Research

A B C D E F G H I J K L M N O P Q R S T U V W X Y Z

PEOPLE (by last name / then D.o.B.)

A

- Brockman **Adams** (Born 1927)
- Harold Melvin **Agnew** (born 1921)
- Paul Gardner **Allen** (born 1953)
- Mikhail Naumovich **Alperovitch** (born 1951)
- Dmitris Alperovitch (born 1980)
- Otto **Ambros** (born 1901)
- Deborah Susan **Asnis** (born 1956)
- Alex Michael **Azar** II (born 1967)

B

- Henry J. **Baker** (born 1818)
- Charles Joseph **Baker** (born 1821)
- Charles E. **Baker** (born 1845)
- Bernard Nadal **Baker** (born 1854)
- William Whitely **Baker** Sr. (born 1867)
- William Whiteley **Baker** Jr. (born 1894)
- Dr. David **Baltimore** (born 1938)
- Daniel Richard **Bannister** (born 1930)
- Frank Stringfellow **Barr** (born 1897)
- Philip **Barr** (born 1872)
- Simon Pelham **Barr** (born 1892)
- Estelle de Young **Barr** (born 1893)
- David S **Barr** (born 1894)
- Elinor Sachs **Barr** (born 1894)
- Donald **Barr (born 1921)**
- Sherman **Barr** (born 1925)
- Paul S. **Barr** (born 1920x)
- William Pelham **Barr** (born 1950)
- Dr Jordan Jay **Baruch** (born 1923)
- Sina A **Bavari** (born 1959)
- Demetrios James **Bidzos** (born 1955)
- Paul Alec **Bilzerian** (born 1950)
- Jacob **Blaustein** (born 1892)
- David Abraham **Blech** (born 1955)

- Dr. Kurt **Blome** (born 1894)
- Merson **Booth** (1924)
- James d'Orma **Braman** (born 1901)
- Dr. Roger Gerrard **Breeze** (born 1946)
- William **Bremer** (born 1863)
- Earl Winfrey **Brian**, Jr. (born 1942)
- Shirley Armitage Chidsey **Bridgwater** (born 1907)
- Werner **Bruchhausen** (born 1939)
- Christopher James **Brummer** (born 1975)
- Henry William **Buse** Jr. (born 1913)
- Vannevar **Bush** (born 1890)

C

- Calvin **Campbell** (born 1934)
- David N. **Campbell** (born 1941)
- Joseph Daniel **Casolaro** (born 1947)
- Vinton Gray **Cerf** (born 1943)
- John Marshall **Chidsey** (born 1871)
- Donald Barr **Chidsey** (born 1902)
- Dr. Purnell Whittington **Choppin** (born 1929)
- Richard Douglas **Clarke** Jr (born 1962)
- Ray Steiner **Cline** (born 1918)
- Eliot Asher **Cohen** (born 1956)
- William Egan **Colby** (born 1920)
- Dr. Francis Sellers **Collins** (born 1950)
- Joseph Frederick **Colvin** (born 1942)
- George Henry **Conrades** (born 1939)
- James Quell **Crowe** (born 1949)
- Gordon Calvin **Culp** (born 1926)
- Dr. Andrew Alexander **Cunningham** (born 1964)

D

- Norman Christian **Dahl** (born 1918)
- Dr. Peter **Daszak** (born 1965)
- Dr. David Bliss **Dekker** (born 1919)
- Dr. Emmie **de Wit** (born 1980(est.))
- Dr. Renato **Dulbecco** (born 1914)
- Eugene Éleuthère Irénée **du Pont** jr. (born 1873)
- Eugene Éleuthère **du Pont** (born 1882)
- Émile Francis **du Pont** (born 1898)
- Ethel **du Pont** (born 1916)

E

- Walter Roy **Edgington** (born 1925)
- Christopher J. **Elias** (born 1957)
- David Friedman **Epstein** (born 1951)
- Jeffrey Edward **Epstein** (born 1953)
- Fritz Walter **Ermarth** (born 1941)
- Dr. Charles Albert **Evans** (born 1912)
- Daniel Jackson **Evans** (born 1925)
- Marvin Davis **Evans** (born 1925)

F

- Stephen **Fauci** (born 1910)
- Dr Anthony Stephen **Fauci** (born 1940)
- Dr. Heinz Ulrich **Feldmann** (born 1959)

- Dr. James Brown Fisk
- Rodney Harald **Fisk** (born 1945)
- Joseph Bernard **Flavin** (born 1928)
- Sir Walter Morley **Fletcher** (born 1873)
- Dr. Simon **Flexner** (born 1863)
- Bernard **Flexner** (born 1865)
- Abraham **Flexner** (born 1866)
- Dr. Quincy Ernest **Fortier** (born 1912)
- John Stuart **Foster** (born 1890)
- Dr. John Stuart **Foster** Jr. (born 1922)
- Dr. Thomas **Francis** Jr. (born 1900)
- Dr. Donald Sharp **Fredrickson** (born 1924)
- Dr. Edward Jacob Freeman (born 1851)
- Dr. Charlotte **Friend** (born 1921)

G

- Jennifer Elizabeth **Garrus** (born 1973)
- William Henry **Gates** (born 1858)
- William Charles **Gates** (born 1860)
- Dr. Frederick Lamont **Gates** (born 1886)
- William Henry **Gates** (born 1891)
- William Henry **Gates** II (born 1925)
- Mary Maxwell **Gates** (born 1929)
- William Henry **Gates** III (born 1955)
- Melinda Ann **Gates** (born 1964)
- Dr. Thomas William **Geisbert** (born 1962)
- Dr. Lawrence Kenneth **Gershwin** (born 1942)
- Carlos **Ghosn** (born 1954)
- Robert Gordon **Gillespie** (born 1933)
- **G - Gise family**
  - George Adam **Geise** Jr. (born 1772)
  - David B. **Gise** (born 1812)
  - William Franklin **Gise** (born 1835)
  - Daniel Kerlin **Gise** (born 1843)
  - Jacob Kerlin **Gise** (born 1849)
  - William C **Gise** (born 1861)
  - William Kern **Gise** (born 1871)
  - Lloyd Preston **Gise** (born 1873)
  - Grace S **Gise** (born 1886)
  - Grover Daniel **Gise** (born 1886)
  - William John **Gise** (born 1888)
  - Luther Russell **Gise** (born 1895)
  - Lawrence Preston **Gise** (born 1915)
  - William John **Gise** Jr (born 1920)
  - Alan Ambrose **Gise** (born 1929)
  - Lawrence Preston **Gise** Jr (born 1936)
- Hellmut Paul Oscar **Golde** (born 1930)
- Neil Elbridge Gordon (born 1886)
- Gottlieb
- Joseph Peter **Grace** (born 1913)
- William Robert **Graham** (born 1937)
- Dr. Duane J. **Gubler** (born 1939)

H

- Dr. William Arthur Hagan (born 1893)

- Stefan Alan **Halper** (born 1944)
- Lewis Bradley **Harder** (born 1918)
- Robert Lewis **Harris** (born 1937)
- Sally Swisher **Heet** (born 1950)
- Richard McGarrah **Helms** (born 1913)
- William W **Herrmann** (born 1936)
- Dr. David Lowell **Heymann** (born 1946)
- Melissa Ripton **Hodgman** (born 1968)
- Steve Michael **Hotz** (born 1963)

I

- Dr. Bruce Edward **Ivins** (born 1946)

J

- Henry Martin "Scoop" **Jackson** (born 1912)
- Dr. Kuan-Teh **Jeang** (born 1958)
- Rodney Lance **Joffe** (born 1954)

K

- Dr. William Bamberger **Karesh** (born1955)
- Herman **Khan** (born 1922)
- John George **Kemeny** (born 1926)
- Peter D. **Kiewit** (born 1900)
- Harold Jens **Kildall** (born 1894)
- Gary Arlen **Kildall** (born 1942)
- Dr. J Joseph Kim
- Dr. Ernst **Klenk** (born 1896)
- Dr. Hans-Dieter **Klenk** (born 1938)
- Dr. Gary Pignac **Kobinger** (born 1969)
- Neal **Koblitz** (born 1948)
- Marion Petronella Gerarda **Koopmans** (born 1956)
- Dr. Hilary **Koprowski** (born 1916)
- Thomas Eugene **Kurtz** (born 1928)

L

- Sir Patrick Playfair **Laidlaw** (born 1881)
- Dr. Robert Salvatore **Lanciotti** (born 1960)
- Dr. Alexander Duncan **Langmuir** (born 1910)
- Lyndon Hermyle **LaRouche** Jr. (born 1922)
- Dr. Marcelle C. **Layton** (born 1958)
- Dr. Joshua **Lederberg** (born 1925)
- Herbert Henry **Lehman** (born 1878)
- Frank Thomson **Leighton** (born 1956)
- Daniel Mark **Lewin** (born 1970)
- Dr. Paul Adin **Lewis** (born 1879)
- Dr. Walter Ian **Lipkin** (born 1952)
- Richard Green **Lugar** (born 1932)

M

- Warren Grant "Maggie" **Magnuson** (born 1905)
- **M - Mann family**
  - Harold Cornelius **Mann** (born 1892)
  - Donald **Mann** (born 1922)
  - Bruce Hartling **Mann** (born 1950)
- Melissa Ann (Colvin) **Mann** (born 1965)
- 1967 **Marburg** virus outbreak in West Germany

- Andrew Walter **Marshall** (born 1921)
- General James Norman **Mattis** (born 1950)
- Ian Robert **Maxwell** (born 1923)
- Dr. Donald Malcolm **MacArthur** (born 1931)
- Diana Lee Taylor **MacArthur** (born 1933)
- Dr. Alan B. **MacDonald** (born 1948)
- Dr. John S. **MacKenzie** (born 1943(est.))
- Dr. Tracey S. **McNamara** (born 1954)
- Charles William **Merritt** (born 1951)
- Messonnier
- Yevgeny Ilyich **Mikerin** (born 1928)
- John Lewis **Mikovits** (born 1931)
- Dr. Judy Anne **Mikovits** (born 1958)
- Michael Robert **Milken** (born 1946)
- Dr. Thomas Patrick **Monath** (born 1940)
- Dr. Alice E. **Moore** (born 1908)
- **M - Mueller family**
  - Gustave Adolph **Mueller** (born 1863)
  - **Robert Swan Mueller I (born 1893)**
  - **Robert Swan Mueller II (born 1916)**
  - John Freeman **Mueller** (b1919)
  - Robert Swan **Mueller** III (born 1944)
- Dr. Hermann Joseph **Muller** (born 1890)
- Dr. Vincent J. **Munster** (born 1973)
- Dr. Peter Keith **Murray** (born 1946)

N

- Lee Miller **Neff** (born 1912)
- Thomas L **Neff** (born 1943)
- William David **Neff** (born 1945)
- William Horlick **Neukom** (born 1942)
- Dr. Hideyo **Noguchi** (born 1876)
- Maximilian Irving **Nowinski** (born 1920)
- Dr. Robert Charles **Nowinski** (born 1945)

O

- Thomas Johannes **Obenhuber** (born 1955)
- Dr. Lloyd John **Old** (born 1933)
- Kevin James **Olival** (born 1975)
- Lionel Herbert **Olmer** (born 1934)
- Kenneth Harry **Olsen** (born 1926)
- Tara O'Toole

P

- Carter William **Page** (born 1971)
- Melvyn Robert **Paisley** (born 1924)
- Wolfgang Kurt Hermann **Panofsky** (born 1919)
- Bud Ray **Pembroke** (born 1931)
- Richard Norman **Perle** (born 1941)
- Dr. Clarence James **Peters** (born 1940)
- Dr. Peter Karel **Piot** (born 1949)
- Francis Allan **Plummer** (born 1952)
- Ben Telfer **Plymale** (born 1926)
- Jon Bruce **Postel** (born 1943)
- Richard McCann **Preston** (born 1954)

Q

- Xiangguo **Qiu** (born 1964)

R

- Gita **Ramjee** (born 1956)
- William Carlisle **Reeves** (born 1916)
- Dr. Alfred J. **Restaino** (born 1931)
- Dr. Cornelius Packard "Dusty" **Rhoads** (born 1898)
- Prof. Jürgen Albrecht **Richt** (born 1958)
- James Gerard **Roche** (born 1939)
- Nelson Aldrich **Rockefeller** (born 1908)
- Dr. John Timothy **Roehrig** (born 1952)
- Thomas Paul **Rona** (born 1923)
- Monique R **Rona** (born 1928)
- Dennis B. **Ross** (born 1948)
- Henry **Rothschild** (born 1920)
- Prof. Rudolf **Rott** (born 1926)
- Dr. Francis Peyton **Rous** (born 1879)
- Francis William **Ruscetti** (born 1943)
- Stephen **Russell** (born 1937)

S

- Dr. Albert Bruce **Sabin** (born 1906)
- Samuel **Sachs** (born 1851)
- **S - Sachs|Sacks family**
  - Herman Alexander **Sacks** (born 1885)
  - Alexander **Sachs** (born 1892)
  - Joseph Alexander **Sachs** (born 1896)
  - Charlotte Cramer **Sachs** (born 1907)
- Paul Lewis **Sagan** (born 1959)
- Dr. Jonas Edward **Salk** (born 1914)
- Dr. Heinrich Werner **Schäfer** (born 1912)
- Lt. Captain Maurice **Schiff** MD (born 192x)
- Edward Maurice Schiff (born 1928)
- Adam Bennett **Schiff** (born 1960)
- Eve Sanderson **Schiff** (born 1962)
- Michael **Schimmel** (born 1896)
- Stuart Barr **Schimmel** (born 1925)
- James Rodney **Schlesinger** (born 1929)
- Christoph **Scholtissek** (born 1929)
- Dr. Calvin Walter **Schwabe** (born 1927)
- Walter **Scott** Jr. (born 1931)
- William Forsythe **Sharpe** (born 1934)
- Dr. Richard Edwin **Shope** (born 1901)
- Dr. Robert Ellis **Shope** (born 1929)
- Charles Noel **Sibley** (born 1899)
- Charles Gald **Sibley** (born 1917)
- John William **Sidgmore** (born 1951)
- William Hunter **Simpson** (born 1926)
- Dr. Theobald **Smith** (born 1859)
- Dr. Anna Lenore Skow **Southam** (born 1915)
- Dr. Chester Milton **Southam** (born 1919)
- Arnold Meyer **Spielberg** (born 1917)
- Irvin Nathaniel **Spielberg** (born 1918)
- James Hahn **Steele** (born 1913)

- Marvin Leonard **Stein** (born 1924)
- Prof. Adrian **Stokes** (born 1887)
- Peter Paul **Strzok** I (born 1936)
- Peter Paul **Strzok** II (born 1970)
- Wes Sundquist
- **S - Symington family**
  - Thomas **Symington** (born 1793)
  - William Stuart **Symington** I (born 1839)
  - Thomas Alexander **Symington** II (born 1842)
  - William Stuart **Symington** II (born 1871)
  - Powers **Symington** (born 1872)
  - Charles Julian **Symington** (born 1883)
  - William Stuart **Symington** III (born 1901)
  - James Wadsworth Symington (born 1901)

T

- Thomas Jefferson **Taylor** II (born 1874)
- Antonio Jefferson **Taylor** (born 1904)
- Claudia Alta "Lady Bird" **Taylor** (born 1912)
- William Brockenbrough **Taylor** Sr (born 1925)
- Diana Lee **Taylor** (born 1933)
- William Brockenbrough Newton **Taylor** Jr (born 1947)
- John Parks **Tazewell** (born 1920)
- Dr. Howard Martin **Temin** (born 1934)
- Dr. Edward Donnall "Don" **Thomas** (born 1920)
- Dr. Erich **Traub** (born 1906)
- Frederick **Trump** (born 1869)
- Fred Christ **Trump** (born 1905)
- John George **Trump** (born 1907)
- Gilbert Leonard **Tugwell** (born 1919)

V

- William Robert **Van Cleave** (born 1935)

W

- Dr. Andrew Jeremy **Wakefield** (born 1957)
- Dr. Lin-Fa **Wang** (born 1960)
- Dr. Sherman Morton **Weissman** (born 1930)
- Dr. Jonathan Seth **Weissman** (born 1966)
- Dr. William Henry **Welch** (born 1850)
- Charles **Wohlstetter** (born 1910)
- Albert James **Wohlstetter** (born 1913)
- John Charles **Wohlstetter** (born 1947)
- Theodore Wai **Wu** Jr. (born 1936)

Y

- Carl Garland **Young** (born 1926)

Z

- Dr. Dov Solomon **Zakheim** (born 1948)
- Philip David **Zelikow** (Born 1954)
- Bernie Edward **Zettl** (born 1922)
- Philip Richard **Zimmermann** Sr (born 1922)
- Philip Richard **Zimmermann** Jr. (born 1954)

PLACES

- **Bremerton**, Washington
- **Canton**, Baltimore, Maryland
- **Gibson** Island, Maryland
- Vickers Building, Baltimore

A B C D E F G H I J K L M N O P Q R S T U V W X Y Z

COMPANIES

- **Akamai Technologies, Incorporated**
- **American Computer** Group [of CA/AZ]
- **American Locomotive** Company
- **Baugh** Chemical Corporation
- **BBN** Technologies, Incorporated
- **Bell** Textron Corporation
- **Canton** Company
- **CenturyLink**, Incorporated
- **Computer** Center Corporation (Seattle)
- **Contel** Corporation
- **Davison** Chemical Company
- Thomas J. **Deegan** Company
- **Dynalectron** Corporation
- **Dynamac** Corporation
- **DynCorp** International
- **E-Systems**, Incorporated
- **Edlow** International Company
- **Electronic** Arrays Incorporated
- **Engelhard** Corporation
- **EpiGenX** Pharmaceuticals
- **General** Electric Mainframe Computers
- **General Telephone** and Electronics Corporation
- **Genetic** Systems Corporation
- **Genuity** Incorporated
- **Genuity** Incorporated (2000)
- **Gilead** Sciences
- **Gould** Storage Battery Corporation
- W. R. **Grace** and Company
- **GSE** Systems, Inc.
- **GTE** Corporation
- **GTE Sylvania** Products
- **Immunex** Corporation
- **Inslaw**, Incorporated
- **International** Mining Corporation
- **Internet** Media Network Incorporated
- **Kiewit** Corporation
- **Kiewit** Diversified Group
- J. **Lehrenkrauss** Corporation
- **Level** 3 Communications, Incorporated
- **Litton** Bionetics
- **Lumen** Technologies, Incorporated

- **MCI** WorldCom Corporation
- **Melpar** Incorporated
- **MFS** Communications Company, Incorporated
- **Micro** Instrumentation and Telemetry Systems (MITS) Incorporated
- **National Metal** Moldings Corporation
- **National Patent** Development Corporation
- **Nuclear Fuel Services**, Inc. (NFS)
- **Pathfire**, Inc.
- **Peripheral** Equipment Corporation
- **Pertec** Computer Corporation
- **Philipp** Brothers Incorporated
- **Physio-Control** Corporation
- The **Pillsbury**, Madison, and Sutro law firm
- Raytheon Intelligence, Information, and Services Business Unit
- **Silicon** Beach Communications Inc.
- Singer Corporation
- Symington Machine Corporation
- Symington Wayne Corporation
- S3 Technologies
- **Thiokol** Chemical Corporation
- **Trusted** Information Systems Inc.
- **TRW** Incorporated
- United Fruit Company
- **UUNET** Technologies, Incorporated
- **VaxGen**, Incorporated
- **Verizon** Communications Incorporated
- **WorldCom** Corporation

OTHER

- **Baltimore** and the opium trade with China
- **CERFnet**
- The **Clipper** Chip
- The **Crypto** War in the USA Intelligence Community
- **Gulf War** syndrome
- "The **Hot Zone**" (book, 1994)
- **Housatonic.Live**
- **Humanized mice**
- **Humanized mouse**
- Fred **Hutchinson** Cancer Research Center
- **ICANN**
- Operation **Ill Wind**
- Gary **Kildall's** book "Computer Connections" (1994)
- 1967 **Marburg** virus outbreak in West Germany
- **Megatons** to Megawatts Program
- **MITS** Inc. Altair 8800
- **National Cancer** Institute
- **National Institutes of Health**
- **National Institutes of Health Clinical** Center
- USS **Neunzer** (DE-150)
- **Nipah** Virus
- **NSFNET**
- USS **O'Bannon** (DD-450)
- **One Health**
- **One Health Commission**
- **Pathfinder** (Time Warner)
- The President's Commission on Critical Infrastructure Protection (**PCCIP**)
- US AEC Project **Plowshare**
- **Plum Island Animal Disease Center**
- **Portsmouth** Gaseous Diffusion Plant
- **Rocky** Mountain Labs
- 1918 Spanish Influenza
- USS Sylph (PY-5)
- Ukraine International Airlines Flight 752
- (Russia) State Research Center of Virology and Biotechnology (**VECTOR**)
- **Virotherapy**
- Special **Virus**-Cancer Program
- **West Nile Virus biological weapon technology and production**
- **West Nile Virus discovery** in the United States (1999)

A

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- Alex Michael **Azar** II (born 1967)

PLACES / COMPANIES / OTHER

- Akamai Technologies, Incorporated
- American Computer Group [of CA/AZ]
- **American** Locomotive Company

Brockman Adams (Born 1927)

Wikipedia Brock Adams

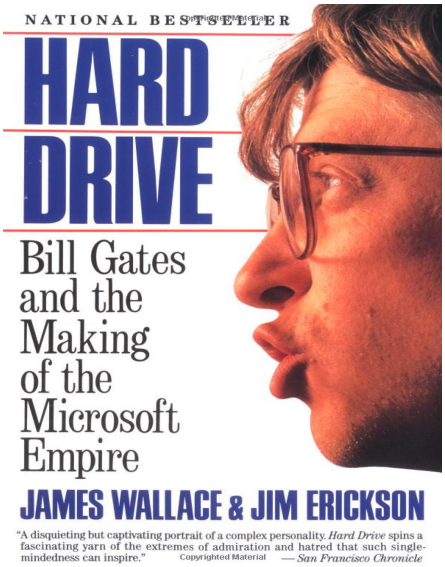
Associations

- Mary Maxwell Gates (born 1929) (Friend in college, Introduced her to future husband William Henry Gates II (born 1925) [HB0053][GDrive])
- William Henry Gates II (born 1925) (Vice versa!)

Introduced Bill and Mary Gates

PDF of book : [HB0053][GDrive]

"Their daughter Mary was born in Seattle in 1929. A vivacious young beauty she grew up among some of the most prominent families in the Northwest. Like her mother before her, Mary Maxwell met her future husband, a tall, **athletic, prelaw student by the name of Bill Gates, Jr.,** while she was a co-ed at the University of Washington. A school cheerleader, Mary was as outgoing and gregarious as Bill was shy and reserved. A mutual friend, Brockman Adams, had introduced the couple while Adams was student body president, and Mary was an officer in the student government association. (Adams went on to a career in politics, serving as secretary of transportation under 7 President Jimmy Carter. He is currently one of Washington's U.S. senators and remains a close friend of the Gates family.)"



[HB0054][GDrive]

Saved Wikipedia (Nov 21 2020) - Brock Adams

See [HK003M][GDrive]

United States Senator

from Washington

In office

January 3, 1987 – January 3, 1993

Preceded by

Slade Gorton

Succeeded by

Patty Murray

5th United States Secretary of Transportation

In office

January 23, 1977 – July 20, 1979

President

Jimmy Carter

Preceded by

William Thaddeus Coleman Jr.

Succeeded by

Neil Goldschmidt

Chair of the House Budget Committee

In office

January 3, 1975 – January 3, 1977

Preceded by

Al Ullman

Succeeded by

Robert Giaimo

Member of the U.S. House of Representatives

from Washington's 7th district

In office

January 3, 1965 – January 22, 1977

Preceded by

K. William Stinson

Succeeded by

John E. Cunningham

United States Attorney for the Western District of Washington

In office

1961–1964

President

John F. Kennedy

Lyndon B. Johnson

Preceded by

Charles Moriarty

Succeeded by

William Goodwin

Personal details

Born

Brockman Adams

January 13, 1927

Atlanta, Georgia, U.S.

Died

September 10, 2004 (aged 77)

Stevensville, Maryland, U.S.

Political party

Democratic

Spouse(s)

Mary Adams

Education

University of Washington, Seattle (BA)

Harvard University (LLB)

Military service

Allegiance

United States

Branch/service

United States Navy

Years of service

1944–1946

Brockman "Brock" Adams (January 13, 1927 – September 10, 2004) was an American politician and member of Congress. A Democrat from Washington, Adams served as a U.S. Representative, Senator, and United States Secretary of Transportation. He was forced to retire in January 1993 due to public and widespread sexual harassment, sexual assault and rape allegations.[1]

Early life and education[edit]

Adams was born in Atlanta, Georgia, and attended public schools in Portland, Oregon. He attended the University of Washington at Seattle where, in 1948, he was elected president of the student government (ASUW) and was the first student to both serve in that post and receive the President's Medal of Excellence as the University's top scholar.[2] He graduated in 1949 and was admitted to Harvard Law School, where he earned his law degree in 1952.

Naval and legal career[edit]

Adams served in the U.S. Navy from 1944 to 1946, and was admitted to the Washington state bar in 1952, opening a private practice in Seattle. He was a member of the American Bar Association.

Adams taught law at the American Institute of Banking from 1954 to 1960, and served as United States Attorney for the Western District of Washington from 1961 to 1964.[3]

Political career[edit]

U.S. House of Representatives[edit]

Adams was elected as a Democrat to the House and served six terms beginning January 3, 1965. He was chairman of the newly created Budget Committee during the 94th Congress, and was considered a strong candidate for Speaker of the House. On January 22, 1977, Adams resigned to become the fifth Secretary of Transportation following his appointment by President Jimmy Carter and confirmation by the Senate. After resigning his Cabinet post on July 20, 1979, Adams resumed law practice, this time in Washington, D.C., where he was a lobbyist for CSX Corporation and other railroad carriers.

Adams at Cabinet Meeting

U.S. Senator[edit]

On November 4, 1986, Adams was elected to the U.S. Senate, narrowly defeating incumbent Republican Slade Gorton with 50.66% of the vote.[4] Serving one term, he compiled a liberal record and was strongly supportive of his party's leadership.

Sexual assault, rape allegations[edit]

Kari Tupper, the daughter of a longtime friend, accused Adams of drugging and assaulting her in 1987.[5][6]

In 1992 eight women made statements to *The Seattle Times* alleging that Adams had committed various acts of sexual misconduct, including sexual assault, molestation and rape.[7] Multiple women said they were drugged after being served suspicious drinks and either assaulted or raped.[8]

In the exposé, an unnamed source said, "Adams had long been known by his staff and associates for aggressively kissing and handling women within his reach."

A former Democratic Party activist alleged that in the early 1970s, when Adams was serving in the House of Representatives, he invited her to a Seattle bar, where he drugged her with what he called "Vitamin C", after she recalled suffering from a cold. The woman said Adams followed her home, pushed her onto a couch and raped her.[9]

A young woman in her thirties told *The Washingtonian* that while she was seated to Adams's right at a formal luncheon shortly after she had taken a new job on Capitol Hill, he slid his hand under her skirt to the upper part of her thigh, whereupon she tried to move her leg away from him. Failing that, she said she tried to remove his hand, but Adams dug his fingers into her skin.[10]

Forced retirement[edit]

Adams denied the allegations in a press conference. But already under the spotlight due to previously aired allegations that he drugged and molested a young female aide in 1987, a highly publicized matter in which no charges were brought, Adams was forced to drop out of his reelection campaign.[11] He never lost an election, and lived in Stevensville, Maryland, until his death of complications from Parkinson's disease.[12]

Legacy[edit]

Adams's willingness to plunge into controversial issues was evident in the contrasting assessments of his tenure and accomplishments during a tumultuous period in transportation. *The Wall Street Journal* in 1979 called him the "biggest disappointment" in the Carter cabinet, while Public Citizen President Joan Claybrook, who led the National Highway Traffic Safety Administration under Adams, called him "absolutely one of the best transportation secretaries we've ever had".[13] Adams was also a member of the Phi Beta Kappa Society.

#MeToo Resurgence[edit]

In light of the 2017 #MeToo Movement, some see Adams's legacy as a powerful politician who systemically abused his power over young women as emblematic of Washington's culture of harassment.[14]

In 2020, an extensive PBS exposé concerning the workplace for women in the 1990s in Washington, D.C., described the climate of "sexual harassment and sexual entitlement [that] existed in some offices in the Senate", driven by some male senators whose behavior was well known on Capitol Hill. There was a list of congressmen that young women were told to keep away from, which included Adams, Bob Packwood, Strom Thurmond, and Ted Kennedy.[15]

See also[edit]

- List of federal political sex scandals in the United States
- Lobbying in the United States

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Housatonic

Akamai Technologies, Incorporated

Wikipedia Akamai Technologies

Key people:

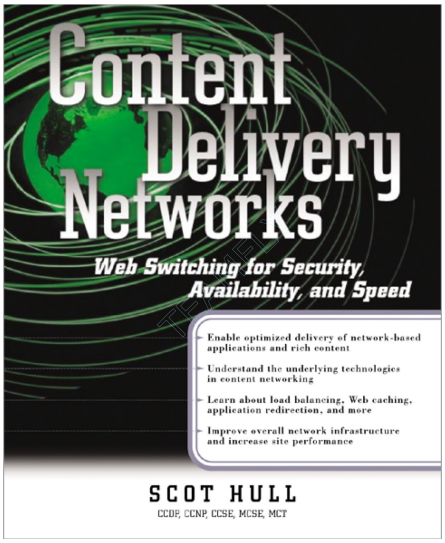
- Daniel Mark Lewin (born 1970)
- Frank Thomson Leighton (born 1956)
- Paul Lewis Sagan (born 1959)
- George Henry Conrades (born 1939)
-

Sources todo -

2002 book by Scot Hull - "Content Delivery Networks: Web Switching for Security, Availability, and Speed"

Source - [HB005H][GDrive]

Genuity, Akamai,



[HB005I][GDrive]

Saved Wikipedia (Dec 28 2020) - Akamai Technologies

[HK004L][GDrive]

Type Public

Traded as

- NASDAQ: AKAM
- S&P 500 component

Industry Internet / Cloud computing

Founded / 1998; 22 years ago

Founders

- [Daniel Mark Lewin (born 1970)]
- [Frank Thomson Leighton (born 1956)]
- Randall Kaplan
- Jonathan Seelig

Headquarters Cambridge, Massachusetts, U.S.

Key people

- F. Thomson Leighton (CEO and Co-Founder)
- Frederic V. Salerno (Chairman)

Revenue $2.894 billion (2019)

Operating income $549 million (2019)

Net income $478 million (2019)

Total assets $7.007 billion (2019)

Total equity $3.658 billion (2019)

Number of employees 7,650 (2018)

Website akamai.com

Akamai Technologies, Inc. is a global content delivery network (CDN), cybersecurity, and cloud service company, providing web and Internet security services.[2][3] Akamai's Intelligent Edge Platform is one of the world's largest distributed computing platforms. The company operates a network of servers around the world and rents out capacity on these servers to customers who want their websites to work faster by distributing content from locations near the user. When a user navigates to the URL of an Akamai customer, their browser is directed to one of Akamai's copies of the website.

History

Akamai Technologies entered the 1998 MIT $50K competition with a business proposition based on their research on consistent hashing, and were selected as one of the finalists.[4] By August 1998 they had developed a working prototype, and with the help of Jonathan Seelig and Randall Kaplan, they began taking steps to incorporate the company.[5]

In late 1998 and early 1999, a group of business professionals joined the founding team. Most notably, [Paul Lewis Sagan (born 1959)], former president of New Media for Time Inc. and [George Henry Conrades (born 1939)], former chairman and chief executive officer of BBN Corp. and senior vice president of US operations for IBM. Conrades became the chief executive officer of Akamai in April 1999 and led the company from start-up to sustained profitability and positive free cash-flow before turning the reins over to Sagan in 2005.[6][7][8] The company launched its commercial service in April 1999 and was listed on the NASDAQ Stock Market from October 29, 1999.[9]

On July 1, 2001, Akamai was added to the Russell 3000 Index and Russell 2000 Index.[10]

On September 11, 2001, co-founder [Daniel Mark Lewin (born 1970)] died in the September 11 attacks at the age of 31 when he was stabbed during his flight aboard American Airlines Flight 11, the first plane to crash into the World Trade Center.[11]

In 2005, [Paul Lewis Sagan (born 1959)] was named chief executive officer of Akamai. Sagan worked to differentiate Akamai from its competitors by expanding the company's breadth of services.[8] Under his leadership the company grew to $1.37 billion in revenues.[12] Sagan served as chief executive officer until co-founder and current CEO, [Frank Thomson Leighton (born 1956)], was elected to the position in 2013.[13] In July 2007, Akamai was added to the S&P 500 Index.[14]

Akamai's headquarters are in Kendall Square. Akamai started out in Technology Square and later expanded to multiple buildings in Cambridge Center. They consolidated their offices in a purpose-built building at 145 Broadway in December 2019.[15]

Technologies

Akamai Intelligent Edge Platform

The Akamai Intelligent Platform is a distributed cloud computing platform that operates worldwide. It is a network of over approximately 275,000 servers deployed in more than 136 countries.[16] These servers reside in roughly 1,500 of the world's networks gathering real-time information about traffic, congestion, and trouble spots.[16] Each Akamai server is equipped with proprietary software that uses complex algorithms to process requests from nearby users, then serve the requested content.[17]

Content delivery process

Akamai content delivery to a user

The content delivery process begins with a user submitting a request to a browser. When a user enters a URL, a DNS request is triggered and an IP address is retrieved. With the IP address, the browser can then directly contact the Akamai edge server for subsequent requests.[18] In a content delivery network structure, the domain name of the URL is translated by the mapping system into the IP address of an edge server to serve the content to the user.[17]

Akamai delivers web content over its Intelligent Platform by transparently mirroring elements such as HTML, CSS, software downloads, and media objects from customers' servers. The Akamai server is automatically chosen depending on the type of content and the user's network location. Receiving content from an Akamai server near the user allows faster downloads and less vulnerability to network congestion. Akamai claims to provide better scalability by

from an Akamai server near the user allows faster downloads and less vulnerability to network congestion. Akamai claims to provide better scalability by delivering the content over the last-mile from servers close to end-users, avoiding the middle-mile bottleneck of the Internet.[19] The Download Delivery product line includes HTTP downloads for large downloadable objects, a customizable application for consumers, and analytics tools with metrics that monitor and report on the download process.[20]

Peer-to-peer networking

In addition to using Akamai's own servers, Akamai delivers certain content from other end-users' computers, in a form of peer-to-peer networking.[21][22]

Network Operations Command Center

Akamai's Network Operations Command Center (NOCC) is used for proactive monitoring and troubleshooting of all servers in the global Akamai network.[23] The NOCC provides real time statistics of Akamai's web traffic. The traffic metrics update automatically and provide a view of the Internet traffic conditions on Akamai's servers and customer websites.[24]

State of the Internet

The State of the Internet report is a quarterly report Akamai releases based on data gathered from its Intelligent Platform, which provides global Internet statistics such as connection speed, broadband adoption, attack traffic, network connectivity, and mobile connectivity.[25][26]

Visualizing the Internet

Akamai's data visualization tools display how data is moving across the Internet in real-time. Viewers are able to see global web conditions, malicious attack traffic, and Internet connectivity.[27] In addition, the net usage indices monitor global news consumption, industry specific traffic, and mobile trends.[28] Akamai also offers the Internet Visualization application, which allows users to view real-time data on their mobile device.[29]

OPEN Initiative

On October 9, 2013 Akamai announced its Open Initiative at the 2013 Akamai Edge Conference. OPEN allows customers and partners to develop and customize the way they interact with the Akamai Intelligent Platform. Key components of OPEN include system and development operations integration, real-time big data integration, and a single-point user interface.[30]

Primary domains

Akamai Technologies owns about 60 other domains, but the primary domains it uses include:

Corporate[edit]

- akamai.com – Akamai's domain

Content (delivery) domains[edit]

- akamai.net
- akamaiedge.net
- akamaized.net
- akamaihd.net
- edgesuite.net
- edgekey.net
- srip.net[31][32]
- akamaitechnologies.com
- akamaitechnologies.fr

DNS servers[edit]

- akamaitech.net
- akadns.net
- akagtm.org
- akam.net
- akamaistream.net
- akamaiedge.net
- akamaihd.net
- akamai.com

Customers

On July 21, 1999, at Macworld Expo New York, Apple and Akamai announced a strategic partnership to build Apple's new media network, QuickTime TV (QTV), based on QuickTime Streaming Server.[33] Both companies later announced that Apple had made a $12.5 million investment in the company the previous month.[34] Apple continues to use Akamai as their primary content delivery network[35] for a wide range of applications including software downloads from Apple's Website, QuickTime movie trailers, and the iTunes Store.[36]

In September 1999, Microsoft and Akamai formed a strategic relationship to incorporate Windows Media technology in Akamai's FreeFlow service, as well as to facilitate the porting of the FreeFlow product to the Windows platform; this relationship exists to this day.[37] Microsoft Azure offers Akamai (along with Verizon) as options for its "standard" CDN service.[38]

Arabic news network Al-Jazeera was a customer from March 28, 2003, until April 2, 2003, when Akamai decided to end the relationship.[39] The network's English-language managing editor claimed this was due to political pressure.[40]

In June 2008, The NewsMarket teamed with Akamai to accelerate dynamic content and applications to global media ahead of the Beijing Olympics.[41]

In June 2008, The NewsMarket teamed with Akamai to accelerate dynamic content and applications to global media ahead of the Beijing Olympics.[41]

The BBC iPlayer uses Akamai to stream its recorded and live programs, focused through an XML playlist.

The entire China Central Television website, including its streaming video, has been hosted on Akamai's edge servers since late 2009.[42][43] Hulu uses Akamai for hosting video.[44] MIT OpenCourseWare utilizes Akamai's EdgeSuite for its content delivery network.[45]

Trend Micro uses Akamai for their Housecall antivirus application.

Valve's Steam service uses Akamai's Content Delivery Network for storing screenshots and icons uploaded by users.

Akamai provided streaming services to ESPN Star (India) during the course of the ICC Cricket World Cup 2011.[46]

Rackspace's Cloud Files use Akamai's Content Delivery Network (CDN) for storing its customer's files.

Other customers include Adobe Systems, Airbnb, AMD, AutoTrader.com, COS, ESPN, The Great Courses, Hewlett-Packard, Hilton Worldwide, IBM, J. C. Penney, Jehovah's Witnesses, MTV Networks, NASA, National Academy of Recording Arts and Sciences, NBC Sports, Pearson Education, Red Bull GmbH, Red Hat, Sony PlayStation and Yahoo!.[47]

In August 2017, Nintendo launched its new game console and mobile gaming application simultaneously around the world via Akamai's Media Delivery Solutions.[48]

Acquisitions

- On February 10, 2000, Akamai acquired Network24 Communications[49] for an aggregate purchase price of $203,600,000.[50]
- On April 20, 2000,[50] Akamai acquired InterVU Inc.[51] for an aggregate purchase price of $2,800,000,000.
- On July 25, 2000, Akamai acquired CallTheShots, Inc., for an aggregate purchase price of $3,700,000.[50]
- On June 10, 2005, Akamai acquired Speedera Networks, Inc. for an aggregate purchase price of $142,200,000.[52]
- On December 13, 2006, Akamai acquired Nine Systems, Inc.,[53] for an aggregate purchase price of $157,500,000.[54]
- On March 13, 2007, Akamai acquired Netli Inc. (Netli),[55] for an aggregate purchase price of $154,400,000.
- On April 12, 2007, Akamai acquired Red Swoosh Inc.[56] for an aggregate purchase price of $18,700,000.[57]
- On November 3, 2008, Akamai acquired aCerno Inc.,[57] for an aggregate purchase price of $90,800,000.[58]
- On June 10, 2010, Akamai acquired Velocitude LLC,[59] for an aggregate purchase price of $12,000,000.[60]
- On February 7, 2012, Akamai acquired Blaze Software, Inc.,[61] for an aggregate purchase price of $19,300,000.[62]
- On March 6, 2012, Akamai acquired Cotendo, Inc.,[61] for an aggregate purchase price of $278,900,000.[63]
- On September 13, 2012, Akamai acquired FastSoft, Inc.,[61] for an aggregate purchase price of $14,400,000.[64]
- On December 4, 2012, Akamai acquired Verivue, Inc.,[61] for an aggregate purchase price of $30,900,000.[65]
- On November 8, 2013, Akamai acquired Velocius Networks[66] for an aggregate purchase price of $4,300,000.[67]
- In February 2014, Akamai acquired cyber security provider, Prolexic Technologies[66] for an aggregate purchase price of $390,000,000.[68]
- In February 2015, Akamai acquired Xerocole Inc., a domain name system technology company.[69]
- On April 6, 2015, Akamai acquired cloud OTT IPTV service provider Octoshape,[70] for an undisclosed amount.[71]
- On November 2, 2015, Akamai acquired Bloxx, a provider of Secure Web Gateway (SWG) technology,[72] for an undisclosed amount.[73]
- On September 28, 2016, Akamai acquired Concord Systems, a provider of technology for the high performance processing of data at scale,[74] for an undisclosed amount.[75]
- On October 4, 2016, Akamai acquired Soha Systems, an enterprise secure access delivered as a service provider,[76] for an undisclosed amount.[77]
- On December 19, 2016, Akamai acquired Cyberfend, a bot and automation detection solutions provider,[78] for an undisclosed amount.[79]
- On March 29, 2017, Akamai acquired SOASTA, a digital performance management company based in Mountain View, CA, for an undisclosed all-cash amount.[80]
- On October 11, 2017, Akamai acquired Nominum, a carrier-grade DNS and DHCP provider and one of the major players in the creation of the modern DNS system, for an undisclosed all-cash amount.[81]
- In October 2019, Akamai acquired security software provider ChameleonX for $20 million.[82][83]
- On January 24, 2019, Akamai acquired CIAM provider Janrain.[84]
- On October 27, 2020, Akamai acquired IoT and mobile security provider Asavie.[85]

Litigation

One of Akamai's patents covers a method of delivering electronic data using a content delivery network. Internet Web site proprietors (content providers) contract with Akamai to deliver their Web sites' content to individual Internet users. The patented method permits large files, such as video or music files, to be stored on Akamai's servers and accessed from those servers by Internet users. This increases the speed with which Internet users access the content from Web sites.

Unfortunately for Akamai, its patent was written in a way that called for or permitted actions by multiple persons or entities—such as the content provider customer and the company providing the CDN service.[86] **Akamai's competitor Limelight chose to operate its allegedly infringing service in that manner—it performed most steps of the patented process and its customers performed a so-called tagging step. Under the interpretation of patent law at the time when Akamai decided to sue Limelight for patent infringement, a method patent could be held infringed only when a single actor performed all of the steps.** The court therefore overturned a $40 million jury verdict in Akamai's favor.

Akamai initially lost the case, even taking it to the Supreme Court. The Supreme Court returned the case to the United States Court of Appeals for the Federal Circuit, however, with an invitation to re-evaluate its rule, if it chose to do so, that all the steps of a method had to be performed by a single actor for there to be infringement. On remand, the Federal Circuit considered the matter *en banc* (all active judges of the circuit) and modified its rule. It

now held that a patent could also be directly infringed if "an alleged infringer conditions participation in an activity or receipt of a benefit upon performance of a step or steps of a patented method and establishes the manner or timing of that performance." On that basis, the Federal Circuit reinstated the $40 million jury verdict. It said that "Akamai presented substantial evidence demonstrating that Limelight conditions its customers' use of its content delivery network upon its customers' performance of" the steps that Limelight does not itself perform. This has been considered a substantial change in patent law. The case is known as *Akamai Techs., Inc. v. Limelight Networks, Inc.*.

Controversies

The National Security Agency and Federal Bureau of Investigation have reportedly used Facebook's Akamai content delivery network (CDN) to collect information on Facebook users.[87]This report appears to show intelligence analysts intercepting communications between Facebook and its CDN provider, but does not indicate Akamai as being complicit in this process.

According to researchers from the Universities of Cambridge and California-Berkeley, University College London, and International Computer Science Institute-Berkeley, Akamai has been blocking access to web sites for visitors using Tor.[88][89]

See also

- ***Companies portal***
  - *Akamai Techs., Inc. v. Limelight Networks, Inc.*

1999 (Sep) - Wired Magazine - "PROOF OF CONCEPT Akamai overcomes the Internet's hot spot problem. "

Source - [HP004T][GDrive]

PROOF OF CONCEPT Akamai overcomes the Internet's hot spot problem. Paul Sagan says that Danny could leave the company to finish his PhD and publish his thesis, but then they'd have to kill him. Everyone else at Akamai is encouraged to complete their academic work, a slew of them at MIT, but Danny – him […]

[**Paul Lewis Sagan (born 1959)**] says that Danny could leave the company to finish his PhD and publish his thesis, but then they'd have to kill him. Everyone else at Akamai is encouraged to complete their academic work, a slew of them at MIT, but Danny - him they'd have to off. He knows too much.

[**Daniel Mark Lewin (born 1970)**] is an algorithms guy, and at Akamai Technologies, algorithms rule. After years of research, he and his adviser, professor [**Frank Thomson Leighton (born 1956)**], have designed a few that solve one of the direst problems holding back growth of the Internet. This spring, Tom and Danny's seven-month-old company launched a service built on these secret formulas.

The **Akamai** solution recalls great historical shifts - discoveries of better, faster ways - like the invention of Arabic numerals, or the development of seafaring. Take the latter: For most of prehistory, people traveled exclusively over land. Then, around 5,000 years ago, they discovered that floating cargo on water was easier than lugging it across terrain - no mountains to climb, no roads to negotiate. Seafaring transformed most of the world's surface from unusable space into a vast ubiquitous shortcut, a portal to faraway lands and great riches. Natural harbors blossomed into sophisticated cities. And although societies continued exchanging goods with their neighbors over land, the first world powers, the first empires, commanded the seas.

In some ways, sending information around the traditional Internet resembles human transport, pre-Phoenicia. The Net was originally designed like a series of roads connecting distinct sources of content. Different servers, physical hardware, specialized in their own individual data domains. As first conceived, an address like nasa.gov would always correspond to dedicated servers located at a NASA facility. When you visited www.ksc.nasa.gov to see a shuttle launch, you connected to NASA's servers at Kennedy Space Center, just as you traveled to Tivoli for travertine marble instead of picking it up at your local port. When you ran a site, your servers and only your servers delivered its content.

This routing system worked fine for years, but as users move to fatter pipes, like DSL and broadband cable, and as event-driven supersites emerge, the protocols tying information to location cause a bottleneck. Back when The Starr Report was posted, Congress' servers couldn't keep up with hungry surfers. When Victoria's Secret ran its Super Bowl ad last February, similar lusts went unsated. The Heaven's Gate site in 1997 quickly followed its cult members into oblivion. And when The Phantom Menace trailers hit the Web this spring, a couple of sites distributing them went down.

This is the "hot spot" problem: When too many people visit a site, the excessive load heats it up like an overloaded circuit and causes a meltdown. Just as something on the Net gets interesting, access to it fails.

For more time-critical applications, the stakes are higher. When the stock market lurches and online traders go berserk, brokerage sites can hardly afford to buckle. In retail, slow responses will send impatient customers clicking over to the competition. Users may have Pentium IIIs and ISDN lines, but when a site can't keep up with demand, they feel like they're on a slow dialup. And users on relatively remote parts of the network - even tech hubs like Singapore - often suffer slow responses, not just during peak traffic.

ISPs address this problem by adding connections, expanding capacity, and running server farms to host client sites on many machines, but this still leaves content clustered in one place on the network. Publishers can mirror sites at multiple hosting companies, helping to spread out traffic, but this means duplicating everything everywhere, even the files no one wants. A third remedy, caching, temporarily stores copies of popular files on servers closer to the user, but out of the original site's control. Naturally, site publishers don't like this - it delivers stale content, preserves errors, and skews usage stats. In other words, massive landlock.

So in 1998, with their new algorithms in hand, [Frank Thomson Leighton (born 1956)] and [Daniel Mark Lewin (born 1970)] found themselves facing a sort of manifest destiny. The Web's largest sites were straining to meet demand - and frequently failing. Most needed better traffic handling, a way to cool down hot spots and speed content delivery overall. And Tom and Danny had conceived a solution, a grand-scale alternative to the Net's routing system.

In September, a California company called Sandpiper Networks introduced a service perilously similar to what they'd envisioned, but Tom and Danny's load-balancing solution was one step more radical, and the problem was plenty big for two contenders. [Paul Lewis Sagan (born 1959)], a content guy from Time Warner's Pathfinder, signed up to lead them, and the Cambridge, Massachusetts-based startup began building its own globe-spanning network of servers that would handle Web content in a brand-new way.

It worked. With Akamai's FreeFlow service, all content pours through the entire network, instantly responding to demand, ebbing and flowing as needed, changing routes and locations in response to current conditions. Its ocean of servers connects to the terra firma of the rest of the Net at scores of ports, all of which move data more quickly as conditions continually change.

No Fixed Address

In January, Akamai began running beta versions of FreeFlow, serving content for ESPN.com, Paramount Pictures, Apple, and other high-volume clients. (Akamai withholds the names of the others, but you can tell if a site is using the service by viewing the page source and looking for akamaitech.net in the URLs. A cursory test reveals "Akamaized" content at Yahoo! and GeoCities.)

ESPN.com and Paramount have been good beta testers - ESPN.com because it requires frequent updates and is sensitive to region as well as time, and Paramount because it delivers a lot of pipe-hogging video. On March 11, while ESPN was covering the first day of NCAA hoops' March Madness, Paramount's Entertainment Tonight Online posted the second Phantom Menace trailer. FreeFlow handled up to 3,000 hits per second for the two sites - 250 million in total, many of them 25-Mbyte downloads of the trailer. But the system never exceeded even 1 percent of its capacity. In fact, as the download frenzy overwhelmed other sites, Akamai picked up the slack. Before long, Akamai became the exclusive distributor of all Phantom Menace QuickTimes, serving both of the official sites, starwars.com and apple.com.

So how does it work? Companies sign up for Akamai's FreeFlow, agreeing to pay according to the amount of their traffic. Then they run a simple utility to modify tags, and the Akamai network takes over. Throughout the site, the system rewrites the URLs of files, changing the links into variables to break the connection between domain and location. On www.apple.com, for example, the link www.apple.com/home/media/menace_640qt4.mov, specifying the 640 x 288 Phantom Menace QuickTime trailer, might be rewritten as a941.akamai.com/7/941/51/256097340036aa/www.apple.com/home/media/menace_640qt4.mov. Under standard protocols, a941.akamaitech.net would refer to a particular machine. But with Akamai's system, the address can resolve to any one of hundreds of servers, depending on current conditions and where you are on the Net. And it can resolve a different way for someone else - or even for you, a few seconds later. (The /7/941/51/256097340036aa in the URL is a fingerprint string used for authentication.) This new method is more complicated, but like modern navigation, it opens new vistas of capacity and commerce.

Sandpiper remains Akamai's only direct competitor. In April it signed a deal with AOL and Inktomi to begin serving their sites and incorporating their servers into the Sandpiper network. But a month out of the starting gate, Akamai was running immediately neck and neck with its rival, both promising more than 1,000 servers by the end of the year.

Academic Hot Spot

Partly because it arrived second, Akamai has had to differentiate its product. The company has done this not only by focusing on fine points of the technology, but also by positioning itself as the intelligent solution. FreeFlow is the masterwork of leading scientists from MIT.

What's more, the scientists of Akamai are algorithms people. Whereas network hackers tend to be masters of improvisation, spotting local problems and using intuition and quick experimentation to fire off fixes, algorithms people tend to be slower and more rigorous, examining and proving everything along the way. They start with the most pared-down problems - sorting numbers, stacking rectangles, connecting dots - and build up to more complicated situations. They study how efficiently computer programs run under all conditions - the best, average, and worst-possible cases - as the mass of processors, connections, and information become infinitely large. It may take them a while to find a solution they like, but when they do, they know it will work, both on paper and in any reality.

This is the hot spot phenomenon: just as something on the Net gets interesting, access to it fails.

So network growth doesn't scare algorithms people; they always push things to infinity anyway.

You can trace Akamai's genesis to LCS, MIT's Laboratory for Computer Science, where **Tim Berners-Lee's World Wide Web Consortium** and [Frank Thomson Leighton (born 1956)]'s algorithms group both have their offices. In 1995 Tim asked Tom if he thought distributed algorithms could reliably solve the hot spot problem, and Tom's algorithms posse was intrigued. The problem raised interesting theoretical issues, the group's forte, while at the same time the graphs of nodes and edges they drew on whiteboards represented actual machines and Net connections. Real-world relevance! Several semesters and ideas later - some published, some still proprietary - Tom and Danny had blueprints for server software that would cool down traffic everywhere. But better, they had formally proven that most of their algorithms were optimal. In other words, different solutions might give equally good results, but none could ever possibly do better.

For their nonoptimal algorithms, Tom and Danny demonstrated that the problems were, in computer-science shorthand, "hard" problems. This means there are no major shortcuts to finding the best solution; the problem is inherently difficult, and you just have to do the best you can with finite time and computational resources.

Lastly, Tom and Danny knew with total certainty that, given their descriptions of the hot spot problem and the workings of the Net, the larger the network grew, the better their solution would perform. They not only had a solution, they had a solution that was literally - demonstrably - unbeatable.

La Sauce Est Tout

The name Akamai means "clever" in Hawaiian, or more colloquially, "cool." At Danny's suggestion, the team found it by trying out words in an online English-Hawaiian dictionary. In a sense, FreeFlow is an attempt to put smartness into the Web page, the URL, and the network itself.

Although at first Akamai's founders imagined selling their traffic-calming solution as server software - ISPs would buy it and install it themselves to boost

Although at first Akamai's founders imagined selling their traffic-calming solution as server software - ISPs would buy it and install it themselves to boost performance - they soon realized they should be a service for publishers, content providers, and ecommerce companies of all kinds, not a software company. With Akamai's service, publishers could forget about servers and ISPs, and concentrate on content. Akamai would run its software on its own broadly deployed server network and sell guaranteed fast delivery, subscription style. The idea was to work with as many ISPs as possible to create a new layer of infrastructure on top of the Net, a fluid system that would run everywhere and reach out to remote populations.

Small ISPs operate at a single location; the big ones have their own subnetworks encompassing multiple POPs in different locations. Both are basically facilities where a bunch of servers share one or more network connections. Akamai calls these facilities "regions," and to get close to all users, the company tries to locate its servers in as many regions as it can. Singapore's SingNet has Akamai servers in its single region, while Teleglobe has them all over. Partnering ISPs small and large benefit from improved capacity, while their users get faster delivery of FreeFlow sites. (The company targets content providers and ecommerce sites, but hopes to cultivate an Intel-style status among consumers as well, who would look for ISPs with "Akamai Inside.")

So Akamai servers are in diaspora, but they remain clannish. They keep in constant contact with each other all over the map, speaking their own special dialect of Linux. Each region has one mapping server and one or more content servers. All content servers, no matter where they are, are eligible to serve any content. The mapping servers monitor the local state of the network: How fast are the current connections to neighboring regions? Which connections seem to have gone down completely? They figure out which servers should carry which files, and then how to evenly distribute the hits for a requested file among the servers that carry it.

Web pages themselves break down into units: the HTML page plus each embedded file it contains - images, animations, sounds, video. Akamai's system wisely leaves the HTML alone and scatters only the embedded elements, the rationale being that these larger files cause the traffic jams, while plain HTML is fast and cheap. In a big cafeteria, FreeFlow might pick up your meat loaf, green beans, and rice pudding at three different counters, calculating which steam tables look hotter and where the lines are long. But your tray, the HTML, always comes from the same place. Keeping the HTML on the home server also keeps the user database and customization scripts in one place, where publishers want them.

When a user requests a file, the mapping servers decide on a content server in two stages: They choose first the best region and then the content server within that region. In computer-science terms, the first stage represents a classic "min-cost" flow problem, where the cost associated with each hop between neighboring regions - or how easy it is for traffic to flow between them - is weighted. As traffic conditions change, the mapping servers update these weights and continually find a low-cost route based on a user's place on the network. As Akamai and Sandpiper both know, this is an expensive, "hard" calculation. The mapping servers have to be fast.

Within a region, for the second stage of routing, the system divides the traffic evenly among all the servers using "consistent hashing," a wonderful double-randomized hashing algorithm that Danny invented, earning him MIT's 1998 Morris Joseph Lewin Award (no relation) for best master's thesis. Simple hashing algorithms, which assign objects to locations the way a card dealer deals out hands, break down completely when players drop out or come in; the original formula for who will receive what card, which relies on knowing the number of players, no longer works. But consistent hashing splits up and mixes the assignments so thoroughly, while still using a fairly simple formula, that if locations drop out and throw things off, the correct location will still be close by. As more server problems and network glitches arise, the algorithm has to do more second-guessing, but it achieves the best results possible in an unsteady environment.

Routing and spreading the hits intelligently is important, but it isn't the whole solution. The real hot spot cooler is balancing the content load - determining which servers should have which files in the first place, before they fulfill requests routed to them. Akamai's solution replicates the popular files on multiple servers, spreads total loads evenly, and minimizes copying files around. The ingenious algorithm underlying this process is Akamai's secret sauce, and as the French say, the sauce is everything.

It was a solution that was literally - demonstrably - unbeatable.

Cambridge Dons

Underlying algorithms aside, a private network service business is a different beast entirely from a software business - for one thing, it requires far more money.

Discovered by Battery Ventures through MIT's student-run "$50K" Entrepreneurship Competition (the Akamai team failed to win the trial's whopping $50,000 grant for starting a new business, though the winner turned out virtuous and offered to split the take with the four other finalists), Akamai later secured funding from several angel investors. Among them were Gil Friesen (formerly of Classic Sports) and Art Bilger (formerly of Apollo Fund and New World Communications). Polaris Venture Partners of Boston and Seattle also joined, and by the end of 1998 the startup had more than $8 million in first-round funding.

The talent snowballed. Battery Ventures' Todd Dagres recruited [Paul Lewis Sagan (born 1959)] as chief operating officer last January. In March David Goodtree joined as head of marketing, after years of studying the IT industry at Forrester Research. In April [George Henry Conrades (born 1939)] became Akamai's CEO and chair. **At BBN George had overseen the acquisition of Genuity, authors of the traffic-management software tool Hopscotch, and when he learned about Akamai, it seemed the perfect big-thinking, out-of-the-box idea: a Hopscotch for the entire Internet. Everyone believed.**

Today Akamai employs about 130 people. Many are MIT students, both graduate and undergrad. But alongside them in the trenches is a surprising number of actual faculty on temporary leave - full professors and associate professors from places like MIT, Carnegie Mellon, and UC Berkeley.

The Sandpiper Approach

Akamai and Sandpiper are not the first in their field of distributed traffic management. Older systems, many still available and useful, perform sophisticated routing and load balancing over groups of servers installed on a single subnetwork. Companies like Cisco (DistributedDirector), GTE Internetworking (which acquired BBN and with it Genuity's Hopscotch), and Resonate (Central Dispatch) have been selling such solutions as installable software or hardware. Digex and GTE Internetworking (Web Advantage) offer hosting that uses intelligent load balancing and routing within a single ISP. These work like Akamai's and Sandpiper's services, but with a narrower focus.

But only Akamai and Sandpiper are selling the service of whole server networks spanning numerous ISPs, and only Akamai and Sandpiper use the trick of rewriting URLs as a hook into the alternative system.

Both companies' services are powerful, but they're not identical. Footprint customers specify which part of their content the system should handle by defining rules through a user interface, rather than by adding tag lines to page source. Sites project expected traffic levels ahead of time and pay for levels of

service, rather than paying by the meter.

Footprint users can choose from many content distribution options - some simple, some advanced - for different parts of a site, while FreeFlow optimizes everything automatically. Footprint also distributes HTML, not just embedded files, spreading database information through the network. Akamai leaves HTML at home.

Under unusual circumstances, Footprint may be less bulletproof than FreeFlow, but it has proven itself well. It kept The Starr Report available on the Los Angeles Times site, when many others buckled, and served Intuit's site reliably all through tax season. As long as speed is scarce on the Net, the two companies are going to find fans.

Both companies, if they continue to grow, will route traffic more efficiently over the Net as a whole, increasing delivery speeds for subscribers and nonsubscribers as well. But there's a downside. Content delivered via these subscription-based networks will make content routed by the old, free Internet seem slow. A page that loads in six seconds seems fine until you visit one that loads in four. This effect will be magnified as people upgrade their connections to DSL and broadband cable. With fatter pipes, users will demand more information-intensive experiences, and the newly available last-mile bandwidth will be filled up with fast, dazzling content from supersites, served from networks like Akamai. ESPN.com will appear instantly, but you'll have to wait an age for anything homegrown or poorly financed.

Others argue, however, that the Internet is already a tiered environment, where cash-rich content providers can add more and more hardware to improve delivery, while your cousin's homepage, with no traffic management resources behind it, is already slow. Akamai and Sandpiper just allow more publishers to tap into premium services.

Either way you look at it, the stakes are high. The winner, if there is one, will have its hand in the major revenue-generating sites on the Web. More than any other company in the medium's short history, the winner will own the Net - or at least the parts of it that pay.

Sea Change

Akamaiians compare their company to FedEx, delivering content faster and more reliably than the old USPS. It's not a bad comparison - as good, at least, as the glorious advent of sea travel thousands of years before Christ - but it raises the specter of huge capital needs and about 10 more years till ubiquity.

Akamai wants to be everywhere: says Paul, "a server in every POP."

Yet in less than a year, the little-known company is well on its way toward global domination. Akamai wants to be universal, as widespread as the Net itself, with, in Paul's terms, "a server in every POP." If the company has its way, every computer on the Net will connect to Akamai servers, which will push and pull content around with the tides, constantly running calculations on the turbulence and fluid dynamics of information. As each new site and ISP signs on, Akamai's ocean will swell, carrying ships ever closer to their final goals. For now at least, the ordinary user ought to be glad that the company in charge of the Earth's oceans wants only to give each of us beachfront property.

2000 (April) - whitepaper on FreeFlow

http://www.theether.org/cs199/papers/freeflow.pdf

2000 (April 17) - NYTimes - "TECHNOLOGY; 2 Companies Take Separate Paths To Speed Delivery of Web Pages"

By Lawrence M. Fisher / April 17, 2000 - Source - [HN01F7][GDrive]

Here's news: Some of the Internet's uncertainties have nothing to do with stock prices. Take the vagaries of surfing the Web, for example.

Anyone who has ever watched a complex Web page paint itself onto the computer screen, image by grudgingly slow image, can attest that the World Wide Web should be faster. On that simple proposition there is virtually unanimous agreement.

Where there is disagreement is over how to accomplish this worthy goal -- and how to get paid for doing it. On that, the Web-performance industry splits into two factions, whose leaders are divided by technologies and an entire continent: Inktomi, based in Foster City, Calif., and Akamai, in Cambridge, Mass.

Inktomi, with America Online as a trophy customer, aims to make Web traffic flow faster by storing or "caching" the most frequently requested material on network server computers nearest to the people who request it. Last year, for example, when a bazillion or so AOL users clicked on the Starr report, there were no delays or crashes. That is because the readers were not linking to the government server, but to a battalion of Inktomi caches that duplicated and delivered the document.

Akamai, which counts Yahoo among its big clients, takes a different approach to the same problem, with a technique called content distribution. When a user

in Singapore, say, clicks on a popular page in Yahoo, only the first request goes to Yahoo's server in Palo Alto, Calif.; the balance of the page is then delivered from an Akamai server with the shortest, fastest connection to the person in Singapore.

Inktomi and Akamai each have a pack of competitors, snapping at their heels and hoping to bite off bigger and bigger chunks of the Web-performance market, which is expected to grow from about $4.5 billion last year to $25 billion in 2003, according to Andrew C. Brosseau, an analyst with S. G. Cowen.

Officially, Inktomi and Akamai executives assert that they really do not compete with each other and have little in common -- which of course means they compete vigorously and have more in common than either will let on.

"Akamai is just doing one of a multitude of things you would want to do to interact with content," said David C. Peterschmidt, president and chief executive of Inktomi, whose stock price is up nearly 14 percent so far this year, despite the market's recent turmoil. "Caching allows a whole set of stuff, of which content distribution is just one thing."

But as Akamai sees things, "there's a lot of content that's uncacheable, because caching doesn't ensure freshness," said [Paul Lewis Sagan (born 1959)], Akamai's president and chief operating officer. "In entertainment or news you have to make sure the content is fresh for each user." Akamai's stock price, despite a plunge from the stratospheric heights it occupied in January, is still up nearly 150 percent from the offering price last October.

Whatever their technical differences, Akamai and Inktomi in some ways have followed remarkably parallel paths. Each, for instance, has an odd name derived from a Native American language: Inktomi, pronounced INK-tuh-mee, is the name of a clever spider in Lakota legend; Akamai (AK-uh-migh) is Hawaiian for intelligent.

Each was founded by a pair of math whizzes from a leading university, but is now managed by a computer industry graybeard.

Each company, moreover, received venture funding from a leading technology company, Intel in Inktomi's case, Apple Computer and Cisco Systems in Akamai's. And each has ridden an initial public offering into a high stock market valuation for the company -- $100.8125 a share for Inktomi and $64.875 a share for Akamai.

And each, of course, tries to address perhaps the most vexing quirk of the Web. Some sites sprint while others crawl. But sometimes a site will sprint on one visit only to crawl on the next. In such cases the disparity is more likely caused not by the Web site itself, but by the underlying architecture of the Internet, which was originally intended to deliver e-mail reliably -- not to broadcast complex media at high speed.

For a user, calling on any Web page requires downloading multiple "objects" -- a banner ad, a photo or a set of activity buttons, for example. Any or all such objects must be broken down into packets of digital bits, sent across the Internet and reassembled at the end user's computer.

During this downloading, even for the delivery of a single Web page, there is a tremendous amount of dialogue between the user's browser software and the source computer server. All the communicating bits must travel -- often across the country, or even around the globe -- hopping across multiple networks and traffic routers. At each hop, a few packets may get lost and have to be resent.

Inktomi's approach, caching, and Akamai's mainstay, content distribution, both seek to streamline things by taking the material on the original server and moving it closer to the user. But the approaches differ, as do the trade-offs.

The concept of caching comes from the semiconductor industry; chip makers commonly put a small amount of memory, called cache, directly on a microprocessor. Frequently used bits of data can be stored in this cache memory, to be easily summoned when needed, speeding the computer's operation

Inktomi has a software product, called Traffic Server, that runs on server computers around the Internet, working essentially the same way as cache memory on a computer chip. Traffic Server monitors network traffic to identify the most frequently requested objects, then stores, or caches, them closer to the requesting users.

"Networks were very dumb," Mr. Peterschmidt said. "They would send the same packet over and over again to the same location. Traffic Server was the first step at making the network smarter. It would recognize that you'd already requested that information, and store it closer to the user."

At age 52, Mr. Peterschmidt, formerly president of Sybase, the database software company, is Inktomi's graybeard. The company was founded in 1996 by two researchers at the University of California at Berkeley: Eric A. Brewer, now 33 and Inktomi's chief scientist, and Paul Gauthier, who is 27 and currently on sabbatical from the company. Their first product was a search engine, which Inktomi still sells as a service to portals like Yahoo and Hotbot.

Traffic Server, introduced in 1998, was created as a stand-alone software package to run on Sun Microsystems' Solaris version of the Unix operating system. The product now also runs on other major versions of Unix and on Microsoft's Windows NT network operating system. Inktomi also publishes Traffic Server's application programming interfaces, or A.P.I.'s -- software specifications that enable other companies to add functions, like network security or so-called streaming audio and video.

Excite@Home, which became Inktomi's second customer for Traffic Server after AOL, uses Traffic Server's programming capability to customize the Excite@Home Web service for different devices -- one version for PC's, for example, another for TV set-top boxes. But while this flexibility was nice, the real draw was the improved performance, said Robert Keller, an engineering manager at Excite@Home.

Inktomi, which counts 200 customers, sells Traffic Server for as much as $24,000 a copy. And it requires a substantial piece of hardware, like a Sun Sparc server, which is likely to cost as much or more. These requisites have left an opening at the budget-minded end of the market.

Rushing to fill this opening are companies like CacheFlow and NetAppliance, which sell caching appliances -- small computers preloaded with caching software. Novell, the office-network software company, is also a player in this end of the cache market. The company has deals with 13 major server manufacturers, including I.B.M., Compaq and Dell, to sell hardware bundled with software. Prices start as low as $4,000.

CacheFlow, whose stock went public last November at $24 and now trades at $34.25, says it will do for caching what Cisco Systems did for routing -- even though Cisco has its own cache products. CacheFlow offers a simple hardware box with its own operating system and software that is designed to require little of the Web operator's time or effort.

"We go out, do the installation and the customer never has to think about us," said Brian M. NeSmith, president and chief executive of CacheFlow, based in Sunnyvale, Calif.

All of the cache vendors sell a product, be it hardware, software or a mixture of both**. Akamai, on the other hand, sells a service, typically priced on a megabit-per-month basis.**

megabit per month basis.

Akamai customers -- which include the Web sites of Apple Computer, CBS, Microsoft and The New York Times -- must first run a small program that selectively ''akamaizes'' portions of their sites for delivering material over Akamai's servers. This process, one that the individual user normally would not be aware of, takes the U.R.L., or address, that normally directs a browser request to the server housing the information and converts the address to an A.R.L., the designator for an Akamai server.

The 2,750 or so Akamai servers worldwide are run for the company by network operators like [UUNET Technologies, Incorporated] and Sprint. Akamai's software determines which server is best suited for use by the person making the request and then sends the ''akamaized'' content to that server. Akamai officials contend that the process is much more sophisticated than caching.

''Caching is 2 percent of the complexity of content delivery,'' said [**Daniel Mark Lewin (born 1970)**] , who was a graduate student at the Massachusetts Institute of Technology when he co-founded Akamai in 1998 with [**Frank Thomson Leighton (born 1956)**], a professor of applied mathematics there. ''The hard part of content delivery is figuring out what request should go to what machine,'' said Mr. Lewin, 29, who is now Akamai's chief technology officer.

In addition to Akamai's president, **Mr. Sagan, who is 41 and is a former president of Time Inc.** New Media, Akamai's executive suite includes [**George Henry Conrades (born 1939)**], chairman and chief executive. Mr. Conrades, 61, is the former chief executive of the networking company BBN, now Genuity, and a former senior executive at I.B.M.

Some analysts say Akamai overstates the distinctions between content distribution and caching, which they say is also a big part of Akamai's service. ''Akamai deployed $4 million worth of caches and accelerated Yahoo's performance,'' said Peter Christy, an analyst with Jupiter Communications. ''Any of the caching companies could have done that.''

Although he concedes that Akamai has some truly innovative technology, Mr. Christy said the company's real brilliance lay in its business model, which might be described as caching plus network management, all sold as a pay-as-you-go service.

Mr. Christy says Akamai's pitch, that it can improve performance for content providers, has more sizzle than Inktomi's claim that it can reduce costs for Internet service providers. ''None of Inktomi's customers can figure out how to get a consumer to pay more for higher performance,'' he said. Akamai asks content providers, ''Are you willing to pay to have your site perceived better by the consumer?'' he said, ''and the answer is yes.''

Akamai's service is now used by more than 400 Web customers. But the company is challenged by a pack of players, like Adero, Digital Island and Exodus, that act as network hosts for companies that operate Web sites and that have all formed partnerships with Inktomi.

Some of Akamai's potential rivals are even more daunting, like mighty Intel, which started its own Web-hosting business last year and has begun selling Inktomi's software with an Intel cache server.

What is more, many of these hosting companies own their own networks. Akamai does not, instead piggybacking on network carrying capacity from UUNet, Sprint and others.

''Akamai has content distribution, which is good, but that's just one piece,'' said Ruann Ernst, chairman and chief executive of Digital Island, a company in San Francisco that went public last June at $10 and whose stock closed on Friday at $25.875. Its notable customers include CNBC.com, Intuit and The Los Angeles Times.

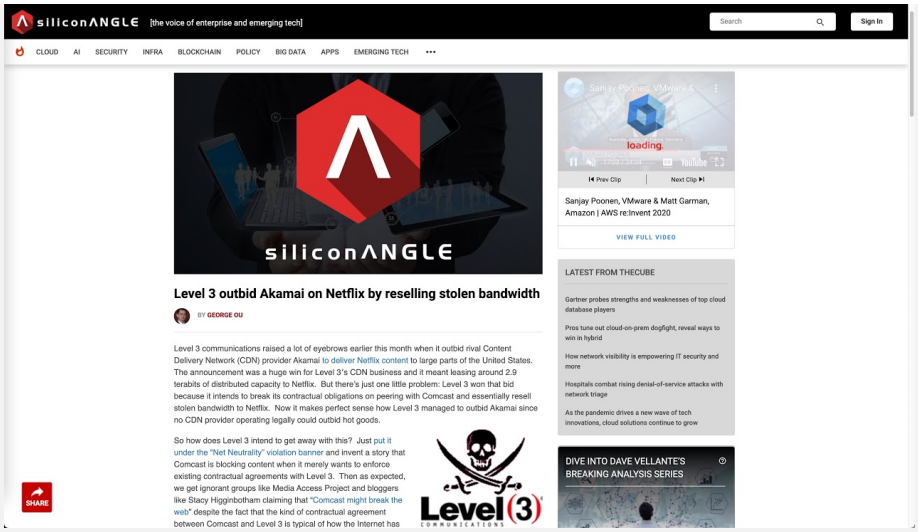
''We are especially good at putting it all together in an integrated way so they don't all look like different solutions,'' Ms. Ernst said. ''It's a huge market, and there will be room for a lot of different business models because different customers will want to buy in different ways.''

2020 (Nov 30) - Silicon Angle - "Level 3 outbid Akamai on Netflix by reselling stolen bandwidth"

Source - [HW005J][GDrive]

2010-11-30-siliconangle-com-level-3-outbid-akamai-on-netflix-by-reselling-stolen-bandwidth

BY GEORGE OU



[HW005K][GDrive]

Level 3 communications raised a lot of eyebrows earlier this month when it outbid rival Content Delivery Network (CDN) provider Akamai to deliver Netflix content to large parts of the United States. The announcement was a huge win for Level 3's CDN business and it meant leasing around 2.9 terabits of distributed capacity to Netflix. But there's just one little problem: Level 3 won that bid because it intends to break its contractual obligations on peering with Comcast and essentially resell stolen bandwidth to Netflix. Now it makes perfect sense how Level 3 managed to outbid Akamai since no CDN provider operating legally could outbid hot goods.

So how does Level 3 intend to get away with this? Just put it under the "Net Neutrality" violation banner and invent a story that Comcast is blocking content when it merely wants to enforce existing contractual agreements with Level 3. Then as expected, we get ignorant groups like Media Access Project and bloggers like Stacy Higginbotham claiming that "Comcast might break the web" despite the fact that the kind of contractual agreement between Comcast and Level 3 is typical of how the Internet has always worked. On the contrary, allowing Level 3 to violate their peering agreement under the banner of "Net Neutrality" is what would actually break the Internet and turn peering and Internet investment economics on its head.

What makes the Internet work

The Internet is comprised of privately built and privately operated networks that connect on a contractual basis. These contracts are mutually agreed upon and there are generally two types of contractual agreements.

1. **Transit agreements**
2. **Peering agreements**

A transit agreements is when a network carrier delivers data between two other networks, and both end point networks have to pay the central carrier to carry that traffic at a metered rate. So if Comcast and Level 3 communications had no direct method of connecting to each other, they must each pay a third party network carrier to connect their two networks. Transit agreements are usually more expensive than peering agreements for every packet delivered and they're generally slower because of distance and congestion. According to DrPeering.net, typical Internet transit rates are $3 to $10 per Megabit per second (Mbps) per month for server bandwidth.

Peering agreements occur when two networks have a direct physical connection to each other. A physical connection exists when it is financially feasible and when there is a business agreement in place. Physical connections are often practical to construct since many end point networks meet at Internet Exchange Points within the same physical building and that merely involves connecting a few in-building Ethernet cables on some gigabit or multi-gigabit switched ports. The business agreement requires that both parties come to mutually agreed upon terms on a financial settlement scheme.

The settlement scheme can involve a fee based agreement or it might involve no money changing hands. When one network sends more traffic to another network than it receives, it usually has to pay a metered fee on the extra traffic that it sends. When the two networks are more or less sending the same amounts of traffic to each other, the two networks can agree on settlement free terms where no money changes hands. These terms of settlement might sound arbitrary and unfair to outside observers that smacks of "might makes right", but it is based on sound economics that ensures continued investment in the Internet.

The network sending more traffic does so because it has cheaper-to-serve customers than the network receiving more traffic. The network receives more traffic because it has more "eyeballs" i.e., broadband consumers who are hundreds of times more expensive to connect than the sending network's customers which are the Netflix and YouTubes of the world. Providing a gigabit per second (Gbps) of capacity to a server in a data center might cost a few hundred dollars of capital expenditures but an additional gigabit of last-mile broadband capacity could cost millions in capital expenditures. Another example of one network that might charge another network to peer is when one network operates more long distance lines which are more expensive to build and maintain, especially those going under the oceans connecting continents.

A network that didn't build the expensive infrastructure can't just expect to use those networks without paying to use them. The network that spent all the money up front in capital expenditures provides value to the network that spent little money building the network and it needs to recoup its costs by charging the network that didn't build the most expensive part of the network. Settlement based peering is the mechanism than ensures that all players on the Internet pay their share of expanding the Internet. This is the only way to ensure continued private investment and growth on the Internet.

How Level 3 intends to steal bandwidth from Comcast

Before Level 3 Communications landed the Netflix CDN deal, it sent approximately the same amount of traffic to Comcast as it received. Because of that, the two networks exchanged services of roughly equal value and they agreed to a settlement free peering contract. The two companies agreed not to charge each other for peering connectivity so long as the traffic exchange levels remained more or less the same

charge each other for peering connectivity so long as the traffic exchange levels remained more or less the same.

But with the massive new Netflix CDN deal where Netflix is currently the largest source of traffic in North America, Level 3 will likely start sending 5 times more traffic to Comcast than it receives. That would violate its current settlement free peering agreement and it would require a new fee based agreement where Level 3 has to pay Comcast for the extra traffic it sends to Comcast. That makes sense as Netflix's old CDN provider Akamai paid to peer with Comcast, but Level 3 decided that it would simply insist on violating its existing free peering agreement with Comcast which would allow it to outbid Akamai on the lucrative Netflix CDN service. Level 3 would essentially steal bandwidth from Comcast to outbid Akamai which pays Comcast for bandwidth.

From Comcast's perspective, this impacts them severely as they're losing bandwidth revenue from Akamai since Akamai lost Netflix business to Level 3, but Level 3 will refuse to pay for the bandwidth they use from Comcast by free riding on their existing peering connection. Even without the bogus Net Neutrality claims, Level 3 can cause major problems for Comcast if a peering dispute turns ugly. If Comcast insists on enforcing its contractual agreement and charges Level 3 and Level 3 refuses to pay, there's little Comcast can do about it other than to sever the peering connection and send Level 3 traffic to its Internet transit provider that will eventually reach Level 3. But with most peering disputes, the contract violator will simply refuse to return to the Internet transit path and they'll keep sending traffic down a broken unpaid pipe to Comcast which breaks network connectivity between Level 3 and Comcast completely.

Each will point the finger while customers on the two networks are cut off from each other and it makes both providers look bad. The reputation of both companies will be harmed and it will essentially be a game of "chicken" to see who blinks first. For smaller peering disputes that don't garner much attention, the dispute is settled in a court or arbitration while the network is cut off for days or weeks. For larger peering disputes that receive media attention and congressional attention because fuming voters are calling their representatives and senators, it turns ugly and may lead to calls for additional Internet regulations which no one on the Internet wants.

With the added confusion of "Net Neutrality", the hopeless pro-anything-labeled-Net-Neutrality biased blogosphere and the FCC proceedings on the Comcast NBC merger, Level 3 figured that they had a good chance of getting away with bandwidth theft or at least forcing much more favorable rates from Comcast. But not only is Level 3 trying to steal bandwidth, they're a hypocrite because they've fought just as vigorously against other bandwidth thieves that tried to violate Level 3's peering agreements. Joe Waz of Comcast pointed this out by citing Level 3's own words when it came to the sanctity of peering agreements.

"To be lasting, business relationships should be mutually beneficial. In cases where the benefit we receive is in line with the benefit we deliver, we will exchange traffic on a settlement-free basis. Contrary to [other ISPs] public statements, reasonable, balanced, and mutually beneficial agreements for the exchange of traffic do not represent a threat to the Internet. They don't represent a threat to anyone other than those trying to get a free ride on someone else's network."

Of course Level 3 wasn't actually being genuine when they said that. They only meant it when someone else tried to free ride on Level 3's network but they think it's just fine if they free ride and steal bandwidth from Comcast.

A possible solution to free riders

I think there might be a better solution than severing a peering connection that goes unpaid. What Comcast or any other network encountering a free rider should do is simply enforce a symmetric rate on their peering connection. If Comcast sends 1 Gbps of traffic to Level 3 Communications, then they should enforce a 1 Gbps settlement free receive rate from Level 3. This might result in Level 3 failing to deliver the performance they promised to Netflix. If Level 3 can't deliver an adequate service level to Netflix because they refuse to pay for the extra traffic going to Comcast, then Netflix is well within its rights to terminate the new agreement with Level 3 and return to honest CDN providers like Akamai. From a Net Neutrality standpoint, Comcast would not be discriminating against any source or application type in particular and they would only be enforcing existing contractual agreements with Level 3.

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Housatonic

Harold Melvin Agnew (born 1921)

Wikipedia Harold Agnew

See Wikipedia capture : [HK000P][GDrive]

Harold Melvin Agnew (March 28, 1921 – September 29, 2013) was an American physicist, best known for having flown as a scientific observer on the Hiroshima bombing mission and, later, as the third director of the Los Alamos National Laboratory.

Agnew joined the Metallurgical Laboratory at the University of Chicago in 1942, and helped build the Chicago Pile-1, the world's first nuclear reactor. In 1943, he joined the Los Alamos Laboratory, where he worked with the Cockcroft–Walton generator. After the war ended, he returned to the University of Chicago, where he completed his graduate work under Enrico Fermi.

Agnew returned to Los Alamos in 1949, and worked on the Castle Bravo nuclear test at Bikini Atoll in 1954. He became head of the Weapon Nuclear Engineering Division in 1964. He also served as a Democratic New Mexico State Senator from 1955 to 1961, and was the Scientific Adviser to the NATO Supreme Allied Commander Europe (SACEUR) from 1961 to 1964. He was director of the Los Alamos National Laboratory from 1970 to 1979, when he resigned to become President and Chief Executive Officer of General Atomics. He died at his home in Solana Beach, California, on September 29, 2013.

Early life and education

Harold Melvin Agnew was born in Denver, Colorado on March 28, 1921, the only child of a pair of stonecutters. He attended South Denver High School and entered the University of Denver, where he majored in chemistry. He was a strong athlete who pitched for the university softball that won a championship. He left the University of Denver in January 1942, but had enough credits to graduate Phi Beta Kappa with his Bachelor of Arts degree in June, and he received a scholarship to Yale University.[1][2]

After the Japanese bombing of Pearl Harbor brought the United States into the Pacific War, Agnew and his girlfriend Beverly, a fellow graduate of South Denver High School and the University of Denver, attempted to join the United States Army Air Corps together. They were persuaded not to sign the enlistment papers. Instead, Joyce C. Stearns, the head of the physics department at the University of Denver, persuaded Agnew to come with him to the University of Chicago, where Stearns became the deputy head of the Metallurgical Laboratory. Although Agnew had enough credits to graduate, Beverly did not and had to remain behind. They were married in Denver on May 2, 1942. They then went to Chicago, where Beverly became a secretary to Richard L. Doan, then head of the Metallurgical Laboratory. Agnew and Beverly had two children, a daughter Nancy, and a son, John.[1][3]

Harold Agnew on Tinian in 1945, carrying the plutoniumcore of the Nagasaki Fat Manbomb

At the Metallurgical Laboratory, Agnew worked with Enrico Fermi, Walter Zinn and Herbert L. Anderson.[1] There, he was involved in the construction of Chicago Pile-1. Initially, Agnew worked with the instrumentation. The Geiger counters were calibrated using a radon-beryllium source, and Agnew received too high a dose of radiation. He was then put to work stacking the graphitebricks that were the reactor's neutron moderator. He witnessed the first controlled nuclear chain reaction when the reactor went critical on December 2, 1942.[4][2][5]

Agnew and Beverly moved to the Los Alamos Laboratory in March 1943.[2] Agnew, Beverly and Bernard Waldman first went to the University of Illinois, where the men disassembled the Cockcroft–Walton generator and particle accelerator while Beverly catalogued all the parts. The parts were shipped to New Mexico, where Agnew and Beverly met up with them, and rode the trucks hauling them to the Los Alamos Laboratory. There, Beverly worked as a secretary, initially with Robert Oppenheimer and his secretary Priscilla Green. She then became secretary to Robert Bacher, the head of Physics (P) Division, and later the Gadget (G) Division, for the rest of the war. Agnew's job was to reassemble the accelerator, which was then used for experiments by John Manley's group.[3][6]

When experimental work wound down, Agnew was transferred to Project Alberta, working as part of Luis W. Alvarez's group, whose role was to monitor the yield of nuclear explosions. With Alvarez and Lawrence H. Johnston, Agnew had devised a method for measuring the yield of the nuclear blast by dropping pressure gauges on parachutes and telemetering the readings back to the plane.[7] In June 1945, he was issued with an Army uniform and dog tags at Wendover Army Air Field, Utah, and was flown to Tinian in the Western Pacific in a C-54 of the 509th Composite Group. Agnew's first task was to install his yield measurement instrumentation in the Boeing B-29 Superfortress aircraft *The Great Artiste*.[8]

During the atomic bombing of Hiroshima, on August 6, 1945, Agnew, along with Alvarez and Johnston, flew as a scientific observer in *The Great Artiste*, piloted by Charles Sweeney, which tailed the *Enola Gay* as the instrumentation aircraft. Agnew later recalled, "After we dropped our gauges I remember we made a sharp turn to the right so that we would not get caught in the blast – but we still got badly shaken up by it." He brought along a movie camera and took the only existing movies of the Hiroshima event as seen from the air.[7][9][10]

After the war ended, Agnew entered the University of Chicago, where he completed his graduate work under Fermi. Agnew and Beverly stayed with Fermi

and his family, due to the post-war housing shortage.[6] He received his Master of Science (MS) degree in 1948 and his Doctor of Philosophy (PhD) degree in 1949,[11] writing his thesis on "The beta-spectra of Cs137, Y91, Pm147, Ru106, Sm151, P32, Tm170".[12] Fellow postgraduate students at Chicago at the time included Tsung-Dao Lee, Chen Ning Yang, Owen Chamberlain and Jack Steinberger.[11]

Los Alamos years

Harold Agnew receives his 30 years of service award in 1974

With his doctorate in hand, Agnew returned to Los Alamos as a National Research Foundation Fellow, and worked on weapons development in the Physics Division.[10] In 1950, he was assigned to the thermonuclear weapons project, and was project engineer for the Castle Bravonuclear test at Bikini Atoll in 1954.[13][14] He became head of the Weapon Nuclear Engineering Division in 1964.[10]

Agnew served as a Democratic New Mexico State Senator from 1955 to 1961.[15] He was the first state senator to be elected from Los Alamos County. Senators served unpaid, receiving only a per diem allowance of five dollars.[16] Since the New Mexico legislature convened for only 30 days in even numbered years and 60 days in odd numbered years,[17] he was able to continue working at Los Alamos, taking leave without pay to attend.[16] He attempted to reform New Mexico's liquor laws, which specified a minimum mark-up. He was unsuccessful in 1957, but the law was reformed in 1963.[18]

From 1961 to 1964, he was Scientific Adviser to the NATO Supreme Allied Commander Europe (SACEUR). He also held a number of part-time advisory position with the military over the years. He was a member of the United States Air Force Scientific Advisory Board from 1957 to 1968, and was chairman of the Science Advisory Group of the United States Army's Combat Development Command from 1966 to 1970. He was a member of the Defense Science Board from 1966 to 1970, the Army's Scientific Advisory Panel from 1966 to 1974, and the Army Science Board from 1978 to 1984.[10]

Agnew became director of the Los Alamos National Laboratory in 1970, when it had 7,000 employees.[19] He took over at a time of great change. His predecessor, Norris Bradbury, had rebuilt the laboratory from scratch after the war, and many of the people he had brought in were approaching retirement.[20]Under his directorship, Los Alamos developed an underground test containment program, completed its Meson Physics Facility, acquired the first Cray supercomputer, and trained the first class of International Atomic Energy Agency inspectors.[21] Agnew managed to get the Los Alamos Laboratory responsibility for the development of the W76, used by the Trident I and Trident II Submarine Launched Ballistic Missiles, and the W78 used by the Minuteman III intercontinental ballistic missiles. He was proud of the work with insensitive high explosive that made nuclear weapons safer to handle. Support from the Atomic Energy Commission for reactor development dried up, but during the 1970s energy crisis, the laboratory explored other types of alternative fuels.[20]

Later life

In 1979, Agnew resigned from Los Alamos and became President and Chief Executive Officer of General Atomics, a position he held until 1985.[10] In his letter of resignation to David S. Saxon, the President of the University of California, Agnew wrote that his decision was influenced by "dissatisfaction with University administration policies and a lack of advocacy for the total LASL [Los Alamos Scientific Laboratory] program" and "frustration with what I consider to be a continuing inequitable distribution of defense program funding by the Department of Energy between the LASL and LLL [Lawrence Livermore Laboratory]."[22]

Harold Agnew at The Los Alamos Laboratory in 2006

Agnew chaired the General Advisory Committee of the Arms Control and Disarmament Agency from 1974 to 1978, and served as a White House science councillor from 1982 to 1989. He was a member of NASA's Aerospace Safety Advisory Panel from 1968 to 1974, and from 1978 to 1987. He became an adjunct professor at the University of California, San Diego in 1988. He was the recipient of the E.O. LawrenceAward in 1966, and of the Department of Energy's Enrico Fermi Award in 1978. Along with Hans Bethe, Agnew was the first to receive the Los Alamos National Laboratory Medal. He was a member of the National Academy of Sciences and the National Academy of Engineering.[5][10][23][24]

A proponent of tactical nuclear weapons, Agnew pointed out in 1970 that the Thanh Hoa Bridge in Vietnam required hundreds of sorties to destroy with conventional weapons when a nuclear weapon could have done the job with just one.[25] In a 1977 article for the Bulletin of the Atomic Scientists, Agnew argued that the fusion reactions of neutron bombs could provide "tactical" advantages over conventional fission weapons, especially in countering the "massive armor component possessed by the Eastern bloc." Citing conclusions reached by the Rand Corporation, Agnew argued that without affecting the armor of a tank, the neutrons produced by a fusion blast would penetrate the vehicle and "in a matter of a few tens of minutes to hours kill or make the crew completely ineffective." Because the neutron bomb reduced collateral damage, it could be used in a much more selective fashion than a fission weapon, thereby providing a clear "advantage for the military defender as well as for the nearby non-combatant."[26]

Agnew maintained that no new U.S. nuclear weapon design could be certified without nuclear testing, and that stockpile reliability stewardship without such testing may be problematic.[27] In a 1999 letter to the *Wall Street Journal*, he commented on the significance of allegations of Chinese nuclear espionage. "As long as any nation has a demonstrated nuclear capability and a means of delivering its bombs and warheads, it doesn't really matter whether the warheads are a little smaller or painted a color other than red, white, and blue," he wrote. "I suspect information published in the open by the National [sic.] Resources Defense Councilhas been as useful to other nations as any computer codes they may have received by illegal means."[28]

Beverly died on October 11, 2011.[3] Agnew was diagnosed of chronic lymphocytic leukemia, and died at his home in Solana Beach, California, on September 29, 2013, while watching football on television.[15][19] He was survived by his daughter Nancy and son John.[2] He had arranged to be cremated and his ashes interred with Beverly's at the Guaje Pines Cemetery in Los Alamos.[29]

In a 2005 BBC interview, Agnew stated, "About three-quarters of the U.S. nuclear arsenal was designed under my tutelage at Los Alamos. That is my legacy."[9]

2013 (Oct 01) - Passes

2013-10-01-nytimes-harold-m-agnew-dies-at-92.pdf

See article in NY Times : [HN008F][GDrive]

Harold M. Agnew, the last surviving major figure to have been present at the birth of the nuclear age — a physicist who helped build the world's first reactor and atomic bombs, flew on the first atomic strike against Japan, filmed the mushroom cloud, helped perfect the hydrogen bomb and led the Los Alamos National Laboratory at the height of the cold war — died on Sunday at his home in Solana Beach, Calif. He was 92.

He had recently been given a diagnosis of chronic lymphocytic leukemia, his family said.

Dr. Agnew was no giant of discovery, but he was ingenious technically and wielded great influence for decades as a presidential adviser and a gregarious hawk, as restless and unpredictable as the tumultuous age he helped define.

"We did pretty good," he remarked during a 1992 flight between Moscow and Kiev, Ukraine. "We brought a quick end to a devastating war and maintained the peace, and eventually saw democracy prevail. That's something you can hang your hat on."

In a statement, Charlie McMillan, the current director of Los Alamos, the birthplace of the bomb in the mountains of New Mexico, called Dr. Agnew "a national treasure," saying the United States "will be forever in Harold's debt."

Harold Melvin Agnew was born in Denver on March 28, 1921, the only child of a stonecutter of Scotch-Irish heritage. A natural athlete, he pitched his softball team to a Denver championship. He majored in chemistry at Denver University, graduated Phi Beta Kappa in 1942 and won a scholarship to Yale.

But the secret wartime effort to build an atomic bomb intruded on his studies. Early in 1942 he was assigned to Enrico Fermi, the Italian Nobel laureate who was helping to lead the project at the University of Chicago. Dr. Agnew did what he called "grunt work," making scientific measurements and getting a hefty dose of radiation.

Redirected because of the health danger, he helped stack tons of graphite bricks and uranium into a neat pile at a university squash court.

On a blustery Chicago day, Dec. 2, 1942, Dr. Agnew and a few dozen other people gathered to see if the pile could sustain a chain reaction. Recording pens jumped as atoms split in two. The success meant that in theory the human race now had the means to illuminate cities or level them. He was 21.

Dr. Agnew arrived at Los Alamos in March 1943 with his wife, Beverly. The couple shared a bunkhouse with another couple and a man who cooked nothing but Chinese food, even for breakfast. Amid the tall pines and deep canyons, Dr. Agnew helped build and run a particle accelerator whose data helped demonstrate the merits of various bomb designs.

When the world's first nuclear blast lit up the New Mexico desert before dawn on July 16, 1945, Dr. Agnew was already far away, preparing for the bombing of Hiroshima. He was "aching" for the run to Japan, he recalled, because so many friends had died in the war. He autographed the bomb.

On Aug. 6, he boarded a B-29 bomber that accompanied the Enola Gay, which was carrying the bomb code-named Little Boy. Dr. Agnew and two other scientists measured the size of the shock wave and thus the bomb's power.

Afterward, he and his colleagues took turns peering out a small window at the mushroom cloud and the ground damage. Dr. Agnew filmed the devastation with a 16-millimeter Bell & Howell movie camera he had taken along. He was the only person to witness the whole undertaking, from reactor to weapon to Hiroshima.

After the war, he studied with Fermi at Chicago and received his Ph.D. in physics in 1949. Returning to Los Alamos, he joined the hunt for a technical edge over the Soviet Union, which had exploded its own atomic bomb in 1949, surprising the West.

The first hydrogen bomb, tested successfully in 1952, weighed a staggering 65 tons. Dr. Agnew helped perfect lighter H-bombs that were deliverable over long distances.

In the 1960s, as scientific adviser to the supreme allied commander in Europe, he led the development of protective devices for nuclear arms that kept them under tight presidential control.

Returning to Los Alamos, Dr. Agnew was named head of the weapons division, which developed the warhead for the Minuteman intercontinental ballistic missile, among other arms. In 1970, he became director of the lab, with a staff of about 7,000. Meanwhile, political radicals at the University of California, which ran Los Alamos, labeled him a war criminal and tried him in absentia.

In 1978, Dr. Agnew advised President Jimmy Carter against seeking a comprehensive ban on nuclear testing. He argued that such an East-West stoppage would have ended the development of new arms and, more important, reduced confidence in the potency of the existing arsenal. The White House eventually dropped the ban idea.

Upon retiring from Los Alamos, Dr. Agnew sought to encourage the growth of civilian nuclear power. In March 1979, he became president of General Atomics, a San Diego-based maker and developer of innovative reactors.

From 1982 until 1989, he was a science adviser to the White House under President Ronald Reagan. After the cold war, in 1991, he participated in the first meeting between American bomb makers and their Russian counterparts, seeking ways to reduce nuclear arsenals. In 1992, he urged the United States to buy bomb-grade uranium from scrapped Soviet nuclear arms to bolster the shaky Russian economy and reduce the risk of nuclear war, accident and theft. In August of that year, the White House announced a plan to buy at least 500 metric tons of the material in a deal worth several billion dollars.

The Russian bomb uranium was diluted into fuel for nuclear reactors that make electricity, turning a major danger into a peaceful bonanza.

Dr. Agnew is survived by a daughter, Nancy E. Chapman; a son, John; four grandchildren and three great-grandchildren.

He also left a towering reputation at Los Alamos. Late in life, Dr. Agnew noted with pride that cars could occasionally be seen there bearing bright orange bumper stickers reading, "Harold, come back."

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Paul Gardner Allen (born 1953)

Wikipedia Paul Allen

special note :

Ebola [edit]

In 2014, Allen pledged at least $100 million toward the fight to end the Ebola virus epidemic in West Africa,[135] making him the largest private donor in the Ebola crisis. He also created a website called TackleEbola.org[136] as a way to spread awareness and serve as a vehicle for donors to fund projects in need. The site additionally highlighted organizations working to stop Ebola that Allen supported such as International Red Cross and Red Crescent Movement, Médecins Sans Frontières, Partners in Health, UNICEF and World Food Program USA. On April 21, 2015, Allen brought together key leaders in the Ebola fight at the Ebola Innovation Summit in San Francisco. The summit aimed to share key learnings and reinforce the need for continued action and support to bring the number of Ebola cases down to zero, which was achieved in January 2016.[137]

In October 2015, the Paul G. Allen Family Foundation announced it would award seven new grants totaling $11 million to prevent future widespread outbreaks of the virus.[138]

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Paul G. Allen

Born Paul Gardner Allen January 21, 1953 , Seattle, Washington, U.S.

Died October 15, 2018 (aged 65) , Seattle, Washington, U.S.

Education Lakeside School, Washington State University (dropped out)

Occupation

Investorentrepreneurphilanthropist

Years active 1975–2018

Known for Co-founder of Microsoft

Net worth US$20.3 billion (October 2018)[1]

Title

Chairman and co-founder of Vulcan Inc.

Owner of Seattle Seahawks and Portland Trail Blazers

Part-owner of Seattle Sounders

Founder of Allen Institute for Brain Science

Founder of Allen Institute for Cell Science

Founder of Allen Institute for Artificial Intelligence

Founder of Apex Learning

Founder of Stratolaunch Systems

Co-founder of Mojave Aerospace Ventures

Strategy advisor of Microsoft

Relatives Jody Allen (sister)

Website www.paulallen.com

Paul Gardner Allen (January 21, 1953 – October 15, 2018) was an American business magnate, investor, and philanthropist. He was best known for co-founding Microsoft Corporation with childhood friend Bill Gates in 1975, which helped spark the microcomputer revolution of the 1970s and 1980s, later making Microsoft the world's largest personal computer software company.[2] Allen was ranked as the 44th-wealthiest person in the world by Forbes in 2018, with an estimated net worth of $20.3 billion at the time of his death.[1][3]

Allen left active operations at Microsoft in early 1983 after a Hodgkin lymphoma diagnosis, remaining on its board as vice chairman. He and his sister, Jody Allen, founded Vulcan Inc. in 1986,[4] a privately held company that managed his various business and philanthropic efforts. He had a multi-billion dollar investment portfolio including technology and media companies, scientific research, real estate holdings, private space flight ventures, and stakes in other sectors. He owned the Seattle Seahawks of the National Football League[5] and the Portland Trail Blazers of the National Basketball Association,[6] and was part-owner of the Seattle Sounders FC of Major League Soccer.[7] In 2000 he resigned from his position on Microsoft's board and assumed the post of senior strategy advisor to the company's management team.

Allen was also the founder of the Allen Institutes for Brain Science,[8] Artificial Intelligence[9] and Cell Science,[10] as well as companies like Stratolaunch Systems[11] and Apex Learning.[12] He gave more than $2 billion to causes such as education, wildlife and environmental conservation, the arts, healthcare, community services and more.[13] In 2004, he funded the first manned private spaceplane with SpaceShipOne.[14][15] He received numerous awards and honors in several different professions and was listed among the Time 100 Most Influential People in the World in 2007 and 2008.[16] Allen was diagnosed with Non-Hodgkin lymphoma in 2009. He died of septic shock related to the cancer on October 15, 2018.[17]

[...]

Allen (left) with Bill Gates at Lakeside School in 1970

Allen was born on January 21, 1953, in Seattle, Washington, to Kenneth Sam Allen and Edna Faye (née Gardner) Allen.[18] He attended Lakeside School, a private school in Seattle where he befriended Bill Gates, with whom he shared an enthusiasm for computers, and they used Lakeside's Teletype terminal to develop their programming skills on several time-sharing computer systems.[19] They also used the laboratory of the Computer Science Department of the University of Washington, doing personal research and computer programming; they were banned from the laboratory in 1971 for abuse of their privileges there.[20]

Gates and Allen joined with Ric Weiland and Gates' childhood best friend and first collaborator, Kent Evans, to form the Lakeside Programming Club and find bugs in Computer Center Corporation's software, in exchange for extra computer time. In 1972, after Evans' sudden death due to a mountain climbing accident, Gates turned to Allen for help finishing an automated system of Lakeside's entire class scheduling procedure.[21] They then formed Traf-O-Data to make traffic counters based on the Intel 8008 processor. According to Allen, he and Gates would go "dumpster diving" in their teenage years for computer program code.[22]

Allen attained a perfect SAT score of 1600[23] and went to Washington State University, where he joined the Phi Kappa Theta fraternity.[24][25][26] He dropped out of college after two years to work as a programmer for Honeywell in Boston near Harvard University where Gates was enrolled.[19] Allen convinced Gates to drop out of Harvard in order to create Microsoft.[27]

Microsoft

The title page of the assembly language code that produced Altair BASIC, developed by Allen, Gates, and Monte Davidoff, with two early Microsoft business cards showing Gates as president and Allen as vice president

Main articles: History of Microsoft and Microsoft § 1972–1985: The founding of Microsoft

Allen and Gates formed Microsoft in 1975 in Albuquerque, New Mexico, and began marketing a BASIC programming language interpreter, with their first employee being high school friend and collaborator Ric Weiland.[28][19] Allen came up with the name of "Micro-Soft", a combination of "microcomputer" and "software".[29]

Microsoft committed to delivering a disk operating system (DOS) to IBM for the original IBM PC in 1980, although they had not yet developed one, and Allen spearheaded a deal for Microsoft to purchase QDOS (Quick and Dirty Operating System) written by Tim Paterson who was employed at Seattle Computer Products.[30][31] As a result of this transaction, Microsoft secured a contract to supply the DOS that ran on IBM's PC line and led to Allen's and Gates' wealth and success.[19]

The relationship between Allen and Gates became strained as they argued even over small things.[21] Allen effectively left Microsoft in 1982 after being diagnosed with Hodgkin's lymphoma, though he remained on the board of directors as vice chairman.[19][32] Gates reportedly asked Allen to give him some of his shares to compensate for the higher amount of work that Gates was doing.[33][34] According to Allen, Gates said that he "did almost everything on BASIC" and the company should be split 60–40 in his favor. Allen agreed to this arrangement, which Gates later renegotiated to 64–36.[35] In 1983, Gates tried to buy Allen out at $5 per share, but Allen refused and left the company with his shares intact; this made him a billionaire when Microsoft went public

tried to buy Allen out at $5 per share, but Allen refused and left the company with his shares intact; this made him a billionaire when Microsoft went public.[35][36] Gates later repaired his relationship with Allen, and the two men donated $2.2 million to their childhood school Lakeside in 1986.[21] They remained friends for the rest of Allen's life.[37]

Allen resigned from his position on the Microsoft board of directors on November 9, 2000, but he remained as a senior strategy advisor to the company's executives.[38][39][40] In January 2014, he still held 100 million shares of Microsoft.[41]

Business and investments

See also: Vulcan Inc.

Financial and technology

Vulcan Capital is an investment arm of Allen's Seattle-based Vulcan Inc., which has managed his personal fortune. In 2013, Allen opened a new Vulcan Capital office in Palo Alto, California, to focus on making new investments in emerging technology and internet companies.[42]

Patents: Allen held 43 patents from the United States Patent and Trademark Office.[43]

Apps: Allen backed A.R.O., the startup behind the mobile app Saga;[44] SportStream, a social app for sports fans;[45] and a content-management app called Fayve.[46]

Interval Research Corporation: In 1992, Allen and David Liddle co-founded Interval Research Corporation, a Silicon Valley-based laboratory and new business incubator that was dissolved in 2000 after generating over 300 patents,[47] four of which were the subject of Allen's August 2010 patent infringement lawsuit against AOL, Apple, eBay, Facebook, Google, Netflix, Office Depot, OfficeMax, Staples, Yahoo!, and YouTube.[48][49]

Ticketmaster: In November 1993, Allen invested more than $325 million to acquire 80% of Ticketmaster.[50][51] In 1997, Home Shopping Network acquired 47.5% of Allen's stock in exchange for $209 million worth of their own stock.[52]

Charter Communications: In 1998, Allen bought a controlling interest in Charter Communications.[53] Charter filed for bankruptcy reorganization in 2009, with Allen's loss estimated at $7 billion. Allen kept a small stake after Charter emerged from reorganization, worth $535 million in 2012.[54] The company's 2016 purchase and subsequent merger of Time Warner Cable with Charter's subsidiary, Spectrum, made Charter Communications the second-largest cable company in the U.S.[55][56]

Aerospace

Allen confirmed that he was the sole investor behind aerospace engineer and entrepreneur Burt Rutan's SpaceShipOne suborbital commercial spacecraft on October 4, 2004.[57] The craft was developed and flown by Mojave Aerospace Ventures, which was a joint venture between Allen and Rutan's aviation company, Scaled Composites. SpaceShipOne climbed to an altitude of 377,591 feet (115,090 m) over the Mojave Air and Space Port and was the first privately funded effort to successfully put a civilian in suborbital space. It won the Ansari X Prize competition and received the $10 million prize.[58]

The Stratolaunch aircraft, 2018

On December 13, 2011, Allen announced the creation of Stratolaunch Systems, based at the Mojave Air and Space Port. The Stratolaunch is a proposed orbital launch system consisting of a dual-bodied, 6-engine jet aircraft, capable of carrying a rocket to high altitude; the rocket would then separate from its carrier aircraft and fire its own engines to complete its climb into orbit. If successful, this project would be the first wholly privately funded space transport system.[59] Stratolaunch, which is partnering with Orbital ATK and Scaled Composites, is intended to launch in inclement weather, fly without worrying about the availability of launch pads and to operate from different locations. Stratolaunch plans to ultimately host six to ten missions per year.[60] On April 13, 2015, Vulcan Aerospace was announced. It is the company within Allen's Vulcan Inc. that plans and executes projects to shift how the world conceptualizes space travel through cost reduction and on-demand access.[61]

On April 13, 2019, the Stratolaunch aircraft made its maiden flight, reaching 15,000 ft (4,600 m) and 165 kn (305 km/h) in a 2 h 29 min flight.[62][63] Stratolaunch CEO Jean Floyd offered this comment: "We dedicate this day to the man who inspired us all to strive for ways to empower the world's problem-solvers, Paul Allen. Without a doubt, he would have been exceptionally proud to see his aircraft take flight".[64]

As of the end of May 2019, Stratolaunch Systems Corporation is closing operations.[65]

SpaceShipOne on ramp before Takeoff in October 2004

(L-R) Marion Blakey, Mike Melvill, Sir Richard Branson, Burt Rutan, Brian Binnie and Allen reflect on a mission accomplished

Allen (third from right) and Rutan (fifth from right) were awarded the Ansari X PRIZE by members of the X PRIZE Foundation in November 2004

SpaceShipOne at the National Air and Space Museum

Real estate

Allen's Vulcan Real Estate[66] division offers development and portfolio management services, and is known for the redevelopment of the South Lake Union neighborhood immediately north of downtown Seattle.[67] Vulcan has developed 6.3 million square feet (590,000 m2) of new residential, office, retail and biotechnology research space, and has a total development capacity of 10,000,000 sq ft (930,000 m2). Vulcan advocated for the Seattle Streetcar line known as South Lake Union Streetcar, which runs from Seattle's Westlake Center to the south end of Lake Union.[68] In 2012, The Wall Street Journal called Allen's South Lake Union investment "unexpectedly lucrative" and one that led to his firm selling a 1,800,000-square-foot (170,000 m2) office complex to Amazon.com for US$1.16 billion, one of the most expensive office deals ever in Seattle.[69] "It's exceeded my expectations", Allen said of the South Lake Union development.[70]

Venues

Sports and event centers: Allen funded the development of Portland's Moda Center, which he purchased in 2007.[71] He also contributed $130 million to help build CenturyLink Field in Seattle.[72]

Seattle Cinerama: Allen purchased Seattle's historic Cinerama Theater in 1998, and upgraded it with 3-D capability and digital sound, in addition to interior and exterior refurbishing. The theater installed the world's first commercial digital laser projector in 2014.[73]

Hospital Club: Allen opened the Hospital Club in London in 2004 as a professional and social hub for people working in the creative arts.[74] A second location in Los Angeles is under construction.[75]

Sports team ownership

Portland Trail Blazers

Main article: Portland Trail Blazers

Allen purchased the Portland Trail Blazers NBA team in 1988 from California real estate developer Larry Weinberg for $70 million.[6] He was instrumental in the development and funding of the Moda Center (previously known as the Rose Garden), the arena where the Blazers play. He purchased the arena on April 2, 2007, and stated that this was a major milestone and a positive step for the franchise.[19][76] The Allen-owned Trail Blazers reached the playoffs 19 times including the NBA Finals in 1990 and 1992.[77] According to Forbes, the Blazers were valued at $940 million in 2015 and ranked No. 12 out of 30 NBA teams.[78]

Seattle Seahawks

Main article: Seattle Seahawks

Allen purchased the NFL's Seattle Seahawks in 1997 from owner Ken Behring,[79][80] who had attempted to move the team to southern California the previous year.[5][81][82] Herman Sarkowsky, a former Seahawks minority owner, told The Seattle Times about Allen's decision to buy the team, "I'm not sure anybody else in this community would have done what [Allen] did."[83] In 2002, the team moved into CenturyLink Field, after Allen invested into the upgrade of the stadium.[84] Acquired for $200 million in 1997,[79][80] the Seahawks were valued at $1.33 billion in August 2014 by Forbes, which says the team has "one of the most rabid fan bases in the NFL".[85] Under the helm of Allen, the Seahawks made the Super Bowl three times following NFC Championship victories (2005, 2013, 2014), and won Super Bowl XLVIII in February 2014.[86]

Seattle Sounders FC

Main article: Seattle Sounders FC

Allen's Vulcan Sports & Entertainment is part of the ownership team of the Seattle Sounders FC, a Major League Soccer (MLS) franchise that began play in 2009 at CenturyLink Field, a stadium which was also controlled by Allen.[7] The ownership team also includes film producer Joe Roth, businessman Adrian Hanauer, and comedian Drew Carey. The Sounders sold out every home game during its first season, setting a new MLS record for average match attendance.[87]

Filmmaking

Allen and his sister, Jody Allen, together were the owners and executive producers of Vulcan Productions,[88] a television and film production company headquartered in Seattle within the entertainment division of Vulcan Inc. Their films have received various recognition, ranging from a Peabody Award[89] to Independent Spirit Awards,[90] Grammys[91] and Emmys.

In 2014 alone, Allen's film, We The Economy, won 12 awards including a Webby award for best Online News & Politics Series. The films have also been nominated for Golden Globes[91] and Academy Awards[90] among many others. Vulcan Productions' films and documentary projects include Far from Heaven[90] (2002), Hard Candy[92] (2005), Rx for Survival: A Global Health Challenge[93][94] (2005), Where God Left His Shoes[95] (2006), Judgment Day: Intelligent Design on Trial[96][97] (2007), This Emotional Life[98][99] (2010), We The Economy[100] (2014) Racing Extinction[101] (2015) and Oscar-nominated Body Team 12[102] (2015).

In 2013, Vulcan Productions co-produced the Richard E. Robbins-directed film Girl Rising[103] which tells the stories of girls from different parts of the world who seek an education. Globally, over 205 million households watched Girl Rising during the CNN premier,[104] and over 4 million people have engaged with Girl Rising through websites and social media. Through the associated 10×10 program, over $2.1 million has been donated to help girls receive an education worldwide.[105]

Also in 2013, Vulcan Productions signed on as a producing partner of Pandora's Promise,[106] a documentary about nuclear power, directed by Oscar-nominated director Robert Stone. It was released on CNN in November 2013. A variety of college and private screenings as well as panel discussions have been hosted throughout the country.[107]

Philanthropy

Allen gave more than $2 billion towards the advancement of science, technology, education, wildlife conservation, the arts, and community services in his lifetime.[13] The Paul G. Allen Family Foundation, which he founded with his sister Jody Allen, was established to administer a portion of Allen's philanthropic contributions. Since its formation, the foundation has given more than $494 million to over 1,500 nonprofits; and,[108] in 2010, Allen became a signatory of The Giving Pledge, promising to give at least half of his fortune to philanthropic causes.[109] Allen received commendations for his philanthropic commitments including the Andrew Carnegie Medal of Philanthropy[110] and Inside Philanthropy's "Philanthropist of the Year".[111]

Science and research

Allen (right) studies a brain sample with Allan Jones, CEO of the Allen Institute for Brain Science, in 2011

In September 2003, Allen launched the Allen Institute for Brain Science with a $100 million contribution dedicated to understanding how the human brain works. In total, Allen donated $500 million to the institute, making it his single largest philanthropic recipient. Since its launch, the Allen Institute for Brain Science has taken a Big Science and Open Science approach to tackle projects. The institute makes research tools available to the scientific community using an open data model.[112] Some of the institute's most notable projects include the Allen Mouse Brain Atlas, Allen Human Brain Atlas and the Allen Mouse Brain Connectivity Atlas. The Allen Institute is also helping to advance and shape the White House's BRAIN Initiative as well as the Human Brain Project.[113]

Founded in 2014, the Allen Institute for Artificial Intelligence (AI2)'s main focus is to research and engineer artificial intelligence.[114] The Institute is modeled after the Allen Institute for Brain Science and led by researcher and professor, Dr. Oren Etzioni. AI2 has undertaken four main projects, Aristo, Semantic Scholar, Euclid, and Plato. Project Aristo is working to build an AI system capable of passing an 8th-grade science exam.[115]

In December 2014, Allen committed $100 million to create the Allen Institute for Cell Science in Seattle. The institute is investigating and creating a virtual model of cells in the hope of bringing forth treatment of different diseases.[116] Like the institutes before it, all data generated and tools developed will be made publicly available online.[117]

Launched in 2016 with a $100 million commitment, The Paul G. Allen Frontiers Group aims to discover and support ideas at the frontier of bioscience in an effort to accelerate the pace of discovery.[118] The group is led by Tom Skalak and will be targeting scientists and research areas that "some might consider out-of-the-box at the very edges of knowledge".[119]

Allen launched the Allen Distinguished Investigators Awards (ADI) in 2010 to support scientists pursuing early-stage research projects who often have difficulty securing funding from traditional sources.[120]

Allen donated the seed money to build SETI's Allen Telescope Array, eventually contributing $30 million to the project.[121]

The Paul Allen's flower fly was named in recognition of his contributions to Dipterology.[122]

Environment and conservation

Allen provided more than $7 million to fund a census of elephant populations in Africa, the largest such endeavour since the 1970s. The Great Elephant Census team flew over 20 countries to survey African savannah elephants. The survey results were published in 2015 and showed rapid rates of decline which were accelerating.[123]

He began supporting the University of British Columbia's Sea Around Us Project in 2014 to improve data on global fisheries as a way to fight illegal fishing. Part of his $2.6 million in funding went towards the creation of FishBase,[124] an online database about adult finfish.[125] Allen funded the Global FinPrint initiative, launched in July 2015, a three-year survey of sharks and rays in coral reef areas. The survey is the largest of its kind and designed to provide data to help conservation programs.[126][127]

Allen backed Washington state initiative 1401 to prohibit the purchase, sale and distribution of products made from 10 endangered species including elephants, rhinos, lions, tigers, leopards, cheetahs, marine turtles, pangolins, sharks and rays. The initiative gained enough signatures to be on the state's ballot on November 3, 2015, and passed.[128]

Alongside the United States Department of Transportation (USDOT), Allen and Vulcan Inc. launched the Smart City Challenge,[129] a contest inviting American cities to transform their transportation systems. Created in 2015 with the USDOT's $40 million commitment as well as $10 million from Allen's Vulcan Inc., the challenge aims to create a first-of-its-kind modern city that will demonstrate how cities can improve quality of life while lowering greenhouse gas emissions.[130] The winning city was Columbus, Ohio.[131]

As a founding member of the International SeaKeepers Society, Allen hosted its proprietary SeaKeeper 1000TM oceanographic and atmospheric monitoring system on all three of his megayachts.[132]

Allen funded the building of microgrids, which are small-scale power grids that can operate independently, in Kenya to help promote reusable energy and empower its businesses and residents.[133] He was an early investor in the Mawingu Networks, a wireless and solar-powered Internet provider which aims to connect rural Africa with the world, and Off Grid Electric, a company focused on providing solar energy to people in emerging nations.[134]

Ebola

In 2014, Allen pledged at least $100 million toward the fight to end the Ebola virus epidemic in West Africa,[135] making him the largest private donor in the Ebola crisis. He also created a website called TackleEbola.org[136] as a way to spread awareness and serve as a vehicle for donors to fund projects in need. The site additionally highlighted organizations working to stop Ebola that Allen supported such as International Red Cross and Red Crescent Movement, Médecins Sans Frontières, Partners in Health, UNICEF and World Food Program USA. On April 21, 2015, Allen brought together key leaders in the Ebola fight at the Ebola Innovation Summit in San Francisco. The summit aimed to share key learnings and reinforce the need for continued action and support to bring the number of Ebola cases down to zero, which was achieved in January 2016.[137]

In October 2015, the Paul G. Allen Family Foundation announced it would award seven new grants totaling $11 million to prevent future widespread outbreaks of the virus.[138]

Exploration

In 2012, along with his research team and the Royal Navy, Allen attempted to retrieve the bell from HMS Hood, which sank in the Denmark Strait during World War II, but the attempt failed due to poor weather. On August 7, 2015, they tried again and recovered the bell in very good condition.[139] It was restored and put on display in May 2016 in the National Museum of the Royal Navy, Portsmouth, in remembrance of the 1,415 crewmen lost.[140]

Since 2015, Allen funded the research ship RV Petrel, and he purchased the ship in 2016. The project team aboard Petrel was responsible for locating the Japanese battleship Musashi in 2015.[141] In 2017, on Allen's directions, Petrel found USS Indianapolis, USS Ward, the wrecks of the Battle of Surigao Strait and the Battle of Ormoc Bay. In 2018, Petrel found a lost US Navy C-2A Greyhound aircraft in the Philippine Sea, USS Lexington in the Coral Sea and the USS Juneau off the coast of the Solomon Islands.[142][143][144]

The arts

Allen established several non-profit community institutions that feature his private collections of historic artifacts. These include:

Museum of Pop Culture, or MoPOP, is a nonprofit museum, dedicated to contemporary popular culture inside a Frank Gehry-designed building at Seattle Center, established in 2000.[145]

Flying Heritage Collection, which showcases restored vintage military aircraft and armaments primarily from the World War II era, established in 2004.[146]

STARTUP Gallery, a permanent exhibit at the New Mexico Museum of Natural History and Science in Albuquerque dedicated to the history of the microcomputer, established in 2007.[147]

Living Computer: Museum + Labs, a collection of vintage computers in working order and available for interactive sessions on-site or through networked access, opened to the public in 2012.[148][149]

An active art collector, Allen gifted more than $100 million to support the arts.[150] On October 15, 2012, the Americans for the Arts gave Allen the Eli and

Edythe Broad Award for Philanthropy in the Arts.[151] Allen also loaned out more than 300 pieces from his private art collection to 47 different venues. In 2013, Allen sold Barnett Newman's Onement VI (1953) at Sotheby's in New York for $43.8 million which at the time was the record price to have been paid for a work by the abstract artist.[152][153]

In 2015, Allen founded the Seattle Art Fair, a four-day event with 60-plus galleries from around the world including the participation of the Gagosian Gallery, David Zwirner, and many others. The event drew thousands and inspired other satellite fairs throughout the city.[154]

In August 2016, Allen announced the launch of Upstream Music Fest + Summit,[155] an annual festival fashioned after South by Southwest.[156] Held in Pioneer Square, the first festival took place in May 2017.[157]

Education

Allen and Steve Wozniak at the Living Computer Museum in 2017

In 1989, Allen donated $2 million to the University of Washington to construct the Allen Library, which was named after his father Kenneth S. Allen, a former associate director of the University of Washington library system.[158] In the same year, Allen donated an additional $8 million to establish the Kenneth S. Allen Library Endowment.[159] In 2012, the endowment was renamed the Kenneth S. and Faye G. Allen Library Endowment after Allen's mother (a noted bibliophile) died.[160]

In 2002, Allen donated $14 million to the University of Washington to construct the Paul G. Allen Center for Computer Science and Engineering.[161] The building was dedicated in October 2003.[162]

In 2010, Allen announced a gift of $26 million to build the Paul G. Allen School of Global Animal Health at Washington State University, his alma mater. The gift was the largest private donation in the university's history.[163]

In 2016, Allen pledged a $10 million donation over four years for the creation of the Allen Discovery Centers at Tufts University and Stanford University. The centers would fund research that would read and write the morphogenetic code. Over eight years the donation could be as much as $20 million.[164]

In 2017, Allen donated $40 million (with an additional $10 million added by Microsoft) to reorganize the University of Washington's Computer Science and Engineering department into the Paul G. Allen School of Computer Science and Engineering.[165]

Music

Paul Allen and the Underthinkers perform at the Allen Institute for Brain Science's 10th-anniversary gala

Allen received his first electric guitar at the age of sixteen, and was inspired to play it by listening to Jimi Hendrix.[166] In 2000, Allen played rhythm guitar on the independently produced album Grown Men.[167] In 2013, he had a major label release on Sony's Legacy Recordings; Everywhere at Once by Paul Allen and the Underthinkers.[168] PopMatters.com described Everywhere at Once as "a quality release of blues-rock that's enjoyable from start to finish".[169][170]

On February 7, 2018, an interview with Quincy Jones was released by the magazine New York on their Vulture website. In this interview, Jones said that he had extreme respect for Eric Clapton, his band Cream, and Allen. Referencing Allen's Hendrix-like play, the article mentioned a jam session on a yacht with Stevie Wonder.[171]

Yachting

Allen's Octopus off the Cayman Islands in 2010

Allen's 414-foot (126 m) yacht, Octopus, was launched in 2003.[172] As of 2019, it was 20th on the list of motor yachts by length. The yacht is equipped with two helicopters, a submarine, an ROV, a swimming pool, a music studio and a basketball court.[173] Octopus is a member of AMVER, a voluntary group ship reporting system used worldwide by authorities to arrange assistance for those in distress at sea.[174] The ship is also known for its annual celebrity-studded parties which Allen hosted at the Cannes film festival,[175] where Allen and his band played for guests. These performances included musicians such as Usher and David A. Stewart.[176] Octopus was also used in the search for a missing American pilot and two officers whose plane disappeared off Palau[177] and the study of a rare fish called a coelacanth among many others.[178]

Allen also owned Tatoosh, which is one of the world's 100 largest yachts. In January 2016, it was reported that Tatoosh allegedly damaged coral in the

Cayman Islands.[179] In April 2016, the Department of Environment (DoE) and Allen's Vulcan Inc. successfully completed a restoration plan to help speed recovery and protect the future of coral in this area.[180]

Death

Allen was diagnosed with Stage 1-A Hodgkin's lymphoma in 1982.[35] Although his cancer was successfully treated by several months of radiation therapy,[32] Allen was diagnosed with non-Hodgkin lymphoma in 2009. Likewise, the cancer was successfully treated until it returned in 2018, which ultimately caused his death by septic shock on October 15, 2018.[181][17] He was 65 years old.[182][183][184]

Several Seattle-area landmarks, including the Space Needle, Columbia Center and CenturyLink Field, as well as various Microsoft offices throughout the United States, were illuminated in blue on November 3, 2018, as a tribute to Allen.[185] He was also honored by his early business partner and lifelong friend Bill Gates, who said in a statement:

> Paul loved life and those around him, and we all cherished him in return. He deserved much more time, but his contributions to the world of technology and philanthropy will live on for generations to come. I will miss him tremendously.[37]

Awards and recognition

Allen received numerous awards in many different areas, including sports, philanthropy, and the arts:

In 2004, Allen, Burt Rutan, Doug Shane, Mike Melvill, and Brian Binnie won the Collier Trophy for SpaceShipOne.[14]

On March 9, 2005, Allen, Rutan, and the rest of the SpaceShipOne team were awarded the 2005 National Air and Space Museum Trophy for Current Achievement.[15]

In 2007 and 2008, Allen was listed among the Time 100 Most Influential People in The World.[16]

He received the Vanguard Award from the National Cable & Telecommunications Association on May 20, 2008.[186]

On October 30, 2008, the Seattle-King County Association of Realtors honored Allen for his "unwavering commitment to nonprofit organizations in the Pacific Northwest and lifetime giving approaching US$1 billion".[187]

In 2009, Allen's philanthropy as the long-time owner of the Portland Trail Blazers was recognized with an Oregon Sports Award.[188]

On October 26, 2010, Allen was awarded the W. J. S. Krieg Lifetime Achievement Award for his contributions to the field of neuroscience by the Cajal Club.[189]

On January 26, 2011, at Seattle's Benaroya Hall, Allen was named Seattle Sports Commission Sports Citizen of the Year, an award that has been renamed the Paul Allen Award.[190]

In 2011, Allen was elected to the American Academy of Arts and Sciences.[191]

On October 15, 2012, Allen received the Eli and Edythe Broad Award for Philanthropy in the Arts at the National Arts Awards.[192]

On February 2, 2014, Allen received a Super Bowl ring as the Seattle Seahawks won the Vince Lombardi Trophy.[193]

On October 22, 2014, Allen received a Lifetime Achievement Award from Seattle Business magazine for his impact in and around the greater Puget Sound region.[194]

On December 31, 2014, online philanthropy magazine Inside Philanthropy made Allen their inaugural "Philanthropist of the Year"[111] for his ongoing effort to stop the Ebola outbreak in West Africa, breaking ground on a new research center in Seattle, and his battle to save the world's oceans.

In 2014, Allen was inducted into the International Space Hall of Fame.[195]

On July 18, 2015, Ischia Global Film and Music Festival recognized Allen with the Ischia Humanitarian Award. Event organizers honored Allen for his contributions to social issues through his philanthropic efforts.[196]

On August 25, 2015, Allen was named a recipient of the Andrew Carnegie Medal of Philanthropy for his work to "save endangered species, fight Ebola, research the human brain, support the arts, protect the oceans, and expand educational opportunities for girls".[197]

On October 3, 2015, the Center for Infectious Disease Research presented Allen with the 2015 "Champion for Global Health Award" for his leadership and effort to fight Ebola.[198]

On December 10, 2016, Allen, as co-owner of the Seattle Sounders, won the 2016 MLS Cup.[199]

On October 3, 2019, Allen was posthumously inducted into the Seattle Seahawks Ring of Honor.[200]

Honorary degrees

Honorary degree from the Washington State University. The university bestowed its highest honor, the Regents' Distinguished Alumnus Award, upon him.[201]

Honorary doctorate in Philosophy from Nelson Mandela Metropolitan University.[202]

Honorary doctorate of Science from the Cold Spring Harbor Laboratory's Watson School of Biological Sciences.[203]

Honorary degree from the École Polytechnique Fédérale de Lausanne.[204]

Honorary degree from the École Polytechnique Fédérale de Lausanne.[204]

Idea Man

In 2011, Allen's memoir, Idea Man: A Memoir by the Cofounder of Microsoft, was published by Portfolio, a Penguin Group imprint. The book recounts how Allen became enamored with computers at an early age, conceived the idea for Microsoft, recruited his friend Bill Gates to join him, and launched what would become the world's most successful software company. It also explores Allen's business and creative ventures following his 1983 departure from Microsoft, including his involvement in SpaceShipOne, his purchase of the Portland Trail Blazers and Seattle Seahawks, his passion for music, and his ongoing support for scientific research. The book made The New York Times Best Seller list and the paperback version, which included a new epilogue, came out on October 30, 2012.[205][206]

See also

Altair 8800

The Spaceship Company

Open Letter to Hobbyists

List of select cases of Hodgkin's Disease

Pirates of Silicon Valley, a 1999 film about the rise of the personal computer. Allen is portrayed by Josh Hopkins.

Black Sky: The Race For Space, a 2005 documentary about Allen, SpaceShipOne and the Ansari X Prize.

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Further reading

Kenneth Sam Allen

Paul Allen's mom -

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BITCHUTE @Housatonic **YOUTUBE** @HousatonicLive **ODYSEE** @Housatonic **BRIGHTEON** @Housatonic

Housatonic

Mikhail Naumovich Alperovitch (born 1951)

[HW0004][GDrive]

Partners - Married to Tatiana Alperovitch

Children - **Dmitri Alperovitch (born 1980)**

2017 article from State of the Nation

Source article : [HW0001][GDrive]

"If someone steals your keys to encrypt the data, it doesn't matter how secure the algorithms are." — Dmitri Alperovitch, founder of CrowdStrike

[...]

[Dmitri] Alperovitch and the DNC

After CrowdStrike was hired as an independent "vendor" by the DNC to investigate a possible cyberattack on their system, Alperovitch sent the DNC a proprietary software package called ***Falcon*** that monitors the networks of its clients in real time. According to Alperovitch, *Falcon* "lit up," within ten seconds of being installed at the DNC. Alperovitch had his "proof" in TEN SECONDS that Russia was in the network. This "alleged" evidence of Russian hacking has yet to be shared with anyone.

[...]

It is also absurd to hear Alperovitch state that the Russian FSB (equivalent to the CIA) had been monitoring the DNC site for over a year and had done nothing. No attack, no theft, and no harm was done to the system by this "false-flag cyber-attack" on the DNC – or at least, Alperovitch "reported" there was an attack. The second hacker, the supposed Russian military (GRU – like the U.S. DoD) hacker, had just entered the system two weeks before and also had done "nothing" but observe.

[...]

Once again, Guccifer 2.0 proved Alperovitch and CrowdStrike's claims to be grossly incorrect about the hack originating from Russia, with Putin masterminding it all. Nancy Pelosi offered members of Congress Alperovitch's suggestion of installing *Falcon*, the system that failed to stop cyberattacks at the DNC, on all congressional laptops.

Key Point: **Once *Falcon* was installed on the computers of members of the U.S. Congress, CrowdStrike had even further full access into U.S. government accounts.**

[...]

Dmitri – Front Man for His Father's Russian Espionage Mission

After taking a close look at the disinformation around Dmitri and his father, it is clear to see that **Michael Alperovitch became a CIA operative** during his first visit to America. Upon his return to Russia, he stole the best Russian encryption codes that were used to protect the top-secret work of nuclear physics in which his father is alleged to have been a major player. **Upon surrendering the codes to the CIA when he returned to Canada, the CIA made it possible for a Russian nuclear scientist to become an American citizen overnight and gain a top-secret security clearance to work at the Oakridge plant, one of the most secure and protected nuclear facilities in America**. Only the CIA can transform a Russian into an American with a top-secret clearance overnight.

We can see on Michael Alperovitch's Linked In page that he went from one fantastically top-secret job to the next without a break from the time he entered America. He seemed to be on a career path to work in every major U.S. agency in America. In every job he was hired as the top expert in the field and the leader of the company. All of these jobs after the first one were in cryptology, not nuclear physics. As a matter of fact, Michael became the top expert in America overnight and has stayed the top expert to this day.

Most of the work of cyber-security is creating secure interactions on a non-secure system like the Internet. **The cryptologist who assigns the encryption codes controls the system from that point on**.

Key Point: **Cryptologists are well known for leaving a "back-door" in the base-code so that they can always have over-riding control.**

Michael Alperovitch essentially has the "codes" for all Department of Defense sites, the Treasury, the State Department, cell-phones, satellites, and public media. There is hardly any powerful agency or company that he has not written the "codes" for. One might ask, why do American companies and the U.S. government use his particular codes? What are so special about Michael's codes?

Stolen Russian Codes

In December, Obama ordered the U.S. military to conduct cyberattacks against Russia in retaliation for the alleged DNC hacks. All of the attempts to attack Russia's military and intelligence agencies failed miserably. Russia laughed at Obama's attempts to hack their systems. Even the Russian companies targeted by the attacks were not harmed by Obama's cyber-attacks. Hardly any news of these massive and embarrassing failed cyber-attacks were reported by the Main Stream Media. The internet has been scrubbed clean of the reports that said Russia's cyber-defenses were impenetrable due to the sophistication of their encryption codes.

Michael Alperovitch was in possession of those impenetrable codes when he was a top scientist in Russia. **It was these very codes that he shared with the CIA on his first trip to America**. These codes got him spirited into America and "turned into" the best cryptologist in the world. **Michael is simply using the effective codes of Russia to design his codes for the many systems he has created in America for the CIA**.

KEY POINT: It is crucial to understand at this junction that **the CIA is not solely working for America**. The CIA works for itself and there are three branches to the CIA – two of which are hostile to American national interests and support globalism.

Michael and Dmitri Alperovitch work for the CIA (and international intelligence corporations) **who support globalism**. They, and the globalists for whom they work, are not friends of America or Russia. It is highly likely that the criminal activities of Dmitri, which were supported and sponsored by the FBI, created the very hackers who he often claims are responsible for cyberattacks. None of these supposed "attackers" have ever been found or arrested; they simply exist in the files of CrowdStrike and are used as the "usual culprits" when the FBI or CIA calls in Dmitri to give the one and only opinion that counts. Only Dmitri's "suspicions" are offered as evidence and yet 17 U.S. intelligence agencies stand behind the CrowdStrike report and Dmitri's suspicions.

Michael Alperovitch – Russian Spy with the Crypto-Keys

Essentially, Michael Alperovitch flies under the false-flag of being a cryptologist who works with PKI. A public key infrastructure (PKI) is a system for the creation, storage, and distribution of digital certificates which are used to verify that a particular public key belongs to a certain entity. The PKI creates digital certificates which map public keys to entities, securely stores these certificates in a central repository and revokes them if needed. Public key cryptography is a cryptographic technique that enables entities to securely communicate on an insecure public network (the Internet), and reliably verify the identity of an entity via digital signatures. Digital signatures use Certificate Authorities to digitally sign and publish the public key bound to a given user. This is done using the CIA's own private key, so that trust in the user key relies on one's trust in the validity of the CIA's key. **Michael Alperovitch is considered to be the number one expert in America on PKI and essentially controls the market**.

Michael's past is clouded in confusion and lies. Dmitri states that his father was a nuclear physicist and that he came to America the first time in a nuclear based shared program between America and Russia. But if we look at his current personal Linked In page, Michael claims he has a Master Degree in Applied Mathematics from Gorky State University. From 1932 to 1956, its name was State University of Gorky. Now it is known as Lobachevsky State University of Nizhni Novgorod – National Research University (UNN), also known as Lobachevsky University. Does Michael not even know the name of the University he graduated from? And when does a person with a Master's Degree become a leading nuclear physicist who comes to "visit" America. In Michael's Linked In page there is a long list of his skills and there is no mention of nuclear physics.

[...]

Michael Alperovitch's Linked In Page

Education:

Gorky State University, Russia, MS in Applied Mathematics

Work History:

- *Sr. Security Architect :* **VT IDirect** -2014 – Designing security architecture for satellite communications including cryptographic protocols, authentication.
- *Principal SME (Contractor) :* **DISA-Defense Information Systems Agency** (Manager of the Global Information Grid) – 2012-2014 – Worked on PKI and identity management projects for DISA utilizing Elliptic Curve Cryptography. Performed application security and penetration testing.
- *Technical Lead (Contractor) :* **U.S. Department of the Treasury** – 2011 – Designed enterprise validation service architecture for PKI certificate

credentials with Single Sign On authentication.

- *Principal Software Engineer :* **Comtech Mobile Datacom** – 2007-2010 – Subject matter expert on latest information security practices, including authentication, encryption and key management.
- *Sr. Software Engineer :* **TriCipher** – 2006-2007 – Designed and developed security architecture for TriCipher Armored Credential Authentication System.
- *Lead Software Engineer :* **BellSouth** – 2003-2006 – Designed and built server-side Jabber-based messaging platform with Single Sign On authentication.
- *Principal Software Research Engineer :* **Pathfire, Inc.** – 2001-2002 – Designed and developed Digital Rights Management Server for Video on Demand and content distribution applications. Pathfire provides digital media distribution and management solutions to the television, media, and entertainment industries. The company offers Digital Media Gateway, a digital IP store-and-forward platform, delivering news stories, syndicated programming, advertising spots, and video news releases to broadcasters. It provides solutions for content providers and broadcasters, as well as station solutions.

[...]

1990 - Michael is sent to Maryland (USA) as part of a nuclear-safety training program for scientists (and "simulation program"

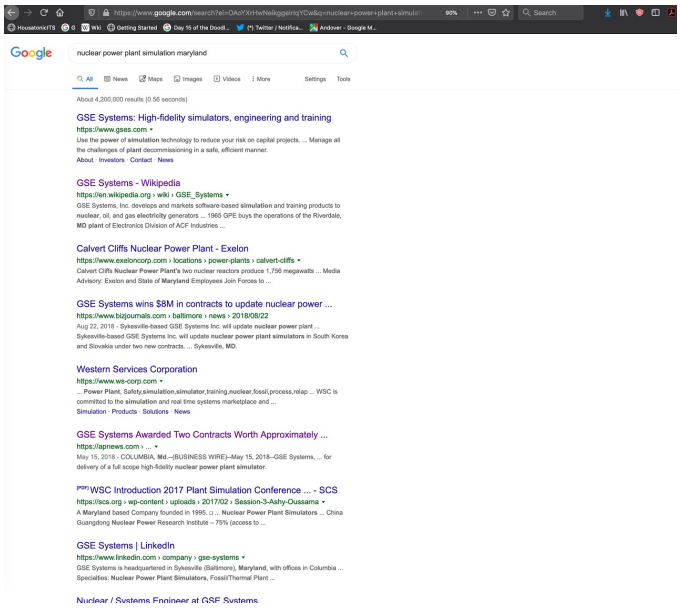
"In 1990, [Dmitri Alperovitch's] father was sent to Maryland as part of a nuclear-safety training program for scientists. Per Soviet custom, Dmitri stayed in the USSR to ensure that his parents didn't defect. [Dmitri Alperovitch] lived with his grandparents, and when his parents returned, after a year, they brought him his Brst computer, an IBM PC." Source : [HP0001][GDrive]

Upon his return, we discover that Mikhail Alperovitch was working on a nuclear power plant simulation project. See [HB0008][GDrive]

The company that Mikhail worked at was "most likely" going to be GSE Systems, Inc.

A Google Search - "nuclear power plant simulation maryland" leads us to the following results shown below, with two companies present. One is "WSC - Western Services Corporation", which was founded in 1995 (see https://scs.org/wp-content/uploads/2017/02/Session-3-Ashy-Oussama.pdf) - Since Mikhail came to Maryland in 1990, it cant be WSC. It is was thus most likely the other company, which is GSE Systems, Inc. .

- Source article : [HW0009][GDrive]



[HW0009][GDrive]

1990/1991 - Ukraine separates from Russia

See https://en.wikipedia.org/wiki/Ukraine#Independence

1992 (Early) - Returns to (Russia?) from Maryland, where he had worked on a nuclear power plant simulation project

- "In the early 1992, when Michael Alperovitch returned from a trip to Maryland, where he had worked on a nuclear power plant simulation project" [HB0008][GDrive]

1994 - Michael "granted a visa to Canada"

Source : [HP0001][GDrive]

"In 1994, his father was granted a visa to Canada, "

1995 - Michael moves the Alperovitch family to Chattanooga, Tennessee (USA), to work at the TVA

Source : [HP0001][GDrive]

"In 1994, his father was granted a visa to Canada, and a year later the family moved to Chattanooga, where Michael took a job with the Tennessee Valley Authority. The work was not particularly challenging, so Michael began studying cryptography on the side. While Dmitri was still in high school, he and his father started an encryption-technology business. Dmitri says he loved the beauty of the math but also saw cryptography's fatal \aw: "If someone stole your keys to encrypt the data, it didn't matter how secure the algorithms were." "

1990s (Mid) - No work in nuclear power or Mikhail Alperovitch - (source : 2018 Forbes Article)

Source : [HP0002][GDrive]

*"Dmitri [Alperovitch] immigrated to America in the 1990s from the Soviet Union while in his mid-teens. His family settled in Chattanooga, Tennessee [...] . [Michael Alperovitch, Dmitti's father], a nuclear physicist, **wasn't able to get a job in nuclear power, given the lack of new plants being built in the U.S.** However, he became interested in cryptography. "*

Encryption Software, Inc. of Georgia (USA)

Source article : [HG0001][GDrive]

GEORGIA
CORPORATIONS DIVISION

GEORGIA SECRETARY OF STATE
BRAD RAFFENSPERGER

BUSINESS SEARCH

BUSINESS INFORMATION

Business Name:	**ENCRYPTION SOFTWARE, INC.**	Control Number:	**0005385**
Business Type:	**Domestic Profit Corporation**	Business Status:	**Admin. Dissolved**
Business Purpose:	**NONE**		
Principal Office Address:	**3338 Peachtree Rd NE , #1003, Atlanta, GA, 30326**	Date of Formation / Registration Date:	**2/2/2000**
State of Formation:	**Georgia**	Last Annual Registration Year:	**2007**
Dissolved Date:	**09/04/2010**		

REGISTERED AGENT INFORMATION

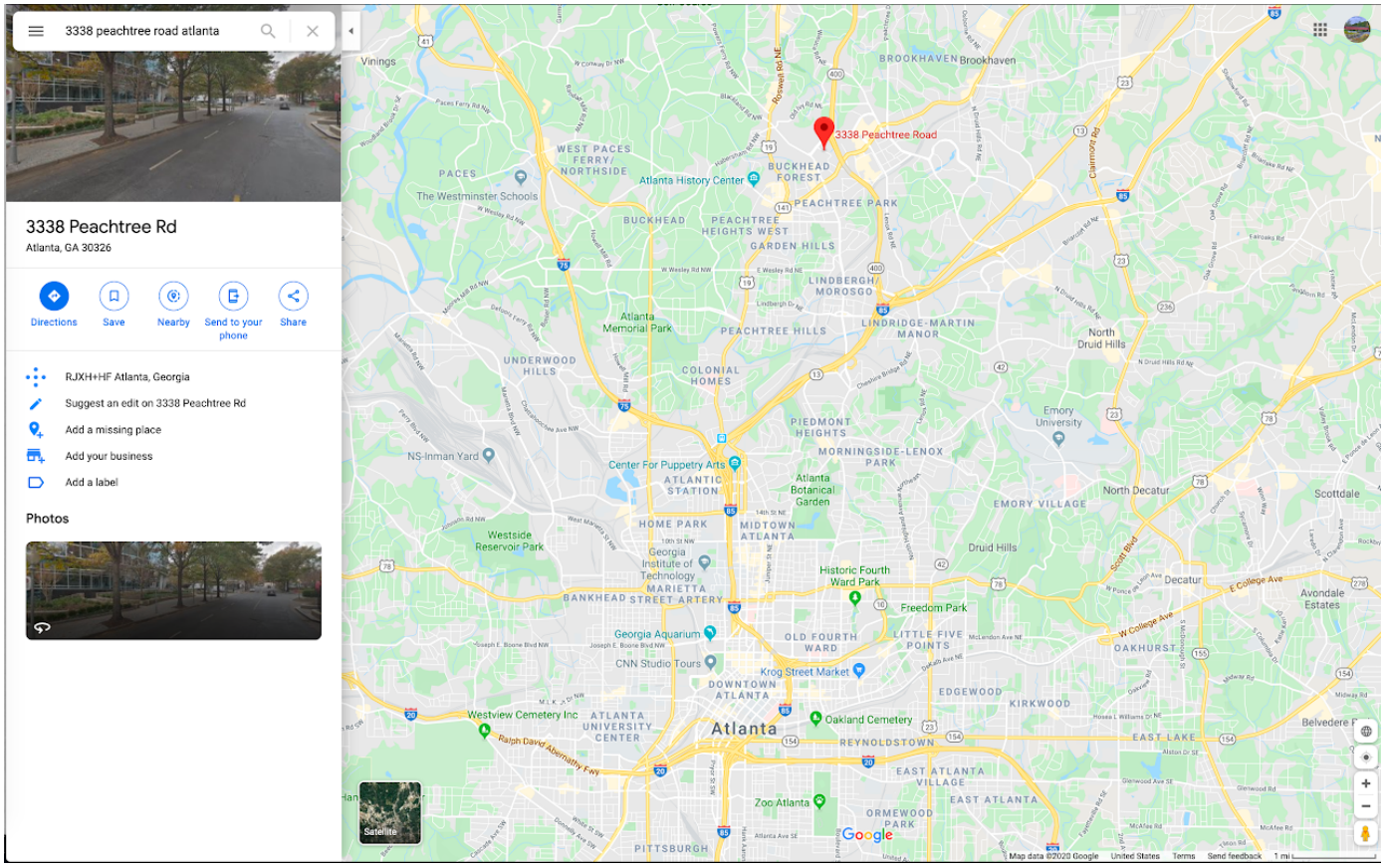
Registered Agent Name:	**TATIANA ALPEROVITCH**
Physical Address:	**595 BELLEMONT COURT, DULUTH, GA, 30097, USA**
County:	**Gwinnett**

OFFICER INFORMATION

Name	Title	Business Address
DMITRI ALPEROVITCH	Secretary	3338 Peachtree Rd NE #1003, Atlanta, GA, 30326, USA
MICHAEL ALPEROVITCH	CFO	3338 Peachtree Rd NE #1003, Atlanta, GA, 30326, USA
TATIANA ALPEROVITCH	CEO	3338 Peachtree Rd NE #1003, Atlanta, GA, 30326, USA

Filing History | Name History

[HG0002][GDrive]

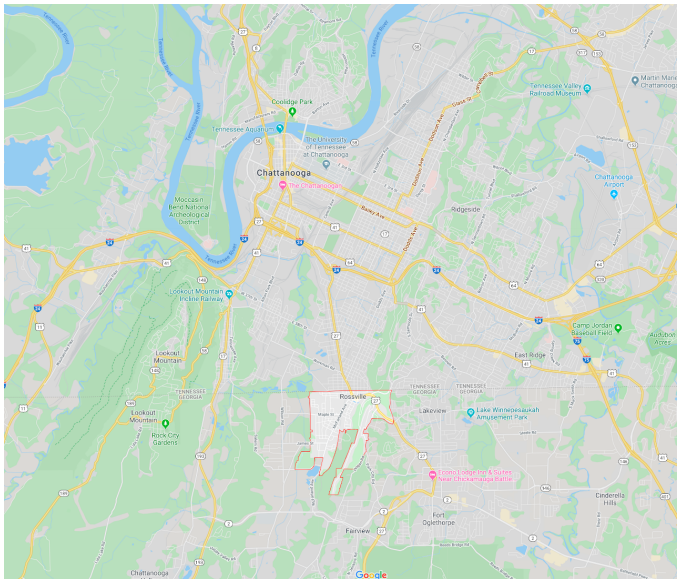


1999 (July) - Residing at Rossville, Georgia

Source article : [HL0001][GDrive]

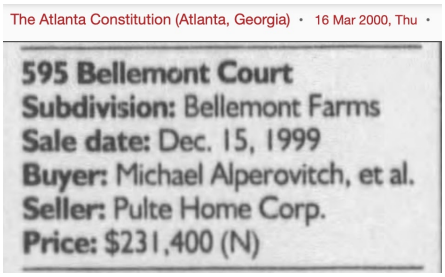
" 208 Park Lake Rd, Rossville Georgia 30741-4724, USA July 1 1999 "

Rossville, Georgia is on the border with Tennessee, and is very close to Chattanooga



1999 (Dec) - Purchase to (595) Bellemont Court, (Duluth), Georgia

Source : [HN0001][GDrive]


The Atlanta Constitution (Atlanta, Georgia) • 16 Mar 2000, Thu •

595 Bellemont Court
Subdivision: Bellemont Farms
Sale date: Dec. 15, 1999
Buyer: Michael Alperovitch, et al.
Seller: Pulte Home Corp.
Price: $231,400 (N)

[HN0002][GDrive]

https://pdfs.semanticscholar.org/45ef/c85c2a92fe00dae5477f918795d9fd23e6e5.pdf

2011-05-ijcsi-org-ecc-over-rsa-for-asymmetric-encryption.pdf

● The Top Secret Messenger software was developed by Encryption Software Inc. It encrypts the messages of some of the most popular instant messaging programs today, like ICQ and MSN. It can also be used with e-mail clients such as Microsoft Outlook and Outlook Express to encrypt e-mail messages. This product uses both private and public key cryptosystems, including a 307-bit key for its implementation of the ECC.

"Elliptic curves were proposed for use as the basis for discrete logarithm-based cryptosystems almost 20 years ago, independently by Victor Miller of IBM and Neal Koblitz of the University of Washington . At that time, elliptic curves were already being used in various cryptographic contexts.

Elliptic curves are rich mathematical structures that have shown usefulness in many different types of applications. ECC, like RSA has the role in digital signatures, secure key distribution, and encryption. ECC has the upper hand in the efficiency of algorithm. Some devices have limited processing capacity, storage, power supply, and bandwidth like the newer wireless devices and cellular telephones. When used, efficiency of the resource use is very important in these devices. ECC provides encryption functionality requiring a smaller percentage of the resources required by RSA and other algorithms, so it is used in these types of devices. In most cases, the longer the key length, the more protection that is provided, but ECC can provide the same level of protection with a smaller key size than RSA. Since smaller keys as in ECC require fewer resources of the device to perform the mathematical tasks. ECC cryptosystems use the properties of elliptic curves in their public key systems. The elliptic curves provide ways of constructing groups of elements and specific rules of how the elements within these groups combine. The properties between the groups are used to build cryptographic algorithms."

2004 : "Top Secret Messenger"

https://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=12&ved=2ahUKEwiY3IqutPXmAhVMMt8KHYx8BpI4ChAWMAF6BAgFEAI&url=https%3A%2F%2Fsceweb.uhcl.edu%2Fyang%2Fteaching%2Fcsci5931webSecuritySpr04%2FImtiazOralPresentation.ppt&usg=AOvVaw1NIMAjDHmksL_fFn9wAwia \

2004-03-24-security-risks-instant-messaging-workplace-imtiaz-paniwala-preso.ppt /

"Top Secret Messenger :Top Secret Messenger (TSM) is product developed by Encryption Software, Inc. It provides a powerful public-key encryption platform, TSM provides integrated add-on for popular instant messengers thus integrating the new IM technology with existing system applications"

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http://www.edpci.com/Newsletter/NL4.html

Top Secret Messenger (Encryption Software Inc; $15; Windows (Outlook), plus...): http://www.encrsoft.com

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2006 (Aug 31) - Alperovitch Purchased 7903 Plum Creek Drive , Gaithersburg, MD 20879-

Source : [HW0007][GDrive]

08/31/2006 : 7903 Plum Creek Drive Gaithersburg, MD 20879-5630 Find on map >> Owner: ***TATIANA ALPEROVITCH & MIKHAIL ALPEROVITCH*** *Land value: $202,200 Improvement value: $347,200 Total value for property: $549,400 Assessments for tax year: 2015 Property use: Residential Property class: Standard Unit Land size: 13,671 square feet Building area: 2,903 square feet Number of full bathrooms: 3 Number of half bathrooms: 1 Number of stories: 2.0 Year property was built: 1995 Basement: Yes Exterior: Siding Garage: 1 Attached Last sales: Date: 08/31/2006 Price: $640,000 Seller: KRIESE, BRIAN M & D P*

2017 (Feb) - Selling 7903 Plum Creek Drive, Gaithersburg, MD

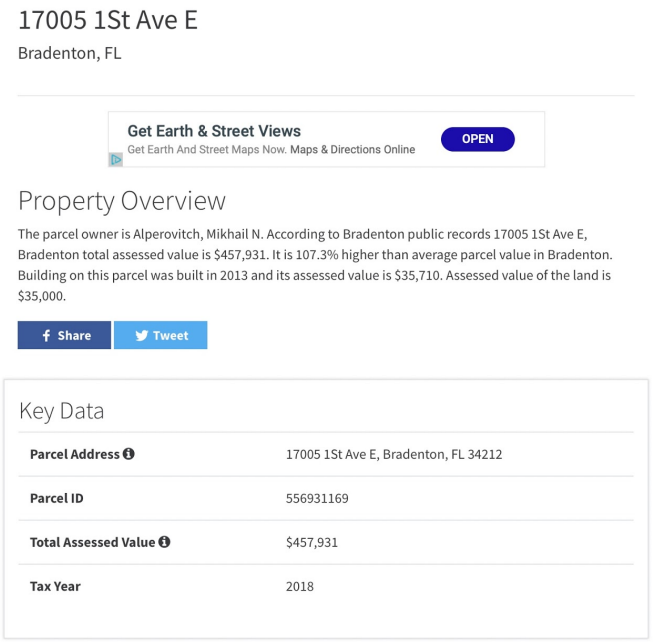
Source : [HN0003][GDrive]

"2017 sales : GAITHERSBURG AREA : ***Plum Creek Dr.****, 7903-****Mikhail and Tatiana Alperovitch*** *to German A. Benitez, $625,000. "*

2018 -Residence in Bradenton, Florida

Source : [HW0005][GDrive]

"The parcel owner is Alperovitch, Mikhail N. According to Bradenton public records 17005 1St Ave E, Bradenton total assessed value is $457,931. It is 107.3% higher than average parcel value in Bradenton. Building on this parcel was built in 2013 and its assessed value is $35,710. Assessed value of the land is $35,000."

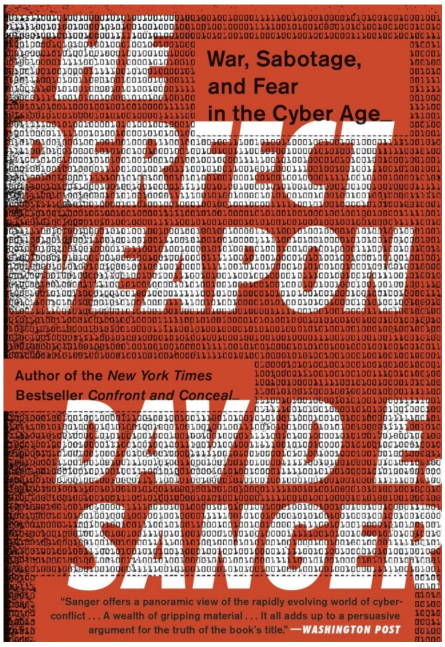


[HW0006][GDrive]

Book reference - From [2018] "The Perfect Weapon : War, Sabotage, and Fear in the Cyber Age"

Crown/Archetype, Jun 19, 2018 - 400 pages - By David E. Sanger

Google Link - [HB0001][GDrive]



[HB0002][GDrive]

risen to $1,400 a week, a small fortune by Russian standards, especially for twentysomethings. In return, they worked twelve-hour shifts, churning out Facebook posts that hit on themes conveyed to them by email. On one floor, Russian-language trolls fought off opposition to Vladimir Putin. On another floor, they looked for any divisive issue in American society where a wedge could be driven via the Internet, to widen the natural fault lines in American politics and society.

Texas seemed particularly ripe for meddling. Few of the trolls and bot makers had been there, but they had read about it online and seen it in the movies. It didn't take much of a leap of imagination to form a "Heart of Texas" group that appeared to be based in Houston, but was actually operating near Red Square. They promoted a rally called "Stop Islamization of Texas," as if there were much Islamization to worry about. Then, in a masterful stroke, the Russians created an opposing group, "United Muslims of America," which scheduled a counter-rally, under the banner of "Save Islamic Knowledge." The idea was to motivate actual Americans—who had joined each of the Facebook groups—to face off against each other and prompt a lot of name-calling and, perhaps, some violence.

It was a testament to how easy it is to mislead some subgroups of American citizens on the web with a few cheap bots and someone imitating a local resident. But no one was more amazed than the young Russians in Saint Petersburg, who, their own emails later showed, could not believe their targets were so gullible.

If you are going to catch a Russian inside your networks, hiring a Russian who thinks the way the attackers think isn't a bad idea. By that measure, Dmitri Alperovitch was the right man for the job.

In his mid-30s, with sandy hair and broad smile, he was already a fixture in the Washington firmament: a cyber specialist who was a regular at foreign policy forums and seemed as interested in the geopolitics of the business as the bits and bytes. But it was hardly preordained that Alperovitch would get so far.

[HB0003][GDrive]

He was the son of Soviet nuclear scientist Michael Alperovitch, and spent his childhood and early teen years in Moscow, in the waning days of the Soviet Union. In 1986, when Dmitri was about five years old, Michael narrowly escaped an assignment that would have left his son fatherless. A fire had broken out at the Chernobyl nuclear power plant, and panicked Soviet officials wanted Michael and his colleagues to check it out. Michael had a bad feeling and declined. The scientists who went all developed cancer and died soon after.

His life spared by good luck, Michael began to think it might be time to get out. His opportunity came shortly after the breakup of the Soviet Union. The Alperovitch family left Moscow in 1994, moving first to Toronto before settling in Chattanooga when Michael had landed a job at the Tennessee Valley Authority. Dmitri eventually enrolled at Georgia Tech, graduating with what was, at the time, a rare degree in cybersecurity.

Out of college, Alperovitch bounced around a number of the digital stations of the cross, eventually joining McAfee, known for its early virus-protection products. His job was to analyze state sponsors of cyberattacks, and he did it well, publishing a long paper about a China-based group called "Shady Rat," which was behind the theft of intellectual property from American companies. McAfee had been acquired by Intel, the country's leading chipmaker, and the paper took off as one of the best-researched pieces of work tying the Chinese government to what Keith Alexander, then the head of the National Security Agency, used to call the "greatest transfer of wealth in history."

Unsurprisingly, the Chinese didn't care much for the research. Suddenly they were showing up in Intel's offices in Beijing, inspecting business licenses—completely unrelated to Alperovitch's work, naturally. One day, he recalled, he got a call from one of the company's top executives. "Do you realize we do 60 percent of our business in China?" he remembers the executive asking.

Actually, he hadn't known that. He resigned the next week and in 2011 moved on to create the cybersecurity firm CrowdStrike with

[HB0004][GDrive]

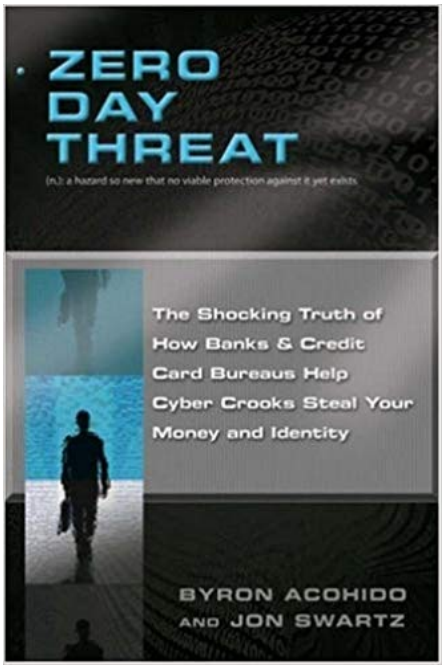
NOTES:

- Dmitri Alperovitch "spent his childhood and early teen years in Moscow, in the waning days of the Soviet Union.

Book references - From [2009] "Zero Day Threat: The Shocking Truth of how Banks and Credit Bureaus Help Cyber Cooks Steal Your Money and Identity"

Google Link - [HB0005][GDrive]

- By Byron Acohido, Jon Swartz
- **Hardcover:** 304 pages
- **ISBN-10:** 140275695X / **ISBN-13:** 978-1402756955
- Hardcover – April 1, 2008



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kept some of the sensitive data to acquire iPods, digital cameras, and video game consoles from online merchants, and sold the rest on IRC chat channels and carding forums. Their total take over the course of four months tapping away at their keyboards: close to $80,000.

When U.S. adware supplier Zango, then called 180solutions, began to balk at paying the Dutch bot masters, and then cut them off as affiliate adware distributors, the pair asked to be reinstated. When the company refused, they used their botnets to launch a retaliatory DDoS attack on Zango. The company reported the attack to the FBI, and the bot masters, along with a third suspect, shortly thereafter were tracked down and arrested in Amsterdam. The two men received eighteen-month prison sentences and were fined $11,800 and $5,000, respectively. The third suspect was released.

The fact that the Dutch pair was caught so easily (the attack was reported in August; the arrests followed in early October) suggested that the young bot masters, for all their diversified activities, played in the shallows of the cybercrime market. Botnets continued right on proliferating. Virus hunters and law enforcement could see the footprints of big-time bot masters on the move and obviously controlling the most sophisticated botnets. They just couldn't do much to stop the high-level bot masters from collaborating with organized crime rings. To dodge good guys monitoring the IRC chat channels, which most bot masters used to communicate with their bots, elite bot masters began directing their bots to report for instructions by clicking to obscure Web pages running on compromised servers.

"It looked just like regular Web traffic," says Rob Fleischman, chief technology officer at Denver-based tech-security company Simplicita. "They [bot masters] know the Web is like a giant haystack and that hiding their command-and-control servers on the Web makes them much harder to spot."

Clever bot masters also began using proxies—the favored mechanism to spread spam and launch DDoS attacks—to handle all routine communications. So a chat between a spammer and his hired bot master, for instance, would zigzag among a series of proxies; an investigator tracing communiqués between coconspirators would end up in a cul-de-sac of zombie PCs.

Dmitri Alperovitch assiduously mapped out this evolution as a principal research scientist at Secure Computing. As a youth growing up in

[HB0007][GDrive]

Moscow in the late 1980s, Alperovitch learned how to program computers from his father, Michael, a Russian nuclear physicist, who instructed him on paper since personal computers were not widely available in Russia at the time. Young Dmitri's lessons accelerated in the early 1990s, when Michael Alperovitch returned from a trip to Maryland, where he had worked on a nuclear power plant simulation project, and brought back the family's first home computer; Dmitri was eleven at the time and became intrigued with the mathematics behind breaking cryptographic algorithms.

Raised by a nuclear physicist father and a mother, Tatiana, who was a health-care information technology specialist, Alperovitch took the route bypassed by so many other bright Russians of his generation: he became a white hat. When a cybercriminal defrauded a close family friend, Alperovitch says he was repulsed. "Nothing would please me more than to see them go to jail," he says of the culprits. "The victim was very sick; she had had a stroke and wasn't completely functional in terms of her brain capacity. She was very easily defrauded."

In college he studied international affairs and emerged in the vanguard of virus hunters who began piecing together the nexus of cyberconflict and international policy. Out in the deeper waters, crime rings had begun hiring specialists to write viruses, manage botnets, and carry out various scams.

"Guys were making $20,000 to $30,000 a month. The top guys might make $100,000 a month," says Alperovitch. "These were the guys doing the full-scale attacks, sending out phishing e-mails, collecting bank accounts, logging in to accounts, doing interbank transfers, wiring the money out, and collecting the money, all while sitting comfortably in an apartment in Moscow."

Vardan Kushnir had such an apartment in downtown Moscow, out of which he ran the Centre for American English, the New York English Centre, and the Centre for Spoken English. These were front businesses for sending out spam. Kushnir was widely reviled as the Spam King of Russia, where, unlike Europe and the United States, spamming remained legal.

Retaining the services of top-level bot masters, Kushnir sent out so much spam that he angered legit system administrators, some of whom took it upon themselves to bombard his English centers with repeated retaliatory DDoS attacks. Even his business phones came under assault after someone posted the centers' phone number on the Web as a contact number for cheap sex services.

[HB0008][GDrive]

- "As a youth growing up in Moscow in the late 1980s, [Dmitri] Alperovitch learned how to program computers from his father, Michael, a Russian nuclear physicist"
- "In the early 1992, when Michael Alperovitch returned from a trip to Maryland, where he had worked on a nuclear power plant simulation project"
- Mother is Tatiana Alperovitch, "who was a health-care information technology specialist"
- "[Dmitri] Alperovitch took the route bypassed by so many other bright Russians of his generation: he became a white hat."
- "In college, [Dmitri Alperovitch] studied international affairs and emerged in the vanguard of virus hunters who began piecing together the nexus of cyberconflict and international pollicy."

Wife info :

- Source article : [HD0001][GDrive]

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- Gaithersburg, MD, 20879
- Atlanta, GA, 30324
- Duluth, GA, 30097
- Chattanooga, TN, 37402
- Rossville, GA, 30741

Full name :

- **Tatiana Ilyinichna Alperovitch**

Source article : [HL0001][GDrive]

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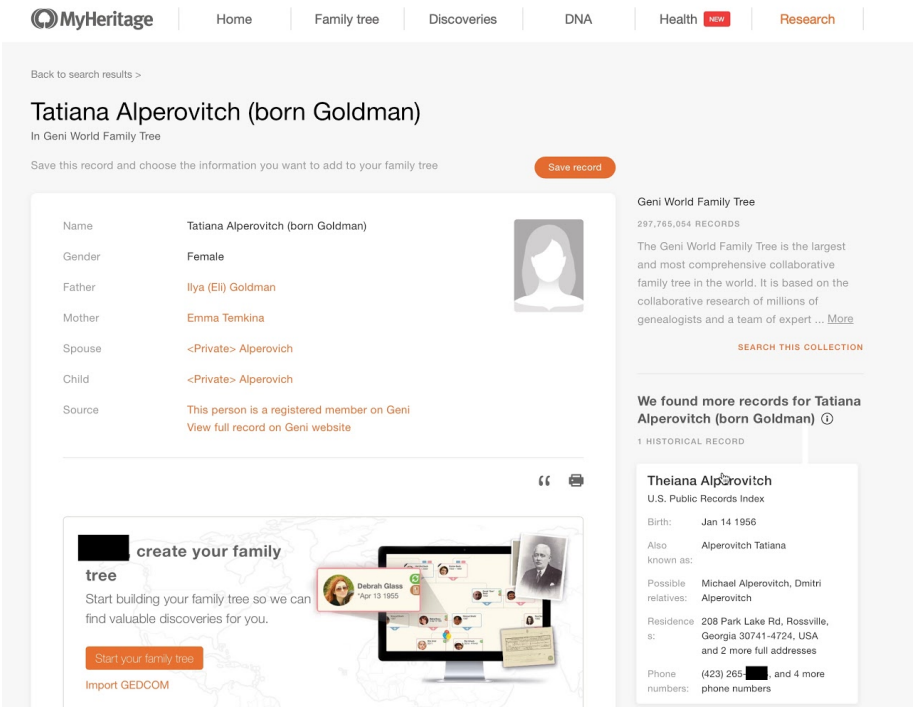

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Housatonic

Dmitri Alperovitch (born 1980)

Wikipedia Dmitri Alperovitch

Parents - **Mikhail Naumovich Alperovitch (born 1951)** and Tatiana **Ilyinichna** Alperovitch [HD0001][GDrive]

See captured Wikipedia:

[HK0001][GDrive]

Born 1980 Moscow, U.S.S.R.

Alma mater Georgia Institute of Technology

Occupation

Co-founder & CTO, CrowdStrikeInc.

Senior Fellow, Atlantic Council

VP, Threat Research, McAfee, Inc.

Employer CrowdStrike, Inc.

[...]

Dmitri Alperovitch is a Russian-born American computer security industry executive. He is co-founder and chief technology officer of CrowdStrike. In August 2011, as vice president of threat research at McAfee, he published *Operation Shady RAT*, a report on suspected Chinese intrusions into at least 72 organizations, including defense contractors, businesses worldwide, the United Nations and the International Olympic Committee. Alperovitch is a naturalized American citizen born in Russia who came to the United States in 1994 with his family.

Early life and education

Born in Moscow in the Russian S.F.S.R., a constituent republic of the Soviet Union, Alperovitch is a U.S. citizen. In 1994, his father was granted a visa to Canada, and a year later the family moved to Chattanooga. Alperovitch earned a B.S. in computer science in 2001, and a M.S. in information security in 2003, both from Georgia Institute of Technology. It was the school's first graduate degree in information security.

Career

Alperovitch worked at a number of computer security startups in the late 1990s and early 2000s, including e-mail security startup CipherTrust, where he was one of the leading inventors of the TrustedSource reputation system. Upon acquisition of CipherTrust by Secure Computing in 2006, he led the research team and launched the Software-as-a-Service business for the company. Alperovitch took over as vice president of threat research at McAfee, when the company acquired Secure Computing in 2008.

In January 2010, he led the investigation into Operation Aurora, the Chinese intrusions into Google and two dozen other companies. Subsequently, he led the investigation of Night Dragon espionage operation of the Western multinational oil and gas companies, and traced them to Song Zhiyue, a Chinese national living in Heze City, Shandong Province.

In late 2011, along with entrepreneur George Kurtz and Gregg Marston, Dmitri Alperovitch co-founded and became the chief technology officer of CrowdStrike, a security technology company focused on helping enterprises and governments protect their intellectual property and secrets against cyberespionage and cybercrime.

In 2015 CapitalG (formerly Google Capital), led a $100 million capital drive for CrowdStrike. The firm brought on board senior FBI executives, such as Shawn Henry, former executive assistant director (EAD) of the FBI's Criminal, Cyber, Response and Services Branch, and Steve Chabinsky, former deputy assistant director of the FBI's Cyber Division. By May of 2017, CrowdStrike had received $256 million in funding from Warburg Pincus, Accel Partners, and Google Capital and its stock was valued at just under $1 billion.

[...]

OCT 24, 2016 - Esquire article from VICKY WARD

Source : [HP0001][GDrive]

At six o'clock on the morning of May 6, Dmitri Alperovitch woke up in a Los Angeles hotel to an alarming email.Alperovitch is the thirty-six-year-old cofounder of the cybersecurity Brm CrowdStrike, and late the previous night, his company had been asked by the Democratic National Committee to investigate a possible breach of its network. A CrowdStrike security expert had sent the DNC a proprietary software package, called Falcon, that monitors the networks of its clients in real time. Falcon "lit up," the email said, within ten seconds of being installed at the DNC: Russia was in the network.

Alperovitch, a slight man with a sharp, quick demeanor, called the analyst who had emailed the report. "Are we sure it's Russia?" he asked.

The analyst said there was no doubt. Falcon had detected malicious software, or malware, that was stealing data and sending it to the same servers that had been used in a 2015 attack on the German Bundestag. The code and techniques used against the DNC resembled those from earlier attacks on the White House and the State Department. The analyst, a former intelligence officer, told Alperovitch that Falcon had identiBed not one but two Russian intruders: Cozy Bear, a group CrowdStrike's experts believed was affiliated with the FSB, Russia's answer to the CIA; and Fancy Bear, which they had linked to the GRU, Russian military intelligence.

Alperovitch then called Shawn Henry, a tall, bald Bfty-four-year-old former executive assistant director at the FBI who is now CrowdStrike's president of services. Henry led a forensics team that retraced the hackers' steps and pieced together the pathology of the breach. Over the next two weeks, they learned that Cozy Bear had been stealing emails from the DNC for more than a year. Fancy Bear, on the other hand, had been in the network for only a few weeks. Its target was the DNC research department, speciBcally the material that the committee was compiling on Donald Trump and other Republicans. Meanwhile, a CrowdStrike group called the Overwatch team used Falcon to monitor the hackers, a process known as shoulder-surBng.

Ultimately, the teams decided it was necessary to replace the software on every computer at the DNC. Until the network was clean, secrecy was vital. On the afternoon of Friday, June 10, all DNC employees were instructed to leave their laptops in the office. Alperovitch told me that a few people worried that Hillary Clinton, the presumptive Democratic nominee, was clearing house. "Those poor people thought they were getting Bred," he says.

For the next two days, three CrowdStrike employees worked inside DNC headquarters, replacing the software and setting up new login credentials using what Alperovitch considers to be the most secure means of choosing a password: \ipping through the dictionary at random. (After this article was posted online, Alperovitch noted that the passwords included random characters in addition to the words.) The Overwatch team kept an eye on Falcon to ensure there were no new intrusions. On Sunday night, once the operation was complete, Alperovitch took his team to celebrate at the Brazilian steakhouse Fogo de Chão.

A few people worried that Hillary Clinton, the presumptive Democratic nominee, was clearing house.

Hacking, like domestic abuse, is a crime that tends to induce shame. Companies such as Yahoo usually publicize their breaches only when the law requires it. For this reason, Alperovitch says, he expected that the DNC, too, would want to keep quiet.

By the time of the hack, however, Donald Trump's relationship to Russia had become an issue in the election. The DNC wanted to go public. At the committee's request, Alperovitch and Henry briefed a reporter from The Washington Post about the attack. On June 14, soon after the Post story publicly linked Fancy Bear with the Russian GRU and Cozy Bear with the FSB for the Brst time, Alperovitch published a detailed blog post about the attacks.

Alperovitch told me he was thrilled that the DNC decided to publicize Russia's involvement. "Having a client give us the ability to tell the full story" was a "milestone in the industry," he says. "Not just highlighting a rogue nation-state's actions but explaining what was taken and how and when. These stories are almost never told."

In the Bve years since Alperovitch cofounded CrowdStrike, he and his company have played a critical role in the development of America's cyberdefense policy. Frank Cilluffo, the former special assistant to the president for homeland security, likens Alperovitch to Paul Revere: "Dmitri, as an individual, has played a signiBcant role in elevating cybersecurity policy not only inside the private sector but more generally."

When I met Alperovitch in late September, at his open-plan offices outside Washington, D.C., he explained that CrowdStrike was created to take advantage of a simple but central lesson he'd learned about stopping hackers. It's not enough, he says, to play defense with technology: "Otherwise the adversary will scale up and it becomes a game of numbers, which they will win." Instead, attribution is crucial: First you need to identify the perpetrator, then you need to discover what motivates the crime, and finally—most important—you need to Bgure out how to Bght back.

Before Alperovitch founded CrowdStrike, the idea that attribution ought to be a central defense against hackers was viewed as heresy. In 2011, he was working in Atlanta as the chief threat officer at the antivirus software Brm McAfee. While sifting through server logs in his apartment one night, he discovered evidence of a hacking campaign by the Chinese government. Eventually he learned that the campaign had been going on undetected for Bve years, and that the Chinese had compromised at least seventyone companies and organizations, including thirteen defense contractors, three electronics Brms, and the International Olympic Committee.

That the Chinese government had been stealing information from the private sector was a shock to the security industry and to many U. S. officials. Almost no one thought that foreign governments used the Internet for anything other than old-fashioned espionage. "This was not spy versus spy," says John Carlin, who was until recently the assistant attorney general for national security. The hacking was economic sabotage.

While Alperovitch was writing up his report on the breach, he received a call from Renee James, an executive at Intel, which had recently purchased McAfee. According to Alperovitch, James told him, "Dmitri, Intel has a lot of business in China. You cannot call out China in this report."

Alperovitch removed the word China from his analysis, calling the operation Shady Rat instead. He told me that James's intervention accelerated his plans to leave Intel. (James declined to comment.) He felt that he was "now being censored because I'm working for a company that's not really an American company."

Alperovitch and George Kurtz, a former colleague, founded CrowdStrike as a direct response. The cybersecurity industry at the time, Alperovitch says, was

"terriBed of losing their ability to market products in China." Their new company would push the idea that hacking was a means, not an end. "We saw that no one's really focused on the adversary," Alperovitch told me. "No one's focusing exclusively on how can we actually identify them, attribute them, deter them from taking this action again." CrowdStrike's tagline encapsulated its philosophy: "You don't have a malware problem, you have an adversary problem."

Aperovitch's June 14 blog post garnered so much media attention that even its ebullient author felt slightly overwhelmed. Inevitably there were questions about the strange names his company had given the Russian hackers. As it happened, "Fancy Bear" and "Cozy Bear" were part of a coding system Alperovitch had created. Animals signiBed the hackers' country of origin: Russians were bears, Chinese were pandas, Iranians were kittens, and North Koreans were named for the chollima, a mythical winged horse. By company tradition, the analyst who discovers a new hacker gets to choose the Brst part of the nickname. Cozy Bear got its nickname because the letters coz appeared in its malware code. Fancy Bear, meanwhile, used malware that included the word Sofacy, which reminded the analyst who found it of the Iggy Azalea song "Fancy."

The day after the media maelstrom, the reporters were back with less friendly questions: Had Alperovitch gotten his facts right? Was he certain Russia was behind the DNC hacks? The doubts were prompted by the appearance of a blogger claiming to be from Eastern Europe who called himself Guccifer 2.0. Guccifer said that the breach was his, not Russia's. "DNC'S servers hacked by a lone hacker," he wrote in a blog post that included stolen Bles from the DNC. "I guess CrowdStrike customers should think twice about company's competence," Guccifer wrote. "Fuck CrowdStrike!!!!!!!!!"

Guccifer said that the breach was his, not Russia's

Alperovitch was bewildered. In a career spanning nearly two decades, he had never made an incorrect attribution in public. "Did we miss something?" he asked CrowdStrike's forensics team. Henry and his staff went back over the evidence, all of which supported their original conclusion.

Alperovitch had also never seen someone claim to be the only intruder on a site. "No hacker goes into the network and does a full forensic investigation," he told me. Being called out, he said, was "very shocking. It was clearly an attack on us as well as on the DNC."

Alperovitch initially thought that the leaks were standard espionage and that Guccifer's attacks on CrowdStrike were just a noisy reaction to being busted. "I thought, Okay, they got really upset that they were caught," he said. But after documents from the DNC continued to leak, Alperovitch decided the situation was far worse than that. He concluded that the Russians wanted to use the leaked Bles to manipulate U. S. voters—a Brst. "It hit me that, holy crap, this is an in\uence operation. They're actually trying to inject themselves into the election," he said. "I believe that we may very well wake up on the morning the day after the election and Bnd statements from Russian adversaries saying, 'Do not trust the result.' "

As it turned out, many reporters found Guccifer's leaked documents too cumbersome to sift through, and some were nervous that Bles from the strange website might contain viruses. But on July 22, three days before the Democratic convention in Philadelphia, WikiLeaks dumped a massive cache of emails that had been stolen from the DNC. Unlike the leaks published by Guccifer, these were organized and easily searchable. Reporters soon found emails suggesting that the DNC leadership had favored Hillary Clinton in her primary race against Bernie Sanders, which led Debbie Wasserman Schultz, the DNC chair, along with three other officials, to resign.

Days later, Alperovitch got a call from a Reuters reporter asking whether the Democratic Congressional Campaign Committee had been hacked. CrowdStrike had, in fact, been working on a breach at the DCCC; once again, Alperovitch believed that Russia was responsible. Now, however, he suspected that only Fancy Bear was involved. A lawyer for the DCCC gave Alperovitch permission to conBrm the leak and to name Russia as the suspected author.

Two weeks later, Bles from the DCCC began to appear on Guccifer 2.0's website. This time he released information about Democratic congressional candidates who were running close races in Florida, Ohio, Illinois, and Pennsylvania. On August 12, he went further, publishing a spreadsheet that included the personal email addresses and phone numbers of nearly two hundred Democratic members of Congress.

Alperovitch was in New York when he read about the leak on Twitter. He and Henry were asked to join a conference call with Nancy Pelosi, the House minority leader, and the chair of the DCCC. Pelosi said she'd warned her colleagues to keep their phones away from their grandchildren until they got new numbers, as some members of Congress had already received threatening messages. Alperovitch offered to install Falcon on representatives' computers until the election.

"I remember getting off that call feeling completely outraged," he said. "I called up Shawn. I'm like, 'I can't believe the Russians are getting away with it. These are congresspeople. I can't believe that there's still no response from this government.' "

Alperovitch's friends in government told him privately that an official attribution so close to the election would look political. If the government named Russia, it would be accused of carrying water for Hillary Clinton. The explanations upset Alperovitch. The silence of the American government began to feel both familiar and dangerous. "It doesn't help us if two years from now someone gets indicted," he said. After Michelle Obama's passport was published online, on September 22, Alperovitch threw up his hands in exasperation. "That is Putin giving us the Bnger," he told me.

Dmitri Alperovitch knows a thing or two about what the Russians call "active measures," in which propaganda is used to undermine a target country's political systems. He was born in 1980 in Moscow, in an era when people were afraid to discuss politics even inside their homes. His father, Michael, was a nuclear physicist who barely escaped being sent to Chernobyl as part of a rescue mission in 1986. Many of Michael's close friends and colleagues died of radiation poisoning within months of \ying to the burning power plant. The takeaway for Dmitri was that "life is cheap in the Soviet Union."

Michael also taught Dmitri to code. Without a computer at home, Dmitri practiced by writing down algorithms on paper. In 1990, his father was sent to Maryland as part of a nuclear-safety training program for scientists. Per Soviet custom, Dmitri stayed in the USSR to ensure that his parents didn't defect. He lived with his grandparents, and when his parents returned, after a year, they brought him his Brst computer, an IBM PC.

Without a computer at home, Dmitri practiced by writing down algorithms on paper

In 1994, his father was granted a visa to Canada, and a year later the family moved to Chattanooga, where Michael took a job with the Tennessee Valley Authority. The work was not particularly challenging, so Michael began studying cryptography on the side. While Dmitri was still in high school, he and his father started an encryption-technology business. Dmitri says he loved the beauty of the math but also saw cryptography's fatal \aw: "If someone stole your keys to encrypt the data, it didn't matter how secure the algorithms were."

Alperovitch studied computer science at Georgia Tech and went on to work at an antispam software Brm. There he met a striking dark-haired computer geek named Phyllis Schneck. As a teenager, Schneck once showed her father that she could hack into the company where he worked as an engineer. Appalled, Dr. Schneck made his daughter promise never to do something like that again.

Fighting email spam taught Alperovitch a second crucial lesson. He discovered that every time he blocked a server, the spammers deployed a hundred new

servers to take its place. Alperovitch realized that defense was about psychology, not technology.

To better understand his adversaries, Alperovitch posed as a Russian gangster on spam discussion forums, an experience he wrote up in a series of reports. One day he returned from lunch to a voice mail telling him to call the FBI immediately. He was terriBed. "I was not a citizen yet," he told me.

As it happened, the bureau was interested in his work. The government was slowly waking up to the realization that the Internet was ripe for criminal exploitation: "the great price of the digital age," in John Carlin's words. In 2004, the bureau was hacked by Joseph Colon, a disgruntled IT consultant who gained "god-level" access to FBI Bles. Colon was eventually indicted, but his attack showed the government how vulnerable it was to cybercrime.

In 2005, Alperovitch \ew to Pittsburgh to meet an FBI agent named Keith Mularski, who had been asked to lead an undercover operation against a vast Russian credit-card-theft syndicate. Mularski had no prior experience with the Internet; he relied on Alperovitch, whom he calls "a good guy and a friend," to teach him how to get into the forum and speak the lingo. Mularski's sting operation took two years, but it ultimately brought about Bfty-six arrests.

Alperovitch's Brst big break in cyberdefense came in 2010, while he was at McAfee. The head of cybersecurity at Google told Alperovitch that Gmail accounts belonging to human-rights activists in China had been breached. Google suspected the Chinese government. Alperovitch found that the breach was unprecedented in scale; it affected more than a dozen of McAfee's clients.

Three days after his discovery, Alperovitch was on a plane to Washington. He'd been asked to vet a paragraph in a speech by the secretary of state, Hillary Clinton. She'd decided, for the Brst time, to call out another country for a cyberattack. "In an interconnected world," she said, "an attack on one nation's networks can be an attack on all."

Despite Clinton's announcement, Alperovitch believed that the government, paralyzed by bureaucracy and politics, was still moving too slowly. In 2014, Sony called in CrowdStrike to investigate a breach of its network. The company needed just two hours to identify North Korea as the adversary. Executives at Sony asked Alperovitch to go public with the information immediately, but it took the FBI another three weeks before it conBrmed the attribution.

The delay still frustrates Alperovitch, who saw the long silence as a kind of disinformation. "Yesterday you had no idea. Today you're 100 percent certain. It wasn't credible." From the perspective of the government, however, the handling of the Sony hack was a triumph. "In twenty-six days we Bgured out it was North Korea," John Carlin told me. The attribution changed the focus, he said, from what Sony did wrong to how the government was going to respond to North Korea. As Phyllis Schneck, who now works at the Department of Homeland Security, told me, the government moves slowly because it cannot afford to be wrong: "Vendors like to be Brst. Government must be right."

The government's attitude toward attribution moved closer to Alperovitch's in September 2015, in the run-up to a state visit by Chinese president Xi Jinping. A year earlier, Bve members of the Chinese People's Liberation Army had been indicted by a grand jury in Pennsylvania for stealing economic secrets from the computers of U. S. Brms in the nuclear, solar, and metals industries. Carlin told me that the indictments were meant as "a giant No Trespass sign: Get off our lawn." But the indictment didn't stop the hackers. Alperovitch went on television to call for a stronger response. In April 2015, after President Obama signed an executive order threatening sanctions against the Chinese, Alperovitch received a call from the White House. "You should be happy," he was told. "You're the one who's been pushing for this."

Six months later, just before the state visit, The Washington Post reported that the U. S. was considering making good on the executive order. A senior State Department official told me that Xi did not want to be embarrassed by an awkward visit. The Chinese sent over a negotiating team, and diplomats from both countries stayed up all night working out an agreement. During the state visit, Obama and Xi announced that "neither country's government will conduct or knowingly support cyber-enabled theft of intellectual property" for the purpose of economic espionage. Since then, the Chinese burglaries have slowed dramatically.

This past March, Alperovitch hosted a cyber war game at the Moscone Center in San Francisco. Four teams of ten people—representing the government, the private sector, European and Australian allies, and the hackers—met for two hours to play the game. Shawn Henry; John Carlin; Chris Painter, coordinator for cyber issues at the State Department; and Chris Inglis, the former deputy director of the NSA, were all part of the government team. Executives from JPMorgan Chase and Microsoft represented the private sector. A former member of GCHQ, the British intelligence organization, was on the international team. Frank Cilluffo played a hacker. Ash Carter, the defense secretary, arrived halfway through and asked to play, but the game was already under way, so he was politely turned down.

The game's premise was that ISIS had hacked the databases of several state DMVs and their European counterparts. After a twenty-minute brainstorm, the government team said it was organizing a crisis-response group, speaking to the private sector, and sharing information with the Department of Homeland Security and the FBI. The private team said it was trying to get information from the government. The international team, meanwhile, complained that no one had briefed it—a mistake, Alperovitch said.

The adversary team then stood up and announced, "While the government team is deliberating and talking to the private sector, we're going to kill some people." It was a chilling moment that had real-life echoes for many people in the room. In June 2015, a Kosovar named Ardit Ferizi hacked an online retailer and passed the personal details of more than a thousand U. S. government and military officials to a member of ISIS, who in turn posted them on Twitter. (The ISIS member was later killed by a U. S. drone strike in Syria, and the Kosovar hacker was sentenced to twenty-Bve years in prison.)

The government's reluctance to name the Russians as the authors of the DNC and DCCC hacks made Alperovitch feel that the lessons of the war game—call out your enemy and respond swiftly—had been wasted. He continued to be told by his friends in government that it was politically impossible for the United States to issue an official response to Russia. Some, especially in the State Department, argued that the United States needed Russia's help in Syria and could not afford to ratchet up hostilities. Others said an attribution without a concrete response would be meaningless. Still others insisted that classiBed security concerns demanded consideration.

Alperovitch was deeply frustrated: He thought the government should tell the world what it knew. There is, of course, an element of the personal in his battle cry. "A lot of people who are born here don't appreciate the freedoms we have, the opportunities we have, because they've never had it any other way," he told me. "I have."

"A lot of people who are born here don't appreciate the freedoms we have."

The government's hesitation was soon overtaken by events. During the Brst week of October, while Alperovitch was on a rare vacation, in Italy, Russia pulled out of an arms-reduction pact after being accused by the U. S. of bombing indiscriminately in Syria. The same day, the U. S. halted talks with Russia about a Syrian ceaseBre. On October 7, two days before the second presidential debate, Alperovitch got a phone call from a senior government official alerting him that a statement identifying Russia as the sponsor of the DNC attack would soon be released. (The statement, from the office of the director of

national intelligence and the Department of Homeland Security, appeared later that day.) Once again, Alperovitch was thanked for pushing the government along.

He got the news just after leaving the Sistine Chapel. "It kind of put things in perspective," he told me. Though pleased, he wished the statement had warned that more leaks were likely. "It's nice that you have the DHS and DNI jointly putting the statement out on a Friday night, but the president coming out and saying, 'Mr. Putin, we know you're doing this, we Bnd it unacceptable, and you have to stop' would be beneBcial."

Less than a week later, after WikiLeaks released another cache of hacked emails—this time from John Podesta, Hillary Clinton's campaign chair—the White House announced that the president was considering a "proportional" response against Russia. Administration officials asked Alperovitch to attend a meeting to consider what to do. He was the only native Russian in the room. "You have to let them save face," he told the group. "Escalation will not end well."

2017 article from State of the Nation - "You Won't Believe Who They Really Work For"

Source article : [HW0001][GDrive]

"If someone steals your keys to encrypt the data, it doesn't matter how secure the algorithms are." — Dmitri Alperovitch, founder of CrowdStrike

Russians did not hack the DNC system, a Russian named Dmitri Alperovitch is the hacker and he works for President Obama. In the last five years the Obama administration has turned exclusively to one Russian to solve every major cyber-attack in America, whether the attack was on the U.S. government or a corporation. Only one "super-hero cyber-warrior" seems to "have the codes" to figure out "if" a system was hacked and by "whom."

Dmitri's company, CrowdStrike has been called in by Obama to solve mysterious attacks on many high level government agencies and American corporations, including: German Bundestag, Democratic National Committee, Democratic Congressional Campaign Committee (DCCC), the White House, the State Department, SONY, and many others.

CrowdStrike's philosophy is: *"You don't have a malware problem; you have an adversary problem."*

CrowdStrike has played a critical role in the development of America's cyber-defense policy. Dmitri Alperovitch and George Kurtz, a former head of the FBI cyberwarfare unit founded CrowdStrike. Shawn Henry, former executive assistant director at the FBI is now CrowdStrike's president of services. **The company is crawling with former U.S. intelligence agents.**

Before Alperovitch founded CrowdStrike in 2011, he was working in Atlanta as the chief threat officer at the antivirus software firm McAfee, owned by Intel (a DARPA company). During that time, he "discovered" the Chinese had compromised at least seventy-one companies and organizations, including thirteen defense contractors, three electronics firms, and the International Olympic Committee. **He was the only person to notice the biggest cyberattack in history!** Nothing suspicious about that.

Alperovitch and the DNC

After CrowdStrike was hired as an independent "vendor" by the DNC to investigate a possible cyberattack on their system, Alperovitch sent the DNC a proprietary software package called ***Falcon*** that monitors the networks of its clients in real time. According to Alperovitch, *Falcon* "lit up," within ten seconds of being installed at the DNC. Alperovitch had his "proof" in TEN SECONDS that Russia was in the network. This "alleged" evidence of Russian hacking has yet to be shared with anyone.

As Donald Trump has pointed out, the FBI, the agency that should have been immediately involved in hacking that effects "National Security," has yet to even examine the DNC system to begin an investigation. Instead, the FBI and 16 other U.S. "intelligence" agencies simply "agree" with Obama's most trusted "cyberwarfare" expert Dmitri Alperovitch's "TEN SECOND" assessment that produced no evidence to support the claim.

Also remember that it is only Alperovitch and CrowdStrike that claim to have evidence that it was Russian hackers. In fact, only two hackers were found to have been in the system and were both identified by Alperovitch as Russian FSB (CIA) and the Russian GRU (DoD). It is only Alperovitch who claims that he knows that it is Putin behind these two hackers.

Alperovitch failed to mention in his conclusive "TEN SECOND" assessment that Guccifer 2.0 had already hacked the DNC and made available to the public the documents he hacked – before Alperovitch did his ten second assessment. Alperovitch reported that no other hackers were found, ignoring the fact that Guccifer 2.0 had already hacked and released DNC documents to the public. Alperovitch's assessment also goes directly against Julian Assange's repeated statements that the DNC leaks did not come from the Russians.

The ridiculously fake cyber-attack assessment done by Alperovitch and CrowdStrike naïvely flies in the face of the fact that a DNC insider admitted that he had released the DNC documents. Julian Assange *implied* in an interview that the murdered Democratic National Committee staffer, Seth Rich, was the source of a trove of damaging emails the website posted just days before the party's convention. Seth was on his way to testify about the DNC leaks to the FBI when he was shot dead in the street.

It is also absurd to hear Alperovitch state that the Russian FSB (equivalent to the CIA) had been monitoring the DNC site for over a year and had done nothing. No attack, no theft, and no harm was done to the system by this "false-flag cyber-attack" on the DNC – or at least, Alperovitch "reported" there was an attack. The second hacker, the supposed Russian military (GRU – like the U.S. DoD) hacker, had just entered the system two weeks before and also had done "nothing" but observe.

It is only Alperovitch's word that reports that the Russian FSB was "looking for files on Donald Trump." It is only this false claim that spuriously ties Trump to the "alleged" attack. It is also only Alperovitch who believes that this hack that was supposedly "looking for Trump files" was an attempt to "influence" the election. No files were found about Trump by the second hacker, as we know from Wikileaks and Guccifer 2.0's leaks. To confabulate that "Russian's hacked the DNC to influence the elections" is the claim of one well-known Russian spy. Then, 17 U.S. intelligence agencies unanimously confirm that Alperovitch is correct – **even though there is no evidence and no investigation was ever conducted**.

How does Dmitri Alperovitch have such power? Why did Obama again and again use Alperovitch's company, CrowdStrike, when they have miserably failed to stop further cyber-attacks on the systems they were hired to protect? Why should anyone believe CrowdStrikes false-flag report?

After documents from the DNC continued to leak, and Guccifer 2.0 and Wikileaks made CrowdStrike's report look foolish, Alperovitch decided the situation was far worse than he had reported. **He single-handedly concluded that the Russians were conducting an "influence operation" to help win the election for Trump**. This false assertion had absolutely no evidence to back it up.

On July 22, three days before the Democratic convention in Philadelphia, WikiLeaks dumped a massive cache of emails that had been "stolen" (not hacked) from the DNC. Reporters soon found emails suggesting that the DNC leadership had favored Hillary Clinton in her primary race against Bernie Sanders, which led Debbie Wasserman Schultz, the DNC chair, along with three other officials, to resign.

Just days later, it was discovered that the Democratic Congressional Campaign Committee (DCCC) had been hacked. CrowdStrike was called in again and once again, Alperovitch immediately "believed" that Russia was responsible. A lawyer for the DCCC gave Alperovitch permission to confirm the leak and to name Russia as the suspected author. Two weeks later, files from the DCCC began to appear on Guccifer 2.0's website. This time Guccifer released information about Democratic congressional candidates who were running close races in Florida, Ohio, Illinois, and Pennsylvania. On August 12, Guccifer went further, publishing a spreadsheet that included the personal email addresses and phone numbers of nearly two hundred Democratic members of Congress.

Once again, Guccifer 2.0 proved Alperovitch and CrowdStrike's claims to be grossly incorrect about the hack originating from Russia, with Putin masterminding it all. Nancy Pelosi offered members of Congress Alperovitch's suggestion of installing *Falcon*, the system that failed to stop cyberattacks at the DNC, on all congressional laptops.

Key Point: **Once *Falcon* was installed on the computers of members of the U.S. Congress, CrowdStrike had even further full access into U.S. government accounts.**

Alperovitch's "Unbelievable" History

Dmitri was born in 1980 in Moscow where his father, Michael, was a nuclear physicist, (so Dmitri claims). Dmitri's father was supposedly involved at the highest levels of Russian nuclear science. He also claims that his father taught him to write code as a child.

In 1990, his father was sent to Maryland as part of a nuclear-safety training program for scientists. In 1994, Michael Alperovitch was granted a visa to Canada, and a year later the family moved to Chattanooga, where Michael took a job with the Tennessee Valley Authority.

While Dmitri Alperovitch was still in high school, he and his father started an encryption-technology business. Dmitri studied computer science at Georgia Tech and went on to work at an antispam software firm. It was at this time that he realized that cyber-defense was more about psychology than it was about technology. A very odd thing to conclude.

Dmitri Alperovitch posed as a "Russian gangster" on spam discussion forums which brought his illegal activity to the attention of the FBI – as a criminal. In 2005, Dmitri flew to Pittsburgh to meet an FBI agent named Keith Mularski, who had been asked to lead an undercover operation against a vast Russian credit-card-theft syndicate. Alperovitch worked closely with Mularski's sting operation which took two years, but it ultimately brought about fifty-six arrests. Dmitri Alperovitch then became a pawn of the FBI and CIA.

In 2010, while he was at McAfee, the head of cybersecurity at Google told Dmitri that Gmail accounts belonging to human-rights activists in China had been breached. Google suspected the Chinese government. Alperovitch found that the breach was unprecedented in scale; it affected more than a dozen of McAfee's clients and involved the Chinese government. Three days after his supposed discovery, Alperovitch was on a plane to Washington where he had been asked to vet a paragraph in a speech by the secretary of state, Hillary Clinton.

2014, Sony called in CrowdStrike to investigate a breach of its network. Alperovitch needed just "two hours" to identify North Korea as the adversary. Executives at Sony asked Alperovitch to go public with the information immediately, but it took the FBI another three weeks before it confirmed the attribution.

Alperovitch then developed a list of "usual suspects" who were well-known hackers who had identifiable malware that they commonly used. Many people use the same malware and Alperovitch's obsession with believing he has the only accurate list of hackers in the world is plain idiocy exacerbated by the U.S. government's belief in his nonsense. Alperovitch even speaks like a "nut-case" in his personal Twitters, which generally have absolutely no references to the technology he is supposedly the best at in the entire world.

Dmitri – Front Man for His Father's Russian Espionage Mission

After taking a close look at the disinformation around Dmitri and his father, it is clear to see that **Michael Alperovitch became a CIA operative** during his first visit to America. Upon his return to Russia, he stole the best Russian encryption codes that were used to protect the top-secret work of nuclear physics in which his father is alleged to have been a major player. **Upon surrendering the codes to the CIA when he returned to Canada, the CIA made it possible for a Russian nuclear scientist to become an American citizen overnight and gain a top-secret security clearance to work at the Oakridge plant, one of the most secure and protected nuclear facilities in America**. Only the CIA can transform a Russian into an American with a top-secret clearance overnight.

We can see on Michael Alperovitch's Linked In page that he went from one fantastically top-secret job to the next without a break from the time he entered America. He seemed to be on a career path to work in every major U.S. agency in America. In every job he was hired as the top expert in the field and the leader of the company. All of these jobs after the first one were in cryptology, not nuclear physics. As a matter of fact, Michael became the top expert in America overnight and has stayed the top expert to this day.

Most of the work of cyber-security is creating secure interactions on a non-secure system like the Internet. **The cryptologist who assigns the encryption codes controls the system from that point on**.

[...]

Michael Alperovitch's Linked In Page

Education:

Gorky State University, Russia, MS in Applied Mathematics

Work History:

- *Sr. Security Architect :* **VT IDirect** -2014 – Designing security architecture for satellite communications including cryptographic protocols, authentication.
- *Principal SME (Contractor) :* **DISA-Defense Information Systems Agency** (Manager of the Global Information Grid) – 2012-2014 – Worked on PKI and identity management projects for DISA utilizing Elliptic Curve Cryptography. Performed application security and penetration testing.
- *Technical Lead (Contractor) :* **U.S. Department of the Treasury** – 2011 – Designed enterprise validation service architecture for PKI certificate credentials with Single Sign On authentication.
- *Principal Software Engineer :* **Comtech Mobile Datacom** – 2007-2010 – Subject matter expert on latest information security practices, including authentication, encryption and key management.
- *Sr. Software Engineer :* **TriCipher** – 2006-2007 – Designed and developed security architecture for TriCipher Armored Credential Authentication System.
- *Lead Software Engineer :* **BellSouth** – 2003-2006 – Designed and built server-side Jabber-based messaging platform with Single Sign On authentication.
- *Principal Software Research Engineer :* **Pathfire, Inc.** – 2001-2002 – Designed and developed Digital Rights Management Server for Video on Demand and content distribution applications. Pathfire provides digital media distribution and management solutions to the television, media, and entertainment industries. The company offers Digital Media Gateway, a digital IP store-and-forward platform, delivering news stories, syndicated programming, advertising spots, and video news releases to broadcasters. It provides solutions for content providers and broadcasters, as well as station solutions.

[...]

Encryption Software, Inc. of Georgia (USA)

Source article : [HG0001][GDrive]

GEORGIA
CORPORATIONS DIVISION

GEORGIA SECRETARY OF STATE
BRAD RAFFENSPERGER

BUSINESS SEARCH

BUSINESS INFORMATION

Business Name:	**ENCRYPTION SOFTWARE, INC.**	Control Number:	**0005385**
Business Type:	**Domestic Profit Corporation**	Business Status:	**Admin. Dissolved**
Business Purpose:	**NONE**		
Principal Office Address:	**3338 Peachtree Rd NE , #1003, Atlanta, GA, 30326**	Date of Formation / Registration Date:	**2/2/2000**
State of Formation:	**Georgia**	Last Annual Registration Year:	**2007**
Dissolved Date:	**09/04/2010**		

REGISTERED AGENT INFORMATION

Registered Agent Name:	**TATIANA ALPEROVITCH**
Physical Address:	**595 BELLEMONT COURT, DULUTH, GA, 30097, USA**
County:	**Gwinnett**

OFFICER INFORMATION

Name	Title	Business Address
DMITRI ALPEROVITCH	Secretary	3338 Peachtree Rd NE #1003, Atlanta, GA, 30326, USA
MICHAEL ALPEROVITCH	CFO	3338 Peachtree Rd NE #1003, Atlanta, GA, 30326, USA
TATIANA ALPEROVITCH	CEO	3338 Peachtree Rd NE #1003, Atlanta, GA, 30326, USA

Filing History Name History

[HG0002][GDrive]

11/14/2000 - Video Network, Inc. Closes $66 Million Financing Round,Announces Plans to Change Company Name to Pathfire

http://www.quadranglegroup.com/News/NewsItem.aspx?id=42

Key Strategic Investors Include Enron Broadband Services, Reuters and PanAmSat

New Pathfire Name Reflects Company's Pioneering Applications for Distribution and Management of Digital Media Across Numerous Industries

ATLANTA, GEORGIA, and NEW YORK, NEW YORK, November 14, 2000

Video Networks Inc. (VNI), a leading business-to-business provider of digitized video and related e-commerce applications for the media industry,

announced today that it has closed on a $66 million round of private financing led by Quadrangle Group LLC, a private equity firm specializing in the media and communications industries.

Quadrangle's $20 million investment was the cornerstone of a round of financing that also included several key strategic and financial investors, such as Enron Broadband Services, a subsidiary of Enron Corp. (NYSE: ENE); Halpern Denny & Company; PanAmSat (NASDAQ: SPOT); Reuters; Riggs Capital Partners; and Sand Hill Capital. VNI said that it expects to announce business partnerships with several of its new strategic investors in the near future.

This round of financing included participation by existing high-quality VNI investors, such as Alliance Technology Ventures, AT&T Ventures, Bank of America Capital Investors, Institutional Venture Partners (IVP), Kinetic Ventures, Monarch Capital Partners, Noro-Moseley Partners, UPS Strategic Enterprise Fund and U.S. Venture Partners. Robertson Stephens functioned as VNI's agent for this significant round of financing.

Michael J. Eckert, president and CEO of VNI, said, "We are pleased and gratified that such a large number of blue-chip companies and firms have joined our existing investors in supporting VNI's vision and direction, and we are quite enthusiastic about the significant strategic value they bring. Our ability to secure a lead investor of Quadrangle's stature represents a strong vote of confidence in our employees, and of course in our groundbreaking technology. Through its deep relationships and high regard within the media and communication industries, Quadrangle will be a valuable partner as we continue to build this company."

Joshua L. Steiner, managing principal of Quadrangle, said, "We believe that VNI offers its customers superior service and significant cost-savings. The fact that leading media companies like NBC and Charter Communications rely on VNI for mission-critical solutions gives us great confidence in the company's prospects."

Steven Rattner, managing principal of Quadrangle, said, "Quadrangle's strategy is to focus on high-quality investments in the media and communications industries, and to invest in companies where we can make a difference. We are very excited about this company and its management team, and we look forward to helping VNI increase its product offerings and expand its customer base."

Quadrangle will receive one seat on the VNI Board of Directors and has the right to nominate a second board member, subject to the approval of the other shareholders in this round of financing.

VNI is a leading business-to-business provider of digital media content distribution and management services to the broadcasting and cable industries, with emerging operations in the areas of radio, digital cinema, syndication and streaming content on the Internet. VNI provides a distribution platform and software applications for the delivery and management of digitized video content and has developed unique e-commerce solutions that improve the efficiency of related billing and processing transactions. VNI's customers include major broadcast networks, cable companies, advertising agencies and other leading media companies.

Company to Change Name to "Pathfire," Reflecting Its Continuing Evolution

VNI's decision to change its name to Pathfire reflects a new stage of its development and its unique ability to distribute and manage digital media across numerous segments of the media industry.

The name is meant to evoke the speed and efficiency the company's leading-edge software applications and related networking capabilities bring to the management and exchange of digitized media assets in the cable, broadcast, media and entertainment industries. The company will officially adopt the Pathfire name and will launch an extensive rebranding campaign during the first quarter of 2001.

"We wanted a name that evoked the things we do as a company as well as the unique and dynamic way in which we do them," Eckert said. "Pathfire speaks to our ability to distribute content and also to our ability to surround that content with applications and services that make it more valuable."

Quadrangle Group LLC is an investment firm specializing in the media and communications industries. It was founded in March 2000 by four Managing Directors of Lazard Frères & Co. LLC who have more than 50 years of combined experience in private equity and in media and communications. The firm's advisory board and other investors include many prominent executives of leading media and communications companies.

Media Contact:

Video Networks Inc.

Laurie Sillay Lahr

Director, Marketing Communications

770.619.0801, ext. 1240

lsillaylahr@vninet.com

https://www.bizjournals.com/atlanta/stories/1997/01/27/story2.html

Tom Engdahl is a rare bird in these parts, and he almost migrated to California.

The CEO of 8-week-old Video Networks Inc. is a veteran entrepreneur, with two successful start-ups on his resume. West Coast venture capitalists, who love backing a proven commodity, wanted to back VNI, but only if he relocated to his native California.

That didn't sit well with the locals here, not to mention Engdahl and his family, comfortably ensconced in Atlanta since 1983. So Engdahl and venture capitalist Stephen Fleming, with the help of several institutions, convinced the investors -- two prestigious West Coast venture funds -- through cajoling and cash that Atlanta could profitably house VNI.

Though his North Atlanta office has little furniture and personnel (the sign outside still reads "Commonwealth Insurance," the previous tenant), Engdahl has secured investments from Fleming's Atlanta-based Alliance Technology Ventures, as well as Institutional Venture Partners (IVP) and U.S. Venture Partners (USVP), both based in Palo Alto, Calif. Rosemont, Ill.-based Comdisco Inc., whose network VNI will use, also has an equity stake in the company.

The total investment is worth about $4.3 million. VNI wants to transmit video digitally through an electronic infrastructure -- not a new idea, but one no one has successfully executed.

After Engdahl left Digital Video Inc. -- his second successful start-up -- in 1995, IVP general partner Geoff Yang offered him a slot as an "entrepreneur in residence" at IVP. Engdahl commuted between Atlanta and Palo Alto for a year, advising potential investors and researching his next opportunity.

2018 Forbes Article

Source : [HP0002][GDrive]

Dmitri Alperovitch's story began several years earlier. Dmitri immigrated to America in the 1990s from the Soviet Union while in his mid-teens. His family settled in Chattanooga, Tennessee, which is different in many ways from Russia's capital city Moscow, one of the most populated cities in the world. One thing that served Dmitri well in America was his education in Soviet schools, which emphasized math and science. Dmitri became interested in cybersecurity at a young age. "I started a company with my dad when I was still in high school," he told me in an interview. His father, a nuclear physicist, wasn't able to get a job in nuclear power, given the lack of new plants being built in the U.S. However, he became interested in cryptography. "I got more interested in the security side of cryptography and encryption and realized early on that no matter how good you were mathematically, if someone was able to steal your keys, then the quality of the algorithm didn't matter."

Dmitri attended Georgia Tech and received the school's first graduate degree in information security. He considered himself fortunate to land a job with CipherTrust, an email security company, and expected to work on encryption and cryptography. Instead, the company focused on how to block spam, including phishing attacks, that were being launched through email. "It highlighted how quickly things can deteriorate. We went from 5% of email traffic being spam to 95% in less than 6 months."

Dmitri thinks the malware industry was slow to learn because malware threats evolved less rapidly. At CipherTrust, he gained an appreciation for the importance of gaining intelligence. "I started infiltrating those underground forums where the spammers were talking about their latest capabilities . . . That's something we've leveraged heavily at CrowdStrike, to be an intelligence-driven company, so we can stay one step ahead."

In 2011, George Kurtz, Dmitri Alperovitch and Gregg Marston founded CrowdStrike, and it is now headquartered in Sunnyvale, CA, with a valuation of $3 billion and approximately 1,200 employees. According to CrowdStrike, its customers now include "12 of the 20 Fortune largest global companies, 10 of the 20 largest financial institutions," and many of the largest energy, healthcare providers and technology companies. (CrowdStrike is considering an initial public offering in 2019, according to Reuters.) CrowdStrike is one of 50 current U.S. billion-dollar startups with an immigrant founder, according to research by the National Foundation for American Policy.

Immigrants play a major role in the company. Dmitri Alperovitch is the company's chief technology officer. Alex Ionescu, who was born in Romania, worked in Canada and then immigrated to the U.S., is chief architect and helped design the company's "end-point solution," according to Dmitri. Dr. Sven Krasser, an immigrant from Germany, is CrowdStrike's chief scientist.

From the beginning, the company sought to hire people without the limitation of geographic location, a not uncommon practice in cutting-edge companies and something policymakers should keep in mind when proposing immigration restrictions. Dmitri notes he never even met many of the CrowdStrike's first employees until an "all-hands meeting in New York" weeks after the company started. [...]

https://pdfs.semanticscholar.org/45ef/c85c2a92fe00dae5477f918795d9fd23e6e5.pdf

2011-05-ijcsi-org-ecc-over-rsa-for-asymmetric-encryption.pdf

● The Top Secret Messenger software was developed by Encryption Software Inc. It encrypts the messages of some of the most popular instant messaging programs today, like ICQ and MSN. It can also be used with e-mail clients such as Microsoft Outlook and Outlook Express to encrypt e-mail messages. This product uses both private and public key cryptosystems, including a 307-bit key for its implementation of the ECC.

"Elliptic curves were proposed for use as the basis for discrete logarithm-based cryptosystems almost 20 years ago, independently by Victor Miller of IBM and Neal Koblitz of the University of Washington . At that time, elliptic curves were already being used in various cryptographic contexts.

Elliptic curves are rich mathematical structures that have shown usefulness in many different types of applications. ECC, like RSA has the role in digital signatures, secure key distribution, and encryption. ECC has the upper hand in the efficiency of algorithm. Some devices have limited processing capacity, storage, power supply, and bandwidth like the newer wireless devices and cellular telephones. When used, efficiency of the resource use is very important in these devices. ECC provides encryption functionality requiring a smaller percentage of the resources required by RSA and other algorithms, so it is used in these types of devices. In most cases, the longer the key length, the more protection that is provided, but ECC can provide the same level of protection with a smaller key size than RSA. Since smaller keys as in ECC require fewer resources of the device to perform the mathematical tasks. ECC cryptosystems use the properties of elliptic curves in their public key systems. The elliptic curves provide ways of constructing groups of elements and specific rules of how the elements within these groups combine. The properties between the groups are used to build cryptographic algorithms."

https://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=12&ved=2ahUKEwiY3IqutPXmAhVMMt8KHYx8BpI4ChAWMAF6BAgFEAI&url=https%3A%2F%2Fsceweb.uhcl.edu%2Fyang%2Fteaching%2Fcsci5931webSecuritySpr04%2FImtiazOralPresentation.ppt&usg=AOvVaw1NIMAjDHmksL_fFn9wAwia

2004 :

Top Secret Messenger :Top Secret Messenger (TSM) is product developed by Encryption Software, Inc. It provides a powerful public-key encryption platform, TSM provides integrated add-on for popular instant messengers thus integrating the new IM technology with existing system applications

http://www.edpci.com/Newsletter/NL4.html

Top Secret Messenger (Encryption Software Inc; $15; Windows (Outlook), plus...): http://www.encrsoft.com

2011 Speaking video - Asymmetric Cyber Operations LLC - speaking Dec 2 2011

See video : [HV0001][GDrive]

2012

https://www.youtube.com/watch?v=8d7pC9WmQ-U

2013

https://www.youtube.com/watch?v=pYzND9SYhA8

2010

Authentication Giant VeriSign Hacked Repeatedly in 2010

http://www.nbcnews.com/id/46238590/ns/technology_and_science-security/t/authentication-giant-verisign-hacked-repeatedly/#.XhaY9S2ZMXs

By Matt Liebowitz

updated 2/3/2012 2:50:09 PM ET

Print Font:

Update: VeriSign has released a public statement about the data breach. See below.

VeriSign, the Internet infrastructure company at the heart of the World Wide Web, was hacked repeatedly in 2010 by attackers who stole undisclosed but potentially critical information.

According to a report by Reuters, the previously undisclosed breaches took place in 2010 at the Reston, Va.-based firm, which verifies the integrity of top-level domains including all .com and .net addresses and until recently was one of the largest providers of Secure Sockets Layer (SSL) authentication certificates, used by most financial sites to ensure the legitimacy of sites beginning with "https."

"Oh my God," said Stewart Baker, formerly of the Department of Homeland Security and the National Security Agency, when told by Reuters of the breach. "That could allow people to imitate almost any company on the Net."

VeriSign told Reuters its executives "do not believe these attacks breached the servers that support our Domain Name System network," but it did not rule out the possibility of such an attack.

Compromising a Domain Name System (DNS) server could be catastrophic, as these servers verify that a site's Internet Protocol address — for example, 207.86.128.60 — matches up with what users type in to their browsers, such as "www.securitynewsdaily.com."

If an outside party tampered with a company's DNS servers, especially those as powerful as VeriSign's, that could potentially mean millions of people navigating to sites like Google and Amazon, or to their online banking websites, would actually be landing on spoofed, malicious sites controlled by the perpetrators.

In August 2010, VeriSign sold its authentication-certificate business to security-software giant Symantec. Authentication certificates, also known as SSL certificates, are issued to online retailers and other companies that sell products and provide services online. Those companies use the certificates to verify their identities to Web browsers. For example, an authentication certificate known to belong to Amazon proves to your browser that you're logged into the Amazon website.

Were the information about both the DNS server verification and the authentication certificates to fall into the wrong hands, malicious parties could "spoof" large parts of the Internet and World Wide Web.

"You could create a Bank of America certificate or Google certificate that is trusted by every browser in the world," **Dmitri Alperovitch**, head of Asymmetric Cyber Operations, LLC, and until recently vice president of threat research at Symantec's main rival, McAfee, told Reuters.

The Reuters report did not say if the data breach occurred before or after VeriSign transferred its authentication-certificate business to Symantec. SecurityNewsDaily could not reach VeriSign for comment.

"There is no indication that the 2010 corporate network security breach mentioned by VeriSign, Inc. was related to the acquired SSL product production systems," a Symantec spokeswoman told Reuters.

The VeriSign attacks came to light in a U.S. Securities and Exchange Commission filing in October that followed new SEC guidelines on disclosing security breaches to investors.

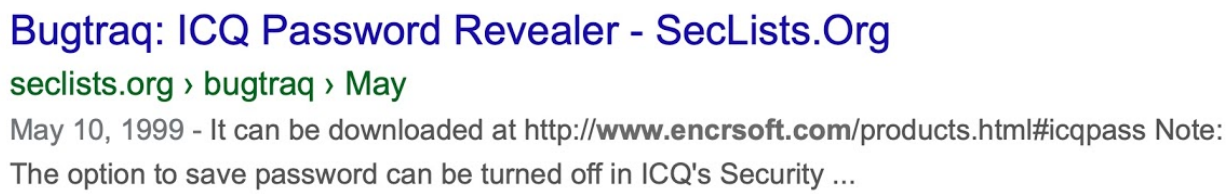
1999 - Encryption Software in business - TSM is available -

https://www.google.com/search?ei=hosWXvGKLc--ggeQ_6P4DQ&q=%22www.encrsoft.com%22&oq=%22www.encrsoft.com%22&gs_l=psy-ab.3...6982.11463..11921...0.0..0.103.695.7j1.....0....1..gws-wiz.....0i13j0i13i10.brB9fob_c08&ved=0ahUKEwjx5YKUuPXmAhVPn-AKHZD_CN8Q4dUDCAo&uact=5

2020-01-08-21-15-24-google-search-www-encrosoft-com-pg-1

2020-01-08-21-15-24-google-search-www-encrosoft-com-pg-1-zclip-1

2020-01-08-21-15-24-google-search-www-encrosoft-com-pg-1-zclip-2



anonyimity tips | Proxy Server | File Transfer Protocol - Scribd

https://www.scribd.com › doc › anonyimity-tips ▾

Oct 17, 2019 - Top Secret Messenger (TSM) - http://www.encrsoft.com/products/tsm.html (trial. version has only weak 8-bit encryption) * Chat Buddy ...

1999 (May) - Dmitris working at Encryption Software

https://seclists.org/bugtraq/1999/May/103

1999-05-seclists-org-bugtraq-icq-password-revealer.pdf

1999-05-seclists-org-bugtraq-icq-password-revealer-clip1.jpg /

ICQ Password Revealer

From: dmitri () ENCRSOFT COM (Dmitri Alperovitch)

Date: Mon, 10 May 1999 09:29:01 -0400

Hi.

A few weeks ago, it was posted that ICQ99 stores the password used to access the ICQ network in plain-text in the .DAT files.

We have written a program that demonstrates this by parsing these .DAT files for password and showing it to the user.

It can be downloaded at http://www.encrsoft.com/products.html#icqpass

Note: The option to save password can be turned off in ICQ's Security & Privacy settings.

Yours truly,

Dmitri Alperovitch

Encryption Software - Developers of TSM for ICQ, an ICQ encryption add-on

http://www.encrsoft.com

dmitri () encrsoft com

2000 (Aug 24) - Dmitri Alperovitch quoted in Computerworld article "Flaw in Microsoft Hotmail accounts leaves old buddy lists to new users"

Read full article from Computerworld : [HP0001][GDrive]

Microsoft is investigating a complaint that expired Hotmail accounts retain the linked MS Instant Messenger buddy lists, and those lists are available to the next person who registers the same e-mail address on a Hotmail account.

Microsoft spokeswoman Leslie Hui acknowledged the company is aware of the problem, but didn't say for how long, or when the access to supposedly expired buddy lists would be closed off.

*The glitch first came to light more than a year ago, when **Dmitri Alperovitch,** a software developer and part-founder of Encryption Software Inc., left a message at the Bugtraq Web site in which he detailed the programming glitches. He didn't indicate that the possible holes had created any real problems.*

Alperovitch wrote in an e-mail to Computerworld, "I did not receive any official response from Microsoft" after his Bugtraq post last year.

"I first checked it a year ago because I expected Microsoft to learn from the mistakes that ICQ and other early IM developers have made in regards with security. I was left quite disappointed that they repeated the same mistakes that others have made, in regards to not using any kind of encryption and also tying the service so closely to Hotmail, which has been plagued with all kinds of security problems in the recent months, which could have potentially compromised the security of not only users' e-mails, but also their IM contact lists and messages." [...]

2013

https://gvu.gatech.edu/news/georgia-tech-alumni-earn-spots-mit-technology-review-innovators-list

The list honors innovators in five categories: inventors, entrepreneurs, visionaries, humanitarians and pioneers. To compile the list, MIT Technology Review editors solicited nominations, selected fewer than 100 finalists and asked a distinguished panel of judges to score each finalist on the originality and impact of their work. From those scores, editors compiled the final list of 35 innovators.

Dmitri Alperovitch, 32, was recognized in the entrepreneur category for his role in co-founding the security company CrowdStrike, which enables cyber-attack victims to strike back against cyber-espionage.

Vijay Balasubramaniyan, 33, was recognized in the inventor category for developing Pindrop Security, which enables its clients to determine the origins of fraudulent phone calls, including those attempting identity theft.

Julie Kientz, 33, was recognized in the visionary category for her work in using computing tools to help people with sleep disorders and families with autistic children. She now works at the University of Washington, where she directs the Computing for Healthy Living and Learning Lab.

Alperovitch earned a bachelor's degree in computer science in 2001 and a master's in information security in 2003, both at Georgia Tech. Balasubramaniyan earned a doctorate in computer science from Georgia Tech in 2011. Both men completed research at the College of Computing's Information Security Center. Kientz earned her doctorate in computer science in 2008, completing her research in the School of Interactive Computing.

2005 mention - research engineer at Alpharetta and CipherTrust

Full newspaper page : [HN017P][GDrive]

F6 Thursday, April 28, 2005 / The Atlanta Journal-Constitution

Domains: E-mail address says lots about you

➤ Continued from F1

label of all — spammer.

Granted, while a large chunk of the nearly 123 million Americans zapping e-mails daily might not care about the label on their correspondence, others are glancing a judgmental eye.

"When I see a Yahoo or Hotmail domain, I think not only cheap, but also disposable and possibly porno, because of the anonymity of those domains," said Elizabeth McDaniel of Athens. "And I think 'dumbo' when I see someone nowadays with an AOL account."

Don't dismiss this as mere electronic snobbery. These e-mail impressions are having consequences users may not even realize.

Some employers are now balking at résumés that are sent from certain e-mail domains because of the stigma attached.

"I'll never hire someone with an AOL.com address," said Peter Shankman, founder of the Geek Factory, a New York City marketing firm that consults for such clients as Yoo-hoo soft drinks and Walt Disney World. "It screams that you're at a very basic stage."

And mighty AOL — which 50 million Americans still rely upon for e-mail exchanges, according to Internet audience measurement service comScore Media Metrix — is far from threatened.

"The thing that is most disconcerting to our members is not the domain names, but what is being sent," said AOL spokesman Nicholas Graham. "There's an immense amount of integrity and trust associated with the AOL.com name. Given the amount we've invested in products and services [spam filters and virus protection], the AOL.com domain name is trusted as much for professional and personal use."

The online giant, however, is fully aware of domain stigma: It offers software that allows its members to block specific domain names from their in boxes.

But what's worth more — credibility or cash?

Free e-mail services such as Hotmail or Yahoo Mail have attracted millions of users. ComScore Media Metrix counts Yahoo Mail as king with almost 63 million unique users as of this March. Hotmail boasts 44 million.

"I think Yahoo Mail has universal appeal," said Yahoo spokeswoman Karen Mahon in Sunnyvale, Calif. "Our users run the gamut from beginning users to business users."

But despite the massive audience, there's an unpleasant rep associated with these names.

> "We wonder at those 'sheep' with other systems and e-mail domains. They are always having problems. Don't they have the intelligence to research and select a more manageable operation?"
> ELIZABETH McDANIEL

And it's often earned.

Dmitri Alperovitch, research engineer at Alpharetta e-mail security and anti-spam vendor CipherTrust, said 2.5 percent of the e-mail sent to his business clients — which arrives from Hotmail, Yahoo and Gmail domains — is a legitimate exchange.

Yet almost 3.3 percent of mail from these addresses is spam.

"Spammers know that a great deal of mail comes from Hotmail or Yahoo, and they intentionally 'spoof' those domains," Alperovitch said, referring to the practice of sending out spam that appears to originate from a legitimate e-mail address.

And although it may save a few pennies, free e-mail addresses and certain providers don't always make the best first impression.

"I believe there is a place for AOL, MSN, Yahoo, in the personal e-mail world," said Richard Arnold, a marketing director for Auto Color Inc. in Marietta, "but not for a business."

Still, it's hard to decline the temptation of a free e-mail address, especially when services such as Gmail and Yahoo are now offering huge amounts of storage. Which has led many to create a near-Rolodex worth of addresses for themselves:

One for friends. One for banking. One for buying. One that's none of your business. And one that just looks cool.

"I have several e-mail addresses because of the stereotypes put on them," said Betsie Smith of Franklin. "When I said I was on Yahoo, people would not respond because just the name meant it was unsafe and too commercial. I use BellSouth Internet when I want not to be looked down upon."

Not all free e-mail accounts are pompously pooh-poohed. Gmail, Google's stab at carving an e-mail niche, has a bit of prestige since an address can only be secured from a personal invite from another user. Slightly more than 3 million Americans now boast a Gmail account.

"Gmail created a cachet that got everybody hot and bothered — a gourmet e-mail address," said Alan Thornton of Decatur, who uses a Gmail address among others.

But when, or if, Gmail becomes available to everyone, its fate could be the same as its other no-cost brethren.

"Anything that's free will eventually be the same," said David Carnoy, executive editor at technology news Web site CNET.com in New York City.

And then there are the elitists, who make no bones about their upscale domain tastes.

"I feel those of us with a mac.com e-mail domain are a little smug," McDaniel said. "We wonder at those 'sheep' with other systems and e-mail domains. They are always having problems. Don't they have the intelligence to research and select a more manageable operation?"

Easy now. Before copping such an attitude, realize that there's also a backlash against such bluster.

Personalized domains, which perhaps offer the greatest air of authenticity to an e-mail recipient, also can elicit the greatest contempt.

Yourname@yourname.com can intimate to some that you're a jerk.

"When I see someone like that it's like, 'Whoa, that person's a little full of themselves,'" Carnoy said. "It's almost like a vanity license plate."

So how does one achieve digital dignity, affordability and simplicity?

Stereotypes, as always, are often shallow and unfair, said Dave Mason of Tucson, Ariz., host of the syndicated radio program "ComputerTalk With Dave Mason."

The only real worth of any e-mail is its content.

"It's judging a book by the cover," Mason said. "You have to be very careful doing that. But you have to make judgments and you filter things out based on what's important."

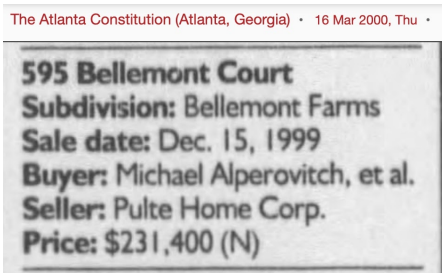
And many could not care less. Just please . . . no spam.

A domain name "has no significance," said Mike Leibowitz of Roswell. "Just don't send me [e-mail] that asks me to forward it to 47 other people or my legs will fall off."

[HN017Q][GDrive]

1999 (Dec) - Moves to Bellemont Court, Georgia

Source : [HN0001][GDrive]



The Atlanta Constitution (Atlanta, Georgia) • 16 Mar 2000, Thu •

595 Bellemont Court
Subdivision: Bellemont Farms
Sale date: Dec. 15, 1999
Buyer: Michael Alperovitch, et al.
Seller: Pulte Home Corp.
Price: $231,400 (N)

[HN0002][GDrive]

https://www.zdnet.com/article/china-connection-eyed-in-oak-ridge-cyber-attack/

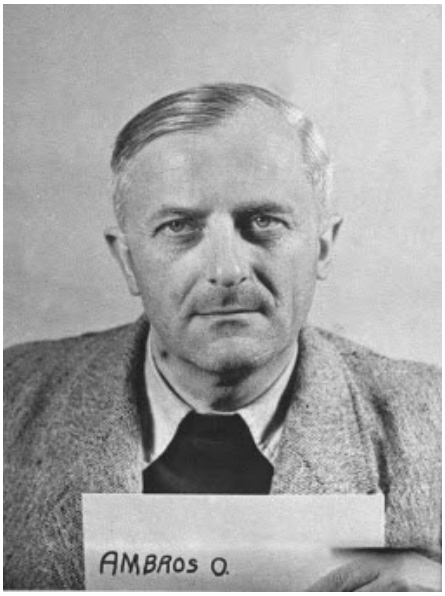
Dmitri's citizenship papers were approved Oct. 25th, 2010. The public record of his citizenship application is blocked from public records by the U.S. Citizenship and Immigration Services. His file is marked, "Withheld pursuant to (b)(6) COW2010000515".

https://search.uscis.gov/search?utf8=%E2%9C%93&affiliate=uscis_gov&query=alpernovitch

Baby Bear earned a bachelor's degree in computer science in 2001 and a master's in information security in 2003, both at Georgia Tech

Otto Ambros (born 1901)

Wikipedia Otto Ambros



[HK001B][GDrive]

Born 19 May 1901 Weiden in der Oberpfalz [HK001A][GDrive]

Died 23 July 1990 (aged 89) [HK001A][GDrive]

Saved WIkipedia capture

See [HK001A][GDrive]

Otto Ambros (19 May 1901 – 23 July 1990) was a German chemist and Nazi war criminal, who was involved with the research of chemical nerve agents, especially sarin and tabun. After the end of the war, he was tried at Nuremberg and convicted of crimes against humanity for his use of slave labor from the Auschwitz III–Monowitz concentration camp.

Early life

The son of a university professor, Ambros attended school and passed his Abitur exam in Munich. In 1920 he went to the University of Munich to study chemistry and agricultural science. In 1925 he gained a doctorate, studying under the 1915 Nobel Prize for Chemistry winner, Richard Willstätter.

Career

Beginning in 1926, Ambros worked at BASF in Ludwigshafen. In 1930 he spent a year studying in The Far East.

From 1934 he worked at IG Farben, becoming head of their Schkopau plant in 1935. His division of IG Farben developed chemical weapons, including the nerve agents sarin (in 1938) and soman (in 1944). In this capacity, he was an advisor to Carl Krauch, a company executive.

Ambros then managed the IG Farben factories at Dyhernfurth, which produced tabun (a nerve agent similar to sarin), and at Gendorf, which produced mustard gas (a poison gas originally developed and used in World War I). The Dyhernfurth factory included a slave labor concentration camp with about 3000 prisoners (needs citation, too vague) who were used for the most hard and dangerous work at the plant, and as human guinea pigs in nerve gas experiments.

In 1944 Ambros was awarded the Knight's Cross of War Merit Cross.

Monowitz

IG Farben plant at Monowitz under construction approximately 10 kilometres (6.2 mi) from Auschwitz, 1942

Concentration camp prisoners, identified by striped clothes at work in Monowitz

Ambros was arrested by the US Army in 1946. He had overseen the IG Buna Werke rubber plant at Monowitz in the Auschwitz complex. At the IG Farben trial in Nuremberg in 1948 he was sentenced to eight years' confinement, and was ultimately released from Landsberg Prison early in 1952. The extensive works were to have produced (WIKI) Buna rubber, or (WIKI) polybutadiene for use in rubber tyres. Monowitz was built as an Arbeitslager (workcamp); it also contained an "Arbeitsausbildungslager" (Labor Education Camp) for non-Jewish prisoners perceived not up to par with German work standards. It held approximately 12,000 prisoners, the great majority of whom were Jewish, in addition to non-Jewish criminals and political prisoners. Prisoners from Monowitz were leased out by the SS to IG Farben to labor at the Buna Werke, a collection of chemical factories including those used to manufacture Buna (synthetic rubber) and synthetic oil. The SS charged IG Farben three Reichsmarks (RM) per day for unskilled workers, four (RM) per hour for skilled workers, and one and one-half (RM) for children. By 1942 the new labour camp complex for IG Farben prisoners occupied about half of its projected area, the expansion was for the most part finished in the summer of 1943. The last 4 barracks were built a year later. The labour camp's population grew from 3,500 in December 1942 to over 6,000 by the first half of 1943. By July 1944 the prisoner population was over 11,000, most of whom were Jews. Despite the growing death-rate from slave labour, starvation, executions or other forms of murder, the demand for labour was growing, and more prisoners were brought in. Because the factory management insisted on removing sick and exhausted prisoners from Monowitz, people incapable of continuing their work were murdered at the death camp at Birkenau nearby. The company argued that they had not spent large amounts of money building barracks for prisoners unfit to work.

Release from prison

After his release, he became an adviser to chemical companies such as W. R. Grace and Company , (WIKI) Dow Chemical, as well as the U.S. Army (WIKI) Chemical Corps, and (WIKI) Konrad Adenauer.

He was also advising *Chemie Grünenthal* (now *Grünenthal GmbH*) in the development of thalidomide.

Book - "Operation Paperclip"

Source - [HB0020][GDrive]

[...] In 1998, Congress passed the Nazi War Crimes Disclosure Act, which required various U.S. government agencies to identify and release federal records relating to Nazi war criminals that had been kept classified for decades. In accordance with the act, President Clinton established an Interagency Working Group-made up of federal agency representatives and members of the public to oversee the interpretation of over eight million pages of U.S. government records and report its findings to Congress. The documentation revealed a vast web of profitable relationships between hundreds of Nazi war criminals and U.S. military and intelligence agencies.

In 2005, in a final report to Congress, U.S. Intelligence and the Nazis, the Interagency Working Group determined that "[t]he notion that they [the U.S. military and the CIA] employed only a few 'bad apples' will not stand up to the new documentation." In hindsight, wrote the Interagency Working Group, the government's use of Nazis was a very bad idea, and "there was no compelling reason to begin the postwar era with the assistance of some of those associated with the worst crimes of the war." And yet history now shows us that that is exactly what the American government did – and continued to do throughout the Cold War.

In the decades since Operation Paperclip ended, new facts continue to come to light. In 2008, previously unreported information about Otto Ambros emerged, serving as a reminder that the story of what lies hidden behind America's Nazi scientist program is not complete.

*A group of medical doctors and researchers in England, working on behalf of an organization called the **Thalidomide Trust**, believe they have tied the wartime work of **IG Farben** and **Otto Ambros** to the **thalidomide tragedy** of the late 1950s and early 1960s. After Ambros was released from Landsberg Prison, he worked as an economic consultant to **German chancellor Konrad Adenauer** and to the industrial magnate **Friedrich Flick**, the richest person in Germany during the Cold War. Like Ambros, Flick had been tried and convicted at Nuremberg, then released early by John J. McCloy.*

*In the late 1950s, Ambros was also elected chairman of the advisory committee for a German company called **Chemie Grünenthal**. Grünenthal was about to market a new tranquilizer that promised pregnant women relief from morning sickness. The drug, called thalidomide, was going to be sold under the brand name Contergan. Otto Ambros served on the board of directors of Grünenthal. In the late 1950s, very few people knew that Grünenthal Was a safe haven for many Nazis, including Dr. Ernst-Gunther Schenck, the inspector of nutrition for the SS, and Dr. Heinz Baumkotter, an SS captain (Hauptsturmfiihrer) and the chief concentration camp doctor in Mauthausen, Natzweiler-Struthof, and Sachsenhausen concentration camps.*

*Ten months before **Grünenthal**'s public release of thalidomide, the wife of a **Grünenthal** employee, who took the drug to combat morning sickness, gave birth to a baby without ears. No one linked the birth defect to the drug, and thalidomide was released by the company. After several months on the market, in 1959, **Grünenthal** received its first reports that thalidomide caused polyneuropathy, or nerve damage, in the hands and feet of elderly people who took the drug. The drug's over-the-counter status was changed so that it now required a prescription. Still, thalidomide was marketed aggressively in forty-six countries with a label that stated it could be " given with complete safety to pregnant women and nursing mothers without any adverse effect on mother and child." Instead, the drug resulted in more than ten thousand mothers giving birth to babies with terrible deformities, creating the most horrific pharmaceutical disaster in the history of modern medicine. Many of the children were born without ears, arms, or legs and with reptilian, flipperlike appendages in place of healthy limbs.*

*The origins of thalidomide were never accounted for. Grünenthal had always maintained that it lost its documents that showed where and when the first human trials were conducted on the drug. Then, in 2008, the Thalidomide Trust, in England, headed by Dr. Martin Johnson, located a group of Nazi-era documents that produced a link between thalidomide and the drugs researched and developed by IG Farben chemists during the war. Dr. Johnson points out that Grünenthal's 1954 patents for thalidomide cryptically state that human trials had already been completed, but the company says it cannot offer that data because it was lost, ostensibly during the war. **"The patents suggest that thalidomide was probably one of a number of products developed at Dyhernfurth or Auschwitz-Monowitz under the leadership of Otto Ambros in the course of nerve gas research,"** Dr. Johnson says.*

The Thalidomide Trust also links Paperclip scientist Richard Kuhn to the medical tragedy. "Kuhn worked with a wide range of chemicals in his nerve gas research, and in his antidote research we know he used Antergan, which are fairly sure was a 'sister drug' to Contergan," the brand name for thalidomide, Dr. Johnson explains.

[...] It seems that the legacy of Hitler's chemists has yet to be fully unveiled. Because so many of these German scientists were seen as assets to the U.S. Army Chemical Corps' nerve agent programs, and were thus wanted as participants in Operation Paperclip, secret deals were made, and the many documents pertaining to these arrangements were classified. President Clinton's Interagency Working Group had access to eight million pages of declassified documents, but millions more documents remain classified. In U.S. Intelligence and the Nazis, the Interagency Working Group's authors Write that " the truest reckoning with the official past can never be complete without the full release of government records."

*Part of the problem lies in identifying where records are physically located. For example, a 2012 FOIA request to the State Department, asking for the release of all files related to Otto Ambros, was denied on the grounds that no such files exist. But it is a matter of record; owing to a May 1971 news article in the "Jewish Telegraphic Agency", that Otto Ambros traveled to the United States twice with the State Departments assistance, despite his status as a convicted war criminal. In an interview with State Department official Fred Scott, the Jewish Telegraph1c Agency learned "Ambros came to the United States in 1967 after the State Department recommended to the Justice Department a waiver on his eligibility, which was granted" and that in 1969, Ambros received a second visa waiver and traveled to the United States again. In the spring o 1971 Ambros was attempting to get a third visa waiver from the State Department when the Jewish Telegraphic Agency reported the story. **According to Fred Scott, Ambros's host for his May 1971 visit was listed as the Dow Chemical Company.** After the story was published, Jewish groups held protests, and Ambros allegedly canceled his trip. But none of this information is contained in Ambros's declassified U.S. Army files, FBI files, or CIA files. Otto Ambros was a convicted Nazi war criminal. In accordance with the Nazi War Crimes Disclosure Act, all files about him should have been released and declassified. But records that cannot be located cannot be declassified. [...]*

Otto Ambros lived until 1990, to the age of ninety-two. After his death, the chemical conglomerate BASF, on whose board of directors he had served, lauded him as " an expressive entrepreneurial figure of great charisma." [...]

Source - [HX000K][GDrive]

As I read your book I started thinking about the various Nazi genre films such as; The Boys from Brazil, The Odessa File, and Marathon Man — they all hold to a similar premise, key Nazi's escape Germany after the war and plot in various ways to do bad things. Apparently truth is stranger than fiction. What was Operation Paperclip?

Operation Paperclip was a classified program to bring Nazi scientists to America right after World War II. It had, however, a benign public face. The war department had issued a press release saying that good German scientists would be coming to America to help out in our scientific endeavors.

But it was not benign at all, as seen in the character of Otto Ambros, a man, as you explain, was keen on helping U.S. soldiers in matters of hygiene by offering them soap, this soon after they had conquered Germany. Who was Ambros?

Otto Ambros I must say was one of the most dark-hearted characters that I wrote about in this book. He was Hitler's favorite chemist, and I don't say that lightly. I found a document in the National Archives, I don't believe it had ever been revealed before, that showed that during the war Hitler gave Ambros a one million Reichsmark bonus for his scientific acumen. ***The reason was two-fold. Ambros worked on the Reich's secret nerve agent program, but he also invented synthetic rubber, that was called buna. The reason rubber was so important — if you think about the Reich's war-machine and how tanks need treads, aircraft need wheels — the Reich needed rubber. By inventing synthetic rubber, Ambros became Hitler's favorite chemist.***

Not only that when the Reich decided to develop a factory at Auschwitz, — the death camp had a third territory, there was Auschwitz, there was Birkenau — they did it in a third territory called Auschwitz III also known as ***Monowitvz-Buna****. This was where synthetic rubber was going to be manufactured using prisoners who would be spared the gas chamber as they were put to work, and most often worked to death by the Reich war machine. The person, the general manager there at Auschwitz III, was Otto Ambros. Ambros was one of the last individuals to leave Auschwitz, this is in the last days of January 1945 as the Russians are about to liberate the death camp.* ***Ambros is there according to these documents I have located in Germany, destroying evidence right up until the very end.***

After the war, Ambros was sought by the Allies and later found, interrogated and put on trial at Nuremberg, where he was convicted of mass-murder and slavery. He was sentenced to prison, but in the early 1950s as the Cold War became elevated ***he was given clemency by the U.S. High Commissioner John McCloy*** *and released from prison. When he was sentenced, the Nuremberg judges took away all his finances, including that one million Reichsmark bonus from Hitler. When McCloy gave him clemency he also restored Otto Ambros' finances, so he got back what was left of that money.* ***He was then given a contract with the U.S. Department of Energy.***

He actually came to work in the United States?

Otto Ambros remains one of the most difficult cases to crack in terms of Paperclip. While I was able to unearth some new and horrifying information about his postwar life, most of it remains, "lost or missing," which I take to mean classified. We do know for a fact that Ambros came to the United States two, possibly three times. As a convicted war criminal traveling to the United States he would have needed special papers from the U.S. State Department. The State Department, however, informed me through the Freedom of Information Act that those documents are lost or missing.

NY Times article

See [HN00MM][GDrive]

The release of the nerve gas sarin in the Tokyo subway system has unleashed another possible weapon for any terrorists, but segments of the press have credited (or blamed) the Nazis for development of sarin and its mate, tabun. Such is incorrect, for tabun was publicized as early as 1902, as was sarin, and I. G. Farbenindustrie patented tabun in 1937 and sarin in 1938.

The Nazi regime merely refined these two nerve gases. In Tokyo, diluting chemicals must have been used, otherwise the death rate would have been in the thousands with many more thousands sickened.

By the fall of 1944 the unholy trio of Martin Bormann, Josef Goebbels and Robert Ley had pressured Hitler to use tabun on enemy cities and other installations. In May 1943 the same three urged its use on the Russian front after the Nazi debacle of Stalingrad.

In a conference in Hitler's East Prussian headquarters, Hitler learned that Albert Speer was opposed to the use of tabun against the Allies. ***Otto Ambros, a member of I. G. Farben's managing board and expert on poison gas and synthetic rubber, reminded Hitler that the Allies had a greater capacity to produce mustard gas and access to ethylene, its source from petroleum.***

Otto Ambros also warned Hitler that if Germany used tabun, the Allies could produce this gas in much greater quantities. Hearing this discouraging report from an expert, Hitler abruptly left the conference, but insisted that research be continued on sarin, which was coded "N-Stoff" as a closely guarded military secret, and ordered testing transferred from Army Ordnance to the SS.

When the nerve gas subject came up again in the fall of 1944, Hitler was told by Ambros that nothing had changed from his 1943 views, and Hitler again forbade its use against the Allies. But in February 1945 Speer conceived the idea of using tabun to kill Hitler by introducing it into the ventilating system of the Berlin Fuhrerbunker, but technical problems nullified that scheme.

After the war Ambros's estimate of the Allied chemical warfare capability proved wrong, ironically, for either gas might have altered the course of the war if Hitler had authorized the use of sarin or tabun.

Also, after the war, it was alleged that Farben's poison gases were used on inmates of concentration camps. R. H. HODGES Pelham, N.Y., March 21, 1995 The writer is a longtime researcher into the Nazi regime.

Housatonic

American Locamotive Company

Wikipedia American Locomotive Company

Saved Wikipedia

See HK001Q][GDrive]

"Alco" redirects here. For other uses, see Alco (disambiguation).

Former type Private

Industry Rail transport

Energy generation

Predecessor

List[show]

Founded

1901 in Schenectady, New York, United States

Defunct

1969; 50 years ago[1]

Headquarters

Bethania St, Schenectady, New York, United States

Products

Steam locomotives, Diesel-electric locomotives, Diesel engines and generators, Specialized forgings, High quality steel, Armed tanks, Automobiles, Electricity

Subsidiaries

Montreal Locomotive Works

Rogers Locomotive Works

The **American Locomotive Company** (often shortened to **ALCO**, **ALCo** or **Alco**) was an American manufacturer that built locomotives, diesel generators, steel and tanks. The company was formed in 1901 by the merger of Schenectady Locomotive Engine Manufactory of Schenectady, New York, with seven smaller locomotive manufacturers. The American Locomotive Automobile Company subsidiary designed and manufactured automobiles under the Alco brand from 1905 to 1913 and produced nuclear energy from 1954 to 1962.

The company changed its name to **Alco Products, Incorporated** in 1955. In 1964, the Worthington Corporation acquired the company. The company went out of business in 1969.

Foundation and early history

The plant in 1906

The company was created in 1901 from the merger of seven smaller locomotive manufacturers with Schenectady Locomotive Engine Manufactory of Schenectady, New York:[1][2]

- Brooks Locomotive Works in Dunkirk, New York
- Cooke Locomotive and Machine Works in Paterson, New Jersey
- Dickson Manufacturing Company in Scranton, Pennsylvania
- Manchester Locomotive Works in Manchester, New Hampshire
- Pittsburgh Locomotive and Car Works in Pittsburgh, Pennsylvania
- Rhode Island Locomotive Works in Providence, Rhode Island

- Richmond Locomotive Works in Richmond, Virginia

The newly formed company was headquartered in Schenectady, New York.[2] Samuel R. Callaway left the presidency of the New York Central Railroad to become president of Alco.[3] When Callaway died on June 1, 1904,[4] Albert J. Pitkin succeeded him as president of Alco.[5]

In 1904, the American Locomotive Company acquired control of the Locomotive and Machine Company of Montreal, Quebec, Canada; this company was eventually renamed the Montreal Locomotive Works. In 1905, Alco purchased Rogers Locomotive Works of Paterson, New Jersey, the second largest locomotive manufacturer in the United States behind Baldwin Locomotive Works.[2]

In the post World War II period, Alco operated manufacturing plants only in Schenectady and Montreal, having closed all the others. After the American Locomotive Company ceased locomotive manufacturing in the United States in 1969, Montreal Locomotive Works continued to manufacture locomotives based on Alco designs.

Steam locomotives

Milwaukee Road 261, a 1944 American 4-8-4 steam locomotive

Alco was the second-largest steam locomotive builder in the United States (after Baldwin Locomotive Works), producing over 75,000 locomotives (though not all were steam, since, unlike Baldwin, Alco transitioned more readily to Diesel). Among these were a large number of well-known locomotives. Railroads that favored Alco products included the Delaware & Hudson Railway, the New York, New Haven & Hartford Railroad, the New York Central Railroad, the Union Pacific Railroad and the Milwaukee Road. Alco was known for its steam locomotives of which the 4-6-4 Hudson, 4-8-2 Mohawk and the 4-8-4 Niagara built for the New York Central and the 4-8-4 FEF and the 4-6-6-4 (Challenger) built for the Union Pacific were fine examples. Alco built many of the biggest locomotives ever constructed, including Union Pacific's *Big Boy* (4-8-8-4). Alco also built the fastest American locomotives, the Class A Atlantic and Class F7 Hudson streamliners for the Milwaukee Road's *Twin Cities Hiawatha* run. Among the ambitious state-of-the-art designs of the late steam era, Alco's Challengers, Big Boys and high speed streamliners stood out for their in-service success.

American No 75214 Tr2 1319 at the Finnish Railway Museum

Other than the Delaware & Hudson's application of SKF roller bearings to the drivers, main and side rods of their own 4-6-2 locomotives in 1924 (the world's first), Alco built the first production steam locomotive in North America to use roller bearings: Timken 1111, a 4-8-4 commissioned in 1930 by Timken Roller Bearing Company was used for 100,000 miles (160,000 km) on fifteen major United States railroads before it was purchased in 1933 by the Northern Pacific Railway. (The Northern Pacific renumbered the *Four Aces* to No. 2626 and ran it on the *North Coast Limited*, as well as its pool trains between Seattle, Washington, and Portland, Oregon, and excursions, through 1957.)

Narrow gauge Alco locomotive built for the military service behind the trenches of World War I

During World War II, Alco produced many 2-10-0 Decapods for the USSR. Many of these were undelivered at the end of the war, and ten of these were sold to Finland in 1947. One, Alco builder's No. 75214, is preserved at the Finnish Railway Museum.[6]

Though the dual-service 4-8-4 steam locomotive had shown great promise, 1948 was the last year that steam locomotives were manufactured in Schenectady. These were the seven A-2a class 9400-series Pittsburgh & Lake Erie Railroad 2-8-4 "Berkshires." Their tenders had to be subcontracted to Lima Locomotive Works, as Alco's tender shop had been closed. The building was converted to diesel locomotive manufacture, to compete with locomotives manufactured by the automobile industry.[7]

Joseph Burroughs Ennis (1879–1955) was a senior vice president between 1917 and 1947 and was responsible for the design of many of the locomotives manufactured.

Alco automobiles

The company diversified into the automobile business in 1906, producing French Berliet designs under license. Production was located at Alco's Rhode Island Locomotive Works in Providence, Rhode Island. Two years later, the Berliet license was abandoned, and the company began to produce its own designs instead. An Alco racing car won the Vanderbilt Cup in both 1909 and 1910 and competed in the first Indianapolis 500 in 1911, driven on all three occasions by Harry Grant. But, ALCO's automotive venture was unprofitable, and they abandoned automobile manufacture in 1913.[8] The Alco automobile story is notable chiefly as a step in the automotive career of Walter P. Chrysler, who worked as the plant manager. In 1911 he left Alco for Buick in Detroit, Michigan, where he subsequently founded the Chrysler Corporation in 1925.

- American Locomotive Automobile Company - Berliet - 1906.
- An Alco winning the 1910 Vanderbilt Cup.
- 1912 Alco

Electric Locomotives

Alco made 60-ton center cab electric freight motors from 1912 through the 1920s for electric railway lines in Oregon. [9]

Diesel-electric locomotives

For a list of Alco diesel locomotive models, see List of ALCO diesel locomotives.

Alco RSD-16 used for freight services in Argentina, 1999.

Although strongly committed to the steam locomotive, ALCo produced the first commercially successful diesel-electric switch engine in 1924 in a consortium with General Electric (electrical equipment) and Ingersoll-Rand (diesel engine). This locomotive was sold to the Central Railroad of New Jersey. It built additional locomotives for a number of railroads, including the Long Island Rail Road and the Chicago and North Western Railway.

The company bought the McIntosh & Seymour Diesel Engine Company in 1929 and henceforth produced its own diesel engines. Its electrical equipment was always from GE. The diesel program was largely overseen by Perry T. Egbert, vice president in charge of diesel locomotive sales and later president of the

company.[10] In the early to middle 1930s, ALCo was the pre-eminent builder of diesel-electric switch engines in the United States but the Electro-Motive Corporation was expanding the realm of diesel power to mainline service, first with custom streamliner trainsets then with production design locomotives for passenger, then freight service. ALCo provided motive power for the Rebel streamliners in 1935 but remained focused on low power applications while General Motors (owner of EMC) was developing reliable diesel power for full-size mainline trains. In 1939, ALCo started production of passenger diesel locomotives to compete with those produced by EMC. The following year, ALCo entered into a partnership with General Electric (Alco-GE), for much-needed support in their efforts to compete with EMC. In 1941 ALCo introduced the RS-1, the first road-switcher locomotive. The versatile road-switcher design gained favor for short-haul applications, which would provide ALCo a secure market niche through the 1940s. The entry of the United States into World War II froze ALCo's development of road diesel locomotives. During that time, ALCo was allocated the construction of diesel switching locomotives, their new road-switcher locomotives, a small quantity of ALCO DL-109 dual-service engines and its proven steam designs, while EMD (formerly EMC) was allocated the construction of mainline road freight diesels (the production of straight passenger-service engines was prohibited by the War Production Board). The postwar era saw ALCo's steam products fall out of favor while they struggled to develop mainline diesel locomotives competitive with EMD's E and F series road locomotives, which were well positioned from GM-EMC's large development efforts of the 1930s and their established service infrastructure. ALCo would prove unable to overcome that lead.

An ALCO S-1 diesel switcher at the Mid-Continent Railway Museum, North Freedom, Wisconsin

Alco's revolutionary RS-1 roadswitcher was selected by the United States Army for a vital task. ALCo ranked 34th among United States corporations in the value of wartime production contracts.[11] The Kriegsmarine's capital ships, led by the Tirpitz, and the Luftwaffe were threatening Allied shipping to the Soviet Union at the port of Murmansk from bases in Norway. This was, at the time, the Soviet lifeline. Thanks to successes in Africa, the U.S. was able to rehabilitate the Trans-Iranian Railway and extend it to the USSR. They chose as locomotives the RSD-1, a six-axle, six traction motor variant of the light ALCo RS-1. Not only was the company prevented from selling these locomotives to mainline U.S. railroads, the thirteen RS-1s that had already been built were commandeered for Iranian duty and converted to RSD-1.[7]

ALCO wordmark recreation

In 1946, ALCo controlled 26% of the diesel locomotive market.[10] The ubiquitous S series (660 and 1000 horsepower) switchers and RS series (1000 and 1500 horsepower) road switchers represented ALCo well during the late 1940s. Much of their success in this period can be tied to their pioneering RS locomotives, representing the first modern road-switcher, a configuration which has long outlasted ALCo. The success of their switcher and road-switcher locomotives was not matched with the PA and FA-type mainline units, however. The 244 engine, developed in a crash program to compete with the power available with EMD's 567 engine, proved unreliable and sales of ALCo's mainline units soon went into decline. In 1948 ALCo-GE produced a prototype gas turbine-electric locomotive, a play to address the concerns of operators such as Union Pacific who sought to minimize the number of locomotive units needed for large power requirements. In 1949, ALCo embarked on a clean-sheet design project to replace the 244. 1949 also saw the introduction of the EMD GP7 road-switcher, a direct challenge in ALCo's bread-and-butter market.

In 1953, General Electric, dissatisfied with the dilatory pace of ALCo's efforts to develop a replacement for the troubled 244 engine, dissolved their partnership with ALCo and took over the gas turbine-electric venture that had started series production the previous year. In 1956 ALCo made long-overdue changes, modernizing their production process and introducing road locomotives with their new 251 engine. However, the benefits to ALCo were negated by bad timing; the market for locomotives was declining after the height of the dieselization era and EMD's GP9 was on the market as a proven competitor backed by a service infrastructure that ALCo, since the dissolution of the GE partnership, lacked. Sales were disappointing and ALCo's profitability suffered.[10] GE entered the export road diesel locomotive market in 1956. GE introduced their newest locomotive to the domestic market in 1960, quickly took the number two position from ALCo, and eventually eclipsed EMD in overall production. Despite continual innovation in its designs (the first AC/DC transmission among others), ALCo gradually succumbed to its competition, in which its former ally, General Electric, was an important element. A new line of Century locomotives including the 630 (the first AC/DC transmission), the 430 and the 636, the first 3,600 horsepower (2.7 MW) locomotive, failed to keep the enterprise going. Third place in the market proved to be an impossible position; ALCo products had neither the market position or reputation for reliability of EMD's products, nor the financing muscle and customer support of GE. It could not earn enough profits. In the late 1960s Alco gradually ceased locomotive production, shipping its last two locomotives, a pair of T-6 switchers to the Newburgh & South Shore Railroad (#1016 and #1017) in January 1969.[7] ALCo closed its Schenectady locomotive plant later that year, and sold its designs to the Montreal Locomotive Works in Canada.

Diversification

Alco diversified into areas other than automobiles with greater success. During World War II, Alco built munitions for the war effort, in addition to locomotive production; this continued throughout the Korean War. After the Korean War, Alco entered the oil production equipment and nuclear power plant markets. With the latter, it began to manufacture heat exchangers for nuclear plants.

In 1955, the company was renamed Alco Products, Incorporated. By this stage locomotive production only accounted for 20% of the business.[12][13]

A complete nuclear power plant, the PM-2A, was built for the Army Nuclear Power Program in 1960.

Purchase and division

The company was purchased in 1964 by the Worthington Corporation, which merged with the Studebaker corporation in 1967 to form Studebaker-Worthington, Inc. (SWI), Alco remaining a wholly owned subsidiary.[14] Former divisions of Alco became semi-independent subsidiaries in 1968.

After the termination of locomotive production in 1969, the locomotive designs (but not the engine development rights) were transferred to the Montreal Locomotive Works, which continued their manufacture. The diesel engine business was sold to White Motor Corporation in 1970, which developed White Industrial Power. In 1977 White Industrial Power was sold to the British The General Electric Company plc (GEC) which renamed the unit Alco Power, Inc. The business was subsequently sold to the Fairbanks-Morse corporation, which continues to manufacture Alco-designed engines in addition to their own design.

The heat exchanger business continued as Alco Products, Inc. for a time. At some later point, some of the heat exchanger products were manufactured by the Alco Products Division of Smithco Engineering, Inc. in Tulsa, Oklahoma (Smithco). In January 1983, certain assets of the Alco Products Division of Smithco, namely double-pipe and hairpin-type heat exchanger products sold under the "Alco Twin" name, mark and style, were sold in an asset sale by Smithco to Bos-Hatten, Inc., a subsidiary of Nitram Energy, Inc. (Nitram). Following the sale of these assets, Smithco remained in business, manufacturing other heat exchange products. In 1985, the assets acquired from Smithco were assigned by Bos-Hatten, Inc. to its parent, Nitram. In 2008, Nitram was acquired by

exchange products. In 1988, the assets acquired from Smiths were assigned by Bob Hatten, then to its parent, Nitrum. In 2008, Nitrum was acquired by Peerless Mfg. Co.[15] In 2015, Peerless sold its heat exchanger business to Koch Heat Transfer Co.[16]

Epilogue

ALCO 251 engine used as a backup generator at a wastewater plant in Montreal

After the closure of Alco's Schenectady works, locomotives to Alco designs continued to be manufactured in Canada by Montreal Locomotive Works and in Australia by AE Goodwin. In addition, Alco-derived locomotives form the major chunk of diesel power on the Indian Railways. Many thousands of locomotives with Alco lineage are in regular mainline use everywhere in India, and around 100 new locos are added every year.

Most of these locomotives are built by the Diesel Locomotive Works (DLW), located at Varanasi, India. The Diesel Loco Modernisation Works (DMW) at Patiala, India, do mid-life rebuilding and upgrading the power of these locomotives, typically the 2,600 horsepower (1.94 MW) WDM-2 to 3,100 horsepower (2.31 MW). *See also: Indian locomotives*.

Alco DL537 metre gauge locomotive of the Hellenic Railways Organisation at Corinth Old Railway Station, Greece.

A number of Alco and MLW diesel-electric locomotives (models DL500C, DL532B, DL537, DL543, MX627 and MX636) are in daily use hauling freight trains of the Hellenic Railways Organisation (OSE) in Greece. The oldest of them (class A.201, DL532B) were delivered to the former Hellenic State Railways (SEK) in 1962. In addition to a variety of standard gauge locomotives, the fleet includes 11 metre gauge Alco locomotives, mainly used for departmental trains in the Peloponnese network. The MX627 and MX636 locomotives have been extensively rebuilt at Piraeus Central Factory of OSE. The remaining Alco locomotives are also being rebuilt, starting with models DL532B and DL537.

The ALCO 251 diesel engine is still manufactured by Fairbanks-Morse of Beloit, Wisconsin, a company which also manufactured diesel locomotives. Additionally, Alco diesel engines are used to power the NASA Crawler Transporter.[17]

Alco and MLW locomotives still work on many regional and tourist railroads across the United States and Canada, including the Delaware-Lackawanna Railroad in Scranton, Pennsylvania, the Catskill Mountain Railroad in Kingston and Phoenecia; the Livonia, Avon and Lakeville Railroad family of lines based in Lakeville, New York, the Lake Whatcom Railway in Wickersham, Washington and the Middletown & Hummelstown Railroad in Middletown, Pennsylvania. The latter owns one of the last true ALCO switchers ever built, #1016. The 1016 is a T-6 type switcher engine. This and ALCO sister 151 (ex Western Maryland Railway S-6) provide daily service in Middletown. Two original Alco RS-2's that were delivered to the Nevada Northern Railway are still in operation.

ALCO-Cooke 2-8-0 #18, built in 1920, survives in passenger service on the Arcade & Attica Railroad in Arcade, New York. It returned to service in May 2009 after a six-year overhaul to bring it into compliance with the FRA's new steam locomotive regulations.

Great Western 60, a 2-8-0 built in Schenectady in 1937, currently operates in passenger service on the Black River & Western Railroad in Ringoes, NJ.

Alco RSD-16 were used in San Martín Line of Argentina until 2014.

Some Alcos survive on Australian networks, as well as in Bangladesh and Pakistan. Another fleet of Alco Bombardier locomotives run in rugged terrain on the Sri Lanka railway network. Argentina also has a healthy fleet of Alcos DL540 running commuter and cargo trains.

The Glenbrook Vintage Railway New Zealand, has a 2-4-4-2 articulated compound mallet, built by Alco in 1912. Only four mallets with this wheel arrangement were ever built; the other three by Baldwin. This unique loco is currently out of service awaiting overhaul.

During the 1970s, Romania's UCMR Resita made licensed engines from ALCo, putting the engines 6&12R251 into naval gensets and also with the 6R251 in FAUR factory were made locomotives known as LDH 1500 CP. (CFR Classes 67/68/70/71 and CFR Class 61). They were also exported in Iran and Greece (OSE)

Preserved Alco Steam Locomotives

While regular production of steam locomotives by Alco ended in the 1950s, Alco-built steam engines have been preserved in locations across North America. They can be found on the Nevada Northern Railway in Ely, Nevada; in the Orange Empire Railway Museum in California, on the Lake Whatcom Railway in Washington and on the Durango and Silverton Narrow Gauge Railroad in Colorado. Several Alco-built mainline engines are still operational, such as Union Pacific 844, Union Pacific 3985, Milwaukee Road 261 and Soo Line 1003. What is probably the most famous Alco steam locomotive ever built, Union Pacific Big Boy 4014, has been restored by the Union Pacific Railroad for excursion service.

In Portugal an Alco 2-8-2 locomotive built 1945 (Construction number: 73480) is undergoing major restoration to be displayed at the National Railway Museum at Entroncamento.[18]

WW2 Museum - American Locomotive Company

By Sarah Jones ; Source : [HI000H][GDrive]

The American Locomotive Company (ALCO) of Schenectady, NY, founded in 1845, was an important producer of locomotives and tanks for the war. In 1939, ALCO's output was $22,358. By 1943, in the midst of the war, it had increased by over 1800 percent to $428,905,600. During the first four years of the war, ALCO produced more than it had in the first twenty-five years of the 20th century. As Lieut. Gen. Somervell, the Commanding General, Army Service Forces, said "The American Locomotive Company has been in the forefront of our armament program."

On November 23, 1940, more than a year before Pearl Harbor, the Schenectady plant received a contract to build medium tanks. They immediately began the conversion of their locomotive manufacturing buildings, dedicating thousands of square feet to the production of tanks. ALCO continued to assemble locomotives alongside the tanks. By April 19, 1941, the first of these tanks was successfully tested and approved by government officials. Having never before built a tank, ALCO was the first to produce a M3 "General Lee" tank that was satisfactory to the army. ALCO also manufactured the M4 "General Sherman" tank.

In 1942, William Lentz, the Schenectady plant manager, lobbied for a contract to build a tank killer. After obtaining the contract from the US government, ALCO began design and production of a tank destroyer, the M7, nicknamed "The Priest". The Schenectady plant designed and manufactured the first M7 in only nineteen days, using the M3 tank chassis. The M7 was equipped with a 105 mm howitzer which had a range of seven miles. It proved crucial during the battle of El Alamein in Egypt, in November of 1942. The British army surprised Rommel's forces when one thousand M7s burst suddenly on the scene and stopped the German advance through North Africa. Even though the M7 had been in production in Schenectady for months, not a word had leaked to German ears. Schenectady became known as "The city that kept a secret." Don Godard declared on radio station WEAF on January 4, 1943, "For months, thousands of employees of the American Locomotive plant up in Schenectady were engaged in the production of a secret weapon. Practically all of them knew what it was they were building - the most destructive anti-tank device the world had ever seen... It came to the Germans as a complete surprise. A complete surprise thanks to the fact that thousands of employees... were able to keep their lips buttoned up since June." The hard work done by ALCO turned the tide in North Africa. In all, ALCO produced approximately 6,000 tanks during WWII.

To thank the ALCO employees, representatives of the American and British Armies celebrated "M7 Tank Day" in Schenectady on April 10, 1943, the anniversary of ALCO's delivery of the M7 prototype. In a ceremony at Liberty Park, a time capsule, with a hammer used on the first M7 and sand from the Sahara, was buried under a stone marker. The highlight of the day was when tanks paraded down Erie Boulevard, featuring the M7.

ALCO also produced 1,086 steam and 157 diesel locomotives for the war effort. Many of these were used on the Trans-Iranian Railroad. In late 1942, Russia needed supplies because the Nazi U-boats had crippled the Murmansk sea convoy route. The US military repaired the old and inadequate Iranian Railroad and ALCO renovated 57 locomotives to run on it. The locomotives were delivered at the Persian Gulf and rode up to Tehran. The first locomotive reached Tehran in March 1943. Two ALCO locomotives that served on the railroad were the 8000 (Susquehanna) and the 8008. Both were requisitioned by the US government and were modified by ALCO to run on the Iranian tracks. By May 1943, the Russian requirement for munitions was exceeded by 18 percent. Many of the workers who operated the Trans-Iranian Railroad were trained at ALCO or were former ALCO employees now in the army.

The products produced at ALCO were vital to the victory of the Allies. The locomotives that were modified and built at ALCO supplied the Russians via the Trans-Iranian Railroad and the M7 tank killer was used to great effect in North Africa and in Europe. Many NY factories helped to arm the Allies, including those at the Brooklyn Navy Yard and the Watervliet Arsenal. Allied success in WWII was due in part to the great work and the dedication of the industries and workers of the State of New York.

TODO -

https://www.nytimes.com/1972/05/26/archives/r-b-mgoll-led-logomotiye-firm-schenectady-concern-headi-from-1945to.html

https://www.youtube.com/watch?v=7xMhN3kPjp4

https://dailygazette.com/article/2014/05/24/reactor-alco-site-be-moved-or-notm

http://www.thuleforum.com/alco/

SM-1 L Small Modular Nuclear Reactor

See 🌐SM-1

Research and development of the reactor design was conducted in 1952–54 at the Oak Ridge National Laboratory, under the guidance of the Package Power Group. Funding for the reactor was approved in 1954 and bids to construct the facility were received from 18 companies, ranging in price from $2 million to $7 million.[3] According to *Time* magazine of 18 July 1955, the Army selected the low bid ($2,096,753), submitted by the American Locomotive Company (ALCO Products) of Schenectady, New York, and awarded the contract in December 1954.[4]

The name "SM-1" stands for Stationary, Medium-size reactor, prototype #1. The pressurized-water reactor (PWR) design developed by the AEC was a heterogeneous, water-cooled and water-moderated, stainless steel system, using highly enriched (93%) uranium dioxide mixture as fuel.[5]

The term "package" in the name *Army Package Power Reactor* refers to the program objective of designing a compact nuclear power plant whose components could be packed for delivery to remote facilities aboard large military transport aircraft. The SM-1 served as the prototype for the SM-1A power plant, which was constructed at Fort Greely, Alaska between 1960–62. The reactor core itself was compact, about the size of a household dishwasher.[6]

At a press conference held on 19 August 1954, (then) Major General Sturgis, Chief of Engineers, announced the plan by the Army and the AEC to build the "package" power plant at Fort Belvoir. A location in a "closed area" of the garrison had been selected, near a point at which Accotink Bay (aka, Gunston Cove) joins the Potomac River. The general said the design of the package reactor resembles the nuclear power plant on the US Navy's (newly launched) nuclear submarine Nautilus. He also said the reactor could be housed in a building 29 feet wide, 42 feet high and 80 feet long. The Army was sending out a request for proposals, that day, to "33 qualified bidders", and companies were being asked to come up with a "competitive lump-sum bid", rather than a cost-plus estimate.[7]**On 14 December 1954, the AEC announced that the contract was being given to American Locomotive Company of New York, whose $2 million bid was the lowest of the 18 proposals received.**[8] Asking companies to submit a lump-sum bid was hailed, at that time, as a sign of how much progress had been made in reactor power plant design by mid-1954, such that companies now had sufficient experience and could calculate costs with confidence.

Construction of the building to house the reactor began on 5 October 1955 in the southeast "corner" of Fort Belvoir, Virginia, alongside Gunston Cove, off the Potomac River. According to a news note in the December 1955 *Bulletin of the Atomic Scientists*, "Construction of the 'package' or portable reactor has been started at Fort Belvoir, VA. Alco Products is the contractor for the Defense Department and the AEC. The reactor will generate about 2,000 kilowatts of electricity, enough for a community of about 5,000 people."[9] Alco Products supplied the reactor, pressurizer and steam generator, while Westinghouse Electric Corporation supplied the canned-rotor pumps, General Electric supplied the turbine and generator, the Lummus Company supplied the condenser, and Minneapolis-Honeywell installed the controls. By late October 1955, the Army pushed ALCO to accelerate construction towards a completion date of 10 July 1957.[10] As a result, all major work was completed by March 1957.

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Housatonic

American Computer Group [of CA/AZ]

This page is for a company (or subsidiary?) called **American Computer Group** that was said to have been started in California in 1983 or 1984, and eventually moved to Arizona in the 1990s.

A **Rodney Lance Joffe (born 1954)** claimed multiple times to be the founder of American Group Group.

Note there is an "American Computer Group, Inc" in the Boston area. We are uncertain if there is any relaitonship between these two.

Adolf "Sonny" Monosson and American Computer Group, Inc

https://www.bfec.com/about

Started in 1968, BFEC is celebrating its 47th year in business! It all began with **Sonny Monosson**, known as a true pioneer in the venture leasing industry, who started over 14 companies. After receiving a BS in Electrical Engineering from MIT, Sonny went directly to Harvard Business School and went to work for his father in the Garment industry. After working with the factoring companies that factored their receivables, he realized he liked the business model and decided to start his own factoring company, Berkeley Finance Corporation in 1957.

In the sixties, he started the first computerized finance company, which lead to many inquiries, and he sold his portfolio and started a consulting company with two partners. After consulting and writing many studies on the computer industry, he and one of his partners started American Used Computer, one of the first used computer dealers and along the way became an authorized DEC dealer. This led Sonny to become an "expert" on DEC and so, he sold his factoring portfolio and wrote newsletters MONOSSON on DEC and columns in many of the computer oriented publications of the time.

He soon realized that since he had a vehicle to sell computer equipment, he could lease equipment to risky credits, and if they didn't succeed, he could simply take back the equipment and resell it. **At the same time, American Computer Group leased communication equipment to Fortune 100 companies, while Boston Financial & Equity leased to the early stage and venture backed companies.** Sonny passed away in 2003 but he would be proud of his well-trained group of employees who have been working together for the last twenty-five years!

(obituary) Adolf Monosson; established a market for computer leasing

http://archive.boston.com/news/globe/obituaries/articles/2003/10/07/adolf_monosson_established_a_market_for_computer_leasing/

2003-10-07-boston-com-news-adolf-monosson-obituaries.pdf

By Martha Bartle, Globe Correspondent, 10/7/2003

Adolf "Sonny" Monosson, who established a market for leased computers in the United States and was known for his signature red bow ties and forward thinking, died Friday at Beth Israel Deaconess Medical Center.

He was 76 and was managing his businesses until his death.

A Boston native, Mr. Monosson graduated from Brookline High School where he excelled in the sciences. At age 16, he enrolled at the Massachusetts Institute of Technology. His studies were interrupted when he served in the Navy for two years.

Mr. Monosson graduated from MIT in 1948 and earned an MBA from Harvard Business School in 1950. The day after classes ended, he married Gloria Haskins, the daughter of a Brookline doctor, whom he had earlier lost a chance to ask out in a coin toss with a friend. He asked her out anyway.

In his 20s, Mr. Monosson founded American Used Computers, the first such business in the country. The business leased high-tech computer equipment to high-risk businesses.

His first client was NASA, which leased a DEC computer that delivered the first pictures of Mars and Venus from space.

Mr. Monosson was always noticed for his eccentricities and intelligence, said his daughter, Susan Kooper of Somerville. At a 1970 National Computer Conference in Atlantic City, Mr. Monosson took an alternative approach to sales. When most people were inside the conference, he was strolling along the boardwalk wearing a sandwich board advertising his computers.

"I used to tell people, `I've got a great used computer for you,' and they'd say, `A used what?' " Mr. Monosson recalled in a 1984 interview with Inc. magazine.

"He was not a very ordinary man," said another daughter, Debbie of Cambridge. "He was very quirky and spoke his own mind."

But he was a serious business man who ran a finance company, which eventually grew into Boston Financial & Equity Corp. He wrote a column for Digital Review for several years and published the newsletter Monosson on DEC, becoming an authority on Digital Equipment Corp. Mr. Monosson enjoyed taking his family skiing and hiking.

Kooper recalled a time the family had gone skiing and her aunt was bewildered one morning to find the usually raucous children eating breakfast in silence. She soon realized that Mr. Monosson had fed them chocolate cake, ice cream, and ginger ale.

"He was a great father," Monosson said. "He was tough, but kind, and brought us all up to think independently."

Mr. Monosson was also devoted to his Japanese rock garden, converted from a backyard swimming pool complete with steps and a waterfall. Several years ago, he passed a few sickly cactus plants that garden store employees were planning to throw out. Mr. Monosson offered to take the plants home and nurse them back to health. The plants are now alive and well in Mr. Monosson's home, Kooper said.

In addition to his wife and two daughters, he leaves two other daughters, Judith Scherzer of Lexington and Emily of Montague; and four grandchildren.

A memorial service will be held today at 2 p.m. in Levine Chapels in Brookline. Burial will be private.

"American Computer Group, Inc." of Boston - https://opencorporates.com/companies/us_ma/042434010

"American Computer Group, Inc." of Arizona - https://opencorporates.com/companies/us_az/F07731988

** says it is a branch of the "American Computer Group" of California - https://opencorporates.com/companies/us_ca/C1314808

2010 - wow a real product !

http://www.prweb.com/releases/economicforecasttool/economicindicators/prweb4803704.htm

https://www.inc.com/profile/american-computer-group

https://www.linkedin.com/company/american-computer-group/about/

now arizona

https://www.dnb.com/business-directory/company-profiles.whitehat_inc.a610e5f44a2393e3702d1e075c12f019.html

whitehat - ultimate parent is Tenth Power Technologies Corp

https://www.dnb.com/business-directory/company-profiles.tenth_power_technologies_corp.b88cd595b3a7c97cd8a724d61979ab4b.html

https://www.bloomberg.com/profile/company/NITFF:US

1983-1984 - Help-wanted ads for "American Computer Group" in California

Oct 23 1983
Full newspaper page : [HN01GH][GDrive] / Clip : [HN01GI][GDrive]

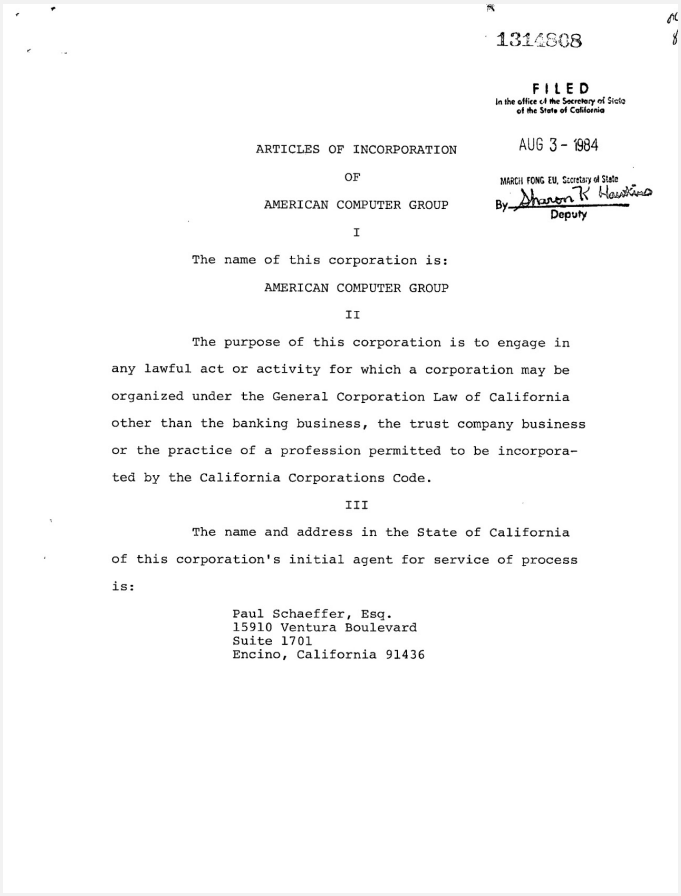
Nov 17 1983
Full newspaper page : [HN01GJ][GDrive] / Clip : [HN01GK][GDrive]

Dec 09 1984
Full newspaper page : [HN01GL][GDrive] / Clip : [HN01GM][GDrive]

1984 (Aug 03) - "American Computer Corp" - Letter of incorporation

NOTE - **Name of Rodney Joffe is not present**. Instead the sole proprietor is an **Ellen M. Ruberti**

PDF Source - [HC005O][GDrive]



1314808

FILED
In the office of the Secretary of State
of the State of California

AUG 3 - 1984

MARCH FONG EU, Secretary of State
By Sharon K Hawkins
Deputy

ARTICLES OF INCORPORATION

OF

AMERICAN COMPUTER GROUP

I

The name of this corporation is:

AMERICAN COMPUTER GROUP

II

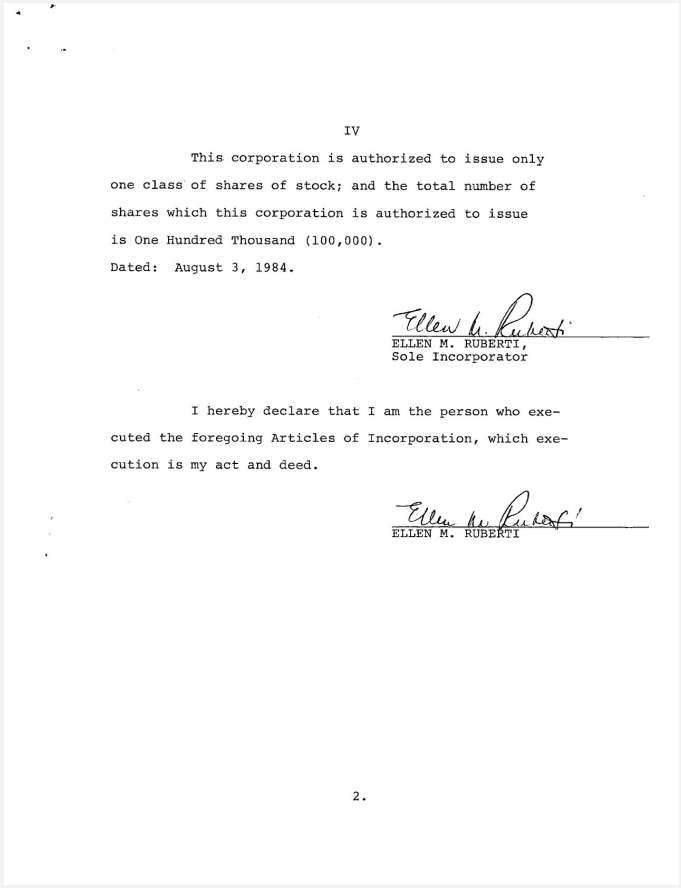
The purpose of this corporation is to engage in any lawful act or activity for which a corporation may be organized under the General Corporation Law of California other than the banking business, the trust company business or the practice of a profession permitted to be incorporated by the California Corporations Code.

III

The name and address in the State of California of this corporation's initial agent for service of process is:

Paul Schaeffer, Esq.
15910 Ventura Boulevard
Suite 1701
Encino, California 91436

[HC005P][GDrive]



IV

This corporation is authorized to issue only one class of shares of stock; and the total number of shares which this corporation is authorized to issue is One Hundred Thousand (100,000).

Dated: August 3, 1984.

Ellen M. Ruberti
ELLEN M. RUBERTI,
Sole Incorporator

I hereby declare that I am the person who executed the foregoing Articles of Incorporation, which execution is my act and deed.

Ellen M. Ruberti
ELLEN M. RUBERTI

2.

[HC005Q][GDrive]

Who is "Ellen M. Ruberti" ?

SEE U.S., Public Records Index, 1950-1993, Volume 1, U.S., Public Records Index, 1950-1993, Volume 1 No Image - https://www.ancestry.com/discoveryui-content/view/147563663:1788?indiv=1&tid=&pid=&queryId=fd93a0456b44a6aff1f83251f875ca9f&usePUB=true&_phsrc=bis28&_phstart=successSource

- Name: Ellen M Ruberti [Ellen Elgrably] [Ellen Ruberti]
- Residence Date: 1993
- Address: 5736 Eunice Ave , Simi Valley, CA [...]
- Second Address: 5736 Eunice Ave , Simi Valley, CA [...]
- Third Address: 4440 Sepulveda Blvd Apt 303 , Sherman Oaks, CA [...]

Ellen M Ruberti married a Victor Elgrably in Oct 1985

Source - https://search.ancestry.com/cgi-bin/sse.dll?indiv=1&dbid=1144&h=3901777&tid=&pid=&queryId=2b59b75f3ee0ecb14cb8ad117cb68a25&usePUB=true&_phsrc=bis23&_phstart=successSource

- Name: Victor Elgrably
- Birth Year: abt 1957 / Age: 28
- Marriage Date: 6 Oct 1985
- Marriage Place: Los Angeles, California, USA
- Spouse Name: Ellen M Ruberti / Spouse Age: 28

Victor Elgrably died 2013 (Sept. 18) at 56. Survived by wife Nadia Ali; mother Fortune Dahan; sisters Rita Danino, Evelyn Saul; brother Eli. Hillside

https://www.findagrave.com/memorial/160834593/victor-elgrably / https://jewishjournal.com/judaism/obituaries/122510/ / no obituary : https://www.newspapers.com/image/203709194/?terms=Victor%20Elgrably&match=1

Dec 1989 - Rodney Joffe secured the following address for ACG

http://www.uspostalbulletins.com/PDF/Vol110_Issue21743_19890921.pdf

American Computer Group

3599 Cahuenga Blvd W , **L**os Angeles CA 90068-1303

1990 ? - Rodney Joffe secured same address in Los Angeles for ACG

http://www.uspostalbulletins.com/PDF/Vol111_Issue21759_19900322.pdf

American Computer Group

3599 Cahuenga Blvd W , Los Angeles CA

1998 (Nov 30) - USC News- "ISD Wires the Neighborhood for the 'Net"

https://news.usc.edu/9839/ISD-Wires-the-Neighborhood-for-the-Net/

1998-11-30-usc-news-isd-wires-the-neighborhood.pdf

https://drive.google.com/file/d/1JRkADAKheNJ-pl5peoitVHY3tyDWRxfG/view?usp=sharing

BY Sharon Stewart NOVEMBER 30, 1998

Bell High teacher Scott Morris helps students in the school's computer lab. With help from USC's Information Services Division, Bell has become the Internet access provider for other schools. The university absorbed the annual fee for using high-speed data transmission lines operated by Los Nettos, a consortium that provides Internet access.

Mary Lewis has two characteristics of most great teachers: She is insatiably curious, and she constantly seeks new ways to inspire her students to engage in critical thinking.

Lewis, a sixth-grade math and science teacher at Foshay Learning Center, jumped at the chance several years ago to take Web Masters/Info Masters computer classes offered to teachers at USC's Family of Five Schools.

The classes "made my searching [the Internet] more efficient, more productive and a great deal faster," Lewis said. "The time thing is really important because by the time you finish correcting papers after school, it's 5 or 6 at night and you don't have time to go to the library. Now I can just get on the computer for any research I need to do."

Foshay, 32nd Street USC Performing Arts Magnet and Weemes, Norwood Street and Vermont Avenue elementary schools are members of USC's Family of Five Schools, a public-private partnership that provides special educational, cultural and developmental opportunities for 8,000 children who live close to USC's University Park campus.

Foshay's entrée to the Internet – made possible by USC's Information Services Division (ISD) and its Information Technology Services (ITS) branch and an assortment of other private and public agencies – helps level the playing field for the school's kindergarten – through 12th-grade students and their counterparts from more affluent neighborhoods, said Lisa Beebe, Foshay's technology co-coordinator.

USC's role in helping Foshay and about 16 area schools hook up to the Internet over the past five years "is definitely part of [the university's] outreach to the community," said Beebe, who also teaches 10th- through 12th-grade technology classes. "They are bringing us something that is not easy to get and something that most schools can't generally afford."

Talks on how to help schools gain access to the Internet began in 1994, said ITS project manager Marty Ruggles.

"Bell High School was the first project," Ruggles said. "They came to us trying to find a solution for getting Internet connectivity because they were frustrated with the length of time it was taking for L.A. schools to get wired and on-line. They wanted cooperation from us to establish that connectivity."

And thanks to USC's participation in a regional consortium that provides high-quality network connections at the lowest possible cost, it was able to help not only Bell High school, but other schools as well.

"We definitely cut them a deal," Ruggles said of the university's absorption of the $10,000 annual fee to use the high-speed data transmission lines operated by Los Nettos, the consortium of institutions that provides access to the Internet.

"With our mandate to be working with the community, we initially went ahead and developed a program with Bell, then Roosevelt and Manual Arts high schools, Foshay and Elizabeth Learning Centers and Don Bosco Technical Institute, a private school in Rosemead," he said. "We actually had several people in our department volunteer to work with each school in the Family of Five Schools to help them figure out how they should set up their network."

The Los Nettos consortium includes USC, Caltech, the Jet Propulsion Laboratory, USC's Information Sciences Institute, TRW, UCLA and the American Computer Group.

Bell High was a natural place for USC to start, said Mike Goldberg, who with his wife, teacher Bonnie Goldberg, and another teacher, Scott Morris, had already set up a computer lab at Bell. In order to advance to a networking system, the three approached the Defense Advanced Research Projects Agency (DARPA) and USC.

"We told those guys that if we were to get an Internet connection, we could turn around and in three weeks have 200 kids a day doing research on the Internet with good instruction behind it," Goldberg said. "DARPA gave us two routers and as much professional help as we wanted, and USC gave us the high-speed access to the Internet. This allowed us to hook our network up."

And an on-line visit to www.bell.K12.ca.us will prove that the school has lived up to its promise, Goldberg said.

"All of our feeder elementary schools feed into our access lines, while we feed into USC's," said teacher Scott Morris. "USC has allowed us carte blanche connection. They made it very painless for us to get started, letting us focus on curriculum. It's been a great relationship."

Bell – like Foshay, Manual Arts and Roosevelt – has become the Internet access provider for other schools. "BellNet" serves the Bell High Cluster of Los Angeles public schools in the cities of Bell, Cudahy, Huntington Park and Maywood.

"They are like the hub of a wheel, and these other schools are the spokes out from them," said Ruggles. "They have Integrated Service Digital Network (ISDN) circuits which link the outlying schools to the hub school."

It's a sort of trickle-down theory that really does work, said USC Director of Networking James Wiedel.

"We provide a 1 1/2 megabit-per-second circuit to the host schools, which is equivalent to sending or receiving 40 single-spaced pages per second. The feeder schools, using ISDN dial-up, connect to that line," said Wiedel, who designed and maintains USC's computer network system. "For instance, schools get to the Internet through Foshay, then back to us and then out to the rest of the world. It's a seamless approach."

Each school pays for and maintains its own equipment, but USC "is picking up the bill for the Los Nettos access," Wiedel said.

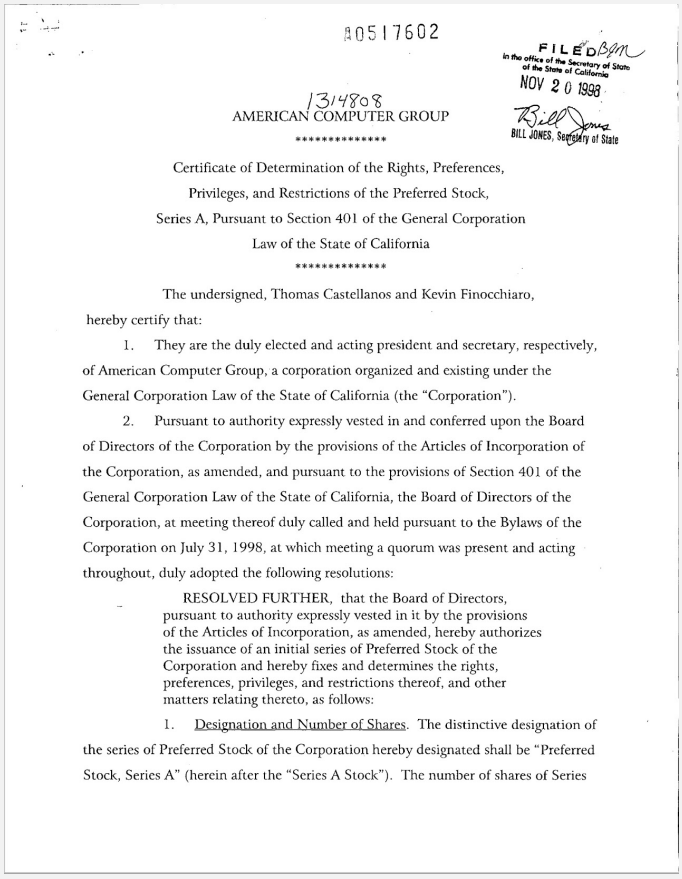
Students and teachers are benefiting from USC's commitment to its neighbors, said Foshay's Beebe. Math and science teacher Mary Lewis is a shining example. [...]

1998 (July 31) - Sale(???) of American Computer Group to Thomas Castellanos and Kevin Finocchiaro,

https://businesssearch.sos.ca.gov/Document/RetrievePDF?Id=01314808-6191001

1998-07-31-california-articles-corporation-acg.pdf / 1998-07-31-california-articles-corporation-acg-ocr.pdf

1998-07-31-california-articles-corporation-acg-pg-10.jpg



A0517602

FILED
In the office of the Secretary of State
of the State of California
NOV 20 1998
BILL JONES, Secretary of State

1314808
AMERICAN COMPUTER GROUP
****

Certificate of Determination of the Rights, Preferences,
Privileges, and Restrictions of the Preferred Stock,
Series A, Pursuant to Section 401 of the General Corporation
Law of the State of California
****

The undersigned, Thomas Castellanos and Kevin Finocchiaro,
hereby certify that:

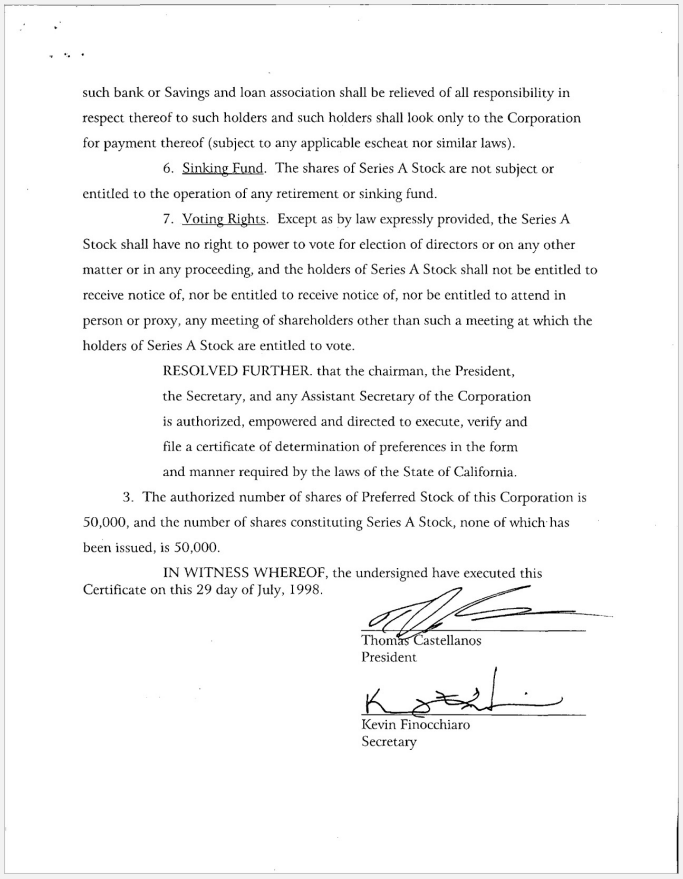
1. They are the duly elected and acting president and secretary, respectively, of American Computer Group, a corporation organized and existing under the General Corporation Law of the State of California (the "Corporation").

2. Pursuant to authority expressly vested in and conferred upon the Board of Directors of the Corporation by the provisions of the Articles of Incorporation of the Corporation, as amended, and pursuant to the provisions of Section 401 of the General Corporation Law of the State of California, the Board of Directors of the Corporation, at meeting thereof duly called and held pursuant to the Bylaws of the Corporation on July 31, 1998, at which meeting a quorum was present and acting throughout, duly adopted the following resolutions:

RESOLVED FURTHER, that the Board of Directors, pursuant to authority expressly vested in it by the provisions of the Articles of Incorporation, as amended, hereby authorizes the issuance of an initial series of Preferred Stock of the Corporation and hereby fixes and determines the rights, preferences, privileges, and restrictions thereof, and other matters relating thereto, as follows:

1. Designation and Number of Shares. The distinctive designation of the series of Preferred Stock of the Corporation hereby designated shall be "Preferred Stock, Series A" (herein after the "Series A Stock"). The number of shares of Series

Page 1 of 11
[][GDrive]



such bank or Savings and loan association shall be relieved of all responsibility in respect thereof to such holders and such holders shall look only to the Corporation for payment thereof (subject to any applicable escheat nor similar laws).

6. Sinking Fund. The shares of Series A Stock are not subject or entitled to the operation of any retirement or sinking fund.

7. Voting Rights. Except as by law expressly provided, the Series A Stock shall have no right to power to vote for election of directors or on any other matter or in any proceeding, and the holders of Series A Stock shall not be entitled to receive notice of, nor be entitled to receive notice of, nor be entitled to attend in person or proxy, any meeting of shareholders other than such a meeting at which the holders of Series A Stock are entitled to vote.

RESOLVED FURTHER. that the chairman, the President, the Secretary, and any Assistant Secretary of the Corporation is authorized, empowered and directed to execute, verify and file a certificate of determination of preferences in the form and manner required by the laws of the State of California.

3. The authorized number of shares of Preferred Stock of this Corporation is 50,000, and the number of shares constituting Series A Stock, none of which has been issued, is 50,000.

IN WITNESS WHEREOF, the undersigned have executed this Certificate on this 29 day of July, 1998.

Thomas Castellanos
President

Kevin Finocchiaro
Secretary

Page 10 of 11
[][GDrive]

2001 (Feb 02)

https://businesssearch.sos.ca.gov/Document/RetrievePDF?Id=01314808-6212745

2012 - Now Joffe listed (now is CEO); new agent

https://businesssearch.sos.ca.gov/Document/RetrievePDF?Id=01314808-15646284

Employees of "American Computer Group" of California/Arizona

1988-1991 : Elisa Jayne Bienenstock

- Manager of Modeling Applications **American Computer Group** - Statistical consultant to private list-management company
- Source - https://spa.asu.edu/sites/default/files/cv_bienenstock_2018.pdf

"BRIAN LEWIS".. 1988 to 1992ish (est)

Source : Morgan Timms/The Taos News - Aug 8, 2018 - See https://www.taosnews.com/news/know-your-neighbor-brian-lewis/article_d2a0f4dc-c0a4-5065-8642-1092cd93f677.html

[...] While Volkswagens form a large portion of [Brian Lewis]' life, his past and present includes a much larger story. He was born in Los Angeles and grew up in Echo Park, a low-income, racially diverse community. The product of the Los Angeles school system, Lewis earned an overall A-/B+ overall average and performed as a top athlete. [...]

Lewis lived in Los Angeles from 1959 to 1992 in a wonderful, diverse neighborhood much like the population of Taos. This experience taught Brian not to judge people by race, color or creed. He developed a love of cultures, especially foods, and by age 7, knew all the possible cuss words in Spanish. He and his California neighbors remain friendly to this day.

After high school, Lewis traveled for six months and then worked for six months, enjoying his love of surfing around the world. Notable sites of special surfing include the following: Australia; Hawaii; Portugal; Bali; Mexico City; France; Costa Rica; New Zealand; and Puerto Rico. He graduated from Cal State LA with a bachelor's degree in physical education in 1983. Other employment reveals Lewis' varied talents and interests. H**e completed work in the mail order section of an alternative record store, Rockaway Records, until he finished his degree. In 1988, Lewis worked as a programmer and during that time, he lost all his worldly possessions in a house fire. Brian served as assistant manager of a pottery and floral warehouse. For six years, he worked for American Computer Group in Los Angeles.** During the Rodney King riots [those were April and May 1992}, he realized the thin line between sanity and insanity and decided to leave the city.

On a more personal level, Lewis met his wife Yvonne at a family wedding on Catalina Island. The couple married 23 years ago. She works at Berkshire Hathaway, and the couple live with five rescue dogs and a gift, a desert box turtle. He moved to Taos to help care for his ailing mother, Sophia Lewis, who taught for 40 years. She passed away in 2001. His father, Dr. Albert J. Lewis, a teacher, psychiatrist and social and political activist, died in 2009. Lewis credits his parents for his varied interests. He also enjoys time with his brother Aaron who lives in Carson. . [...]

Ana Gamboa - employee.. 1993 to 1995

Source - https://www.linkedin.com/in/ana-gamboa-b8a6a02a/

Senior Programmer Analyst - American Computer Group - Oct 1993 – Jul 1995 - "Responsible for new and existing systems that managed mail order lists. Duties included working with problematic files, and cleaning them up so as to salvage as much usable information as possible."

https://www.corporationwiki.com/California/Los-Angeles/marty-jannol/66582344.aspx

2021-01-13-corporationwiki-com-marty-jannol.jpg

https://drive.google.com/file/d/1FfmoyVH9jrG5UBbwO9XBiAt2-YeBfxSH/view?usp=sharing

MARTY JANNOL

Active Los Angeles, CA — Vice President for Israel Emergency Alliance, Inc.

https://www.corporationwiki.com/California/Los-Angeles/israel-emergency-alliance-inc/66582328.aspx

Israel Emergency Alliance, Inc. filed as a Foreign Non Profit Corporation in the State of Florida on Friday, October 15, 2010 and is approximately eleven years old, according to public records filed with Florida Department of State. A corporate filing is called a foreign filing when an existing corporate entity files in a state other than the state they originally filed in. This does not necessarily mean that they are from outside the United States.

Deborah Susan Asnis (born 1956)

[HN01LF][GDrive]

Wikipedia Deborah Asnis

Associations

- Dr. Marcelle C. Layton (born 1958) (...)
-

2015 (Sep 21) - The LA Times : "Dr. Deborah Asnis is credited with help sounding the alarm on the West Nile virus in the United States.(Courtesy Joshua Kazdin)"

By DAVID COLKER / SEP. 21, 2015 1:47 PM PT / Source : [HN01LE][GDrive]

Late in the summer of 1999, **Dr. Deborah Asni**s had three patients in Flushing Hospital in New York who had similar, dire symptoms and were not responding to treatment.

The patients had three things in common: all were from the same part of Queens, were 60 or older, and had dark tans. It was that last clue that eventually unlocked the mystery, leading to the diagnosis of the first known West Nile virus cases in the country.

It was the kind of situation that Asnis, chief of infectious diseases at the hospital, had trained for.

“I found infectious diseases to be fascinating,” she said in a 1999 New York Daily News interview. “It was challenging and intellectual, like a mystery that you have to solve.”

Asnis, 59, died Sept. 12 at Memorial Sloan Kettering Cancer Center in New York. The cause was breast cancer, said her son, Joshua Kazdin.

The medical mystery began when a man who lived in Queens was admitted to Flushing Hospital with a high fever and signs of delirium. Within a few days, he was so weak he couldn’t lift his arms. Before long, additional patients arrived with similar symptoms.

Asnis thought the cause might be a virus that hit the area, but antiviral drugs didn’t help. Other causes she considered included Guillain-Barre syndrome or botulism, but those didn’t quite fit the symptoms she was seeing.

She sounded the alarm, calling the city’s Bureau of Communicable Diseases, which in turn notified the Centers for Disease Control and Prevention. Asnis kept doing tests on patients, sending blood samples and spinal fluid packed in dry ice to a state lab.

More local people with similar symptoms were admitted. “It almost came to the point where if you showed up in the hospital with a 104-degree fever and a headache, you got a spinal tap,” Asnis told the Daily News.

Patients grew steadily worse, with some needing respirators to breathe, the Associated Press reported. Investigators, including Marci Layton of the city health department, came to the hospital to talk to the families, looking for clues.

The fact that they many were tanned indicated they spent a lot of time outdoors during the summer, and as it turned out, several loved to garden. Could the cause be a virus carried by mosquitoes?

“[Dr. Marcelle C. Layton (born 1958)] said that first,” Asnis said in an interview with Newsday.

An entomologist sent to the neighborhood found that stagnant ponds and even liquid in discarded beer cans had become vibrant breeding grounds for the insects in a summer with less rain than usual. The mosquito-borne disease was identified, wrongly as it turned out, as St. Louis encephalitis.

With some patients dying and word of the disease spreading, Mayor Rudolph Giuliani announced measures were being taken, including malathion insecticide spraying from helicopters. The onset of cooler weather also helped wipe out the disease-carrying mosquitoes.

In late September it was finally determined that the actual disease was West Nile virus, also carried by the insects.

Asnis’ quick actions in identifying and reporting the mysterious “cluster” of patients with serious symptoms was credited with keeping the outbreak from being worse.

She was born July 17, 1956, in New Hyde Park on Long Island and graduated from Roslyn High School. Asnis went to Northwestern University for her undergraduate and medical degrees.

The medical profession ran in the family — her father was a dentist and two older brothers became physicians. But Asnis’ inspiration was her mother, Ruth.

“She was an accountancy teacher, but we called her ‘Doctor Mom,’” Deborah Asnis told the Daily News in the 1999 interview. “She wanted me to pursue a career that I could use to be independent.”

Ruth Asnis died on Friday.

Deborah Asnis is survived by her husband, Dr. Hal Kazdin; sons Joshua and Matthew Kazdin; and brother Dr. Gregory Asnis.

Saved Wikipedia (April 22, 2021) - "Deborah Asnis"

Source : [HK006U][GDrive]

Deborah Susan Asnis (July 17, 1956 – September 12, 2015, aged 59) was an American infectious disease specialist and H.I.V. clinical researcher, who is credited with reporting the first human cases of West Nile virus in the United States.[1][2]

In August 1999, Asnis, the chief of infectious diseases at Flushing Hospital Medical Center in Queens, New York, noticed two male patients with similar, mysterious symptoms. Their symptoms included loss of arm and leg control, high fevers, and disorientation. She reported her patients' unusual symptoms to health authorities, who pursued further testing and analysis of the illness.[1] Asnis' patients were diagnosed with West Nile virus in September 1999, the first known human cases of the disease in the United States.[1][2]

Asnis had been praised for reporting her patients' symptoms to authorities.[1] Not only did her actions lead to the discovery of the West Nile virus in the United States, but, by alerting authorities, Asnis likely prevented a more widespread initial outbreak of West Nile in the country.[1][2]

Biography

Asnis was born on July 17, 1956, in New Hyde Park, New York, to Ruth (née Kornblum), an accounting teacher, and Myron Asnis, a dentist.[2] She graduated from Roslyn High School in Roslyn, New York.[2] Asnis then earned her bachelor's degree from Northwestern University and her medical degree from Northwestern's Feinberg School of Medicine in 1981.[1]

She resided in Hewlett, New York, with her husband, Hal Kazdin; the couple had two sons, Joshua and Matthew Kazdin.[1][2]

West Nile discovery in the United States

In August 1999, Deborah Asnis, an infectious disease specialist at Flushing Hospital Medical Center in Queens, noticed two male patients who were suffering from similar, unusual symptoms. **The two patients, aged 60 and 75 respectively, were exhibiting sudden paralysis in their arms and legs, as well as disorientation and high fevers.**[1][2] Lab testing also showed elevated numbers of white blood cells within the spinal fluid of both males.[1] None of the patients were responding to antiviral drugs.[2] Possible early hypothesizes included botulism, viral encephalitis, Guillain–Barré syndrome, or meningitis, but none of these illnesses exactly matched the symptoms.[1] Asnis decided to pursue a more concrete diagnosis by contacting authorities and other colleagues.[1]

Asnis contacted Marcelle Layton, the New York City Department of Health's chief epidemiologist, on Monday, August 23, 1999, to report her patients' symptoms.[1] Layton advised Asnis to send samples of the patients' blood and spinal fluid to the New York State Department of Health in Albany for further analysis.[1] By Friday, August 27, 1999, just four days after Asnis had contacted Layton, two additional patients had been identified in Queens.[1] The number rose to eight by Sunday, August 29, at Flushing Hospital Medical Center and other hospitals in Queens.[1] All of the early patients resided within a few miles of one another. They were also frequent gardeners in the evenings.[1]

The Centers for Disease Control and Prevention (C.D.C.) initially identified the mystery illness as St. Louis encephalitis on September 3, 1999.[1] The city of New York began widespread spraying for mosquitos later that same day.[1] However, laboratory testing continued to determine a definitive cause of the symptoms.

The U.S. federal government revised its diagnosis from St. Louis encephalitis to West Nile virus on September 27, 1999, citing research by [**Dr. Duane J. Gubler (born 1939)**], a C.D.C. expert on arboviruses, as well as several bird deaths in the Bronx, located to the north of Queens.[1]

Deborah Asnis was credited by health experts with the early identification of West Nile virus in the United States.[1] Her actions likely prevented a more widespread outbreak.[1][2]In their 2003 book, "The New Killer Diseases: How the Alarming Evolution of Germs Threatens Us All," authors Elinor Levy and Mark Fischetti praised Dr. Asnis' response to the symptoms, writing that, "Asnis did something other doctors might not have bothered to do."[1] They elaborated that, "One of the worst problems with our disease-detection system is that many doctors never report cases of strange symptoms, either because they are unsure of the disease they are facing, they're ignorant of the reporting requirement, or they simply never get around to it. Deborah Asnis was highly conscientious."[1]

Later life

Asnis continued to practice as the chief of infectious diseases at Flushing Hospital Medical Center.

She died from breast cancer at Memorial Sloan Kettering Cancer Center in Manhattan, New York City, on September 12, 2015, at the age of 59.[2] She was survived by her husband, Hal Kazdin; their sons, Joshua and Matthew Kazdin; and one of her two brothers, Gregory Asnis.[1] Her mother, Ruth Asnis, died on September 18, 2015.[2]

References

- ^
- Jump up to:
- a b c d e f g h i j k l m n o p q r s t u v w x Roberts, Sam (2015-09-15). "Dr. Deborah Asnis, Who Sounded Alert on West Nile Virus Outbreak, Dies at 59". The New York Times. Retrieved 2015-10-10.
- ^
- Jump up to:
- a b c d e f g h i j k Colker, David (2015-09-21). "Deborah Asnis dies at 59; helped detect West Nile virus in U.S." Los Angeles Times. Retrieved 2015-10-10.

Authority control

- ISNI: 0000 0000 4522 413X
- LCCN: n2002136560
- VIAF: 4300406
- WorldCat Identities: lccn-n2002136560

(Note - https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6830995/ .... **Nipah virus: epidemiology, pathology, immunobiology and advances in diagnosis, vaccine designing and control strategies – a comprehensive review ..** Due to involvement of nervous system, there may be twitching of muscles, weakness of hind legs, tremors, along with paresis, either flaccid or spastic, of varying degrees. There may also be nystagmus along with seizures in boars as well as sows (Chua 2003; Kulkarni et al. 2013). In dogs infected with NiV, there may be inflammation of the lungs along with necrosis of glomeruli as well as tubules with formation of syncytia in kidneys. In cats, there may be development of endothelial syncytia along with vasculopathy in multiple organs.

BITCHUTE @Housatonic YOUTUBE @HousatonicLive ODYSEE @Housatonic BRIGHTEON @Housatonic

Alex Michael Azar II (born 1967)

Wikipedia Alex Azar

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Live - https://en.wikipedia.org/wiki/Alex_Azar saved - [HK001Y][GDrive]

Alex Michael Azar II (/ˈ æzɑːr/; born June 17, 1967) is an American attorney, former pharmaceutical lobbyist and executive, and current member of Donald Trump's cabinet who serves as the United States Secretary of Health and Human Services. Azar was nominated to his post by President Donald Trump on November 13, 2017, and confirmed by the United States Senate on January 24, 2018.

Azar served as General Counsel of the United States Department of Health and Human Services (HHS) from 2001 to 2005. On July 22, 2005, he was confirmed as the Deputy Secretary of Health and Human Services; he served in that capacity until his January 2007 resignation.

From 2012 to 2017, Azar was President of the U.S. division of Eli Lilly and Company, a major drug company, and a member of the board of directors of the Biotechnology Innovation Organization, a large pharmaceutical lobby.

Early life[edit]

Azar was born on June 17, 1967, in Johnstown, Pennsylvania, the son of Lynda (Zarisky) and Alex Michael Azar.[2][3] His father is of Maronite Lebanesedescent, while his maternal grandfather was a Jewish immigrant from the Russian Empire.[4][5] His father, also named Alex Azar, is a retired ophthalmologist who practiced ophthalmology in Salisbury, Maryland, for more than 30 years, and taught at Johns Hopkins Hospital. His grandfather emigrated from Lebanon in the early 20th century.[6]

Azar attended Parkside High School in Salisbury, Maryland, from 1981 to 1985. He received a B.A. degree *summa cum laude* in government and economics from Dartmouth College in 1988. He belonged to the Kappa Kappa Kappa fraternity. He earned a J.D. degree at the Yale Law School in 1991, where he served as a member of the executive committee of the *Yale Law Journal*.[7][8]

After law school, from 1991 to 1992, Azar served as a law clerk for controversial Judge Alex Kozinski of the United States Court of Appeals for the Ninth Circuit. Azar left after six weeks, and was replaced in Kozinski's chambers by Brett Kavanaugh.[9] Azar subsequently clerked for the remainder of the term for Judge J. Michael Luttig of the United States Court of Appeals for the Fourth Circuit. From 1992 to 1993, he served as a law clerk for Associate Justice Antonin Scalia of the United States Supreme Court.[10]

From 1994 to 1996, he served as an Associate Independent Counsel for Ken Starr in the United States Office of the Independent Counsel, where he worked on the first two years of the investigation into the Whitewater controversy.[11][12] At the time of Azar's appointment, he was working as an associate in Starr's law firm.[11]

Between 1996 and 2001, Azar worked for Wiley Rein, a Washington, D.C., law firm, where he achieved partner status.[13]

Health and Human Services[edit]

Official Deputy Secretary portrait

On August 3, 2001, Azar was confirmed as General Counsel of the United States Department of Health and Human Services.[14][15] George W. Bush's first HHS Secretary, Tommy Thompson, said Azar played an important role in responding to the 2001 anthrax attacks, ensuring there was a vaccine ready for smallpox, and dealing with outbreaks of SARS and influenza.[6] On July 22, 2005, Azar was confirmed as the Deputy Secretary of Health and Human Services.[16][17] He was twice confirmed unanimously by the United States Senate.

Working under Secretary Mike Leavitt, Deputy Azar supervised the operation of HHS, which would grow to annual budget of over $1 trillion by 2017 when he was appointed Secretary. Azar led the development and approval of HHS regulations, led U.S. government efforts to encourage worldwide pharmaceutical and medical device innovation, and was in charge of the HHS response to an initiative implemented by President George W. Bush to improve government performance.[6]

Azar resigned in January 2007.[18]

Eli Lilly & Co.[edit]

In June 2007, Azar was hired by Eli Lilly and Company chief executive officer Sidney Taurel to be the company's top lobbyist and spokesman as its Senior Vice President of Corporate Affairs and Communications.[6][19] Azar left the position after the 2008 United States presidential election was won by

Democratic Party candidate Barack Obama and the corporation wanted to replace Azar with a Democrat in that role.[citation needed]

In April 2009, Azar became Vice President of Lilly's U.S. Managed Healthcare Services organization and its Puerto Rico affiliate.[20] In 2009, the company paid $1.415 billion to settle criminal charges regarding its promotion of antipsychotic drug Zyprexa (olanzapine) for off-label uses between 1999 and 2005.[19]

Effective January 1, 2012, Azar became President of Lilly USA, LLC, the largest division of Eli Lilly and Company, and was responsible for the company's entire operations in the United States.[20]Prices for drugs rose substantially under Azar's leadership, including the tripling of the cost of the company's top-selling insulin drug. Also under Azar's watch, Eli Lilly was one of three companies accused in a class-action lawsuit of exploiting the drug pricing system to increase profits for insulin. Eli Lilly was also fined in Mexico for colluding on the price of insulin.[21][22] In connection with the position, Azar served on the board of directors of the Biotechnology Innovation Organization, a pharmaceutical lobby.[23]

In January 2017, Azar resigned from Eli Lilly "to pursue other career opportunities" as a result of a company reorganization.[24] He also resigned from the board of directors of the Biotechnology Innovation Organization. In his last year at the corporation he earned $2 million.[25]

Secretary of Health and Human Services[edit]

Nomination and tenure[edit]

Azar and his family (with President Trump and Vice President Pence) shortly after being sworn in as Secretary of Health and Human Services

On November 13, 2017, President Trump announced via Twitter that he would nominate Azar to be the next Secretary of Health and Human Services.[23][26]

Many health care advocates raised concerns about the nomination, citing Azar's track record of raising drug prices and his opposition to Obamacare; his preferences, that is, for a "free market" to meet all Americans' health care needs.[27] Critics noted that Azar approved a tripling of the price of insulin while CEO of Eli Lilly.[28][29] Speaking in favor of his nomination were two former U.S. Senate Majority Leaders, Democrat Tom Daschle and Republican Bill Frist. Both those endorsers were affiliated with the Bipartisan Policy Center, a Washington D.C. think-tank which receives support from Eli Lilly.[30]

In spite of objections, his nomination was relatively smooth. Azar was confirmed on January 24, 2018, with a vote of 55–43,[31] with most Democrats opposed. Voting against him, Oregon Senator Ron Wyden, ranking member on the Senate Finance Committee, said that while Azar was at Eli Lilly, he "never, not one time, signed off on a decrease in the price of a drug.[32] Senator Bernie Sanders said in a press release, "The nomination of Alex Azar, the former head of Eli Lilly's U.S. operations, shows that Trump was never serious about his promise to stop the pharmaceutical industry from 'getting away with murder'." "The last thing we need is to put a pharmaceutical executive in charge of the Department of Health and Human Services." During that tenure, Eli was fined for colluding to maintain high drug costs in Mexico.[28]

Azar had additionally consulted with numerous other biopharmaceutical and health insurance corporations regarding government policy, product access, sales and marketing, pricing, reimbursement and distribution.[28] He was confirmed by the Senate on January 24, 2018 and sworn in by Vice President Pence on January 29, 2018.[33]

Healthcare policy[edit]

Affordable Care Act[edit]

Azar has been a critic of the Patient Protection and Affordable Care Act (Obamacare) and predicted in 2017, "There will be a piece of legislation passes this year that is called the repeal of Obamacare. I don't know what's going to be in the substance of it, but there will be a piece of legislation that says that."[26] Also regarding the ACA, Azar said the Department of Health and Human Services has latitude to "make it work a little better".[22]

Abortion[edit]

Azar opposes abortion. In a written response to Senator Patty Murray regarding future HHS policy, he said, "The mission of HHS is to enhance the health and well-being of all Americans, and this includes the unborn."[34]

Regulations[edit]

According to *The New York Times*, Azar differed with his predecessor, Tom Price, in terms of their approach to regulations. Writing in May 2018, *The Times* said, "in a sharp break from his predecessor — and from most Trump cabinet secretaries — he seems to be relishing the chance to write new regulations, rather than just crossing out Obama-era ones."[35]

Coronavirus[edit]

Outbreak[edit]

Azar speaks to the White Housepress corps on COVID-19 in March 2020

President Trump, with Azar, signs the Coronavirus Preparedness and Response Supplemental Appropriations Act into law on 6 March 2020

Azar informed associates that he had alerted Trump on January 18, 2020, regarding the potential danger from COVID-19, but that the president thought he was being "alarmist" as Azar struggled to get Trump's attention to focus on the issue.[36] Despite Azar's warnings, four days later, Trump announced, "We have it totally under control. It's one person coming in from China."[36] On January 28, 2020, Azar stated that the Trump administration had no plan to declare a public health emergency as the COVID-19 virus spread in China. He asserted that the risk to Americans was minimal, but admitted that authorities in 30 states were monitoring potential cases and added that he would not "hesitate at all to invoke any authorities I need to, to ensure we're taking all steps to protect the American people, but I'll do it when it's appropriate." U.S. Senator Rick Scott and U.S. Representative Vern Buchanan, as well as other Republicans, demanded the declaration of a public health emergency as a means of budgeting necessary federal funding to deal with the potential pandemic. At the time, Azar said, there were just five confirmed cases in the U.S., there was no known person-to-person transmission, and every confirmed U.S. victim had traveled to Wuhan, China (the outbreak's place of origin). "This is potentially a very serious public health threat, but at this time Americans should not worry about their own safety," Azar said. At that point, the disease had killed at least 106 people in China, with more than 4,500 cases confirmed.[37]

On February 27, U.S. Representative Jimmy Gomez of California revealed that he had been contacted by a whistleblower from the Department of Health

On February 27, U.S. Representative Jimmy Gomez of California revealed that he had been contacted by a whistleblower from the Department of Health and Human Services (HHS) who had been dispatched to deal with the arrivals of travelers exposed to the coronavirus. There were allegations made that those sent from the HHS to California quarantine sites lacked both sufficient protective clothing and the training necessary to prepare them to deal with the contagion, though they were working alongside CDC personnel who had adequate protective gear.[38] The whistleblower also said that professionals raising concerns about the unsafe practices were subjected to retaliation.[38] Azar responded to the issues raised by Gomez by saying, "Urgency does not compensate for violating isolation and quarantine protocols" and adding, "I'd want to know the full facts and would take appropriate remedial measures."[38][39]Azar insisted that careful protocols were being observed by all CDC employees.[38]

On February 28, 2020, United States Senate Finance Committee ranking member Ron Wyden wrote Azar to ask why HHS Administration for Children and Families employees were involuntarily dispatched to California to meet with quarantined travelers despite lacking expertise in the field and lacking proper information, equipment and training. Wyden also asked why said employees were not cleared to ensure that they had not become carriers of the disease before they were returned to their home stations.[40]

Centers for Disease Control and Prevention[edit]

As Secretary of Health and Human Services, Azar is responsible for the Centers for Disease Control and Prevention (CDC), a key institution in charge of containing contagious diseases. On January 28, 2020, Azar requested that the Chinese government allow a CDC expert team into their country to help them learn more about the virus. Referring to the SARS epidemic 17 years earlier, Azar said, "I can say that the posture of the Chinese government levels of cooperation and interaction with us is completely different from what we experienced in 2003 and I want to commend them for such assistance". The World Health Organization had already agreed to supply international experts to visit China "as soon as possible." Seventy-three possible cases were being monitored in the U.S. Simultaneously, the CDC had ramped up coronavirus screenings of travelers coming into the U.S. at 20 airports. Azar said it might be possible to ban any travelers arriving from China, and all options had to be considered. "Diseases are not terribly good at respecting borders," he added.[41]

Congressional testimony and requests for funding[edit]

On February 25, 2020, Azar appeared before the Senate Appropriations Committee to testify on the danger of and responses to the 2019–20 coronavirus pandemic. Louisiana Republican Senator John Kennedy asked both Azar and Chad Wolf about the fatality rate in victims. Azar said that the fatality rate of seasonal influenza was about 0.1%, and that the fatality rate of COVID-19 was estimated at between 1% and 2%; however, Azar added that the latter figure was uncertain because there might be many mild coronavirus cases yet unreported.[42] Chad Wolf said that the fatality rate for COVID-19 was between 1.5% and 2%, and that the fatality rate for influenza over the last 10 years in America was similar (about 2%).[43][44] Kennedy was unhappy with the briefing, saying afterwards, "I thought a lot of the briefing was bullshit... They would answer the question but dodge, bob and weave. I understand there's a lot they don't know. I get that. But they need to answer the questions straight up. They all talk about a task force, a committee — a committee's not going to solve this problem".[45]

Trump's officials tried to allay concerns that their request for $2.5 billion was insufficient to address the epidemic. Some Republicans joined Democrats in criticizing the funds requested and found transparency lacking with regard to a coherent strategy to contain the virus. Another Republican, Senate Appropriations Committee Chairman Richard Shelby of Alabama, told Azar: "If you lowball something like this, you'll pay for it later."[46][47][48] Pennsylvania Democratic Congressman Brendan Boyle asked Azar how he could defend "draconian cuts" in the CDC budget "at the same time we are facing a unique worldwide health crisis".[48] Two years earlier, a coalition of global health organizations opposed Trump's plans to reduce the CDC's operations in 39 of 49 countries in which it had been helping to rapidly identify and suppress outbreaks of diseases. The coalition wrote to Azar, contending, "These programs are essential to our national defense".[48][49] In 2018, National Security Adviser John Bolton dismantled the task force charged with responsibility for planning and response to epidemics. The team's leader, Rear Admiral Timothy Ziemer, was the leader of the anti-malarial efforts under presidents Barack Obama and George W. Bush.[48] White House Homeland Security adviser Tom Bossert, who had advocated a comprehensive biodefense strategy against both pandemics and potential biological attacks, departed from the White House on the same day Bolton arrived.[48]

Testing[edit]

Further information: COVID-19 testing

On March 2, 2020, Azar was criticized for unpreparedness that may have accelerated the spread of the virus. Some critics focused on the lack of definitive testing of those who might be spreading the virus. China had tested over 1,000,000 people, while the CDC had tested less than 500 and its results had been undermined by problems with accuracy and potential contamination. There was substantial internal feuding with regard to formulation of policy at HHS and the CDC.[50]

Vaccine[edit]

Azar argued that the pharmaceutical industry was best poised to discover, manufacture, and market a vaccine for coronavirus. When asked about the cost of vaccines, Azar responded that the price might be high, but that an important vaccine would be created even if many Americans could not afford it.[51]

Personal life[edit]

Azar is an Eastern Orthodox Christian. He is of Lebanese, Ukrainian, English and Swiss descent and lives in Indianapolis with his wife and two children.[33][52] Azar served for two years on the board of HMS Holdings.[53] He is currently on the board of the American Council on Germany, where he is Chairman of the Strategic Planning Committee, and the Indianapolis Symphony Orchestra.[13]

He has previously served on the board of directors of the Healthcare Leadership Council, where he was Treasurer; the National Association of Manufacturers; and the Indianapolis International Airport Authority, where he was Chairman of the Human Resources Committee.[13]

Azar is a Republican and has contributed to the campaigns of Mike Pence, Mitch McConnell, Orrin Hatch, Lamar Alexander, Jeb Bush, and Donald Trump according to the Center for Responsive Politics.[6]

FOR IMMEDIATE RELEASE

September 14, 2019

Secretary Azar Meets with Local Leaders and Visits Ebola Treatment Center

"The U.S.A. is here for you not just for Ebola, but also healthcare after Ebola."—HHS Secretary Alex Azar

BUTEMBO, DRC—Today, September 14, Health and Human Services Secretary Alex Azar, Dr. Robert Redfield, Director of the Centers for Disease Control and Prevention (CDC); Dr. Anthony S. Fauci, Director of the National Institute of Allergy and Infectious Diseases (NIAID); Garrett Grigsby, Director of the HHS Office of Global Affairs; Tim Ziemer, Senior Deputy Assistant Administrator of the United States Agency for International Development (USAID); Mike Hammer, U.S. Ambassador to the Democratic Republic of the Congo (DRC); and staff of President Trump's National Security Council joined World Health Organization (WHO) Director General Tedros Adhanom Gebreyeus and United Nations (UN) Emergency Ebola Response Coordinator (EERC) David Gressly in Butembo, DRC, where they toured an Ebola treatment center near the center of the outbreak.

During the visit, the delegation observed the detection, infection prevention, and control measures. They spoke to the healthcare providers about how they provide care for patients at the Ebola treatment center and saw patients being successfully discharged from the center. The delegation also heard from officials and healthcare workers about the challenges they face in providing care due to mistrust and the conflict in the region. Secretary Azar shared his sincere gratitude for the hard work and dedication all personnel have shown in the face of this health crisis.

Secretary Azar and the delegation also participated in a discussion with local community leaders and health personnel. The delegation heard firsthand from the women's association leader, the Federation of Commerce, the leader of the cultural associations, the representative of traditional leaders, and an Ebola survivor. They shared their perspectives on how to engage the communities more effectively in the response to combat misinformation and improve outcomes.

Secretary Azar expressed the U.S. government's strong commitment to ending the Ebola outbreak and commitment to work with local, community leaders along the way. "The U.S.A. is here for you not just for Ebola, but also healthcare after Ebola," he told the community meeting. The U.S. recognizes that health challenges in the DRC extend past Ebola and also supports efforts to fight measles, malaria, HIV, tuberculosis, cholera, and other diseases.

https://nihrecord.nih.gov/2019/07/26/hhs-secretary-department-leaders-attend-hiv-meeting-nih

2019-07-26-nihrecord-nih-gov-hhs-secretary-department-leaders-attend-hiv-meeting-nih.pdf

Health and Human Services Secretary Alex Azar visited NIH for the HHS Global-Domestic HIV Meeting: Successes and Challenges Reaching the 95-95-95 Goals. Held June 26 in Bldg. 45's Kirschstein Auditorium, the day-long meeting gathered department leaders to share ideas about common challenges in the HIV response; exchange lessons learned in HIV policy, program, implementation and research across the global and domestic experiences; and create recommendations for further collaboration across HHS. NIH director Dr. Francis Collins opened the meeting with welcoming remarks. Azar discussed the President's initiative, Ending the HIV Epidemic: A Plan for America.

Later, a panel featuring representatives from HHS agencies offered an opportunity for each to highlight contributions and areas of expertise in ending the HIV epidemic, both domestically and globally.

https://nihrecord.nih.gov/sites/recordNIH/files/styles/full_width/public/2019/July-26/Briefs%20Azar%20viz%20FC%20AF%20greetg.jpg?itok=eyOIV-kW&timestamp=1563912373

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HHS Secretary Alex Azar (r) is greeted by (from l) NIAID director Dr. Anthrony Fauci, FDA acting commissioner Ned Sharpless, NIH Director Dr. Francis Collins, and CDC director Dr. Robert Redfield.

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Azar discusses the President's initiative, Ending the HIV Epidemic: A plan for America.

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Shown seated at the panel are (from l) Redfield, Sharpless, Dr. George Sigounas of HRSA, Radm. Michael Toedt of IHS, Fauci, and Dr. Elinore McCance-Katz of SAMHSA.

https://www.whitehouse.gov/briefings-statements/press-briefing-national-biodefense-strategy-091818/

2018-09-18-whitehouse-gov-briefings-national-biodefense-strategy

Press Briefing on the National Biodefense Strategy

Issued on: September 18, 2018

James S. Brady Press Briefing Room

11:30 A.M. EDT

MR. MARQUIS: I'm Garrett Marquis at the NSC. We're here for a briefing that's off camera, but on record, on the National Biodefense Strategy.

We have Ambassador John Bolton, National Security Advisor, and Health and Human Services Secretary Azar, as well. How this will flow is the Ambassador will make a few remarks, followed by Secretary Azar, and then brief Q&A, which I'll manage.

We have about 25 minutes, maybe a little bit less. And the focus of this, of course, is on the National Biodefense Strategy, so please make sure your questions are relative to that.

With that, Ambassador Bolton.

Q (Inaudible) embargo?

MR. MARQUIS: It's embargoed until we inform you (inaudible). Embargoed until 12 o'clock.

AMBASSADOR BOLTON: Well, thanks, Garrett. Thanks to all of you for being here. Last week, we commemorated the 17th anniversary of the 9/11 attacks. Today is actually the 17th anniversary of the anthrax letters, which were distributed and were thought to be an indication of possible further terrorist activity, really, I think, bringing to the attention to the American people, many of them for the very first time, the threat of bioweapons in the hands of terrorists or adversary nations.

What we're going to do today is release the National Biodefense Strategy, which we've worked out through the National Security Council process. And the President will also sign a National Security Presidential Memorandum, which will repeal prior authorities and put a new process in place.

This is, we think, critical for our defense purposes, looking at the range of weapons of mass destruction that the United States and our friends and allies face. We all focus on nuclear weapons, but biological weapons and chemical weapons are very, very dangerous. Bio and chem are often referred to as the poor

man's nuclear weapon, so they're particularly attractive to terrorist groups that want to try and cause great damage to us here at home.

So what we've done is establish a Cabinet-level biodefense steering committee that will be chaired by the Department of Health and Human Services. This is the approach that we think is going to be best suited for carrying out the strategy operationally. And Secretary Azar, who will speak to you in a second, will be chairing that.

The division of labor here is that the role of the NSC is the coordination of the development and implementation of the policy, but operationally carrying out the policy will be through this committee that HHS will chair. NSC, in this area or any other area, is not operational, going back to the lessons of the Tower Commission report after the Iran-Contra affair.

But the operational effort is something we expect to be on an ongoing basis for HHS to be the lead on. Other Cabinet departments that are involved: obviously the Defense Department; the Agricultural Department, because a biological weapons attack could be directed against our food supply, against plant and animal life. Homeland Security has a role, EPA and others.

Now, this is a biodefense strategy. It's not what our offensive counter-response would be if we were attacked. That's something we do through the regular national security channels. But it's really what we would do here in the United States and with our friends and allies.

And our intention, having now written this strategy which the President will sign, is to review it on an annual basis to move away from the concept we see in too many strategy documents, that they're written and then that's the end of the process. We want it to be continuing. HHS plays the lead role, as I say, in implementing, operationalizing this. And so we're going to work very closely together on this critical need to protect the American people from the threat of biological warfare.

So now let me turn it over to the Secretary of HHS, Alex Azar.

SECRETARY AZAR: Well, good morning, everybody. And thanks for joining us here today. I wanted to complement what Ambassador Bolton just had to say by laying out a couple of points.

I wanted to give you the historical context for the strategy and why HHS is taking the lead on biodefense, and how it also reflects the lessons that we've learned about the serious threats that we face.

So, first of all, why a biodefense strategy? The simple answer is that biological threats of a manmade, accidental, or naturally occurring nature are very real and they're growing. There are several factors that drive their growth:

As the world grows more urbanized and interconnected, infectious threats can spread more rapidly and easily than ever. Think about one of the threats that HHS is monitoring at this very second, which is the Ebola outbreak in the Eastern Democratic Republic of the Congo. Such is the ease of mobility between countries now, that just in the DRC, more than 100,000 people are being screened at border crossings every day.

We also face accidental and manmade threats. Today's rapid technological advances have great potential to improve public health and human health, but they also create the opportunity for new kinds of threats and for more and more actors to make use of biological weapons. These trends are not new, so the release of this national strategy is an important culmination of a long series of steps taken by HHS and the entire U.S. government over decades to build our biodefense capabilities.

As you'll notice — and once you see the materials — at each stage, the growing complexity of these threats demanded the involvement of more and more of the top-flight biomedical and public health expertise that we have at HHS. Back in the '90s, the Secretary, Donna Shalala, declared HHS a national security agency, detailing a Public Health Service Commissioned Corps officer to the National Security Council for the very first time.

The recognition of the importance of HHS's public health expertise to national defense grew during my first tenure in the department back in the 2000s. In the days following September 11, 17 years ago to the day, HHS was tasked with evaluating our preparedness for biological threats. And that became a very tangible responsibility with the anthrax attack 17 years ago today.

I was personally involved in much of managing the response, and we saw the importance of coordinating across government agencies. It was the FBI that had the actual spore sample, since it was criminal evidence, but we needed CDC's scientific expertise to discover that we were actually dealing with a new form of anthrax with spores so small that they were seeping through envelopes that had not even been open by the recipients.

Throughout my time at HHS, we've faced a number of other biological threats: SARS, monkeypox, pandemic flu, MERS, and more. In response, we've had to significantly expand the Department's preparedness and response capabilities, including the creation of the Office of the Assistant Secretary for Preparedness and Response.

We transformed what had been a national stockpile of pharmaceuticals into a strategic national stockpile that contains countermeasures for a wide variety of threats. We oversaw the creation of the National Disaster Medical System, which has thousands of civilian health professionals on call to prepare for and respond to healthcare and public health needs caused by disaster. In fact, right now, hundreds of NDMS members are working to respond to Florence, but they're equally important in the event of a pandemic or a biological attack.

We also created BARDA, the Biomedical Advanced Research and Development Authority, which supports the private sector to develop medical countermeasures, like vaccines, diagnostic tools, and antibiotics that will help us respond to biological, chemical, nuclear, and radiological threats.

BARDA in particular was a response to a need identified about lack of coordination. There was no single entity in the government, before BARDA, or anywhere else that was interested in bringing countermeasures from basic scientific research, all the way through development, to stockpiling and deploying those assets until we created BARDA.

So that speaks to one particular need for the biodefense strategy, and one of its key elements — that's the need they coordinate across different government agencies and the private sector.

The threats that HHS dealt with under President Obama provided another lesson about the need for a coherent and coordinated strategy. The 2014 Ebola crisis demanded efforts from all across the government. HHS took the lead on treatment and epidemiological work in West Africa and here in the U.S. But there were significant roles played by the State Department and USAID, as well as for Department of Homeland Security components, like Customs and Border Patrol. It was widely recognized that, early on, the response was not nearly as well coordinated as it should have been.

So those are a couple of other lessons incorporated into this biodefense strategy. For the first time, invest accountability in one place — the Secretary of HHS — as chairman of a coordinating committee. And it covers naturally occurring threats for the first time ever.

HHS — as chairman of a coordinating committee. And it covers naturally occurring threats for the first time ever.

This is a cooperative effort with expertise from many domains, but it's a cardinal rule of leadership that you have to have accountability, which means one leader, and that's a leadership lesson well understood by the President.

Many of the HHS activities I've just discussed will fall under this new biodefense strategy. By incorporating them into this broader framework with other agencies, we're going to have a much easier time identifying where we have gaps in our capabilities and preparedness, and addressing them in the most efficient way possible.

Most fundamentally, this strategy represents the importance to the President and to the country of biodefense as a fundamental and distinct aspect of our national security. Before 9/11, a future President understood this and recommended that we do a much better job of preparing for the possibility of a biological attack. "Our adversaries understand that if they are able to blindside us," he wrote, "they will be much more likely to succeed in blackmailing us." That future President was Donald Trump and the year was 2000.

With this strategy and President Trump's commitment to defending the health and wellbeing of the American people, it's going to be much harder for any threat — for our adversaries to be able to blindside us.

So thank you very much. And happy now with Ambassador Bolton to take questions.

MR. MARQUIS: Thank you. And just to be clear, the embargo is actually 1:00 p.m. And at that time, you'll also see a statement from the President and a factsheet come out from the White House Press.

Steve.

Q Ambassador Bolton, how vulnerable is the United States to a bio-attack? And who do you — are you suspicious of wanting to attack us?

AMBASSADOR BOLTON: Well, Secretary Azar may want to address this as well. But we're constantly monitoring a range of countries and terrorist groups for the possibility that they would acquire a biological weapons capability that could threaten us.

And the attack can come in a lot of different ways, either directly in the homeland;. It could come from people traveling into the United States previously infected. It could come from stockpiles that are smuggled into the United States or may already be here. This is something we speak with our allies about all the time.

There are any number of countries that are not the parties to the Biological Weapons Convention. There are parties that are — states that are parties to the Biological Weapons Convention that we think are violating it. I don't want to get into the intelligence at this point, but we take very seriously, as we do across the range of weapons of mass destruction, the dangers to the United States from this kind of attack, which is why we felt that bringing all of this together in a coordinated government-wide biodefense strategy to create an accountable, operational capability was so important.

SECRETARY AZAR: Yeah. I would just add the importance of non-state actors and even individuals. Remember, the anthrax attacks were conducted by an individual. So you have terrorist groups, non-state actors. Unfortunately, with the democratization of biotechnology expertise, it's a dangerous world out there, and many would either seek to do intentional harm or could even inflict accidental harm through lack of appropriate bio-security in labs.

MR. MARQUIS: Francesca.

Q Thank you. I wanted to take advantage of your time a little bit here, Ambassador Bolton, since you are here, and I wanted to ask you about Kim Jong Un's comments today about the United States. He said that, thanks to President Trump, the political situation in the region has been stabilized because he is with Moon Jae-in in South Korea today.

But at the same time, an editorial today in North Korea said that due to United States' nonsensical, irrational stubbornness, there are issues that can't be discussed right now, specifically referring to denuclearization. So I wanted to ask you for your response to that. And if you could tell us a little bit more about whether or not there will be another summit between President Trump and Mr. Kim anytime soon.

AMBASSADOR BOLTON: Yeah, I'd love to discuss the subject, but we are here today, really, just to discuss the biodefense strategy. So another time.

Q So you have no comment? You have absolutely no comment on that?

MR. MARQUIS: Is this a biodefense question?

AMBASSADOR BOLTON: We're confining this to the subject matter of the briefing.

MR. MARQUIS: Please.

Q Ambassador Bolton and Secretary Azar, can you talk a little bit about any potential cost to what you're talking about? Is there a price tag? Are you asking for any more money from Congress? And is there any new legislation that you feel needs to follow these actions, or is this simply a reorganization within the government?

And one more question. Just to follow up — when you talk about the potential of people that would be carrying out these types of attacks, you have to think about ISIS. How concerned are you that ISIS has its sights on this type of attack?

SECRETARY AZAR: So, first, great question in terms of resources and statutory authority. And that's actually one of the most important parts of this strategy. By having this coordinating committee that I, as Secretary of HHS, will chair, we're going to be conducting immediately a review across all of the relevant agencies — so that's Defense, State, Homeland Security, the Attorney General, EPA, Homeland Security, Agriculture — to basically get a survey of all of the activities going on in biodefense. And again, that's natural, manmade, accidental threats.

So what are all of the activities going — a full, sort of, collection of what resources do we have deployed against it, and then where do we see gaps. So it is really the first-ever holistic look across the government to see where are we acting, and where might there be any gaps in light of our awareness of threats, our preparedness needs, and our ability to respond.

That will then inform the 2020 budget cycle. Obviously we're later in the budget cycle. I think the biggest impact would be, as we look at the 2021 budget cycle, for a holistic look there for any gaps in funding, if we see any needs there.

I don't want to — as Ambassador Bolton said with regard to ISIS, I don't want to get into any particular actors. Obviously, we follow — we're tightly connected in to ensure that awareness — that first element of the strategy — is critical to know who's operating and also what they might be operating on.

in to ensure that awareness — that first element of the strategy — is critical to know who's operating and also what they might be operating on.

MR. MARQUIS: Great. Is this a biodefense question?

Q Yes. Two biodefense questions. First, can you discuss why HHS was the proper home for biodefense rather than the Department of Homeland Security, which has a more traditional homeland security in the title? And then, secondly, you mentioned the threats. The State Department had previously stated publicly that China, Iran, North Korea, Russia, and Syria had not been complying with the Biological Weapons Convention. Is that still the assessment of the government? And then, why has the biological issue not been the subject of the President's negotiations with Kim's —

AMBASSADOR BOLTON: Well, on the second point, I can tell you we have said we want the elimination of all North Korea's weapons of mass destruction programs, whatever they might be.

And to go to your first question — and Alex will probably want to expand on it — what we try and do when we create, across the board, national security strategies is pick the organizational structure that we think is most likely to achieve the objectives.

So in this case, we felt the evidence was overwhelming that we wanted a lead agency that would have the principal responsibility but would also be coordinating operational aspects with other departments and agencies that were involved. And the Department of Homeland Security is involved here.

But the overwhelming bulk of the scientific and technical expertise in the government on the range of biological threats we face — including, as the Secretary said, epidemiological threats, not just biological weapons attack — is in HHS. So every consideration that we could think of pointed to putting the lead responsibility in HHS, and that's what we did.

Q You mentioned that the anthrax attacks of 17 years ago was indeed a domestic one done at a National Research Laboratory here by a scientist there.

It would seem to me that that is the single greatest potential threat. And also, coupled with that, is the fact that we have so many scientists from malign states who do university work in this country. What kind of scrutiny are those scientists given by the government?

SECRETARY AZAR: So, as you may know, there are different tiers of biological research facilities all the way up to what's called biosecurity level 4, the most contained for the most dangerous select agents that we operate on. And that lab safety and control is something that at the Centers for Disease Control and Prevention out of Atlanta, that's part of my department, we regulate and focus on lab security there.

So that's actually a key part of the strategy. It's good that you mentioned that — is the lab security here in the United States. There are a fair number of labs. We need to keep that. All of the great research that we do to advance biomedicine, and also even to prepare for countermeasures, has its opposite side, which is the threat potential. Exactly what you mentioned.

So that involves having to do background checks on individuals who may be touching select agents. There's a whole regulatory regime — it's called the Select Agent Regulation that CDC has — that controls the use transport of these more dangerous components that could be used in biological weapons.

Q Okay, and a quick follow-up. It would seem to me that the real canary in the coalmine here would be local hospitals and local public health officials. Are they enlisted in your plan?

SECRETARY AZAR: Oh, sure. That's why state and local public health agencies, as well as the private sector, are critical to a coherent and comprehensive biodefense strategy. It's not just the federal government.

The CDC really operates so much through our state and local partners, and that's why we support public health epidemiological reporting, whether it's in the opioid crisis or otherwise. Absolutely.

Q Secretary Azar, you mentioned for the first time that this also focuses on naturally occurring outbreaks, for example. So how much of this strategy is focusing on preparation to prevent the next big Ebola outbreak or any other global epidemics, for example, when, in fact, we know that CDC has been criticized for cutting back field works on Ebola countries? For example, I believe it's down from 49 to 10 countries. So how prepared is the U.S. to deal with these kinds of naturally occurring epidemics when how big of this is part of this strategy?

SECRETARY AZAR: So, naturally occurring is very much a part of it, just like accidental, as well as manmade. And we're heavily engaged internationally. The best way to stop a disease outbreak in the United States is by stopping it before it ever comes to our border by being engaged abroad.

So I would differ on that assessment around our Ebola engagement through the Global Health Security Agenda. The purpose of the Global Health Security Agenda has been to actually — it's an international collaborative effort of which the United States is a very important and dedicated partner in that, under President Trump, to help other countries bring up their public health capabilities and infrastructure to comply with the modern international health regulations.

We are seeing the fruits of that today in the Democratic Republic of Congo. That is why the DRC itself diagnosed Ebola in both the earlier spring outbreak and the current one. They didn't need the World Health Organization or the CDC to do that. They did that themselves. They have been leading the response. Of course, the World Health Organization and CDC are providing critical resources, as well as others, in the international community. But it was really the great work of the Global Health Security Agenda that's making that possible.

And now you've moved to other countries. So as you build up infrastructure, public health surveillance, and operation center capabilities, you reprioritize and move — that's the nature of it — as opposed to a permanent, enduring. Staying there, you work on building the rest of them up.

Q And just to follow up on the Global Health Security Agenda, is the U.S. prepared to extend that partnership when it expires in 2019, I believe? And —

SECRETARY AZAR: Oh, so we've already set our commitment as members of the Global Health Security Agenda. So, yes, we're fully —

Q And what kind of funding —

SECRETARY AZAR: We'll work with Congress on the appropriate levels of funding. We're still working from the Ebola supplemental funding that provides the basis of the U.S. Global Health Security Agenda commitment. But we'll be working with Congress on that. But we're fully committed on the GHSA.

MR. MARQUIS: We have time for one more question. Vivian.

Q I have a question for both of you gentlemen. Ambassador Bolton, why now? I mean, is there something we need to know in terms of a credible threat to the United States? Something that prompted the administration to prioritize this currently?

And for Secretary Azar, you talked a lot about anthrax, 17 years ago. Is there any other new chemical agents? Technologies have obviously changed. Chemical — people are discovering things all the time. So is there something new that you have your eye on or you're concerned about that we don't know about in the public?

MR. BOLTON: Well, in terms of timing, this was actually mandated by statute sometime before. It was felt, I think, by my predecessors that it was important to do. Sometimes things take longer than one would like them to do. But when I came in, it was one of the things that I put a priority on to get interagency agreement. Secretary Azar has been a leader in this effort from the get-go.

And so that's what's brought it together now. No particular immediate threat, as you'll see when you read the strategy, which is quite comprehensive. It reflects a lot of work that's gone into it. And as I said, it's intended to be a living document that we can revise and update in light of the circumstances.

SECRETARY AZAR: So the threats that we face — what makes biologic defense so interesting and perplexing is that the threats we face have often been around for millennia. And they just — modern techniques of control can be applied to them, as well as modification. So gene editing tactics, other — that, as I mentioned, the innovations in biomedical research that are so wonderful, that can bring so many therapies to us, are also tactics and techniques that can be used with ill will. But it can also be rather simple to use biologic agents. That's the challenge of this and why we have to be so on our guard.

And the threat, as it was mentioned earlier, isn't just from the manmade. We are, today, the 100th anniversary of the Great Flu Pandemic of 1918. It is important to remember that 25 percent of Americans were infected with the flu — the 1918 flu; 647,000 Americans in 1918 died from that flu.

I mean, if you're extrapolating that to today, the numbers are actually — are catastrophic beyond anything we probably could imagine, even in terms of manmade in its dimension. That is also a part of this strategy of accidental, manmade, and naturally occurring disasters.

Q But that's exacerbated by World War I, right? Towards the end of World War I, though. That's how it made its way around the world, that pandemic.

MR. MARQUIS: I think that's it, guys. Thank you so much.

Q But, I mean, isn't that true?

MR. MARQUIS: Again, this is embargoed until 1 o'clock. You should expect an email from the White House with a factsheet, as well as the Biodefense Strategy.

Thank you so much everybody.

END

11:25 A.M. EDT

BITCHUTE @Housatonic **YOUTUBE** @HousatonicLive **ODYSEE** @Housatonic **BRIGHTEON** @Housatonic

Housatonic

B

A B C D E F G H I J K L M N O P Q R S T U V W X Y Z

PEOPLE (by last name / then D.o.B.)

- Henry J. **Baker** (born 1818)
- Charles Joseph **Baker** (born 1821)
- Charles E. **Baker** (born 1845)
- Bernard Nadal **Baker** (born 1854)
- William Whitely **Baker** Sr. (born 1867)
- William Whiteley **Baker** Jr. (born 1894)
- Dr. David **Baltimore** (born 1938)
- Daniel Richard **Bannister** (born 1930)
- **B - Barr** family
  - Philip Barr (born 1872)
    1. Simon Pelham Barr (born 1892) (m Estelle de Young Barr (born 1893))
       1. Donald Barr (born 1921)
          1. William Pelham Barr (born 1950)
    2. David S Barr (born 1894) (m Elinor Sachs Barr (born 1896))
       1. Paul S. Barr (born 1920x)
- Frank Stringfellow **Barr** (born 1897)
- Sherman **Barr** (born 1925)
- Dr Jordan Jay **Baruch** (born 1923)
- Sina A **Bavari** (born 1959)
- Demetrios James **Bidzos** (born 1955)
- Paul Alec **Bilzerian** (born 1950)
- Jacob **Blaustein** (born 1892)
- David Abraham **Blech** (born 1955)
- Dr. Kurt **Blome** (born 1894)
- Merson **Booth** (1924)
- James d'Orma **Braman** (born 1901)
- Dr. Roger Gerrard **Breeze** (born 1946)
- William **Bremer** (born 1863)
- Earl Winfrey **Brian**, Jr. (born 1942)
- Shirley Armitage Chidsey **Bridgwater** (born 1907)
- Werner **Bruchhausen** (born 1939)
- Christopher James **Brummer** (born 1975)
- Henry William **Buse** Jr. (born 1913)
- Vannevar **Bush** (born 1890)

PLACES / COMPANIES / OTHER

- Baltimore and the opium trade with China
- Baugh Chemical Corporation
- BBN Technologies, Incorporated
- Bell Textron Corporation
- Bremerton, Washington

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Housatonic

Henry J. Baker (born 1818)

Born ???

🌳 See the Baker Family Tree PDF (https://drive.google.com/open?id=1XYaC1qjBdSKIlY0ZbueavfHSRGnfpOY2)

Book - 1871-baltimore-past-and-present-w-bio-sketches

[HB002Z][GDrive] , pages 177-180

CHARLES J. BAKER.

Charles Joseph Baker, President of the **Canton Company** and head of the house of **Baker Brothers & Company**, was born in this city on the 28th of May, 1821. His parents, William and Jane Baker, then resided at "Friendsbury," their country seat, situated in what is now the growing and rapidly improving northwestern section of the city, within the corporate limits, although fifty years ago, it was considered sufficiently remote from the built-up portions of the town, to be denominated country. The paternal grandfather of Mr. Baker, who was the head of the dry goods importing house of Willam Baker & Sons, once well known in this city, came to Baltimore to make his own way in the world at the early age of twelve years, having been left an orphan by the massacre of his parents and all the other members of the family, by the Indians, about the year 1750. The scene of the massacre was near the foot of the Blue Ridge Mountains, not far from the present town of Reading, in Pennsylvania. The grandfather of Charles J. Baker, on the mother's side, was Richard Jones, who emigrated to this country from Caernarvonshire, in Wales, in 1781, preceding his family, in order to provide a home for them, before sending for wife and children to join him. He settled in Baltimore, in the part of the city which has retained the name of Fell's Point, and began business as a manufacturer and dealer in paints and oils, a branch of commerce which three generations of his descendants have since continued. In 1793, Mr. Jones purchased and improved the beau tiful site to which he gave the name of "Friendsbury," where the parents of Mr. C. J. Baker resided until their death, a few years since, and where the subject of this sketch was born. Like large numbers of his countrymen, Mr. Jones in early life, before his emigration to America, became a member of the Wesleyan Methodist Society, under the preaching and influence of its celebrated founder, whose personal acquaintance he enjoyed.

Charles J. Baker received his early education at home, and at boarding school, at the Franklin Academy in Reisterstown, Baltimore county, then under the charge of Mr. N. C. Brooks. After wards, he was sent for a short time to St. Mary's College, in this city, and, in 1835, entered the grammar school of Dickinson College, Carlisle, Pa. In 1837, he was admitted Freshman in the College proper, and graduated with the Class of 1841, under the presidency of the Rev. J. P. Durbin, 1). D. During his stay at Carlisle, in 1836, Mr. Baker united himself in membership with the Methodist Episcopal Church, in that place. Upon the completion of his college course, he entered the counting-room of his father, who was then engaged in the manufacture of window-glass at the old Baltimore glass works, at the foot of Federal Hill. In 1842, he started in business with his brother, H. J. Baker, on their own account, in the paint, oil, and glass trade, at No. 2 N. Liberty street. Shortly after the firm became proprietors of the Baltimore Window Glass and Bottle and Vial Glass Works, previously carried on by Shaum & Reitz. In 1843, the brothers removed to No. 42 South Charles street, and enlarged their business, until, in 1848, they were enabled to purchase the two warehouses, Nos. 32 and 34 South Charles street, and changed the stylo of the firm to that of Baker & Brother. In July, 1850, their two warehouses, with all their contents, including $75,000 worth of glass, paints, &c., were destroyed by fire. Nothing daunted by this disaster, the firm immediately commenced the work of rebuilding, and, in the course of the following year, had finished the present five story warehouses, Nos. 32 and 34, on the same site. During 1850, the two brothers, Charles J. and Henry J. Baker, organized the firm of H. J. Baker & Brother in New York city, for the purpose of conducting the same business there, and also importing French glass and chemicals. In 1851, the firm in Baltimore was changed to Baker Brothers & Company, upon the admission of a new partner, Mr. J. Rogers, Jr., and so continued until 1865, when Charles J. Baker purchased the entire interest of H. J. Baker and Mr. Rogers, and admitted his two sons, William Baker, Jr., and Charles E. Baker, into copartnership, retaining the old style of Baker Brothers & Company.

As one of the results of a successful business career, as well as of the enterprising and liberal spirit which has contributed so largely to that success, Mr. Baker has become prominently and usefully identified with various mercantile and manufacturing interests in this city. In 1859, he was elected a director in the Franklin Bank, and in 1867, was chosen its president. In 1860, he was elected a director in the Canton Company, and in 1870, was elected president, He is also interested in the Maryland White Lead Company, the Maryland Manufacturing and Fertilizing Company, and other kindred enterprises of associated capital and skill.

Through the energetic efforts of Mr. Baker, as president of the Canton Company, the Union Railroad, running from the north western limits of the city to tidewater, is being rapidly pushed for ward, and will be of immense service to the business of Baltimore.

Nor have Mr. Baker's life and energies been so far absorbed in business pursuits and undertakings, as to make him neglectful of other and higher duties. His life as a citizen has not been uneventful. In 1859-60, he took an active part in the Municipal Reform movement of that year, and was a candidate for the second branch of the City Council on the same ticket with George William Brown, for Mayor, and was elected by a large majority. In the organization of the branch, although the youngest member, Mr. Baker was elected president ; which position he continued to till during the stormy and memorable days of April, 1861, and the period which followed,—acting as Mayor of the city, *ex officio*, from September, 1861, to January, 1862, while Mayor Brown was a prisoner in Forts Lafayette and Warren.

The interest in religious matters which led Mr. Baker to identify himself early in life with the Methodist Episcopal Church has never failed or ceased. In 1855, he was associated as trustee of Baltimore City Station with the late R. G. Armstrong, David Thomas, John G. Chappell, Dr. Roberts, and others, and was connected and prominently identified with various religious movements and enterprises, such as the extension and rebuilding of the Eutaw Street M. E. Church, the erection of the Madison Avenue M. E. Church, and in the cause of missions, particularly the German Mission, under Dr. Jacoby, in Bremen, Frankfort, and elsewhere in Germany. As one of the trustees of Dickinson College, he manifested his interest and kept alive his connection with the Alma Mater of his youth. The dissensions, however, which disturbed the peace of the Metho dist Episcopal Church after 1860, led to Mr. Baker's withdrawal from the position which he held in that body. He assisted in organizing the Chatsworth Independent Methodist Church, and in build ing the present church edifice at the corner of Franklin and Pine streets, and, subsecpiently, in 1867, he aided in building the Bethany Independent Methodist Chapel at Franklin Square.

The leading traits of Mr. Baker's character may be readily in ferred from the foregoing incidents in his career. Energy and probity in business ; a high sense of duty in all the relations of life, public and private; a spirit and temper firm in the recognition and advocacy of principle, yet withal kindly and conciliatory, and always governed by the rules of Christian charity, and a liberal heart and hand in the support of all undertakings, secular or religious, which commend themselves to his sympathy and judgment, have made Mr. Baker widely respected, trusted and esteemed in this community.

Mr. Baker married, in 1842, Miss Elizabeth Bosserman, of Car lisle, Pa., daughter of Ephraim Bosserman, a merchant of that place.

1866 - Directory Jersey City and Hoboken

Full book : [HD000Z][GDrive] / Page 36 ("Baker") see [HD0010][GDrive]

Baker Charles, express, h 127 Newark av
Baker Charles J. (*H. J. Baker & Bro.*), h Baltimore
Baker David, shoes, 301 Newark av
Baker David H., sup't, h 252 S Sixth
Baker George, laborer, h 83 Morris
Baker George W., clerk, h 158 Montgomery
Baker Hannah J., wid John R., h 208 S Third
Baker Henry, tailor, h r 175 Hoboken
Baker Henry J. (*H. J. Baker & Bro.*), h Sing Sing
Baker Jackson R., boxmetal, h 208 S Third
Baker Jacob, agent, h 83 Washington
Baker John, carpenter, h 131 Warren
Baker John, oysterman, h 154 Steuben
Baker John, sexton, h 143 Henderson
Baker Ludwig, jeweler, h r 233 Washington, Hoboken
Baker Philip, laborer, h 83 Morris
Baker Robert M., engineer, h 208 S Third
Baker Stephen, bookkeeper, h 252 S Sixth
Baker William, painter, h 184 York
Baker William (colored), mariner, h r 255 Newark av
BAKER WILLIAM K., stoves, 213 Washington, Hoboken. *See adv.*
Baker H. J. & Bro. (*Henry J. & Charles J. Baker & Conrad Braker*), linseed, Washington c Bay
Ball Mary, wid James, washing, h 62 Gregory
Baldwin Bradley H, agent, h 133 Bloomfield, Hoboken
Baldwin Jonathan H., carpenter, h 87 Coles
Baldwin Joseph D., clerk, h 217 York
Baldwin Nelson M., ferrymaster, h 181 Montgomery
Baldwin Stephen W., engineer, h 65 Morris
Balfour John, laborer, h r 53 York
Ball James B., painter, 32 Colden
Ball Walter, ferrymaster, h 30 Newark, Hoboken
Ballance Anne J., wid William, seamstress, h 12 Canal
Ballard Hiram P. (*Ballard & Brother*), h 96 Montgomery
Ballard Loomis (*Ballard & Brother*), h 96 Montgomery
BALLARD & BROTHER (*Loomis & Hiram P. Ballard*), boots, 96 Montgomery

HUDSON COUNTY MUTUAL INSURANCE CO.
Organised 1842. Office, 1 Exchange Place.

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Highland Cottage

WHOLE PAGE on Highland Cottage building ! - 🔵Highland Cottage

"HIGHLAND COTTAGE."

RESIDENCE OF ANDREW DICKEY, SING SING, N. Y.

Henry J. Baker, the builder and first occupant of Highland Cottage, bought the property in 1869. A successful New York City businessman who moved to Ossining,[5] he had an interest in construction, having initiated the effort to build a new Methodist church in town. The local newspaper reported in March 1872 that he was going to build houses of "Swiss architecture" on his lots on Highland and Mott Street (as Maple Place was then known).[2]

Concrete had been used to build American houses before, but only rarely, due to the abundance of wood and masonry. Since it was so unusual, English workers were brought over to build the house, which early on earned the disparaging local nickname of "Mud House".[5] The concrete used for the precast blocks was Rosendale cement, made at what is now the Register-listed Snyder Estate Natural Cement Historic District in Rosendale, further north in the Hudson Valley.[5] It would be the first concrete house in Westchester County, predating the better-known reinforced concrete Ward Castle in what is now Rye Brook by four years.[2] The High Victorian Gothic style used was also an unusual choice for house.

Six years later, in 1878, Baker died. His estate took three years to sell. In 1881, the Dickey family gave it the name Highland Cottage when they moved in. Six years later, they moved. Their buyer, an elderly woman, lived there for a short time before selling in turn to a man named John Cockcroft.[2]

Contributions to Ossining (formeerly Sing Sing), NY

Preparation of a Historic Structure Report for the Westchester Preservation League of the picturesque Squire House (Highland Cottage) in Ossining (formerly Sing Sing), NY. Squire House was designed by S. Marvin McCord, Architect in a highly eclectic asymmetrical design with historical allusion to medieval precedents. Built for Henry J. Baker 1872, it was the first poured-in-place concrete house in Westchester County.

https://www.villageofossining.org/sites/ossiningny/files/uploads/voo_downtown_walking_tour_12.11.2017.pdf

(only hint that birthdate was 1818-1878)

Death - Feb 17 1878

Feb 17 1878

See 1878-1880-the-missionary-society-of-methodist-episcopal-church-annual-reports.pdf / https://drive.google.com/open?id=1YYrjfwp5GwGAMpJWl24UdvLYaTkCxr9u

Sixteenth annual report (page 31) -

"We send out our Report for 1878 with mingled emotions of joy and sorrow. [...] Henry J. Baker, who departed this life February I7, 1878, was one of our most liberal givers, and in the days of his physical health, prompt and faithful in all the duties devolving upon him as a manager. His last years were full of weakness and pain, but the end was peaceful and triumph ant. He did not forget the Society to which he had given the best years of his Christian activity, and with the interior working of which he had been familiar for twenty years, in the distribution of his wealth."

1894 - Obituary - Brother Charles J Baker

Full page : [HN00QG][GDrive] / Article : [HN00QH][GDrive]

"Mr. Charles J. Baker, head of the firm of Baker Bros. & Co., died yesterday at "Athol," his country home on the Frederick turnpike."

Mr. Baker was widely known as one of the oldest and most successful business men of Baltimore. Besides being the head of the firm of **Baker Bros. & Co.**, in which house he commenced his business career more than City years ago, he was also interested in many other enterprises In and around Baltimore. Among these were the **Baltimore Car Wheel Company**, **St. Clair-Scott Manufacturing Company**, Equitable National Bank and the Canton Company.

While president of the **Canton Company**, in 1870, Mr. Baker was largely instrumental in securing the construction of the **Union Railroad and tunnel**, now owned by the **Pennsylvania Railroad**, and which gives the Northern Central and Western Maryland Roads tide water terminals at Canton.

For more than twenty years Mr. Baker was president of the old **Franklin Bank**, on South street, which a few years ago was merged into the **Equitable National Bank**. The Franklin was a State bank and under Mr. Baker's direction was for some years successfully conducted. He retired from active banking business when the old Franklin went out of existence, though he was a large holder or the stock of its successor and always manifested much interest in its affairs.

His full name is Charles Joseph Baker. He was born May 28, 1821, at "Friendsbury," an old family estate belonging to bis father, but Which is now a part of Baltimore city, being in the northwestern section. Baker Circle was a portion of this estate, and the circle gets its name from the former owners of the land. He received his early education in the schools of this city, and was graduated from Dickinson College in 1841. He then entered his father's counting-room, and was continuously engaged in the business of manufacturing window glass and dealing in paints and oils. In 1865 Mr. Baker secured the whole control of this business and admitted to the firm two of his sons. William and Charles E. Baker. With his brother, **Henry J. Baker**. Mr. Charles J. Baker established a branch of the business in New York city.

Mr. Baker became an active leader in the municipal reform movement of 1859 and 1800. He was elected to the Second Branch of the City Council on the same ticket with the late George William Brown, and although the youngest member of that body was chosen its president. He occupied this position during the stirring and memorable days of April, 1861, and the stormy period which followed. When Mayor Brown was taken prisoner and confined in Forts Lafayette and Warren, Mr. Baker was Mayor of the city ex-oifficio, serving in that capacity from September, 1861, to January, 1862. Mr. Baker used frequently to tell how he was notified that he must perform the functions of chief executive of the city by a troop of Federal soldiers riding up to his house and Informing him that as Mayor Brown was a prisoner he must take up the work of the Mayor's office.

While attending college Mr. Baker joined the Methodist Episcopal Church, and he continued a practical Christian in that faith to his death. At the outbreak of the civil war, When the Methodists as a body became involved in the sectional differences and determined to separate into the North and South Churches, Mr. Baker disapproved the separation. lie at once took an active and leading part in establishing the Independent Methodist Church.

It was largely through Mr. Baker's efforts and liberality that this church obtained such a strong foothold in Baltimore. From his private fortune he first built Chatsworth Church, tho first Independent Methodist Church in the city. He also built Bethany and Epworth churches. Friendsbury, St. John's and several other chapels for use ot Independent Methodists in various sections of the city.

...

...

Mr. Baker's first wife was Miss Elizabeth Rosserman. They had seven children, all living. One of his sons, Mr. Bernard N. Baker, Is president of the **Baltimore Storage and Lighterage Company**, and is one of the prominent business men of the city. His other children are, William, Charles E., Mary H., Richard J., Frank M. and Ashby Lee. A few years ago Mr. Baker married a second time. His widow survives him. ..

His father - William Baker (Sep 11 1781 - Mar 10 1865)

See [HL003L][GDrive]

Early baker brothers - excellent history - and bottling corporation

(Source : [HW0024][GDrive])

In his need for financial backing (for The Baltimore Glass Works) (after his brother John Friese died in December 1831,), Phillip (Phillip R.J. Friese) turned to **William Baker**, a judge in the Orphans Court of the City of Baltimore and a son of the **William Baker**, who had founded **William Baker & Sons, a dry goods house**. An interest in the Baltimore Glass Works was natural, for, according to an 1837 Baltimore directory, William Baker had a glass warehouse on Hanover Street.

By 1837, William Baker had already acquired a "glass warehouse on Hanover Street" although it is unclear whether the property was only for storage of glass or if this were a glass factory. McKearin & Wilson (1978:73) were also unclear about what products were produced or stored in this "warehouse." Because this property is not mentioned further, it was likely only for storage.

In March of 1837, William Baker became involved with Friese in the Baltimore Glass Works. Baker assumed $5,650 worth of mortgages for the factory the following September and acquired the entire property a few months later. The plant was located at 3 N. Liberty St. and apparently only made window glass. It was not until January of 1845 that Baker executed the bill of sale, apparently incorporating as the Baltimore Glass Works at the same time (McKearin & Wilson 1978:73; Roller 1998).

William Baker, along with his brother, Charles [George Baker], and four associates, bought the Baltimore Glass Works in January 1845. 3 William's sons, Henry J. and Charles J. Baker began serving as commission merchants and agents, selling the products made by the Baltimore Glass Works and the New Jersey Glass Works (probably Coffin, Hay & Bowdle) under the name of C.J. and H.J. Baker in 1851. The name was changed to Baker & Bro. by 1850 and became Baker Bros. & Co. in 1851 – with Joseph Rogers, Jr., as the "& Co." 4 About 1849, the senior Baker had moved into semi-retirement (McKearin & Wilson 1878:73; Roller 1998)

1850 US Census Transcript

Record Transcription:
Us Census 1850

Household Members

First name(s)	Last name	Gender:	Age	Birth year	Birth place
Henry	**Baker**	**Male**	**32**	**1818**	**Maryland**
Jane	Baker	Female	30	1820	Maryland
Wm	Fraley	Male	54	1796	Maryland
Hester	Fraley	Female	54	1796	Maryland

Henry Baker's Census Details

First name(s)	Henry
Last name	Baker
Gender:	Male
Age	32
Birth year	1818
Birth place	Maryland
Dwelling	1222
City/township	Baltimore, ward 19
County	Baltimore
State	Maryland
NARA series	443518
Record set	Us Census 1850
Category	Census, Land & Substitutes
Subcategory	Census
Collections from	Americas, United States

[HS002D][GDrive]

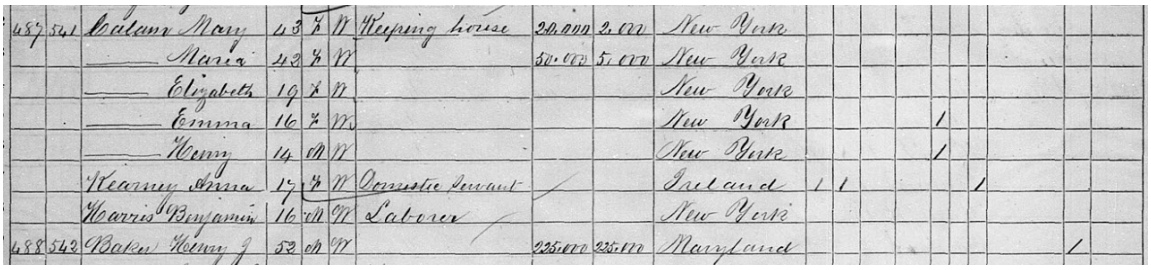
Full 1870 from NY Census (for this baker family) -

See [HS0029][GDrive]

Henry J Baker's Household Members

First name(s)	Last name	Gender	Age	Birth year	Birth place
Henry J	**Baker**	**Male**	**52**	**1818**	**Maryland**
Jane E	Baker	Female	50	1820	Maryland
William N	Baker	Male	13	1857	Maryland
Emma N	Baker	Female	8	1862	New Jersey
Mary	O Rouke	Female	40	1830	Ireland

[HS002B][GDrive]



[HS002C][GDrive]

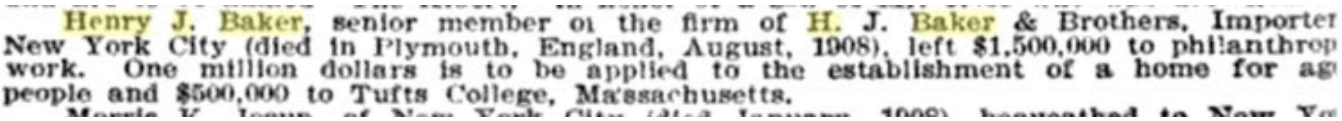
1884 REAL ESTATE RECORD AND BUILDERS' GUIDE. Vol. XXXIII. to june 1884

oct 25 1884 - page 1091

TYPO - The following should be Henry J BRAKER

1909 - the-world-almanac-and-encyclopedia

full book - [HB0031][GDrive] / page 356 below ..


Henry J. Baker, senior member of the firm of H. J. Baker & Brothers, Importer New York City (died in Plymouth, England, August, 1908), left $1,500,000 to philanthrop work. One million dollars is to be applied to the establishment of a home for ag people and $500,000 to Tufts College, Massachusetts.

[HB0032][GDrive]

1878 (May 17) - The Henry J Baker Estate

Correct spelling is here.. Article : [HN00QM][GDrive]

GIVING AWAY THREE MILLIONS.

THE WILL OF THE LATE HENRY J. BAKER ADMITTED TO PROBATE—BEQUESTS TO RELATIVES AND FOR MISSIONARY, CHARITABLE, AND EDUCATIONAL PURPOSES.

The will and codicil of the late Henry J. Baker, the wealthy glass importer, who died on Feb. 17, were admitted to probate by Surrogate Coffin, of Westchester County, yesterday. The value of the estate disposed of is estimated at $3,000,000. By the codicil, which was executed on Dec. 8, 1876—about a year after the will—a legacy to Mrs. Amelia K. Miller is reduced from $10,000 to $5,000. The will appoints the testator's widow, Jane E. Baker, as Executrix, and John Elliott as Executor. There was no contest over the probate. The widow is given a life interest in the mansion and grounds known as Ennvillton, two adjacent houses and plots of ground, and the household furniture and library. She is also given a life interest in $100,000, with power to dispose of the same by will, besides a similar interest in $50,000, which, at her death, is to go in equal shares to William Henry Baker and Emma Hartshorn Baker, the testator's adopted children, and to the children of the latter. To the adopted son $20,000 are given absolutely on his attaining his majority, as well as the income of $30,000 more which is to go to his children after his death. The adopted daughter is given the income of $50,000 during her life, the remainder going to her children. The income of $10,000 is given for life to each of the following: Eleanor Addison Baker and Sarah Jane Baker, cousins, and Anna Jane Graves and Sophia Hollingsworth, sisters of the testator.

[HN00QN][GDrive]

After the enumeration of minor legacies, the will makes the following bequests: New-York City Church Extension and Missionary Society of the Methodist Episcopal Church, $3,000; New-York Missionary and Tract Society, $1,000; Missionary Society of the Methodist Episcopal Church, $3,000; American Bible Society, $2,000; New-York Ladies' Home Missionary Society of the Methodist Episcopal Church, $2,500; Ladies' Union Aid Society of the Methodist Episcopal Church, New-York, $2,500; Tract Society of the Methodist Episcopal Church, $1,000; Methodist Episcopal Sunday-School Union, $1,000; Wesleyan University, at Middletown, Conn., $15,000, and Methodist Episcopal Church Extention Society, Philadelphia, $3,000. The remainder of the estate is divided into six parts, one of which is to go to the testator's widow, another to his adopted son, one to his adopted daughter, two to the Wesleyan University, and the remaining one to the Methodist Episcopal Missionary Society of this City. A loan of $200,000 is left with the firm of H. J. Baker & Brother for three years, the interest on the amount to be paid quarterly or half-yearly.

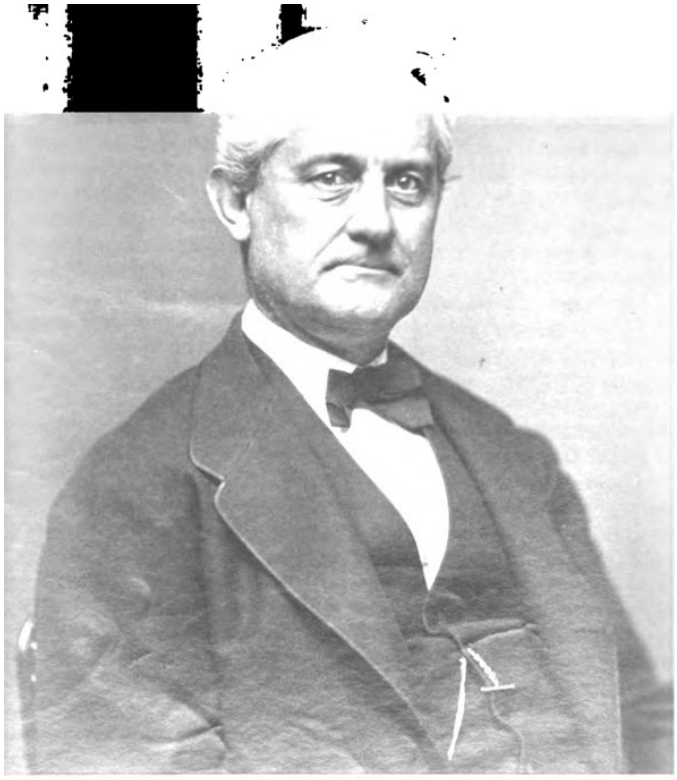
The following are said to be the testator's only heirs and next of kin: Jane E. Baker, widow, of the Town of Ossining, Westchester County; Sophia Hollingsworth, Melissa Baker, Anna Jane Graves, and Olivia Warfield, his sisters, residing in Baltimore, Md.; Robert J. Baker, his brother, residing in Freedom, Carroll County, Md.: Charles J. Baker, his brother, and William B. Graves, John J. Graves, Henry M. Graves, and Elizabeth Graves, his nephews and niece respectively, all residing in Baltimore; Roswell H. Graves, a nephew, residing at Canton China, and the following-named nieces and nephew: Jane Convers, of Racine, Wis.; Mary Wyatt, of Riestertown, Baltimore County, Md.; Anna S. Reese, of this City, and Matthias L. Jones, of London, England, all being of age.

[HN00QO][GDrive]

BITCHUTE @Housatonic YOUTUBE @HousatonicLive ODYSEE @Housatonic BRIGHTEON @Housatonic

Housatonic

Charles Joseph Baker (born 1821)



[HB0030][GDrive]

[intro - todo]

Born on the 28th of May, 1821 [HB002Z][GDrive]

🌳 See the Baker Family Tree PDF (https://drive.google.com/open?id=1XYaC1qjBdSKlIY0ZbueavfHSRGnfpOY2)

See full issues at [HB0023][GDrive]

[...] Charles J. Baker was a glass manufacturer and banker, one of the most prominent and well-known business men of his day in Baltimore, and identified with large business enterprises of various kinds, and a successful man in everything he engaged in. He had nine children (eight of whom are living [as of 1898]: William, Jr., George B., president of the Third National Bank; Bernard N., Richard J., Frank M., Ashby Lee Baker, who resides in Raleigh, N. C., and is a cotton manufacturer, and Mrs. Mary H. Bradenbaugh, wife of Rev. A. E. Bradenbaugh, and [Charles E. Baker]. All reside in Baltimore except Ashby Lee. [The] firm of Baker Bros., glass manufacturers, [...] was founded in 1857 by [Charles Joseph Baker] and [brother] and has continued to do business under that firm name up to the present time [1898], forty years. [...]

Book - 1871-baltimore-past-and-present-w-bio-sketches

[HB002Z][GDrive] , pages 177-180

CHARLES J. BAKER.

Charles Joseph Baker, President of the **Canton Company** and head of the house of **Baker Brothers & Company**, was born in this city on the 28th of May, 1821. His parents, William and Jane Baker, then resided at "Friendsbury," their country seat, situated in what is now the growing and rapidly improving northwestern section of the city, within the corporate limits, although fifty years ago, it was considered sufficiently remote from the built-up portions of the town, to be denominated country. The paternal grandfather of Mr. Baker, who was the head of the dry goods importing house of Willam Baker & Sons, once well known in this city, came to Baltimore to make his own way in the world at the early age of twelve years, having been left an orphan by the massacre of his parents and all the other members of the family, by the Indians, about the year 1750. The scene of the massacre was near the foot of the Blue Ridge Mountains, not far from the present town of Reading, in Pennsylvania. The grandfather of Charles J. Baker, on the mother's side, was Richard Jones, who emigrated to this country from Caernarvonshire, in Wales, in 1781, preceding his family, in order to provide a home for them, before sending for wife and children to join him. He settled in Baltimore, in the part of the city which has retained the name of Fell's Point, and began business as a manufacturer and dealer in paints and oils, a branch of commerce which three generations of his descendants have since continued. In 1793, Mr. Jones purchased and improved the beau tiful site to which he gave the name of "Friendsbury," where the parents of Mr. C. J. Baker resided until their death, a few years since, and where the subject of this sketch was born. Like large numbers of his countrymen, Mr. Jones in early life, before his emigration to America, became a member of the Wesleyan Methodist Society, under the preaching and influence of its celebrated founder, whose personal acquaintance he enjoyed.

Charles J. Baker received his early education at home, and at boarding school, at the Franklin Academy in Reisterstown, Baltimore county, then under the charge of Mr. N. C. Brooks. After wards, he was sent for a short time to St. Mary's College, in this city, and, in 1835, entered the grammar school of Dickinson College, Carlisle, Pa. In 1837, he was admitted Freshman in the College proper, and graduated with the Class of 1841, under the presidency of the Rev. J. P. Durbin, 1). D. During his stay at Carlisle, in 1836, Mr. Baker united himself in membership with the Methodist Episcopal Church, in that place. Upon the completion of his college course, he entered the counting-room of his father, who was then engaged in the manufacture of window-glass at the old Baltimore glass works, at the foot of Federal Hill. In 1842, he started in business with his brother, H. J. Baker, on their own account, in the paint, oil, and glass trade, at No. 2 N. Liberty street. Shortly after the firm became proprietors of the Baltimore Window Glass and Bottle and Vial Glass Works, previously carried on by Shaum & Reitz. In 1843, the brothers removed to No. 42 South Charles street, and enlarged their business, until, in 1848, they were enabled to purchase the two warehouses, Nos. 32 and 34 South Charles street, and changed the stylo of the firm to that of Baker & Brother. In July, 1850, their two warehouses, with all their contents, including $75,000 worth of glass, paints, &c., were destroyed by fire. Nothing daunted by this disaster, the firm immediately commenced the work of rebuilding, and, in the course of the following year, had finished the present five story warehouses, Nos. 32 and 34, on the same site. During 1850, the two brothers, Charles J. and Henry J. Baker, organized the firm of H. J. Baker & Brother in New York city, for the purpose of conducting the same business there, and also importing French glass and chemicals. In 1851, the firm in Baltimore was changed to Baker Brothers & Company, upon the admission of a new partner, Mr. J. Rogers, Jr., and so continued until 1865, when Charles J. Baker purchased the entire interest of H. J. Baker and Mr. Rogers, and admitted his two sons, William Baker, Jr., and Charles E. Baker, into copartnership, retaining the old style of Baker Brothers & Company.

As one of the results of a successful business career, as well as of the enterprising and liberal spirit which has contributed so largely to that success, Mr. Baker has become prominently and usefully identified with various mercantile and manufacturing interests in this city. In 1859, he was elected a director in the Franklin Bank, and in 1867, was chosen its president. In 1860, he was elected a director in the **Canton Company** , and in 1870, was elected president, He is also interested in the Maryland White Lead Company, the Maryland Manufacturing and Fertilizing Company, and other kindred enterprises of associated capital and skill.

Through the energetic efforts of Mr. Baker, as president of the **Canton Company** , the Union Railroad, running from the north western limits of the city to tidewater, is being rapidly pushed for ward, and will be of immense service to the business of Baltimore.

Nor have Mr. Baker's life and energies been so far absorbed in business pursuits and undertakings, as to make him neglectful of other and higher duties. His life as a citizen has not been uneventful. In 1859-60, he took an active part in the Municipal Reform movement of that year, and was a candidate for the second branch of the City Council on the same ticket with George William Brown, for Mayor, and was elected by a large majority. In the organization of the branch, although the youngest member, Mr. Baker was elected president ; which position he continued to till during the stormy and memorable days of April, 1861, and the period which followed,—acting as Mayor of the city, *ex officio*, from September, 1861, to January, 1862, while Mayor Brown was a prisoner in Forts Lafayette and Warren.

The interest in religious matters which led Mr. Baker to identify himself early in life with the Methodist Episcopal Church has never failed or ceased. In 1855, he was associated as trustee of Baltimore City Station with the late R. G. Armstrong, David Thomas, John G. Chappell, Dr. Roberts, and others, and was connected and prominently identified with various religious movements and enterprises, such as the extension and rebuilding of the Eutaw Street M. E. Church, the erection of the Madison Avenue M. E. Church, and in the cause of missions, particularly the German Mission, under Dr. Jacoby, in Bremen, Frankfort, and elsewhere in Germany. As one of the trustees of Dickinson College, he manifested his interest and kept alive his connection with the Alma Mater of his youth. The dissensions, however, which disturbed the peace of the Metho dist Episcopal Church after 1860, led to Mr. Baker's withdrawal from the position which he held in that body. He assisted in organizing the Chatsworth Independent Methodist Church, and in build ing the present church edifice at the corner of Franklin and Pine streets, and, subsecpiently, in 1867, he aided in building the Bethany Independent Methodist Chapel at Franklin Square.

The leading traits of Mr. Baker's character may be readily in ferred from the foregoing incidents in his career. Energy and probity in business ; a high sense of duty in all the relations of life, public and private; a spirit and temper firm in the recognition and advocacy of principle, yet withal kindly and conciliatory, and always governed by the rules of Christian charity, and a liberal heart and hand in the support of all undertakings, secular or religious, which commend themselves to his sympathy and judgment, have made Mr. Baker widely respected, trusted and esteemed in this community.

Mr. Baker married, in 1842, Miss Elizabeth Bosserman, of Car lisle, Pa., daughter of Ephraim Bosserman, a merchant of that place.

Obituary

Full page : [HN00QG][GDrive] / Article : [HN00QH][GDrive]

CHARLES J. "BAKER DEAD.

Hae Had Been in Failing Health for a Long Time.

AND THE END WAS NOT UNEXPECTED.

His Active Career In Business Affairs - Manufacturer, Banker and, at One Time, Newspaper Proprietor - Prominent In Methodist Church Work.

Mr. Charles J. Baker, head of the firm of Baker Bros. & Co., died yesterday at "Athol," his country home on the Frederick turnpike.

He had been in failing health for a long time and his death was not unexpected. He was afflicted with diabetes, which caused his death. In March last Mr. Baker bad two strokes of paralysis within five days and commenced to fail from that time, though bis Vigorous constitution and strong will-power enabled him to withstand these attacks. When he recovered from this prostration he continued bis active business pursuits and bad given almost daily attention to his many enterprises until last Monday. Da that day he ordered his carriage to drive Into town, as was his custom, and while waiting for it be was taken suddenly sick and went to bed, from which he never arose.

Mr. Baker was widely known as one of the oldest and most successful business men of Baltimore. Besides being the head of the firm of **Baker Bros. & Co.**, in which house he commenced his business career more than City years ago, he was also interested in many other enterprises In and around Baltimore. Among these were the **Baltimore Car Wheel Company**, **St. Clair-Scott Manufacturing Company**, Equitable National Bank and the **Canton Company** .

While president of the **Canton Company** , in 1870, Mr. Baker was largely instrumental in securing the construction of the **Union Railroad and tunnel**, now owned by the **Pennsylvania Railroad**, and which gives the Northern Central and Western Maryland Roads tide water terminals at **Canton, Baltimore, Maryland** .

For more than twenty years Mr. Baker was president of the old **Franklin Bank**, on South street, which a few years ago was merged into the **Equitable National Bank**. The Franklin was a State bank and under Mr. Baker's direction was for some years successfully conducted. He retired from active banking business when the old Franklin went out of existence, though he was a large holder or the stock of its successor and always manifested much interest in its affairs.

His full name is Charles Joseph Baker. He was born May 28, 1821, at "Friendsbury," an old family estate belonging to bis father, but Which is now a part of Baltimore city, being in the northwestern section. Baker Circle was a portion of this estate, and the circle gets its name from the former owners of the land. He received his early education in the schools of this city, and was graduated from Dickinson College in 1841. He then entered his father's counting-room, and was continuously engaged in the business of manufacturing window glass and dealing in paints and oils. In 1865 Mr. Bakor secured the whole control of this business and admitted to the firm two of his sons. William and Charles E. Baker. With his brother, Henry J. Baker. Mr. Charles J. Baker established a branch of the business in New York city.

Mr. Baker became an active leader in the municipal reform movement of 1859 and 1800. He was elected to the Second Branch of the City Council on the same ticket with the late George William Brown, and although the youngest member of that body was chosen its president. He occupied this position during the stirring and memorable days of April, 1861, and the stormy period which followed. When Mayor Brown was taken prisoner and confined in Forts Lafayette and Warren, Mr. Baker was Mayor of the city ex-oifficio, serving in that capacity from September, 1861, to January, 1862. Mr. Baker used frequently to tell how he was notified that he must perform the functions of chief executive of the city by a troop of Federal soldiers riding up to his house and Informing him that as Mayor Brown was a prisoner he must take up the work of the Mayor's office.

While attending college Mr. Baker joined the Methodist Episcopal Church, and he continued a practical Christian in that faith to his death. At the outbreak of the civil war, When the Methodists as a body became involved in the sectional differences and determined to separate into the North and South Churches, Mr. Baker disapproved the separation. lie at once took an active and leading part in establishing the Independent Methodist Church.

It was largely through Mr. Baker's efforts and liberality that this church obtained such a strong foothold in Baltimore. From his private fortune he first built Chatsworth Church, tho first Independent Methodist Church in the city. He also built Bethany and Epworth churches. Friendsbury, St. John's and several other chapels for use ot Independent Methodists in various sections of the city.

At one time Mr. Baker purchased a controlling Interest in the Baltimore Gazette, a daily paper formerly published in this city. It was said that Mr. Baker thought he could extend his sphere of usefulness in advancing the material welfare of the city by controlling a newspaper with which to promulgate his ideas of what was best for the city's interests. His other large business enterprises, however, prevented him from giving the necessary attention to the newspaper. He soon sold bis Interest in the Gazette.

Mr. Baker's first wife was Miss Elizabeth Rosserman. They had seven children, all living. One of his sons, Mr. Bernard N. Baker, Is president of the **Baltimore Storage and Lighterage Company**, and is one of the prominent business men of the city. His other children are, William, Charles E., Mary H., Richard J., Frank M. and Ashby Lee. A few years ago Mr. Baker married a second time. His widow survives him.

Mr. Baker has always lived at "Athol." In 1880, during the sequi-centennlal celebration, Mr. Baker and his family were away from borne and on returning found the house afire. When the lire was first seen by him Mr. Baker supposed it was a bonfire as part of the celebration, and when he reached his grounds he found the house and its contents destroyed. He at once built the magnificent, residence that now occupies the high hill on his land.

Rev. J. W, Jones, pastor of Bethany Independent Methodist Church, announced to the congregation last night the death of Mr. Baker. '

His father - William Baker (Sep 11 1781 - Mar 10 1865)

See [HL003L][GDrive]

Early baker brothers - excellent history - and bottling corporation

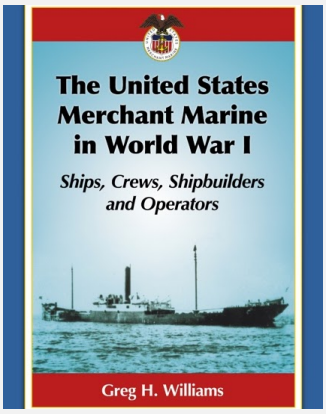
(Source : [HW0024][GDrive])

In his need for financial backing (for The Baltimore Glass Works) (after his brother John Friese died in December 1831,), Phillip (Phillip R.J. Friese) turned to **William Baker**, a judge in the Orphans Court of the City of Baltimore and a son of the **William Baker**, who had founded **William Baker & Sons, a dry goods house**. An interest in the Baltimore Glass Works was natural, for, according to an 1837 Baltimore directory, William Baker had a glass warehouse on Hanover Street.

By 1837, William Baker had already acquired a "glass warehouse on Hanover Street" although it is unclear whether the property was only for storage of glass or if this were a glass factory. McKearin & Wilson (1978:73) were also unclear about what products were produced or stored in this "warehouse." Because this property is not mentioned further, it was likely only for storage.

In March of 1837, William Baker became involved with Friese in the Baltimore Glass Works. Baker assumed $5,650 worth of mortgages for the factory the following September and acquired the entire property a few months later. The plant was located at 3 N. Liberty St. and apparently only made window glass. It was not until January of 1845 that Baker executed the bill of sale, apparently incorporating as the Baltimore Glass Works at the same time (McKearin & Wilson 1978:73; Roller 1998).

William Baker, along with his brother, Charles [George Baker], and four associates, bought the Baltimore Glass Works in January 1845. 3 William's sons, Henry J. and Charles J. Baker began serving as commission merchants and agents, selling the products made by the Baltimore Glass Works and the New Jersey Glass Works (probably Coffin, Hay & Bowdle) under the name of C.J. and H.J. Baker in 1851. The name was changed to Baker & Bro. by 1850 and became Baker Bros. & Co. in 1851 – with Joseph Rogers, Jr., as the "& Co." 4 About 1849, the senior Baker had moved into semi-retirement (McKearin & Wilson 1878:73; Roller 1998)



[HB0024][GDrive]

Atlantic Gulf & West Indies Steamship Lines
11 Broadway, Rm 1256, New York

Galen L. Stone was president, Alexander R. Nichol secretary-treasurer. Incorporated with a capital of $40,000,000. Edward J. Berwind, William A. Bradford, Henry Hornblower, Henry R. Mallory, Hubert E. Rogers, Frederick Fletcher, Harry H. Raymond, Alfred G. Smith, and Franklin D. Mooney were directors. Prior to the war the company owned the steamers *Altamaha*, *Brunswick*, *Ocmulgee*, *Ogeechee*, *Ossabaw*, and *Satilla*.

Atlantic Refining Co.
3144 W. Passyunk Ave., Philadelphia

Atlantic Refining was a subsidiary of Standard Oil. John Wesley Van Dyke worked his way up from roughneck to become manager in 1903. In 1911 the Supreme Court busted up Standard Oil and Atlantic Refining became a separate company to refine, market, and transport petroleum products. Van Dyke became president, Walter P. Cutler and William M. Irish were vice-presidents, Henry S. Mustin was treasurer, and William D. Anderson secretary.
The company owned seven ships when the war started and operated eight Shipping Board ships.

Atlantic Transport Co.
9 Broadway, Rm 268, New York

Charles Joseph Baker, of Baltimore, was president of the Franklin Bank, Baker Bros. & Co., and the Chemical Company of Canton. Baker Bros. were dealers in Lykens Valley, Sunbury and hard coal, "By the ton or cargo," and they manufactured Baltimore Window Glass, Flint & Green Glassware, chemicals, paints, oils, and glue and imported French window glass. Baker Bros. & Co. and the Chemical Company of Canton were at 32–34 S. Charles St.
Bernard Nadal Baker was secretary of the Chemical Company of Canton and in 1888 was in business with James S. Whiteley and Ashby L. Baker as the Baker, Whiteley Coal Co. at 409 Second St. and Bernard was president of the Baltimore Storage & Lighterage Co., steamship agents and ship brokers at 409 Second St. Charles G. Helm was secretary.
At that time, several steamship companies provided service from Baltimore to Europe and the British Isles. Bernard wanted to expand his business and in 1890 started the Atlantic Transportation Line in the office of the Baltimore Storage & Lighterage Co. Baker was president, James Whiteley vice-president, Charles G. Helm secretary, and James C. Gorman manager. Because the cost to build and operate American ships was about 30 percent higher than in England, Baker chose to build and operate under the British flag, but English law prohibited direct foreign ownership of English vessels so the company hired an agent, Alfred S. Williams, and formed the Atlantic Transport Co., Ltd., in London to own the ships and lease them to the Atlantic Transport Co. in New York. All the stock in the London company was owned in New York. The first British ship was the *Surrey* and eventually the company operated 16 foreign-built ships. About 80 percent of the stock ownership was American with Baker owning just over 50 percent of that. Next was Harlan & Wolf, Alexander Brown & Sons, and investors in New York, Chicago, and Baltimore.
In 1891 the Atlantic Transport Line of Steamers offered weekly sailings between Baltimore and London on the *Michigan*, *Mississippi*, *Minnesota*, *British Crown*, *Maryland*, *Maine*, *Memphis*, and *Montana*. The company acted as agents for the Hamburg American Packet Line and the Lord Line. Freight was handled by Baltimore Storage and the company opened offices in Chicago and St. Louis.
In 1897 Atlantic Transport was at 403–409 Water St. and had offices in New York, Chicago, Philadelphia, and Minneapolis. The *Maine*, *Massachusetts*, *Manitoba*, *Mohawk*, *Mobile*, *Minnesota*, *Mississippi*, *Maryland*, *Missouri*, and *Montana* ran between Baltimore, Philadelphia, New York, London, and Swansea. The company added the Bristol Channel Line and the Empire Line to its agency roster and had offices in Chicago, New York, St. Louis, and Philadelphia.
1n 1898 the U.S. government purchased Atlantic Transport's ships for the Spanish-American War. To replace his ships, Baker found investors and incorporated the Atlantic Transport Company of West Virginia with a capital of $3,000,000 and moved to offices on the 5th floor of the Continental Trust Building. Charles Helm was treasurer and Wade Newcomer was secretary. Baker replaced the confiscated ships with ships from the Wilson & Furness-Leyland Line, the famous "Minnies": *Minneapolis*, *Minnehaha*, *Minnetonka*, and *Minnewaska* and acquired other ships.
In 1901 Baker sold his stock to the International Mercantile Marine Corp., but not the ships. The voting trustees were John "J.P." Morgan, J. Bruce Ismay, Clement A. Griscom, and Peter A.B. Widener. Four new ships were ordered from American yards for Atlantic Transport with IMM money: the *China*, *Korea*, and two big liners *Manchuria* and *Mongolia*.
Financial difficulties ensued and in 1904 the IMM bloc sold the *Manchuria* and *Mongolia* to the Pacific Mail Steamship Co. Atlantic Transport was then

[HB0025][GDrive]

reorganized. Baker moved to an office at 504 Union Trust Building. James Whiteley became president of the Baker-Whiteley Coal Co. and the L.H. Miller Safe & Iron Works. James Gorman was the resident manager in Baltimore at 201–207 Chamber of Commerce Building and Arthur W. Robson was the passenger agent at 127 E. Baltimore St.
In August 1915, Pacific Mail announced that the La Follette Seamen's Act of 1915 made it impossible for them to compete against Japanese operators in the Pacific so they were selling their liners *Korea*, *Siberia*, *China*. The Atlantic Transport Company of West Virginia would buy back the *Manchuria*, and *Magnolia* for $5,250,000. The last trip to the Orient would be made by the *Mongolia* on August 25. Philip A.S. Franklin said the liners would be put on trans–Atlantic service "under the American, British, or any other flag depending on which gives the lowest cost."
Pacific Mail said they would put their eight remaining ships on coastwise routes between San Francisco and Panama and sell them before the end of the year.
Bernard Baker was born in Baltimore on May 11, 1854, to Charles Joseph and Elizabeth Baker. He was president of the Atlantic & Pacific Transport Co., the Baltimore Trust & Guarantee Co. and with Albert Ballin was the agent for the Hamburg-American Line. He died at Santa Barbara, California, on December 20, 1918, where he had moved on advice of his doctors.
In 1918 Philip A.S. Franklin was president, John J. McGlone secretary, and Horace B. Phillips treasurer. The company's three ships, *Manchuria*, *Mongolia*, and *Minnesota* were requisitioned by the Shipping Board and bareboat chartered to the Navy for operation by the Army.

Axim Transportation Co., Inc.
Anchorage, Kentucky

Charles C. Mengel established the Mengel Box Co. in 1877 at Louisville, Kentucky, to manufacture wooden boxes. In 1899 the lumber division became a separate entity at 311 W. Main St. as C.C. Mengel & Bro. Co. with Clarence R. Mengel as president. The company also distributed Santa Rosa Coffee and imported chicle and cocoa.
The company had a large logging operation at Axim on the west coast of Africa and in 1915 they incorporated Axim Transportation to handle increasing shipments by water. The company owned and chartered vessels.

Balestrand Navigation Corp.
27 William St., Rm 814, New York

A Norwegian firm that owned one ship, the *Balestrand*, which they sold in February 1918.

Baltimore & Carolina Steamship Co.
607 Union Trust Building, Baltimore

Owned three ships, managed two, and operated five Shipping Board steamers. Provided service from Baltimore to Wilmington, Charleston, and Georgetown in the Carolinas. Mason L. Weems Williams was president and general manager. The company owned the *Georgeanna Weems*, *Matilda Weems*, and *Sarah Weems* after the war.

Barber & Co., Inc.
17 Battery Place, Rm 1026, New York

Incorporated on July 13, 1917, in New York with a capital of $1,000,000 'to engage in a transportation and navigation business." James Barber was president, Edward J. Barber, Francis M. Wilson, Frank B. Mackay, and Aaron Houtman were vice-presidents. Later incorporated with a capital of $500,000 to act as steamship agents. Philip P. Barber and Oakley Wood were directors.
The company owned five freighters: *Dochra*, *Macona*, *Onega*, *Satsuma*, and *Suruga*. The *Macona* and *Onega* were incorporated under their own names. The *Dochra* was incorporated as the La Plata Steamship Co., and the *Satsuma* and *Suruga* were incorporated as the New York & Oriental Steamship Co.
The company's freighter *Suruga* was requisitioned by the Shipping Board on a time charter basis for operation by the company on the Army's account.
The company owned four ships in 1914, managed 6 Shipping Board steamers, operated seven, and managed and operated another 24 ships. The company operated the Dutch freighter *Tjikembang* under Shipping Board management. On January 9, 1918, the Shipping Board chartered the Chinese steamer *Hwah Yih* and delivered the ship to Barber on February 1 for operation to the Orient.
The Shipping Board chartered the Norwegian steamer *Bjornefjord* on September 28, 1918, and assigned the ship to the company on January 23, 1919, for operation to the east coast of South America for 12 months.
The Shipping Board bareboat chartered the Uruguayan steamer *Artigas* (ex–*Wiegand*) and *Paysandu* (ex–*Bahia*) on May 24, 1918, and assigned the ship to the company on November 7, 1918, for service from the United States to Montevideo.

Barnes-Ames Co.

[HB0026][GDrive]

Atlantic Transport Company

9 Broadway, Rm 268, New York

Charles Joseph Baker, of Baltimore, was president of the Franklin Bank, Baker Bros. & Co., and the Chemical Company of Canton. Baker Bros. were dealers in Lykens Valley, Sunbury and hard coal, “By the ton or cargo,” and they manufactured Baltimore Window Glass, Flint & Green Glassware, chemicals, paints, oils, and glue and imported French window glass. Baker Bros. & Co. and the Chemical Company of Canton were at 32 - 34 S. Charles St.

Bernard Nadal Baker was secretary of the Chemical Company of Canton and in 1888 was in business with James S. Whiteley and Ashby L. Baker as the Baker, Whiteley Coal Co. at 409 Second S t . and Bernard was president of the Baltimore Storage & Lighterage Co,. steamship agents and ship brokers at 409 Second St. Charles G. Helm was secretary.

At that time, several steamship companies provided service from Baltimore to Europe and the British Isles. Bernard wanted to expand his business and in 1890 started the Atlantic Transportation Line in the office of the Baltimore Storage & Lighterage Co.. Baker was president, James Whiteley vice-president, Charles G. Helm secretary, and James C. Gorman manager. Because the cost to build and operate American ships was about 30 percent higher than in England, Baker chose to build and operate under the British flag, but English law prohibited direct foreign ownership of English vessels so the company hired an agent, Alfred S.Williams, and formed the Atlantic Transport Co., Ltd., in London to own the ships and lease them to the Atlantic Transport Co. in New York. All the stock in the London company was owned in New York. The first British ship was the Surrey and eventually the company operated 16 foreign-built ships. About 80 percent of the stock ownership was American with Baker owning just over 50 percent of that. Next was Harlan & Wolf, Alexander Brown 8: Sons, and investors in New York, Chicago, and Baltimore.

In 1891 the Atlantic Transport Line of Steamers offered weekly sailings between Baltimore and London on the Michigan, Mississippi, Minnesota, British Crown, Maryland, Maine, Memphis, and Montana.The company acted as agents for the Hamburg American Packet Line and the Lord Line. Freight was handled by Baltimore Storage and the company opened offices in Chicago and St. Louis.

In 1897 Atlantic Transport was at 403-409 Water St. and had offices in New York, Chicago, Philadelphia, and Minneapolis. The Maine, Massachusetts, Manitoba, Mohawk, Mobile, Minnesota, Mississippi, Maryland, Missouri, and Montana ran between Baltimore, Philadelphia, New York, London, and West. The company added the Bristol Channel Line and the Empire Line to its agency roster and had offices in Chicago, New York, St. Louis, and Philadelphia.

1n 1898 the U.S. government purchased Atlantic Transport's ships for the Spanish-American War. To replace his ships, Baker found investors and incorporated the Atlantic 'h'ansport Company of West Virginia with a capital of $3,000,000 and moved to offices on the 5th floor of the Continental ' I r u s t Building. Charles Helm was treasurer and Wade Newcomer was secretary. Baker replaced the confiscated ships with ships from the Wilson & Furness - Leyland Line, the famous “Minnies”: Minneapolis, Minnehaha, Minnetonka, and Minneumska and acquired other ships.

In 1901 Baker sold his stock to the International Mercantile Marine Corp., but not the ships.The voting trustees were John “J.P. ”Morgan, J. Bruce Ismay, Clement A. Griscom, and Peter A.B. Widener. Four new ships were ordered from American yards for Atlantic Transport with IMM money: the *China*, *Korea*, and two big liners *Manchuria* and *Mongolia*.

Financial difficulties ensued and in 1904 the IMM bloc sold the Manchuria and Mongolia to the Pacific Mail Steamship Co. Atlantic Transport was then reorganized. Baker moved to an office at 504 Union Trust Building. James Whiteley became president of the Baker-Whiteley Coal Co. and the L.H. Miller Safe & Iron Works. James Gorman was the resident manager in Baltimore at 201-207 Chamber of Commerce Building and Arthur W. Robson was the passenger agent at 127 E. Baltimore St.

In August 1915, Pacific Mail announced that the La Follette Seamen's Act of 1915 made it impossible for them to compete against Japanese operators in the Pacific so they were selling their liners *Korea*, *Siberia*, *China*. The Atlantic Transport Company of West Virginia would buy back the *Manchuria*, and *Magnolia* for $5,250,000. The last trip to the Orient would be made by the *Mongolia* on August 25. Philip A.S. Franklin said the liners would be put on trans-Atlantic service "under the American, British,or any other flag depending on which gives the lowest cost.”

Pacific Mail said they would put their eight remaining ships on coastwise routes between San Francisco and Panama and sell them before the end of the year.

Bernard Baker was born in Baltimore on May 11, 1854,to Charles Joseph and Elizabeth Baker. He was president of the Atlantic & Pacific Transport Co., the Baltimore Trust & Guarantee Co. and with Albert Ballin was the agent for the Hamburg-American Line. He died at Santa Barbara, California, on December 2 , 1918, where he had moved on advice of his doctors.

In 1918 Philip A.S. Franklin was president, John J. McGlone secretary, and Horace B. Phillips treasurer. The company’s three ships, *Manchuria*, *Mongolia*, and *Minnesota* were requisitioned by the Shipping Board and bareboat chartered to the Navy for operation by the Army.

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Housatonic

Charles E. Baker (born 1845)

[intro - todo]

🌳 See the Baker Family Tree PDF (https://drive.google.com/open?id=1XYaC1qjBdSKIlY0ZbueavfHSRGnfpOY2)

Born - Feb 5 1845

See [HL003H][GDrive]

His father was **Charles Joseph Baker (born 1821)** , and his mother was **Elisabeth (Bosserman) Baker (born 1825)**.

His wife was **Mary Elizabeth (Whitely) Baker** (Dec 8 1847 - Oct 26 1880) (https://www.findagrave.com/memorial/120979342/mary-elizabeth-baker) .

His children with Mary Elizabeth (Whitely) Baker include :

- **William Whitely Baker Sr. (born1867)**
- <others>

His wife Mary Elizabeth Whitely Baker passed in 1880,

He re-married Harriet Stone "Hattie" (Whitely) Baker (born oct 11 1860, died Mar 14 1928) (https://www.findagrave.com/memorial/120978176/harriet-stone-baker) , and had 4 more children - Florence L Baker Hann, Edith M Baker, Emma R Baker, Virginia Baker

See History of Baltimore

[HB0023][GDrive]

CHARLES E. BAKER, of Baker Bros., Manufacturers of Glass, 26 and 38 S. Charles street, is a son of Charles J. Baker and Elizabeth (Basserman) Baker, and was born in Baltimore, February 5, 1845. [...]. [His father Charles Joseph Baker] had nine children, eight of whom are living [as of 1898], William, Jr., George B., president of the Third National Bank; Bernard N., Richard J., Frank M., Ashby Lee Baker, who resides in Raleigh, N. C., and is a cotton manufacturer, and Mrs. Mary H. Bradenbaugh, wife of Rev. A. E. Bradenbaugh, and the subject of this sketch; all reside in Baltimore except Ashby Lee. [...] Mr. Baker was educated in the private schools of Baltimore, but quit school at thirteen years of age, when he went into the service of the firm of Baker Bros., glass manufacturers, working for one dollar a week. This firm was founded in 1857 by Mr. Baker's father and uncle and has continued to do business under that firm name up to the present time, forty years. Mr. Baker, after working with the firm as clerk, salesman, etc., in 1865 became a partner in the firm, and today is the head of the house of Baker Bros., and has the chief management of their large business. not only at their glass factory, but at their warehouse and general offices, 36 and 38 S. Charles street. Mr. Baker has been married twice, having married sisters, the daughters of Benjamin Whitely and Elizabeth W. Stone, whose great-grandfather was one of the most distinguished gentlemen of that day, and a signer of the Declaration of In dependence. His first wife was Mary E. Whitely, and his second Hattie Stone Whitely, and he was first married February 5, 1867, and on the decease of his first wife married again; he had ten children, nine of whom are living: William H., who is secretary of the Chemical Company, Canton; Charles J., Jr.; Mary E.; Benjamin W., who is in business in Raleigh, N. C.; Hattie S., Florence L., Edith M., Emma R. and Virginia Baker. Mr. Baker and his family are Protestants and are members of the Methodist Episcopal Church. In politics he is a Democrat, but takes no part in such matters, only to vote, he being strictly a business man, and his large business matters requiring all his attention. With the public and among his business associates he stands high and is noted as a man of fine business qualities and sterling honesty and worth. He is, besides being identified with his own business enterprises, president of the Chemical Company, of Canton, treasurer of the 'Baltimore Guano Company, treasurer and member of the Board of Managers of the Baltimore General Dispensary, one of the oldest charities of the State of Maryland. His home is at 1405 Eutaw Place.

Death - Oct 15 1915

See [HL003H][GDrive]

Bernard Nadal Baker (born 1854)

Wikipedia 🌐 Bernard N. Baker

[intro - todo]

🌳 See the Baker Family Tree PDF (https://drive.google.com/open?id=1XYaC1qjBdSKlIY0ZbueavfHSRGnfpOY2)

1854 (May) - Birth

Bernard Nadal Baker WAS BORN 11 May 1854.

Page 2437 in the Dec 28 1918 issue of "The Commercial and Financial Chronicle"

- See full issues at [HP0027][GDrive] / Clip at [HP0028][GDrive]

Bernard N. Baker of Baltimore, a retired capitalist shipping expert and formerly a member of the U.S. Board, died at Santa Barbara, Cal., on Dec 20. Mr. Baker, who had helped in the drafting of the Ship Purchase Act, was appointed a member of the Shipping in Dec 1916, but he resigned the following month, his withdrawal having occurred as a result of a suggestion by Secretary of the Treasury McAdoo that Mr . Baker consider letting the Chairmanship (upon which Mr. Baker had evidently counted), go to the Pacific Coast, then represented by William Denman on the Board. Mr. Baker was one of the four recognized transportation experts selected by Secretary McAdoo for the National Sub-Committee on Transportation Problems. Before his appointment to the Shipping Board Mr. Baker acted as an expert adviser to the Administration in connection with its effort to have the Government own and operate a line of merchant steamships. Mr. Baker was President of the Atlantic & Pacific Transport Co., formerly President of the Baltimore Trust & Guarantee Co., and a director in many commercial enterprises. He was a member of the Moral Education Board and actively interested in moral education. Mr. Baker at the time of his death was 64 years of age. He had gone to Santa Barbara on the advice of his physician and his death occurred after an illness of three days.

See History of Baltimore : [HB0023][GDrive]

1876 - Partneship with James Stone Whiteley in 1876, Starting business Baker & Whiteley

Bernard Nadal Baker Formed a partnership with **James Stone Whiteley** in 1876, Starting business **Baker & Whiteley**, for conducting the coal business in Baltimore [HB0023][GDrive] .

1881 - Established Atlantic Transport Line (A.T.L.)

In 1881, with the support of the Pennsylvania Railroad (which wanted a transatlantic outlet for its freight business) Baker established the 🔵Atlantic Transport Line (A.T.L.). See saved Wikipedia at [HK001H][GDrive] .

1887 - Baker-Whiteley Coal Company

In 1887 Mr. Whiteley with Mr. Baker incorporated the **Baker-Whiteley Coal Company** [HB0023][GDrive] .

Subsequently they purchased the **Rohr Scow Company,** and incorporated that under the name of the **Baltimore Storage and Lighterage Company**, for the purpose of conducting a foreign steamship business. At the same time they organized the **Atlantic Transport Line**, and acquired the ownership of steamships engaged in business between New York, Philadelphia, Baltimore and London, which [as of 1898] was composed of a fleet of fifteen steamers.

JAMES STONE WHITELEY, offices Rialto Building, Water street, Baltimore.—This gentleman was born in Baltimore, November 16, 1855. He is the son of Calvin Whiteley and Harriet H. (Stone) Whiteley. His parents were born in Maryland, and were of English descent. His father was for many years interested in and a member of the firm of Whiteley, Brother & Co., dry goods jobbers of this city; one of the leading houses of this line in Baltimore at the time. His mother died in 1872; his father is still living, being a resident of Baltimore, and having retired from active business some years since.

Mr. James S. Whiteley had two brothers, one of whom is now living, viz., Calvin Whiteley, Jr., civil engineer. Mr. James S. Whiteley was educated at Stewart Hall, of which Messrs. Grape and Hartman were the principals. He also for a short time at tended the school of Mr. George Carey. He entered active service as entry clerk in the employ of Messrs. Whiteley, Brother & Co. when seventeen years of age. After serving in this capacity for a short time, he was promoted to stock clerk and then put on the road as a drummer, meeting with considerable success in this latter occupation. In 1876 Mr. Whiteley left the employ of the firm of Messrs. Whiteley, Brother & Co., and started in business for himself—-he and Mr. Bernard N. Baker forming a partner ship under the name of Baker & Whiteley, for conducting the coal business in Baltimore. They were the pioneers of the Pennsylvania coal trade at Baltimore, and gradually worked up a large business at this Port, introducing Pennsylvania ooals in successful competition with those supplied from the George's Creek region.

In 1887 Mr. Whiteley with Mr. Baker incorporated the Baker-Whiteley Coal Company. Subsequently they purchased the Rohr Scow Company, and incorporated that under the name of the Baltimore Storage and Lighterage Company, for the purpose of conducting a foreign steamship business. At the same time they organized the Atlantic Transport Line, and acquired the ownership of steamships engaged in business between New York, Philadelphia, Baltimore and London, which is now composed of a fleet of fifteen steamers.

Mr. Whiteley is the vice-president and general manager of the Baker-Whiteley Coal Company and also vice-president of the Baltimore Storage and Lighterage Company.

The above companies employ over two thousand people in their ofiices in America and England, and transport between two and three million tons of merchandise and coal each year.

1901

The 🌐Atlantic Transport Line was was folded into the 🌐International Mercantile Marine shipping trust (IMM).

INGLESIDE

Barnard Nadal Baker had his fulltime residence, known as 🌐**Ingleside**.

"In 1877 Baker married Elizabeth Elton Livzey. In 1889 Baker incorporated the 🌐Atlantic Transport Line in London, and chose to start construction of the Ingleside Mansion.

The mansion was built on 300 acres (120 ha) of property that Baker inherited and an adjoining parcel he purchased. The building was based on an English home, with 49 rooms. The outside was clad in fieldstone. The roof was red tile. Fireplace mantles were hand carved. Several tenant houses and a formal garden were built on the property.[2] A world traveler, Baker described Ingleside as his only true home."

In April 1918, the Bakers turned the mansion over to Company C of the food production committee of the women's section of the Maryland defense council to support the war efforts. Women farmers would tend crops for $1.20 a day, compared to the going rate of $2.00 a day for male labor. There was some resistance in the community to using women laborers. Governor Emerson Harrington gave a speech at the mansion porch in support of the efforts in July 1918. Troops were also able to live at the house and commute to war-effort jobs. Most of Baker's ships were lost in the war. He died later that year in California.

Ingleside burned down in 1953.

Nearby Ingleside Avenue is named for the mansion. Baker Avenue is named after its original builder, Benard M. Baker.

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Housatonic

William Whitely Baker Sr. (born 1867)

[HP001A][GDrive]

William Whitely Baker Sr was born on Oct 27 1867. His father was Charles E Baker (b1845) , and his mother was **Mary Elizabeth (Whitely) Baker** (Dec 8 1847 - Oct 26 1880) (https://www.findagrave.com/memorial/120979342/mary-elizabeth-baker) .

His mother Mary Elizabeth Whitely Baker passing in 1880,

Father of **William Whiteley Baker Jr.** (b1894)

Dad re-married Harriet Stone "Hattie" Whitely baker (born oct 11 1860, died Mar 14 1928) (https://www.findagrave.com/memorial/120978176/harriet-stone-baker)

An uncle of William Whitely Baker Sr. (and brother of **Charles E. Baker (b 1845)**) was **Bernard Nadal Baker (b 1854)** (See relationship at https://www.findagrave.com/memorial/124676153/bernard-nadal-baker).

[intro - todo]

- 🌳 See the Baker Family Tree PDF (https://drive.google.com/open?id=1XYaC1qjBdSKIlY0ZbueavfHSRGnfpOY2)

Background

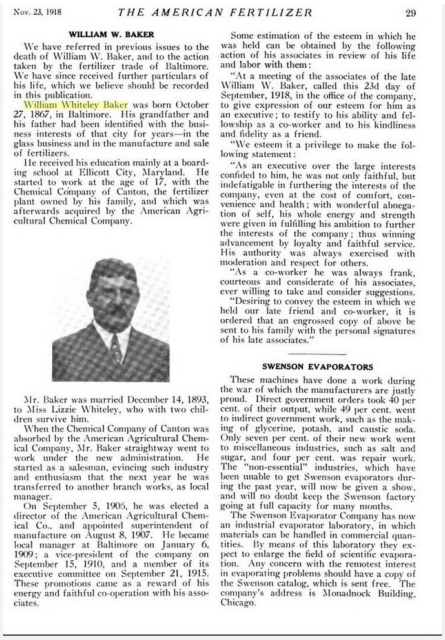
The American Agricultural Chemical Company (or AACC) was led for many years by William Whitely Baker Sr., who passed in 1918 . His legend was called out here in the American Fertilizer 1918 issue.

"

In 1843, WILLIAM BAKER bought the "Baltimore Window-Glass Works" - the oldest glass works in the United States with an outstanding reputation for superior quality.

1845, HENRY J. and CHARLES J. BAKER, sons of WILLIAM BAKER, became connected with these works and in 1850 were enlisted by their father to obtain sources for glass produced in Europe. Henry J. Baker obtained sourcing for the glass trade but could not return to import glass via the port of Baltimore in competition with his family's firm."

November 23 1918 issue of "The American Fertilizer" (For PDF with all 1918 issues, see [HP0018][hGDrive]).



Nov. 23, 1918 THE AMERICAN FERTILIZER 29

WILLIAM W. BAKER

We have referred in previous issues to the death of William W. Baker, and to the action taken by the fertilizer trade of Baltimore. We have since received further particulars of his life, which we believe should be recorded in this publication.

William Whiteley Baker was born October 27, 1867, in Baltimore. His grandfather and his father had been identified with the business interests of that city for years—in the glass business and in the manufacture and sale of fertilizers.

He received his education mainly at a boarding school at Ellicott City, Maryland. He started to work at the age of 17, with the Chemical Company of Canton, the fertilizer plant owned by his family, and which was afterwards acquired by the American Agricultural Chemical Company.

Mr. Baker was married December 14, 1893, to Miss Lizzie Whiteley, who with two children survive him.

When the Chemical Company of Canton was absorbed by the American Agricultural Chemical Company, Mr. Baker straightway went to work under the new administration. He started as a salesman, evincing such industry and enthusiasm that the next year he was transferred to another branch works, as local manager.

On September 5, 1905, he was elected a director of the American Agricultural Chemical Co., and appointed superintendent of manufacture on August 8, 1907. He became local manager at Baltimore on January 6, 1909; a vice-president of the company on September 15, 1910, and a member of its executive committee on September 21, 1915. These promotions came as a reward of his energy and faithful co-operation with his associates.

Some estimation of the esteem in which he was held can be obtained by the following action of his associates in review of his life and labor with them:

"At a meeting of the associates of the late William W. Baker, called this 23d day of September, 1918, in the office of the company, to give expression of our esteem for him as an executive; to testify to his ability and fellowship as a co-worker and to his kindliness and fidelity as a friend.

"We esteem it a privilege to make the following statement:

"As an executive over the large interests confided to him, he was not only faithful, but indefatigable in furthering the interests of the company, even at the cost of comfort, convenience and health; with wonderful abnegation of self, his whole energy and strength were given in fulfilling his ambition to further the interests of the company; thus winning advancement by loyalty and faithful service. His authority was always exercised with moderation and respect for others.

"As a co-worker he was always frank, courteous and considerate of his associates, ever willing to take and consider suggestions.

"Desiring to convey the esteem in which we held our late friend and co-worker, it is ordered that an engrossed copy of above be sent to his family with the personal signatures of his late associates."

SWENSON EVAPORATORS

These machines have done a work during the war of which the manufacturers are justly proud. Direct government orders took 40 per cent. of their output, while 49 per cent. went to indirect government work, such as the making of glycerine, potash, and caustic soda. Only seven per cent. of their new work went to miscellaneous industries, such as salt and sugar, and four per cent. was repair work. The "non-essential" industries, which have been unable to get Swenson evaporators during the past year, will now be given a show, and will no doubt keep the Swenson factory going at full capacity for many months.

The Swenson Evaporator Company has now an industrial evaporator laboratory, in which materials can be handled in commercial quantities. By means of this laboratory they expect to enlarge the field of scientific evaporation. Any concern with the remotest interest in evaporating problems should have a copy of the Swenson catalog, which is sent free. The company's address is Monadnock Building, Chicago.

[HP0019][GDrive]

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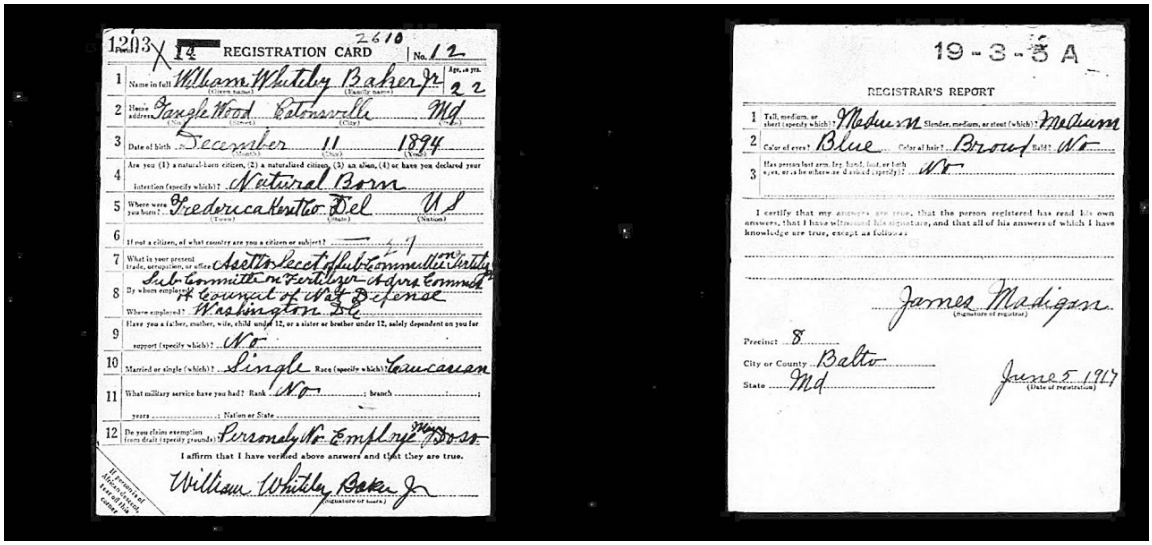
1917 (June) - Son's Draft Registration

William Whiteley Baker Jr. was 22 years of age when he registered on June 5, 1917.



1203 X 14 REGISTRATION CARD 2610 No. 12

1 Name in full: William Whitby Baker Jr. Age, in yrs. 22
2 Home address: Tangle Wood Catonsville Md
3 Date of birth: December 11 1894
4 Are you (1) a natural-born citizen, (2) a naturalized citizen, (3) an alien, (4) or have you declared your intention (specify which)? Natural Born
5 Where were you born? Fredericatown Del US
6 If not a citizen, of what country are you a citizen or subject? —
7 What is your present trade, occupation, or office? Asst to Secret of Sub-Committee Fertilizer
8 By whom employed? Council of Nat Defense
Where employed? Washington DC
9 Have you a father, mother, wife, child under 12, or a sister or brother under 12, solely dependent on you for support (specify which)? No
10 Married or single (which)? Single Race (specify which) Caucasian
11 What military service have you had? Rank No; branch ; years ; Nation or State
12 Do you claim exemption from draft (specify grounds) Personally Mo Employ Boss

I affirm that I have verified above answers and that they are true.

William Whitby Baker Jr
(signature of registrant)

If person registered cannot write, registrant's mark should be witnessed here.

19-3-3 A

REGISTRAR'S REPORT

1 Tall, medium, or short (specify which)? Medium Slender, medium, or stout (which)? Medium
2 Color of eyes? Blue Color of hair? Brown Bald? No
3 Has person lost arm, leg, hand, foot, or both eyes, or is he otherwise defined (specify)? No

I certify that my answers are true, that the person registered has read his own answers, that I have witnessed his signature, and that all of his answers of which I have knowledge are true, except as follows:

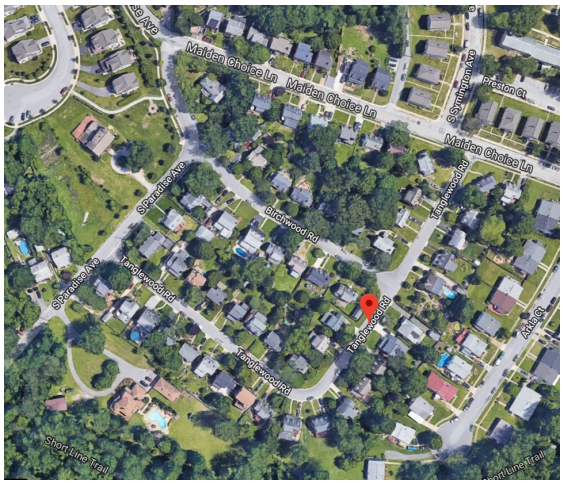
James Madigan
(Signature of registrar)

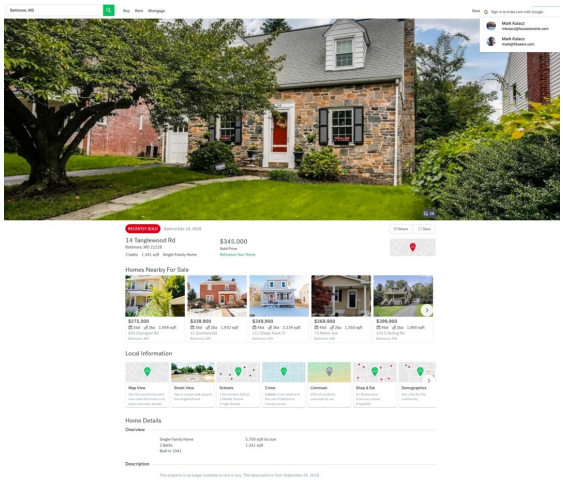
Precinct 8
City or County Balto
State Md
June 5 1917
(Date of registration)

[HG002V][GDrive]

The employer and job is hard to read, but we can see at that time it looks like **"A[??????? ?????????] of Sub-Committee on on [?????], Sub-Committee on Fertilizer [????????????] Council of National Defense"**, located in Washington D.C. .

His address looks to be "**Tanglewood Road, Catonsville, MD**". As of 2019, there doesn't appear to be any homes on this small suburban road build before 1941, so the home may have removed? Hard to tell, without a street address number.





In Catonsville, his uncle Bernard Nadal Baker (born 1854) had his full-time residence: A 49-room mansion on 300 acres known as 🔵Ingleside , .Google shows this location to be about 2 miles from the states address above.

"In 1877 Baker married Elizabeth Elton Livzey. In 1889 Baker incorporated the 🔵Atlantic Transport Line in London, and chose to start construction of the Ingleside Mansion.

The mansion was built on 300 acres (120 ha) of property that Baker inherited and an adjoining parcel he purchased. The building was based on an English home, with 49 rooms. The outside was clad in fieldstone. The roof was red tile. Fireplace mantles were hand carved. Several tenant houses and a formal garden were built on the property.[2] A world traveler, Baker described Ingleside as his only true home."

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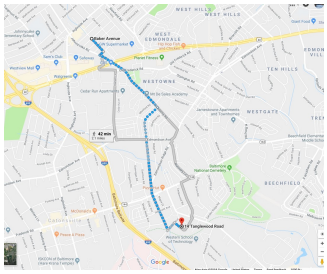
Nearby Ingleside Avenue is named for the mansion. Baker Avenue is named after its original builder, Benard M. Baker.



2 Miles distance ..

1918 (Sep) - Death of William Whitely Baker Sr.

William Whitely Baker Jr's father died on Sep 22 1918 (age 50) [HL0030][GDrive] .

BITCHUTE @Housatonic YOUTUBE @HousatonicLive ODYSEE @Housatonic BRIGHTEON @Housatonic

Housatonic

William Whiteley Baker Jr. (born 1894)

William Whiteley Baker Jr was born on Dec 11 1894 in Delaware, USA [HL002V][GDrive]

His father was **William Whitely Baker Sr. (born 1867)**, who was born on Oct 27 1867 [HL0030][GDrive] .

His mother was **Lizzy Whiteley Baker** (https://www.findagrave.com/memorial/116208822/lizzy-baker) (1872 - 1944).

🌳 See the Baker Family Tree PDF (https://drive.google.com/open?id=1XYaC1qjBdSKlIY0ZbueavfHSRGnfpOY2)

Father - William Whitely Baker Sr.

The American Agricultural Chemical Company (or AACC) was led for many years by William Whitely Baker Sr. (born 1967), who passed in 1918 . His legend was called out here in the American Fertilizer 1918 issue.

Note that the father of **William Whiteley Baker Jr.** has a middle name of "*Whitely*" (no "*e*"), but **WIlliam Whiteley Baker Jr.**'s middle name is "*Whiteley*" (with an "*ey*"). This is because the Jr.'s mother had a maiden name of "*Whiteley*", but his grandmother (his father's mother, who was **Mary Eilizabeth Baker**) had a maiden name of "*Whitely*".

Relation to Bernard Nadal Baker (great uncle)

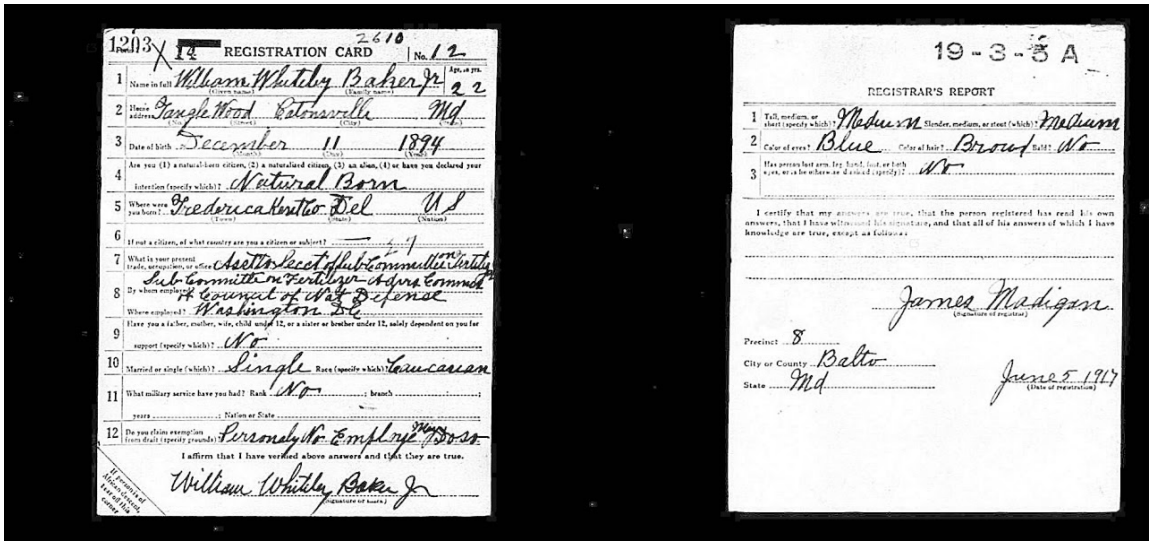
The grandfather of **William Whiteley Baker Jr.** was **Charles E. Baker (born 1845)** - See relationship at https://www.findagrave.com/memorial/120978215/charles-e-baker .

A brother of **Charles E. Baker (b 1845)** was **Bernard Nadal Baker (born 1854)** . - See relationship at https://www.findagrave.com/memorial/124676153/bernard-nadal-baker

1917 (June) - Draft Registration

William Whiteley Baker Jr. was 22 years of age when he registered on June 5, 1917. Note:

1. The employer and job is hard to read, but we can see at that time it looks like **"A[??????? ?????????] of Sub-Committee on on [?????], Sub-Committee on Fertilizer [????????????] Council of National Defense"**, located in Washington D.C. .
2. His address looks to be "**Tanglewood Road, Catonsville, MD**". As of 2019, there doesn't appear to be any homes on this small suburban road build before 1941, so the home may have removed? Hard to tell, without a street address number.



1203 X 14 REGISTRATION CARD 2610 No. 12

1. Name in full: William Whitley Baker Jr. — Age, in yrs.: 22
2. Home address: Jungle Wood, Catonsville, Md.
3. Date of birth: December 11 1894
4. Are you (1) a natural-born citizen, (2) a naturalized citizen, (3) an alien, (4) or have you declared your intention (specify which)? Natural Born
5. Where were you born? Fredericatown Del U.S.
6. If not a citizen, of what country are you a citizen or subject? —
7. What is your present trade, occupation, or office? Asst to Secty of Sub Committee on Fertilizer Advis Comm
8. By whom employed? Council of Nat Defense
Where employed? Washington D.C.
9. Have you a father, mother, wife, child under 12, or a sister or brother under 12, solely dependent on you for support (specify which)? No
10. Married or single (which)? Single Race (specify which)? Caucasian
11. What military service have you had? Rank No; branch —; years —; Nation or State —
12. Do you claim exemption from draft (specify grounds)? Personally No Employe Boss

I affirm that I have verified above answers and that they are true.

William Whitley Baker Jr (signature of registrant)

If necessary to identify registrant, describe scar, mark, or other peculiarity.

19-3-5 A

REGISTRAR'S REPORT

1. Tall, medium, or short (specify which)? Medium Slender, medium, or stout (which)? Medium
2. Color of eyes? Blue Color of hair? Brown Bald? No
3. Has person lost arm, leg, hand, foot, or both eyes, or is he otherwise defined (specify)? No

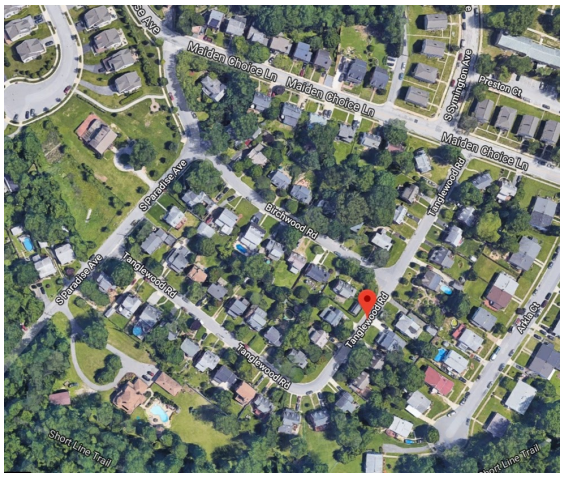
I certify that my answers are true, that the person registered has read his own answers, that I have witnessed his signature, and that all of his answers of which I have knowledge are true, except as follows: —

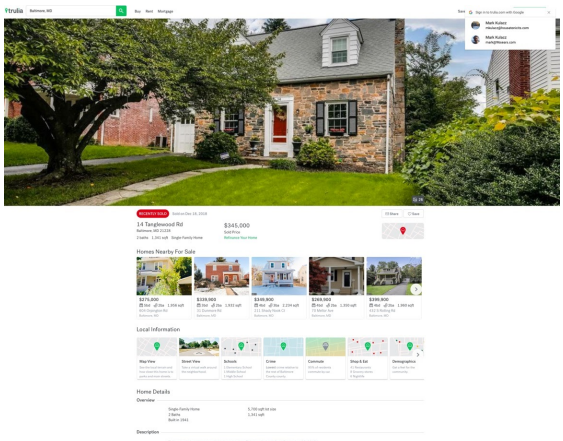
James Madigan (signature of registrar)

Precinct 8
City or County Balto
State Md
June 5 1917 (Date of registration)

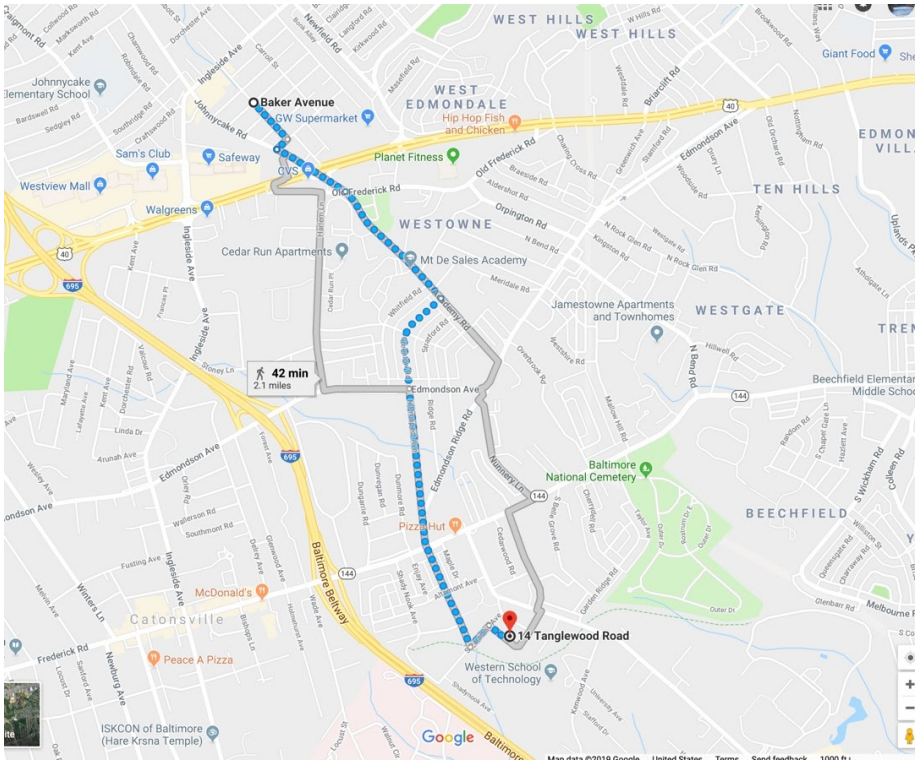
[HG002V][GDrive]

CATONSVILLE, MD HOME





In Catonsville, his great-uncle **Bernard Nadal Baker (born 1854)** had his full-time residence: A 49-room mansion on 300 acres known as 🌐**Ingleside** , that he moved out of in 1918 .Google shows this location to be about 2 miles from the states address above.



2 Miles distance ..

1917 to 1920 - The Baker-Freeman-Baldwin Wholesale and retail tea, coffee, and cocoa business (Baltimore)

See the January 1917 issue of "The Tea and Coffee Trade Journal" (See all 1917 issues at [HP0024][GDrive]). From the Baltimore directory, we can see that **William Whiteley Baker Jr.** was with "Baker-Freeman-Baldwin" from January 1917 until at least 1920.

The business partners were **John Freeman** and **Edward P. Baldwin**, and the business was located at 2108 Eastern Avenue in Baltimore.

'EE TRADE JOURNAL *January*, 1917

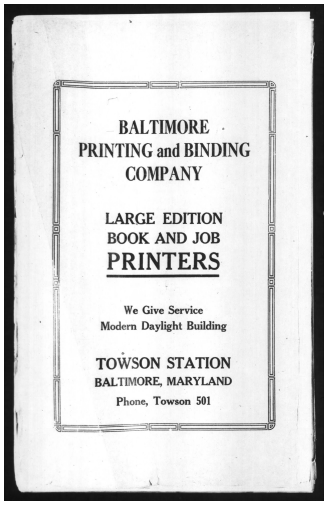
SALIENT TRADE NOTES

Baker-Freeman-Baldwin, Baltimore, Md., is the style under which W. W. Baker, Jr., John Freeman and Edward P. Baldwin have recently started a wholesale and retail tea, coffee and cocoa business at 2108 Eastern Avenue.

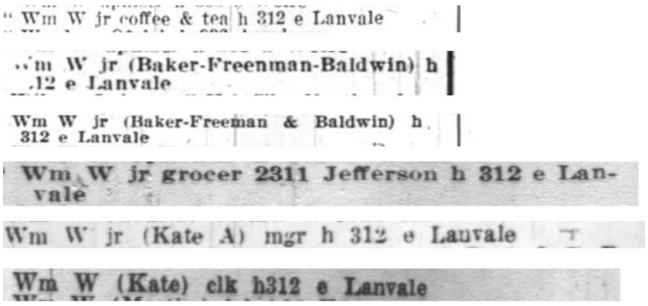
[HP0025][GDrive]

1917 to 1923 - Addresses / Businesses

Notes the 1923 directory has a second business address of William W Baker at 206 Vickers building (see **Vickers Building, Baltimore**) .



[HD0007][GDrive]



[HD000Y][GDrive]

1918 (Sep) - Death of father William Whitely Baker Sr.

William Whiteley Baker Jr's father died on Sep 22 1918 (age 50) [HL0030][GDrive] .

1923 (March) - "R. S. Mueller Company" opens in Baltimore

From the March of 1923 issue of the periodical ***"The American Fertilizer"*** (to download full PDF copies of the July-December 1923 issues, see [HP000X][GDrive]), we read that **Robert Swan Mueller I (b1893)** opened up his company **"R. S. Mueller Company"** in Baltimore. Up until not long before then, Robert Swan Mueller I was working with the United States Shipping Board, but now owned and operated his own business as a "Chemical broker", with an apparent focus on the fertilizer industry.

William Whiteley Baker Jr. (identified here as "**W. Whiteley Baker Jr.**") is an associate of the R.S. Mueller Company.

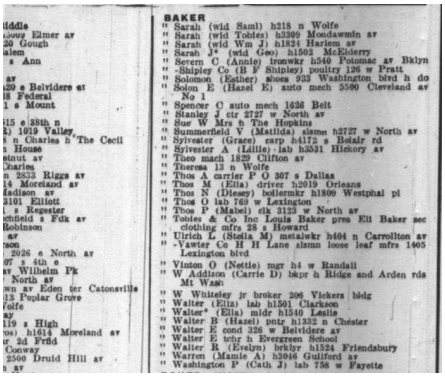
NEW BALTIMORE BROKERS

R. S. Mueller has opened an office at 206 Vickers Building, Baltimore, Md. This new concern will specialize in all kinds of fertilizer materials, chemicals and oils. W. Whiteley Baker, Jr., is associated with Mr. Mueller.

[HP000Y][GDrive]

The **R.S. Mueller Company** has several specialties including (but not limited to) Chemical brokering, Chemicals, Fertilizer materials, Fish scrap, and sulfuric acid.

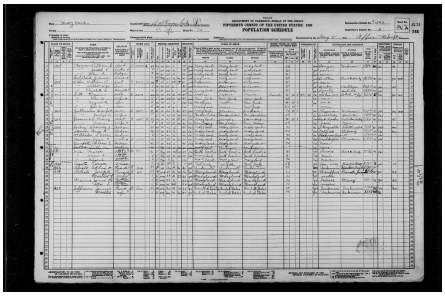
William W Baker Jr ("William Whiteley Baker Jr.") was the business colleague of Robert Swan Mueller I, starting in 1923 in Baltimore Maryland when **Robert Swan Mueller I (b1893)** started his agriculture, fertilizer, and chemical distribution business **"R.S. Mueller Co."**



The American Agricultural Chemical Company has been known since the 1950s as Agrico.

1930

Job listed as "Broker" in the "Fertilizer" industry. 36 years of age, living at home with the mother (now a widow), and his sister Elizabeth (now age 30). Their home is a rental that is $60/month.



[HS001Y][GDrive]

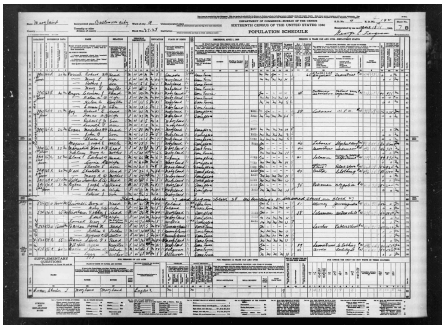
1930 - Still employed at R.S. Mueller Company

The following Google search shows that W.W. Baker Jr. is still working with (or associated with) the R.S. Mueller Company as of 1930. Unfortunately the full issue is not being shared on Google. See (1930-american-fertilizer-volume-73-google-search-wwbaker-jr-mueller-screenshot.jpg / https://drive.google.com/open?id=1QWP_3d4LaD7OmxcCYzo1e3hjLwJOmkUs) ,

---

1940 - Census (Baltimore)

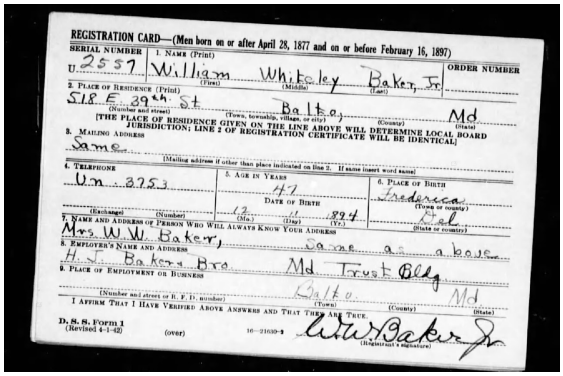
Job listed as "Broker" in the "Fertilizer" industry. 46 years of age, living at home with the mother (widow, age 68). Their home is a rental that is still $60/month.



[HS001Z][GDrive]

1942 (April) - WW2 draft Registration

William Whiteley Baker Jr. resisted on April 25, 1942. At this time we see that we has 47 years of age, working at **H.J. Baker Bro** at the Md Trust Building (Maryland Trust Building).



REGISTRATION CARD—(Men born on or after April 28, 1877 and on or before February 16, 1897)

SERIAL NUMBER U 2557 | 1. NAME (Print): William (First) Whiteley (Middle) Baker, Jr. (Last) | ORDER NUMBER

2. PLACE OF RESIDENCE (Print): 518 E. 39th St (Number and street) Baltimore (Town, township, village, or city) Md (County) (State)

[THE PLACE OF RESIDENCE GIVEN ON THE LINE ABOVE WILL DETERMINE LOCAL BOARD JURISDICTION; LINE 2 OF REGISTRATION CERTIFICATE WILL BE IDENTICAL]

3. MAILING ADDRESS: Same [Mailing address if other than place indicated on line 2. If same insert word same]

4. TELEPHONE: Un. 8753 (Exchange) (Number)

5. AGE IN YEARS: 47 — DATE OF BIRTH: 13 (Day) 11 (Mo.) 894 (Yr.)

6. PLACE OF BIRTH: Frederica (Town or county) Del. (State or country)

7. NAME AND ADDRESS OF PERSON WHO WILL ALWAYS KNOW YOUR ADDRESS: Mrs. W. W. Baker, Same a boye

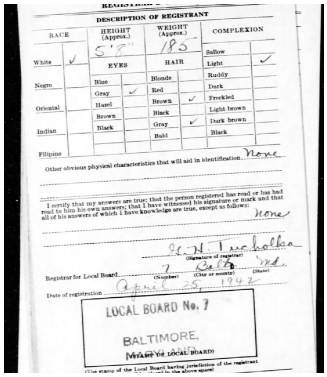
8. EMPLOYER'S NAME AND ADDRESS: H. J. Baker & Bro.

9. PLACE OF EMPLOYMENT OR BUSINESS: Md. Trust Bldg (Number and street or R. F. D. number) Balto. (Town) (County) Md. (State)

I AFFIRM THAT I HAVE VERIFIED ABOVE ANSWERS AND THAT THEY ARE TRUE. W. W. Baker Jr. (Registrant's signature)

D. S. S. Form 1 (Revised 4-1-42) (over) 16—21030-3

[HG002T][GDrive]



DESCRIPTION OF REGISTRANT

RACE		HEIGHT (Approx.)		WEIGHT (Approx.)		COMPLEXION	
White	✓	5' 11"		185		Sallow	
Negro		EYES		HAIR		Light	✓
Oriental		Blue		Blonde		Ruddy	
		Gray	✓	Red		Dark	
Indian		Hazel		Brown	✓	Freckled	
		Brown		Black		Light brown	
Filipino		Black		Gray	✓	Dark brown	
				Bald		Black	

Other obvious physical characteristics that will aid in identification: None

I certify that my answers are true; that the person registered has read or has had read to him his own answers; that I have witnessed his signature or mark and that all of his answers of which I have knowledge are true, except as follows: None

(Signature of registrar)

Registrar for Local Board (Number) (City or county) (State)

Date of registration

LOCAL BOARD No. 7
BALTIMORE
MARYLAND
(Stamp of Local Board having jurisdiction of the registrant)

[HG002U][GDrive]

1953 (Jul) - Death

William Whiteley Baker Jr. died on Jul 1953 (aged 58) in Maryland, USA. [HL002U][GDrive]

BITCHUTE @Housatonic YOUTUBE @HousatonicLive ODYSEE @Housatonic BRIGHTEON @Housatonic

Housatonic

Dr. David Baltimore (born 1938)

Wikipedia David Baltimore

https://www.ae-info.org/attach/User/Baltimore_David/CV/Baltimore%2CD._OHO.pdf

david baltimore - INTERVIEWED BY SARA LIPPINCOTT October – November 2009 -

2009-11-california-institute-of-technology-archives-interview-david-baltimore-by-sara-loppincott

Associations

- Dr. Joshua Lederberg (born 1925) (...)
- Dr. Renato Dulbecco (born 1914) (...)
- Dr. Howard Martin Temin (born 1934) (...)
-

Saved Wikipedia (April 18, 2021): "David Baltimore"

2021-04-17-wikipedia-org-david-baltimore

https://en.wikipedia.org/wiki/David_Baltimore

David Baltimore

Baltimore in 2013

6th President of the California Institute of Technology

In office

1997–2005

Preceded by

Thomas Eugene Everhart

Succeeded by

Jean-Lou Chameau

6th President of Rockefeller University

In office

1990–1991

Preceded by

[Dr. Joshua Lederberg (born 1925)]

Succeeded by

Torsten Wiesel

Personal details

Born

March 7, 1938 (age 83)

New York, New York, U.S.

Nationality

American

Spouse(s)

Alice S. Huang (m. 1968)

Children

1

Alma mater

- Swarthmore College (BA)
- Rockefeller University (PhD)

Website

www.bbe.caltech.edu/content/david-baltimore

Known for

- Reverse transcriptase
- Baltimore classification

Awards

- EMBO Member (1983)[1]
- NAS Award in Molecular Biology (1974)
- Nobel Prize in Physiology or Medicine (1975)
- Sir Hans Krebs Medal (1997)
- National Medal of Science (1999)

Scientific career

Fields

Cell biology, microbiology

Institutions

- MIT
- Rockefeller University
- California Institute of Technology

Thesis

The diversion of macromolecular synthesis in L-cells towards ends dictated by mengovirus (1964)

Doctoral advisor

Richard Franklin

Doctoral students

Sara Cherry

External video

Nobel Prize Interview with Dr. David Baltimore, 26 April 2001, Nobel Prize.org

David Baltimore: Danger from the Wild: HIV, Can We Conquer It?, iBiology

David Baltimore (born March 7, 1938) is an American biologist, university administrator, and 1975 Nobel laureate in Physiology or Medicine. He is currently President Emeritus and Distinguished Professor of Biology at the California Institute of Technology (Caltech), where he served as president from 1997 to 2006.[2] He also served as the director of the Joint Center for Translational Medicine, which joined Caltech and UCLA in a program to translate basic scientific discoveries into clinical realities. He also formerly served as president of Rockefeller University from 1990 to 1991, founder and Director of the Whitehead Institute of Biomedical Research from 1982 to 1990, and was president of the American Association for the Advancement of Science in 2007.

Baltimore has profoundly influenced international science, including key contributions to immunology, virology, cancer research, biotechnology, and recombinant DNA research, through his accomplishments as a researcher, administrator, educator, and public advocate for science and engineering. He has trained many doctoral students and postdoctoral fellows, several of whom have gone on to notable and distinguished research careers. In addition to the Nobel Prize, he has received a number of awards, including the U.S. National Medal of Science in 1999. Baltimore sits on the Board of Sponsors[3] for the Bulletin of the Atomic Scientists and as a senior scientific advisor to the Science Philanthropy Alliance.[4]

Early life and education[edit]

Baltimore in the 1970s

Baltimore was born on March 7, 1938, in New York City to Gertrude (Lipschitz) and Richard Baltimore. Raised in the Queens neighborhoods of Forest Hills and Rego Park, Queens, he moved with his family to suburban Great Neck, New York, while he was in second grade because his mother felt that the city schools were inadequate. His father had been raised as an Orthodox Jew and his mother was an atheist, and Baltimore observed Jewish holidays and would attend synagogue with his father through his Bar Mitzvah.[5] He graduated from Great Neck North High School in 1956, and credits his interest in biology to a high-school summer spent at the Jackson Laboratory's Summer Student Program in Bar Harbor, Maine.[6][7] It was at this program that he met [**Dr. Howard Martin Temin (born 1934)**], with whom he would later share the Nobel Prize.[8]

Baltimore earned his Bachelor's degree with high honors at Swarthmore College in 1960.[9] He was introduced to molecular biology by George Streisinger under whose mentorship he worked for a summer at Cold Spring Harbor Laboratory as part of the inaugural cohort of the Undergraduate Research Program in 1959.[9][5][8] There he also met two new MIT faculty, future Nobel Laureate Salvador Luria and Cyrus Levinthal who were scouting for candidates for a new program of graduate education in molecular biology.[5][8] They invited him to apply to the Massachusetts Institute of Technology (MIT).[5][8] Baltimore's future promise was evident in his work as a graduate student when he entered MIT's graduate program in biology in 1960 with a brash and brilliant approach to learning science, completing his PhD thesis work in 2 years.[10][11] His early interest in phage genetics quickly yielded to a passion for animal viruses.[5] He took the Cold Spring Harbor course on animal virology in 1961 and he moved to Richard Franklin's lab at the Rockefeller Institute at New York City which was one of the few labs pioneering molecular research on animal virology.[5] There he made fundamental discoveries on virus replication and its effect on cell metabolism, including the first description of an RNA replicase.

Career and research[edit]

After his PhD, Baltimore returned to MIT for postdoctoral research with James Darnell in 1963.[12] He continued his work on virus replication using poliovirus and pursued training in enzymology with Jerard Hurwitz at Albert Einstein College of Medicine in 1964/1965.[12]

Independent investigator[edit]

In February 1965, Baltimore was recruited by [] to the newly established Salk Institute for Biological Studies in La Jolla as an independent research associate.[13] There he investigated poliovirus RNA replication and began a long and storied career of mentoring other scientists' early careers including Marc Girard, and Michael Jacobson.[12][14] They discovered the mechanism of proteolytic cleavage of viral polyprotein precursors,[15] pointing to the importance of proteolytic processing in the synthesis of eukaryotic proteins.[16][17] He also met his future wife, Alice Huang, who began working with Baltimore at Salk in 1967.[17][18] He and Alice together carried out key experiments on defective interfering particles and viral pseudo types. During this work, he made a key discovery that polio produced its viral proteins as a single large polyprotein that was subsequently processed into individual functional peptides.[16][17]

Massachusetts Institute of Technology[edit]

Reverse transcriptase[edit]

In 1968, he was recruited once more by soon-to-be Nobel laureate Salvador Luria to the department of biology at MIT as an associate professor of microbiology.[19] Alice S. Huang also moved to MIT to continue her research on vesicular stomatitis virus (VSV). They became a couple, and married in October 1968.[18] At MIT, Huang, Baltimore, and graduate student Martha Stampfer discovered that VSV involved an RNA-dependent RNA polymerase within the virus particle, and used a novel replication strategy to replicate its RNA genome. VSV entered a host cell as a single negative strand of RNA, but brought with it RNA polymerase to stimulate the processes of transcription and replication of more RNA.[17][18][20]

Baltimore extended this work and examined two RNA tumor viruses, Rauscher murine leukemia virus and Rous sarcoma virus.[17][21] He went on to discover reverse transcriptase (RTase or RT) – the enzyme that polymerizes DNA from an RNA template. In doing so, he discovered a distinct class of viruses, later called retroviruses, that use an RNA template to catalyze synthesis of viral DNA.[22] This overturned the simplified version of the central dogma of molecular biology that stated that genetic information flows unidirectionally from DNA to RNA to proteins.[21][23][24] Reverse transcriptase is essential for the reproduction of retroviruses, allowing such viruses to turn viral RNA strands into viral DNA strands. The viruses that fall into this category include HIV.[18][22]

The discovery of reverse transcriptase, made contemporaneously with [**Dr. Howard Martin Temin (born 1934)**], who had proposed the provirus hypothesis, showed that genetic information could traffic bidirectionally between DNA and RNA. They published these findings in back-to-back papers in the prestigious

journal, Nature.[25][26] This discovery made it easier to isolate and reproduce individual genes, and was heralded as evidence that molecular and virological approaches to understanding cancer would yield new cures for the dreaded disease.[27] This may have influenced President Richard Nixon's War on Cancer which was launched in 1971 and substantially increased research funding for the disease. In 1972, at the age of 34, Baltimore was awarded tenure as a professor of biology at MIT, a post that he held until 1997.

Asilomar conference on recombinant DNA[edit]

Baltimore also helped Paul Berg and Maxine Singer to organize the Asilomar Conference on Recombinant DNA, held in February 1975. The conference discussed possible dangers of new biotechnology, drew up voluntary safety guidelines, and issued a call for an ongoing moratorium on certain types of experiments and review of possible experiments, which has been institutionalized by recombinant DNA advisory committees established at essentially all US academic institutions conducting molecular biology research.[5] Baltimore was well aware of the importance of the changes occurring in the laboratory: "The whole Asilomar process opened up to the world that modern biology had new powers that you had never conceived of before."[10]:111

MIT Cancer Center[edit]

In 1973, he was awarded a prestigious American Cancer Society Professor of Microbiology that provided substantial salary support. Also in 1973, he became one of the early faculty members in the newly organized MIT Center for Cancer (CCR), capping a creative and industrious period of his career with nearly fifty research publications including the paradigm-shifting paper on reverse transcriptase.[28] The MIT CCR was led by Salvador E. Luria and quickly achieved pre-eminence with a remarkable group of faculty including Baltimore, Phillips Robbins, Herman Eisen, Philip Sharp, and Robert Weinberg, who all went on to illustrious research careers.[19] Baltimore was honored as a Fellow of the American Academy of Arts and Sciences in 1974.[9] He returned to New York City in 1975, for a year-long sabbatical at Rockefeller University working with Jim Darnell.[13]

Nobel Prize

In 1975, at the age of 37, he shared the Nobel Prize for Physiology or Medicine with [**Dr. Howard Martin Temin (born 1934)**] and [**Dr. Renato Dulbecco (born 1914)**].[13] The citation reads, "for their discoveries concerning the interaction between tumor viruses and the genetic material of the cell."[29] At the time, Baltimore's greatest contribution to virology was his discovery of reverse transcriptase (Rtase or RT) which is essential for the reproduction of retroviruses such as HIV and was discovered independently, and at about the same time, by Satoshi Mizutani and Temin.[16]

After winning the Nobel Prize, Baltimore reorganized his laboratory, refocusing on immunology and virology, with immunoglobulin gene expression as a major area of interest. He tackled new problems such as the pathogenesis of Abelson murine leukemia virus (AMuLV), lymphocyte differentiation and related topic in immunology. In 1980, his group isolated the oncogene in AMuLV and showed it was a member of a new class of protein kinases that used the amino acid tyrosine as a phosphoacceptor.[30] This type of enzymatic activity was also discovered by Tony Hunter, who has done extensive work in the area. He also continued to pursue fundamental questions in RNA viruses and in 1981, Baltimore and Vincent Racaniello, a post-doctoral fellow in his laboratory, used recombinant DNA technology to generate a plasmid encoding the genome of poliovirus, an animal RNA virus.[15] The plasmid DNA was introduced into cultured mammalian cells and infectious poliovirus was produced. The infectious clone, DNA encoding the genome of a virus, is a standard tool used today in virology.

Whitehead Institute for Biomedical Research[edit]

In 1982, with a charitable donation by businessman and philanthropist Edwin C. "Jack" Whitehead, Baltimore was asked to help establish a self-governed research institute dedicated to basic biomedical research.[31] Baltimore persuaded Whitehead that MIT would be the ideal home for the new institute, convinced that it would be superior at hiring the best researchers in biology at the time, thus ensuring quality[8]. Persuading MIT faculty to support the idea was far more difficult. MIT as an institution had never housed another before, and concerns were raised that the wealth of the institute might skew the biology department in directions faculty did not wish to take, and that Baltimore himself would gain undue influence over hiring within the department.[8][12][32] The controversy was made worse by an article published by the Boston Globe framing the institute as corporate takeover of MIT.[8][12] After a year of intensive discussions and planning, faculty finally voted in favor of the institute.[8] Whitehead, Baltimore, and the rest of the planning team devised a unique structure of an independent research institute composed of "members" with a close relationship with the department of biology of MIT. This structure continues to this day to attract an elite interactive group of faculty to the Department of Biology at MIT and has served as a model for other distinguished institutes such as the Broad Institute.

The Whitehead Institute for Biomedical Research (WIBR) was launched with $35 million to construct and equip a new building located across the street from the MIT cancer center at 9 Cambridge Center in Cambridge Massachusetts. The institute also received $5 million per year in guaranteed income and a substantial endowment in his will (for a total gift of $135 million). Under Baltimore's leadership, a distinguished group of founding members including Gerald Fink, Rudolf Jaenisch, Harvey Lodish, and Robert Weinberg was assembled and eventually grew to 20 members in disciplines ranging from immunology, genetics, and oncology to fundamental developmental studies in mice and fruit flies.[33] Whitehead Institute's contributions to bioscience have long been consistently outstanding. Less than a decade after its founding with continued leadership by Baltimore, the Whitehead Institute was named the top research institution in the world in molecular biology and genetics, and over a recent 10-year period, papers published by Whitehead scientists, including many from Baltimore's own lab, were the most cited papers of any biological research institute. The Whitehead Institute was an important partner in the Human Genome Project.[34]

Baltimore served as director of the WIBR and expanded the faculty and research areas into key areas of research including mouse and drosophila genetics. During this time, Baltimore's own research program thrived in the new Institute. Important breakthroughs from Baltimore's lab include the discovery of the key transcription factor NF-κB by Dr. Ranjan Sen and David Baltimore in 1986.[35] This was part of a broader investigation to identify nuclear factors required for Ig gene expression in B lymphocytes. However, NF-κB turned out to have much broader importance in both innate and adaptive immunity and viral regulation. NF-κB is involved in regulating cellular responses and belongs to the category of "rapid-acting" primary transcription factors. Their discovery led to an "information explosion" involving "one of the most intensely studied signaling paradigms of the last two decades."[36]

As early as 1984, Rudolf Grosschedl and David Weaver, postdoctoral fellows, in Baltimore's laboratory, were experimenting with the creation of transgenic mice as a model for the study of disease. They suggested that "control of Ig gene rearrangement might be the only mechanism that determines the specificity of heavy chain gene expression within the lymphoid cell lineage."[37] in 1987, they created transgenic mice with the fused gene that developed fatal leukemia.[38][39]

David G. Schatz and Marjorie Oettinger, as students in Baltimore's research group in 1988 and 1989, identified the protein pair that rearranges immunoglobulin genes, the recombination-activating gene RAG-1 and RAG-2,[40] this was a key discovery in determining how the immune system can have

specificity for a given molecule out of many possibilities,[41] and was considered by Baltimore as of 2005 to be "our most significant discovery in immunology".[9]:Addendum, May 2005

In 1990, as a student in David Baltimore's laboratory at MIT, George Q. Daley demonstrated that a fusion protein called bcr-abl is sufficient to stimulate cell growth and cause chronic myelogenous leukemia (CML). This work helped to identify a class of proteins that become hyperactive in specific types of cancer cells. It helped to lay the groundwork for a new type of drug, attacking cancer at the genetic level: Brian Druker's development of the anti-cancer drug Imatinib (Gleevec), which deactivates bcr-abl proteins. Gleevec has shown impressive results in treating chronic myelogenous leukemia and also promise in treating gastrointestinal stromal tumor (GIST).[42][43][44]

Rockefeller University[edit]

Baltimore served as the director of the Whitehead Institute until July 1, 1990, when he was appointed the sixth president of Rockefeller University in New York City. He moved his research group to New York in stages and continued to make creative contributions to virology and cellular regulation.[8] He also began important reforms in fiscal and faculty management and promoted the status of junior faculty at the university.[45] After resigning on December 3, 1991 (see Imanishi-Kari case), Baltimore remained on the Rockefeller University faculty and continued research until the spring of 1994. He was invited to return to MIT and rejoined the faculty as the Ivan R. Cottrell Professor of Molecular Biology and Immunology.[8]

California Institute of Technology[edit]

From left: JPL Director Charles Elachi, La Canada-Flintridge Mayor Greg Brown, Baltimore and JPL Deputy Director Eugene Tattini (2006).

On May 13, 1997, Baltimore was appointed president of the California Institute of Technology (Caltech).[46][47][48][49][50] He began serving in the office October 15, 1997 and was inaugurated March 9, 1998.[51]

During Baltimore's tenure at Caltech, United States President Bill Clinton awarded Baltimore the National Medal of Science in 1999 for his numerous contributions to the scientific world. In 2004, Rockefeller University gave Baltimore its highest honor, Doctor of Science (honoris causa).[52]

In 2003, as a postdoctoral fellow in David Baltimore's lab at Caltech, Matthew Porteus was the first to demonstrate precise gene editing in human cells using chimeric nucleases.[53]

In October 2005, Baltimore resigned the office of the president of Caltech, saying, "This is not a decision that I have made easily, but I am convinced that the interests of the Institute will be best served by a presidential transition at this particular time in its history..." [54] [55]. Former Georgia Tech Provost Jean-Lou Chameau succeeded Baltimore as president of Caltech.[56] Baltimore was appointed President Emeritus and the Robert Andrews Milikan Professor of Biology at Caltech and remains an active member of the institute's community.[57] On January 21, 2021, Caltech president Thomas F. Rosenbaum announced the removal of the name of Caltech's founding president and first Nobel laureate, Robert A. Millikan, from campus buildings, assets, and honors due to Millikan's substantial participation in the eugenics movement. Baltimore's title was changed to "Distinguished Professor of Biology."[58]

Caltech Laboratory (1997-2019)[edit]

Baltimore's laboratory at Caltech focused on two major research areas: understanding the development and functioning of the mammalian immune system and translational studies creating viral vectors to make the immune system more effective in resisting cancer. Their basic studies went in two directions: understanding the diverse activity of the NF-κB transcription factor, and understanding the normal and pathologic functions of microRNA.

Translational Science Initiatives[edit]

A primary focus of Baltimore's lab was use of gene therapy methods to treat HIV and cancer.[59] In the early 2000's one of Baltimore's graduate students, Lili Yang, developed a lentivirus vector that allowed for the cloning of genes for two chains of TCR. Recognizing its potentially profound implications for enhancing immunity, Baltimore developed a translational research initiative within his laboratory called "Engineering Immunity." The Bill and Melinda Gates Foundation awarded the program with a Grand Challenge Grant, and he used the funding to divide the initiative into four research programs and hire additional lab staff to lead each one. Two of the research programs sparked gene therapy start-up companies, Calimmune and Immune Design Corp, founded in 2006 and 2008 respectively[60][61]. A third program focused on the development of an HIV vaccine, and eventually lead to clinical trials at NIH.[12] In 2009 Baltimore became director of the Joint Center for Translational Medicine, a shared initiative between Caltech and UCLA aimed at developing bench to bedside medicine.[59]

MicroRNA Research[edit]

A focus of Baltimore's lab from his arrival at Caltech to the lab's closure in 2018 was understanding the role of microRNA in the immune system.[12] MicroRNAs provide fine control over gene expression by regulating the amount of protein made by particular messenger RNAs.[57] In recent research led by Jimmy Zhao, Baltimore's team has discovered a small RNA molecule called microRNA-146a (miR-146a) and bred a strain of mice that lacks miR146a. They have used the miR146a(-) mice as a model to study the effects of chronic inflammation on the activity of hematopoietic stem cells (HSCs). Their results suggest that microRNA-146a protects HSCs during chronic inflammation, and that its lack may contribute to blood cancers and bone marrow failure.[62]

Splicing Control Research[edit]

Another concentration within Baltimore's lab in recent years was control of inflammatory and immune responses, specifically splicing control of gene expression after inflammatory stimuli.[59] In 2013 they discovered that ordered expression of genes following an inflammatory stimulus was controlled by splicing, not transcription as previously supposed.[63] This led to further discoveries that delayed splicing was caused by introns, with the revelation that RNA-binding protein BUD13 acts at this intron to increase the amount of successful splicing (2 articles by Luke Frankiw published in 2019 and 2020).[64] [65]

In an autobiographical piece published in Annual Review Immunology in 2019, Baltimore announced that half of his lab space at Caltech would be taken over by a new assistant professor in Fall 2018, and his current lab group would be the last. "I have been involved in research for 60 years, and I think it is time to leave the field to younger people." [12]

Public policy[edit]

In the span of his career, Baltimore has profoundly impacted national science policy debates, including the AIDS epidemic and recombinant DNA research.[59] [66] His efforts to organize the Asilomar Conference on Recombinant DNA were key to creating consensus within scientific and policy spheres.

In recent years Baltimore has joined with other scientists to call for a worldwide moratorium on use of a new genome-editing technique to alter inheritable human DNA.[67] A key step enabling researchers to slice up any DNA sequence they choose was developed by Emmanuelle Charpentier, then at Umea University in Sweden, and Jennifer A. Doudna of the University of California, Berkeley.[68] Reminiscent of the Asilomar conference on recombinant DNA in 1975, those involved want both scientists and the public to be more aware of the ethical issues and risks involved with new techniques for genome modification.[67]

An early spokesperson for federal funding for AIDS research, Baltimore co-chaired the 1986 National Academy of Sciences committee on a National Strategy for AIDS.[59] In 1986, he and Sheldon M. Wolff were invited by the National Academy of Sciences and the Institute of Medicine to coauthor an independent report: Confronting AIDS (1986), in which they called for a $1 billion research program for HIV/AIDS.[5][69] As of 1996 he was appointed head of the National Institutes of Health (NIH) AIDS Vaccine Research Committee (AVRC).[70]

Biotechnology[edit]

Baltimore holds nearly 100 different biotechnology patents in the US and Europe, and has been preeminent in American biotechnology since the 1970s. In addition to Calimmune and Immune Design, he also helped found s2A Molecular, Inc.[59] He has consulted at various companies including Collaborative Research, Brisol-Myers Squibb, and most recently Virtualitics. He serves on the Board of Directors at several companies and non-profit institutions including Regulus Therapeutics and Appia Bio. He has also been a member of numerous Scientific Advisory Boards, and currently serves with PACT Pharma, Volastra Therapeutics, Vir Biotechnology, and the Center for Infectious Diseases Research at Westlake University. He is the principal scientific advisor for the Science Philanthropy Alliance.

Awards and legacy[edit]

Baltimore's honors include the 1970 Gustave Stern Award in Virology, 1971 Eli Lilly and C. Award in Microbiology and Immunology, 1999 National Medal of Science, and 2000 Warren Alpert Foundation Prize.[71] He was elected to the National Academy of Sciences USA (NAS) in1974;[72] the American Academy of Arts and Sciences, 1974; the NAS Institute of Medicine (IOM), 1974;[73] the American Association of Immunologists, 1984.[74] He was elected a Foreign Member of the Royal Society (ForMemRS) in 1987;[75][76] the French Academy of Sciences, 2000;[77] and the American Association for Cancer Research (AACR).[73] He is also a member of the Pontifical Academy of Sciences, 1978.[78] In 2006 Baltimore was elected to a three-year term as president of the American Association for the Advancement of Science (AAAS).[73]

He has published over 700 peer-reviewed articles.[71][79]

Baltimore is a member of the USA Science and Engineering Festival's Advisory Board[80] and an Xconomist (an editorial advisor for the tech news and media company, Xconomy).[81] Baltimore also serves on The Jackson Laboratory's board of trustees,[82] the Bulletin of the Atomic Scientists' Board of Sponsors,[83] Amgen, Inc.'s board of directors,[84] and numerous other organizations and their boards.

In 2019 Caltech named a graduate fellowship program in biochemistry and molecular biophysics in honor of Baltimore. The program combined a $7.5 million gift from the Amgen Foundation with an existing one-year Amgen fellowship and $3.75 million given by Caltech's Gordon and Betty Moore Graduate Fellowship Match.[85]

Controversies[edit]

Imanishi-Kari case[edit]

Main article: Thereza Imanishi-Kari

During the late 1980s and early 1990s, Thereza Imanishi-Kari, a scientist who was not in Baltimore's laboratory but in a separate, independent laboratory at MIT, was implicated in a case of scientific fraud. The case received extensive news coverage and a Congressional investigation. The case was linked to Baltimore's name because of his scientific collaboration with and later his strong defense of Imanishi-Kari against accusations of fraud.

In 1986, while a professor of biology at MIT and director at Whitehead, Baltimore co-authored a scientific paper on immunology with Thereza Imanishi-Kari (an assistant professor of biology who had her own laboratory at MIT) as well as four others.[86] A postdoctoral fellow in Imanishi-Kari's laboratory, Margot O'Toole, who was not an author, reported concerns about the paper, ultimately accusing Imanishi-Kari of fabricating data in a cover-up. Baltimore, however, refused to retract the paper.

O'Toole soon dropped her challenge, but the NIH, which had funded the contested paper's research, began investigating, at the insistence of Walter W. Stewart, a self-appointed fraud buster, and Ned Feder, his lab head at the NIH.[87] Representative John Dingell (D-MI) also aggressively pursued it, eventually calling in U.S. Secret Service (USSS; U.S. Treasury) document examiners.[88]

Around October 1989, when Baltimore was appointed president of Rockefeller University, around a third of the faculty opposed his appointment because of concerns about his behaviour in the Imanishi-Kari case. He visited every laboratory, one by one, to hear those concerns directly from each group of researchers.[87]

In a draft report dated March 14, 1991 and based mainly on USSS forensics findings, NIH's fraud unit, then called the Office of Scientific Integrity (OSI), accused Imanishi-Kari of falsifying and fabricating data. It also criticized Baltimore for failing to embrace O'Toole's challenge.[citation needed] Less than a week later, the report was leaked to the press.[89] Baltimore and three co-authors then retracted the paper; however, Imanishi-Kari and Moema H. Reis did not sign the retraction.[90] In the report, Baltimore stated that he may have been "too willing to accept" Imanishi-Kari's explanations, and felt he "did too little to seek an independent verification of her data and conclusions."[91] Baltimore publicly apologized for not taking a whistle-blower's charge more seriously.[92]

Amid concerns raised by negative publicity in connection with the scandal, Baltimore resigned as president of Rockefeller University[93] and rejoined the MIT Biology faculty.[94]

In July 1992, the US Attorney for the District of Maryland, who had been investigating the case, announced he would bring neither criminal nor civil charges against Imanishi-Kari.[95][96] In October 1994, however, OSI's successor, the Office of Research Integrity (ORI; HHS) found Imanishi-Kari guilty on 19 counts of research misconduct, basing its conclusions largely on Secret Service analysis of laboratory notebooks, documents that these investigators had little experience or expert guidance in interpreting.[97]

An HHS appeals panel began meeting in June 1995 to review all charges in detail. In June 1996, the panel ruled that the ORI had failed to prove even one of its 19 charges. After throwing out much of the documentary evidence gathered by the ORI, the panel dismissed all charges against Imanishi-Kari. As their

its 19 charges. After throwing out much of the documentary evidence gathered by the ORI, the panel dismissed all charges against Imanishi-Kari. As their final report stated, the HHS panel "found that much of what ORI presented was irrelevant, had limited probative value, was internally inconsistent, lacked reliability or foundation, was not credible or not corroborated, or was based on unwarranted assumptions." It did conclude that "The Cell paper as a whole is rife with errors of all sorts ... [including] some which, despite all these years and layers of review, have never previously been pointed out or corrected. Responsibility ... must be shared by all participants." Neither OSI nor ORI ever accused Baltimore of research misconduct.[98][99] The reputations of Stewart and Feder, who had pushed for the investigation, were badly damaged.[99] The pair were reassigned to other positions at NIH because they failed to maintain productivity in their roles as scientists and questions were raised about the legitimacy of their self-appointed inquiries into scientific integrity.[100]

The Imanishi-Kari controversy was one among several prominent scientific integrity cases of the 1980's and 1990's in the United States. In nearly all cases, defendants were ultimately cleared.[97] The case profoundly impacted the process for handling of scientific misconduct in the United States.[97] Baltimore has been both defended and criticized for his actions in this matter.[101][27][102][103][104][66][105] In 1993, Yale University mathematician Serge Lang strongly criticized Baltimore's behavior.[106] Historian of science Daniel Kevles, writing after the exoneration of Imanishi-Kari, recounted the affair in his 1998 book, The Baltimore Case.[107][108] Horace Freeland Judson also gives a critical assessment of Baltimore's actions in The Great Betrayal: Fraud In Science.[109] Baltimore has also written his own analysis.[110]

Luk van Parijs case[edit]

In 2015, at Baltimore's request, Caltech began investigating the work that Luk van Parijs had conducted while a postdoc in Baltimore's laboratory.[111] Van Parijs first came under suspicion at MIT, for work done after he had left Baltimore's lab. After van Parijs had been fired by MIT, his doctoral supervisor also noted problems with work van Parijs did at the Brigham and Women's Hospital, before leaving Harvard to go to Baltimore's lab.[112] The Caltech investigation concluded in March 2007. It found van Parijs alone committed research misconduct, and that four papers co-authored by Baltimore, van Parijs, and others required correction.[113]

Awards and honors[edit]

- First recipient of the Gustav Stern Award in Virology (1971)
- Warren Triennial Prize (1971)
- Eli Lilly Award in Immunology and Microbiology (1971)
- Fellow of the American Academy of Arts and Sciences (1974)
- NAS Award in Molecular Biology (1974)
- Canada Gairdner International Award (1974)[114]
- Nobel Prize in Physiology or Medicine (1975)
- EMBO Member (1983)[4]
- Golden Plate Award of the American Academy of Achievement (1986)[115]
- National Medal of Science (1999)
- Warren Alpert Foundation Prize (2000)

Honorary degrees[edit]

- 1976 Swarthmore College, Swarthmore, PA[16]
- 1987 Mount Holyoke College, So. Hadley, MA[16]
- 1990 Mount Sinai Medical Center, New York, NY[16]
- 1990 Bard College, Annandale-on-Hudson, NY[16]
- 1990 University of Helsinki, Helsinki, Finland[16]
- 1998 Weizmann Institute of Science, Israel[16]
- 1999 Cold Spring Harbor Laboratory, Cold Spring Harbor, NY[16]
- 1999 University of Alabama, Birmingham, AL[16]
- 2001 California Polytechnic State University, San Luis Obispo, CA[16]
- 2004 Columbia University, New York, NY[116]
- 2004 Yale University, New Haven, CT[117]
- 2004 The Rockefeller University, New York, NY[118]
- 2005 Harvard University, Cambridge, MA[119]
- 2012 University of Buenos Aires, Buenos Aires, Argentina[120]

Personal life[edit]

Baltimore was married in 1968 to Dr. Alice S. Huang. They have one daughter.[121] He is an avid fly-fisherman.[27]

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See also[edit]

- History of RNA biology
- List of Jewish Nobel laureates

- List of Jewish Nobel laureates
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External links[edit]

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Baltimore and the opium trade with China

Research paper from Columbia University

See [HE001P][GDrive]

"1805 : Baltimore ship, *Entan*, carries opium to Canton "

It was February, 1784. Only five months earlier, the U.S. and Great Britain signed the Treaty of Paris (September 3, 1783). This agreement ended the Revolutionary War. U.S. ships could no longer trade with the British West Indies. Trade with other nations was in a slump. Americans especially missed tea. Robert Morris (1734-1806), a banker, decided to find a way to supply that tea. By doing so, he said, he hoped "to encourage others in the adventurous pursuit of commerce."

Empress of China

Morris hired a small ship and renamed it the *Empress of China*. The ship was set to sail east, around the southern tip of Africa, to Canton (Guangzhou), China. It would return by the same route. The ship's captain, John Green, had spent the war attacking British cargo ships. His crew of 34 men included a gunner, who would come in handy if the ship met pirates. Also aboard were two carpenters, a barrel-maker, and several boys. The boys were beginning their careers in the merchant marine.

In some ways, the most important man aboard was the "supercargo," Samuel Shaw of Boston. Shaw was a businessman, in charge of the $120,000 cargo in the ship's hold. The *Empress* carried lead, 2,600 animal skins, fine camel cloth, cotton, and a few barrels of pepper. It also carried 30 tons of ginseng, a root that grew wild in North America. The Chinese valued ginseng for its healing powers.

Trading in Canton

The *Empress* left New York harbor on February 22, 1784. Six months later, in August, it arrived at Macao, a Portuguese outpost on the Chinese coast. Here, Captain Green hired Chinese pilots to guide his ship up the Pearl River to Whampoa. Trading ships stayed in Whampoa while their supercargoes worked out deals in Canton, 12 miles upstream.

The Chinese wanted as few foreigners as possible in their country. They believed that China was the center of a square earth. Foreigners, they felt, had nothing but trouble to offer China. The Chinese called the Americans the "New People." But Americans were lumped with all outsiders as "Foreign Devils."

Samuel Shaw spent the next fourth months in Canton. Foreigners there weren't free to roam. The Chinese ordered them to stay in compounds call *hongs* [see Macartney and the Emperor for more about *hongs*]. *Hongs* were pleasant places, where Chinese merchants called to trade.

Shaw traded his cargo for tea, nankeen (Chinese cotton), tableware, silk, and spice. The shipment was welcomed in the U.S. when the *Empress* returned there in May, 1785. The Chinese goods brought Robert Morris and his partners $30,000 — an impressive profit.

Other U.S. merchants were quick to see the value of the China trade. At first, however, they flooded the Chinese market with ginseng. Chinese demand for the root dropped, and so did its price. But the Chinese did want sea-otter pelts, which Yankees traded from Indians in the American Northwest. Sandalwood, found in the Sandwich Islands (Hawaii), also brought a high price from Chinese merchants.

From Ginseng to Opium

The trade took an ugly turn in the early 1800s. British merchants began carrying opium to China, and many Americans followed suit. Opium, a drug, created its own demand by making addicts of its users. U.S. merchants found they could buy a pound of opium in Turkey for $2.50 and sell it in Canton for $10.00.

A Chinese attempt to shut down the opium traffic led to war with Britain. The "Opium War" lasted two years. It ended with a treaty that punished China and opened four more ports to British shipping. In later treaties, China granted the U.S. and France the same privileges Britain had.

Turmoil within China would interrupt trade with the U.S. during the next 100 years. Then, in 1949, a Communist government took over in China. The next year, Chinese and U.S. troops faced off in Korea, and the China trade ended for 22 years.

Now, commerce between China and the U.S. is picking up again. Trade has brought the two nations closer, just as it did in 1784.

See Canton, Baltimore, Maryland .

Baltimore port/neighborhood of Canton -

"In 1785, Irish merchant John O'Donnell settled in Baltimore and began trading with merchants in the Chinese port of Guangzhou, then called Canton by English speakers. When O'Donnell purchased land, he named his plantation Canton.[4] In the Late 18th century, O'Donnell's land was sold off by his son Columbus O'Donnell, William Patterson and Peter Cooper, and was developed for waterfront industry and blue-collar housing.[5]"

See [HX000L][GDrive]

I opened the worn and weathered logbook and was transported back to an exhilarating era of faraway lands, secret trade, and international incidents. From the first page, I was hooked. In my first weeks as an intern at the National Museum of American History, my supervisor, Maritime Curator Paul Johnston, asked me to research the logbook of the brig Ea, a vessel suspected of involvement in the opium trade. A brig is square rigged ship with two masts; the Ea was built in Baltimore, Maryland, circa 1815 as a merchant vessel during one of America's busiest trading eras. Doctor Johnston accessioned the logbook because the Ea was a local ship, and believed it would serve as a good representation of commerce at the time. The name of this vessel, Ea, is unusual—we can only surmise the two letters are the initials of an owner's loved one. The ship's logbook began on February 24, 1821, when the ship departed from Baltimore on a trading voyage to Canton, China. According to the log keeper, William Sanford, the ship reached Canton in August 1821, and left again on November 28, 1821, heading for Amsterdam. ***By 1793, the British East India Co. had a monopoly on the opium trade from India to China****; around this time the number of Chinese and British who recreationally smoked opium reached an all time high (no pun intended). The Chinese Emperor banned opium in 1799, making trade illegal.* ***In the early 1800s, though, American traders realized the high profits involved and began to smuggle opium from Turkey into China. The commodity passed primarily through the complicated port of Canton, where it was bought by shady merchants on islands in the bay. Perkins & Company of Boston, Massachusetts, was a major American trading company with a firm in Canton; in fact, the company would use rice cargoes to cover up opium transactions.*** *John Perkins Cushing recorded the arrival and departure of trading ships, including the Ea. After much searching to determine if the Ea participated in opium trading, I found a single sentence in an obscure book, citing Perkins & Company records:* ***"...The Ea, Captain Alexander Clark, [arrived] with between 140 and 160 piculs of the drug [opium]." A picul is an ancient Asian standard of weight and is approximately 133.3 lbs.; thus the Ea was smuggling an astonishing 20,000 pounds of opium!*** *Digging deeper, I found a report of the United States Secretary of State regarding an international issue involving the Ea and Captain Clark. On September 25, 1821, while the Ea was anchored at Canton, an Italian crewman on board another American merchant vessel was accused of killing a Chinese woman. Captain Clark signed as witness of the event, with multiple other ship captains. Political relations between China and the U.S. tensed as the Chinese wanted to execute the Italian sailor and the U.S. stalled for a fair trial. Unfortunately, the Italian was executed. I did not find out any other information about this incident; it was not mentioned in the logbook nor was there mention of any repercussions for Captain Clark. Many more hours could be spent unraveling the complicated mystery of the Ea. The opium trade was an early example of international drug smuggling and exemplifies the repercussions of a quick profit fueled by addiction. Researching the Ea sparked my fascination for the dark undercurrents of this chapter in American history. There is something fascinating about the stories preserved in a ship's battered logbook, and something enticing about a smuggling brig setting sail for the far ports of Canton.*

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Housatonic

Daniel Richard Bannister (born 1930)

Worked at :

- Dynalectron Corporation / DynCorp International

Associations

- Bernie Edward Zettl (born 1922) (DynaElectron / DynCorp)

2011 (March 15) - Washington Post - Daniel Richard Bannister was born June 29, 1930, in Detroit.

[HN01CZ][GDrive]

Daniel R. Bannister former president of DynCorp, dies at 80 / By **T. Rees Shapiro**

Daniel R. Bannister, 80, who as president and chief of executive of DynCorp from 1985 to 1997 led the government contracting firm through tremendous growth, died March 12 at Georgetown University Hospital. He had pancreatic cancer.

Mr. Bannister was paid $1.65 an hour when he joined DynCorp as an electronics technician in 1953. A half-century later, when DynCorp was sold to Computer Sciences Corp., Mr. Bannister had become the company's chairman and one of its largest individual shareholders, owning 4.1 percent of the business.

During his tenure, Mr. Bannister oversaw the acquisition of more than 40 companies. When he retired in 2003, he was credited with helping to mold what had been an aviation services company into a sprawling conglomerate that employed 24,000 people and earned $2.4 billion in annual revenue.

Much of the company's business stemmed from a variety of government contracts. Under Mr. Bannister's stewardship, DynCorp employees mowed government lawns, maintained military aircraft and built federal computer networks.

He oversaw DynCorp contracts to operate missile test ranges for the Defense Department, develop vaccines for the National Institutes of Health and install security systems in U.S. embassies for the State Department.

As a private security contractor, DynCorp supplied bodyguards to Haitian President Jean-Bertrand Aristide in the 1990s and to Afghan President Hamid Karzai during the early 2000s.

In 1992, by highlighting his company's technical advances on computerized operations, Mr. Bannister helped DynCorp win a lucrative contract to operate and manage the U.S. Strategic Petroleum Reserve.

Mr. Bannister, a longtime McLean resident, stepped down as DynCorp's president and chief executive in 1997 to become chairman of the board.

Seven years after he left the company, DynCorp was sold to private-equity firm Cerberus Capital Management in 2010.

Daniel Richard Bannister was born June 29, 1930, in Detroit. When he was 11, his father died and Mr. Bannister was compelled to take a leading role in his family's welfare.

He enlisted in the Air Force in 1948 and was trained as a radar technician. After service in the Korean War, Mr. Bannister left the military in 1952 and a year later joined Eastern Airways, a precursor of DynCorp.

DynCorp was a publicly traded company for many years until 1988, when Mr. Bannister led a group of investors to take the company private in order to fend off a hostile takeover attempt.

After the buyout, Mr. Bannister began to expand DynCorp's interests in telecommunications and technology.

His marriages to Sheila Thompson and Paula DeCoutis ended in divorce.

Survivors include his wife of four years, Sondra Fearnsides Bannister of McLean, Va.; three children from his first marriage, Michael Bannister of Wimberley, Tex., Linda Epstein of Estero, Fla., and Vickie Pasterak of San Diego; a sister; and four grandchildren.

In 1996, Mr. Bannister was supposed to accompany Commerce Secretary Ronald H. Brown on a visit to Eastern Europe, where DynCorp had contracts to repair infrastructure destroyed during the Bosnian War.

Two days before the trip, Mr. Bannister decided not to go because of scheduling conflicts.

On April 3, the plane that he would have been on crashed into a mountain in Croatia, killing the commerce secretary and 34 others. When Mr. Bannister learned of the accident, he still had the trip's itinerary in his suit pocket.

"I'm lucky, I'm grateful, and I'm humbled," Mr. Bannister told The Washington Post in 1996. "The good Lord spared me for a purpose. Now, I've got to figure out what that purpose is."

From that point forward, his family said, Mr. Bannister intensified his focus on philanthropy. He made significant contributions of his time and money to Easter Seals, Joe Gibbs's Youth for Tomorrow and a number of other charities in the Washington area.

1963 (Nov 10) - Award given to Dan R Bannister by Bernie Zettl

See **Bernie Edward Zettl (born 1922)** / Full newspaper page : [HN01D0][GDrive]

FORT WORTH STAR-TELEGRAM Sunday, November 10, 1963 Section Five PAGE THREE

BUSINESS AT WORK

Fort Worth Firm Wins Coffee Supply Contract

Kimbell Coffee and Tea Corporation of Fort Worth has been awarded a $147,071 contract for roasted ground coffee by the New York regional headquarters of the Defense Subsistence Supply Center which buys food supplies for the armed services.

Twelve firms competed for the contract.

A 10-year award pin was presented to **DAN R. BANNISTER**, vice president and manager of Dynalectron Aerospace Operations Division here.

Bannister, 33, of 4100 Galt, is one of the youngest aviation executives in the nation. A gold pen and pencil set were given to Bannister by **BERNIE ZETTL**, director of program planning. Also participating in the ceremony were **JACK VESTAL**, operations manager, and **JACK MIKEL**, personnel manager.

An extensive microwave system following the course of the Nile River from Cairo to Aswan will be built by Collins Radio which has a division in Dallas.

The 500-mile communication link will make television available for the first time to most Egyptian people.

JOSEPH P. POWELL has been named Houston manager of Mars Instrument Company.

The appointment of **EDWARD L. SKINNER** as sales representative for Texas and Louisiana was announced by **GORDON L. BROTT**, manager of the Fort Smith, Ark., plant of Ohio Rubber Company.

Skinner, a Dallas resident, is the former president of Renniks Rubber Company in Fort Worth.

HAL CARPENTER of Dallas has been named to supervise North Texas sales of the first rolled carpet goods to be produced in the mid-continent area.

Sequoyah Mills announced that Carpenter will be territory manager for the Fort Worth-Dallas metropolitan area.

Clary Corporation Vice President **EDSON I. SMALL** has announced the formation of a new marketing position and a man to fill the spot.

WILLIAM F. DORITY will fill the position of field sales manager, with his headquarters in Montclair, N. J.

A registered secondary offering of 350,000 shares of the Mosler Safe Company common stock ($1 par value) has been announced by Blyth & Company, Inc. and associates.

The shares are being sold for the account of three members of the Mosler family who will hold some 57 per cent of the common stock after the sale. None of the proceeds of the sale will accrue to the company. Subject to obtaining board distribution of its common stock to meet requirements of the New York Stock Exchange, the Mosler firm intends to apply for listing on the exchange.

SAM REZINKOFF of 5400 Odessa has been elected to the Agents Advisory Council for the Southwestern region of the New York Life Insurance Company.

A marketing, research and business planning specialist, **ROBERT W. CLARK**, of Fort Worth has been appointed assistant to the president of the Western Company.

Clark has been associated with GE since 1947 and is former manager of the aviation and defense systems for the firm's outdoor lighting department in Hendersonville, N. C.

A new addition to the staff of Superior accounting, Tax & Insurance Service at 2850-A W. Berry, is **ROY TUGGLE**.

MICKEY GOLDMAN, Fort Worth business man, was one of the principals at a state meeting for Calvert Distillers Company in Dallas recently when executives of the firm came to Texas to launch Calvert Extra.

The appointment of **GORDON H. FISHER** of Gainsville as assistant to the president was announced by **FRANK R. MILLIKEN**, president of Kennecotte Copper Corporation. Fisher was president of General Minerals in Houston before joining Kennecotte.

ELBERT J. HALING, assistant to the regional director of Public Housing Administration in Fort Worth discussed "Better Public Relations for Better City Government" at the Arkansas Municipal League Convention at Hot Springs Friday.

FLOYD E. BLOUNT, Socony Mobil Oil Company of Dallas, will address the North Texas (Fort Worth-Dallas) section of the National Association of Corrosion Engineers Monday at the Torch Restaurant in Dallas at 8:30 p. m.

MICKEY GOLDMAN

ROY TUGGLE

SAM REZINKOFF

JOHN L. HANIGAN

JOSEPH P. POWELL

EDWARD T. SKINNER

C. H. ANSEL

DAN BANNISTER

Three University of Texas professors have collaborated on a Textbook, "Intermediate Accounting," a new publication. The authors are **DR. JOHN WHITE, DR. GLENN A. WALSH** and **DR. CHARLES T. ZLATKOVICH.**

Preparations are underway at Aluminum Company of America's Rockdale, Texas, plant to restart a 25,000-ton potline, thus boosting the smelter's production to 100 per cent capacity and its work force to more than 1,000 men.

JOHN L. HANIGAN has been named president of Brunswick Corporation.

He will assume his new duties as soon as he can be relieved of his old ones.

The appointment of **C. H. ANSEL JR.** as technical representative for Haveg Reinhold Inc., Santa Fe Spcings, Cal., has been announced.

TOM F. ANDERSON of Alcoa has been elected president of Texas Chemcial Council, an association of more than 50 chemical firms with operations in Texas.

Hayes Employment Service has announced the complete remodeling and expansion of their offices in the Continental Life Building.

Promotion of **B. B. McCULLOUGH** from agent to assistant manager of Fort Worth District No. 1 of the American National Insurance Company of Galveston has been announced by **W. W. CHERRY**, senior vice president and director of combination agencies.

[HN01D1][GDrive]

Oral History of Dan R. Bannister

[HI001T][GDrive]

Interviewed by: Paul Ceruzzi

Recorded: April 1, 2009

Falls Church, Virginia

CHM

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Frank Stringfellow Barr (born 1897)

1982-02-05-nytimes-stringfellow-barr-educator-dies-clip-profile.jpg /

https://en.wikipedia.org/wiki/Stringfellow_Barr

1982-02-05-nytimes-stringfellow-barr-educator-dies.pdf /

Stringfellow Barr, a prominent author and educator who, as president of St. John's College in Annapolis, Md., introduced a radically new curriculum composed entirely of the study of 100 great books of man's past, died Tuesday night of pneumonia at a nursing home in Alexandria, Va. He was 84 years old.

On assuming the presidency of the college in 1937, Professor Barr announced that its conventional curriculum would be scrapped in favor of a mandatory, uniform, four-year program modeled on courses taught at Columbia University and the University of Chicago.

"The hundred best books of European thought in all fields will provide the college's new means of instruction," Professor Barr said at the time.

He distinguished the program from its predecessors as follows: "At St. John's, the program is not one of many courses; it is the entire curriculum."

"Moreover," he said, "where the Columbia and Chicago book lists leaned overwhelmingly toward the humanities, the St. John's freshmen read their Euclid, their Nicomachus, their Archimedes along with their Homer." Program Evokes Criticism

Professor Barr acknowledged after the first year that some critics had found the program "authoritarian and fascist, because the student is not allowed to choose what he will study and what he will ignore."

On the other hand, he observed, "For the first time in possibly 1,500 years, a group of college freshmen has just read Euclid's 'Elements' through."

"Meanwhile," Professor Barr said, "Catholic educators have denounced the list for including Marx and Freud along with St. Augustine and St. Thomas. Yet surely both St. Thomas and Freud are part of the intellectual tradition of the Occident."

Others included in the list, which had grown to 109 books by the time Professor Barr left St. John's in 1946, were Chaucer, Copernicus, Dante, Darwin, Dickens, Goethe, Hume, Ibsen, James, Kant, Locke, Milton, Rabelais, Shakespeare, Tolstoy and Virgil. The Old and New Testaments were also studied.

The regimen he and Dean Scott Buchanan established has been maintained to this day. Carl F. Hovde, dean of Columbia College from 1968 until 1972, a time when it was under pressure to revise its own relatively stringent curriculum, said last night of St. John's, "It has always been exciting to have a place with so clear a sense of what it wishedto do and which never made compromises." "St. John' s view," Dr. Hovde said, "was to recover the traditionof the West i n a more thoroughgoing way than any other institution inAmerica tried to do."

Professor Barr, who was known to his family, friends and colleagues as Winkie, was born in Suffolk, Va. He earned degrees at Oxford University, where he was a Rhodes Scholar, the University of Virginia and the University of Paris.

Professor Barr taught at the University of Virginia from 1924 to 1937 and was also a visiting professor at the University of Chicago. Warns of Global Atom Warfare

Among those urging creation of a world union after World War II, Professor Barr cautioned in September 1945: "To trust any league, alliance, association or treaty among sovereign nations to outlaw the production or use of atomic bombs is to trust swamps to cease producing mosquitoes." He was the president of the Foundation for World Government from 1948 until 1958.

Professor Barr also taught at the Newark College of Arts and Sciences of Rutgers University from 1955 to 1964. He was the author of 11 books, including histories of Europe and Greece, a cookbook, a children's book and a novel, "Purely Academic," which was described by The Times's reviewer as an "acid critique of college life."

In his last public role, Professor Barr was a fellow at the Center for the Study of Democratic Institutions in Santa Barbara, Calif., from 1966 to 1969.

During the campus disorders of the late 1960's, Professor Barr praised college administrators who had dealt with students thoughtfully, instead of dismissing them as "truculent petitioners."

"Such administrators," he said at the center in May 1969, "have by their behavior suggested how much more exciting a college or university can be than a fortress or a guerrilla camp."

Upon leaving the center, Professor Barr and his wife, Gladys Baldwin Barr, whom he married in 1921, moved to Kingston, N.J. Mrs. Barr died in 1974. Professor Barr had been confined to a nursing home since May 1979.

The couple had no children. Professor Barr is survived by a nephew, William Alexander Barr of Gibson Island, Md., and a cousin, Sarah Patton Boyle of Arlington, Va.

St. John's College is planning a memorial service.

https://en.wikipedia.org/wiki/Stringfellow_Barr

2019-12-12-wikipedia-stringfellow-barr.pdf /

Stringfellow Barr (January 15, 1897, in Suffolk, Virginia – February 3, 1982, in Alexandria, Virginia) was a historian, author, and former president of St. John's College in Annapolis, Maryland, where he, together with Scott Buchanan, instituted the Great Books curriculum.

Career[edit]

Barr was the editor of *Virginia Quarterly Review* from 1931–1937.[1] He established and was president of the Foundation for World Government from 1948 to 1958. In the 1950s he taught classics at Rutgers University.

Barr wrote compact yet lucid historical surveys of three major periods of western history. Two of his books, *The Will of Zeus* and *The Mask of Jove* deal with the Greeks and Romans, respectively. He also wrote *The Pilgrimage of Western Man*, dealing with western history from the Renaissance through the early post-World War II era.[2]

His nickname was "Winkie" [1].

In a 1951 *New York Post* column, Arthur Schlesinger Jr. mocked Barr as belonging to the "solve-the-Russian-problem-by-giving-them-money school," and said, of him and two others, "None of these gentlemen is a Communist, but none of them objects very much to Communism. They are the Typhoid Marys of the left, bearing the germs of the infection even if not suffering obviously from the disease."[2]

Barr's views on the poor quality of American education and an American society driven by consumerist ideology are presented in ironic terms in *Purely Academic* (1958), a classic academic novel set in an anonymous Corn Belt university during the McCarthy period, as when a character in the story says that

Many observers here and abroad note a kind of higher illiteracy in our college graduates. But we like it that way. In our cars we like horsepower; in our studies we like slow-motion and low-gear. In education the intellectually second-rate does not shock us. To insist on the first-rate would be arrogant. Anyhow, if we are so second-rate, how come we are the richest nation in recorded history and the fattest people on earth? [3]

In 1959, Barr was one of a number of signatories to a petition asking the U. S. Congress to abolish the House Committee on Unamerican Activities. Other notable signatories included Eleanor Roosevelt and Reinhold Niebuhr.

Barr wrote *The Kitchen Garden Book* (New York: Viking Press, 1956) with Stella Standard. The *Kitchen Garden* is a manual on growing and cooking common vegetables.

New York Times reviewer Edmund Fuller called his 1958 novel, *Purely Academic*, "bitterly hilarious," "sadistically satirical," and "funny and appalling." [3]

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Housatonic

Philip Barr ("Pesach") (born 1872)

- **Born -** [HL0020][GDrive] 1872 in **Berdychiv, Zhytomyr Oblast, Ukraine (in 1872, this was Russia) Saved version**: [HK000Y][GDrive] / **Live Version:** 🔵**Berdychiv, Ukraine**
- **Death -** November 05, 1940 (age 68) in New York, New York, United States
- **PARENTS -**
- **MARRIAGE - Wife -** Rebecca Pelam Barr
- **CHILDREN :**
  - **Simon Pelham Barr** (born 1892) (Married **Estelle de Young Barr** (born 1893))
  - **David S Barr** (born 1894) (Married **Elinor Sachs Barr (Born 1896)** , who is the sister of **Alexander Sachs** (born 1893))
  - Leonore Barr Schimmel (Married **Michael Schimmel** (born 1896))
  - **Mae (Barr) Gould** (see notes in B - Barr family)
  -
- **SIBLINGS:**
  - ??
- **OTHER FAMILY RELATIONSHIPS** :
  - Grandchildren :
    - Donald Barr (born 1921)
- **Profession** - It appears that Philip Barr worked in the "furs" trade ("furrier"); see the 1920 census.

Timeline for Philip Barr

Immigration to England - Between 1872 and 1890 (possibly connected to "May Laws" of 1882)

- *" [The] paternal grandfather [of **William Pelham Barr (born 1950)**] was **[Simon] Pelham Barr**, an economist (**Simon Pelham Barr**, the son of **Philip Barr** and **Rebecca Palem/Pecham/Pelham**). [...] Pelham was born in England, to Jewish parents from Poland and/or Russia. Rebecca was the daughter of Rachael. "*
  - See [HL0023][GDrive]
- **1882 - "May Laws" of the Russian Empire - Did this encourage a young Philip Barr family to move to London (before he had children) ?**
  - **Saved version** : [HK000Y][GDrive] / **Live Version:** 🔵**Berdychiv, Ukraine** :
  - *"In 1847, 23,160 Jews resided in Berdychiv and by 1861 the number doubled to 46,683. Berdychiv became the city with the largest share of Jewish population in Ukraine and the Russian Empire. The May Laws of 1882 and other government persecutions affected Jewish population and in 1897, out of the town's population of 53,728, 41,617 (about 80%) were Jewish.[2] 58% of Jewish males and 32% of Jewish females were literate. "*

1901 Census - ENGLAND

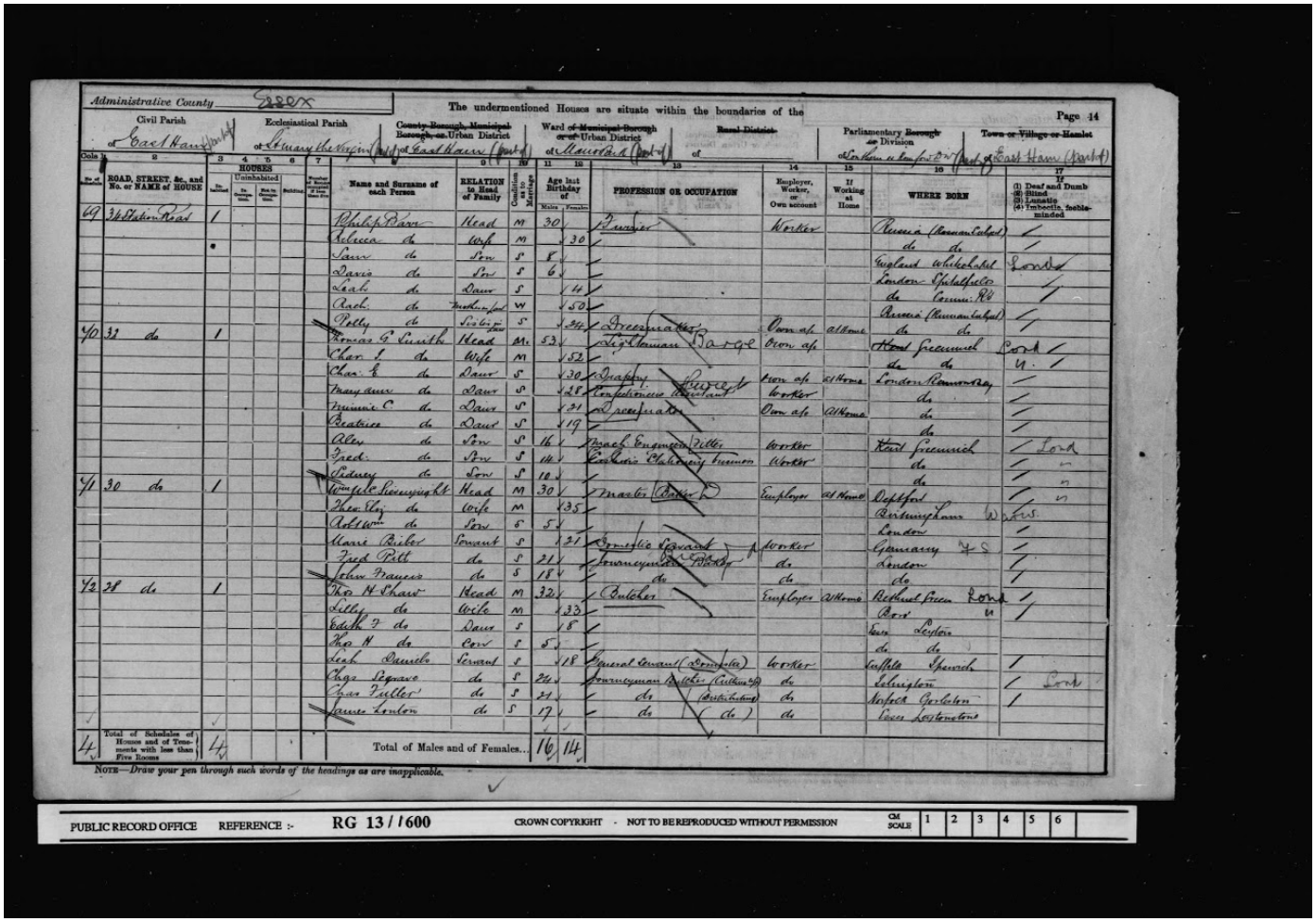
1900 census in England for barr family. Full transcript : [HS0016][GDrive]

Record Transcription:
1901 England, Wales & Scotland Census
34, Station Road, East Ham, West Ham, London & Essex, England
Learn about this record set

Household Members

First name(s)	Last name	Relationship	Marital status	Sex	Age	Birth year	Occupation	Birth place
Philip	Barr	Head	Married	Male	30	1871	Furrier	Russia
Rebecca	Barr	Wife	Married	Female	30	1871	-	Russia
Sam	Barr	Son	Single	Male	8	1893	-	Whitechapel, London, England
Davis	**Barr**	**Son**	**Single**	**Male**	**6**	**1895**	**-**	**Spitalfields, Middlesex, England**
Leah	Barr	Daughter	Single	Female	4	1897	-	London, England
Rach	Barr	Mother-In-Law	Widow	Female	50	1851	-	Russia
Polly	Barr	Sister-In-Law	Single	Female	24	1877	Dressmaker	Russia

[HS0017][GDrive]



[HS0018][GDrive]

1907 - Philip Barr and his family immigrate to the United States (New York City)

THIS immigration date is visible on the 1910 Census ([HS0015][GDrive]) and the 1920 Census.

The **RMS Umbria:** Berdychiv, Ukraine

This MIGHT be a record of the voyage in 1907 - Transcript : [HJ000C][GDrive]

Record Transcription:
New York City Passenger Lists, 1820-1957
Learn about this record set

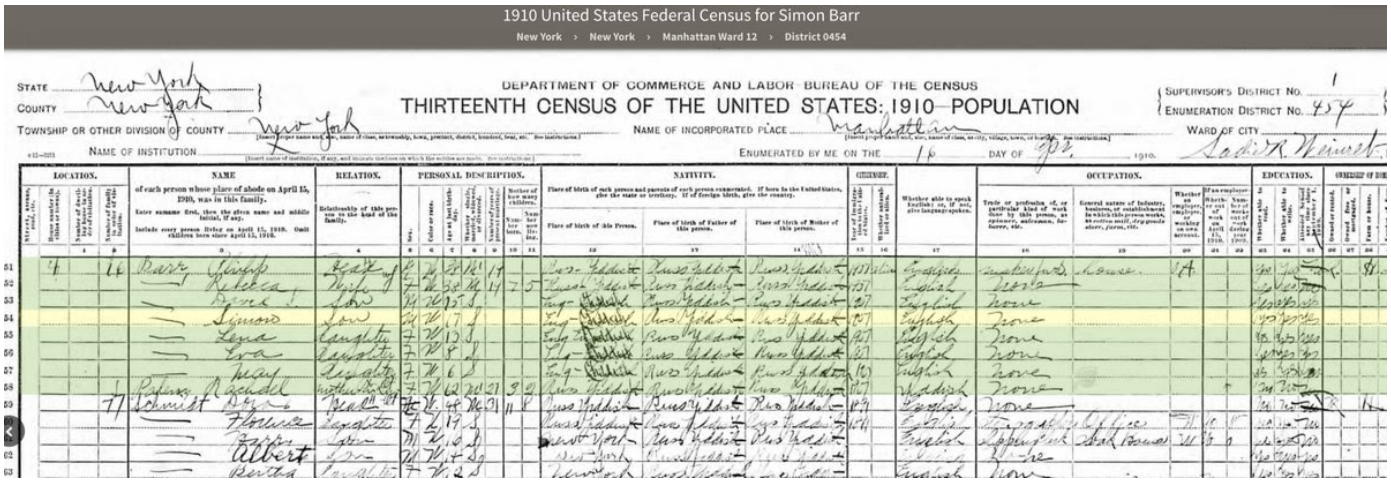
First name(s)	Phillip
Last name	Barr
Role	Passenger
Others	Departure port relation (MOTHER): Mrs Barr, Arrival port relation (BROTHER-IN-LAW): Charles Stoon
Sex	Male
Age	36y
Birth year	1871
Nationality	Russia, Russian
Residence	London, England
Year	1907
Departure port	Liverpool
Arrival place	New York
Ship name	Umbria
Country	United States
Collection	New York City Passenger Lists, 1820-1957
NARA publication number	M237 and T715
Record set	United States, Passenger And Crew Lists
Category	Immigration & Travel
Subcategory	Passenger Lists
Collections from	Americas, United States

[HJ000D][GDrive]

1910 Census

Original Tweet Source : [HT0030][GDrive]

The full census sheet for 1910 (and at a higher resolution) is available here : [HS0015][GDrive]



[HT0031][GDrive]

1915 (Dec 1) - Marriage of son Simon Pelham Barr to Estelle/Stella (DeYoung/De Young)

Married **Estelle DeYoung** ("psychologist"). See "Science Fiction and Fantasy Literature, A Checklist, 1700-1974, Volume Two of Two, contains Contemporary Science Fiction Authors II. " ([HB000Z][GDrive])

Transcript of wedding - [HL0021][GDrive]

Record Transcription:
United States Marriages

Learn about this record set

First name(s)	Estelle
Last name	Deyoung
Sex	Female
Race	White
Marital status	Single
Age	22
Birth year	1893
Father's first name(s)	Samuel A
Father's last name	-
Mother's first name(s)	Esther
Mother's last name	Sonpause
Event	Marriage
Year	1915
Event date	01 Dec 1915
Location	Manhattan
Place	Manhattan, New York, United States
County	New York
State	New York
Country	United States
Spouse's first name(s)	Simon
Spouse's last name	Barr
Spouse's sex	Male
Spouse's race	White
Spouse's marital status	Single
Spouse's age	23
Spouse's birth year	1892
Spouse's father's first name(s)	Philip
Spouse's father's last name	-
Spouse's mother's first name(s)	Rebecca
Spouse's mother's last name	Pecham
FamilySearch film number	001614231
Record set	United States Marriages
Category	Birth, Marriage & Death (Parish Registers)

[HL0022][GDrive]

1920 Census - Philip Barr family (Simon Pelham Barr has moved out - Not at parent's residence anymore)

Philip Barr is a "Maker Furs", and works out of the house (family home). The 1920 Census shows that Philip Barr is a "Furrier", validating the "Furs" part of his trade.

Transcript : [HS0011][GDrive] / Full Census form : [HS0012][GDrive]

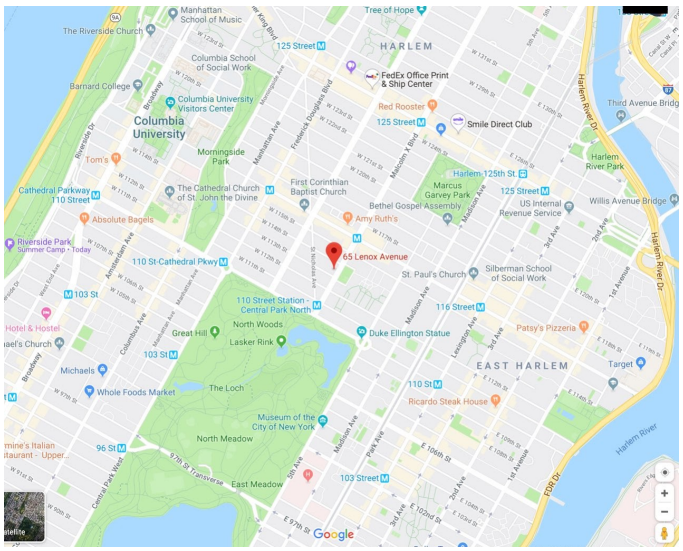
PLACE OF ABODE.				NAME of each person whose place of abode on January 1, 1920, was in this family. Enter surname first, then the given name and middle initial, if any. Include every person living on January 1, 1920. Omit children born since January 1, 1920.	RELATION.	TENURE.		PERSONAL DESCRIPTION.				CITIZENSHIP.			EDUCATION.		
Street, avenue, road, etc.	House number or farm, etc. (See Instructions.)	Number of dwelling house in order of visitation.	Number of family in order of visitation.		Relationship of this person to the head of the family.	Home owned or rented.	If owned, free or mortgaged.	Sex.	Color or race.	Age at last birthday.	Single, married, widowed, or divorced.	Year of immigration to the United States.	Naturalized or alien.	If naturalized, year of naturalization.	Attended school any time since Sept. 1, 1919.	Whether able to read.	Whether able to write.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
	65	6	1	Barr Philip	Head	R		M	W	48	M	1907	Na	1913		yes	yes
				— Rebecca	Wife			F	W	47	M	1907	Na			yes	yes
				— David	Son			M	W	25	S	1907	Na	1913		yes	yes
				— Lorna	Daughter			F	W	22	S	1907	Na	1919		yes	yes
				— Evelyn	Daughter			F	W	18	S	1907	Na			yes	yes
				— Mae	Daughter			F	W	16	S	1907	Na		yes	yes	yes
				— Edith	Daughter			F	W	8	S				yes	yes	yes
			23	Palen Rachel	Boarder			F	W	70	Wd	Un	Un			yes	yes

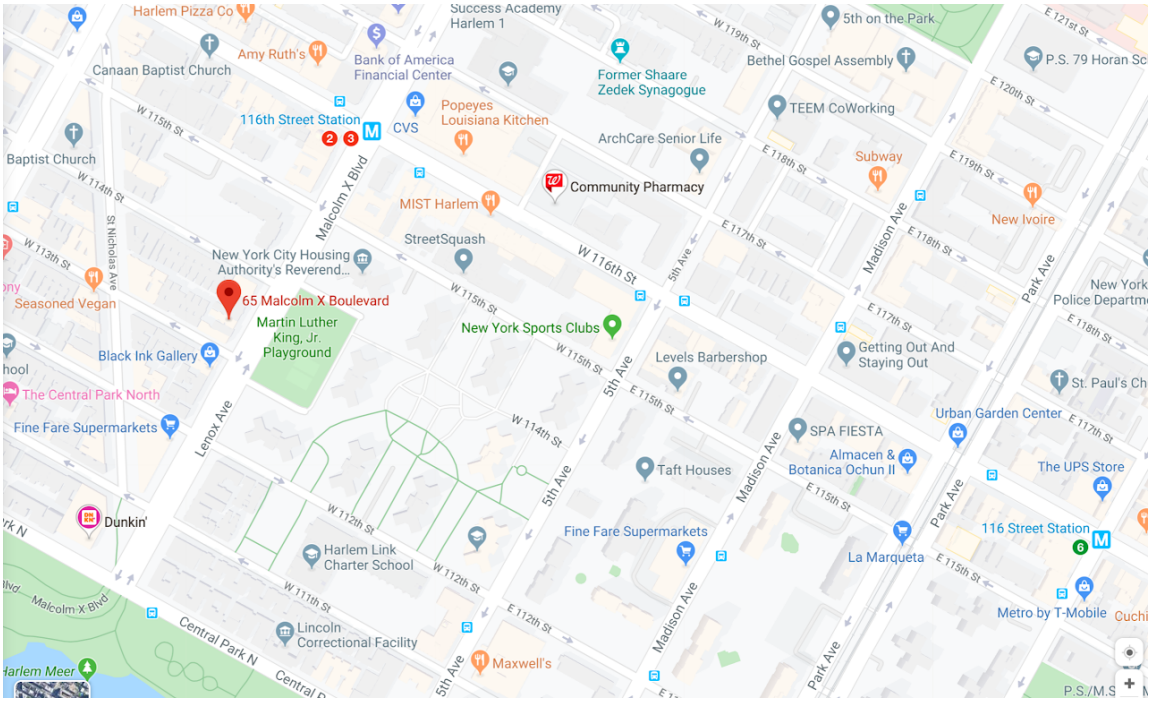
[HS0013][GDrive]

NATIVITY AND MOTHER TONGUE. Place of birth of each person and parents of each person enumerated. If born in the United States, give the state or territory. If of foreign birth, give the place of birth and, in addition, the mother tongue. (See instructions.)						Whether able to speak English.	OCCUPATION.			Number of farm schedule.
PERSON.		FATHER.		MOTHER.			Trade, profession, or particular kind of work done, as spinner, salesman, laborer, etc.	Industry, business, or establishment in which at work, as cotton mill, dry goods store, farm, etc.	Employer, salary or wage worker, or working on own account.	
Place of birth.	Mother tongue.	Place of birth.	Mother tongue.	Place of birth.	Mother tongue.					
19	20	21	22	23	24	25	26	27	28	29
Barr Philip	Russia	Russian	Russia	Russian	Russia	Russian	yes	Farmer		E.M.	
— Rebecca	Russia	Russian	Russia	Russian	Russia	Russian	yes				
— David	England	English	Russia	Russian	Russia	Russian	yes	Lawyer		O.A.	
— Lorna	England	English	Russia	Russian	Russia	Russian	yes	Clerk	Government	W	
— Evelyn	England	English	Russia	Russian	Russia	Russian	yes	Clerk	Government	W	
— Mae	England	English	Russia	Russian	Russia	Russian	yes				
— Edith	New York		Russia	Russian	Russia	Russian	yes				
Palen Rachel	Russia	Russian	Russia	Russian	Russia	Russian	yes				

[HS0014][GDrive]

Address for the 1920 US Census is **"65 Lenox Avenue"** in New York City for **Philip Barr** and his family - Location on map, and picture of buildings at this address, is shown below. Note that 64 Lenox Avenue is between West 113th Street and West 114th Street in Manhattan.





1940 (Nov) - Philip Barr passes

Death: November 05, 1940 (68) in New York, New York, United States (See [HL0020][GDrive])

BITCHUTE @Housatonic YOUTUBE @HousatonicLive ODYSEE @Housatonic BRIGHTEON @Housatonic

Housatonic

Simon Pelham Barr (born 1892)

Simon Barr in college (Columbia), age 20 (est)
[HT003E][GDrive] / Source [HT003D][GDrive]

"Simon Pelham Barr did like to have his photograph taken"
[HX000E][GDrive]

- **Born** in London [HL001Z][GDrive] on Aug 18 1892
- **Parents** **Philip Barr (born 1872)** and Rebecca Barr
- **Siblings**
  - **David S Barr** (born 1894) (Married **Elinor Sachs Barr** (born 1894))
  - Leonore Barr (Married **Michael Schimmel** (born 1896)
- **Married** Estelle De Young Barr (born 1893) [HB000Z][GDrive]
  - **Donald Barr (born 1921)**
  - Margaret Barr
- **Family (extended)**
  - Grandchildren :
    - William Pelham **Barr** (born 1950)
  - In-laws :
    - **Alexander Sachs (born 1892)**
- **Profession** - Son **Donald Barr** referred to his father **Simon Pelham Barr** as an "economist". [HB000Z][GDrive]

Etc :

- **Simon Pelham Barr** was not a tall man - 5' 3" tall as listed on his 1942 Draft Card . [HT0033][GDrive]

Timeline for Simon Pelham Barr

1901 Census - ENGLAND

1900 census in England for Barr family - For details, see Philip Barr (born 1872) .

Full transcript : [HS0016][GDrive] / Full census sheet : [HS0018][GDrive]

Record Transcription:
1901 England, Wales & Scotland Census
34, Station Road, East Ham, West Ham, London & Essex, England
Learn about this record set

Household Members

First name(s)	Last name	Relationship	Marital status	Sex	Age	Birth year	Occupation	Birth place
Philip	Barr	Head	Married	Male	30	1871	Furrier	Russia
Rebecca	Barr	Wife	Married	Female	30	1871	-	Russia
Sam	Barr	Son	Single	Male	8	1893	-	Whitechapel, London, England
Davis	**Barr**	**Son**	**Single**	**Male**	**6**	**1895**	**-**	**Spitalfields, Middlesex, England**
Leah	Barr	Daughter	Single	Female	4	1897	-	London, England
Rach	Barr	Mother-In-Law	Widow	Female	50	1851	-	Russia
Polly	Barr	Sister-In-Law	Single	Female	24	1877	Dressmaker	Russia

[HS0017][GDrive]

1907 - Family (with father Philip Barr) immigrate to the United States (New York City)

THIS immigration date is visible on the 1910 Census ([HS0015][GDrive]) and the 1920 Census.

The **RMS Umbria:** **Berdychiv, Ukraine**

This MIGHT be a record of the voyage in 1907 - Transcript : [HJ000C][GDrive]

Record Transcription:
New York City Passenger Lists, 1820-1957
Learn about this record set

First name(s)	Phillip
Last name	Barr
Role	Passenger
Others	Departure port relation (MOTHER): Mrs Barr, Arrival port relation (BROTHER-IN-LAW): Charles Stoon
Sex	Male
Age	36y
Birth year	1871
Nationality	Russia, Russian
Residence	London, England
Year	1907
Departure port	Liverpool
Arrival place	New York
Ship name	Umbria
Country	United States
Collection	New York City Passenger Lists, 1820-1957
NARA publication number	M237 and T715
Record set	United States, Passenger And Crew Lists
Category	Immigration & Travel
Subcategory	Passenger Lists
Collections from	Americas, United States

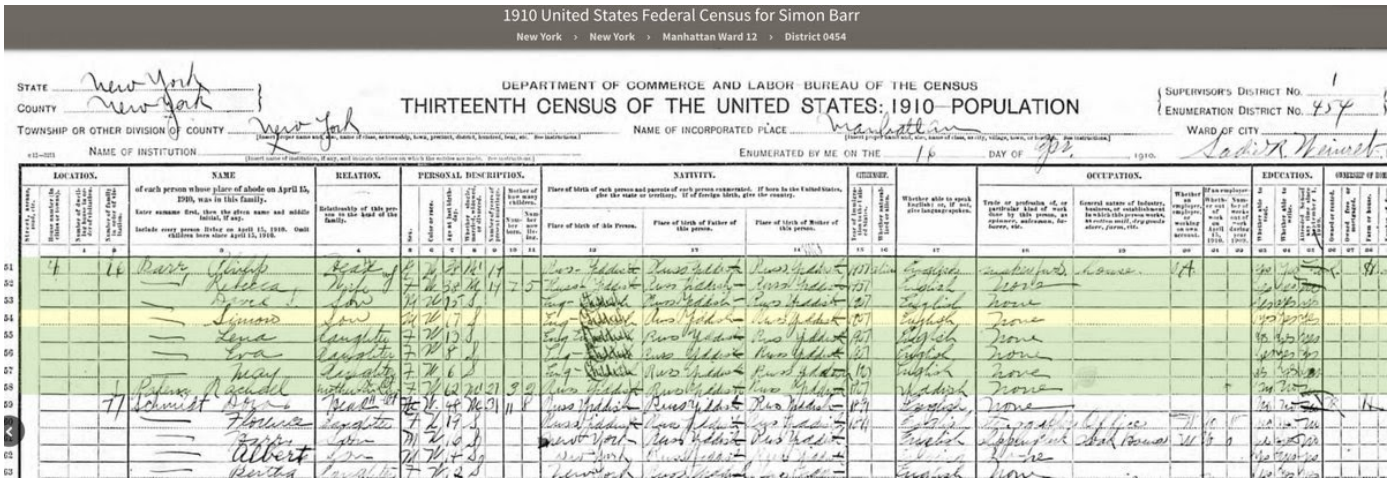
[HJ000D][GDrive]

1910 Census

"Simon has disappeared from his name an he now goes by "Pelham Barr". He married Estella De Young, and Donald E. Barr is their son. His parents are now said to be from Poland." Original Tweet Source : [HT0030][GDrive]

Philip Barr, the head of the family and father of **Simon Pelham Barr**, is a "Maker Furs", and works out of the house (family home). The 1920 Census shows that Philip Barr is a "Furrier", validating the "Furs" part of his trade.

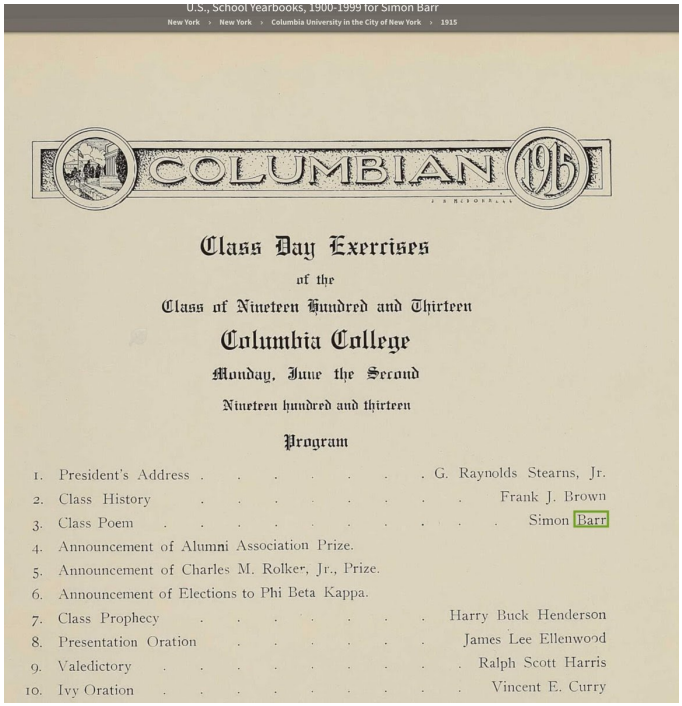
The full census sheet for 1910 (and at a higher resolution) is available here : [HS0015][GDrive]



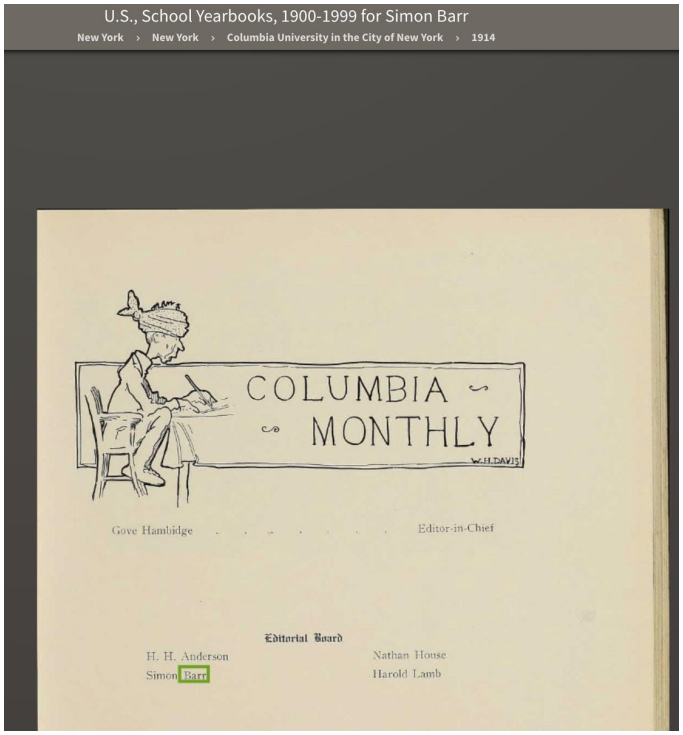
[HT0031][GDrive]

1910-1913 - Attended Columbia University

- Although interested in writing (and poetry), it has been described that Simon Pelham Barr studied Chemistry [HB0016][GDrive]
- Simon Barr matriculated to Columbia University in 1911. He is referred to in the following yearbook excerpts [HT0038][GDrive] :
- Simon Barr, "Columbia Monthly" writer (Source on Twitter : [HT003A][GDrive]) :



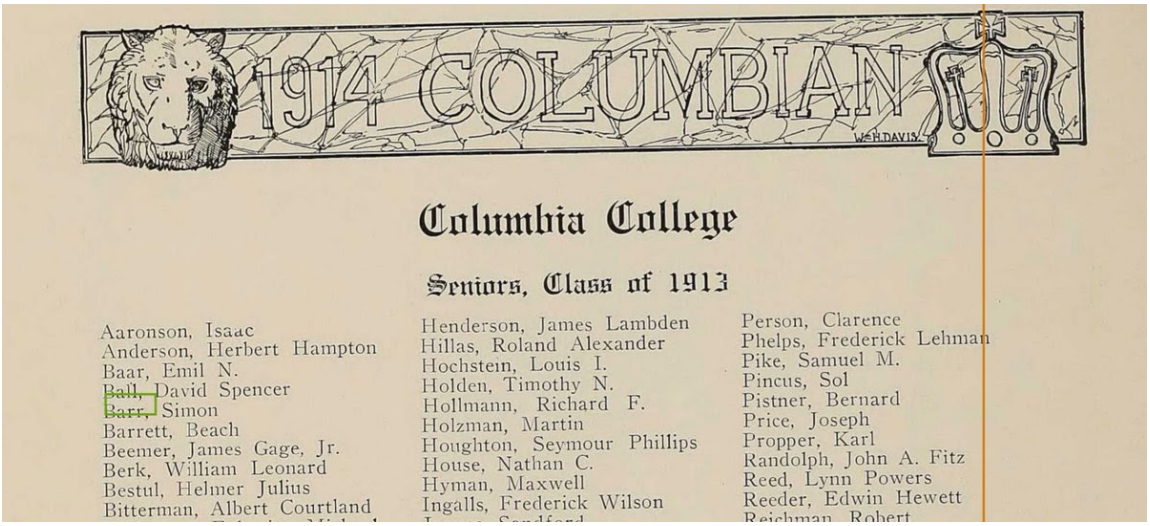
[HT0039][GDrive]



[HT003B][GDrive]

1913 : Columbia senior class

Source on Twitter : [HT0036][GDrive]



[HT0037][GDrive]

Simon Barr in the "Peithologian Society"

Tweet that discovered this is [HT0034][GDrive] .

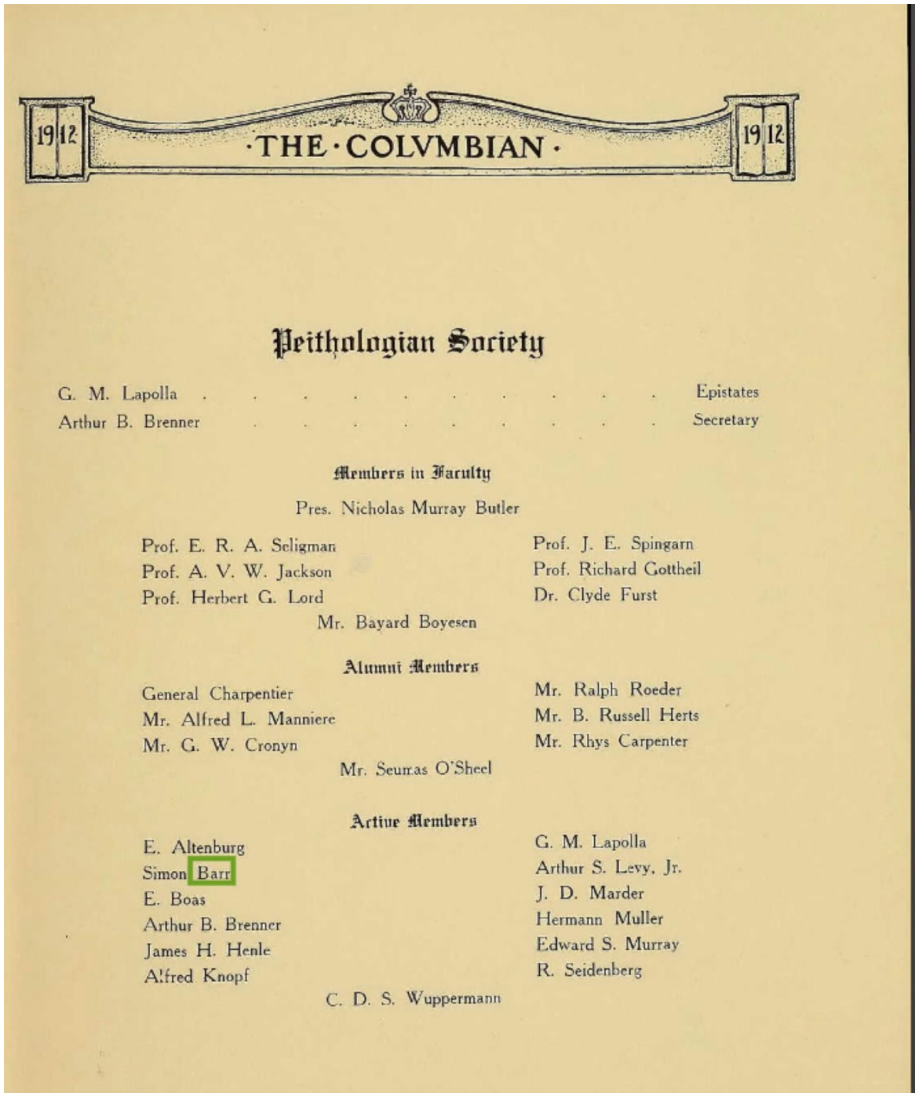
What is the Peithologian Society ?

*"The **Peithologian Society** was an undergraduate debate society at Columbia University. It was founded in 1806, four years after Columbia's first literary society, the **Philolexian Society** , by freshmen who were disenfranchised by Philolexian's requirement that its members be upperclassmen. Its emphasis on debate, composition, and rhetoric was similar to Philo's literary aims, and the two societies shared other superficial characteristics as well. Philo adopted light blue as its official color, while Peithologian adopted white (Columbia later appropriated the two hues as its own official school colors). Whereas Philolexian's symbol was a rising sun, Peithologian's was a star. Its Latin motto was "Vitam Impendere Vero" meaning, roughly, "To devote one's life to truth." "*

What is the Philolexian Society ?

*"The **Philolexian Society** of Columbia University is one of the oldest college literary and debate societies in the United States, and the oldest student group at Columbia. Founded in 1802, the Society aims to "improve its members in Oratory, Composition and Forensic Discussion." The name Philolexia is Greek for "love of discourse," and the society's motto is the Latin word Surgam, meaning "I shall rise." The society traces its roots to a literary society founded by Alexander Hamilton in the 1770s.*

*Philolexian (known to members as "Philo," pronounced with a long "i") has been called the "oldest thing at Columbia except the College itself," and it has been an integral part of Columbia from the beginning, providing the institution with everything from its colors, Philolexian Blue (along with White, from her long-dispatched rival **Peithologian Society**), to some of its most solemn traditions and many of its most noted graduates. Members are admitted after a highly selective evaluation process and are sworn to secrecy thereafter. "*



1912 ·THE·COLVMBIAN· 1912

Peithologian Society

G. M. Lapolla . . . . . Epistates
Arthur B. Brenner . . . . . Secretary

Members in Faculty

Pres. Nicholas Murray Butler

Prof. E. R. A. Seligman
Prof. A. V. W. Jackson
Prof. Herbert G. Lord
Prof. J. E. Spingarn
Prof. Richard Gottheil
Dr. Clyde Furst
Mr. Bayard Boyesen

Alumni Members

General Charpentier
Mr. Alfred L. Manniere
Mr. G. W. Cronyn
Mr. Ralph Roeder
Mr. B. Russell Herts
Mr. Rhys Carpenter
Mr. Seumas O'Sheel

Active Members

E. Altenburg
Simon Barr
E. Boas
Arthur B. Brenner
James H. Henle
Alfred Knopf
G. M. Lapolla
Arthur S. Levy, Jr.
J. D. Marder
Hermann Muller
Edward S. Murray
R. Seidenberg
C. D. S. Wuppermann

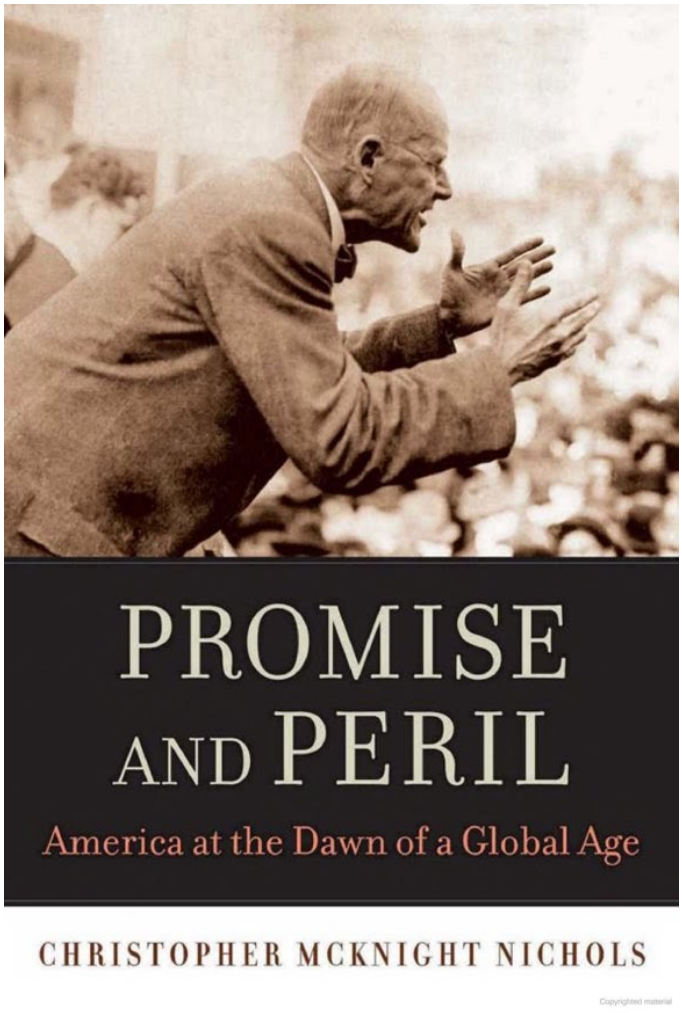
[HT0035][GDrive]

1911 - 1913 (est) - College roommate was Randolph Bourne

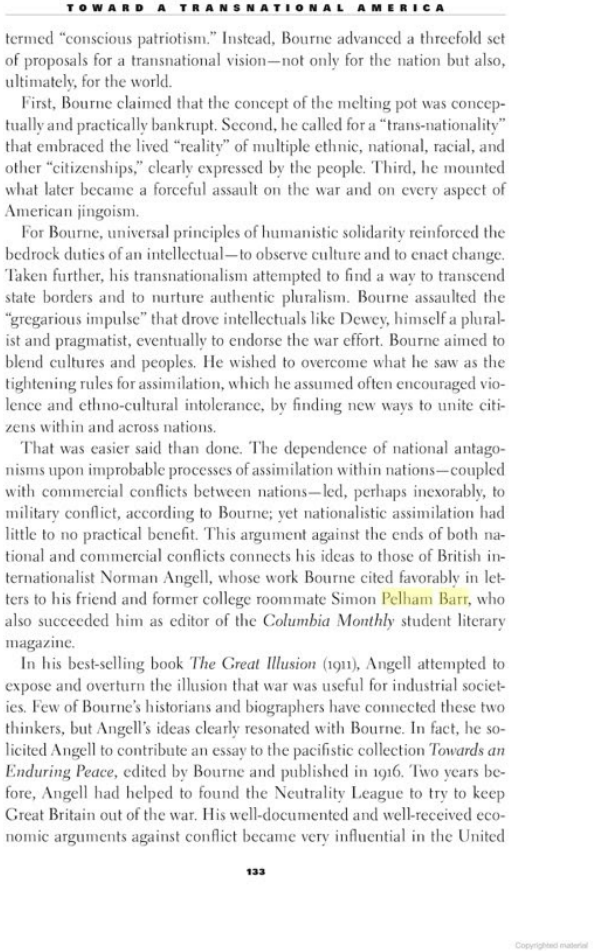
🔵**Randolph Bourne** is *"a progressive writer and intellectual born in Bloomfield, New Jersey, and a graduate of Columbia University. Bourne is best known for his essays, especially his unfinished work "The State," discovered after he died."* Also went to Columbia.

Referred to in page 133 of **Promise and Peril : America at the Dawn of the Global Age** " (written by **Christopher McKnight Nichols**). Google book can be purchased at [HB0010] .

*"This was easier said than done. The dependence of national antagonisms upon improbable process of assimilation within nations - couples with commercial conflicts between nations - led, perhaps inexorably, to military conflict, according to [🔵**Randolph Bourne**] ; yet nationalistic assimilation had little to no practical benefit. This argument against the ends of both national and commercial conflicts connects his ideas to those of British Internationalist **Normal Angell**, whose work Bourne cited favorably in letters to his friends and former college roommate **Simon Pelham Barr**, who also succeeded him as editor of the Columbia Monthly student literary magazine."*



[HB0012][GDrive]



TOWARD A TRANSNATIONAL AMERICA

termed "conscious patriotism." Instead, Bourne advanced a threefold set of proposals for a transnational vision—not only for the nation but also, ultimately, for the world.

First, Bourne claimed that the concept of the melting pot was conceptually and practically bankrupt. Second, he called for a "trans-nationality" that embraced the lived "reality" of multiple ethnic, national, racial, and other "citizenships," clearly expressed by the people. Third, he mounted what later became a forceful assault on the war and on every aspect of American jingoism.

For Bourne, universal principles of humanistic solidarity reinforced the bedrock duties of an intellectual—to observe culture and to enact change. Taken further, his transnationalism attempted to find a way to transcend state borders and to nurture authentic pluralism. Bourne assaulted the "gregarious impulse" that drove intellectuals like Dewey, himself a pluralist and pragmatist, eventually to endorse the war effort. Bourne aimed to blend cultures and peoples. He wished to overcome what he saw as the tightening rules for assimilation, which he assumed often encouraged violence and ethno-cultural intolerance, by finding new ways to unite citizens within and across nations.

That was easier said than done. The dependence of national antagonisms upon improbable processes of assimilation within nations—coupled with commercial conflicts between nations—led, perhaps inexorably, to military conflict, according to Bourne; yet nationalistic assimilation had little to no practical benefit. This argument against the ends of both national and commercial conflicts connects his ideas to those of British internationalist Norman Angell, whose work Bourne cited favorably in letters to his friend and former college roommate Simon Pelham Barr, who also succeeded him as editor of the *Columbia Monthly* student literary magazine.

In his best-selling book *The Great Illusion* (1911), Angell attempted to expose and overturn the illusion that war was useful for industrial societies. Few of Bourne's historians and biographers have connected these two thinkers, but Angell's ideas clearly resonated with Bourne. In fact, he solicited Angell to contribute an essay to the pacifistic collection *Towards an Enduring Peace*, edited by Bourne and published in 1916. Two years before, Angell had helped to found the Neutrality League to try to keep Great Britain out of the war. His well-documented and well-received economic arguments against conflict became very influential in the United

133

[HB0011][GDrive]

1915 (Dec 1) - Marriage of Simon Pelham Barr to Estelle/Stella (DeYoung/De Young)

Married **Estelle DeYoung** ("psychologist"). See "Science Fiction and Fantasy Literature, A Checklist, 1700-1974, Volume Two of Two, contains Contemporary Science Fiction Authors II. " ([HB000Z][GDrive])

Transcript of wedding - [HL0021][GDrive]

Record Transcription:
United States Marriages

Learn about this record set

First name(s)	Estelle
Last name	Deyoung
Sex	Female
Race	White
Marital status	Single
Age	22
Birth year	1893
Father's first name(s)	Samuel A
Father's last name	-
Mother's first name(s)	Esther
Mother's last name	Sonpause
Event	Marriage
Year	1915
Event date	01 Dec 1915
Location	Manhattan
Place	Manhattan, New York, United States
County	New York
State	New York
Country	United States
Spouse's first name(s)	Simon
Spouse's last name	Barr
Spouse's sex	Male
Spouse's race	White
Spouse's marital status	Single
Spouse's age	23
Spouse's birth year	1892
Spouse's father's first name(s)	Philip
Spouse's father's last name	-
Spouse's mother's first name(s)	Rebecca
Spouse's mother's last name	Pecham
FamilySearch film number	001614231
Record set	United States Marriages
Category	Birth, Marriage & Death (Parish Registers)

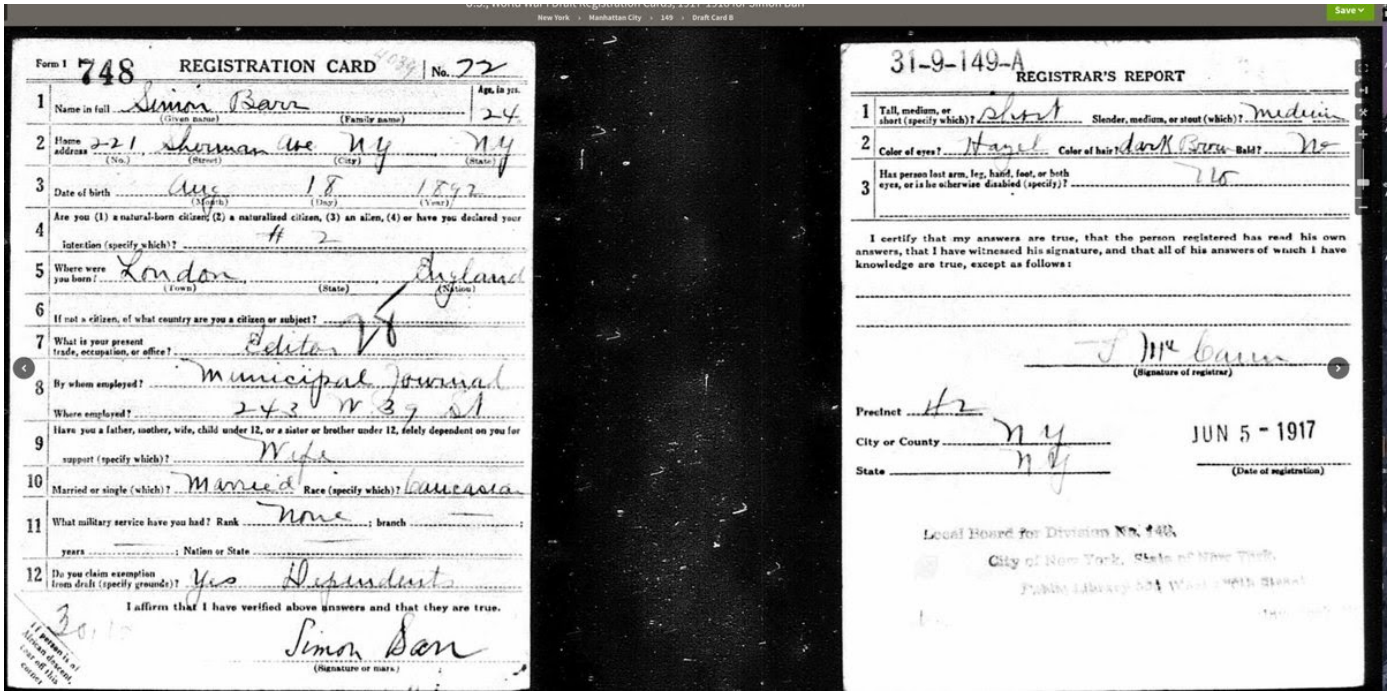
[HL0022][GDrive]

Image of 1915 marriage transcript - See Source image : [HL004G][GDrive] / [HL004H][GDrive]

1917 Draft Card

Provided in a Tweet : [HT0032][GDrive] . From this Draft Card, we learn the following about Simon Barr in 1917 :

- Employed at "**Municipal Journal**" (Editor) (He was the assistant editor , as later verified).
- Living at "**221 Sherman Ave NY**", which near the northern-most point of Manhattan.
- Born in **London, England.**



Form 1 748 REGISTRATION CARD No. 72

1 Name in full: Simon Barr (Given name) (Family name) — Age, in yrs.: 24
2 Home address: 221 Sherman Ave NY (No.) (Street) (City) (State) — NY
3 Date of birth: Aug 18 1892 (Month) (Day) (Year)
4 Are you (1) a natural-born citizen, (2) a naturalized citizen, (3) an alien, (4) or have you declared your intention (specify which)? #2
5 Where were you born? London (Town) (State) England (Nation)
6 If not a citizen, of what country are you a citizen or subject? —
7 What is your present trade, occupation, or office? Editor
8 By whom employed? Municipal Journal
Where employed? 243 W 39 St
9 Have you a father, mother, wife, child under 12, or a sister or brother under 12, solely dependent on you for support (specify which)? Wife
10 Married or single (which)? Married Race (specify which)? Caucasian
11 What military service have you had? Rank None; branch —; years —; Nation or State —
12 Do you claim exemption from draft (specify grounds)? Yes Dependent

I affirm that I have verified above answers and that they are true.

Simon Barr (Signature or mark)

31-9-149-A REGISTRAR'S REPORT

1 Tall, medium, or short (specify which)? Short Slender, medium, or stout (which)? Medium
2 Color of eyes? Hazel Color of hair? Dark Brown Bald? No
3 Has person lost arm, leg, hand, foot, or both eyes, or is he otherwise disabled (specify)? No

I certify that my answers are true, that the person registered has read his own answers, that I have witnessed his signature, and that all of his answers of which I have knowledge are true, except as follows:

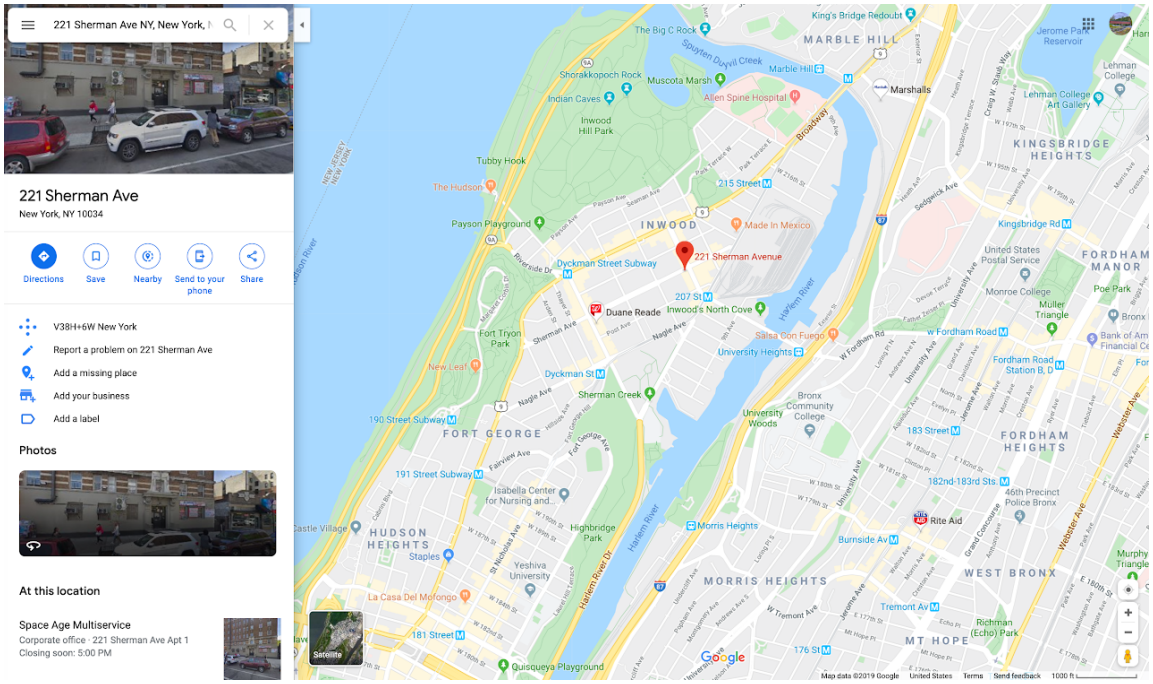
J Mc Barr (Signature of registrar)

Precinct 42
City or County NY
State NY

JUN 5 - 1917 (Date of registration)

Local Board for Division No. 142
City of New York, State of New York

[HT0033][GDrive]



221 Sherman Ave NY", which near the northern-most point of Manhattan.

1918 - Assistant Editor for "Municipal Journal and Engineer"

The periodical "**Municipal Journal and Engineer**", was later renamed to "**Municipal Journal and public works** ". The "**Municipal Journal and Engineer**" was published in Manhattan at **243 West 39th Street** .

Here is the full 1918 Volume 45 (minus the images, downloaded from Google) : [HP001J][GDrive]

Below is a clip from July 13 1918, page 31, is below that shows "**Simon Barr**" as the Assistant Editor.

Below that, we see that Simon Barr was the assistant Editor of Municipal Journal up to early 1920, but stopped at some time before July 1920 .

Municipal Journal

Published weekly at
243 West 39th Street
by
Municipal Journal and Engineer, Inc.

S. W. HUME, President
J. T. MORRIS, Treas. and Mgr. A. PRESCOTT FOLWELL, Sec'y

A. PRESCOTT FOLWELL, Editor
SIMON BARR, Assistant Editor
CHARLES CARROLL BROWN, Western Editorial Representative

Telephone, 9591 Bryant, New York
Western Office, Monadnock Block, Chicago

Subscription Rates.

United States and possessions, Mexico and Cuba.....$3.00 per year
All other countries..... 4.00 per year
Entered as second-class matter, January 3, 1906, at the Post Office at New York, N. Y., under the Act of Congress of March 3, 1879.

Change of Address.

Subscribers are requested to notify us of changes of address, giving both old and new addresses.

Contributed Articles and Reports.

Contributions suitable for this paper, either in the form of special articles or as letters discussing municipal matters, are invited and paid for.

City officials and civic organizations are particularly requested to send to Municipal Journal regularly their annual and special reports.

Information Bureau.

Municipal Journal's Information Bureau, developed by twenty-one years' research and practical experience in its special field, is at the command of our subscribers at all times and without charge.

THE CITIES ARE DUMB.

The urgencies and forces of the war, with their governmental penetration into every phase of national existence, have given impetus to the effective organization of practically every agency, social, professional, industrial, commercial and economic. Whatever their purposes or are expressed and may be defended. The failure of the cities to organize for mutual benefit is unjustly depriving the people of protection of vital interests and may result in grave hazards.

The need of such an organization or of proper representation has been demonstrated time and again since the war began. The curtailment of public improvements through a multitude of regulations has been controlled by vacillating, vague and frequently incoherent policies and utterances. One reason is that the government officials concerned have been confronted with gigantic and urgent problems and the municipalities have not presented to them the proper necessary information and opinions to help them in solving these problems in the best way. If the cities have suffered unnecessarily thereby it is their own fault.

One of the most important situations facing the citizens at present is that of the public utilities which are demanding—and frequently receiving—higher rates and fares. Conditions have gone beyond the hands of state regulating commissions, before which, in normal times, the interests of the cities and their consumers would have been safeguarded. The utilities, the employes of the companies and the financial forces are more than effectively represented. Their cases are being presented with the utmost intelligence and insistence. But there is no spokesman for the consumers and the cities. At the recent hearing on street railway fares, only two or three cities immediately threatened sent representatives. It is the same with power rates, water power developments, financing and every other municipal concern.

The cities must be organized and represented—and quickly. The National Municipal League does not appear to be interested and the National Utilities Bureau has suspended operations at the crucial time. Since most of the problems arising involve public utilities of one kind or another, the American Society of Municipal Improvements, with the co-operation of the state leagues of municipalities and other special organizations of any strength, would seem to be the logical medium for securing this co-operation, and we urge it to act promptly. A working committee is needed at once. The cities

[HP001L][GDrive]

Municipal Journal & Public Works.

City County State

Published Weekly by MUNICIPAL JOURNAL & ENGINEER, INC., at 243 West 39th Street, New York
S. H. HUME, President J. T. MORRIS, Treasurer A. PRESCOTT FOLWELL, Secretary

Vol. XLVIII. NEW YORK, JANUARY 3 and 10, 1920 No. 1

Subscription Rates
United States and Possessions, Mexico and Cuba.....$3.00 per year
All other countries.....$4.00 per year
Entered as second-class matter, January 3, 1906, at the Post Office at New York, N. Y., under the Act of Congress of March 3, 1879.

Change of Address
Subscribers are requested to notify us of changes of address, giving both old and new addresses.

Telephone (New York): Bryant 9591
Western Office: Monadnock Block, Chicago

A. PRESCOTT FOLWELL, *Editor*
SIMON BARR, *Assistant Editor*

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Contents of This Issue.

OUR COMBINED ISSUES.

In spite of efforts made during the past month to catch up with our publication schedule, which the printers' strike had interrupted, the printers have found it physically impossible to do so, the holiday season adding to the difficulty. We therefore decided that the only course possible was to combine issues, publishing each week as many pages as the printers could handle. The four December issues were accordingly combined in one published last week, to finish the volume; and in this issue are combined the first two of the new volume. We hope, following this number, to issue the paper regularly on the publication date.

HOW ABOUT THE 1920 IMPROVEMENTS?

From two months to two years are required for deciding upon and preparing a well-digested and satisfactory plan for any engineering work. At least one or two months are necessary for advertising and letting, and an equal time for the contractor to make his preparations for beginning work. And ground should be broken

Jan 1920 - Simon Barr still Assistant Editor

July 1920

PUBLIC WORKS

Published Weekly at
FLORAL PARK, N. Y.
by
Municipal Journal and Engineer, Inc.
ADVERTISING, SUBSCRIPTION AND EDITORIAL OFFICES AT 243 WEST 39TH STREET, NEW YORK, N. Y.
Address all communications to the New York Office.

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A. PRESCOTT FOLWELL, Editor
FRANK W. SKINNER, Associate Editor

A Disgraceful Financial Policy

The protest on page 15 against the continued delay on the part of the city of New York to keep its sacred pledge or to pay just debts long overdue, is put in strong language but none too strong. The stinging rebuke is well merited and ought to arouse enough public attention to compel the prompt settlement, at this late date, of the claims in question.

The facts are that at the entrance of the United State into the world war there were more than thirty important subway contracts under construction, most if not all of which had been very seriously delayed by the changed conditions brought about by the war, that had already resulted in a heavy increase of the cost of labor and materials to the contractors above those costs which prevailed when the contracts were awarded, and which could not at that time be foreseen. This necessarily involved heavy losses to the contractors who were prepared to accept them and who were faithfully performing their obligations notwithstanding the fact that in many cases they had suffered great additional hardship through unexpected changes and just claims have been paid by the city and there appears to be very slight inclination of the responsible officials to liquidate these claims.

In former years contractors with the highest reputation and long city records for honest, efficient, prompt work had great difficulty in collecting just bills from the city, and have been obliged to resort to slow and costly litigation, and have generally felt that in many cases the policy of the city is to throw the greatest possible responsibility on the contractor, regardless of the merits of the case, and to pay him as little as possible and as slowly as possible for the work regardless of the just compensation.

That such conditions can prevail in New York or any other American city is not only disgraceful but perilous in that, besides discouraging the efforts of loyal and efficient contractors, it encourages a most dangerous disregard of honest obligations that is little if any less mischievous than the deliberate violation of its contracts by labor.

Profitable Co-ordination of Practical and Theoretical Considerations in Waterworks Design

There is commenced in this issue a paper on the design of the Winnipeg Aqueduct which, properly interpreted, is remarkably illuminating in its presentation of the manner in which exceptionally satisfactory technically and financial results were obtained in the design and construction of a great water supply system.

To a very thorough preliminary investigation of the subject were added a keen analysis of conditions and a judicial equating of difficulties, advantages and requirements, which enabled the design to be made in such a way as to co-ordinate the possibilities of construction and operation. The result has been the eminently successful construction, during the worst of the war period, of a large and costly aqueduct and appurtenances practically within the originally estimated time and cost,

July 1920 - Simon Barr is No longer Assistant Editor - What job did he take ?

1918 - Daughter (Margaret Barr) is born

See ... Note, could be 1917, need to verify ...

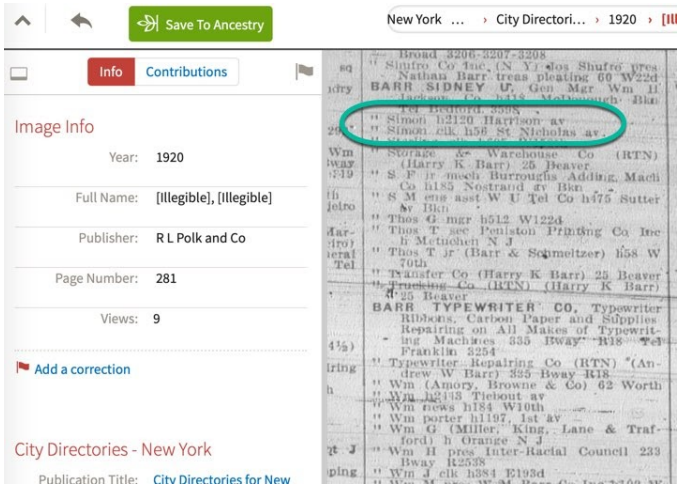
1920 Census - Simon Pelham Barr Not at parent's residence anymore

WHERE IS SIMON BARR (Or Pelham Barr) ??? There is no Simon Barr (or Pelham Barr), born in 1892, listed on any US Census for 1920

Address at this time is **"65 Lenox Avenue"** in New York City for **Philip Barr** and his family - Location on map, and picture of buildings at this address, is shown below. Note that 64 Lenox Avenue is between West 113th Street and West 114th Street in Manhattan.

See Philip Barr (born 1872) .

So where was Simon Barr living ? Note - See 1920 NYC directory clip below: [HD002E]***[GDrive] - Neither of these locations are in Manhattan, so not sure if either is correct. 2120 Harrison Ave is in the Bronx but it is close to the nothern tip of Manhattan.***



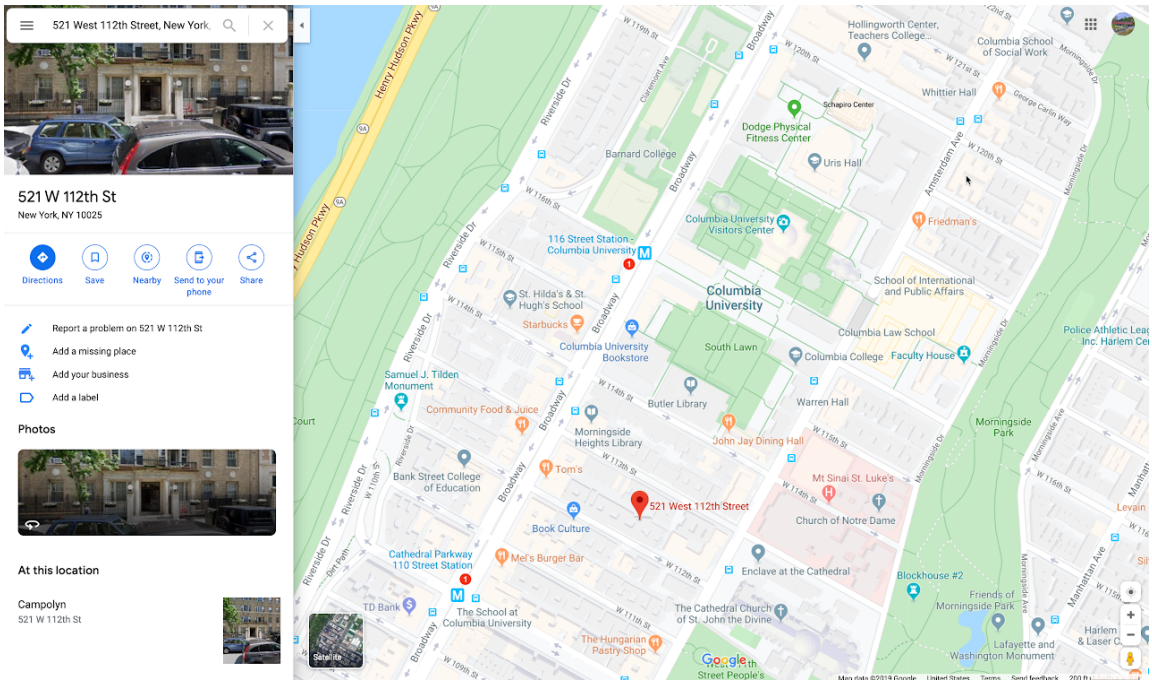
1921 (Aug 08) - Donald Barr (son) is born

Birthplace: Manhattan, New York,, United States [HL0024][GDrive] . See ... **Donald Barr (born 1921)** .

1924 (Aug 6) - Wife Estelle DeYoung Barr : School Dramas / Research

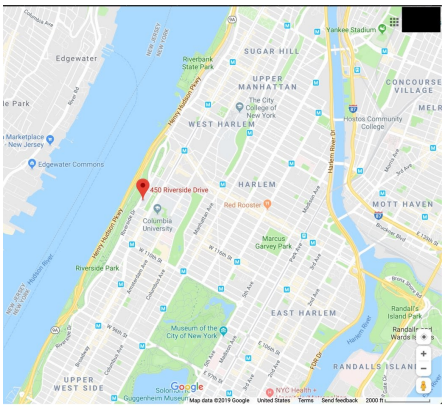
Being applied in Professsor Albert T Poffenberger's courses at Columbia University. Note that this informs us that Estelle de Young Barr is (as of August 1924) residing at 5**21 West 112th Street in Manhattan** .

See [HN00JF][GDrive] , or see the research page for **Estelle de Young Barr** (born 1893) .



1920s : Some time before the 1930 Census - Simon Barr and his family move to 450 Riverside Drive (NYC) is across the street from Columbia University

This is determined by the address that Simon Barr used for the 1930 Census ...



1929 - Drama and motion pictures - Is this Simon Pelham Barr ?

Full page : [HN00JA][GDrive]

CHURCH AND DRAMA ASSOCIATION HAS SPLIT-UP IN RANKS

Officers Connected With Motion Picture Industry Quit Jobs

BY LEMUEL F. PARTON

Copyright, 1929, by Cons. Press

New York —(CPA)—In the withdrawal of Carl E. Milliken and Will Hays from the board of directors of the Church and Drama association, a sharp issue of veracity is raised between Mr. Milliken, former governor of Maine and now secretary of the Motion Picture Producers and distributors of America, Inc., and Dr. George Reid Andrews, executive director of the Church and Drama association. Dr. Andrews said their withdrawal was due to the fact that the association had come to doubt the propriety of having representatives of the moving picture industry on its board. Mr. Milliken baldly replied that he and Mr. Hays withdrew because the association had tried to get money out of their organization.

The Rev. Dr. S. Parkes Cadman is president of the Church and Drama association. It is organized throughout the country, with a membership of about 20,000 and prominent clergymen and laymen on its directorate and managing board. For several years it has functioned in a unique manner by endorsing plays which it approved, rather than by condemning those which it disapproved. Its practice has been to include a list of plays and moving pictures thus sanctioned in a weekly bulletin sent out to its membership. This method was regarded by many liberal minded students of censorship as a possible solution of the perplexing problem of bringing public opinion to bear on the stage and cinema without recourse to negative censorship.

The experiment stirred interest at a time when the censorship menace was looming, and Mr. Hays, and Milliken accepted membership on the board. "Joint, constructive effort of public and producers in the interest of sound morality and good taste" was the objective of the association.

The break between the representatives of the motion picture industry and of the churches and their allies was sharp and unexpected. After stating that Mr. Andrews had "sought substantial amounts" for his association, Mr. Milliken says:

ASKS FOR MONEY

"On Oct. 4, 1928, Mr. Andrews, culminating a series of requests for money, addressed me as secretary of the Motion Picture Producers and Distributors of America, Inc. and said in a letter:

"Since we thus proclaimed our alliance with the motion picture group by placing Mr. Hays, yourself and Mr. Rubin on our board of directors, it would seem that financial support would be taken for granted."

"I shortly thereafter informed Mr. Andrews that we could no longer regard the church and drama association as representative of the protestant constituencies in cooperation with the motion picture industry, and our office ceased all official contact with his office."

Mr. Andrews today refused to make any statement in reply to Mr. Milliken and inquiries were referred to Pelham Barr, who denied that the organization was in any sense "representative of Protestant constituencies," and pointed out that its directorate and management included representatives of all major denominations.

The history of censorship in New York is an almost unbroken recital of futility and dissension—whether the censorship has been of the old-fashioned padlock school or the newer expedient of exalting good rather than decrying evil. Several years ago, Bishop William T. Manning, leading the committee of social service, organized a play jury, with the cooperation of the district attorney. So far as could be learned, the jury didn't even spear one over-ripe joke, and District Attorney Banton announced that he was through with it. It was dissolved. A committee of nine was then organized by producers, actors and playwrights. This also failed. During the years following 1923, the censorship problem was attacked by Bishop manning, Patrick Cardinal Hayes, John S. Sumner, the Bronx church league, the New York Federation of Churches, Judge C. F. Collins, Dr. Edward S. Young, president of the New York association for the suppression of crime, the Methodist Board of Prohibition and Public Morals, and many other organizations and individuals. They closed several plays, but most of the smutty plays collapsed before they got at them.

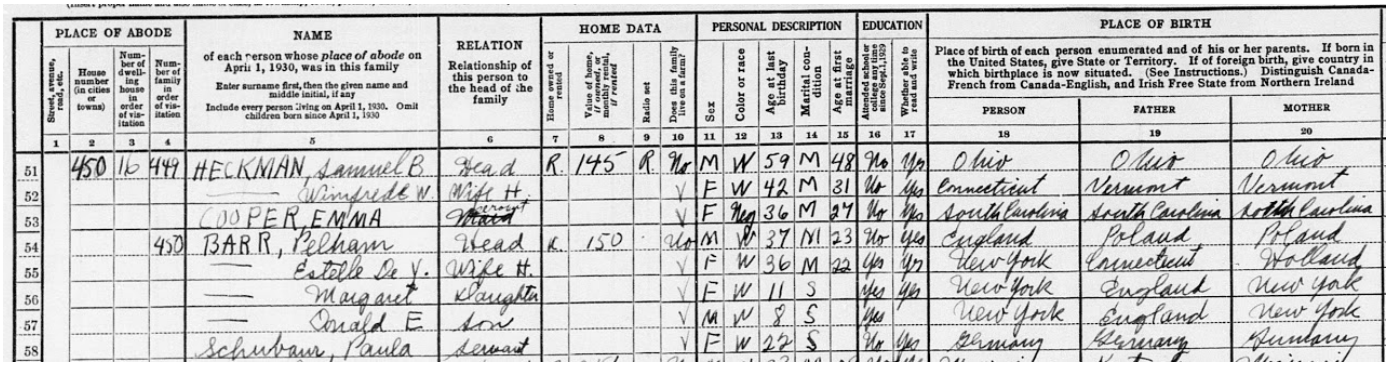
The Church and Drama association is a merger of the American Theatre association, the Church Drama association and the Drama League of America.

[HN00JB][GDrive]

1930 Census - New York

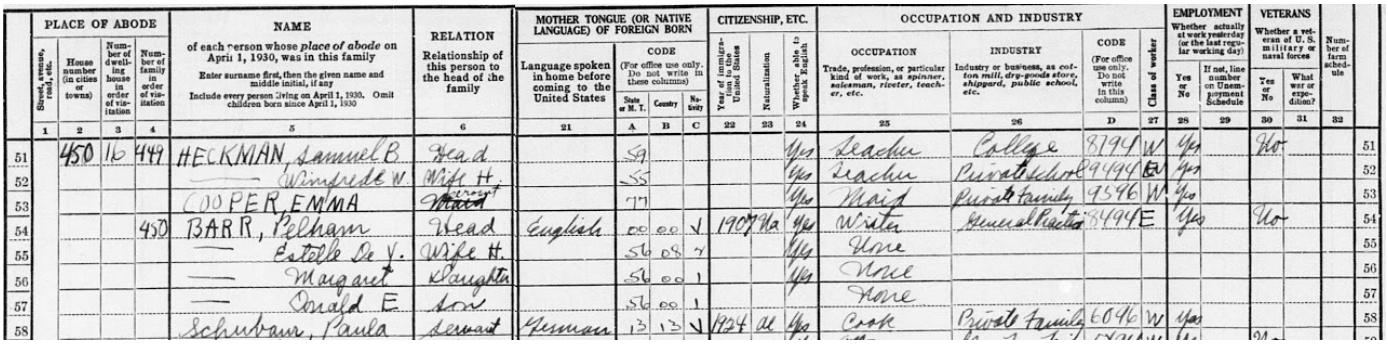
Full Census form : [HS0019][GDrive]

Simon Pelham Barr is age 37; he now refers to himself as "Pelham Barr" (no middle name). He is listed as being a "writer", working for "General Practice". Their address, as noted earlier, has changed to **450 Riverside Drive, in New York. City** .



	PLACE OF ABODE: Street, avenue, road, etc.	House number (in cities or towns)	Number of dwelling house in order of visitation	Number of family in order of visitation	NAME of each person whose *place of abode* on April 1, 1930, was in this family. Enter surname first, then the given name and middle initial, if any. Include every person living on April 1, 1930. Omit children born since April 1, 1930	RELATION: Relationship of this person to the head of the family	HOME DATA: Home owned or rented	Value of home, if owned, or monthly rental, if rented	Radio set	Does this family have a farm?	PERSONAL DESCRIPTION: Sex	Color or race	Age at last birthday	Marital condition	EDUCATION: Attended school or college any time since Sept. 1, 1929	Age at first marriage	Whether able to read and write	PLACE OF BIRTH: Place of birth of each person enumerated and of his or her parents. If born in the United States, give State or Territory. If of foreign birth, give country in which birthplace is now situated. (See Instructions.) Distinguish Canada-French from Canada-English, and Irish Free State from Northern Ireland: PERSON	FATHER	MOTHER
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
51		450	16	449	HECKMAN, Samuel B.	Head	R	145	R	No	M	W	59	M	48	No	Yes	Ohio	Ohio	Ohio
52					— Winifred W.	Wife H.					F	W	42	M	31	No	Yes	Connecticut	Vermont	Vermont
53					COOPER, EMMA	Maid					F	Neg	36	M	27	No	No	South Carolina	South Carolina	South Carolina
54				450	BARR, Pelham	Head	R	150		No	M	W	37	Wi	23	No	Yes	England	Poland	Poland
55					— Estelle De V.	Wife H.					F	W	36	M	22	Yes	Yes	New York	Connecticut	Holland
56					— Margaret	Daughter					F	W	11	S		Yes	Yes	New York	England	New York
57					— Donald E.	son					M	W	8	S		Yes		New York	England	New York
58					Schubaur, Paula	Servant					F	W	22	S		No	Yes	Germany	Germany	Germany

[HS001A][GDrive]



	PLACE OF ABODE: Street, avenue, road, etc.	House number (in cities or towns)	Number of dwelling house in order of visitation	Number of family in order of visitation	NAME of each person whose *place of abode* on April 1, 1930, was in this family. Enter surname first, then the given name and middle initial, if any. Include every person living on April 1, 1930. Omit children born since April 1, 1930	RELATION: Relationship of this person to the head of the family	MOTHER TONGUE (OR NATIVE LANGUAGE) OF FOREIGN BORN: Language spoken in home before coming to the United States	CODE (For office use only. Do not write in these columns): State or H. T.	Country	No.	CITIZENSHIP, ETC.: Year of immigration to United States	Naturalization	Whether able to speak English	OCCUPATION AND INDUSTRY: OCCUPATION: Trade, profession, or particular kind of work, as *spinner, salesman, riveter, teacher, etc.*	INDUSTRY: Industry or business, as *cotton mill, dry-goods store, shipyard, public school, etc.*	CODE (For office use only. Do not write in this column)	Class of worker	EMPLOYMENT: Whether actually at work yesterday (or the last regular working day): Yes or No	If not, line number on Unemployment Schedule	VETERANS: Whether a veteran of U. S. military or naval forces: Yes or No	What war or expedition?	Number of farm schedule
	1	2	3	4	5	6	21	A	B	C	22	23	24	25	26	D	27	28	29	30	31	32	
51		450	16	449	HECKMAN, Samuel B.	Head		59					Yes	Teacher	College	8194	W	Yes		No			51
52					— Winifred W.	Wife H.		55					Yes	Teacher	Private School	8194	W	Yes					52
53					COOPER, EMMA	Maid		77					Yes	Maid	Private Family	9546	W	Yes					53
54				450	BARR, Pelham	Head	English	00	00	V	1907	Na	Yes	Writer	General Practice	8194	E	Yes		No			54
55					— Estelle De V.	Wife H.		56	08	7			Yes	None									55
56					— Margaret	Daughter		56	00	1			Yes	None									56
57					— Donald E.	son		56	00	1				None									57
58					Schubaur, Paula	Servant	German	13	13	V	1924	Al	Yes	Cook	Private Family	6046	W	Yes					58

[HS001B][GDrive]

1932 (July) - Newspaper editorial - Simon Pelham Barr now working as writer for "Boot and Shoe Recorder"

Full page : [HN00J8][GDrive]

PAGE EIGHT

Public Asks For Values

People Are Tired Of Taking All Blame For Depression

Says Pelham Barr

Writer in Shoe Magazine Gives His Ideas On Current Times

The following article by Pelham Barr in the Boot and Shoe Recorder has been given to The Border Cities Star by Lt.-Col. George H. Wilkinson, V.D., with the suggestion that it be published:

GETS SORRY

I DON'T KNOW which are worse, the ads or the editorials, but every day and every hour I am getting sorrier and sorrier for myself for being one of the public.

By the time this is printed, I shall be one of the dear, great invisible hoarderence, exhorted and threatened, wheedled and shamed, into stopping my nefarious hoarding. Every time I go into the lobby of an office building or big store, every time I turn the radio knob, every time I go to the bank or to church, I shall be asked to put my hand into my inner vest pocket and pull out the $1,300,000,000 I have sewed up there.

The reason why I am hoarding, I have been told, is that I have lost faith in America. Business is all shot to pieces because it was I who didn't know it was loaded. It's all my childish perverseness. I have stopped buying for the same reason that kids won't go upstairs in the dark. In 1929 I continued to buy stocks for the same reason that babies suck their thumbs when they are told to stop. The only thing that's wrong with this country is my psychology. All this I have been told in ads and editorials and in the pleadings and denunciations of public-spirited citizens.

TWO CLASSES

Especially public-spirited citizens. The population of the United States, and of the whole world, is now divided into two classes: The public and public-spirited citizens. The public, of which I am a lowly member, is the caste which just sits around and does nothing until it is told, and then usually does the wrong thing. The public-spirited citizens are those who tell the public what to do. The highest rank in the public-spirited citizens caste is the "publicist." He is called that because he has no regular job. If he has a regular job, he is called economist, financier, industrialist, merchant, banker, college president, statesman, legislator, or public official. If you're just a storekeeper and mind your own business, you're one of the public.

PUBLIC DUMB

The public is dumb, in grery sense of the word. The public-spirited citizen is invariably articulate, besides being a great philanthropist, statistician, sociologist and inspired leader rolled into one. A member of the public gets into the headlines only if he murders or is murdered; a public-spirited citizen gets into the headlines by opening his mouth. The ultra-accomplishing public-spirited citizen can get into the headlines by keeping his mouth shut, especially when he should open it.

The best way to tell if conditions in this country are not so good is to see if there is an unusually large number of public-spirited citizens. In the last year or two they have outnumbered the seventeen-year locust by three to one.

1928 AND 1929

One of the reasons why I am beginning to be discontented with my membership in the public is that the public-spirited citizens who are telling us what to do now are the very ones who told us what to do in 1928 and 1929. Not that I harbor any peeve; I forgive and forget. I am a member of the public, and the memory of the public is like a sales-book with the carbon reversed. But I just can't help racking my numb brain and stewing around. Aren't some of these public-spirited citizens, the bankers, the very boys who started this hoarding?

They are. Last summer, while I was still a happy member of the public, I wrote my first article for this magazine. Not knowing any better, because no public-spirited citizen had told me, I tried to point out that the trouble with business was that the bankers thought that all the money belonged to them.

I was irreverent enough to indicate that the bankers were so scared out of their wits that they were frozen to their vault lids; that the credit policies to merchants and manufacturers were based on the idea that business was never again going to be good. Now, even the public-spirited citizens on the Potomac have begun to realize that all this bankers' talk about being liquid is just so much gas.

LIKE GANDHI

The bankers in the last two years became ardent followers of Mahatma Gandhi. They just sat right down on the railroad tracks and nuthin' was never goin' to go nowhere. But our legislators were too smart for the bankers; they sat down, too. Now they have discovered that they can't outsmart or outsit them and they are adopting new tactics. We and our legislators are now promising the bankers almost anything if they will only be nice boys and loosen up. Their securities have been marked up so that their statements can look prettier, while they kept on pounding the desk and bellowing at their customers to cut down their inventories. They have been given new gadgets for the reserve machinery. They have been given a Reconstruction Corporation so they can reconstruct what they tore down. They are being handed the money with which to loosen up!

But what are the poor devils of storekeepers and white-collar men and overall workers being promised? Don't be silly; it's all their fault. If they would only stop hoarding, prosperity would return. Is there a Reconstruction Corporation for unselling the goods which were sold at bankrupt prices? Is there a Reconstruction Corporation for reviving businesses which have been liquidated to death in the last two years? Is there a Reconstruction Corporation for mending hundreds of thousands of broken lives? Seat! You'll never grow up to be a public-spirited citizen if you talk like that.

The public must have confidence in bankers, even though the bankers have proved that they have no confidence in themselves. Do you know any ditch-digger or salesman or store-keeper who has made as many mistakes in all his life as some of our most public-spirited bankers have made in the last two years? But can it be that the public is coming to realize that the banker is just a store-keeper who handles paper (belonging to other people instead of strong iron, durable leather and colorful silk? Do we realize that the only difference between the banker and the hardware man, shoe man or drygoods man is that the banker's mistakes cause a whole lot more trouble?

The banking system of the country is and will remain sound; the doubtful banks have been made harmless. But our banking system is sound not because of the bankers but in spite of them.

BLAME ON WAR

Of course, it all goes back to the darn fool publics insisting on going to war with each other, in spite of all that the public-spirited diplomats, statesmen and permanent-makers could do. Now the darn fool publics have to pay for their war. But will they ever learn? No; at this very moment they are disrespectful to the public-spirited citizens from all over the world who have gathered in Geneva to decide who won the war.

All this isn't dead history; it's stop-press news of the day after tomorrow. It's this very public we are talking about which has got to get back the habit of coming into our stores and buying shoes at some kind of a profit to us. How are we going to get the public to do it? What methods should we use after all the methods which have failed and after all the campaigns for which the public has been the guinea-pig?

STOCKS ORGY

The "now is the time to buy stocks" campaign at the end of 1929 was responded to by an orgy of putting money into the bank. The public responded to the "buy now" campaigns of 1930 by an orgy of taking money out of the banks and putting it into steel vaults and cracked china teapots. What will will be the response to the anti-hoarding campaign with our public-spirited citizens acting like a combination of Texas Guinan and the Pied Piper of Hamelin?

If business picks up this year, as it may well do, the public-spirited citizens will claim the triumph of their advice over the foolishness of the public. No public-spirited citizen will admit, even if he knows, that business revival will be due to the renewal of saner credit policies and to the halt in the over-deflation of commodity prices; and that these will be due to the government's bribing of bankers to be bankers.

If the public comes back into the stores, don't give credit to the kind of advertising most stores have been running during the past year. Scolding ads, prosperity ballyhoo and "astounding cut prices" will not be the copy keynotes to make them buy.

NO CAMPAIGNS

Nor will nationwide campaigns and "movements" set the cash registers ringing. The public is just about tired to the jitters of being told that all that is the matter with it is "psychology." Mr. and Mrs. Consumer are just about fed up with being campaigned. They are tired to death of being "educated" to buy a bale of cotton, to love good music, to win the war by eating tin foil, to buy now, to stop hoarding and to have faith.

They are even more tired to an even deader death of being told that there is going to be a campaign to get them to do these things, and to read all the details of the machinery with which it is to be done.

Plastering all the campaign plans of a "secret" conference of public-spirited citizens all over the front page is, to the tired public, adding insult to injury.

Is it true that the American public is really as dumb as our merchandising and advertising experts believe it to be? Is there truth in the fixed delusion of our master propagandists that all they need to do to transform the public at will is an elaborately staged campaign with all the ropes and pulleys exposed? It is true that the same force which makes all the girls turn their hair into platinum can make men stop turning their bank accounts into gold?

CHANGING STYLES

Are we too well convinced that changing styles will pull the consumer's dollar out of the old sock, and even make him buy a new sock? Can a changing style do this even when there is no dollar or the consumer does not know where the next one is coming from?

What right have our merchandising experts to believe that all they have to do to get the consumer to loosen up is to announce that everything called George Washington this year will be the rage; and that nothing not called after the Father of Our Country can possibly sell?

We are told that the public this year is going to trip over its hair in rushing to buy George Washington golf shoes, Martha Washington lipsticks, Mount Vernon chop suey and Valley Forge electric refrigerators. But will they? If a lot of things called George Washington do sell, will it be because of bicentennial stamps and Parson Weems' cherry tree story, or will it be because the only kind of goods which the stores will carry will be named George Washington?

And how much will it matter what the technique of the advertising will be? As one of the public, I am supposed to respond feverishly when the style of type in ads changes. I'll admit, without being asked, that I am already bored stiff by the latest fad in type faces; and even by the one which may be expected in a few months.

But, as a member of the public, I will also admit that a new kind of advertising will be needed to get me into the store. It must have the novelty of being honest. It must have the novelty of talking my language. It must have the novelty of telling me about the goods and giving good reasons for buying them. It must have the novelty of flattering me by giving me credit for a little sense and a little self-respect. It must have the novelty of not blaming the depression on me.

1932-07-06-the-border-cities-star-windsor-ontario-pg-8-clip-values-barr.jpg

[HN00J9][GDrive]

1934 - Pelham Barr Appointed Divisional Director of the LBI (Library Binding Institute) - Remained Executive Director until 1947

[HX000E][GDrive] : *"Pelham Barr [...] Executive Director 1935-1947 "*

Below : See [HB0016][GDrive]

When the New Deal organized American industry under the National Recovery A c t (NRA) in 1934, library bookbinders began a cooperative program to insure standards of quality and fair dealing that has continued for fifty years. Library bookbinding in 1934 was a considerably different affair than it is currently. A host of small shops dominated an industry with very few "giants" and no consistent definition of what it was that was being sold as "library binding." Individual binders dealt with individual librarians without the benefit of broader consultation about standards and prices for their services. Cost accounting varied tremendously across the indus- try, making pricing of bindery services exceedingly difficult. Wide variations in labor practices further destabilized a market already hard-hit by the Depression.

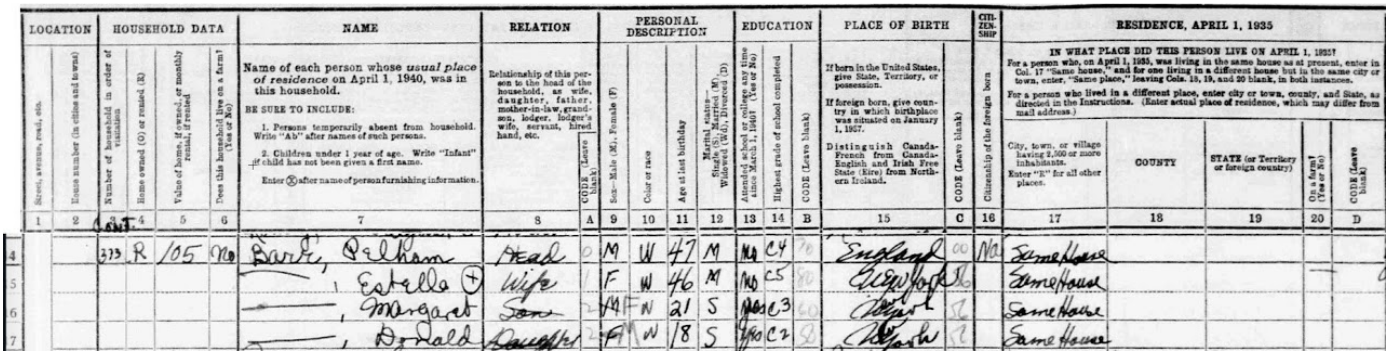
Barr is influential in creating LBI

Into this scene came the faceless federal bureaucracy of the NRA National Code Authority - with a difference in the person of Pelham Barr. Barr had started his professional life as a chemist, politically active and committed to the goals of the New Deal. With the inauguration of the NRA in February 1934, a Book Manufacturing Institute was established, and Barr was appointed Divisional Director for Library Binding.He immediately set about applying Code provisions for self-government, labor standards, and fair competition across the industry. By November of that year, Barr was planning to extend his duties to include promotional activities for the industry as a whole, undertaken at the expense of divisional member binders.

1940 Census

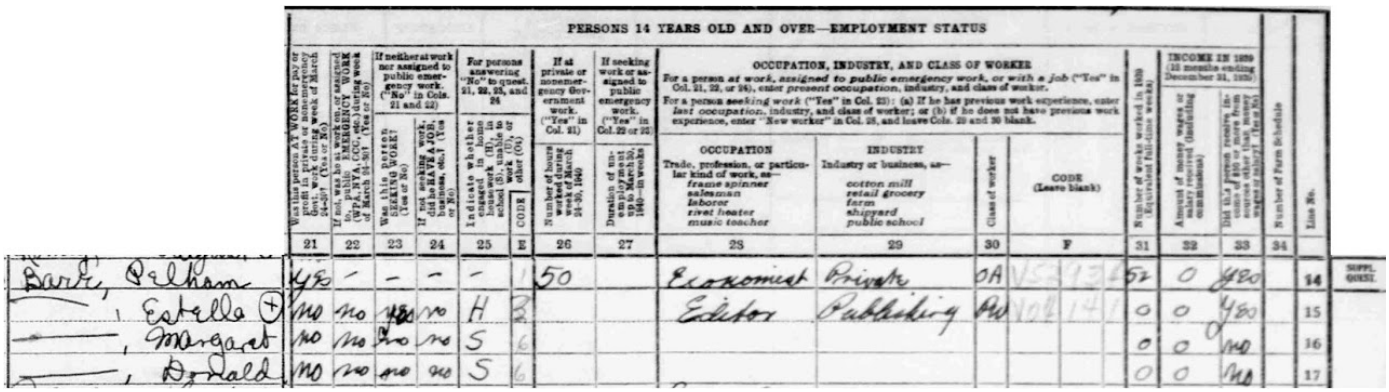
Transcript : [HS001C][GDrive] / Full Census form : [HS001D][GDrive]

Trade - "Economist" with a "Private" practice



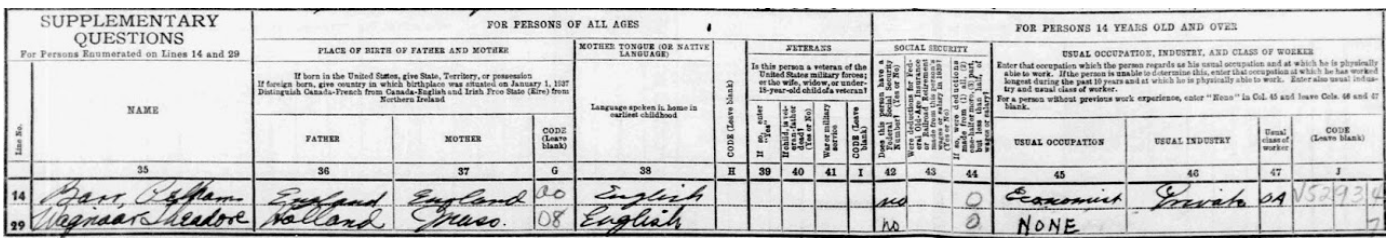
LOCATION		HOUSEHOLD DATA				NAME	RELATION	PERSONAL DESCRIPTION				EDUCATION			PLACE OF BIRTH	CIT-IZEN-SHIP	RESIDENCE, APRIL 1, 1935				
Street, avenue, road, etc.	House number (in cities and towns)	Number of household in order of visitation	Home owned (O) or rented (R)	Value of home, if owned, or monthly rental, if rented	Does this household live on a farm? (Yes or No)	Name of each person whose usual place of residence on April 1, 1940, was in this household. BE SURE TO INCLUDE: 1. Persons temporarily absent from household. Write "Ab" after names of such persons. 2. Children under 1 year of age. Write "Infant" if child has not been given a first name. Enter ⊗ after name of person furnishing information.	Relationship of this person to the head of the household, as wife, daughter, father, mother-in-law, grandson, lodger, lodger's wife, servant, hired hand, etc.	CODE (Leave blank)	Sex—Male (M), Female (F)	Color or race	Age at last birthday	Marital status—Single (S), Married (M), Widowed (Wd), Divorced (D)	Attended school or college any time since March 1, 1940? (Yes or No)	Highest grade of school completed	CODE (Leave blank)	If born in the United States, give State, Territory, or possession. If foreign born, give country in which birthplace was situated on January 1, 1937. Distinguish Canada-French from Canada-English and Irish Free State (Eire) from Northern Ireland.	CODE (Leave blank)	Citizenship of the foreign born	IN WHAT PLACE DID THIS PERSON LIVE ON APRIL 1, 1935? For a person who, on April 1, 1935, was living in the same house as at present, enter in Col. 17 "Same house," and for one living in a different house but in the same city or town, enter, "Same place," leaving Cols. 18, 19, and 20 blank, in both instances. For a person who lived in a different place, enter city or town, county, and State, as directed in the Instructions. (Enter actual place of residence, which may differ from mail address.)				
																	City, town, or village having 2,500 or more inhabitants. Enter "R" for all other places.	COUNTY	STATE (or Territory or foreign country)	On a farm? (Yes or No)	CODE (Leave blank)
1	2	3	4	5	6	7	8	A	9	10	11	12	13	14	B	15	C	16	17	18	19	20	D
4		373	R	105	No	Barr, Pelham	Head		M	W	47	M	No	C4		England		No	Same House				
5						, Estelle ⊕	Wife		F	W	46	M	No	C5		New York			Same House				
6						, Margaret	Son		F	W	21	S	Yes	C3		Maryland			Same House				
7						, Donald	Daughter		F	W	18	S	Yes	C2		New York			Same House				

[HS001E][GDrive]



PERSONS 14 YEARS OLD AND OVER—EMPLOYMENT STATUS																			
Was this person at WORK (for pay or profit) or in NONPAID WORK in private home or in family business or farm, last week, during week of March 24-30? (Yes or No)	If not, was he at a REGULAR JOB but not at work last week because of temporary illness, vacation, bad weather, or labor dispute during week of March 24-30? (Yes or No)	If neither at work nor assigned to public emergency work (WPA, NYA, CCC, etc.) during week of March 24-30? (Yes or No)	Was this person SEEKING WORK? (Yes or No)	If not seeking work, is he RETIRED from business, etc.? (Yes or No)	For persons answering "No" to quest. 21, 22, 23, and 24: Indicate whether engaged in home housework (H) unable to work (U), or other (O)	CODE	If at private or nonemergency Government work ("Yes" in Col. 21)	If seeking work or assigned to public emergency work ("Yes" in Col. 22 or 23)	OCCUPATION, INDUSTRY, AND CLASS OF WORKER. For a person at work, assigned to public emergency work, or with a job ("Yes" in Col. 21, 22, or 24), enter present occupation, industry, and class of worker. For a person seeking work ("Yes" in Col. 23): (a) If he has previous work experience, enter last occupation, industry, and class of worker; or (b) if he does not have previous work experience, enter "New worker" in Col. 28, and leave Cols. 29 and 30 blank.				Number of weeks worked in 1939 (Exclusive of full-time weeks)	INCOME IN 1939 (12 months ending December 31, 1939)		Number of Farm Schedule	Line No.	
							Number of hours worked during week of March 24-30, 1940	Duration of unemployment (up to March 30, 1940—in weeks)	OCCUPATION. Trade, profession, or particular kind of work, as—frame spinner, salesman, laborer, rivet heater, music teacher	INDUSTRY. Industry or business, as—cotton mill, retail grocery, farm, shipyard, public school	Class of worker	CODE (Leave blank)		Amount of money wages or salary received (including commissions)	Did he have income of $50 or more from sources other than wages or salary? (Yes or No)			
21	22	23	24	25	E	26	27	28	29	30	F	31	32	33	34		
Barr, Pelham	Yes	-	-	-		50		Economist	Private	OA	V52	13	52	0	Yes		14		
, Estelle ⊕	No	No	Yes	No	H			Editor	Publishing	Pr	108	14	0	0	Yes		15		
, Margaret	No	No	No	No	S								0	0	No		16		
, Donald	No	No	No	No	S								0	0	No		17		

[HS001F][GDrive]



SUPPLEMENTARY QUESTIONS For Persons Enumerated on Lines 14 and 29		FOR PERSONS OF ALL AGES									FOR PERSONS 14 YEARS OLD AND OVER					
		PLACE OF BIRTH OF FATHER AND MOTHER			MOTHER TONGUE (OR NATIVE LANGUAGE)		VETERANS				SOCIAL SECURITY			USUAL OCCUPATION, INDUSTRY, AND CLASS OF WORKER		
Line No.	NAME	If born in the United States, give State, Territory, or possession. If foreign born, give country in which birthplace was situated on January 1, 1937. Distinguish Canada-French from Canada-English and Irish Free State (Eire) from Northern Ireland			Language spoken in home in earliest childhood	CODE (Leave blank)	Is this person a veteran of the United States military forces; or the wife, widow, or under-18-year-old child of a veteran?				Does this person have a Social Security Number? (Yes or No)	If yes, were deductions made from his wages for Old-Age Insurance or Railroad Retirement taxes? (Yes or No)	If no, was deduction omitted because wage or salary was less than $200? (Yes or No)	Enter that occupation which the person regards as his usual occupation and at which he is physically able to work. If the person is unable to determine this, enter that occupation at which he has worked longest during the past 10 years and at which he is physically able to work. Enter also usual industry and usual class of worker. For a person without previous work experience, enter "None" in Col. 45 and leave Cols. 46 and 47 blank.			
		FATHER	MOTHER	CODE (Leave blank)			If "Yes," enter "Yes"	If child, is he living? (Yes or No)	If dead, was he in World War? (Yes or No)	CODE (Leave blank)				USUAL OCCUPATION	USUAL INDUSTRY	Usual class of worker	CODE (Leave blank)
35		36	37	G	38	H	39	40	41	I	42	43	44	45	46	47	J
14	Barr, Pelham	England	England	00	English						No		0	Economist	Private	OA	V52 13 14
29	Margaret Theadore	Holland	Prussia	08	English						No		0	NONE			

[HS001G][GDrive]

1940 (Nov) - Father (Philip Barr) passes

Death: November 05, 1940 (68) in New York, New York, United States (See [HL0020][GDrive])

1940 - Multiple LBI presentations by Pelham Barr

june 3 1940 : See https://www.newspapers.com/image/314047267/?terms=%22pelham%2Bbarr%22

1941 - Multiple LBI presentations by Pelham Barr

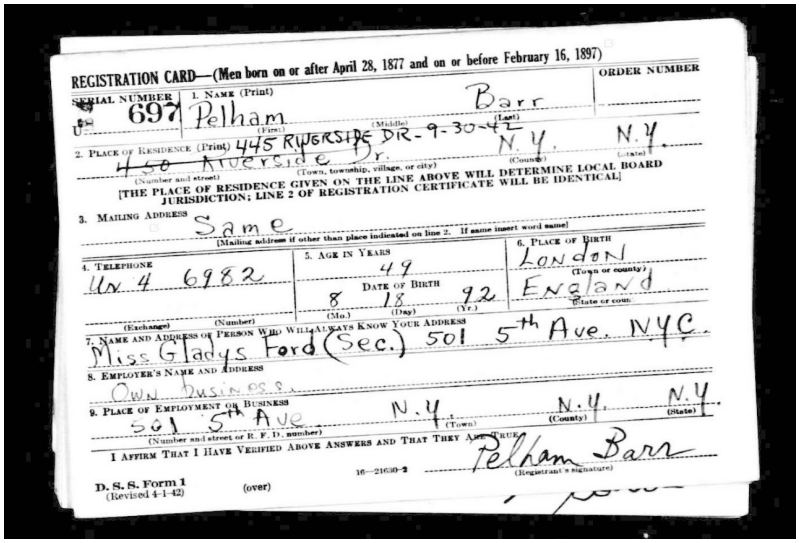
june 27 1941 : See https://www.newspapers.com/image/230596072/?terms=%22pelham%2Bbarr%22

june 28 1941 : See https://www.newspapers.com/image/230596349/?terms=%22pelham%2Bbarr%22

1942 (April 27) - Draft Registration for WW2

Note :

- Went by the name "Pelham Barr" (no middle name)
- Residence - 445 Riverside Drive
- Employment address - 501 5th Avenue NY NY
  - 501 Fifth Avenue is the "Astor Trvst Company" building -



REGISTRATION CARD—(Men born on or after April 28, 1877 and on or before February 16, 1897)

SERIAL NUMBER 697 | ORDER NUMBER

1. NAME (Print): Pelham (First) (Middle) Barr (Last)

2. PLACE OF RESIDENCE (Print): 445 RIVERSIDE DR. 9-30-42 (Number and street) (Town, township, village, or city) N.Y. (County) N.Y. (State)

445 Riverside Dr.

[THE PLACE OF RESIDENCE GIVEN ON THE LINE ABOVE WILL DETERMINE LOCAL BOARD JURISDICTION; LINE 2 OF REGISTRATION CERTIFICATE WILL BE IDENTICAL]

3. MAILING ADDRESS: Same [Mailing address if other than place indicated on line 2. If same insert word same]

4. TELEPHONE: Un. 4 6982 (Exchange) (Number)

5. AGE IN YEARS: 49 DATE OF BIRTH: 8 (Mo.) 18 (Day) 92 (Yr.)

6. PLACE OF BIRTH: London (Town or county) England (State or coun.)

7. NAME AND ADDRESS OF PERSON WHO WILL ALWAYS KNOW YOUR ADDRESS: Miss Gladys Ford (Sec.) 501 5th Ave. NYC.

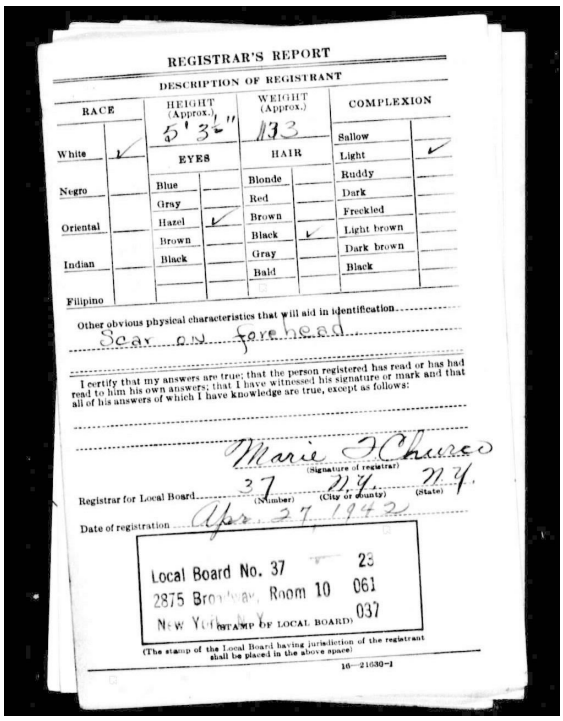
8. EMPLOYER'S NAME AND ADDRESS: Own Business

9. PLACE OF EMPLOYMENT OR BUSINESS: 501 5th Ave. (Number and street or R. F. D. number) N.Y. (Town) N.Y. (County) N.Y. (State)

I AFFIRM THAT I HAVE VERIFIED ABOVE ANSWERS AND THAT THEY ARE TRUE: Pelham Barr (Registrant's signature)

D. S. S. Form 1 (Revised 4-1-42) (over) 16—21630-2

[HG001Q][GDrive]



REGISTRAR'S REPORT

DESCRIPTION OF REGISTRANT

RACE		HEIGHT (Approx.)		WEIGHT (Approx.)		COMPLEXION	
White	✓	5' 3½"		133		Sallow	
Negro		EYES		HAIR		Light	✓
Oriental		Blue		Blonde		Ruddy	
Indian		Gray		Red		Dark	
Filipino		Hazel	✓	Brown		Freckled	
		Brown		Black	✓	Light brown	
		Black		Gray		Dark brown	
				Bald		Black	

Other obvious physical characteristics that will aid in identification: Scar on forehead

I certify that my answers are true; that the person registered has read or has had read to him his own answers; that I have witnessed his signature or mark and that all of his answers of which I have knowledge are true, except as follows:

Marie J Church (Signature of registrar)

Registrar for Local Board 37 (Number) N.Y. (City or county) N.Y. (State)

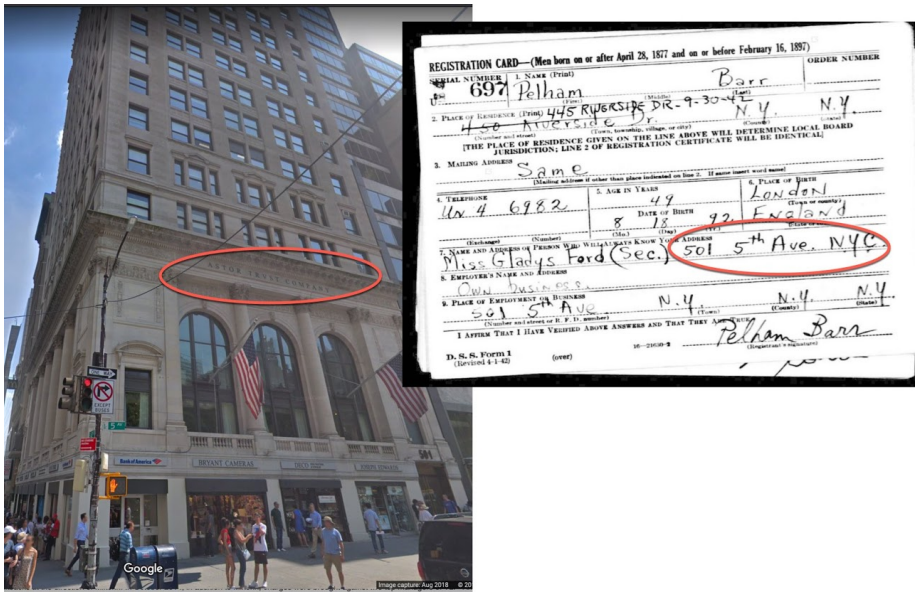
Date of registration Apr. 27, 1942

Local Board No. 37 23
2875 Broadway, Room 10 061
New York, N.Y. 037
(STAMP OF LOCAL BOARD)

(The stamp of the Local Board having jurisdiction of the registrant shall be placed in the above space)

16—21630-1

[HG001S][GDrive]



501 Fifth Avenue is the "Astor Trvst Company" building.

1946 (July) - Authors article "Book Conservation and University Library Administration"

Simon Pelham Barr Authored "Book Conservation and University Library Administration" (see [HX000D][GDrive])

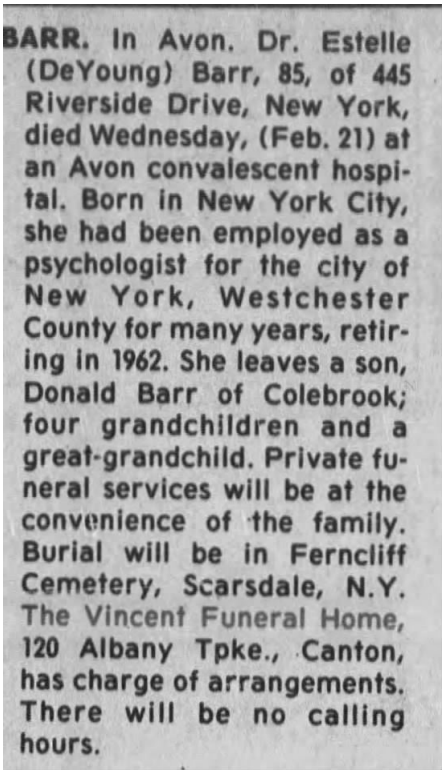
1948 (Death)

Pelham Simon Barr's health started to fall in 1947 [HB0016][GDrive] : "*The standards program, along with membership services, and a concerted public relations campaign with librarians define the earliest phase of LBI's existence, roughly coterminous with the directorship of Pelham Barr.* ***Barr tirelessly pursued these efforts until his health broke down in 1947, and he died early in the following year.*** "

Passing : [HL001Z][GDrive]

1979 (Feb) - Dr. Estelle DeYoung Barr (Pelham's wife) passes

Full page : [HN00JC][GDrive]



BARR. In Avon. Dr. Estelle (DeYoung) Barr, 85, of 445 Riverside Drive, New York, died Wednesday, (Feb. 21) at an Avon convalescent hospital. Born in New York City, she had been employed as a psychologist for the city of New York, Westchester County for many years, retiring in 1962. She leaves a son, Donald Barr of Colebrook; four grandchildren and a great-grandchild. Private funeral services will be at the convenience of the family. Burial will be in Ferncliff Cemetery, Scarsdale, N.Y. The Vincent Funeral Home, 120 Albany Tpke., Canton, has charge of arrangements. There will be no calling hours.

[HN00JD][GDrive]

WIKIPEDIA

https://en.wikipedia.org/wiki/Peithologian_Society
https://en.wikipedia.org/wiki/Philolexian_Society
https://en.wikipedia.org/wiki/Randolph_Bourne

Simon Pelham Barr in Phone directories

- 1917 : Simon Barr - journalist - r450 - E139th
  - https://www.fold3.com/image/238/92738910
- 1918 : Simon Barr h221 Sherman Av (**matches 1917 Draft Card)**
  - https://www.fold3.com/image/238/92859327
- 1920 : There was a "Philip Furs" on 137 W129th / No "pelham barr" / Simon Barr - Harrison av, or h56 Nicolas Ave
  - https://www.fold3.com/image/238/92731604
- 1922 : No Simon Barr ...
  - https://www.fold3.com/image/238/98774064

[HB0013] Source : Managing a Library Binding Program By Jan Merrill-Oldham (1993)

See [HB0016][GDrive]

COOPERATION.. .STANDARDS. . .COMMUNICATION.. .are focal points of this brief history of The Library Binding Institute written by Brian J. Mulhern. Mulhern (BA in history and English, Carle- ton College, Northfield, Minnesota, and an Main American Studies, University of Minnesota) is an archivist and writer who worked part time for LEI for several months. He began organizing the old LBI files and setting up the archives.

When the New Deal organized American industry under the National Recovery A c t (NRA) in 1934, l i b r a r y bookbinders began a cooperative program to insure standards of quality and fair dealing that has continued for fifty years. Library bookbinding in 1934 was a considerably different affair than it is currently. A host of small shops dominated an industry with very few "giants" and no consistent definition of what it was that was being sold as "library binding." Individual binders dealt with individual librarians without the benefit of broader consultation about standards and prices for their services. Cost accounting varied tremendously across the indus- try, making pricing of bindery services exceedingly difficult. Wide variations in labor practices further destabilized a market already hard-hit by the Depression.

Barr is influential in creating LBI

Into this scene came the faceless federal bureaucracy of the NRA National Code Authority - with a difference in the person of Pelham Barr. Barr had started his professional life as a chemist, politically active and committed to the goals of the New Deal. With the inauguration of the NRA in February 1934, a Book

Manufacturing Institute was established, and Barr was appointed Divisional Director for Library Binding.He immediately set about applying Code provisions for self-government, labor standards, and fair competition across the industry. By November of that year, Barr was planning to extend his duties to include promotional activities for the industry as a whole, undertaken at the expense of divisional member binders.

These activities won the enthusiastic support of the depression-stricken industry. When the NRA was declared unconstitutional in May 1935, members of the previously involuntary federal program voluntarily resolved to continue the program on an independent basis with Barr at i t s head. At the hour of decision, Barr enthusiastically anticipated the binders' choices:

> *Library binders a l l over the country are continuing to do business "as was" before the decision. They realize that it is the only safe and sane way to do i t . They didn't have to be told that it would be plain damn-foolishness--suicide--to t r y to go back to the old days when some of their competitors indulged in price-wars, quality chiselling and labor sweating. . .Here's one case where cooperation and selfishness are identical--broad vision is right at the end of the pocket-book nerve.*

Joint Committee Plays Major Role

Even before the group became an independent entity, a program of cooperation had been undertaken with the American Library Association's Bookbinding Committee founded in 1933. In January 1935, three binders were delegated to meet with the ALA in what subsequently became known as "the Joint Com-mittee." Cooperation with librarians became a keystone of the new organization's policy. The Joint Committee consulted on virtually a l l facets of the LEI program. It played a major role in shaping binders' "Guide to Fair Value," (1934), their "Minimum Specifications for Class 'A' Library Binding" (June 1934, revised June, 1938) and their "Certification Plan" (1936). For twenty years following LBI's first annual meeting in 1936, i t s annual get-togethers were planned to coincide in a joint session with the annual meeting of the ALA.

The relationship with the ALA focused LBI's public relations effort on the Library Journal, and for years Pelham Barr provided the Journal with a steady stream of contributions interpreting bindery services and activities. After September 1939, the Institute launched a publication of its own, Book Life, specifically directed at bibliophiles and persons interested in book conservation, another early concern of the bindery group. Barr particularly excelled at these public relations efforts, and he valued them so highly that he donated a portion of his own 1939 salary raise so that his long-standing dream of such a publication might become a reality. LBI's first director also contributed to a wider spectrum of publications, including Bookbinding Magazine, College and Research Libraries, and Bookbinding ggg Book Production, as well as generating a steady stream of informal and entertaining communications with LEI-members and other interested people. From the fi r s t , open communications have played a central role in the affairs of the bindery group.

Gathering statistical information was important

Information flowed in both directions from the earliest days of LBI. An important function of the Institute was the collection of statistical information regarding the industry: i t s volume, i t s suppliers, i t s income, and i t s expenditures. Annual surveys were made of such information, and occasional special surveys were held regarding issues of widespread interest. Reciprocally survey findings were shared with mem-bers to assist them in planning and evaluating their own operations; and the Institute also served occasionally as a conduit for statistical data compiled by the federal govern-ment regarding the binding industry.

To be sure, services to members were not purely statistical. LBI organized members to resist incursions of New Deal work-projects on the binding trade. It disseminated preservation information to members hard-hit by a series of disastrous floods in the late 1930s. With the coming of war in 1941, it kept members posted on coping with shortages of bindery materials, brought on by war-time conditions.

Over the years it interpreted f o r members a host of new federal regulations and legislation. Regular newsletters to members appeared as early as 1935, and LBI annual meetings began in 1936, featuring management and technical sessions to upgrade members s k i l l s in business and production procedures. Given the range of services to members, it is surprising that the fledgling group was able to maintain relatively low dues and to stay within a modest budget in the midst of a lengthy business recession that cut heavily into member-binders' incomes. But the industry stalwartly supported i t s trade association, which in turn responded with some flexibility to the financial plight of individual members. Balanced budgets were to become a tradition in succeeding years. T o -gether, the industry weathered the most harrowing business downturn in American history.

Prices and Products Standardized

Meanwhile they went about systematizing t h e i r mode of doing business. To stabilize binding prices, they developed a "Guide of Fair Value for Library Binding" while s t i l l under NRA jurisdiction. The guide was approved by the Joint Committee and ratified by the newly independent Institute after it formed. Periodic revisions in May 1937, October1941, December 1943, August 1945, attempted to keep pace with and personnel costs. In the words of the first announcement for the guide:

The approval of the Guide of Fair Value and of the Minimum Specifications is an important element in the cooperative program of the Joint Committee to develop sound relations between librarians and binders--to put transactions on a basis of fair dealing and fair competition; to assure librarians of a good quality binding at a fair price which will enable the binder to use standard quality materials, give good workmanship and pay his employees fair wages.

Besides standardizing their prices, binders sought to standardize their products. Initially, product standardization took the form of production specifications enumerating various features of the binding process that were deemed to constitute binding particularly suited for library use. The first "Mini-mum Specifications for Class 'A1 Library Binding" were formulated by the ALA Bookbinding Committee in 1934 as the culmi-nation of a consensus emerging in the trade since at least 1923. The Joint Committee ratified this consensus in 1935 and revised it in 1938. chiefly to accommodate the growing use of pyroxylin-impregnated fabrics in library binding. The original specifications referred to books and magazines. By January 1938, the group had adapted i t s standard to the binding of newspapers. The following year it issued specifications to govern the binding of "reinforced (pre-library-bound) new books."

To reinforce the legitimacy of these standards LBI issued a certification plan in 1936 f o r binders who demonstrated work in conformity to both the minimum specifications and the guide to fair dealing. At least initially certification was not made a prerequisite f o r membership in the association. ***A July 1936 letter from Pelham Barr reassured non-certified members that their membership was not in jeopardy under the new certification plan, and this dispensation apparently prevailed for several years thereafter****. A board of review was convened in connection with the plan to monitor applications for certified status.*

LBI supplies technical advice to members

LBI began early to offer members technical advice in order to help them conform to the prescribed specifications. Pyroxylin was evaluated in 1936. Buckram was repeatedly tested f o r resistance to moisture and abrasion by the early 1940s. Beginning in 1936, both members and librarians were advised on precautions regarding mildew. A series of bulletins issued in-I94l-I942 advised members on how to meet production standards in the midst of war-time supply shortages. Such piecemeal tinkering with production specifications would continue until the early 19608 when heightened technical capabilities made possible the develop-ment of performance standards to supplement these production specifications. Since that time Institute standards have been defined increasingly in terms of durability

under a wide variety of environmental conditions. Empirical testing has yielded a progress-ively more sophisticated specification of library binding. The 1976 inauguration of an LBI book-testing laboratory at the Rochester Institute of Technology (RIT) is merely the most recent phase in the binders' effort to refine and certify the standard of quality in their field.

The standards program, along with membership services, and a concerted public relations campaign with librarians define the earliest phase of LBI's existence, roughly coterminous with the directorship of Pelham Barr. Barr tirelessly pursued these efforts until his health broke down in 1947, and he died early in the following year.

Brownning becomes Executive Director

Binders next turned to a librarian, Earl W. Browning, to head their organization. Browning, formerly of the Peoria Public Library, had been a member of the Joint Committee during i t s earliest years, 1934-1937. His administrative skills, contacts with librarians, and long-standing interest in library bookbinding particularly recommended him to LBI directors seeking a new leader.

In fact, Browning's tenure as LBI Executive Director appears in retrospect as little more than an interregnum. Within four and one-half years of becoming LBI director in April 1948, Browning had resigned. While director, he concentrated his energies on representing librarians' interest in library bookbinding. Browning's program for membership I.D. cards and the use of LBI insignia in advertising were cal-culated to assist librarians searching for quality binding. He dispensed with restrictions barring librarians from the technical sessions at LBI annual meetings. Technicalities subsequently discussed tended more to benefit librarians than binders in attendance at the meeting. Browning enthusiastically toured the circuit of library meetings with his exhibit on the use of standardized lettering in binding, and he filled LBI newsletters with reports of his attendance at such gather-ings. A major publication of the Browning years, the Librar Binding Manual (1951), was actually published by the American Library Association and addressed itself chiefly to a library audience. It constituted a sort of primer for buyers of library binding. Originally co-authored by Louis N. Feipel and Earl w. Browning, the manual was revised and expanded over the years, culminating in Maurice Tauber's 1971 revision published by LEI.

Other significant publications of the Browning years were more geared to the needs of LEI-member binders. During 1951-1952, l e g a l memoranda on wage and salary stabilization equipped members to comply w i t h t h e Defense Production Act of 1950,inspired by the outbreak of hostilities in Korea. These memoranda reflect the growing importance to the organization of a l e g a l acumen beyond the ken of Browning, and he resigned and moved to California in September 1952, following the death of his wife.

BITCHUTE @Housatonic **YOUTUBE** @HousatonicLive **ODYSEE** @Housatonic **BRIGHTEON** @Housatonic

Housatonic

Estelle ("Stella") de Young Barr (born 1893)

Born : June 18, 1893 - see [HL0026][GDrive]

Died : Feb 21, 1970 [HN00JC][GDrive]

Husband - Simon Pelham Barr (born 1892)

Children include : Donald Barr (born 1921)

Grandmother to - William Pelham Barr (born 1950)

[...] ***Estelle/Stella (DeYoung/De Young) Barr*** *[was] a psychologist [, and] the daughter of* ***Solomon/Samuel A. DeYoung/De Young*** *and* ***Esther Sonepouse/Sonpause****. [...] Estelle was born in New York. [Her] father Solomon was born in Connecticut, to Dutch Jewish parents, from Amsterdam, Aaron De Young and Esther Arbeit. [Estelle's] mother Esther Sonepouse was a Dutch Jew, from Amsterdam, and was the daughter of Philip Sonepouse and Rachel Premselaar. [...]* [HL0023][GDrive]

1900 Census

Transcript : [HS001K][GDrive] / **Image of Census form :** [HS001M][GDrive]

Record Transcription:
Us Census 1900

Household Members

First name(s)	Last name	Relationship	Marital status	Gender	Age	Birth year	Birth place
Samuel	De Young	Self	Married	Male	29	1871	Connecticut
Esther	De Young	Wife	Married	Female	30	1870	Holland
Stella	**De Young**	**Daughter**	**Single**	**Female**	**6**	**1894**	**New York**
Philip	De Young	Son	Single	Male	2	1898	New York

[HS001L][GDrive]

1910 census

Transcript : [HS001H][GDrive] / **Image of Census sheet :** [HS001J][GDrive]

Address - 451 E 137th St, The Bronx, NY - Hard to tell what was where in 1910, from current map -

Father **Samuel DeYoung** was a "Post Office Clerk"

Record Transcription:
Us Census 1910

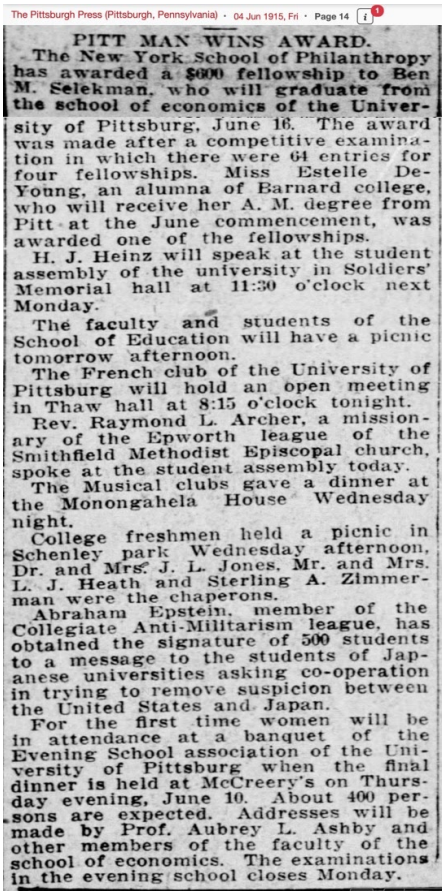
Household Members

First name(s)	Last name	Relationship	Marital status	Gender	Age	Birth year
Samuel	Deyoung	Self	Married	Male	39	1871
Esther	Deyoung	Wife	Married	Female	40	1870
Estelle	**Deyoung**	**Daughter**	**Single**	**Female**	**17**	**1893**
Phillip	Deyoung	Son	Single	Male	11	1899

[HS001I][GDrive]

1915 (June) - Graduate School completion from U Pittsburgh

Full page : [HN00JG][GDrive]



The Pittsburgh Press (Pittsburgh, Pennsylvania) · 04 Jun 1915, Fri · Page 14

PITT MAN WINS AWARD.

The New York School of Philanthropy has awarded a $600 fellowship to Ben M. Selekman, who will graduate from the school of economics of the University of Pittsburg, June 16. The award was made after a competitive examination in which there were 64 entries for four fellowships. Miss Estelle DeYoung, an alumna of Barnard college, who will receive her A. M. degree from Pitt at the June commencement, was awarded one of the fellowships.

H. J. Heinz will speak at the student assembly of the university in Soldiers' Memorial hall at 11:30 o'clock next Monday.

The faculty and students of the School of Education will have a picnic tomorrow afternoon.

The French club of the University of Pittsburg will hold an open meeting in Thaw hall at 8:15 o'clock tonight.

Rev. Raymond L. Archer, a missionary of the Epworth league of the Smithfield Methodist Episcopal church, spoke at the student assembly today.

The Musical clubs gave a dinner at the Monongahela House Wednesday night.

College freshmen held a picnic in Schenley park Wednesday afternoon, Dr. and Mrs. J. L. Jones, Mr. and Mrs. L. J. Heath and Sterling A. Zimmerman were the chaperons.

Abraham Epstein, member of the Collegiate Anti-Militarism league, has obtained the signature of 500 students to a message to the students of Japanese universities asking co-operation in trying to remove suspicion between the United States and Japan.

For the first time women will be in attendance at a banquet of the Evening School association of the University of Pittsburg when the final dinner is held at McCreery's on Thursday evening, June 10. About 400 persons are expected. Addresses will be made by Prof. Aubrey L. Ashby and other members of the faculty of the school of economics. The examinations in the evening school closes Monday.

[HN00JH][GDrive]

1915 (Dec 1) - Marriage to Simon Pelham Barr

Marries Simon Pelham Barr (born 1892) , also a student at Columbia University .. See "Science Fiction and Fantasy Literature, A Checklist, 1700-1974, Volume Two of Two, contains Contemporary Science Fiction Authors II. " ([HB000Z][GDrive])

Transcript of wedding - [HL0021][GDrive]

Record Transcription:
United States Marriages

Learn about this record set

First name(s)	Estelle
Last name	Deyoung
Sex	Female
Race	White
Marital status	Single
Age	22
Birth year	1893
Father's first name(s)	Samuel A
Father's last name	-
Mother's first name(s)	Esther
Mother's last name	Sonpause
Event	Marriage
Year	1915
Event date	01 Dec 1915
Location	Manhattan
Place	Manhattan, New York, United States
County	New York
State	New York
Country	United States
Spouse's first name(s)	Simon
Spouse's last name	Barr
Spouse's sex	Male
Spouse's race	White
Spouse's marital status	Single
Spouse's age	23
Spouse's birth year	1892
Spouse's father's first name(s)	Philip
Spouse's father's last name	-
Spouse's mother's first name(s)	Rebecca
Spouse's mother's last name	Pecham
FamilySearch film number	001614231
Record set	United States Marriages
Category	Birth, Marriage & Death (Parish Registers)

[HL0022][GDrive]

1918 - Daughter (Margaret Barr) is born

See ... Note, could be 1917, need to verify ...

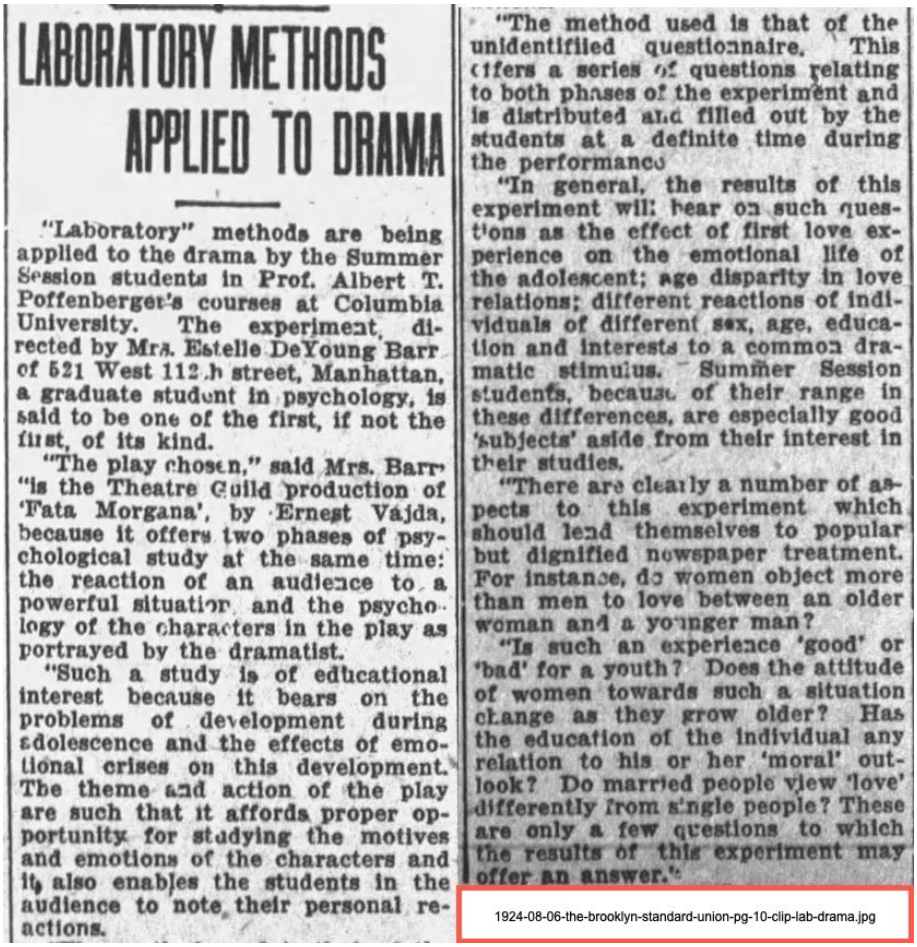
1921 (Aug 08) - Donald Barr (son) is born

Birthplace: Manhattan, New York,, United States [HL0024][GDrive] . See ... **Donald Barr (born 1921)** .

1924 (Aug 6) - Wife Estelle DeYoung Barr : School Dramas / Research

Being applied in **Professor Albert T Poffenberger**'s (see below for more info ...) courses at Columbia University. Note that this informs us that Estelle de Young Barr is (as of August 1924) residing at 5**21 West 112th Street in Manhattan** .

Full page : [HN00JE][GDrive]



LABORATORY METHODS APPLIED TO DRAMA

"Laboratory" methods are being applied to the drama by the Summer Session students in Prof. Albert T. Poffenberger's courses at Columbia University. The experiment, directed by Mrs. Estelle DeYoung Barr of 521 West 112th street, Manhattan, a graduate student in psychology, is said to be one of the first, if not the first, of its kind.

"The play chosen," said Mrs. Barr, "is the Theatre Guild production of 'Fata Morgana', by Ernest Vajda, because it offers two phases of psychological study at the same time: the reaction of an audience to a powerful situation and the psychology of the characters in the play as portrayed by the dramatist.

"Such a study is of educational interest because it bears on the problems of development during adolescence and the effects of emotional crises on this development. The theme and action of the play are such that it affords proper opportunity for studying the motives and emotions of the characters and it also enables the students in the audience to note their personal reactions.

"The method used is that of the unidentified questionnaire. This offers a series of questions relating to both phases of the experiment and is distributed and filled out by the students at a definite time during the performance.

"In general, the results of this experiment will bear on such questions as the effect of first love experience on the emotional life of the adolescent; age disparity in love relations; different reactions of individuals of different sex, age, education and interests to a common dramatic stimulus. Summer Session students, because of their range in these differences, are especially good 'subjects' aside from their interest in their studies.

"There are clearly a number of aspects to this experiment which should lend themselves to popular but dignified newspaper treatment. For instance, do women object more than men to love between an older woman and a younger man?

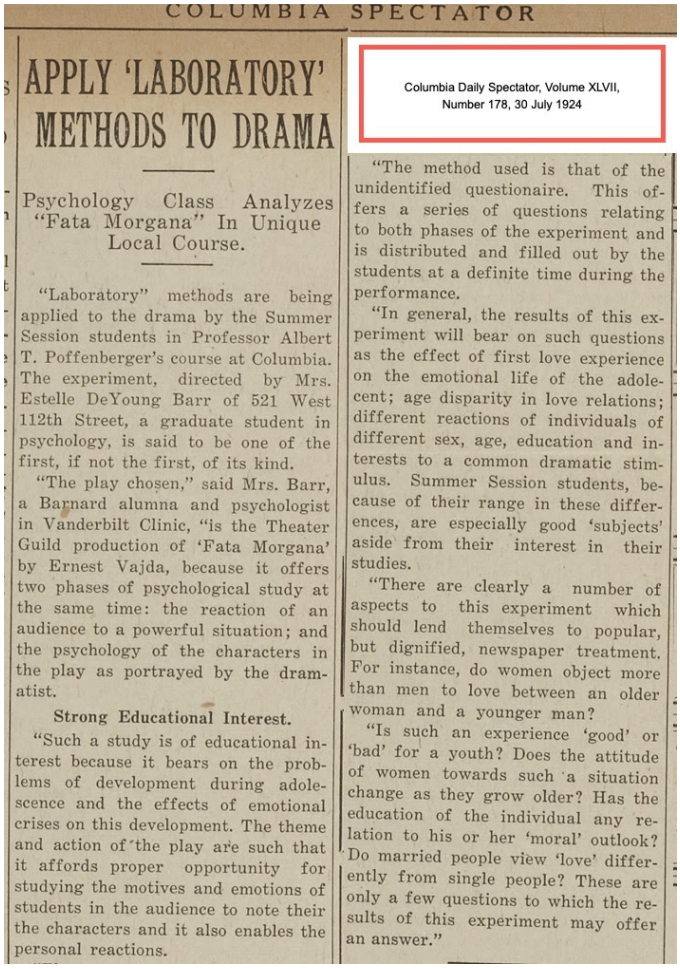
"Is such an experience 'good' or 'bad' for a youth? Does the attitude of women towards such a situation change as they grow older? Has the education of the individual any relation to his or her 'moral' outlook? Do married people view 'love' differently from single people? These are only a few questions to which the results of this experiment may offer an answer."

1924-08-06-the-brooklyn-standard-union-pg-10-clip-lab-drama.jpg

[HN00JF][GDrive]

Article from COlumbia University Daily Spectator - This version mentions that **Estelle DeYoung Barr** was *"a Barnard alumna and psychologist in Vanderbilt Clinic"*.

Full publication - [HE001H][GDrive]



COLUMBIA SPECTATOR

APPLY 'LABORATORY' METHODS TO DRAMA

Columbia Daily Spectator, Volume XLVII, Number 178, 30 July 1924

Psychology Class Analyzes "Fata Morgana" In Unique Local Course.

"Laboratory" methods are being applied to the drama by the Summer Session students in Professor Albert T. Poffenberger's course at Columbia. The experiment, directed by Mrs. Estelle DeYoung Barr of 521 West 112th Street, a graduate student in psychology, is said to be one of the first, if not the first, of its kind.

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Strong Educational Interest.

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"Is such an experience 'good' or 'bad' for a youth? Does the attitude of women towards such a situation change as they grow older? Has the education of the individual any relation to his or her 'moral' outlook? Do married people view 'love' differently from single people? These are only a few questions to which the results of this experiment may offer an answer."

[HE001I][GDrive]

1934 - "A psychological analysis of fashion motivation" by Estelle De Young Barr

Published 1934 in New York .

Written in English.

Barr (1934) investigated the diffuseness and intensity of fundamental drives as related to dress: the desire to conform, desire for economy, attitudes related to modesty, desire for comfort, the aesthetic impulse, and desire for self-expression. Her findings indicated that the desire to conform was the most diffuse of the desires measured. Conformity was more effective as a determiner of the time of buying clothing than was the desire for economy. The desire to conform varied with the technical or professional interest of the group.

This book//research is referenced for many years afterwards ...

Referenced in https://books.google.com/books?id=zEX24jqsGTQC&pg=PA110&lpg=PA110&dq=A+psychological+analysis+of+fashion+motivation+Estelle+De+Young+Barr+1+2+3+4+5++A+psychological+analysis+of+fashion+motivation+by+Estelle+De+Young+Barr&source=bl&ots=ep3PuCkWx-&sig=ACfU3U2y-tpuxQznPym6Akr3vWqakp6oEQ&hl=en&sa=X&ved=2ahUKEwjG-ZzQ6szlAhUyVt8KHUseAk0Q6AEwAnoECAgQAQ#v=onepage&q=A%20psychological%20analysis%20of%20fashion%20motivation%20Estelle%20De%20Young%20Barr%201%202%203%204%205%20%20A%20psychological%20analysis%20of%20fashion%20motivation%20by%20Estelle%20De%20Young%20Barr&f=false

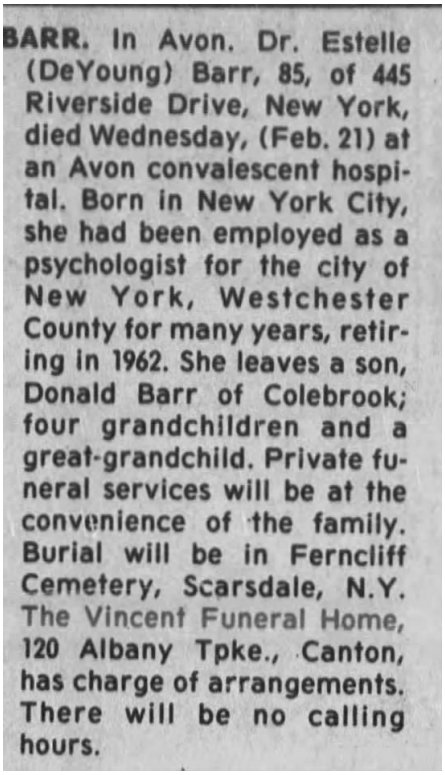
Social Change And Social Control

By Rajendra K. Sharma

(1997)

1979 (Feb) - Passing

Full page : [HN00JC][GDrive]



BARR. In Avon. Dr. Estelle (DeYoung) Barr, 85, of 445 Riverside Drive, New York, died Wednesday, (Feb. 21) at an Avon convalescent hospital. Born in New York City, she had been employed as a psychologist for the city of New York, Westchester County for many years, retiring in 1962. She leaves a son, Donald Barr of Colebrook; four grandchildren and a great-grandchild. Private funeral services will be at the convenience of the family. Burial will be in Ferncliff Cemetery, Scarsdale, N.Y. The Vincent Funeral Home, 120 Albany Tpke., Canton, has charge of arrangements. There will be no calling hours.

[HN00JD][GDrive]

Transcript : [HL0026][GDrive]

Record Transcription:
United States Obituary Notices
Learn about this record set

First name(s)	Estelle
Last name	Barr
Full name as given	Estelle Barr
Birth year	1893
Birth date	18 Jun 1893
Death year	1979
Death date	Feb 1979
Full dates	June 18, 1893 - February 1979
Place	New York, New York
State	New York
Country	United States
Obituary text	Estelle was born on June 18, 1893 and passed away in February 1979. Estelle was a resident of New York, New York.
Source link	View the Source Record
Record set	United States Obituary Notices
Category	Birth, Marriage & Death (Parish Registers)
Subcategory	Civil Deaths & Burials
Collections from	Americas, Central America, United States

[HL0027][GDrive]

Albert Theodore Poffenberger: 1885-1977

Poffenberger - Obituary

https://www.nytimes.com/1977/12/27/archives/albert-poffenberger92-professor-at-columbia.html

The American Journal of Psychology - Albert Theodore Poffenberger: 1885-1977 - Vol. 92, No. 1 (Mar., 1979), pp. 143-149 (7 pages)

PDF w/ OCR - [HP003C][GDrive]

"THE RESEARCH PSYCHOLOGIST IN THE ARMY-- 1917 TO 1977 - J. E. Uhianer"

Soure : [HG006K][GDrive]

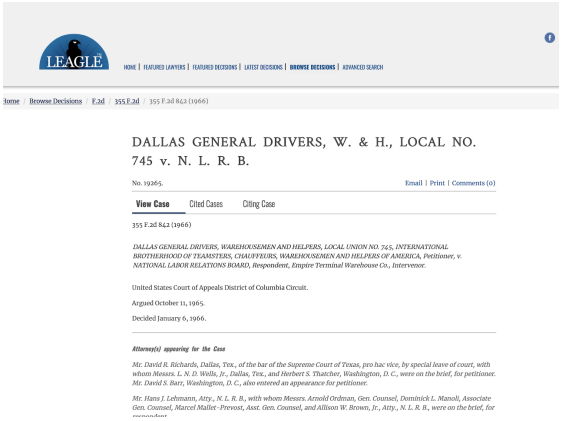
http://www.archive.org/stream/columbiaswarwork00newy/columbiaswarwork00newy_djvu.txt

Harry L. Hollingsworth, Professor of Psychology at Barnard College, is taking part in the work of the Psychopathic Service at Bellevue Hospital, and Albert T. Poffenberger, Instructor in the same department, who was formerly lecturer to military psycheatriats on the use of mental tests, is now psychological examiner to determine the fitness of soldiers at Camp Wheeler, Georgia.

BITCHUTE @Housatonic YOUTUBE @HousatonicLive ODYSEE @Housatonic BRIGHTEON @Housatonic

Housatonic

David S Barr (born 1894)



- **Born** - Born in London on Aug 29 1894 [HL002A][GDrive]
- **Died** - Aug 30 1966 (age 72) [HL002A][GDrive]
- **PARENTS** - Father is **Philip Barr** (born 1872), Mother is Rebecca Barr
- **MARRIAGE** - **Wife** - **Elinor Sachs Barr (born 1895)**
- **CHILDREN** :
  - ...
- **SIBLINGS:**
  - Brothers include :
    - **Simon Pelham Barr** (born 1892) (married to Estelle de Young Barr (born 1893))
    - Mae (Barr) Gould [HL002A][GDrive]
    - Leonore (Barr) Schimmel [HL002A][GDrive] (Married **Michael Schimmel** (born 1896))
    - Evelyn (Barr) Gaines
    - Jane Meriam Barr (died at age 1)
  - Brother-in-law : **Alexander Sachs** (born 1893)
- **OTHER FAMILY RELATIONSHIPS** :
  - Nephew :
    - **Donald Barr** (born 1921)
- **Profession** - ....

1901 Census - ENGLAND

1900 census in England for Barr family - For details, see Philip Barr (born 1872) .

Full transcript : [HS0016][GDrive] / Full census sheet : [HS0018][GDrive]

Record Transcription:
1901 England, Wales & Scotland Census
34, Station Road, East Ham, West Ham, London & Essex, England
Learn about this record set

Household Members

First name(s)	Last name	Relationship	Marital status	Sex	Age	Birth year	Occupation	Birth place
Philip	Barr	Head	Married	Male	30	1871	Furrier	Russia
Rebecca	Barr	Wife	Married	Female	30	1871	-	Russia
Sam	Barr	Son	Single	Male	8	1893	-	Whitechapel, London, England
Davis	**Barr**	**Son**	**Single**	**Male**	**6**	**1895**	**-**	**Spitalfields, Middlesex, England**
Leah	Barr	Daughter	Single	Female	4	1897	-	London, England
Rach	Barr	Mother-In-Law	Widow	Female	50	1851	-	Russia
Polly	Barr	Sister-In-Law	Single	Female	24	1877	Dressmaker	Russia

[HS0017][GDrive]

1907 - Family (with father Philip Barr) immigrate to the United States (New York City)

THIS immigration date is visible on the 1910 Census ([HS0015][GDrive]) and the 1920 Census.

The **RMS Umbria:** Berdychiv, Ukraine

This MIGHT be a record of the voyage in 1907 - Transcript : [HJ000C][GDrive]

Record Transcription:
New York City Passenger Lists, 1820-1957
Learn about this record set

First name(s)	Phillip
Last name	Barr
Role	Passenger
Others	Departure port relation (MOTHER): Mrs Barr, Arrival port relation (BROTHER-IN-LAW): Charles Stoon
Sex	Male
Age	36y
Birth year	1871
Nationality	Russia, Russian
Residence	London, England
Year	1907
Departure port	Liverpool
Arrival place	New York
Ship name	Umbria
Country	United States
Collection	New York City Passenger Lists, 1820-1957
NARA publication number	M237 and T715
Record set	United States, Passenger And Crew Lists
Category	Immigration & Travel
Subcategory	Passenger Lists
Collections from	Americas, United States

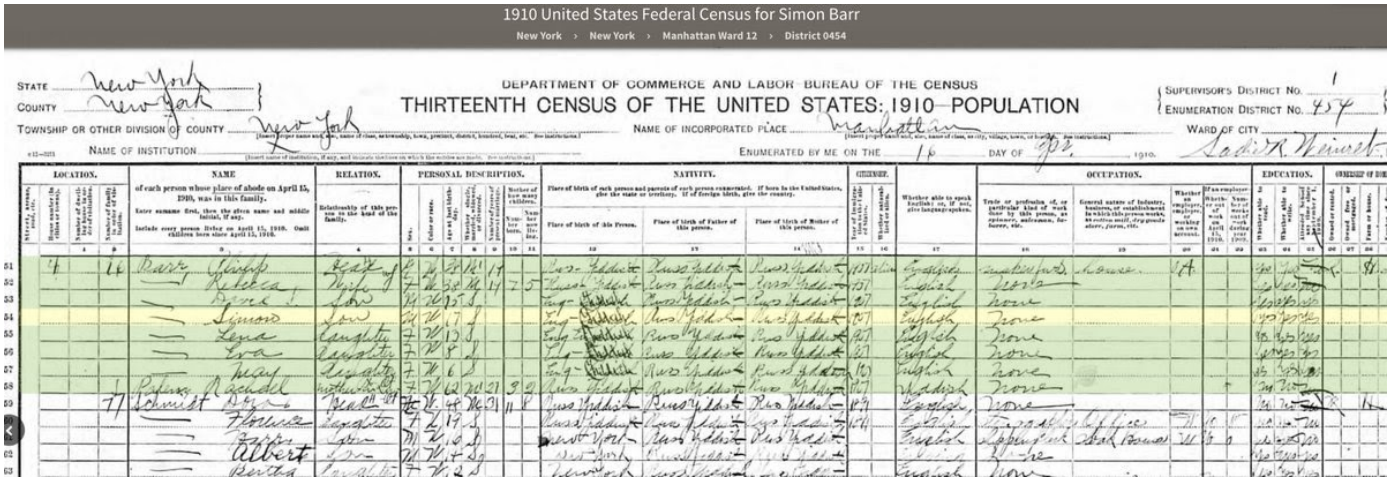
[HJ000D][GDrive]

1910 Census

"Simon has disappeared from his name an he now goes by "Pelham Barr". He married Estella De Young, and Donald E. Barr is their son. His parents are now said to be from Poland." Original Tweet Source : [HT0030][GDrive]

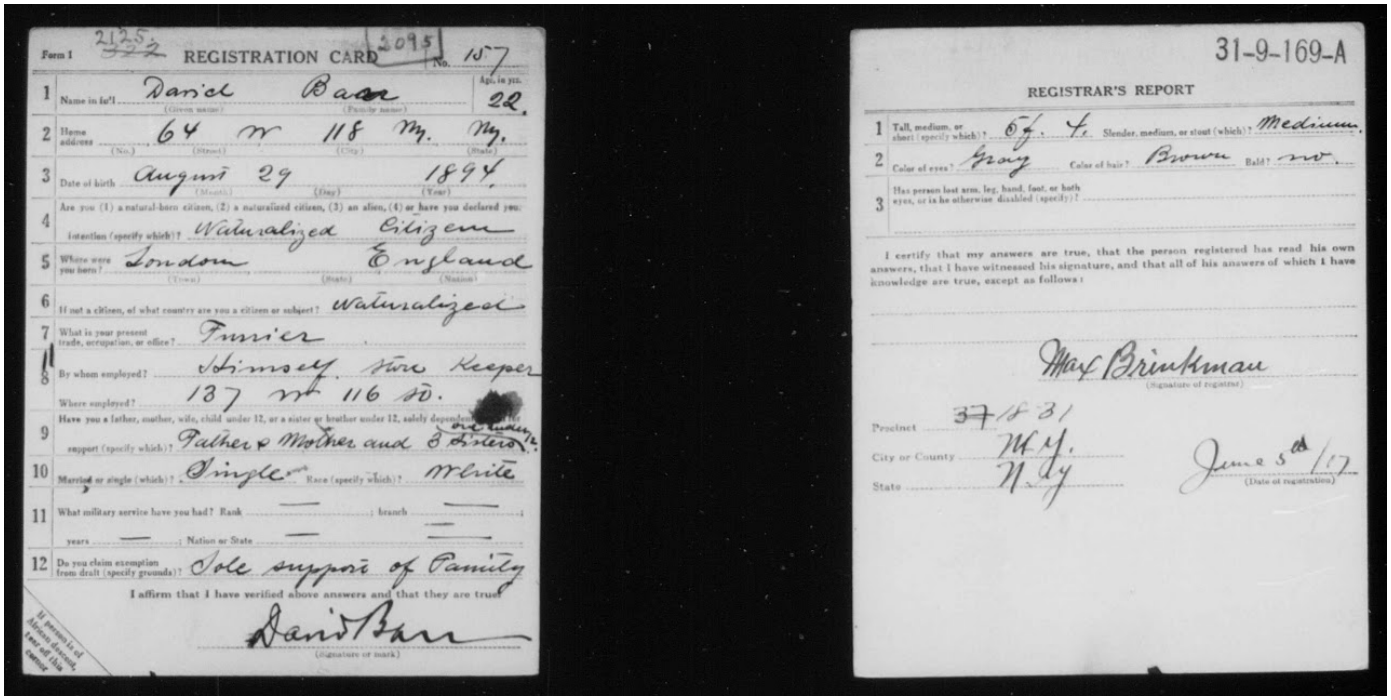
Philip Barr, the head of the family and father of **Simon Pelham Barr**, is a "Maker Furs", and works out of the house (family home). The 1920 Census shows that Philip Barr is a "Furrier", validating the "Furs" part of his trade.

The full census sheet for 1910 (and at a higher resolution) is available here : [HS0015][GDrive]



[HT0031][GDrive]

1917 WW1 Draft



[HG001U][GDrive]

1919 - Honorable Discharge from WW1 Service - David S. Barr was in the Ordinance Inspection Corps. in NYC and Washington DC

Barr, David S (Surname) (Christian name) 2,519,633 (Army serial number) White (Race: White or colored)

Residence: 64 W 118th St (Street and house number) New York City (Town or city) (County) NEW YORK (State)

*Enlisted in: N.A at 280 Broadway New York City N.Y — Dec 14/17

†Born in: London England — 23 4/12 yrs

Organizations: Ord Corps Inspection Section Gun Div 24th St & Broadway N Y to June 4/18; Inspection Div Enl Ord Corps N.A 6th & B Sts Washington D.C to discharge.

Grades: Cpl Dec 13/18. —

Engagements: — —

Wounds or other injuries received in action: None.

‡Served overseas: None

§Hon. disch. Jan 13/19 on demobilization

Was reported 0 per cent disabled on date of discharge, in view of occupation.

Remarks: —

Form No. 724-1½, A. G. O. March 12, 1920. 3—7688

*Insert "R. A.", "N. G.", "E. R. C.", "N. A.", as case may be, followed by place and date of enlistment. †Give place of birth and date of birth, or age at enlistment. ‡Give dates of departure from and arrival in the United States. §Give date.

[HG001V][GDrive]

1920 Census - David Barr living in NYC with parents

Transcript : [HS0011][GDrive] / Full Census Form : [HS0012][GDrive]

- Trade of Philip Barr (born 1872) says "Furrier" .
- David Barr is a "lawyer".

	PLACE OF ABODE.			NAME of each person whose place of abode on January 1, 1920, was in this family. Enter surname first, then the given name and middle initial, if any. Include every person living on January 1, 1920. Omit children born since January 1, 1920.	RELATION.	TENURE.		PERSONAL DESCRIPTION.				CITIZENSHIP.			EDUCATION.		
	Street, avenue, road, etc.	House number or farm, etc. (See instructions.)	Number of dwelling house in order of visitation.	Number of family in order of visitation.		Relationship of this person to the head of the family.	Home owned or rented.	If owned, free or mortgaged.	Sex.	Color or race.	Age at last birthday.	Single, married, widowed, or divorced.	Year of immigration to the United States.	Naturalized or alien.	If naturalized, year of naturalization.	Attended school any time since Sept. 1, 1919.	Whether able to read.	Whether able to write.
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
31		65-6		1	Barr Philip	Head	R		M	W	48	M	1907	Na	1913		yes	yes
32					— Rebecca	Wife			F	W	47	M	1907	Na			yes	yes
33					— David	Son			M	W	25	S	1907	Na	1913		yes	yes
34					— Lorna	Daughter			F	W	22	S	1907	Na	19		yes	yes
35					— Evelyn	Daughter			F	W	18	S	1907	Na			yes	yes
36					— Mae	Daughter			F	W	16	S	1907	Na		yes	yes	yes
37					— Edith	Daughter			F	W	8	S				yes	yes	yes
38			53		Palen Rachel	Boarder			F	W	70	Wd	Un	Un			yes	yes

[HS0013][GDrive]

	NATIVITY AND MOTHER TONGUE. Place of birth of each person and parents of each person enumerated. If born in the United States, give the state or territory. If of foreign birth, give the place of birth and, in addition, the mother tongue. (See instructions.)						Whether able to speak English.	OCCUPATION.			Number of farm schedule.
	PERSON.		FATHER.		MOTHER.			Trade, profession, or particular kind of work done, as spinner, salesman, laborer, etc.	Industry, business, or establishment in which at work, as cotton mill, dry goods store, farm, etc.	Employer, salary or wage worker, or working on own account.	
	Place of birth.	Mother tongue.	Place of birth.	Mother tongue.	Place of birth.	Mother tongue.					
	19	20	21	22	23	24	25	26	27	28	29
31	Russia	Russian	Russia	Russian	Russia	Russian	yes	Farmer		E.M.	
32	Russia	Russian	Russia	Russian	Russia	Russian	yes				
33	England	English	Russia	Russian	Russia	Russian	yes	Lawyer		O.A.	
34	England	English	Russia	Russian	Russia	Russian	yes	Clerk	Government	W	
35	England	English	Russia	Russian	Russia	Russian	yes	Clerk	Government	W	
36	England	English	Russia	Russian	Russia	Russian	yes				
37	New York		Russia	Russian	Russia	Russian	yes				
38	Russia	Russian	Russia	Russian	Russia	Russian	yes				

[HS0014][GDrive]

1922 (Feb) - David S Barr marriage to Elinor Sachs

Transcript : [HL001T][GDrive]

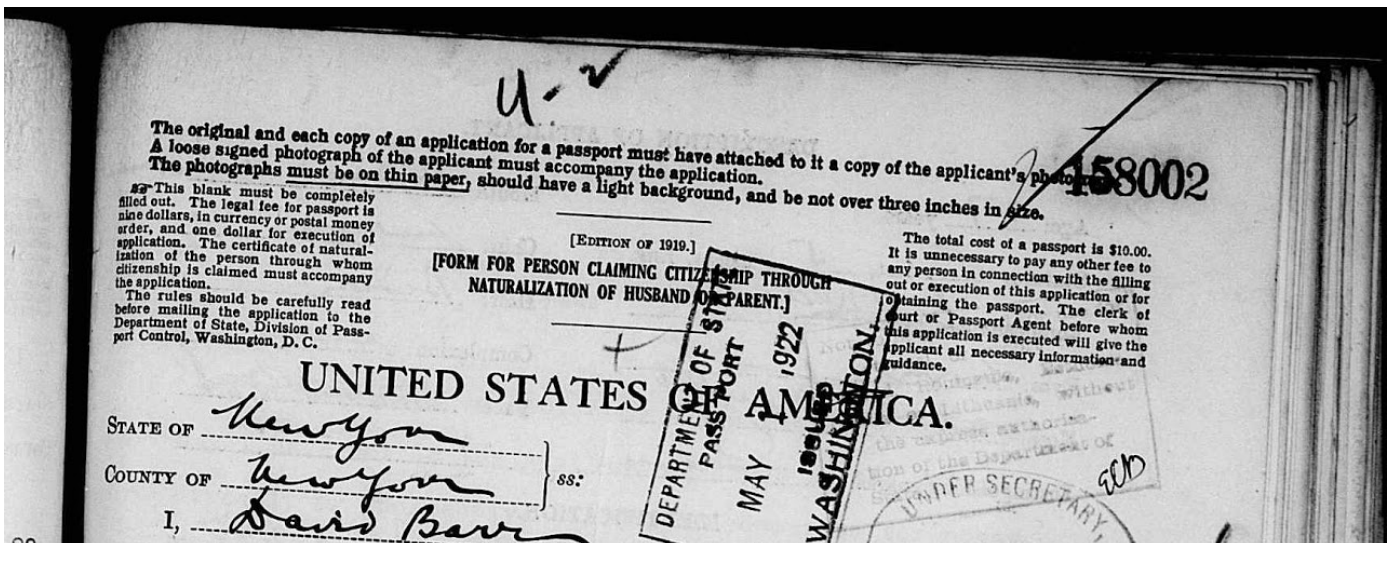
Record Transcription:
United States Marriages
Learn about this record set

First name(s)	Elinor
Last name	Sachs
Sex	Female
Race	White
Marital status	Single
Age	26
Birth year	1896
Father's first name(s)	Samuel
Father's last name	-
Mother's first name(s)	Sarah
Mother's last name	Alexandrowtz
Event	Marriage
Year	1922
Event date	17 Feb 1922
Location	Manhattan
Place	Manhattan, New York, United States
County	New York
State	New York
Country	United States
Spouse's first name(s)	David
Spouse's last name	Barr
Spouse's sex	Male
Spouse's race	White
Spouse's marital status	Single
Spouse's age	27
Spouse's birth year	1895
Spouse's father's first name(s)	Philip
Spouse's father's last name	-
Spouse's mother's first name(s)	Rebecca
Spouse's mother's last name	Palem

[HL001U][GDrive]

1922 - Citizenship / Naturalization Claims

Below : [HG0021][GDrive]


U-2

The original and each copy of an application for a passport must have attached to it a copy of the applicant's pho
A loose signed photograph of the applicant must accompany the application.
The photographs must be on thin paper, should have a light background, and be not over three inches in size.

158002

This blank must be completely filled out. The legal fee for passport is nine dollars, in currency or postal money order, and one dollar for execution of application. The certificate of naturalization of the person through whom citizenship is claimed must accompany the application.

The rules should be carefully read before mailing the application to the Department of State, Division of Passport Control, Washington, D. C.

[Edition of 1919.]

[FORM FOR PERSON CLAIMING CITIZENSHIP THROUGH NATURALIZATION OF HUSBAND OR PARENT.]

The total cost of a passport is $10.00. It is unnecessary to pay any other fee to any person in connection with the filing out or execution of this application or for obtaining the passport. The clerk of court or Passport Agent before whom this application is executed will give the applicant all necessary information and guidance.

UNITED STATES OF AMERICA.

STATE OF New York
COUNTY OF New York } ss:
I, David Barr

DEPARTMENT OF STATE PASSPORT MAY 1922 ISSUED WASHINGTON

UNDER SECRETARY

THE UNITED STATES, hereby apply to the Department of State, at Washington, for a passport.

BARR, a NATURALIZED AND LOYAL CITIZEN OF

I solemnly swear that I was born at London, England

on or about the 29th day of August, 1894;

that my {father / husband}, Philip Barr (Name.) was born in Russia (Country.)

that he emigrated to the United States, sailing on board the

from Liverpool on or about June 1, 1907;

that he resided 14 years, uninterruptedly, in the United States, from 1907 to 1922

at New York City, N.Y. that he was naturalized as a citizen

of the United States before the Supreme Court of New York County

at New York City, N.Y., on June 2, 1913

as shown by the accompanying Certificate of Naturalization; that I am the Son of the person

described in said Certificate; that I have resided in the United States, uninterruptedly, for 14

years, from 1907 to 1922, at New York City, N.Y.; that I am domiciled in the

United States, my permanent residence being at 65 West 11th St., in the State

of New York, where I follow the occupation of Lawyer & Writer

My last passport was obtained from

and was (Disposition of passport.) on (Date.)

I am about to go abroad temporarily; and intend to return to the United States within 9 months

with the purpose of residing and performing the duties of citizenship therein; and that I

desire a passport for use in visiting the countries hereinafter named for the following purpose:

(Name of country.)	(Object of visit.)
France	Pleasure & Travel
England	Pleasure & Travel
Holland	Pleasure & Travel
Germany	Pleasure & Travel
Poland	Newspaper Work

I intend to leave the United States from the port of New York (Port of departure.)

sailing on board the Lapland (Name of vessel.) on May 18th (Date of departure.), 1922

OATH OF ALLEGIANCE.

Further, I do solemnly swear that I will support and defend the Constitution of the United States against all enemies, foreign and domestic; that I will bear true faith and allegiance to the same; and that I take this obligation freely, without any mental reservation or purpose of evasion: So help me God.

(Signature of applicant.)

Sworn to before me this day

of APR 24 1922

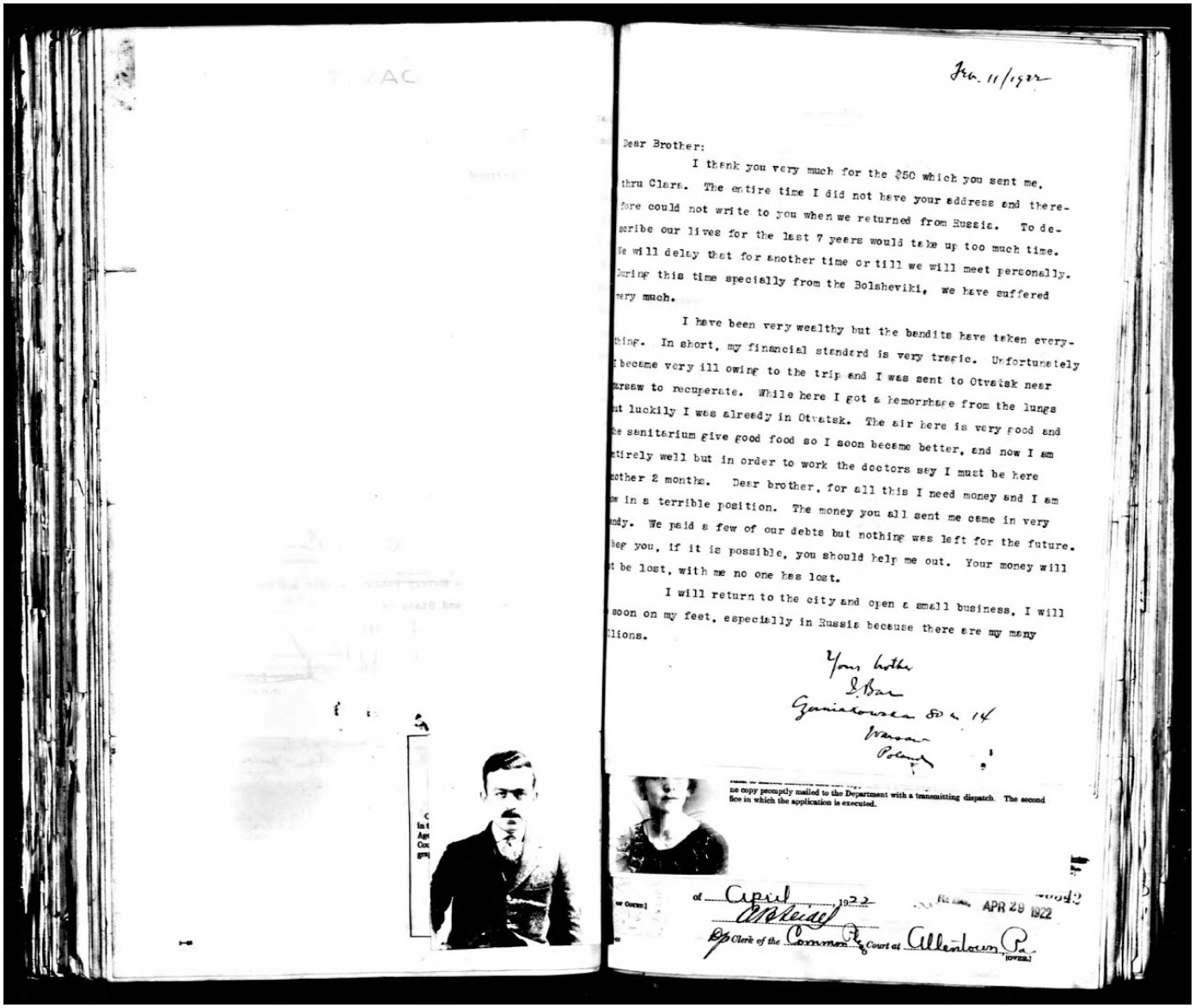
Agent of the Department of State

Clerk of the Court

APR 27 1922 23720

CERTIFICATE OF NATURALIZATION SEEN

[OVER.]



Feb. 11/1922

Dear Brother:

I thank you very much for the $50 which you sent me, thru Clara. The entire time I did not have your address and therefore could not write to you when we returned from Russia. To describe our lives for the last 7 years would take up too much time. We will delay that for another time or till we will meet personally. During this time specially from the Bolsheviki, we have suffered very much.

I have been very wealthy but the bandits have taken everything. In short, my financial standard is very tragic. Unfortunately I became very ill owing to the trip and I was sent to Otvatsk near Warsaw to recuperate. While here I got a hemorrhage from the lungs but luckily I was already in Otvatsk. The air here is very good and the sanitarium give good food so I soon became better, and now I am entirely well but in order to work the doctors say I must be here another 2 months. Dear brother, for all this I need money and I am now in a terrible position. The money you all sent me came in very handy. We paid a few of our debts but nothing was left for the future. I beg you, if it is possible, you should help me out. Your money will not be lost, with me no one has lost.

I will return to the city and open a small business, I will be soon on my feet, especially in Russia because there are my many millions.

Your brother
I. Bar
Granicznowska 50 a 14
Warsaw
Poland

ne copy promptly mailed to the Department with a transmitting dispatch. The second fice in which the application is executed.

or Ourse.]

of April 1922

APR 28 1922

By Clerk of the Common Pleas Court at Allentown Pa.

[SEAL.]

[HG0022][GDrive]

DESCRIPTION OF APPLICANT.

Age: 27 years.
Stature: 5 feet 5 inches, Eng.
Forehead: Medium
Eyes: brown
Nose: straight
Mouth: medium
Chin: medium
Hair: Brown
Complexion: medium
Face: Round
Distinguishing marks: none

IDENTIFICATION.

April 24, 1922

I, Sidney S. Bobo, solemnly swear that I am a [native] citizen of the United States; that I reside at 601 West 148th Street; that I have known the above-named David Barr personally for eight years and know [him] to be the person referred to in the within-described certificate of naturalization; and that the facts stated in [his] affidavit are true to the best of my knowledge and belief.

Sidney S. Bobo
Lawyer
(Occupation)
46 Cedar Street, N.Y.C.
(Address of witness.)

No lawyer or other person will be accepted as witness to a passport application if he has received or expects to receive a fee for his services in connection with the execution of the application or obtaining the passport.

Sworn to before me this 24 day of April, 1922

Agent of the Department of State.
Clerk of the ____ Court of ____

Applicant desires passport to be sent to the following address:

David Barr
65 W. 117 St
Nyack N.y.

A duplicate of the photograph to be attached here must be sent to the Department with the application to be affixed to the passport with an impression of the Department's seal.

AFFIDAVIT

State of New York.
County of New York. } ss:

I, the undersigned, an applicant for a passport, solemnly swear that I have not in the past and will not in the future, either directly or indirectly, solicit or advertise for money to be used in bringing immigrants or aid any emigrant, other than the members of my immediate family, to come to the United States, and will in no manner engage in or assist others engaged in inducing emigration to the United States; that in case I enter countries or sections of countries where disturbed conditions exist I will do so upon my own responsibility; that I will not digress from the purposes for which a passport is issued to me, unless such passport is properly amended; and that I will scrupulously observe the laws and regulations of the countries through which I may travel or in which I may reside.

I take this obligation freely, without any mental reservation or purpose of evasion.

David Barr
(Signature.)

Sworn to before me, a ~~Notary Public~~ Agent of the Department of State, within and for the City of Nyack and State of N.Y., on this 24 day of April, 1922

(Seal)

Agent of the Department of State
~~Notary Public.~~
(P. C. Form No. 19.)

one copy promptly mailed to the Department with a transmitting dispatch. The second face in which the application is executed.

[or Cons.]

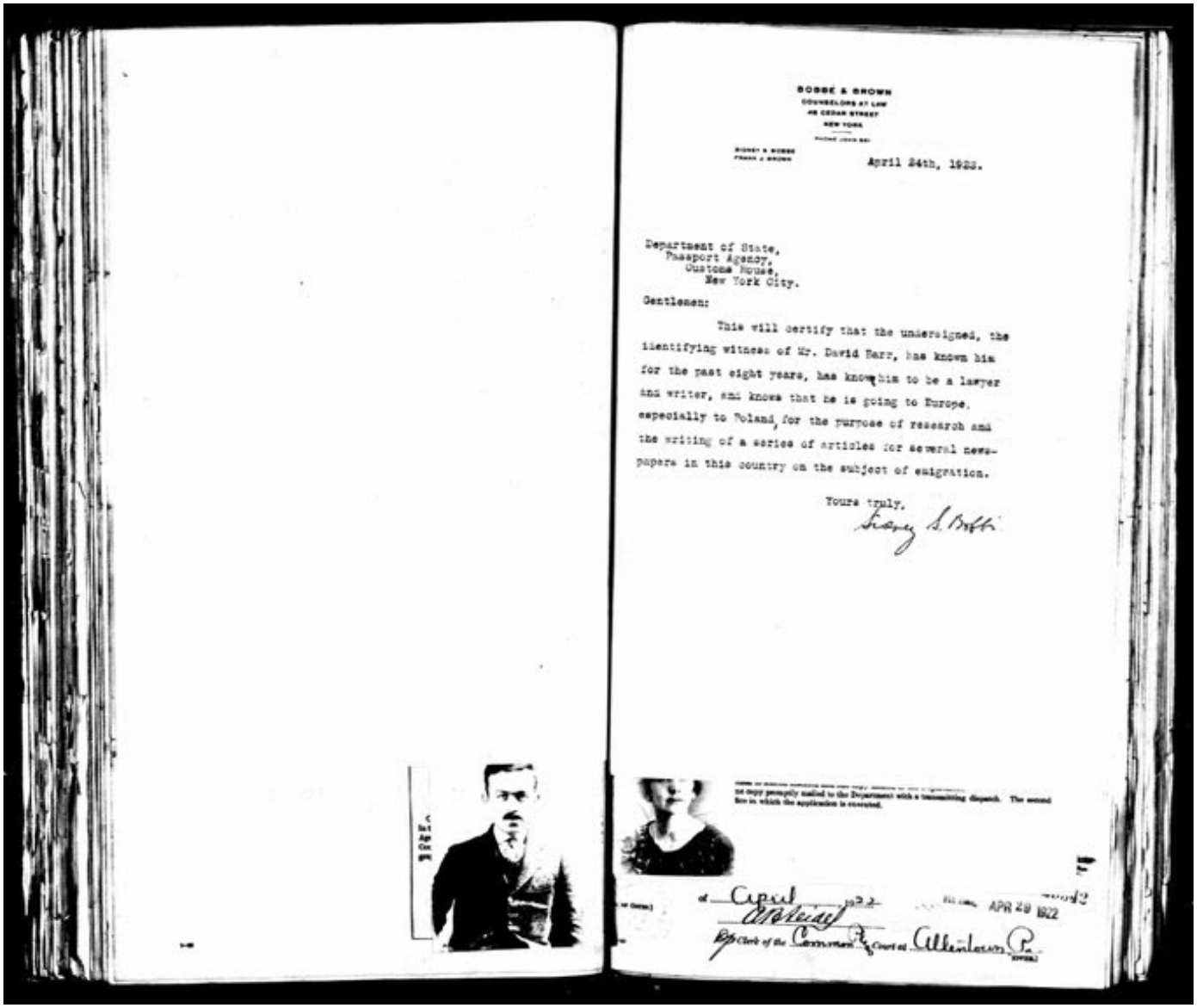
of April, 1922

APR 29 1922

Clerk of the Common Pleas Court at Allentown Pa.

[OVER.]

[HG0023][GDrive]



BOBBE & BROWN
COUNSELORS AT LAW
49 CEDAR STREET
NEW YORK

April 24th, 1922.

Department of State,
Passport Agency,
Customs House,
New York City.

Gentlemen:

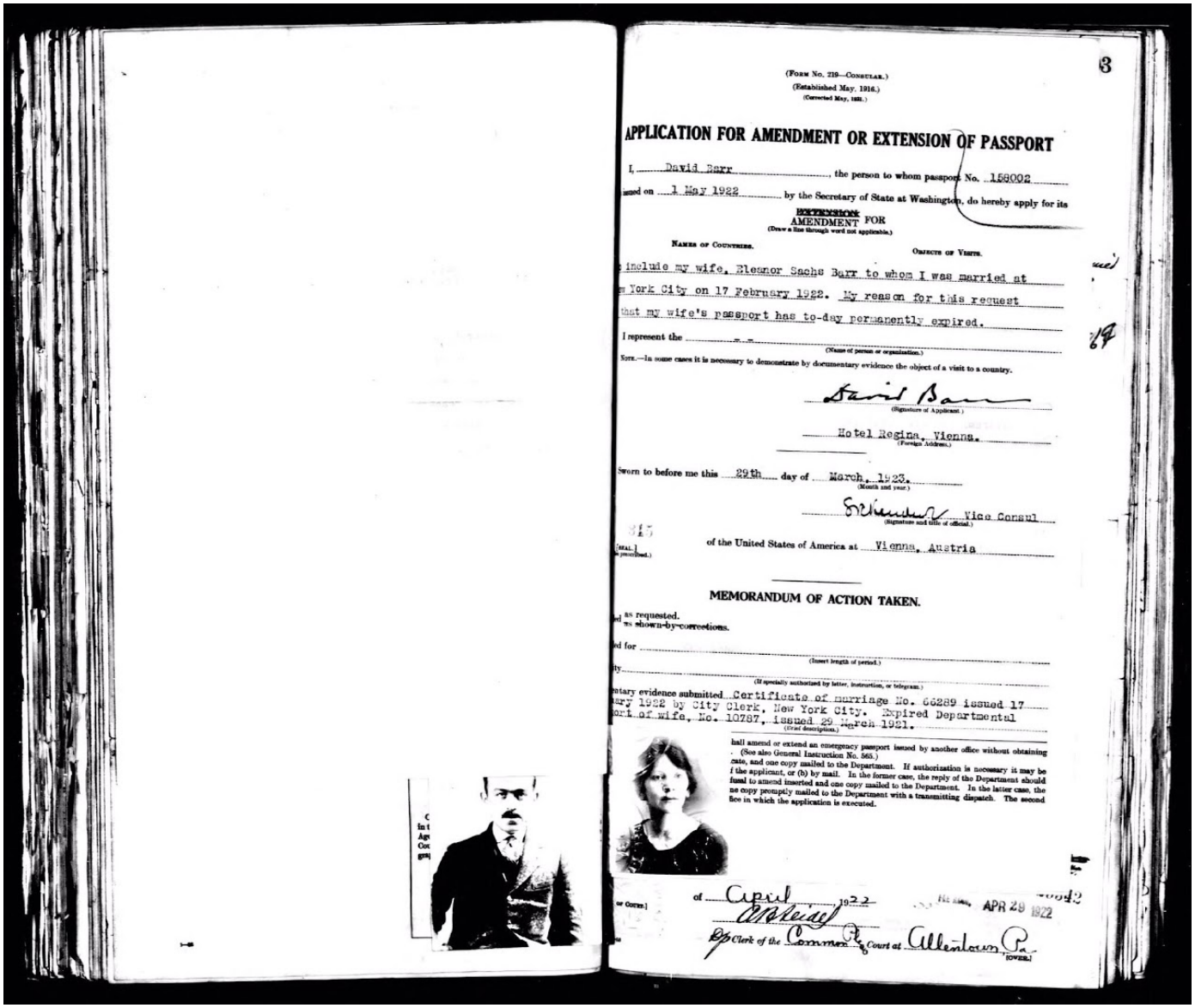
This will certify that the undersigned, the identifying witness of Mr. David Karr, has known him for the past eight years, has known him to be a lawyer and writer, and knows that he is going to Europe, especially to Poland, for the purpose of research and the writing of a series of articles for several newspapers in this country on the subject of emigration.

Yours truly,

Sidney S. Bobbe

[HG0024][GDrive]

1923 (March) - Passport application extension



(Form No. 219—Consular.)
(Established May, 1916.)
(Corrected May, 1921.)

3

APPLICATION FOR AMENDMENT OR EXTENSION OF PASSPORT

I, David Barr, the person to whom passport No. 156002 was issued on 1 May 1922 by the Secretary of State at Washington, do hereby apply for its ~~EXTENSION~~ AMENDMENT FOR
(Draw a line through word not applicable.)

NAMES OF COUNTRIES. OBJECTS OF VISITS.

include my wife, Eleanor Sachs Barr to whom I was married at York City on 17 February 1922. My reason for this request that my wife's passport has to-day permanently expired.

I represent the
(Name of person or organization.)

NOTE.—In some cases it is necessary to demonstrate by documentary evidence the object of a visit to a country.

David Barr
(Signature of Applicant.)

Hotel Regina, Vienna.
(Foreign Address.)

Sworn to before me this 29th day of March, 1923.
(Month and year.)

Vice Consul
(Signature and title of official.)

[SEAL.] of the United States of America at Vienna, Austria

MEMORANDUM OF ACTION TAKEN.

as requested.
as shown by corrections.

d for
(Insert length of period.)

(If specially authorized by letter, instruction, or telegram.)

ntary evidence submitted Certificate of marriage No. 66289 issued 17 ary 1922 by City Clerk, New York City. Expired Departmentul ort of wife, No. 10787, issued 29 March 1921.
(Brief description.)

hall amend or extend an emergency passport issued by another office without obtaining . (See also General Instruction No. 565.)
ate, and one copy mailed to the Department. If authorization is necessary it may be f the applicant, or (b) by mail. In the former case, the reply of the Department should ssal to amend inserted and one copy mailed to the Department. In the latter case, the ne copy promptly mailed to the Department with a transmitting dispatch. The second fice in which the application is executed.

[or Corns.] of April 1922 APR 29 1922

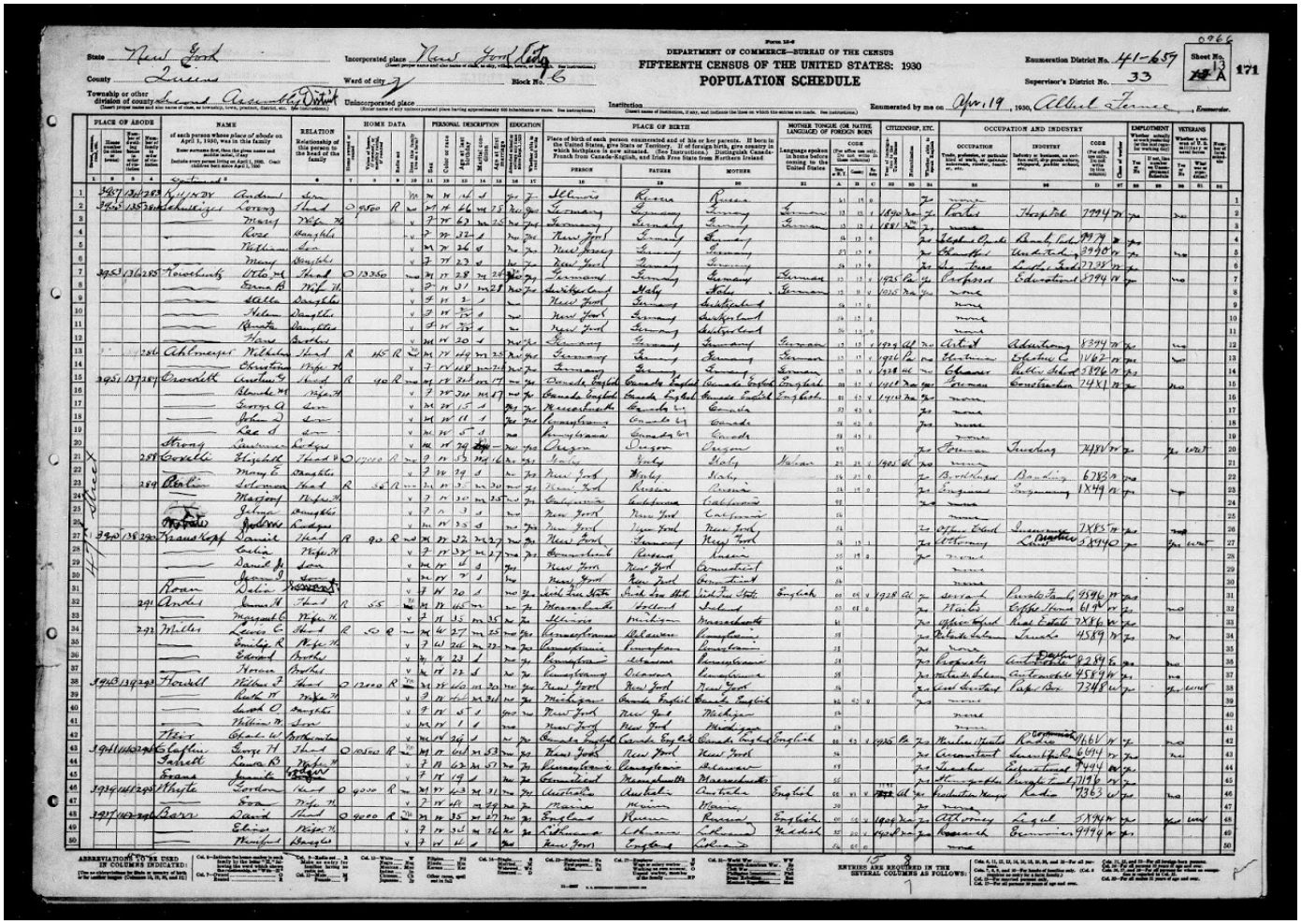
By Clerk of the Common Pleas Court at Allentown Pa.
[OVER.]

[HG001Y][GDrive]

1930 Census

Born 1896 in Lithuania ?

1. David Barr / 35
2. Elinor Barr / 34
3. Winifred Barr / 4
4. Paul Barr / 3



DEPARTMENT OF COMMERCE—BUREAU OF THE CENSUS
FIFTEENTH CENSUS OF THE UNITED STATES: 1930
POPULATION SCHEDULE

State New York — Incorporated place New York City — Enumeration District No. 41-657 — Sheet No. 13 A — 171
County Queens — Ward of city 7 — Block No. 6
Township or other division of county Second Assembly District — Unincorporated place — Supervisor's District No. 33
Institution — Enumerated by me on Apr. 19, 1930, Albert James, Enumerator.

	PLACE OF ABODE	NAME	RELATION	HOME DATA	PERSONAL DESCRIPTION	EDUCATION	PLACE OF BIRTH	MOTHER TONGUE (OR NATIVE LANGUAGE) OF FOREIGN BORN	CITIZENSHIP, ETC.	OCCUPATION AND INDUSTRY	EMPLOYMENT	VETERANS
	Street, avenue, road, etc. / House number / Number of dwelling house in order of visitation / Number of family in order of visitation	Enter surname first, then the given name and middle initial, if any, of each person whose place of abode on April 1, 1930, was in this family. Include every person living on April 1, 1930. Omit children born after April 1, 1930.	Relationship of each person named to the head of the family	Home owned or rented / Value of home or monthly rental / Radio set	Sex / Color or race / Age at last birthday / Single, married, widowed, or divorced / Age at first marriage / Whether attended school or college at any time since Sept. 1, 1929	Whether able to read and write / Highest grade completed	Place of birth of each person enumerated and of his or her parents. If born in the United States, give State or Territory. If of foreign birth, give country in which birthplace is now situated. (See Instructions.) Distinguish Canada-French from Canada-English, and Irish Free State from Northern Ireland. PERSON / FATHER / MOTHER	Language spoken in home before coming to the United States	Year of naturalization / Whether naturalized or alien	OCCUPATION (Trade, profession, or particular kind of work done, as spinner, weaver, salesman, manager, clerk, etc.) / INDUSTRY (Industry or business, as cotton mill, retail shoe store, dwelling, public school, etc.) / CODE	Whether at work yesterday / If not, line on which return was made	Whether a veteran of U. S. military or naval forces / What war or expedition
	1 2 3 4	5	6	7 8 9 10	11 12 13 14 15 16 17	18	19 20 21	22 A B C	23 24	25 26 27	28 29	30 31 32
1	167 / 36 / 283	Kyl, Andrew	Son		M W S 7	Yes	Illinois / Russia / Russia			Porter / Hospital	7994	
2	167 / 185	Schellinger, Conrad	Head	9500 R	M W M 66	Yes	Germany / Germany / Germany	German	1890 Na	Porter / Hospital	7994	
3		Mary	Wife		F W M 63	Yes	Germany / Germany / Germany	German	1888 Na			
4		Rose	Daughter		F W S 32	Yes	New York / Germany / Germany			Stenographer / Bank, Inst.	7979	
5		William	Son		M W S 26	Yes	New Jersey / Germany / Germany			Chauffeur / Undertaking	7990	
6		Mary	Daughter		F W S 23	Yes	New York / Germany / Germany			Secretary / Lutheran Church	7795	
7	345 / 136 / 285	Tewelweit, Otto M	Head	O 13350	M W M 28 M 24	Yes	Germany / Germany / Germany	German	1925 Na	Professor / Education	7994	
8		Erna B	Wife		F W M 31 M 28	Yes	Switzerland / Italy / Italy	German	1926 Na	none		
9		Hilda	Daughter		F W S 2		New York / Germany / Switzerland			none		
10		Helen	Daughter		F W S 5		New York / Germany / Switzerland			none		
11		Rosita	Daughter		F W S 3		New York / Germany / Switzerland			none		
12		Hans	Brother		M W S 20	Yes	Germany / Germany / Germany	German	1929 Al Na	Artist	8394	
13	286	Ahlmeyer, Nikolaus	Head	R 165 R	M W M 49 M 25	Yes	Germany / Germany / Germany	German	1926 Pa Na	Electrician / Electric Co	7467	
14		Christina	Wife		F W M 48 M 24	Yes	Germany / Germany / Germany	German	1928 Al Na	Cleaner / Public School	7896	
15	345 / 137 / 287	Crockett, Arthur G	Head	R 90 R	M W M 39 M 17	Yes	Canada English / Canada English / Canada English	English	1908 Na	Foreman / Construction	7481	
16		Blanche M	Wife		F W M 37	Yes	Canada English / Canada English / Canada English		1910 Na	none		
17		George A	Son		M W S 15	Yes	Massachusetts / Canada Eng. / Canada			none		
18		John J	Son		M W S 11	Yes	Pennsylvania / Canada Eng. / Canada			none		
19		Lee J	Son		M W S 5		Pennsylvania / Canada Eng. / Canada			none		
20		Strong, Laurence	Lodger		M W S 29	Yes	Oregon / Oregon / Oregon			none		
21	288	Cordle, Elizabeth	Head	O 12000 R	F W M 54	Yes	Italy / Italy / Italy	Italian	1901 Al Na	none		
22		Mary C	Daughter		F W S 19	Yes	New York / Italy / Italy			Bookkeeper / Banking	6783	
23	289	Berlin, Solomon	Head	R 35 R	M W S 30	Yes	Russia / Russia / Russia			Engineer / Engineering	1849	
24		Margery	Niece		F W S 5		California / California / California			none		
25		Jolina	Daughter		F W S 3		New York / California / California			none		
26		Rodgers, Jodine	Lodger		M W S 33		New York / New York / New York			Office Exec. / Insurance Co.	7485	
27	344 / 138 / 290	Krauskopf, Daniel	Head	R 90 R	M W M 32 M 27	Yes	New York / Germany / New York			Attorney / Law	5849	
28		Celia	Wife		F W M 32 M 27	Yes	Connecticut / Russia / Russia			none		
29		Daniel Jr	Son		M W S 4		New York / New York / Connecticut			none		
30		Joan J	Son		M W S 1		New York / New York / Connecticut			none		
31	Rear	Delia	Servant		F W S 20		Irish Free State / Irish Free State / Irish Free State	English	1928 Al	Servant / Private Family	8946	
32	291 Andes	James A	Head	R 55	M W M 45		Maryland / Ireland / Ireland			Waiter / Coffee House	6194	
33		Margaret C	Wife		F W M 35 M 35		Illinois / Michigan / Massachusetts			Office Exec. / Real Estate	7486	
34	292 Miller	Lewis C	Head	R 60 R	M W M 37 M 35		Pennsylvania / Delaware / Pennsylvania			Real Estate Salesman	4589	
35		Emily R	Wife		F W M 36 M 32		Pennsylvania / Pennsylvania / Pennsylvania			none		
36		Edward	Brother		M W S 23		Pennsylvania / Delaware / Pennsylvania			Purchasing Agent / Department Store	8296	
37		Horace	Brother		M W S 22		Pennsylvania / Delaware / Pennsylvania			Salesman / Automobile	4589	
38	343 / 139 / 293	Howell, Wilbur F	Head	O 12000 R	M W M 40 M 30	Yes	New York / New York / New York			Asst. Secretary / Paper Box	7248	
39		Ruth M	Wife		F W M 34 M 24	Yes	Michigan / Canada Eng. / Canada Eng.			none		
40		Sarah O	Daughter		F W S 8		New York / New York / Michigan			none		
41		William R	Son		M W S 1		New York / New York / Michigan			none		
42	Their	Edgar W	Brother-in-law		M W S 26		Canada Eng. / Canada Eng. / Canada Eng.	English	1925 Pa	Machine Shop / Radio	7667	
43	341 / 140 / 294	Coffin, George H	Head	O 10500 R	M W M 60 M 53		New York / New York / New York			Accountant / Investigation	6694	
44		Farrell, Laura B	Wife		F W M 63 M 37		Pennsylvania / Pennsylvania / Delaware			Teacher / Education	7494	
45		Evans, Jeanette	Servant		F W S 19		Connecticut / Massachusetts / Massachusetts			Stenographer / Private Family	7196	
46	342 / 141 / 295	Thorpe, Gordon	Head	O 9000 R	M W M 43 M 31		Australia / Australia / Australia	English	1924 Al	Production Mgr. / Radio	7363	
47		Eva	Wife		F W M 41 M 29		Maine / Maine / Maine			none		
48	340 / 142 / 296	Barr, David	Head	O 14000 R	M W M 35 M 27		England / Russia / Russia	English	1906 Pa	Attorney / Legal	5894	
49		Elsie	Wife		F W M 35 M 26		Lithuania / Lithuania / Lithuania	Yiddish	1928 Na	Research / Economics	7494	
50		Manfred	Boarder		M W S 1		New York / England / England			none		

ABBREVIATIONS TO BE USED IN COLUMNS INDICATED:

ENTRIES ARE REQUIRED IN THE SEVERAL COLUMNS AS FOLLOWS:

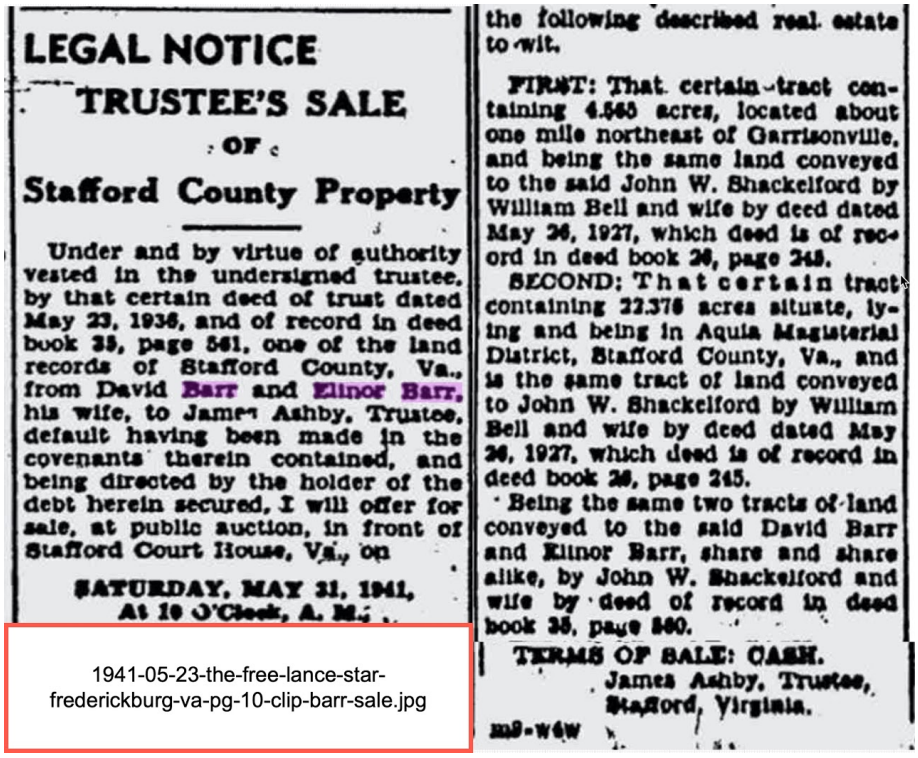
[HS001N][GDrive]

1940 Census

No record found for a David Barr

1941 (May)

Property sale with wife **Elinor Sachs Barr** (born 1894) , of property in stafford country, Virginia.



LEGAL NOTICE

TRUSTEE'S SALE

OF

Stafford County Property

Under and by virtue of authority vested in the undersigned trustee, by that certain deed of trust dated May 23, 1936, and of record in deed book 35, page 561, one of the land records of Stafford County, Va., from David Barr and Elinor Barr, his wife, to James Ashby, Trustee, default having been made in the covenants therein contained, and being directed by the holder of the debt herein secured, I will offer for sale, at public auction, in front of Stafford Court House, Va., on

SATURDAY, MAY 31, 1941, At 10 O'Clock, A. M.,

the following described real estate to wit.

FIRST: That certain tract containing 4.565 acres, located about one mile northeast of Garrisonville, and being the same land conveyed to the said John W. Shackelford by William Bell and wife by deed dated May 26, 1927, which deed is of record in deed book 26, page 245.

SECOND: That certain tract containing 22.376 acres situate, lying and being in Aquia Magisterial District, Stafford County, Va., and is the same tract of land conveyed to John W. Shackelford by William Bell and wife by deed dated May 26, 1927, which deed is of record in deed book 26, page 245.

Being the same two tracts of land conveyed to the said David Barr and Elinor Barr, share and share alike, by John W. Shackelford and wife by deed of record in deed book 35, page 560.

TERMS OF SALE: CASH.

James Ashby, Trustee, Stafford, Virginia.

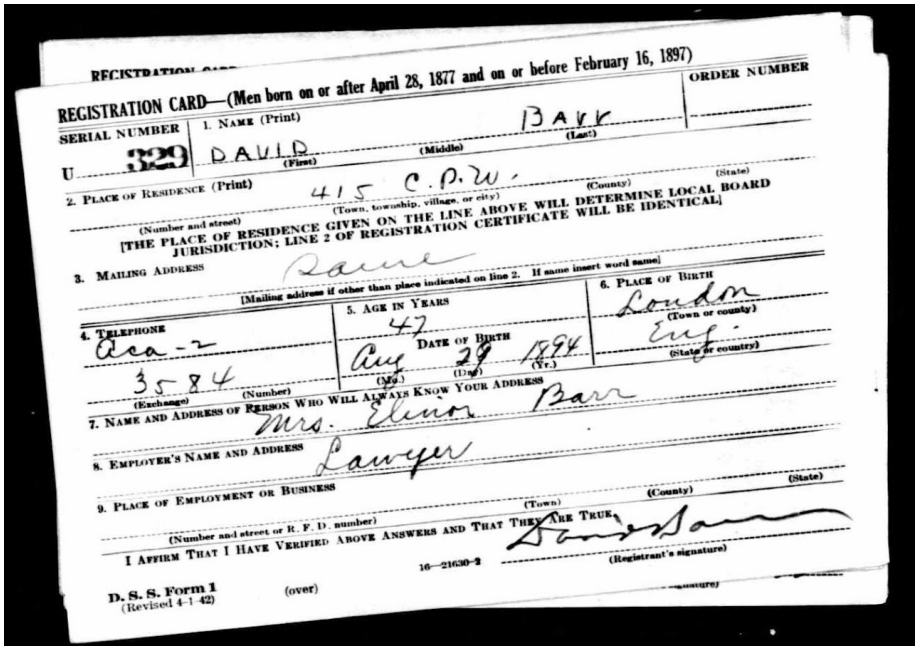
m9-w6w

1941-05-23-the-free-lance-star-fredericksburg-va-pg-10-clip-barr-sale.jpg

[HN00KZ][GDrive]

1942 (April 22) WW2 Draft application - Completed in New York City

Address of **"415 C.P.W"** means **"415 Central Park West, Manhattan, New York City"**



REGISTRATION CARD—(Men born on or after April 28, 1877 and on or before February 16, 1897)

SERIAL NUMBER 329 — ORDER NUMBER

1. NAME (Print): DAVID (First) (Middle) BARR (Last)

2. PLACE OF RESIDENCE (Print): 415 (Number and street) C.P.W. (Town, township, village, or city) (County) (State)

[THE PLACE OF RESIDENCE GIVEN ON THE LINE ABOVE WILL DETERMINE LOCAL BOARD JURISDICTION; LINE 2 OF REGISTRATION CERTIFICATE WILL BE IDENTICAL]

3. MAILING ADDRESS: Same

[Mailing address if other than place indicated on line 2. If same insert word same]

4. TELEPHONE: Eca-2 3584 (Exchange) (Number)

5. AGE IN YEARS: 47 — DATE OF BIRTH: Aug 29 1894 (Day) (Yr.)

6. PLACE OF BIRTH: London (Town or county) Eng. (State or country)

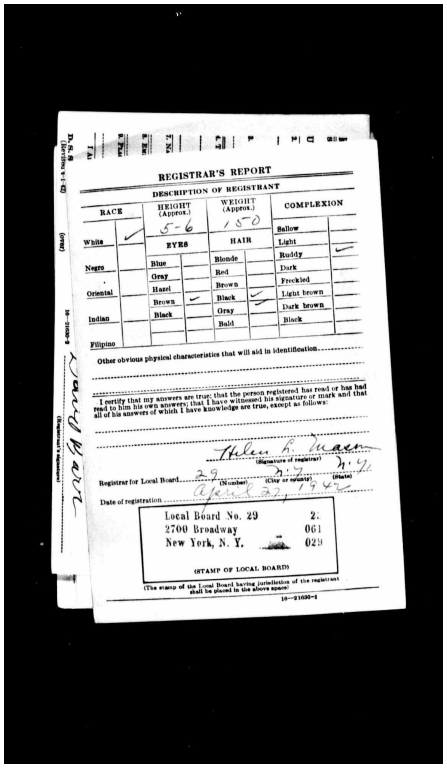
7. NAME AND ADDRESS OF PERSON WHO WILL ALWAYS KNOW YOUR ADDRESS: Mrs. Elinor Barr

8. EMPLOYER'S NAME AND ADDRESS: Lawyer

9. PLACE OF EMPLOYMENT OR BUSINESS (Number and street or R. F. D. number) (Town) (County) (State)

I AFFIRM THAT I HAVE VERIFIED ABOVE ANSWERS AND THAT THEY ARE TRUE. (Registrant's signature)

D. S. S. Form 1 (Revised 4-1-42) (over) 16—21630-2



REGISTRAR'S REPORT

DESCRIPTION OF REGISTRANT

RACE: White ✓ Negro Oriental Indian Filipino

HEIGHT (Approx.): 5-6

WEIGHT (Approx.): 150

COMPLEXION: Sallow Light ✓ Ruddy Dark Freckled Light brown Dark brown Black

EYES: Blue Gray Hazel Brown ✓ Black

HAIR: Blonde Red Brown Black ✓ Gray Bald

Other obvious physical characteristics that will aid in identification

I certify that my answers are true; that the person registered has read or has had read to him his own answers; that I have witnessed his signature or mark and that all of his answers of which I have knowledge are true, except as follows:

Registrar for Local Board 29 (Number) (City or county) (State)

Date of registration April 27 1942

Local Board No. 29, 2700 Broadway, New York, N. Y. 2 061 029

STAMP OF LOCAL BOARD

(The stamp of the Local Board having jurisdiction of the registrant shall be placed in the above space)

16—21630-1

[HG001W][GDrive]

[HG001X][GDrive]

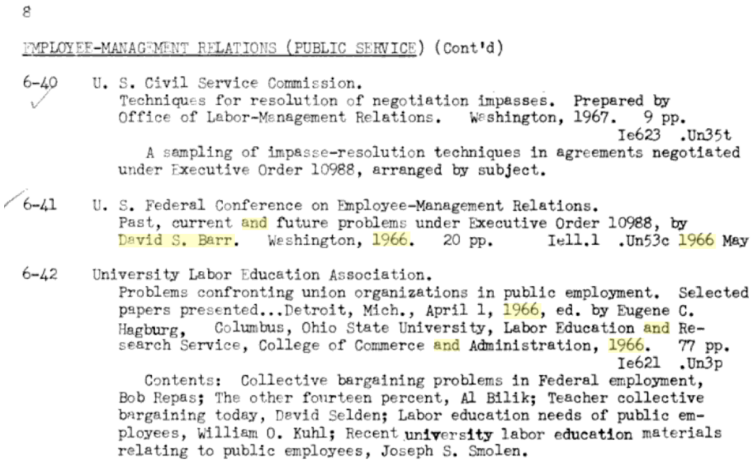
1966 (August 31) - Passing - In Washington DC? or New Haven CT ?

Death Record transcript - [HL002B][GDrive]

Record Transcription:
Social Security Death Index
Learn about this record set

First name(s)	David
Last name	Barr
Birth year	1894
Birth month	Aug
Birth day	29
Death year	1966
Death month	Aug
Death day	-
Social Security number	578-14-4082
Place of issue	Washington, DC
State	District of Columbia
Country	United States
Record set	Social Security Death Index
Category	Birth, Marriage & Death (Parish Registers)
Subcategory	Civil Deaths & Burials
Collections from	Americas, United States

[HL002C][GDrive]



8

EMPLOYEE-MANAGEMENT RELATIONS (PUBLIC SERVICE) (Cont'd)

6-40 U. S. Civil Service Commission.
Techniques for resolution of negotiation impasses. Prepared by Office of Labor-Management Relations. Washington, 1967. 9 pp.
Ie623 .Un35t

A sampling of impasse-resolution techniques in agreements negotiated under Executive Order 10988, arranged by subject.

6-41 U. S. Federal Conference on Employee-Management Relations.
Past, current and future problems under Executive Order 10988, by David S. Barr. Washington, 1966. 20 pp. Ie11.1 .Un53c 1966 May

6-42 University Labor Education Association.
Problems confronting union organizations in public employment. Selected papers presented...Detroit, Mich., April 1, 1966, ed. by Eugene C. Hagburg, Columbus, Ohio State University, Labor Education and Research Service, College of Commerce and Administration, 1966. 77 pp.
Ie621 .Un3p

Contents: Collective bargaining problems in Federal employment, Bob Repas; The other fourteen percent, Al Bilik; Teacher collective bargaining today, David Selden; Labor education needs of public employees, William O. Kuhl; Recent university labor education materials relating to public employees, Joseph S. Smolen.

Personnel Literature, Volume 26

By United States Civil Service Commission. Library,

https://books.google.com/books?id=gelZAAAAYAAJ&dq=%22David+s+barr%22+and+%221966%22&source=gbs_navlinks_s

Mr. David S. Barr, Washington, D. C.

https://www.leagle.com/decision/19661197355f2d8421974

https://newsguild.org/home-2/david-s-barr-award-for-student-journalism/

DAVID S. BARR was much more than a lawyer to those privileged to know and work with him. He was the Guild's mentor, advisor, role model, institutional memory and friend. Before starting his own practice and representing our union and others, Barr was a National Labor Relations Board attorney. He was passionate about justice and fairness and viewed journalists as agents of those virtues. In his name, The NewsGuild-CWA awards annual scholarships to one high school and one college student journalist whose work focuses on issues of social justice. Barr had represented the Guild for more than 20 years when he died of a heart attack in 1997.

David S. Barr Award

The NewsGuild-CWA

501 Third Street, N.W.

Washington DC 20001-2797

David S. Barr

1101 17th Strreet N.W>

Washington D.C.

the newspaper guild

BITCHUTE @Housatonic YOUTUBE @HousatonicLive ODYSEE @Housatonic BRIGHTEON @Housatonic

Housatonic

Elinor Sachs Barr (born 1894)

ELINOR SACHS

"To love, to wealth, to pomp I pine
and die
"With all those living in philosophy."

1917 Columbia College Yearbook
[HT003N][GDrive]

- **Born -** June 10 1894 (see discussion below)
- **Death -** 1990 (March 23) (https://www.findmypast.com/transcript?id=US/TRIB/009865910)
- **PARENTS -** Daughter of Samuel Sachs and Fay Sachs
- **MARRIAGE** - Husband of **David S Barr** (born 1894)
- **CHILDREN :**
  - **Paul S. Barr** (born 1927)
- **SIBLINGS:**
  - **Herman Alexander Sacks (born 1885)**
  - **Alexander Sachs** (born 1892)
  - **Joseph Alexander Sachs** (born 1896)
- **OTHER FAMILY** :
  - In-laws (via **David S Barr** (born 1894)) :
    - Brother In-Law **Simon Pelham Barr** (born 1892)
- **Profession** -

Eleanor (or Elinor Barr) - Conflicts of birth dates and name spelling on federal records

Two death certificates :

1. Eleanor Barr ; June 16 1896 to Sep 1979 (https://www.findmypast.com/transcript?id=US/TRIB/005839593) - Nyack, NY
2. Elinor Barr : 10 Jun 1894 to 23 Mar 1990 (https://www.findmypast.com/transcript?id=US/TRIB/009865910) - New York City

Marriage certificate of "Elinor Sachs"(See transcript : [HL001T][GDrive])

- Elinor is age 26 on a 17 Feb 1922 wedding to David S Barr.. and born in 1895 (some forums suggest 1896, but we know with certainty her brother **Joseph** was born in 1896)
- A June 16 1895 birthday would make her () on a January 1910 census

So the "Elinor Sachs" on the wedding certificate that marries David Barr on Feb 17 1922 ... is birthday-matched with the death certificate for "Eleanor Barr" (June 16 1896 to Sep 1979)

Also note : from the Alexander Sachs notes from FDR Library (at Marist College)

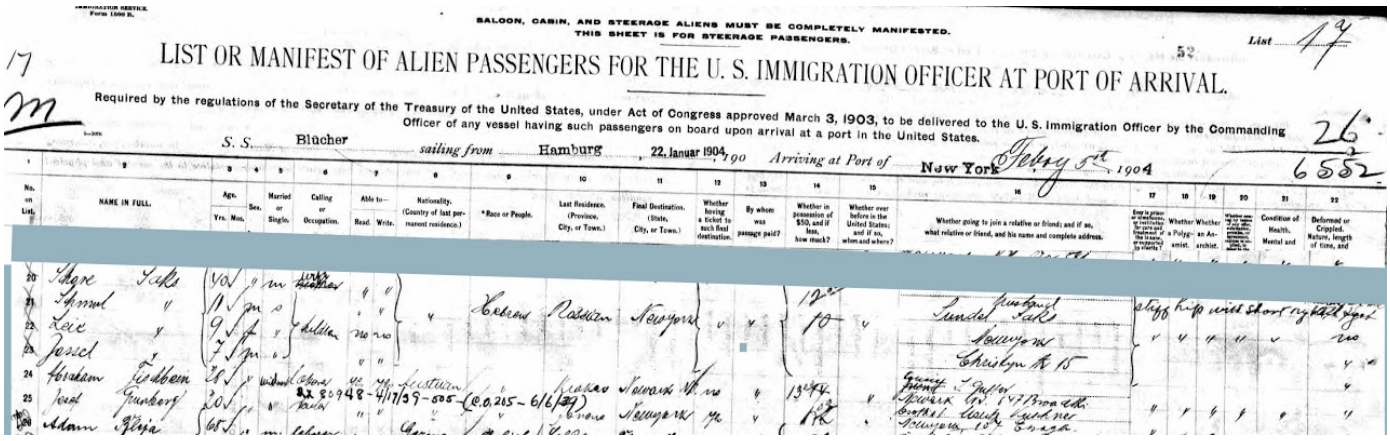
[Download list at : 2014-fdrlibrary-marist-edu-papers-of-alexander-sachs-1874-1973.pdf / https://drive.google.com/open?id=1XVxipo772hakT_ZPpzrwEh4qy-DicV8-]

In here on page 12 of 88, it is listed that Alexander Sachs had email correspondence with "Mrs. Elinor barr"

1904 (Feb 5) - Passenger info, voyage arriving in New York City (from Hamburg) on Blucher

"Sohone Saks" (age 40), Shamal (age 11), Lie (age 9),and Jossel (age 7) - Husband "Sundel Saks" in New York

Full sheet : [HJ0007][GDrive]



SALOON, CABIN, AND STEERAGE ALIENS MUST BE COMPLETELY MANIFESTED.
THIS SHEET IS FOR STEERAGE PASSENGERS.

LIST OR MANIFEST OF ALIEN PASSENGERS FOR THE U. S. IMMIGRATION OFFICER AT PORT OF ARRIVAL.

Required by the regulations of the Secretary of the Treasury of the United States, under Act of Congress approved March 3, 1903, to be delivered to the U. S. Immigration Officer by the Commanding Officer of any vessel having such passengers on board upon arrival at a port in the United States.

S. S. Blücher sailing from Hamburg, 22. Januar 1904, 90 Arriving at Port of New York Febry 5th 1904

[HJ0008][GDrive]

1910 - US Census for "Sacks" family

- "Sacks" not "Sachs"
- **Older brother** **Alexander Sachs** (born 1892) still has name "Samuel" (not yet changed to "Alexander")
- 38 (or 40?) west 117th street - Right next to 1915 address
- **Oldest brother** **Herman Alexander Sacks** (born 1885) immigrated to the USA in 1901, 3 years before his siblings
- Sadly, mother Sarah must have passed (father "Sundel" is widowed)
- Father here is "Sundel", not "Samuel" ... ???
- "Elinor" is here as "Lena"

Full Census Form : [HS000J][GDrive] / **TRANSCRIPT :** [HS000K][GDrive]

Record Transcription:
Us Census 1910

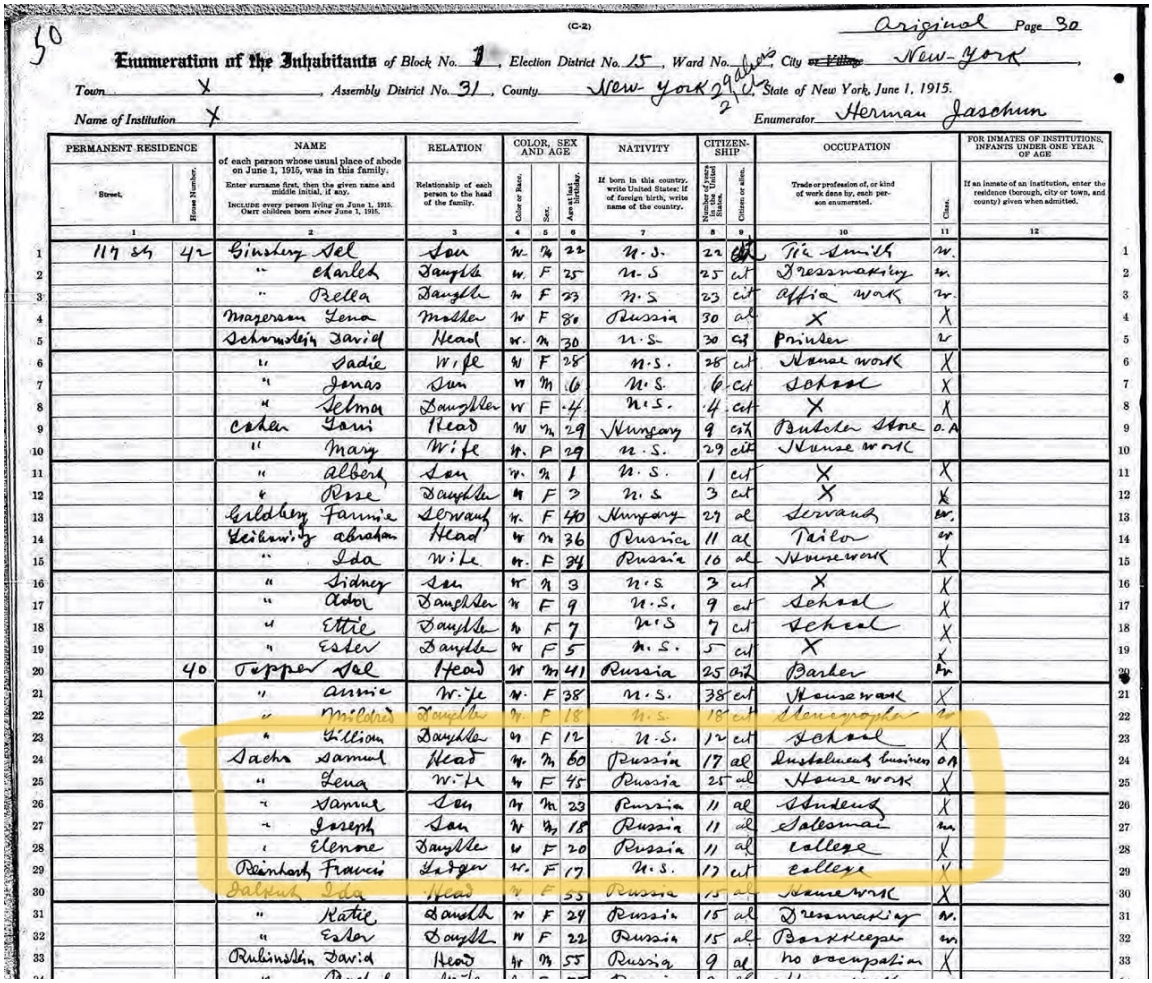
Household Members

First name(s)	Last name	Relationship	Marital status	Gender	Age	Birth year
Sundel	Sacks	Self	Widowed	Male	54	1856
Herman	Sacks	Son	Single	Male	24	1886
Samuel	Sacks	Son	Single	Male	18	1892
Lena	Sacks	Daughter	Single	Female	15	1895
Joseph	**Sacks**	**Son**	**Single**	**Male**	**13**	**1897**

[HS000L][GDrive]

1915 Census

Source of image (Tweet) : [HT002X][GDrive]



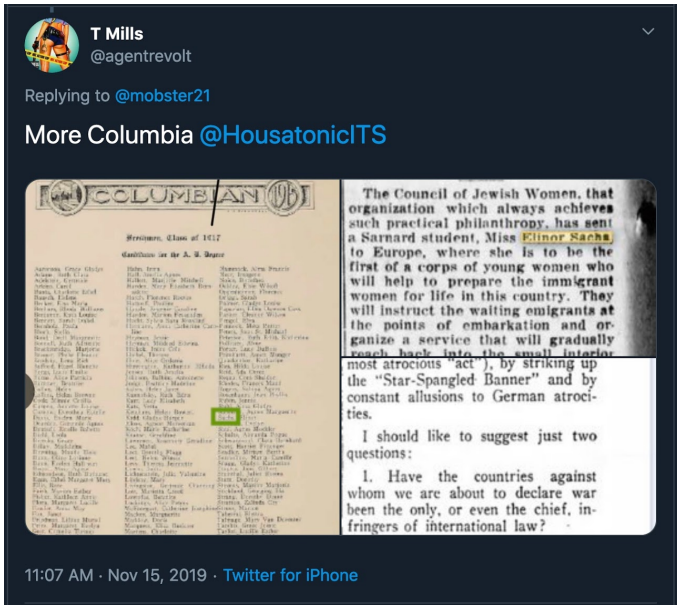
Enumeration of the Inhabitants of Block No. 1, Election District No. 15, Ward No. 21st, City ~~or Village~~ New-York
Town X, Assembly District No. 31, County New-York 2nd, State of New York, June 1, 1915.
Name of Institution X, Enumerator Herman Jaschun

Original Page 30

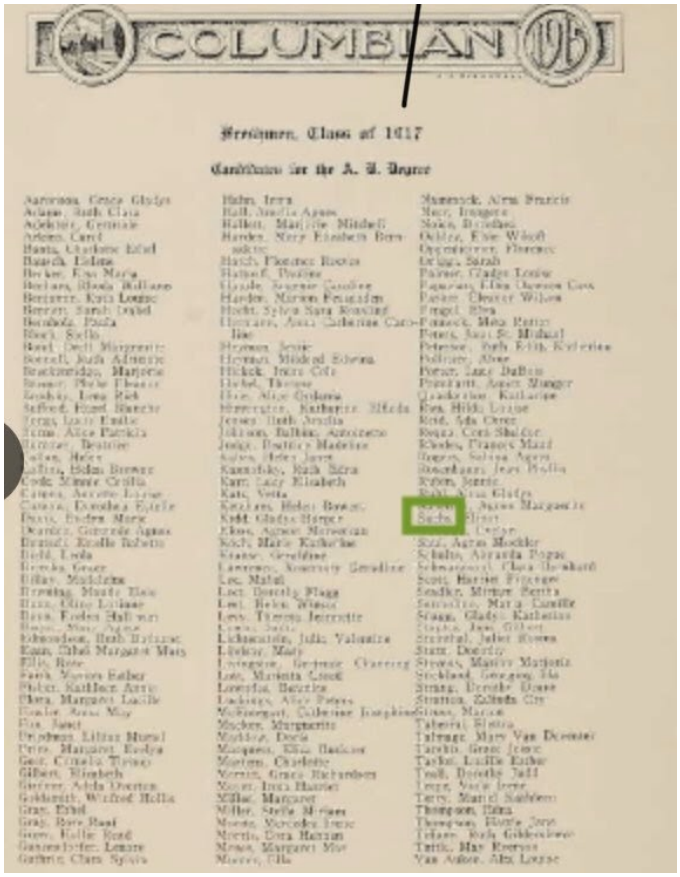
	PERMANENT RESIDENCE Street	House Number	NAME of each person whose usual place of abode on June 1, 1915, was in this family. Enter surname first, then the given name and middle initial, if any. Include every person living on June 1, 1915. Omit children born since June 1, 1915.	RELATION Relationship of each person to the head of the family.	COLOR, SEX AND AGE Color or Race	Sex	Age last birthday	NATIVITY If born in this country, write United States; if of foreign birth, write name of the country.	CITIZENSHIP Number of years in the United States	Citizen or alien	OCCUPATION Trade or profession of, or kind of work done by, each person enumerated.	Class	FOR INMATES OF INSTITUTIONS, INFANTS UNDER ONE YEAR OF AGE If an inmate of an institution, enter the residence (borough, city or town, and county) given when admitted.
	1		2	3	4	5	6	7	8	9	10	11	12
1	117 St	42	Ginsberg Sol	Son	W	M	22	U.S.	22	Cit	Tin Smith	W	
2	"		Charles	Daughter	W	F	25	U.S	25	Cit	Dressmaking	W	
3	"		Bella	Daughter	W	F	23	U.S	23	Cit	Office work	W	
4	Nazerson		Lena	Mother	W	F	80	Russia	30	al	X	X	
5	Schonstein		David	Head	W	M	30	U.S.	30	Cit	Printer	W	
6	"		Sadie	Wife	W	F	28	U.S.	28	Cit	House work	X	
7	"		Jonas	Son	W	M	6	U.S.	6	Cit	School	X	
8	"		Selma	Daughter	W	F	4	U.S.	4	Cit	X	X	
9	Cohen		Sam	Head	W	M	29	Hungary	9	Cit	Builder Stone	O.A	
10	"		Mary	Wife	W	F	29	U.S.	29	Cit	House work		
11	"		Albert	Son	W	M	1	U.S.	1	Cit	X	X	
12	"		Rose	Daughter	W	F	3	U.S	3	Cit	X	X	
13	Goldberg		Fannie	Servant	W	F	40	Hungary	29	al	Servant	Ser	
14	Leibowitz		Abraham	Head	W	M	36	Russia	11	al	Tailor	W	
15	"		Ida	Wife	W	F	34	Russia	10	al	Housework	X	
16	"		Sidney	Son	W	M	3	U.S.	3	Cit	X	X	
17	"		Ador	Daughter	W	F	9	U.S.	9	Cit	School	X	
18	"		Ettie	Daughter	W	F	7	U.S	7	Cit	School	X	
19	"		Ester	Daughter	W	F	5	U.S.	5	Cit	X	X	
20		40	Pepper Sol	Head	W	M	41	Russia	25	Cit	Barber	Bar	
21	"		Annie	Wife	W	F	38	U.S.	38	Cit	House work	X	
22	"		Mildred	Daughter	W	F	18	U.S.	18	Cit	Stenographer	W	
23	"		Lillian	Daughter	W	F	12	U.S.	12	Cit	School	X	
24	Sachs		Samuel	Head	W	M	60	Russia	17	al	Dry Goods business	O.A	
25	"		Lena	Wife	W	F	45	Russia	25	al	House work	X	
26	"		Samuel	Son	W	M	23	Russia	11	al	Student	X	
27	"		Joseph	Son	W	M	18	Russia	11	al	Salesman	W	
28	"		Elenore	Daughter	W	F	20	Russia	11	al	College	X	
29	Reinhard		Francis	Lodger	W	F	17	U.S.	17	Cit	College	W	
30	Dalpuh		Ida	Head	W	F	55	Russia	15	al	Housework	X	
31	"		Katie	Daughter	W	F	29	Russia	15	al	Dressmaking	W	
32	"		Ester	Daughter	W	F	22	Russia	15	al	Bookkeeper	W	
33	Rubinstein		David	Head	W	M	55	Russia	9	al	no occupation	X	

[HT002Y][GDrive]

Elinor Sachs - Columbia University (Barnard College) graduate / class of 1917



[HT003F][GDrive]


COLUMBIAN 1917

Freshmen, Class of 1917

Candidates for the A. B. Degree

[HT003G][GDrive]

To the Editor of the BULLETIN:

In the last few weeks most people, from our duly-constituted authorities down to the patriotic business firms that fly flags and offer special terms for war contracts, have been *doing* rather than *thinking*. The "hoi polloi" are further kept from considering the issues by managers of vaudevilles and motion picture houses who stimulate unthinking patriotism (and, incidentally, applause for the most atrocious "act"), by striking up the "Star-Spangled Banner" and by constant allusions to German atrocities.

I should like to suggest just two questions:

1. Have the countries against whom we are about to declare war been the only, or even the chief, infringers of international law?

2. Would the United States advance the cause of international law and of *peace* by entering into the war?

ELINOR SACHS, '17.

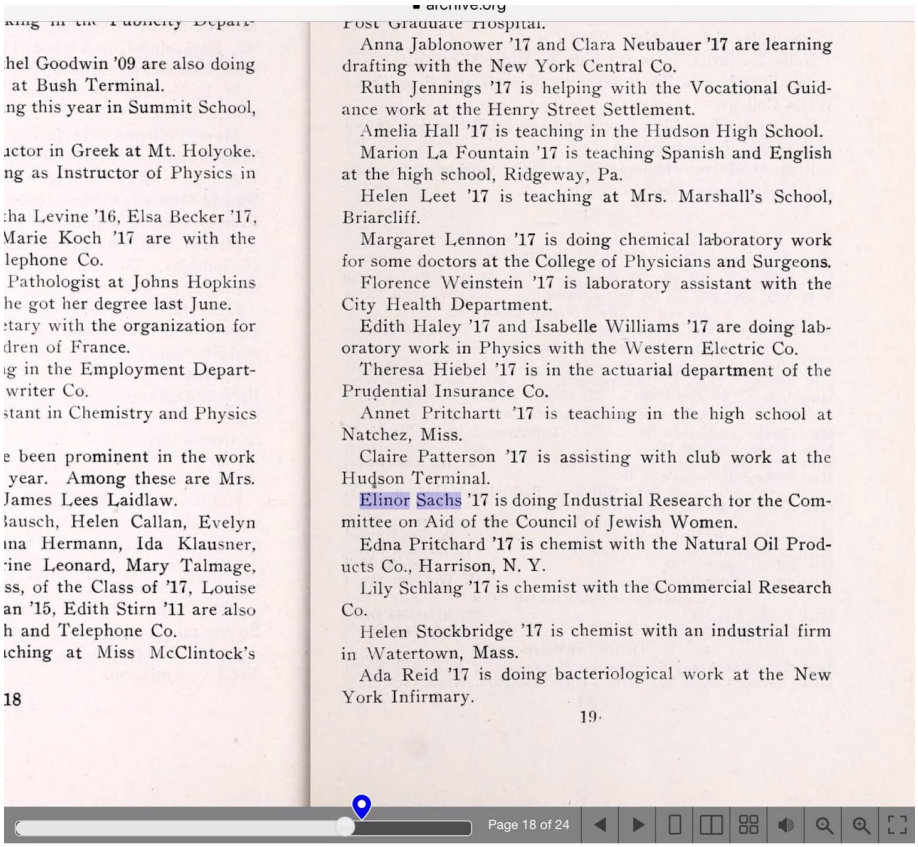
[HT003I][GDrive]

1917 Feb 15

https://www.newspapers.com/image/37825584/?clipping_id=34812091

ELinor Sachs - Class of 1917 - Barnard College -

1917 (Dec) - Doing Industrial Research for the Committee of Aid of the Council of Jewish Women



hel Goodwin '09 are also doing
at Bush Terminal.
ng this year in Summit School,

ıctor in Greek at Mt. Holyoke.
ng as Instructor of Physics in

ha Levine '16, Elsa Becker '17,
Marie Koch '17 are with the
lephone Co.
Pathologist at Johns Hopkins
he got her degree last June.
tary with the organization for
dren of France.
g in the Employment Depart-
writer Co.
stant in Chemistry and Physics

e been prominent in the work
year. Among these are Mrs.
James Lees Laidlaw.
Jausch, Helen Callan, Evelyn
ına Hermann, Ida Klausner,
rine Leonard, Mary Talmage,
ss, of the Class of '17, Louise
an '15, Edith Stirn '11 are also
h and Telephone Co.
ıching at Miss McClintock's

18

Anna Jablonower '17 and Clara Neubauer '17 are learning drafting with the New York Central Co.

Ruth Jennings '17 is helping with the Vocational Guidance work at the Henry Street Settlement.

Amelia Hall '17 is teaching in the Hudson High School.

Marion La Fountain '17 is teaching Spanish and English at the high school, Ridgeway, Pa.

Helen Leet '17 is teaching at Mrs. Marshall's School, Briarcliff.

Margaret Lennon '17 is doing chemical laboratory work for some doctors at the College of Physicians and Surgeons.

Florence Weinstein '17 is laboratory assistant with the City Health Department.

Edith Haley '17 and Isabelle Williams '17 are doing laboratory work in Physics with the Western Electric Co.

Theresa Hiebel '17 is in the actuarial department of the Prudential Insurance Co.

Annet Pritchartt '17 is teaching in the high school at Natchez, Miss.

Claire Patterson '17 is assisting with club work at the Hudson Terminal.

Elinor Sachs '17 is doing Industrial Research for the Committee on Aid of the Council of Jewish Women.

Edna Pritchard '17 is chemist with the Natural Oil Products Co., Harrison, N. Y.

Lily Schlang '17 is chemist with the Commercial Research Co.

Helen Stockbridge '17 is chemist with an industrial firm in Watertown, Mass.

Ada Reid '17 is doing bacteriological work at the New York Infirmary.

19

Page 18 of 24

The Bulletin of the Associate Alumnae of Barnard College

by Barnard College

Publication date	1917-12
Topics	Alumni and alumnae, periodicals, Associate Alumnae, women's colleges, Barnard College
Publisher	Barnard College
Collection	barnardcollege; americana
Digitizing sponsor	Barnard College

35 Views

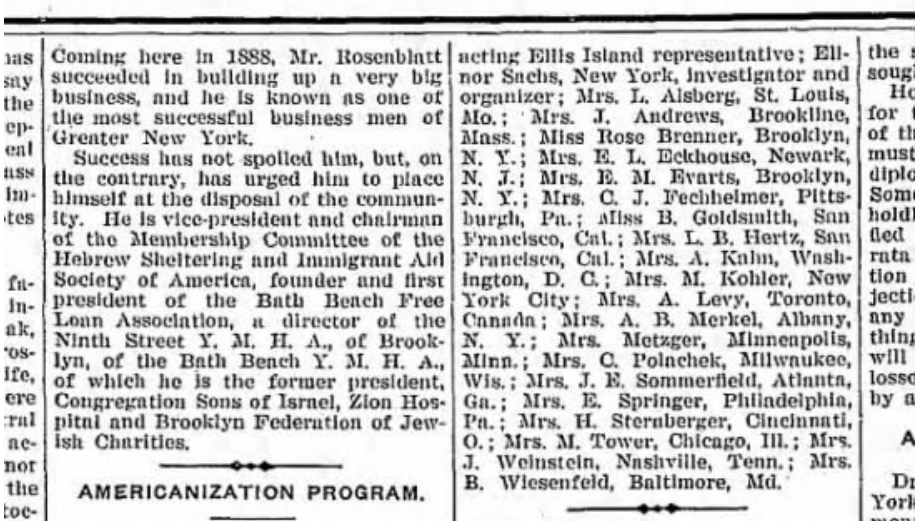
DOWNLOAD OPTIONS

ABBYY GZ 1 file

[HT003L][GDrive]

1918 (Oct)

Full page : [HN00KL][GDrive] (Click on the article below to zoom)



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Coming here in 1888, Mr. Rosenblatt succeeded in building up a very big business, and he is known as one of the most successful business men of Greater New York.

Success has not spoiled him, but, on the contrary, has urged him to place himself at the disposal of the community. He is vice-president and chairman of the Membership Committee of the Hebrew Sheltering and Immigrant Aid Society of America, founder and first president of the Bath Beach Free Loan Association, a director of the Ninth Street Y. M. H. A., of Brooklyn, of the Bath Beach Y. M. H. A., of which he is the former president, Congregation Sons of Israel, Zion Hospital and Brooklyn Federation of Jewish Charities.

AMERICANIZATION PROGRAM.

acting Ellis Island representative; Elinor Sachs, New York, investigator and organizer; Mrs. L. Alsberg, St. Louis, Mo.; Mrs. J. Andrews, Brookline, Mass.; Miss Rose Brenner, Brooklyn, N. Y.; Mrs. E. L. Eckhouse, Newark, N. J.; Mrs. E. M. Evarts, Brooklyn, N. Y.; Mrs. C. J. Fechheimer, Pittsburgh, Pa.; Miss B. Goldsmith, San Francisco, Cal.; Mrs. L. B. Hertz, San Francisco, Cal.; Mrs. A. Kahn, Washington, D. C.; Mrs. M. Kohler, New York City; Mrs. A. Levy, Toronto, Canada; Mrs. A. B. Merkel, Albany, N. Y.; Mrs. Metzger, Minneapolis, Minn.; Mrs. C. Polachek, Milwaukee, Wis.; Mrs. J. E. Sommerfield, Atlanta, Ga.; Mrs. E. Springer, Philadelphia, Pa.; Mrs. H. Steraberger, Cincinnati, O.; Mrs. M. Tower, Chicago, Ill.; Mrs. J. Weinstein, Nashville, Tenn.; Mrs. B. Wiesenfeld, Baltimore, Md.

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Dr
York

A Laudable Activity of the Council of Jewish Women.

There are a few fundamentals in what we term Americanism. A speaking, reading and writing knowledge of English is one of these basic principles. Without this the alien can not make real contacts with Americans, American customs, institutions and ideals. The Council of Jewish Women, therefore, has made its own Americanization endeavor an effort to promote literacy in English as the fundamental, unifying force in Americanization.

That the existing educational facilities for alien girls and women are inadequate was ascertained in a number of studies made by the Department of Immigrant Aid of the Council of Jewish Women in a few typical centers with considerable alien populations. Nearly half of the states make no provision in their constitution for the establishment of evening schools. In other states, also, there is no provision for the education of adult foreigners. And there are nearly six million people in this country who can not read and write English. The inadequacy of the night school to meet the needs of the illiterate alien woman and girl is shown by their slender enrollment and their slenderer attendance at the evening schools. The reasons for this are: Long working hours and consequent fatigue; normal desire for recreation; home duties; discouragement over slow progress in classes which are heterogeneous in age, nationality and degree of previous education; lack of interest in school curriculum; poor teaching conditions and standards.

Only about one per cent of the mothers attend evening school, for they are overburdened with home cares. To compensate the illiterate woman or girl for the sacrifice she is making in going to evening school, and to make it worth her while, the teaching and the curriculum should be especially interesting and pertinent. But as long as the foreigner is considered as "only a grown-up child," and night school teaching as an extension of the day school, the evening school will fail to attract those whom it ought to reach.

The program of the Department of Immigrant Aid, as stated in their STUDY in LITERACY and AMERICANIZATION PROGRAM, just published, is: "To promote, in co-operation with local school boards, boards of trade and other civic agencies, extended facilities for the education in English and citizenship of the alien girl and women." It includes:

1. Small group homogeneous classes for mothers in tenements and neighborhood centers.
2. Small group homogeneous evening classes for girls.
3. Classes in factories conducted during working hours.

Although the total illiteracy among mothers has been found by the Department's investigations to be as high as from 35 per cent to 50 per cent, and the illiteracy in English still higher, there is no corresponding degree of apathy. Where it is humanly possible for them, the women are eager to learn English. This flickering interest is fostered by personal friendly contact with Americans.

A number of the Council Sections have demonstrated that mothers' classes are a possibility and a success. The organization of such classes has followed the systematic visiting by a Yiddish-speaking investigator, sympathetic to the needs of the alien women, in several Jewish communities. Publicity in English and Yiddish are brought to them through personal visits, through Yiddish newspapers, and by displaying signs in places they frequent.

The publicity for girls' classes is made through talks at the noon hour in the factory, and through pay-envelope-slip announcements which the Council supplies and which the employer puts into the envelope.

The Council recognizes that adult alien education is properly an integral

Letters From People

Who Is He?

Editor ISRAELITE:

Sir—One of your readers acquainted with modern Russian literature might be able to solve the following puzzle: One Wladimiro Frenkel recently published an Italian pamphlet, entitled "Finis Russiae?" (Rome, 1918), in which the following passage occurs:

"The second Russian revolution is the fulfillment of the terrible prophecy of Dostoyefski that Russia will perish through the Jews, as the Polish rabbi, Imirzehascem, predicted, the same Jews who were oppressed, pillaged, tortured and assassinated under the dominion of the Teutonic Pharaohs in the Romanoff empire."

Is the author with the unmistakably Jewish name a missionary or an apostate, hired by the Black Hundred, or is this name a mere hoax, invented to create the impression that the Jews are self-confessed plotters against the future of Russia? The "Rabbi Imirzehascem" is a mere hoax. The word means, "may it be God's will."

INQUIRER.

Women in the Quorum.

Editor ISRAELITE:

Sir:—Quoting the London Jewish Chronicle's suggestion of having counted women as among the ten adults necessary for holding religious services, THE ISRAELITE, in one of its editorial notes of a recent date, makes mention of the fact that Dr. Isaac M. Wise, father of American Reform Judaism, had this innovation introduced over sixty years ago, remarking at the same time that our English brethren are 62 years behind the times.

One, however, does not need to cross the Atlantic in his quest for people who are behind the times in this particular tradition of the constitution of the quorum for divine services. There are thousands and tens of thousands of Simon pure Orthodox, reasonable (?) Orthodox, nominal orthodox and all sorts of adherents to their peculiar doxies, who will emphatically refuse to accept women in the Minyan, Dr. Wise's introduction of sixty-two years ago and the Jewish Chronicle of our own time's approval notwithstanding. Rabbinical sources and the Jewish Codices are somewhat silent on the matter, although the Talmud and the Schulhan Aruch unhesitatingly admit women to the septuary required for the participation in the recitation of the Pentateuch, on Sabbath mornings, (Megilah f. 23, a). Again, the very institution of the Minyan is but a matter of speculation and uncertainty, the number being, rather, reduced to six or seven, which are properly backed and substantiated by a Scriptural command of six words terminating with the Deity, the idea advanced by one of the rabbis is that six persons may praise the Lord; another rabbi, however, wants a seventh man responding to the word of Lord as to the previous dicta of lesser import (Sopherim x, 7). While, the reason for the necessity of ten to constitute the Minyan, namely, the number of the scouts and the spies that brought evil reports and slandered the Holy Land, after the discount of Joshua and Caleb (Megilah f. 23, b), smacks much of a joke of the rabbis' humorous witticism. But then, it might have predicted the American Synagogs, the sincerity of some of their members being doubtful, indeed, strife and discontent reigning supreme, here, there and everywhere.

Now, since there was never specified the predilection of men over women, in any of the mentioned Talmudic places, why is the woman tabooed in the Minyan?

NACHMAN HELLER.

Orange, N. J.

HOW CAN GERMANY PAY?

Question of the Money Demanded for Reparation and Restoration.

[From the New York Journal of Com-

part of the public educational system and that it behooves the school board to develop educational facilities acceptable to the adult alien. The Council, therefore, whenever it has opened a center has tried to get the co-operation of the school board and other civic agencies. Until the suitable teacher is secured from the school board, the organizer leads the classes, thus establishing friendly personal contact, which is maintained in the follow-up by home visiting, in order to deepen the interest and increase the attendance. The importance of getting the right teacher can not be overemphasized. Such a teacher, who knows her pupils' home background, their conditions and the best way in which to meet their practical needs, may often be found in the ranks of those who have married and are no longer teaching.

But small group classes can not be far-reaching enough to affect, materially, the problem of illiteracy. The only effective means of overcoming illiteracy and inducing good citizenship is by combining the industrial contacts with the educational contacts. The illiterate alien must be reached where he is most often found—in the factory. The worker, the employer and the community are the gainers. The factory class acts as a stimulus to the ambition of the worker; it is an asset to the employer in that it creates an intelligent and literate labor force; and lastly, it is the only adequate means of reaching the large masses of illiterate workers so as to make them fit to share intelligently in developing the democratic American ideal of government.

The Department of Immigrant Aid, therefore, is making the establishment of factory classes the main objective of its Americanization work for girls just as it is making the small group homogeneous class its main objective for mothers in the home.

The Department of Immigrant Aid, C. J. W., has the following personnel: Helen Winkler, New York, chairman; Elsa Alsberg, New York, secretary and

Any acquisition of Germany's own soil, the ancient method of forcible acquisition of territory is apparently out of the question as a means of adjusting the righteous war claims of the belligerent nations so deeply wronged by the Germans.

Most of the German debt is held by her own citizens. Owing to the peculiar conditions of blockade under which the war has been waged, Germany has found it difficult to place loans in other countries. A few bonds were sold during the first year or two of the war, and still fewer at a later date, but the total is very small. The debt is held by the German people, who are the ultimate source from which the burden of Germany's restitution must be drawn. With this domestic debt wiped out, repudiated, or deferred to a distant future, Germany can approach the allies with the offer of an annual payment in some agreed form for the adjustment of her debt. Inasmuch as a long period of rebuilding must be expected before even a small part of German damage can be made good, an annual liquidation of the costs of the operation might be as effective a means of paying the debt as any that could be devised. German industry can be set at work to produce the materials, machinery and equipment that will be needed in the process of restoring the district of northern France that has been laid waste as well as the shipping to recreate the merchant marine that has been sacrificed to the "ruthless" type of warfare.

Such an annual tax may be stated in terms of money, but the actual settlement of it must come as a regular deduction from the output of German mines, forests and factories, from customs taxes or a tax upon transportation until the debt has been made good. When settlement has thus been gradually accomplished it will be time enough for the German constituted authorities to consider the question of th own people for parted with for

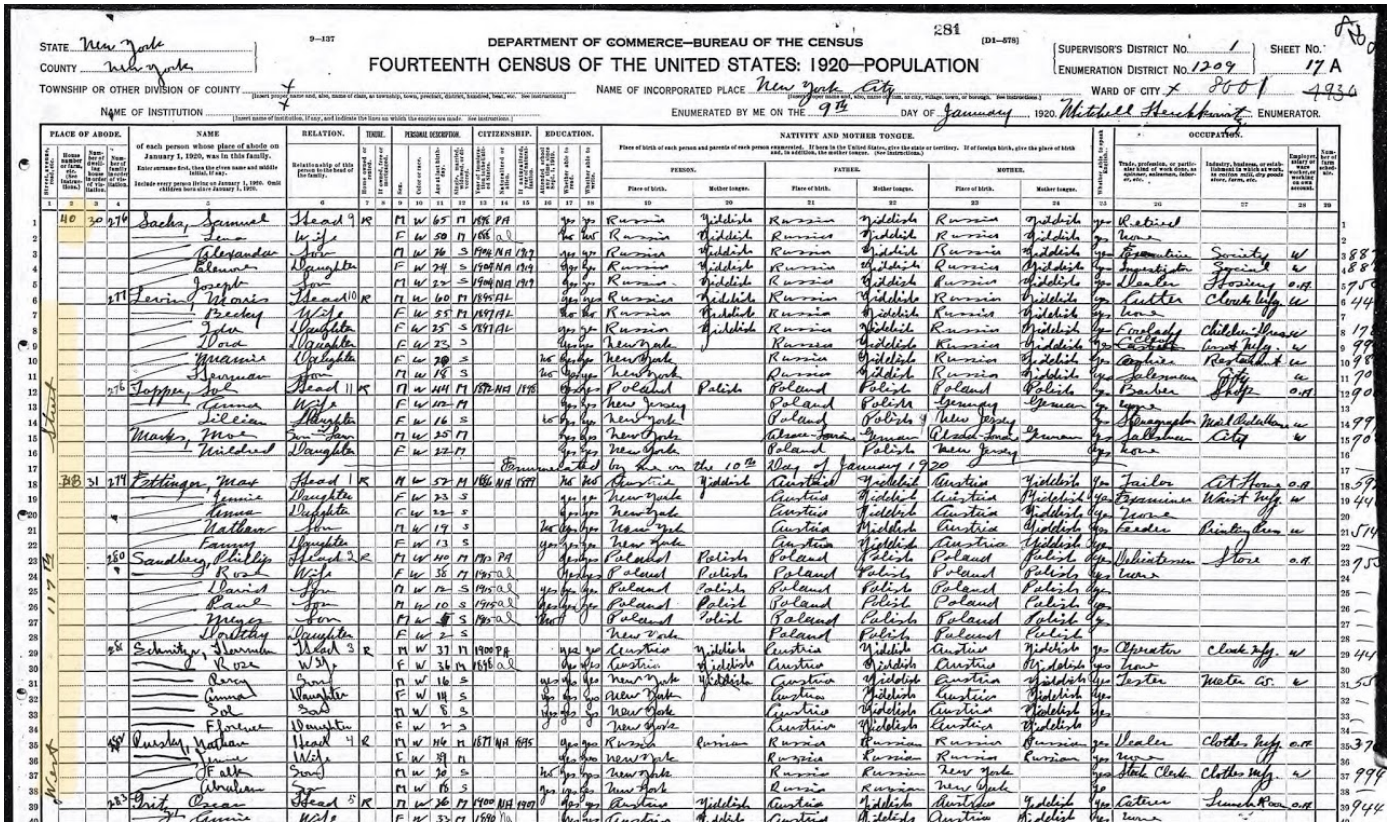
The American Israelite
Cincinnati, Ohio
31 Oct 1918, Thu • Page P4

[HN00KM][GDrive]

1920 Census - Living with parents in NYC

Can also access transcript : See [HS000W][GDrive]

- Who is "Lena" ?
- His father is "retired"? With 3 children going to Columbia ?



STATE New York
COUNTY New York
TOWNSHIP OR OTHER DIVISION OF COUNTY 1
NAME OF INSTITUTION 1

9—137

DEPARTMENT OF COMMERCE—BUREAU OF THE CENSUS

281

(D1—578)

FOURTEENTH CENSUS OF THE UNITED STATES: 1920—POPULATION

SUPERVISOR'S DISTRICT NO. 1
ENUMERATION DISTRICT NO. 1209
SHEET NO. 17 A

NAME OF INCORPORATED PLACE New York City
WARD OF CITY 1 20th 4th

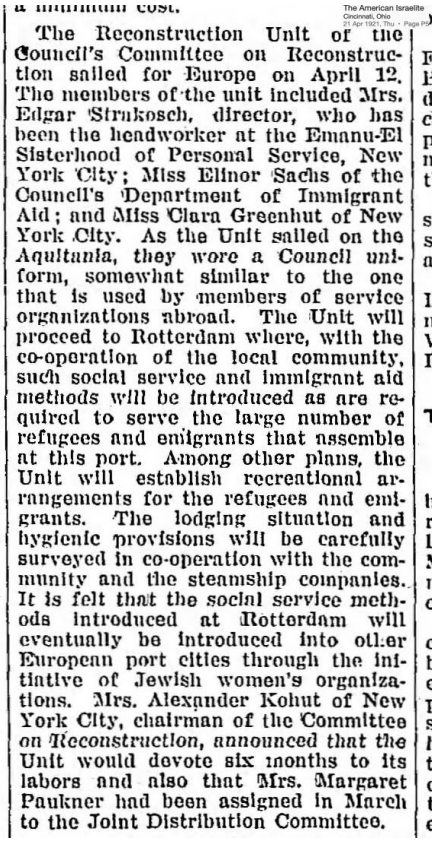
ENUMERATED BY ME ON THE 9th DAY OF January 1920. Mitchell Hershkowitz ENUMERATOR.

PLACE OF ABODE.			NAME of each person whose place of abode on January 1, 1920, was in this family.	RELATION.	TENURE.		PERSONAL DESCRIPTION.				CITIZENSHIP.			EDUCATION.			NATIVITY AND MOTHER TONGUE. Place of birth of each person and parents of each person enumerated. If born in the United States, give the state or territory. If of foreign birth, give the place of birth and, in addition, the mother tongue. (See instructions.)						OCCUPATION.				
																	PERSON.		FATHER.		MOTHER.								
Street, avenue, road, etc.	House number or farm.	Number of dwelling house in order of visitation.	Number of family in order of visitation.	Relationship of this person to the head of the family.	Home owned (O) or rented (R).	Farm owned (O) or rented (R).	Sex.	Color or race.	Age at last birthday.	Single, married, widowed, or divorced.	Year of immigration to the United States.	Naturalized or alien.	Whether able to speak English, or, if not, language spoken.	Attended school any time since Sept. 1, 1919.	Whether able to read.	Whether able to write.	Place of birth.	Mother tongue.	Place of birth.	Mother tongue.	Place of birth.	Mother tongue.	Whether able to speak English.	Trade, profession, or particular kind of work done, as spinner, salesman, laborer, etc.	Industry, business, or establishment in which at work, as cotton mill, city goods store, farm, etc.	Employer, salary or wage worker, or own account.	Number of farm schedule.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29
	40	30	276	Sachs, Samuel	Head	9		M	W	65	M	1856	PA			Yes	Yes	Russia	Yiddish	Russia	Yiddish	Russia	Yiddish	Yes	Retired			
				Lena	Wife			F	W	50	M	1866	Al			No	No	Russia	Yiddish	Russia	Yiddish	Russia	Yiddish	Yes	None			
				Alexander	Son			M	W	26	S	1894	NA	1897		Yes	Yes	Russia	Yiddish	Russia	Yiddish	Russia	Yiddish	Yes	Typewriter	Society	W	
				Salomon	Daughter			F	W	24	S	1896	NA	1919		Yes	Yes	Russia	Yiddish	Russia	Yiddish	Russia	Yiddish	Yes	Stenographer	Society	W	
				Joseph	Son			M	W	22	S	1898	NA	1919		Yes	Yes	Russia	Yiddish	Russia	Yiddish	Russia	Yiddish	Yes	Dealer	Housing	O.A.	
		271		Levin, Morris	Head	10	R	M	W	60	M	1889	Al			Yes	Yes	Russia	Yiddish	Russia	Yiddish	Russia	Yiddish	Yes	Cutter	Cloak Mfg.	W	
				Becky	Wife			F	W	55	M	1891	Al			No	No	Russia	Yiddish	Russia	Yiddish	Russia	Yiddish	Yes	None			
				Jack	Daughter			F	W	25	S	1891	Al			Yes	Yes	Russia	Yiddish	Russia	Yiddish	Russia	Yiddish	Yes	Firm Lady	Children's Home		
				Dora	Daughter			F	W	23	S					Yes	Yes	New York		Russia	Yiddish	Russia	Yiddish	Yes	Cashier	Cloak Mfg.	W	
				Miriam	Daughter			F	W	18	S					Yes	Yes	New York		Russia	Yiddish	Russia	Yiddish	Yes	Cashier	Restaurant	W	
				Herman	Son			M	W	18	S					Yes	Yes	New York		Russia	Yiddish	Russia	Yiddish	Yes	Salesman	Dry Goods	W	
		272		Topper, Sol	Head	11	R	M	W	44	M	1912	NA	1918		Yes	Yes	Poland	Polish	Poland	Polish	Poland	Polish	Yes	Barber	Shop	O.A.	
				Anna	Wife			F	W	40	M					Yes	Yes	New Jersey		Poland	Polish	Germany		Yes	None			
				Lillian	Daughter			F	W	16	S					No	Yes	New York		Poland	Polish	New Jersey		Yes	Stenographer	Mail Advertising	W	
				Marks, Moe	Son-in-law			M	W	25	M					Yes	Yes	New York		Russia	Yiddish	Russia	Russia	Yes	Salesman	City	W	
				Mildred	Daughter			F	W	22	M					Yes	Yes	New York		Poland	Polish	New Jersey		Yes	None			
															Enumerated by me on the 10th Day of January 1920													
	338	31	274	Pottinger, Max	Head		R	M	W	52	M	1886	NA	1887		No	Yes	Austria	Yiddish	Austria	Yiddish	Austria	Yiddish	Yes	Tailor	Cut Shop	O.A.	
				Jennie	Daughter			F	W	23	S					Yes	Yes	New York		Austria	Yiddish	Austria	Yiddish	Yes	Examiner	Waist Mfg.	W	
				Anna	Daughter			F	W	22	S					Yes	Yes	New York		Austria	Yiddish	Austria	Yiddish	Yes	None			
				Nathan	Son			M	W	19	S					No	Yes	New York		Austria	Yiddish	Austria	Yiddish	Yes	Feeder	Printing Co.	W	
				Fanny	Daughter			F	W	13	S					Yes	Yes	New York		Austria	Yiddish	Austria	Yiddish	Yes				
		280		Sandberg, Phillip	Head	2	R	M	W	40	M	1910	PA			Yes	Yes	Poland	Polish	Poland	Polish	Poland	Polish	Yes	Salesman	Store	O.A.	
				Rose	Wife			F	W	36	M	1913	Al			Yes	Yes	Poland	Polish	Poland	Polish	Poland	Polish	Yes	None			
				David	Son			M	W	12	S	1913	Al			Yes	Yes	Poland	Polish	Poland	Polish	Poland	Polish	Yes				
				Paul	Son			M	W	10	S	1913	Al			Yes	Yes	Poland	Polish	Poland	Polish	Poland	Polish	Yes				
				Meyer	Son			M	W	8	S	1913	Al			Yes	Yes	Poland	Polish	Poland	Polish	Poland	Polish	Yes				
				Dorothy	Daughter			F	W	2	S							New York		Poland	Polish	Poland	Polish					
		281		Schmitz, Herman	Head	3	R	M	W	37	M	1909	PA			Yes	Yes	Austria	Yiddish	Austria	Yiddish	Austria	Yiddish	Yes	Operator	Cloak Mfg.	W	
				Rose	Wife			F	W	34	M	1898	Al			Yes	Yes	Austria	Yiddish	Austria	Yiddish	Austria	Yiddish	Yes	None			
				Percy	Son			M	W	16	S					Yes	Yes	New York	Yiddish	Austria	Yiddish	Austria	Yiddish	Yes	Tester	Water Co.	W	
				Emma	Daughter			F	W	14	S					Yes	Yes	New York		Austria	Yiddish	Austria	Yiddish	Yes				
				Sol	Son			M	W	8	S					Yes	Yes	New York		Austria	Yiddish	Austria	Yiddish	Yes				
				Florence	Daughter			F	W	2	S							New York		Austria	Yiddish	Austria	Yiddish					
		458		Pursley, Nathan	Head	4	R	M	W	46	M	1871	NA	1895		Yes	Yes	Russia	Russian	Russia	Russian	Russia	Russian	Yes	Dealer	Clothes Mfg.	O.A.	
				Jennie	Wife			F	W	39	M					Yes	Yes	New York		Russia	Russian	Russia	Russian	Yes	None			
				Jack	Son			M	W	20	S					No	Yes	New York		Russia	Russian	New York		Yes	Stock Clerk	Clothes Mfg.	W	
				Abraham	Son			M	W	16	S					Yes	Yes	New York		Russia	Russian	New York		Yes				
		283		Brit, Oscar	Head	5	R	M	W	36	M	1900	NA	1907		Yes	Yes	Austria	Yiddish	Austria	Yiddish	Austria	Yiddish	Yes	Cutter	Trunk Mfg.	O.A.	
				Annie	Wife			F	W	32	M	1910	Na					Austria	Yiddish	Austria	Yiddish	Austria	Yiddish	Yes	None			

[HS000X][GDrive]

April 21 1921

Full page : [HN00KN][GDrive]



a minimum cost.

The American Israelite
Cincinnati, Ohio
21 Apr 1921, Thu • Page P5

The Reconstruction Unit of the Council's Committee on Reconstruction sailed for Europe on April 12. The members of the unit included Mrs. Edgar Strukosch, director, who has been the headworker at the Emanu-El Sisterhood of Personal Service, New York City; Miss Elinor Sachs of the Council's Department of Immigrant Aid; and Miss Clara Greenhut of New York City. As the Unit sailed on the Aquitania, they wore a Council uniform, somewhat similar to the one that is used by members of service organizations abroad. The Unit will proceed to Rotterdam where, with the co-operation of the local community, such social service and immigrant aid methods will be introduced as are required to serve the large number of refugees and emigrants that assemble at this port. Among other plans, the Unit will establish recreational arrangements for the refugees and emigrants. The lodging situation and hygienic provisions will be carefully surveyed in co-operation with the community and the steamship companies. It is felt that the social service methods introduced at Rotterdam will eventually be introduced into other European port cities through the initiative of Jewish women's organizations. Mrs. Alexander Kohut of New York City, chairman of the Committee on Reconstruction, announced that the Unit would devote six months to its labors and also that Mrs. Margaret Paukner had been assigned in March to the Joint Distribution Committee.

[HN00KO][GDrive]

1922 (Feb) - Davis S Barr marriage to Elinor Sachs

Transcript : [HL001T][GDrive]

Record Transcription:
United States Marriages
Learn about this record set

First name(s)	Elinor
Last name	Sachs
Sex	Female
Race	White
Marital status	Single
Age	26
Birth year	1896
Father's first name(s)	Samuel
Father's last name	-
Mother's first name(s)	Sarah
Mother's last name	Alexandrowtz
Event	Marriage
Year	1922
Event date	17 Feb 1922
Location	Manhattan
Place	Manhattan, New York, United States
County	New York
State	New York
Country	United States
Spouse's first name(s)	David
Spouse's last name	Barr
Spouse's sex	Male
Spouse's race	White
Spouse's marital status	Single
Spouse's age	27
Spouse's birth year	1895
Spouse's father's first name(s)	Philip
Spouse's father's last name	-
Spouse's mother's first name(s)	Rebecca
Spouse's mother's last name	Palem

[HL001U][GDrive]

1922 (March)

Council Aids Relief Appeal

Mrs. Alexander Kohut, who recently studied the European stiuation on an extensive tour that included many countries, is also addressing large audiences of men and women to assure the sucess of New York's appeal for $5,000,000. The Council is, in this way, placing the results of its European work at the disposal of the American Jewish Relief Committee.

Prior to her departure for Europe, Miss Elinor Sachs, Secretary of Foreign Work, Council of Jewish Women, addressed many organizations in New York city in the interest of the local war relief appeal. Miss Sachs presented stirring accounts of European conditions, observed during her association with the Council's Reconstruction Unit.

Other National Officers who are actime in the appeal include: Miss Rose Brenner, President; Mrs. Harry Sternberger, Executive Secretary; Mrs. Clarence E. Mack, Director; Miss Florina Lasker and Miss Cecelia Razovsky of the Department of Immigrant Aid.

The Wisconsin Jewish Chronicle
Milwaukee, Wisconsin
03 Mar 1922, Fri. - Page 5

[HN00KP][GDrive]

1923 (March)

Full page : [HN00KQ][GDrive]

P. M.

Council Established in Italy

Another European country has established a Council of Jewish Women, under the inspiration of the American organization. The most recent one to be established is at Trieste, Italy, under the direction of Miss Elinor Sachs. European Councils of Jewish Women are now to be found in Holland, Belgium, Switzerland, Poland, Latvia and Italy. All will send representatives to the approaching American-European Conference of Jewish Women, to be held at Vienna, on May 6 to 13, upon the call of the American Council of Jewish Women.

[HN00KR][GDrive]

1923 (April)

Council of Jewish Women, 1921 volumes 1 to 7 : [HP001O][GDrive]

The Council in Europe

By ELINOR SACHS-BARR

Secretary of Foreign Work, Council of Jewish Women

Mrs. Elinor Sachs-Barr

THE work of the Council of Jewish Women in Europe is a logical extension of its service to the immigrants in America. It was very clear that help to the immigrant, to be truly effective, must begin before he had reached the shores of America, while he was still in Europe. The restrictive American immigration law, the conditions in Eastern Europe which drove thousands to port cities in the hope of securing passage to America, intensified the need for the organizing of facilities to assist emigrants from Europe, especially for women and girls.

Accordingly, in the Spring of 1921, a unit of workers was sent to Europe for this purpose. Beginning in the ports of Rotterdam and Amsterdam, the work spread eastward, as the need demanded, to the borders of Russia. And in September of this year a Council of Jewish Women was organized in Riga to assist the hundreds of Russian emigrants who were fleeing from the Ukraine.

The immigrant of America is, in a sense, a concrete symbol of the close bond between Europe and America. Bearer of the traditions of Europe, he adds to his personality the new ideals of America: in him America and Europe meet. The organization of the Councils of Jewish Women in various cities of Europe has given form and definite recognition to this bond. Through the medium of the emigrant a close and intimate cooperation has been established between American and European Jewish women.

The members of the first Reconstruction Unit included Mrs. Celia Strakosch, of the Emanu-el Sisterhood of Personal Service, New York City; Miss Elinor Sachs and Miss Clara Greenhut, of New York City. It did not limit its work to that of study and observation at port cities on its own initiative. It also conferred with leaders of existing European organizations and exchanged views with European social workers, through lectures presented before classes in social workers' schools.

The Council's Reconstruction Unit

This Unit sailed for Europe in April, 1921, and carried on the pioneer work of the Council's Reconstruction Program.

[Elinor Sachs-Barr, the writer of this article, went abroad with the first Reconstruction Unit of the Council in April, 1921. Since 1922, she has been serving as Secretary of Foreign Work of the Council of Jewish Women. Working in cooperation with our Committee on Reconstruction and Foreign Relations, she directed all European arrangements for the approaching Vienna Conference and conferred with many prominent women of various countries in promoting the Conference Program.—*Editor.*]

1923 May 18

Full page : [HN00KS][GDrive]

The Council of Jewish Women Becomes a World Force

BY ESTELLE M. STERNBERGER,

Executive Secretary, Council of Jewish Women

(Written Specially for Wisconsin Jewish Chronicle)

Since its inception, the Council of Jewish women has been the counsellor and companion of the immigrant. The very moment that an immigrant mother or girl sets her foot on the steamer bound for a new shore, bulletins gave her the assuring knowledge that a representative of the Council of Jewish Women would be awaiting her at Ellis Island. It meant that, in the event of any difficulty, she would not be alone and friendless. She would be aided in

MISS ROSE BRENNER, Brooklyn
President, C. J. W.

solving her problems, by those who had often solved them for other immigrants.

The Immigrants Plight in Europe

The Council of Jewish Women has not been content to wait until the immigrant reached American shores. There have recently arisen so many distressing and difficult situations that the Council has found it imperative to begin its work in Europe. Accordingly in the spring of 1921, a Council Unit of four women was sent abroad. Europe was so torn from its world war, that it required the sustaining strength of some body or organization to restore a service that it had once rendered. Refugees, by the thousands, were pouring from one country into another, their needs for sympathy and counsel unmet. Their eyes were turned to shores that spelt promise for hundreds of thousands of unfortunates. They were surging toward the cities of Western Europe, which they regarded as the gates of hope, that opened the roads of freedom, the steamship lanes to the land of America.

ESTELLE M. STERNBERGER, N.Y.
Executive Sec'y, C. J. W.

Reconstruction Work of Council Unit

It was with and for these refugees that the Council Unit labored. Steamship companies and community leaders in Holland and Belgium were met in successive conferences. Out of them resulted a group of European Council organizations, who undertook to render the refugee and immigrant service like that of the Council of Jewish Women in the instruction and recreation were instituted, by the members of the Unit, to initiate the educational and social welfare programs of these Councils. The ablest women of these splendid Jewish communities responded to the call for leaders to guide this work. As a result of this work, European Councils of Jewish Women are now to be found in Antwerp, Belgium; Paris, France; Amsterdam, Rotterdam and The Hague, Holland; Lodz, Poland; Geneva, Switzerland; Riga, Latvia; and Trieste, Italy.

European Conference Crowns Foreign Work

The crowning achievement of all these efforts abroad, has just occurred. The Council of Jewish Women invited the Jewish women's organizations of Europe and America to meet in a conference in Vienna, May 6th to 11th. This conference discussed the problems affecting the transmigrant woman and child; the need for educational and religious work in communities that lack institutions and organizations for this communal service; and the possibilities of co-operation on the part of Jewish women's organizations in Europe and America in solving these problems and meeting these needs.

Reconstruction Unit, C. J. W.

The delegation of the Council of Jewish Women included the following: Mrs. Alexander Kohut of New York City, Chairman of the Committee on Reconstruction; Mrs. Nathaniel E. Harris of Bradford, Pa., Chairman of the Committee on Foreign Relations; Mrs. Harry Sternberger of New York City, Executive Secretary of the Council of Jewish Women, and Miss Cecilia Razovsky, of the National Department of Immigrant Aid, Council of Jewish Women. Mrs. Elinor Sachs-Barr, of New York City, who has been serving as Secretary of Foreign Work directed European arrangements for the Conference at Vienna.

Emigrants Informed of American Immigration Laws

With the enactment of the recent Percentage Law governing the admission of immigrants into the United States, the Council of Jewish Women has been called upon to inform emigrants of the provisions of the law. Through the Council Unit in Europe, the Council of Jewish Women has been able to keep emigrants informed of the changes in the law, and to advise them as to the best course to pursue.

The Council and the Immigrant Problem

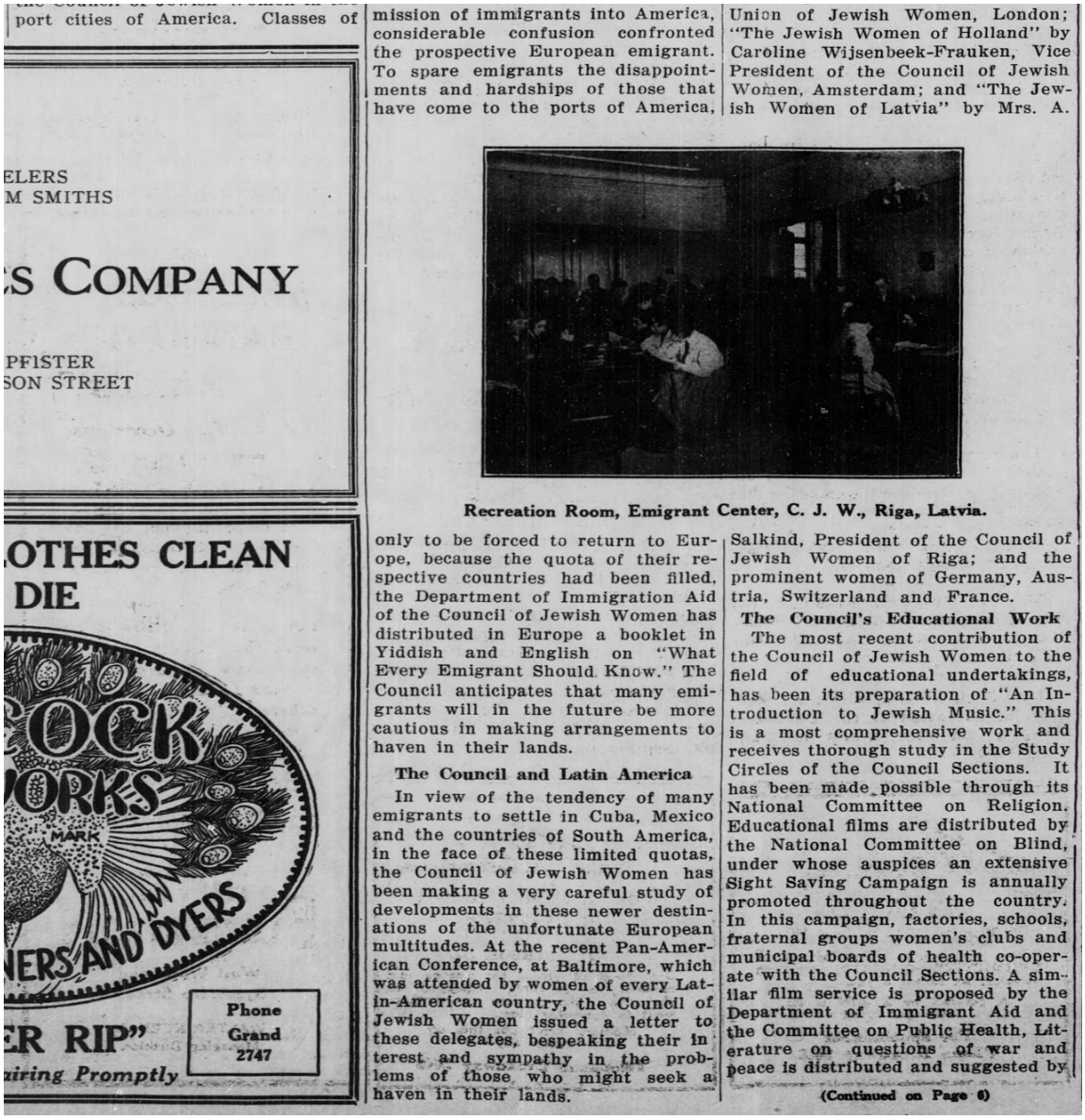
Moreover, to encourage thoughtful discussion and consideration of the immigrant problem, the Department of Immigration Aid of the Council of Jewish Women issues a periodical, "The Immigrant." Women of the Council, its national officers and more local leaders, authorities on the immigration question and observers, contribute to its columns.

The Council and the Woman in Rural Communities

An increasing number of Jewish women are now resident in the rural communities. The farmers have often appealed directly to the Council of Jewish Women to extend its work to their communities, to guide the women in a program that would afford them newer visions and increased opportunities for useful service and effort. Every essential feature of rural activity and interest has been introduced through a national Committee on Work Among Women on Farms. This national rural committee functions through state chairmen; field representatives who come in direct contact with every rural family; and local organizations that have been affected by it. Active work among our women in rural communities, is now being promoted in the states of Massachusetts, Connecticut, New York, New Jersey and Pennsylvania. These local organizations carry on every possible phase of the Council's program of religious, educational, social welfare and civic work.

The Council Establishes a Woman's Literary Medium

Through "The Jewish Woman," the official quarterly of the Council of Jewish Women, the Jewish women of the world have been afforded a new medium for the expression of their ideas. Its columns have contained contributions from the women of Europe, as well as from the American woman. An interchange of thought has resulted that will, eventually, lead to a better understanding of the problems and aspirations of Jewish womanhood everywhere. It it a journal of world news, and thought that will offer posterity a better appreciation of the status and achievements of women in our generation. In its columns have already appeared such articles as "The Jewish Women of England" by Gertrude Spielman Chairman of the



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mission of immigrants into America, considerable confusion confronted the prospective European emigrant. To spare emigrants the disappointments and hardships of those that have come to the ports of America, only to be forced to return to Europe, because the quota of their respective countries had been filled, the Department of Immigration Aid of the Council of Jewish Women has distributed in Europe a booklet in Yiddish and English on "What Every Emigrant Should Know." The Council anticipates that many emigrants will in the future be more cautious in making arrangements to haven in their lands.

The Council and Latin America

In view of the tendency of many emigrants to settle in Cuba, Mexico and the countries of South America, in the face of these limited quotas, the Council of Jewish Women has been making a very careful study of developments in these newer destinations of the unfortunate European multitudes. At the recent Pan-American Conference, at Baltimore, which was attended by women of every Latin-American country, the Council of Jewish Women issued a letter to these delegates, bespeaking their interest and sympathy in the problems of those who might seek a haven in their lands.

Union of Jewish Women, London; "The Jewish Women of Holland" by Caroline Wijsenbeek-Frauken, Vice President of the Council of Jewish Women, Amsterdam; and "The Jewish Women of Latvia" by Mrs. A. Salkind, President of the Council of Jewish Women of Riga; and the prominent women of Germany, Austria, Switzerland and France.

Recreation Room, Emigrant Center, C. J. W., Riga, Latvia.

The Council's Educational Work

The most recent contribution of the Council of Jewish Women to the field of educational undertakings, has been its preparation of "An Introduction to Jewish Music." This is a most comprehensive work and receives thorough study in the Study Circles of the Council Sections. It has been made possible through its National Committee on Religion. Educational films are distributed by the National Committee on Blind, under whose auspices an extensive Sight Saving Campaign is annually promoted throughout the country. In this campaign, factories, schools, fraternal groups women's clubs and municipal boards of health co-operate with the Council Sections. A similar film service is proposed by the Department of Immigrant Aid and the Committee on Public Health, Literature on questions of war and peace is distributed and suggested by

(Continued on Page 6)

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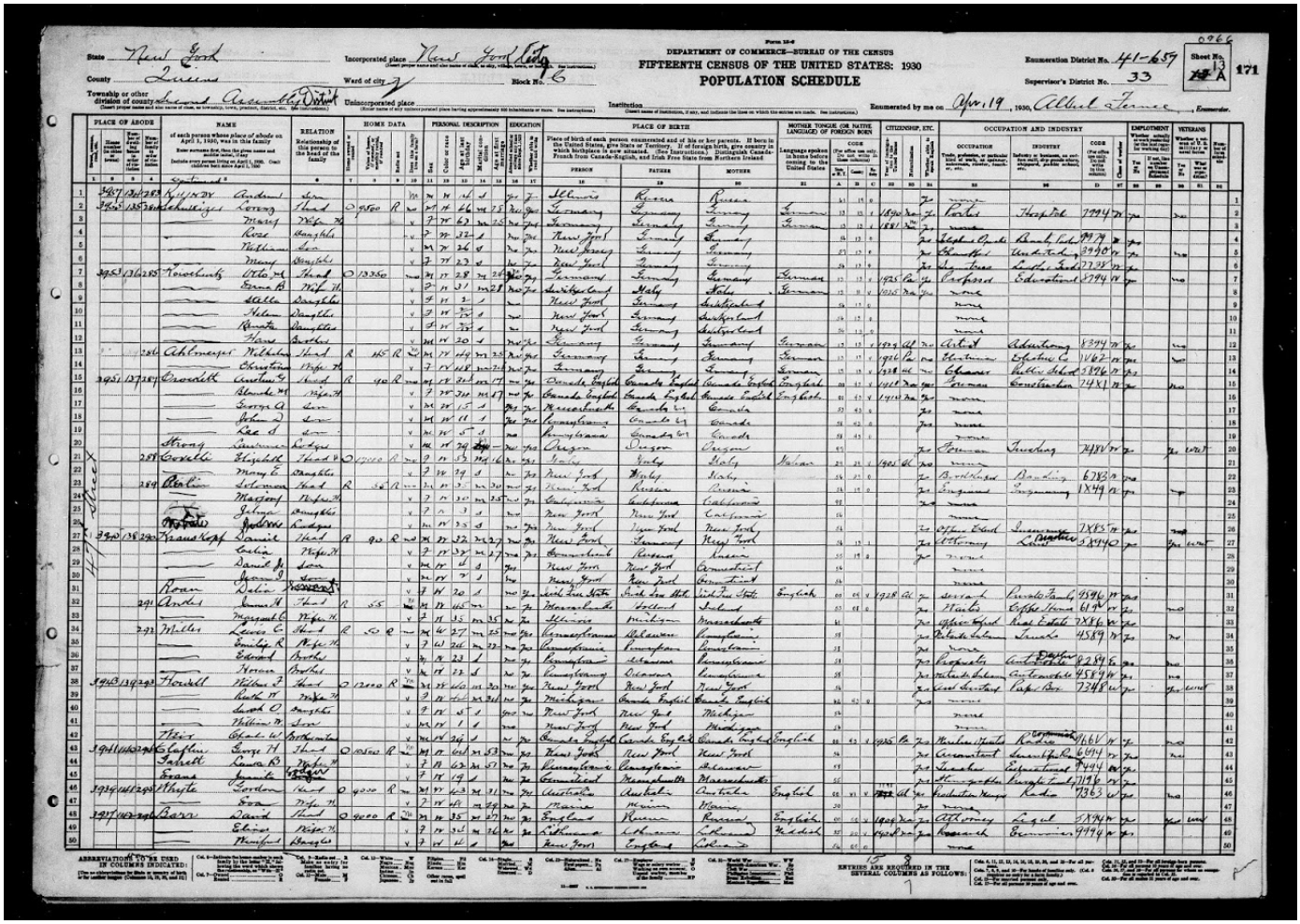
1930 Census Elinor Sachs

Born 1896 in Lithuania ?

1. David Barr / 35
2. Elinor Barr / 34
3. Winifred Barr / 4
4. Paul Barr / 3



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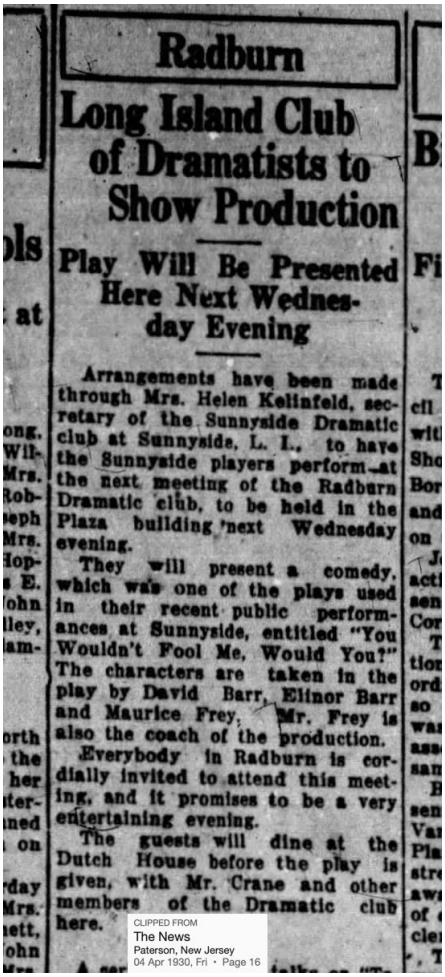
1930 april 4



Radburn

Long Island Club of Dramatists to Show Production

Play Will Be Presented Here Next Wednesday Evening

Arrangements have been made through Mrs. Helen Kelinfeld, secretary of the Sunnyside Dramatic club at Sunnyside, L. I., to have the Sunnyside players perform at the next meeting of the Radburn Dramatic club, to be held in the Plaza building next Wednesday evening.

They will present a comedy, which was one of the plays used in their recent public performances at Sunnyside, entitled "You Wouldn't Fool Me, Would You?" The characters are taken in the play by David Barr, Elinor Barr and Maurice Frey. Mr. Frey is also the coach of the production.

Everybody in Radburn is cordially invited to attend this meeting, and it promises to be a very entertaining evening.

The guests will dine at the Dutch House before the play is given, with Mr. Crane and other members of the Dramatic club here.

CLIPPED FROM
The News
Paterson, New Jersey
04 Apr 1930, Fri • Page 16

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1931 (June) - Committee work with W.E.B. DuBois

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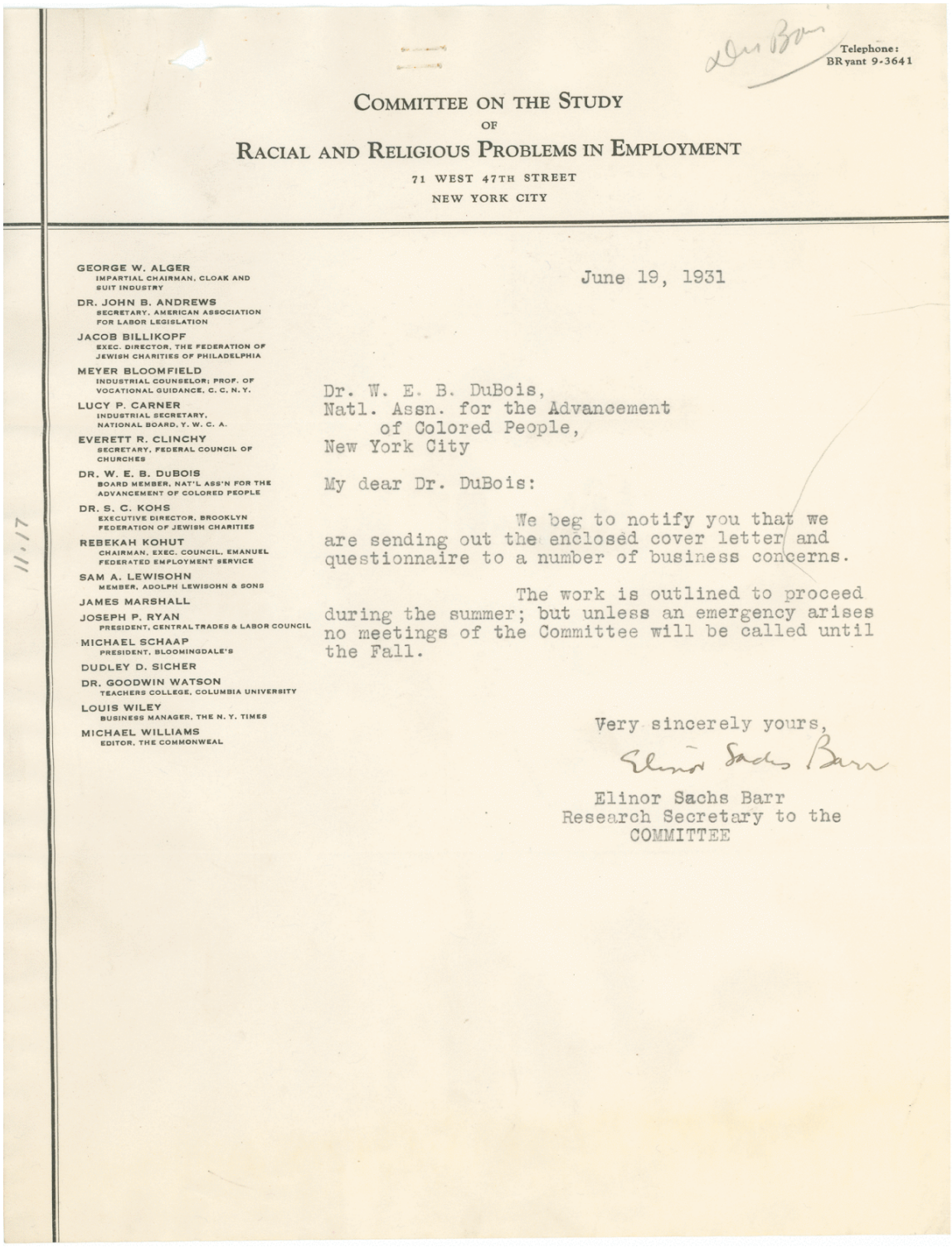

COMMITTEE ON THE STUDY
OF
RACIAL AND RELIGIOUS PROBLEMS IN EMPLOYMENT
71 WEST 47TH STREET
NEW YORK CITY

Telephone:
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EXEC. DIRECTOR, THE FEDERATION OF JEWISH CHARITIES OF PHILADELPHIA
MEYER BLOOMFIELD
INDUSTRIAL COUNSELOR; PROF. OF VOCATIONAL GUIDANCE, C. C. N. Y.
LUCY P. CARNER
INDUSTRIAL SECRETARY, NATIONAL BOARD, Y. W. C. A.
EVERETT R. CLINCHY
SECRETARY, FEDERAL COUNCIL OF CHURCHES
DR. W. E. B. DuBOIS
BOARD MEMBER, NAT'L ASS'N FOR THE ADVANCEMENT OF COLORED PEOPLE
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CHAIRMAN, EXEC. COUNCIL, EMANUEL FEDERATED EMPLOYMENT SERVICE
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JOSEPH P. RYAN
PRESIDENT, CENTRAL TRADES & LABOR COUNCIL
MICHAEL SCHAAP
PRESIDENT, BLOOMINGDALE'S
DUDLEY D. SICHER
DR. GOODWIN WATSON
TEACHERS COLLEGE, COLUMBIA UNIVERSITY
LOUIS WILEY
BUSINESS MANAGER, THE N. Y. TIMES
MICHAEL WILLIAMS
EDITOR, THE COMMONWEAL

11.17

June 19, 1931

Dr. W. E. B. DuBois,
Natl. Assn. for the Advancement
of Colored People,
New York City

My dear Dr. DuBois:

We beg to notify you that we are sending out the enclosed cover letter and questionnaire to a number of business concerns.

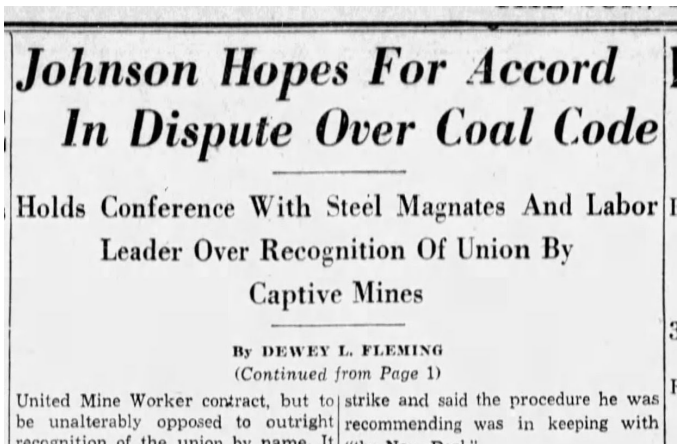
The work is outlined to proceed during the summer; but unless an emergency arises no meetings of the Committee will be called until the Fall.

Very sincerely yours,
Elinor Sachs Barr

Elinor Sachs Barr
Research Secretary to the
COMMITTEE

1933 Oct 1

Full page : [HN00KV][GDrive]



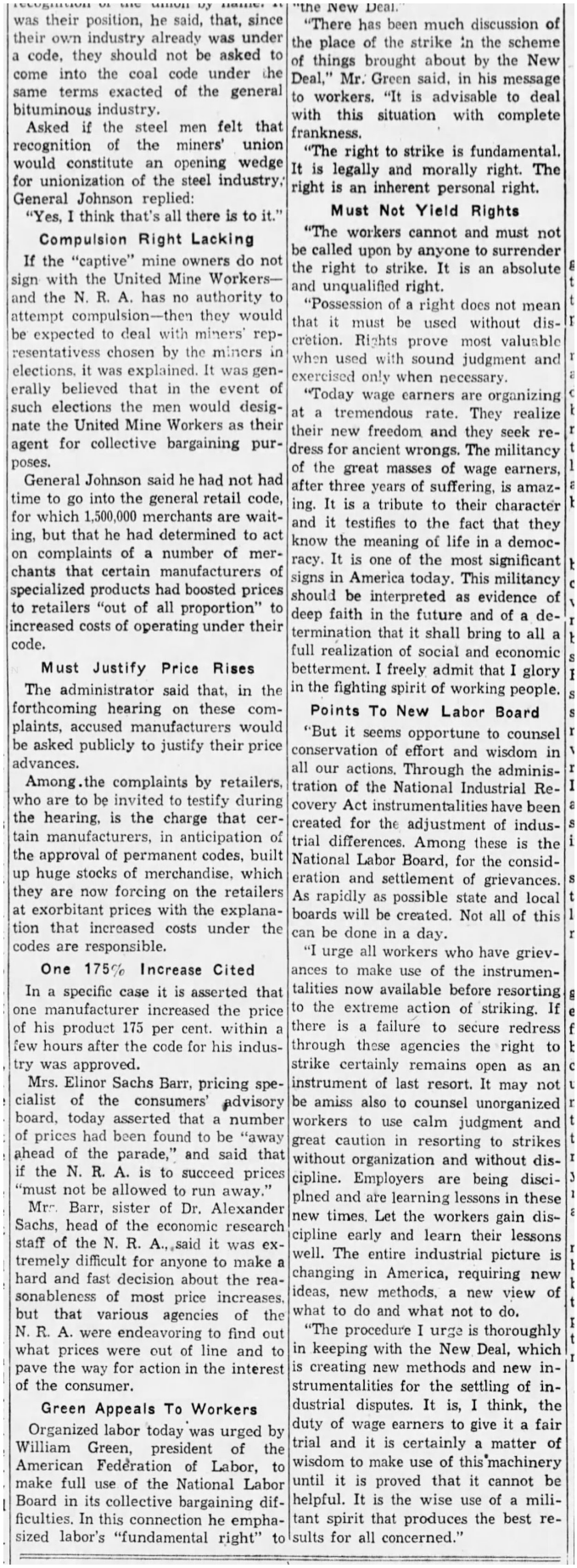
Johnson Hopes For Accord In Dispute Over Coal Code

Holds Conference With Steel Magnates And Labor Leader Over Recognition Of Union By Captive Mines

By DEWEY L. FLEMING

(*Continued from Page 1*)

United Mine Worker contract, but to be unalterably opposed to outright recognition of the union by name. It strike and said the procedure he was recommending was in keeping with



recognition of the union by name. It was their position, he said, that, since their own industry already was under a code, they should not be asked to come into the coal code under the same terms exacted of the general bituminous industry.

Asked if the steel men felt that recognition of the miners' union would constitute an opening wedge for unionization of the steel industry, General Johnson replied:

"Yes, I think that's all there is to it."

Compulsion Right Lacking

If the "captive" mine owners do not sign with the United Mine Workers—and the N. R. A. has no authority to attempt compulsion—then they would be expected to deal with miners' representativess chosen by the miners in elections, it was explained. It was generally believed that in the event of such elections the men would designate the United Mine Workers as their agent for collective bargaining purposes.

General Johnson said he had not had time to go into the general retail code, for which 1,500,000 merchants are waiting, but that he had determined to act on complaints of a number of merchants that certain manufacturers of specialized products had boosted prices to retailers "out of all proportion" to increased costs of operating under their code.

Must Justify Price Rises

The administrator said that, in the forthcoming hearing on these complaints, accused manufacturers would be asked publicly to justify their price advances.

Among the complaints by retailers, who are to be invited to testify during the hearing, is the charge that certain manufacturers, in anticipation of the approval of permanent codes, built up huge stocks of merchandise, which they are now forcing on the retailers at exorbitant prices with the explanation that increased costs under the codes are responsible.

One 175% Increase Cited

In a specific case it is asserted that one manufacturer increased the price of his product 175 per cent. within a few hours after the code for his industry was approved.

Mrs. Elinor Sachs Barr, pricing specialist of the consumers' advisory board, today asserted that a number of prices had been found to be "away ahead of the parade," and said that if the N. R. A. is to succeed prices "must not be allowed to run away."

Mrs. Barr, sister of Dr. Alexander Sachs, head of the economic research staff of the N. R. A., said it was extremely difficult for anyone to make a hard and fast decision about the reasonableness of most price increases, but that various agencies of the N. R. A. were endeavoring to find out what prices were out of line and to pave the way for action in the interest of the consumer.

Green Appeals To Workers

Organized labor today was urged by William Green, president of the American Federation of Labor, to make full use of the National Labor Board in its collective bargaining difficulties. In this connection he emphasized labor's "fundamental right" to

"the New Deal."

"There has been much discussion of the place of the strike in the scheme of things brought about by the New Deal," Mr. Green said, in his message to workers. "It is advisable to deal with this situation with complete frankness.

"The right to strike is fundamental. It is legally and morally right. The right is an inherent personal right.

Must Not Yield Rights

"The workers cannot and must not be called upon by anyone to surrender the right to strike. It is an absolute and unqualified right.

"Possession of a right does not mean that it must be used without discretion. Rights prove most valuable when used with sound judgment and exercised only when necessary.

"Today wage earners are organizing at a tremendous rate. They realize their new freedom and they seek redress for ancient wrongs. The militancy of the great masses of wage earners, after three years of suffering, is amazing. It is a tribute to their character and it testifies to the fact that they know the meaning of life in a democracy. It is one of the most significant signs in America today. This militancy should be interpreted as evidence of deep faith in the future and of a determination that it shall bring to all a full realization of social and economic betterment. I freely admit that I glory in the fighting spirit of working people.

Points To New Labor Board

"But it seems opportune to counsel conservation of effort and wisdom in all our actions. Through the administration of the National Industrial Recovery Act instrumentalities have been created for the adjustment of industrial differences. Among these is the National Labor Board, for the consideration and settlement of grievances. As rapidly as possible state and local boards will be created. Not all of this can be done in a day.

"I urge all workers who have grievances to make use of the instrumentalities now available before resorting to the extreme action of striking. If there is a failure to secure redress through these agencies the right to strike certainly remains open as an instrument of last resort. It may not be amiss also to counsel unorganized workers to use calm judgment and great caution in resorting to strikes without organization and without discipline. Employers are being disciplned and are learning lessons in these new times. Let the workers gain discipline early and learn their lessons well. The entire industrial picture is changing in America, requiring new ideas, new methods, a new view of what to do and what not to do.

"The procedure I urge is thoroughly in keeping with the New Deal, which is creating new methods and new instrumentalities for the settling of industrial disputes. It is, I think, the duty of wage earners to give it a fair trial and it is certainly a matter of wisdom to make use of this machinery until it is proved that it cannot be helpful. It is the wise use of a militant spirit that produces the best results for all concerned."

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1933 - Oct 13

Full page : [HN00KX][GDrive]

s - Other Hom

Consumers Are Asking Why Prices Continually Mount

By ELINOR SACHS BARR

(Pricing Specialist, Consumers Advisory Board)

If the NRA is to succeed, prices must not be allowed to run away. In the words of President Roosevelt: "We cannot hope for full effect of this plan unless, in these first critical months, and even at the expense of full initial profits, we defer price increases as long as possible."

What is actually happening?

Judging by newspaper comment and letters to the consumers' advisory board, some prices are marching away ahead of the parade. And there is every expectation of further jumps.

How is the consumer to pass intelligently on the problem? Why have prices risen? How much? Are these rises in prices justified?

It is an easy matter to keep currently informed on the situation in the retail trade. A visit to the store any will show the purchaser increases in one or the other item. But it is much more difficult to judge the validity of the price increases.

The intelligent consumer tries to figure out why the bed sheets for which she paid 60 cents a piece in March this year were $1.19 when she went to the same store in September. "That's almost twice as much," she said, indignantly. "I won't buy any sheets now." The salesperson telis her politely but firmly that if she waits until the winter months, she will have to pay much more. She finds an even larger increase when she is about to buy percale for her children's clothes. In March she paid 8 cents a yard; in September, when she was making their school clothes, she had to pay 22 cents.

Not Easily Answered

Perplexed, she returns home to "figure it out." Her percale cost her 175 percent more than she paid in March; her sheets cost 72 percent more.

It is true that with the exception of the previous year, she never paid so little for that particular sheet as in March of this year. Why were sheets so cheap then? Is it just a desire to profiteer that makes the retailer charge so much more now? Who is doing the profiteering? Is there really profiteering? Or, are the increases justifiable under the circumstances? What are these "circumstances?"

These and many more questions come to the mind of the intelligent consumer who tries to find the reasons for the increased cost of articles of daily use in the household.

With the aid of the consumers' advisory board this consumer has made an attempt to evaluate the factors that enter into the increased price. She finds at the outset that her questions are not easily answered.

The retailer gets his percale from a wholesaler or jobber, who gets the goods from the converter. The converter, who probably bought direct from the mill, has had the goods printed by the finisher. In a manufactured article, a dress, for example, there is a still more bewildering progression of steps from the mill which wove the gray goods to the retail store.

What did it cost the mill to manufacture the yard of percale she has bought? How much did it cost to print it in its present design? What does the wholesaler charge for his services? What did the retailer pay? What were these costs in March and what are these costs now?

Two distinct increases in the cost have been effected recently. One is a government tax; the other is increased wages and shorter hours.

Taxes and Wages Increase

Under the Agricultural Adjustment Act, a processing tax of 4.2 cents is imposed on every pound of cotton. The greater the cotton content of the article she buys, the larger is the proportionate amount of the tax. Consequently, the $1 cotton house dress she wears on her round of home duties in the morning bears a larger tax than the light voile dress she slips on to go to the store. This tax on cotton is designed to help the farmer, to whom the government will make substantial benefit payments this year. She is, of course, in sympathy with any attempt to increase the income and purchasing power of the farmer.

The second increase arises from the national recovery act's aim to increase wages to labor and shorten hours. Thus again the government is making an effort to increase purchasing power, this time of the workers in trade and industry. The cotton textile industry was of the first to sign a code, on July 17. Hours of labor were reduced to 40 a week, with a two-shift operation; wages were raised to a minimum of $12 in the south and $13 in the north. The customer is in full accord with this effort to raise wages and spread employment. She realizes that the clothes offered last winter at such "extraordinary bargains" often meant sweatshop conditions and starvation wages to factory workers and salespeople. And it very often meant shoddy clothes.

Where Are Labor's Cost

But how much more should be added, or is added, to the price of the three yards of percale and the six sheets she bought? Where are the labor costs incurred? There is the mill which weaves the cloth. In the case of sheets, it usually does all the operations—weaves the gray cloth, bleaches, and hemstitches or sews the sheet. In case of cloth, the mill usually sells the gray goods to a converter, who contracts with the finisher to have the goods printed into patterns of his designing. The finisher dyes or bleaches or prints the cloth. Already there are two sources to which extra labor costs

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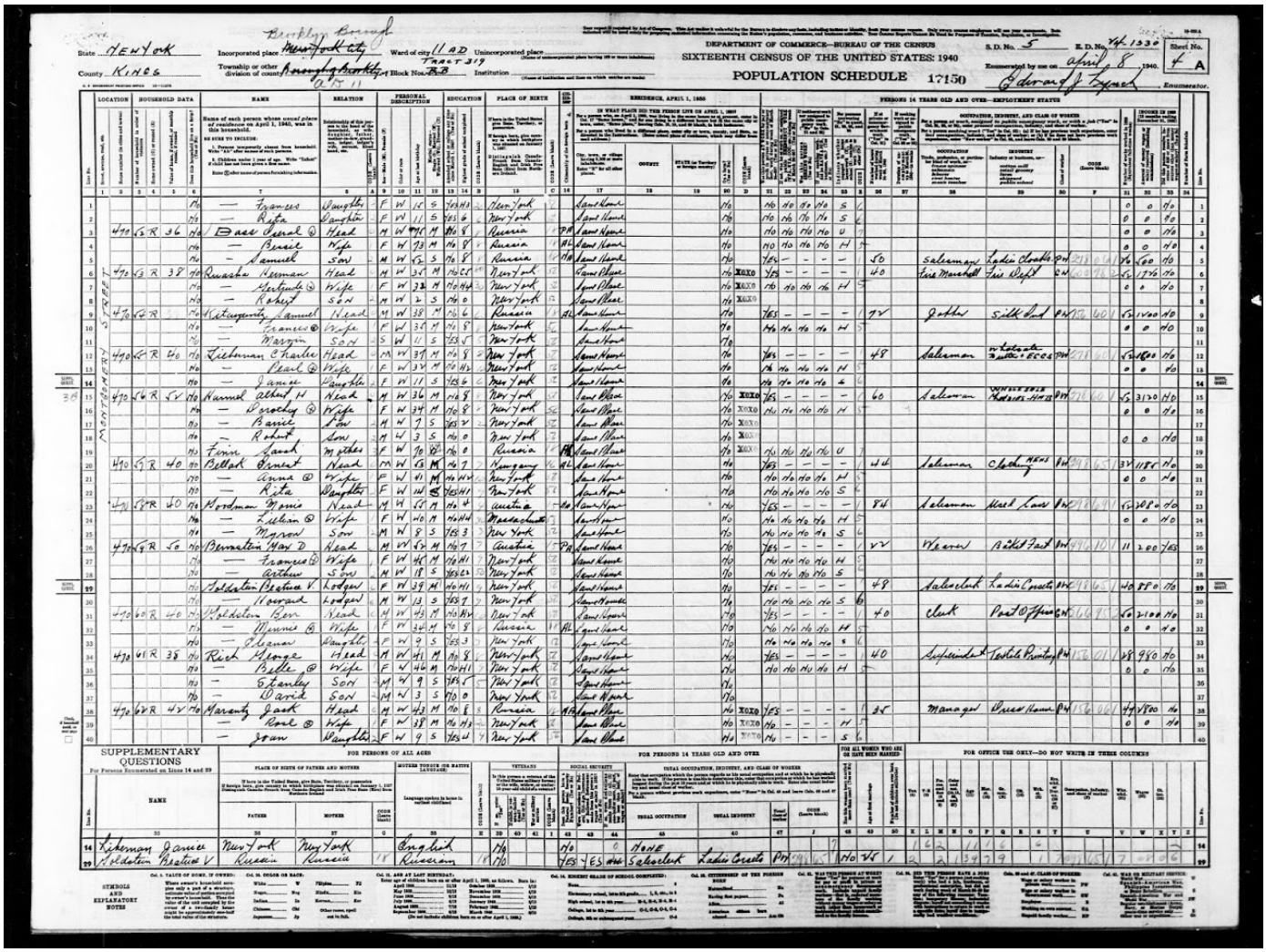
1940 (US Census)



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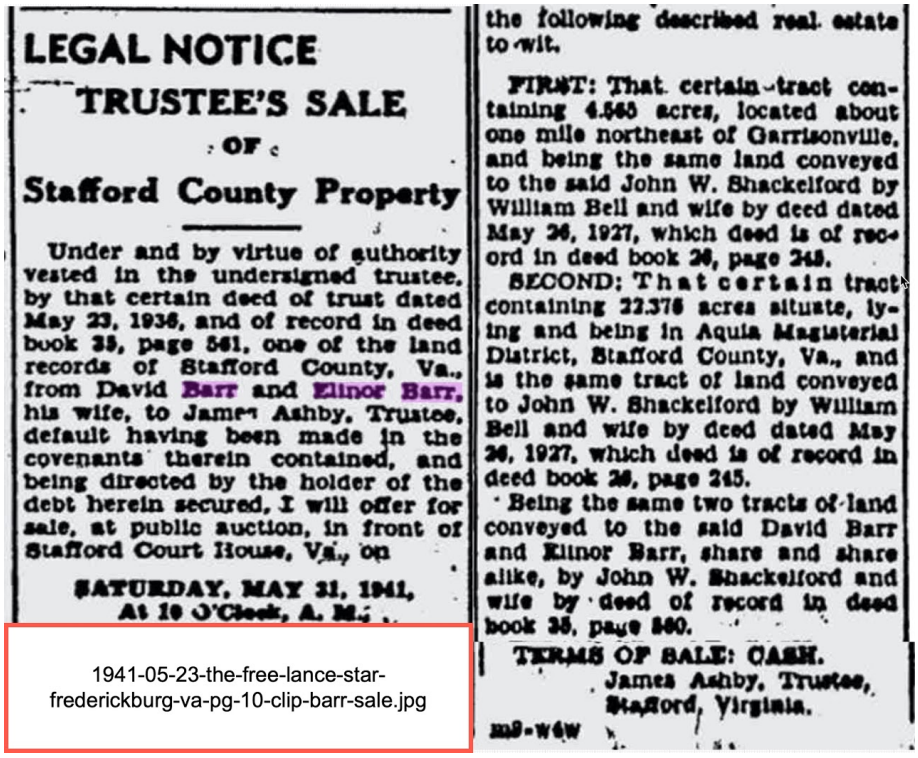
1941 (May)

Property sale with husband David S Barr (born 1894) , of property in stafford country, Virginia.



LEGAL NOTICE

TRUSTEE'S SALE

OF

Stafford County Property

Under and by virtue of authority vested in the undersigned trustee, by that certain deed of trust dated May 23, 1936, and of record in deed book 35, page 561, one of the land records of Stafford County, Va., from David Barr and Elinor Barr, his wife, to James Ashby, Trustee, default having been made in the covenants therein contained, and being directed by the holder of the debt herein secured, I will offer for sale, at public auction, in front of Stafford Court House, Va., on

SATURDAY, MAY 31, 1941, At 10 O'Clock, A. M.,

the following described real estate to-wit.

FIRST: That certain tract containing 4.565 acres, located about one mile northeast of Garrisonville, and being the same land conveyed to the said John W. Shackelford by William Bell and wife by deed dated May 26, 1927, which deed is of record in deed book 26, page 243.

SECOND: That certain tract containing 22.376 acres situate, lying and being in Aquia Magisterial District, Stafford County, Va., and is the same tract of land conveyed to John W. Shackelford by William Bell and wife by deed dated May 26, 1927, which deed is of record in deed book 26, page 245.

Being the same two tracts of land conveyed to the said David Barr and Elinor Barr, share and share alike, by John W. Shackelford and wife by deed of record in deed book 35, page 560.

TERMS OF SALE: CASH.

James Ashby, Trustee,
Stafford, Virginia.

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1941-05-23-the-free-lance-star-fredericksburg-va-pg-10-clip-barr-sale.jpg

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1946 (July)

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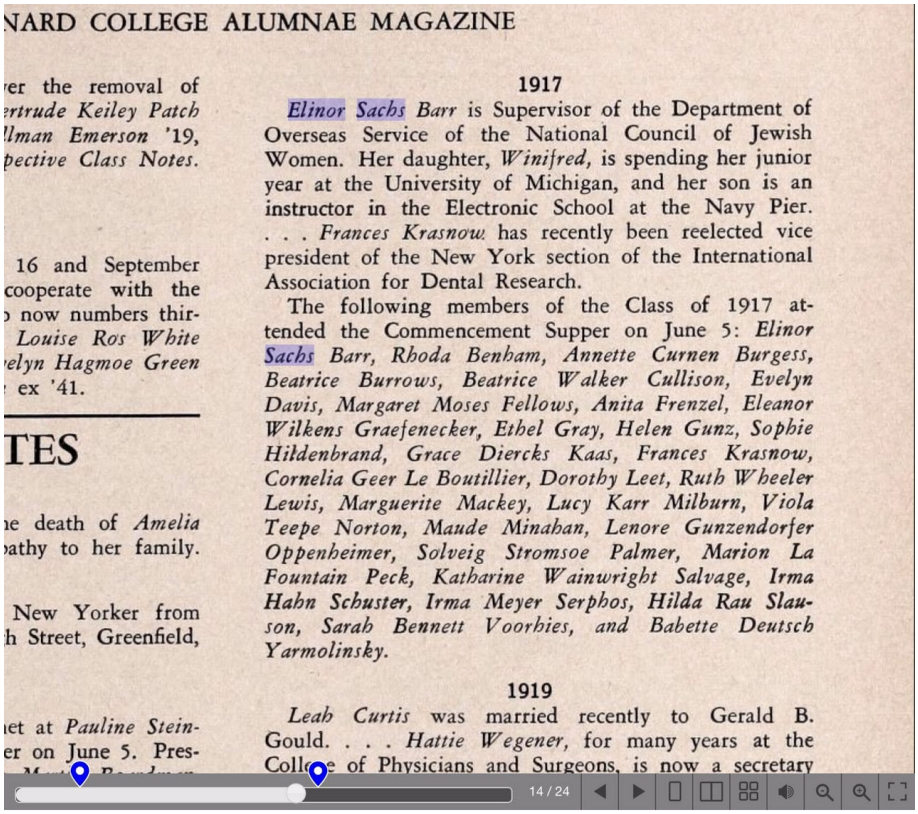
1946-07-26-the-morning-call-paterson-new-jersey-pg-39.jpg

1947 - Update in Barnard College Alumnae Magazine



NARD COLLEGE ALUMNAE MAGAZINE

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New Yorker from
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1917

Elinor Sachs Barr is Supervisor of the Department of Overseas Service of the National Council of Jewish Women. Her daughter, *Winifred*, is spending her junior year at the University of Michigan, and her son is an instructor in the Electronic School at the Navy Pier. . . . *Frances Krasnow* has recently been reelected vice president of the New York section of the International Association for Dental Research.

The following members of the Class of 1917 attended the Commencement Supper on June 5: *Elinor Sachs Barr, Rhoda Benham, Annette Curnen Burgess, Beatrice Burrows, Beatrice Walker Cullison, Evelyn Davis, Margaret Moses Fellows, Anita Frenzel, Eleanor Wilkens Graefenecker, Ethel Gray, Helen Gunz, Sophie Hildenbrand, Grace Diercks Kaas, Frances Krasnow, Cornelia Geer Le Boutillier, Dorothy Leet, Ruth Wheeler Lewis, Marguerite Mackey, Lucy Karr Milburn, Viola Teepe Norton, Maude Minahan, Lenore Gunzendorfer Oppenheimer, Solveig Stromsoe Palmer, Marion La Fountain Peck, Katharine Wainwright Salvage, Irma Hahn Schuster, Irma Meyer Serphos, Hilda Rau Slauson, Sarah Bennett Voorhies, and Babette Deutsch Yarmolinsky.*

1919

Leah Curtis was married recently to Gerald B. Gould. . . . *Hattie Wegener*, for many years at the Colle[illegible]e of Physicians and Surgeons, is now a secretary

14 / 24

Barnard College Alumnae Magazine

by Barnard College

Publication date	1946-09
Usage	http://creativecommons.org/licenses/by nc sa/4.0/deed.en_US
Topics	Alumni and alumnae, periodicals, Associate Alumnae, women's colleges, Barnard College
Publisher	Barnard College

101 Views

DOWNLOAD OPTIONS

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1948 - Daughter's wedding - Mrs. Winifred Barr to marry Jerome Rothenberg

Cousin of bride was **Mrs. Gloria Lurie** (as her only attendant ??? Where was the rest of the family?)

The New York Times

MONDAY, JULY 12, 1948

Rothenberg—Barr

The marriage of Miss Winifred Barr, daughter of Mrs. Elinor Sachs Barr of 415 Central Park West and of David Barr, also of this city, to Jerome Rothenberg, son of Mr. and Mrs. Gabriel Rothenberg of Brooklyn and of Danbury, Conn., took place last evening in the ballroom of the Delmonico. The Rev. Dr. Jerome Malino performed the ceremony.

The bride had her cousin, Miss Gloria Lurie, as her only attendant. Albert Rothenberg was his brother's best man.

The bride was graduated last year from Barnard College, where she was elected to Phi Beta Kappa. She is studying for a Master's degree at Columbia University. Mr. Rothenberg, an alumnus of Columbia College, received his Master's degree from Columbia last year and is working for a Ph. D. degree there. He also is a member of Phi Beta Kappa.

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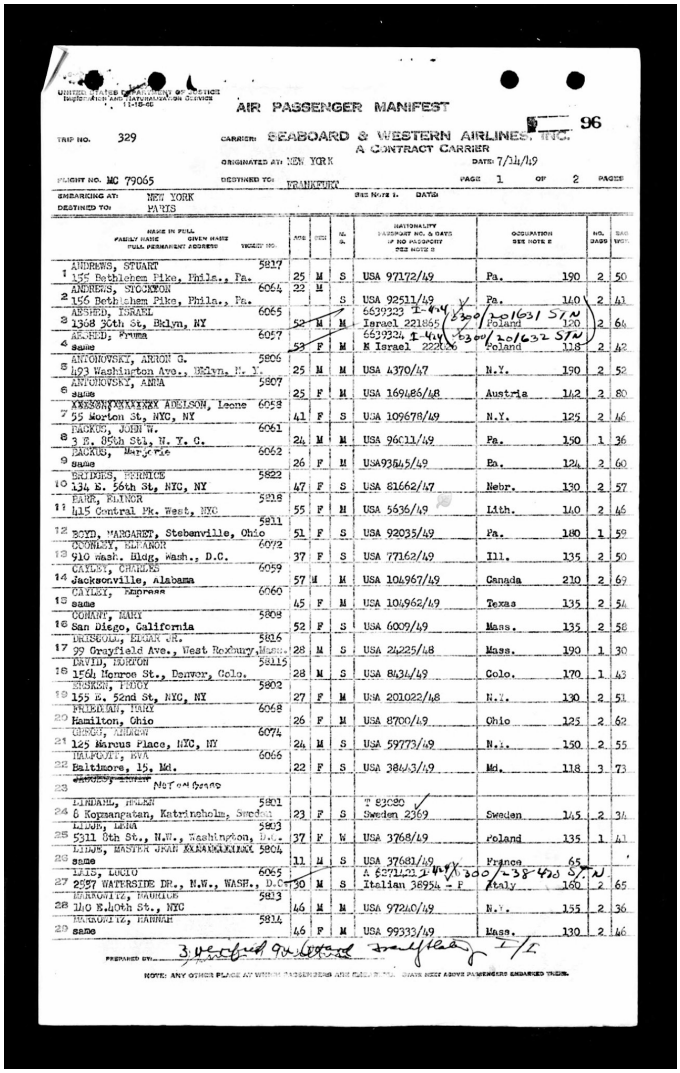
1949 - Travel to Frankfurt Germany from NYC

Her address is listed as "***415 Central Park West, NYC***"



AIR PASSENGER MANIFEST

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EMBARKING AT: NEW YORK

DESTINED TO: PARIS

	NAME IN FULL (FAMILY NAME, GIVEN NAME, FULL PERMANENT ADDRESS)	VISEY NO.	AGE	SEX	NO. CH.	NATIONALITY (PASSPORT NO. & DATE IF NO PASSPORT SEE NOTE B)	OCCUPATION SEE NOTE E	NO. BAGS	BAG WGT.
1	ANDREWS, STUART 155 Bethlehem Pike, Phila., Pa.	5817	25	M	S	USA 97172/49	Pa. 190	2	50
2	ANDREWS, SHOLMON 156 Bethlehem Pike, Phila., Pa.	6064	22	M	S	USA 92511/49	Pa. 140	2	43
3	ARSHED, ISRAEL 1368 50th St, Bklyn, NY	6065	52	M	M	6639323 I-414 V 300/201631 S/N Israel 221855	Poland 120	2	64
4	ARSHED, Emma Same	6057	53	F	M	6639324 I-414 V 300/201632 S/N N Israel 222026	Poland 118	2	42
5	ANTONOWSKY, AARON G. 493 Washington Ave., Bklyn, N. Y.	5806	25	M	M	USA 4370/47	N.Y. 190	2	52
6	ANTONOWSKY, ANNA Same	5807	25	F	M	USA 169486/48	Austria 142	2	80
7	ADELSON, Leone 55 Morton St, NYC, NY	6059	41	F	S	USA 109678/49	N.Y. 125	2	46
8	BACKER, JOHN W. 3 E. 85th Stl, N. Y. C.	6061	24	M	M	USA 96011/49	Pa. 150	1	36
9	BADRUS, Marjorie Same	6062	26	F	M	USA93845/49	Pa. 124	2	60
10	BRIDGES, PENNICE 134 E. 56th St, NYC, NY	5822	47	F	S	USA 81662/47	Nebr. 130	2	57
11	BAUR, FAINER 415 Central Pk. West, NYC	5816	55	F	M	USA 5636/49	Lith. 140	2	46
12	BOYD, MARGARET, Stebenville, Ohio	5811	51	F	S	USA 92035/49	Pa. 180	1	58
13	COONLEY, ELEANOR 910 wash. Bldg, Wash., D.C.	6072	37	F	S	USA 77162/49	Ill. 135	2	50
14	CAREY, CHARLES Jacksonville, Alabama	6059	57	M	M	USA 104967/49	Canada 210	2	69
15	CAYLEY, Empress Same	6060	45	F	M	USA 104962/49	Texas 135	2	54
16	COHANY, MARY San Diego, California	5809	52	F	S	USA 6009/49	Mass. 135	2	58
17	DRIEDGAL, BRIAN JR. 99 Grayfield Ave., West Roxbury, Mass.	5816	28	M	S	USA 24225/48	Mass. 190	1	30
18	DAVID, HORTON 1561 Monroe St., Denver, Colo.	58115	28	M	S	USA 8434/49	Colo. 170	1	43
19	ERSKEN, TEDDY 155 E. 52nd St, NYC, NY	5802	27	F	M	USA 201022/48	N.Y. 130	2	51
20	FRIEDLAY, TONY Hamilton, Ohio	6068	26	F	M	USA 8700/49	Ohio 125	2	62
21	GINOV, ANDREW 125 Marcus Place, NYC, NY	6074	24	M	S	USA 59773/49	N.Y. 150	2	55
22	HALPOTT, EVA Baltimore, 15, Md.	6066	22	F	S	USA 38443/49	Md. 118	3	73
23	~~HARDEY, ELMER~~ Not on Plane								
24	LINDAHL, HELEN 6 Kopsangatan, Katrinsholm, Sweden	5801	23	F	S	T 83080 ✓ Sweden 2369	Sweden 145	2	34
25	LINDE, LENA 5311 8th St., N.W., Washington, D.C.	5803	37	F	M	USA 3768/49	roland 135	1	41
26	LINDS, MASTER JOHN same	5804	11	M	S	USA 37681/49	France 65		
27	LUIS, LUCIO 2587 WATERSIDE DR., N.W., WASH., D.C.	6065	30	M	S	A 6271.22 I-414 V 300-38420 S/N Italian 38954 - F	Italy 160	2	65
28	MARKOWITZ, MAURICE 110 E.100th St., NYC	5813	46	M	M	USA 97240/49	N.Y. 155	2	36
29	MARKOWITZ, HANNAH same	5814	46	F	M	USA 99333/49	Mass. 130	2	46

PREPARED BY: 3 Wexford Gardens Staten Island 14, N.Y.

NOTE: ANY OTHER PLACE AT WHICH PASSENGERS ARE FIRST TO BE GIVEN HERE ABOVE PASSENGERS EMBARKED THERE.

[HT003T][GDrive]

1979 (Dec 21) - Joseph A Sachs (brother) passes

Article : [HN00IA][GDrive]

SACKS-Joseph A. Beloved husband of the late Florence. Devoted father of Sanford, Renee Benin and Zachary. Cherished grandfather of Sharon, David. Wendy, Benlamin and Alexander. Dear brother of Eleanor Barr. Service Sunday December 23 at 10:30 a.m. "The Riverside", 76th St. & Amsterdam Ave.

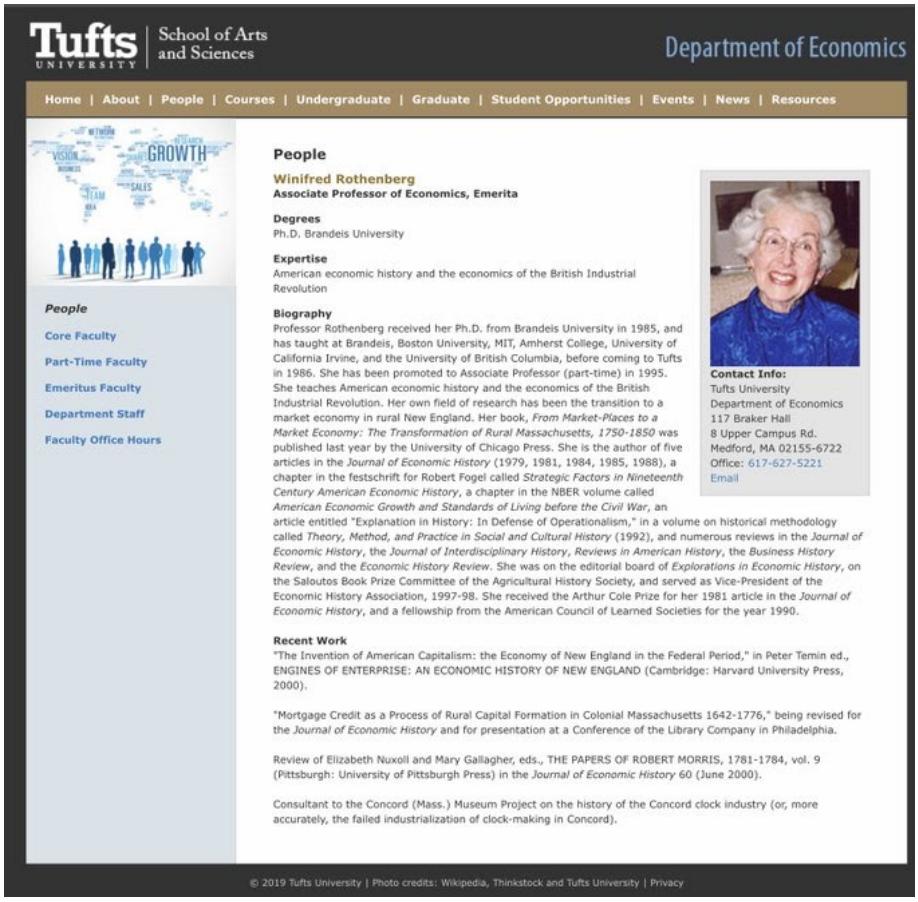
ADDITIONAL REFERENCE INFO - DAUGHTER WINIFRED AND SON-IN-LAW JEROME ROTHENBBERG

Children - Winifred Barr , married to Jerome Rothenberg

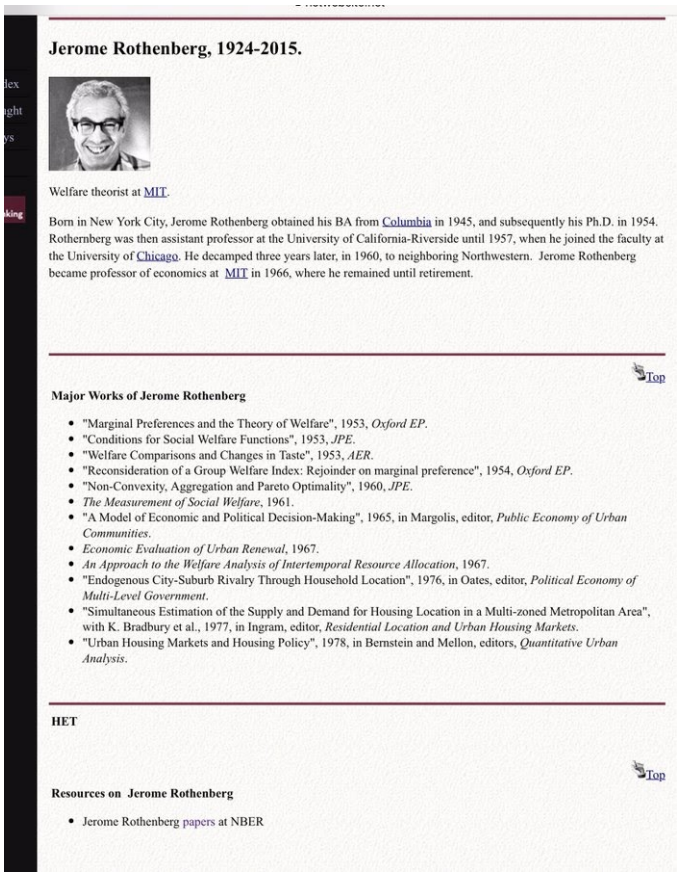
Source Tweet (from "agentrevolt") - [HT003V][GDrive]

Winifred Barr Rothenberg, daughter of David Barr and Elinor Sachs, married Jerome Rothenberg, Professor of Economics at M.I.T for 40 years. Author of "Strategy, Arms Control, and the Deployment of Defensive Weapons Systems" (available at https://nber.org/chapters/c5160)

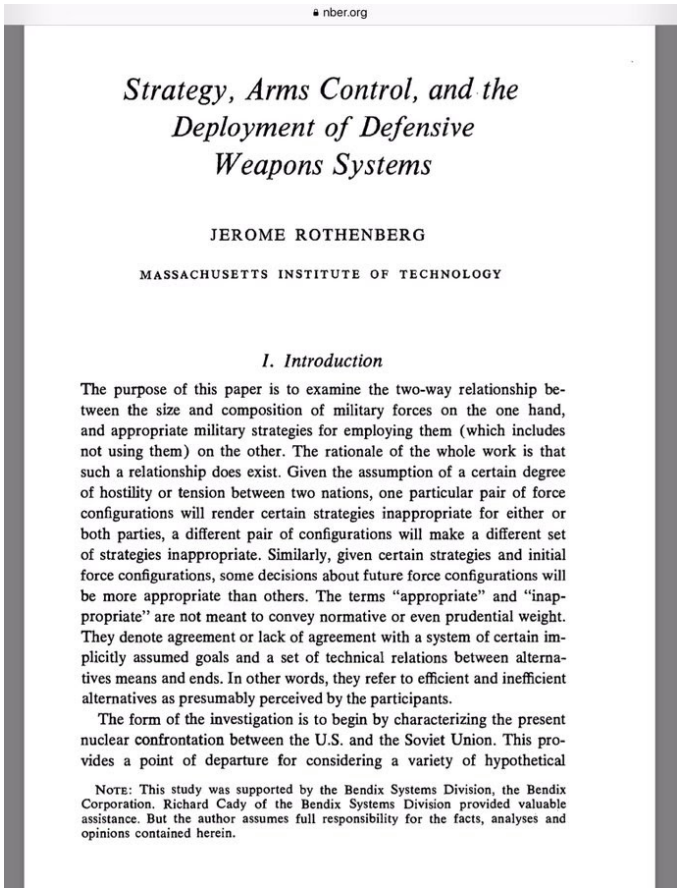
[HT003W][GDrive]



[HT003X][GDrive]



[HT003Y][GDrive]


nber.org

Strategy, Arms Control, and the Deployment of Defensive Weapons Systems

JEROME ROTHENBERG

MASSACHUSETTS INSTITUTE OF TECHNOLOGY

I. Introduction

The purpose of this paper is to examine the two-way relationship between the size and composition of military forces on the one hand, and appropriate military strategies for employing them (which includes not using them) on the other. The rationale of the whole work is that such a relationship does exist. Given the assumption of a certain degree of hostility or tension between two nations, one particular pair of force configurations will render certain strategies inappropriate for either or both parties, a different pair of configurations will make a different set of strategies inappropriate. Similarly, given certain strategies and initial force configurations, some decisions about future force configurations will be more appropriate than others. The terms "appropriate" and "inappropriate" are not meant to convey normative or even prudential weight. They denote agreement or lack of agreement with a system of certain implicitly assumed goals and a set of technical relations between alternatives means and ends. In other words, they refer to efficient and inefficient alternatives as presumably perceived by the participants.

The form of the investigation is to begin by characterizing the present nuclear confrontation between the U.S. and the Soviet Union. This provides a point of departure for considering a variety of hypothetical

NOTE: This study was supported by the Bendix Systems Division, the Bendix Corporation. Richard Cady of the Bendix Systems Division provided valuable assistance. But the author assumes full responsibility for the facts, analyses and opinions contained herein.

[HT003Z][GDrive]

Strategy, Arms Control, and the Deployment of Defensive Weapons Systems

Jerome Rothenberg

Note - the above can be downloaded form - https://www.nber.org/chapters/c5160

Chapter in NBER book Issues in Defense Economics (1967), Roland N. McKean, editor (p. 67 - 104)

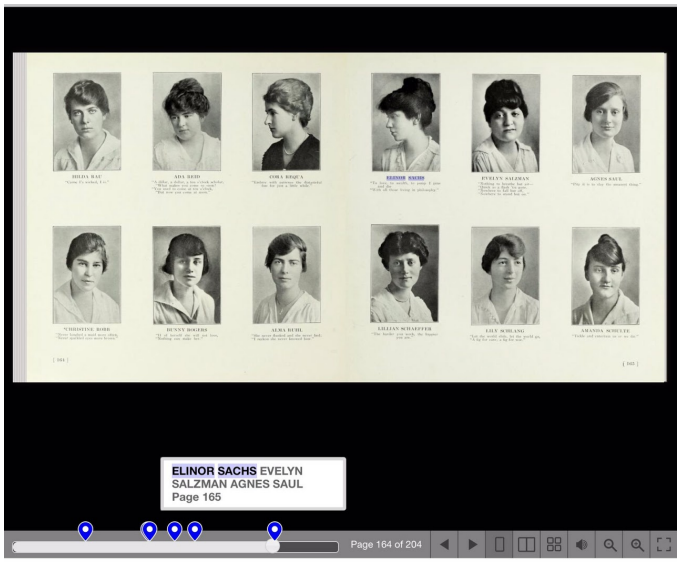
Published in 1967 by NBER

NEBR - National Bureau of Economic Research ...

Reference Info : Barnard College (Columbia University)

Elinor Sachs Barr at Columbia

Source Tweet : [HT003J][GDrive]



Mortarboard

by Barnard College

Publication date	1916
Topics	college yearbooks, women's colleges, Barnard College, student activities
Publisher	Barnard College
Collection	barnardcollege; americana
Digitizing sponsor	LYRASIS Members and Sloan Foundation
Contributor	Barnard College
Language	English
Volume	23 1917

991 Views

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on as possible
man, Barnard
York.
hompson are:
lacBain, Miss
, Miss Helen
s, Mrs. Alfred

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n)

	Harriette N. Blachly)
Plainfield, New Jersey	Mrs. Robert P. Coates '34 (Alice L. Canoune)
Huntington, Long Island	Mrs. Edward S. Blagden '15 (Lois W. Martin)
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	Miss Jane Bell '39
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Nashville, Tennessee	Mrs. Will Manier, Jr. '16 (Ruth Salom)
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	Mrs. Henry Edward Catto '22 (Maurine Halsell)
Richmond, Virginia	Miss Champe Carter Winston '36
Brattleboro, Vermont	Mrs. Frederic F. Van de Water '09 (Eleanor Gay)
Washington, D. C.	Mrs. David Barr '17 (Elinor Sachs)

Parties will be given in the following places but final arrangements have not yet been made: Alabama; Arizona; Louisiana; New Haven, Connecticut; Columbia, Missouri; Chapel Hill, North Carolina and New Mexico.

Please remember to fill in the blank on page 24.

Page 8 of 24

Barnard College Alumnae Monthly

by Barnard College

Publication date 1938-10
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Topics Alumni and alumnae, periodicals, Associate Alumnae, women's colleges, Barnard College

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y. The new salary scale for Barnard's aff, retroactive to January 1, 1947, schedule in line with Columbia's new nd makes Barnard salaries, in all prob- her than those of any other college

* * *

EAR NEXT FALL that the math depart- serious difficulties don't say we didn't Mary Elizabeth Ladue '35, its newest ofessor and our valued colleague, will this summer to Frank Solari of Kings- affordshire, England, a graduate with n Birmingham University. The lucky ed the Editorial Board without flinch- e were not easy on him, either, be- cause he plans to take his bride home with him to England.

* * *

AN ALUMNA'S DAUGHTER wins a graduate fellowship—pretty special! Winifred Barr '47, who is the daughter of Elinor Sachs Barr '17, erstwhile director of the Associate Alumnae and at present a member of the Board of Editors of this magazine, has been named by the Faculty as the winner of the George Welwood Murray fellowship in the humanities and social sciences.

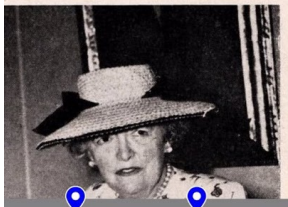
Lest we be accused of a tendency towards nepotism, let us also name for you the winners of the Rice fellowships in the natural sciences—Virginia Kanick, a physics major, and Eleanor Stephanie Zink, who has specialized in geology.

college gets money. T merly well-stocked she have since last June turn $2,600, with one quart we report at Commence member the name is marked Barnard.

FROM THE ALUMNAE OFFICE

New Editor

normous gratification the Board of the Nominating Committee announce nomination of *Clare M. Howard* '03 *Marie Bernholz Flynn* '18 as Editor- as been confirmed by the Board of assume her new duties during the summer, and her name will top the mast-head of the Autumn 1947 number. Miss Howard has been a faithful and frequent contributor to our columns, and we may all look forward happily to the future issues of her inspiration and creation.



The Thrift Shop

Rummage! Rummage! Rummage! That is all your chairman can think of these days. After a wonderful year of plenty, she went down cellar the other day and found great gaps on the shelves! Summer is coming when many will leave town and then little rummage will be coming in. So we must stock up, and "That means you!"

At the Dean's delightful and delicious Fund

Now a

Now and then, as i tities in all ages and a Barnard get together ju company. Then—Febr hundred of us luncheo Hall dining room, and informal report on the charming talk by Doro visit to post-war Franc still considerable, visit some cases stealing thu Many remained and ho in the afternoon. Wh undergrad-alumnae bash find an alumna who wo

Now—plans are alre ment Reunion and T fourth. Your notice wi in due course, but there this year that gives pr dinary gathering. Ren your class is not invite inside back cover), yo but *eat* on campus; and A.A.B.C. is for everyb

Swing Yo

Page 6 of 16

Barnard College Alumnae Magazine

by Barnard College

Publication date	1947-03
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[HT003Q][GDrive]

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Elinor Sachs

land Park, N.J.; *Marsha Kayser* to Peter Hutchings and living in NYC; *Margaret Kent* to Peter Brooks; *Sandra Levy* to Barry B. Mahl; *Enid R. Litel* to Stephen Freedman; *Ruth Ann Locke* to Michael E. Selzer, living in NYC; *Linda Lovas* to John Hoeschler, living in NYC; *Tamara Lowe* to Lawrence Dworsky; *Joy Markman* to Michael Arnold Lew, living in the Bronx; *Teresa Naugle* to Andrew Lukas and living in Waltham, Mass. while he studies for his Ph.D. in physics at Brandeis; *Betsy Page* to Russell Schoch, Jr., and living in Madison, Wis.; *Susan Panny* to Eaton E. Lattman; *Amy Richman* to Nathaniel Mayer and living in the Bronx; *Elizabeth Romberg* to Richard Bernstein, living in Boston, Mass.; *Mary Rowen* to David Okelkevich and living in NYC; *Alice Rubinstein* to Richard M. Gochman; *Judith Senitzky* to Urie Reichman and living in Israel; *Mary Siegel* to Charles Bleiberg; *Helen Stern* to Jonathan Sunshine, living in Oxford, England; *Meredith Stetson* to James F. Paisley III, living in the Bronx; *Barbara Sullivan* to Robert C. Spindle and living in New Haven, Conn; *Barbara Suskind* to Michael A. Goldfarb; *Charlotte Tyte* to Stephen C. Kennedy and living in Lexington, Ky.; *Ruth Weinstock* to Gad Heuman and living in New Haven, Conn.; *Diane Wolfe* to Mark Levy and living in New York City where he is with NBC.

Many of our classmates are continuing their education. President of the class *Judy Schatz* has begun studying at Columbia's School of Library Service and working as a library trainee for the New York Public Library at the County Cullen Regional Branch in Harlem. Studying at Yale for a master of arts in teaching degree is *Maureen McCullough*, who plans eventually to teach history in secondary school. Also working toward an MAT, but in mathematics, is *Linda Bellotti*, one of Harvard's

Rubb is working as secretary to the dean of Johns Hopkins Medical School. In Mayaguez, Puerto Rico, *Nancy Cowles* is training for her Peace Corps assignment as teacher of English at the State Technical University in Santiago, Chile. *Barrie Gelbhaus* Klaits has a unique type of job writing earth sciences curricula for third graders. The project she is working with is entitled Minnemast (Minnesota School Mathematics and Science Teaching Project) and is "an NSF-sponsored effort to integrate mathematics and science curricula in the elementary schools." Working as a case aide, *Barbara Leon* is at Speedwell Services for Children, a foster care agency. *Marcia Weinstein* is an interviewer at the Professional Placement Center of the New York State Employment Service. To those of you who are looking for jobs in New York, please drop by and say hello. To all of you: please write.

WITHOUT NEWS

Correspondents for the classes for which there was no news are as follows:

'04 *Florence L. Beeckman*
Pugsley Hill Rd., Amenia, N.Y. 12501
'05 *Edwina Levy* Hayman (Mrs. H.)
575 Park Ave., N.Y., N.Y. 10021
'06 *Dorothy Brewster*
310 Riverside Drive, N.Y., N.Y. 10025
'07 *Eva Jacobs* Rich (Mrs. M.)
147 W. 79 St., N.Y., N.Y. 10024
'12 *Lucile Mordecai* Lebair (Mrs. H.)
180 W. 58 St., N.Y., N.Y. 10019
'17 *Elinor Sachs* Barr
415 Central Park West
New York, N.Y. 10025
'40 *Frances Danforth* Thomas (Mrs. H.)
19 East Cross Road
Springdale, Conn. 06879
'55 *Siena Ernst* Danziger (Mrs. R.)
117 Main St., Flemington, N.J. 08822

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60 / 64

Barnard Alumnae Magazine
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Publication date 1966-09
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Topics Alumni and alumnae, periodicals,

507 Views

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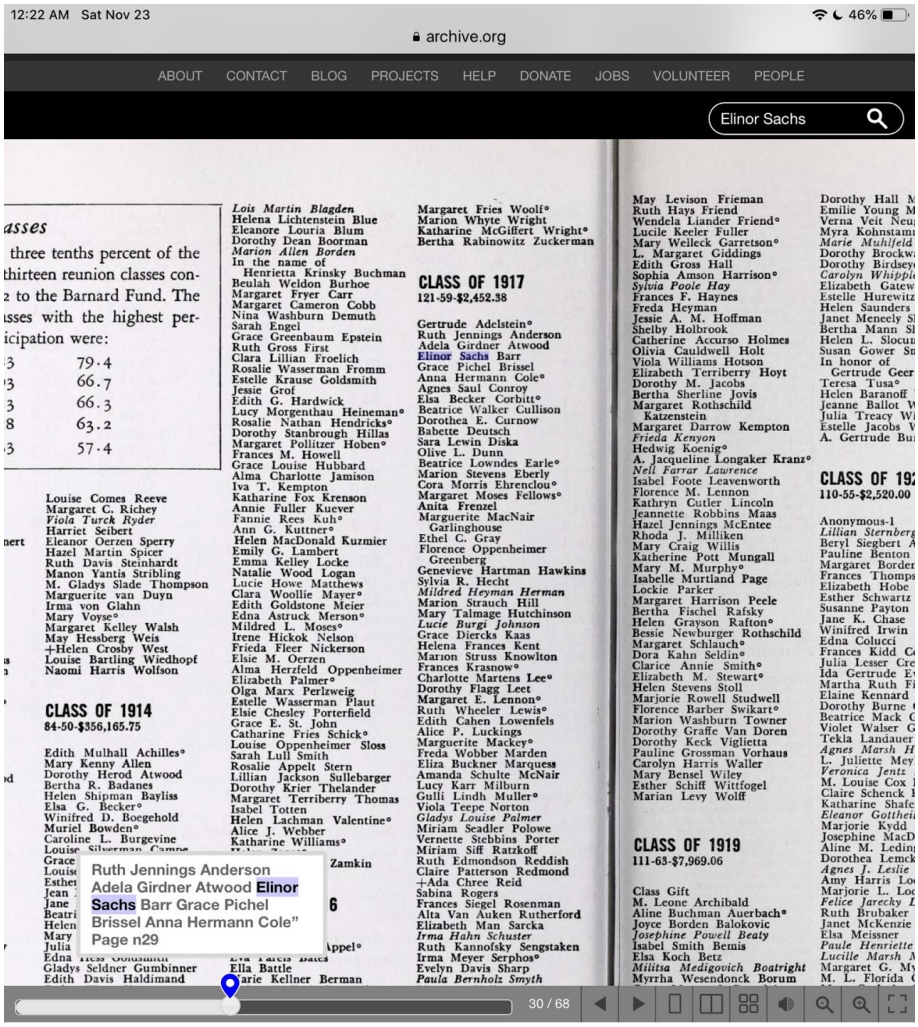

Barnard Alumnae

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599 Views

[HT003S][GDrive]

Winifred Barr links :

- Mar 19 1945 https://www.newspapers.com/image/37827513/?terms=%22winifred%2Bbarr%22
- April 27 1945 https://www.newspapers.com/image/37827554/?terms=%22winifred%2Bbarr%22
- mar 27 1947 https://www.newspapers.com/image/37827261/?terms=%22winifred%2Bbarr%22
- Mar 8 1945 https://www.newspapers.com/image/37827498/?terms=%22winifred%2Bbarr%22

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Housatonic

Donald E. Barr (born 1921)

Wikipedia Donald Barr

[HB001Q][GDrive]

NOTE : "Donald Barr" is not the same person as "Donald Barr Chidsey" - No relationship exists!
Donald Barr Chidsey (born 1902) who lived nearby in New Jersey, was also an author, also had an intelligence background, but was born in 1902.

- **BORN :** August 08, 1921 ; Birthplace: **Manhattan**, New York,, United States [HL0024][GDrive]
- **DEATH :** February 05, 2004 (82) : Langhorne, Bucks County, Pennsylvania, United States [HL0024][GDrive]
- **PARENTS :** Father is **Simon Pelham Barr** (born 1892) / Mother is **Estelle de Young Barr** (born 1893) [HL0024][GDrive]
- **MARRIAGE :** Husband of Mary Margaret (Ahern) Barr
  - Not sure if the "Ahern" family is connected to the CIA officer and book author "Thomas L. Ahern Jr.) (https://www.historynet.com/book-review-vietnam-declassified-the-cia-and-counterinsurgency-by-thomas-l-ahern-jr.htm)
- **CHILDREN :** [HN00JO][GDrive]
  - Christopher J Barr (1947 - 2009) [HL0028][GDrive]
  - **William Pelham Barr (born 1950)**
  - Hilary Benedict Thomas Barr
  - Stephen M Barr
- **SIBLINGS :** Margaret Barr
- **OTHER FAMILY RELATIONSHIPS :**
  - Father's brother-in-law : **Alexander Sachs** (born 1892)

1930 Census - New York

Donald "E" Barr is 8 years old.

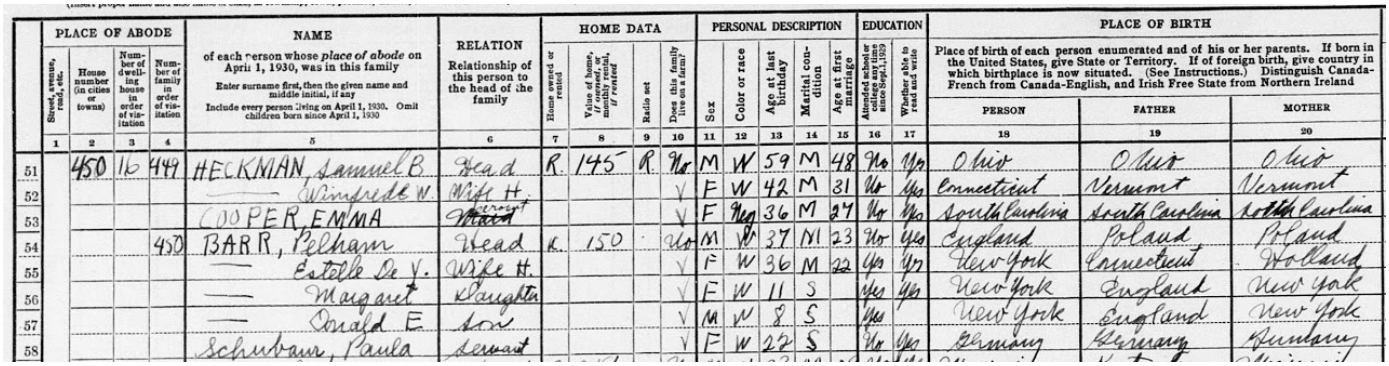
Full Census form : [HS0019][GDrive]

Father is **Simon Pelham Barr (born 1892)** , age 37. The census form says Simon was a "writer", working for "General Practice". He was born in England; his father and mother were born in Poland.

Mother is "**Estelle De Y**" (actually it is " **Estelle de Young Barr** (born 1893) ") , age 36. The census form says Estelle was born in New York; her father was born in Connecticut, and mother was born in Holland. Note that the census form says her career is "None", but we know that Estelle was working with Columbia University professionals in the 1920s and the 1930s, and that she was a doctor of psychology.

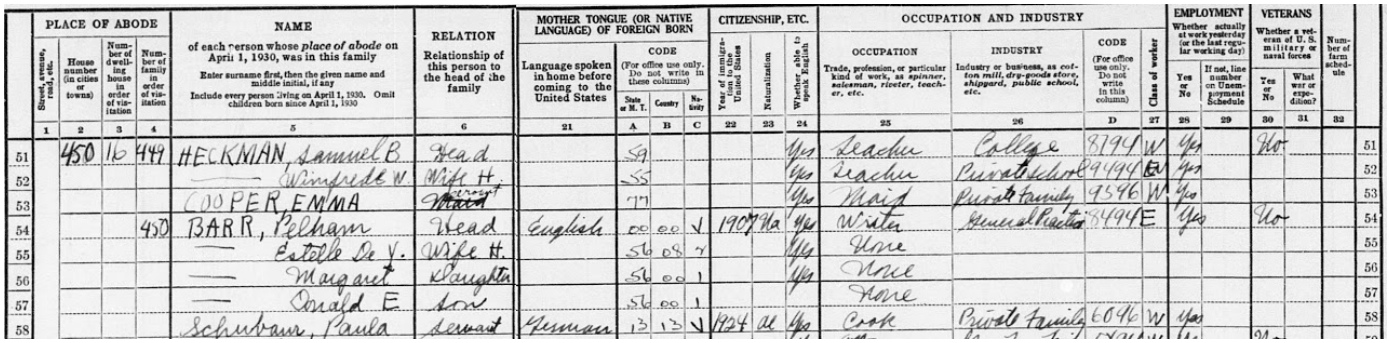
Their servant was **Paula Schubaur** (*spelling could be wrong*), who was born in Germany.

Their address was **450 Riverside Drive, in New York. City** .



	Street, avenue, road, etc.	House number (in cities or towns)	Number of dwelling house in order of visitation	Number of family in order of visitation	NAME of each person whose *place of abode* on April 1, 1930, was in this family	RELATION	Home owned or rented	Value of home, if owned, or monthly rental, if rented	Radio set	Does this family have a radio?	Sex	Color or race	Age at last birthday	Marital condition	Age at first marriage	Attended school or college any time since Sept. 1, 1929	Whether able to read and write	PLACE OF BIRTH: PERSON	FATHER	MOTHER
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
51		450	16	449	HECKMAN, Samuel B.	Head	R	145	R	No	M	W	59	M	48	No	Yes	Ohio	Ohio	Ohio
52					— Wingrede W.	Wife H.				Y	F	W	42	M	31	No	Yes	Connecticut	Vermont	Vermont
53					COOPER, EMMA	Maid				Y	F	Neg	36	M	27	No	Yes	South Carolina	South Carolina	South Carolina
54				450	BARR, Pelham	Head	R	150		No	M	W	37	M	23	No	Yes	England	Poland	Poland
55					— Estelle De Y.	Wife H.				Y	F	W	36	M	22	Yes	Yes	New York	Connecticut	Holland
56					— Margaret	Daughter				Y	F	W	11	S		Yes	Yes	New York	England	New York
57					— Donald E.	Son				Y	M	W	8	S		Yes		New York	England	New York
58					Schubaur, Paula	Servant				Y	F	W	22	S		No	Yes	Germany	Germany	Germany

[HS001A][GDrive]



	Street, avenue, road, etc.	House number (in cities or towns)	Number of dwelling house in order of visitation	Number of family in order of visitation	NAME of each person whose *place of abode* on April 1, 1930, was in this family	RELATION	MOTHER TONGUE (OR NATIVE LANGUAGE) OF FOREIGN BORN: Language spoken in home before coming to the United States	CODE: State or N. T.	Country	No. Imig.	CITIZENSHIP, ETC.: Year of immigration to United States	Naturalization	Whether able to speak English	OCCUPATION AND INDUSTRY: OCCUPATION	INDUSTRY	CODE	Class of worker	EMPLOYMENT: Yes or No	If not, line number on Unemployment Schedule	VETERANS: Yes or No	What war or expedition?	Number of farm schedule	
	1	2	3	4	5	6	21	A	B	C	22	23	24	25	26	D	27	28	29	30	31	32	
51		450	16	449	HECKMAN, Samuel B.	Head		59					Yes	Teacher	College	8194	W	Yes		No			51
52					— Wingrede W.	Wife H.		55					Yes	Teacher	Private school	9199	W	Yes					52
53					COOPER, EMMA	Maid		77					Yes	Maid	Private family	9546	W	Yes					53
54				450	BARR, Pelham	Head	English	00	00	V	1907	No	Yes	Writer	General Practice	8194	E	Yes		No			54
55					— Estelle De Y.	Wife H.		56	08	Y			Yes	None									55
56					— Margaret	Daughter		56	00	1			Yes	None									56
57					— Donald E.	Son		56	00	1				None									57
58					Schubaur, Paula	Servant	German	13	13	V	1924	Al	Yes	Cook	Private family	6096	W	Yes					58

[HS001B][GDrive]

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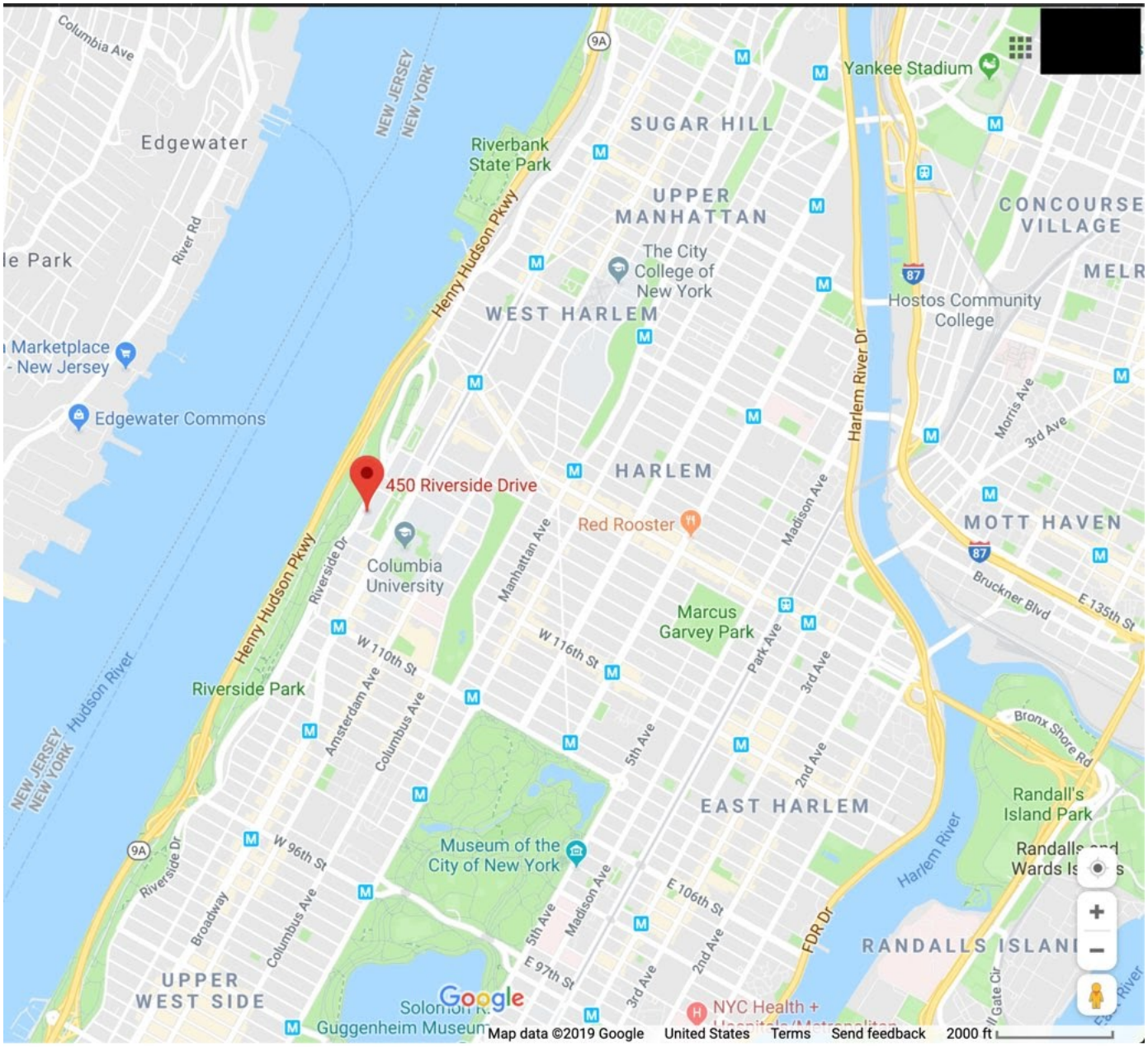
450 Riverside Drive (NYC) is across the street from Columbia University


450 Riverside Drive
Columbia Ave
Edgewater
NEW JERSEY
NEW YORK
Riverbank State Park
SUGAR HILL
Yankee Stadium
UPPER MANHATTAN
CONCOURSE VILLAGE
River Rd
Henry Hudson Pkwy
The City College of New York
WEST HARLEM
Hostos Community College
Harlem River Dr
Marketplace - New Jersey
Edgewater Commons
Morris Ave
3rd Ave
HARLEM
Red Rooster
Madison Ave
MOTT HAVEN
Bruckner Blvd
E 135th St
Columbia University
Manhattan Ave
Marcus Garvey Park
Park Ave
W 110th St
W 116th St
Riverside Park
Amsterdam Ave
Columbus Ave
Hudson River
Bronx Shore Rd
5th Ave
2nd Ave
EAST HARLEM
Randall's Island Park
Museum of the City of New York
W 96th St
Harlem River
E 106th St
Broadway
FDR Dr
RANDALLS ISLAND
E 97th St
UPPER WEST SIDE
Google
Solomon R. Guggenheim Museum
NYC Health +
Map data ©2019 Google
United States
Terms
Send feedback
2000 ft

1934 - His father (and "New Dealer") Pelham Barr Appointed Divisional Director of the LBI (Library Binding Institute) - Remained Executive Director until 1947

See [HB0016][GDrive] :

When the New Deal organized American industry under the National Recovery A c t (NRA) in 1934, library bookbinders began a cooperative program to insure standards of quality and fair dealing that has continued for fifty years. Library bookbinding in 1934 was a considerably different affair than it is currently. A host of small shops dominated an industry with very few "giants" and no consistent definition of what it was that was being sold as "library binding." Individual binders dealt with individual librarians without the benefit of broader consultation about standards and prices for their services. Cost accounting varied tremendously across the indus- try, making pricing of bindery services exceedingly difficult. Wide variations in labor practices further destabilized a market already hard-hit by the Depression.

Barr is influential in creating LBI

Into this scene came the faceless federal bureaucracy of the NRA National Code Authority - with a difference in the person of Pelham Barr. Barr had started his professional life as a chemist, politically active and committed to the goals of the New Deal. With the inauguration of the NRA in February 1934, a Book Manufacturing Institute was established, and Barr was appointed Divisional Director for Library Binding.He immediately set about applying Code provisions for self-government, labor standards, and fair competition across the industry. By November of that year, Barr was planning to extend his duties to include promotional activities for the industry as a whole, undertaken at the expense of divisional member binders.

1941 - Graduates from Columbia University

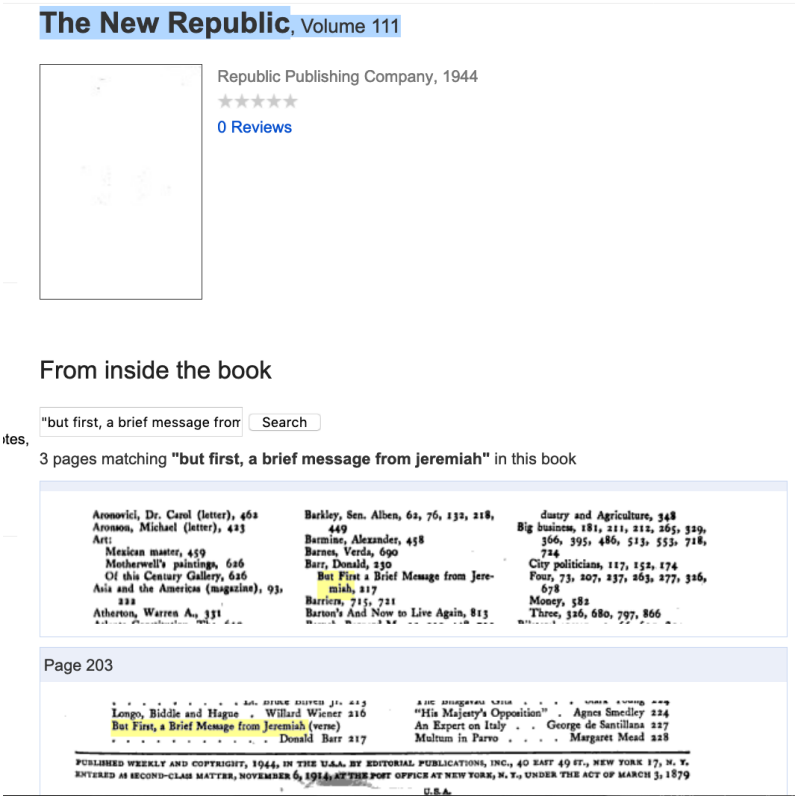
Donald Barr was in the class of 1941 at Columbia University, where he studied mathematics and 🔵**anthropology**. [HN00JU][GDrive]

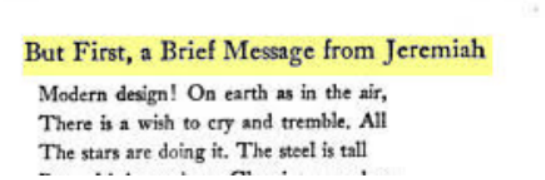
1942-1944 - With US Army in World War II

- [Donald Barr] "served with the U.S. Army as an Italian interpreter in a POW camp." [HN00JU][GDrive]
- During WW2, [Donald Barr] }taught higher math to anti-aircraft gunnery students at an Army camp in Hulen, Texas". [HN00JQ][GDrive]
- It was during his time with the army in WW2 that Donald Barr learned Italian. Donald Barr said *"I knew if I didnt make it, I'd be made a combat engineer in the South pacific where if I didnt get shot, I'd catch marlia or down. Boy, did I learn Italian."* [HN00K3][GDrive]

1944 - Donald Barr has first published poem : "But First, a Brief Message for Jeremiah"

The New Republic, Volume 111 : Republic Publishing Company, 1944





A full page view of this poem is not available in Google Books - Will post when one is available !

1945 - Joins Office of Strategic Service (OSS) in Germany

- In 1945, [Donald Barr] *"joined the Office of Strategic Services (OSS) in Germany, aiding in de-Nazifying companies and industry. He also investigated German industrialists and SS men who had fled to South America."* [HN00JQ][GDrive]
- The Office of Strategic Services (OSS) was the predecessor to the **Central Intelligence Agency (CIA)**. [HK0013][GDrive]
- In addition to working with the OSS Germany, it is documented that Donald Barr also served with the Office of Strategic Services in Washington DC.
- Some references describe this time differently. One source says that in 1945 Donald Barr joined the English department at Columbia and remained there for 10 years, taking an M.A. in English. [HN00JU][GDrive] Does this mean Donald Barr was only in Berlin for a few months? Or, does it mean that "aiding in de-Nazifying companies" is part of the job at Columbia University's English program?

Thus, it is not clear how long Donald Barr was with the OSS.

1946 (April 22) - Married Mary Margaret Ahern

Donald Barr marries at age 25. Marriage date here : [HB000Z][GDrive] . **Mary Maraget Ahern** was born in Connecticut on August 14, 1918. See [HL0029][GDrive] . Information on where this wedding took place is needed.

Mary Margaret (Ahern) Barr has been identified as a **Columbia University** professor / faculty member [HG001T][GDrive] . Details and additional verification is pending.

1947 - First son Christopher James born

See [HB000Z][GDrive]

1948 - Father (Simon Pelham Barr) passes

See **Simon Pelham Barr (born 1892)** .

1951 - Completes master's degree

[...] Donald Barr taught in the English department while getting his master's degree in 1951 and completing course requirements for a Ph.D. [By] then he was teaching courses with field work in sociology and political science at the School of Engineering and writing science and mathematics texts for elementary and junior high school students. [HN00JO][GDrive]

1955 - 1959

"In 1955 the engineering school asked him to oversee its efforts to spot promising elementary and secondary science students, including girls, and enlist them for advanced training at the school to help them rise to the college level. Joining the engineering dean's office, he then developed the Science Honors Program, which got the attention and support of the National Science Foundation." [HN00JO][GDrive]

In 1956 he moved to the school of engineering at Columbia University, where he became assistant dean and started and directed the science honors programs. [HN00JU][GDrive]

Mr. Barr became assistant dean of the Faculty of Engineering and Applied Science in 1959, and the foundation eventually asked him to administer its entire Cooperative College-School Program. He did so beginning in 1963, continuing until he became headmaster at Dalton the following year.

1958 (May26)

Full page : [HN00JM][GDrive]

The Trouble With Science Education In the High Schools

By Donald Barr

(Mr. Barr is assistant to the dean of engineering at Columbia University and director of a program sponsored by the university in behalf of science education in high schools. The following are excerpts from an article in the quarterly Columbia University Forum.)

TO BEGIN WITH, there is a shortage of high-school teachers, especially in science and mathematics. When one asks high-school boys what careers they would like to follow, only a tiny fraction are interested in primary and secondary teaching—and most of these want to teach physical education. Why? Doubtless because teachers' salaries are too low. But they are not so low or so insecure in comparison with the material rewards of other rather popular careers—the law, for example, or "business administration." Doubtless also teachers are not respected by our society. Children absorb the values of their parents, and our popular culture does not value the intellectual. But children do not merely take over their parents' image of the teacher. They see the teacher in the classroom. And what they see is a man without authority.

The old-style teacher was an authoritarian figure. We have changed this, and probably it was wise and progressive to do so; but what children usually see now in front of the class is a manipulator anxiously trying to find some palatable psychological substitute for simple authority. The only authoritarian figure left in the modern school is the coach. This may explain why more boys want to teach physical education than all other subjects combined. Witness: it is not Society that has accomplished this; it is the educational system itself.

No More Rote and Rod

The real results of this change in teaching methods do not stop here, however. Authority is a simple device; the new pedagogy is subtle, complex, and shifting. It is no longer enough for a teacher to know the subject he teaches. It is far more important for him to know teaching methods. Almost every American community protects its children from the old barbarities of rote and rod by requiring its teachers to have had a substantial amount of course-work in methods and philosophies of education. It is not easy for a trained scientist or mathematician to get permission to teach science or mathematics in high school. Many have tried; few have been allowed to become more than teachers' understudies or irregular drudges, and often their frustration has been sharpened by watching mathematics and science classes turned over to music teachers or gym teachers. The solid, kindly power of the teachers colleges and the educational associations stands behind a teacher-certification system based on the psychology, not the content, of education.

Yet in some ways this system is realistic. The pupils who come up to high school at twelve or fourteen would be serious problems to the innocent scientist or engineer who did make his way into the classroom. These pupils have already undergone a long anti-intellectual indoctrination. There are two kinds of anti-intellectualism in American life, and more dangerous than the vulgar kind—which is a debased survival of the frontier spirit—is the intellectual anti-intellectualism which pervades modern elementary education. This view regards the brain as an organ which evolved by natural selection, like the neck of a giraffe or the nose of a dog. Its test of the healthy functioning of the brain is survival value; in other words, one is thinking well

when one's thoughts adapt one to the social environment. Ideas are thought of as "instruments," and the test of truth is experience. The more amiable the experience, the more truth it is supposd to contain. School should be a rich, rewarding experience. "Dry" subjects can be made fun by burying them in "real-life situations." If a subject cannot be learned through "real-life situations" at the youngsters' "experience-level" the youngsters are not ready for it. And so on, and so on.

Now, a good high-school mathematics teacher wants the child to understand highly abstract concepts, not merely to memorize and perform operations. This is a child, however, who has learned to read by a method which obliterates conceptual thinking. The first- or second-grade teacher, almost ignoring the rationale of phonics, has based her method on "word recognition"—that is, on recognizing arbitrarily presented associations between printed word and spoken word as if English were Chinese. She has put a premium on guesswork and the sensing of contexts. The child has developed no sense of close responsibility towards the printed page, and he has learned to see there (and everywhere else) what the "total situation" makes him expect to see. The satisfaction he has gotten from reading is the rich reward of having his expectations confirmed and his prejudices authorized, not the humble satisfaction of study. Growing a little older, this child has been encouraged to read "a sentence at a time." He has learned where to dart his eyes to "lift out the main ideas"—a thing which he can do in English because the meaning of an English clause depends on word order, so that the main elements come around according to a regular formula. This child has never learned Latin, because it is a dead language, so he has never encountered a language which, expressing relations by word-endings instead of by word order, must be read closely or not at all. He cannot read poetry or close reasoning.

He has, in fact, already learned to learn certain things and not others.

There was a time when children learned precision and ingenuity under the threat of corporal punishment. This method was based on the notion that intellection was worth the price in pain, and it demonstrated to the child that society put as high a value on intelligence as on deportment. The method was effective for the majority; but it produced bad habits in teachers, wrecked some of the best and most sensitive pupils, and brutalized the slower ones.

So the lash of competition was substituted. Dr. Johnson protested: "I would rather have the rod to be the general terrour of all, to make them learn, than tell a child, if you do thus, or thus, you will be more esteemed than your brothers or sisters. The rod produces an effect which terminates in itself. A child is afraid of being whipped, and gets his task, and there's an end on't; whereas, by exciting emulation and comparisons of superiority, you make brothers and sisters hate each other."

In time yet another method had to be substituted. The pupil was to be measured not against his fellows but against his own potentialities. But this is too subtle, too mysterious for a child to follow. In practice, the pupil loses his capacity to face being measured against any objective standards whatever. The result is that subjects where day-to-day success or failure is objective and clear-cut—subjects like mathematics—put an emotional strain on the pupil. These are the "hard" subjects, to be avoided. . . .

Some of the gravest problems that afflict high-school teaching of the sciences thus come not from general cultural configurations but from the very methods which devoted educators themselves have sold to the public.

What can be done about the schools? Of course teachers' salaries should be doubled. Of course Federal money should help build schools, including laboratory and library facilities. Industry should send exhibits and engineers to high schools to demonstrate the excitements of science. School boards should install training programs in which every elementary teacher already in the schools can learn how to take the natural sense of wonder a young child brings to school and develop it into exacting but still loving inquiry—that is, into science. There should be testing programs to discover the potentially gifted child as soon as possible; and teachers and guidance counselors should watch that child admiringly to discover where his best gifts tend; and he should be taught in a group of his intellectual peers, where he may be challenged; and he should be encouraged to go at his own best rate. Psychologists should conduct research into the psychology of gifts, into the early experiences that make the difference between the thing-minded child and the people-minded child. Instead of "accelerating" the bright child—putting him through the same old inadequate courses, but faster—schools should set up "enriched" programs for him.

Formula for Change

The old lockstep high-school curriculum, marching ill-assorted squads of children through "science" that consists only of obediently repeating the experiments of Lavoisier and Ohm, should go; and in its place there should be at least three curricula: a "science appreciation" course for those future voters who cannot do the mathematics on which modern science—and modern society—is based; a standard course for the standard student; and a course in real science—original or "open-ended" investigation—for the gifted..

Courses in "life adjustment"—driver safety, consumer education—should be reserved for those children whose innate abilities are such that they can do nothing with life but adjust to it. The three-option system, under which a child, with the help of his mother or his buddy, chooses a "college preparatory," a "business," or a "general" program, should go; the power to elect between mediocrity and hard work should not be given to fourteen-year-olds. Indeed, the whole intrusion of vocational training into high schools should be given a hard, cold look.

1958-05-26-the-courier-journal-louisville-kentucky-pg-6-clip-barr-touble

[HN00JN][GDrive]

1959 (Dec)

Full page : [HN00JK][GDrive]

Columbia's Maverick Prof

G. K. Chesterton once wrote about a young man who, brought up by vegetarians, turned toward cannibalism. Maybe this explains the case of Donald Barr, maverick professor at Columbia university, who recently became a political district leader.

Barr is an avowed conservative Republican on . campus long dominated by liberal Democrats. A product of the university's educational system from kindergarten through graduate school, he has become a fighter for stiff academic standards and special programs for the gifted.

* * *

"In our equalitarian system," says Barr, "we've been too suspicious of bringing bright kids together. The great tradition in this country is to look after the weak. Commendable, enough. But equality of opportunity means that everyone gets the opportunity to do his best—and not just the average best."

At the age of 7, Barr was already challenging the progressive educationists. At Horace Mann elementary school, he stubbornly refused to print. He insisted on writing his exercises in script.

Later, at the Lincoln high school, while his classmates were taking pacifist oaths at mass meetings, young Barr was advocating the formation of an ROTC unit.

* * *

As an undergraduate at Columbia university, Barr was denounced as a "confused reactionary" by the student newspaper, The Spectator. Barr's editorial in the university's literary magazine had sided with the president of the university's stand against the Hitler-Stalin pact.

Now, as executive director of the university's joint program for technical education, Barr is developing a "science honors program." Each Saturday, students from public and private schools take courses and do research under the direction of the university's professors.

"This program shows people that bright children can and should go a lot faster than they do," he says.

At 38, Barr is not only educational expert and politician, but poet, literary critic, and a father of four. He is married to the former Mary Ahern of Hartford, Conn., who is teaching at Columbia now that their four boys are in school.

Barr's poetry and literary and educational articles have appeared in the Saturday Review, Harpers, the New York Times Book Review, and Commonweal.

* * *

Once, while a private in the army, Barr even infiltrated that organ of liberalism, the New Republic.

"It was just a poem," he says, "but rather a good conservative sonnet. It scanned and all. I'll bet I could take a good Barry Goldwaterism or a line from any Herbert Hoover speech and get it published as a poem in some liberal magazine. Let's face it," he adds impishly. "The majority of editors don't understand poems. In their heart of hearts, editors just don't believe that sonnets 'mean' anything."

* * *

To what does Barr owe his revolt from liberalism?

"To the messianic complex of my liberal colleagues," he replies. "When you get down to fundamental philosophical issues, there's always a point at which they won't follow you. All of a sudden you begin to notice a sort of pharisaical sneer. They don't listen to you any more. They diagnose you. They say, 'This man is morally sick. He is suffering from reactionary views just because you don't believe in this or that or the other. Liberals have certain basic beliefs in which they have invested their emotions.'"

* * *

Barr likes to list these beliefs in speeches before groups in the Seventh assembly district north, the college neighborhood in which he lives and is Republican district leader:

1. Liberals believe that anything taken over by the federal government is magically transformed into social justice, public welfare and virtue.

2. If you're a liberal, the other fellow is always a "sleazy politician," while you, the liberal, are always the "holy amateur."

3. Combinations of capital are automatically sinful while combinations of labor are automatically virtuous.

* * *

To combat these beliefs, Barr advises conservatives of whatever political party to "quit sulking and join your local political club."

"Liberals have falsely pictured the conservative man as a man who loves rich people and hates poor people," he says. "We conservatives must get out and tell the people what a conservative really is.

"He is a person who believes certain precious things ought to be preserved. The conservative believes that government intervention at any level should only begin when action by the individual citizen or private groups is unlikely or impractical."

Has Barr made any converts among intellectuals in his predominantly Democratic district?

"I think the liberals are beginning to find themselves increasingly incapable of infallibility," he says with scholarly understatement.

Copyright 1959 by Edith Kermit Roosevelt Syndicate.

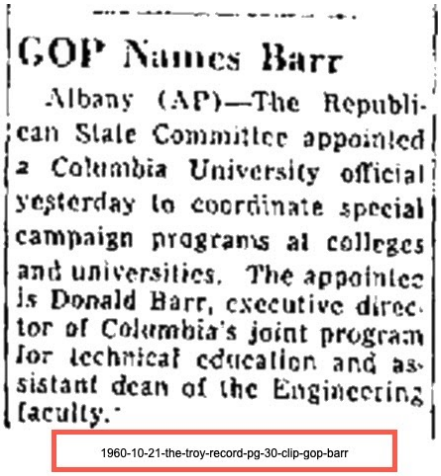
Even the telecasts of senate investigations weren't honest. Many of the witnesses had to have their lawyers coach them as to which amendment they were unable to answer because of.

1959-12-20-the-semi-weekly-spokesman-review-spokane-washington-pg-4-clip-maverick

[HN00JL][GDrive]

1960 (Oct 21)

Full page ; [HN00JI][GDrive]



GOP Names Barr

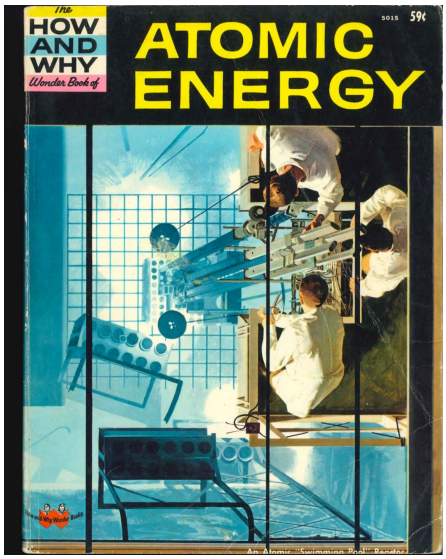
Albany (AP)—The Republican State Committee appointed a Columbia University official yesterday to coordinate special campaign programs at colleges and universities. The appointee is Donald Barr, executive director of Columbia's joint program for technical education and assistant dean of the Engineering faculty."

1960-10-21-the-troy-record-pg-30-clip-gop-barr

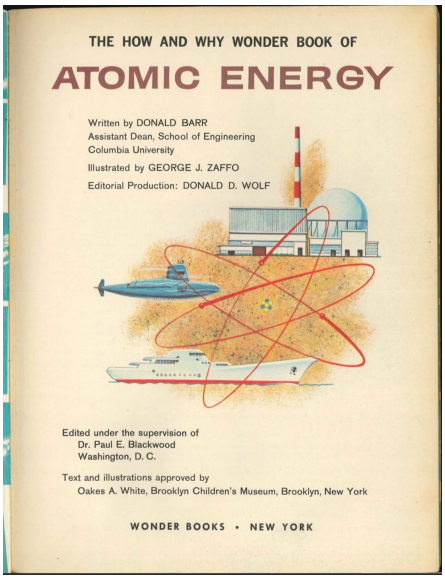
[HN00JJ][GDrive]

1961 - Wonder Books : Wrote "The How and Why Wonder Book of Atomic Energy"

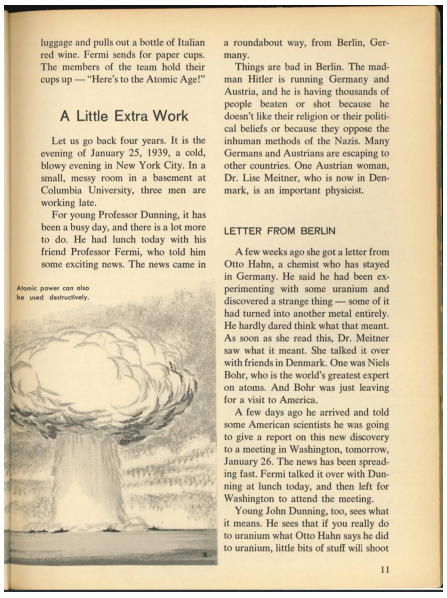
- Download the FULL PDF for "The How and Why Wonder Book of Atomic Energy" by Donald Barr : [HB001K][GDrive]
- Note: Bill Barr Also wrote "The How and Why Book of Primitive Man" ([HB001O][GDrive]) and "The How and Why Book of Buildings" [HB001O][GDrive])



[HB001L][GDrive]



[HB001M][GDrive]



luggage and pulls out a bottle of Italian red wine. Fermi sends for paper cups. The members of the team hold their cups up — "Here's to the Atomic Age!"

A Little Extra Work

Let us go back four years. It is the evening of January 25, 1939, a cold, blowy evening in New York City. In a small, messy room in a basement at Columbia University, three men are working late.

For young Professor Dunning, it has been a busy day, and there is a lot more to do. He had lunch today with his friend Professor Fermi, who told him some exciting news. The news came in a roundabout way, from Berlin, Germany.

Things are bad in Berlin. The madman Hitler is running Germany and Austria, and he is having thousands of people beaten or shot because he doesn't like their religion or their political beliefs or because they oppose the inhuman methods of the Nazis. Many Germans and Austrians are escaping to other countries. One Austrian woman, Dr. Lise Meitner, who is now in Denmark, is an important physicist.

Atomic power can also be used destructively.

LETTER FROM BERLIN

A few weeks ago she got a letter from Otto Hahn, a chemist who has stayed in Germany. He said he had been experimenting with some uranium and discovered a strange thing — some of it had turned into another metal entirely. He hardly dared think what that meant. As soon as she read this, Dr. Meitner saw what it meant. She talked it over with friends in Denmark. One was Niels Bohr, who is the world's greatest expert on atoms. And Bohr was just leaving for a visit to America.

A few days ago he arrived and told some American scientists he was going to give a report on this new discovery to a meeting in Washington, tomorrow, January 26. The news has been spreading fast. Fermi talked it over with Dunning at lunch today, and then left for Washington to attend the meeting.

Young John Dunning, too, sees what it means. He sees that if you really do to uranium what Otto Hahn says he did to uranium, little bits of stuff will shoot

11

[HB001N][GDrive]

TODO

- 1959 July 19
  - https://www.newspapers.com/clip/34736615/donald_barr_program_director_columbia/
  - 1959-07-19-the-daily-news-new-york-clip-donald-barr-program-dir-columbia.pdf
- 1960 Oct 14
  - https://www.newspapers.com/image/490577255/?terms=%22donald%2Bbarr%22
  - 1960-10-14-the-record-hackensack-new-jersey-pg-60
  - 1960-10-14-the-record-hackensack-new-jersey-pg-60-clip-simeon-stylites
- 1960 Oct 21
  - https://www.newspapers.com/image/86300444/?terms=%22donald%2Bbarr%22
  - 1960-10-21-the-kingston-daily-freeman-ny-pg-9.jpg
  - 1960-10-21-the-kingston-daily-freeman-ny-pg-9-clip-programs
- 1961 May 22
  - https://www.newspapers.com/image/490587421/?terms=%22donald%2Bbarr%22
  - 1961-05-22-the-record-hackensack-new-jersey-section-2

- 1961-05-22-the-record-hackensack-new-jersey-section-2-clip-students-tv
- 1961 Sep 16
  - https://www.newspapers.com/image/490553186/?terms=%22donald%2Bbarr%22
  - 1961-09-16-the-record-hackensack-new-jersey-pg-6
  - 1961-09-16-the-record-hackensack-new-jersey-pg-6-clip-science-star
- 1962 June 8
  - https://www.newspapers.com/image/490782240/?terms=%22donald%2Bbarr%22
  - 1962-06-08-the-record-hackensack-new-jersey-pg-23
  - 1962-06-08-the-record-hackensack-new-jersey-pg-23-clip-tests
- 1962 Aug 7
  - https://www.newspapers.com/image/144974154/?terms=%22donald%2Bbarr%22
  - 1962-08-07-asbury-park-press-nj-pg-17
  - 1962-08-07-asbury-park-press-nj-pg-17-clip-barry-unger
- 1962 Dec 15
  - https://www.newspapers.com/image/576310521/?terms=%22donald%2Bbarr%22
  - 1962-12-15-the-tablet-brooklyn-ny-pg-13
  - 1962-12-15-the-tablet-brooklyn-ny-pg-13-clip-teenotebook
- 1964 Mar 26
  - https://www.newspapers.com/image/370572041/?terms=%22donald%2Bbarr%22
  - 1964-03-26-hartford-courant-pg-2
  - 1964-03-26-hartford-courant-pg-2-clip-donald-barr
- 1964 April 6
  - https://www.newspapers.com/image/143655380/?terms=%22donald%2Bbarr%22
  - 1964-04-06-asbury-park-press-nj-pg-13
  - 1964-04-06-asbury-park-press-nj-pg-13-clip-how-why-books

page 236

https://www.nsf.gov/pubs/1963/annualreports/ar_1963_appendix_d.pdf

COLUMBIA UNIVERSITY, New York, N.Y. : Donald Barr ; 7 months ; $45,000

1961 - NSF

https://www.scribd.com/document/1001629/National-Science-Foundation-ar-1961

COOPERATIVE COLLEGE-SCHOOL SCIENCE

PROGRAM

COLUMEIA UNIV~~DBCIITP, New York, N.Y.;

Donald Barr: 18 months: $76.460

COBNIULL UN&BSITY, Ithaca. N.Y. ;

I FORGOT THAT DONALD BARR ALSO WENT TO ROCKEFELLER SPY SCHOOL HACKLEY AFTER DALTON ...

1965 (June 27)

Full page 1 of San Francisco Examiner "Book Week" section (June 27 1965) - [HN00KE][GDrive]

Alan Barth on Thurman Arnold

Wallace Markfield on Tom Wolfe

Benjamin DeMott on the new radicalism

BOOK WEEK

JUNE 27, 1965

San Francisco Examiner

1965-06-27-the-san-francisco-examiner-pg-bookweek-clip-barr

READ, DICK, READ

How can we best teach our children to heed—and understand—the printed page?

By Donald Barr

THIS IS READING. By Frank G. Jennings. Teachers College, Columbia University. 196 pp. $4.25.
READING WITHOUT DICK AND JANE. By Arthur S. Trace jr. Regnery. 185 pp. $4.50.
FOX IN SOCKS: A Tongue Twister for Super Children. By Dr. Seuss. Illustrated. Random House. 62 pp. $1.95.

In the first chapter of his first novel, written 42 years before he became Prime Minister, Disraeli lightly sketches a "backward" boy who had been taught to read "on the new system, by a pictorial alphabet, and who persisted to the last . . . in spelling A-P-E—monkey, merely because over the word there was a monster munching an apple."

"And quite right in the child . . . ," growls the character who speaks for Disraeli. "*Pictorial* alphabet!—pictorial fool's head!"

And here is a description of how most American children are introduced to reading in 1965; it comes from a new book, *This Is Reading*, written by a respected educational entrepreneur and journalist, Frank G. Jennings, and published by Teachers College of Columbia University: ". . . a simple picture and a whole word of two or three letters, both well known to the child, both well within his daily spoken vocabulary. Word and picture are handled and talked about. The teacher writes the word, usually printing in large block letters and games are played with them. This process goes on until the child acquires about seventy-five words in a so-called sight vocabulary."

Passing over Mr. Jennings' spinster commas and orphan pronouns for the moment, let us consider the operative words in this passage: "picture," "whole word," "daily," and "games." What do they really mean?

First: "picture." Between 1826 and 1965, printing technology has improved wonderfully, and the pictures in schoolbooks have grown brighter and better, more copious—and more dominant. Even so, Disraeli could already perceive what "the new system" was: instead of seeing the written word, then translating letters into sounds, identifying the spoken word, and lastly considering what the spoken word might mean, the child was now invited to look at the written word, then look at pictures of the meaning of the written word, and lastly guess what spoken word might have about the same meaning. Thus meaning became a means, not the end, of reading.

Second: "whole word." When we ask a child to associate a whole printed word with a whole spoken word, we ask *(Continued on page 19)*

[HN00KF][GDrive]

Read, Dick, read

(Continued from page 1)

him *not* to think about the parts of the printed word (the letters) and the parts of the spoken word (the phonemes). We ask him to learn *by rote*—by purblind nasty old 18th-century rote!—that A-P-E stands for a certain pair of sounds. "Never mind why—it just does!" we say in effect; and we give the poor little devil an eye-catching picture of a primate to remind him, so that he will not be forced, as a mnemonic device, to puzzle out the connection between the letters and the sounds. Under this system, many children may never acquire the habit of responsible attention to the printed page—or to anything else.

Third: "daily." If we put off teaching the simple rules for translating letters into sounds, we can only make a child memorize the written equivalent of a rather small number of whole spoken words. What words are these to be? Why, clearly they should be useful, socially *central* words, daily words. So we begin the practice of "vocabulary control"—the deliberate restricting of the verbal experiences of a child for several years. We create a new kind of writing, a whole new rhetoric for children—not stories, not poems, not histories, not articles on science, but a series of demonstrative shrieks: "Look, Dick! See Jane run!' Look, Jane, look! See Spot! Run, Spot, run!" And we create a whole mythological America inhabited by scrubbed, friendly, *depersonalized* people and dogs. The unique emotional shallowness of this mythology may actually be a worse threat to some children's security than the bloody bumptiousness and malicious pathos of Grimm and Andersen.

Fourth: "games." If we are going to substitute memorizing for figuring out, and if we are going to control a child's reading vocabulary so that he cannot have access *on his own* to anything interesting in the way of stories, we are going to change the tone of the learning experience. Children are avid for mastery, for the sense of powerful insights. The "new system" withholds or defers the full joy of competence; instead of being thrilling in itself, learning to read has to be disguised and sweetened up with synthetic gaiety. As a result, some children may not make a good transition from habits of play—play is activity contained in the present—to habits of work—work is activity which reaches toward the future.

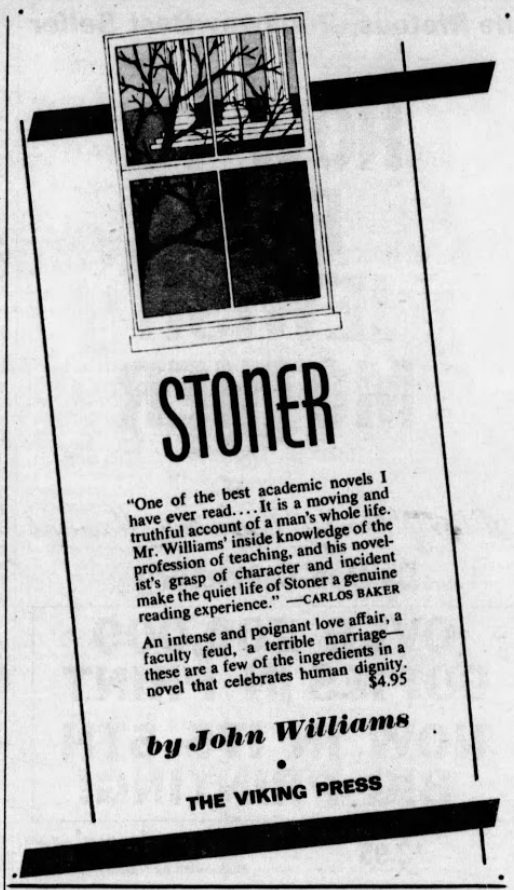
A hostile but carefully researched exposition of "the new system" and its consequences has now been written by Dr. Arthur S. Trace jr., whose previous book on education, *What Ivan Knows That Johnny Doesn't*, compared American curricula unfavorably with Russian and provoked in the school world a marvelous display of patriotism.

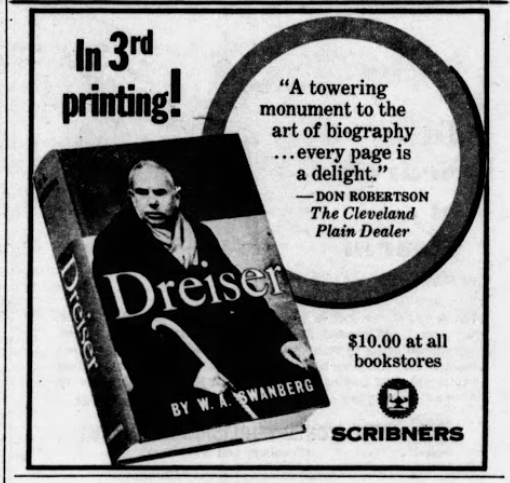
It is instructive to compare Professor Trace's *Reading Without Dick and Jane* with Mr. Jennings' *This is Reading:* the angry scholar arraying his damning quotations and statistics and saying precisely what he thinks with grim humor; the journalist cascading information and misinformation, panegyric and insult, with an airy disdain for syntax. In the Jennings book one comes across sentences like this: "Count Rutherford made electric sparks jump little gaps, as had Franklin long before him, but then the Italian, Tesla, made a veritable Jovian bolt, and his compatriot, Marconi, used to hurl words across the Atlantic." Does Mr. Jennings mean Rutherford, who was not a count and whose work was primarily with atomic structure, or Rumford, who was a count and whose great work was with the mechanical equivalent of heat, or perhaps Ruhmkorff? Tesla was Croatian, not Italian. Somehow blunders like this destroy whatever confidence one might have in Mr. Jennings as an expositor of the subtle and mooted notions of educational psychology; and of course one wonders, too, how his editors at Teachers College ever passed such errors.

Professor Trace's title and most of his anger come, of course, from the most famous of the "basal reader" series, a sequence of non-stories about two non-children named Dick and Jane. All literate people share Professor Trace's revulsion; even Mr. Jennings admits that such books "occasionally assault the child's intelligence with a story and idea content that would bore a five-year-old." (How that particular adverb got there one cannot even speculate.) A few serious and gifted writers have tried to do something better for American children. Some of them have submitted to the prevailing rubrics of vocabulary-control and rote repetition, doubtless convincing themselves that such constraints are really a fecundating challenge to the artist, like the rules of a Petrarchan sonnet. Others build theoretical commitments into stories and poems—they try to illustrate cutely the rules that associate sounds with letters, so that a child can puzzle out a little phonics for himself.

One of the most productive of this latter group is Dr. Seuss, who started several decades ago with the enchanting *And to Think That I Saw It on Mulberry Street*, a plain and wonderful child's tale, and has grown more and more didactic and less and less enchanting ever since. His new effort, *Fox in Socks*, lacks all charm. It is mere calisthenics. The phonic guile shows: "Slow Joe Crow sews/Knox in box now." It raises an important question: When we have an effective intellectual implement to give a child, why set up elaborate situations so that the child "finds" the implement, "discovers" that it *is* an implement, and "explores" its effects? If you have a door-key a child needs, why hand it to him buried in a boxful of hairpins, clips and coins? Why not say, "Here is a key"? Our schools are full of this counterfeit induction, part of the current mystique of discovery. There is a trickiness about it that at best is smarmy and at worst may contaminate a child's best pride with doubt.

Very young children are, of course, capable of genuine induction. Merely becoming aware of language is a brilliant achievement in abstract thought. Consider: there are two media through which we pass bits of intelligence to one another, Time and Space. Speech, like music, is organized in Time. One word follows another, and the word uttered is instantly gone—irretrievable except by an act of remembering. And yet the new infant, squirming in the bassinet without a concept in his head, perceives patterns in the welter of recurring noises, makes comparisons of sounds which have already sped into the silence of the past, and discovers the very existence of meaning. Pictures are organized in Space. All the parts of a notion are presented together; there is no set order in which they are seen, and therefore no true logic; but they do stay there to be scrutinized over and over, compared and contracted, thought about. Of all the expressions of intelligence, writing is uniquely organized in *both* Space and Time: we write and read in sequence and therefore with possible logic; but all the elements stay within the reach of scrutiny and thought; we can pause and we can skip, we can go back and forth repeatedly. This fact—that we take something which happens in time and record it faithfully in space, so that it exists in orderly permanence—is the whole secret of reading. The rules of translation are simple; they could be simpler if languages like English had no past or a poor disposable past; but they are simple enough. With these rules explicitly known—with competence and its healthy glory—the teaching of reading begins.





DAN WAKEFIELD, a forceful young social critic and journalist, author of "Island in the City" and "Revolt in the South", frequently comments on the contemporary scene for *BOOK WEEK*

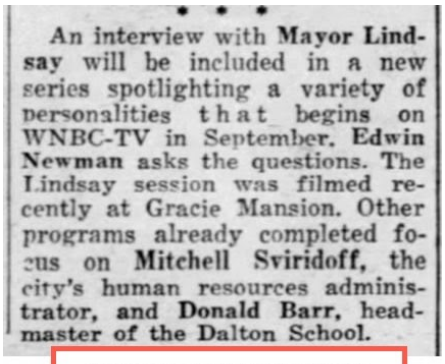
[HN00KG][GDrive]

1967 (April) - Article : "The Tale of the Headmaster" (in The Saturday Review)

Read it here : [HP001N][GDrive]

1967 (Aug)

Full page : [HN00KC][GDrive]



An interview with **Mayor Lindsay** will be included in a new series spotlighting a variety of personalities that begins on WNBC-TV in September. **Edwin Newman** asks the questions. The Lindsay session was filmed recently at Gracie Mansion. Other programs already completed focus on **Mitchell Sviridoff**, the city's human resources administrator, and **Donald Barr**, headmaster of the Dalton School.

1967-08-03-daily-news-new-york-pg-61-clip-barr-tv

[HN00KD][GDrive]

1967 (Dec 7)

Full page : [HN00KA][GDrive]

School board called 'bungling, near-sighted' in scathing attack

Dr. Donald Barr of the U. S. ffice of Education has called igonier Valley School Board's efusal to send one of its science teachers to Brazil a whacking blow, not only to ie professional pride and sta- is of a teacher, but also to in- rnational relations with outh America!"

"Poor administration" and a "bung- g, near-sighted, small-town school strict" are among his other accusa- ons in a letter sent this week from arich, Switzerland to Dr. Mary Kin- y, secretary of the school board.

The letter was sent post-haste to e school board (with a copy to the cho) after Dr. Barr, formerly with e National Science Foundation, arned of the board's November de- sion to reject a leave of absence to rs. Maria L. Clark, science instruc- r at Ligonier Senior High, to train atin American science teachers in e new science courses developed in e U.S.

The board decided, upon the recom- endation of Superintendent John cCoy and Principal John McCutch- n, that it was not feasible to send rs. Clark during January because the unavailability of a suitable sub- tute and because of cost — Mrs. ark would receive her normal sal- y plus paying a substitute.

The National Science Foundation d asked the board further to pick one-third of Mrs. Clark's travel pense. This, however, was not re- red, only requested.

Mrs. Clark was one of five teach- in the county selected by Foundation to participate in the minar.

N HIS LETTER, Dr. Barr stated: t the American School in Zurich where I have just arrived, I found in a large stack of mail, which had accumulated since my departure from the U.S. in October, a letter from Mrs. Maria L. Clark (and also the Brazilian Embassy) that brings most unfortunate news.

"Mrs. Clark informs me that the Ligonier Valley School Board will not grant her a one-month leave of absence to train Latin American Science teachers in the new science course developed in the U.S. A whacking blow, I must say, not only to the professional pride and status of a teacher, but also to international relations with South America!

"LET ME BEGIN at the beginning: Following the Punta del Este Conference last summer, Sr. de Souza, Brazilian representative in the Department of Scientific Affairs of the O.A.S., had taken steps to improve his country's secondary science program as well as college and university courses.

"The O.A.S., Pan American Union and the U.S. Department of State put their heads together and asked the National Science Foundation to select top U.S. secondary teachers to be the instruments in this Latin American training program.

"After extensive investigation and screening, Mrs. Clark was selected with four other awardees. After the committee's interview with Mrs. Clark, we were sure she was the BEST the United States could offer for placement in Brazil.

"The applicants were judged on the basis of their competence in teaching, their ability in the English language and their personal qualifications. Mrs. Clark has an international reputation, not only as a writer, but also an educator. With listings in 'Who's Who, Contemporary Authors,' American Assn. of Physics Teachers and American Assn. for the Advancement of Science, Mrs. Clark remains as unpretentious as before she reached this hierarchy.

"In addition, Mrs. Clark is beautiful, brilliant and obedient to all disciplines.

"NOW LET ME interject some side thoughts about Ligonier, a town of international reputation — PGA tournament . . . Rolling Rock Races . . . year-round resort . . . a colony of cosmopolitan people. It is now evident that the public school system does nothing to contribute to Ligonier's fine reputation.

"Here would have been an opportunity to say to the world, 'Ligonier has a great educational system' (I have just checked records and find that Ligonier is not accredited by the Middle Atlantic States).

"Now let me tell you what NSF has done for your teachers. Since 1964, NSF has paid over $5,000 to Ligonier teachers for training to put better science programs in the Ligonier schools. Our aid to the state of Pennsylvania is over $1 million. Yet the Ligonier School Board will not invest $500 in one of their staff.

"'What kind of a school board will budget $300 to send Mrs. Clark to a Physics conference each January for four days, but will not provide $500 to allow her to further an international educational program for one month! (The salary does not go to Mrs. Clark — it is the salary for a substitute teacher. Mrs. Clark has an accumulated sick leave equal to twice that length of time. The one-third transportation is not necessary as stated in the Echo's news article).

NO SUBSTITUTE? Bah! Ligonier Valley, Latrobe and Greensburg have a rich concentration of scientific personnel that could be borrowed from industry (at no expense to the board).

"Or the board feels that one needs a number of credits in the use of a projector and the history of education for maximum classroom performance. Poor administration, I'd say.

"I have disclosed some facts and a few opinions here and have sent similar correspondence to the state and federal departments of education to inform them of the bungling and near-sightedness of a small town school district."

WHEN ASKED by the Echo about securing a substitute for Mrs. Clark, Superintendent McCoy said they could not find a suitable one in the Ligonier Valley and surrounding school districts and that he had asked Mrs. Clark to suggest possibilities from the University of Pittsburgh where she had some contacts. No other area colleges were contacted, said McCoy, because of the short time involved and the probable cost of that caliber instructor.

Mrs. Clark, who had no suggestions from Pitt, contended that finding a substitute was not her responsibility. And in a letter to the board president, dated Dec. 2, she said ". . . It is my opinion that the facets for obtaining a substitute have not been explored by the administration. Even Ligonier's science substitute, Mrs. Roland Tucker, was not called as a replacement for my January's absence. Industry and the science and education departments of local colleges and universities should have been called."

McCoy reported to the board Monday that Mrs. Tucker is not certificated as a science instructor and hence was not considered.

He told the Echo, further, that Mrs. Clark had been urged by both him and Mr. McCutcheon to come to both the November and December meetings of the school board to present her program in fuller detail, but Mrs. Clark failed to attend either meeting.

1967-12-07-the-ligonier-echo-pg-1-clip-barr

[HN00KB][GDrive]

1968 (Feb 22)

Full page : [HN00K8][GDrive]

Writer of scathing letter to school board reported fictitious

The writer of a scathing letter sent to the Ligonier Valley School Board is apparently fictitious, the Echo has learned from reliable sources. The letter appeared in full in the December 7 issue of the Echo.

The alleged writer, Dr. Donald T. Barr who claimed he was with the U. S. Office of education at the time of the writing, took the school board to task for refusing Mrs. Mary Lou Clark, former physics and chemistry teacher at Ligonier Senior High School, a month's leave of absence to teach science teachers in Brazil under provisions of a concocted National Science Foundation award.

The school board, at its January meeting, refused the request on the basis of cost (the board was asked to pay one-third of the transportation bill) and because no suitable substitute could be located on short notice.

The scathing letter from the alleged Dr. Barr dated November 29, 1967 and sent from Zurich, Switzerland, was one of three letters sent to school officials and Mrs. Clark on the leave of absence issue. The first two letters were sent respectively to John McCutcheon and Mrs. Clark, informing them of the teaching award which seemed to be coming from the National Science Foundation.

SPOKESMAN for both the U.S. Office of Education and the National Science Foundation told the Echo, however, that they have no Dr. Donald T. Barr on their staffs. The National Science Foundation, headquartered in Washington, D.C., said it did have a D.T. Barr hired as a consultant, but that he denied any knowledge of the three letters.

And, in a January 11 letter to John McCoy, superintendent of the Ligonier Valley Schools, Dr. Wilson, deputy director of NSF, said the whole event has been "misleading, giving bad publicity to both the school board and NSF."

He directed McCoy to inform McCutcheon, Dr. Mary Kinney, secretary of the school board to whom the third letter was sent; and the editor of the Ligonier Echo to whom a copy of the letter had been sent, of the alleged fictitious nature of the correspondence.

"All were apparent victims in the case," Dr. Wilson said.

Dr. Wilson explained further that the Foundation does not have such a teaching progam in Brazil and that Mrs. Clark had never been selected for the alleged award. The correspondence from the alleged Dr. Barr indicated that Mrs. Clark was one of five teachers in the entire United States selected to do the teaching in Brazil.

WHEN ASKED by the Echo if she had written the letters, Mrs. Clark, who resigned her teaching position on January 10, said that she did not, but refused to identify the actual writer.

The school board and administration have declined comment on the matter, saying that reasons for Mrs. Clark's resignation of January 10 "must come from her."

1968-02-22-the-ligonier-echo-pg-1-clip-barr

[HN00K9][GDrive]

1968 (March) - Lord harlech visits Dalton School, even chats with Headmaster Donald Barr

Full page : [HN00K6][GDrive]

It Happened Last Night

1968-03-06-the-scranton-tribune-pg-15-clip-last-night 2

—By EARL WILSON—

NEW YORK—The gossips who think Jackie Kennedy will marry Lord Harlech and become Lady Harlech have some new tidbits . . . Lord Harlech, who has children of school age, dropped in recently at the Dalton School, 108 E. 90th St., a few blocks from Mrs. Kennedy's 5th Ave. residence, and had a lengthy tete-a-tete with headmaster Donald Barr.

Some of the bright teenagers recognized Lord Harlech.

And they were especially curious because the headmaster cancelled a class that

"Lord Harlech was here," one of the Dalton School's lady officials told me. "But we have no application, he was just interested in visiting the school. We have a whole staff that shows visitors around. His visit was of no more importance than that."

"He just wanted to see the little old schoolhouse?" we asked.

"That's exactly what it was," the lady said.

[HN00K7][GDrive]

1971 (Nov 12)

[HN00K4][GDrive]

Solution for Schools' Woes: More Discipline

By RALPH NOVAK

NEW YORK — (NEA) — In an era when prophets of educational doom are flourishing, just about everybody has some kind of revolutionary suggestion for saving the schools.

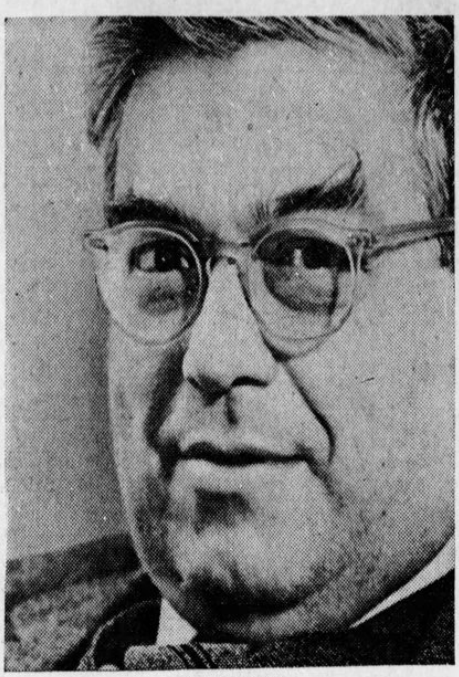
Donald Barr is one of them but he is also an exception. He is, politically and ideologically, a conservative and his solutions are conservative. One of his main tenets, in fact, is conservative enough to be radical these days: the need to restore old-fashioned discipline in schools.

"You have to set limits to what is permissible in school and those limits do not have to correspond with the Bill of Rights," says Barr, a former professor at Columbia University, former associate program director at the National Science Foundation and now headmaster of New York's highly regarded Dalton School, a bustling private school for youngsters 2 to 18. "A child must learn to follow the rules of the game in school or he will never be able to learn the rules of the next game he plays."

"Few of us like to think about discipline," he writes in "Who Pushed Humpty Dumpty?" (Atheneum), a new collection of his essays on education. "To the modern liberal mind, the word has an almost pornographic sound, but discipline is necessary to freedom.

Barr looks just the way benevolently despotic private school headmaster should look: big and bulky enough to be imposing, with eyes lively and friendly but capable of casting piercing looks, conversation witty and loose but uncompromising.

He agrees that today's schools are in a crisis, accusing them of "sedulously crushing the life out of marvelous little kids." But he places the blame on those "progressive educators" who have argued that the child can teach himself.



Donald Barr

"The trouble began when people began to think they could run schools on the basis of something other than the teacher's individual style and ability," he says. "Now teachers are flailing; they don't know what works any more. They're not the beasts some people make them out to be but they are demoralized and, too often, they're boring."

"The office of teacher deserves respect whether the teacher is good or bad, interesting or dull."

Barr does not romanticize the past, when teachers ruled their classes with a more or less iron hand. He just says the schools were better 30 years ago than they are now, in these days of what he calls "technological, sociological gizmos" and those who believe the child is supposed to bring himself up"

"The school is not an idyllic garden where the child can stay forever," he says. "It's a place where the potential adult in the child can emerge and the teacher has to be the symbol of what the child wants to become."

"The child who has never been controlled can never control himself. And there is no insecurity like being unable to control oneself."

Barr's theories on discipline run counter to the prevailing winds in education, which are blowing in the general direction of loosely structured schools (typified by the "open classroom" concept advocated by, among others, Charles Silberman, in his influential educational manifesto, "Crisis in the Classroom") but he argues that the public would support a return to tighter reins.

"The majority of people wants schools to be strict to teach respect for authority and promote good habits," he says. "Most people know that their children will have to face a world in which you have to show up on time for work and do what's assigned to you. People in the ghettoes know this better than anyone else. They are not only indifferent to educational experimentation; they're hostile to it."

Barr's idea of discipline, he says, "is not synonymous with fascism."

"The emphasis should be on growing freedom of choice, with the student having a bigger and bigger say in shaping his own education as he gets older," he contends. "Now we find people letting kids have self-destructive autonomy when they're younger and then trying to put their foot down when it's too late.

"Worse than being unable to succeed is being unable to fail. And the more parents show that they will pay their children's way no matter what, that they will approve of them no matter what, that they will deny them the right to fail, to suffer and to be ashamed—the more superfluous, the more angry and unreal these young people will feel."

Barr doesn't pretend that a return to stricter discipline would be any kind of elixir for America's troubled schools but he sees it as a step in the right direction.

"It can reinforce a child's conscience as regards work and personal moral character and help him cope gracefully with the demands of his own appetites and peer group pressures, which can be more despotic, masters than the worst teacher," he says. "Every once in a while you can stand between a kid and a situation into which he's being drawn by intolerable internal and external pressures and say 'no' and really help him. Then you've done something."

1971-11-12-hazelton-standard-speaker-pg-10-clip-school-solution

[HN00K5][GDrive]

1971 (Dec 01) - A Review of Barr's books

Full Page : [HN00K0][GDrive] / Article : [HN00K1][GDrive]

1971 (Dec 30)

Full Page : HN00K2][GDrive]

TALK WITH AN AUTHOR

'The Purpose of Discipline in Schools Is to Spur Discipline in Students'

By THOMAS HINE
Inquirer Education Writer

"All the king's horses and all the king's men couldn't put Humpty together again."

DONALD BARR, a shambling, slightly dishevelled admittedly portly but scarcely brittle or thin-shelled gentleman, has written a book entitled "Who Pushed Humpty Dumpty?: Dilemmas in American Education Today."

Sifting through the jagged remains of American education, the headmaster of New York's Dalton School finds two sets of villains — those who refuse to discipline children, and those who use statistics as a substitute for judgment, consecrating accountability at the expense of responsibility.

But who is finally responsible for Humpty Dumpty's great fall? Probably the king himself. All his horses and men can't do much about it.

"A school has to be a monarchical setup," Barr said during a recent visit to Philadelphia. "The administrator has to make personal responses. You can't process problems."

At Dalton, a first rate private school on New York's Upper East Side near Park Ave., a number of parents last year tried to depose Barr because of what they considered to be the illiberal nature of the school. But others, who admire his rigorous intellectual approach, defended him, and Barr continues to run his school with discipline and without standardized tests.

"Do you know why so many schools have gone in for things like the open classroom?" he asked, without waiting for an answer. "That way you don't know whether a school is botching. If my school is not teaching reading, I say 'That's not the enterprise, we're fearing down the walls.'

★ ★ ★

"You can work a kind of moral blackmail on rich parents, but you can't get away with it with the working class. The open classroom is appropriate for a heavily endowed child . . . if you want to produce a spoiled brat who will never do anything he doesn't want and will remain a spoiled brat until he dies."

—Donald Barr

★ ★ ★

"You can work that kind of moral blackmail on rich parents, but you can't get away with it with the working class. The open classroom is appropriate for a heavily endowed child. If you want to produce a spoiled brat who will never do anything he doesn't want and will remain a spoiled brat until he dies, surrounded by private nurses, that will do it."

Barr's belief in discipline and general conservatism is a reaction to a childhood spent in progressive schools and his youthful career as what he calls "an ultra-Marxist."

One important turning point came when he was in the Army during World War II and was sent to school to learn Italian. "I knew if I didn't make it, I'd be made a combat engineer in the South Pacific where if I didn't get shot, I'd catch malaria or drown. Boy, did I learn Italian."

In running the school, he tries to avoid mistakes that were made with him as a child.

"I was a very bright child, but I was lazy. I didn't want to be lazy. There was a little Donald who wanted to get to work, but the other little Donald got away with murder. Most children are bundles of contradictions.

"When we say we trust children, we throw them into the hands of that negative, refractory little Donald. You wouldn't put a bunch of kids on top of a cliff and trust them not to fall off. You put somebody there. But when you tell people they are being unfair to their children by letting them do as they please, they react with a horrible, smarmy piety, as if to say 'You rotten fascist.' "

Barr says the purpose of discipline is so that the student can develop self-discipline. "It's good when it helps work, bad when it substitutes for work. But a teacher can also substitute freedom for work. It's the same sleazy operation."

If there is one thing that incenses Barr more than the trend toward permissiveness, it is the push for accountability.

DONALD BARR

He abolished standardized tests at Dalton, and now he is appalled to see these tests emerge at the heart of a philosophy that threatens to take over the country's schools.

"Accountability implies you can measure performance. It means if you make predictions judge the human material that goes into a school. These are always self-fulfilling prophesies. There's something called the Rosenthal effect, which means if you make predictions at random, the students will turn out to behave as you predicted.

"The parent comes in and you say 'We're going to tell you that your kid is dumb so you can give up on him too.' There is no group test that gives a fair, culture-free rating of native ability. The whole result of accountability is a new Calvinism—a form of infant damnation."

Barr's aversion to standardized tests stems from the same sort of first-hand experience that shaped his feelings on progressive education. He was frequently asked to take such tests, when he was in school, to help set norms. As a result, he is an expert in taking them, and he does best in subjects he knows nothing about.

"The worst evil of such tests is that they are vulgarized. It is the thoughtful person who is penalized."

Like the other aspects of schooling at Dalton, escape from standardized tests can be enjoyed by only a privileged few. Parents of most of Barr's students are free to send their students to any sort of school they want.

"This is a luxury, but I believe that it should not be restricted to the rich. When parents can determine what kind of school they want their child to attend, there is instant accountability.

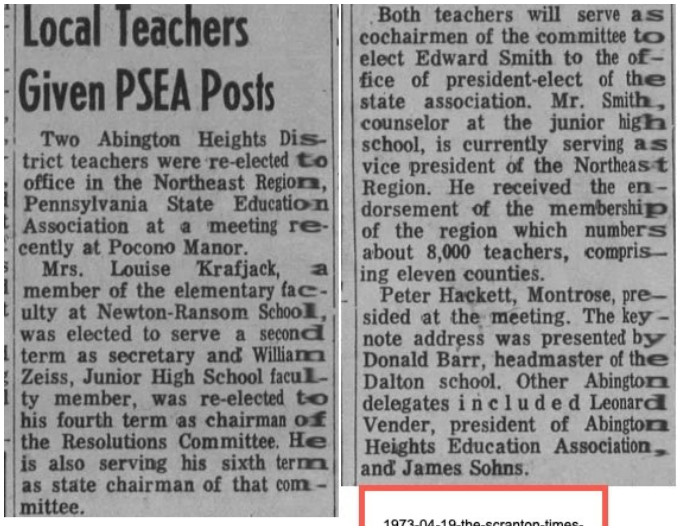
"There are drawbacks to a voucher plan (in which parents are given public money to pay for their children's education at a school of their choice) but I would rather risk them than to continue to play budget politics with people's lives. Nothing is quite as dreadful as the current game of shafting the other fellow's kid."

1971-12-30-the-philadelphia-inquirer-pg-23-clip-discipline

[HN00K3][GDrive]

1973 (April)

Full page : [HN00JY][GDrive]



Local Teachers Given PSEA Posts

Two Abington Heights District teachers were re-elected to office in the Northeast Region, Pennsylvania State Education Association at a meeting recently at Pocono Manor.

Mrs. Louise Krafjack, a member of the elementary faculty at Newton-Ransom School, was elected to serve a second term as secretary and William Zeiss, Junior High School faculty member, was re-elected to his fourth term as chairman of the Resolutions Committee. He is also serving his sixth term as state chairman of that committee.

Both teachers will serve as cochairmen of the committee to elect Edward Smith to the office of president-elect of the state association. Mr. Smith, counselor at the junior high school, is currently serving as vice president of the Northeast Region. He received the endorsement of the membership of the region which numbers about 8,000 teachers, comprising eleven counties.

Peter Hackett, Montrose, presided at the meeting. The keynote address was presented by Donald Barr, headmaster of the Dalton school. Other Abington delegates included Leonard Vender, president of Abington Heights Education Association, and James Sohns.

1973-04-19-the-scranton-times-pg-16-clip-local-teacher-posts

[HN00JZ][GDrive]

1974 - Video of Donald Barr (on PBS USA)

See [HV0015][GDrive]

[HV0016][GDrive]

1974 (Feb) - Barr Resigns from Dalton School (will remain until June 1974), Charging Trustees' Interference

See [HN00JX][GDrive]

Donald Barr, the controversial and outspoken headmaster of the Dalton School, one of the city's largest and most selective private schools, has resigned in protest of what he considers the trustee's interference with his leadership.

"Everyone knows that I am somewhat anachronistic in my views of the educational leadership of a school," Mr. Barr wrote in a letter yesterday to faculty members and parents. "I am not comfortable with the definition of board-head relations that I see becoming current in schools everywhere."

Mr. Barr's resignation, which the board says was not requested and not expected, comes after 10 frequently stormy years as head of Dalton, which is housed in an 11-story, brick building at 108 East 89th Street.

Question of Authority

The source of conflict between the strong-minded Mr. Barr and his 20-member board seemed to center on the question of where the board's authority should yield to the headmaster's judgment. There was apparently no one incident that prompted the resignation, but the confrontation was exacerbated by financial pressures that have forced the school to set priorities.

"The issue is the prerogatives of the board and the headmaster," said Richard Ravitch, a construction company executive who is president of the board. "My sense of trusteeship and my understanding of the requirements of the state law And the bylaws of the school all say to me that it is the obligation of the trustees of an institution to make all the policies."

Irony in the Resignation

Ironically, the present board of trustees includes many parents who rose to Mr. Barr's defense when a faction of the former board and some of the parents sought his ouster in 1971. He was accused then of turning a "humanistic, progressive" school into one in which "discipline and authoritarian rule" were the hallmarks.

The issues then had nothing to do with this issue now," Mr. Ravitch said. "All of us who are now officers of the board were supportive of him in that fight and supported his educational philosophy."

Mr. Barr ***said that he would remain until June 7*** *as headmaster of the coeducational school, which has grown rapidly under his leadership to an enrollment of 1,254 from prekindergarten through 12th*

The growing financial constraints that have come to bear on privately supported institutions are known to have heightened tensions between Mr. Barr and the board over the question of the extent to which cutbacks should be made among faculty and staff members.

Last month, Dalton dismissed several clerical and administrative employees and announced that more than a half dozen teaching positions would be eliminated next fall. Furthermore, an average increase of about $150 was announced in the tuition and fee schedule, which now ranges from $1,936 for pre-kinder-garteners to $3,126 for high school students.

"Certain things are essential and not to be touched, however you solve your problems," Mr. Barr said as he paced the floor of his cluttered office, his hands on his hips. "So far, I've patched together working solutions, but under economic stress I fear my differences with the board as to what's important are likely to show up more and more sharply."

An additional source of friction between Mr. Barr and the board seems to be the board's hiring of an outside committee to study the school and to assess its operation under Mr. Barr.

The first of the consultants, by coincidence, arrived yesterday and was in the headmaster's outer office as Mr. Barr was inside talking to reporter about his resignation.

Mr. Ravitch said yesterday that "everyone in the school was shocked and saddened" by the resignation and that it was possible that some board members might try to dissuade Mr. Barr from leaving.

1974 (July)

Full Page : [HN00JV][GDrive]

Oil City, Pa. Thursday, July 25, 1974 THE DERRICK —5

Drama Develops In Dalton Schools

By MELVIN MADDOCKS

The Christian Science Monitor News Service, Copyright 1974

"Few pessimists become educators, but many educators become pessimists."

This dejected little aphorism — conjuring up clouds of stale chalkdust and the splat of a thousand spitballs — stands proven by the gloomy books devoted to the subject: "The Conspiracy Against Childhood," "Death at an Early Age," "Educational Wastelands," "Quackery in the Public Schools," "What They Are Doing to Your Children."

How lurid the melodramas promised by these titles!

Oliver Twist, it would seem, was blessed that he never fell into the hands of American school principals: he only got Fagin.

Lovers of rhetoric know that the inveighing against umpires grows more impassioned as a game goes on, reaching a fine hot - dog - mustard - smeared climax in the last of the ninth. According to the same general law, the high - dudgeon moment against American schools occurs in June.

It comes as little surprise, for instance, that a new chapter has just been written in education's answer to the soap opera, the Great Dalton School Massacre. As the temperature rose and teachers, students, and parents slowly wobbled into end - of - term hysteria, the very controversial headmaster of this very expensive New York private school, Donald Barr, was done in again. Or was he? Two pieces of paper fluttered like battle flags over still - disputed territory. One was Mr. Barr's resignation; one was a petition by Dalton parents that he be reappointed.

A twinkly man who looks (and writes) a bit like H.L. Mencken, Barr figures as one of those heroes whose ups and downs can be read as indicators of fads - in - flux in American education. In a business where "progressive" is still the approved designation, Barr has described himself as a reactionary — "that is, a conservative who is not cute." He came to Dalton in 1964 when conservative educators were in demand, briefly, after Sputnik. But Barr is a man of stubborn principles, and when the Sixties went onto the counterculture, he stayed put.

In fact, like a good reactionary, he reacted. In a sprightly book called "Who Pushed Humpty Dumpty?" he endorsed a forbidden word — "discipline." He was for Latin and against the "new" math! And he got personal.

Frowning over the "jaded children" he found in Dalton classrooms (and elsewhere), he complained: "We tend to withhold reality from them by behaving as if there were no such notion as earning thing. "

To the Dalton parents who burbled of their eight - year - old, "He's not our son; he's our friend," Barr responded: "The trouble with many parents is that the fathers are mothers and the mothers are sisters. . . Be an adult and enjoy being an adult. Do not permit what you do not soberly approve."

Since Dalton was founded in 1919 as the model of a "progressive" school, these Barrisms, stressing "competence" instead of "self-fulfillment," have mixed strangely with the setting, rather as if Barry Goldwater were the head of a commune.

Dalton children, characteristically, are the children of liberals — the David Susskinds, the Eli Wallachs, the Jules Feiffers. One parent called Barr "the Captain Queeg of Dalton," and during 10 years as headmaster, the Captain has come close to walking the plank at least once before, in 1970.

Now, curiously, Barr seems less dated than he did in 1970, or even in 1964. Like the counterculture, which hoped to transfer their classroom theories into life, the "progressives" have faded. The new radicals, like Ivan Illich, who calls or nothing less absolute than "deschooling," presumably mean to disenfranchise all the "progressive" Daltons as well as all the Little Red Schoolhouses.

newfangled ideal of education as "ecstasy," which allowed the books cited above such luxury of disparagement in their titles.

Education, Riesman suggests, is hung up between a past not quite dead and a future not yet born. The perfect time for lots more ideology, lots more rhetoric — lots more best - selling books with titles like "Who Put Your Child in the Black Hole of Calcutta?" Well, maybe not. Maybe the truer need during this interregnum is for caretakers who really care — "a minority," in Riesman's words, "who possess deep institutional loyalty and whose caring and sense of responsibility are moderately contagious."

If the description fits Barr, perhaps he ought to be cherished, whether he is a "progressive," "conservative," or a "reactionary."

If the Dalton board or any other overwrought trustees, teachers, parents, or students require an outlet during their steamy season, let them buy tickets for the bleachers at Shea Stadium and yell their lungs out. From that distance all Mets umpires look like headmasters anyway.

1974-07-25-the-oil-city-derrick-pg-5-clip-dalton-school-drama

[HN00JW][GDrive]

1974 - Did Jeff Epstein meet Donald Barr at Dalton School ?

Did **Jeffrey Edward Epstein (born 1953)** meet Donald Barr at **Dalton School** ? The following is from [HN00KH][GDrive] :

- *"If Mr. Barr caught students using marijuana, he would often send them to therapy as a condition of staying in the school. He himself described his leadership style as "by ukase," using the Imperial Russian term for an edict from the czar."* Interesting ... Donald Barr used a "Russian" term!
- Jeff Epstein began teaching in September 1974, but Donald Barr was completed in June 1974.
- Jeff Epstein was only 21 years old when he started teaching, and did not have a degree.

See [HN00JX][GDrive] : In 1974 the Dalton School had an "enrollment of 1,254 from prekindergarten through 12th". As headmaster, it is probable that any new staff hires would have been met by Donald Barr, but it is possible Jeff Epstein did not interview with the school until summer 1974.

Mr. Epstein's time at Dalton was brief, and an administrator said it ended in a dismissal.

[....] The school, which had been a progressive haven for the children of artists and writers, was undergoing a shift under a new headmaster. Donald Barr, the father of Attorney General William Barr, came in as a disciplinarian focused on beefing up the academics of the school, and on enforcing a strict code of conduct.

In a school known for creativity, administrators had prohibited denim jeans and "bizarre and eccentric costumes." If Mr. Barr caught students using marijuana, he would often send them to therapy as a condition of staying in the school. He himself described his leadership style as "by ukase," using the Imperial Russian term for an edict from the czar.

[...] In February 1974, Mr. Barr had announced that he was resigning as headmaster, protesting the meddling by the board of trustees, but that he would stay on until the end of the school year. It is unclear whether Mr. Barr hired Mr. Epstein during that time.

Mr. Epstein, from Brooklyn, was just 21 when he joined the faculty at Dalton, arriving without a college degree. The school's student newspaper reported in September 1974 that he was starting that year as a math and physics teacher.

The next year [1975], he participated in a school musical for parents and faculty, and he appeared in later editions of the paper as the coach of the Dalton Tigers math team until the beginning of 1976.

The school had new leadership under Gardner Dunnan, who tentatively explored a rollback of some of its strict rules. Mr. Dunnan announced in early 1975 a policy that would allow denim inside the building, although students were still told to be neat and clean.

In the years since, however, Mr. Dunnan has faced allegations of his own inappropriate conduct. A former Dalton student said in a lawsuit that she had been invited to live with Mr. Dunnan at age 14, and had suffered repeated sexual assaults under his care. Mr. Dunnan denied the allegations. The lawsuit was dropped, but the woman's lawyer, Mariann Meier Wang, said she intended to refile it.

[...]

But Peter Branch, who was an interim headmaster after Mr. Barr and later the head of the high school, was not as fond of Mr. Epstein's teaching. He said that he did not recall anyone raising concerns to him about Mr. Epstein's conduct with students, but that he had heard concerns from the faculty about Mr. Epstein's teaching, and eventually determined that the teacher needed to go.

1974/1975 - Interesting insight on headmasters at Dalton School

See full page : [HN00KI][GDrive]

- **Dennis J. Phillips**, who was living in Glens Falls NY as of December 1974, was *"acting headmaster at the Dalton School in New York City [in 1974", before joining the law firm of "McPhillips, Fitzgerald & Meyer"*.
- Of note, the other person who joined the law firm at this time was **Joseph R. Brennan**, who was *"a member of the Federal Bureau of Investigation [, "FBI",] for three years and for three years he serve as an assistant United Stated attorney for the Northern District of New York."*

The Post-Star (Glens Falls, New York) · 31 Dec 1974, Tue · Page 10

Law Firm Changes Name

The Glens Falls law firm of McPhillips, Fitzgerald & Meyer has announced that Joseph R. Brennan has become a member and Dennis J. Phillips has become associated with the firm.

The firm also announced that effective Wednesday its name will change to McPhillips, Fitzgerald, Meyer & McLenithan.

Founded in 1911 by the late James McPhillips in association with the late C. E. Fitzgerald, the firm became McPhillips, Fitzgerald & McCarthy in May, 1931. The successor firm of McPhillips, Fitzgerald & Meyer was formed Jan. 1, 1961.

Brennan is a graduate of Mineville High School, Clarkson College and Albany Law School. He was a member of the Federal Bureau of Investigation for three years and for three years he served as an assistant United States attorney for the Northern District of New York. He became associated with the firm of McPhillips, Fitzgerald & Meyer in February, 1974.

Brennan resides in the Town of Queensbury with his wife, Faye, and their three daughters.

Phillips is a graduate of Lowville Academy and St. Lawrence University. A graduate of Fordham Law School, he received the degree of master of law in taxation and corporations from New York University. Before joining the firm, he was acting headmaster at the Dalton School in New York City.

Phillips and his wife, Patricia, reside in Glens Falls.

JOSEPH R. BRENNAN

DENNIS J. PHILLIPS

[HN00KJ][GDrive]

Additional info on **Dennis J. Phillips** can be found in his August 1974 wedding announcement in the NY Times (implying social/wealth status) ([HN00KK] [GDrive]) :

*"**Patricia Smith** Wed To Dennis Phillips : [...] Mrs. Phillips, who attended the University of Hawaii and the University of California at Los Angeles, graduated from Washington State College. She sang for two years with the Los Angeles Civic Light Opera before coming to New York to study at the Neighborhood Playhouse and the Manhattan School of Music. For the last four years she has been a teacher of English and director of the middle school drama program at the **Dalton School** , where her husband was formerly **director of admissions and college placement**. The bridegroom is with the law firm of McPhillips, Fitzgerald & Meyer in Glens Falls. [...]"*

Summary: The "acting headmaster at Dalton School" after Donald Barr was Dennis J. Phillips, and he was also formerly director of admissions and college placement. The odds of Dennis J. Phillips meeting a young Jeff Epstein are quite high.

1974 - Insight on Jeff Epstein and Dalton (from 2019 Daily Beast article)

See [HP001M][GDrive]

"Jeffrey Epstein graduated from Lafayette High School in 1969 at age 16, having skipped two grades. He was "chubby with curly hair and a high, 'hee-hee' kind of laugh," according to Filthy Rich. In the fall of 1969, Epstein started at Cooper Union and studied there for two years until the spring semester of 1971. Many writers say he attended New York University (NYU) after Cooper Union, but they rarely give specific dates. I decided to verify exactly when Epstein went to college and where. It turned out that Epstein was enrolled at NYU between September of 1971 and June of 1974. Thus, most of Epstein's college study years were spent at NYU. I verified that he did not graduate from NYU with their registrar."

[...]

"After the summer of 1974, Epstein began working as a teacher of mathematics and physics at the Dalton School in the Upper East Side of Manhattan. It has been reported that he began there in 1973, but this is incorrect. I searched the 1973-74 Dalton yearbook and there is no mention of Jeffrey Epstein. I then searched Dalton's school newspaper and found in the September 1974 issue that "... Mr. Epstein, who will also teach physics, [has] also joined the department this year." Epstein also confirmed that he taught there between 1974 and 1976 in a deposition."

[...]

"In 1974, Dalton was run by headmaster Donald Barr [...]. Writers have noted the interesting coincidence. However, Donald Barr resigned in turmoil in February of 1974 (according to the March 14, 1974 issue of The Daltonian) which was seven months before Jeffrey Epstein began teaching there that fall. While it is possible that Donald Barr may have hired Epstein, if he made personnel decisions long in advance, the Dalton School lost four math teachers (according to The Daltonian) prior to the 1974-75 school year. Therefore the school may have hired Epstein, in part, out of an urgent need to fill vacant positions—even though Epstein did not have a college degree."

[...]

Peter Branch was the acting headmaster after Barr's departure and he may have hired Epstein. Full verification would require access to Dalton's personnel records, if they still retain them. I put a Freedom of Information Law (FOIL) request into the State of New York Department of Education and they reported having no teaching license on file for Epstein—this may suggest that he was not planning on a career in teaching. Unlike public schools, it should be noted, a private school like Dalton does not require its teachers to possess a state teaching license or certificate.

***Update:** After publication, a reporter from the Miami Herald kindly provided me with Branch's phone number. When he spoke with me, he noted that he was upper school director before being appointed interim headmaster at Dalton. His appointment began on July 1, 1974 and Barr's contract at Dalton expired on June 30th. Branch does not recall hiring Epstein and he is relatively certain Barr or possibly the head of the Math Department hired Epstein because hiring decisions were typically made in the spring. He also noted that Barr liked to hire unconventional teachers to enhance the educational experience for students at Dalton.*

While at the Dalton School, Epstein was the coach of the math team. In competitions with several local schools, Epstein led the students to victory in one instance and to second place in another. At a February 1976 math meet, the Dalton team competed against Ramaz and the Manhattan Talmudic Academy with "Boss Epstein watching from the sidelines..." (The Daltonian March 5, 1976). At another match up in April 1976, Epstein told his team "a victory would be as easy as Pi." The paper reported Epstein would be starting a "math-track team" the following year due to his "unique philosophy of integrating physical exercise with spiritual and mathematical stimulation." The Dalton School students and families are comprised of some of the wealthiest families in the United States—unlike Epstein's own. But this access may have created an opening for him.

1975 (Feb 26)

Full Page : [HN00JT][GDrive]

[HN00JU][GDrive]

Educational accountability is subject of Barr's talk

MONTPELIER — Donald Barr, former headmaster of the prestigious Dalton School in New York, will speak at Vermont College on March 1 at 9:30 a.m. under sponsorship of the Vermont Academy of Arts and Sciences. The subject of Barr's talk will be "Accountability in Education."

Barr is an articulate and witty spokesman for the conservative educators whose theories on education are contrary to the prevailing educational permissiveness. Trained in both sciences and literature, he was an assistant director of the National Science Foundation in Washington and from 1964 until the spring of 1974 was headmaster of the Dalton School.

DONALD BARR

Barr was born in New York, son of an economist and a psychologist, educated conservatively at Horace Mann and progressively at Lincoln School of Teachers College. He was in the Class of 1941 at Columbia University, where he studied mathematics and anthropology. He served with the U.S. Army as an Italian interpreter in a POW camp and as a member of an OSS "target team" in Germany.

In 1945 he joined the English department at Columbia and remained there for 10 years, taking an M.A. in English. In 1956 he moved to the school of engineering, where he became assistant dean and started and directed the science honors program (a pioneer series of Saturday classes at the university for gifted high school students) and the talent preservation project (a massive research and therapy program for high school underachievers carried out jointly with the New York City Board of Education).

In 1963 he took leave from Columbia to join the National Science Foundation in Washington as associate program director, returning to New York in 1964 to become headmaster of the Dalton School, where he remained for 10 years. His term there was not without controversy; parents and alumni were virgorously split on Barr's approach to education as he built into the generally permissive Dalton system a strength in academics and discipline which some applauded but which others felt were contrary to the school's flexible, pioneering educational plan, which for half a century had been widely copied both in the United States and abroad.

Recently Barr has returned to literature, this time as a novelist. "Space Relations," a work of science fiction, was published in 1973, and another will be appearing soon. He is also the author of "Who Pushed Humpty Dumpty?" He wrote a children's book on mathematics called "Arithmetic for Billy Goats," and has written other children's books on atomic energy, building and primitive man.

1975-02-26-bennington-banner-pg-6-clip-barr

1983 (March 9) - Donald Barr joins President Reagan's National Council on Education Research

Donald Barr is still Headmaster of **Hackley School**, Tarrytown NY) at this time; he remains there until 1986.

Full page of article : [HN00JR][GDrive]

[HL0025][GDrive]

Council members replaced

Policy for the National Institute for Education, the research arm of the US Department of Education and now headed by Dr. Manuel Justiz, is set by a National Council on Educational Research, established in 1971 under President Richard Nixon.

Last May President Reagan distressed a number of academics when he abruptly ousted all of the council members, though many had not completed their appointed terms. Among those dropped was Council chairman Harold Howe, a former official of the Ford Foundation and former US Commissioner of Education, now on the faculty at the Harvard Graduate School of Education.

In a letter to Reagan last June, Howe challenged the ousters as "contrary to law." He also wrote: "The program plans of NIE for the next several years have been developed by the director without adequate opportunity for review by the Council."

Howe was replaced by George Roche 3d, president of a small Michigan college that has consistently turned down federal aid as a matter of principle. Reagan designated the following Council members:

Chairman: **George C. Roche 3d,** 47, president Hillsdale College, Hillsdale, Mich.; former history professor, author, winner of Freedom Foundation Award, Valley Forge, Pa.; BS history, Regis College, Colo.; MA, PhD, University of Colorado.

Donald Barr, 61, headmaster of the Hackley School, Tarrytown, N.Y.; former assistant program director of the National Science Foundation; author of several books on education and a former Republican district leader in New York City. AB and AM, Columbia University.

Milton B. Carus, 56, president and chief executive officer, Carus Corp. of Chicago; president and chief executive officer of Open Court Publishing Co.; publisher of Cricket magazine and president of two small Midwest railroads. BS, California Institute of Technology; study at University of Freiburg, Germany and the Sorbonne.

Paul Copperman, 35, president, Institute of Reading Development, San Francisco; author and teacher. BA, University of California, Berkeley; MA, Lone Mountain College, San Francisco (now part of the University of San Francisco).

J. Floyd Hall, 57, superintendent of schools, Langdale, Ala.; former superintendent and assistant superintendent in public schools in Midwest and South; named outstanding school superintendent in South Carolina in 1980. BS, MS, EdD, Auburn University.

J. Harvey Harrison Jr., 55, manager, program management international systems, Washington region defense systems division, Sperry Univac; formerly consultant and staffer with US Navy in London, Washington; BS, Middle Tennesse State College; MS, American University.

Donna H. Hearne, 42, former teacher and owner of small business handling driver licenses for Missouri; member Missouri River Republican Township Organization and National Federation of Republican Women; specialist on the American Revolution; BA, Washington University.

Onalee McGraw, 43, consultant on education to the Heritrage Foundation; founding board member, Christendom College, Vienna, Va.; BA, Whittier College; PhD, Georgetown University. Freedom Foundation Award.

Penny Pullen, 35, state representative, Illinois; newspaper columnist and reporter; BA, University of Illinois. Freedom Foundation Award.

Carl W. Salser, 61, executive director and editor, Educational Research Associates and National Book Co., Portland, Ore.; former teacher and author; BS, MS, Oregon State.

Elaine Y. Schadler, 38, director, Alumni Assn., Intercollegiate Studies Institute, Bryn Mawr, Pa.; former consultant, US Departments of Education and Health and Human Services; ABD, University of Pennsylvania.

Wallie C. Simpson, 51, founder and director Lower East Side International Community School, New York City; BA, Bishop College, Texas.

– MURIEL COHEN

1983-03-09-the-boston-globe-pg-2-clip-ed-council

[HN00JS][GDrive]

1985 (Aug)

Full Page : [HN00JP][GDrive]

scramble tourney (selecting

He raised hackles, Hackley

By WILLIAM NEUGEBAUER

WHEN HE RESIGNED as headmaster of the prestigious Dalton School in Manhattan in 1974, protesting what he considered the trustees' interference with his leadership, Donald Barr, headmaster of the Hackley School in Tarrytown for the past 10 years, admitted he was "somewhat anachronistic" in his views on the educational leadership of a school.

That became quite obvious when the stocky, graying teacher, poet, essayist and sci-fi novelist was inundated by an avalanche of parental fury in 1971 and assailed for his "prim, Victorian attitude."

Verbal brickbats were tossed at Barr after he noted, sardonically, that adolescents acting out the sexual revolution were "robots in heat."

"I'm not anti-sex," Barr was later to explain. "I just think that adolescents have no idea how to handle their sexuality."

Barr's book, "Who Pushed Humpty Dumpty?", a collection of essays published in 1971, attacked parental permissiveness while advocating such academic rigors as keeping foreign languages in the secondary schools, especially classical Latin and Greek.

Since becoming headmaster of the Hackley School in 1975, Barr has remained true to form, continually espousing a more vigorous assertion of teacher authority and a stronger emphasis on traditional academics.

"Under Donald Barr's leadership," said Robert Akin 3d, president of the Hackley board of trustees, "Hackley has attained a level of academic excellence rivaling that of the best preparatory schools in the nation."

Indeed, Akin noted in a communique to the Hackley community, the current curriculum at the 786-pupil school, situated about 25 miles north of New York City, offers eight languages and 11 advanced placement courses. Moreover, this year, Hackley has six National Merit Finalists. The school was founded in 1899 as a liberal arts boarding school for boys.

His confreres say that Barr has imbued the private, coed school in Westchester with the kind of academic excellence and leadership he advocated in helping the tony Dalton School to double its enrollment in the 10 often-stormy years he served there.

Now, in June 1986, Barr will be bowing out of the headmaster's role at the 111-acre campus overlooking the Hudson River and the Tappan Zee Bridge.

"Facilities (at Hackley) have been continually upgraded while the school's financial condition has been strengthened," Akin observed in his missive, adding that Barr will be "active in matters relative to the implementation of our new strategic plan, specifically in the area of fund-raising."

A 63-year-old native New Yorker, Barr is a former Manhattan Republican district leader who lived for many years on W. 116th St. and Riverside Drive, not far from Columbia University, where he earned bachelor's and master's degrees and served as an assistant dean of engineering and applied sciences.

During World War II, he taught higher math to anti-aircraft gunnery students at an Army camp in Hulen, Tex., and in 1945 joined the Office of Strategic Service (OSS) in Germany, aiding in de-Nazifying companies and industry. He also investigated German industrialists and SS men who had fled to South America.

After a stint with the National Science Foundation in Washington, Barr joined the Dalton School as headmaster in 1974.

Barr, who lives on campus with his wife, Mary, will be succeeded as headmaster by Peter Gibbon, a prolific education writer who has served as director of the Upper School at the Hackley School for the past six years.

Commenting on the transition, Akin said: "Hopefully, Don and Mary Barr will continue to be active in Hackley affairs for many years to come."

Daily News, Sunday, August 4, 1985

1985-08-04-daily-news-new-york-pg-w-10-clip-hackles

[HN00JQ][GDrive]

2004 (August) - Passing

See [HN00JO][GDrive]

Donald Barr, an educator, writer and former headmaster of the Dalton School in Manhattan and the Hackley School in Tarrytown, N.Y., died on Thursday at a hospital in Langhorne, Pa.

He was 82 and lived in Colebrook, Conn.

The cause was heart failure, his family said.

Mr. Barr, a traditionalist in academic matters, took a no-nonsense approach that rated good conduct as a virtue. He expressed his views on education not only at the schools he headed but also in national forums.

Before moving into private preparatory education, ***he established a science honors program at Columbia University that served as a model for similar programs elsewhere administered by the National Science Foundation****.*

He became head of Dalton in 1964. His sometimes stormy tenure ended in 1974 with his departure after disputes with the trustees over budget priorities and his disciplinarian approach to substance abuse.

The next year, he became headmaster at Hackley, where he soon dismissed more than two dozen students for disruptive conduct and poor academic performance. This time, he had parents and trustees in his corner. He also upgraded the curriculum, adding foreign languages and bolstering academic subjects and the arts.

Donald Barr, who was born in Manhattan on Aug. 2, 1921, majored in mathematics and anthropology at Columbia, graduating in 1941. He went into the Army and served with the Office of Strategic Services in Washington and Europe.

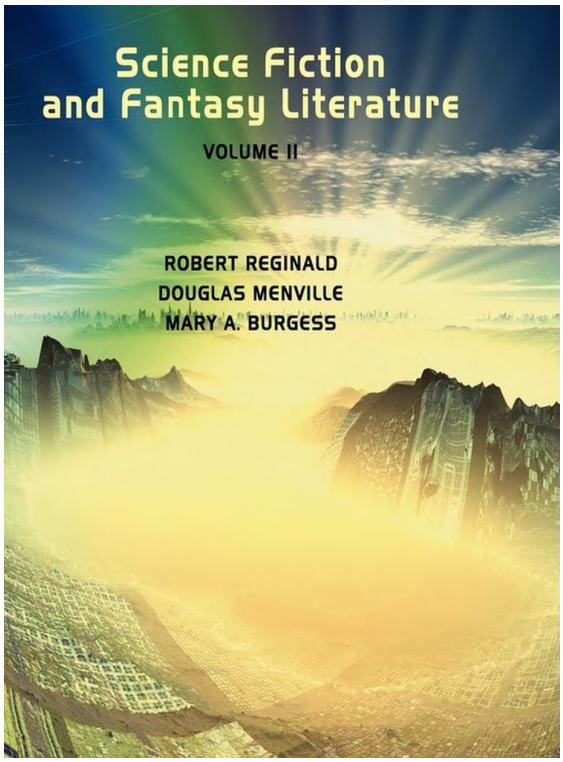
Returning to Columbia, he taught in the English department while getting his master's degree in 1951 ***and completing course requirements for a Ph.D****. But by then he was teaching courses with field work in sociology and political science at the School of Engineering and writing science and mathematics texts for elementary and junior high school students.*

In 1955 the engineering school asked him to oversee its efforts to spot promising elementary and secondary science students, including girls, and enlist them for advanced training at the school to help them rise to the college level. Joining the engineering dean's office, he then developed the Science Honors Program, which got the attention and support of the National Science Foundation.

Mr. Barr became assistant dean of the Faculty of Engineering and Applied Science in 1959, and the foundation eventually asked him to administer its entire Cooperative College-School Program. He did so beginning in 1963, continuing until he became headmaster at Dalton the following year.

Mr. Barr's wife, Mary Margaret Ahern Barr, a college teacher, died in 2001. He is survived by four sons, Christopher J. of Yardley, Pa.; William P. of McLean, Va., a former United States attorney general; Hilary B. T. of Heiningen, Germany; and Stephen M. of Newark, Del.; and eight grandchildren.

Additional Reference Sources



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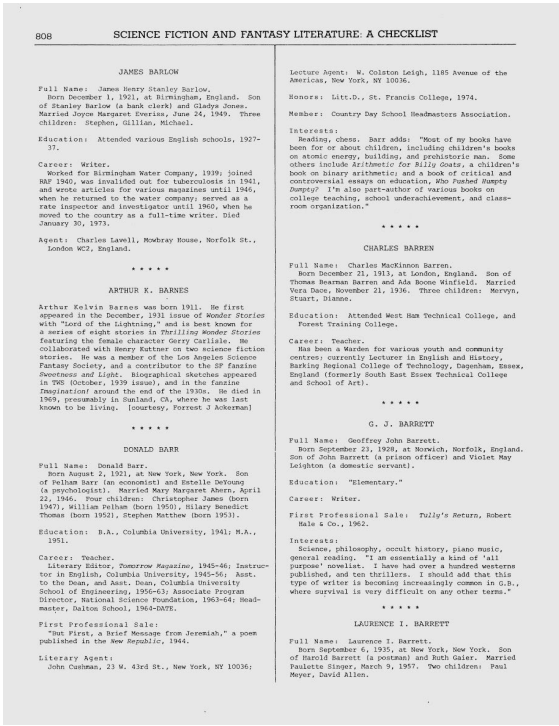


808 SCIENCE FICTION AND FANTASY LITERATURE: A CHECKLIST

JAMES BARLOW

Full Name: James Henry Stanley Barlow. Born December 1, 1921, at Birmingham, England. Son of Stanley Barlow (a bank clerk) and Gladys Jones. Married Joyce Margaret Everiss, June 24, 1949. Three children: Stephen, Gillian, Michael.

Education: Attended various English schools, 1927-37.

Career: Writer. Worked for Birmingham Water Company, 1939; joined RAF 1940, was invalided out for tuberculosis in 1941, and wrote articles for various magazines until 1946, when he returned to the water company; served as a rate inspector and investigator until 1960, when he moved to the country as a full-time writer. Died January 30, 1973.

Agent: Charles Lavell, Mowbray House, Norfolk St., London WC2, England.

* * * * *

ARTHUR K. BARNES

Arthur Kelvin Barnes was born 1911. He first appeared in the December, 1931 issue of *Wonder Stories* with "Lord of the Lightning," and is best known for a series of eight stories in *Thrilling Wonder Stories* featuring the female character Gerry Carlisle. He collaborated with Henry Kuttner on two science fiction stories. He was a member of the Los Angeles Science Fantasy Society, and a contributor to the SF fanzine *Sweetness and Light*. Biographical sketches appeared in TWS (October, 1939 issue), and in the fanzine *Imagination!* around the end of the 1930s. He died in 1969, presumably in Sunland, CA, where he was last known to be living. [courtesy, Forrest J Ackerman]

* * * * *

DONALD BARR

Full Name: Donald Barr. Born August 2, 1921, at New York, New York. Son of Pelham Barr (an economist) and Estelle DeYoung (a psychologist). Married Mary Margaret Ahern, April 22, 1946. Four children: Christopher James (born 1947), William Pelham (born 1950), Hilary Benedict Thomas (born 1952), Stephen Matthew (born 1953).

Education: B.A., Columbia University, 1941; M.A., 1951.

Career: Teacher. Literary Editor, *Tomorrow Magazine*, 1945-46; Instructor in English, Columbia University, 1945-56; Asst. to the Dean, and Asst. Dean, Columbia University School of Engineering, 1956-63; Associate Program Director, National Science Foundation, 1963-64; Headmaster, Dalton School, 1964-DATE.

First Professional Sale: "Not First, a Brief Message from Jeremiah," a poem published in the *New Republic*, 1944.

Literary Agent: John Cushman, 23 W. 43rd St., New York, NY 10036; Lecture Agent: W. Colston Leigh, 1185 Avenue of the Americas, New York, NY 10036.

Honors: Litt.D., St. Francis College, 1974.

Member: Country Day School Headmasters Association.

Interests: Reading, chess. Barr adds: "Most of my books have been for or about children, including children's books on atomic energy, building, and prehistoric man. Some others include *Arithmetic for Billy Goats*, a children's book on binary arithmetic; and a book of critical and controversial essays on education, *Who Pushed Humpty Dumpty?* I'm also part-author of various books on college teaching, school underachievement, and classroom organization."

* * * * *

CHARLES BARREN

Full Name: Charles MacKinnon Barren. Born December 21, 1913, at London, England. Son of Thomas Bearman Barren and Ada Boone Winfield. Married Vera Dace, November 21, 1936. Three children: Mervyn, Stuart, Dianne.

Education: Attended West Ham Technical College, and Forest Training College.

Career: Teacher. Has been a Warden for various youth and community centres; currently Lecturer in English and History, Barking Regional College of Technology, Dagenham, Essex, England (formerly South East Essex Technical College and School of Art).

* * * * *

G. J. BARRETT

Full Name: Geoffrey John Barrett. Born September 23, 1928, at Norwich, Norfolk, England. Son of John Barrett (a prison officer) and Violet May Leighton (a domestic servant).

Education: "Elementary."

Career: Writer.

First Professional Sale: *Tully's Return*, Robert Hale & Co., 1962.

Interests: Science, philosophy, occult history, piano music, general reading. "I am essentially a kind of 'all purpose' novelist. I have had over a hundred westerns published, and ten thrillers. I should add that this type of writer is becoming increasingly common in G.B., where survival is very difficult on any other terms."

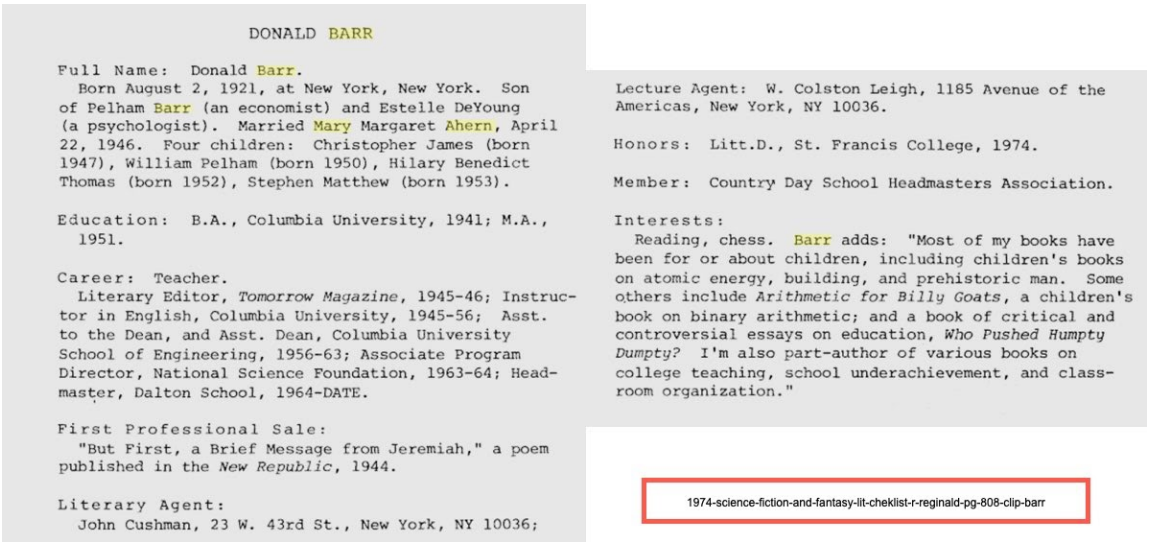
* * * * *

LAURENCE I. BARRETT

Full Name: Laurence I. Barrett. Born September 6, 1935, at New York, New York. Son of Harold Barrett (a postman) and Ruth Galer. Married Paulette Singer, March 9, 1957. Two children: Paul Meyer, David Allen.

[HB000Y][GDrive]

Source : Science Fiction and Fantasy Literature, A Checklist, 1700-1974, Volume Two of Two, contains Contemporary Science Fiction Authors II.



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Literary Editor, *Tomorrow Magazine*, 1945-46; Instructor in English, Columbia University, 1945-56; Asst. to the Dean, and Asst. Dean, Columbia University School of Engineering, 1956-63; Associate Program Director, National Science Foundation, 1963-64; Headmaster, Dalton School, 1964-DATE.

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"But First, a Brief Message from Jeremiah," a poem published in the *New Republic*, 1944.

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Honors: Litt.D., St. Francis College, 1974.

Member: Country Day School Headmasters Association.

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1974-science-fiction-and-fantasy-lit-cheklist-r-reginald-pg-808-clip-barr

[HB000Z][GDrive]

BITCHUTE @Housatonic YOUTUBE @HousatonicLive ODYSEE @Housatonic BRIGHTEON @Housatonic

Housatonic

Sherman Barr (born 1925)

Birth Date: 11 Oct 1925 [HL003P][GDrive] (Born as "Sherman" Barr - [HT004Q][GDrive])

Last Residence: 10012, New York, New York, New York, USA [HL003P][GDrive]

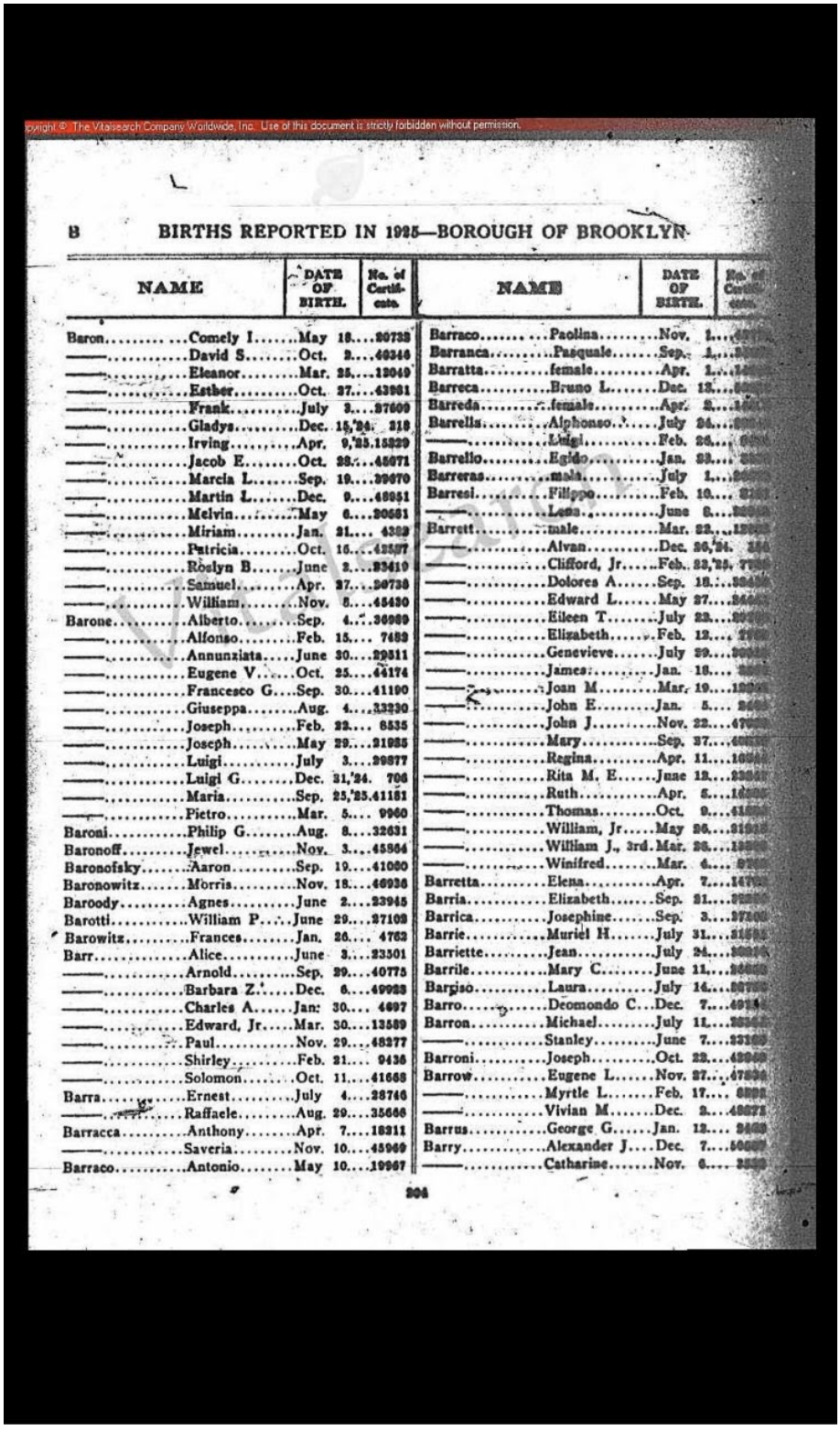
Death Date: Nov 1982 [HL003P][GDrive]

Married - Elinor Goldstein (1953) - [HL003Q][GDrive]

- Father of **David Barr** (info below) - who is discussed as working in September of 1995 with Dr Anthony Stephen Fauci (born 1940) here : [HN00R7] [GDrive]

1925 - "Sherman" Barr was actually born as "Solomon" Barr

Source Tweet (it was a DM) - [HT004P][GDrive]



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8 BIRTHS REPORTED IN 1925—BOROUGH OF BROOKLYN

NAME		DATE OF BIRTH.	No. of Certificate.
Baron	Comely I.	May	18...20732
——	David S.	Oct.	2...40346
——	Eleanor	Mar.	25...12049
——	Esther	Oct.	27...43961
——	Frank	July	3...37609
——	Gladys	Dec.	15,'24. 318
——	Irving	Apr.	9,'25.13329
——	Jacob E.	Oct.	28...45071
——	Marcia L.	Sep.	19...39070
——	Martin L.	Dec.	9...43951
——	Melvin	May	6...20661
——	Miriam	Jan.	21.... 4382
——	Patricia	Oct.	16...42527
——	Roslyn B.	June	2...23419
——	Samuel	Apr.	27...20736
——	William	Nov.	5...45430
Barone	Alberto	Sep.	4...30969
——	Alfonso	Feb.	15.... 7489
——	Annunziata	June	30...22511
——	Eugene V.	Oct.	25...44174
——	Francesco G.	Sep.	30...41190
——	Giuseppa	Aug.	4...33230
——	Joseph	Feb.	22.... 6535
——	Joseph	May	29...21935
——	Luigi	July	3...29877
——	Luigi G.	Dec.	31,'24. 706
——	Maria	Sep.	25,'25.41151
——	Pietro	Mar.	5.... 9960
Baroni	Philip G.	Aug.	8...32631
Baronoff	Jewel	Nov.	3...45964
Baronofsky	Aaron	Sep.	19...41080
Baronowitz	Morris	Nov.	18...46936
Baroody	Agnes	June	2...23945
Barotti	William P.	June	29...37109
Barowitz	Frances	Jan.	26.... 4762
Barr	Alice	June	3...23501
——	Arnold	Sep.	29...40775
——	Barbara Z.	Dec.	6...49983
——	Charles A.	Jan.	30.... 4697
——	Edward, Jr.	Mar.	30...13589
——	Paul	Nov.	29...45277
——	Shirley	Feb.	21.... 9436
——	Solomon	Oct.	11...41668
Barra	Ernest	July	4...28746
——	Raffaele	Aug.	29...35666
Barracca	Anthony	Apr.	7...18311
——	Saveria	Nov.	10...45969
Barraco	Antonio	May	10...19967
Barraco	Paolina	Nov.	1...
Barranca	Pasquale	Sep.	1...
Barratta	female	Apr.	1...
Barreca	Bruno L.	Dec.	13...
Barreda	female	Apr.	2...
Barrella	Alphonso	July	26...
——	Luigi	Feb.	28...
Barrello	Egido	Jan.	23...
Barreras	male	July	1...
Barresi	Filippo	Feb.	10...
——	Lena	June	6...
Barrett	male	Mar.	22...
——	Alvan	Dec.	26,'24.
——	Clifford, Jr.	Feb.	23,'25.
——	Dolores A.	Sep.	18...
——	Edward L.	May	27...
——	Eileen T.	July	23...
——	Elizabeth	Feb.	12...
——	Genevieve	July	29...
——	James	Jan.	18...
——	Joan M.	Mar.	19...
——	John E.	Jan.	5...
——	John J.	Nov.	22...
——	Mary	Sep.	27...
——	Regina	Apr.	11...
——	Rita M. E.	June	13...
——	Ruth	Apr.	8...
——	Thomas	Oct.	9...
——	William, Jr.	May	26...
——	William J., 3rd.	Mar.	28...
——	Winifred	Mar.	4...
Barretta	Elena	Apr.	7...
Barria	Elizabeth	Sep.	21...
Barrica	Josephine	Sep.	3...
Barrie	Muriel H.	July	31...
Barriette	Jean	July	24...
Barrile	Mary C.	June	11...
Bargiso	Laura	July	14...
Barro	Deomondo C.	Dec.	7...
Barron	Michael	July	11...
——	Stanley	June	7...
Barroni	Joseph	Oct.	22...
Barrow	Eugene L.	Nov.	27...
——	Myrtle L.	Feb.	17...
——	Vivian M.	Dec.	2...
Barrus	George G.	Jan.	12...
Barry	Alexander J.	Dec.	7...
——	Catharine	Nov.	6...

204

[HT004Q][GDrive]

1930 Census

Transcript - [HS002F][GDrive] USA Census sheet - [HS002E][GDrive]

Record Transcription:
Us Census 1930

Household Members

First name(s)	Last name	Relationship	Marital status	Sex	Age	Birth year	Birth place
Sam	Barr	Head	Married	Male	35	1895	Russia
Berth	Barr	Wife	Married	Female	31	1899	Russia
Betty	Barr	Daughter	Single	Female	10	1920	New York
Solomon	**Barr**	**Son**	**Single**	**Male**	**4**	**1926**	**New York**

[HS002G][GDrive]

1953 - Wedding

Record - See [HL003Q][GDrive]

Sherman Barr (Male) marries **Elinor Goldstein** (F), license number 12037, Manhattan, New York City, New York, USA

(1943) - WW2 Draft

Transcript (PDF) - [HG003I][GDrive]

Record Transcription:
World War Ii Army Enlistment Records

First name(s)	Sherman
Last name	Barr
Race	White
Birth year	1925
Birth state	New York
Marital status	Single, without dependents
Enlistment year	1943
Enlistment month	Dec
Enlistment day	18
Enlistment place	Ft Dix New Jersey
Enlistment term	Enlistment for the duration of the War or other emergency, plus six months, subject to the discretion of the President or otherwise according to law
Branch	No Branch Assignment
Grade	Private
Soldier Number	12226896
Education	First Year of College
Resident county	-
Resident state	New York
Country	United States
Source	Enlisted Reserve or Medical Administrative Corps (MAC) Officer
Record set	World War Ii Army Enlistment Records
Category	Military Service & Conflict
Subcategory	Second World War
Collections from	Americas, United States

[HG003J][GDrive]

1960 - 1965

1960 - https://newspaperarchive.com/bronxville-review-press-and-reporter-apr-14-1960-p-11/

1961 - https://newspaperarchive.com/scarsdale-inquirer-feb-16-1961-p-16/

1966 - Congressional Record: Proceedings and Debates of the ... Congress, Volume 112, Part 21

Full PDF - [HG003E][GDrive]

The Clerk read as follows:

Senate amendment No. 15, page 14, line 8, insert ", of which $192,500,000 shall be available for grants to States."

Mr. FOGARTY. Mr. Speaker, I offer a motion.

The Clerk read as follows:

Mr. FOGARTY moves that the House recede from its disagreement to the amendment of the Senate numbered 15 and concur therein with an amendment, as follows: In lieu of the sum named in said amendment insert: "$198,225,000".

The motion was agreed to.

The SPEAKER. The Clerk will report the next amendment in disagreement.

The Clerk read as follows:

Senate amendment No. 32, page 21, line 6, insert: ", and $100,000 to be available only for the National Conference on Education of the Deaf."

Mr. FOGARTY. Mr. Speaker, I offer a motion.

The Clerk read as follows:

Mr. FOGARTY moves that the House recede from its disagreement to the amendment of the Senate numbered 32 and concur therein with an amendment, as follows: In lieu of the matter inserted by said amendment insert the following: ", $100,000 to be available only for the National Conference on Education of the Deaf, and $150,000 to be available only for transfer to the appropriation 'Office of the Secretary, Salaries and Expenses' for a comprehensive study of training programs financed in whole or in part with Federal funds."

The motion was agreed to.

The SPEAKER. The Clerk will report the next amendment in disagreement.

The Clerk read as follows:

Senate amendment No. 45, page 36, line 7, after the figure, insert: ", of which $1,000,000 shall be available for the training of clinical anesthesiologists."

Mr. FOGARTY. Mr. Speaker, I offer a motion.

The Clerk read as follows:

Mr. FOGARTY moves that the House recede from its disagreement to the amendment of the Senate numbered 45 and concur therein.

The motion was agreed to.

The SPEAKER. The Clerk will report the next amendment in disagreement.

The Clerk read as follows:

Senate amendment No. 65, page 53, line 5, after "Welfare", insert ": *Provided*, That the position now designated as Comptroller, level V, shall hereafter be designated as Assistant Secretary, Comptroller, level V.

Mr. FOGARTY. Mr. Speaker, I offer a motion.

The Clerk read as follows:

Mr. FOGARTY moves that the House recede from its disagreement to the amendment of the Senate numbered 65 and concur therein.

The motion was agreed to.

The SPEAKER. The Clerk will report the next amendment in disagreement.

The Clerk read as follows:

Senate amendment No. 70, page 57, after line 2, insert:

"SEC. 207. None of the funds contained in this title shall be available for additional permanent Federal positions in the Washington area if the proportion of additional positions in the Washington area in relation to the total new positions is allowed to exceed the proportion existing at the close of fiscal year 1966."

Mr. FOGARTY. Mr. Speaker, I offer a motion.

The Clerk read as follows:

Mr. FOGARTY moves that the House recede from its disagreement to the amendment of the Senate numbered 70 and concur therein.

The motion was agreed to.

A motion to reconsider the votes by which action was taken on the conference report and on the several motions was laid on the table.

CORRODING THE MORAL FIBER OF THE UNITED STATES

Mr. ASHBROOK. Mr. Speaker, I ask unanimous consent to extend my remarks at this point in the RECORD and to include extraneous matter.

The SPEAKER. Is there objection to the request of the gentleman from Ohio?

There was no objection.

Mr. ASHBROOK. Mr. Speaker, the September 16, 1966, issue of U.S.A. by Alice Widener, who attended the Second Annual Conference of Socialist Scholars at the Hotel Commodore in New York City on the weekend of September 9–11, recounts for us the tenor of the conference and the nature of the proposals advanced by the various speakers. For example, Polish-born Isaac Deutscher, of London, advocated "complete freedom of sexual life that will abolish the family."

The youth of this Nation was advised to "turn on, tune in, drop out" through use of the hallucinogenic drug LSD and marihuana.

Another source of wisdom and counsel urged: "We must develop the moral-sexual rebellion of the youth."

As only the full text of the above-mentioned issue can do justice to the new and old left program for America, I request that the special report of U.S.A. entitled "In the West and West Ballrooms," by Alice Widener be inserted in the RECORD at this point.

[From the publication U.S.A., Sept. 16, 1966]

IN THE EAST AND WEST BALLROOMS

(A special report by Alice Widener on the second annual conference of Socialist Scholars)

"The temptation of our day is to accept the intolerable, for fear of still worse to come."
—"The Revolution of Nihilism," 1939, by Hermann Rauschning, former President of the Free State of Danzig.

"Only the clunks stay in the clink," said the Socialist Scholar, in the West Ballroom of the Hotel Commodore, New York City, Sunday, September 11, 1966. "Fortunately—as at Berkeley, for example—the parents of middle class and wealthy students in our movement bail them out."

REGISTRATION

While ordinary travelers from out of town were registering at the reception desk in the main lobby at the Hotel Commodore in New York City, Friday evening, September 9, 1966, more than two thousand members of the Old and New Left were registering at tables set up in ballroom floor hallways to attend the Second Annual Conference of Socialist Scholars.

The New Left movement in our country is generally described by misinformed or misleading members of the press as a spontaneous, amorphous grouping of rebellious youth. It is not. Any non-Socialist who attended the evening and daytime panel sessions of the Socialist Scholars during the week-end of September 9–11, would have been forced to recognize, as did I, that most members of the New Left are activists instigated, controlled and manipulated by disciplined members of the Communist Party working in a united front with Marxist ideologues.

Was it to foster illusion or misconception that the big press—the wire services, broadcasting networks, big circulation magazines and newspapers—stayed away from the conference? It is hard to find a satisfactory explanation of why they granted it privileged sanctuary in the East Ballroom and West Ballroom of the Hotel Commodore in the center of the city.

There were no TV cameras to film the arrival from London of white-bearded radical Marxist zealot Isaac Deutscher, invited by the Socialist Scholars to open their conference with a discourse "On Socialist Man." Nor were there any cameras turned on 54-year-old Victor Perlo, identified in Congressional hearings as a member of a Soviet espionage ring while he was in U.S. Government employ during World War II. No well known reporter was present to interview conference panelist Communist Herbert Aptheker, age 51, now running for Congress in Brooklyn, N.Y., who last year told the First Annual Conference of Socialist Scholars, "Of course, Watts was *glorious!*"

For some inexplicable reason it seems that nowadays our communications media personnel report graphically only on the effects of the Leftist radicals' activities—on the bloody race riots, street demonstrations, disrupting and costly acts of civil disobedience—but stay away from the gatherings where plans for such activities are hatched, though most meetings, as this one was, are publicly announced.

Last September, after *Barron's National Business and Financial Weekly* reprinted my article about the First Annual Conference of Socialist Scholars at Columbia University, the UPI wire service got in touch with *Barron's* to request quotation rights. The request was immediately granted. But not a single word about the Socialist conference went out over UPI or any other wire service, though no statement or quotation in my article ever was challenged for accuracy. Soon after *Barron's* carried my article, however, several of the leading Socialists figuring in it—such as Prof. Staughton Lynd of Yale—made national and international headlines for radical activities that aided our Communist enemies in Hanoi and were conducted in total defiance of the U.S. Government.

Unquestionably, even before the end of 1966, several of the registrants at the Second Annual Conference of Socialist Scholars will make headlines and TV camera appearances as friends of our enemies, enemies of our friends, and as subverters of our American way of life.

BOLSHEVIK NEW LEFTISM

There was not an empty chair in the 800-seat Windsor Ballroom at the Commodore when the Socialist Scholars and their radical Leftist audience gathered to hear Polish-born Isaac Deutscher of London. He was introduced by Prof. H. H. Wilson of Princeton University, who described Mr. Deutscher as "a contributor to *The Economist* and *The Observer*." This is a fact, though most Deutscher articles in those publications were unsigned.

When Deutscher went to the rostrum, the audience stood to honor him; they did so again after his address. Whether the huge

[HG003E][GDrive]

On Tuesday, September 13, the *New York Daily News* reported, "About 500 welfare recipients picketed the Department of Welfare building . . . and staged sit-downs and sit-ins yesterday. . . . As police called reinforcements, the demonstrators blocked one of the two entrances to the building and marched along the sidewalk."

Socialist Scholar Prof. Cloward of Columbia certainly was right about the success of his Wednesday night meetings. Evidently his strategy of "disruptive tactics" will require costly police reinforcements at city welfare departments throughout our nation.

The prospects delighted Prof. William Ryan, formerly of Harvard now of Yale, who described himself to the audience as "a radical without portfolio." He said, "I have been enchanted with the Cloward strategy of blowing a fuse in the welfare agencies, housing developments, and among unmarried mothers. I wonder what would happen if there was a really systematic overload."

Sherman Barr, of Mobilization for Youth, said that through the techniques used in his organization for welfare, "further demand is stimulated rather than decreased." Mr. Barr called for "indoctrination in group methodology" and said that on the lower East Side, for a group of 350, they had been able to get $85,000 for "an extremely expensive operation requiring money for phones, mimeographing, etc."

When a member of the audience went to the floor microphone during the question period to ask whether Dr. Cloward's strategy is a substitute for "Socialist organization of the proletariat, the industrial factory workers," Dr. Frances Piven of Columbia replied from the dais: "I really only want to make one point—the disruption of the system. Welfare rolls will begin to go up; welfare payments will begin to go up—the impact will be very, very sharp. The mounting welfare budget will increase taxes, force cities to turn to the federal government. We have to help people to make claims; for this they will organize and act."

What the entire strategy amounts to is a diabolical Socialist plan to increase the number of welfare clients through systematic overloading, to instigate "the poor" to make bankrupting demands, and thus wreck the existing financial structure of our society. There was no talk at all at the conference of improving the present welfare system, of decreasing the number of welfare recipients, or the number of unmarried mothers. All the emphasis was on "disruption" for the purpose of forcing chaos and conditions making our society ripe for the radical overthrow of existing institutions and a Socialist take-over. Much of this was made perfectly clear in Prof. Cloward's plan to disrupt private enterprise and "release the flow of rewards to the poor" by increased taxation on corporations that will "disrupt corporate power" and end "by disrupting production."

The big press coverage of the welfare recipients' demonstration at City Hall was at the wrong time in the wrong place. NBC and CBS cameras should have been focused on Prof. Richard A. Cloward as he read his scholarly Socialist paper in the ballroom at the Commodore. The TV newscasters would have gotten a beat on news about to burst into print. And if the U.S. Attorney General had been present at the Second Annual Conference of Socialist Scholars, he might have obtained most useful information about who are the real agitators in our midst.

1966-usa-congressional-record-proceedings-and-debates-of-the-congress-vol-112-part-21-pg-28579-sherman-barr

[HG003G][GDrive]

LIST OF OFFICIAL PARTICIPANTS IN THE SECOND ANNUAL CONFERENCE OF SOCIALIST SCHOLARS

Robert S. Cohen, Boston University; Shane Mage, Polytechnic Institute of Brooklyn; Donald McKelvey, Student Union for Peace Action; Robert Paul Wolff, Columbia University; H. H. Wilson, Princeton University; Irving Markovitz, Queens College; Franz Schurmann, University of California, Berkeley; James Petras, University of California, Berkeley; Gordon Lewis, University of Puerto Rico; Robert Wolfe, New York University; Robert S. Browne, Fairleigh Dickinson University; Victor Perlo, New York; Allen Solganick, University of Maryland; Alexander Erlich, Columbia University;

Harry Braverman, New York; Lynn Turgeon, Hofstra University; Lee Baxandall; Norman Rudich, Wesleyan University; Harvey Blume, Columbia University; Gaylord Leroy, Temple University; Vernon K. Dibble, Columbia University; Richard A. Cloward and Frances Piven, Columbia University; Sherman Barr, Mobilization for Youth; James Haughton, Harlem Unemployment Center; Oscar Lewis, University of Illinois; William Ryan, Yale University; Judith Mage, Social Service Employees Union;

Karl Niebyl, Temple University; Russ Nixon, New York University; James O'Connor, San Jose State College; John Owen, Johns Hopkins University; Paul M. Sweezy, Monthly Review; Conor Cruise O'Brien, Albert Schweitzer Professor of Humanities, New York University; Warren I. Susman, Rutgers University; Ronald Radosh, Queensborough Community College; Martin J. Sklar, Rochester University; Philip S. Foner, New York; Gabriel Kolko, University of Pennsylvania; James Weinstein, Studies on the Left; Robert Engler, Sarah Lawrence College; John M. Cammett, Rutgers University; Leslie; Derfler, Carnegie Institute of Technology;

Robert G. Colodny, University of Pittsburgh; Helmut Gruber, Polytechnic Institute of Brooklyn; Manuela Dobos-Schleicher, Columbia University; Eugene D. Genovese, Rutgers University; Harry Magdoff, New York; James P. Becker, New York University; Brijen Gupta, Brooklyn College; Michael A. Lebowitz, Simon Fraser University; Herbert Aptheker, American Institute for Marxist Studies; Frank Kofsky, University of Pittsburgh; C. Vann Woodward, Yale University; Nathan Hare, Howard University.

1966-usa-congressional-record-proceedings-and-debates-of-the-congress-vol-112-part-21-pg-28580-sherman-barr

[HG003H][GDrive]

1966 - Socialist Scholars Conference

https://keywiki.org/Sherman_Barr

https://keywiki.org/Socialist_Scholars_Conference#tab=1966

1967 (Nov 26) - "mobilization for youth"

Full page : [HN00R9][GDrive]

MRS. OLIVER COPE
. . . M.C.S.W. president

DR. LEONARD DUHL
. . . speaker

DR. BAUMGARTNER
. . . Harvard Medical School

SHERMAN BARR
. . . Mobilization for Youth

Social Workers Eye The Great Society

"The Great Society: Alive or Dead?" is the question scheduled for discussion this week by more than 2200 social workers at the 64th annual Fall meeting of the Massachusetts Conference on Social Welfare.

Topics will include public and private financing of social welfare, protection of clients' rights, drug abuse, day care and Headstart, school personnel and the problem child, unmarried mothers, and the neglected middle class.

More than 100 speakers from government, industry, universities, the medical profession, and social agencies will address sessions at the Statler Hilton Hotel for three days, starting Nov. 29.

Program highlights include discussion of the "Impact of Our Society on the Poor," by Edward Sparer, director of New York City's Center on Social Welfare Policy and Law, and an address Thursday night by David R. Hunter, executive director, Stern Family Fund of New York.

A session on multiservice centers will feature Sherman Barr of Mobilization for Youth, New York; Hubert E. Jones, director, Roxbury Multiservice Center; and Joseph Vilimas Jr., Kennedy Family Service Center, Charlestown.

Dr. Leona Baumgartner, professor of Social Medicine, Harvard Medical School, will discuss health and welfare services to the aging at a session Friday.

"The Social Welfare Component in the Model Cities Program" will be presented Friday by Dr. Leonard Duhl, special assistant to the Under Secretary of Housing and Urban Development, Washington, D. C.

1967-11-26-the-boston-globe-pg-56-clip-mobilization

[HN00RA][GDrive]

Nov. 26, 1982 - Dr. Sherman Barr, 57, Chief; Of Social Welfare at N.Y.U.

NY Times article = [HN00RB][GDrive]

Dr. Sherman Barr, associate professor of social work at New York University and chairman of the social-welfare programs and policies curriculum at the university's School of Social Work, died last Friday at St. Vincent's Hospital. He was 57 years old and lived in Manhattan.

Dr. Barr had been a faculty member for 14 years and previously had been director of the Neighborhood Service Center program of Mobilization for Youth, an organization that combats juvenile delinquency. He was born in New York City, graduated from Brooklyn College and received a master's degree and a doctorate from the Columbia University School of Social Work.

He recently had received the 1982 Great Teacher Award of the N.Y.U. Alumni Federation. He is survived by his wife, Elinor; two sons, David and Daniel, and a daughter, Rachel, all of New York City.

1983 (April 15) - PUBLISHERS AND N.Y.U. SETTLE SUIT ON COLLEGES' PHOTOCOPYING RIGHTS

See [HN00RC][GDrive]

'Nine major publishers announced yesterday that they had dropped their case against New York University and eight of its professors who they said had violated Federal copyright laws by improperly photocopying material for classroom use.

In exchange, the university agreed to certain guidelines governing the duplication of copyright works and to monitor compliance by the faculty.

Lawyers for the publishers, which included Random House, Simon & Schuster and Houghton Mifflin, said the settlement with the country's largest private university could set a precedent and help curb what they said were widespread violations of Federal copyright laws. They threatened further legal action should such practices continue at N.Y.U. or elsewhere.

Association Financed Suit

"The publishers are hopeful the principles reached in this agreement will be taken to heart by other colleges and universities, and by faculties and administrators alike," said Jon A. Baumgarten, who represented the Association of American Publishers, which financed the suit. "If our hopes are unfounded, we will take appropriate action."

'We're not out to hang faculty members from a lamppost and cut out all photocopying," he said. "The assumption is not that photocopying should be stopped but that the rights of copyright owners should be respected."

The guidelines restrict teachers who want to use multiple copies of copyright materials in the classroom, and are based on the length of the excerpts copied. They do not apply to individual students making occasional copies for their own use.

Similar provisions have already been adopted voluntarily by Yale and Johns Hopkins Universities. The suit, which was filed last December in Federal District Court in Manhattan, accused the defendants of "engaging in the unauthorized and unlawful reproduction, anthologizing, distribution and sale of the publisher's copyrighted work."

Andrew Schaffer, N.Y.U.'s general counsel, acknowledged that the university would have to compensate various publishers for duplicated materials in the future. But he denied that the agreement would necessarily lead to higher costs for students or that it would curb the traditional discretion of professors to design their courses.

"This agreement does not in any way, shape or form restrict faculty members' choices of curriculum materials," he said. "What will change is that, in many instances where photocopying was previously done, the prior permission of the publisher will be required.

'We're hopeful that this will enable faculty members to understand in a much more specific and practical way what is permitted and not permitted under the copyright laws." Standards for 'Fair Use'

The guidelines agreed to by N.Y.U. were originally negotiated by authors, educators and publishers, and were contained in the report accompanying the 1976 Copyright Act. Together, they define minimal standards for the "fair use" of copyright material.

Under these guidelines, for instance, teachers can, subject to some limitations, make multiple copies of complete poems of fewer than 250 words, as well as of complete articles, stories or essays of fewer than 2,500 words, without permission. They are also free to copy excerpts - of 1,000 words or 10 percent of the total text, which ever is less - of longer works.

Where a professor determines that photocopying is explicitly barred by the guidelines, the agreement continues, permission must be sought from the publisher. The professor seeking such authorization must specify the exact material to be used, the number of copies to be made and the use planned for the duplicated materials.

In some circumstances, according to a policy statement contained in the settlement agreement, the fair-use doctrine could permit photocopying beyond that allowed under the guidelines. When a faculty member believes he has been unreasonably denied permission to duplicate materials, he must seek authorization from the university's general counsel. Only those following such procedures will be defended by the university in any subsequent suits. 'Full and Prompt Inquiry'

The agreement obliges N.Y.U. to "act diligently and in good faith to foster compliance" with the new policy, as well as to make "full and prompt inquiry" into possible violations and to take "appropriate action" where wrongdoing is discovered.

The university also pledged to distribute copies of the new policy to its faculty and to post notices at all university copying facilities.

The other publishers in the lawsuit were Addison Wesley, Alfred A. Knopf, Basic Books, Little Brown, Macmillan and the National Association of Social Workers. The N.Y.U. professors named as defendants were Martin Hamburger, Phyllis Mervis, Thelma B. Chesney, Terri Schultz, Robert Sklar, J. Rosen, Stuart Johnson, Robert Sharp and William G. Simon. **A ninth professor named in the original suit, Sherman Barr, died recently.**

The publishers' case against the Unique Copy Center, situated near the N.Y.U. campus, was unaffected by the settlement.

Wife - Elinor (Goldstein) Barr

1930 US Census

https://www.findmypast.com/transcript?id=USC%2F1930%2F004952115%2F00727%2F005

1991

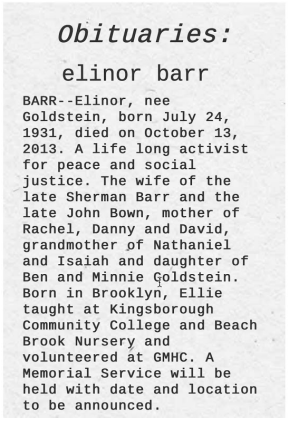
https://www.newspapers.com/image/?clipping_id=48339366&fcfToken=eyJhbGciOiJIUzI1NiIsInR5cCI6IkpXVCJ9.eyJmcmVlLXZpZXctaWQiOjQ2NjkyMDY0OSwiaWF0IjoxNTg2NDY2MTAyLCJleHAiOjE1ODY1NTI1MDJ9.LF2WZU-M-eBfUoS8X3It9yOJlpLBXe7UfoNIo41NwVw

https://www.newspapers.com/clip/48339366/ellie-barr/

2013 (October 13)

https://newspaperarchive.com/elinor-barr-obituary-3329691/

ELINOR BARR Obituary



Obituaries:

elinor barr

BARR--Elinor, nee Goldstein, born July 24, 1931, died on October 13, 2013. A life long activist for peace and social justice. The wife of the late Sherman Barr and the late John Bown, mother of Rachel, Danny and David, grandmother of Nathaniel and Isaiah and daughter of Ben and Minnie Goldstein. Born in Brooklyn, Ellie taught at Kingsborough Community College and Beach Brook Nursery and volunteered at GMHC. A Memorial Service will be held with date and location to be announced.

Obituary Details:

Name: Elinor Barr

Age at Death: ---

Birth Date: ---

Birth Place: ---

Death Date: October 13, 2013

Death Place: ---

Publication or Record Date: October 18, 2013

Publication or Record Place: New York

URL: www.legacy.com

People Listed:

Oct 8 2013

BARR--Elinor, nee Goldstein, born July 24, 1931, died on October 13, 2013. A life long activist for peace and social justice. The wife of the late Sherman Barr and the late John Bown, mother of Rachel, Danny and David, grandmother of Nathaniel and Isaiah and daughter of Ben and Minnie Goldstein. Born in Brooklyn, Ellie taught at Kingsborough Community College and Beach Brook Nursery and volunteered at GMHC. A Memorial Service will be held with date and location to be announced.

Published in The New York Times on Oct. 18, 2013

https://www.legacy.com/obituaries/nytimes/obituary.aspx?n=elinor-barr&pid=167586172

Son - David Barr

2007 Interview - ActUpOralHistory.org

See [HW002G][GDrive] -

SARAH SCHULMAN: Okay, so we just start by your saying your name, your age, today's date, and where we are.

DAVID BARR: I'm David Barr; I'm 51. It's May 15, 2007. And we're in my apartment in New York.

SS: On Second Avenue –

DB: On Second Avenue and 12th Street.

SS: Where you've been since 1979.

DB: Where I've lived since 1979.

SS: A true New Yorker. And full disclosure; your father and my mother worked together at Jewish Board.

DB: Oh –

SS: **Sherman Barr, yes**.

DB: Yeah. It was a long, long time ago, then.

SS: Yes. So you're a real New Yorker, New Yorker, New Yorker?

DB: I'm a third-generation native.

SS: Native New Yorker. What neighborhood did you grow up in?

DB: In Brooklyn; in Sheepshead Bay, Brighton Beach.

SS: And did you go to Brighton, which high school did you –

DB: I went to John Dewey High School, an experiment in public education.

SS: And did it work for you?

DB: Oh yeah. Yeah. I was –

SS: So you grew up in one of those Jewish socially oriented families.

DB: Very much so, yeah.

SS: And do you think that you were trained to be a community activist by your family?

DB: Yes.

SS: How did they do it?

DB: They took me on demonstrations from when I was a young kid. I went on, I remember going to — and it's a really long answer, but –

SS: Go for it.

DB: – I was taken on demonstrations to integrate housing in Brooklyn; to ban-the-bomb demonstrations in the early '60s. I was a part of, my parents helped to organize a volunteer reversed busing program in Brooklyn in the '60s, where all these sort of white, middle class kids from Brooklyn were bused to a predominantly black and Latino elementary school in Fort Greene, which was a very different neighborhood than it is now. So I was involved in that, and it was a very high profile program, so there was a lot of press involved, and like I remember all that. And then a lot of antiwar, anti–Vietnam War activity in junior high and high school.

SS: How left were your parents?

DB: My mother was thrown out of Erasmus High School for distributing socialist literature. And my father was a member of the Welfare Rights Movement and started Mobilization for Youth on the Lower East Side.

SS: So were they ever Party members, or –

DB: No, they were never, no, so I'm a pink diaper –

SS: Okay. So like solid liberal background.

DB: Nn-, by liberal, liberal would be a sneer to liberal. It would be definitely be more left than that.

SS: Like socialists –

DB: Yeah.

SS: Yeah. But your mother never belonged to a party, or –

DB: No.

SS: No.

DB: She belonged, I guess before, as a teenager, she was a member of the Socialist Party, or the Young Socialist Group.

SS: Oh, the Trotskyites, or something like that?

DB: I don't, now you're getting into –

SS: Now I don't know.

DB: – yeah.

SS: Okay. But anyway, it's been in the family for a long time.

DB: Yeah, yeah.

SS: And do you remember them explaining to you why it was important to show up for social change, or –

DB: Um – yeah. It's sort of most of what we talked about, I guess. It was like that was the discussion in the house. That and food. And just, stopping the kids

DB: Uh – yeah. It's sort of most of what we talked about, I guess. It was like that was the discussion in the house. That and food. And just, stopping the kids from fighting with each other. I went to a radical, leftist summer camp. It was a real –

SS: What was that called?

DB: It was called Camp Thoreau. And it was, it was in New Paltz, outside of New Paltz, and it was – the Rosenberg kids were there; the Robeson kids were there. It was an interesting place to be in the '60s, in terms of the kids that were there, the counselors that were, what the counselors were doing when they weren't at camp and stuff like that.

SS: So what were the first movements that you participated in?

DB: I started a group called Children's Strike for Peace, in junior high school

SS: Wow.

DB: In like seventh grade.

SS: And what did you guys do?

DB: Nothing. We went, we went to, I don't know; what did we do? We, we – I guess we participated in demonstrations, you know. Because I, I remember going to most of the major Vietnam War demonstrations, and volunteering at the – the office was on 17th Street, off of 5th Avenue, and it was like the Mobilization to End the War; I guess that was the name of it. And I would go and volunteer there, and – yeah.

SS: So what do you think your vision was for what your life was going to be like, when you were coming out of high school, at that time?

DB: I got really interested in theater. I got interested in avant garde environmental group theater, because of, there was some program at the high school that I got involved in, where we did this very sort of experimental, communal theater piece.

And I was taken to see the Performance Group in what was going to become SoHo. And saw their piece called Commune. And it really changed my life. I really said, oh, this is what I want to do. And so I got involved in doing that kind of work. And went to theater

school at NYU when I got out of high school; moved into the city.

SS: Oh, I never knew that. So who did you study with, or who did you work with?

DB: Well, first I studied with Stella Adler in this program there, and I really hated the program. She was a – very entertaining, but a pain in the ass. But then I got involved with the Performance Group, and I left school to go work with them for a while. And the guy who started, there was a guy in The Performance Group named Steve Borst who started a gay and lesbian theater group – and this was 1972, 1973; three, maybe. So it was probably the first gay and lesbian theater group, ever. And I was 18, and I left college so I could be a part of that. And we created a piece called Slime Mourning. Which was, oddly, about death and sort of how gay and lesbian people relate to rituals of death in society, which was kind of odd, that we, that was our focus, given what was to come. And Ron Vawter was a member of the group, because he was the business manager of the Performance Group, and good friends with Steve, and that was sort of how he started acting

David Barr notes -

David Barr Is currently working with the Joep Lange Institute. Joep Lange was a Dutch clinical researcher specialising in HIV therapy. He was a passenger on Malaysia Airlines Flight 17, which was shot down on 17 July 2014 over Ukraine. He was a Youth for Understanding foreign exchange student from 1971 to 1972 at Robinson High School in Tampa, Florida. Hey Mark were did Zippy Zimmermann go to highschool again?

The 2013 Oscar-nominated documentary How to Survive a Plague features Barr and sheds light on the early days of the AIDS crisis, as well as the activism that helped push the FDA to fast-track approval of HIV drugs that would help curb an epidemic

https://publicsquare.law.cuny.edu/pages/right-wrongs/stories---david-barr

The Fremont Center, LLC David Barr's Consulting clients have included the Ford Foundation, New York City Department of Health, New York State AIDS Institute, Open Society Institute, and UNDP. YIKES!

Joep Lange was a Dutch clinical researcher specialising in HIV therapy. Lange and his partner Jacqueline van Tongeren were passengers on Malaysia Airlines Flight 17, which was shot down near Hrabove, Ukraine, on 17 July 2014. What I did not mention is Joep was en route to Melbourne to attend the 20th International AIDS Conference, starting on 20 July.

Housatonic

Paul S. Barr (born 1927)

Parents -

- David S Barr (born 1894)
- Elinor Sachs Barr (born 1894)

Paul barr

https://www.ancestry.ca/sharing/18265149?h=af4639

Dr. Paul Barr MD

https://www.sharecare.com/doctor/dr-paul-s-barr

https://twitter.com/agentrevolt/status/1198149257716473856?s=20

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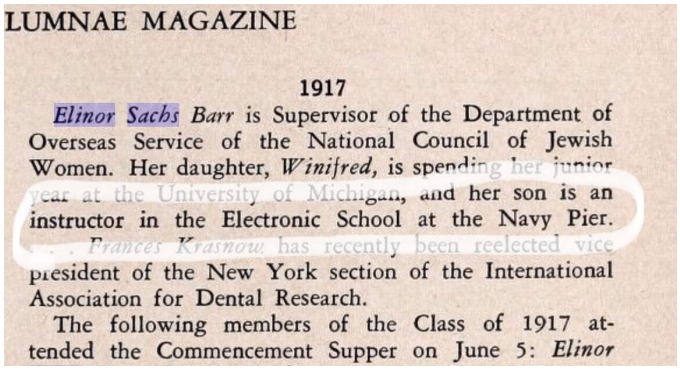
And just when I thought I could go to sleep, I find this:



LUMNAE MAGAZINE

1917

Elinor Sachs Barr is Supervisor of the Department of Overseas Service of the National Council of Jewish Women. Her daughter, *Winifred,* is spending her junior year at the University of Michigan, and her son is an instructor in the Electronic School at the Navy Pier. . . . *Frances Krasnow* has recently been reelected vice president of the New York section of the International Association for Dental Research.

The following members of the Class of 1917 attended the Commencement Supper on June 5: *Elinor*

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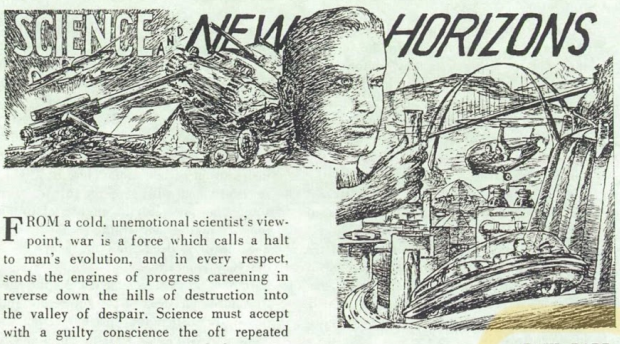

PAUL BARR

FROM a cold, unemotional scientist's viewpoint, war is a force which calls a halt to man's evolution, and in every respect, sends the engines of progress careening in reverse down the hills of destruction into the valley of despair. Science must accept with a guilty conscience the oft repeated charge that its inventions and discoveries have become engines of destruction in the hands of certain maniacs. Science's only possible alibi is that it has worked in a social vacuum and has thrown its genius on to the marketplace for sale to the highest bidder. The present war is the most condemning indictment of science on the charge that it has either been ignorant of, or indifferent, to the social implications of scientific discovery.

If one were to attempt a justification of war, he might possibly conceive of this: that war demands basic changes, especially scientific ones, which are often for the good of mankind. In this total war, scientific laboratories have been glowing and humming twenty-four hours a day. It has become the job of the chemist to devise new and more potent explosives and poison; it has been the task of the engineer to draft the plans for new guns, radios, mobile units, ships and other monsters of war; there is a job for the mathematician, the physicist and the mechanic in operating our machines; so there is for the physician in treating our wounded.

These new skills, trades, inventions and discoveries are not going to terminate with the war. On the contrary, they will be the springboard for the science of our post-war world which will give the common man a rich and fruitful future in everyday comfort. It is this legacy of war that might be considered an advance over the conditions of the prewar world. War hastens the enrichment of the world with scientific discovery.

To be more specific, here are some of the advances necessitated by the war. In the field of medicine, there have been innumerable cures and treatments discovered. The thousands of pitifully wounded soldiers have given the stimulus to a sweeping wave of discovery. Atabrine, a synthetic quinine, has been developed. The amazing family of sulpha drugs has expanded and its disinfecting powers have saved literally hundreds of thousands of soldiers from untimely death. The giant steps of surgery are astounding. Artificial limbs have been reconnected to the living muscles; the Stader steel pin reduction splint perfectly reforms mangled and broken bones; wax treatments and miraculous skin graftings have saved the lives of burn victims. Probably the most far-reaching discovery necessitated by this horrible war is blood plasma transfusion. After the typing, drying, and preserving treatment, this life blood, donated by patriotic citizens, is shipped to the battlefield where it is injected into the hungry veins of the wounded.

The achievements toward better machines of war are not to be disregarded. The lists of improvements in fire-power, range, safety, load, speed and maneuverability of the air-

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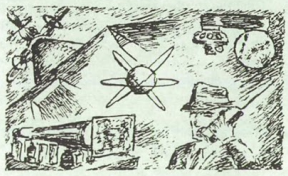
plane all but stagger the mind. The astonishing records set by Kaiser in the production of ships bears testimony to the rapid advance of industry marching hand in hand with science. Tanks, guns, ships and planes rolling off our assembly lines are in themselves manifestations of the giant steps taken forward by American science because of the demands of war.

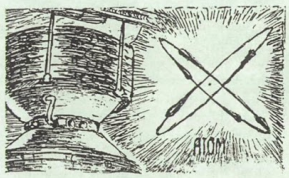
No, the war will not be a totally wasted effort. There is much good to be squeezed for the blood, sweat and tears of this brutal war against tyranny and oppression. After the smoke of battle clears, after the dead have been buried, and after the world has realized a new birth of freedom, there will be work to do. And few will play a more significant role in world reconstruction than the scientist. The part of science in postwar reconstruction is multilateral. Science has had its incentive, its stimulus from the war itself, but its task will only have started when this war ends. There will be a torn and diseased world to be brought back to its feet. There will be a population eagerly awaiting the things for which it has so valiantly fought. There will be a hungry craving for a better world in the hearts and minds of every man.

This, then, is the task of science: to bring freedom from fear and freedom from want to the common man; to construct a world, so rich, so envigorating, that a soldier can stand up and truly say his efforts have not been in vain.

To what extent is science assuming this mighty burden? One need not have great imagination to see the promise of organic chemistry. Already to meet the war shortages, chemical laboratories have produced neoprene, butyl, thiokol, ameripol and other synthetic rubber. They have produced synthetic materials like nylon and rayon acetate. Plastics are in themselves a vast and untapped field. Amberlite, zeolite, and bakelite already appear on the markets of the nation. If you will dwell for a moment in the realm of organic chemistry, you cannot help sensing the meaning of the apparently insignificant carbon atom. Here is a field of science which will give the world of the future the power for its engines of production, the plastics and synthetics for its home, and the dyes, drugs and medicines for its everyday comforts.



In another closely related field, the chemist and the physicist of the future are going feverishly to attempt to smash the atom. This alone will be the most far-reaching achievement that the world has ever known. It is hard to conceive of the potential powers of uranium 239, a gram of which will operate a great battleship for five years. Here is another goal toward which science now strives, a goal that will open for us the doors to undreamed-of wealth and power. The remaking of every grain of matter on earth will be at the scientist's fingertips. Stored in nature's vaults there is unheard-of energy that needs only to be cracked by man. And, if, in proper hands, it will bring with it a world that far outshines even the wildest expectations.



And now, to medicine. Just as the chemist delves into secrets of the material structure of the earth, so does the doctor seek the very secret of life. He will pour forth every energy in his veins. The first steps have already been made. The chemical structure of much of the cell has been determined. The discovery of biotin is an ex-

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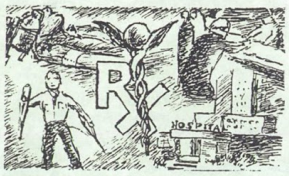
ample. This may seem fantastic, but Jules Verne's submarine, remember, was thought to be fantastic too.

But enough of that. There is a practical side to medicine. Medicine has an influential part to play in the *permanent reconstruction* of the world. There are vitamins to be discovered and to be produced synthetically. There are food concentrates to be developed. And the present goal of medicine is along these lines. There is a starved and downtrodden Europe to feed and rehabilitate. Public Health stations will be established in every corner of the earth. Nu-



trition and strength will be given to the bushman of Borneo and slum dweller of Chicago alike. Socialized medicine is no idle dream. It is on its way to becoming a reality. Great engineering projects and electrical plants bringing new hope to millions of newly awakened peoples are, let us hope, no figments of the imagination.

War has brought disease. Even now the army offers splendid opportunity for medical research. The army doctors combat tropical disease bred by insects. This is but the starting point for a great international war against plague of the body and disease of the mind. Doctors Freeman and Watts are opening a fantastic field called psycho-surgery. The surgeon's knife will purge the brain of evil. Psychosis, mental aberrations, inhibitions and obsessions will be removed from the minds of men. Medicine is taking great strides. This astounding advance will not be stopped. On the contrary, a world that cries for medical aid will bring forth the best in our doctors.

Another branch of science that will be of vital importance in our postwar world is

electronics. The further success in the development of the electronic tube can prove to be as momentous as the smashing of the atom itself. Army signal corps technicians have made significant discoveries in radio, television and electron rays. These advances are war secrets now, but when war is over, the whole world will be shaken by extensive accomplishments in frequency modulation and television, lightweight, two-way radios, and especially the electron microscope, an instrument which has already magnified to the colossal proportions of 100,000 times and promises to invade the privacy of the minutest bacteria and even the atom.

No imagination, no matter how fertile, can ever grasp the wonders of the cosmic ray, of the stars, of a source of stellar energy. Think of harnessing the sun, the stars, the energies of the gallaxies!

And there is more — there is science of plants growing in chemicals. The farm will no longer be a place to grow vast quantities of wheat and corn and potatoes. Production of food will be concentrated in chemical vats and the farm will grow soy beans and other materials to be used in the manufacturing of plastics.

There is going to be unlimited air travel. The networks of the world will be linked by the airplane. There's going to be a helicopter for every family. Pre-fabricated housing and scores of like comforts will exist in the postwar world. In short, there will be comfort, security, longevity and happiness for everyone.

Scientific achievements in the future will enable us to arise from the valley of despair into a new and better world with a firm resolution that promises hope for all mankind.

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U.S., School Yearbooks, 1900-1999 for Paul Barr
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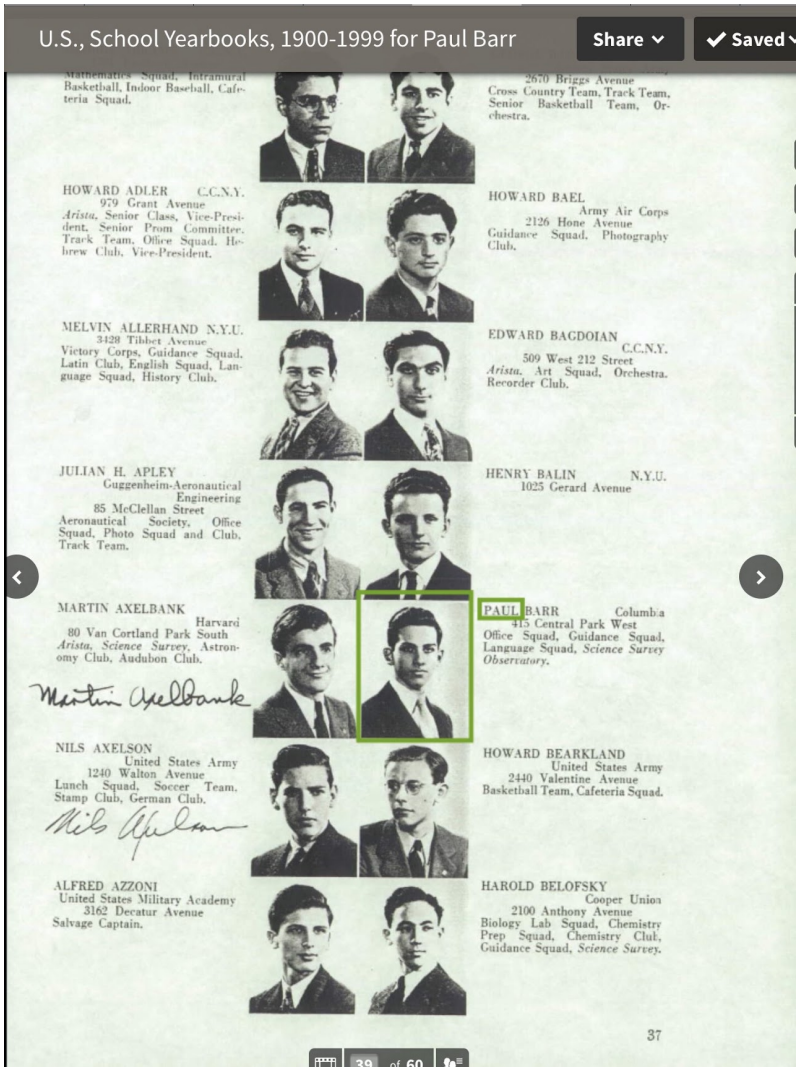

Mathematics Squad, Intramural Basketball, Indoor Baseball, Cafeteria Squad.

2670 Briggs Avenue
Cross Country Team, Track Team, Senior Basketball Team, Orchestra.

HOWARD ADLER C.C.N.Y.
979 Grant Avenue
Arista, Senior Class, Vice-President, Senior Prom Committee, Track Team, Office Squad, Hebrew Club, Vice-President.

HOWARD BAEL
Army Air Corps
2126 Hone Avenue
Guidance Squad, Photography Club.

MELVIN ALLERHAND N.Y.U.
3428 Tibbet Avenue
Victory Corps, Guidance Squad, Latin Club, English Squad, Language Squad, History Club.

EDWARD BAGDOIAN
C.C.N.Y.
509 West 212 Street
Arista, Art Squad, Orchestra, Recorder Club.

JULIAN H. APLEY
Guggenheim-Aeronautical Engineering
85 McClellan Street
Aeronautical Society, Office Squad, Photo Squad and Club, Track Team.

HENRY BALIN N.Y.U.
1025 Gerard Avenue

MARTIN AXELBANK
Harvard
80 Van Cortland Park South
Arista, *Science Survey*, Astronomy Club, Audubon Club.

PAUL BARR Columbia
415 Central Park West
Office Squad, Guidance Squad, Language Squad, *Science Survey Observatory*.

NILS AXELSON
United States Army
1240 Walton Avenue
Lunch Squad, Soccer Team, Stamp Club, German Club.

HOWARD BEARKLAND
United States Army
2440 Valentine Avenue
Basketball Team, Cafeteria Squad.

ALFRED AZZONI
United States Military Academy
3162 Decatur Avenue
Salvage Captain.

HAROLD BELOFSKY
Cooper Union
2100 Anthony Avenue
Biology Lab Squad, Chemistry Prep Squad, Chemistry Club, Guidance Squad, *Science Survey*.

39 of 60

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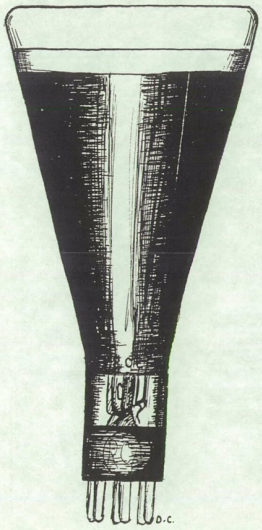

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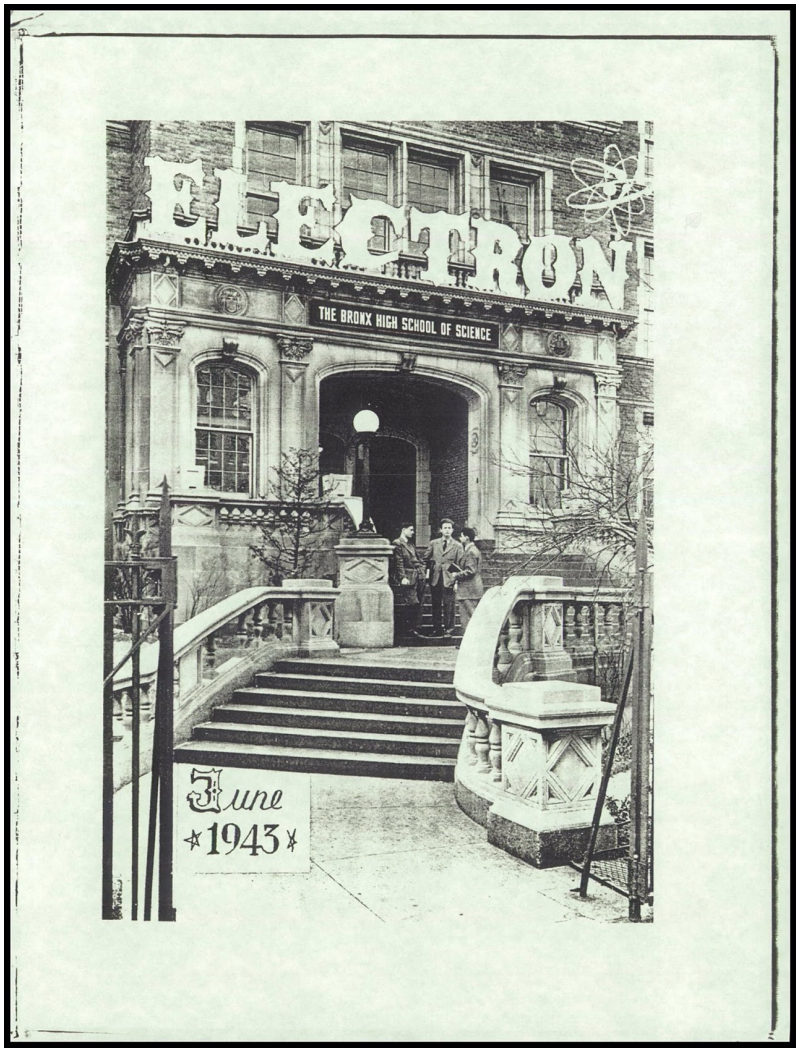

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March 21 1957

Dr. Paul S. Barr

https://www.newspapers.com/image/162492892/?terms=%22paul%2Bbarr%22

Juy 21 1960

https://www.newspapers.com/image/163073937/?terms=%22paul%2Bbarr%22

https://twitter.com/agentrevolt/status/1198298037975691265?s=20

2019-11-23-twitter-agentrevolt-1198298037975691265

"He (Paul S. Barr) married Roberta Bernstein, whose brother Monroe makes mention of a lot of relatives in his obituary"

https://obits.lohud.com/obituaries/lohud/obituary.aspx?n=monroe-bernstein&pid=186583396&fhid=11917

Monroe Bernstein

1936 - 2017

Dr Paul Barr had a daughter Pamela and a son Evan

William Pelham Barr (born 1950)

Source : https://www.nationalreview.com/2019/05/mueller-report-william-barr-scandal-farce/

Wikipedia 🌐 William Barr

Relatives:

- Father : Donald Barr (born 1921) / Mother :
  - Grandfather (paternal) - Simon Pelham Barr (born 1892)
  - Grandmother (paternal) - Estelle De Young Barr (born 1893)
    - NOTE: Estelle De Young Barr's brother **David S Barr (born 1894)** married **Elinor Sachs Barr (born 1894)** , who was the brother of **Alexander Sachs (born 1892)**)

Worked on (at DOJ) :

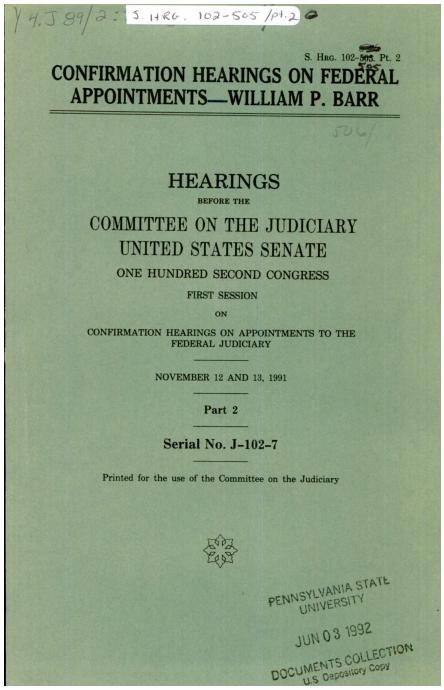
- Operation Ill Wind

Worked at :

- GTE Corporation
- Verizon

1991 - Resume (presented at congressional confirmation hearings) - 1991-nov-12-and-14-confirmation-hearings-on-federal-appts-w-barr-part-2

See full PDF (online only) - [HG0091][GDrive] / See his resume on page 154 PDF : [HG0094][GDrive]



[HG0092][GDrive]

employee since graduation from college.

1971 - 1972	Central Intelligence Agency Summer Intern Program
1973 - 1977	Central Intelligence Agency (1973 - 75 Intelligence Directorate) (1975 - 77 Office of Legislative Counsel)
1977 - 1978	Law Clerk to the Honorable Malcolm R. Wilkey U.S. Circuit Judge U.S. Court of Appeals for the D.C. Circuit
1978 - 1982	Shaw, Pittman, Potts & Trowbridge Washington, D.C. (Law Firm - Associate)
1982 - 1983	Deputy Assistant Director Office of Policy Development White House
1983 - 1989	Shaw, Pittman, Potts & Trowbridge* 1983 - 1984 Associate 1985 - 1989 Partner
1984 - 1989	2300 N Street Associates Real Estate Investment Partnership with a number of other Shaw, Pittman partners
1989 - 1990	Assistant Attorney General Office of Legal Counsel Department of Justice
1990 - Pres.	Deputy Attorney General Department of Justice

1991-nov-12-and-14-confirmation-hearings-on-federal-appts-w-barr-part-2-pg-154-clip-resume

* In connection with law practice, at Shaw, Pittman, when the firm was asked to set up a new corporation for a client, I would occasionally be listed as an incorporating director/officer for purposes of filing incorporation papers but would be replaced by the permanent director/officer at the first corporate meeting. In one case, however, I actually did serve on a client's board. In April 1986, Scottish Widows Fund Assurance Society, a U.K. insurance company, asked me to serve on the board of its two wholly-owned U.S. subsidiaries, "Dalkeith Corporation" and "1146 19th Street Corporation". These corporations own a commercial office building in Washington, D.C. I served as a director, vice president, and treasurer of each subsidiary from April 1986 to January 1989.

[HG009I][GDrive]

Saved wikipedia page (Feb 15 2019) : William Barr

See [HK003X][GDrive]

The second of four [brothers], [William Barr] grew up on the Upper West Side [of Manhattan]. [...] After high school, Barr entered **Columbia University**, where he majored in government and graduated with a Bachelor of Arts in 1971. He then did two years of graduate study at Columbia, receiving an Master of Arts in government and **Chinese studies** in 1973. While employed at the Central Intelligence Agency (CIA) from 1973 to 1977, he attended the evening division of George Washington University Law School, graduating with a Juris Doctor in 1977.

Early career

From 1973 to 1977, Barr was employed by the CIA, initially for a short period as a China analyst, then in the legislative affairs section. After graduating from law school, Barr was a law clerk to Judge Malcolm Wilkey of the U.S. Court of Appeals for the District of Columbia Circuit from 1977 through 1978. He was in private practice with the Washington law firm of Shaw, Pittman, Potts & Trowbridge from 1978 to 1982 and again from 1983 to 1989,[9] after serving as **Deputy Assistant Director for Legal Policy on the domestic policy staff at the Reagan White House from May 1982 to September 1983**.

U.S. Department of Justice

In 1989, at the beginning of his administration, President George H. W. Bush appointed Barr to the U.S. Department of Justice as Assistant Attorney General for the Office of Legal Counsel (OLC), an office which functions as the legal advisor for the President and executive agencies. Barr was known as a strong defender of presidential power.[12] He wrote an advisory opinion justifying the U.S. invasion of Panama and arrest of Manuel Noriega.[12] He wrote legal justifications for the practice of rendition,[13] so that the FBI could enter onto foreign soil without the consent of the host government to apprehend fugitives wanted by the United States government for terrorism or drug-trafficking.[12] Barr declined a congressional request for the full opinion, but instead provided a document that "summarizes the principal conclusions." Congress subpoenaed the opinion, and its public release after Barr's departure from the Justice Department showed he had omitted significant findings in the opinion from his summary document.[14]

U.S. Deputy Attorney General (1990–1991)

In May 1990, Barr was appointed Deputy Attorney General, the official responsible for day-to-day management of the Department. According to media reports, Barr was generally praised for his professional management of the Department.[15][16][17]

During August 1991, when then-Attorney General Richard Thornburgh resigned to campaign for the Senate, Barr was named Acting Attorney General.[18] Three days after Barr accepted that position, 121 Cuban inmates, awaiting deportation to Cuba, seized 9 hostages at the Talladega federal prison. He directed the FBI's Hostage Rescue Team to assault the prison, which resulted in rescuing all hostages without loss of life.[19][20]

U.S. Attorney General (1991–1993)

First nomination and confirmation

It was reported that President Bush was impressed with Barr's management of the hostage crisis; weeks later, Bush nominated him as Attorney General.[21]

Barr enjoyed a "sterling reputation" among Republican and Democratic politicians alike.[22] His two-day confirmation hearing was "unusually placid", and he was received well by both Republicans and Democrats on the Senate Judiciary Committee.[23] Asked whether he thought a constitutional right to privacy included the right to an abortion, Barr responded that he believed the constitution was not originally intended to create a right to abortion; that *Roe v. Wade* was thus wrongly decided; and that abortion should be a "legitimate issue for state legislators".[23] "Barr also said at the hearings that Roe v. Wade was 'the law of the land' and claimed he did not have 'fixed or settled views' on abortion."[24] Senate Judiciary Committee Chair Joe Biden, though disagreeing with Barr, responded that it was the "first candid answer" he had heard from a nominee on a question that witnesses would normally evade; Biden hailed Barr as "a throwback to the days when we actually had attorneys general that would talk to you."[25] Barr was approved unanimously by the Senate Judiciary Committee, was confirmed by voice vote by the full Senate,[26][27] and was sworn in as Attorney General on November 26, 1991.[28]

Wikipedia - Dec 4, 2020 - Wikipedia - Dec 4, 2020

See [HK003Y][GDrive]

77th and 85th
United States Attorney General

Incumbent

Assumed office
February 14, 2019

President
Donald Trump
Deputy
Rod Rosenstein
Ed O'Callaghan (acting)
Jeffrey A. Rosen
Preceded by
Jeff Sessions
In office
November 26, 1991 – January 20, 1993

President
George H. W. Bush
Deputy
George J. Terwilliger III
Preceded by
Dick Thornburgh
Succeeded by
Janet Reno
25th United States Deputy Attorney General

In office
May 26, 1990 – November 26, 1991

President
George H. W. Bush

Preceded by
Donald B. Ayer
Succeeded by
George J. Terwilliger III
United States Assistant Attorney Generalfor the Office of Legal Counsel

In office
January 20, 1989 – May 26, 1990

President
George H. W. Bush
Preceded by
Douglas Kmiec
Succeeded by
J. Michael Luttig
Personal details

Born
William Pelham Barr
May 23, 1950 (age 70)
New York City, New York, U.S.
Political party
Republican
Spouse(s)
Christine Moynihan (m. 1973)
Children
3
Parents
Donald Barr
Mary Margaret Ahern
Relatives
Stephen Barr (brother)
Education
Columbia University
(BA, MA)
George Washington University(JD)
Signature

William Pelham Barr (born May 23, 1950) is an American attorney serving as the 85th United States Attorney General since 2019, previously holding the office from 1991 to 1993.
From 1973 to 1977, Barr was employed by the Central Intelligence Agency during his schooling years. He then served as a law clerk to judge Malcolm Richard Wilkey. In the 1980s, Barr worked for the law firm Shaw, Pittman, Potts & Trowbridge, sandwiching a year's work in the White House of the Ronald Reagan administration dealing with legal policies. Before becoming Attorney General in 1991, Barr held numerous other posts within the Department of Justice, including leading the Office of Legal Counsel (OLC) and serving as Deputy Attorney General. From 1994 to 2008, Barr did corporate legal work for GTE and its successor company Verizon Communications, which made him a multimillionaire. From 2009 to 2018, Barr served on the board of directors for Time Warner.
Barr is a longtime proponent of the unitary executive theory of nearly unfettered presidential authority over the executive branch of the U.S. government.[1][2][3] In 1989, Barr, as the head of the OLC, justified the U.S. invasion of Panama to arrest Manuel Noriega. As deputy attorney general, Barr authorized an FBI operation in 1991 which freed hostages at the Talladega federal prison. An influential advocate for tougher criminal justice policies, Barr as attorney general in 1992 authored the report The Case for More Incarceration, where he argued for an increase in the United States incarceration rate.[4]Under Barr's advice, President George H. W. Bush in 1992 pardoned six officials involved in the Iran–Contra affair.
Barr became attorney general for the second time in 2019. During his ongoing term, he has received criticism from some for his handling of several challenges, including his mischaracterized summary and selective redaction of the Mueller report, interventions in the guilty convictions and sentences of former advisors to President Trump, Roger Stone and Michael Flynn,[5][6] and allegations of political interference in the removal of Geoffrey Berman from his Southern District of New York attorney position in a matter pertaining to the indictment of Turkish bank Halkbank, a bank with close personal ties to Recep Tayyip Erdogan.[7][8]

Early life and education
Barr was born in New York City in 1950. His father, Donald Barr, taught English literature at Columbia University before becoming headmaster of the Dalton School in Manhattan and later the Hackley School in Tarrytown, New York, both members of the Ivy Preparatory School League. Barr's mother, Mary Margaret (née Ahern), also taught at Columbia.[9] Barr's father was Jewish and raised in Judaism but later converted to Christianity and joined the Catholic Church. His mother is of Irish ancestry. Barr was raised as a Catholic.[10][11] Barr was the second of four sons, and his younger brother Stephen Barr is a professor of physics at the University of Delaware.[12]
Barr grew up on New York City's Upper West Side. As a child he attended a Catholic grammar school, Corpus Christi School, and then the non-sectarian Horace Mann School. After high school, he attended Columbia University, where he majored in government and graduated with a Bachelor of Arts in 1971. He did two additional years of graduate study at Columbia, receiving an Master of Arts in government and Chinese studies in 1973. While at Columbia, Barr opposed anti-Vietnam War occupation protests by students on campus.[13]
Barr moved to Washington, D.C., to work as an intelligence analyst for the CIA while taking evening classes at George Washington University Law School, graduating in 1977 with a Juris Doctor with highest honors.[14][15]
Career
Early career
Barr with President Ronald Reaganin the Oval Office in 1983
From 1971 to 1977, while attending graduate school and law school, Barr worked for the Central Intelligence Agency (CIA).[16] He was first hired as a summer intern for two years.[13] During his law school years he was an analyst in the Intelligence Directorate division from 1973 to 1975, and then transitioning to an assistant in the Office of Legislative Counsel and an agency liaison to Congress from 1975 to 1977.[16][17][18][19]
After graduating from law school in 1977, Barr spent one year as a law clerk to Judge Malcolm Wilkey of the U.S. Court of Appeals for the D.C. Circuit.[20][14] He then joined the law firm of Shaw, Pittman, Potts & Trowbridge (now Pillsbury Winthrop Shaw Pittman) from 1978 to 1982 and again from 1983 to 1989,[20] after serving as Deputy Assistant Director for Legal Policy on the domestic policy staff at the Reagan White House from May 1982 to September 1983.[20][14][21]
U.S. Department of Justice
Barr and Dan Quayle watch as President George H. W. Bush signs the Civil Rights Commission Reauthorization Act in the Rose Garden of the White House in 1991.
In 1989, at the beginning of his administration, President George H. W. Bush appointed Barr to the U.S. Department of Justice as Assistant Attorney General for the Office of Legal Counsel (OLC), an office which functions as the legal advisor for the President and executive agencies. Barr was known as a strong defender of presidential power.[22] He wrote an advisory opinion justifying the U.S. invasion of Panama and arrest of Manuel Noriega.[22] He wrote legal justifications for the practice of rendition,[23] so that the FBI could enter onto foreign soil without the consent of the host government to apprehend fugitives wanted by the United States government for terrorism or drug-trafficking.[22] Barr declined a congressional request for the full 1989 opinion, but instead provided a document that "summarizes the principal conclusions". Congress subpoenaed the opinion, and its public release after Barr's departure from the Justice Department showed he had omitted significant findings in the opinion from his summary document.[24]
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U.S. Attorney General (1991–1993)
Official photo of Barr during his first tenure as Attorney General
First nomination and confirmation
It was reported that President Bush was impressed with Barr's management of the hostage crisis; weeks later, Bush nominated him as Attorney General.[31]
Barr enjoyed a "sterling reputation" among Republican and Democratic politicians alike.[32] His two-day confirmation hearing was "unusually placid", and he was received well by both Republicans and Democrats on the Senate Judiciary Committee.[33] Asked whether he thought a constitutional right to privacy included the right to an abortion, Barr responded that he believed the Constitution was not originally intended to create a right to abortion; that Roe v. Wade was thus wrongly decided; and that abortion should be a "legitimate issue for state legislators".[33] "Barr also said at the hearings that Roe v. Wade was 'the law of the land' and claimed he did not have 'fixed or settled views' on abortion."[34] Senate Judiciary Committee Chair Joe Biden, though disagreeing with Barr, responded that it was the "first candid answer" he had heard from a nominee on a question that witnesses would normally evade; Biden hailed Barr as "a throwback to the days when we actually had attorneys general that would talk to you."[35] Barr was approved unanimously by the Senate Judiciary Committee, was confirmed by voice vote by the full Senate,[36][37] and was sworn in as Attorney General on November 26, 1991.[38]
First tenure
During his first tenure as AG, media characterized Barr as "a staunch conservative who rarely hesitates to put his hardline views into action."[39][40][41] He was described as affable with a dry, self-deprecating wit.[39][42] The New York Times described the "central theme" of his tenure to be "his contention that violent crime can be reduced only by expanding Federal and state prisons to jail habitual violent offenders."[40] In an effort to prioritize violent crime, Barr reassigned three hundred FBI agents from counterintelligence work to investigations of gang violence. The New York Times called this move "the largest single manpower shift in the bureau's history."[40]
During the 1992 election year, the Wall Street Journal wrote of Barr's work that he "has put a heavy emphasis on attention-grabbing events and pronouncements that may have more to do with presidential election-year politicking than with fighting crime on the streets."[43]
The Case for More Incarceration
The Case for More Incarceration
In 1992, Barr authored a report, The Case for More Incarceration,[44] which argued for an increase in the United States incarceration rate, the creation of a national program to construct more prisons, and the abolition of parole release.[4] Barr argued that incarceration reduced crime, pointing to crime and incarceration rates in 1960, 1970, 1980 and 1990. A 1999 criminology study criticized Barr's analysis, saying "so complex an issue as the relationship between crime and punishment cannot be addressed through so simplistic an analysis as a negative correlation between the two very aggregated time series of crime rates and incarceration rates."[45] University of Minnesota criminologist Michael Tonry said the data in Barr's report was deceptively presented; if Barr had chosen five-year intervals, then the data would not have supported Barr's argument, and if Barr had chosen to look at violent crime specifically (as opposed to all crimes as a category), then the data would not have supported his argument.[46]
Barr said in the report, "The benefits of increased incarceration would be enjoyed disproportionately by black Americans".[46] In the report, Barr approvingly quoted New Mexico Attorney General Hal Stratton, "I don't know anyone [who] goes to prison on their first crime. By the time you go to prison, you are a pretty bad guy."[47] Barr's report influenced the Violent Crime Control and Law Enforcement Act of 1994, which aimed to increase the incarceration rate.[4]
Investigations
In October 1991, Barr appointed then-retired Democratic Chicago judge Nicholas Bua as special counsel in the Inslaw scandal. Bua's 1993 report found the Department of Justice guilty of no

In October 1991, Barr appointed then-retired Democratic Chicago judge Nicholas Bua as special counsel in the Inslaw scandal. Bua's 1992 report found the Department of Justice guilty of the wrongdoing in the matter.[48]

In October 1992, Barr appointed then retired New Jersey federal judge Frederick B. Lacey to investigate the Department of Justice and the Central Intelligence Agency handling of the Banca Nazionale del Lavoro (BNL) Iraqgate scandal.[49] The appointment came after Democrats called for a special prosecutor during the scandal fearing a "cover-up" by the administration. House Banking Committee Chairman Henry B. González called for Barr's resignation, citing "repeated, clear failures and obstruction" by the Department of Justice in allegedly delaying an investigation of the BNL-Iraqgate case.[50][51] González also called for an independent special counsel investigation.[51]

Phone surveillance program

In 1992, Barr launched a surveillance program to gather records of innocent Americans' international phone calls.[52] The DoJ inspector general concluded that this program had been launched without a review of its legality.[52] According to USA Today, the program "provided a blueprint for far broader phone-data surveillance the government launched after the terrorist attacks of Sept. 11, 2001."[52]

In December 2019, Democratic Senators Ron Wyden and Patrick J. Leahy asked the Justice Department's Office of Professional Responsibility to investigate Barr for approving an illegal surveillance program without legal analysis.[53]

Iran-Contra

In late 1992, Independent Counsel Lawrence Walsh, who had been chosen to investigate the Iran–Contra affair, found documents in the possession of Reagan's former defense secretary, Caspar Weinberger, which Walsh said was "evidence of a conspiracy among the highest-ranking Reagan Administration officials to lie to Congress and the American public."[54][55] Weinberger was set to stand trial on felony charges on January 5, 1993.[54][56] His "indictment said Mr. Weinberger's notes contradicted Mr. Bush's assertions that he had only a fragmentary knowledge of the arms secretly sold to Iran in 1985 and 1986 in exchange for American hostages in Lebanon."[56][55][57] According to Walsh, then-president Bush might have been called as a witness.[58]

On December 24, 1992, during his final month in office, Bush, on the advice of Barr, pardoned Weinberger,[14][59] along with five other administration officials who had been found guilty on charges relating to the Iran–Contra affair.[14][60][61][54] Barr was consulted extensively regarding the pardons, and especially advocated for pardoning Weinberger.[62]

Walsh complained about the move insinuating that Bush on Barr's advice had used the pardons to avoid testifying and stating that: "The Iran-contra cover-up, which has continued for more than six years, has now been completed."[63] In 2003, he wrote an account of the investigation in his book, Firewall: The Iran-Contra Conspiracy and Cover-Up.

Because of this and Barr's unwillingness to appoint an independent counsel to look into a second scandal known as Iraqgate, New York Times writer William Safire began to refer to Barr as "Coverup-General Barr."[64] Barr, however, responded that he believed Bush had made the right decision regarding that and he felt people in the case had been treated unfairly.[65] Barr said Walsh was a "head-hunter" who "had completely lost perspective."[2]

Post-DOJ career

Upon leaving the DOJ in 1993, Barr was appointed by Virginia Governor George Allen to co-chair a commission to implement tougher criminal justice policies and abolish parole in the state.[66][67] Barr has been described as a "leader of the parole-abolition campaign" in Virginia.[68]

After leaving the DOJ, he criticized the Clinton administration for being "soft on crime".[69] Barr expressed his opposition to efforts to end mandatory minimum sentencing.[69] In a 1993 op-ed, he wrote, "The notion that there are sympathetic people out there who become hapless victims of the criminal-justice system and are locked away in federal prison beyond the time they deserve is simply a myth."[70][69] In a 1995 essay, Barr rejected that crime was caused by material factors, such as poverty, arguing instead that crime was caused by immorality: "Spending more money on these material social programs is not going to have an impact on crime, and, if anything, it will exacerbate the problem."[70]

In 1994, Barr became Executive Vice President and General Counsel of the telecommunications company GTE Corporation, where he served for 14 years. During his corporate tenure, Barr directed a successful litigation campaign by the local telephone industry to achieve deregulation by scuttling a series of FCC rules, personally arguing several cases in the federal courts of appeals and the Supreme Court.[71][72] In 2000, when GTE merged with Bell Atlantic to become Verizon Communications, Barr became the general counsel and executive vice president of Verizon until he retired in 2008.[73] Barr became a multimillionaire from working in GTE and Verizon. In 2001, Barr's salary was reportedly $1.5 million.[13]

From 1997 to 2000, Barr served on the Board of Visitors of the College of William & Mary in Williamsburg.[74]

In 2009, Barr was briefly of counsel to the firm Kirkland & Ellis. From 2010 until 2017, he advised corporations on government enforcement matters and regulatory litigation; he rejoined Kirkland and Ellis in 2017.[75]

From 2009 to 2018, Barr served on the board of directors for Time Warner.[76]

Comments about the Starr investigation of President Clinton

In March 1998, Barr lambasted the Clinton administration for criticizing Independent Counsel Ken Starr's investigation of the Whitewater controversy, which had shifted towards an investigation of an alleged affair between Clinton and Monica Lewinsky.[2] Barr said the criticism appeared "to have the improper purpose of influencing and impeding an ongoing criminal investigation and intimidating possible jurors, witnesses and even investigators."[2]

Comments about the Trump administration

On April 18, 2019, a redactedversion of Report on the Investigation into Russian Interference in the 2016 Presidential Election was released to the public.

During the first two years of the Trump presidency, Barr frequently criticized legal challenges against Trump and investigations into the Trump 2016 campaign and presidency.[77][78]

In 2017, Barr said there was "nothing inherently wrong" with Donald Trump's calls for investigating Hillary Clinton while the two were both running for president. Barr added that an investigation into an alleged Uranium One controversy was more warranted than looking into whether Trump conspired with Russia to influence the 2016 elections.[79] Barr also said in 2017 that he didn't think "all this stuff" about incarcerating or prosecuting Hillary Clinton was appropriate to say, but added that "there are things that should be investigated that haven't been investigated," although the FBI began investigating the Clinton Foundation and the related Uranium One matter in 2015, followed by investigations by Republican congressional committees.[80][81][82]

In February 2017, Barr argued Trump was justified in firing Acting Attorney General Sally Yates over her refusal to defend Executive Order 13769.[83]

Barr was publicly critical of the special counsel investigation. In 2017, he faulted Mueller for hiring prosecutors who have contributed to Democratic politicians, saying that his team should have had more "balance," and characterized the obstruction of justice investigation as "asinine" and that it was "taking on the look of an entirely political operation to overthrow the president."[84][85]

In June 2018, Barr sent an unsolicited 20-page memo to senior Justice Department officials. He also provided copies to members of Trump's legal team and discussed it with some of them.[86] In his memo, Barr argued that the Special Counsel should not be investigating Trump for obstruction of justice because Trump's actions, such as firing FBI Director James Comey, were within his powers as head of the executive branch.[87][88][89] He characterized the obstruction investigation as "fatally misconceived" and "grossly irresponsible" and "potentially disastrous" to the executive branch.[90][91]

The day after the existence of the memo became known, Deputy Attorney General Rod Rosenstein said "our decisions are informed by our knowledge of the actual facts of the case, which Mr. Barr didn't have."[92]Democrats later characterized the memo as Barr's "job application" for the Attorney General position.[93]

Political donations

The National Republican Senatorial Committee (NRSC) financially assists Republicans in their Senate election contests; in the seven years from 2009 to 2016, Barr gave six donations to the NRSC totaling $85,400. In a five-month period from October 2018 to February 2019, Barr donated five times (around $10,000 every month) for a total of $51,000. When Barr started donating more frequently to the NRSC, it was uncertain whether then-Attorney General Jeff Sessions would remain in his job. Barr continued donating even after Sessions resigned, and after Trump nominated Barr for Attorney General. The donations stopped after Barr was confirmed by the Senate as Attorney General. NRSC refunded Barr $30,000 before his confirmation. Previously in 2017, Barr had said he felt "prosecutors who make political contributions are identifying fairly strongly with a political party".[94]

U.S. Attorney General (2019–present)

Barr is sworn in as Attorney General by Chief Justice John Roberts in 2019.

Second nomination and confirmation

On December 7, 2018, President Donald Trump announced Barr's nomination to succeed Jeff Sessions.[95][96] Michael Isikoff and Daniel Klaidman reported that Trump had sought Barr as chief defense lawyer for Trump regarding the special counsel investigation headed by Robert Mueller after Barr made three positions known. First, Barr supported Trump's firing of Comey on May 9, 2017. Second, he questioned the appointments of some of Mueller's prosecutors due to political donations they had made to the Clinton campaign. Third, he alleged there were conflicts of interest of two appointees to the Special Counsel Team, Jennie Rheeand Bruce Ohr.[97][98][99]

Barr meets with the Justice Department leadership.

Barr was confirmed as Attorney General on February 14, 2019, by a 54–45 near party-line vote, with Sen. Doug Jones (D-AL), Joe Manchin (D-WV), and Kyrsten Sinema (D-AZ) as the three Democrats to vote Yea. Republican senator Rand Paul (R-KY) voted No and Richard Burr (R-NC) did not vote.[100][101] Later that day, Barr was sworn-in as the nation's 85th Attorney General by Chief Justice John Roberts in a ceremony at the White House.[102] He is the first person to be appointed to a second non-consecutive term as Attorney General since John J. Crittenden in 1850.[103]

Second tenure

In May 2019, three months into his tenure as Attorney General, the Associated Press characterized Barr as a champion and advocate for Trump.[104] Barr had enthusiastically supported Trump's political agenda, misrepresented aspects of Special Counsel Robert Mueller's report, repeated Trump's talking point that those investigating Trump had engaged in "spying", defied congressional subpoenas, and refused to give Congress an unredacted version of the Mueller report.[104]

Under Barr's leadership, the Justice Department changed its position on the Affordable Care Act (ACA). Previously the department took the position that the individual mandate provision was unconstitutional, but could be severed from the whole healthcare law. On March 25, the department updated its position to argue that the entire law is unconstitutional.[105] On May 2, the department conducted a filing with the United States Court of Appeals for the Fifth Circuit to nullify the entire law, arguing that the removal of the provision on individual mandate results in the entire law becoming unconstitutional.[106]

On May 1, 2019, Assistant Attorney General Stephen Boyd told the House Oversight Committee that Barr had instructed Justice Department official John Gore to refuse a subpoena to testify in front of the committee. The committee subpoenaed Gore over the Trump administration's efforts to add a question on citizenship to the 2020 United States Census. The reason for the refusal was that the committee's decision to not allow a Justice Department lawyer to accompany Gore during testimony violated "the confidentiality interests of the Executive Branch" (though a separate room was permitted).[107] In early June the House Oversight Committee moved to hold Barr in contempt of congress for defying a subpoena regarding the efforts to add a citizenship question to the census.[108]

In July 2019, the House of Representatives voted 230–198 to hold Barr (and Commerce Secretary Wilbur Ross) in criminal contempt of Congress, after they failed to produce documents as April 2019 congressional subpoenas mandated. The documents, on the planned (and eventually scrapped) citizenship question in the 2020 census, were withheld due to a "deliberative process" and "attorney-client communications", according to the Justice Department. President Trump also asserted executive privilege over the documents to withhold them from Congress. Only once prior has a sitting Cabinet member been held in criminal contempt of Congress (Eric Holder in 2012). The House instructed the Justice Department to prosecute Barr, but the Department refused.[109][110]

Also in July 2019, Barr reportedly made the decision to not bring federal civil rights charges against New York policeman Daniel Pantaleo for causing the death of Eric Garner. In so doing, he overruled the Justice Department's Civil Rights Division, which advocated charging Pantaleo, instead agreeing with Justice Department prosecutors from New York.[111]

On July 25, 2019, Barr reinstated the death penalty for federal crimes.[112]

In December 2019, Barr said that communities that do not show the "respect and support that law enforcement deserves ... might find themselves without the police protection they need."[113] Barr dropped the Department of Justice's case against the police officer who killed Eric Garner in 2014.[13]

In February 2020, Senator Lindsey Graham stated that the Justice Department "is receiving information coming out of the Ukraine from" Rudy Giuliani, a personal lawyer to president Donald Trump. Graham had learned from Barr that "they've created a process that Rudy could give information and they would see if it's verified". A day later, Barr confirmed Graham's account, stating that he had "established an intake process" for information on Ukraine, including from Giuliani, while citing an "obligation to have an open door" policy on receiving information. Giuliani has claimed to have information of improprieties regarding Ukraine for Joe Biden (a former vice president, later a 2020 presidential candidate) and his son Hunter Biden. Giuliani himself is reportedly being investigated by the Justice Department, with two of his associates having been arrested.[114][115][116]

In early June 2020, according to reporting by The Washington Post and Fox News, Barr personally ordered that the streets around Lafayette Square, Washington, D.C. should be cleared so that Trump, Barr and other administration officials could stage a photo op in front of St. John's Church. At the time, the streets were occupied by peaceful protesters as part of the George Floyd protests in Washington, D.C. Barr's order resulted in federal law enforcement officers rushing protesters, and employing smoke canisters, pepper balls, riot shields, and batons against the protesters.[117][118]

Barr reacted to the incident by falsely claiming that pepper balls (used by law enforcement on protesters) were not chemical irritants (pepper balls contain pelargonic acid vanillylamide, a chemical irritant; while the product's manufacturer, and the Justice Department, both consider pepper balls a chemical irritant).[119] In August 2020, he invoked qualified immunity before a federal court to protect himself from liability in a lawsuit regarding the Lafayette Square incident.[120]

As Attorney General, Barr sowed doubt about the integrity of the 2020 election.[121] In a September 2020 interview, Barr falsely asserted the Justice Department had indicted a Texas man for fraudulently completing 1,700 mail-in ballots. There was no such indictment, and the matter actually involved a series of errors by election officials during a county election, rather than fraud.[122] Barr also repeated a claim that foreign adversaries could flood the country with counterfeit ballots to disrupt the election, a threat that experts characterized as nearly impossible to execute.[123][124] Senior American intelligence officials have said there was no evidence any foreign powers intended to manipulate mail-in voting.[125] The day after Barr's interview, the Department of Homeland Security issued an intelligence bulletin warning that Russia is using social media and other venues to promote false claims that mail voting will lead to widespread fraud, in order "to undermine public trust in the electoral process."[126] In a subsequent September 2020 interview, Barr stated that mail-in voting meant "we're back in the business of selling and buying votes" including "outright coercion, paying off a postman, here's a few hundred dollars, give me some of your ballots."[127] On October 1, 2020, more than 1,600 former DOJ attorneys signed an open letter stating, "we fear that Attorney General Barr intends to use the DOJ's vast law enforcement powers to undermine our most fundamental democratic value: free and fair elections."[128]

In mid-June 2020, Barr announced that Geoffrey Berman, the court-appointed United States Attorney for the Southern District of New York (SDNY), "is stepping down". Berman's office had been investigating both Trump's personal lawyer Rudy Giuliani and Trump's inaugural committee, as well as conducting a wider investigation into Trump's company and his associates after successfully prosecuting Michael Cohen, another personal lawyer of Trump.[129] CNN also reported that Berman had prosecuted Halkbank despite Barr's attempt to try to avoid charges for the Turkish state-owned bank, after Turkish president Recep Tayyip Erdoğan requested Trump to help drop the charges.[130][131][132][133] Simultaneously, Barr announced that at his recommendation, Trump had

owned bank, after Turkish president Recep Tayyip Erdoğan requested Trump to help drop the charges. [illegible] Simultaneously, Barr announced that at his recommendation, Trump had appointed Craig Carpenito as the interim SDNY U.S. Attorney, in a departure from the tradition of a career prosecutor from SDNY taking the interim role. Also concurrently, Barr said that Trump would nominate Jay Clayton for the permanent role of SDNY U.S. Attorney.[130][131] Within a day, Berman said that he actually had "not resigned, and have no intention of resigning". Berman also said that he only learned of his supposed departure from Barr's public announcement.[131][132] Barr then informed Berman that Trump had fired Berman at Barr's request. Barr did not give a reason for Berman's firing. As a result of the firing, the deputy SDNY U.S. Attorney, Audrey Strauss, would become the interim SDNY U.S. Attorney. With this, Berman agreed to leave. Meanwhile, the Senate indicated it would not confirm Clayton as the permanent replacement.[133][132]

Barr has made commentary about social and religious issues in speeches and television appearances. In an October 2019 address at the University of Notre Dame, Barr asserted that "militant secularists" had been attacking Judeo-Christian values for five decades, stating, "This is not decay. This is organized destruction. Secular forces and their allies have marshaled all the forces of mass communication, popular culture, the entertainment industry, and academia, in an unremitting assault on religion and traditional values."[134] In an August 2020 appearance on Fox News, Barr asserted that Black Lives Matter is "a revolutionary group that is interested in some form of socialism, communism. They're essentially Bolsheviks. Their tactics are fascistic." Barr equated the movement with antifa, characterizing that loose collective as "highly organized" and claiming "the media doesn't take footage of what's happening" at George Floyd protests. He also claimed that liberals are intent on "tearing down the system" and that the Democratic party was only "interested in total victory. It's a secular religion. It's a substitute for a religion."[135] Barr had in June 2020 blamed antifa for orchestrating the George Floyd protests, but analysis by The New York Times found that no one arrested for serious federal crimes at the protests had been linked to antifa.[136] Homeland Security Departmentsecretary Chad Wolf said in September 2020 that he and Barr had discussed arresting leaders of antifa and the Black Lives Matter movement.[137] The Wall Street Journal reported in September 2020 that Barr told federal prosecutors to consider charging violent protestors with plotting to overthrow the US government.[138][139]

Barr has sometimes supported controversial or false statements made by Trump.[140] In an August 2020 interview, Trump claimed that a plane full of "thugs in dark uniforms", implying antifa, had recently flown from one unidentified city to another with the intention of fomenting riots. His claim appeared to be based on months-old social media rumors.[141][142] Two days later, Barr asserted he knew that antifa activists "are flying around the country" and "we are following them."[143]

In September 2020, Barr asserted liberals were "projecting," referring to "all this bullshit about how the president is going to stay in office and seize power? I've never heard of any of that crap. I mean, I'm the attorney general. I would think I would have heard about it." During both the 2016 and 2020 campaigns, Trump was noncommittal when asked if he would accept election results showing he had lost. Days after Barr's remarks, Trump was asked if he would commit to a peaceful transition of power if he lost the 2020 election, to which he replied, "Well, we'll have to see what happens. You know that I've been complaining very strongly about the ballots. And the ballots are a disaster. Get rid of the ballots and you'll have a very peaceful — there won't be a transfer, frankly. There will be a continuation."[144][145][127][146] In the days after his electoral defeat, Trump and his legal team led by Rudy Giuliani pursued an aggressive effort to challenge the results with dozens of lawsuits and numerous false and unsubstantiated assertions revolving around an international communist conspiracy, rigged voting machines and polling place fraud to claim the election had been stolen from Trump.[147][148][149][150][151]

On September 3, 2020, Trump ordered Barr to identify "anarchist jurisdictions," stating in a memorandum, "It is imperative that the federal government review the use of federal funds by jurisdictions that permit anarchy, violence, and destruction in America's cities."[152] Days later, Barr designated New York City, Seattle and Portland, Oregon as such jurisdictions, suggesting they should lose their federal funding because, "We cannot allow federal tax dollars to be wasted when the safety of the citizenry hangs in the balance."[153]

As baseless claims of voting fraud circulated in the aftermath of the 2020 presidential election in which Trump lost,[154] Barr sent a memo to DOJ prosecutors authorizing them to investigate "vote tabulation irregularities" before voting results had been certified, a reversal of long-standing department policy. Richard Pilger, director of the Election Crimes Branch at the DOJ Criminal Division, stepped down from that position in protest hours later.[155] Four days later, sixteen assistant U.S. attorneys of the Branch wrote Barr a letter urging him to rescind the memo because it "thrusts career prosecutors into partisan politics."[156]

Mueller investigation and report

Further information: Special Counsel investigation (2017–2019) and Mueller Report

On January 14, 2019, a day before Barr's confirmation hearing for Attorney General, Barr sent written testimony to the Senate Judiciary Committee regarding the eventual final Mueller report, saying "it is very important that the public and Congress be informed of the results of the special counsel's work ... For that reason, my goal will be to provide as much transparency as I can consistent with the law."[157][158]

Upon taking office, Barr refused calls to recuse himself from overseeing the Mueller investigation, despite his June 2018 memo arguing that the special counsel had no right to investigate Trump.[87][21]

On March 22, 2019, Mueller concluded his special counsel investigation and gave the final report to Barr.[159] On March 24, Barr wrote a four-page letter to Congress describing what he said were the report's principal conclusions: first, that the Special Counsel did not establish conspiracy or coordination between the Trump campaign and Russia's efforts to interfere with the 2016 election; and second, that the Special Counsel made no decision as to whether to prosecute Trump for obstruction of justice, quoting "while this report does not conclude that the President committed a crime, it also does not exonerate him." Barr and Deputy Attorney General Rosenstein themselves concluded that the evidence did not establish obstruction of justice beyond reasonable doubt, and made the decision not to press the charge; "Deputy Attorney General Rod Rosenstein and I have concluded that the evidence developed during the Special Counsel's investigation is not sufficient to establish that the President committed an obstruction-of-justice offense."[160][161][162][163]

On March 25, Mueller reportedly wrote a letter to Barr, as described in the New York Times as "expressing his and his team's concerns that the attorney general had inadequately portrayed their conclusions".[164] In USA Today it was described that Mueller "expressed his differences with Barr".[165]

On March 27, Mueller sent Barr another letter describing his concerns of Barr's letter to Congress and the public on March 24. In it, Mueller complained that the summary "did not fully capture the context, nature, and substance" of the Special Counsel's probe, adding, "There is now public confusion about critical aspects of the results of our investigation. This threatens to undermine a central purpose for which the Department appointed the Special Counsel: to assure full public confidence in the outcome of the investigations".[166] Both before and after the release of Barr's summary, Mueller repeatedly tried to get Barr to release the report's introductions and executive summaries. Mueller's March 27 letter also stated that he had earlier sent a March 25 letter to Barr.[167]

Mueller's March 27 letter prompted Barr to call Mueller on March 28. Barr clarified on the intention of his letter both in his phone call with Mueller and in another letter to Congress that his letter had not been intended to be a summary of the report, but rather a description of the principal findings of the report.[168][166]

On April 9, Barr appeared in a congressional hearing before the House. There, Representative Charlie Crist described media reports that "members of the special counsel's team are frustrated at some level with the limited information included in your March 24 letter, that it does not adequately or accurately portray the [Mueller] report's findings". Crist asked Barr: "Do you know what they are referencing with that?" Barr replied: "No, I don't. I think – I think – I suspect that they probably wanted more put out, but in my view, I was not interested in putting out summaries."[169][170] On April 10, Attorney General Barr appeared before the Senate Appropriations Committee. Senator Chris Van Hollen asked Barr regarding obstruction: "Did Bob Mueller support your conclusion?" Barr replied: "I don't know whether Bob Mueller supported my conclusion."[169][170]

The Department of Justice released a redacted version of the special counsel's report in the morning of April 18, 2019.[171][172] After the release of the full report, fact-checkers and news outlets characterized Barr's initial letter as a deliberate mischaracterization of the Mueller Report and its conclusions.[173][174][175][176][177][178] The New York Times reported instances in which the Barr letter omitted information and quoted sentence fragments out of context in ways that significantly altered the Mueller findings, including:[173]

- A sentence fragment described only one possible motive for Trump to obstruct justice, while the Mueller report listed other possible motives
- Omission of words and a full sentence that twice suggested there was knowing and complicit behavior between the Trump campaign and Russians that stopped short of coordination
- Omission of language that indicated Trump could be subject to indictment after leaving office, to suggest that Trump was cleared in full

According to the Associated Press, Barr misrepresented the report in several ways, saying the report gave no indication that Congress could make a determination on obstruction of justice (the report specifically stated "that Congress may apply obstruction laws") and that "these reports are not supposed to be made public" (when DOJ regulations give the AG wide authority in releasing reports such as this one).[179] Barr falsely claimed in his summary of the report that "the White House fully cooperated with the Special Counsel's investigation."[180] The Washington Post fact-checker described Barr's claim as "astonishing"[174] and PolitiFact said it was "false."[180] In actuality, Trump declined to grant the Special Counsel an in-person interview, and the Special Counsel report characterized Trump's written responses to interview questions as "inadequate".[180] The report also documented numerous instances where Trump tried to either impede or end the Special Counsel investigation, analyzing each in terms of the three factors necessary for a criminal charge of obstruction.[180][181][182][failed verification]

During a press conference, Barr said Mueller's report contained "substantial evidence" that Trump was "frustrated and angered" because of his belief that the "investigation was undermining his presidency, propelled by his political opponents, and fueled by illegal leaks"; however, the report gave no indication that Trump's frustrations with the investigation would mitigate obstructing behavior.[167][183][184] Barr also said it would not be criminal obstruction of justice for a president to instruct a staffer to lie to investigators about the president's actions,[185] and suggested a president could legally terminate an investigation into himself if he was being "falsely accused".[186]

On May 8, 2019, the House Judiciary Committee voted along party lines to hold Barr in contempt of congress for failing to comply with a subpoena which requested the full and unredacted Mueller Report.[187] The matter then fell to the House of Representatives at-large for a contempt of Congress vote.[188] The Justice Department took the position that disclosure of the unredacted Mueller Report would require the department to violate "the law, court rules and court orders" as well as grand jury secrecy rules.[187]

During May 1, 2019, testimony before the Senate Judiciary Committee, Barr stated he accepted Mueller's interpretation of the law that was applied in the Report. However, in a May 30 CBS News interview, Barr said he had applied his own interpretation of the law and took the position that obstruction laws cannot apply to presidents who abuse their official powers to impede an investigation for a corrupt reason. Barr elaborated: "As a matter of law ... we didn't agree with the legal analysis - a lot of the legal analysis in the report. It did not reflect the views of the department".[189][190]

In March 2020, Reggie Walton, a federal district judge originally appointed by President George W. Bush, criticized Barr's characterizations of the Mueller report as "distorted" and "misleading". Walton made his comments while presiding over a lawsuit on whether the Mueller report should be released without redactions. As Walton saw it, Barr's "lack of candor" undermined Barr's "credibility and, in turn, the department's" arguments before the court. Walton had concerns that Barr may have made a "calculated attempt to influence public discourse" in favor of President Trump by establishing "a one-sided narrative" about the report contrary to the report's findings. Walton questioned if the report's redactions were actually "self-serving" to avoid conflict with Barr's statements, and if the Justice Department used "post-hoc rationalizations" to defend Barr. Thus, Walton decided to personally review the redacted material to check if the redactions were justified.[191][192] On September 3, Walton ruled that the redaction of FBI reports of witness interviews was proper.[193] On September 30, he ruled the DOJ had violated federal law by redacting some portions of the Mueller report and ordered them to be released before the November election.[194]

Intervention in cases of Trump associates

In the spring of 2019, Barr reportedly attempted to undermine the conviction of Trump fixer Michael Cohen for campaign finance violations, detailed The New York Times in June 2020. Barr reportedly raised doubts multiple times about the validity of the charges against Cohen, including requesting the Office of Legal Counsel to draft a memo with legal arguments which could have helped Cohen's case. Barr's efforts were reportedly stemmed by the prosecutors of the Southern District of New York. Ultimately, Cohen's conviction was not changed.[195]

In February 2020, President Trump directly referenced Barr in the Justice Department's intercession in recommending a lighter sentence for Trump's associate and old friend Roger Stone. Trump's tweet stated: "Congratulations to Attorney General Bill Barr for taking charge of a case that was totally out of control and perhaps should not have even been brought." Initially, four career prosecutors had recommended that Stone serve a jail term of between seven and nine years. A Trump tweet followed: "Cannot allow this miscarriage of justice!" - after which the Department recommended an unspecified jail term. The Department claimed that this later decision was made without consulting the White House. The prosecutors resigned from the case as a result, with one choosing to leave the Department.[196][197]

Barr affirmed that he had made the decision in the Stone case to change the sentencing memo. Barr said Trump had not asked him to step in, but noted that Trump's tweets and public comments make it impossible for the attorney general to do his job. "I think it's time to stop the tweeting about Department of Justice criminal cases," Barr said.[198][199] Barr's rebuke of Trump's use of Twitter for interference in DOJ matters were seen as a rare departure from his usual unwavering support of the president. Barr's comments followed criticism of the department for its poor handling of the sentencing of Roger Stone after DOJ actions seen as favorable to Trump and his allies.[200][201] Days later, more than 2,000 former DOJ employees signed a letter calling for Barr's resignation.[202] while the Federal Judges Association of over 1,000 federal jurists called an emergency meeting for February 18 to discuss their concerns about the intervention of Trump and Justice Department officials in politically sensitive cases.[203] Despite Barr's rebuke of Trump, days later the president resumed denouncing the prosecutors, the judge, and the jury foreperson in the Stone case, while acknowledging that his comments made Barr's job harder.[204] After granting several pardons, Trump also labeled himself as the country's "chief law enforcement officer", a description usually reserved for the attorney general.[205]

Additionally in February 2020, Barr declared that there would be a review of the criminal case of Michael Flynn, the former National Security Advisor to Trump, who had pled guilty in 2017 to lying to the FBI about his contacts with a Russian ambassador. Flynn later attempted to withdraw his guilty plea, and had not been sentenced yet.[206][207] Barr chose St. Louis' chief federal prosecutor, Jeffrey Jensen, to conduct the review. Jensen himself was nominated by Trump for the St. Louis position.[207] Trump had publicly called for the charges to be dropped against Flynn. In late April or early May, Jensen recommended to Barr that the charges be dropped.[208]

The Justice Department announced in May 2020 that the charges against Flynn would be dropped, with Jensen stating that Barr had agreed with his recommendation.[208] Shortly after, Barr was asked in a media interview if given that Flynn "admitted lying to the FBI. Does the fact remain that he lied?" Barr replied that "people sometimes plead to things that turn out not to be crimes ... the Department of Justice is not persuaded that this was material to any legitimate counterintelligence investigation. So it was not a crime." Barr denied that he was carrying out the president's agenda on this case, stating that he was "doing the law's bidding". He also said that from this case, he wanted to show Americans that "there's only one standard of justice", instead of two standards of justice.[209]

Barr's firing of Geoffrey Berman was widely condemned,[210][211] given that the Southern District of New York was actively pursuing criminal investigations into several persons and companies associated with President Donald Trump and The Trump Organization.[212][213][214][215] Barr's conduct was seen as sacrificing the independence of the Department of Justice to protect Trump and his allies.[216][217][218][219] For these reasons, numerous groups have called for Barr's resignation, including the New York City Bar Association.[220][221][222][223][224]

Ethics complaints

On October 3, 2019, Rep. Bill Pascrell Jr. filed ethics complaints against Barr with the District of Columbia Bar and Virginia Bar associations.[225] On February 14, 2020, Citizens for Responsibility and Ethics in Washington filed an ethics complaint against Barr with the Department of Justice Office of Professional Responsibility and Office of the Inspector General, accusing Barr of "violating [illegible]"[226] On July 23, 2020, [illegible] of 27 [illegible]

several Justice Department rules, guidelines and procedures.[226] On July 22, 2020, a group of 27 legal ethics experts and former government lawyers, including four former presidents of the District of Columbia Bar, also filed a complaint against Barr with the District of Columbia Bar.[227][228] A bar association may take years to investigate an ethics complaint filed against a lawyer.[227] If the District of Columbia Bar concludes that a lawyer has violated any of its Rules of Professional Conduct, that lawyer may be sanctioned in one of several ways, including admonition, suspension, and disbarment.[229]

Halkbank Investigation and the firing of Geoffrey Berman

In June 2019, in violation of Department of Justice policy, Barr pressured Berman, then the U.S. Attorney for the Southern District of New York, to drop an investigation into close allies of Turkish President Recep Tayyip Erdogan involved with the Turkish bank Halkbank.[6] The bank and the individuals in question were alleged to have broken U.S. sanctions on Iran, funnelling billion of dollars to Iran and helping fund its nuclear ambitions.[8] Barr's demand followed a concerted pressure campaign by Erdogan and his close associates, including his son-in-law, Turkish Finance Minister Berat Albayrak, and Mehmet Ali Yalcindag, a Trump family friend involved in developing the Trump towers in Turkey;[8] Erdogan himself personally insisted to President Trump that the Halkbank investigation be shut down on at least two occasions, November 1, 2018 at the G20 summit in Buenos Aires, and on a telephone call on December 14, 2018.[8] According to former National Security Adviser John Bolton, a first-hand witness of many of the events in question, this sequence of events "does look like obstruction of justice."[8] After encountering legal complexities in firing Berman, Barr successfully ousted Berman over the weekend of June 19–20, 2020, citing Berman's behavior in the Halkbank episode as a primary reason for his removal.[8]

Spying claims

Main article: Spygate (conspiracy theory)

In April 2019, Barr stirred controversy by saying he thought "spying did occur" against the Trump 2016 presidential campaign.[230] The remark echoed unsubstantiated claims made by Trump and his supporters that the Trump campaign had been unfairly targeted or spied on by the FBI; Trump described it as an "attempted coup."[231][230][232][233][234] There is no evidence that government officials engaged in "spying" on the Trump campaign.[232] Barr later said he was not sure what spying had occurred and he did clarify what he meant by "spying".[230] He also said he had no evidence of wrong-doing.[230][233] Democrats criticized Barr's statement as "incendiary", saying the statement was intended to please Trump and that the statement lacked credibility following Barr's misrepresentation of the Mueller report in March 2019.[230][232][233] Barr said he thought there was not "any pejorative connotation at all" to the term spying.[235] At the time, Barr said he would not launch an investigation into the origins of the FBI probe into Russian interference in the 2016 election.[232]

FBI officials denied Barr's claims about spying.[236] FBI Director Christopher A. Wray said he was unaware of any illegal surveillance by the FBI; he rejected the description of "spying".[237] Subsequently, Trump retweeted a far-right pundit who said the FBI had "no leadership" and that Wray was "protecting the same gang that tried to overthrow the president in an illegal coup".[238] Trump said Wray's statement was "ridiculous."[238] Former FBI Director James Comey rebutted Barr, saying "The FBI doesn't spy. The FBI investigates."[231]

In May 2019, Barr asserted, "Government power was used to spy on American citizens".[235] Barr did not identify the specific actions prior to the 2016 election that he considered spying.[235]

Origins of the Russia investigation

Main article: Russia investigation origins counter-narrative

Trump–Ukraine scandal

A request by U.S. President Donald Trump(right) to Ukrainian President Volodymyr Zelensky (left) to investigate Joe Biden and his son sparked the scandal.

- Also in May 2019, Barr appointed John Durham, the U.S. attorney in Connecticut, to oversee a DOJ probe into the origins of the FBI investigation into Russian interference.[238] The origins of the probe were already being investigated by the Justice Department's inspector general and by U.S. attorney John Huber, who was appointed in 2018 by Jeff Sessions.[238] Democrats criticized the decision, with Sen. Patrick Leahy saying, "Ordering a 3rd meritless investigation at the request of Trump is beneath the office he holds."[238] Trump ordered the intelligence community to cooperate with Barr's inquiry and granted Barr unprecedented full authority to declassify any intelligence information related to the matter.[239][240][241][242][243]
- In September 2019, Barr was reported to have been contacting foreign governments to ask for help in this inquiry, including personally traveling to the United Kingdom and Italy to seek information. At Barr's request Trump phoned the prime minister of Australia to request his cooperation.[244][245] Barr sought information related to a conspiracy theory that had circulated among Trump allies in conservative media asserting Joseph Mifsud was a Western intelligence operative who was allegedly directed to entrap Trump campaign advisor George Papadopoulos in order to establish a false predicate for the FBI to open an investigation into Russian interference in the 2016 United States elections. On October 2, 2019, Senator Lindsey Graham, a staunch Trump supporter and chairman of the Senate Judiciary Committee, wrote a letter to the leaders of Britain, Australia and Italy, asserting as fact that both Mifsud and Australian diplomat Alexander Downer had been directed to contact Papadopoulos. Joe Hockey, the Australian ambassador to the United States, sharply rejected Graham's characterization of Downer.[246][247] A former Italian government official told The Washington Post in October 2019 that during a meeting the previous month, Italian intelligence services told Barr they had "no connections, no activities, no interference" in the matter; Italian prime minister Giuseppe Conte later affirmed this.[248][249] One British official with knowledge of Barr's requests observed, "it is like nothing we have come across before, they are basically asking, in quite robust terms, for help in doing a hatchet job on their own intelligence services."[250] The Washington Post reported on November 22, 2019 that the Justice Department inspector general had aggressively investigated the allegation that Mifsud had been directed to entrap Papadopoulos, but found it was without merit. The Post also reported the inspector general found the opening of the FBI's Crossfire Hurricane investigation was legally and factually predicated.[251] The Post subsequently reported in December 2019 that Barr disagreed with the inspector general's conclusion that there was adequate evidence for the FBI to open its investigation.[252] The Post also reported in December 2019 that the inspector general asked Durham and several American intelligence agencies if there was evidence of a setup by American intelligence, but they replied there was none.[253]
- On October 24, 2019, two sources told The New York Times that the Durham inquiry had been elevated to a criminal investigation.[254] The Times reported on November 22 that the Justice Department inspector general had made a criminal referral to Durham regarding Kevin Clinesmith, an FBI attorney who had altered an email during the process of acquiring a wiretap warrant renewal on Carter Page, and that referral appeared to be at least part of the reason Durham's investigation was elevated to criminal status.[255] Barr rejected criticism by Democrats in Congress that the transitioned investigation was designed to provide support to Trump during his impeachment inquiry in the Trump–Ukraine scandal.[256][257] On August 14, 2020, Clinesmith pleaded guilty to a felony violation of altering an email used to maintain Foreign Intelligence Surveillance Act (FISA) warrants, having added the phrase "not a 'source'" to the original email.[258][259] Carter Page had a prior operational relationship with the CIA from 2008 to 2013.[260]
- In November 2019, Justice Department Inspector General Michael Horowitz concluded his investigation into the origins of the 2016 Russia probe, concluding that the investigation was not tainted by "political bias or improper motivation", and that the initial information gathered "was sufficient to predicate the investigation" given the "low threshold" for opening an investigation. Barr rejected the conclusions of the report, declaring that the investigation was started "on the thinnest of suspicions that, in [his] view, were insufficient to justify the steps taken." This also contradicted FBI director Chris Wray, who interpreted Horowitz's findings as the investigation having "appropriate predication and authorization".[261][262]
- In December 2019, Barr claimed in an interview with NBC News that the Russia investigation was "completely baseless" and said he believed the FBI's investigation may have been conducted in "bad faith".[263] Barr also refused to refute the debunked conspiracy theory of Ukrainian interference in the 2016 election during the interview.[263][264] In a subsequent interview on Fox News, Barr asserted, "the president bore the burden of probably one of the greatest conspiracy theories — baseless conspiracy theories — in American political history," despite the recent inspector general report debunking several conspiracy theories Trump and his allies had promoted.[265][266][267][268]
- In January 2020, Barr prohibited the start of counterintelligence investigations related to presidential campaigns unless both the Attorney General and head of the FBI signed off on those investigations.[269]
- Barr defended Trump's April 2020 firing of intelligence community inspector general Michael K. Atkinson. Atkinson was the inspector general who sought to get the Trump administration to the disclose the Ukraine scandal whistleblower complaint to Congress. In defense of the firing, Barr allegedly made numerous false claims about Atkinson's actions during his tenure.[270]
- On May 18, 2020, Barr commented on prior investigations into potential collusion between Trump and Russia stating: "What happened to the president in the 2016 election and throughout the first two years of his administration was abhorrent…it was a grave injustice and it was unprecedented in American history…the law enforcement and intelligence apparatus of this country were involved in advancing a false and utterly baseless Russian collusion narrative against this president".[5][6]
- Barr hinted in June 2020 that the Durham investigation would produce results regarding the "complete collapse of the Russiagate scandal" before the end of the summer.[271] In July he told a Congressional committee that the results of the investigation could be released before the election, despite an informal Justice Department rule limiting release of such information.[272] In August, Trump in public comments appeared to be getting impatient for the investigation to produce more prosecutions and suggesting that his opinion of Barr will be negatively influenced if it doesn't.[272] As summer ended there were reports that Barr was pressing for the Durham investigation to release its report. Colleagues of Durham have said they believe he is under pressure to produce something before the election. A top aide in the investigation quietly resigned on September 10; she gave no reason, but colleagues said she was concerned about political pressure from Barr.[273] On September 18, 2020, four chairs of Democratic committees asked the DOJ inspector general to open an emergency investigation because "We are concerned by indications that Attorney General Barr might depart from longstanding DOJ principles to take public action related to U.S. Attorney Durham's investigation that could impact the presidential election," adding that Barr's public comments may have already violated that policy.[274]
- On November 2, 2020, the day before the presidential election, New York magazine reported that:
…there has been no evidence found, after 18 months of investigation, to support Barr's claims that Trump was targeted by politically biased Obama officials to prevent his election. (The probe remains ongoing.) In fact, the sources said, the Durham investigation has so far uncovered no evidence of any wrongdoing by Biden or Barack Obama, or that they were even involved with the Russia investigation. There 'was no evidence … not even remotely … indicating Obama or Biden did anything wrong,' as one person put it.[275]

Criticism

On December 11, 2019, former Attorney General Eric Holder, who had served under President Obama, wrote an op-ed in The Washington Post claiming William Barr is "unfit to be attorney general"[276]for his "naked partisan[ship]", "attempts to vilify the president's critics", his attacks on the inspector general and his comments on ongoing investigations.[276]

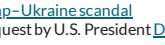
In a December 2019 opinion piece, former FBI director, CIA director and federal judge William Webster wrote of "a dire threat to the rule of law in the country I love." Webster asserted that "the integrity of the institutions that protect our civil order are, tragically, under assault," writing that "aspersions cast upon [FBI employees] by the president and my longtime friend, Attorney General William P. Barr, are troubling in the extreme."[277] Since 2005, Webster had served as the chair of the Homeland Security Advisory Council.

Actions Barr took in the Roger Stone case led to an outcry from a bipartisan group of more than 2,000 former DOJ employees, who called on Barr to resign.[278]

Sixty-five law professors and faculty from George Washington University Law School, Barr's alma mater, wrote in a June 2020 letter that he had "failed to fulfill his oath of office to 'support and defend the Constitution of the United States.'" They wrote that Barr's actions as attorney general "have undermined the rule of law, breached constitutional norms, and damaged the integrity and traditional independence of his office and of the Department of Justice."[279]

During a June 2020 House Judiciary Committee testimony, Donald Ayer, a former deputy attorney general for whom Barr worked during the George H. W. Bush presidency, asserted that Barr "poses the greatest threat, in my lifetime, to our rule of law and to public trust in it".[280] Three months later, Ayer claimed Barr "is on a mission to install the president as an autocrat."[281]

Political positions


Barr with Senator Mitt Romney in February 2019

A lifelong Republican, Barr takes an expansive view of executive powers and supports "law and order" policies.[282] Considered an establishment Republican at the time of his confirmation, Barr gained a reputation as someone loyal to Trump and his policies during his second tenure as Attorney General.[282] His efforts to support the sitting president politically during his DOJ office tenure have been viewed as the most strenuous since those of another law-and-order Attorney General, John N. Mitchell.[283]

Immigration

As Deputy Attorney General, Barr – together with others at the Department of Justice – successfully led the effort for the withdrawal of a proposed Department of Health and Human Services rule that would have allowed people with HIV/AIDS into the United States.[284] He also advocated the use of Guantanamo Bay to prevent Haitian refugees and HIV infected individuals from claiming asylum in the United States.[61] According to Vox in December 2018, Barr supported an aggressive "law and order" agenda on immigration as Attorney General in the Bush Administration.[285]

Death penalty

Barr supports the death penalty, arguing that it reduces crime. He advocated a Bush-backed bill that would have expanded the types of crime that could be punished by execution. In a 1991 op-ed in The New York Times, Barr argued that death row inmates' ability to challenge their sentences should be limited to avoid cases dragging on for years: "This lack of finality devastates the criminal justice system. It diminishes the deterrent effect of state criminal laws, saps state prosecutorial resources and continually reopens the wounds of victims and survivors."[286][287]

On July 25, 2019, Barr announced that the United States federal government would resume its use of capital punishment under his leadership, after nearly two decades without an execution. Barr ordered the Department of Justice to adopt a new lethal injection protocol, consisting of a single drug (pentobarbital), and ordered execution dates to be set for five inmates in December 2019 and January 2020.[288]

On July 14, 2020, Daniel Lewis Lee became the first death row inmate executed by the federal government since 2003.[289] Since then, six other death row inmates have been executed, two in July 2020, two in August 2020, and another two in September 2020.

Social issues

Abortion

In 1991, Barr said he believed the framers of the Constitution did not originally intend to create a right to abortion, that Roe v. Wade was thus wrongly decided, and that abortion should be a "legitimate issue for state legislators".[33] In contrast, Barr said during his 1991 confirmation hearings that Roe was "the law of the land" and that he did not have "fixed or settled views" on the subject.[34]

Religion

In a 1995 article for The Catholic Lawyer, Barr said the American government is "predicated precisely" on the Judeo-Christian system.[290]:3 Barr grapples with the challenge of representing Catholicism "in an increasingly militant, secular age."[290]:1 Barr asserts that there are three ways secularists use "law as a legal weapon."[290]:8 The first method is through elimination of traditional moral norms through legislation and litigation; Barr cites the elimination of the barriers to divorce and the Supreme Court's decision in Roe v. Wade as examples of this method.[290]:8 The second is the

promotion of moral relativism through the passage of laws that dissolve moral consensus and enforce neutrality.[290]:8 Barr draws attention to a 1987 case, Gay Rights Coalition v. Georgetown University, which "compel[s] Georgetown University to treat homosexual activist groups like any other student group."[290]:9 The third method is the use of law directly against religion; as an example of this method, Barr cites efforts to use the Establishment Clause to exclude religiously motivated citizens from the public square.[290]:9 Concluding, Barr states the need to "restructure education and take advantage of existing tax deductions for charitable institutions to promote Catholic education."[290]:12
In an October 2020 op-ed in The Washington Times, Barr argued in favor of religion in public life, stating that "the imperative of protecting religious freedom ... reflects the Framers' belief that religion was indispensable to sustaining our free system of government."[291]
Drug policy
Barr supports a federal ban on marijuana.[292] However, he has stated that the discrepancy between federal and state law is suboptimal, and that if a uniform federal ban on marijuana could not be achieved, then he would support the STATES Act on marijuana legalization.[292] "I think it's a mistake to back off on marijuana ... However, if we want a federal approach, if we want states to have their own laws, then let's get there and let's get there the right way." Barr also said DOJ policy should align with congressional legislation.[293]
2016 election
Barr donated $55,000 to a political action committee that backed Jeb Bush during the 2016 Republican Party presidential primaries and $2,700 to Donald Trump during the general election campaign.[294]
Executive powers
Barr is a proponent of the unitary executive theory, which holds that the President has broad executive powers.[3][121][295][296][297] Prior to joining the Trump administration, he argued that the president has "complete authority to start or stop a law enforcement proceeding."[3]
Race relations
In June 2020, amid the George Floyd protests against racism and police brutality, Barr said he rejected the view "that the law enforcement system is systemically racist."[298] In a CNN news interview in September 2020, Barr denied that systemic racism plays a role in police shootings of unarmed African American men and called such shootings by white police officers "very rare."[299]
China
In July 2020, Barr condemned large American tech companies, such as Google, Microsoft, Yahoo, and Apple,[300] and Hollywood studios, accusing them of "kowtowing" to the Chinese Communist Party for the sake of profits. He said that "Hollywood now regularly censors its own movies to appease the Chinese Communist Party, the world's most powerful violator of human rights".[301]
2020 election
Disputing President Trump, on 1 December 2020, Barr stated that the Justice Department "has not uncovered evidence of widespread voter fraud that would change the outcome of the 2020 presidential election".[302]
Personal life
Barr has been married to Christine Moynihan Barr since 1973.[13] She holds a master's degree in library science, and together they have three daughters:[303] Mary Barr Daly, Patricia Barr Straughn,[304] and Margaret (Meg) Barr.[11] Their eldest daughter, Mary, born 1977/1978, was a senior Justice Department official who oversaw the department's anti-opioid and addiction efforts; Patricia, born 1981/1982, was counsel for the House Agriculture Committee; and Meg, born 1984/1985, is a former Washington prosecutor and cancer survivor (of recurrent Hodgkin's lymphoma), was counsel for Republican Senator Mike Braun of Indiana.[11]
In February 2019, as their father awaited Senate confirmation for his appointment as Attorney General, Mary left her post at the Department of Justice as the Trump Administration's point woman on the opioid crisis and took a position at the Financial Crimes Enforcement Network (FinCEN), the Treasury Department's financial crimes unit.[305] Her husband, however, continued to work in the Justice Department's National Security Division.[306] Around the same time Mary left the Department of Justice, Tyler McGaughey, the husband of her youngest sister, left the U.S. Attorney's office in Alexandria, Virginia, to join the White House Counsel's office.[305]
Barr is an avid bagpiper. He began playing at age eight and has performed competitively in Scotland with a major American pipe band. At one time, Barr was a member of the City of Washington Pipe Band.[39]
Barr is the brother of Stephen Barr, a physics professor at the University of Delaware.[12]
Barr and Robert Mueller have known each other since the 1980s and are said to be good friends. Mueller attended the weddings of two of Barr's daughters, and their wives attend Bible study together.[307]

1994 LaRouche PAC article : "William Barr, the Bush Clique, and Their Friends at Dope, Inc. "

- https://larouchepub.com/eiw/public/1994/eirv21n42-19941021/eirv21n42-19941021_029-william_barr_the_bush_clique_and.pdf / 1994-10-21-executive-intel-review-v21-n42-william-barr-and-the-bush-clique.pdf / https://drive.google.com/open?id=1AWBKDbuPh2i6NFqJ276OcZMk3lAJ7Y7u

Two members of George Bush's covert action team, former U.S.Attorney General William Barr and Lt.Col.Oliver North, both plunged into Virginia politics this year.Barr was head of the governor's commission to abolish parole, proposing to make prison inmates slaves under private corpo rate control.North was promoted for the U.S.Senate as a "law and order" candidate.

Oliver North became world famous in the 1980s as a smuggling manager in the Iran-Contra drug-running and gun running affairs.

William Barr, though little known to the public, is a top lawyer for the same criminal covert action team.He was also Attorney General in the Bush administration, when Lyndon LaRouche, then a political prisoner, submitted six volumes of new evidence proving that the government always knew he was innocent, evidence which the Justice Department and the courts refused even to look at.We shall report here on Barr's unusual career, protecting the political and financial managers of the world narcotics trade.

[...]

Blocking the BCCI investigation

*Executives of the **Bank of Credit and Commerce International (BCCI)** were indicted in October 1988, on charges they conspired with cocaine traffickers to launder millions of dollars in narcotics profits. Forty U.S. and foreign banks, evidently complicit in the international drug trade, were subpoenaed to produce records before a Tampa, Florida grand jury.A majority of those subpoenaed had earlier been named in EIR's best-selling book, Dope, Inc., as among those lead ing British and allied Wall Street banks in the business of washing dope money.*

BCCI was further exposed as an instrument for the trans actions of Oliver North and his associates, who had been criminally employed by Vice President George Bush in the Iran and Contra operations.

But George Bush was elected U.S.President just weeks after the BCCI indictments.In December 1989, Bush ordered the U.S.bombing and invasion of Panama, killing thousands. Panamanian Gen. Manuel Noriega, who knew the dirtiest drug-pushing secrets of BCCI, Bush, and North, was kidnapped and imprisoned in Florida.

Under the leadership of Attorney General Richard Thornburgh and William Barr, who was then an official in the Bush Justice Department, the BCCI investigations were stopped.Plea bargains protected the world's top drug bank ers, and protected President Bush and his criminal employee North.In exchange for leniency, officials of BCCI agreed to help Bush prosecute General Noriega for alleged drug trafficking.

Barr, who had a startling private relationship to BCCI, and who had drawn up the spurious legal rationale for the attack on Panama, was then appointed U.S.Attorney Gener al.He reached a final settlement of the BCCI case, foreclosing all further investigations of the BCCI-linked drug apparatus.

Initiation into the Bush team

We shall now trace Barr's route to political power, ob serving his early initiation into the Bush covert action machine.

Barr reportedly decided, while still a high school student, that he would one day be the head of the Central Intelligence Agency.He joined the CIA's internship program while he was a Columbia University graduate student in 1971, and went to work full time for the CIA when he left Columbia in 1973.

During his first two years with the Agency, Barr worked for the intelligence directorate in the China department. He would soon cross paths with George Bush, who went to Beijing in 1974 as Secretary of State Henry Kissinger's liaison chief to the Communist Chinese government.

*Barr was already in the CIA's legal office in 1976 when Bush became Director of Central Intelligence. Bush promptly brought back assassinations manager **Theodore***

Barr was already in the CIA's legal office in 1976 when Bush became Director of Central Intelligence. Bush promptly brought back assassinations manager ***Theodore Shackley*** *as associate deputy CIA director for covert operations, along with Shackley's deputy* ***Thomas Clines****. Shackley had been the head of the CIA Miami Station in the early 1960s, following the disastrous invasion of Cuba. Shackley and Clines had assembled the Cuban irregulars, who had been trained as assassins and smugglers, into a permanent covert action force. Men like* ***Felix Rodriguez*** *had served under Shackley as he ran the opium-growing projects in Laos and the Operation Phoenix mass murder project in Vietnam.*

Shackley's Cubans had turned up as the 1972 Watergate burglars, paid by George Bush's Texas political machine. Shackley would later serve as George Bush's speechwriter in Bush's campaign against Ronald Reagan for the 1980 Republican presidential nomination. When Bush got in as vice president instead, Felix Rodriguez and Oliver North together would supervise the Contras' drug running, out of George Bush's vice presidential office.

William Barr joined this team as it matured under George Bush's hand at the CIA. Barr prepared briefs for Bush's stonewalling responses to congressional probes, led by Sen. Frank Church and Rep. Otis that attempted to bring the Bush and Kissinger covert under the rule of American law.

George Bush made one extraordinary change at the Agency which was never publicized beyond the ranks of the intelligence community. Bush committed the United States to share with Great Britain's secret service the fruits of the U.S. satellite surveillance throughout the world. This action dismayed many in the American service who has seen traitors such as ***Kim Philby*** *as the very heart of the British Crown's leadership grouping But Bush's official intelligence policy change reflected his deep-seated ties to Britain, from his father, Prescott Bush's, banking partnership with Averell Harriman in British geopolitical schemes from the 1920s to the 1950s. This Anglo-Bush faction of the intelligence community would soon fashion BCCI into a global rime instrument.*

Jimmy Carter won the 1976 presidential election, and refused Bush's request to stay Jr as CIA director. Barr was one of the many CIA men who left the Agency after Bush's departure in 1977. Ted Shackley led the Association of Former Intelligence Officers and cdrralled these men into a private intelligence clique around George Bush.

On George Bush's recommendation, the 27-year-old Barr was hired in 1977 as clerk to Federal Circuit Court Judge Malcolm Wilkey. During the 1960s, Wilkey had been general counsel to a copper-mining conglomerate operating in Chile under the political management of Prescott Bush's banking partner, Spruile Braden. Salvador Allende became Chile's President and confiscated Braden's huge El Teniente mine; Allende was soon overthrown and murdered in 1973.

In 1976, Chilean opposition leader Orlando Letelier had been blown up by a car bomb in Washington, D.C. Though the U.S. media generally blamed the Chilean secret police for the killing, it is well established that then-CIA director George Bush had penetrated the Chilean agency and had squelched all U.S. police investigation into the murder. Barr's new boss, Malcolm Wilkey, later served as George Bush's ambassador to Uruguay and arranged cool-out payments to Chileans who might have fingered Bush's CIA for the Letelier bombing.

Later, in 1992, Chile's Supreme Court decided that Presi dent Bush could be legally ordered to appear in Chile, to testify on the role of the CIA in the Letelier case; Chilean generals claimed they have been wrongly blamed for the killing, and that Bush's CIA ordered the 1976 bombing. The U.S. chief law enforcement officer, Attorney General William Barr, did not respond. But what he did, was to hire Malcolm Wilkey as a special prosecutor to intimidate the Democratic Congress in the House Post Office affair.

On Judge Wilkey's recommendation, Barr started in Oc tober 1978 as an associate of the Washington, D.C. law firm Shaw, Pittman, Potts, and Trowbridge. Barr immediately took up the representation of B.F. Saul II, a Maryland real estate magnate who only a few months earlier had become chairman of Financial General Bankshares. In his later testimony to the Senate hearings on his confirmation for Justice Department posts, Barr revealed that he had represented B.F. Saul beginning November 1978, and in 1979, 1981, and 1982.

This was an extraordinarily important stretch of time in his client's life. During this period, Financial General was taken over in stages by BCCI, a London-based bank with Arab and other principal investors tied to Anglo-American intelligence. Saul's Financial General Bankshares changed its name to First American Bankshares, and functioned as the Maryland, District of Columbia, and Virginia arm of the British spook-bank BCCI.

What did Barr really know about BCCI?

A decade later, the worldwide scandal would begin with the British taking regulatory action against BCCI in London. British newspapers called BCCI a front for the CIA. The scandal culminated in the prosecution of the elderly Clark Clifford, who at a certain point replaced Saul as chairman of First American.

In America, much of the scandal centered around the "secret" ownership of First American by the BCCI group of investors, in violation of U.S. banking laws requi[ri]ng transparency of bank control. William Barr told the Senate that the government could not have prosecuted BCCI earl[i]er, because it had not discovered this secret BCCI involvement in First American until a [d]eca[d]e after the fact. [B]ut to w[h]om was it secret? Had it really been a secret to Attorney General Barr?

Regardie's magazine of May 1990, quote[d] Cliffor[d] that B.F. Saul "had occasion to go to London, maybe more than once. He had occasion to go to the Middle East, the Persian Gulf countries. I remember later on his talking with me, an[d] he said, 'I have looked into the reputation, particularly o[f] e leader of the group, of His Excellency Sheikh Kamal Adham' [chief of Saudi intelligence]. And he said, 'It's [d]ifficult to recall a time when I have heard such universal commen[d]at[i]on for an international businessman. I hear it in Lon[d]on. [I]'ve heard the most commendatory comments. I've hear[d] a[bo]ut him in the countries of the Persian Gulf. I have not hear[d] one whisper of criticism against this man.' And he said, 'I feel perfectly comfortable about this group, headed by this man, coming in and taking over our banks.' "

Attorney William Bar'r s client du[ri]ng the takeover, B.F. Saul, tried to put a different spin on the matter. He told Regardie's: "I never did go to the Middle East to meet him. I think I met Kamal Adham in Washington once. I don't think I ever met him in London. I met him for 20 minutes. I did not try to make a judgment whether they should own a bank. That was something for the Federal Reserve to do. All I was concerned about was whether this was in the best interest of the shareholders, and I thought it was " (emphasis added).

Barr told the Senate that he had represented B.F. Saul through March 1982. By this time, the BCCI takeover of First American was completed. In April 1982, Clifford re placed B.F. Saul as First American's chairman, although Saul stayed on the board. In May 1982, Barr ceased being a private attorney, and joined the White House legal staff, becoming an intimate collaborator of Vice President George Bush's counsel C. Boyden Gray.

Bush's covert action apparatus

Barr was officially back in government at the precise time that the Bush team was consolidating extraordinary power, and the new BCCI arrangements would be useful for [th]eir global offensive.

On May 14, 1982, Vice President Bush's position as chief of all U.S. covert action was formalized in a secret memorandum (signed "for the President" by Ronald Reagan's National Security Adviser William P. Clark an[d] declassified during the congressional Iran-Contra hearings). The memo explained that "National Security Decision Direc tive 3, Crisis Management, establishes the Special Situation Group (SSG), chaired by the Vice President. The SSG is charged. . .with formulating plans in

anticipation of crises. "

The memo also announced the birth of the Standing Crisis Pre-Planning Group (CPPG),to work as an intelligence-gathering agency for Bush and his SSG. This new subordinate group ,consisting of representatives of Vice President Bush, National Security Council (NSC) staff members, the CIA, the military, and the State Department, was to "meet periodically in the White House Situation Room. " They were to identify areas of potential crisis and "present . . . plans and policy options to the SSG " under Chairman Bush. And they were to provide to Bush and his assistants,"as crises develop, alternative plans," "action/options," and "coordinated implementation plans" to resolve the "crises. "

Finally,the subordinate group was to give to Chairman Bush ami his assistants "recommended security,cover,and media plans that will enhance the likelihood of successful execution. " It was announced that the CPPG would meet for the first time on May 20,1982, and that agencies were to "provide the name of their CPPG representative to Oliver North,NSC staff'; North would henceforth function under Bush's direction in the smuggling of drugs and weapons. Felix Rodriguez,North's cohort in the massive cocaine smuggling of the Contras, began operating through George Bush's office in August 1982, and appeared in Bush's office no later than March 17,1983.

Barr left the administration in September 1983, returning to Shaw,Pittman. Two years later,the illegal shipment of missiles to the Khomeini regime in Iran was planned, officially, at an Aug. 8,1985 meeting of Vice President Bush with the National Security Planning Group in the residence section of the White House.

The work of Bush and his cadres bore fruit in what be came known,years later,as the first transactions of the Iran scandal. The London Financial Times on July 29,1991 described the way BCCI had become a "magnet for covert operations in the 1980s":

- *"BCCI Used by Iran to Buy U.S. Missiles*
- *"London branches of BCCI were used to finance the export of U. S. anti-tank missiles during [Iran's] war with Iraq.*
- *"The export of the TOW missiles together with other weapons in 1985 was arranged by an Indian-born British arms dealer who figured prominently in the Irangate arms-for-hostages scandal and was wound up in February of this year.*
- *"The man at the center of the deal was Mr. Ben Banerjee, a London-based businessman, who boasted of his links with Col. Oliver North,the disgraced former White House official at the center of Irangate. Mr. Banerjee died of a heart attack in May 1990.*
- *"The . . . $ 18. 8 m[illion] deal in 1985 . . . was disguised as a shipment of' I ,250 lift trucks'. . . .*
- *"Mr. Arthur Liman, former chief counsel of the Senate's Iran-Contra committee . . . told the FinanciaL Times that Mr. Adnan Khashoggi,the Saudi arms dealer who was one of the main figures in the scandal, made payments from his ac counts at the BCCIto the Enterprise Fund [of Oliver North] . . .*
- *"The story of how Mr. Ba erjee . . . arranged for the shipment of arms . . . provides a revealing insight into the way in which [BCCI] became a ragnet for covert operations in the 1980s. . . . A U. S. investigator said . . . BCCI could have been involved in the begin ing and the end of the TOW missile transactions.*
- *According to the document ,some of the weapons were shipped through Poland. "*

Barr in power

As a member of the Bush team since 1976, Barr was the first Assistant Attorney GeJeral installed at the Justice Department after Bush's 1988 election to the presidency. He was chief of the Office of Legal Counsel. During one late night session,Barr drafted the brief justifying the kidnapping of Panama's General Noriega; he also supplied legal pretexts for the bombing and invasion of Iraq. Barr further developed the astonishing legal theory,which came to be known as the Thornburgh Doctrine, that the FBI could kidnap people in foreign countries, even against those countries' laws and regardless of U . S. obligations under international law. Some congressmen were reportedly angry with Barr for keeping confidential the text of the brief upon which this legal doctrine was based.

In May 1990, Barr was elevated to Deputy Attorney Gen eral, was in charge of the day-to-day management of the Justice Department. As a Bush insider, Barr gradually took over much of the power of his nominal boss,the discredited Attorney General Thornburgh. In August 1991, Thornburgh resigned; Barr became acting Attorney General and was soon officially nominated for the post.

In his Senate confirmation hearings, Barr was asked by Sen. Strom Thurmond (R- S.C.), "What are your goals during your tenure as Attorney General?"

In reply, Barr first made it clear that an attack on the leadership of the world narcotics trade, or any top-down approach to the drug problem, was strictly ruled out: "Obvi ously, drugs has to continue as a top priority. In my view, it is a long-term struggle. We are talking here about the cold war. We are not talking about Desert Storm. This problem took decades to come about, and it is going to take decades to cure. But part of my responsibility and my priority will be to keep the pressure on, so we continue to make progress."

What progress? The money-laundering bankers, the co vert-action drug smugglers, and the corrupters of the security and military services, are all untouchable by law enforcement, because they are "gentlemen and men of distinction" for Barr [...].

What did Barr have in mind, when he told the senators that he would be "attacking criminal organizations"? It was not the Dope, Inc. apparatus, which criminally employs and feeds the drugs to America's youth. Rather,Barr would tar get the street-level criminals. He was crudely hyping up vic tims of violent crime, speaking of "street gangs, many of which are involved in drug trafficking themselves,and I think there are some initiatives we can take in that area. We are focusing . . . more on those kinds of organizations like the Cripps and the Bloods. You may have read about the FBI anti-gang squad that was established in Washington, and I think you will be seeing more of that nationwide.

"[Then there is] the problem of career criminals, armed career criminals. We have strong firearm statutes . . . and we are seeking some additional statutes and we realize that a very high proportion of violent crime is committed by a very small group, a cohort of hardened criminals, career criminals,and we can use the firearm laws to apprehend these individuals and put them away in federal prison for long periods of time."

How the dope trade was saved

Just before Bush's 1988 election to the presidency, as the Iran-Contra scandals continued to boil,executives of BCCI were indicted for conspiracy to launder millions in cocaine profits.

Recently a former high-level U.S. government official with intimate knowledge of the BCCI case told EIR that the Reagan-Bush-era CIA had initiated the bank's trafficking in drugs and arms. This source said that the CIA had assured BCCI associates that these practices were in accord with U.S. national security. Here was the operation of the Bush "Special Situation" executive, briefly thrown into public view with the BCCI indictments,

The records of at least 40 banks were subpoenaed in connection with BCCI's drug-money laundering, including Bank of America, which helped finance the founding of BCCI's start-up company, and at one point owned 20% of BCCI. Customs agents scrutinized Bank of America accounts used by people linked to Roberto Alagino, a

of BCCI's start-up company, and at one point owned 30% of BCCI. Customs agents scrutinized Bank of America accounts used by people linked to Roberto Alcaino, a Colombian arrested in 1988 in New York on cocaine-smuggling charges. Alcaino was named in BCCI indictments as "a major trafficker" of cocaine to New York, Los Angeles, and Chicago. Executives of BCCI allegedly helped him launder his profits.

Other major banks targeted by the federal probe included:

- ***Marine Midland Bank**, since 1978 owned by the Hong kong and Shanghai Banking Corp., so notorious since the British Opium Wars of the nineteenth century as a drug bank, that the New York State Banking Commission blocked its buyout of Marine Midland;*
- ***Republic National Bank**, the New York City flagship firm of Israeli mafia figure Edmond Safra, whose banking empire stretches from the eastern Mediterranean to Ibero-America;*
- ***Bank of Nova Scotia**, the Canadian banking giant, which was identified in EIR's Dope, Inc. as the institution that opened up the Caribbean as an offshore money-laundering center,in collusion with the **Meyer Lansky** syndicate;*
- *Another Florida bank subpoenaed, **Dadeland Bank**, was owned by a group of anti-Noriega Panamanians.*

But these investigations were sabotaged and shut down. And in December 1991, Attorney General Barr announced that BCCI had entered a guilty plea to certain racketeering charges, in return for which the U.S. Justice Department agreed to drop all other federal and state charges that might be brought against BCCI entities in the future. In the plea bargain arrangement,BCCI forfeited all of its estimated $550 million assets in the United States, and there were some minor jail sentences. But the global drug apparatus, which had for a time been publicly challenged, was safe.

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https://www.muckrock.com/news/archives/2019/apr/16/cia-barr-crest/

A memo uncovered in the Central Intelligence Agency's declassified archives shows that during his time at the CIA's Office of Legislative Council, current Attorney General William P. Barr drafted letters calling for the end of the moratorium on destroying records imposed on the Agency ahead of the Church Committee hearings.

https://www.commondreams.org/views/2019/01/16/william-barrs-deep-state-resume-cover-ups-covert-ops-and-pardons

2019-01-11-city-journal-org-if-confirmed-ag-barr-reputation.pdf (https://www.city-journal.org/william-barr-attorney-general-nominee)

What would William Barr do if he is confirmed as attorney general and confronted with a repetition of the 1973 Saturday Night Massacre, when Richard Nixon tried to save his presidency by ordering his attorney general to fire the special prosecutor investigating him? Would he be willing to shut down special counsel Robert Mueller's investigation?

After meeting with him earlier this week, Senator Lindsey Graham said that Barr had assured him that he would let Mueller complete his inquiry into Russia's election-meddling. That view was widely echoed by those who know Barr well. "The man I know would never be swayed by undue political pressure—from editorial boards, the Congress, or a president," said Paul Cappuccio, a former executive vice president and general counsel of Time Warner. "He'll be his own man," said Michael Kelly, who worked with Barr when he came to GTE as general counsel and executive vice president. "Anyone who knows my father knows he's the wrong man to try to bully," said Margaret "Meg" Barr, at 34 the youngest of his three daughters, all lawyers with public-service jobs.

Barr was well regarded during his first stint as attorney general under President George H. W. Bush between 1991 and 1993, but critics argue that his overly expansive view of executive power and defense of Trump in a 19-page unsolicited memo to the Justice Department and to Trump's lawyers raise questions about his fitness for the job. Many insist that Barr should recuse himself from overseeing the Mueller inquiry as a condition of confirmation, though Deputy Attorney General Rod Rosenstein has said that the memo had "no impact" on the Mueller probe.

*In our interviews last month in Washington, Barr refused to discuss either his confirmation hearings, which begin on January 15, or his only meeting with Trump, in December, which one White House official described as a "candid" 90-minute encounter, though Trump reportedly did not ask how Barr would handle the Mueller inquiry. During a wide-ranging interview and at a dinner with his family, Barr did discuss his personal and professional life. **He and Christine, a retired librarian, have been married 45 years. His eldest daughter, Mary, 41, is a senior Justice Department official who now oversees the department's anti-opioid and addiction efforts in Rosenstein's office**; Patricia, 37, is counsel for the House Agriculture Committee; and Meg, a former Washington prosecutor and cancer survivor, is now counsel for Republican Senator Mike Braun of Indiana.*

Barr, 68, clearly wants the attorney general job. "Our institutions matter," he said, without elaboration. He does not seem to fear his confirmation turning into an ugly, partisan brawl that could sully his reputation. Meg's cancer battle took care of that. "If it's not about my daughter's being mortally ill, it's nothing," he said softly in the living room of the new house in McLean, Virginia, that he helped design. "Meg's illness changed our family. It changed me."

*The second of four sons, William Pelham Barr grew up on New York's Upper West Side. **His father became headmaster at Dalton, the elite New York prep school, where his college-educated mother taught English to foreign students.** Barr's values were ingrained early in life—conservative politics and Catholicism—and have never wavered. At Corpus Christi, his Roman Catholic elementary school, he supported Richard Nixon. (A nun took him aside and promised to pray for him.) Even in high school at Horace Mann, the most competitive nonsectarian (but largely Jewish) prep school in New York, Barr stood out. "He wanted to be respected as a conservative intellectual more than liked," recalled Doug Schoen, the Democratic pollster and a fellow student there. "He made it known that he took his intellectual inspiration not from Allard Lowenstein, the Pied Piper of the anti-war movement, but William Buckley." This predilection for early decisions applied to avocations as well. At age eight, Barr took up the bagpipes, and has since played competitively in Scotland and at family events.*

Barr told his high school guidance counselor that he wanted to lead the Central Intelligence Agency, said Robert Kimmitt, a Republican friend of 40 years who has

also held several senior government posts. *While most aspiring analysts studied Russian during the Cold War,* **Barr got a master's degree at Columbia in Chinese—"the other enemy," as he put it**. *Between 1973 and 1977, he worked as a CIA analyst while attending night law school at George Washington.* **As a junior specialist in China, he occasionally was asked to backstop CIA director, George H.W. Bush, a former U.S. ambassador to China, at congressional hearings.** *The connection proved useful.*

Barr's faith and commitment to service have taken priority, his family told me, whether he was working in government or in the private sector as executive vice president and general counsel of Verizon. He has long served on the board of the Archdiocese's Inner-City Scholarship Fund in New York, raising money for Catholic schools and causes. **Friends told me that for many years he has paid the tuition of some 18 students a year at a parochial school in New York, costing him about $50,000 a year.**

Perhaps the pivotal day in the Barr's life was July 17, 2012, when he and Meg learned that her Hodgkin's lymphoma had relapsed. Though 92 percent of Hodgkin's cases are cured, only 17 percent of patients whose cancer returns survive. "It was the worst day of my life," Meg told me. They reacted with resolve, not panic, reading studies, questioning researchers, and examining the results of experimental treatments. "We were like two lawyers preparing a legal brief," she recalled.

They also prayed. Barr asked the nuns at convents he helps support in Illinois and Virginia to pray for his daughter. He also sought help from a rabbi who sent Meg a book of prayers. His own father, though a Catholic convert, was born a Jew. "So I wanted to cover all the bases," he said.

When they chose Dana Farber Cancer Institute for Meg's chemo and stem-cell transplant, Barr suspended work at his law firm, Kirkland & Ellis, and moved with his wife to Boston to be close to her. "He never missed a chemo or radiation treatment, a test or a scan," she said, calling him her "cancer concierge." When Meg needed to be isolated after her stem-cell transplant, Barr rented a house in Scituate, outside Boston, where they walked on the beach and read books together. They talked about a future neither was certain she would have. "Those three months were best and worst of times," she recalled.

Against the odds, Meg recovered. "The hardest part of my illness was accepting the randomness of it, the fact that you can't control the outcome," she said. "Both my father and I tend to be control freaks."

Last December, days after President Trump announced his intention to nominate Barr as attorney general, he walked Meg down the aisle of St. Peter's, their local parish church. He even persuaded the priests to let bagpipes play at the wedding ceremony.

In 1991, after only two days before the Senate Judiciary Committee, Barr's nomination as attorney general was approved unanimously, by voice vote. He won praise for his candor from Judiciary Committee chairman Joe Biden for admitting that he believed the Constitution had not created a right to abortion, and that abortion, though now settled law since Roe v. Wade, should be a "legitimate issue for state legislators."

His second confirmation hearing will surely prove more contentious, especially given Barr's longstanding endorsement of broad presidential powers. **When Barr headed the Justice Department's Office of Legal Counsel in 1989, he deemed legal the invasion of Panama and the arrest of longtime U.S. ally Manuel Noriega and argued that the Bush administration could arrest terrorists and drug traffickers overseas, even in violation of international law. As deputy attorney general in 1990, he advised that President Bush could legally wage war against Iraq, without Congress's approval, though he encouraged Bush to seek a congressional resolution of support to strengthen his political position. Barr is therefore likely to support the issuing of presidential pardons to loyalists. Long a champion of tough-on-crime policies and of tighter immigration controls, he is also likely to embrace former attorney general Jeff Sessions's agenda on both, perhaps even including the legality of separating parents from children at the U.S. southern border.**

But it is the Mueller investigation that will draw the sharpest inquiry. **Barr's memo argues that a president cannot be accused of obstructing justice unless he destroys evidence, urges a witness to lie, or deliberately takes other actions "to block or hinder an investigation." He has criticized Mueller for appointing so many Democratic investigators for his probe. In a 2017 Washington Post op-ed, he argued that Trump "made the right call" by firing James Comey as head of the FBI, and last year he told the New York Times that there was more justification to investigate Hillary Clinton's role in the sale of uranium to Russia than Trump's supposed collusion with Russia.** *Senator Dianne Feinstein has called such views "troubling." Senate Minority Leader Chuck Schumer has vowed to use the confirmation hearings to force Barr to pledge that Mueller's inquiry will proceed unimpeded, and that Congress and the public will see the final Mueller report.*

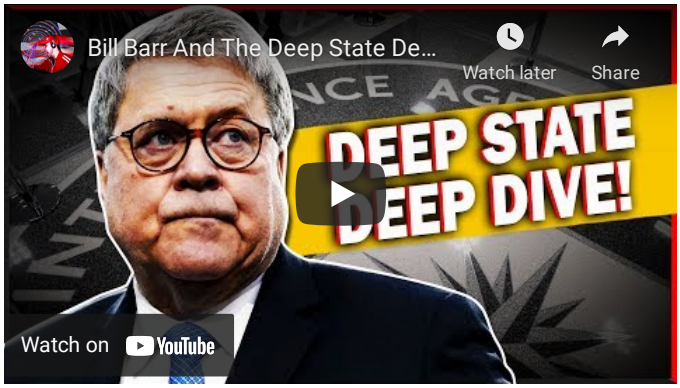
In his highly qualified, unenthusiastic endorsement of Barr, Benjamin Wittes, editor-in-chief of Lawfare and a senior fellow at the Brookings Institution, called the nominee "as good as we're likely to get," arguing that "all the features that make Barr attractive also make him scary." But Wittes is also encouraged by reports that Barr and Mueller have known and respected one another for years. Senator Graham, one of Trump's most ardent champions, also stressed Barr's respect for Mueller, who was assistant attorney general for the Justice Department's criminal division under Barr.

"Trump may believe that Barr will do his bidding, but that's wrong," said Schoen. "Notwithstanding his memo, what Barr's history tells you is that he won't bend or fold for Trump. His personal and professional record suggest that he will do what he considers legally right and ethical."

In a recent episode of The Lawfare Podcast, former U.S. Attorney Preet Bharara argued that Barr's decisions as attorney general, if he is confirmed, will either burnish or tarnish what is now a sterling reputation. Barr, in sum, has little to gain, but much to lose. That may well be his best qualification for the job.

Good video - Jason Bermas

YouTube video below - [HV003F][GDrive]

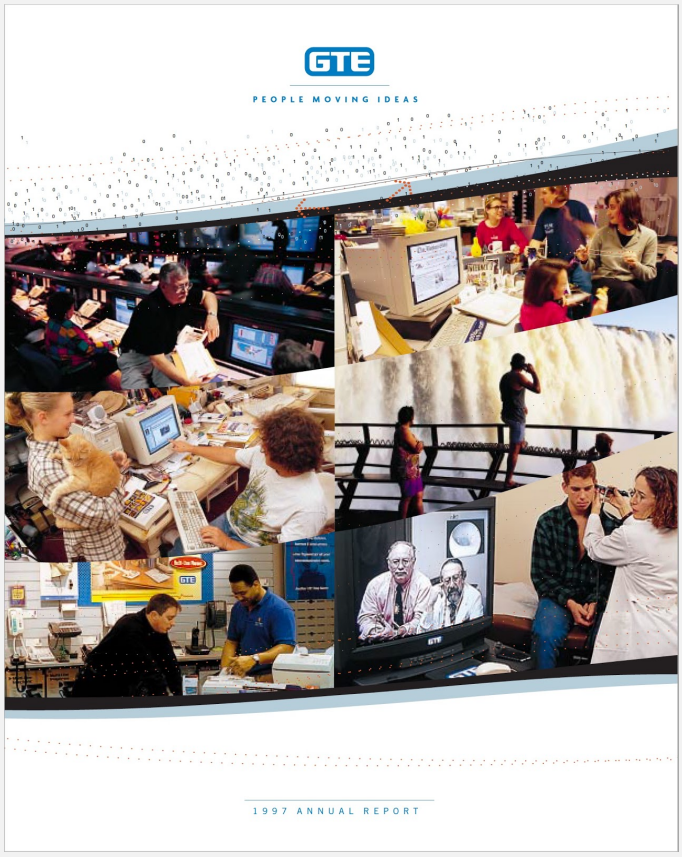


Year 1997 at GTE (summary provided mid-1998) - Conrades listed

1998 Report - Annual Summary for GTE for the year 1997

Source - [HC004R][GDrive]

- [**William Pelham Barr (born 1950)**] Executive Vice President – Government and Regulatory Advocacy and General Counsel
- [**George Henry Conrades (born 1939)**], Executive Vice President of GTE and President, GTE Internetworking



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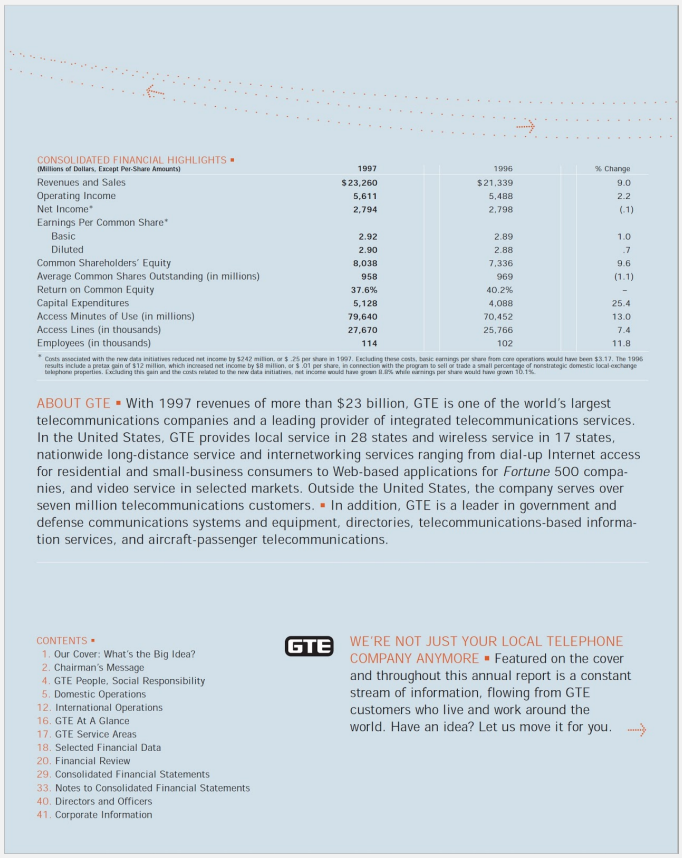

CONSOLIDATED FINANCIAL HIGHLIGHTS ▪

(Millions of Dollars, Except Per-Share Amounts)	1997	1996	% Change
Revenues and Sales	$23,260	$21,339	9.0
Operating Income	5,611	5,488	2.2
Net Income*	2,794	2,798	(.1)
Earnings Per Common Share*			
Basic	2.92	2.89	1.0
Diluted	2.90	2.88	.7
Common Shareholders' Equity	8,038	7,336	9.6
Average Common Shares Outstanding (in millions)	958	969	(1.1)
Return on Common Equity	37.6%	40.2%	–
Capital Expenditures	5,128	4,088	25.4
Access Minutes of Use (in millions)	79,640	70,452	13.0
Access Lines (in thousands)	27,670	25,766	7.4
Employees (in thousands)	114	102	11.8

* Costs associated with the new data initiatives reduced net income by $242 million, or $ .25 per share in 1997. Excluding these costs, basic earnings per share from core operations would have been $3.17. The 1996 results include a pretax gain of $12 million, which increased net income by $8 million, or $ .01 per share, in connection with the program to sell or trade a small percentage of nonstrategic domestic local-exchange telephone properties. Excluding this gain and the costs related to the new data initiatives, net income would have grown 8.8% while earnings per share would have grown 10.1%.

ABOUT GTE ▪ With 1997 revenues of more than $23 billion, GTE is one of the world's largest telecommunications companies and a leading provider of integrated telecommunications services. In the United States, GTE provides local service in 28 states and wireless service in 17 states, nationwide long-distance service and internetworking services ranging from dial-up Internet access for residential and small-business consumers to Web-based applications for *Fortune* 500 companies, and video service in selected markets. Outside the United States, the company serves over seven million telecommunications customers. ▪ In addition, GTE is a leader in government and defense communications systems and equipment, directories, telecommunications-based information services, and aircraft-passenger telecommunications.

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GTE

WE'RE NOT JUST YOUR LOCAL TELEPHONE COMPANY ANYMORE ▪ Featured on the cover and throughout this annual report is a constant stream of information, flowing from GTE customers who live and work around the world. Have an idea? Let us move it for you.

[HC004U][GDrive]

PRODUCTIVE ▪ GTE provides over 13,000 Boeing Company employees with dial-up Internet-access service and offers a fast integrated services digital network (ISDN) system to promote telecommuting. We also helped to configure and install a private Central Office telephone switching system. GTE is bidding on customizing a wireless headset system that will allow jet aircraft assemblers to communicate with suppliers – and each other – across the factory floor more efficiently, boosting productivity and quality in its plants in Washington and Kansas.

INTERACTIVE ▪ GTE enables Purdue University in West Lafayette, Indiana, to use a special PictureTel™ system to conduct interactive distance learning, videolinking faculty and students at other campuses to increase office hours and the quality of education. GTE also meets other Purdue communications needs from basic phone service to trial ADSL Internet access and a managed switching facility on the campus, which serves 36,000 students and 12,000 faculty and staff.

9

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Ignacio Santillana, Senior Vice President, International Business Development

[HC004V][GDrive]

1998 - (May 10)

Full newspaper page - [HN01EU][GDrive]

wow - MCi-Worldcom eventually failed due to a scandal, and were bought by Verizon anyways! Mentioned - **William Pelham Barr (born 1950)**

See **MCI WorldCom Corporation** .

The Daily Spectrum (Saint George, Utah) · 10 May 1998, Sun · Page 32 | FIND | CLIP | PRINT/SAVE | SHARE | Save

GTE seeks to block WorldCom-MCI merger

■ Company says deal would crimp competition

By JEANNINE AVERSA
The Associated Press

WASHINGTON — GTE Corp. is suing in an effort to stop the big WorldCom-MCI merger, contending it would crimp competition and possibly raise prices in the Internet and long-distance businesses.

GTE, which itself made an unsuccessful bid for MCI last November, says the merger would violate antitrust laws. MCI says GTE is just worried about competition.

The lawsuit, filed late Thursday in federal court, raises the same points GTE has made to the Justice Department and other regulatory bodies that are investigating the $37 billion deal.

GTE general counsel William Barr said Friday the lawsuit was "a firewall," filed in case regulators do not stop the merger.

"While we believe that the enforcement agencies are going to do the right thing ... at the end of the day GTE has to be in the position to defend its interests if our concerns are not fully addressed," he said.

Under the merger, MCI-WorldCom would control between 40 percent and 60 percent of Internet traffic flowing on "backbones" in the United States, Barr said. GTE accounts for between 8 percent and 10 percent of such Internet backbone traffic, Barr said.

Internet backbones are high capacity networks that carry Internet and other data traffic.

"The merger will give MCI-WorldCom a stranglehold over the burgeoning Internet and the incentive and ability to stifle competition from all other rival Internet backbone operators, including GTE," the company said in its suit.

WorldCom and MCI reject rivals' allegations that the merger would lead to higher pricing in the Internet and long-distance businesses, MCI spokesman Frank Walter said.

"We think GTE's motive is clearly to keep us from competing more aggressively in the local phone market where GTE has a virtual monopoly," said Walter. "It is disingenuous for them to take the mantle of pro-competition when they preside over one of the largest telephone monopolies in the country."

Walter also said there are 40 major companies, including AT&T, Sprint and IBM, that provide Internet backbone services.

GTE's lawsuit also alleges that the merger will "substantially lessen competition in the highly concentrated wholesale and retail markets for long-distance services."

MCI is the nation's second-largest long-distance company and WorldCom is the fourth largest. WorldCom accounts for 40 percent of long-distance service sold to other companies at wholesale rates, GTE's lawsuit says.

[HN01EV][GDrive]

Housatonic

Dr Jordan Jay Baruch (born 1923)

See Thomas Paul Rona (born 1923)

National Academy of Engineering

[HI001Q][GDrive]

Dr. Baruch has made significant contributions to acoustic engineering, the early application of computers to medical and educational practice and management, and teaching technological innovation at Harvard Graduate School of Business Administration and Dartmouth College.

Baruch graduated from James Madison High School, Brooklyn, in 1940, and attended Brooklyn College for the next two-and-one-half years. After three years in the Army during WWII, he enrolled as a junior at Massachusetts Institute of Technology (MIT). Dr. Baruch received his Sc.D. from MIT in 1950 and was on the MIT faculty from 1948 to 1971. From 1970 to 1974, he was a faculty member at the Harvard Graduate School of Business Administration, and from 1974 to 1977, he was professor of business administration at the Tuck School of Business and professor of engineering at the Thayer School of Engineering, both at Dartmouth College.

Baruch was a founding partner and vice president of Bolt Beranek and Newman ([**BBN Technologies, Incorporated**]). Although he left the company from 1966 to 1968 to become department general manager of the MEDINET Department of General Electric, he remained a director of BBN until 1977. He was a also a Founding Member and director of Boston Broadcasters Inc. (Channel 5, Boston) until he joined the Carter administration in 1977 as assistant secretary of commerce for science and technology, a post he held until 1981.

He was elected to membership in NAE in 1974 and became an NAE Fellow and Senior Scholar in 2001. Dr. Baruch is also a fellow of the Acoustical Society of America, IEEE, American Academy of Arts and Sciences, American Association for the Advancement of Science, and New York Academy of Science.

Dr. Baruch holds 12 patents, is the author of numerous articles, has worked in Africa, India, Indonesia, and Jordan, and has been honored by China and Israel for his work in and with those countries. He was a founder of the Trans-Atlantic Institute of the American Jewish Committee and the US/Israel Binational Industrial Research and Development Foundation and a member of the American Boards of Ben Gurion University and the Israel Oceanic and Limnological Research Foundation.

National Academy of Engineering - Dr Jordan Baruch by BY LEO L. BERANEK

Source - [HI001P][GDrive]

JORDAN JAY BARUCH was born August 21, 1923, in New York City and grew up in Brooklyn. Both his father and grandfather were in the wholesale fur business until the collapse of that business in the 1940s. Jordan's father then sought other opportunities, becoming a stockbroker in a small Wall Street firm. Jordan already knew how to read when he entered Midwood Elementary School (PS 99) and graduated eighth grade as an honor student in January 1936. At James Madison High School he participated in the after-school activities of the Microscope club.

One of his projects on hydroponics was selected to be exhibited in the New York World's fair. A talk of his, based on another high school project, "On the Action of Ions on Cardiac Muscles—a Home Made Kymograph," was named "Best of the Session" by the Science Congress of the American Institute.

The kymograph was made up of parts that Jordan bought from junk pushcarts. During these years, Jordan was an enthusiastic Boy Scout, becoming an eagle Scout. Later in life he was a Boy Scout leader. In 1940 he entered Brooklyn College. In his freshman physics class, Jordan's professor announced there would be gender-segregated seating in alphabetical order. Jordan Baruch, the first male, sat next to Rhoda Wasserman, the last female. Jordan invited Rhoda to the BioMed Society Dance. Four years later, in June 1944, when he was a private first class in the U.S. Army, they were married. Their marriage lasted 67 years.

In december 1942, at the age of 19, Jordan enlisted in the U.S. Army, dropping out of Brooklyn College in his junior year. He was offered a place in the Army Specialized Training Program (ASTP) at the Massachusetts Institute of Technology.

He enjoyed MIT until the program came to an end. Fortunately, the participants were assured they would be welcomed back at the end of the war. Jordan did reenter MIT in february 1946, immediately after he was discharged from the army. When the ASTP came to an end, Jordan was assigned to the Army Signal Corps. He served in both the European and Pacific theaters of operation.

When the war ended in Europe, he was sent to Japan. He became very seasick on the long ocean voyage. He wrote home to his young wife Rhoda that, when he returned, he would have nothing in the house that moved — neither a rocking chair nor a porch glider. It is surprising that after his discharge in February

he returned, he would have nothing in the house that moved— neither a rocking chair nor a porch glider. It is surprising that after his discharge in February 1946, he became an avid sailor, first learning in a tech dinghy and later owning a sequence of sailboats, each bigger than the previous.

He taught many of his friends to sail, as well as his children and grandchildren. Favorite vacations involved charters in the Caribbean with friends and "bumping into" old Cambridge friends on some sparsely populated island. Jordan's prize war story was during the Battle of the Bulge. One of the repeater amplifiers along the line failed. He drove at top speed to the nearest army supply depot to obtain a replacement, only to learn that they did not have the part. A Marine supply depot was not far away.

Jordan went there, learned they had the part, but they refused to give it to him without a written request. He threatened and, by hook or by crook, got the part. Communications were quickly restored to general Patton's headquarters to announce the end of the war in Europe. Jordan received a medal. There were other brave exploits, and Jordan ended his service with a box of medals and the rank of technical sergeant.

One of his most memorable and nightmarish experiences in the war was to witness the liberation of the Buchenwald Concentration Camp in 1945. After the war, under the G.I. Bill, Jordan attended MIT as an electrical engineering student, beginning in his junior year. He received his bachelor's and master's degrees in 1948. For his master's thesis he designed a high-speed polariscope for analysis of dynamic stresses, while a co-op student at general radio company.

When he took Professor Leo Beranek's course, "Acoustics 101," in the Electrical Engineering Department, he became very interested in the subject and asked so many questions during class that he had to be told to give the others a chance. With his master's degree, his G.I. Bill money would run out and he was prepared, reluctantly, to leave MIT. Jordan was forever grateful for Beranek's help.

Professor Beranek encouraged him to go for his doctorate and arranged for him to get the Armstrong cork fellowship and other assistance. He received scholarships in the MiT acoustics laboratory during the next two years. Jordan had already taken most of the courses in the electrical engineering department, so he chose to register jointly in three departments: electrical engineering, mechanical engineering, and physics.

He became Beranek's first doctoral student. His thesis work was in the Acoustics laboratory, where he set up a novel means for measuring the sound isolation of building partitions. defense of his thesis exam involved a committee with members from all three departments. one committee member said that Jordan was a stellar candidate and answered questions in all three fields, not responding incorrectly to any. Jordan was appointed an assistant professor of electrical engineering at MIT the next year. During that year he invented what became known as the Baruch-lang loudspeaker, which he patented.

It was a corner loudspeaker, with 4-inch loudspeakers in a vented half-a-cubic-foot box. It received much acclaim, and several thousand were sold. The firm Bolt and Beranek was formed in 1948 and was subsequently renamed Bolt Beranek and Newman([BBN Technologies, Incorporated]). The business grew rapidly, and in the summer of 1951 Jordan became a full-time employee. He seemed to know everything and was quick to offer help to anyone on an eclectic array of subjects, from health and gardening to automobiles and electronics equipment.

He assisted in carrying out a number of consulting jobs. This led to his invention of a structure for reducing noise in ventilating ducts, called SOUNDSTREAM. This patented design was licensed to two manufacturers. In 1952, Jordan and Sam Labate were admitted into the partnership, although the firm's name was not changed. In December 1953, with 39 employees, the company was incorporated.

Bolt was named chairman, Beranek president, Labate vice president, and Baruch treasurer. government contracts started to pour in from the U.S. Army, Navy, National Institutes of Health (NIH), National Science Foundation, and U.S. Department of Defense. [BBN Technologies, Incorporated] grew quickly. The U.S. government decided to make the BBN contracts uniform and set up a contract conference at BBN. Government procurement regulations involved a number of volumes that occupied a 3-foot shelf. Jordan, with his photographic memory, sat down and read the entire set. When the contract negotiators arrived, they found him to be better informed than they were.

At the end of the second day, the government people came out of the meeting obviously overwhelmed by Jordan's proficiency. Soon BBN had more government contracts than any other firm in New England. In 1961 it became apparent that BBN needed cash for expansion. As treasurer, Jordan worked with the auditors to produce a prospectus. An investment banker had to be selected, and Jordan and Beranek interviewed several candidates.

On June 27, [BBN Technologies, Incorporated] made its initial public offering with Hemphill Noyes as the winner, taking BBN public at $12 a share. While at BBN, Jordan was a consultant to NIH. In addition to acoustical consulting for the new clinical center, he designed a colorimeter for monitoring blood during cardiac surgery and developed a novel lighting system used in neurosurgery. He designed other instruments for the medical fields.

His friend at NIH and director of the clinical center, dr. Jack Mazur, persuaded him to work on a computer system for medical records. Jordan took an interest in the new computer field that BBN was pioneering and that was called "time sharing." With time sharing, many operators could use a single computer, sharing data as needed.

Baruch soon envisioned this as a means of bringing computer technology to bear on medical practice. In 1962, contracts were obtained from NIH and the American Hospital Association to install a demonstration computer system for the information processing needs of Massachusetts General Hospital (MGH) in Boston. As Professor Octo Barnett, director of computer science at MGH, has written: "BBN's time- sharing technology was at the cutting edge of computer science, and its use at MGH was one of the first demonstrations of the potential power of remote access to a real, online data base."

With Baruch as parent, the system allowed nurses and doctors to create and access patients' records at a number of hospital stations, all connected to a central station. When Jordan was installed as a regent of the National Library of Medicine, he was introduced as the father of medical informatics. Hospital use of computers looked so promising that in 1966 General Electric set up a new department to merchandise hospital computer systems, called MEDINET. G.E. hired Baruch as department general manager, and he left [BBN Technologies, Incorporated] to go to the new building in Watertown, Massachusetts.

Unfortunately, after a period of time, G.E. mandated that a digital equipment corporation computer could no longer be used (like the one in use at MGH). Instead, Jordan was required to adapt a midrange G.E. Computer System for the project. This was a computer that G.E. had been unable to sell. Jordan and the staff members he had hired tried desperately to modify it in a reasonable length of time but found it impossible. Baruch developed, specifically for MediNeT, a computer programming language called FILECOMP. In 1968, Jordan left General Electric.

From 1968 to 1970, Jordan was president of Educom, a consortium of 100 colleges and universities. Educom's goal was to help institutions adopt networking, computation, and storage in the four principal college and university application areas: administrative systems, teaching and learning, research, and community services. Jordan was particularly interested in a system for sharing library resources, using microfiche technology. The universities were not ready to enter this cooperative venture.

In 1970 he resigned so that he could work full time as an independent consultant. From 1971 to 1974. Baruch was a lecturer in business administration at

the Harvard School of Business administration, where he could develop his ideas about the management of technological innovation. His success there led him to dartmouth college, where he held a joint professorship at the Tuck School of Business and the Thayer School of Engineering from 1974 to 1977. In 1963, Jordan had joined a group of 30 leading citizens from the Boston area who applied for a license to operate a television station on Channel 5 in Boston.

They were successful, and the station went on the air in 1972. It was featured in a two-page article in the New York Times as "probably the best television station in the U.S." In 1982 the station was sold to MetroMedia, and Jordan's share in the receipts made him well off. Afterward, he joined with his longtime friends Isaac Auerbach and William Poorvu, as well as Howard Stevenson from the Harvard Business School, to form an investment firm—The Baupost Group. Under the leadership of Seth Klarman, it has been highly successful. Jordan remained a partner until he died.

While Jordan was at dartmouth, he was invited, along with other experts from around the country, by Under Secretary of commerce Sidney Harman to participate in a seminar in Washington, D.C., to discuss the federal government's role in fostering innovation. As Harman relates in his memoir, Mind Your Own Business (crown Business, 2003), Baruch stood out above the others, and Harman invited him to join the carter administration as assistant secretary of commerce for science and technology. He moved to D.C. in 1977. in his new position, Baruch aimed to foster innovations and competitiveness in the United States.

He led efforts to modernize the Patent and Trademark Office, to transfer and expand the Bureau of Standards into the National Institute for Standards and Technology, and to examine industrial innovation. While at the commerce department, he worked with eminent industry leaders to establish the commerce Technical advisory Board, and they provided President Carter with an "Innovation Study" useful for that and subsequent administrations. Early in the administration, Baruch went on an institute of Electrical and Electronics Engineers (IEEE) mission to china to visit business fairs and factories.

When, shortly after that trip, the United States and China were about to sign an agreement about transfer of science and technology, Baruch voiced his concern that without management reform there would be little advancement in productivity and the standard of living of the chinese people. His concern was based on observations he and his colleagues had made on the IEEE visit. The Chinese were very responsive and followed Baruch's recommendation to establish a school of management jointly with the United States.

Baruch was authorized to help hire staff, including american professors and case writers for the new school in Dalien, China. It was the first example of management education in the People's Republic of China. Professor Bill Dill, first dean of the Faculty at the National Center at Dalien University of Technology, as it came to be called, wrote of how the programs had grown, "built solidly on the conceptual foundation and guidelines for implementation that Jordan provided" (letter to Rhoda Baruch, Nov. 29, 2011).

He recalled that Jordan had negotiated for a computer from control data corporation and for a Xerox copier to be provided for the Dalien Campus, the first such machines for that part of the world. In writing about Baruch's 1979 mission to China, Bruce Merrifield, who followed Jordan in the same position at the Commerce Department, referred to it as a "critical turning point for the country" (letter to Rhoda Baruch, Nov. 18, 2011).

Merrifield wrote that "most of China's leaders are graduates of that school." Another major achievement of Baruch while at the commerce department was the establishment of the Binational research and development foundation (Bird-f) in Israel, which Merrifield stated "may have been of even greater significance" than the Chinese management school. In addition to being a primary engine for the remarkable Israeli economy, Bird-f became the model for similar programs in India, Chile, Finland, Ireland, and Iceland. Much of this was done under Merrifield, but the initial model was Baruch's.

Merrifield wrote: "BIRD-F has now become the primary model which incrementally will be assisting some 80% of the world's 7 billion population, living in underdeveloped countries, to develop their economies as well! What a legacy!" after leaving commerce, Jordan established a consulting firm in Washington, D.C., called Jordan Baruch Associates. The firm has served industry and government in the planning, management, and integration of strategy and technology. Jordan also served on the Board of Regents of the National Library of Medicine.

He was involved in efforts to develop industry strategies and to increase innovation in India, Indonesia, and Israel. Baruch told of a humorous incident: "I was involved in starting another management school in the country Jordan despite the fact that 'Baruch' is a Hebrew word well known in the arab world. At the end of the conference program, crown Prince Hassan asked me, 'dr. Baruch, this has been wonderful. What can we do for you?' I responded, 'I'd like the school named for me.'

There was dead silence. Before anyone's heart could stop I said, 'yes, I would like it called the Jordan Institute.' Crown Prince Hassan just smiled and said, 'done.' and that is what it is called." Baruch was associated with many organizations. In 1956 he was awarded the outstanding young electrical engineer award from eta Kappa Nu. He was a fellow of the acoustical Society of America, the IEEE, the American Academy of Arts and Sciences, the American Association for the Advancement of Science, and the New York Academy of Sciences.

His greatest interest was the National Academy of Engineering (NAE) to which he was elected in 1974 and served on 24 committees after 1982. Of these he chaired the following: General Engineering Peer committee, Subcommittee on Educational Systems, Board on Telecommunications/computer applications, and Panel on Techniques for Affordable Housing. In 2007 he received the NAE's Arthur M. Bueche Award for "the promotion of innovation and managing of science and technology nationally and internationally, thereby enhancing the economy of the U.S. and developing nations." finally, Jordan worked in Africa, India, Indonesia, and Jordan, and he was honored by China and Israel.

He founded the Transatlantic Institute of the American Jewish Committee and was a member of the American Boards of Ben-gurion University and the Israel Oceanographic and Limnological Research Foundation. In 2005 he established at MIT the Jordan J. Baruch fund to support undergraduates conducting research for the Undergraduate research opportunities Program in the School of engineering and the School of Science. Recipients of the fund are known as Baruch Undergraduate researchers.

Jordan held 12 patents and authored many articles. He coauthored the book The Innovation Explosion (free Press, 1997) with James Brian Quinn and Karen A. Zien. He served as president of his synagogue, Adas Israel, in Washington, D.C., and was appreciated as a member of his neighborhood book club in chevy chase, Maryland. He was also a member of the Cosmos Club for many years.

Jordan was a loving husband and partner for 67 years to Rhoda Wasserman Baruch; an active and caring father to Roberta Baruch (Bethesda Maryland), Marjory Baruch (Fayetteville, New York), and Lawrence Baruch (Parsippany, New Jersey). He passed on to his grandchildren a joy for life, a curiosity for understanding, a passion for tinkering, and an appreciation of art, science, and nature, while endowing them with a sense of responsibility for family and the world. His grandchildren (Mina, Solomon, and Sabrina Hsiang; Rebecca, Max, and Julia Ostrov; and Benjamin, Alexander, and Rachel Baruch) treasured their relationship with grandpa.

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ZNOTES-baugh-chemical-corp

http://dla.library.upenn.edu/dla/pacscl/ead.html?fq=subject_topic_facet%3A%22Fertilizers%22&id=PACSCL_HML_1980250

"Baugh & Sons Company was founded in 1855 and was one of the oldest and largest fertilizer manufacturers in the United States during the late nineteenth to mid-twentieth centuries. Baugh manufactured a variety of ground bone-based agricultural fertilizers that were tailored for a wide range of crops. They later expanded into the manufacture of animal charcoal, glue, and chemicals. Baugh's corporate offices were located in Philadelphia, Pennsylvania. By the early twentieth century Baugh products were widely available from a network of independently owned farm supply stores. In its yearly almanacs they suggested the appropriate brand of Baugh fertilizer for specific crops. Baugh Chemical Company was purchased by Kerr-McGee Oil Industries, Incorporated in 1963. Kerr-McGee ceased to exist as an independent entity in 2006 when purchased by Houston, Texas-based Anadarko Petroleum Corporation. "

https://amhistory.si.edu/archives/AC1098.html

https://books.google.com/books?id=SyQ_AQAAMAAJ&pg=PA463&lpg=PA463&dq=baugh+chemical&source=bl&ots=10ksaaNtV_&sig=ACfU3U0bSPByQL27ob3JyoGrQ5wOHLdo2A&hl=en&sa=X&ved=2ahUKEwjK8NbthcLiAhVQOK0KHaN1DM04ChDoATAIegQIBxAB#v=onepage&q=baugh%20chemical&f=false

Report on Baugh and Sons -

https://books.google.com/books?id=8XoZAAAAYAAJ&pg=PA214&lpg=PA214&dq=baugh+chemical&source=bl&ots=e51iiGedzd&sig=ACfU3U2imidIujxR4g2jXCjpRSZ6rku6wQ&hl=en&sa=X&ved=2ahUKEwjK8NbthcLiAhVQOK0KHaN1DM04ChDoATAAegQIBhAB#v=onepage&q=baugh%20chemical&f=false

Daniel Baugh - See

https://hiddencityphila.org/2016/05/secrets-of-a-house-of-cadavers-reanimated-as-condos/

"

The wealthy Daniel Baugh, a chemical magnate who devoted his time to civic and philanthropic ventures, took notice of the building after the dental school vacated. Baugh was at various points of his life president of Girard Bank, director of the Delaware Insurance Company, director of the Commercial Museum, president of the School of Design for Women (now Moore College of Art), director of the Philadelphia Bourse, director of the Belt Line Railroad Company, president of the Sanitarium Association, president of the Philadelphia Art Club, president of the Philadelphia Art Federation, and president of the Archeology and Paleontology Department at the University of Pennsylvania.

On top of his myriad responsibilities and commitments, Baugh became involved with Jefferson Medical College, with an underlying interest in becoming chairman of the school's board of trustees. Around 1909, Baugh inspected the Jefferson's brand new building at 10th and Walnut and found the Department of Anatomy to be severely inadequate and outdated. He set his sights on providing a new home for the department that would be rivaled by no other medical school.

The former Pennsylvania College of Dental Surgery building was available, close enough to Jefferson's campus, and was already laid out for educational use. In April 1910 Baugh had Jefferson purchase the place for $48,000, taking out a substantial mortgage. One month later Baugh paid off the mortgage with his own money. Five months later he donated another $40,000 for another overhaul, this time designed by architect John Torrey Windrim, which included an addition to the building fitted with the most up-to-date technology and equipment.

Daniel Baugh Institute, 1911 | Source: The Daniel Baugh Institute of Anatomy of The Jefferson Medical College of Philadelphia, Dedication Exercises

Work on the building was complete in September 1911. By the time the new school opened Baugh had other philanthropists donating to the project. He used his own funds to purchase all the furnishings and equipment. His contributions to the school on 11th Street are said to have totaled over $200,000. Naturally, Jefferson Medical College renamed the Department of Anatomy to the Daniel Baugh Institute of Anatomy of the Jefferson College of Philadelphia (certainly an early example of this practice, which dominates the ed-med sector today). A dedication ceremony took place on September 26th, 1911, showcasing the outstanding, 29,350 square foot facility that included a cadaver room in the basement that could hold 350 bodies, a library, a small anatomical museum, multiple laboratories, and two surgical amphitheaters."

https://www.phillyhistory.org/blog/index.php/2013/04/1601-locust-street-and-the-perfect-square/

Daniel Baugh - 1836 to 1921

Daniel Baugh bio -

https://books.google.com/books?id=-UcVAAAAYAAJ&pg=PA379&lpg=PA379&dq=daniel+baugh+chemical&source=bl&ots=KA6NmFyBQC&sig=ACfU3U3_X5YxQfQTpRyJVWt-meZ19hMxng&hl=en&sa=X&ved=2ahUKEwjxr_uZiMLiAhVNo1kKHRN2Cks4ChDoATACegQICRAB#v=onepage&q=daniel%20baugh%20chemical&f=false

https://www.ourfamtree.org/descend.php/Benjamin-Harris-Brewster-Sr/320322

Elizabeth Wills Baugh

http://www.pennock.ws/surnames/fam/fam68669.html

CHILDREN

Name: Elizabeth Willis Baugh Born: at: Married: 22 OCT 1894 at: Philadelphia, Pa. Died: at: Spouses: Benjamin Harris Jr. Brewster

https://www.ancestry.com/1940-census/usa/Maryland/Elizabeth-B-Brewster_57sxwg

https://books.google.com/books?id=YHYZAQAAIAAJ&pg=PA108&lpg=PA108&dq=elizabeth+baugh+brewster&source=bl&ots=4S6aPvPGOR&sig=ACfU3U0FjPDwVnU2WOaLEeWVgJ-tdAO0xA&hl=en&sa=X&ved=2ahUKEwi3_urQjsLiAhXhRt8KHZePARsQ6AEwD3oECAcQAQ#v=onepage&q=elizabeth%20baugh%20brewster&f=false

Elizabeth Baugh ...

https://www.findagrave.com/memorial/107665692/edwin-pugh-baugh

Edwin passed away on 12 October 1921 while on a business trip in Philadelphia, Philadelphia County, Pennsylvania, and he was laid to rest there with his Family at Laurel Hill Cemetery.

https://books.google.com/books?id=EO9IAAAAYAAJ&pg=RA5-PA55&lpg=RA5-PA55&dq=%22paul+daniel+baugh%22&source=bl&ots=NYmtm6Q1n9&sig=ACfU3U1nMHFZaj8G6U1t7eFl1bNgw1QozA&hl=en&sa=X&ved=2ahUKEwiag9ulksLiAhWGg-AKHc9eBFMQ6AEwDnoECAgQAQ#v=onepage&q=%22paul%20daniel%20baugh%22&f=false

Paul Daniel Baigh married Miss Josephine Fay Glaser of Asheville

https://books.google.com/books?id=EO9IAAAAYAAJ&pg=RA5-PA55&lpg=RA5-PA55&dq=%22paul+daniel+baugh%22&source=bl&ots=NYmtm6Q1n9&sig=ACfU3U1nMHFZaj8G6U1t7eFl1bNgw1QozA&hl=en&sa=X&ved=2ahUKEwiag9ulksLiAhWGg-AKHc9eBFMQ6AEwDnoECAgQAQ#v=onepage&q=%22paul%20daniel%20baugh%22&f=false

GREAT BIO

https://chroniclingamerica.loc.gov/lccn/sn83045211/1922-05-30/ed-1/seq-16/

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Housatonic

Sina A Bavari (born 1959)

Born - 12/20/1959 [HL0037][GDrive]

1977 (Dec 04)

Full page : [HN00OU][GDrive]

Lincoln Journal Star (Lincoln, Nebraska) • 04 Dec 1977, Sun • Page 59 FIND CLIP PRINT/SAVE SHAR

'Persian Panthers' enjoying soccer

By Dean Terrill
Southeast Nebraska Bureau

FAIRBURY — If they could afford a name, perhaps nothing would fit better than the Oilers or maybe the Persian Panthers. All but two of the soccering collegians at Southeast Community College-Fairbury are from Iran.

In truth they have no name and no schedule and no official status. They do have the tremendous record of only one loss (and no wins) and a "coach" who'd never seen a soccer game until recently going against a similar foreign group at the University of Nebraska-Lincoln.

"My boys had to tell me who was going to play what positions and when," chuckled Neil Dawes, now serving as SCC foreign student advisor after some 35 years as a county extension agent. "They also told me we lost 2 to 1."

With only a handful of other regional colleges playing the sport, games are hard to come by. The unofficial status also is inhibiting, but high insurance rates have caused the college administration to withhold its full blessing.

Nonetheless, a record foreign enrollment of 43 — including 34 Iranians — makes for "a lot of very voluntary and very rough" soccer on campus. A practice field near the school dormitory often reminds of an Iranian school at recess.

"We're getting enough local interest built up that it appears official recognition might be forthcoming eventually," said Dawes.

Meanwhile, the players are standing their own expenses, even buying their own jerseys and painting numbers on them. By spring they hope to have several games, even if they are "unofficial," arranged.

Joining the Iranian players are Raji Ismail Ansari of Israel and Mike Lawanson of Nigeria. Johansha Bavari, president of the SCC International Club, serves as captain, assisted by Saeed Jamshidinezhad.

Other players are Kamran Behnam, Massoud Askari, Rasol Omidkhoda, Sina Bavari, Mehrdad Salehi, A.R. Yousefi, Mansour Sedaghatzadeh and Rahkhoda Kiani.

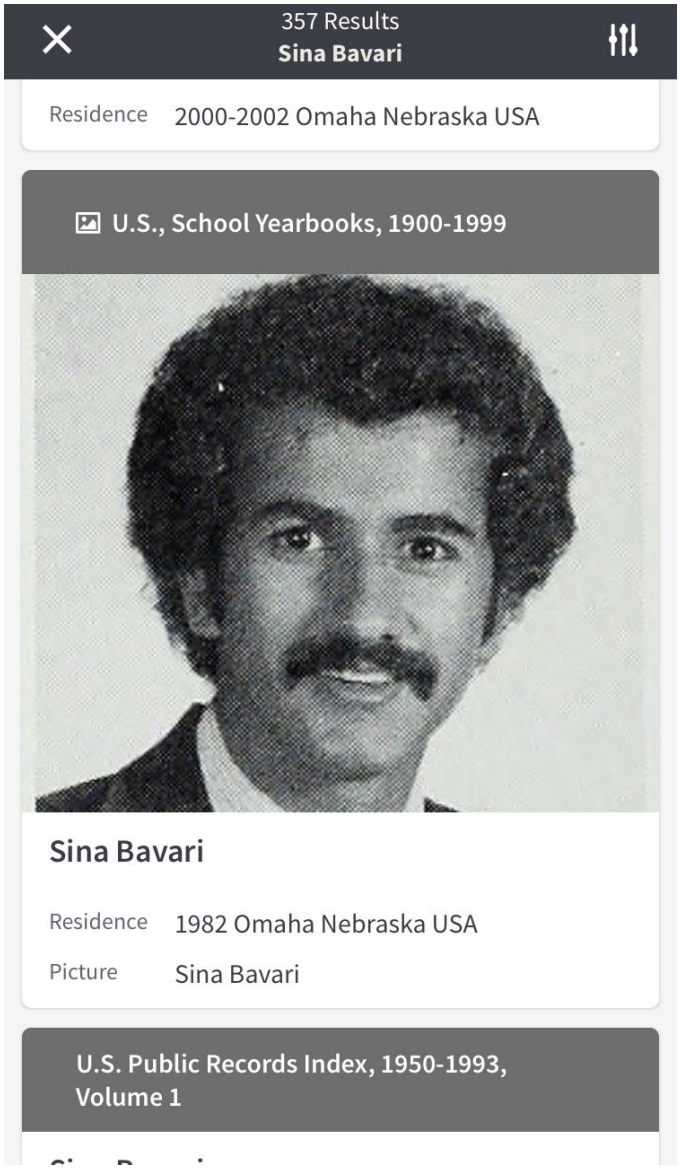
A good time to

Little Fry basketball

Family open

[HN00OV][GDrive]

1982 College Yearbook - Nebraska



[HT004J][GDrive]

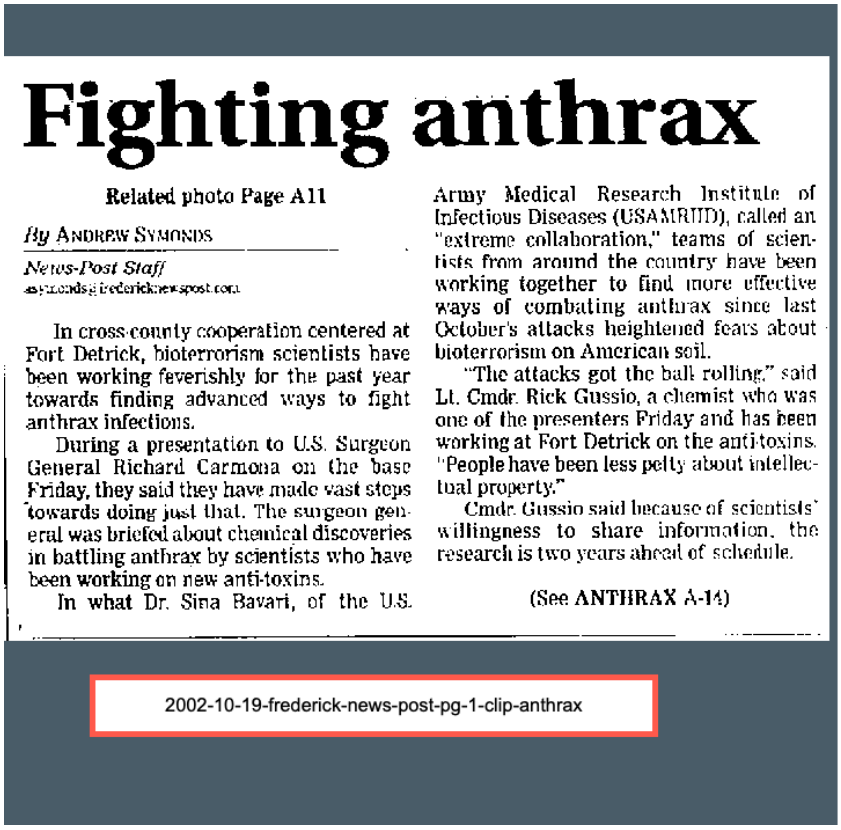
1999 (April 3) - Home purchase

https://newspaperarchive.com/news-apr-03-1999-p-26/

2002 (Oct 19) - Fighting Anthrax

Two pages from newspaper -

- Page 1 - [HN00OY][GDrive]
- Page 14 - [HN00OZ][GDrive]



Fighting anthrax

Related photo Page A11

By ANDREW SYMONDS
News-Post Staff
asymonds@fredericknewspost.com

In cross-county cooperation centered at Fort Detrick, bioterrorism scientists have been working feverishly for the past year towards finding advanced ways to fight anthrax infections.

During a presentation to U.S. Surgeon General Richard Carmona on the base Friday, they said they have made vast steps towards doing just that. The surgeon general was briefed about chemical discoveries in battling anthrax by scientists who have been working on new anti-toxins.

In what Dr. Sina Bavari, of the U.S. Army Medical Research Institute of Infectious Diseases (USAMRIID), called an "extreme collaboration," teams of scientists from around the country have been working together to find more effective ways of combating anthrax since last October's attacks heightened fears about bioterrorism on American soil.

"The attacks got the ball rolling," said Lt. Cmdr. Rick Gussio, a chemist who was one of the presenters Friday and has been working at Fort Detrick on the anti-toxins. "People have been less petty about intellectual property."

Cmdr. Gussio said because of scientists' willingness to share information, the research is two years ahead of schedule.

(See ANTHRAX A-14)

(Continued from A-1)

Dr. Carmona addressed a group of soldiers on the base after the presentation and told them he was impressed with the progress the team has made.

"The research I just heard about normally takes several years," he said. "You guys accomplished this in six months. I couldn't be prouder."

The main partnership has been between the U.S. Public Health Service and the Army, with additional help on the anti-toxins from scientists at Harvard University and the Burnham Institute in La Jolla, Calif.

Dr. Bavari said the headway made towards new anthrax anti-toxins can help researchers battle other aspects of bioterrorism as well.

"If we have the basic structure, when the call comes we will be ready to go," he said.

Chuck Dasey, Fort Detrick public affairs officer, said the base was honored to show the surgeon general the gains they have made towards fighting bioterrorism.

"We're proud that he was very impressed by the scientific presentation he received at USAMRIID, he said.

2002-10-19-frederick-news-post-pg-1-clip-anthrax

[HN00P0][GDrive]

2002 / 2003 - Support for the Resident Research Associateship Program with the U. S. Army Medical Research and Materiel Command

See [HG0047][GDrive]

2003 -

See [HG0049][GDrive]

2005 -

See [HG004B][GDrive]

2006 -

See [HG004D][GDrive]

2003 (October 11) - Botox

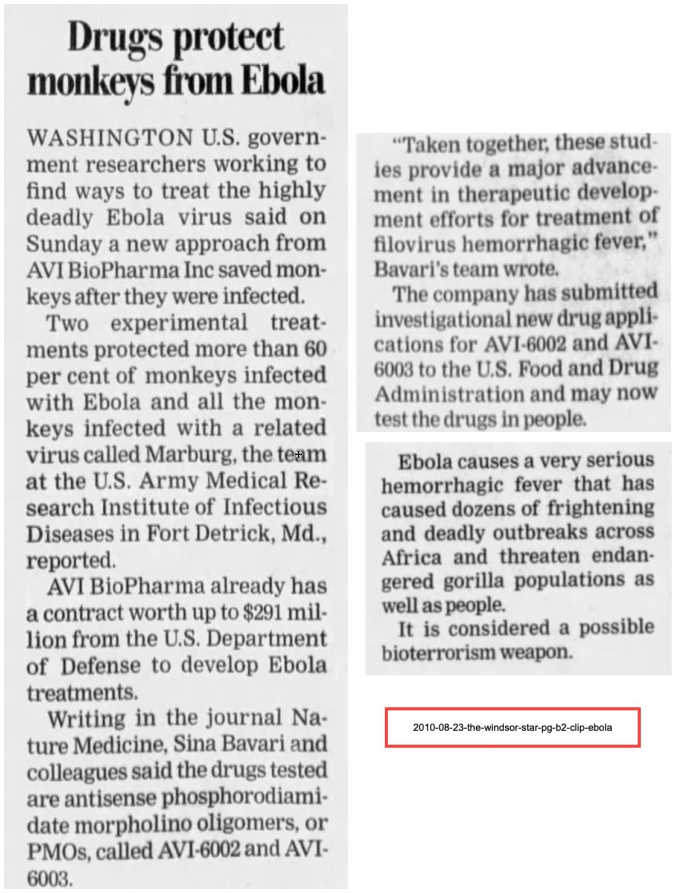
https://newspaperarchive.com/colorado-springs-gazette-oct-11-2003-p-51/

and https://www.newspapers.com/image/613817416/?terms=%22sina%2Bbavari%22

and (best one i think) - https://www.newspapers.com/image/103963299/?terms=%22sina%2Bbavari%22

2010 (Aug 23) - Ebola

Full page - [HN00P1][GDrive]



Drugs protect monkeys from Ebola

WASHINGTON U.S. government researchers working to find ways to treat the highly deadly Ebola virus said on Sunday a new approach from AVI BioPharma Inc saved monkeys after they were infected.

Two experimental treatments protected more than 60 per cent of monkeys infected with Ebola and all the monkeys infected with a related virus called Marburg, the team at the U.S. Army Medical Research Institute of Infectious Diseases in Fort Detrick, Md., reported.

AVI BioPharma already has a contract worth up to $291 million from the U.S. Department of Defense to develop Ebola treatments.

Writing in the journal Nature Medicine, Sina Bavari and colleagues said the drugs tested are antisense phosphorodiamidate morpholino oligomers, or PMOs, called AVI-6002 and AVI-6003.

"Taken together, these studies provide a major advancement in therapeutic development efforts for treatment of filovirus hemorrhagic fever," Bavari's team wrote.

The company has submitted investigational new drug applications for AVI-6002 and AVI-6003 to the U.S. Food and Drug Administration and may now test the drugs in people.

Ebola causes a very serious hemorrhagic fever that has caused dozens of frightening and deadly outbreaks across Africa and threaten endangered gorilla populations as well as people.

It is considered a possible bioterrorism weapon.

2010-08-23-the-windsor-star-pg-b2-clip-ebola

[HN00P2][GDrive]

2014 - "Global Health Special Seminar by Dr. Sina Bavari from USAMRIID at University of Tokyo. Dec 2, 2014"

YouTube link below

Recorded version here - [HV001A][GDrive]

2016 (AUg 13) article - Army report says science director creating 'environment of fear' at USAMRIID

Source - Frederick News Post - [HN00O3][GDrive]

A controversial leader is creating a culture of fear and is stifling cutting-edge research at the U.S. Army Medical Research Institute of Infectious Diseases, according to a newly released Army report.

The Army's investigating officer urged that the leader, science director Sina Bavari, be removed from USAMRIID and re-assigned to a job without supervisory duties.

Bavari continues in the position, however, and there is no evidence the institute has acted on these recommendations.

At USAMRIID, Bavari oversees the majority of the Fort Detrick institute's research departments, including staff members who work in immunology, genomics, bacteriology and virology.

The Army found in a 2015 investigation that since Bavari took that position in 2014, he has created an "environment of fear" at the prestigious lab.

"Workers are genuinely afraid for their jobs and scientific careers," the investigating officer stated in the report. In June, *The Frederick News-Post* obtained a copy of the Army report through a Freedom of Information Act request.

The News-Post spoke to multiple sources, including current and former institute researchers, about the Army report. Those who declined to be named feared Bavari would fire them, damage their reputations as researchers, or both.

The Army's investigation of Bavari did not find any illegal activity.

Bavari declined an interview with The News-Post, but issued a statement through a USAMRIID spokeswoman.

In the statement, he said he is honored to serve as science director and looks forward to "enabling USAMRIID's expanded capabilities and increased collaborations."

'Hot potato'

Statements from multiple current and former USAMRIID employees in the Army report showed that Bavari "fostered a negative or toxic leadership climate," the investigating officer stated.

"There is a duality in Dr. Bavari's tactics," a former USAMRIID employee wrote in an email to *The News-Post*. "Those who are loyal and follow him unquestioningly are richly rewarded, while anyone who questions him or whom he otherwise perceives as a threat does not have a long future at USAMRIID, and will usually be made to suffer in the time that they are still there."

The science director tarnished reputations, falsely accused employees of scientific misconduct and threatened them with termination, according to sworn statements in the Army investigation.

Many researchers at the institute work closely with toxins and biological agents such as anthrax and the Ebola virus in maximum-containment laboratories where protective, full-body suits are mandatory.

Henry Heine, who worked at USAMRIID from 1998 until 2010, said in an interview that Bavari was already working at the institute when Heine started there.

According to Caree Vander Linden, a spokeswoman for the institute, Bavari started at USAMRIID as a post-doctoral fellow in 1991.

Heine described Bavari as a "hot potato" who caused problems and was passed from one department to another before he became science director.

In a sworn statement provided for the Army investigation, a colonel said Bavari preferred to hire contractors, so he could terminate them for any reason.

Heine said Bavari took advantage of his ability to terminate contractors.

"When somebody would get into something that crossed him, or crossed something he was trying to do, they would disappear," Heine said.

Heine is currently program director at the University of Florida's Institute for Therapeutic Innovation. He did not work directly with Bavari while at USAMRIID, but felt familiar with the director's modus operandi.

He said Bavari used other employees to further his own goals.

"He's a consummate user," Heine said.

Transformational leader

Current and former USAMRIID employees have described Bavari as condescending, manipulative and disrespectful.

Some also described him as an ambitious, resourceful leader who has attracted diligent, loyal workers to his research team.

Travis Warren, a principal investigator at USAMRIID, noted that the Army investigator did not ask some of Bavari's closest colleagues to provide statements for the Army investigation.

Warren said he has been one of Bavari's right-hand workers since 2007.

"I regard him as the single most influential mentor in my career development," he wrote in an email to *The News-Post*.

Bavari has high expectations and little tolerance for maintaining the status quo, Warren wrote.

"While he often voices strong opinions, I have never felt these viewpoints were presented in an antagonistic or authoritarian manner and have found him to be highly receptive and encouraging of countering viewpoints," he wrote in an email.

Gustavo Palacios, director of the institute's Center for Genome Sciences, also works closely with the science director.

The center houses cutting-edge equipment for genome sequencing, which help researchers gain insight into the genes of bacteria, viruses and potential biowarfare agents. According to Warren, Bavari led efforts to get the Center for Genome Sciences off the ground.

Bavari has a sense of purpose that is "inspirational," Palacios said, and he challenges his staff to think outside the box.

Bavari said in a statement to the investigator that taking care of employees "is of paramount importance to me and is at the centerpiece of my management style."

Palacios described Bavari as a "transformational" leader whose goal is to ensure that USAMRIID is constantly growing and operating as a first-class lab.

"That's a very tall task, given the restrictions in funding and the continuous appearances of new natural challenges like Ebola and Zika, or the potential risks associated with bioterrorism acts," Palacios wrote in an email to *The News-Post*.

Bavari received an honorary doctorate degree from the University of Nebraska this year for leading the institute's efforts to fight the Ebola outbreak.

"Honorary degrees are awarded by the University of Nebraska to recognize those who have attained achievements of extraordinary and lasting distinction," according to a press release from the school.

Palacios said institutions such as the World Health Organization and the Centers for Disease Control and Prevention also praised USAMRIID for its efforts during the Ebola outbreak.

"It means that the institute is moving in the right direction," he wrote in an email to *The News-Post*. "Obviously that is not the sole result of Dr. Bavari's work, but he has taken a leadership role at a crucial time."

A culture without checks

The Army started an investigation into Bavari last year, after a group of anonymous USAMRIID scientists submitted a letter to Army officials who oversee the institute.

Bavari, "while directing his own highly productive research program, is a detriment to the current and future state of medical research at USAMRIID and should be removed from this position," the letter stated. "He is a person lacking in honesty, integrity and character, who in his short time as director has created a climate of distrust, intimidation, and fear of retribution."

The letter writers called Bavari a "catastrophic threat" to the future of USAMRIID.

Some USAMRIID researchers commented to *The News-Post* that the frequent changes in command, in addition to the fact that their recently assigned commanders aren't familiar with infectious disease research, have created a culture without checks or balances.

Fort Detrick installation commander Maj. Gen. Brian Lein and Army Surgeon General Lt. Gen. Patricia Horoho, who received the letter from the anonymous USAMRIID scientists, have since left their positions.

Army spokespeople who took media inquiries for Lein were unable to reach him for comment the week before he ended his two-year assignment at Fort Detrick. Lein's last day as commander of the installation was July 28.

The Department of the Army generally assigns the U.S. Army Medical Research and Materiel Command, or USAMRMC, and Fort Detrick a new commander every two or three years.

Fort Detrick's installation commander traditionally has a dual role as commander of USAMRMC, which manages USAMRIID.

USAMRIID has its own commander, Col. Thomas Bundt, who is also serving a two- to three-year assignment.

Bundt's spokespeople did not respond to a request for comment about the Army investigation.

Conflict of interest

In the investigation, current and former USAMRIID researchers told the Army's investigating officer that Bavari maintains a large research program that seems to be funded "at the expense of other projects," according to the report.

Warren said Bavari has had a positive effect on USAMRIID's research portfolio.

"I have personally observed multiple research programs move from an early discovery phase program to advanced development status due in large part to Dr. Bavari's dedication to USAMRIID's mission," Warren wrote in an email.

But the fact that Bavari has a research program at all creates a conflict of interest, the anonymous USAMRIID researchers wrote in their letter.

"It is impossible for the Science Director to have [his or her] own research program and maintain independent judgment in an ethically responsible way," the researchers wrote.

Hood College biology professor Ann Boyd teaches ethics and sits on the Institutional Review Board for the USAMRMC. The board reviews study proposals from USAMRIID and USAMRMC researchers to ensure that human subjects are treated ethically in experiments.

Directors who conduct research are not necessarily wrong to do so, Boyd said, but those who act in their own self-interest may display a lack of leadership.

"The problem with [a conflict of interest] in research is that it erodes trust," she said.

Connie Dudley, director of graduate programs in science at Mount St. Mary's University, said Bavari's position as director and researcher leaves an "open door" for conflicts.

"It would certainly be a reasonable conclusion that a conflict of interest exists, if indeed this person had the ability to make programmatic changes that would benefit them," she said.

Bavari told the investigating officer that he does not believe having his own research program creates a conflict of interest.

"In order to be an effective Science Director and to have the respect of other scientists, I feel the need to maintain a good scientific reputation in the field," he said.

As a researcher, he said he can better relate to the challenges his staff faces.

Heine said that as a director, it can be difficult to be engaged with scientists if you don't have some of your own research to refer to, but that is a difficult line to walk.

"In an environment where you have a very limited and restricted amount of funding, the temptation is to take care of yourself first, and that's exactly what I think happened," he said.

But, Warren said Bavari has intentionally reduced his role in programs to allow colleagues to step up.

"He intentionally empowers individuals like myself to assume greater responsibilities, while remaining available to advise or assist with challenges that may arise," he wrote in an email.

Questions of support

The Army investigator determined that Bavari uses his power and authority to limit researchers from submitting grant proposals and getting funding from the Defense Threat Reduction Agency, a Department of Defense agency that is a major USAMRIID funder.

The agency declined to comment.

“It would be inappropriate for the Defense Threat Reduction Agency to comment on an USAMRIID matter or employee,” agency spokesman Ron Lovas wrote in an email.

Bavari opted to submit a limited number of proposals to the agency, which were subject to his approval, instead of allowing researchers to submit their own proposals.

That may have kept researchers from securing funding to support their own staff and goals, according to the Army report.

In Bavari’s response to the Army investigation, he argued that his approach eliminated a process that created internal competition and replaced it with team collaboration.

“To ensure that the collective wisdom of USAMRIID’s outstanding scientists are fully applied to solutions for the Warfighter, I am slowly changing the way in which we work with [the Defense Threat Reduction Agency],” he said.

Some USAMRIID employees who provided sworn statements for the Army investigation also were concerned about Bavari’s relationship with the nonprofit Geneva Foundation.

The foundation supports innovative medical research and works with military researchers as they create proposals for federal or other funding.

A dozen principal investigators at USAMRIID are supported by the Geneva Foundation. The foundation also employs 30 research team members at the institute.

The Army investigator asserted that the science director used his relationship with the Geneva Foundation to “bank” funding from pharmaceutical companies to achieve his own research goals without letting USAMRIID know about the funds.

That’s not how the Geneva Foundation works, President Elise Huszar said.

The foundation does not award funding; it works with researchers during the proposal stage and after funding has been awarded from another source, such as the federal government.

“We’re not a grant-making body; we don’t have a cache of money that we make discriminately to different people,” Huszar said.threat

Huszar said the foundation typically works closely with USAMRIID’s business office to make sure financial awards are reported according to Geneva’s requirements.

“There shouldn’t be any awards that USAMRIID doesn’t know about,” she said.

Huszar found multiple problems with the Army’s report.

“Geneva’s experience with Dr. Bavari did not equate with the report that was provided,” she said.

The Army’s findings will not affect Bavari’s relationship with the Geneva Foundation, Huszar said, unless USAMRIID decides to restrict his proposals.

Recommendations

The Army investigator recommended removing Bavari from USAMRIID and re-assigning him to a job without supervisory duties.

The investigator also recommended the following:

Changing the science director position to minimize the possibility of a conflict of interest between that person and the institute’s research

Auditing funding from nongovernmental sources

Requiring detailed reporting of that funding

Extending commanders’ assignments from two to three years to reduce the impact of turnover

Requiring commanders to have subject matter expertise in the research their organizations conduct.

Vander Linden confirmed that Bavari continues to hold the position of science director at the institute, but could not comment whether the institute had acted on the investigator’s recommendations.

Current employees who spoke to *The News-Post* said they have not seen any indications that the institute has done so.

Officially, the institute itself was unable to comment on the report.

“Laws such as the Privacy Act severely restrict what can be discussed related to these matters,” Vander Linden wrote in an email. “Therefore, we are unable to comment further.”

2018 presentation

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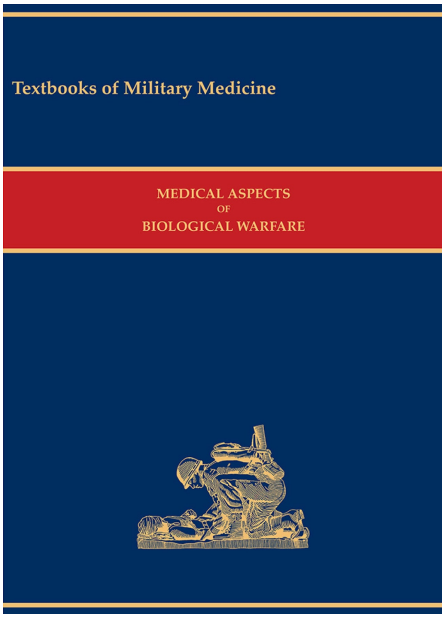
2018 - Medical Aspects of Biological Warfare (contributor)

PDF : [HG002W][GDrive]



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2019 - Research paper - Broad-spectrum coronavirus antiviral drug discovery

PDF - [HP0029][GDrive]

REVIEW Broad-spectrum coronavirus antiviral drug discovery **Allison L. Totura** and Sina Bavari Division of Molecular and Translational Sciences, United States Army Medical Research Institute of Infectious Diseases, Fort Detrick, MD, USA

EXPERT OPINION ON DRUG DISCOVERY
2019, VOL. 14, NO. 4, 397–412
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REVIEW

Broad-spectrum coronavirus antiviral drug discovery

Allison L. Totura and Sina Bavari

Division of Molecular and Translational Sciences, United States Army Medical Research Institute of Infectious Diseases, Fort Detrick, MD, USA

ABSTRACT

Introduction: The highly pathogenic coronaviruses severe acute respiratory syndrome coronavirus (SARS-CoV) and Middle East respiratory syndrome coronavirus (MERS-CoV) are lethal zoonotic viruses that have emerged into human populations these past 15 years. These coronaviruses are associated with novel respiratory syndromes that spread from person-to-person via close contact, resulting in high morbidity and mortality caused by the progression to Acute Respiratory Distress Syndrome (ARDS).
Areas covered: The risks of re-emergence of SARS-CoV from bat reservoir hosts, the persistence of MERS-CoV circulation, and the potential for future emergence of novel coronaviruses indicate antiviral drug discovery will require activity against multiple coronaviruses. In this review, approaches that antagonize viral nonstructural proteins, neutralize structural proteins, or modulate essential host elements of viral infection with varying levels of efficacy in models of highly pathogenic coronavirus disease are discussed.
Expert opinion: Treatment of SARS and MERS in outbreak settings has focused on therapeutics with general antiviral activity and good safety profiles rather than efficacy data provided by cellular, rodent, or nonhuman primate models of highly pathogenic coronavirus infection. Based on lessons learned from SARS and MERS outbreaks, lack of drugs capable of pan-coronavirus antiviral activity increases the vulnerability of public health systems to a highly pathogenic coronavirus pandemic.

ARTICLE HISTORY
Received 16 August 2018
Accepted 7 February 2019

KEYWORDS
Antiviral; ARDS; acute respiratory distress syndrome; bat; broad-spectrum; camel; civet; coronavirus; emerging virus; highly pathogenic virus; human cases; interferon; in vitro model; lopinavir; MERS; MERS-CoV; Middle East respiratory syndrome; pneumonia; primate model; respiratory; ribavirin; rodent model; SARS; SARS-CoV; severe acute respiratory syndrome; therapeutic; zoonosis; zoonotic

1. Introduction

Outbreaks of severe acute respiratory syndrome (SARS, 2002–2004 [1,2]) and Middle East respiratory syndrome (MERS, 2012-current [3]) in the last two decades are a significant threat to global public health. SARS and MERS represent a new class of public health concern that may continue to emerge into human populations: respiratory syndromes caused by coronaviruses (CoVs) that are transmitted from person-to-person via close contact, resulting in high morbidity and mortality in infected individuals. Although SARS and MERS initially present as mild, influenza-like illnesses with fever, dyspnea, and cough, progression to more severe symptoms is characterized by an atypical interstitial pneumonia and diffuse alveolar damage. Both SARS-CoV and MERS-CoV are capable of causing acute respiratory distress syndrome (ARDS), the most severe form of acute lung injury where alveolar inflammation, pneumonia, and hypoxic lung conditions lead to respiratory failure, multiple organ disease, and death in 50% of ARDS patients [4]. The total confirmed number of patients infected with highly pathogenic CoVs is relatively low (approximately 10,000 cases of both SARS and MERS since 2002), but CoVs are of particular concern due to high case fatality rates, lack of proven therapeutics, as well as the demonstrated ability of these pathogens to seed outbreaks that rapidly cross geographic and geopolitical borders into other countries and continents [5,6].

1.1. Coronaviridae phylogeny and emergence

Highly pathogenic coronaviruses SARS-CoV and MERS-CoV recently emerged into human populations, but other human coronaviruses (HCoVs) including HCoV-OC43, HCoV-229E, HCoV-NL63, and HCoV-HKU1 are estimated to have circulated in human populations for hundreds of years, causing mild respiratory illness to which approximately 5–30% of 'common colds' are attributed [7,8]. Within the *Coronaviridae* family (order Nidovirales) four genera are recognized: alphacoronavirus, betacoronavirus, gammacoronavirus, and deltacoronavirus. The six HCoVs (Table 1) currently identified belong to the genera alphacoronavirus (HCoV-229E and HCoV-NL63) and betacoronavirus (SARS-CoV, MERS-CoV, HCoV-OC43, and HCoV-HKU1). Gammacoronaviruses and deltacoronaviruses have no known viruses that infect humans, but contain important agricultural pathogens of livestock. Epizootic coronaviruses in animals cause a wide range of disease signs resulting from respiratory, enteric, and neurological tissue tropism. Although HCoVs cause primarily respiratory symptoms, the potential for a wide range of severe disease symptoms in humans caused by infection by future emergent coronaviruses cannot be excluded. Despite the severity and diversity of coronavirus disease signs and symptoms affecting a large number of important livestock species as well as humans, there are no proven therapies that specifically target CoVs.

CONTACT Sina Bavari sina.bavari.civ@mail.mil Division of Molecular and Translational Sciences, United States Army Medical Research Institute of Infectious Diseases, Fort Detrick, MD 21702, USA

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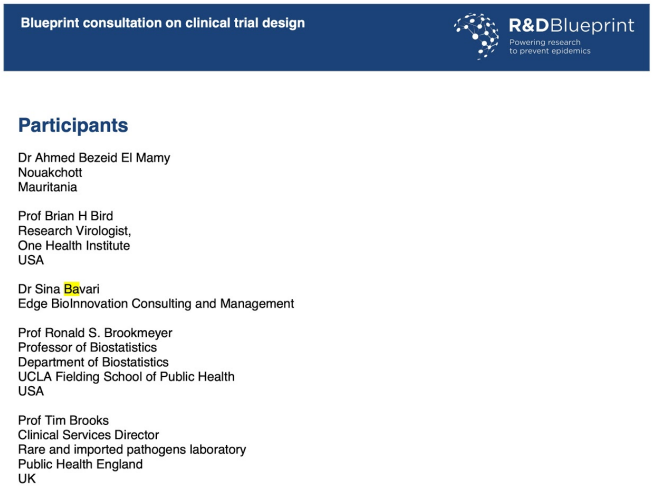
[HP002A][GDrive]

2019 (November 01)

R+D Blueprint : World Health Organization - 5th Consultation on Clinical Trial Designs (Rift Valley Fever vaccine treatment evaluation) - PDF at [HI000B] [GDrive]

" Dr Sina Bavari - Edge BioInnovation Consulting and Management "

[HI000C][GDrive]



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Sina Bavari LinkedIN (March 2020)

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Owner at Edge BioInnovation Consulting and Managment

Dr. Bavari is a lead decision maker and leader in global research and development of vaccines and therapeutics for deadly infectious diseases. Well-experienced in using and providing management on new and complex technologies, Dr. Bavari is adept at effectively translating scientific discovery into products, and has discovered and developed vaccines and therapeutics for multiple infectious diseases. Dr. Bavari has initiated and led programs at all stages of discovery and guided programs through critical decision points and into advanced development. Dr. Bavari has substantial experience in providing technical leadership and communicating policies and strategies to dynamic and highly matrixed environments. He has provided representation in both national and international settings and organizations.

- **CSO**
- Company Name
- Edge BioInnovation Consulting and Managment
- Dates EmployedSep 2019 – Present
- Employment Duration7 mos
- LocationFrederick, MD
- **Company NameUSAMRIID , US Army Medical Research Institute of Infectious Diseases**
- Total Duration8 yrs 9 mos
  - **TitleChief Scientific Officer and Scientific Director**
  - Dates EmployedSep 2014 – Sep 2019
  - Employment Duration5 yrs 1 mo
  - LocationFrederick, MD
  - **TitleChief, Molecular and Translational Sciences**
  - Dates EmployedJan 2011 – Sep 2014
  - Employment Duration3 yrs 9 mos

Sina Bavari

Owner at Edge BioInnovation Consulting and Managment

Washington D.C. Metro Area · 500+ connections

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About

Dr. Bavari is a lead decision maker and leader in global research and development of vaccines and therapeutics for deadly infectious diseases. Well-experienced in using and providing management on new and complex technologies, Dr. Bavari is adept at effectively translating scientific discovery into products, and has discovered and developed vaccines and therapeutics for multiple infectious diseases. Dr. Bavari has initiated and led programs at all stages of discovery and guided programs through critical decision points and into advanced development. Dr. Bavari has substantial experience in providing technical leadership and communicating policies and strategies to dynamic and highly matrixed environments. He has provided representation in both national and international settings and organizations.

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Sep 2019 – Present · 7 months

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8 years 9 months

Chief Scientific Officer and Scientific Director

Sep 2014 – Sep 2019 · 5 years 1 month

Frederick, MD

Chief, Molecular and Translational Sciences

Jan 2011 – Sep 2014 · 3 years 9 months

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Christopher Cooper
Principal Investigator/Immunologist at U.S. Army Medical Research Institute of Infectious Disease

Karen Kopydlowski
Transitioning from US Army

Rashmi Pillai
Cancer Biologist, Mass spec, FACS, Cell culture, RNASeq, Microscopy, RNAi, Team player, management

Cheryl Taylor-Howell
Laboratory Technician IV at USAMRIID , US Army Medical Research Institute of Infectious Diseases

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Sina Bavari
Owner at Edge BioInnovation Consulting and Managment

CSO at Edge BioInnovation Consulting and Managment

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- Merck

- **University of Illinois at Chicago**

Experience

- **Principal Scientist, High Content Imaging, Quantitative Biosciences**
- Company Name
- Merck Full-time
- Dates EmployedNov 2018 – Present
- Employment Duration1 yr 5 mos
- LocationBoston, MA
- **PI**
- Company Name
- Hanry M.Jackson Foundation for Advancement of Military Medicine; BCSAI, USAMRIID
- Dates EmployedJul 2013 – Nov 2018
- Employment Duration5 yrs 5 mos
- LocationFort Detrick, MD
- As a lead of in vitro testing for anti-viral and anti-toxin discovery projects established collaborations on 80 projects (currently) with major pharmaceutical companies, biotech and academic organizations on the search for anti-viral therapies against major DoD viral threats and emerging pathogens including Filoviridae, Togaviridae, Bunyaviridae, Arenaviridae, Flaviviridae, Picornoviridae, Coronaviridae, Paramixaviridae ets.
- Developed comprehensive phenotypic screening triage for efficient discovery of new active compounds and fast and evaluation of their potency and selectivity for using confocal imaging PE Opera platform.
- Developed screening triage to search of inhibitors of Botulinum neurotoxin both whole enzyme and active side using Fluorescent Imaging and MSD technology platforms. Performed screening and hit to lead characterization for selected collections both inter- and extra-mural collaborations
- On a daily bases coordinate work of screening group (7 people) applying high content imaging in antiviral drug discovery and supporting research lab of 1 PhD scientist (currently) for enzymatic in vitro testing.
- Provide data analysis and data packages designed for rapid prioritization of potent and selective antiviral therapies for rapid transition into in vivo evaluation, report results for collaborators and financial agencies.**see less**
- **Director of CCT (Center of Core Technologies)**
- Company Name
- IP-Korea
- Dates EmployedMar 2010 – Jun 2013
- Employment Duration3 yrs 4 mos
- LocationInstitut Pasteur Korea
- Accountable for project managing of three image based core platforms: PhenomicScreen, PhenomicID and Phenomic drug-target de-convolution. The Center comprises 20 people including 4 PhD-level scientists and 5 PhD students organized into three groups: Screening Technology, Discovery Biology and Image Mining.
- **Principal Research Scientist II**
- Company Name
- Pfizer Pharmaceuticals
- Dates EmployedJan 2009 – Mar 2010
- Employment Duration1 yr 3 mos
- As a Group Leader of Cellular Assay Development, organized, trained and supervised a group of 5 scientists working on cell-based assay development for Screening Sciences at Wyeth; coordinated the workflow for assay development and interacted with research group, HTS and automated cell culture group to deliver TS ready cell based assays.
- Principal Scientist

Company Name

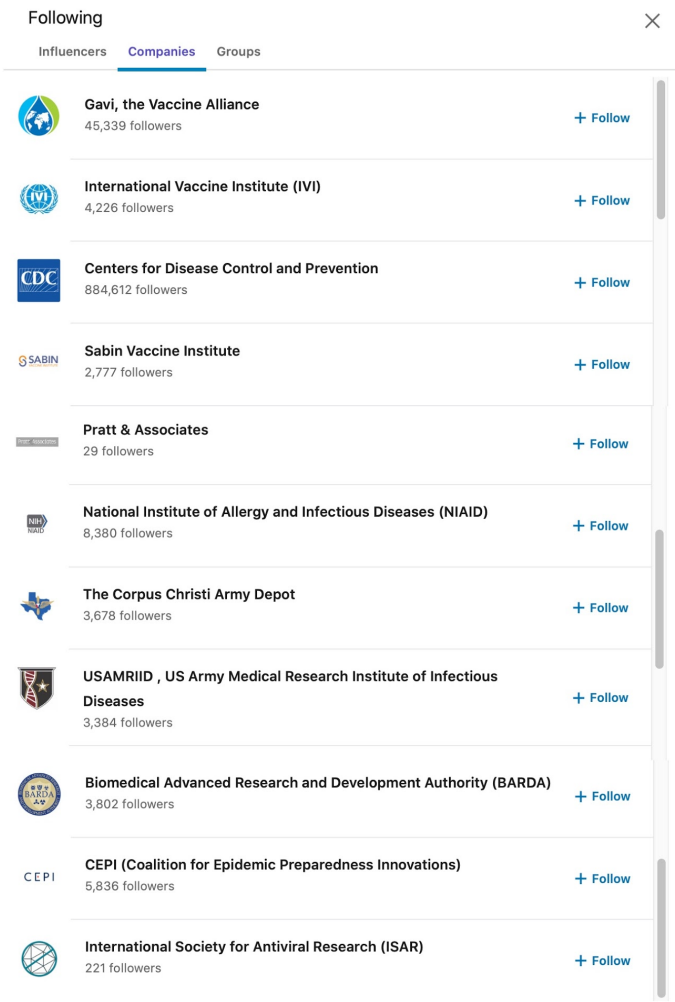
Wyeth Research

Dates Employed2002 – 2009

Employment Duration7 yrs

Ran drug discovery projects for the Pharmaceutical Industry. Targets included GPCRs (neuroscience and inflammation), ion channels and transporters (inflammation, metabolic diseases, and neuroscience), kinases and receptors, cell signaling pathways, cellular enzymes (oncology). During 9 years I developed 52 fully characterized cell-based assays. Assays technologies included FLIPR-based, EFC DiscoverX , HTRF CisBio, MDS Transfluor, immuno-staining HCS technologies. I developed multiple assays for SAR, profiling and hit selection; 10 functional follow up HCS assays for PE Opera and Cellomics Array Scan VTI and additionally performed several low scale profiling and secondary screens.

Worked with HTS scientists on development and custom design of HSDM Thermo/duel FLIPR(tetra) Automated system (Reflected by publication in JALA, 2006). Evaluated and integrated (working with our HTS group, Thermo and PE) new technologies: first FLIPR-3-based assays, new fully automated platforms for FLIPR Tetra , PE Opera for first HCS project at Screening Sciences. Evaluated and integrated image-based technologies (PE/Evotec Opera confocal system, Cellomics Array ScanVTI, FCS Guava EasyCyte and Essen IncuCyte.**see less**



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Addresses - [HL0037][GDrive]

Family Members - [HL0038][GDrive]

Properties - [HL0039][GDrive]

BBN Technologies, Incorporated

Wikipedia BBN Technologies

1997 - Acquired by **GTE Corporation** .

Key members:

1. **Dr Jordan Jay Baruch (born 1923)** (a founding member, but not mentioned in the Wikipedia as of Oct 2020)
2. George Henry Conrades (born 1939)
3.

Saved Wikipedia (Oct 28, 2020) - BBN Technologies

[HK003V][GDrive]

Type Subsidiary

Founded 1948; 72 years ago

Founder Leo Beranek and Richard Bolt

Headquarters Cambridge, Massachusetts, US

Parent Raytheon

Website www.raytheon.com/ourcompany/bbn

BBN Technologies (originally **Bolt Beranek and Newman Inc.**) is an American research and development company,[1] based next to Fresh Pond in Cambridge, Massachusetts, United States.

In 1966 the Franklin Institute awarded the firm the Frank P. Brown Medal, in 1999 BBN received the IEEE Corporate Innovation Recognition, and on February 1, 2013, BBN was awarded the National Medal of Technology and Innovation, the highest honors that the U.S. government bestows upon scientists, engineers and inventors, by President Barack Obama.[2] It became a wholly owned subsidiary of Raytheon in 2009.

History

BBN has its roots in an initial partnership formed on October 15, 1948 between Leo Beranek and Richard Bolt, professors at the Massachusetts Institute of Technology.[3][4] Bolt had won a commission to be an acoustic consultant for the new United Nations permanent headquarters to be built in New York City. Realizing the magnitude of the project at hand, Bolt had pulled in his MIT colleague Beranek for help and the partnership between the two was born. The firm, Bolt and Beranek, started out in two rented rooms on the MIT campus. Robert Newman would join the firm soon after in 1950, and the firm became Bolt Beranek Newman.[5] Beranek remained the company's president and chief executive officer until 1967, and Bolt was chairman until 1976.

From 1957 to 1962, J. C. R. Licklider served as vice president of engineering psychology for BBN.[6] Foreseeing the potential to obtain federal grants for basic computer research, Licklider convinced the BBN leadership to purchase a then state-of-the-art Royal McBee LGP-30 digital computer in 1958 for $25,000. Within a year, Ken Olsen, president of the newly formed Digital Equipment Corporation (DEC), approached BBN to test the prototype of DEC's first computer, the PDP-1.[7] Within one month, BBN completed its tests and recommendations of the PDP-1. BBN ultimately purchased the first PDP-1 for around $150,000 and received the machine in November 1960.[8][9]

After the PDP-1 arrived, BBN hired two of Licklider's friends from MIT, John McCarthy and Marvin Minsky, as consultants.[10] McCarthy had been unsuccessful in convincing MIT engineers to build time-sharing systems for computers. He had more success at BBN though, working with Ed Fredkin and Sheldon Boilen in implementing one of the first timesharing systems, the BBN Time-Sharing System.[11] In 1962, BBN would install one such time-shared information system at Massachusetts General Hospital where doctors and nurses could create and access patients' information at various nurses' stations connected to a central computer.[5] BBN would soon begin more research about integrating computers and medicine, hiring Richard Bolt in 1965 and MIT Lincoln Laboratory computer systems engineer Frank Heart in 1966.[12]

As BBN began focusing on computer technology, it gained a reputation as "the third university" in Cambridge alongside Harvard and MIT, and its offices

As BBN began focusing on computer technology, it gained a reputation as "the third university" in Cambridge alongside Harvard and MIT, and its offices expanded on a site near Fresh Pond in western Cambridge.[13] By 1968, the company had over 600 employees.[14] By the early 1970s, BBN bought a laundromat on Moulton Street and tore it down for a new, seven-story headquarters.[15]

In 1980, the U.S. federal government charged BBN with contracts fraud, alleging that from 1972 to 1978, BBN altered time sheets to hide overcharging the government. That year, two top financial officers plea bargained for suspended sentences and $20,000 fines, and the company paid a $700,000 fine.[16]

BBN's September 1994 celebration of the 25th anniversary of ARPANET generated much local and national news coverage from outlets including *The Boston Globe*, *Newsweek*, and National Public Radio.[17] By that year, Heart retired from BBN after 28 years; his final position was president of the systems and technology division.[18]

Notable achievements

BBN is best known for its DARPA-sponsored research. It has made notable advances in a wide variety of fields, including acoustics, computer technologies, quantum information, and synthetic biology. In recent years, BBN has led a wide range of research and development projects, including the standardization effort for the security extension to the Border Gateway Protocol (BGPsec), mobile ad hoc networks, advanced speech recognition, the military's Boomerang mobile shooter detection system, cognitive radio spectrum use via the DARPA XG program. In the early 2000s, BBN created the world's first quantum key distribution network, the DARPA Quantum Network, which operated for 3 years across Cambridge and Boston, and which included the world's first fully operational prototype of a superconducting nanowire single-photon detector. BBN also led the Global Environment for Network Innovations (GENI) project for the National Science Foundation, which ultimately built out programmable "future Internet" infrastructure across approximately 60 university campuses.[19]

Interface Message Processor

In August 1968, BBN was selected by ARPA to build an Interface Message Processor (IMP) for the ARPANET, the precursor to the modern Internet.[20][nb 1] The IMPs were the very first generation of gateways, known today as routers. Under the leadership of Frank Heart and Bob Kahn, four IMPs were produced for nearly $1 million from September to December 1969.[21][22] The first IMP was shipped to the University of California, Los Angeles in September 1969 and the second to the Stanford Research Institute a month later.[23] The first message between the two IMPs was "LO" — phonetically, "ello" — but the SRI host crashed before the UCLA researcher could complete typing the "LOGIN" command.[5][24]

Acoustics

Well-known acoustics commissions include MIT's Kresge Auditorium (1954), Tanglewood's Koussevitzky Music Shed (1959), Lincoln Center's Avery Fisher Hall (1962), the Cultural Center of the Philippines (1969), Baltimore's Joseph Meyerhoff Symphony Hall (1978)*[citation needed]* and Louise M. Davies Symphony Hall (1979).

The architectural acoustics division of BBN faced controversy in the early 1960s with its acoustics design project for the Philharmonic Hall (now David Geffen Hall) at the Lincoln Center in New York City. Beranek and BBN's chief architect were criticized for ignoring important acoustical principles in concert hall design. Many failed minor adjustments led the walls, balconies, and ceilings to be torn out and dumped, and a new consultant oversaw a repair that cost millions of dollars over several years.[13] The division also produced poor results at the Louise M. Davies Symphony Hall in San Francisco. The hall's large volume and seating capacity initially resulted in less than ideal results. Kirkegaard Associates completed acoustical renovations in 1992 at a cost of $10 million which resulted in substantial improvement. [25]

In the 1960s and 1970s, experts at the company examined audio tapes related to notable events in U.S. history, including the John F. Kennedy assassination Dictabelt recording,[26] an audio recording from the 1970 Kent State shootings, and during the 1974 Watergate scandal, the tape of President Richard Nixon that had 18.5 minutes erased.[27]

The substantial calculations required for acoustics work led to an interest, and later business opportunities, in computing. BBN was a pioneer in developing computer models of roadway and aircraft noise, and in designing noise barriers near highways.[28] Some of this technology was used in landmark legal cases where BBN scientists were expert witnesses.[29]

In early 2004, BBN applied its acoustics expertise to design, develop, and deliver the Boomerang shooter detection system in a little over two months to combat the sniper threat US troops faced in Operation Iraqi Freedom. The system immediately pinpoints the location of hostile fire. Since then, more than 11,000 Boomerang systems have been deployed by US and allied forces.

Computer technologies

BBN bought a number of computers in the late 1950s and early 1960s, notably the first production PDP-1 from Digital Equipment Corporation, on which it implemented the BBN Time-Sharing System(1962).[30]

Ray Tomlinson of BBN is widely credited as having invented the first person-to-person network email in 1971[31] and the use of the @ sign in an email address.[32][33][34]

BBN has had a very distinguished career in natural-language understanding,[35][36] ranging from speech recognition through machine translation and more recently machine understanding of the causality of events and accurate forecasts for the Intelligence Advanced Research Projects Activity (IARPA).[37]

BBN's education group, led by Wally Feurzeig, created the Logo programming language, conceived by BBN consultant Seymour Papert as a programming language that school-age children could learn.[38]Other well-known BBN computer-related innovations include Interlisp programming language, the TENEX operating system, and the Colossal Cave Adventure game. BBN also is well known for its parallel computing systems, including the Pluribus, and the BBN Butterfly computers, which have been used for such tasks as warfare simulation for the U.S. Navy.[39] BBN also developed the RS/1, RS/Explore, RS/Discover and the Cornerstone statistical software systems, and played a pioneering role in the development of today's semantic web, including participating in the DARPA Agent Markup Language project and chairing Web Ontology Language standardization.

Networking technologies

The Internet, circa 1985. BBN built and operated the MILNET, ARPANET, SATNET, and Wideband networks

BBN was involved in building some of the earliest Internet networks, including the implementation and operation of the ARPANET and its Interface

Message Processors;[40][nb 1], as well as SATNET, PRNET, MILNET, SIMNET, the Terrestrial Wideband Network, the Defense Simulation Internet, CSNET, and NEARNET. In the course of these activities, BBN researchers invented the first link-state routing protocol.

BBN was a key participant in the creation of the Internet. It was the first organization to receive an Autonomous System Number (AS1) for network identification.[42]ASNs are an essential identification element used for Internet Backbone Routing; lower numbers generally indicate a longer established presence on the Internet. AS1 is now operated by Level 3 Communications following their acquisition of BBN's Genuity internet service provider. BBN registered the *bbn.com* domain on April 24, 1985, making it the second oldest domain name on the internet.[43][44] In addition, BBN researchers participated in the development of TCP, created the Voice Funnel, an early predecessor of voice over IP, helped lead the creation of the first email security standard, Privacy Enhanced Mail (PEM), chaired development of the "core" Internet Protocol security suite (IPsec) standards, and performed extensive work to secure the Border Gateway Protocol (BGP).

BBN also created a series of mobile ad hoc networks starting in the 1970s with DARPA's experimental PRNET and SURAN systems. Later BBN efforts included the networking portions of the Near-term digital radio (NTDR) and High-capacity data radio (HCDR), the Wideband Networking Software in the Joint Tactical Radio Systemand the Wireless Network after Next (WNaN). It also created the networking portions of the US Army's Mobile Subscriber Equipment (MSE) and Canada's Iris Digital Communications System.

PRNET

First mobile ad hoc network, sponsored by ARPA.

SURAN

Follow-on to PRNET experiments, also sponsored by ARPA.

Mobile Subscriber Equipment (MSE)

Tactical Internet for the US Army

Iris Digital Communications System

Tactical voice + data Internet for the Canadian Army

Near-term digital radio (NTDR)

First fielded mobile ad-hoc network

High-capacity data radio (HCDR)

NTDR version for the British Army

Joint Tactical Radio System (JTRS)

Wideband Networking Waveform

Wireless Network after Next (WNaN)

Experimental tactical ad-hoc network, sponsored by DARPA

SATNET

Early data satellite network linking ARPANET nodes, incorporated into first Internet demonstrations.

ACTS Gigabit Satellite Network

Experimental network supporting a wide range of high-bandwidth networking experiments from 1993-2004.

Celestri

Network architecture for (never launched) Internet constellation, follow-on to the Iridium satellite constellation.

Connexion by Boeing

Networking architecture studies.

Discoverer II

Networking studies for (never launched) LEO constellation of radar satellites

SBIRS Low

Network architecture for (never launched) Space-Based Infrared System LEO constellation.

TSAT

Network architecture for the IPv6 Transformational Satellite Communications System constellation.

Notable BBNers

A number of well-known computer luminaries have worked at BBN, including Daniel Bobrow, Ron Brachman, John Seely Brown, Edmund Clarke, Allan Collins, William Crowther, John Curran, Chip Elliott, Wally Feurzeig, Ed Fredkin, Bob Kahn, Steve Kent,[45] J. C. R. Licklider, John Makhoul, John McCarthy, Marvin Minsky, Dan Murphy, Severo Ornstein, Seymour Papert, Craig Partridge, Radia Perlman, Oliver Selfridge, Cynthia Solomon, Bob Thomas, Ray Tomlinson, and Peiter "Mudge" Zatko. Former board members include Jim Breyer, Anita K. Jones and Gilman Louie.

Spin-offs and mergers

- In 1971, BBN's TELCOMP subsidiary was sold.

- In the 1970s, BBN created Telenet, Inc., to run the first public packet-switched network.
- In 1983 BBN Instruments was sold to Vibro-Meter Corp.
- In 1989, BBN's acoustical consulting business was spun off into a new corporation, Acentech Incorporated, located across the street from BBN headquarters in Cambridge.[47]
- In 1994 LightStream Corp., a joint venture with Ungermann-Bass, Inc. created in 1992 to manufacture asynchronous transfer mode (ATM) switches, was sold to Cisco Systems Inc. $120 million.
- **BBN formed an early Internet service provider in 1994 as its BBN Planet division.** Previously traded as "BBN" on the stock market, the company was purchased by [**GTE Corporation**] in 1997 as a wholly owned subsidiary.[49] BBN Planet was joined with GTE's national fiber network to become GTE Internetworking, **"powered by BBN".** When GTE and Bell Atlantic merged to become Verizon in 2000, the Internet service provider division of BBN was included in assets spun off as Genuity [(We call this "Genuity In,, 2000" and can be found here : Genuity Incorporated (2000) . There was also a **Genuity Incorporated**)] that existed from 1995 to 1997/8)] to satisfy Federal Communications Commission (FCC) requirements, leaving behind the remainder of BBN Technologies. **Genuity [(Genuity Incorporated (2000))] was later acquired out of bankruptcy by Level 3 Communications in 2003.**[50] In March 2004, Verizon sold the remainder of the company, by then known as BBNT Solutions LLC, to a group of private investors from Accel Partners, General Catalyst Partners, In-Q-Tel and BBN's own management,[51] making BBN an independent company for the next five years.
- In September 2009, Raytheon entered into an agreement to acquire BBN as a wholly owned subsidiary.[52] The acquisition was completed on October 29, 2009[53] and the company was valued at approximately $350 million.[54] BBN owned the domain bbn.com, the second oldest currently registered domain name on the Internet, which ran continuously from April 1985 to mid-December 2019.
- Digital Force Technologies (DFT) of San Diego, California was a wholly owned BBN subsidiary, purchased in June 2008, and spun out in 2018.[55]
- Former BBN employees have formed about a hundred startup companies with varying levels of official involvement, including Parlance Corporation and EveryZing.[56]

Locations and subsidiaries

As of 2013, BBN Technologies maintains offices in:[57]

- Cambridge Highlands, Cambridge, Massachusetts
- Columbia, Maryland
- St. Louis Park, Minnesota
- O'Fallon, Illinois
- Newport East, Middletown, Rhode Island near Naval Station Newport[58]
- Rosslyn, Arlington, Virginia near Washington, D.C.

See also

- Oldest registered domain names
- DARWARS, a military simulation game developed with DARPA since 2003
- George G. Robertson
- Richard E. Hayden
- Interlisp

[...]

Evidence Timeline

1997 (May 06) - Wired magazine - "GTE Takes Net Plunge with BBN Buyout"

See [HP004E][GDrive]

The nation's largest local phone company aims to expand its reach by purchasing one of the "backbone" Internet providers.

LEAPING HEADFIRST INTO the deep end of the Internet, **[GTE Corporation] said Tuesday that it will purchase Net pioneer BBN for US$616 million, and is partnering with Cisco Systems to develop new data services.**

The move helps position **[GTE Corporation]**, the nation's largest local phone company, as a full-service telecom outlet for corporate clients seeking Internet access and Web-site hosting, as part of its networking strategy. Such all-in-one packaging is seen as crucial to compete in today's increasingly complex and fast-changing telecom industry.

BBN spokesman Vaughn Harring said Tuesday that because his company's network helps account for nearly 80 percent of all traffic on the Internet, the increased capacity resulting from GTE's investment should result in faster service for the typical user. "The resources of a major telecom company were necessary to expand our service," he noted.

BBN has been around since the beginnings of the Net, when the system was still known as the Arpanet. It is considered one of the "backbone" Internet providers, along with MCI, Sprint, and WorldCom's UUNET Technologies.

Besides expanding its range of services offered, GTE is standing firm against AT&T as the leading long-distance carrier makes inroads to local phone customers. For the past two years, BBN has been the provider of networking systems for most of AT&T's Internet service. It is not yet known how the GTE buyout will affect AT&T's WorldNet operation.

AT&T holds a minority stake in BBN, and was believed to be interested in acquiring full control of the company. "Our relationship with AT&T is still being sorted out as a result of this news," Harring said.

[GTE Corporation] already claims some 100,000 subscribers to its Intelligent Network Services ISP. The alliance with Cisco aims to give more substance to this network, and to create new applications and services intended to meet the needs of major clients. GTE said its purchases of Cisco networking equipment for resale could reach more than $1 billion.

This has been an expensive week so far for GTE. On Monday, the company said it will buy a stake in Qwest Communications' coast-to-coast fiber-optic network for $485 million. Because of the acquisitions, GTE said it doesn't expect to meet projected 10 percent earnings increases for this year and next. Beyond 1999, though, the company is hoping that earnings will soar by as much as 15 percent a year.

"We think all this will mean a lot to Internet users across the country," said GTE spokesman Bob Brand. "Clearly we think this is a growth area for us."

GTE will soon commence a cash offer to acquire all outstanding shares in BBN for $29 a share. BBN reported an operating loss of $12.1 million for the quarter that ended on 31 March, compared with an operating loss of almost $30 million a year earlier.

1997 May 07 - GTE / BBN

Full newspaper pages : Page D1 at [HN01EJ][GDrive] , Page D2 at [HN01EL][GDrive]

AP PHOTO

GTE's Charles Lee gestures as he announces purchase of BBN Corp., whose chairman George Conrades, right, flanks two other GTE executives.

GTE buys BBN for $616m

Deal for Internet pioneer puts firm ahead of AT&T, MCI

By Joann Muller
GLOBE STAFF

Stepping up an aggressive strategy to challenge nationwide telephone carriers, GTE Corp., the nation's largest local phone company, yesterday agreed to buy Internet pioneer BBN Corp. of Cambridge for $616 million in cash, or $29 per share.

The announcement came one day after GTE said it would pay $485 million for part of Qwest Communications Corp.'s nationwide fiber-optic network. The back-to-back moves enable GTE to offer a broad array of telecommunications services to consumers and businesses throughout the United States.

"Our goal is to be the first player to truly deliver local, long distance, Internet access and enhanced data services, all on a nationwide basis, all from one company, all on one bill, and all with a single point of contact for customer service," GTE chief executive Charles R. Lee told analysts.

The company, which is moving its headquarters from Stamford, Conn., to Dallas, also said it was teaming up with Cisco Systems Inc., a San Jose, Calif. networking company, to help manage its network and could buy more than $1 billion of Cisco products over five years.

Lee said the moves would pay off long-term for GTE shareholders, but cautioned that the heavy up-front investments would hurt short-term profits. He estimated that 1997 per-share earnings growth would be "flat to slightly positive," instead of the 10 percent earnings growth that had been expected before the moves were announced. The company said earnings could increase 13 percent to 15 percent a year starting in 1999.

GTE shares fell 1⅛, to 45, while BBN leaped 6¼, to 28⅞, on the New York Stock Exchange.

Under terms of the deal, which has been approved by directors of both companies, GTE will begin a cash tender offer for all

BBN, Page D2

GTE Corp.

Headquarters: Stamford, Conn.
Chairman/CEO: Charles R. Lee
Founded: 1918
Employees: 102,000
Stock: Down 1 1/8 to 45 on NYSE
Core business: Provides local telephone and mobile-cellular services to customers in 29 states, Canada, the Dominican Republic, and Venezuela. Also publishes telephone directories and supplies command, control, communications, and intelligence systems to US Department of Defense.

BBN Corp.

Headquarters: Cambridge
Chairman/CEO: George H. Conrades
Founded: 1948
Employees: 2,000
Stock: Up 6 1/4 to 28 7/8 on NYSE
Core business: Builds wide-area communications network systems. Also develops and markets packaged data analysis software products and performs contract research and development in computer, communications and acoustics.

[HN01EK][GDrive]

From sound of things, BBN helped pioneer 'Net

By Hiawatha Bray
GLOBE STAFF

GTE Corp.'s $616 million investment in BBN Corp. will buy it a lot more than a major Internet service provider. In a sense, BBN is *the* Internet service provider, the company that constructed the ARPANET, the first primitive computer network that has grown into today's global web of data. Many companies, universities and government agencies collaborated to build the Internet, but no one participant is more closely identified with the project than BBN.

Yet when the company was founded as Bolt, Beranek and Newman in 1948, it wasn't involved with computers. Instead the company's specialty was acoustics – the study of sound. BBN designed the acoustics for the great hall where the United Nations General Assembly meets. And the company still does a great deal of sensitive work for the US Navy on ways to make surface ships and submarines quieter and harder to detect.

Given BBN's relationship to the Pentagon, it's easy to believe the popular story that the Internet was developed to ensure that military computer networks could survive a nuclear attack. But Frank Heart, who worked on the ARPANET for BBN, says the story is bogus.

Instead, the Internet grew out of an effort in the 1960s to allow computers at universities and research institutions to communicate with each other. BBN's involvement with the project began in the late 1950s, when the company hired a brilliant psychologist named J.C.R. Licklider.

"He was with the company only a matter of months, and he said, 'I want a computer,'" recalled Leo Beranek, cofounder of BBN.

"I asked what is it going to cost. He said $30,000. I said: 'My God, man, we've never bought anything more expensive than a water cooler. What are you going to do with it?' He said he didn't know but he knew that computers were the wave of the future."

Beranek got Licklider his computer, one of the first minicomputers from Digital Equipment Corp., and Licklider began hiring smart, ambitious students fresh from Harvard and MIT, and turned BBN into a center for computer research.

"BBN was thought of as sort of the third university. People would go from Harvard to MIT to BBN," said Katie Hafner, author of "Where Wizards Stay Up Late," a history of the Internet.

In 1962, Licklider left BBN to take a job at the Pentagon's Advanced Research Projects Agency. There he established the program that would eventually lead to the creation of ARPANET.

But it wasn't until 1969 that construction of ARPANET began. The goal was to connect computers at four major universities. BBN won the contract to attempt it – and they succeeded.

Even though the computers were connected, there wasn't a simple way to send messages. A BBN engineer named Ray Tomlinson solved the problem in 1972 by inventing electronic mail.

Now BBN is one of a handful of major firms that run the Internet's "backbone," the major communication lines that carry Internet traffic.

GTE buys Cambridge's BBN Corp. for $616m

■ BBN

Continued from Page D1

outstanding shares of BBN for $29 a share.

In acquiring BBN, GTE instantly acquires an Internet network that would have taken two years to build, said David Goodtree, an analyst with Forrester Research.

"That gives them a two-year jump" on competitors such as AT&T Corp. and MCI Corp., which are also scrambling to provide customers with Internet service.

And BBN, which created a forerunner of the Internet 28 years ago, is attractive to GTE because it has established customers and "a golden name," Goodtree said.

Building off of BBN's Internet base, GTE, with 1996 sales of $21 billion, expects to add $5 billion, to $8 billion in revenues over the next few years, officials said.

GTE's purchase of BBN is a blow to AT&T, because BBN has been providing Internet access to AT&T's business customers since June 1995.

AT&T spokesman Mike Miller said the deal with BBN was a short-term solution and that AT&T has always intended to move its customers to its own Internet backbone, which is now in place.

The two companies are negotiating an end to the contract, but neither Miller nor BBN chief executive George Conrades would comment on the talks.

It had been widely rumored for more than a week that AT&T was about to buy BBN. Those rumors helped lift BBN stock from 15¾ on April 21, to 22⅝ on Monday, the day before the GTE deal was announced.

Yesterday's deal with GTE overshadowed the release of BBN's third-quarter results, which showed revenues of $95.9 million, about 58 percent higher than a year ago, and an operating loss of $12.1 million.

Much of the revenue growth was due to growth in BBN Planet, BBN's Internet services division, which had revenue of $48.2 million, up 134 percent from a year ago. Nearly half that revenue came from helping America Online Inc. expand its network to meet rising demand.

[HN01EM][GDrive]

1997 (Sep 02) - GTE Press Release (archived with Verizon) - "GTE announces the launch of its new operating unit, GTE Internetworking; Internet pioneer BBN Corp. and GTE Intelligent Network Services combine to offer complete Internet Protocol networking services."

Source - [HC004N][GDrive]

IRVING, Texas -- **[GTE Corporation]** today announced the launch of GTE Internetworking, its new operating unit. GTE Internetworking includes the recently acquired **BBN Corp.**, which 28 years ago developed the ARPANET, the forerunner to today's Internet, and GTE Intelligent Network Services, which provides Internet services to residential and small business customers. The new operating unit will offer Internet services to residential and small business customers and Fortune 500 companies.

The acquisition of BBN and launch of GTE Internetworking are key components of **[GTE Corporation]**'s data strategy, one of a series of steps the company is taking to be a market-leading provider of voice, video and data services.

"GTE Internetworking is uniquely positioned to offer our customers the only complete, integrated Internet services using Internet Protocol (IP) networking technologies," said [**George Henry Conrades (born 1939)**], corporate executive vice president and president of GTE Internetworking. "We're building upon BBN's technological heritage and capabilities plus GTE's customer base, expanding national footprint and diversified distribution channels. Our mission is to help customers improve their business processes through the integration of IP technologies and telecommunications."

GTE Internetworking will work closely with other GTE units, including GTE Communications Corp., the company's new national sales, service and marketing unit, and GTE Network services, its regulated local exchange carrier.

GTE Internetworking will offer a full spectrum of internetworking services including dial-up and dedicated Internet access, high-performance Web hosting, managed security, network management, systems integration and Web-based application and integration services.

The new division will have responsibility for engineering and combining facilities such as data centers and network infrastructure as well as integrating new capacity on the company's high-speed, fiber-optic network being constructed by Qwest Communications Corp. Additionally, through BBN Technologies, its research and development arm, GTE Internetworking will continue to provide funded research and development services in the area of Internet Protocol networking, security, speech recognition and other advanced technologies.

With revenues of more than $21 billion in 1996, **[GTE Corporation]** is one of the largest publicly held telecommunications companies in the world. In the United States, GTE offers local and wireless service in 29 states and long-distance service in all 50 states. GTE was the first among its peers to offer "one-stop shopping" for local, long-distance and Internet access services. Outside the United States, where GTE has operated for more than 40 years, the company serves approximately 7 million customers. GTE is also a leader in government and defense communications systems and equipment, directories and telecommunications-based information services, and aircraft-passenger telecommunications.

1997 (Nov 13) - GTE Press Release (archived with Verizon) - "GTE Corp. to acquire Genuity, Inc."

Source - [HC004M][GDrive]

IRVING, Texas - **GTE Internetworking**, a subsidiary of **[GTE Corporation]**, today announced that it will acquire [Genuity Incorporated], a **subsidiary of Bechtel Enterprises**. The terms of the transaction were not disclosed. The acquisition is subject to customary closing conditions, including the expiration of applicable waiting periods under the Hart-Scott-Rodino Act. **The acquisition will be completed through GTE Internetworking's affiliate, [BBN Technologies, Incorporated].** It is anticipated that the transaction will be completed by the end of the year.

GTE Internetworking, already a leading provider of Web hosting, is pursuing its strategy of enabling customers to transfer their business applications to the Internet. Moving mission-critical business processes to the Web allows customers to broaden market reach, lower the cost of sales, distribution, and support, and transform the relationships between companies and their customers.

GTE Internetworking has more than a thousand Web hosting customers, including some of the busiest sites on the Web--ZD.Net, Four11, LA Times, Boston Globe, Tribune Corporation, and NBC Interactive. The combination of GTE Internetworking with Genuity will provide an expanded global footprint with 12 fully networked data centers, creating an organization with an unprecedented ability to provide distributed Web hosting services.

Genuity is a value-added provider of distributed application hosting solutions. Genuity has strategically located data centers and a sophisticated load-balancing technology, Hopscotch, which together ensure efficient delivery of data across the Internet. **Genuity's unique Hopscotch technology helps solve busy server problems, network congestion, and Internet latency to deliver the highest levels of performance.** Its customers include cnet, CMP Publications, Inc., Excite, InterTel, and MCA/Universal.

"With this acquisition we continue to build the critical set of assets necessary to advance our position as a trusted provider of the enabling infrastructure for Internet commerce. We are combining our high-speed national backbone with global reach, robust public and private peering relationships, advanced hosting and distributed application management with our security and systems integration expertise to enable customers to migrate mission critical applications and business processes to the network," said [George Henry Conrades (born 1939)], president of GTE Internetworking.

"Genuity's network technology, and most importantly, its people, are what give us the competitive advantage," said T. Geir Ramleth, president and CEO of Genuity. "The integration of our robust hosting infrastructure and powerful Hopscotch technology with GTE Internetworking's extensive resources will create a synergistic union. And our similar cultures and vision for the future provide a unique opportunity for customers looking to transform their businesses using Internet technology."

"Genuity's robust distributed application hosting architecture will be instrumental to GTE Internetworking as we continue to focus on delivery of the most advanced distributed network-centric solutions," said Mark Shull, vice president and general manager of GTE Internetworking's Network Centric Solutions group. "This combination allows us to build on our existing base of technology and expertise to provide Internet infrastructure services for electronic commerce."

About Genuity

Genuity is a subsidiary of Bechtel Enterprises, the development, financing and ownership affiliate of the Bechtel organization. Genuity is a value-added provider of distributed application hosting, access and security technologies that provide cost-effective, scaleable and highly reliable Internet infrastructure for commercial applications. With headquarters in San Francisco, Genuity also has data centers established in Chicago, Los Angeles, New York, Phoenix, San Jose, Washington, D.C. and London. Genuity is the creator of Hopscotch, a service allowing organizations to ensure the accessibility and performance of their mission-critical Internet sites by eliminating DNS look-up failures and solving Internet latency problems. For more information, please call 1-888-Genuity, or visit the company's World Wide Web site located at Genuity

About Bechtel Enterprises

Bechtel Enterprises, Inc. is the development, financing and ownership affiliate of the Bechtel organization, a premier global engineer - constructor. It is a leader in the privatized infrastructure market, with ownership interests in 9 companies and 29 projects in the power, water, transportation, telecommunications, and technology sectors. Since 1990 alone, Bechtel Enterprises has participated in arranging nearly $12 billion in project financing. For more information about Bechtel please visit the company's World Wide Web site at Bechtel

About GTE Internetworking

GTE Internetworking, a unit of GTE Corporation (NYSE:GTE), includes the recently acquired BBN Corporation, which 28 years ago developed the ARPANET, the forerunner to today's Internet, and GTE Intelligent Network Services, which provides Internet services to consumers and small businesses.

GTE Internetworking offers customers, from consumers to Fortune 500 companies, a full spectrum of Internet services and solutions including dial-up and dedicated Internet access, end-to-end network management, high-performance distributed hosting and applications solutions, managed security, and systems integration, for customers migrating their mission-critical business applications to the Internet. GTE Internetworking draws upon BBN's expertise in funded research and development of advanced technologies, including satellites, digital radio, multi-gigabit routers, security, and speech, and GTE's strong existing telecommunications services, including local and long distance, wireless, paging, video, research, and Internet. The address for the GTE Internetworking's home page is www.bbn.com.

1998 Aug 09 ... some BBN and Genuity in there too

Full newspaper page : [HN01EN][GDrive]

Technology

Host of companies compete for business data storage

Hosts rent space on servers to hold programs, data or Web pages

By Jerry Ackerman
Boston Globe

It was only a matter of time, once interstate highways were built, before roadside diners gave way to fast-food chains and mom-and-pop motels were replaced by Holiday Inns, Radissons, and EconoLodges.

And so it is today along the Internet information highway, where a battle is being waged for market share in a roadside service called hosting — storage of Web page text and other content for retrieval by computer users at the click of a mouse.

Along with storage, some hosting companies see the field evolving to include rental of specialized business software, on a per-use basis, to customers who need these sophisticated programs but can't afford their upkeep.

The players range from giants — such as IBM Corp. and GTE Corp., which got into the game last year by buying BBN Corp. of Cambridge, Mass. — to Sage Networks Inc., a Cambridge start-up intent on building a national hosting company by buying smaller operators, and tiny Taylor Group of Bedford, N.H., which is starting from scratch.

The prize is a position in an industry that now has 4,000 to 5,000 hosting companies, which maintain the computers, called servers, that store Internet data. While no hosting company is believed to hold more than 2 percent of the market, these companies had combined sales of $400 million in 1997, according to Forrester Research Inc. of Cambridge. That number is expected to reach $1.9 billion in 1999 and $10.5 billion by 2002.

Tied to online shopping

Underlying this rapid growth is the surging interest in online shopping.

Electronic commerce last year chalked up more than $20 billion in sales, two-thirds of that in business-to-business transactions. Forrester figures that by 2002, this number could reach $350 billion, as existing on-line companies — ranging from home-based enterprises to pioneering bookseller Amazon.com — are joined by retailers such as L.L. Bean, Macy's, and Sears, Roebuck & Co.

Many of the largest of these "e-commerce" companies manage their own servers and networks. But some big players, and most of the small ones, contract this work to hosting companies.

These often are Internet service providers, many of them local companies whose primary business is providing dial-up phone connections to the Internet.

But along with providing connections, they sell service packages that — for an average fee of $300 to $400 a year and frequently much higher for large users — store Web pages, execute orders, and provide software to post purchases to buyers' credit cards while transmitting deposits to sellers' bank accounts.

Still waiting to be tapped, however, are thousands of firms that could sell their products or services over the Internet but haven't tried, and others that have yet to exploit the World Wide Web's full potential.

Software products are coming out almost daily to ease the way, says Joseph Barlett, an analyst with Yankee Group in Boston. "Most companies going with a hosting provider today are not very sophisticated," he observes.

But many that are very savvy are still hiring hosting companies to help guarantee service quality for both external Internet pages and intranet content meant only for employees' eyes.

Forrester says there were 12,000 such "complex sites" last year, and predicts this number will grow to 20,000 by 2002. Many will be managed in-house, but many more firms will be paying thousands of dollars a year to hosting companies.

Looking further ahead, the Internet is on the brink of opening up new ways for companies to conduct their own internal financial and production affairs, using software that until now only large Fortune 500 companies could afford.

Testing the market

Seeing this opportunity, major business software developers such as Lotus Development Corp. (an IBM subsidiary), Microsoft Corp., and Great Plains Software Inc. are market-testing versions of their brand-name products for small companies — firms with 500 or fewer employees — to use via the Internet.

The concept calls for hosting companies to install master copies of such specialized software, and then rent access to users. International Data Corp. of Framingham, Mass. says 25 percent of 900 companies in a recent survey said they liked the idea for payroll processing; others saw a need for such services for economic forecasting or supply-chain management capabilities that they now lack.

"The capabilities in this field are just emerging," said Steven Brand, Lotus' manager for small business applications.

Hosting as a growth business is sharply defined in the "roll-up" strategy being pursued by Sage Networks, which since March has spent more than $20 million to buy eight hosting companies from coast to coast.

These acquisitions — in Atlanta, New York, Washington, D.C., Los Angeles and San Jose, Calif., — form the backbone of what Sage intends to be a national company that can establish brand identity in a now-fragmented market.

"We actually think that through consolidation you can build a large international company," said Bradley Feld, cochairman and one of Sage's founders.

Could become No. 2

By January, he said, Sage hopes to have between 15 and 25 acquisitions under its wing, with more planned for 1999. "We are now one of the top 10 hosting companies in the country and by the end of this year should be one of the top two."

Not that this represents a big market share.

Sage says it has tens of thousands of clients at its companies; some estimate that number is less than 40,000. The firm believed to be the nation's largest hosting operator, Hiway Technologies Inc. of Boca Raton, Fla., claims 87,000 customers.

And the runner-up, Verio Inc., which has 125,000 customers buying connections to the Internet, may be able to claim about 65,000 as hosting customers, based on rules of thumb that industry veterans say are commonly accepted.

Both Hiway and Verio also are pursuing roll-up strategies. Verio, based in Englewood, Colo., is publicly traded. Hiway has an initial public stock offering planned for this year.

Sage's buying spree has included a large, high-speed computer center near Washington, D.C., purchased from IBM Corp., to be the linchpin in the company's operations. A second center is being built in Atlanta, where two of its operating units are also based, at a projected cost of $1 million.

Sage's money comes mostly from a venture fund managed by a New York investment bank, Charterhouse Group International Inc. Patricia Riley, managing director, says Charterhouse has "well over $40 million in pure equity" committed to Sage.

"The way I look at this, you have a market that is growing exponentially and a business that creates profits quickly," she said. An IPO is planned, but no timetable has been set.

GTE, an international telecommunications giant with $23 billion in revenues in 1997, paid $616 million last year to buy BBN, which in 1969, as Bolt, Beranek & Newman, launched the forerunner of the Internet for the U.S. Defense Department.

Today, BBN operates under the name GTE Internetworking, still running key portions of the Internet and selling services to support its parent company's drive to compete against AT&T Corp. and MCI Communications Corp.

"We're shooting to be a leader in the hosting market," says John Vincenzo, a company spokesman.

Still under the BBN flag at the time, the company began commercializing hosting operations at its 11 U.S. locations in 1995, according to senior product manager Christine Silva.

Noticing smaller firms

Going first after large corporations that needed backup storage capacity, the company last year expanded sales efforts to include small and mid-size firms — companies with fewer than 500 employees or sales less than $100 million. Analysts say this sector is where electronic commerce is growing the fastest.

Vincenzo said GTE now has more than 1,000 hosting customers. It acquired one smaller hosting company, Genuity Inc., of San Francisco, late last year primarily because it had a data center that could be a GTE West Coast operations center. More acquisitions are possible.

Coming from a different direction, Dan Taylor, a Bedford, N.H., software consultant, sees new computer hardware technology paving the way for hosting centers to provide small businesses with payroll, engineering, manufacturing control, sales systems, and other software that they previously couldn't afford.

Taylor says the licensing fees for these high-end products, which big companies take for granted, weren't the problem.

It was the cost of hiring someone to install the software, manage its use, and install upgrades, in as many as 200 desktop computers in a medium-sized firm. These information systems managers, who can earn $80,000 to $90,000 a year, also must be available around the clock to solve problems.

The new hardware that is altering this picture is called "thin client" technology, a name that refers to the fact that those desktop terminals are stripped of their software storage capabilities — thinned down — to become terminals that connect to servers that function as a central computer.

May sound familiar

This may sound familiar to anyone who used a computer before the PC revolution , when computer terminals were wired to IBM, Digital Equipment, or similar mainframe computers that were tended behind closed doors by technicians. "The industry is calling it recentralization," says Taylor of this return to the past.

But by requiring that software be installed and maintained only at the servers, operating costs plummet and fancy software becomes more affordable.

Taylor this fall will launch his first application of this approach, installing accounting software in host servers at his company's offices that nearby New Hampshire College will be able to tap, via the Internet, for teaching its business courses.

Simultaneously, his company, The Taylor Group, is discussing the hosting of specialized business applications with New Hampshire's largest private manufacturing company, Cabletron Corp. of Rochester, and with a Massachusetts health care firm, Physicians Quality Care Inc. of Waltham, Mass.

Anticipating success in these pilot installations, Taylor recently bought a 9.5 acres of land in Bedford where he plans to build new offices for his 75-employee company — with 10,000 square feet of space set aside for a hosting center.

[HN01EO][GDrive]

2005 (May 12) - BusinessWire - BBN Technologies Appoints George Conrades, Executive Chairman of Akamai Technologies, to Board of Directors

Source - [HW0051][GDrive]

CAMBRIDGE, Mass.--(BUSINESS WIRE)--May 12, 2005--BBN Technologies, a leading provider of advanced technology and research and development, announced today that [George Henry Conrades (born 1939)], executive chairman of [Akamai Technologies, Incorporated], has been appointed to BBN's Board of Directors. Mr. Conrades served as the CEO of [**BBN Technologies, Incorporated**] from 1994 to 1997.

"I'm delighted to join the Board of Directors of BBN Technologies, a highly respected organization renowned for developing innovative solutions to some of the world's most challenging problems," said Mr. Conrades. "It's a privilege to be reunited with BBN's world-class scientists and their excellent work."

“George brings to the BBN board an outstanding record of technology and business leadership together with a deep understanding of and appreciation for BBN's business, culture, and core values”

The BBN Board of Directors also includes: Tad Elmer, BBN's president and CEO; David Fialkow and Ken Novack, managing director and advisory board member of General Catalyst Partners, respectively; Jim Breyer and Kevin Efrusy of Accel Partners; and Anita K. Jones, the Lawrence R. Quarles Professor of Engineering & Applied Science, and Professor of Computer Science in the School of Engineering and Applied Science at the University of Virginia.

"George brings to the BBN board an outstanding record of technology and business leadership together with a deep understanding of and appreciation for BBN's business, culture, and core values," said Mr. Elmer. "His counsel will help us grow and prosper."

[George Henry Conrades (born 1939)] was named Chairman and Chief Executive Officer of Akamai in April 1999, bringing a broad range of business experience in the computing, Internet, telecommunications, and media industries. Mr. Conrades became Executive Chairman of Akamai in April 2005.

Before joining Akamai, Mr. Conrades was Executive Vice President and President of GTE Internetworking following the firm's acquisition of BBN Corporation in 1997. At [GTE Corporation], he was responsible for creating GTE Internetworking and leading GTE's rapid growth in the data and Internet business, including integrated telecommunications services.

From 1994 until GTE's acquisition of BBN, [George Henry Conrades (born 1939)] served as CEO of BBN, where he built BBN Planet into one of the industry's top-tier ISPs. BBN designed, built, and deployed the first four nodes of the ARPANET, the forerunner to today's Internet.

Mr. Conrades currently serves as a venture partner at Polaris Venture Partners, an early stage investment company.

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Bell Textron Corporation

The current Wiki : (https://en.wikipedia.org/wiki/Bell_Helicopter)

Capture- 2019-06-12-wikipedia-bell-helicopter.pdf /

Bell Aircraft

The company was founded on July 10, 1935 as Bell Aircraft Corporation by Lawrence Dale Bell in Buffalo, New York. The company focused on the designing and building of fighter aircraft. Their first fighters were the XFM-1 Airacuda, a twin-engine fighter for attacking bombers, and the P-39 Airacobra. The P-59 Airacomet, the first American jet fighter, the P-63 Kingcobra, the successor to the P-39, and the Bell X-1 were also Bell products.[2]

In 1941, Bell hired Arthur M. Young, a talented inventor, to provide expertise for helicopter research and development. It was the foundation for what Bell hoped would be a broader economic base for his company that was not dependent on government contracts. The Bell 30 was their first full-size helicopter (first flight December 29, 1942) and the Bell 47 became the first helicopter in the world rated by a civil aviation authority, becoming a civilian and military success.[2]

Bell Helicopter

Textron purchased Bell Aerospace in 1960. Bell Aerospace was composed of three divisions of Bell Aircraft Corporation, including its helicopter division, which had become its only division still producing complete aircraft. The helicopter division was renamed **Bell Helicopter Company** and in a few years, with the success of the UH-1 Huey during the Vietnam War, it had established itself as the largest division of Textron. In January 1976, Textron changed the name of the company again to **Bell Helicopter Textron**.[3]

Bell Helicopter has a close association with AgustaWestland. The partnership dates back to separate manufacturing and technology agreements with Agusta (Bell 47 and Bell 206) and as a sublicence via Agusta with Westland (Bell 47).[4] When the two European firms merged, the partnerships were retained, with the exception of the AB139, which is now known as the AW139. As of 2014, Bell and AW cooperate on the AW609 tiltrotor.[5]

Bell planned to reduce employment by 760 in 2014 as fewer V-22s were made.[5] A rapid prototyping center called XworX assists Bell's other divisions in reducing development time.[6]

The company was rebranded as "Bell" on February 22, 2018.[7]

https://www.bellflight.com/company/history/1960-1969

1960

- Ten Bell HU-1A U.S. Army medical evacuation helicopters are airlifted to Chile for Operation Amigo.
- Textron Inc., of Providence, RI, purchases the defense activities of Bell Aircraft Corporation and sets up Bell Aerospace Corporation as a wholly-owned subsidiary with three operating divisions: Bell Helicopter Corporation; Bell Aerospace Systems Corporation; and Hydraulic Research and Manufacturing Corporation.
- An 18-foot Air Cushion Vehicle designed by Bell Aerosystems is turned over to the U.S. Navy for test and evaluation.
- U.S. Army pilots flying a Bell HU-1 set 7 helicopter world records, including a non-stop flight distance of 441.74 miles, 3 speed records, and 2 speed climbing records. The HU-1 reaches 10,000 ft. in less than 4 minutes and 24,250 ft. in just 12 minutes.
- Edwin J. Ducayet becomes president of the company, replacing Harvey Gaylord.

1961

- The first aircraft to be powered by a 250 shp T-63 engine, the U.S. Navy's Bell HUL-1M, takes its initial flight.
- Al Averill, flying a Bell 47J-2, sets a helicopter world record in Class E-1.c for 100 kilometer speed in a closed circuit. His speed of 107.081 mph breaks a Russian-held record.
- Bell Aerosystems develops the "Reaction Control System" successfully used in NASA's Mercury program, the first program sending man to space.
- Lou Hartwig, flying a Bell 47G, sets three class E-1.b world records during one flight: non-stop distance of 631.436 miles in a closed circuit; 500 kilometer speed of 73.985 mph in a closed circuit; and 1,000 kilometer speed of 73.351 mph in a closed circuit. All three records are the first to be set in their respective categories and weight classes.
- Dr. Dora Jean Dougherty Strother, flying a Bell 47G-3, sets two female helicopter world records: altitude without payload of 19,385 feet and non-stop distance of 405.83 miles in a straight line without payload. Both accomplishments break previous Russian-held records.
- The Royal Australian Air Force (RAAF) places a $4 million order for eight Bell 204B/HU-1Bs.
- Bell Aerospace Corporation announces it has built and demonstrated the "Rocket Belt" for mankind's first free flight.
- A new range of high-altitude capabilities for helicopter operations is discovered in a Pikes Peak test by the new turbo-supercharged Bell 47G-3B.
- The Bell OH-4 is announced as one of three Light Observation Helicopter (LOH) design competition winners.
- An unofficial helicopter endurance world record is set by the Bell HTL-6 for a flight lasting 72 hours and 2 minutes at the U.S. Navy's Ellyson Field, Pensacola, FL.
- A $6 million procurement contract is awarded for five Bell YOH-4 LOH (Light Observation Helicopter) prototypes. Bell Helicopter later loses the contract, but uses the prototype as the base for the future Bell 206 JetRanger.
- Bell Helicopter announces the receipt of $70 million in new government business. This includes the Bell HO-4, Royal Australian Air Force (RAAF) contracts, and follow-on production of Bell HU-1B and HU-1D U.S. Army helicopters.

1962

- Mitsui & Co. Ltd. licenses manufacturing rights to the Bell 204 in Japan.
- The Bell HU-1 designation is changed to the Bell UH-1 as a result of a newly revised military designation system.
- Bell Aerosystems announces that it will

- Bell Aerosystems announces that it will build a 22-ton, 62-foot Hydro-Skimmer for the U.S. Navy under a $2 million contract. This is the largest air cushion vehicle ever constructed in the U.S.
- The Bell UH-1E wins the competition for the U.S. Marine Corps' Assault Support Helicopter (ASH) production contract.
- Capt. Boyce Buckner of the U.S. Army sets a world record in a Bell YHU-1D (Model 533) by climbing to 6,000 meters (19,686 feet) in 5 minutes and 51 seconds.
- Bell Aerospace Corporation is awarded a contract to design and build the X-22A VTOL for the U.S. Navy's portion of the Tri-Service Assault Transport Research Program.
- U.S. Army Lt. Col. Leland Wilhelm sets a world record in a Bell YHU-1D (Model 533) by climbing to 3,000 meters (9,843 feet) in 2 minutes and 17 seconds.
- Capt. W. F. Gurley of the U.S. Army sets a world record in a Bell YHU-1D (Model 533) by flying 1,000 kilometers in a closed circuit at an average speed of 134.9 mph.
- The Bell YOH-4 prototype, nicknamed "Ugly Duckling," makes its first flight.
- Bell Aerosystems announces the construction of a radiation-cooled, high-performance rocket motor.
- The Bell D-255 design study leads to a full-scale mock-up of the Iroquois Warrior combat helicopter for the U.S. Army.

1963

- In Morocco, the Bell UH-1B carries 32 flood refugees and a crew of four in one flight.
- The high-performance Bell UH-1B flies more than 170 mph.
- A Federal Aviation Administration certificate is received by the Bell 204B.
- The U.S. Army accepts its first Bell UH-1D.
- Bell Helicopter wins a competition to build the Bell UH-1F for the U.S. Air Force.
- A $108,320,407 U.S. Army contract is announced by Texas Congressman Jim Wright for Bell UH-1B and UH-1D ships.
- The modified Bell 47G-2A-1, nicknamed "Wing Ding," flies for the first time.
- First flight occurs for the Bell 205A.
- Bell Aerosystems announces an $11.2 million subcontract from Grumman to develop ascent rocket engines for NASA's Lunar Excursion Module (LEM) of Project Apollo.
- Bell Aerosystems acquires the rights to manufacture and sell hovercraft in the U.S. from Westland Aircraft Ltd. and Hovercraft Development Limited of England.

1964

- Bell Helicopter receives a $7,662,257 production contract from the U.S. Marine Corps for Bell UH-1Es.
- A new Engineering and Research facility opens at Bell Helicopter's Hurst, TX, plant.
- The 850th Bell UH-1 is delivered; first flight of Bell UH-1F series occurs; and the first delivery of Bell UH-1E is made to an operational U.S. Marine Corps unit.
- An order for 150 Bell 47G-3B-1s is placed by the British Army.
- The modified Bell YUH-1B flies 222 mph in an unofficial new world speed record.
- A $5,762,850 contract is awarded for 103 Bell 47G-3B-1s, modified to trainer configuration, for the U.S. Army.
- The first operational Bell UH-1F is delivered to the U.S. Air Force.
- Bell Aerospace is praised by NASA for its accelerometer package aboard the Ranger 6 moon shot. NASA states that the package "contributed greatly to the complete guidance success" of the moon mission.
- Flown by U.S. Army pilots, the YUH-1D establishes 20 Fédération Aéronautique Internationale (FAI) World Records, all for turbine-powered helicopters without payload.
- Bell Aerosystems began ground testing the Lunar Landing Research Vehicle (LLRV) at NASA's Flight Research Center, Edwards, CA.
- The Bell Rocket Belt performs 396 flights throughout the year before an estimated 1.8 million spectators, including flights at the New York World's Fair.
- Bell Helicopter receives an order for 720 Bell UH-1s. This $100 million order is the largest Bell UH-1 order to date.

1965

- The U.S. Army takes delivery of its first Bell TH-13T instrument trainers.
- Bell Aerosystems' Agena engine is used to send NASA's Ranger 9 on moon photo missions.
- The U.S. Air Force elevates Bell Aerosystems to prime contract status, calling for the delivery of all Agena engines directly to the Air Force.
- Bell Helicopter sets a production record believed to be unprecedented in the aerospace industry, with 100 consecutive months of on-schedule deliveries to U.S. Government entities.
- A new vertical and/or short take-off and landing (V/STOL) trailing rotor convertiplane design is unveiled.
- Selection of the Bell UH-1D is approved by the West German Parliamentary Committee in Bonn, which places an order for 406 helicopters, valued at approximately $125 million.
- The twin-turbine powered Bell UH-1D is developed and takes first flight.
- Bell Helicopter receives additional U.S. Army orders for 720 helicopters (225 Bell UH-1Bs and 465 Bell UH-1Ds).
- Bell Helicopter announces the development of the Bell AH-1 Cobra, a highly modified Bell UH-1B derivative featuring a streamlined fuselage, armament package, and dedicated crew for flying and weapon system control.
- Known also as the HueyCobra or Snake, the Bell AH-1 Cobra makes its first flight. The aircraft later became the backbone of the U.S. Army's attack helicopter fleet.
- Bell Aerosystems announces a Federal Government transportation project using two SK-5 Air Cushioned Vehicles to shuttle passengers between the Oakland and San Francisco airports.
- As an addition to its 1966 commercial line, Bell unveils the new five-seat, turbine-powered Bell 206 JetRanger. It will fly at speeds in excess of 140 mph and will carry a 1,500-lb useful load.
- he new Bell AH-1 Cobra records a sustained level flight cruise speed of 200 mph. Until this time, the official world speed record for its weight class was 180.1 mph.
- A $297,000 contract is awarded for a preliminary design study for a new research VTOL rotary-

wing composite aircraft.

- The third and final SK-5 Air Cushioned Vehicle is produced for the U.S. Navy and shipped to Coronado, CA.
- The Bell X-22A V/STOL aircraft number 2 is rolled out.

1966

- Rollout of the first Bell 206 JetRanger takes place at the Hurst, TX, facility. The flight test program is initiated with the first flight occurring on the same day. Successfully derived from the prior YOH-4 "Ugly Duckling," with a stylistic redesign accredited to Dwayne Jose, Vice President of Marketing, the Bell 206 becomes the most successful commercial helicopter in history.
- The U.S. Army awards Bell Helicopter a contract for 110 production Bell AH-1s.
- Testing takes place for a three-blade spacecraft rotor recovery system that would allow astronauts to reduce landing speeds and control choice of landing sites.
- A $249,457,443 contract is received for 2,115 Bell UH-1 Iroquois, the largest contract in Bell history and largest ever awarded by the U.S. Army Aviation Materiel Command.
- The Federal government's transportation project, using two Bell SK-5's Air Cushioned Vehicles, successfully concludes in San Francisco, logging 179,700 passenger miles and carrying 13,600 passengers.
- Altitude testing of the modified multiple restart Gemini/Agena rocket engine is carried out in preparation of Gemini VIII.
- Halvorson-Lent's Trans-Canyon Pipeline Project nears completion at the Grand Canyon. It is one of the greatest construction challenges in history, using helicopters exclusively to lay water pipe in the floor of the canyon.
- The U.S. Army awards Bell Helicopter a $44,377,858 contract for 708 Bell UH-1Ds.
- A unique radar antenna that is built into the blade of a helicopter is successfully tested.
- Two new "flying devices" – the Flying Chair and Pogo Stick – are developed and announced.
- The delivery of three Bell UH-1Ds completes an order for 11 helicopters, constituting New Zealand's first armed forces rotary-wing fleet.
- First flight occurs for the X-22A V/STOL research airplane, featuring four ducted fans that can rotate together between vertical and horizontal positions for various flight modes.
- The U.S. Army continues to expand its fleet by placing a $21,795,000 order for 210 additional Bell AH-1s.
- Three Bell SK-5 Air Cushioned Vehicles (ACVs) arrive for the U.S. Navy operation near Moc Hoa, South Vietnam. The three craft are able to access areas that were previously inaccessible, successfully destroying and capturing Viet Cong supplies and soldiers.
- The Bell Aerosystems Lunar Landing Research Vehicle (LLRV) sets a new flight record by staying aloft for 9.5 minutes.

1967

- The first two Bell 206A JetRanger deliveries take place during the Helicopter Association of America (HAA) convention. The first is purchased by Harry Holly of Hollymatic Corp. in Park Forest, IL, and the second by the National Helicopter Service & Engineering Co. of Van Nuys, CA.
- Canadian operators Dominion Helicopters Ltd. and Pegasus Airlifts establish a joint air taxi service using four Bell 206 JetRangers and four Bell 47J-2s at the Canadian International Exposition of 1967.
- The Brazilian Air Force purchases its first Bell UH-1Ds, acquiring six aircraft to supplement its Bell 47G and Bell 47J fleets.
- Helicopter Sales Pty. Ltd., a Bell Helicopter dealer in Australia, receives first export delivery of a production Bell 206A.
- The Los Angeles County Fire Department becomes the first municipality to purchase a Bell 204B.
- “Cobra” is officially adopted by the U.S. Army as its name for the Bell AH-1.
- The first production Bell AH-1G is delivered to the U.S. Army.
- A U.S. Army contract is awarded for 141 Bell TH-13T instrument trainers.
- The West Germany Federal Defense Force accepts the first of 380 Bell UH-1Ds assembled in West Germany under a co-production contract between Bell Helicopter and Dornier, GmbH.
- Ten Bell UH-1Ds are ordered following the aircraft’s selection as the first helicopter to be used in the all-around ground support operations of the Canadian Forces (Army, Navy, Air Force).
- Bell Helicopter announces a new 15-seat commercial model, the Bell 205A, to be available during 1968. It is the largest helicopter ever manufactured by the company at that time.
- The U.S. Army announces it has deployed the Bell AH-1 Cobra in Vietnam. The first combat kill is credited to Maj. Gen. George Seneff, commander of the First Aviation Brigade, who destroyed a sampan (river boat) with four Viet Cong onboard.
- U.S. Vice President Hubert H. Humphrey rides in a SK-5 ACV down Niagara River from Buffalo to Bell Aerosystems’ Wheatfield, NY, plant. He also witnesses a ducted fan transition on the X-22A aircraft, a double “rocket belt” flight, and tours the facility. Neil Armstrong, who is also visiting, gives a detailed explanation of Bell’s Lunar Landing Training Vehicle to the Vice President.
- A double Rocket Belt flight by Bob Courter and Bill Suitor is aired on national television during the first Super Bowl football game in Los Angeles.
- Over 4,000 employees and officials witness the X-22A’s first successful public flight.

1968

- The U.S. Navy selects the Bell 206 JetRanger as its light turbine trainer and orders 40 for delivery by end of year.
- Bell Aerosystems' Lunar Module ascent engine is fired into orbit during the Apollo 5 flight.
- Bell Helicopter announces it will open an Overhaul & Modification Center in Amarillo, TX, occupying buildings being phased out by the U.S. Air Force. William Humphrey is named general manager of the facility, which will repair and refurbish battle-damaged U.S. Army helicopters.
- Seven Bell 206 JetRangers and six more Bell UH-1Ds are ordered by the Brazilian Air Force to update and expand its helicopter forces.
- Bell Aerosystems' first production line Air Cushioned Vehicle (ACV), an SK-5 for the U.S. Army, rolls off the assembly line.
- The Bell 206 JetRanger is named a winner of the U.S. Army's re-opened light observation helicopter (LOH) competition. Bell Helicopter is awarded a $123 million contract for 2,200 aircraft with deliveries scheduled between 1969 and 1972.
- Development of a twin-engine Bell UH-1, powered by United Aircraft of Canada Pratt & Whitney PT6T-3 turbines, is approved by the Canadian Government. The contract is expected to lead to Canada equipping its armed forces with the new aircraft.
- The 10,000th helicopter, a Bell JetRanger, delivers to Petroleum Helicopters, Inc. (PHI), the world's largest helicopter operator.
- Selected for use as its advanced helicopter trainers, the U.S. Navy orders 45 Bell TH-1Ls and Bell UH-1Ls.
- The U.S. Marine Corps orders 49 Bell AH-1s, becoming the second branch of the U.S. military to buy the high-speed gunship.
- A contract for 900 Bell UH-1Hs is awarded by the U.S. Army, making it the second largest order ever of the UH-1.
- The New York City Police Department, a pioneer in the use of helicopters by law enforcement agencies, marks the 20th anniversary of its first Bell helicopter purchase. NYPD has an all-Bell helicopter fleet.
- An announcement is made that the Bell 212, the first twin-engine, medium-sized, commercial helicopter, will be ready for delivery in 1970.
- Bell Aerospace's body-controlled pogo vehicle, which the operator maneuvers simply by leaning in the direction he wishes to go, registers a successful first flight.
- The upgraded Bell UH-1, nicknamed "Huey Tug" in light of its upgraded drive train and power plant, larger rotor, and increased lifting capacity, flies as the Bell 211.
- Apollo 7, the first manned flight in the U.S. lunar landing program, launches into Earth's orbit for an 11-day mission. A total of 24 Bell Aerosystems propellant positive expulsion tanks will supply fuel and oxidizer to the spacecraft's reaction control systems and to the S-IVB third stage's auxiliary propulsion system.

1969

- Bell Helicopter's compound research helicopter, a highly modified Bell UH-1, attains a speed of 316 mph in level flight. This is an unofficial speed record and has remained unchallenged.
- The U.S. Air Force awards Bell Helicopter a contract to define the design characteristics of a folding prop-rotor aircraft.
- Bell Helicopter announces that its twin-engine Bell 212 flight test program is well underway.
- The U.S. Army accepts the first Bell OH-58A light observation helicopter. The Bell OH-58 is officially named the Kiowa.
- A licensing agreement for co-production of the Bell 205 is signed by the People's Republic of China and Bell Helicopter.
- The U.S. Air Force, U.S. Navy and U.S. Marine Corps place orders for the new twin-engine Bell HU-1N. The total includes 79 for the Air Force, 40 for the Navy and 22 for the Marines.
- Fifty twin-engine Bell CUH-1Ns are ordered by the Canadian government for its armed forces.
- The U.S. Marine Corps' Bell AH-1J Sea Cobra, a twin-engine version of the U.S. Army Cobra, is unveiled by Bell Helicopter before a gathering of armed forces representatives. The U.S. Marine Corps orders 49.
- The U.S. Navy accepts its first Bell UH-1L utility helicopter from Bell Helicopter for deployment to the Pacific Fleet.
- A U.S. Army announcement is made that the first deployment of the Bell OH-58A Kiowa to battle units in Vietnam has occurred.

https://www.bellflight.com/company/history/1970-1979

The History of Bell Helicopter: 1970 - 1979

1970

- The U.S. Army awards a contract for 170 additional Bell AH-1s with an initial funding of $5 million.
- With $20 million in initial funding, the U.S. Army orders 289 Bell UH-1Hs

- With $20 million in initial funding, the U.S. Army orders 287 Bell UH-1Hs.
- Selected by the Canadian government as the light observation helicopter for the Canadian Armed Forces, 74 Bell OH-58As are ordered.
- The U.S. Air Force formally accepts its first Bell UH-1N Twin Huey at Eglin AFB, FL.
- FAA certification is received for the Bell 212.
- **The Bell 214 is initiated, built, and has first flight. Also known as the "Huey Plus," the Bell 214 was conceived from a request by the Imperial Iranian Air Force.**

1971

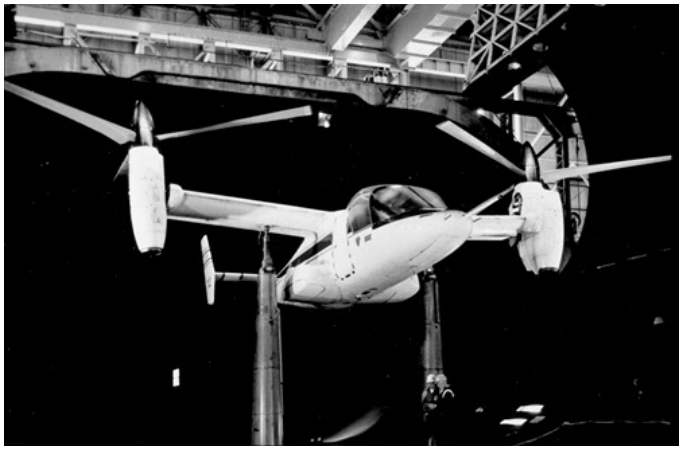
- The U.S. Army contracts with Bell Helicopter to provide 300 Bell UH-1H helicopters, funded at $37.5 million.
- Delivery of the first Bell UH-1N Twin Huey is taken by the U.S. Marine Corps.
- The Bell 206B JetRanger II, powered by an Allison 250-C20 engine, receives FAA type certification.
- Acceptance of the first of 50 twin-engine Bell CUH-1Ns is made by the Canadian Armed Forces.
- In honor of the company's 20th year in Texas, the mayor of Fort Worth proclaims "Bell Helicopter Week."
- The first Bell 206B JetRanger II production model delivers to Okanagan Helicopters Ltd. of Canada.
- The Bell 212 receives FAA Category A certification.
- Presentation of the Bell 207 Sioux Scout prototype from 1963 to the U.S. Army Aviation Museum in Ft. Rucker, AL, occurs.
- The first of 74 Bell COH-58A light observation helicopters is delivered to Canadian Armed Forces.

1972

- Commercial and international marketing break all-time records with firm orders for 105 helicopters valued at $23 million.
- Bell Helicopter receives a $24,732,793 contract from the U.S. Army as prime systems integrator of the Improved Cobra Armament Program (ICAP). The contract calls for integrating the tube-launched, optically tracked, wireless-guide (TOW) system into eight U.S. Army Bell AH-1Gs.
- Twenty-four Bell UH-1Hs are added to a co-production contract between Bell Helicopter and the People's Republic of China.
- The U.S. Air Force takes delivery of the first two of 30 Bell HH-1H local base rescue helicopters.
- Petroleum Helicopters Inc. (PHI) orders 33 new Bell helicopters, valued at $5 million. This is the largest single commercial helicopter order in history.
- Bell Helicopter announces a breakthrough in the elimination of helicopter vibration by suspending the fuselage from a "nodalized" beam.
- Four Bell UH-1s are assigned to launch a site recovery force team during the last programmed Apollo lunar mission – the first night launch from Kennedy Space Center.
- Texas Congressman Jim Wright announces the sale of 287 new Bell 214As and 202 Bell AH-1Js to Iran through the U.S. Government. Total value of the purchase exceeds $500 million.
- James F. Atkins becomes president of the company, replacing Edwin J. Ducayet.

1973

- The U.S. Army orders 74 additional Bell OH-58A helicopters. The contract is valued at $6.5 million.
- An additional 20 Bell AH-1J SeaCobras are ordered by the U.S. Marines. The contract is valued at $5 million.
- The U.S. Army orders 180 Bell UH-1H helicopters. The contract is valued at $27.4 million.
- Under an option, the U.S. Army orders 16 additional Bell UH-1H helicopters. The contract is valued at $2.6 million.
- The 1,000th Bell 206B JetRanger II is delivered.
- In a contract valued at $9.5 million, the U.S. Navy orders 24 additional Bell UH-1N helicopters.
- Bell Helicopter is awarded a NASA/U.S. Army contract to build and test two tiltrotor research aircraft. Estimated cost of the four-year program is $28 million.
- The U.S. Army awards Bell Helicopter a $44.7 million contract to initiate development of an Advanced Attack Helicopter system. Total development funds could reach $120 million. The three-year program calls for Bell Helicopter to design and fabricate two flying prototypes and one ground test vehicle. The Army will select the production contractor for an estimated $500 million run in three to five years.
- A single-month record of 70 commercial aircraft deliveries is achieved.



1974

- Bell Helicopter receives a $59.2 million U.S. Army contract to modify 101 of the U.S. Army's existing Bell AH-1G Cobras into Bell AH-1Q TOW Cobras.
- A Bell Helicopter Supply Center is established at Amsterdam Airport Schipol, The Netherlands.
- The Bell 214A developed in partnership with Iran for offshore use makes its first flight.
- A ceremony at the Hurst, TX, plant commemorates the delivery of the 20,000th Bell helicopter.
- The first Bell Helicopter AH-1J SeaCobra arrives in Japan.
- Initial flight is made by the new Bell 206L LongRanger. An experimental Bell 206LM with a four-blade rotor is developed.
- The U.S. Army awards Bell Helicopter a modification to two existing contracts, calling for 54 additional Bell UH-1H utility helicopters, valued at nearly $12 million.
- Under a $54 million U.S. Army contract, 189 additional Bell AH-1 helicopters are to be modified to the Bell AH-1Q TOW/Cobra configuration.

1975

- An Iranian Bell 214A sets five world records in altitude and time-to-climb categories.
- Delivery of the first 290 production Bell AH-1Q TOW Cobra helicopters is made to the U.S. Army at Hurst, TX.
- The Bell 206L LongRanger receives FAA certification.
- First flight of the Bell YAH-63 prototype occurs.
- Bell Helicopter achieves a major technical breakthrough when the main transmission of a Bell 214A runs for 1.5 hours without oil.
- The government of Iran names Bell Helicopter as partner in a joint venture organized to establish a modern helicopter industry in Iran. The program includes co-production of 400 Bell 214s.
- A $37 million production contract for 44 Bell AH-1Ss (the improved version of the AH-1G) is awarded to Bell Helicopter by the U.S. Army.

1976

- Bell Helicopter Operations Corporation is formed to carry out a long-term co-production and joint venture agreement with the Iranian government.
- The company adopts a new name, Bell Helicopter Textron.
- FAA certification is received for the Bell 214B.
- Ceremonies for the 25th anniversary celebrating the Hurst, TX, plant occur.
- The Bell AH-1T prototype (improved AH-1J) makes its first flight.
- Delivery of the first of 198 Bell AH-1Ss modified from existing aircraft is made to the U.S. Army at Bell Helicopter's Amarillo, TX, plant.
- The 2,000th Bell 206B JetRanger II is delivered to the McDonald's Corporation. Delivery was accepted by founder Ray Kroc.
- First flight occurs for the Bell 222 prototype.
- The U.S. Army awards Bell Helicopter Textron a production contract for 22 additional Bell AH-1Ss, increasing the total order to 66.
- The first NASA/U.S. Army Bell XV-15 tiltrotor is rolled out at Bell Helicopter's Flight Research Center.
- Dedication ceremonies for Bell Helicopter's Machining Center are held in Grand Prairie, TX.
- A contract is awarded for 82 additional Bell AH-1Ss.
- Bell Helicopter sets a new one-month delivery record of 90 commercial helicopters.

1977

- The Bell 222 makes its initial public flight at Helicopter Association of America's annual meeting. Later versions include the Bell 222A, 222B, 222SP and 222U.
- Bell Helicopter announces the development of a Bell 206B-3 JetRanger III, a more powerful version of the world's most popular helicopter.
- The U.S. Army formally accepts the initial production model of the Bell AH-1S.
- First hover flight of the Bell XV-15 (aka Bell 301) tiltrotor research aircraft takes place at Bell Helicopter's Flight Research Center.
- Deliveries of the Bell JetRanger III to customers all over the world begin.
- The U.S. Marine Corps orders 22 additional Bell AH-1Ts.
- Petroleum Helicopters Inc. (PHI) records 1,100,000 flight hours on its Bell 47s. This is a record unequaled in commercial helicopter operations.
- Bell Helicopter announces the development of the Bell 214ST, an 18-seat, twin-engine, stretched version of the Bell 214.
- The U.S. Marine Corps formally accepts the first production Bell AH-1T.
- An option to purchase 83 additional Bell AH-1Ss is exercised by the U.S. Army.

1978

- Construction begins on the two-story, 135,000 square-foot Bell Helicopter Technical Center at the Hurst, TX, facility.
- A single pilot instrument flight rules (IFR) system, designed for the new seven-seat Bell 206L2 LongRanger II, is announced. Bell Helicopter and Collins Avionics developed the system.
- The Bell XV-15 tiltrotor research aircraft is shipped to NASA Ames Research Center, Moffett Field, CA, for extensive wind tunnel testing.
- Additional Bell AH-1Ts are ordered by the U.S. Marine Corps.
- The Bell 206L2 LongRanger II receives FAA certification. First customer deliveries follow one month later.
- Bell Helicopter President James Atkins announces development of the Bell 412, an advanced technology, four-blade variant of the Bell 212.
- Sixty-six additional production Bell AH-1Ss are ordered by the U.S. Army.
- The Bell 206L2 LongRanger II receives FAA certification for single pilot IFR.

1979

- Bell receives an order for eight commercial Bell 212s from the People's Republic of China, a first by a U.S. helicopter manufacturer.
- The second Bell XV-15 makes its first flight in helicopter mode.
- First flight of the Bell 214ST occurs.
- The second Bell XV-15 completes its first conversion from hover to conventional airplane mode and back again.
- The Bell 412, destined to become Bell Helicopter Textron's first four-blade production helicopter, makes its first flight.
- Construction begins on a 270,000 square-foot, $10 million manufacturing building at the Hurst, TX, facility.
- During ImaginEighties, a Bell Helicopter Textron sponsored program, orders are received for more than 200 commercial aircraft, valued at $200 million. Included are $150 million in customer commitments for the Bell 214ST.
- Bell Helicopter Textron achieves record-setting delivery of 585 commercial helicopters to domestic and foreign customers.

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Housatonic

Demetrios James Bidzos (born 1955)

Source - https://littlesis.org/person/124832-D_James_Bidzos

Birthday

Mar 21 '55

Aliases

James Bidzos, Mr Jim Demetrios Bidzos

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Demetrios James Bidzos
https://www.onecle.com/contracts/rsa/bidzos.consult.1999.02.18.shtml
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Source : 1995 (March edition) of "PGP : Pretty Good Privacy"

1995-03-pgp-pretty-good-privacy-garfinkel.pdf / https://drive.google.com/open?id=106fR2C4q7enMCmxYT7aUpqoEucJV2PU6

So, who was this Jim Bidzos, anyway?

Jim Bidzos says he was born in 1955 in a small mountainous Greek village near the Albanian border. The Italians invaded the village during World War II; then the Germans invaded. During the Greek civil war, the village was alternatively a home to rebels and to the Greek militia. "It wasn't a good place to raise a family," recalls Bidzos, "There was nothing there but farmers and soldiers." So Bidzos' father moved to the United States to find a new life. Starting without any money or knowledge of English, Bidzos Senior worked for a year and a half, sending what little earnings he had to Greece. Finally there was enough money for his wife and son to join him. **The family settled in Ohio**—"A good place to come from," says Bidzos.

Bidzos speaks numerous languages: English, Greek, Macedonian, German, and quite a bit of Japanese. He has a green card but has no intention of becoming a U.S. citizen. "I can see three benefits to becoming naturalized," he says. "One is that I could vote. The second is that I could leave the country for more than a year without jeopardizing my resident status. And the third reason," he says with a smile, "is that it is harder to get thrown out if you are a U.S. citizen. . . . But the down side is that Greece doesn't allow you to have dual citizenship. If I became a naturalized American citizen, I would have to give up my Greek passport and all the privileges of citizenship." For Bidzos, losing Greek citizenship would mean losing his membership in the European Community, which allows him to work and travel freely within Europe. "Why should I give that up? There's no difference with a green card: you pay taxes, you can be drafted, you can be jailed." And Bidzos is dedicated to his guest country—so much so that he enlisted in the U.S. Marine Corps.

In January 1986, RSA Data Security was on the verge of failing. "The company had no products, no customers, no revenue. It had taken some money from investors, and it had all disappeared," says Bidzos. Fewer than five people worked for the company. One of them, Bart O'Brien, was an old friend that Bidzos had worked with at **Paradyne** in Florida. Both were marketing executives. In 1983, they split up, with Bidzos going off to create an international technology marketing company, and O'Brien going out to California and eventually joining RSA Data Security. O'Brien called Bidzos and said that RSADSI needed help. O'Brien described the RSA technology and the patent. Bidzos started working there on February 1, 1986.

What saved RSADSI was a little company in eastern Massachusetts, Iris Associates, that was writing a program called Notes for the Lotus Development Corporation. "They didn't know that RSA was patented," says Bidzos. "They had played around with it and had finally gotten it to work, but [their implementation] was too slow. So they were actually delighted to know that there was a company called 'RSA.' They said, 'Gosh, maybe you can help us.'"

Bidzos committed to build an RSA encryption toolkit that Iris could drop into Notes. The toolkit was written mostly by Rivest and other members of the MIT faculty. Rivest also started work on MailSafe: a program that would serve two important purposes. It would supply RSADSI with a small revenue stream, and it would demonstrate the power of public key encryption. "It was perfect for showing people that it could work, how it worked, and that it could run fast enough on a personal computer," says Bidzos.

By the time that Bidzos met with Merritt and Zimmermann in Denver, things had already turned around for RSADSI. The deal with Lotus was closed in June 1986, giving RSADSI a large amount of prepaid royalties. The next big deal, with Motorola, used RSA for commercial secure telephones. The third deal, with Digital Equipment Corporation, involved the development of a secure network system. (The project was later killed because Digital couldn't export its secure software.) Next was Novell, which built RSA encryption into NetWare.

By 1991, says Bidzos, RSADSI was making substantially more money on toolkit royalties than it was on the sales of enduser programs. Bidzos boasts that even if RSADSI never licensed another company, RSADSI could have stayed in business indefinitely at its current strength. Of course, that didn't happen. New licenses continued to pour in. By 1993, more than 100 companies were incorporating RSADSI's toolkit into their products. By this time, Bidzos had also learned that a large, secret, and incredibly powerful government agency wanted him out of business.

Working with Big Jim

Bidzos is a strong man and a strong negotiator, and he drives a hard bargain. It's a style that might not work in some businesses. But RSA Data Security had a monopoly on public key cryptography: the MIT patent on RSA. Anyone in the United States who wants to use the RSA algorithm has to either make a deal

with Bidzos or change their plans.*

Bidzos has a simple negotiating technique; no matter how well-informed the customer might be, Bidzos doesn't give a price until after he spends at least an hour educating his potential business partner about cryptography, public key, what a business can do with it, and various royalty models that RSA Data Security has for license fees. Finally he names a price. It's his goal, he says, for both RSADSI and the company that licenses the technology to make money with cryptography.

"Everyone wanted it more or less for free," says Bidzos. "I believed it had more value, and I could be persuasive." Indeed, the fact that customers made deals with RSA to license the algorithms or software is a strong testimony to the truth of Bidzos' words.

"I put our customers into one of three categories," says Bidzos. "There are those like Lotus Notes users, who I think benefit immensely from the security that is there, and generally are aware of it. The second category really doesn't understand at all that it is there, and I think really doesn't need to, like Novell. And it is still for the benefit of the users. And then there is the case where [the users] don't know it, and our direct customer doesn't want their customers to know, or at least they don't want to broadcast the fact." An example of the third category, says Bidzos, is Atari, which uses RSA as the basis of its protection scheme on video game cartridges. Only cartridges that have been signed by the company's public key work in the company's video game machines.

* In 1987, representatives from Stanford University began to claim that RSA's patent rights could not be exercised without infringing on the Merkle-Hellman patent owned by Stanford. Eventually, MIT licensed the patent rights from Stanford. MIT, in turn, passed the rights to RSADSI. In exchange for the rights, MIT pays a portion of RSADSI's patent royalties to Stanford.

Bidzos says that many people who don't contact him grossly overestimate the price of an RSA license. Newspaper accounts confirm this statement. According to an article by John Markoff in the New York Times, RSADSI's income is between $5 and $10 million a year on the sale of products, while between 2 and 4 million end-user software packages in the world include one of the company's algorithms. Court documents in a recent lawsuit imply that RSADSI's licenses might cost as little as a dollar per user for high-volume applications. Generally, Bidzos refuses to do deals in which RSA is sold to the end user as an option: he wants it embedded as part of the application program. "Users want absolute security, zero overhead, and no cost," says Bidzos. "We usually find a way to do that."

But patents aren't forever. RSADSI has been doing well, but an outside observer might wonder if RSADSI's reliance on its patents means that the company may face hard times. After all, patents last only 17 years; the RSA patent expires in the year 2000.

The reason that Bidzos isn't worried is that he isn't basing his company's future on the patents. In fact, RSA Data Security doesn't even license the patents anymore.

On April 6, 1990, RSADSI and Cylink (holder of the Diffie-Hellman and Hellman-Merkle patents) formed a partnership called Public Key Partners, whose sole purpose is to acquire the rights to cryptography patents, write licenses, and collect license fees.

RSADSI has turned its attention to the development of cryptographic toolkits. The company's BSAFE 2.1 product, introduced in the summer of 1994, included implementations of many cryptographic algorithms: Bloom/Shamir Secret Sharing, RC2 Symmetric Block Cipher, RC4 Symmetric Stream Cipher, Pseudorandom Number Generators, RSA, DES, DESX, Triple-DES, MD5-With-XOR,-RC4-With-MAC, Diffie-Hellman, and support for Privacy Enhanced Mail (PEM) by RFC 1422. The kit is designed for developers, costs $290 ($750 for a five-user license, $950 for a ten-user license), and includes a license for all of the relevant patents.

Run-time fees are separately negotiated. (As mentioned, license fees for large customers might be as low as one dollar per user.)

"We have no unhappy customers," boasts Bidzos. "If they are unhappy, we give them their money back." So far, he says, he's never had to cancel a license agreement and refund a customer's money.

A Pretty Good Program

Although Zimmermann kept in touch with Bidzos on and off during the years following their meeting in Boulder, most of his time was spent devising his own solution to the problem of public key encryption on microcomputers. First Zimmermann wrote a paper describing standards and data structures for representing encryption keys, encrypted text, and signatures. The paper was eventually published in IEEE Computer. The paper gave Zimmermann the legitimacy in the eyes of the cryptography community to be able to call other cryptographers and not be instantly dismissed as a crank. Zimmermann next turned his attention to writing a working program that implemented the RSA public key system. He called his program PGP—short for Pretty Good Privacy. (Why? Zimmermann was a fan of Garrison Keillor's "Prairie Home Companion" radio program, in which one of the "sponsors" was "Ralph's Pretty Good Groceries.")

According to Bidzos, sometime during 1990, Phil Zimmermann called RSADSI asking for "a free license" to the RSA algorithm. "When I told him 'no,' he was really upset. He told me that he was behind on his mortgage payments and that he had invested years in writing this piece of software and needed to make money from it."

"I told him that what he should do is go find some larger company," recalls Bidzos. "He said that he was trying to help us by recommending RSA to companies. I said, 'Great! If you are working with them, they'll buy a license! It will be perfectly fine that you made something for them, and they buy the license. We won't try to keep you from making money. We don't begrudge anybody a living. We just can't give you a free license to go make money with.'"

Zimmermann went back to his keyboard. By the spring of 1991, the basic structure of PGP was beginning to take shape. Zimmermann's main interest was in distributing the program as "shareware." (People could freely copy the shareware program, but some critical component of it would not operate correctly unless the user sent the author a check to "register" his copy.) Shareware programs had taken off during the late 1980s; some people had become millionaires using the concept.

Zimmermann's first attempt at shareware was a terminal program called PGT—Pretty Good Terminal. It was not very successful. But there was one hitch with either scheme: Zimmermann's PGP program violated the RSA patent held by RSA Data Security and later by Public Key Partners.

In April 1991, Zimmermann sent Jim Bidzos a one-page letter. "Dear Jim," the letter started, "Well, I'm finally getting around to writing you about requesting a royaltyfree

license for your RSA algorithm. We talked about this a few times since your 1986 visit to Boulder, when I developed my own RSA math library in C. Both you and Ron [Rivest] said then and later that you would grant me a free license to make and sell products with your algorithm. I appreciate that a lot. When we

last spoke, you said you would need a letter telling you what products it's for. It was unclear whether this meant highly detailed firm product plans or just general fuzzy plans."

Zimmermann's letter goes on to describe two projects. The first project is a low-cost secure telephone, based on encryption and voice compression. The second project is a program to do RSA/DES encryption on a personal computer. "This would be somewhat analogous to your MailSafe or ComSafe products. I guess it would sort of compete with these products. I suspect these products are not the backbone of your company's cash flow, anyway. I just think they would be fun for me to do. I probably would not be developing that jointly with another company, but I may sell it through another company's marketing channels."

Bidzos was shocked by Zimmermann's letter: despite what Zimmermann thought, Bidzos maintains that he had never promised Zimmermann a "free license" of any kind.

"I said, 'We don't give those. It is not consistent with our business, and not consistent with licenses already granted,'" Bidzos recalls telling Zimmermann. "I promised to talk to our attorneys to explore the possibility, and did. I then wrote him a letter saying 'Nope, can't do it.' He later lied, claiming in some vague statement that I promised him a license."

Without the license, a shareware version of public key encryption wasn't possible. Zimmermann wasn't sure what to do. Then something happened that would change cryptography in the United States forever: the U.S. Senate discovered data encryption.

https://www.thenationalherald.com/wealthiest/d-james-bidzos/

2019-thenationalherald-com-wealthiest-d-james-bidzos.pdf

#39th weathiest American in 2013

#39

D. James Bidzos

Made Money In**Information Technology**

Wealth **$275 Million (TNHE)**

Described as a “father of cybersecurity,” D. James Bidzos, 62, is Founder, Chairman of the Board, President, and CEO, of Verisign, Inc., which provides domain name registry services and Internet security worldwide, Bidzos’ companyoffers a range of security services, including managed DNS, Distributed Denial of Service (DDoS) mitigation and cyber-threat reporting. Bidzos served as [Verisign's] first CEO from 1995 to 2001. In **2010 the company’s authentication services were purchased by Symantec for $1.28 billion**. Bidzos returned to the CEO job in 2011. The following year, he was named Fortune’s 2012 Businessperson of the year for reviving Verisign’s income, growth, and stock performance, which previously had flagged. His compensation increased by 46 percent in 2013 to $8.5 million, including his bonus and stock awards.

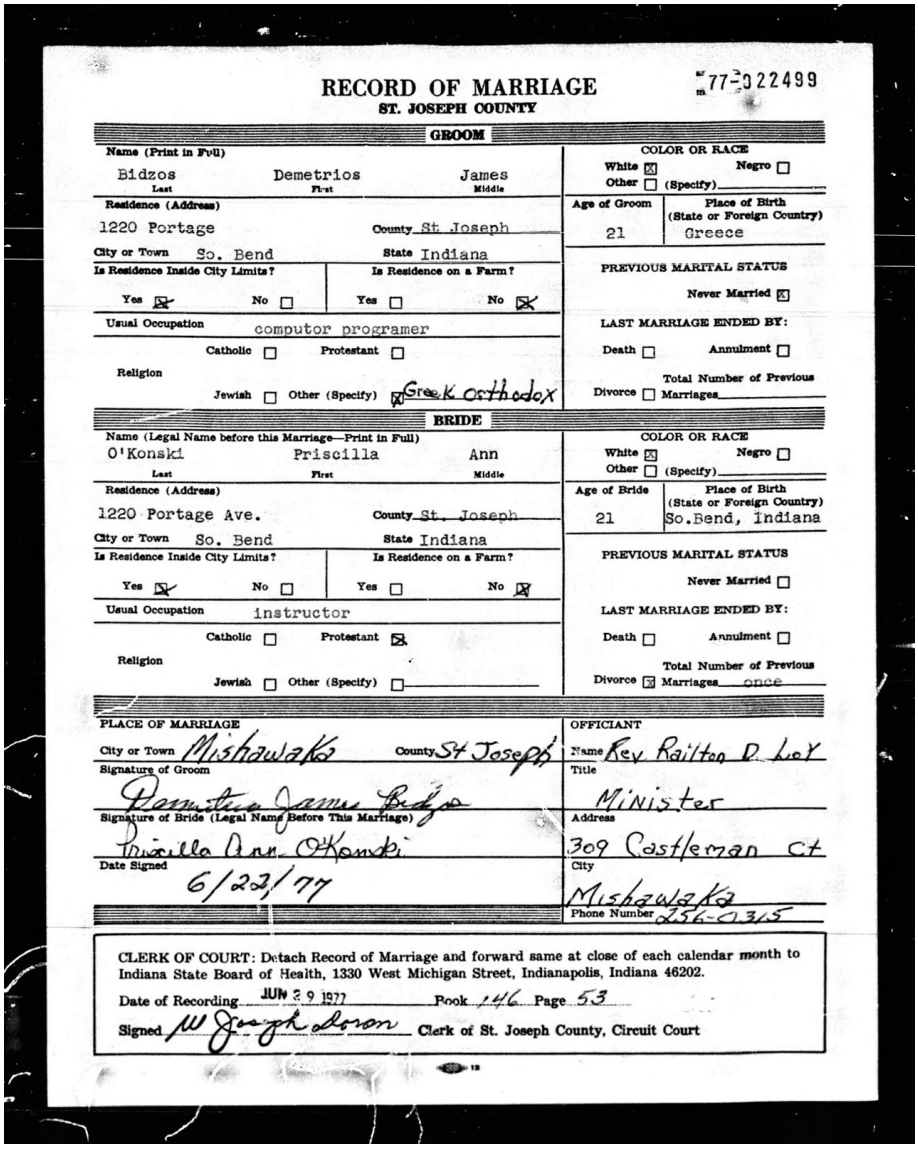
Born in Greece, Bidzos he came to the United States as a boy. His father worked as a barber, and his mother managed a restaurant. A former computer programmer, he is credited with foreseeing the need for online security in the early 1990s. Bidzos is an Internet and security industry pioneer, whose accomplishments include building RSA Security, an Internet identity and access management solution provider, into the early standard-bearer for authentication and encryption, and launching Verisign as a spin-off in 1995 to develop the digital certificate infrastructure for Internet commerce. Verisign operates infrastructure services that enable and protect billions of interactions every day across the world’s voice, video and data networks.

The Mountainview, CA-based Verisign (now moved to Reston, VA) offered a variety of Internet and communications-related services in its global affiliate network. Verisign managed two of the world’s 13 Internet root servers, a.root-servers.net and j.root-servers.net, considered national IT assets by the federal government. Since 2007, the company has been focusing on its core business and whittling away less profitable side efforts. In 2009 it sold its security service business to SecureWorks and its security consulting business to AT&T. Verisign focuses now on its Internet infrastructure services. Among the company’s services are providing .com, .net, .cc, .tv, .name and .jobs domain names for websites. Bidzos served as president and CEO of RSA Security from 1988 to February 1999, and then served as RSA’s vice chairman from 1999 to May 2002.

He has been named one of Time magazine’s “Digital 50,” and is in CRN’s “Computer Industry Hall of Fame.” In September 2013, the Federal Aviation Administration named Bidzos, who is a certified pilot, to the FAA Airmen Certification Database.

Bidzos told an audience in Naples, FL in April that “apathy and ignorance are the biggest threats to your bank account today.It’s a jungle out there. We’ve got to live with the odds, and odds are, you’re going to get hacked,” the Naples Daily News reported. He is a realist, but has an extensive plan for addressing that reality.

1977-06-indiana-marriage-record-bidzos-okonski.jpg / https://drive.google.com/open?id=108EWNn1IDuvrkqnWYBpeRffc434Cla9D



RECORD OF MARRIAGE

ST. JOSEPH COUNTY

77-022499

GROOM

Name (Print in Full): Bidzos (Last) Demetrios (First) James (Middle)

Residence (Address): 1220 Portage

County: St Joseph

City or Town: So. Bend

State: Indiana

Is Residence Inside City Limits? Yes ☒ No ☐

Is Residence on a Farm? Yes ☐ No ☒

Usual Occupation: computor programer

Religion: Catholic ☐ Protestant ☐ Jewish ☐ Other (Specify) ☒ Greek Orthodox

COLOR OR RACE: White ☒ Negro ☐ Other ☐ (Specify)

Age of Groom: 21

Place of Birth (State or Foreign Country): Greece

PREVIOUS MARITAL STATUS: Never Married ☒

LAST MARRIAGE ENDED BY: Death ☐ Annulment ☐ Divorce ☐

Total Number of Previous Marriages:

BRIDE

Name (Legal Name before this Marriage—Print in Full): O'Konski (Last) Priscilla (First) Ann (Middle)

Residence (Address): 1220 Portage Ave.

County: St. Joseph

City or Town: So. Bend

State: Indiana

Is Residence Inside City Limits? Yes ☒ No ☐

Is Residence on a Farm? Yes ☐ No ☒

Usual Occupation: instructor

Religion: Catholic ☐ Protestant ☒ Jewish ☐ Other (Specify) ☐

COLOR OR RACE: White ☒ Negro ☐ Other ☐ (Specify)

Age of Bride: 21

Place of Birth (State or Foreign Country): So.Bend, Indiana

PREVIOUS MARITAL STATUS: Never Married ☐

LAST MARRIAGE ENDED BY: Death ☐ Annulment ☐ Divorce ☒

Total Number of Previous Marriages: once

PLACE OF MARRIAGE

City or Town: Mishawaka

County: St Joseph

Signature of Groom: Demitrios James Bidzos

Signature of Bride (Legal Name Before This Marriage): Priscilla Ann O'Konski

Date Signed: 6/22/77

OFFICIANT

Name: Rev Railton D LeY

Title: Minister

Address: 309 Castleman Ct

City: Mishawaka

Phone Number: 256-0345

CLERK OF COURT: Detach Record of Marriage and forward same at close of each calendar month to Indiana State Board of Health, 1330 West Michigan Street, Indianapolis, Indiana 46202.

Date of Recording: JUN 29 1977 Book 146 Page 53

Signed: W Joseph Doran Clerk of St. Joseph County, Circuit Court

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Housatonic

Paul Alec Bilzerian (born 1950)

Wikipedia Paul Bilzerian

Paul Bilzerian on Wikipedia

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Paul Alec Bilzerian (Armenian: Փօլ Պիլզերեան, born 1950) is an Armenian-American businessman and corporate takeover specialist. Convicted of failing to make complete and timely disclosures on Schedule 13(d) filings related to unsuccessful takeover attempts of Cluett, Peabody and Company and Hammermill Paper Company in the 1980s, Bilzerian served a 13-month prison sentence and was also ordered to disgorge his profits, leading him to bankruptcy and a 30-year legal battle with the Securities and Exchange Commission. Bilzerian has spent the past 31 years maintaining that he is factually and legally innocent. In 2019, he renounced his American citizenship in protest of what he claims has been "a long and disappointing experience in the federal judicial system that has been consistently unjust and shown little regard for the law or the truth.".

Career

One of Bilzerian's first business deals was an investment in the 1970s in a Tampa Bay-area radio station, WPLP, which he made with two Army colleagues from the Vietnam War who had experience in the broadcasting industry. However, in a dispute over control, Bilzerian left in the late 1970s to join his father-in-law in the real estate business. After Bilzerian left the station its performance deteriorated which led to its bankruptcy and a lawsuit by Bilzerian against his former partners. Bilzerian's real estate investments were highly successful and led to the beginning of his fortune. In 1984, he moved to Sacramento, California where his father-in-law and another business associate lived.[*clarification needed*]

Failed corporate takeovers

While living in Sacramento, in 1985 Bilzerian embarked on his first two high-profile takeover attempts, one of New York clothing manufacturer Cluett Peabody & Company, and the other of Pittsburgh construction company H. H. Robertson. After Bilzerian purchased a large stake and raised his bid for the remaining 76% of Cluett Peabody in October,[7] Cluett Peabody's board of directors adopted poison pill provisions, earning them public criticism from Bilzerian. Cluett Peabody eventually accepted a competing merger offer by WestPoint Pepperell (now WestPoint Home) for $41 per share (in cash or equivalent value of WestPoint Pepperell common stock); Bilzerian and his fellow investors agreed separately to sell their stake to WestPoint Pepperell for $40 per share plus reimbursement of $7.5 million in expenses.

Bilzerian moved back to Florida in 1986. That July he and fellow investors William and Earle I. Mack (sons of New Jersey real estate developer H. Bert Mack)[10] launched a takeover bid against the Hammermill Paper Company, purchasing about 3.3 million Hammermill shares at an average price of roughly $47 per share, and then offering $900 million ($52 per share) to purchase the remainder of the company. Bilzerian's offer was ultimately rejected when Hammermill sold out to International Paper instead at $64.50 per share, but Bilzerian and his fellow investors still made a profit of more than $60 million from the deal.

Singer Corporation

In 1987, Bilzerian began what would ultimately be a successful takeover of the Singer Corporation, a defense electronics manufacturer. In October 1987, it came to light through SEC-mandated disclosures that a group of investors led by Bilzerian had purchased 2.1 million Singer shares in the preceding two months. Singer seemed an unlikely target for a takeover: early reports cast doubt on the idea that the government would permit a hostile takeover of a defense contractor, and the company had already moved its headquarters from Connecticut to takeover-hostile New Jersey in an attempt to fend off a previous takeover by T. Boone Pickens. In January 1988, Pickens provided $150 million in additional financing which helped Bilzerian acquire Singer.

Bilzerian's unexpected success was attributable to several factors. Singer chairman Joseph B. Flavin had died in early October, leaving the company without strong leadership to fight off the takeover attempt. The Black Monday crash less than two weeks later spooked competing investors. Finally, the Omnibus Budget Reconciliation Act of 1987 included provisions to disallow sales of assets in certain acquired businesses to be treated as capital gains for tax

purposes, making future takeover bids less attractive; however, takeover bids like Bilzerian's which were already outstanding on the date of the Act's passage were exempted from this tax increase.

Stock parking case

In 1986, the government stumbled onto an insider trading scheme whereby a Drexel Burnham investment banker named Dennis Levine was exchanging inside information for suitcases of cash from Ivan Boesky. This led to an indictment of Boyd Jefferies, the well known owner and Chairman of Jefferies & Company. Jefferies cut a deal to testify against three individuals in the corporate and investment banking community, including Bilzerian. The SEC then went after Bilzerian - focusing its investigation on whether he had failed to timely make two Schedule 13(d) filings and whether he was required to disclose investors in his partnerships. In May 1988, the SEC began a probe against Edward J. DeBartolo, Sr. to determine whether DeBartolo had illegally aided Bilzerian's hostile takeover attempts through "stock parking", in which one party purchases shares in coordination with another in order to keep legal ownership separated and avoid either party's holdings exceeding disclosure thresholds. Then, in December 1988 Rudy Giuliani announced that Bilzerian had been indicted in Manhattan by a federal grand jury for Schedule 13(d) disclosure violations with respect to Cluett Peabody and Hammermill Paper Company and general claims regarding failed takeovers of H. H. Robinson and Armco. Bilzerian was the first person ever to be indicted for 13d disclosure violations as the hundreds of previous cases were civil and resolved with consent decrees and without fines or penalties.

In January 1989, Bilzerian pleaded not guilty to the charges amidst growing public controversy and demanded a speedy trial to clear his name. There were, broadly speaking, two different camps of opinion on Bilzerian's actions. Much of the public had a negative view of corporate takeovers in general and saw Bilzerian's activities as "greenmail", profiting by deceiving companies into believing they faced a hostile takeover attempt and scaring them into buying their stock from him at a high price. In Bilzerian's case he never sought greenmail and always offered all other shareholders all cash for their shares at prices substantially above the market. Many saw Bilzerian as guilty of nothing but making a profit in genuine-but-failed takeover attempts which benefited all investors. In an article in *New York* magazine, Christopher Byron questioned the entire basis of the case against Bilzerian, describing it as fueled by "Puritan envy". He further stated that the Department of Justice's primary motivation for the case was not the prosecution of wrongdoing but rather the need to justify its earlier unpopular plea bargain with Boyd Jeffries of Jefferies & Company, which would see Jefferies avoid any jail time at all in exchange for the opportunity to "drag some headline-sized names through the mud". Daniel Fischel, Dean of the University of Chicago Law School, wrote Payback a treatise on the takeover era in the 1980s in which he argued Bilzerian was an innocent victim of an overzealous prosecutor, Rudy Gulliani, and never should have been indicted as he was viewed as a hero to the shareholders of Cluett Peabody and Hammermill Paper Company.

After two days of deliberations in June, the jury found Bilzerian guilty on nine counts including conspiracy, making false statements, and securities law violations. In September, Judge Robert Joseph Ward sentenced Bilzerian to four years in prison and a fine of $1.5 million because he "now must pay the price" for testifying in his own defense. Judge Ward had told Bilzerian before trial that if he lost and did not testify he would receive no jail time, but if he lost and testified he would pay the price. Bilzerian was permitted to remain free pending appeal. Bilzerian's appeal came before the Court of Appeals for the Second Circuit, which in January 1991 ruled against him in a split decision, finding no merit in his argument that his trial had been unfair. He started to serve his sentence in December 1991 at the now-closed Federal Prison Camp, Eglin at Eglin Air Force Base, Florida. Bilzerian was released from prison in December 1992 to serve out his sentence under house arrest. Bilzerian has maintained that the Court of Appeals for the Second Circuit should have reversed and vacated his conviction based on two subsequent unanimous United States Supreme Court decisions that mandated his conviction be reversed. Instead, the Court of Appeals simply ignored the Supreme Court decisions and let his conviction stand. After Bilzerian's release from prison, he became president of Utah-based software company Cimetrix. In 2002, the government confiscated Bilzerian's ownership in Cimetrix and drove the company from several years of high sales growth and profitability to the verge of bankruptcy. Bilzerian has always maintained that the government lawyers are seldom concerned about the shareholders but rather in making a name for themselves by prosecuting high profile and often innocent businessmen.

Civil suit and bankruptcy

After Bilzerian was convicted, the SEC filed a civil suit against Bilzerian based on identical charges in order to force him to disgorge the profits from the takeover attempts. Bilzerian claimed that this was double jeopardy as he had already been punished once for exactly the same conduct. In 1993, a federal judge ruled in favor of the SEC and ordered Bilzerian to disgorge $33.1 million of profits, plus interest. The total amount to be disgorged was thus $62 million. In January 1994, Bilzerian also filed an appeal against the civil judgment in the Court of Appeals for the District of Columbia. However, the court rejected his civil appeal as well.

Due to the size of the disgorgement judgment against him, Bilzerian first filed for bankruptcy in 1991. Bilzerian emerged from that bankruptcy having disgorged all his non-exempt assets in settlement of debts that mostly consisted of claims by the government. In 1999 he tried to put his house up for sale in the prestigious Avila neighborhood of Tampa, Florida, and at one point even Mike Tyson was reportedly interested in buying. After the SEC continued its pursuit of Bilzerian and the judge issued an order appointing a receiver over his assets and then issued another order that he be arrested for civil contempt, Bilzerian filed for bankruptcy again in January 2001, declaring his non-exempt assets of $15,805 against $140 million in debts, most of which was for the government's disgorgement judgment. Under Florida Bankruptcy Law, the value of his primary residence was protected from creditors. The SEC alleged that Bilzerian was using bankruptcy as a tactic to block creditors from finding out the true value of his assets, and Bilzerian argued that was a total fabrication as the bankruptcy laws require full disclosure and a trustee to take possession of his assets. Bilzerian argued the real reason the SEC opposed his bankruptcy was so that the SEC Receiver could control all his assets through an extremely cooperative federal judge in Washington who allowed the SEC to go after Bilzerian's wife and children in complete disregard for an earlier bankruptcy court judgment.

On June 11, 2001, while Bilzerian was in prison, FBI agents raided his family's residence on the strength of a sealed warrant and seized computers, files, and a Beretta firearm. The raid appeared to be related to SEC contentions that Bilzerian had concealed his ownership of assets during bankruptcy proceedings by transferring them to trusts and shell corporations, which Bilzerian claimed was a total fabrication. Bilzerian unsuccessfully sued the FBI agent for filing a sworn affidavit that contained mostly false statements but a federal judge dismissed the case. Bilzerian was released from prison in January 2002 pursuant to an agreement under which his wife, Terri Steffen would sell the residence and split the proceeds with the SEC, and transfer most of her wealth to the SEC. Bilzerian was critical of the deal, describing it as the SEC using him "as a hostage to extort money" from his wife. In May 2004, Steffen sold her residence for $2.55 million to a partnership controlled by a Belgian businessman; SEC attorneys approved the unusually low price. According to court documents filed in 2006, Steffen's parents purchased a 99% interest in that partnership three weeks later.

Education and family

Bilzerian was born in Miami, Florida, but grew up in Worcester, Massachusetts. He is an Armenian American. His father, a civil servant, and his mother later divorced, leading to troubled teenage years for Bilzerian; he would later describe himself as a "juvenile delinquent". Called into the principal's office of his high school one day in 1968 for violating the dress code by wearing blue jeans, Bilzerian impulsively responded by dropping out of school. However, after serving in the Vietnam War and earning a Vietnamese Gallantry Cross, Bronze Star Medal, and Army Commendation Medal, he went to college and earned a Bachelor of Arts with Honors in Political Science and graduated With Distinction from Stanford University in 1975. Bilzerian entered Harvard Business School that same year. He was unsure about his choice to attend, having passed on offers of admissions to several law schools in order to enroll at HBS. After his graduation, Bilzerian married Stanford classmate Terri Steffen in 1978, and moved with her to St. Petersburg, Florida.

Bilzerian has two sons, Adam and Dan Bilzerian. Adam attended Gaither High School, where he represented his school in tennis. Angered by the government's treatment of his father, Adam abandoned his dream of becoming an Army Green Beret. After graduating from Vanderbilt University, he moved to Saint Kitts and Nevis in 2007 and became a citizen there, relinquishing his U.S. citizenship in the process. Both Adam and Dan went on to careers as professional poker players; Norman Chad nicknamed them the "Flying Bilzerian Brothers" for their performance in the 2009 World Series of Poker. Adam also wrote a book about his experiences, which the Midwest Book Review's *Small Press Bookwatch* reviewed favorably as "a well-versed list of grievances with the powers that be in America, making for an intriguing read through and through". Dan has gone on to become an international celebrity with 50 million followers on social media, and is the Chairman of Ignite International, a public company traded on the Canadian Stock Exchange.

In June 2014, a Bloomberg News report incorrectly stated that Paul Bilzerian had become one of the licensed service providers who processed applications for the same Saint Kitts and Nevis citizenship-by-investment program which his son had used. The report also stated that Bilzerian had gone on to process a citizenship-by-investment application for Bitcoin investor Roger Ver, and that the two men had co-launched a website through which customers could use Bitcoins to pay for the fees and the real estate purchase in the citizenship-by-investment program. The government of Saint Kitts and Nevis responded in a statement the following week that Bitcoin was not an acceptable payment method for participation in the program.

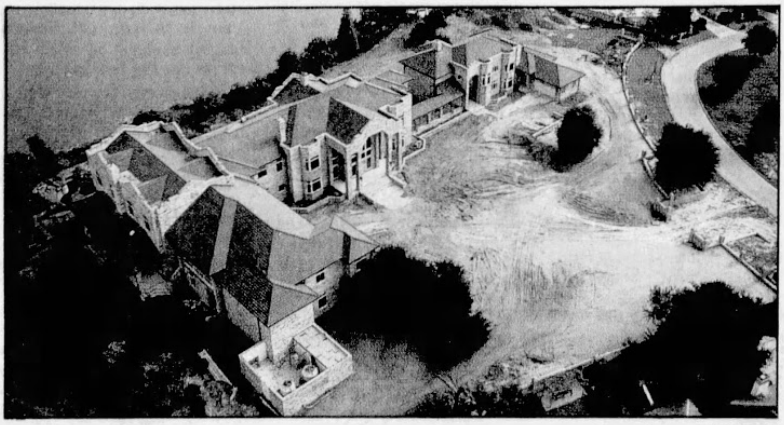
1991 Article

Article source pages :

- [HN001R][GDrive]
- [HN000T][GDrive]

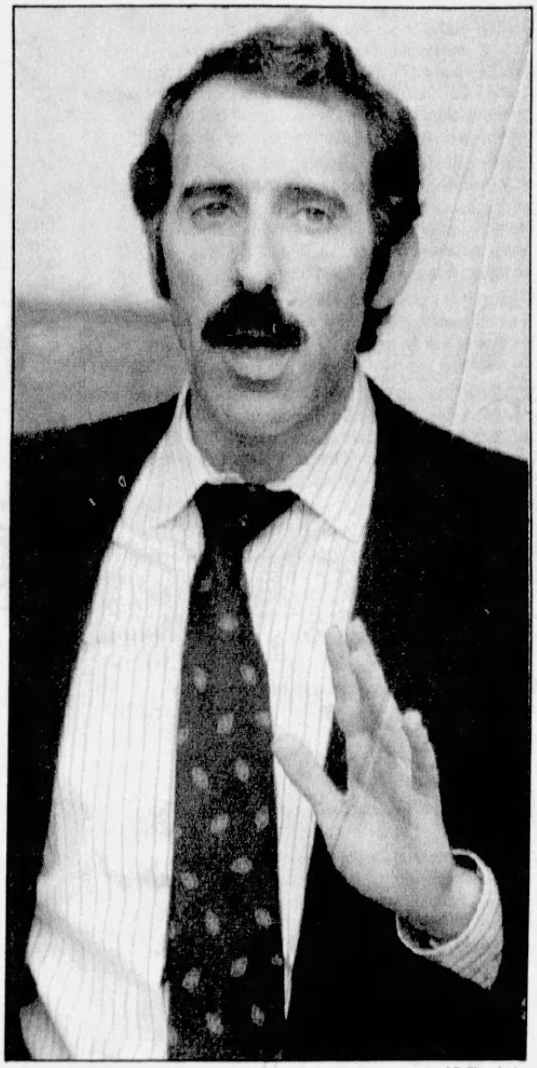
SATURDAY
NOV. 2, 1991
St. Petersburg Times
Florida's Best Newspaper

A resigned Bilzerian prepares for prison



Times photo — MIKE PEASE

Corporate raider and one-time multimillionaire Paul Bilzerian was building a multi-million-dollar home in Tampa. It is not finished.



AP file photo

Bilzerian went from being a poor man to a rich man. And now he's going to prison for breaking the rules.

The RISE & FALL of Paul Bilzerian

From 29 cents to $50-million ... and back again

- **1968:** Bilzerian had 29 cents to his name, according to a letter he wrote to a friend.
- **1983:** After receiving his MBA from Harvard Business School, putting together real estate deals and inching into the stock market, Bilzerian had a net worth of about $2-million, he said at his 1989 trial.
- **1986:** After more stock deals, his wealth was about $10-million.
- **1988:** Stock manipulations through the late '80s and the eventual takeover of the Singer Co. upped his fortune to more than $50-million by his own testimony, and as much as $81-million by some estimates.
- **1989:** Bilzerian was convicted on charges of securities fraud and tax violations. He received a sentence of four years in prison and was fined $1.5-million.
- **1991:** In August he filed for Chapter 11 bankruptcy protection, listing meager assets. Creditors and the Securities and Exchange Commission have accused Bilzerian of hiding his assets overseas. He has denied the allegations.

Source: Times research

Times art

■ He started with nothing and made a fortune. He also broke the law and made a name for himself as a corporate raider. Soon, he'll be in prison.

By JOHN CRADDOCK
Times Staff Writer

His wife works at the secretary's desk. His mom answers the phone. And he sits sprawled in an office filled with stacks and stacks of legal documents.

On top of the stacks are pictures of two boys; in one they're wearing ski gear, in the other they're posing in phony Old West getups.

Paul Bilzerian hasn't figured out when to tell his boys, ages 8 and 10, that he is going to jail.

But on or before Dec. 2, Bilzerian, once a multimillionaire corporate raider and now a convicted felon, must turn himself in to federal authorities. He probably will serve his time at the minimum security Eglin Federal Prison Camp in Fort Walton Beach.

In an interview with the *St. Petersburg Times* on Friday, Bilzerian seemed to be steeling himself for his four-year sentence.

"I'll be better for this," he said.

Bilzerian, 41, who lives in Tampa, reflected on his life as a businessman and on the days he was mentioned in the same breath with Ivan Boesky and Michael Milken.

In fact, he still is.

Boesky and Milken also were convicted of crimes after scaling the heights of finance.

Bilzerian is philosophical about his conviction but embittered by what he believes is a miscarriage of justice.

A movie fan, Bilzerian often mentions how the kids of his generation were taught that "the good guys win."

He believes he is a good guy. Of course, a jury disagreed, as do a string of opponents who have felt his wrath.

And he knows he must face reality. He mentions a movie called *Lost in America*, in which a man asks if he can have his money back after losing at a Las Vegas casino. The manager replies that casinos give money to people who win. You lost, said the manager.

"I lost," said Bilzerian.

A tough competitor

Bilzerian also did his share of winning against tough odds.

He grew up in a working class family in Worcester, Mass. His parents divorced while he was in high school. He worked at a

Please see **BILZERIAN** 2A

[HN001S][GDrive]

The RISE & FALL of Paul Bilzerian

Bilzerian from 1A

hamburger joint to make ends meet.

Bilzerian dropped out of high school when he was sent to the principal's office for wearing blue jeans.

"I went home to change my pants, and I never came back," he testified in a court hearing two years ago.

He turned to the Army.

It was seven days before Christmas 1968 when Bilzerian arrived at Fort Jackson, S.C., wearied quietly as he took stakes in vulnerable companies.

From nothing, he became a force to be reckoned with. He brought in wealthy partners, such as William Mack, the former Tampa baseball leader, and shopping center developer Edward DeBartolo Sr.

Bilzerian hit his peak in 1988 with the $1.06-billion acquisition of the Singer Co., a proud old name in the sewing machine business that had evolved into a defense contractor. Bilzerian found the financing, bought out the shareholders and started selling off parts of

the St. Petersburg Northeast Little League.

Bilzerian sued Little League vice president Rick Brannelly for slander in May 1988 after Brannelly told the *St. Petersburg Times* that Bilzerian had "welched" on a promise to donate $5,000 to the league.

At one time, Bilzerian's sons had played in the league. Bilzerian had told league officials that if team members raised $5,000 by selling household goods door-to-door, he would match it. The team members, consisting of 5- 6- and 7-year-olds, fell short by

Times files

Paul Bilzerian poses in Tampa in 1986, during the height of his takeover activity. He failed in several attempted acquisitions that year, but made millions each time.

AP

Paul Bilzerian and his wife, Terri Steffen, leave Federal Court in New York on May3, 1989 during his trial for violating securities and tax laws, conspiracy and making false statements to the government.

- **1978:** Paul Bilzerian and two other investors move to St. Petersburg and buy a Pinellas Park radio station, converting it into WPLP/Talk Radio. Two years later, the company files for Chapter 11 bankruptcy protection.
- **1979-82:** Bilzerian works for Southern Business Enterprises Inc. in St. Petersburg, handling $25-million in real estate investments, mostly in Fort Lauderdale, Miami and Palm Beach.
- **1982:** Bilzerian pulls out of the real estate business and begins investing in stocks at the beginning of the strongest bull market in history.
- **1984:** Bilzerian moves to northern California, lining up backers for his first takeover attempt on Syntex Corp. of Palo Alto, Calif., for $1.5-billion. Deal falls through.
- **1985:** Bilzerian makes unsuccessful attempt to buy H.H. Robertson Co., a construction materials manufacturer, for $247.5-million. Several months later he loses out in a bid to buy Cluett Peabody & Co., Inc., maker of Arrow shirts. Bilzerian makes $7-million on the deal by accumulating stock and then selling it after the stock price rises as a result of the takeover attempt.
- **1986:** Bilzerian returns to St. Petersburg and targets Hammermill Paper Co., a paper producer, with a $900-million takeover bid. He loses his bid to International Paper Co., but Bilzerian and his investor group make $54-million. Shortly thereafter, Bilzerian, with the Edward J. DeBartolo Corp., attempts but fails in a takeover of Allied Stores Corp.
- **1987:** Bilzerian and a partner offer to buy Pay 'N Pak, a Pacific Coast home center store chain, for $171-million. A few months later, Pay 'N Pak rejects the bid and the partners make a profit of $8-million.
- **January 1988:** For the first time, Bilzerian is successful in a takeover as he captures Singer Co., the defense electronics contractor once famous as a maker of sewing machines, for $1.06-billion. Bilzerian sells most of the company's assets for a profit estimated at $100-million and later changes the company's name to Bicoastal.
- **December 1988:** Bilzerian indicted on 12 counts of violating securities and tax laws, conspiracy and making false statements to the government. None of the charges relates to the acquisition of Singer, but the indictment says he violated securities laws in his stock trading involving Cluett, Peabody & Co., H.H. Robertson & Co., the Hammermill Paper Co. and Armco Inc.
- **June 1989:** Bilzerian is convicted on 12 felony counts of securities fraud and tax violations. He is sentenced to four years in prison and fined is $1.5-million.
- **November 1989:** Bicoastal Corp., the successor to Singer Co., files for Chapter 11 bankruptcy protection.
- **January 1991:** A federal appeals court upholds Bilzerian's conviction.
- **August 1991:** Bilzerian files for bankruptcy protection for himself and Bicoastal Financial Corp., a Tampa-based financial services company he and his wife own. The company is separate from Bicoastal Corp.
- **October 1991**: U.S. Supreme Court upholds Bilzerian's conviction; he is scheduled to start his jail sentence.

Compiled by Times library researcher Kitty Bennett from Times files, Associated Press, Reuters

Times art

Paul Bilzerian hasn't figured out when to tell his boys, ages 8 and 10, that he is going to jail. He must turn himself in on or before Dec. 2.

ing a torn sweatshirt and no jacket. He had 29 cents and a copy of *Of Mice and Men.*

He landed on KP 16 straight days, got in two fistfights, and skipped training classes. But his physical prowess won the respect of his peers. "There was no (physical test) he couldn't max out," said a fellow recruit, Nicholas Damer.

In a letter to Damer, Bilzerian recalled that before he was shipped out to Vietnam, "I thought then that I had some greater destiny than a six-foot hole some half-way round the world.".

Damer was Bilzerian's friend for years.

A first lieutenant, he returned home with a Bronze Star.

He studied at tiny Clark University in Worcester, and at one point rode a motorcycle out West, hocked it, then hitch-hiked to California. His bushy beard and electro-shock hair were signs of the rebellious times.

In 1973 Bilzerian enrolled at Stanford University. It was a period in which he struggled financially but enjoyed "the happiest time of my life." He sometimes bunked on his friend Damer's couch. "He just sort of floated around," said Damer.

Bilzerian graduated from Stanford with honors in 1975 and received glowing letters of recommendation from his professors, which helped him gain admission to Harvard Business School.

But Harvard didn't offer the liberal surroundings he had left at Stanford.

Bilzerian criticized his money-hungry classmates for their callousness toward the little guy in society.

"I thought business couldn't care less about society," he said.

But he graduated and soon moved back to the Pacific Coast. Bilzerian and a friend in the San Francisco area joined with another man to buy a radio station almost 3,000 miles away — WPLP in Pinellas Park.

The purchase would help set a pattern for Bilzerian business deals: using other people's money, in this case $50,000 borrowed from his father-in-law. Bilzerian also helped arrange loans for the other principals.

Bilzerian converted the radio station to talk radio, but he was in a constant fight with his colleagues, according to court documents. Finally, his colleagues fired him in a dispute that wound up in court.

Bilzerian wrote his old friend Damer, by then a lawyer: "How could a struggling intelligent future millionaire be in so much damn trouble and so penniless . . . ?"

He joined his father-in-law's real estate business and worked on shopping center deals in Florida. But by the summer of 1982 he turned to the stock market on the mistaken belief that the Florida real estate market had peaked.

"I really didn't know anything about markets then, so I did what probably everybody else does and called up the local Merrill Lynch broker for recommendations," Bilzerian said.

It soon became clear that Bilzerian was no average investor. Not only was he doing his own market analysis, but by 1984 had boldly targeted the Syntex Corp., a large pharmaceuticals company, for a corporate takeover.

He needed $100-million down to finance the $1-billion acquisition, so he gathered 20 investors and laid out his plans. Before the group could launch its takeover bid, word leaked out and the stock rose in price, thus making the effort too costly.

From then on, Bilzerian operat-

the company to cover his debt.

He had finally arrived — but he didn't get to stay long.

Criminal charges; where's the money?

Only 11 months after his takeover of Singer, the government filed criminal charges against Bilzerian.

Prosecutors said Bilzerian made millions of dollars by accumulating the stock of takeover targets while concealing ownership of the stock in secret accounts. Failure to tell the Securities and Exchange Commission the true owner of a stock is a criminal violation.

Prosecutors said Bilzerian also failed to report on his income tax $4-million that he had earned in stock deals.

In the six-week trial, the government case portrayed Bilzerian as a cheat. In fact, after hearing Bilzerian's testimony, the judge in the case concluded: ". . . He lies."

Although the conviction is behind him, there are still questions to be answered about the life of a man who has left his own special mark on American business history.

For one, where's the money?

Bilzerian says he has gone the full route: From 29 cents in his pocket, to a fortune estimated at more than $50-million, back to virtually nothing. He filed for Chapter 11 bankruptcy in Tampa and is trying to liquidate in Chapter 7. He said he is personally bankrupt.

But he still has two homes in the exclusive Avila development in Tampa, though both in his wife's name. One is an unfinished mansion in which he has invested $5-million to $6-million.

Meanwhile, the Securities and Exchange Commission has filed a civil suit in hopes of recovering as much as it can from Bilzerian. Another group seeks $22-million. A St. Petersburg lawyer, Robert Bolton, wants $100,000 won in a judgment.

Creditors have charged — and Bilzerian has denied — that the bulk of his fortune is overseas in foreign accounts.

That question likely will be settled in court, as are many of Bilzerian's affairs.

For example, when he was breaking up the Singer Co., more than a dozen lawsuits were filed.

But perhaps Bilzerian's weirdest legal battle was his clash with

$52.25, by Bilzerian's estimate. The league contended the full amount had been raised. Bilzerian said that wasn't true and refused to pay.

His slander suit was dismissed.

Bilzerian now says he wishes he had paid the money, as he sometimes was advised to do, but he was just too stubborn.

One lawsuit in which exceptional bitterness lingers is the tangle between Bilzerian and Damer, a person Bilzerian described in a letter as a close friend.

When Bilzerian was in trouble in the radio station deal, Damer left San Francisco and came to Florida to represent Bilzerian. Broke, Bilzerian wrote an I.O.U., called a promissory note, for $10,000 in 1979.

Years passed and Damer kept the note.

In 1985, Bilzerian made $7.5-million on a stock deal. Damer saw an article in the newspaper reporting how Bilzerian had paid a $250,000 fee to a lawyer. Damer wrote a letter reminding his old friend about the $10,000 note. The letter ended with a line inviting Bilzerian to San Francisco.

Bilzerian, then worth close to $10-million, wrote back: "I have been hoping, for the past several years, that I would not have to address the subject of the $10,000 promissory note as it has been my belief that to do so would result in the termination of a friendship that is nearly 16 years old. Nevertheless, let us begin to write what I fear will be the final chapter."

Astonished, Damer sued and won a $75,000 judgment he likely will never collect.

Of his former friend, Damer said, "I think he went off the deep end. We were having this conversation once about greatness. I argued you could be great and not be famous. He said you had to have notoriety. He said Hitler was great, Stalin was great."

Bilzerian has won his share of notoriety, but his story continues.

After four years of prison, or perhaps less, this average-sized man of enormous physical strength, stamina and intelligence could be back on the street, sporting his trademark bushy sideburns and moustache.

But at least one thing will be different, he says. He won't re-enter the business world.

"I got into business because it was fun," he said. "It's not fun anymore."

SATURDAY
NOV. 2, 1991
St. Petersburg Times
Florida's Best Newspaper

[HN001U][GDrive]

TODO

1978 (June 16)

https://www.newspapers.com/image/335574694/?terms=%22paul%2Bbilzerian%22

1978 (July 2)

https://www.newspapers.com/image/319003182/?terms=%22paul%2Bbilzerian%22

1978 (Oct 25)

https://www.newspapers.com/image/335352191/?terms=%22paul%2Bbilzerian%22

1982 (Feb 04)

https://www.newspapers.com/image/335506473/?terms=%22paul%2Bbilzerian%22

1982 (May 10)

https://www.newspapers.com/image/333892704/?terms=%22paul%2Bbilzerian%22

March 20 1989

https://www.newspapers.com/image/512287628/?terms=%22paul%2Bbilzerian%22

July 1994

https://www.newspapers.com/image/143363250/?terms=mueller%2Bbilzerian

June 1995

https://www.newspapers.com/image/165388339/?terms=mueller%2Bbilzerian

Jacob Blaustein (born 1892)

Father was Louis Blaustein - " (January 16, 1869–1937) was an American businessman and philanthropist who founded the American Oil Company (AMOCO)."

https://en.wikipedia.org/wiki/Louis_Blaustein

Below - [HN00G0][GDrive]

Jacob Blaustein Is Dead at 78; Founder of the American Oil Co.

Special to The New York Times

BALTIMORE, Nov. 15—Jacob Blaustein, founder of the American Oil Company and a president of the American Jewish Committee, died tonight at his farm. He was 78 years old.

Influential on Many Fronts

After founding American Oil in 1910 and after seeing his enterprise turn from a small, localized company into one of the giants of the oil industry, Jacob Blaustein turned to his other interests.

He helped talk Vyacheslav Molotov, the Soviet Union's Foreign Minister, into accepting the human rights articles of the United Nations Charter when that body was still in its conceptual stages in San Francisco in 1945.

He helped to convince Premier David Ben-Gurion of Israel to accept the United Nations plan to partition Palestine in 1948.

And later he negotiated with Chancellor Konrad Adenauer of West Germany the payment of more than $10-billion in reparations to the survivors of Adolf Hitler's war crimes.

But basically, Mr. Blaustein was neither a diplomat nor a professional fund-raiser nor an adviser to five United States Presidents—he was "an oil man."

Fueled Lindbergh's Plane

Jacob Blaustein was born Sept. 30, 1892, in Baltimore, the son of Louis and Henrietta

first major court battle, with Standard Oil (N.J.), which through a variety of intricate financial maneuvers had managed to gain partial control of the fledgling company. The suits dragged on for 17 years, during which American continued to grow.

Finally, in 1954, American Oil became a totally owned subsidiary of the Standard Oil Company. Through various other family controlled enterprises, Mr. Blaustein also owned a fleet of oil tankers, oil wells in Texas and Louisiana and several manufacturing companies. He had vast real estate holdings in Baltimore, San Diego, Dallas and Los Angeles and was a controlling stockholder of the Union Trust Company of Baltimore.

In 1945, his diplomatic career began when President Franklin D. Roosevelt asked him to attend the formative meetings of the United Nations as a consultant to the United States delegation.

In 1948, when President Harry S. Truman was debating whether to seek election as President, he called in six people to advise him. Mr. Blaustein was one.

The next year, he became president of the American Jewish Committee, and it was in this capacity that he negotiated with Chancellor Adenauer and continued his talks with Jewish leaders over the Palestinian, by that time, the Israeli, question.

son of Louis and [illegible] Blaustein. His father had come to the United States from Lithuania, and after working as a peddler in eastern Pennsylvania, settled in Baltimore, where he opened a wholesale grocery store.

Louis Blaustein later went to work for a small oil jobber in Maryland, but Standard Oil (N. J.) soon wiped his employer out of business, and shortly thereafter, with his son, started a new company—American Oil.

Despite the impressive name, the new oil company consisted basically of three men, a small tank wagon and a horse, all operating out of a converted stable. The three were Louis and Jacob Blaustein and the horse driver.

Thanks to numerous innovations, the company grew quickly. It opened the first drive-in gasoline station in the United States, on Cathedral Street in Baltimore. Then, a gasoline pump complete with meter reading in dollars and gallons. And, finally, its greatest innovation — anti-knock gasoline.

They called it Amoco, still being sold at American Oil stations, and it blended benzol, a coke by-product with the gasoline. This Amoco powered Charles A. Lindbergh across the Atlantic Ocean in his Spirit of St. Louis in 1927.

Within five years, the Blausteins were embroiled in their

In 1955, President Dwight D. Eisenhower appointed him a regular member of the United States delegation to the United Nations, where he spent more time confronting the Russians "head to head."

'Stick to Your Guns

"With the Russians you have to make sure you're right and then stick to your guns no matter what," Mr. Blaustein said. "If you deal from strength, you may or may not win your point, but at least they will respect you. If you evidence weakness, you gain neither."

He had also been an adviser to Presidents Kennedy and Lyndon B. Johnson.

After his retirement as president of the American Jewish Committee in 1954, Mr. Blaustein continued as honorary president of the organization to his death. He also continued his membership on the boards of the various companies he headed and in many cases founded.

He is survived by his widow, the former Hilda Van Leer Katz; a son, Dr. Morton K. Blaustein of Baltimore; two daughters, Mrs. David Hirschhorn of Baltimore and Mrs. Arthur E. Roswell of Somerville, N. J. a sister, Mrs. Henry Rosenberg of Baltimore, and eight grandchildren.

A funeral service is scheduled at noon Wednesday at Temple Oheb Shalom in Baltimore.

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He had also been an adviser to Presidents Kennedy and Lyn don B. Johnson.

After his retirement as presi dent of the American Jewish Committee in 1954, Mr. Blau stein continued as honorary president of the organization to his death. He also continued his membership on the boards of the various companies he headed and in many cases founded.

He is survived by his widow, the former Hilda Van Leer Katz; a son, Dr. Morton K. Blaustein of Baltimore; two daughters, Mrs. David Hirschhorn of Balti more and Mrs. Arthur E. Ros well of Somerville,: N. J. a sis ter, Mrs. Henry Rosenberg of Baltimore, and eight grand children.

A funeral service is scheduled at noon Wednesday at Temple Oheb shalom in Baltimore.

https://engineering.lehigh.edu/alumni/jacob-blaustein

irth:

Friday, September 30, 1892

Birthplace:

Baltimore, MD

Date of Death:

Sunday, November 15, 1970

Degree:

B.S. Mining Engineering

Graduation:

1913

Notable Achievement:

Incorporated AMOCO with father; human rights activist

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Housatonic

David Abraham Blech (born 1955)

Wikipedia 🌐 David Blech

Associated with

- Dr. Robert Charles Nowinski (born 1945) (Genetic Systems Corporation)

Saved Wikipedia (Mar 18, 2021) - "David Blech"

https://en.wikipedia.org/wiki/David_Blech

2021-03-18-wikipedia-org-david-blech.pdf

HK005X

https://drive.google.com/file/d/1yg9EKBYzagBaFKADYhKRK7Y8w2Jxqdc6/view?usp=sharing

David Abraham Blech (born November 25, 1955) is an American businessman, investor, and venture capitalist. He is one of the financial pioneers of the biotech industry and was once known as the "King of Biotech".

Early life and education

Blech grew up in Brooklyn, New York.[1] Blech graduated from Baruch College and earned a Master's in Music Education at the Teacher's College of Columbia University.[2]

Early career

Since 1980, Mr. Blech has been a founder of companies and venture capital investor in the biotechnology sector. His initial venture investment, Genetic Systems Corporation, which he helped found with his father and his brother Isaac Blech, was built around promising scientists, including the high profile microbiologist Robert Nowinski. It developed the first inexpensive and accurate test to diagnosis sexually-transmitted diseases using monoclonal antibodies, allowing tens of thousands of babies to be born to women who otherwise would have become sterile from pelvic inflammatory disease.[3] The company was sold to Bristol Myers in 1986 for $294 million (3%) of Bristol Myers stock.[4]

In 1989, Blech co-founded Icos Corporation with Nowinski and George B. Rathmann, receiving the largest start up financing in biotech history at $33 million. Icos discovered the drug Cialis, which was acquired by Eli Lilly in 2003 for over $2.6 billion. The Blechs also co-founded Celgene Corporation in 1986, which was a unit of the Celanese Corporation, and was spun off as an independent company following the merger of Celanese Corporation with American Hoechst Corporation. Celgene introduced two major cancer drugs, and has a current value of over $35 billion, making it the 5th largest biotech company in the world.[5]

Other companies he helped found include DNA Plant Technology, Neurogen Corporation, Incyte Pharmaceuticals, Alexion Pharmaceuticals, ARIAD Pharmaceuticals, Neurocrine Biosciences, Cytosorbents Inc, and Intellect Neurosciences. He was also instrumental in the turnaround of Liposome Technology Inc. and Biotech General Corporation. In 1990, Mr. Blech founded D. Blech & Company, which, until it ceased doing business in September 1994, was a registered broker-dealer involved in underwriting biotechnology issues.[citation needed] At his peak in 1992, Blech's wealth was estimated at almost $300 million, briefly making him a member of the Forbes 400.[6]

Falling deep into debt, D. Blech & Co was in violation of net capital rules and ceased operations on September 22, 1994, a day that came to be known as "Blech Thursday" in the biotech industry.[5]

Blech came under investigation by the SEC for securities fraud. During the investigation Lloyd Schwed, a Florida-based attorney representing a group of former brokers, attempted to blackmail Blech by promising to withhold tapes subpoenaed during the investigation. Blech became an informant in exchange for leniency. He pleaded guilty to two counts of criminal fraud and was sentenced to a five-year term of probation.[5] A documentary film titled The Blech Effect was released in 2020 documenting his rise and fall in the industry.

Personal

Blech says he is bipolar, has a gambling addiction and is a member of Gamblers Anonymous.[7][8]

References

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- ^ Bylinsky, Gene (June 19, 1989). "WHAT A WAY TO START A COMPANY! A pharmaceuticals giant has put more than $70 million into Nova, a fledgling outfit that didn't even have a lab before it went public – and still hasn't marketed a product". CNN.
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- ^ Walters, Donna (February 4, 1986). "Bristol-Myers Agrees to Buy Genetic Systems : Syntex Bought Out of Deal With Biotech Firm". Los Angeles Times. Retrieved February 18, 2012.
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- a b c Duff Wilson; David Heath. "He helped create the biotech boom and when it went bust so did he". Uninformed Consent. Retrieved February 18, 2012.
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Dr. Kurt Blome (born 1894)

Wikipedia Kurt Blome

Saved Wikipedia (March 2, 2021) - Kurt Blome

2021-03-02-wikipedia-org-kurt-blome.pdf

https://en.wikipedia.org/wiki/Kurt_Blome

https://drive.google.com/file/d/1dMJj2j8_J3Rhg33Vanc_mgP0hg21NMoF/view?usp=sharing

Blome as defendant in the Doctors' Trial, Nuremberg

- Born 31 January 1894 , Bielefeld, Germany
- Died 10 October 1969 (aged 75)
- Citizenship German
- Scientific career Fields : Virologist
- Institutions
  - Reims Island, German Reich
- Influenced
  - [**Dr. Erich Traub (born 1906)**]

Kurt Blome (31 January 1894, Bielefeld, Westphalia – 10 October 1969) was a high-ranking Nazi scientist before and during World War II. He was the Deputy Reich Health Leader (Reichsgesundheitsführer) and Plenipotentiary for Cancer Research in the Reich Research Council. In his autobiography Arzt im Kampf (A Physician's Struggle), he equated medical and military power in their battle for life and death.

Blome was tried at the Doctors' Trial in 1947 on charges of practicing euthanasia and conducting experiments on humans. He only admitted that he had been ordered in 1943 to experiment with plague vaccines on concentration camp prisoners. In reality, starting in 1943 he "assumed responsibility for all research into biological warfare sponsored by the Wehrmacht" and the S.S.[1] Although he was acquitted of war crimes charges at the Nuremberg Doctors' Trial, this was mainly due to the intervention of the United States as his earlier admissions were well known. It was generally accepted that he had indeed participated in chemical and biological warfare experiments on concentration camp inmates.[2]

Director of the Nazi biological warfare program

As Plenipotentiary for Cancer Research in the Third Reich, Blome had a longstanding interest in the "military use of carcinogenic substances" and cancer-causing viruses. According to Ute Deichmann's book Biologists under Hitler, in 1942 he became director of a unit affiliated with the Central Cancer Institute at the University of Posen (Poznań in Poland, annexed by Germany in 1939). Although he claimed that the work at this institute involved only 'defensive' measures against biological weapons, Heinrich Himmler, Hermann Goering, and Erich Schumann, head of the Wehrmacht's Science Section, strongly supported the offensive use of chemical and biological weapons against Britain, the Soviet Union, and the United States. In 1943, Schumann wrote to Dr. Heinrich Kliewe, one of the Wehrmacht's biological warfare experts that "in particular, America must be attacked simultaneously with various human and animal epidemic pathogens as well as plant pests."[3] According to Kliewe, plague, typhoid, cholera and anthrax were being developed as weapons, as well as a new "synthetic medium for the spread of these bacteria" which would allow them to remain virulent for eight to twelve weeks.[4]

As part of the Nazi biological warfare program code-named Blitzableiter (Lightning Rod), Blome's institute was therefore "a camouflaged operation for the production of biological warfare agents", and its construction was overseen by Karl I. Gross, an S.S. officer and specialist in tropical diseases, who had conducted lethal experiments on 1,700 prisoners at the Mauthausen concentration camp.[5] It was surrounded by a ten-foot high wall, guarded by a special S.S. unit, and designed to prevent the accidental release of the various biological agents being produced there. By May 1944, the institute had sections devoted to physiology-biology, bacteriology and vaccines, radiology, pharmacology, cancer statistics and a tumor farm, and had received at least 2.7 million Reichsmarks in funding from the Wehrmacht and S.S. in 1943–45.[6]

Blome worked on methods of storage and dispersal of biological agents like plague, cholera, anthrax, and typhoid, and also infected prisoners with plague in order to test the efficacy of vaccines. At the University of Strassburg, a "special unit" headed by Prof. Eugen von Haagan and employing researchers like Kurt Gutzeit and Arnold Dohmen, tested typhus, hepatitis, nephritis, and other chemical and biological weapons on concentration camp inmates.[7] Gutzeit

Kurt Gutzeit and Arnold Dohmen, tested typhus, hepatitis, nephritis, and other chemical and biological weapons on concentration camp inmates.[8] Gutzeit was in charge of hepatitis research for the German Army, and he and his colleagues carried out virus experiments on mental patients, Jews, Russian POWs and Gypsies in Sachsenhausen, Auschwitz and other locations.[8] In October 1944, Himmler also ordered Blome to experiment with plague on concentration camp prisoners.[9]

Use of insect vectors in biological warfare

In 1943, Blome proposed spreading malaria "artificially by means of mosquitoes" and experimented on prisoners at Dachau and Buchenwald with lice in order to cause typhus epidemics.[10] Eduard May, director of the Entomological Division of the SS Institute for Practical Research in Military Science, received a commission to experiment on concentration camp prisoners with "humanly harmful insects" starting in October 1943, which was closely connected with Blome's biological warfare program.[11] May collaborated with him in experiments on "the artificial mass transmission of the malaria parasite to humans", with infected mosquitoes dropped from planes. In addition, the Wehrmacht's Veterinary Section, which included research projects on animal diseases being conducted by [**Dr. Erich Traub (born 1906)**] at the Insel Riems (Riems Island) Institute, was developing methods to spread these by aircraft over Britain, the U.S. and the Soviet Union.[12] Like Kurt Blome's cancer research institute in Posen, the State Research Institute at Insel Riems was a dual use facility during the Second World War where at least some biological warfare experiments were conducted. It was founded in 1909–10 to study foot-and-mouth disease and by World War II employed about 20 scientists and a staff of about 70–120. From 1919 to 1948, its director was Otto Waldmann. Hans-Christoph Nagel, a veterinarian and biological warfare expert for the German Army, was in charge of research into the use of animal and insect diseases as biological weapons. Like Blome, Traub was also employed by the U.S. government after the war as a biological warfare expert.[13]

Insecticides and experiments with nerve gas

Blome also worked on aerosol dispersants and methods of spraying nerve agents like Tabun and Sarin from aircraft, and tested the effects of these gases on prisoners at Auschwitz.[9] I.G. Farben had developed nerve gas in 1936 as a result of its research into insecticides, and Blome's duties included preparing defensive measures against possible Allied use of insect-borne biological weapons, either in a first strike or in retaliation for German use of such weapons. As early as September 1940, Wolfram Sievers, director of the S.S. Ahnenerbe Institute, had warned Blome of the need to expand the production of insecticides to deal with this eventuality.[14] This led Blome to experiment with the dispersal of insecticides, fungicides and nerve gas from aircraft, especially after Hitler had ordered a "drastic increase" in the production of Tabun and Sarin at I.G. Farben's Dyhernfurth factory in eastern Germany. On orders from Himmler in 1944, Blome also tested these on inmates at Auschwitz.[15]

Flight from the Poznan Institute

Blome fled from Posen in January 1945 just ahead of the Red Army, and was unable to have the facilities completely destroyed. He informed Walter Schreiber, head of the Wehrmacht's Military Medical Inspectorate, that he was "very concerned that the installations for human experiments that were in the institute and recognizable as such, would be very easily identified by the Russians."[16] He relocated to the town of Geraburg in Thuringia, where the Wehrmacht and SS had already constructed another biological warfare facility disguised as a cancer research institute. Blome brought his biological cultures with him from Poland, and was still promising Hitler a Wunderwaffe or 'miracle weapon' that would turn the tide of war in Germany's favor, but the Geraburg facility was captured by the U.S. Army in April 1945, along with its records and equipment.[17]

Collaboration with Unit 731 and the Japanese biological warfare program

Throughout the war, the German and Japanese biological warfare programs exchanged information, samples, and equipment by submarine. The last of these submarines departed from Japan as late as May 1945. The Japanese destroyed many of the records about these contacts and the biological warfare program prior to their own surrender in August 1945. In the 1930s, Hitler had ordered a group of officers led by Otto Muntsch to study Japan's use of chemical and biological weapons against China. These programs of scientific cooperation and exchange were formalized in a series of agreements in 1938–39. Hojo Enryo, a Japanese Army doctor and expert in biological weapons "frequently visited the Robert Koch Institute as well as companies under German occupation to collect information about research on bacteriological warfare" and gave a lecture on this subject at the Berlin Military Academy of Medicine in October 1941.[18] Gerhard Rose, who was "the German expert on tropical diseases and epidemic typhus" and later a defendant at the Nuremberg Doctors Trial, supplied samples of the yellow fever virus to Unit 731 that they had been unable to obtain from the United States.[19] Blome's own institute in Posen was very similar in design to Unit 731's facility in Pingfan, Manchuria.[20]

Postwar activities and employment by the United States

Blome was arrested in Munich on 17 May 1945 by the United States Counter Intelligence Corps (an army intelligence service). He had no papers except his driving licence. After some weeks of custody, during which the CIC checked on his identity, Blome was taken to Kransberg Castle (a medieval castle north of Frankfurt). After his arrival at the castle a secret message was transmitted to Operation Alsos, an Anglo-American team of experts, tasked with investigating the state of German and Italian weapons technology towards the end of the war:

In 1943 Blome was studying bacteriological warfare, although officially he was involved in cancer research, which was however only a camouflage. Blome additionally served as deputy health minister of the Reich. Would like you to send investigators?"[21]

It is believed that American intervention saved Blome from the gallows in exchange for information about biological warfare, nerve gas, and providing advice on to the American chemical and biological weapons programs [22] **In November 1947, two months after his Nuremberg acquittal, Blome was interviewed by four representatives from Camp Detrick, Maryland, including H.W. Batchelor, in which he "identified biological warfare experts and their location and described different methods of conducting biological warfare."**[23]

In 1951, he was hired by the U.S. Army Chemical Corps under Project 63, one of the successors to Operation Paperclip, to work on chemical warfare. His file neglected to mention Nuremberg. Denied a visa by the U.S. Consul in Frankfurt, he was employed at European Command Intelligence Center at Oberursel, West Germany.[24] He worked there on a never-declassified top secret project labeled in Blome's foreign scientist case file as "Army, 1952, Project 1975".[25]

He was not arrested or charged with war crimes again after his acquittal at the Nuremberg Doctors' Trial in 1947. He also continued to practice medicine in West Germany, and was active in politics as a member of the right-wing Germany Party. He died in Dortmund in 1969.[26]

Works

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See also

- [**Dr. Erich Traub (born 1906)**]
- Claus Schilling
- Doctors' Trial
- Nazi human experimentation
- Operation Paperclip
- U.S. intelligence involvement with German and Japanese war criminals after World War II
- Project MKULTRA
- Project MKNAOMI
- Project MKDELTA
- Sigmund Rascher
- Fort Detrick
- Anthrax
- Typhus
- Malaria
- Hepatitis
- Plague (disease)
- Nephritis
- Nerve gas
- I.G. Farben
- Gerhard Rose
- Unit 731

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http://nuremberg.law.harvard.edu/documents/276-brief-closing-brief-for-dr?q=%2A#p.1

Brief: Closing brief for Dr. Kurt Blome

The Case Prof. Dr. Blome

09 June 1947

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Merson Booth (born 1924)

FindAGrave - [HL000S][GDrive]

LCDR Merson Booth

BIRTH 27 Mar 1924 / Minneapolis, Hennepin County, Minnesota, USA

DEATH 26 Oct 2012 (aged 88) / Bethesda, Montgomery County, Maryland, USA

BURIAL United States Naval Academy Cemetery / Annapolis, Anne Arundel County, Maryland, USA

Merson Booth, 88, a retired nuclear engineer with the old Atomic Energy Commission, died Oct. 26 at his home in Bethesda. He had Parkinson's disease, his son William Booth said.

Mr. Booth was a 1946 graduate of the U.S. Naval Academy in Annapolis. Early in his naval duty, he was assigned to work on the U.S. nuclear weapons program in Los Alamos, N.M.

In the early 1950s, he was recruited by Adm. Hyman S. Rickover to participate in the early development of the Navy's first nuclear-powered vessels.

While serving in the Navy, Mr. Booth attended graduate school at the Massachusetts Institute of Technology, receiving advanced degrees in naval architecture and marine engineering in 1953 and in nuclear engineering in 1955.

He resigned from the Navy as a lieutenant commander in 1958 and joined the Atomic Energy Commission. He worked in reactor development and retired in 1972 as chief of systems.

Merson Booth was born in Minneapolis. He was a member of the Naval Academy's Class of 1947 but graduated a year early as part of an accelerated wartime program. He was captain of the sailing team at the Naval Academy.

*In later years, Mr. Booth sailed a Hinckley Bermuda 40 sailboat on Chesapeake Bay and was a commodore of the Chesapeake Bay Bermuda-40 Association. He was a member of the Gibson Island Club [see **Gibson Island, Maryland**] in Anne Arundel County and River Road Unitarian Universalist Congregation in Bethesda.*

He volunteered at St. John's College in Annapolis and completed the course work for a doctorate in philosophy at Georgetown University.

Survivors include his wife of 64 years, Barbara Winter Booth of Bethesda; three children, James Booth of Davis, Calif., Kathryn Johnson and William Booth, both of Bethesda; and seven grandchildren.

1942 (April 26)

https://www.newspapers.com/image/187717930/?terms=%22merson%2Bbooth%22

1946 (April 09) Annapolis Yacht Club

https://newspaperarchive.com/annapolis-capital-apr-09-1946-p-2/

Schoenfeld, Clay (ed.) / Wisconsin alumnus

Volume 50, Number 6 (March 1949)

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 Barbara Ellen WINTER and Ensign  Merson Booth were married last Dec. 26 in Milwaukee. They are living in
Albuquerque, N. M., where he is stationed.
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June 17 1949

https://www.newspapers.com/image/158286391/?terms=%22merson%2Bbooth%22

Nov 6 1949

https://www.newspapers.com/image/158321119/?terms=%22merson%2Bbooth%22

1949 (Nov 28)

https://www.newspapers.com/image/158296215/?terms=%22merson%2Bbooth%22

sale of real estate in albuquerque

1952 (August) - Merson Booth in "Journal of the American Society of Naval Engineers"

See [HG000Q][GDrive]

BOOTH, MERSON

Journal of the American Society of Naval Engineers, 1952-08-01T00:00:00, vol. 64, no. 3, pp. 675-677(3)

1953 - Paper submitted to MIT - One-Dimensional Analysis of Steady Flow Air Water Mixtures in Pipes

by Merson Booth

See report : [HE0003][GDrive]

1955 - MIT doc - Behavior of water-moderated reactors during rapid transients

See report : [HE0004][GDrive]

May 7 1960

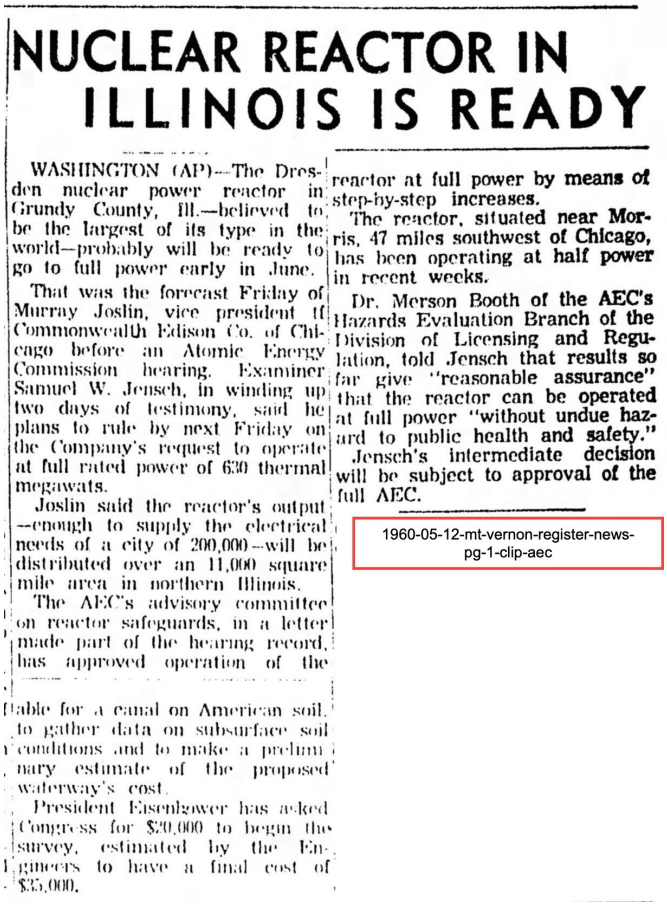
https://www.newspapers.com/image/88579147/?terms=%22merson%2Bbooth%22

May 7 1960

https://www.newspapers.com/image/88588881/?terms=%22merson%2Bbooth%22

1960 (May 12)

[HC007C][GDrive]



NUCLEAR REACTOR IN ILLINOIS IS READY

WASHINGTON (AP)—The Dresden nuclear power reactor in Grundy County, Ill.—believed to be the largest of its type in the world—probably will be ready to go to full power early in June.

That was the forecast Friday of Murray Joslin, vice president tf Commonwealth Edison Co. of Chicago before an Atomic Energy Commission hearing. Examiner Samuel W. Jensch, in winding up two days of testimony, said he plans to rule by next Friday on the Company's request to operate at full rated power of 630 thermal megawats.

Joslin said the reactor's output —enough to supply the electrical needs of a city of 200,000—will be distributed over an 11,000 square mile area in northern Illinois.

The AEC's advisory committee on reactor safeguards, in a letter made part of the hearing record, has approved operation of the reactor at full power by means of step-by-step increases.

The reactor, situated near Morris, 47 miles southwest of Chicago, has been operating at half power in recent weeks.

Dr. Merson Booth of the AEC's Hazards Evaluation Branch of the Division of Licensing and Regulation, told Jensch that results so far give "reasonable assurance" that the reactor can be operated at full power "without undue hazard to public health and safety."

Jensch's intermediate decision will be subject to approval of the full AEC.

1960-05-12-mt-vernon-register-news-pg-1-clip-aec

able for a canal on American soil, to gather data on subsurface soil conditions and to make a preliminary estimate of the proposed waterway's cost.

President Eisenhower has asked Congress for $20,000 to begin the survey, estimated by the Engineers to have a final cost of $35,000.

[HC007D][GDrive]

1960 (May 27) - US AEC Report -

Get report here - [HG000K][GDrive]

Report CF-169 re Investigation of Radiation Incident at Westinghouse by John Sears & Marvin Mann. By:

U. S. **ATOMIC ENEGY** COMMISSIOW DIVISION (N' IWZPCTION.

REPORT ***07-169***

John R. Sears, Inspection Division **Nev** York Operations Office

and Marvin **M.** Mann

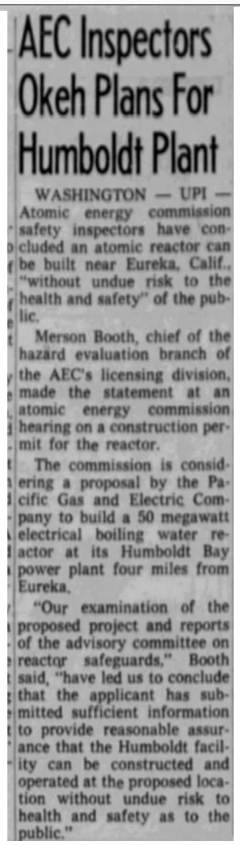
Date: MAY 2 7 1990

Division of Inspection, H

1960 (August)

[HN007I][GDrive]

The Sacramento Bee (Sacramento, California) • 26 Aug 1960, Fri •



AEC Inspectors Okeh Plans For Humboldt Plant

WASHINGTON — UPI — Atomic energy commission safety inspectors have concluded an atomic reactor can be built near Eureka, Calif., "without undue risk to the health and safety" of the public.

Merson Booth, chief of the hazard evaluation branch of the AEC's licensing division, made the statement at an atomic energy commission hearing on a construction permit for the reactor.

The commission is considering a proposal by the Pacific Gas and Electric Company to build a 50 megawatt electrical boiling water reactor at its Humboldt Bay power plant four miles from Eureka.

"Our examination of the proposed project and reports of the advisory committee on reactor safeguards," Booth said, "have led us to conclude that the applicant has submitted sufficient information to provide reasonable assurance that the Humboldt facility can be constructed and operated at the proposed location without undue risk to health and safety as to the public."

[HN007J][GDrive]

1961 (June 20)

[HN007G][GDrive]

The San Francisco Examiner (San Francisco, California) • 20 Jun 1961, Tue • Page 13

'No Atom Peril To Pleasanton'

A three man panel of Atomic Energy Commission experts last night declared the proposed $8,000,000 superheat reactor at General Electric Company's Vallecitos Atomic Laboratory would not endanger the Pleasanton area if properly operated under AEC regulations.

The panel, consisting of Robert Lowenstein, acting director of the AEC's division of licensing and regulation, Dr. Clifford K. Beck, assistant director, and Merson Booth, reactor engineer, discussed the effects of the reactor before an informal public meeting at the Alisal Elementary School in Pleasanton.

Some 100 persons attended the meeting, including personnel from the California State Radiation Service, State and County Public Health Services, representatives from the State Public Utilities Commission, and the Water Pollution Board.

The AEC panel members said they saw no reason why GE's application to construct the experimental reactor would not be approved at a formal hearing at AEC headquarters on June 29.

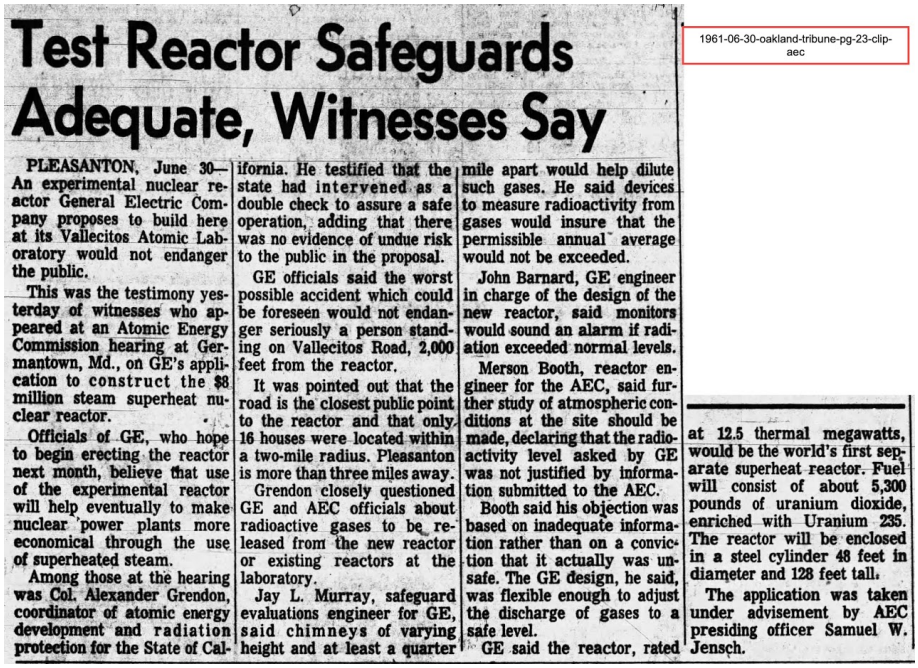
[HN007H][GDrive]

1961 (June 30)

https://www.newspapers.com/image/458358512/?terms=%22merson%2Bbooth%22

1961 (June 30)

[HN007E][GDrive]



1961-06-30-oakland-tribune-pg-23-clip-aec

Test Reactor Safeguards Adequate, Witnesses Say

PLEASANTON, June 30—An experimental nuclear reactor General Electric Company proposes to build here at its Vallecitos Atomic Laboratory would not endanger the public.

This was the testimony yesterday of witnesses who appeared at an Atomic Energy Commission hearing at Germantown, Md., on GE's application to construct the $8 million steam superheat nuclear reactor.

Officials of GE, who hope to begin erecting the reactor next month, believe that use of the experimental reactor will help eventually to make nuclear power plants more economical through the use of superheated steam.

Among those at the hearing was Col. Alexander Grendon, coordinator of atomic energy development and radiation protection for the State of California. He testified that the state had intervened as a double check to assure a safe operation, adding that there was no evidence of undue risk to the public in the proposal.

GE officials said the worst possible accident which could be foreseen would not endanger seriously a person standing on Vallecitos Road, 2,000 feet from the reactor.

It was pointed out that the road is the closest public point to the reactor and that only 16 houses were located within a two-mile radius. Pleasanton is more than three miles away.

Grendon closely questioned GE and AEC officials about radioactive gases to be released from the new reactor or existing reactors at the laboratory.

Jay L. Murray, safeguard evaluations engineer for GE, said chimneys of varying height and at least a quarter mile apart would help dilute such gases. He said devices to measure radioactivity from gases would insure that the permissible annual average would not be exceeded.

John Barnard, GE engineer in charge of the design of the new reactor, said monitors would sound an alarm if radiation exceeded normal levels.

Merson Booth, reactor engineer for the AEC, said further study of atmospheric conditions at the site should be made, declaring that the radioactivity level asked by GE was not justified by information submitted to the AEC.

Booth said his objection was based on inadequate information rather than on a conviction that it actually was unsafe. The GE design, he said, was flexible enough to adjust the discharge of gases to a safe level.

GE said the reactor, rated at 12.5 thermal megawatts, would be the world's first separate superheat reactor. Fuel will consist of about 5,300 pounds of uranium dioxide, enriched with Uranium 235. The reactor will be enclosed in a steel cylinder 48 feet in diameter and 128 feet tall.

The application was taken under advisement by AEC presiding officer Samuel W. Jensch.

[HN007F][GDrive]

1965 (Feb) - US AEC - Oak Ridge Nuclear Safety - Behavior of iodine in reactor containment systems

See report : [HG000O][GDrive]

Behavior of iodine in reactor containment systems

FOREWORD

*This is the fourth report prepared under the auspices of the Nuclear Safety Information Center, which was established in March **1963** at the Oak Ridge National Laboratory under the sponsor- ship of the U.S. Atomic Energy Commission. The Center serves as a focal point for the col- lection, storage, evaluation, and dissemination of information in the following areas:*

- *Containment of nuclear facilities*
- *Fission-product release, transport, and removal*
- *Nuclear instrumentation, control, and safety systems*
- *Radioactive effluent control monitoring, movement, and dosage **0** Reactor transients, kinetics, and stability*
- *Meteorological considerations*

In addition, the Center prepares the quarterly technical progress review Nuclear Safety and has a reference file stored on magnetic tape for the computer search of safety information and the preparation of a quarterly, indexed bibliography of the nuclear safety literature.

Inquiries concerning the services, capabilities, and operation of the Center should be addressed to:

Wm. B. Cottrell, Director

Nuclear Safety Information Center Oak Ridge National Laboratory

P. 0. Box Y

*Oak Ridge, Tennessee **37831***

The present report was prepared at the request of Merson Booth of the Analysis and Eval- uation Branch of the AEC Division of Reactor Development. The subject is of particular interest, both because of the extensive research and development in the subject area for a number of years in this country and elsewhere - particularly in the United Kingdom - as well as its potential use in reactor safety evaluations. While this active interest makes the report quite timely, it should be recognized that it is, in a sense, a progress report, because new and per- tinent information on the subject is being generated daily. Nevertheless, the authors have attempted to condense, to summarize, and to some extent, to evaluate the present state of knowledge on the behavior of fission-product iodine when it is released into a containment system as a result of a reactor accident. It has not been possible to use or even to refer to all published work on iodine behavior, because of the large mass of the available information. The authors furthermore recognize some bias toward the use of data and references originating in the research and development program at ORNL, but they have tried not to neglect the more pertinent information from other installations.

1971 (Dec) - US AEC - Oak Ridge - Chemical Abstracts of MSRE Operations (ORNL-4658)

Doc : [HG000M][GDrive]

1971 (Dec) - US AEC Abstracts on Molten Salt Reactor Tech (ORNL-TM-3595)

Doc : [HG000L][GDrive]

1973 - ANSI - Quality Assurance Terms and Definitions (ANSI N45.2.10· 1973)

See doc : [HG000N][GDrive]

"U.S. ATOMIC ENERGY COMMISSION

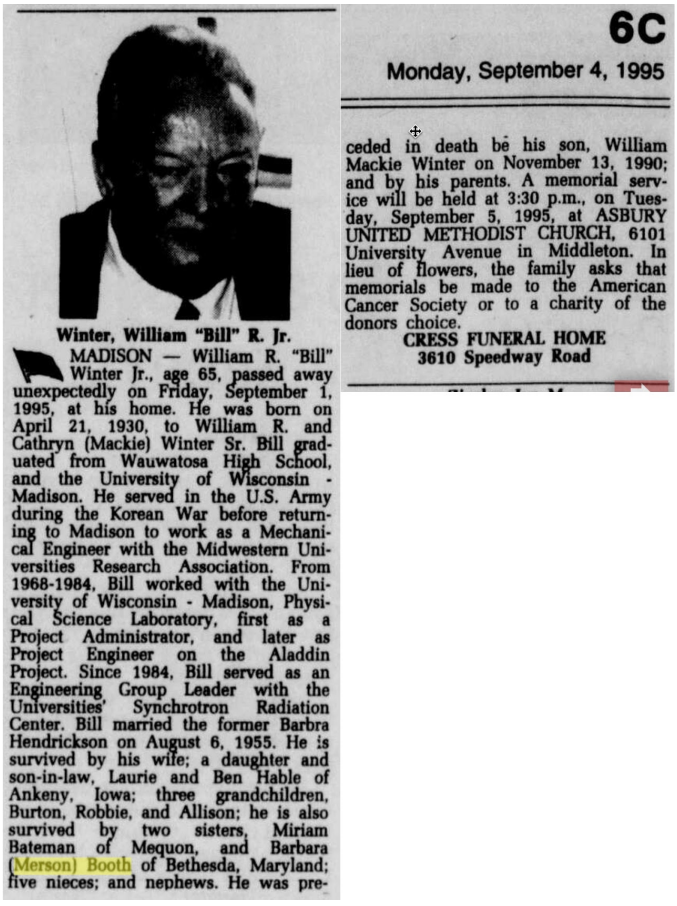
***Merson Booth**, U.S. Atomic Energy Commission, Washington. D.C.*

R. B. Minogue, U.S. Atomic Energy Commission, Washington, D.C.

F. J. Shon, Divison of Operational Safety, U.S. Atomic Energy Commission, Washington, D.C."

1995 (Sep) - Brother in-law passes (was also in nuclear industry)

[HN007K][GDrive]



Winter, William "Bill" R. Jr.

MADISON — William R. "Bill" Winter Jr., age 65, passed away unexpectedly on Friday, September 1, 1995, at his home. He was born on April 21, 1930, to William R. and Cathryn (Mackie) Winter Sr. Bill graduated from Wauwatosa High School, and the University of Wisconsin - Madison. He served in the U.S. Army during the Korean War before returning to Madison to work as a Mechanical Engineer with the Midwestern Universities Research Association. From 1968-1984, Bill worked with the University of Wisconsin - Madison, Physical Science Laboratory, first as a Project Administrator, and later as Project Engineer on the Aladdin Project. Since 1984, Bill served as an Engineering Group Leader with the Universities' Synchrotron Radiation Center. Bill married the former Barbra Hendrickson on August 6, 1955. He is survived by his wife; a daughter and son-in-law, Laurie and Ben Hable of Ankeny, Iowa; three grandchildren, Burton, Robbie, and Allison; he is also survived by two sisters, Miriam Bateman of Mequon, and Barbara (Merson) Booth of Bethesda, Maryland; five nieces; and nephews. He was pre-

6C

Monday, September 4, 1995

ceded in death be his son, William Mackie Winter on November 13, 1990; and by his parents. A memorial service will be held at 3:30 p.m., on Tuesday, September 5, 1995, at ASBURY UNITED METHODIST CHURCH, 6101 University Avenue in Middleton. In lieu of flowers, the family asks that memorials be made to the American Cancer Society or to a charity of the donors choice.

CRESS FUNERAL HOME
3610 Speedway Road

[HN007L][GDrive]

2005 (Feb)

Full newspaper page : [HN017V][GDrive]

2005-02-11-annapolis-capital-pg-c-5-clip-booth

From left, Guy and Susan Riccio of Annapolis with Barbara and Merson Booth of Bethesda.

[HN017W][GDrive]

Son - William C Booth

(married to Irina ( ) Booth)

Full newspaper page : [HN017R][GDrive]

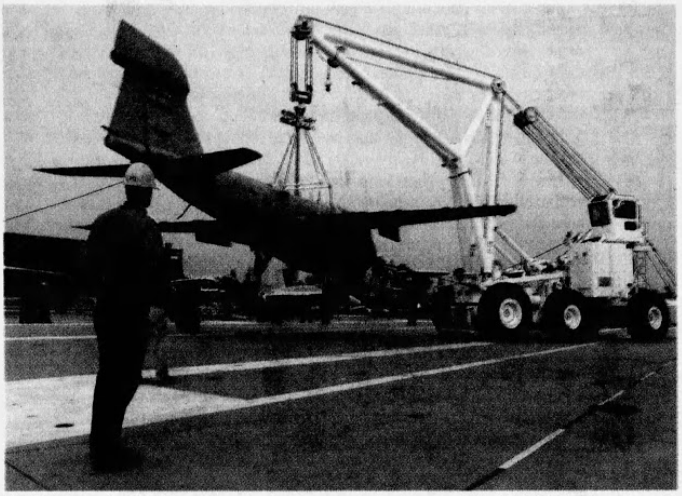
Inventory manager for the US Navy ? William C Booth

NATTC Air Department receives new airframes

By Megan Kohr
Gosport Staff Writer

Better training making the Navy efficient and safe is becoming more prevalent as the Naval Air Technical Training Center (NATTC) Air Department recently received six new airframes for crash and salvage students to train bringing their airframe count up to 11 trainers.

The NATTC Air Department's mission is to train personnel in the technical phases of aircraft handling, crash and salvage procedures and tactics, shipboard aviation firefighting, aviation fueling systems and aviation launch and recovery equipment. To adhere to the mission, the Air Department needed more realistic equipment to train on before the students are sent out to the fleet.



USS Kitty Hawk (CV 63) crash and salvage crew train with one of the NATTC Air Department's new airframes EA-6B Prowler onboard NAS Pensacola Feb. 28. Photo by Megan Kohr

"The time to train is aboard NATTC while attending Aviation Boatswain's Mate Handling (ABH) "C" School and Aviation Firefighting Shipboard Team Trainer, not in the landing area of the ship after a major crash when the airplane is on fire and the pilot is trapped and unconscious," CW03 Patrick Halinski from the NATTC Air Department, said. "Properly trained crash crew personnel, senior and junior ABH's on diesel and nuclear powered carriers and large L class ships will be able to save lives in the event of a crash or fire aboard ship."

Halinski presented his case to the Naval Aircraft Strike Board throughout 2006 and 2007 stating that the airframes were not conducive to training fleet crash and salvage crews and ABH "C" school students on aircrew rescue; aircraft emergency and normal entry procedures; aircraft emergency shutdown; and salvage procedures and tactics.

"The aircraft I had were stripped of everything that is required to conduct this kind of training or the airframe itself was so old and corroded that they did not pass inspection that would allow them to be hoisted by a crane," Halinski stated. "For example, the emergency procedure to shutting down a Hornet is to pull the throttles aft, secure the fuel flow to the engines by pushing the left and right fire warning lights, ensure the Auxiliary Power Unit switch is in the off position and place the battery switch in the off position. For years, instructors were literally pointing to holes in the cockpits where these components are supposed to be and telling the students the actions."

The board empathized with Halinski's situation and arrange for the NATTC Air Department to receive aircraft that were going to be stricken from the Navy. According to William C. Booth, inventory manager for the Navy, the Air Department wasn't meeting the training objectives because they didn't have fleet representative aircraft.

"It's a little hard to train someone to raise a canopy when there isn't one. Or to turn off a switch and dial when they aren't there," Booth who was instrumental in process, said. "The USS Kitty Hawk (CVN 63) was going through their annual training (Feb. 28) and this time they actually got to raise an aircraft because they never had that."

Among the fleet representative aircraft, the Air Department received an EA-6B Prowler, E-2C Hawkeye, F/A-18A Hornet, CH-46E Sea Knight, SH-60 Seahawk and S-3B Viking. These aircraft have all of their parts allowing students to properly train thanks to the strike board and other program managers who "generously" allowed the parts to remain on the aircraft.

Three carriers have already trained with the new equipment along with three large L-class amphibious ships. Halinski said fleet crash and crew salvage officers have been ecstatic with the advanced training commenting, "This is the training we have needed for years."

The Air Department is scheduled to receive an F/A-18F F-1 and an AV-8B Harrier with the possibility of an AH-1 and UH-1 in the near future. The NATTC Air Department trains approximately 500 students with the airframes each year.

Naval Air Technical Training Center (NATTC) Air Department trains with airframes for the following areas:

- Insofar as Crash and Salvage training is concerned we train to the scenario that an airplane has crashed aboard ship, caused a large fire, left the pilot/aircrew unconscious, the engines are still at a high power setting and the aircraft landing gear is so damaged that it can not be towed out of the landing area.
- Aircrew Rescue procedures (how to release the aircrew from the seat restraints and pull him/her to safety).
- Ejection seat and egress system emergency saving procedures (saving the ejection seat so it can not be inadvertently actuated during rescue by the aircrew or the rescue personnel).
- Emergency shutdown procedures (securing or turning off the engines and other systems).
- Normal, manual and emergency aircraft entry (how to get into the airplane to complete the above).
- Salvage procedures using a manufacturer's hoisting sling and a crash crane and salvage procedures using a 20,000 pound capacity forklift and salvage dollies. The forklift picks up one part of the airframe and a wheeled dolly is placed below the airframe taking the place of a landing gear, allowing the airframe to be towed from the landing area on board ship/shore.
- The Fuel School and the Catapult and Arresting Gear School walk their students around the airplanes pointing out the components they will be working with, i.e. fueling ports and catapult holdback parts.

[HN017S][GDrive]

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https://waltwhitmanhs1974.classquest.com/main/default.aspx?pageindex=0&siteid=E212417339&pageid=100119&viewimage=124783

William and Irina Booth;

Walt Whitman High School

Class of 1974 40th Reunion

7228 Millwood Ct, Bethesda, MD, 20817-6172

https://nuwber.com/person/563a865aa219445d520df6a2

Different Booth ...

Full newspaper page : [HN017F][GDrive] / article : [HN017G][GDrive]

Housatonic

James d'Orma Braman (born 1901)

Wikipedia James d'Orma Braman

Saved Wikipedia : James d'Orma Braman

Source - [HK002C][GDrive]

James Braman Assistant Secretary of Transportation for Urban Systems and Environment

In office March 23, 1969 – 1970

President Richard Nixon

45th Mayor of Seattle

In office 1964–1969

Preceded by Gordon S. Clinton

Succeeded by Floyd C. Miller

Personal details

Born James d'Orma Braman December 23, 1901 Lorimor, Iowa, U.S.

Died August 21, 1980 (aged 78) Seattle, Washington, U.S.

James d'Orma "Dorm" Braman (December 23, 1901 – August 21, 1980)[1] was an American politician who served as the 45th mayor of Seattle, Washington from 1964 to 1969. To date, Braman was last Republican to serve as Mayor of Seattle.[2] Previously, mayors were elected for a term of four years, but because of a change in the date of election to odd-numbered years during his mayoral tenure, Braman served five and a half years.

Early life and education

He was born in Lorimor, Iowa, on December 23, 1901. As a child, Braman lived in Oklahoma before his family relocated to Pend Oreille County, Washington around 1908. He attended Union High School from 1916 to 1918, dropping out to work in the family lumber business.

Career

Braman worked in the lumber industry and also designed homes. In 1943, Braman served as a Lieutenant in the United States Navy Reserve. Braman was based in Portland, Oregon and managed lumber procurement. In 1945, he was promoted to Commander and transferred to Washington, D.C. He returned to the Puget Sound region in 1946.

He was elected to the Seattle City Council, serving from 1954 until he became mayor in 1964.[3]

He was appointed by President Richard M. Nixon as Assistant Secretary of Transportation for Urban Systems and Environment in February 1969, resigning as mayor on March 23, 1969 to accept the position.[3][4][5]Braman resigned in 1970 and returned to Seattle after 18 months in the position.

Death

Braman died in Seattle on August 21, 1980 at the age of 79.[6]

Brief clip of Braman in a video (1968) -

Youtube - https://www.youtube.com/watch?v=5NRLCSJ-sLc

Captured - MP4 is [HV009A][GDrive]

1906 - The Braman Family moves to Bremerton, open sawmill

Source - Jacob Wesley Braman obituary - February 28, 1949 - https://products.kitsapsun.com/archive/1999/02-28/0073_remember_when.html

- Jacob Wesley Braman, 90, pioneer Bremerton lumberman whose name is synonymous with the growth of Bremerton, died early this morning at his home, 1242 Eighth St.
- Mr. Braman, well-known throughout the area, **came to Bremerton in 1906** and, through his business interests, **was active in the development of the city**.
- **Upon arrival, he bought a sawmill at the present site of the Bremerton Lumber Co**. He operated the mill for two years before selling it to the Port Blakely Mill Co [see https://portblakely.com/port-blakely/our-story for some of the company history]
- He continued with the firm for 20 years, serving as manager of line yards in Bremerton and Charleston.

Summary -

1906 - Jacob Wesley Braman (father of James d'Orma "Dorm" Braman) moved to Bremerton, and upon arrival, he bought a sawmill at the present site of the Bremerton Lumber Co

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2020 HistoryLink article on James d'Orma "Dorm" Braman

Source to HistoryLink article on James Braman : [HW0034][GDrive]

This biography of James d'Orma "Dorm" Braman, Seattle City Council member beginning in 1954, and Seattle mayor from 1964 to 1969, was written by his son, Jim Braman.

Dorm Braman: Kitsap County Years

James d'Orma "Dorm" Braman was born in Lorimor, Iowa, on December 23, 1901. He moved with his family first to Oklahoma and then to the Pend Oreille valley of Eastern Washington circa 1908. His family moved to Bremerton in 1910, where **his father, Jacob Wesley Braman, managed first a lumber mill and later a lumber retail store for the Port Blakely Mill Company.**

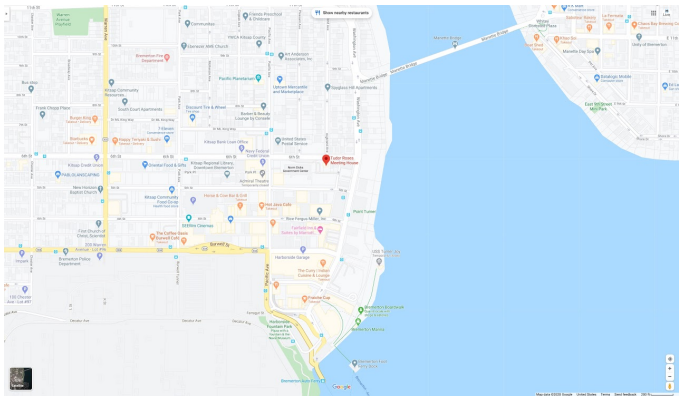
Dorm attended Union High School from 1916 to 1918, dropping out of school late in his sophmore year to deliver lumber for new housing being build as a result of the World War I boom in Bremerton, site of the Puget Sound Navy Yard. With a neighbor chum, Dorm opened a small millwork plant in leased quarters on the Bremerton waterfront in 1919. After he became sole owner of the business, known as Braman Mill and Manufacturing Company, he moved it to larger quarters on 4th Street and in 1930 into a facility built for him at the corner of Pacific Avenue and 7th Street.

The new plant was large enough to accomodate up to 25 workers but unfortunately opened just as the slump of the Great Depression was being felt in Bremerton. Within several years, he was the sole employee. However, his reputation for high quality millwork permitted a build-up of employment as economic conditions eased. Ultimately, the Braman Mill provided millwork such as door and window frames, cabinets, and store fixtures for public and private buildings as far way as Bothell, north of Seattle.

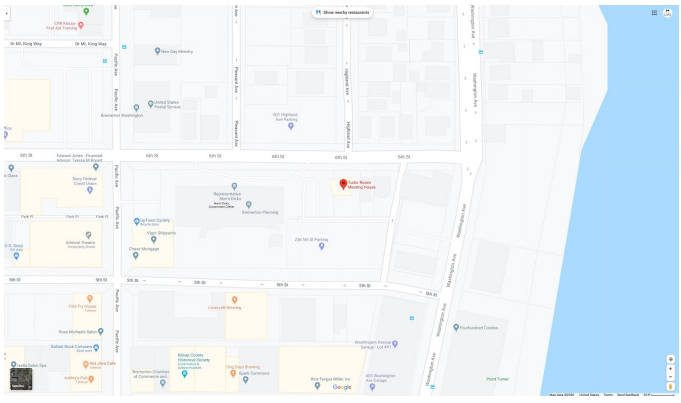
Braman had married a Manette girl, Margaret Veroka Young, in 1902, and had two sons, James d'Orma, Jr. (b. 1925) and Robert Clifford (b. 1927). Although he had no training or experience as an architect, in **1936 he designed and built, with help of several sub-contractors, a large Norman-style home, one of the grandest in Bremerton. This home was registered as an historic landmark in 2000.**

Note - More on this home can be found here - https://www.kitsapdailynews.com/business/tudor-roses-meeting-house-opens-after-long-renovation-period/

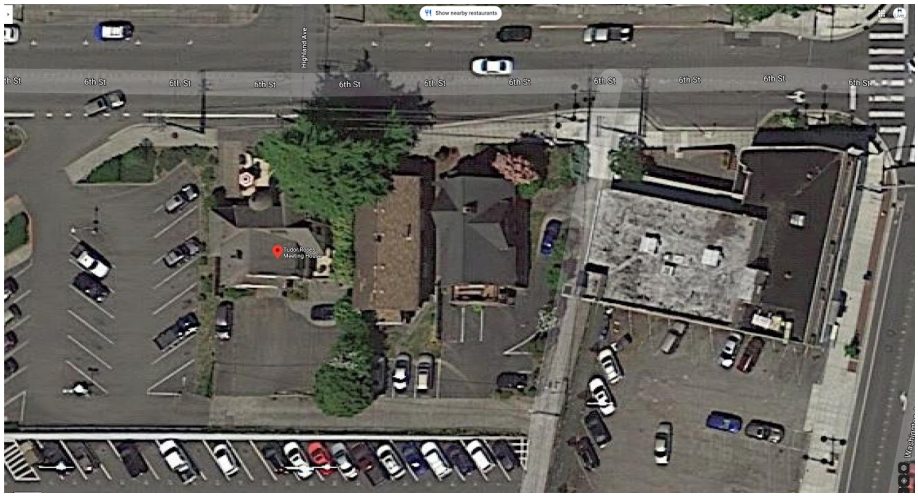
As a child, Bill Sr. spent many of his days next door at the Braman house, home of his best friend and that boy's father, Scoutmaster Dorm Braman.
Source : [HN00Z1][GDrive]



[HW003B][GDrive]



[HW003C][GDrive]



[HW003D][GDrive]

[HW003E][GDrive]

Braman served one term as Bremerton Port Commissioner and was instrumental in the approval of construction of the first ferry terminal in downtown Bremerton designed to handle automobiles. He was active in the Masonic Lodge and the Lions Club. **The latter activity led him to Boy Scout work and he became scoutmaster of Troop 511 in 1937. During his six years of service, this troop became one of the most prestigious in the region. Fifty of the Troop 511 Scouts attained the rank of Eagle and the troop won most scouting competitions for several years. It once took first place in nine of 10 events at a county-wide field meet.**

Dorm Braman, Scoutmaster of Bill Sr.'s troop and later mayor of Seattle, opened Bill Gates Sr.'s to a wider world and was instrumental in his development.
Source: [HN00Z0][GDrive]

[The] log house that Bill Gates Sr. built with his Boy Scout troop in 1939; in front, the bus they drove across the Northwest to national parks.
Source: [HN00YZ][GDrive]

Braman again turned to his drawing board in designing Sundown Lodge, built by boys of his troop near the headwaters of the Tahuya River. This large and handsome facility served first the troop and eventually all the Kitsap District of the Boy Scouts of America for more than 40 years before vandalism dictated its demolition. Troop 511 also traveled widely in an old Fageol bus owned by the troop, ranging as far as Yellowstone and Glacier National Parks in 1939.

In 1943 Braman sought and obtained a commission as Lieutenant in the United States Naval Reserve. He handled lumber procurement for the Navy from an office in Portland and traveled extensively to lumber producers throughout the West. **In 1945, after being promoted to the rank of Commander, he was assigned to the national headquarters of naval lumber procurement in Washington D.C. Braman was instrumental in revising the Navy Manual and in other actions required to carry out President Truman's mandate that lumber procurement for all armed forces be coordinated. He headed the new office responsible for such joint procurement until he resigned to return to the Pacific Northwest in 1946.**

Seattle Years

After a brief stay in Bremerton, he moved to Seattle in 1946, where he purchased a lumber and building materials store in suburban Lake City. Braman Lumber and Hardware became an early example of a full-service home builder store, with sales of lumber, window glass, paint, appliances, housewares, and gifts. A cabinet shop was added in 1950. Dorm was active in the Lake City Kiwanis Club and was one of the founders of Shoreline Savings and Loan Association, which eventually opened branches in many Western Washington communities.

After a broad North End area, including Lake City, was annexed to Seattle in 1954, civic leaders in the area chose Braman to run for Seattle City Council. He ran a non-typical campaign, during which he praised Seattle's clean and business-like government. **Dorm was elected with a greater number of votes than any of the four incumbents who were re-elected at the same election. During most of the ensuing ten years with Seattle City Council he was chairman of the powerful Finance Committee.**

He was a hard-nosed, plain spoken legislator, tight-fisted in budgetary matters. He promoted use of the cumulative reserve fund, into which were deposited savings when City expenditures were less than revenues. This allowed building of some needed facilities without requiring voter approval of bond issues, a procedure that won praise from conservatives but was criticized by some others as a way to avoid seeking public approval of civic projects.

Braman ultimately became the City's representative on the World's Fair Commission responsible for constructing and operating the Century 21 Exposition in 1962. He served as a watchdog in the immediate post-fair period to assure that long-range plans developed before the fair were followed as the fairgrounds were transformed into Seattle Center. His use of the cumulative reserve fund to help in this effort received general support, but use of the same fund to build a new municipal building was controversial, especially since local architects criticized what they called the "Holiday Inn" look of the building.

Braman won two re-election races handily, but during the middle of his third four-year term on city council he was persuaded by backers to run for the office of mayor, since the incumbent had announced he would not seek a third term. He placed first among a large slate of contenders in the primary election of 1964, and defeated Lieutenant Governor John Cherberg in the final by a margin of nearly 12,000 votes. Because of a change in State law, his term was to run five and one-half years, and Braman announced upon election that he intended not to run for a second term. He said this would free him to make decisions based on what he considered best for the city, and not just on what would please the electorate.

There was some bitterness in the local minority community about Braman's election, because he had indicated his opposition to an open housing initiative, which was rejected by the voters at the same time as the mayoral election. Braman stated that his opposition was not based on the principle involved, but on specific provisions of the ordinance that he felt were too destructive of individual property owners' rights. He attempted, with partial success, to gain support of dissenters by appointing minority persons to several important positions, by strengthening the Human Rights Commission, and by establishing a Job Corps in which city departments hired minority youths during summers.

Braman, a life-long Republican, surprised many people, including some supporters, when he appointed several Democrats to key positions on his personal staff. This was followed by a change in attitude about seeking federal funds for local projects and activities. Whereas he had been skeptical about such funding as a councilman, he declared that as mayor he would do his best to get as much as possible of federal taxes paid by Seattleites back to the community. His words were followed by action, with Seattle being the first U.S. city to obtain a federal Model Cities grant. Federal funding for other projects also flowed into the city.

During the summer of 1968, when Seattle began to feel the urban unrest spreading through American cities, fueled at least in part by the Vietnam War, Braman visited African-American neighborhoods several times during periods when acts of violence were occurring, to the dismay of the police chief. One night during the height of the unrest he ordered that demonstrators threatening violence be arrested. He appeared at a local police station in the middle of that night to thank police for their resultant actions, which appeared to head off a potential riot.

Other significant progress was made during his five-year term. He threw City support behind the citizen-led Forward Thrust bond program, organized to gain support for facilities to serve the expected growth in metropolitan area population. The end result was voter approval of six major bond issues in 1968, constituting the largest bond program ever approved at a local level in the U.S.. Braman, however, was deeply disappointed that the rapid transit issue failed to gain the required 60 percent positive vote, although a majority of voters supported it.

Braman also worked to obtain from the federal government title to Fort Lawton and to assure that its site would be used park purposes. With support from the Washington State congressional delegation, particularly Senator Henry "Scoop" Jackson, this was accomplished, and the great majority of the area became Discovery Park, Seattle's largest park in acreage.

Braman had become increasingly convinced that comprehensive transit systems, including rail transit, integrated with land use planning was necessary to avoid future congestion in Seattle and other American cities. He became a national leader in the effort to obtain reliable federal support for transit, working closely with the National League of Cities and the U.S. Conference of Mayors to this end. Ultimately, this work led to his appointment by President Nixon early in 1969 to a newly created federal position, Assistant Secretary of Transportation for Urban Systems and Environment.

Working for Mass Transit in Washington D.C.

Braman had gained a reputation for straight talk, even blunt talk at times, and this and his many accomplishments during his short period in office resulted in widespread praise from the press and from civic and political leaders of both parties when he left Seattle for Washington, D.C. Local papers referred to him as the best mayor Seattle had ever had.

Braman went to Washington for two reasons. The foremost was to obtain a more stable source of federal funding for transit projects in general, and specifically for Seattle's proposed rapid transit system. Failure at the polls of the 1968 transit issue stemmed at least partly from lack of certainty of federal funding for the project. A secondary objective was to assure that environmental consequences of federally-supported transportation projects be considered more carefully in the decision-making process.

Braman had always been a pragmatic environmentalist. His experience with the Boy Scouts, followed by a lifetime love of skiing and hiking in his beloved Pacific Northwest mountains, gave him an appreciation of the natural environment. However, his experience in business and government lent a tempering influence on environmental controls so that they not be harsh enough to completely stop reasonable development. These factors influenced his performance in D.C.

Braman carried out his assignment there with the type of determination (some called it bull-headedness) that characterized his work in city government. Twice when he felt that important principles were being compromised for political reasons he told the Secretary of Transportation that he was going to resign and return to Seattle. Since he had the support of many local governmental and environmental groups, his resignation would have been political dynamite, and he ultimately prevailed both times.

Freeway projects in New Orleans and San Antonio that were potentially harmful to the urban environment were stopped, and ones in Memphis and New Hampshire substantially modified. Even more important in the long term, he succeeded in obtaining passage of legislation securing continuing federal funding for urban transit projects, even though the highway lobby and initially President Nixon himself opposed such legislation.

With 80 percent federal funding for Seattle's rapid transit assured, the matter was submitted to a new public vote. The timing was unfortunate, since the big "Boeing bust" of late 1969 was in full sway, and voters once again failed to approve the system, even though local taxpayers would cover only 20 percent of the total cost of the project. Funds earmarked for Seattle went to build Atlanta's rail system instead. Braman was discouraged by the result, and shortly later resigned his federal position and returned to Seattle in 1970. He received unusual praise from the *Washington Post* and other papers around the

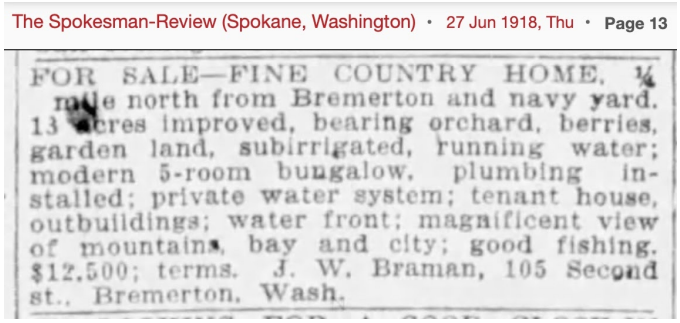
country for the great accomplishments during his 18 months in the position.

In Seattle, Braman resumed service on the **Board of Directors of Shoreline Savings**, served as President of the Chief Seattle Council of the Boy Scouts, and for a short time was member of a national transportation advisory board. However, he never again was active in civic or political affairs. He remained physically vigorous, skiing and hiking until he died quietly in his sleep at home in 1980, at age 79.

1918 (June 27) - Family selling fine country home / farm at 105 Second St, Bremerton Washington

June 1918 - Braman selling land in Bremerton - 12 acres - 105 second st.

Full page - [HN00YU][GDrive]


The Spokesman-Review (Spokane, Washington) • 27 Jun 1918, Thu • Page 13

FOR SALE—FINE COUNTRY HOME, ¼ mile north from Bremerton and navy yard. 13 acres improved, bearing orchard, berries, garden land, subirrigated, running water; modern 5-room bungalow, plumbing installed; private water system; tenant house, outbuildings; water front; magnificent view of mountains, bay and city; good fishing. $12,500; terms. J. W. Braman, 105 Second st., Bremerton, Wash.

[HN00YV][GDrive]

1919 - marriage -

https://www.newspapers.com/image/174743763/?terms=Braman%2Blumber

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Bremerton Lumber Co, in 1900s, operated in area of Highland Avenue in Bremerton, WA

http://archive.kitsapsun.com/news/local/bremerton-building-razed-for-park-expansion-ep-421483709-358373751.html

2008-11-13-kitsap-sun-bremerton-building-razed-for-park-expansion

Bremerton Building Razed for Park Expansion

Walkers on the path at Evergreen-Rotary park in Bremerton go past the building being torn down on Thursday. (LARRY STEAGALL | KITSAP SUN)

Walkers on the path at Evergreen-Rotary park in Bremerton go past the building being torn down on Thursday. (LARRY STEAGALL | KITSAP SUN)

Nov. 13, 2008

0 Comments

SHARE

By Christopher Dunagan

BREMERTON

A building on Highland Avenue, built in 1942 and recently used by the local Plumbers and Steamfitters Union, has been torn down to make way for a further expansion of Evergreen-Rotary Park.

Last year, Bremerton purchased the building and its .16 acres near the abandoned Chevron fuel facility, which is scheduled to undergo a final cleanup next summer, said Tom Knuckey, managing engineer for Bremerton Public Works.

When the project is completed, Sheldon Boulevard will continue onto Highland, and the existing extension of Highland will be incorporated into the park.

During the early part of the 1900s, the area was used as a lumber mill operated by the Bremerton Lumber Co., according to research by Western Shore Heritage Service, a consultant for the city. The old concrete building was built in 1942 as a machine shop. In the 1960s, fire gutted the building, which was repaired and later expanded. It was recently used for offices and welding classes.

When the demolition is complete, the site will become a gravel lot for overflow parking at Evergreen-Rotary Park, Knuckey said. Next summer, the site will be used to store contractor equipment during the cleanup of the Chevron property.

The Chevron site was scheduled for cleanup this past summer, but bids came in higher than anticipated, Knuckey said. The project will be rebid early next year.

Under current plans, soils will be removed on a portion of the Chevron site. The rest will be treated with special chemicals to oxidize the petroleum compounds so the resulting organic chemicals can be eaten by bacteria. The process will use heavy equipment to stir the soils while injecting the oxidation chemicals down to about 15 feet deep, Knuckey said.

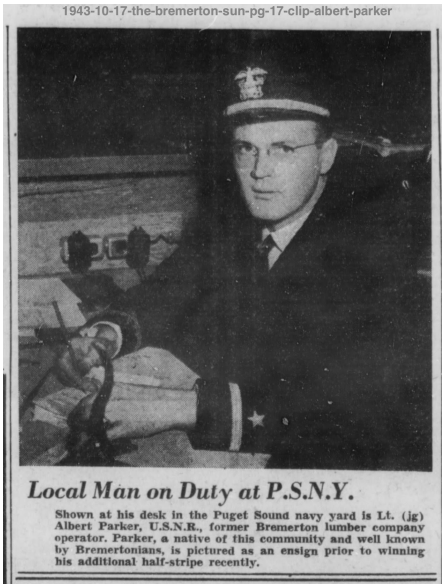
On drawings of the future park, the Chevron property is designated as the terminus of the proposed Bremerton Boardwalk, an overwater structure that has drawn fire from the U.S. Fish and Wildlife Service, Suquamish Tribe and some environmental groups. The U.S. Army Corps of Engineers is reviewing an application for the boardwalk.

The demolition of the plumbers building, cleanup of the Chevron property and expansion of the park have no apparent opposition.

For a discussion about water-related issues, check out the blog Watching Our Water Ways at kitsapsun.com.

1943 ...

Full newspaper page : [HN017L][GDrive]


1943-10-17-the-bremerton-sun-pg-17-clip-albert-parker

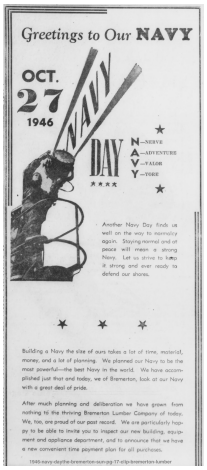
Local Man on Duty at P.S.N.Y.

Shown at his desk in the Puget Sound navy yard is Lt. (jg) Albert Parker, U.S.N.R., former Bremerton lumber company operator. Parker, a native of this community and well known by Bremertonians, is pictured as an ensign prior to winning his additional half-stripe recently.

[HN017L][GDrive]

1946 .

Full newspaper page : [HN017J][GDrive]



[HN017K][GDrive]

1942 - Braman Mill and Manufacturing Active in Bremerton

1942 Braman Mill address

https://www.fold3.com/image/649590995

611 Pacific Ave. , Bremerton

1957 - Newspaper - Bremerton Lumber

Bremerton LUmber - created in 1938

Full newspaper page : [HN017H][GDrive]

[HN017I][GDrive]

1957 - More Seattle tax revenue needed !

https://www.newspapers.com/image/564547099/?terms=braman%2Bseattle

1961 - Seattle 28 million dollar computer error

https://www.newspapers.com/image/568540513/?terms=braman%2Bseattle

1961 - space needle construction

https://www.newspapers.com/image/568489873/?terms=braman%2Bseattle

62 - Seattle Century 21 World's Fair

https://www.newspapers.com/image/570017459/?terms=braman%2Bseattle

64 - Baseball in Seattle?

https://www.newspapers.com/image/576914736/?terms=braman%2Bgates

1968 - Helping Seattle Pilots ?

https://www.seattlepi.com/sports/baseball/article/Where-Are-They-Now-Max-Soriano-1245289.php

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Braman - 1969 Senate Hearings

Source - [HG005V][GDrive]

NOMINATION OF HON. JAMES D. BRAMAN, MAYOR OF SEATTLE, WASH, TO BE AN ASSISTANT SECRETARY OF TRANSPORTATION

The CHAIRMAN. The next nomination, the Chair takes great pleasure in announcing this, is that of Mr. James D. Braman .# Washington to be Assistant Secretary of Transportation.

I want to tell the committee he isn't walking very well. He thinks he is a skier, and he forgot that he isn't as young as he used to be.

Senator Cotton. He had better select some safer method of transportation.

The CHAIRMAN. He had a little accident. That is why he couldn't be here on Monday. But, Mayor we are glad to have you here, and we will put your biography in the record in full.

(Biography of Mr. Braman follows:)

JAMES D'ORMA BRAMAN

Born December 23, 1901, Seattle, Wash.

The President of the United States has nominated Mr. J. D. Braman to be an Assistant Secretary of the Department of Transportation. Mr. Braman will serve as Assistant Secretary for Urban Systems and Environment. In this capacity, he will be the Secretary's principal staff adviser on urban transportation affairs and on the relationships of transportation programs to the social and physical environment. His sphere of staff responsibility will include review and planning of transportation programs in the urban areas, coordination of the Department's urban programs with those of other Federal, state and local agencies, and development of programs to assure that environmental factors are given their full weight in all transportation decision-making.

Mr. Braman has been Mayor of Seattle, Washington, since 1964. For the preceding ten years he had been a member of the Seattle City Council and served as Chairman of its Budget and Finance Committee from 1956 to 1964.

During this period he was the City's representative on Washington State World's Fair Commission and Century 21, Inc., in developing and staging the 1962 Seattle World's Fair, the "Century 21 Exposition." He handled the redevelopment of the Fair site into the present spectacular "Seattle Center."

Mr. Braman has extensive experience in the subject areas of the position for which he has been nominated. He has been Chairman and Board member of the Transportation Committee Municipality of Metropolitan Seattle (METRO), which now is completing a $150 million water pollution control program and which is responsible for transportation system development. He is an Executive Board member of the Puget Sound Governmental Conference, a four-country land and transportation planning agency, and of the Puget Sound Regional Air Pollution Control Agency. He is Chairman of the Transportation Committee of the National League of Cities, also representing in this capacity the United States Conference of Mayors, of which he is also an Advisory Council member.

He has served on the Urban Transportation Advisory Council of the Department of Transportation and on the President-Elect's Task Force on Transportation.

Before coming to public service in Seattle, Mr. Braman had a distinguished business career as President and Chief Executive Officer of the Braman Lumber & Hardware Co. of Seattle from 1946 to 1956 and President and Manager of the Braman Mill & Manufacturing Co., Inc., of Bremerton, Washington, from 1929 to 1943. During World War II, Mr. Braman served as a commissioned officer in the Navy Supply Corps and was responsible for procurement of all West Coast lumber needed by the Navy and later was in charge of all Navy lumber programs.

Mr. Braman has been President of the Lake City Chamber of Commerce of Seattle, President of the Associated Lumber Dealers of Seattle and of the Seattle Retail Hardware Association, and **from 1940 to 1943, President of the Bremerton Port Commission**. He has been active in Boy Scouting since 1932 and holds the Silver Beaver Award. He has been affiliated with Masons, Scottish Rite Bodies, Shrine, American Legion, Kiwanis, Urban League, Seattle Chamber of Commerce, Municipal League, Central Association of Seattle, and the Y.M.C.A.

Mr. Braman is an active outdoors sportsman. He is married to the former Margaret W. Young and has two sons and three grandchildren.

The CHAIRMAN. He has had some extensive experience in all forms of urban problems, urban systems, and urban environment and transit problems, and I think the Department of Transportation is very fortunate in being able to have him come down there and work on these particular problems which are so important to the country. So, I welcome you here as a fellow citizen of mine at home.

STATEMENT BY Hon. HENRY M. JACKSON, U.S. SENATOR FROM THE STATE OF WASHINGTON

Mr. Chairman, I want to thank you and the members of the Senate Commerce Committee for availing to me this opportunity to speak in behalf of the distinguished nominee for the position of Assistant Secretary of Transportation, Mayor J. Dorm Braman of Seattle.

Dorm Braman has been an excellent mayor for the past five years. Prior to that time, he served for ten years with great distinction as a member of the Seattle City Council.

When Secretary Wolpe announced a few weeks ago the selection of Mayor Braman as Assistant Secretary of Transportation for Urban Systems and Environment, I said then that it was an excellent marriage of the man and the job.

I commend Secretary Wolpe for creating this position within his department to deal with the total urban problem as it relates to transportation and in addition the question of the quality of the environment.

I congratulate the Secretary on his choice of Mayor Braman, who has taken such a keen and contributing interest in our nation's transportation problems through his role as Chairman of the Transportation Committee of the National League of Cities. And, as he evidenced on many occasions, he knows and cares about the urgency of improving and preserving the quality of the environment.

Early in the 90th Congress, it was my role to serve as floor manager of the bill creating the Department of Transportation. Since then I have watched the development of this department with great interest. In drafting the legislation, we specifically provided for certain safeguards covered in Section 4–F and 2–B–2 guaranteeing that the new department would establish appropriate environmental criteria. As Chairman of the Senate Interior and Insular Affairs Committee, I have been keenly interested in this entire field. Only recently I introduced legislation calling for a Council of Environmental Advisors in the Executive Office of the President which could advise the President on this great and complex problem area that crosses the bounds of many departments of government.

I want to say that I am heartened that the questions of environment involving the Department of Transportation will be in the hands of such a sensitive and knowledgeable person as Mayor Braman.

It reassures everybody that such a vigorous proponent of balanced transportation systems is placed in a position where he can contribute to national policy.

And it is most encouraging to see a man with such a keen appreciation of conservation and environmental values appointed to this key position.

I believe a recent comment of my colleague, the Chairman of this Committee, is most appropriate. The Chairman said: "Mayor Braman understands that the need for new technology must be balanced with the need for a safe and human environment."

Mr. Chairman, as you well know, the elevation of Mayor Braman to this national office is a worthwhile development for our nation. However, we will miss the excellent counsel and assistance he provided to us as Mayor of Seattle. Our ability to work hand in hand with the Mayor on matters of deep concern to Seattle was in the finest spirit of bipartisan cooperation.

He has been a progressive mayor. Under his leadership, Seattle obtained the first model city program in the United States to be approved and funded. He is one of the nation's pioneers in the design team concept for community planning which takes into account human values as well as traditional technical considerations. As a councilman he was a chief spokesman of the city government in bringing about the highly successful Seattle World's Fair which has resulted in a magnificent on-going community center.

I am happy, Mr. Chairman, to urge Senate confirmation of Mayor Braman so that he can began his important work in the executive branch of the government.

We of the State of Washington are proud of his past accomplishments. We look forward to sharing his talents with the nation.

The CHAIRMAN. This office to which you have been named, and I have discussed this with the Secretary, too, Secretary Volpe, is considered a new one in the Department of Transportation. That is not particularly unusual because the Department of Transportation is new itself. It is a new Cabinet office. If you have come to some conclusions, it would be helpful to the committee if you would briefly provide an outline of what you conceive it to be and the organizational structure of your office as Assistant Secretary.

Mr. BRAMAN. Thank you, Senator Magnuson and gentlemen of the committee.

First, let me say I appreciate your kind remarks and your explanation of the rather halting way in which I approached the table. I do enjoy skiing and for the first time in 25 years I had a very untimely accident just before having to come down here.

I have prepared a very short statement.

The CHAIRMAN. We will be glad to hear that.

Mr. BRAMAN. Then, I will be very happy to respond to your questions.

The Office of Assistant Secretary for Urban Systems and Environment is a new one in the Department of Transportation, which has been created by Secretary Volpe because of his deep concern about the problems of metropolitan America. He is resolved to make certain that urban policies which emanate from his department will be re viewed and reconciled by this new office.

For the past 15 years, I have been intimately involved in municipal government. The first 10 years were spent as a member of the Seattle City Council, where, as chairman of the finance committee, I was required to cope with the fiscal dilemma, one which practically all cities

ace—that of increased demands for services with limited resources available. In 1964 I became mayor of Seattle. Since that time, our community has shared with others the agonies of swiftly moving social change. We have been fortunate by contrast with some of our sister cities, but, like in Alice in Wonderland, we have had to run awfully hard to stay in the same place. We in Seattle are proud of the community support we have been able to develop, with concerned citizens representing a broad spectrum of our city. The fact that our model city effort was the first in the United States to be approved and funded is national recognition of the success of our efforts to get meaningful local citizen participation.

I want to acknowledge the wise counseling of our two illustrious Senators, your chairman, Warren G. Magnuson and the chairman of the Senate Interior Committee, Henry M. Jackson. These gentlemen have always been available for counseling, and I am afraid we in Seattle have taken unfair advantage of their accessibility. They have been a tower of strength to me in discharging my responsibilities as mayor. I sincerely hope that I will be able from time to time to continue to benefit from their advice. I welcome, of course, the advice and counseling of all members of this committee.

In addition to my other responsibilities, I am serving on the advisory board of the U.S. Conference of Mayors, on the executive board of the National League of Cities, and for the last 3 years have also served as chairman of the transportation committee of that organization. In the latter role, I have had an opportunity to become informed on urban transportation problems in other sections of our country.

This has given me an opportunity to develop a national perspective.

In addition to speaking before many of the nationally recognized transportation organizations, I have had the privilege of testifying on several occasions before committees of the U.S. §. as well as committees of the House of Representatives.

In my city administration, I have assigned No. 1 priority to the resolution of our transportation problems. The crisis of urban America will not be solved by a balanced transportation system, but until all citizens have full access to their community, we cannot hope to achieve a permanent solution to our social problems.

I have sensed a growing awareness by all elements of our society that the old ground rules were no longer valid. New concerns were involved when we started constructing transportation facilities in our more densely populated urban areas. Citizens have, with increasing vigor, demanded that the views of all those affected be heard.

The problem has two elements: (1) the need to develop a transportation system for urban areas wherein the components will complement each other rather than be competitive, and (2) that appropriate attention be give to the human values which are affected—a concern about improving the quality of our

than be competitive, and (2) that appropriate attention be give to the human values which are affected—a concern about improving the quality of our environment.

The mission of the Assistant Secretary for Urban Systems and Environment will be to coordinate the policies, programs and resources of the Department of Transportation with public and private efforts to Solve urban and environmental problems; to develop and test new procedures, techniques and methods by which transportation development can be made more relevant to urban and environmental needs and goals; and generally to make the offices and agencies within the Department more responsive to the needs of cities and more sensitive to the protection and enhancement of the environment.

Secretary Volpe has designated the office for which I have been nominated to be the focal point within the Department for the resolution of questions as between the various modes, such as highway, rail, buses, and air, where they are part of the urban complex. In addition, the office will have the challenging responsibility of being concerned about the quality of the environment wherever transportation has any impact.

I approach #. assignment with the knowledge that the challenges are great and the solutions are debatable. I do feel that my previous experience and my enthusiasm for this assignment will enable me to make a contribution.

That concludes my prepared remarks. I will attempt to answer any questions that you may care to ask.

The CHAIRMAN. I think you generally outlined in your last two paragraphs what you conceive in a broad way what this new office will do.

I know that you can't be very definitive about many of these things because you have to start out down there new as far as the Depart ment is concerned, and the Department itself is just beginning to feel its way. It was just created, as you know, a short time ago. I think when you talk about the environmental needs and goals, that all of this has got to fit into a pattern such as we have tried to do in Seattle, and we were honored by the model cities the first month, involving so many other things than just one phase, say of transportation.

I think you have sensed the feeling of this committee in that respect, because we are going to have a subcommittee of this committee, which will be new for us, although we have been around the periphery of all these things, on that very thing, environmental approaches to the problems of the urban population. -

You mentioned the old rules may not apply. Surely, your concept of this is in tune with the times, in my opinion.

Senator Cotton, do you have any questions?

Senator Cotton. No. I have listened to the colloquy that you have had with Mr. Braman, and I would say that if you want him and the President wants him that the rest of us would be wasting our breath to try to stop it, so I am for it.

I will be very happy to vote for your confirmation. I have no questions.

The CHAIRMAN. Senator Spong.

Senator SPONG. Mr. Chairman, it has been my privilege to hear Mayor Braman when he has testified before the Roads Subcommittee of the Public Works Committee during the 90th Congress. I would like to add to what you have already said. I believe the Department is most fortunate to have a man of his experience.

I would like to say in observing the mayor's statement the statement that "there is a need to develop a transportation system for urban areas

wherein the components will complement each other rather than be

competitive" that I wish him well.

I think one of the very apparent problems everywhere—and it is probably no more apparent than right here in the Washington metropolitan area—is the unfortunate uncompetitiveness between those who build highways and want highways and freeways and those who recognize the need for a mass transit system, when in effect here, as

I am sure in many other places, both are going to be necessary.

I would also like to say I am delighted that we are going to pay some attention to the environmental factors in transportation.

. I would like to ask Mayor Braman if you have any comment on the regulations recently adopted with regard to hearings in the condemnation of property under eminent domain proceedings that the Department of Transportation recently enacted.

Mr. BRAMAN. This has been referred to as the two-hearing procedure. The fact of the matter is in many State jurisdictions this has been in effect to a degree, but the timing hasn't been quite as contemplated by the Department regulation. I personally support a regulation of this type. Certainly, many of us have some questions relative to the appeal procedure that was written into it, and I believe to some degree that has already been corrected.

As far as the procedure of having the hearings, a corridor hearing early, before anything has become fixed in the minds of the designers,

I think it is the approach to reaching the community problem that seems to be developing every time a major facility is planned in an urban area. Then, of course, later when we get to What is known as the access hearing, which comes more to the actual design, the configuration of the interchanges and things of that nature, then, again, the community should be heard. Contrary to some statements that have been made that this will delay the process of construction to a degree that will work to the public harm rather than good, I don't subscribe to this. I believe that having gotten these things out of the way at the proper time will actually accelerate the ultimate construction rather than delay it.

In our own city, for example, we have a major construction item that was proposed to have gotton underway some year and a half to 2 years ago, and it is still nowhere near starting because of the almost overwhelming public protest on the fact that it had been designed in such a manner it destroyed a large amount of very valuable property but more importantly it impacted very heavily on our minority or less privileged community. The result is we are going to end up in my opinion with a considerable longer delay than would have resulted had we gotten to where we are now through the model cities procedure where I think we are going to come to an amicable conclusion of this.

I believe it is a good regulation with some modification of the appeal.

enator Spong. Thank you very much. I certainly look forward to hearing fom you some more.

The CHAIRMAN. The Senator from Wyoming.

Senator HANSEN. Thank you, Mr. Chairman.

I am pleased to be here today to hear from you, Mayor Braman. I wanted to say that as a member of the Special Committee on Aging and some other committee work I have done I do have some sensitivity for minority groups, and I think it has been demonstrated repeatedly that the full economic impact and the full economic loss cannot be assessed as easily as one might suspect. Oftentimes the location of a road can shut off or can cut off from a merchant his clientele. It may be a little neighborhood store and it may be a particular ethnic group has patronized his store, and if he is separated from those to whom he has looked for the major share of his income, he may not have had his building touched at all and yet he has suffered a real and very substantial economic loss.

I think, too, that older people oftentimes, as we uproot them and move them someplace else, we do great violence to them. We move them from their friends, from their acquaintances, and these are difficult things to put a price tag on. So, I would hope as we get on with the job of trying to improve our transportation system, to modernize it, and to make it so as to be more equal to the task that it faces that we might also have in mind that because a blighted area is run down, it may seem to be a logical place to root out and use for a transportation system, in terms of human values that may not be the best place. It may be that you could put it someplace else and that the people who thus would be uprooted would be far more able to adiust themselves to the impact than some of those that we would consider to be in very low income status and would agree on the basis of other criteria to be a logical place for highway extensions.

These are just ideas that I wanted to toss out that I hope you might give consideration to. I have every reason to believe that you will.

Mr. BRAMAN. Senator, I concur fully in the remarks that you have made. I would like to point out that the basis of the kind of design that I hope will become common throughout the country is the design team concept which includes not only the engineering designer but also the urban design concept and the economists, sociologists, the architects, so in fact we get to the total cost of a project which includes the non quantity values that you have mentioned.

We have been inclined to go only on economics, what it will cost to lay a strip of concerte or rail or what have you from a point to a point to serve a purpose, but we have failed to recognize the nonquantity costs which are very important, which now as we get into this more deeply, into the consideration of human values, must be added to the measurable costs.

I agree fully with what you have said, sir.

Senator HANSEN. I have no further questions, Mr. Chairman.

The CHAIRMAN. That brings me to a question that I am going to ask the mayor. I am sure you feel that whatever your jurisdiction down there will be in these

urban problems, that it extends beyond just a city boundary, the city limits, that it is a conglomeration of things all around it, it has all got to fit into an area.

I was thinking of my friend from Virginia who down in the Norfolk area, the city boundaries don't mean anything.

Senator SPONG. We are all connected by tunnels. There are so many I think we are moles at times.

The CHAIRMAN. They have a transportation problem which includes water, too. When you talk about saying you will be involved in something in his area, you can't just use city boundaries for the environment, you have got to use the whole thing, and the same thing in a sparsely settled State like Wyoming.

I am sure even though you are mayor of a city, your responsibilities go way beyond the city limits.

Mr. BRAMAN. That is correct.

The CHAIRMAN. Not your political responsibilities, but your others.

Mr. BRAMAN. No, the responsibility to the public you serve is broader than the city limits. I would say that the whole basis of the plans which we hope to develop for urban transportation are based on regions rather than on political jurisdictions. The plan must be a locally developed plan to serve a region after which we must find ways to implement it and make it come into being.

The CHAIRMAN. The quicker the cities start to think in those terms in planning, which I think we have been in the forefront out there, the more we are going to reach some solutions.

The Senator from Pennsylvania is so familiar with this. The problem of Philadelphia is not the city limits of Philadelphia.

Senator Scott. No, sir; it is not. Philadelphia County and Philadelphia City are coterminus, but our traffic, transportation, and population mode is regional. Yet, the counties are often very jealous of any °al proposals. However, we surely are coming to that sort of

1ng.

The CHAIRMAN. Now, the problem, of course, in the heart of the urban areas is to try to coordinate the various modes of transportation,

whether they be underground or surface or rapid transit or elevators, such as our monorail even in our own hometown. But it is a big job, and I am so pleased that the Secretary has seen fit to make this a special project and a special office which you are going to take hold of.

Senator Scott, do you have any other questions?

Senator Scott. I don't think so, Mr. Chairman.

The CHAIRMAN. Senator Moss.

Senator Moss. Thank you, Mr. Chairman. I don't think I have any questions of the mayor. I wish him well. I know something of his distinguished career in Seattle, and I am most happy that you are assuming this position which, as this colloquy has developed here, is of growing importance and complexity in the areas around our great cities. It isn't the cities only but it is all of the metropolitan area or even beyond that which may include several political jurisdictions and as such offers knotty problems in that regard that must be resolved.

So, I am pleased indeed with your nomination, and I know that you will do a fine job.

Mr. BRAMAN. Thank you

Mr. Chairman, if I might comment along the lines of the last two or three remarks. Actually, the problem is a regional one. Certainly, the coordination of modes of transportation is important in developing a regional plan, and this plan must be developed locally because of the different conditions that exist at different localities. For example, cities like New York, San Francisco, Pittsburgh, Seattle, and many others have a geographical and topographical situation because of waterways, hills, and so forth, that give them an entirely different problem than the Plains cities such as Phoenix and Denyer, et cetera.

So we must have a way to get away from the competition between highways and other modes and find a way in which all of them can serve their best and highest purpose in a total plan. It may be some areas that for one or two decades it will largely be based on §°

In other areas such as ours there has to be a mix on perhaps a one-third/two-thirds basis of some type of mass transportation coupled with highways. The point I want to make very clear is my purpose in my past activities as well as approaching this new assignment is not an attack on highways per se. I think that all of these modes have a proper place.

I think we have to be reasonable in our approaches. But I think we have to have a better approach to make sure that each serves its purpose in relation to the other so that ultimately we come up with the maximum with the least damage, though there will always be some damage when you construct major facilities of this type.

Senator CottoN. I am very much interested in this discussion. I hope that in your laudable desire to coordinate the various forms of transportation you are going to carefully protect and guard our Interstate Highway System until it is completed. I was on the Public Works Committee years ago when that project was passed through the Congress. We fought for it. We lost in our committee the first year by one vote. We passed it through the Senate the second year by one vote. I think if the Senate voted once more on it, it would be almost unanimous.

Yet, from time to time, with the best motives in the world, people want to keep dipping into the trust fund for not extraneous purposes

but some particular purpose that delays the completion of the Interstate System. To me an uncompleted Interstate System is just like a bridge with one span out of it. It is not quite as bad as that, but I think it is important that we complete that system as laid out before we start adding to it and before we start diverting any funds anywhere else.

diverting any funds anywhere else.

I wonder if you feel that way?

Mr. BRAMAN. I certainly do. I have always taken the position in all of my activities in the field of transportation that the Interstate Highway System, I think, is one of the great monuments of the past decade in public works. I certainly agree that the Interstate System which has made it possible to connect our urban areas across the Plains and the mountains with fine highways has been a great achievement and it must be completed. There must be provision made to continue to update—update and maintain it after it is completed.

I think as we approach the next phase, postinterstate, as I call it, we must determine how these funds still devoted for the purpose of providing right-of-way for rubber-tired vehicles can be best used in

Solving the next phase which is the internal problem in the urban areas, and at no point have we advocated either abolishing this fund or diverting funds out of it for other purposes, because we foresee more needs in this field than could ever be met even out of all the funds that are available. But there must be a way provided to give the same type of assured financing to the other modes so that when you plan a total system you don't have an assured method of constructing a portion of it and not the other, which means the system will never be constructed.

Senator CoTTON. I realize that, and I realize that is the need of the hour now as it was the need of the hour 10 or 12 years ago when we started this system. The need of the hour now is just what you are talking about, of course: the urban problem. I am sure that you are the ideal person to undertake this. -

Everybody now has some route that they want to add to the Interstate System. In the name af beautification or something else, everyone wants to add to the system before it is completed and laid out.

Everybody has pet projects on safety or beautification or something ...that is highly laudible but they want to divert some of the trust

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I know that your great challenge will be urban transportation and opening up the cities, but I am reassured when you tell us that you are not going to let that interfere with the completion of this Interstate System as it was laid out. Then comes the problem of who gets what priorities, and you are better versed in that than we are. -

Mr. BRAMAN. Senator, I can assure you that this is directly in line with my thinking, and I believe as far as I am privileged to state for the other cities, who are affiliated in the league, that this is thought as well. We must complete the Interstate System. You will note I have always used the term “postinterstate.” In other words, we must complete the Interstate System, and I agree with you we should be very cautious about indiscriminate additions to the system. We have to complete the system, we have to provide for its maintenance and some degree of improvement, which means some, where needed, minor extensions, but I think we need to direct our attention postinterstate to the other commanding problems of the metropolitan communities.

Senator CottoN. Of course, when I come down to see you in a month or two representing my State and asking you to be in favor of one new little highway on this Interstate System, you are going to know exactly what to say to me.

Mr. BRAMAN. I left a little loophole there, if you noted, with some moderate increases perhaps

Senator Scott. Mayor Braman, are you familiar with the history of our suburban transit in the Philadelphia area where passenger fares have actually been substantially reduced, in a typical instance from 60 to 35 cents, with about 35 cents round trip on our Penn Central and Reading Railways, and that, as you know, was done by assistance from the cities to the transit company, perhaps from the State, and perhaps to a degree from the Federal Government, but fundamentally it was a city-assisted program? I assume you are aware that as a result of that many people who formerly drove their auto mobiles into town —this includes myself—will now leave the automobile at a parking spot alongside a suburban railway station and ride in in comfort. This isn't the Long Island Railway, so we ride in comparative comfort.

You are familiar with the success of that operation, are you not?

Mr. BRAMAN. I am to a limited degree, Senator. I am not intimately informed on it. I do know of it, and I might say that as part of the Transportation Committee of the National League of Cities I have had the pleasure of having Mr. Edward Tennyson from your city as one of my members. He has been very helpful.

Senator Scott. I am glad that you are in consultation with him.

This was brought about by former Mayor Dilworth, of Philadelphia, who is entitled to the credit for having thought of this imaginative thing.

Are you familiar with the opportunities offered to General Electric and Grumman to bid on a prototype of a cushioned-track vehicle primarily, I understand, for transportation in the 300- to 500-mile range to supplement the short-run air carriers?

Mr. BRAMAN. Senator, I am only aware of these new proposed programs for innovative forms of transportation in a broad sense. Actually, within the Department under another Assistant Secretarv will be the Department of Research and Development which would have cognizance of that type of thing. -

Actually, the design of a system to use would fall in my area of Concern.

The CHAIRMAN. But supposing they think this is a good design or something new, I envision that they have got to come and clear with your place “Does it fit in 7”

Mr. BRAMAN. This is what I am referring to, the design of a system using any mode would be under my concern. The development of innovative new procedures would be theirs.

Senator Scott. This cushioned-track vehicle, I believe the present planning is for a test area, and there is competition for it from Texas and Colorado and New Jersey for a 48- or 60-square-mile area to test out these cushion-track trains.

The only operating train I know of on a test track of about 20 miles is the Pitin from Paris to Orleans.

The CHAIRMAN. We have the monorail.

Senator Scott. I know you have the monorail. This is an air cushioned system.

Mr. BRAMAN. Is it an air-cushioned system, Senator?

Senator SCOTT. It is an air-cushioned system and is said to be very quiet and extremely fast. It can maintain speeds of 300 miles an hour, and its potential is 500.

Now, I have bad news for the Senator from New Hampshire. The tell me with the institution of the cushioned-track vehicle, if adopted, the suburbanite will have his home in New Hampshire and work in New York and that this will be an hour's ride. So, I just want the Senator from New Hampshire to get ready to become

Mr. BRAMAN. I think the air-cushioned vehicle, particularly a track vehicle, is probably the one that has the greatest potential of being attractive at this time that they tell me.

Senator Scott. The engineers tell me of all the various proposals, the tunnel, the air-push type of tunnel, the monorail, the overhead, and all the rest of them, that the air-cushioned, single-track vehicle is probably the most feasible, and I do hope you will encourage development on that.

Mr. BRAMAN. We are going to have an entire office devoted to that, and I am sure all of us are going to be much concerned about it in the Department. I think there is one thing we have to remember that we have some demanding problems existing at the moment in our cities. For instance, rail lines, such as you have mentioned, can be converted to serve that way. Some have no such ability. We have none in Seattle that can serve that way. We are getting to the point as they develop the right kind of plan and the local support and, hopefully, additional F. support, we will have to construct something. I don't think we can ever wait for the quantum system. In other words, there will come a time when we will use the best thing available and we will go ahead and contstruct knowing that just around the corner will probably be something better.

The only thing we can do is to try to design the system we do con struct to make it adaptable to the broadest scale of new development.

For instance, tunnels should be so designed to suit air-cushioned tracks and what have you. I think you have to get to the point where you have to make up your mind we have to go ahead and build something, no matter what the future would hold.

The CHAIRMAN. I would say the No. 1 priority also in every big urban center today in the United States is easy access to their airport.

Mr. BRAMAN. Yes; right.

Senator Scott. Cleveland is the great example of that.

The CHAIRMAN. This is what they want most of all right now, if they don't have it. This has got to fit into the Interstate System, but this is almost a No. 1 priority with people.

Mr. BRAMAN. It ties in directly with the concern about airports and airline operation.

The8. This committee is going to have to labor with that problem very soon, what to do about the airport situation, and that involves access, ingress, and egress to the airports.

Look at your problem of air °: which is going up like this. Are you going to run big trucks out to the passenger airport terminals, and things like that. It all fits into what your job is going to be.

Mr. BRAMAN. That is right. Actually, we must get to the point— this thing extends itself step by step. We get to the construction of airports and terminals. In our city, Senator, there now is, as you know, under construction a 5,000-car parking garage, an excavation some what reminiscent of the Grand Canyon, and at the moment because of lack of funds or means by which a coordinated plan could have been developed, this new installation contains no provision for a rail terminal. It should have provisions not only for the rail terminal, but the automated handling of baggage and freight, but it doesn't.

We have got to get to the point where these things are not built without consideration of the other facilities.

The CHAIRMAN. You have got a big challenge down there.

Senator Scott. Mr. Chairman, you have got a lot of witnesses, and I don't want to delay, but I would also like to suggest to you a fascinating experiment that was tried out at Philadelphia airport. I saw the television demonstration of it. They take one of these very large helicopters, and it is equipped to reach down and grab a busload of passengers downtown. Then the helicopter and bus all together go popping across the atmosphere, and in a few minutes they land right at the airport, drop the bus, and the bus tottles off to the passenger depot, and the helicopter goes back and grabs itself another bus. It is very fascinating.

Mr. BRAMAN. Senator Magnuson kind of shuddered at that thought, but actually there is nothing so fantastic that it doesn't contain some possibility if we go far enough out into the future. So this could have

Some merit if we develop this thing.

Senator Scott. I hope it doesn't develop bad habits and start grabbing automobiles.

Mr. BRAMAN. That is right.

The CHAIRMAN. If there are no further questions, we would like to

thank you very much.

Mr. BRAMAN. I would like to make one closing remark. As previously stated, this is a new office. Secretary Wolpe has chosen to take some duties out of one

of the established offices and put them in other offices in order to open up a place for this operation. We have nothing to start to work with. We are going to have to develop from scratch.

We can't promise results too early because we have a whole structural organization to develop.

I would hope as time goes on and as I and others in the Department come to the Senate and to the House for support, that we will have your understanding as we try to find answers to these problems. It is going to take a great deal of understanding and support by all of us in the Government if we are going to solve this problem. Thank you very much.

The CHAIRMAN. Thank you very much.

King Olav V of Norway visits Seattle area from May 1 to May 4, 1968.

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Braman + Governor Evans

- By David Wilma
- Posted 1/10/2000
- HistoryLink.org Essay 2031

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From May 1 to 4, 1968, Norway's King Olav V (1903-1991) makes his third visit, and first as king, to the Seattle area. At every stop he is greeted enthusiastically by large crowds, many of them from the region's substantial Norwegian American community, and the king declares that he "feels more at home in Seattle than in any other United States city" ("King Olav's Visit ...").

Olav, whose full name was Alexander Edward Christian Frederik of Gluksburg, had visited Western Washington twice as Crown Prince. In 1939 he and his wife, Princess Martha (1901-1954), spent a day skiing at Paradise on Mount Rainier and attended the dedication of the Toftezen (or Taftezon) Memorial in Stanwood, Snohomish County, which honored the first Norwegian settler on Puget Sound. During a 1942 visit, Olav explained Norway's position as a country occupied by German troops.

In 1968, Seattle was just one stop on the Norwegian monarch's tour of the United States. King Olav arrived from San Francisco on Wednesday afternoon May 1 and had dinner that evening at the Rainier Club with Governor Daniel J. Evans (b. 1925) and Mayor Dorm Braman (1901-1980).

On Thursday, May 2, the king visited the University of Washington College of Fisheries, a group of demonstrators waited for the king with signs reading "Scandinavia Unite as a Neutral Republic" and scuffled with another group of students who tore up their signs. The king did not see the confrontation.

Also on Thursday, Olav attended a ceremony at the statue of Leif Erikson at the Port of Seattle's Shilshole Bay Marina, greeted retirees at the Norse Home, watched sea otters at the Woodland Park Zoo, and ate lunch at the Space Needle. At the Norway Center, he listened to the Ballard High School Band and the Issaquah High School Chorus and said, "It is fine that you are able to keep these (Norwegian) traditions as a living thing ... and blend them as part of the American way of life" (*Post-Intelligencer*). That night the king attended a banquet in his honor at the Olympic Hotel.

On Friday, May 3, King Olav returned to the Cascade Mountains, making a trip to the Crystal Mountain ski area. He rode a chair lift to the resort's Summit House and admired the view of nearby Mount Rainier, where he had skied 29 years before. That evening he had a private dinner with family friends who lived in Bellevue. The next morning, Olav departed for Minneapolis.

King Olav made another visit to the Puget Sound region in 1975, celebrating the sesquicentennial of Norwegian immigration to America with a visit to Poulsbo, located in Kitsap County and nicknamed "Little Norway" for its large Norwegian American population.

1967 - working with governor evans for US Olympic bid in 1976

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William McPherson Allen (The Boeing Company), Boeing's 50th Anniversary Banquet, July 16, 1966

Production Date: July 16, 1966

Source Type: Photograph

Printer, Publisher, Photographer: Unknown

Postmark: Not Applicable

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Remark: *Guests at the head table at the civic banquet marking Boeing's first half century included, from left, William P. Woods of the civic committee and Mrs. Woods; C. L. Egtvedt, retired Boeing chairman and Mrs. Egtvedt; William M. Allen, Boeing president; Mrs. Juan J. Trippe, wife of the chairman of Pan American World Airways; Trippe, Mrs. William M. Allen; Gov. Daniel J. Evans, Mrs. J. D. Braman and Mayor Braman. Other head-table guests were not pictured. Guests were welcomed by the governor and the mayor.*

William McPherson Allen was born September 1, 1900, in Lolo, Montana. After earning a degree at the University of Montana, he enrolled at Harvard University where he earned a degree on law in 1925. In 1930, Allen joined the board of directors of Boeing Air Transport while being employed as an attorney with Donworth, Todd & Higgins, a Seattle law firm.

The unexpected death of Boeing president Philip G. Johnson in 1944 required that Boeing's chairman of the board, Claire Egtvedt, appoint a replacement. Egtvedt turned to Bill Allen, who initially refused to accept the position because he felt that he was unqualified to head the company. Allen, however, later accepted the position and served as the Chief Executive Officer (President) of The Boeing Company from September 1, 1945, to April 29, 1968. He then served as chairman of the company from 1968 to 1972.

Under William M. Allen's leadership, The Boeing Company launched the Boeing 367-80 (Dash 80), a jet-powered passenger airplane and the predecessor of the Boeing 707. Allen was also responsible for the development and launch of the Boeing 727, Boeing 737, and Boeing 747.

William M. Allen died on October 28, 1985. In 2003, an article published in **Fortune** ranked William McPherson Allen second among "*The 10 Greatest CEOs of All Time*," the top CEO being Charles Coffin, the founder of General Electric Company.

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1911

Buena Vista farm

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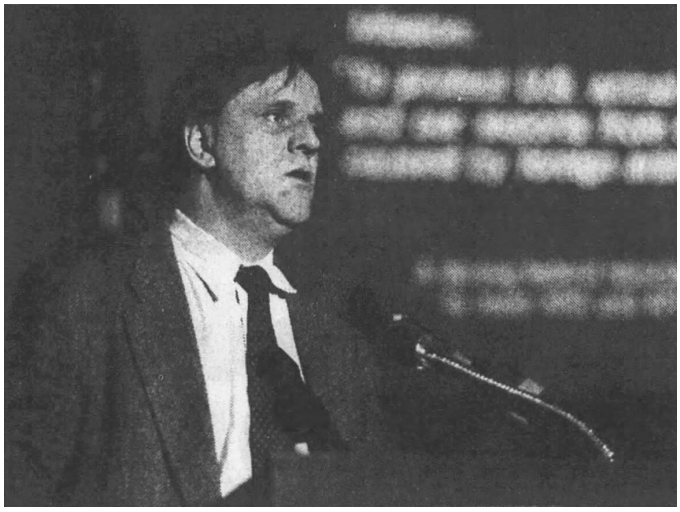
Dr. Roger Gerrard Breeze (born 1946)



1992
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2009

Wikipedia Roger Breeze

Born Oct 10, 1946 [HK005Q0][GDrive]

Died June 14, 2016 [HK005Q0][GDrive]

Asssociations

- **Dr. Robert Ellis Shope (born 1929)** (Dr. Roger Breeze was a roommate of Dr. Robert Shope, in the early days of Dr. Breeze's new assignment as director of the **Plum Island Animal Disease Center** ; Dr. Robert Shope was living in Connecticut and with Yale at this time; There was likely professional collaboration (details TBD))
- ...

Saved Wikipedia (March 12, 2021) - Roger Breeze

Source: [HK005Q0][GDrive]

Dr. Roger Gerrard Breeze BVMS, Ph.D, MRCVS (10 October 1946 - 14 June 2016) was an English veterinary scientist who was an expert on bio-terrorism and a critic of mass culling to combat foot and mouth disease in animals.[1][2][3] [4]

Education

- Graduated from Manchester Grammar School
- Received his Bachelor of Veterinary Medicine and Surgery and a PhD in Veterinary Pathology from the University of Glasgow (1964-1973)

Career

- Was a member of the Royal College of Veterinary Surgeons
- Lecturer at The University of Glasgow School of Veterinary Medicine (1968-1977)
- Professor and chair of the Department of Microbiology and Pathology at Washington State University (1977-1987)
- **Deputy Director at the University of Washington Technology Center (1984-1987)**
- Director at [**Plum Island Animal Disease Center**] , USDA ARS (1987-1995)
- USDA Agricultural Research Service: Area Director (1995 – 1998) and Associate Administrator (1998-2004)
- CEO/Owner/President of the Centaur Science Group (2004-2015)
- Bio-Security Deputy Program Director at the Lawrence Livermore National Laboratory (2011-?)

Awards

Dr. Breeze received the Distinguished Executive Award from President Clinton in 1998 for his work at Plum Island and in biodefense.[5]

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External links

- Obituary

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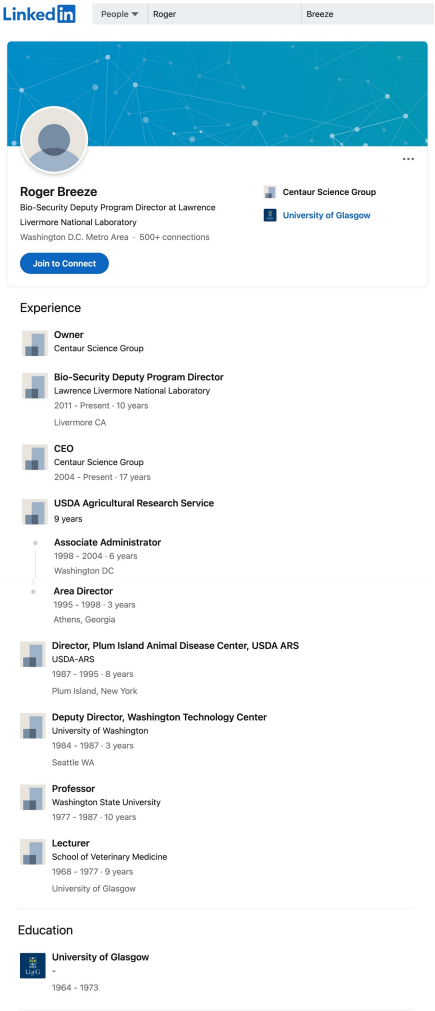

1977 (Oct)

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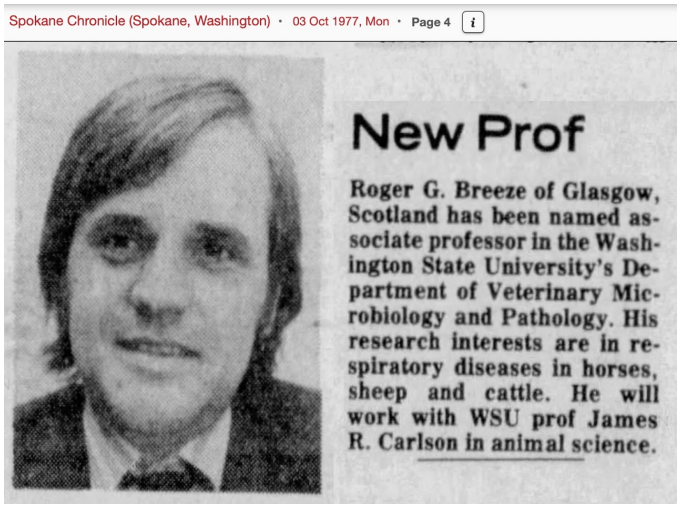

1978 (July) - Research in ScienceMagazine - "Monensin and the prevention of tryptophan-induced acute bovine pulmonary edema and emphysema"

https://sci-hub.se/10.1126/science.663643# / 1978-07-14-sciencemagazine-monensin-prevention-acute-bovine-plumonary-edema-hammond-carlson-breeze.pdf

1. AC Hammond,
2. Carlson JR,
3. RG Breeze

See all authors and affiliations

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DOI: 10.1126/science.663643

1978-07-14-sciencemagazine-monensin-prevention-acute-bovine-plumonary-edema-hammond-carlson-breeze-pg-1 / -2

the size and orientation of the proteins involved, the matrix element is $T = 9 \pm 3 \times 10^{-4}$ eV. Using an approximate estimate (*1*)

$$T = \frac{2.7}{(N_d N_a)^{1/2}} \exp\left(-\frac{R}{1.4}\right) \quad (5)$$

T can be related to $N_d(N_a)$, the number of atoms over which the electron is delocalized on the donor (acceptor) molecule, and R, the distance between the heme groups on CP and C. For electronic wave functions delocalized over the heme groups, $N_d = N_a = 20$ and Eq. 5 gives the value $R \simeq 7$ Å. This is consistent with values predicted from the theory for other biological systems and similar to the value $R \simeq 7$ to 10 Å for C-Fe(CN)$_6$ (*3*). The distance between iron atoms is ~15 to 20 Å, similar to distances measured by fluorescence techniques (*8*).

The values of T and Δ obtained in these experiments are similar to those inferred in electron transfer processes in bacterial photosynthesis. Depending on which molecules are involved, the theory predicts values of T between 2×10^{-4} and 3×10^{-3} eV. Values of Δ between 0.4 and 1.6 eV are predicted for a series of electron transfers in bacterial photosynthesis. The CP-C value of $\Delta = 1.07$ eV is within this range.

The electron transfer rate, k, can be directly calculated from the parameters Δ, σ, and T (*1*). A value of $k \simeq 1 \times 10^{7 \pm 3}$ sec^{-1} is calculated for the measured parameters $E_d - E_a - \Delta = 0.70 \pm 0.22$ eV, $\sigma = 0.21 \pm 0.04$ eV, and $T = 9 \pm 3 \times 10^{-4}$ eV. The large error is due to the exponential behavior of the rate expression.

These results show the existence of a new charge-transfer band in the bound complex CP-C which is not present in the individual components. This new band and the parameters obtained are significant demonstrations of the validity of nonadiabatic electron tunneling.

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15 February 1978; revised 28 April 1978

Monensin and the Prevention of Tryptophan-Induced Acute Bovine Pulmonary Edema and Emphysema

Abstract. *3-Methylindole, a ruminal fermentation product of tryptophan, induces acute pulmonary edema and emphysema in cattle, and 3-methylindole is present in the ruminal fluid and blood of cows with a natually occurring form of this disease. Monensin, a polyether antibiotic and widely used feed additive for beef cattle, prevented tryptophan-induced acute bovine pulmonary edema and emphysema. Monensin acted by reducing the ruminal conversion of* L*-tryptophan to 3-methylindole both in vitro and in vivo. Lasalocid, also a polyether antibiotic, showed similar effects in vitro. These results provide a promising approach to prevention of this major respiratory disease of cattle.*

Acute bovine pulmonary edema and emphysema (ABPE) or fog fever is a naturally occurring disease of adult cattle characterized by sudden onset of acute respiratory distress soon after a change to lush forage, usually in the fall (*1*). The disease occurs in many parts of the world including the United States, Canada, and Europe (*1*, *2*), and it is the most prevalent respiratory disease associated with groups of pastured beef cattle (*3*). The incidence of ABPE appears to be increasing in parallel with changes to more intensive range and pasture management. This and the absence of proven methods of treatment or prophylaxis results in a significant economic loss to beef cattle producers. Effective prevention would allow more efficient utilization of improved pastures and provide economic benefits contributing toward more profitable red meat production.

Previously (*4*) we demonstrated that 3-methylindole, a ruminal fermentation product of tryptophan, would cause acute pulmonary lesions in cattle, similar to those of ABPE. Additional work has shown that the pathogenesis of the disease probably involves ruminal conversion of L-tryptophan, a naturally occurring amino acid and constituent of forage, to indoleacetic acid which is then converted to 3-methylindole (*5*, *6*). We have also found that ruminal microorganisms convert L-tryptophan to indoleacetic acid (*7*) and that a *Lactobacillus* sp. isolated from the rumen metabolizes indoleacetic acid to 3-methylindole (*8*). This process occurs in vivo, as indicated by the presence of 3-methylindole in ruminal fluid and plasma of cows given tryptophan to induce ABPE (*6*). In contrast to tryptophan or indoleacetic acid, both intravenous and oral administration of 3-methylindole results in pulmonary lesions typical of ABPE (*4*, *9*). In addition to the pathological similarity between the experimentally induced and naturally occurring diseases, the presence of 3-methylindole in ruminal fluid (*10*, *11*) and peripheral blood (*10*) has been demonstrated in cows that developed ABPE after a move from relatively dry to lush, green pasture. These observations lend support to the view that naturally occurring ABPE results from ruminal metabolism of tryptophan. In this report we describe experiments that demonstrate that monensin, a widely used feed additive, can inhibit the production of 3-methylindole and prevent experimentally induced ABPE. These results provide a promising approach to possible prevention of naturally occurring ABPE.

Previous work in our laboratory demonstrated that 3-methylindole production in ruminal fluid could be decreased in vitro and in vivo by the use of antibiotics (*7*), but the effectiveness of these antibiotics at concentrations low enough for practical application in live animals was not investigated. Therefore, we undertook experiments to screen several compounds for their ability to reduce 3-methylindole production. By means of in vitro techniques (*7*) and analytical methods devised in our laboratory (*12*), several antimetabolites were screened for their ability to reduce the conversion of L-tryptophan to 3-methylindole in vitro. Mixtures of 23 ml of ruminal fluid, 10 mg of L-tryptophan (10 mg of L-tryptophan per milliliter of H_2O), and 0.625 mg or 0.125 mg of test compound (25 or 5 μg per milliliter, final concentration) were incubated in triplicate in 50-ml Erlenmeyer flasks fitted with rubber caps. The test compounds were dissolved in 1 ml of H_2O, 0.1*N* aqueous NaOH, or absolute methanol. Each flask was flushed with CO_2 for 1 hour, then incubated at 37°C for another 23 hours. The results obtained were compared to those for control mixtures in which only solvent, substrate, and ruminal fluid were incubated. For these experiments we used ruminal fluid collected from one animal on several different days (at the same time each day), but comparisons between individual treatments and controls were always from the same ruminal fluid samples. Conversion of L-tryptophan to 3-methylindole in control mixtures averaged 43.7 percent. The results for mixtures incubated in vitro are shown in Table 1. The polyether antibiotics monensin and lasalocid (*13*) were the most effective compounds tested. At concentrations of 5 μg/ml, these compounds reduced 3-methylindole formation by 87 to 90 percent. The positive results with monensin were of particular interest because a commercial preparation of monensin is a widely used feed additive for beef cattle and might be a promising preventative for ABPE. Monensin increases production efficiency of cattle on pasture and reduces feed intake (*14*) by increasing the relative proportion of ruminal propionic acid production and possibly by decreasing methanogenesis and protein degradation (*15*). These effects may be complementary to those of reducing 3-methylindole formation and may allow a smoother transition from dry forage to lush pasture.

In subsequent studies we determined the ability of monensin to decrease ruminal production of 3-methylindole in vivo. Eight mature Hereford cows were divided into two groups and given 0.35 g of L-tryptophan per kilogram of body weight to induce ABPE. Each of four cows was given 100 mg of monensin (*16*) orally in gelatin capsules twice daily starting 1 day before and ending 4 days after the tryptophan dose. Four control cows were given L-tryptophan without further treatment. Ruminal fluid samples were taken at 0, 6, 12, 18, 24, 36, 48, 72, and 96 hours after tryptophan administration and analyzed for 3-methylindole (*12*). The cows were observed at least daily for clinical signs of respiratory disease, then examined at necropsy 6 days after the oral dose of tryptophan had been given.

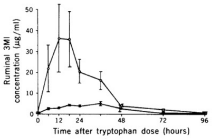

Fig. 1. Mean concentrations of 3-methylindole (*3MI*) in the rumens of four cows each given 200 mg of monensin per day, from −1 to 4 days after an oral dose of 0.35 g of L-tryptophan per kilogram of body weight (●), and in four cows given L-tryptophan without further treatment (○). Bars indicate ± standard error of the mean.

The mean concentrations of 3-methylindole in the rumen for each group of four cows are shown in Fig. 1. Mean ruminal concentrations of 3-methylindole in control cows reached a peak of 36.4 μg/ml at 12 hours and persisted at levels above 15 μg/ml from 6 to 36 hours after the cows received tryptophan. Mean concentrations in the rumen of monensin-treated cows never exceeded 5.0 μg/ml.

All control cows responded to tryptophan by developing clinical signs of respiratory disease, and three of the four cows were severely affected. One control cow died of ABPE approximately 132 hours after receiving tryptophan; two other control cows developed severe clinical signs of ABPE and were slaughtered in extremis, and the fourth control had mild clinical signs which had subsided by the time of slaughter. No clinical signs of respiratory disease were observed in any of the monensin-treated cows.

At necropsy, none of the monensin-treated animals had pulmonary lesions of tryptophan-induced ABPE. In contrast, diffuse lesions of congestion, edema, interstitial emphysema, alveolar epithelial hyperplasia of type 2 pneumonocytes, interstitial eosinophilia, and bronchiolar epithelial necrosis and hyperplasia were found in the lungs of the three cows with severe clinical signs. Similar focal lesions were detected microscopically in the fourth cow.

These experiments demonstrate that reduction in ruminal 3-methylindole formation prevents tryptophan-induced ABPE. Monensin and lasalocid, both polyether antibiotics, reduced 3-methylindole formation in vitro. Monensin was further shown to reduce 3-methylindole formation in vivo. These results provide a promising approach to a prevention for naturally occurring ABPE.

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Table 1. The production of 3-methylindole in vitro expressed as a percentage of control (± standard error of the mean) in mixtures of ruminal fluid incubated in triplicate with L-tryptophan and various compounds.

Compound	Concentration	
	25 μg/ml	5 μg/ml
Monensin*	7.8 ± 0.4	13.3 ± 2.3
4,4-Dimethyldiphenyl iodonium chloride†	0.8 ± 0.1	105.9 ± 11.9
Diphenyl iodonium chloride†	0.6 ± 0.1	106.1 ± 13.2
1,1,1-Trichloro-2-hydroxy-4-pentanone†	70.0 ± 5.7	87.6 ± 3.7
Dicloralurea†	44.2 ± 5.6	104.0 ± 12.2
Amiclora†	51.0 ± 12.0	104.9 ± 15.8
Dithiooxamide†	38.0 ± 4.5	101.9 ± 12.7
Lasalocid‡	13.4 ± 0.7	9.9 ± 0.7
5-Chloro-8-hydroxyquinoline§	112.1 ± 6.0	107.7 ± 9.2
15-Crown-5§	104.8 ± 4.4	94.1 ± 3.7
DL-α-Methyldopa‖	102.3 ± 7.9	110.2 ± 1.9

*A gift of Elanco Products Company. †A gift of Smith Kline Animal Health Products. ‡A gift of Hoffmann-La Roche, Inc. §Aldrich. ‖Nutritional Biochemicals.

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1981 (Jan 02)

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1986 (April 15) - https://newspaperarchive.com/fairbanks-daily-news-miner-apr-15-1986-p-10/

1987 (March 20) - Announces RESIGNATION from WSU because "pay is too low"; resignation effective June 1987

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1987-03-20-spokane-daily-chronicle-pg-03

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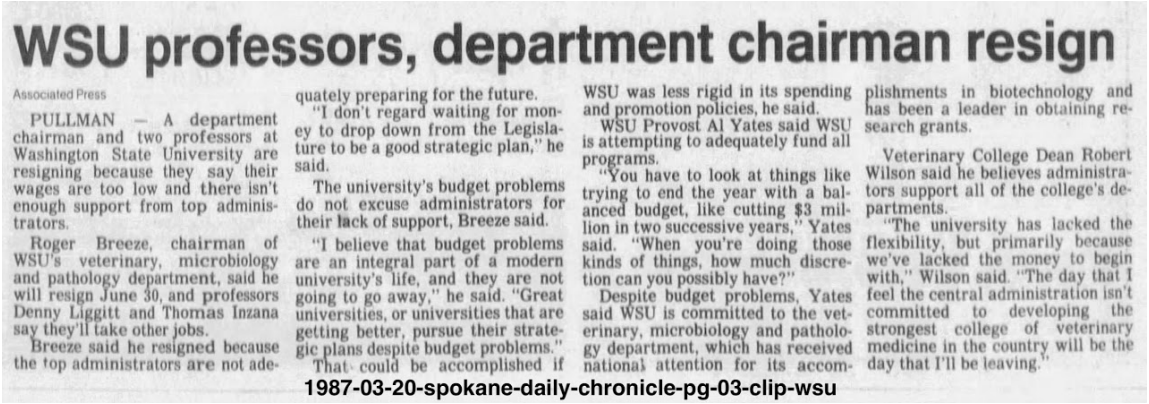

WSU professors, department chairman resign

Associated Press

PULLMAN — A department chairman and two professors at Washington State University are resigning because they say their wages are too low and there isn't enough support from top administrators.

Roger Breeze, chairman of WSU's veterinary, microbiology and pathology department, said he will resign June 30, and professors Denny Liggitt and Thomas Inzana say they'll take other jobs.

Breeze said he resigned because the top administrators are not adequately preparing for the future.

"I don't regard waiting for money to drop down from the Legislature to be a good strategic plan," he said.

The university's budget problems do not excuse administrators for their lack of support, Breeze said.

"I believe that budget problems are an integral part of a modern university's life, and they are not going to go away," he said. "Great universities, or universities that are getting better, pursue their strategic plans despite budget problems."

That could be accomplished if WSU was less rigid in its spending and promotion policies, he said.

WSU Provost Al Yates said WSU is attempting to adequately fund all programs.

"You have to look at things like trying to end the year with a balanced budget, like cutting $3 million in two successive years," Yates said. "When you're doing those kinds of things, how much discretion can you possibly have?"

Despite budget problems, Yates said WSU is committed to the veterinary, microbiology and pathology department, which has received national attention for its accomplishments in biotechnology and has been a leader in obtaining research grants.

Veterinary College Dean Robert Wilson said he believes administrators support all of the college's departments.

"The university has lacked the flexibility, but primarily because we've lacked the money to begin with," Wilson said. "The day that I feel the central administration isn't committed to developing the strongest college of veterinary medicine in the country will be the day that I'll be leaving."

1987-03-20-spokane-daily-chronicle-pg-03-clip-wsu

1987 (between June and Dec) ... Dr. Breeze

"**In 1988, a year after Breeze took control, a performance work statement (PWS) was prepared.**"

1988 (March 13)

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1988-03-13-journal-and-courier-lafayette-indiana-pg-b-7

1988-03-13-journal-and-courier-lafayette-indiana-pg-b-7-clip-vet-school.jpg

Journal and Courier (Lafayette, Indiana) • 13 Mar 1988, Sun • Page 21

Vet school's research day is Wednesday

Phi Zeta Research Day, an annual event in the Purdue University School of Veterinary Medicine, is Wednesday in Lynn Hall.

The all-day program, primarily for students and faculty of the school, is sponsored by Purdue's Omicron Chapter of the Society of Phi Zeta, the national honor society of veterinary medicine. Senior veterinary-medical students will serve as hosts of the free program.

Presenting the Phi Zeta Lecture this year will be Dr. Roger G. Breeze, director of the Plum Island Animal Disease Center in Greenport, N.Y. His talk, titled "Impact of Biotechnology on Veterinary Medicine," will be at 3 p.m. in Room 31 of Lynn Hall.

The students' research presentations will also be in Room 31. Undergraduates will compete from 1 p.m. to 1:25 p.m., vying for a $200 first prize and $100 second prize. Graduate competition will be from 1:25 p.m. to 2 p.m., with Beecham Laboratories, a national pharmaceutical firm, providing a $500 first prize.

From 2:20 p.m. to 2:50 p.m., faculty members receiving research support from the Department of Agriculture's Animal Health and Disease Research Fund will report on their research.

Also featured will be an all-day poster session.

Recipients of two new student-research fellowships sponsored by Abbott Laboratories and Ralston-Purina will be announced.

— Staff Reports

1992 (Dec 20)

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1992-12-20-hartford-courant-pg-b-1-clip-island-research

1992 (Dec) - https://www.newspapers.com/image/242416309/?terms=%22roger%20breeze%22&match=1

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3rd & 4th eds. Sun.

The Hartford Courant

Connecticut

ON THE WEEKEND

B10 / OBITUARIES
B12 / WEATHER

SECTION B
SUNDAY
DECEMBER 20, 1992

Forbidding Plum Island opens up

By ALIX BIEL
Courant Staff Writer

PLUM ISLAND, N.Y. — There's something forbidding about Plum Island. On a misty morning its sandy, sloping shores rise from Long Island Sound to barbed-wire fences surrounding stark, stone buildings.

In front of the desolation of crumbling military bunkers and scruffy shrubs stands the unmistakably unwelcoming sign: "U.S. Government Property. Closed to the Public. Landing Prohibited." Gulls circle above.

The Plum Island Animal Research Center has been cloaked in mystery since its opening 38 years ago by the U.S. Department of Agriculture. Scientists there have been accused of developing everything from biological warfare to Lyme disease.

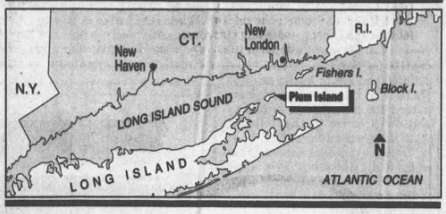
In the year since a private company was hired to manage the installation, employees have complained that safety precautions have lapsed. So last week, for only the third time in the center's history, the director invited 17 reporters and photographers ashore in hopes of quashing fears and beginning a new chapter of openness.

"We don't have gnarled gnomes living around here," said Claude G. Crawford of Old Saybrook, deputy area director. "We have people with kids and families and homes who have a sincere concern about the livestock industry."

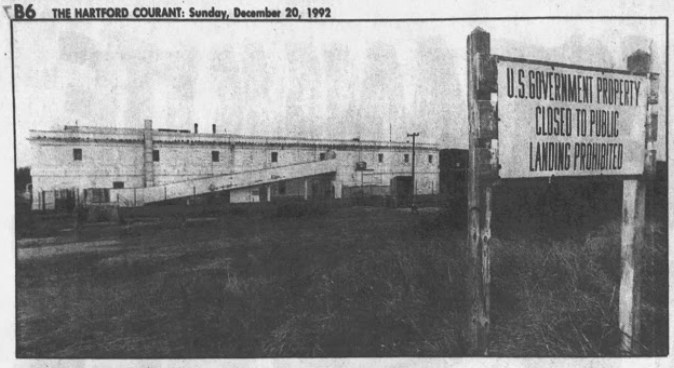
Still, anyone who steps ashore must have the explicit invitation of any of the scientists or technicians who work there. A former Army fort, the 850-acre island, named for

Please see Island, Page B6

Closed to public: The Plum Island Animal Research Center



The Hartford Courant



▲ An unwelcome sign stands outside the Plum Island Animal Research Center.

◀ Roger G. Breeze of Cheshire, director of the research program at Plum Island, meets with members of the news media during a tour of the facility last week.

Michael Kodas / The Hartford Courant

Island research center tries policy of openness

Continued from Connecticut page

the plum trees along its shores, is bordered by expansive views off shore. Connecticut's coast is 12 miles to the north, and Orient Point, N.Y., is 1.5 miles to the south.

No one lives on Plum Island, and the 200 to 220 people who work there are holed up most of the time in laboratories, studying deadly diseases. Layers of precautions — sanitary requirements and armed guards — prevent employees and visitors from taking diseases back to the Connecticut or New York mainlands. The diseases, found only in animals outside the United States, pose such a threat to domestic animal populations that Congress ordered they be studied offshore.

Blue jays and ospreys fly over the island, but no research animals can be seen. They are penned inside laboratory buildings. After an outbreak of foot and mouth disease in 1978, officials kept both healthy and infected animals indoors to prevent further outbreaks. Visitors can see the pigs, cows, sheep and other animals only through laboratory doors.

Research focuses on diseases that could cost billions of dollars if not contained and eradicated, scientists said. Although the diseases could be studied safely now at inland laboratories, when the Plum Island lab opened there were no such assurances. Hence, the congressional requirement that their study be buffered by a body of water.

Plum Island opened in 1954 to study and develop a vaccination against foot and mouth disease, a debilitating, contagious illness characterized by blistering around the feet and mouth of cattle, pigs, sheep, goats and a host of wild animals. About 40 percent of the research on the island today is focused on foot and mouth disease, which is no longer found in North America, said Roger G. Breeze of Cheshire, the director of the research program. Another 40 percent focuses on African swine fever, and the other 20 percent is concerned with a variety of other foreign animal diseases.

The Plum Island installation is divided into two parts: research and health inspection. The inspection service is responsible for testing plants and animal products being brought into the United States, training veterinarians to recognize foreign diseases and diagnosing those diseases.

The mission of both branches is "to protect animal industries and exports from economic losses caused by foreign animal diseases," Breeze said.

An outbreak of African swine fever in the United States could cost more than $2 billion in lost American pork sales, said Corrie C. Brown, head of the health inspection service's pathology section. An outbreak of foot and mouth disease could cost more than $20 billion in lost sales here and abroad, she said.

Not surprisingly, great precautions are taken to contain the foreign diseases. Samples headed to Plum Island from other countries are issued permits and specially packaged. Containers are wrapped in absorbent materials and placed in metal boxes designed to withstand three airplane crashes.

Scientists and technicians — and journalists — undergo extensive biosafety precautions. They strip naked and don hard hats, goggles, coveralls and sneakers before passing through a series of doorways that lead to the labs. Within the laboratory complex, areas are sealed off from each other. In some places, entry is allowed only

inants. Glasses worn into the lab areas are soaked in acidic solution. Hands and fingernails are scrubbed, and everyone spends at least three minutes in pulsating, hot showers, where they wash their bodies and their hair. Only then are lab workers allowed to leave each day.

Because of the sanitary precautions, the public is unwelcome; the big, black-lettered signs along the beach are clear on that point. Before last week, journalists had visited only twice — when the lab opened and after an outbreak of foot and mouth disease in 1978 when scientists wanted to assure the public that all was safe.

Officials explained the news blackout on the island as a throwback to the Cold War.

"It was a tit-for-tat philosophy," Crawford said; the Soviet Union kept the United States out of its labs so the United States wanted to prevent the Soviet Union from finding out what was happening in American labs.

The foreign menace has dissipat-

Burns and Roe Services Corp. of New Jersey took over in response to federal mandates that private corporations be hired if they can perform at a lower cost than the government can. The low bidder for the job, Burns and Roe, is the first private management company to run the installation. The company also runs several military bases overseas and has the janitorial contract for an Agriculture Department building in Washington.

Although many employees lost their federal jobs when Burns and Roe came in, most who did not retire were hired by the company, Crawford said; he knew of only one person who applied for a job with Burns and Roe and was turned down. He said many of the rehired employees took pay cuts and lost some of their benefits.

"We have had a lot of disruption to people's lives," Crawford said. "We have people who are unhappy."

Burns and Roe's first year has been rough in other ways as well, the director said. There have been a series of minor incidents — a Bunson burner left on, a radio missing from a biologically regulated area — that were reported to the FBI, the only enforcement agency with authority on the island.

Minor as separate events, the incidents developed into an unsettling trend.

"We don't know why these things are happening," Crawford said, adding that he could not rule out sabotage. But, he said, "I find it personally inconceivable that employees of Plum Island would do anything to sabotage the operations. . . . They may be unhappy, but they care about the island."

In general, most employees have continued to do "an outstanding job" while management works out difficulties in its first year, Crawford said. Burns and Roe will be managing the center for the next four years under its contract with the government.

Despite the difficulties, Crawford said, most of the employees on Plum Island have continued their work oblivious to the troubles.

"Whatever we do from a management standpoint, the people just go about doing their jobs, ignoring us," he said. "It's a matter of the management learning to live with one another."

1994 (June 18)

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1994-06-18-hartford-courant-pg-b9-clip-plum-island.jpg

Research building opens on island

By SAM LIBBY
Courant Correspondent

PLUM ISLAND, N.Y. — Scientists and government officials tried Friday to remove the veil of mystery that has long enveloped this beautiful, but forbidden 850-acre island in Eastern Long Island Sound.

About 120 animal disease scientists, veterinarians, former employees, utility officials and journalists attended a dedication ceremony for a new $15 million animal disease research building.

There is nothing secret or mysterious about the work that is done on Plum Island, said Dr. Roger Breeze, director of the Plum Island Animal Disease Center. The mission of the 40-year-old center is to protect America's food supply and to avoid the financial and public health devastation that would result if livestock diseases found in other parts of the world spread to North America, he said.

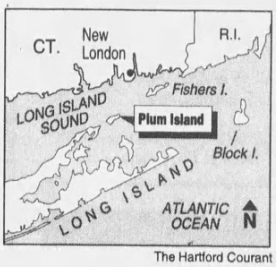
Since 1954, when the U.S. Department of Agriculture gained control of the island, it has been the restricted domain of livestock disease scientists and their test animals, who under controlled conditions have been exposed to the world's deadliest disease pathogens.

Thirty-five livestock diseases are being studied on the island. There is also a stockpile of hoof-and-mouth disease vaccine on the island to control any appearance of the disease in the United States, Mexico and Canada. The island gained notoriety in 1978 when there was an accidental release of hoof-and-mouth disease. That once devastating disease had not been present in the United States since 1929 at least partly as the result of work done on the island.

The disease spread to the island's test animals, said Charles Mebus, chief of the foreign animal diagnostic laboratory. The accident could have resulted in an international embargo on American livestock and livestock products, which could have cost American producers millions of dollars, he said. But because of the quick action of island scientists, that did not happen.

Mebus said Plum Island is the right place to have this kind of center. It is unlikely that any livestock disease pathogen would be able to leave the island. And prevailing winds would take pathogens to urban areas, where there is little agriculture, he said.

Although the island is forbidden except to authorized personnel, it is surrounded by some of Long Island Sound's best sport fishing areas. It is about 7 miles offshore from the Niantic section of East Lyme. The island is surrounded by coastal fortifications dating to World War I and World War II. It is covered by Asiatic bittersweet, a plant that has infested the island much as kudzu has spread over much of the Southeastern United States. The island has a long inviting strand of white sandy beach. Its skies are dominated by osprey.



The Hartford Courant

The work done on the island has added significance in light of the North American Free Trade Agreement, said R. Dean Plowman, acting assistant secretary of agriculture for science and education. In the global marketplace, livestock disease can quickly spread and cause sudden and severe devastation. Livestock disease can affect not only domesticated animals, but also wild animals and human health, he said.

1995 (Dec 30)

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1995-12-30-the-record-hackensack-new-jersey-pg-a-1-clip-plum-island

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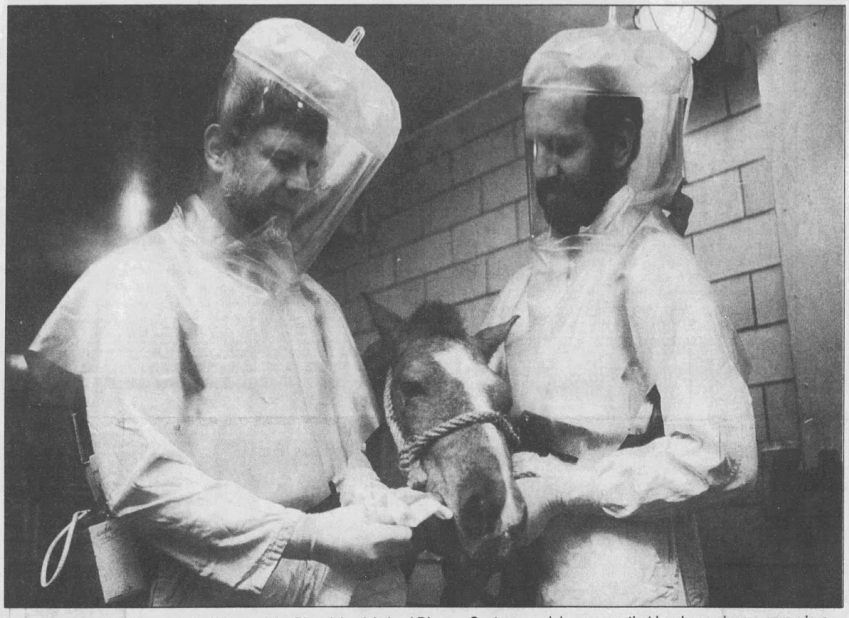
1995-12-30-the-record-hackensack-new-jersey-pg-a-5-clip-plum-island

The Record

SATURDAY, DECEMBER 30, 1995 | Friend of the People It Serves | 50¢

RESEARCH KEEPS INDUSTRY ALIVE



Drs. James House, left, and Colin Wilkes of the Plum Island Animal Disease Center examining a pony that has been given a rare virus.

Island of infection

Site guards viruses of cows, horses

By BOB GROVES
Staff Writer

— PLUM ISLAND, N.Y. Ever mindful of stray microbes, chief pathologist Corrie Brown led the way deep into the biocontainment area of Building 101.

She passed through a double-doored air lock — humid as a hothouse — and down several long, dimly lighted corridors that hummed with ventilation ducts and high-efficiency air filters. Huge compressors pumped air into the dreary spaces faster than it was exhausted, creating a "negative air pressure" to keep unseen contagion from escaping to the outside world.

Everyone who enters Building 101 of the Plum Island Animal Disease Center must follow a standard procedure. Visitors strip naked and don government-issue underwear, surgical scrub suits, and sneakers. They sign waivers and leave their wallets, watches, and other worldly possessions behind.

In the inner sanctum, Brown pulled open a heavy steel door to a cramped, windowless room that smelled of damp hay and large animal life.

No mythical Minotaur or man-bull mutant monster from H. G. Wells' "Island of Dr. Moreau," however, was tethered at the end of this labyrinth. Instead, there were four befuddled, white-faced Herefords waiting to be exposed to foot-and-mouth disease.

"Oh, you didn't brush this morning," Brown chided, prying open a cow's mouth to

See INFECTION Page A-5

INFECTION: Center protects, researches animal disease

From Page A-1

show off its teeth. Another cow mooed.

Brown was standing at the heart of the nation's only official "hot zone" for livestock, where animals are housed and studied, and their carcasses later incinerated.

"Foot-and-mouth is a highly contagious disease," said Brown, 44. "If you put a pig with FMD among 5,000 cows for one minute, within one week, every animal would have it.

"Controlling the spread of FMD is almost impossible" once an outbreak starts, she said.

Disease is a huge threat to the productivity and profit of the $50 billion American livestock business. Viruses such as FMD, though rarely fatal, leave animals sickly and unable to produce much meat or good milk. Anything that even looks like FMD can panic people who make their livelihood from livestock.

Unlike other parts of the world, the United States has been largely free of such diseases for more than 40 years, thanks to the vigilance of the U.S. Department of Agriculture, which operates the Plum Island facility.

Plum Island is a pork-chop-shaped islet two miles off the northeast tip of Long Island, reachable only by ferry. The Animal Disease Center is the federal facility for diagnosis and research of FMD, African swine fever, and more than three dozen other foreign viruses highly contagious to cows, pigs, and other cloven-hoofed animals.

The center keeps a repository of animal viruses and bacteria, stored in vials that are locked away in liquid nitrogen freezers, chilled to minus 70 degrees centigrade. About a third of them — including the anthrax virus and Venezuelan equine encephalitis — can be fatal to humans. Each year, the center ships hundreds of samples of these diseases to about 30 countries to test animals, tissue, and blood suspected of being infected. The center also maintains the North American Foot-and-Mouth Disease Vaccine Bank, containing 12 million doses.

About 35 of the 195 people who work at Plum Island are scientists. Another 60 are USDA animal caretakers, lab technicians, and librarians. The rest are employed by Burns and Roe Services Corp. of Oradell as firefighters, engineers, plumbers, carpenters, ferry pilots, and plant managers.

Since May, the center has been diagnosing cases of vesicular stomatitis (VS) from an outbreak occurring among cattle in five Western states. VS is a virus that mimics the symptoms of foot-and-mouth disease, such as lesions on the mouth, hoof, and teat. VS is less contagious than FMD, but it also makes the animal less productive and salable. VS was first identified more than 70 years ago in New Jersey, and samples are stored for reference on Plum Island.

To prevent potentially devastating diseases from crossing the border, 20,000 to 25,000 tests are performed each year on animals that are to be imported to the United States, and again when they enter the country. Samples of suspected cases of FMD are sent to Plum Island.

"We couldn't afford it if we missed one animal and caused an outbreak. It would be very costly. Our exports would drop by $20 billion for the year," Brown said.

Canadian economists, she said, estimated recently that a small outbreak of foot-and-mouth disease would cost their country $2 million to control quickly, but cause $2 billion in costly quarantines, trade embargoes, and damaged exports if left unchecked.

The guardians of New Jersey's own billion-dollar livestock business have relied on Plum Island in the past. "Their source of expertise is not available elsewhere," said Dr. Ernest Zirkle, director of the Division of Animal Health for the state Department of Agriculture.

The training that Zirkle and other veterinarians in the state received at Plum Island keeps them "on the cutting edge of being able to control animal disease," he said.

New Jersey has about 45,000 beef and dairy cattle, 65,000 horses, 20,000 pigs, and 3 million chickens and turkeys.

FMD flourishes mainly in South America, Asia, Africa, and Eastern Europe. The last outbreaks of FMD in North America were in the United States in 1929; in Canada in 1952 (caused by a farm worker who brought in contaminated sausage from Germany), and in Mexico in 1953.

In 1954, following these outbreaks on both borders, the USDA took over Fort Terry, a turn-of-the-century Army base on Plum Island.

Research animals — as well as tissue and fluid samples sent to Plum Island for diagnosis — are kept in what is classified as a "biological safety level 3-plus" agriculture zone inside Building 101. Level 3-plus viruses can be transmitted by air and are potentially lethal to other animals.

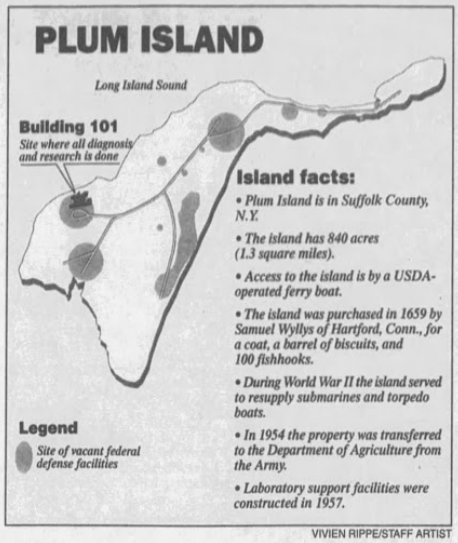
Anyone leaving the area must submit to mandatory showers, shampoos, and rigorous nail scrubbing; soak their eyeglasses in an acid bath; and agree to stay away from farm, zoo, and circus animals for a week. Reporters' notes are confiscated inside the area and faxed to them later to reduce risk of their carrying microbes out on paper and pens.

Isolation is key to the elaborate safety system for containing volatile viruses on the island, said Dr. Harley W. Moon, director of the center.

"If the first envelope fails, there's a second envelope and a third envelope. If something got out of the building, there's a whole series of things that have to happen" before a virus threatened the mainland, said Moon, 59. "That's the advantage of being on an island."

Another advantage, according to a report by former center director Roger G. Breeze, is that if an airborne virus were released accidentally from Plum Island, half of it would be dispersed over the Atlantic Ocean. The rest would spread to Long Island, which no longer has commercial herds of cattle and swine, and Connecticut, whose herds are diminishing.

Plum Island has no herds roaming on its 840 acres. Deer that occasionally swim out to the island to forage are shot and killed, Moon said.



VIVIEN RIPPE/STAFF ARTIST

In addition to diagnosis, Plum Island focuses on research. The facility takes credit for determining the genetic structure of and developing field tests and vaccines for numerous diseases, including FMD, African swine fever, African horse sickness, Venezuelan equine encephalitis, Japanese encephalitis of swine, and bluetongue.

In one of several microbiology labs, a man was peering at what looked like large X-ray transparencies. Dr. Peter Mason, a molecular biologist, was in fact reading audio-radiographic images of DNA material, mapping the entire gene sequence, or genome, of the FMD virus. Mason was studying mutant strains.

"There are hundreds of subtypes. Our goal is to use a mutant strain to produce a safe, synthetic vaccine," Mason explained.

"Viruses are able to mutate, and the new virus evolves selectively in the presence of an immune response. They mutate because they're sloppy. They're like frogs laying eggs — even if a lot of them don't hatch, they still get tadpoles," he said.

Moon is holding the fort between federal budget cuts on one flank and, on the other, increasing numbers of livestock being imported under new treaties, such as the North American Free Trade Agreement.

In 1994, according to Brown's figures, 2.5 million livestock, poultry, and zoological animals were imported, a number that increases by 10 percent each year. "Foot-and-mouth is still a threat, even though the technology to fight it is evolving. This is pretty much of an endless commitment," Moon said.

Moon has been monitoring recent outbreaks of deadly viruses in Australia that have been killing rabbits, horses, and even humans.

Scientists working in a lab similar to Plum Island off the southern coast of Australia experimented with calicivirus to exterminate wild rabbits, which overrun the country and are considered pests. When windblown insects spread the virus to the mainland and rabbits there began dropping by the thousands, Australians cheered, but Moon got worried.

"There's a potential for calicivirus to come to the United States," he said. "We're keeping a close eye on it. We don't want it here."

Moon also is following an Australian outbreak of morbillivirus, a mysterious hemorrhagic disease that has killed nearly two dozen horses and two handlers during the past year. "It's quite lethal," he said.

After decades of secrecy surrounding Plum Island, the USDA finally opened the center to the press and the public for the first time last year.

Until then, there had been wild rumors among Long Island locals about alleged secret government experiments out there involving germ warfare, AIDS-infected monkeys, Lyme disease, crashed UFO aliens, and genetically engineered, 6-foot-tall, two-headed, mutant chickens — all of them firmly denied by government officials.

Still, there are weird stories told by the scientists themselves, about the island's murky past, that would play well on television's "Unsolved Mysteries."

There is the tale of Thomas Gardiner, a sea captain and scion of the family that settled eastern Long Island. "Colonel Tom," who died of smallpox and was buried by relatives — fearing his infected remains — on Plum Island in 1839, is periodically sighted roaming laboratory basements at night when things are not going well.

Even after working there for 23 years, Doug Moore, a microbiologist, is susceptible to the mysterious aura of Plum Island.

"You'd almost expect it to be shrouded in fog . . . like the island in the remake of 'King Kong,' wouldn't you?" Moore said, making his daily morning ferryboat commute into Long Island Sound to study African swine fever.

1997 (Feb 09)

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1997-02-09-the-miami-herald-pg-13-h-clip-usda

Country Day at U.S.D.A stars agricultural research

By GEORGIA TASKER
Herald Staff Writer

The annual open house at Chapman Field, sponsored by the Council of Garden Club Presidents of Dade County and called Country Day at the U.S.D.A., is Saturday.

This year, visitors will find some changes and note some new ones on the way.

The 200-acre subtropical research station of the U.S Department of Agriculture is undergoing a transition. Some basic road work, building rehabilitation and field work are spiffing up the place, but much more is being evaluated for a master plan that will plot the station's future.

The research center's plants and trees, many kept as a living collection of germ plasm for agricultural use, are looking better than they have in years, says Steve Pearson, president of the Friends of Chapman Field.

The station's new director is Michael Hennessey, an entomologist who has been working on the staff.

Exhibits, music and food

Country Day includes narrated tours of the station discussing the research, planting programs and projects. The Garden Club Presidents will sponsor a junior flower show, education exhibits, plants, music and food.

The day also is set aside for the annual meeting of Friends of Chapman Field at 11 a.m. and election of new directors of that group.

The research center's plants and trees are looking better than they have in years, says Steve Pearson, president of the Friends of Chapman Field.

The friends came together two years ago as a group of plant scientists and professionals who wanted to help save the historic research site from being shut by Department of Agriculture budget cuts. Now, the organization has an official "memorandum of understanding" with the Agriculture Research Service (ARS), giving its volunteers "official status so we can help define projects" for the station, Pearson said.

"This is a tremendous milestone," Pearson said. "The agreement was modeled after that between the ARS and Friends of the National Arboretum in Washington, D.C. It also indicates that the ARS will be more receptive to the public."

Work of friends

The regional director of ARS, Roger Breeze, based in Athens, Ga., said the National Arboretum is run by the ARS and has half a million visitors a year. He believes Friends of Chapman Field should define similar projects locally. A primary role of the National Arboretum's friends is to raise money, since it is prohibited from doing so.

Pearson said the friends would like to see programs at the research station expanded to include not only tropical fruit, but "to restart its traditional work with ornamental plants."

At one time, the station introduced plants for landscape use and, after testing, made cuttings or seeds available to local nurseries.

Proposals discussed by plant groups in South Florida have included research on citrus tristeza virus, which can be devastating to the industry; suggestions from the Florida Nurserymen and Growers Association for research on environmentally safe ways to fight insect pests affecting ornamental crops; the use of some acreage to increase Fairchild Tropical Garden's collection of new mango varieties.

Breeze said, "We have a research program, but we also have a couple of hundred acres of unique plants, and one of the things we want to do is make sure people have access to them."

Breeze said he would visit South Florida in March to meet with the friends and listen to their proposals.

Admission to Saturday's event is free.

Chapman Field is at 13601 Old Cutler Rd. Country Day will take place from 10 a.m. to 4 p.m.

2000 (Feb) - Presentation, RAND Corporation

https://www.rand.org/content/dam/rand/pubs/conf_proceedings/CF155.1/CF155.1.pdf

2000-02-rand-symposium-bioterrorism-homeland-defense-next-steps-exec-summary-cf155-1.pdf

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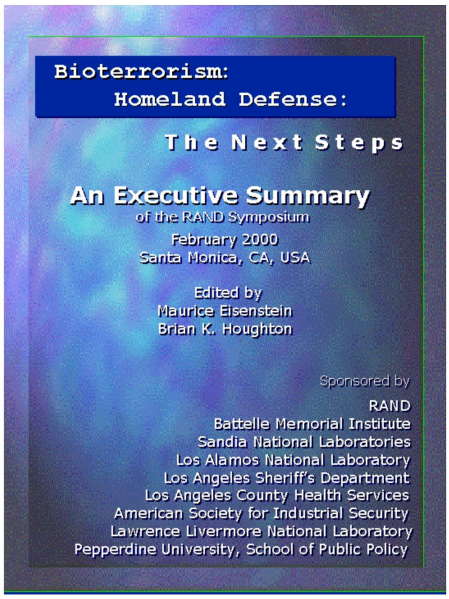
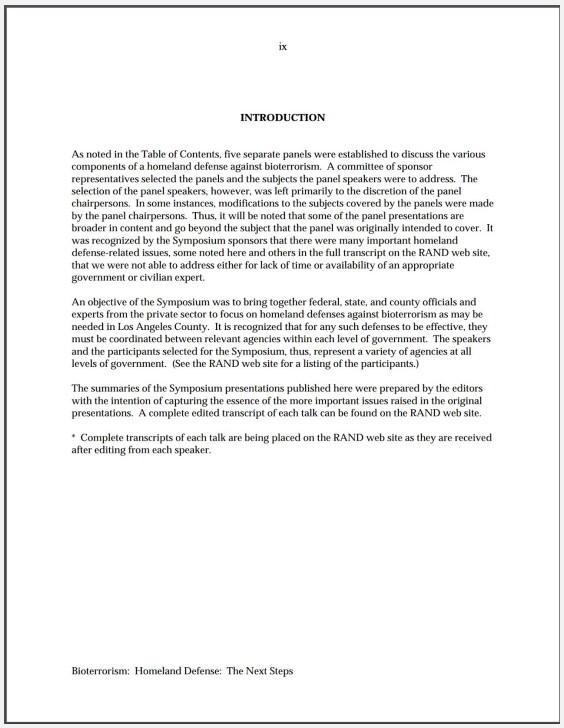




ix

INTRODUCTION

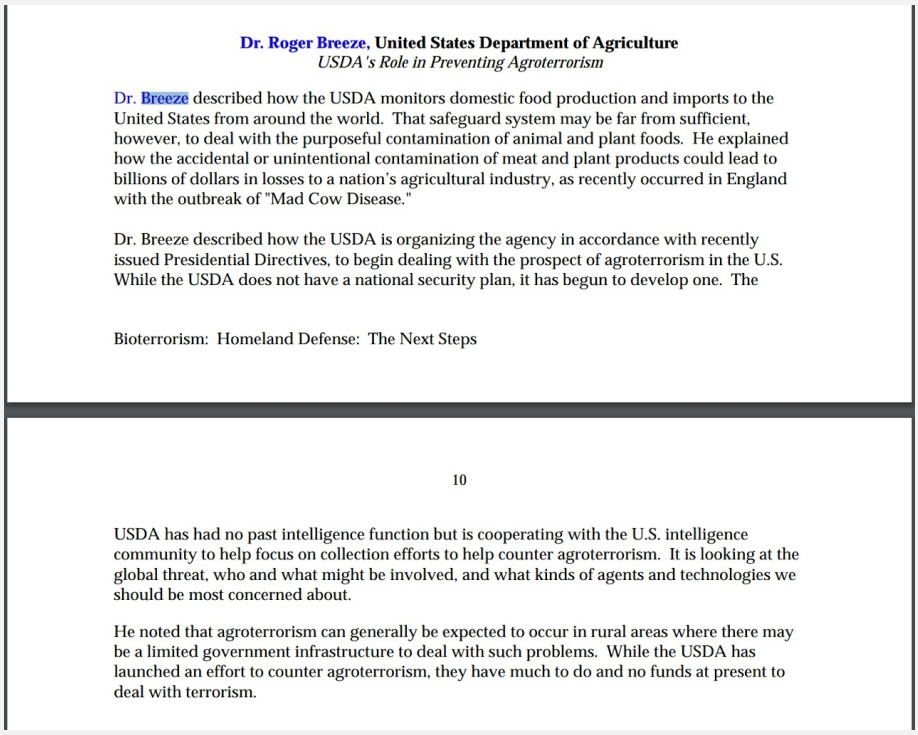
As noted in the Table of Contents, five separate panels were established to discuss the various components of a homeland defense against bioterrorism. A committee of sponsor representatives selected the panels and the subjects the panel speakers were to address. The selection of the panel speakers, however, was left primarily to the discretion of the panel chairpersons. In some instances, modifications to the subjects covered by the panels were made by the panel chairpersons. Thus, it will be noted that some of the panel presentations are broader in content and go beyond the subject that the panel was originally intended to cover. It was recognized by the Symposium sponsors that there were many important homeland defense-related issues, some noted here and others in the full transcript on the RAND web site, that we were not able to address either for lack of time or availability of an appropriate government or civilian expert.

An objective of the Symposium was to bring together federal, state, and county officials and experts from the private sector to focus on homeland defenses against bioterrorism as may be needed in Los Angeles County. It is recognized that for any such defenses to be effective, they must be coordinated between relevant agencies within each level of government. The speakers and the participants selected for the Symposium, thus, represent a variety of agencies at all levels of government. (See the RAND web site for a listing of the participants.)

The summaries of the Symposium presentations published here were prepared by the editors with the intention of capturing the essence of the more important issues raised in the original presentations. A complete edited transcript of each talk can be found on the RAND web site.

* Complete transcripts of each talk are being placed on the RAND web site as they are received after editing from each speaker.

Bioterrorism: Homeland Defense: The Next Steps



Dr. Roger Breeze, United States Department of Agriculture
USDA's Role in Preventing Agroterrorism

Dr. Breeze described how the USDA monitors domestic food production and imports to the United States from around the world. That safeguard system may be far from sufficient, however, to deal with the purposeful contamination of animal and plant foods. He explained how the accidental or unintentional contamination of meat and plant products could lead to billions of dollars in losses to a nation's agricultural industry, as recently occurred in England with the outbreak of "Mad Cow Disease."

Dr. Breeze described how the USDA is organizing the agency in accordance with recently issued Presidential Directives, to begin dealing with the prospect of agroterrorism in the U.S. While the USDA does not have a national security plan, it has begun to develop one. The

Bioterrorism: Homeland Defense: The Next Steps

10

USDA has had no past intelligence function but is cooperating with the U.S. intelligence community to help focus on collection efforts to help counter agroterrorism. It is looking at the global threat, who and what might be involved, and what kinds of agents and technologies we should be most concerned about.

He noted that agroterrorism can generally be expected to occur in rural areas where there may be a limited government infrastructure to deal with such problems. While the USDA has launched an effort to counter agroterrorism, they have much to do and no funds at present to deal with terrorism.

2001 (May 31)

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Kokomo Tribune US
31 May 2001, Kokomo, Indiana

Roger Breeze associate administra tor of the Agriculture Research Ser vice said he was releasing informa tion ...Breeze Associate administrator of the Agricultural Research Service land is developing for more speedy detecti...Breeze said another advantage of the DNA tests is that it can find the virus in an infected animal that oth er...

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2001 (Jun 26)

pg c2

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2001-06-26-the-pantagraph-bloomington-illinois-pg-c-2-clip-food-security

Feds urge food security

Scripps Howard News Service

NEW ORLEANS — The FBI and federal agencies overseeing food safety issues are urging America's food manufacturers and processors to impose new farm-to-restaurant security procedures to thwart attacks by bioterrorists that could cripple the nation's food supply.

"The food supply is an obvious target — we all have to eat," said LeeAnne Jackson of the U.S. Food and Drug Administration's center for food safety and nutrition. "We need to raise the attention of the food industry to the possibility of terrorism."

She said information on spreading plant and animal diseases is already available on the Internet, including one "how-to" underground publication, "Silent Death," by the pseudonymous Uncle Fester, which once was a best-seller on Amazon.com.

But Jackson said potential terrorists don't need to go to the effort of making biological weapons because there's an ample supply of deadly cultures and viruses in often badly secured academic research laboratories that could also be stolen and used to spread diseases.

"Why we are concerned about food is that it has already occurred," she said, recalling the 1984 incident in The Dalles, Ore., when followers of the Bhagwan Shree Rajneesh spread salmonella on a salad bar, poisoning 750 people. More recently, 27 people at LaValle University in Quebec were sickened last year after arsenic was put in the veterinary laboratory's coffee machine.

Craig Watz, director of the FBI's center for biological terrorism in Washington, told the Institute of Food Technologists convention meeting here this week that the current assessment of likely future terrorist attacks in the United States involves bombs and guns because they have more predictable effects.

But he told the industry that there are already worrying signs biological weapons are appearing more often in anthrax hoaxes and extortion attempts using threats of poisoning food. He said his office now handles 200 to 250 cases a year of possible biological terrorism, most of which turn out to be hoaxes.

"The biological arena is unpredictable," and terrorists could switch to spreading animal or plant diseases to undermine public confidence in the $18 billion food industry, and attempt to ruin America's economy.

Scott Brooks, head of food safety for the Taco Bell restaurant chain, said there are simple security steps the industry can take to make terrorist attacks more difficult, from closing their processing plants to outsiders, to more closely checking everything that comes into their facilities.

Roger Breeze, head of special research programs at the U.S. Agriculture Department's Agricultural Research Service, said Americans have been lulled into a sense of security because the two oceans have prevented serious animal disease epidemics in the United States.

Breeze said that shouldn't make the food industry complacent to what might happen if someone deliberately infected animals.

july 01

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2001-07-01-york-news-pennsylvania-pg-a11.jpg

2001-07-01-york-news-pennsylvania-pg-a11-clip-food-security

STATE & NATION

'WE ALL HAVE TO EAT'

Experts warn of the next terror target: food supply

Nation vulnerable to deliberate spread of bacteria, viruses

By LANCE GAY
Scripps Howard News

NEW ORLEANS — The FBI and federal agencies overseeing food safety issues are urging America's food manufacturers and processors to impose new farm-to-restaurant security procedures to thwart attacks by bioterrorists that could cripple the nation's food supply.

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Predictable: Craig Watz, director of the FBI's center for biological terrorism in Washington, told the Institute of Food Technologists convention meeting here this week that the current assessment of likely future terrorist attacks in the United States involves bombs and guns because they have more predictable effects.

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"The biological arena is unpredictable," and terrorists could switch to spreading animal or plant diseases to undermine public confidence in the $18 billion food industry, and attempt to ruin America's economy. "The public panic is the goal," he said.

Scott Brooks, head of food safety for the Taco Bell restaurant chain, said there are simple security steps the industry can take to make terrorist attacks more difficult, from closing their processing plants to outsiders, to more closely checking everything that comes into their facilities.

"The weak underbelly is our food and water supplies," said Brooks, who formerly worked on a Pentagon program to secure the food supply for U.S. Air Force bases in the Middle East.

Sense of security: Roger Breeze, head of special research programs at the U.S. Agriculture Department's Agricultural Research Service, said Americans have been lulled into a sense of security because the two oceans have kept serious animal disease epidemics from coming to the United States.

Breeze said that shouldn't make the food industry complacent to what might happen if someone deliberately infected animals with a foreign disease. He noted England's beef and sheep industry has been devastated by a foot-and-mouth disease outbreak that brought agricultural shipments to a halt and resulted in killing more than 4.5 million head of livestock. The United States has more than 200 million cattle, hogs and sheep that would be vulnerable if the outbreak spread here.

"There are vulnerabilities" in the U.S. food supply chain, he said. "What we're doing here is trying to anticipate something will happen in the future."

Agriculture Department inspector general Roger Viadero said his office is also asking Congress this year to increase penalties for smuggling prohibited agricultural products into the United States.

He said he wasn't aiming at individuals who bring prohibited fruit or meat into the United States, but organized smuggling that could import exotic fruit flies that would devastate fruit farms from California's Central Valley to Georgia.

2004 (Aug 23)

- https://www.newspapers.com/image/266794423/?terms=%22roger%20breeze%22&match=1

2004-08-23-the-honolulu-advertiser-pg-a5-clip-farm-security.jpg

(also https://newspaperarchive.com/cedar-rapids-gazette-aug-25-2004-p-15/)

Many of nation's farms step up security

Bioattack could be devastating to economy

BY CHARLES PILLER
Los Angeles Times

GREELEY, Colo. — The teeming Swift & Co. slaughterhouse on the edge of town has the feel of a military base lately. Security cars cruise the fenced compound, and periodic drills are run to prepare for any attack.

At the Wayne Farms poultry plant in Decatur, Ala., armed guards patrol the grounds, searching for any threat to the tens of thousands of chickens.

In Porterville, Calif., dairy farmer Tom Barcellos recently installed video cameras in his milking barns to keep watch over his 1,200 cows.

Nothing seems farther from the front lines of terror than the vast American hinterlands, yet since the Sept. 11, 2001, attacks they have been drawn into the amorphous battle.

The threat is agroterrorism — the use of microbes and poisons to shake confidence in the U.S. food supply and devastate the $201 billion farm economy.

Diseases such as swine fever or citrus greening disease can spread across the land silently. A single outbreak of foot-and-mouth disease could require the destruction of millions of cows and result in a worldwide ban on U.S. cattle exports for years.

"The animal becomes a weapon," said Peter Chalk, an agroterrorism expert with the Rand Corp., a Santa Monica, Calif.-based think tank.

Unlike the most feared bioterrorism threats, such as smallpox and anthrax, some virulent agricultural diseases are harmless to humans. The diseases can be obtained from infected crops and animals worldwide.

No known intelligence has linked terrorists to attempts to compromise the food supply, according to federal officials, but concerns were sparked after investigators discovered that the Sept. 11 hijackers had explored the use of crop dusters. Last year, Sen. Susan Collins, R-Maine, chairwoman of the Governmental Affairs Committee, said U.S. forces found "hundreds of pages of U.S. agricultural documents" in caves in Afghanistan once occupied by al-Qaida militants.

"The expertise needed to mount a serious attack is quite small," said University of California-Davis microbiologist Mark Wheelis. "The amount of material needed — you could hold it in a ballpoint pen."

The Department of Agriculture is building or modernizing two dozen laboratories to quickly screen disease samples from around the United States. It has created SWAT teams of plant and animal pathologists in each region to respond to outbreaks and proposes to spend $381 million on biodefense in 2005.

"Naturally, when there's never been a Noah-like flood, people don't want to prepare for it."
ROGER BREEZE | agroterrorism expert

"We're looking at what changes are needed," said Jeremy Stump, the USDA's domestic security director, whose office is dedicated to the agroterrorism threat. "We may need to harden targets."

Yet the efficiencies of the very productive farm system — vast tracts of single-crop fields and factory farms that crowd thousands of animals in tightly packed pens — make security in agriculture difficult.

"Naturally, when there's never been a Noah-like flood, people don't want to prepare for it," said Roger Breeze, an agroterrorism expert who recently retired from a top USDA post.

There have been several natural outbreaks of animal disease that bolster a wide view of the threat's scope. In December in Washington state, a single case of bovine spongiform encephalopathy — mad cow disease — shut down most U.S. beef exports for months. Some nations still refuse U.S. cattle.

Three million chickens were killed in 2002 as Newcastle disease swept through Southern California.

If a foot-and-mouth attack occurs, it might start at a place like Swift's Gilcrest feedlot, south of Greeley. It is a small city of cows — about 80,000 packed in pens.

Gates block entrances. Cameras and guards keep watch. Yet, unlike Swift's fortresslike slaughterhouse, Gilcrest seems an easy target for an attacker lofting a bag of infected feed over the fence from nearby County Road 31. Within a 10-mile radius are nearly a half million cattle, said Bob Rolston, past president of the Colorado Livestock Association.

The primary concern of most farmers and ranchers is a natural outbreak. "One catastrophic disease outbreak and 15 years of market development is down the drain," said Mark Gustafson, a senior vice president at Swift.

But the Sept. 11 attacks added another layer of worry. More surveillance cameras have been installed in Swift's feedlots. At the slaughterhouse in Greeley, every employee is searched before entering the plant through a tunnel accessible only from a guardhouse, said Jim Herlihy, a company spokesman.

Such measures, however, seem minimal given the vast territory that must be protected against an attack or, more likely, a natural outbreak.

The industry has turned to advanced technology for reassurance. But just like bioterrorism that targets people, each precaution would only limit rather than deter an attack.

Breeze and Wheelis advocate greater use of vaccines, but that approach is fraught with problems — high cost and logistical complexity among them.

Foot-and-mouth comes in more than a dozen strains, each of which requires a separate vaccine. Many nations cannot readily distinguish between infected and vaccinated animals and would reject either at their border.

Cepheid Corp. and Idaho Technology market suitcase-size devices that they call a first line of defense against agroterrorism. Originally designed as mobile sensors to protect people against bioterrorism, the sensitive instruments sniff the air to determine the presence of a deadly microbe within half an hour. Such devices helped map Southern California's Newcastle outbreak.

Scientists are experimenting with portable units at poultry farms and dairies. But the scale of the problem is too big for such solutions. Each device costs at least $30,000, and thousands would be needed.

2006 (book) - Microbial Forensics Edited by Roger Breeze, Bruce Budowle, and Steven Schutzer

Burlington, MA: Elsevier Academic Press, 2005.433 pp., illustrated. $129.95 (cloth)

Gary P. Wormser, Philip L. Graham, III

Clinical Infectious Diseases, Volume 42, Issue 1, 1 January 2006, Pages 159–160, https://doi.org/10.1086/498524

Published: 01 January 2006

https://academic.oup.com/cid/article/42/1/159/394679

2007 (Oct 03) -

https://newspaperarchive.com/hutchinson-news-oct-03-2007-p-16/

2006 - nice home !

https://issuu.com/washingtonlife/docs/october_2006__100mb_/115

2008 (april 12) - color !

pg a1 - https://newspaperarchive.com/hutchinson-news-apr-12-2008-p-1/

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2008-04-12-the-hutchinson-news-kansas-pg-01-clip-foot-mouth-labJpeg

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2008-04-12-the-hutchinson-news-kansas-pg-10

COVERING THE BETTER PART OF KANSAS

THE HUTCHINSON NEWS

SATURDAY, APRIL 12, 2008 50 CENTS

Foot-and-mouth lab considers Kan.

■ Feds admit to previous accidents at research facility for illness fatal to livestock.

By Larry Margasak
Associated Press Writer

WASHINGTON - The only U.S. facility allowed to research the highly contagious foot-and-mouth disease experienced several accidents with the feared virus, the Bush administration acknowledged Friday.

A 1978 release of the virus into cattle holding pens on Plum Island, N.Y., triggered new safety procedures. While that incident was previously known, the Homeland Security Department told a House committee there were other accidents inside the government's laboratory.

The accidents are significant because the administration is likely to move foot-and-mouth research from the remote island to one of five sites on the U.S. mainland near livestock herds. This has raised concerns about the risks of a catastrophic outbreak of the disease, which does not sicken humans but can devastate the livestock industry.

Skeptical Democratic leaders of the House Energy and Commerce Committee demanded to see internal documents from the administration that they believe highlight the risks and consequences of moving the research. The live virus has been confined to Plum Island for more than a half-century to keep it far from livestock.

The 1978 accidental release "resulted in the FMD virus in some of the cattle in holding pens outside the laboratory facility," Jay Cohen, a senior Homeland Security official,

See LAB / A9

Lab

●Continued from Page A1

wrote in response to the committee.

"Detailed precautions were taken immediately to prevent the spread of the disease from Plum Island, and new precautionary procedures were introduced."

Cohen, undersecretary for science and technology, said there also have been "in-laboratory incidents" - contamination of foot-and-mouth virus within the facility but not outside it - at Plum Island since 1954. That was the year the Agriculture Department acquired the land and started the Plum Island Animal Disease Center.

One government report, produced last year and already provided to lawmakers by the Homeland Security Department, combined commercial satellite images and federal farm data to show the proximity to livestock herds of locations that have been considered for the new lab.

"Would an accidental laboratory release at these locations have the potential to affect nearby livestock?" asked the nine-page document. It did not directly answer the question.

'Full-court press'

A simulated outbreak of the disease in 2002 - part of an earlier U.S. government exercise called "Crimson Sky" - ended with fictional riots in the streets after the simulation's National Guardsmen were ordered to kill tens of millions of farm animals, so many that troops ran out of bullets. In the exercise, the government said it would have been forced to dig a ditch in Kansas 25 miles long to bury carcasses. In the simulation, protests broke out in some cities amid food shortages.

"It was a mess," said Sen. Pat Roberts, R-Kan., who portrayed the president in that 2002 exercise.

"Devastating results happened; utter chaos - loss of markets, the herds had to be destroyed, people panicked in urban areas," Roberts said during a 2008 Senate hearing.

Now, like other lawmakers from the states under consideration, Roberts supports moving the government's new lab to his state. Manhattan, Kan., is one of five mainland locations under consideration. "It will mean jobs" and spur research and development, he says.

In its quest to win the $450 million facility, Kansas officials have launched what Gov. Kathleen Sebelius calls a "full-court press" to convince the government that Kansas is the best location. Sebelius created a task force to lobby for the lab and last month the state authorized $105 million in bonds to buy land, upgrade roads and build a utility plant for the lab at the proposed site on the Kansas State University campus.

Other possible locations for the new National Bio- and Agro-Defense Facility are Athens, Ga.; Butner, N.C.; San Antonio; and Flora, Miss. The new site could be selected later this year, and the lab would open by 2014. The number of livestock in the counties and surrounding areas of the finalists range from 542,907 in Kansas to 132,900 in Georgia, according to the Homeland Security Department's internal study.

Foot-and-mouth virus can be carried on a worker's breath or clothes, or vehicles leaving a lab, and is so contagious it has been confined to Plum Island since the research began. The existing lab is 100 miles northeast of New York City in the Long Island Sound. Researchers there who work with the live virus are not permitted to own animals at home that would be susceptible, and they must wait at least one week after work before attending outside events where such animals might perform, such as a circus.

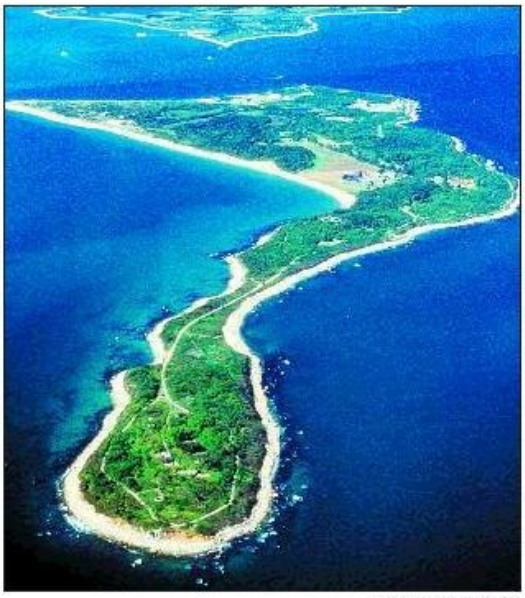
Leaders of the House Energy and Commerce Committee also are worried about the lab's likely move to the mainland. Chairman John Dingell, D-Mich., and the head of the investigations subcommittee, Rep. Bart Stupak, D-Mich., also demanded reports about "Crimson Sky" and other studies on the consequences of live virus research on the U.S. mainland. Cohen, the Homeland Security official, said those documents were provided.

Two lawmakers from New York, Sen. Hillary Rodham Clinton and Rep. Timothy Bishop, both Democrats, expressed concerns in letters they wrote last year about the Homeland Security Department's ability to protect the existing lab at Plum Island, which relies for security on a private security company and local police rather than federal agents.

"We are particularly concerned that DHS has not been meeting the security needs of the facility since Federal Protective Service agents were removed from the island," Clinton and Bishop wrote in a letter obtained by The Associated Press.

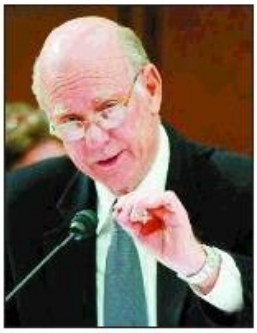
Cohen responded that Plum Island used a contract with a private security firm and relied on an agreement with local police, who were deputized to enforce federal laws on the island.

Will Jenkins, Bishop's spokesman, said Friday that Homeland Security "has been responsive to the concerns raised last year, and Congressman Bishop is pleased with the progress DHS is making regarding security for Plum Island."



Photos by The Associated Press

Plum Island, off the northern shore of Long Island, N.Y., is home to the Plum Island Animal Disease Center, where scientists study some of the world's most infectious animal viruses.



Sen. Pat Roberts, R-Kan., portrayed the president in the 2002 "Crimson Sky" exercise – a simulated outbreak of foot-and-mouth disease. The exercise ended with riots in the streets after fictional National Guardsmen were ordered to kill tens of millions of farm animals, so many that troops ran out of bullets. "It was a mess," he said.

Security questions

The White House said modern safety rules at labs are sufficient to avoid any outbreak. But incidents in Britain have demonstrated that the foot-and-mouth virus can cause remarkable economic havoc - and that the virus can escape from a facility.

An epidemic in 2001 devastated Britain's livestock industry, as the government slaughtered 6 million sheep, cows and pigs. Last year, in a less serious outbreak, Britain's health and safety agency concluded that the virus probably escaped from a site shared by a government research center and a vaccine maker. Other outbreaks have occurred in Taiwan in 1997 and in China last year and in 2006.

If even a single cow signals an outbreak in the United States, emergency plans permit the government to shut down all exports and movement of livestock. Herds would be quarantined, and a controlled slaughter could be started to stop the disease from spreading.

Infected animals weaken and lose weight. Milk cows don't produce milk. They remain highly infectious, even if they survive the virus.

The Homeland Security Department is convinced it can safely operate the lab on the mainland, saying containment procedures at high-security labs have improved. The livestock industry is divided. Some experts, including the former director at the aging Plum Island lab, say research ought to be kept away from cattle populations - and, ideally placed where the public already has accepted dangerous research.

The former director, Dr. Roger Breeze, suggested the facility could be safely located at the Atlanta campus of the Centers for Disease Control and Prevention, or at Fort Detrick in Frederick, Md., home of The United States Army Medical Research Institute for infectious diseases.

Another possibility, Breeze said, is on Long Island, where there is no commercial livestock industry. That would allow retention of most of the current Plum Island employees.

The former head of the Agriculture Department's Agricultural Research Service said Americans are not prepared for a foot-and-mouth outbreak that has been avoided on the mainland since 1929.

"The horrific prospect of exterminating potentially millions of animals is not something this country's ready for," said Dr. Floyd Horn.

The Agriculture Department ran the Plum Island lab until 2003. It was turned over to the Homeland Security Department because preventing an outbreak is now part of the nation's biological defense program.

Plum Island researchers work on detecting the disease, controlling epidemics using vaccines and drugs, testing imported animals and training professionals.

The new facility will add research on diseases that can be transferred from animals to humans. The Plum Island facility is not secure enough to handle that higher-level research.

A new facility at Plum Island is technically a possibility. Signs point to a mainland site, however, after the administration spent considerable time and money scouting new locations. Also, there are financial concerns about operating from a location accessible only by ferry or helicopter.

The Homeland Security Department said laboratory animals would not be corralled outside the new facility, and they would not come into contact with local livestock. All work with the virus and lab waste would be handled securely and any material leaving would be treated and monitored to ensure it was sterilized.

"Containment technology has improved dramatically since foot-and-mouth disease prohibitions were put in place in 1948," said Homeland Security spokeswoman Amy Kudwa.

2009ish - Video

https://www.youtube.com/watch?v=7Tt9cDEYNPI

2010

https://www.ncbi.nlm.nih.gov/books/NBK50872/

2010-nbk50873.pdf

Sequence-Based Classification of Select Agents A B R I G H T E R L I N E Committee on Scientific Milestones for the Development of a Gene Sequence-Based Classification System for the Oversight of Select Agents Board on Life Sciences Division on Earth and Life Studies

Copyright 2010 by the National Academies. All rights reserved. Printed in the United States of America.

Preface Recent studies by the National Research Council have focused on the tension between the rapid advances in biotechnology that clearly benefit humankind and the potential use of the same advances for nefarious purposes. The 2004 report, Biotechnology Research in an Age of Terrorism helped to focus attention on the issue, and among other recommendations called for the creation of a National Science Advisory Board for Biodefense (NSABB) to serve as a bridge between the government and scientific communities in raising awareness of the potential for misuse of biotechnology. A later report, Globalization, Biosecurity, and the Future of the Life Sciences carried the discussion forward with a global perspective and promoted a global common culture of awareness and a shared sense of responsibility among life scientists. In 2006, the NSABB issued Addressing Biosecurity Concerns Related to the Synthesis of Select Agents, which called for expert evaluation to determine whether an alternative framework based on predicted features and properties encoded by nucleic acids, such as virulence or pathogenicity, can be developed and used in lieu of the current finite list of specific agents and taxonomic definitions. Our committee was tasked with identifying “the scientific advances that would be necessary to permit serious consideration of developing and implementing an oversight system for Select Agents that is based on predicted features and properties encoded by nucleic acids rather than a relatively static list of specific agents and taxonomic definitions.” Our committee was populated with persons who had expertise in several complementary fields. The amalgamation of scientific backgrounds allowed us to address our task from different viewpoints and to assess the potential impact of our recommendations on various sectors. We benefited by having committee members who were experts in human and animal health and leaders in the

development of policy relevant to these fields; leaders in fundamental structural, evolutionary, and computational biology and bioinformatics; scientists dedicated to the study of pathogenic viruses and bacteria; and experts from the commercial biotechnology sector. Many committee members were personally involved either directly or indirectly in research on plant or animal pathogens designated as Select Agents and thus had first-hand experience in dealing with the relevant regulations and security requirements implemented in recent years to reduce the risk of misuse. We were especially fortunate to have a senior scientist and executive in the biotechnology industry who was able to offer a unique perspective on the role of industry in implementation of current and future steps that might be taken to reduce the risk of misuse of synthetic biology. We were informed by the shared expertise of many professionals in synthetic biology, security, public health, human and animal medicine, the life sciences, informatics and several other relevant fields as we grappled with our challenging task. Specifically, Julia Kiehlbauch, Robbin Weyant, Claudia Mickelson, Edward You, and Amy Patterson helped us to understand the current structure for oversight of Select Agents. Peter Pesenti, John Mulligan, Marcus Graf, Claes Gustafsson and Stephen Maurer discussed with us the current mechanisms and criteria for screening and surveillance at the sequence level. Stanley Falkow, Jeffrey Taubenberger, Michael Katze, Ralph Baric and Ramon Felciano discussed virulence; and Sean Eddy, Jonathan Eisen, Elliot Lefkowitz, John Moult and Ian Lipkin addressed gaps, challenges and potential milestones in predicting pathogenicity from sequence information. In addition, Carol Linden, Arturo Casadevall, David Relman, Mary Groesch, Jacqueline Corrigan-Curay and James Blaine all met personally with our committee and joined in our discussions. We sincerely thank all those who took time from their busy schedules to meet with us, answer our questions, and guide us in our deliberations. Early in our discussions, it became apparent that the criteria historically used to designate a pathogen as a Select Agent included characteristics that cannot be determined by sequence alone and therefore cannot be predicted with the degree of certainty required for regulatory purposes. We soon concluded that a sequence-based prediction system for oversight of Select Agents is not now possible, nor is it likely to be feasible in the foreseeable future. We did, however, recognize that a sequence-based classification system for Select Agents focused on consideration of sequences of concern could be developed and might help to clarify taxonomic distinctions among recognized Select Agents. By focusing on “sequences of concern” and coupling that with a cautionary alert (a “yellow flag system”), one might effectively address both biosecurity and biosafety goals. Near-term milestone and long-term research objectives were defined and are discussed in our report. Throughout our deliberations, we continually tried to balance the need for safety and security, while recognizing the challenges of potential dual-use applications that arise as the scientific

community improves its understanding of the genomic basis that leads one organism to be pathogenic, while its near neighbor is not. We were also concerned about the potential burden that such an oversight program might have on the day-to-day conduct of science and the biotechnology business sector, and about the opportunities that might be missed. We concluded that a gene sequence-based classification system could be developed. We did not, however, address whether such as system should be developed or whether the additional administrative structure needed to maintain such a system would be justified. Therefore, we do not specifically recommend that either the classification or yellow flag system be implemented. Rather, we provide information about what is technologically feasible, and emphasize that the potential benefits of such a system should be considered and weighed against the cost and complexity of implementation. **The Nobel laureate Joshua Lederberg was quoted in Richard Preston's 1998 article on bioweaponeers in The New Yorker as saying: "There is no technical solution to the problem of biological weapons. It needs an ethical, human, and moral solution if it's going to happen at all. Don't ask me what the odds are for an ethical solution, but there is no other solution. But would an ethical solution appeal to a sociopath? (Preston 1998)"** We find ourselves today, more than a decade later, still searching for a technical solution to a challenge that has grown beyond biological warfare and now encompasses the threat of bioterrorism as well; a challenge that is ever more complex and threatening as biotechnology advances and access to it expands. We can attempt to harness technology to lessen risks, but we would be wise to heed Lederberg's advice to couple this with efforts toward an "ethical, human and moral solution." The committee wishes to express its sincere thanks and appreciation to India Hook-Barnard, our study director and program officer, for her leadership, guidance and expertise, coupled with good nature and charming personality. We benefited greatly from her dedication and creativity throughout the study. She was ably assisted by Carl-Gustav Anderson, senior program assistant, who ensured that our every need was met during our meetings and conference calls and worked diligently to coordinate schedules in what must have been a nearly impossible task. Our project was expertly guided by Fran Sharples as the director of the Board on Life Sciences. Finally, on a personal note, I would like to express my sincere appreciation to the members of the committee, who generously donated their time and knowledge to make this project both extremely productive and very enjoyable. Our discussions were frank, open, and honest, and they benefited greatly from the diversity of our backgrounds and our complementary experiences. We were indeed more than the sum of our own individual contributions. It has been my pleasure and privilege to work with each of you. James W. Le Duc, Chair

[...]

Dr. Roger G. Breeze received his veterinary degree in 1968 and his PhD in veterinary pathology in 1973, both from the University of Glasgow, Scotland. He was engaged in teaching, diagnostic pathology, and research on respiratory and cardiovascular diseases at the University of Glasgow Veterinary School from 1968 to 1977 and at Washington State University College of Veterinary Medicine from 1977 to 1987, where he was professor and chair of the Department of Microbiology and Pathology. **From 1984 to 1987, he was deputy director of the Washington Technology Center, the state's high-technology sciences initiative, based in the College of Engineering of the University of Washington.** In 1987, he was appointed director of the U.S. Department of Agriculture (USDA) Plum Island Animal Disease Center, a Biosafety Level 3 facility for research and diagnosis related to the world's most dangerous livestock diseases. In that role, he initiated research on the genomic and functional genomic basis of disease pathogenesis, diagnosis, and control of livestock RNA and DNA virus infections. That work became the basis of U.S. defense against natural and deliberate infection with those and led to his involvement in the early 1990s in biologic-weapons defense and proliferation prevention. From 1995 to 1998, Dr. Breeze directed research programs in 20 laboratories in the Southeast for the USDA Agricultural Research Service before going to Washington, D.C., to establish biologic-weapons defense research programs for USDA. He received the Distinguished Executive Award from President Clinton in 1998 for his work at Plum Island and in biodefense. Since 2004, he has been chief executive officer of Centaur Science Group, which provides consulting services in biodefense. His main commitment is to the Defense Threat Reduction Agency's Biological Weapons Proliferation Prevention Program in Europe, the Caucasus, and Central Asia.

BUT A QUIET REVOLUTION WAS UNDER WAY IN AN OBSCURE SECTOR known as "advanced technology." Almost unnoticed, state high-tech employment increased 28 percent during those tough four years.

In an industrial economy accustomed to lumber mills and copper smelters, high technology had long meant **Boeing's missiles, radar systems and jet aircraf**t. Otherwise, high tech happened someplace else.

It was just as well, noted some locals, because technology was heartless. Computerized robots would only force more workers to join out-of-work loggers and fishermen. And what would they all do? Become computer programmers?

In 1980, The Times regarded high technology with considerable skepticism. A year later, as the term "high tech" was entering standard newspaper usage, The Times noted a number of small, local companies with promising futures. "Some may grow to become household words, others may die on the vine," the story cautioned. This iffy group included Data I/O and Microsoft, then boasting 100 employees and annual sales of only $15 million.

https://special.seattletimes.com/o/special/centennial/december/silicon_forest.html

1996-12-01-the-seattle-times-silicon-forest.pdf

UW RESEARCH PROVIDED THE CORE CONCEPTS FOR A HOST OF LOCAL PRODUCT DEVELOPMENTS in medical electronics and biomedical engineering. **Worried about "the UW idea drain," the Washington Research Foundation was organized in 1981, joined two years later by the Washington Technology Center, to foster and control the transfer of technology from UW researchers to commercial development.**

As the high-tech boom gained momentum in 1984, the development council published its first guidebook, Advanced Technology in Washington State. **In that Orwellian year, the guide found the top five high-tech employers in the state, by workforce, to be Boeing Computer Services in Seattle, Battelle in Richland, John Fluke in Everett, Keytronic in Spokane, and Tektronix in Vancouver. Sundstrand Data Control, in Redmond, was the only Eastside firm among the top 10.**

among the top 10.

W. Hunter Simpson, a UW regent and president of [Physio-Control Corporation - home], lobbied for the Technology 21 initiative to attract more high-tech industry, noting that "lifestyle, economic practicability, legislative compatibility and educational strength" had made Puget Sound an attractive home for high-tech firms.

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William Hunter Simpson (born 1926)

BUT THERE WERE STUMBLING BLOCKS. The new entrepreneurs accused the state of being unfriendly to high tech. Immunex CEO Stephen Duzan pointed out tartly that his company would pay nearly $1 million in state sales and business-and-occupation taxes before turning a dime of profit.

Others worried about stringent federal regulations and the lack of local venture capital. But as the '80s wore on, high-tech growth increasingly included local spinoffs and start-ups, as well as established firms from outside the area.

Early in the 1980s, The Times measured these companies by their number of employees and potential to diversify the state economy. But at mid-decade, The Times grew fascinated with the science-fiction promise of high-technology products, from genetic therapies to solar cells, defibrillators to operating systems. The Times wrote breathlessly of start-ups, the grunge bands of 1980s' engineering research and development, as "heady places to work," characterized by roller-coaster risks and opportunities, keen camaraderie and a frantic pace.

Hot pursuit of the Next Great Thing by velvet-sweatshop workaholics contradicted received management wisdom and flattened the corporate hierarchy.

https://25iq.com/about/

"My name is **Tren**. I work for Microsoft. Previously I was a partner at Eagle River, a private equity firm established by Craig McCaw."

ALSO WROTE BOOKS ON CHARLIE MUNGER

https://25iq.com/2017/06/24/a-dozen-lessons-i-learned-from-bill-gates-sr/

5. **"Woody Allen said, 'Eighty percent of success is showing up.' And, I believe that. If you're on a board, a committee of some kind, and you go to a meeting and nobody else showed up... You support causes by showing up and, obviously, participating."** It is stunning how many boards, committees and groups Bill has participated in over his career. His influence is everywhere you look in Seattle and, if you look at the influence of the Bill and Melinda Gates Foundation, the world. **As just one illustrative example, in the early 1980s he involved me in an effort to move technology from the University of Washington to the private sector. The Washington Research Foundation was organized in 1981 and the Washington Technology Center two years later to foster the transfer of technology from university researchers to commercial businesses. He knew then that it is the positive spillovers a great research university that drives the economic and cultural vibrancy of a city.** Having the opportunity to watch him operate in that setting was life changing in terms of developing my skills.

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https://www.washington.edu/students/gencat/archive/GenCat1984-86v1.pdf

https://www.washington.edu/students/gencat/archive/GenCat1986-88v1.pdf

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Has joined Lawrence Livermore ... was an advocate of PCR testing

https://www.ncbi.nlm.nih.gov/books/NBK390426/

"In subsequent discussions, workshop participants considered how to address the issue of inadequate surveillance for mosquito-borne diseases in particular. Both Petersen and Margolis noted that while mosquito surveillance proved a good early indicator of outbreaks of West Nile fever, that is not the case for dengue, nor might it be for chikungunya. Petersen noted that surveillance for mosquito-borne diseases in the continental United States is limited largely to *Culex* mosquitoes, which are very different from the *Aedes* species.

Moreover, Petersen said, mosquito-based surveillance is useful for preventing or controlling outbreaks only if it generates a speedy response. “Really, we want to aim to build local capacity for mosquito-based surveillance. They are the ones making the decisions. They need to make them quickly.” To this end, forum member Roger Breeze of Lawrence Livermore National Laboratory recommended that health departments take advantage of technological advances, such as multiplex PCR, to expedite pathogen analysis. “We are still stuck in a very 1990s paradigm, and bemoaning the fact that we don't have lots of people doing 1990s technology that you can do with a machine,” he observed. He also noted that the Department of Defense is attempting to develop “a completely autonomous system to analyze what [pathogens are] . . . flying around in the mosquito and report to you.”

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https://www.legacy.com/obituaries/washingtonpost/obituary.aspx?n=roger-gerrard-breeze&pid=180345805&fhid=6125

DR. ROGER GERRARD BREEZE

On Tuesday, June 14, 2016, DR. ROGER GERRARD BREEZE of Washington, DC. Beloved husband of **Diana Jean Schemo Breeze**. Loving father of Liam, Roger, Matthew, Padraic, Sarah and Jacob. Dear brother of Elaine (David) Holcombe and the late Sylvia Fulham. Cherished grandfather of Henry, Stella, Leo and Tennessee. Beloved uncle of James, Lawrence and Emily. Funeral services were held on June 15, 2016, in Washington, DC, with burial in Staten Island, NY. Shiva will be observed at the late residence. Memorial contributions may be made to Kesher Israel, the Jewish Primary Day School or Chai Lifeline. Arrangements entrusted to TORCHINSKY HEBREW FUNERAL HOME, 202-541-1001 (endorsed by The Rabbinical Council of Greater Washington).

https://www.researchgate.net/search/publication?q=roger%20breeze

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2016 - Memorial for "Roger Gerrard Breeze, 1946-2016" in Health Security; (co-author is Karesh)

Source : [HP006A][GDrive]

"Led the world into the modern era of biodefense and biosecurity"

It is with a profound sense of loss to the global biodefense community and the larger scientific community that we write to honor Dr. Roger Gerrard Breeze, who passed away June 14, 2016, after a courageous yearlong fight with cancer.

Roger grew up on a farm in the UK, where he undoubtedly gained an appreciation for animal health and the complexity of disease management in farm operations. His passion for animal health resulted in a distinguished career in veterinary medicine that began at the University of Glasgow, where he received his bachelor of veterinary medicine and surgery degree and a PhD in veterinary pathology.

His academic contributions included many scientific papers that had great impact and resulted in his being appointed to the Royal College of Veterinary Surgeons. Roger came to the United States in 1977, joining the College of Veterinary Medicine at Washington State University, where he served as chairman of the Department of Veterinary Microbiology and Pathology and associate dean.

Roger then joined the Washington Technology Center at the University of Washington, where his passion began for translation of discoveries in infectious disease to global applications in biodefense and biosurveillance.

In the United States, Roger was an early force in advocating for creation of new defense and security systems for defending agricultural assets from offensive use of biological agents. His deep knowledge of needed global reforms was informed by his relationships with international scientists during and following the dismantling of the Soviet biological weapons programs.

Roger provided outstanding executive leadership at the US Department of Agriculture, where in 1987 he joined and led efforts at Plum Island and then, as a senior executive service member, where he established and directed major new programs in agricultural biosecurity and counterterrorism.

Roger also implemented new programs in agricultural biodefense and countermeasures including rapid diagnostics and vaccines as well as reforms in the culture and practices at Plum Island that stand today.

With the breakup of the Soviet Union and the emergence of a vast clandestine bioweapons program that had escaped detection during the Cold War, Roger led the biodefense community into the modern era. He visited the network of research stations, institutes, and manufacturing facilities that the former Soviet Union had compiled into a potent offensive bioweapons enterprise that the world would never have imagined. Beyond the facilities, materials, and machines, Roger saw that the know-how of the most capable scientists and engineers was the real challenge in stepping the world back from the evils of bioweapons.

In away that only Roger could, he saw through to the other side of the coin to appreciate the opportunity to advance global health in unparalleled ways. In his eyes, the scientists of the former Soviet states could make meaningful contributions to the reduction of the threat by not only turning away from bioweapons work but by advancing the science of health security as part of the global scientific community. Through engagement of former Soviet scientists as peers and not adversaries, Roger's work was fundamental in walking the world back from the irreversible abyss of bioweapons.

As a member of the US National Academies Institute of Medicine's Forum on Microbial Threats and Committee on Biodefense Analysis and Countermeasures, Roger made many significant contributions to critical review and analysis of biodefense issues. **For the past decade, Roger served as a senior advisor to the Assistant Secretary of Defense for Chemical and Biological Threats, where he contributed to Nunn Luger Counter Threat Reduction programs and to the Joint Science and Technology Investments on biosecurity and biodefense at the Defense Threat Reduction Agency.**

Over this tenure, Roger was instrumental in launching new global efforts in biosurveillance, vector-borne diseases, molecular diagnostics, and medical countermeasures to thwart the threat of chemical and biological agents. He also worked closely with industry and the national laboratories in energy and defense working in biodefense and biosecurity, and in his last years, served in this capacity as a senior advisor at Lawrence Livermore Laboratories.

Roger mentored many young investigators over his career, helping them understand and execute complex ideas and programs in the international community. His mentorship extended beyond the new investigators to organizations and often to those he worked for.

Roger frequently held his tutorials over a pint. In a small corner of a pub, Roger would recount a small segment of his life. Each story would start with how the world was not quite right at that moment in time, and, through a seemingly impossible mixture of humor, skill, and courage, the earth would be placed back on the proper axis.

It was in this most unique way that Roger passed to many the courage to live beyond their inherited capabilities and achieve something remarkable. It is this indelible mark he made on so many that will be his legacy. It is so much more than pushing back scientific frontiers; it is the legions of his students who will at some time act greater than themselves. His knowledge, humor, and personality contributed much to his accomplishments. He will be missed.

2016 (Nov 09) - The Times UK - OBITUARY - Professor Roger Breeze

Veterinary scientist who was an expert on bioterrorism and highly critical of mass culling to combat foot and mouth

Wednesday November 09 2016, 12.01am GMT, The Times

https://www.thetimes.co.uk/article/professor-roger-breeze-j032gf7df

2016-11-09-the-times-uk-professor-roger-breeze.pdf

Roger Breeze was honoured in the US

When he was working at Plum Island, the US Department of Agriculture's research laboratory, Professor Roger Breeze had to collect blood samples from pigs infected with foot and mouth disease to take to a meeting in Washington. The pigs were being held in separate rooms, which meant that Breeze would have to shower and change before going into each room.

"So to save time I just decided to do it naked," he recalled. "There I was, going from room to room, crawling on my hands and knees with the squealing pigs, buck naked on the cold cement floor. Great fun."

During his time at Plum Island — the equivalent of Britain's Pirbright facility — Breeze helped to develop a farm-gate test that could detect the presence of the foot and mouth (FMD) virus in animals. His was a powerful voice against mass culling. He believed passionately that science and not slaughter was the best way to protect the world against outbreaks of animal disease.

He was horrified during the FMD epidemic in Britain as millions of healthy animals were killed, and he continued to campaign for a different approach. As chief scientific adviser to the US defence department's threat reduction agency, dealing with bioterrorism, he argued that killing animals rather than diagnosing infection made it easier for terrorists to introduce pathogens undetected. "Bioterrorism," he said in 2001, "is a cheap alternative to nuclear war and, chances are, that is how the US would be attacked."

Even leaving terrorism aside, animal-borne pathogens, he believed, posed a grave threat. "People have no idea what's out there," he said. "It's all so goddamn crazy. There's something called mad cow disease in England that we're keeping a close eye on. We've got ostriches from Namibia that could be carrying ticks with Congo-Crimean haemorrhagic fever. We've got Vietnamese pot-bellied pigs, alpacas, llamas, you name it."

Constant border vigilance was vital to protect the US from pathogenic invaders. "We've got Russian immigrants trying to smuggle in crates of their pigeons or hide them under their coats. We had one multimillionaire a few years back who had 28 elephants flown to his own private airstrip, just smuggled them in right under our noses. God knows what he wanted them for. Trying to keep pace with all of this, it's like we're running round sticking fingers in a leaky dyke."

Blunt and outspoken, he was recognised across the world for his expertise in animal husbandry, and his knowledge of the diseases animals can carry. He set up a multibillion-dollar programme to establish the surveillance of public health and veterinary disease in the former Soviet Union, co-ordinating a series of laboratories, which also monitor Russia's biological weapons.

He received the Presidential Distinguished Executive Rank Award — the highest given to a civil servant — in 1998 for his work in safeguarding the nation's food supply and protecting it against biological threats.

Roger Gerrard Breeze was born at Heywood in Lancashire, where his parents owned a small mixed farm with a dairy herd. His great-grandfather, a gamekeeper, had been killed by poachers, and his widow and her son, were turned out of the cottage to fend for themselves. They survived by hiding in unused buildings and eating off scraps for several years. The fact that his parents had managed to purchase 50 acres and build their own farm on the same land was deeply important to him. It is still farmed by the family.

He won a scholarship to Manchester Grammar School, took a veterinary degree, followed by a PhD in veterinary pathology at the University of Glasgow veterinary school, where he lectured from 1968 to 1977. One of his pupils was the son of James Herriot, the author of All Creatures Great and Small.

He was an adventurous cook, taking weeks to work out his menus

His expertise was informed by his own work as a vet. He recalled one occasion when he was delivering a newborn pig that was stuck in its mother's womb. Just as he was finishing, he got another call about a sick dog: "I go right over, knock on the door, and a bunch of Hell's Angels answer. They're all looking at me kind of funny, but I'm too worn out to care. I examine the dog and see right away that it's too far gone with distemper.

"So I take the dog out back and shoot it. The bikers pay me my fee, but they're still staring at me wide-eyed, like I'm some kind of lunatic. It's not until I'm back in my car looking at myself in the rear-view mirror that I see that my face and hair are all blotched and matted with pig placenta. I looked like the psycho vet from hell."

He moved to the US in 1977 to become an associate professor at Washington State University College of Veterinary Medicine, where he served as chairman of its department of veterinary microbiology and pathology and associate dean for research. He resigned in 1987 after funding was cut.

After taking over as director at Plum Island he oversaw a major overhaul of laboratory facilities and initiated research programmes into the genomic basis of disease pathogenesis, genetically engineered vaccine development and the development of innovative techniques to identify the pathogens responsible for disease.

One of those techniques, the pen-side dipstick test, meant that diseases such as FMD could be identified on site rather than from samples sent to a laboratory. It was, he pointed out, simple to use, effective and quick. Despite all his efforts, neither the US nor UK departments of agriculture were prepared to adopt it. Breeze watched as the killing continued. In despair he wrote: "I have five sons and a daughter so I will add a codicil to my will, tasking a great-great-grandchild to check in on [the department of agriculture's] progress in 2061. Maybe with a Ouija board he or she can update me."

Widely read, with a particular interest in books on British and European history, science, and mystery stories, he was an adventurous cook, and would prepare gourmet meals, perusing cookbooks for weeks as he worked out the menus. Despite living in America he read the British press daily and watched the BBC.

He was married twice. There were four sons from his first marriage to Christine Booth: Liam, who works in the chemicals and lab supply business; Roger, who does high-end cabinetry and construction; Matthew, who is a doctor; and Padraic, who manages VIP guests for a casino in Las Vegas. **He has two young children, Sarah and Jacob, from his second marriage to Diana Jean Schemo, a journalist.**

A reporter who interviewed Breeze described him as "a burly, avuncular man in a tweed sport coat and corduroys, a beguiling mix of Oxford professor and old salt". On the wall of his office was a large lithograph of medieval invaders storming a well-defended citadel — a fitting image for a man who spent his career repelling invaders, albeit of the invisible variety. "Don't know who they are," he said. "Goths or something."

Roger Breeze, veterinary scientist, was born on October 10, 1946. He died of cancer on June 14, 2016, aged 69

1992 (Nov 26) - https://www.nytimes.com/1992/11/26/nyregion/unit-for-animal-disease-study-trims-safeguards.html

"Unit for Animal-Disease Study Trims Safeguards"

1992-11-26-nytimes-unit-for-animal-disease-study.pdf

1992 (Dec 24) - https://www.nytimes.com/1992/12/24/nyregion/research-unit-is-postponing-major-projects.html

1992-12-24-nytimes-research-unit-postponing-major-projects.pdf

Research Unit Is Postponing Major Projects

By Diana Jean Schemo

- Dec. 24, 1992

The hiring of a private company to run the Federal center for foreign animal diseases here, undertaken last year to cut costs, has gone so awry that it is not only undermining safety but eroding research efforts, according to newly released documents.

The documents show that because of rising operating costs, spending for research has dropped 20 percent this year. A report by the Agriculture Department, which runs the research effort here, concluded that a "massive cost overrun" had forced the "postponement of important agricultural research projects."

The contractor, the Burns and Roe Services Corporation of Oradell, N.J., says its cost have exceeded projections because the job was bigger and the operations were more antiquated than Government officials had said.

Government officials have not disputed that view, though correspondence between them and the contractor show a yearlong dialogue of disappointment and mutual recrimination. The department also withheld part of a discretionary "award fee," that is essentially the company's profit for operating the center, according to Agriculture Department documents.

Debate Over Privatization

Whoever is at fault, one thing is clear: after paying basic operating costs, the amount left over for research, which had been running about $3.4 million a year in the last few years of Government operation, fell this year to about $2.7 million. Because research is dictated by what is left from the $8.9 million annual budget, that amount will likely continue to drop as operating expenses inevitably chew up a bigger share of the money.

"There's a major concern here, because the whole idea for the privatization was cost savings," said Representative George J. Hochbrueckner, a Democrat from Centereach who has been studying the private company's takeover of Plum Island. "I expect there's going to be close scrutiny of the dollars that were spent." He vowed to seek Congressional review and possible reversal of the privatization.

The difficulties at Plum Island, the country's bulwark against foreign animal diseases, reflect a larger national debate on privatization. Recently, Congress and the Federal Office of Management and Budget have found that rather than saving money, the practice has led to billions of dollars in overspending. In addition, the Agriculture Department has recently come under intense criticism as being too bloated at a time when the number of farmers is declining.

At this Government outpost off the northeastern tip of Long Island, taxpayers spend $3 on roads, electricity, special ferries and other expenses for every $1 spent on research into foot-and-mouth disease, African swine fever, Rift Valley fever and other foreign animal diseases. The original rationale for the vast overhead on such a remote location was that foot-and-mouth disease is too infectious to work with on the mainland. But that reasoning is outdated, because harmful agents can now be contained safely in a modern center. Concern From Cattle Owners

Tom Cook, vice president for governmental affairs at the National Cattleman's Association, said his group planned to discuss the problems at Plum Island at its next meeting. "Our bottom line," he said, "is we want to see the most dollars made available for research." He said his industry, which could lose an estimated $2 billion through an outbreak of foot-and-mouth disease, would favor a study to determine whether the research could be done at lower cost on the mainland.

Among the sacrifices in research was the slaughter of pigs specially bred at Tufts University for experiments on cellular immunity of African swine fever, which scientists on the island had to forego last September when the initial cost overruns became known, said a source on the island who spoke on condition of anonymity.

Last week, the Agriculture Department opened Plum Island to the press for the first time in 14 years amid questions surrounding the operation and work of the island.

Scientists outlined the research and diagnostic work conducted on the island, but an examination that strayed from the prepared tour showed puddles in the corridors, rusted doors and cracked walls in rooms for animals infected with disease. There were no burglar alarms or locks on the doors of rooms containing concentrations of deadly viruses.

The move to a private contractor reduced the work force by a third, eliminating the fire department, reducing the number of security guards and relaxing safety precautions. Electronic security measures that could compensate for the cutbacks, like motion detectors and computerized door locks, have not been included in planned renovations. Plans for Renovations

Agency officials, who had gathered to defend safety procedures at the island, did not dispute a 1983 report by the National Academy of Sciences that recommended closing the center at Plum Island. Because of advances in biosafety containment, the report said, much of the work done here could be done safely on the mainland at far lower cost. Manuel S. Barbeito, the agency's top authority on biological safety and one of the authors of the 1983 report, told reporters at the tour that he still agreed with its recommendation, though it was ruled out as politically unfeasible.

But a few hundred yards away, workers were building a $20 million addition to one of the buildings that would consolidate most operations on the island,

part of a 10-year, $60 million government renovation project. The work includes construction of new offices, a library and some laboratories, but does not include the refurbishing of animal rooms or the research laboratories for foot-and-mouth disease.

C. G. Crawford, the director of Plum Island, said the consolidation plan would save on operating expenses by closing 24 buildings, and the savings would ultimately be used to renovate animal rooms and the research labs. "It is not state of the art, but we will have everyone consolidated," he said. "It's expensive to live spread out all over the island."

He also said the sudden increase in cost for running Plum Island was unrelated to the move to a private contractor. "This isn't a matter of a contractor versus the Government, it's a matter of the rising costs of operating the island." Several Extra Costs

Documents show that specifications for privatization failed to include such basics as janitorial services for the research building and manned operation of a decontamination plant.

As a result of such omissions, the Federal Government will have to pay Burns and Rose $5 million for the basic contract, and another $204,000 for support of the construction project, instead of the $4.2 million originally quoted by the company. And scientists said they were dumping their own trash and mopping their own floors because janitorial services would be yet another expense.

Another $91,000 that Congress appropriated for research into foreign animal diseases went to Burns and Roe for legal fees to fight unionization, according to Government documents.

Privately, some researchers said they feared that costs under a private contractor were swelling so much that they were strangling the research effort. Concern Over Research Funds

Roger Breeze, director of the research program, acknowledged that the funds left for research from his $8.9 million-a-year budget were declining. "Every year it costs more to do research, and the available amount of money rarely grows in proportion," Dr. Breeze said. "I'm not responsible for the operation of the support services and facilities at Plum Island. I just have to rely on those who are that they are trying to get the best value for the money."

Mark Fagerlin, the president of Burns and Roe, blamed the Agriculture Department for the problems with privatization at Plum Island. "I believe strongly in the whole privatization issue," he said, "and the fact that the Government doesn't implement it efficiently doesn't make me believe it less."

In his written response to the company's performance rating, the agency's basis for deciding whether to grant the company its $300,000-a-year profit, Mr. Fagerlin said the "increased costs" were caused by changes to the contract for services the Government failed to properly specify in the bidding documents.

He has asked the Government to reconsider its decision to deny the award, arguing that while it has made mistakes, Burns and Roe "has performed satisfactorily under extremely difficult circumstances."

Correction: Dec. 26, 1992

Because of an editing error, an article on Thursday about the Federal center for foreign animal diseases on Plum Island, L.I., misstated the total to be spent on construction and renovation projects. It is $80 million.

2003 (June 10)

https://www.nytimes.com/2003/01/10/us/threats-responses-bioterrorism-scientists-discuss-balance-research-security.html

THREATS AND RESPONSES: BIOTERRORISM

THREATS AND RESPONSES: BIOTERRORISM; Scientists Discuss Balance Of Research and Security

2003-01-10-nytimes-threats-and-responses-bioterrorism.pdf

By Diana Jean Schemo

- Jan. 10, 2003

Leading scientists began talks here today on whether and how to withhold publication of scientific information that could compromise national security.

The discussions at the National Academy of Sciences follow a raft of post-Sept. 11 restrictions on research into some 64 substances that could be used in biological weapons. The discussions were also partly an effort to fend off potential government censorship or other steps to control unclassified research that the new domestic security law terms "sensitive."

The talks were prompted by the hesitance of microbiologists to publish their full research in scientific journals out of concern that terrorists could use the information. While restrictions on research have long been a fact of life for chemists and nuclear physicists, they are new and not entirely welcome among microbiologists, who say data must be published so other scientists can verify the quality of the research by reproducing the results.

"We in the life sciences are in the process of losing some of our innocence," said Stephen S. Morse of the Joseph L. Mailman School of Public Health at Columbia University. "Knowledge, often using very simple materials, is also the critical ingredient in making a biological weapons advance."

The discussions brought together two communities that have often viewed each other with distrust, if not disdain: security experts and scientists. While some scientists contend that the best defense against biological weapons is robust research that is widely accessible, security specialists maintain that scientists are being naïve at best, and reckless at worst.

"These two communities, if we do not start now with a constructive dialogue with each other, we're going to turn this into a disaster," said John J. Hamre, president of the Center for Strategic and International Studies, which sponsored the meeting along with the National Academy of Sciences.

Dr. Hamre noted that the political climate in Washington and around the nation supported greater restrictions on science and civil liberties in the name of fighting terrorism. If scientists did not take the security concerns seriously, he said, politicians and policy makers with little understanding of science would step in with "blanket restrictions on science, not knowing what's sensitive and what's not sensitive."

"For precious little security, we would have devastating effects for the conduct of science," said Dr. Hamre, a former deputy secretary of defense.

John H. Marburger, director of the White House Office on Science and Technology Policy, noted that under a Reagan-era directive, research that was not classified as secret when ordered by the government could not be classified retroactively. But citing a report by the Johns Hopkins Center for Civilian Biodefense Strategies, he said such "traditional regulatory approaches are not well suited to biosecurity concerns."

Dr. Marburger did not reveal any impending policy changes, but said, "Those concerns are public concerns, and to them the public deserves a rational and serious response from its government."

The discussions, in a sense, ran against the instincts of many scientists here. Bruce Alberts, president of the National Academy of Sciences, stood before a picture of children gathered around a giant bust of Albert Einstein and recalled the society's founding mission: "to make science much more accessible to the nation and the world." Today's discussions pondered the opposite.

Since the Sept. 11 attacks, new laws and regulations restrict who may work on 64 "select agents" that could be used to make biological weapons, barring students or scholars with a drug conviction or a history of mental illness and those from countries labeled sponsors of terrorism from participating in research. Universities and clinical and research laboratories have inventoried their select agents, with many of them urging researchers to destroy their stocks unless they were needed for current projects. Scientists found with such agents in violation of the law could face five years in prison.

Lewis Branscom, a Harvard professor who is advising the university on future work with select agents and other security issues, said he feared not so much a "frontal assault" on the First Amendment's freedom to speak and publish as "an elaborate web of controls that look and smell and taste like classification."

Barring groups of people -- certain foreigners, marijuana smokers or people with clinical depression, say, from the research, he said, "reminds me very much of the McCarthy days."

Ronald Atlas, president of the American Society of Microbiologists, noted that proposed regulations issued in December included prohibitions on certain avenues of experimentation, and said he was concerned by First Amendment issues.

"Do you have a right of inquiry?" Dr. Atlas asked. "It's almost biblical: when God says, 'Thou shalt not eat of the Tree of Knowledge.' "

In the cold war, the United States faced a technologically advanced adversary, but today's threat from enemy nations and terrorists is more diffuse, with discoveries that appear benign sometimes providing the clues for weapons to spread disease. Outlining a hair-raising next generation of biological armaments, George Poste, chairman of the bioterrorism task force at the Defense Department, said, "I do not wish to see the coffins of my family, my children and grandchildren created as a consequence of the utter naïvete, arrogance and hubris of people who cannot see there is a problem."

Sept. 11 Strikes At Labs' Doors

By Diana Jean Schemo

- Aug. 13, 2002

https://www.nytimes.com/2002/08/13/science/sept-11-strikes-at-labs-doors.html

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https://www.nytimes.com/2002/12/17/us/threats-responses-laboratories-after-9-11-universities-are-destroying-biological.html

THREATS AND RESPONSES: LABORATORIES; After 9/11, Universities Are Destroying Biological Agents

By Diana Jean Schemo

- Dec. 17, 2002

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https://www.nytimes.com/2001/10/22/us/nation-challenged-disease-postal-employee-washington-has-anthrax-lungs.html

A NATION CHALLENGED: THE DISEASE; POSTAL EMPLOYEE IN WASHINGTON HAS ANTHRAX IN LUNGS

By Diana Jean Schemo

- Oct. 22, 2001

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https://www.nytimes.com/2002/08/26/us/weapons-expert-attacks-fbi-and-ashcroft-on-anthrax-inquiry.html

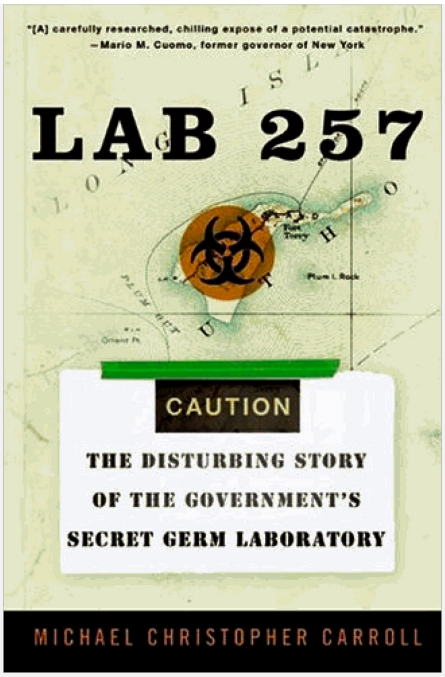
Weapons Expert Attacks F.B.I. And Ashcroft on Anthrax Inquiry

By Diana Jean Schemo

- Aug. 26, 2002

Select sections from book "Lab 257"

Book by Michael Carroll - [HB0033|GDrive]



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CHAPTER 1 - 1975: The Lyme Connection

pg 23 to 26

PLAYING WITH FIRE

Former Plum Island Director Dr. Jerry Callis says the association between Lyme disease and Plum Island is absurd. "Not now or ever had we anything to do with Lyme disease," he says in measured impatience. "It's existed in Europe for years—I've had it three times." Asked if Plum Island ever worked with ticks on Plum Island, Dr. Callis gave a surprising answer.

"Plum Island experimented with ticks," he says, adding, "but never outside of containment. We had a tick colony, where you take them and feed them on the virus, and breed the ticks to see how many generations it would last, on and on, until it's diluted. Recently, they reinstated the tick colony."

Tick *colony*?

Journalist Karl Grossman pressed a Plum Island lab chief some years ago about John Loftus's claims in *The Belarus Secret*. "My impression is that there is no truth to this," said Dr. Charles Mebus. But like director Harley Moon, Mebus had not been there in the 1950s to form an "impression." He did tell the roving reporter what he knew firsthand: Plum Island previously worked on—and continued to work on—tick experiments on "soft ticks" that transmitted heartwater, bluetongue, and African swine fever viruses, but aren't normally known for spreading the *Bb* bacteria. But that wasn't the complete picture.

The lab chief failed to mention that Plum Island also worked on "hard ticks," a crucial distinction. A long overlooked document, obtained from the files of an investigation by the office of former Long Island Congressman Thomas Downey, sheds new light on the second, more damning connection to Lyme disease. A USDA 1978 internal research document titled "African Swine Fever" notes that in 1975 and 1976, contemporaneous with the strange outbreak in Old Lyme, Connecticut, "the adult and nymphal stages of Abylomma americanum and Abylomma cajunense were found to be incapable of harboring and transmitting African swine fever virus." In laymen's terms, Plum Island was experimenting with the Lone Star tick and the Cayenne tick—feeding them on viruses and testing them on pigs—during the ground zero year of Lyme disease. They did not transmit African swine fever to pigs, said the document, but they might have transmitted Bb to researchers or to the island's vectors. The Lone Star tick, named after the white star on the back of the female, is a hard tick; along with its cousin, the deer tick, it is a culprit in the spread of Lyme disease. Interestingly, at that time, the Lone Star tick's habitat was confined to Texas. Today, however, it is endemic throughout New York, Connecticut, and New Jersey. And no one can really explain how it migrated all the way from Texas.

Entomologist Dr. Richard Endris joined Plum Island in 1981 to spearhead increased tick research. Endris and the African swine fever team leader, Dr. William Hess, went to Cameroon and other parts of Africa on tick-hunting safaris. They stuck their arms deep inside burrows and were occasionally bitten by snakes and rats. They searched out wild warthog burrows in the brush using a "tick sucker"—a reversed leaf-blower with attached sieves and filters—to strain hundreds of tick specimens out of the moist sand. They set out little blocks of dry ice thirty feet apart and watched the ticks march to the smoking lumps (the carbon dioxide attracted them, fooling the ticks into thinking it was the exhale of mammalian hosts). Endris constructed two high-hazard "insectories," insect labs, one in the back corner of Laboratory 101 and another in the basement. Each insectory was equipped with sand-filled climate chamber incubators with lighting that simulated photoperiods, protective rims around the airlock doors covered in sticky glue, and seals across all windows and drains. The ticks were fed on the blood of hairless suckling baby mice, where they would attach and molt and breed. All told, he reared over 200,000 hard and soft ticks of multiple species.7 Endris handled the tiny parasites with extreme care, using fine art brushes to move the minute nymphs into a transfer container—a urine specimen cup and a screen, glued together with globs of plaster of Paris. To test the ticks, the scientists first anesthetized diseased pigs, goats, mice, and calves, then placed the ticks on the sleeping animals. The ticks immediately attached and dug their mouth parts in. After a few hours of feeding, technicians detached the ticks with soft-tip forceps.

Endris set up quite an impressive tick colony when he arrived in 1981. But there was substantial earlier tick research. Dr. Hess's tick experiments in the 1960s and '70s with the Lone Star tick and others were conducted in unsafe conditions. Endris said the early tick research wasn't focused: "Plum Island was

1960s and '70s with the Lone Star tick and others were conducted in unsafe conditions. Endris said the early tick research wasn't focused. "Plum Island was not set up to deal with ticks at all." In 1980, a Plum Island scientific oversight committee urged the USDA to hire "an appropriately trained medical entomologist," calling it a "priority item." The consultants also "strongly recommended" the construction of "a modern, approved insectory be undertaken for future research."8 The advisers had serious concerns 7Dr. Endris also conducted experiments with sand flies on Plum Island in 1987 to test transmission of leishmaniasis, a bacterial ailment that if left untreated, has a human mortality rate of almost 100 percent. It is characterized by irregular bouts of fever, substantial weight loss, and swelling of the spleen and liver. The work was performed under contract for Fort Detrick, and serves as another example of a deadly germ warfare agent worked on at Plum Island for the Army, with no public knowledge or public safety precautions taken. Lab 257 25 with the primitive tick colony then in operation under the veterinarian Dr. Hess, who had been with Plum Island since 1953.

Dr. Endris and his boss, Hess, were both fired in 1988 by incoming director Dr. Roger Breeze, who promptly closed down their precious tick labs. They wrapped up research, put the viruses back in the freezers, and dumped the ticks into the autoclave, which steamed them at over 100 degrees centigrade.9 Endris, who went to work for Merck Pharmaceutical, scoffs at a Plum Island–Lyme disease connection. "Those kind of comments . . . indicate a gross ignorance of Lyme disease." Before being fired by Dr. Breeze, Endris served as the scientific member of Southampton's Joint Lyme Disease Task Force, and says with conviction he never heard of any Lyme disease relationship.

But Dr. Endris wasn't on Plum Island in 1975; his entomology expertise and the "modern, approved" tick insectory he built were a full six years away. Unfortunately, Dr. Hess, who could shed light on the old tick experiments, died in 1999 in New Hampshire. It is clear, though, that he was proud of and cherished his thirty-five-year scientific career there—his family scattered his ashes in Plum Gut among the trade winds of Plum Island.

Dr. Garth Nicolson, a national expert on immune system disorders, isn't satisfied with the ecological Lyme disease theory. "There's a high possibility," says Nicolson, who runs a California medical institute and has testified before Congress on Gulf War Syndrome, "that Lyme disease is a combination of infectious agents let loose from a laboratory, possibly from Plum Island by birds to the coast, causing multiple infections." Nicolson contends Bb is often found in tandem with mycoplasma bacteria, which causes many of Lyme's debilitating symptoms. Mycoplasmas found in foreign countries were studied on Plum Island since its inception; they may have been cross-contaminated with Bb and escaped the lab in the 1970s.

Dr. Wally Burgdorfer, who discovered the Lyme disease bacteria that bears his name, says, "The big question is where the ticks came from." He believes that imported deer from Europe brought the deer tick species, and with it the bacteria, to America, where all three proliferated. I ask Dr. Burgdorfer about the Lyme disease connection to Plum Island. "Touching on something like that may cause a hell of a lot of problems," he says.

"You have to show a development in the 1960s and 1970s, and it seems impossible—

"Unless," he continues, "they cultivated the tick species on Plum Island, and unknowingly fed some ticks on animals or humans and a Borrelia spirochete [bacteria] accrued." Dr. Wally Burgdorfer isn't ready to prove the link, but he's quick to point to the proven track record that helps make the case: "Plum Island is proof of the existence of breaks in biological safety." And of a proposed biosafety-level-four upgrade at Plum Island, the most dangerous, he admits, "Even if it's biosafety level four [the highest containment level], that doesn't mean it's safe."

CHAPTER 2 - EAST END MEETS WEST NILE

pg 28

Birds were losing their minds at the Bronx Zoo. Some flew in perpetual circles. Others died in their cages. Veterinarian in charge [Dr. Tracey S. McNamara (born 1954)] was concerned about the twenty-four birds— ducks, owls, a bald eagle, a black-crowned heron, and magpies— suffering in perhaps the most famous zoo in the world in August 1999.

McNamara had recently attended Plum Island's foreign animal disease school, where vets were taught how to diagnose exotic disease outbreaks and respond. But when she dialed the emergency telephone number set up to report possible foreign animal diseases, she found the line disconnected. The program was presided over by new Plum Island acting director Dr. Lee Ann Thomas, who had recently replaced director Dr. Alfonso Torres, who had replaced director **Dr. Harley Moon when he left to return to Iowa in 1996, who replaced director Dr. Roger Breeze. Since Dr. Breeze's departure, there had been no continuity in the laboratory's leadership. According to sources, no one wanted the job because Breeze pulled the lab's strings from afar.**

In the last few days of that August, Dr. Deborah Asnis, a specialist in infectious disease at a small Queens hospital, noticed an unusual pattern. Two and then four hospital patients, all elderly, contracted fevers with headaches, muscle weakness, and mental ailments that progressed

[....]

Pg 33 :

If Plum Island was uninterested in West Nile virus in the past, it seems to have acquired a taste for the germ. In October 1999, on the heels of the outbreak, Lab 101 held four healthy Equus caballus, the common domestic horse. They were given intravenous injections of a West Nile virus strain obtained from Dr. McNamara's Bronx Zoo collection of frozen infected birds. Each day, as the horses progressively sickened, animal handlers examined them. The scientists noted that the virus was not detectable in the blood until thirty days post-infection, but occurred within forty-five days; all four succumbed. Autopsies were performed, and four new "horse adapted" virus strains were extracted for the Plum Island virus library. If West Nile virus is not detectable in horses for thirty days, that means the North Fork horses became infected with the virus bug in July of 1999, and perhaps earlier.

This all begs the question: did Plum Island have West Nile fever virus at the time of the outbreak? [Dr. Robert Ellis Shope (born 1929)]'s Yale Arbovirus Research Unit (YARU) across Long Island Sound held twenty-seven different strains of West Nile virus in its New Haven, Connecticut, freezers until 1995, when he moved to the University of Texas and took his strains with him. YARU and Plum Island often trafficked in viruses, most notably the dangerous Rift Valley fever virus in 1977. Had Dr. Shope shared West Nile virus reference samples with his friend Plum Island director Dr. Roger Breeze —the island laboratory being the only official location where foreign animal germs like West Nile virus are supposed to be studied? When I ask him, former Plum Island director Jerry Callis says he didn't think it was in the virus repository in August 1999. "I never thought it was important enough.

It's more of a mild virus, not among the serious animal virus diseases," he says, even though it appears fatal to birds. **But Callis had left Plum Island in 1987 when Dr. Breeze came in.** USDA official Wilda Martinez confirmed Dr. Callis's beliefs when she assured the public that West Nile wasn't studied there prior to the outbreak—but she declined to say whether the virus was in their freezers.

CHAPTER 8 - RIFT VALLEY FEVER

pg 128 -

[...]

THE RIFT VALLEY FEVER EXPERIMENT

Unlike bacteria, which can be seen easily under a traditional microscope, viruses are too small to be detected. To measure the concentration of viruses, scientists use the plaque-reduction method, whereby a visibly clear area in a culture dish, called a plaque, is left behind after the virus destroys the healthy culture cells. By measuring the plaque—essentially the damage the invisible viruses have done—you can get an idea of the titer, or how virulent and concentrated the virus is. Viruses are measured in plaque-forming units, or PFUs. In the Plum Island study of the deadly strain of the Rift Valley fever virus, the lab techs took a starter culture of African green monkey kidney cells out of the freezer and propagated them in culture plates using a growth medium of amino acids and heated calf fetus serum. To brew large quantities of virus, they fed Zagazig 501-plus on the monkey cells they cultured inside sterilized fermenters, not unlike the ones seen at a microbrew pub. Zagazig 501 was the Rift Valley fever strain pulled from a fatal hemorrhagic human case during the Egyptian outbreak. Peters added some kick at Fort Detrick—the plus—when he passed the virus through two sets of lung cell cultures taken from rhesus monkey fetuses. It was potent as hell. From the fermenter, they decanted the slurry into hundreds of 1-milliliter ampoules and stored them in nitrogen-cooled freezers at minus 70 degrees Celsius. They thawed each ampoule immediately before pacing briskly through the "hot corridor" to the animal room to inject a test animal.

Rift Valley fever virus affects its victim much like the well-known Ebola virus. Ten of the sixty sheep were used as controls, meaning they were not afforded the luxury of a vaccine. Twelve hours after the unlucky ones are exposed to the virus, viremia—the onslaught of a virus infection within the body—begins. Their temperatures rise sharply and their hearts beat rapidly in an attempt to circulate an immune response to parts of the body suffering from localized attack. But their immune systems cannot counter the multiplying germ. The blood circulates viruses to all quarters of the body, where they attach to the surface of organ and membrane cells, then infiltrate those cells. Within the cytoplasm, the virus hijacks the cell's machinery and replicates itself exponentially. Inside of one hour the cells lyse, or burst, unleashing thousands of new baby viruses upon neighboring healthy cells, where they attach and repeat the vicious cycle ad infinitum.

The exploded cells cause edema, or large buildups of fluid in the connective tissues throughout the body. The sheep spasm and lose their gait, leaning up against the cell-block wall of the windowless room to stay upright. A pregnant ewe spontaneously aborts her young onto the floor in a grotesque scene. The sheep vomit blood and discharge red-tinged mucus from their noses. The dizziness in their heads makes them slide, one by one, down the wall and onto the concrete floor.

Within forty-eight hours, eight will be dead. Samples of each animal's blood-riddled excreta are taken to see if the virus passed through. The two that make it to recovery are then killed, along with the fifty sheep in the test flock. Each is lifted onto a cart by an animal handler and wheeled into the necropsy room. On

kill day, veterinarians necropsy (animal autopsy) each of the animals under bright examination lights, snap photos of the diseased internal organs for later analysis, clip tissue samples from here and there, and send the carcasses down the chute to the incinerator charging room.

The initial experiment was a success. The human vaccine produced immunity in all of the vaccinated sheep and warded off the virus.

With the April 1 safety deadline met, the Plum Island scientists decided to push their luck. They revaccinated employees and continued the groundbreaking research, extending the study through the end of April and into the start of the mosquito season. Supplanting the ubiquitous foot-and-mouth disease virus work, Rift Valley fever fast became the island's germ of choice. Eight Shetland ponies injected with Rift Valley fever were observed daily and their rectal temperatures recorded for forty days to see if they were susceptible hosts or carriers. Necropsied on day forty-one, the ponies showed no internal signs of disease or clinical signs. However, the vets found that the Arabian horses maintained low levels of viremia, and, as such, were potential reservoirs to infect biting mosquitoes.

Next, they brought in another sixty-three sheep for a third Rift Valley fever project. This study revealed that infected sheep could pass USDA food inspections for human consumption. Drs. Dardiri and Walker observed the virus lingering in spleen tissues, but reasoned that "the spleen is not normally eaten." The scientists also announced in a press release that they produced "antigens and reagents" for future use. Put more plainly, they were brewing Zagazig 501 virus in gross quantities on Plum Island.

As the studies progressed, tensions eased between the Plum Island and Suffolk County officials. Together they drew up emergency plans for hurricanes, civil disobedience (like violent animal rights demonstrations), fires, sabotage, radiological incidents, and unauthorized removal of an exotic pathogen. But the détente was short-lived.

Dr. Martin Mayer, the county's disease control chief, got a call from an investigative reporter over the weekend of April 29. Did he know Plum Island extended research until May 8, eight days into the mosquito season and six weeks after they promised to conclude? "No, I'm completely unaware," Mayer said. He called the island first thing Monday morning, and Walker promised him they would be finished—honestly, this time—by week's end. "A couple of extra days aren't going to hurt," conceded Mayer, calling it a "minor" deviation. Yet mosquitoes in the region were hatching and beginning to fly, according to the county's mosquito control chief, who told Newsday the pests would not be swarming for another week or two over "dry areas" like Plum Island. This "dry area" boasted three freshwater swamp beds covering 120 acres of an 843-acre island, and over twenty different species of mosquitoes called Plum Island home. Dr. Callis said the project ran late because researchers were in the middle of their studies.

While Plum Island faced three ongoing investigations—one for a virus outbreak, one for a construction fiasco, and one for criminal fraud—scientists uncorked vials of deadly Zagazig 501 (and its progeny) and infected cattle, horses, sheep, pigs, and even seals. Few of the air filter, incinerator, and negative airflow repairs were complete.

The labs were vulnerable, and the USDA was compounding the risk.

[...]

A TROUBLING SCENARIO

Discussing Rift Valley fever—over a decade before the West Nile virus became part of the American lexicon— [Dr. Clarence James Peters (born 1940)] and Plum Island director Dr. Roger G. Breeze wrote, "[T]he most probable routes of introduction of Rift Valley fever into the United States are via a viremic person who will be bitten by a mosquito or an infected mosquito aboard a plane.

The infected mosquito will then infect a susceptible animal in which the virus will be amplified for the infection of more mosquitoes."

But what if the virus performed an end run, not from the nation's international airports, but from within, set free from a poorly run top-secret facility where it was kept in large quantities? What might have happened?

And how?

Chapter 9 - "Crossing the Rubicon"

147 to 150

All the negative press, the PR missteps, the biological bungling, and the outright mismanagement had impacted Dr. Callis's reign as Lord of the Manor. No longer was he the twenty-seven-year-old kid scientist who, at Doc Shahan's side, helped build the "World's Safest Lab."

One source described the situation on the island at the time as "stagnation."

Another, "benign neglect." "Jerry had a helluva vision about Plum Island," says his successor, Dr. Roger G. Breeze. "But that vision sort of ran its arc. And I'm not trying to be critical about where that arc comes to rest."

But rest it did.

A former official cites the director's penchant for travel as a contributing factor. "I'd say he was one for the ages, one of the few scientists who was a good leader and a good scientist. But by then his mission wasn't running Plum Island—it was running around the world, visiting other countries doing disease work, addressing meetings, and attending seminars—that was his agenda. And that's one of the reasons why Plum Island went to hell."

All the negative newspaper stories, egged on by Karl Grossman, Newsday, and others—much of it warranted, but not all of it—weathered the old veterinarian beyond repair. "There's one thing I think Jerry failed at," says Dr. Jim House, "and every director after him has also failed at—public relations. There was and is no program to explain the benefits of the place, the fact that it is a national treasure, that it is needed. Nobody does that—nobody goes out and gets the community involved and lets them understand it."

Much of that failure was an extreme desire for secrecy. "I think Jerry had this old-school cold war mentality," House contemplates. "You must remember, the

Russians thought Plum Island was a really wild site out there. They knew it existed, and they played this game, they built it up in areas, saying it was a biological warfare site, or at least something of cold war value. And this just carried on." Dr. Carol House, also a retired Plum Island scientist (and Jim's wife), adds, "I think Jerry liked that." **Though the outside advisory committee—now headed by Dr. Robert Shope—urged Plum Island to hold frequent press events, the hurtful, enduring sting caused by Grossman's 1971 AP germ warfare story caused Callis to lock up the gates tighter. P**roblems and difficulties on Plum Island were met not with candor and public recognition, but with suppression. Ironically, the lack of sunlight on Plum Island's activities over the years would lead the public—and rebuffed curious news reporters—to always assume the worst, fanning the flames of mystery, intrigue, and rampant speculation.

In one of his final communications, an uncharacteristically dry memo lacking the usual pleasantries, Dr. Callis told Plum Island employees that federal budget reduction legislation called for 5 percent cuts across the board, further depleting Plum Island's shoestring budget. To fight skyrocketing costs, he was considering a proposal to consolidate the two laboratory buildings into one, close the old Army-vintage administration buildings, and make Laboratory 101 a self-contained operation. This might—might— require cuts in staff, he said, but lest anyone worry, he would reduce positions through natural attrition, not through layoffs. By this time, Callis twice had stopped a move to privitize the federal workforce and reduce salaries, benefits, and the total number of staff positions. Callis may have faulted in many areas, but he remained doggedly loyal to his people, and to the promises he had made to them a quarter century ago: "respect personal dignity . . . recognize work achievement . . . provide work security. . . . Believe in the Golden Rule and always practice it."

Just days after his memo, the USDA hammer came down heavily.

Regime change came quickly on Plum Island—Washington called up Jerry Jackson Callis, and told him his time was up.

"Let's just say retirement was not his own idea," says a source. "It happened abruptly—there were a lot of people and politics involved. He had really been there too long. We needed much better progression. We didn't need one person in one place—no matter how good he was." While Dr. Robert Shope maintains Callis's retirement was his own decision, other sources confirm he was "pushed out."

The USDA "elevated" him to the post of senior research adviser. This allowed him to maintain regular contact with his beloved island and offered another perk. Says one administrator familiar with the offer, "They said to him, 'We'll give you an office on the island, and carte blanche for several years on travel.' And Washington did that by dragging in money from other agencies and hidden places. They took real good care of him. It was a payoff, a golden parachute, if you will—they had to give it to him."

Dr. Roger Breeze, his successor, elaborated. "Jerry Callis is a very exceptional person. The United States never had a facility like Plum Island, until the debacle in Mexico hit between 1946 and 1952. People had to go out there, find it, and build it. Meanwhile, Jerry went over to Holland to learn about viruses from the Dutch. Now if you said to someone today, 'Hey this is the federal government and we want you to go to a foreign country to learn this whole new thing, and when you come back, we're going to build a laboratory for you,' people would laugh in your face.

'Yeah—sure—bullshit—can I get that in writing?' But Callis did it." Lucrative offers from private laboratories had come his way for years, and he turned them all down. Plum Island was his life, and the island's life was in many ways his—it was his first job out of school, the only job he'd ever worked. Like a parent to his child, he could never see fit to abandon it.

And there he remained for four decades.

Most of those interviewed for this book have the highest respect for Jerry Callis. "Jerry built Plum Island into a very prestigious place," says Carol House. "I think [his successors] had a hard time following in his shoes—anyone would, because of his memory and his depth of knowledge on everything that was Plum Island. A good—no, a very good manager."

Dr. Shope acknowledges that "every leader has some disgruntled employees," but he found Dr. Callis nothing but "a real straight arrow." John Boyle, a former budget director at Plum Island, called him "a brilliant man, at one time a great scientist, and probably still that way today." Over time, a fondness and respect bonded the staff to their beloved director. "It wasn't always perfect," says building engineer Stanley Mickaliger. "There were discrepancies, and sure there were gripes—which were all normal. But we all understood something very important—Jerry Callis took care of us."

When asked about his retirement, Callis says simply and humbly, "I've enjoyed my career tremendously."

Plum Island librarian Frances Demorest—second in seniority to the now retiring director—saluted her director:

Dear Doctor Callis:

Our thoughts return to 1953 and the local turmoil over the decision to locate the Laboratory at Plum Island off Orient Point. The representatives from USDA were not received warmly but, as time went on, the turmoil and anger subsided. It has been a long time and we have crossed a lot of water together!

Through the efforts of two fine Directors, Dr. Shahan and yourself . . . the Center was recognized both nationally and internationally. Also, the Center made a tremendous economic impact on this end of Long Island.

Harrison and I trust you will experience a busy, fruitful, productive retirement, and enjoy GOOD HEALTH and fond MEMORIES for a "JOB WELL DONE."

Not everyone lamented his retirement. Some expressed glee over the change in the guard and looked forward to replacing the dusty old administration with fresh new leadership. "A lot of people thought of him as an emperor who treated Plum Island as his personal fiefdom," one former scientist says, "and to a degree, I believed he did. Whether your [research] program was funded depended on whether he liked you or not." But those who cheered Callis's departure didn't realize how good they had had it. "I tell you what," says one of them. "Six months later we were making novenas to Saint Anthony that he'd come back."

Because what came next would be far worse.

"You know, there's this old saying on Plum Island," says one worker.

" 'When Dr. Callis went, the island went with him.' Once they moved him out, everything went downhill.

"In my humble opinion, this is when the whole island started to fall apart."

Lab 257, CHAPTER 10 - "The Kingdom and the Glory"

(pages 153 - 175)

Roger Breeze wanted to be a vet because the local veterinarian was the most successful person who came by his family's sixty-acre dairy farm in the north of England. The Breezes milked cows and raised chickens in the 1950s. They delivered creamy milk each morning to their customers' doors, along with fresh eggs and chickens, eking out a living by profiting on both production and delivery.

Roger's idea was to follow in that country vet's footsteps. When he was seventeen, he attended vet school at the University of Glasgow in nearby Scotland, one of the oldest universities in the world. Though it wasn't his original plan, upon graduation he was given the coveted opportunity to teach at Glasgow. It was a prestigious appointment he couldn't turn down. To help make ends meet, he opened a local vet practice and worked nights and weekends. "I had some crazy nights," Breeze told Outside magazine:

- Once I had just finished pulling a newborn pig that was stuck in its mother's womb when I get another call about a sick dog. I go right over, knock on the door, and a bunch of Hell's Angels answer. They're all looking at me kind of funny, but I'm too worn out to care. I examine the dog and see right away that it's too far gone with distemper. So I take that dog out back and shoot it. The bikers pay me my fee, but they're staring at me wide-eyed, like I'm some kind of lunatic. It's not until I'm back in my car looking at myself in the rearview mirror that I see that my face and hair are all blotched and matted with pig placenta. I looked like the psycho vet from hell.

Two years into his professorship Breeze emigrated to America—a bold and unconventional move. He saw that young go-getters like himself, no matter how bright they were or how hard they worked, would be shunted into Glasgow's faculty caste system. There were eighteen veterinary pathology positions in all of Britain, and a slow thirty-two-lockstep ladder of advancement. Every professor parked on the same step was paid the same meager salary. "It didn't matter whether you taught Sanskrit or law," he remembers. " 'As long as there is still death, there's hope,' we used to say."

Roger Breeze disliked the stuffy peerage. What does your father do? Who do you know? What high school did you attend? No one seemed to care about what was really important—one's talent and ability to perform. "Can you imagine people in America asking, 'Where did he go to high school?' " Breeze asks. "How the hell would anybody know where to look, let alone care?"

The religious discrimination also bothered him. Once a man "of great power" at Glasgow asked him to return to his alma mater to teach a discipline he didn't know. When Breeze explained his lack of knowledge in the discipline, the man said it didn't matter, saying, "There are too many English Catholics up here teaching and we need more Scottish Protestants." Ironically, Breeze was neither a Scot nor a Protestant—but with his University of Glasgow pedigree, they assumed he was.

All those stodgy trappings—and the royal mahogany paneling and leather furniture—never aroused him. No one in America cared what the laboratory lobby looked like and what the scientists' last names were, so long as they produced great science. In America, Breeze was more at home than he ever was in Britain. "Here it's 'On with the job!' That's what I like."

THE BREEZE REIGN

For all but a few of today's scientists, it's not about the money. It doesn't matter if you earn a million per year if five years down the road you are less employable than you were when you started. It's about science, but also, apparently, the glory. "They all want the glory," Breeze asserts. "That's what the whole thing is sold on today, and as director, your job is to provide that." To reach scientific brilliance, you need the proper tools, and that means expensive equipment. Most scientists do not question their ability; what they do question is whether a potential employer can offer the equipment and support they need.

Dr. Breeze's theory, honed in his first career post in the New World, went like this: institutions like Yale and Columbia, because of their reputations, have no problem recruiting postdoctorates for their three-year apprenticeships with lab chiefs. In this regard, America was little different from the Old World. Elsewhere down the ladder of prestige, that isn't quite the case; competition is fierce among the rest, and to prevail, a lab director must deliver the resources.

In 1984, after just a few years on United States soil, Dr. Breeze rose to chairman of the microbiology department at the Washington State University vet school, where he oversaw twenty-five faculty members. The school had a unique approach to its faculty recruitment that fit well with Breeze's management style. "It was a very entrepreneurial university," he recalls. "You could walk into the president's office and tell him you had a problem and you could cut a deal." He could reduce a salary or eliminate a position altogether and use those funds to buy an electron microscope for a star faculty member. Utilizing this flexibility, Dr. Breeze built the best department of its kind in the nation. In the mid-1980s, however, a new provost arrived. Out went the freewheeling philosophy. Now, over half of Breeze's powerhouse faculty was being courted by rival universities and bombarded with lucrative job offers.

On a cold January morning Breeze went to the provost's office to plead his case. "Listen," he said in his deep Scottish-sounding brogue. "You have to give us the flexibility we once had—please—or we're going to lose our people!" The provost leaned over his desk and lectured his spunky department chair. "Roger, you need to understand something. WSU is never going to be a great university. We're going to be a place where people pass through to achieve their best elsewhere. You've done a fantastic job developing these people—really you have—but you'll have to accept that." Breeze could hardly believe his ears. What the provost was really saying was that there's a cap on one's success, that one could go no further. And in America, no less!

"I told him, 'I have never heard so much bullshit in all my life.' " Breeze turned and walked out of the provost's office, feeling like he was back at Glasgow. He trudged back to his campus office, darting between waist-deep snowdrifts. He spied an orange slip of paper on the windshield of his car parked out in front of the quaint brick vet school building. "What the hell is this?" he yelled out. It was a $10 parking violation: Parking Without a Permit. "When it snowed," recalls Breeze, "they only brushed off the windshield on the driver's side looking for the permit." His parking permit had slid to the other side of the dashboard.

The ticket was enough to push Breeze over the edge. "I absolutely became unglued." Breeze stormed up to his office and resigned his chair. Previously, the USDA had asked him to run the Plum Island Animal Disease Center. He had responded by asking, "Are you crazy?" The gig came with a $20,000 pay cut, made worse by a cross-country move and a huge cost-of-living increase. Now he was the crazy one. Breeze renounced his British citizenship, pledged allegiance to the United States, and cast his lot with Plum Island, an island monarchy all his own. To Breeze, unless one's science was "the very best in the field," one's career was finished. He left WSU, taking with him the "entrepreneurial style" he perfected there.

"The whole management style I have is this—you have to go in, not just with money, but with resources." He could help the USDA deliver those resources at Plum Island. Or, as one familiar with Breeze puts it, "He could go up there and kick some ass."

When Roger Breeze arrived, he found Plum Island's laboratories "literally falling into the sea." Turning Plum Island into a gleaming new facility would take a tremendous financial effort, and money was unavailable. "Nobody said to me, 'Come to Plum Island and we'll pour money into it. . . . ' Washington thought the money they poured in gave them more of the same—the same science that wasn't good enough." The goal then would be to take Plum Island's small budget and stretch it as far as possible, to lure the best scientists with new lab equipment, and keep them happy once they arrived. "I told [USDA headquarters] we either have to do it this way or recruit only Czechs, because this place looks like Prague in 1956 and they'll feel right at home here." Meanwhile, the National Academy of Sciences, having excoriated Plum Island, said it couldn't be fixed and urged it be closed down. While Breeze spoke persuasively to the skeptics about how the island would turn around, privately he harbored doubts. He knew all eyes were on him, looking for his tenure to end in disaster. His first failure could very well be his last.

Taking over the Plum Island kingdom, Roger Breeze had put himself up against the proverbial wall. He had some snake oil to sell. The question was, could he sell it?

The first thing Breeze's "science first for glory" regime did was tear apart Plum Island's budget. Since the Army had left Plum Island in 1954, ongoing funding problems were par for the course. Dismayed over early cuts in his budget, Doc Shahan said, "The project may stand or fall, depending on adequate support in the beginning. . . . [USDA] cannot properly discharge its responsibilities without such a facility as Plum Island which is at present only an infant facing gargantuan tasks."

When Dr. Callis first took the reins in the 1960s, he too felt the money crunch: "For the last several years, the salaries of wage board employees have increased annually . . . [but] our budget has not been increased by an amount equivalent. . . ." **And in the 1980s, Dr. Shope's advisory board proposed Plum Island prepare two budgets—one outlining the costs of a mainland laboratory, and another showing the additional costs of operating a facility on an island, in an effort to sway Congress into properly funding Plum Island.** This way, Congress could understand why it had to fork over such large chunks of money to support functions as compared to research. Without the necessary funds, said the advisers, Plum's mission could be "jeopardized."

To raise Plum Island from its depths, Breeze first focused on where the money was going. For this, he needed a crack accountant, a brilliant numbers guy. Enter John Patrick Boyle, known as one of the best number crunchers in the business. An Irishman of medium build, with a frosty white beard, Boyle in his heavy Boston accent recalls Breeze's offer: " 'You'll have to build it up from nothing, John,' he said to me. 'It presents a real challenge.' " As they discussed the opportunity, something about the Scot (though he was really a north-Englishman, everyone thought him a Scot) captivated Boyle. He saw in Breeze a rarity in government service—a visionary with an ambitious plan, backed up with the enthusiasm and an uncanny relentless drive to carry it through. Boyle signed on.

Boyle's first visit to Plum Island was like something out of an episode of The Twilight Zone—to him, it was an eerie isle that time forgot. The once impeccably groomed and abundantly flowering "plantation" was now a wildly overgrown jungle. Paint had chipped off Lab 101's walls and huge chunks barely clinging on were flapping in the ocean winds. "Scientists were just sitting around doing nothing." Or at least Boyle thought they were scientists. "You couldn't tell the difference between a scientist, a tech, or the guy who swept the floor." The place had gone to pot—it was filthy and carried a rank, musty smell. The floors, caked with stains, hadn't been mopped in ages. On laboratory bench tops, which required an ultrasterile surface for virus research, Boyle spied dried soda pop, crumbs, and papers strewn about in piles. He took his index finger and swiped it along a pipe that ran along the wall, removing a quarter-inch layer of dust. "It was just ugly," says Boyle. "And everyone had the same attitude—'fuck it.' "

Plum Island was also a mess in other ways, especially when seen through the assiduously burning eyes of an accountant. "There was a lot of what we call indirect research cost [IRC]," remembers Boyle. "Scientific money that is eaten up by administration, support, building maintenance, grounds crew. And this side of Plum Island was essentially a Golden Cow." John Boyle explained how it worked during the reign of Dr. Callis: "Engineering would say, 'Well, we have this hurricane season, and we need [power] redundancy up here because we may lose a 50,000-kilovolt transformer that might go out on a Saturday night, when there's no one around.' They would use scare tactics like these, and add, 'Now if we lose that 50-KV transformer, then we lose power to Lab 101, we lose our negative airflow, and there's danger of what we have escaping out into the atmosphere.' And it would scare the bejesus out of management, so they'd say, 'Here, take this $75,000 and purchase a generator.' They dazzled them with footwork."

No longer would the tail wag the dog. **To Breeze and his man Boyle, the primary need was not support, but rather Plum Island's pièce de résistance, its holy grail: the science. Without science, there could be no glory. "The IRC was outrageous—it was 78 percent [of Plum Island's yearly budget] when we got there."** At a normal lab, Boyle says, it would be in the low twenties. To improve science and keep the island from being shut down? "Shave the IRC down to a bare minimum," says Boyle. No longer would engineering and plant management be the Golden Cow that got whatever it wanted. Boyle sharpened his pencil and got to number crunching, putting in late nights and seven-day workweeks, huddled over stacks of spreadsheets and financial data. With a stroke of his pencil, he slashed the animal supply contract and whittled down oil and new vehicle purchases. Next, he started counting up all the widgets—electric saws, toilet paper, circuit breakers, circuit boards, soap, hammers, nails, lightbulbs—and figured out where costs were coming from. "We bought thirty items, used twelve, and they reported six in inventory," he recalls. "People were carrying stuff off the island on Sundays, typical stuff people try to steal from the government— except here, they were doing it wholesale."1 He installed a phone switchboard that provided reports of outgoing calls. "The day after I announced that one, there were cries I was violating people's privacy." But it worked—the monthly Plum Island phone bill plummeted in just one month from $7,000 to $3,000.

"John, I am hiring a doctor and I need an X-ray crystallography machine," Breeze told Boyle early on. "It costs half a million dollars—now go find me the money for it." Coming up with that kind of dough stumped even the uncanny number cruncher, who had just completed chiseling together a budget. He tore the whole thing apart again and found Breeze another $500,000, securing a renowned doctor's transfer to Plum Island. "He was very demanding to work for," Boyle says, smiling fondly, relishing working on the Breeze dream team. "I had to pull a string here and there and unravel it all and put it back together—and of course I found the money." But from where had it come?

"If you watch the pennies," Boyle's parents had taught him growing up in hardscrabble Dorchester, an Irish Catholic inner-city Boston neighborhood, "the dollars will take care of themselves." Now he was watching nickels and dimes, too, and to Breeze's delight. "We cut a substantial amount of money," says Boyle. "We cut well over a million dollars." He believes even more could have been slashed. After six years on the job, says Boyle, "I still didn't know where all the waste was. There was still some shit going on that I couldn't put my finger on—which tormented me to no end."

With the budget in Boyle's capable hands, Breeze next brightened up the physical appearance of the laboratories, taking special interest in the toilets. "Nobody had cleaned these rest rooms—there would be no toilet paper, and the sinks were filthy. I wasn't prepared to live with people not doing their job.

Everything at Plum depends upon a handful of scientists who are pulling the train." At a minimum, those scientists had to have sparkling bathrooms, perhaps the most basic of all provisions. "I had to completely remove all of the furniture in the toilets because it was so bad—so dirty—it couldn't be cleaned." Breeze ordered brand-new porcelain, metalwork fixtures, shiny faucets, and gleaming tile, and refinished the rest rooms. Then he explicitly set forth the frequency and manner in which they were to be cleaned. He also conducted unannounced spot checks throughout the week to ensure full compliance.2 "It was a personal tour de force," Breeze gloats.

But that was only child's play compared to what he did next. Within a year, the new administration had become a lean and mean machine, deaf to the rants and raves of the support staff and their supposed needs.3 So when Walter Sinowski, the building foreman of Lab 257, told them in early 1991 that an emergency backup power cable needed repair, management had a different answer this time around: no.

Roger Breeze had become a slave to science.

Soon after taking over the reins, Breeze set out to acquaint himself with the island's three hundred daytime inhabitants. "When he first came in, we really thought he might be one of us," says one worker. **Whereas Jerry Callis wore a suit and tie to work each morning, Dr. Breeze scarcely looked like a doctor, let alone the director. Sporting a plaid shirt and jeans and smiling broadly, Breeze was slapping workers on the back as if they were old friends. Veteran employee Martin Weinmiller recalls Breeze coming ashore on his first day. Heading home after the graveyard shift, Weinmiller watched the ferry bearing the new director tie up at the harbor dock. "He walks off the boat, and looks out at the island for a time. Then he says, 'Either I'm going to make this place or I'm going to break it.' "**

Easing himself quite comfortably into the chair occupied by Dr. Callis for decades, Breeze quickly set the tone with employees with his newsletter, the Plum Island Diary:

- *I am sure that the last many months have been very frustrating and disheartening. . . . This Center is not going to close, we are not moving to another location. . . . Together, we are going to plan and build the next proud 35 years of our history.*
- *The impression potential recruits gain of [Plum Island] must be diminished by the shabby state of most of our buildings and grounds resulting from years of neglect—and I know that our loyal E&PM [engineering and plant maintenance] staff who have tried so hard to do so much must also be discouraged.*
- *If we complain about federal salaries, crumbling buildings, and bureaucratic inertia, it should be no surprise that people lost interest in working here. Let's be proud of what we do and speak positively wherever we can.*
- *Those with problems and suggested solutions can help me more than those with problems alone. . . . Thanks for your input in advance.*

The whispers began: *Hey, look out for this guy.* **When Jerry Callis looked out upon his island from his office perched over the Army parade ground, he saw an honorable band of three hundred loyal, dedicated employees. Breeze saw support staff and veteran scientists as a motley gang of serfs, a drain on science funds that did little more than punch the clock and collect an oversized paycheck.**

In Breeze's first big move, he fired three scientists and forced a fourth into early retirement. He called the African swine fever virus team from the lab to his office and told them they had two weeks to pack up and leave. They were dumbfounded. "We had experiments with years of work gone into them," says Dr. Richard Endris. "With Roger, there was no kinder, gentler way," said another source. The team complained to the swine industry and the local congressman that taxpayers' work was "going down the tubes." That bought them a six-month reprieve. But once that time was up, Drs. Endris, Jerry Pan, Gertrude Schloer, and their leader, Bill Hess—a forty-year Plum Island veteran—were out on their rears. "He's seen fit to change directions," the seventy-two-year-old Dr. Hess drily told a reporter, "which is his privilege."

In Breeze's opinion, the four scientists were repeating the same science, or as one Breeze official said, "Reinventing the wheel, over and over again," testing viruses on one tick species after another. Said the official of the sacked four, "They were the worst of the worst—one of them hadn't published a research paper in nine years. Another one hadn't written one in five years. Sat there on their dead asses leaning on their elbows. They knew it was coming."

Contrary to what others said, Dr. Endris and Dr. Hess had published scientific papers in recent years. **Breeze's reasoning that it was time for a genetically engineered vaccine for African swine fever made little sense to Endris, who says African swine fever antibody proteins (like Dr. Bachrach's VP3) just didn't have the prophylactic properties necessary. "[Breeze] did not understand the biology of it, didn't have the grasp of it— but he didn't let that get in the way of his politics."** Ironically, Endris was one of those few on Plum Island who thought Dr. Callis's departure might be a good thing. A new director could rejuvenate the crumbling laboratory and reinvigorate its mission, he thought. Now he knew just how wrong he was. "Personally, after I saw what replaced [Callis]," he admits fifteen years later, "I wish he had stayed."

Breeze then confronted the remaining scientists. Sitting them all down, he berated them with facts and figures—the number of test animals purchased compared to the number of scientific papers produced. The number wasn't nearly high enough and the few papers published were terrible. "This was really sad," Dr. Jim House would growl years later. "The part that's bothersome is that he tried to play down the accomplishments of those who had been there before him—not one time, but numerous times. He tried to make their accomplishments look petty."

There was another reason the scientists were pushed out—to make room in the budget for a new ferry.

MELTING SNOWBALLS IN THE ANTARCTIC

Just when it seemed like things were clicking into place—the budget being tightened, unwanted scientists pushed overboard, and new equipment for new scientists under requisition—the roof caved in. Or rather, the dock caved in. **The ubiquitous autumn storms that pounded Plum Island smashed the harbor dock to pieces. The $700,000 cost to replace the bulkhead blew a hole straight through Boyle's crafty budget and jeopardized monies earmarked for the new crystallographers, spectrographs, and electron microscopes.** Washington told Breeze that Plum Island had to pay for the repair, putting him in the unenviable position of reneging on promises to his recruits. Says Breeze, "That would be like telling recruits at Columbia University, 'I can't buy your scientific equipment for you, because I have to go fix a piece of West 168th Street.' They would look at you like you were crazy." With the dock standing in the way of scientific glory, he had to do something.

In its long history, the secretary of agriculture's advisory committee, made up of representatives from livestock industries, had never met outside of Washington, D.C. Breeze proposed to Washington that the committee meet this year in Old Saybrook, Connecticut, to see Plum Island. As a friendly gesture to their new exotic disease lab director, the aggies agreed to organize it—but on one condition: he would not, under any circumstances, ask the committee for money. "The Department was going to put $1 million into the island and that was going to be it—and I was not to ask them [for any more]," says Breeze.

They all came out one morning—the National Cattlemen's Association, the Pork Producers' Council, and the dairy and poultry associations— all the groups that had a multibillion-dollar stake in what some might label "corporate welfare." Plum Island had always been painted as essential to the American people—

wholesome, apple pie research to protect the food supply, defensive research that private industry just wouldn't do. But when the twenty dark suits crowded onto a boat bound for Plum Island with "Cap'n" Breeze, the scene looked less vital to the taxpaying public than to the billion-dollar agribusiness conglomerates the captain's passengers represented.4

In evangelical tones, Dr. Breeze walked and talked the group through the deteriorating laboratory, preaching how he planned to shore up its crumbling foundations, rid the place of the driftwood, clean the bathrooms, shine the floors, and bring science—glorious science. "He was very charming," says one observer. "So charming he could melt snowballs in the Antarctic." But meeting again the next day, the Pied Piper's smile had turned down at its corners. He talked hard and fast at them in his distinct accent.

"This place is never going to fly. You can't keep doing this business with the island falling down. We need $40 million here. We need it. I'm delivering the program, I'm hiring the people—but it won't work without $40 million." Breeze had previously been told by his engineers that it would cost about $25 million in total to repair the island into tip-top shape. He paused and looked at them, head cocked for effect.

"Now if you don't want to do it, that's fine—and we'll all walk away. No problem—I'll go find another job." But heads in front of him were nodding. We're with you, Roger, we are—we are!

They were. Thumbing his nose at his superiors, **Breeze had secured, in a matter of days, a construction program that Plum Island had failed to get under way for decades. The livestock groups got behind it, and leaned heavily on reluctant USDA officials and Congress to give way.** Though infuriated with their insubordinate new director, there was little Washington could do about it. How did his superiors respond? "Well," says Breeze, smiling, "everybody changes. If there was no money, it was all over, and they might as well have known that. You cannot make bricks without clay." Breeze soon had $22 million of clay in his hands ($3 million shy of his personal goal, but still enough) to build some 58,000 square feet of new space and renovate another 45,000 square feet. It was a truly remarkable feat.

Successful in dividing Washington officials from their industry advisory group, he trained his sights on the island, and on how to grab the animal kingdom for himself.

Long Island's North Fork was far too remote a place to attract good scientists, said Breeze. The cost of living there was far too high for government-salaried postdocs. Opportunities for spouses were also limited, except maybe to wait tables or work retail cash registers. As far as raising children, some scientists thought the school system fell short. "You'd have to go way up the Island to find any real sophistication," says one. And another, "The area is dead . . . it is not the type of place to attract young, upwardly mobile professionals. God knows how many miles you are from the nearest quality health care." Locals couldn't fill the scientific need, Breeze believed; they lacked the requisite education and experience. Recruiting would soundly fail. The laboratory would indeed fall into the sea, and with it would go Cap'n Breeze.

But there was a solution. By running a ferry across the Sound to Connecticut, Breeze could provide the scientists with a better place to live, one with a lower cost of living and better schools and real employment opportunities for spouses. At the same time, Plum Island would be connected with the Amtrak station there, allowing a link to universities like Yale and the University of Connecticut. "This ferry will turn Plum Island around," the new director boldly predicted. "It will help make us the number one research center in the world."

The Connecticut ferry's first customer was none other than Director Roger Breeze. He moved with his wife and children to a house in Cheshire. "I had to be on [the Connecticut boat]," he said. "It doesn't matter to me where I live. I just didn't think people would take it seriously without me being there." **{But Dr. Breeze didn't even attempt to live on Long Island. The director lived alone on Plum Island in an old Army barracks until his family moved east from Washington State and joined him in Connecticut. }** The ferry's heaviest load was a mere seven or eight passengers. Former ferry engineer Ed Hollreiser says the boat often ferried a single passenger. Once, one of the new scientists Dr. Breeze recruited (all of whom "chose" Connecticut as their place of residence) realized he'd forgotten an important book while en route to the island. The ferry was sent all the way back to Connecticut, where a deckhand went and fished the book out of the scientist's trunk and brought it back—to the tune of $400 in marine fuel.

It was an open secret that new hires must hail from the Nutmeg State. "Anyone that wanted to work on Plum Island at that time—even on support staff—had to be from Connecticut," says a worker. Among the scientists and support staff interviewed who ventured opinions on the ferry, all of them suspected Breeze's wife was the motivation behind it. They say she disliked the countrified North Fork, and the closest university teaching positions for her were miles away at Stony Brook. With its many colleges and universities, Connecticut offered far better opportunities for her and the children. While all of this may be true, the director's own motivations seemed far deeper than pleasing his wife.

As ridership on the Connecticut ferry increased, professional camaraderie at the laboratory began to decline. People were beginning to fraternize based upon which boat—and from which state—they hailed. The move "set up two classes on the island," said Ed Hollreiser, "[Breeze's] people from Connecticut and us peons from Long Island." **"I don't have a personal problem with him," notes Dr. Jim House. "But he caused a divisiveness between the New York and Connecticut people. He created the Connecticut people because to him, no one smart would live on [the New York] side**. But for forty years it had worked without it." Dr. Carol House agrees. "He would have conversations with people on the Connecticut boat that [the New York staff] wouldn't be privy to."

The ferry was a top-of-the-line, luxurious $1.2 million, 540-horsepower, 110-foot-long boat—but there were flaws from the start. Hollreiser said there were design problems with the engines, and the exhaust noise ran afoul of local town ordinances. "It was like they bought a Yugo," says a former worker. "The engines constantly blew up and it cost the government big dollars in repairs." When they finally got the leaky, noisy, shuddering craft running, it cost a hefty $100,000 a year to operate—a significant chunk of funds for a "cost cutting" regime to bear.

Dr. Breeze maintains that "[i]t had been difficult to fill jobs in the past," but nothing in the records indicate that local hiring over the previous four decades had been problematic at all. As veteran Fran Demorest wrote, "The professional staff moved to Long Island, bought or built homes, raised their families and used our school systems. These families joined in the many local community activities, services, churches, and other programs." Breeze's detractors, large and small, would always say the Connecticut ferry was a colossal waste, a sham, all the way down to the nifty uniforms he dressed the marine crews in. Even the local congressman decried the move. "It sounds like a total waste of money," snapped George Hochbrueckner, a Democrat representing New York's First Congressional District. "It sounds like a few people—including Mr. Breeze—decided they wanted to live in Connecticut. The taxpayers shouldn't be paying for this. . . . This does not make any sense to me." But the USDA had paid for it, and the congressman's objections were for naught.

Even had he tried, Hochbrueckner could never have reversed the ferry. Because **Dr. Breeze saw to it that undoing his Connecticut boat would be akin to unscrambling eggs. In a masterstroke, he did the one thing that would grant his new ferry perpetuity. He lionized the one man whose name was inextricably entwined with Plum Island, invoking in a simple step the potent feelings of a warm and distant past that instantly hushed would-be critics.**

He named the boat after Jerry Callis.

The opinions of two of his allies are enlightening. "Yes, it was Roger's idea," says John Boyle, when asked who named the Connecticut ferry. "In my heart of hearts, I would never tell you what my honest opinion of that particular thing is. There are still a few things about him I can't quite figure out. He can be inscrutable—even to his closest friends."

The definitive word comes from Dr. Breeze's dear friend Dr. Robert Shope, with whom Breeze had lived after he legally separated from his first wife.7 "He lived in Connecticut and wanted the ferry for himself. The excuse was that it would bring in a broader group of scientists—and it was a very controversial move." What did Shope think of the naming of the ferry? "It was very clever," Shope mused. "The J. J. Callis—he had it painted on the boat before anybody knew it—[after that] you couldn't take the boat away and nobody could counter the move." [...]

DIVIDE AND CONQUER

By this time, in the words of one observer, "[Employees] were praying that Breeze would die and Callis would come back." No longer was Dr. Breeze the rustic faux Scot, turned backslapping American cowboy. He now charged around the island with a flashy imperiousness. Says a retired Plum Island engineer, **"You know, a lot changed when Breeze came in. He seemed real worried about climbing the ladder. He could care less about us Americans—or American labor, for that matter. The island was all for his own benefit. I remember one time, he was coming over on the early morning ferry, and we'd been coming off from the night shift. He shook his finger at Walt [Sinowski, Lab 257's building foreman] and said, 'I'm gonna get your job. I'm gonna have your job one day. It's not long now. Not long.' "Meanwhile, Walt had been retired already from another job, and working at Plum was something he was good at and enjoyed doing. Walt said to him, 'You can take it right now, Breeze. Go right ahead.' We'd sit there and take that crap from him, day in and day out.**

"And then one day—it happened. It really, truly happened."

The A-76 federal privatization program had visited Plum Island two times since its inception in 1980. The rules stated the government had to step aside when the private sector could perform the government's nonprofessional tasks, provided no "overriding factors" required the government to keep those functions federalized. On both previous occasions, Dr. Callis invoked the "overriding factors" exception and staved off privatization, arguing that Plum Island functions were far too sensitive to be contracted out.

Placing two high-hazard biological containment laboratories in the hands of a private company would shift the emphasis from safety to profits. And it would kill employee morale. Why take the chance? Plum Island remained under federal control. Until Dr. Breeze arrived.

In 1988, a year after Breeze took control, a performance work statement (PWS) was prepared. This was essentially a chart of all the tasks that private contractors (and the government's own "in house" team) would bid on. From the start, there were signs that the PWS was prepared incorrectly.

In an internal memorandum, the government review panel noted "many misleading statements concerning the real situation with underground storage tanks, existing fuel spills, the chemical management program . . . etc." The panel said the PWS had been "sugarcoated" and charged it did "not reflect the reality of the true pressing problems" at Plum Island. It seemed like the PWS was being rigged to lure an unsuspecting outside contractor into snatching the bid.

"It was a political decision to do it," Dr. Breeze says today of the Plum Island privatization. "It had nothing to do with me or anybody else in USDA—that's just the way it is." But at the time, responding to the review panel, Dr. Breeze exploded. "There are no misleading statements," he wrote. Instead, the panel had "misunderstood several issues. . . . There are no obvious deficiencies we know of. . . . If [the review panel] feels this PWS is 'sugarcoated,' I am very willing to make their specific concerns known." Definitive words from someone who supposedly had nothing to do with it.

On Thursday morning, February 21, 1991, four sealed envelopes were opened in Washington. Burns & Roe Services Corporation of New Jersey was awarded the five-year Plum Island contract, with the lowest and best bid: $16.3 million. The government's in-house team had bid $23.7 million on the same exact PWS. The private contractor had underbid the in-house bid by $7.4 million—more than 30 percent lower. The disparity meant one of two things. Either the private contractor grossly underestimated the costs of the Plum Island project, or the in-house government team engaged in the unfathomable: it tanked its own bid.

Breeze explains his point of view. "There is no secret to this. There's no way you can shuffle cards around, if you are giving people decent jobs with full medical benefits and all the other benefits that accrue with having a job with the federal government. You cannot compete with people that are being paid minimum wage, with minimal benefits—it's not possible. It's actually not something I agree with. I don't think it's the right thing to do by any means. But that's the process."

Breeze says the two bids during the Callis regime beat the private bids because they combined tasks. Those bids said: "Firefighters would act as janitors, and take away the garbage and clean the toilets and mop the rest rooms . . . the boat crew will maintain motor vehicles, and et cetera. And if that would have been clear up front, that firefighters weren't going to clean rest rooms, there would have been janitors and the government would have lost." John Boyle, who admits he was "heavily involved" in the privatization process, said, "You have to be really, really creative to have the government submit the winning bid. We put together a good bid—a competitive contract. To preserve it, [the union] had to give something up, and they didn't want to give up some jobs. I was quite frankly afraid we were going to win it. I didn't want to win it."

Most Americans instantly recall exactly where they were and what they were doing at the moment they heard President John F. Kennedy was assassinated, or that the space shuttle Challenger had exploded. For Plum Islanders, May 3, 1991, was one of those days.

John Boyle recalls the moment he heard Plum Island would be privatized for the first time in its history. "I was sitting in my office, staring out on the lawn, out on Gardiner's Bay, just daydreaming for a few moments, when Ernie [Escarcega, Breeze's facilities manager] calls me and says, 'A-76 is coming in!' And I thought, 'Well, thank God.' I personally considered it a blessing. . . ." Walking out of his office, Boyle saw men wringing their hands and women crying in the hallways. "Crestfallen is way too mild a word. For these people, it was like getting news your son was killed in a car crash. I am not overstating it, either." Dr. Breeze also remembers the scene. "Chaos—it was the first time any of the employees had an inkling they might really lose their jobs."

Seizing the moment, the very next morning Burns & Roe executives called an all-hands 8:00 a.m. meeting in the old Army chapel. Exhausted, Stanley Mickaliger had just finished an eight-hour graveyard shift in Lab 257 and trudged over to the chapel. "When I got to the meeting hall, they were already introducing each other, giving all these speeches—all these men with suntan lotion on all over, you know? It clearly wasn't the government anymore. They were these big contractor types." As the crowd slowly filed in, they were handed sealed envelopes holding the documents that determined the fate of their

careers. Mickaliger walked over to an official-looking woman for guidance. She told him they were not taking questions, not now—"You have to catch the ten a.m. boat because we're not going to be paying overtime anymore. You can look at your letter on the boat."

Shunted onto the ferry, Mickaliger and the others tore open their letters. "It had all this information, on a bunch of papers, but I didn't understand a lot of it." One thing was clear, though—he'd been fired. And the severance package was nil. The fifteen-year-veteran's remaining choices were a bit limited. "I could have went to Calverton [National Cemetery, a nearby federal facility with openings], but that wasn't my cup of tea. See, I had been a master plumber for forty years. Now I'm going to dig graves and bury people? My wife and I lost our health insurance at age sixty—I had to pay 102 percent of the cost. The letter said if I retired, I got only 40 percent of the eligible Social Security benefit I paid into all those years. I remember complaining to them, saying, 'Hey, I know guys here have thirty years in. But I've put in a good fifteen years—do you think you can help me?' They gave me COBRA for six months."8

The days of "respecting personal dignity . . . recognizing work achievement . . . providing work security" were over. So was the old feeling that working on Plum Island was like being part of an extended family, that it was a career. For the roughly one hundred support workers left behind (which would decrease to seventy-five by 1995), employment at the Plum Island exotic germ laboratory would now simply be a job. And thereafter it would have all the dedication to mission, attention to detail, pride in workmanship, and camaraderie that accompanied a job.

A newspaper editorial published at the time captured the moment: "How would you feel if you worked for somebody for 15 years and a new boss came in and told you that you were losing your seniority and most of your benefits? What's more, you will be paid half of what you were paid to do the same job and your annual vacation days will be reduced from 25 to zero in the first year." And that was only if the contractor kept your position—" Remember," says one employee, "those that were allowed to stay were offered 'a' job, not 'your' job." And those were the lucky ones. A deeper sympathy was reserved for the seventy-five or so that were fired or pushed off the island into the bitter seas of early retirement. The negative effects on the community of the privatization layoffs at Plum Island, the east end's largest employer, were real.9

Even the USDA grudgingly admitted it had been a "challenging transition period." A former Plum Island official described the transition with a bit more flavor. He calls it "the biggest clusterfuck you ever saw in your life."

Like he did with the ferry debacle, Congressman Hochbrueckner complained again, saying privatization "was handled poorly. The workers were treated shabbily." For a politician who publicly bemoaned the woes of Plum Island numerous times, he accomplished surprisingly little. Says Dr. Breeze of Hochbrueckner's rants, "He said, 'I'm going to block it,' and that was just disingenuous at best. He knew quite well the way privatization worked. He knew exactly what was going to happen."

The congressman wasn't the only one feigning powerlessness. "I wanted the government to hold a series of meetings where you explained to the workers the process under way," explains Dr. Breeze. "Absolutely nobody would do that and it wasn't up to me to do it. I actually couldn't get it done." Those meetings never happened. Breeze says he had nothing to do with the privatization or the transition, though the record clearly indicates the opposite. He could have, like Dr. Callis before him, warded off the A-76 guillotine by invoking the "overriding factors" exception, based on the island's unique risks and unfathomable dangers among federal facilities. After all, Plum Island was no run-of-the-mill federal office building, where you'd apply for a passport or pick up a Social Security check. "When Dr. Callis was there, we had the rigid safety standards that almost made it impossible for the contractor to bid," says a longtime Plum Island scientist. "And they could have applied for an exemption this time around, but they didn't."

Retired Plum Island scientists Drs. Jim and Carol House believe without question that Breeze had the power to halt the privatization steamroller. "He could have stopped it, prevented it," says Jim. "Oh yeah, absolutely." Carol adds, "The next time [privatization] came up, [Breeze] threw in all of the inside support services, so it became a big enough 'plum' to bid on—he reengineered the [PWS] so that more was included. He personally did that." "We said from day zero that this is a place that should not be contracted out," continues Jim House. "It can't be—there are just too many concerns." Despite their beliefs now, Plum Island scientists remained silent, instead of speaking out to fight the process. As a result, many of the support workers, says union leader Ed Hollreiser, felt betrayed.

As one employee said, "All it took was the swipe of a pen" to prevent Plum Island from being contracted out. But Dr. Breeze kept his pen in his pocket protector.

[...] John Boyle [...] felt at that time [...] that getting into the private sector would [...] "get rid of the riffraff , and it would run more efficiently for less money." **The USDA, indeed, trumpeted the Plum Island privatization.** They said contracting out to Burns & Roe would save taxpayers $1 million a year, and that support costs would decline by $5 million, or 20 percent, over the length of the contract.

[...] Later, it would be learned that the PWS grossly underestimated the required material and manpower to run Plum Island.10

After Burns & Roe came in, John Boyle was let go, the contractor having no need for his services. But eight months later, the contractor begged the financial wizard to come back because things were spiraling out of control. When he returned, Boyle didn't find a mess—he found nothing. "They had no accounting system to speak of. They had hired a bookkeeper who did not know what cost accounting was. I built a new accounting system there, from the ground up." And when he finished his task, he delivered some bad news. "They were over $1 million in the red. I knew about it two or three weeks before, when I started seeing the signs, and I was thinking, 'Jesus, this isn't going to turn around.' They wanted to shoot me."

In most organizations, taking out the trash, tending the grounds, mowing the lawns, and providing clerical support seem like responsibilities that should be handled by a contractor. But Plum Island is not your typical institution. Positions like firefighters, security guards, ferry operators, engineers, incinerator operators, ventilation system operators, electric operators, nitrogen freezer caretakers, power monitors, and sewer decontamination plant operators hold seriously heightened responsibilities. At the home of the most dangerous germs known to man, even the grounds crew and typists must be specially trained and abide by complicated guidelines. Ed Hollreiser comments, "My take is that management was so poor, contracting out would be an easier way to go. This way, they could yell at someone now besides themselves. They could hold [a contractor] accountable and blame them for all the mishaps."

A USDA laboratory in Ames, Iowa, was also put out for privatization at this time. Though the Ames lab houses far less dangerous germs, the staff there, surprisingly, remained under federal government control. And it remains in federal hands today. In August 2003, Iowa Senator Tom Harkin fought off a renewed push to privatize Ames by introducing legislation barring non-governmental workers at the laboratory. He called Ames's research "a vital function of the federal government, and it should remain the responsibility of federal employees." There seems to be no other reason for this glaring inconsistency between the two laboratories than the personal wishes of a director looking to slash nonresearch costs and yoke his workforce. Breeze muses, "It's sort of surprising that Ames hasn't gone out to a contractor. I think it will eventually go to a contractor—it's just a push that various administrations do to different degrees."

Privatization resulted in federally trained, highly skilled workers with decades of experience being bartered away in exchange for a cost-cutting, efficiency-

driven private contractor. But on paper, it looked good, and the credit redounded to Plum Island's director, Dr. Breeze. Most important for Breeze, it freed up more funds for science, his primary goal. At least that's how it was supposed to go.

Back in 1965, Jerry Callis described his island laboratory at an international conference by saying, "Safety is uppermost in our minds in everything we do." If that meant less money for science, then so be it. Some three decades later, costs, not safety, were uppermost in management's minds. With the support staff slashed by 40 percent, and the Breeze team cutting every support line item, some other details—like biological safety and security—were compromised. For starters, the two-day Plum Island orientation course, after which new employees were ordered to study a three-inch-thick safety manual as if it were the Bible, was now boiled down to a forty-minute VHS tape and a two-page flyer. The "Nothing Leaves" policy was abandoned. Vehicles and items trafficked among the two laboratory buildings, Long Island, and Connecticut without being decontaminated at all. Contractors, who once had to be escorted ("The escort had to take a shower with these men, take their cigarette breaks with them, even go into the bathroom with them," remembers one), now roamed free.11 The color-coded badge system was discontinued, and the identification num- bers disappeared. Against the advice of an outside consulting firm, the fiveman full-time professional fire department was converted to one firefighter and a bucket brigade of volunteers.12

For years, security on intruders was "like white on rice," as one veteran employee describes it. The once thirty-four-man-strong armed guard platoon—checking off ID numbers at the ferry dock, manning the lab compound gatehouses—was dispensed with. One "safety technician" now stood in place of all the guards. He wore an empty gun holster to scare away intruders. One of the fired security guards, Phillip Zerillo, told a reporter there was "a total disregard for security. . . . The place is just going crazy.

It's running by luck now." Today it's no different. "You could walk onto that island right now," says an employee. "Two Eskimos in a kayak could invade and take Plum Island."13 There are two private security firm guards, one at Orient Point and one protecting all of Plum Island. The U.S. Coast Guard patrolled the island's surrounding waters until 1977, when it decommissioned the Plum Island Lighthouse. **After a brief Plum Island detail following September 11, 2001, Coast Guard cutters again retreated, leaving Plum Island without any marine patrol.**

An internal memorandum dispensing with and erasing away decades of safety closed on an bizarre note: "We welcome any and all suggestions, recommendations, criticisms, and attaboys . . . as well as fishing tips, a good joke, and restaurant recommendations."

In perhaps the most egregious of the safety lapses, the sentinel animals, Plum Island's "canaries in the mine," were eliminated. These test animals were kept outdoors and tested periodically to ensure no germs had escaped the lab. Said a USDA safety director of the move, "From a biological safety perspective, the best thing that ever happened to Plum was the discontinuation of Animal Supply," because he believed it eliminated the threat of disease transmission. But it also eliminated the island's last line of defense.

After all, they had successfully alerted the Plum Island scientists to the virus outbreak. Having the control animals outside "keeps you honest," says Plum Island scientist Dr. Doug Gregg. It was akin to a mother removing the smoke detector from her baby's bedroom. The laboratories, now more than ever, became ticking time bombs and the public, unknowing sitting ducks.

But one thing remained clear: the new way was certainly cheaper. And the cost-conscious attack on safety soon became literal—the Plum Island biological safety office itself suffered. First it was divided into contractor safety and government safety. Then contractor safety was eliminated, and the government safety department was slashed down to three staffers. The money saved went toward recruits' salaries and their new scientific equipment, and amenities like touring bicycles and a high-tech exercise gym.

Veteran scientists became concerned over the hacking away of four decades of carefully thought-out biological safety procedures. Former Plum Islander Dr. Ronald Yedoutschnig told a reporter, "When I was there, every person on the island was the same. But today, there are fewer permanent employees. I would be more safety conscious because the [new] people are less safety conscious. The agents we are working with are highly infectious." Says Dr. Richard Endris: "When I was there, the safety was good. Now when it went from a system that is based on employee loyalty and integrity to one of the lowest bidder, I was very concerned that safety would be compromised. Little things, like the backup power generator going out during a storm. The redundant systems are the absolute key. You have to maintain air pressure, the airflow, the freezers. . . ."

Dr. Gregg ponders what privatization has wrought upon the island's morale. "Morale is not as good," he says. High turnover in the workforce contributes further to the problem. "The contracting out was a major blow to the unity of the island," says Dr. Jim House, "and it's still a problem today. A lot of the esprit de corps with the people is gone—they're not there for more than a year and there's a turnover. The turnover after two, three years had 90 percent of the people gone—people that had been there for years." Unfortunately, low morale often translates into poor performance on the job.

The USDA should best be able to assess Plum Island's safety. Out of a possible 100 points under rating system, the USDA scored Burns & Roe, the contractor they chose to run Plum Island, 54.3, 43.9, and 60. The score of 60 was the minimum acceptable performance number.

Sometimes poetry captures the human condition better than prose. Plum Island Lighthouse keeper Captain William Wetmore penned "Plum Island" in the mid-1800s:

- *There is a rock-bound Island off Long Island's shore;*
- *Where you hear the music of the Ocean's roar.*
- *There you see a light-house on a rocky bluff—*
- *Tides there a roaring, surging; waters sometimes rough.*

One hundred and fifty years later, this line and verse was pulled from a file in Lab 101:

- *What in the world's going on over there;*
- *We heard that there is a "new Breeze in the air."*
- *Who denounced the achievements of thirty-some years;*
- *And announced that a time of success would appear.*
- *Just what has he done in three years on the job;*
- *See those new scientists that fancy boat bobs.*
- *Back and forth, forth and back to Connecticut and*
- *Of course the new carpet has served to expand*
- *USDA's credit both here and abroad;*

- *That use of our taxes we can all applaud.*
- *It seems that there's only one thing to say:*
- *That new Breeze just may blow Plum Island away.*

One employee summed it up more succinctly: "Breeze? "Breeze was a fucking doomsday machine."

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THE BREEZE SUBSIDES

Dr. Roger Breeze left Plum Island in 1995 for a better career opportunity.

His two predecessors had been honored by the ferryboats M. S. Shahan and J. J. Callis. "They won't need a boat to remember me by," Breeze told a Newsday reporter who asked him about his legacy. He was even more direct with me when we spoke. "My memorial has to do with the people I got there. I'm not interested in any damn boats and buildings. Facilities and boats don't do the research. People do. You can set out a stack of my scientific papers, and I'll be judged by those. I come back to this—it's the glory at all levels, and not in a negative kind of way."

Roger Breeze drew responses out of people, whether they were his superiors, his scientists, or his support workers. A head Washington-based USDA official said, "Some people just think he's the best—and some don't." From that distant official's vantage point, Dr. Breeze was "innovative and dynamic." He had reworked Plum Island's entire scientific program, rebuilt the facility, and saved Plum Island from imminent demise.

Ed Hollreiser sees Breeze as a "strange guy, very cunning—he'd call me in for little chats and tell me things that he said he didn't wanted repeated, but he really wanted me to spread the word." Plum Island safety officer Tom Sawicki says, "Breeze was here for a reason, he did what he had to do, and a lot of people didn't like it." Fran Demorest says, "It was his steppingstone.

And he made enemies there."

Dr. Robert Shope, who had lived with Breeze for a time in Connecticut, takes a middle view. "He did some things that weren't too popular with his superiors at USDA. And he may have gotten rid of some people at Plum who were deadwood, and in that sense, he wasn't very popular. But I think he was part of the driving force of the island." When asked to compare him to his predecessor, Shope thought of Breeze as "a totally different type of person—and still is. He's a wheeler-dealer type, and Callis was very conservative and played by the book and that sort of thing. Just two different people."

"My problem with Roger," says Dr. Carol House, "is that he still has an influence. He still shows up at town meetings and stands in the back, hovering. He still has a large influence over there, and he has pulled potential [Plum Island director] candidates."

"Roger's very hard to talk about," Dr. Jim House says, slowly, measuring his words. "Not one of the brighter moments in Plum Island history.

Roger had a way of manipulating situations so he was always politically on top. No matter what he did, he would come out smelling like a rose. He was very, very clever.

"He did make strides, enhancing the amount of molecular virology done, but he even took that to an extreme. He was somewhat of a visionary, and he's into biological warfare, his new thing now. But he didn't have the vision or skills as a manager to run Plum in a smooth and productive manner. I didn't have a lot of respect for him scientifically. He was selling genetically resistant animals, and we didn't do genetics of animals. We had this genetically resistant cow, and transgenic pigs. Of course that never went anywhere.

"A lack of perspective—of all the things you'd say about him, that would be the one—a lack of perspective."

The two research groups at Plum Island are without question the best of their kind in the world," boasts Dr. Breeze, "and that wasn't true when I went there. If there's one thing I do know about very, very well, it's how to motivate scientists to go beyond what they think they can do—that's what I do best." But in some cases, the science on Plum Island may actually have been set back. Proof of that, says Dr. Richard Endris, is that some three years after the four scientists had been dismissed, one of Dr. Breeze's new recruits reestablished and set up—from scratch and at great cost—the same African swine fever tick colony research that Breeze disbanded upon his arrival. As for the new laboratory facility, it included a new animal isolation wing, and a fancy sandstone two-story brick office complex slapped across the front of Lab 101. The brown brick and shiny glass façade conceals the deteriorating 1956 laboratory facility behind it.

Retired from government service, John Boyle still follows the career path of his old boss. "You saw what happened after Roger left Plum Island—he became an associate area director, he then became an area director. Now he is a big-time guy in Washington." Dr. Breeze is the associate administrator for "special interagency programs" for Agricultural Research Service. With his boss, Floyd Horn, at the Department of Homeland Security, Breeze oversees a good part of the USDA's scientific research.

Undoubtedly, the steep trajectory of his career path in America trumps the sluggish thirty-two-step ladder he left behind at Glasgow University.

Is it possible that Dr. Breeze was blinded by his own ambition? "He is a very talented guy, and cares very deeply," says Boyle. "I think he cares so much that maybe it even overrides his talent, because he is so tenacious, once he sets out to do something, it will get done. But he really cares about science—good science. It's why he took a liking to me, because I worked so hard to get him the ferryboat." Blinded by the glory of science, or blinded by unadulterated ambition—or perhaps both—Dr. Breeze's curriculum vitae soared while the people of Plum Island tumbled and the island itself crumbled.

In the wake of that unbridled progress, people's lives changed, and not necessarily for the better.

"If this place wasn't going to be different," Breeze told a reporter, reflecting on his tenure, "it was going to be gone."

For certain, Roger Breeze had made Plum Island different.

"Living with success," he says, "is harder than living with failure."

CHAPTER 14 : The Homeland

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Unfortunately, this story doesn't have a happy ending where the troubles work themselves out into tidy solutions. In fact, there is no ending. The island workforce walked out and went on strike in August 2002. The following June, President George W. Bush moved the laboratory from the USDA to the new Department of Homeland Security.

The Plum Island saga gets more intriguing with each passing day.

Dr. Breeze physically departed Plum Island in 1995, but he continued calling the shots from his new office in Washington as a procession of faceless directors came and went. Breeze finally got his man in sixty-five-year-old Dr. David L. Huxsoll, whom he appointed Plum Island's director in June 2000. "Roger handpicked him," says one scientist familiar with the decision. "He has that biological warfare background that Roger likes. Breeze has always been into germ warfare. He loves the mystery, and the intrigue—he's really into it." Dr. Huxsoll grew up on a farm in the rural town of Aurora, Indiana, where he recalls being so attached as a child to his family's livestock, he cried for days when the fattened baby calves he had named and petted were sold at market. Like Dr. Callis, Huxsoll attended Purdue University, but the comparisons end there. After a brief vet practice stint in northern Illinois, Huxsoll was drafted into military service and embarked on a threedecade military career chasing diseases around the globe. Colonel Dr. Huxsoll was named commander of the Fort Detrick biological warfare laboratories in 1983, the first veterinarian to hold that command, bringing full circle the veterinarian connection to biological warfare that Plum Island founding father Dr. Hagan began in 1941. "The most valuable thing out there," says Dr. Huxsoll, "it's not the gun, it's not the tank, it's not the jet fighter—it's man. So we do whatever can be done to prevent illness, and should illness occur, restore that person to operational status."

As Fort Detrick's1 commander, Colonel Huxsoll saw heavy action during the now-infamous Ebola virus outbreak in Reston, Virginia, featured in Richard Preston's The Hot Zone. He made the controversial decision to send the Army into a domestic matter that the Centers for Disease Control (CDC)—lacking any hands-on expertise—was having a difficult time managing.

"At that time, I considered everything, the potential hazards, and the safety issues. . . . There comes a point in time when you see—and you know—the only logical response is to make that uncomfortable decision with the best interests of lots and lots of people in mind." The decision was the right one. Huxsoll's well-trained medical soldiers—led by virus hunter C. J. Peters, who stalked Rift Valley fever through Egypt a decade before— successfully beat back the Ebola virus.

After the 1991 Persian Gulf War, Huxsoll served on three U.N. biological warfare inspection teams in Iraq, leading two of them. In Iraq he interrogated directors and middle managers of medical and academic facilities like the University of Baghdad and the College of Agriculture. As with the United States, following the veterinarians revealed clues about germ warfare.

Says Huxsoll, "Probably the greatest capability in addressing the biological villains, and those having a true understanding of it, was at the veterinary vaccine places." Special military satellite image maps enhanced by computer line drawings afforded the inspection team an uncanny recreation— down to exact shapes and sizes—of each suspected germ weapon manufacturing plant. Among the long sheet maps Huxsoll unfurled in front of his impressed Iraqi hosts ("I think it got to the point they probably thought we had more capability than we really did") was a single-cell protein facility at Al-Hakam. Ostensibly, that operation grew colonies of bacteria in big fermenter vats to be dried and milled into high-protein animal feed. But the team discovered a fair amount of evidence that it was used for biological agents, and ultimately the Iraqis admitted it. It wasn't easy to determine, however. "The plant that would produce biological agents for weapons purposes," Huxsoll notes, "may not look too much different from the plant that produces biological agents for vaccine purposes or for making beer." Chemical agents are another story. Chemical plants have what is

called a large "signature," while biological facilities have a far smaller footprint.

"If you're going to dump chemical agents on a significant portion of Long Island," Dr. Huxsoll postulates, "you have to have tons of the stuff.

Now, in the case of biological [agents], you can measure what you need for the same area on Long Island in kilograms, not tons. That's because you can disseminate them in an aerosol, and if you are good at this, you can spread it over a huge distance." Following those tiny footprints all throughout Iraq, Huxsoll's teams uncovered volumes of anthrax, botulinum toxin, ricin, gas gangrene, and other anticrop and antilivestock germs being prepared and weaponized on the tips of bombs.

[...]

In its final battle, Pat Acampora's task force faced down mad cow disease.

At an early morning meeting in Acampora's office, with Dr. Breeze present, USDA officials were asked if Plum Island had ever studied bovine spongiform encephalopathy, better known as mad cow disease. This animal infection's human variant, Creutzfeldt-Jakob disease, gnaws away at brain tissue and has a 100 percent mortality rate. {4Mad cow disease and Creutzfeldt-Jakob disease are caused not by live germs, but inanimate "prions," freefloating snippets of infectious DNA material that lack the structure that characterize viruses and bacteria. More resilient than any known germ, they resist the decontaminating processes of steam autoclaving and even incineration. Little is known about prions, but they are known to be extremely dangerous to animal and human life. } The Plum Island officials told the group they had not worked on mad cow and weren't equipped to study it. But a few months later, when 255 sheep in Vermont were suspected of contracting mad cow, the USDA made plans to ship the carcasses to Plum Island for necropsy, tissue and blood samples, and incineration. Tipped off of the plan, Acampora went livid. When she confronted Plum Island about it, the USDA told her, "Well, the situation has changed." "They don't even have a state permit for their incinerator!" she roared, and threatened a showdown: if they carted the sheep carcasses through Manhattan or Connecticut onto Long Island soil, she would get the police in Nassau and Suffolk counties to barricade the roads.

Fearing a public relations debacle with national implications, the USDA backed off, and trucked its infected sheep refuse to the Ames, Iowa, laboratory. "It became such a hassle, they decided not to do it," Acampora recalls with modesty; the truth is, she was the hassle. So many others— politicians, media, community groups—had failed over the years in trying to fight Plum Island. Finally, the task force had won a battle. It was a start.5

"Look at our space shuttle," Acampora says. "We spent billions of dollars on the space mission, hundreds of engineers, technicians, scientists, and safety experts to make sure the flight was fail-safe. We watched in awe. We clapped. And then it exploded in horror. That's what I'm worried about."

Even to this day, while other local officials have accepted tour invitations, the feisty assemblywoman won't go to Plum Island. Why is that? "It's really a simple reason," she laughs. "They say that when you go there, you have to scrub down, and get all washed up. And no one's going to see my hair wet." One gets the impression her fears go far beyond a bad hair day.

"There have been a lot of mishaps out there," she says, "and let's face it— Long Island has a lot of wind, and should something happen there, and the wind's blowing in the wrong direction, that could be pretty problematic.

"When you are a mile off the coast of a heavily populated area, an area for which we have no real evacuation, I have a concern." Indeed, there is only one arterial road off the North Fork and one out of the Hamptons, spilling into the heart of Long Island. From there, Long Island's 7.2 million people bottleneck into ten narrow bridges and tunnels that themselves empty into the cluttered congestion of New York City, where 11 million more people reside.6 Indeed, Plum Island lies on the periphery of the largest population center in the United States.

"You know, a lot of people really don't know Plum Island even exists,"

Acampora muses as her smile fades to a smirk. "People move here from New York City, they come here, play here—and they have no idea what's going on one mile off the coast."

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William Bremer (born 1863)

https://www.kuow.org/stories/bremerton-wouldnt-exist-without-seattleite

2017-02-npr-kuow-org-bremerton-wouldnt-exist-without-this-seattleite.pdf

William Bremer, born in Germany, moved to Seattle first.

But it was Bremerton, the city across Puget Sound, to which Bremer "gave his name and his fortune and all of this thought and energy," according to Leonard Garfield, director of Seattle's Museum of History and Industry.

Around 1890, Bremer learned that the U.S. government was scouting land on the west side of Puget Sound as a site for a Naval shipyard. Bremer was just one of a number of speculators who tried to cash in on the opportunity, "but he ended up by far being the most successful," Garfield said.

Bremer had a banking background and a brother-in-law who'd made money as a jeweler, so "he just went over there with a pretty hefty checkbook, figures out where the Naval station might be, and buys up everybody's property."

Bremer didn't just have a chunk of land, though.

He had a vision for a town. Bremer saw shipyard workers would need food, and shelter, and places to congregate. So he platted the land, named it Bremerton, and began dreaming of what it would be. "He thought that there would be a metropolis on the other side of the sound. And it would all revolve around this enormous federal investment," Garfield said.

The town did grow, but not necessarily how Bremer imagined. One thing Bremer didn't seem to anticipate, says Garfield, is that the Navy would bring not just renters and customers, but also drinkers and brawlers. "He was probably overly optimistic that it would be a normal apple pie American city," Garfield said.

Bremer himself never moved to Bremerton. He lived with his family in Seattle until his death in 1910 at the age of 47.

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"A Volume of Memoirs and Genealogy of Representative Citizens of the City of
Seattle and County of King, Washington." New York and Chicago: Lewis Publishing
Co., 1903.  p. 278.

WILLIAM BREMER

     So composite is the social fabric of our republic that we can as yet
scarcely be said to have developed a national type, and among the many elements
that have entered into the makeup of our populace there is none which has been
of more vital and valuable order than the German, from which America has had
much to gain and nothing to lose.  From the great German empire have come many
of our most progressive citizens, men of sterling worth of character and endowed
with that pragmatic ability which has promoted advancement along all lines of
material industry and has ever stood for social stability.  Among the
representative young men of German birth who have attained distinction in
connection with the industrial life of the state of Washington is Mr. Bremer
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connection with the industrial life of the state of Washington is Mr. Bremer, who has maintained his home in the Puget Sound district for the past fourteen years and who has attained marked precedence as an able and enterprising business man, one who has contributed in no small degree to the work of development and improvement through legitimate lines of endeavor. He is well deserving of representation in this publication as one of that progressive type of men who have made the Evergreen state what it is to-day. He is the owner of the town site of Bremerton, was one of the founders of the village of Sidney and through his real-estate operations and well directed enterprise has done much to forward the material development of this section of the state, maintaining his home and business headquarters in the city of Seattle, where he commands unequivocal confidence and esteem.

William Bremer was born in the town of Seesen, duchy of Brunswick, Germany, on the 12th of June, 1863, being a son of Edward and Matilda (Mader) Bremer, representatives of stanch old families of the German fatherland. Edward Bremer was a man of prominence in his locality, having been engaged in the banking business and having attained considerable wealth and exercised notable influence in local affairs. He passed his entire life in his native land. He and his wife became the parents of eight children, of whom the subject of this review was the fifth in order of birth. He received his educational discipline in his native land, having completed a course in the Jacobson Institute, at Seesen, the same being an institution of more than national reputation. In his youth Mr. Bremer became identified with the banking business, which he learned in all its details, this training having proved of inestimable value to him in his subsequent business career. After serving what may be termed as apprenticeship in a banking house in his native town he went to the city of Hamburg, where he was identified with a similar line of enterprise for a period of two years. When in his twentieth year Mr. Bremer bade adieu to home and native land and came to America, whither his elder brother, Charles E., had preceded him, being now a prominent capitalist and business man of Aberdeen, South Dakota. Our subject passed about one year in Minnesota and the following three years were spent in South Dakota. When but twenty-one years of age he was appointed state agent for the Jon Gund Brewing Company, of La Crosse, Wisconsin, and was incumbent of this responsible position for a term of two years, and since that time he has never worked on salary, having attained a position of independence and conducted operations on his own responsibility, a fact that is significant, as indicatory of his exceptional business and executive ability, and the more notable by reason of the circumstance that when he came to the United States he had but slight knowledge of the English language. He was for a year engaged in agricultural operations in South Dakota, and at the expiration of that period, in January, 1888, he came to Washington. Here, associated with three others, he purchased the land upon which the town of Sidney, Kitsap county, is now located, and they became the founders of the town, platting the same and placing the lots upon the market. The village is now in a prosperous and thriving condition and its further advancement is assured. It should be noted in this connection that Mr. Bremer has bought and sold land in nearly every section of Kitsap county, being one of the prime factors in its development and his straightforward and honorable course is shown by the fact that he has never been compelled to enter into litigation with any person to whom he thus sold property. Ever since his arrival in Washington Mr. Bremer's principal field of business operations has been in Kitsap county, which is one the western shore of the Sound, and he has been conspicuously identified with the development of its resources, the building up of its towns and the advancing of its material interests. It is a recognized fact that in his real-estate transactions in that county he had done more business than that representing the aggregate of all other operators in this line, and he is well entitled to the distinction of being designated as one of the founders and builders of that section of our great commonwealth, while the statement made affords an idea of the great scope and importance of his work. In 1891 Mr. Bremer platted the town of Bremerton, in the county mentioned, and through his energy, discrimination and far-sighted policy the development of this attractive village was brought about, while the town has as assuredly bright future before it, since he continued to be actively identified with its interests. At that point he sold to the federal government eighty-six acres of land at a sacrifice to himself of fifty dollars an acre, in order to insure the location of the naval station there, thus indicating his public spirit and showing his confidence that the future would justify his course, for a more eligible location for the navy yard on Puget Sound could not be found, and while he lost forty-three hundred dollars on the immediate transaction he firmly believed that his action was politic from a personal as well as general standpoint, and time is proving the wisdom of his attitude. This station has the only dry dock on the Pacific coast that will accommodate the largest type of war vessels, and the significance of this statement can not fail of appreciation even at a cursory glance. Mr. Bremer has not only thus brought about the development of town property, but he has also been extensively engaged in the handling of farming and timber lands in the county, usually buying the property outright and then placing it upon the market, while in numerous instances he has made valuable improvements before selling. He passes Wednesday and Saturday of each week in Bremerton, but maintains his home in the city of Seattle and has his office headquarters in the Bailey building, suite 404. In politics Mr. Bremer gives a stanch support to the Republican party, but he has never had personal ambition in a political way and has taken no active part in public affairs of this nature. His success has been of pronounced type and he is known as one of the representative young business men of the state, in whose future

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and greater precedence he has the utmost confidence, while a more loyal and
enthusiastic citizen of the commonwealth cannot be found.
     On the 25th of March, 1891, in the city of Seattle, was solemnized the
marriage of Mr. Bremer to Miss Sophia Hensel, who was born in Portage,
Wisconsin, a daughter of William Hensel, a well known business man of Seattle,
and of this union three children have been born, namely:  Matilda, William and
Edward.
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https://products.kitsapsun.com/archive/2001/03-18/0090_bremerton_centennial_1901-2001__w.html

BREMERTON CENTENNIAL 1901-2001: William Bremer's Lively Town

Sun | Local

Story by John Wallingford, Sun Staff — Mar 18th, 2001

West Sound hub's origins through 1913

William Bremer died in 1910 at the age of 47. He has been remembered as a benevolent town squire. The city bears his name.

Ambrose Barkely Wyckoff died 12 years later at the age of 74. He is credited by some as saving the Puget Sound Navy Yard. A street -- Wycoff Avenue -- is named for him.

How the western shores of Puget Sound became home to a Navy yard and rollicking young city

In autumn of 1864, a pessimistic Abraham Lincoln labored to keep a war-weary union on course while fighting off a presidential challenge from George McClellan, his onetime top general.

A callow lad named Ambrose Barkley Wyckoff left his family's Illinois farm for the U.S. Naval Academy.

When he arrived at Newport, R.I., he failed his entrance exam, then failed a second try. There was, however, a persistence in his bearing that led academy officers to grant him admission.

At 16, Wyckoff entered the academy as a rangy 6-footer with blue-gray eyes that seemed to smile perpetually. His down-home mannerisms, which inspired fellow midshipmen to dub him "Country," was trumped by an irrepressible will.

He remained an individual among the middie collective, his refusal to study on the Sabbath withstanding the mirthful jibes of his fellow plebes. Longing for the pastoral comforts of home, Wyckoff fought depression by dispatching a veritable library of letters to Jerseyville.

His determination enabled him to overcome ignorance, a severely broken ankle and a bout with pneumonia to graduate with his class.

On June 12, 1868 - William Bremer's fifth birthday - Wyckoff wrote his mother from Sandy Hook, N.Y, where he was aboard USS Savannah on a post-graduation practice cruise. His words foreshadowed a physical vulnerability that would hound him the rest of his days:

"I have been sick ever since leaving the Capes and consequently have had little enjoyment. All the way up I have been ruminating how I can leave the service I am evidently unfitted for in many ways. To stay in the service, I do not think I would live beyond a few years, at least not long enough to gratify my ambition by attaining a very exalted position. Now if I cannot make a mark in history, there is no use making my whole life miserable."

Wyckoff made an abortive step toward a more "congenial" profession, but was dissuaded from entering divinity school by Navy Secretary Gideon Welles. As he predicted, his health proved a continuous source of distress, but he soldiered on nonetheless.

In 1876, with Republican Rutherford B. Hayes and Democrat Samuel Tilden engaged in a tumultuous presidential election, Wyckoff was assigned to the U.S Coast Survey team in California. In 1877, the 29-year-old junior officer joined the survey team in Seattle, and 18 months hence was in charge of charting Puget Sound waters. It was during that work that Lt. Wyckoff was stricken with the bug that defined his career.

He soon earned the sobriquet - derisively used by his opponents in Congress - as "that Puget Sounder."

For he bent the ear of anyone who would listen, including Richard W. Thompson, then secretary of the Navy, on the unsurpassable advantages of Puget Sound vis-a-vis a future Naval base.

The Influence of Sea Power

In 1890, the year pitcher Cy Young earned the first of his 511 victories, Alfred Thayer Mahan published "The Influence of Sea Power upon History." Mahan argued that national prosperity resulted from naval power, and his book quickly became the standard work on the subject, spreading the author's fame across the Atlantic and into the war colleges of Europe.

For an America intent upon flexing its muscles, Mahan's book sounded an alarm to expand a ramshackle Navy. And toward that end, a major installation on the west coast was a practical inevitability.

A decade after Wyckoff started lobbying for a Pacific Coast base, the Navy dispatched a three-man commission, headed by Capt. Mahan, to the Northwest in late 1888. The commission explored the Northwest for five weeks, examining sites on the Pacific Coast, Alaska, the San Juan Islands, the straits of Juan de Fuca, Lake Washington and Puget Sound. The latter was deemed the best prospect, and Point Turner, the future site of PSNS, was selected as the top site in

the Sound.

"It is the citadel of Puget Sound," Mahan wrote, adding that if the east side of the Sound was more advantageous in a business sense, the western shores were "greatly and decisively superior" from every other perspective. Its defensive attributes were unparalleled.

Despite bitter opposition from eastern legislators, Washington Senator John B. Allen, spurred by Wyckoff, won an appropriation of $10,000 to purchase Puget Sound land for a Navy dry dock in 1891.

Bremer's town

William, or "Mr." Bremer, as most people who did business in his town addressed him, was born in the foothills in what was then the tiny Duchy of Brunswick.

He entered banking - his father's profession - before crossed the Atlantic and landing at Ellis Island in 1882.

The tradition says Bremer trekked across the country to join his brother, Charles, at Aberdeen, S.D., where he sold farm implements. Younger brothers Adolph and Otto joined them later, ultimately leaving for St. Paul, Minn.

The view of family patriarch Edward Bremer as a prosperous banker is bolstered by the acumen of his sons. Besides William's real estate triumphs, Otto built a banking empire in the upper Midwest. He created the Otto Bremer Foundation, a philanthropy that lives today. Adolph Bremer married into Jacob Schmidt's brewing empire, rising to vice president.

At 22, William met Sophia Hensel, the 12-year-old daughter of German immigrants. When the Hensels moved to Seattle, Bremer followed. Besides taking a shine to Sophia, William apparently hit it off with Hensel boys Louis, William and Henry, the latter a successful jeweler and the source of the capital that would underwrite the birth of Bremerton.

Bremer and the Hensels, historian Fredi Perry says, sailed the waters of Puget Sound, hiked the unspoiled Kitsap terrain and set up camp in the wild. A favorite spot was the beach the Bremerton Transportation Center now occupies.

By 1889, when it became apparent the Navy was coming, Bremer and Henry Hensel worked to tie up land around West Sound. They got options on land from Sidney to Silverdale to Charleston. When the Navy finally hit upon on a spot, Bremer was ready.

In the Kitsap County Pioneer of Feb. 13, 1890, readers saw the usual boasts of patent medicines such as DuJardin's Life Essence, which promised a "permanent cure for all derangements," right up to and including "Noises in the head and Ears." Readers also found Bremer's advertisement alerting buyers and sellers that he'd be in Sidney on "Saturday of each and every week to look after my business."

The deal goes down

A key figure in the evolution of Bremerton was the mysterious Andrew Williams, who in the 1870s had homesteaded 168 acres of untamed ground now framed by Sixth and High streets and stretching south and west to the shoreline. In February 1891, Henry Hensel made Williams a rich man, buying his whole stake for nearly $200 an acre and paving the way for downtown Bremerton.

Seven months hence, Wyckoff was in town with a mandate to buy 200 acres of land for a dry dock. Some spirited dickering sent him north for flirtation with landowners on Dogfish Bay, but Bremer galvanized a motley collection of owners around Point Turner, convincing them of the wisdom of selling their land for $50 an acre.

Bremer himself owned just 5 acres of the eventual 190 1/4-acre parcel; Hensel owned 81; Charleston pioneer Robert Jertson had 43; Bernth Olsen 21; and 40 belonged to William Sayward and Arthur Scrivener.

The speculative scramble was on as towns were platted and lots peddled. Tracyton, named for Navy Secretary Benjamin F. Tracy, was billed as "the New Navy Yard Town." Town site president Charles H. Kittinger promised the streets were graded and the sawmill was producing 35,000 feet of lumber daily.

Across Dyes Inlet, Benjamin Sparks and Ole Johnson of the Chico company were attempting to cash in on their land "one and a half miles from the land bonded by the Naval Commissioners." They touted pristine freshwater streams, a new post office and two Seattle-bound steamers each day.

The Grace departed Chico at 6:45 a.m. daily and made stops at Silverdale, Tracyton, Sackman, Sidney, Mitchell, Brickyard, Nibbeville, Sylvan Grove, Brooklyn and Colby before arriving in Seattle four hours and 15 minutes later. None of the amenities of Chico, Tracyton or Charleston (which was incorporated as Port Orchard in 1893) could compete with Bremer's embryonic site. He had a hammerlock on the new station, or dry dock, which was the official designation. He said as much in the Sidney Independent in 1892:

"Bremerton lies around the actual dry dock, etc., in such a way as to shut out every competitor. In other words, the farthest lot in Bremerton is nearer to the United States dry dock ... than the nearest lot in any other town or addition."

He advertised residential lots for $50 and business lots for $150, promising reasonable terms. Herbert W. "Josh" Linsley purchased the first plot and became Bremerton's first postmaster in 1892, followed by Civil War hero and downtown businessman John Nibbe in 1898.

Bremer married Sophia Hensel on March 25, 1891. Their first child, Matilda, was born in May 1892. Two boys followed, William John in 1893 and Edward in 1900.

The family summered at Waterman before 1908, when they bought 40 acres at Enetai Beach. They stayed there until 1920, eventually selling the house to Tacoma lumber magnate Ben Cheney.

The Early Years

By the time Wyckoff first saw Puget Sound, Bremerton had seen an intermittent infusion of Euro-American settlers. Charles Wilkes first surveyed the area in 1841, leaving behind names such as Sinclair Inlet, Dyes Inlet and Point Turner. In 1854, Capt. William Renton moved his Alki Point sawmill to the waterfront stretch then known as Port Orchard (today Enetai, on the Manette peninsula). A boiler exploded in 1857, costing Renton sight in one eye. He would sell out and move his business to Port Blakely, and the mill at Enetai eventually burned down.

Warren Smith, namesake of Warren Avenue, and brother Sheldon were prominent early settlers. The original Smith homestead is now occupied by Olympic College, and their land encompassed most of the waterfront between the bridges, including what's now Evergreen Park.

Of course, Native Americans had been present in the area for more than a millennium. The Suquamish tribe had an outpost near what's now the east end of the Manette Bridge, and in 1999, construction workers stumbled on human remains at Evergreen Park. An anthropological firm estimated that native use of the area dates 1,300 years.

Times of trouble

Bremerton and the Navy Yard suffered through the first decade together while Charleston, and even Manette, boomed by comparison. The dry dock, constructed by Byron Barlow & Co., was completed April 23, 1896, and USS Monterey was allowed to dock. The early highlight was the overhaul of the battleship Oregon before its dash around the Cape Horn en route to combat in the Spanish-American War.

Whatever glory was reaped was forgotten in 1899, when Adm. Mordecai Endicott, the Navy's chief of yards and docks, condemned the yard with faint praise, saying that it possessed none of the "desiderata" of a major base and that a better site should be found.

Wyckoff fought back, rallying the Seattle Chamber of Commerce. By 1901, Congress voted to appropriate more than $1.5 million to the Puget Sound Navy Yard.

With the yard suffering neglect and the country in the grip of a depression, Bremerton was anything but booming in the 1890s, when the site of the neighboring installation was commonly referred to as Port Orchard.

By September 1901, with William Turnbull Burwell in charge of the Yard, the streets of Bremerton were littered with lumber and other building materials as businesses sprouted feverishly.

Charleston established a post office in 1901, with Louis A. Bender as postmaster. Bender owned a saw mill on Point Herron in Manette, then known as Decatur, moving it across the Port Washington Narrows to Smith Cove in 1901. When a law was passed prohibiting the dumping of refuse in waters around Bremerton, Bender installed a generator to burn his trash, then sold the resultant electricity, the area's first power plant.

A Lively Town

In official terms, Bremerton became more than a stump-strewn wilderness Dec. 10, 1891, when its namesake founder platted the site. Less than a year later, the Sidney Independent lauded Bremer's peerless ability "to build a lively town."

Apparently, editor W.L. Wheeler knew of what he spoke. Because in another decade, Bremerton's vivacity would become a cause celebre and glower threateningly over the town's future.

Two months before Bremerton incorporated Oct. 1, 1901, a roving columnist from the weekly Seattle Herald & Mail sampled local offerings and returned the verdict that the Navy burg "furnishes all the facilities for a wide-open town."

On Aug. 3, the writer toured the town's nighttime haunts, including a new saloon at Evergreen Park that was illuminated by electricity. Bremerton, in the writer's view, was "full of frolic. People are doing business in shacks, and tents or anything just to get at the trade." Mostly what transfixed the author were Bremerton's colorful array of soon to be notorious saloons.

"They come to rally around its freedom loving stripes in early evening and stay by it till the dawn, when they are carried away to their ships by comrades whose battle-scarred stomachs will not hold enough liquor ... to make their heads dizzy. ... If this naval station ever becomes a success, it will be indebted to the army of intrepid bar tenders," he wrote.

Late in 1902, the 1-year-old city reeled when Charles H. Darling, acting secretary of the Navy, threatened to place the Navy Yard off limits to America's ships until Bremerton refined its morals. The Dec. 30 edition of the Seattle Times said Navy's plans to "adopt heroic measures to protect the enlisted men ... from the evil influences which exist at Bremerton. ... Gambling resorts and disorderly houses ... flourish just outside the yard. ... There are 'big-mitt' games running in Bremerton that hardly would have been allowed in Seattle's wildest days. Saloons are everywhere, bawdy houses of the lowest class thrive in large numbers."

On Jan. 3, 1903, the Bremerton News devoted its front page to a defense of the city and a scathing critique of the Times. Editors Charles and Edgar Gale articulated astonishment that their "quiet, orderly town" had fallen victim to an unjust portrayal from the "fertile brain of the local editor of the paper that would've put to blush the greatest writer of fiction the world has ever known."

Council, mayor battle

For the next six months, Bremerton's five city councilmen banged heads with youthful Mayor Alvyn Littler Croxton in search of a solution that would appease the Navy and, at least three of them hoped, keep the booze flowing out and the cash rolling in along Front Street.

City Ordinance No. 58 passed Feb. 2, 1903, outlawing saloons on Front (now Washington) Street on Nov. 1.

The Navy was first satisfied, then fit to be tied when the "whiskey" faction of the council conspired to repeal the ordinance. That faction included future county commissioner and pioneering auto dealer A.G. Benbennick, Thomas Driscoll, a former Buffalo, N.Y., policeman who rented Front Street property to saloon keepers, and Navy Saloon owner Charles Dietz.

Mayor Croxton pushed through an ordinance causing all liquor licenses to expire April 1, but the whiskey triumvirate got around that by automatically extending permits to April 1, 1904.

The game dragged on into the spring, and by May 2 even the Gale brothers had lost patience, and the News turned its disgust on the city fathers, accusing them of jeopardizing Bremerton's economic future.

The story provided continuous fodder for Seattle newspapers. On May 30, the Seattle Herald & Mail opined that "the sins of the little town of Bremerton have found it out," adding that the town was "drunk with saloons - 16 saloons for 1200 inhabitants."

Finally, on June 6, the whiskey coalition broke. The top story in the Seattle Post-Intelligencer on June 7 told the good news with a large headline trumpeting "BREMERTON IS PURGED OF OFFENDING SALOONS."

A 'model town'

The saloonkeepers saw their licenses expire June 8, 1903. Among the affected entrepreneurs was William Moffett, a native Canadian who ran the Log Cabin

Saloon at Front and Pacific, an area now inside the shipyard gate. Moffett sold the usual array of liquors, wines, beers and cigars, making a specialty of whiskeys such as Jefferson Club and Mt. Vernon Rye.

Also out of luck, at least temporarily, was Dietz, who had opened the United States Dry Dock Hotel in Charleston in 1893. A German immigrant, Dietz had moved on to the bustling town to the east, building the Dietz Hotel and operating his saloon.

But the town's residents had spoken, and the P-I announced that the kingdom was at hand, promising that "Bremerton will be in a class by itself as a model town, from a moral standpoint, adjacent to a navy yard."

The threat had ended, but Bremerton would see its reputation as a hotbed of vice resurrected again and again. There is good indication the good times were rolling again in March 1906, when Jack Smith's Louvre Saloon burned to the ground - while hosting the volunteer fireman's ball.

A.D. Humble, a teenage firefighter who would become the town's first fire chief, shared his memories with The Sun in 1951.

"The saloon burned down," Humble said, "but we did manage to save most of the whiskey."

By 1910, according to the reminiscences of former Mayor Jack McGillivray, Bremerton was again "a real wide-open town." McGillivray, who ran a blacksmith shop on Second Street before being elected mayor, told The Sun that Bremerton circa 1910 "was as tough a place as you could find on the Pacific Coast."

McGillivray, elected mayor twice more in the 1930s after serving two terms as county commissioner, said most of the offenders were refugees from "Soapy Skagway's Gang."

The mayor went to town wielding a sledgehammer.

"The first place we hit was a gambling house run by a fellow named Bulldog Kelly. I knocked on the door and he opened a sliding panel and peaked out at us. When he saw who it was, he told us he was running according to the law. ... I patted the sledgehammer and told him as far as he was concerned, it was the law."

Alas, as with Croxton's attempts, McGillivray's sledgehammer reform lacked the power to stem downtown's good-time tide. The year 1913, local historian B.E. Schureman reported, was a "heyday for crime, graft and immoral enterprises."

Coda

By 1913, the year the Navy Yard's second dry dock was completed, William Bremer was dead, and Ambrose Wyckoff was living a painful existence in Ontario, Calif.

Bremer died at 47 Dec. 28, 1910. He languished in bed three weeks before dying of a mysterious illness.

He has been remembered as a benevolent town squire. He donated property, like that at Fourth and Front in 1893 for Bremerton's first church. He donated two lots for Our Lady Star of the Sea. And in 1892, he built a wharf at the foot of Second Street near his former camping grounds.

Wyckoff, who lived upon the rotten old sealer Yukon as first commandant of the Navy Yard, realized his dream Sept. 16, 1891.

His 43-year-old joints aching with the rheumatism, he watched his daughter, Selah, hoist the American flag up a denuded fir tree on the grounds of the future dry dock.

Wyckoff's infirmities soon made a career in the Navy untenable, and James C. Morong relieved him as commandant Jan. 10, 1893.

"So while I eventually saw my cherished project of a naval station on Puget Sound started, it proved the means of my own undoing and prevented my reaching the high rank which is every naval officer's ambition," Wyckoff wrote in a 1901 article in Washington Historian.

After being retired in July 1893, Wyckoff visited home and made his way to Chicago for the Columbian Exposition. A.L. Croxton, who would come to Bremerton in 1899 as the Navy Yard's chief electrician, headed Standard Electric Co.'s exhibit.

After finishing nearly a decade as head of the Navy's Branch Hydrographic office in Port Townsend, Wyckoff returned to Puget Sound from time to time to rally support for the Navy Yard. He eventually toured the site with U.S. House Speaker Joe Cannon, who paved the way for the building of the second dry dock. Some say Wyckoff, who wrote the amendment that gave rise to the Lake Washington Canal, actually saved the yard.

As he foresaw at the age of 20, he paid a dear price for his dream. A year after Bremer's death, on Dec. 30, 1911, Wyckoff wrote to his old pal Terrell:

"My health is such that the use of a pen is a painful effort. I feel very grateful to the people of Charleston for having named one of the principal streets after me ..." Alas, the street a block west of Callow that bears his name is spelled incorrectly as, "Wycoff."

His life stretched on much longer than he had anticipated. He remarried in 1902 and fathered two more children.

With America's involvement in World War I growing probable in the spring of 1915, Wyckoff angled for a role. He petitioned the Navy again and again, to no avail.

He died on Memorial Day in 1922, and the Ontario Daily Report offered this chronicle of the death of "That Puget Sounder":

"Just after the G.A.R. and the Legion Memorial Day parade had passed his home, and he heard the muffled drums' last beat, he said, 'There they go now' " ...

- Information for this story was compiled from records at the Kitsap County Historical Society. In addition, local historians Fredi Perry and Russell Warren graciously shared their knowledge.

https://issuu.com/ksundigital/docs/combined

1987-05-the-sun-bremerton-washington-pg-2.jpg

1987-05-the-sun-bremerton-washington-pg-3-top.jpg

1987-05-the-sun-bremerton-washington-pg-2-3-pdf-ocr.pdf

Page 2 May, 1987 Bremerton, Wash. The Sun

The Bremers:

It was their kind of town

By Ron Judd
Sun Staff Writer

It is a warm July day in downtown Seattle, and Ed Bremer is dying.

Lying on a hospital bed in the living room of his Bremerton home, he is not talking — perhaps by personal choice, perhaps by an ear at all.

Bremer and the nurse know the old man has little time left, however, and it is to them to come from a time that no longer exists.

The siblings need to be checked. Here to go across town. I have to call Mother. She'll be worried.

In the final days, Bremer's mind has died a decaying body, returning to its sweetest memory: Bremerton in its heyday.

In Bremerton's finest hour, Sophia Bremer and her children are riding the crest of a wave of prosperity that began to roll in 1891 and would not crash for nearly eight decades.

It is Friday morning — any Friday morning between 1940 and the cold-1980s — and Bremerton resident Joy Stokes remembers the days of her youth.

Friday mornings are special at the Bremer Estate office where Mrs. Stokes, then a prominent works as a personal secretary to a strapping young Ed Bremer, the local scion of one of the area's few Seattle-based families that owned a city.

Bremer, dark-haired and haphazardly handsome, has inherited not only the family wealth (or a man of his, for that matter) climbs the stairs in the downtown Eagles Building and shuffles into the Bremers' office.

His clothes are dirty. Bremer is a hands-on man. In his daily rounds of his family's city, he has joined some of his many employees Pond to keep Bremerton, the city, a glowing monument to Bremer, the family.

Ed would not hesitate to demonstrate his way — the only way.

In his hands are dirty but it is for a good cause: Ed has been preparing for The Friday meeting. Inside, Ed and Joy Stokes Bremer shuffles past his secretary into a private office.

The Bremer employee swings the downstairs door open, revealing a long, dark nuts. A uniformed black chauffeur named Eugene jumps from the driver's seat, rushes around the car and hastily but politely opens the door.

From the car emerges an impeccably dressed, middle-aged man with striking features but a soft, almost effeminate manner: John Bremer, the elder son who had been left in charge of the family interests other underneath most legal and financial aspects of the business from a desk at the family home, sprawled upon Seattle's Capitol Hill.

It does so under the careful watch of the need to leave the car: Bremerton's first lady, Sophia Bremer.

Also elegantly dressed, Mrs. Bremer oozes dignity and poise as she enters the office and her late husband's employees.

Still, the smiles pleasantly and greets the

Boom town: cars line the First Street Dock in 1924, awaiting the ferry to Seattle.

William Bremer

Bremer's office staff. The woman who more than anyone else would shape the future of the city and the Bremer family has not let her high standing get to the way of niceties. She maintains a mixed-bag face of pleasantry and power when dealing with her employees and even the general public.

a very fine woman." recalls Mrs. Stokes. But old-world people were a way. I always felt very happy with her. She never made you feel in awe of her."

Of course, she was forthright. She would say what she wanted to say, but she was very, very fair.

Pleasantries exchanged, the Bremer class disappears into a private office reserved for the Friday meetings. Inside, Ed, John and Sophia discuss this week's events and next week's agenda.

They will decide the latest step on a long journey toward maintaining their sense of worth — all that William Bremer had left them.

WHAT WILLIAM BREMER left behind had been obtained through a stroke of what then was considered financial genius.

Trained in banking and finance, the German-born Bremer had arrived in Seattle in cash in an largely unclaimed Puget Sound shorelands. Hearing the U.S. government was about to open up huge tracts of land in Washington or Oregon, Bremer and a partner (Henry Hensel, brother of Sophia Hensel Bremer) invested $25,000 to buy what now is much of West Bremerton and a small part of the Manette peninsula.

Acting as a representative of other local property holders, he turned around and sold a large parcel to the government in 1891, absorbing a $18,000 loss on his own land.

It was a loss he could take. The large financial risks the Bremer family never would take.

It paid off handsomely. With his remaining land, Bremer began to build a town on his shipyard, and the two grew together.

Bremer's little city became Bremer's big city almost too easily. The shipyard created an automatic, long-lasting source of people and revenue. Later, during the boom years of World War II, the shipyard workforce would balloon to 32,500, and the city population to 80,000.

Under those conditions, Bremerton was destined to prosper — with or without its founder's uncanny business sense.

His family proved it after Bremer's unexpected death in 1910.

William Bremer's passing remains largely unexplained. The story is that he had taken ill, and that his wife administered a prescription from a pharmacist.

It is said the prescription was mislabeled, and that the medicine poisoned the 47-year-old land baron. William's younger son, Ed, was only 10 years old at the time, but he would remember it until his own death.

Ed, in his final years of reminiscence, would tell his nurses that Sophia Bremer had had the killer medicine bottle analyzed, finding that it contained a poison, such as cyanide. Mrs. Bremer had considered suing the pharmacist, Ed recalled. But she decided not to.

Ed, if he knew, never said why.

ALTHOUGH WILLIAM BREMER did not live to see the full fruition of his dreams, his presence and values in his young son, Ed's life forever would be shaped by the elder Bremer's qualities.

The essence of the city father was described in his obituary, which was read by hundreds of friends and associates. His eulogy painted him as a powerful yet generous man who had given many a penniless, would-be businessman a marvelous opportunity to succeed.

In the interest of establishing his city, Bremer had been lenient with rent and lease terms, sometimes even letting them slip altogether. He donated property and money to charity and churches.

And he did it all quietly.

Bremerton businessmen kept their doors open during the Great Depression, granting eulogy hints at the rest of their devotion: "He was generous almost to a fault, and to his own loss and detriment."

In his youth, Ed Bremer could not have known what those words would mean for his future.

In the end, they would explain why Ed's way was the only way; why Bremerton, the city, became a monument to Bremer, the family.

All of those notions sprang from Sophia Bremer's powerful and immediate reaction to her husband's death.

Almost from the moment Sophia, by all accounts, seized control of the family business while drawing her children close to her in an incredibly bad emotional rut that would encircle them for the rest of their lives.

Acquaintances say Mrs. Bremer's reaction was natural. Women of her day, with her upbringing, rallied their families together in times of crisis.

"[Sophia] had a lot on her plate to look after when her husband died."

John, who later was to control the family's business, was 17 years old. Sophia, 47, alone at the helm.

She had full authority to control the business. William Bremer's will, unvaried by hand in 1905, left one dollar to each child, and the rest of the estate — valued at over a million real estate then appraised at $91,000 and personal property worth $10,000 — to Sophia.

But he left more than waterfront properties.

When Bremer the man passed away, Bremer the image was born and quickly adopted by the family.

The image, simply, was Bremer as he had been in life: a strong, fair, and kind business pioneer driven by a curious blend of benevolence and omnipotence. The family was brave sorry to its recipients, the latter to all. Together, they formed the bedrock of the Bremer legend.

Sophia cut and rounded her children to fit it. She would make sure the family lived up to the image.

And the children fell obediently in line. Not only did they follow, they marched in perfect step.

Neither John, Ed, nor their older sister Mathilde ever seemed to question the mission: certainly none abandoned it.

For Ed, happiness and contentment became equated with maintenance of the image.

"It was his occupation," said Mrs. Stokes.

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In the early 1900s (1900 - 1905, maybe later), Bremer was doing business out of The Bailey Building in Seattle

https://web6.seattle.gov/DPD/HistoricalSite/QueryResult.aspx?ID=1741056853

Address - **619 2nd Ave, Seattle, WA 98104**

BITCHUTE @Housatonic YOUTUBE @HousatonicLive ODYSEE @Housatonic BRIGHTEON @Housatonic

Housatonic

Bremerton, Washington

Wikipedia Bremerton, Washington

LINKS

Founded by William Bremer (born 1863)

Saved Wikipedia

Source ; [HK0029][GDrive]

History

"In the Navy Yard of Puget Sound", in *Seattle and the Orient* (1900). Two ships are shown in drydock; the two circular insets are titled "Iowa coming up the Sound" (upper) and "Torpedoboat Rowan" (lower).

1890s

Bremerton is within the historical territory of the Suquamish people. The land was made available for non-Native settlement by the Treaty of Point Elliott of 1855. Bremerton was planned by German immigrant and Seattle entrepreneur William Bremer in 1891. In that year, Navy Lieutenant Ambrose Barkley Wyckoff purchased approximately 190 acres (77 ha) of waterfront land on Sinclair Inlet. This land was owned by the Bremer family. Three years earlier, a U.S. Navy commission determined that Point Turner, between the protected waters of the Sinclair and Dyes inlets, would be the best site in the Pacific Northwest on which to establish a shipyard. Recognizing the large number of workers such a facility would employ, Bremer and his business partner and brother-in-law, Henry Hensel, purchased the undeveloped land near Point Turner at the inflated price of $200 per acre. In April 1891, Bremer arranged for the sale of 190 acres (0.77 km^2) to the Navy at $50 per acre. This land became part of the initial footprint of the Puget Sound Navy Yard.

1900–1930

Bremerton was incorporated on October 15, 1901, with Alvyn Croxton serving as the city's first mayor. Progress in the new city soon faced a major crisis, as Assistant Secretary of the Navy Charles Darling moved all repair work to the Mare Island Navy Yard in California in November 1902. Darling cited reports from commanders that the Bremerton waterfront was rife with prostitution, opium houses and frequent strongarmed robberies of sailors. Politics were probably also at play, as local newspapers reported that the city's incorporation left the shipyard essentially landlocked without room to expand. A dispute ensued between Mayor Croxton, who wanted to shutter all saloons in Bremerton, and three members of the city council, who attempted to block his efforts. Croxton eventually won out, and the council voted to revoke all liquor licenses in June 1904. With the ban, Darling reestablished the navy yard as a port of call. Saloons had begun to return to business within two years, however.

In 1908, the city library and Union High School were established to serve the educational needs of the 2,993 residents recorded in the 1910 U.S. Census. During World War I, submarine construction and the addition of a third drydock caused the shipyard's workforce to balloon to over 4,000 employees. Growth due to the war effort and the 1918 annexation of the city of Manette, east of Bremerton on the Port Washington Narrows, can be seen in the 1920 census, which reported a population of 8,918. Bremerton absorbed Charleston, its neighboring city to the south in 1927. The population reached 10,170 in 1930.

1930s

Manette was linked to Bremerton by the Manette Bridge, a 1,573-foot (479 m) bridge constructed in June 1930. Prior to this time, the trip could only be made by ferry or a long trip around Dyes Inlet through Chico, Silverdale, and Tracyton on mostly unimproved roads. This wooden bridge was replaced with a concrete and steel structure in October 1949. It was replaced by the new Manette Bridge in 2011. At the shipyard, the 250-foot tall (76 m) Hammerhead Crane No. 28 was completed in April 1933. One of the nation's largest, it is capable of lifting 250 tons and continues to dominate the Bremerton skyline.

1940s

Bremerton's Admiral Theater opened in 1942 as a cinema; in the 1990s it was remodeled for performances and banquets.

At the peak of World War II, the Bremerton area was home to an estimated 80,000 residents due to the heavy workload of shipbuilding, repair and maintenance required for the Pacific war effort. Most of the relocation was temporary, though, and only 27,678 citizens were left in the city by 1950. During the 1940s, presidents Franklin D. Roosevelt and Harry S. Truman both visited Bremerton. Roosevelt made a campaign stop at the Puget Sound Naval Shipyard on August 12, 1944, giving a national radio address in front of a backdrop of civilian workers. During the course of his 35-minute speech, it is

Shipyard on August 12, 1944, giving a national radio address in front of a backdrop of civilian workers. During the course of his 35-minute speech, it is believed the president suffered an angina attack, experiencing severe chest and shoulder pain. An electrocardiogram was immediately administered once he left the podium, but it showed nothing abnormal. President Truman took a two-day tour of Washington state in 1948, speaking from the balcony of the Elks Club on the morning of June 10. Local legend has it that a man in the large Pacific Avenue crowd yelled the infamous "Give 'em hell, Harry!" line for the first time. This is a matter of dispute, however, as local newspapers quoted the man as having shouted "Lay it on, Harry!" Despite this, there is a bronze plaque attached to the corner of the building declaring that spot to be the place where the phrase "Give 'em hell, Harry" was first uttered.

With the return of World War II GIs to the homefront, the need for post-secondary education became evident to officials of the Bremerton School District. Olympic Junior College (now Olympic College), a two-year institution, opened its doors to 575 students in the fall of 1946. Initially, it operated in the former Lincoln School building, gradually moving operations to World War II–surplus Quonset buildings at its current 16th & Chester site. About 100 students received associate degrees at the first commencement exercises held June 10, 1948. President Truman was in attendance and received the college's first honorary degree. Operation of the college transferred from the school district to the state of Washington in 1967.

1950–1970

The 1950s and 1960s were a period of stability for the city. A second high school opened in 1956,[12] and two comprehensive high schools operated in the city until 1978. Growth in East Bremerton necessitated the construction of another span across the Port Washington Narrows in 1958. The $5.3 million, four-lane Warren Avenue Bridge allowed for increased traffic on State Highway 21-B (now State Route 303).

The battleship USS *Missouri*, site of the Japanese surrender treaty signing that ended World War II, was assigned to the Pacific Reserve Fleet at PSNS in 1955. For 30 years, she served as the city's primary tourist attraction. Hundreds of thousands of visitors walked the "surrender deck" before the ship was recommissioned in 1985. She was decommissioned on March 31, 1992 (final), and her name was struck off the register on January 12, 1995. In 1998 "Mighty Mo" was donated to the USS *Missouri* Memorial Association and became a museum ship at Pearl Harbor, Hawaii.

Population growth was flat, with 26,681 enumerated in the 1960 census, leading Bremerton leaders to annex the shipyard the following year in an effort to include stationed sailors in those figures. While the Vietnam War spawned protests and sit-ins on the Olympic College campus, the city was relatively free of civil disorder during the 1960s.

1970s

With the 1973 selection of the Bangor Ammunition Depot 12 miles (19 km) northwest of Bremerton as the Pacific home of the new Trident submarine fleet, residential and commercial development began to move north, closer to Silverdale, and farther from the Bremerton downtown core. Numerous failed proposals were made at redevelopment beginning in the early 1970s, including discussions of a waterfront hotel and the erection of a large canopy over the central business district. Meanwhile, most of the city's office and retail space remained in the hands of Edward Bremer, son of William Bremer and the sole remaining heir to his wealth. (In order to receive their inheritance, William Bremer's three children were honor-bound to never marry.) Bremer began to neglect his properties, never increasing decades-old lease rates and failing to make necessary maintenance upgrades. In 1978, the Bremerton City Council passed an ordinance declaring the entire downtown a "blighted area".

1980s

In 1985, Safeco subsidiary Winmar Corporation developed the Kitsap Mall in Silverdale. With lower taxes and minimal planning regulations in the unincorporated town, Silverdale achieved virtually unfettered growth. Sears, J.C. Penney, Montgomery Ward, Nordstrom Place Two, Woolworth and Rite Aid all closed their downtown Bremerton stores in the 1980s and '90s. Upon the death of Edward Bremer in 1987, the Bremer properties were placed under the complete control of a trust held by Olympic College. Not being in the real-estate business, the college did not actively market its holdings, and the downtown was composed almost entirely of very large empty storefronts. As of January 2010, many buildings remained vacant.

1990–present

The Norm Dicks Government Center

In recent years Bremerton has seen its share of community setbacks. Like many other West Coast cities, Bremerton school teachers were pitted against their district's administration for nearly a month in September 1994 during a contentious strike. Four elderly residents were killed in an enormous three-alarm fire that destroyed the 165-unit Kona Village apartment complex in November 1997. Damages were estimated at $7.5 million. A replacement senior apartment building has since been built.

Despite a hard-fought battle throughout the mid-1990s by local politicians to have the decommissioned and mothballed USS *Missouri*, already in the Bremerton Navy Yard, stay in Bremerton as a museum ship and tourist attraction, Secretary of the Navy John H. Dalton awarded the ship to the Pearl Harbor Naval Base, Hawaii, in 1998. It now sits near the USS *Arizona* Memorial to demonstrate where U.S. involvement in World War II started on December 7, 1941, and where it ended by the signing of the instrument of surrender by the Japanese on board the USS *Missouri*, on September 2, 1945.

Beginning with the building of a waterfront boardwalk and marina in 1992, Bremerton had begun the process of revitalizing its downtown community. That same year, the Bremerton Historic Ships Association opened the destroyer USS *Turner Joy* (DD-951) to public tours at the end of the boardwalk; the ship was built in the Puget Sound area in 1958, commissioned in 1959, and had played a back-up role in the 1964 Gulf of Tonkin incident that further escalated U.S. involvement in the Vietnam War with the Congressional passage of the Gulf of Tonkin Resolution, allowing President Lyndon B. Johnson to send fighting troops in addition to the "advisors" already on the ground in Vietnam.

In 2000, Bremerton saw the opening of the waterfront multimodal bus/ferry terminal and a hotel/conference center complex in 2004. The high-rise Norm Dicks Government Center also opened that year, housing City Hall and other government offices. The Waterfront Fountain Park and Naval History Museum adjacent to the Bremerton Bus/Ferry Terminal opened in 2007, and a newly expanded marina with more boat capacity was completed in 2008. Plans to build an extension to the current boardwalk from the USS *Turner Joy* to Evergreen Park is in the litigation stage. Even though the boardwalk extension project is fully funded, opposition to the extension by the Suquamish Tribe concerning the impact to treaty fishing rights threatens the project. Fairfield Inn and Suites by Marriott, a 132-room hotel, opened in March 2010 on the site of the old City Hall building made obsolete by the new Norm Dicks Government Building.

Condominiums were built on the waterfront to lure more people to live and shop in the downtown area as part of the revitalization effort. However, construction delays and economic downturn forced the builder of the publicly funded Harborside Condominium complex, the Kitsap County Consolidated Housing Authority, to fall $40.5 million in debt. That debt later was taken on by Kitsap County, which hired a marketing firm to sell the remaining units at a lower-than-anticipated price.[13] The privately built 400-condominium complex north of the Harborside complex opened shortly before the Harborside

complex and also didn't sell as well as projected. The remaining empty condos were eventually sold at auction for a lower cost.

The 2.5-acre (1.0 ha) Harborside Fountain Park opened on May 5, 2007. Located on the waterfront just steps away from the Kitsap Conference Center, the park features five large copper-ringed fountains, wading pools, and lush landscaping. The park will also be home to the Harborside Heritage Naval Museum. [14]

A tunnel underneath downtown, traversing from the ferry terminal to Highway 304 (Burwell Street), has been newly opened that allows for a smoother egress for vehicles exiting the car ferry and makes for a more pedestrian friendly downtown. A new fountain park above the tunnel blends water and art, along with the bow of a ship and the conning tower of a submarine as a tribute to the workers at the Bremerton Naval Shipyard over the years. The stations along the walk include pictures of the shipyard, workers, and shipbuilding and repair statistics.

The popular Blackberry Festival is held annually during Labor Day weekend on the waterfront boardwalk to celebrate everything blackberry. Local residents, shopkeepers and growers bring their blackberry ice creams, pastries, pies, jams, jellies, candies, and even ciders and wines to this annual event. Free entertainment includes music by local musicians and entertainers performing throughout the three-day festival, the Berry Fun Run, and the Blackberry Criterium Bike Race. Bremerton National Airport sponsors the annual Blackberry Festival Fly-In, with shuttle service provided by Kitsap Transit to the festival. As the festival's background story goes, the downtown waterfront of Bremerton where the festival takes place was a massive overgrowth of wild blackberry bushes that were removed to build the waterfront Fountain Park, Boardwalk, Marina and Bus/Ferry Terminal.

HistoryLink.org article on Bremerton

HistoryLink.org article: Source : [HW0033][GDrive]

The city of Bremerton, home to the Puget Sound Naval Shipyard & Intermediate Maintenance Facility, was founded in 1891 by German immigrant William Bremer. The main part of the city is on the Kitsap Peninsula's Point Turner, approximately 15 miles west of Seattle. The history of Bremerton and that of the navy base have always been inextricably entwined, with the fortunes of the former highly dependent on the activities of the latter. Bremerton made it through the ups and downs of a military-dominated economy for most of the twentieth century, but barely survived the 1980s when almost every major business enterprise moved to Silverdale, and significant military spending was diverted to the new Trident submarine base at Bangor. The city managed to hold on through the 1980s and 1990s, and in more recent years took steps to reinvent itself and revitalize its economy.

The Suquamish

The Suquamish, or "people of the clear salt water" in the Lushootseed tongue of the Coast Salish linguistic group, established permanent winter camps on the islands and peninsulas of the central Puget Sound as long ago as 5,000 years. During the summer months they would decamp from their permanent settlements and travel by canoe to seasonal grounds to fish the rivers, hunt, and gather berries and other edible plants. Their primary settlement was Old Man House at present-day Suquamish, about 12 miles north and a little east of Bremerton.

The Suquamish had two great nineteenth-century leaders whose names live on today. The first was Kitsap (1780?-1860), a war chief who won renown in 1825 by leading an attack against the warlike Cowichan Tribe of Vancouver Island. Kitsap County and the Kitsap Peninsula honor his memory.

The other was Seattle (178?-1866), a nephew of Kitsap who was chief of both the Suquamish and Duwamish tribes when the full Denny Party arrived at Alki Point in 1853. Chief Seattle also had proved himself in battle against Native enemies, but was considered a true friend of the white settlers. At the urging of early settler David "Doc" Maynard (1808-1873), the hardscrabble little village of Duwamps on Elliott Bay was renamed after Chief Seattle in 1853.

Today there are approximately 950 registered members of the Suquamish Tribe, and about half of them live on the Port Madison Reservation. Although they still exercise their treaty rights to fish and gather shellfish at their traditional grounds, the tribe also operates the luxurious Suquamish Clearwater Casino Resort on the Kitsap Peninsula near Agate Passage.

Exploration and Exploitation

The first official American survey of the waters around present-day Bremerton was conducted in 1841 by Lieutenant Charles Wilkes (1798-1877) of the United States Exploring Expedition. It was Wilkes who named Point Turner, the peninsula where much of Bremerton and the Puget Sound Naval Shipyard are now situated, and he was struck by the suitability of the area for naval use:

"There is not in the world nor could there be a harbour superior to Port Orchard — Good anchorage, protected from every point with many little basins about the size of a Dry Dock but hard sandy bottom, into which a ship of the line may be hauled & left dry at low water. A pair of floodgates & a foundation would make a dry dock without any other expense or trouble" (Charles Wilkes and the Exploration of Inland Washington Waters, 176).

In the years following Wilkes's survey, white settlers started appearing in Puget Sound in increasing numbers. Among the first to homestead near present-day Bremerton were William Littlewood and Daniel J. Sackman, the latter of whom fathered four children by a Suquamish woman. Another early arrival was Captain William Renton (1818-1891), who built a sawmill on Alki Point in 1853 but relocated it to the Manette Peninsula the following year. His was the first industry of note in the area and the first sawmill, but many more were to follow, drawn by the seemingly endless expanse of virgin timber.

A Northern Navy Base

In 1877, Ambrose Barkley Wyckoff (1848-1922), a sickly young lieutenant with the U.S. Coast and Geodetic Survey, piloted the schooner Yukon on a hydrographic mapping voyage in upper Puget Sound and Commencement Bay. Wyckoff, like Wilkes, recognized the region's military potential. Upon returning to the East Coast in May 1880 he started what would become a long campaign to establish a naval base in the sheltered but roomy inland waters of Sinclair Inlet at the southern end of Port Orchard Bay.

Studies by two presidential commissions, one of which included Ambrose Wyckoff, concluded that the southern shore of Point Turner had everything necessary for a naval base: sheltered but deep water close to shore; abundant supplies of timber; unlimited fresh water from the region's many rivers; and huge fields of bituminous coal within just few miles of Seattle, itself easily accessible by water. The merits of the place overwhelmed all objections by advocates for other sites, and Congress, albeit with some reluctance and a pinched purse, finally allocated $10,000 for the purchase of land and an additional $200,000 to begin construction of a dry dock.

A Quick Buck or a Longer View

Within just a year or two of Wyckoff's 1877 visit, rumors were circulating that there would be major federal land purchases made in the area for a naval base. Homesteading loggers who had struggled for years to eke out a living now hoped that their property was worth many times what it would have brought just months earlier. The rumors came true, but the hope of a windfall generally did not. Ambrose Wyckoff was sent to buy the land, but with strict instructions to pay no more than $50 an acre.

The chasm between what the settlers thought their property was worth and what the government was willing to pay created opportunities for men who had a longer view of things. William Bremer (1863-1910) and Henry Paul Hensel (1871-1935), both of Seattle, reasoned that once the navy base was established -- indeed, even while it was being established -- it would need a town to support it, and that was where the real money would be made.

Bremer had the plan and Hensel, a Seattle jeweler and Bremer's soon-to-be brother-in-law, had the money. In February 1891, one month before Wyckoff arrived on his land-buying mission, the two purchased the original homestead claim of settler Andrew Williams, agreeing to pay close to $200 an acre for nearly 170 acres of land that Williams had sold to his son for $3 an acre not too many years earlier. The property was logged-off waterfront bordering Sinclair Inlet, right at the heart of the proposed navy base.

When Wyckoff came calling, Bremer and Hensel sold him 81 acres of the Williams property for $50 an acre, losing, on paper, over $12,000, but keeping property inland from the planned facility and on the point of the peninsula where Sinclair Inlet met Port Washington Narrows. On September 16, 1891, Wyckoff was appointed the first commandant of what was then called the Puget Sound Naval Station, and by June 1892 he had completed the purchase of a little more than 190 acres at the prescribed price of $50 per acre.

William Bremer's Town

While Wyckoff was busying himself buying up land for the naval base, Bremer, having obtained Hensel's interests, set about building a town next door. **In September 1891 the navy raised the American flag over its land, and three months later, on December 10, Bremer filed a 25-acre plat for a new town named, somewhat immodestly, "Bremerton."** The navy base and the town thus came into the world together, and their fortunes have been linked, in good times and bad, ever since.

One year later, in December 1892, work began on the station's first dry dock, a 650-foot-long "graving" dock capable of handling the navy's largest ships. While that was going on Bremer nurtured his new town by donating or selling at discount prices land for schools and churches. He also built Bremerton's first wharf at his own expense and helped numerous businesses get off the ground. But the financial Panic of 1893 slowed progress on the naval base, and this in turn slowed Bremerton's development. Dry Dock No. 1 was finally completed in 1896, but things only got worse. Federal funding dried up, and both the base and the town staggered through the remaining years of the nineteenth century.

Wyckoff to the Rescue

Health problems forced Ambrose Wyckoff's early retirement in July 1893, but he **returned to the area in 1899 as a civilian, disturbed by reports of plans to close and relocate the naval base. Wyckoff enlisted the help of the Seattle business community, and the city's Chamber of Commerce prepared and submitted to Congress a persuasive report stressing the yard's importance to the regional economy.** This had the desired effect; federal funding was greatly increased in 1900 and 1901, and the workforce at the base quickly grew from fewer than 150 to more than 600.

As the base prospered, so did Bremerton. Soon the town was sprouting businesses of all kinds. A weekly newspaper, The Bremerton News, started publication on June 8, 1901, and its first issue claimed that 24 new businesses and 70 homes had been built in the previous three months. The workforce at the navy yard supported a half-dozen general stores, at least 15 saloons, and a post office. There were rooming houses, a barber shop, a hotel, a laundry, two cigar stores, even a "shooting gallery." Culture was served as well, with the nearby Charleston Social Club featuring a performance by the "Bremerton Orchestra" (The Bremerton News, June 8, 1901).

Just a month later, in July 1901, a group of the town's citizens petitioned the Kitsap County Commissioners for incorporation. The lengthy list of voting-age residents who signed the petition did not include William Bremer, who continued to reside in Seattle. On October 2, 1901, the voters approved the incorporation of Bremerton as a city of the fourth class. The town's first mayor was Alvyn Croxton (1869-1941). An election in January 1902 returned Croxton as mayor and seated A. P. Stires, Thomas Driscoll (1845-1934), J. J. Kost, F. W. Coder, and C. Hanson as the town's first full five-member council.

In July 1902 a private company brought in Bremerton's first piped water through wooden mains. In August the first official volunteer fire department was formed, and the following December phone lines came in. William Bremer's plans seemed to be proceeding smoothly, but some serious trouble was brewing on the town's rowdy Front Street.

An Often Uneasy Affair

It was inevitable that Bremerton would attract businesses that catered to the less-savory inclinations of young sailors and transient workers. Prostitution, gambling, drunkenness, opium, muggings -- the panoply of human temptation and weakness -- were present from the beginning. By late 1902 Bremerton had a population of about 1,700, and there were 16 saloons, all within a short walk of the navy's front gate. It was a wide-open town, and less than a year after Mayor Croxton was elected the navy threatened to shut it down, warning that it would boycott its own shipyard in order to save its sailors from Bremerton's "gross immorality." An Olympia newspaper, under the headline "Too Bad for Them," reported:

> "An official report received today from Rear Admiral Yates Stirling ... details a deplorable state of affairs in Bremerton, and Acting Secretary of the Navy

Darling today issued an order that will have the effect of keeping naval vessels away from that station in future until the nuisance is abated.

Gambling resorts and disorderly houses, the report says, flourish just outside the yard, especially when one of the war vessels is in port ..." (Morning Olympian, December 31, 1902).

Mayor Croxton was quick to respond, issuing a statement on January 1, 1903, that said, in part:

"The report regarding Bremerton is an unqualified falsehood ... . There are no card sharks, bunco men, or bawdy houses in the town" (Morning Olympian, January 1, 1903).

With no apparent sense of irony, Croxton two days later announced that he would close all public gambling in Bremerton. This decision was not met with universal approval, even among members of the city council, nor was the navy overly impressed. It continued to issue threats and broadsides, and expanded the circle of blame to Seattle, describing it as

"a harbor for all of the bad elements of lumber camps, mining camps and seaport towns, and ... a degree of immorality exists there that is equal to that of any city in the United States, and much of this element works in Bremerton ... " (Morning Olympian, January 8, 1903).

The battle over vice pitted the U.S. Navy against Bremerton's gambling houses and saloons, with the mayor and council in the middle and fighting among themselves. Resolution seemed possible on February 2, 1903, when the council, at the persistent urging of Mayor Croxton, doubled the licensing fee for saloons and rescinded the licenses of the five or six drinking and gambling houses located nearest the base on Front Street (which was south of today's 1st Street). But a pro-saloon faction on the council managed to rescind the Front Street ban within weeks, and a short game of tit-for-tat was on.

Mayor Croxton next pushed through an ordinance that would cause all liquor licenses to expire on April 1, 1903; the council responded by automatically extending all licenses for an additional year. The navy chimed in, again threatening to pull out "unless every saloon is moved from Front Street" (The New York Times, May 25, 1903). This time the threat worked -- the pro-saloon coalition collapsed, and the council went the navy one better by revoking every liquor license in town, effective June 8, 1903. The ban of course did little to stop either drinking or gambling, but it did make it a little less obvious and a little more distant.

This Town for Sale

The navy's overbearing attitude and charges of rampant immorality really bothered William Bremer, who had put his money and his good name into the town, and by early fall of 1903 he'd had enough. His reasoning was simple: If the U.S. government wanted to dictate how Bremerton should be run, then the U.S. government should buy the damn town and run it. By September 4, 1903, Bremer had obtained powers of attorney from nearly all of Bremerton's commercial land owners and disclosed that his asking price was $350,000. Later that month he traveled to Washington, D.C., and offered Bremerton lock, stock, and barrel to the navy at the discounted price of $300,000. But the navy thought the price was still exorbitant; Bremer came home disappointed, and never tried again. Nor did his widow, or his children. Even today, a significant part of downtown Bremerton is owned by a trust established by William Bremer's sons, John and Edward.

The ban on saloons and legal liquor sales stayed in place for about two years without significantly reducing Bremerton's overall sin quotient. But the navy was pacified, and quietly allowed a handful of liquor licenses to be issued. The entire state went "dry" in 1916, and nationwide Prohibition started in 1919. Sailors still got drunk in and around Bremerton, and gambling and prostitution did not disappear, but the city's leaders were no longer accused of being complicit.

Despite its somewhat raucous reputation, or perhaps because of it, Bremerton continued to attract new residents and businesses. The February 1909 issue of Coast magazine described the town:

"Bremerton has a population of about 3,000 souls, and is daily adding to its numbers. The business interests are large and increasing. On every hand is seen the widest activities in all lines of business. A large saw mill, ice and cold storage, lumber yards are located here and groceries, dry goods stores, boot and shoe stores, bakeries, restaurants, hotels, saloons and all kinds of business departments are numerous and thriving.

New, substantial brick and concrete business blocks, public halls, several hotels, one of which is a large three-story structure, and countless numbers of residences of a lasting and permanent nature are now under construction or just being completed" (Coast, p. 112).

The Second Decade and World War I

William Bremer died young, at age 47. On the day of his burial, December 30, 1910, Bremerton's businesses closed for two hours in the afternoon and the town's flags were flown at half-mast. **His widow, Sophia Hensel Bremer (1872-1959), took over management of the family properties and with the three Bremer children she would continue to play an influential role in Bremerton for many years. One of the family's signature projects was the construction in 1914 of the Bremerton Trust and Savings Bank building on the northeast corner of 2nd Street and Pacific Avenue, one of three buildings in Bremerton designed by noted Seattle architect Harlan Thomas (1870-1953).**

Employment at the yard reached 1,620 by the early summer of 1909, but the roller-coaster nature of an economy based on military needs became clear two months later when work slowed. The labor force was reduced by more than half almost overnight, only to grow to 1,500 again within a year, a pattern of ebb and flow that would be repeated with varying intensity for decades. And, of course, the population of Bremerton saw huge temporary spikes of military personnel -- in 1912 the Bremerton YMCA reported that it had been visited by 57,272 enlisted men.

World War I started to affect Bremerton two years before America's formal entry, when the navy yard began building submarines for Imperial Russia in 1915. (They were not completed before the Bolshevik Revolution, and were bought by the U.S. government to prevent them falling into communist hands.) By the time U.S. troops were sent overseas to fight in 1917, the yard employed 4,000, and that year money was allocated for a third dry dock. By 1918 employment at the yard stood at more than 6,500, most of whom lived on-base and all of whom spent money outside its gates.

Bremerton annexed the town of Manette, just across Port Washington Narrows, in 1918, but the two would not be connected by a bridge until 1930. The 1920 census showed that Bremerton's population had almost exactly tripled in 10 years, growing from 2,993 to 8,918. And although it had refused Bremer's earlier offer, the federal government in 1918 decided to buy up what had been Bremerton's "tenderloin" district, from Front Street down to the waterfront. Front Street disappeared behind the base perimeter, and it and its riotous days came to an end.

Heading for Depression

With peace went the booming prosperity of the second decade of the twentieth century, and Bremerton settled into a period of slower growth. Employment at the base tapered off from the wartime high of 6,500 to bottom out at fewer than 2,500 by 1927, but the town itself had grown to a point that many businesses could survive by serving the area's civilian population and the lessened needs of the military. Homes were being built, car dealerships opened, services expanded, and optimism prevailed.

Bremerton absorbed the next-door community of Charleston in 1927, further increasing its population and tax base. In 1928, construction began on the light cruiser USS Louisville, and employment at the naval yard jumped by 1,000, providing additional flotation to the local economy. In June 1929, just four months before the stock market crash and the beginning of the Great Depression, Bremerton voters passed an $835,000 bond issue to improve the city's water system and to build an electrical plant.

In November, after the bottom fell out of the world economy, work began on a bridge linking Bremerton with the former Manette, now East Bremerton, financed almost entirely by public subscription. When the full effects of the Depression set in, Bremerton, perhaps inured to some degree by the previous economic ups and downs of the naval yard, actually managed better than most towns and cities.

Surviving the Thirties

The Manette Bridge opened to great fanfare in June 1930, and with that completed the people of Bremerton tackled the Great Depression. A Puget Sound Navy Yard Stabilization Bureau was established to lobby in Washington D.C., for shipyard work, and each worker at the yard pledged $5 a year to support its efforts. They also agreed to regular payroll deductions to help support Kitsap County's unemployed, and all employed workers in the county were asked to give up one day's pay a month for the same purpose.

The federal government did its part too, and the shipyard actually expanded during the Depression years. Concerns over Japan's actions in the Pacific led to orders for several new ships. County projects funded by the Works Progress Administration also helped. So successful were these combined efforts that Bremerton experienced record growth in 1934 and 1935, and by the end of the decade its population had increased by half, to over 15,000. By 1940, when the national unemployment rate was still well over 14 percent of the labor force, Bremerton's stood at just 6.9 percent. Bremerton was doing well, and in 1937 its incorporated status was upgraded to city of the second class.

Business was good enough that the Bremerton Chamber of Commerce, which had been in existence since 1907, saw fit to formally incorporate in March 1938. The incorporation papers were signed by its treasurer, William H. Gates Sr., grandfather of Microsoft co-founder Bill Gates. And during the late 1930s and early 1940s, Bremerton was also home to the controversial founder of the Church of Scientology, L. Ron Hubbard.

More War, More Work

The global disaster that was World War II was a huge boon to Bremerton almost from day one. Five of America's warships damaged during the Pearl Harbor attack of December 7, 1941, were towed or limped under their own power into what was then called Navy Yard Puget Sound for repair. Soon the city fashioned itself "Home to the Pacific Fleet," and its population ballooned to as many as 80,000, including more than 32,000 shipyard workers. With most working-age men being sent off to fight, they were replaced in the shipyard by wives and girlfriends, marking a major cultural shift and helping give rise to World War II icon "Rosie the Riveter."

Bremerton during this era was filled with young people, and with the shipyard running three shifts, dances were held at all hours of the day and night, including afternoon USO-sponsored affairs on the decks of dry-docked aircraft carriers. But housing all these new people was a challenge that was never fully met. Two housing developments, Westpark and Eastpark, were built early in the war by the federal government and a third, Sheridan Park in East Bremerton, somewhat later, but they didn't nearly fill the need. Tents and trailers abounded, and people lived in converted garages and chicken coops. "Hot-bedding," in which workers on different shifts would alternate sleeping in the same bed, was common. By the end of the first full year of war Bremerton had 69 apartment houses, four hotels, three hospitals, six theaters, six dance pavilions, and nearly 6,000 students enrolled in its schools. Also in 1942, Bremerton's incorporation status was upgraded again, to city of the first class.

With this latest boom, and with Prohibition no longer the law of the land, alcohol, gambling, drugs, increased crime, and other social ills again became more visible. The city's police force increased from 12 officers to 54 during the course of the war. But this time there were no threats to pull work away from the shipyard; it was simply too critical to the war effort, and a certain tolerance took hold during those years of crisis, especially for the occasional indulgences of sailors on leave.

One controversy that did cause friction with the federal government was the Bremerton Housing Commission's practice (which it denied at the time) of separating black and white workers and families in allocated housing. The federal census counted only seven "negroes" in Kitsap County in 1940, but by 1945 the number exceeded 4,500. Although Bremerton had largely shunned the resurgent Ku Klux Klan during the 1920s, there was still a deep strain of white fear and bigotry. During the war years, most African Americans, and virtually no whites, were assigned to live in the Sinclair Park area of West Bremerton, and many downtown businesses posted "Whites Only" signs. Well-known Bremerton activist Lillian Walker (b. 1913), the wife of a shipyard worker, started her long career in civil rights in 1941 by organizing protests at the navy base against such discrimination. Despite these actions and steady pressure from the federal government, the practice of de facto segregation persisted after war's end, and it took until the 1960s for the last vestiges of overt racism to recede.

On December 1, 1945, the name of Navy Yard Puget Sound was changed to the Puget Sound Naval Shipyard, and with the end of World War II Bremerton had reason to worry about its future. A labor force that had peaked at 32,000 was reduced to 9,000 by the end of 1946, and the estimated 80,000 peak population of the war years dropped to 27,678 in the 1950 census. But there were a few bright spots. In 1946 the Bremerton School District opened Olympic Junior College (now Olympic College) and admitted 575 students to its inaugural class, and in 1948 its first graduates were honored with a visit by President Harry S. Truman (1884-1972). The state took over operation of the college in 1967 and still runs it today.

Then, once again, Bremerton was helped by war. North Korea invaded South Korea on June 25, 1950, and the yard was put to work recommissioning mothballed warships. The respite was temporary -- when a truce was signed in July 1953, Bremerton entered an extended period of stasis, to be followed three decades later by a steep decline.

Doing Without War

With the huge population decrease after the war, Bremerton found itself with too many buildings for too few people, and it showed. The economy was not particularly bad during the 1950s, but the city took on a somewhat desolate and semi-abandoned air simply because it had been overbuilt during the war years.

City tourism got a boost in 1955 with the coming of the famed USS Missouri, on the deck of which the Japanese had signed their formal surrender on September 2, 1945. The Iowa-class battleship stayed in Bremerton as part of the Pacific Reserve Fleet before being reactivated in 1985. Bremerton fought to get the "Mighty Mo" back when she was again retired in the 1990s, but the venerable battleship ended up in Honolulu.

By the 1950s the Manette Bridge, despite being partially rebuilt in 1949, had become totally inadequate for the traffic volumes across Port Washington Narrows. In 1958 the four-lane, $5.3 million Warren Avenue Bridge was completed about a half mile to the northeast of the old span. (In 2011 the 1930 Manette Bridge was demolished. Its replacement span was completed in 2012.)

The days of wars fought with vast navies seemed over, and the government's demand for new ships diminished. The Puget Sound yard did build two guided missile frigates in the late 1950s and kept fairly busy refurbishing existing ships. But it was not enough to fuel growth, and the 1960 federal census showed that Bremerton's population shrank slightly in the preceding decade.

Years of economic ups and downs had made city leaders quick on their feet, and one of their most ingenious moves was the annexation of the Puget Sound Naval Shipyard in 1961. This was done by simply extending the city's eastern boundary to the center of Sinclair Inlet, thus encompassing the base. Mayor H. O. Domstad (1909-1991) was not at all coy about the reasons for the annexation. With 10 ships due to arrive at the base by April 1961, the mayor calculated that the move would add at least 10,000 military personnel to the city's official population. Since the state distributed $13.18 per person per year to its cities, Bremerton would reap more money at a time that it was badly needed.

A Series of Unfortunate Events

At the end of the 1960s, Bremerton could be proud that it had survived and largely prospered for seven decades, through war and peace. But in the last three decades of the twentieth century the town hit a patch of bad luck that almost brought it to its knees, and from which it has yet (2010) to fully recover. An indication of how bad things were can be found in the population figures. In 1970, Bremerton's population was 35,301. Thirty years later, it had increased by less than 2,000, to 37,259.

Even at the start of the 1970s, thing were not rosy: The unemployment rate in King County was 6 percent; Bremerton's was almost double that, at 11.9 percent, and every slight downward tick in that number represented not a new job, but the migration of another working family. William Brenner's son John, who had managed the family's extensive holdings in downtown Bremerton, died in 1969, and his younger brother, Edward, was a poor manager. Leases expired and weren't renegotiated; necessary upkeep and repairs went undone; even the valuable waterfront property owned by the family sat largely unused except for parking cars.

A major blow came when the federal government selected Bangor, located on Hood Canal about 12 miles north of Bremerton, as the home port for the first squadron of Trident nuclear submarines. The Bangor facility, which had served as a humble ammunition depot from 1942 until 1973, suddenly became the new center for military construction and spending on the Kitsap Peninsula. The demand for labor to convert the old depot to a modern submarine base drew workers and their families away from Bremerton and towards Silverdale, which stood about half way between Bremerton and Bangor. After adding nearly 10,000 residents between 1960 and 1970, Bremerton grew by less than a thousand over the next decade.

At Silverdale, a sleepy little unincorporated community in central Kitsap County, a subsidiary of the Safeco Insurance Company started building the huge Kitsap Mall. It opened in 1985 and quickly replaced Bremerton as the dominant commercial center for the entire Kitsap Peninsula. The J. C. Penney store was first to pull out of downtown Bremerton and move to Silverdale, and this led to more defections. Sears, Montgomery Ward, Nordstrom Place Two, Woolworth, and Rite Aid all closed their downtown Bremerton stores in the 1980s and early 1990s, and soon the commercial core of the city consisted of street after street of empty windows staring out from empty spaces. Edward Bremer died in 1987, and the properties were placed in a trust controlled by Olympic College, which seemed equally unable to do anything to break the downward spiral.

The death of Bremerton's commercial district had many causes, but to many the primary blame belonged to the family that gave the city its name. Wally Kippola, a past president of the Kitsap County Historical Society and former director on the Central Kitsap School Board, told the Seattle Post-Intelligencer in 1998:

"What drove people to Silverdale and out of Bremerton was the parochial attitude of (the late) Bremer brothers (John and Ed), whose father founded Bremerton and who owned most of the property there" (Seattle Post-Intelligencer, June 20, 1998).

That may have been a harsh judgment, but it was more than a little true. It is a sad irony that a city started through the initiative of one generation of Bremers was nearly destroyed by the ineptitude or inaction of the next.

Signs of Life

In June 1977 the Bremerton city council passed a resolution designating virtually the entire urban core of the city a "blighted area," a first step to obtaining expanded powers for urban renewal under state law, including enhanced powers of eminent domain and taxation. Much of the "blighted area" was still in the hands of the Bremer family, and Bremerton clearly was fed up with Edward Bremer's unwillingness or inability to make better use of his holdings.

Twenty-five years later, little had been done. The J. C. Penney building and most of the downtown core still sat vacant. In January 2003 a city ordinance acknowledged that "conditions have not changed since those designations (of blighted areas) to warrant repeal of said designations ..." (Bremerton City Ordinance No. 4830). In 2000, Bremerton voters had rejected a ballot proposal to create a recreational center in the downtown area, and the Bremer Trust, established by the brothers, had maintained for years that it wasn't economically feasible for it to subdivide large commercial buildings for rental to multiple small businesses.

But the logjam was actually loosening. In 2001 the city adopted a Downtown Revitalization Plan. The following year, the city council appointed the Kitsap County Consolidated Housing Authority to oversee the city's community renewal efforts. In 2003, ground was broken for the Norm Dicks Government Center and City Hall, and it opened its doors in November 2004. In that same year, the adoption of a Comprehensive Plan gave additional impetus to the city's revitalization efforts. Also in 2004, a conference center with a hotel, restaurant, offices and shops opened next door to the ferry terminal, and another hotel and a tunnel to redirect ferry traffic from downtown streets were under construction.

The arts are being seen to, as well. In July 2005, Bremerton's city council passed an ordinance establishing the Bremerton Arts Commission and enacting a

"1% For Arts" program which requires all city-funded capital improvements to allocate 1 percent of their construction cost to support public art projects. A downtown Arts District centered on 4th Street and Pacific Avenue hosts monthly "First Friday Arts Walks," and there are also "Last Saturday Arts Walks" in the Charleston district of West Bremerton. The downtown Arts District features several fine galleries, three museums, two performing art stages, unique shops, various restaurants and cafes, and clubs featuring jazz and other live music.

Among the art on permanent display are the sculptural fountains of Harbour Fountain Park and at least four other public sculptures, one of which, a two-part piece entitled "Fish and Fisherman," has not been free of criticism since its installation in 2010 on diagonal corners at 4th and Pacific. But disputes about the merits of individual art works aside, the welcoming civic atmosphere, city-sponsored programs, relatively low prices for commercial space, and a core of established artists, galleries, and workshops should ensure that Bremerton's art scene continues to make major contributions to the city's eclectic personality.

A major boost came in late 2007, when the Bremer Trust agreed to sell the long-vacant J. C. Penney building to Ron Sher, a Seattle developer. Sher announced plans to create a new downtown commercial center, with a bookstore, health facility, restaurant, residential units, and a large commons area for community use. Also in 2007, the city opened the 2.5-acre Harborside Fountain Park as part of its Harborside Redevelopment Plan, and in May 2008 the Port of Bremerton dedicated a greatly expanded 300-slip marina.

Once again, however, events much larger than Bremerton's local concerns conspired to hamstring the city's economy and stymie its redevelopment plans. The global financial crisis that started in 2008 slowed or halted progress on several proposed projects, including the redevelopment of the J. C. Penney building, and many slips at the new marina remained unfilled. But there was one big difference this time, and reason for optimism. Bremerton had to look beyond its historical reliance on the military and by 2010 the city had on its books a detailed blueprint for urban revitalization and a more durable and stable economic footing.

History of Bremerton Chamber of Commerce

https://www.bremertonchamber.org/history-of-the-chamber/

Serving Bremerton for over 100 Years!

Although the Bremerton Chamber of Commerce celebrated its 100th birthday in 2007, most people would be surprised to know that chambers of commerce existed in this country before we even became a country! The first chambers of commerce were formed in the colonies in the 1760's. And they've been growing stronger ever since.

The Bremerton Improvement Club began in the year 1902. The Bremerton Board of Trade was started in 1904. The Board of Trade absorbed the BIC, and was organized to promote PSNS and the affairs pertaining to the well being of Bremerton. The name was changed to Bremerton Chamber of Commerce in 1907.

Early history shows the Board of Trade/ Chamber helped to secure the US Navy staying and growing in Bremerton. In 1903 the Navy almost moved from Bremerton due to the 'shadiness' outside it's gates, which included Bremerton business selling alcohol, and other colorful activities.

Also the Chamber in 1908 aided by getting outside investors from Seattle to supply the capital for building housing for the military and their families.

Airport and Incorporation

In 1935 the Bremerton Chamber of Commerce proposed the plans for a landing field in Gorst which grew into today's Bremerton Airport. In 1938 the Chamber incorporated. It's interesting to note that the Treasurer of the Board of Directors was William Gates, grandfather of Microsoft founder Bill Gates. The Gates family owned a furniture store in downtown Bremerton and William Gates signed the Chamber's Articles of Incorporation.

*Photos courtesy of Kitsap Historical Society and Smith Western Postcard Co.

https://en.wikipedia.org/wiki/Port_Blakely,_Bainbridge_Island,_Washington

https://en.wikipedia.org/wiki/Inca_(schooner)

aug 1933 - bremerton lumber yard fire

https://www.newspapers.com/image/326124357/?terms=%22Bremerton%2BLumber%22

https://www.newspapers.com/image/568990968/?terms=Bremerton%2Bchamber%2Bcommerce%2Btreasurer%2Bgates

cassius gates - chamber of commerce for seattle ???

http://web6.seattle.gov/DPD/HistoricalSite/QueryResult.aspx?ID=-1405065157

Pier 5 is somewhat famous, because it is where the steamer Spokane, carrying President Theodore Roosevelt, landed in Seattle, with great fanfare, on May 23, 1903. Early on the pier was known, along with Pier 4, as one of the two Arlington Docks. The Arlington Dock Company operated as an agent for steamships carrying passengers from several West Coast cities to Alaska, Asia and Europe. The pier is best known, however, as the base of operations for Frank Waterhouse and Company, which began to thrive during the Klondike Gold Rush. According to Clarence Bagley, during the 1900s, Frank Waterhouse and Company was already one of the major Seattle steamship lines. Frank Waterhouse was considered one of the waterfront's most successful and energetic entrepreneurs. The firm not only provided transportation to the Yukon and Alaska, including a Bering Sea service, but also delivered U.S. Army transports to Manila, during the Spanish American War of 1898-1899. Frank Waterhouse's firm, which also provided service to Hawaii, the Mediterranean and Russia, endured through the end of World War I.

Birds' eye view of Seattle and environs, King County Wash., 1891, eighteen months after the great fire / drawn by Augustus Koch.

to, Print, Drawing

Birds' eye view of Seattle and environs, King County Wash., 1891, eighteen months after the great fire / drawn by Augustus Koch.

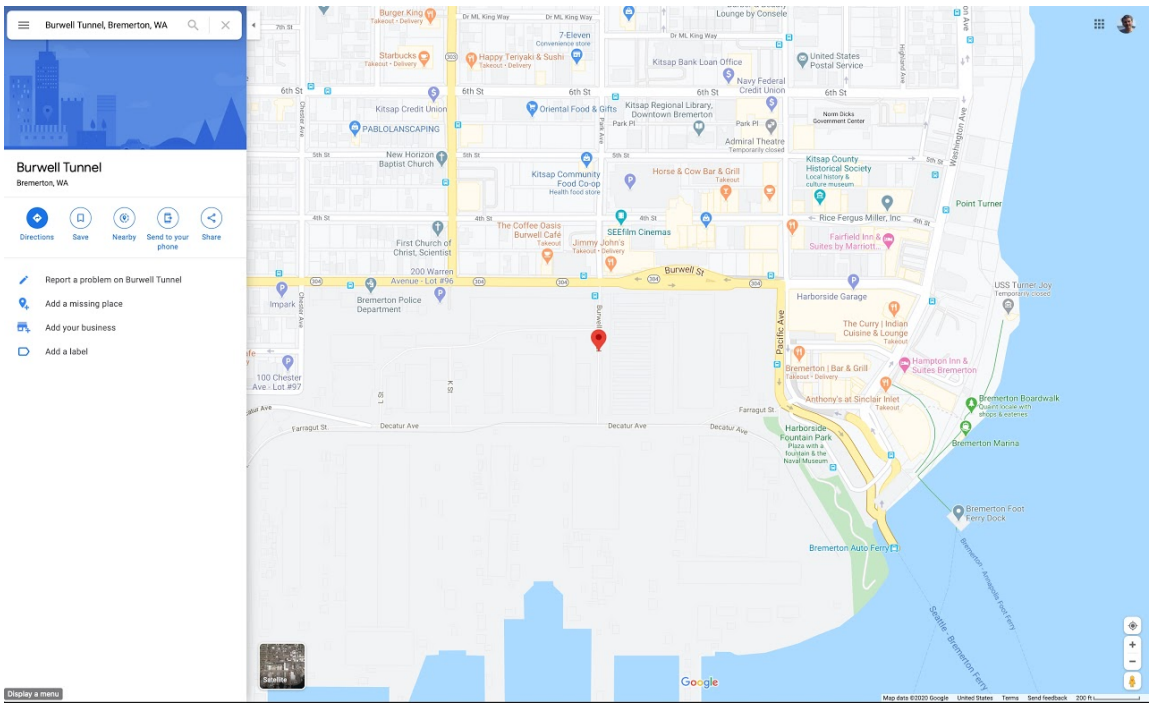
https://www.loc.gov/item/2004670275/

https://www.kitsapsun.com/story/news/local/2018/08/16/burwell-pedestrian-tunnel-puget-sound-naval-shipyard-park-avenue-open/1009226002/

During World War I, the Navy dug the original 90-foot tunnel under Burwell Street to create a shipyard access point for workers who were staying at a hotel that had once stood at gate's access point.

2020-08-11-google-com-maps-burwell-tunnel-bremerton-washington-17-06-36.jpg

Original 190 acres were nearest Sinclair Inlet



2020-07-31-twitter-com-housatonicits-received-dm-decoderoftruth-11-32-am.jpg

A leading firm which has been intimately identified with the development of Seattle as a port is that of Frank Waterhouse & Company, first established in 1898 by Frank Waterhouse as president, Messrs. Neal H. Begley vice-president, R. D, Smalley secretary, and J. Richard Lane treasurer.

Besides the general offices at Seattle the company has branches in New York, Chicago, San Francisco, Vancouver, Kobe, Singapore and Calcutta.

The firm is especially prominent in the transportation of cargoes between Seattle and other Pacific Coast ports and the Far East, including Japan, China, and the various colonies and presidencies British India.

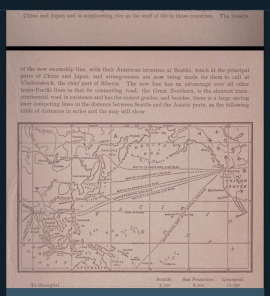
The opium trade through Puget Sound

2020-07-31-twitter-com-housatonicits-received-dm-agentrevolt-11-45-am

IMAGE : 2020-07-31-twitter-com-housatonicits-received-dm-agentrevolt-11-45-am-v55XMkJY.jpeg

1893 ~ Asiatic Steamship Line—About the time of the completion of the Great Northern railway Messrs. Samuel Samuel & Co., of London and Yokohama, sent a representative to America to confer with President Hill, of the railway company, relative to putting on a trans-Pacific steamship line in connection with the Great Northern railway. The mission was entirely successful, and the Great Eastern Steamship Company is the result. The Crown of England, the first ship of the new line to make the voyage, arrived at Seattle early in the present month with a cargo of tea and other Asiatic products for Puget Sound and the East, and there will be a vessel every three weeks. The return cargoes will consist mainly of flour from the flouring mills of Seattle, as flour is already largely consumed in China and Japan and is supplanting rice as the staff of life in those countries. The vessels of the new steamship line, with their American terminus at Seattle, touch at the principal ports of China and Japan, and arrangements are now being made for them to call at Vladivostock, the chief port of Siberia. The new line has an advantage over all other trans-Pacific lines in that its connecting road, the Great Northern, is the shortest trans¬ continental road in existence and has the easiest grades, and besides, there is a large saving over competing lines in the distance between Seattle and the Asiatic ports, as the following table of distances in miles and the map will show:

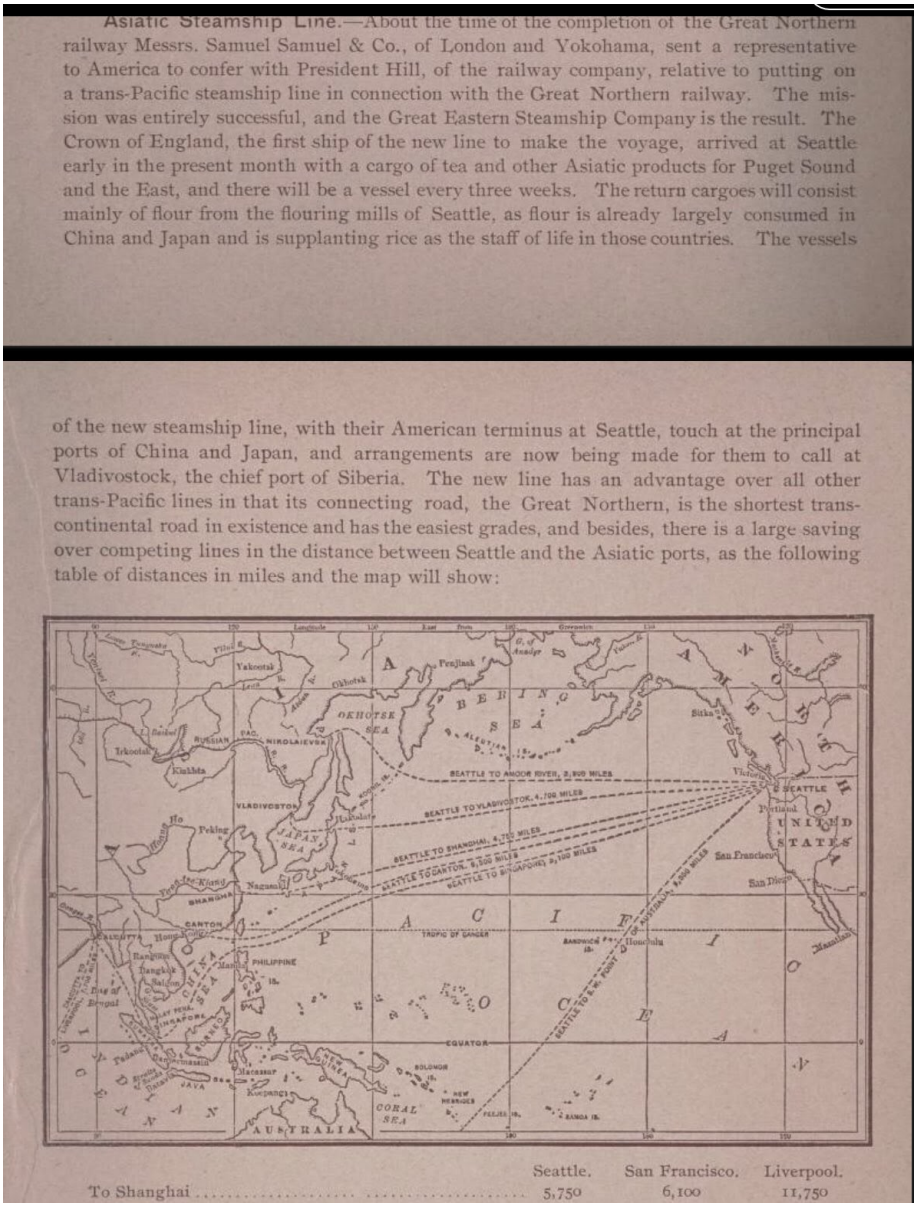
TeamW Top Fuel



1893 ~ Asiatic Steamship Line—About the time of the completion of the Great Northern railway Messrs. Samuel Samuel & Co., of London and Yokohama, sent a representative to America to confer with President Hill, of the railway company, relative to putting on a trans-Pacific steamship line in connection with the Great Northern railway. The mission was entirely successful, and the Great Eastern Steamship Company is the result. The Crown of England, the first ship of the new line to make the voyage, arrived at Seattle early in the present month with a cargo of tea and other Asiatic products for Puget Sound and the East, and there will be a vessel every three weeks. The return cargoes will consist mainly of flour from the flouring mills of Seattle, as flour is already largely consumed in China and Japan and is supplanting rice as the staff of life in those countries. The vessels of the new steamship line, with their American terminus at Seattle, touch at the principal ports of China and Japan, and arrangements are now being made for them to call at Vladivostock, the chief port of Siberia. The new line has an advantage over all other trans-Pacific lines in that its connecting road, the Great Northern, is the shortest trans¬ continental road in existence and has the easiest grades, and besides, there is a large saving over competing lines in the distance between Seattle and the Asiatic ports, as the following table of distances in miles and the map will show:

1

T Mills · Jul 31, 2020, 11:45 AM



Asiatic Steamship Line.—About the time of the completion of the Great Northern railway Messrs. Samuel Samuel & Co., of London and Yokohama, sent a representative to America to confer with President Hill, of the railway company, relative to putting on a trans-Pacific steamship line in connection with the Great Northern railway. The mission was entirely successful, and the Great Eastern Steamship Company is the result. The Crown of England, the first ship of the new line to make the voyage, arrived at Seattle early in the present month with a cargo of tea and other Asiatic products for Puget Sound and the East, and there will be a vessel every three weeks. The return cargoes will consist mainly of flour from the flouring mills of Seattle, as flour is already largely consumed in China and Japan and is supplanting rice as the staff of life in those countries. The vessels

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	Seattle.	San Francisco.	Liverpool.
To Shanghai	5,750	6,100	11,750

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Earl Winfrey Brian, Jr. (born 1942)

Wikipedia Earl Brian

Saved Wikipedia (Dec 09, 2020) - Earl Brian

[HK0041][GDrive]

Earl Winfrey Brian, Jr.

(circa 1974)

© Daily Titan

Earl Winfrey Brian, Jr. (born 1942) is an American businessman who served as Director of California's Department of Health Care Services, and then as Secretary of California's Agency for Health and Welfare under Governor Ronald Reagan. Following an unsuccessful run for the U. S. Senate in 1974, Brian headed several technology based firms during the 1970s and 80s. In 1991 however, Infotechnology, the venture capital firm he headed, filed for bankruptcy. Brian was later charged with conspiring to cover up the firm's financial difficulties and sentenced to four years in prison. Dr. Brian died on November 2, 2020, at the age of 78 in Easton, MD.

Early career[edit]

Brian graduated from medical school at Duke University and served in the Army Medical Corps in Vietnam.[1]

Political career in California[edit]

After leaving the service in 1970, he was appointed first as Director of California's Department of Health Care Services (DHCS), then Secretary of Health and Welfare. During his term as secretary, Brian succeeded in implementing a requirement for a $2 co-payment from Medi-Cal recipients for each doctor's visit,[2] but failed in an attempt to curtail medical benefits available under Medi-Cal when the state lost a suit brought by the California Medical Association.[3] In 1974 Brian resigned his cabinet post and ran for the U.S. Senate seat held by Senator Alan Cranston (D–CA), but lost the Republican primary.[1]

Business and expansion[edit]

Brian then turned to business and in 1980 established his own company, Biotech Capital, a venture capital firm that invested in companies developing medical technology.[4] Biotech later shifted its focus to news and information services, acquiring interest in the Financial News Network (FNN) and changing the name Biotech in 1987 to Infotechnology.[4] In 1988, the company acquired United Press International, one of the two major American news wire services at the time.[1]

Conspiracy and fraud conviction[edit]

Infotechnology encountered financial difficulties and filed for bankruptcy in 1991, as did FNN and UPI.[5] In 1995, Brian was charged with conspiracy and fraud for inflating the value of FNN and UPI in an attempt to secure loans to shore up the companies.[6] He was convicted of the conspiracy charges in 1996 and sentenced to four years in prison.[7]

2020-09-08-legacy-com-earl-brian-obituary-1942-2020.pdf

[HL005T][GDrive]

Dr. Earl Winfrey Brian, Jr., died on November 2,2020 at the age of 78 in Easton, MD.

Earl Brian, born February 26,1942, the only son of Earl Winfrey Brian MD. Sr and Blanche Barringer Brian, spent his youth in Raleigh, NC. Early on, he excelled in academics and quickly developing the remarkable intelligence and determined confidence that became part of his life-long personality.

Following the footsteps of both his parents, he enrolled at Duke University at age 16 and entered Duke Medical School at age 19, graduating in 1965. He accepted residency at Stanford University Medical Center Palo Alto in their prestigious surgery/neurosurgery program. In 1967, drafted by the US Army, he went to officers training at Fort Sam Houston, then Surgeons' Flight School in Fort Ruckers, Alabama. He was then stationed at the Presidio before serving in Vietnam. There he earned the Bronze Star, the Silver Star and the Air Medal for Valor becoming the most decorated physician of the conflict. He rose to the rank of major prior to coming home at the end of 1968. He never forgot the young men lost in service and the brave men who died there.

During his youth, he fell in love with tennis. He learned to play the game at Royster Courts simply by watching others play. Even though he was self-taught, he won the North Carolina Men's Singles Junior title at age 14. He continued to play tennis the rest of his life with his hitting partner and teacher, Jay Aldridge of Cambridge MD. He loved to watch his children and grandchildren play the game.

Deciding not to pursue a career in the military, he returned to California and worked as a neurosurgeon at University of Southern California School of Medicine. In 1971, after receiving a surprise from the Governor Ronald Regan, he accepted a position working for him. He quickly rose to a cabinet position becoming the youngest director of Health and Human Services in California's history. A staunch Republican all his life, he managed to reach across the aisles on a number of occasions to ensure bipartisan approval. He prided himself on innovative and cost-effective legislation particularly in healthcare. During his tenure, he helped move California from a ranking of 48 out of 50 states in healthcare costs to 2nd out of 50 within 4 years. His innovations included a modest co-payment from patients, the first ever implemented in the country. In 1975, he was awarded One of the Top Outstanding Men of America along with co-recipient, Joe Biden. In 1976, he left Regan's cabinet, but he continued his involvement in national healthcare issues and reforms for many more years. Although he briefly entertained a career in politics, after an unsuccessful bid for US Senate in 1978, he moved on to pursue a business career as an entrepreneur.

He moved with his family to NYC and began several business ventures including Infotech, UPI, Hadron and FNN. He fondly remembered his colleagues and kept up with many of them through the years. His lasting contributions to business include 24/7 financial news updates and ticker displayed prices in real time displayed at the bottom of the TV screen. His goal of providing real time financial analysis on TV was one of the first of its kind. Dr. Brian's work as a venture capitalist began in 1982 and continued until 2017. He invested in many startup companies particularly in health and tech fields, some performing well. During this time, he served as chairman of Duke Hospital Advisory Board.

His Life's passion however, revolved around the mathematical proofs of stock market trends by computer algorithms. He worked on this analysis from age 18 to 75. He felt much gratitude to his long time colleague "Joey" Dong Ping Zhou for their hours of work together. He much appreciated the work of Kan Devani as they spent many hours discussing business plans.

In passing, he is predeceased by his parents, Earl Sr. and Blanche. He leaves behind his wife, Molly (Mary) B. Brian, MD and children: Earl W Brian III (Nina), Jennifer M Brian (Chet), Natalie Dent, Christopher Brian (Ellen), Alexandra Brian and stepson Robert A Burgoyne (Laura). His grandchildren are: Earl W Brian IV (Winn), Baron Brian (Bo), Audrey Dent, John Dent and Vivian Brian. His beloved sisters, Betsy Rollins and Leigh Cooper also survive him; as well as, his first cousin Henry Hawthorne (Beth); and his nephew Dave Schmickel (Amy) and the Schmickel family. His step grandchildren are Connor and Emelia Burgoyne. He owes a debt of gratitude to former wives Jane and Diana and all those who supported him in good times and bad.

Earl Brian will be buried at Arlington National Cemetery with military honors at a future date. In lieu of flowers, consider a donation to local charities he thought highly of:

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Shirley Armitage Chidsey Bridgwater (born 1907)

1936 - Age 29

1936-09-07-the-san-francisco-examiner-pg-24-clip-mrs-dbchidsey-1.jpg / https://drive.google.com/open?id=15Z5L7nxQPLmkN8_iynL7qlT0rrsT3s52

INTRO

"**Shirley Armitage Chidsey [Bridgwater]** was born in Philadelphia in 1907, and later married **Donald Barr Chidsey (born 1902)** , a novelist and biographer. Shirley worked as an editor and assisted Charles Nordhoff and James Norman Hall, both authors, on The Bounty Trilogy (The Mutiny on the Bounty, 1932; Men Against the Sea, 1933; and, Pitcairn's Island, 1934). Later, Shirley became an assistant editor at Knopf. She stayed in publishing most of her. After divorcing Donald Barr Chidsey, she remarried and took on the name Shirley Bridgwater. This book has an excellent provenance and was purchased from an estate of one of Shirley Chidsey's relatives in Philadelphia . ." (See 2019-07-mtgothictomes-com-f-scott-fitzgerald-pg-23.pdf / https://drive.google.com/open?id=14v1fI0jt2K7gmb5R49R9qWdhrgqoTUmJ)

*"**Shirley Chidsey** [was] born **Elinor Shirley Stewart** [.] Her features were plain, but she had an intelligent, independent, and lively air, which made her almost beautiful. OSS files record that she had grey eyes, brown hair, a fair complexion, and petite build: just five foot one inch tall, weighing 52 kg."* [aa1][GDrive]

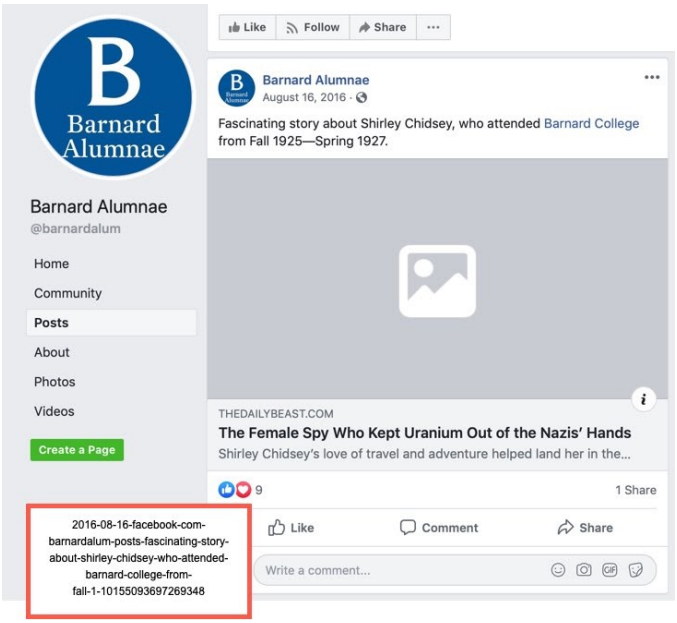
Up to 1930

From a review of The Female Spy Who Kept Uranium Out of the Nazis' Hand : See [aa1][GDrive]

"[Shirley Armitage Chidsey [Bridgwater] had her father die] father died when she was little and when her mother married again, she was given his surname of Armitage. She grew up in a gracious home in Swarthmore, Pennsylvania, where her family frequently appeared in the society pages. But Shirley wanted more out of her life than a busy calendar with the smart set. She studied in New York at Barnard College and then at Columbia University, taking "numerous writing and lit. courses," as well as French."

1925 to 1927 - Barnard College

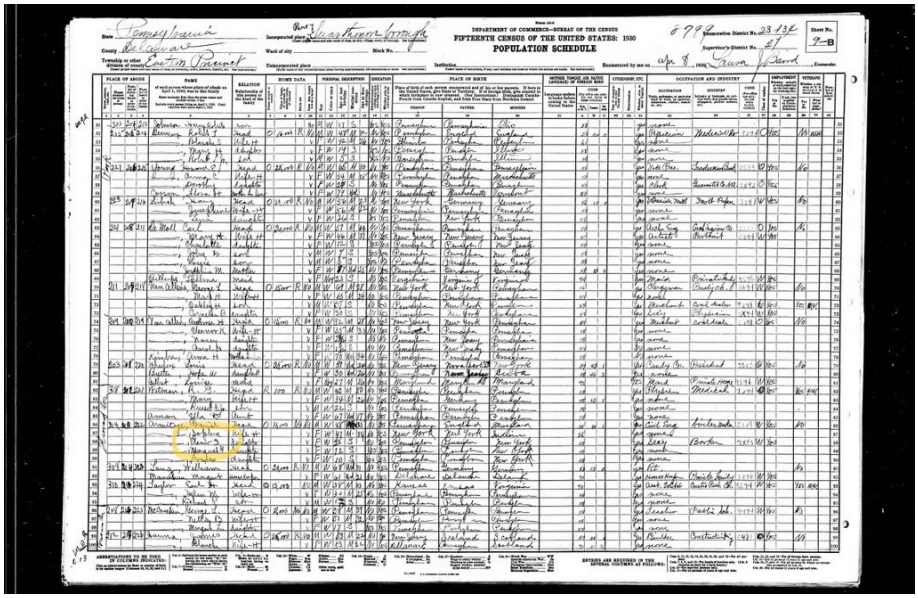
"Shirley Chidsey, who attended Barnard Collegefrom Fall 1925—Spring 1927"



2016-08-16-facebook-com-barnardalum-posts-fascinating-story-about-shirley-chidsey-who-attended-barnard-college-from-fall-1-10155093697269348.jpg / https://drive.google.com/open?id=178y4KCsvMKjVz34fPzHFtGXn6oIBnTYL

1930 Census

1930 - she is age 23.



1930-usa-census-delaware-country-pa-low-rez-eafnprbxsaede1d.jpg / https://drive.google.com/open?id=156msFI86ZAO0PAxcuj6xtUmv_IxDPfhH

Up to 1930-1940

In the early 1930s, Shirley was a secretary for the author 🔵 **John P Marquand** . See [aa2][GDrive]

From a review of The Female Spy Who Kept Uranium Out of the Nazis' Hand : See [aa1][GDrive]

"Shirley had a huge appetite for travel and adventure. She lived for three years in Haiti, three months in Hawaii, a month in France, and a month in Germany, and visited China. ***In 1935 she married the author [Donald Barr Chidsey (born 1902)] and went with him to Tahiti, where she sailed in his boat and helped to manage a coconut plantation; she also learned Tahitian. While there she made friends with a number of writers, including F. Scott Fitzgerald. Tahiti has often been described as paradise, but the same could not be said of the Chidseys' marriage: Shirley separated from him in February 1940. She went to New York*** *and placed an advertisement in the Saturday Review of Literature for a "Girl Friday"—to do typing, research, and stenography."*

1936 (Sep)

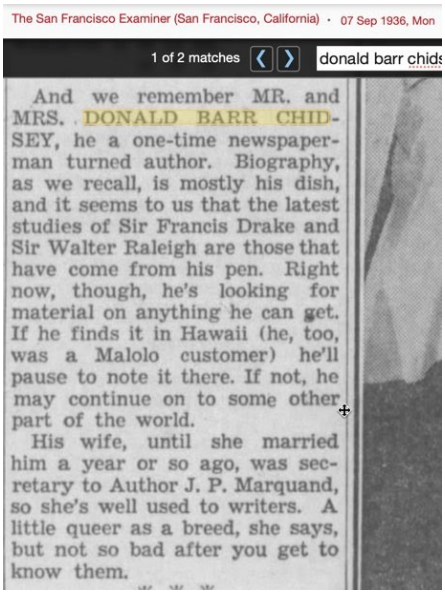
Full page : 1936-09-07-the-san-francisco-examiner-pg-24.jpg / https://drive.google.com/open?id=15_q0jkOeZc-neJ2hmZTaEHgfz-YlVbYw

HAWAII BOUND

Sails With Author Mate

USED TO WRITERS—Mrs. Donald Barr Chidsey, who is en route to Hawaii to aid her author husband search for material for his pen.

1936-09-07-the-san-francisco-examiner-pg-24-clip-mrs-dbchidsey-1.jpg / https://drive.google.com/open?id=15_ishSOFI3X9AW_SpCkZZQXQ9p8XeyfW



The San Francisco Examiner (San Francisco, California) · 07 Sep 1936, Mon

1 of 2 matches donald barr chids

And we remember MR. and MRS. DONALD BARR CHIDSEY, he a one-time newspaperman turned author. Biography, as we recall, is mostly his dish, and it seems to us that the latest studies of Sir Francis Drake and Sir Walter Raleigh are those that have come from his pen. Right now, though, he's looking for material on anything he can get. If he finds it in Hawaii (he, too, was a Malolo customer) he'll pause to note it there. If not, he may continue on to some other part of the world.

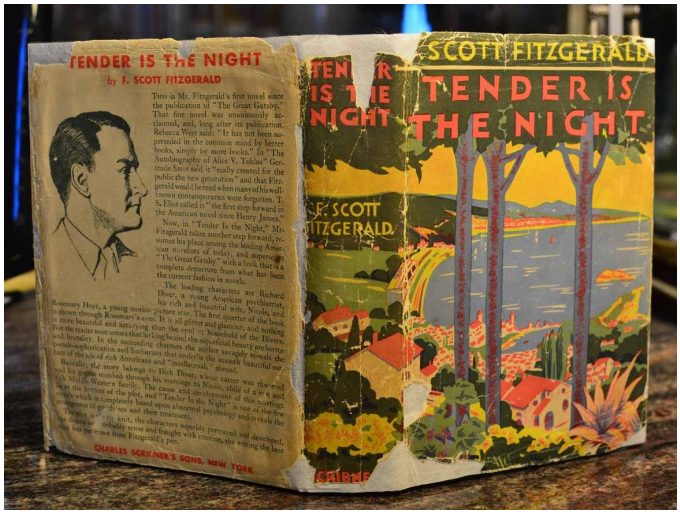
His wife, until she married him a year or so ago, was secretary to Author J. P. Marquand, so she's well used to writers. A little queer as a breed, she says, but not so bad after you get to know them.

[aa2][GDrive]

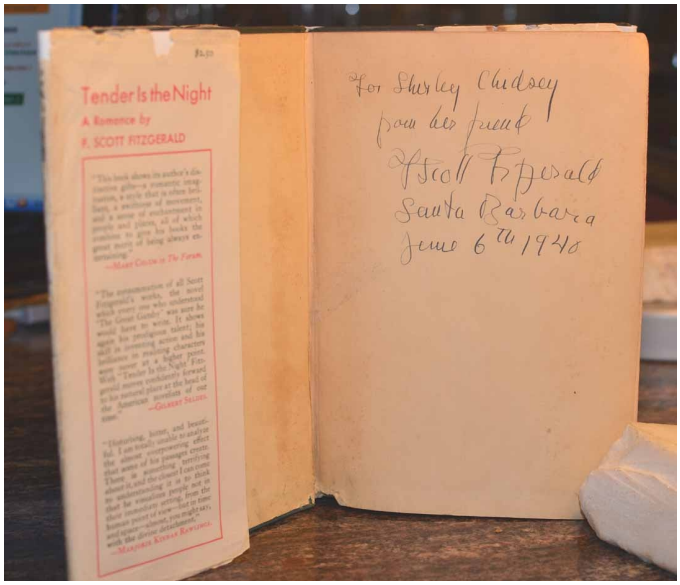
1940 (June 6) - Book signed by F. Scott Fitzgerald

Company webpage for book : 2019-07-mtgothictomes-com-f-scott-fitzgerald-pg-23.pdf / https://drive.google.com/open?id=14v1fI0jt2K7gmb5R49R9qWdhrgqoTUmJ

"When F. Scott Fitzgerald met Shirley Chidsey in Santa Barbara , California , she was married to the author, Donald Barr Chidsey."



2019-07-mtgothictomes-com-f-scott-fitzgerald-pg-23-tender-night-inscribed-chidsey-2.jpg / https://drive.google.com/open?id=14pFX8G9ufyWC5ByJt-kQGEn5gVbp1NIg



2019-07-mtgothictomes-com-f-scott-fitzgerald-pg-23-tender-night-inscribed-chidsey-4.jpg / https://drive.google.com/open?id=14pN6Kq3sCLFsRrRsQt0-t6NGWbAR5YAD

1940 - EARLY 1944

From a review of The Female Spy Who Kept Uranium Out of the Nazis' Hand : See [aa1][GDrive]

In August 1939 Albert Einstein signed a letter to President Franklin Roosevelt, warning of the potential of Adolf Hitler's Nazi regime to use uranium to develop an atomic bomb. "The most important source of uranium," he added, was in Africa—in the Belgian Congo (now the Democratic Republic of Congo). It was therefore a priority for the U.S. to build its own bomb and to secure all available Congolese ore. But there was a risk that uranium might be smuggled out of the Belgian colony to Germany. To prevent this, the 🌐 **Office of Strategic Services (OSS)** , America's new intelligence service and forerunner of the CIA, established a station in the Congo. The station's agents included a courageous woman named Shirley Chidsey, one of the small number of women OSS agents to serve overseas.

[...]

When the U.S. entered the war, **[Shirley Chidsey]** joined the Office of Strategic Services in New York as a stenographer in French. As a woman, she was in a minority in OSS, which was dominated by men and male attitudes. The Ivy League universities that most of them had attended "were all male, and the OSS was very heavily so." One agent, Elizabeth MacDonald, wrote a memoir after the war entitled Undercover Girl, which describes the sexism of the organization. "Women have no place in the war," one colonel told her dismissively. "All the time I've put in overseas—and that's four years—I've only come across one who was worth her salt." When General William Donovan, the head of OSS, gave instructions about the "right types" of women to be hired, one definition of right type was a Smith graduate who could pass a filing exam. Most of the 26,000 women who joined OSS worked in the secretarial field and only a small percentage—some 700—served overseas.

These attitudes held women back. But Chidsey was eager to serve overseas and when an opportunity came up in French Equatorial Africa in 1943, she jumped at it, though it meant leaving OSS. The post was that of transcriber at Radio Brazzaville, a radio transmitter beaming propaganda on behalf of Free France. This, thought Chidsey, would be an ideal way of doing her bit for the war.

But she was unhappy in Brazzaville and wondered if it might have been better to join the Women's Army Auxiliary Corps. "Rather wish," she mused with feeling to her mother, "I had joined the WAACS tho' and perhaps got to North Africa with them." It was not all bad news though. "But I did have one nice thing happen," she reported home. "I had dinner with a handsome naval officer and sat on his terrace overlooking the Congo and saw the full moon rise big & red out of the dark river and had a tall whisky and soda …"

Then another nice—but far more significant—thing happened: she was able to return to OSS. But this time, it was to work not in the New York office, but in the OSS station in Léopoldville (now Kinshasa), the capital of the Belgian Congo. In Brazzaville she had met Dock Hogue, the OSS chief of station in Léopoldville, on the opposite side of the Congo River. Thirty-four years old and just short of six feet three, Hogue was athletic and strikingly good-looking, with a narrow moustache. A sombre and very clever civil engineer, he nursed a dream of becoming an author. But for now, he was carrying out a top secret mission for his country: keeping Congolese uranium out of the hands of the Axis powers. His cover was the investigation of diamond smuggling and his codename was TETON.

Hogue and Chidsey had much to talk about, including their shared interest in literature. They were also both isolated and lonely. Shirley told Dock about her "urgent desire to escape Brazzaville" and her "extremely disagreeable living and working conditions." He suggested that she cross the river to Léopoldville, to become his assistant. No doubt he felt sorry for her. But he was also overburdened with work and she seemed ideal: she spoke French fluently and had even worked previously for OSS.

Hogue asked Rud Boulton, the head of the Africa Section in Secret Intelligence at OSS headquarters in Washington, for permission to hire Chidsey. It was vital that he had "a loyal and competent person" he could trust, he pointed out, since he was the only OSS representative in the Congo. It was essential, he argued, that the secretary in Léopoldville be herself "of 'agent stature' … [and] she must have complete loyalty to OSS and the proper feeling for the security of operations."

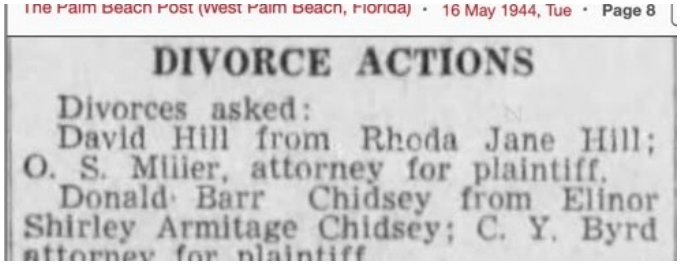
Boulton was impressed by Chidsey's record and in December 1943 he initiated a security check and sent some inquiries. A question about sports and hobbies elicited an arch response: "None particularly." When asked if she had ever used intoxicants, she responded: "The usual 'occasional cocktail.'" By late January 1944, she had been cleared to work for the Africa Section of OSS. Her codename would be ANGELLA and her codenumber would be 1080.

The OSS station was transformed by Chidsey. It had been over nine months since Hogue had first arrived in the Congo—a period of intense difficulty, sickness, and excessive travel, in the context of harsh colonial racism and severe inequities. But he no longer had to worry about leaving the office unattended and, in addition, ANGELLA was adept at cultivating informants and information. Hogue was proud of the information he and Chidsey sent to Washington. "How does our little office stack up for volume?" he inquired. "I won't ask about quality," he commented with his usual self-effacing humor, "because that is always a problem."

Chidsey was also good company—a smart, kind, and funny woman, with unusual hobbies—she was an enthusiastic railfan and avid reader of Railroad Magazine, a journal devoted to trains. This interest was useful, given the importance of the Congo's vast rail networks to the export of uranium ore to America.

1944 (May) - Divorce ?

Full page : 1944-05-16-the-palm-beach-post-pg-8.jpg / https://drive.google.com/open?id=15mGZa6pl4pyr99cFn-i-ggP7THBMpgsb



1944-05-16-the-palm-beach-post-pg-8-clip-divorce-chidsey.jpg / https://drive.google.com/open?id=15i9sQWQ7s5qloumudUtwu-QPUs-NNJOt

JULY 1944 -

From a review of The Female Spy Who Kept Uranium Out of the Nazis' Hand : See [aa1][GDrive]

In July 1944 Hogue and Chidsey were joined by Henry Stehli, a sophisticated but easygoing man whose cover was his role in the family business—the famous Stehli Silks Corporation; his codename was LOCUST. The OSS station appeared to be growing steadily. But just days before Stehli's arrival, Hogue's cover was unexpectedly blown open, putting him in danger of his life. He was also vulnerable as a result of information he had gathered about collaboration between businessmen and senior policemen in the Belgian Congo with the Nazis.

Realizing he may have to escape at any moment, Hogue prepared to hand the station over to Stehli. "ANGELLA knows pretty well what our files contain, and can be of assistance in this respect," he told him. "Her memory is excellent regarding names of persons on whom we have dossiers, and can save you a lot of time." But he was concerned about her. If she were to leave the Congo, she would need a flight with Air Transport Command, which was extremely difficult for women. "After six months service with us," he hoped, "she should be made eligible for ATC transportation to the United States … I personally feel that her services merit this consideration." Her work, he said, was very good: "ANGELLA has tapped a mine of information in Poskin, the news editor of L'Avenir Colonial Belge." So, he added with self-mocking humor, "except for the Chief who can't stay out of trouble, things are going along pretty well."

Hogue survived two threats on his life. But when he was attacked by a gunman in his bedroom at home, he immediately implemented his plan for escape. Stehli took over, relying on ANGELLA as "a loyal and trusted agent." But he became very ill: a thin and exhausted shadow, who had no choice but to leave the Congo in April 1945.

This meant that Shirley Chidsey became de facto chief of station. She was now based in the U.S. Consulate and sending reports to OSS. "1080," noted Boulton in Washington with evident approval, "is developing rapidly into a competent source during this interim period."

***

After Germany surrendered in May 1945, there was no longer any reason to fear a German atomic bomb and, in any case, Nazi Germany had failed to build one. Leading German physicists attributed this failure to the lack of uranium ore, which can be considered a tribute to the clandestine OSS mission in the Congo. OSS operations in Africa were now being reduced, but the station in the Congo was maintained. In June 1945, a senior OSS official flew to the Congo to arrange cable communications for ANGELLA. There were now "1 secretary at the Léopoldville station, 4 informants regularly used, and 1 undercover agent."

But in September, OSS representation ceased in the Congo too, "with the official closing of the Congo office by 1080," who left Africa. Very shortly afterwards, President Truman abolished OSS.

Chidsey returned to the Congo in January 1946 to work for the U.S. consul. Boulton arranged with the State Department for her to send reports back to the Central Intelligence Group, which had replaced OSS. "Anything you hear from me so far," she wrote to Boulton, "is completely unofficial and unsponsored. I shall keep it up to whatever extent seems practicable, and meanwhile keep a sort of background file which will be ours … Best to you all, and I miss hearing from you."

Shirley Chidsey finally left the Congo in September 1947. She became editorial assistant on Railroad Magazine and then worked on literary projects as an editor, including a translation of The Pillow Book by Sei Shōnagon. She remarried, taking the surname Bridgwater. Neither she, Hogue, nor Stehli received any recognition of any kind for their brave contribution to the fight against fascism.

[...]

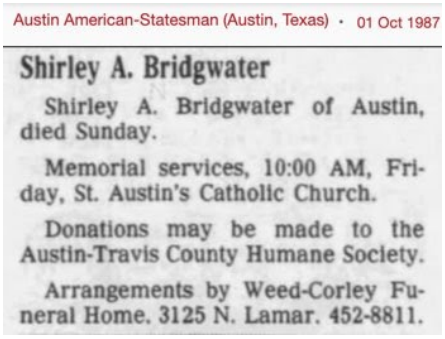
Chapter 21 ("Atomic Spies") in the book "Spie2 in the Congo") : 2016-spies-in-the-congo-americas-atomic-mission-in-ww2-susan-williams-ch-21-ocr.pdf / https://drive.google.com/open?id=148rwgILKmGrEZJwpN7eu6OYHSq9Fjvkj

Shirley Chidsey [...] *returned to the Congo in late January 1946 to continue working for the US Consul, Robert Buell. Boulton arranged with the State Department for her to be allowed to send reports back to the Central Intelligence Group, which had replaced OSS. She was given a new code number - 987/50 - and stayed at La Rotonde, a simple but popular hotel attached to a cafe and restaurant. 'Anything you hear from me so far,' she wrote to Boulton, 'is completely unofficial and unsponsored. I shall keep it up to whatever extent seems practicable, and meanwhile keep a sort of background file which will be ours Best to you all, and I miss hearing from you.'*

After finally leaving the Congo in September 1947, Chidsey became editorial assistant on ***Railroad Magazine****; by 1951 she had left this position but was still contributing to the magazine. She worked on a number of literary projects as an editor and co-edited a translation of* ***The Pillow Book*** *by the Japanese writer Sei Shonagon. While doing this work in New York, she met* ***Dr William ('Bill') Bridgwater****, who was Editor-in-Chief of Columbia University Press. They married in 1955 and Shirley found married happiness for the first time; she and Bill lived peacefully together in Harlem and enjoyed outings to watch the Yankees play baseball. After only nine years, Bill died. Shirley was bereft but resolved within less than ten years to start a new adventure. Though well into middle age, she moved to Austin, Texas, in 1974, where she worked at the state university on literary projects. She died on 27 September 1987.*

1987 (Oct 1) - Passing of Shirley A. Bridgwater

Full page : 1987-10-01-austin-american-statesman-pg-c-16.jpg / https://drive.google.com/open?id=15OGCr2Znj2ylt_xgIAsk-4BJCvT4sw_



Austin American-Statesman (Austin, Texas) · 01 Oct 1987

Shirley A. Bridgwater

Shirley A. Bridgwater of Austin, died Sunday.

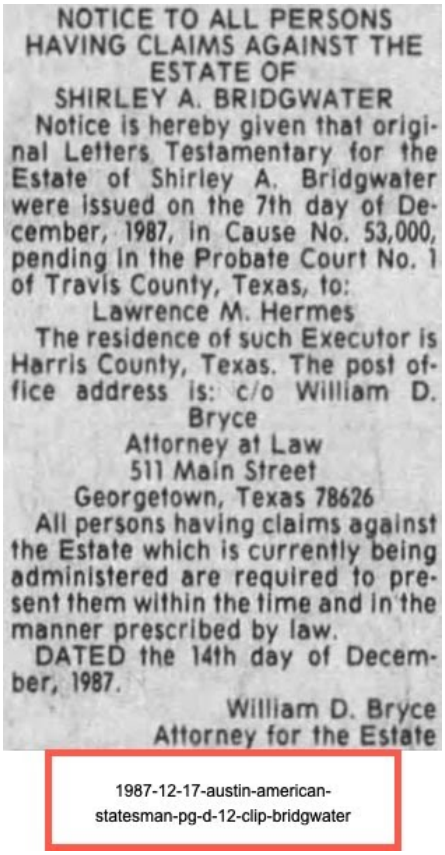
Memorial services, 10:00 AM, Friday, St. Austin's Catholic Church.

Donations may be made to the Austin-Travis County Humane Society.

Arrangements by Weed-Corley Funeral Home. 3125 N. Lamar. 452-8811.

1987-10-01-austin-american-statesman-pg-c-16-clip-shirley-bridgwater.jpg / https://drive.google.com/open?id=15LvXgHwAyRG74qhwW8iNc9LNVdJxfx6v

Full page : 1987-12-17-austin-american-statesman-pg-d-12.jpg / https://drive.google.com/open?id=15SaB-mpwMxSP3U0meWPut-K1hOkrlqCp



NOTICE TO ALL PERSONS HAVING CLAIMS AGAINST THE ESTATE OF SHIRLEY A. BRIDGWATER

Notice is hereby given that original Letters Testamentary for the Estate of Shirley A. Bridgwater were issued on the 7th day of December, 1987, in Cause No. 53,000, pending in the Probate Court No. 1 of Travis County, Texas, to:

Lawrence M. Hermes

The residence of such Executor is Harris County, Texas. The post office address is: c/o William D. Bryce
Attorney at Law
511 Main Street
Georgetown, Texas 78626

All persons having claims against the Estate which is currently being administered are required to present them within the time and in the manner prescribed by law.

DATED the 14th day of December, 1987.

William D. Bryce
Attorney for the Estate

1987-12-17-austin-american-statesman-pg-d-12-clip-bridgwater

1987-12-17-austin-american-statesman-pg-d-12-clip-bridgwater.jpg / https://drive.google.com/open?id=15OePXnfzTZLEdJeG3ksZjwcttkAsWZDh

2019-07-findagrave-com-36140314-shirley-a-bridgwater-1907-1987.pdf / https://drive.google.com/open?id=16DE_h9ZHmjzTBYm8l00vZG6NvocIn3T

Burial Forest Park Cemetery - Houston, Harris County, Texas, USA

REFERENCES

[aa1] 2017-thedailybeast-com-the-female-spy-who-kept-uranium-from-nazis.pdf / https://drive.google.com/open?id=144dgNiAMIEpO9C_PBQLlUSrrZHzVES_N

[aa2] 1936-09-07-the-san-francisco-examiner-pg-24-clip-mrs-dbchidsey-2.jpg / https://drive.google.com/open?id=15_CTwka3ML7SAcQpCQF2W3sbrbdriFT8

WIKIPEDIA

https://en.wikipedia.org/wiki/John_P._Marquand

https://en.wikipedia.org/wiki/Office_of_Strategic_Services

Werner Bruchhausen (born 1939)

1985 (est)
[HN009T][GDrive]

Birthday - Nov 5 1939 [HW001C][GDrive]

1981 (Aug 21)

[HN00AX][GDrive]

4A THE CHARLOTTE OBSERVER Friday, Aug. 21, 1981

2 Arrested, 2 Still Sought In Sale Of Electronic Goods To Soviet Bloc

Associated Press

LOS ANGELES — Two persons have been arrested on charges of selling bugging devices and other strategic technology for shipment to the Soviet Union.

The arrests were made Wednesday, shortly before those two and two other persons were charged in a 60-count indictment handed up by a federal grand jury in Los Angeles.

Arrested were Anatoli Maluta, 61, a Soviet-born U.S. citizen who lives in Redondo Beach, and Sabina Dorn Tittel, 31, of Rancho Palos Verdes. Assistant U.S. Attorney Theodore Wu said they would be arraigned Monday. Both were held in lieu of $800,000 bail.

Still being sought are Werner Bruchhausen, 42, of West Germany, and Dietmar Ulrichshofer, 41, of Austria. "They're overseas for sure," said Alan Walls, deputy regional director of U.S. Customs. Authorities indicated they were probably in Europe.

Neither Walls nor Wu would say how the case was broken, although Walls said the investigation began 18 months ago. Walls said West German authorities cooperated.

"We're talking of a suspected $8 million worth of strategic technology," he said. "We can document and prove approximately $2 million and have a good indication of the remaining $6 million."

Walls said exporting such technology illegally is common: "It's also common that . . . it is exported to friendly countries and then diverted to hostile countries. It's difficult (to prove intent) but it's possible and we think we have," he said.

The indictment charged that during 3½ years ending in June 1980, the four conspired to ship strategic technology to West Germany and elsewhere without obtaining U.S. export licenses.

Maluta, Bruchhausen and Ulrichshofer were accused of exporting electronic monitoring and communications systems, computer components, semiconductors, manufacturing and testing equipment.

Maluta and Ms. Tittel allegedly told their employees to tell manufacturers the items were being purchased for Maluta's security business and facilities in Arizona and Alaska, officials said.

Bruchhausen owns and controls six California technology corporations and two West German corporations. Maluta, an officer and director, controlled the daily operations of the six California firms.

Named as an unindicted coconspirator was Hans Koenig, a West German and owner of a company called Elmasch, which allegedly sold high technology products from the United States to Soviet-bloc countries.

[HN00AY][GDrive]

1982 (May) - Transfer of United States High Technology to the Soviet Union and Soviet Bloc Nations: Hearings Before the Permanent Subcommittee on Investigations of the Committee on Governmental Affairs, United States Senate, Ninety-seventh Congress, Second Session, May 4, 5, 6, 11, and 12, 1982

PDF : [HG000S][GDrive]

PAGES 413 - 417

Sales To Dr. Guenther Forgber

German Customs Agent Ulrich Schulz and U. S. Customs Agent Roger Urbanski developed information on June 23, 19S1 indicating that the Watkins-Johnson 900 microwave receiving systems had not been sold to the Yugoslav Defense Ministry but directly to Mashpinborintorg in Moscow. It was reported that only one of the Fairchiid/Xincom memory test systems was sold to Tungsram of Hungary and three had been sold to Dr. Guenther Forgber of East Germany.

Schulz and Urbanski obtained documentation from Ulrichshofer's sales of American manufactured electronic equipment to Soviet and Soviet Bloc customers including the sale to Dr. Guenther Forgber of Narda microwave amplifiers and power dividers and a Fairchild automatic testing system and Xincom manuals; and to Mashpinborintorg of Moscow of Watkins-lohnson 9*0 microwave receiving systems, manuals and tuners.

Koenig Described Work In CTC Syndicate

On June 6 and 12, 1981, Hans-Juergen Koenig was interviewed in the U. S. Embassy in Bonn, West Germany by Stephen Dodge of the U. S. Customs Service, Robert Rice of Commerce and Theodore Wu, an Assistant U. S. Attorney in Los Angeles.

Koenig, reciting his recollections in fluent English, said that he first went to work for the CTC group of companies in June of 1977, serving as general manager of Analog and Digital Technik, or ADT, of Dusseldorf.

Koenig said ADPs sales were largely electrical components to West German firms but one department of the enterprise, managed by Sybille Ziogas, was devoted exclusively to the sale of electronic equipment to the Soviet Union. Ziogas worked in ADT from August of 1977 until late 1978 when she joined another CTC entity.

His tour at ADT lasted six months, Koenig said. While he was not trained in technical matters, Koenig did learn the technical side of the business and how the

CTC enterprises operated. Koenig came to realize that ADT had two principal interests — sales to West German firms, and sales to the Soviet Union.

CTC executives explained to Koenig that all sales by ADT to the Soviet Union were made through Electronorgtechnika, also known at Elorg, the Soviet state purchasing agency for electrical components, test equipment {or components and computers. Koenig said he learned while working (or ADT that the CTC group bought most of the electrical components and computers for the Soviet Union from the United States. Koenig said CTC was managed by Tony Maluta, a Russian born American who spoke English, German and Russian and who had technical experience and knowledge of high technology equipment. Maluta was assisted by Sabina Dam Tittel, a German woman whom Koenig met for the first time in Dusseldbrf in 1977 shortly after he joined ADT.

It was the opinion of CTC executives in Germany that AOTs sales of American manufactured high technology to the Soviet Union did not violate German laws because the goods never formally entered West Germany but instead were only "in-transit" — or passing through — in route to Switzerland and then on to the U.S.S.R-, Koenig said. They felt they were breaking no law when they shipped high technology freight through Vest Germany and on to the Soviet Union with no German export licenses.

But Koenig doubted this legal interpretation, pointing out that export licenses were required for freight shipped "in-transit* through Vest Germany and that it was apparant that Vest German authorities never knew about CTCs sales to the Soviets.

West German executives of CTC also held the legal opinion that Tony Mahitas shipments out of the U. S. did not require American export licenses because Maluta declared the shipments in a deceptive way, describing them in deliberately vague terms such as "electricals." Because their destination was Vest Germany, CTCs shipments were undetected.

However, Koenig said, CTC officials knew that if they had listed the Soviets as recipients of the goods, export licenses would have been refused. Koenig said Tony Maluta declared Fairchikl/Xincom computer equipment as being "electricals" when he knew the machinery was more sophisticated than that. Because of Maluta** "deceptive methods," Koenig said, he believed that Maluta recognized the legal requirement for proper export licenses was being circumvented.

While he was learning ADT procedures, Koenig said, he had differences with management over how the firm should be run. The differences led to Koenig's quitting ADT. However, he remained on good terms with ADT. In fact, company officials put up »,000 Deutschemarks of their own money to enable Koenig to establish another enterprise, Elmasch, GmbH. The founding of Elmasch enabled Koenig to put into practice an idea he had of selling electrical and computer components to the Warsaw Pact nations. Koenig explained how and why Elmasch came into being:

- By early 1978, 1 was knowledgeable of ADT's methods of doing business with the Soviet Union. During this period, 1 discussed.. .my ideas about doing business with the other Eastern Bloc nations. As part of my attempts to establish business contacts with the Soviet Bloc customers after the establishment of Elmasch, I attended a trade fair in Hannover, West Germany, in April, 1978. At that time, I anticipated selling electrical components and semiconductors to my customers, but I learned that certain electric components were very easy for Soviet Bloc customers to obtain from West Germany and Austria. I determined that.. ..the price for such components was relatively low and their sale to Eastern Europe was not profitable. In about Tune, 1978, I obtained from Bulgaria an inquiry for U. S. ball-bonding , die-bonding and etching equipment used in semiconductor manufacturing, and this inquiry became an official order in September, 1978. This inquiry was sent by me in Bulgaria to ADT then to Maluta at CTC... Later on, less than a week after my return from Bulgaria, ...I talked with Tony (Maluta) about this inquiry by telephone from ADT's office, using a telephone loud speaker.

While Koenig was in the process of setting up Elmasch, GmbH, he established another business, Techma, GmbH, to take over ADT's transactions with the Soviet Union. ADT officials wanted to have no further sales to the Soviets. Koenig was listed as Techma's general manager but Sybille Ziogas, who had supervised ADT's Soviet sales, took on the same assignment with the new entity.

CTC executives held a party in April or May of 1978 near Dusseldorf which was attended by about 20 persons, including Maluta and Koenig. Koenig and Maluta were told to get to know each other and to be on good terms.

Koenig discussed an order he had received from Czechoslovakia for Intel 2708 integrated circuits and an Intel microcomputer develoment system model MDS231. Maluta's judgement was that Koenig was on the right track in planning to use Elmasch, GmbH, as a vehicle to supply Eastern Bloc orders. Maluta told Koenig to accept orders from Warsaw Pact nations and to transmit them directly to him at CTC in California. Maluta said there would be "no problem" with CTC delivering U. S. machinery to Elmasch.

Koenig said he frequently heard CTC officials talking long distance with Maluta. They talked about the availability of machinery and prices. It was obvious what they were talking about, Koenig said. CTC executives in Germany were afraid their telephones were monitored and were careful not to mention Soviet Bloc customers by name.

Koenig remembered one telephone conversation between one CTC executive and Ualuta that he overheard on the loud speaker. The two men discussed a possible order from Bulgaria which Koenig knew about. But neither man referred to Bulgaria or the prospective buyer by name.

The circuitous nature of the telephone conversations did not prevent Maluta from knowing what was happening, Koenig said. Maluta knew that alt the orders from Elmasch were from Eastern Bloc nations.

The Soviets' invasion of Afghanistan in late 1979 triggered new U. S. government assurances that the flow of high technology to the Soviet Bloc would be made more difficult. The grain embargo was imposed and, Koenig said, there were indications that illegal shippers like Maluta were likely to face stronger U. S. export controls.

To prepare for such an eventuality, the CTC group called a meeting with Koenig and Maluta for London in February of 1980. Maluta said a tightening of export controls might be attempted but that they would not succeed, Koenig recalled. Moreover, Maluta added that he had noted no increase in efforts by the U. S. government. In short, Maluta declared, there was no need to devise a new method for shipping high technology out of the U. S. because no new safeguards had been set up. But, Maluta did say that a Commerce Department agent had visited him, a recollection by Maluta which was doubted by both Koenig and other CTC representatives. They believed Maluta was exaggerating the "dangers involved in ordering U. S. goods" as a ploy to get the CTC syndicate to pay him more money, Koenig said.

Horst Jonas, a customer of CTC, was suspected by the West German national police (Bundes kriminal amt or BKA) of having illegal dealings with the Soviet Bloc. The BKA interviewed CTC executives about 3onas. The encounter troubled them to such an extent that they moved ADT to new quarters in Ousseldbrf in 1977 and then moved the company offices to Munich in 1979, Koenig said. Donas was arrested and imprisoned for IS months by German authorities for alleged espionage activities.

Referring to his contention that Tony Maluta was well aware of the activities of the West German businesses in the CTC syndicate, Koenig recalled a conversation he had during the London meeting with Maluta. He told Maluta that Bulgaria was Elmasch's biggest customer. To conceal the true destination

of the Bulgarian shipments, Elmasch gave them the order code of 7200. Maluta knew all 7200 codes were for Bulgarian customers, Koenig said. Similarly, Maluta also knew that Techma, GmbH, was selling to the Soviet Union, Koenig said. He added:

- I am of the opinion that Maluta knew all orders from Elmasch and Techma were for Eastern European and Soviet customers, except for a very small portion of Techma orders for Zabel, a West German firm. My opinion is based on the fact that I told Maluta in May 1978 that Elmasch was set up specifically to do business with Eastern Europe other than the U.S.S.R., and Maluta had to know Techma was selling primarily to the U.S.S.R. because it followed ADT in the Soviet business, and simply was a change of name for business with the Soviet Union already being conducted by ADT.

Early in 1980 CTC executives began to suspect that Maluta and his assistant, Sabina Dorn Tittel, were cheating them, charging them exorbitant prices for U. S. equipment.

On a Monday morning in May, Werner 3. Bruchhausen and Koenig made an unexpected visit on CTC in Los Angeles. Their arrival caused tension between Bruchhausen and Maluta. Later that day the two men quarreled. When Maluta left the offices, Bruchhausen and Koenig searched the files and found evidence that Maluta was overcharging his employer 10 to 20 percent. Bruchhausen fired Maluta and Sabina Tittel.

Maluta's pay, Koenig said, had been $2,000 to $3,000 a month but he was given another $25,000 a month by charging the CTC entities through a fictitious advertising account which CTC executives had agreed to. The CTC executives set aside another $150,000 to be used by Maluta should he be arrested and face big legal fees. Suspicions that Maluta was stealing from CTC were well founded and Koenig estimated that Maluta embezzled about $800,000 from CTC entities.

Koenig recalled his first meeting with Sabina Dorn Tittel, saying he met her in August of 1977 while she was on vacation in Dusseldorf. He said Tittel may not have known about ADT's Soviet sales at the time but that it was his "common sense assumption that Maluta must have told her at some time."

Page 390 to 395

The following summary of the CTC case was written by Fred Asselin of the Subcommittee Minority staff. It is based on information provided by Commerce and Justice Department, U.S. Customs and other sources.

CTC Network Was Formed In 1977

On October 23, 1974, Werner Jurgen Bruchhausen, a 34-year-old West German residing in Los Angeles, incorporated four companies in Southern California for the purpose of buying and selling sophisticated electronic equipment. The firms all used the address of 4676 Admiralty Way in Marina Del Rey. Subsequently, Bruchhausen incoporated eight other entities in Southern California.

Bruchhausen, who was born on November 5, 1939 in Dortmund, West Germany and who listed his home as being D8019 Niederseeon 21 in West Germany, enlisted the aid of two associates in setting up his firms -- Anatolij T. M. Maljuta of 231 Calle Mayor, Redondo Beach, California; and Sabina Dorn Tittel of 30605 Cartier Drive, Rancho Palos Verdes.

Maljuta, who was born in Kharkov, Russia on January 25, 1920, was a naturalized American citizen. He used three aliases -- Anatoli T. M. Maluta, Tony Maluta and Tony Metz. Tittel was born on January 13, 1950 in Gumbsheim, West Germany. Divorced, Tittel was unmarried, as was Bruchhausen. Maluta's wife was named Aida.

Of the four companies Bruchhausen created in 1974, the principal enterprise was CTC California Technology Corporation. From its inception through 1980, CTC utilized 18 other trade styles, 12 of which were incorporated in California. In the four-year period of 1977 to 1980, CTC and its variants, under the direction and supervision of Anatoli Maluta and Sabina Dorn Tittel, purchased high technlogy electronic equipment, peripherals and components valued in excess of $10.5 million. Most of the items they purchased were classified as strategic commodities, controlled for national security purposes and requiring United States export licenses granted by the Departments of State and Commerce.

In the same four-year period, CTC exported from the United States to Germany, the Soviet Union, or the Soviet Bloc more than 300 shipments consisting of strategic commodities. None of the commodities had proper export licenses. The shipments were documented with fraudulent U. S. Shipper's Export Declarations (SED's). Most of the exports were sent to West Germany consigned to companies controlled by or associated with Werner 3. Bruchhausen. From West Germany, most ol the commodities were transshipped to Switzerland or Austria or to other intermediate countries and then transported to the USSR or to a Warsaw Pact nation.

The entities located in Southern California that comprised the Bruchhausen or CTC group were as follows:

Interorga International Components .and Equipment Sales Organization
4676 Admiralty Way, Marina Del Rey, California
Incorporated: October 23, 197*, file No. 740201
Statement of domestic stock corporation, filed August 31, 1977, file No. 7719X790
Chief executive officer: Werner 3. Bruchhausen, Marina Del Rey
Secretary: Anatoli Maluta, Marina Del Rey
Chief Executive officer: Anatoli Maluta
Directors: Werner Bruchhausen, Anatoli Maluta, Aida Maluta

Interebdo Ebdo International Inc., dba ADT International Inc.
Post Office Box 9076, Venice, California
4676 Admiralty Way, Marina Del Rey
Incorporated: October 23, 1974, file no. 7*0203
Statement of domestic stock corporation, filed December 2, 197*, file No. 7*180292
Dissolved: February 26, 1979
President: Volker Brandlmeier, Marina Del Rey
Vice President: Barbara Brandlemeier, Marina Del Rey
Secretary/Treasurer: Barbara Brandlmeier
Directors: Herbert Abrams, Marilyn McCumber, Volker Brandlmeier
The name of this corporation was changed to ADT International, Inc., on March 2*, 1975, file No. 153552.

CTC California Technology Corp.
4676 Admiralty Way, Marina Del Rey, California
Incorporated: October 23, 197*, file No. 7*0200
Statement of Domestic Stock Corp., filed December 2, 197*, file No. 7*190291
Dissolved: February 26, 1979
President: Volker Brandlmeier. Marina Del Rev. California

Vice President: Barbara Brandlmeier, Marina Del Rey, CA
Secretary/Treasurer: Barbara Brandlmeier
Directors: H. Abrams, Marilyn McCumber, Volker Brandlmeier

MTL Measurements and Test Laboratories, Inc.
4676 Admiralty Way, Marina Del Rey, California
Incorporated: October 23, 197*, file No. 7*0200
Statement of Domestic Stock Corp., filed December 2, 197*, file No. 7*190291
Dissolved: February 26, 1979
President: Volker Brandlmeier, Marina Del Rey, California
Vice President: Barbara Brandlmeier, Marina Del Rey, CA
Secretary/Treasurer: Barbara Brandlmeier
Directors: Herbert Abrams, Marilyn McCumber, Volker Brandlmeier

Electronic Continental Industries, Inc.
4676 Admiralty Way, Marina Del Rey, California
Incorporated: June 30, 1977, file No. 820513
Statement of Domestic Stock filed August 29, 1977, file No. 7718636.9
Dissolved: February 26, 1979
Chief Executive Officer: Werner Bruchhausen
Secretary/Chief Financial Officer: Anatoli Maluta
Directors: Werner Bruchhausen, Anatoli Maluta, Aida Maluta

Interorga Europe, Inc.
4676 Admiralty Way, Marina Del Rey, California
Incorporated: October 25, 1977, file No. 830539
Statement of Domestic Stock Corp., filed December 29, 1977, file No. 7727-1373
Dissolved: February 26, 1979
Chief Executive Officer: Werner Bruchhausen, Marina Del Rey, California
Secretary: Anatoli Maluta, Marina Del Rey, California
Chief Financial Officer, Sabina D. Tittel, Marina Del Rey, CA
Directors: Werner Bruchhausen, Anatoli Maluta, Sabina D. Tittel

Atlantic Universal Supply, Inc.
4804 Macafee Road, Torrance, California
dba: AUS, 21515 Hawthorne Boulevard, #646, Torrance, CA
Incorporated: July 3, 1978, file No. 86.8824
Statement of Domestic Stock Corp., filed November 19, 1979, file No. 793.10-42
Chief Executive Officer: Tony Maluta, Redondo Beach, CA
Secretary: Sabina D. Tittel, Torrance, California
Chief Financial Officer: Sabina D. Tittel
Directors: Tony Maluta, Sabina Tittel

Consolidated Protection Development Corp.
21515 Hawthorne Boulevard, #646, Torrance, California
Incorporated: July 3, 1978, file No. 86.8822
Statement of Domestic Stock Corp., filed December 10, 1979, file No. 7932-737
Chief Executive Officer: Tony Maluta, Redondo Beach, CA
Secretary: Sabina D. Tittel, Torrance, California
Chief Financial Officer: Sabina D. Tittel
Directors: Tony Maluta, Sabina D. Tittel

American Data Technology Corp.
231 Calle Mayor, Redondo Beach, California (2)
Incorporated: July 12, 1978, file No. 869313
Statement of Domestic Stock Corp. filed: December 10, 1979, file No. 79324736
Chief Executive Officer: Tony Maluta, Redondo Beach, CA
Secretary: Sabina D. Tittel, Torrance, CA
Chief Financial Officer: Sabina D. Tittel
Directors: Tony Maluta, Sabina D. Tittel

Digital Security Corp.
231 Calle Mayor, Redondo Beach, California
Incorporated: May 25, 1979, file No.931745
Statement of Domestic Stock Corp., filed August 21, 1979, file No. 79231486
Chief Executive Officer: Rainer Hildebrand, Bonn, West Germany
Secretary: Eric Roos, Dusseldorf, West Germany
Chief Financial Officer: Tony Maluta, Redondo Beach, CA
Directors: Rainer Hildebrand, Eric Roos, Tony Maluta, Sabina Tittel

Continental Technology Corp.
21515 Hawthorne Boulevard, #6*6, Torrance, California
23868 Hawthorne Boulevard, #100, Torrance, California
Incorporated: May 25, 1979, file No. 9317*6
Statement of Domestic Stock Corp., filed August 21, 1979, file No. 79231*85
Chief Executive Officer: Roland Sturm, Munich, West Germany
Secretary: Rainer Hildebrand, Bonn, West Germany
Chief Financial Officer: Tonyt Maluta, Redondo Beach, CA
Directors: Roland Sturm, Rainer Hildebrand, Tony Maluta, Sabina D. Tittel

Universal Digital Corp.
4804 Macafee Road, Torrance, California (3)
18*3 Lincoln Blvd., Suite 202, Santa Monita, CA (*)
Incorporated: May 25, 1979, file No. 9317*1
Chief Executive Officers Eric Roos, Dusseldorf, West Germany
Secretary: Rainer Hildebrand, Bonn, West Germany
Chief Financial Officer: Sabina Tittel, Torrance, California
Directors: Eric Roos, Rainer Hildebrand, Sabina Tittel, Tony Maluta

CTC Group Used Companies Overseas

In addition to the California-based entities comprising the CTC group, Bruchhausen also controlled or was associated with several other enterprises, including entities in West Germany, Austria and Switzerland.

The CTC group's associates in West Europe included Dietmar Ulrichshofer, Hans-Jurgen Koenig, Sybille Ziogas, and Frank and Karin Nassauer.

Ulrichshofer, born in Austria on May 27, 19*0, owned electronics supply companies in Vienna and Bad Reichenhall, West Germany. Koenig, who lived in Bonn, was born on May 12, 19*0, and was general manager of electronics supply firms in Dusseldorf, and the West German capital.

The foreign entities utilized or owned by the Bruchhausen group were as follows:

ADT Analog Und Digital Technik
D-8019 Neiderseeon 21, West Germany
Commenced Business: 1978
General Manager: Werner Bruchhausen
Operation: Import, export, distribute and manufacturer electronic building parts and equipment

Elubat Vertriebsgellschaft Fur Elektronik Und Batterien Mbh
Goethestrasse 11, *000 Dusseldorf, West Germany
Commenced Business: December 30, 1977, under Registry number HRB 595, dated April 7, 1978
Managers: Detlef Lackmann, Werner Bruchhausen

Managers: Detlef Lackmann, Werner Bruchhausen
Ownership: ADT Analog and Digital Technik Bauelemente and Gerate-Vertrieb, Gmbg - 50%, Detlef Lackmann - 50%
Operation: Wholesale of electronical elements, batteries and similar articles

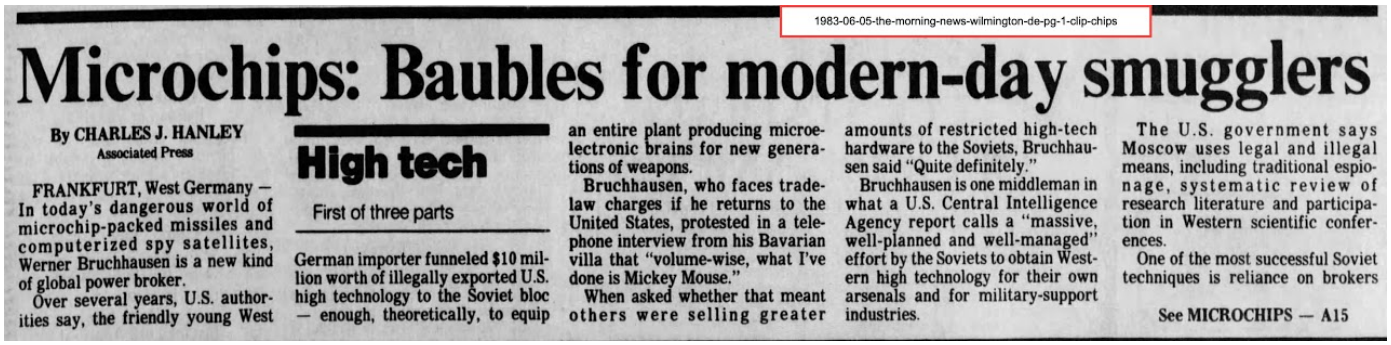
Techma Technische Maschinenhandels - Gesellschaft Mbh Koeingstrasse 10, D-4000 Dusseldorf, West Germany Commenced Business: February 27, 1978, under Registry Number HRB 13228, dated February 27, 1978 General Manager: Hans-Jurgen Koenig Ownership: Hans-Jurgen Koenig - 100% Operation: Distribution, import and export of machine and products of the mechanical engineering, as well as electric devices Elmasch Vertriebsgesellshaft Fur Produkte Der Electrotechnik Und Des Maschinenbaues Mgh Bergstrasse 185, 5300 Bonn 1, West Germany Commenced Business: February 27, 1978, under Registry Number HRB 2478, dated June 19, 1979 General Manager: Hans-Jurgen Koenig Ownership: Hans-Jurgen Koenig - 90%, Stefan Wagner - 10% Operation: Distribution, import and export of electrotechnical and mechanical products Electronic Elektronechnische Bauelmente Handelsgesellshaft 4951 Ameisasse, 1140 Vienna, Austria Commenced Business: October 30, 1974, under Registry Number B-9060, dated November 23, 1964 Managers: Dietmar Ulrichshofer, Helmut Hartner Ownership: Dietmar Ulrichshofer Operation: Distribution of electronic component parts and apparatus as well as other technical articles, mainly in Eastern Europe (80%) Ing. Ulrichshofer, Dietmar Vertrieb Electronischer Bauelmente Und Elektronischer Gerate Baderstrasse 5,823 Bad Reichenhall, West Germany Commenced Business: November 1974 under Registry Number HRA 3530, dated 1976 Sole Proprietor: Dietmar Ulrichshofer Ownership: Dietmar Ulrichshofer Operation: Wholesale in (5%) import of (20%) and export (75%) electronic components, mainly semiconductors. Exports to European countries. Solid State Electronics SA DBA: SSC Solid State Commerz AG, Zurich, Switzerland Commenced Business: April 26, 1971 Director: Dr. Juraj Tamas Zabratzky Operation: Trade in products of the electronic industry and related products, take-over of agencies of all kinds, rendering of commercial services of all kinds, acquisition of participations and real property as well as acquisition, registration and exploitation of patent rights of all kinds. Intra-engineering, GmbH Goethestrasse 11, D-4000 Dusseldorf, West Germany Commenced Business: December 30, 1977, under registry HRB 13197 General Manager: Ing. Gerhard Drost Operation: Development, planning and construction of plants. Universal Transport GmbH Cologne, Dusseldorf and Munich, West Germany

Commenced Business: July 19, 1968, under Registry No. HRB 2296, dated July 27, 1978 Operation: Forwarding and transports of all kinds (air, road and water); especially international forwarding for import and export; customs clearance and air freight. Panalpina AG Zurich, Switzerland Commenced Business: 1920 Operation: Freight forwarder to all parts of the world. Wholesale trade with various butcher articles, such as sausage machines, guts, etc. The firm does mainly transit trade, and there is practically no activity in Switzerland. Copex Air B. V. Subsidiary of shipping and forwarding "SAFF" B. V. Schiphol, Metherlands Commenced Business: January 18, 1977 Managers: G. H. F. Smit, A. M. Hageman Operation: Air freight forwarding.

1983 (June 05)

Full pages :

- Page 1 - [HN00LR][GDrive]
- Page 15 - [HN00LT][GDrive]



1983-06-05-the-morning-news-wilmington-de-pg-1-clip-chips

Microchips: Baubles for modern-day smugglers

By CHARLES J. HANLEY
Associated Press

High tech

First of three parts

FRANKFURT, West Germany — In today's dangerous world of microchip-packed missiles and computerized spy satellites, Werner Bruchhausen is a new kind of global power broker.

Over several years, U.S. authorities say, the friendly young West German importer funneled $10 million worth of illegally exported U.S. high technology to the Soviet bloc — enough, theoretically, to equip an entire plant producing microelectronic brains for new generations of weapons.

Bruchhausen, who faces trade-law charges if he returns to the United States, protested in a telephone interview from his Bavarian villa that "volume-wise, what I've done is Mickey Mouse."

When asked whether that meant others were selling greater amounts of restricted high-tech hardware to the Soviets, Bruchhausen said "Quite definitely."

Bruchhausen is one middleman in what a U.S. Central Intelligence Agency report calls a "massive, well-planned and well-managed" effort by the Soviets to obtain Western high technology for their own arsenals and for military-support industries.

The U.S. government says Moscow uses legal and illegal means, including traditional espionage, systematic review of research literature and participation in Western scientific conferences.

One of the most successful Soviet techniques is reliance on brokers

See MICROCHIPS — A15

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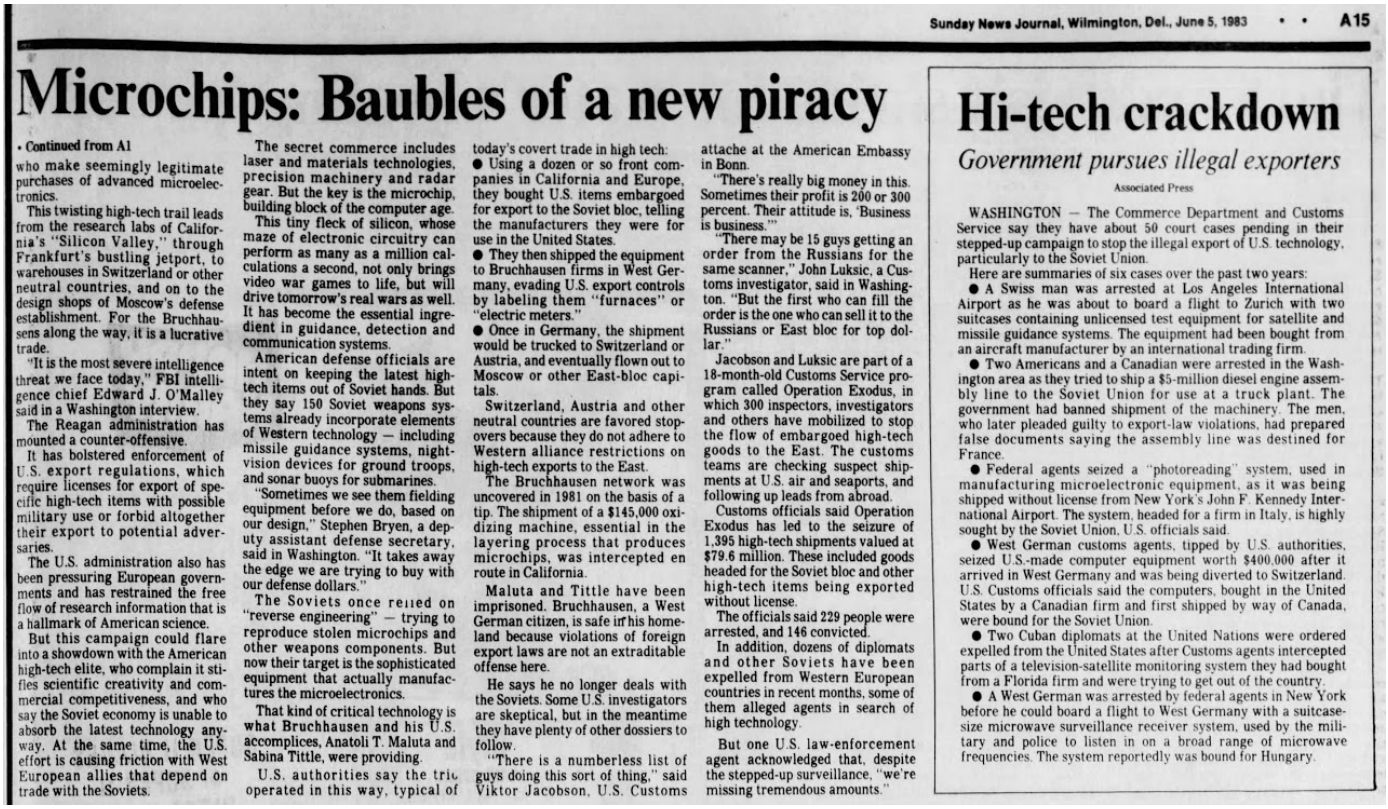

Microchips: Baubles of a new piracy

• Continued from A1

who make seemingly legitimate purchases of advanced microelectronics.

This twisting high-tech trail leads from the research labs of California's "Silicon Valley," through Frankfurt's bustling jetport, to warehouses in Switzerland or other neutral countries, and on to the design shops of Moscow's defense establishment. For the Bruchhausens along the way, it is a lucrative trade.

"It is the most severe intelligence threat we face today," FBI intelligence chief Edward J. O'Malley said in a Washington interview.

The Reagan administration has mounted a counter-offensive.

It has bolstered enforcement of U.S. export regulations, which require licenses for export of specific high-tech items with possible military use or forbid altogether their export to potential adversaries.

The U.S. administration also has been pressuring European governments and has restrained the free flow of research information that is a hallmark of American science.

But this campaign could flare into a showdown with the American high-tech elite, who complain it stifles scientific creativity and commercial competitiveness, and who say the Soviet economy is unable to absorb the latest technology anyway. At the same time, the U.S. effort is causing friction with West European allies that depend on trade with the Soviets.

The secret commerce includes laser and materials technologies, precision machinery and radar gear. But the key is the microchip, building block of the computer age.

This tiny fleck of silicon, whose maze of electronic circuitry can perform as many as a million calculations a second, not only brings video war games to life, but will drive tomorrow's real wars as well. It has become the essential ingredient in guidance, detection and communication systems.

American defense officials are intent on keeping the latest high-tech items out of Soviet hands. But they say 150 Soviet weapons systems already incorporate elements of Western technology — including missile guidance systems, night-vision devices for ground troops, and sonar buoys for submarines.

"Sometimes we see them fielding equipment before we do, based on our design," Stephen Bryen, a deputy assistant defense secretary, said in Washington. "It takes away the edge we are trying to buy with our defense dollars."

The Soviets once relied on "reverse engineering" — trying to reproduce stolen microchips and other weapons components. But now their target is the sophisticated equipment that actually manufactures the microelectronics.

That kind of critical technology is what Bruchhausen and his U.S. accomplices, Anatoli T. Maluta and Sabina Tittle, were providing.

U.S. authorities say the trio operated in this way, typical of today's covert trade in high tech:

● Using a dozen or so front companies in California and Europe, they bought U.S. items embargoed for export to the Soviet bloc, telling the manufacturers they were for use in the United States.

● They then shipped the equipment to Bruchhausen firms in West Germany, evading U.S. export controls by labeling them "furnaces" or "electric meters."

● Once in Germany, the shipment would be trucked to Switzerland or Austria, and eventually flown out to Moscow or other East-bloc capitals.

Switzerland, Austria and other neutral countries are favored stopovers because they do not adhere to Western alliance restrictions on high-tech exports to the East.

The Bruchhausen network was uncovered in 1981 on the basis of a tip. The shipment of a $145,000 oxidizing machine, essential in the layering process that produces microchips, was intercepted en route in California.

Maluta and Tittle have been imprisoned. Bruchhausen, a West German citizen, is safe in his homeland because violations of foreign export laws are not an extraditable offense here.

He says he no longer deals with the Soviets. Some U.S. investigators are skeptical, but in the meantime they have plenty of other dossiers to follow.

"There is a numberless list of guys doing this sort of thing," said Viktor Jacobson, U.S. Customs attache at the American Embassy in Bonn.

"There's really big money in this. Sometimes their profit is 200 or 300 percent. Their attitude is, 'Business is business.'"

"There may be 15 guys getting an order from the Russians for the same scanner," John Luksic, a Customs investigator, said in Washington. "But the first who can fill the order is the one who can sell it to the Russians or East bloc for top dollar."

Jacobson and Luksic are part of a 18-month-old Customs Service program called Operation Exodus, in which 300 inspectors, investigators and others have mobilized to stop the flow of embargoed high-tech goods to the East. The customs teams are checking suspect shipments at U.S. air and seaports, and following up leads from abroad.

Customs officials said Operation Exodus has led to the seizure of 1,395 high-tech shipments valued at $79.6 million. These included goods headed for the Soviet bloc and other high-tech items being exported without license.

The officials said 229 people were arrested, and 146 convicted.

In addition, dozens of diplomats and other Soviets have been expelled from Western European countries in recent months, some of them alleged agents in search of high technology.

But one U.S. law-enforcement agent acknowledged that, despite the stepped-up surveillance, "we're missing tremendous amounts."

Hi-tech crackdown

Government pursues illegal exporters

Associated Press

WASHINGTON — The Commerce Department and Customs Service say they have about 50 court cases pending in their stepped-up campaign to stop the illegal export of U.S. technology, particularly to the Soviet Union.

Here are summaries of six cases over the past two years:

● A Swiss man was arrested at Los Angeles International Airport as he was about to board a flight to Zurich with two suitcases containing unlicensed test equipment for satellite and missile guidance systems. The equipment had been bought from an aircraft manufacturer by an international trading firm.

● Two Americans and a Canadian were arrested in the Washington area as they tried to ship a $5-million diesel engine assembly line to the Soviet Union for use at a truck plant. The government had banned shipment of the machinery. The men, who later pleaded guilty to export-law violations, had prepared false documents saying the assembly line was destined for France.

● Federal agents seized a "photoreading" system, used in manufacturing microelectronic equipment, as it was being shipped without license from New York's John F. Kennedy International Airport. The system, headed for a firm in Italy, is highly sought by the Soviet Union, U.S. officials said.

● West German customs agents, tipped by U.S. authorities, seized U.S.-made computer equipment worth $400,000 after it arrived in West Germany and was being diverted to Switzerland. U.S. Customs officials said the computers, bought in the United States by a Canadian firm and first shipped by way of Canada, were bound for the Soviet Union.

● Two Cuban diplomats at the United Nations were ordered expelled from the United States after Customs agents intercepted parts of a television-satellite monitoring system they had bought from a Florida firm and were trying to get out of the country.

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[HN00LU][GDrive]

1983 (June 1)

Full page : [HN00AV][GDrive]

High technology reaches Soviets via underground

By CHARLES J. HANLEY

FRANKFURT, West Germany (AP) – In today's dangerous world of microchip-packed missiles and computerized spy satellites, Werner Bruchhausen is a new kind of global power broker.

Over several years, U.S. authorities say, the friendly young West German importer funneled $10 million worth of illegally exported U.S. high technology to the Soviet bloc – enough, theoretically, to equip an entire plant producing microelectronic brains for new generations of weapons.

Bruchhausen, who faces trade-law charges if he returns to the United States, protested in a telephone interview from his Bavarian villa that "volume-wise, what I've done is Mickey Mouse."

Does that mean others are selling even greater amounts of restricted high-tech hardware to the Soviets?

"Quite definitely," he said.

Bruchhausen is one middleman in what a U.S. Central Intelligence Agency reprt calls a "massive, well-planned and well-managed" effort by the Soviets to obtain Western high technology for their own arsenals and for military-support industries.

The U.S. government says Moscow uses legal and illegal means, including traditional espionage, systematic review of research literature and participation in Western scientific conferences.

One of the Soviets' most successful techniques: reliance on brokers who make seemingly legitimate purchases of advanced microelectronics.

A lucrative trade

This twisting high-tech trail leads from the research labs of California's "Silicon Valley," through Frankfurt's bustling jetport, to warehouses in Switzerland or other neutral countries, and on to the design shops of Moscow's defense establishment. For the Bruchhausens along the way, it is a lucrative trade.

"It is the most severe intelligence threat we face today," the FBI's intelligence chief, Edward J. O'Malley, said in a Washington interview.

The Reagan administration has mounted a counter-offensive.

It has bolstered enforcement of U.S. export regulations, which require licenses for export of specific high-tech items with possible military use or forbid their export altogether to potential adversaries.

The U.S. administration also has been pressuring European governments and has restrained the free flow of research information that is a hallmark of American science.

But this campaign could flare into a showdown with the American high-tech elite, who complain it stifles scientific creativity and commercial competitiveness, and who say the Soviet economy is unable to absorb the latest technology anyway. At the same time, the U.S. effort is causing friction with West European allies that depend on trade with the Soviets.

The secret commerce includes laser and materials technologies, precision machinery and radar gear. But the key is the microchip, building block of the computer age.

This tiny fleck of silicon, whose maze of electronic circuitry can perform as many as a million calculations a second, not only brings video war games to life, but will drive tomorrow's real wars as well. It has become the essential ingredient in guidance, detection and communication systems.

American defense officials are intent on keeping the latest high-tech items out of Soviet hands. But they say 150 Soviet weapons systems already incorporate elements of Western technology – including missile guidance systems, ground troops' night-vision devices, and submarines' sonar buoys.

'Reverse engineering'

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The Soviets once relied on "reverse engineering" – trying to reproduce stolen microchips and other weapons components. But now their target is the sophisticated equipment that actually manufactures the microelectronics.

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'Really big money'

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Jacobson and Luksic are part of a 1½-year-old Customs Service program called Operation Exodus, in which 300 inspectors, investigators and others have been mobilized to stop the flow of embargoed high-tech goods to the East. The Customs teams are checking suspect shipments at U.S. air and seaports, and following up leads from abroad.

In its first 18 months, Customs officials said, Operation Exodus led to the seizure of 1,395 high-tech shipments valued at $79.6 million. These included not just goods known to be headed for the Soviet bloc, but also other high-tech items being exported without license.

The officials said 229 people were arrested, and 146 people convicted.

In addition, dozens of diplomats and other Soviets have been expelled from Western European countries in recent months, some of them alleged agents in search of high technology.

"We know we've slowed it down," Bryen said. "There have been a lot of seizures, some of it apparently stuff the Soviets need very badly – scanning equipment for aircraft and spacecraft, elaborate computer devices."

But one U.S. law-enforcement agent acknowledged that, despite the stepped-up surveillance, "we're missing tremendous amounts."

One reason these guardians of America's technological genius are nervous: The U.S. microelectronics industry may soon produce "supercomputers" that could catapult the U.S. military into a vast lead in electronic warfare – if they are not stolen first.

High-tech trail

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50 court cases pending

WASHINGTON (AP) – The Commerce Department and Customs Service say they have about 50 court cases pending in their stepped-up campaign to stop the illegal export of U.S. technology, particularly to the Soviet Union.

Here are summaries of six cases over the past two years:

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[HN00AW][GDrive]

1984 (Dec 23) - how they work .. who is Richard Mueller ?

Full page : [HN00LV][GDrive]

The Palm Beach Post (West Palm Beach, Florida) · 23 Dec 1984, Sun · Page 105

How Technology Is Smuggled Overseas

By Warren Richey
© Christian Science Monitor

TECHNOBANDITS. **By Linda Melvern, David Hebditch, and Nick Anning. Houghton Mifflin. 305 pages. $15.95.**

Technobandits may soon be regarded as required reading in the American high-technology industry.

It is the first book to examine the controversial issue of the smuggling of United States high technology to the Soviet Union. The book, which documents several of the most notorious cases of illegal high-tech diversion, is written in the style of a combination spy-thriller and journalistic expose.

The book's strength is that it endeavors to put real faces on many of the shadowy figures who, for the past several years, have made lucrative livings by buying and selling goods that have been controlled to protect U.S. national security.

Technobandits concentrates on exposing — as the book cover puts it — "How the Soviets are stealing America's high-tech future." It details law enforcement successes and bureaucratic bumbling, as well as the heated intra-Washington feud between the Commerce Department and the Customs Service over who should be top dog in policing high-tech diversion. The book also examines the strain this issue has placed on the Western alliance.

Technobandits

Readers expecting solutions may be disappointed. The book touches on the larger, more difficult questions but tends to concentrate at length on the spy-like stories of technology smuggling. It does not provide an in-depth examination of how U.S. export controls can be made more effective.

Nonetheless, it is an interesting and useful book — especially given the Commerce Department's recent announcement that large volume high-tech exporters will be required to keep a sharp eye out for potential technology smugglers.

The new regulations of the department — to take effect Jan. 15 — make it the responsibility of American high-technology firms and their employees to ensure that the company's products will not be illegally diverted to the Soviets. (In the past, enforcement responsibility fell entirely on government investigative agencies.)

Thus, a section of industrial America will soon gear up to head off such known diverters as Richard Mueller, Werner Bruchhausen, and Fredrich Linnhoff. In addition, America will probably be facing a new generation of even more sophisticated technobandits, say the authors.

"Technobandits know how to get around the rules that are in place now," says Melvern, an investigative reporter who has worked for the London *Sunday Times*.

The book devotes an entire chapter to Richard Mueller, perhaps the best-known and most sought technobandit. He is currently a fugitive. The authors call him a "superbandit." Mueller, operating since 1974, is said by U.S. officials to have set up some 41 dummy firms in Europe and Africa solely for the purpose of facilitating the diversion of sensitive American high tech.

He is the technobandit said to be behind the now-famous attempted VAX computer diversion last year from South Africa to the Soviet Union via West Germany and Sweden. The diversion trail, as outlined by the authors, demonstrates the lengths to which determined smugglers may go to attempt to avoid detection.

According to the authors, the sensitive computers were transferred from one of Mueller's South African firms, Microelectronics Research Institute (MRI) to another of his South African firms, Optronix. The computers were then resold to a Swiss firm, Integrated Time AG. The Swiss firm was a subsidiary of Mueller's German firm, Deutsche Integrated Time. In the meantime, the computers had been loaded on a ship bound for Sweden and the Soviet Union.

The authors also provide added details of another case involving shipments of VAX computer systems to the East bloc via Mueller front organizations.

This fall Digital Equipment Corporation paid a $1 million fine as a result of a sale of VAX computers in 1982 from a Norwegian firm to Mueller's West German firm, Deutsche Integrated Time. At the time company officials did not realize the firm was a Mueller front.

But, according to the authors, the story didn't stop there. He still had to find a way to get the computers to the East bloc.

Earlier that year, the authors write, Mueller took over a failing organ company in West Germany and used its loading dock to recrate and disguise the same VAX computers purchased by Deutsche Integrated Time. The contents of the boxes were listed on shipping documents as airconditioners, office furniture, light fixtures, and PVC foam filling.

Then on Oct. 29, 1982, according to the authors, a truck with Hungarian license plates carried the disguised computers across the East German border.

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[HN00LW][GDrive]

1985 (May 12) ARREST - IN KENSINGTON DISTRICT, LONDON

Full page : [HN00LX][GDrive]

'Techno bandit' arrested by Scotland Yard

LONDON (AP) — A West German was ordered held without bail Friday to face an American extradition demand on charges of exporting U.S. high technology to the Soviet Union and Eastern Europe.

Scotland Yard spokesman Mick Jordan said Werner J. Bruchhausen was arrested Wednesday at a hotel in London's fashionable Kensington district by the police extradition squad.

U.S. officials hailed the arrest as a major break in a drive to stop unauthorized exports to the East bloc.

In Washington, William von Raab, U.S. customs commissioner, described Bruchhausen as "one of the world's top techno-bandits."

Bruchhausen appeared at Bow Street Magistrates Court in central London today and Magistrate William Robins ordered that he be held in custody. A further hearing was scheduled for May 17.

The U.S. Embassy in London said that under the terms of the U.S.-Britain extradition treaty, Washington has until June 23 to provide Britain with documents to support its demand for Bruchhausen's extradition.

[HN00LY][GDrive]

1985 (Oct 06)

Full page : [HN009R][GDrive]

The Observer (London, Greater London, England) · 06 Oct 1985, Sun · Page 3

Trail of high-tech smugglers

By PAUL LASHMAR

DETAILS of an alleged multi-million dollar operation to smuggle western technology behind the Iron Curtain were revealed last week in a London court when the United States Government moved to extradite the alleged 'Mr Big' of the smuggling ring.

Werner Bruchhausen, 46, a West German businessman was arrested by Scotland Yard detectives at London's Kensington Hilton in May for alleged arms control breaches. According to the Americans, Bruchhausen has been selling embargoed high technology to the Soviet Bloc since 1976. They say he has been involved in arranging the smuggling of at least 400 items of equipment worth up to $24 million from California's 'silicon valley.' These include a surveillance system for missile tracking, a complete chip manufacturing plant and an innovative chip testing system.

Bruchhausen, who denies the allegations, is being held in custody in Pentonville prison pending the outcome of the extradition hearing which resumes later this month.

Bow Street magistrates court was told last week that when Bruchhausen was arrested he told police his name was 'Werner Haus' and was carrying a Brazilian passport in that name. His identity was revealed when his fingerprints were checked with West German police.

Werner Bruchhausen : extradition move

Related inquiries led to the arrest of a Durham businessman, Clifford Chadwick, 48, by Customs officers from Operation Arrow, a team especially set up by the British Government to deal with high technology smuggling. Two weeks ago Chadwick was sentenced to nine months in jail for sending two advanced VAX computers to Bulgaria.

Bruchhausen has been wanted by the US Customs since 1980. Following a tip-off from former employees, customs officers investigated one of his operations, California Trading Corporation, run by Antoli Baluti, a former US Air Force officer born in the Ukraine in 1920.

The US authorities issued a 60-count indictment against Bruchhausen, Maluti and the latter's German lover, Sabrina Dorn Tittel, for sending embargoed technology to the Soviets.

Bruchhausen was out of the country at the time and remains wanted by the US Customs. Following a trial in California at the end of 1981 Maluti was jailed for five years and fined $50,000. Tittel was jailed for two years and fined $25,000.

When Bruchhausen was arrested in London, the original 60-count indictment had been reduced to three. None of these charges was apparently extradictable, yet he remained in custody for a month while a grand jury was reconvened in California and a further four indictments were brought.

Bruchhausen denies the American charge that he is a fugitive from justice and says he has merely not been to the US recently. He also claims the charges are of a political character and therefore not extradictable.

In a BBC 'Panorama' interview in July 1983 Bruchhausen said it was not against the law to ship material from the US to Germany, from Germany to Switzerland, or from Switzerland to the Soviet Union.

[HN009S][GDrive]

1987 (Jan 28) - West German 'Techno Bandit' Did 'Tremendous Harm,' Prosecutor Says

Full page : [HN00M8][GDrive] / Text at [HN00MA][GDrive]

6 Part II/Wednesday, January 28, 1987 ★ Los Angeles Times

West German 'Techno Bandit' Did 'Tremendous Harm,' Prosecutor Says

By JOHN KENDALL, *Times Staff Writer*

A West German businessman described as one the world's top "techno bandits" did "tremendous harm" to U.S. security by illegally diverting millions of dollars worth of American high technology to the Soviet Union, a federal prosecutor declared Tuesday.

Assistant U.S. Atty. William F. Fahey charged in Los Angeles federal court that Werner Bruchhausen, 47, had provided "tremendous benefits" to the Soviets by selling them more than $6 million worth of high technology and military equipment.

Bruchhausen, an electronics engineer who conducted his worldwide operation from a mansion outside Munich before his arrest in Britain in May, 1985, is on trial on 15 counts of mail fraud. He was extradited to the United States in June.

Fahey declared in an opening statement that the Soviets recruited Bruchhausen in the early 1970s to obtain U.S. technology that could not be shipped outside this country without export licenses issued by federal authorities.

The Soviets were so eager to obtain American-made electronic and computer equipment for military and civilian use that they were willing to pay Bruchhausen up to 10 times the value of the gear, Fahey said.

Just how well the Soviet Union succeeded in its buying efforts will be explored by expert government witnesses during the trial, according to Fahey. But he offered examples outside of court on Tuesday.

The Soviets acquired an entire plant enabling them to greatly improve their quality control in computer microchip production, increasing the number of good chips from 10% to 70% or 80%, Fahey said. Also, he said, they acquired U.S. military communications equipment that permitted them to monitor North Atlantic Treaty Organization forces.

Bruchhausen's attorney, Alan M. May, portrayed his client as an ambitious businessman who set out to make his fortune during a period of detente between the United States and the Soviet Union and ended up being a victim who was betrayed by lying associates and set up by federal officials.

Bruchhausen never talked to any U.S. manufacturers about sensitive equipment and never falsely filled out a government form, May said. "And now they say, 'Werner made me do it.' "

Quite a different opinion of Bruchhausen's role in securing U.S. technology was expressed when the British agreed to extradite him.

"We have spread our net wide and caught one of the biggest fish," said Customs Commissioner William Von Raab. "Werner Bruchhausen is one of the most important members of a small fraternity of shady characters who handle most of the transfers of forbidden technology to the Soviet Bloc."

Fahey alleged that Bruchhausen designed an elaborate scheme to smuggle American high-tech gear by setting up dozens of companies, several of them in California, and instructing his agents on how to export components without detection either by U.S. manufacturers and federal authorities.

The prosecutor charged that two of Bruchhausen's companies operated under different identities out of the same office, one to buy equipment and the other to illegally ship it out of the country by falsely declaring what was being shipped and concealing its value and final destination.

Fahey accused Bruchhausen of setting up two companies in Marina del Rey in October, 1974, to purchase and export technical commodities. He said the names of the firms were changed twice within six years before authorities became suspicious.

According to Fahey, Bruchhausen and his agents made at least 13 attempts to export high-tech equipment between 1978 and 1980, starting with his first successful attempt in November, 1978, when Bruchhausen purportedly acquired a Data General S/230 computer.

Sometimes equipment was sent to Switzerland, or West Germany, or Austria, Fahey said. But, he said, "Eventually all of it ended up in the Soviet Union."

Bruchhausen was originally named, along with two Southern California residents, in a 60-count indictment returned by a federal grand jury in Los Angeles in August, 1981.

The others, Russian-born Antoli (Tony) Maluta and Sabina Dorn Tittel, were sentenced to prison in 1981 for illegally diverting U.S. technology. Bruchhausen avoided arrest for four year.

Bruchhausen's lawyer described Maluta on Tuesday as a snake who, as Bruchhausen's agent, had lied to equipment manufacturers and U.S. Customs officials, and stolen $750,000 from the defendant.

The trial, which U.S. District Judge Alicemarie Stotler is hearing without a jury, is expected to last three or four weeks.

[HN00M9][GDrive]

A West German businessman described as one the world's top "techno bandits" did "tremendous harm" to U.S. security by illegally diverting millions of dollars worth of American high technology to the Soviet Union, a federal prosecutor declared Tuesday.

Assistant U.S. Atty. William F. Fahey charged in Los Angeles federal court that Werner Bruchhausen, 47, had provided "tremendous benefits" to the Soviets by selling them more than $6 million worth of high technology and military equipment.

Bruchhausen, an electronics engineer who conducted his worldwide operation from a mansion outside Munich before his arrest in Britain in May, 1985, is on trial on 15 counts of mail fraud. He was extradited to the United States in June.

Fahey declared in an opening statement that the Soviets recruited Bruchhausen in the early 1970s to obtain U.S. technology that could not be shipped outside this country without export licenses issued by federal authorities.

The Soviets were so eager to obtain American-made electronic and computer equipment for military and civilian use that they were willing to pay Bruchhausen up to 10 times the value of the gear, Fahey said.

Just how well the Soviet Union succeeded in its buying efforts will be explored by expert government witnesses during the trial, according to Fahey. But he offered examples outside of court on Tuesday.

The Soviets acquired an entire plant enabling them to greatly improve their quality control in computer microchip production, increasing the number of good chips from 10% to 70% or 80%, Fahey said. Also, he said, they acquired U.S. military communications equipment that permitted them to monitor North Atlantic Treaty Organization forces.

Bruchhausen's attorney, Alan M. May, portrayed his client as an ambitious businessman who set out to make his fortune during a period of detente between the United States and the Soviet Union and ended up being a victim who was betrayed by lying associates and set up by federal officials.

Bruchhausen never talked to any U.S. manufacturers about sensitive equipment and never falsely filled out a government form, May said. "And now they say, 'Werner made me do it.' "

Quite a different opinion of Bruchhausen's role in securing U.S. technology was expressed when the British agreed to extradite him.

"We have spread our net wide and caught one of the biggest fish," said Customs Commissioner William Von Raab. "Werner Bruchhausen is one of the most important members of a small fraternity of shady characters who handle most of the transfers of forbidden technology to the Soviet Bloc."

Fahey alleged that Bruchhausen designed an elaborate scheme to smuggle American high-tech gear by setting up dozens of companies, several of them in California, and instructing his agents on how to export components without detection either by U.S. manufacturers and federal authorities.

The prosecutor charged that two of Bruchhausen's companies operated under different identities out of the same office, one to buy equipment and the other to illegally ship it out of the country by falsely declaring what was being shipped and concealing its value and final destination.

Fahey accused Bruchhausen of setting up two companies in Marina del Rey in October, 1974, to purchase and export technical commodities. He said the names of the firms were changed twice within six years before authorities became suspicious.

According to Fahey, Bruchhausen and his agents made at least 13 attempts to export high-tech equipment between 1978 and 1980, starting with his first successful attempt in November, 1978, when Bruchhausen purportedly acquired a Data General S/230 computer.

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The trial, which U.S. District Judge Alicemarie Stotler is hearing without a jury, is expected to last three or four weeks.

1988 (Aug 29)

Source : [HN00MB][GDrive]

A West German imprisoned for selling classified technology to the Soviet Union and Eastern European countries tried to escape the Federal prison here in a helicopter Saturday, officials said today.

Federal officers were there to halt the escape of the prisoner, Werner Bruchhausen, before he could board the helicopter at the Federal Correctional Institution, a prison spokesman said.

Mr. Bruchhausen, 48 years old, began serving a 15-year prison sentence for wire fraud in May 1987.

A crew from a Tallahassee television station, WCTV, which had been notified that an escape was planned, waited outside the prison and videotaped the helicopter descend into the compound Mr. Bruchhausen was in the recreation yardat the time, said Lieut. Roy Gay, operations supervisor at the prison.

The authorities released few details about the escape attempt. WCTV said it had been told that Mr. Bruchhausen had offered to pay more than $100,000 to get out of prison.

Mr. Bruchhausen, was transferred to an undisclosed, more secure prison, Lieutenant Gay said.

Mr. Bruchhausen had fled the United States after a Federal grand jury in Los Angeles accused him and three others in August 1981 of conspiracy and violating the Export Administration Act, the Arms Export and Control Act and Federal income tax law. Mr. Bruchhausen was arrested in London on May 8, 1985, on immigration violations.

1988 (Aug 30/31)

[HN00AR][GDrive]

[HN00AT][GDrive]

Techno-bandit's helicopter escape plan foiled

1988-08-30-european-stars-and-stripes-germany-pg-5-clip-bruchhausen

AP

Photos taken from television screen show helicopter taking off from prison yard and Werner Bruchhausen being taken away in handcuffs after unsuccessful escape attempt.

TALLAHASSEE, Fla. (AP) — Officers from four federal agencies foiled an attempt by a West German once described as "one of the world's top techno-bandits" to escape from a federal prison here in a helicopter, officials said Sunday.

Officials had been tipped of Werner Bruchhausen's escape plans and were on hand to prevent him from boarding the helicopter at the Federal Correctional Institution Saturday, prison spokesman Dan Rouse said.

A crew from Tallahassee television station WCTV, which had been tipped that an escape was planned, were outside the prison and videotaped the unmarked helicopter as it swooped down into the compound and lifted off a few seconds later.

"At the time he attempted to escape he was in the recreation yard along with scores of others," said Lt. Roy Gay, operations supervisor at the medium-minimum security prison. About six guards were watching the inmates.

Bruchhausen, imprisoned for selling classified technology to the Soviet Union and Eastern European countries, was transferred to a more secure prison, Gay said. He refused to disclose the location.

Unidentified sources told WCTV that Bruchhausen had offered to pay more than $100,000 to get out of prison.

"We're aware of a lot of details we still can't go with. If we let on to everything we know, we'll jeopardize the case," WCTV news director Jim Foy said Sunday night.

Asked about the tip, Foy said: "We were just alerted to this possibility. We had no idea whether it was a crank call. We went not knowing what was up, and lo and behold, a helicopter came out of the sky. It was Christmas in August."

Federal authorities are considering filing escape charges, said R.E. Honsted, warden of the prison, which holds about 1,000 inmates.

Bruchhausen, 48, began serving a 15-year prison term for wire fraud in May 1987.

He had fled the United States after a federal grand jury in Los Angeles accused him and three others in August 1981 of conspiracy and violating the Export Administration Act, the Arms Export and Control Act and federal income tax laws.

The 60-count indictment charged that from January 1977 through June 5, 1980, Bruchhausen and the others "conspired to export from the United States various high technology commodities" to East Germany and elsewhere without obtaining export licenses from the State and Commerce departments.

On May 8, 1985, London police arrested Bruchhausen on immigration violations and U.S. officials immediately began extradition proceedings.

Bruchhausen smuggled a microwave receiver system, semiconductor manufacturing equipment, a computer system and other military and scientific items to the Soviet bloc through dummy corporations in California and West Germany, U.S. Customs Commissioner William von Rabb said.

He called Bruchhausen "one of the world's top techno-bandits" and said his arrest was "a major break in this country's efforts to track and arrest people wanted for deceiving and defrauding American businesses by selling potential high technology to the Soviets."

[HN00AS][GDrive]

Helicopter 'escape attempt' revealed as a trick

1988-08-31-european-stars-and-stripes-germany-pg-7-clip-bruchhausen

TALLAHASSEE, Fla. (UPI) — Federal officials used a disguised helicopter and a U.S. Customs pilot to trick imprisoned "techno-bandit" Werner Bruchhausen into trying to escape, then foiled the attempt, authorities revealed Monday.

Bruchhausen, 45, of West Germany, who is serving a 15-year sentence for selling high-tech secrets to the Soviet Union and other communist countries. He is considered to be one of the leading "techno-bandits" in U.S. history, and until Sunday was confined at Tallahassee's low-security Federal Correctional Institute.

About 7:30 p.m. Sunday, a black helicopter swooped over the prison wall and appeared to make a landing on an exercise field. Bruchhausen ran toward the helicopter, only to see it rise and take off as he approached.

"It was a government helicopter flown by a U.S. Customs Service agent," said Warden Robert Honsted, describing the scam. "That's what enabled us to apprehend Mr. Bruchhausen, obviously, and preclude him from boarding the craft and fleeing."

Bruchhausen has since been moved to the high-security Atlanta Federal Penitentiary and may be charged with attempted escape and conspiracy to escape. He could be sentenced to 10 more years in prison and fined up to on those charges.

Honsted said officials were tipped by unnamed sources 2½ weeks ago that Bruchhausen was planning an escape. Prison officials began monitoring Bruchhausen's outgoing telephone calls.

From those calls, they pieced together Bruchhausen's escape plans, which included a proposed $250,000 payoff to his rescuers.

Honsted and other officials said an investigation into the escape "conspiracy" is continuing and refused to give other details.

Honsted said a $5,000 down payment was in the custody of law enforcement officials, but refused to say if that payment had been delievered to one of the suspected co-conspirators.

U.S. Attorney Michael Moore said an indictment has been issued against a person who is not in custody. He refused to elaborate on that person's identity.

The escape attempt was videotaped by WCTV, a CBS affiliate that had been tipped to the story in advance. Moore said he would like to know where the station got its information, but that he did not plan to take any action against it.

Moore said WCTV knew authorities were already aware of the planned escape and so did not call prison officials. He said the escape was filmed from a nearby road and not from the prison grounds.

WCTV managing editor Richard Smith declined comment.

AP

Warden Robert Honsted (left) and U.S. Attorney Michael Moore describe to reporters the foiled "escape attempt" of West German Werner Bruchhausen.

[HN00AU][GDrive]

Aug 30 1988

Full page : [HN00LZ][GDrive]

The Associated Press

A government helicopter, disguised to look like one that inmate Werner Bruchhausen allegedly hired to help him escape, lifts off over the Federal Correctional Institute in Tallahassee, Fla. The scene was filmed by a TV station.

Officials learn escape plot, concoct another one to catch 'technobandit'

United Press International

TALLAHASSEE, Fla. — Federal officials used a disguised helicopter and a U.S. Customs pilot to trick imprisoned "technobandit" Werner Bruchhausen into trying to escape, then foiled the attempt, authorities said Monday.

Bruchhausen, 45, is serving a 15-year sentence for selling high-tech secrets to the Soviet Union and other Eastern bloc countries. He is considered to be one of the leading "technobandits" in U.S. history, and until Sunday had been confined at Tallahassee's low-security Federal Correctional Institute.

At about 7:30 p.m. Sunday, a black Vietnam-era helicopter swooped over the prison wall and appeared to make a landing on an exercise field. Bruchhausen ran toward the helicopter, only to see it rise and take off as he approached.

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Moore said WCTV knew authorities were already aware of the planned escape and so did not call prison officials. He said the escape was filmed from a nearby road, off the prison grounds. WCTV Managing Editor Richard Smith declined comment.

[HN00M0][GDrive]

1988 (Sep 10)

Full page : [HN00M1][GDrive]

1988-09-10-tallahassee-democrat-pg-2b-clip-winget

Grand jury indicts pair in foiled escape attempt

Democrat staff report

A Tallahassee federal grand jury returned indictments Friday against Werner Bruchhausen and Margaret Winget, on charges stemming from a daring, but foiled, attempt to escape from the Federal Correctional Institution by helicopter.

Bruchhausen, a 48-year-old West German citizen considered by the U.S. Customs Service to be "one of the world's top techno-bandits" for selling millions of dollars worth of high-tech equipment to Soviet-bloc countries, was serving a 15-year sentence at the Tallahassee prison for wire fraud.

Winget, described as Bruchhausen's friend who lives in Los Angeles, is accused of helping the inmate relay telephone messages to his sister in West Germany.

According to Gail London, spokeswoman for the U.S. Attorney's Office, both Bruchhausen and Winget were indicted for conspiracy to escape, carrying a maximum penalty of five years in prison and a $10,000 fine. In addition, Bruchhausen is charged with attempted escape, and Winget is charged with assisting in the escape attempt. Those charges each carry a maximum penalty of five years in prison and a $5,000 fine.

On Aug. 27, Bruchhausen made his way to a helicopter that swooped low near Tom Brown Park, aiming for the prison softball field. According to federal agents, he got within 20 feet of the helicopter, which never landed. It was piloted by a U.S. Customs agent, authorities said, on a successful mission to trap Bruchhausen in his own escape plan.

Now, Bruchhausen is in an high-security federal prison in Atlanta.

Winget is free on $50,000 bail in Los Angeles, London said.

A hearing will be held Tuesday in Los Angeles to verify Winget's identity, London said.

No trial date has been set.

[HN00M2][GDrive]

1989 (Feb 24)

Full page : [HN00M3][GDrive]

Florida Today (Cocoa, Florida) · 25 Feb 1989, Sat · Page 24

German conspired to escape

TALLAHASSEE — A West German considered by U.S. officials to be "the world's top techno-bandit," was convicted Friday in federal court on two counts of conspiracy to escape.

A jury found Werner Bruchhausen guilty of trying to escape from the Federal Correctional Institution last August.

Authorities foiled Bruchhausen's daring attempt by setting up a U.S. Customs helicopter as the escape aircraft. Bruchhausen, 48, reportedly offered to pay up to $250,000 for assistance.

[HN00M4][GDrive]

1989 (April 28)

Full pages :

- Page 33 - [HN00M5][GDrive]
- Page 34 - [HN00M7][GDrive]

Spy's escape attempt extends his prison time

1989-04-28-tallahassee-democrat-pg-33-clip-bruchhausen

By Albert Oetgen
Democrat staff writer

A federal judge sentenced a West German industrial spy on Thursday to another 30 months in prison for trying to break out of Tallahassee's federal prison, and delivered an impassioned defense of American justice in the process.

A jury convicted Werner Bruchhausen on Feb. 25 of conspiracy and attempted escape for plotting to fly out of the prison in a helicopter on Aug. 27.

He was already serving a 15-year sentence for selling high-tech secrets to the Soviet Union and other Eastern Bloc countries when he tried to escape. He has 13 years left on his original sentence.

The defendant's friends and family wrote U.S. District Court Judge William Stafford, urging leniency and criticizing the original sentence as too harsh.

Stafford was not happy with the tone of the criticism, nor with Bruchhausen's attempt to discredit his original conviction during his trial on the escape and conspiracy charges.

"No one should be critical of our system because they may be grieved by a particular decision," Stafford said, emphasizing that the two proceedings were entirely separate.

He offered a broad defense of the American judicial system and his view of the American way of life.

He suggested that it was "the European experience of those who drafted our Constitution" that led to the creation of an independent judiciary. He said that Bruchhausen and his friends should understand that "the court system in this government is not an agency of government. It indeed is a co-equal branch of government."

His remarks were not intended as a lecture or an admonition to Bruchhausen, Stafford said, "but just to share with you my thoughts about this great country."

"I don't see anyone trying to sail into Cuba (or) emigrate to the Soviet Union," Stafford said. "I don't know of anyone who's tried to go east over the Berlin Wall."

Stafford also levied a $40,000 fine, which he ordered Bruchhau-

Please see ESCAPE, 2C

Escape

From 1C

sen to begin paying upon his release from prison.

Prosecutors had asked the judge to go outside of prescribed guidelines and sentence Bruchhausen to 10 years in prison for the conspiracy and escape convictions.

But Stafford said the sentencing guidelines were adequate and fair, and used his ruling as another opportunity to lecture the defendant.

"That's the kind of legal system we have in a country in which the people have the maximum amount of freedom possible, short of anarchy," Stafford said.

The government said Bruchhausen had approached another inmate on work release and offered to pay $250,000 to escape and fly back with a helicopter to free Bruchhausen.

The inmate instead told authorities. They faked the escape of that inmate, then staged an escape attempt, using a U.S. Customs helicopter. It took off and Bruchhausen was arrested.

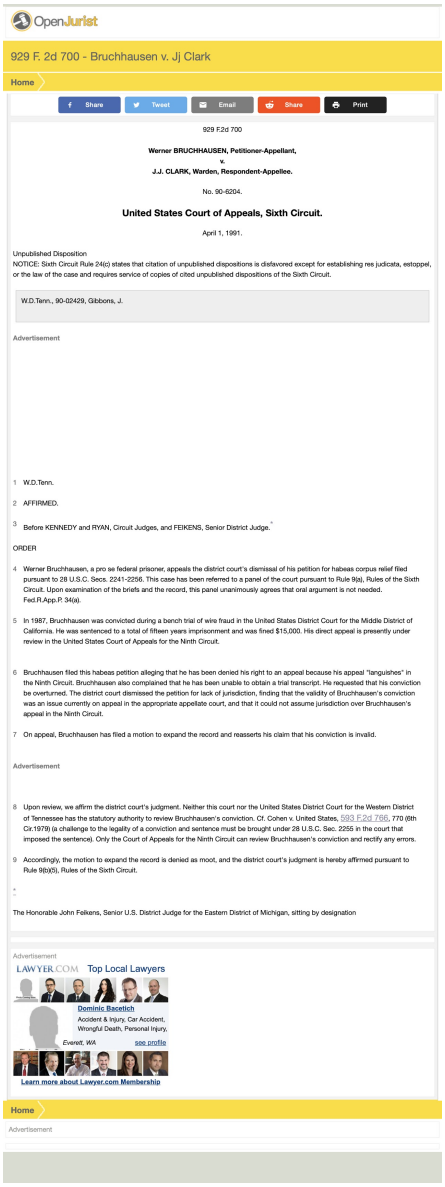
A pre-sentencing report included information from Scotland Yard that Bruchhausen once tried to escape from a London prison, and from federal penal officials that Bruchhausen had attempted an escape from federal prison in California.

He currently is being held in federal prison in Atlanta.

[HN00M5][GDrive]

1991 - Appeal

Source = [HG002Q][GDrive]



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W.D.Tenn.

1. AFFIRMED.
2. Before KENNEDY and RYAN, Circuit Judges, and FEIKENS, Senior District Judge.*
3. ORDER
4. Werner Bruchhausen, a pro se federal prisoner, appeals the district court's dismissal of his petition for habeas corpus relief filed pursuant to 28 U.S.C. Secs. 2241-2256. This case has been referred to a panel of the court pursuant to Rule 9(a), Rules of the Sixth Circuit. Upon examination of the briefs and the record, this panel unanimously agrees that oral argument is not needed. Fed.R.App.P. 34(a).
5. In 1987, Bruchhausen was convicted during a bench trial of wire fraud in the United States District Court for the Middle District of California. He was sentenced to a total of fifteen years imprisonment and was fined $15,000. His direct appeal is presently under review in the United States Court of Appeals for the Ninth Circuit.
6. Bruchhausen filed this habeas petition alleging that he has been denied his right to an appeal because his appeal "languishes" in the Ninth Circuit. Bruchhausen also complained that he has been unable to obtain a trial transcript. He requested that his conviction be overturned. The district court dismissed the petition for lack of jurisdiction, finding that the validity of Bruchhausen's conviction was an issue currently on appeal in the appropriate appellate court, and that it could not assume jurisdiction over Bruchhausen's appeal in the Ninth Circuit.
7. On appeal, Bruchhausen has filed a motion to expand the record and reasserts his claim that his conviction is invalid.
8. Upon review, we affirm the district court's judgment. Neither this court nor the United States District Court for the Western District of Tennessee has the statutory authority to review Bruchhausen's conviction. Cf. Cohen v. United States, 593 F.2d 766, 770 (6th Cir.1979) (a challenge to the legality of a conviction and sentence must be brought under 28 U.S.C. Sec. 2255 in the court that imposed the sentence). Only the Court of Appeals for the Ninth Circuit can review Bruchhausen's conviction and rectify any errors.
9. Accordingly, the motion to expand the record is denied as moot, and the district court's judgment is hereby affirmed pursuant to Rule 9(b)(5), Rules of the Sixth Circuit*

The Honorable John Feikens, Senior U.S. District Judge for the Eastern District of Michigan, sitting by designation

1992 (Oct) - Conviction overturned by 9th circuit !?!?

See https://www.casemine.com/judgement/us/5914bee6add7b049347aaf89

SCREENSHOT : 1992-10-casemine-com-judgement-us--v-bruchhausen-977-f-2d-464-9th-circuit.png

PDF generated from screenshot, with OCR - 1992-10-casemine-com-judgement-us--v-bruchhausen-977-f-2d-464-9th-circuit-ocr.pdf

ATTORNEYS - William F. Fahey, Assistant U.S. Attorney ., Los Angeles , Cal., for plaintiff-appellee.

~ JUDGES William Cameron Canby , Alex Kozinski , Ferdinand Francis Fernandez

CANBY, Circuit Judge:

Werner J. Bruchhausen appeals his conviction for wire fraud in violation of 18 U.S.C. § 1343 and 18 U.S.C. § 2(b).

We reverse.

BACKGROUND

This case arises out of a scheme to smuggle American technology to Soviet Bloc countries. Bruchhausen, a German citizen, engineered the effort by deceiving the United States government and manufacturers. The deception spanned more than ten years and led to the diversion of millions of dollars in equipment.

Bruchhausen often relied on his American agents to deal directly with the manufacturers. With Bruchhausen's blessing, these agents assured company representatives that all equipment would be used in the United States. No manufacturer was told that the equipment actually was going to West Germany and then on to the Soviet Bloc. Representatives from these companies testified that they would never have sold to Bruchhausen had they known the truth .

The deception also took other forms. Bruchhausen's agents prepared two sets of invoices: one stating the shipment's true value, and a second reflecting only ten percent of this amount. The first invoice was sent to Bruchhausen in Germany. Meanwhile , the second invoice would accompany the delivery to freight forwarders and to United States Customs. Bruchhausen believed that this method would reduce the likelihood that officials would search the crates.

In addition, agents mischaracterized the shipments when preparing Shipper's Export Declarations. For example, they would label shipments of computers and military communications equipment as "electrical" or "meters." Further, Bruchhausen instructed them not to apply for export licenses in order to limit Customs' control over the shipments.

Throughout the deception, Bruchhausen relied on telex machines to communicate with these agents.

On August 19, 1981, a federal grand jury indicted Bruchhausen and his confederates for offenses ranging from tax evasion to export violations. During the next four years, Bruchhausen eluded authorities. On May 8, 1985, however, British authorities apprehended him. He was extradited to the United States.

On June 6, 1985, a second grand jury indicted Bruchhausen on sixteen counts of wire fraud, in violation of 18 U.S.C. § 1343 1 and 18 U.S.C. § 2(b). 2 After a *467 bench trial, he was convicted of fifteen of these counts. On May 1, 1987, the district court sentenced Bruchhausen to fifteen years in custody and fined him $15,000. Bruchhausen appeals.

The statute provides:

Whoever, having devised or intending to devise any scheme or artifice to defraud, or for obtaining money or property by means of false or fraudulent pretenses, representations, or promises, transmits or causes to be transmitted by means of wire, radio, or television communication in interstate or foreign commerce, any writings, signs, signals, pictures, or sounds for the purpose of executing such scheme or artifice, shall be fined not more than $1,000 or imprisoned not more than five years, or both.

The statute provides:

Whoever willfully causes an act to be done which if directly performed by him or another would be an offense against the United States, is punishable as a principal.

18 U.S.C. § 2(b) (1984).

DISCUSSION

Bruchhausen contends that the wire fraud indictment was insufficient as a matter of law. We review this issue de novo. See United States v. Buckley, 689 F.2d 893, 897-98 (9th Cir. 1982), cert. denied, 460 U.S. 1086, 103 S.Ct. 1778, 76 L.Ed.2d 349 (1983).

The indictment defined Bruchhausen's objectives as follows:

a. [to] defraud American manufacturers of high-technology commodities of their property and their right to make business decisions based on truthful information and representations;

b. [to] defraud the United States and its executive agencies, namely the Department of Commerce, the Department of State and the Customs Service of their right to conduct their affairs free from stealth, chicanery, fraud, false statements and deceit.

According to Bruchhausen, the indictment improperly relies on intangible property rights. This contention is without merit. The wire fraud statute is not limited to possessory interests, and can extend to rights in intangible property.

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The real question is whether the government's and manufacturers' interests can be considered property rights within the meaning of the statute. The

government contends that two other statutes recognize its interest in the future alienation of American high technology products - the Arms Export Control Act, 22 U.S.C. § 2751 et seq., and the Export Administration Act of 1979, 50 U.S.C. App. § 2401 et seq. To enforce these statutes, Congress enacted forfeiture provisions that permit the government to seize the products. 50 U.S.C. App. § 2410(g); 22 U.S.C. § 401(a) .

From these provisions, the government would have us derive a property right.

We reject this construct. The government's potential forfeiture interest is too ethereal to fall within the protections of a statute that "had its origin in the desire to protect individual property rights." Cf. McNally v. United States, 483 U.S. 350, 358-59 n. 8, 107 S.Ct. 2875, 2881 n. 8, 97 L.Ed.2d 292 (1987).3 We accordingly hold that this interest cannot support Bruchhausen's indictment.

Congress overrode the result in McNally in 1988 by passing 18 U.S.C. § 1346, which provides that a scheme to defraud includes a scheme "to deprive another of the intangible right of honest services."

Section 1346 does not affect the analysis in McNa//yupon which we rely.

A closer question is whether the manufacturers were defrauded of "Property" withiin the meaning f the statue.

The manufacturers received the full sale price for their products; they clearly suffered no monetary loss. While they may have been deceived into entering sales that they had the right to refuse, their actual loss was in control over the destination of their products after sale. It is difficult to discern why they had a property right to such post-sale control.

The government argues, however, that the manufacturers lost part of their bargain because they would not have sold the products if they had been told that the products were destined for the Soviet Bloc. *468 Thus, the assurance that the products would be used domestically was, in the government's view, part of the consideration for the sale, and the manufacturers were defrauded of that portion of their bargain. The government relies on Carpenter v. United States, 484 U.S. at 25-28, 108 S.Ct. at 320-22 , in which the Supreme Court held that the Wall Street Journal was defrauded of "property" when its employees leaked to conspiring brokers the prepublication contents of columns discussing stocks. The Court stated that the Journal "had a right to decide how to use [the confidential information] prior to disclosing it to the public," and that a scheme to defraud did not "require a monetary loss." Id. at 26, 108 S.Ct. at 321. The government analogizes the Journal's intangible interest in controlling prepublication information to the manufacturers' intangible interest here in controlling the destination of their products.

The government's argument is not without force, but the analogy is a strained one. Carpenter relied in part on the fact that "[c]onfidential business information has long been recognized as property. [---]. There is no comparable understanding that a manufacturer has a property interest in the destination of its products. Of course the manufacturer may have an interest in assuring that its products are not ultimately shipped in violation of law, but that interest in the disposition of goods it no longer owns is not easily characterized as property.

If we are to rely on an analogy, McNally provides a closer one than Carpenter. In McNally, government employees purchasing insurance for the state required the seller to share its commissions with other companies in which the government employees had an interest. There was no showing that the state paid more for its policies than it otherwise would have, or that it received less insurance. The employees were convicted of mail fraud on a theory that their actions defrauded the citizens and government of the state of their right to have the state's affairs conducted honestly. The Supreme Court reversed, holding that, under such a theory, no "property" had been taken by fraud within the meaning of the mail fraud statute, 18 U.S.C. § 1341.

The Court noted that "the original impetus behind the mail fraud statute was to protect the people from schemes to deprive them of their money or property." McNal/y, 483 U.S. at 356, 107 S.Ct. at 2880 .

In McNally it was doubtless true that the state would not have permitted the policies to be purchased if it had known of the arrangement for sharing of commissions. Yet the state's or the citizens' legitimate interest in preventing dishonest redistribution of commissions paid by the government did not qualify as "property" within the meaning of the mail fraud statute. We see no reason why a similar result should not obtain under the wire fraud statute. the relevant language of which is identical to that of the mail fraud statute. We conclude, therefore, that the interest of the manufacturers in seeing that the products they sold were not shipped to the Soviet Bloc in violation of federal law is not "property" of the kind that Congress intended to reach in the wire fraud statute.

Our decision is colored by the rule of lenity. As the Court instructed in McNa/ly, we may choose the harsher view of the statute only when Congress has spoken in clear and definite language. Id. at 359-60, 107 S.Ct. at 2881-82 .

Section 1343 provides no guidance, and section 1346 refers only to the intangible right to honest services. 18 U.S.C. § 1343, 1346. In the absence of definite language, we must conclude that the manufacturers' interest cannot support a criminal prosecution. McNally, 483 U.S. at 359- 60, 107 S.Ct. at 2881-82 .4

In this regard, we respectfully disagree with the Second Circuit's approach in United States v. Schwartz, 924 F.2d 410 (2d Cir. 1991). In assessing the manufacturer's interest, that court did not address McNallyand Carpenter. Id. at 420-21.

In light of this conclusion, we hold that the second indictment was insufficient as a matter of law. We therefore reverse *469 Bruchhausen's convictions. 5 Bruchhausen may be subject to punishment under other statutes, but his alleged conduct does not constitute wire fraud against the United States or the manufacturers.

We find it unnecessary to address Bruchhausen's argument that the indictment failed to provide notice of the charges against him. We also decline to address his arguments based on the statute of limitations, the sufficiency of the evidence, and delay on appeal.

REVERSED; CONVICTION VACATED; REMANDED.

[23] KOZINSKI, Circuit Judge, concurring:

Because the majority opinion and Judge Fernandez's concurrence are entirely consistent, and each interprets the applicable law correctly, I join both.

[25] FERNANDEZ, Circuit Judge, concurring:

I agree with the majority that the United States was not defrauded of its property within the meaning of McNally v. United States, 483 U.S. 350, 107 S.Ct. 2875, 97 L.Ed.2d 292 (1987). I also agree that the right of manufacturers to make decisions based on truthful information is far too ethereal to be a property right for the purposes of the wire fraud statute. See Carpenter v. United States, 484 U.S. 19, 25, 108 S.Ct. 316,320, 98 L.Ed.2d 275 (1987).

However, I do not agree that a person has not been defrauded of his property when he is induced by fraudulent representations to transfer that property to another. In reaching the contrary conclusion, the majority puts far too much weight on the fact that the defrauded companies received a monetary payment equal to the fair market value of the property.

In my opinion, at the very least ownership of a tangible object, whether it is a pen, a desk, or a piece of equipment, includes the right to retain that object and to refuse to transfer it to others. The right persists even if others are willing to pay fair market value for the object. Were it otherwise, everyone would have a private right of condemnation over the property of others; everyone could simply take another's property at will as long as fair market value was oaid. That concept is far outside our traditions. It is an acceptance of Holmes's "bad man" theory of the law which, though realistic in some sense, should not define this area.

See Oliver W. Holmes, The Path of the Law, 10 Harv. L. Rev. 457, 459-62 (1897). Perhaps a contracting party can properly consider the contract to be one to perform or pay damages, although I am dubious. Surely, however, the duty owed to a person who owns property is not merely a duty to respect that person's rights or pay damages. In short , a person can wrongfully invade another's property even when willing to pay fair market value. By the same token, a person can fraudulently deprive another of property even when willing to pay fair market value. The strictures an owner puts on his willingness to sell an item are not mere ephemera. When a prospective buyer lies in order to evade those strictures , a fraud has been committed upon the owner of the item just as surely as if the buyer had issued a rubber check.

This is not an exotic proposition. See, e.g., Walker v. Galt, 171 F.2d 613, 614 (5th Cir. 1948) ("'The vendor has the right to select the person to whom he will sell. ... [F]raud may be predicated upon misrepresentations as to the identity of the purchaser .... "') (citation omitted), cert. denied, 336 U.S. 925, 69 S.Ct. 656, 93 L.Ed. 1086 (1949). Cf., Earl V. Saks Co., 36 Cal.2d 602, 610-13, 226 P.2d 340 (1951) (a contract can be rescinded when induced by fraud, even if no pecuniary harm has been suffered); 37 Am.Jur.2d Fraud and Deceit§ 284 (1968) ("If one obtains from an owner, by a false representation of a fact which he deems material, property that he would not otherwise have parted with ... there is such an injury as will he redressed by equity."). Also, as the majority points out, the •410 Sec and Circuit agrees with the position taken in this concurrence.

United States v. Schwartz, 924 F.2d 410, 420-21 (2dCir . 1991) .

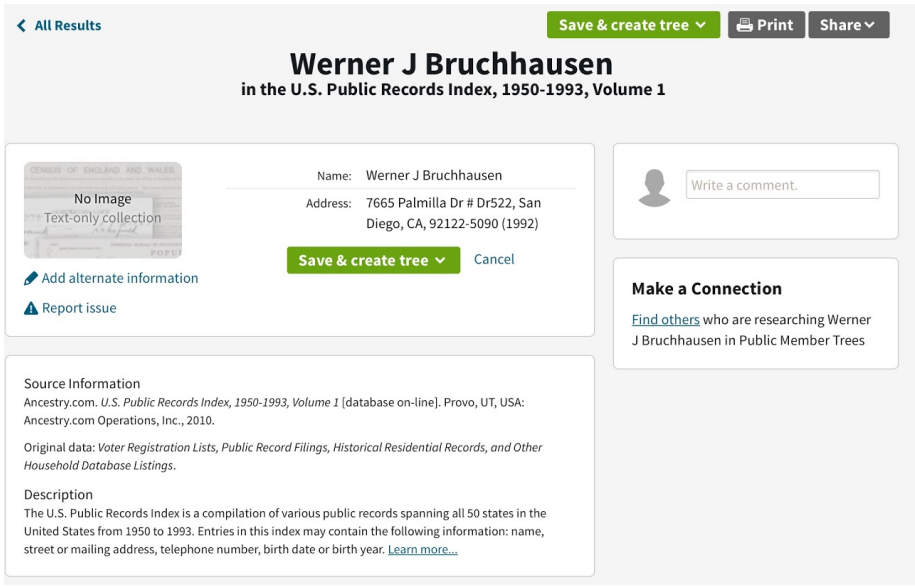
Here the various sellers simply refused to sell to persons like Bruchhausen who intended to export equipment from the United States without permits. Indeed, at least one of them, Watkins-Johnson Co., required a certification that the property would stay in the United States, period. If a buyer would not cert ify to that , the company would not sell its goods to that buyer . When Bruchhausen lied in order to evade that condition, he did commit a fraud. That fraud was the obtaining of the property of another (the equipment) by means of false representations. Thus, I cannot agree with the majority's conclusion that Bruchhausen's behavior could not constitute a violation of the wire fraud statute.

the concept of a tangible deprivation of property, even though there was evidence to support a determ ination on that basis. Thus, the finding of guilt was at best based upon an undefined mixture of legal theories too ephemeral to support that finding and an essentially unarticulated legal theory which would support it. Given that , Yates v. United States, 354 U.S. 298, 77 S.Ct. 1064, 1 L.Ed.2d 1356 (1957), militates in favor of the majority's determination. I say this with much hesitation because we deal here with a bench trial rather than with a jury trial. Here, however, given the fact that McNally overturned what had long been our approach to the wire fraud statute, it would be taking theory to an extreme to insist that the learned district judge who presided over this case could have been following the Mc Nally strictures. See, e.g., United States v. Bohonus, 628 F.2d 1167, 1170-73 (9th Cir.), cert. denied, 447 U.S. 928, 100 S.Ct. 3026, 65 L.Ed.2d 1122 (1980). Moreover, the district judge's comments made it rather clear that she was not following the McNally approach and that she saw the whole matter as one unified decision rather than as discreet legal elements which supplied alternate pathways to a finding of guilt.

Thus, I concur in the result.

1992 - Somehow, Bruchhausen is listed as having a San Diego address in 1992 !

NAME: Werner J Bruchhausen : ADDRESS: 7665 Palmilla Dr # Dr522, 92122-5090 (1992), San Diego, CA



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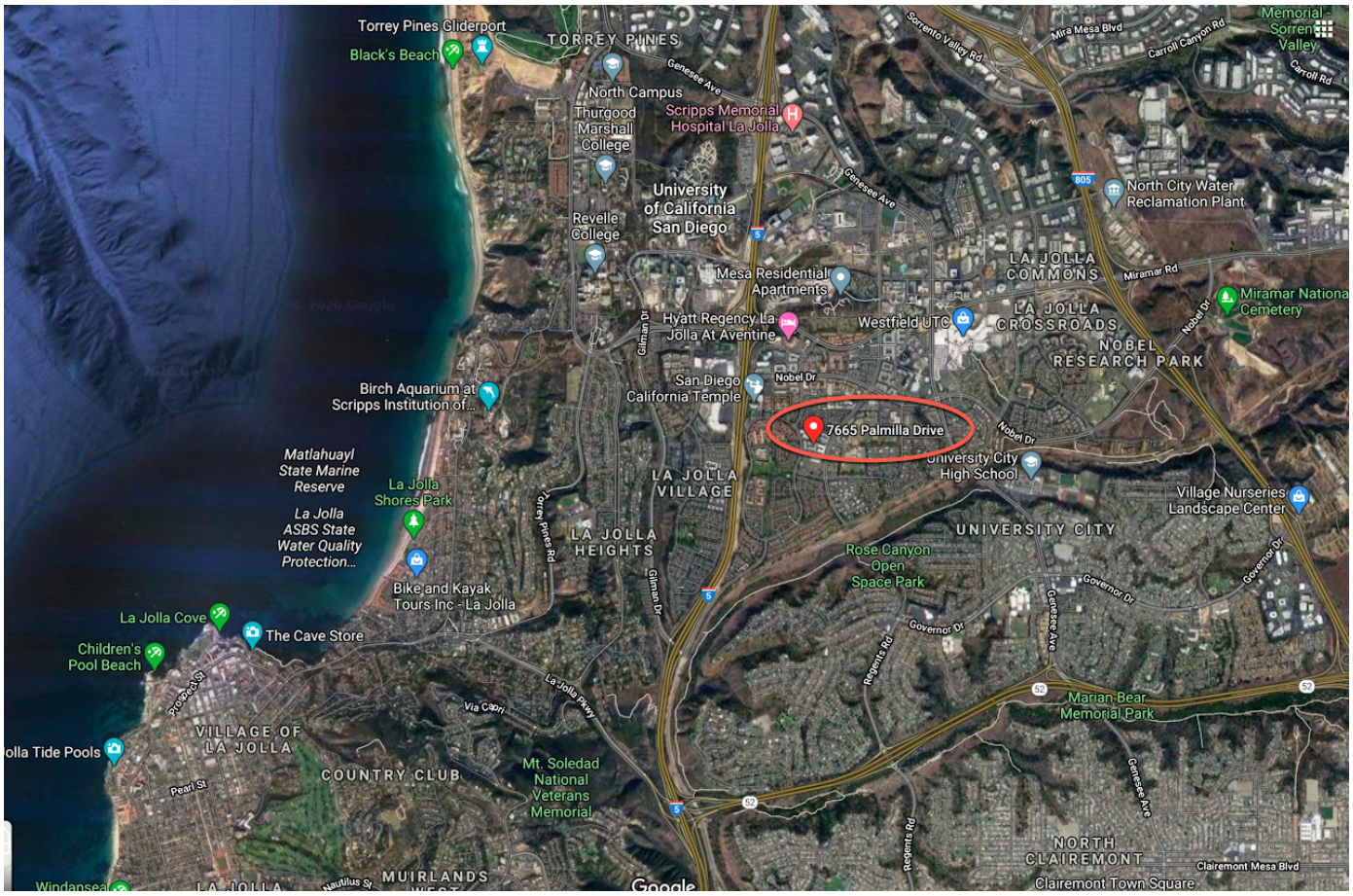
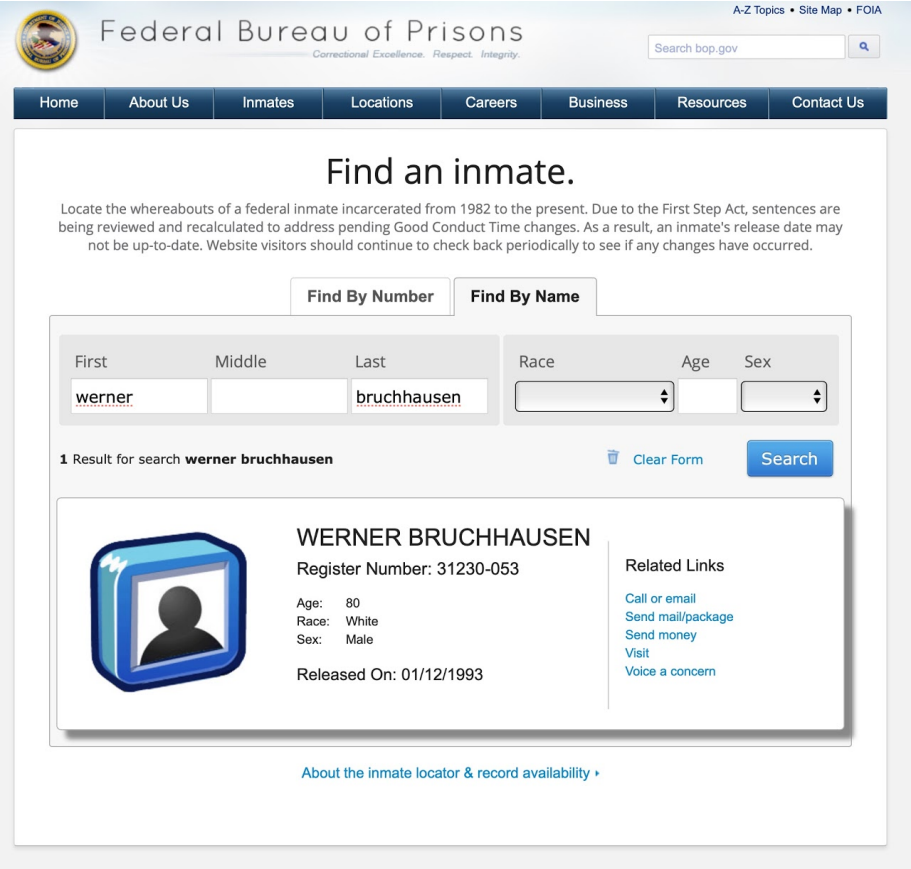


1993 (January) - Released form federal prison



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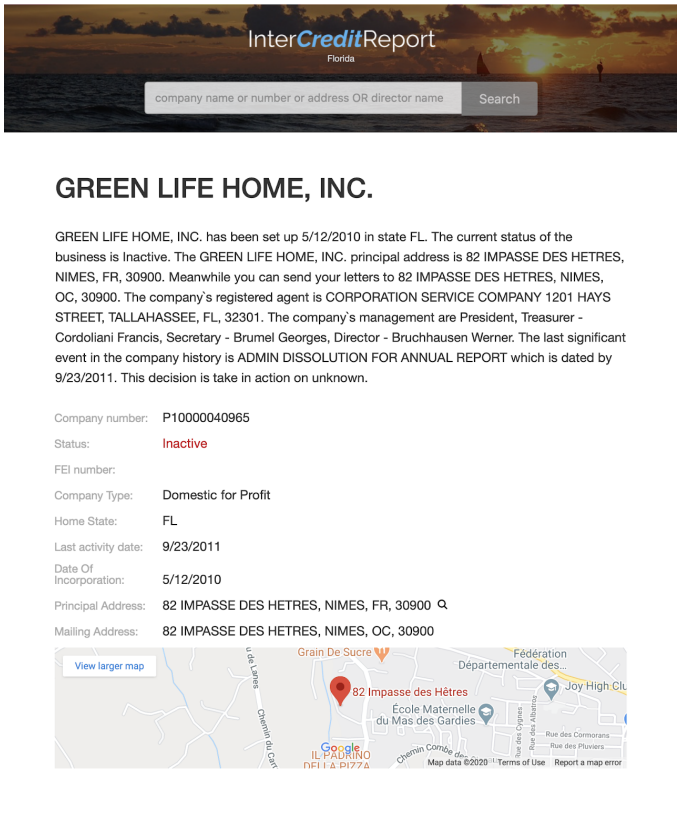
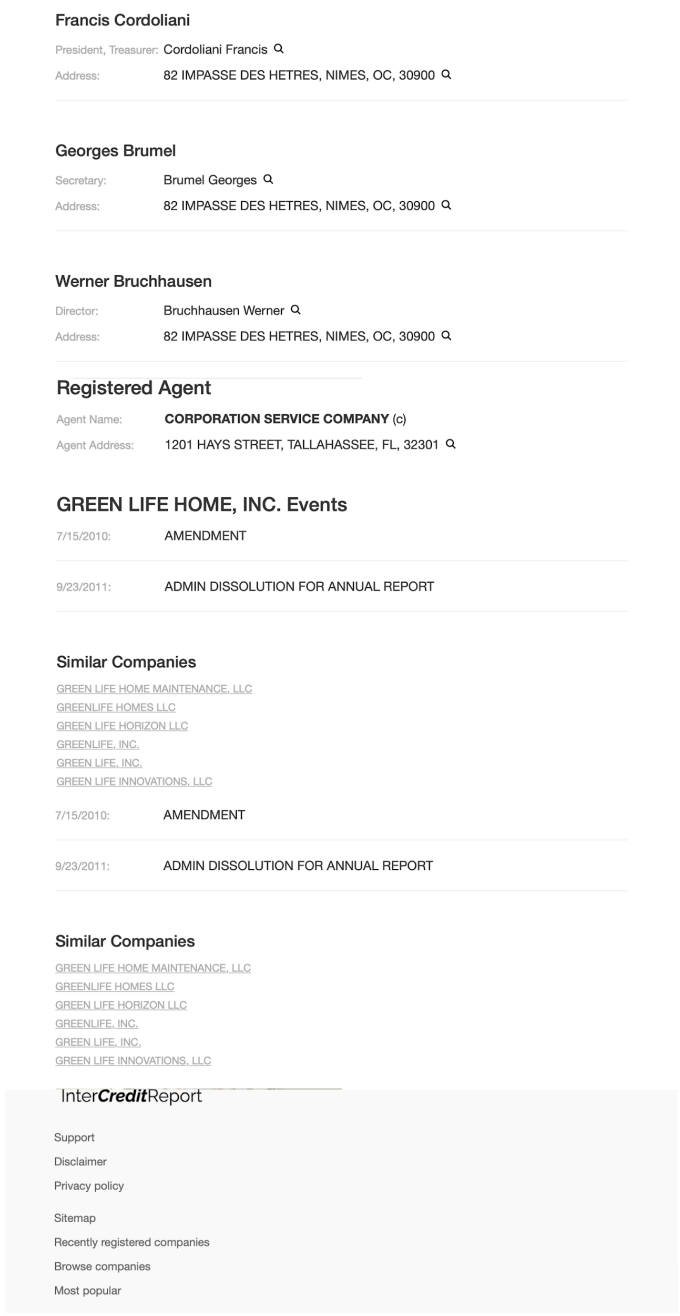
2010 - New business registered in Florida : "Green Life Home, Inc."

See : PDF = [HW001P][GDrive] / Full PNG capture = [HW001Q][GDrive]

"GREEN LIFE HOME, INC. has been set up 5/12/2010 in state FL. The current status of the business is Inactive. The GREEN LIFE HOME, INC. principal address is 82 IMPASSE DES HETRES, NIMES, FR, 30900. Meanwhile you can send your letters to 82 IMPASSE DES HETRES, NIMES, OC, 30900. The company`s registered agent is CORPORATION SERVICE COMPANY 1201 HAYS STREET, TALLAHASSEE, FL, 32301. The company`s management are President, Treasurer - Cordoliani Francis, Secretary - Brumel Georges, Director - Bruchhausen Werner. The last significant event in the company history is ADMIN DISSOLUTION FOR ANNUAL REPORT which is dated by 9/23/2011. This decision is take in action on unknown."





Francis Cordoliani

President, Treasurer: Cordoliani Francis

Address: 82 IMPASSE DES HETRES, NIMES, OC, 30900

Georges Brumel

Secretary: Brumel Georges

Address: 82 IMPASSE DES HETRES, NIMES, OC, 30900

Werner Bruchhausen

Director: Bruchhausen Werner

Address: 82 IMPASSE DES HETRES, NIMES, OC, 30900

Registered Agent

Agent Name: **CORPORATION SERVICE COMPANY** (c)

Agent Address: 1201 HAYS STREET, TALLAHASSEE, FL, 32301

GREEN LIFE HOME, INC. Events

7/15/2010: AMENDMENT

9/23/2011: ADMIN DISSOLUTION FOR ANNUAL REPORT

Similar Companies

GREEN LIFE HOME MAINTENANCE, LLC
GREENLIFE HOMES LLC
GREEN LIFE HORIZON LLC
GREENLIFE, INC.
GREEN LIFE, INC.
GREEN LIFE INNOVATIONS, LLC

7/15/2010: AMENDMENT

9/23/2011: ADMIN DISSOLUTION FOR ANNUAL REPORT

Similar Companies

GREEN LIFE HOME MAINTENANCE, LLC
GREENLIFE HOMES LLC
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GREEN LIFE INNOVATIONS, LLC

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[HW001R][GDrive]

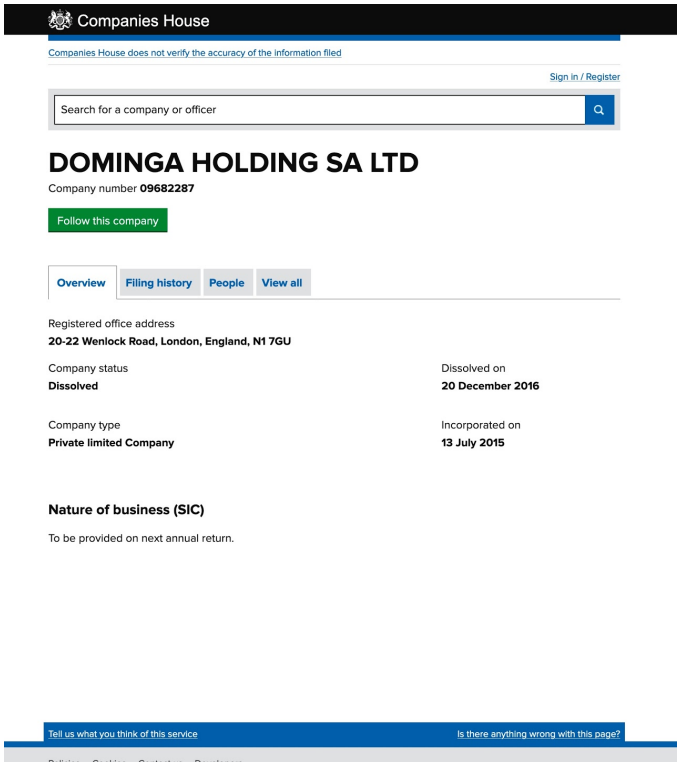
2015 (July) to 2016 (Dec) - Dominga Holding SA LTD in London

PDF - Letter of Incorporation : [HW001C][GDrive]

Date authorized - July 13, 2015

Werner Bruchhausen is a German, who is a "Engineer and Consultant", born Nov 5, 1939

Authenticated electronically - July 10 2015



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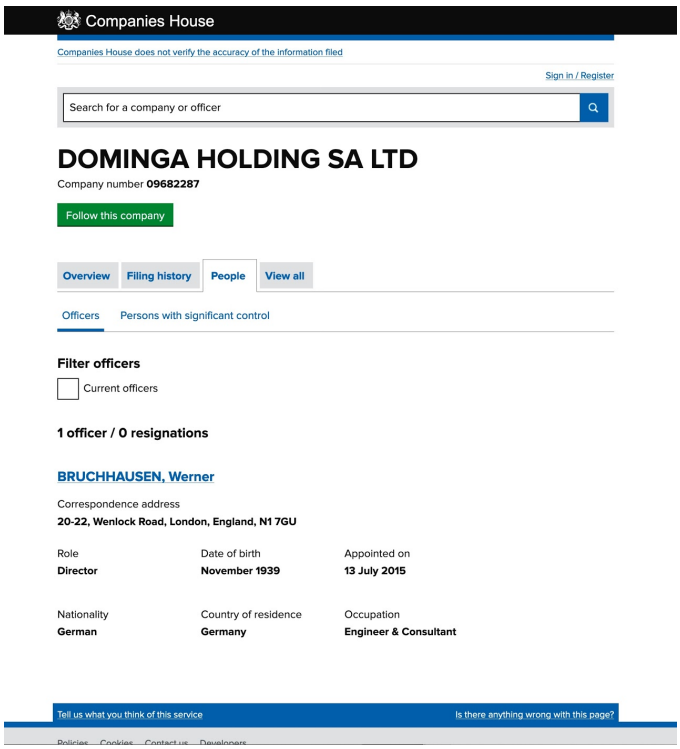

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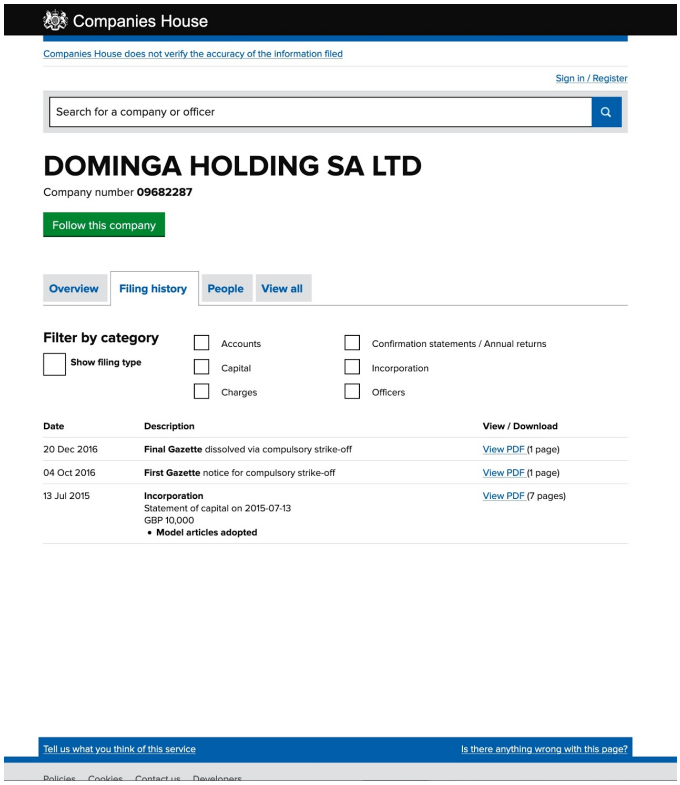

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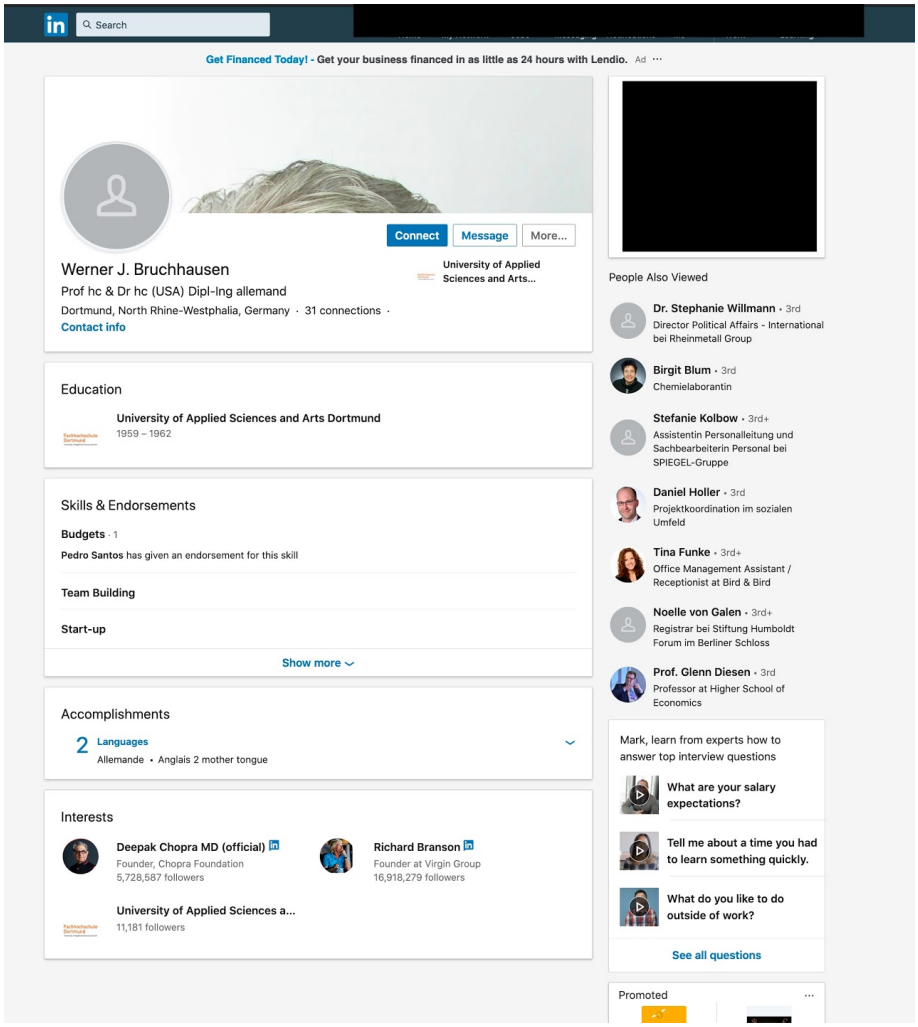
OTHER REFERENCES

LinkedIN - as of 2020

https://www.linkedin.com/in/werner-j-bruchhausen-67586919/

2020-02-linkedin-com-werner-j-bruchhausen

2020-02-linkedin-com-werner-j-bruchhausen-clip1



BOOKS - Werner Bruchhausen references

1993 - "Friendly-Spies - How America's Allies Are Using Economic Espionage to Steal Our Secrets" - Peter Schweizer

See [HB000K][GDrive]

1984 - TechnoBandits

by Melvern, Linda; Anning, Nick; Hebditch, David Leroy

1989 (Fall) : U.S. Treasury Department / Customs journal (magazine)

Source PDF : [HP000H][GDrive]

In May 1985 Scotland Yard Inspector Vernon Williams ended five years of frustration for U.S. law enforcement authorities when he arrested Werner Bruchhausen, a West German businessman, in a London hotel.

For almost 10 years Bruchhausen had smuggled sophisticated U.S. equipment and technology to the Soviet Union and its satellite countries. He made a fortune—millions of dollars—from hundreds of illegal shipments of specialized military and dual-use electronics and communications systems. He shipped enough equipment to set up a complete integrated circuit manufacturing plant complete with 100 percent spares.

In all, Bruchhausen advanced Soviet computer chip manufacturing and related capabilities by perhaps a decade.

Clandestine meetings with Soviet agents, an international sting operation, double agents and a missed opportunity to apprehend him in Canada, and evidence suggesting a scheme involving East German agents to spring him from an English prison all added to the intrigue of this dramatic case of high tech banditry.

It began with a casual meeting at a trade fair in Munich, West Germany between a Russia trade official (a suspected Soviet GRU agent) and Bruchhausen, who was manning a booth at the fair. For 10 years, despite numerous legal impediments, Bruchhausen relentlessly prospered.

In February 1987 a federal judge found Bruchhausen guilty of 15 counts of wire fraud. Less than three months later the same judge sentenced him to prison. (As of this writing, Bruchhausen remains in a federal prison in Florida.)

To date, the Bruchhausen case remains the most successful investigation and prosecution by the U.S. Customs Service of illegal technology diversion. It was the catalyst for the Customs Service's Operation Exodus, the successful, ongoing high-tech diversion investigations program.

How the case developed, delays in its investigation and the methods used to snare Bruchhausen, once considered unextraditable from the sanctuary of a foreign nation, point o u t lessons to be shared by the export control community.

Bruchhausen earned a degree in communications engineering in 1962 in his native West Germany. In 1965 he opened his first independent business, representing U.S., British, and French electronic firms in West Germany. By the end of the sixties, Bruchhausen was well established in the electronics trade and had traveled extensively throughout Europe. In 1973, he established his first California corporations, all of which purchased or exported U.S. technologies.

Bruchhausen's first (documented) illegal export to the Soviet Union, a Data General 51230 computer system, occurred in 1978. Bruchhausen purchased the system for about $135,000 and sold it to the Soviets for about $263,000. This profit margin, which became typical in Bruchhausen's dealings with the Soviets, financed his opulent lifestyle. He wore cashmere coats and expensive suits, carried a walking stick, and lived in a lavish estate outside of Munich. He allegedly refused to drive a Mercedes because, "every farmer in Germany has one."

The Bruchhausen network

Twelve California companies operating under 18 different names from many different addresses worked closely with nine European companies to coordinate Bruchhausen's illegal diversions. This complex network of companies shared an equally complex system of double invoicing, shredded records and false trails.

Incorporated between 1973 and 1980, the California companies initially purchased the high-tech items sought by the Soviets. These items were then transferred to their European counterparts for final shipment to the Soviet Union or one of its satellites. These diversions almost invariably shared several traits: (1) The California companies misrepresented the planned destination and purpose of the purchases to the manufacturers, as well as on the Shipper's Export Declarations (which typically misrepresented the real identity and value of the goods being shipped); (2) export licenses were never sought; and (3) in virtually every case, the equipment was extremely sophisticated and would not have been granted an export license.

Bruchhausen's California companies employed only a few people, mainly to maintain appearances, but also to manage the unavoidable mundane business concerns. Through an ad in the Los Angeles Times, Bruchhausen recruited Tony Maluta, a Russian-born, naturalized American citizen, and Sabina Tittel, a German-hem naturalized American citizen, to operate these companies. Maluta was well suited for Bruchhausen's needs. As an engineer, comfortable in the world of high technology and fluent with some of its vernaculars, Maluta played well his role as a company vice-president. Most manufacturing companies had no reason to question his appearance.

Tittel, alleged at the trial to be Maluta's lover, managed the day-to-day affairs of the offices. Perhaps her most important duty was to ensure that the few other employees did not understand thae multiple invoices and other abnormal paperwork. (Evidence suggests Bruchhausen paid her well. In May of 1980, Customs seized companies' records that showed Tittel had already earned over $500,000 for that year).

Scant legitimate business

Bruchhausen‘s American companies conducted little or no legitimate business. The companies used professional stationery and business cards, and, although exporting was their business, the companies never applied for export licenses.

The European side of the network involved about nine companies in West and East Germany, Austria, and the Soviet Union. Bruchhausen owned several of these companies; a business associate, Dietmar Ulrichshofer, owned several more; and still others, financed by Bruchhausen, were legally owned by yet another individual. Ulrichshofer mainly supplied East bloc countries with equipment purchased from one of Bruchhausen's West German companies. Bruchhausen's principal company in West Germany was Analog und Digital Technik (ADT).

To protect ADT, which conducted some legal business in Europe, he created Techma, based in Dusseldorf, to deal exclusively with the Soviets. Bruchhausen formed Elmasch, in Bonn, again through the manager of Techma, to sell electronic components to East bloc countries. These buffer companies, in both California and Europe, kept the operations separate and Bruchhausen safe in the confusion they created.

Scope of operations

Maluta and Tittel's document shredder prevents us from ever knowing exactly how much money this network controlled. However, records seized in U.S. Customs raids in May 1980 give a glimpse of the scope of the companies' operations. Though incomplete, the records identified about $10.5 million of high-tech purchases made by California companies between 1977 and 1980. These purchases eventually landed in Soviet hands.

However, evidence presented at trial identified a four-year period in which Bruchhausen sent Maluta and Tittel about $100,000 a week for purchases, almost twice the $10.5 million figure.

The companies worked in pairs. For example, California Technology Corporation (CTC) would purchase equipment from U.S. manufacturers at original equipment manufacturer's prices.

Then, another Bruchhausen company, Interorga International Components, would export it, typically to an intermediary country - Vienna, Austria; Munish or Dusselford, West Germany; or Zurich, Switzerland.

Invariably, neither of the American companies took delivery of the purchases or legally transferred ownership; they went directly to a warehouse or freight forwarder for export. Tittel rented a desk in an otherwise empty office in Santa Monica, California, to use as an address for two of Bruchhausen’s "export" companies.

In Europe, the goods typically changed hands several times before the final hop to the proscribed destination. Maluta and Tittel prepared two invoices. One, which accompanied the goods to the US. freight forwarders, falsely identified equipment as fumances, machinery, meters or other vague and innocuous sounding products, and valued it at a small percentage of its actual worth.

The Shipper’s Export Declarations, filed with the US. Customs Service at the port of export, similarly misrepresented the products to reduce the chances of a

Customs inspection.

With the nation more concerned with interdicting incoming drugs than outgoing technologies at its borders, this simple hit of deception went mostly unnoticed.

A second, and accurate, invoice was sent to Bruchhausen in West Germany. The other principals generated more invoices, with varying descriptions and valuations of the goods, for the intermediate changes of ownership in Europe. The Soviets received yet another invoice; this one accurately described the goods.

In Europe, Bruchhausen “neutralized" the goods to erase records of the original purchaser or exporter. A common and legitimate business practice, neutralizing is used to prevent the ultimate customer from dealing directly with the manufacturer or original shipper; it protects the business interests of the middle man.

But Bruchhausen extended the technique to obliterate the trail. Usually, by the time the goods reached their final destination, the paperwork had gone through at least as many changes as the number of companies that had owned or forwarded the shipment. The records were so confusing, US. Customs investigators required a computer to reconstruct the Byzantine routes of more than a hundred of Bruchhausen's shipments.

Hugh profits

Bruchhausen's average markup was 199 percent; on some shipments he made as much as 1,000 percent profit. His associate Ulrichshofer, who often owned and forwarded the goods at some point in their journey to the proscribed destination, added an average markup of 215 percent.

Despite these profits, the Soviets readily paid the bill for technologies they might otherwise have to do without or develop themselves. According to Lara Baker of Los Alamos National Laboratory, an expert in computer manufacturing technologies who analyzed the equipment and information that the Soviets got through Bruchhausen,

“The Soviets knew exactly what they wanted. They showed very good taste. They got the state-of-the art equipment. They knew it down to nine and ten digit part numbers."

Collapse

Bruchhausen's scheme eventually collapsed under the weight of suspicious U.S. manufacturers and U.S. and West German Customs investigations that included a sting operation in which Customs investigators substituted sand for the state-of-the-art equipment bound for Moscow.

In March of 1980, officials at the Gasonics Corporation, which produced the most sophisticated silicon chip manufacturing equipment in the world, contacted the Department of Commerce. They were suspicious of a company called California Technology Corporation. Its vice-president, Tony Maluta, had expressed interest in purchasing two of their high-pressure oxidation (Hipox) systems, at that time the most advanced machinery for growing oxides on silicon microchips.

According to Theodore Wu, then a federal prosecutor, subsequently head of the Commerce Department's enforcement operations, “My understanding was that at the time the Gasonics equipment was so state of the art, an export license would not have been granted even to a NATO country."

Initially, Maluta told dubious Gasonics officials that CTC needed the Hipox systems for a secret U.S. Army installation in Arizona. In May, Maluta paid cash for two Hipox systems and instructed Gasonics to deliver them directly to Kamino, an international freight forwarder, because CTC's manufacturing plant in the San Fernando Valley had just burned.

By then, both Commerce and Customs were following the developments with great interest; Gasonics was keeping Customs informed of the transaction.

Convinced that the equipment was earmarked for illegal export (the Shipper’s Export Declaration misrepresented the equipment's identity, value and ultimate destination), Customs officials had identical crates built, filled them with pounds of sand, and allowed them to continue just as Bruchhausen and his associates had planned.

The West German Customs Service in Dusseldorf agreed to cooperate in the investigation. Their agents followed the crates from Munich to an intransit holding facility near the Austrian border. By then, five separate companies had "owned" and transferred the shipment. It was now tagged for a KLM/Aeroflot flight to Moscow.

At about that time Stephen Dodge and Theodore Wu visited the West German Customs Service and entered a formal agreement to exchange documents and information. When Dietmar Ulrichshofer discovered the sand, U.S. and German Customs had served search warrants at various Bruchhausen companies and principals' residences.'

In all, they recovered about 45,000 documents. Those recovered in California - inquiries, purchase orders, telexes between Bruchhausen and the California companies, export freight bills - revealed the purchasing end of a major operation. The documents seized in Europe (Bonn, Munich and Dusseldorf) provided a picture of the delivery side of the operation.

Dodge spent 10 months doing nothing but reading the documents, trying to piece together a coherent picture of the magnitude and methods of Bruchhausen's operations. Eventually, using a computer to sort and correlate the information, Dodge was able to trace 102 shipments from California, through Europe, to a final destination in the Soviet Union or East bloc.

The work resulted in a 60-count indictment against Bruchhausen, Ulrichshofer, Maluta and Tittel.

In 1981 Maluta and Tittel plead guilty to illegal export. Federal Judge William Matthew Byrne, Jr. sentenced Maluta and Tittel to five and two years, respectively, in federal prison. The judge also fined Maluta $60,000 and Tittel $25,000. These were the stiffest sentences the courts had ever meted out for illegal export of high-technology equipment.

Still, the mastermind, Bruchhausen, remained free, almost flaunting the nature of his continuing business - he called one of his West German companies American Data Technology.

The West German Customs Service had cooperated in the investigation, but Bruchhausen and Ulrichshofer were n o t extraditable under existing treaties. Most Western European countries consider illegal export to be a political, and therefore n o t extraditable, offense

Extradition and trial

Although untouchable, Bruchhausen was not forgotten. Unbeknownst to him, a Greek undercover informant had been shadowing Bruchhausen for several months before his arrest. (After the investigations in 1981, Bruchhausen relocated the bulk of his continuing operations to Greece, Turkey and Bulgaria.)

U.S. and British authorities were aware of Bruchhausen's trip to England, via Zurich, to arrange the delivery of some VAX computers to Bulgaria. In fact, Scotland Yard agents awaited him at Heathrow Airport and followed him for six days before making the arrest.

U.S. authorities were elated when they learned of Bruchhausen's arrest in London - unlike West Germany, the British government was able to act on an extradition request.

Still, British law allowed authorities to hold Bruchhausen for a limited time on the false passport charge, No extradition treaties specifically covered illegal export. However, Bruchhausen was extraditable under a general extradition treaty with England and North Ireland, ratified by the U.S. Senate in June 1976. Two of the long list of offenses covered by the treaty fit Bruchhausen's crimes: 1) obtaining property, money or valuable securities by false pretenses or other form of deception; and 2) false accounting.

But the clock was ticking - U.S. authorities had only about two weeks to submit, through the Justice and State Departments, an extradition package to the British government.

The first order of business was to re-indict Bruchhausen for crimes that fit the treaty. He had used a teletype for all of his communications with Maluta and Tittel, which, considering the nature of his business, constituted wire fraud.

U.S. Customs had seized boxes of these telexes in their 1980s raids. In addition, the misrepresentations Maluta made to American manufacturers and the false documents that accompanied Bruchhausen's shipments constituted fraud against both the manufacturers and the federal government.

Within a week, William Fahey and Ronald Boos, the U.S. attorneys who subsequently prosecuted the case, put together a second indictment package against Bruchhausen consisting of 15 counts of wire fraud. Although hastily put together, the document satisfied Fahey and Boos. The maximum jail term of five years for fraud was the same asthat for illegal exporting, and 15 counts were enough to justify a fair jail term. A quickly convened grand jury returned the indictment.

The next order of business was to prepare an extradition package for the British government.

Dodge flew up and down the West Coast in a Customs airplane to gather affidavits. After several false starts, Dodge became almost desperate, afraid that Bruchhausen might slip free while Dodge got more and more tangled in legal requirements. "You talk about scramble! We had about a week left to get our act together," Dodge recalls.

The State Department sent an extradition package to the British government just days before Britain would have been forced to free Bruchhausen. The British accepted the package, and in October 1985 ordered Bruchhausen to be extradited.

Getting him on a plane proved another matter because Bruchhausen immediately appealed the British decision. Finally, in June 1986the House of Lords, Bruchhausen's last resort, allowed the extradition order to stand. U.S. federal officials immediately flew Bruchhausen to California to await trial.

Throughout the extradition appeal process Bruchhausen remained in British prison. British authorities considered him a flight risk, particularly in view of a possible plan for escape.

Allegedly while in custody in Great Britain, Bruchhausen made arrangements with East German (GDR) agents to pick him up from an undisclosed location with a helicopter, and transfer him to the GDR. British authorities searched his cell and found maps of several London airports, a credit card, and other items that suggested an escape attempt was in the works.

The case

Dodge had put together continuous paper trails (from purchases in California to delivery to the Soviets or the East bloc) for 102 of the approximately 300 shipments attributed to Bruchhausen. Of these 102, the prosecution presented 13 during the trial.

To prove a scheme, the prosecu~ tion presented evidence regarding the purchase, lack of export license, shipment routes through intermediate countries and final delivery to the Soviet Union.

To prove false statements, Fahey and Boos presented documents, given to American manufacturers by Maluta and Tittel, that indicated no export was planned, as well as fraudulent Shipper's Export Declarations. In all, the prosecution presented 15 false statements associated with the 13 shipments.

To prove that wire communications had figured in the scheme, the prosecution presented the telexes that had been seized in the 1981 Customs raids.

Export violation cases are unique in their typical use of international witnesses and the sheer volume and complexity of documentary evidence. The Bruchhausen trial was no exception.

The prosecution submitted 218 exhibits comprising more than 2,000 documents and called 30 witnesses, including European law enforcement agents, West German Customs officials, technical experts who demonstrated the enormous benefit the Soviets gained from doing business with Bruchhausen and employees of his California corporations.

The prosecution also entered into the court record excepts from interviews the West Germany Customs Service conducted with Bruchhausen in 1982, in which he described his intent to establish a confusing network of interrelated companies. In addition, in a 1982 interview with the BBC, Bruchhausen . . . insisted that it was not illegal to ship the goods from the United States to West Germany, from there to Switzerland and from Switzerland to the Sovietbloc. He characterized his operations as follows: " I t might have been a slight infringement of the rules, but it's no crime.

The defense attorney, Alan May, presented Bruchhausen as a successful, although somewhat naive businessman interested in contributing to the spirit of detente and taking advantage of it to further his business interests. "Maluta did it" was the thrust of the defense.

After four weeks of testimony, Judge Alicemarie Stotler, in a very brief decision, found the evidence "indeed overwhelming" and Bruchhausen guilty of all 15 counts. On May 1, Judge Stotler sentenced Bruchhausen to 15 years in federal prison and fined him $15,000 - one year and $1000 for each count.

What Bruchhausen shipped

The equipment Bruchhausen and his associates shipped was among the most sophisticated of the time. In testimony to the U.S. Senate in 1982, Lara Baker

described the Bruchhausen pipeline as "certainly one of the most successful for the Soviet Union, and perhaps one of the most damaging to the U.S."

Baker examined documentation (seized by Customs in the United States and Europe) on more than 400 Bruchhausen shipments to the Soviet Union and the East bloc. All of these shipments were illegal – no export license had been sought and none would have been granted.

Among the most significant of the Soviet purchases were those used to equip a complete, medium-sized integrated circuit production plant. At the time, process control and quality assurance problems seriously hampered the Soviet integrated circuit/ microcomputer development industry.

Other equipment Bruchhausen shipped, not related to integrated circuit development and production, included high-speed oscilloscopes, military microwave and radio receivers, and hundreds of electronic cables, testers, circuits and related pieces of hardware.

Bruchhausen even instructed Maluta in a telex to get the optics from the Surveyor spacecraft. For once, in a return telex, Maluta refused.

The Watkins-Johnson microwave tuners the Soviets received had direct military applications. These systems operated in the frequency range used by NATO forces. One of the systems included an antenna designed for missile tracking and telemetry applications. Another shipment, 10,000 256-bit random access memory (RAM) circuits in military packages, had possible direct military applications.

Typically, the Soviets use Western equipment for R&D rather than in fielded military systems. At the time the Soviets were capable of manufacturing RAM circuits. A reasonable inference is that the Soviets procured these circuits for an existing system.

The continuing saga

Bruchhausen established acquisition and delivery networks at will, and continued to sell proscribed goods to the Soviet block after authorities shut down his California companies.

After his arrest, Swiss authorities seized a suitcase belonging to Bruchhausen, then turned it over to the U.S. Customs Service. He had been storing it in a Swiss locker, perhaps to protect it from possible seizure at one of his German addresses.

The suitcase contained hundreds of documents - business records, personal notes and business cards of his American, Soviet, and European associates - as well as numerous original Bulgarian and Czech shopping lists ,purchase orders, and evidence of completed sales to the Soviet bloc.

The records in the suitcase indicated that between 1983 and 1985 Bruchhausen shipped e equipment that could be used for engineering and development of logic and microcircuit technologies.

The following equipment was shipped, probably through a Zurich based company, to Czechsolvokia and Bulgaria, and additional orders worth millions of dollars were pending.

- Thousands of semiconductor devices made by Advanced Micro Devices, National Semi-conductor, Motorola, and Intersil (est. $63,000)
- One DEC Vax 11/730 computer ($135,000)
- One Intel Corporation logic development system ($105,000)
- One Hewlett Packard semiconductor analysis system ($38,360)
- Nine CAD/CAM systems (eight of which were Megatek) (est. $1,165,000)
- Two Tektronix hard disk systems ($15,000)
- One Tektronix instrument ($20,000)
- One MTS single disk certifier ($370,000)
- One GCA/D.A. Mann Mod. 4800 direct step-on wafer system ($65,000)
- Control Data Corp. disk drives and DEC computers 780/730 ($1,109,000)
- Tektronix computer graphics terminals ($150,000)

.. Then and Today section

Then

Enforcement of export regulations has changed dramatically since Bruchhausen's chicanery came to light. The initial, sluggish response to reports of his activities, described below, is no longer typical.

The first tips were two anonymous letters, both signed “former employees," sent to the U.S. Consulate in Dusseldorf. The first letter arrived in 1977, and accused Bruchhausen of violating U.S. export controls and falsifying export documents.

The second letter arrived about nine months later, in 1978, and contained even more details, including copies of documents proving that Bruchhausen had shipped commodities to a proscribed country.

The Consulate translated the letters, then forwarded them to the Commerce Department Compliance Division. About a year and nine months after the first letter to the Consulate in Duseldorf, Perkin-Elmer Company reported to Commerce that Bruchhausen's CFC was probably a front; Maluta had represented several companies, with various addresses.

The Commerce Compliance Division sent an agent to interview Maluta, who could not produce an export license application for the equipment in question, a Micralign semiconductor testing machine worth $150,000. Maluta said that he knew little about export license requirements, and cancelled the shipment. Bruchhausen and his American employees later referred to the affair as the "Perkin-Elmer problem".

Eight months later, Fairchild contacted the COmmerce Department, the Office of Defense Intelligence and the FBI. Maluta had ordered $740,000 worth of semiconductor memory test systems. A routine investigation by the Fairchild export administration manager had made that company suspicious. However, none of the federal agencies expressed concern because Maluta had signed a standard declaration stipulation that Department of Commerce regulations would be observed if the equipment were resold.

About a month later, Watkins-Johnson wrote Commerce for advice. Bruchhausen's companies had changed names frequently and Maluta had four orders pending for microwave receiving and antenna systems, totaling over $980,000. Special Agent Robert Rice became involved and learned that Maluta had told Watkins-Johnson that one of the systems was to be used at the Army's Fort Huachuca, in Arizona. Headquarters there informed Rice they had never ordered anything from Maluta.

(Also, Maluta had previously purchased similar systems and refused installation, instruction or repair assistance.) At that point, more than three years after the first tip, the Commerce Department contacted Dodge and Wu and the investigation began.

... And Today

Today, the Department of Commerce plays a principal role in the enforcement of export laws. Under Title 28, 1982, the Commerce Department's enforcement staff became separate from other export administration activities and increased from a handful of investigators (who made up the old Compliance Division) to more than 160 full-time enforcement officers, with arrest and seizure authority

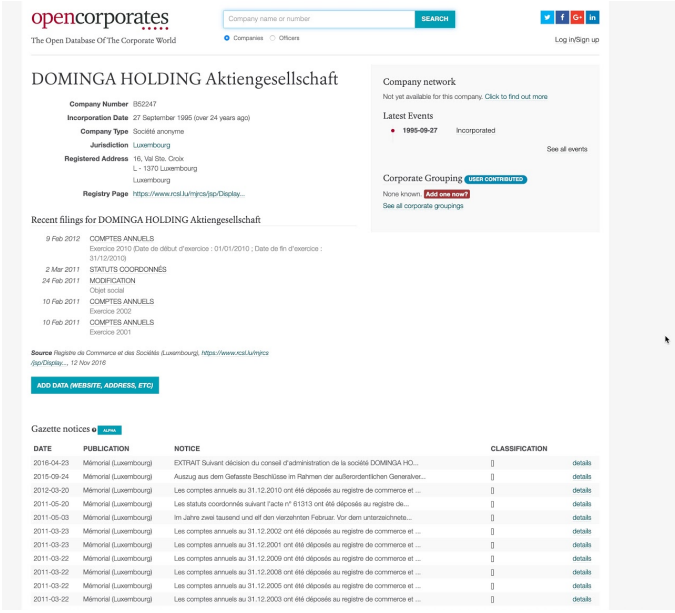
There are now eight domestic field offices, as well as offices in Sweden and Austria. About 35 intelligence specialists work in enforcement - more than the entire staff of the Compliance Division when the Bruchhausen case was originally investigated.

According to Wu, who became Deputy Assistant Secretary for Export Enforcement (created under title 28), "The foreign field offices have raised international sensitivities and increased cooperation in investigations and prosecution." In addition, the cooperation among U.S. enforcement agencies has improved dramatically. Joint Commerce, Customs, and FBI investigations are common Again, according to Wu, 'The working atmosphere between Commerce and Customs has improved enormously. We have daily contact."

The Customs Service has also increased and redirected its exports enforcement activities. The Exodus operations are supported by the Office of Enforcement and the Office of Intelligence, which employ about 1,600 people. Twelve hundred work in criminal investigation and about 400 work in intelligence, including about 200 analysts who identify trends and conduct other analyses.

A Customs-to-Customs agreement with Sweden, signed during the summer of 1987, allows the US. Customs Service to cooperate directly with the Swedish Customs agency on investigations of illegal diversions of technology and armaments, bypassing other diplomatic channels.

Dominga Holding



IMG : [HW0015][GDrive]

Dominga Holding, in Luxembourg :

PDF : [HW0014][GDrive]

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[HW0016][GDrive]

Date Published
2015-09-24

Date Published
2015-09-24
Publication
Mémorial (Luxembourg)
Gazette Notice
Extract from the resolutions passed at the extraordinary general assembly on July 31, 2015.
First decision

The General Meeting decides to accept the resignation of the following members of the Board of Directors:

- **Mr. Pierre EKAMBA LOUMA**, delegate of the board of directors

- Mr. Klaus-Peter WASCHEWSKI

The following are appointed as new board members:

- Mr. Wermer BRUCHHAUSEN, dipl. Engineer residing in D-44139 Dortmund, Rheinlanddamm, 6

- Mr. Olivier LAM, Kauffmann, residing at F-06100 Nice, 2, rue Louis Roubaudi

The mandates of the members of the Board of Directors end with the Ordinary General Meeting of Shareholders which will take place in 2017.
Second decision

Mr. Wermer BRUCHHAUSEN, is appointed delegate of the Board of Directors with the authority of day-to-day management and the right to always represent the company alone. His mandate ends with the Ordinary General Meeting of Shareholders which will take place in 2017.
Third decision

The General Assembly decides to resign the current Commissioner LUX-AUDIT S.A. to accept. Mr. Robert ELVINGER, tax consultant, with professional address L-1370 Luxembourg, 16, Val Ste Croix, will become the new commissioner. His mandate ends with the Ordinary General Meeting of Shareholders which will take place in 2017.

For publication in the Mémorial, Recueil des Sociétés et Associations.

Luxembourg.
Identical for extract

Référence de publication: 2015133688/29.

(150144491) Déposé au registre de commerce et des sociétés de Luxembourg, le 5 août 2015.

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[HW0017][GDrive]

Date Published
2011-05-20

and with the Annual General Meeting which will take place in the year 2017.

Purpose disclosure in memorial, Recruitment of Societies and Associations.

Luxembourg.
For extraction smoothly

Reference of the publication: 2015133688/29.

(150144491) Department of Commerce and Social Registration, Luxembourg, 5 August 2015.

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[HW0013][GDrive]

Date Published
2011-05-03

Gazette Notice

Gazette Notice

In the year two thousand and eleven the fourteenth of February.

In front of the signed notary Joseph ELVINGER, based in Luxembourg.

An extraordinary general meeting of shareholders of the holding company DOMINGA HOLDING Aktiengesellschaft takes place, based in Luxemburg, 16, Val Sainte Croix;

Company mentioned, registered in the Luxembourg Trade and Companies Register, Section B under number 52247.

The meeting will take place under the chairmanship of Mr. Robert Elvinger living in Luxembourg.

The Chairman appoints as secretary and the meeting elects Ms. Flora Gibert, resident in Luxembourg, as the auditor.

The chairman opened the meeting and made the following statements, which the acting notary recorded.

A.- That a attendance list drawn up by the meeting board shows that all shareholders are present or legally represented in the current meeting; This attendance list, countersigned by the shareholders or their representatives and signed by the acting notary public, remains attached to the current deed to be registered with it, as well as the powers of attorney of the represented shareholders duly initialed by the appearing party and the acting public notary.

B.- The fact that the general meeting, in view of the presence or representation of all shareholders, is regularly composed and can pass validly on all items on the agenda.

C.- That the agenda includes the following:
Agenda

1. Change of the statute of the company, which from then on no longer has the status of a holding company according to the law of July 31, 1929, but that of a Soparfi share company.

2. Accordingly, amendment to Article 4 of the Company's Articles of Association regarding the purpose of the company:

"The purpose of the company is to acquire participations in any form in other domestic and foreign financial, industrial or trading companies. The company can acquire all types of securities and rights, be it through deposit, subscription, purchase option, purchase or otherwise, and sell the same through sale, assignment, exchange, or otherwise, and the Company may acquire and exploit patents and concessions, and may provide any support to the companies in which it is directly involved, whether through loans, guarantees, advances, or otherwise.

The company will generally carry out all financial, commercial and technical actions required to protect its rights and its corporate purpose. "

3. Removal of any reference to the 1929 Law in the articles of association.

4. Changes to the social contract in this regard.

After these points have been presented and confirmed by the General Meeting, the shareholders unanimously decide as follows:
First decision:

The assembly decides to give up the tax status created by the law of July 31, 1929 bereffend Holding and to assume the status of Soparfi.
Second decision:

In order to adapt the Articles of Association to the previous decision, the Assembly decides to amend Articles 4 and 1 of the Articles of Association as follows:

"Art. 4. The purpose of the company is the acquisition of participations in any form in other domestic and foreign financial, industrial, or trading companies. The company can acquire all types of securities and rights, be it through deposit, subscription, purchase option, Purchase or otherwise, and sell the same through sale, assignment, exchange, or otherwise. In addition, the Company may acquire and exploit patents and concessions; the Company may provide any assistance to the companies in which it is directly involved, whether through loans, guarantees, Advances or whatever.

The company will generally take all financial, commercial and technical actions required to safeguard its rights and its corporate purpose ".
Third decision:

The Assembly decides to amend Article 25 of the Statutes as follows:

"The law of August 10, 1915 on commercial companies and its subsequent amendments apply unless otherwise provided in these statutes.

The meeting is closed with no further items on the agenda.

About document, Recorded in Luxembourg, In the year, month and day as mentioned at the beginning.

And after the lecture, the aforementioned comparators signed the present deed together with the acting notary.

Signé: R. ELVINGER, F. GIBERT, J. ELVINGER.

Enregistré à Luxembourg A.C. le 16 février 2011. Relation: LAC / 2011/7742

Registered in Luxembourg A.C. on February 16, 2011. Relationship: LAC / 2011/7742. Received seventy-five euros (75.-?)

The Receiver (signed): Francis SANDT.

FOR CONFORMITY SHIPPING, delivered to the company on request

Luxembourg, February 23, 2011.

Publication reference: 2011027392/69.

(110033750) Deposited in the Luxembourg Trade and Companies Register, February 24, 2011.

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[HW0018][GDrive]

Company
DOMINGA HOLDING Aktiengesellschaft (events)
Type
Event::Company::Incorporation
Categories
Existence, Corporate
Description
Incorporated
Event Occurred
On 1995-09-27

BITCHUTE @Housatonic YOUTUBE @HousatonicLive ODYSEE @Housatonic BRIGHTEON @Housatonic

Housatonic

Christopher James Brummer (born 1975)

Sites :

- https://chrisbrummer.com
- Atlantic council - https://www.atlanticcouncil.org/expert/chris-brummer/

Evidence Timeline

2008 (May 24) - Chris Brummer garners SEC Fellowship

https://law.vanderbilt.edu/news/chris-brummer-garners-sec-fellowship/

Next year, Professor Chris Brummer will become the first Academic Fellow for the Securities & Exchange Commission's Office of International Affairs.

Chris Brummer, whose scholarship focuses on securities regulation, **will spend part of the 2008-09 academic year as an Academic Fellow with the Securities & Exchange Commission's Office of International Affairs.**

Professor Brummer will be the first SEC Fellow to work with the SEC's Office of International Affairs (OIA), the arm of the SEC that addresses cross-border securities transactions. At the SEC, the OIA facilitates international regulatory and enforcement cooperation, the adoption of high regulatory standards worldwide and the development of technical assistance programs to strengthen the regulatory infrastructure in global securities markets.

"My research involves assessing how securities regulators coordinate with one another to formulate policy with regards to cross-border securities transactions," he explains. "In the U.S., the OIA is the focal point of such activity. This is quite an exciting time to be a research fellow in this office, because no other issue is quite as important right now as the issue of globalization."

Professor Brummer's research will address issues such as the regulation of new financial products, many of which are created in the U.S. and then sold overseas, as well as how to allow foreign companies to sell securities to investors. "I'll be analyzing the impact of SEC rules and actions on foreign market participants active in the United States, and advising the SEC regarding the effect of U.S. regulations on cross-border activities," he says. "There are concerns and questions about how to regulate new markets. There's obviously a need for cooperation on that front. In addition, as more companies choose to raise capital outside of the United States, there's a big push to ensure the competitiveness of American financial institutions. My role will involve researching those kinds of issues and providing analytical support and advice to senior staff on issues of regulatory policy."

Professor Brummer looks forward to the opportunity to gain a "deep, institutional understanding" of the inner workings of the Securities & Exchange Commission. "It's a somewhat unique opportunity," he says. "No scholar has had the opportunity to be embedded in the Office of International Affairs."

Professor Brummer joined Vanderbilt's law faculty in 2006, after practicing in the New York and London offices of Cravath Swaine & Moore. He teaches courses in Securities Regulation and International Business Transactions and is affiliated with both Vanderbilt's Law & Business and International Legal Studies programs.

2008 - "Chris Brummer, Stock Exchanges and the New Markets for Securities Law, 75 U. Chi. L. Rev. 1435 (2008)."

Referenced here - https://www.sec.gov/comments/s7-02-10/s70210-128.pdf (April 21, 2010 RE: Concept Release on Equity Market Structure File No. S7-02-10) / Also referenced here : https://www.sec.gov/comments/4-673/4673-9.pdf

https://lawreview.uchicago.edu/sites/lawreview.uchicago.edu/files/75_4_Brummer.pdf

Stock Exchanges and the New Markets for Securities Laws

Chris Brummer†

Introduction

For nearly a decade, leading scholars have bemoaned the absence of what can be termed a market for securities laws.[1] Unlike the federalist structure of US corporate law, which may incentivize some states to compete for corporate charters, no competition for firms animates the enactment of national securities laws. Instead, the federal government has enjoyed a virtual monopoly over the provision of securities laws. Ever since the passing of the Securities Act of 1933[2] ("Securities Act") and the Securities Exchange Act of 1934[3] ("Exchange Act"), firms have generally had to comply with US securities laws when selling their stocks and bonds to American investors. And because US stock exchanges were the most liquid in the world, there was little danger of foreign multinationals going elsewhere to raise capital. As a result, federal regulators have had few incentives to formulate efficient regulatory policies.

A revolutionary transformation of global equity markets is, however, currently underway. American stock exchanges are no longer unrivaled venues of capital market activity. Instead, foreign exchanges have developed liquid markets of their own, and now consistently attract over 90 percent of the world's initial public offerings (IPOs) and half of all investor activity.[4] The success of foreign exchanges has sparked

† Assistant Professor of Law, Vanderbilt University Law School. This Article has benefited from the comments and suggestions of Professors Bobby Ahdieh, Douglas Baird, Margaret Blair, Bill Bratton, William Christie, Steven Davidoff, Gillian Hadfield, Paul Heald, Larry Helfer, Donald Langevoort, David Millon, Erin O'Hara, Bob Rasmussen, Hans Stoll, Bob Thompson, Joel Trachtman, and Todd Zywicki. The Article also benefited from faculty workshops at the University of Georgia, the University of Pennsylvania, the University of Southern California, and Northwestern University. I would also like to thank Murray Teitelbaum, James Duffy, and the staff of the New York Stock Exchange for their time and valuable insight.

1 The notion that such a market is missing in securities regulation was popularized in Roberta Romano's seminal article. See generally Roberta Romano, *Empowering Investors: A Market Approach to Securities Regulation*, 107 Yale L J 2359 (1998) (advocating competitive federalism for securities regulation where states compete for investors by offering different sets of securities laws).

2 15 USC §§ 77a–77bbbb (2000).

3 15 USC §§ 78a–78mm (2000).

4 Committee on Capital Markets Regulation, *Interim Report of the Committee on Capital Markets Regulation* 2 (Nov 30, 2006), online at http://www.capmktsreg.org/pdfs/11.30Committee_Interim_ReportREV2.pdf (visited Aug 29, 2008) ("Interim Report") (stating that the US share of

Page 01

consolidation in the trading industry as US stock exchanges, including the behemoth New York Stock Exchange[5] (NYSE) and Nasdaq,[6] have moved to acquire major European competitors in order to regain market share. These new transatlantic combinations will have significant implications for the regulation of securities. Perhaps most important, US exchanges will be able to provide an alternative through their foreign affiliates' listing services for companies seeking to avoid costly disclosure and corporate governance regulations like the Sarbanes-Oxley Act of 2002[7] ("Sarbanes-Oxley" or SOX) that attach when securities are traded in the United States.

Several scholars have acknowledged that the growing competitiveness of foreign exchanges and capital markets may pressure US regulators to provide regulation that more effectively attracts issuers to the United States,[8] a perspective which is likely to gain currency as American regulators incur significant reputational losses in the wake of the US-generated credit crisis.[9] However, virtually no commentator has provided a theoretical framework for assessing these developments in the securities industry.[10] Academics have instead largely fo-

global IPOs declined from 48 percent in the 1990s to only 6 percent in 2005, and its share of global stock market activity dropped from 60 percent in 2000 to 50 percent in 2005).

5 See *NYSE and Euronext in $20bn Merger*, BBC News Online (June 2, 2006), online at http://news.bbc.co.uk/2/hi/business/5039412.stm (visited Aug 29, 2008) (reporting that the NYSE agreed to buy the pan-European Euronext exchange in response to competitive pressures).

6 See Nick Clark, *Nasdaq Poised to Complete OMX Deal*, The Independent (UK) 40 (Jan 3, 2008) (reporting that Nasdaq will take over the Nordic group OMX after it concedes a 19.9 percent stake in the combined company to Borse Dubai).

7 Sarbanes-Oxley Act of 2002, Pub Law No 107-204, 116 Stat 745, codified at 15 USC § 7201 et seq (2006).

8 See, for example, James D. Cox, *Rethinking U.S. Securities Laws in the Shadow of International Regulatory Competition*, 55 L & Contemp Probs 157, 157 (1992). See also Eric J. Pan, *Why the World No Longer Puts Its Stock in Us* *9 (Cardozo Legal Studies Research Paper No 176, Dec 2006), online at http://papers.ssrn.com/abstract_id=951705 (visited Aug 29, 2008).

9 See Philip Stephens, *The Financial Crisis Marks Out a New Geopolitical Order*, Fin Times 9 (Asia ed, Oct 10, 2008). Some commentators and leaders have furthermore argued that the United States will lose its superpower status in the world of international finance. See Bertrand Benoit, *German Minister Predicts US Will Lose Financial 'Superpower Status,'* Fin Times 1. See also Andrew E. Kramer, *Moscow Says U.S. Leadership Era Is Ending*, NY Times A6 (Oct 3, 2008). As a result, regional financial centers have sought to displace now largely discredited US capital markets. See Ariana Eunjung Cha, *Financial Hubs See an Opening Up at the Top*, Wash Post D01 (Oct 1, 2008). The degree of success they will have is, however, unclear.

10 Notably, John Coffee has perceptively argued that cross-listings between exchanges may create pressures on regulators to provide credible, and often stringent, regulation. See generally John C. Coffee, Jr., *Racing towards the Top?: The Impact of Cross-listings and Stock Market Competition on International Corporate Governance*, 102 Colum L Rev 1757, 1757 (2002). However, this account focuses primarily on how stricter US regulations may pressure foreign regulators to provide more stringent regulation, not the other way around. See Larry E. Ribstein, *Cross-listing and Regulatory Competition*, 1 Rev L & Econ 97, 99 (2007) (noting that Coffee's model involves a "limited" form of regulatory competition in which a firm opts into a stricter regime in the United States). Stephen Choi and Andrew Guzman have also emphasized the

Page 02

I. The Presumption of Regulatory Monopoly

A. Territorial Governance of Securities Transactions

US securities law takes what many scholars consider to be a paternalistic approach to investor protection: firms wishing to buy or sell stocks to the public, or in a way that impacts the US economy, are not permitted to bargain with investors individually or to negotiate independently rules governing the quality of information they may provide investors. Instead, a mandatory set of rules applies.[12] Most notably, federal laws generally require that firms file with the government a registration statement disclosing sensitive financial information relating to their operations.[13] Issuers may also potentially have to distribute a prospectus to investors containing a portion of the registration statement before sales are allowed as well as provide periodic disclosures concerning the firm's economic activities.[14] These disclosures must be made with no material misstatements or omissions, or issuers will be subject to possible civil and criminal sanctions.

Compliance with US securities laws, as in most countries, is ensured by a "territorial" or geographically based approach to jurisdiction exemplified in the Securities Act and the Exchange Act. Under the Securities Act, all individuals seeking to sell stocks and bonds in the United States who make means of "instruments of transportation or communication in interstate commerce" must comply with the country's disclosure laws.[15] The Exchange Act meanwhile dictates that listing a security on a stock exchange located in the United States subjects an issuer of securities to US registration requirements.[16] Thus if a firm wishes to seek financing from any of the country's vast capital markets—the NYSE, Nasdaq, or the American Stock Exchange—the firm must become subject to US securities laws. The Exchange Act further holds that an issuer must generally file a registration statement

12 Romano, 107 Yale L J at 2365 (cited in note 1). Those mandatory rules may, however, have notable and important exemptions. See note 63 for a discussion of Rule 144A transactions.

13 See 15 USC § 77e (2000) (outlining § 5 of the Securities Act of 1933, the cornerstone of the regulation of primary transactions in the United States). Numerous exceptions do exist, however. See Thomas Lee Hazen, *The Law of Securities Regulation* § 4.1–4.36 at 177–294 (West 4th ed 2002).

14 Choi and Guzman, 71 S Cal L Rev at 909 (cited in note 11).

15 "Interstate commerce" is defined by the statute as implicating "trade or commerce in securities or any transportation or communication relating thereto" of one "state, territory or the District of Columbia" with another. 15 USC § 77b(a)(7). Issues deemed to be made outside the US are exempt from the statute's registration requirements. Because under the terms of the Act interstate commerce includes not only transportation "between any foreign country and any State, Territory, or the District of Columbia" but also communications via email, internet, or phone lines, virtually all sales involving US persons—as well as many foreign transactions—are covered by the Securities Act. Id.

16 15 USC § 78l(a) (2000).

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if it has assets in excess of $10 million and a class of equity securities held by at least five hundred shareholders worldwide (of whom at least three hundred are US investors).[17]

By attaching to both interstate trading activities and US-based intermediaries facilitating investment, federal securities laws provide deep geographic coverage touching virtually all "transactions that occur within its borders, or that have substantial effects within its territory."[18] Issuers and investors wishing to sell stocks and bonds in the United States are unavoidably bound by US securities laws unless exempted by regulators. And in some limited instances, territorially based securities laws may even have an extraterritorial reach where foreign transactions touch or have a connection to the United States.[19]

B. Choice-of-Law Reforms and Pure Regulatory Markets

Though the broad reach of US securities laws was designed to ensure the protection of US investors from fraudulent and abusive practices, the territorial basis of US securities law has been criticized extensively in the literature.[20] If one views regulation as the price a national regulator charges issuers in order to sell their securities in their home market, regulators, as the sole sellers of law, have monopoly power over the price they charge firms.[21] Critics consequently argue that federal regulators may not have much incentive to offer optimal regulation or

17 See 15 USC § 78l. Notably, however, under Rule 12g3-2(b), such foreign issuers can enjoy an exemption from registration under this provision where a foreign listing is maintained and the US trading volume of its securities is no greater than 20 percent of the security's worldwide trading volume. See 17 CFR 240.12g3-2(b)(1)–(5). See also Larry D. Soderquist, *Understanding the Securities Laws* § 9.3 at 9-3 (PLI 2004).

18 Frederick Tung, *From Monopolists to Markets?: A Political Economy of Issuer Choices in International Securities Regulation*, 2002 Wis L Rev 1363, 1371. Relief from registration is available only to issuers that have chosen not to use exchanges to sell securities. See 17 CFR § 240.12g3-2 (2007). See also James D. Cox, Robert W. Hillman, and Donald C. Langevoort, *Securities Regulation: Cases and Materials* 552 (Aspen 5th ed 2006).

19 This is particularly the case in the United States under § 5 of the Securities Act and Rule 10b-5 of the Exchange Act. See Choi and Guzman, 71 S Cal L Rev at 909 (cited in note 11) (discussing the expansive extraterritorial reach of the Securities Act over any offerings that have a connection, no matter how remote, to the United States).

20 See generally Romano, 107 Yale L J at 2362–63 (cited in note 1) (noting that US investors are often harmed by the expansion of US securities jurisdiction because foreign firms often exclude them from takeover offers in order to avoid the application of US law); Choi and Guzman, 71 S Cal L Rev at 918 (cited in note 11) (maintaining that the strict territorial approach to jurisdiction is flawed because it binds together two separate aspects of value for investors—the capital and regulatory regimes of the country).

21 See Roberta Romano, *The Need for Competition in International Securities Regulation*, 2 Theor Inq in L 387, 390–96 (2001) (asserting that a market for regulatory regimes is superior to a monopolist regulator or "regulatory cartel" of internationally harmonized regimes). See also Tung, 2002 Wis L Rev at 1379 (cited in note 18); Joel P. Trachtman, *Regulatory Competition and Regulatory Jurisdiction*, 3 J Intl Econ L 331, 334 (2000).

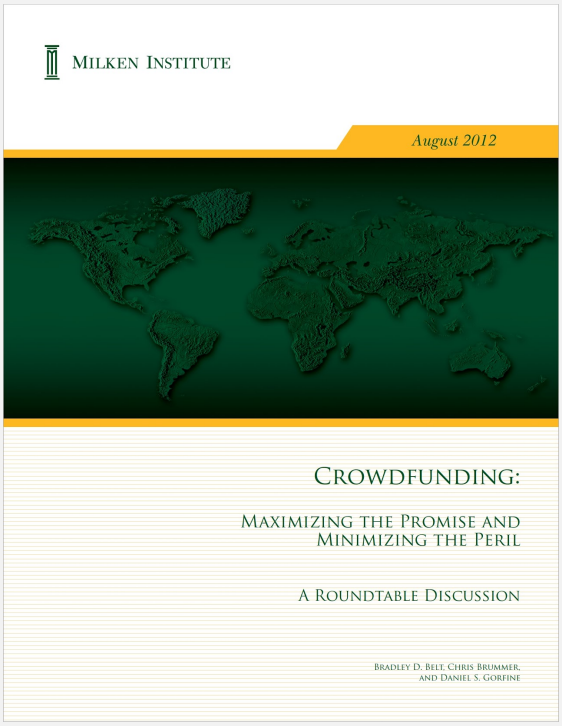
Page 07

2012 (Aug) paper with Milken Institute - "Crowdfunding: Promoting the Promise and Minimizing the Peril."

https://web.archive.org/web/20130925144203/http://www.milkeninstitute.org/publications/download.taf?pubtype=pdf&pubid=38801360&file=%2Fpdf%2Fcrowdfunding120827.pdf

2012-08-milken-institute-crowdfunding-max-promise-limit-peril-belt-brummer-gorfine.pdf

REFERENCED in this 2013 letter (https://www.sec.gov/comments/jobs-title-iii/jobstitleiii-245.pdf) and in this 2014 letter - (https://www.sec.gov/comments/s7-09-13/s70913-228.pdf / 2014-02-03-sec-gov-s70913-228-city-first-enterprised-to-sec-crowdfunding.pdf)



MILKEN INSTITUTE

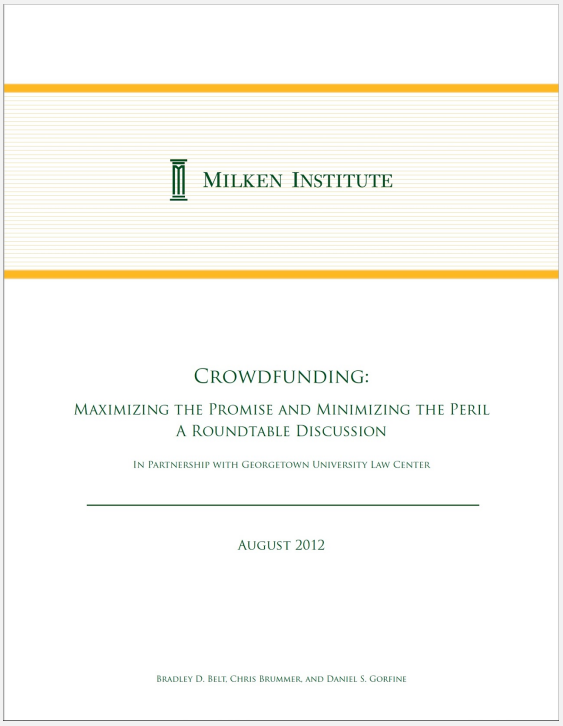
August 2012

CROWDFUNDING:

MAXIMIZING THE PROMISE AND MINIMIZING THE PERIL

A ROUNDTABLE DISCUSSION

BRADLEY D. BELT, CHRIS BRUMMER, AND DANIEL S. GORFINE



MILKEN INSTITUTE

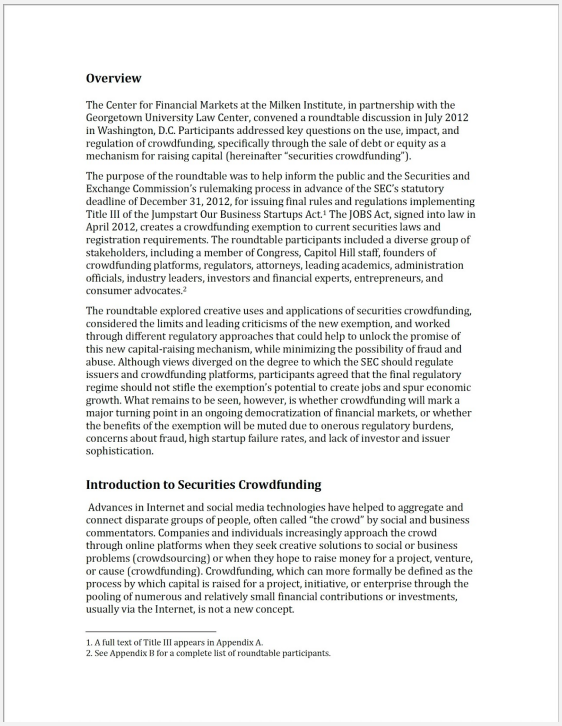
CROWDFUNDING:

MAXIMIZING THE PROMISE AND MINIMIZING THE PERIL
A ROUNDTABLE DISCUSSION

IN PARTNERSHIP WITH GEORGETOWN UNIVERSITY LAW CENTER

AUGUST 2012

BRADLEY D. BELT, CHRIS BRUMMER, AND DANIEL S. GORFINE



Overview

The Center for Financial Markets at the Milken Institute, in partnership with the Georgetown University Law Center, convened a roundtable discussion in July 2012 in Washington, D.C. Participants addressed key questions on the use, impact, and regulation of crowdfunding, specifically through the sale of debt or equity as a mechanism for raising capital (hereinafter "securities crowdfunding").

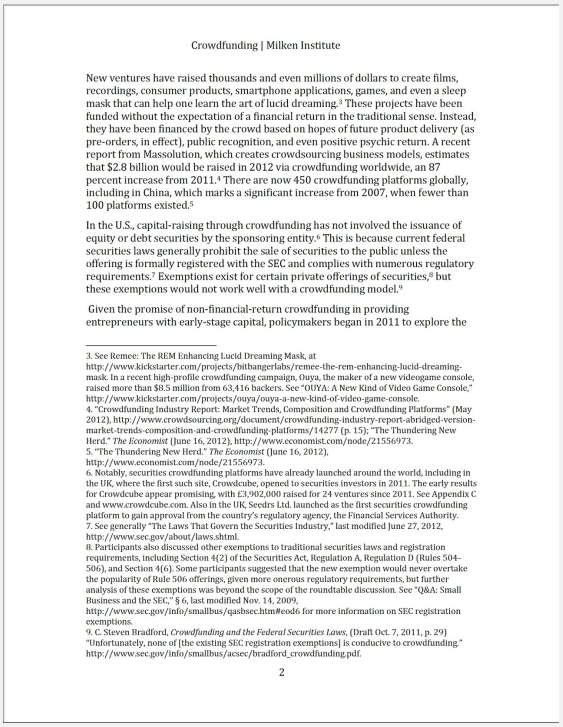
The purpose of the roundtable was to help inform the public and the Securities and Exchange Commission's rulemaking process in advance of the SEC's statutory deadline of December 31, 2012, for issuing final rules and regulations implementing Title III of the Jumpstart Our Business Startups Act.[1] The JOBS Act, signed into law in April 2012, creates a crowdfunding exemption to current securities laws and registration requirements. The roundtable participants included a diverse group of stakeholders, including a member of Congress, Capitol Hill staff, founders of crowdfunding platforms, regulators, attorneys, leading academics, administration officials, industry leaders, investors and financial experts, entrepreneurs, and consumer advocates.[2]

The roundtable explored creative uses and applications of securities crowdfunding, considered the limits and leading criticisms of the new exemption, and worked through different regulatory approaches that could help to unlock the promise of this new capital-raising mechanism, while minimizing the possibility of fraud and abuse. Although views diverged on the degree to which the SEC should regulate issuers and crowdfunding platforms, participants agreed that the final regulatory regime should not stifle the exemption's potential to create jobs and spur economic growth. What remains to be seen, however, is whether crowdfunding will mark a major turning point in an ongoing democratization of financial markets, or whether the benefits of the exemption will be muted due to onerous regulatory burdens, concerns about fraud, high startup failure rates, and lack of investor and issuer sophistication.

Introduction to Securities Crowdfunding

Advances in Internet and social media technologies have helped to aggregate and connect disparate groups of people, often called "the crowd" by social and business commentators. Companies and individuals increasingly approach the crowd through online platforms when they seek creative solutions to social or business problems (crowdsourcing) or when they hope to raise money for a project, venture, or cause (crowdfunding). Crowdfunding, which can more formally be defined as the process by which capital is raised for a project, initiative, or enterprise through the pooling of numerous and relatively small financial contributions or investments, usually via the Internet, is not a new concept.

1. A full text of Title III appears in Appendix A.
2. See Appendix B for a complete list of roundtable participants.



New ventures have raised thousands and even millions of dollars to create films, recordings, consumer products, smartphone applications, games, and even a sleep mask that can help one learn the art of lucid dreaming.[3] These projects have been funded without the expectation of a financial return in the traditional sense. Instead, they have been financed by the crowd based on hopes of future product delivery (as pre-orders, in effect), public recognition, and even positive psychic return. A recent report from Massolution, which creates crowdsourcing business models, estimates that $2.8 billion would be raised in 2012 via crowdfunding worldwide, an 87 percent increase from 2011.[4] There are now 450 crowdfunding platforms globally, including in China, which marks a significant increase from 2007, when fewer than 100 platforms existed.[5]

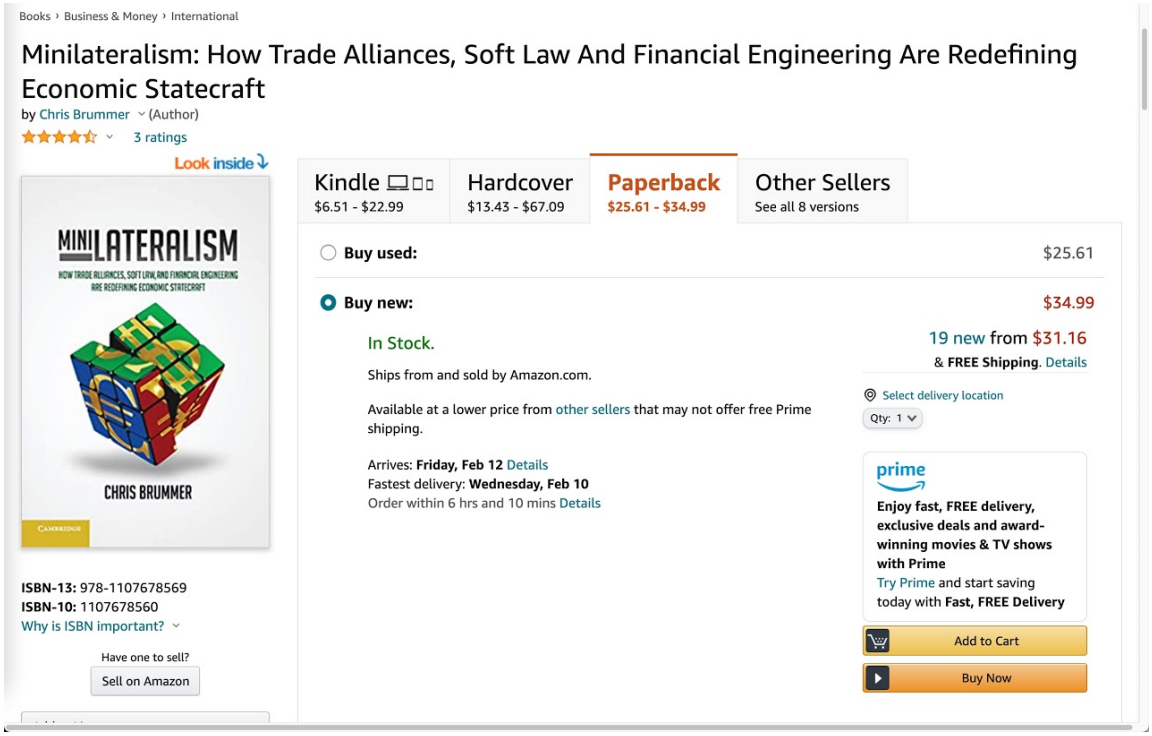
In the U.S., capital-raising through crowdfunding has not involved the issuance of equity or debt securities by the sponsoring entity.[6] This is because current federal securities laws generally prohibit the sale of securities to the public unless the offering is formally registered with the SEC and complies with numerous regulatory requirements.[7] Exemptions exist for certain private offerings of securities,[8] but these exemptions would not work well with a crowdfunding model.[9]

Given the promise of non-financial-return crowdfunding in providing entrepreneurs with early-stage capital, policymakers began in 2011 to explore the

3. See Remee: The REM Enhancing Lucid Dreaming Mask, at http://www.kickstarter.com/projects/hithangerlabs/remee-the-rem-enhancing-lucid-dreaming-mask. In a recent high-profile crowdfunding campaign, Ouya, the maker of a new videogame console, raised more than $8.5 million from 63,416 backers. See "OUYA: A New Kind of Video Game Console," http://www.kickstarter.com/projects/ouya/ouya-a-new-kind-of-video-game-console.
4. "Crowdfunding Industry Report: Market Trends, Composition and Crowdfunding Platforms" (May 2012), http://www.crowdsourcing.org/document/crowdfunding-industry-report-abridged-version-market-trends-composition-and-crowdfunding-platforms/14277 (p. 15); "The Thundering New Herd," *The Economist* (June 16, 2012), http://www.economist.com/node/21556973.
5. "The Thundering New Herd," *The Economist* (June 16, 2012), http://www.economist.com/node/21556973.
6. Notably, securities crowdfunding platforms have already launched around the world, including in the UK, where the first such site, Crowdcube, opened to securities investors in 2011. The early results for Crowdcube appear promising, with £3,902,000 raised for 24 ventures since 2011. See Appendix C and www.crowdcube.com. Also in the UK, Seedrs Ltd. launched as the first securities crowdfunding platform to gain approval from the country's regulatory agency, the Financial Services Authority.
7. See generally "The Laws That Govern the Securities Industry," last modified June 27, 2012, http://www.sec.gov/about/laws.shtml.
8. Participants also discussed other exemptions to traditional securities laws and registration requirements, including Section 4(2) of the Securities Act, Regulation A, Regulation D (Rules 504-506), and Section 4(6). Some participants suggested that the new exemption would never overtake the popularity of Rule 506 offerings, given more onerous regulatory requirements, but further analysis of these exemptions was beyond the scope of the roundtable discussion. See "Q&A: Small Business and the SEC," § 6, last modified Nov. 14, 2009, http://www.sec.gov/info/smallbus/qasbsec.htm#eod6 for more information on SEC registration exemptions.
9. C. Steven Bradford, *Crowdfunding and the Federal Securities Laws*, (Draft Oct. 7, 2011, p. 29) "Unfortunately, none of [the existing SEC registration exemptions] is conducive to crowdfunding." http://www.sec.gov/info/smallbus/acsec/bradford_crowdfunding.pdf.

2014 (April 7) book by Chris Brummer - "Minilateralism: How Trade Alliances, Soft Law and Financial Engineering are Redefining Economic Statecraft"

- https://www.kobo.com/us/es/ebook/minilateralism
- https://minilateralism.com/



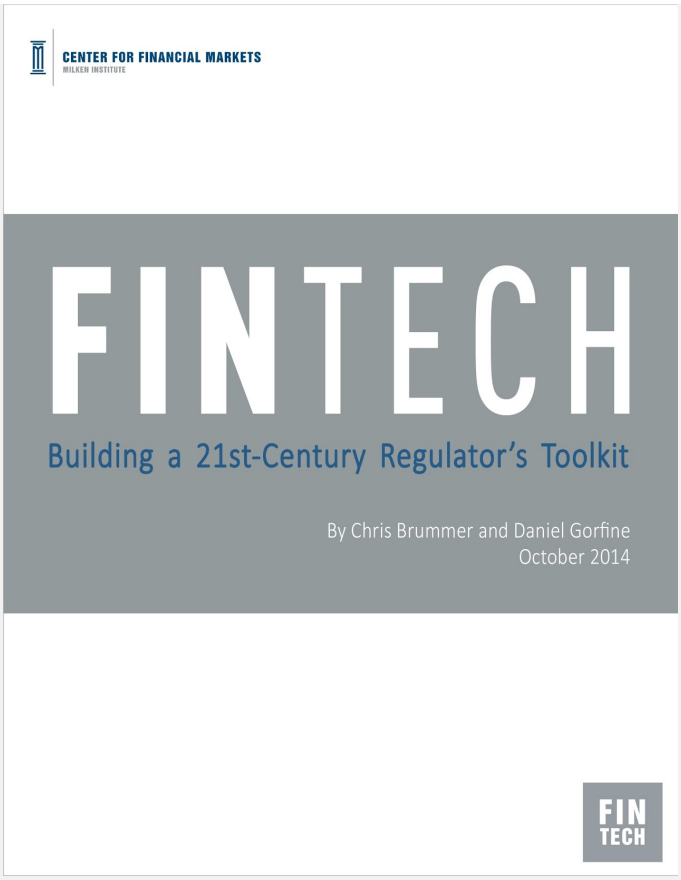
Available on Amazon - https://www.amazon.com/Minilateralism-Alliances-Engineering-Redefining-Statecraft/dp/1107678560/

2014 REPORT - "FinTech: Building a 21st-Century Regulator's Toolkit"

By Chris Brummer and Daniel Gorfine

https://milkeninstitute.org/reports/fintech-building-21st-century-regulators-toolkit

2014-10-milken-institute-fintech-building-a-21st-century-regulators-toolkit-brummer-gorfine.pdf
https://drive.google.com/file/d/1SJJstajgPcocOso7j5sWhvZ1ZnFwJjvQ/view?usp=sharing



Cover

2014-10-milken-institute-fintech-building-a-21st-century-regulators-toolkit-brummer-gorfine-img-pg-00

https://drive.google.com/file/d/1MUlYB3WBX9hgbBba33zdFFs9JjtmrqE0/view?usp=sharing

FinTech: Building a 21st-Century Regulator's Toolkit

By Chris Brummer and Daniel Gorfine

October 2014

In recent years we have witnessed a torrent of technology-driven innovation in financial markets and services. This innovation, in turn, is reshaping how markets are structured, how investors receive and use information, how customers receive and use financial services, and how companies access and deploy capital. Ranging from new digital payment systems and digital or electronic currencies to online investment/finance platforms and data analytics, these developments, collectively called FinTech, are already having an impact on traditional financial markets and services. Less discussed, however, is how the rise of FinTech challenges underlying precepts of existing regulatory approaches and requires fresh thinking as to how regulation can best foster the responsible development of this industry.[1]

How can regulation best foster the responsible development of the FinTech industry?

We tackle some of these issues in the pages that follow. That said, we do not proclaim absolute policy prescriptions, which are rarely possible in a world of dynamic, sophisticated, ever-changing markets. Instead, as we will argue, regulatory policies that match these dynamics with the versatile application of agile approaches and tools, as discussed further below, will more likely ensure market integrity and transparency, investor protection, and capital formation.

With this in mind, this paper outlines characteristics of FinTech that drive the need for new thinking about today's regulatory approaches, and then details the pros and cons of alternative regulatory responses—which themselves can and will be deployed in varying contexts and scenarios.

Rapid change and innovation are already the norm in technology-driven sectors, and perhaps more so in financial markets and services. A failure to account for these trends will result in regulatory frameworks that fall short of their goals, impede positive innovation, and reduce competitiveness of local economies and businesses. The following discussion, which begins with a brief summary of the growth of FinTech, is an attempt to catalyze efforts to provide policymakers with a "toolkit" that can keep pace with FinTech developments.

[1] Chris Brummer, *Disruptive Technology and Securities Regulation*, (working paper, forthcoming, 2015).

1

Page 01

2014-10-milken-institute-fintech-building-a-21st-century-regulators-toolkit-brummer-gorfine-img-pg-01

https://drive.google.com/file/d/1tFkIsJUBBIqpz8MdTDn3D-ZCC_fYjZub/view?usp=sharing

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2015 - Disruptive Technology and Securities Regulation Chris Brummer Georgetown University Law Center

https://ir.lawnet.fordham.edu/cgi/viewcontent.cgi?article=5158&context=flr

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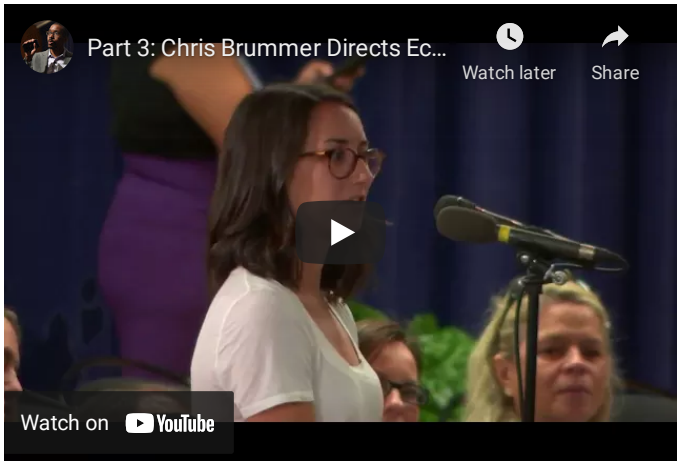
2017 (Sep 29) - video - "Part 3: Chris Brummer Directs Economic Conversation with Former CIA Deputy Director David Cohen"

https://www.youtube.com/watch?v=9VzSBgXuyUM

Part 3: Chris Brummer Directs Economic Conversation with Former CIA Deputy Director David Cohen

41 views • Sep 29, 2017



2019 (April 08) - "Chris Brummer joins the Milken Institute as a Senior Fellow, brings expertise in international finance to Institute's Center for Financial Market Understanding in Washington, D.C."

https://milkeninstitute.org/articles/chris-brummer-joins-milken-institute-senior-fellow-brings-expertise-international-finance

2019-04-08-milken-institute-chris-brummer-joins-the-milken-institute-as-senior-fellow.pdf

(LOS ANGELES) — Chris Brummer, professor of law at Georgetown University Law Center, has joined the Milken Institute as a senior fellow. He will bring his expertise in international financial regulation, market microstructure, securities regulation, and international trade to the work of the Institute and its recently established Center for Financial Market Understanding in Washington, D.C.

The Center is charged with increasing policymakers' understanding of the operations of financial markets in the U.S. and worldwide, with a focus on the myriad impacts of policy decisions, both intended and not. Brummer's grasp of the connectedness of markets around the world will help the Milken Institute offer legislators, regulators, executives and journalists a greater insight into how markets function.

"Chris brings an entrepreneurial approach to his work — a trait that's perhaps unusual in law professors," said Bradley Belt, senior managing director and head of the Center for Financial Market Understanding. "His depth of knowledge about regulation in overseas markets and the increasingly connected global economy will enrich the resources we can offer to leaders in policy and business."

Brummer has taught at the University of Basel, and will serve as a visiting professor next year at the University of Heidelberg and the London School of Economics. Before coming to Georgetown, he was an assistant professor of law at Vanderbilt University Law School. He also practiced law in the New York and London offices of Cravath, Swaine & Moore, where his practice focused on high-yield debt offerings. In 2008, he was the Securities and Exchange Commission's first academic fellow, and worked in the Office of International Affairs.

"I'm delighted to have the opportunity to join the Milken Institute, particularly at this point in time, when one sees the need for a more focused, less ideological policy discussion on financial markets and their role in society," Brummer said. "No other institution brings to the table the energy and creative thinking required for tackling the emerging challenges of the modern financial marketplace."

Brummer's research has appeared in many of the country's most prestigious journals, including the California Law Review, the University of Chicago Law Review, the Georgetown Law Journal, the Southern California Law Review and the Vanderbilt Law Review. He periodically serves as an expert on NASDAQ hearings panels on de-listings.

Brummer lectures widely on finance and global governance at universities. His book, "Soft Law and the Global Financial System," will be published later this year by Cambridge University Press. He earned his J.D. from Columbia Law School, where he graduated with honors, and holds a Ph.D. in Germanic studies from the University of Chicago.

Also 2019-04-08 - "PRESS RELEASE : Milken Institute and Georgetown University launch congressional staff briefing series"

https://milkeninstitute.org/articles/milken-institute-and-georgetown-university-launch-congressional-staff-briefing-series

The interactive, informal session, "The Future of Wall Street After Dodd-Frank," covered market responses to the legislation and looked at how the markets have changed since Dodd-Frank was enacted. This is the first in a monthly series of Milken Institute-Georgetown University briefings for congressional staff on topical financial markets issues.

"The Milken Institute is pleased to partner with Georgetown in launching this briefing series," said Bradley Belt, senior managing director of the Milken Institute. "We believe it is critically important to bring a market-based perspective to the discussion of how the laws and regulations affect markets and whether the results intended by the sponsors will be achieved."

Opening today's discussion were leading financial experts from Georgetown University and the Milken Institute, including Rohan Williamson, associate professor of finance and Stallkamp Faculty Research Fellow at the McDonough School of Business, along with Phillip Swagel, professor of international economic policy at the University of Maryland.

"We found this a terrific opportunity to engage with congressional staff members who want to gain a deeper understanding of the intended and unintended effects of financial legislation," said Chris Brummer, professor of law at Georgetown and a Milken Institute senior fellow. "Our discussion focused on market responses to the law and to other forces and events."

2020 (OCT 23) - "Cœuré, Cunliffe, Giancarlo and Skingsley discuss CBDCs with Chris Brummer at DC Fintech Week"

Cœuré, Cunliffe, Giancarlo and Skingsley discuss CBDCs with Chris Brummer at DC Fintech Week

197 views • Oct 23, 2020

https://www.youtube.com/watch?v=CzMoFEBUfrw

2020 (Dec 2) - Biden Administration Expected to Aid FinTech Innovation

The president-elect has made economic equality a focus for the upcoming term, and many lawmakers and financial technology experts expect Biden will encourage personal ownership of digital identities and close loopholes.

CAITLIN REILLY, CQ-ROLL CALL | DECEMBER 2, 2020 | ANALYSIS

https://www.governing.com/next/Biden-Administration-Expected-to-Aid-FinTech-Innovation.html

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2021 (Jan21)

https://www.pymnts.com/personnel/2021/biden-announces-admin-changes-sec-ftc-cftc/

(also see - https://www.coindesk.com/chris-brummer-to-be-bidens-cftc-chair-crypto-friendly-tarbert-steps-down)

The new acting chair of the Securities and Exchange Commission (SEC) will be Commissioner Allison Herren Lee as designated by President Joe Biden, according to a press release.

“During my time as commissioner, I have focused on climate and sustainability, and those issues will continue to be a priority for me,” she said, according to the release.

Lee was sworn in as commissioner in 2019, and she has written, lectured and taught courses on the financial regulation and corporate law, the release stated. She has also been with the SEC for years in various roles, including counsel to Commissioner Kara Stein and as senior counsel in the Division of Enforcement’s Complex Financial Instruments Unit.

In addition, Federal Trade Commission (FTC) Commissioner Rebecca Kelly Slaughter will be acting chair of the agency as designated by Biden, according to a press release.

Slaughter, in her position as commissioner thus far, has advocated for greater FTC resources, promoting equity and inclusion efforts, the release stated. In addition, Slaughter has been “outspoken” about fighting systemic racism, growing threats to competition and the “broad abuse” of consumers’ data.

Also, Heath Tarbert, a former President Donald Trump nominee, has stepped down as Commodity Futures Trading Commission (CFTC) chair as of Thursday (Jan. 21), Reuters reported.

The leading candidate emerging to replace him is Georgetown University academic Chris Brummer, the report stated, with the White House expected to make a decision soon.

Democratic CFTC commissioner Rostin Behnam is set to serve as acting commissioner for the time being, Reuters reported. Tarbert is going to remain on the commission as he transitions to private life.

Biden took office Wednesday (Jan. 20) and set about signing executive orders, PYMNTS reported. Many of them focused on fighting the pandemic, including orders for mask mandates in federal buildings, establishing a coordinator of the COVID-19 response to lead vaccine rollouts, and establishing ways to safely reopen schools.

Did Melissa Hodgman and Chris Brummer work together at the SEC ?

We can find no evidence that they worked together directly, which is contrary to some claims found on the internet of alleged collusion. Only indirect, for example

Brent Fields + Melissa Hodgman working togehter (https://www.sec.gov/litigation/admin/2019/34-84998.pdf) , and Brummer worked with Brent Fields (https://www.sec.gov/comments/sr-iex-2018-06/iex201806-3492198-162258.pdf / 2018-04-sec-gov-iex201806-3492198-162258)

https://www.ancestry.com/discoveryui-content/view/201452937:62209?tid=&pid=&queryId=fc8b76f71ea6b37cdfc9f40a350d3d24&_phsrc=bis61&_phstart=successSource

Name: Christopher James Brummer / Birth Date: Jul 1975 / Residence Date: 2009-2020 [...] Washington, District of Columbia, USA

Birth Place: Jefferson, Kentucky, USA / Mother's Name: Isabelle J Carpenter

grandmother - https://www.newspapers.com/image/490401563/?image=490401563&words=&article=26bfccc2-1e3e-4c92-af61-1928cc00f2bc&focus=0.01593361,0.10626845,0.50980514,0.4883313&xid=3355&_ga=2.188742381.491857885.1612326416-1494574405.1609728327&ancestry=true

father - Chauncey Brummer

2021-02-03-wikipedia-org-milken-institute.pdf

https://en.wikipedia.org/wiki/Milken_Institute

https://en.wikipedia.org/wiki/Milken_Institute

Tax policy

The Institute has held several events regarding Opportunity zones created by the Tax Cuts and Jobs Act of 2017. In May 2018, Treasury Secretary Steven Mnuchin instructed his staff to accept a non-low-income tract in Storey County, Nevada as an Opportunity Zone shortly after attending an Institute event in Beverly Hills with Michael Milken.[18] Milken was already an investor in the Nevada tract.[18] In August 2018, Mnuchin attended an Institute conference on Opportunity Zones in the Hamptons with Milken and latter accepted a flight to Los Angeles with Milken on his private jet.[18] Treasury later issued a regulatory guidance at the Institute's request that allows prior investors to benefit from newly designated Opportunity Zones.[18]

NOTE - "chris brummer" + "opportunity zones" , no connections found on Google

https://home.solari.com/opportunity-zones-prototyping-community-technocracy-with-patrick-wood/

In this segment, Patrick and I take a look at Opportunity Zones—a U.S. tax shelter investment vehicle authorized by the Tax Cuts and Jobs Act of 2017.

Opportunity Zones teams are prototyping technocracy's "last mile" in the United States. As global capital returns to North America, opportunities in real estate abound. Entrepreneurs and investors can shift enormous unrealized capital gains out of tech companies and the stock market at a relative high and into real estate (and related digital integration in communities) at relative low prices.

Put aside your prism of national competition. Look at the world through the prism of digital control—the competition to own and access the satellites, telecommunications, information systems, software, and AI that implement "the databeast" is reaching a fever pitch. Or, as Patrick says, "data is the new oil," and we are entering a new period of "digital despotism."

Dr Uchimoto trashes chris brummer here - https://professorchrisbrummer.com

But BRUMMER says.. .enough ! here - http://brokeandbroker.com/PDF/Brummer3rdAmdComp201110.pdf

Henry William Buse Jr. (born 1913)

Wikipedia 🌐 Lt. General Henry William Buse Jr.

Family research, to best understands origins of 🌐 **Lt. General Henry William Buse Jr. (born 1913)**

1920 Census

Record Transcription: Us Census 1920 | findmypast.com

First name(s) Last name Relationship Marital status Gender Age Birth year Birth place

Henry W Buse Self Married Male 45 1875 New York <--- FATHER

Clara E Buse Wife Married Female 41 1879 New Jersey

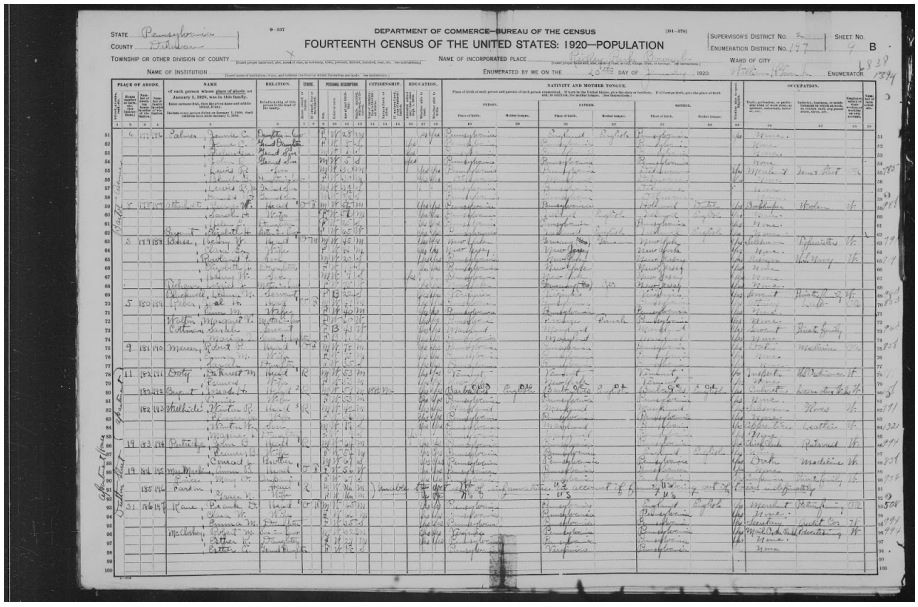
Rowland F Buse Son Single Male 20 1900 Pennsylvania

Elizabeth A Buse Daughter Single Female 18 1902 Pennsylvania

Henry W Buse Son Single Male 7 1913 Pennsylvania

Lizzie J Tichenor Mother-in-law Widowed Female 75 1845 New York

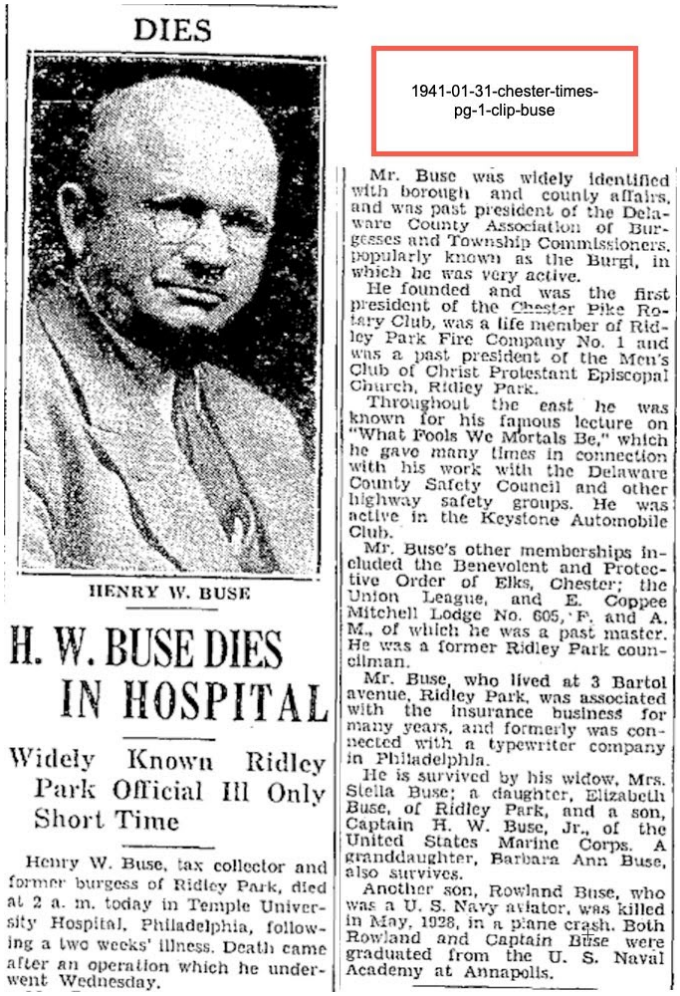
Lanna N Blackwell - Single Female 22 1898 Virginia


DEPARTMENT OF COMMERCE—BUREAU OF THE CENSUS
FOURTEENTH CENSUS OF THE UNITED STATES: 1920—POPULATION

1920-usa-census-ridley-parks-penn-004967714-00026.jpg

1941 (January) - H W Buse (sr) passes

Full page - [HN010R][GDrive]



DIES

1941-01-31-chester-times-pg-1-clip-buse

HENRY W. BUSE

H. W. BUSE DIES IN HOSPITAL

Widely Known Ridley Park Official Ill Only Short Time

Henry W. Buse, tax collector and former burgess of Ridley Park, died at 2 a. m. today in Temple University Hospital, Philadelphia, following a two weeks' illness. Death came after an operation which he underwent Wednesday.

Mr. Buse was widely identified with borough and county affairs, and was past president of the Delaware County Association of Burgesses and Township Commissioners, popularly known as the Burgi, in which he was very active.

He founded and was the first president of the Chester Pike Rotary Club, was a life member of Ridley Park Fire Company No. 1 and was a past president of the Men's Club of Christ Protestant Episcopal Church, Ridley Park.

Throughout the east he was known for his famous lecture on "What Fools We Mortals Be," which he gave many times in connection with his work with the Delaware County Safety Council and other highway safety groups. He was active in the Keystone Automobile Club.

Mr. Buse's other memberships included the Benevolent and Protective Order of Elks, Chester; the Union League, and E. Coppee Mitchell Lodge No. 605, F. and A. M., of which he was a past master. He was a former Ridley Park councilman.

Mr. Buse, who lived at 3 Bartol avenue, Ridley Park, was associated with the insurance business for many years, and formerly was connected with a typewriter company in Philadelphia.

He is survived by his widow, Mrs. Stella Buse; a daughter, Elizabeth Buse, of Ridley Park, and a son, Captain H. W. Buse, Jr., of the United States Marine Corps. A granddaughter, Barbara Ann Buse, also survives.

Another son, Rowland Buse, who was a U. S. Navy aviator, was killed in May, 1928, in a plane crash. Both Rowland and Captain Buse were graduated from the U. S. Naval Academy at Annapolis.

[HN010S][GDrive]

BACKGROUND - Lt. General Henry W Buse Jr

See 🔵 **Lt. General Henry William Buse Jr.** : "*At the beginning of July 1967, **Buse** was appointed chief of staff, Headquarters Marine Corps. [This] assignment lasted until May 31, 1968, when he received the Navy Distinguished Service Medal for his service in this capacity, and was then transferred to Hawaii.*" In April 1968 **Lt. Gen Buse Jr.** was appointed Commanding General Fleet Marine Force Pacific, in charge of all Marine units in the Pacific. See article clip below; full page at [aa36][GDrive] .

See 🔵 **Lt. General Henry William Buse Jr.** : "*[In Vietnam, **General Buse**] frequently visited the combat zone in Vietnam and always moved immediately to forward areas to assess operational requirements, investigate problem areas, and encourage and assist his Marines in every way possible. Under Lieutenant General Buse's dynamic leadership, Marine infantry units were reorganized into well-coordinated, mobile elements, **the command's electronic warfare operational capability increased to a degree unparalleled in Marine aviation history,** and numerous major amphibious operations were planned and executed with tremendous success.*"

🔵 **Lt. General Henry William Buse Jr.** was relieved by 🔵 **Lt. General William Kenefick Jones** on July 1, 1970, and subsequently retired from the military service. He distinguished himself in his last assignment and received his second Navy Distinguished Service Medal.

"***General Buse** was the authorizing authority on [all of] Mueller's awards.*" [**From "The Mule: Robert Swan Mueller III" by Gene "Chip" Tatum**]

Pic from 🔵 Lt. General Henry William Buse Jr.

The Danville Register (Danville, Virginia) · 26 Apr 1968, Fri · Page 4

Passed-Over General Asks To Be Retired

locked door. The Brooklyn cam-

WASHINGTON (AP) —A senior Marine general whose star rose under former Secretary of Defense Robert S. McNamara has put in for retirement.

He is Lt. Gen. Victor H. Krulak, passed over for Marine commandant and considered a leading contender for two other top posts until they were filled earlier this month by others.

The White House said President Johnson is nominating Krulak for permanent rank of lieutenant general when he retires about June 1.

For the last four years, Krulak has commanded Fleet Marine Forces in the Pacific with headquarters in Honolulu.

Krulak, 55, came to McNamara's attention while serving as a specialist on counterinsurgency under the Joint Chiefs of Staff.

It was reported President John F. Kennedy also was impressed with Krulak, who is credited with a major role in developing clear-and-hold tactics used by the Marines in Vietnam until major North Vietnamese incursions changed the character of the war.

Although Krulak was considered at one time the leading contender for Marine commandant, Johnson chose Gen. Leonard F. Chapman Jr. last December.

Johnson made his announcement five days after McNamara's intention to leave the Pentagon was made public. Krulak reportedly was McNamara's first choice.

In subsequent months, sources said Krulak was a leading candidate to become commander in chief of all Pacific forces—a job that would have meant promotion to full general. He also was mentioned as possible deputy to the U.S. commander in Vietnam, also a four star post.

But on April 10 Johnson named Adm. John S. McCain Jr. to become commander in chief of the Pacific and Army Gen. Andrew Goodpaster for the deputy position in Saigon.

Krulak, a native of Denver, Colo. is said by some sources to be planning to retire to San Diego, Calif.

The Pentagon said his successor as commanding general of Pacific Fleet Marine Froces will be Lt. Gen. Henry W. Buse, 56, a native of Ridley Park, Pa. Buse now is chief of staff at Marine headquarters.

[aa37][GDrive]

🔵 **Lt. General Henry William Buse Jr.** and 🔵 **Admiral John S. McCain Jr.** together in Hawaii at party - (Oct 9 1968) Full: [aa32][GDrive] Clip: [aa33][GDrive]

On Feb 6 1970, [🔵 **Lt. General Henry William Buse Jr.**] announced his retirement - **see** Full Page: [aa40][GDrive]

🔵 **Lt. General Henry William Buse Jr.** **was involved in Olympic lobbying since (or before) Feb 2 1967; see** Full Page: [aa34][GDrive] / Clip :[aa35][GDrive] . By 1973 , Buse was involved in the Olympic Committee - **see** Full Page: [aa38][GDrive]

Col Paul D. Lafond, Commanding Officer, 3d Marines briefs, from left, MajGen Carl A. Youngdale, Deputy Commanding General, III MAF; LtGen Henry W. Buse, Jr., Commanding General, FMFPac; MajGen Raymond G. Davis; and BGen Frank E. Garretson, Commanding General, Task Force Hotel, on search operations in the Vietnam Salient.

Abel Papers, Marine Corps Historical Center

April 1969

1988-us-marines-in-vietnam-high-mobility-and-standdown-full-charles-r-smith-pg-62-img-1.jpg /

A good reference of Buse's activities in Vietnam is in the 1988 book **"United States Marines in Vietnam - High mobility and standdown"** by Charles R Smith (see 1988-us-marines-in-vietnam-high-mobility-and-standdown-full-charles-r-smith.pdf / https://drive.google.com/open?id=1Cq55zUDuHuRBI0gdw3Qbz50exY6g5_xJ)

Do You Own or Use a Typewriter?

THE NEW CUSHIONED KEYS SHOULD INTEREST EVERY MANUFACTURER, DEALER, OWNER AND USER OF A WRITING MACHINE.

An Operator Can do More Work, do it Better and with Less Fatigue. Your Machine will Cost Less for Repairs, Speed will be Increased, and the Operator's Life will be Worth Living. Do You go Home after a Hard Day's Work, ... Tired, Nervous and Exhausted? . . . . . .

Read the following from a young lady connected with one of New York's great daily papers:

"I want to express my deep appreciation of your inestimable patent cushions for the typewriter keys. They are one of the greatest labor-saving devices, and most valuable adjunct to the typewriter, ever invented.

Singularly, indeed, but at the end of the day now my hands are far more rested than formerly at the start. The cushioned keys save the fingers all toil, and wonderfully soften them by manipulation.

I trust the day may come when they shall have reached all typewriters, and none will be deprived of their benefit. With sincere appreciation and gratitude, etc."

See also this one from a stenographer with a prominent Wall Street firm:

"I have now been using for some time the cushion keys placed by you on my typewriter, and I feel constrained to say a word in their commendation.

I have been operating a typewriter for several years past, eight hours each day, during which time I have always suffered more or less from soreness of the finger tips. Your keys not only do away with this entirely, but add materially to the speed of the machine.

I cannot say too much in recommendation of your device, and shall be pleased to have you refer to me at any time."

This is from the Official Stenographer of Somerset and Bedford Counties, Pennsylvania:

"Having tested them for a month, I am very much pleased with them; they add an elasticity of touch to the machine which I would not do without for twice their cost."

Do you want further evidence? If so, read this from a stenographer with a large railroad ticket office in New York City:

"After using your covers for the Remington Typewriter, as an aid for my sight and touch of the fingers, I wish to say I would rather not be without the same now, and recommend them to every operator."

And this from the stenographer of a large insurance company in New York:

"The cushion keys purchased of you some time ago have proven quite satisfactory. They are certainly a vast improvement to a typewriting machine.

We could go on and fill many pages with similar letters, the originals of which are in our possession. We do not publish the names, because in some cases, it might cause the writer trouble or annoyance. We are constantly in receipt of such communications.

In addition to increased comfort for the operator, and lessened labor, the cushion keys greatly assist in preserving the alignment of a machine, reducing the wear and tear on the numerous working parts, especially the type-bar bearings, and effect an **actual saving in the expense of keeping the machine in proper repair.**

Any special characters needed to complete sets are supplied without extra charge.

TYPEWRITER CUSHION KEY COMPANY,

H. W. BUSE, New York City Agent,
144-152 Nassau St., American Tract Society Bldg.

289-297 Washington St., Newark, N. J.

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[aa32] 1968-10-09-the-honolulu-advertiser-pg-25.jpg / https://drive.google.com/open?id=1CP2tEXhvmWYQp9dQOxD6k_fuFfLRE-U0)
[aa33] 1968-10-09-the-honolulu-advertiser-pg-25-clip-green-party.jpg / https://drive.google.com/open?id=1CRUOLHGNFfv0SzFl40nYYc2qGM9pA5PF
[aa34] 1967-02-26-the-el-paso-times-pg-47.jpg https://drive.google.com/open?id=1CVUtW7Jn_QNqHcIlvx4mLolLfX10MKZi /
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aa36] 1968-04-26-the-danville-register-pg-4.jpg https://drive.google.com/open?id=1CNf185ILVV-hB4W6OIt42QHYmcxdeTiT
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[aa38] 1973-03-06-the-des-moines-register-pg-20.jpg / https://drive.google.com/open?id=1COz5JCDALB96Nwuj5Y7zpIBoIakbNlKK

[aa40] 1970-02-06-the-manitowoc-herald-times-pg-t-1.jpg / https://drive.google.com/open?id=1CQMwycCp1n68QH0FFmnBbppbw68Jx_73

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https://en.wikipedia.org/wiki/Henry_W._Buse_Jr.
https://en.wikipedia.org/wiki/Robert_Mueller

https://en.wikipedia.org/wiki/James_L._Jones ***Gen. James L. Jones***

"F. R. Buse" - Frederick Rowland Buse

https://www.findagrave.com/memorial/34794799/frederick-rowland-buse

Lieutenant (Junior Grade) F. R. Buse, USN, was designated Naval Aviator #3143 in 1924. Graduated U.S. Naval Academy, Class of 1920 (graduating in 1919). Lieutenant Buse was killed in the crash of his aircraft at NAS Anacostia.

Father also called Burgess Henry W Buse , sometimes just Burgess Buse

1988 (Oct 22) - "GEN. HENRY W. BUSE, OFFICIAL OF OLYMPIC PANEL, DIES AT 76"

Washington Post

Source - [HN010Q][GDrive]

Henry William Buse Jr., 76, a retired Marine Corps lieutenant general and veteran of World War II and the Korean War, who also had served on the U.S. Olympic Committee, died of cancer Oct. 19 at his home in Severna Park, Md.

Gen. Buse was born in Ridley Park, Pa. He graduated from the U.S. Naval Academy at Annapolis in 1934 and had assignments at Quantico and Pearl Harbor.

During World War II, he served with the lst Marine Division in the Pacific. He received the Bronze Star for his service in the capture and defense of Guadalcanal. He was commander of the 3rd battalion of the 7th Marines on Cape Gloucester, where he received the Silver Star and a second Bronze Star.

From 1944 to 1951, Gen. Buse had a variety of command and staff assignments in this country and in Japan. He served in Korea in 1952 and 1953 and received the Legion of Merit.

He was transferred to Marine Corps headquarters in Washington in 1953. He later served for two years as chief of staff of the Marine Corps recruit depot in Parris Island, S.C. He was promoted to brigadier general in 1958.

From 1959 to 1961, Gen. Buse was Marine Corps liaison officer to the vice chief of naval operations. He took command of the 3rd Marine Division on Okinawa in June 1962 and was promoted to major general a month later.

He was transferred back to Marine Corps headquarters in 1963 and became deputy chief of staff for plans and programs. He was promoted to lieutenant general in 1964.

Gen. Buse later became chief of staff at Marine Corps headquarters and was commanding general of Fleet Marine Forces in the Pacific from 1968 until he retired in 1970.

From 1958 to 1985, he had served on the U.S. Olympic Committee, where he was assistant to three former presidents of the committee. He was a member of the Naval Academy Alumni Association and the Naval Academy Chapel. He was a former member of the school board in Severn, Md.

Survivors include his wife, the former Dorothy Snow of Severna Park; a daughter, Barbara Johnson of Bowie; a son, retired Marine Corps Col. Henry W. Buse III of Chicago; a sister, Elizabeth Buse of Swarthmore, Pa., and two grandchildren.

Housatonic

Vannevar Bush (born 1890)

WikiPedia Vannevar Bush

Vannevar Bush - Saved version form Wikipedia (July 8 2020)

See [HK0027][GDrive]

Born

March 11, 1890

Everett, Massachusetts, U.S.

Died

June 28, 1974 (aged 84)

Belmont, Massachusetts, U.S.

Alma mater

Tufts College (B.S., M.S.)

Massachusetts Institute of Technology (D.Eng.)

Known for

National Science Foundation

Manhattan Project

Raytheon

Differential analyzer

Memex

Awards

Edison Medal (1943)

Hoover Medal (1946)

Medal for Merit (1948)

IRI Medal (1949)

John Fritz Medal (1951)

John J. Carty Award (1953)

National Medal of Science (1963)

Atomic Pioneer Award (1970)

(more, see below)

Scientific career

Fields

Electrical engineering

Institutions

Massachusetts Institute of Technology

Carnegie Institution of Washington

Thesis

Oscillating-current circuits: an extension of the theory of generalized angular velocities, with applications to the coupled circuit and the artificial transmission line

(1916)

Doctoral advisor

Dugald C. Jackson

Arthur Edwin Kennelly[1]

Notable students

Claude Shannon

Frederick Terman

Charles Manneback

Influenced

Douglas Engelbart

Ted Nelson

Signature

Vannevar Bush (/væˈniːvɑːr/ *van-NEE-var*; March 11, 1890 – June 28, 1974) was an American engineer, inventor and science administrator, who during World War II headed the U.S. Office of Scientific Research and Development (OSRD), through which almost all wartime military R&D was carried out, including important developments in radar and the initiation and early administration of the Manhattan Project. He emphasized the importance of scientific research to national security and economic well-being, and was chiefly responsible for the movement that led to the creation of the National Science Foundation.[2]

Bush joined the Department of Electrical Engineering at Massachusetts Institute of Technology (MIT) in 1919, and founded the company now known as Raytheon in 1922. Bush became vice president of MIT and dean of the MIT School of Engineering in 1932, and president of the Carnegie Institution of Washington in 1938.

During his career, Bush patented a string of his own inventions. He is known particularly for his engineering work on analog computers, and for the memex.[2] Starting in 1927, Bush constructed a differential analyzer, an analog computer with some digital components that could solve differential equations with as many as 18 independent variables. An offshoot of the work at MIT by Bush and others was the beginning of digital circuit design theory. The memex, which he began developing in the 1930s, was a hypothetical adjustable microfilm viewer with a structure analogous to that of hypertext. The memex and Bush's 1945 essay "As We May Think" influenced generations of computer scientists, who drew inspiration from his vision of the future.[3]

Bush was appointed to the National Advisory Committee for Aeronautics (NACA) in 1938, and soon became its chairman. As chairman of the National Defense Research Committee (NDRC), and later director of OSRD, Bush coordinated the activities of some six thousand leading American scientists in the application of science to warfare. Bush was a well-known policymaker and public intellectual during World War II, when he was in effect the first presidential science advisor. As head of NDRC and OSRD, he initiated the Manhattan Project, and ensured that it received top priority from the highest levels of government. In *Science, The Endless Frontier*, his 1945 report to the President of the United States, Bush called for an expansion of government support for science, and he pressed for the creation of the National Science Foundation.

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Early life and work[edit]

Vannevar Bush was born in Everett, Massachusetts, on March 11, 1890, the third child and only son of Perry Bush, the local Universalist pastor, and his wife Emma Linwood (née Paine). He had two older sisters, Edith and Reba. He was named after John Vannevar, an old friend of the family who had attended Tufts College with Perry. The family moved to Chelsea, Massachusetts, in 1892,[4] and Bush graduated from Chelsea High School in 1909.[5]

He then attended Tufts, like his father before him. A popular student, he was vice president of his sophomore class, and president of his junior class. During his senior year, he managed the football team. He became a member of the Alpha Tau Omega fraternity, and dated Phoebe Clara Davis, who also came from Chelsea. Tufts allowed students to gain a master's degree in four years simultaneously with a bachelor's degree. For his master's thesis, Bush invented and patented a "profile tracer". This was a mapping device for assisting surveyors that looked like a lawn mower. It had two bicycle wheels, and a pen that plotted the terrain over which it traveled. It was the first of a string of inventions.[6][7] On graduation in 1913 he received both bachelor of science and master of science degrees.[8]

After graduation, Bush worked at General Electric (GE) in Schenectady, New York, for $14 a week. As a "test man", his job was to assess equipment to ensure that it was safe. He transferred to GE's plant in Pittsfield, Massachusetts, to work on high voltage transformers, but after a fire broke out at the plant, Bush and the other test men were suspended. He returned to Tufts in October 1914 to teach mathematics, and spent the 1915 summer break working at the Brooklyn Navy Yard as an electrical inspector. Bush was awarded a $1,500 scholarship to study at Clark University as a doctoral student of Arthur Gordon Webster, but Webster wanted Bush to study acoustics, a popular field at the time that led many to computer science. Bush preferred to quit rather than study a subject that did not interest him.[9]

Bush subsequently enrolled in the Massachusetts Institute of Technology (MIT) electrical engineering program. Spurred by the need for enough financial security to marry,[9] he submitted his thesis, entitled *Oscillating-Current Circuits: An Extension of the Theory of Generalized Angular Velocities, with Applications to the Coupled Circuit and the Artificial Transmission Line*,[10] in April 1916. His adviser, Arthur Edwin Kennelly, tried to demand more work from him, but Bush refused, and Kennelly was overruled by the department chairman; Bush received his doctorate in engineering jointly from MIT and Harvard University.[9] He married Phoebe in August 1916.[9] They had two sons: Richard Davis Bush and John Hathaway Bush.[11]

Bush accepted a job with Tufts, where he became involved with the American Radio and Research Corporation (AMRAD), which began broadcasting music from the campus on March 8, 1916. The station owner, Harold Power, hired him to run the company's laboratory, at a salary greater than that which Bush drew from Tufts. In 1917, following the United States' entry into World War I, he went to work with the National Research Council. He attempted to develop a means of detecting submarines by measuring the disturbance in the Earth's magnetic field. His device worked as designed, but only from a wooden ship; attempts to get it to work on a metal ship such as a destroyer failed.[12]

Differential analyzer in use at the Cambridge University Mathematics Laboratory, 1938.

Bush left Tufts in 1919, although he remained employed by AMRAD, and joined the Department of Electrical Engineering at Massachusetts Institute of Technology (MIT), where he worked under Dugald C. Jackson. In 1922, he collaborated with fellow MIT professor William H. Timbie on *Principles of Electrical Engineering*, an introductory textbook. AMRAD's lucrative contracts from World War I had been cancelled, and Bush attempted to reverse the company's fortunes by developing a thermostatic switch invented by Al Spencer, an AMRAD technician, on his own time. AMRAD's management was not interested in the device, but had no objection to its sale. Bush found backing from Laurence K. Marshall and Richard S. Aldrich to create the Spencer Thermostat Company, which hired Bush as a consultant. The new company soon had revenues in excess of a million dollars.[14] It merged with General Plate Company to form Metals & Controls Corporation in 1931, and with Texas Instruments in 1959. Texas Instruments sold it to Bain Capital in 2006, and it became a separate company again as Sensata Technologies in 2010.[15]

In 1924, Bush and Marshall teamed up with physicist Charles G. Smith, who had invented a device called the S-tube. This enabled radios, which had previously required two different types of batteries, to operate from mains power. Marshall raised $25,000 to set up the American Appliance Company on July 7, 1922, to market the invention, with Bush and Smith among its five directors. The venture made Bush wealthy, and the company, now known as Raytheon, ultimately became a large electronics company and defense contractor.[16][14]

Starting in 1927, Bush constructed a differential analyzer, an analog computer that could solve differential equations with as many as 18 independent variables. This invention arose from previous work performed by Herbert R. Stewart, one of Bush's masters students, who at Bush's suggestion created the integraph, a device for solving first-order differential equations, in 1925. Another student, Harold Hazen, proposed extending the device to handle second-order differential equations. Bush immediately realized the potential of such an invention, for these were much more difficult to solve, but also quite common in physics. Under Bush's supervision, Hazen was able to construct the differential analyzer, a table-like array of shafts and pens that mechanically simulated and plotted the desired equation. Unlike earlier designs that were purely mechanical, the differential analyzer had both electrical and mechanical components.[17] Among the engineers who made use of the differential analyzer was General Electric's Edith Clarke, who used it to solve problems relating to electric power transmission.[18] For developing the differential analyzer, Bush was awarded the Franklin Institute's Louis E. Levy Medal in 1928.[19]

Bush taught binary algebra, circuit theory, and operational calculus according to the methods of Oliver Heaviside while Samuel Wesley Stratton was President of MIT. When Harold Jeffreys in Cambridge, England, offered his mathematical treatment in *Operational Methods in Mathematical Physics* (1927), Bush responded with his seminal textbook *Operational Circuit Analysis* (1929) for use instructing future electrical engineers. In the preface he wrote:

I write as an engineer and do not pretend to be a mathematician. I lean for support, and expect always to lean, upon the mathematician, just as I must lean upon the chemist, the physician, or the lawyer. Norbert Wiener has patiently guided me around many a mathematical pitfall ... he has written an appendix to this text on certain mathematical points. I did not know an engineer and a mathematician could have such good times together. I only wish that I could get the real vital grasp of mathematics that he has of the basic principles of physics.

Parry Moon and Stratton were acknowledged, as was M.S. Vallarta who "wrote the first set of class notes which I used."[20]

An offshoot of the work at MIT was the beginning of digital circuit design theory by one of Bush's graduate students, Claude Shannon.[21] Working on the analytical engine, Shannon described the application of Boolean algebra to electronic circuits in his landmark master's thesis, *A Symbolic Analysis of Relay and Switching Circuits*.[22] In 1935, Bush was approached by OP-20-G, which was searching for an electronic device to aid in codebreaking. Bush was paid a $10,000 fee to design the Rapid Analytical Machine (RAM). The project went over budget and was not delivered until 1938, when it was found to be unreliable in service. Nonetheless, it was an important step toward creating such a device.[23]

The reform of the administration of MIT began in 1930 with the appointment of Karl T. Compton as president. Bush and Compton soon clashed over the issue of limiting the amount of outside consultancy by professors, a battle Bush quickly lost, but the two men soon built a solid professional relationship. Compton appointed Bush to the newly created post of vice president in 1932. That year Bush also became the dean of the MIT School of Engineering. The two positions came with a salary of $12,000 plus $6,000 for expenses per annum.[24]

The companies Bush helped to found and the technologies he brought into the market allowed him not to be concerned with financial well-being though, and so he was able to pursue academic and scientific studies that he felt made the world better in the years before and after World War II.

World War II[edit]

Bush attending a meeting at the University of California, Berkeley in 1940. From left to right: Ernest O. Lawrence, Arthur H. Compton, Bush, James B. Conant, Karl T. Compton, and Alfred L. Loomis

Carnegie Institution for Science[edit]

In May 1938, Bush accepted a prestigious appointment as president of the Carnegie Institution of Washington (CIW), which had been founded in Washington, D.C. Also known as the Carnegie Institution for Science, it had an endowment of $33 million, and annually spent $1.5 million in research, most of which was carried out at its eight major laboratories. Bush became its president on January 1, 1939, with a salary of $25,000. He was now able to influence research policy in the United States at the highest level, and could informally advise the government on scientific matters.[25] Bush soon discovered that the CIW had serious financial problems, and he had to ask the Carnegie Corporation for additional funding.[26]

Bush clashed over leadership of the institute with Cameron Forbes, CIW's chairman of the board, and with his predecessor, John Merriam, who continued to offer unwanted advice. A major embarrassment to them all was Harry H. Laughlin, the head of the Eugenics Record Office, whose activities Merriam had attempted to curtail without success. Bush made it a priority to remove him, regarding him as a scientific fraud, and one of his first acts was to ask for a review of Laughlin's work. In June 1938, Bush asked Laughlin to retire, offering him an annuity, which Laughlin reluctantly accepted. The Eugenics Record Office was renamed the Genetics Record Office, its funding was drastically cut, and it was closed completely in 1944.[26] Senator Robert Reynolds attempted to get Laughlin reinstated, but Bush informed the trustees that an inquiry into Laughlin would "show him to be physically incapable of directing an office, and an investigation of his scientific standing would be equally conclusive."[27]

Bush wanted the institute to concentrate on hard science. He gutted Carnegie's archeology program, setting the field back many years in the United States. He saw little value in the humanities and social sciences, and slashed funding for *Isis*, a journal dedicated to the history of science and technology and its cultural influence.[26] Bush later explained that "I have a great reservation about these studies where somebody goes out and interviews a bunch of people and reads a lot of stuff and writes a book and puts it on a shelf and nobody ever reads it."[28]

National Advisory Committee for Aeronautics[edit]

On August 23, 1938, Bush was appointed to the National Advisory Committee for Aeronautics (NACA), the predecessor of NASA.[25] Its chairman Joseph Sweetman Ames became ill, and Bush, as vice chairman, soon had to act in his place. In December 1938, NACA asked for $11 million to establish a new aeronautical research laboratory in Sunnyvale, California, to supplement the existing Langley Memorial Aeronautical Laboratory. The California location was chosen for its proximity to some of the largest aviation corporations. This decision was supported by the chief of the United States Army Air Corps, Major General Henry H. Arnold, and by the head of the navy's Bureau of Aeronautics, Rear Admiral Arthur B. Cook, who between them were planning to spend $225 million on new aircraft in the year ahead. However, Congress was not convinced of its value, and Bush had to appear before the Senate Appropriations Committee on April 5, 1939. It was a frustrating experience for Bush, since he had never appeared before Congress before, and the senators were not swayed by his arguments. Further lobbying was required before funding for the new center, now known as the Ames Research Center, was finally approved. By this time, war had broken out in Europe, and the inferiority of American aircraft engines was apparent,[29] in particular the Allison V-1710 which performed poorly at high altitudes and had to be removed from the P-51 Mustang in favor of the British Rolls-Royce Merlin engine.[30] The NACA asked for funding to build a third center in Ohio, which became the Glenn Research Center. Following Ames's retirement in October 1939, Bush became chairman of the NACA, with George J. Mead as his deputy.[29] Bush remained a member of the NACA until November 1948.[31]

National Defense Research Committee[edit]

During World War I, Bush had become aware of poor cooperation between civilian scientists and the military. Concerned about the lack of coordination in scientific research and the requirements of defense mobilization, Bush proposed the creation of a general directive agency in the federal government, which he discussed with his colleagues. He had the secretary of NACA prepare a draft of the proposed National Defense Research Committee (NDRC) to be presented to Congress, but after the Germans invaded France in May 1940, Bush decided speed was important and approached President Franklin D. Roosevelt directly. Through the President's uncle, Frederic Delano, Bush managed to set up a meeting with Roosevelt on June 12, 1940, to which he brought a single sheet of paper describing the agency. Roosevelt approved the proposal in 15 minutes, writing "OK – FDR" on the sheet.[32]

With Bush as chairman, the NDRC was functioning even before the agency was officially established by order of the Council of National Defense on June 27, 1940. The organization operated financially on a hand-to-mouth basis with monetary support from the president's emergency fund.[33] Bush appointed four leading scientists to the NDRC: Karl Taylor Compton (president of MIT), James B. Conant (president of Harvard University), Frank B. Jewett (president of the National Academy of Sciences and chairman of the Board of Directors of Bell Laboratories), and Richard C. Tolman (dean of the graduate school at Caltech); Rear Admiral Harold G. Bowen, Sr. and Brigadier General George V. Strong represented the military. The civilians already knew each other well, which allowed the organization to begin functioning immediately.[34] The NDRC established itself in the administration building at the Carnegie Institution of Washington.[35] Each member of the committee was assigned an area of responsibility, while Bush handled coordination. A small number of projects reported to him directly, such as the S-1 Section.[36] Compton's deputy, Alfred Loomis, said that "of the men whose death in the Summer of 1940 would have been the greatest calamity for America, the President is first, and Dr. Bush would be second or third."[37]

Bush was fond of saying that "if he made any important contribution to the war effort at all, it would be to get the Army and Navy to tell each other what they were doing."[38] He established a cordial relationship with Secretary of War Henry L. Stimson, and Stimson's assistant, Harvey H. Bundy, who found Bush "impatient" and "vain", but said he was "one of the most important, able men I ever knew".[33] Bush's relationship with the navy was more turbulent. Bowen, the director of the Naval Research Laboratory (NRL), saw the NDRC as a bureaucratic rival, and recommended abolishing it. A series of bureaucratic battles ended with the NRL placed under the Bureau of Ships, and Secretary of the Navy Frank Knox placing an unsatisfactory fitness report in Bowen's personnel file. After the war, Bowen would again try to create a rival to the NDRC inside the navy.[39]

On August 31, 1940, Bush met with Henry Tizard, and arranged a series of meetings between the NDRC and the Tizard Mission, a British scientific delegation. At a meeting On September 19, 1940, the Americans described Loomis and Compton's microwave research. They had an experimental 10 cm wavelength short wave radar, but admitted that it did not have enough power and that they were at a dead end. Taffy Bowen and John Cockcroft of the Tizard Mission then produced a cavity magnetron, a device more advanced than anything the Americans had seen, with a power output of around 10 KW at 10 cm,[40] enough to spot the periscope of a surfaced submarine at night from an aircraft. To exploit the invention, Bush decided to create a special laboratory. The NDRC allocated the new laboratory a budget of $455,000 for its first year. Loomis suggested that the lab should be run by the Carnegie Institution, but Bush convinced him that it would best be run by MIT. The Radiation Laboratory, as it came to be known, tested its airborne radar from an

institution, but Bush convinced him that it would best be run by MIT. The Radiation Laboratory, as it came to be known, tested its airborne radar from an Army B-18 on March 27, 1941. By mid-1941, it had developed SCR-584 radar, a mobile radar fire control system for antiaircraft guns.[41]

In September 1940, Norbert Wiener approached Bush with a proposal to build a digital computer. Bush declined to provide NDRC funding for it on the grounds that he did not believe that it could be completed before the end of the war. The supporters of digital computers were disappointed at the decision, which they attributed to a preference for outmoded analog technology. In June 1943, the Army provided $500,000 to build the computer, which became ENIAC, the first general-purpose electronic computer. Having delayed its funding, Bush's prediction proved correct as ENIAC was not completed until December 1945, after the war had ended.[42] His critics saw his attitude as a failure of vision.[43]

Office of Scientific Research and Development[edit]

On June 28, 1941, Roosevelt established the Office of Scientific Research and Development (OSRD) with the signing of Executive Order 8807.[44] Bush became director of the OSRD while Conant succeeded him as chairman of the NDRC, which was subsumed into the OSRD. The OSRD was on a firmer financial footing than the NDRC since it received funding from Congress, and had the resources and the authority to develop weapons and technologies with or without the military. Furthermore, the OSRD had a broader mandate than the NDRC, moving into additional areas such as medical research[45] and the mass production of penicillin and sulfa drugs. The organization grew to 850 full-time employees,[46] and produced between 30,000 and 35,000 reports.[47] The OSRD was involved in some 2,500 contracts,[48] worth in excess of $536 million.[49]

Bush's method of management at the OSRD was to direct overall policy, while delegating supervision of divisions to qualified colleagues and letting them do their jobs without interference. He attempted to interpret the mandate of the OSRD as narrowly as possible to avoid overtaxing his office and to prevent duplicating the efforts of other agencies. Bush would often ask: "Will it help to win a war; *this* war?"[50] Other challenges involved obtaining adequate funds from the president and Congress and determining apportionment of research among government, academic, and industrial facilities.[50] His most difficult problems, and also greatest successes, were keeping the confidence of the military, which distrusted the ability of civilians to observe security regulations and devise practical solutions,[51] and opposing conscription of young scientists into the armed forces. This became especially difficult as the army's manpower crisis really began to bite in 1944.[52] In all, the OSRD requested deferments for some 9,725 employees of OSRD contractors, of which all but 63 were granted.[52] In his obituary, *The New York Times* described Bush as "a master craftsman at steering around obstacles, whether they were technical or political or bull-headed generals and admirals."[53]

Proximity fuze[edit]

Cut away diagram of the proximity fuze Mark 53

In August 1940, the NDRC began work on a proximity fuze, a fuze inside an artillery shell that would explode when it came close to its target. A radar set, along with the batteries to power it, was miniaturized to fit inside a shell, and its glass vacuum tubes designed to withstand the 20,000 g-force of being fired from a gun and 500 rotations per second in flight.[54] Unlike normal radar, the proximity fuze sent out a continuous signal rather than short pulses.[55] The NDRC created a special Section T chaired by Merle Tuve of the CIW, with Commander William S. Parsons as special assistant to Bush and liaison between the NDRC and the Navy's Bureau of Ordnance (BuOrd).[54] One of CIW staff members that Tuve recruited to Section T in 1940 was James Van Allen. In April 1942, Bush placed Section T directly under the OSRD, and Parsons in charge. The research effort remained under Tuve but moved to the Johns Hopkins University's Applied Physics Laboratory (APL), where Parsons was BuOrd's representative.[56] In August 1942, a live firing test was conducted with the newly commissioned cruiser USS *Cleveland*; three pilotless drones were shot down in succession.[57]

To preserve the secret of the proximity fuze, its use was initially permitted only over water, where a dud round could not fall into enemy hands. In late 1943, the Army obtained permission to use the weapon over land. The proximity fuze proved particularly effective against the V-1 flying bomb over England, and later Antwerp, in 1944. A version was also developed for use with howitzers against ground targets.[58] Bush met with the Joint Chiefs of Staff in October 1944 to press for its use, arguing that the Germans would be unable to copy and produce it before the war was over. Eventually, the Joint Chiefs agreed to allow its employment from December 25. In response to the German Ardennes Offensive on December 16, 1944, the immediate use of the proximity fuze was authorized, and it went into action with deadly effect.[59] By the end of 1944, proximity fuzes were coming off the production lines at the rate of 40,000 per day.[58] "If one looks at the proximity fuze program as a whole," historian James Phinney Baxter III wrote, "the magnitude and complexity of the effort rank it among the three or four most extraordinary scientific achievements of the war."[60]

The German V-1 flying bomb demonstrated a serious omission in OSRD's portfolio: guided missiles. While the OSRD had some success developing unguided rockets, it had nothing comparable to the V-1, the V-2 or the Henschel Hs 293 air-to-ship gliding guided bomb. Although the United States trailed the Germans and Japanese in several areas, this represented an entire field that had been left to the enemy. Bush did not seek the advice of Dr. Robert H. Goddard. Goddard would come to be regarded as America's pioneer of rocketry, but many contemporaries regarded him as a crank. Before the war, Bush had gone on the record as saying, "I don't understand how a serious scientist or engineer can play around with rockets",[61] but in May 1944, he was forced to travel to London to warn General Dwight Eisenhower of the danger posed by the V-1 and V-2.[62] Bush could only recommend that the launch sites be bombed, which was done.[63]

Manhattan Project[edit]

Bush played a critical role in persuading the United States government to undertake a crash program to create an atomic bomb.[64] When the NDRC was formed, the Committee on Uranium was placed under it, reporting directly to Bush as the Uranium Committee. Bush reorganized the committee, strengthening its scientific component by adding Tuve, George B. Pegram, Jesse W. Beams, Ross Gunn and Harold Urey.[65] When the OSRD was formed in June 1941, the Uranium Committee was again placed directly under Bush. For security reasons, its name was changed to the Section S-1.[66]

Left to right: Vannevar Bush, James B. Conant, Major General Leslie Groves and Colonel Franklin Matthias at the Hanford Site in July 1945

Bush met with Roosevelt and Vice President Henry A. Wallace on October 9, 1941, to discuss the project. He briefed Roosevelt on Tube Alloys, the British atomic bomb project and its Maud Committee, which had concluded that an atomic bomb was feasible, and on the German nuclear energy project, about which little was known. Roosevelt approved and expedited the atomic program. To control it, he created a Top Policy Group consisting of himself—although he never attended a meeting—Wallace, Bush, Conant, Stimson and the Chief of Staff of the Army, General George Marshall.[67] On Bush's advice, Roosevelt chose the army to run the project rather than the navy, although the navy had shown far more interest in the field, and was already conducting research into atomic energy for powering ships. Bush's negative experiences with the Navy had convinced him that it would not listen to his advice, and could not handle large-scale construction projects.[68][69]

In March 1942, Bush sent a report to Roosevelt outlining work by Robert Oppenheimer on the nuclear cross section of uranium-235. Oppenheimer's

calculations, which Bush had George Kistiakowsky check, estimated that the critical mass of a sphere of Uranium-235 was in the range of 2.5 to 5 kilograms, with a destructive power of around 2,000 tons of TNT. Moreover, it appeared that plutonium might be even more fissile.[70] After conferring with Brigadier General Lucius D. Clay about the construction requirements, Bush drew up a submission for $85 million in fiscal year 1943 for four pilot plants, which he forwarded to Roosevelt on June 17, 1942. With the Army on board, Bush moved to streamline oversight of the project by the OSRD, replacing the Section S-1 with a new S-1 Executive Committee.[71]

Bush soon became dissatisfied with the dilatory way the project was run, with its indecisiveness over the selection of sites for the pilot plants. He was particularly disturbed at the allocation of an AA-3 priority, which would delay completion of the pilot plants by three months. Bush complained about these problems to Bundy and Under Secretary of War Robert P. Patterson. Major General Brehon B. Somervell, the commander of the army's Services of Supply, appointed Brigadier General Leslie R. Groves as project director in September. Within days of taking over, Groves approved the proposed site at Oak Ridge, Tennessee, and obtained a AAA priority. At a meeting in Stimson's office on September 23 attended by Bundy, Bush, Conant, Groves, Marshall Somervell and Stimson, Bush put forward his proposal for steering the project by a small committee answerable to the Top Policy Group. The meeting agreed with Bush, and created a Military Policy Committee chaired by him, with Somervell's chief of staff, Brigadier General Wilhelm D. Styer, representing the army, and Rear Admiral William R. Purnell representing the navy.[72]

At the meeting with Roosevelt on October 9, 1941, Bush advocated cooperating with the United Kingdom, and he began corresponding with his British counterpart, Sir John Anderson.[73] But by October 1942, Conant and Bush agreed that a joint project would pose security risks and be more complicated to manage. Roosevelt approved a Military Policy Committee recommendation stating that information given to the British should be limited to technologies that they were actively working on and should not extend to post-war developments.[74] In July 1943, on a visit to London to learn about British progress on antisubmarine technology,[75] Bush, Stimson, and Bundy met with Anderson, Lord Cherwell, and Winston Churchill at 10 Downing Street. At the meeting, Churchill forcefully pressed for a renewal of interchange, while Bush defended current policy. Only when he returned to Washington did he discover that Roosevelt had agreed with the British. The Quebec Agreement merged the two atomic bomb projects, creating the Combined Policy Committee with Stimson, Bush and Conant as United States representatives.[76]

Bush appeared on the cover of *Time* magazine on April 3, 1944.[77] He toured the Western Front in October 1944, and spoke to ordnance officers, but no senior commander would meet with him. He was able to meet with Samuel Goudsmit and other members of the Alsos Mission, who assured him that there was no danger from the German project; he conveyed this assessment to Lieutenant General Bedell Smith.[78] In May 1945, Bush became part of the Interim Committee formed to advise the new president, Harry S. Truman, on nuclear weapons.[79] It advised that the atomic bomb should be used against an industrial target in Japan as soon as possible and without warning.[80] Bush was present at the Alamogordo Bombing and Gunnery Range on July 16, 1945, for the Trinity nuclear test, the first detonation of an atomic bomb.[81] Afterwards, he took his hat off to Oppenheimer in tribute.[82]

Before the end of the Second World War, Bush and Conant had foreseen and sought to avoid a possible nuclear arms race. Bush proposed international scientific openness and information sharing as a method of self-regulation for the scientific community, to prevent any one political group gaining a scientific advantage. Before nuclear research became public knowledge, Bush used the development of biological weapons as a model for the discussion of similar issues, an "opening wedge". He was less successful in promoting his ideas in peacetime with President Harry Truman, than he had been under wartime conditions with Roosevelt.[2][83]

In "As We May Think", an essay published by the *Atlantic Monthly* in July 1945, Bush wrote: "This has not been a scientist's war; it has been a war in which all have had a part. The scientists, burying their old professional competition in the demand of a common cause, have shared greatly and learned much. It has been exhilarating to work in effective partnership."[84]

Post-war years[edit]

Memex concept[edit]

Bush introduced the concept of the memex during the 1930s, which he imagined as a form of memory augmentation involving a microfilm-based "device in which an individual stores all his books, records, and communications, and which is mechanized so that it may be consulted with exceeding speed and flexibility. It is an enlarged intimate supplement to his memory."[84] He wanted the memex to emulate the way the brain links data by association rather than by indexes and traditional, hierarchical storage paradigms, and be easily accessed as "a future device for individual use ... a sort of mechanized private file and library" in the shape of a desk.[84] The memex was also intended as a tool to study the brain itself.[84]

Bush conceived the encyclopedia of the future as having a mesh of associative trails running through it, akin to hyperlinks, stored in a memex system.

After thinking about the potential of augmented memory for several years, Bush set out his thoughts at length in "As We May Think", predicting that "wholly new forms of encyclopedias will appear, ready made with a mesh of associative trails running through them, ready to be dropped into the memex and there amplified".[84] "As We May Think" was published in the July 1945 issue of *The Atlantic*. A few months later, *Life* magazine published a condensed version of "As We May Think", accompanied by several illustrations showing the possible appearance of a memex machine and its companion devices.[85]

Shortly after "As We May Think" was originally published, Douglas Engelbart read it, and with Bush's visions in mind, commenced work that would later lead to the invention of the mouse.[86] Ted Nelson, who coined the terms "hypertext" and "hypermedia", was also greatly influenced by Bush's essay.[87][88]

"As We May Think" has turned out to be a visionary and influential essay.[89] In their introduction to a paper discussing information literacy as a discipline, Bill Johnston and Sheila Webber wrote in 2005 that:

Bush's paper might be regarded as describing a microcosm of the information society, with the boundaries tightly drawn by the interests and experiences of a major scientist of the time, rather than the more open knowledge spaces of the 21st century. Bush provides a core vision of the importance of information to industrial / scientific society, using the image of an "information explosion" arising from the unprecedented demands on scientific production and technological application of World War II. He outlines a version of information science as a key discipline within the practice of scientific and technical knowledge domains. His view encompasses the problems of information overload and the need to devise efficient mechanisms to control and channel information for use.[90]

Bush was concerned that information overload might inhibit the research efforts of scientists. Looking to the future, he predicted a time when "there is a growing mountain of research. But there is increased evidence that we are being bogged down today as specialization extends. The investigator is staggered by the findings and conclusions of thousands of other workers."[84]

National Science Foundation[edit]

The OSRD continued to function actively until some time after the end of hostilities, but by 1946–1947 it had been reduced to a minimal staff charged with finishing work remaining from the war period; Bush was calling for its closure even before the war had ended. During the war, the OSRD had issued contracts as it had seen fit, with just eight organizations accounting for half of its spending. MIT was the largest to receive funds, with its obvious ties to Bush and his close associates. Efforts to obtain legislation exempting the OSRD from the usual government conflict of interest regulations failed, leaving Bush and other OSRD principals open to prosecution. Bush therefore pressed for OSRD to be wound up as soon as possible.[91]

With its dissolution, Bush and others had hoped that an equivalent peacetime government research and development agency would replace the OSRD. Bush felt that basic research was important to national survival for both military and commercial reasons, requiring continued government support for science and technology; technical superiority could be a deterrent to future enemy aggression. In *Science, The Endless Frontier*, a July 1945 report to the president, Bush maintained that basic research was "the pacemaker of technological progress". "New products and new processes do not appear full-grown," Bush wrote in the report. "They are founded on new principles and new conceptions, which in turn are painstakingly developed by research in the purest realms of science!"[92] In Bush's view, the "purest realms" were the physical and medical sciences; he did not propose funding the social sciences.[93] In *Science, The Endless Frontier*, science historian Daniel Kevles later wrote, Bush "insisted upon the principle of Federal patronage for the advancement of knowledge in the United States, a departure that came to govern Federal science policy after World War II."[94]

Bush (left) with Harry S. Truman (center) and James B. Conant (right)

In July 1945, the Kilgore bill was introduced in Congress, proposing the appointment and removal of a single science administrator by the president, with emphasis on applied research, and a patent clause favoring a government monopoly. In contrast, the competing Magnuson bill was similar to Bush's proposal to vest control in a panel of top scientists and civilian administrators with the executive director appointed by them. The Magnuson bill emphasized basic research and protected private patent rights.[95] A compromise Kilgore–Magnuson bill of February 1946 passed the Senate but expired in the House because Bush favored a competing bill that was a virtual duplicate of Magnuson's original bill.[96] A Senate bill was introduced in February 1947 to create the National Science Foundation (NSF) to replace the OSRD. This bill favored most of the features advocated by Bush, including the controversial administration by an autonomous scientific board. The bill passed the Senate and the House, but was pocket vetoed by Truman on August 6, on the grounds that the administrative officers were not properly responsible to either the president or Congress.[97] The OSRD was abolished without a successor organization on December 31, 1947.[98]

Without a National Science Foundation, the military stepped in, with the Office of Naval Research (ONR) filling the gap. The war had accustomed many scientists to working without the budgetary constraints imposed by pre-war universities.[99] Bush helped create the Joint Research and Development Board (JRDB) of the Army and Navy, of which he was chairman. With passage of the National Security Act on July 26, 1947, the JRDB became the Research and Development Board (RDB). Its role was to promote research through the military until a bill creating the National Science Foundation finally became law.[100] By 1953, the Department of Defense was spending $1.6 billion a year on research; physicists were spending 70 percent of their time on defense related research, and 98 percent of the money spent on physics came from either the Department of Defense or the Atomic Energy Commission (AEC), which took over from the Manhattan Project on January 1, 1947.[101] Legislation to create the National Science Foundation finally passed through Congress and was signed into law by Truman in 1950.[102]

The authority that Bush had as chairman of the RDB was much different from the power and influence he enjoyed as director of OSRD and would have enjoyed in the agency he had hoped would be independent of the Executive branch and Congress. He was never happy with the position and resigned as chairman of the RDB after a year, but remained on the oversight committee.[103] He continued to be skeptical about rockets and missiles, writing in his 1949 book, *Modern Arms and Free Men*, that intercontinental ballistic missiles would not be technically feasible "for a long time to come ... if ever".[104]

Later life[edit]

With Truman as president, men like John R. Steelman, who was appointed chairman of the President's Scientific Research Board in October 1946, came to prominence.[105] Bush's authority, both among scientists and politicians, suffered a rapid decline, though he remained a revered figure.[106] In September 1949, he was appointed to head a scientific panel that included Oppenheimer to review the evidence that the Soviet Union had tested its first atomic bomb. The panel concluded that it had, and this finding was relayed to Truman, who made the public announcement.[107] During 1952 Bush was one of five members of the State Department Panel of Consultants on Disarmament, and led the panel in urging that the United States postpone its planned first test of the hydrogen bomb and seek a test ban with the Soviet Union, on the grounds that avoiding a test might forestall development of a catastrophic new weapon and open the way for new arms agreements between the two nations.[108] The panel lacked political allies in Washington, however, and the Ivy Mike shot went ahead as scheduled.[108] Bush was outraged when a security hearing stripped Oppenheimer of his security clearance in 1954; he issued a strident attack on Oppenheimer's accusers in *The New York Times*. Alfred Friendly summed up the feeling of many scientists in declaring that Bush had become "the Grand Old Man of American science".[109]

Bush continued to serve on the NACA through 1948 and expressed annoyance with aircraft companies for delaying development of a turbojet engine because of the huge expense of research and development as well as retooling from older piston engines.[110] He was similarly disappointed with the automobile industry, which showed no interest in his proposals for more fuel-efficient engines. General Motors told him that "even if it were a better engine, [General Motors] would not be interested in it."[111] Bush likewise deplored trends in advertising. "Madison Avenue believes", he said, "that if you tell the public something absurd, but do it enough times, the public will ultimately register it in its stock of accepted verities."[112]

From 1947–1962, Bush was on the board of directors for American Telephone and Telegraph. He retired as president of the Carnegie Institution and returned to Massachusetts in 1955,[109] but remained a director of Metals and Controls Corporation from 1952–1959, and of Merck & Co. 1949–1962.[113] Bush became chairman of the board at Merck following the death of George W. Merck, serving until 1962. He worked closely with the company's president, Max Tishler, although Bush was concerned about Tishler's reluctance to delegate responsibility. Bush distrusted the company's sales organization, but supported Tishler's research and development efforts.[114] He was a trustee of Tufts College 1943–1962, of Johns Hopkins University 1943–1955, of the Carnegie Corporation of New York 1939–1950, the Carnegie Institution of Washington 1958–1974, and the George Putnam Fund of Boston 1956–1972, and was a regent of the Smithsonian Institution 1943–1955.[115]

Bush received the AIEE's Edison Medal in 1943, "for his contribution to the advancement of electrical engineering, particularly through the development of new applications of mathematics to engineering problems, and for his eminent service to the nation in guiding the war research program."[116] In 1945, Bush was awarded the Public Welfare Medal from the National Academy of Sciences.[117] In 1949, he received the IRI Medal from the Industrial Research Institute in recognition of his contributions as a leader of research and development.[115] President Truman awarded Bush the Medal of Merit with bronze

oak leaf cluster in 1948, President Lyndon Johnson awarded him the National Medal of Science in 1963,[118] and President Richard Nixon presented him with the Atomic Pioneers Award from the Atomic Energy Commission in February 1970.[119] Bush was also made a Knight Commander of the Order of the British Empire in 1948, and an Officer of the French Legion of Honor in 1955.[115]

After suffering a stroke, Bush died in Belmont, Massachusetts, at the age of 84 from pneumonia on June 28, 1974. He was survived by his sons Richard (a surgeon) and John (president of Millipore Corporation) and by six grandchildren and his sister Edith. Bush's wife had died in 1969.[120] He was buried at South Dennis Cemetery in South Dennis, Massachusetts,[121] after a private funeral service. At a public memorial subsequently held by MIT,[122] Jerome Wiesner declared "No American has had greater influence in the growth of science and technology than Vannevar Bush".[113]

In 1980, the National Science Foundation created the Vannevar Bush Award to honor his contributions to public service.[123] The Vannevar Bush papers are located in several places, with the majority of the collection held at the Library of Congress. Additional papers are held by the MIT Institute Archives and Special Collections, the Carnegie Institution, and the National Archives and Records Administration.[124][125][126]

1952

https://www.newspapers.com/image/236088953/?terms=vannevar%2Bbiological

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1950

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1951 - new printing?

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1957 - Vannevar + MelpAR

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1964

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1970 - vannever + groves

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1945

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https://www.newspapers.com/image/249499450/?terms=vannevar%2Btesla

https://en.wikipedia.org/wiki/Westinghouse_Atom_Smasher

1962 - Groves + Vannevar

https://www.newspapers.com/image/574694294/?terms=vannevar%2Bgise

1962-04-07-st-louis-globe-democrat-pg-4-f

1962-04-07-st-louis-globe-democrat-pg-4-f-clip-bomb

Story of A-Bomb Project

Reviewed by
LOUIS LA COSS
Editor Emeritus
Of The Globe-Democrat

1962-04-07-st-louis-globe-democrat-pg-4-f-clip-bomb

NOW IT CAN BE TOLD: The Story of the Manhattan Project, by Lt.Gen. Leslie R. Groves, U. S. Army, Ret. (Harper)—The author was a Colonel in the United States Army Engineers in September, 1942, when he was given the assignment by President Roosevelt to construct the facilities needed for the development of the atomic bomb project which the United States was undertaking and which was known then as the Manhattan Engineer District (MED) with headquarters in Washington. He was in charge of the project until December 31, 1946, when he retired, now a Lieutenant General.

During his incumbency the vast potentialities of atomic energy were explored, more than 600,000 Americans worked on various phases of the project from Oak Ridge, Tenn., to Hanford, Wash., to Los Alamos and Alamogordo, New Mexico, until the date in August, 1945, when Hiroshima was blasted, followed by a similar bombing of Nagasaki. All of which knocked Japan out of the war and that was our long objective. In Hiroshima alone the dead numbered 71,000 and 68,000 were injured.

The task confronting Gen. Groves had many ramifications. Of prime importance was secrecy and that was not easy considering the thousands employed at various sites, most of them not knowing what was going on except in their limited field of engineering and construction. The ever-iquisitive press could be told little. Only a few top government officials, including leaders in Congress where the billions in appropriations had to be made, were in the know.

In addition, the best scientists in the nation were working on special phases of the project. Many had their own ideas of how the bomb was to be developed and it was not easy to reconcile their views because, for the most part, all were working in the dark. There were no precedents to follow, no charted course—it was a procedure by trial and error.

Gen. Groves extends lavish praise on everybody concerned —Dr. Vannevar Bush, chairman of the Office of Scientific Research and Development (OSRD), Dr. James B. Conant, chairman of the National Defense Research Committee (NDRC), top brass in the Army, Navy and Air Force. He frequently refers to the splendid effort of the late Dr. Arthur H. Compton who was in charge of the Metallurgical Laboratory at the University of Chicago where he conducted valuable research to develop the knowledge needed to design, build and operate a plant for the conversion of uranium into plutonium. There were other laboratories at other Universities.

As was to be expected, Gen. Groves was a controversial figure in the atomic energy program, because the Project required one over-all boss whose decisions were final. He could not hope to please all groups all the time and he was criticized. But his present account, now that the full story can be told, makes it plain that his absorbing interest was to get the job done and to do it he chose the best men and women available.

One of his controversial selections was Dr. J. Robert Oppenheimer who was charged by some with being a security risk. Of him he writes: "As to his loyalty, I have repeatedly stated in recent years—in print, on tv, on radio, and before the Personnel Security Board, headed by Dr. Gordon Gray—that I would be greatly surprised if Oppenheimer had ever consciously committed a disloyal act against the United States."

The question is frequently asked: Was the development of the atomic bomb necessary, was the bombing of Japan necessary? His reply: "The atomic bombings of Hiroshima and Nagasaki ended World War II. While they brought death and destruction on a horrifying scale, they averted even greater losses — American, English and Japanese. No man can say what would have been the result if we had not taken the steps that were necessary to achieve that end. One thing seems certain—atomic energy would have been developed somewhere in the world in the mid-twentieth century. x x x In answer to the question, 'Was the development of the atomic bomb by the United States necessary?, I reply unequivocally, 'Yes'. To the question, 'Is atomic energy a force for good or for evil?', I can only say, 'As mankind wills it.'"

His story of the Manhattan Project is fascinating reading.

1949 (Nov 26) - Discussing bioweapons

https://www.newspapers.com/image/650858295/?terms=vannevar%2Bbiological

1949-11-26-the-kansas-city-star-pg-14

1949-11-26-the-kansas-city-star-pg-14-clip-vannevar-bush

A Scientist's Estimate Of Today's Weapons For War

MODERN ARMS AND FREE MEN, by Vannevar Bush (271 pages; Simon & Schuster, New York; $3.50).

BOMBING by air fleets at the speeds and altitudes of the last war is now obsolete against a fully prepared and alert enemy, we are told.

Because of this "logical conclusion," Dr. Vannevar Bush, head of American scientific research and development in the last war, believes that "we have less reason to be terrified by the thought of the A-bomb delivered by fleets of bombers."

Discussing this fear of many people today, Dr. Bush, in "Modern Arms and Free Men," analyzes the changes caused by the advent of atomic energy applied to warfare. Delivery of A-bombs by bombers cannot be entirely discounted, but he maintains that "the specter of great fleets of bombers, destroying great cities at will by atomic bombs [illegible]ecter only."

The high-speed guided missile is a prime defensive weapon that promises to neutralize the high-flying bombers, according to Dr. Bush.

Used Like a Gun.

"The high-speed guided missile can be used locally, like a gun," he writes, "or carried to a threatened spot or fired from a plane. It has not the gun's limitation on ceiling and can go as high as the bomber. Its speed of a bullet pretty well guarantees it against being shot down in flight. Jamming is difficult. It is directed into its target and carries a proximity fuse. For defense of restricted areas it promises to be a deciding factor. It can be used air-to-air, but here again the interceptor can use it to better advantage than the bomber."

VANNEVAR BUSH . . . He considers possibilities and probabilities of A-bomb warfare in his book, "Modern Arms and Free Men."

This guided missile, Dr. Bush indicates, should be ready for war use by the time there are great stocks of atomic bombs. In his opinion, "it may well render all conventional mass bombing obsolete when two highly technical, alert and industrially advanced combatants clinch."

Despite this new method of defense, Dr. Bush warns that an enemy might, with great losses, get through to highly important targets. The means of defense is highly expensive, and it must be alert, he observes. There are other means of delivery of atomic bombs than dropping them from the air, such as sneaking them into harbors in ships and planting them at the bottom of rivers.

A Danger in Sneak Raids.

Sneak raids and surprise attacks must be guarded against. The sneak bomber coming in at low altitude to avoid radar warning and too low to be fired upon effectively by batteries of guns and missiles might carry an atomic bomb to a target, even if it were destroyed itself in doing so. Bombs might be lobbed into coastal cities by rocket projectors, perhaps from submarines twenty-five to fifty miles at sea, Dr. Bush says.

The question of whether germ or biological warfare will be used in the future depends, in Dr. Bush's opinion, on whether an enemy can deliver the old and the newer toxic materials effectively. He does not believe that mass delivery in an effective method is feasible, and biological weapons are not the absolute weapons, but are more important in subversive operations than in open, all-out combat.

Dr. Bush, for the last ten years president of the Carnegie Institute of Washington, also goes into the political and sociological aspects of today's developments in physical and biological science. He is optimistic about the future.

"I believe," he writes, "that the technological future is far less dreadful and frightening than many of us have been led to believe, and that the hopeful aspects of modern applied science outweigh by a heavy margin its threat to our civilization. I believe the democratic process is itself an asset with which, if we can find the enthusiasm and the skill to use it and the faith to make it strong, we can build a world in which all men can live in prosperity and peace."

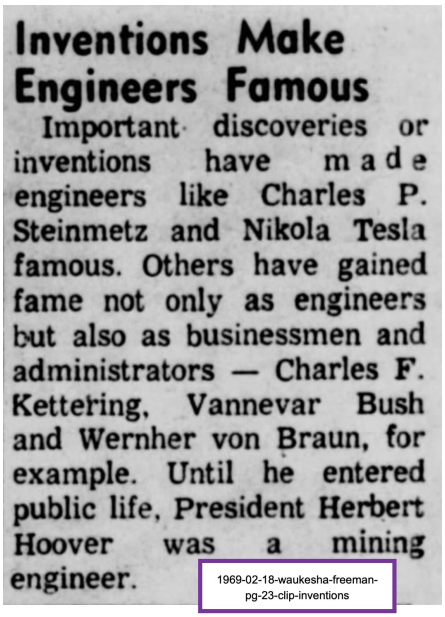
1949-11-26-the-kansas-city-star-pg-14-clip-vannevar-bush

1969 (Feb 18) - tesla / bush mentioned

https://www.newspapers.com/image/87153995/?terms=vannevar%2Btesla

1969-02-18-waukesha-freeman-pg-23

1969-02-18-waukesha-freeman-pg-23-clip-inventions



Inventions Make Engineers Famous

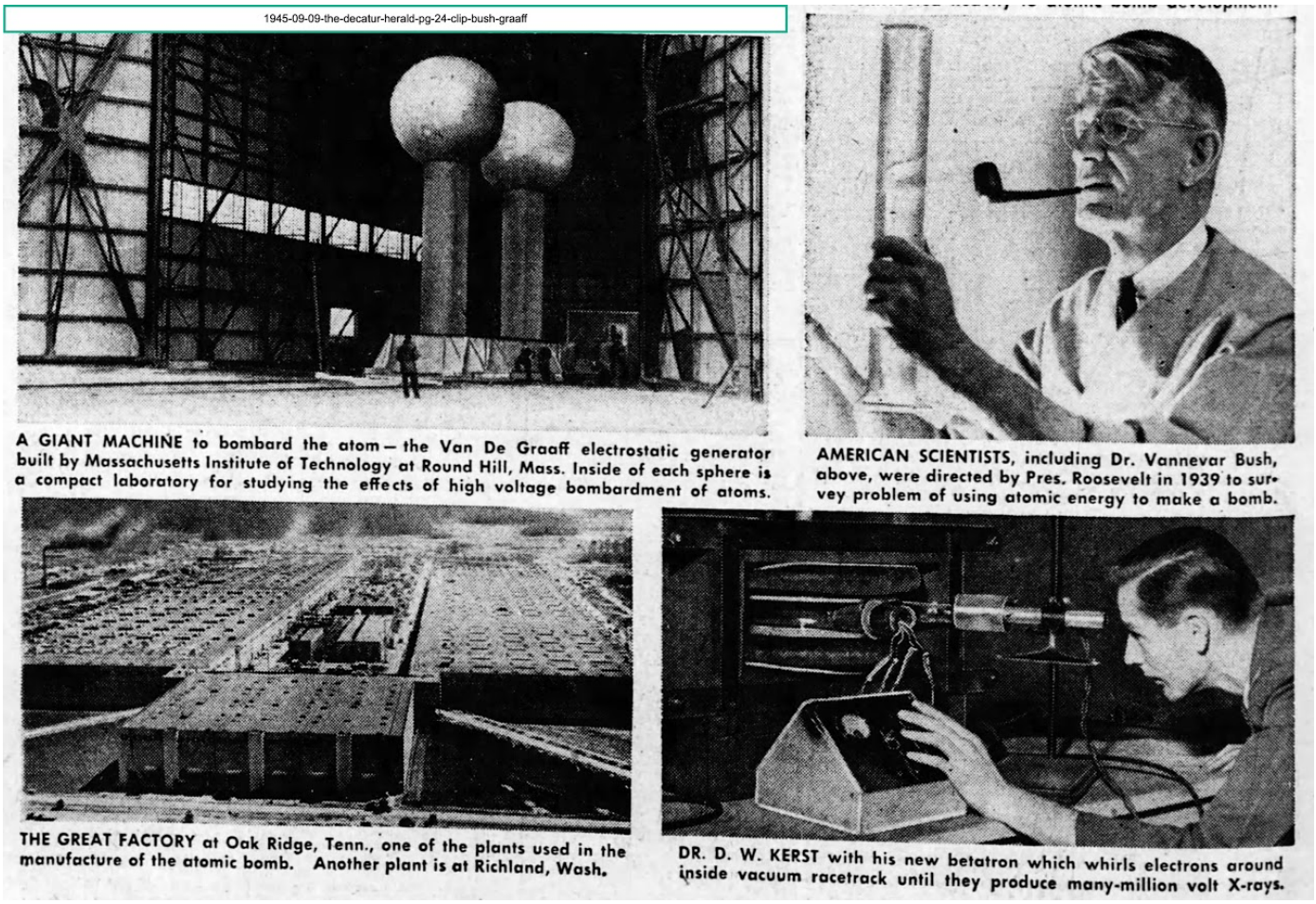
Important discoveries or inventions have made engineers like Charles P. Steinmetz and Nikola Tesla famous. Others have gained fame not only as engineers but also as businessmen and administrators — Charles F. Kettering, Vannevar Bush and Wernher von Braun, for example. Until he entered public life, President Herbert Hoover was a mining engineer.

1969-02-18-waukesha-freeman-pg-23-clip-inventions

1945 (Sep 09)

https://www.newspapers.com/image/88454892/?terms=vannevar%2BVan%2Bde%2BGraaff

1945-09-09-the-decatur-herald-pg-24-clip-bush-graaff



1955 (Aug 10) - Tracerlab / Atoms for Peace (with van de Graaff)

https://www.newspapers.com/image/661146663/?terms=vannevar%2BVan%2Bde%2BGraaff

1955-08-10-the-barre-daily-times-pg-8

1955-08-10-the-barre-daily-times-pg-8-clip-tracerlab-atoms-for-peace

Tracerlab, Inc., New England Company, Employs Atoms For Peace; Develops Flourishing Trade

Editors Note: The "Big Four" talked of world agreements to use atomic energy for peace at last month's Geneva conferences. Currently, scientists from all parts of the world are meeting—also in Geneva—to discuss peaceful use of the great new force which ended World War II with the Hiroshima and Nagasaki atomic bombs. In the 10 years since the atom bombs gave birth to a whole concept of future scientific development, New England has grown into a world center in the peaceful use of atomic energy. This is the first of two articles about that development.

By CORNELIUS F. HURLEY

BOSTON (AP) — Peaceful use of atomic energy was the principal subject underlying last month's talks "at the summit" in the Big Four meeting in Geneva.

It's the main topic this month in the world gathering of atomic scientists, also in Geneva.

Here in New England the atom went to work in the peaceful way they're talking about, almost before the ashes of Hiroshima and Nagasaki cooled off after the first —and only—two uses of atomic energy in warfare.

That might have been expected, anyway.

Several New England scientists were members of the committee of experts called in for an opinion when the late Albert Einstein sent his famous letter to President Roosevelt suggesting that the winner in the race to develop an atomic bomb would be the winner of World War II as well.

Among them were the late Karl T. Compton, then president of Massachusetts Institute of Technology, and his neighbor educator, the then president of Harvard James Bryant Conant.

The committee of scientists, headed by Dr. Vannevar Bush, a Massachusetts native who won degrees from Tufts College, Harvard and MIT, advised the President to go ahead with the project.

The atom bomb project drew heavily on New England colleges and industry for electrical and chemical engineers and for physicists—some of them old hands at experiments probing the secrets of the atom.

It was a team of MIT researchers who built and successfully operated the Van de Graaff generator which split the atom a dozen years earlier in a test at South Dartmouth.

It was logical when the atom ended the war in the Pacific 10 years ago this month, and New England's scientists were free to return to peacetime pursuits, that they should turn to atomic energy for post-war careers.

One group of five—a chemist, two physicists and two electrical engineers — set up their own "atoms for peace" company a month after the war ended.

They called it Tracerlab, Inc.

The company has grown rapidly.

What was five men with an idea 10 years ago is now a busy industry which employs 1,000 persons and had a gross business of 14 million dollars last year.

The company has been expanding in three fields in the use of atomic energy—medical, research and industrial.

The company makes everything from film badges which detect the amount of exposure to radioactivity undergone by laboratory and X-ray workers to special instruments for use in nuclear research.

One of the more fascinating industrial tools developed by Tracerlab is a thickness gauge which utilizes the beta rays given off by an irradiated source to check the thickness of materials during manufacture.

The biggest saving is in material—since the material can be rolled to exact specifications without allowing a little extra thickness to meet a minimum.

The second saving is in time—the machinery doesn't have to be halted at intervals to allow for laborious measurements by hand.

Similar savings are being made by the pipeline industry through the use of radioactivity.

Tracerlab is only one of the mushrooming atomic industries which have sprung up in New England in the last 10 years.

There are many others.

The New England Governors' Committee on Atomic Energy reported recently that New England companies had 50 million dollars worth of primary contracts last Nov. 1 with the atomic energy commission.

These were contracts of $25,000 or more.

In addition there were an unknown number of contracts being filled by New England firms for other prime contractors in all parts of the country in the supply of instruments, machinery, and small parts.

One expert in the economic and atomic field estimated there are as many as 20,000 New Englanders employed in the nuclear industry—which didn't even exist 15 years ago.

1955-08-10-the-barre-daily-times-pg-8-clip-tracerlab-atoms-for-peace

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june 3 1945 with kettering

https://www.newspapers.com/image/618411312/?terms=vannevar%2Btrump

1945-06-03-the-miami-herald-pg-2-b

1945-06-03-the-miami-herald-pg-2-b-clip-merry-patents

1945-06-03-the-miami-herald-pg-2-b-clip-merry-patents

Merry-Go-Round

Liberals Who Fought For Wallace Fear He Has Gone Conservative

By DREW PEARSON

WASHINGTON—Some of the liberals who fought so hard for Henry Wallace's confirmation are now beginning to wonder how much he is the prisoner of old line bureaucrats inside the Commerce Department.

What has particularly aroused Wallace's liberal friends is his committee to study the U. S. patent system. Wallace appointed the committee upon a letter from President Truman which reminded him the American patent system had been misused by unlawful monopolies and needed overhauling.

The committee to study patents included two men considered staunch defenders of the present setup: Charles F. Kettering, vice-president of General Motors, and Dr. Vannevar Bush, director of the Office of Scientific Research and Development. This caused Justice Department experts to hit the ceiling.

Kettering had previously told the Temporary Economic Committee he knew nothing about patent laws. Bush is considered notorious for his subservience to big business. In the early war days, they came out with a report completely whitewashing the existing patent system.

1945 (July 05) - Machines that think

page 6

https://www.newspapers.com/image/276596421/?terms=vannevar%2Btrump

1945-07-05-elmira-star-gazette-pg-6 / 1945-07-05-elmira-star-gazette-pg-6-clip-machines-that-think

EDITORIAL PAGE

Expressions of Opinion

1945-07-05-elmira-star-gazette-pg-6-clip-machines-that-think

Machines That Think

THE SCIENTISTS continue to paint fabulous pictures of the wonders ahead, when scientific brains once more settle down to the useful inventions of peace.

Dr. Vannevar Bush, director of the Office of Scientific Research and Development, in his article in the Atlantic Monthly, says we may expect machines that will so supplement the mental processes that they will vastly increase our store of knowledge. Where most inventions in the past have been designed to increase man's physical powers, to lighten his labors and increase his productivity, the inventions of the future will extend his mental capacities.

Thus he pictures machines that will enormously speed up adding, counting, mathematical calculations of all sorts. Machines will take words that are spoken into them and instantly transform them into printed matter—a boon for authors and writers of all sorts. Microphotography will be so improved that the Encyclopedia Britannica can be reduced to the volume of a match box and all the printed material published by the human race "could be lugged off in a moving van."

Then there will be the memex. This is a desk-like device pictured as "an enlarged intimate supplement" to the memory. It is to be a miniature storehouse of information, all recorded on microfilm, each item available at the press of a button. Books can be summoned up instantly by this means. Detailed references bearing on any given subject, with quotations, supplemental notes and information, will be available at the pressing of the right key. Every memex will be the equivalent of a library of information, with the added advantage that one's own ideas and comments on a given subject can be tucked away for use on demand.

There is much more in prospect, covering the fields of photograph, television, electrical recording. The applications of science, as Dr. Bush says, have given man living comforts and improved health; "they have enabled him to throw masses of people against one another with cruel weapons." They may yet allow him "truly to encompass the great record and to grow in the wisdom of race experience."

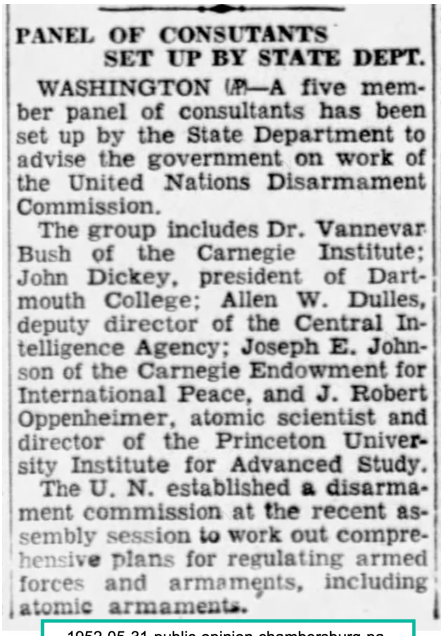
* * *

1952 (May 31) - Vannevar + Allen Dulles + Oppenheimer + UN diarm

https://www.newspapers.com/image/450615248/?terms=vannevar%2Btrump

1952-05-31-public-opinion-chambersburg-pa-pg-5

1952-05-31-public-opinion-chambersburg-pa-pg-5-clip-consultants-state-dept



PANEL OF CONSUTANTS SET UP BY STATE DEPT.

WASHINGTON (AP)—A five member panel of consultants has been set up by the State Department to advise the government on work of the United Nations Disarmament Commission.

The group includes Dr. Vannevar Bush of the Carnegie Institute; John Dickey, president of Dartmouth College; Allen W. Dulles, deputy director of the Central Intelligence Agency; Joseph E. Johnson of the Carnegie Endowment for International Peace, and J. Robert Oppenheimer, atomic scientist and director of the Princeton University Institute for Advanced Study.

The U. N. established a disarmament commission at the recent assembly session to work out comprehensive plans for regulating armed forces and armaments, including atomic armaments.

1952-05-31-public-opinion-chambersburg-pa-pg-5-clip-consultants-state-dept

1964 (Jan 14)

Vannevar with LBJ 0 1964

https://www.newspapers.com/image/54586748/?terms=vannevar%2Bmelpar

1964-01-14-ames-daily-tribune-pg-2

1964-01-14-ames-daily-tribune-pg-2-clip-science-awards-lbj

MEDAL — In a ceremony in the Cabinet Room of the White House Monday afternoon, President Johnson presented the National Medal of Science to five leading scientists. Left to right, they are Dr. Cornelius D. vanNiel, Professor of Biology, Stanford University; Dr. Norbert Wiener, Institute Professor Emeritus, Massachusetts Institute of Technology (MIT); Dr. John R. Pierce, director of research communications, Bell Telephone Laboratories; Dr. Vannevar Bush, honorary chairman, MIT; President Johnson; and Dr. Luis W. Alvarez, professor of physics, University of California for Physics. In background left is Dr. Jerome Wiesner, the President's science adviser. (UPI Telephoto).

1964-01-14-ames-daily-tribune-pg-2-clip-science-awards-lbj

Vannevar Bush video - reflecting back on the decision to "use the bomb"

https://www.youtube.com/watch?v=xdWwtvtAVp0

2015-12-14-youtube-elemental-mit-science-reporter-vannevar-bush-looking-back-on-the-bomb /
https://drive.google.com/file/d/1udiurj02vaCoq1FSRpVPwubkk9i5K19L/view?usp=sharing

1995 Vannevar Bush Symposium

pronounce as "Van-E-Verr"

https://www.youtube.com/watch?v=48lbWlLpmoA

2013-02-20-youtube-gardner-campbell-tape-one-vannevar-bush-symposium-1995.mp4
https://drive.google.com/file/d/1uapr4lMdMX27nwziPjScwBl38PNh73FZ/view?usp=sharing

cip : 11:10 to ... 19:13

2013-02-20-youtube-gardner-campbell-tape-one-vannevar-bush-symposium-1995-video-clip-1.mp4
https://drive.google.com/file/d/1uXCTISaYBqOTh4PnU48TvAlI7_oO-bTM/view?usp=sharing

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C

A B C D E F G H I J K L M N O P Q R S T U V W X Y Z

PEOPLE (by last name / then D.o.B.)

- Calvin **Campbell** (born 1934)
- David N. **Campbell** (born 1941)
- Joseph Daniel **Casolaro** (born 1947)
- Vinton Gray **Cerf** (born 1943)
- John Marshall **Chidsey** (born 1871)
- Donald Barr **Chidsey** (born 1902)
- Dr. Purnell Whittington **Choppin** (born 1929)
- Richard Douglas **Clarke** Jr (born 1962)
- Ray Steiner **Cline** (born 1918)
- Eliot Asher **Cohen** (born 1956)
- William Egan **Colby** (born 1920)
- Dr. Francis Sellers **Collins** (born 1950)
- Joseph Frederick **Colvin** (born 1942)
- George Henry **Conrades** (born 1939)
- James Quell **Crowe** (born 1949)
- Gordon Calvin **Culp** (born 1926)
- Dr. Andrew Alexander **Cunningham** (born 1964)

PLACES / COMPANIES / OTHER

- Canton, Baltimore, Maryland
- Canton Company
- **CenturyLink**, Incorporated
- **CERFnet**
- The Clipper Chip
- **Computer** Center Corporation (Seattle)
- **Contel** Corporation
- The Crypto War in the USA Intelligence Community

Calvin Campbell (born 1934)

"born Sept. 1, 1934 in Detroit and grew up in Midland, MI" [HL003F][GDrive]

Was a DOW Chemical CEO - was the CEO who worked with LP Gise for the rocky flats handover

Obituary

Source : [HL003F][GDrive]

Calvin A. "Tink" Campbell, Jr. Calvin A. "Tink" Campbell, Jr., 82,passed away peacefully at his Dataw Island home with his wife, Paula, by his side. A Funeral Mass will be held on Thursday, February 9, 2017 at 11:30 am at Saint Peter's Catholic Church with a reception to follow at Dataw Island Club from 1:30 Pm to 3:30 pm. Tink was born Sept. 1, 1934 in Detroit and grew up in Midland, MI. He is the son of the late Calvin "Tink" Campbell and Alta (Koch) Campbell. (The name, "Tink" was a family hand- me- down). Growing up in that company town (home of Dow Chemical)had a profound influence on Tink. While he later earned three degrees from Williams College, MIT, and a law degree from the University of MI, Tink often said that his greatest classroom was at the dining room table in Midland. ***Tink began his career in manufacturing management at Exxon (then Enjay Chemica)l in New York City in 1961****. In 1971, he pursued his entrepreneurial instincts by acquiring Goodman Equipment Corporation in Chicago. Tink was a mentor to many employees at Goodman and took an extraordinary interest in their career development and families. Tink was also involved in many business and civic organizations including the Commercial Club, Illinois Institute of Technology, and World Presidents Organization.*

He served as Chairman of the Illinois Manufacturers Association. He was the first small company CEO to be elected chairman of the National Association of Manufacturers. Tink was a director of ***Cyprus Amax Minerals Company****, Eastman Chemical Company,* ***Mine Safety Appliance (MSA)*** *and several small companies in Chicago. Tink was married for 37 years to Rosemary (Phoenix) who predeceased him. In 1998, Tink married Paula Burke. In addition to his wife, he is survived by his daughter,* ***Georgia Lundgren*** *of Denver, CO, grandson, Erik Lundgren of Denver, and granddaughter, Serena Rose Lundgren of East Longmeadow, MA. He is also survived by* ***his sister, Mary Paddon*** *of Middlebury, VT and nieces Christine Chase of Larchmont, NY and Katie Werthmann of Panton, VT. After retiring, he and Paula moved to* ***Dataw Island*** *and eventually became full time residents. Tink lived for summers with family in Glen Lake, MI where he owned a home for many years and played golf at Crystal Downs Country Club. He loved golf, Williams College, Univ. of Michigan football, and international travel. Even as he struggled with Alzheimer's disease, he never forgot what it is to be a gentleman. Tink had a deep love for family, unwavering principles and a kind word for all. Tink did not see the glass as half full-- he thought it overflowed. His legacy of uncommon decency, integrity and warmth set him apart, but he was always connected to others. Tink's was a life lived well, and his family and friends treasure his days among us. In lieu of flowers, the family suggests that donations be made to the Alzheimer's Association of Beaufort, P. O. Box 1514 Beaufort, SC 29901 or Franciscan Center, P.O. Box 682*

David N. Campbell (born 1941)

Wikipedia David N. Campbell

https://en.wikipedia.org/wiki/David_N._Campbell

2021-01-08-wikipedia-org-david-n-campbell

HK0066

https://drive.google.com/file/d/18mwoEkEzmfmY7X7rvqnFtoe9TPmFaDre/view?usp=sharing

David N. Campbell

From Wikipedia, the free encyclopedia

Jump to navigation

Jump to search

David N. Campbell

David Campbell

Born

November 4, 1941 (age 79)

Nationality

American

Known for

All Hands And Hearts - Smart Response

David Campbell is a technology executive, corporate board member, and the founder and chairman of All Hands and Hearts, nonprofit natural disaster response and rebuild organization.[1][2] In 1997, he was appointed as the president of BBN Technologies of Cambridge, Mass. by then-president Bill Clinton.[3] Campbell has also served as a member of the Board of Directors of public companies Tektronix, M&T Bank, MRO Software, and Gibraltar Industries; as Trustee at both Niagara University and SUNY-Buffalo; as Chairman for civic organizations including Roswell Park Cancer Institute Council, the Buffalo United Way campaign, the Erie County IDA, and the Buffalo Chamber of Commerce.[4]

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Personal life[edit]

Campbell was born in November 1941. He is originally from Buffalo, New York and earned a Master of Science degree in Industrial Engineering and Operations Research from the University of Buffalo in 1966, where he has served as a trustee. After receiving a Bachelor of Sciences in Mathematics from Niagara University in 1963.[5] He is the recipient of honorary doctorates from both Niagara University and Canisius College,[6][4] Citizen of the year from The Buffalo News,[6] the 2013 Richard Cornuelle Award and the Encore.org 2014 Symetra Purpose Prize.[7]

Campbell started his career in 1963 with IBM and then left to join Computer Task Group.[5] He is married to Gay Wind Campbell and the couple have 4 children.

Honors and awards[edit]

- 2015 Wins the Points of Light Award
- 2015 St Vincent de Paul medal, Vincentian Heritage Convocation[8]
- 2014 Encore.org Purpose Prize Award winner
- 2013 Richard Cornuelle Award for Social Entrepreneurship, Manhattan Institute
- 2006 Encore.org Purpose Prize Fellow
- 1993 Man of the Year, Buffalo News

Bibliography[edit]

Books authored by Campbell[edit]

- Campbell, David (2015), *All Hands: The Evolution of a Volunteer-Powered Disaster Response Organization*
- Campbell, David (2014), *Being There: The Creation of a Cool, Happy, and Surprisingly Effective Disaster Response Organization*

Technology Patents[edit]

- Dec 03, 2002, US# 6,490,458 B1 "Portable phone bank"
- Nov 26, 2002, US# 6,487,284 B1 "Card pay telephone with speed dialing"

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- [a] [b] "All Hands Volunteers Founder David Campbell to Speak at Commencement". *www.alfredstate.edu*. Retrieved 2020-08-01.
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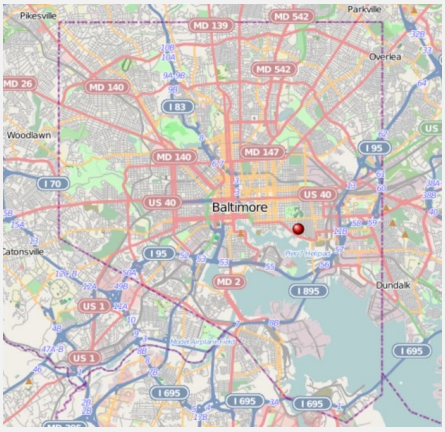
Canton, Baltimore, Maryland

Wikipedia Canton, Baltimore, Maryland

Wikipedia page - https://en.wikipedia.org/wiki/Canton%2C_Baltimore



2019-07-02-wikipedia-org-canton-baltimore-img1.jpg

2019-07-02-wikipedia-org-canton-baltimore.pdf /

Canton is a historic waterfront neighborhood in Baltimore, Maryland, United States. The neighborhood is along Baltimore's outer harbor in the southeastern section of the city, roughly two miles east of Baltimore's downtown district and next to or near the neighborhoods of Patterson Park, Fell's Point, Highlandtown, and Brewers Hill.

Canton is considered one of Baltimore's trendiest and vibrant neighborhoods, known for its family-friendly community, urban lifestyle and hot spot for the social scene. The inclusive neighborhood continues to see rapid growth as more development opportunities come into the area.[3] Since the late 1990s, the neighborhood has undergone significant gentrification and has been ranked the 16th most-gentrified zip code in the nation from 2000–2016.[4]

History

In 1785, Irish merchant John O'Donnell settled in Baltimore and began trading with merchants in the Chinese port of Guangzhou, then called Canton by English speakers. When O'Donnell purchased land, he named his plantation Canton.[5] In the late 18th century, O'Donnell's land was sold off by his son Columbus O'Donnell, William Patterson and Peter Cooper, and was developed by the Canton Company for the waterfront industry and blue-collar housing.[6]

A major feature of early Canton was Major David Stodder's shipyard, located at Harris Creek, with the most famous vessel being built the USS *Constellation*.[6]

During the early 19th century, European immigrants settled in the area. Welsh immigrants, primarily workers from South Wales, began settling in Baltimore in large numbers beginning in the 1820s. Welsh and Irish migrant workers composed a large portion of Baltimore's working class during the early and mid-1800s.[7] In 1850, a large community of copper workers from Wales settled in the neighborhood.[8] These workers established a Presbyterian church in 1865, located on Toone Street in Canton.[9] Subsequent groups of immigrants have included Germans, Poles and Ukrainians.

In the 2000s, as industry moved out, new housing and marinas have been developed along the waterfront and gentrification of the existing housing has occurred further inland.

Boundaries

Canton is bounded by Patterson Park and Eastern Ave to the north, Chester Street to the west, the waterfront to the south, and Conkling Street to the east. The streets are laid out in a uniform north to south and east to west directions, with the major exception of Boston Street, which runs along the Patapsco River waterfront.

Transportation

Canton is conveniently situated with easy access to Interstate 95, Interstate 895 and Boston Street and Eastern Avenues, which provide major surface routes to downtown Baltimore. Two high-frequency MTA bus lines (Gold and Navy) service Canton for direct access to the central business district and Penn Station. The south waterfront area provides a water taxi link to Locust Point.

Bus transportation to New York City and Washington, D.C. is available with frequent service at a nearby Eastern Bus stop on Ponca Street.

Landmarks

Many of the structures are included in the **Canton Historic District**, listed on the National Register of Historic Places in 1980.[6]

Canton's traditional center is O'Donnell Square, a small park bordered on the north and south by O'Donnell Street, to the east by South Potomac Street, and to the west by Linwood Avenue. O'Donnell Square is home to a number of lively bars and restaurants, gift shops, salons and other small businesses, as well as residences. Canton is also immediately adjacent to Patterson Park, a popular nearby attraction for local residents. In the 2000s, developments have added focus areas to the neighborhood, including the Canton Waterfront Park and Maryland Korean War Memorial, the rehabilitated American Can Company building, the Du Burns Soccer Arena, two marinas, a public boat launch, and new bars and restaurants. The Canton Dog Park, the first off-leash dog park in Baltimore, has been open for dog lovers since 2002.

The neighborhood is home to the many food and wine festivals, Light Night Canton, Baltimore's annual Ukrainian-American festival, summer concert series, and is a popular destination to view Baltimore Harbor July 4th fireworks. A premier shopping complex, The Shops at Canton Crossing, anchored by Target and Nordstrom Rack, has been serving local residents since 2013.

Notable churches in the area include the St. Casimir (Roman Catholic) Church, built c. 1926, the St. Michael the Archangel Ukrainian Catholic Church, and the (Episcopal) Church on the Square.

Enoch Pratt Free Library branch

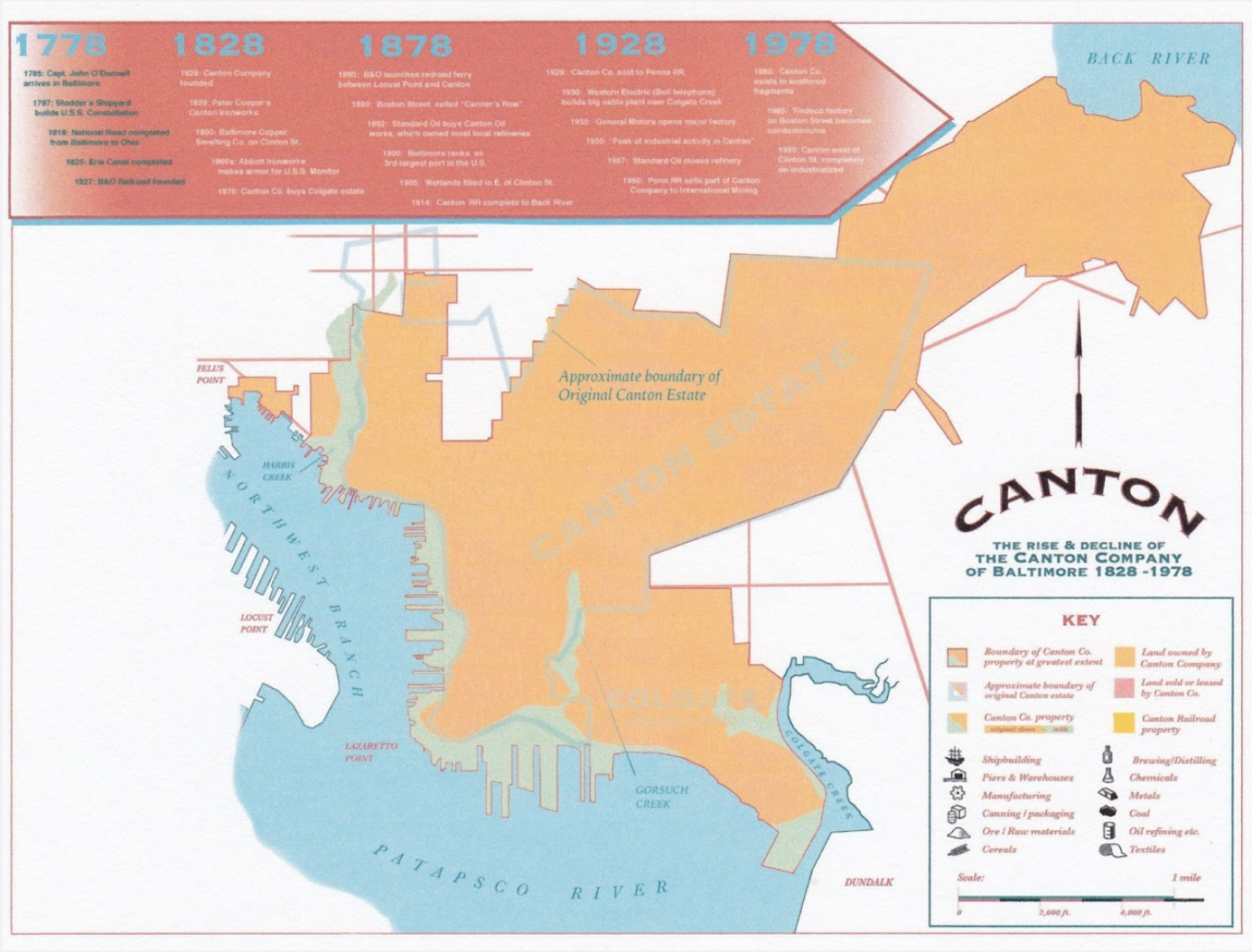
Canton's branch of the Enoch Pratt Free Library, Baltimore's first and in operation since 1866, is centrally located on O'Donnell Square.

A moored trash interceptor, the female-gendered Professor Trash Wheel (with appropriate googly eyes) can be found off the Boston Street Pier Park since December 2016. [10]

From the Canton Company to the Future

See [HW001U][GDrive]

According to the Baltimore Historical Society Canton became the Canton we now know because of the Canton Company that began in 1828 with the start of the Industrial Revolution that continued in Canton until well into the 1980s and many people feel that the Spirit of the Revolution continues even today. At one time, the Canton Company owned and leased more than 10,000 acres where industry could flourish under a benevolent company. Industries would come and go, but there was always another industry and a new idea that would replace it successfully. Today, we have an expanding Brewer's Hill Technology Area that is spreading east and north to fuse with the expanding Medical Complex taking place at Johns Hopkins Bayview Campus, and we have heard about a new company involved with the Personal Genome Project. Yes, the Canton Company is very much alive in spirit even today.



[HW001U][GDrive]

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H.L. Mencken and the Gunther Brewing Company

See [HW001U][GDrive]

Later on the Gunther Brewing Company would establish itself just south of the National Brewing Company on Conkling Street.

Prohibition applies to the period (1920-1933) in the history of the United States during which the prohibition of alcohol was enforced. Prohibition was instituted with ratification of the Eighteenth Amendment to the United States Constitution. This prohibited the manufacture, sale or transportation of intoxicating liquors in the United States. Congress would pass the “Volstead Act” to enforce the law.

However, most large cities were uninterested in enforcing the law, leaving an understaffed federal service to go after bootleggers involved in organized crime associated with this illegal activity.

Prohibition became increasingly unpopular during the Great Depression. The repeal movement got started and emphasized the enormous sums of much needed tax revenue and weakening the base of organized crime. The Repeal of Prohibition was accomplished with the passage of the Twenty-first Amendment to the United States Constitution in 1933.

In the Memoirs of Michael V.Lardner, Mr Frank Gunther and his brother, George, had a Brewery on Conkling Street just south of the National Brewing Company. They were looking for an office boy and hired Michael Lardner who was then 15 years old. When Michael was 17 years old, he became secretary to both brothers and was sent to school in 1919 to become a bookkeeper for the Gunther Brewery.

After prohibition set in, the Brewery made real beer and then pumped it back to the kettle to de-alcoholize it by boiling it off to reduce it to the required 1/2 of 1% alcohol. Many Gunther workers opted to work on the roofs of Gunther Company to inhale the vapors that were coming up!

With prohibition and good beer at the brewery, the Gunthers found a lot of “long lost friends” who wanted to come and get some real beer! It was Michael Lardner whose job it became to procure the food for parties throughout the days and evenings.

George Gunther would say, “Mike, you take charge and get any of the help from the employees you need.” Mike always had on hand 5 barrels of Chincoteague Oysters, two dozen Diamond Back Terrapins, a deer, a bear, various cheeses, celery by the crate, large cans of pretzels, pounds of raw beef, onions, and a good supply of rye and pumpernickel breads.

Dignitaries got wind of the real beer and sumptuous food and came. Governor Ritchie, Mayor Broening, Frank Kelly, Danny Loden……and H.L. Mencken who became the centerpiece for many parties to follow. The Saturday Night Club parties would last from 9 pm until 3 or 4 in the morning. The singing became very loud, especially when it came to the German Songs.

H.L. Mencken always led the singing that would go round and round the table with lots of hilarity at some of the impromptu compositions. They would always reminiscence about the Days of Canton-past which were vibrant days full of fun and adventure.

This spirit has never left Canton. Fells Point may have its ghost stories of sailors being hijacked to far-away places and being paid by the boom on return, but here in Canton there are many stories of real men and women, courageous and risk-taking, to go along with the real beer!

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Canton Company

Article from http://welcometobaltimorehon.com/the-canton-company-industry-comes-to-the-plantation

See 2019-welcometobaltimorehon-com-the-history-of-canton-the-canton-company.pdf / https://drive.google.com/open?id=1m_pbyUyITzBCtzeO9_w-8pEiNIcwo1nB

Captain John O'Donnell, the 18th century seafaring merchant, **founded the Baltimore community of Canton** on a fortune made through trade – including Turkish opium, according to historians – in the Chinese port of the same name.

O'Donnell, who brought cattle to Baltimore and goods from the Orient peculiar enough to attract George Washington's wallet, **died a rich man in 1805**, long before the legacy of his estate would employ tens of thousands of laborers while making many men much richer than he.

Early development in Canton included tracks for horse racing, one on the north side of Boston Street at Clinton in 1820 and another, in 1823, called "Potters Course" (later Kendall Track) on the south side of Boston and Clinton.

Near the foot of Clinton Street, in 1831, rose the 34-foot tall Lazaretto Lighthouse, with detached light keeper's house.

In May of 1840, the Whig party endorsed William Henry Harrison for president of the United States at the Kendall Track. Harrison was elected the ninth U.S. president, serving a mere month – the shortest term in American history – before succumbing to pneumonia.

Canton's transformation from agrarian to a slow but steady (and eventual roaring) industrialization proceeded from **the 1828 formation of the Canton Company, which coincided with the founding of the Baltimore and Ohio Railroad.**

In time, the combination of rails and docks would make the southeast Baltimore waterfront one of the greatest industrial and commercial powerhouses in the world.

A half-century after the Canton Company was chartered, historian James Thomas Scharf wrote, "The scheme indicated a comprehensive insight into the future greatness of Baltimore as a commercial emporium."

In his signal, 1874 work – The Chronicles of Baltimore: Being a Complete History of "Baltimore Town" and Baltimore City from the Earliest Period to the Present Time – Scharf observed that the Canton Company had been "attended with wonderful success.

"Wharves have been built, elevators constructed, railroads find their tide-water terminals, factories flourish and enterprise in a thousand different employments find encouragement and compensation."

A growing population of skilled and unskilled labor lived close enough to walk to work at broom factories, oyster shucking plants (Chesapeake bounty shipped in cans made nearby) and lumber yards.

The need for skilled craftsmen became so great that representatives of various Canton industries – particularly copper smelting – traveled through Europe enticing workers to move to Baltimore.

Which led to several blocks of Welsh families on South Clinton street to be known as "Copper Row."

Canton and its working class residents prospered from the vision of the Canton Company for well more than 100 years. At first, it was mere speculation viewed by some as a quick-buck "humbug."

Before long, the enterprise would become a darling of Wall Street, paying handsome dividends many times over initial investment for shares.

"A perfect storm of timing," said Raymond Bahr, a retired cardiologist who grew up in Canton and is keen to let others know how significant the neighborhood is to the growth of Baltimore. "It all came together because of the Canton Company."

It **began with Peter Cooper (1791-to-1883), the New York industrialist who tweaked a prototype of the steam locomotive to suit the needs of the B&O, whose financial promise had lured Cooper to Baltimore.**

"Cooper came up with a version that had a vertical boiler and a short wheel base that was able to negotiate the sharp curves of the line between Baltimore and Ellicott City," said James D. Dilts, author of The Great Road: The Building of the Baltimore and Ohio.

"It helped convince the company that steam power was appropriate for their railroad."

Cooper went in with two others on a 3,000 acre, $105,000 bite out of southeast Baltimore shoreline, much of it within the O'Donnell estate. According to reports of the time, the sale netted Cooper "the whole shore from the Fells Point Dock for three miles."

Following Cooper came a coalition of businessmen determined to develop the land the New Yorker had bought. The group included some of the biggest

names of the era, names which still reverberate in Baltimore. These men created the Canton Company, a real estate corporation chartered by the General Assembly in December, 1828.

The charter specified that a majority of the company's directors be citizens of Baltimore.

In addition to Cooper, the company was launched by Columbus O'Donnell, the ambitious and hard-working first son and heir of Canton founder John O'Donnell and a War of 1812 veteran; William Patterson, the international trader for whom Patterson Park (and whose daughter married Napoleon's little brother), Francis Price, Ely Moore, future New York City mayor Gideon Lee and a gentleman named John Ramsey.

At a time when planned development was rare – if not non-existent – the group's stated objective was to "improve the land, lay out streets, erect wharves, docks, slips, factories, stores and personal dwellings."

And make a pretty penny while doing so.

One of the first things Cooper did was drain the "swamp" and level hills along the shoreline. Ore was found in the muck, lots of it. Being a man of opportunity, Cooper established rolling mills and kilns – **the Canton Iron Works – near Harris Creek on Boston Street near Hudson Street**.

In 1830, Cooper designed and supervised the building of the Tom Thumb, the first American-built steam locomotive. It was an immediate sensation, made famous by its race with a horse. Because of its ability to navigate sharp curves and steep hills, Cooper's engine persuaded the B&O to commit to steam power.

Investors bought stock in the railroad and the relationship earned Cooper – a shrewd visionary of prodigious whiskers – the first of several fortunes.

Describing Canton as the perfect depot for coal from Pennsylvania and grain from Western Maryland and distant farms, Scharf wrote "the vast plains of the great West must find their outlet to the sea over railroads that center here …"

And over time created the manufacturing colossus of recent memory, the Canton your grandmother remembers if she was born between Boston Street and Eastern Avenue during the Great Depression.

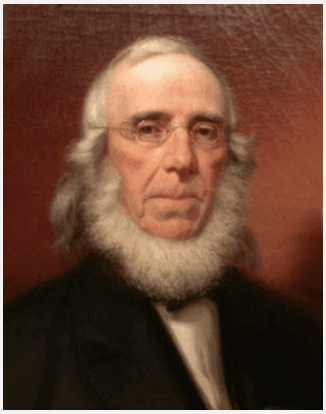
A place of good jobs for the whole family if you knew the right people or lived around the corner.

"The American Can Company was a magical place to work," said Andy Mezensky, a kid from East Pratt Street who worked summers at the factory in the 1960s to pay for college. "Everyone made money and everyone was happy. It was the focal point of our lives."

Mezensky's father had already worked at the can company for more than a decade. The way that the younger Mezensky landed his well-paying union job at the corner of Boston and Hudson streets was both simple and symbolic of the way most industries did business in the provincial village on the southeast Baltimore waterfront: nepotism.

"They didn't hire off the street," you had to know someone," said Mezensky, now 71 and an established sculptor. "My father sent me in to get a job and I didn't tell them he already worked there. They wouldn't even talk to me. So I went back with my father and they hired me on the spot.

And that's how it rolled – like miles of tin sheets – for more than a century; a miracle neighborhood of bars and churches, factories, social clubs and ballfields enduring community born of the foresight of the Canton Company.



2019-welcometobaltimorehon-com-the-history-of-canton-peter-cooper-no-4.png / https://drive.google.com/open?id=1maWWiWdlX8Xhm8VxCGnDh7qGJtyCFM_h
Peter Cooper

1960 - The Canton Company becomes a wholly-owned subsidiary of the International Mining Corporation

See International Mining Corporation .

See Page 48 in 1978-historic-canton-baltimores-industrial-heartland-and-its-people-norman-rukert-ocr.pdf / https://drive.google.com/open?id=1mAn_vXKzMSBCn9ZARrUwrD0etnGmOcax

"On July 28, 1960, The Canton Company became a wholly-owned subsidiary of the International Mining Corporation , a New York-based conglomerate."

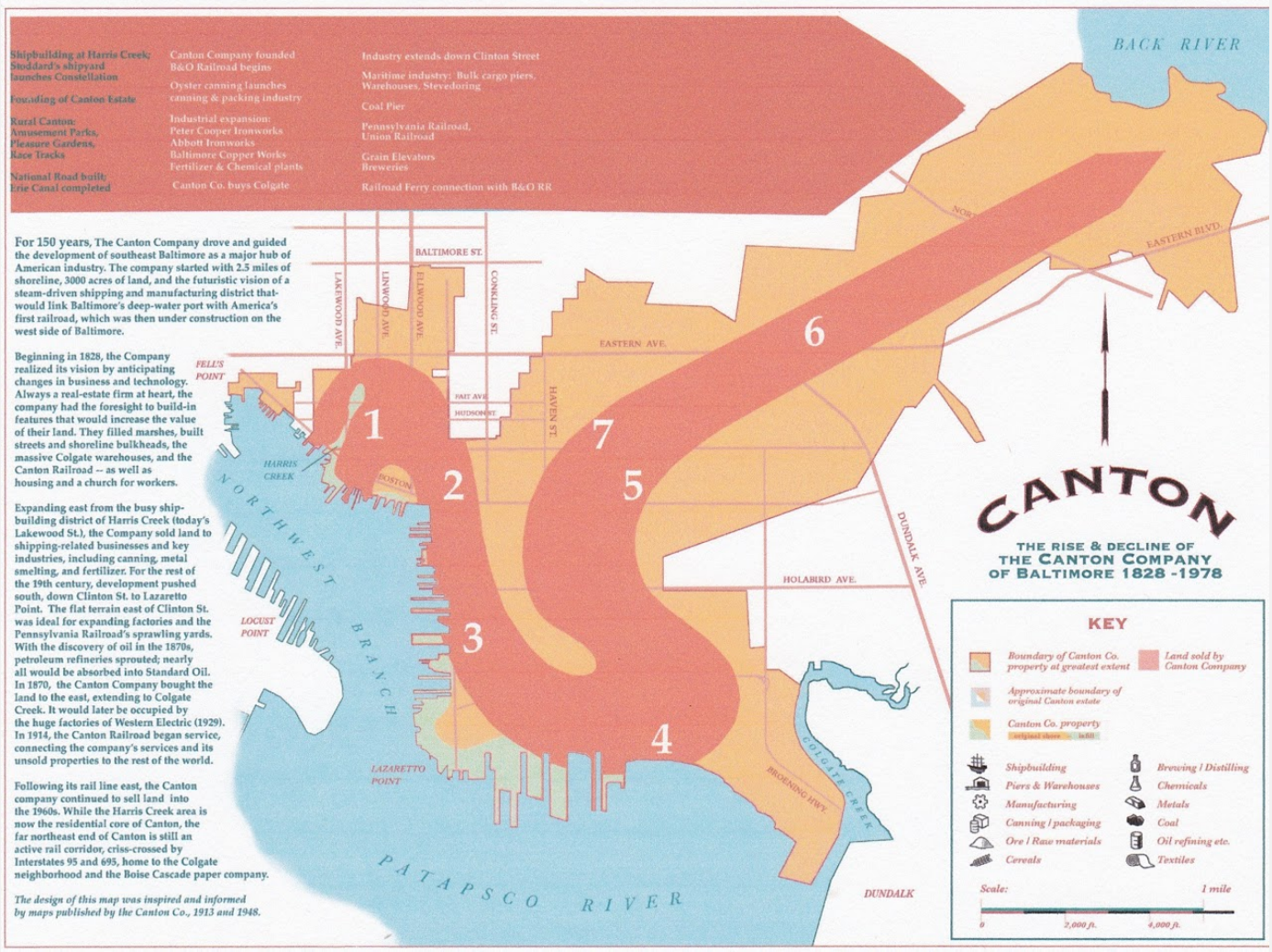
2018-cantoncove-net-dr-bahrs-canton-history-class-pt-1.pdf / https://drive.google.com/open?id=1mrdvwf15zlHQ8EGuQ8KJEt2mYe39bQM6

The Rise and Decline of the Canton Company

The Industrial Revolution began in Canton in 1828 just outside Baltimore and east of Harris Creek. It resulted from the Canton Company obtaining a unique Charter from the General Assembly of Maryland to take advantage of the 3,000 acres (recently purchased from the Captain O'Donnell Estate) in setting up an industrial neighborhood that would provide a stable force to work in local industry for decades to come.

It did not hurt that mobile steam power became available and was replacing stream power from the falls….. or that railroads for transportation were being perfected…. or that there were food needs that could be met with the canning and packing industries, the most successful being the Oyster Industry that helped to supply needed food to the '49ers in California and the soldiers in the Civil War being fought nearby.

The proximity to the Chesapeake Bay and the farms of the Eastern Shore of Maryland were a constant source for water and land produce to fuel these industries in Canton. The Smokestack Industry in Canton had begun. However, the Industrial Revolution would not end with the Smokestack Industries, but would expand and extend further south and east and last for many years into the 1980s.



2018-05-cantoncove-net-upload-rise-and-decline-of-the-canton-co-1828-1978.jpg / https://drive.google.com/open?id=1mubFfZmJ74w4xHUFE-e75-AfodvLpTWu

This map shows that the original footprint of 3,000 acres would grow even more with the purchase of 7,000 acres from the Colonel Colgate Estate and go further east to Back River. Along the way, industries would come and go but there would always be new industries to step up, flourish for a while, start to decline, and then give way to another industry cycle. The direction of this industrial flow can be seen in the map above and the various industries associated with each approximate time period are as follows:

(1) 1828-1878

- Wooden Historic Ships
- Oyster Industry
- Canning and Packing Industry
- Cooper (Abbott) Iron Company
- Railroad Companies
- Smokestack industries
- Can, Tin and Bottle Companies
- Breweries

(2) 1878-1928

- Oil Refineries
- Oil Engines
- Standard Oil Company, Humble Oil, Esso
- Copper Smelting and Refineries, American, Baltimore Copper

(3) Pennsylvania RR Coal Pier

- Fertilizer Companies
- Chemicals Company
- Stevedores Company
- Rukert Piers, Terminals and Warehouses
- Union Railroad Company
- Sand and Gravel Companies
- Port activities exporting and inporting
- Canton Railroad Company
- Lower Canton Piers

(4) 1928-1978

- Western Electric Company
- General Motors
- Lever Brothers Soap Products
- Later, Amazon Companies

(5) Brewers Hill

- Personal Genome Company
- AOL and other Tech Companies
- Pemco Corporation
- Anchor Post Products
- Cross and Blackwell Company

(6) The Canton Center Industrial Park

Eastern Stainless Steel Company

In summary, these companies represent only a fraction of the many companies that took advantage of the Canton Company over close to 190 years that the Company would stay in existence.

The purpose of this post is to demonstrate that the Canton Company dynamically kept companies coming and helping with their success by either entering into partnership with them or creating conditions that would benefit their products.

Overall, the Canton Company is the reason behind what Canton is all about today and the industrial success story continues east as the fusion with medicine from the Johns Hopkins Bayview Campus is about to take place. Keep an eye on this futuristic endeavor!

1860 - Charles J Baker elected to be a director of the Canton Company

See Book - 1871-baltimore-past-and-present-w-bio-sketches-of-representative-men-richardson-bennett.pdf / https://drive.google.com/open?id=1XQ09-uBItdNC3n6W46Fn5WLmeypT49Qv) ; pages 177-180

"In 1860, [***Charles J Baker (born 1821)***] was elected a director in the ***Canton Company*** , and in 1870, was elected president."

1870 - Charles J Baker elected President of the Canton Company

See Book - 1871-baltimore-past-and-present-w-bio-sketches-of-representative-men-richardson-bennett.pdf / https://drive.google.com/open?id=1XQ09-uBItdNC3n6W46Fn5WLmeypT49Qv) ; pages 177-180

"In 1860, [***Charles J Baker (born 1821)***] was elected a director in the ***Canton Company*** , and in 1870, was elected president."

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Joseph Daniel Casolaro (born 1947)

Wikipedia Danny Casolaro

See [HK0043][GDrive]

Saved Wikipedia (Dec 2020) for Danny Casolaro

Born

Joseph Daniel Casolaro

June 16, 1947

Died

August 10, 1991 (aged 44)

Room 517, Sheraton Hotel, Martinsburg, West Virginia

Nationality

American

Alma mater

Providence College

Occupation

computer-trade magazine owner, writer

Spouse(s)

Terrill Pace (divorced)

Children

1

Joseph Daniel Casolaro (June 16, 1947 – August 10, 1991) was an American freelance writer who came to public attention in 1991 when he was found dead in a bathtub in room 517 of the Sheraton Hotel in Martinsburg, West Virginia, his wrists slashed 10–12 times. The medical examiner ruled the death a suicide.[1]

His death became controversial because his notes suggested he was in Martinsburg to meet a source about a story he called "the Octopus." This centered on a sprawling collaboration involving an international cabal, and primarily featuring a number of stories familiar to journalists who worked in and around Washington, D.C. in the 1980s—the Inslaw case about a software manufacturer whose owner accused the Justice Department of stealing its work product, the October Surprise theory that during the Iran hostage crisis Iran deliberately held back American hostages to help Ronald Reagan win the 1980 presidential election, the collapse of the Bank of Credit and Commerce International, and Iran–Contra.[2]

Casolaro's family argued that he had been murdered; that before he left for Martinsburg, he had apparently told his brother that he had been frequently receiving harassing phone calls late at night; that some of them were threatening; and that if something were to happen to him while in Martinsburg, it would not be an accident. They also cited his well-known squeamishness and fear of blood tests, and stated they found it incomprehensible that if he were going to commit suicide, he would do so by cutting his wrists a dozen times.[3] A number of law-enforcement officials also argued that his death deserved further scrutiny, and his notes were passed by his family to ABC News and *Time Magazine*, both of which investigated the case, but no evidence of murder was ever found.[4][5]

Early life and career[edit]

Casolaro was born into a Catholic family in McLean, Virginia, the son of an obstetrician, and the second of six children. One of his siblings fell ill and died

shortly after birth. A younger sister, Lisa, died of a drug overdose in San Francisco's Haight-Ashbury in the 1960s. Casolaro attended Providence College until 1968. He married Terrill Pace, a former Miss Virginia. The couple had a son, Trey, and divorced after ten years, with Casolaro granted legal custody of his son.[6]

Casolaro's interests included amateur boxing, writing poems and short stories, and raising pure bred Arabian horses. He also dabbled in journalism, looking into issues such as the Soviet naval presence in Cuba, the Castro intelligence network, and Chinese communist smuggling of opium into the U.S. according to his own *curriculum vitae* (though it remains unclear how much he had published).[6] At the time of his death, he had written and published one novel, *The Ice King*, with Whitmore Publishing Co.

Towards the end of the 1970s, he dropped his interest in journalism and acquired a series of computer-industry trade publications, which he began selling towards the end of the 1980s. In early 1990, he decided to take up journalism again and, soon after, took an interest in the Inslaw case, of which his IT contacts had made him aware.[6]

Research[edit]

Shortly before his death, Casolaro told people that he was nearly ready to reveal a wide-ranging conspiracy involving the Inslaw case, Iran-Contra, the alleged October Surprise conspiracy, and the closure of BCCI.[7] David Corn writes in *The Nation* that the papers Casolaro left behind reveal few clues, except that he was in over his head, but was tenacious.[8]

His papers included old clippings, handwritten notes that were hard to read, and the names of former CIA officers and arms dealers. Corn writes that the notes show Casolaro was influenced by the Christic Institute and that he had pursued material fed to him by a reporter who worked for Lyndon LaRouche.[8] Richard Fricker writes in *Wired* that Casolaro had been led into a "Bermuda Triangle of spooks, guns, drugs and organized crime."[9]

Inslaw case[edit]

Main articles: Inslaw, Michael Riconosciuto, and Earl Brian

Ron Rosenbaum writes that the Inslaw story alone is enough to drive a sane man to madness. "If they ever make a movie of the Inslaw suit," he writes, "it could be called *Mrs. and Mrs. Smith Go to Washington and Meet Franz Kafka*."[6] Inslaw's founder, William A. Hamilton, in a previous position with the U.S. Justice Department, had helped develop a program called PROMIS, short for Prosecutor's Management Information System. PROMIS was designed to organize the paperwork generated by law enforcement and the courts. After he left the Justice Dept, Hamilton alleged that the government had stolen PROMIS and had distributed it illegally, robbing him of millions of dollars. The department denied this, insisting that they owned it because Hamilton had developed it while working for them. As a result of this dispute, Hamilton and the department had been in litigation since 1983. A federal bankruptcy judge ruled in 1988 that the department had indeed taken the software by "trickery, fraud, and deceit," a decision upheld by a federal district court in 1988, but overturned on appeal in 1991.[8]

A conspiracy theory developed around the case, with allegations that "back doors" had been inserted into the software so that whomever the Justice Department had sold it to could be spied upon. The major source on the conspiracy-theory aspect of the case, both for Hamilton and, later, for Casolaro, was Michael Riconosciuto, described by Rosenbaum as a "rogue scientist/weapons designer/platinum miner/alleged crystal-meth manufacturer... ."[6] Riconoscuito had been introduced to a friend of Casolaro's by Jeff Steinberg, a longtime top aide in the LaRouche organization.[8]

Riconosciuto told Bill Hamilton that he and Earl Brian, a director of Hadron, Inc., a government consulting firm, had paid $40 million to Iranian officials in 1980 to persuade them not to release the American hostages before the conclusion of the presidential election that saw Ronald Reagan elected president of the United States; this is the claim now known as the "October Surprise". In exchange for his helping the Reagan administration, Brian was allegedly allowed to profit from the illegal distribution of the PROMIS system, according to Riconoscuito.[4][10] Brian, a close friend of then-Attorney General Ed Meese, has denied any involvement in either October Surprise or the Inslaw case.

In addition to this allegation, Riconosciuto also claimed — in a March 21, 1991 affidavit submitted to the court in the Inslaw case[11] — that he had modified Inslaw's software at the Justice Department's behest so that it could be sold to dozens of foreign governments with a secret "back door," which allowed outsiders to access computer systems using PROMIS. These modifications allegedly took place at the Cabazon Indian Reservation near Indio, California. Because the reservation was sovereign territory where enforcement of U.S. law was sometimes problematic, Riconosciuto further claimed that he had worked on weapons programs there for the Wackenhut Corporation, such as a powerful "fuel air explosive". On March 29, 1991, eight days after submitting the affidavit, Riconosciuto was arrested for, and later convicted of, distributing methamphetamine and methadone, charges that he said were a set-up to keep him from telling his story.[8][12][13]

In the summer of 1990, Casolaro arranged to meet Bill Hamilton, expressing an interest in pursuing the Inslaw story. Hamilton gave Casolaro a 12-page memo Riconoscuito had written detailing his allegations. Rosenbaum writes that, "The moment he got his hands on that maddening memo, with its maze of illusion and reality, was the moment Danny's life changed and he began his descent into the obsession that would lead to his death. He was slowly, then rapidly, sucked into a kind of covert-ops version of Dungeons & Dragons, with that memo as his guide and Michael Riconosciuto as his Dungeon Master."[6]

Final days[edit]

On August 8, 1991, Casolaro arrived in Martinsburg, West Virginia to meet a source who, he said, had promised to provide an important missing piece of his story.

On August 5, 1991, Casolaro phoned Bill McCoy, a retired CID officer to tell him that *Time* magazine had assigned him an article about the Octopus. He further claimed to be working with reporter Jack Anderson, and that publishers Little, Brown and Time Warner had offered to finance the effort. All of these claims were later shown to be false:[1] Little and Brown, for example, had rejected his Octopus manuscript over a month earlier.[6]

On the same day, Casolaro's friend Ben Mason agreed to talk to Casolaro about his finances. A few days later, Casolaro showed Mason a 22-point outline for his book and expressed frustration at having been tied up with a literary agent who was unable to sell it for the last eighteen months. He also allegedly complained about his sleep being disturbed for the previous three months by calls during the night.[1]

The following day, a neighbor of Casolaro's and long-time housekeeper, Olga, helped Casolaro pack a black leather tote. She remembers him packing a thick sheaf of papers into a dark brown or black briefcase. Casolaro said he was leaving for several days to visit Martinsburg, West Virginia, to meet a source who

sheaf of papers into a dark brown or black briefcase. Casolaro said he was leaving for several days to visit Martinsburg, West Virginia, to meet a source who promised to provide an important missing piece to his story. This was the last time Olga saw him. Olga told *The Village Voice* that she answered several threatening telephone calls at Casolaro's home that day. She said that one man called at about 9:00 a.m. and said, "I will cut his body and throw it to the sharks". Less than an hour later, a different man said: "Drop dead." There was a third call, but Olga remembered only that no one spoke and that she heard music as though a radio were playing. A fourth call was the same as the third, and a fifth call, this one silent, came later that night.[1]

Last known sightings[edit]

According to *The Village Voice*, Casolaro's whereabouts between late in the day of August 8 and the afternoon of August 9 are unknown. The day before he died, according to *The Martinsburg Morning Journal*, he ate at a Pizza Hut, where he told the waitress he liked her eyes and quoted *The Great Gatsby* to her.[14] He met Honeywell engineer William Richard Turner at the Sheraton at about 2:30 p.m. on August 9. Turner says he gave Casolaro some documents, and that they spoke for a few minutes. Witnesses reported that Casolaro spent the next few hours at a Martinsburg restaurant. A bartender there told police that he had seemed lonely and depressed. The police further learned that Casolaro was seen at Heatherfields, the cocktail lounge at the Sheraton, at around 5 p.m. with a man described by a waitress as "maybe Arab or Iranian."[1]

At about 5:30 p.m. that night, Casolaro happened to meet Mike Looney who rented the room next to Casolaro's room 517. They chatted on two occasions—first at about 5:30 p.m. and then again at about 8:00 p.m. Looney later explained, "[Casolaro] said he was there to meet an important source who was going to give him what he needed to solve the case." According to Looney, Casolaro claimed that his source was scheduled to arrive by 9:00 p.m. Around that time, Casolaro left Looney, explaining that he had to make a telephone call. He returned a few minutes later and said that his source might have "blown him off." Casolaro and Looney talked until about 9:30 p.m. At about 10.00 p.m., Casolaro bought coffee at a nearby convenience store. That was the last time anyone reported seeing him alive.[1]

Death[edit]

At about noon on August 10, 1991, housekeeping staff discovered Casolaro naked in the bathtub of room 517. His wrists had been slashed deeply. There were three or four wounds on his right wrist and seven or eight on his left. Blood was splattered on the bathroom wall and floor; and according to Ridgeway and Vaughn, "the scene was so gruesome that one of the housekeepers fainted when she saw it."[1]

Under Casolaro's body, paramedics found an empty Milwaukee beer can, two white plastic liner-trash bags, and a single edge razor blade. There was also a half-empty wine bottle nearby. Ridgeway and Vaughan write that nothing was placed in the bathtub drain to prevent debris from draining away, and none of the bathwater was saved.[1] Other than the gruesome scene, the hotel room was clean and orderly. There was a legal pad and a pen present on the desk; a single page had been torn from the pad, and a message written on it: "To those who I love the most: Please forgive me for the worst possible thing I could have done. Most of all I'm sorry to my son. I know deep down inside that God will let me in."[6]

Based on the note, the absence of a struggle, no sign of a forced entry, and the presence of alcohol, police judged the case a straightforward suicide. After inspecting the scene, they found four more razor blades in their envelopes in a small package. Police interviews further revealed that no one had seen nor heard anything suspicious. The Martinsburg police contacted authorities in Fairfax, Virginia, who said they would notify Casolaro's family.

Police investigation[edit]

The first autopsy was performed on Casolaro's body at the University of Virginia on August 14, 1991. The coroner determined that blood loss was the cause of death, and that death had occurred from one to four hours before the body was discovered, or roughly between 8:00 a.m. and 11:00 a.m. on August 10.[1]

The day after Casolaro's body was found, *Village Voice* editor Dan Bischoff received an anonymous telephone call alerting him to Casolaro's death.[8] By Tuesday, August 13, Ridgeway and Vaughan write, the "rumors were flying,...and by the next day, the crazies started coming out of the woodwork. There were vague unsubstantiated rumors that the Mafia was somehow involved, and the wildest story even suggested that the undertaker was an employee of the CIA, hired to clean up after an agency assassination." Even at the funeral, they write, the family felt "engulfed by mysteries." As the ceremony drew to a close, a highly decorated military officer in U.S. Army dress reportedly arrived in a limousine. Accompanied by another man in plain clothes, the military man approached the coffin just before it was lowered into the ground, laid a medal on the lid, and saluted. No one recognized either man and, to this day, they have never been identified.[1] Further, Casolaro was known to have complained numerous times about threatening or unsettling phone calls directed at him, often occurring late at night, including those received by his housekeeper during his absences from his home.

After Casolaro's death was reported by several mainstream news organizations, police re-examined room 517. The adjacent rooms had been rented the evening of Casolaro's death — one by Mike Looney, the other by an unnamed family. No one reported hearing anything unusual either on the night of August 9 or the morning of August 10. In January 1992, about five months after Casolaro's death, Dr. Frost of the Virginia state medical examiner's office performed another autopsy; he returned a second suicide verdict, citing blood loss as the cause of death. Frost said there was evidence of the early stages of multiple sclerosis, but the degree of severity was probably minor. Toxicology analysis uncovered traces of several drugs: antidepressants, acetaminophen, and alcohol. He wrote: "There was nothing present in any way that could have incapacitated Casolaro so he would have been incapable of struggling against an assailant, let alone been sufficient to kill him."[1]

Ron Rosenbaum, a journalist acquaintance of Casolaro's, speculated in *Vanity Fair* that Casolaro may have intended his suicide to appear to be murder triggered by his research, in order to have others look into the story after his death.[6]

Later investigations showed that the FBI misled Congress about investigating Casolaro's death. Members of an FBI task force looking into Casolaro's death "questioned the conclusion of suicide" and recommended further investigation. This level of doubt "was especially significant, because even at that time (December 1992), it was undertood that to express those views risked one's career."[15] FBI documents show that some files on Casolaro are being withheld from public release, which is contradicted by the FBI saying the files are missing entirely.[16]

In popular culture[edit]

Dominic Orlando, Casolaro's cousin, wrote a play based on Casolaro's story in 2008 called *Danny Casolaro Died For You*.[17]

In January 2013, Aviation Cinemas Productions and Caliber Media optioned the film rights to the story of Danny Casolaro based on Orlando's play. Adam Donaghey, Eric Steele, Dallas Sonnier and Jack Heller are set to produce with Eric Steele directing. Production was set to begin in 2015.[18]

References

Computer Age Magazine - Many available on the Internet Archive

https://ia802806.us.archive.org/3/items/computer-age-magazine-01/Computer_Age_01.pdf

1979-12-computer-age-01

Unsolved Mysteries -

Saved copy -

2019-05-23-youtube-filmrise-true-crime-unsolved-mysteries-season-5-episode-21 HV00EP https://drive.google.com/file/d/1oh-XPLmiOMZ8WKqYLOAkQne-tS5YMQHA/view?usp=sharing

2019-05-23-youtube-filmrise-true-crime-unsolved-mysteries-season-5-episode-21-img-1 HV00EQ https://drive.google.com/file/d/1aHf5NsWv9Z-KmyZ4heWYS69-vulcDJWJ/view?usp=sharing

https://www.youtube.com/watch?v=TpRqRJplvOo

Unsolved Mysteries with Robert Stack - Season 5, Episode 21 - Full Episode

28,017 views • May 23, 2019

FilmRise True Crime

This episode includes: Casolaro, If the Truth Be Known & UD, Rest Stop Killer and Purvis Confession & UD.

(10:40) - "Connected to EVERY major scandal of the 1980s" ... wow, clearing house !

"he stepped into a world or murderers and arms" ... well then WTF dont you look for the killers???

He tells of threats to his life ... people dont do this, they just KILL you. He WANTED people to know his life was at risk

He was getting info on IRS targets? What ? The IRS does not leak to reporters.

New version - Housatonic.Live Ep 63.2 (#157) - Unsaved Mysteries : Danny Casolaro

Youtube link : https://youtu.be/w3xrXSn7POU

BITCHUTE @Housatonic YOUTUBE @HousatonicLive ODYSEE @Housatonic BRIGHTEON @Housatonic

Housatonic

CenturyLink, Incorporated

Wikipedia Lumen_Technologies oldid=933672902

NOTE - As of Sep 2020, **CenturyLink** has been renamed to be **Lumen Technologies, Incorporated** . This page will keep company history up to and including this name change.

Saved wikipedia from Jan 2, 2020

[HK0045][GDrive]

CenturyLink, Inc. is a global technology company headquartered in Monroe, Louisiana that offers communications, network services, security, cloud solutions, voice and managed services. The company is a member of the S&P 500 index and the Fortune 500.[6] Its communications services include local and long-distance voice, broadband, Multi-Protocol Label Switching (MPLS), private line (including special access), Ethernet, hosting (including cloud hosting and managed hosting), data integration, video, network, public access, Voice over Internet Protocol (VoIP), information technology and other ancillary services.[7] CenturyLink also serves global enterprise customers across North America, Latin America, EMEA and Asia Pacific.[8]

Products and Services

CenturyLink's products and services focus on 3 key segments: Enterprise Business, Small Business, and Residential.[9]

CenturyLink Enterprise Business

CenturyLink Enterprise Business provides products and services around Network, Cloud, Security, Voice, and Managed Services to enterprise customers.[10] CenturyLink's Network services include SD WAN, MPLS/IPVPN, Hybrid WAN, Ethernet, Internet Access, Wavelength services, Dark Fiber and Private Lines.[11] CenturyLink Cloud provides Big Data as a Service, Internet of Things (IoT), Multi-Cloud Management, Private Cloud, Public Cloud, Bare Metal, SaaS Applications and Cloud Connect.[12] CenturyLink Security monitors more than a billion security events daily.[13] Services include: Cloud, Infrastructure, DDoS, Web Application, Email, and Web Security. The company also provides Analytics and Threat Management, Risk and Compliance support and Threat Research Labs.[14] CenturyLink offers voice products ranging from traditional landlines to Unified Communications and Collaboration (UC&C) services and was recognized in 2018 by Frost & Sullivan for "growth excellence in VoIP access and SIP Trunking".[15] CenturyLink's Managed Services include Advanced Professional Services, IT consulting and strategic partnerships.[16]

CenturyLink Small Business

CenturyLink Small Business provides products and services around Internet, Phone, TV and Cloud Applications.[16]

CenturyLink Residential

CenturyLink Residential provides Internet (including Gigabit Fiber), Voice, and TV, via partnership with DirecTV.[17] The company also offers bundling with Verizon Wireless.[18]

Availability by state

CenturyLink Availability Map by Zip Code

CenturyLink residential services are available in the following states:[19]

- Alabama
- Arizona
- Arkansas
- Colorado
- Florida

- Georgia
- Idaho
- Illinois
- Indiana
- Iowa
- Kansas
- Kentucky
- Louisiana
- Michigan
- Minnesota
- Mississippi
- Missouri
- Montana
- Nebraska
- Nevada
- New Jersey
- New Mexico
- North Carolina
- North Dakota
- Ohio
- Oklahoma
- Oregon
- Pennsylvania
- South Carolina
- South Dakota
- Tennessee
- Texas
- Utah
- Virginia
- Washington
- Wisconsin
- Wyoming

Fiber

CenturyLink Fiber is a fiber to the premises service in the United States, providing broadband Internet and Prism TV to a small and very slowly growing number of locations. The service was first introduced to Omaha, Nebraska,[20] and next rolled out to Las Vegas, Nevada,[21] with plans for expansion to several other markets.[22] Unlike the company's existing high speed Internet deployments, which utilize fiber-to the node/neighborhood to increase the speed of ADSL2+ speeds up to 20/2 Mbit/s, Vectored VDSL2+ speeds up to 140/10Mbit/s, in these markets CenturyLink now installs their fiber optic cable all the way to the home or business with speeds up to 1,000 Mbit/s download and 1,000 Mbit/s upload[23] using Calix Optical Network Terminals.[24] On Feb. 2, 2014, CenturyLink announced the availability of Gigabit fiber service to multi-tenant businesses in Salt Lake City and surrounding communities.[25] On Aug. 5, 2014, CenturyLink announced the expansion of its gigabit fiber service to 16 additional markets.[26] On Sep, 15, 2015, CenturyLink announced the expansion of its gigabit fiber service to residential and business customers in six additional states, increasing the company's service coverage to select areas of 17 states.[27]

Gigabit Fiber markets

State	**Availability by City**[28]
Arizona[29]	Flagstaff, Phoenix-Mesa-Scottsdale, Prescott, Safford, Sierra Vista-Douglas, Tucson, Yuma
Colorado[30]	Boulder, Colorado Springs, Denver-Aurora-Lakewood, Fort Collins, Grand Junction, Greeley, Pueblo
Florida[31]	Arcadia, Cape Coral-Fort Myers, Clewiston, Crestview-Fort Walton Beach-Destin, Deltona-Daytona Beach-Ormond Beach, Naples-Immokalee-Marco Island, Ocala, Orlando-Kissimmee-Sanford, Punta Gorda, Sebring, Tallahassee, The Villages
Georgia[32]	Hinesville

Iowa[33]

Ames, Cedar Rapids, Davenport-Moline-Rock Island, Des Moines-West Des Moines, Dubuque, Omaha-Council Bluffs, Sioux City, Waterloo-Cedar Falls

Idaho[34]

Boise City, Burley, Hailey, Idaho Falls, Lewiston, Pocatello, Rexburg, Twin Falls

Louisiana[35]

Lafayette, Ruston

Minnesota[36]

Alexandria, Bemidji, Duluth, Minneapolis-St. Paul-Bloomington, Rochester, St. Cloud

Missouri[37]

Columbia, Jefferson City, Warrensburg

Montana[38]

Billings, Bozeman, Great Falls, Helena, Kalispell, Missoula

Nebraska[39]

Grand Island, Omaha-Council Bluffs

Nevada[40]

Las Vegas-Henderson-Paradise

New Mexico[41]

Albuquerque, Farmington, Las Cruces, Santa Fe

North Carolina[42]

Burlington, Dunn, Durham-Chapel Hill, Elizabeth City, Fayetteville, Greensboro-High Point, Greenville, Henderson, Hickory-Lenoir-Morganton, Jacksonville, Kill Devil Hills, Morehead City, New Bern, Pinehurst-Southern Pines, Raleigh, Rocky Mount, Virginia Beach-Norfolk-Newport News, Washington, Wilson

North Dakota[43]

Bismarck, Dickinson, Fargo

Ohio[44]

Mansfield, Wooster, Youngstown-Warren-Boardman

Oregon[45]

Albany, Bend-Redmond, Corvallis, Eugene, Grants Pass, Hermiston-Pendleton, Medford, Portland-Vancouver-Hillsboro, Prineville, Salem

Pennsylvania[46]

Gettysburg, Harrisburg-Carlisle, York-Hanover

South Dakota[47]

Pierre, Rapid City, Sioux Falls, Yankton

Texas[48]

Austin-Round Rock, Dallas-Fort Worth-Arlington, Killeen-Temple, Stephenville

Utah[49]

Cedar City, Heber, Logan, Ogden-Clearfield, Provo-Orem, Salt Lake City, St. George, Summit Park

Virginia[50]

Charlottesville

Washington[51]

Aberdeen, Bellingham, Bremerton-Silverdale, Kennewick-Richland, Longview, Moses Lake, Olympia-Tumwater, Port Angeles, Portland-Vancouver-Hillsboro, Seattle-Tacoma-Bellevue, Spokane-Spokane Valley, Walla Walla, Yakima

Wisconsin[52]

Baraboo, La Crosse-Onalaska, Madison, Marinette, Milwaukee-Waukesha-West Allis, Platteville

Wyoming[53]

Casper, Cheyenne, Gillette, Jackson, Laramie, Rock Springs

Data centers

On May 2, 2017 CenturyLink, Inc. completed the previously announced sale of its data centers and colocation business to funds advised by BC Partners, in a consortium including Medina Capital Advisors and Longview Asset Management. The deal was worth approximately $1.86 billion with CenturyLink

retaining an approximately 10% equity stake in the consortium's newly formed global secure infrastructure company, Cyxtera Technologies.[9]

Organizational structure [as of Jan 2, 2020]

CenturyLink is the second largest U.S. communications provider to global enterprise customers. CenturyLink has customers in more than 60 countries.[54]

- Jeff Storey[55] - Chief Executive Officer
- Shaun Andrews[56] - Executive Vice President, Product Management and Chief Marketing Officer
- Richard Batelaan[57] - Executive Vice President, North American Operations
- Neel Dev[58] - Executive Vice President and CFO
- Andrew Dugan[59] - Chief Technology Officer
- Stacey W. Goff[60] - Executive Vice President, General Counsel and Chief Administrative Officer
- Fletcher Keister[61] - Chief Transformation Officer
- Lisa Miller[62] - President, Wholesale, Indirect Channels and Alliances
- Edward Morche[63] - President, Strategic Enterprise and Government Markets
- Maxine L. Moreau[64] - President, Consumer Markets
- Laurinda Pang[65] - President, International and Global Accounts Management
- Scott A. Trezise[66] - Executive Vice President, Human Resources

Acquisitions

File:CenturyLinkCombinedCoverageMap.gif

CenturyLink's combined coverage following Embarqacquisition. Dark fiber and lit fiber assets are shown

On October 27, 2008, Embarq announced that it would be acquired by CenturyTel, Inc. in an all-stock transaction valued at about $6 billion.[67][68] CenturyTel's CEO Glen Post would remain CEO of the merged company following the acquisition,[69] and remained CEO as of 2018.[70] Embarq was the former landline business of Sprint and served cities in 18 states, including Nevada, Florida, North Carolina and Ohio.[71] The deal made CenturyTel the third-largest landline phone provider in Pennsylvania behind Verizon (through both Verizon Pennsylvania and Verizon North) and Comcast.

Network map of combined Qwestand CenturyLink assets

On April 22, 2010, CenturyLink (at this point still legally known as CenturyTel, Inc.) announced it would acquire Qwest in a stock-for-stock transaction.[72] Under the agreement, CenturyLink would swap 0.1664 of its shares for each share of Qwest; as a result, CenturyLink shareholders prior to the merger wound up with 50.5% share of ownership in the combined company, while former Qwest shareholders gained the remaining 49.5%.[73] The valuation of CenturyLink's purchase was $12 billion.[67] The merger was completed on April 1, 2011.[74][75]

The addition of Qwest allowed CenturyLink to become the third largest telecommunications company in the United States, and the largest landline phone provider in the state of Colorado.[70] The new company has 17 million access lines, 5 million broadband customers, and 1.4 million video subscribers across 37 states.[76] The merger also made CenturyLink owner of one of the so-called Baby Bells: Qwest included what was once US West, the Baby Bell for much of the western United States.

On July 15, 2011,[71] CenturyLink acquired Savvis, Inc., a global provider of cloud infrastructure and hosted IT services for $2 billion, which represented all outstanding shares of Savvis common stock at $40 per share.[67][77] This acquisition allowed CenturyLink to provide expanded managed hosting and cloud services.[78]

On December 4, 2012,[79] CenturyLink launched an integrated suite of cloud services called savvisdirect.[80] Savvisdirect was an expansion of CenturyLink's portfolio of Savvis cloud services and includes cloud application hosting,[81] cloud servers,[82] cloud storage,[83] and private cloud[84] for small businesses, IT administrators and developers. CenturyLink later shuttered the savvisdirect subsidiary, consolidating their cloud service offerings internally.

On October 16, 2012 Savvis acquired ITO Business Division of Ciber thereby adding managed services to the portfolio.[85]

On June 14, 2013, CenturyLink announced the acquisition of AppFog, a Portland-based Platform as a Service used by over 100,000 developers to automate the deployment of software on public clouds such as Amazon Web Services and OpenStack.[86]

On November 19, 2013, CenturyLink announced the acquisition of Tier 3, a Seattle-based infrastructure as a service (IaaS), platform, and advanced cloud management company[87] based on Cloud Foundry.[88]

On December 8, 2014, CenturyLink announced the acquisition of DataGardens, Inc., a Disaster Recovery as-a-Service (DRaaS) provider based in Edmonton, Alberta, Canada.[89]

On December 11, 2014, CenturyLink announced the acquisition of Cognilytics, a predictive analytics and big data service provider.[90]

On March 30, 2016, CenturyLink announced the acquisition of netAura, a security services company that focuses on cybersecurity, security information and event management (SIEM), analytics and vulnerability management.[91]

On January 9, 2017, CenturyLink announced the acquisition of Edison, New Jersey-based SEAL Consulting, a leading SAP services provider. This expanded CenturyLink's existing integrated SAP capabilities of hosting and managed services to include integration and software implementation.[92]

On October 31, 2016, CenturyLink announced its intent to acquire Level 3 Communications in a deal valued at around $25 billion.[93] After securing the necessary regulatory approvals, CenturyLink closed the transaction on November 1, 2017.[94]

Naming rights and sponsorships

Venues & Sponsorships

- CenturyLink Arena Boise – Boise, Idaho (formerly *Bank of America Centre* and *Qwest Arena*)
- CenturyLink Center – Bossier City, Louisiana (formerly *Bossier City Arena* and *CenturyTel Center*)
- CenturyLink Field – Seattle, Washington (formerly *Qwest Field*)
- Denver Broncos[95]
- Orlando Magic[95]
- Idaho Steelheads[95]
- Seattle Seahawks[95]
- Texas Rangers
- Tampa Bay Buccaneers
- Minnesota Vikings[95]
- Portland Trail Blazers[95]
- ULM[95]
- LA Tech

History

The earliest predecessor of CenturyLink was the Oak Ridge Telephone Company in Oak Ridge, Louisiana, which was owned by F. E. Hogan, Sr. In 1930, Hogan sold the company, with 75 paid subscribers, to William Clarke and Marie Williams, for $500. They moved the switchboard to the Williams family front parlor. In 1946, the Williams' son, Clarke McRae Williams, received ownership of the family's telephone company as a wedding gift.[96] In 1947, Clarke Williams learned the telephone company in Marion, Louisiana was for sale. With a loan from business associate Joe Sydney Carter, Clarke purchased the Marion Telephone Company and eventually made it his base of operation as he grew his company through more acquisitions. CenturyLink still maintains offices in the former headquarters building.[97] The company remained as a family-operated business until it became incorporated in 1968.[98][99]

1967-1999

By 1967, Oak Ridge Telephone Company served three states with 10,000 access lines. That year, the company was incorporated as Central Telephone and Electronics. Clarke M. Williams served as president and chairman of the board.[100] Between 1972 and 1975, Clarke gradually moved his headquarters from Marion to Monroe, Louisiana, to access the larger employee base and to be near the airport.

In 1971, the company was renamed as Century Telephone Enterprises, Inc.[101][102] In 1972, Century Telephone acquired the La Crosse Telephone Corporation, of Wisconsin.[103]

On October 24, 1978, Century Telephone moved to the New York Stock Exchange for the first time and began to trade under the ticker symbol CTL.[104]

Century Telephone performed well during the long bear market of the 1970s, as its stock rose over fourfold. The company provided telephone service in parts of 14 states by that time.[105]

In 1981, Century Telephone acquired War Telephone in West Virginia.[106]

In 1982, Century Telephone's earnings peaked at $14 million, then declined in 1983 following the early 1980s recession, and finally began to recover in 1984. However, the 1983 decline led to a loss of half the value of the company's stock in 1984.[107]

In 1985, both earnings and the stock price had recovered to new record highs. But by then, the company had accumulated $206 million in long-term debt.[108] Century Telephone sold the operations of War Telephone and two other companies to Colonial Telephone for $4.66 million.[109]

In 1987, the stock price nearly doubled from its low that year, and from its old 1982 record high, before falling back by a third in the 1987 stock market crash. Earnings had steadily grown each year from their 1983 low, and by 1987 reached nearly US$20 million.[110]

In 1989, Century Telephone Enterprises acquired Universal Telephone, Inc. for US$90 million in cash.[111] During the late 1980s the company began a long trend in which it performed extremely well. The stock split three-for-two twice in this period, as earnings steadily grew, through the 1990-1991 recession, and by year-end 1991, they reached nearly US$40 million, double from what they had been in 1987.[112]

In 1992, Century Telephone acquired Central Telephone Company of Ohio, a Centel subsidiary, for $135 million. The acquisition served more than 65,000 access lines, and added 20% to Century's access line total. Also that year Glen F. Post III became Chief Executive Officer and, named Vice Chairman of the Board of Century Telephone.[113]

In 1993, Century Telephone revenues were over $425 million, up from about $350 million in 1992. 1993 earnings were nearly $80 million, up from about $70 million in 1992, excluding a nearly $16 million charge in 1992 due to the cumulative effect from an accounting change that year.[114][115] Also in 1993 the company split its stock three-for-two yet again. However, by that time, the company had accumulated nearly $520 million in long-term debt.[116]

By 1995, Century Telephone Enterprises had been added to the S&P MidCap 400 index. Earnings had continued their steady growth trend through the 1994 economic soft landing, and by 1995 they reached over US$115 million. But the long-term debt continued to grow as well, reaching US$623 million that year.[117]

In 1997, Century Telephone acquired Delta Security Alarm Co., Inc. of Monroe, Louisiana, and its largest acquisition up until that time, Pacific Telecom, doubling its size with 660,000 additional telephone access lines in 12 states.[118] Pacific Telecom, Inc., would continue existence and was renamed CenturyTel of the Northwest, Inc.

In 1998, Century Telephone split its stock three-for-two once again. The company acquired another Monroe, Louisiana security company, Century Protection Systems, and also acquired 89,000 access lines and 19 exchanges in 21 northern Wisconsin communities from Ameritech. The affected customers had formerly been served by Wisconsin Bell. Ameritech's directory publishing operations serving those customers were also acquired.[119]

In 1999, the company was renamed as CenturyTel, Inc.[120] It split its stock three-for-two once more, and was added to the Standard & Poor's 500 Index that year.[121]

2000-Present

In 2000, CenturyTel acquired 230,500 GTE lines in Arkansas, and also bought 127,000 GTE lines in Missouri in partnership with Spectra Communications.[122][123] In Wisconsin, it acquired 133,000 additional lines, and 70,500 access lines for US$195 million from Verizon. That year CenturyTel also bought 62,650 lines for US$170 million in partnership with Telephone USA of Wisconsin, LLC.[124]

In 2001, CenturyTel acquired CSW Net, Inc. of Russellville, Arkansas, and fended off a hostile take-over attempt by ALLTEL, Inc.[125][126]

In 2002, the son of the company's original founder and Chairman of the Board Clarke M. Williams died. He was succeeded by then Vice Chairman Glen F. Post III. The company sold its wireless business to ALLTEL, to become a pure-play rural local exchange carrier. Also that year CenturyTel acquired 300,000 Verizon access lines in Alabama, and 354,000 Verizon access lines in Missouri, bringing its total operations to 22 states with 2.5 million access lines.[127]

In 2003, CenturyTel acquired half ownership of SkyComm International, Inc. in Houston, Texas, in March, to form a satellite teleport for its global Network Access Point (NAP) system. In June, CenturyTel also acquired the fiber network of Digital Teleport, Inc., a 5,700-mile (9,200 km) route running from Illinois to Texas, and adjoining states.[128] CenturyTel renamed the network company LightCore.[129] Closing out the year, in December CenturyTel acquired the Midwest Fiber Optic Network (MFON) from Level 3 Communications, Inc. in December, a stand-alone system in the same core central states as LightCore.[130]

In August 2004, it partnered with EchoStar Communications Corporation for DISH Network multi-channel digital TV.[131] In September, CenturyTel began a relationship with Cingular Wireless.[132]

In 2005, CenturyTel began a wireless voice and data service, and bought a number of fiber networks in the central United States, from KMC Telecom Holdings, Inc.[133]

In 2006, CenturyTel sold its Arizona assets to Hopi Telecommunications, Inc., bringing total operations to 23 states.[134]

In May 2007, CenturyTel acquired Madison River Communications, based out of Mebane, NC and parent company to four LECs (AL, GA, IL, and NC) as well as CLEC operations in IL, LA, and NC. The LECs included Mebtel Communications, a telephone company serving Alamance County, North Carolina;[135][136] GulfTel Communications, based out of Foley, AL and serving Baldwin and surrounding counties;[137][138] Coastal Communications, based out of Hinesville, GA; and Gallatin River Communications, serving the Dixon, Galesburg, and Pekin areas of IL.

In late 2007, the Customer Respect Group, an international research and consulting firm that focuses on how corporations treat their online customers, ranked CenturyTel the best among six leading communications providers.

On June 2, 2009, a press release announced that the combined CenturyTel/Embarq entity would be called CenturyLink.[139] Denver-based Monigle Associates was retained to formulate the new brand strategy. The acquisition was completed on July 1, 2009.[140]

On October 19, 2009, CenturyTel and Embarq brandings were retired, and all business was officially conducted under the CenturyLink banner, continuing to trade on the NYSE under the CenturyTel stock ticker CTL. The new corporate name, CenturyLink, Inc., did not become official until May 2010.

[...

2020 name change to Lumen

See [HK0044][GDrive]

On September 14, 2020, **CenturyLink, Inc** announced they have rebranded to [**Lumen Technologies, Incorporated**]. Effective with the opening of the trading day on Sept. 18, 2020, the company stock ticker changed from CTL to LUMN. For residents and small businesses, the CenturyLink brand will continue to be used for traditional copper-based services. *Quantum Fiber* branding will be used for fiber-based products and services.[66]

...]

Criticism and controversy

The Federal Communications Commission ordered CenturyLink to pay a record $16 million for failing to alert authorities of a preventable programming error that left nearly 11 million people in seven states without access to emergency services for six hours in 2014.[143][144]

In December 2018, CenturyLink faced criticism for requiring residential customers in Utah to, via DNS hijacking, view and acknowledge a notice advertising its security and parental control software, before they could connect to the internet again. The provider claimed that this was required by a recently-enacted state law, which requires all ISPs to inform users that they provide "the ability to block material harmful to minors". Bill sponsor and Utah State Senate member Todd Weiler stated that the law did not require that service be disrupted until the notice is acknowledged; the law only requires that this notice be delivered in a "conspicuous" manner (such as an advertisement within a bill or invoice) and does not require disruption of service.[145]

On December 27, 2018, a “nationwide outage” caused 9-1-1 service to be disrupted across the country. The Federal Communications Commission says it will investigate.[146][147] In some areas the outage lasted nearly twelve hours and was the third shutdown of the year following outages in April and November 2018. ATM and point of sale credit card machines were also widely affected.[148]

See also

- List of CenturyLink operating companies
- List of United States telephone companies
- Tier 1 network

Lumen Technologies

From Wikipedia, the free encyclopedia

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(diff) ← Previous revision | Latest revision (diff) | Newer revision → (diff)

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Formerly

Central Telephone and Electronics, Inc.

Century Telephone Enterprises, Inc.

CenturyTel, Inc.

Type

Public

Traded as

NYSE: CTL

S&P 500 Component

Industry

Telecommunications

Founded

1930[1]

Headquarters

Monroe, Louisiana,

United States

Area served

North America, LATAM, EMEA and Asia Pacific

Key people

Jeff Storey (CEO)[2]

Services

Fixed-line telephony, fiber-optic broadband and fixed-line internet services, digital television, network services, Internet Protocol Television/Prism TV, and Internet hosting service

Revenue

US$ 23.321 million (2019)[3]

Operating income

US$ 570 million (2018)[4]

Total assets

US$ 70.256 million (2018)[4]

Total equity

US$ 19.828 million (2018)[4]

Number of employees

45,000 (2018)[4]

Subsidiaries

CenturyTel companies

Embarq

Qwest

Savvis

Level 3 Communications[5]

Website

www.centurylink.com

CenturyLink, Inc. is an American telecommunications company, headquartered in Monroe, Louisiana, that provides communications and data services to residential, business, governmental, and wholesale customers in 37 states.[6] A member of the S&P 500 index and the Fortune 500,[7] the company operates as a local exchange carrier and Internet access provider in U.S. markets and is the third-largest telecommunications company in the United States in terms of lines served, behind AT&T and Verizon and[8] provides long distance service. CenturyLink also serves global enterprise customers across North America, Latin America, EMEA and Asia Pacific.[9]

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History

CenturyLink Technology Center of Excellence in Monroe, LA

The earliest predecessor of CenturyLink was the Oak Ridge Telephone Company in Oak Ridge, Louisiana, which was owned by F. E. Hogan, Sr. In 1930, Hogan sold the company, with 75 paid subscribers, to William Clarke and Marie Williams, for $500. They moved the switchboard to the Williams family front parlor. In 1946, the Williams' son, Clarke McRae Williams, received ownership of the family's telephone company as a wedding gift.[1] In 1947, Clarke Williams learned the telephone company in Marion, Louisiana was for sale. With a loan from business associate Joe Sydney Carter, Clarke purchased the Marion Telephone Company and eventually made it his base of operation as he grew his company through more acquisitions. CenturyLink still maintains offices in the former headquarters building.[10] The company remained as a family-operated business until it became incorporated in 1968.[1][11]

1967-1999

By 1967, Oak Ridge Telephone Company served three states with 10,000 access lines. That year, the company was incorporated as Central Telephone and Electronics. Clarke M. Williams served as president and chairman of the board.[1] Between 1972 and 1975, Clarke gradually moved his headquarters from Marion to Monroe, Louisiana, to access the larger employee base and to be near the airport.

File:Century Telephone.gif

Century Telephone logo

In 1971, the company was renamed as Century Telephone Enterprises, Inc.[1][11] In 1972, Century Telephone acquired the La Crosse Telephone Corporation, of Wisconsin.[1]

On October 24, 1978, Century Telephone moved to the New York Stock Exchange for the first time and began to trade under the ticker symbol CTL.[1]

Century Telephone performed well during the long bear market of the 1970s, as its stock rose over fourfold. The company provided telephone service in parts of 14 states by that time.[12]

In 1981, Century Telephone acquired War Telephone in West Virginia.[13]

In 1982, Century Telephone's earnings peaked at $14 million, then declined in 1983 following the early 1980s recession, and finally began to recover in 1984. However, the 1983 decline led to a loss of half the value of the company's stock in 1984.[12]

In 1985, both earnings and the stock price had recovered to new record highs. But by then, the company had accumulated $206 million in long-term debt.[12] Century Telephone sold the operations of War Telephone and two other companies to Colonial Telephone for $4.66 million.[14]

In 1987, the stock price nearly doubled from its low that year, and from its old 1982 record high, before falling back by a third in the 1987 stock market crash. Earnings had steadily grown each year from their 1983 low, and by 1987 reached nearly US$20 million.[12]

In 1989, Century Telephone Enterprises acquired Universal Telephone, Inc. for US$90 million in cash.[1] During the late 1980s the company began a long trend in which it performed extremely well. The stock split three-for-two twice in this period, as earnings steadily grew, through the 1990-1991 recession, and by year-end 1991, they reached nearly US$40 million, double from what they had been in 1987.[12]

In 1992, Century Telephone acquired Central Telephone Company of Ohio, a Centel subsidiary, for $135 million. The acquisition served more than 65,000 access lines, and added 20% to Century's access line total. Also that year Glen F. Post III became Chief Executive Officer and, named Vice Chairman of the Board of Century Telephone.[1]

In 1993, Century Telephone revenues were over $425 million, up from about $350 million in 1992. 1993 earnings were nearly $80 million, up from about $70 million in 1992, excluding a nearly $16 million charge in 1992 due to the cumulative effect from an accounting change that year.[12][15] Also in 1993 the company split its stock three-for-two yet again. However, by that time, the company had accumulated nearly $520 million in long-term debt.[12]

By 1995, Century Telephone Enterprises had been added to the S&P MidCap 400 index. Earnings had continued their steady growth trend through the 1994 economic soft landing, and by 1995 they reached over US$115 million. But the long-term debt continued to grow as well, reaching US$623 million that year.[12]

In 1997, Century Telephone acquired Delta Security Alarm Co., Inc. of Monroe, Louisiana, and its largest acquisition up until that time, Pacific Telecom, doubling its size with 660,000 additional telephone access lines in 12 states.[1] Pacific Telecom, Inc., would continue existence and was renamed CenturyTel of the Northwest, Inc.

In 1998, Century Telephone split its stock three-for-two once again. The company acquired another Monroe, Louisiana security company, Century Protection Systems, and also acquired 89,000 access lines and 19 exchanges in 21 northern Wisconsin communities from Ameritech. The affected customers had formerly been served by Wisconsin Bell. Ameritech's directory publishing operations serving those customers were also acquired.[16]

In 1999, the company was renamed as CenturyTel, Inc.[17] It split its stock three-for-two once more, and was added to the Standard & Poor's 500 Index that year.[1]

2000-Present

Former CenturyTel logo used by the company prior to becoming CenturyLink

CenturyTel office, Ann Arbor, Michigan

In 2000, CenturyTel acquired 230,500 GTE lines in Arkansas, and also bought 127,000 GTE lines in Missouri in partnership with Spectra Communications.[18][19] In Wisconsin, it acquired 133,000 additional lines, and 70,500 access lines for US$195 million from Verizon. That year CenturyTel also bought 62,650 lines for US$170 million in partnership with Telephone USA of Wisconsin, LLC.[20]

In 2001, CenturyTel acquired CSW Net, Inc. of Russellville, Arkansas, and fended off a hostile take-over attempt by ALLTEL, Inc.[21][22]

In 2002, the son of the company's original founder and Chairman of the Board Clarke M. Williams died. He was succeeded by then Vice Chairman Glen F.

Post III. The company sold its wireless business to ALLTEL, to become a pure-play rural local exchange carrier. Also that year CenturyTel acquired 300,000 Verizon access lines in Alabama, and 354,000 Verizon access lines in Missouri, bringing its total operations to 22 states with 2.5 million access lines.[23]

In 2003, CenturyTel acquired half ownership of SkyComm International, Inc. in Houston, Texas, in March, to form a satellite teleport for its global Network Access Point (NAP) system. In June, CenturyTel also acquired the fiber network of Digital Teleport, Inc., a 5,700-mile (9,200 km) route running from Illinois to Texas, and adjoining states.[24] CenturyTel renamed the network company LightCore.[25] Closing out the year, in December CenturyTel acquired the Midwest Fiber Optic Network (MFON) from Level 3 Communications, Inc. in December, a stand-alone system in the same core central states as LightCore.[1]

In August 2004, it partnered with EchoStar Communications Corporation for DISH Network multi-channel digital TV.[26] In September, CenturyTel began a relationship with Cingular Wireless.[27]

In 2005, CenturyTel began a wireless voice and data service, and bought a number of fiber networks in the central United States, from KMC Telecom Holdings, Inc.[28]

In 2006, CenturyTel sold its Arizona assets to Hopi Telecommunications, Inc., bringing total operations to 23 states.[1]

In May 2007, CenturyTel acquired Madison River Communications, based out of Mebane, NC and parent company to four LECs (AL, GA, IL, and NC) as well as CLEC operations in IL, LA, and NC. The LECs included Mebtel Communications, a telephone company serving Alamance County, North Carolina;[29][30] GulfTel Communications, based out of Foley, AL and serving Baldwin and surrounding counties;[31][32] Coastal Communications, based out of Hinesville, GA; and Gallatin River Communications, serving the Dixon, Galesburg, and Pekin areas of IL.

In late 2007, the Customer Respect Group, an international research and consulting firm that focuses on how corporations treat their online customers, ranked CenturyTel the best among six leading communications providers.

On June 2, 2009, a press release announced that the combined CenturyTel/Embarq entity would be called CenturyLink.[33] Denver-based Monigle Associates was retained to formulate the new brand strategy. The acquisition was completed on July 1, 2009.[34]

On October 19, 2009, CenturyTel and Embarq brandings were retired, and all business was officially conducted under the CenturyLink banner, continuing to trade on the NYSE under the CenturyTel stock ticker CTL. The new corporate name, CenturyLink, Inc., did not become official until May 2010.[35][36]

Services offered

CenturyLink offices in Salt Lake City, Utah

CenturyLink offers voice and data communications, as well as television and home security services.[37] CenturyLink's local and long distance voice communications is POTS. CenturyLink's data communication is through DSL, Metro Ethernet, MPLS, ATM, and Frame Relay over fiber optics, copper DS-3 and T-1 lines. The company also offers bundling with Verizon Wireless.[38]

Availability by state

CenturyLink Availability Map by Zip Code

CenturyLink residential services are available in the following states:[39]

Arkansas

Illinois

New Jersey

Oregon

Florida

Minnesota

Oklahoma

Virginia

Arizona

Indiana

New Mexico

Tennessee

Georgia

Missouri

Ohio

Washington

Arkansas

Iowa

North Carolina

Texas

Texas

Idaho

Montana

Pennsylvania

Wisconsin

Colorado

Michigan

North Dakota

Utah

Kansas

Nebraska

South Carolina

Wyoming

Louisiana

Nevada

South Dakota

Television

Main article: Prism TV

CenturyLink offers a fiber-optic based IPTV service named Prism TV in select markets.[40] In areas where Prism TV is not available, CenturyLink partners with DirecTV.

Fiber

CenturyLink Fiber is a fiber to the premises service in the United States, providing broadband Internet and Prism TV to a small and very slowly growing number of locations. The service was first introduced to Omaha, Nebraska,[41] and next rolled out to Las Vegas, Nevada,[42] with plans for expansion to several other markets.[43] Unlike the company's existing high speed Internet deployments, which utilize fiber-to the node/neighborhood to increase the speed of ADSL2+ speeds up to 20/2 Mbit/s, Vectored VDSL2+ speeds up to 140/10Mbit/s, in these markets CenturyLink now installs their fiber optic cable all the way to the home or business with speeds up to 1,000 Mbit/s download and 1,000 Mbit/s upload[44] using Calix Optical Network Terminals.[45] On Feb. 2, 2014, CenturyLink announced the availability of Gigabit fiber service to multi-tenant businesses in Salt Lake City and surrounding communities.[46] On Aug. 5, 2014, CenturyLink announced the expansion of its gigabit fiber service to 16 additional markets.[47] On Sep, 15, 2015, CenturyLink announced the expansion of its gigabit fiber service to residential and business customers in six additional states, increasing the company's service coverage to select areas of 17 states.[48]

Gigabit Fiber markets

This section **needs additional citations for verification**. Please help improve this article by adding citations to reliable sources. Unsourced material may be challenged and removed. *(May 2018) (Learn how and when to remove this template message)*

State

Cities

Availability

Arizona

Anthem, Chandler, Gilbert, Mesa, Peoria, Phoenix, Queen Creek, Scottsdale, Sun City, Surprise, Tucson

Residences and Businesses[49]

Colorado

Colorado Springs

Residences and Businesses

Colorado

Denver

Residences and Businesses

Colorado

Boulder

Residences and Businesses

Florida

Orlando

Residences and Businesses

Iowa

Ankeny, Des Moines, Clive, Urbandale

Residences and Businesses

Minnesota

Minneapolis, St. Paul

Residences and Businesses

Missouri

Columbia, Jefferson City

Residences and Businesses

Nebraska

Omaha

Residences and Businesses

Nevada

Las Vegas

Residences and Businesses

New Mexico

Albuquerque

Businesses

North Carolina

Angier, Clayton, Fuquay-Varina, Hillsborough, Mebane, Pittsboro, Roxboro, Smithfield, Wake Forest

Residences and Businesses[50]

Oregon

Portland

Residences and Businesses

South Dakota

Sioux Falls

Businesses

Utah

Salt Lake City, Draper, Midvale, Sandy, South Jordan, West Jordan, Cottonwood Heights

Multi-tenant Business Buildings[51]

Utah

Salt Lake City, Bountiful[52]

Residences and Businesses

Washington

Seattle

Residences and Businesses

Washington

Spokane

Businesses

Wisconsin

La Crosse

Residences and Businesses [53]

Data centers

On May 2, 2017 CenturyLink, Inc. completed the previously announced sale of its data centers and colocation business to funds advised by BC Partners, in a consortium including Medina Capital Advisors and Longview Asset Management. The deal was worth approximately $1.86 billion with CenturyLink retaining an approximately 10% equity stake in the consortium's newly formed global secure infrastructure company, Cyxtera Technologies.

Organizational structure

The combined company's 37-state service area is organized into five regions and led by region presidents.[54] The region presidents are responsible for revenue, customer retention, customer satisfaction, and service delivery throughout their local markets.[55] The regions, region headquarters locations, and states within each region are:

Region

Headquarters

States

Eastern Region

Apopka, FL

Alabama, Florida, Georgia, New Jersey, North Carolina, Pennsylvania, South Carolina, Tennessee, Virginia

Midwest Region

Minneapolis

Illinois, Indiana, Iowa, Michigan, Minnesota, Nebraska, North Dakota, Ohio, South Dakota, Wisconsin

Central Region

Denver

Arkansas, Colorado, Kansas, Louisiana, Mississippi, Missouri, Oklahoma, Texas

Northwest Region

Seattle

Idaho, Montana, Oregon, Washington, Wyoming

Southwest Region

Phoenix

Arizona, California, Nevada, New Mexico, Utah

Acquisitions

File:CenturyLinkCombinedCoverageMap.gif

CenturyLink's combined coverage following Embarqacquisition. Dark fiber and lit fiber assets are shown

On October 27, 2008, Embarq announced that it would be acquired by CenturyTel, Inc. in an all-stock transaction valued at about $6 billion.[56][36] CenturyTel's CEO Glen Post would remain CEO of the merged company following the acquisition,[57] and remained CEO as of 2018.[58] Embarq was the former landline business of Sprint and served cities in 18 states, including Nevada, Florida, North Carolina and Ohio.[59] The deal made CenturyTel the third-largest landline phone provider in Pennsylvania behind Verizon (through both Verizon Pennsylvania and Verizon North) and Comcast.

Network map of combined Qwestand CenturyLink assets

On April 22, 2010, CenturyLink (at this point still legally known as CenturyTel, Inc.) announced it would acquire Qwest in a stock-for-stock transaction.[60] Under the agreement, CenturyLink would swap 0.1664 of its shares for each share of Qwest; as a result, CenturyLink shareholders prior to the merger wound up with 50.5% share of ownership in the combined company, while former Qwest shareholders gained the remaining 49.5%.[61] The valuation of CenturyLink's purchase was $12 billion.[56] The merger was completed on April 1, 2011.[62][63]

The addition of Qwest allowed CenturyLink to become the third largest telecommunications company in the United States, and the largest landline phone provider in the state of Colorado.[58] The new company has 17 million access lines, 5 million broadband customers, and 1.4 million video subscribers across 37 states.[64] The merger also made CenturyLink owner of one of the so-called Baby Bells: Qwest included what was once US West, the Baby Bell for much of the western United States.

On July 15, 2011,[59] CenturyLink acquired Savvis, Inc., a global provider of cloud infrastructure and hosted IT services for $2 billion, which represented all

outstanding shares of Savvis common stock at $40 per share.[56][65] This acquisition allowed CenturyLink to provide expanded managed hosting and cloud services.[66]

On December 4, 2012,[67] CenturyLink launched an integrated suite of cloud services called savvisdirect.[68] Savvisdirect was an expansion of CenturyLink's portfolio of Savvis cloud services and includes cloud application hosting,[69] cloud servers,[70] cloud storage,[71] and private cloud[72] for small businesses, IT administrators and developers. CenturyLink later shuttered the savvisdirect subsidiary, consolidating their cloud service offerings internally.

On October 16, 2012 Savvis acquired ITO Business Division of Ciber thereby adding managed services to the portfolio.[73]

On June 14, 2013, CenturyLink announced the acquisition of AppFog, a Portland-based Platform as a Service used by over 100,000 developers to automate the deployment of software on public clouds such as Amazon Web Services and OpenStack.[74]

On November 19, 2013, CenturyLink announced the acquisition of Tier 3, a Seattle-based infrastructure as a service (IaaS), platform, and advanced cloud management company[75] based on Cloud Foundry.[76]

On December 8, 2014, CenturyLink announced the acquisition of DataGardens, Inc., a Disaster Recovery as-a-Service (DRaaS) provider based in Edmondton, Alberta, Canada.[77]

On December 11, 2014, CenturyLink announced the acquisition of Cognilytics, a predictive analytics and big data service provider.[78]

On March 30, 2016, CenturyLink announced the acquisition of netAura, a security services company that focuses on cybersecurity, security information and event management (SIEM), analytics and vulnerability management.[79]

On January 9, 2017, CenturyLink announced the acquisition of Edison, New Jersey-based SEAL Consulting, a leading SAP services provider. This expanded CenturyLink's existing integrated SAP capabilities of hosting and managed services to include integration and software implementation. [80]

On October 31, 2016, CenturyLink announced its intent to acquire Level 3 Communications in a deal valued at around $25 billion.[81]. After securing the necessary regulatory approvals, CenturyLink closed the transaction on November 1, 2017.[82]

Naming rights and sponsorships

Venues & Sponsorships

- CenturyLink Arena Boise – Boise, Idaho (formerly *Bank of America Centre* and *Qwest Arena*)
- CenturyLink Center – Bossier City, Louisiana (formerly *Bossier City Arena* and *CenturyTel Center*)
- CenturyLink Field – Seattle, Washington (formerly *Qwest Field*)
- CenturyLink Sports Complex and Hammond Stadium - Fort Myers, Florida (Spring Training for Minnesota Twins)
- Denver Broncos[83]
- Orlando Magic[83]
- Idaho Steelheads[83]
- Minnesota Twins[83]
- Seattle Seahawks[83]
- New Mexico State Aggies[83]

Criticism and controversy

The Federal Communications Commission ordered CenturyLink to pay a record $16 million for failing to alert authorities of a preventable programming error that left nearly 11 million people in seven states without access to emergency services for six hours in 2014.[84][85]

In December 2018, CenturyLink attracted criticism after employing DNS hijacking to display an advertisement for its security and parental control software to residential subscribers in Utah, with service disrupted to users until they read and acknowledge the advertising. CenturyLink stated that the message was presented to comply with a recently-enacted Utah state law, requiring ISPs to inform users "of the ability to block material harmful to minors". Bill sponsor and Utah State Senate member Todd Weiler stated that the law did not require that service be disrupted until the notice is acknowledged; the law only requires that this notice be delivered in a conspicuous manner, and suggested manners such as inclusion in a monthly bill.[86]

On December 27th, 2018, a "nationwide outage" caused 9-1-1 service to be disrupted across the country. The Federal Communications Commission says it will investigate.[87][88] In some areas the outage lasted nearly twelve hours and was the third shutdown of the year following outages in April and November 2018. ATM and point of sale credit card machines were also widely affected.[89]

See also

- List of CenturyLink operating companies
- List of United States telephone companies

BITCHUTE @Housatonic YOUTUBE @HousatonicLive ODYSEE @Housatonic BRIGHTEON @Housatonic

Vinton Gray Cerf (born 1943)

2007 ICANN event
[HK004R][GDrive]

Wikipedia Vint Cerf

Saved Wikipedia (Jan 13 2021) for Vint Cerf

[HK004Q][GDrive]

Born

Vinton Gray Cerf

June 23, 1943 (age 77)

New Haven, Connecticut, U.S.

Citizenship

American

Alma mater

Stanford University

UCLA

Known for

TCP/IP

Internet Society

Awards

- ACM Fellow (1994)
- IEEE Alexander Graham Bell Medal (1997)
- National Medal of Technology (1997)
- Marconi Prize (1998)
- Prince of Asturias Award (2002)
- Turing Award (2004)
- Presidential Medal of Freedom (2005)

- Japan Prize (2008)
- Harold Pender Award (2010)
- Queen Elizabeth Prize for Engineering (2013)
- ForMemRS (2016)[1]

Scientific career

Fields

Telecommunications

Institutions

IBM,[2] International Institute of Information Technology, Hyderabad,[2][3] UCLA,[2] Stanford University,[2] DARPA,[2] MCI,[2][4] CNRI,[2] Google[5]

Thesis

Multiprocessors, Semaphores, and a Graph Model of Computation (1972)

Doctoral advisor

Gerald Estrin[6]

Website

research.google.com/pubs/author32412.html

Signature

Vinton Gray Cerf[2] ForMemRS[1] (/ˈsɜːrf/; born June 23, 1943) is an American Internet pioneer and is recognized as one of "the fathers of the Internet", sharing this title with TCP/IP co-developer Bob Kahn.[7][8][9][10] He has received honorary degrees and awards that include the National Medal of Technology,[2] the Turing Award,[11] the Presidential Medal of Freedom,[12] the Marconi Prize and membership in the National Academy of Engineering.

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Life and career[edit]

Vinton Cerf in Vilnius, September 2010

Cerf was born in New Haven, Connecticut, the son of Muriel (née Gray) and Vinton Thurston Cerf.[13][14] Cerf attended Van Nuys High School with Jon Postel and Steve Crocker. While in high school, Cerf worked at Rocketdyne on the Apollo program and helped write statistical analysis software for the non-destructive tests of the F-1 engines.[15]

Cerf received a Bachelor of Science degree in mathematics from Stanford University.[16] After college, Cerf worked at IBM as a systems engineer supporting QUIKTRAN for two years.[2]

Cerf and his wife Sigrid both have hearing deficiencies; they met at a hearing aid agent's practice in the 1960s,[17] which led him to becoming an advocate for accessibility.

He left IBM to attend graduate school at UCLA where he earned his M.S. degree in 1970 and his PhD in 1972.[6][18] Cerf studied under Professor Gerald Estrin and worked in Professor Leonard Kleinrock's data packet networking group that connected the first two nodes of the ARPANet,[19] the first node[19] on the Internet, and "contributed to a host-to-host protocol" for the ARPANet.[20]

While at UCLA, Cerf met Bob Kahn, who was working on the ARPANet system architecture.[20] Cerf wrote the first TCP protocol with Yogen Dalal and Carl Sunshine, called *Specification of Internet Transmission Control Program* (RFC 675), published in December 1974.[21]

Cerf worked as assistant professor at Stanford University from 1972 to 1976 where he conducted research on packet network interconnection protocols and co-designed the DoD TCP/IP protocol suite with Kahn.[20]

Cerf playing *Spacewar!* on the Computer History Museum's PDP-1, ICANN meeting, 2007

Cerf worked at the United States Defense Advanced Research Projects Agency (DARPA) from 1973 to 1982 and funded various groups to develop TCP/IP, packet radio (PRNET), packet satellite (SATNET) and packet security technology.[22] These efforts were rooted in the needs of the military.[23][24][25] In the late 1980s, Cerf moved to MCI where he helped develop the first commercial email system (MCI Mail) to be connected to the Internet.[26]

Cerf is active in a number of global humanitarian organizations.[*citation needed*][27] Cerf is also known for his sartorial style, typically appearing in a three-piece suit—a rarity in an industry known for its casual dress norms.[28][29]

As vice president of MCI Digital Information Services from 1982 to 1986, Cerf led the engineering of MCI Mail, the first commercial email service to be connected to the Internet. In 1986, he joined Bob Kahn at the Corporation for National Research Initiatives as its vice president, working with Kahn on Digital Libraries, Knowledge Robots, and gigabit speed networks. Since 1988 Cerf lobbied for the privatization of the internet.[30] In 1992, he and Kahn, among others, founded the Internet Society (ISOC) to provide leadership in education, policy and standards related to the Internet. Cerf served as the first president of ISOC. Cerf rejoined MCI during 1994 and served as Senior Vice President of Technology Strategy. In this role, he helped to guide corporate strategy development from a technical perspective. Previously, he served as MCI's senior vice president of Architecture and Technology, leading a team of architects and engineers to design advanced networking frameworks, including Internet-based solutions for delivering a combination of data, information, voice and video services for business and consumer use.

During 1997, Cerf joined the Board of Trustees of Gallaudet University, a university for the education of the deaf and hard-of-hearing.[31] Cerf himself is hard of hearing.[32] He has also served on the university's Board of Associates.[33]

Cerf, as leader of MCI's internet business, was criticized due to MCI's role in providing the IP addresses used by Send-Safe.com, a vendor of spamware that uses a botnet in order to send spam. MCI refused to terminate the spamware vendor.[34][35] At the time, Spamhaus also listed MCI as the ISP with the most Spamhaus Block List listings.[36]

Cerf has worked for Google as a vice president and Chief Internet Evangelist since October 2005.[5] In this function he has become well known for his predictions on

how technology will affect future society, encompassing such areas as artificial intelligence, environmentalism, the advent of IPv6 and the transformation of the television industry and its delivery model.[37]

Since 2010, Cerf has served as a Commissioner for the Broadband Commission for Digital Development, a UN body which aims to make broadband internet technologies more widely available.

Cerf helped fund and establish ICANN, the Internet Corporation for Assigned Names and Numbers. He joined the board in 1999, and served until November 2007.[38] He was chairman from November 2000 to his departure from the Board.

Cerf was a member of Bulgarian President Georgi Parvanov's IT Advisory Council (from March 2002 – January 2012). He is also a member of the Advisory Board of Eurasia Group, the political risk consultancy.[39]

Cerf is also working on the Interplanetary Internet, together with NASA's Jet Propulsion Laboratory and other NASA laboratories. It will be a new standard to communicate from planet to planet, using radio/laser communications that are tolerant of signal degradations including variable delay and disruption caused, for example, by celestial motion.[40]

On February 7, 2006, Cerf testified before the U.S. Senate Committee on Commerce, Science, and Transportation's hearing on network neutrality. Speaking as Google's Chief Internet Evangelist, Cerf noted that nearly half of all consumers lacked meaningful choice in broadband providers and expressed concerns that without network neutrality government regulation, broadband providers would be able to use their dominance to limit options for consumers and charge companies like Google for their use of bandwidth.[41]

Cerf at 2007 Los Angeles ICANN meeting

Cerf currently serves on the board of advisors of Scientists and Engineers for America, an organization focused on promoting sound science in American government.[42] He also serves on the advisory council of CRDF Global (Civilian Research and Development Foundation) and was on the International Multilateral Partnership Against Cyber Threats (IMPACT) International Advisory Board.[43]

Cerf was elected as the president of the Association for Computing Machinery in May 2012[44] and joined the Council on CyberSecurity's Board of Advisors in August 2013.[45]

From 2011 to 2016, Cerf was chairman of the board of trustees of ARIN, the Regional Internet Registry (RIR) of IP addresses for United States, Canada, and part of the Caribbean.[46] Until Fall 2015, Cerf chaired the board of directors of StopBadware, a non-profit anti-malware organization that started as a project at Harvard University's Berkman Center for Internet & Society.[47][48] Cerf is on the board of advisors to The Liquid Information Company Ltd of the UK, which works to make the web more usefully interactive and which has produced the Mac OS X utility called 'Liquid'.[49] Vint Cerf is a member of the CuriosityStream Advisory Board.[50]

During 2008, Cerf chaired the Internationalized domain name (IDNAbis) working group of the IETF.[51] In 2008 Cerf was a major contender to be designated the first U.S. Chief Technology Officer by President Barack Obama.[52] Cerf is the co-chair of Campus Party Silicon Valley, the US edition of one of the largest technology festivals in the world, along with Al Gore and Tim Berners-Lee.[53] From 2009 to 2011, Cerf was an elected member of the Governing Board of the Smart Grid Interoperability Panel (SGIP). SGIP is a public-private consortium established by NIST in 2009 and provides a forum for businesses and other stakeholder groups to participate in coordinating and accelerating development of standards for the evolving Smart Grid.[54] Cerf was elected to a two-year term as President of the Association for Computing Machinery (ACM) beginning July 1, 2012.[55] In 2015 Cerf co-founded (with Mei Lin Fung), and is currently chairman of, People-Centered Internet (PCI).[56] On January 16, 2013, U.S. President Barack Obama announced his intent to appoint Cerf to the National Science Board.[57] Cerf served until May 2018 when his six-year term expired.

Cerf is also among the 15 members of governing council of International Institute of Information Technology, Hyderabad.[58]

In June 2016, his work with NASA led to Delay-tolerant networking being installed on the International Space Station with an aim towards an Interplanetary Internet.[59]

Since at least 2015, Cerf has been raising concerns about the wide-ranging risks of digital obsolescence, the potential of losing much historic information about our time – a digital "dark age" or "black hole" – given the ubiquitous digital storage of text, data, images, music and more. Among the concerns are the long-term storage of, and continued reliable access to, our vast stores of present-day digital data and the associated programs, operating systems, computers and peripherals required to access such.[60][61][62][63]

In March 2020, Cerf confirmed that he had tested positive for COVID-19. He announced the news via a tweet in which he also criticized President Donald Trump for the way he was handling the COVID-19 pandemic in the United States.[64] On April 3, 2020, Cerf announced via Twitter that VA Public Health had certified his wife and himself as no longer contagious with the virus.[65]

Awards and honors[edit]

> This section of a biography of a living person **needs additional citations for verification**. Please help by adding reliable sources. Contentious material about living persons that is unsourced or poorly sourced **must be removed immediately**, especially if potentially libelous or harmful.
> *Find sources:* "Vint Cerf" – news · newspapers · books · scholar · JSTOR *(June 2015) (Learn how and when to remove this template message)*

Cerf and Bob E. Kahn being awarded the Presidential Medal of Freedom by President George W. Bush

Cerf and Bulgarian President Parvanov being awarded the St. Cyril and Methodius in the Coat of Arms Order

Cerf has received a number of honorary degrees, including doctorates, from the University of the Balearic Islands, ETHZ in Zurich, Switzerland, Capitol College, Gettysburg College, Yale University,[66] George Mason University, Marymount University, Bethany College (Kansas), University of Pisa, University of Rovira and Virgili (Tarragona, Spain), Rensselaer Polytechnic Institute,[67] Luleå University of Technology (Sweden), University of Twente (Netherlands), Beijing University of Posts and Telecommunications, Tsinghua University (Beijing), Brooklyn Polytechnic, UPCT (University of Cartagena, Spain), Zaragoza University (Spain), University of Reading (United Kingdom), Royal Roads University (Canada), MGIMO (Moscow State University of International Relations), Buenos Aires Institute of Technology (Argentina), Polytechnic University of Madrid, Keio University (Japan), University of South Australia (Australia), University of St Andrews (Scotland), University of Pittsburgh and[68] Gallaudet University (United States). Other awards include:

- Edward A. Dickson Alumnus of the Year Award from UCLA[69]
- Prince of Asturias award for science and technology[70]
- Life Member IEEE[71]
- Fellow of the Association for Computing Machinery, 1994[72][73]
- Yuri Rubinsky Memorial Award, 1996[74][75]
- SIGCOMM Award for "contributions to the Internet [spanning] more than 25 years, from development of the fundamental TCP/IP protocols".[76]
- Certificate of Merit from The Franklin Institute, in 1996.

- In December 1997 he, along with his partner Robert E. Kahn, was presented with the National Medal of Technology by President Bill Clinton, "for creating and sustaining development of Internet Protocols and continuing to provide leadership in the emerging industry of internetworking."[77][78]
- In 2000, he received the honorary doctorate degree from URV, Spain.[79]
- He received the Living Legend Medal from the Library of Congress in April 2000
- In 2000, he was made a Fellow of the Computer History Museum "for his contributions to computer architecture, operating systems, and software engineering."[80]
- Cerf was selected as a Fellow of the Association for Women in Science (AWIS) in 2000.
- Cerf was awarded the Award of Technology from the Telluride Tech Festival in 2002, also known as the Tesla Festival since the world's first AC hydro-power power plant was built in Telluride in 1891 by L.L. Nunn who purchased the generator and plans from George Westinghouse and Tesla.
- Cerf and Kahn were the winners of the Turing Award for 2004,[11] for their "pioneering work on internetworking, including .. the Internet's basic communications protocols .. and for inspired leadership in networking."[81]
- In November 2005, Vinton Cerf and Kahn were awarded the Presidential Medal of Freedom by President George W. Bush for their contributions to the creation of the Internet.[12]
- He and Robert Kahn were inducted into the National Inventors Hall of Fame in May 2006
- Vinton Cerf was awarded the St. Cyril and Methodius in the Coat of Arms Order in July 2006[82]
- Vinton Cerf and Robert Kahn were each inducted as an Honorary Fellow of the Society for Technical Communication (STC) in May 2006
- He and Robert Kahn were awarded the Japan Prize in January 2008.[83]
- Cerf was inducted into the Worshipful Company of Information Technologists and given the Freedom of the City of London in April 2008.
- Cerf was awarded an honorary membership in the Yale Political Union after keynoting a lively debate on the subject "Resolved: Online Communities are Real Communities." The motion passed.[84]
- In celebration of the five year-anniversary of YouTube he was selected as a guest curator by the site, and chose the six videos on YouTube he found most memorable.[85]
- IEEE-HKN Eta Kappa Nu Eminent Member, 2010[86]
- In May 2011, he was awarded an HPI Fellowship as "...a tribute to his work for a new medium which influenced the everyday life of our society like no other one."[87]
- In September 2011 he was made a distinguished fellow of British Computer Society, in recognition of his outstanding contribution and service to the advancement of computing.[88]
- In 2012 he was inducted as a Pioneer into the Internet Hall of Fame[89]
- In 2013, Cerf was one of five Internet and Web pioneers awarded the inaugural Queen Elizabeth Prize for Engineering.[90]
- In 2013, Cerf presented the Bernard Price Memorial Lecture[91]
- In 2014, Cerf was awarded the Order of the Cross of Terra Mariana, 1st class for his role in invention of TCP/IP by president of Estonia Toomas Hendrik Ilves[92]
- In 2014, Cerf was awarded Officer of the French Légion d'honneur [93]
- In 2015, Cerf received an honorary doctorate from the University of Reading, UK.[94]
- Cerf was elected a Foreign Member of The UK Royal Society in 2016[1]
- In 2018, Cerf was named a recipient of the Benjamin Franklin Medal[95]
- In 2018, Vinton Cerf was awarded Catalonia's International Award[96]

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Vint Cerf, before his talk in memory of Dr. John Niparko at the 2017 MidWinter Meeting of the Association for Research in Otolaryngology in Baltimore

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- Vinton Cerf et al., *System for Distributed Task Execution* June 3, 2003, U.S. Patent 6,574,628
- Vinton Cerf et al., *Delay-Tolerant Networking Architecture (Informational Status)*, RFC 4838, April 2007

Cerf writes under the column name "CERF'S UP", and Cerf's car has a vanity plate (registration) "CERFSUP".[98]

Housatonic

CERFnet

Wikipedia CERFnet

Saved Wikipedia (Jan 14 2021) for CERFnet

[HK004S][GDrive]

The **California Education and Research Federation Network** (CERFnet) is a mid-level network service provider based in California. It was originally proposed by Susan Estrada of the San Diego Supercomputer Center (SDSC). CERFnet was one of the [NSFNET] regional networks and a co-founder of the Commercial Internet eXchange (CIX).[1] The CERFnet network was founded in January 1988 by Susan Estrada, received partial funding of $2.8 million by the National Science Foundation a year later, and was fully operational by November 1989, linking together 38 California research centers. The network was operated by the SDSC and General Atomics.[2]

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CERFnet History (June 1992, from nic.cerf.net)

1992-06-29-nic-cerf-net-history.txt

http://www1.chapman.edu/gopher-data/archives/Internet%20Information/cerfnet-history.txt

In June, 1988, a proposal was submitted by the San Diego Supercomputer Center and General Atomics to the National Science Foundation (NSF) to establish the California Education and Research Federation Network (CERFnet). Thirty-four of the leading research and education centers in California participated in the proposal effort. In March, 1989, $2.8 million was awarded by the NSF to initiate CERFnet. The institutions contributed additional funds in membership fees, support personnel (such as training, consultation, and documentation), and maintenance of equipment needed to connect and support their CERFnet link.

Today, CERFnet links over 300 research and education centers with data transfer rates of up to 45 Megabits-per-second. CERFnet provides enhanced communication among researchers, educators and private industry, and high-speed access to the resources available through the National Science Foundation Network (NSFNET) and the Internet, such as supercomputer centers, online library catalogs, and specialized databases.

The Research Need

Before CERFnet, some of the institutions had medium-speed access to the [NSFNET] backbone but a substantial increase in bandwidth and connectivity was needed to encourage usage by making access easier, faster, and cost-efficient.

The need for CERFnet was two-fold. The availability of high-speed networking and supercomputer power greatly expands computational possibilities. This stimulates a wider range of scientific explorations and makes projects more feasible. Complex projects frequently involve the sharing of databases, software, and results by researchers in different institutions and multiple disciplines. Project feasibility is enhanced by the integrated communications environment offered by the Internet by achieving better collaboration and interaction with distant colleagues and resources.

Many of the institutions were already experienced in using NSF and other supercomputer centers, such as the San Diego Supercomputer Center, the National Center for Atmospheric Research, the Lawrence Livermore National Laboratory, and the National Magnetic Fusion Energy Center. Today, CERFnet allows convenient access to these state-of-the-art facilities. CERFnet also provides capabilities through the use of TCP/IP, which include remote logins, file

transfers, and telnet sessions.

CERFnet Phase I

CERFnet was built on existing data communication links--some have been upgraded to higher bandwidths. New links were installed between March and November 1989 to expand the network to all of the original research and education centers.

CERFnet's high-speed backbone nodes were installed between May and June 1989 at the University of California, Los Angeles (UCLA), University of California, Irvine (UCI), the San Diego Supercomputer Center (SDSC), and the California Institute of Technology (Caltech). The backbone was expanded to the University of California Office of the President in Oakland in November, 1989, and to San Jose in December, 1990.

CERFnet Phase II

In March, 1990, CERFnet submitted a proposal to the NSF for Phase II. Phase II proposed to establish new Internet connections for three four-year colleges and two community colleges. CERFnet also proposed to establish gateways to fifteen FrEdMail (Free Educational Mail) Network sites.

The FrEdMail Network is a grass-roots data- communications network that allows teachers and students at K-12 institutions around the country to exchange teaching materials, student assignments, and information on workshops, job opportunities, and national legislation affecting education.

The institutions proposed in CERFnet Phase II were brought online between September,1990 and March,1991, at a cost of $226,000 over two years.

Further Expansion

Since March, 1989, the network has grown to include over 300 research and education centers. Several classes of memberships were introduced since 1989. All of these memberships provide access to the Internet via a dedicated leased line service or by a dial up connection. The dedicated lease line services that CERFnet has provided are CERF 1544 (1.544 megabits-per-second); CERF 56 (56 kilobits-per-second); CERF 14.4 (14.4 kilobits-per-second); and CERF 9.6 (9.6 kilobits-per-second). The dial up connections include DIAL n' CERF, DIAL n' CERF AYC, and DIAL n' CERF Plus which all provide dialup SLIP access up to 19.2 kilobits-per-second. An additional dial up service that has recently been introduced is DIAL n' CERF USA, which uses an 800 number for toll-free connections anywhere in the United States. All of these memberships are supported by subscription fees.

In 1991, CERFnet also established the first Commercial Internet Exchange (CIX) in cooperation with PSInet amd Alternet. The CIX has expanded to include several additional domestic and international networks. It permits the exchange of commercial traffic between these three networks.

Adopt A School is a program that originated in September 1991 and it allows CERFnet users to connect a local K-12 school to DIAL n' CERF. The CERFnet user helps the school use the connection and the available information on the Internet. The school or CERFnet user provides a terminal/PC and modem. Many staff members have already adopted their schools their children attend or that are in their neighborhoods. Currently, there are about 19 schools involved in the program.

CERFnet also estabilised their first T1 connection near the end of 1991. This 45 megabits-per-second connection extends between two of CERFnet's backbone sites, UCI and California Institude of Technology. The success of thisconnection will pave the way for the upgrade of all CERFnet's backbone circuits.

Three international links were also completed by the end of 1991. The Federal University of Rio de Janeiro (UFRJ) came on-line in December 1991. The connection between CERFnet and UFRJ is intended to provide, among other things, Internet access to a regional network located within the state of Rio de Janeiro. Initially, nine institutions will be connected to this local network: Brazilian Center of Investigating Sciences (CBPF), Fundacao Oswaldo Cruz (FIOCRUZ), Institute of Mathematics Prue and Applied (IMPA), Polytechnic Institute of Rio de Janeiro (IPRJ), National Laboratory of Computer Science (LNCC), Pontifical Catholic University of Rio de Janeiro (PUC-Rio), State University of Rio de Janeiro (UERJ), Federal University Fluminense (UFF), and the Federal University of Rio de Janeiro (UFRJ). Eventually the network will expand to include research institutions located in the state of Sao Paulo.

Three of these institutions (CBFF, IMPA, and LNCC) are laboratories of the National Council of Scientific Development and Technology, which is the equivalent of the National Science Foundation. Two are federally funded universities (UFF and UFRJ) and FIOCRUZ is the laboratory of the Federal Health Ministry.

The CICESE Institute located in Ensenada, Mexico was brought on-line in November 1991. The institute will have a 64 kbps satellite link to the SDSC via the Mexican satellite, Morelles II.

The System Engineering Research Institute (SERI), Seoul Korea was brought on-line in March 1991. SERI is similar to the National Foundation sponsored supercomputer centers. SERI performs a large number of research and development products for both domestic and foreign clients through the application of its high level resources, such as supercomputers. The link between SERI and CERFnet will provide Internet access to the Korean National Research Network (KREONet).

BITCHUTE @Housatonic YOUTUBE @HousatonicLive ODYSEE @Housatonic BRIGHTEON @Housatonic

Housatonic

John Marshall Chidsey (born 1871)

1880 Census

GRANDPARENTS (mother's side) - Charles Woodford (age 87, born in 1793) and Lydia Woodford (age 83, born in 1797)

MOTHER - Susan Chidsey born in 1845 in New York

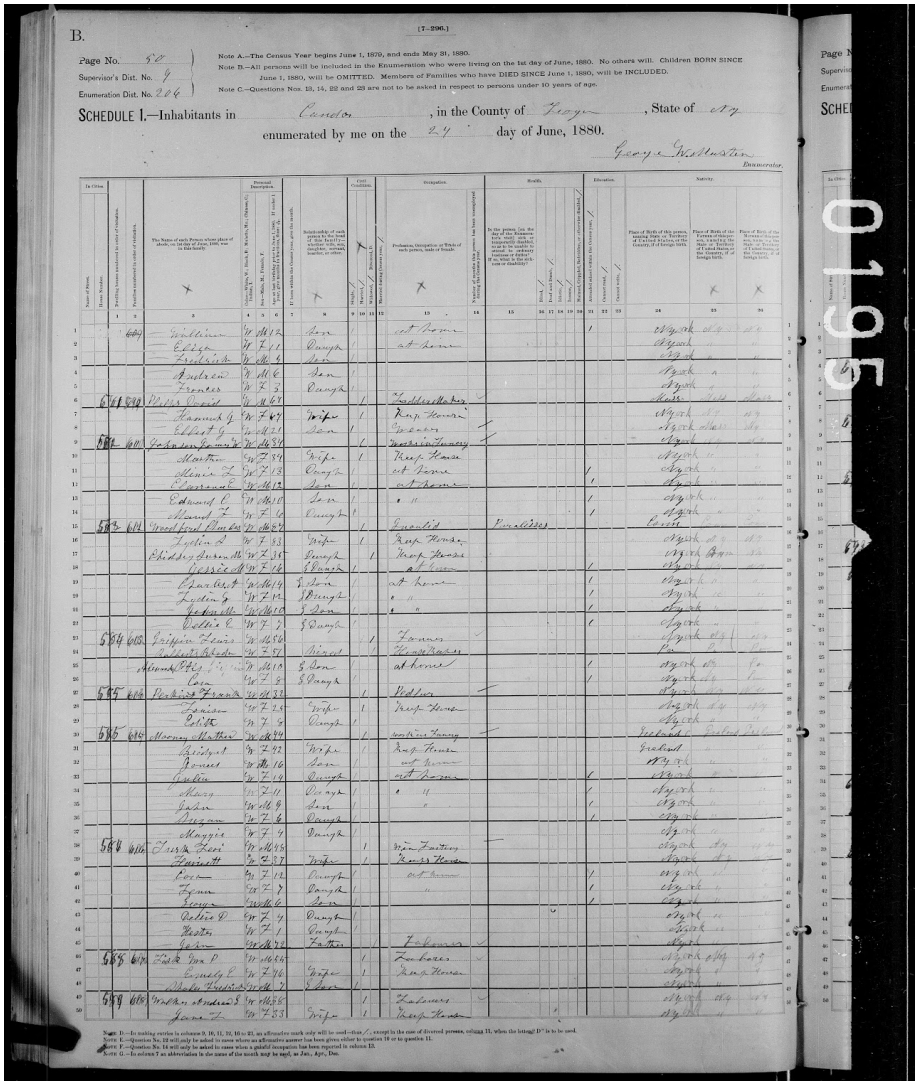
Jessie M Chidsey F (age 16) born in 1864

Charles A Chidsey M (age 14) born in 1866

Lydin J Chidsey F (age 12) born in 1868

John M Chidsey M (age 10) born in 1870

Delie E Chidsey F (age 7) born in 1873


B.

Page No. 50
Supervisor's Dist. No. 9
Enumeration Dist. No. 206

Note A.—The Census Year begins June 1, 1879, and ends May 31, 1880.
Note B.—All persons will be included in the Enumeration who were living on the 1st day of June, 1880. No others will. Children BORN SINCE June 1, 1880, will be OMITTED. Members of Families who have DIED SINCE June 1, 1880, will be INCLUDED.
Note C.—Questions Nos. 13, 14, 22 and 23 are not to be asked in respect to persons under 10 years of age.

SCHEDULE 1.—Inhabitants in Candor, in the County of Tioga, State of N.Y.
enumerated by me on the 24 day of June, 1880.

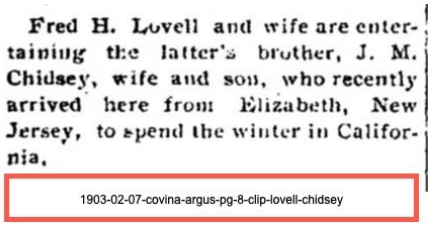
George Wellington
Enumerator.

0195

1880-usa-census-candor-ny-usc-05161740-00204.jpg / https://drive.google.com/open?id=158t55mvrTpMk-4c65qK1P-kUde7SQFfz

1903 - Winters in california with Fred H Lovell

1903-02-07-covina-argus-pg-8.jpg / https://drive.google.com/open?id=15YWXK7vgPd4s-7xO47Nn5UW0gqUiXpWc



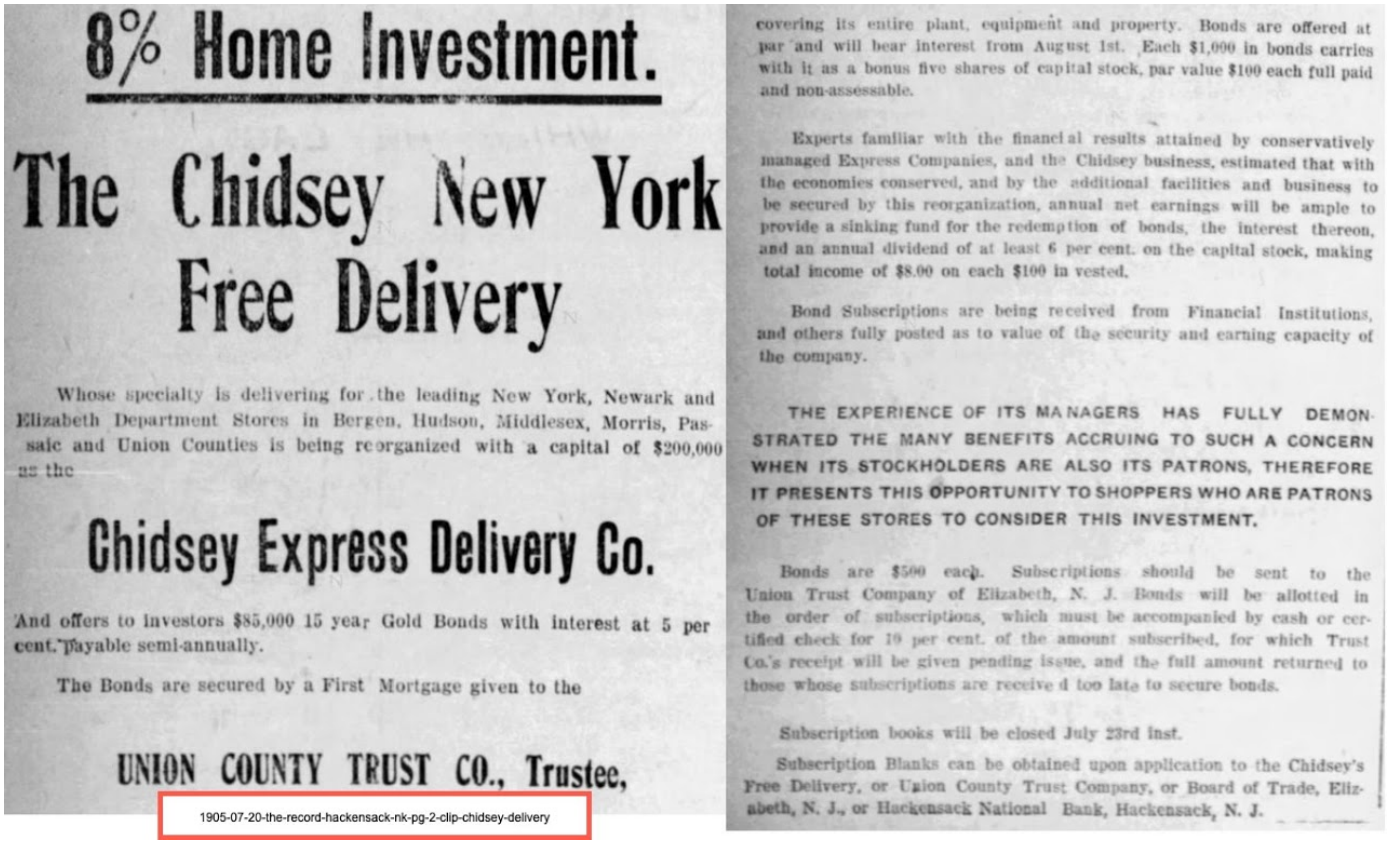
Fred H. Lovell and wife are entertaining the latter's brother, J. M. Chidsey, wife and son, who recently arrived here from Elizabeth, New Jersey, to spend the winter in California.

1903-02-07-covina-argus-pg-8-clip-lovell-chidsey

1903-02-07-covina-argus-pg-8-clip-lovell-chidsey.jpg / https://drive.google.com/open?id=15YG-X-bI5k-UKLqtzYVENa6Au19N7TEh

1905 - Chidsey Express

1905-07-20-the-record-hackensack-new-jersey-pg-2.jpg / https://drive.google.com/open?id=15h4IDgtWgrJPaCyJSrfOwZhmgUcTTDeq



8% Home Investment.

The Chidsey New York Free Delivery

Whose specialty is delivering for the leading New York, Newark and Elizabeth Department Stores in Bergen, Hudson, Middlesex, Morris, Passaic and Union Counties is being reorganized with a capital of $200,000 as the

Chidsey Express Delivery Co.

And offers to investors $85,000 15 year Gold Bonds with interest at 5 per cent. Payable semi-annually.

The Bonds are secured by a First Mortgage given to the

UNION COUNTY TRUST CO., Trustee,

covering its entire plant, equipment and property. Bonds are offered at par and will bear interest from August 1st. Each $1,000 in bonds carries with it as a bonus five shares of capital stock, par value $100 each full paid and non-assessable.

Experts familiar with the financial results attained by conservatively managed Express Companies, and the Chidsey business, estimated that with the economies conserved, and by the additional facilities and business to be secured by this reorganization, annual net earnings will be ample to provide a sinking fund for the redemption of bonds, the interest thereon, and an annual dividend of at least 6 per cent. on the capital stock, making total income of $8.00 on each $100 in vested.

Bond Subscriptions are being received from Financial Institutions, and others fully posted as to value of the security and earning capacity of the company.

THE EXPERIENCE OF ITS MANAGERS HAS FULLY DEMONSTRATED THE MANY BENEFITS ACCRUING TO SUCH A CONCERN WHEN ITS STOCKHOLDERS ARE ALSO ITS PATRONS, THEREFORE IT PRESENTS THIS OPPORTUNITY TO SHOPPERS WHO ARE PATRONS OF THESE STORES TO CONSIDER THIS INVESTMENT.

Bonds are $500 each. Subscriptions should be sent to the Union Trust Company of Elizabeth, N. J. Bonds will be allotted in the order of subscriptions, which must be accompanied by cash or certified check for 10 per cent. of the amount subscribed, for which Trust Co.'s receipt will be given pending issue, and the full amount returned to those whose subscriptions are received too late to secure bonds.

Subscription books will be closed July 23rd inst.

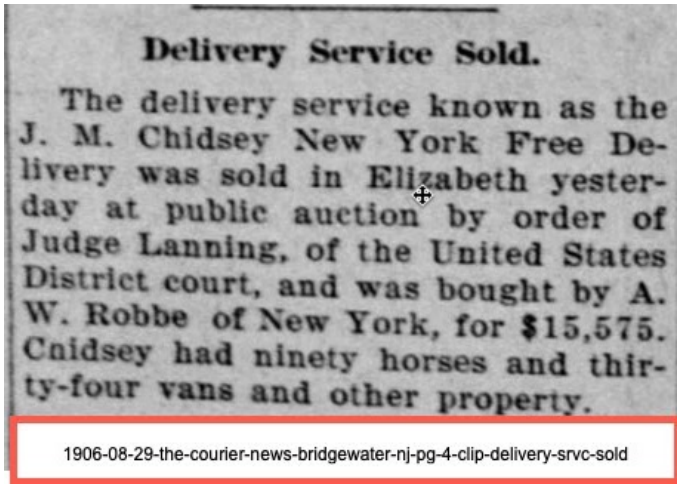
Subscription Blanks can be obtained upon application to the Chidsey's Free Delivery, or Union County Trust Company, or Board of Trade, Elizabeth, N. J., or Hackensack National Bank, Hackensack, N. J.

1905-07-20-the-record-hackensack-nk-pg-2-clip-chidsey-delivery

1905-07-20-the-record-hhackensack-new-jersey-pg-2-clip-chidsey-delivery.jpg / https://drive.google.com/open?id=15a3aG9j15U8iJY-3e-AwnkxgTJDNzodd

1906 - J M CHidsey moving

1906-08-29-the-courier-news-bridgewater-nj-pg-4.jpg / https://drive.google.com/open?id=15uI5DY6EaEykNDt2GZvIkA6KABqYBLkf



Delivery Service Sold.

The delivery service known as the J. M. Chidsey New York Free Delivery was sold in Elizabeth yesterday at public auction by order of Judge Lanning, of the United States District court, and was bought by A. W. Robbe of New York, for $15,575. Cnidsey had ninety horses and thirty-four vans and other property.

1906-08-29-the-courier-news-bridgewater-nj-pg-4-clip-delivery-srvc-sold

1906-08-29-the-courier-news-bridgewater-nj-pg-4-clip-delivery-srvc-sold.jpg / https://drive.google.com/open?id=15tzt6jUA-_Ug7TnNSRxJ_ArxOolmo9I

1910 Census

Glen Allen ... Chidsey

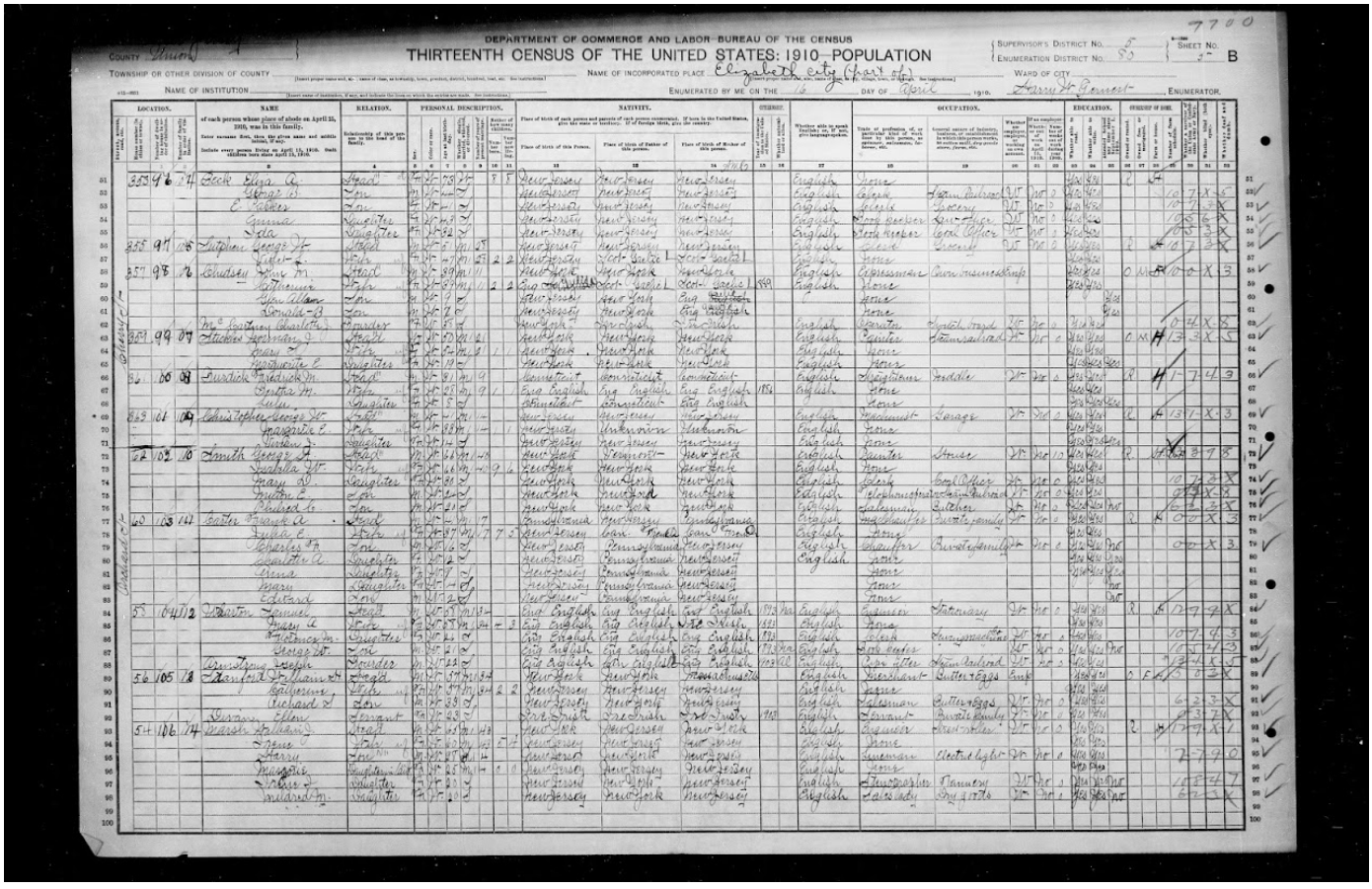
Father - John M. Chidsey (aka "John Marshall Chidsey"). His job is listed as " Expressman", and that he "own his own business"

Birth year changes - Here, John M Chidsey - 1871 birth year ...

Mother - Catherine Chidsey - Born in 1872 in England. She says her parents were both born in Scotland, and that she immigrated to the United States in 1889

Two Sons:

- Donald "B" Chidsey (born in 1902)
- Glen Allan Chidsey (born in 1900)



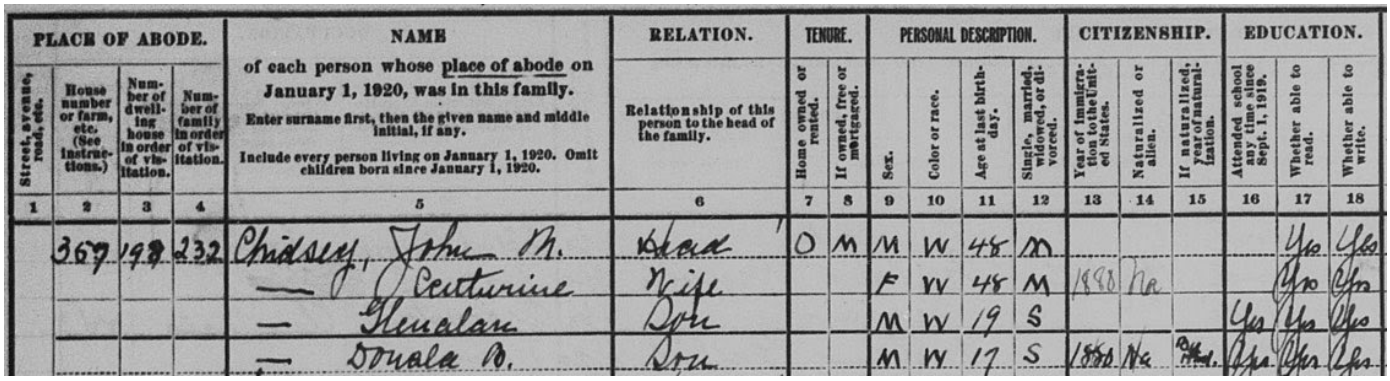
DEPARTMENT OF COMMERCE AND LABOR—BUREAU OF THE CENSUS
THIRTEENTH CENSUS OF THE UNITED STATES: 1910—POPULATION

1910-usa-census-usc-elizabeth-nj-004972885-00406.jpg / https://drive.google.com/open?id=15FD9K74dL0GhfW8tQ0-u3wwAcM-jwTeQ

1920 Census

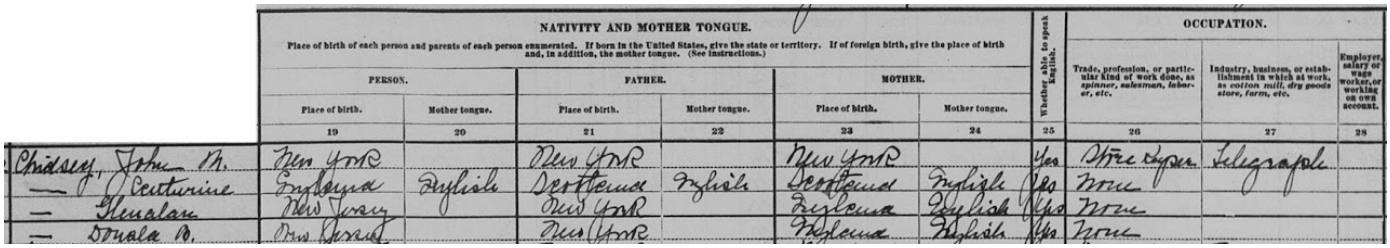
WIFE - Catherine , born in 1872

Full Census sheet : See 1920-usa-census-elizabeth-new-jersey-004966448-01045.jpg / https://drive.google.com/open?id=13xXsIdCpqOwGWfqt0XG4BNpyKs7iRU-o



PLACE OF ABODE.				NAME of each person whose place of abode on January 1, 1920, was in this family. Enter surname first, then the given name and middle initial, if any. Include every person living on January 1, 1920. Omit children born since January 1, 1920.	RELATION.	TENURE.		PERSONAL DESCRIPTION.				CITIZENSHIP.			EDUCATION.		
Street, avenue, road, etc.	House number or farm, etc. (See instructions.)	Number of dwelling house in order of visitation.	Number of family in order of visitation.		Relationship of this person to the head of the family.	Home owned or rented.	If owned, free or mortgaged.	Sex.	Color or race.	Age at last birthday.	Single, married, widowed, or divorced.	Year of immigration to the United States.	Naturalized or alien.	If naturalized, year of naturalization.	Attended school any time since Sept. 1, 1919.	Whether able to read.	Whether able to write.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
	367	198	232	Chidsey, John M.	Head	O	M	M	W	48	M					Yes	Yes
				— Catherine	Wife			F	W	48	M	1888	Na			Yes	Yes
				— Glenalan	Son			M	W	19	S				Yes	Yes	Yes
				— Donala B.	Son			M	W	17	S	1888	Na	Pa.	Yes	Yes	Yes

1920-usa-census-elizabeth-new-jersey-004966448-01045-clip-chidsey-1.jpg / https://drive.google.com/open?id=13tY6_SdsYgvPW1DnC1NqHSuN1drXo6sR



NATIVITY AND MOTHER TONGUE. Place of birth of each person and parents of each person enumerated. If born in the United States, give the state or territory. If of foreign birth, give the place of birth and, in addition, the mother tongue. (See instructions.)						Whether able to speak English.	OCCUPATION.		
PERSON.		FATHER.		MOTHER.			Trade, profession, or particular kind of work done, as spinner, salesman, laborer, etc.	Industry, business, or establishment in which at work, as cotton mill, dry goods store, farm, etc.	Employer, salary or wage worker, or working on own account.
Place of birth.	Mother tongue.	Place of birth.	Mother tongue.	Place of birth.	Mother tongue.				
19	20	21	22	23	24	25	26	27	28
New York		New York		New York		Yes	Store keeper	Telegraph	
England	English	Scotland	English	Scotland	English	Yes	None		
New Jersey		New York		England	English	Yes	None		
New Jersey		New York		England	English	Yes	None		

1920-usa-census-elizabeth-new-jersey-004966448-01045-clip-chidsey-2.jpg / https://drive.google.com/open?id=13uufCYz37FGegFZyHCdcEodtcmMxDFpU

1934 - Chidsey (father?) with the Vanderbilt and duponts

1934-09-21-the-courier-news-bridgewater-nj-pg-6.jpg /https://drive.google.com/open?id=15we0Qaleb3qrAwGxEczft2YVGv3Em5yI

John (M?) Chidsey in competition again Mrs. E Dupont and John Vanderbilt

Flower and Produce Show At Clinton Is Big Success

Clinton—Annual Flower and Produce Show held in the Bethlehem Presbyterian Church, Grandin, proved a big success. The show was given Wednesday and last evening. Dr. C. H. Conors of the State Agricultural College and Dwight M. Babbitt, county farm agent, awarded the ribbons.

The awards for flowers are as follows: Class 1—Best vase of zinnias: Alice Crouse, Milford, Howard Frace Jr., Pittstown; Mrs. Hemke, Lebanon.

Class 2—Best in small zinnias: Kathryn Barber, Clinton; Lucy Yates, Annandale; Mrs. Hemke.

Class 3—Best of African marigolds: Mrs. Hemke; Cora McCrea, Milford; Mrs. Gladys Barlow, Hampton.

Class 4—Best Guinea gold marigolds: Cora McCrea; Marian Huff, Milford; A. B. Agans, Pittstown.

Class 5—Best French marigolds: Cora McCrea, Mrs. Edward Sheets, Annandale; Miss Helen Haver, Clinton.

Class 6—Best cosmos: Lucy Yates; Kenneth Rice, Annandale; Marian Huff.

Class 7—Best asters: Cora McCrea; Austin Roberts, Clinton; Mary Jane Mitchell, Clinton. Class 8—Best petunias: Mrs. M. E. McPhail, Clinton; Kathryn Barber; Mrs. Thackaberry, Clinton. Class 9—Best basket of annuals: Mrs. Fred MacPherson, Clinton, A. B. Agans, Mrs. Mary Rice. Class 10—Best basket variety perennials: Mrs. Alice Reed, Pittstown; Kathryn Barber, Mrs. Joseph McClary, Annandale.

Roses—Class 11—Best single: Edward Sheets; Mrs. Alice Reed. Class 12—Best collection—no entries.

Gladioli, Class 13—Best collection: Miss Caroline Romer, Summit; Marian Huff; George Milligan, Annandale. Class 14—best spike: Miss Romer, George Milligan.

Dahlias, Class 15—largest bloom: Mrs. Reed, George Milligan; Mrs. MacPherson. Class 16—Best collection: Mrs. Reed; Mrs. Sheets; Mrs. Woehrle, Annandale.

Artistic Arrangement, Class 17—Dinner table: Mrs. Reed; Donnell Gilbert, Lebanon; Sadie Vanderbilt, Pittstown. Class 18—In antique container: Miss Jennie Haver; Sadie Vanderbilt; Mrs. Hemke.

Class 19, arrangement for living room: Miss Helen Haver; Mrs. Agans; Mrs. MacPherson. Class 20, winter bouquet: Miss J. Haver, Mrs. Hemke; Pearl Conover, Clinton. Class 21—dish garden: Howard Frace; Sadie Vanderbilt; Miss J. Haver.

Potted plants—Class 22—Best, Mrs. P. G. Schneider, Jutland. Class 23—Best foliage: Mrs. Joseph McClary; Mrs. Charles Young, Jutland; Mrs. Barlow.

Wild flowers for children under 12—Class 24—Best container: Janet Schanze, Annandale; Kathryn Barber. Sweepstake prize: Mrs. Alice Reed, Pittstown.

Farm produce—Potatoes (5) specimens: E. G. Odell; John Aber. Tomatoes (3) specimens: Glen Rice; Mrs. T. Woehrle; John Chidsey. Egg plant—Mrs. E. Dupont; Mrs. Lester Potts; Jack Rinehart. Cabbage—E. G. Odell. Onions (5) specimens: Mrs. McClary; Clayton Barlow; Glen Rice. Beets (5) George Milligan; John Vanderbilt; Mrs. Alex Young. Peppers (3) Mrs. McClary; Mrs. DuPont; Mrs. Potts. Carrots (5) specimens: Glen Rice; Mrs. Potts; Mrs. Adolph Miller. Lima Beans (10) specimens: Mr. Odell; John Aber; John Vanderbilt. Pumpkin: George Milligan; Jack Rinehart; Howard Frace.

Squash — Howard Frace Jr.; George Milligan; A. C. Ridderoth, D.D.

Eggs—One brown dozen: John Aber; Garrett Mitchell. One dozen whites: no entries:

Fruit—Grapes: John Vanderbilt; J. D. Anderson; Caroline Romer. Pears — S. Johnston; Caroline Romer; Glen Rice. Apples—S. Johnston; J. I. Anderson; Mrs. Woehrle.

Grains—Wheat, John Aber; A. B. Cornwell. Oats—Mr. Vanderbilt; G. Mitchell; Mr. Aber. Corn—Garrett Mitchell; Howard Frace; John Mitchell.

Prizes awarded for total entries in produce—First, John Aber; second, John Vanderbilt; third, George Milligan.

1934-09-21-the-courier-news-bridgewater-nj-pg-6-clip-flower-produce

1934-09-21-the-courier-news-bridgewater-nj-pg-6-clip-flower-produce.jpg / https://drive.google.com/open?id=15vWi4evLs84RqQLpAzdv5DkNFv7iukLg

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WIKIPEDIA

https://en.wikipedia.org/wiki/Donald_Barr_Chidsey

Donald Barr Chidsey (born 1902)

Wikipedia Donald Barr Chidsey

INTRO

See 2019-07-findagrave-com-199060978-donald-barr-chidsey-1902-1981.pdf / https://drive.google.com/open?id=143Gwwr0uR-xHcepyLjIab8xjcc9Nko0N

"Donald Barr Chidsey was an American writer, biographer, historian, novelist and writer of adventure fiction.

Donald Barr Chidsey was born in Elizabeth, New Jersey, on May 14, 1902. He worked at the Elizabeth Daily Journal, and traveled widely in his youth.

He wrote more than fifty books. Alden Whitman called him "an old hand at light writing." According to Kirkus Reviews, Chidsey "is known for his popular American histories, and has a nose for a good story."

He lived in Lyme, Connecticut for many years. Along with artist W. Langdon Kihn, he was a Democratic candidate for the Connecticut House of Representatives from the town of Lyme, in the November 2, 1948 election.

He died on March 17, 1981, in Lawrence Memorial Hospital at New London, Connecticut"

See https://www.historicnavalfiction.com/authors-a-z/other-authors/donald-barr-chidsey

Donald Barr Chidsey (1902-1981) was a frequent contributor to the pulp magazines in the 1930s, even as he developed a more socially acceptable career as a historical novelist and biographer. Early on he dabbled in private eye fiction for such magazines as Star Detective, Detective Fiction Weekly, Dime Detective, and Black Mask, where he wrote tough stuff about homicide cops and busybody newshawks. He became best known for adventure stories, swift and flavorful historical fiction, much of it set at sea, where the author had spent some time himself. His biographies included the life stories of such personages as Bonnie Prince Charlie (1720-1788) and Sir Walter Raleigh (1554-1618).

A rugged, handsome fellow from Elizabeth, New Jersey, Chidsey enjoyed a peripatetic, adventurous youth, including several years aboard a series of tramp steamers that took him to every exotic port on the globe. He also did time as a press agent, keeper, actor, bartender, and golf caddy. **In the 1930s he lived in the South Seas, sailing about the islands on his own boat, and for a time he managed a small coconut plantation in Tahiti**. During World War II Chidsey fought alongside the Free French and New Zealand forces as well as serving in the U.S. Army (stationed in North Africa). Chidsey imbued his fiction with his zest for life and adventure.

1910 Census

Glen Allen ... Chidsey

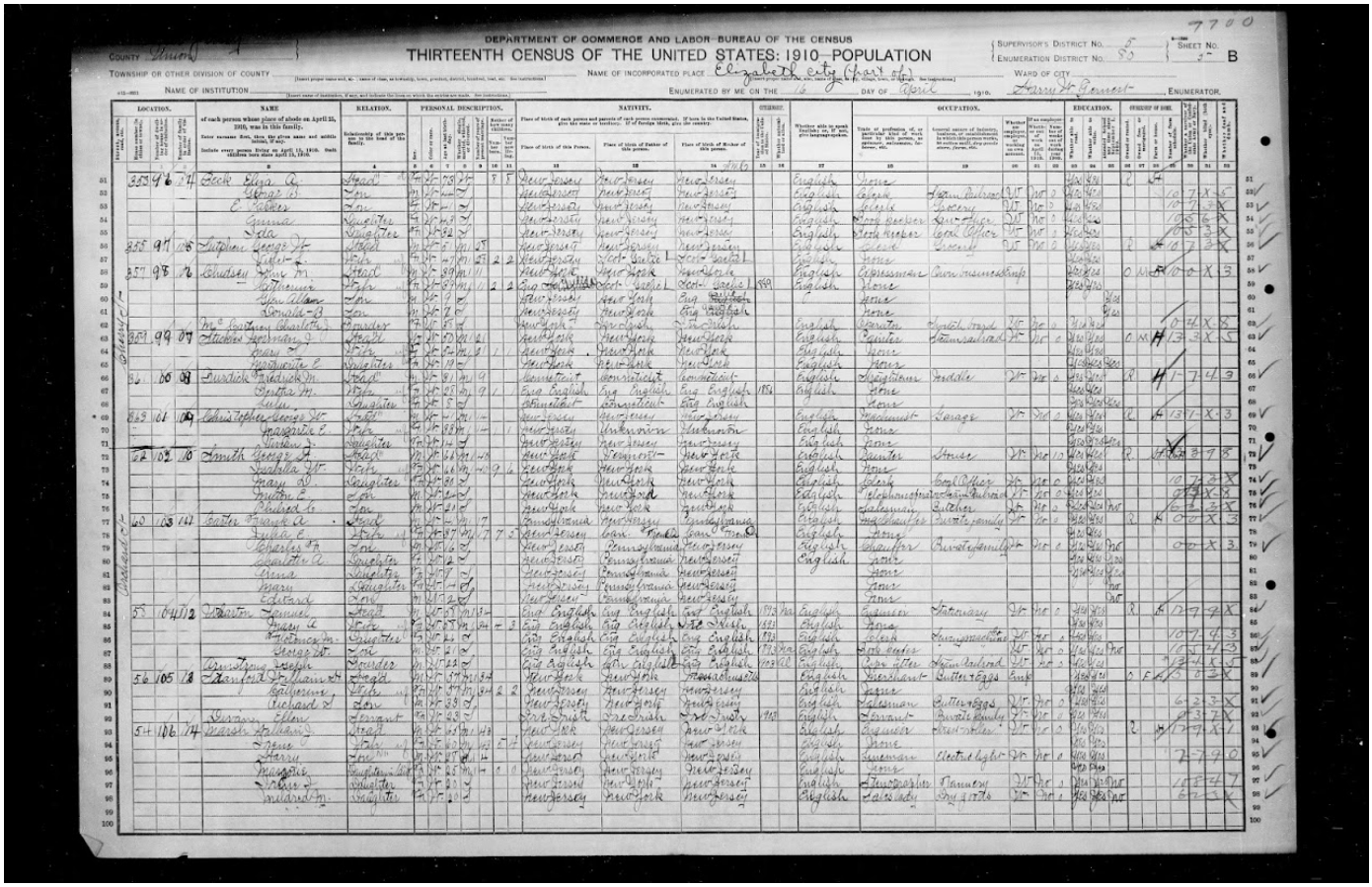
Father - John M. Chidsey (aka "**John Marshall Chidsey (born 1871)** "). His job is listed as " Expressman", and that he "own his own business"

Birth year changes - Here, John M Chidsey - 1871 birth year ...

Mother - Catherine Chidsey - Born in 1872 in England. She says her parents were both born in Scotland, and that she immigrated to the United States in 1889

Two Sons:

- Donald "B" Chidsey (born in 1902)
- Glen Allan Chidsey (born in 1900)



1910-usa-census-usc-elizabeth-nj-004972885-00406.jpg / https://drive.google.com/open?id=15FD9K74dL0GhfW8tQ0-u3wwAcM-jwTeQ

191(8)? - High School - Graduated from battin High School (Elizabeth, N.J.)

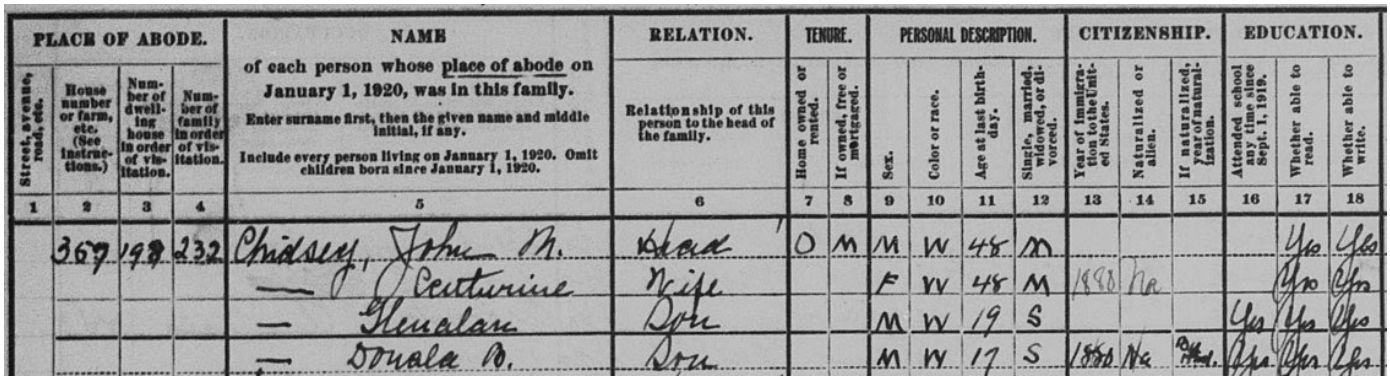
See https://www.newspapers.com/image/559679882/?terms=%22donald%2Bbarr%2Bchidsey%22%2Buniversity

1920 Census

Father - **John Marshall Chidsey (born 1871)**

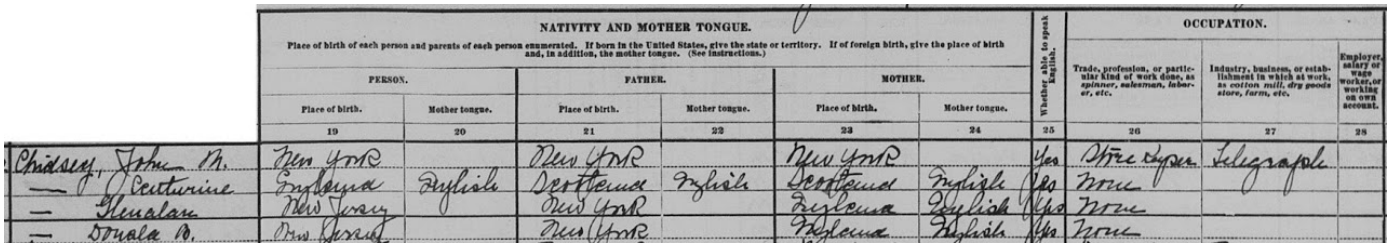
Mother - Catherine , born in 1871

Full Census sheet : See 1920-usa-census-elizabeth-new-jersey-004966448-01045.jpg / https://drive.google.com/open?id=13xXsIdCpqOwGWfqt0XG4BNpyKs7iRU-o



PLACE OF ABODE. Street, avenue, road, etc.	House number or farm, etc. (See instructions.)	Number of dwelling house in order of visitation.	Number of family in order of visitation.	NAME of each person whose place of abode on January 1, 1920, was in this family. Enter surname first, then the given name and middle initial, if any. Include every person living on January 1, 1920. Omit children born since January 1, 1920.	RELATION. Relationship of this person to the head of the family.	TENURE. Home owned or rented.	If owned, free or mortgaged.	PERSONAL DESCRIPTION. Sex.	Color or race.	Age at last birthday.	Single, married, widowed, or divorced.	CITIZENSHIP. Year of immigration to the United States.	Naturalized or alien.	If naturalized, year of naturalization.	EDUCATION. Attended school any time since Sept. 1, 1919.	Whether able to read.	Whether able to write.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
	367	198	232	Chidsey, John M.	Head	O	M	M	W	48	M					Yes	Yes
				— Centurine	Wife			F	W	48	M	1888	Na			Yes	Yes
				— Donald	Son			M	W	19	S				Yes	Yes	Yes
				— Donald B.	Son			M	W	17	S	1888	Na	Pat.	Yes	Yes	Yes

1920-usa-census-elizabeth-new-jersey-004966448-01045-clip-chidsey-1.jpg / https://drive.google.com/open?id=13tY6_SdsYgvPW1DnC1NqHSuN1drXo6sR



	NATIVITY AND MOTHER TONGUE. Place of birth of each person and parents of each person enumerated. If born in the United States, give the state or territory. If of foreign birth, give the place of birth and, in addition, the mother tongue. (See instructions.)						Whether able to speak English.	OCCUPATION.		
	PERSON.		FATHER.		MOTHER.			Trade, profession, or particular kind of work done, as spinner, salesman, laborer, etc.	Industry, business, or establishment in which at work, as cotton mill, dry goods store, farm, etc.	Employer, salary or wage worker, or working on own account.
	Place of birth.	Mother tongue.	Place of birth.	Mother tongue.	Place of birth.	Mother tongue.				
	19	20	21	22	23	24	25	26	27	28
Chidsey, John M.	New York		New York		New York		Yes	Wire typer	Telegraph	
— Centurine	England	English	Scotland	English	Scotland	English	Yes	None		
— Donald	New Jersey		New York		England	English	Yes	None		
— Donald B.	New Jersey		New York		England	English	Yes	None		

1920-usa-census-elizabeth-new-jersey-004966448-01045-clip-chidsey-2.jpg / https://drive.google.com/open?id=13uufCYz37FGegFZyHCdcEodtcmMxDFpU

1920s (early) - Traveled and had experiences to help writing

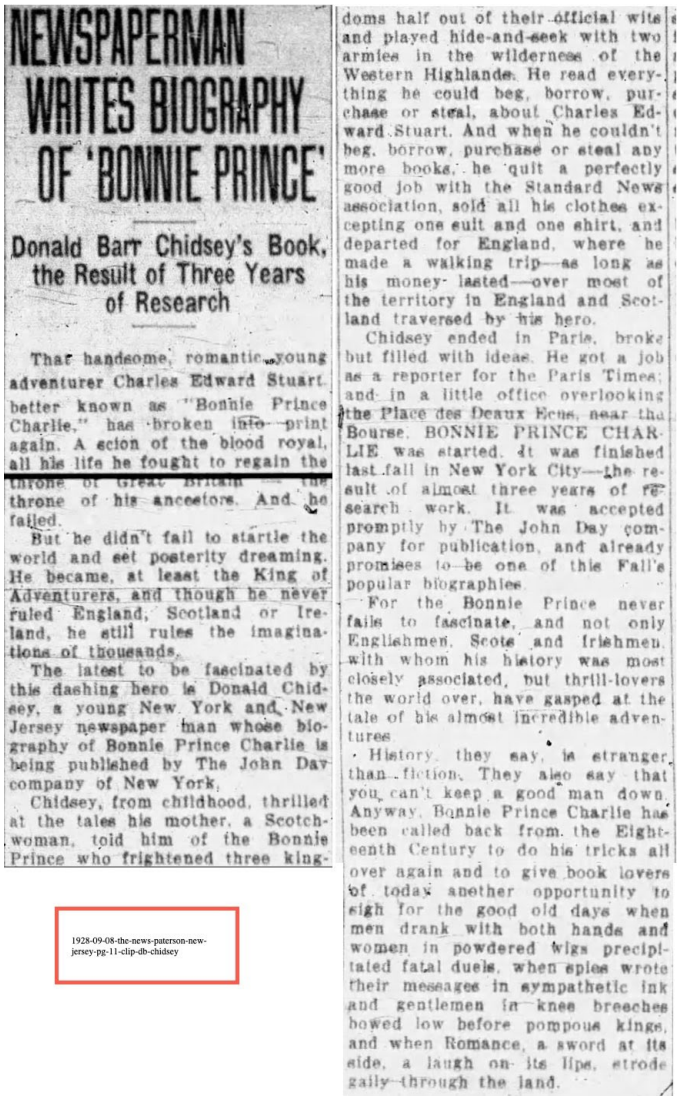
See https://www.newspapers.com/image/559679882/?terms=%22donald%2Bbarr%2Bchidsey%22%2Buniversity

"He worked variously at the jobs usually tackles by very young and ambitious boys of a literary turn. [...] Including a hitchhike to Virginia, where he talked with James Branch Cabell. "

1928 - Good bio notes up to this point

https://www.newspapers.com/image/525523458/?terms=donald%2Bbarr%2Bchidsey

1928-09-08-the-news-paterson-new-jersey-pg-11 / https://drive.google.com/open?id=17-mKGnmXcuxvBGyRqxc2EPmjbaxnV4YV



NEWSPAPERMAN WRITES BIOGRAPHY OF 'BONNIE PRINCE'

Donald Barr Chidsey's Book, the Result of Three Years of Research

That handsome, romantic young adventurer Charles Edward Stuart, better known as "Bonnie Prince Charlie," has broken into print again. A scion of the blood royal, all his life he fought to regain the throne of Great Britain — the throne of his ancestors. And he failed.

But he didn't fail to startle the world and set posterity dreaming. He became, at least the King of Adventurers, and though he never ruled England, Scotland or Ireland, he still rules the imaginations of thousands.

The latest to be fascinated by this dashing hero is Donald Chidsey, a young New York and New Jersey newspaper man whose biography of Bonnie Prince Charlie is being published by The John Day company of New York.

Chidsey, from childhood, thrilled at the tales his mother, a Scotchwoman, told him of the Bonnie Prince who frightened three kingdoms half out of their official wits and played hide-and-seek with two armies in the wilderness of the Western Highlands. He read everything he could beg, borrow, purchase or steal, about Charles Edward Stuart. And when he couldn't beg, borrow, purchase or steal any more books, he quit a perfectly good job with the Standard News association, sold all his clothes excepting one suit and one shirt, and departed for England, where he made a walking trip—as long as his money lasted—over most of the territory in England and Scotland traversed by his hero.

Chidsey ended in Paris, broke but filled with ideas. He got a job as a reporter for the Paris Times; and in a little office overlooking the Place des Deaux Ecus, near the Bourse, BONNIE PRINCE CHARLIE was started. It was finished last fall in New York City—the result of almost three years of research work. It was accepted promptly by The John Day company for publication, and already promises to be one of this Fall's popular biographies.

For the Bonnie Prince never fails to fascinate, and not only Englishmen, Scots and Irishmen, with whom his history was most closely associated, but thrill-lovers the world over, have gasped at the tale of his almost incredible adventures.

History, they say, is stranger than fiction. They also say that you can't keep a good man down. Anyway, Bonnie Prince Charlie has been called back from the Eighteenth Century to do his tricks all over again and to give book lovers of today another opportunity to sigh for the good old days when men drank with both hands and women in powdered wigs precipitated fatal duels, when spies wrote their messages in sympathetic ink and gentlemen in knee breeches bowed low before pompous kings, and when Romance, a sword at its side, a laugh on its lips, strode gaily through the land.

1928-09-08-the-news-paterson-new-jersey-pg-11-clip-db-chidsey

1928-09-08-the-news-paterson-new-jersey-pg-11-clip-db-chidsey / https://drive.google.com/open?id=17-Eg9R3F5buikQ8BLzn6fAaouDhwCrhV

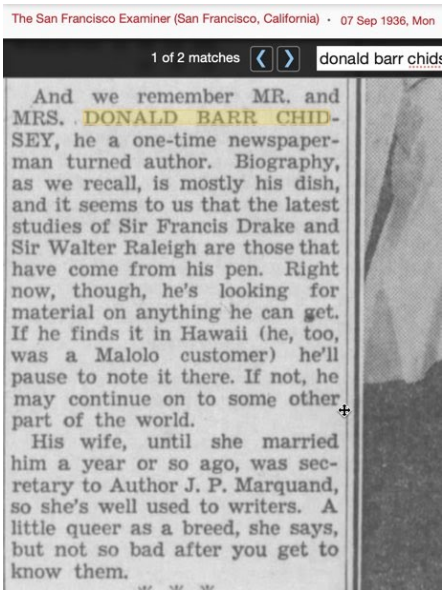
Donald Barr Chidsey briefly was married to Shirley Chidsey (born Elinor Shirley Stewart) 1935 to 1940

2017-thedailybeast-com-the-female-spy-who-kept-uranium-from-nazis.pdf / https://drive.google.com/open?id=144dgNiAMIEpO9C_PBQLlUSrrZHzVES_N

*[**Shirley Armitage Chidsey Bridgwater (born 1907)**] had a huge appetite for travel and adventure. She lived for three years in Haiti, three months in Hawaii, a month in France, and a month in Germany, and visited China.* ***In 1935 she married the author Donald Barr Chidsey and went with him to Tahiti, where she sailed in his boat and helped to manage a coconut plantation; she also learned Tahitian. While there she made friends with a number of writers, including F. Scott Fitzgerald. Tahiti has often been described as paradise, but the same could not be said of the Chidseys' marriage: Shirley separated from him in February 1940. She went to New York*** *and placed an advertisement in the Saturday Review of Literature for a "Girl Friday"—to do typing, research, and stenography.*

1936 (Sep)

Full page : 1936-09-07-the-san-francisco-examiner-pg-24.jpg / https://drive.google.com/open?id=15_q0jkOeZc-neJ2hmZTaEHgfz-YlVbYw


The San Francisco Examiner (San Francisco, California) · 07 Sep 1936, Mon

1 of 2 matches donald barr chids

And we remember MR. and MRS. DONALD BARR CHIDSEY, he a one-time newspaperman turned author. Biography, as we recall, is mostly his dish, and it seems to us that the latest studies of Sir Francis Drake and Sir Walter Raleigh are those that have come from his pen. Right now, though, he's looking for material on anything he can get. If he finds it in Hawaii (he, too, was a Malolo customer) he'll pause to note it there. If not, he may continue on to some other part of the world.

His wife, until she married him a year or so ago, was secretary to Author J. P. Marquand, so she's well used to writers. A little queer as a breed, she says, but not so bad after you get to know them.

1936-09-07-the-san-francisco-examiner-pg-24-clip-mrs-dbchidsey-2.jpg / https://drive.google.com/open?id=15_CTwka3ML7SAcQpCQF2W3sbrbdriFT8

2010-09-ask-metafilter-com-who-was-donald-barr-chidsey.pdf / https://drive.google.com/open?id=1428ftaOzeqZyhNncAEeVnR_mOtyTE7dS

*[**Donald Barr Chidsey**] is a handsome, middle-aged gentleman who lives quietly with his wife in Lyme, Connecticut. He is a Justice of the Peace, and is active in the local P.T.A., Boy Scout movement, concert association, and Church. It was not always thus.*

***Donald Barr Chidsey** has covered a good part of the earth in tramp steamers or tramp schooners, pearl shell boats or copra boats, or private yachts. He owned a plantation in the Punaauia district of [Tahiti,] visited or lived in most of the South Sea Islands: the Society Islands, American and Western Samoa, the Australs, the Cooks, the Fiji Islands, the Gambiers, the Tuamotus, New Guinea, Papua, New Caledonia, the New Hebrides, and many others; Central and South America, China, Indo-China, Japan, Malaya, the Near East.*

Mr. Chidsey has been a newspaperman, Broadway actor, farmer, road gang foreman, mountaineer, bartender, boxer, and fencer with foil, épée, saber, schlaeger and broadsword. He was an ambulance driver with the British 8th Army in North Africa, has served also with the 9th Army in Syria, the New Zealanders, the United States army, the Free French in Tunisia, and the 51st Highland Division. Throughout his own adventures, he has always been a writer. Many previous works include the bestselling novels Panama Passage and Stronghold.

These days, Mr. Chidsey hardly ever dreams of returning to the South Seas. He likes it in Connecticut. However, he has a new hobby, stunt flying…

[....]

Career: Newspaperman for ten years on many different papers; writer, beginning 1928. Served with American Field Service in Middle East.

Awards: Boys Clubs of America Junior Book Award for Rod Rides High, 1951; Colonial Dames of America annual book award, 1965, for The Birth of the Constitution.

Here's a para about him from the Saturday Evening Post (8/17/1946), mostly repeating and confirming info you know: "DONALD BARR CHIDSEY, who writes of old Connecticut in DEADLINE AT MIDNIGHT, Page 12 [not included in the original], is one of the newest and most devoted citizens of Lyme, Connecticut, after many years of combining writing and travel. The photograph [sorry, wasn't able to copy that for you] was taken in Quinn's Bar, in Pápete, in 1940. Chidsey lived a relatively long time in Tahiti: He put down stakes, bought a small copra plantation, and stayed six years. He has spent shorter periods of semi-permanent residence in Honolulu and Haiti."

There's a really weird newspaper column written about him that was published in the Florida Times Union in 1998 (talking about yachting during the Great Depression); MeMail if you'd like the full text, as I can't put it online.

[...]

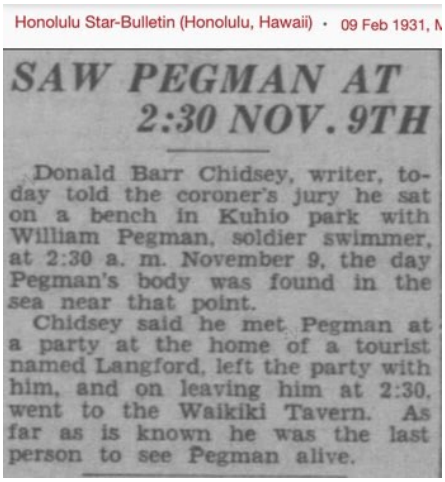
https://www.newspapers.com/image/258754203/?terms=donald%2Bbarr%2Bchidsey

1946-03-01-the-honolulu-advertiser-pg-44

1931 - Last person to see another alive

https://www.newspapers.com/image/275057167/?terms=donald%2Bbarr%2Bchidsey

1931-02-09-honolulu-star-bulletin-pg-1 / https://drive.google.com/open?id=16sFVTv3DHk413znc81hcwV1ymxGBTJp9



Honolulu Star-Bulletin (Honolulu, Hawaii) · 09 Feb 1931, M

SAW PEGMAN AT 2:30 NOV. 9TH

Donald Barr Chidsey, writer, today told the coroner's jury he sat on a bench in Kuhio park with William Pegman, soldier swimmer, at 2:30 a. m. November 9, the day Pegman's body was found in the sea near that point.

Chidsey said he met Pegman at a party at the home of a tourist named Langford, left the party with him, and on leaving him at 2:30, went to the Waikiki Tavern. As far as is known he was the last person to see Pegman alive.

1931-02-09-honolulu-star-bulletin-pg-1-saw-pegman / https://drive.google.com/open?id=16paRoRX3evpfYdrdxr0gfSYAGqOWCiZ

1941 - people are fleeing Tahiti

https://www.newspapers.com/image/259194968/?terms=donald%2Bbarr%2Bchidsey

1941-09-20-the-honolulu-advertiser-pg-1 / https://drive.google.com/open?id=1748ZUjrppi0EQn-JkwoRcp--VahxKLEz

https://www.newspapers.com/image/259194979

1941-09-20-the-honolulu-advertiser-pg-2 / https://drive.google.com/open?id=172LY6QuT4Xzbp-gepqrv6KVNdOdB4XHJ

Growing Strife In Tahiti Results In Exodus Of American Residents

Two DeGaulle Factions Battling for Control

Alarmed at inter-factional disputes between two De Gaulle cliques in Tahiti, Americans living in that disrupted South Pacific paradise are hastening evacuation, Charles Borden, owner of the ketch Confucius, reported on his arrival here from Pepeete yesterday.

Some 42 American citizens remain in Tahiti and nearly all are trying to book some sort of passage to Hawaii or the Mainland, Mr. Borden said, while six American yachts bearing citizens who have purchased passage aboard the vessels, are either en route here or are expecting to leave immediately.

No More Visaes

No further visaes are being granted to American yachts to cruise to French Oceania, Mr. Borden said, and the islands are now closed to visitors.

Mr. and Mrs. Borden returned from Tahiti in the 90-foot schooner Wander Bird, 20 days from Papeete. They left the craft at Hilo and came to Honolulu by steamer; the schooner is expected here Sunday night.

En route to Honolulu from Papeete, Mr. Borden said, is the ketch Nara, Capt. Harry Littchen, which left here for the south some months ago. Also coming is the

Visitors No Longer Welcome at Papeete

110-foot teak schooner Robinson, owned by Cornelius Crane, American resident of Los Angeles and Papeete. Mr. Crane, who is coming here to report for the draft, has a French crew.

Southern Cross Due

The Southern Cross, 50-foot ketch under "Curley" Mossman, American businessman in Tahiti, will start for Hawaii soon, as will the Karlchrist, 42-foot Los Angeles ketch owned by Mr. and Mrs. Karl N. Gessler. The latter is bringing Donald Barr Chidsey.

(Continued on Page 2, Col. 4)

Americans Quit Tahiti As Strife Grows Bitter

(Continued from Page 1)

American writer who lives in Tahiti, and all these boats are expected to bring "evacuated" American passengers.

James Norman Hall, the writer, is remaining in Tahiti, Mr. Borden said. Also there is W. H. Donald, former adviser to Generalissimo Chiang Kai-shek. Mr. Donald, an Australian, who exerted much influence in Chiang's government for many years, has retired and is writing an autobiography.

Growing unrest in the isles was described by Mr. Borden.

A Free French destroyer is bound directly for Tahiti on orders of General De Gaulle to attempt to straighten out the disputes, which has resulted from continued arguments over control and policy.

De Gaulle Dissatisfied

French and Tahitian residents in the Society Islands, he said, knew that a warship was en route, bringing a new high commissioner for French Oceania, and considerable concern was felt there because both Gen. Charles de Gaulle and Prime Minister Winston Churchill have expressed dissatisfaction with muddled conditions in the islands.

A large number of Frenchmen, Mr. Borden said, were recently arrested on orders of the Free French governor and are awaiting trial when the warship arrives.

The British consul at Papeete, Mr. Borden reported, was recently mobbed on unfounded suspicion of favoring the Vichy government, and is expected to leave Tahiti soon. Communications, however, are few and far between, being limited to occasional freighters from New Zealand.

Conditions Tolerable

Conditions in Tahiti are not particularly bad, he said, except for shortages in certain commodities. There are plenty of fruits, vegetables and meat, although prices for some foods are very high. Rents are, however, correspondingly low because of a general exodus of non-French residents and because of the lack of tourists, and a four-room house near Papeete may be rented for as little as $6 a month.

Strict censorship is imposed and non-French visitors are generally unwelcome, Mr. Borden reported. Nearly half the residents appear to be in government service, with Tahitians serving as home guards, gendarmes and patrolmen under French officers.

No French or British warships have visited Tahiti in many months, he said, and contrary to reports, there are no New Zealand troops garrisoned there. Business is virtually non-existent.

Going Primitive

"Tahiti is rapidly reverting to its original condition as a primitive South Sea community, since it can no longer depend on outside influences or supplies," Mr. Borden said. "Imports and exports have ceased, the population is falling back on island-grown foods, island-produced clothing and other requirements. But they are rich in natural resources and in their climate, and this works little hardship. Many of us believe it is the best thing that could happen to the Tahitians, who have grown soft in their dependence on Western civilization."

Mr. Borden left his own ship, the Confucius, here, and went to Tahiti as navigator aboard the Golden Hind, returning on the schooner Wander Bird.

1941-09-20-the-honolulu-advertiser-pg-1-2-clip-tahiti

1941-09-20-the-honolulu-advertiser-pg-1-2-clip-tahiti / https://drive.google.com/open?id=170JKhzty4i2llc90XySodHOfhSAeMEO6

1981 (March) - Passing

https://www.nytimes.com/1981/03/26/obituaries/donald-barr-chidsey-biographer-and-historian-of-the-revolution.html?searchResultPosition=1

***Donald Barr Chidsey**, a biographer and author of many books dealing with the American Revolution, died March 17 at Lawrence Memorial Hospital in New London, Conn. He was 78 years old and lived in Lyme, Conn.*

Mr. Chidsey started his writing career when he was about 17 years old on The Elizabeth (N.J.) Daily Journal, his hometown paper. He eventually wrote 50 books including novels.

Among his books on the Revolution was "Valley Forge," "Victory at Yorktown," and "The Loyalists: The Story of Those Americans Who Fought Against Independence." His biographies included "Marlborough, The Portrait of a Conquerer," "Bonnie Prince Charlie" and "John the Great," the life of John L. Sullivan, the American boxer.

He is survived by a brother, G. Alan Chidsey of Port Washington, L.I.

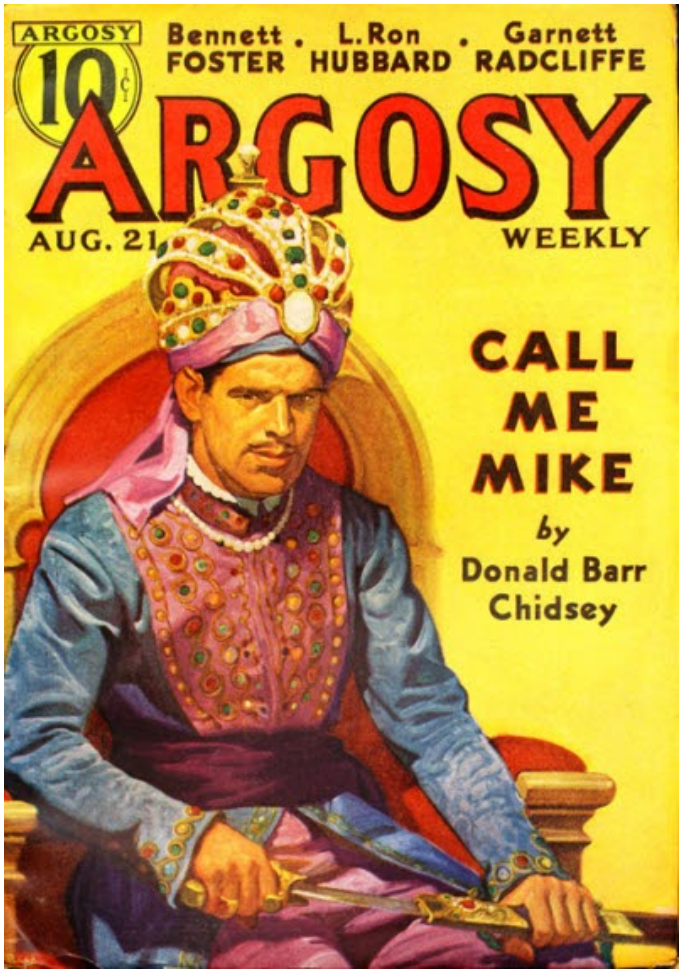
WIKIPEDIA

https://en.wikipedia.org/wiki/Donald_Barr_Chidsey

http://truepulpfiction.blogspot.com/2016/08/the-pulp-calendar-august-21.html

2016-08-truepulpfiction-blogspot-the-pulp-calendar-aug-21.pdf

"**H**ere's a 1937 ***Argosy*** without a table of contents in the Fiction Mags Index. Fortunately, a site dedicated to the pulp writings of **L. Ron Hubbard** has this issue covered with a detailed table. For Hubbard fans or followers, this issue is extra-special because the great man has a letter in Argonotes along with his story "Nine Lives." In the letter, Hubbard defends "fast-production" writers like Frederick Faust and H. Bedford-Jones against snobby critics, crediting them with more nimble brains and "unconscious technique," while saying of himself that " *If I write less than fifty thousand a month, my idea-machine practically breaks down.*" A**s was often the case in the second half of the 1930s, Donald Barr Chidsey gets the cover with the debut of a new series. "Call Me Mike"** introduces Mikkud-Phni Luangba, heir to the real of Kamorriri, and his American companion/bodyguard George Marlin. Mikkud-Phni, aka "Mike," has adventures all around the world when he's not studying at Princeton. The running gag is that Marlin usually is forced into frantic action to rescue Mike, while the prince views everything with placid bemusement -- though he shouldn't be underestimated in a fight. Chidsey published at least three more Mike stories: two in September 1937 and one in 1940. There may be more, since the Mike series isn't recognized in the Fiction Mags Index. The first three stories have "Mike" in the title, but the 1940 story is "Flight to Singapore," and other Mike stories may be similarly obscured. I've read a couple of the Mikes, and they're mildly amusing, though you can see how they'd quickly grow monotonous. Along with these highlights the Aug. 21 issue features serial chapters from Bennett Foster, John Hawkins and Arthur Leo Zagat and stories by Frank Richardson Pierce (possibly a No-Shirt McGee), Garnett Radcliffe and Bertrand L Shurtleff. Hubbard's stuff was pretty entertaining in these early days of his career, so this issue's probably a pretty good overall package. "



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1948 - new book - https://www.newspapers.com/image/367939403/?terms=%22donald%2Bbarr%2Bchidsey%22

Housatonic

Dr. Purnell Whittington Choppin (born 1929)

Wikipedia Purnell W. Choppin

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https://en.wikipedia.org/wiki/Purnell_W._Choppin

https://drive.google.com/file/d/1pV9KvUZ5-D_pW_6Mt_hM5xQVHIHBBVpj/view?usp=sharing

Purnell W. Choppin

From Wikipedia, the free encyclopedia

Jump to navigation

Jump to search

Purnell W. Choppin

Born

July 4, 1929 (age 91)

Baton Rouge, Louisiana

Education

Louisiana State University, M.D.

Known for

HHMI President, 1987-1999

Scientific career

Fields

Virology

Institutions

Rockefeller University, Howard Hughes Medical Institute

Purnell W. Choppin is an American virologist. He served on the faculty of Rockefeller University for nearly thirty years, becoming the Leon Hess Professor of Virology. He moved to the Howard Hughes Medical Institute in 1985, became the president of the institute in 1987, and retired in 1999, succeeded by Thomas Cech. He is currently the chair of the Scientific Advisory Board at the Center for the Study of Hepatitis C, supported by a university consortium consisting of Rockefeller, Weill Cornell Medical College, and New York-Presbyterian Hospital.[1][2]

Early life and education[edit]

Choppin was born on July 4, 1929, in Baton Rouge, Louisiana. He attended medical school at Louisiana State University and received an M.D. in 1953.[1] Before beginning his independent research career, Choppin did his internship and residency at Washington University School of Medicine and Barnes Hospital in St. Louis, Missouri. He also served as a medical officer in the United States Air Force.[2]

Academic career[edit]

Choppin began work at Rockefeller in 1957 as a research fellow and joined the faculty there in 1959, heading a virology research program focused on the influenza virus. He became a full professor and senior physician at Rockefeller in 1970, and served in various administrative roles including the vice president of academic programs and the dean of graduate studies.[1][2][3] In 1985 Choppin moved from his position as the Leon Hess Professor of Virology at Rockefeller to the Howard Hughes Medical Institute, where he served as vice president and chief scientific officer. He assumed the presidency in 1987, succeeding Donald Fredrickson.[4] During his presidency, both the institute's budget and its number of scientists increased dramatically.[3][4] Choppin retired from HHMI at the end of 1999, succeeded by Thomas Cech.[5]

Choppin became a member of the National Academy of Sciences in 1977. He received the University of Chicago's Howard Taylor Ricketts Award in 1978 and the National Academy of Sciences' Selman A. Waksman Award in Microbiology in 1984.[3] In the early 1980s, Choppin was among the group of American virologists who helped organize and became the founding members of the American Society for Virology.[6][7]

References[edit]

- ^
- Jump up to:
- a b c "Purnell W. Choppin papers". The Online Collections and Catalog of Rockefeller Archive Center. Rockefeller University. Retrieved 22 August 2016.
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- a b c "Purnell Choppin, M.D." Center for the Study of Hepatitis C. Retrieved 22 August 2016.
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- a b c "Purnell W. Choppin Announces His Retirement". HHMI News. 22 September 1998. Retrieved 22 August 2016.
- ^
- Jump up to:
- a b Cowen, Ron (21 September 1987). "HHMI Expands Under New President". The Scientist. Retrieved 22 August 2016.
- ^ "Thomas R. Cech to Become the Next President of the Howard Hughes Medical Institute". HHMI News. 25 March 1999. Retrieved 22 August 2016.
- ^ Joklik WK, Grossberg SE (2006). "How the American Society for Virology was founded". Virology. 344 (1): 250–7. doi:10.1016/j.virol.2005.09.022. PMID 16364755.
- ^ Joklik, WK (9 December 2005). "Adventures of a biochemist in virology". The Journal of Biological Chemistry. 280 (49): 40385–97. doi:10.1074/jbc.x500005200. PMID 16326717.

External links[edit]

- Yellow Fever, A Success Story - 2013 talk by Purnell Choppin at a meeting of the American Philosophical Society

https://www.ancestry.com/discoveryui-content/view/1463773487:1265?tid=&pid=&queryId=36ae3918f36d8e23c5d7758732b42363&_phsrc=TmZ38&_phstart=successSource

Name:	Purnell Whittington Choppin
Estimated Age:	Abt 20
Birth Year:	abt 1930
Yearbook Date:	1950
School:	Louisiana State University
School Location:	Baton Rouge, Louisiana
Yearbook Title:	Gumbo Yearbook

Richard Douglas Clarke Jr (born 1962)

Wikipedia Richard D. Clarke

Captured Wikipedia page : [HK0005][GDrive]

General **Richard D. Clarke**

Born July 23, 1962 (age 57) Stuttgart, Germany[1]

Allegiance United States

Service/branch United States Army

Years of service 1984–present

Rank General

Commands held

United States Special Operations Command

82nd Airborne Division

75th Ranger Regiment

Battles/wars

Gulf War

War in Afghanistan

Iraq War

Operation Inherent Resolve

Awards

- Defense Distinguished Service Medal
- Army Distinguished Service Medal (2)
- Defense Superior Service Medal (3)
- Legion of Merit (2)
- Bronze Star Medal (5)

Richard Douglas Clarke Jr. (born July 23, 1962) is a United States Army four-star general who currently serves as the 12th commander of United States Special Operations Command at MacDill Air Force Base, Florida. He assumed his current assignment on March 29, 2019. He previously served as Director of Operations, Joint Special Operations Command on Operation Neptune Spear.

Military career

General Richard D. Clarke currently serves as the 12th Commander of United States Special Operations Command (USSOCOM) headquartered at MacDill Air Force Base, Florida since March 29, 2019.

Clarke was born in West Germany and raised in an Army family. He is a graduate of the United States Military Academy at West Point, New York, and commissioned into the Infantry Branch in 1984. He holds a Bachelor of Science degree from West Point and a Master of Business Administration from Benedictine College. He is a distinguished graduate of the National War College and earned a master's degree in Security and Strategic Studies.

Clarke has led soldiers at all levels in Airborne, Ranger, Mechanized and Light Infantry units in five different divisions, the 173rd Airborne Brigade, and the 75th Ranger Regiment in the United States, Europe, Iraq and Afghanistan. Clarke spent eight years in the 75th Ranger Regiment as a company commander from 1994 to 1996, then as a battalion commander from 2004 to 2006 and regimental commander from 2007 to 2009. He also served as battalion commander of 3rd Battalion, 504th Parachute Infantry Regiment, 82nd Airborne Division from 2002 to 2004. His most recent assignments include serving as the Director for Strategic Plans and Policy (J5), Joint Staff, the Pentagon, Washington, D.C. from 2017 to 2019. General Clarke's other assignments as a general office include: Deputy Commanding General for Operations, 10th Mountain Division from 2011 to 2013; the 74th Commandant of Cadets, United States Military Academy at West Point from 2013 to 2014; and the Commander of the 82nd Airborne Division from 2014 to 2016.

Clarke's deployments while serving in the aforementioned positions include Operations Desert Shield and Desert Storm, Operation Joint Guardian in Macedonia, three deployments in support of Operation Enduring Freedom, four deployments in support of Operation Iraqi Freedom, and one deployment as the commander of the Combined Joint Forces Land Component Command – Operation Inherent Resolve.[3]

Awards and decorations

Combat Infantryman Badge with Star *(denoting 2nd award)*

Expert Infantryman Badge

Master Parachutist Badge with background trimming

Ranger tab

Military Free Fall Parachutist Badge

http://jitc.fhu.disa.mil/organization/aboutJitc/leaders/dcmdr.aspx

ACTING DEPUTY COMMANDER

Mr. Richard Clarke

DUTIES PERFORMED: Assists with oversight of a broad range of Command wide test operations to include testing, workforce, facilities, contracts, security, safety, policy, and infrastructure

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LENGTH OF TIME IN DISA: 18 Years

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Instrumentation Chief – Managed contractor staff at Electronic Proving Ground developing instrumentation for T&E of Army systems

Electronics Engineer – Contractor task lead and instrumentation developer supporting T&E of Joint and Army acquisition at JITC and EPG

https://www.armytimes.com/news/your-army/2019/04/02/from-75th-ranger-regiment-to-the-pentagon-gen-clarke-now-helms-socom/

2019-04-02-armytimes-com-gen-clarke-now-helms-socom.pdf

From 75th Ranger Regiment to the Pentagon, Gen. Clarke now helms SOCOM

Kyle Rempfer

April 2, 2019

Gen. Richard D. Clarke took control of U.S. Special Operations Command from Gen. Raymond A. Thomas III during a change of command ceremony in Tampa, Florida, on Friday.

Clarke, 56, is coming to SOCOM from his role as the director for strategic plans and policy, joint staff at the Pentagon, Washington, D.C. He has led soldiers in five different divisions, the 173rd Airborne Brigade, and the 75th Ranger Regiment in Europe, Iraq, Afghanistan and stateside, according to a command news release.

He also served six years in the 75th Ranger Regiment as a company commander from 1994 to 1996, battalion commander from 2004 to 2006 and regimental commander from 2007 to 2009, according to the release.

Now, Clarke will be responsible for syncing special operations forces from the Army, Navy, Air Force and Marine Corps.

As the Pentagon begins to focus more on peer adversaries like Russia and China, SOCOM's new leader will be challenged to maintain the momentum against the violent extremist organizations that once preoccupied the whole of government.

A glimpse of Clarke's agenda

The world continues to evolve and increase in complexity, Clarke told the Senate Armed Services Committee during his Dec. 4 confirmation hearing.

“While violent extremism persists, challenging regional stability and threatening our interest, near peer competitors grow in both capability and intent to contest our vital national interest," he said.

Clarke will be assuming command of a special operations structure that has participated in the defeat of the Islamic State’s physical territory in Iraq and Syria over the past five years, while still wrangling with extremist groups across multiple combatant commands.

In Afghanistan, the Taliban still have an estimated 60,000 personnel at their disposal, according to Marine Gen. Kenneth F. McKenzie Jr., who leads Central Command.

SOCOM troops are in the country conducting advise and assist missions alongside Afghan special operations forces, providing planning and operational knowledge, as well as a vital link to U.S. air power.

Clarke conducted his confirmation hearing roughly one week after two Army Green Berets and an Air Force special tactics airman were killed by a roadside bomb in Ghazni province, Afghanistan.

“We’ve double the amount of Afghan commandos to be able to help with the strategy to put the pressure on the Taliban and I think that effort is bearing fruit," Clarke said.

SOCOM isn’t just focused on counter-insurgency, however. The command is uniquely qualified to counter the maligned activities of Russia and China, Clarke said in December.

Clarke said he wasn’t currently asking for more SOCOM operators, but that missions abroad could expand.

For instance, U.S. special operators are already “conducting training with special operations forces from nations that are within NATO and within Russia’s near abroad,” Clarke said.

Other units within SOCOM, like military information support operations, psychological operations and civil affairs, could also see a boost under Clarke.

“Some are actually stationed in embassies around the world in support of the chief of mission at those embassies. Those help build a network,” Clarke said. “I’m not advocating for additional resources at this time, but I am looking to make sure that the people are prioritized in the right places.”

Gen. Thomas’ retirement

Thomas, 60, has commanded SOCOM since March 2016, and is now retiring after nearly four decades of military service.

“I’m compelled to acknowledge that the opportunity with the SOCOM team has been one of the most rewarding experiences of my life,” said Thomas. “I was quickly amazed by the span and scope of our organizational activities and extraordinary leaders that comprised this eclectic headquarters.”

Acting Secretary of Defense Patrick M. Shanahan presided over the change-of-command ceremony and commended Thomas for his service.

“Since the day you pinned on the black and gold Ranger tab you’ve been leading the way. This includes your numerous combat deployments in support of historic missions from Operation Urgent Fury in 1983 to Operation Enduring Freedom in 2013,” Shanahan said.

Thomas deployed to Afghanistan and Iraq multiple times from 2001 to 2013, and was wounded in combat in 2009, Shanahan said.

"In 39 years of distinguished service, you’ve embodied the West Point motto duty, honor, country,” he added.

https://www.socom.mil/Documents/GEN%20CLARKE%20BIO%20PHOTO%20-%2015APR19.pdf

General Richard D. Clarke Commander, U.S. Special Operations CommandGeneral Richard D. Clarke currently serves as the 12thCommanderof U.S. Special Operations Command (USSOCOM) headquartered at MacDill Air Force Base, FL.Prior to assuming command of USSOCOM, General Clarke served as Director for Strategic Plans and Policy (J5), Joint Staff, thePentagon, Washington, D.C.General Clarke's other assignments as a general officer include:Deputy Commanding General for Operations, 10th Mountain Division from 2011 to 2013; the 74th Commandant of Cadets, United States Military Academy at West Point from 2013 to 2014; and the Commander of the 82nd Airborne Division.His formative and key, Army and special operations, assignments include: Director of Operations, Joint Special Operations Command from 2009 to 2011. Eight years in the 75thRanger Regiment first as a company commander, then as a battalion commander, and finally as the regimental commander. He also served as commander of 3rd Battalion, 504th Parachute Infantry Regiment, 82nd Airborne Division.General Clarke has led Soldiers at all levels in Airborne, Ranger, Mechanized and Light Infantry units in five different divisions, the 173rd Airborne Brigade, and the 75th Ranger Regiment in the United States, Europe, Iraq and Afghanistan. His deployments while serving in the aforementioned positions include Operations Desert Shield and Desert Storm, Operation Joint Guardian in Macedonia, three deployments in support of Operation Enduring Freedom, four deployments in support of Operation Iraqi Freedom, and one deployment as the commander of the Combined Joint Forces Land Component Command - Operation Inherent Resolve.General Clarke was born in Germany and raised in an Army family. He is a graduate of the United States Military Academy at West Point, NY, and was commissioned into the Infantry in 1984. He holds a Bachelor of Science degree from West Point and a Master of Business Administration from Benedictine College. He is a distinguished graduate of the National War College earning a master's degree in Security and Strategic Studies

https://www.fayobserver.com/article/20141003/News/310039667

By Amanda Dolasinski Staff writer

Posted Oct 3, 2014 at 12:01 AM Updated Oct 3, 2014 at 11:36 AM

After thanking 82nd Airborne Division paratroopers for their service, incoming commander Brig. Gen. Richard D. Clarke looked out onto Pike Field on Friday, assuring them of his leadership.

“What I pledge to this entire division, with all my heart and all my soul, is I will give 100 percent every day and that I will lead by example in all regards,” he said. “I will do my utmost every day to assure the paratroopers and their families are well resourced and well led.”

Clarke became the division’s newest commander Friday after Maj. Gen. John W. Nicholson Jr. relinquished command during a ceremony on Fort Bragg. Nicholson had been the division’s commander since October 2012.

Neither Clarke nor Nicholson were available for interviews Friday.

Clarke was most recently the 74th commandant of cadets at the U.S. Military Academy at West Point, New York. He was born in Germany and raised in an Army family, according to the division.

Clarke was commissioned after graduating from West Point in 1984 and holds degrees from that school, Benedictine College and the National War College.

Clarke has led soldiers in airborne, ranger, mechanized and light infantry units. He has served with five divisions, the 173rd Airborne Brigade and 75th Ranger Regiment, where he spent six years in total, including time as a company commander, battalion commander and regimental commander.

At Fort Bragg, Clarke commanded the 3rd Battalion, 504th Parachute Infantry Regiment, from 2002 to 2004 and later served as director of operations for Joint Special Operations Command from 2009 to 2011.

The general has deployed in support of operations Desert Shield and Desert Storm, Operation Joint Guardian in Macedonia, three times in support of Operation Enduring Freedom in Afghanistan and four times in support of Operation Iraqi Freedom.

During his comments to guests, Clarke said his family has moved 18 times - three to Fort Bragg - for his Army career. This move was supported unanimously by his family, he said.

“We are honored, thrilled and excited but most of all humbled to be joining the ranks of this division and back in the Fayetteville community again,” he said. “This one was much easier because we felt like we were coming back home.”

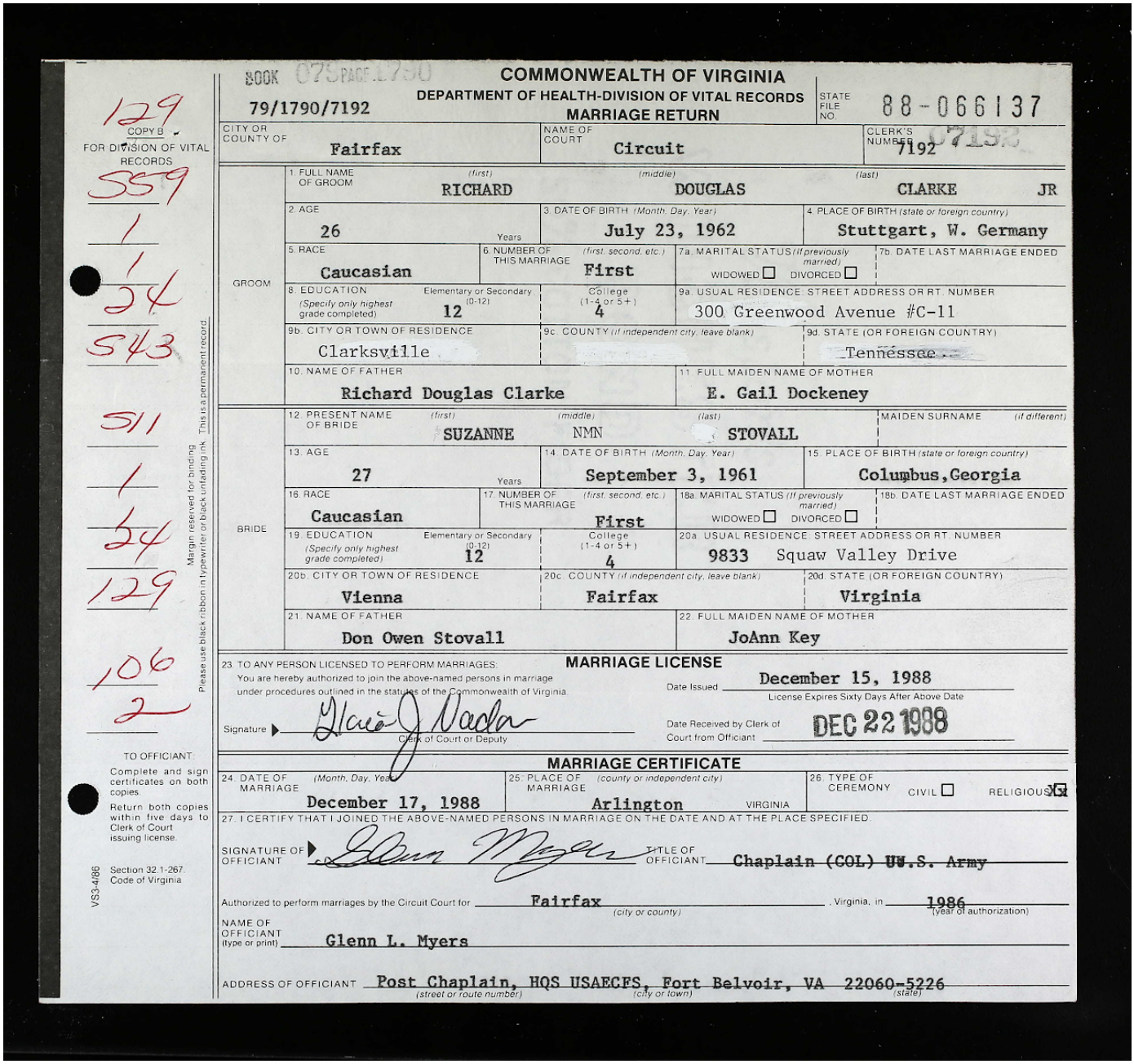
In addition to his family, dozens of West Point graduates from the class of 1984 attended the ceremony. Clarke joked that they attended out of curiosity and skepticism.

He thanked the paratroopers for their service and urged them to be ready.

“What I ask from each of you is to be ready,” he said. “We are currently in the most vulnerable and uncertain time in this world and that our nation has ever known. We could have as little as 18 hours between alert and wheels up, and failure is not an option. At the end of the day, we will be judged by the American people as to whether or not we accomplished the mission. We must be ready; we will be ready.”

Nicholson had commanded the division since October 2012. He has been selected for promotion to lieutenant general and will next be assigned as commander of Allied Land, Command, NATO in Izmir, Turkey.

The division is the “most highly trained and combat-ready division in the United States Army - indeed, in the entire world,” Nicholson said during the ceremony. “Some have raised the concern that our soldiers in this division are tired. I assure everyone that we are not tired; we are ready. We’re ready to jump, fight and win anytime, anywhere in defense of our nation’s security, and we always will be.”



BOOK 075 PAGE 1790

COMMONWEALTH OF VIRGINIA
DEPARTMENT OF HEALTH-DIVISION OF VITAL RECORDS
MARRIAGE RETURN

79/1790/7192

STATE FILE NO. 88-066137

COPY B - FOR DIVISION OF VITAL RECORDS

CITY OR COUNTY OF: Fairfax

NAME OF COURT: Circuit

CLERK'S NUMBER: 7192

GROOM

1. FULL NAME OF GROOM: RICHARD (first) DOUGLAS (middle) CLARKE (last) JR
2. AGE: 26 Years
3. DATE OF BIRTH (Month, Day, Year): July 23, 1962
4. PLACE OF BIRTH (state or foreign country): Stuttgart, W. Germany
5. RACE: Caucasian
6. NUMBER OF THIS MARRIAGE (first, second, etc.): First
7a. MARITAL STATUS (If previously married) WIDOWED ☐ DIVORCED ☐
7b. DATE LAST MARRIAGE ENDED:
8. EDUCATION (Specify only highest grade completed) Elementary or Secondary (0-12): 12 College (1-4 or 5+): 4
9a. USUAL RESIDENCE: STREET ADDRESS OR RT. NUMBER: 300 Greenwood Avenue #C-11
9b. CITY OR TOWN OF RESIDENCE: Clarksville
9c. COUNTY (If independent city, leave blank):
9d. STATE (OR FOREIGN COUNTRY): Tennessee
10. NAME OF FATHER: Richard Douglas Clarke
11. FULL MAIDEN NAME OF MOTHER: E. Gail Dockeney

BRIDE

12. PRESENT NAME OF BRIDE: SUZANNE (first) NMN (middle) STOVALL (last)
MAIDEN SURNAME (if different):
13. AGE: 27 Years
14. DATE OF BIRTH (Month, Day, Year): September 3, 1961
15. PLACE OF BIRTH (state or foreign country): Columbus, Georgia
16. RACE: Caucasian
17. NUMBER OF THIS MARRIAGE (first, second, etc.): First
18a. MARITAL STATUS (If previously married) WIDOWED ☐ DIVORCED ☐
18b. DATE LAST MARRIAGE ENDED:
19. EDUCATION (Specify only highest grade completed) Elementary or Secondary (0-12): 12 College (1-4 or 5+): 4
20a. USUAL RESIDENCE: STREET ADDRESS OR RT. NUMBER: 9833 Squaw Valley Drive
20b. CITY OR TOWN OF RESIDENCE: Vienna
20c. COUNTY (If independent city, leave blank): Fairfax
20d. STATE (OR FOREIGN COUNTRY): Virginia
21. NAME OF FATHER: Don Owen Stovall
22. FULL MAIDEN NAME OF MOTHER: JoAnn Key

MARRIAGE LICENSE

23. TO ANY PERSON LICENSED TO PERFORM MARRIAGES: You are hereby authorized to join the above-named persons in marriage under procedures outlined in the statutes of the Commonwealth of Virginia.

Date Issued: December 15, 1988
License Expires Sixty Days After Above Date

Signature: Marie J. Nadal
Clerk of Court or Deputy

Date Received by Clerk of Court from Officiant: DEC 22 1988

MARRIAGE CERTIFICATE

24. DATE OF MARRIAGE (Month, Day, Year): December 17, 1988
25. PLACE OF MARRIAGE (county or independent city): Arlington VIRGINIA
26. TYPE OF CEREMONY: CIVIL ☐ RELIGIOUS ☒

27. I CERTIFY THAT I JOINED THE ABOVE-NAMED PERSONS IN MARRIAGE ON THE DATE AND AT THE PLACE SPECIFIED.

SIGNATURE OF OFFICIANT: Glenn Myers
TITLE OF OFFICIANT: Chaplain (COL) U.S. Army

Authorized to perform marriages by the Circuit Court for Fairfax (city or county), Virginia, in 1986 (year of authorization)

NAME OF OFFICIANT (type or print): Glenn L. Myers

ADDRESS OF OFFICIANT: Post Chaplain, HQS USAECFS, Fort Belvoir, VA 22060-5226
(street or route number) (city or town) (state)

TO OFFICIANT: Complete and sign certificates on both copies. Return both copies within five days to Clerk of Court issuing license.

Section 32.1-267, Code of Virginia

VS3-4/86

Please use black ribbon in typewriter or black unfading ink. This is a permanent record. Margin reserved for binding.

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1961

https://www.newspapers.com/image/3444344/?terms=%22Richard%2BD%2BClarke%22

Mar 1961

https://www.newspapers.com/image/74537170/?terms=%22Richard%2BD%2BClarke%22

martinsburgh west virginia ?

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1940 census

https://www.findmypast.com/transcript?id=USC%2F1940%2F1504438341

https://www.findmypast.com/transcript?id=US%2FFS%2FM%2F050581138%2F2

https://www.findmypast.com/transcript?id=US%2FWV%2FDEATHS%2F0606067

http://jitc.fhu.disa.mil/organization/aboutJitc/leaders/dcmdr.aspx

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https://www.newspapers.com/image/133643613/?terms=%22Richard%2BD%2BClarke%22

https://www.shadowspear.com/vb/threads/traditions-continue-as-75th-ranger-regiment-changes-command.1140/

Aug 10, 2007

U.S. Army Special Operations Command Public Affairs Office

By Bonita Riddley And Carol Darby

FORT BENNING, GA, (August 10, 2007) -- In keeping with tradition, Ranger Rendezvous 2007 ushered in the regimental change of command here for the 75th Ranger Regiment, Aug. 9.

Col. Richard D. Clarke continues the historical lineage of commanders as the 15th colonel of the Ranger Regiment as he assumed command from Col. Paul J. LaCamera during a formal ceremony on York Field.

Overlooking a sea of tan berets, Lt. Gen. Robert W. Wagner, U.S. Army Special Operations Command commanding general, presided over the ceremony. USASOC is the headquarters for the Ranger Regiment.

“Some Americans may forget that our nation is at war,” he said. “At war with the global enemy that threatens our very way of life. But nobody on this field ever forgets. America will always be the land the free as it is the home of the brave and you are the brave men that guarantee that freedom, the freedom of our good nation.”

As LaCamera departs command of the Rangers, the premier raid force, for his next assignment at Fort Bragg, N.C., he talked about the men he lead who were not in attendance. Company B, 3rd Battalion and 2nd Bn., are currently deployed.

“I am an extremely fortunate leader and Ranger,” he said. “The men who stand before you on the field today have brothers who are fighting on another battlefield. They represent all that is good in America and our Army.”

LaCamera asked the audience to remember the 11 Rangers who died during his tenure as regimental commander. He added a special thought for retired Gen. Wayne Downing, the third colonel of the regiment, who died suddenly July 17.

“We honor Gen. Downing’s service and character, his value and his lasting contribution,” said Wagner who served with Downing during his Ranger days. “Each of you in formation, honor it by your distinguished service.”

LaCamera explained the moments over the week’s activities and many comments made by Ranger veterans and Rangers alike of deeds past and present.

“As I thought about what to say today, I thought that it really does not matter what I say today. What I said earlier is true; all the great words have been spoken throughout the week. What matters is that deeds speak louder than words. In fact, I have been ‘quote’ writing this speech since I arrived at 3rd platoon, A Company, 1st Ranger Battalion a few years ago.

“I have been extremely fortunate to be blessed with a lot of things,” LaCamera said. “I have met, been mentored and tormented, I have mentored and tormented, lead and been lead by some Ranger legends.”

After serving in multiple positions in 1st, 2nd and 3rd battalions of the Ranger Regiment before assuming command of the unit in 2005, LaCamera spoke to

his Ranger family.

"As for my family. Both families. Since it is like my name, like all of our names. Our first – Ranger. And our last. You have to earn your first name, more importantly, you have to earn it every day thereafter," he said. "To my Ranger family, there are no words to describe the pride, privilege and honor it has been serving with you."

Before assuming command of the Ranger Regiment, Clarke commanded the 1st Bn., 75th Ranger Regiment, Hunter Army Airfield, Ga. His other assignments in the regiment include regimental training officer and commander of the Regimental Reconnaissance Detachment and company commander, Comp. B, 3rd Bn., 75th Ranger Regiment.

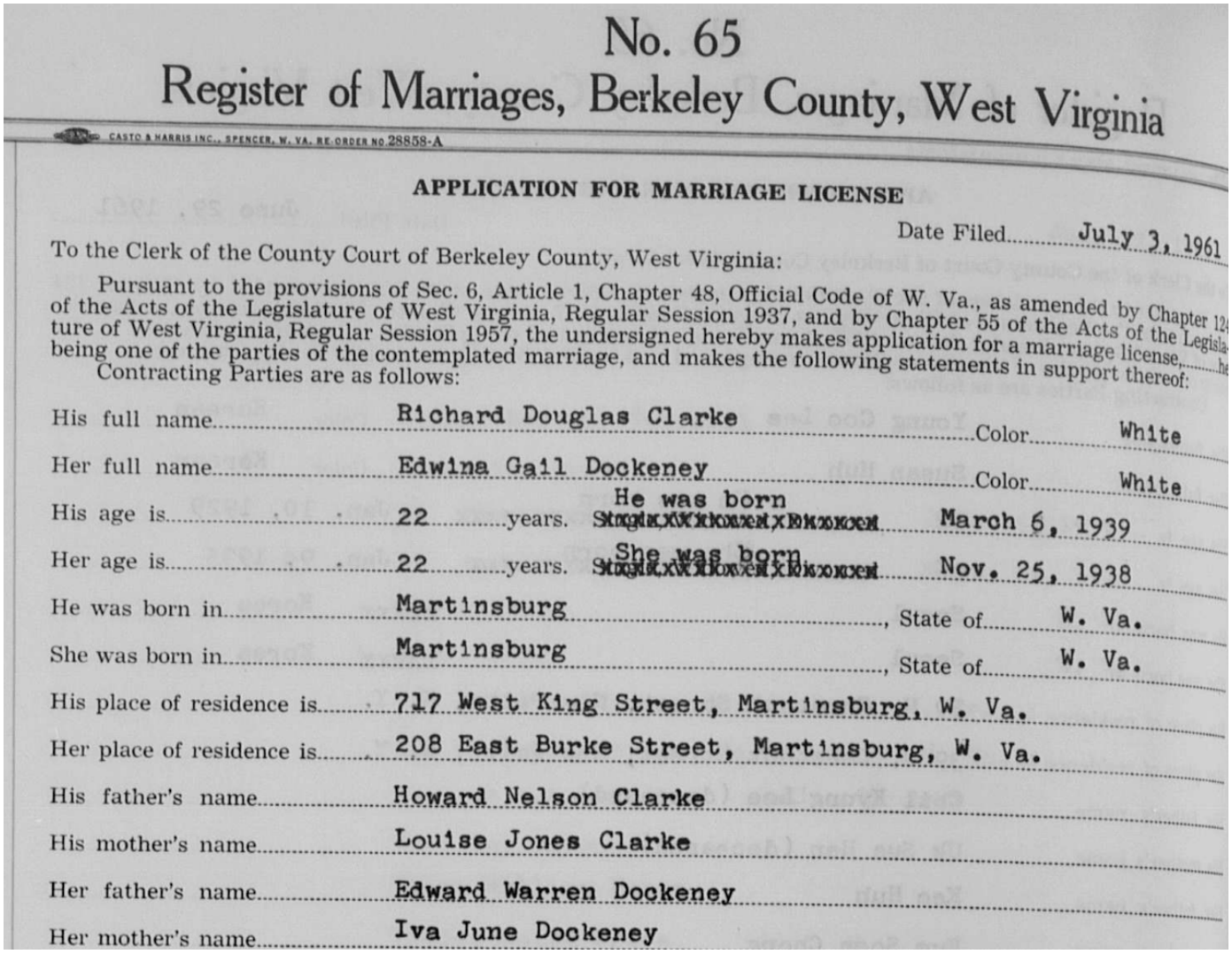
"First and most importantly, to the Rangers in the ranks, and those deployed, the most important group that I will address," Clarke said. "You have borne a tremendous burden since the onset of this war in 2001 and will continue to do so in the future. It is you who deserve the highest praise, even thought you would never seek recognition. I pledge to you to do my utmost each and every day to uphold the prestige and honor of this Ranger Regiment."

Clarke was commissioned as an infantry officer from the U.S. Military Academy at West Point in 1984. He is a graduate of the Infantry Officer Basic and Advanced Course, the Army Command and General Staff College and recently completed a year of study at the National War College in Washington, D.C.

Clarke is a veteran of Operations Desert Storm, Enduring Freedom and Iraqi Freedom.

He has earned numerous awards and decorations to include the Legion of Merit and four Bronze Star medals.

Clarke is married to the former Suzanne Stovall of Beaufort, S.C. They have two children, Madeleine, 9 and Will, 6.



No. 65

Register of Marriages, Berkeley County, West Virginia

CASTO & HARRIS INC., SPENCER, W. VA. RE-ORDER NO 28858-A

APPLICATION FOR MARRIAGE LICENSE

Date Filed July 3, 1961

To the Clerk of the County Court of Berkeley County, West Virginia:

Pursuant to the provisions of Sec. 6, Article 1, Chapter 48, Official Code of W. Va., as amended by Chapter 12 of the Acts of the Legislature of West Virginia, Regular Session 1937, and by Chapter 55 of the Acts of the Legislature of West Virginia, Regular Session 1957, the undersigned hereby makes application for a marriage license, ...he being one of the parties of the contemplated marriage, and makes the following statements in support thereof:

Contracting Parties are as follows:

His full name	Richard Douglas Clarke	Color	White
Her full name	Edwina Gail Dockeney	Color	White
His age is	22 years.	He was born	March 6, 1939
Her age is	22 years.	She was born	Nov. 25, 1938
He was born in	Martinsburg,	State of	W. Va.
She was born in	Martinsburg,	State of	W. Va.
His place of residence is	717 West King Street, Martinsburg, W. Va.		
Her place of residence is	208 East Burke Street, Martinsburg, W. Va.		
His father's name	Howard Nelson Clarke		
His mother's name	Louise Jones Clarke		
Her father's name	Edward Warren Dockeney		
Her mother's name	Iva June Dockeney		

Housatonic

Ray Steiner Cline (born 1918)

Wikipedia Ray S. Cline

Saved Wikipedia (Nov, 2020) for Ray S. Cline

See [HK003I][GDrive]

At 1973 U.S. Intelligence Board, 4th from left

Ray Steiner Cline (June 4, 1918 – March 16, 1996) was an official at the United States Central Intelligence Agency best known for being the chief CIA analyst during the Cuban Missile Crisis.

Background

Ray S. Cline was born in Anderson Township, Clark County, Illinois in 1918 and raised in Terre Haute, Indiana, graduating from Wiley High School in 1935. He earned a scholarship to study at Harvard University where he received two bachelor's degrees and a Ph.D..[1]

Cline was the father-in-law of [Stefan Alan Halper (born 1944)].

Career

U.S. Government

In the midst of World War II, Cline joined the Office of Strategic Services. He became Chief of Current Intelligence in 1944. He later traveled to China where he worked with other legendary OSS officers such as John K. Singlaub, Richard Helms, E. Howard Hunt, Paul Helliwell, Robert Emmett Johnson, and Lucien Conein. In 1946, he was assigned to the Operations Division of the General Staff of the United States Department of War, tasked with writing the history of the Operations Division.

Cline joined the Central Intelligence Agency in 1949. He was initially responsible for intelligence on Korea, but he failed to predict North Korea's 1950 invasion of South Korea, which began the Korean War. From 1951-1953, he served in Great Britain under the supervision of Brigadier General E. C. Betts. From 1953 to 1957, he was the CIA desk officer charged with monitoring the Soviet Union and the People's Republic of China; in this capacity, he correctly predicted the Sino-Soviet split. In 1958 he became Chief of the CIA station in Taiwan, with his official title being chief of the United States Naval Auxiliary Communications Center.[1]

In 1962, Cline moved to Washington, D.C. as head of the CIA's Directorate of Intelligence, the agency's analytical branch. He replaced Robert Amory Jr who had held this Office in 1953-1962. Cline played a crucial role in the Cuban Missile Crisis when, under Cline's leadership, the Directorate of Intelligence concluded that the Soviet Union had shipped nuclear warheads to Cuba; Cline was among those who informed President John F. Kennedy of this development.[1]

Cline played a role in the formation of the World League for Freedom and Democracy in 1966.

Cline remained head of the Directorate of Intelligence until 1966, when, disillusioned with President Lyndon B. Johnson, he determined to leave the CIA. His old friend Richard Helms intervened to have Cline posted as Special Coordinator and Adviser to the United States Ambassador to Germany in Bonn.

In 1969, Cline returned to the United States when President Richard Nixon nominated him as Director of the Bureau of Intelligence and Research and he subsequently held this office from October 26, 1969 until November 24, 1973. In this capacity, he oversaw U.S. intelligence in the build-up to the Yom Kippur War.[3]

Academic

Cline left government service in 1973, becoming an executive director of the Center for Strategic and International Studies at Georgetown University. While at the Center for Strategic and International Studies, he became a prolific author on American intelligence and foreign policy. He also became an ardent defender of the CIA in testimony before the United States Congress and in the media.[1]

Cline was head of the U.S. Global Strategy Council.[4]

Books by Ray S. Cline

- *World War Two, War Department* (1951)
- *World Power Assessment* (1975)
- *CIA: Reality v Myth* (1981)
- *Central Intelligence Agency Under Reagan, Bush and Casey* (1982)
- *Terrorism: The Soviet Connection* (1985)
- *Secrets, Spies and Scholars: The CIA from Roosevelt to Reagan* (1986)
- *Western Europe in Soviet Global Strategy* (1987)
- *Central Intelligence Agency: A Photographic History* (1989)
- *Chiang Ching-Kuo Remembered: The Man and His Political Legacy* (1993)
- *The Power of Nations in the 1990s: A Strategic Assessment* (1995)

Awards

- Distinguished Intelligence Medal[5]
- Career Intelligence Medal[5]

Housatonic

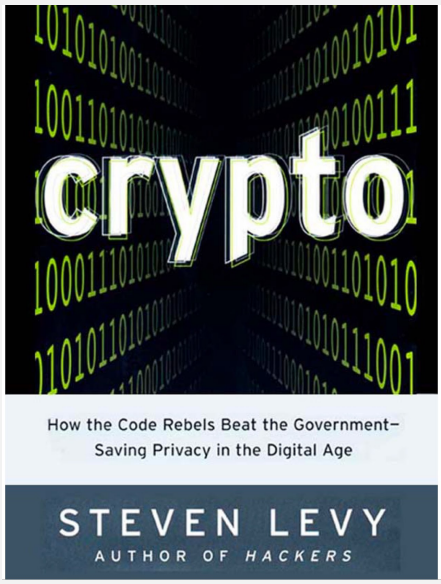
The Clipper Chip

Wikipedia Clipper Chip

"Crypto, How the Code Rebels Beat the Government--Saving Privacy in the Digital Age"

Chapter - Clipper Chip

2001-crypto-rebels-beat-the-government-saving-privacy-steven-levy https://drive.google.com/open?id=10FVeVDaCy2o-8T9ZutXBpI_sTKx54iUy



2001-crypto-rebels-beat-the-government-saving-privacy-steven-levy-cvr.jpg / https://drive.google.com/open?id=10Iaq4dtjD2SMyV25wVuv1nOd5O3TyIpi

The creator of the Clipper Chip was an unintentional spook. Clinton Brooks's passion was astronomy. He studied it at Yale during the late sixties, and wanted to make it his career, after fulfilling his ROTC obligations in the navy. His duty was slated for the Pacific, and he planned to move his wife and small children to Hawaii and sail as a shipboard communications officer. He didn't realize that people at a certain intelligence agency had other plans for him.

Several years earlier, Brooks had been assigned for his mandatory summer duty to a location unknown to him: Fort George Meade. He had driven to Maryland, expecting a typical military base. Instead he was intercepted by inscrutable guards outside what looked like a modern office building in the middle of nowhere who told him that only those with high security clearances could enter. To his surprise, a phone call revealed that he already had been granted such a clearance. Welcome, Clint Brooks, to the National Security Agency. He might have thought of this duty as an interlude, but his superiors had apparently taken note of his abilities, and offered him an alternative to the navy. Not only could he remain in the States, but he'd have a chance at a deeper satisfaction—an opportunity to indulge his cosmic yearnings, to a degree, by working in top-secret satellite reconnaissance. He would not, of course, be able to talk about his work to his friends, neighbors, and relatives, because even the title of the satellite organization was more closely protected than the No Such Agency itself. But it sounded good to Brooks. So he declined his commission on the USS Pueblo—the intelligence ship that would be captured by the North Koreans a few months later, on January 23, 1968. He would work at the agency that dared not speak its name.

Twenty-four years later, Clint Brooks was an assistant deputy director at the agency that now did speak its name in public. And he found himself at the center of a crisis that involved the very mission of the National Security Agency: the rise of public cryptography. One day in the late spring of 1992, he walked over to the office of a recently arrived general counsel of the agency to enlist the newcomer's aid in a campaign that, Brooks hoped, might help the agency get through this dangerous passage.

Traditionally, the NSA general counsel is recruited from outside, a lawyer familiar with government work with no particular experience in intelligence matters. Someone who can fit into the cloistered culture inside the Triple Fence, but who retains a sense of the real world beyond. It had been Bobby Ray

Inman who first figured out that a sharp legal mind just plucked from the fray could best forward the agency's business, and provide a level of oversight that perhaps a career spook might not. Ever since Inman's lawyers helped him navigate the agency's problems with academic crypto research, a series of sharp, relatively young attorneys had filled the post for a couple of years, then each had moved on.

Stewart Baker fit the mold. Born in 1947 and raised outside Detroit, he went to law school at UCLA, clerked for a federal judge, then went into private practice for Steptoe and Johnson, one of the most prestigious firms in the nation's capital. He served for a few years in Jimmy Carter's Education Department, then returned to Steptoe. When recommended for the NSA job, he'd been unsure about it. "Should I do it?" he asked a military friend. "What better could you do for your country?" his friend replied.

Baker had occupied his new office for less than a month before Clint Brooks's visit. It was clear that the spindly, square-jawed NSA lifer was a true believer—but in what? Before he spoke, Brooks placed a large bottle of Advil on Stewart Baker's desk. "You're going to need this," he said. Then Brooks laid out the entire story of how cryptography was going public. He told Baker about DES, the strong cipher that wound up in more common use than the NSA had expected, then about the development of public key, and RSA, and the agency's troubles with the new cryptographic community that led to the compromise of prepublication review. And now, he said, the idea that you could control things by vetting academic papers was irrelevant: companies like RSA were selling crypto commercially. Baker was aghast. How did you let that stuff out? he wanted to know.

It wasn't that simple, Brooks explained. The NSA has two roles. One, of course, is cracking ciphers and providing great intelligence to the rest of the government. But the other is to provide the United States with the best possible codes. Inside the Triple Fence, this duality was referred to as "Equities," reflecting, no doubt, that both tasks were equally important. Clint Brooks was the Equities guy at the NSA.

It was a thankless balancing act, because an advance in one mission was sometimes a threat to the other one. In the old days, at least, the debate was confined inside The Fort, but now it took place in the halls of Congress and in the pages of the New York Times. Meanwhile, the specter of widespread encryption was like a train bearing down not just on the NSA but on society in general. Like the cypherpunks, Clint Brooks looked into the future and saw crypto everywhere. But while the crypto rebels embraced the vision, Brooks understood that this new reality was a potential disaster, if the agency did not adjust.

This was gospel that Brooks had been preaching for several years, at first to deaf ears. During most of the 1980s, after director Inman's first skirmishes with the crypto academics, most people at the agency hadn't been much concerned with the possibility that public cryptography would affect them in any significant way. Strong export laws kept everything under control, assuring that nothing as strong as DES left the country without restrictions. In the chill of the Cold War, Congress always gave Fort Meade what it asked for. And though an occasional in-house Cassandra would cite some pundit's prediction that in two or three years widespread commercial crypto would take off, it never did seem to happen. So it was easy to think that it might never happen. Brooks knew otherwise. Beginning around 1988, he came to understand the direction the Internet was taking and realized that, this time, the threat was real. But his superiors laughed when he tried to lecture them. What are you talking about? they'd say. We're the only cryptographers! This is a military technology, not something that people want to use! Only when an Internet revolution became plausible, and companies like Lotus actually started to build crypto like RSA into their products, did the top levels of the agency come to realize that Brooks had a point. So they authorized him to find some sort of solution to this conundrum. And Brooks had indeed come up with one.

That was the reason for Clint Brooks's visit to Stewart Baker: to get him on board with the plan. There was, he explained, a possible way out . . . a solution that not only could give the unprecedented protection of strong crypto to the masses, but that would also preserve the government's ability to get hold of the original plaintext conversations and messages. In fact, for the past three years, Brooks revealed, the NSA had been creating such a scheme. It involved a technique known as key escrow.

The project had begun in 1989. Brooks, in his role as Fort Meade's Equities man, had been racking his brain to figure out how to reconcile the two seemingly incompatible demands: the need for strong public codes and the agency's need for plaintext traffic. Clearly, no solution was perfect. The idea was to strike the proper balance, giving users of nonclassified information both inside and outside the government a healthy measure of security, but not so much that the public's safety was abridged. At the time the NSA, acting in accordance with the Memorandum of Understanding, had formed the working group on cryptography with the National Institute of Standards and Technology. In NIST's acting director Ray Kammer, Brooks found a kindred soul. The two of them spent hours going over the problem, probing the technical and even philosophical aspects of a crypto policy.

In one of their early discussions, Brooks and Kammer had simultaneously had an epiphany: the use of encryption would have a profound effect on law enforcement, particularly in its ability to continue wiretapping. They began visiting people in the Justice Department and the FBI, none of whom had the slightest inkling of the troubles that lay ahead. Brooks or Kammer would tell them that all the authorizations to wiretap in the world might not help them when crooks used encryption, and their jaws would drop. Can't you help us? the law enforcement people would ask.

Brooks had once assumed the solution might lie in a giant deception. The agency could create a putatively strong cryptosystem, so apparently strong that companies would build it into their products and export it around the world. But the agency would have built in a "trapdoor," to allow the NSA secretly to derive plaintext from encoded transmissions. But after some clear thinking, he discarded that risky, and questionably legal, idea. Such a scheme would entail getting decrypted messages from U.S. citizens. You might be able to justify a hidden trapdoor to snoop on foreigners, but if Congress or some investigative reporter discovered that the NSA had launched a clandestine surveillance plan against Americans, the Church committee would look like a picnic.

So Brooks spent nights awake trying to conjure some other idea. On one of those nights, he had a flash. There could be a compromise that could satisfy everybody. In the physical world, a search warrant compelled a suspect in a crime to give authorities the combination of a safe. Why not translate that concept to the world of communications and computers? If you created a system by which special duplicate encryption keys were somehow spirited away and stored in secure facilities, you would essentially be holding lock combinations in escrow, unavailable to anyone but those who had authority to retrieve them. Those with that legal authority—a search warrant from a judge or an understood set of national security criteria—could get the keys from the trusted storage facility. Once that access was assured, there would be no problem in allowing the encryption itself to be as strong as anyone liked. Make it uncrackable! If the FBI or the police needed the key, and a judge concurred, then they'd have the wherewithal to decipher it, just as if they were the intended recipients.

To some people at the agency, the scheme was a heresy: You're going to put a back door into a cryptosystem . . . and TELL people about it? But full disclosure was a critical part of Brooks's vision. He really wanted this new scheme to kick off a national debate about cryptography. Only then, he believed, could an escrow scheme, which would require an elaborate infrastructure, be established. With the government no longer concerned about getting hold of encoded messages, the path would be free and clear toward a universal blanket of crypto, with organized public key distribution, standardized digital signatures, and automatic encryption of messages. The privacy nuts and conspiracy freaks would raise hell at the idea of escrowed keys. But if all the issues were aired, all the dangers addressed, all the benefits sketched out, surely reasonable people could see that this plan was the best way to protect our communications

without sacrificing our safety. Anyway, what was the alternative?

Of course, if such a scheme were to be launched, the NSA itself would have to change, readjusting its focus so it would operate in a highly computerized—and crypto-ized—post–Cold War world. The intensity with which The Fort still maintained its veil of secrecy was no longer appropriate. If the people were to buy such a radical idea, the NSA would have to earn their trust. Thus it was imperative to bring the debate on cryptography to the public, treading on once forbidden areas with brutal honesty.

Brooks eventually got approval to pursue his plan, but his idea that the NSA should collaborate with the general public was received with skepticism or worse. He found himself arguing like some deranged Jeremiah. "This has got to be a national policy," Brooks said at one meeting of the top NSA officials. When asked by a deputy director to explain further, he replied, "This isn't a judgment that can be made by the director of the National Security Agency or a committee of deputies . . . it's a value judgment as to what's in the best interest of the country. It has to be decided by the president of the United States." The official who answered directly to the voters! His peers thought he'd gone off the deep end. This was the National Security Agency, their attitude was, and we don't do that sort of thing.

While waiting for the public debate to take shape, Brooks was working hard with other agencies to set up a structure for his ambitious key escrow plan. Because of the Memorandum of Understanding, of course, the agency would have to develop the scheme with NIST. But that was no problem. The joint technical working group had been working on the public crypto situation since the very first meeting in March 1989, particularly on the digital signature algorithm. Public crypto was known within the group as Issue One.

A third stakeholder in the discussions was the FBI. The early alert from Brooks and Kammer had indeed awakened interest at the bureau: in 1991, director William Sessions had written to defense secretary Dick Cheney about computer security, clearly indicating that his agency wanted a voice in determining policy. The FBI, it turned out, would actually assume the hardest line on the issue.

The NSA, of course, did the technical heavy lifting. By 1990, thirty of its mathematicians were working on the problem. They quickly settled on the bedrock of the system, a powerful encryption algorithm that had been kicking around Fort Meade for a couple of years. Its codename was Skipjack. It was a block cipher like DES but was deemed much stronger. Its recommended key length was 80 bits as opposed to DES's 56; it used 32 rounds of substitution instead of 16. (There appears also to have been some more subtle technical reasons for Skipjack's superiority, but of course, the NSA was loath to reveal these.)

Though Brooks tried to argue that in this new era, it might be appropriate to reveal the algorithm— insisting, in fact, that to win over their critics they would probably be forced to publish it anyway—he met with staunch resistance. Never—never—would the agency allow its foes access to what amounted to an advanced course on the cutting edge of codemaking. Things don't work that way at The Fort.

Skipjack, though, was only a single component of what the NSA called Capstone, which was a complete public key system that would include the digital signature standard. Of course, this particular scheme had an additional complication: how would you implement the escrow? You'd have to figure out a way to isolate a copy of each key and send that information elsewhere for storage. By 1991, the NSA decided that trying to do this in software was too risky—it feared that some foe could change the code to build in a weakness—and concluded that a better method would be to put the whole shebang on a tamperproof computer chip. An experienced defense contractor in Torrance, California, called Mykotronx was hired to fabricate the chips.

The system itself worked by inserting several new components into the classic equation where Alice encrypts and Bob decrypts. One of them was the "unique chip identifier." It was a number that matched up with a "chip unique key" that was assigned to a single physical chip. Each device—a computer or perhaps a phone—would have its own unique chip identifier and chip unique key.

When two people wanted to communicate privately, they would each have one of those devices. If, for instance, they wanted a phone conversation that an eavesdropper couldn't hear, they'd have special phones with the technology built in. Once the connection was made, the phones would zip signals to each other (via a Diffie-Hellman exchange) to calculate a new symmetrical key, called the session key. Using Skipjack, that key would actually encode the sounds of each speaker as the sounds left the phone and decrypt those sounds as they emerged from the other phone. But along with the encrypted conversation, the phones would transmit another set of bits, called the Law Enforcement Access Field (LEAF). (It was originally called the Law Enforcement Exploitation Field, but was changed to a somewhat less ominous term.) The LEAF would be generated by a set of calculations involving the session key, the chip unique key, and the unique chip identifier, winding up with two important components: an encrypted version of the session key and the unique chip identifier. All of that would be further scrambled by the family key.

So how would officials get hold of those keys? They would already be in possession of one of them, the family key—there's only one in the whole system. The tricky part of the scheme would be getting the proper chip unique key and, ultimately, the session key. This would be performed by way of the LEAF.

What if an eavesdropper captures the information on the LEAF? Even if he could isolate the chip identifier from the LEAF, it would be useless. All the identifier would do, really, is identify. It would point to a chip unique key in a vast database. But only the government wiretappers would have access to that database, stocked with every chip unique key in existence. Having that identifier without a way to get into the escrow facility would be like having someone's fingerprint and no access to crime records: it would be of no help whatsoever in telling you who it identifies. But a government agent would be able to take that identifier, along with a court order, to an escrow facility, and match it up with the chip unique key. And then combine it with the family key. Viola! You'd have the session key—and the fuzz of an encrypted conversation could be transformed into blessed, perhaps incriminating, plain language.

That led to another complication. Where would the escrowed keys be stored? If they were all kept in one place, it would be a potential gold mine for all sorts of crooks, spies, and even corrupt U.S. government agents—anyone with access could get hold of the means to violate the privacy of every encrypted conversation in the world. So Brooks and his colleagues decided that the escrowed keys would be split into two pieces that would be stored in different locations. This would be done in such a way that obtaining one piece of the key would provide no mathematical advantage in discovering the entire key. When a judge authorized a wiretap, the law enforcement officer would present the warrant to both escrow agents, construct the key, and then have the wherewithal to listen to the conversations.

In late July 1992, all the relevant government agencies met for an off-site meeting at the FBI's Engineering Research Facility in Quantico, Virginia, to discuss the alternatives for a national encryption policy. Clint Brooks made the opening presentation. As recorded by one official in attendance:

> He presented these within the context of a national goal that would satisfy the need for good commercial and unclassified cryptographic security while protecting the interests and responsibilities of national security and law enforcement organizations. He termed the achievement of this goal "Nirvana."

The agencies didn't reach total agreement. Notably, the FBI apparently was arguing for the ability to do its decrypting instantaneously, or in "real time," an

approach that the NIST people deemed "draconian and intrusive." (The FBI approach would essentially dictate that the escrow facilities should be a phone call away at any time, and safeguards against abuse would go out the window.) But they all agreed that a system should provide encryption for the public while allowing the cops and the spooks access to the keys—essentially, the NSA solution.

Until the whole government got behind it, the escrow scheme was just another flashy technology concocted behind the Triple Fence. In order for it to work, it needed to be ubiquitous. As Brooks had anticipated—and as his superiors finally came to understand—such a sweeping change needed the imprimatur and active support of government's highest level, up to George Bush himself. But an election was approaching, not the time to air potentially controversial new ideas. In any case, the Bush people seemed unconvinced of the urgency of quick action. Brooks figured that in 1993, after Bush was returned to the White House, the reelected president would be able to tackle the problem, free from worries about what the electorate might think.

But in 1992, two unexpected events dramatically shaped the course of Clint Brooks's key escrow scheme. The first one involved an innovative product about to be introduced into the marketplace—a twenty-four ounce box that connected to the telephone. That pound and a half of technology portended tons of problems. The second development was the election of a new U.S. president.

The box's technical name was the AT&T Telephone Security Device (TSD) 3600. For several years, the telecommunications giant had been manufacturing secure phones for the government, using a special NSA-designed algorithm. In 1992, the company decided to broaden its market outside the government, and began limited sales of a voice data scrambler that used an encryption algorithm devised by AT&T's own crypto team. That autumn, it decided to follow up on an even wider scale—by launching a secure phone designed to sell by the thousands. If you were worried about snoopers listening for sensitive data involving intellectual property, trade issues, and business strategies, you'd want one of these. You didn't have to be an engineer or a nerd to use it, either. "It connects easily to desk telephones or . . . mobile cellular phones," gushed company literature. "And it's as easy to use as it is portable. To protect conversations, the user simply pushes a single button. The call is automatically encrypted and the conversation secured." AT&T also claimed that the voice quality on this device was, unlike the relatively fuzzy phones that the military used, almost as good as that of a regular telephone.

What's more, this new phone would use the most trusted encryption algorithm of all to scramble voice: DES, the cipher that was still a hot button behind the Triple Fence.

The NSA, of course, was unhappy at this new use of the problem child it had once blessed. But news of AT&T's plan was even more troubling to the FBI. The law enforcement agency had already been complaining that new telephone features like cellular service and call forwarding were making it more difficult to implement wiretaps. Its solution was to propose a new bill, known within the Beltway simply as "Digital Telephony." The law would mandate that all new telecommunications equipment be designed with wiretaps in mind; it essentially banned new devices and services that denied the government an easy way to conduct surveillance. Critics were already howling. It was bad enough that the bill would cost equipment makers hundreds of millions of dollars (presumably a cost passed on to consumers). Much worse was the central premise behind the legislation, which required the tail of wiretaps to wag the dog of telecommunications. Instead of encouraging one of the country's most innovative industries to produce the systems that would sustain America's high-tech success in the global marketplace, Congress would be locking a ball and chain on innovations. And for what? Just to keep its ears open to approximately 1000 annual federal wiretaps, to glean information that could arguably be recovered by other means, like hidden bugs or informants?

Though Digital Telephony didn't mention cryptography specifically, the specter of crypto restrictions hung over the legislation like some digital Sword of Damocles. As Brooks and Kammer had explained to the FBI, strong crypto could totally screw up the benefits of the bill. Even if Digital Telephony passed, and the industry faithfully followed its strictures, the G-men and other police agencies would be able to monitor the transmissions sent over the wires or the air—but then what? If those communications were scrambled, those precious intercepts would be no more than useless static. FBI director William Sessions got the message and made sure that G-men would be participants in the NSA–NIST effort to deal with the problem.

Now the FBI was freaking. Here was this new AT&T phone, designed to move secure-phone technology from a status item on the desks of national security advisors to a common commercial product, one used by executives, lawyers, and scientists, not to mention privacy nuts, crooks, terrorists, and God knows who else. It would be a law enforcement disaster . . . unless there was a way that the government could somehow overhear those conversations as they were before encryption. Wasn't that what Clint Brooks had figured out? So Brooks and his team were asked if the Capstone chip might go into the AT&T phone. As the Capstone was originally conceived, it was too demanding for the TSD 3600—with all its features, such as the digital signatures, it would require more computation than the device could handle. But maybe if the NSA carved out just the encryption algorithm and key escrow, it could come up with something that could simply be clipped into the phone in place of the DES chip.

Even while agreeing that it could be done, Brooks was wary. The Capstone chip was well designed and represented a complete solution. Coming up with something new would be riskier—and to do it in time to stave off the AT&T phone, it would have to be done very quickly. There would be no time for the national debate he felt was so essential.

But the FBI couldn't wait. On October 13, 1992, Judge Sessions himself placed a call to AT&T's chief executive officer Robert Allen. We've got a problem, he told him, and then outlined problem and solution: Would AT&T consider using an escrow encryption chip instead of its DES-based system? If the company agreed, the feds could offer considerable carrots. For one thing, AT&T could claim that it was actually providing mightier encryption, since Skipjack was much more difficult for outsiders to crack than DES. Furthermore, the United States would probably allow this key escrow phone to be exported. Best of all was a promise directed toward the bottom line: the federal government would buy thousands of units for its own use.

The downside, of course, would be that potential corporate buyers would have to buy into the basic compromise that escrow entailed: the encryption would be strong, but one not necessarily welcome third party would also have a copy of the key.

Sound familiar? It was the same situation that Whit Diffie had found utterly intolerable two decades earlier: the difficulty of two people seeking intimacy when someone else is in the bed. Diffie had invented public key in order to avoid this perversion of the cryptographic relationship. Indeed, the AT&T phone as originally conceived was an embodiment of Diffie's vision. The users of the phone would not need to exchange secret keys beforehand. Instead, the two respective phone devices would furiously perform the calculations of a Diffie-Hellman key exchange, in order to settle on a secure DES key that would encrypt, and then decrypt, the actual conversation. No need for anyone else. You wouldn't want anyone else.

But the bounty offered to AT&T—and the chance to avoid a government confrontation—was too juicy to turn down. The phone company signed off on a deal: if the government would adopt a plan to make key escrow its standard, AT&T would forgo its DES scheme and install a government-designed chip in the device instead. This would be the stripped-down version of Capstone, using the Skipjack algorithm and the escrow features, but without the signature or hashing algorithms. It was given a new code name: Clipper.

"We knew no decision would make everybody happy," said an AT&T spokesperson. "But frankly, the Clipper Chip offered an important law enforcement issue and increased the level of protection." More to the point, it also offered guaranteed sales, and the continued goodwill of one of AT&T's major customers, the

and increased the level of protection. More to the point, it also offered guaranteed sales, and the continued goodwill of one of AT&T's major customers, the United States government (at the time, the company was negotiating a government contract worth over $10 billion). If key escrow became government policy, AT&T would happily be on board.

But Clipper was still nowhere close to being the official government policy. Clint Brooks and the NSA needed one more big break before they could begin their journey toward Nirvana. That break came on November 3, 1992, when the United States went to the polling place and elected William Jefferson Clinton its president, with Albert Gore as his vice president.

It might appear counterintuitive to think that those election results favored the NSA. After all, Clinton was a Democrat who had spent the Vietnam years speaking against the conflict instead of fighting in it.

During the campaign, Clinton had visited Silicon Valley, and while he had made no promises, he indicated that his presidency would be a friend to private crypto. "He talked about how silly it was that there were export controls on off-the-shelf software," remembers privacy advocate Marc Rotenberg. "He didn't say 'encryption' specifically, but that's clearly what he was referring to."

Another sign that Clinton might not be NSA-friendly was the nature of the people surrounding him. For instance, the head of his transition team was a former electronics lobbyist named John Podesta, who had vociferously supported the industry agenda of liberalizing export rules. Besides Podesta, Clinton's minions included a number of people who seemed tuned into the hip and crypto-friendly cyber world.

Chief among that contingent was the vice president himself—a self-styled computer aficionado to whom Clinton would delegate the ultimate decision on the cryptography issue. In fact, Al Gore's presence as the nation's second-in-command was often cited as proof that the new leadership team was a nerdfriendly future squad who "got" the new Internet paradigms. Their campaign speeches might have been about bridges to the future, but Gore's vision was of an Information Highway to transform the country and indeed the globe. Gore arranged to bring some of the most techno-savvy Senate staffers to the White House to help on digital matters, people like Mike Nelson, a former MIT geophysicist experienced in Info-Highway issues. They were "extremely smart, conscious freedom-lovers," wrote John Perry Barlow, who got to know them in his role as Electronic Frontier Foundation cofounder. "Hell, a lot of them are Deadheads. I was sure that after they were fully moved in, they'd face down the National Security Agency and the FBI."

Barlow had mistakenly assumed that because the Clinton staffers recognized the opening chords of "Sugar Magnolia," they'd be immune to top-secret doom lectures from the star-spangled crypto boys at Fort George Meade. Behind the Triple Fence, the expectations were just the opposite. The spooks understood that Bill Clinton and his peach-fuzz tech squad were a godsend for the escrow idea. The Bush administration had never warmed to the escrow plan. The problem wasn't so much that the Bush people were specifically against this particular scheme. They were against anything that required a little gumption. "The Bush people had spent twelve years in power, most of them with a Democratic Congress, and they knew that everything that could blow up, would blow up," one insider explained. "When you presented something to them, you got nothing but eyes staring out. . . . You could sense that everyone was thinking, 'How might this end up on my suit?' "

In contrast, the Clinton people were policy joyriders, like teenagers finally granted their turn behind the wheel. They were totally juiced that after twelve years of dinosaur rule, they now had their chance to fix things. They were also detail freaks, eager to belly flop into the huge piles of clauses, footnotes, and trivia that embodied the process of governing. Present them with an idea and they surrounded it, tickled it, tore it apart to see its gears rattle, and wondered how they could make it work for them. They drew confidence from a belief that their own good intentions were obvious, and even if their efforts didn't pan out, the public would give them credit for trying to do the right thing.

The forces pushing key escrow didn't even wait until the new administration reached the White House before they hit Clinton and Gore with the encryption problem. The AT&T phone threat provided an impetus. "Suddenly this wasn't something where we could wait, do an orderly briefing of the new administration, let them get their feet under them, appoint their assistant secretaries, and make a decision in 1994," says Stewart Baker. The idea of getting George Bush to sign off before vacating the White House had been considered, but rejected. "We believe that going forward with the installation of the Clipper Chip based on the approval of the current administration has some potential pitfalls," wrote an FBI official to director Sessions in a late-1992 memo. What if the news of an "exploitable" chip leaked before the Clinton people formally approved the policy? "It might result in their being pushed toward disavowing the prior Bush administration approach in order to prevent the controversy."

Judge Sessions himself, whose fear of losing precious wiretaps had made him increasingly frantic on the issue, was the first one to hit Little Rock. "It had become his highest priority," says a government official working for key escrow. "He was fearless in going to the transition team and saying, 'You guys may be coming in January, but you've got to hear this now.' " In any case, the NSA was just as happy to let him lead. After all, Fort Meade's stated role in government was not promoting policy decisions but providing technical background and intelligence information from its files.

To frame the issues, the FBI, with the NSA's help, prepared a paper entitled "Encryption, Law Enforcement, and National Security." The classified document was packed with high-impact scenarios of what might happen if crypto ran free. It discussed the AT&T device as a possible trigger for this onslaught. But the coming disaster might be averted. "The solution is an encryption chip that provides extra privacy protection (at least a million times stronger than DES) but one that can be read by U.S. government officials when authorized by law. . . . This 'key escrow' system would protect U.S. citizens and companies from invasion of their privacy by hackers, competitors, and foreign governments. At the same time, it would allow law enforcement to conduct wiretaps in precisely the same circumstances as are currently permitted under the law." While the description sounded very much like a panacea to an otherwise apocalyptic problem, the paper did include one possibly annoying consequence of the policy:

"This concept undoubtedly will be vigorously attacked by those who fear law enforcement abuses and thus would rather rely on technology than on the court to protect their privacy." But that seemed rather an easy trade-off to make. Which would you rather tolerate—a bit of flak from privacy nuts, or a powerful weapon in the hands of kidnappers and terrorists?

Stewart Baker was the NSA's point man on the issue, and wound up coordinating much of the effort to sell escrow to the incoming leadership. While Fort Meade was packed with geniuses, it wasn't as loaded with people who were comfortable dealing with the outside world. Baker had come a long way since Clint Brooks had come to his office and first told him about Equities. In that time, he had gotten a good view of the cryptographic landscape from the NSA point of view. He saw where it all fit together. You couldn't mandate what people inside the country used nor could you keep every copy of a program like PGP away from every geek on the globe. But realistically, not many people were going to take the trouble to find exotic encryption software like PGP and figure out how to use it. Export controls were the way you stopped good crypto—everything from DES on up—from being built into the systems people used every day, and thus, out of the hands of most bad guys.

Baker saw the Clipper scheme as a way of weaning the government from its dependence on export controls to contain crypto. There were signs that Congress might not support those regulations indefinitely. The business community was getting louder and louder in its opposition to them. The problem

was, the software industry had grown up in an environment with few regulations, and was now a multibillion-dollar colossus. It felt that the natural order of things was to fight things out in the marketplace while the government remained some distant entity. The techies seemed to regard the premier crypto agency in the world as some doddering, irrelevant artifact of the Cold War. Their philosophy was hey, technology happens. Baker was horrified once when a Microsoft middle manager blithely told Baker that Bill Gates was going to put crypto into the Microsoft operating system, that it was going to be in all the applications. Who cares whether it would empower terrorists or rogue nations? Their attitude was, "Encryption is cool, let's put it anywhere."

The techies weren't unpatriotic, Baker thought, just clueless about the very real dangers in the world. They thought it was a joke that crypto was classified along with heavy munitions. But the ability to listen in on the world—with a vast multibillion-dollar network of secret satellites, radar installations, and ground sensors—was a pillar of U.S. defense policy. How did they think we discovered those Libyan terrorists who brought down the Pan Am jet over Lockerbie? How else to keep track of the North Korean nuke program or Iraq's use of chemical weapons against the Kurds? The public had only heard hints of the importance of those "intercepts," signals snatched from telephone conversations, digital transfers, and even walkie-talkie transmissions. Most of it was classified, deep black stuff. That's why there were no reporters when George Bush himself had ventured to The Fort to extend his personal congratulations to the codebreakers for their work during the Gulf War. Just what did the spooks do? If the public only knew. . . .

Baker and his fellow advocates of escrow thought it essential that the worldview taken by the new administration be a more realistic and tougher one. Encryption should be an important part of the Networked Society, sure, but you needed controls. You needed limits. You needed a way for the good guys to hear what the terrorists and crooks were saying to each other.

Early in the campaign to win the hearts and minds of the Clinton people, Baker and Sessions briefed Leon Fuerth, who would become Al Gore's national security advisor. Though Fuerth was cautious, the escrow advocates could see that their presentation had hit the mark. They thought they could see it in his face: the realization that the election campaign was over and now the Clinton folks were going to be wrestling with some hard, hard issues. This was one that the NSA and the FBI could win.

As December rolled on, the briefings continued. And not long after the inauguration, Al Gore himself got exposed to the religion by NSA director McConnell and Clint Brooks. It was a bull's-eye for The Fort. Because Gore loved technology, he was able to appreciate the ingenuity of the key escrow scheme. A neo-Luddite Republican might have fuzzed out on those particulars, but Gore's openness toward the idea seemed tied to his perception that these software gears and levers might actually work, providing a solution that gave something to everybody.

As the Clinton-Gore teams shifted from transition to governing, the Clipper people stepped up the meetings. Memos flew between the NSA and NIST on how best to anticipate and respond to possible objections. They knew one potential problem: Fort Meade's insistence on keeping the Clipper's workings a secret from the public. Brooks tried to convince his colleagues to open up, but failed. His fallback plan was somehow to gin up some assurances that the NSA hadn't intentionally weakened Skipjack for its own purposes. "Get a panel of academics from cryptomath/analyst community to examine classified level SKIPJACK to 'assure' it is valid/good algorithm," he scrawled on a memo to his director on January 5. "Who should it be?"

Meanwhile, in the White House, the barrage of briefings was having its effect. In their first weeks in office, Clinton and Gore hadn't signed off on Clipper. But their staffs were coming to the conclusion that there was no other alternative.

John Podesta was already on board. Maybe his personal tipping point came very early after the inauguration when some high-tech lobbyists came to visit him. At this point, civil libertarians and software industry people were still hoping that the new administration would act against the spooks and the cops and liberalize crypto export regulations. (If they'd known about the Clipper Chip they would have gone ballistic.) Podesta, still dazzled by the new toys in his office, showed them his STU-III phone, the standard-issue crypto phone the government had used for about five years. They sneered at it. "Typical clunky government solution," they said. "But you know what's cool? AT&T is going to make a device that's half the size, much cheaper, and will do everything that one does, but better. You should buy those!"

Though the high-tech guys didn't know it, their comments resonated with the briefings Podesta had been getting. If the government didn't do something, those damn devices probably would sweep the market. Not that the NSA/FBI Clipper cabal was relying on serendipity to bring the Clinton folks around. They were essentially stacking the deck, presenting a limited set of options to the greenhorns. Want to do nothing, and let the marketplace take its course? Fine. If you want to trigger crypto anarchy, that is.

Doing nothing, they warned, would mean that AT&T would begin selling its phones and the next thing you knew the costs would come down and everybody would be talking on secure phones and e-mailing with crypto software. The smoke had hardly cleared from the World Trade Center bombing. What if another, maybe a worse, terrorist disaster came, and it turned out that the government failed to prevent it because the perpetrators were able to communicate with unbreakable crypto? You want to give Saddam Hussein access to ciphers we can't break? Go ahead—do nothing. The blood will be on your hands. This terrified the Clinton people.

The other alternative, which some law enforcement hardliners were urging, was even more extreme: ban crypto within the United States. In one of the FBI's presentations, illustrated by a slide show with bullet charts to underline the salient points, the G-men merged their Clipper-related goals with their Digital Telephony vision. Essentially, the show said: because the domestic use of encryption is not regulated, there is a NEED FOR A NATIONAL POLICY that allows "legitimate" users crypto strong enough to foil their adversaries but also "insures that cryptographic devices and systems are capable of real-time encryption by law enforcement." The implication was unavoidable: any cryptography that does not meet that standard should be prohibited. Even stuff distributed by American manufacturers for American users. Otherwise, an intolerable "electronic sanctuary" would exist. Forget about the strategy of using export controls to mitigate what people used inside the country. . . . Our nation was at risk because such tools were legally available to anyone motivated enough to find them. Just as it was illegal to have nuclear weapons lying around, it should be illegal to have codes that could fall into the hands of those who would destroy society with it. In a weird way, this sentiment echoed Phil Zimmermann: when crypto is outlawed, only outlaws will have crypto.

The Clinton people did manage to resist that demand, which would have started riots in Silicon Valley and probably wouldn't have survived a court challenge anyway. The Gore team in particular was sensitive to the idea that the emerging Information Highway needed privacy protections. Besides, how would you enforce such a ban? What did these guys want the government to do, go house to house and search people's hard disk drives for copies of PGP?

So, after being presented with two unpalatable alternatives, the Clinton people were offered a third way, one which, in contrast, seemed a compromise with which everyone could live. In retrospect, one administration insider came to see it as akin to the choices offered the Kennedy people on the invasion of Cuba —a cowardly evasion of the problem, a destabilizing full-scale military operation, or this other plan, a small operation at some place called the Bay of Pigs.

The scheme was presented to the Clinton people as plug-ready, poised to go into operation as soon as the president gave the word. Even temporary inaction would mean a severe and probably lingering loss of respect from the law-and-order constituency the administration needed. One of the FBI men briefing the

Clinton people was a burly, street-smart assistant director named James Kallstrom. Formerly head of the bureau's technology team, he had made his bones in the bugging operation that took down John Gotti.

Some people described him as the FBI's version of "Q," the gadget wizard of the James Bond films. He had an in-your-face style of briefing, making eye contact and personalizing his rap. Are you married? Do you have a child? he'd ask. Then he'd launch into a scenario in which someone had kidnapped one of your kids and was holding him in a fortress up in the Bronx. The bureau suspects your kid is there; they have a search warrant to find him. But the crooks have constructed the fortress out of some new metal that can't be penetrated. Your kid's potential rescuers can't get in. What a nightmare: the kidnappers, with their precious hostage, watching you and the G-men trying to get in and laughing at you.

"That's what the basis of this issue really is," Kallstrom would say in his New York accent. "From the standpoint of law enforcement, there's a super-big threat—this guy is gonna build this domain in the Bronx right now, because he's got a big steel door, and none of the welding torches, none of the boomerangs, nothing we have is gonna blast our way in there. Sure, we want those new steel doors ourselves, to protect our banks, to protect the American trade secrets, patent rights, technology. But do we want a digital superhighway where major criminals can operate impervious to the legal process? If we don't want that, then we have to look at Clipper."

Kallstrom, along with Baker, Brooks, McConnell, and the CIA's John Deutch, became part of the key escrow team ostensibly briefing the administration on its options, but really steering it, with one hand on the scruff of its Democratic neck, toward an inevitable embrace of Clipper. One unexpectedly ally was commerce secretary Ron Brown; in the first briefing he attended, Brown mentioned that his army days had been spent at an NSA listening post, and he was fully aware of the vital importance of signals intelligence. By now the briefings included not only national security people but the Clinton-Gore science staffers like the Office of Science and Technology Policy's Mike Nelson, infonauts well attuned to issues like personal privacy and the industry's need for secure systems. (Nelson got his top-secret clearance in a lightning-quick three weeks.) In a January 26 FBI briefing, Kallstrom laid out a lot of the fine points of the scheme, but Gore's senior director on intelligence programs, George Tenet, had further questions on the Clipper methodology. Who would be the key escrow agents? How would the international aspects be handled? A lengthy February 9 memo from Judge Sessions gave a detailed summary of the plan and the dire implications that would ensue if no action was taken.

So, barely a month into the Clinton administration, the pressure was intense to move on Clipper. Supposedly, AT&T would ship ten thousand DES-equipped phone devices by April 1 if no action was taken. But by then, the administration's crypto team—consisting of national security people and Internet specialists—had almost imperceptibly shifted from decision making to implementation. It was their first big initiative, and they wanted it done fast: the word "closure" kept popping up in their correspondence.

A typical internal memo, dated March 5, was from George Tenet to Gore's national security advisor Leon Fuerth and his colleague William Wise: the header read "HELP HELP HELP." Then, "Desperately need time from the VP"—for a meeting with the past and current NSA directors on the encryption issue. "I think I know what the VP wants to hear McConnell/Studeman talk about," Tenet continued, finishing with the odd closing, "God bless you all."

All through March, the meetings continued. Meanwhile, industry and civil liberties groups were lobbying the newcomers, still hoping that the new administration would be amenable to considerable reform on crypto. "You're holding back e-commerce, you're endangering the security network, and besides, it's all out of control, anyway!" one of them shouted at Gore's people. But the Clinton people had already mentally aligned themselves with the government insiders at the NSA, the FBI, the Justice Department, and the CIA. The classified briefings had done the trick, particularly the warning that if no action was taken, people will die. Are you willing to sacrifice human lives, they were asked, for a fraction of a decimal point rise in the GNP? The tack was devastatingly effective: the dilemma was essentially resolved by framing it as a choice between thousands of people dying and Bill Gates being 10 percent richer. "That's a pretty easy decision," says an administration official.

Not that there weren't qualms within the White House. The biggest question the Clinton aides asked themselves was, "Why would anyone want Clipper?" (After all, the plan was supposed to be voluntary.) Another problem was the requirement that the Skipjack algorithm remain under wraps. It was inevitable that its secrecy would lead critics to charge that the scheme was a Trojan horse to bring flawed crypto into the infrastructure. But the NSA wouldn't budge on secrecy.

Finally, there was the problem of how the key escrow scheme would play overseas. If a crypto solution was not global, it would be useless. If buyers abroad did not trust U.S. products with the escrow scheme, they would eschew those products and buy instead from manufacturers in Switzerland, Germany, or even Russia. And how could you handle key escrow in other countries? Should the United States allow access to stored keys to free-speech–challenged nations like Singapore, or China? And would France, Egypt, Japan, and other countries be happy to let their citizens use products that allowed spooks in the United States to decipher conversations but not their own law enforcement and intelligence agencies? The answers to those questions were not forthcoming because the planners of Clipper never did work out a solution to its global implications—another consequence that came with rushing Clipper out of the door.

None of those objections were sufficient to sink the plan. At six in the evening on March 31, 1993, in the White House Situation Room, Vice President Gore went over the proposed directives in a meeting that included the whole gamut of law enforcement, intelligence, and national security leaders. Not long afterward, he briefed the president with his recommendation. Bill Clinton agreed.

Clipper was a go.

From that point the operation shifted to what one participant calls "White House Marketing." Press releases were drafted. Mike Nelson set about writing an explanation of the proposal in question-andanswer form. Then on the eve of the announcement itself, the White House prebriefed a number of representatives from Congress, industry, and the civil liberties groups on the issue, not so much to collect feedback as to forestall charges that the Clinton people had blindsided them with the abrupt change in course.

Still, no one at the White House anticipated a major clamor over Clipper. But Clint Brooks saw trouble coming—this issue had the potential to leak outside the Beltway, to make real enemies out of potential sympathizers. They just don't get it, he complained to Stew Baker on one drive between Fort Meade and the White House. At one meeting, he asked, "Who's going to handle this on Larry King Live?" His question was ignored. A few minutes later, he repeated it. A senior administration official sternly told him, "Clint, we appreciate your sense of humor but this is really serious—you handle the technical stuff and we'll handle the political stuff." (Some months later, when Al Gore appeared on Larry King Live to talk about the Information Highway, the first question posed to him was about . . . the Clipper Chip.)

The briefings with Congress and industry went pretty much as expected: the proposal was received cautiously, even skeptically, but not dismissed out of hand. One legislative staffer complained that when the Clinton people were challenged, they went on the offensive. "Do you want to be responsible for kidnappers?" the Clintonistas would ask, and the legislators would crumble. The sessions with civil liberties groups weren't so cordial. John Perry Barlow of the Electronic Frontier Foundation got one of these last-minute briefings and couldn't believe his ears. He felt that his new friends in the White House had

the Electronic Frontier Foundation got one of those last-minute briefings and couldn't believe his ears. He felt that his new friends in the White House had been "drinking the Kool-Aid," a national security version of Jonestown. What particularly offended him was Mike Nelson's invocation of the classified information he had heard and Barlow had not. "If only I could tell you what I know, you'd feel the same way I do," Nelson said. Thousands could die, he confided. Barlow felt he was hearing the same phony music that had been sung by the Vietnam warmongers. What Clipper really represented, he felt, was a plan that would "initiate a process that might end freedom in America."

Then there was Clint Brooks's effort to get outside experts the information necessary to explain the benign nature of the system to the public. The night before the announcement, Brooks himself ventured through a driving rain to brief Georgetown computer science professor Dorothy Denning, his first choice to lead the panel to vet the classified Skipjack algorithm. It would be an inspired choice. Denning was an expert on crypto and computer security but her demeanor was as benign as Betty Crocker's. (Science fiction writer Bruce Sterling once described the diminutive woman as "something like a Pilgrim maiden behind leaden glass.") She was already on the record as supporting the regulation of cryptography, and coincidentally at the time of Brooks's visit had just experienced an awkward situation in which she'd been unable to get into her locker after a swim in the university's indoor pool; only helpful maintenance men with heavy-duty cutters (the equivalent of escrow agents!) saved her from venturing into forty-degree weather in her wet bathing suit. Not only was she ready to defend key escrow, she came to feel it was her destiny.

On April 16, President Clinton unveiled the new initiative. In his press secretary's announcement of the plan, the issue was presented to the public as a middle ground between two dreadful extremes—much as the situation had been presented to the administration by the NSA. Seen through that filter, the Clipper Chip was to be regarded as a godsend:

The chip is an important step in addressing the problem of encryption's dual-edged sword: encryption helps the privacy of individuals and industry, but it can also shield criminals and terrorists. We need the "Clipper Chip" and other approaches that can both provide law-abiding citizens with access to the encryption they need and prevent criminals from using it to hide their illegal activities.

> The actual announcement did not establish Clipper as a standard, but it did affirm that the government itself was committed to buying thousands of the AT&T Clipper-inside devices for its own agencies. The hope was that while Clipper was designed to be a voluntary standard, its adoption and endorsement by the government would tip the marketplace to make it ubiquitous. The ultimate recommendation would come after Clinton received the results of a widespread blue-ribbon review on the national crypto policy that would look at the escrow initiative and reevaluate the export laws.

With that announcement, Bill Clinton and his people felt that they had made a big step toward avoiding what seemed like a disastrous collision in the crypto world, one that had seemed predestined since the day that Whit Diffie figured out how to split the cryptographic key. In fact, the Clipper Chip did mark the turning point in the battle, but not at all in the way the Clinton administration had intended. By promoting Clipper as its key escrow flagship, the government profoundly erred. Instead of a nuanced debate on encryption, from that point on the merits—and drawbacks—of this particular scheme would become the main crypto battleground. Clipper itself was the issue, and Clipper as proposed was vulnerable. And Clint Brooks, who was more than anyone its architect, saw what was happening, but was powerless to prevent it.

At first, things didn't look so bad. From the vantage point of the White House and Fort Meade, it appeared that what relatively little public attention the Clipper Chip had garnered was fairly balanced. The New York Times article, published on the day of the announcement, had set a reasonable tone, right from its lead. The Clinton administration was "about to announce a plan to preserve privacy in electronic communications . . . while also insuring the government's right to eavesdrop for law enforcement and national security reasons." Balance. Of course, the article did quote one industry representative as saying, "The government is creating a monster."

In the days following, there was no rush to embrace the plan by the various stakeholders who might be affected by it. The feds took succor, though, in the lack of a widespread outcry against it. The Internet, of course, was buzzing with fears of police-state tactics, but on the other hand, Dorothy Denning had almost immediately posted a clear-headed description of the system itself and was already serving as an example that the crypto community was not universally anti-Clipper. Better yet, an unexpectedly friendly description of the plan came from Marty Hellman, whom Brooks had briefed by phone on the eve of the announcement. Hellman's explanation of the scheme was cautiously neutral (though he did warn that there should be safeguards in the legal process leading to key retrieval), and was posted on the influential "Interesting People" mailing list run by Net gadfly David Farber.

On April 20, Clint Brooks wrote a memo reflecting his optimism. "The reactions I am getting from academic and industry people is that this may succeed," he wrote. So much so, these people were telling him, that the government may have not allocated enough digits in the chip identification fields to handle all the Clippers that would come into use. A hundred million would not be enough!

But that initial success was illusory, like a second-rate baseball team sitting in first place after a lucky string of April wins. The first serious rumbles came from the crucial information industries. After going over the plan, they concluded that the opportunity it offered to build strong exportable crypto into their systems was more than canceled out by the presence of the Law Enforcement Access Field, which provided keys to government snoops with warrants. The point of exporting crypto, after all, was to serve customers overseas. But what foreign companies wanted to buy a security system where the keys were stored in United States government escrow facilities? The business leaders joined with the already skeptical civil liberties people and fed on the energy of the grassroots Internet folk, who'd hated it from the get-go. Then they all took their case to the media. Though the reaction took a few months to build, the Clipper coverage eventually exceeded all the publicity that any previous cryptological development had ever received.

Little of it was favorable. All the time the government was planning its key escrow initiative, its creators had implicitly believed that only an isolated few would question their motives. They saw the selling of Clipper as a process by which responsible people would have a number of concerns, and the government would respond to those. One prime concern, they figured, would be a fear that the mechanics of the escrow scheme would somehow compromise the security of the encryption itself, making it easier for crooks and spies from other countries to do the unscrambling. Another would be that the key escrow facilities themselves might be vulnerable. What this thinking didn't account for was that the very basis for the scheme—a government means by which to flip the "descramble" switch for its own purposes—was offensive to most people. All opponents had to do was use a simple analogy—What if you had to leave a copy of your front door key at the police station?—and even a Joe Sixpack who didn't know encryption from a forward pass would be an anti-Clipper convert. "The idea that government holds the keys to all our locks, even before anyone has been accused of committing a crime, doesn't parse with the public," explained Jerry Berman of the EFF. "It's not America."

Others didn't need such analogies. One of the basic reasons many people wanted to use crypto was to keep information from the government itself. Not that they were necessarily lawbreakers. They simply didn't trust the government. The bureaucrats who made the plan were a generation removed from Watergate, but anyone who had been around in the seventies might have known better.

Former NSA director Bobby Inman, for instance, got an early briefing on the Clipper Chip and he sensed right away that it was doomed. Who wanted to give

the government a direct pipeline to your information? The cypherpunks understood this, and immediately initiated a guerrilla campaign to infect the media and the general population with the anti-Clipper message. At their monthly meeting, Eric Hughes solicited an agenda of possible actions including everything from advocacy press kits to stumping for a procrypto constitutional amendment. Tim May suggested active sabotage of Clipper, or a boycott of AT&T. One effective prank they did pull off was distributing a little decal to stick on your laptop. Designed to resemble the famous Intel Inside logo, it read, "Big Brother Inside." That pretty much said it all. (Intel quickly threatened to sue for trademark infringement, and the offending cypherpunks stopped distributing the stickers.)

Opposition came from all quarters. The ACLU found itself agreeing with Rush Limbaugh, who attacked Clipper on his radio show. Digital hippies savored the William Safire column "Sink the Clipper Chip," where he noted that the solution's name was well chosen, "as it clips the wings of individual liberty." Tim May often expounded a theory that Americans are of two minds when it comes to privacy. One involves the public interest and was essentially anticrypto: "What do you have to hide?" The other expresses the individual ethic of the Bill of Rights, and is proprivacy: "None of your business." Any successful policy has to walk down the middle of those opposing sentiments. But Clipper, in its insistence that nothing should be hidden from the government, never established that balance. Once people began calling it the Big Brother Chip, the game was over.

The government did its best to defend the scheme. Stewart Baker briefed industry figures including crypto advocate Bill Gates, to little avail. He went into the lion's den, speaking at procrypto events like the Computers, Freedom, and Privacy conference—where he belittled the anti-Clipper forces to their faces, calling their actions, "the revenge of people who couldn't go to Woodstock because they had too much trig homework." He taunted them with the "If you knew what I know" argument. Your view of privacy, he told them, reflects a hopelessly naive view of the world. "By insisting on having a claim to privacy that is beyond social regulation, we are creating a world in which [crooks and terrorists] will flourish and be able to do more than they can do today," Baker warned.

Not all the news was bad for the government. In the summer of 1993, the Skipjack algorithm was deemed strong by the team of "independent experts" led by Dorothy Denning and including Walt Tuchman (who had led IBM's DES team) and Ernie Brickell (who had picked up the $1000 reward for cracking Merkle's multi-iteration knapsack cipher). Denning had become so fierce in her defense of the government, clearly articulating a position that posited the dangers of crypto anarchy, that critics were calling her "Clipper Chick." Her disinterested status made her more effective in public forums than the administration's battered tech squad, which was beginning to regard its appearances at Internet-related conferences with all the enthusiasm of dental surgery. Who could blame them, as question after question drilled in the reality that their natural constituency of tech-savvy "Netizens" now saw them as virtual brownshirts? The White House's Mike Nelson came to refer to crypto as "the Bosnia of telecommunications."

Still, Clipper seemed cursed. At every turn a new problem cropped up. For example, not long after the announcement of the plan, the government heard from an MIT professor named Silvio Micali. Micali, who worked in MIT's mathematics and cryptography group (led by Ron Rivest), had devised some mathematical protocols he called "Fair Cryptosystems" that seemed similar to the government's key escrow scheme. He had published a paper on them in 1992 and had gotten a patent for them. The government quietly paid Micali a million dollars to license his patent.

Even the chip's name proved to be a problem. "Clipper was our cover name, a la NSA normal operations," Brooks wrote in an early 1992 memo. "I tried to get people not to use this outside the agency, but the policy makers and their staffs found it so convenient to use that it stuck." Unfortunately, a company named Intergraph was already selling a microprocessor it called Clipper, and the United States had to pay a considerable sum to buy the rights to a moniker that was well on its way to what marketers call a brand disaster.

Other problems were purely technical. The chipmaker Mykotronx was a government and commercial contractor unaccustomed to the demands of the consumer marketplace, and its chip wasn't built to accommodate high-bandwidth data rates. In its haste to get the Clipper Chip into the AT&T phones, the NSA had created a product that might have been adequate for the communications technology of 1993 but was woefully inefficient for the high speed of information flow in the glistening future that would arrive, oh, two years or so later. In other words, as critics noted with withering irony, by the time a security company took the fifteen to eighteen months to build a product around Clipper, the hardware would be obsolete.

Did anyone like Clipper? As part of the process, NIST had been required to solicit public comment on the plan. Three hundred and twenty individuals and organizations responded; of those, only two agreed with Clipper. "This is not a Hall of Fame batting average," conceded NIST official Lynn McNulty. But the Clinton people would not budge. On February 4, 1994, the president formally endorsed Clipper —known as the Escrow Encryption Standard—as a Federal Information Processing Standard. The government would immediately start buying Clipper-equipped AT&T phones for its own use, escrowing keys with NIST and the Treasury Department. (This despite the fact that the technology did not yet actually exist to perform decryption of keys retrieved from the as-yet-nonexistent escrow facilities.)

"The War is upon us," wrote Tim May. "Clinton and Gore folks have shown themselves to be enthusiastic supporters of Big Brother."

In the Senate, Patrick Leahy, among others, vowed to fight Clipper, insisting that without congressional approval the project could not be funded (setting up the program would cost $14 million, with an annual $16 million budgeted for the escrow facilities). In May 1994 he held hearings. In rare public appearances, Clint Brooks and Mike McConnell presented the view from behind the Triple Fence, essentially congratulating the administration for taking the right approach. "There are, to be sure, issues to be ironed out," concluded McConnell. "But I am confident we will work out the wrinkles."

Then a panel of opponents showed those "wrinkles" to be approximately the size of the Colorado River basin.

One tough question they posed: Who would want to use Clipper, when there were already programs like PGP readily available? The government's response had been the "stupid crook theory," best explained by the FBI's Jim Kallstrom, who professed to have himself heard mobsters on wiretaps make jokes about being wiretapped—and then engage in incriminating conversations, simply because it was too awkward to go outside and use a pay phone. "If in five years this catches on and people put Clipper in their devices, a high percentage of criminals will go to a Radio Shack or some other place like that to buy some sort of encryptor," he said. "They're not going to remember that in 1994 some article [appeared] in the Wall Street Journal [about key escrow]. Maybe in the fine print somewhere it'll say Clipper something. But it's not going to be readily apparent—it'll be part of the landscape. That's what would be our desire."

OK, so stupid crooks might use it. But the antigovernment witnesses noted that if smart criminals eschewed Clipper, so would the overseas customers who were crucial to its adoption. What was in it for France or Japan or Indonesia to sign on to a plan where the keys to their citizen's private conversations—possibly involving invaluable business secrets—were held jointly by two branches of the United States government?

Perhaps the most persuasive witness was Whit Diffie. He testified not only as one of the inventors of public key but as a representative of one of the ad hoc organizations lobbying against Clipper, the Digital Privacy and Security Working Group. Diffie tried to put the issue into historical perspective. Governments had been similarly concerned with previous revolutions in telecommunications, like the transatlantic cable and the advent of radio. Despite fears that governments would lose sovereignty, these developments turned out to prove tremendously useful to governments. Computer communications, too, would probably, on the whole, increase government power. But the United States seemed loath to allow any of that power to accrue to its citizens. While

too, would probably, on the whole, increase government power. But the United States seemed loath to allow any of that power to accrue to its citizens. While the government claimed only the desire to retain its current ability to wiretap, the fact was that during the time of the founding fathers, privacy was easily obtained simply by walking out of the earshot of others. "It seems that the right . . . of the participants to take measures to guarantee the right to speak privately can hardly have been in doubt, despite the fact that the right to speak privately could be abused in the service of a crime," said Diffie. Today, of course, people communicate largely by electronic means, from the telephone to the computer. Could it be that the government has the right to deny the possibility of privacy in those conversations? "The legitimacy of laws in a democracy grows out of the democratic process," Diffie told the senators. "Unless the people are free to discuss the issues—and privacy is an essential component of many of those discussions—that process cannot take place."

Not long after the Senate hearings, Clipper suffered perhaps the worst blow of all. It came not as a tirade in Congress, an attack by an industry representative, or a screed from a cypherpunk. It was the result of a scientific experiment conducted by a formerly obscure research scientist named Matthew Blaze. Essentially, he made the Clipper Chip look stupid.

Blaze was a New York kid, a classic science nerd. He'd dropped out of a preppy private school, worked for a while as a paramedic (the first person hired by the city's emergency medical service without a driver's license), then drifted back to college, earning a degree in two seemingly incompatible sciences: computer and political. At graduate school at Columbia, he began seriously thinking about crypto. Talking to his officemate, a guy named Stuart Haber, who had devised a way to use public key to time-stamp documents digitally (providing an electronic equivalent to the old trick of postmarking a letter to affirm its age), he realized that crypto was both a way to tackle important mathematical problems and a practical lever to change society. Blaze was also a big believer in privacy rights.

After switching to Princeton and getting a Ph.D., he went to work for the small crypto group at AT&T's Bell Labs research facility. Blaze began working in areas of encryption other than algorithms. His group was more concerned with basic research than AT&T's secure system group in North Carolina, which had produced the TSD 3600 device that was slated to be the Clipper phone. In fact, he found out about Clipper by reading the newspaper like everyone else.

But as the Clinton administration was readying its February 1994 endorsement of the escrow standard, it had initiated a series of technical briefings that included the Bell Labs crypto group. Several NSA scientists came to New Jersey for a briefing. Though the group could generally be described as anti- Clipper—besides the privacy implications, as cryptographers they were offended at the security risks of sending a key to a third party—"we managed to be on our best behavior," says Blaze, "not letting the meeting degenerate into whether this is a good idea." Afterward, he asked if he could post a summary of the meeting to the Internet, and Blaze stuck to the facts in that as well.

This impressed people behind the Triple Fence, who apparently thought Blaze could be another valuable outside tester of Clipper technology. They invited him and a colleague to Fort Meade to get a prototype of Tessera, the smart-card-based version of the escrow system. (Tessera was to be a portable version of the whole-enchilada Capstone cryptosystem that Clint Brooks favored over the limited Clipper Chip.) Never having been there, Blaze was excited. He was given the standard visitor's badge with a sensor that tracked him through the building: when his host took him through he had to keep facing security cameras and assuring some unseen guard that Blaze was with him, and a disembodied voice said, "Okay, thank you." Even between the briefing room and the bathroom this happened a couple of times. "They didn't actually follow me into the bathroom," Blaze says. When the Bell researchers left, they were given Tessera cards, a stack of manuals, and NSA coffee mugs.

Blaze immediately began testing the system, focusing on the Clipper aspects of the device. Unlike Dorothy Denning's team, which had focused on Skipjack, Blaze wondered whether there was a way to actually use the strong encryption while defeating the escrow feature. In other words, could a crook, terrorist, or someone just wanting privacy use Clipper's crypto without being identified? He focused his efforts on studying the Law Enforcement Access Field. "I wasn't even thinking of it as a potential weakness," he says. "But it turned out that the obvious way of defeating the LEAF was pretty much the first thing you would initially think of."

Using a card reader and a little program that simulated a wiretap, he began testing. The simplest things —altering the code so you wouldn't send the identifier, or sending some other number in place of the identifier—didn't work. But it took only a bit of thought to come up with slightly more complicated ways that did work. The breakthrough came when Blaze, poring over the manuals, noted that the "checksum" in the LEAF was only 16 bits long. (The checksum is the way to verify that the proper LEAF, including the chip identifier and session key that encoded the conversation, was indeed sent off to the authorities. The proper number in the checksum is like an "all's clear" that says everything is OK. If there was some way of creating a counterfeit LEAF with a legitimate checksum, in effect you would have defeated the Clipper system. The encryption would work, but the wiretappers wouldn't have the proper session key to decrypt the conversation.)

"Sixteen bits isn't a very big number these days, computationally," Blaze says. Within a few hours he hacked up a "LEAF-blower," a quick program that could send out every possible combination (2 to the 16th power) of checksum numbers, then hooked it to his test system. He really didn't expect it to work—it seemed so easy. But it did work, each time he tried it. In no more than forty-two minutes, he was able to send out a checksum that spoofed the escrow system into mistakenly assuming he was sending out the data that could lead investigators to the escrowed key—when in fact that data would lead them nowhere. Instead, the wiretapper would be faced with a conversation encrypted by the powerful Skipjack algorithm, deemed uncrackable by the NSA itself. (He also found a way in which two people conspiring to defeat the LEAF system could do so even more quickly.)

What Blaze did not know was that the small checksum space was no accident but an artifact of the haste with which Clipper was prepared. During the hurried design process the NSA engineers consulted with various technical experts at telephone companies, and were warned that with wireless phones, any system that required transmission of too many bits would be deemed impractical. So the LEAF field was limited to 128 bits. Of that, 32 bits had to be used for the chip identifiers, leaving only 96 bits for an actual encryption key and the checksum. The NSA wanted a large checksum, but the FBI insisted on using 80 bits so the full session key would be transmitted. (An alternative may have been to leave off some of the key bits and allow the FBI to complete the decoding by a brute-force attack. If, for instance, eight bits had been diverted from the keyspace to the checksum, the FBI could have run through a mere 256 different alternatives to find its key—but Blaze's attempt to crack the checksum would have taken not 42 minutes, but more than a week. That's a long time on hold.)

In a few days, Blaze sent a draft paper of his findings to his colleagues at Bell Labs. Most of them couldn't believe it. "Are you sure about this?" they asked, suggesting he recheck his work. He did. Then he began the more delicate process of checking it with outsiders. One morning Blaze girded himself and sent a fax of his draft to Fort Meade. Right after lunch he got a call back, affirming his results were technically correct.

"What are you planning on doing with this?" asked his NSA contact.

Blaze took a deep breath. "I'd like to publish it."

To his surprise, no objection was raised. His NSA reader did point out a couple of errors in numerical transcription and one grammatical error. Now all Blaze

had to do was get an okay from his employer— who had millions of dollars riding on its Clipper phones. Though there were some who wanted to bury the paper, eventually Blaze managed to convince his bosses that it would be impossible to keep his findings secret, so they shouldn't even try. In any case, John Markoff of the New York Times had already gotten wind of the work. Blaze got permission to send him a draft, so that whatever story ran would be accurate. Markoff called back for some clarification and a few hours later called back again and asked Blaze a strange question: how newsworthy did he consider the story? Blaze felt that it was indeed a story —it showed how rushed the NSA was to get its system out, and emphasized how dangerous it was to foist something half baked on the public—but not a front-page story or anything like that. Not long afterward, Markoff called again, almost apologetically, and said that it had been a slow news day so the story was going to be more prominently placed. Blaze figured that meant it would lead the business section.

He'd heard that you could get the next day's paper at 9 P.M. if you went to the Times Building, and he was curious enough to do so. After opening the paper, he went through it and was disappointed to find nothing. "It hadn't occurred to me to even look on the front page until I had gotten out of the building." But there it was—leading the entire paper on the sweet spot in the rightmost column of page one, headlined "FLAW DISCOVERED IN FEDERAL PLAN FOR WIRETAPPING."

This was significant in several ways. First, though the flaw itself could be fixed—and arguably didn't compromise security much—the very fact that such a weakness existed put a permanent taint on a system dependent on public trust. But perhaps more important was that the former backwater, mumbo-jumbo subject of crypto had raised its profile so high that even a moderate development like Blaze's crack could be seen by the Times editors as the most important story in the world that day. What made this dry topic sexy was the whiff of a Big Brother who couldn't even program correctly. The government unintentionally played into that role when an imperious NSA official insisted that Blaze's attack, while feasible, was unlikely in practice—not a particularly comforting assurance for the nation's cryptographic caretaker. Much stronger was Marty Hellman's assertion, "The government is fighting an uphill battle."

Meanwhile, after some initial supply problems, the government was already starting to use Clipper phones. (The more comprehensive Capstone chips, designed to escrow computer communications, were late in entering the pipeline.) Approximately once a week, four couriers with security clearance—two each from NIST and the Treasury Department—flew from Washington, D.C., to Torrance, California, to the so-called programming facility at Mykotronx headquarters. (The redundancy was intentional, conforming to the Two-Person Integrity Protocol also used for nuclear weapon controls.) Once inside they waited while a Sun workstation did its work, first generating the unique cryptographic keys that would be blown into the MYK-78 (Clipper) chips, then splitting the keys into two parts and creating two stacks of floppy disks, each one with a set of partial keys. To reconstruct the full keys inside the chips required both sets of disks.

Backup sets were produced by the same method. Then the disks were separated, each one going with a pair of couriers. A plastic seal went over the disks. When the couriers returned to their respective agencies, the disks were placed in double-walled safes meeting government standards for classified materials. A set of the backups went in another safe. And there they waited, about 20,000 key splits by May 1994, sitting undisturbed while the war over Clipper continued.

In late January 1994, the Computer Professionals for Social Responsibility had written a letter to the president urging that he rescind the Clipper proposal. It was cosigned by privacy experts, industry figures, academics, and cryptographers, and supplemented by signatures gathered over the Internet. Within a few months, the petition—one of the first Internet political protests—boasted over 47,000 endorsers. While a skeptic might dismiss this as a result of overheated Net-heads, a New York Times/CNN poll showed that the government had clearly suffered a Custer-sized rout in the public relations arena. Eighty percent of the American public now opposed Clipper.

Not that it did any good. The administration was betting that the export regulations would prevent strong crypto from being built into products that people routinely used, and key escrow would be the only game in town. But Congress had the power to change those regulations. And pushing hardest on the issue was a thirty-eight-year-old single woman in her first term in Congress.

Maria Cantwell was a daughter of an Indiana politician. She'd moved to Washington State in her twenties, served in the legislature there, and in 1992 pulled off a successful run for the House. Her district, consisting of part of Seattle and the towns east of Lake Washington, was loaded with high-tech companies, from Nintendo to Microsoft. So when choosing a committee to serve on she focused on one of the software industry's main concerns, exports, and requested the Foreign Affairs Committee— specifically, its subcommittee on economic policy, trade, and environment.

She'd hardly gotten familiar enough with the House to find the cloakroom when the Clipper announcement hit. It infuriated her big high-tech constituents, and she began to look more deeply into the problem, particularly at the export regulations. She worked closely with the affected software companies, not only those in her district like Microsoft but others like Lotus. The more she learned about the export regulations of crypto, the more absurd they seemed in the computer age. They can't be so myopic to think cryptography is a munition, she'd say to Sam Gejdenson, the subcommittee chair and one of her legislative mentors. If they continue, you won't be able to get protection on the Internet.

Meanwhile, the export situation was at a standstill. In 1992, some of the leaders of the new industry, like Lotus's Ray Ozzie and Microsoft's Nathan Myhrvold, had spent an incredible amount of energy negotiating a deal with the NSA. The talks were a classic culture clash. The software guys thought it absurd that government was attempting to contain bits of code within national borders, when algorithms with the same ciphers were openly published in countries from Germany to Russia. It was the worst sin among nerds: illogical behavior. Or was it? "Don't you realize," Myhrvold once asked one of the spooks in a briefing session, "that you're like the little Dutch boy, trying to use your fingers to plug the dike against a sea of strong crypto?"

His tormentor smiled. "Every day the dike doesn't break," he said softly, "is a victory." And it was true. Sure, the crypto genie had escaped the bottle. But if you throw enough obstacles in the genie's way, it'll take him a long time to perform any magic.

Finally, all that energy resulted in a temporary compromise. Working with an industry group called the Software Publishers Association, the companies got an agreement for "expedited consideration" when they exported software programs sold in shrink-wrap to retail customers. The requirement was that the encryption in those products would be Ron Rivest's ciphers RC-2 or RC-4, using keys of no more than 40 bits. This would allegedly be increased in subsequent years to keep pace with faster computers. In exchange, the NSA got some restrictions of its own. The regulation would not be formalized in an explicit standard. RSA and the companies using the cipher had to agree to keep the details of its design a secret.

But no one particularly liked that deal. Companies had two choices. They could, like Lotus, offer American customers a version with strong (64-bit) encryption, and a weaker version for export. Then foreign customers would wonder why their software had second-class crypto—and sometimes, buy other products. Ray Ozzie claimed that it was already happening with Lotus. (He called the 40-bit limit espionage-enabled encryption.) Or, like Microsoft, they could avoid the hassle of manufacturing and shipping two versions and give everyone weak encryption. Meanwhile, hard-liners in the government felt that by green-lighting an export exemption, no matter what the key length, they were on a slippery slope toward strong crypto. Give the Lotuses and the Microsofts 40 bits now, and tomorrow they're at your door demanding 48 bits, and more.

But when Cantwell and Gejdenson went to the White House to urge movement toward export of stronger crypto, they hit a brick wall. The Clinton people held firm.

In October 1993 Gejdenson and Cantwell held a subcommittee hearing to draw attention to the problem. "This hearing is about the well-intentioned attempts of the National Security Agency to control that which is uncontrollable," said Gejdenson. He was talking about export regulations, but he might have been talking about something else—the support from Congress that Fort Meade once took for granted. While the majority of legislators accepted the NSA's contentions at face value, a cognitive dissonance was emerging between its arguments and what appeared to be a more compelling view of reality. Cantwell put it clearly in her own opening statement: "We are here to discuss, really, competing visions of the future." On one hand was a mind-set so locked into Cold War posturing that it ignored the inevitable. On the other were the techno-visionaries who powered our future, eager to fortify American ascendancy in a global marketplace.

The hearing's first witness was Ray Ozzie, who had come prepared with a software demo. He had a screen connected by phone line to his computer in Massachusetts, which he used to venture onto the Internet and download one of "hundreds of thousands" of copies of implementations of DES available overseas. He chose one in German, and downloaded it into his machine within seconds, as anyone in the world could do. But, he noted, if he were then to send the same software back to Germany, he would be guilty of the federal offense of exporting strong crypto.

Next was Steve Walker, a former NSA official who now headed Trusted Information Systems, a consulting firm helping businesses implement crypto. He presented the results of a Software Publishers Association study that identified 264 cryptographic products produced overseas, 123 of which employed DES. Foreign individuals and companies could buy any of these, but not similar products created by American firms because the NSA would not permit their export. "It cannot be clearer," he said. "The existence of widespread and affordable cryptographic products overseas is an indisputable fact . . . the U.S. government is succeeding only in crippling a vital American industry's exporting ability." He then cited specific examples of business lost by American companies, like one firm that lost half of its European customers because it could not provide them strong cryptographic security.

Phil Zimmermann gave testimony that trying to restrict cryptography is like attempting to "regulate the tides and the weather." Don Harbert, an executive of Digital Equipment Corporation, insisted that "U.S. export controls on encryption must be brought into line with reality."

One of the committee members who had not been previously vocal in challenging the government, a conservative Californian named Dana Rohrbacher, noted for the record that if it were five years earlier, he would have chastised the witnesses for seeking profit at the potential loss of national security. But now, he said, "the Cold War is over. It is time for us to get on."

After the public session, security experts swept the room for bugs before the inevitable follow-up hearings involving the interests of the National Security Agency: The Briefing, "where the NSA answers all those questions in secret," said Gejdenson. NSA briefings were notorious in Congress. They involved a dramatic presentation by the NSA on why our international eavesdropping abilities were so vital, typically including a litany of victories achieved by clandestine snooping (victories that would have been unthinkable without billions of dollars in funding), and perilous international situations that required continued vigilance and support. Perfected by Bobby Ray Inman in his days as NSA director, they initiated legislators into the society of Top Secret, implicitly shifting their alliance from the citizenry to the intelligence agencies. A newly cleared congressperson would get a presumably unvarnished and reportedly terrifying dose of global reality, after which he or she thereafter could be assumed to dutifully support any demands of the National Security Agency, lest the Huns gain a purchase on our liberty. Representatives and senators had been known to venture into the bug-swept room and emerge grim faced, stunning their go-go staffers by remarking, "Well, maybe we should reconsider."

Not Maria Cantwell. She was among a growing number of legislators who found The Briefing impressive but not persuasive. The issue for these skeptics wasn't just how important crypto was, or what successes we'd had breaking codes, but whether maintaining export rules was actually productive. If the genie was out of the bottle, so what if American companies couldn't export? Crooks would get crypto elsewhere!

Cantwell began to prepare a legislative remedy. In 1994 the Foreign Affairs Committee was already planning its periodic overhaul of the export regulations. She prepared H.R. 3627, "Legislation to Amend the Export Administration Act of 1979," a bill adding a new subsection to the old rules, with specific implications for software exports, including encryption. It would move the decision-making process from the Department of Defense to Commerce, and would essentially make shrink-wrapped or public-domain software exempt from export regulations. It would put an end to the NSA's game of controlling American crypto by use of the export laws.

Naturally, the administration could not let that stand. When Cantwell was ready to introduce the bill, her staff notified her of an incoming phone call—from the vice president. The only previous time she had engaged Al Gore in a one-on-one had been during the budget battle, when Cantwell, despite severe reservations, had supported the administration (and would eventually wind up losing her reelection campaign in part because of it). What did he want this time?

"I want you to stop this bill," he said. He reiterated the stuff from the briefings about national security and all that.

Cantwell held firm. "I'm sorry, Mr. Vice President," she said. "I respect your opinion but I'm not changing my mind."

In a way, that was a turning point for Maria Cantwell. She got the bill through the subcommittee and kept pressing, even though fellow committee members were already trying to get her to drop the thing. Even before she left the hearing room after the vote—she hadn't even gotten up from her chair—one representative came up to her and said outright, "If you don't stop this it's going to get very ugly." And Maria Cantwell said to herself, "I'm not stopping."

On November 24, 1993, Cantwell introduced H.R. 3627 on the House floor. Her comments were blunt. "The United States' export control system is broken," she said. "It was designed as a tool of the Cold War, to help fight against enemies that no longer exist. The myriad federal agencies responsible for controlling the flow of exports from our country must have a new charter, recognizing today's realities."

The pressure continued, though most members were collegial in their attempts at persuasion. There was one instance in which a fellow Democrat came up to her on the floor and began berating her for ignoring national security issues. She felt intimidated but more than ever was convinced she should go on. With all the forces lined up to bolster these bizarre export laws and the silly Clipper Chip, it struck her as an exercise in unchecked power—against consumers.

Still, she knew that on this issue she was out there. Though she was doing yeoman service for the techies she represented, most of her constituents in Washington State's First Congressional District preferred her to be concentrating on issues such as health care, and here she was, locked in meetings with National Security Advisor Tony Lake. One day she heard that Bill Gates would be in town. So she asked the people at Microsoft who had been working with her—Nathan Myhrvold and company counsel Bill Neukom—if they could convince the world's most famous techno-geek to lobby her colleagues on the matter. I'm out on a political limb here, she pleaded. Without publicity, she had Bill Gates address the intelligence committee. The National Security stooges

matter. I'm out on a political limb here, she pleaded. Without publicity, she had Bill Gates address the intelligence committee. The National Security Stooges started to explain to the billionaire how important the export laws were, but the icon of the New Economy had little patience for being lectured. Gates let them know that was a bullshit reason. The committee members didn't get offended—it was kind of a kick, getting snapped at by the world's richest guy. You certainly had to take him seriously when he talked about what was good for business.

Cantwell dug in her heels with the White House, too. She asked them not to fight her bill, but to let it take its course in Congress. The response was unexpected, and it came two days before the vote. It was a deal. If we change our position, the Gore people wanted to know, would you drop the bill? They suggested that instead of forcing the Clipper Chip on people, they would instead advocate a different voluntary key escrow scheme. And maybe it could be based on more flexible software implementations than that already antiquated chip. And maybe, instead of only government escrow facilities, some could be in the more-trusted private sector, like banks or security companies.

A significant retreat, but it was still an escrow scheme, not at all the ultimate solution that Cantwell and her constituents wanted. On the other hand, the chances of her bill passing were equivalent to that of Microsoft's shipping an operating system without bugs. (Even then it would face a near-certain veto.) Cantwell went back to the people who had been fighting the battle long before she switched Washingtons. Bruce Heiman of the industry group called the Business Software Alliance was encouraged that the administration was giving a framework for a compromise. Nathan Myhrvold straight out celebrated. "They blinked," he later said. All of Cantwell's advisors agreed, though, that before she stood down, she should get promises in writing.

On July 20, 1994, the afternoon before the vote, the letter from Al Gore arrived. After the usual flatulence ("I write to express my sincere appreciation for your efforts to move the national debate forward . . .") Gore got to the point.

> The administration understands the concerns that industry has regarding the Clipper Chip. We welcome the opportunity to work with industry to design a versatile, less expensive system. Such a key escrow system would be implementable in software, firmware, hardware, or any combination thereof, would not rely on a classified algorithm, would be voluntary, and would be exportable. . . . We also recognize that a new key escrow encryption system must permit the use of private-sector key escrow agents as one option.

Apparently, the White House figured that the exercise was simply a way to quiet a potential firestorm. (Later in the summer, a Defense Department official seeking clarification on the implications of the policy shift was told that the letter was intended "to placate Rep. Cantwell and avoid a national debate.") But when the contents of Gore's missive found their way to the front page of the Washington Post the next day (a slight embarrassment for Cantwell, who didn't want to look like she was showboating), the Gore people rediscovered that the Bosnia of telecommunications was as thorny as ever. The White House had made its promises without clearing them with the NSA or the FBI. (The first Clint Brooks had heard about it was the day it ran in the Washington Post.) Cantwell got a call from a Gore person. Do you mind, he asked, if we, um, rescind the letter?

"Do you know how silly you'd look?" she replied. It was, after all, Gore's letter, Gore's words. She promised that she wasn't out to milk the incident with the press, but the news was out there, and she didn't have the authority to let him rescind the agreement. So the deal stood. Cantwell dropped her bill, though in the next few years it would be only the first of a number of increasingly popular congressional initiatives to reform the export rules. Meanwhile, the Gore letter, whether intentional or not, was essentially a blueprint for the direction that the administration would take in tinkering with their ill-fated Clipper Chip. A step backward. A rejection. Another step backward. Stalling and confusion, while the great honest debate that Clint Brooks had envisioned about a national crypto policy never did come to the forefront. Meanwhile, the platform that Brooks considered absolutely essential—a full encryption solution to protect privacy, a policy that would generate a pervasive digital signature policy to empower electronic commerce and prevent electronic forgeries, and access for law enforcement—never did get straightened out.

Clint Brooks himself wanted out of the struggle. After a couple of years of driving back and forth from Maryland to D.C., having the same arguments with the same people, he asked the new NSA director if he could work on something that utilized his talents more effectively. His request was granted. Nirvana was lost.

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Housatonic

Eliot Asher Cohen (born 1956)

Wikipedia Eliot A. Cohen

Born April 3, 1956 (age 64) in Boston, Massachusetts [HK003N][GDrive]

Associations

- **Philip David Zelikow (Born 1954)** (Philip Zelikow immediately proceeded Eliot Cohen as Counselor of the United States Department of State)

Saved Wikipedia (Nov 22, 2020) - Elliot A Cohen

See [HK003N][GDrive]

- Counselor of the United States Department of State
- In office April 30, 2007 – January 20, 2009
- President George W. Bush
- Preceded by [**Philip David Zelikow (Born 1954)**]
- Succeeded by Cheryl Mills

Personal details

- **Education :** Harvard University , Massachusetts Institute of Technology
- **Not to be confused with the founder-editor of Commentary magazine**, Elliot E. Cohen.

Eliot Asher Cohen[1] (born April 3, 1956 in Boston, Massachusetts) is an American political scientist. He was a counselor in the United States Department of State under Condoleezza Rice from 2007 to 2009. In 2019, Cohen was named the 9th Dean of the Paul H. Nitze School of Advanced International Studies (SAIS) at Johns Hopkins University, succeeding the former dean, Vali Nasr.[2] Before his time as dean, he directed the Strategic Studies Program at SAIS. Cohen "is one of the few teachers in the American academy to treat military history as a serious field", according to international law scholar Ruth Wedgwood.[3] Cohen is a contributing writer at *The Atlantic*.[4]

Biography

Cohen grew up in Boston in a secular Jewish family. When he was in his teens his father became more observant and sent him to the Maimonides School, a Modern Orthodox Jewish day school in Brookline.[5] Cohen received his B.A. in government at Harvard University in 1977. He went on to receive a Ph.D. from Harvard in 1982 in political science,[6] and during his PhD training went through the Army ROTC program at Massachusetts Institute of Technology.[7]

He was an assistant professor of government and assistant dean at Harvard University from 1982 to 1985. Following this, he taught for four years at the Naval War College in the Department of Strategy, before briefly serving in 1990 on the policy planning staff in the Office of the Secretary of Defense. In 1990, Cohen began teaching at SAIS. After the 1991 Persian Gulf War, he directed the U.S. Air Force's official four-volume survey, the Gulf War Air Power Survey, until 1993, for which he received the Air Force's Exemplary Civilian Service Award. This analysis of the effect of U.S. air power was widely referenced in discussions of the Revolution in Military Affairs concept.[*citation needed*] In 1993, Paul Wolfowitz, who would later become prominent as the Deputy Secretary of Defense in the run-up to the Iraq War, became Dean of SAIS. During his brief stint at the defense policy planning staff, Cohen had worked under Wolfowitz but this was the first time they were in extended contact.

In 1997, Cohen co-founded the Project for the New American Century (PNAC), which was a center for prominent neoconservatives. He has been a member of the Defense Policy Board Advisory Committee, a committee of civilians and retired military officers that the U.S. Secretary of Defense may call upon for advice, that was instituted during the administration of President George W. Bush. He was put on the board after acquaintance Richard Perle put forward his name.[8] Cohen has referred to the War on Terrorism as "World War IV".[9] In the run-up to the 2003 invasion of Iraq, he was a member of Committee for the Liberation of Iraq, a group of prominent persons who pressed for an invasion.

On 2 March 2007, Cohen was appointed by Secretary of State Condoleezza Rice to serve as Counselor of the State Department, replacing Philip D. Zelikow.

[10] He exited government along with his peers at the end of term for the Bush presidency.

He currently sits on the America Abroad Media advisory board.[11]

Political views

Statements on US foreign policy

Cohen was one of the first neoconservatives to publicly advocate war against Iran and Iraq. In a November 2001 op-ed for *The Wall Street Journal*, Cohen identified what he called *World War IV* and advocated the overthrow of Iran's government as a possible next step for the Bush Administration. Cohen claimed "regime change" in Iran could be accomplished with a focus on "pro-Western and anticlerical forces" in the Middle East and suggested that such an action would be "wise, moral and unpopular (among some of our allies)". He went on to argue that such a policy was as important as the then identified goal of Osama Bin Laden's capture: "The overthrow of the first theocratic revolutionary Muslim state and its replacement by a moderate or secular government, however, would be no less important a victory in this war than the annihilation of bin Laden."[12]

Later in 2001, Cohen, in what was becoming a dominant theme of his writing, advocated war against Iraq once again and proceeded to outline how effortless such a military campaign would be:

> After Afghanistan, what? Iraq is the big prize... One important element will be the use of the Iraqi National Congress to help foster the collapse of the regime, and to provide a replacement for it. The INC, which has received bad, and in some cases malicious treatment, from the State Department and intelligence community over the years, may not be able to do the job with U.S. air support alone.[13]

As a result of his public statements on why a war against Iraq was necessary, Cohen was invited to appear on *CNN Wolf Blitzer Reports* and amongst other statements given in response to questioning from Blitzer offered the judgment:

> We know that he [Saddam Hussein] supports terror. There's very solid evidence that the Iraqis were behind an attempt to assassinate President Bush's father. And we—by the way, we do know that there is a connection with the 9/11 terrorists. We do know that Mohamed Atta, the ringleader of the 9/11 terrorists, met with Iraqi intelligence in Prague. So...[14]

In testifying to a Congressional House committee later in 2002, Cohen was quoted as saying:

> ..the choice before the United States is a stark one, either to acquiesce in a situation which permits the regime of Saddam Hussein to restore his economy, acquire weapons of mass destruction and pose a lethal threat to his neighbors and to us, or to take action to overthrow him. In my view, the latter course, with all of its risks, is the correct one. Indeed, the dangers of failing to act in the near future are unacceptable.[15]

In a piece for the *Wall Street Journal* on 6 February 2003, Cohen fervently praised the presentation given by then Secretary of State Colin Powell in which he outlined the case for military action against Iraq to the United Nations. He went on to indicate that it was time for those who doubted that the case had been proven to support the Bush administration in their efforts.[16]

An article written for *The Washington Post* on 10 July 2005 raised the attention of commentators in the media and "blogosphere". The piece, an attempt to articulate Cohen's self identified roles as academic, pundit, and father, was written as his son prepared to deploy to Iraq to fight a war the elder Cohen had been calling for since early 2001. The piece ends:

> There is a lot of talk these days about shaky public support for the war. That is not really the issue. Nor should cheerleading, as opposed to truth-telling, be our leaders' chief concern. If we fail in Iraq—and I don't think we will—it won't be because the American people lack heart, but because leaders and institutions have failed. Rather than fretting about support at home, let them show themselves dedicated to waging and winning a strange kind of war and describing it as it is, candidly and in detail. Then the American people will give them all the support they need. The scholar in me is not surprised when our leaders blunder, although the pundit in me is dismayed when they do. What the father in me expects from our leaders is, simply, the truth—an end to happy talk and denials of error, and a seriousness equal to that of the men and women our country sends into the fight.[17]

External video

Q&A interview with Cohen on his *Washington Post* piece, "A Hawk Questions Himself as His Son Goes to War", July 31, 2005, C-SPAN

This piece was extensively discussed in the blogosphere at the time, with some progressive blogs decrying that Cohen continued to maintain that the invasion was justified.[*citation needed*] Other commentators expressed surprise that a figure with such access and impeccable neoconservative credentials could appear to criticise the Bush Administration in such a way. Cohen later stated that he had received overwhelmingly positive responses from senior military officials in a resulting interview on C-SPAN.[*citation needed*] Cohen also continued his criticism of the conduct of the war, stating that, "Those three guys—Tommy Franks, George Tenet, and L. Paul Bremer—got the Presidential Medal of Freedom. That's just wrong."

As a member of the Defense Policy Board Advisory Committee Cohen had also been engaged in meetings involving US President George Bush. During these meetings Cohen provided advice on strategy in the Iraq conflict.[18]

View on military experience and policy-making skills

In 2002, Cohen defended the PNAC membership against the charge that its personnel were chicken-hawks. Cohen found unsupported the opinion that, compared to civilians, veterans possess "sheer moral authority" or "are uniquely qualified to make judgments on matters of war and peace." As an example, Cohen states:

> There is no evidence that generals as a class make wiser national security policymakers than civilians. George C. Marshall, our greatest soldier statesman after George Washington, opposed shipping arms to Britain in 1940. His boss, Franklin D. Roosevelt, with nary a day in uniform, thought otherwise. Whose judgment looks better?[19]

Appointment to Department of State

On 2 March 2007, it was reported by *The Washington Post* that Cohen was to be appointed as Condoleezza Rice's "counselor" at the United States

Department of State. Cohen replaced Philip D. Zelikow and said he would fill time before appointment in April 2007 by acting as a consultant for Rice.

The tone of the *Washington Post* article—Cohen is described as a "critic" of the Iraq war—was soon criticised. An article by Ximena Ortiz in the *National Interest Online* called Cohen's ability to do the job into question and attempted to juxtapose his previous statements on the Bush administration foreign policy with the resulting war in Iraq.[20] Adding to the criticism was Glenn Greenwald of Salon.com who, describing Cohen as "extremist a neoconservative and warmonger as it gets", suggested an internal significance of the appointment for the Bush administration:

> The Cohen appointment, is clearly another instance where neoconservatives place a watchdog in potential trouble spots in the government to ensure that diplomats do not stray by trying to facilitate rapproachments between the U.S. and the countries on the neoconservative War hit list.[21]

As the controversy played out in the media, a rebuttal of sorts from Ruth Wedgwood, international law scholar at Johns Hopkins University, sought to defend Cohen from criticism.[22] Ortiz was subsequently supported in her criticism by fellow commentator at *National Interest Online*, Anatol Lieven, who raised the level of criticism to include Cohen's efforts as a historian and analyst as well as tackling other pronouncements on US foreign policy in the Middle East made by Cohen.[23]

Mearsheimer and Walt Paper

Main article: The Israel Lobby and U.S. Foreign Policy

In March 2006, Harvard's Kennedy School of Government Academic Dean Stephen M. Walt along with Professor John J. Mearsheimer of the University of Chicago, both political scientists, published an academic paper titled *The Israel Lobby and U.S. Foreign Policy*. The paper criticizes the Israel lobby for influencing U.S. foreign policy in the Middle East away from U.S. interests and towards Israel's interests. Eliot Cohen wrote in a prominent op-ed piece in *The Washington Post* that the academic working paper bears all the traditional hallmarks of anti-Semitism: "obsessive and irrationally hostile beliefs about Jews", accusations toward Jews of "disloyalty, subversion or treachery, of having occult powers and of participating in secret combinations that manipulate institutions and governments", as well as selection of "everything unfair, ugly or wrong about Jews as individuals or a group" and equally systematical suppression of "any exculpatory information".[24] Mearsheimer and Walt have denied Cohen's assertions as false, dishonest and ridiculous, noting that criticism of Israeli state policy and influential American advocates of that policy, such as Cohen, is not the same thing as demonization of Jewish people.[25]

Chuck Hagel nomination

Along with a large number of other Republicans, Cohen opposed Barack Obama's prospective nomination of Republican Chuck Hagel as U.S. Secretary of Defense in late 2012. Cohen was quoted as saying:

> If you have somebody there [at Defense] who's already made it clear that he does not want to engage in a confrontation with Iran, what kind of negotiating leverage do we have? ... You want to have as secretary of defense somebody who's the heavy. Somebody who's the guy who looks as if he's perfectly capable of waging war against you and happy to do it. That's just kind of elementary negotiating tactics.[26]

2014 Crimean crisis

Cohen wrote an op-ed piece in *The Washington Post* on 3 March 2014, between the ousting of Viktor Yanukovich on 22 February and the Crimean referendum on 16 March. In it, he maintains that "Putin is indeed a brutal Great Russian nationalist who understands that Russia without a belt of subservient client states is not merely a very weak power but also vulnerable to the kind of upheaval that toppled Yanukovych's corrupt and oppressive regime." He mentions *The New York Times* publication of the op-ed by Putin on the Syrian chemical arms question and links to the text of the NATO accord as a token of good faith.[27]

Never Trump movement

See also: List of Republicans who opposed the Donald Trump presidential campaign, 2016

Cohen wrote an op-ed piece in *The Washington Post* on 15 November 2016 after the 2016 presidential election affirming his stance against the presidency of Donald Trump. In the piece he states:

> I am a national security Never-Trumper who, after the election, made the case that young conservatives should volunteer to serve in the new administration, warily, their undated letters of resignation ready. That advice, I have concluded, was wrong. [...] My friend was seething with anger directed at those of us who had opposed Donald Trump — even those who stood ready to help steer good people to an administration that understandably wanted nothing to do with the likes of me, someone who had been out front in opposing Trump since the beginning.[28]

Cohen also wrote an op-ed piece in *The Atlantic* on 29 January 2017 commenting on his distaste for Donald Trump as a person:

> Many conservative foreign-policy and national-security experts saw the dangers last spring and summer, which is why we signed letters denouncing not Trump's policies but his temperament; not his program but his character. We were right. And friends who urged us to tone it down, to make our peace with him, to stop saying as loudly as we could "this is abnormal," to accommodate him, to show loyalty to the Republican Party, to think that he and his advisers could be tamed, were wrong.[29]

Selected works

External video

Presentation by Cohen on *Supreme Command*, July 9, 2002, C-SPAN

Booknotes interview with Cohen on *Supreme Command*, September 22, 2002, C-SPAN

Washington Journal interview with Cohen on *Supreme Command*, January 16, 2004, C-SPAN

Presentation by Cohen on *Conquered into Liberty*, November 10, 2011, C-SPAN

Presentation by Cohen on *Conquered into Liberty*, March 29, 2012, C-SPAN

Discussion with Cohen on *The Big Stick*, February 2, 2017, C-SPAN

- " Conquered into Liberty" Two centuries of battles along the Great Warpath that made the American way of war. (2011) Simon & Schuster. ISBN 978-0-7432-4990-4
- *Citizens and Soldiers: The Dilemmas of Military Service* (1985)
- *Military Misfortunes: The Anatomy of Failure in War*, Free Press, 1990, ISBN 0-02-906060-5.
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- *Knives, Tanks, and Missiles: Israel's Security Revolution*, Washington Institute for Near East Policy, 1998, ISBN 0-944029-72-8.
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- *The Big Stick: the Limits of Soft Power and the Necessity of Military Force*. Basic Books. 2016. ISBN 9780465044726. OCLC 958205490.

Eliot Asher Cohen (born 1956)

https://www.encyclopedia.com/arts/educational-magazines/cohen-eliot-asher-1956

Cohen, Eliot A(sher) 1956-

views 1,226,083 updated Nov 12 2020

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COHEN, Eliot A(sher) 1956-

PERSONAL: Born April 3, 1956, in Boston, MA; son of Felix M. (a physician) and Frieda S. Cohen; married Judith G. Rosenberg, June 26, 1977; children: Raphael, Michal, Rebecca. Education: Harvard University, B.A. (magna cum laude), 1977, M.A., 1979, Ph.D., 1982.

https://www.legacy.com/obituaries/bostonglobe/obituary.aspx?n=felix-cohen&pid=15900527

Dr. Felix Cohen

Of Newton, Entered Into Rest, December 5, 2005. Beloved husband of Frieda (Omansky). Devoted father of Stephen Cohen and his wife Betty, Richard Cohen and his wife Edith, all of Chestnut Hill, Eliot Cohen and his wife Judith of Silver Springs, MD and David Cohen and his wife Nancy of Easton, CT. Cherished grandfather of Dena, Jared, Shoshana, Joseph, Naomi, Matthew, Raphael, Michal, Rebecca, Nathan, Jessica, Jeffrey and Peter. Proud great-grandfather of Idan, Lital and Oriyah. Services were held Dec. 7, 2005. Shiva will be at the late residence from 2-5 and 7-9 PM. In lieu of flowers, donations may be made to the American Parkinson's Disease Association, 60 Bay St. #401, Staten Island, NY 10301 or to a charity of choice. Stanetsky Memorial Chapel (800) 842-4280 www.stanetsky.com

https://pages.jh.edu/jhumag/694web/target.html

Defensively Off Target

By Dale Keiger

The nation's blueprint for future defense is predicated on a kind of warfare that may never occur again, say four defense experts from Hopkins. The plan is unimaginative, unaffordable—and already in effect.

In March 1993, the Department of Defense initiated what has come to be known as the Bottom-Up Review, or the BUR. The BUR was so named because it purported to examine U.S. defense policy from the bottom up now that the Cold War was over and the Soviet Union was not even a country, much less a threat. The 109-page final document, produced in less than eight months, constituted the blueprint for $1.3 trillion in defense spending by the Clinton administration over the next five years.

Four defense experts associated with Hopkins's Nitze School of Advanced International Studies (SAIS) believe that the BUR, and thus American defense policy, is aiming at the wrong target. For when the BUR's authors gazed into the tea leaves, they foresaw a world made more dangerous by the proliferation of nuclear weapons, but otherwise filled with familiar threats, like Iraq. They decided that the United States needed the capability to fight and win two nearly simultaneous wars of the sort it fought in the Persian Gulf in 1991. The U.S. military, under the BUR's mandate, is now pursuing that capability.

The four SAIS experts—Eliot A. Cohen, Andrew F. Krepinevich Jr., Jeffrey S. McKitrick, and Michael Vickers have gazed into the future, too, and they fear that the BUR ignores both more likely and more serious threats to American national security. The world they envision over the next 10 to 20 years is one big bad neighborhood. They expect constant low-grade warfare (low- grade on a historical scale, not to the combatants or the innocents caught in the crossfire) of the sort now occurring in Bosnia, Rwanda, the Republic of Georgia, Liberia, and Sudan. They foresee more aggression by what they call "non-state actors": Islamic extremists like Hamas, various insurgent movements, and warlord armies like those in Somalia. They anticipate regional belligerents like North Korea, Iran, and Iraq getting the capability to inflict mass destruction, principally through nuclear weapons.

In this world, the United States is unlikely, in their estimate, to once again fight a relatively straightforward war for control of territory like it fought in the Persian Gulf, much less two such wars at the same time, as the BUR envisions. They say that if the United States goes into battle again—and there's little in history to give faith that it won't—it should not assume it will confront another massed, ineptly led conventional army. Instead, it will more likely face wily streetfighters like the ones who recently kicked U.S. troops out of Somalia, and terrorist armies capable of striking anywhere in the world, and techno-saboteurs bent on disrupting the world's electronic infrastructure.

Of greater concern, the SAIS experts agree that the United States cannot complacently assume it will remain the world's sole superpower. For no period of history, they point out, has one nation-state reigned supreme for long without a challenge from an emergent rival. They are particularly concerned about China and the need to forestall a major military confrontation in Asia. They don't see evidence in the BUR of the government planning for such an eventuality.

If the United States is to defend itself and its interests, they say, its strategists must stop thinking in terms of refighting the last war (albeit with better results), and figure out how best to fight the next one. They believe that the BUR fails to take sufficient account of the fundamental rethinking of all aspects of war—tactics, operation, and strategy—that an unfolding technological revolution will necessitate. Those who fail to keep up with this revolution will be in peril, and the United States, they warn, is keeping up in technology but in danger of falling behind in strategic thinking.

In 1940, both France and Germany had modern armies, tanks, and airplanes. But the Germans had figured out how to combine them into the blitzkrieg, while the French were prepared only to use them to refight the First World War. In six weeks, German troops marched through Paris.

Cohen, Krepinevich, et al. do not want the United States of 2014 to be the France of 1940.

A professor of strategic studies at SAIS, Eliot Cohen also lectures at the National War College at Ft. McNair, Washington, D.C.; writes frequently for mainstream journals such as The New Republic, Foreign Affairs, National Review, and Commentary; and directed the Air Force's official analysis of the use of air power in the Persian Gulf War. He's the author of several books, most recently Military Misfortunes: The Anatomy of Failure in War (Vintage Books, 1991). His friend Andrew Krepinevich lectures at SAIS and is director of the non-profit, non- partisan Defense Budget Project, which studies national security policies and how defense dollars are and should be spent. Krepinevich is a graduate of Harvard and West Point, and the author of The Army and Vietnam (Johns Hopkins Press, 1986) and The Bottom-Up Review: An Assessment (Defense Budget Project, 1994).

Both men are strenuous critics of the intellectual quality of the BUR. Cohen calls it "a remarkably conservative and intellectually timid document." Krepinevich believes it was done too fast, with not enough time to consider alternatives to the sort of conventional military thinking that may have worked well in Kuwait in 1991, but may not work at all somewhere else in 1999.

They focus much of their criticism on the two-war scenario, citing history as justification. Never, says Krepinevich, starting with the American Revolution, has an enemy taken advantage of U.S. engagement in one conflict to start a second one. Why, he argues, should we plan for it to happen in the future? If the Defense Department is concerned about two simultaneous wars without historical precedent, why not three? Why not four? "The Pentagon is buying very expensive insurance against a very unlikely situation," he claims.

He and Cohen further argue that the BUR promises more than it can deliver. The United States, Cohen says, does not have the airlift and sealift capability to move troops to two simultaneous conflicts. He offers as evidence the Persian Gulf War, which required most of the U.S. air refueling capability, used virtually every F-117 Stealth fighter in the Air Force arsenal, needed help from commercial airlines to transport troops, and required the call-up of thousands of reservists.

Krepinevich has analyzed the BUR's numbers and does not see how the military can accomplish the mandated force levels and stay within the defense budget over the long term; to do so even in the short term, he says, would require sacrifices in training and modernization. The BUR states the number and types of armed forces needed for a two-war capability: a standing force of 1.5 million troops divided among 10 active Army divisions, 11 Navy carrier battlegroups (with a 12th carrier in reserve), five active Marine brigades, and 13 active Air Force wings. President Bill Clinton wants this defense structure to cost no more than $1.3 trillion during the next five years, a target $104 billion below the level projected by the last Bush administration plan.

Krepinevich says he can't be certain of the size of the budget discrepancy. But he has reviewed the BUR, media reports, the estimates of other analysts from the Defense Budget Project, and Congressional Budget Office reports, and he predicts that to pay for these forces the Defense Department could need anywhere from $11 billion to $50 billion more than the budget allows over the first five years. For the "out years," the years past the initial five-year budgeting period, he predicts a shortfall of $20 billion per year, and says that's the optimistic estimate. The services, presumably, are supposed to trim all those billions from their projected costs and still achieve the BUR's force goals, but Krepinevich asks, "How many billions can they cut before this whole structure begins to collapse?"

Cohen and Krepinevich argue that the BUR promotes preparation for the threat that is most familiar—an opponent like Iraq—because that is the threat most recent. "They've been successful," Krepinevich says, speaking of the military's experience in the Persian Gulf, "so they're preparing to do again what they've done well in the past." The problem with this reasoning, Cohen points out, is that it seems to assume our enemies were not paying attention to the fate of Saddam Hussein's troops in Kuwait.

"Analysts and generals like to refight the last battle," he says. "Unfortunately, our opponents don't." Why, he asks, after the debacle in Kuwait, would another country (or Iraq, for that matter) try to fight us in the same way? "America's opponents 10 years hence will surely have found other, less comfortable ways of securing success than by imitating Saddam Hussein," Cohen wrote in a recent issue of The New Republic. "Indeed, as General Mohamed Farah Aideed has demonstrated in Somalia, they already have."

What the United States needs, Cohen and Krepinevich argue, are plans for combatting the more likely threat of unconventional enemies who won't repeat Iraq's mistakes. Krepin- evich envisions our next regional military confrontation as one in which we face what he calls a "streetfighter" state. This enemy, whoever it may be, doesn't invade its neighbor and then try to stand off the United States with massed armored battalions, like the Iraqis did. Nor does it allow full use of American strengths like technology and logistics. Instead, it conducts a series of aggressions against another state sufficiently low in

allow full use of American strengths like technology and logistics. Instead, it conducts a series of aggressions against another state sufficiently low in intensity to make the American government and its allies unwilling to launch a Desert Storm-type response. It keeps its attacks small and sporadic. It engages in destabilization and terrorism. It works to subvert from within.

If it miscalculates and does provoke the United States into military action, it mingles its forces and strategic targets with civilian populations to make it hard for the United States to attack without killing innocent non-combatants. It threatens use of a mass- destruction weapon (a single nuclear weapon, or the credible possibility of having one, will do) to frighten away other countries from joining with the United States in a military coalition, or in trade sanctions or a blockade. It threatens environmental sabotage to any neighbor that allows the United States to base troops there. Once combat with U.S. forces begins, it does all it can to drag out the fighting, playing on the American public's historical impatience with protracted conflict and its reluctance to sustain casualties. It could ally itself with other states antagonistic to the United States, or with terrorist organizations.

Cohen points out that some of these streetfighter tactics worked in Mogadishu. "Basically, Somalia was a war we lost," he says. The BUR, he adds, does not address such situations.

Just as serious as these problems, say Cohen and Krepinevich, is the BUR's failure to address the revolutionary change in military technology that the public only glimpsed during the Gulf War. Michael Vickers is a 10-year veteran of the U.S. Army Special Forces and a PhD candidate under Cohen's tutelage. In his dissertation, he is attempting to develop a general theory of how revolutions in military capability take place. Vickers says that in the last 500 years, there have been eight of these revolutionary shifts, and he lists examples. In the 1500s, artillery provided the means to breach formerly impregnable castles. A century later, sailing ships with on-board artillery supplanted oar-driven galleys. In the mid-1800s, telegraph, railroads, and the development of accurate rifles forever changed infantry fighting, as demonstrated in the American Civil War. The Second World War saw the first effective use of mechanized armored warfare and naval aviation. A mushroom cloud over Hiroshima announced the advent of the nuclear military revolution. In each of these instances, war changed dramatically. SAIS's strategic thinkers believe another such revolution is under way.

Jeffrey McKitrick, SAIS '81, is directing a five-year study of this revolution at Science Applications International Corporation, under contract to the Pentagon's Office of Net Assessment. "People tend to think tomorrow will be like today, only a little more so," he says. But he believes that on the battlefield, at least, tomorrow will be much unlike today.

The revolution now underway, according to McKitrick, is high tech, information driven, and very deadly. He foresees weaponry—some in development but much of it already here—of incredible range, accuracy, and lethality. He says, "The Gulf War was only the precursor of the kind of things we'll be able to do. Lethality is going to increase by orders of magnitude. What it took 500,000 men to do in the Persian Gulf will be done by 50,000. Everything is becoming smaller, faster, and deadlier." Though not cheaper.

For centuries and up to the Gulf War, warfare has amounted to this: the necessity of figuring out where the enemy is, then getting close enough to kill him before he kills you, with all of this taking place under the horrific and chaotic conditions described by the eerily benign phrase "the fog of war." War is still about killing the enemy before he can kill you, but everything else is changing rapidly. Start with that metaphoric "fog of war," for example. It has always been hard, sometimes impossible, to know where you are on a battlefield and where the enemy is. Now, American troops go into battle with hand-held Global Positioning Systems, the size of paperback novels, that use satellite signals to pinpoint precisely where they are standing, in just a few seconds.

Satellites help soldiers figure out where the enemy is standing, as well. Highly defined satellite imagery, manned and unmanned reconnaissance aircraft, and advanced radar can pinpoint the location of enemy units right down to individual vehicles. Night-vision technology removes the cloak of darkness that used to hide troop movements. If the enemy tries to use radio communications or its own radar, high-tech guided weaponry locks on to those signals and follows them to their sources, destroying them. During the Gulf War, the Iraqis often did not turn on their air- defense radar because they feared that American radar- seeking missiles would wipe them out if they did.

The fog is not all gone. Cohen says Gulf War commanders sometimes had too much information; the overload created a new sort of fog, leading to misinterpretation of data, as well as hasty decisions made because ever-changing information left little time for calm ratiocination. A wily opponent can still hide a lot; American troops never did find Mohamed Farah Aideed in Mogadishu, and the official Gulf War Air Power Survey, directed by Cohen, states there's no evidence that American planes ever succeeded in knocking out a single one of Iraq's mobile SCUD missile launchers.

Still, troops on a battlefield and military installations anywhere in the theater of combat have become vulnerable to American military technology as never before. "We can see targets at great distances, and they can't see us," Krepinevich says. Says McKitrick, "Data moves so fast that information can alter everything on the battlefield not in days, not in minutes, but in nanoseconds."

There's a new strategic mantra, simplistic and not entirely accurate but indicative all the same: "If it's there, we can find it. If we can find it, we can hit it. And if we can hit it, we can kill it." Once U.S. forces find the enemy, they can hit it from greater distances than ever before. Those memorable video images on CNN during the Gulf War vividly portrayed the accuracy of precision guided weaponry, the so-called "smart bombs." Smart bombs aren't always as accurate as the Pentagon public relations apparatus would like the public (who pays for them) to believe, but when the bombs do work, their destructive capabilities are remarkable. A U.S. warship can launch a Tomahawk cruise missile and hit a specific building hundreds of miles away. Apache attack helicopters can hover in the dead of night and destroy enemy tanks whose doomed occupants didn't even know a helicopter was in the vicinity.

As the weapons have become more accurate, they've also become more deadly. A strike on a command bunker, bridge, or enemy tank doesn't merely inflict damage, as it might have 20 years ago. Now the strike often destroys. In From Gettysburg to the Gulf and Beyond, Colonel Richard J. Dunn III notes that during the Vietnam War, American fighter-bombers needed more than 700 sorties to destroy one bridge near Hanoi; during the Persian Gulf War, single F-117 Stealth fighters took out Iraqi bridges on the first try. The trend is toward even greater lethality. McKitrick says weapons researchers are approaching the capability to inflict a magnitude of damage a hundred times greater than that of any high explosive now in the arsenal. One method, McKitrick says, could be to tremendously compress a substance like mercury, under extreme temperature and pressure, then shatter it, releasing enormous energy.

Hand in hand with the development of advanced weaponry has come its proliferation. Says Krepinevich, "History would indicate that once the genie is out of the bottle regarding advanced military technology, sooner or later—usually sooner—countries that want it and can afford it acquire it." Much of this stuff is on the open market; countries can simply go shopping at the international arms bazaar. Krepinevich says Iran, besides investing in components for its own nuclear weapons program, is buying or shopping for cruise missiles and diesel-powered submarines from the Russians. From the Chinese it seeks ballistic missiles, Silkworm anti-ship missiles, and sophisticated underwater mines.

A country can easily obtain much of what might be called collateral high technology—non-weaponry that has military application—because such technology is in commercial use. During the Gulf War, says McKitrick, 70 percent of American UHF communication took place over commercial networks. Well-heeled backpackers can buy Global Positioning Systems through advertisements in Outside magazine. Several countries, including France, Russia and the United States, sell detailed satellite imagery. One person with a personal computer can locate and track targeted individual vehicles throughout the world; Federal Express does it every business day. Commercial encryption software has become so sophisticated that even the code-breakers at the National Security Agency are no longer confident of their ability to decrypt intercepted communications.

Among lesser powers, the most worrisome proliferating items are nuclear weapons. Cohen says, "It's 50-year-old technology, and anybody who really wants it can get it. What's particularly frightening is that anybody can get it without our knowing. You can hide an amazing amount. We're not omniscient at all." In directing the Gulf War Air Power Survey, Cohen was impressed by how far Iraq had gotten with its nuclear program despite the West's sophisticated surveillance. He is particularly concerned about the whereabouts of all the nuclear weapons scattered about what used to be the Soviet Union. "My personal hunch would be that some of those nukes have gone astray," he says. "If everything else has gone astray, why wouldn't people be able to buy nuclear weapons?"

Vickers thinks that within 30 years instead of a dozen or fewer nuclear powers, as now (the United States; Russia and the former Soviet republics of Ukraine, Kazakhstan, and Belarus; Britain; France; China; Israel; India; probably Pakistan; possibly South Africa), the world may have 20 or more. Cohen thinks the expanded roster could include among others Iran, Algeria, North Korea, Iraq, Saudi Arabia, Poland, Germany, and Japan.

All this diffusion of technology creates one overriding headache for American strategic planners: the greatly enhanced capacity for mischief by developing nations. Cohen and Krepinevich offer several examples of how a country that couldn't directly threaten the territory of the United States could still pose a serious threat to American global interests. Imagine for a moment that Saddam Hussein had had a credible nuclear threat when he invaded Kuwait. Would Saudi Arabia have allowed the American-led coalition to use its territory for staging Desert Storm? If North Korea develops missiles with nuclear warheads, will Japan feel compelled to get its own nuclear capability? How will China respond to that? If Algeria gets nukes and points them at Europe or Israel, what does the United States do on behalf of its allies? What does the United States do if Iran develops biological weapons? What happens if a hacker in India, which has lots of computer programmers, decides American foreign policy has tilted too far toward Pakistan and manages to hack into and crash the U.S. computerized banking transfer system?

The advent of new weaponry and military technology is only the first part of military revolutions, McKitrick says. The second part is a revolution in strategy, tactics, and organization. High-tech weapons proliferate, but not everyone will use them the same way. Some nations, as did the aforementioned France in 1940, will try to use them in the same way as older weapons. Others, recalling Nazi Germany, will figure out new strategic doctrines and organizational schemes that make overpowering use of new technology.

New weapons used in old ways can lead to disaster against opponents who use new weapons in new ways (or even old weapons in new ways). In the future, agree Cohen, Krepinevich, McKitrick, and Vickers, the enemy with a deadly, innovative strategy may not be a lesser power like North Korea or Iran. Somewhere down the road, they say, a new superpower will emerge, and it will be a serious problem for the United States if it's that rival that first develops the next strategic equivalent of blitzkrieg.

Their candidate for the next superpower rival to the United States is China. The Chinese have a booming economy, vast resources, and an enormous population that 30 years from now, according to Vickers, will consist mostly of people ages 20 to 65, the most productive years. They will be at the center of the world's next great economic center, northeastern Asia. And they feel entitled to a place among the world's great powers.

If the United States wants to forestall another confrontation of the sort it endured for four decades with the Soviet Union, says Krepinevich, it should be working now to develop new strategic doctrines that could foster cooperation and integration in a peaceful world order. He advocates more experimentation in the Defense Department and armed services, to develop organizational schemes better able to cope with the likely contingencies of the near future, such as peacekeeping missions or combat with a streetfighter enemy. He points out that the current organization of the defense budget remains based on a

primary mission formulated 30 years ago.

Greater emphasis on forward thinking need not cost much, says McKitrick: "You don't need a lot of money to think." Krepinevich points out that between World War I and World War II, Admiral William Sowden Simms worked out naval aviation doctrines and Marine General John Archer Lejeune developed methods of amphibious island assault on shoestring research budgets.

What they did have, however, was incentive and encouragement—institutional support, says Cohen. For people in the defense establishment to think through the long-term implications and innovative applications of revolutionary technology, someone must provide them with the time, resources, and motivation. The present system, as epitomized in the BUR, Cohen says, tends to encourage a short-term view. Presidents, defense secretaries, service secretaries, and the Joint Chiefs of Staff usually serve short terms, sometimes less than four years. Their first concern is that nothing go wrong on their watch. They are insufficiently interested (and, says Cohen, provided with insufficient reason to be interested) in working on plans that may not pay off for 10 or 20 years. People lower in the ranks could do it, but the promotion system tends to discourage creative thinking, says Krepinevich; the way for a captain or major to make top rank is to master the tried and true.

"I don't have a master solution to all this," Cohen says. But he believes a solution starts with a president who is aware of the need to plan for the changes under way in warfare; who will devote time and energy to defense issues; and who wants his defense secretary to take charge of the Pentagon instead of merely preventing the military from giving him grief. "An enormous amount hinges on the president," Cohen says. "You have to have a president who thinks foreign policy and military affairs are important. And that's not the president we have."

When asked if he thinks the United States can sustain its present strategic advantage over the next few decades, McKitrick says, "Unknown, and fraught with unknown unknowns. There's no way to tell if we're doing enough." Krepinevich likes to quote the saying: "Predicting is difficult, especially about the future." He defends his conclusions versus those of the BUR's authors in this way: "Their work is an extrapolation out of the Cold War. My work is an extrapolation out of centuries of history. It's the history of revolutionary change that you have to look at."

Eliot Cohen does feel confident about one thing, though: "The only thing I'm sure of is that defense analysts are not going to go out of business."

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William Egan Colby (born 1920)

Wikipedia William Egan Colby

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Other Important Bonesmen

Richard M. Bissell, Jr. was a very important man to the denizens of Jupiter Island. He graduated from Yale in 1932, the year after the Harrimanites bought the island. Though not in Skull and Bones, Bissell was the younger brother of William Truesdale Bissell, a Bonesman from the class of 1925. Their father, Connecticut insurance executive Richard M. Bissell, Sr., had put the U.S. insurance industry's inside knowledge of all fire-insured industrial plants at the disposal of government planners during World War I.

The senior Bissell, a powerful Yale alumnus, was also the director of the Neuro-Psychiatric Institute of the Hartford Retreat for the Insane; there, in 1904, Yale graduate Clifford Beers underwent mind-destroying treatment which led this mental patient to found the Mental Hygiene Society, a major Yale-based Skull and Bones project. This would evolve into the CIA's cultural engineering effort of the 1950s, the drugs and brainwashing adventure known as ``MK-Ultra.''

Richard M. Bissell, Jr. studied at the **London School of Economics** in 1932 and 1933, and taught at Yale from 1935 to 1941. He then joined Harriman's entourage in the U.S. government. Bissell was an economist for the Combined Shipping Adjustment Board in 1942-43, while Averell Harriman was the U.S. leader of that board in London.

In 1947 and 1948, Bissell was executive secretary of the ``Harriman Commission,'' otherwise known as the President's Commission on Foreign Aid. When Harriman was the administrator of the Marshall Plan, Bissell was assistant administrator.

Harriman was director of Mutual Security (1951-53), while Bissell was consultant to the director of Mutual Security 1952.

Bissell then joined **F. Trubee Davison** at the **Central Intelligence Agency. When Allen Dulles became CIA Director, Bissell was one of his three aides.**

Why could this be of interest to our Floridians? We saw in Chapter 4, that the great anti-Castro covert initiative of 1959-61 was supervised by an awesome array of Harriman agents. We need now add to that assessment only the fact that the detailed management of the invasion of Cuba, and of the assassination planning, and the training of the squads for these jobs, was given into the hands of Richard M. Bissell, Jr.

This 1961 invasion failed. Fidel Castro survived the widely-discussed assassination plots against him. But the initiative succeeded in what was probably its core purpose: to organize a force of multi-use professional assassins.

The Florida-trained killers stayed in business under the leadership of **Ted Shackley**. They were all around the assassination of President Kennedy in 1963. They kept going with the Operation Phoenix mass murder of Vietnamese civilians, with Middle East drug and terrorist programs, and with George Bush's Contra wars in Central America.

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Dr. Francis Sellers Collins (born 1950)

Wikipedia Francis Collins

Associations

- **Dr. Sherman Morton Weissman (born 1930)** (" At Yale, Collins worked under the direction of [**Dr. Sherman Morton Weissman (born 1930)**], and in 1984 the two published a paper, "Directional cloning of DNA fragments at a large distance from an initial probe: a circularization method".[7] The method described was named chromosome jumping, to emphasize the contrast with an older and much more time-consuming method of copying DNA fragments called chromosome walking.[8] ")

Saved Wikipedia (April 19, 2021) : "Francis Collins"

2021-04-19-wikipedia-org-francis-collins.pdf

https://en.wikipedia.org/wiki/Francis_Collins

For other people named Francis Collins, see Francis Collins (disambiguation).

Francis Collins

ForMemRS

16th Director of the National Institutes of Health

Incumbent

Assumed office

August 17, 2009

President

Barack Obama

Donald Trump

Joe Biden

Deputy

Lawrence Tabak

Preceded by

Raynard S. Kington (Acting)

Elias Zerhouni

2nd Director of the National Human Genome Research Institute

In office

1993–2008

President

Bill Clinton

George W. Bush

Preceded by

Michael Gottesman (Acting)

James D. Watson

Succeeded by

Alan Guttmacher (Acting)

Eric D. Green

Personal details

Born

Francis Sellers Collins

April 14, 1950 (age 71)

Staunton, Virginia, U.S.

Spouse(s)

Diane Baker

Education

University of Virginia (BS)

Yale University (MS, PhD)

University of North Carolina, Chapel Hill (MD)

Scientific career

Fields

Molecular genetics

Institutions

- University of Michigan
- National Human Genome Research Institute
- National Institutes of Health

Thesis

Semiclassical theory of vibrationally inelastic scattering, with application to $H^+ + H_2$ (1974)

Doctoral advisor

James Cross

Francis Sellers Collins ForMemRS (born April 14, 1950) is an American physician-geneticist who discovered the genes associated with a number of diseases and led the Human Genome Project. He is director of the National Institutes of Health (NIH) in Bethesda, Maryland, United States.

Before being appointed director of the NIH, Collins led the Human Genome Project and other genomics research initiatives as director of the National Human Genome Research Institute (NHGRI), one of the 27 institutes and centers at NIH. Before joining NHGRI, he earned a reputation as a gene hunter at the University of Michigan.[1] He has been elected to the Institute of Medicine and the National Academy of Sciences, and has received the Presidential Medal of Freedom and the National Medal of Science.

Collins also has written a number of books on science, medicine, and religion, including the New York Times bestseller, The Language of God: A Scientist Presents Evidence for Belief. After leaving the directorship of NHGRI and before becoming director of the NIH, he founded and served as president of The BioLogos Foundation, which promotes discourse on the relationship between science and religion and advocates the perspective that belief in Christianity can be reconciled with acceptance of evolution and science, especially through the idea that the Creator brought about his plan through the processes of

evolution.[2] In 2009, Pope Benedict XVI appointed Collins to the Pontifical Academy of Sciences.[3]

Early years[edit]

Collins was born in Staunton, Virginia, the youngest of four sons of Fletcher Collins and Margaret James Collins. Raised on a small farm in Virginia's Shenandoah Valley, Collins was home schooled until the sixth grade.[4] He attended Robert E. Lee High School in Staunton, Virginia. Through most of his high school and college years he aspired to be a chemist, and he had little interest in what he then considered the "messy" field of biology. What he referred to as his "formative education" was received at the University of Virginia, where he earned a Bachelor of Science degree in Chemistry in 1970. He went on to graduate as a Doctor of Philosophy in physical chemistry at Yale University in 1974.[5] While at Yale, a course in biochemistry sparked his interest in the subject. After consulting with his mentor from the University of Virginia, Carl Trindle, he changed fields and enrolled in medical school at the University of North Carolina at Chapel Hill, earning a Doctor of Medicine degree there in 1977.[6]

From 1978 to 1981, Collins served a residency and chief residency in internal medicine at North Carolina Memorial Hospital in Chapel Hill. He then returned to Yale, where he was a Fellow in Human Genetics at the medical school from 1981 to 1984.

Genetics research[edit]

At Yale, Collins worked under the direction of [**Dr. Sherman Morton Weissman (born 1930)**], and in 1984 the two published a paper, "Directional cloning of DNA fragments at a large distance from an initial probe: a circularization method".[7] The method described was named chromosome jumping, to emphasize the contrast with an older and much more time-consuming method of copying DNA fragments called chromosome walking.[8]

Collins joined the University of Michigan faculty in 1984, rising to the rank of professor in internal medicine and human genetics. His gene-hunting approach, which he named "positional cloning",[9][10] developed into a powerful[11] component of modern molecular genetics.

Several scientific teams worked in the 1970s and 1980s to identify genes and their loci as a cause of cystic fibrosis. Progress was modest until 1985, when Lap-Chee Tsui and colleagues at Toronto's Hospital for Sick Children identified the locus for the gene.[12] It was then determined that a shortcut was needed to speed the process of identification, so Tsui contacted Collins, who agreed to collaborate with the Toronto team and share his chromosome-jumping technique. The gene was identified in June 1989,[13][14] and the results were published in the journal Science on September 8, 1989.[15] This identification was followed by other genetic discoveries made by Collins and a variety of collaborators. They included isolation of the genes for Huntington's disease,[16] neurofibromatosis,[17][18] multiple endocrine neoplasia type 1,[19] inv(16) AML[20] and Hutchinson–Gilford progeria syndrome.[21]

Genomics[edit]

In 1993 National Institutes of Health Director Bernadine Healy appointed Collins to succeed James D. Watson as director of the National Center for Human Genome Research, which became National Human Genome Research Institute (NHGRI) in 1997. As director, he oversaw the International Human Genome Sequencing Consortium,[22] which was the group that successfully carried out the Human Genome Project.[23]

In 1994 Collins founded NHGRI's Division of Intramural Research,[24] a collection of investigator-directed laboratories that conduct genome research on the NIH campus.

In June 2000 Collins was joined by President Bill Clinton and biologist Craig Venter in making the announcement of a working draft of the human genome.[25] He stated that "It is humbling for me, and awe-inspiring to realize that we have caught the first glimpse of our own instruction book, previously known only to God."[26][27][28] An initial analysis was published in February 2001, and scientists worked toward finishing the reference version of the human genome sequence by 2003, coinciding with the 50th anniversary of James D. Watson and Francis Crick's publication of the structure of DNA.

Another major activity at NHGRI during his tenure as director was the creation of the haplotype map of the human genome. This International HapMap Project produced a catalog of human genetic variations—called single-nucleotide polymorphisms—which is now being used to discover variants correlated with disease risk. Among the labs engaged in that effort is Collins' own lab at NHGRI, which has sought to identify and understand the genetic variations that influence the risk of developing type 2 diabetes.

In addition to his basic genetic research and scientific leadership, Collins is known for his close attention to ethical and legal issues in genetics. He has been a strong advocate for protecting the privacy of genetic information and has served as a national leader in securing the passage of the federal Genetic Information and Nondiscrimination Act, which prohibits gene-based discrimination in employment and health insurance.[29] In 2013, spurred by concerns over the publication of the genome of the widely used HeLa cell line derived from the late Henrietta Lacks, Collins and other NIH leaders worked with the Lacks family to reach an agreement to protect their privacy, while giving researchers controlled access to the genomic data.[30]

Building on his own experiences as a physician volunteer in a rural missionary hospital in Nigeria,[31] Collins is also very interested in opening avenues for genome research to benefit the health of people living in developing nations. For example, in 2010, he helped establish an initiative called Human Heredity and Health in Africa (H3Africa)[32] to advance African capacity and expertise in genomic science.

Collins announced his resignation as NHGRI director on May 28, 2008, but has continued to lead an active lab there with a research focus[33] on progeria and type 2 diabetes.[34]

NIH director[edit]

Nomination and confirmation[edit]

Collins with Health and Human Services Secretary Kathleen Sebelius after swearing-in ceremony

On July 8, 2009, President Barack Obama nominated Collins as director of the National Institutes of Health,[35] and the Senate unanimously confirmed him for the post. He was sworn in by Health and Human Services Secretary Kathleen Sebelius on August 17, 2009.[36]

Science writer Jocelyn Kaiser opined that Collins was "known as a skilled administrator and excellent communicator," that Obama's nomination "did not come as a big surprise" and that the appointment "ignited a volley of flattering remarks from researchers and biomedical groups." Yet, she wrote, Collins "does have his critics," some of them who were concerned with the new director's "outspoken Christian faith."[37]

Washington Post staffer David Brown wrote, however, that Collins' status as a "born-again Christian . . . may help him build bridges with those who view some gene-based research as a potential threat to religious values."[38] Collins' appointment was welcomed by the chief executive officer of the American Association for the Advancement of Science[38] and by Bernadine Healy, the former head of the National Institutes of Health.[39]

In October 2009, shortly after his appointment as NIH director, Collins stated in an interview in The New York Times: "I have made it clear that I have no religious agenda for the N.I.H., and I think the vast majority of scientists have been reassured by that and have moved on."[40]

On October 1, 2009, in the second of his four appearances on The Colbert Report, Collins discussed his leadership at the NIH and other topics such as personalized medicine and stem cell research. And, in November 2011, Collins was included on The New Republic's list of Washington's most powerful, least famous people. Collins appeared on the series finale of The Colbert Report, participating in a chorus with several other famous people singing "We'll Meet Again".[41][42]

On June 6, 2017, President Donald Trump announced his selection of Collins to continue to serve as the NIH Director.

On 19 December 2017, Collins and the NIH lifted the Obama moratorium on gain of function research because it was deemed to be "important in helping us identify, understand, and develop strategies and effective countermeasures against rapidly evolving pathogens that pose a threat to public health."[43]

On January 15, 2021, President-elect Joe Biden announced his selection of Collins to continue to serve as NIH Director.[44]

Projects[edit]

Collins was instrumental in establishing the National Center for Advancing Translational Sciences (NCATS) on December 23, 2011.[45] In January 2013, Collins created two senior scientific positions on Big Data [46] and the diversity of the scientific workforce.[47] Other projects he took on early in his tenure included increased support for Alzheimer's disease research, which was announced in May 2012;[48] the Brain Research through Advancing Innovative Neurotechnologies (BRAIN) Initiative, announced by President Obama and Collins on April 2, 2013, at the White House; and, in February 2014, the Accelerating Medicines Partnership (AMP), a public-private partnership between NIH, the U.S. Food and Drug Administration, 10 biopharmaceutical firms, and multiple non-profit organizations.

In 2014, Collins worked with the larger biomedical research community to create principles and guidelines to foster rigor and reproducibility[49] in preclinical research, including incorporating sex as a biological variable to ensure differences in treatment response between men and women are addressed.[50]

In January 2015 President Obama announced the NIH-led Precision Medicine Initiative (PMI), later renamed the All of Us Research Program, in his State of the Union address.[51] All of Us seeks to extend precision medicine to all diseases by building a national research cohort of 1 million or more U.S. participants.

In other precedent-setting actions during his time as NIH director, Collins announced in November 2015 that NIH will no longer support any biomedical research involving chimpanzees.[52] In December 2015, Collins and other NIH leaders released a detailed plan that charted a course for NIH's efforts over the ensuing five years The NIH-Wide Strategic Plan, Fiscal Years 2016-2020: Turning Discovery Into Health was aimed at ensuring the agency remains well positioned to capitalize on new opportunities for scientific exploration and to address new challenges for human health.[53]

In January 2016, President Obama announced a new initiative to galvanize the nation's research efforts against cancer.[54] Fueled by an additional $680 million in the proposed fiscal year 2017 budget for NIH, the National Cancer Moonshot Initiative aims to accelerate progress toward the next generation of interventions to reduce cancer incidence and improve patient outcomes.[55] In 2016, Collins instituted a number of clinical trial reforms[56] to enhance protection of participants in research and improve reporting of research results in ClinicalTrials.gov.[57] In 2017, Collins implemented the Next Generation Researchers Initiative[58] to improve the odds for early investigators to win NIH grants.[59]

To support the Administration's Stop Opioid Abuse Initiative, Collins launched the NIH HEAL (Helping to End Addiction Long-term℠) Initiative in April 2018.[60] The NIH HEAL Initiative℠ bolsters research across NIH to improve treatments for opioid misuse and addiction and enhance pain management. Also in 2018, Collins launched an initiative to address sexual harassment in science and change a culture that sends messages to women and other underrepresented groups that they don't belong in biomedical research.[61]

Music[edit]

Collins' love of guitar playing and motorcycle riding is often mentioned in articles about him.[62]

While directing NHGRI, he formed a rock band with other NIH scientists. Sometimes the band, called the Directors, dueled with a rock band from Johns Hopkins University led by cancer researcher Bert Vogelstein. Lyrics of the Directors' songs included spoofs of rock and gospel classics re-written to address the challenges of contemporary biomedical research.[63] Collins has performed at TEDMED 2012, StandUpToCancer,[64] The 2017 Southern Methodist University Commencement[65] and Rock Stars of Science.[66]

His passion for music also inspired him to partner with the Kennedy Center to expand the Sound Health Initiative, which was announced in February 2017.[67] Sound Health aims to expand current knowledge and explore ways to enhance the potential for music as therapy for neurological and other disorders.[68]

Awards and honors[edit]

While leading the National Human Genome Research Institute, Collins was elected to the Institute of Medicine and the National Academy of Sciences. He was awarded the Canada Gairdner International Award in 1990. He was a Kilby International Awards recipient in 1993.[69] Collins received the Golden Plate Award of the American Academy of Achievement in 1994.[70] He received the Biotechnology Heritage Award with J. Craig Venter in 2001, from the Biotechnology Industry Organization (BIO) and the Chemical Heritage Foundation.[71][72] Collins and Venter shared the "Biography of the Year" title from A&E Network in 2000.[73] In 2005, Collins and Venter were honored as two of "America's Best Leaders" by U.S. News & World Report and the Harvard University Center for Public Leadership.[74]

In 2005 Collins received the William Allan Award from the American Society of Human Genetics. In 2007 he was presented with the Presidential Medal of Freedom.[75] In 2008 he was awarded the Inamori Ethics Prize[76] and National Medal of Science.[77] In the same year, Collins won the Trotter Prize where he delivered a lecture called "The Language of God".

Collins also received the Albany Medical Center Prize in 2010 and the Pro Bono Humanum Award of the Galien Foundation in 2012, the Federation of American Societies for Experimental Biology (FASEB) Public Service Award in 2017,[78] the Pontifical Key Scientific Award in 2018,[79] and the Warren Alpert

Foundation Prize in 2018.[80]

In 2020 he received the Templeton Prize[81] and was elected a Foreign Member of the Royal Society.[82]

Views[edit]

Christianity[edit]

By graduate school, Collins considered himself an atheist. However, a conversation with a hospital patient led him to question his lack of religious views, and he investigated various faiths. He familiarized himself with the evidence for and against God in cosmology, and on the recommendation of a Methodist minister used Mere Christianity by C. S. Lewis as a foundation to develop his religious views. He believes that people cannot be converted to Christianity by reason and argument alone, and that the final stage of conversion entails a "leap of faith".[83] After several years of deliberation, he finally converted to Christianity during a trip to the Cascade Mountains, where he describes a striking image of a frozen waterfall as removing his final resistance, resulting in his conversion the following morning.[83] He has described himself as a "serious Christian".[29]

In his 2006 book The Language of God: A Scientist Presents Evidence for Belief, Collins wrote that scientific discoveries were an "opportunity to worship" and that he rejected both Young Earth creationism and intelligent design. His own belief, he wrote, was theistic evolution or evolutionary creation, which he preferred to call BioLogos. He wrote that one can "think of DNA as an instructional script, a software program, sitting in the nucleus of the cell".[84] He appeared in December 2006 on The Colbert Report television show and in a March 2007 Fresh Air radio interview to discuss this book.[85][86] In an interview with D. J. Grothe on the Point of Inquiry podcast, he said that the overall aim of the book was to show that "one can be intellectually in a rigorous position and argue that science and faith can be compatible", and that he was prompted to write the book because "most people are seeking a possible harmony between these worldviews [science and faith], and it seems rather sad that we hear so little about this possibility.[87] Collins said he had been a Methodist, Presbyterian, Baptist, and Episcopalian, emphasizing that denominational differences were not essential to him.[88] He recalled that, growing up, he participated in the choir of an Episcopal church.[89]

Collins is a critic of intelligent design, and for this reason he was not asked to participate in the 2008 documentary Expelled: No Intelligence Allowed. Walt Ruloff, a producer for the film, claimed that by rejecting intelligent design, Collins was "toeing the party line", a claim which Collins called "just ludicrous".[90] In an interview he stated that "intelligent design is headed for collapse in the not too distant future" and that "science class ought to be about science, and opening the door to religious perspectives in that setting is a big mistake."[87] In 2007, Collins founded the BioLogos Foundation to "contribute to the public voice that represents the harmony of science and faith". He served as the foundation's president until he was confirmed as director of the NIH.[91] Collins has also spoken at the Veritas Forum on the relationship between science and religion and the existence of God.[92]

Christopher Hitchens referred to Francis Collins as "one of the greatest living Americans" and stated that Collins was one of the most devout believers he had ever met.[93] He further stated that Collins was sequencing the genome of the cancer that would ultimately claim Hitchens's life, and that their friendship despite their differing opinion on religion was an example of the greatest armed truce in modern times.[94]

Agnosticism[edit]

In an interview with National Geographic in February 2007, writer John Horgan criticized Collins' description of agnosticism as "a cop-out". In response, Collins clarified his position on agnosticism so as to exclude:

"earnest agnostics who have considered the evidence and still don't find an answer. I was reacting to the agnosticism I see in the scientific community, which has not been arrived at by a careful examination of the evidence. I went through a phase when I was a casual agnostic, and I am perhaps too quick to assume that others have no more depth than I did."[95]

Abortion[edit]

In a 1998 interview with Scientific American, Collins stated that he is "intensely uncomfortable with abortion as a solution to anything" and does not "perceive a precise moment at which life begins other than the moment of conception". However, in the same interview it was said that Collins also "does not advocate changing the law".[96]

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See also[edit]

- List of events in National Human Genome Research Institute history
- Science and religion

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External links[edit]

Wikimedia Commons has media related to Francis Collins.

Wikiquote has quotations related to: Francis Collins

- The BioLogos Foundation
- NIH Bio
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- Appearances on C-SPAN
- Francis Collins at TED

Government offices

Preceded by

James D. Watson

3rd Director of the National Human Genome Research Institute

1993 – 2008

Succeeded by

Eric D. Green

Preceded by

Raynard Kington (Acting)

Elias Zerhouni

16th Director of the National Institutes of Health

2009 – present

Incumbent

BITCHUTE @Housatonic YOUTUBE @HousatonicLive ODYSEE @Housatonic BRIGHTEON @Housatonic

Joseph Frederick Colvin (born 1942)

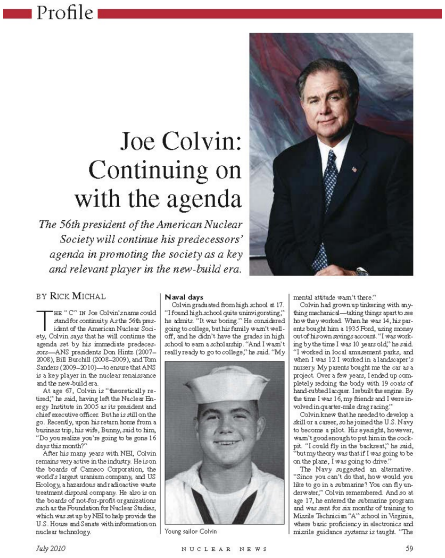
Born - Joe Colvin is 76 years old and was born on 11/20/1942. [HL002D][GDrive]

Father of **Melissa Ann (Colvin) Mann (born 1965)** .

"Joe Colvin lives in Santa Fe, NM; previous city include Johns Island SC. Joe Frederick Colfin, Joe Frederick Colvin, Joseph F Colin, Joe F Colvin and Joe F Colvin are some of the alias or nicknames that Joe has used." - [HL002D][GDrive]

Article : [HP001S][GDrive] BY RICK MICHAL

[HP001T][GDrive]



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THE “C” IN Joe Colvin’s name could stand for continuity. As the 56th president of the American Nuclear Society, Colvin says that he will continue the agenda set by his immediate predecessors— ANS presidents Don Hintz (2007–2008), Bill Burchill (2008–2009), and Tom Sanders (2009–2010)—to ensure that ANS is a key player in the nuclear renaissance and the new-build era.

At age 67, Colvin is “theoretically retired,” he said, having left the Nuclear Energy Institute in 2005 as its president and chief executive officer. But he is still on the go. Recently, upon his return home from a business trip, his wife, Bunny, said to him, “Do you realize you’re going to be gone 16 days this month?”

After his many years with NEI, Colvin remains very active in the industry. He is on the boards of Cameco Corporation, the world’s largest uranium company, and US Ecology, a hazardous and radioactive waste treatment disposal company. He also is on the boards of not-for-profit organizations such as the Foundation for Nuclear Studies, which was set up by NEI to help provide the U.S. House and Senate with information on nuclear technology.

Naval days

Colvin graduated from hi-h school at 17. “I found high school quite uninvigorating,” he admits. “It was boring.” He considered going to college, but his family wasn’t well=off, and he didn’t have the grades in high school to earn a scholarship. “And I wasn’t really ready to go to college,” he said. “My mental attitude wasn’t there.”

Colvin had grown up tinkering with anything mechanical—taking things apart to see how they worked. When he was 14, his parents bought him a 1935 Ford, using money out of his own savings account. “I was working by the time I was 10 years old,” he said. **“I worked in local amusement parks, and when I was 12 I worked in a landscaper’s nursery. My parents bought me the car as a project. Over a few years, I ended up completely redoing the body with 19 coats of hand-rubbed lacquer. I rebuilt the engine. By the time I was 16, my friends and I were involved in quarter-mile drag racing.**”

Colvin knew that he needed to develop a skill or a career, so **he joined the U.S. Navy to become a pilot**. His eyesight, however, wasn’t good enough to put him in the cockpit. “I could fly in the backseat,” he said, “but my theory was that if I was going to be on the plane, I was going to drive.”

The Navy suggested an alternative. “Since you can’t do that, how would you like to go in a submarine? You can fly underwater,” Colvin remembered. And so **at age 17** [being born in November 1942, this would be late 1959 or early 1960]**, he entered the submarine program and was sent for six months of training to Missile Technician “A” school in Virginia, where basic proficiency in electronics and missile guidance systems is taught.** “T training combined the nuclear weapons side of the business and the electronics, digital controls, and guidance systems side,” he said. “It had to do with engineering, and I knew I was cut out for that.”

His first assignment after training was on a diesel submarine equipped with a Regulus nuclear missile. Colvin said that during his first year on the sub, he figured out that the only difference between the officers and the enlisted men was the gold on the officers’ sleeves, and the fact that they had earned college degrees, while most enlisted men had not. “At that point I made a decision to finish out my Navy career and go to school,” he said.

In the meantime, however, the Navy established the Navy Enlisted Scientific Education Program, which in its first year selected 100 enlisted men to enroll in four-year programs at 22 colleges and universities in the United States. “It was total immersion— spring, summer, fall, winter,” he said. “Your job was to go to school. **I was lucky enough to get picked for the program, and so I stayed in the Navy**.”

[See here - https://newspaperarchive.com/albuquerque-journal-jan-02-1959-p-33/ .. Feb 2 1959 it was announced]

Colvin selected the **University of New Mexico (UNM)**, in Albuquerque. “It was one of the top schools for electrical engineering, which is what I wanted to major in,” he said. It also was his introduction to New Mexico, a state that would eventually

become his home**. Colvin spent four years at UNM as an undergraduate, and then worked on his master’s degree in nuclear engineering until Adm. Hyman Rickover, the “father of the nuclear Navy,” told him to get back on a submarine and out to sea.**

During his university career, Colvin was promoted through the ranks to chief petty officer, which was such a rapid ascent that it is nearly unheard of even today, according to Colvin. For each of his career advancements, from chief engineer to

commanding officer of a nuclear-powered submarine, **Colvin was interviewed by Rickover, who handpicked every officer for the Navy’s nuclear program**.

While attending UNM, Colvin worked nights for **Eberline Instruments**, a company that made radiation detection equipment and other components. His job was to calibrate and repair the company’s digital equipment for **Sandia Laboratory** (which became a national lab in 1979) and **Kirtland Air Force Base.**

Colvin finished school in 1969 at age 27, and upon graduation he was sent to the Navy’s nuclear power school in Vallejo, Calif., for six months of training, and then to another six months’ training on a prototype reactor in Idaho. After that, he was assigned to a submarine docked at Pearl Harbor, Hawaii.

The Navy turned out to be “a great path” for Colvin, he said, adding that it was tremendously hard work, but rewarding. The biggest difficulty was the family separation. “There were times when I was gone for a year at a time without coming home,” he said. “I would come home to Hawaii and would be there for a month. The next thing you know I would come home at night and say, ‘Honey, I’m leaving in the morning.’ ‘Where are you going?’ ‘I can’t tell you.’ ‘How long are you going to be gone?’ ‘I don’t know.’ It was really hard, especially on the family.”

Musical roots

Colvin was born in November 1942 in a small town in Oklahoma, where his family was in the business of bottling the Dr. Pepper soft drink. When Colvin was three years old, he and his mother traveled by train to California to visit his father, who was serving in World War II. On the way, Colvin played with a little girl who became violently ill during the trip and had to be taken off board. Two weeks later, Colvin came down with polio, and he was paralyzed from the waist down on his right side for

about three years. “I was in the hospital for about six months, and in the pool every day for therapy,” he said. “I got shots every day, and I wore braces for several years. I’m really lucky to have come out of it.”

Colvin grew up in California’s San Fernando Valley, in the Tuluca Lake–North Hollywood area. His entire family—his mother, father, stepmother, stepfather, aunts, uncles, and brother—were performing artists, either actors, actresses, dancers, or musicians. His father was a musician for Paramount Studios, and his mother played the marimba. And the man who became Colvin’s stepfather, Earl Hatch, was known as the unofficial “father of the marimba” in the United States. Hatch brought the marimba into prominence, and for many years he worked for Disney, doing percussion for the movies Fantasia, Snow White, and other classic Disney films.

Colvin's sister was a harpist, and his brother played the upright bass. Colvin's parents required that he take piano lessons. "We lived in the back of a large music studio," he said. "Every morning I would get up an hour earlier than any of my friends and go into the studio to practice classical music on a concert grand piano. My stepfather would lie in the back with his eyes closed, critiquing every note I played."

Colvin took piano lessons for nine years, and although he can read notes well, he admits that he plays mechanically, not artistically. His brother, on the other hand, studied piano for only one year, but he became a professional musician, playing with the band Three Dog Night and artists Madonna and Dan Fogelberg, among others.

Colvin himself also rubbed elbows with Hollywood celebrities. **He helped cut the grass at the home of Bob and Dolores Hope**, and he grew up around the corner from Annette Funicello, who was a good friend.

His wife's real name is Carole Anne, but she goes by "Bunny." She was born around Easter time, and when her parents brought her home from the hospital, her older brother said, "She looks like a little bunny!"

The name stuck. Bunny grew up in the South, and everyone in her family has a nickname. Her older brother is Bubba, her sister is Treatie, and another brother is known as Fella.

While Colvin was going to the Navy's "A" school in Virginia, he worked part time at a race track that featured go-karts that traveled 60 to 70 miles per hour on the straightaway. He got to know a family that frequented the track—a husband and wife with two young children. Another occasional visitor that Colvin chatted with was a blond teenage girl who drove a Karmann Ghia.

One night the family invited Colvin to their home for Sunday dinner. After they finished dinner and he was about to leave, the blond girl walked in the door. It turned out to be Bunny, the family's oldest daughter.

Colvin and Bunny started dating, and they married in 1962, when he was 19 and she was 16. They have been married 48 years. Two months after their wedding day, Colvin went to sea for about three months.

It was **mid-October 1962, the time of the Cuban Missile Crisis, a confrontation between the Soviet Union, Cuba, and the United States. In September 1962, the Cuban and Soviet governments had begun to surreptitiously build bases in Cuba for a**

number of ballistic nuclear missiles with the ability to strike most of the continental United States. The United States announced that it would not permit offensive weapons to be delivered to Cuba and demanded that the Soviets dismantle the missile bases under construction or completed in Cuba and remove all offensive weapons.

"I was out at sea, and my new wife was back at home," he said. "At that point, it was really tenuous. We figured that if we had to launch missiles, we would survive, but no one else would. Psychologically, it was a troubling dynamic."

The Colvins have two adult children. **Daughter Melissa lives in Washington, D.C., and is the head of sales and marketing for Urenco, the European uranium enrichment company.** She and her husband, Chris, a marine biologist who works for the Pew Foundation, are the parents of the Colvins' 13-year-old grandson, Devon. The Colvins' son, Bob, lives in Boulder, Colo.

NEI involvement

In the early 1980s, as Colvin's Navy career was winding down, he interviewed with Stone & Webster Engineering in Boston, but he leaned more toward working for the new **Institute of Nuclear Power Operations (INPO)** because it seemed to be a natural fit for him. **During his final two and a half years in the Navy [in the early 1980s?], Colvin was on the Nuclear Propulsion Examining Board, a group of 16 hand-picked officers who went out in teams to evaluate the safety of every U.S. Navy nuclear ship, submarine, and shore base around the world. Colvin says it was a great experience.**

"It was interesting to me because nuclear submarines—the reactors and the operations— are very standard," he says. "And yet, you would go onboard this ship versus that ship and you could see how differently they were operated, how successful or unsuccessful they were. It was all basically because of management. It was all because of the people. The differences had to be the people, because the processes, procedures, and manuals were all very strict. That was eye-opening to me."

The examining board was feared by the rest of the Navy, Colvin said, because it had total autonomy. "If we thought a ship or submarine was not operating safely, we would have it returned to port and shut down, and typically the commanding officer would be relieved," said Colvin, adding that the board was essential to preserving the safety of the operations of the ships.

[1983/1984-ISH : Joseph F Colvin joins Institute of Nuclear Power Operations (INPO)]

After the Three Mile Island accident in 1979, the nuclear power industry decided it needed something similar to the Navy's board to look at the safety of nuclear plant operations and increase the level of operations above that required by government

regulations. That effort led to the formation of INPO [**Institute of Nuclear Power Operations**], headquartered in Atlanta, Ga. "I went to work there in the early stages and helped get INPO off the ground, running the Operations Division," he said. "We'd look at the operations of a plant, the senior reactor operators, reactor operators, and all that side of the business." Later, he took over the Technical Support and Design Engineering side of INPO, which involved the engineering work process. After that, it was over to the Construction Project Evaluation Division.

By 1984, the interface between the industry and the government regulators—the Nuclear Regulatory Commission in particular, according to Colvin—mainly involved the vendors—"the Westinghouses, the General Electrics, and the Babcock & Wilcoxes"— with little participation from the utilities. Yet, Colvin said, in the aftermath of the TMI accident, the utilities were being asked to do things at nuclear power plants that didn't make sense. "It was a flood of requirements and changes," he said. "One change would be ordered, but then another course was set soon after that. It was just dragging the industry down."

So INPO helped set up a group called the Nuclear Utility Management and Human Resources Committee (NUMARC), which consisted of a representative (usually the president or chief executive officer) from each of the 55 nuclear utilities that existed at the time. "We got all 55 of them together and said, 'We have to take charge of our destiny,'" Colvin said. It was the beginning of the industry's becoming responsible for its future.

The effort worked so well as a committee that it was decided in 1986 to set it up as a permanent organization, also called NUMARC, in Washington D.C. Colvin established the new organization and was charged with running it. Other industry initiatives also were changed—the Atomic Industrial Forum was dissolved and the U.S. Council for Energy Awareness (USCEA) became more of a public group. Then **in 1994, NUMARC and USCEA were combined into the new Nuclear Energy Institute. Colvin was named executive vice president and chief operating officer.** Phillip Bayne, a utility CEO, was named

president. In 1996, Colvin took over as president and CEO of NEI, and he stayed there until his retirement in 2005.

The highlights during his time at NEI include the work done to find a solution for high-level waste—the now-canceled Yucca Mountain repository; the involvement in license renewal for power plants, doing all the analytical work along with the Electric Power Research Institute to get the plants ready to extend their lives; promoting new reactor designs in anticipation of the new nuclear build, including the changes to legislation and the regulations in 10 CFR Part 52, which spells out the licensing procedure used for all the new build; and improvements in the regulatory processes between the industry and the NRC.

Most of Colvin's time in his later years at NEI involved working with the political system, talking with senators, congressmen, and various committees. "I probably spent 75 percent of my time dealing with the administration or on Capitol Hill, looking at how to bring about positive change to the industry," he said.

One major change for the industry will come when new reactors are built. Colvin said that he thinks that utilities are going to line up for new plant orders after the first one is constructed in the United States. "Once the decision is made to build the first plant and we show some real success in that we can actually make these regulatory systems work efficiently, then there is going to be a tremendous queue," he said. But, he added, everybody wants to be second. "They don't want to be first, because of the huge risk."

A new nuclear plant will cost $8 billion to $12 billion to bring on line. If a utility has a market capitalization of $35 billion, investing in the new plant will take one third of it. "The decision for the utility's board is

going to be a tough one," he said, "which is why we need the incentives that the government is offering, such as loan guarantees."

Regarding new reactors, Colvin said that ANS supports all of the new reactor designs. "It's not up to the society to pick a technology or reactor size," he said. "We need to provide the technical and scientific support so that all the designs have an opportunity to be successful."

Colvin said that he is confident that the lack of a national repository for spent nuclear fuel is not going to be an issue for the new reactor builds. "We can store this material safely at the sites," he said. "Most of the people I talk with at the utilities don't see that as a significant issue."

He said that there is an interesting dichotomy in shutting down the Yucca Mountain Project and at the same time needing more nuclear power plants because of climate change. "Nuclear has a great opportunity today because of the recognition of its importance to climate," he said. "I think that's going to overshadow a lot of what is going on regarding the waste issue concern."

Also a boon for nuclear is the prospect of the tax base and the jobs created in local populations through the construction of new nuclear plants. "If you take Calvert Cliffs in Maryland as an example, they are talking about building a U.S. EPR. There are going to be 4000 construction jobs over a period of about six to seven years in that area, and about 400 to 500 permanent jobs," he said. "Calculate the economic benefits to that community. The people who live in the area already see it because of the existing Calvert Cliffs plants. Hearings were held about the new reactor build in that area a while back. Antinukes who came in from outside the local area were shouted down by the public. The people said, 'This is our plant. This is our area. You go home.'"

Colvin said that for every population center around the existing plants, public sentiment is the same. "We're going to build all the first new plants at existing power plant sites," he said. "I'm very optimistic. In my view, the local population is going to be very supportive and is not going to have an issue that would cause the new plants not to be built."

In the 1960s and early 1970s, ANS played a major role in the licensing of the current fleet of nuclear power plants, Colvin noted. "The nuclear expertise resides in the industry," he said. "All of our scientists, engineers, and technical people that are involved are the heart of the society. In the early days, those people were called upon to support the society, and they were very active in supporting it. Recently, however, this hasn't been the case because new plants haven't been built."

Colvin said that he remembers being visited by various ANS presidents over the years when he was with NEI, and each one would have a different agenda for what they intended to do while in office. Then came Don Hintz, ANS's 2007–2008 president, who established ANS's Utility Integration initiative to get utilities more involved in the society. Since then, for continuity's sake, each of the succeeding presidents—Bill Burchill, Tom Sanders, and now Colvin— has agreed to maintain society programs and activities in a continuum.

ANS has to be viewed as the "go-to" place for independent scientific and technical input, Colvin said. "ANS can't be political, and it shouldn't be," he said. "ANS's views can be heard by the policymakers, but they should be independent views."

Colvin thinks that there is an opportunity to ratchet up the involvement of ANS's local and student sections. "I go to local section meetings and ask the attendees when was the last time they invited the city's mayor. It usually turns out that the

mayor was never invited, nor were the local officials or the newspaper editors," he said. "They should be invited, not to twist their arms on something, but to put a positive face on the industry."

[...]

1948 (Nov) - Joe Colvin's father to re-marry (to Gladis Gardner)

Joseph Frederick Colvin's father, also Joseph F Colvin (born 1920), remarries in November 1948 to Gladis Garder . Full page : [HN00L8][GDrive]

Tulsans' Son to Wed Fellow City Slicker

HOLLYWOOD, Nov. 29—(AP)—Gladis Gardner and Joseph F. Colvin, both members of Spike Jones' City Slickers group of entertainers, will be married here on New Year day.

The bride's identical twin sister and partner, Gloria, will be maid of honor. The groom's parents, Mr. and Mrs. S. W. Colvin, are expected to fly from Tulsa, Okla., for the wedding. The bride resides here with her parents, Mr. and Mrs. Lyman K. Gardner.

Nov 30 1948 - Daily Oklahoman pg 13

[HN00L9][GDrive]

Info on **Gladis Garder** - [HW001M][GDrive] : "***Gladis Gardner*** *was born on November 2, 1929 in Lansing, Michigan, USA as Gladys Gardner. She was an actress, known for Heart of the Rio Grande (1942). She died on February 11, 1981 in Los Angeles, California, USA."*

Source - [HX000G][GDrive]

Joe F. Colvin joined the Board of Directors in 2008. He is a former senior executive with more than forty (40) years of experience in the nuclear energy field. Mr. Colvin serves on [...] the Board of Directors of the ***School for Advanced Research****, a non-profit organization whose mission is to conduct innovative research and public education focused on the study of human societies (2016). He previously served as a director of* ***Cameco Corporation (1999-2015****) and the* ***American Nuclear Society (2007-2012),*** *an organization in which he served as President from 2011-2012. He is also President Emeritus of the* ***Nuclear Energy Institute, Inc. ("NEI"),*** *serving since 2005 and previously served in various executive positions with the NEI, including President and Chief Executive Officer (1996-2005) and Executive Vice President and Chief Operating Officer (1994-1996). Mr. Colvin previously held senior management positions with the Nuclear Management and Resources Committee and the Institute for Nuclear Power Operations. Mr. Colvin served twenty (20) years as a line officer with the U.S. Navy nuclear submarine program.*

http://cdn.ans.org/about/presidents/docs/joe-f-colvin-bio.pdf

Joe Colvin

[...] Colvin served on the board of the American Nuclear society from 2007-2012 and served as the President of the Society from 2011-2012, managing the industry's response to the nuclear accident at Fukushima in Japan. Colvin is President Emeritus of the Nuclear Energy Institute, Inc., NEI, serving as its President and CEO from 1996-2005. He previously held senior executive positions with the NEI, the Nuclear Management and Resources Committee and the Institute of Nuclear Power Operations. He also served over twenty years as a line officer in the U.S. Navy nuclear submarine program.In 1969, Colvin earned a BSEE from University of New Mexico and graduated from Harvard's School of Business' Advanced Management Program.

1960s - Colvin Nurseries (in Malibu Beach)

Evidence can be found in this 1960s newspaper - [HN002R][GDrive]

Networks Chiefs View Outlook for Next Year

Continued from 3rd Page

(on Broadway) he figures he should have an Oscar for every appearance . . .

GOLDENSON — There will always be room for first-rate comedy as there is for first-rate adventure or action or any kind of show . . .

Q.—Any chance for the return of drama on a regular basis?

GOLDENSON — The success of the Untouchables is leading us toward documentary drama in the hour form, such as the new hour-long Naked City and the Roaring 20s. Also, hour dramatic series with exotic backgrounds in the manner of Adventures in Paradise — on tap are Hong Kong, Surfside 6 and the Islanders. We also have plans for a half-hour dramatic series with Bill Orr of Warner Bros. as host . . .

AUBREY — I would love to see live drama return to CBS. As it is, the major dramatic specials such as the Du Pont series and some special Playhouse 90s are on the schedule. Also, there are plans for GE Theater to do six hour programs as well as its half-hour dramas.

COURTNEY — Hallmark Hall of Fame is planning at least two two-hour dramas — "Macbeth," to be made in Scotland, and "Show Boat." There will be other dramatic specials and the possibility of a return of Omnibus with its occasional dramas. We're adding Barbara Stanwyck's half-hour dramatic series to the schedule next year.

Q—What of public information shows?

AUBREY — We plan more than ever before — and in prime time. We will do at least 26 CBS Reports. We're moving Face the Nation to Monday nights.

GOLDENSON — John Daly will do at least one special news report a month next season in prime time, interrupting regular programing . . .

COURTNEY—Our primary plan is for the new hour Meet the Press on Saturday nights for the eight weeks preceding the convention. World Wide 60 and special reports will continue . . .

Q—What do you believe is the most significant change in regular TV programing?

COURTNEY — Possibly the drop in favor of the musical-variety program. Still, we feel that Dinah Shore and Perry Como may regain their popularity. They will be back . . .

GOLDENSON — TV moves in cycles—as does the entire entertainment world. We at ABC want to be ahead of these cycles . . . as does the entire entertainment world. We at ABC want to be ahead of these cycles . . .

AUBREY — Networks need to be masters of their own houses, to supervise closely the programs that go over their channels—to insure that such events as the quiz scandals cannot happen again . . .

And what does all this mean to the casual TV observer?

It would seem to me that television after the year of the special is leaning more and more toward routine programs. The outlook is rather bleak at the moment — but there's many a TV slip between spring and fall.

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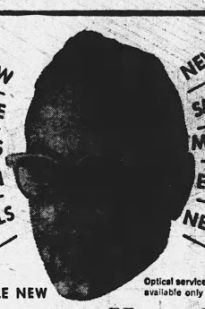

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RIVERSIDE 4117 Main Street OVerland 3-8130
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La Mirada Nursery, 14141 Rosecrans Ave.
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Marsh's Nursery, 150 North Lake Ave.
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Altadena Nursery, 1968 N. Lake
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Arcadia Garden Center, 145 E. Huntington Dr.
Green Spot Nursery, 600 Foothill Blvd.
Hansen's Highland Nursery, 820 Highland Ave.
Hal's Water Garden, 6224 San Gabriel Blvd.
Bindy's Patio & Garden Supply, 2102 E. Huntington Dr.
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Tustin Avenue Nursery, 13862 S. Tustin
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RIVERSIDE AREA
Stover's Nursery, 2340 California Ave.
SANTA BARBARA AREA
La Sumida Nursery, 3880 State Street

Father - Joseph Frederick Colvin (born 1920)

Born May 20 1920 ; Died August 23 1987 (age 67) in Malibu, California. See [HL002F][GDrive]

[HL002G][GDrive]

The Wikipedia Page for 🔵**Spike Jones and his City Slickers** (Saved version, see [HK0016][GDrive]) lists ***"Joe Colvin***" as a prominent band member (and trombonist) in the 1940s.

See [HW001N][GDrive]

*This Midwesterner began his professional music career on the USO circuits during the second World War, backing up the likes of **Jan Savitt** and **Frank Sinatra**. When peacetime came, he started teaching music, but left this sedate environment to become one of the **City Slickers**, under the direction of **Spike Jones**. He stayed with the group from 1947 through 1952, and was part of the "milkshake band" that came into power once Jones decided he'd reached his limit with alcoholic sidemen. Other players who were enlisted in the band as part of this new regime included Roger Donley on bass and tuba, drummer Joe Siracusa, saxophonist Dick Gardner, and pianist Paul Leu. This version of Jones' band was solidly into pranks, some of which were choreographed into the show and others that happened as a total shock to some. Colvin's mastery of the fine art of trombone techniques hadn't quite prepared him for responsibilities as a City Slicker, which included rigging his pants to fall down and come back up in synchronized time to sound effects he was making on the trombone. Most of Colvin's musical responsibilities were related to executing various parts of the arrangements, with little solo space. In fact, his only nightly solo was a four-bar spot during one of the numbers that featured a female vocalist. Colvin's ability to execute this solo spot properly was, in his mind, badly hampered by the fact that sitting next to him on the bandstand was the grinning, obnoxious banjo player Freddie Morgan. Whatever Morgan decided was the appropriate thing to play on banjo during a trombone solo, Colvin didn't like it. He wound up having to bribe the banjo player to lay off during the solo. The two players arrived at a nightly fee of one dollar. The arrangement was Colvin had to lay the dollar bill on Morgan's music stand. Then, when the trombone solo came up, the banjo player would instantly stop his plinkety-plunking. When the trombone solo was over, the banjo would come back in. Acknowledged as a skinflint when it came to financial matters, leader Jones perhaps took pity on the trombonist having to shell out bucks from his own pocket in order to clear up the solo space. When Jones created a polka project in the early '50s, he factored in a lot of solo space for the low horns of Colvin and Donley, perhaps a bit of a polka payback for the payouts. Colvin played on many of the elaborate and amusing Jones recordings from this period, including "Morpheus," "Dance of the Hours," and the band's satire of "Ghost Riders in the Sky."*

*Colvin also worked in the band of self-described mambo king Perez Prado. **After the '50s, the trombonist retired from the music business, going first into a restaurant franchise and then into a succesful nursery.** He was married to **Gladys Gardner**, one of Jones' Slickettes.*

I think this video has Joe Colvin on trombone - https://www.youtube.com/watch?v=I1583adUqSg .

Mother - Carol Culp (April 11 1921 to July 25 2015)

See [HL002E][GDrive]

***Carol Culp Colvin Hatch**, 94, passed away in total peace in her home in Santa Fe on Saturday, July 25, 2015, as the dawn broke over the Sangre de Christo Mountains. **Carol was born on April 11, 1921, at the Culp family ranch in the panhandle of Western Oklahoma, nearest the prairie territory now called Elk City**. Growing up on the ranch and then in the town of Drumright, Oklahoma, she later attended Oklahoma A&M, now Oklahoma State University. She had a distinguished **career in California as a professional musician and later as a theologian**. In her music career, she played the marimba and had the pleasure of working for the Disney Studios and playing in the Disney orchestra on some of the classic Disney movie themes and scores. Even up to the time of her passing, she continued to play her marimba in her home for friends, awing them on her ability to handle four mallets at a time. **She later became associated with Drs. Ernest Homes, Norman Vincent Peale and William Hornaday and studied their teachings as a practitioner at the Founders Church of Religious Science in Los Angeles**. In 1984, she was awarded an honorary Doctor of Humane Letters degree for her studies and contributions to the church. Carol was very involved in charitable activities, serving as the president of the Junior Women's Club in California, supporting charitable organizations in California and also involved in raising major contributions to national organizations such as March of Dimes and American Cancer Society. Carol loved automobiles, mainly her 1974 Porsche "Blue Bird" which she drove on the freeways of Los Angeles for more than 14 years. She was so enamored by cars that when she was going on her first trip to Europe, her only expressed wish was to visit the Porsche, Mercedes and BMW factories, although Vienna turned out to be her most beloved city. Carol was a wonderful and gracious person whose smile lit up a room and whose optimism and positive attitude enveloped everyone she met. Carol was preceded in death by **her parents C.P. Culp and Edna Culp**, her younger brother Charles Culp, her first husband Joe Colvin and her second husband, Earl Hatch. **She is survived by her son, Joe Colvin and wife Bunny, her son Kerry Hatch, her daughter-in-law MaryKate McGeehan, her grandchildren, Melissa Colvin Mann and husband Chris Mann, Robert Colvin and Katy Hatch and her great-grandson, Devon Mann**, her special friends Barbara Hefner and Claudia Monteiro and her many other treasured friends in Santa Fe. Carol will be buried at Forest Lawn, Hollywood Hills, next to her husband Earl Hatch in a private family ceremony. [...]*

Stepfather - Earl Hatch

See [HX000H][GDrive]

Historical Analysis

When Earl Hatch was born, it was in Greely, Colorado on August 24, 1906. He grew up in a musical family and was surrounded by the arts in everything that he did and that his friends and family did. He started as a percussionist at 6 years old. He played snare drum and trap drummer, which I am assuming to be drum kit, or accessories for the Theater Orchestra at age 10. He was extremely talented and really could make anything out of not much. The first time that Hatch played marimba for a solo piece was with the pit orchestra at the local theater. That is really, where his performance lifestyle began. Actually, during a performance, he was not holding onto his mallet very well and let it go. The mallet hit one of his audience members between the eyes and created a name for himself in the newspaper. They called him, "Dead Eye, the Mallet Slinger".

At age 15, Earl Hatch started to learn piano, all different styles, but what he was very good at was jazz. He went on the road with a six piece jazz band as their pianist. As he grew up, he learned more and more about percussion and the capabilities that he had to make beautiful music. I do not know where he attended college, but I am guessing that he studied composition because he went on to write over 600 published pieces of music. He wrote so many solos and arrangements that he did not know what to do with them. Hatch created his own private library. After his death, on November 5, 1996 in North Hollywood, California, he left his private collection to some close friends and family who finished publishing his compositions and making them available to the public. Just before he passed away, Hatch was given an Honorary Doctorate of Music in February 1988. Dr. Hatch was 90 years old when he passed away and because of all of his great accomplishments, his compositions still stay and are being played by musicians everywhere. Dr. Hatch helped bring up so many great professional players all over the United States.

While Dr. Earl Hatch was still alive, he accomplished a great deal, other than just writing a multitude of percussion pieces. He played with Walt Disney percussion, the management jobs, and played and managed at other movie companies as well. He even designed his own personal bass marimba. This sound can be heard specifically in the originals of "Dr. Zhivago", "Sound of Music", and "The King and I". A bass marimba is a smaller version of a marimba, it only has 1-2 octaves, but the wood that it is made of is either quarter saw wood, mahogany, or ash. These marimbas can be made by almost anyone, many instructors with their own private studio have either bought one, or made their own. Many of these instruments are formed into a fan shape. To be able to reach all 10 notes and still play with accuracy, that shape seemed to make the most sense. This marimba is truly one of a kind and it is very hard to properly construct or even play with a good sound, but it is possible. Dr. Hatch was even a Honorary Member of the Japan Xylophone Association.

Dr. Hatch was even a part of expanding the marimba size. He helped conceptualize that if we want lower notes, then we need bigger bars, which means we need bigger resonators. The project of helping with marimba designs was very exhausting for Hatch, but he remained teaching and educating future musicians to become great people and do great things with their life, as he did with his.

When S. Kumada helped take over Dr. Hatch's publication business, he created a website to help get the word out about his pieces. He now supervises the EHP Publication music handling shops at the address he posted. "Earl Hatch Publications 5008 Auckland Avenue, North Hollywood, California 91601". However, right now, there are only 150-200 marimba solo pieces assumed to be existing in the library.

[...]

Housatonic

Computer Center Corporation (Seattle)

Wikipedia Computer Center Corporation

Founders included :

1. Dr. David Bliss Dekker (born 1919)
2. Carl Garland Young (born 1926)
3. Monique R Rona (born 1928)
4. Thomas Paul Rona (born 1923) (did he help provide financing?)

Key employees :

1. Stephen Russell (born 1937)

Noted customers :

1. Gary Arlen Kildall (born 1942)
2. Paul Gardner Allen (born 1953)
3. William Henry Gates III (born 1955)

Saved Wikipedia (2020, Oct 22) - "Computer Center Corporation"

[HK003G][GDrive]

This small Washington state company offered time-sharing on a PDP-10. Its customers included Bill Gates and Paul Allen.[1]

Nicknamed C-Cubed, this company was founded in 1968 and closed in 1970.[2][3]

Misc

Two other companies, both based in New Jersey, used similar names.

References

- ^ Petersen, Julie K (2002). *The Telecommunications Illustrated Dictionary*. CRC Press. p. 563. ISBN 978-0-8493-1173-4.
- ^ http://www.freeinfosociety.com/article.php?id=74

1967/1968 - Were Thomas and Monique Rona the "brains" behind Computer Center Corp? Did Thomas Rona help finance the company?

See The New Face of War: How War Will Be Fought in the 21st Century Paperback – October 26, 2007

By Bruce D. Berkowitz

- Amazon purchase : https://www.amazon.com/New-Face-War-Fought-Century/dp/1416584528
- 2003 version : https://archive.org/details/newfaceofwarhoww00berk
- My purchase, 2007 version, text)(chapter 3, below) - [HB004Y][GDrive]

Chapter 3 “THEY ARE ALREADY AMONG US”

[...] Tom and Monique began moving farther and farther west to escape the chaos and constraints of the Old World—first to Montreal, then to a junior faculty position for Tom at the Massachusetts Institute of Technology. By that time he and Monique had three sons and a daughter. **An assistant professor at MIT earned an annual salary of $2,400, so money was tight. Tom heard about an opening for a staff scientist at Boeing. He and Monique flipped a coin. Boeing won, and they piled the four kids in the car and began the drive to Seattle. Tom reported to work, and Monique got a job at the University of Washington.**

It’s hard to tell if Rona ever actually used his engineering degree at Boeing, at least in the sense that he never designed a bomber or missile. Officially he was a senior scientist. Defense contractors like Boeing charge the government an extra fee beyond the basic materials and labor it takes to build a B-52 or an air-launched cruise missile. This money goes into an account for preparing bids and proposals (B&P, in defense contractor jargon), which Boeing used to pay for most of Rona’s salary.

The idea was that Rona would develop new ideas for using military hardware—hopefully, new Boeing hardware. In any case, Rona effectively had a license to look at any technology or topic that seemed interesting and was a potential market for Boeing. It was almost as good as being a professor at a major university, if not better.

People were still trying to assimilate the lessons of World War II when Rona arrived at Boeing. The war was just ten years past, and everyone was still trying to figure out the legacy of what Winston Churchill called the “wizard war”—the contest of electronic weapons and countermeasures.

The British had learned the hard way just how complex this game could be. **Electronic warfare had become a critical factor in World War II during the Battle of Britain.** In 1940 émigrés who had escaped the Continent told British intelligence that the Germans had developed some kind of “beam” weapon. At first the Brits thought this might be a ray gun that could shoot down aircraft by electronically frying their ignition systems; the refugees had talked about the Germans’ testing a “beam weapon that stopped cars.”

[...]

In the 1960s a new technology began to drive the Seattle economy: computers. Up to then, computers were scarce and expensive, and could only run one program at a time. **Then in 1957 a young mathematics graduate student named John McCarthy proposed a revolutionary idea: time-sharing, or having a single computer run several programs simultaneously.** This completely changed the computer business and, by extension, Seattle.

McCarthy, who was visiting MIT on a fellowship at the time, observed that the slowest part of a computer system is always the person operating it. We work at human speed; the computer works at electronic speed. The computer requires just milliseconds to run a typical calculation. McCarthy, later a distinguished professor in computer science at Stanford, realized that if you can collect computer jobs from many users, the computer can electronically rack-and-stack the jobs as they arrive, perform the operations as capacity becomes available, and thus run more or less continuously. 3

A Teletype—a typewriter that transmits a different electronic signal for each character in the alphabet—made it possible to do all this from miles away. The basic idea for the Teletype had been kicking around since 1909, but it was not until 1931 that the Bell System had introduced it into computers.

It did not take long for some early entrepreneurs to put all the pieces together and see a business opportunity. One could buy a computer, hook users into it with Teletypes, and sell portions of the computer’s capacity to companies that couldn’t afford to buy their own.

Time-sharing became popular at universities, which typically had two or three large computers located somewhere on campus, and tens of thousands of faculty and students who wanted to use them. So it was little wonder that many of the people who tried to get into the timesharing business were college staff, like Monique Rona.

By then Monique had expanded her repertoire from oceanography to computer science. Soon she found herself running the university’s computer center. Tom helped with the financing and Monique got together with some university colleagues to buy a Digital PDP-10. They set up the Computer Center Corporation—C-Cubed, for short—in an office near the campus. Monique put a Teletype on the kitchen table, and they were in business.

[...]

Boeing published Rona’s monograph in the summer of 1976 as a “think piece” for company staff and customers. Tom Rona was the first person to use the term “information war” in print. Considering that the Internet was still thirteen years away and a “home computer” was something you built from a box of components with a screwdriver and a soldering gun, it was not a bad piece of prognostication.

1968 (August 14)

Full newspaper page : [HN01AV][GDrive]

1968-08-14-the-seattle-times-pg-35-clip-computer-center

Computer Firm Formed

A new computer firm, the Computer Center Corp., has been formed by four University of Washington specialists, it was announced today.

Carl G. Young, director of operations at the university's computer center since 1965, has resigned to become president of the new company, which will specialize in service to scientific firms and industries on a time-sharing basis.

Quarters have been leased in the former Dresslar-Waesche Building at 4057 Roosevelt Way N. E.

Dr. David B. Dekker, who has been faculty director of the University Computer Center since its establishment, is vice president of the new firm.

DEKKER will serve in a consultant capacity during the school year and continue on the university faculty as an associate professor of mathematics and graduate-program adviser in computer sciences. He has resigned his position with the University Computer Center.

C. G. YOUNG

DR. D. B. DEKKER

Richard G. Hamlet, chief systems programmer at the University Computer Center, and Monique R. Rona, chief scientific programmer at the center, have resigned their university positions to join the new firm.

A fifth incorporator is Richard L. Wilkinson, formerly Northwest sales manager of the Digital Equipment Corp.

TIME-SHARING of the capabilities of large, fast and complex central processors will be the principal mode of operation of the corporation, Young said.

The company plans to sell computer time via common-carrier lines from teletype machines or other electronic typewriter devices situated in customer offices.

The user will be able to communicate data directly to the computer and receive almost instantaneous reply in his own office.

The Computer Center Corp. plans to be in operation about November 1.

Westside S & L Leads July Gain

Westside Federal Savings & Loan Association in July led a local reversal of the usual July trend toward a decline in net savings.

Net savings rose only $200,000 last month in the 23 associations affiliated with the Seattle League of Insured Savings Associations. Westside, a member of the association, registered a gain of $433,000.

In 1966, when there was a tight money situation comparable to this year, league institutions suffered a July loss of $6.7 million.

[HN01AW][GDrive]

1969 (March 24)

Full newspaper page : [HN01BB][GDrive]

Gazette-Times, Corvallis, Oregon, Monday, March 24, 1969 9

Moore-Rane Buys Interest In Computer

Kenneth J. Bush, president of Moore-Rane Manufacturing Co., has announced the purchase of an interest in Computer Center Corp. of Seattle, Wash.

Moore-Rane Co. is a Corvallis-based firm which manufactures irrigation equipment, aluminum castings, and aluminum products for aircraft and automotive industries. It also produces cast aluminum products for electrical and marine operations. Recently the company started to produce houseware and giftware products.

Bush noted that this development program for the firm emphasizes further expansion of company interest.

Computer Center Corp. is engaged in the business of providing time sharing computer services and "batch" processing. Time sharing is a relatively new field in the computer services industry. It is designed particularly for those customers who require instant answers to problems and who cannot afford or do not wish to purchase or lease their own computers. It also offers an alternative source of computer service to those customers that already have their own computers.

The general classes of customers to whom the company will offer its services are engineers, architects, statisticians, state, federal, and local planning agencies, manufacturing businesses and schools and colleges.

The management of Computer Center Corp. consists of persons who were formerly on the staff at the University of Washington Computer Center. This list includes Carl G. Young, president and director; David B. Dekkar, vice-president, treasurer and director; Monique R. Rone, secretary; Richard L. Wilkinson, sales manager; Richard G. Hamlet, supervisor of systems programing and Robert E. Brine, consultant.

[HN01BC][GDrive]

1969 (May 25)

Full newspaper page : [HN01B9][GDrive]

Note : Kenneth Joseph Bush : https://pamplinmedia.com/obits/167-pt-obituaries/478422-386750-kenneth-joseph-bush

Statesman Journal (Salem, Oregon) · 25 Mar 1969, Tue · Page 23

Interest Bought

CORVALLIS (AP) —Kenneth J. Bush, president of Moore-Rane Manufacutring Co., has announced the purchase of a $50,000 interest in Computer Center Corp., Seattle. Bush said the acquisition was the first step in the developmental program of the company which makes irrigation equipment and other aluminum products.

[HN01BA][GDrive]

1969 (May) - Monique Rona is director of Applications Programming at C3

PDF of Datamation, May 1969 : [HP003Z][GDrive]

[HP0040][GDrive]

■ Computer Center Corp. is a new company in Seattle, Wash., offering time-sharing. Monique R. Rona is the director of applications programming.

1969-05-datamation-pg-155-clip-rona

[HP0041][GDrive]

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https://ia803000.us.archive.org/25/items/MyStuff205/Hard%20Drive-%20Bill%20Gates%20and%20the%20Making%20of%20the%20Microsoft%20Empire%20by%20wallace%20Erickson.pdf

do with computers," Allen said. "It was a vast area of knowledge we were trying to absorb. . . . Bill and I always had big dreams of what we could do with computers." While Allen liked to read magazines like Popular Electronics, Gates read the business magazines that came into his family's home. As a prelude to doing business in the "real world," Gates and Allen formed the Lakeside Programmers Group, along with two of their friends, Richard Weiland and Kent Evans. Weiland and Allen were in the tenth grade, while Gates and Evans were in the eighth grade. The Lakeside Programmers Group was dedicated to finding money-making opportunities to use The Machine in the real world.

"I was the mover," Gates said. "I was the guy who said, 'Let's call the real world and try to sell something to it.' "

As it turned out, the real world called them first. And what a deal it was—all the free computer time they wanted.

Founded by four University of Washington computer experts in the fall of 1968 with the backing of several Seattle investors, Computer Center Corporation was a private Seattle firm offering the largest concentration of timesharing computer power on the West Coast. The company (which Gates referred to as "C-Cubed") had leased several computers from Digital Equipment Corporation, including a PDP-10 like the one Gates and the other Lakeside students used.

Computer Center Corporation attempted to sell its timesharing services to scientific and engineering businesses in the region—or any other customer in need of computer power at an affordable price.

One of the firm's founders and chief scientific programmer, Monique Rona, had a son in the eighth grade at Lakeside—the same grade as Gates. She knew about the school's teletype machine and its deal with General Electric for computer time. A representative from her company contacted Lakeside to inquire whether the school would be interested in making a similar arrangement with Computer Center Corporation. The students would have an even greater opportunity to learn about computers, the representative argued.

Lakeside concurred, and once again asked parents to help pay for the computer time used by their sons.

Gates and some of the other boys soon discovered all kinds of "neat" programs hidden in the C-Cubed PDP-10 software— **programs they had not encountered with the General Electric computer**. One trick the boys learned was something called "detach and leave job running." This meant that even though they were logged off the system, the machine was still working on their program . . . and keeping a record of the computing time used. Computer bills soon ran into the hundreds of dollars.

"These kids were very hungry for time," recalled Dick Wilkinson, one of the partners who organized Computer Center Corporation. "Every time we would get a new version of software, they would go poking around in the system, and we would have to forgive some bills because they would be running programs they were not supposed to. They found chess on the system, when they should not have. So they would play a half game of chess, and then leave the Lakeside terminal and go off to class or something. They didn't understand they were using computer time like it was going out of style."

The electronic mischief eventually got out of hand. Gates and a couple other boys broke the PDP-10 security system and obtained access to the company's accounting files. They found their personal accounts and substantially reduced the amount of the time the computer showed they had used. They were quite proud of this ingenious accomplishment—until they got caught.

Wilkinson drove out to Lakeside for a talk with Fred Wright, the math teacher in charge of the school's computer project. Like naughty boys, Gates and the others were marched into the principal's office.

Paul Allen version of Bill Gates / Paul Allen intro to C cubed :

Notes:

1. No mention of Monique Rona at all, anywhere in the book ... he should have known... big detail to omit !!!
2. Makes case that they (paul allen and bill gates) are very very smart

[...]

Within a month [in September 1968], we'd run through the Mothers Club's budget for computer time for the year, so they allocated a little bit more. In early November, as computer blackjack began to pall, **I got news from Harvey. A time- sharing company had opened in Seattle's University District. It needed people for acceptance testing of its new- model leased computer, a Digital Equipment Corporation PDP- 10.**

The next night I asked my father to take me to the Computer Center Corporation, a ten-minute drive from our home. I peered through the plate glass, into a room that never went dark, at the mysterious puppy in the window: a black mainframe with cabinet after cabinet and panels of blinking lights. The CPU alone was about five feet wide. It was the first time that I'd seen an actual computer in the flesh, and it seemed not quite real that such a thing could exist just forty blocks from where I lived. All I wanted to do at that moment was log on, connect, and have at it.

Today's average laptop is thirty thousand times faster than the machine I was lusting after, with ten thousand times more memory. But in its day, the PDP- 10 was the most advanced species of an evolutionary alternative to the batch- processing establishment. Founded by Ken Olsen and Harlan Anderson, DEC made its first splash in 1960 with the PDP- 1, the first truly interactive, "conversational" computer. **Less than a decade later, the PDP- 10 became the mainstay for the Defense Department's ARPANET (the original Internet) and a time- sharing workhorse.** It ran faster than GE's system at Lakeside and had a broader software repertoire, including FORTRAN and other languages, plus a rich array of online utilities.

Fortunately for me and my fellow Lakesiders, this wonderful hardware all relied on a new operating system, TOPS- 10, that was apt to crash whenever it served too many users at a time. **Computer Center Corporation (which we'd call C- Cubed) had taken delivery of its leased PDP- 10 in October 1968, with a plan to start selling time in the New Year. In the meantime, their TOPS- 10 needed to be debugged before the paying customers arrived. As an added incentive for C- Cubed, its lease payments would be deferred until the software functioned reliably. The company needed somebody to push the system to its limit, which was where we came in.**

One C- Cubed partner was a Lakeside mother who'd heard about our little tech fraternity. A few days after my sneak preview, Fred Wright ushered us into the building to make introductions. A resident guru laid out the deal: We could have unlimited free time on their terminals, off-hours, as long as we abided by their ground rules. "You can try to crash the computer," he said, "but if it crashes from something you do, you've got to tell us what you did. And you can't do it again until we tell you to try."

The following Saturday, we met in the C- Cubed terminal

The Gary Kildall version :

see Gary Arlen Kildall (born 1942) / Gary Kildall's book "Computer Connections" (1994)

Notes:

1. Ridiculous scenario that company found Gates and Allen
2. This narrative sort of paints Gates and Allen as capable, but that they were being used as tools
3. Kildall definitely claiming turf - that the computer center was HIS friends

The Computer Center Corporation

I mention the Computer Center Corporation, or C-cubed, as it was called, because it predicated an interesting series of events involving Bill Gates, Paul Allen, and myself.

Dick Hamlet, Monique Rona, Carl Young, director of the UW Computer Center, and my undergraduate professor David Dekker started C-cubed. It was one of the first timesharing computer companies in Seattle and used Digital Equipment Corporation's DEC PDP-I Os. C-cubed, located near the UW, was in business for only a short time and folded.

C-cubed depicted the mentality of the late sixties. No one wanted to manage punched cards, nor did they wish to wait at the operator's door in favor of a sampling of program output. Instead, timesharing became the watchword. Remote access to the B5500 sparked Dick, Monique, and David's interest in creating the Ccubed business.

There were two kids from Lakeview High School who broke into Dick's DEC PDP-IOs and stole passwords. This way, they could hook up to Dick's computers from a remote teletype and use it for free. The two kids were Gates and Allen.

[OK - What are the odds that one of the company's FOUNDERS just happen to be a classmate and a computer-club-mate of Bill Gates / Paul Allen, who were the two kids who "hacked" the passwords? Remember .. they had only been using computers for a few weeks !!!!]

Don't vilify Gates and Allen for this activity. Breaking in was not that hard. It was like stealing candy from the comer computer store. And, it was theft of the very basic sort.

Dick was one of the best systems programmers I had ever run across, and it didn't take him long to discover the theft of time on his machines. He found the culprits and cleverly allowed Gates and Allen access to C-cubed, so that he could recode and test the operating system to help prevent illegal access.

Dick explained how Gates and Allen did it. It's fairly simple. They "logged-in" to his DEC PDP-10 system from a remote location using a valid account and password. A sample limited account was given to Lakeview students by C-cubed, mostly through Monique's interest in the school. Well, the DEC PDP- I 0 used virtual memory that swapped RAM to disk. This left data in memory pages that were given to other programs. Dick's machine wasn't heavily used, so most of memory had operating system data structures like passwords, still lying around in memory. Gates and Allen just dumped "pages" of reassigned memory to their computer terminal and watched for things that looked like passwords. Once they found a few. they simply used them at no cost to themselves. The reason that I consider this theft is that I, even being a very good friend of both Dick and Monique, could not afford to pay C-cubed timesharing charges, although, I sincerely wished to do so.

Dick found the Gates and Allen scam when a customer complained about a bill for services when, in fact, no services were rendered. He fixed it by zeroing memory pages when they were swapped out and released. That took extra computer time but stopped the banditos.

I was attending the UW then. I noticed a couple of kids programming at C-cubed one day. They were Gates and Allen. I ran into them then, and again several years later.

Stephen Russell version

1. It was al Monique Rona who found the kids
2. Doesnt speak super highly of the kids.. more or less of a cute story

[...]

Kossow: All these vertically stacked platters.

Russell: Yeah. That was not as reliable as was desirable. But the main struggle was we just didn't get enough business. And so eventually they went out of business. And at that point, I guess I had annoyed DEC sufficiently that they thought maybe I would be useful in marketing. And so I started working for Digital.

Kossow: There's the one little story that you had a couple of testers up in Seattle.

Russell: Oh yes, yes. We did have a testing program. Was it TOPS-10 by then? I'm not sure. **At any rate, the multi-user operating system for the PDP-10 was not a paragon of reliability. In fact, it started out with a pretty dismal mean time to failure. And so we had a couple of people working on basically fixing, full-time, fixing bugs in the operating system. And there was no real lack of bugs to fix. Monique Rona had— was one of the principles, and her son was going to Lakeside School. And so she arranged that we could— we give some time to the Lakeside School who had got a teletype**. And we also had built a training room which had six or eight terminal teletypes in it. And what we would do is on Saturdays especially, we'd open that up to the Lakeside students to come in and load test the computer. We wanted lots of people. And the rules were, you can do anything you want, you can try to break the system if you want. But if you do manage to break the system, you've got to tell us what you did and don't do it again until we tell you. And this was quite fruitful. We collected heavy load bugs this way. And two of the students were Paul Allen and Bill Gates. And they had to be admonished several times about the "don't do it again until we tell you" part of the rules. But they certainly had a great deal of fun and they evidently learned quite a bit.

Kossow: You remember anything in particular that they did?

Russell: No. They asked lots of questions. And one of the things that we would do at Saturdays was, Dick Gruen or I or somebody would be in the terminal room, or periodically stick our nose in the terminal room, make sure that the pandemonium was under control, and answer questions."

[...]

monique Rona version (from that book)

See Monique R Rona (born 1929)

1. Yea Bill gates and paul allen were smart, but Monique was totally in control

By then Monique had expanded her repertoire from oceanography to computer science. Soon she found herself running the university's computer center. Tom helped with the financing and Monique got together with some university colleagues to buy a Digital PDP-10. They set up the Computer Center Corporation—C-Cubed, for short—in an office near the campus. Monique put a Teletype on the kitchen table, and they were in business.

The PDP-10 had just hit the market. Being a new machine, it was prone to electronic burps and hangfires. The C-Cubed partners thought they might cut a deal where Digital would give them a discount on the computer if they worked out the bugs.

As it happened, one of the Rona boys attended the Lakeside School, a local private academy, and had heard of some classmates who liked to work with computers. **Some of the Lakeside moms had bought their kids a Teletype and a few thousand dollars of computer time from local companies with money raised from a rummage sale.** The moms hoped their kids might learn a few computer skills writing programs to play ticktacktoe and the like.

[Several THOUSAND dollars in 1960s is a lot of money]

The kids had other ideas. They began playing with the Teletype day and night, taking apart programs and writing some of their own. In no time they burned through the computer time their mothers had bought them and had to look for some new benefactors, **just when Monique was looking for some eager minds to test her PDP-10**. The boys cut a deal with C-Cubed: the boys would look for bugs in the PDP-10, and C-Cubed would give them some time on its computer.

Two of the kids, Bill Gates and Paul Allen, seemed to have a knack for computers. When the machine crashed, they would fetch the "core dump" from the trash and search through the machine language line by line to find the bug. They wangled operating manuals from the staff. Eventually the "Lakeside Programmers Group" came to know the insides of the PDP-10 about as well as C-Cubed did. So, when they ran out of their allotted time on the machine, they naturally took the simple expedient of fiddling with the computer's operating system to set back the clocks. Bill, Paul, and their Lakeside buddies Ric Weiland and Kent Evans were four of the earliest computer hackers. 4

Alas, the market for computer time-sharing never worked out as well as Monique had hoped, and C-Cubed eventually went broke, another case of roadkill on the path to IT riches. Gates and Allen went on to other ventures. **One was a new company, "Micro-Soft," which they incorporated in April 1975 to sell programs for the Altair 8800, the first personal computer.**

BITCHUTE @Housatonic YOUTUBE @HousatonicLive ODYSEE @Housatonic BRIGHTEON @Housatonic

Housatonic

George Henry Conrades (born 1939)

[HK004I][GDrive]

Wikipedia George Conrades

Born - 1939 (See "who's who" at ([HL0060][GDrive])

"Con-rad-es"

Worked at :

- **BBN Technologies, Incorporated**
- **GTE Corporation**
- **Akamai Technologies, Incorporated**

Associations

- William Pelham Barr (born 1950) (Barr was chief legal counsel at GTE while Conrades was a VP of GTE Internetworking, which was created from BBN Technologies, Incorporated where George Conrades was CEO)
- Daniel Mark Lewin (born 1970) (Co-foudner of Akamai Technologies, Incorporated)
- Frank Thomson Leighton (born 1956) (Co-foudner of Akamai Technologies, Incorporated)
- Paul Lewis Sagan (born 1959) (Akamai Technologies, Incorporated)

Saved Wikipedia (Jan 1, 2021) - George Conrades

[HK004H][GDrive]

George Conrades is the former Chairman of the Board and Chief Executive Officer of [**Akamai Technologies, Incorporated**]. Prior to Akamai, Conrades served as CEO of [**BBN Technologies, Incorporated**]. Before joining BBN he spent 31 years at IBM, running its U.S. and Asia-Pacific businesses and heading two manufacturing and development groups.[3]Mr. Conrades currently serves on the Board of Directors of Oracle Corporation,[4]. He has also served on the Boards of Ironwood Pharmaceuticals[5] and Harley-Davidson.[6]

Conrades was also an executive producer of the 2013 documentary film 20 Feet from Stardom, which won the 2014 Academy award for Best Documentary.[8] He is a Fellow of the American Academy of Arts and Sciences.[9] He is married to Patricia "Patsy" Belt Conrades.[10]

Career

Conrades spent his childhood in Youngstown, Ohio, during the 1950s. He planned to become a drummer.

In 1961, he received his B.S. degree in Physics and Mathematics from Ohio Wesleyan University, and received the M.B.A. from the University of Chicago Graduate School of Business in 1971.[9] He was going to join a rock band after his graduation, but took the position of a sales representative in Big Blue, Columbus, Ohio[*citation needed*].

After 10 years at IBM, Conrades got a sales management position in Chicago and inherited the company's fifth largest account, Sears, Roebuck & Co.

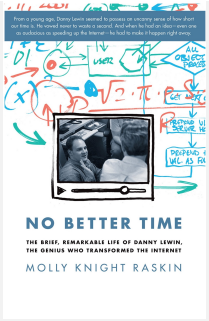
In 1971, he entered for the Executive MBA Program North America at Booth. The program provided broad perspectives of business.

The MBA helped Conrades to make a good career at IBM. He took top management positions at IBM for more than two decades. Conrades advanced to the rank of senior vice president and member of the Corporate Management Board. But by late 1980s, IBM faced contest in technological businesses. In 1992, Conrades left his top management position.

Conrades formed a technology consulting firm in the advanced R&D company Bolt, Beranek and Newman (BBN). The company was based in Cambridge, Massachusetts. BBN became an early internet service provider.[11]

1939 to 1990 : Early life and career : From 2013 - "No Better Time" by Molly Knight Raskin

PDF - made from recording, with OCR - [HB005L][GDrive]



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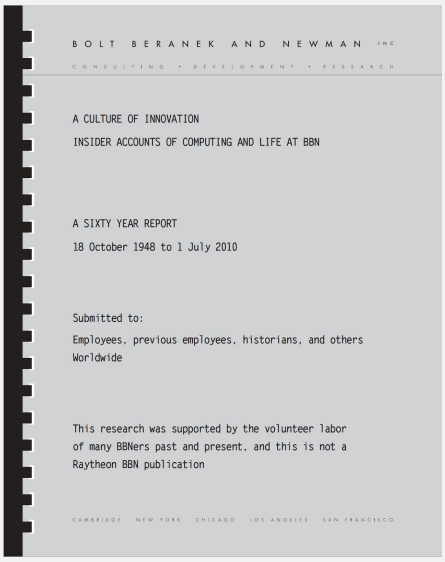
Pages 167 - 172 in OCR copy :

- [...] Conrades first laid eyes on a computer as a student in math and physics at Ohio Wesleyan University. Conrades, who graduated from the university in 1961, was then somewhat of a star on the university's campus. Handsome and charismatic, he served as president of both his fraternity and the student body.
- He played the drums in a rock 'n' roll band, which he described as "full of testosterone," and spent a lot of time in the physics lab trying to blow things up. But Conrades was also a standout student with a gift for both math and physics. So when the head of the school's math department decided to offer a computing course, Conrades signed up. Before he knew it, he'd learned to program one of IBM's earliest models, the 650. In his day, Conrades said, "No one had even heard of computers." With a love for motorcycles, hot rod cars, and "anything that moved," Conrades said that he took one look at the colossal machine with its blinking red lights and rotating magnetic drum and fell in love. With its relatively low cost and ease of programming, the 650 was marketed as a teaching computer to science and engineering schools across the country. Conrades became so skilled at programming that, before he graduated, some of the faculty members at Wesleyan approached him with a list of computer companies, including IBM, Honeywell, and NCR (National Cash Register Company). "They told me that I should interview at every one of them, and that I should be in technical sales," Conrades remembered. "I told them that I really wanted to make it as a rock star."
- Reason prevailed, however, and Conrades landed an entry-level job at IBM, which by the 1960s had burgeoned into a $1 billion business. Conrades began as a systems engineer, and at the same time earned an executive MBA from the University of Chicago School of Business. Over the course of 31 years, he rose up through the ranks at IBM to become senior vice president of IBM North America, a $24 million business. In 1992, after a dispute with then-chairman of IBM John Akers, Conrades left the company. By 1994, he had become president and CEO of BBN Technologies, formerly Bolt, Beranek, and Newman, the technology and research fmn that helped build ARPANET. When Conrades joined BBN, the company was a think tank that survived on government contracts. Conrades leveraged the tremendous brainpower at BBN to transform the company into one of the world's largest Internet Service Providers. In 1997, GTE Corporation purchased BBN for $616 million, or $29 a share, more than double the stock's value when Conrades came aboard. **But the corporate culture of GTE didn't agree with Conrades, and after a year spent as the president of GTE Intemetworking, he left and took a year off work for the first time in his career.** Conrades could have comfortably retired, but he soon realized that slowing down was not for him, or his wife, Patsy, whom he met in college. "One day, I opened the freezer and suddenly everything was falling out-chicken and steak all over the place," recalled Conrades. "And Patsy looked at me and said, 'George, stay out of my freezer. And get a job."' The fact was, Conrades had spent too much time at the forefront of the digital age to sit on the sidelines of the dotcom craze. He wanted to play a part in the next big thing, so he looked to venture capital, which he said was raising its head in anticipation of the digital gold rush. **In August 1998, he joined Polaris.**
- **[...]**

BBN history (source - Book - "A CULTURE OF INNOVATION L INSIDER ACCOUNTS OF COMPUTING AND LIFE AT BBN : A SIXTY YEAR REPORT - 18 October 1948 to 1 July 2010

PDF : [HB005M][GDrive]


BOLT BERANEK AND NEWMAN INC

CONSULTING · DEVELOPMENT · RESEARCH

A CULTURE OF INNOVATION

INSIDER ACCOUNTS OF COMPUTING AND LIFE AT BBN

A SIXTY YEAR REPORT

18 October 1948 to 1 July 2010

Submitted to:

Employees, previous employees, historians, and others Worldwide

This research was supported by the volunteer labor of many BBNers past and present, and this is not a Raytheon BBN publication

CAMBRIDGE NEW YORK CHICAGO LOS ANGELES SAN FRANCISCO

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Epilog by David Walden

[...] The first section of this epilog continues from the point of Steve Levy's section 6.6 discussion of BBN in the 1990s. That section, which starts on page 116, sketches the BBN transitions from the arrival of George Conrades as BBN CEO until the 1997 sale of BBN to GTE.1 The second and third sections of this epilog provide a more general picture of how BBN changed between 1997 and 2010.2

this epilog provide a more general picture of how BBN changed between 1997 and 2010.2

22.1 Changes in ownership

BBN under **George Conrades** as president and CEO invested heavily in expanding the market share of its Internet business, **BBN Planet**. This was in the era of the dot com boom. **In time the need for continued investment in BBN Planet resulted in the sale of BBN to the telephone company GTE which wanted to be in the Internet business.** In the two years following GTE's June 1997 acquisition of BBN, GTE continued to operate BBN Systems and Technologies (the contract R&D business) and BBN Planet as separate businesses, investing over $1 billion in growing BBN Planet.

In the spring of 1999, as part of the continuing consolidation and evolution of the communications industry, GTE and Bell Atlantic announced that they had agreed to merge their two companies (in other words, Bell Atlantic acquired GTE). However, Bell Atlantic was one of the Regional Bell Operating Companies (RBOCs) that resulted from the historic breakup of AT&T Corporation and was forbidden under the terms of the breakup from being in the "long-distance service" business. BBN Planet's Internet business was deemed to be a long distance business by the Federal Communications Commission; consequently, prior to effecting the merger with GTE, Verizon had to relinquish control of BBN Planet.3 **Verizon accomplished this divestiture of control by allowing BBN Planet to sell $2 billion of its shares in the public market. The resulting public company was named Genuity. 4**

At the time of Genuity's IPO in the summer of 2000, BBN Technologies5 continued to operate under its own name as a wholly owned business unit of Verizon Communications. Then in February 2004, BBN Technologies became a privately held company again, having been acquired from Verizon by private investors (primarily Accel Partners of Palo Alto, California, and General Catalyst Partners of Cambridge, Massachusetts) and the management of the company. In October 2009, the 2004 investors cashed out of their investment, selling BBN to Raytheon for $350 million.6

22.2 The classic BBN culture and business

Not surprisingly, when **George Conrades** came to BBN as CEO, he brought in new senior managers (see Figure 6.11) with skills he didn't see in traditional BBN managers, many of whom had come up through the technical side of the company. In particular, the position of Frank Heart (see https://en.wikipedia.org/wiki/Frank_Heart) had as president of BBN Technologies was taken over by **David Campbell** (https://en.wikipedia.org/wiki/David_N._Campbell) who came from an executive position outside of BBN.8 Campbell brought in additional key managers from outside BBN, reorganized BBN Technologies, and in general worked on redirecting BBN Technologies's business in ways he thought appropriate.

[See The President's Commission on Critical Infrastructure Protection (PCCIP) ..

"AUG 25, 1997", Clinton also appointed Charles R. Lee, chief executive officer of GTE Corp. of Stamford, Conn., David N. Campbell, president of BBN Technologies of Cambridge, Mass., and Elvin Moon, president of E.W. Moon Engineering & Construction Management Industries of Los Angeles, to serve on the team advising the President's Commission on Critical Infrastructure Protection (PCCIP). "]

When BBN was acquired by GTE in June 1997, David Campbell became a senior executive of the GTE Technology Office, managing GTE Laboratories and a few other GTE held activities, and still personally managed BBN Technologies. Campbell did the job he was assigned and tried to fit BBN Technologies into the GTE culture and organization.

As a result of such reshaping—and the prior emphasis within BBN from 1995 to 1997 on exploiting BBN's Internet activities and changing BBN Technologies' business direction—BBN Technologies' traditional research and development business suffered. Many good researchers and managers left, and for several years the company did an insufficient job of recruiting the potential stars of tomorrow.9

Nonetheless, a number of influential BBN Technologies old timers (and an influential consultant) were committed to preserving the "classic" BBN culture and business. They were able to convince David Campbell that BBN Technologies needed its own dedicated leader. In the first half of 1998 a committee consisting of one long-time, senior BBN person and two outside people who knew BBN Technologies' traditional strengths undertook a search for a dedicated leader of BBN Technologies.

Ed Starr, who had joined BBN in 1959 and was serving as part of Campbell's top management team, was chosen to be president of BBN Technologies. Starr was well known and respected throughout the company, having worked as a project leader and business leader in many capacities all around the company. However, Starr was planning to go to half-time work the next year and was thinking about full retirement. Starr agreed to serve as president for 18 months; and Tad Elmer was designated as Starr's successor.

Elmer also had been on the search committee's list, but he had never run a companywide activity. Elmer was a department manager who had been with BBN for many years and also was well known and respected throughout the company. Elmer had demonstrated entrepreneurial capability, having initiated a new branch office and moved his department into new business areas, particularly at the intersection of BBN's involvement with computers and acoustics. Elmer worked closely with Starr, watching and learning.

Ed Starr did cut back his hours (and eventually retired), and Tad Elmer became president.10 With Starr and then Elmer at the helm, BBN Technologies began to reassert its traditional culture and approach to business (and financial viability).

By the time of the Bell Atlantic acquisition of GTE and the spin off of Genuity (what had previously been called BBN Planet), the BBN Technologies business and culture had already been substantially reinvigorated.

Verizon did not try to integrate BBN Technologies into the rest of its business. Instead it treated BBN Technologies benignly, and there was mutual respect between Verizon and BBN Technologies. BBN did do a little bit of work for Verizon, but generally BBN's technologies were in too far from being off-the-shelf products to be useful to Verizon.

During the almost four year it was part of Verizon, BBN Technologies flourished in its classic business. Visiting BBN during that period, I heard one-time BBN colleagues of mine say that is was like the old BBN again—perhaps better.

In 2003 Verizon needed to change its capital structure in preparation for a big investment in FIOS and began looking for buyers for parts of the company not central to its future, including seeking a buyer for BBN Technologies. Worried about coming under the control of another owner not interested in the classic BBN business, Tad Elmer and his management team were given permission by Verizon to seek investors who would make an equivalent financial offer to keep BBN Technologies what it was; and they found such investors.

The sale, primarily to Accel Partners of Palo Alto, California, and General Catalyst Partners of Cambridge, Massachusetts, happened in March 2004, and was celebrated within BBN Technologies and by retired BBN people who retained a strong emotional attachment to BBN classic business continuing to

flourish.

Of course, the outside investors wanted BBN to make money for them. Thus, as had happened so often in BBN's past,11 there was pressure once again to license technology and to create products in addition to pursuing the traditional contract research and development business. This time BBN Technologies tried to be particularly quick and nimble and to take advantage of the contacts of the venture capitalists who were its major investors.

A new division was created for the licensing and product opportunities led by Alex Laats who came from outside the company with entrepreneurial, licensing, and venture capital experience. Between 2004 and 2009, several product opportunities were pursued. Some examples are:

- PodZinger12 audio and video search engine
- AVOKETM system and services to examine telephone interactions from the caller's perspective
- Boomerang sniper detection localization system
- Digital Force Technologies (acquisition of a company with specialized manufacturing capabilities)

Boomerang is an representative example. This system detects incoming smallarms fire and displays the azimuth, range, and elevation of the shooter; it can be installed on a vehicle in an hour. Based on BBN Technologies' prior acoustics and computer technology experience and development work, in 2005 DARPA awarded BBN Technologies a contract to prototype this system. BBN completed a set of prototype systems in 65 days. Eschewing the approach BBN had used sometimes in the past of setting up its ownmanufacturing activity, BBN Technologies outsourced manufacturing for Boomerang with BBN engineers working closely with the engineers of the a contract manufacturer to modify the design for productization, reliability, and manufacturability. In 2006 the Army ordered over 100 systems, and through 2008 there were additional procurements totaling approximately 10,000 units.

Some of the other projects, for example, Podzinger and Avoke, benefitted from the connections of the ventures capitalist owners of BBN.

Over the same period, BBN Technologies grew and expanded its traditional research and development activities, in combination with the aforementioned product activities.

By the time of the sale of BBN Technologies to Raytheon in late 2009, BBN Technologies had doubled its yearly revenue, tripled its yearly profit, and paid off the debt resulting from the leveraged buyout from Verizon.

22.3 The evolution continues

The day before my April 1, 2010, interview with Tad Elmer and Steve Milligan, I studied the BBN Technologies website, bbn.com, to try to understand how the areas in which BBN Technologies does research and development had changed since most of the chapters in this book were drafted in 2003. Looking under "technologies" on the website, I found the following categories:

- Advance Networking
- Cyber Security
- Heathcare Informatics
- Immersive Learning Technologies
- Information and Knowledge Technologies
- Sensor Systems
- Speech and Language Technologies

Each of those areas listed between 5 and 30 subareas. While I could see some overlap with what I knew from 2003, much was different.

Tad Elmer explained that he believes in rearranging existing technical groups and adding new groups with fair regularity—to pursue new technology opportunities, especially at the intersections of previous technology areas where innovation so often happens.13 Furthermore, long-time areas of BBN expertise have expanded. For example, Elmer explained that the sensors and detection area (see Chapter 10) has expanded to detection using any sensor media (for example, sound, infrared, magnetism) to look into or through any sort of substance; and speech and language technology leaders John Makhoul and Ralph Weischedel already hinted (see Chapters 14 and 15) at expansion in their area. There also has been expansion in other areas.

I asked Elmer and Milligan if there were any principles that guide the ongoing evolution of BBN Technologies and development of its people. Milligan said that the senior technical leaders (the "principle investigators" who represent the company technically to customers and mentor the relevant technical people) are allowed to move in any direction they want as long as: (a) it is legal and ethical; (b) someone outside the company is willing to pay for the work; and (c) the work is generally fun and interesting for the people at BBN. Elmer said that point b can slightly dominate point c if the contract is big enough.14

Such flexibility not only is allowed; it is encouraged. Some senior people who did not enjoy change and moving into new areas and ways of organizing have left the company.

One can't know for certain how BBN Technologies will change as a consequence of its purchase by Raytheon. However, given the company's 62-year history as a preeminent innovator, one can assume that Raytheon and BBN Technologies will work hard to keep this powerful national resource working in its traditional way in an ever evolving set of problem areas.

Notes and References

1. Some of the information in this chapter came from Steve Levy's work on Chapter 6. Steve Blumenthal and Harry Forsdick providing confirming details on the Genuity-to-Level 3 transition in e-mails of April 3, 2010.
2. This information came from an interview of BBN Technologies president Tad Elmer and chief technology officer Steve Milligan at BBN in Cambridge, Massachusetts, on April 1, 2010, and from an e-mail of June 27, 2003 from Ed Starr.
3. GTE's ownership of BBN Planet had not had a "long distance" problem because GTE had not been an RBOC.
4. Verizon retained an option to convert, under certain conditions, the 10 percent ownership it held after the sale of the equity into a 90 percent ownership position in Genuity. Between 2000 and 2002, Genuity continued to invest heavily in its growth, and annual revenues grew to in excess of $1 billion. Nevertheless, after a cumulative investment approaching $6 billion, Genuity was still incurring heavy operating losses; and, in the fall of 2003, Verizon announced that it was not going to exercise its option to convert its 10 percent equity position in Genuity into a 90 percent ownership position. Given its heavy, negative cash flow Genuity was then forced to file for bankruptcy under Chapter 11 of the U.S. bankruptcy laws. In early 2003, Level 3, Inc., acquired the operating assets and business of Genuity for something on the order of $200 million.
5. Somewhere along the line, the "Systems and" part of the BBN Systems and Technologies named was dropped.
6. The 2004 purchase price has never been publicly disclosed, but the 2009 sale price purportedly produced a nice profit for the investors, especially in a time of generally poor economic results.
7. See Chapter 7.
8. Conrades himself led BBN Technologies for over a year, in addition to his many other duties, until he was able to bring Campbell on board.
9. See the discussing of recruiting in section 5.2.

10. Around the same time David Campbell left GTE.
11. See Chapter 6.
12. The system's name was later changed to RAMP.
13. Also, several years earlier BBN's business related to ship quieting had been sold to Raytheon, thus eliminating that part of the company's historic business.
14. In mid 2012 Tad Elmer retired from BBN. According to the bbn.com website, Ed Campbell is now president. At the time of his appointment as president, Ed had been with the company for 34 years and had been Tad Elmer's deputy for many years.

1961 (Sep 30) bestman at wedding -

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jan 06 1994

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Dec 09 1994

pg 77 - https://www.newspapers.com/image/440617922

pg 78 - https://www.newspapers.com/image/440617931/?terms=George%20Conrades%20BBN&match=1

1995 (June 21)

Full newspaper pages : pg 41 - [HN01FR][GDrive] / Pg 43 - [HN01FT][GDrive]

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Bloomberg Mass. index 117.26 +.30

Business

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THE BOSTON GLOBE • WEDNESDAY, JUNE 21, 1995

BBN shares rocket 49% after firm inks AT&T pact

By Jeff Glasser
CONTRIBUTING REPORTER

Bolt Beranek & Newman Inc. shares jumped by 49 percent yesterday after the telecommunications services company said it will join with AT&T Corp. to provide companies with a broad range of Internet services.

Under the terms of the partnership, BBN will help AT&T customers set up, operate, protect and maintain dedicated, leased-line connections to the Internet, while AT&T's 12,000-member sales staff will market BBN's products and technology.

The agreement is expected to generate at least $120 million in revenue over three years for BBN Planet Corp., Bolt Beranek's Internet services subsidiary, officials of the two companies said.

BBN and AT&T will begin offering services in selected (but undisclosed) markets on Aug. 1, and nationally on Sept. 1.

"Our customers will benefit from the synergy between AT&T and BBN," said Tom Evslin, AT&T vice president of Gateway Services. " ... Together, we'll make the Internet as much a part of modern business as the telephone today."

Analysts said they expected BBN stock to continue its upsurge for a week to 10 days, with little or no effect on AT&T stock. BBN closed at 27⅝, up 9⅛. The analysts said BBN's strong showing reflected shareholders' happiness with the deal since it fulfills basic needs on both sides.

"AT&T pacifies the customers who had clamored for some type of Internet

BBN, Page 43

BBN shares leap after firm inks AT&T pact

■ BBN
Continued from page 41

service immediately, BBN gets the marketing expertise and access to AT&T's huge customer base," said Yankee Group analyst Stephen Franco, who follows the telecommunications service industry.

Until the announcement, AT&T had been slow to tap into the Internet marketplace – a policy which had drawn widespread criticism.

Analysts said AT&T chose BBN because of its role in developing effective and reliable security for businesses on the Internet, particularly large Fortune 500-scale companies.

BBN, based in Cambridge, has been a leader in creating "public private virtual networks," which protect companies doing business on the internet by encrypting information so that only authorized parties can access information.

"We're like the ADT of the Internet," BBN chief xecutive and president George H. Conrades said.

The public private virtual network system which BBN has developed can best be explained by the following example: A pharmaceutical company wants to communicate with 35 hospitals through the Internet. So on behalf of the pharmaceutical company, AT&T and BBN create public private virtual networks to set up communications between the 35 hospitals. BBN and AT&T encrypt the company's information to the same key for the hospitals and then transmit the communication. Upon transmission, the encryption keeps a regular Internet user not affiliated with the hospitals from reading the communications because the data transmitted comes out transparent.

BBN will spend the next few months consolidating its business and laying the foundation for thousands of new clients courtesy of AT&T. The company already laid the groundwork for such an expansion when it purchased several regional access providers in the Southeast and West.

The moves should help the firms expand their 5 to 6 percent market share against competitors PCI and UUNET, which already have a partnership agreement to work with Microsoft's powerful network.

For AT&T, yesterday's announcement could just be the beginning of a slew of moves designed to sketch out and implement a clear strategy for the Internet.

[HN01FS][GDrive]

1995 (July 24)

Full newspaper Pages - D1 : [HN01FQ][GDrive] / D5 : [HN01FQ][GDrive]

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TECH MONDAY

Monday, July 24, 1995

Austin American-Statesman

Complaints Dept.

If you can keep track of customers' complaints and suggestions, you're ahead of the game. And there's software to help you do just that. D6

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Microsoft planning on-line gambit with World Wide Web

By Jim Erickson
Seattle Post-Intelligencer

SEATTLE — Shouldering for the first time into the fast-growing market for Internet software, Microsoft said last week it would adapt programs being created for its planned on-line service to the World Wide Web.

Microsoft has been developing a set of proprietary software tools, code-named "Blackbird," for exclusive use of companies creating content for its Microsoft Network. The company is also creating consumer software called "viewers," which work in conjunction with the Blackbird technology, for Microsoft Network subscribers.

But the explosive growth of the World Wide Web as an on-line publishing venue and as a popular alternative to closed on-line services persuaded Microsoft to alter its proprietary on-line service strategy and climb onto the Web.

"We needed to figure out ways to make money (on

See Microsoft, D5

Microsoft Chairman Bill Gates said Internet access will be available through Microsoft Network next month.

BBN ready to come into its own

By Laurence Zuckerman
New York Times

CAMBRIDGE, Mass. — Bolt Beranek & Newman has been the Forrest Gump of high technology, playing an obscure but crucial role in many key events since its founding in 1948 by two professors and a graduate student from MIT.

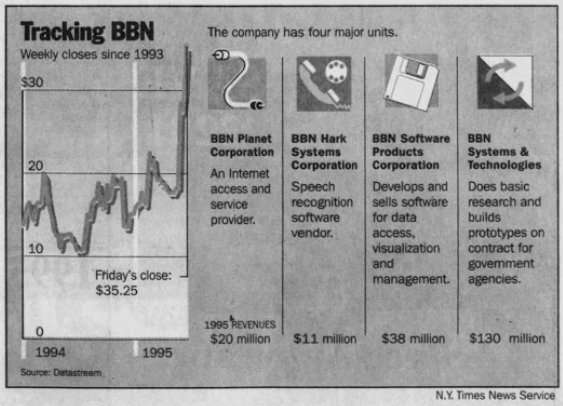
But recent deals have put the company in the spotlight, and it now seems poised to cash in on the enormous growth of the Internet.

Bolt Beranek & Newman, which is changing its name to BBN, designed the first modem, chose the @ symbol to address electronic mail and built the now-legendary Arpanet, the original computer network from which the Internet evolved.

But until recently other companies took its inventions and turned them into multimillion-dollar businesses.

"We were a company whose time had come, and yet we didn't have a presence," said George Conrades, the chief executive. That has changed. Under the leadership of Conrades, who was forced out of the top ranks of IBM in 1991 after 31 years with the company, BBN has committed itself to profiting from its own invention. BBN has received a strong en-

See Pioneering, D5



N.Y. Times News Service

Pioneering BBN ready to cash in on Internet

Continued from D1

dorsement when AT&T Corp. agreed to buy a minority stake in BBN Planet, a subsidiary that is the largest provider of Internet access and security services to corporations and institutions.

The two companies concluded a partnership agreement by which BBN Planet will provide a broad array of Internet services to AT&T clients on an exclusive basis starting in September.

Meanwhile, BBN's Hark Systems subsidiary also is on a roll. Its speech-recognition software, originally developed to help intelligence agencies eavesdrop, has been licensed by IBM to be included in a hardware and software package that automatically answers and directs large numbers of calls.

These deals have sent BBN's stock surging. After the alliance with AT&T was announced on June 20, BBN shares rose 49 percent in one day, to 27⅝. Since then, they have risen another 2 percent, closing Friday at 34¼, up 2⅜ on the New York Stock Exchange.

Not a bad performance for a company that has lost money for the last two years and has seen its annual revenue shrink to $200 million last year from a high of $300 million in 1988.

Most analysts predict that for the fiscal year that just ended on June 30, BBN will register another loss and revenue will remain flat.

Those numbers reflect the company's reliance on government research and development contracts, which have accounted for two-thirds of revenue. While government cutbacks have made such contracts more scarce, BBN has been investing in new management to develop its three commercial subsidiaries.

In addition to BBN Planet and Hark, the company owns BBN Software Products, which makes data analysis software used by manufacturers and pharmaceutical companies.

"A management that had profitability in the next three months as its goal would probably be the wrong management for BBN at this time," said Lee Allen, president of Allen Financial Advisors in Boston, who has been following BBN for more than two years.

"It's a topsy-turvy way of looking at a company, but it is the right way to look at BBN now."

BBN's first contract came in 1948 to consult on the acoustics for the U.N. General Assembly hall in New York. Later, it was hired to analyze a recording of gunshots by a congressional committee investigating the assassination of President John F. Kennedy and by a second committee to analyze the famous 18-minute gap in the Nixon White House tapes.

After buying the very first minicomputer produced by Digital Equipment Corp. in the 1960s, BBN invented packet switching, in which a message is broken into discrete pieces that are transmitted over telephone lines and then reassembled at their destination.

That technology forms the basis for the modern networks that enable communication between computers and made the Internet possible.

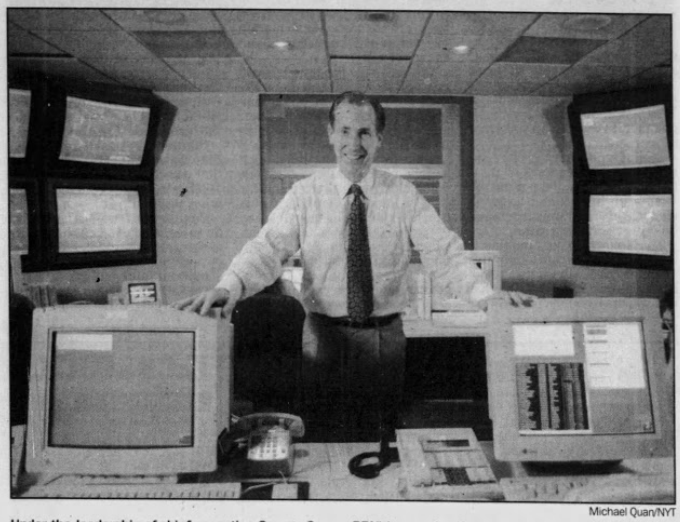
The company boomed in the 1980s, growing 25 percent a year, fueled by heavy military spending and a business building packet-switching networks for government agencies and commercial clients like Delta Air Lines, Mastercard and Procter & Gamble.

But the sharp cuts in military spending of the last decade sent the company into a tailspin, and BBN's management responded by moving to commercialize more technology.

A company called Lightstream was formed to sell a packet switch developed by BBN. Steven Levy, BBN's chairman, approached Conrades, who had already left IBM, about joining the board.

"As I started to work with George, I saw what an incredible talent he really was," Levy said. As he pondered the changes to be made at BBN, Levy realized that the best course would be to combine BBN's technological prowess with Conrades' marketing expertise. "And the only way I was going to pull that off was to give him my job," he said.

Conrades became chief executive in January 1994. Most companies must finance their research from product sales, he said, but at BBN, the research arm is self-supporting. That, in turn, supports the company's commercial efforts as well as promising a steady stream of opportunities.



Michael Quan/NYT

Under the leadership of chief executive George Conrades, Bolt Beranek & Newman (soon to be called BBN) has put itself in the spotlight recently and seems poised to cash in on the Internet's growth.

And by establishing independent subsidiaries, BBN has attracted a core of talented executives from companies like EDS, Oracle and Dun & Bradstreet by giving them equity stakes in their company's success.

Conrades came under fire in December when he decided to sell Lightstream to Cisco Systems for $120 million; BBN's stock fell 25 percent the day the deal was announced.

Conrades defended the decision by saying that Lightstream required millions of dollars to set up a distribution network. Instead, he said, he was convinced that BBN should use the proceeds of the sale to expand its Internet access and software businesses.

[HN01FP][GDrive]

1996 (May 05)

https://www.newspapers.com/image/99325929/?terms=George%20Conrades%20BBN&match=1

Year 1996 at GTE (summary provided mid-1997) - Does not list Conrades

1997 Report - Annual Summary for GTE for the year 1996

Source - [HC004Q][GDrive]

NOTE : It does list **William Pelham Barr (born 1950)**

1997 May 07 - GTE / BBN

Full newspaper pages : Page D1 at [HN01EJ][GDrive] , Page D2 at [HN01EL][GDrive]

Business D

Professional help D10
Deaths D14
Auto classified D16

THE BOSTON GLOBE • WEDNESDAY, MAY 7, 1997

AP PHOTO

GTE's Charles Lee gestures as he announces purchase of BBN Corp., whose chairman George Conrades, right, flanks two other GTE executives.

GTE buys BBN for $616m

Deal for Internet pioneer puts firm ahead of AT&T, MCI

By Joann Muller
GLOBE STAFF

Stepping up an aggressive strategy to challenge nationwide telephone carriers, GTE Corp., the nation's largest local phone company, yesterday agreed to buy Internet pioneer BBN Corp. of Cambridge for $616 million in cash, or $29 per share.

The announcement came one day after GTE said it would pay $485 million for part of Qwest Communications Corp.'s nationwide fiber-optic network. The back-to-back moves enable GTE to offer a broad array of telecommunications services to consumers and businesses throughout the United States.

"Our goal is to be the first player to truly deliver local, long distance, Internet access and enhanced data services, all on a nationwide basis, all from one company, all on one bill, and all with a single point of contact for customer service," GTE chief executive Charles R. Lee told analysts.

The company, which is moving its headquarters from Stamford, Conn., to Dallas, also said it was teaming up with Cisco Systems Inc., a San Jose, Calif. networking company, to help manage its network and could buy more than $1 billion of Cisco products over five years.

Lee said the moves would pay off long-term for GTE shareholders, but cautioned that the heavy up-front investments would hurt short-term profits. He estimated that 1997 per-share earnings growth would be "flat to slightly positive," instead of the 10 percent earnings growth that had been expected before the moves were announced. The company said earnings could increase 13 percent to 15 percent a year starting in 1999.

GTE shares fell 1⅛, to 45, while BBN leaped 6¼, to 28⅞, on the New York Stock Exchange.

Under terms of the deal, which has been approved by directors of both companies, GTE will begin a cash tender offer for all BBN, Page D2

GTE Corp.
Headquarters: Stamford, Conn.
Chairman/CEO: Charles R. Lee
Founded: 1918
Employees: 102,000
Stock: Down 1 1/8 to 45 on NYSE
Core business: Provides local telephone and mobile-cellular services to customers in 29 states, Canada, the Dominican Republic, and Venezuela. Also publishes telephone directories and supplies command, control, communications, and intelligence systems to US Department of Defense.

BBN Corp.
Headquarters: Cambridge
Chairman/CEO: George H. Conrades
Founded: 1948
Employees: 2,000
Stock: Up 6 1/4 to 28 7/8 on NYSE
Core business: Builds wide-area communications network systems. Also develops and markets packaged data analysis software products and performs contract research and development in computer, communications and acoustics.

[HN01EK][GDrive]
NOTE : George Henry Conrades (born 1939) in the photo

D2 THE BOSTON GLOBE • WEDNESDAY, MAY 7, 1997

From sound of things, BBN helped pioneer 'Net

By Hiawatha Bray
GLOBE STAFF

GTE Corp.'s $616 million investment in BBN Corp. will buy it a lot more than a major Internet service provider. In a sense, BBN is *the* Internet service provider, the company that constructed the ARPANET, the first primitive computer network that has grown into today's global web of data. Many companies, universities and government agencies collaborated to build the Internet, but no one participant is more closely identified with the project than BBN.

Yet when the company was founded as Bolt, Beranek and Newman in 1948, it wasn't involved with computers. Instead the company's specialty was acoustics – the study of sound. BBN designed the acoustics for the great hall where the United Nations General Assembly meets. And the company still does a great deal of sensitive work for the US Navy on ways to make surface ships and submarines quieter and harder to detect.

Given BBN's relationship to the Pentagon, it's easy to believe the popular story that the Internet was developed to ensure that military computer networks could survive a nuclear attack. But Frank Heart, who worked on the ARPANET for BBN, says the story is bogus.

Instead, the Internet grew out of an effort in the 1960s to allow computers at universities and research institutions to communicate with each other. BBN's involvement with the project began in the late 1950s, when the company hired a brilliant psychologist named J.C.R. Licklider.

"He was with the company only a matter of months, and he said, 'I want a computer,'" recalled Leo Beranek, cofounder of BBN.

"I asked what is it going to cost. He said $30,000. I said: 'My God, man, we've never bought anything more expensive than a water cooler. What are you going to do with it?' He said he didn't know but he knew that computers were the wave of the future."

Beranek got Licklider his computer, one of the first minicomputers from Digital Equipment Corp., and Licklider began hiring smart, ambitious students fresh from Harvard and MIT, and turned BBN into a center for computer research.

"BBN was thought of as sort of the third university. People would go from Harvard to MIT to BBN," said Katie Hafner, author of "Where Wizards Stay Up Late," a history of the Internet.

In 1962, Licklider left BBN to take a job at the Pentagon's Advanced Research Projects Agency. There he established the program that would eventually lead to the creation of ARPANET.

But it wasn't until 1969 that construction of ARPANET began. The goal was to connect computers at four major universities. BBN won the contract to attempt it – and they succeeded.

Even though the computers were connected, there wasn't a simple way to send messages. A BBN engineer named Ray Tomlinson solved the problem in 1972 by inventing electronic mail.

Now BBN is one of a handful of major firms that run the Internet's "backbone," the major communication lines that carry Internet traffic.

GTE buys Cambridge's BBN Corp. for $616m

■ BBN
Continued from Page D1

outstanding shares of BBN for $29 a share.

In acquiring BBN, GTE instantly acquires an Internet network that would have taken two years to build, said David Goodtree, an analyst with Forrester Research.

"That gives them a two-year jump" on competitors such as AT&T Corp. and MCI Corp., which are also scrambling to provide customers with Internet service.

And BBN, which created a forerunner of the Internet 28 years ago, is attractive to GTE because it has established customers and "a golden name," Goodtree said.

Building off of BBN's Internet base, GTE, with 1996 sales of $21 billion, expects to add $5 billion to $8 billion in revenues over the next few years, officials said.

GTE's purchase of BBN is a blow to AT&T, because BBN has been providing Internet access to AT&T's business customers since June 1995.

AT&T spokesman Mike Miller said the deal with BBN was a short-term solution and that AT&T has always intended to move its customers to its own Internet backbone, which is now in place.

The two companies are negotiating an end to the contract, but neither Miller nor BBN chief executive George Conrades would comment on the talks.

It had been widely rumored for more than a week that AT&T was about to buy BBN. Those rumors helped lift BBN stock from 15¾ on April 21, to 22⅝ on Monday, the day before the GTE deal was announced.

Yesterday's deal with GTE overshadowed the release of BBN's third-quarter results, which showed revenues of $95.9 million, about 58 percent higher than a year ago, and an operating loss of $12.1 million.

Much of the revenue growth was due to growth in BBN Planet, BBN's Internet services division, which had revenue of $48.2 million, up 134 percent from a year ago. Nearly half that revenue came from helping America Online Inc. expand its network to meet rising demand.

[HN01EM][GDrive]

1997 (Sep 02) - GTE Press Release (archived with Verizon) - "GTE announces the launch of its new operating unit, GTE Internetworking; Internet pioneer BBN Corp. and GTE Intelligent Network Services combine to offer complete Internet Protocol networking services."

Source - [HC004N][GDrive] / Full article at **GTE Corporation** .

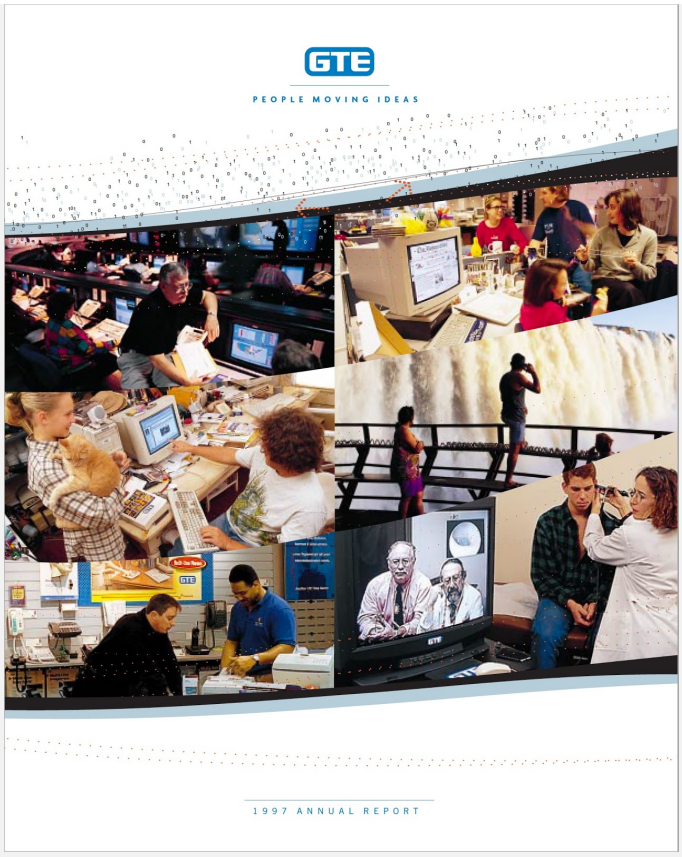
*""GTE Internetworking is uniquely positioned to offer our customers the only complete, integrated Internet services using Internet Protocol (IP) networking technologies," said [**George Henry Conrades (born 1939)**], corporate executive vice president and president of GTE Internetworking. "We're building upon BBN's technological heritage and capabilities plus GTE's customer base, expanding national footprint and diversified distribution channels. Our mission is to help customers improve their business processes through the integration of IP technologies and telecommunications." "*

Year 1997 at GTE (summary provided mid-1998) - Conrades listed

1998 Report - Annual Summary for GTE for the year 1997

Source - [HC004R][GDrive]

- [**William Pelham Barr (born 1950)**] Executive Vice President – Government and Regulatory Advocacy and General Counsel
- [**George Henry Conrades (born 1939)**], Executive Vice President of GTE and President, GTE Internetworking



[HC004T][GDrive]

CONSOLIDATED FINANCIAL HIGHLIGHTS ▪

(Millions of Dollars, Except Per-Share Amounts)	1997	1996	% Change
Revenues and Sales	$23,260	$21,339	9.0
Operating Income	5,611	5,488	2.2
Net Income*	2,794	2,798	(.1)
Earnings Per Common Share*			
Basic	2.92	2.89	1.0
Diluted	2.90	2.88	.7
Common Shareholders' Equity	8,038	7,336	9.6
Average Common Shares Outstanding (in millions)	958	969	(1.1)
Return on Common Equity	37.6%	40.2%	–
Capital Expenditures	5,128	4,088	25.4
Access Minutes of Use (in millions)	79,640	70,452	13.0
Access Lines (in thousands)	27,670	25,766	7.4
Employees (in thousands)	114	102	11.8

* Costs associated with the new data initiatives reduced net income by $242 million, or $ .25 per share in 1997. Excluding these costs, basic earnings per share from core operations would have been $3.17. The 1996 results include a pretax gain of $12 million, which increased net income by $8 million, or $ .01 per share, in connection with the program to sell or trade a small percentage of nonstrategic domestic local-exchange telephone properties. Excluding this gain and the costs related to the new data initiatives, net income would have grown 8.9% while earnings per share would have grown 10.1%.

ABOUT GTE ▪ With 1997 revenues of more than $23 billion, GTE is one of the world's largest telecommunications companies and a leading provider of integrated telecommunications services. In the United States, GTE provides local service in 28 states and wireless service in 17 states, nationwide long-distance service and internetworking services ranging from dial-up Internet access for residential and small-business consumers to Web-based applications for *Fortune* 500 companies, and video service in selected markets. Outside the United States, the company serves over seven million telecommunications customers. ▪ In addition, GTE is a leader in government and defense communications systems and equipment, directories, telecommunications-based information services, and aircraft-passenger telecommunications.

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40. Directors and Officers
41. Corporate Information

GTE WE'RE NOT JUST YOUR LOCAL TELEPHONE COMPANY ANYMORE ▪ Featured on the cover and throughout this annual report is a constant stream of information, flowing from GTE customers who live and work around the world. Have an idea? Let us move it for you.

[HC004U][GDrive]

PRODUCTIVE ▪ GTE provides over 13,000 Boeing Company employees with dial-up Internet-access service and offers a fast integrated services digital network (ISDN) system to promote telecommuting. We also helped to configure and install a private Central Office telephone switching system. GTE is bidding on customizing a wireless headset system that will allow jet aircraft assemblers to communicate with suppliers – and each other – across the factory floor more efficiently, boosting productivity and quality in its plants in Washington and Kansas.

INTERACTIVE ▪ GTE enables Purdue University in West Lafayette, Indiana, to use a special PictureTel™ system to conduct interactive distance learning, videolinking faculty and students at other campuses to increase office hours and the quality of education. GTE also meets other Purdue communications needs from basic phone service to trial ADSL Internet access and a managed switching facility on the campus, which serves 36,000 students and 12,000 faculty and staff.

[HC004U][GDrive]

DIRECTORS AND OFFICERS ▪

DIRECTORS ▪

Edwin L. Artzt,[1] Chairman of the Executive Committee and Director, The Procter & Gamble Company
James R. Barker,[2] Chairman, The Interlake Steamship Co., and Vice Chairman, Mormac Marine Group, Inc. and the Moran Towing Company
Edward H. Budd,[3] Retired Chairman of the Board of The Travelers Corporation and Director, the Travelers Group, Inc.
Robert F. Daniell,[4] Retired Chairman, United Technologies Corporation
Kent B. Foster,[5] President, GTE
James L. Johnson,[6] Chairman Emeritus, GTE
Richard W. Jones,[7] Business Consultant, PaineWebber Incorporated
James L. Ketelsen,[8] Retired Chairman, Tenneco Inc.
Charles R. Lee,[9] Chairman and Chief Executive Officer, GTE
Michael T. Masin,[10] Vice Chairman and President – International, GTE
Sandra O. Moose,[11] Senior Vice President, Director and Chair of the East Coast Practice, The Boston Consulting Group, Inc.
Russell E. Palmer,[12] Chairman and Chief Executive Officer, The Palmer Group
Robert D. Storey,[13] Partner, Thompson, Hine & Flory LLP

CORPORATE OFFICERS ▪

Charles R. Lee, Chairman and Chief Executive Officer
Kent B. Foster, President
Michael T. Masin, Vice Chairman and President – International
Thomas W. White, Senior Executive Vice President – Market Operations
William P. Barr, Executive Vice President – Government and Regulatory Advocacy and General Counsel
George H. Conrades, Executive Vice President of GTE and President, GTE Internetworking
Armen Der Marderosian, Executive Vice President – Technology and Systems
J. Michael Kelly, Executive Vice President – Finance and Planning
J. Randall MacDonald, Executive Vice President – Human Resources and Administration
Mary Beth Bardin, Senior Vice President – Public Affairs and Communications
Robert C. Calafell, Senior Vice President, BBN Transition
Dan J. Cohrs, Vice President and Chief Planning and Development Officer
William M. Edwards III, Vice President and Controller
Geoffrey C. Gould, Vice President – Government and Regulatory Affairs
John P. Z. Kent, Vice President – Taxes
Thomas F. Lysaught, Vice President – Marketing
Daniel P. O'Brien, Vice President and Treasurer
D. Otis Wolkins, Vice President – Quality Services
Marianne Drost, Corporate Secretary

SENIOR OFFICERS OF BUSINESS UNITS ▪

John C. Appel, President, GTE Network Services
Clarence F. Bercher, President, GTE Communications Corporation
C. David Decker, President, GTE Laboratories
Gerald K. Dinsmore, President, Business Development & Integration
Michael B. Esstman, Senior Vice President, International Telecom Services
Mark S. Feighner, President, GTE Wireless
Earl A. Goode, President, GTE Information Services and GTE Directories
Katherine J. Harless, President, GTE Airfone
Thomas W. Muldoon, President, GTE Government Systems
Fares F. Salloum, Senior Vice President, International Operations
Ignacio Santillana, Senior Vice President, International Business Development

[HC004V][GDrive]

1997 Arkansas/GTE legal matter

http://www.apscservices.info/pdf/99/99-058-u_1_1.pdf

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BEFORE THE
ARKANSAS PUBLIC SERVICE COMMISSION

MAR 9 1 36 PM '99

FILED

IN THE MATTER OF THE APPLICATION OF GTE COMMUNICATIONS CORPORATION FOR A CERTIFICATE OF PUBLIC CONVENIENCE AND NECESSITY TO OPERATE AS A FACILITIES BASED PROVIDER OF INTEREXCHANGE TELECOMMUNICATIONS SERVICES WITHIN ARKANSAS) DOCKET NO. 99-058-U

APPLICATION

COMES NOW GTE Communications Corporation (hereinafter referred to as "GTE" or "Applicant") pursuant to Arkansas Code Annotated § 23-3-201, et seq., and Rule 7.06 of the Arkansas Public Service Commission ("Commission") *Rules of Practice and Procedure* and respectfully requests the Commission to issue a Certificate of Public Convenience and Necessity ("CCN") authorizing Applicant to operate as a facilities based provider of interexchange telecommunications services within the State of Arkansas. In support of its Application, GTE states as follows:

1. In accordance with Rule 7.06(a), the name and address of Applicant is :GTE Communications Corporation, 6665 North MacArthur Boulevard, Irving, Texas 75039-2443.

2. Pursuant to Rule 2.03(b) of the Commission's Rules of Practice and Procedure, Applicant requests that the following person be shown on the Official Service List:

Lawrence E. Chisenhall Jr.
Chisenhall, Nestrud, & Julian P.A.
400 West Capitol, Suite 2840
Little Rock, AR 72201

3. Applicant is a subsidiary of GTE Corporation. Applicant is a Delaware corporation having been incorporated on November 30, 1988 as GTE Interactive Services Incorporated. Applicant's name was changed to GTE Card Services Incorporated and, subsequently, applicant conducted business under

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the name GTE Long Distance. On July 28, 1997, Applicant's name was changed to GTE Communications Corporation. Applicant is authorized to do business in the State of Arkansas as a foreign corporation. A copy of Applicant's Articles of Incorporation are on file in Docket No. 95-187-U. A copy of Applicant's Certificate of Amendment and Application for Amended Certificate of Authority from the Arkansas Secretary of State are attached hereto respectively as Exhibits 1 and 2.

4. In Docket No. 95-187-U, this commission issued a CCN authorizing Applicant to operate as a reseller of interexchange telecommunications services within the State of Arkansas.

5. A list of officers and directors of GTE, as required by Rule 7.06(a) is attached hereto as Exhibit 3. A description of the qualifications of certain of its officers is attached as Exhibit 4.

6. Applicant has access to ample experience, technical means and capital to develop its network and is financially capable of providing reliable, safe and adequate facilities based interexchange telecommunications services within the State of Arkansas. Information with respect to its financial ability is contained in Docket No. 95-187-U and a copy of GTE Corporation's most recent Form 10-K is attached hereto as Exhibit 5.

7. Applicant seeks amended certification and authority to provide intrastate facilities based interexchange telecommunications services in Arkansas. Applicant seeks to provide interLATA and intraLATA voice message, data transmission and ancillary long distance services over its own or leased facilities or in combination with its own or leased facilities and on a resale basis. Such services will include direct dial switched access on a prescheduled basis in those areas where available and in other areas on a 10xxx basis.

8. GTE has a price list on file with the Commission and, except as may be necessary to clarify that services are not exclusively provided on a resale basis, is not proposing changes at this time in

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connection with this application.

9. Pursuant to Rule 7.06(g) the following information is provided regarding Applicant's proposed transmission facilities, switching equipment, the points at which such facilities and equipment will connect to other telecommunication carriers' networks, and a description of the type of access service to be used to connect such facilities and equipment to the local exchange carrier networks:

> A) Applicant seeks authority to operate as a facilities based carrier of interexchange services. Applicant may construct a private, high-speed, high-capacity fiber network. This high capacity fiber backbone route may be established by lease and construction and will connect Applicant to appropriate local exchange carriers, including its own local exchange network. The fiber network would also be connected with other telecommunications carriers where appropriate. Applicant's system would provide state-of-the-art fiber optic clarity, speed, diversity of access and reliability of service. Applicant is still determining the location of any facilities and switching points.

10. Granting this application is consistent with the public interest and will allow customers and potential customers of interexchange telecommunications services to receive high quality, reliable, interexchange services at competitive prices.

WHEREFORE, GTE Communications Corporation respectfully requests the Commission to grant its request herein and amend its Certificate of Public Convenience and Necessity to provide facilities based interexchange telecommunications services within the State of Arkansas.

Respectfully Submitted,

CHISENHALL, NESTRUD & JULIAN, P.A.
400 W. Capitol, Suite 2840
Little Rock, Arkansas 72201
(501) 372-5800

By: Larry Chisenhall
Lawrence E. Chisenhall, Jr., AR BAR 74023
Attorney for GTE Communications Corporation

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PART III

Item 10. Directors and Executive Officers of the Registrant as of December 31, 1997 (a).

Executive Officers of GTE

Name(b)	Title	Age	Date Assumed Present Position
Charles R. Lee	Chairman and Chief Executive Officer	58	May 1992
Kent B. Foster	President	54	June 1995
Michael T. Masin (c)	Vice Chairman and President - International	53	June 1995
Thomas W. White	Senior Executive Vice President - Market Operations, GTE Service Corporation	51	June 1997
William P. Barr (d)	Executive Vice President - Government and Regulatory Advocacy and General Counsel	47	June 1997
George H. Conrades (e)	Executive Vice President and President - GTE Internetworking	59	July 1997
Armen Der Marderosian	Executive Vice President - Technology and Systems	60	June 1997
J. Michael Kelly	Executive Vice President - Finance and Planning	41	June 1997
J. Randall MacDonald	Executive Vice President - Human Resources and Administration	49	June 1997
Dan J. Cohrs (f)	Vice President - Corporate Planning and Development, GTE Service Corporation	45	July 1997
William M. Edwards, III	Vice President and Controller	49	July 1997
Daniel P. O'Brien	Vice President and Treasurer	43	July 1997

(a) Reference is made to pages 22 to 26 of GTE's Proxy Statement covering the Annual Meeting of Shareholders to be held on April 15, 1998, which is incorporated herein by reference, for information concerning directors of GTE.

(b) Prior to serving as executive officers of GTE, each of the officers named has been employed in high-level management positions by GTE or a GTE subsidiary for more than five years, with the exception of Michael T. Masin, William P. Barr, George H. Conrades and Dan J. Cohrs.

(c) Mr. Masin joined GTE as Vice Chairman effective October 20, 1993. He was also elected President - International on June 30, 1995. He had been a director of GTE since 1989. Prior to joining GTE as Vice Chairman, he was the Managing Partner of the New York Office of O'Melveny & Myers and Co-chair of the firm's international practice group. Mr. Masin joined the firm in 1969 and became a partner in 1977.

(d) Mr. Barr was elected Executive Vice President - Government and Regulatory Advocacy and General Counsel effective June 5, 1997. He had served as Senior Vice President and General Counsel since 1994. Prior to joining GTE, he was a partner in the Washington, D.C. office of the law firm of Shaw, Pittman, Potts & Trowbridge since 1993. He served as Attorney General of the United States from 1991 to 1993. Mr. Barr joined the Department of Justice as Assistant Attorney General in charge of the Office of Legal Counsel in 1989, and subsequently served as Deputy Attorney General prior to his appointment as Attorney General.

(e) Mr. Conrades was elected Executive Vice President and President - GTE Internetworking effective July 9, 1997. He served as president and chief executive officer of BBN Corporation since January 1994. Prior to joining BBN, he had been employed for more than 30 years at IBM, most recently as Senior Vice President and General Manager of IBM United States.

(f) Mr. Cohrs was elected Vice President - Corporate Planning and Development, GTE Service Corporation, effective July 9, 1997. He had previously served as Vice President and Treasurer since 1995 and had been Assistant Treasurer - Capital Markets of GTE Service Corporation since June 1993. Prior to joining GTE, he had been Vice President - International Finance for Northwest Airlines ("Northwest") in Tokyo, and before that was Northwest's Vice President - Capital Markets.

06.30.1998|Corporate

https://www.verizon.com/about/news/press-releases/gte-becomes-first-receive-electronic-check-payment-internet-trusted-security-infrastructure-internet-payment-solution-provided-gte-internetworking

GTE Becomes First to Receive Electronic Check Payment Via the Internet; Trusted Security Infrastructure for Internet Payment Solution Provided by GTE Internetworking

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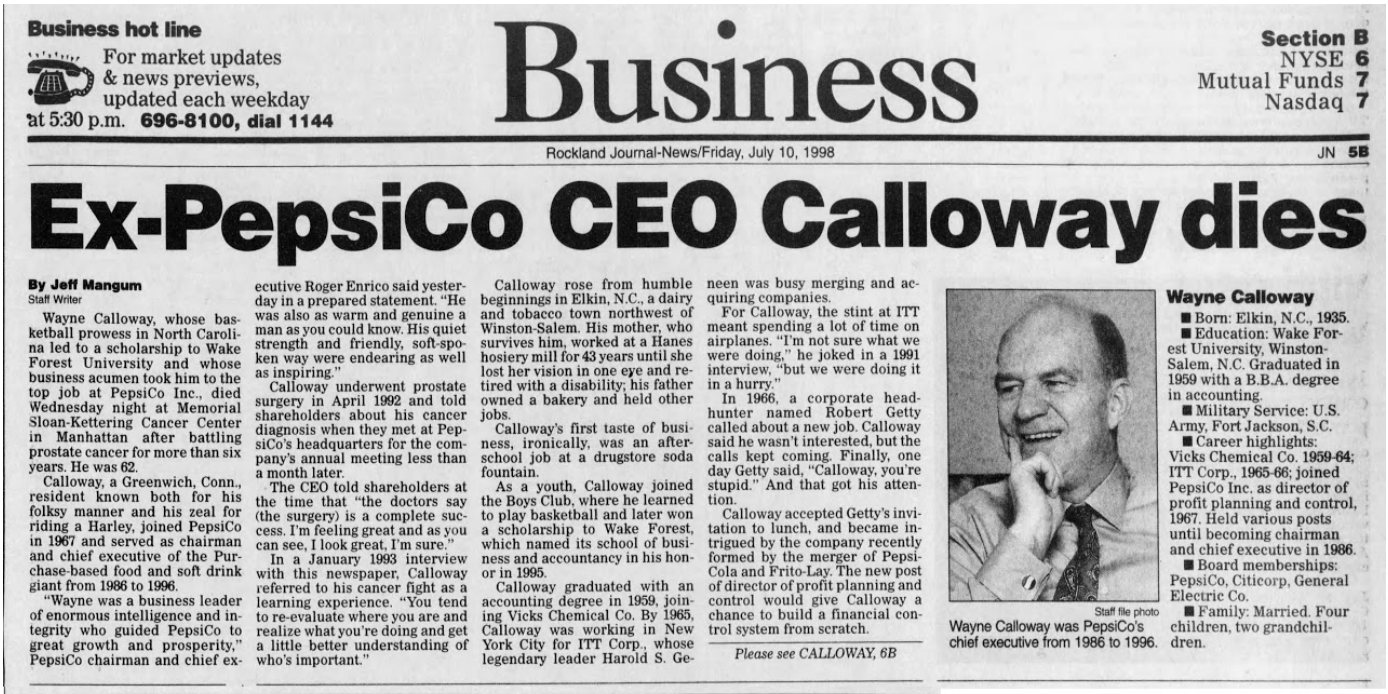
1998 (July 10)

It is clearly stated here that George Conrades is still a president at **GTE Corporation** .

Whole newspaper page 5b at [HN01FD][GDrive], page 6b at [HN01FE][GDrive]



Business hot line
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Business

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Rockland Journal-News/Friday, July 10, 1998 JN 5B

Ex-PepsiCo CEO Calloway dies

By Jeff Mangum
Staff Writer

Wayne Calloway, whose basketball prowess in North Carolina led to a scholarship to Wake Forest University and whose business acumen took him to the top job at PepsiCo Inc., died Wednesday night at Memorial Sloan-Kettering Cancer Center in Manhattan after battling prostate cancer for more than six years. He was 62.

Calloway, a Greenwich, Conn., resident known both for his folksy manner and his zeal for riding a Harley, joined PepsiCo in 1967 and served as chairman and chief executive of the Purchase-based food and soft drink giant from 1986 to 1996.

"Wayne was a business leader of enormous intelligence and integrity who guided PepsiCo to great growth and prosperity," PepsiCo chairman and chief executive Roger Enrico said yesterday in a prepared statement. "He was also as warm and genuine a man as you could know. His quiet strength and friendly, soft-spoken way were endearing as well as inspiring."

Calloway underwent prostate surgery in April 1992 and told shareholders about his cancer diagnosis when they met at PepsiCo's headquarters for the company's annual meeting less than a month later.

The CEO told shareholders at the time that "the doctors say (the surgery) is a complete success. I'm feeling great and as you can see, I look great, I'm sure."

In a January 1993 interview with this newspaper, Calloway referred to his cancer fight as a learning experience. "You tend to re-evaluate where you are and realize what you're doing and get a little better understanding of who's important."

Calloway rose from humble beginnings in Elkin, N.C., a dairy and tobacco town northwest of Winston-Salem. His mother, who survives him, worked at a Hanes hosiery mill for 43 years until she lost her vision in one eye and retired with a disability; his father owned a bakery and held other jobs.

Calloway's first taste of business, ironically, was an after-school job at a drugstore soda fountain.

As a youth, Calloway joined the Boys Club, where he learned to play basketball and later won a scholarship to Wake Forest, which named its school of business and accountancy in his honor in 1995.

Calloway graduated with an accounting degree in 1959, joining Vicks Chemical Co. By 1965, Calloway was working in New York City for ITT Corp., whose legendary leader Harold S. Geneen was busy merging and acquiring companies.

For Calloway, the stint at ITT meant spending a lot of time on airplanes. "I'm not sure what we were doing," he joked in a 1991 interview, "but we were doing it in a hurry."

In 1966, a corporate headhunter named Robert Getty called about a new job. Calloway said he wasn't interested, but the calls kept coming. Finally, one day Getty said, "Calloway, you're stupid." And that got his attention.

Calloway accepted Getty's invitation to lunch, and became intrigued by the company recently formed by the merger of Pepsi-Cola and Frito-Lay. The new post of director of profit planning and control would give Calloway a chance to build a financial control system from scratch.

Please see CALLOWAY, 6B

Staff file photo
Wayne Calloway was PepsiCo's chief executive from 1986 to 1996.

Wayne Calloway

- Born: Elkin, N.C., 1935.
- Education: Wake Forest University, Winston-Salem, N.C. Graduated in 1959 with a B.B.A. degree in accounting.
- Military Service: U.S. Army, Fort Jackson, S.C.
- Career highlights: Vicks Chemical Co. 1959-64; ITT Corp., 1965-66; joined PepsiCo Inc. as director of profit planning and control, 1967. Held various posts until becoming chairman and chief executive in 1986.
- Board memberships: PepsiCo, Citicorp, General Electric Co.
- Family: Married. Four children, two grandchildren.

Calloway: Former PepsiCo CEO dies at 62

Continued from page 5B

He became a corporate vice president in 1973 and was tapped to run PepsiCo's Frito-Lay unit in Texas in 1976, returning to New York as PepsiCo's chief financial officer in 1983. He became president in 1985.

People who knew Calloway credited him for melding business savvy with a personal touch. Shortly after he became chairman and CEO in 1986, Calloway ordered workers to tear down the wall in the company gym that separated top executives from other staffers.

"Whenever I'd see him he would always make you feel welcome," said Emanuel Goldman, a PaineWebber analyst in San Francisco who knew Calloway for years. "This is a very special trait to have. No matter how high he rose in the organization — to the pinnacle — he typified the Rudyard Kipling poem, 'If.' ... He walked with kings and did not lose the common touch."

George Conrades, a former senior executive at Armonk-based IBM and now president of a GTE Corp. division in Cambridge, Mass., met Calloway as a parishioner at an Episcopal church in Greenwich. At the time, Conrades recalled, he didn't know anything about Calloway, who eventually became a motorcycle riding buddy.

> **"Whenever I'd see him he would always make you feel welcome. This is a very special trait to have. No matter how high he rose in the organization — to the pinnacle — he typified the Rudyard Kipling poem, 'If.' ... He walked with kings and did not lose the common touch."**
>
> **— Emanuel Goldman, PaineWebber analyst**

"In his typical fashion, he asked me a lot of questions about myself," Conrades said, "so I was telling him what a muckety-muck I was at IBM and all the while this guy is the CEO of Pepsi and so approachable and so interested in other people — just a wonderful guy."

Calloway had a "tremendous, pragmatic intellect," Conrades added, and was a "tremendous listener."

"He both listened and kind of talked the listener's language," Conrades said. "It made him seem like just a good fellow, but he was really helping you move the ball along with his comments and his insights."

Calloway is survived by his mother Lether Smith, of Winston-Salem, and his wife, Jan, of Greenwich. The couple's four children are David Calloway of Austin, Texas, Jennifer Calloway of New York City, Ross Smythe of Dallas and Boyd Smythe of Newton, Mass. Calloway also had two grandchildren, Ross Smythe II and Helena Smythe.

Funeral services are scheduled tomorrow at 11 a.m. at Christ Church, 254 E. Putnam Ave., Greenwich. In lieu of flowers, a PepsiCo spokesman said donations may be made to either the Calloway School of Business and Accountancy at Wake Forest or Memorial Sloan-Kettering Cancer Center in New York City.

[HN01FF][GDrive]

1998 (July 16) - Announced he is leaving GTE - Joining Polaris

Full newspaper page - [HN01FI][GDrive]

Boston Globe (Boston, Massachusetts) · 16 Jul 1998, Thu · Page 65

GTE unit chief named

GTE Corp. named Paul Gudonis president of GTE Internetworking, effective Aug. 1. The Stamford, Conn., firm said Gudonis succeeds George Conrades, who is leaving GTE to become a partner at **Polaris Venture Partners,** a venture capital firm. In a press release, GTE said Gudonis, 44, was president of GTE Internetworking Services, GTE's Internet services business unit. (Dow Jones)

[HN01FJ][GDrive]

1998 (July 28) - CNN - "Bell Atlantic buying GTE : Companies to combine in $52.8 billion stock swap; deal likely to face gov't hurdles"

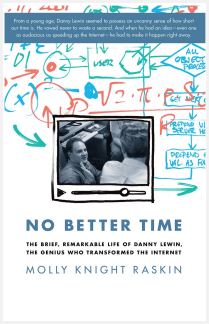
NOTE date of this news release - Source at [HM001D][GDrive] / Full text available at **GTE Corporation** .

1998 (August) - Conrades now with Polaris

Source - 2013 book - By Molly Knight Raskin - "No Better Time" ; PDF - made from recording, with OCR - [HB005L][GDrive]

1998 (Summer time.. August ? September?) - Conrades first meets Lewin and Leighton of Akamai

Source - 2013 book - By Molly Knight Raskin - "No Better Time" ; PDF - made from recording, with OCR - [HB005L][GDrive]



[HB005K][GDrive]

That summer [of 1998], Conrades first made the acquaintance of Lewin and Leighton, agreeing to meet them at the suggestion of Battery's Todd Dagres. Conrades recalled sitting through the pitch session and thinking that, as much as he liked the idea, he was initially uncertain about Akamai's business model. "I understood what they were saying-not at the level of the algorithms-but about making the Internet feasible for e-commerce and robust audio and visual interaction," Conrades explained. "I lived the problem at BBN, even though we threw a lot of money at it. That's when I learned that you can't throw enough money at the Internet to make it work right." By the end of the meeting, however Conrades was so impressed with Akamai 's solution that he felt Polaris had a potential gold mine. He helped convince Polaris to invest in Akamai, and decided to put in some money of his own, too. According to Conrades, his investment strategy was informed by four basic elements: the idea's greatness, the technology's potential impact, the business model's strength and, most importantly, the employees' overall caliber.

For Conrades, the people always came first. As for Akamai, he had no concerns about the people. Then he considered the idea. To him, the concept of what he called an "agnostic" network-one that provided a synoptic view of the Internet-was brilliant. "It was a big idea,"

1998 (Summer) - Akamai moves into their own offices, and out of MIT

Source - 2011 (Sep 13) Interview - F. Thomson (Tom) Leighton PhD '81 / Transcript (below) - [HE003S][GDrive] (video - https://youtu.be/gWJW4TAquCI)

And so we said, the only way we're going to do this is to do it ourselves, so let's give it a try. ***So we spun out of MIT at the end of the summer of '98,*** *a year after the 50K started and got offices over in One Kendall and then called up those VCs and said, hey, we could use some money. Turned out to be harder than we thought to actually get the money on terms we wanted, so we had a period of about three to four months where we were funding it ourselves with friends and with some angels, professional angels. We had friends of friends we knew to bridge us to the first round with the VCs.*

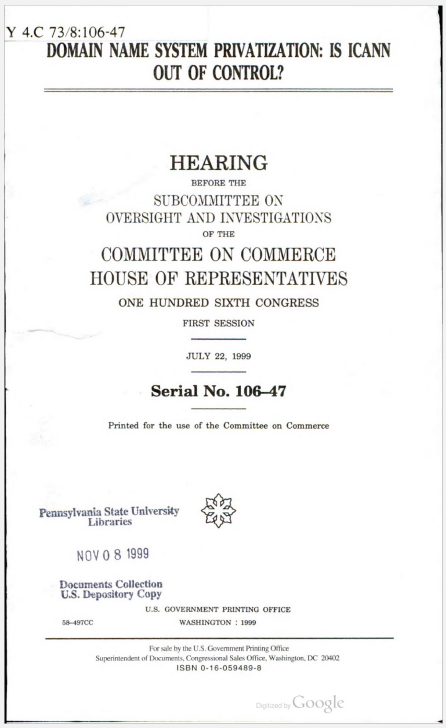
1998 - Some time in fall (but before OCt 03) .. meaning like Sep 24th 1998, Conrades is notified of opportunity to work with ICANN

Source - Domain Name System Privatization, is ICANN Out of Control?: Hearing Before the Subcommittee on Oversight and Investigations of the Committee on Commerce, House of Representatives, One Hundred Sixth Congress, First Session, July 22, 1999, Volume 4

Source = [HG00AY][GDrive] / Original but with OCR - [HG00AZ][GDrive]

https://en.wikipedia.org/wiki/John_R._Patrick

http://www.cochetti.us



Y 4.C 73/8:106-47

DOMAIN NAME SYSTEM PRIVATIZATION: IS ICANN OUT OF CONTROL?

HEARING

BEFORE THE

SUBCOMMITTEE ON OVERSIGHT AND INVESTIGATIONS

OF THE

COMMITTEE ON COMMERCE

HOUSE OF REPRESENTATIVES

ONE HUNDRED SIXTH CONGRESS

FIRST SESSION

JULY 22, 1999

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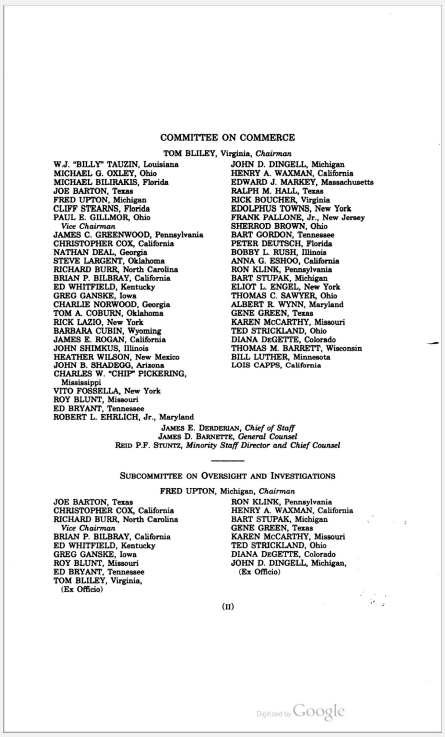

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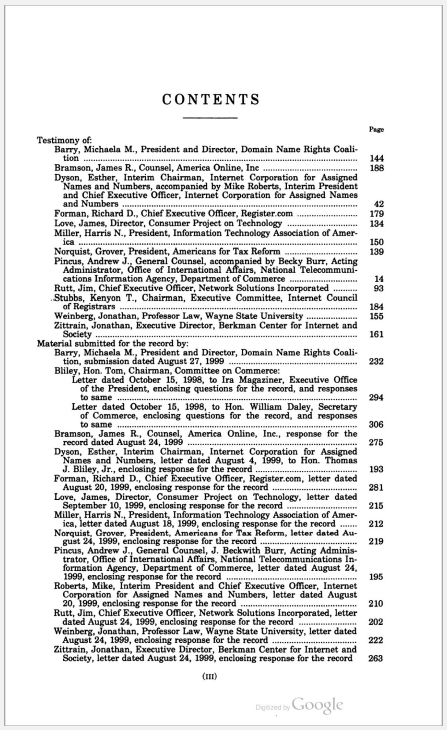

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[HG00B2][GDrive]

The details of the contacts with each Director are summarized below. To provide some context: As part of the creation of the consensus structure that eventually became ICANN, there was considerable discussion about how this new entity would be managed .. Since it was, by definition, intended to be a global consensus entity, it was understood by all that its management should be globally diverse. While there was considerable discussion about how the permanent Board should be constituted, it was generally understood that the Initial Board members would have to be produced by the same consensus process that-was to. create the new entity itself.

In fact, that is what happened. Simultaneously with the effort to develop a consensus organization, the entire Internet .community was invited to propose people who would be suitable as Initial Board members. At first, the general view seemed to be that the Initial Board should represent the various stakeholders in the process - those groups or coalitions that wereseparately.Identffled and had a specific Interest to advance. It quickly became clear that it was not going to be easy - and perhaps impossible - to come to a consensus using this approach, in part because the various stakeholders·showed no propensity for coming to consensus on their particular · representative, and in part because it was difficult to perceive a consensus on which stakeholder groups should be represented on the Initial Board. The focus then changed to finding what were referred to as •1uminaries•- peopleo f outstanding credentials and reputations who had not been engaged in the debates and whom the Internet community would recognize and support as both qualified and neutral.

The Initial Board as it now stands is the result of that latter effort, which was engaged in by numerous people around the world. In addition to volunteered proposals, Jon Postel and IANA affirmatively sought out recommendations from the full range of participants in the debate, including NSI. A number of people who seemed to be attractive candidates were approached in various ways and declined to be considered; others who were recommended seemed inappropriate for a variety of reasons. After considerable discussion, the current roster of Initial Board members was finally reached. The original suggestions of those people who ultimately came to serve on the Initial Board came from private. individuals, business organizations, trade associations, and officials of various governmental organizations. The final decisions on who would be invited were made by Jon Postel, after considering all the advice and recommendations received and coming to a judgment that this group of individuals was likely to receive consensus support from the Internet community. The official invitations were issued on behalf of Dr. Postel by his counsel.

With that preamble, the following summarizes the details of the contacts that each individual director experienced:

[...]

2. George H. Conrades

Sometime last fall, Mr. Conrades received a call on his car phone from John Patrick, whom he knew from working together at IBM. Mr. Patrick asked him if he was familiar with IANA and the effort to form a new private sector entity to take over those responsibilities. Mr. Conrades said he was aware of the effort. Mr. Patrick then told him that his name had been suggested as a possible initial director of the entity, and asked if he would be interested; Mr. Patrick said that the Global Internet Project was supporting this effort, and that Mr. Conrades' background and experience in the industry, combined with the fact that he was no longer associated with any company, made him a particularly good choice as a knowledgeable but neutral candidate. He then suggested that Mr. Conrades call Roger Cochetti for more details, which he did, and he subsequently agreeJ to let his name be submitted to the USG. He ·then received a call from the counsel to Jon Postel, who confirmed that his name would be submitted and discussed dates for an initial meeting, which was held in October.

[...]

1998 (Oct 03) - Founding board member of ICANN

Full newspaper page - [HN01FM][GDrive]

1998-10-03-rutland-daily-herald-pg-09-clip-internet-names

Internet Names Proposal Received

By ALAN M. WOLF
Bloomberg News

WASHINGTON — The U.S. government received a proposal from part of the Internet's technical community for a new non-profit organization to administer Internet addresses.

The organization would be based in California and eventually take over responsibility of Internet domain names — the .com, .org and other tags for addresses on the World Wide Web. It also will resolve issues such as trademark protection and how to dole out new names as the number of sites on the World Wide Web continues to explode.

In June, the Clinton administration gave the Internet community a deadline of Sept. 30 to hammer out a compromise on how to create the new organization. The request set off a dispute among conflicting interests over the future of the Internet's administration.

The Internet Corporation for Assigned Names and Numbers, or IANA, the main group that's been scrambling to prepare a proposal for the new body, submitted a document to the Commerce Department Friday. "These documents reflect the consensus judgment of the global Internet community," wrote Jon Postel, IANA's director, in a letter to U.S. Commerce Secretary William Daley.

Postel ran the University of Southern California research organization that has administered the numbers behind Internet addresses.

The proposal represents the interests of Internet engineers and computer scientists, domain name companies, Internet users, businesses, Internet service providers and others, Postel wrote. "This organization will be unique in the world — a non-governmental organization with significant responsibilities for administering what is becoming an important global resource."

The Commerce Department will accept comments on the proposal for at least a week, according to Ira Magaziner, Clinton's top Internet advisor. "We want consensus," Magaziner said, though he added that given the chaotic nature of the Internet, it's hard to get "100 percent consensus."

Network Solutions Inc., the company now in charge of keeping the registry of the most popular domain names, had worked with the IANA group on an earlier draft proposal, though it hasn't officially endorsed the latest version submitted to the government. The company's five-year exclusive contract to operate the registry of so-called Internet domain names, set to expire Sept. 30, was extended until Oct. 7 earlier this week.

The extension was designed to allow Network Solutions, the government and IANA work out details of the transition of oversight of domain names.

The latest proposal is a "workable" document, said Christopher Clough, a Network Solutions spokesman. The company will review the proposal and expects to file comments with the Commerce Department.

Shares of the Herndon, Virginia-based company fell 13/16 to close at 37 15/16.

The IANA group also submitted a proposed list of candidates for the new organization's first board. These candidates would serve for two years if the Clinton administration agrees they represent a broad cross-section of various Internet interests.

The proposed board members include Linda Wilson, president of Radcliffe College; Geraldine Capdeboscq, a vice president with Bull SA, a French computer networking company; George H. Conrades, a partner with Polaris Venture Partners and former GTE Corp. executive; Gregory L. Crew, chairman of the Australian Communications Industry Forum Ltd.; Esther Dyson, chairman of Edventure Holdings Inc.; Frank Fitzsimmons, a global marketing vice president with Dun & Bradstreet Corp.; Hans Kraaijenbrink, chairman of the Association of European Public Telecommunications Network Operators; Eugenio Triana, an Internet consultant; and Jun Marai, a professor of environmental information at Japan's KEIO University.

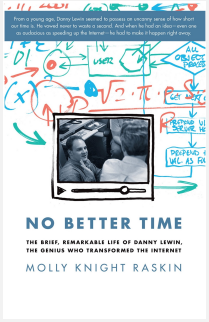
"This list is intended to be geographically and functionally diverse," said Joe Sims, a lawyer representing IANA.

The IANA proposal will be posted at www.ntia.doc.gov, the Web site for Commerce Department's National Telecommunications & Information Administration and at www.iana.org, IANA's home page.

[HN01FN][GDrive]

1998 (November) - Akamai secures funding with Polaris and Battery Ventures; agrees to take Conrades on as a director

Source - 2013 book - By Molly Knight Raskin - "No Better Time" ; PDF - made from recording, with OCR - [HB005L][GDrive] ; Pages 104 - 105 in OCR copy



[HB005K][GDrive]

*With the belief that the big venture money was soon to come, [**Frank Thomson Leighton (born 1956)**] signed the lease on a new office. Akamai moved from its tiny office space at One Kendall to the fourth floor of 201 Broadway in the heart of the Cambridge hub for high-tech firms. By November, everyone involved in the first-round financing rush was anxious-a deal was on the table, and it was a good one. Two prominent firms - **Battery Ventures** and **Venrock** - were ready to make an investment of $8 million ($4 million each) in Akamai. The deal was as good as done, signed, and delivered to Akamai's financial officers and attorneys for vetting. But on a Sunday, the night before the funds were to be wired into Akamai's account, Leighton's home phone rang. It was one of the general managers of Venrock. "We're sorry," he told Leighton. "We're not going to close the deal." Leighton was stunned. Venrock seemed like the perfect fit, having been an early investor in both Apple and Intel. The partner went on to explain: "I've thought hard about it, and I don't think you're going to be successful." Leighton could only think of one thing to say in response: "I think you're wrong."*

In one phone call, Akamai lost half of the $8 million they'd been promised. Lewin immediately feared a domino effect after Venrock's sudden departure. Having turned down offers from almost all the local venture capital companies, they worried no one would even consider stepping in if Battery backed out, too. ***Dagres reassured them, though, offering to close the deal if Battery could take charge of finding another investor to fill the hole left by Venrock. Akamai agreed. Their best hope was Polaris Venture Partners, which had recently recruited George Conrades, a veteran from IBM and BBN (Bolt, Baranek Newman) who had long governed the intersection of business and cutting-edge technology. Dagres contacted Polaris with a deal: if the firm would supply the $4 million Akamai needed, the company would offer Conrades a position on its board. A deal was struck, and in November 1998, just before the Thanksgiving holiday, Akamai secured its first round of financing from Battery and Polaris.***

Leighton and Lewin retained control of the company with a stake of $8 million. *Lewin took the title of chief technology officer, and Leighton became chief scientist. Seelig assumed the role of vice president for Strategy and Corporate Development. Kaplan became vice president for Business Development.*

1998 (Dec) - Conrades becomes a director at Akamai

fiscal year 2000 - https://www.ir.akamai.com/static-files/16c4fae9-fc0e-4fea-8d97-da36a2a6f888

https://www.annualreports.com/HostedData/AnnualReportArchive/a/NASDAQ_AKAM_2000.pdf

George H. Conrades has served as Chairman and Chief Executive OÇcer of Akamai since April 1999 and as a director since December 1998. Mr. Conrades has also been a venture partner of Polaris Venture Partners, Inc., an early stage investment company, since August 1998. From August 1997 to July 1998, Mr. Conrades served as Executive Vice President of GTE and President of GTE Internetworking, an integrated telecommunication services Ñrm. Mr. Conrades served as Chairman of the Board of Directors and Chief Executive OÇcer of BBN Corporation, a national Internet services provider and Internet technology research and development company, from January 1994 until its acquisition by GTE Internetworking in July 1997. Prior to joining BBN Corporation, Mr. Conrades was an IBM Senior Vice President and a Member of IBM's Corporate Management Board. Mr. Conrades is currently a director of Viacom, Inc., a media company, and Cardinal Health, Inc., a health care company.

1999 (Jan 15) - Confirmation Conrades is a director at Akamai

Full newspaper page - [HN01FK][GDrive]

1999-01-15-calgary-herald-pg-e-4-clip-new-network

WORLD WIDE WEB

New network to boost speed, quality

TONY MUNROE
REUTERS
CAMBRIDGE, MASS.

A cadre of high-wattage scientists, entrepreneurs and venture capitalists on Thursday announced the launch of a network they said will boost the speed and quality of content delivered over the World Wide Web.

The venture, called Akamai Technologies Inc., is the result of three years of development at the Massachusetts Institute of Technology's Laboratory for Computer Science.

As part of its launch, Akamai said it has received more than $8 million US in venture capital from Battery Ventures of Wellesley, Mass., and Polaris Venture Partners of Boston and Seattle.

The technology, which is still in the beta, or preliminary, stage, uses hundreds of servers linked to the Internet and deployed all over the world to bring the distribution of Web content closer to users.

Proprietary software developed at MIT drives the servers and prevents the need for a centralized distribution system, thereby easing Web traffic and boosting the speed and quality of information, said Akamai Chief Operating Officer Paul Sagan, a founder of the NY1 cable channel and the Road Runner Internet service.

MIT has licensed the technology to Akamai, for which it has received an equity stake in the company.

Akamai's service will be sold to Web content providers, Sagan said, and users of those pages will automatically enjoy the advantages of Akamai.

Akamai has enlisted 10 Web content providers to use the technology in the development stage, Sagan said. Though he declined to identify the partners, he said five of them are among the busiest on the Web.

Akamai hopes to have a revenue stream in the second half of this year, and upward of 1,000 servers deployed globally by the end of 1999, Sagan said. He said he expects that the company will need another round of financing.

Akamai, which Sagan called a "unique marriage of scientific and Internet minds," is in the process of hiring a chief executive officer.

Frank Thomson Leighton, professor of applied mathematics at MIT, led the team that developed Akamai's "content distribution network" technology.

Leighton, who has taken leave from MIT to be Akamai's chief scientist, said the technology can be used by information and entertainment providers, as well as for e-commerce and online trading.

MIT graduate student Daniel Lewin, who worked with Leighton, is Akamai's chief technology officer.

Among the ventures directors is George Conrades, a partner at Polaris Venture Partners.

Conrades was chairman and chief executive of BBN Corp., which played a key role in building the cross-country computer network that became the Internet, before it was acquired in 1997 by GTE Corp. At GTE, he was executive vice president and president of GTE Internetworking.

The word "Akamai" is Hawaiian for smart and "cool," Sagan said.

COMPUTER GRAPHICS

[HN01FL][GDrive]

1999 (April 08) - Conrades named CEO of Akamai

Full newspaper page - [HN01FG][GDrive]

The Boston Globe (Boston, Massachusetts) · 08 Apr 1999, Thu · Page 65

Conrades named CEO of Akamai Technologies

George H. Conrades, a veteran of **International Business Machines Corp.** and **BBN Corp.**, was named chairman and chief executive of Cambridge-based **Akamai Technologies Inc.**, an Internet service start-up firm. Conrades will launch a service to solve the problem of lengthy download times for popular Web sites caused by too much user traffic across multiple networks. Akamai was founded last year by Tom Leighton, a professor of applied mathematics at MIT, and one of his graduate students. Conrades, 60, formerly was chief executive of BBN, an Internet-service provider in Cambridge that was acquired by GTE Corp. After leaving BBN, he became a partner at **Polaris Venture Partners,** a venture-capital firm in Boston that funds a variety of information technology and biotech companies. Polaris and **Battery Ventures,** a venture-capital firm in Wellesley, have contributed a combined $8.4 million to Akamai, the company said. Conrades, who is also a CBS Corp. director, said he will remain with Polaris.

RegionBriefs

[HN01FH][GDrive]

Year 1998 at GTE (summary provided mid-1999) - Does NOT list Conrades

1999 Report - Annual Summary for GTE for the year 1998

Source - [HC004S][GDrive]

Career at Akamai -From 2013 - "No Better Time" by Molly Knight Raskin

PDF - made from recording, with OCR - [HB005L][GDrive]

[HB005K][GDrive]

Pages 167 - 172 in OCR copy :

- Leighton recalled having a conversation with Lewin early on about the top role, which either of them could have easily assumed. Lewin didn't want to be CEO, but said he'd work for Leighton if he wanted the job. Leighton said he didn't want the job, but that he would work for Lewin if he did. This set off a formal search for a CEO that, by the spring of 1999, was well into its third month. A top executive search firm regularly sent candidates to Cambridge, but when it came time to decide on someone to fill the job, Lewin couldn't commit. The reason, Leighton said, was that Lewin had already decided on the man for the job. In fact, he'd made up his mind before Akamai even incorporated, drafting a list of dream CEOs for his dream company. Topping the list was George Conrades.
- At age sixty, Conrades was comfortably settled into a plumb job as a Venture Partner at Polaris. After four decades on the frontlines of two of the most successful computing companies-International Business Machine (IBM) and Bolt, Beranek, and Newman (later BBN Technologies} Conrades had retired from the career-climbing race. Or so he thought.
- **[...]**
- **When Polaris put $4 million into Akamai 's first round of financing, Conrades agreed to sit on the company's board. At the time, he had no idea that Lewin had a plan to lure him into the role of Akamai's CEO. "It was a whole seduction to get George," recalled Leighton. "Of course we knew he wouldn't be our CEO on day one, so Danny worked to get him on our board. Then we got him on the board and kept working on getting him as CEO.**" Conrades knew Akamai was actively searching for a CEO, but was unaware of Lewin's subtle efforts to court him. **So when Lewin and Leighton invited him for breakfast at Harvest restaurant in Cambridge in late March 1999, Conrades wasn't expecting them to offer him Akamai's top job. "**We told him point blank, we need you to be CEO -what's it going to take?" remembered Leighton.
- Conrades laid out some terms, and Lewin said they'd get back to him later that day. On the way home from lunch, Leighton noted, instead of celebrating what was sure to be a win for Akamai, Lewin suggested they push back on Conrades's terms. "I'm driving away from the restaurant, and Danny is saying how he wants to negotiate," observed Leighton. "I said, 'Danny, what are you doing? Just say yes!"' Leighton added: "That was Danny, always wanting to negotiate the best possible deal."
- **In the end, there wasn't much negotiating, and, on April 7, 1999, George Conrades became Akamai's first CEO, a fitting position for a man who had long been associated with speed.** "To me, Akamai is like Fed Ex," explained Conrades. "Fed Ex changed the game on the postal service, and we changed the game on the Internet." The media seized on Conrades 's move to Akamai as another example of many seasoned executives taking chances on Internet startups in exchange for equity.
- Reporting on this trend, the May 1999 issue of Forbes singled out Conrades, Richard Frank, the ex-chairman of Walt Disney Television who signed on to head Food.com, and James Cannavino, former CEO of Perot Systems who joined the small network security firm CyberSafe. The article posed this question: "Why are these elder statesmen, with little left to prove, now pulling twelve-hour days to run baby firms barely on their second round of venture funding?" While the story speculated that such moves were motivated largely by money, Conrades said he was genuinely thrilled to assume the role at Akamai.
- "I was still full of energy, and I thought the people were just fantastic," said Conrades.
- **Conrades came on board just in time for Akamai 's second round of financing, led by Baker Communications Fund LP of New York. On May 7, Akamai secured $35 million total from Polaris and Battery Ventures, bringing the company's total venture funding raised to more than $43 million.** Todd Dagres told the media it was more than the company needed, and a sizeable sum even for hot startup, which averaged about $20 million in a first round in the late 1990s. Yet Akamai was less than six months old, and its market value had already multiplied tenfold. The day the second round closed, Conrades issued a statement saying Akamai had sufficient capital and had no immediate plans for an additional round of equity or any private or public offering.
- First, Conrades said he needed to step back and give order to what was the chaos of a startup company moving too fast to position itself clearly. "My job was not to understand the algorithms and technology but to build the framework of a business," Conrades observed. "We had to hire and establish a culture; it had to be codified for everyone." One of the first questions he posed to the small company was this: Akamai exists to do what? It seemed so simple, but, as Conrades still recalls, "there was a lot of uncertainty." With the help of everyone at Akamai, Conrades conceived of the company's list of guiding principles, which still stands true today. One of them, which he and Lewin agreed on, was never to dismiss an idea from any source without first giving it consideration. "There was a highly argumentative culture in place, which was either inspired by Danny's Israeli traits or the atmosphere at MIT," said Conrades. "That was good-we reveled in arguing assumptions. But when we did we made a point of listening to everyone." At IBM, Conrades concluded: "there was no ability to do this.
- Some ideas, however, were not up for consideration, no matter how vehemently they were argued. Just after Conrades came on board, he asked Randall Kaplan-who was still working out of Los Angeles-to relocate to Boston. Kaplan pushed back. As the only employee based outside Boston, Kaplan argued that he had originally left his lucrative position at SunAmerica to join

Akamai on two conditions: that he could remain on the West Coast, and that he would report to the company's CEO. Conrades offered Kaplan a second option: remain on the West Coast, but report to Earl Galleher, the VP of Sales. Kaplan refused, and decided to resign. His decision didn't go over well, particularly with Lewin. In the months leading up to Kaplan's departure, tensions between the two were beginning to mount. Although he acknowledged Lewin as one of the most brilliant and talented people he has ever met, Kaplan said he disliked him on a personal level for being what he called too "abrasive." Coworkers said Lewin came to dislike Kaplan, partly because he felt like Kaplan's heart wasn't in the company. Kaplan left the company with a very good deal for himself, one the Wall Street Journal referred to as "a boatload" of stock options-ones he could cash. "Even by the outrageous standards of Silicon Valley, Randall Kaplan is one lucky guy," noted the newspaper. "Unlike his ex-colleagues at Akamai-who have to wait around for four years-Mr. Kaplan already owns all of his shares." By the end of 1999, Kaplan's 2.4 million shares were worth approximately $633 million.

Pages 228 - 230 in OCR copy : (Epligue)

- When they look back on those days, everyone at Akamai agrees they were some of the darkest of their lives. The loss was too searing, the irony too thick. The remainder of 2001, to most of them, was a blur.
- They came to work and continued to carry out the company's new strategy. But they did it all weighted down by heartache. One of Lewin's coworkers said it was like running in snow-they kept moving, but every step felt labored. When they tried to look forward, they did so through the thick haze of grief. They saw nothing but the abyss left by Danny's absence.
- But months passed, and with time, emotional strength regenerated enough for everyone at Akamai to realize that they had one last fight left in them, one that had to be waged in Lewin's honor. They knew it was going to be a fierce one. Although Akamai made it through the days and weeks immediately following the attacks, the company's financial problems were mounting. The attacks sent the U.S. economy further into the black, eating into Akamai's revenues and spawning widespread fears of a recession. Investors lost confidence in Akamai, fearing that Lewin's death meant death for the company.
- Conrades recalled making rounds at the office to check in with staffers who "looked at me like deer in the headlights." As Conrades explained, "This was not the exuberant Akamai they were used to."
- Conrades became well versed at pep talks. "I'd say our stock is coming down, but we're still about one big idea," he recalled, also saying, "The technology still works. The business model works. Then I'd ask them: Do you still have bragging rights at the bar? The answer was yes, so I told them to have faith." He also told them, repeatedly, to do it for Danny.
- Conrades made a pledge to Akamai 's board that he would not step down until the company achieved sustained profitability. But in the two
- years following 9/11, Akamai was written off as another casualty of the dot-com boom. "Everybody had left us for dead," Leighton said. "We were gonna go broke. It was really that bad." The fall was precipitous. Once the stuff of legend, Akamai 's stock was delisted by the NASDAQ after it fell below $1. The company's customers were going out of business faster than the sales representatives could close accounts. More downsizing was necessary, including most of the sales force. Conrades, Sagan and Leighton began citing a metric they called "quarters to live," guessing how many more quarters Akamai could stay in business. {88} But they kept pushing. Every time they thought about Lewin, they became resolute in their pledge never to give up. "The people were really good people, the technology was good, and you know, we were relentless," said Leighton. "It was all about Danny. He had instilled such a culture through the powerfulness of his personality and the people that he vetted and selected that everyone wanted to double down and work extra hard to make Akamai successful. We wanted to make it happen for him, and it was very, very hard."
- Fortunately, Lewin had left behind what Akamai called one "gift" for the company: EdgeSuite. Akamai positioned EdgeSuite as the ticket to its comeback, one that would take the company beyond content delivery to content assembly, presentation, and delivery. Akamai, Conrades said, used EdgeSuite to form a new strategy akin to what Federal Express accomplished when it moved beyond the shipment of packages into the additional services of packing and preparing them for shipment. With EdgeSuite as the centerpiece of a new business plan, Akamai offered customers technology that would accelerate the movement of dynamic content-things like stock quotes, airline prices, auction listings, and weather reports. Prior to EdgeSuite, A.kamai was delivering static pages, which were assembled before delivery, meaning everyone who clicked on them saw the same thing. Dynamic Web sites, in contrast, are put together on the spot and change frequently, often with every click-and EdgeSuite could do this very, very well.

2018 (March 27) - Boston Business Journal - "Former Akamai CEO George Conrades to retire as board chairman"

By Kelly J. O'Brien – Technology Reporter, Boston Business Journal

Mar 27, 2018, 11:31am EDT

https://www.bizjournals.com/boston/news/2018/03/27/former-akamai-ceo-george-conrades-to-retire-as.html

2018-03-27-bizjournals-com-former-akamai-ceo-george-conrades-to-retire-as-board-chairman.pdf

Akamai Technologies Inc. (Nasdaq: AKAM) chairman George Conrades will retire from the company's board as of June 1, the latest change at the Cambridge tech giant since activist hedge fund Elliott Management took a stake in the company last year.

Conrades will retire from the board on June 1, but will hand over the chairman role to another director, Frederic V. Salerno, effective immediately.

"I want to express my deep appreciation to George for his unwavering dedication and tremendous leadership over the past two decades," Akamai co-founder and CEO Tom Leightonsaid in a statement. "The impact of his work cannot be overstated, not just for the growth and customer-focused culture that he fostered at Akamai, but on the evolution of the internet as a whole."

Conrades joined Akamai's board in 1998, when it was still a tiny MIT startup. He took over the CEO role in 1999 and soon led the company through its initial public offering. Conrades handed over the CEO role to Paul Sagan in 2005.

Conrades' departure comes less than a month after the public got its first insight into the strategy that Elliott has in mind for Akamai. In early March, Akamai announced that it would add Tom Killalea, formerly the chief information security officer of Amazon, to its board of directors. The company also said it plans to add another board director, to be named later. Akamai didn't say whether the vacancy left by Conrades' departure would be filled by a third new director.

Akamai also said earlier this month it would work with Elliott to increase operating margins over the next several years.

The company has gone through several tumultuous years thanks to big shifts in the market for its internet content delivery technology. Akamai announced about 400 layoffs earlier this year, some of them connected to failed experiments within the internet content delivery division. At the same time, Akamai is doubling down on its fast-growing cybersecurity division.

WIPED - Conrades + Akamai in the year 1998 ...

https://www.newspapers.com/search/#query=conrades+akamai&dr_year=1998-1998

.. NO HITS

Not disclosed on Akamai website -

https://www.akamai.com/us/en/about/company-history.jsp

ICANN on HousatonicITS - **ICANN** (Internet Corporation for Assigned Names and Numbers (ICANN))

https://www.youtube.com/watch?v=j15mNmsR-So

2008 presentation - Conrades

https://www.youtube.com/watch?v=iVq5J3SnSck

DEALMAKERS PROFILE : INTERNET PIONEER

41 views • Jan 19, 2017

Landmark Ventures

George Conrades, Chairman of Akamai; Board Member at Oracle, Harley-Davidson

Moderator: Izhar Shay, Managing General Partner – Canaan Partners Israel

Israel Dealmakers Summit 2016

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Contel Corporation

- 1990/1991 - Purchased by **GTE Corporation**

Founded by : **Charles Wohlstetter (born 1910)**

1990 (July 13)- NYTimes - "Contel Agrees to Takeover Offer by GTE"

By Barnaby J. Feder

Source - [HN01D4][GDrive]

In a move that would sharply expand both its local telephone operations and its fast-growing cellular telephone business, the [**GTE Corporation**] said yesterday that it had reached a preliminary agreement with the Contel Corporation to acquire the Atlanta-based company in a stock swap. The deal would be worth about $6 billion, based on yesterday's closing stock prices.

If the deal is completed and approved by regulatory authorities, GTE, based in Stamford, Conn., would become the fifth-largest local telephone company in the nation, based on number of telephone lines - after the Bell Atlantic Corporation, the BellSouth Corporation, Ameritech and the Nynex Corporation - and its second-largest mobile phone operator, after McCaw Cellular Communications.

"Aside from the obvious synergy of our telephone and cellular operations, both companies have other areas of interest that are remarkably parallel," James L. Johnson, GTE's chairman and chief executive, said in a statement. He cited businesses that supply communications systems to governments, satellite communications operations and aggressive programs by both companies to gain a foothold in cable television services.

"It's a great strategic move and very gutsy," said Jack Grubman, who follows the telecommunications industry for Paine Webber. "The bigger you are in this industry, the better off you are. They got the best of the independent companies at a price that will look good in three or four years."

Investors took a shorter-term view, however. GTE's stock price fell $1.25 a share, to $29.75, in trading yesterday on the New York Stock Exchange. The more than 200 million shares GTE will issue to complete the transaction at an exchange rate of 1.27 GTE shares for each Contel share could dilute GTE's share earnings this year by about 10 percent, analysts said.

Contel shares rose $7.125 to finish at $35.125 a share on the New York Stock Exchange. Charles Wohlsetter, the entrepreneurial 80-year-old chairman of Contel, said that because of GTE's higher stock dividend, Contel shareholders will receive the equivalent of $1.85 a share in dividends for their stock after the deal, a sharp increase from Contel's $1.10-a-share payout.

The proposed deal is one of the largest to date in the telecommunications industry, which has been undergoing a period of consolidation. The MCI Communications Corporation recently bought Telecom USA Inc. for $1.25 billion. In April, GTE agreed to acquire the cellular phone operations of the Providence Journal Company for $710 million, and United Telecommunications Inc. said it would pay $500 million to complete its buyout of GTE's interest in the U S Sprint Communications Company. U S Sprint is the nation's third-largest long-distance enterprise, after the American Telephone and Telegraph Company and MCI.

Earlier this year, McCaw secured its place as the nation's largest cellular concern, based on number of potential customers in its service areas, by paying $3.4 billion for control of the Lin Broadcasting Corporation.

Mr. Wohlsetter and John L. Segall, Contel's vice chairman, will become vice chairmen of GTE and members of its board if the deal is completed. Mr. Wohlsetter would also become chairman of GTE's strategic issues, planning and technology committee. However, the actual roles of both men and of Donald M. Weber, Contel's president and chief executive, at GTE remain to be worked out, said Harvey W. Greisman, a GTE spokesman.

$3.1 Billion is Sales

Contel's attractions for GTE include 2.6 million telephone lines in 30 states, with a far-higher-than-average percentage of its exchanges employing modern digital switches. And Contel has completed a reorganization in which it shed a number of money-losing businesses accumulated during an ill-fated period of diversification. It netted $277 million on revenues of $3.1 billion last year.

Contel Cellular Inc., which is 90 percent owned by the Contel Corporation and 10 percent publicly owned, has franchises in 36 metropolitan areas. The franchises include valuable regions in the Southeast acquired last fall from McCaw for $1.3 billion, making Contel Cellular the seventh-largest cellular business in the nation.

GTE has undergone a wave of restructuring since Mr. Johnson became chief executive in 1988. In addition to phasing out GTE's ownership interest in U S Sprint, Mr. Johnson has shifted headquarters for the local telephone operations to Dallas, begun a drive to reduce employment by 14,000 and reduced GTE's involvement in the development and manufacturing of telephone switches by setting up a joint venture with A.T. &T.

GTE employs 158,000 people and has businesses in 46 states and 41 countries, including local phone companies in Canada and the Dominican Republic that serve 2.3 million customers. In addition to telecommunications, it has a large lighting business. It had net earnings of $1.4 billion on sales of $17.42 billion last year.

Sept. 30, 1986 (Sep 30) - NYTimes - "COMPANY NEWS; COMSAT, CONTEL PLAN TO MERGE"

By David E. Sanger - Source : [HN01H2][GDrive]

Comsat, struggling to recover the growth rates it grew accustomed to in the early days of communications satellites, said yesterday that it would merge with the Contel Corporation in an exchange of stock worth about $2.4 billion.

Under the agreement, Comsat, formally the Communications Satellite Corporation, will retain its name and pursue its unique role as the Federal Government's chief vehicle for operating communications satellites in cooperation with foreign nations.

But control of the company will go to top executives at Contel, which is attempting to speed its entry into the unregulated portions of the telecommunications business - including internal communications for the nation's largest companies and sales of advanced telecommunications equipment to the Federal Government. Contel's primary business is the operation of local telephone companies in 30 states.

Mutual Benefit

The merger will give the Atlanta-based Contel, whose $2.5 billion in revenues last year made it five times Comsat's size, access to Comsat's highly regarded technologies. Contel would also benefit from its role as the international satellite carrier for everything from telephone companies to television networks.

Meanwhile, the Washington-based Comsat will gain the financial resources and marketing power that it has failed to muster in recent efforts to diversify into a range of other communications ventures.

"We realized that we simply did not have a market position in the competitive side of our business," said Irving Goldstein, Comsat's chief executive, who will become vice chairman of the combined venture. "I think now we will have the staying power, the marketing clout and the technical capability that neither company alone had enough of."

Terms of Agreement

Under the terms of the agreement holders of Contel's 76 million outstanding shares will each receive 94-hundredths of a share of Comsat common stock for each of their Contel shares. Comsat closed Monday at $34.25, meaning that Contel shareholders will receive the equivalent of about $32.195. Comsat also said its annual dividend would rise to $2 from $1.20.

Analysts noted that the merger -which was approved by the boards of both companies last Friday, but still requires a go-ahead from the Federal Communications Commission -marked an acknowledgement that Comsat was facing increasing competition in the business where it once held a monopoly: establishing satellite communications between the United States and virtually every other country in the world.

That was Comsat's charge when it was created in 1962 by the United State Communications Satellite Act. At the dawn of the space age, Comsat's chief task was setting up Intelsat, an international consortium responsible for the construction, launching and operation of communications satellites for more than 100 countries. Later, it started Inmarsat, which established the first satellite links to ships and oil platforms at sea. A Hot Stock in 1964

When it went public in 1964, Comsat was considered the hottest of high-tech stocks, with investors receiving only about three shares for every 100 they ordered. Even at the time, many thought the company was racing a bit ahead of the technology. Philip L. Graham, the late publisher of The Washington Post and an early member of the Comsat board, said creating the company was "a little like trying to create an international airline six months after Kitty Hawk."

The company's first satellite, Early Bird, increased the number of international circuits by 50 percent and permitted the first live television transmissions from abroad. And through the early 1970's, the company grew by leaps and bounds - until it became clear that demand for telecommunications was not growing as fast as capacity. Ill-Fated Diversifications

That realization, along with the entry of RCA and other competitors into the international satellite business, led Comsat into a host of telecommunications ventures. Most notable among them were the ill-fated Satellite Business Systems, a partnership with the International Business Machines Corporation and Aetna Insurance to provide communications services to large corporations, and a pay-TV spinoff that was intended to beam television programming from satellites directly into homes.

Both ventures ran up tens of millions of dollars in losses, and were dumped in a restructuring led by Mr. Goldstein and Marcel P. Joseph, Comsat's president and chief operating officer, a longtime veteran of General Electric who is regarded as a tough-minded engineer. Both also worked extensively with Contel, formerly Continental Telecom Inc., when the two companies built a communications system recently for Halliburton Company.

"That led us to discussions of more and more joint ventures," said Mr. Goldstein. "Then in the past month the idea emerged - I can't really remember by who - that a merger would really be the best solution."

The structure of the deal was influenced by Comsat's Congressional charter. "No matter what, Comsat had to be the surviving entity," said Susan O'Connell, special assistant to the chief of the F.C.C.'s Common Carrier Bureau.

At Contel yesterday, executives welcomed the merger. "Having international scope is important to our future, and the Comsat name will help us toward that end," said John N. Lemasters, Contel's 52-year-old chief executive, who will take control of Comsat's executive suite along with Contel chairman Charles Wohlstetter. Contel's American Satellite subsidiary, he said, "has the network we need, and Comsat has the customer base."

https://www.nytimes.com/1988/07/19/business/contel-leader-is-recovering.html?searchResultPosition=1

https://www.nytimes.com/1990/11/06/business/company-news-contel-acquisition-may-be-delayed.html?searchResultPosition=7

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James Quell Crowe (born 1949)

https://prabook.com/web/james_quell.crowe/837687

2020-12-prabook-com-web-james-quell-crowe-837687

James Quell Crowe - James Quell Crowe, American communications executive. Member National Academy of Engineering, **American Nuclear Society**.

construction company executive

Background

Crowe, James Quell was born on July 2, 1949 in Camp Pendleton, California, United States. Son of Henry Pierson and Mona (Quell) Crowe.

Education

- Bachelor of Science in Mechanics Engineering, Rensselaer Polytechnic Institute, 1972. Master of Business Administration, Pepperdine University, 1982.
- Project engineer Cozzolino Construction Company, Portuguese of Albany, New York, 1971-1973.
- Self-employed, Albany, 1973-1974. Engineer Morrison-Knudsen Company, Inc Company, Incorporated, Saratoga, New York, 1974-1975, project engineer, Washington, 1975-1976, project manager various cities,1976-1980, vice president operations, Boise, Idaho, 1980-1983, group vice president-power, 1983-1986.
- President Kiewit Industrial Company, Omaha, 1986. Chairman Metropolitan Fiber Systems, Chicago, 1988.
- President Kiewit Energy Company, Omaha, 1988.
- Director California EnergyCo., San Francisco.

Career

Project engineer Cozzolino Construction Company, Port of Albany, New York, 1971-1973. Independent, consultant engineer Albany, 1973-1974. Engineer Morrison-Knudsen Company, Inc, Saratoga, New York, 1974-1975, project engineer Washington, 1975-1976, project manager various cities, 1976-1980, vice president operations Boise, 1980-1983, group vice president power, 1983-1986.

President Kiewit Industrial Company, Omaha, 1986—1991. President, Chief Executive Officer MFS Communications, 1993—1997, Level 3 Communications, Broomfield, Colorado, 1997—2000, Chief Executive Officer, since 2000. Chairman, Chief Executive Officer MFS Communications Company, Inc., Omaha, 1988-1997.

Chairman WorldCom, Inc., 1997. Board director Level 3 Communications, Inc., since 1993. Director RCN Corporation, Commonwealth Telephone.

Achievements

- James Quell Crowe has been listed as a noteworthy communications executive by Marquis Who's Who.

Membership

Member National Academy of Engineering, American Nuclear Society.

Connections

Married Pamela L. Powell, June 20, 1986. Children: Sterling, Angela, James Michael.

- **Father:** Henry Pierson Crowe (https://en.wikipedia.org/wiki/Henry_Pierson_Crowe)
- **Mother:** Mona (Quell) Crowe
- **Spouse:** Pamela L. Powell
- **child:** James Michael Crowe
- **child:** Sterling Crowe
- **child:** Angela Crowe

2010 (Oct 04) - Business Wire : "President Obama Names Level 3 CEO James Crowe as Chairman of National Security Telecommunications Advisory Committee"

See [HW005D][GDrive] / October 04, 2010 07:46 PM Eastern Daylight Time

[**Level 3 Communications, Incorporated**]. today welcomed President Obama's announcement of his intent to appoint **James Q. Crowe**, the company's chief executive officer, to the position of Chair of the National Security Telecommunications Advisory Committee (NSTAC).

"The public/private partnership of the NSTAC has resulted in unique contributions to critical infrastructure protection, information sharing, network convergence, security and communications infrastructure reliability across the nation."

As chairman, Crowe will preside over a 30-member committee that comprises industry executives from major network service providers, IT, finance and aerospace companies. The NSTAC provides critical industry-based analyses and advice to the President on policy and technical issues regarding national security and emergency preparedness communications. The committee also develops recommendations to the President to assure vital telecommunications links through any event or crisis.

"I am honored by the opportunity to chair this important committee," said Crowe. "The public/private partnership of the NSTAC has resulted in unique contributions to critical infrastructure protection, information sharing, network convergence, security and communications infrastructure reliability across the nation." [...]

2013 (May 09) - Omaha World Herald - "Crowe, who built Level 3 Communications from ground floor, to retire"

By Barbara Soderlin WORLD-HERALD STAFF WRITER / Source : [HN01CR][GDrive]

James Q. Crowe, who led the development of Level 3 Communications from its Omaha origins, announced Thursday he plans to retire by the end of 2013 from his position as the Broomfield, Colo., firm's chief executive officer.

The board of directors, led by chairman Walter Scott Jr., has formed a committee to select a new CEO. Crowe will remain on the board.

Crowe led MFS Communications Co. in Omaha when it was a subsidiary of Peter Kiewit Sons' Inc. under Scott and after it was spun off in 1995. It was sold in 1996, and Crowe returned to Kiewit to head the Diversified Group, which was founded in 1985 to hold Kiewit's nonconstruction assets.

A year later, he announced that Diversified Group would move its headquarters out of Omaha and start an Internet-related telecommunications business in a city where it would have an easier time attracting high-tech workers. It was discouraging news to the Omaha business community at a time when the Peter Kiewit Institute was in its infancy.

In 1998, Kiewit Diversified Group changed its name to Level 3 Communications Inc. and started trading on the NASDAQ exchange, drawing heavy investment from the Omaha area.

Today the firm provides data, Internet, voice, video, security, IT and managed services. It has service in more than 70 countries and more than 100,000 "route miles" of fiber optic cable.

"Level 3," Crowe said, "is extraordinarily well-positioned to benefit from the worldwide explosion of voice, data and video carried over the Internet."

In February, it reported year-end revenue of $6.38 billion, up from $6.32 billion in 2011. Level 3 in 2012 had a net loss of $422 million, compared with losses of $875 million the year before.

Scott thanked Crowe for his leadership and for all that he has done to build Level 3. "It is no exaggeration to say that, without Jim, there would be no Level 3."

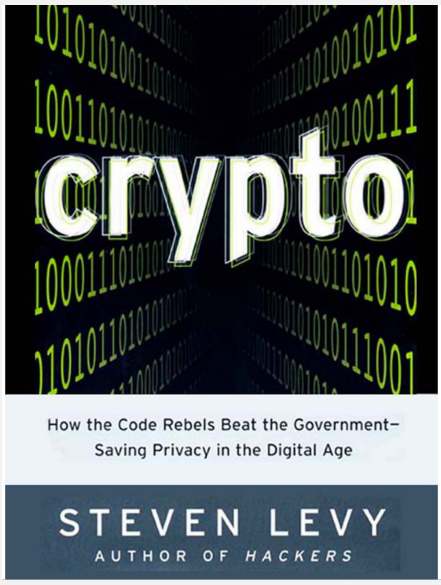
Housatonic

The Crypto War in the USA Intelligence Community

"Crypto, How the Code Rebels Beat the Government--Saving Privacy in the Digital Age"

Chapter - Slouching towards crypto

2001-crypto-rebels-beat-the-government-saving-privacy-steven-levy https://drive.google.com/open?id=10FVeVDaCy2o-8T9ZutXBpI_sTKx54iUy



2001-crypto-rebels-beat-the-government-saving-privacy-steven-levy-cvr.jpg / https://drive.google.com/open?id=10Iaq4dtjD2SMyV25wVuv1nOd5O3TyIpi

by 1995, it was clear that the field of cryptography—as well as its reach—had dramatically changed, despite the government's best efforts. Crypto, propelled by computer power and new discoveries by the Whit Diffies of the world, was moving at a turbocharged pace, shifting from Pony Express to Internet time. But the basic principles remained. Despite the increasingly invoked specter of crypto anarchy— where codes would proliferate unchecked, to the point where no government or institution could even hope to get a handle on digital commerce or law—the ancient clash of measure and countermeasure persisted. Only now the outsiders had a hand in the game.

Over a century before, Edgar Allan Poe, who had been nearly obsessive on the subject of cryptology, wrote, "It may roundly be asserted . . . that human ingenuity cannot concoct a cipher which human ingenuity cannot resolve." Mathematically, of course, Poe was wrong; the verifiably impenetrable onetime pad was a firm "nevermore" to his claim. But implementing a one-time pad was demanding; certainly it was inappropriate in large-scale settings. So on a practical basis, was the poet's claim correct? When Martin Gardner had cited Poe's quote in his famous Scientific American article about RSA, he had thought not.

The question certainly bugged Phil Zimmermann. In his heart, he felt that the encryption algorithm at the center of his PGP software was sound. In naming his program, he felt that "pretty good" was an understatement: users should be able to count on its imperviousness to codebreakers. The government, at least publicly, hinted that PGP was strong, too. In the spring of 1995, Louis Freeh of the FBI and William Crowell of the National Security Agency had testified in a classified congressional briefing about the difficulty of breaking crypto with long key sizes. Freeh complained, "We don't have the technology or the brute-force capability to get to this information." Crowell went even further. Citing current personal computer technology, he said that to crack "128-bit cryptography, which is what PGP is . . . would [take] 8.6 trillion times the age of the universe."

But Zimmermann knew that a brute-force attack on IDEA (International Data Encryption Algorithm) was not the only way to gut his cipher into something that could be called "Pretty Good Try at Privacy."

There were countless ways to crack a code. Maybe through stronger factoring algorithms and dedicated hardware a supercomputer could make much faster work of the public key part of the program. Or, even more likely, there could be quirks in the details of PGP's implementation that would provide a

cryptanalyst with a precious shortcut to plaintext.

As it happened, one evening at the 1995 crypto conference at Santa Barbara, there was a cocktail party alfresco, and late in the evening a few cryptographers, decked in traditional garb of T-shirts and sandals, gathered around one of the event's keynote speakers. He was Robert Morris, Sr., and until recently the only crowds he'd addressed were those authorized to receive U.S. government secrets. He had just retired as a top scientist at Fort George Meade. Morris's reputation—enhanced by the unknowable feats he may have accomplished in the service of spookdom—drew a small crowd to his table. And when Morris mentioned that he wouldn't mind meeting Phil Zimmermann, the neatly bearded forty-one-year-old was quickly called over.

"Phil, let me ask you a question," said the former intelligence man, puffing aggressively on a cigarette.

"Say that someone used PGP for very bad stuff. How much would it cost us to break it?"

Zimmermann seemed flustered. "Well, I've been asked that before," he said. "It could be done."

"But how much would it cost us?"

It was far from Zimmermann's favorite subject, but he played along. He conjectured that the best attacks on PGP would not be on its key size but on other weaknesses. Its data structure could be troublesome, he admitted, its error correction poor.

Morris nodded and said nothing. He'd been playing with Zimmermann. Who the hell knew if the NSA had already unearthed some elementary flaw that enabled the acres of silicon in its vaunted basement instantly to cough up the plaintext of the freedom fighters who allegedly used Zimmermann's program?

But the next day in his talk, Morris implicitly provided a commentary on the new cryptographers and their crypto-anarchist visions. He revealed no trade secrets. But somewhat in the spirit of the Eastern masters, Morris did present a pair of truisms—koans of the crypto faith—that pointed toward an eventual rapprochement between the Equities, one beyond the current political struggles. A glimpse of a post- Clipper society in the century to come.

Koan One (for codemakers): never underestimate the time and expense your opponent will take to break your code. The inner text of the Morris speech was that cryptography is best left to those of a paranoid mind-set, those who believe beyond question that their opponents just may be very rich, very clever, and very dedicated—hellhounds on the trail. They will launch powerful frontal assaults on your codes. And, often, they will win.

Koan Two (for codebreakers): look for plaintext. This was reassurance to the crowd that no matter how baffling the task of codebreaking might seem, the fact is that very fallible human beings are the ones who must employ these sophisticated systems. So sometimes, when one least expects it, a seemingly impenetrable code—the jumble of ASCII confetti one must hammer into human language—might have a passage, or an entire message, somehow unencoded. In that case, you could read it as easily as a fortune cookie.

To the crypto anarchists, Morris was saying, "Hey, it's not that easy to create a cipher utopia." The ancient game would go on. But by imparting the lesson to outsiders he was also tacitly acknowledging that the future belonged not just to the NSA illuminati, but to these T-shirted longhairs at Santa Barbara as well.

Morris's statements came at a time when the tension between public and government crypto was at its height. Further, a novel twist had recently been introduced. Some of the emerging crypto forces were now well beyond code making and deeply into cryptanalysis. While this had been undertaken by the crypto crowd before—most famously in the attacks on Merkle's knapsack scheme—there was now a new sort of effort. It did not conform to the traditional rules forged in the world of William Friedman or Alan Turing. . . . It was an aggregate code breaking, a mass effort powered by the amplifying abilities of the Net. Its practitioners were, of course, cypherpunks. This breed of codebreaker was not interested in crime and espionage, but in making a political point and reaping big fun in the process.

One of the first efforts began with Phil Zimmermann's PGP software. Long before Morris brought up the question of PGP's strength at Crypto '95, its users had been plagued by nagging questions of its resilience. Their angst reflected the key dilemma of guerrilla cryptography: could you trust software developed without the imprimatur of an organization known for secure codes? This was the question that Derek Atkins, then a twenty-year-old electrical engineering student at MIT, was asking himself in 1992.

His initial reaction to Zimmermann's program was to join the crusade, and he became part of the impromptu development team creating new versions of the software. But then Atkins came to wonder what attacks might work against it.

As Bob Morris indicated in his talk, there are two general ways to crack a cryptosystem. The first way is brute force—to try all possible solutions until you hit on the right one. The second method involves seeking a shortcut, an unintended weakness, which may enable you to break the codes. As Atkins spoke to his friends—including Michael Graff at Iowa State University and Paul Leyland of Oxford University—he decided on the former style of attack. Trying to find a subtle flaw was a task beyond his abilities and experience. (Though, as Morris implied, it was a route that the NSA had probably attempted.) On the other hand, everybody seemed to agree that a direct, and perhaps feasible, route to cracking PGP would be one that worked against any RSA-based program: factoring.

Rivest, Shamir, and Adleman had understood, of course, that if someone figured out a quick way to factor—to determine two original primes from the key based on the product of those numbers—their system was dead meat. But even though they had expected somewhat better factoring algorithms to come, they figured that nothing on the horizon would make it feasible to break RSA. Atkins and his friends, however, wanted to test that proposition. They suspected that by relying on a previously unavailable resource—the thousands of computers accessible to people on the Internet—they might be able to make factoring history. This was a fascinating premise, regarding the aggregate computing power of Internet users as sort of a giant supercomputer, perhaps a kludged cousin to the ones that supposedly existed in the basement of Fort Meade. They ran the idea past Arjen Lenstra, the renowned mathematical expert at Bellcore in New Jersey. He told them that the large prime numbers commonly used in PGP (as well as the commercial versions of RSA) would be too formidable to attack. Then he suggested another challenge: RSA 129.

Lenstra's idea cut to the heart of the issue of whether or not cryptography could ever assure perfect security. The RSA 129 challenge was the one offered in Martin Gardner's Scientific American column in 1977—the column that began by declaring moot Poe's dictum that no code was impervious to cracking.

The challenge still had not been met in all these years. The estimate of time it would take a dedicated supercomputer to factor a number that size was forty quadrillion years. But even if you did not accept that number (Rivest now says it was a miscalculation) even a much, much smaller number—a billion years, say, or a measly few million—would indicate that anyone breathing today's air would have been long rendered into a dust ball before the secret of the RSA message encoded with a 129-digit key would be revealed.

Yet fifteen years later, Atkins, Graff, Leyland, and Lenstra joined forces with the Internet to attempt to collect that hundred dollars—in a matter of months.

The first, and probably most important, thing they needed was a good factoring algorithm. There had been some conceptual advances in this area since Gardner's column had been published. Specifically, someone had devised the "double large prime multiple polynomial variation of the quadratic sieve." This involves searching in a numbers realm called vector space for numbers known as univectors. These can be combined to chart mathematical relations in a way that yields the two original primes. "You don't have to search the full space of possibilities, but only a small finite portion of the space," says Atkins. "One way of looking at it is that we were looking for eight million needles in a haystack full of countless needles. You're not looking for any particular needle—you just find enough of them and combine them in a special mathematical means to actually factor the number." That technique was perfect for a distributed Internet attack, where literally hundreds of people would join forces to solve the problem. During the summer of 1993, the software was ready—Atkins had been running some of it on the MIT Media Lab computers—and they could now recruit volunteers with computers. The response was terrific: over 1600 machines worked on the problem, all over the world, every continent except Antarctica. The computers ranged from garden variety PCs to the 16,000-processor Maspar supercomputer at Bell Labs.

A standard measurement of computer power is a MIPS year—one year of constant use of a Million Instructions per Second machine. From September 1993 to April 1994, the RSA 129 experiment used about five thousand of those MIPS years. It was then that Atkins and the others guessed that they finally had enough univectors to do the final calculations. As planned, they sent it to Lenstra at Bell Labs, who would then do the final "matrix reduction." Atkins sent Lenstra a tape with 400 megabytes worth of univectors, via U.S. mail. He also sent a backup by FedEx. Lenstra fed it to his machines, and for two days they matrix-reduced. On April 24, 1994, Atkins posted the following message on the Net: We are happy to announce that

RSA-129 =

114381625757888867669235779976146612010218296721242362562561842 9 \3
570693524573389783059712356395870505898907514759929002687954354 1 =

349052951084765094914784961990389813341776463849338784399082057 7*3
276913299326670954996198819083446141317764296799294253979828853 3

Applying that key to the number that represented the enciphered message text, they were able to transform it into a similarly long number. This was easily converted to English by one of the oldest decoding schemes in history: 01 = A, 02 = B, and so on. That yielded the secret that supposedly would last for a quadrillion years:

THE MAGIC WORDS ARE SQUEAMISH OSSIFRAGE

Did this discovery rock Ron Rivest's world? Not really. In the years since Gardner's article, he had kept track of developments in factoring, and had concluded it wasn't impossible that one day he might have to write out a check for $100 to someone. (Amazingly, he had forgotten the actual message.) He even defends Gardner's prediction that a break in our lifetime was extremely remote. "It was probably accurate for the analysis of the fastest algorithm we knew about at the time, but technology was moving fast on the factoring frontier."

But the very idea of a "factoring frontier" was enough to throw some doubt into the security of the most popular public key cryptosystem. After all, if factoring was easy, RSA was, well, worthless. Of course, breaking RSA 129 was nowhere near as challenging as cracking RSA codes set at commercial strength.

When the RSA system uses 129 digits, the key turns out to be 425 bits long. But the standard RSA key— the one used by the company's actual software—was 1024 bits long. Had the Atkins team attempted the same task with that key length, their computers would still be working on the problem—for a few million more years.

Yet that degree of futility had once been predicted for RSA 129. Might new techniques to factor numbers melt down even the fattest RSA keys? There may well be mathematical breakthroughs to speed up factoring, but an even greater threat to the strength of the cryptosystems was the development of what are called quantum computers, machines that take advantage of subatomic physics to run much faster than our current models. (Think of the speed differential between turtles and laser beams.) While these machines still existed only in theory, scientists had been taking the first difficult steps toward implementation. Once the journey toward quantum computers was completed, you could stick a fork into the RSA cryptosystem. "I think that I shall see a special-purpose quantum factorization device in my lifetime," cryptographer Giles Brassard wrote in 1996. "If this happens, RSA will have to be abandoned." This was published, of all places, in CryptoBytes, the technical newsletter of RSA Data Security.

But that remained speculation. The reality is that Derek Atkins and his colleagues took what seemed to be an invincible problem and, working informally, with an ad hoc collection of computers, managed to crack it. "What we learned is that a bunch of amateurs can get together and do this," he says. And that all claims of invincibility should be regarded with skepticism.

The next target was an irresistible one: the 40-bit crypto allowed by the government for export. The point this time would be purely political. If the barn-raising style of cryptanalysis used in the RSA crack was directed against the puny key lengths negotiated by the Software Publishers Association in 1992 (and, despite government promises, not adjusted in subsequent years), those keys would surely fall, and the need for stronger crypto would be obvious.

After one cypherpunk suggested a "Key Cracking Ring," Tim May urged action, guessing that the "CPU horsepower of this list could be quite impressively applied" to crack the key in six months, making a strong statement against U.S. export standards. (Six months was a guess. But comparing the computation effort to the RSA's crack was somewhat like apples and oranges—keyspace search versus factoring.)

"Heh, I was already working on it . . . ," wrote Adam Back, a twenty-five-year-old computer science student at Exeter College in England. Immediately after seeing the first posting, he'd begun writing scripts to allow people to participate in a group crack. He knew what he was doing, since he had been recently playing around with Rivest's RC-4 algorithm—the actual cipher that performed the 40-bit encryption permitted for export by the government in programs by Microsoft and Lotus.

A brute-force attack on a bulk encryption cipher like RC-4 or DES requires the codebreaker to try out every possible key combination. Finding a key requires searching through the entire space of possibilities; in the case of a 40-bit key there are about a trillion actual possibilities, enough to keep a pack of computers busy for days. That's what Adam Back had in mind: a mass effort with each attacker claiming some portion of keyspace, testing it, and then requesting another. The process would continue until someone found the key. Back posted his scripts to his Web page, and a group of conspirators from various corners of the world quickly gathered. Eventually, eighty-nine cypherpunks participated in trying to find a 40-bit key in Microsoft's database program Access.

But the Microsoft Access crack was doomed. After the entire keyspace was "swept," none of the millions of potential keys unlocked the message. It turned

out that the would-be crackers were stuck on a technical point that kept them from actually getting the plaintext. (“The problem was a lack of specifications,” says Back. “We didn’t know what format the file was in.”)

Still, the cypherpunks emerged from the failed Microsoft attack with some group-cracking software, a loose yet dedicated organization, and a continuing desire to expose what they believed was the pitiful sham of export-level crypto. And then the cypherpunks hit upon an even better target for a brute-force attack: Netscape.

In 1993, two students at the University of Illinois had engaged in a coffeehouse conversation that would not only change the course of the twenty-two-year-old international network called the Internet but would profoundly affect the adoption of crypto. One of them, a chunky undergrad named Marc Andreessen, had recently been learning about a new system on the Internet brashly named the World Wide Web by its inventor, Tim Berners-Lee, a British computer scientist working in Switzerland. The Web was an ingenious way to publish and get access to information on the Net, but only a few in the technical community had adopted the system. Andreessen saw a wider potential. If someone created a slick “browser” to surf through the information space created by a multitude of people who shared text, pictures, and sounds on the Web, he said to his colleague Eric Bina, the Internet itself would be easier to use and a better way to get information. The pair, both of whom worked at the Supercomputing Center at the university, created Mosaic, the first great Web browser. Instead of being forced to use arcane commands and tackle a baffling alphabet soup of acronyms, people could now get all sorts of wonderful stuff from handmade Web “pages”—at the click of a mouse! It was an instant phenomenon; to use Mosaic was to swoon with the excitement of participating in a vast experiment with the future of information sharing. Soon a team at Illinois had churned out versions of the program for virtually every computing platform. Millions of people downloaded them, and thousands of Web sites sprang up to take advantage of the audience.

In 1994, Andreessen had another famous cup of coffee, this time with Silicon Valley entrepreneur Jim Clark. The just-departed CEO of Silicon Graphics was casting about for a big new idea for a start-up company, and with this college kid he hit one of the richest pay dirts in history. Clark, who’d been unaware of the Web boom up till then, quickly realized that there were untapped commercial possibilities for the Web, and grabbed not only Andreessen but most of the Illinois team to start Mosaic Communications. (When the university objected to the name, Clark changed it to Netscape.) The idea was to develop an improved browser called the Navigator, along with software for “servers” that would allow businesses to go on-line. The one missing component was security. If companies were going to sell products and make transactions over the Internet, surely customers would demand protection. It was the perfect job for encryption technology.

Fortunately Clark knew someone in the field—Jim Bidzos. By the time negotiations were completed, Netscape had a license for RSA and the company’s help in developing a security standard for the Web: a public key–based protocol known as Secure Sockets Layer. Netscape would build this into its software, ensuring that its estimated millions of users would automatically get the benefits of crypto as envisioned by Merkle, Diffie, and Hellman, and implemented by Rivest, Shamir, and Adleman. A click of a mouse would send Netscape users into crypto mode: a message would appear informing them that all information entered from that point was secure. Meanwhile, RSA’s encryption and authentication would be running behind the scenes.

Jim Bidzos drove his usual hard bargain with Netscape: in exchange for its algorithms, RSA was given 1 percent of the new company. In mid-1995, Netscape ran the most successful public offering in Wall Street’s history to date, making RSA’s share of the company worth over $20 million. (Not bad, Bidzos realized, for a company that was just about flatlining until Lotus’s $100,000 advance for the Notes license.)

It was just after that eye-opening IPO that a cypherpunk named Hal Finney began looking at Netscape’s security. Finney, a Santa Barbara–based programmer who had participated in PGP development, was particularly interested in how cryptography would be used with electronic commerce, and had become familiar with Netscape’s Secure Sockets Layer. In adhering to the export regulations, Netscape had released two versions of the browser: a domestic version with a 128-bit key for its RC-4 encryption function, and a 40-bit version for export.

Finney set up a challenge to break a message encrypted with that weaker key. He would make a dummy Netscape transaction—just as if he were a customer—then use the encryption in the export version. “I basically connected to Netscape in one of their secure pages and typed in some random data where I was supposed to be ordering a T-shirt or something,” he says. Then he captured the encrypted data and included it in his challenge:

Date: Mon, 10 Jul 1995 16:13:52-0700

From: Hal <hfinney@shell.portal.com>

To: cypherpunks@toad.com

Subject: Let’s try breaking an SSL RC4 key

Since this whole Microsoft Access thing turned out to be a dud, maybe an alternative would be to try breaking the 40-bit RC4 used in Netscape’s SSL (Secure Sockets Layer) exportable encryption . . .

From England, Adam Back’s group accepted the challenge. Though Back’s original intent seems to have been to apportion the keyspace among many people, he wound up accepting the offer of an Australian programmer to organize half the search. The rest of the keyspace was to be swept by volunteers who were assigned slices. But there was some confusion between the two groups that slowed down the effort for some days.

It was during this lull in the action that Damien Doligez began to wonder what was taking so long. Doligez was a twenty-seven-year-old computer scientist who had just gotten his Ph.D. a few months before and was working as a researcher at INRIA, the French government computer lab. His office was in one of a cluster of shacks in what was once a NATO base a few miles outside of Versailles. Doligez had a personal interest in crypto. He shared the sense of disgust at the way governments attempt to suppress their citizens’ ability to communicate privately with each other, and he believed that if someone cracked one of those artificially lame 40-bit cryptosystems, it would be a blow against the powers that be. He also guessed that after the successful RSA 129 crack, a two- or three-week effort should do the job. So as time passed between Finney’s challenge and its solution, he wondered what the hell had happened.

As a researcher at INRIA Doligez had access not only to the workstation in his small office, but also to an entire network of computers, including a Maspar supercomputer. Doligez studied the SSL specifications and concocted a small program to allow a computer quickly to test out a potential key, then adapted the program so it would work on the various machines on the INRIA network, as well as on some machines at the nearby universities, L’École Polytechnique and L’École Normale Supérieure.

Then he began his own multiple-computer attack. Whenever an INRIA worker would stray from his or her computer, within five minutes, Doligez’s program would take over the machine, crunching perhaps 10,000 keys a second. Simply by touching the keyboard, a user could regain control over the machine. No one complained.

Doligez figured that his odds of finding the key would be better if he started from the end of the keyspace and worked backward. “I figured the cypherpunks would start from the start, so I started from the end.” He set his network into action on Friday, August 4, and left for the weekend. On Monday, he returned and discovered a bug in his program. He restarted the process. From that point, the number crunching ran perfectly, but he wound up writing ten new versions of the software over the next few days to address glitches in the communications between machines. The program was working fine when Doligez left work on Friday, August 11. Due to a national midsummer holiday that next Tuesday, on August 15, it would be a four-day weekend, but checking on his home computer before the holiday ended, his software gave him the message he was waiting for.

“I saw it found the key,” he says. SSL had been cracked!

The following day, Damien Doligez drove to work from his home outside Paris and recovered the key from his workstation, then successfully decrypted the message. He posted a message to cypherpunks with the heading “SSL challenge—broken!” As proof, he displayed the plaintext. Those familiar with the RSA 129 crack appreciated the significance of the address of the fictional character that Hal Finney had created in his coded message. Mr. Cosmic Kumquat, of SSL Trusters, Inc., lived at 1234 Squeamish Ossifrage Road.

Though technically it was anything but shocking—the mathematics of cryptography dictated that a weak key should fall to a concentrated effort—the very idea of cracking Netscape’s crypto captured the imagination of the popular press. The media descended on Damien Doligez. Because the break occurred only a week after Netscape enjoyed perhaps the most successful IPO in history, some journalists played the crack as if it spoke to the nature of the browser’s overall security, and not as an example of the way the government export rules weaken software in general. In a message that Netscape posted on its site later that week, the company noted that Doligez had simply broken one message—and that it took about 64 MIPS years to do so. Netscape also estimated that the cost of breaking the message had been $10,000. But as Doligez pointed out in his own response, he had used idle computer time, and paid nothing to do so. Netscape was on firmer ground when it noted that the domestic version of Navigator used a much sounder 128-bit key. “The computer power required to decrypt such a message would be more than a thousand trillion trillion times greater than that which was used to decrypt the RC-4-40 message,” wrote Netscape.

Which as far as the cypherpunks were concerned was exactly the point: export-level crypto was needlessly weak.

But the cypherpunks were not through with Netscape. At Berkeley, two first-year graduate students were inspired by group cryptanalysis. They were twenty-two-year-old Ian Goldberg and twenty-twoyear- old Dave Wagner. They, too, thought it would be a good idea to hack Netscape, the new flagship for Internet security. But they had missed out on the obvious brute-force attacks—Goldberg had been moving to California from his native Canada and Wagner had just arrived after getting his undergraduate degree at Princeton. So they began to explore a different mode of attack, more akin to the second of Robert Morris’s recommendations: look for plaintext. Could it be possible that the Netscape security team made some simple yet egregious error in implementing their software, thus exposing what might be millions of electronic commerce transactions to eavesdroppers? Not likely. But, as Morris had suggested, you never know unless you look.

And that’s when Wagner saw it. Buried in the code were the instructions for Netscape’s Random Number Generator (RNG). This is an important part of any sophisticated cryptosystem—the piece of code crucial to scrambling the letters so that the encoded text offers no tell-tale patterns that would help a cryptanalyst. It is well known that a lack of true randomness is a weakness smart codebreakers can eventually exploit. So it is important to have a solid RNG—something that spins the alphabetic roulette wheel thoroughly.

An important part of a good RNG is the use of an unpredictable “seed”—a number that begins the randomization process. Since, unlike dice, computers do the same thing each time they run, it is essential to begin the process with a seed that a potential opponent cannot possibly guess. Methods of doing this often include using some off-the-wall statistics from the real world—the position of the mouse, for instance. Anything that an enemy could not possibly know.

Netscape, as it turns out, had ignored this wisdom. When Dave Wagner looked closely at the code, the error jumped out at him. Netscape derived the seed of its RNG from three elements: the time of day and two forms of user identification called the Process ID and the Parent ID. A disaster. A foe would burn few computer cycles and even fewer brain cells finding the first part of the seed: it is easy to run through the limited number of times of day. And in many cases, both kinds of identification numbers were also easy to find, particularly if someone is sharing a server with a number of people—as often happens in an Internet environment. “If an attacker has an account on your machine, it’s trivial,” says Goldberg. “Here at Berkeley, there are thousands of users. If anyone uses Netscape, you can discover the IDs.” But even without that advantage, it would be fairly trivial for attackers to calculate out those IDs. The identification numbers in question were only fifteen bits long, easily susceptible to brute-force attacks.

Over the course of a weekend, Wagner and Goldberg wrote a program to exploit the weakness. On Sunday night, they tested it. By zeroing in on the huge flaw in Netscape’s implementation, they were able to find a secret key in less than a minute. Hasta la vista, Netscape security. Goldberg posted the result on the cypherpunks’ mailing list that night. “We didn’t expect lots of press,” he said. Silly boy. Among the readers was a New York Times reporter. When the story ran in the Paper of Record, the two grad students were deluged with curiosity seekers and journalists. Of the things that the two grad students had to say, perhaps the most sobering was Goldberg’s observation, “We’re good guys—but we don’t know if this flaw has been discovered by bad guys.”

Unlike the first Netscape crack, where the company could quite rightfully claim that their otherwise strong crypto was crippled by government restrictions, this was a total flub. You didn’t need to tap a multi-workstation network, or get access to a supercomputer. In certain circumstances all you needed was a minute’s worth of crunching on a vanilla Pentium machine. “Our engineers made an implementation mistake,” admitted Mike Homer, Netscape’s vice president of marketing.

The error cast a shadow on the security of the leading Internet software company. “If Netscape did this wrong, what else did they do wrong?” asked cryptographer Bruce Schneier. But the more pressing question was, if Netscape was unsafe, what was safe? Netscape, after all, was making a concerted effort to protect its users. If the Navigator could be cracked so easily, what hope was there for the others?

There was a bright side to the event: you could argue that things worked properly because the cypherpunks publicly exposed a weakness, which Netscape immediately moved to fix. But the lasting lesson was somewhat darker. As the Internet proliferated, the public was beginning to become truly dependent on networked computers for financial transactions and storing private information—everything from buying books to making stock trades to paying bills. New businesses were planning to put medical records on-line. But security was still haphazard at best. And more and more, it was becoming clear that one big reason for this failing was the United States government’s long-term stalling action. While it tried to push Clipper and key escrow as its pet solution to the problem, the Internet kept going—without an organized effort to provide the protections it needed.

During the mid-1990s, though, those trying hardest to bring to fruition a new era of cipher protection—one that would finally secure the Internet and other electronic means of communication—found themselves under increasing fire. It seemed that those in charge of the laws and institutions of society, while not

able to shut down mathematical and engineering progress, could do plenty to make crypto innovators know that their actions had consequences. The question became how far was the government willing to go to invoke those consequences.

For Ray Ozzie of Lotus such a lesson in power would have seemed unnecessary: he was committed to working within the system. (Besides, in 1993, Lotus had officially joined the Establishment when it was bought by IBM for $3 billion.) In the years since his early adoption of RSA, Ozzie had become a vocal figure in the crypto battles, testifying in Congress and visiting key administration figures. Though his procrypto bias was plain, Ozzie's easy manner and willingness to consider the opposing view earned him the respect of even export hard-liners. He was a realist. Unable to wait for the government to liberalize its rules, he was constantly brainstorming for innovative ways around the export impasse.

After the Netscape crack, overseas buyers of Lotus Notes became increasingly uneasy using the 40-bit encryption IBM was permitted to ship overseas. They wanted to know why it was that American customers were sold a version with 64-bit keys, millions of times more difficult to break—while their version could be cracked by some random postdoc outside Paris. (Meanwhile, companies like Microsoft, which didn't want the hassles of making two flavors of the same product, gave all their customers weaker crypto. This made the whole product line less valuable to those who wanted encryption, and some of those customers began buying from foreign companies that could legally sell them strong crypto.)

In 1995, Ozzie came up with what seemed a preferable compromise, at least in the short term: a mathematical fix devised to satisfy the NSA's requirements. Though Ozzie hated Clipper, his scheme was sort of a less onerous version of it. Lotus would still sell two versions of Notes, but unlike prior versions, both would have 64-bit encryption. But the international version would have a little gift for the NSA: something called the National Security Access Field (NSAF). This consisted of 24 bits of the encrypted data that the NSA, and only the NSA, could decode. It was to be encrypted by the NSA's public key, so only the folks at The Fort could exclusively decrypt that field. After the NSA used its private key to unscramble the 24-bit NSAF, the Notes-encrypted messages would have shrunk from 64-bit ciphertext to 40-bit ciphertext. Cracking the remaining code would require precisely the same work factor as messages encrypted with 40-bit keys shipped under the old system. But since the overall encryption was stronger against all attackers other than the NSA—and it was those other attackers most users were worried about, like vandals or industrial spies—Ozzie figured that this solution might help in the short run.

Lotus filed two patents for its innovation, called "Differential Work-factor Cryptography Method and System," in December 1995, and included the innovation in the new version of its software, Notes Release 4. He first spoke about it publicly in January 1996, at the RSA Data Security Conference in San Francisco. The conference was another of Jim Bidzos's marketing brainstorms. Since 1990, the RSA Data Security honcho had been gathering commercial crypto customers in the Bay Area, sponsoring a few days of seminars and a small trade show where vendors could show their wares. From a gathering of a few dozen geeks at the Sofitel Hotel near RSA's Redwood City offices, the conclave had grown to thousands and was now held at a large hotel near Union Square. Ozzie's speech drew a lot of attention, and not a little hand-wringing: some wondered whether the dynamic designer behind Notes had given up the fight.

No, he hadn't. Ozzie was just pursuing a more subtle agenda. "I wanted to stir things up," he said. The idea was to knock a wedge between the administration and the NSA. Once Al Gore had backed down from the idea of government-controlled escrow facilities, the NSA found little to like in those post- Clipper ideas. If people stored keys in private facilities, authorities would need a warrant to get hold of them. But the NSA operated in secret and was banned from domestic surveillance. So the agency might prefer Ozzie's scheme—which gave it a head start in cryptanalysis. (It wouldn't need a warrant to get those 24-bits' worth of decryption.) Thus, Ozzie's scheme was far from a sellout—it was a subversive strategy to get the NSA and the administration arguing for different approaches. In the confusion, he hoped that his industry could sneak through its own solution.

Before Ozzie could congratulate himself on his cleverness, he discovered that the government was not without its own means for dealing with such strategies. On December 30, 1996, both Ozzie and his coinventor Charles Kaufman were sent letters labeled in boldface: SECRECY ORDER. Their patent application, read the letters, "contains subject matter the unauthorized disclosure of which would, in the opinion of the sponsoring defense agency, be detrimental to the national security." (In the space where the government patent officer could check off which agency that was, there was an X next to "ARMY.") Disclosing the subject matter to anyone without authorization, they were warned, would subject the inventors and IBM to a penalty, including a jail term. Finally, they were instructed, any copies of the subject matter "should be destroyed by a method that will prevent disclosure of the contents or reconstruction of the document."

Ozzie, who received the order on January 7, 1997, immediately understood that complying with that order presented something of a problem. Not only had he spoken in detail about the scheme numerous times, but the "subject matter" had also already been distributed to almost six million Lotus Notes users, about half of whom were outside the United States. He quickly informed his bosses at Lotus, who immediately began pondering the consequences of having one of the most popular software programs in the world deemed a government secret.

Perhaps the best thing Ozzie did was to have a friend call the deputy director of the NSA, Bill Crowell, who reportedly laughed when he heard of the news, and told the friend he'd look into it. On January 9, Crowell called Ozzie. It was all a mistake, he said. Everything would be fixed. Indeed, the next day, when IBM attorneys got in touch with the Patent Office, they got a verbal confirmation that the order had been rescinded, and later got a fax to that effect. No longer were Ray Ozzie, his coinventor, and IBM liable for about six million violations of the patent secrecy act. But after everyone had some time to breathe, questions remained. If this was the fate that welcomed someone trying to serve his customers in the spirit of key escrow, what would happen to those who outright challenged the government?

Jim Bidzos could answer that question. As he took the most public stance possible in opposition to the government—he even distributed posters urging people to "Sink Clipper"—the relationship between his company and the NSA had gotten more contentious. Though Bidzos had no hard evidence of having been wiretapped, he assumed that he was under surveillance. Perhaps the most egregious confrontation came in April 1994, during a meeting with three NSA export officers, all of whom Bidzos had been grappling with for years. Two were women he'd come to trust to some degree, but the third was a man who clearly despised Bidzos and his company.

Since the NSA reps didn't open the meeting with any specific issues, Bidzos used the opportunity to lecture them about Clipper: no one would use it, it was a flawed system, yadda yadda. Bidzos noticed the man from the NSA getting more and more agitated. Finally the official spoke. If I see you in the parking lot, he said, I'll run your ass over.

Bidzos recalls being stunned but finally he replied. "I'll give you an opportunity to retract that or apologize," he said. But the man kept pressing. I'm serious, he raged. You don't understand me, do you? Was Bidzos getting an official warning, sort of a Triple Fence equivalent of a Mafia kiss on the lips? Should he avoid parking lots? Bidzos felt that most likely the guy was probably just venting, but he didn't want to let the threat go unchallenged. He told a newspaper reporter, and the story found its way into the local paper. Not long afterward Bidzos received a phone call from the NSA guy's boss. Bidzos got an apology. Even if his life wasn't at risk, though, Bidzos felt that the agency wanted him out of business.

But at least Bidzos wasn't under the threat of indictment. That fate was reserved for his sometime nemesis Phil Zimmermann.

Ever since the release of Pretty Good Privacy, Zimmermann had assumed that his biggest problem was the intellectual property dispute with RSA. Jim Bidzos thought nothing of publicly attacking Zimmermann, and at the drop of a fax button, he would zip journalists a copy of Zimmermann's (ambiguously) written promise to stop distributing PGP, a vow apparently not kept in spirit. But Zimmermann never thought that he would find himself under criminal investigation. So when two women from the U.S. Customs Service in northern California came to visit him in 1993, he assumed that they were there at Jim Bidzos's bidding.

Indeed, though the investigators wanted to know how PGP was distributed, many of the questions dealt with PGP's similarity to RSA's products. As far as technological expertise, the investigators seemed clueless. Zimmermann had to explain to them the very basic ideas of crypto and software distribution. When they left he felt that he had little to worry about. The whole thing was some Bidzos harassment, he figured. "I don't think that there will be action against me," he said at the time. "They raised questions about the [export regulations], but I diffused that."

Not quite. United States Attorney William Keane was indeed concerned about a possible export violation. After all, within hours of PGP's release on the Internet, the strong crypto program had found its way overseas. It's unclear whether pressure from Washington had anything to do with it, but some weeks later, Keane informed Zimmermann that he was under investigation for illegally exporting munitions. (Kelly Goen, who had identified himself to MicroTimes columnist Jim Warren as a Johnny Appleseed of PGP, was also a potential target.)

For the next three years, Zimmermann was in legal purgatory, investigated by a grand jury but unindicted. His lawyers advised him to lie low. But PGP's fame had given Phil Zimmermann a taste for speaking out loud. Besides, he felt that his best chance lay in taking the case to the public. Whenever he had talked to just plain folks about PGP and crypto issues, they had become outraged at the prospect of the government's limiting the ability of people to communicate privately. He suspected, with good reason, that even techno virgins would be equally indignant at this new atrocity: here was Big Brother himself, contemplating a prison cell for someone who freely distributed privacy software to freedom fighters, lovers, and those who simply felt that their secrets were nobody's business. What's more, the case against Zimmermann himself was weak; he wasn't even the one who'd posted his program to the Net. The guy who had had told Jim Warren that he scrupulously limited the uploads to American sites. Was the Justice Department actually asserting that export restrictions prohibited U.S. citizens from distributing legal materials to other U.S. citizens?

Oh, the export regulations. The more you looked at them, the weirder they appeared. One recent controversy involved Bruce Schneier's 1994 book, Applied Cryptography. It was a technical cornucopia of cryptological mathematical theory, explanations of popular cryptosystems, and all the algorithms that a security specialist or cypherpunk would ever need. The Millennium Whole Earth Catalog called it "the Bible of code hackers." But while anyone could ship the physical book overseas, the crypto restrictions seemed to ban the export of those same contents in digital form. At least that's what cypherpunk Phil Karn found out when he applied for a "commodities jurisdiction" (or CJ) to export the book, along with an accompanying floppy disk with the same contents on it. Officials confirmed that the book could be exported, but not the floppy. It seemed absurd.

So Zimmermann talked, and generated publicity. He seldom failed to note that Burmese rebels reportedly used PGP to avoid the deadly consequences of being discovered in antigovernment activities; in testimony to a congressional hearing in 1993 he also noted that he'd received an effusive thank-you from a Latvian patriot who claimed, "your PGP is widespread from Baltic to Far East and will help democratic people if necessary." When confronted with the charges from law enforcement agencies that PGP was particularly useful to criminals—in one Sacramento case, the cops couldn't read a pedophile's diary encrypted with Zimmermann's software—he argued that all technology has trade-offs. Perhaps the highlight of Zimmermann's odd celebrity came one day in San Francisco when some businesspeople decided to take him for an evening on the town that wound up at a North Beach strip club.

The young lady lap dancing in proximity to Zimmermann asked casually what he did. "I'm a cryptographer," he said. "I wrote a program called PGP."

The lap dance stopped in midgyration. "You're Phil Zimmermann?" she asked in awe. "I know all about PGP!"

True, cypherpunk sex workers were not everyday occurrences. But PGP's audience was beginning to extend beyond techies and privacy nuts. The Wall Street Journal described how PGP was used by lawyers maintaining electronic confidentiality with clients, authors protecting their works in progress from copyright infringers, and an astronomer staking his claims to his celestial discoveries. In order to entice commercial audiences, Zimmermann had licensed the code to a company called ViaCrypt. Since ViaCrypt already had paid a licensing fee to RSA, it could sell PGP to business customers without fear of a lawsuit. (Supposedly paying two license fees was worth it, since PGP had become, by virtue of its underground following, a wonderful brand.) Beginning in 1994, the main distribution point for the much more popular freeware version was an unexpectedly mainstream ally, the Massachusetts Institute of Technology. Some there, notably professor Hal Abelson and network manager Jeff Schiller, believed that the Institute should be allowed to provide Americans with programs that they were legally permitted to use—and do it on the Internet, which was by far the most expedient method of software distribution. So MIT stored the latest versions of PGP on its Internet server and allowed anyone to download it—after asserting that they were, indeed, Americans.

The honor system obviously wasn't what the government had in mind when establishing the export laws. So flimsy was the MIT protection against export that copies of PGP downloaded from its site were spotted outside the country two days after the program was made available. Still, the citizenship restriction apparently was sufficient for MIT to avoid official complaints, let alone a criminal investigation. Not that the government officially approved of the arrangement. In one memorable session at a 1995 conference, MIT's Jeff Schiller and NSA counsel Ronald Lee (who replaced Stewart Baker in 1994) faced off. Despite repeated pleas to make some sort of statement about whether MIT's restrictions were sufficient, Lee refused to draw even the vaguest guidelines for what was permissible and what could land you in jail. Meanwhile, the MIT Press published a book (those analog dead-tree artifacts were still around) that contained nothing but hundreds of pages of C source code—the entire PGP program, formatted so that computer scanners and character recognition software could easily transform the printed hard copy into a real-life industrial-strength crypto product. It seemed almost surreal that such a scheme could be legal while a grand jury still contemplated indicting Phil Zimmermann, but that was the shaky state of crypto export policy in 1995.

Another crypto rebel faced with intrusions from the nasty real world was Julf Helsingius, the Finnish programmer who ran one of the first, and certainly the most popular, remailers in the world. By 1995, his operation called Penet was a shining example of crypto anarchy, stripping identification from thousands of messages each week, and sending them off on their merry anonymous way. Its operator was himself becoming well known in certain circles—and reviled by government doomsayers who warned that such services would prove the end of civilized society itself. But when the real trouble came it was not instigated by a government, but a private group: the Church of Scientology.

Scientologists had been routinely incensed by the criticisms of unhappy former members on Internet discussion groups. In some cases, these apostates had obtained church documents and were posting them on the Net. Scientology officials wanted to charge these people with violating the church's copyright and trade secrets. But since the addresses of the critics were laundered through the cypherpunk remailer system—very often on Penet, as it turned out—there

was no easy way to find who was responsible for the messages.

Then it turned out there was a way. Penet—unlike many of the cypherpunk remailers—was "two way," enabling people to respond directly to anonymous postings. This required a means for Julf's system to keep track of who was sending messages. First, church lawyers wrote a letter to Helsingius, formally notifying him that his service was forwarding mail that violated their copyright. Julf politely replied that his policy was to keep hands off the traffic going through his computers. Didn't they "get" remailers?

The lawyers wrote back, threatening legal action. Helsingius, in Finland, figured that the chances were slight that these faceless attorneys in California could do any such thing. Then Julf Helsingius's phone rang. It was a representative of the Church of Scientology, in person. In Finland.

Would Julf like to be taken out for dinner?

No sense in turning down a meal, Julf figured. He suggested a Thai joint. The man was friendly, saying that he was a retired policeman, and that all he wanted was two things: for the messages to stop, and for Helsingius to let him know who was sending them.

"I'm sorry," said Helsingius, "I can't do that."

But the Scientologists were not relying on Julf Helsingius's good will to cough up a name. They filed a complaint with the Los Angeles police, charging that their stolen property was being shipped over the Internet, and fingered Julf as someone willfully withholding the identity of the thieves. In Finland, that's a grave crime, sufficient to get a search and seizure warrant.

About a week after apologetically turning down the retired cop, Julf Helsingius got another call—from the Helsinki police. We have a court order, they told him, and must take your computer away so it can be searched. Helsingius's heart sank—he knew that he had to comply. (Ironically, if Helsingius had used readily available crypto software to encrypt his data and protect his customers, such a search would have proven useless. But because of "performance reasons"—"the database is huge," he explains—he did not encrypt the contents of his disk.)

But while Helsingius knew that he had to give up the single customer whom the Scientologists wanted, he didn't want to put thousands of others at risk. Fortunately, in keeping with the cordial relations Finns have with their police, he was able to negotiate a transfer that would not require him to turn over the contents of his entire database. Helsingius simply copied the e-mail address of the offending party onto a floppy disk, and set it on the table, allowing the police to take possession of that disk. "I was not too happy, but it was a compromise," he says.

Helsingius's troubles were not over, however, because another institution of the real world was about to rain on his crypto anarchy parade: the media. The same day he handed over the disk to the police, a story ran in a Swedish newspaper claiming that the majority of all child pornography on the Internet was routed through a server in Finland. Obviously it was referring to Penet. But Julf knew that his service did not distribute such materials, since he blocked "binaries" (digital photographs). Not that people cared to check. When he tracked down the source of the information, it turned out that some child pornography ring had forged the headers on porno binaries, making it look as if the stuff came from his site when it actually was posted from a location in the United Kingdom. Still, the publicity was damaging, and became worse when a British newspaper repeated the charge, this time citing Helsingius personally as the evil middleman of Internet kiddie porn.

Meanwhile, the Scientology civil case wasn't going away; Helsingius was called to a Finnish court to explain why he shouldn't turn his names over. By then he had taken measures to protect the security of the 700,000 e-mail addresses on his server. The names still weren't encrypted, but hidden: he'd moved the computer out of his home to a storage room at a secret location. And he'd hired lawyers, though God knows he didn't have the money for that sort of thing. He claimed to the Finnish court that those who used his services were entitled to privacy. But to his dismay, the judge ruled that e-mail shouldn't have the same protections as physical mail. The whole thing had taken cyberspace a step backward, at least in Finland.

That was it for Julf Helsingius. "The decision was quite clear," he said. "There's no way you can run a server like mine in Finland." So on August 30, 1996, he shut down Penet. The ineluctable lesson was that while technology can provide crypto freedom, the real people who use it must live in the real world— where governments and regulators have the means to track them down. The real world can make things very, very complicated.

But David Chaum could have told you that, too.

The maverick inventor of anonymous digital cash—and the holder of important patents on electronic money—was having a difficult time keeping his company Digicash afloat. Though he had assembled a terrific staff of enthusiastic programmers and cryptographers at his Amsterdam headquarters, there was increasing unrest within the team. Chaum wasn't completing the important alliances he needed to get his ideas into the mainstream. The intrigue in his little group intensified when one of his former students, Stefan Brands, claimed to have devised an alternative means to produce anonymous cash, and began exploring ways to license these ideas. Chaum insisted that Brands's work was dependent on his. (Brands obtained valid patents.) Meanwhile, Digicash was still looking for the big deal.

Digicash had begun an experimental pilot program on the Internet called E-Cash. It used a form of scrip, digital Monopoly money. But it really was a test run for the prospect of true digital cash on the Net, a form of currency that would one day usurp folding bills and metal coins. For now, though, a user could get 100 "cyberbucks" simply by asking. The digital tokens could be e-mailed to friends or used to "buy" things from any merchants who decided, in the spirit of experimentation, to accept cyberbucks. All of this was done anonymously. Though one participating merchant was the Encyclopedia Britannica, which took Chaum's pretend money in exchange for its articles, most of the extremely limited universe of E-Cash merchants was ad hoc operations like "Big Mac's Monty Python Archive Shop," which offered unauthorized transcriptions of that comedy group's routines for various increments of cyberbucks.

When Chaum finally did break some news, it was with a Midwestern institution with a name more familiar to literature students than international financiers: the Mark Twain Bank. The idea was to deliver a version of E-Cash where the units finally could be exchanged for real money, backed by Mark Twain.

Then, perhaps, larger institutions would jump in. At that point Chaum's critics—one of whom dismissed his ideas as Walden Pond meets the Internet—might shut up. But the Mark Twain scheme never took off.

It wasn't just Chaum who was having difficulties establishing crypto cash as an Internet standard.

Electronic commerce hadn't taken off quickly enough, and the still-evolving standards of the Net made any sort of crypto-cash scheme relatively hard to use. Chaum's competitors were unfettered by the moral obligation to provide anonymity to their digital money—they generally felt that people really didn't demand it. But those companies were falling short of expectations as well, among them the well-funded start-up Cybercash and Mondex, which allowed consumers to download money on credit-card-sized smart cards (think of a bank cash machine on your personal computer). But those disappointments paled

beside Chaum's. It was Chaum who had the patents for anonymous digital cash. And when Digicash finally filed for bankruptcy in 1998, it was Chaum who lost the patents.

Yet despite the problems and harassments suffered by the crypto revolutionaries in the mid-1990s, their larger cause kept advancing. Skirmishes and setbacks to the contrary, it was the government that was on the run. After Al Gore first retreated by promising to amend the Clipper scheme in the letter to Representative Cantwell, the administration offered to negotiate a compromise with industry, and several meetings were held at NIST's Maryland headquarters to try and reach a consensus. Hopes were high that some scheme would be reached whereby export standards were liberalized and any key escrow would be truly optional. Some of the things that the government was saying seemed quite reasonable. But when the administration's officials unveiled the final rules, there were devils in the details. Bottom line: the export restrictions would continue as they always had and Clipper's rules were only partially relaxed (for instance, users would be offered a choice of escrow agencies). The plan earned its sobriquet of Clipper II.

Inevitably, it was followed by Clipper III, in 1996. That plan had a new angle. The idea was to give cooperating companies a carrot—if companies promised to build escrow into their future products, they'd be allowed to export unescrowed DES-strength crypto now. But in practice, this proved no more attractive than the earlier versions. The obvious relief would have been a blanket export exemption of reasonably strong crypto. Instead the government tinkered with variations of its same old policy.

One continuing problem for the administration was that foreign countries regarded any American escrow scheme with suspicion. At one point, a "crypto ambassador" was sent off to try to convince the world community that such a global solution could work for all. But since he could offer no implementation where all countries had equal access to keys, his failure was a foregone conclusion. Some members of the administration considered this shortcoming the death blow to the entire policy.

Meanwhile, spurred by complaints that American industry was losing business to foreign firms selling crypto software, Congress was reconsidering a legislative solution. In 1996, Senator Conrad Burns of Montana introduced the Security and Freedom through Encryption (SAFE) bill, designed to lift export restrictions on programs that offered a "generally available" level of crypto. (Presumably, this included DES and domestic-strength RSA.) The bill also addressed fears that the government might one day declare that Clipper technology would be the only permissible crypto: SAFE would specifically forbid mandatory key escrow. Burns, a crusty Westerner who felt more comfortable seated on a saddle than in front of a computer screen, was tickled at his new reputation as a high-tech privacy crusader. But the bill itself sat bottled in committee, as legislators still swayed by NSA's well-orchestrated briefing stifled what the spooks continued to warn them was a threat to national security. "Some people here fully understand the issue," complained Senator Patrick Leahy, an early SAFE supporter. "But with others, they're talking like it was ten years ago, about an industry where ten days is an eternity."

If the government's goal was simply to stall—each day the dike doesn't crack, we win—then its approach could be considered a success. But as the cypherpunk attacks against export-strength crypto demonstrated—and the interception of unencrypted cell phone conversations, including the House Republican leadership, dramatized—such a policy had its perils. The country lacked a strong electronic security system, a vulnerability that became more serious as the Internet wound itself more deeply into the fabric of American life.

That, at least, was a key conclusion of a major study by the National Research Council (NRC). That organization, the research arm of Congress, undertook a comprehensive examination of the national crypto policy, and recruited a panel of experts from all sides of the issue, including former cabinet members, officials from the NSA, and critics from business and academia like Ray Ozzie and Marty Hellman. Their report, "Cryptography's Role in Securing the Information Society," was a surprisingly strong criticism of government policy, and recommended continued freedom for domestic encryption, relaxed export controls, and, above all, "a mechanism to promote information security in the private sector." In other words, more crypto.

Perhaps the most interesting observation of the study came as a result of the classified briefings its members had received. (Three of the sixteen members declined clearances and did not attend.) Though they could not of course reveal what they had heard in the briefings, they could—and did—evaluate the importance of that secret knowledge in determining national policy. Answer: not much. "Those [classified] details . . . ," the report stated, "are not particularly relevant to the larger issues of why policy has the shape and texture that it does today nor to the general outline of how technology will and policy should evolve in the future." So much for the "If you only knew what we know" argument.

Some people in the administration chafed at that conclusion. (In the NSA, there was even some unhappiness that the title of the report could be read as an acronym, CRISIS.) They conceded that the classified briefings given the NRC participants were thorough, but contended that to really understand the issue, you have to live and breathe intelligence. Sure, Marty Hellman or Ray Ozzie understood in theory that it was important to wiretap a crook or intercept a terrorist's call on a cell phone. But every morning the president and the vice president got nice thick books that zeroed in on the world's pressure points—everything from cracked diplomatic dispatches to the car-phone conversations of Russian mafiosi. The Clinton people knew damn well that if crypto was universal, significant hunks of those books would disappear.

But that fine point was lost on the general public—and indeed on much of Congress, which commissioned the study. Instead, the NRC report stood as a call to arms to drop the silly restrictions against crypto and start using it to strengthen our own systems. After all, it argued, the genie's out of the bottle. And quietly, some of the staunchest defenders of government's control of crypto were themselves admitting it, too.

Then another front opened in the crypto wars. For the first time, export regulations were facing a serious challenge in the courts. A decade earlier, the NSA's Bobby Ray Inman felt that he had successfully fended off the 1978 opinion of a Justice Department lawyer that the export regulations violated the First Amendment. But no judge had ever addressed the issue. Many legal experts thought that if a ruling did come on the question, it might not be to the liking of the crypto community. Indeed, a recent decision involving cypherpunk Phil Karn's legal challenge to export the floppy disk version of Applied Cryptography ended in flames. Rejecting the idea that the same information permitted for export in hard copy should be provided the same privilege in digital form, a federal judge had not only denied the request but also delivered a withering opinion on Phil Karn's request, virtually accusing him of an immoral attack on national security. But that was a sideshow to a more important suit: that of Daniel Bernstein.

Bernstein was a graduate student at Berkeley. He'd become interested in crypto and security after someone hacked his own computer account in 1987, and thereafter wanted to include crypto algorithms in his course work. As a reflection of how times had changed, courses focusing on cryptography were now almost mainstream. Technically, though, regulations seemed to forbid anyone from placing a crypto concoction somewhere a foreigner might see it. Which was exactly what Bernstein wanted to do.

Bernstein's project was inspired, coincidentally, by something Ralph Merkle had produced at Xerox PARC in 1989: a hash function called Snefru. Written in 1990 when he was an undergraduate at NYU, Bernstein's addition to Snefru playfully tweaked the illogic of the export codes. He knew that while encryption programs were subject to restrictions, hash functions like Merkle's (which don't scramble information per se) were not. So Bernstein wrote a program that transformed the hash function Snefru into something that could perform encryption and decryption. (Think of Snefru as a banned automatic weapon shipped

through customs without a trigger, and the new program as a kit that installs the missing part.) “It takes any good hash function and turns it into a good encryption function,” he later explained of his creation. He called his crypto package Snuffle and wrote a paper to describe what he’d done. But he was worried about publishing it, figuring, he later said, that “the government might not be too happy about me pointing this out.” So he put Snuffle on the shelf.

But at Berkeley in 1992, he reconsidered. Why not publish Snuffle? After all, it was not a commercial product but an academic exercise. Since the actual encryption relied on an already-published hash algorithm—he introduced no original encryption algorithms of his own—it presented no threat to the republic, so why would publishing it be a problem? The obvious place to release it was the sci.crypt discussion group on the Internet. But before uploading Snuffle to sci.crypt, he decided to take one final precaution to make sure he wasn’t violating any laws. He would ask someone in the government if such a step was permissible.

That little step kept Snuffle off the Internet for the rest of the twentieth century.

Bernstein’s first problem was identifying the proper government office to handle his request. After a series of queries he finally wound up at something called the Office of Defense Trade Controls. He sent his letter off in June 1992. To his dismay, the reply, signed by William B. Robinson, the director of that mysterious office, asserted that distributing Snuffle without a license would indeed put Bernstein in legal jeopardy.

Okay, Bernstein figured, I’ll go through the formality of getting the commodities jurisdiction—the “CJ.”

First, though, he hoped that the Office of Defense Trade Controls would clarify what his rights were, and what appeals he might have if he disagreed with a government decision. It took him until March 1993 to get someone to talk to him. Finally he got Charles Ray, the special assistant to William B. Robinson, on the horn. (Bernstein taped his conversations, with permission.) Basically, Ray told him that his rights were, well, nonexistent. If he posted Snuffle on the Net without clearance, and some foe of the United States downloaded his program from a terrorist base in Afghanistan or an apartment in Paris, Bernstein might have to scope out a jail cell for his next home. “There are no exempt groups,” Ray told him. “If you’ve got something considered technical information covered by the Munitions List . . . then being a member of the press [or an academic] does not provide you with any sanctuary. . . . You can still be prosecuted.” But what about the First Amendment? he asked.

“That freedom carries with it a responsibility to comply with the existing legislation and regulations” was Charles Ray’s interpretation of the U.S. Constitution.

A month later, Bernstein finally reached Ray’s boss, William Robinson, who confirmed that a CJ would be required before Bernstein could distribute his work. Subsequent conversations with government officials were even more frustrating. Not only was Internet posting forbidden, but Bernstein might be prosecuted even if he placed a copy of his paper in a public library. Of course, the National Security Agency became involved, as it always does in export cases of new crypto systems. Eventually, Bernstein managed to have some conversations with NSA representatives, learning that behind the Triple Fence some people considered Snuffle “strategic.” This meant, he inferred, that it was not trivial to break. “They offered to help me rewrite it to make it not strategic,” says Bernstein, but he deemed such a move counterproductive.

So he’d play the game. In September 1992, Bernstein filed for five separate CJs. He’d broken the problem up into different versions—ranging from English-language descriptions of the system to mathematical formulas—“to see where they’d draw the line.” Could the government consider each one a “defense article”? He still maintained a belief that at some point the fog would clear from a bureaucrat’s eyes and he would finally realize that Snuffle was simply one graduate student’s academic work, not a weapon. But in October 1993, the government replied that yes, each one of his mathematical formulas was a weapon, “subject to the licensing jurisdiction of the Department of State.”

Bernstein hadn’t begun the process as a rabble-rouser, but now he was himself thoroughly roused. He continued to pursue the case with a methodical patience that would prove devastating to the U.S. government’s eventual defense of its export regulations as they applied to Snuffle. He appealed the first CJ. When months passed without a response, he decided that he needed help.

His benefactor was John Gilmore, no stranger to court battles against the government. The senior cypherpunk already had accumulated a file cabinet’s worth of documents with Freedom of Information requests originally withheld but later kicked loose by legal appeals. Gilmore referred Bernstein to a lawyer named Cindy Cohn, who took the case pro bono (the Electronic Frontier Foundation helped with the costs and coordinated the effort with supplementary counsel). In early 1995, Bernstein and the EFF filed a complaint against the State Department, charging that the export laws were unconstitutional. At the center of the case was the contention that Bernstein’s computer source code was a form of speech, and that by preventing its publication, the government was denying Bernstein’s right to express himself.

That 1978 opinion—that the regulations might flout the First Amendment—was finally about to be tested. But few thought that a judge would resist the government’s inevitable claim that the export laws were crucial to national security, and that striking them down would unleash the modern-day version of the Four Horsemen of the Apocalypse: drug dealers, kidnappers, child pornographers, and terrorists. The case was tried before Judge Marilyn Patel in the Northern California District Court. One of her first acts did not seem promising for the plaintiff: she ordered the trial exhibits sealed, since the export rules forbade their distribution. But as the case progressed, Judge Patel proved to be more than sympathetic to Bernstein’s claims. Perhaps sensing this, the government tried a number of tactics to get the suit out of her court. It reversed itself on two of the five CJ determinations, admitting that those particular mathematical decisions were simply “technical data.” It argued that Judge Patel’s court had no jurisdiction in matters involving export law. It filed for immediate dismissal. But on April 27, 1996, Patel decided the case should proceed. The reason was enough to make a government regulator’s blood run cold: Judge Marilyn Patel had determined that at least part of the encryption export control rules was indeed unconstitutional. Furthermore, she accepted the Bernstein team’s assertion that computer source code could be considered a form of speech. Which meant that the much stricter First Amendment rules regarding prior restraint applied to Snuffle. As far as Judge Patel was concerned, this wasn’t about keeping a weapon within our borders. It was about illegally suppressing an opinion. That summer, Patel officially affirmed her preliminary decision.

The government appealed to the higher Ninth Circuit court. By then Bernstein had received his doctorate and was teaching at the University of Chicago. He wanted to teach a course involving cryptography, but because of the continuing case, he required a government waiver to do so. It took another judicial ruling before he was finally permitted to distribute materials about his work—and then only to his students. The course was taught without discernible damage to the nation.

But still the case dragged on. Oral arguments before a three-judge panel were scheduled for December 1997. Conventional wisdom had it that the appeals court would strike down what was seen as an impudent ruling from a judge who, after all, sat on the bench in wacky San Francisco. But in the packed courtroom, a rather harried government lawyer, a man of baby-boom vintage with experience before higher courts, was questioned harshly by the judges. The panel seemed more impressed with Bernstein’s advocate, Cindy Cohn, a diminutive woman in her early thirties, who, despite an occasional wavering in

her voice, presented her arguments forcefully. One unexpected point she made was that by preventing publication on the Internet, the government was failing to heed the recent Supreme Court decision that struck down a law known as the Communications Decency Act: the court had ruled that the Net was a beacon of democracy entitled to the highest level of First Amendment protection. Cohn also urged the judges to consider the implications of not allowing crypto to thrive: was it proper for the government to deny the tools that citizens might use to safeguard their privacy?

The three-judge panel pondered the case for more than a year, not handing down their ruling until May 1999. For Daniel Bernstein, it was worth the wait. By a two to one margin, they issued a broad opinion that not only affirmed Patel, but also went even further in celebrating cryptography itself as a vital component of democracy. Crypto should not be merely a state secret, they wrote, but also a protector of the people's privacy. Somehow these two technologically unschooled jurists had gotten it. "Government attempts to control encryption . . . may well implicate not only First Amendment rights of cryptographers," wrote Judge Betty Fletcher, "but also the constitutional rights of each of us as potential recipients of encryption's bounty."

Encryption's bounty? Judge Fletcher was a cypherpunk in robes!

The afternoon that the decision came down, Bernstein was proctoring a calculus exam in Chicago. Only afterward, when he checked his e-mail, did he learn that he had clobbered the government.

The government appealed of course—but the export rules it was defending were looking less and less likely to survive. For years, the crypto dike had held admirably. But now it was crumbling. It was endgame for the government.

Oddly, the NSA no longer appeared to be the prime obstacle to a solution—behind the Triple Fence one could discern a sense of resigned acceptance of the new crypto reality. Clint Brooks himself was no longer on the front lines, but ultimately the institution he served had come to accept his idea of change.

Maybe its leaders recognized that instead of trying to hold back progress, their efforts might be better spent trying to prepare for the inevitable. Probably, when the NSA cipher wizards had really thought about it, the putative nightmare of crypto everywhere was something they felt they could handle—if they were granted more funding, of course. Perhaps, as Robert Morris hinted in his Crypto '95 speech, and the cypherpunk-cracking effort had indicated, these shiny, "uncrackable" programs created by the private sector really weren't so uncrackable after all, and the NSA was satisfied at its ability to get plaintext when it needed to. One caper funded by the Electronic Frontier Foundation had been particularly telling: a team of engineers led by John Gilmore and Paul Kocher had built a DES-cracking machine for $210,000.

(DES, of course, was still deemed a munition too hazardous to send abroad in normal circumstances.) In a demonstration at a 1998 crypto conference, the device produced the plaintext to a DES message in less than twenty-four hours. Obviously, if such machines were produced in bulk, obtaining such keys would be dirt cheap. One had to assume that the NSA had plenty of similar units in its basement.

In any case, it was the FBI, particularly its director Louis Freeh, that kept urging a hard line—even to the point of continuing to insist that the bureau should have access to plaintext even at the cost of regulating crypto within U.S. borders. Freeh had finally managed to get a version of the Digital Telephony bill passed, presumably forcing the telecommunications industry to design its products to be wiretap friendly. (Congressional opponents of the concept, however, had foiled its intent by refusing to budget the hundreds of millions of dollars needed to implement the effort.) But Freeh continued to fear that crypto would be the death of wiretapping. Since 1994, he had been demanding publicly that if his agents were unable to get plaintext from their wiretaps, Congress should institute a new era of prohibition by banning unescrowed strong encryption. "The objective is to get those conversations, whether they're [conducted] by alligator clips or [by] ones and zeros," he said. "Whoever they are, whatever they are, I need them."

But Freeh was no longer a Clinton administration favorite, and White House officials shrugged off his remarks.

Not that the administration had given up its hopes of stemming the cipher tide. It's just that with each iteration, its anticrypto vision got flimsier and flimsier. White House apparatchiks insisted that the changes were all in the spirit of Al Gore's willingness to work with stakeholders in the crypto world to find the proper balance between codes and snoops. But the only direction that Clinton's people were going was backward. "The boat was getting shelled," Mike Nelson admits. The surest sign that a policy is in big trouble is when the words used to describe it are so discredited that they require euphemisms. By 1997, the word "escrow" became verbum non gratum, despite the fact that thousands of Clipperequipped phones had now been purchased, their keys gathering digital dust in the prescribed escrow facilities. Now the stated goal was called key recovery. A policy that began with the firm controls of Clipper—secret algorithms in tamperproof hardware, government-controlled escrow facilities—had been modified to a software-based scheme where users could choose their own, privately run escrow facilities. Another compromise: the formerly top-secret Skipjack algorithm was finally made public.

"We're not stupid," one administration official later explained. "We listened to the marketplace." But the marketplace—meaning real people trying to buy, sell, and use crypto—didn't want any part of an escrow scheme.

Meanwhile, Congress was discovering the confidence to follow that market, rather than fall prey to the administration's doomsday scenarios. Probably the most important factor was the rise of a well-organized lobbying effort by the computer industry. Since (now former) Representative Maria Cantwell's kamikaze run at the export laws, the high-tech crowd had learned a lot about what the white-shoe contingent could do for them. Regulatory warriors like Bruce Heiman of the Business Software Alliance had made crypto their cause célèbre. Their alliances with civil liberties groups like the Electronic Privacy Information Center, EFF, and the Center for Democracy and Technology gave them populist street cred. The lobbyists met with crucial administration officials so often that either side could flawlessly complete the other's sentences. And they cleverly identified the legislators who would promote procrypto bills, not so much in anticipation of actually passing them, but to increase the already considerable pressure for strong-crypto détente. The lobbyists' prize converts were a conservative Republican from Virginia, Robert Goodlatte, and a new-economy Democrat representing Silicon Valley, Zoe Lofgren. Goodlatte in particular was a firebrand on the issue, a newly born crypto head in pinstripes. "The first thing we did was have him spend time with the NSA on this, so he could hear the point of view from the other side," says Heiman. After being inoculated by a full-contact classified briefing, Goodlatte then was served the alternative reality: crypto was already abroad, industry was in danger of losing billions, and so on. Once the congressman adopted the outsider's vision, he appeared so often with Internet industry leaders that it was a shame he was ineligible for stock options.

Helped by a newly formed industry group called Americans for Computer Privacy (those "Americans" were thirteen corporations including RSA, IBM, Novell, Sun, and Microsoft), Goodlatte and Lofgren educated their colleagues on the political benefits of supporting strong crypto. In the Senate, the unlikely crypto crusader Conrad Burns of Montana took on the administration, backed by privacy-savant Patrick Leahy and the senator from Microsoft, Washington's Patty Murray.

A dramatically different variation on The Briefing was coming into vogue in congressional hearing rooms. Instead of shrouded conversations about maintaining our successes in codebreaking, witnesses were warning of potential disasters caused by outsiders screwing up our own systems—which were vulnerable, in part, because the world's most advanced technological nation had failed to adopt strong crypto to protect those systems. Every corruption of

a Web site and theft of on-line credit-card numbers seemed to reinforce those fears; the conclusions of the National Research Council were finally resonating.

Even the FBI's Web site got hacked! Capitol Hill was suddenly abuzz with the prospects of a "digital Pearl Harbor," where hackers, terrorists, and hostile nations would grind our society to a halt by shutting down computer-controlled functions like the electrical grid or weapons systems. And though there was no magic bullet that might shore up our defenses, we did have a powerful tool to protect ourselves: strong crypto, the very thing that the administration had been trying to suppress!

By 1999, an emboldened Congress was finally rallying around the SAFE bill, the three-year-old proposed legislation to relax the export rules. In fact, a majority of the House—258 members—had signed on as cosponsors. In the Senate, the news for the administration was no better. Its leader in the fight against relaxed export controls had been John McCain, the former Vietnam prisoner of war whose credibility on such matters was unimpeachable. A bill McCain and Senator Bob Kerry had introduced in June 1997 would deny the services of any future government-sponsored "certificate authorities" (agencies to distribute and authenticate public keys, a necessary component in a full-blown crypto infrastructure) to those who refused to escrow their keys—potentially giving citizens the choice of either using Clippertype schemes or losing their ability to participate in the electronic society. But by 1999, McCain had looked more closely at the issue (and perhaps its impact on his pending presidential run). In a stunning switcheroo, McCain suddenly turned into Mr. Crypto, a vocal supporter of the SAFE bill.

Was it time for the administration to finally toss its export forms in the air and yell "ciphertext"?

Apparently so. Even though the administration never really believed that Congress would pass a bill demanding liberalized exports—the system was too convoluted to tackle, the risk of compromising national security too dicey, and in any case there was always the promised presidential veto—the White House was distressed and anxious that votes in the subcommittees kept the issue alive. More to the point, the Clinton people began pondering the potential consequences of a national disaster resulting from a lack of crypto—for which they could be blamed. Sure, allowing crypto exports could be dangerous, they figured, people may die . . . but on the other hand, if someone attacked an unprotected digital infrastructure . . . people may die! As one White House policy maker later explained, it came down to how they would die: "Do you want them shot out of the sky with a surface-to-air missile, or do you want the floodgates on the Grand Coulee Dam to be rewired?" If the whole issue boiled down to six of one against half a dozen of the other, what was the sense of fighting such a thankless, uphill battle?

In September 1999, Al Gore—himself preparing for a run at the White House—announced that a new set of regulations would be unveiled in December: the net result of which would be permission to export consumer-directed crypto products in any key length. So drastic a change was this that upon being briefed on the policy, Curt Weldon, a Pennsylvania congressman who had carried serious water for the administration in fending off the SAFE bill, could not contain himself. How can you be implementing this policy? he shouted. For years, you've been telling us that exports of strong crypto will compromise security and empower criminals. And now you're telling us you've changed your minds?

"It's over," concluded Stewart Baker, who since leaving the NSA in 1994 had returned to his law firm to practice cyberlaw. Some suspected that the whole thing was yet another government stalling tactic; at the last moment, the regulators would unveil a plan loaded with fine print that represented very little change. Just like Lucy snatching away the football when Charlie Brown was ready to boot it, they imagined, the NSA and the FBI would once again deny the crypto community the ability to export strong keys. But by now it was clear that the game could have fewer and fewer iterations before Charlie would finally, inevitably put toe to pigskin.

This time, in fact, the government made good. The first draft of the regulations seemed to dictate an alarming amount of red tape before strong crypto could be granted an "automatic" exemption—but tactful yet firm opposition from the Goodlatte-Lofgren faction and the industry led to a more commodious second draft. Not perfect, but sufficiently straightforward to assure even the paranoid that this time the good stuff could be sent abroad. No longer was a 56-bit DES key, or even keys of 64, 80, 128, or more bits, regarded as a deadly weapon.

If was official: public crypto was our friend.

A few days into the new millennium, it was time for the tenth-anniversary gathering of RSA's annual cryptography conference. The gathering now had outgrown San Francisco's largest hotels and was held at the mammoth San Jose Convention Center. It had become a huge crypto bazaar with a conference program with five separate tracks of seminars and over ten thousand people in attendance.

Almost every year at the show, one of the keynote sessions tracked the progress, or lack of progress, of cryptography in the political realm. It would play out almost like Kabuki theater, with aggrieved representatives from the commercial, academic, or civil liberties world griping about the intransigence of the government. Then some unlucky emissary from the administration—an assistant attorney general, an NSA lawyer, a White House techno-policy wonk—would lecture an unforgiving crowd about the ineffable balance between privacy and national security, perhaps inflaming the gathering by an ill-placed "If you knew what we know" reply to one of the inevitably hostile questions. But this year it was different. Jim Bidzos came to the podium with a bottle of champagne, offering it to the people from Justice and the NSA on the panel. The fight is over, he was saying, and our guys won.

Bidzos himself was no longer working full time, partly as a consequence of the June 1996 acquisition of RSA Data Security by an East Coast computer security firm called Security Dynamics. (Weeks before the January conference, the purchasing company decided to change its name and was now called RSA Security, Inc.) The price tag was around $300 million, of which Bidzos himself took in $40 million. Some think that the sum might have been even higher—or RSA might have been able to pull off its own billionbuck Internet IPO—had it not been for the acrimonious breakup of Public Key Partners, when lawsuits flared between RSA Data Security and its partner Cylink. The people at Cylink had become unhappy with the arrangement, and also frustrated that the original agreement did not allow them to exploit RSA technology freely in their own products; they went so far as to challenge the validity of the MIT patent on the breakthroughs of Rivest, et al. (A remarkable action, since Cylink, through PKP, received a share of the royalties from that patent.) Bidzos and his colleagues, meanwhile, were livid that Cylink had developed an RSA-based product for the global transaction clearinghouse SWIFT. The suits were finally settled in late 1996, with the assistance of a federal judge. Both sides claimed victory at the complicated settlement (Bidzos noted that there were no findings that RSA had acted improperly) but valuable energies had been expended—while the patents themselves inched closer to their expiration dates.

Not long after the sale, Bidzos figured he'd be happier with less involvement in the firm. He'd moved into a Marin County mansion, owned a sleek posse of BMW motorcycles, sampled exotic bottles of wine, practiced classical guitar, flew his minifleet of airplanes, and checked on his impressive stock portfolio.

Investments had made him a millionaire many, many times over—his personal stake in the VeriSign digital certificate company alone (which he cofounded) was worth more than the money he cleared in the RSA sale (a stake that had itself now grown to over $100 million). His main job was now as a quasiambassador of the commercial crypto cause, and his main visibility came at the annual conference. Diffie was there, of course. Still unrepentantly

longhaired and strikingly bearded, he cut a startling figure in one of his bespoke suits. Though not wealthy by Silicon Valley standards, the few million dollars he had received from his patents and RSA stock made him quite comfortable. He and Mary Fischer were still together, still very much in love, though their one-time petting zoo was now down to two Tibetan mastiffs.

Rivest, Shamir, and Adleman attended as well. Rivest was now a well-respected graybeard, still on the MIT faculty but wealthy from his RSA holdings. He was still doing original crypto research. Shamir was even more active in the field, brainstorming everything from systems for digital cash micropayments to a new computer that could factor huge numbers. But Len Adleman was pretty much out of crypto, working instead on schemes that combined mathematics with organic chemicals, like DNA computers. Some key cryptographers and figures in the struggle didn't make it to San Jose for the event. Ralph Merkle, too busy with his work at Xerox PARC in the field of nanotechnology, couldn't find the time to accept an award bestowed by RSA for significant contributions in the field. And Ray Ozzie was immersed in the development of his first major project since Notes: within weeks he would receive— fifteen years after his first frustrating contacts with the NSA—export clearance to ship 2048-bit RSA keys, 256-byte RC-4 (yes, byte—eight times more than bits!) keys, and, by the way, clearance for plain old DES as well.

Another unfortunate no-show was David Chaum. Had he attended, he might have seen plenty of things he liked. Anonymous crypto solutions like Chaum's were increasingly cited as an antidote to the unwanted transmission of personal data. One start-up prominently displaying at the conference trade show was a Canadian company called Zero Knowledge that sucked up millions in venture capital to launch its "Anonymizer," a Web site that allowed people to surf the Net without leaving their digital footprints behind.

And though Julf Helsingius didn't venture from Finland for the conference, his ideas still flourished. At the monthly cypherpunks meeting held the weekend before the event, there was the usual discussion of a new generation of remailers called "mixmasters," which used an improved technology to make encrypted anonymous Internet messaging easy to use and devilishly difficult for governments to unravel.

Phil Zimmermann, however, did manage to attend the conference. On January 11, 1996, the government had officially dropped its investigation of him and his co-target, Kelly Goen. To celebrate, Zimmermann's wife had tossed a "Phil Got Off the Hook" party at the Rocky Mountain Peace Center. Not long afterward, Zimmermann decided to move to Silicon Valley and start a company, Pretty Good Privacy, Inc., to produce the software commercially. (An RSA lawsuit filed against the new company for copyright infringement was eventually settled, with PGP paying normal royalties for public key protocols.) But PGP, Inc. was short-lived. Admittedly the kind of guy who couldn't balance his own checkbook, Zimmermann turned over the operations of his company to businesspeople who went through millions of dollars in barely the time it takes to calculate a long prime. The new company acquired other firms, had splashy displays at trade shows, and pursued an overly ambitious plan of transforming itself into a fullservice security giant. Finally, the nearly broke company was sold to an established personal computer security firm, Network Associates. Zimmermann was kept on as the official head of PGP, but his contribution came not so much as a software developer but as a living symbol of strong cryptography. It was in that iconic role that Phil Zimmermann attended the 2000 RSA conference; his best moment came at a Network Associates party on the event's second night. Standing at a computer keyboard, he made a big show of mouse clicking a file transfer that launched a copy of commercial PGP abroad. Only a few years earlier, the government wanted to throw him in jail for the same alleged act.

Later in the conference came a series of sessions focused on a so-called crypto bakeoff run by NIST to choose a successor to the now-ancient Data Encryption Standard. In contrast to the selection of DES, which was made after closed-door meetings with its creators and agreements to keep its design principles secret, the Advanced Encryption Standard was being run as an open competition, with the winner to be chosen by 2001. Not only the algorithms themselves but also the design considerations were completely public. All, as required by NIST, were much stronger than DES, with minimum 128-bit keys. It would have been difficult to argue for strong restrictions against the export of the algorithm in any case, since more than half of the contenders were written by cryptographers outside the United States.

It had taken more than twenty years since Whit Diffie's discovery—so long, in fact, that in just a few months into the new century, the suite of patents covering public key and RSA would one by one reach their expiration dates—but the era that Diffie had dreamed of was finally beginning. In a keynote speech following Bidzos, a vice president at Microsoft announced that its new operating system, Windows 2000 —variations of which would undoubtedly find their way into almost every personal computer sold in the new century—would have 128-bit crypto built in, with government clearance to export it. And Apple Computer was already shipping strong crypto in its new operating system.

And, of course, crypto was already a component in every Web browser, enabling the secure transfer of credit-card numbers and financial information. In 2000, there would be over $80 billion worth of ecommerce transactions—a number that was estimated to eventually shoot into the trillions; virtually all of that was protected by RSA crypto. And later that year, a national digital signature bill would be passed, finally clearing the way out of the logjam caused by the administration's foot-dragging back in 1992.

President Clinton would sign the bill electronically.

The once-forbidden technology was suddenly the new panacea. It was envisioned that the solution to the pirated, downloading of music and films would be . . . crypto. In addition, crypto was the secret sauce of protected corporate discussions used in "virtual private networks," a hot business trend that allowed snoop-proof conferencing. The movement of medical records to the on-line world would be possible only with crypto. And crypto was expected to be an essential component in the next generation of the Internet, where all of us would communicate with non-personal-computer "devices" ranging from palmtops to phones to kitchen appliances. We would be wired and wirelessed up the wazoo, and crypto would be our privacy safety net.

To be sure, its revolutionary impact would be stealthy. The hundreds of millions already using it in browsers and operating systems, for instance, knew nothing of Whit Diffie and the others, even as their machines silently made key exchanges and scrambled, unscrambled, and successfully completed transactions with secrecy that would stagger the medieval occultist Trithemius, stun autokey wizard Vigenère, and perhaps bring a wistful smile to Lucifer's creator, Horst Feistel. Why didn't it happen sooner, as Diffie had expected? Because it wasn't until the Internet that it had to happen.

So there was reason to celebrate at the 2000 RSA conference. But those wondering why the turnaround had come so quickly would have found a succinct answer one year earlier—same season, same place, at the 1999 conference. That event had opened with the soaring vocalists of the Oakland Interfaith Gospel Choir. Decked out in electric blue robes, they filed onstage, booming out a holy-roller version of the rock song "I Still Haven't Found What I'm Looking For." The lyrics had been changed to refer to the long struggle for widespread, strong encryption. But when Jim Bidzos himself hit the stage, similarly berobed, his preacherlike testimony presciently claimed that the clouds were parting, the rainbow just ahead. If not crypto anarchy, he knew, crypto ubiquity was on the way. He realized that for all those years he'd been flogging the public key dream, he'd been pushing a boulder uphill. But the problem hadn't been only the government or the export regulations, but the product itself. Public key cryptography was a mathematical marvel, but it had actually been born too soon. Twenty years ago, it was a solution whose problem hadn't fully materialized.

No more. Not when every desktop had a computer on it and was connected to the Internet. Not when nearly every lap had one of the things, too. Not when phones were beginning to get hooked to the World Wide Web, along with set-top television boxes, and even videogame consoles. Certainly not when all those Net-connection devices were being used to shuttle everyone's private information, and even their credit cards. Especially their credit cards.

Jim Bidzos looked at his audience and made his own joyful gospel sound: "We've found the problem to the solution," he said, ". . . and it's e-commerce!"

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Housatonic

Gordon Calvin Culp (born 1926)

[HL005L][GDrive]
Gordon C. Culp (1926-2006), founding partner Culp, Dwyer, Guterson, ca. 1961

[HL005O][GDrive]
Gordon C. Culp, Seattle, 2004

Born on February 17, 1926, in Auburn, Washington [HL005K][GDrive]

Middle name suggested here - https://www.ancestry.com/family-tree/person/tree/81349349/person/48445348694/facts?_phsrc=fEm29&_phstart=successSource

Associations

- **Henry Martin "Scoop" Jackson (born 1912)** (Culp was long-time counsel to United States Senator Henry M. Jackson)
- **Daniel Jackson Evans (born 1925)** (Evans was governor while Culp was supporting Sen Jackon - I think Gov Evans appointed Culp as a University of Washington Regent.)
- **Mary Maxwell Gates (born 1929)** (University of Washington Regents)
- **William Hunter Simpson (born 1926)** (University of Washington Regents)

HistoryLink biography of Culp, Gordon C. (1926-2006)

Source - [HL005K][GDrive]

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Gordon C. Culp came out of Auburn, Washington, during the Great Depression, and never forgot his roots or his old friends. He went on to become a counsel to United States Senator [**Henry Martin "Scoop" Jackson (born 1912)**] ,co-founder of the Culp, Dwyer, Guterson & Grader law firm in Seattle, influential Pacific Northwest power-utilities attorney, University of Washington Regent, University of Washington Medical Center board member, and the key

Pacific Northwest power utilities attorney, University of Washington Regent, University of Washington Medical Center board member, and the key negotiator in bringing together the Seattle Cancer Care Alliance. He attributed his success in life to luck. In the words of one of his obituaries, "He had great credibility with public power leaders, federal officials and Washington's congressional delegation" (Shaw). Culp was content to be an out-of-the-spotlight negotiator, bringing disparate groups together in common cause. A former law partner said, "His roots were so deep, his comfort with himself was so deep, he didn't have to pander to people" (Marritz). He was a wordsmith, raconteur, and debater who relished discourse but had little patience for uninformed opinion. He was devoted to public service, and to the University of Washington.

Rural King County Roots

Gordon C. Culp was born on February 17, 1926, in Auburn, Washington, to Norman and Cara Virl Carter Culp, the third of four children. His father was 45 and his mother was 37. His siblings were sisters Shirley, who died in 1949, Audrey, and Wilda. Norman Culp's ancestors were religious refugees, Swiss Mennonites, and Tories who settled first in Pennsylvania, then moved to Canada, which was politically more compatible for them. Norman first came to the United States in 1906, moved back and forth a few times and in 1930 brought in a herd of polled (hornless) Herefords. He settled with his wife, children, and cattle on a rented ranch in King County's Soos Creek area, between Auburn and Black Diamond, just in time for the Great Depression.

Culp once recalled: "He saved for years and years ... and then you couldn't give (the cattle) away. He lost the whole thing, a life's work, for a $500 feed bill" (Whiteley). Norman found work as an accountant for the federal Public Works Administration, but the experience had a debilitating effect on Gordon, for years after. Whether because of it or in spite of this, young Culp excelled in school. He was a straight-A student, class president, and otherwise active in student affairs, including the debate team, drama club, and cheerleading. "I was always mouthy," Culp explained (Whiteley).

He was christened Calvin Carter Culp, but his mother disliked the name and called him Gordon. He changed his name legally in 1953.

Culp had a newspaper route and won a bicycle for obtaining the most new subscriptions. Auburn was a railroad hub, telephones were far from universal, and he also worked as a call boy, sent out to wake engineers for their shifts. Years later, he would occasionally don his old, distinctive, blue-and-white railroad engineer's cap. He regularly visited his old Auburn buddies throughout his life. Culp never lost touch with those roots.

Discovering Law

Shortly before graduating from Auburn High School in 1944, he joined the Navy, which made more sense to him than waiting to be drafted into the Army. He served as an Electronic Electricians Mate in the United States and the Philippines until 1946. His father died that year and his mother died in 1969.

He entered the University of Washington under the GI Bill, the Servicemen's Readjustment Act of 1944 that put higher education within the reach of millions of veterans of World War II and succeeding wars. Culp had enjoyed his Navy experience and was considering engineering or prelaw. "Culp remembers, 'There were lots of girls to be met and beer to be drunk,' and prelaw offered more flexibility for doing that." He majored in philosophy and economics as an undergraduate, and found time and enthusiasm to be a cheerleader. He enjoyed law school, because "It was fun to argue all day long" (Whiteley).

Culp served on the *Law Review*, was president of the Alpha Tau Omega fraternity, and graduated from the UW School of Law in 1952, with the modest expectations of a Depression child. He reflected, "I was going to get a hot job as an insurance adjuster. I was going to end up making $10,000 a year ... That was the extent of my planning" (Whiteley). That $10,000 a year was the dream for thousands of young men entering the work force in the wake of World War II.

Instead Culp joined the Seattle law firm of Ferguson and Burdell for two years, then opened his own practice. In 1957, Culp wanted to take time off to work on the U.S. Senate Subcommittee on Territories and Insular Affairs, chaired by **Senator Henry M. "Scoop" Jackson** (1912-1983). In the meantime, an old law school friend, William L. "Bill" Dwyer (1929-2002), had gone on to earn his law degree from New York University, complete a U.S. Army tour in West Germany, and was working as law clerk for state Supreme Court Justice Charles Donworth. Vasiliky Dwyer, Bill Dwyer's widow, recalled, "Gordy talked to Bill about taking over his practice, which was very little. Gordy said, 'When I get back, we can talk about maybe going into practice together.' Bill took over, got close to Charlie Burdell, who was in the same building, Charlie then brought Bill into the Dave Beck case, and that was the beginning, really, of Bill's career" (Dwyer).

Working for Scoop Jackson

Senator Jackson and other Washington state politicians strongly supported statehood for the territories of Alaska and Hawaii, though powerful interests, especially southern segregationists, opposed both. As counsel for Jackson's subcommittee, Culp was a major contributor to the crafting of both measures. The Alaska statehood bill was signed in 1958 and the Hawaii statehood bill in 1959.

By chance, another subcommittee assignment involving a plan to increase Pacific Northwest salmon runs led Culp to the region's power industry, where he would spend his professional career.

Marriage to Joan Procter Culp

While working for Senator Jackson, Culp became friendly with the senator's appointments secretary, Joan Proctor (1930-1996), and they married in 1958. When they returned to Seattle that year, she managed Jackson's Seattle office, worked on Jackson's presidential campaigns, and continued working for him until 1974. She was a Ballard native, daughter of a union organizer, and a major bulwark for Culp, her family, and others. Joan was a skilled cook who provided everything from elaborate four-course gourmet meals for 12 to whipping up gourmet delights for the gang of Husky football tailgaters that the Culps hung with.

Both Gordon and Joan Culp were voracious readers and inveterate travelers. During their 39 year marriage (until her death in 1996 after a long battle with emphysema) he and Joan enjoyed many sojourns both exotic and mundane. They traveled all over the Pacific Northwest, went fishing in New Zealand, cruising to Antarctica, riding the Trans-Siberian Express; and they were left on the beach by a cruise ship at al Àqabah, Jordan, part of their odyssey around the world. Along the way, the Culps met people who became lifelong friends -- a German military pilot wedded to a Japanese woman, a Burmese student, and many others. Culp's travel tales were always punctuated with the amazement of a boy only recently out of Auburn.

Seattle Law Firm

In 1958, Culp and William Dwyer teamed up as a law firm, with offices in the Hoge Building, the endeavor set forth in a one-page contract. Murray Guterson, another old UW School of Law classmate, joined them shortly. George Grader joined the firm in 1964, when Dwyer took a sabbatical to write *The Goldmark Case: An American Libel Trial* about a landmark suit Dwyer pursued to the United States Supreme Court.

Culp, Dwyer, Guterson & Grader began making news in a range of other high-profile cases -- some *pro bono* and highly controversial, others involving high-stakes gambles -- cheeky antitrust suits that ultimately earned the firm multimillion-dollar fees and made the *pro bono* work possible.

Culp, meanwhile, was establishing himself out of the public eye, orchestrating complicated, politically sensitive power projects and finding common ground among sometimes disparate interests -- tricky work, which he mostly shrugged off as "magoozling." (Seattle author Bill Speidel defined a *magoozle* as "a method by which we get things done in America. It's neither legal nor illegal, but it gets the job done" [Magoo website].)

Power Treaties

Culp's first major success was a landmark treaty signed with Canada in 1964 to enhance Columbia River hydroelectric potential. Robert Marritz, a lawyer who worked with Culp on energy issues, said: "They were looking for someone with political savvy, someone who knew power, and knew how to put this together -- the politics of it -- on both sides of the border. Culp had much to do with putting this complicated deal together, and the millions of dollars in benefits that flowed from it." Under the treaty, the Canadians built three dams on the upstream reaches of the Columbia River and both Canada and the United States shared the downstream benefits of the added firm power created by the new dams. The Canadians at first didn't need their share of power, so they sold their entitlement to utilities in the United States, under an arrangement known as the Columbia Storage Power Exchange (CSPE), which Culp was also instrumental in creating.

The treaty and CSPE, along with differences in West Coast geography and climate, prompted another inter-regional contract. Peak power demand in California and other Southwest states came during the summer air-conditioning season, when the Pacific Northwest enjoyed a surplus. This led to development of the West Coast interties (high voltage lines traveling great distances to link two or more electric power systems), connecting the Pacific Northwest to California energy markets. The interties permitted large seasonal exchanges of power, mostly surplus sales from the Northwest.

Culp was in the middle of it all. There were some bumps in the road, however. With development of the interties, Northwest utility lawyers became concerned about potential antitrust suits by third parties, so Culp and others, working with the offices of Senators Jackson and Warren G. Magnuson (1905-1989), crafted a bill that would exempt from the antitrust laws utilities already under federal regulation. Marritz was working for the rural electric co-ops in Washington at the time, and wondered "who's behind this thing? It was Culp and Grinstein." Working with Culp was Gerry Grinstein, a top aide for Magnuson who went on to become president and CEO of Western Airlines, chairman and CEO of Burlington Northern, and then CEO of Delta Airlines. This was the first time Marritz had heard Culp's name, never dreaming he would later become his law partner. "The bill was brilliant in its simplicity," Marritz recalled, "but it was too broad." Rather than stir up a hornet's nest, Culp and Grinstein decided to drop the bill.

Power Politics

The offices of Jackson and Magnuson were major forces in Pacific Northwest power politics -- as they were in *all* regional politics -- and former staffers, in addition to Culp and Grinstein, were scattered influentially throughout the industry. Longtime Jackson chief-of-staff Sterling Munro (1932-1992), for instance, was administrator of the Bonneville Power Administration from 1978 to 1981. One-time Magnuson aide Eric Redman represented industrial customers of BPA at Seattle's Preston, Thorgrimson, Ellis law firm, where his boss was Gerry Grinstein.

According to Egil "Bud" Krogh, a Seattle lawyer who worked for the Culp Dwyer firm and who also specialized in energy issues, the CSPE and the intertie "transformed the energy infrastructure of the Northwest. It all took root in the fertile mind of Gordy Culp ... . When this was first put together, there was an ability on the part of public power, the investor-owned utility community, the direct-service customers of Bonneville, the governments of Washington, Oregon, Idaho, Canada, BC Hydro, the U.S., and Canadian regulators, to work together. Culp was absolutely crucial because he had an ability to bring people together and get them to see the common good, and back off from very narrow interests" (Krogh).

Culp also was instrumental in developing the Pacific Northwest Utilities Conference Committee (PNUCC) into a significant industry forum-cum-lobbying group. PNUCC was formed in 1946 "as a voluntary, informal organization of public and private utilities to assess regional power supply in the West Group Forecast and to support federal appropriations for power projects in the region" (PNUCC website). The direct-services industries (DSIs) -- aluminum manufacturing firms -- which consumed one-third of the power from the federal dam system on the Columbia, became members in 1971.

Lou Nawrot, a former Culp Dwyer attorney, recalled: "Public and private power companies had their own lawyers, but they didn't speak to each other very much. Whenever there was something of common interest, they had trouble getting to a position where they could agree on anything." Robert Marritz added, "There was a need to coordinate conflicting, overlapping interests: public power -- itself diverse -- private utilities, aluminum companies, and the public interest. Culp was the titular head of the power industry legal community, figuring out these problems, trying to get the parties together to get more kilowatts out of the resource."

Politics Beckons

In 1960, Culp took a leave of absence to return to politics. He and wife Joan hit the road as an advance team for Jackson, then National Democratic Chairman and a leading vice-presidential candidate to run with John F. Kennedy (1917-1963). Kennedy, counting potential votes in the conservative-leaning South, instead chose Texas Senator Lyndon B. Johnson (1908-1973). The Culps also worked on Jackson's own presidential campaign in 1972, Gordon as scheduler. On the eve of this eagerly awaited new adventure, Culp had said, "This train only passes once." And an adventure it was. In late April 1971, with Gordon already in Washington, D.C., scheduling and writing speeches, Joan drove across the country in her 1968 Mustang – she liked sporty cars – with her 11-year-old nephew Don Devan for company, and arrived in time for the May Day anti-war riots, which shut down the nation's capital. The Culps also worked on Jackson's second attempt at the presidency in 1976.

Meanwhile, fear of an energy shortage was beginning to permeate the Pacific Northwest power industry. When the first Columbia River hydroelectric dams were built in the early 1930s, critics claimed they would produce more electricity than the region could ever use. But 20 years later, industry analysts, including the Bonneville Power Administration, were projecting that the region's demand for electricity would double every 10 years, beyond the capacity of the hydropower resource. The solution would be nuclear and "economies of scale" -- the plants of the Washington Public Power Supply System (WPPSS), created by the state Legislature in 1957, and privately funded nuclear or coal-fired plants as well.

Nuclear Power

"Culp was pro-nuclear and believed in economies of scale. It was the conventional wisdom ... and I don't think there was any credible information at the time that was contrary to that" (Krogh). Indeed, it not only was "conventional wisdom," but official state policy. **In 1969, Governor Daniel Jackson Evans (born 1925) announced plans "to make Washington the nation's leader in nuclear energy development**" [...]

By the late 1970s, however, WPPSS was rapidly approaching disaster. Inflation, design changes, contractor boondoggling, and mismanagement by WPPSS

officials and managers had pushed costs far beyond original estimates. Energy shortages driven by the 1973 oil embargo, and a rising tide of environmentalism also were reducing demand and fueling a conservation ethic.

But the industry and state and federal officials were still operating under "a politics of scarcity" (Morgan). The political battle was coalescing in Washington, D.C., where a centralized Pacific Northwest power overseer was being hammered into shape. "The first bill, introduced by Jackson in 1977, was written largely by PNUCC" (Morgan). Actually, that bill was largely the result of a consensus developed by Culp and his associates at Culp Dwyer.

"Culp was really comfortable in that milieu. Culp was just Culp. He was a man of Auburn, the U-Dub [University of Washington]. So sharp, so tuned in, and yet so regular. There was not a phony bone in his body. His roots were so deep, his comfort with himself was so deep, he didn't have to pander to people. Some said he was in the pockets of the private power companies, but that was never true" (Marritz).

George Grader recalled: "Gordy mingled at ease and as an equal with the giants of his day, yet never lost that impish-kid quality, always ready with a shaggy-dog story, told with a conspiratorial grin."

Susanne Tsoming, Culp's secretary at the law firm, also remembered her boss fondly. "He was a great mentor and always a gentleman. Even when I made a mistake, he treated me with kindness ... . He liked puzzles and challenges. He looked at a problem from every angle, upside down, and sideways. Other people would have given up, but he would turn it over in his mind as if looking at a Rubik's Cube for a solution."

Three years from the time that first bill was introduced, the disparate parties and virtually all politicians in the four-state region agreed on the Northwest Power Act of 1980, which created what became known as the Northwest Power and Conservation Council. The addition of *Conservation* to the agency's name summed up the evolution of conventional wisdom in Pacific Northwest power over the ensuing 20 years.

Meanwhile, WPPSS was en route to a $2.25 billion meltdown – the largest default in municipal bond history. The collapse, in 1983, was the result of "bad judgment and bureaucratic bungling on an unprecedented, almost unimaginable scale" (Time). "They came to Culp and our firm, and it was a natural choice," Marritz said. "They wanted someone who was knowledgeable about the business and skilled litigators, and in that firm you found both -- power expertise and terrific litigators."

WPPSS lost, however, when the state Supreme Court decided that the WPPSS participants' contracts -- "take-or-pay" contracts that were standard throughout the industry -- were not valid. "The Supreme Court made a very political decision," Marritz said.

[HL005M][GDrive]
University of Washington Regents, 1984. Left to right Robert Philip, Gordon Culp, [Mary Maxwell Gates (born 1929)], UW President William Gerberding, [William Hunter Simpson (born 1926)], Herman Sarkowsky, Edward Carlson, Janet Skadan

[HL005N][GDrive]
[Mary Maxwell Gates (born 1929)] and Gordon C. Culp, University of Washington Regents, 1980s

New Challenges

In 1977, in the middle of this regional upheaval in energy, Governor Dixy Lee Ray (1914-1994) named Culp to the University of Washington Board of Regents, a prestigious *pro bono* appointment. Some assumed that his pro-nuclear beliefs influenced the vociferously pro-nuclear Ray, but in fact they had never met. According to Culp, "I got a call out of the blue" (Whitely).

The man whom Culp would later recruit as UW president, William P. Gerberding (1929-2014), said, "I always thought he was an insider with Ray, this odd character who suddenly became governor. [But] Gordon was very surprised." Some of Ray's appointments to the UW Board of Regents may have been fishes-out-of-water, but Culp was "a fish *in* water ... . He was ideally suited for it. He took no easy answer and he was very shrewd."

A year after Culp was appointed, UW President John R. Hogness (b. 1922) announced he was stepping down and in June 1978, Board of Regents President [Mary Maxwell Gates (born 1929)] named Culp to head the search committee to find a successor. Mary Gates, a highly respected philanthropist, was the wife of [William Henry Gates II (born 1925)], another old UW law school classmate of Culp, mother of Microsoft founder [William Henry Gates III (born 1955)], and had known Culp for many years. According to Gerberding, "Gordon and Mary became very close right away. A power center, certainly ... . Gordon and Mary were distinctive. Not only were they great regents, ambitious for the university, but almost irrationally fond of the university. Gordon was a very proud citizen of the Pacific Northwest" (Gerberding).

Recruiting a University President

Relations between Governor Ray and the UW were testy at best and the assignment had a high potential for disaster. But at the time, Culp was described as "the kind of guy who gets things done without being conspicuous about it ... . Culp will have the delicate job of keeping the selection ... free of politics at a time when the Board of Regents is politicized and subject to the possible maneuvering by Gov. Dixy Lee Ray" (Emery).

Governor Ray had taught zoology at the UW from 1945 to 1960. "She had unhappy memories of the university and didn't hide that," Gerberding reflected

Governor Ray had taught zoology at the UW from 1945 to 1960. "She had unhappy memories of the university and didn't hide that," Gerberding reflected. "But she made some very good appointments, with Gordon as exhibit A. Hans Lehmann also was very good. I had a decent relationship with Ray, but she was not a friend of the university, budgetarily or otherwise" (Gerberding).

For Culp, the assignment was something of a crusade. "This is a Gordon-type story," Gerberding said, by way of introduction. "By then, anyone in the university or business world looking for a CEO would hire a headhunter. Gordon said, 'We'll do it ourselves.' He didn't trust their judgment or motives." The committee included Regents **Robert Philip, president and co-founder of the *Tri-City Herald*,** and **R. Mort Frayn (1906-1993), onetime Speaker of the state House of Representatives**. "Both were Republicans, but that was not an issue. There was no partisanship. **One of Mort Frayn's closest friends, in fact, was Maggie [Senator Magnuson]**, back in the days when those things could happen." The committee also included representatives of the university's administration, faculty, students, and alumni association. "It was the usual Noah's Ark committee, which Gordon had to manipulate" (Gerberding).

William P. Gerberding had been on the job as chancellor of the University of Illinois Urbana-Champaign (UI) only a few months when he first met Culp for a couple of hours at Chicago's O'Hare Airport in December 1978. Ostensibly, Culp was picking the chancellor's brain about other candidates. Gerberding didn't consider himself a possibility because of his relatively brief tenure at UI, "but about two months later, Culp called and said, 'What about you?,' " Gerberding recalled.

Gerberding and his wife, Ruth, visited Seattle in March 1979 for interviews, and he accepted the job offer. "I liked the spirit of it, the mood of it. I said Seattle was San Francisco populated by Minnesotans," he recalled.

Gerberding was inaugurated UW's 27th president in January 1980. He became fast friends with Culp, as well as others on the board. With Culp he shared the Navy experience, a major in philosophy, an intense interest in political affairs, and stints as congressional staff. Gerberding had served on the staff of Senator Eugene McCarthy (1916-2005), D-MN.

His honeymoon was short-lived. The state's budget went deep red about seven months after he took office: Departments were cut, hundreds of faculty and staff jobs were lost, and all programs scaled back. "We lost at least 10 percent of our core budget in that process. It was very severe, and not anticipated," Gerberding said.

While Gerberding was busy lobbying the Legislature and Ray (and later Governor John Spellman) for more money, in 1981 Culp "was in the forefront of the UW's campaign to win more autonomy from the Legislature" (Schaefer).

In 1982, Governor John Spellman (1926-2018), a Republican, reappointed Culp to another six-year term. Said Gerberding: "If Gordon was involved in something, people who were serious-minded quickly came to respect him" regardless of party. Culp had a reputation for detail beyond the pale. "We'd be at a board meeting or some other setting, talking through a difficult issue, and think we'd come to a kind of consensus. And about that time, Gordon would want to spin it around one more time, or two more times. He was a philosophy major and a lawyer, a wordsmith. Nothing was obvious to him."

Health Care and Cancer Care

When Culp's two terms on the Board of Regents ended, Gerberding appointed him to the UW Medical Center board, where he would serve until 1998, one term as president. Culp was a founding chairman of the board of the Seattle Cancer Care Alliance. In the summer of 2006 the new board room of the Cancer Care Alliance was dedicated as the Gordon C. Culp Board Room.

Culp was also active in the UW Physicians Network (Neighborhood Clinics) and a member of the Fred Hutchinson/University of Washington Cancer Consortium Strategic Planning Committee.

And he had been a founding board member of the Henry M. Jackson Foundation, established in 1983 to continue the senator's work. Culp "played an influential role in shaping the organization's strategic direction" (*The Jackson Legacy*). In 2004, he was awarded the Henry M. Jackson Award for Distinguished Public Service.

A Husky Fanatic

Culp retired from his law firm in 1990, but continued to answer the public-service call. In 1992, he was appointed chairman of a panel asked to investigate allegations of racism on the part of UW basketball coach Lynn Nance. The panel -- two African American members and two Caucasian -- cleared Nance of the racism allegations, but questioned his coaching style. Nance resigned a year later, after the university agreed to buy out the final year of his contract.

Culp's devotion to Husky football was legendary. He not only attended all home games, but videotaped them -- as well as all away games -- for future viewing. According to Gerberding, **"The two biggest Husky football fanatics that I ever encountered -- and boy, that's a high standard -- were Dan Evans and Gordon Culp" (Shaw)**. And, again proving that he had no problem rowing against the tide of popular opinion, he remained a defender and champion of Rick Neuheisel (b.1961), UW football coach fired in 2003.

In 1993, a year after the Nance investigation, the "taxpayer revolt" had wended its way up from California and Initiatives 601 and 602 were threatening the already beleaguered state budget -- and the state's colleges and universities. Culp was instrumental in forming Citizens for Higher Education, a political action committee to raise money to fight the anti-tax initiatives on the fall ballot, and was its treasurer and spokesman. Supporters included regents and trustees, administrators and faculty members who were alarmed by the damaging effects of tax revolts on higher education in Oregon and California. Culp said: "The University of California system was the pride of this country for generations. It's been decimated. Now the Oregon system is approaching shambles. The same thing would happen here" (Hadley).

End of the Law Firm

Throughout the years of Culp's public service, the law firm, Culp, Dwyer, Guterson & Grader, had continued to prosper. Bill Dwyer had established a reputation as an outstanding antitrust lawyer and civil libertarian, and was appointed a U.S. District Court Judge by President Ronald Reagan (1911-2004). Culp had retired in 1990, and in 1995, the remaining 40-odd members of the Culp Guterson & Grader voted to disband.

Culp was philosophical about the end of the firm he founded. He told a reporter, "Times change. It doesn't do all that much to me ... Bill and I and George Grader and Murray were there 35 years, and we developed it as we wanted. Others can decide how to go forward" (Miletich).

Lawyer Bud Krogh reflected: "Gordy and Bill were the animating spirit of a law firm that was ... and I don't want to overstate it, but in a way it was Camelot when the two of them were there. Not only were they super competent and extraordinarily effective lawyers and litigators, but they had a social conscience. They really felt strongly about making their community better, and contributed enormous amounts of their time to it" (Krogh).

Marriage to Kathie Werner

A year or so after Joan Culp's death, Gordon met Kathie Werner (b. 1947), a Seattle editor (mostly for Microsoft) and writer who'd had a career as a bookseller and publisher's rep. They had many things in common, including Auburn, where Kathie's father had run a variety store and been a fellow Rotary Club member with John Peckenpaugh, one of Culp's oldest friends. Werner, who grew up in Tacoma, was also a formidable debater: She had won several of the same debate tournaments Culp had won 20 years before. She had attended the University of Washington, becoming a Husky fan and ASUW President Thom Gunn's paid speechwriter. She graduated in 1971.

After meeting in 1997, Gordy and Kathie became a couple and they married in 2002. They were enthusiastic travelers, going to Vietnam and Singapore, taking the Silk Road tour of China, and traveling also to Italy and Germany. Kathie Werner says, "Gordy reminded me of a line from a Theodore Roethke poem: 'The right thing happens to the happy man.'"

A Passion for Discourse

Culp was "mouthy," loved discourse, repartee, argument, didn't suffer fools gladly, and didn't trust the media. " 'If they ever call ... say nothing,' " his former secretary Susanne Tsoming said, recalling his instructions. "'You have to be very careful when you talk to them. They're only human and they may have a bias.' I was very young then. I thought what they said was the truth."

Culp made no secret of his political passions, or any others, as long as he could draw a breath and put pen to paper. In a letter in the *Seattle Post-Intelligencer*, March 30, 2003, only 10 days after the Iraq War began, Culp rejected the conventional wisdom of the time that finding weapons of mass destruction would have justified the invasion in the eyes of the world. He was prescient.

"Not so," he wrote:

> "Even if we discover such supplies, our choice of war and the death of innocent people have forever precluded the world from knowing whether the ongoing, universally supported disarmament procedure would have worked.
>
> "Many friends of the United States (as well as all who already dislike, fear and distrust us) will not soon exonerate us from destroying the possibility of a peaceful solution. That cannot bode well for our future safety and comfort, not to mention our self-respect."

Last Years

Gordon Culp was diagnosed with cancer in 2003, and the disease became terminal in 2006. The end in sight, he held court for friends and family, with "courage and characteristic forthrightness," said an encomium signed by University of Washington leaders past and present -- Bill Gates Jr., Gerberding, Philip, and Grinstein among them. Grader recalled a final visit with Culp, along with Murray Guterson, Lou Nawrot, and another law firm partner, Jerry McNaul: "As we trooped up the stairs, having said our goodbyes, he called out and waved and yelled, as best he could, 'It's been a great ride, hasn't it boys?'"

Gordon Culp died on April 23, 2006. His memorial service was held at the University of Washington's Kane Hall, and was filled with representatives of Washington state's power structure, from former governors Evans and Mike Lowry on down. Jackson Foundation Executive Director Lara Iglitzin, in her remarks at the service, recalled: "Gordy gave Kathie strict orders about the reception: 'I want *very good* food,' he said, and '*fairly good*' wine."

This essay made possible by: [...]

Sources:

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Note: This essay was updated on January 8, 2015.

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Housatonic

Dr. Andrew Alexander Cunningham (born 1964)

Born 1964 (estimate) [Note - birth date is estimated, based on years of primary school]

Associations

- **Dr. Peter Daszak (born 1965)** (29 shared research papers between Dr. Daszak and Dr. Cunningham - https://www.zsl.org/science/users/andrew-cunningham)

Education (from 2021 LinkedIn capture)

Source : [HW005V][GDrive] / Primary education begins in the UK at age 5 and continues until age 11, comprising key stages one and two under the UK educational system. so this would put his birthday around 1963 or 1964

- University of London
  - PhD Field Of StudyVeterinary Pathology & Epidemiology
  - Dates attended 2001
- The University of Glasgow
  - Bachelor's Degree Field Of StudyVeterinary Medicine and Surgery
  - Dates attended 1982 – 1987
- Hamilton Grammar [see https://en.wikipedia.org/wiki/Hamilton_Grammar_School] / High School
  - Dates attended 1976 – 1982
- St Johns Primary
  - Dates attended 1969 – 1976

Prof. Andrew Cunningham - Curriculum Vitae

https://www.zsl.org/science/users/andrew-cunningham

- 2015–present Deputy Director of Science, Institute of Zoology, Zoological Society of London
- 2007–2014 Deputy Head, Institute of Zoology, Zoological Society of London
- 2013–present Visiting Professor, Universidad Andres Bello, Chile
- 2011–present Honorary Professor, University College London
- 2011–present Professor of Wildlife Epidemiology, Institute of Zoology, London
- 2004–2010 Reader in Wildlife Epidemiology, Institute of Zoology, London
- 2001–present Head of Wildlife Epidemiology, Institute of Zoology, London
- 1988–2001 Veterinary Pathologist, Institute of Zoology, London
- 2016–present Fellow, Royal College of Veterinary Surgeons
- 1987–2016 Member, Royal College of Veterinary Surgeons
- 2010–2015 Royal Society Wolfson Research Merit Award
- 2001 PhD, University of London
- 1987 BVMS, University of Glasgow

I joined the Institute of Zoology in 1988 as Veterinary Pathologist for the Zoological Society of London; a job which involved carrying out diagnostic pathology on zoo and wild animal species. Since 2001 I have led a team of researchers at the Institute of Zoology who work on wildlife diseases, with particular reference to biodiversity conservation, on a wide range of animal taxa: from snails to whales.

Research Interests

My main area of interest is the study of disease threats to wildlife conservation, although I am also interested in host-parasite interactions and co-evolution, and in wildlife disease and comparative pathology per se. One of my main projects is the investigation of catastrophic vulture declines in India with colleagues at the Royal Society for the Protection of Birds , the Bombay Natural History Society , the Venkateshwara Hatcheries Poultry Diagnostic and Research Centre and the National Bird of Prey Centre. Much of this work has been funded by the RSPB and we recently won a grant from the Darwin Initiative for the Survival of Species to further our studies on this major ecological and socio-economic problem.

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middle name "Alexander"

https://ebvs.eu/colleges/ECZM/members/prof-andrew-alexander-cunningham

Andrew Alexander Cunningham
EBVS® European Veterinary Specialist in Wildlife Population Health
Member of European College of Zoological Medicine

Andrew investigates infectious and non-infectious disease threats to wildlife conservation, including the drivers of disease emergence and zoonotic spillover. He has published > 400 scientific articles, including primary data and reviews on emerging infectious diseases and on disease threats to biodiversity. He discovered a new epidemic ranaviral disease of amphibians in Europe and he published the first definitive report of the global extinction of a species by an infectious disease. He has led several international and multi-disciplinary wildlife disease research projects, including the investigation of vulture declines in South Asia and the international research team that discovered the fungus Batrachochytrium dendrobatidis as a cause of amphibian declines (for which he was awarded a medal by the CSIRO in Australia). In 2010, he won a Royal Society Wolfson Research Merit Award for his work on zoonotic viruses in African bats and in 2016 he was elected a Fellow of the Royal College of Veterinary Surgeons for meritorious contributions to learning

https://artsandculture.google.com/asset/prof-andrew-a-cunningham-ph-d-sebastian-baurmann/sQEYPp5QMDwSLw?hl=en /
https://www.youtube.com/watch?v=rnhOG1WmkDc

Evidence Timeline

1995 (August)- Research - "A Report of Intestinal Sarcocystosis in the Bullsnake (Pituophis melanoleucus sayi) and a Re-evaluation of Sarcocystis sp. from Snakes of the Genus Pituophis" - With Dr. Peter Daszak

With - **Dr. Peter Daszak (born 1965)** / PDF - [HP004X][GDrive]

Journal of Wildlife Diseases, 31(3), 1995, pp. 400–405
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A Report of Intestinal Sarcocystosis in the Bullsnake (*Pituophis melanoleucus sayi*) and a Re-evaluation of *Sarcocystis* sp. from Snakes of the Genus *Pituophis*

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ABSTRACT: We report a severe enteric infection of *Sarcocystis* sp. from a wild-caught bullsnake (*Pituophis melanoleucus sayi*). The animal was collected in October 1988 by a commercial dealer, imported into the United Kingdom during November 1988 and purchased by the London Zoo, in December 1988. The animal was not fed after capture and was anorexic from the time of purchase to the time of death in January 1989. On necropsy, the animal was emaciated and the mucosa of the proximal intestine was markedly thickened. The lamina propria was packed with oocysts, and enterocytes were parasitized by an organism which closely resembled *Sarcocystis roudabushi* and *Sarcocystis idahoensis*, two bisporocystid coccidia described previously from *Pituophis melanoleucus*. We propose that *Sarcocystis idahoensis* and *Sarcocystis roudabushi* are synonymous since both occur in the same host species, both invade the intestinal lamina propria and enterocytes, and sporocyst measurement ranges of both species overlap. This is the first report of death believed to be due to sarcocystosis in a naturally-infected definitive host.

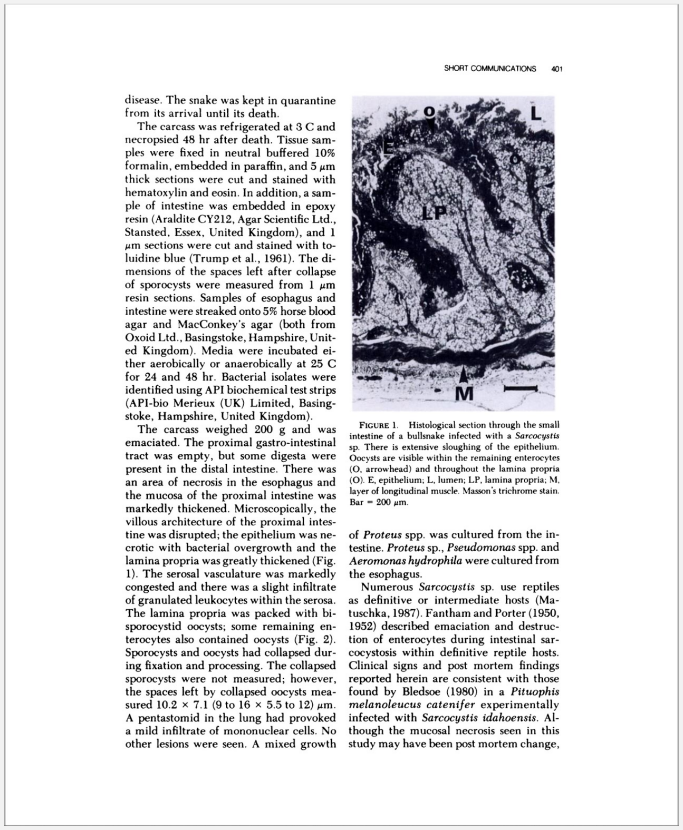
Key words: *Pituophis melanoleucus*, *Sarcocystis*, *Isospora*, sarcocystosis, pathology, taxonomy.

Sarcocystosis is an important disease of livestock caused by the asexual developmental stages of *Sarcocystis* spp. within non-intestinal tissues of the intermediate host (Dubey et al., 1989). In the definitive host, the parasite reproduces sexually within the intestinal mucosa. Reports of intestinal sarcocystosis causing clinical signs are rare, but occasionally symptoms of vomiting, diarrhea and anorexia have been reported in humans (Bunyaratvej et al., 1982). Here we report disease associated with an enteric infection of a *Sarcocystis* sp. in a wild-caught bullsnake (*Pituophis melanoleucus sayi*).

Identification of intestinal *Sarcocystis* spp. is complicated by the similarity of their oocysts and sporocysts to those of *Isospora* spp. and *Toxoplasma* spp. However *Sarcocystis* spp. undergo merogony in the intermediate host only (Dubey et al., 1989). The presence of fully sporulated oocysts within the host (endogenous sporulation) is another distinguishing characteristic (Upton et al., 1992). Only three coccidia with *Sarcocystis* sp. or *Isospora* sp. types of oocysts have been described in snakes of the genus *Pituophis*: *Sarcocystis roudabushi* Levine and Tadros, 1980, (Roudabush, 1937; Pellerdy, 1974) *S. idahoensis* Bledsoe, 1980 and an unnamed *Sarcocystis* sp. Upton et al. 1992 (Wacha and Christiansen, 1975). All are found in subspecies of *Pituophis melanoleucus*. In this paper we describe lesions associated with a *Sarcocystis* sp. in a wild-caught bullsnake, and propose that *S. roudabushi* and *S. idahoensis* are synonymous using the criteria by which they were originally described.

An adult male bullsnake (*Pituophis melanoleucus sayi*) was captured in northern Illinois within the area 39° to 42°N, 88° to 90°W, by a Tennessee dealer in October 1988. The snake was exported to the United Kingdom within 2 wk of capture, collected immediately upon arrival by a British dealer, who then sold the snake to London Zoo in mid-December 1988. Based on all available information, we believe that the snake was not fed in the USA between capture and export. The snake was not fed during or after import into the United Kingdom on 13 December 1988; indeed the snake refused to eat following purchase by the zoo until its death on 18 January 1989. The animal had no other signs of

Page 400 : [HP004Y][GDrive]



disease. The snake was kept in quarantine from its arrival until its death.

The carcass was refrigerated at 3 C and necropsied 48 hr after death. Tissue samples were fixed in neutral buffered 10% formalin, embedded in paraffin, and 5 μm thick sections were cut and stained with hematoxylin and eosin. In addition, a sample of intestine was embedded in epoxy resin (Araldite CY212, Agar Scientific Ltd., Stansted, Essex, United Kingdom), and 1 μm sections were cut and stained with toluidine blue (Trump et al., 1961). The dimensions of the spaces left after collapse of sporocysts were measured from 1 μm resin sections. Samples of esophagus and intestine were streaked onto 5% horse blood agar and MacConkey's agar (both from Oxoid Ltd., Basingstoke, Hampshire, United Kingdom). Media were incubated either aerobically or anaerobically at 25 C for 24 and 48 hr. Bacterial isolates were identified using API biochemical test strips (API-bio Merieux (UK) Limited, Basingstoke, Hampshire, United Kingdom).

The carcass weighed 200 g and was emaciated. The proximal gastro-intestinal tract was empty, but some digesta were present in the distal intestine. There was an area of necrosis in the esophagus and the mucosa of the proximal intestine was markedly thickened. Microscopically, the villous architecture of the proximal intestine was disrupted; the epithelium was necrotic with bacterial overgrowth and the lamina propria was greatly thickened (Fig. 1). The serosal vasculature was markedly congested and there was a slight infiltrate of granulated leukocytes within the serosa. The lamina propria was packed with bisporocystid oocysts; some remaining enterocytes also contained oocysts (Fig. 2). Sporocysts and oocysts had collapsed during fixation and processing. The collapsed sporocysts were not measured; however, the spaces left by collapsed oocysts measured 10.2 × 7.1 (9 to 16 × 5.5 to 12) μm. A pentastomid in the lung had provoked a mild infiltrate of mononuclear cells. No other lesions were seen. A mixed growth

FIGURE 1. Histological section through the small intestine of a bullsnake infected with a *Sarcocystis* sp. There is extensive sloughing of the epithelium. Oocysts are visible within the remaining enterocytes (O, arrowhead) and throughout the lamina propria (O). E, epithelium; L, lumen; LP, lamina propria; M, layer of longitudinal muscle. Masson's trichrome stain. Bar = 200 μm.

of *Proteus* spp. was cultured from the intestine. *Proteus* sp., *Pseudomonas* spp. and *Aeromonas hydrophila* were cultured from the esophagus.

Numerous *Sarcocystis* sp. use reptiles as definitive or intermediate hosts (Matuschka, 1987). Fantham and Porter (1950, 1952) described emaciation and destruction of enterocytes during intestinal sarcocystosis within definitive reptile hosts. Clinical signs and post mortem findings reported herein are consistent with those found by Bledsoe (1980) in a *Pituophis melanoleucus catenifer* experimentally infected with *Sarcocystis idahoensis*. Although the mucosal necrosis seen in this study may have been post mortem change,

Page 401 : [HP004Z][GDrive]

1996 (May 09)

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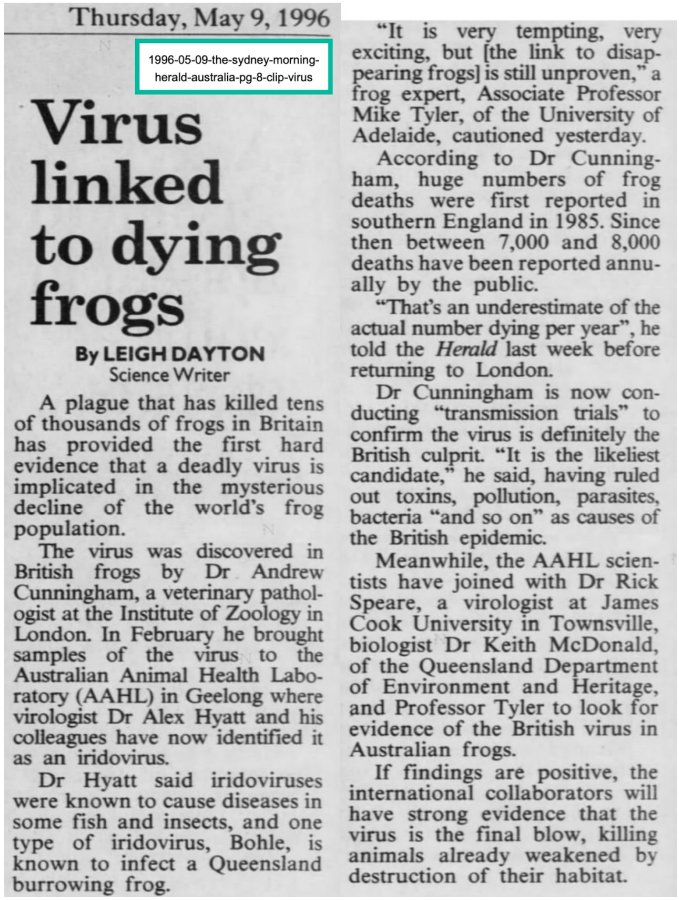
1996-05-09-the-sydney-morning-herald-australia-pg-8-clip-virus.jpg



Thursday, May 9, 1996

1996-05-09-the-sydney-morning-herald-australia-pg-8-clip-virus

Virus linked to dying frogs

By LEIGH DAYTON
Science Writer

A plague that has killed tens of thousands of frogs in Britain has provided the first hard evidence that a deadly virus is implicated in the mysterious decline of the world's frog population.

The virus was discovered in British frogs by Dr Andrew Cunningham, a veterinary pathologist at the Institute of Zoology in London. In February he brought samples of the virus to the Australian Animal Health Laboratory (AAHL) in Geelong where virologist Dr Alex Hyatt and his colleagues have now identified it as an iridovirus.

Dr Hyatt said iridoviruses were known to cause diseases in some fish and insects, and one type of iridovirus, Bohle, is known to infect a Queensland burrowing frog.

"It is very tempting, very exciting, but [the link to disappearing frogs] is still unproven," a frog expert, Associate Professor Mike Tyler, of the University of Adelaide, cautioned yesterday.

According to Dr Cunningham, huge numbers of frog deaths were first reported in southern England in 1985. Since then between 7,000 and 8,000 deaths have been reported annually by the public.

"That's an underestimate of the actual number dying per year", he told the *Herald* last week before returning to London.

Dr Cunningham is now conducting "transmission trials" to confirm the virus is definitely the British culprit. "It is the likeliest candidate," he said, having ruled out toxins, pollution, parasites, bacteria "and so on" as causes of the British epidemic.

Meanwhile, the AAHL scientists have joined with Dr Rick Speare, a virologist at James Cook University in Townsville, biologist Dr Keith McDonald, of the Queensland Department of Environment and Heritage, and Professor Tyler to look for evidence of the British virus in Australian frogs.

If findings are positive, the international collaborators will have strong evidence that the virus is the final blow, killing animals already weakened by destruction of their habitat.

1997 (Jan 20)

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1997-01-20-the-guardian-pg-04-clip-frog-massacre.jpg

Scientists blame foreign killer for frog massacre in South-east

Alison Daniels

A VIRUS from overseas may be to blame for the lingering death of hundreds of thousands of frogs in South-east England, scientists revealed yesterday after a five-year study

The Institute of Zoology at London University and the Suffolk-based organisation, Frogline, investigated the reasons behind a noticeable increase in the number of frogs found dead at some 2,000 locations from Dorset to East Anglia.

The scientists, who have studied environmental factors as well as disease, believe that the most likely killer is an iridovirus.

It causes the common frog to develop a red rash, open sores, internal bleeding, skeletal and muscular wasting and loss of toes.

It is feared the virus could spread to the rest of Britain's 16 million frog population after isolated cases were discovered in Scotland and Wales.

The Frog Mortality Study, which is part-funded by the RSPCA and conducted by Frogline's Tom Langton and the Institute of Zoology's Andrew Cunningham and Peter Bennett, found that most of the frogs affected live in garden ponds.

Mr Langton said that in some areas the frog population had crashed to dangerously low levels. It was not yet clear if the numbers would recover.

Frog numbers have been affected by disease or pollution, but only in very localised incidents, said Mr Langton.

Research now had to be carried out into whether the virus was new, the consequence of some human activity or whether it had been imported and was similar to that found in other animals, such as the American bullfrog.

Scientists hoped to carry out a wide-scale study, and to research ways the virus may have been transmitted through the plant and fish trade.

A spokesman for English Nature said the organisation would be interested in the findings.

However he said that the biggest threat to frogs remained the destruction of their habitat.

1997-01-20-the-guardian-pg-04-clip-frog-massacre

2002 (Jan 29)

https://www.newspapers.com/image/260707785/?terms=andrew%20cunningham%20zoology%20london&match=1

2002-01-29-the-guardian-pg-07-clip-goldfish.jpg

Disease killing frogs is linked to goldfish from US

Frogs are prey to many things
Photograph: Graham Turner

Paul Brown
Environment correspondent

A disease epidemic is killing millions of Britain's most common and least studied amphibian, the frog — and the cause could be goldfish imported from the US.

Soon frogs should be engaged in the annual breeding frenzy which leads to the piles of frogspawn in garden ponds — to the delight of children and of gardeners, who rely on frogs to keep down the slug population.

But large areas of London and the south-east have seen a wiping out of the frog population on a scale reminiscent of myxomatosis in rabbits. The disease causes sores and sometimes the loss of whole legs as the frogs die slowly.

So far there have been 3,500 documented cases of the disease, with a body count of 62,000, the worst outbreak killing 2,000 frogs in a single incident.

Tom Langton, director of the Froglife Trust, who has been studying the spread of the disease, said it was killing populations south of a line between Dorset and Norfolk, but cases had been found in the Midlands, Wales and Scotland.

The disease was first noted in the early 90s but spread rapidly and began to threaten whole populations. He said: "They may be wild animals but people get attached to them and they are almost in tears when they ring to ask what to do. The frogs look so desperate with sores and toes falling off as they get weaker and weaker."

Mr Langton, with Andrew Cunningham and Peter Bennett of the Institute of Zoology at Regents Park, the research arm of London Zoo, has been looking for a cause of the epidemic.

A virus known to able to jump species has been identified as the cause. A ranavirus found in north America is the main culprit. This appears to have arrived in Britain from goldfish farmed in the US and brought to Britain to put in garden ponds. Goldfish and frogs both dying from ranavirus have been found sharing the same ponds.

The virus also affects the north American bullfrog, brought to this country as tadpoles to be sold in pet shops in the 80s. Another theory is that Americans with shotguns, shooting bullfrogs in fish farms, blasted the pieces into the ponds, which were eaten by the fish, which were subsequently imported to Britain bringing the infection with them.

Since the virus also attacks other reptiles, and a pet London tortoise has died of it, there are fears that other British species may also suffer population crashes.

A complicating factor in the study is the presence of large quantities of copper in the livers of frogs, which would damage their immune system and make them more susceptible to disease. Many of the dead frogs were recorded as having higher concentrations of copper than previously known to science.

The main culprit for this is slug pellets, which include copper to give them their characteristic blue colour designed to make them unattractive to birds. Frogs feasting on half dead slugs, some with slug pellets attached, could be destroying their own immune systems allowing them to fall victim to the virus.

Mr Langton said: "We have a fantastic amount of information on this disease and not the financial means to continue studying it. Foot and mouth cost £3bn and BSE even more, what we need is £1m to study the common frog and find out what is wiping it out."

A variety of colours and dangers

- The frog is Britain's most common amphibian, although no one has ever counted them
- Frogs hop up to 2ft, have webbed feet, and wet looking skin, unlike toads which mostly crawl, have claws and are warty
- They can be green, red, brown, grey or yellow
- Frogs grow all their lives, reaching 10cm (4in) in six or seven years, but most do not last that long, being eaten by herons, foxes, hedgehogs, domestic cats or grass snakes, or run over
- Frogs breed in still water, mostly in garden ponds. The young emerge in wet weather in mid-summer and return to breed two or three years later
- Most frogs are still hibernating, burying themselves in damp ground or in mud at the bottom of ponds
- Food includes slugs, worms and flies and many insects

2002-01-29-the-guardian-pg-07-clip-goldfish

2004 (Oct 13)

Mentioned : **Dr. Peter Daszak (born 1965)** / **Dr. Andrew Alexander Cunningham (born 1964)**

Full newspaper page : [HN01HY][GDrive]

C4 October 13, 2004 South Bergenite

ENVIRONMENT

Hurricanes spread plant diseases and ruin crops

The term "emerging infectious diseases" (EIDs) typically makes people think of HIV/AIDS, Ebola, or SARS. However, in a paper released today in the leading ecology journal *Trends in Ecology and Evolution*, an international team of researchers led by Wildlife Trust's Consortium for Conservation Medicine has highlighted a series of emerging plant diseases that are devastating crops globally, and impacting humans through agricultural and economic loss.

Nikkita Patel, Program Officer for the Consortium for Conservation Medicine, and lead researcher for the group, comments, "The recent spate of extreme weather events in Florida and elsewhere highlights the need to protect crops and wild plants from invasive pathogens that exploit the damaged environments following hurricanes." She notes that the reason these diseases are emerging is because we are changing the environment at such a rapid rate. Ms. Patel adds, "These highly evolved diseases are being given the chance of spreading into new regions, wiping out crops and wild plants as they go. Unless we radically change our approach and provide proper surveillance and control, these diseases have the potential to undermine the basis for our food security in the future."

The research team analyzed broad trends in emerging plant diseases and showed that:

·Extreme weather events, such as the hurricanes that hit Florida, are one of the leading causes of plant EIDs. This is due to the sensitivity of plants to fluctuations in moisture levels and the responses of plant pathogens to weather events. With projections that climate change will increase extreme weather events, disease-related die-offs will likely increase with time.

A series of key wild plant species are at risk of extinction due to emerging diseases. For example, the endangered cedar tree (*Torreya taxifolia*) is only found over a 154 square mile area of the Florida panhandle and is gradually being wiped out by a fungal disease and extreme weather events. This unique tree species once had a population of over 500,000, but is now reduced to only 1,500.

The underlying cause of most plant EIDs is the anthropogenic introduction of pathogens, or "pathogen pollution." This is related to changes in land use, global warming, and trade in plants and plant products.

Technological advances in agriculture are leaving global crops open to disease emergence. For example, in many developing countries the availability of year-round irrigation and declining market prices for staple crops has promoted increased intensity and acreage of non-traditional crop plants, thus promoting disease emergence.

The international trade in seeds is an estimated US $40-80 billion-per-year industry. Over 2,400 microorganisms are known to occur in seeds of 383 genera of plants. It is estimated that up to one-third of plant viruses are seed-borne. Improved surveillance and control of disease in this trade is urgently needed.

According to Peter Daszak, Executive Director of Wildlife Trust's Consortium for Conservation Medicine, "Not only are plant EIDs wiping out crops, they're threatening the biodiversity of plant life on our planet. With diseases like sudden oak death (*Phytophthora ramorum*) marching through our forests, we have an unprecedented risk for loss of ecosystems."

The team's results are part of a new approach to emerging diseases that stresses the need for predicting when and how diseases will emerge and dealing with them before they cause significant outbreaks. "If we can predict where diseases will occur, we'll be better equipped to handle them once they emerge," observed Mary Pearl, President of Wildlife Trust.

Pamela K. Anderson, Andrew A. Cunningham, Nikkita G. Patel, Francisco J. Morales, Paul R. Epstein and Peter Daszak. 2004. Emerging infectious diseases of plants: pathogen pollution, climate change and agrotechnology drivers. *Trends in Ecology & Evolution*

About The Consortium for Conservation Medicine

The Consortium for Conservation Medicine (CCM) is a unique collaborative institution that strives to understand the link between anthropogenic environmental change, health of all species, including humans, and the conservation of biodiversity.

About Wildlife Trust

Wildlife Trust is an international organization dedicated to innovative conservation science and conservation medicine, linking ecology and human health in the New York region and around the world. Wildlife Trust trains and supports a network of local scientists in over twenty countries in their efforts to save endangered species and their habitats and to protect the health of ecosystems that are vital to life on Earth.

[HN01HZ][GDrive]

2002 (Oct 24)

https://www.newspapers.com/image/260723521/?terms=%22dr.%20andrew%20cunningham%22&match=1

2002-10-24-the-guardian-pg-11-science-clip-pecking-order.jpg

The Guardian Thursday October 24 2002

Change in the pecking order

The vulture population in India is in rapid decline, leaving human and animal remains either to rot, or feed increasing numbers of rabid dogs, writes **Sanjida O'Connell**

'We passed thence to a scene of a different sort: from this glow of colour to those grim receptacles of the Parsee dead, the Towers of Silence ... we have no name that is so majestic as that one, or lingers upon the ear with such deep and haunting pathos." So wrote Mark Twain in Following the Equator.

The Parsees cannot cremate, bury or submerge their dead in water because they consider a corpse impure and their Zoroastrian faith does not permit them to defile any of the elements — air, earth, water or fire.

This desert ritual, which originated with their faith in Persia more than 3,000 years ago, dictates that the dead be left to vultures in stone citadels called Towers of Silence. The pathos now haunting these stone towers is a lack of vultures. India's vulture population has crashed, putting the Parsees in a difficult position, but also endangering India's fragile ecosystems, and her people.

The problem was noticed by Dr Vibhu Prakash, the Bombay natural history society's principal scientist, whose survey at Keolodeo National Park, Rajasthan, showed a decline of 96% in two species of vulture — the Indian white-backed, and the long-billed, vulture. A nationwide survey in 2000 confirmed his results. In one region, for example, the numbers of white-backed vultures had fallen from 21,000 to 2,000 within seven to 10 years.

White-backed vultures feed on dead buffalo
JOANNA VAN GRUISEN/ARDEA LONDON

"Most people think vultures evolved to steal bits off lion kills but, in fact, vultures take almost no meat from predators. They evolved to find carcasses — animals that died of old age, illness or malnutrition," says David Houston, a professor of zoology at the institute of biomedical and life sciences, Glasgow University.

Indian vultures grew to depend on dead livestock. Diminished numbers mean cattle are left to rot in the heat. The implications are serious. Feral dogs have increased rapidly in the absence of competition. Many carry rabies and already half of the world's rabies cases are found in India. Second, since dogs are predators as well as scavengers, they are likely to hunt ground-nesting birds and small mammals.

"We don't know what the long-term implications for India's wildlife could be," says Houston. Contamination from the carcasses could seep into the ground water, leading to widespread epidemics, including anthrax, which can be carried by cattle.

The problem may also go global: eurasian vultures have been migrating in increasing numbers to India, and the birds could spread anthrax and other diseases to the Middle East, Europe and Africa. Whatever has caused the decline of the vultures in India might be transmitted to the rest of the word's vultures.

Funded by a newly awarded Darwin Initiative, Dr Debbie Pain, head of international research at the RSPB, and Dr Andrew Cunningham, from the Institute of Zoology, London, have begun investigating what is causing the decline. In spite of the Parsees — of whom only 76,000 remain — vultures are frequently shot. Pesticides and herbicides, used liberally in India, also kill them.

However, Pain and Cunningham believe the birds have not been poisoned: numbers are as low in nature reserves as they are in unprotected areas, and post-mortems have not revealed traces of toxic chemicals. Instead, the researchers discovered that the vultures were suffering from severe renal and visceral gout, often associated with kidney failure, which will kill the birds within hours, as well as inflammation of the blood vessels and the brain.

It's precious little to go on, but a virus could be the culprit. "We are keeping our minds as open as possible," says Pain. "Although our findings indicate viral involvement, this may not be the case or may only be part of the story."

As Twain wrote: "The ring of vultures rose, flapping their wings, and swooped down into the Tower to devour the body. Nothing was left of it but a clean-picked skeleton when they flocked-out again a few minutes afterward."

This is hardly the case now. Approximately six vultures remain, instead of the 120 needed to cope with three corpses a day. The Parsees have installed eight giant solar reflectors in one of the 350-year-old towers to hasten decomposition. They have also enlisted the help of Jemima Perry-Jones, of the national birds of prey centre, near Gloucester, who is the only non-Parsee to have entered a Tower of Silence, she has now established a vulture-breeding programme.

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https://www.youtube.com/watch?v=mCHvnkymn50

Lessons From Nature: How Can We Prevent The Next Pandemic?

1,958 views•Apr 27, 2020

Bloomberg Quicktake: Now

"When this Covid-19 pandemic is over, we cannot go back to business as usual," said Professor Andrew Cunningham, a veterinary pathologist for the Zoological Society of London, "we have to learn from our past mistakes and change the way we interact with wildlife and change the way we interact with nature."

https://www.youtube.com/watch?v=bqMQFTqUbUc

Bats & bugs

261 views • Jun 23, 2011

The Royal Society

This is an interview with Dr Andrew Cunningham from the Zoological Society of London and Dr Olivier Restif from the University of Cambridge, they are exhibitors for the exhibit entitled Bats and Bugs: balancing conservation and public health that will be part of the Royal Society Summer Science Exhibition

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https://mycustardpie.com/2020/03/18/the-link-between-coronavirus-and-food-what-can-we-do/

https://www.sciencemediacentre.org/expert-reaction-to-statement-from-south-china-agricultural-university-that-research-has-identified-the-pangolin-as-a-possible-coronavirus-host/

2020 (March 29) - BBC - "Coronavirus: Pangolins found to carry related strains"

By Helen Briggs / BBC News / Published 26 March 2020

https://www.bbc.com/news/science-environment-51496830

2020-03-29-bbc-com-coronavirus-pangolins-found-to-carry-related-strains

Smuggled pangolins have been found to carry viruses closely related to the one sweeping the world.

Scientists say the sale of the animals in wildlife markets should be strictly prohibited to minimise the risk of future outbreaks.

Pangolins are the most-commonly illegally trafficked mammal, used both as food and in traditional medicine.

In research published in the journal Nature, researchers say handling these animals requires "caution".

And they say further surveillance of wild pangolins is needed to understand their role in the risk of future transmission to humans.

Two groups of coronaviruses related to the virus behind the human pandemic have been identified in Malayan pangolins smuggled into China, said lead researcher Dr Tommy Lam of The University of Hong Kong.

"Although their role as the intermediate host of the SARS-CoV-2 outbreak remains to be confirmed, sale of these wild animals in wet markets should be strictly prohibited to avoid future zoonotic [animal to human] transmission," he told BBC News.

Bats also contain coronaviruses, which are closer still to the human virus, except in one key area - the part that helps the virus invade cells.

"This tells us that viruses that look pretty adapted to humans are present in wildlife," said co-researcher, Prof Edward Holmes of the University of Sydney. "Bats are certainly involved, pangolins may be, but it is very possible that other animal species are involved as well."

Exactly how the virus jumped from a wild animal, presumably a bat, to another animal and then humans remains a mystery. The horseshoe bat and the pangolin have both been implicated, but the precise sequence of events is unknown.

Finding the virus in smuggled Malayan pangolins raised the question of where they contracted the virus, said Dr Lam. Was it from bats along the trafficking route to China or in their native habitats in Southeast Asia?

Calls to end illegal wildlife trade

Conservationists say it would be devastating if the discovery led to further persecution of the endangered mammal. The animal's scales are in high demand for use in traditional Chinese medicine, while pangolin meat is considered a delicacy.

"This is the time for the international community to pressure their governments to end illegal wildlife trade," said Elisa Panjang of Cardiff University, a pangolin conservation officer at the **Danau Girang Field Centre in Malaysia**.

China has moved to ban the consumption of meat from wild animals in the wake of the outbreak. Similar moves are being considered in Vietnam.

Prof Andrew Cunningham of Zoological Society of London (ZSL) said it was important not to jump to conclusions from the paper. "The source of the detected coronavirus really is unknown - it might have been a natural pangolin virus or have jumped from another species between capture and death."

And Dr Dan Challender, of the University of Oxford, said pangolins are known to host various strains of coronaviruses. "Identifying the source of SARS-CoV-2 is important to understand the emergence of the current pandemic, and in preventing similar events in the future," he said.

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relative ?

https://www.nature.com/articles/163594a0

death march 4 1949

https://www.ancestry.com/imageviewer/collections/1904/images/32858_625988_0720-00280?usePUB=true&_phsrc=bis91&_phstart=successSource&usePUBJs=true&pId=15439298

Felix Löhnis

https://www.nature.com/articles/127099a0

D

A B C D E F G H I J K L M N O P Q R S T U V W X Y Z

PEOPLE (by last name / then D.o.B.)

- Norman Christian **Dahl** (born 1918)
- Dr. Peter **Daszak** (born 1965)
- Dr. David Bliss **Dekker** (born 1919)
- Dr. Emmie **de Wit** (born 1980(est.))
- Dr. Renato **Dulbecco** (born 1914)
- Eugene Éleuthère Irénée **du Pont** jr. (born 1873)
- Eugene Éleuthère **du Pont** (born 1882)
- Émile Francis **du Pont** (born 1898)
- Ethel **du Pont** (born 1916)

PLACES / COMPANIES / OTHER

- **Davison** Chemical Company
- Thomas J. **Deegan** Company
- **Dynalectron** Corporation
- **Dynamac** Corporation
- **DynCorp** International

Norman Christian Dahl (born 1918)

Associated With :

- Thomas Paul Rona (born 1923) (Witness for Thomas Rona's immigration to the USA ; and colleague at MIT)
- Monique R Rona (born 1928) (Also witness for Thomas Rona's wife Monique's immigration to the USA)

also - https://www.newspapers.com/image/425780303/?terms=%22norman%20C%20Dahl%22&match=1 (big newspaper article)

http://csg.csail.mit.edu/Dahl/globetext.txt

Norman Dahl; helped India go high-tech

By Gloria Negri, Globe Staff, 1/23/2004

When India's prime minister Jawaharlal Nehru asked the Massachusetts Institute of Technology for help in starting an institute of technology in 1961, MIT promptly turned to Dr. Norman C. Dahl.

A professor of mechanical engineering at MIT, Dr. Dahl had not only the intellectual skills required, but the human skills as well.

Dr. Dahl, who helped bring computer technology to Kanpur, India, died of Alzheimer's disease on Jan. 11 at Fairlawn Nursing Home in Lexington. The 85-year-old was a resident of Cambridge and Block Island, R.I. The success of the Indian Institute of Technology at Kanpur, with graduates now spanning the world as professors, engineers, computer scientists, and entrepreneurs, remains a tribute, friends said, to Dr. Dahl's diligence and ability to connect with people.

"Norman was a powerful servant of American international policy and practical effort and, in short, a serving citizen of not one but several countries in his time," said Harvard economist John Kenneth Galbraith, the US ambassador to India when Dr. Dahl was there from 1962 to 1964. "Perhaps the most spectacular achievement of the early days of the IIT/Kanpur was its contribution to the computer revolution of India -- now a commonplace," Galbraith said. "Not often, and perhaps not ever, has an economic and technical effort so rewarded both the donor country and the major recipient."

Dr. Dahl's wife, Dorothy (Sweet), said the gift by IBM to IIT/Kanpur in 1963 of a computer was "perhaps the first computer in a teaching institution in the subcontinent."

Four other technology institutes, established by India, Germany, Russia, and Britain, still flourish in India. But according to MIT professor Arvind Mithal, a graduate of IIT/Kanpur, "The American model dominates them all, and Norman was, perhaps, the most important to it."

While other engineering schools existed before the IITs, Mithal said, "the IITs revolutionized engineering education in India. The American model was different from the existing schools because it was not like [learning] a trade but was deeply embedded in science.

"Norman was a brilliant administrator and utterly charming," Mithal said. "He connected with people. His attitude was, `Let's see what works.' "

Under Dr. Dahl's setup, the IIT was run by Indians, instead of Americans.

Rama Dasari, associate director of an MIT laboratory, agreed. "Norman's particular talent was in delegating," he said. "He allowed the best to come out of the Indian administrators while the American professors stayed in the background."

Dr. Dahl, his wife, and their two young children stayed in Kanpur for two years. While there, his wife helped start a school for children of institute workers. **The family would return to India in 1968 for three years, when Dr. Dahl was appointed the Ford Foundation's deputy representative on projects dealing with over-population, education, agriculture, and urban planning.**

Dr. Dahl was born in Seattle, one of three sons of a Norwegian-born father who once panned for gold in Alaska and a Norwegian-American mother. In his senior year at the University of Washington, Dr. Dahl was the first engineering student and non-fraternity member to be elected president of the student body. He graduated with a degree in civil engineering.

At the start of World War II, Dr. Dahl was at Princeton University with the Passive Protection Against Bombing, a committee of the Office of Scientific Research and Development.

The Dahls were married in 1943, and Mrs. Dahl, also, took a position at Princeton. Later, Dr. Dahl became the only civilian assigned to the staff of General Curtis LeMay, head of the US Air Force Strategic Air Command on Guam, where air attacks on Japan were launched. "Norman was provided with a document giving him the rank of major in the event of his capture," his wife said.

In 1946, the Dahls moved to the Boston area when Dr. Dahl came to do graduate study at MIT. **He earned his doctorate of science in mechanical engineering in 1952 and stayed on at MIT to teach.** He was appointed professor in the department of mechanical engineering in 1959.

That same year, Dr. Dahl co-edited, with MIT professor Stephen Crandall, the textbook "An Introduction to the Mechanics of Solids," with chapters written by seven MIT professors. The text is still in use today around the world.

The book was five years in the making, said Crandall, now retired. "You can imagine that there might have been disagreement among the authors and it was because of the humanity and good grace of Norman Dahl that he was able to pour oil on rough waters. It was so typical of Norman's approach to a problem to get everyone involved."

Dr. Dahl left MIT in 1968 and worked as a consultant in mechanical engineering on projects that took the Dahls around the world. "If Norman had to make a choice," his wife said, "it was always the adventurous one."

In 1969, the Dahls bought a home on Block Island, where Dr. Dahl not only led a study of the island's water supply and its effect on the island's development but served as a member of its sewer commission. **He was also involved in a study of Lyme disease on the island.** Besides his wife, Dr. Dahl leaves a son, Christian, of King Ferry, N.Y.; a daughter, Sabra, of Cambridge; and three grandchildren.

A memorial gathering will take place at 5 p.m. Feb. 28 at the MIT Faculty Club. The family plans to bury his ashes in July on Block Island.

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Brother Arve Dahl - Radioloical fallout ??

https://books.google.com/books?id=JcxEAQAAMAAJ&pg=PA988&lpg=PA988&dq=%22arve+dahl%22+washington&source=bl&ots=eNVcBFPiZ7&sig=ACfU3U22Kz1PkEKCs81YdsO_ku9JUL2qBg&hl=en&sa=X&ved=2ahUKEwjK4uOyxIPtAhUOFFkFHX5BAb4Q6AEwDnoECAEQAg#v=onepage&q=%22arve%20dahl%22%20washington&f=false

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1930 US Census

Full census form : [HS003Z][GDrive]

Record Transcription:
Us Census 1930

Household Members

First name(s)	Last name	Relationship	Marital status	Sex	Age	Birth year	Birth place
Gjermunn	Dahl	Head	Married	Male	50	1880	Norway
Anna V	Dahl	Wife	Married	Female	45	1885	Sweden
Helge C	Dahl	Son	Single	Male	17	1913	Washington
Arve H	Dahl	Son	Single	Male	13	1917	Washington
Norman C	**Dahl**	**Son**	**Single**	**Male**	**11**	**1919**	**Washington**

Norman C Dahl's Census Details

First name(s)	Norman C
Last name	Dahl
Relationship	Son
Sex	Male
Race	White
Age	11
Birth year	1919
Birth place	Washington
Marital status	Single
Father's birth place	Norway
Mother's birth place	Sweden
City/township	Seattle
County	King
State	Washington

[HS0040][GDrive]

Born 1918 -

https://www.findmypast.com/transcript?id=USBMD%2FSSDI%2F534145965

Norman C

Last name

Dahl

Birth year

1918

Birth month

May

Birth day

21

Death year

2004

Death month

Jan

Death day

11

Social Security number

534-14-5965

Place of issue

Washington

State

Washington

Country

United States

Record set

Social Security Death Index

Category

Birth, Marriage & Death (Parish Registers)

Subcategory

Civil Deaths & Burials

Collections from

Americas, United States

Travel record - middle initial "C" is for Christian

https://www.findmypast.com/transcript?id=US%2FPASS%2FNY%2F011983880443

1976

https://library.wmo.int/doc_num.php?explnum_id=7096

1949 - joins MIT faculty

https://www.newspapers.com/image/433409647/?terms=%22norman%20C%20Dahl%22&match=1

BITCHUTE @Housatonic YOUTUBE @HousatonicLive ODYSEE @Housatonic BRIGHTEON @Housatonic

Housatonic

Dr. Peter Daszak (born 1965)

Wikipedia Peter Daszak

Born Nov 18 1965 (See [HD0013][GDrive])

Married to - Janet D Cottingham (Married Feb 1997 - see https://search.ancestry.com/cgi-bin/sse.dll?indiv=1&dbid=8753&h=1493317&tid=&pid=&usePUB=true&_phsrc=JbL13&_phstart=successSource) - Her twitter : https://twitter.com/JanetCottingha1

Parents - Father is **Bohdan Daszak (born March 21, 1926)**

Mother's maiden name was "Walton" - [HL0043][GDrive] , born in England (Ashton district)

Siblings - John Daszak

HousatonicITS Research Pages :

- **Professional relations:**
  - Peer at Eco Health Alliance of **Kevin James Olival (born 1975)**
  - "**Farmer Wei Shangzheng**"
  - Was on same editorial board of "Biosafety and Health Journal " as **Xiangguo Qiu (born 1964)** (see https://www.journals.elsevier.com/biosafety-and-health/editorial-board), but did not appear to work on any shared research projects with her.
  - **Dr. Andrew Jeremy Wakefield (born 1957)** (...)
  - **Dr. Lin-Fa Wang (born 1960)** (...)
  - Zheng-Li Shi
  - **Dr. Walter Ian Lipkin (born 1952)** (([HK0050][GDrive] : "Dr. Lipkin is Honorary Director of the Beijing Infectious Disease Center, Chair of the Scientific Advisory Board of the Institut Pasteur de Shanghai and serves on boards of the Australian Biosecurity Cooperative Research Centre for Emerging Infectious Disease, the Guangzhou Institute for Biomedicine and Health, the **EcoHealth Alliance** [EcoHealth President is **Dr. Peter Daszak (born 1965)**] ....")
  - co-authors : (see https://scholar.google.com/citations?user=HBjU-38AAAAJ&hl=en)
    - [**Dr. William Bamberger Karesh (born1955)**] / Also at EcoHealth Alliance
    - Feng Li / 1 Food and Drug Administration; 2 University of Maryland, Baltimore County;
    - Sasha Greenspan / University of Alabama
    - Christina A. Cuomo / Broad Institute of MIT and Harvard
    - Jonathan H. Epstein / EcoHealth Alliance
    - [**Dr. Andrew Alexander Cunningham (born 1964)**] / Institute of Zoology, Zoological Society of London [Note - (29 shared research papers between Dr. Daszak and Dr. Cunningham - https://www.zsl.org/science/users/andrew-cunningham)]

Saved Wikipedia (June, 2020) - Peter Daszak

Wikipedia - live link at https://en.wikipedia.org/wiki/Peter_Daszak / saved - [HK0023][GDrive]

Peter Daszak is a British zoologist and an expert on disease ecology, in particular on zoonosis. He is currently president of EcoHealth Alliance, a nonprofit non-governmental organization that supports various programs on global health with headquarters in New York City. He is a researcher, consultant and public expert for media inquiries on the subject of virus-caused epidemics. In late April 2020, during the COVID-19 pandemic, the National Institutes of Health (NIH) "abruptly terminated" EcoHealth Alliance's research funding.[1][2]

Education

Daszak earned a B.Sc. in Zoology in 1987 at University College of North Wales (UCNW), and a Ph.D. in parasitic infectious diseases in 1994 at University of

Daszak earned a B.Sc. in Zoology in 1987 at University College of North Wales (UCNW), and a Ph.D. in parasitic infectious diseases in 1994 at University of East London. [3]

Career

Daszak worked at the School of Life Sciences, Kingston University, in Surrey, England in the 1990s. In the late 1990s Daszak moved to the United States and was affiliated with the Institute of Ecology at the University of Georgia and the National Center for Infectious Diseases, Centers for Disease Control and Prevention, in Atlanta, Georgia. Later he became executive director at a collaborative think-tank in New York City, the Consortium for Conservation Medicine. He holds adjunct positions at several universities in the U.S. and the U.K., including the Columbia University Mailman School of Public Health. [3]

He was one of the early adopters of conservation medicine. [4] The Society for Conservation Biology symposium in 2000, had focused on the "complex problem of emerging diseases".[4] He said in 2001 that there were "almost no examples of emerging wildlife diseases not driven by human environmental change...[a]nd few human emerging diseases don't include some domestic animal or wildlife component." His research has focused on investigating and predicting the impacts of new diseases on wildlife, livestock, and human populations, and he has been involved in research studies on epidemics such as the Nipah virus infection, the Hendra virus, SARS-1, Avian influenza, and the West Nile virus. [5]

Daszak has served on committees of the International Union for the Conservation of Nature, World Health Organization (WHO), National Academy of Sciences, and United States Department of the Interior. [3] He is a member of the National Academy of Medicine and Chair of the National Academies of Sciences, Engineering, and Medicine (NASEM)'s Forum on Microbial Threats and sits on the supervisory board of the One Health Commission Council of Advisors.[6]

Daszak is the president of the New York-headquartered NGO, EcoHealth Alliance,[7] known for its research on global emergent diseases such as Severe Acute Respiratory Syndrome (SARS), Nipah virus, Middle East Respiratory Syndrome (MERS), Rift Valley fever, Ebola virus, and COVID-19.

Publications

As of 2020 he has authored or contributed to over 300 scientific papers and been designated a Highly Cited Researcher by the Web of Science. In addition to citations in academic publications, his work has been covered in leading English-language newspapers,[8][9] television and radio broadcasts, documentary films[10] and podcasts.

Media coverage

During times of large virus outbreaks he has been invited to speak as an expert on epidemics involving diseases moving from animals to humans.[6][11][12] At the time of the Ebola outbreak in West Africa in 2014, Daszak said"Our research shows that new approaches to reducing emerging pandemic threats at the source would be more cost-effective than trying to mobilize a global response after a disease has emerged".[13]

In October 2019, when the federal government "quietly" ended the ten-year old program called Predict, operated by United States Agency for International Development (USAID)'s emerging threats division,[14] experts like Daszak, expressed concern that shutting Predict down, could "leave the world more vulnerable to lethal pathogens like Ebola and MERS that emerge from unexpected places, such as bat-filled trees, gorilla carcasses and camel barns."[14] Daszak said that compared to the $5 billion the US spent fighting Ebola in West Africa, Predict—which cost $250 million—was much less expensive. As well, Daszak said, "Predict was an approach to heading off pandemics, instead of sitting there waiting for them to emerge, and then mobilizing."[14]

COVID-19 Pandemic

On February 9, 2020, Newt Gingrich invited Daszak as a special guest along with Anthony Fauci on Newt's World to discuss the coronavirus.[15]

In his February 27, 2020 New York Times article, entitled "We knew Disease X was Coming", Daszak said R&D Blueprint group of experts to which he belonged, had warned the World Health Organization in February 2018 in Geneva, Switzerland, of the "next pandemic, which would be caused by an unknown, novel pathogen that hadn't yet entered the human population". The Blueprint group coined this hypothetical pathogen "Disease X" and was included it on a list of eight diseases which they recommended should be given highest priority in regard to research and development efforts, such as finding better diagnostic methods and developing vaccines.[16] He said, "As the world stands today on the edge of the pandemic precipice, it's worth taking a moment to consider whether Covid-19 is the disease our group was warning about."[8]

On March 20, 2020 Daszak was featured in a PBS Newshour special podcast "Understanding the coronavirus".[17]

In April and May 2020, during the COVID-19 pandemic, Daszak was interviewed by National Public Radio (NPR),[18] CNN, [19] NBC News,[20] CBS News, [1] and other outlets, refuting the idea that COVID-19 pandemic was caused by a virus resulting from a laboratory accident at the Wuhan Institute of Virology.

In his April 26 interview with CNN's Fareed Zakaria, Daszak said that conspiracy theories had emerged "pointing the finger at China". He said that "politicization" had resulted in "countries" cramp[ing] up" which was unfortunate because "what we need right now is open communication with scientists across the world. China has done a lot to deal with this virus before us. They know a lot about how to control it. We need access to that information and talking in political terms about this outbreak closes down the access."[19]

According to a May 9, 2020 news report by a number of media outlets, National Institutes of Health (NIH) "abruptly terminated" EcoHealth Alliance's "research grant, which was "focused on identifying and warning about coronaviruses dangerous to human health."[1][2]

Daszak was part a segment of the May 11, 2020 broadcast of 60 Minutes. [21]

Awards and Honors

In October 2018, Daszak was elected to the National Academy of Medicine (NAM),[22] which the New York Times has been called the "most esteemed and authoritative adviser on issues of health and medicine" whose "reports can transform medical thinking around the world."[23] In 2000 he received the CSIRO medal for work on amphibian disease.

Scientist Bio for "Dr. Peter Daszak" from EcoHealth Alliance Org

Source - Ecohealth Alliance Org - [HC000E][GDrive]

Dr. Peter Daszak is President of EcoHealth Alliance, a US-based organization that conducts research and outreach programs on global health, conservation and international development. Dr. Daszak's research has been instrumental in identifying and predicting the origins and impact of emerging diseases across the globe. This includes identifying the bat origin of SARS, the drivers of Nipah virus emergence, publishing the first global emerging disease 'hotspots' map, discovering SADS coronavirus, designing a strategy to identify the number of unknown viruses in wildlife, launching the Global Virome Project, identifying the first case of a species extinction due to disease, and discovering the disease chytridiomycosis as the cause global amphibian declines. He is one of the founders of the field of Conservation Medicine and has been instrumental in the growth of EcoHealth, One Health, and now Planetary Health.

A fundamental part of the Dr. Daszak's work on disease ecology is directed by the conviction that disease outbreaks are not just predictable, but preventable. This approach is informed by a perspective on emerging infectious disease research that sees problems of human and animal disease as intimately linked – exacerbated by ecological change. With this in mind, he led the researcher that produced the first ever global emerging disease 'hotspots' map to determine where in the world viruses with pandemic potential are most likely to emerge, and developed a strategy to identify just how many of those viruses currently exist.

Dr. Daszak is a member of the National Academy of Medicine and Chair of the NASEM's Forum on Microbial Threats. He is a member of the NRC Advisory Committee to the US

NIH Grants ? Many !

GrantToMe

Source - [HW0021][GDrive]

Daszak, Peter
Ecohealth Alliance, Inc., New York, NY, United States

Understanding the Risk of Bat Coronavirus Emergence Novel zoonotic, bat-origin CoVs are a significant threat to global health and food security, as the cause of SARS in China in 2002, the ongoing outbreak of MERS, and of a newly emerged Swine Acute Diarrhea Syndrome in China. In a previous R01 we found that bats in southern China harbor an extraordinary diversity of SARSr-CoVs, some of which can use human ACE2 to enter cells, infect humanized mouse models causing SARS-like illness, and evade available therapies or vaccines. We found that people living close to bat habitats are the primary risk groups for spillover, that at one site diverse SARSr-CoVs exist that contain every genetic element of the SARS-CoV genome, and identified serological evidence of human exposure among people living nearby. These findings have led to 18 published peer-reviewed papers, including two papers in Nature, and a review in Cell. Yet salient questions remain on the origin, diversity, capacity to cause illness, and risk of spillover of these viruses. In this R01 renewal we will address these issues through 3 specific aims:

Aim 1. Characterize the diversity and distribution of high spillover-risk SARSr-CoVs in bats in southern China. We will use phylogeographic and viral discovery curve analyses to target additional bat sample collection and molecular CoV screening to fill in gaps in our previous sampling and fully characterize natural SARSr-CoV diversity in southern China. We will sequence receptor binding domains (spike proteins) to identify viruses with the highest potential for spillover which we will include in our experimental investigations (Aim 3).

Aim 2. Community, and clinic-based syndromic, surveillance to capture SARSr-CoV spillover, routes of exposure and potential public health consequences. We will conduct biological-behavioral surveillance in high-risk populations, with known bat contact, in community and clinical settings to 1) identify risk factors for serological and PCR evidence of bat SARSr-CoVs; & 2) assess possible health effects of SARSr-CoVs infection in people. We will analyze bat-CoV serology against human-wildlife contact and exposure data to quantify risk factors and health impacts of SARSr-CoV spillover.

Aim 3. In vitro and in vivo characterization of SARSr-CoV spillover risk, coupled with spatial and phylogenetic analyses to identify the regions and viruses of public health concern. We will use S protein sequence data, infectious clone technology, in vitro and in vivo infection experiments and analysis of receptor binding to test the hypothesis that % divergence thresholds in S protein sequences predict spillover potential. We will combine these data with bat host distribution, viral diversity and phylogeny, human survey of risk behaviors and illness, and serology to identify SARSr-CoV spillover risk hotspots across southern China. Together these data and analyses will be critical for the future development of public health interventions and enhanced surveillance to prevent the re-emergence of SARS or the emergence of a novel SARSr-CoV.

Public Health Relevance

Daszak, Peter Renewal: Understanding the Risk of Bat Coronavirus Emergence Project Narrative Most emerging human viruses come from wildlife, and these represent a significant threat to public health and biosecurity in the US and globally, as was demonstrated by the SARS coronavirus pandemic of 2002-03. This project seeks to understand what factors allow coronaviruses, including close relatives to SARS, to evolve and jump into the human population by studying viral diversity in their animal reservoirs (bats), surveying people that live in high-risk communities in China for evidence of bat-coronavirus infection, and conducting laboratory experiments to analyze and predict which newly-discovered viruses pose the greatest threat to human health.

Funding Agency

Agency	National Institute of Health (NIH)	Project Start	2014-06-01
Institute	National Institute of Allergy and Infectious Diseases (NIAID)	Project End	2024-06-30
Type	Research Project (R01)	Budget Start	2019-07-24
Project #	2R01AI110964-06	Budget End	2020-06-30
Application #	9819304	Support Year	6
Study Section	Clinical Research and Field Studies of Infectious Diseases Study Section (CRFS)	Fiscal Year	2019
		Total Cost	
		Indirect Cost	
Program Officer	Stemmy, Erik J		

Institution

Name	Ecohealth Alliance, Inc.	City	New York
Department		State	NY
Type		Country	United States
DUNS #	077090066	Zip Code	10001

Related projects

NIH 2019 R01 AI	Understanding the Risk of Bat Coronavirus Emergence Daszak, Peter / Ecohealth Alliance, Inc.	
NIH 2018 R01 AI	Understanding the Risk of Bat Coronavirus Emergence Daszak, Peter / Ecohealth Alliance, Inc.	
NIH 2017 R01 AI	Understanding the Risk of Bat Coronavirus Emergence Daszak, Peter / Ecohealth Alliance, Inc.	$597,112
NIH 2016 R01 AI	Understanding the Risk of Bat Coronavirus Emergence Daszak, Peter / Ecohealth Alliance, Inc.	
NIH 2015 R01 AI	Understanding the Risk of Bat Coronavirus Emergence Daszak, Peter / Ecohealth Alliance, Inc.	$630,445
NIH 2014 R01 AI	Understanding the Risk of Bat Coronavirus Emergence Daszak, Peter / Ecohealth Alliance, Inc.	$666,442

[HW0022][GDrive]

Publications

Luo, Chu-Ming; Wang, Ning; Yang, Xing-Lou et al. (2018) Discovery of Novel Bat Coronaviruses in South China That Use the Same Receptor as Middle East Respiratory Syndrome Coronavirus. J Virol 92:

Luo, Yun; Li, Bei; Jiang, Ren-Di et al. (2018) Longitudinal Surveillance of Betacoronaviruses in Fruit Bats in Yunnan Province, China During 2009-2016. Virol Sin 33:87-95

Zhou, Peng; Fan, Hang; Lan, Tian et al. (2018) Fatal swine acute diarrhoea syndrome caused by an HKU2-related coronavirus of bat origin. Nature 556:255-258

Wu, Zhiqiang; Lu, Liang; Du, Jiang et al. (2018) Comparative analysis of rodent and small mammal viromes to better understand the wildlife origin of emerging infectious diseases. Microbiome 6:178

Wang, Ning; Li, Shi-Yue; Yang, Xing-Lou et al. (2018) Serological Evidence of Bat SARS-Related Coronavirus Infection in Humans, China. Virol Sin 33:104-107

Eskew, Evan A; Olival, Kevin J (2018) De-urbanization and Zoonotic Disease Risk. Ecohealth 15:707-712

Field, Hume Ernest (2018) Evidence of Australian bat lyssavirus infection in diverse Australian bat taxa. Zoonoses Public Health :

Hu, Ben; Zeng, Lei-Ping; Yang, Xing-Lou et al. (2017) Discovery of a rich gene pool of bat SARS-related coronaviruses provides new insights into the origin of SARS coronavirus. PLoS Pathog 13:e1006698

Olival, Kevin J; Hosseini, Parviez R; Zambrana-Torrelio, Carlos et al. (2017) Host and viral traits predict zoonotic spillover from mammals. Nature 546:646-650

Olival, Kevin J; Willoughby, Anna R (2017) Prioritizing the 'Dormant' Flaviviruses. Ecohealth 14:1-2

Showing the most recent 10 out of 17 publications

[HW0023][GDrive]

Has worked with people at Wuhan - See saved wikipedia at [HK001M][GDrive]

2 call outs -

- Li, Wendong; Shi, Zhengli; Yu, Meng; Ren, Wuze; Smith, Craig; Epstein, Jonathan H; Wang, Hanzhong; Crameri, Gary; Hu, Zhihong; Zhang, Huajun; Zhang, Jianhong; McEachern, Jennifer; Field, Hume; Daszak, Peter; Eaton, Bryan T; Zhang, Shuyi; Wang, Lin-Fa (28 October 2005). "Bats Are Natural Reservoirs of SARS-Like Coronaviruses". *Science*. **310** (5748): 676–679. Bibcode:2005Sci...310..676L. doi:10.1126/science.1118391. PMID 16195424.
- Drosten, C.; Hu, B.; Zeng, L.-P.; Yang, X.-L.; Ge, Xing-Yi; Zhang, Wei; Li, Bei; Xie, J.-Z.; Shen, X.-R.; Zhang, Yun-Zhi; Wang, N.; Luo, D.-S.; Zheng, X.-S.; Wang, M.-N.; Daszak, P.; Wang, L.-F.; Cui, J.; Shi, Z.-L. (2017). "Discovery of a rich gene pool of bat SARS-related coronaviruses provides new insights into the origin of SARS coronavirus". *PLOS Pathogens*. **13**(11): e1006698. doi:10.1371/journal.ppat.1006698.

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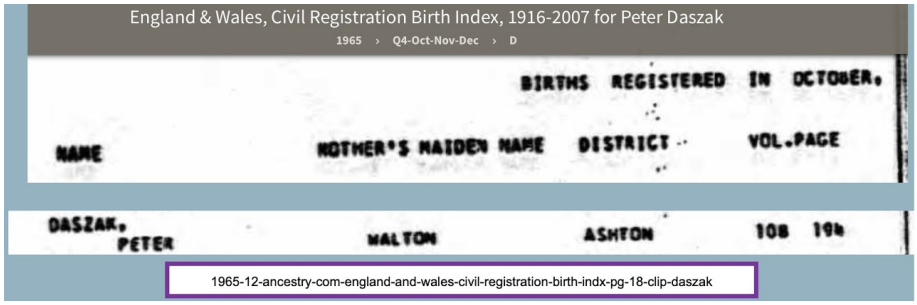
http://www.cell-symposia.com/emerging-viruses-2017/conference-speakers.asp

- **Keynote Speaker :** Anthony S. Fauci, NIAID, USA
- **Special Guest Speaker :** Richard Preston , Author of the best seller 'The Hot Zone'
- **Speakers**
  - Dan Barouch, Ragon Institute of MGH, MIT and Harvard, USA
  - Sara Cherry, University of Pennsylvania, USA
  - James Crowe, Vanderbilt University School of Medicine, USA
  - Peter Daszak, EcoHealth Alliance, USA
  - Michael Diamond, Washington University School of Medicine at St. Louis, USA
  - George Fu Gao, Chinese Center for Disease Control and Prevention, China (Co-Organizer)
  - Adolfo Garcia-Sastre, Mount Sinai School of Medicine, USA
  - Akiko Iwasaki, Yale University, USA (Co-Organizer)
  - Yoshihiro Kawaoka, University of Wisconsin-Madison, USA
  - Sheemei Lok, Duke-NUS Medical School, Singapore
  - Luciano Moreira, Centro de Pesquisas René Rachou, Brazil
  - Johan Neyts, KU Leuven, Belgium
  - Erica Ollmann Saphire, The Scripps Research Institute, USA
  - Gustavo Palacios, USAMRIID Center for Genomic Sciences, USA
  - Zhengli Shi, Wuhan Institute of Virology, China
  - Nancy Sullivan, NIAID, USA
  - Linfa Wang, Duke-NUS Medical School, Singapore

Evidence Timeline

1965 - Born

Full page from England & Wales, Civil Registration Birth Index 1916-2007 (1965 - Q4-Oct-Nov-Dec) [HL0042][GDrive]



[HL0043][GDrive]

1991 research - "Ultrastructural studies of the effects of the ionophore lasalocid onEimeria tenella in chickens" (P. Daszak, S. J. Ball, R. M. Pittilo & C. C. Norton)

Parasitology Research volume 77, pages224–229(1991)Cite this article

https://link.springer.com/article/10.1007%2FBF00930862

Abstract : The ultrastructural development ofEimeria tenella was studied in experimentally infected chicks fed 90 ppm lasalocid, an ionophorous anticoccidial antibiotic. Drug treatment was timed to target-specific endogenous stages. At 6 h after infection, many sporozoites within the epithelium showed degradation as a result of drug action. Only a few intact sporozoites were seen. The drug caused outer-membrane blistering, large surface swellings and enlarged mitochondria in both first-and second-generation merozoites. No effect on the gamonts was discerned.

Other early research papers : https://eprints.kingston.ac.uk/view/creators/1412.html

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1995 (August)- Research - "A Report of Intestinal Sarcocystosis in the Bullsnake (Pituophis melanoleucus sayi) and a Re-evaluation of Sarcocystis sp. from Snakes of the Genus Pituophis" - With Dr. Andrew A. Cunningham

With - **Dr. Andrew Alexander Cunningham (born 1964)** / PDF - [HP004X][GDrive]

Journal of Wildlife Diseases, 31(3), 1995, pp. 400–405
© Wildlife Disease Association 1995

A Report of Intestinal Sarcocystosis in the Bullsnake (*Pituophis melanoleucus sayi*) and a Re-evaluation of *Sarcocystis* sp. from Snakes of the Genus *Pituophis*

Peter Daszak[1] and Andrew Cunningham,[2] [1] School of Life Sciences, Kingston University, Kingston-u-Thames, Surrey KT1 2EE, United Kingdom and [2] Veterinary Science Group, Institute of Zoology, Regent's Park, London NW1 4RY, United Kingdom

ABSTRACT: We report a severe enteric infection of *Sarcocystis* sp. from a wild-caught bullsnake (*Pituophis melanoleucus sayi*). The animal was collected in October 1988 by a commercial dealer, imported into the United Kingdom during November 1988 and purchased by the London Zoo, in December 1988. The animal was not fed after capture and was anorexic from the time of purchase to the time of death in January 1989. On necropsy, the animal was emaciated and the mucosa of the proximal intestine was markedly thickened. The lamina propria was packed with oocysts, and enterocytes were parasitized by an organism which closely resembled *Sarcocystis roudabushi* and *Sarcocystis idahoensis*, two bisporocystid coccidia described previously from *Pituophis melanoleucus*. We propose that *Sarcocystis idahoensis* and *Sarcocystis roudabushi* are synonymous since both occur in the same host species, both invade the intestinal lamina propria and enterocytes, and sporocyst measurement ranges of both species overlap. This is the first report of death believed to be due to sarcocystosis in a naturally-infected definitive host.

Key words: *Pituophis melanoleucus*, *Sarcocystis*, *Isospora*, sarcocystosis, pathology, taxonomy.

Sarcocystosis is an important disease of livestock caused by the asexual developmental stages of *Sarcocystis* spp. within non-intestinal tissues of the intermediate host (Dubey et al., 1989). In the definitive host, the parasite reproduces sexually within the intestinal mucosa. Reports of intestinal sarcocystosis causing clinical signs are rare, but occasionally symptoms of vomiting, diarrhea and anorexia have been reported in humans (Bunyaratvej et al., 1982). Here we report disease associated with an enteric infection of a *Sarcocystis* sp. in a wild-caught bullsnake (*Pituophis melanoleucus sayi*).

Identification of intestinal *Sarcocystis* spp. is complicated by the similarity of their oocysts and sporocysts to those of *Isospora* spp. and *Toxoplasma* spp. However *Sarcocystis* spp. undergo merogony in the intermediate host only (Dubey et al., 1989). The presence of fully sporulated oocysts within the host (endogenous sporulation) is another distinguishing characteristic (Upton et al., 1992). Only three coccidia with *Sarcocystis* sp. or *Isospora* sp. types of oocysts have been described in snakes of the genus *Pituophis*: *Sarcocystis roudabushi* Levine and Tadros, 1980, (Roudabush, 1937; Pellerdy, 1974) *S. idahoensis* Bledsoe, 1980 and an unnamed *Sarcocystis* sp. Upton et al. 1992 (Wacha and Christiansen, 1975). All are found in subspecies of *Pituophis melanoleucus*. In this paper we describe lesions associated with a *Sarcocystis* sp. in a wild-caught bullsnake, and propose that *S. roudabushi* and *S. idahoensis* are synonymous using the criteria by which they were originally described.

An adult male bullsnake (*Pituophis melanoleucus sayi*) was captured in northern Illinois within the area 39° to 42°N, 88° to 90°W, by a Tennessee dealer in October 1988. The snake was exported to the United Kingdom within 2 wk of capture, collected immediately upon arrival by a British dealer, who then sold the snake to London Zoo in mid-December 1988. Based on all available information, we believe that the snake was not fed in the USA between capture and export. The snake was not fed during or after import into the United Kingdom on 13 December 1988; indeed the snake refused to eat following purchase by the zoo until its death on 18 January 1989. The animal had no other signs of

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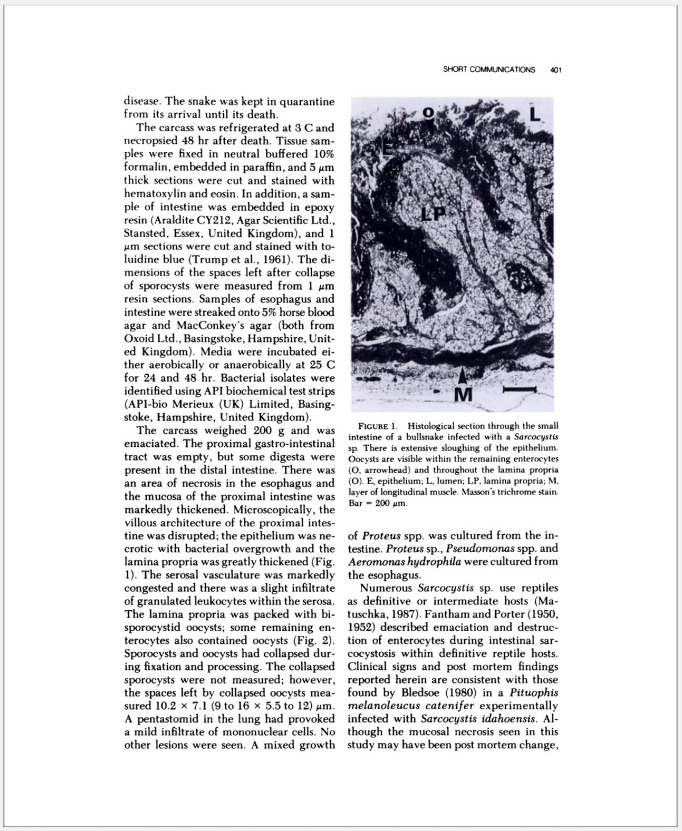


disease. The snake was kept in quarantine from its arrival until its death.

The carcass was refrigerated at 3 C and necropsied 48 hr after death. Tissue samples were fixed in neutral buffered 10% formalin, embedded in paraffin, and 5 μm thick sections were cut and stained with hematoxylin and eosin. In addition, a sample of intestine was embedded in epoxy resin (Araldite CY212, Agar Scientific Ltd., Stansted, Essex, United Kingdom), and 1 μm sections were cut and stained with toluidine blue (Trump et al., 1961). The dimensions of the spaces left after collapse of sporocysts were measured from 1 μm resin sections. Samples of esophagus and intestine were streaked onto 5% horse blood agar and MacConkey's agar (both from Oxoid Ltd., Basingstoke, Hampshire, United Kingdom). Media were incubated either aerobically or anaerobically at 25 C for 24 and 48 hr. Bacterial isolates were identified using API biochemical test strips (API-bio Merieux (UK) Limited, Basingstoke, Hampshire, United Kingdom).

The carcass weighed 200 g and was emaciated. The proximal gastro-intestinal tract was empty, but some digesta were present in the distal intestine. There was an area of necrosis in the esophagus and the mucosa of the proximal intestine was markedly thickened. Microscopically, the villous architecture of the proximal intestine was disrupted; the epithelium was necrotic with bacterial overgrowth and the lamina propria was greatly thickened (Fig. 1). The serosal vasculature was markedly congested and there was a slight infiltrate of granulated leukocytes within the serosa. The lamina propria was packed with bisporocystid oocysts; some remaining enterocytes also contained oocysts (Fig. 2). Sporocysts and oocysts had collapsed during fixation and processing. The collapsed sporocysts were not measured; however, the spaces left by collapsed oocysts measured 10.2 × 7.1 (9 to 16 × 5.5 to 12) μm. A pentastomid in the lung had provoked a mild infiltrate of mononuclear cells. No other lesions were seen. A mixed growth of *Proteus* spp. was cultured from the intestine. *Proteus* sp., *Pseudomonas* spp. and *Aeromonas hydrophila* were cultured from the esophagus.

FIGURE 1. Histological section through the small intestine of a bullsnake infected with a *Sarcocystis* sp. There is extensive sloughing of the epithelium. Oocysts are visible within the remaining enterocytes (O, arrowhead) and throughout the lamina propria (O). E, epithelium; L, lumen; LP, lamina propria; M, layer of longitudinal muscle. Masson's trichrome stain. Bar = 200 μm.

Numerous *Sarcocystis* sp. use reptiles as definitive or intermediate hosts (Matuschka, 1987). Fantham and Porter (1950, 1952) described emaciation and destruction of enterocytes during intestinal sarcocystosis within definitive reptile hosts. Clinical signs and post mortem findings reported herein are consistent with those found by Bledsoe (1980) in a *Pituophis melanoleucus catenifer* experimentally infected with *Sarcocystis idahoensis*. Although the mucosal necrosis seen in this study may have been post mortem change,

Page 401 : [HP004Z][GDrive]

1996 (Dec) - Research paper submission : "Detection and comparative analysis of persistent measles virus infection in Crohn's disease by immunogold electron microscopy."

https://www.ncbi.nlm.nih.gov/pmc/articles/PMC499879/pdf/jclinpath00253-0035.pdf / 1997-ncbi-nim-nih-gov-pmc-articles-downloads-jclinpath00253-0035.pdf

J Clin Pathol. 1997 Apr; 50(4): 299–304.

doi: 10.1136/jcp.50.4.299

PMCID: PMC499879

PMID: 9215145

- P Daszak
- M Purcell,
- J Lewin
- A P Dhillon
- R E Pounder
- A J Wakefield (NOTE : **Dr. Andrew Jeremy Wakefield (born 1957)**)
  - https://news.yahoo.com/andrew-wakefield-appearance-trump-inaugural-161120348.html
  - **https://discovery.ucl.ac.uk/id/eprint/1317857/1/287978.pdf**
  - **"Epidemiology. Several studies have provided epidemiological evidence for the involvement of measles virus in the aetiology of IBD, particularly Crohn's disease (Ekbom et al. 1994; Thompson et al. 1995a; Ekbom et al. 1996). Although controversial, the results ugges f these studies that early exposure to measles virus is a significant risk factor for the development of IBD. As discussed above, early exposure to measles virus and molecular mimicry, without virus persistence, may be a risk factor for the development of IBD later in life, accounting for the observed epidemiological associations"**
  - **wow - https://files.eric.ed.gov/fulltext/ED466915.pdf (AUTISM: PRESENT CHALLENGES, FUTURE NEEDS - WHY THE INCREASED RATES?**
  - **HEARING BEFORE THE COMMITTEE ON GOVERNMENT REFORM HOUSE OF REPRESENTATIVES**
  - **ONE HUNDRED SIXTH CONGRESS, SECOND SESSION**
  - **APRIL 6, 2000)**
  - **COMMITTEE ON GOVERNMENT REFORM DAN BURTON, Indiana, Chairman**
  - **"Based on the previous material that I have seen, and on the opinions of experts present at the MRC meeting, I have concluded that there is no link between measles, measles vaccine or MMR immunisation, Crohn's Disease, and ASD. Together with others at the meeting, I was not liktonvinced that any of the studies support --suggestions that measles or MMR vaccines are implicated in Crohn's Disease or in autism."**
  - **https://scienceblogs.com/insolence/2012/01/11/the-antivaccine-crankosphere-rallies-aro**
  - **https://issuu.com/wakefieldjusticefund/docs/4_5_12_exhs_1-5**

Abstract

AIMS: To determine the specificity of persistent measles virus infection in intestinal samples from Crohn's disease patients using quantitative immunogold electron microscopy. To compare the results with samples from ulcerative colitis, a granulomatous inflammatory control (tuberculous lymphadenitis), and a positive control. METHODS: Formalin fixed, paraffin embedded intestinal tissue from patients with Crohn's disease was reprocessed and stained with antimeasles nucleocaspid protein primary antibody followed by 10 nm gold conjugated secondary antibody. Tissue samples were taken from granulomatous and non-granulomatous areas of the intestine. Intestinal samples from patients with ulcerative colitis, tuberculous lymphadenitis, or acute mesenteric ischaemia were similarly processed. Brain tissue from a patient with subacute sclerosing panencephalitis (SSPE) was used as the positive control. Duplicate sections of all tissues were processed without the primary antibody. Stained specimens were examined by electron microscopy. RESULTS: In Crohn's disease patients, 8/9 foci of granulomatous inflammation and 0/4 foci of non-specific inflammation were positive for measles virus. Of controls, 0/5 non-inflamed intestinal tissues, 1/8 tuberculous tissues, 1/5 ulcerative colitis tissues, and 1/1 SSPE tissues were positive. Gold grain counts per nuclear field-of-view in both Crohn's disease granulomas (43.29) and SSPE (36.94) were significantly higher than in tissues from patients with ulcerative colitis (13.52) or tuberculous lymphadenitis (15.875), and nongranulomatous areas of Crohn's disease (4.89) ($p < 0.001$, $p < 0.001$, $p = 0.0006$, respectively), with no significant difference between Crohn's disease and SSPE ($p > 0.1$). In both SSPE and Crohn's disease staining was confined to a small population of cells exhibiting characteristic cytopathology. CONCLUSION: These data support a role for measles virus in the aetiology of Crohn's disease.

1998 (June 28) - NYTimes - "Newly Found Fungus Is Tied To Vanishing Species of Frog"

By Carol Kaesuk Yoon / [HN01HX][GDrive]

A newly discovered fungus appears to be the cause of an epidemic among amphibians that is killing off frogs and toads of a wide variety of declining species in rain forests in Australia and Central America, according to a new report by an international team of researchers. Scientists say the new study may help solve the mystery of why amphibians are vanishing around the world, often from pristine, isolated habitats.

Nineteen species of frogs, researchers report, are succumbing to a newly discovered fungus called a chytrid, a type of fungus known previously to live only on decaying matter and insects. Researchers say it remains to be seen how and why the fungus is killing frogs in such large numbers over such a wide area, as well as whether the fungus is doing its deadly work in areas other than Central America and Australia.

The research is described in a report to appear in next month's issue of the Proceedings of the National Academy of Sciences. The mystery of the vanishing amphibians has been plaguing scientists for a decade, ever since they began noticing that frogs were disappearing. At various times, researchers have proposed ultraviolet light, pollution and disease as the villains, but scientists lacked direct evidence that any of these factors was causing large, widespread declines.

Searching the tissues of dead frogs, biologists on the new study say, they found fungi as the clear culprit. When researchers scraped fungi off the skin of the dead frogs and infected the water of healthy frogs, within a couple of weeks all the exposed frogs were dead or dying. But while researchers described the new study as convincing, they noted that skin scrapes were not pure samples of fungus. To be sure that the fungus alone is killing the frogs, researchers must await the results of a last crucial test.

Dr. Joyce Longcore, chytrid fungal specialist at the University of Maine at Orono, said that she had grown a pure culture of the fungus and that she and colleagues at the National Zoo were in the process of doing the experiment find out whether the pure fungus can kill frogs.

Researchers say the new fungus is unlikely to be related to the limb deformities in Minnesota frogs.

The report that will appear next month provides a long-awaited answer for scientists, who had been mystified by the increasing reports of large numbers of dead frogs in rain forests in Central and South America and Australia. Quickly eaten by scavengers, wild frog cadavers are a rare sight, with biologists typically seeing no more than two or three in the wild in a lifetime. The numbers were "just stunning," said Dr. David Wake, amphibian biologist at the University of California at Berkeley. "When you find carcasses in a rain forest, you know you're only finding a tiny fragment of the number really there."

Researchers still do not know exactly how the fungus kills so many frogs, but say they suspect it is by suffocation. Frogs breathe not only through their lungs, but also by absorbing oxygen through their moist skin. As the fungus grows in the skin of frogs, the skin appears to grow more layers, making it more difficult for the frog to absorb oxygen.

While biologists say they are confident that the newly discovered fungus is the immediate cause of the death of these frogs, it is unclear whether the frogs were already weakened by other factors and so more susceptible. Researchers are now studying air, water and other samples from regions where the frogs died in a search for such factors.

Researchers agree that other factors are certainly at play in the amphibian deaths around the globe. For example, Dr. Wake said it was very likely that chemical contamination was involved in California and that ultraviolet light was a factor in Oregon.

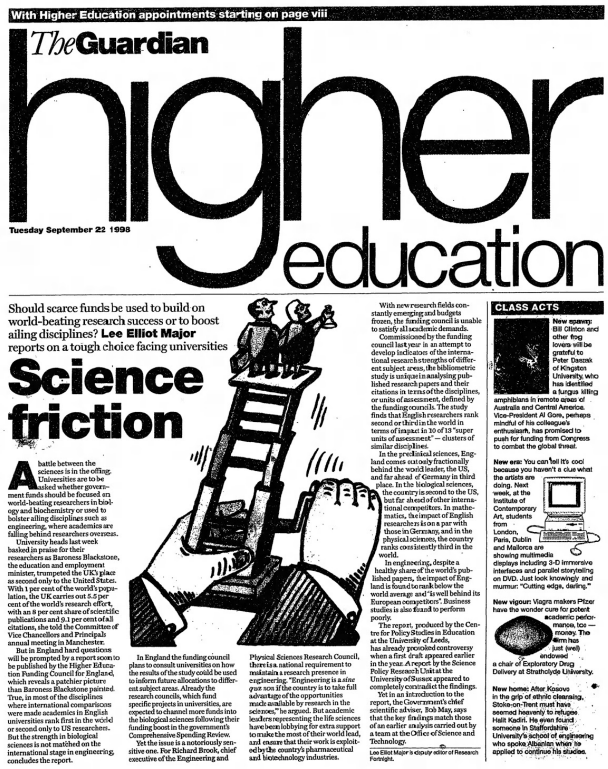
"Nobody thinks there's a single answer to this problem," Dr. Wake said.

Researchers do not know why the fungal disease is emerging now. Dr. D. Earl Green, a veterinary pathologist who worked on the project at the Maryland Animal Health Laboratory, said the new fungus had been seen in healthy frogs from Maryland and Illinois, suggesting that the disease may be from more northern climes and made its way to the tropics recently, perhaps on the boot of a tourist or the net of a biologist. Once there, it might easily attack populations that had never been exposed to it before. Alternatively, the disease may have been around for years and is only now able to ravage populations weakened by other factors.

''It's one thing to go and look for frogs and say they're gone, but what we needed were the bodies to work on,'' said Dr. Peter Daszak, parasitologist at Kingston University in England and an author of the report. Now, with all the carcasses at their disposal, he said, ''at last we seem to be getting somewhere.''

1998 (September 22) - Bill Clinton and Al Gore may have known about Peter Daszak ?

Note - Gore and Daszak were both referenced in 2020 article - https://www.newsmax.com/us/al-gore-wildlife-pandemic-virus/2020/04/11/id/962439/



With Higher Education appointments starting on page viii

The Guardian

higher education

Tuesday September 22 1998

Should scarce funds be used to build on world-beating research success or to boost ailing disciplines? **Lee Elliot Major** reports on a tough choice facing universities

Science friction

A battle between the sciences is in the offing. Universities are to be asked whether government funds should be focused on world-beating researchers in biology and biochemistry or used to bolster ailing disciplines such as engineering, where academics are falling behind researchers overseas.

University heads last week basked in praise for their researchers as Baroness Blackstone, the education and employment minister, trumpeted the UK's place as second only to the United States. With 1 per cent of the world's population, the UK carries out 5.5 per cent of the world's research effort, with an 8 per cent share of scientific publications and 9.1 per cent of all citations, she told the Committee of Vice Chancellors and Principals annual meeting in Manchester.

But in England hard questions will be prompted by a report soon to be published by the Higher Education Funding Council for England, which reveals a patchier picture than Baroness Blackstone painted. True, in most of the disciplines where international comparisons were made academics in English universities rank first in the world or second only to US researchers. But the strength in biological sciences is not matched on the international stage in engineering, concludes the report.

In England the funding council plans to consult universities on how the results of the study could be used to inform future allocations to different subject areas. Already the research councils, which fund specific projects in universities, are expected to channel more funds into the biological sciences following their funding boost in the government's Comprehensive Spending Review.

Yet the issue is a notoriously sensitive one. Sir Richard Brook, chief executive of the Engineering and Physical Sciences Research Council, thinks it a national requirement to maintain a research presence in engineering. "Engineering is a sine qua non if the country is to take full advantage of the opportunities made available by research in the sciences," he argued. But academic leaders representing the life sciences have been lobbying for extra support to make the most of their world lead, and ensure that their work is exploited by the country's pharmaceutical and biotechnology industries.

With new research fields constantly emerging and budgets frozen, the funding council is unable to satisfy all academic demands.

Commissioned by the funding council last year in an attempt to develop indicators of the international research strengths of different subject areas, the bibliometric study is unique in analysing published research papers and their citations in terms of the disciplines, or units of assessment, defined by the funding councils. The study finds that English researchers rank second or third in the world in terms of impact in 10 of 13 "super units of assessment" – clusters of similar disciplines.

In the medical sciences, England comes out only fractionally behind the world leader, the US, and far ahead of Germany in third place. In the biological sciences, the country is second to the US, but far ahead of other international competitors. In mathematics, the impact of English researchers is on a par with those in Germany, and in the physical sciences, the country ranks consistently third in the world.

In engineering, despite a healthy share of the world's published papers, the impact of England is found to rank below the world average and "is well behind its European competitors". Business studies is also found to perform poorly.

The report, produced by the Centre for Policy Studies in Education at the University of Leeds, has already provoked controversy when a first draft appeared earlier in the year. A report by the Science Policy Research Unit at the University of Sussex appeared to completely contradict the findings.

Yet in an introduction to the report, the Government's chief scientific adviser, Rob May, says that the key findings match those of an earlier analysis carried out by a team at the Office of Science and Technology.

Lee Elliot Major is deputy editor of Research Fortnight.

CLASS ACTS

New spawn: Bill Clinton and other frog lovers will be grateful to Peter Daszak of Kingston University, who has identified a fungus killing amphibians in remote areas of Australia and Central America. Vice-President Al Gore, perhaps mindful of his colleague's enthusiasm, has promised to push for funding from Congress to combat the global threat.

New era: You can't tell it's cool because you haven't a clue what the artists are doing. Next week, at the Institute of Contemporary Art, students from London, Paris, Dublin and Mallorca are showing multimedia displays including 3-D immersive interfaces and parallel storytelling on DVD. Just look knowingly and murmur: "Cutting edge, darling."

New vigour: Viagra makers Pfizer have the wonder cure for potent academic performance, too — money. The firm has just (we) endowed a chair of Exploratory Drug Delivery at Strathclyde University.

New home: After Kosovo is in the grip of ethnic cleansing, Stoke-on-Trent must have seemed heavenly to refugee Halit Kadiri. He even found someone in Staffordshire University's school of engineering who spoke Albanian when he applied to continue his studies.

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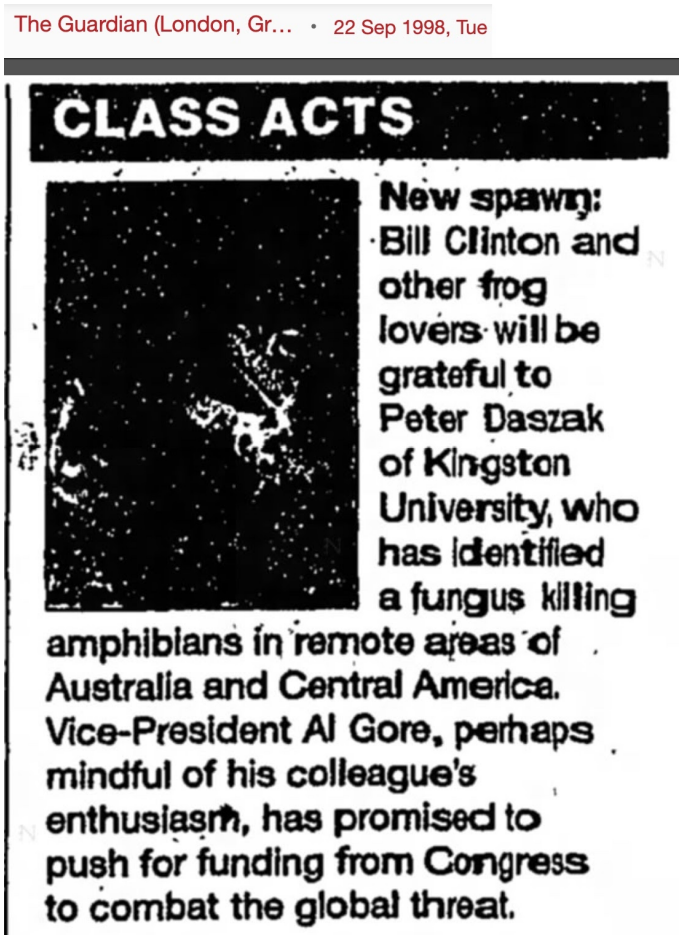

The Guardian (London, Gr... • 22 Sep 1998, Tue

CLASS ACTS

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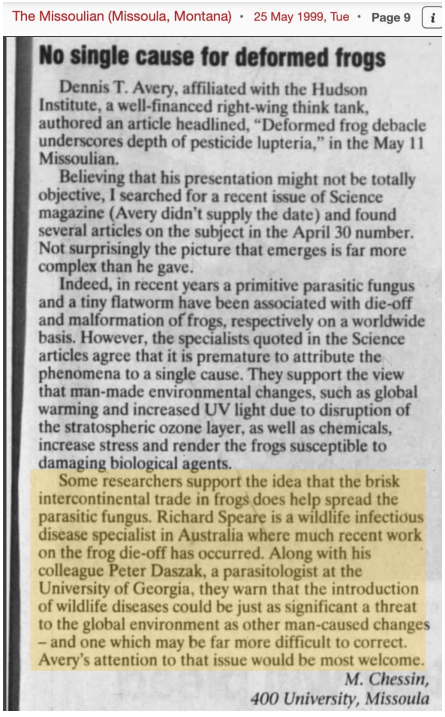
1999 (May 25) - Now a "parasitologist" at the University of Georgia

Full newspaper page : [HN01I0][GDrive]



The Missoulian (Missoula, Montana) • 25 May 1999, Tue • Page 9

No single cause for deformed frogs

Dennis T. Avery, affiliated with the Hudson Institute, a well-financed right-wing think tank, authored an article headlined, "Deformed frog debacle underscores depth of pesticide lupteria," in the May 11 Missoulian.

Believing that his presentation might not be totally objective, I searched for a recent issue of Science magazine (Avery didn't supply the date) and found several articles on the subject in the April 30 number. Not surprisingly the picture that emerges is far more complex than he gave.

Indeed, in recent years a primitive parasitic fungus and a tiny flatworm have been associated with die-off and malformation of frogs, respectively on a worldwide basis. However, the specialists quoted in the Science articles agree that it is premature to attribute the phenomena to a single cause. They support the view that man-made environmental changes, such as global warming and increased UV light due to disruption of the stratospheric ozone layer, as well as chemicals, increase stress and render the frogs susceptible to damaging biological agents.

Some researchers support the idea that the brisk intercontinental trade in frogs does help spread the parasitic fungus. Richard Speare is a wildlife infectious disease specialist in Australia where much recent work on the frog die-off has occurred. Along with his colleague Peter Daszak, a parasitologist at the University of Georgia, they warn that the introduction of wildlife diseases could be just as significant a threat to the global environment as other man-caused changes – and one which may be far more difficult to correct. Avery's attention to that issue would be most welcome.

M. Chessin,
400 University, Missoula

[HN01I1][GDrive]

2000 (Jan 21)

Jan 2000 - https://www.newspapers.com/image/339565199/?terms=daszak

2000-01-21-the-daily-dispatch-moline-illinois-pg-a-5

2000-01-21-the-daily-dispatch-moline-illinois-pg-a-5-clip-disease

NATION / WORLD

Disease on the rise among wildlife

WASHINGTON (AP) — While concern about newly evolving diseases has focused on humans, scientists warn that wildlife face the same threats as animals are forced into more crowded conditions and moved to new locations.

The causes of emerging diseases in animals are the same as for humans, explained Peter Daszak of the University of Georgia. "Basically, it's the globalization of the planet, things are taken abroad from one country to another and you spread diseases that way as well.

"We call it pathogen pollution," said Daszak, lead author of a paper appearing in today's edition of the journal Science.

Emerging infectious diseases can cause local extinctions among wild animals and in some cases even lead to total extinction of a species, he said.

"We need to take this issue seriously, especially if we are to take biodiversity seriously," Daszak said in a telephone interview.

He urged scientific research on the emerging diseases and social efforts to prevent their spread. He mentioned legislation to try to prevent the importation of diseases that affect wild animals; such steps now are taken to block foot and mouth disease, rabies and other diseases.

Emerging infectious diseases among wildlife not only threaten the future of the animals but also may form a reservoir of germs that could harm people and domestic animals, his team warns.

This kind of transmission may have been a factor in the emergence of the virus that causes AIDS as well as the newer Marburg and Ebola viruses, the paper notes.

The international transport of livestock and current agricultural practices have helped spread rinderpest in Africa and mad cow disease in Europe, for example.

'We need to take this issue seriously, especially if we are to take biodiversity seriously.'

Peter Daszak, author

Even the seemingly most innocent act can pose problems.

"Recent analysis suggests that 15,000 tons of peanuts are fed annually to United Kingdom garden birds. This form of provisioning has led to the emergence of infection by salmonella and E coli in Britain ... because of the high density and diversity of birds at feeding stations," the scientists reported. Similar reports have occurred in the United States.

As humans encroach on animal territory diseases can move back and forth between domestic and wild animals.

The paper notes that wild dogs became extinct in Africa's Serengeti in 1991, at the time canine distemper was raging among domestic dogs in the region.

2000 (Aug 11)

Chickens first line of defense against West Nile virus

CHRISTOPHER A. RECORD / Associated Press
In Charlotte, Mark O'Donoghue holds a chicken that serves as one of the South's virus monitors.

By M.A.J. McKenna
mmckenna@ajc.com

Hendersonville, N.C. — The best defense against West Nile virus, the Third World pathogen that has unexpectedly invaded the East Coast, sits in a swampy corner of a county park in the heart of North Carolina's apple country.

And clucks.

Five white chickens brood in an improvised battery cage perched 4 feet off the ground to protect them against predators. Every day, Henderson County engineer Jerry Robinson feeds and waters thems and collects their eggs. Every two weeks, he draws a tablespoon of blood from a vein beneath one wing. Back at the county health department, the blood is centrifuged and refrigerated, then shipped to a lab in Raleigh to check whether the birds are infected.

The African virus that in 12 months has killed seven people, sickened 56 and killed thousands of wild birds from Massachusetts to Maryland — and for which there is no vaccine — has not yet turned up in Henderson County's chickens, nor in 57 other "sentinel flocks" across the state.

But health officials in North Carolina — and in Georgia and other states that are watching North Carolina for the first signs of virus in the South — don't expect that to last.

"West Nile virus will probably reach North Carolina late this year," said Dr. Nolan Newton of North Carolina's Department of Environment and Natural Resources. "If not, we will see it next summer."

West Nile virus is this summer's scary disease. Like hantavirus in 1993, Ebola in 1995 and the Hong Kong avian influenza in 1997 — and a new rodent-borne virus, announced Thursday, that appears to have killed three women in California — it is a reminder of how easily pathogens that infect animals can leap across species and take humans by surprise.

Among public health experts, though, it is a reminder of a second phenomenon as well: the frequency with which infectious diseases that once were thought confined to the Third World are menacing developed countries, too.

"West Nile virus shows us that new diseases can emerge at any time, unexpectedly," said Dr. Peter Daszak of the University of Georgia, a specialist in diseases of wildlife. "It is a sign of our globalized planet, with humans, animals and their products being transported internationally at an unprecedented rate."

The discovery last summer that

➤ PLEASE SEE Virus, E2

Full page : [HN01HG][GDrive] / Clip : [HN01HH][GDrive]

Virus: Chickens guard South

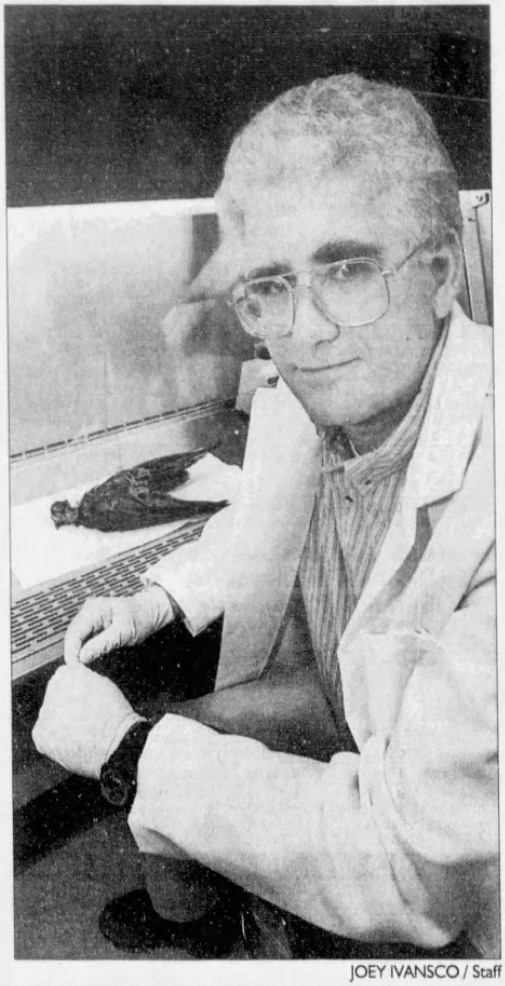
➤ Continued from E1

West Nile had arrived in New York, coupled with confirmation this month that the virus is circulating in at least three other states — New Jersey, Connecticut and Massachusetts — has triggered an extraordinary national effort to track the microbe. Led by the Centers for Disease Control and Prevention, the initiative has enlisted health departments in 17 at-risk states, including Georgia, which are collaborating to detect the disease as it migrates across borders.

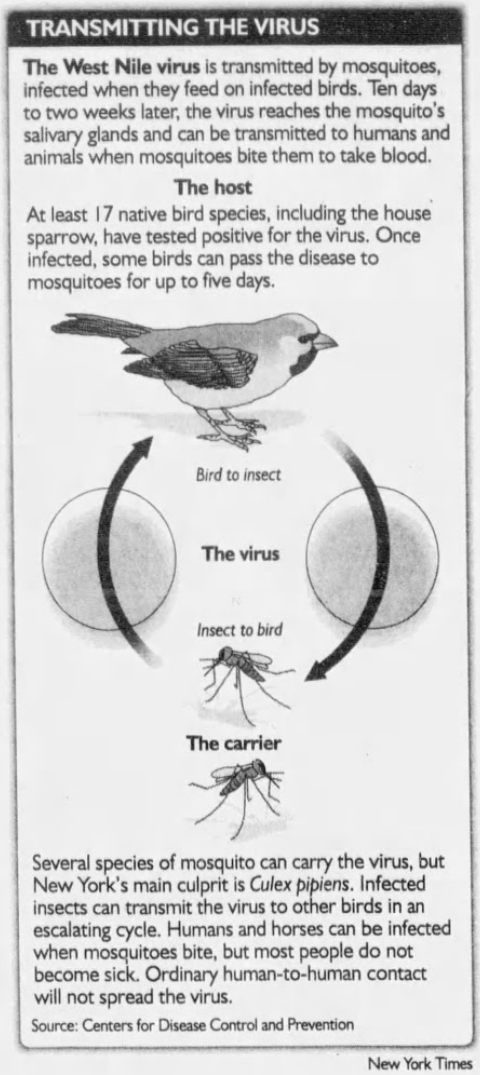
Like their counterparts in North Carolina, Georgia public health officials expect that West Nile virus will be detected here sometime in the coming months. Meanwhile, they are dealing with other insect-borne diseases that are less familiar to the public, pose potentially higher risks of illness and death, and — like West Nile — represent troubling new trends in infectious diseases.

"There is cause for awareness of West Nile virus," said Dr. Cathy Rebmann, head of Georgia's West Nile detection effort for the Division of Public Health, "but not for panic over it."

Humans acquire West Nile from mosquitoes, which transmit it from birds. Some bird species, such as chickens, can be infected without showing signs of illness: North Carolina's chicken flocks are the above-ground equivalent of canaries in a coal mine.



JOEY IVANSCO / Staff
This year in Georgia, blood samples from more than 1,000 geese, crows, pigeons and boat-tailed grackles have been analyzed, microbiologist David Stallknecht says, and none has shown signs of the West Nile virus.



New York Times

Wild birds also analyzed

Georgia maintains one sentinel-chicken flock, part of the Chatham County mosquito control program in Savannah. At the moment, detection in the rest of the state depends on analyses of dead and living wild birds performed by an independent agency in Athens, the Southeast Cooperative Wildlife Disease Study, funded by governments of South-

mosquitoes. When the birds land to rest or feed, they could be bitten by local mosquitoes, which would then transmit the virus to other birds and on to humans. So many migrating birds cross the Southeast that a new CDC study suggests South Georgia could actually become a significant site for the virus: The coastal plains of Georgia, northern Florida and

if not detected early. Since 1996, two Georgia residents were infected with malaria without leaving the state; until recently, public health authorities believed the disease had been eliminated from the United States.

There have also been two fatal cases of viral encephalitis, transmitted by mosquitoes, in North Carolina this summer, one not far

1.7 times by 2020.

Despite alarm over West Nile and other unrecognized diseases, public health experts stress that the potential for infection is largely under individuals' control. Insect-borne diseases cannot imperil humans unless the insects are given the chance to bite.

"We recognize, in public health, that people are often will-

ern states.

So far this year, the group has inspected blood samples from more than 1,000 geese, crows, pigeons and boat-tailed grackles, according to David Stallknecht, a scientist who is also assistant professor of medical microbiology at the University of Georgia College of Veterinary Medicine. None has shown signs of West Nile.

"We're also analyzing dead birds that are turned in by the public to county health departments," Stallknecht said. "We haven't had a lot of submissions so far — maybe 30, statewide — but we haven't had any virus isolations."

Public health experts predict that West Nile will arrive in Georgia in the bloodstream of migrating birds that were bitten somewhere north of here by infected

Alabama are winter habitat for some species that move through New Jersey and New York.

West Nile is the latest exotic to show up on Georgia's disease radar, but not the only one. Other insect-borne diseases already exist here or in nearby states: Eastern equine encephalitis, St. Louis encephalitis, La Crosse encephalitis, erlichiosis, Rocky Mountain spotted fever, malaria and dengue. Unlike West Nile, they have mostly not attracted public attention, though in some cases they pose a greater risk of illness or death.

So far this year, according to state statistics, there have been at least three cases of human monocytic erlichiosis and potentially 100 cases of Rocky Mountain spotted fever — two illnesses caused by ticks that can be fatal

from the Georgia border. And South Florida, along with southern Texas, is consistently recording cases of dengue, a mosquito-borne tropical disease.

Warm weather a factor

Authorities tracking the spread of emerging diseases fear the situation could get worse. Many insect-borne diseases are kept under control by the arrival of cold temperatures, because most mosquitoes don't survive winter. But the planet is warming: A study done by malaria experts at Maastricht University in the Netherlands suggests that temperate parts of the planet, including the Eastern U.S., will become friendlier environments for mosquitoes, and more vulnerable to the diseases they carry. Georgia's risk of malaria, they say, will rise

ing to take risks, for instance smoking, that they themselves can control, and unwilling to accept risks where they feel they don't have any control, such as potentially being bitten by a mosquito," said Dr. Susan Lance-Parker of the Georgia Division of Public Health. "So I try to encourage people to know that the diseases are out there, that their chances of contracting them are small, and that there are things they can do to lower the risk further.

"They should put screens on their windows . . . cover themselves when they go outside if they can and use repellents if that is not possible. And they should try to avoid being outside for extended periods during the time when the disease-bearing mosquitos are most likely to bite."

Full page : [HN01HI][GDrive] / Clip : [HN01HJ][GDrive]

2000 (Nov 29)

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2000-11-29-citizens-voice-wilkes-barre-pa-pg-52-clip-wildlife.jpg

Contact with people making some wild animals sick

By Joan Lowy
Scripps Howard News Service

From seals in Europe suffering from flu to mountain gorillas in Africa laid low by measles, too much contact with people may be making wild animals sick.

While the threat to human health from diseases like AIDS and Ebola — which appear to have originated with wild animals — has garnered international attention, conservationists are increasingly concerned about the less well-known problem of people transmitting diseases to wild animals.

The problem is so acute for some animals that conservationists worry that a single epidemic could push species on the brink of extinction over the edge. Particularly at risk are primates because their close biological relationship with man makes them more susceptible to human illnesses and because the increasing destruction of their habitats throughout the world has brought them into closer and closer contact with people.

Mountain gorillas have suffered outbreaks of measles, while neighboring lowland gorillas have contracted yaws, a severely disfiguring skin disease historically found among some peoples native to Africa.

Chimpanzees have experienced polio outbreaks and annual outbreaks of respiratory ailments that look suspiciously like the flu. Orangutans captured in Borneo and Sumatra have contracted human malaria and tuberculosis.

Even some non-primate species may have been affected. Earlier this year, researchers at the University of Rotterdam reported discovering the influenza B virus — previously thought to have been strictly a human ailment — in seals washed up on the coast of the Netherlands. They estimated that from 0.5 percent to 2 percent of seals in the region were infected.

The strain found in seals was very closely related to an influenza B outbreak that swept through humans in Europe a few years ago, the researchers said.

Scientists call the problem "pathogen pollution," and they suspect it is far more widespread than previously thought.

"This is the thin end of the wedge," said Peter Daszak, a parasitologist with the University of Georgia who has examined the problem. "There is a lot more out there that we just haven't yet found out.

"I'm sure that over the next few years we will find more cases of human diseases or diseases that are present in our community with domestic animals that are spreading to wildlife. It's a huge problem."

The issue brings into question whether some of the people working the hardest to protect endangered species are inadvertently harming them as well. Scientists who study animals in the wild bring germs with them. Governments that promote ecotourism as an economic alternative to hunting and habitat destruction help bring historically isolated animals in contact with people from all over the world. Conservationists who care for endangered animals that have been illegally captured and try to return them to the wild may be sending them back to their homes harboring human or livestock disease germs.

"I think this is one of the giant sleeping issues in conservation," said Steve Osofsky, a wildlife veterinarian and director of field support for the World Wildlife Fund. "If you talk to most of the major conservation organizations, virtually none of them are routinely addressing disease issues as they plan and implement projects."

Scientists have known about the problem for a long time — naturalist Jane Goodall documented polio among chimpanzees in Gombe in Tanzania two decades ago — but only recently has there been a heightened awareness of the problem's seriousness.

"Traditionally, nobody bothered to look or nobody thought about the risk," said William Karesh, head of the field veterinarian program for the Wildlife Conservation Society. "A hundred years ago it was less significant, although it has probably led to the extinction of some species we don't know about."

Karesh headed an expedition to Africa earlier this year to gather evidence about which diseases lowland gorillas have been exposed to in the past, and which they have not.

2000-11-29-citizens-voice-wilkes-barre-pa-pg-52-clip-wildlife

2001 (April 01)

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2001-04-01-rutland-daily-herald-pg-a-5-clip-wildlife

Globalization speeds dangerous species' migration

By RICK MONTGOMERY
Knight Ridder Service

In the global economy, like it or not, mosquitoes can be big players, too.

The Asian tiger mosquito reached out to Western markets in 1985 when it jumped aboard a shipment of used tires headed to Houston. Water that had collected inside the tires provided a nice suite for the insect's journey to the other side of the world.

After the Asian tiger mosquito arrived in the United States, it spread from Texas to at least 20 other states, biting hard and carrying potentially lethal diseases such as encephalitis, which makes brains swell. U.S. health officials, unable to stop it, have been keeping an eye on the critter ever since.

No serious outbreak of human illness in this country has yet been linked to the imported pest. Still, its travels underscore an ancient truth: As people and products move around the globe, so do microscopic threats.

"In an increasingly globalized society, all sorts of wildlife diseases are getting through the net, moving from one country to another," said Peter Daszak, a wildlife-disease researcher at the University of Georgia. "It's impossible to prevent these invasions completely."

That is because infectious foreign agents – whether they're spreading the mysterious, such as mad cow disease, or bringing back old-time menaces, such as foot-and-mouth disease – have always been savvy hitchhikers.

Some move with people, some stow away in cargoes of fruit, some even catch long-distance rides on wind currents and ocean waves.

A few examples:

◆ A ferocious maple tree-eater from China, the Asian long-horned beetle, surfaced in Brooklyn in 1996. Scientists believe it immigrated by burrowing inside wooden shipping pallets.

> **"Certainly we're not going to stop every dangerous organism from coming into the U.S."**
> Dana DeWeese, Department of Agriculture

Within two years the coal-black bug had made its way to the Chicago area, where residents were ordered to destroy infested trees.

◆ New York City last year found itself in a war with the West Nile virus, which apparently had traveled by way of an African bird, an Asian mosquito and U.S. boats. Several persons died from encephalitis before the city conquered the intruder by spraying streets and storm drains with larvicide and urging people to rid their gutters of standing water.

◆ Toxic algae surfing the Pacific Ocean camped in California's Monterey Bay in 1998, killing hundreds of sea lions.

◆ Zebra mussels from Europe suddenly appeared in the Midwest in 1987, having hitched a ride in the ballast water of a ship that docked in the Great Lakes. Lacking natural predators in the United States, the striped invaders have been multiplying ever since, affixing themselves in bunches onto boat hulls and piers and clogging underwater pipes.

◆ "Whirling disease" has shown up in trout from California to New York. Thought to have been first brought to the United States in fish shipments from Denmark in the 1950s, parasites that cause the disease can travel on boots, remaining viable in dried mud for up to 30 years.

The foot-and-mouth virus is a weakling by comparison, scientists say. Though it quickly spreads among hoofed animals, it dies within a week outside a host. International travelers can rid themselves of it with soap and water.

The job of keeping U.S. borders safe from immigrant microbes rests with the Department of Agriculture's Animal and Plant Health Inspection Service. Its inspectors check cargo and passengers at airports and other points of entry.

They seize mangoes, fumigate cut flowers, hunt crates for fruit flies. They destroy 2 million pieces of contraband food a year. Last week, in an effort to protect against the spread of foot-and-mouth, they disinfected the shoes of travelers flying in from Europe.

"Certainly we're not going to stop every dangerous organism from coming into the U.S.," said Dana DeWeese, a plant health director for the service. "But we can take a risk-assessment approach" to reduce the threat of known viruses wreaking havoc on "the most economically important species," such as cows, pigs and sheep.

Although recent infections have raised concerns, the inherent dangers of globalization have lurked for centuries. And the results have been far more catastrophic.

It happens when foreign cultures meet: Spanish conquistadors introduced smallpox and measles to the Americas half a millennium ago, causing the deaths of tens of millions of South American natives. World War I helped unleash the 1918 influenza pandemic that killed more than 20 million people before the virus burned itself out.

Rather than erecting barriers between nations, a global approach is needed to ward off the dangers swirling in today's world marketplace, said researcher Daszak.

"We need to invest in more research, more inspectors, more communication and monitoring between countries," he said. "Increased surveillance is expensive. But it's much less than the cost of, say, foot-and-mouth spreading through U.S. livestock. That expense would be astronomical."

In 1998, health officials in Hong Kong acted swiftly to halt an unprecedented flu strain that had spread from poultry to people. Fears of a worldwide outbreak spurred the slaughter of every poultry bird in Hong Kong. The death toll among people was limited to a half-dozen.

Few experts are yet calling for steps as drastic as those advocated by Germany's new minister for agriculture, Renate Kuenast, who has suggested that nations shut down trade and rely only on products that can be locally grown.

"No country wants to be quarantined," said former U.S. Agriculture Secretary Dan Glickman. "What we're facing doesn't give us a reason to stop trade. But there is a reason to spend more money on prevention."

Some have learned to make the most of a bad situation. In Marshall, Texas, the residents throw a FireAnt Festival every October in honor of their pesky cohabitants – red imported fire ants – which accidentally arrived in Mobile, Ala., from South America more than 50 years ago.

The biting ants now infest more than 260 million acres in nine Southern states. In Marshall, however, they have their own mascot – Freddy the FireAnt – and people compete in fire-ant calling contests.

"We just can't get rid of these critters," said Phyllis Bryan, a Chamber of Commerce official who coordinates the celebration with a pesticide company. "So we've decided to relax a little and have a good time."

2001-04-01-rutland-daily-herald-pg-a-5-clip-wildlife

2003 (May 04)

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2003-05-04-the-miami-herald-pg-22-a.jpg

2003-05-04-the-miami-herald-pg-22-a-clip-birds-of-prey

Birds of prey: W. Nile carriers are here to stay

BY ALAN BAVLEY
Knight Ridder News Service

KANSAS CITY, Mo. — In the forested lowlands of the Dominican Republic, University of Kansas biologists have found cuckoos, thrushes and a quail dove infected with West Nile virus.

Researchers from the Smithsonian Environmental Research Center have found the antibodies for the virus in more than a dozen native birds in Jamaica. There also have been reports of West Nile in horses and birds in Mexico.

These recent discoveries are testimony to just how rapidly West Nile virus has spread through the Western Hemisphere since it first appeared in New York four years ago.

But even more importantly, they are among the reasons scientists now say West Nile virus is here to stay, and that it may prove dangerous to people and devastating to wildlife for years to come.

'PERMANENT'

"The long and short of it is all of North America will have West Nile virus in the next two years," said biologist Andrew Townsend Peterson of KU's Natural History Museum and Biodiversity Research Center, which discovered West Nile in the Dominican Republic.

"It will become a permanent part of the landscape," Peterson said. "I think that's clear."

Last summer, the United States had the largest epidemic of severe West Nile illness on record anywhere. The disease spread across most of the country, making more than 4,000 people ill with fevers, headaches or body aches. It caused nearly 300 deaths. The virus also killed thousands of birds, horses and other animals.

West Nile is spread by mosquitoes that pick up the virus when they feed on the blood of infected birds. Infected mosquitoes then pass the disease to other birds, or to people or animals.

Scientists have found that some mosquitoes that carry West Nile can endure cold winters and possibly spread the virus again when the weather warms up.

The discovery of West Nile in the American tropics means the disease is now in areas where mosquitoes thrive year-round.

That opens the possibility that some of the hundreds of millions of migratory birds wintering in the Caribbean or Latin America may become infected and bring the virus with them when they return to their summer homes in the United States.

NONENDING CYCLE

"What we can think of as a possibility," Peterson said, "is a continuous cycle of West Nile virus in the tropics and an annual infusion in North America when the birds arrive in the spring."

Even if migratory birds do not catch the virus during their tropical sojourns, they may pick it up when they reach the Southeast. In February 2002, cases of West Nile were reported among horses and birds in four Florida counties.

Migratory birds that travel up the East Coast or into the Midwest may be largely responsible for spreading the disease across North America, said Peter Daszak, executive director of the Consortium for Conservation Medicine in Palisades, N.Y.

"More and more, the evidence points to migratory birds," he said. "That's going to be a big source of reintroduction of the virus. We're going to get outbreaks every year."

Daszak's consortium includes scientists who study how emerging diseases affect people and wildlife.

Daszak said we can expect large numbers of West Nile cases in the United States until people and animals develop immunity.

When that happens, the situation may become similar to that in Egypt where West Nile virus is common, but not considered a threat. People commonly become infected in childhood when the disease is usually mild and maintain immunity as adults.

The virus had spread rapidly since it first appeared in New York 4 years ago.

"But you have to be realistic," Daszak said. "I think it will take decades for this to happen here. It's going to be a bad problem for a long time. And it's going to stay with us forever."

Daszak also is concerned about what will happen as West Nile spreads farther south.

"It still has the whole of South America to conquer," he said. "Some South American cities will be badly hit."

So will a lot of endangered birds. Species that do not produce many offspring, or that live within a small geographical range will be particularly vulnerable, Daszak said.

SOME UNCERTAIN

Not every scientist is convinced that migratory birds are playing a significant role in the steady advance of West Nile virus.

John Rappole, a research scientist at the Smithsonian Conservation and Research Center in Front Royal, Va., was one of the first to suggest several years ago that migratory birds would keep West Nile an active threat despite any efforts to control mosquitoes.

Now he is not so sure.

If migratory birds were responsible for spreading West Nile, the virus should have spread faster, Rappole said.

"You could expect the disease to show up in South America in 1999," he said.

One reason why the evidence for migratory birds is not clear-cut is that no one has been able to find a migrating bird with an active West Nile infection.

"If I had to lay my money on something, it would be migratory birds," said Peter Marra, an animal ecologist with the Smithsonian Environmental Research Center in Edgewater, Md., who was involved in the discovery of West Nile in Jamaican birds.

"But we don't have a smoking gun yet," Marra said. "It's hard to catch a bird with the virus because they die so quickly."

Rappole said evidence now favors nonmigratory birds, the common house sparrow in particular, as the animals more likely responsible for spreading West Nile.

While the sparrows are considered "resident" birds that stay put all year rather than migrate, they can travel distances of 10 miles or more. And unlike crows and blue jays that often sicken and die when infected with West Nile, sparrows stay healthy. Sparrows also stay infectious longer than most other birds, researchers have found.

But finding evidence that nonmigratory birds are maintaining West Nile virus over the winter also may prove elusive.

Since January, Alex Bermudez of the University of Missouri-Columbia College of Veterinary Medicine has tested more than 440 birds for West Nile virus. The birds are captured and released from the James A. Reed Memorial Wildlife Area in Lee's Summit.

Most of the birds are nonmigratory Missouri natives; some have been migratory. So far, none has shown signs of the virus. Bermudez said he is not surprised.

"I was looking for something you wouldn't expect," he said. "But the birds acted as you'd expect they would."

2004 (Oct 13)

Mentioned : **Dr. Peter Daszak (born 1965)** / Dr. Andrew Alexander Cunningham (born 1964)

Full newspaper page : [HN01HY][GDrive]

ENVIRONMENT

Hurricanes spread plant diseases and ruin crops

The term "emerging infectious diseases" (EIDs) typically makes people think of HIV/AIDS, Ebola, or SARS. However, in a paper released today in the leading ecology journal *Trends in Ecology and Evolution*, an international team of researchers led by Wildlife Trust's Consortium for Conservation Medicine has highlighted a series of emerging plant diseases that are devastating crops globally, and impacting humans through agricultural and economic loss.

Nikkita Patel, Program Officer for the Consortium for Conservation Medicine, and lead researcher for the group, comments, "The recent spate of extreme weather events in Florida and elsewhere highlights the need to protect crops and wild plants from invasive pathogens that exploit the damaged environments following hurricanes." She notes that the reason these diseases are emerging is because we are changing the environment at such a rapid rate. Ms. Patel adds, "These highly evolved diseases are being given the chance of spreading into new regions, wiping out crops and wild plants as they go. Unless we radically change our approach and provide proper surveillance and control, these diseases have the potential to undermine the basis for our food security in the future."

The research team analyzed broad trends in emerging plant diseases and showed that:

·Extreme weather events, such as the hurricanes that hit Florida, are one of the leading causes of plant EIDs. This is due to the sensitivity of plants to fluctuations in moisture levels and the responses of plant pathogens to weather events. With projections that climate change will increase extreme weather events, disease-related die-offs will likely increase with time.

A series of key wild plant species are at risk of extinction due to emerging diseases. For example, the endangered cedar tree (*Torreya taxifolia*) is only found over a 154 square mile area of the Florida panhandle and is gradually being wiped out by a fungal disease and extreme weather events. This unique tree species once had a population of over 500,000, but is now reduced to only 1,500.

The underlying cause of most plant EIDs is the anthropogenic introduction of pathogens, or "pathogen pollution." This is related to changes in land use, global warming, and trade in plants and plant products.

Technological advances in agriculture are leaving global crops open to disease emergence. For example, in many developing countries the availability of year-round irrigation and declining market prices for staple crops has promoted increased intensity and acreage of non-traditional crop plants, thus promoting disease emergence.

The international trade in seeds is an estimated US $40-80 billion-per-year industry. Over 2,400 microorganisms are known to occur in seeds of 383 genera of plants. It is estimated that up to one-third of plant viruses are seed-borne. Improved surveillance and control of disease in this trade is urgently needed.

According to Peter Daszak, Executive Director of Wildlife Trust's Consortium for Conservation Medicine, "Not only are plant EIDs wiping out crops, they're threatening the biodiversity of plant life on our planet. With diseases like sudden oak death (*Phytophthora ramorum*) marching through our forests, we have an unprecedented risk for loss of ecosystems."

The team's results are part of a new approach to emerging diseases that stresses the need for predicting when and how diseases will emerge and dealing with them before they cause significant outbreaks. "If we can predict where diseases will occur, we'll be better equipped to handle them once they emerge," observed Mary Pearl, President of Wildlife Trust.

Pamela K. Anderson, Andrew A. Cunningham, Nikkita G. Patel, Francisco J. Morales, Paul R. Epstein and Peter Daszak. 2004. Emerging infectious diseases of plants: pathogen pollution, climate change and agrotechnology drivers. *Trends in Ecology & Evolution*

About The Consortium for Conservation Medicine

The Consortium for Conservation Medicine (CCM) is a unique collaborative institution that strives to understand the link between anthropogenic environmental change, health of all species, including humans, and the conservation of biodiversity.

About Wildlife Trust

Wildlife Trust is an international organization dedicated to innovative conservation science and conservation medicine, linking ecology and human health in the New York region and around the world. Wildlife Trust trains and supports a network of local scientists in over twenty countries in their efforts to save endangered species and their habitats and to protect the health of ecosystems that are vital to life on Earth.

[HN01HZ][GDrive]

2004 (Dec 10)

https://newspaperarchive.com/brownsville-herald-dec-10-2004-p-22/

2004-12-10-the-brownsville-herald-pg-b-11-clip-smuggled.jpg

ANIMALS

2006-01-04-the-orange-county-register-pg-2-clip-flu

Smuggled birds could bring avian flu

BY M.A.J. MCKENNA
COX NEWS SERVICE

ATLANTA — The small suitcase being carried through the Brussels airport by the traveler from Thailand looked unremarkable. But when customs officials opened it Oct. 18, they found a surprise: two rare small eagles, weak but healthy-looking, taped inside lengths of PVC pipe.

Their surprise turned to horror when tests on the eagles came back four days later: The smuggled birds were infected with avian influenza H5N1, the Southeast Asian virus that health authorities fear could blow up into a pandemic and kill millions.

The finding launched a frantic hunt for the man who carried the eagles, the officials who inspected them and the 135 passengers who shared the man's two flights. Twenty-three people were tested; 652 birds that had been in the airport, including the eagles, were destroyed.

The episode did not spark an outbreak, but it shook international health authorities. It demonstrated that the multibillion-dollar trade in smuggled wildlife could become an inadvertent and efficient ally in moving a lethal disease out of its home region, across oceans and around the world.

Underscoring that fear, three weeks later, customs officials in Taipei found 28 parrots packed into PVC pipe in a piece of hand luggage. The bag had been carried from Indonesia, another country grappling with H5N1 flu.

"Those are the ones that were caught. There are almost certainly others that have not been caught," said Dr. Peter Daszak, the executive director of the Consortium for Conservation Medicine in New York. "The global trade in wildlife is potentially a major source of imported disease."

So far this year, avian influenza H5N1 has sickened 44 humans in Thailand and Vietnam, killing 32 of them, as well as causing the slaughter or death from illness of more than 100 million birds - but it has not moved beyond eight countries in Southeast Asia.

Its potential for causing a pandemic, a devastating worldwide epidemic, will be discussed in Atlanta this morning by the American Medical Association's visiting House of Delegates. Speakers will include Dr. Julie Gerberding, director of the Centers for Disease Control and Prevention, and Dr. David Johnson of Aventis Pasteur, which became the United States' sole supplier of injectable flu vaccine for this winter after rival Chiron Corp.'s contaminated vaccine was impounded.

The ability of smuggled wildlife to cause wildlife disease has long been recognized: In 1971, a batch of parrots infected with a strain of Newcastle disease and brought illegally from Mexico, killed millions of poultry in California, causing $65 million in damage.

2005 (Nov 08)

https://www.newspapers.com/image/645800469/?terms=daszak&match=2

2005-11-08-the-charlotte-observer-pg-12-a-clip-bird-flu.jpg

SURVEILLANCE NETWORK

PETER DASILVA – NEW YORK TIMES PHOTO

Dr. Walter Boyce (left) and Grace Lee of the University of California in Davis take a swab from a magpie last month in Davis, Calif.

Eyeing early signs of bird flu

From veterinarians to bird-watchers, hundreds patrolling U.S. in effort to thwart arrival of virus

BY DONALD G. MCNEIL JR.
New York Times

DAVIS, Calif. — Bang! Inside an improvised duck blind – her parked car – Grace Lee presses a switch and her gun blasts a square of light volleyball net over the dirt road she is watching.

One of the two magpies she has baited into range with cornbread, cheese-flavored rice snacks and dog food is snagged, flopping furiously around.

"We mostly catch the young ones," Lee said. "These birds are too smart to be caught again. We get them once, and they don't shop here anymore."

With the country waiting nervously for avian flu to arrive, catching wild birds is no hobby. It has become part of a national early detection effort, and Lee, a researcher at the University of California in Davis, is a sentry on the country's epidemiological ramparts.

She is one of hundreds of ornithologists, veterinarians, amateur bird-watchers, park rangers and others being recruited by the National Wildlife Health Center to join a surveillance effort along the major American migratory flyways. They will test wild birds caught in nets; birds shot by hunters on public lands, who must check in with game wardens; and corpses from large bird die-offs in public parks or beaches.

The plan also calls for sampling bodies of water for the influenza virus, which is shed in bird feces. And it is designating some ducks and geese – like those in backyard flocks or living year-round in park ponds – as "sentinels" to be captured, tested, released and periodically retested.

Surveillance of poultry is already in place. Long-standing federal and state laws require farmers to report deaths of birds from any flu strain. The surveillance system was worked out this summer by the Agriculture Department, which oversees poultry, and the wildlife health center in Madison, Wis., part of the Interior Department. The Interior Department oversees wildlife including migratory birds, which are thought to be the most likely entry route for the flu virus.

Dr. Christopher Brand, the center's research chief, estimated the cost at $10 million. On Nov. 1, President Bush announced a $7.1 billion plan to guard against a flu pandemic; Brand said he hoped money for the surveillance system would come from that.

The sampling plan had a small test run this fall in Alaska, which Brand said was the obvious choice because of the flu's surprise appearance in Siberia in July. Birds from there mingle in the summer Arctic nesting grounds with birds that migrate down the North American coast.

Now the flu's recent crossing of Europe "has opened up more eyes," Brand said. It is unlikely that infected birds will cross the Atlantic, because most migrate north-south and the birds detected in Eastern Europe were from species that migrate to Africa. Still, Brand said, there is now talk of setting up a surveillance network for Greenland, eastern Canada and the East Coast.

The threat of avian flu has also sped a transformation that was begun by the fear of bioterrorism and fueled by the fight against West Nile virus: Veterinarians and doctors, as well as the agencies overseeing them, are joining forces.

Previously, said Dr. William Karesh, head of the field veterinary program at the Wildlife Conservation Society, which runs the Bronx Zoo, the two fields almost never worked in tandem.

"Human medicine and veterinary medicine have advanced beautifully in the last 30 years, but they were not linked," Karesh said. That has always frustrated him, he said, because "diseases don't care which way they flow; there is a whole world of bacteria, viruses and fungi that move between wild animals, domestic animals and humans."

Karesh described once trying to get a research grant for surveillance of animal diseases that infect humans, known as zoonoses. The National Institutes of Health told him to apply to the Department of Agriculture, he said, and officials there sent him to the Fish and Wildlife Service, which told him it had no mandate to study disease.

"Then we went to Homeland Security, and they understood what we were talking about," Karesh said. "But they said: 'You're an orphan. No one does this.' And in their rankings, we're lower than people trying to blow up the subway in New York."

Now, instead of sharing information haphazardly and getting into jurisdictional disputes – problems that cropped up during the 2003 monkeypox outbreak and in surveillance for mad cow disease – health officials are writing plans that emphasize teamwork.

The U.S. still does far better at animal surveillance than most other countries because its medical and veterinary systems are each excellent and because outbreaks cannot be hushed up – as, for example, the SARS outbreak was in China.

But zoonoses fall into a gray area, and the 2003 monkeypox outbreak in the Midwest is a perfect example of what can go wrong, said Peter Daszak, director of the Consortium for Conservation Medicine at the Wildlife Trust, a group specializing in human-animal diseases.

The disease, related to smallpox but less deadly, arrived in a shipment of 18 Gambian giant pouched rats imported for a Chicago pet store, where they infected prairie dogs. By summer's end, there were 37 confirmed human cases – none fatal, but some scary – mostly among prairie-dog owners.

"Millions of live animals come into the country each year, and very few have really good surveillance," Daszak said. "Fish and Wildlife checks cargoes to see if they have endangered species, but it's the USDA that does health checks, and they don't go unless it's an agricultural product, so the pet trade tends to get a pass."

"The CDC does a great job with outbreak investigation, but that's after the fact," he said of the federal Centers for Disease Control and Prevention. "After monkeypox, they put a blanket ban on rodents from some West African countries. But who's looking at rodents from other places? Nobody. And that's a gap."

2005 (Nov 06) - NYTimes - "Sentries in U.S. Seek Early Signs Of an Avian Flu"

By Donald G. McNeil Jr. / [HN01HV][GDrive]

DAVIS, Calif. - Bang! Inside an improvised duck blind -- her parked car -- Grace Y. Lee presses a switch, and her gun blasts a square of light volleyball net over the dirt road she is watching.

One of the two magpies she has baited into range with cornbread, cheese-flavored rice snacks and dog food is snagged, flopping furiously around.

"We mostly catch the young ones," Ms. Lee said. "These birds are too smart to be caught again. We get them once, and they don't shop here anymore."

With the country waiting nervously for avian flu to arrive, catching wild birds is no hobby. It has become part of a national early detection effort, and Ms. Lee, a researcher at the University of California here, is a sentry on the country's epidemiological ramparts.

She is one of hundreds of ornithologists, veterinarians, amateur bird-watchers, park rangers and others being recruited by the National Wildlife Health Center to join a surveillance effort along the major American migratory flyways. They will test wild birds caught in nets; birds shot by hunters on public lands, who must check in with game wardens; and corpses from large bird die-offs in public parks or on beaches.

The plan also calls for sampling bodies of water for the influenza virus, which is shed in bird feces. And it is designating some ducks and geese -- like those in backyard flocks or living year-round in park ponds -- as "sentinels" to be captured, tested, released and periodically retested.

Surveillance of poultry is already in place. Long-standing federal and state laws require farmers to report deaths of birds from any flu strain. The surveillance system was worked out this summer by the Agriculture Department, which oversees poultry, and the wildlife health center in Madison, Wis., part of the Interior Department, which oversees wildlife -- including migratory birds, which are thought to be the most likely entry route for the flu virus.

Dr. Christopher J. Brand, the center's research chief, estimated the cost at $10 million. [On Nov. 1, President Bush announced a $7.1 billion plan to guard against a flu pandemic; Dr. Brand said he hoped money for the surveillance system would come from that.] The sampling plan had a small test run this fall in Alaska, which Dr. Brand said was the obvious choice because of the flu's surprise appearance in Siberia in July. Birds from there mingle in the summer Arctic nesting grounds with birds that migrate down the North American coast.

Now the flu's recent crossing of Europe "has opened up more eyes," Dr. Brand said. It is unlikely that infected birds will cross the Atlantic, because most migrate north-south and the birds detected in Eastern Europe were from species that migrate to Africa. Still, Dr. Brand said, there is now talk of setting up a surveillance network for Greenland, eastern Canada and the East Coast.

The threat of avian flu has also sped a transformation that was begun by the fear of bioterrorism and fueled by the fight against West Nile virus: veterinarians and doctors, as well as the agencies overseeing them, are joining forces.

Previously, said [**Dr. William Bamberger Karesh (born1955)**], head of the field veterinary program at the Wildlife Conservation Society, which runs the Bronx Zoo, the two fields almost never worked in tandem.

"Human medicine and veterinary medicine have advanced beautifully in the last 30 years, but they were not linked," Dr. Karesh said. That has always frustrated him, he said, because "diseases don't care which way they flow -- there is a whole world of bacteria, viruses and fungi that move between wild animals, domestic animals and humans."

[**Dr. William Bamberger Karesh (born1955)**] described once trying to get a research grant for surveillance of animal diseases that infect humans, known as zoonoses. The National Institutes of Health told him to apply to the Department of Agriculture, he said, and officials there sent him to the Fish and Wildlife Service, which told him it had no mandate to study disease.

"Then we went to Homeland Security, and they understood what we were talking about," Dr. Karesh said. "But they said: 'You're an orphan. No one does this.' And in their rankings, we're lower than people trying to blow up the subway in New York."

Now, instead of sharing information haphazardly and getting into jurisdictional disputes -- problems that cropped up during the 2003 monkeypox outbreak and in surveillance for mad cow disease -- health officials are writing plans that emphasize teamwork.

The United States still does far better at animal surveillance than most other countries because its medical and veterinary systems are each excellent and because outbreaks cannot be hushed up -- as, for example, the SARS outbreak was in China.

But zoonoses fall into a gray area, and the 2003 monkeypox outbreak in the Midwest is a perfect example of what can go wrong, said Peter Daszak, director of the Consortium for Conservation Medicine at the Wildlife Trust, a group specializing in human-animal diseases.

The disease, related to smallpox but less deadly, arrived in a shipment of 18 Gambian giant pouched rats imported for a Chicago pet store, where they infected prairie dogs. By summer's end, there were 37 confirmed human cases -- none fatal, but some scary -- mostly among prairie-dog owners.

"Millions of live animals come into the country each year, and very few have really good surveillance," Dr. Daszak said. "Fish and Wildlife checks cargoes to see if they have endangered species, but it's the U.S.D.A. that does health checks, and they don't go unless it's an agricultural product, so the pet trade tends to get a pass."

"The C.D.C. does a great job with outbreak investigation, but that's after the fact," he said of the federal Centers for Disease Control and Prevention. "After monkeypox, they put a blanket ban on rodents from some West African countries. But who's looking at rodents from other places? Nobody. And that's a gap."

Surveillance for diseases in wild animals is particularly difficult, since they do not come to hospitals, are not watched by veterinarians and do not like to be caught.

In the case of the magpie in Davis, it took Ms. Lee and her boss, Dr. Walter M. Boyce, director of the university's Wildlife Health Center, more than 30 minutes to disentangle the bird, set up a lab table, zip themselves into disposable coveralls and get a beak swab, a feces swab and a blood sample before releasing the miffed-looking bird, which high-tailed it for the nearest tree.

Dr. Boyce also gets swabs from hunters' ducks, and his colleagues at the state-run agriculture laboratory on campus get them from poultry farms and from

dead crows, jays and robins collected by city health departments on the watch for West Nile virus, which arrived in California earlier this year.

During the test run in Alaska, Dr. Jonathan Runstadler, a biology professor at the University of Alaska in Fairbanks, said he had collected nearly 5,000 fecal samples from ducks, geese, gulls and other shorebirds, owls and other raptors, and even songbirds.

With limited money, Dr. Runstadler could not mount his own bird-catching efforts, but university ornithologists and dedicated amateurs who study migratory patterns run what he called "ring and fling" leg-banding operations. "Our technicians and grad students go out with them, pull out a Q-Tip and say, 'Excuse me, can I take a sample here?' " he said.

Another difficulty is deciding which species to pursue. [**Dr. William Bamberger Karesh (born1955)**] expressed frustration that no country with birds dead of flu, from China to Romania, had noted which healthy species were nearby, because survivors were the more likely carriers, he said.

Which explains why Ms. Lee was netting birds that live year-round in Davis.

It's "a bit of a maverick approach," Dr. Boyce admitted, but his theory is that scavengers like magpies, crows and cattle egrets are the most likely vectors for moving the virus from the millions of ducks flying down California's Central Valley each fall to domestic chicken farms.

American industrial farms have high levels of biosecurity, penning thousands of birds in hangar-size barns "that no self-respecting duck or goose is looking to get into," Dr. Boyce said, "but there's a lot of free food there for an opportunist."

Since scavengers also bathe in the ponds where ducks stop over and hang around humans' garbage cans, he said, "we're looking for flu in species that can make the link between wildfowl, poultry and people."

2006 (Jan 04)

https://newspaperarchive.com/santa-ana-orange-county-register-jan-04-2006-p-2/

Consortium for conservaiton of medicijne ...

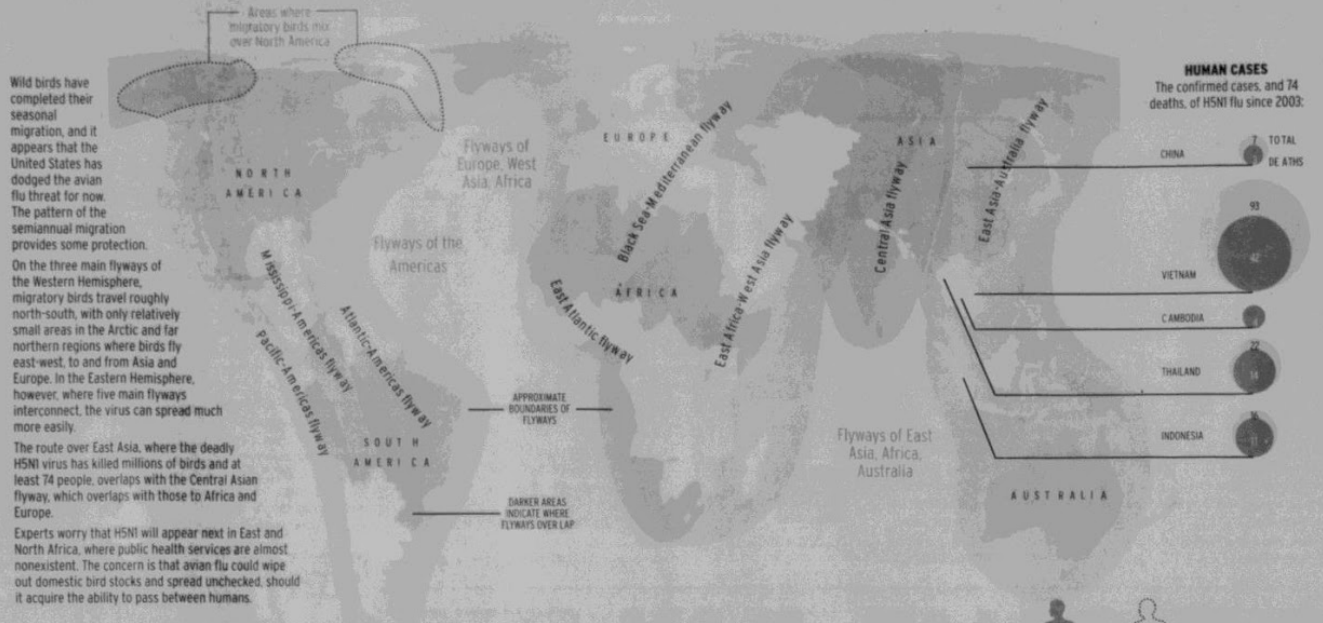
2006-01-04-the-orange-county-register-pg-2-clip-flu

Other names on this article include : [**Dr. William Bamberger Karesh (born1955)**],

Page 2 | **BEYOND THE NEWS**

Dodging the avian flu

The only places where Asian, European and American migratory birds commingle is over northern and Arctic regions. But there is little mixing of flocks over these vast areas. The deadly form of the H5N1 strain in Asia has not been found in North America.



Wild birds have completed their seasonal migration, and it appears that the United States has dodged the avian flu threat for now. The pattern of the semiannual migration provides some protection.

On the three main flyways of the Western Hemisphere, migratory birds travel roughly north-south, with only relatively small areas in the Arctic and far northern regions where birds fly east-west, to and from Asia and Europe. In the Eastern Hemisphere, however, where five main flyways interconnect, the virus can spread much more easily.

The route over East Asia, where the deadly H5N1 virus has killed millions of birds and at least 74 people, overlaps with the Central Asian flyway, which overlaps with those to Africa and Europe.

Experts worry that H5N1 will appear next in East and North Africa, where public health services are almost nonexistent. The concern is that avian flu could wipe out domestic bird stocks and spread unchecked, should it acquire the ability to pass between humans.

Questions and unknowns

Is the risk to wild birds the same as it is to domesticated poultry?
H5N1 spreads easily among tightly confined domestic birds, but far more of these are deliberately killed to stop the spread of the flu.

Can some birds carry the virus and not get sick?
Only domesticated ducks are known to carry it without showing signs of sickness.

Can migrating birds carry the deadly form of the H5N1 virus for long periods?
It may kill some birds quickly, reducing chances to pass it to domestic birds; other birds may live for a week or two. Its effect on bird health is unknown.

Is the threat to domesticated birds in the United States different from the risk in Asia?
Most flocks of farmed birds in the United States are raised in "biosecure" complexes where they cannot mix with wild birds.

Will the H5N1 virus develop the ability to be transmitted from human to human? If so, how virulent will it be?
When the virus can move among humans, the question of migratory and domestic bird infection becomes moot and the pandemic risk is great.

Sources: United Nations Food and Agricultural Organization; World Health Organization; U.S. Department of Health and Human Services; Dr. Walter Boyce, UC Davis; Dr. William B. Karesh, Wildlife Conservation Society; Dr. Peter Daszak, Consortium for Conservation Medicine

The New York Times

2006 (April 24)

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2006-04-24-the-boston-globe-pg-c-1-clip-bats

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2006-04-24-the-boston-globe-pg-c-4-clip-bats

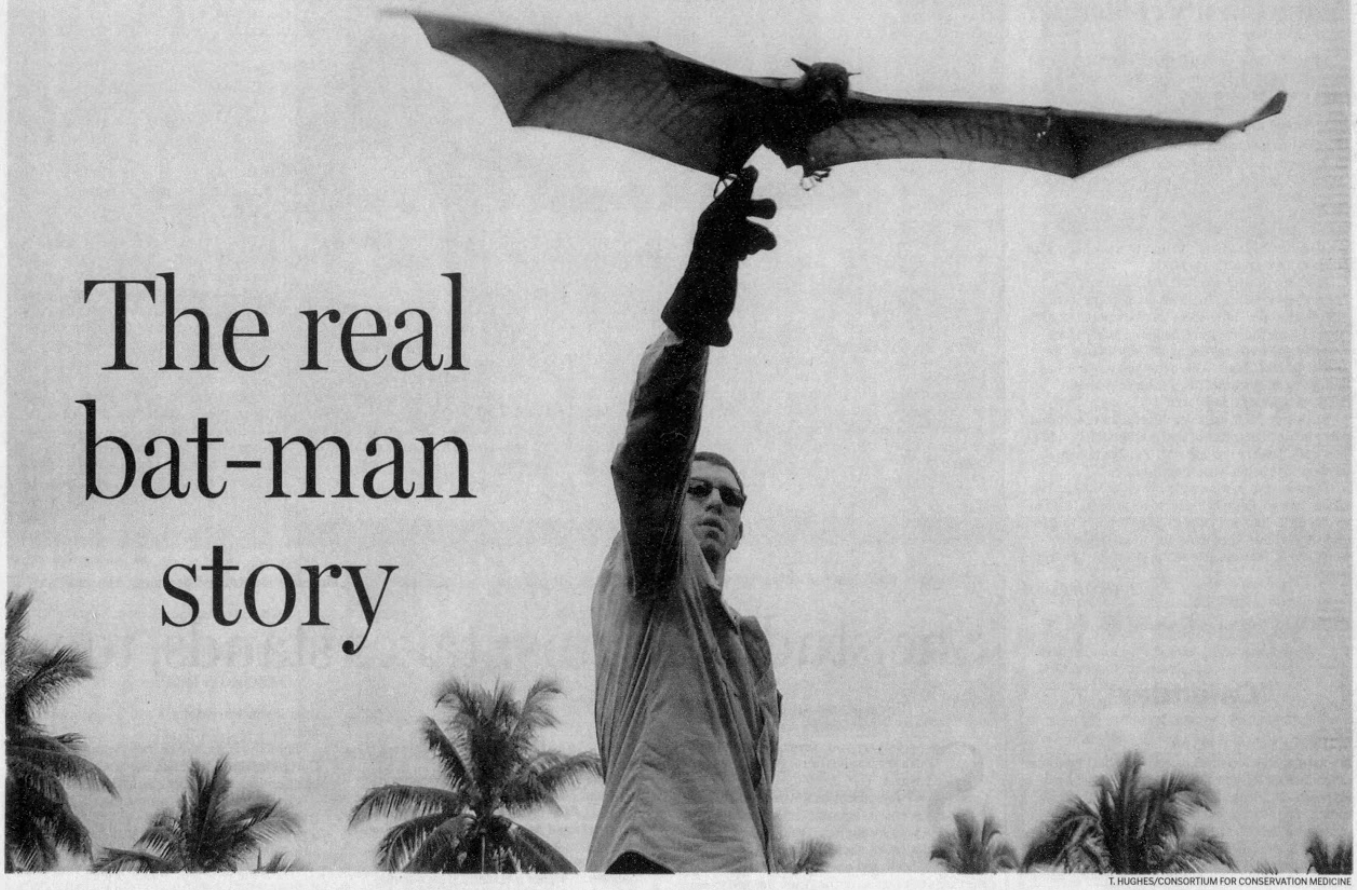
Health | Science

C

Medical Help Wanted C2
Classified C5
TV & Radio C8

THE BOSTON GLOBE MONDAY, APRIL 24, 2006

The real bat-man story



T. HUGHES/CONSORTIUM FOR CONSERVATION MEDICINE

Researcher Jonathan Epstein releases a migratory bat called a Malayan flying fox (Pteropus vampyrus), which is fitted with a satellite collar to track the bat's long-range movements.

True, bats carry deadly diseases, but it's human beings who cause the outbreaks

By Gareth Cook
GLOBE STAFF

Bats have been getting a bad rap.

Last fall, a team of scientists tied bats to the deadly SARS outbreaks. Bats in China, they said, are likely where the virus hides between human outbreaks. Then, in December, another group of researchers suggested that bats in Africa serve as a reservoir for the vicious virus for Ebola hemorrhagic fever, which causes its human victims to bleed to death. Bats have also been definitively tied to two other recently discovered viruses that are lethal to humans: Nipah and Hendra.

But as researchers have worked to uncover the mysterious links between bats and these emerging viruses, they say they have stumbled upon an even wilier culprit working behind the scenes: humans. It now seems that these outbreaks, and likely many others, were set off when people encroached on rain forests, expanded wild animal markets, or made other changes that removed the natural barriers that keep diseases at bay.

"This is not a wildlife problem, it is a human problem," said Jonathan Epstein, an American researcher who spoke by phone from Bangladesh, where he has been investigating the causes of Nipah outbreaks.

The insights that are coming from these outbreaks are feeding an emerging discipline that seeks to redefine the very meaning of health. Epstein and other proponents of this thinking, which they have dubbed "conservation medicine," argue that it is impossible to divorce human health from that of the environment. Emerging viruses like the one that causes SARS are symptoms of the drastic, large-scale changes humans are making in the life of the planet.

At a time of intense concern about avian flu, it is hardly controversial to argue that human health is linked to animal health. But the field challenges traditional academic di-

BATS, Page C4

Causes

Main factors pushing the emergence of new human illnesses:

1. Changes in land use or agricultural practices.
2. Changes in human demographics such as population growth.
3. Poor health, such as malnutrition.
4. Poor hospitals and medical procedures, such as lack of sterile needles.
5. Evolution of viruses and bacteria to become drug resistant.

Source: Emerging Infectious Diseases (December 2005)

Full second page JPG here : [https://www.newspapers.com/image/443776543/?terms=daszak&match=1 C4

2006-04-24-the-boston-globe-pg-c-4-clip-bats]

Text below (NY TImes)

2006 (April 26) - NYTimes : "Blaming bats when man may be culprit"

By Gareth Cook / [HN01HW][GDrive]

Bats have been getting a bad rap. Last autumn, a team of scientists tied bats to the deadly SARS outbreaks. Bats in China, they said, are likely where the virus hides between human outbreaks. Then, in December, another group of researchers suggested that bats in Africa serve as a reservoir for the vicious virus for Ebola hemorrhagic fever, which causes its human victims to bleed to death.

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At a time of intense concern about avian flu, it is hardly controversial to argue that human health is linked to animal health. But the field challenges traditional academic divisions, especially the cultural divide between doctors and veterinarians. Epstein is a senior research scientist at the New York-based Consortium for Conservation Medicine at Wildlife Trust, which organizes projects that cross the old disciplinary boundaries.

The consortium includes the Cummings School of Veterinary Medicine at Tufts University in Massachusetts, the Johns Hopkins Bloomberg School of Public Health in Maryland, and the United States Geological Survey National Wildlife Health Center in Wisconsin.

As researchers do their detective work around the world, they are finding connections between human society and disease. Global warming could push mosquito-borne diseases like malaria and encephalitis into more northern countries. One new bat-borne disease, the Nipah virus, was tied to the expansion of pig farming in Malaysia. Outbreaks of avian flu have been tied to farms, and the disease's spread has been helped by farmers reluctant to come forward with sick birds.

The researchers hope that by studying these connections, they will discover the means to prevent future epidemics.

After the 2003 outbreaks of SARS, which attacks the respiratory system, scientists initially identified an animal known as a civet as the disease's reservoir, the place where the virus sustains itself between outbreaks in humans. But further testing found that civets were not widely infected. In a paper published online by the journal Science last September, a team that included Epstein and scientists from China and Australia named a new suspect: cave-dwelling horseshoe bats. These bats, they reported, carry a family of viruses very similar to the one that causes SARS.

It is likely, the study found, that one of these "SARS-like" viruses evolved into the SARS virus at an exotic animal marketplace, where it infected civets, which, in turn, infected humans, according to Michael Farzan, a Harvard Medical School assistant professor who was not involved in the research.

But why did this happen when it did? One intriguing possibility is that it is linked to China's economic boom, according to Peter Daszak, a co-author of the SARS paper who is executive director of the Consortium for Conservation Medicine. With the newfound wealth there, he said, animal markets have grown as more people can afford fresh animal meat. As the markets grow, so do the chances that a virus will jump from one species to the next.

In December, a different group of researchers linked fruit bats to the dreaded Ebola virus. Outbreaks of the disease in humans have been associated with dramatic outbreaks among chimpanzees and gorillas. The team, working in Gabon and Congo Republic, captured various animals near the bodies of chimpanzees and gorillas. They then looked for signs of Ebola virus.

From this, the team found three different species of bats with antibodies to the virus, according to a paper in the journal Nature. Bats are now the leading suspect as the Ebola virus reservoir, but the case against them remains controversial, according to Jens Kuhn, an Ebola specialist at Harvard Medical School. It is thought that changes in human activity are behind the Ebola outbreaks - such as new mining operations deep in forests and the eating of primate meat - Kuhn said, but nobody knows the true origin.

The ties between bats and disease have raised fears in the conservation community that the winged creatures, long maligned and misunderstood, will become the targets of calls for elimination. This would be a mistake, researchers said, because bats play important environmental roles, such as eating pests - and killing off bats would be very difficult in any case.

There are about 1,000 species of bats, making up a fifth of all mammal species.

2006 (June 06)

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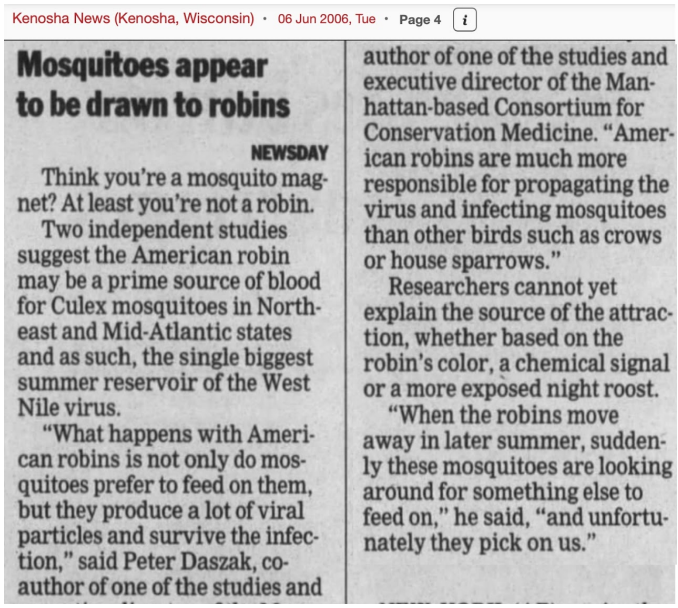
2006-06-06-kenosha-news-pg-a-4-clip-mosquitoes



Kenosha News (Kenosha, Wisconsin) · 06 Jun 2006, Tue · Page 4

Mosquitoes appear to be drawn to robins

NEWSDAY

Think you're a mosquito magnet? At least you're not a robin.

Two independent studies suggest the American robin may be a prime source of blood for Culex mosquitoes in Northeast and Mid-Atlantic states and as such, the single biggest summer reservoir of the West Nile virus.

"What happens with American robins is not only do mosquitoes prefer to feed on them, but they produce a lot of viral particles and survive the infection," said Peter Daszak, co-author of one of the studies and author of one of the studies and executive director of the Manhattan-based Consortium for Conservation Medicine. "American robins are much more responsible for propagating the virus and infecting mosquitoes than other birds such as crows or house sparrows."

Researchers cannot yet explain the source of the attraction, whether based on the robin's color, a chemical signal or a more exposed night roost.

"When the robins move away in later summer, suddenly these mosquitoes are looking around for something else to feed on," he said, "and unfortunately they pick on us."

2007 (Dec 05)

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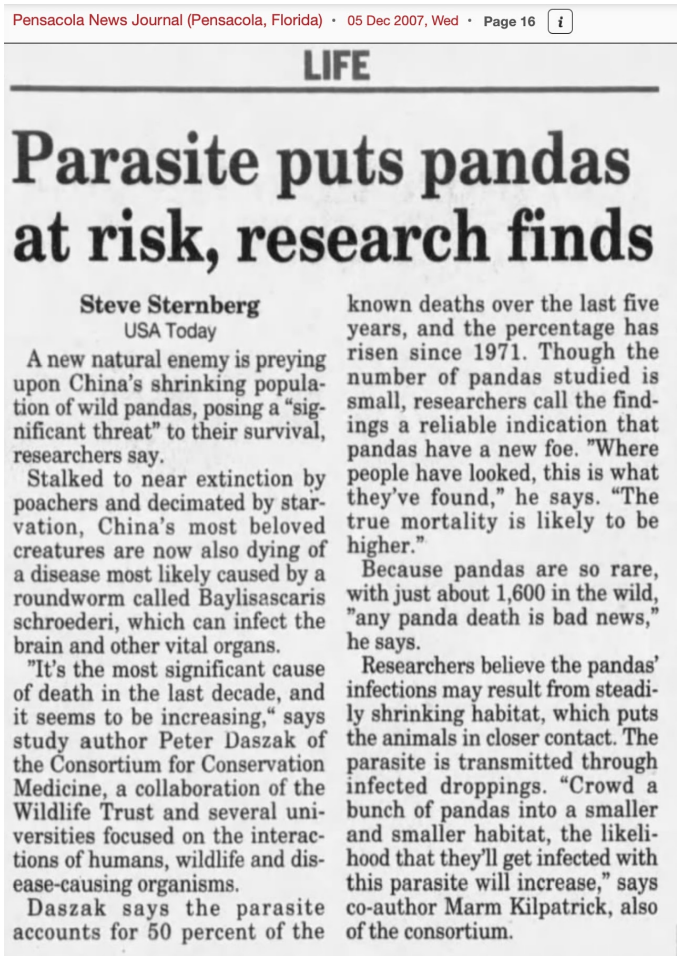
2007-12-05-pensacola-news-journal-pg-6-b-clip-pandas.pdf



Pensacola News Journal (Pensacola, Florida) · 05 Dec 2007, Wed · Page 16

LIFE

Parasite puts pandas at risk, research finds

Steve Sternberg
USA Today

A new natural enemy is preying upon China's shrinking population of wild pandas, posing a "significant threat" to their survival, researchers say.

Stalked to near extinction by poachers and decimated by starvation, China's most beloved creatures are now also dying of a disease most likely caused by a roundworm called Baylisascaris schroederi, which can infect the brain and other vital organs.

"It's the most significant cause of death in the last decade, and it seems to be increasing," says study author Peter Daszak of the Consortium for Conservation Medicine, a collaboration of the Wildlife Trust and several universities focused on the interactions of humans, wildlife and disease-causing organisms.

Daszak says the parasite accounts for 50 percent of the known deaths over the last five years, and the percentage has risen since 1971. Though the number of pandas studied is small, researchers call the findings a reliable indication that pandas have a new foe. "Where people have looked, this is what they've found," he says. "The true mortality is likely to be higher."

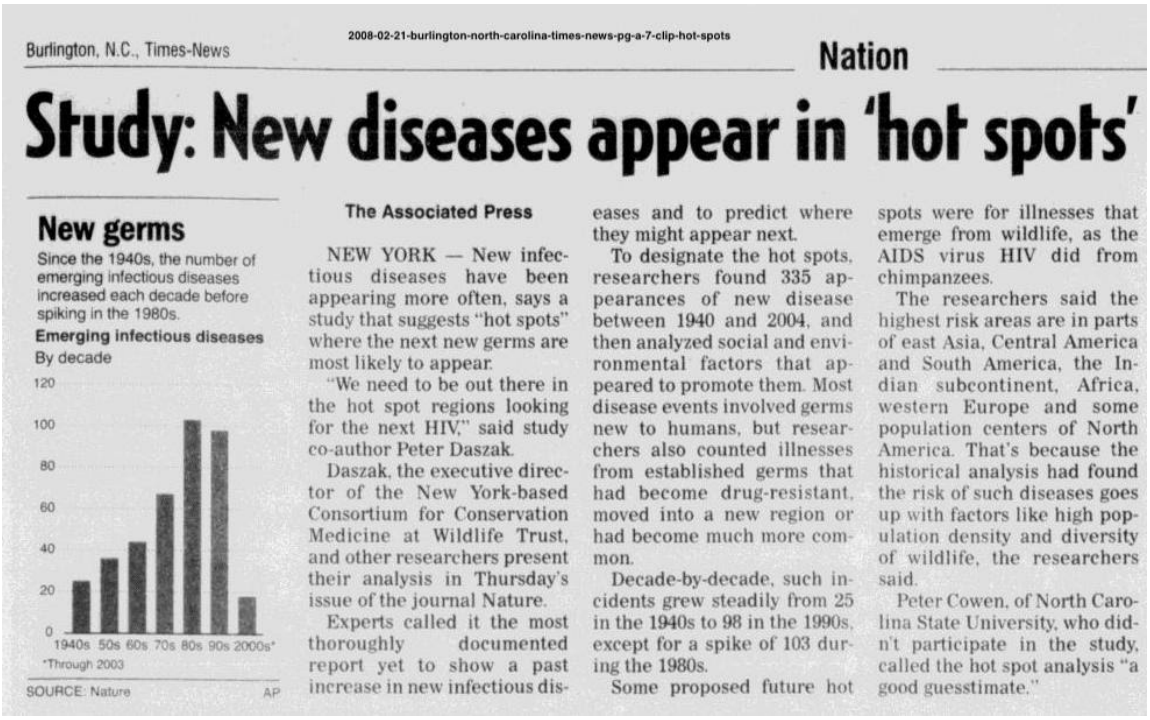
Because pandas are so rare, with just about 1,600 in the wild, "any panda death is bad news," he says.

Researchers believe the pandas' infections may result from steadily shrinking habitat, which puts the animals in closer contact. The parasite is transmitted through infected droppings. "Crowd a bunch of pandas into a smaller and smaller habitat, the likelihood that they'll get infected with this parasite will increase," says co-author Marm Kilpatrick, also of the consortium.

2008 (Feb 21)

https://newspaperarchive.com/burlington-times-news-feb-21-2008-p-7/

2008-02-21-burlington-north-carolina-times-news-pg-a-7-clip-hot-spots



Burlington, N.C., Times-News

2008-02-21-burlington-north-carolina-times-news-pg-a-7-clip-hot-spots

Nation

Study: New diseases appear in 'hot spots'

New germs

Since the 1940s, the number of emerging infectious diseases increased each decade before spiking in the 1980s.

Emerging infectious diseases

By decade

SOURCE: Nature AP

The Associated Press

NEW YORK — New infectious diseases have been appearing more often, says a study that suggests "hot spots" where the next new germs are most likely to appear.

"We need to be out there in the hot spot regions looking for the next HIV," said study co-author Peter Daszak.

Daszak, the executive director of the New York-based Consortium for Conservation Medicine at Wildlife Trust, and other researchers present their analysis in Thursday's issue of the journal Nature.

Experts called it the most thoroughly documented report yet to show a past increase in new infectious diseases and to predict where they might appear next.

To designate the hot spots, researchers found 335 appearances of new disease between 1940 and 2004, and then analyzed social and environmental factors that appeared to promote them. Most disease events involved germs new to humans, but researchers also counted illnesses from established germs that had become drug-resistant, moved into a new region or had become much more common.

Decade-by-decade, such incidents grew steadily from 25 in the 1940s to 98 in the 1990s, except for a spike of 103 during the 1980s.

Some proposed future hot spots were for illnesses that emerge from wildlife, as the AIDS virus HIV did from chimpanzees.

The researchers said the highest risk areas are in parts of east Asia, Central America and South America, the Indian subcontinent, Africa, western Europe and some population centers of North America. That's because the historical analysis had found the risk of such diseases goes up with factors like high population density and diversity of wildlife, the researchers said.

Peter Cowen, of North Carolina State University, who didn't participate in the study, called the hot spot analysis "a good guesstimate."

2008 (Sep)

file:///Users/markkulacz/Downloads/B580803.pdf

2008 (Oct 11) references .. The Human/Animal Interface: Emergence and Resurgence of Zoonotic Infectious Diseases

Michael Greger (see https://en.wikipedia.org/wiki/Michael_Greger)

To link to this article: https://doi.org/10.1080/10408410701647594

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2008 (Nov 06) - Missoula, Montana

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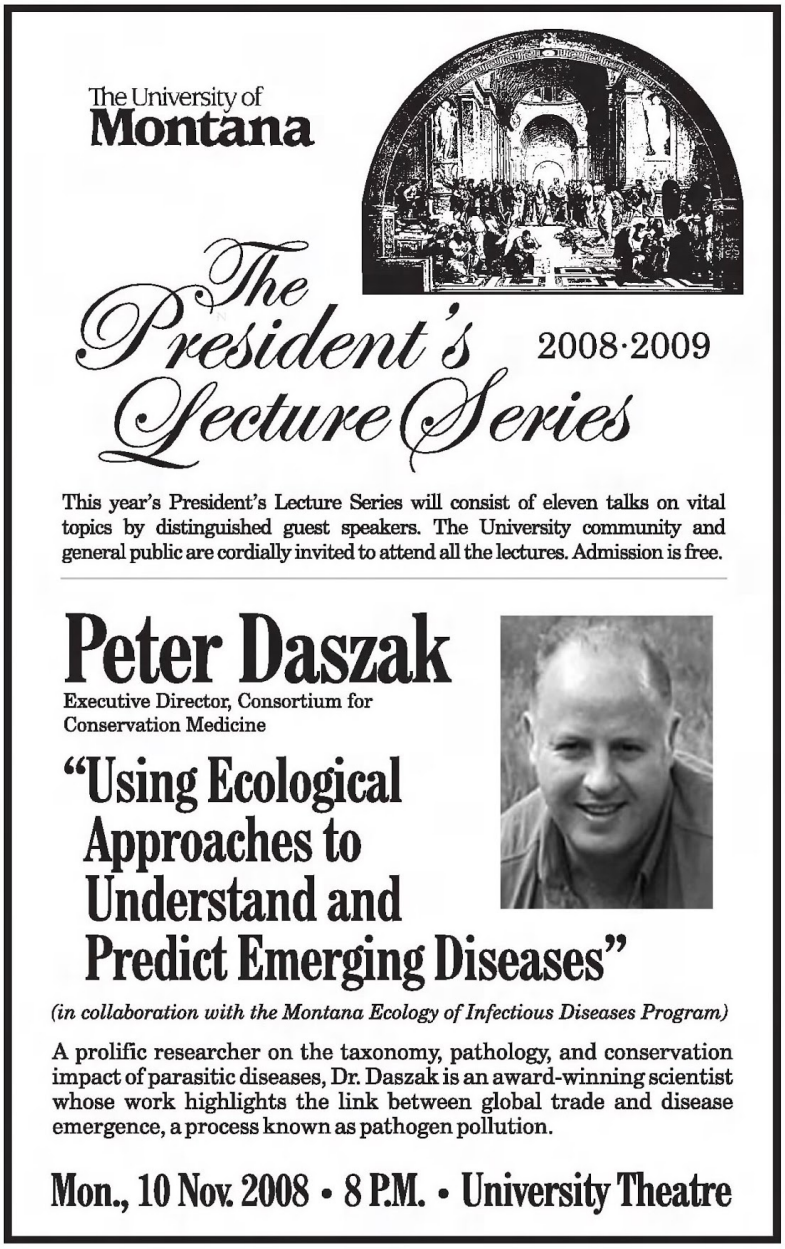
2008-11-06-missoula-independent-pg-27-clip-daszak



2010 - Video : Peter Daszak at TEDMED 2010

video posted : Jan 13, 2011 / TEDMED

Peter Daszak talks about how pathogens from animals around the world are creating disease epidemics, and how we should stop them before they affect the human population.

link - https://www.youtube.com/watch?v=cPFGX7t4KJE / Download video : [HV00FH][GDrive] / Page image : [HV00FI][GDrive]

2010 (Dec 05)

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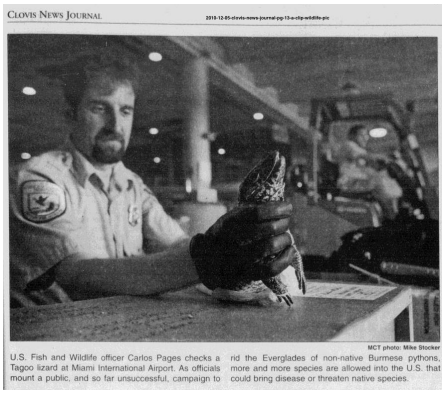
2010-12-05-clovis-news-journal-pg-13-a.jpeg



CLOVIS NEWS JOURNAL 2010-12-05-clovis-news-journal-pg-13-a-clip-wildlife-pic

MCT photo: Mike Stocker

U.S. Fish and Wildlife officer Carlos Pages checks a Tagoo lizard at Miami International Airport. As officials mount a public, and so far unsuccessful, campaign to rid the Everglades of non-native Burmese pythons, more and more species are allowed into the U.S. that could bring disease or threaten native species.

2010-12-05-clovis-news-journal-pg-13-a-clip-wildlife-pic.jpeg

Wildlife trade brings tarantulas, pythons

By David Fleshler and Dana Williams
SUN SENTINEL

FORT LAUDERDALE, Fla. — They arrive from Amazon rainforests, central African savannahs and south Asian jungles, crated passengers in the cargo holds of airliners.

Spitting cobras, common death adders, Zanzibar dwarf geckos, green iguanas, chinchillas, emperor scorpions and hundreds of other non-native species enter the United States each year to serve the demand for unusual pets.

A lot of time has gone into the unsuccessful campaign to clear the Everglades of Burmese pythons, just one of the non-native species to find a congenial home in South Florida. But the federal government continues to allow wide-open imports of a vast range of wildlife, conducting few screenings for disease and permitting most shipments to enter without inspection. A report on wildlife imports by the Government Accountability Office last month found "gaps that could allow the introduction of diseases into the United States."

A Sun Sentinel review of live wildlife import records from 2004 through April of 2010 found that the United States imported these animals:

More than 739,000 rodents, despite warnings from the Centers for Disease Control and prevention that rodents can transmit to humans diseases such as hantavirus, bartonella and typhus.

Nearly 20,000 venomous snakes, among which are some of the most deadly, including 632 puff adders, 113 black mambas and 357 king cobras.

More than 1.2 million green iguanas, as well as other species that have become established in the United States, including 39,673 Nile monitors and 20,806 Burmese pythons. Several of these non-native species kill native wildlife.

A bill in Congress would have restricted imports to those species that had been approved as harmless, but an outcry from wildlife owners and the pet industry defeated it. The U.S. Fish and Wildlife Service is completing the process to declare the Burmese python and eight other big snakes injurious species, which would end imports except for zoos and a few other purposes.

Environmental and animal welfare groups say the python proposal has come too late to help the Everglades, and they call for import limits to keep out the next harmful species.

"If the federal government had listed the Burmese python as injurious 20 years ago, we wouldn't have had this problem," said Beth Preiss, exotic pets director for the Humane Society of the United States. "It may be too late to stop the invasion of the Everglades, but it's not too let to stop it in the rest of the U.S."

But the pet industry and hobbyist groups have fought back. They note that a cold snap last year killed a lot of the Everglades pythons. They say import limits represent an extreme response to problems caused by a few species. And they say tough restrictions would cost jobs and undermine a beneficial pastime that fosters in children an appreciation of science and nature.

"A lot of children spend hours in front of the TV and the computer and have very little contact with nature," said Jamie Reaser, vice president of environmental policy for the Pet Industry Joint Advisory Council, a trade group. "So I think it's very important children have the opportunity to learn about animals and the environment."

■■■

The wooden crates rest on the cement floor of a warehouse at Miami International Airport, second only to Los Angeles in live wildlife shipments into the United States.

U.S. Fish and Wildlife Service inspector Carlos Pages dons black gloves and pries open a long crate from Suriname, a nation with rain forests that extend into the Amazon basin.

The box contains a row of bright yellow sacks. When he picks one up, it starts moving. Inserting a plastic tube the size of a Pringles container that lets him look inside safely, he sees the glistening skin of an emerald tree boa. Although the snake is not venomous, he is careful. "These snakes have a nasty disposition," he says. "They will bite."

Last year Miami International Airport received 4,786 shipments of live wildlife. Among the biggest importers is Strictly Reptiles in Hollywood, whose president, Michael Van Nostrand, was sentenced to eight months in prison in 1997 for smuggling 1,500 rare reptiles from Argentina and Indonesia. After serving a five-year license suspension, the company has resumed importing. From 2004 until April of this year, Strictly Reptiles imported 558,060 reptiles, 172,892 spiders and 161,597 amphibians, according to federal records.

Reached by phone, Van Nostrand initially agreed to an interview but then could not be reached despite repeated phone calls.

D.J. Schubert, wildlife biologist for the Animal Welfare Institute, said the import business is riddled with opportunities for animals to suffer.

"They can be held for a long time without water or food," he said. "Frequently they're held in boxes or burlap sacks. The entire industry facilitates cruelty, not because people are trying to be mean, but because they don't know any better."

A raid last year by the U.S. Fish and Wildlife Service found horrific conditions at U.S. Global Exotics in Arlington, Texas, with more than 26,000 snakes, hamsters, wallabies, sloths and other animals crowded into filthy cages without food or water, many dead or dying.

Reaser, of the pet trade group, said that case was an exception in the industry that works hard to keep its valuable cargo safe.

"I think it's important to keep in mind that a lot of people in the pet industry got into it because they really love animals," she said. "There's an economic investment, and it doesn't make good business sense not to care for the animals."

■■■

About 60 percent of infectious diseases emerging in humans since 1940 — including AIDS and severe acute respiratory syndrome — originated in animals, making the jump to people through live-animal markets, the butchering process and the pet trade.

Dr. Nina Marano, chief of the Geographic Medicine and Health Promotion Branch of the Centers CDC, said rodents particularly are effective at transmitting diseases such as the deadly viral disease hantavirus pulmonary syndrome, a chronic bacterial illness called bartonella and various forms of typhus.

Monkeypox, a viral disease from Africa, appeared in people in the United States in 2003, arriving in a shipment of rodents from Ghana to Texas. The CDC banned rodent imports from Africa, but the pet industry found other sources. Since 2004 more than 739,000 dwarf hamsters, chinchillas, golden hamsters and other rodents have been imported, with the largest numbers coming from captive breeders in the Netherlands and the Czech Republic, according to the Sun Sentinel's review of import data.

"Rodents carry many viral diseases," Marano said. She was particularly concerned about children, who are often the caretakers for these animals and "who aren't known for regularly washing their hands."

"African rodents have been banned, but we've discovered that the pet industry is very fluid," Marano said. "When one door closes, they find another one to open."

The U.S. Fish and Wildlife Service said it's not practical to screen millions of animals for diseases. The service has 124 inspectors at 38 entry points to watch for smuggling, improperly packed animals and banned species. Adding disease to the list would be "tough," said Edward Grace, deputy chief of law enforcement for the Fish and Wildlife Service.

"Our inspectors don't have the veterinary skills to determine if an animal is ill or may be a disease vector," he said.

Peter Daszak, president of EcoHealth Alliance, a group that researches wildlife diseases, said agricultural livestock imports receive tougher scrutiny.

"If you're importing cattle, we're going to test them for hoof-and-mouth disease," he said. "But if you bring in a shipment of rodents from Indonesia, we don't test them for anything. They don't want anything to stop the pet trade, and I understand that. There's a lot of money and a lot of jobs."

■■■

Although Burmese pythons have attracted the most attention, up to 130 other non-native species have established themselves in Florida.

Mexican red rump tarantulas live around an abandoned citrus grove near Fort Pierce. Venomous red lionfish, refugees from the tropical fish trade, inhabit coral reefs. The African rock python, a large and powerful constrictor, lurks around Tamiami Trail in western Miami-Dade County, where 18 have been captured since August 2009.

In coastal Broward, Palm Beach and Miami-Dade counties, a Bahamian lizard called the northern curly-tail has crowded out native lizards. Tegu lizards, which can grow longer than four feet, prowl Homestead and the Tampa suburbs.

"The vast majority are from the pet trade," said Scott Hardin, non-native species coordinator for the Florida Fish and Wildlife Conservation Commission. "Mostly it's from pets that have been released."

■■■

These animals are sold by big-box pet stores, at wildlife shows, over the Internet and at specialty shops.

Underground Reptiles in Deerfield Beach offers a ring-tailed lemur ($2,799.99), a small South American mammal called a kinkajou ($3,249.99) and two baby marmosets ($2,799.99). In a corner, behind a sign reading "Dangerous Live Venomous Snakes," glass cases contained black and white spitting cobras, a West African Gaboon viper and a white-lipped tree viper.

At the Rodeway Inn & Suites on State Road 84 in Fort Lauderdale, the Florida Reptile and Alternative Pet Super Show last month drew dealers and hobbyists to a long conference room to buy and sell pythons, tarantulas and geckos.

"I don't do normal animals," said Tyler Cowan, 14, of Lake Worth, who had purchased a sunglow leopard gecko and a bearded gecko. "I don't like anything furry. I have two leopard geckos, a bearded dragon, a black and white Argentine tegu — such a sweetie. Think of it as a scaly puppy dog."

Anna Harvey, of Davie, wanted a snake for her 6-year-old son. "He is obsessed with reptiles," she said. She asked one dealer, Jay Eaton, whether a $40 king snake would make a nice friend for her son's ball python. Friend? Probably not, he said.

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2011 (Nov 24) - NYTimes : "Global Trade Spreads a Fatal Amphibian Disease"

BY JIM ROBBINS NOVEMBER 24, 2011 6:00 AM / [HN01HU][GDrive]

Kenneth H. Thomas / Photo Researchers, Inc. American bullfrogs are resistant to the lethal amphibian disease known as chytrid, and since they are commonly traded overseas, they are becoming the Typhoid Marys of the amphibian world.

A recent study in the Proceedings of the National Academy of Science reported that global trade in amphibians is one of the big culprits in spreading a fungal disease known as chytrid, responsible for the stunning die-off of amphibians across the world.

Half of all amphibians are in decline, while a third are threatened with extinction, because of the pathogen, which carries the formal name Batrachochytrium dendrobatidis. It infects the amphibians' skin cells — through which most amphibians take in water and salts, including those of sodium and potassium — and thickens the skin, reducing its ability to absorb water and salts.

The recent study indicates that not only has the trade spread the disease, it may have created it.

Rhys Farrer of the Imperial College London and his team foundthat different strains of the chytrid fungus were identified in different parts of the globe. Through sequencing of the fungal genome, they found that the extremely lethal form of the fungus was created when two distinct strains came together to create a potent killer.

A likely explanation is that the global trade during the last century brought two strains together, experts say. "Chytrid is one of the most devastating wildlife diseases with the largest host range of any, and responsible for dozens of species' extinctions and many more extirpations of local populations," Dr. Farrer said.

The finding highlights the dangers of the worldwide movement of wildlife, including the huge global trade in pets. According toEcoHealth Alliance, a New York nonprofit that researches and works to prevent disease caused by wildlife, 120 million animals – fish, birds and reptiles – are shipped around the globe annually, legally and illegally.

American bullfrogs, which are carriers of the chytrid pathogen but resistant to it, are also widely available for sale; another study, done in 2009, looked at records from the ports of San Francisco, Los Angeles and New York from 2000 through 2005 and found "Importation of live amphibians into these ports totaled almost 28 million individuals over this six-year period."

The illegal wildlife trade, valued at as much as $20 billion a year, is second only to the drug trade in terms of its worth, according to EcoHealth. Some 13 million animals are taken illegally from ecosystems for the pet trade. Many of those species come from "hot spots" in tropical regions where the risk of diseases' emergence from the wild are high.

Even legal wildlife importation poses a disease risk, not only to other wildlife but to people as well. Diseases in other mammals pose the biggest threat to humans of all wildlife ailments, said Dr. Peter Daszak, president of EcoHealth. "Phylogenetically they are closer to us, which means we are more likely to share viruses we carry." he said. "That means if we get infected there's a higher change of that virus being transmitted human to human."

One species that he is particularly worried might pass a disease into the human sphere is the sugar glider from Indonesia.

Associated Press A baby sugar glider in a Minnesota home

"They are extremely cute, really good looking little animals, very cheap and very trendy," Dr. Daszak said. The trouble is, he said, they are coming in straight from the forest, in an emerging disease hotspot.

Plucking animals out of the wild can also cause declines in populations and lead to extinctions.

Earlier this year the EcoHealth Alliance started a program calledPetWatch that seeks to educate consumers to the dangers of exotic diseases on imported pets, from parrots to turtles to monkeys. They also include factors like invasive threats, the sustainability of wild populations and animal welfare issues.

The best bet for a disease-free animal is one that is bred in captivity and so is unlikely to harbor a disease from the wild. Among the best choices, according to Pet Watch, are the bearded dragon and cockatiels, while the worst include the African grey parrot and the squirrel monkey.

2012 (July 21)

https://www.newspapers.com/image/477063551/?terms=peter%2Bdaszak 2012-07-21-edmonton-journal-pg-c-2.jpg

Text also in NYTImes - https://www.nytimes.com/2012/07/15/sunday-review/the-ecology-of-disease.html?searchResultPosition=27

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Infectious diseases unleashed

when people mess with nature

Many emerging illnesses have spread to humans from animals

JIM ROBBINS
New York Times News Service

There's a term biologists and economists use these days – ecosystem services – which refers to the many ways nature supports the human endeavour. Forests filter the water we drink, for example, and birds and bees pollinate crops, both of which have substantial economic, as well as biological, value.

If we fail to understand and take care of the natural world, it can cause a breakdown of these systems and come back to haunt us in ways we know little about. A critical example is a developing model of infectious disease that shows that most epidemics – AIDS, Ebola, West Nile, SARS, Lyme disease and hundreds more that have occurred over the last several decades – don't just happen. They are a result of things people do to nature.

Disease, it turns out, is largely an environmental issue. Sixty per cent of emerging infectious diseases that affect humans are zoonotic – they originate in animals. And more than two-thirds of those originate in wildlife.

Teams of veterinarians and conservation biologists are in the midst of a global effort with medical doctors and epidemiologists to understand

"Any emerging disease in the last 30 or 40 years has come about as a result of encroachment into wild lands and changes in demography"

PETER DASZAK,
DISEASE ECOLOGIST

the "ecology of disease." It is part of a project called Predict, which is financed by the U.S. Agency for International Development. Experts are trying to figure out, based on how people alter the landscape – with a new farm or road, for example – where the next diseases are likely to spill over into humans and how to spot them when they do emerge, before they can spread.

They are gathering blood, saliva and other samples from high-risk wildlife species to create a library of viruses so that, if one does infect humans, it can be more quickly identified. And they are studying ways of managing forests, wildlife and livestock to prevent diseases from leaving the woods and becoming the next pandemic.

It isn't only a public-health issue, but an economic one. The World Bank has estimated that a severe influenza pandemic, for example, could cost the world economy $3 trillion.

The problem is exacerbated by how livestock are kept in poor countries, which can magnify diseases borne by wild animals. A study released this month by the International Livestock Research Institute found that more than two million people a year are killed by diseases that spread to humans from wild and domestic animals.

bats. They are messy eaters, no small matter in this scenario. They often hang upside down, looking like Dracula wrapped tightly in their membranous wings, and eat fruit by chewing the pulp and then spitting out the juices and seeds.

The bats have evolved with henipah over millions of years, and because of this co-evolution, they experience little more from it than the fruit bat equivalent of a cold. But once the virus breaks out of the bats and into species that haven't evolved with it, a horror show can occur, as one did in 1999 in rural Malaysia. It is likely that a bat dropped a piece of chewed fruit into a piggery in a forest. The pigs became infected with the virus and amplified it, and it jumped to humans.

It was startling in its lethality. Out of 276 people infected in Malaysia, 106 died and many others suffered permanent neurological disorders. Since then there have been 12 smaller outbreaks in South Asia.

In Australia, where four people and dozens of horses have died of Hendra, the scenario was different: suburbanization lured infected bats that were once forest-dwellers into backyards and pastures.

If a henipah virus evolves to be transmitted readily through casual contact, the concern is that it could leave the jungle and spread throughout Asia or the world.

"Nipah is spilling over, and we are observing these small clusters of cases – and it's a matter of time that the right strain will come along and efficiently spread among people," says Jonathan Epstein, a veterinarian with EcoHealth Alliance, a New York-based organization that studies the ecological causes of disease.

That's why experts say it's critical to understand underlying causes. "Any emerging disease in the last 30 or 40 years has come about as a result of encroachment into wild lands and changes in demography," says Peter Daszak, a disease ecologist and the president of EcoHealth.

Emerging infectious diseases are either new types of pathogens or old ones that have mutated to become novel, as the flu does every year. AIDS, for example, crossed into humans from chimpanzees in the 1920s when bush-meat hunters in Africa killed and butchered them.

Diseases have always come out of the woods and wildlife and found their way into human populations – the plague and malaria are two examples.

But emerging diseases have quadrupled in the last half-century, experts say, largely because of increasing human encroachment into habitat, especially in disease "hot spots" around the globe, mostly in tropical regions. And with air travel and a robust market in wildlife trafficking, the potential for a serious outbreak in urban centres is enormous.

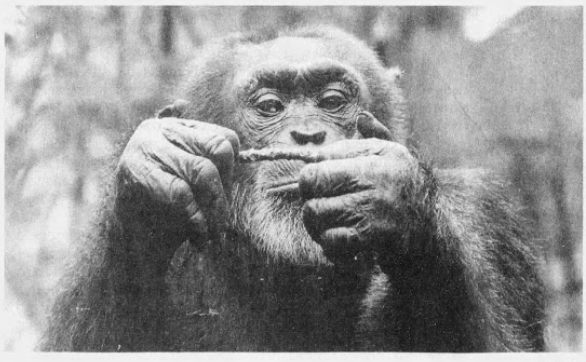
The key to forecasting and preventing the next pandemic, experts say, is understanding what they call the "protective effects" of nature intact.

In the Amazon, for example, one study showed an increase in deforestation by some four per cent increased the incidence of malaria by nearly 50 per cent because mosquitoes, which transmit the disease, thrive in the right mix of sunlight and water in recently deforested areas.

Developing the forest in the wrong way can be like opening Pandora's box. These are the

TIM WIMBORNE, REUTERS

The potentially fatal Nipah virus in South Asia and the related Hendra virus in Australia originated with fruit bats, which often eat upside down and drop juices and seeds from fruit, potentially spreading disease. In 1999, the virus killed 106 people in Malaysia.



SUPPLIED

AIDS crossed into humans from chimpanzees when bush-meat hunters killed and butchered them.

JOHN LUCAS, EDMONTON JOURNAL

The robin plays a role in the spread of West Nile virus.

can cause disease. The West Nile virus arrived in the U.S. from Africa but spread because one of its favoured hosts is the American robin, which thrives in a world of lawns and agricultural fields. And mosquitoes, which spread the disease, find robins especially appealing.

"The virus has had an important impact on human health in the United States because it took advantage of species that do well around people," says Marm Kilpatrick, a biologist at the University of California, Santa Cruz. The pivotal role of the robin in West Nile has earned it the title "super spreader."

The best way to prevent the next outbreak in humans, specialists say, is with what they call the One Health Initiative,

Anthony, a molecular virologist at EcoHealth. "It's learning how to do things sustainably. If you can get a handle on what it is that drives the emergence of a disease, then you can learn to modify environments sustainably."

The scope of the problem is huge. Just an estimated one per cent of wildlife viruses are known. Another major factor is the immunology of wildlife, a science in its infancy.

Raina Plowright, a biologist at Pennsylvania State University who studies the ecology of disease, found that outbreaks of the Hendra virus in flying foxes in rural areas were rare but were much higher in urban and suburban animals.

"By mapping encroach-

may be riding on the work of Predict. EcoHealth and its partners – the University of California at Davis, the Wildlife Conservation Society, the Smithsonian Institution and Global Viral Forecasting – are looking at wildlife-borne viruses across the tropics, building a virus library. Most of the work focuses on primates, rats and bats, which are most likely to carry diseases that affect people.

Most critically, Predict researchers are watching the interface where deadly viruses are known to exist and where people are breaking open the forest, as they are along the new highway from the Atlantic to the Pacific across the Andes in Brazil and Peru.

potentially a risk.' "

It might mean talking to people about how they butcher and eat bush meat or to those who are building a feedlot in bat habitat.

In Bangladesh, where Nipah broke out several times, the disease was traced to bats that were raiding containers that collected date palm sap, which people drank. The disease source was eliminated by placing bamboo screens over the collectors.

EcoHealth also scans luggage at airports, looking for imported wildlife likely to be carrying deadly viruses. And it has a program called PetWatch to warn consumers about exotic pets that are pulled out of the

The Nipah virus in South Asia, and the closely related Hendra virus in Australia, both in the genus of henipah viruses, are the most urgent examples of how disrupting an ecosystem can cause disease. The viruses originated with flying foxes, Pteropus vampyrus, also known as fruit

Pandora's box. These are the kinds of connections the new teams are unravelling.

Public-health experts have begun to factor ecology into their models. Australia, for example, has just announced a multimillion-dollar effort to understand the ecology of the Hendra virus and bats.

It's not just the invasion of intact tropical landscapes that can the One Health Initiative. The worldwide program, involving more than 600 scientists and other professionals, advances the idea that human, animal and ecological health are inextricably linked and need to be studied and managed holistically.

"It's not about keeping pristine forest pristine and free of people," says Simon

She hypothesizes that urbanized bats are sedentary and miss the frequent exposure to the virus they used to get in the wild, which kept the infection at low levels. That means more bats — whether from poor nutrition, loss of habitat or other factors — become infected and shed more of the virus into backyards.

The fate of the next pandemic

ment into the forest you can predict where the next disease could emerge," Daszak, EcoHealth's president, says. "So we're going to the edge of villages, we're going to places where mines have just opened up, areas where new roads are being built. We are going to talk to people who live within these zones and saying, 'What you are doing is

forest in disease hot spots and shipped to market.

All in all, the knowledge gained in the last couple of years should allow us to sleep a little easier, says Epstein, the EcoHealth veterinarian. "For the first time, there is a co-ordinated effort in 20 countries to develop an early warning system for emerging zoonotic outbreaks."

2012 (Dec 01) - "Zoonoses 3 - Prediction and prevention of the next pandemic zoonosis : Stephen S Morse, Jonna A K Mazet, Mark Woolhouse, Colin R Parrish, Dennis Carroll, William B Karesh, Carlos Zambrana-Torrelio, W Ian Lipkin, Peter Daszak"

Full PDF : [HW005Q][GDrive]

Authors : , [Dr. William Bamberger Karesh (born1955)] ,

Zoonoses 3

Prediction and prevention of the next pandemic zoonosis

Stephen S Morse, Jonna A K Mazet, Mark Woolhouse, Colin R Parrish, Dennis Carroll, William B Karesh, Carlos Zambrana-Torrelio, W Ian Lipkin, Peter Daszak

Lancet 2012; 380: 1956–65
See Comment pages 1881 and 1884
This is the third in a Series of three papers about zoonoses

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Most pandemics—eg, HIV/AIDS, severe acute respiratory syndrome, pandemic influenza—originate in animals, are caused by viruses, and are driven to emerge by ecological, behavioural, or socioeconomic changes. Despite their substantial effects on global public health and growing understanding of the process by which they emerge, no pandemic has been predicted before infecting human beings. We review what is known about the pathogens that emerge, the hosts that they originate in, and the factors that drive their emergence. We discuss challenges to their control and new efforts to predict pandemics, target surveillance to the most crucial interfaces, and identify prevention strategies. New mathematical modelling, diagnostic, communications, and informatics technologies can identify and report hitherto unknown microbes in other species, and thus new risk assessment approaches are needed to identify microbes most likely to cause human disease. We lay out a series of research and surveillance opportunities and goals that could help to overcome these challenges and move the global pandemic strategy from response to pre-emption.

Introduction

The emergence of novel infectious diseases such as HIV/AIDS, severe acute respiratory syndrome (SARS), and pandemic influenza has shown the vulnerability of human beings to new zoonotic health threats. The mortality and morbidity associated with HIV/AIDS have devastated communities in some countries and led to global changes in public health. The rapid pandemic spread of SARS coronavirus in 2003 and a new triple-reassortant H1N1 influenza in 2009 both resulted in substantial economic loss as the pathogens exploited—and in some instances closed down—global travel and trade networks.[1] These vulnerabilities emphasise the need for a systematic, pre-emptive approach that aims to prevent the spread, or even the initial emergence, of pandemics.

The emergence of novel pandemic agents often seems to be inherently unpredictable.[2] Indeed, no pathogens have been predicted before their first appearance. However, patterns in the origins and spread of new pathogens can be noted and are an intrinsic, albeit ad-hoc, part of surveillance strategy. For example, more than 60% of the roughly 400 emerging infectious diseases that have been identified since 1940 are zoonotic,[3] and these pathogens are the focus of particular public health interest.[4,5] Similarly, specific geographical regions or interfaces between people, wildlife, livestock, and the environment have been identified as the origins of recent emerging infectious diseases, and thus are targets for intense surveillance.[3,5–7] Analysis of previous emergence events has led to a better understanding of the causes (so-called drivers) of emergence.[4,8] These advances, coupled with a better understanding of the dynamics of pathogen transmission, ecology, and evolution as they emerge and spread, promise the possibility to predict pandemics. Here we review these findings and the most promising strategies to improve anticipation, prediction, and pre-emption of the next pandemic zoonosis at the source.

Key messages

- Most recent pandemics, such as HIV/AIDS, severe acute respiratory syndrome, and pandemic influenza, are caused by zoonotic pathogens (ie, pathogens harboured by non-human animals), are viral diseases, and originated in wildlife
- Such infections are usually driven to emerge by ecological, behavioural, or socioeconomic changes
- Technological advances in mathematical modelling, diagnostics, communication, and informatics enable targeted global surveillance of emerging and previously unknown infections in both human beings and other species
- New risk-assessment approaches show promise for the use of these capabilities to predict and pre-empt potential pandemics at their source (eg, in wildlife or other animals), and need to be further developed

Search strategy and selection criteria

We searched PubMed and ISI Web of Knowledge with the terms "emerging infectio*", "zoonos*", or "pathogen discovery" in combination with the terms "modeling", "prediction", "surveillance", "evolution", "ecology", or "methodology" for papers published in any language before Sept 25, 2012. We did our searches when we began to develop and write the paper and again before submission of the revised, final version. Some coauthors provided references that they deemed of particular importance. We largely selected publications from the past 5 years, but did not exclude commonly referenced and highly regarded older publications. We also searched the reference lists of articles identified by our searches and selected those judged relevant. Reviews and book chapters are cited to provide readers with more detailed information and references than is possible in the space allowed. Our reference list was modified on the basis of comments from peer reviewers.

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Origins and dynamics of pandemic zoonoses

When the origins of emerging infectious diseases are traced back to first emergence in the human population, some distinctive patterns are revealed that could be used in disease control.[3,6] First, the frequency with which new pathogens emerge is increasing, even when the increased surveillance globally is taken into account,[3] suggesting that efforts to coordinate the global strategy to fight pandemics are timely and of growing importance.[5,9] Second, the emergence of all major groups of emerging infectious diseases correlates strongly with human population density, supporting the hypothesis that disease emergence is driven by largely anthropogenic changes, such as the expansion of agriculture, travel routes, and trade, and changes in land use.[10] Finally, the emergence of zoonotic pathogens of wildlife origin (which have dominated the pandemics of the past 100 years) correlates strongly with both human density and the global distribution of wildlife biodiversity.[3,8] Spatially explicit models can be used to identify the regions most likely to produce the next emerging zoonoses (so-called hotspots of emerging infectious disease).[3] These hotspots are regions where human activities take place against a background of high wildlife biodiversity, with concomitant microbial biodiversity (figure 1). Targeting of surveillance to such regions provides a rationale for better allocation of global resources to prevent emerging infectious disease or rapidly deal with outbreaks.[3]

The process through which pandemic zoonoses emerge can be analysed to identify the crucial control points and specific research challenges (panel 1, figure 2). The model we adopt here (developed by Daszak) to assess pandemic potential has three stages—no human infection (stage 1), localised human infection (spillover; stage 2), and widespread transmission and global dissemination (stage 3). The frequency at which stages 1 and 2 occur is unknown but probably high. That human populations are continually exposed to a wide variety of non-human-animal pathogens, many of which infect human beings, seems reasonable to assume. To assess the role of pathogen biology in emergence, investigators need to know how many pathogens people are exposed to and how many successfully cross the species barrier. A complete inventory of spillovers is not available, but researchers have a good working knowledge of pathogens of domestic livestock and pets (species in frequent contact with human beings). Almost 50% of the roughly 1000 species of pathogens that are noted in livestock and pets are zoonotic,[7] implying that any barriers between these hosts and human beings are routinely breached by many different pathogens. More than 50% of the recognised pathogens of human beings can infect other vertebrate hosts.[8] Many non-human pathogens can infect several hosts, and clear examples of viruses transferring between different animal hosts to cause outbreaks in other species have been

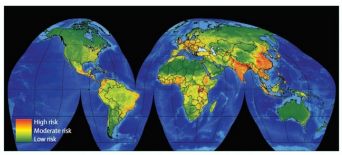

Figure 1: Global hotspots for emerging infectious diseases that originate in wildlife
A database of all known emerging infectious diseases' since 1940 was used to identify the most likely origins of each separate emergence event. Presence or absence of infections emerging from wildlife was analysed with logistic regression against a series of known drivers, including human population density, change in human population density, and wildlife diversity (mammalian species richness), gridded at 1 km² resolution. The global distribution of model outputs gives a measure of the likelihood of a region to generate a new zoonotic emerging infectious disease that originates in wildlife. Because previous pandemics have mainly originated in wildlife, these maps identify hotspots where the next pandemic is most likely to originate.

reported.[17,18] Pathogens can transfer from human beings to animals and between different animal species before being transferred back to people, allowing remixing and evolution with spill-back and potentially enhanced pathogenicity (eg, influenza).[18,19]

Human pathogens from all taxa contain zoonotic species. Roughly 80% of viruses, 50% of bacteria, 40% of fungi, 70% of protozoa, and 95% of helminths that infect human beings are zoonotic.[8] Most of the identified reservoirs are mammalian (roughly 80%) or, to a lesser extent, avian,[8,12] although people share some pathogens with invertebrates, which act as vectors[13] or intermediate hosts. Identification of the key taxonomic groups that are sources for the emergence of zoonotic disease could help to improve targeting of surveillance and interventions. Ungulates are the mammalian taxa with which human beings share the most pathogens[8]—perhaps not surprising because, as major food sources, these animals are often in close proximity to people, and their diseases have been studied extensively. Rodents, carnivores, and primates are also well represented. Although pathogens deemed emerging or re-emerging are disproportionately likely to be zoonotic,[14] their reservoirs are much the same as those of non-emerging zoonoses.[15]

The situation, however, is substantially different for pathogens that have reached stage 3. A disproportionate number of these pathogens are viruses, suggesting that viruses have the potential to evolve more rapidly than do other kinds of pathogen. However, this finding could be due to ascertainment bias. Less complete knowledge is available about the diversity of viruses than that of other pathogens, and researchers might still be missing many at stages 1 and 2.[16] Although a lot of stage 3 pathogens that infect only people don't strictly have reservoirs (eg, HIV-1), many are thought to have had zoonotic origins, including in non-human primates, which contrasts strongly with the minor contribution of primates as

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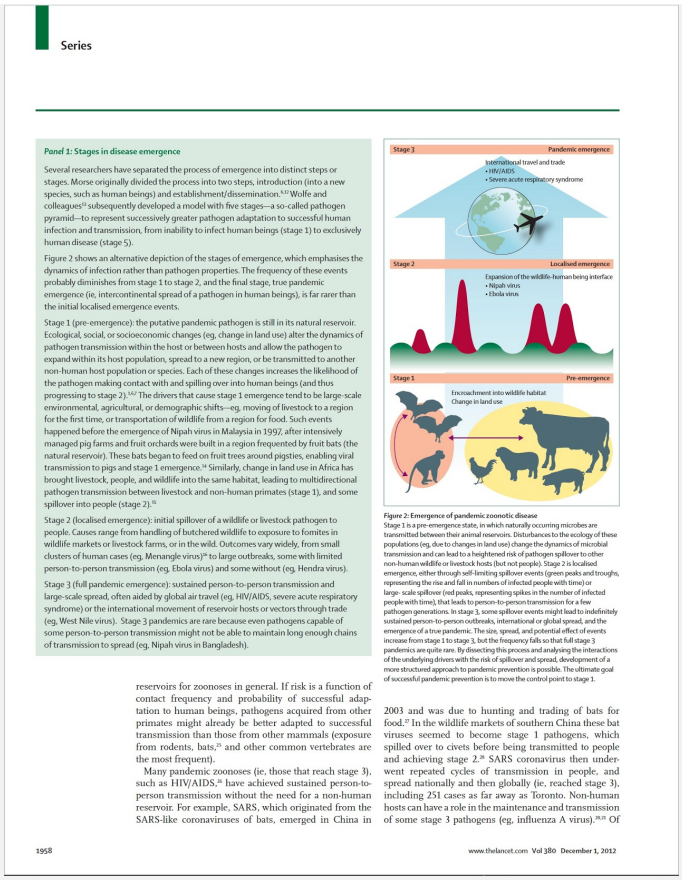

Series

Panel 1: Stages in disease emergence

Several researchers have separated the process of emergence into distinct steps or stages. Morse originally divided the process into two steps, introduction (into a new species, such as human beings) and establishment/dissemination.[4,5] Wolfe and colleagues[14] subsequently developed a model with five stages—a so-called pathogen pyramid—to represent successively greater pathogen adaptation to successful human infection and transmission, from inability to infect human beings (stage 1) to exclusively human disease (stage 5).

Figure 2 shows an alternative depiction of the stages of emergence, which emphasises the dynamics of infection rather than pathogen properties. The frequency of these events probably diminishes from stage 1 to stage 2, and the final stage, true pandemic emergence (ie, intercontinental spread of a pathogen in human beings), is far rarer than the initial localised emergence events.

Stage 1 (pre-emergence): the putative pandemic pathogen is still in its natural reservoir. Ecological, social, or socioeconomic changes (eg, change in land use) alter the dynamics of pathogen transmission within the host or between hosts and allow the pathogen to expand within its host population, spread to a new region, or be transmitted to another non-human host population or species. Each of these changes increases the likelihood of the pathogen making contact with and spilling over into human beings (and thus progressing to stage 2).[3,6,7] The drivers that cause stage 1 emergence tend to be large-scale environmental, agricultural, or demographic shifts—eg, moving of livestock to a region for the first time, or transportation of wildlife from a region for food. Such events happened before the emergence of Nipah virus in Malaysia in 1997, after intensively managed pig farms and fruit orchards were built in a region frequented by fruit bats (the natural reservoir). These bats began to feed on fruit trees around pigsties, enabling viral transmission to pigs and stage 1 emergence.[14] Similarly, change in land use in Africa has brought livestock, people, and wildlife into the same habitat, leading to multidirectional pathogen transmission between livestock and non-human primates (stage 1), and some spillover into people (stage 2).[15]

Stage 2 (localised emergence): initial spillover of a wildlife or livestock pathogen to people. Causes range from handling of butchered wildlife to exposure to fomites in wildlife markets or livestock farms, or in the wild. Outcomes vary widely, from small clusters of human cases (eg, Menangle virus)[16] to large outbreaks, some with limited person-to-person transmission (eg, Ebola virus) and some without (eg, Hendra virus).

Stage 3 (full pandemic emergence): sustained person-to-person transmission and large-scale spread, often aided by global air travel (eg, HIV/AIDS, severe acute respiratory syndrome) or the international movement of reservoir hosts or vectors through trade (eg, West Nile virus). Stage 3 pandemics are rare because even pathogens capable of some person-to-person transmission might not be able to maintain long enough chains of transmission to spread (eg, Nipah virus in Bangladesh).

Figure 2: **Emergence of pandemic zoonotic disease**
Stage 1 is a pre-emergence state, in which naturally occurring microbes are transmitted between their animal reservoirs. Disturbances to the ecology of these populations (eg, due to changes in land use) change the dynamics of microbial transmission and can lead to a heightened risk of pathogen spillover to other non-human wildlife or livestock hosts (but not people). Stage 2 is localised emergence, either through self-limiting spillover events (green peaks and troughs, representing the rise and fall in numbers of infected people with time) or large- scale spillover (red peaks, representing spikes in the number of infected people with time), that leads to person-to-person transmission for a few pathogen generations. In stage 3, some spillover events might lead to indefinitely sustained person-to-person outbreaks, international or global spread, and the emergence of a true pandemic. The size, spread, and potential effect of events increase from stage 1 to stage 3, but the frequency falls so that full stage 3 pandemics are quite rare. By dissecting this process and analysing the interactions of the underlying drivers with the risk of spillover and spread, development of a more structured approach to pandemic prevention is possible. The ultimate goal of successful pandemic prevention is to move the control point to stage 1.

reservoirs for zoonoses in general. If risk is a function of contact frequency and probability of successful adaptation to human beings, pathogens acquired from other primates might already be better adapted to successful transmission than those from other mammals (exposure from rodents, bats,[25] and other common vertebrates are the most frequent).

Many pandemic zoonoses (ie, those that reach stage 3), such as HIV/AIDS,[26] have achieved sustained person-to-person transmission without the need for a non-human reservoir. For example, SARS, which originated from the SARS-like coronaviruses of bats, emerged in China in 2003 and was due to hunting and trading of bats for food.[27] In the wildlife markets of southern China these bat viruses seemed to become stage 1 pathogens, which spilled over to civets before being transmitted to people and achieving stage 2.[28] SARS coronavirus then underwent repeated cycles of transmission in people, and spread nationally and then globally (ie, reached stage 3), including 251 cases as far away as Toronto. Non-human hosts can have a role in the maintenance and transmission of some stage 3 pathogens (eg, influenza A virus).[29,30] Of

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the 400 or so known emerging pathogens, roughly 100 occur only as human pathogens—ie, such specialisation is rare.[29] Some of the seemingly specialist human pathogens are thought to have had zoonotic origins much further back in evolutionary time (eg, *Plasmodium falciparum*).[30] This pattern could be the norm, but the origins of most specialist human pathogens are unknown.[31] Much more is known about the dynamics of pandemic pathogens once they can be transmitted among people. Transmission rates are often higher in dense than in sparse populations, and spread is often greatly enhanced by air travel or human migration. The mathematics of these spreading events is well known, and a sophisticated array of computational models have been used to back-predict such events accurately—eg, the first case clusters of SARS[32] and the subsequent global spread, including the country-by-country distribution of human cases.[33] Models based on air travel, realistic contact networks, and individual countries' capacities to deal with outbreaks can now produce reasonably accurate predictions of future pandemic spread (particularly for influenza).[33–35] However, less is known about the factors that enable pathogens to move from stage 2 to stage 3 and ultimately achieve pandemic status. During this process, stuttering chains of novel human transmission (as with human monkeypox in Africa, for example[36,37]) can become self-sustaining (which monkeypox has still not achieved in people[36]). The distribution and behaviour of human beings, reservoir hosts, and vectors are crucial for emergence, and human demographics and behaviour often establish capacity for person-to-person transmission.

Differential host physiology, especially age and immunocompetence, affect susceptibility to infection.[38,39] The surge in immunocompromised patients during the HIV/AIDS pandemic was associated with an upsurge in other emerging pathogens.[39] Host factors often receive less research focus than does pathogen virulence, but improved knowledge of host responses is essential to understand the species barrier and why some zoonotic pathogens are benign in their natural hosts but lethal when introduced to other species.[38,39]

In view of the importance of human activities in emergence, integration of social sciences research—particularly that focused on human behaviour and demographics—into models of infectious disease emergence and evolution is essential to understand pandemics.[40,41] The importance of human exposure throughout the emergence process also suggests that simple behavioural precautions could greatly reduce risk. Risks to hunters, food handlers, and livestock workers from occupational exposure could be reduced in hotspots of emerging infectious diseases though routine sanitation and biosafety precautions, as has been tried with H5N1 in agricultural settings.[42] Nosocomial spread could be prevented by stringent adherence to infection control practices—eg, use of sterile injection equipment.

A successful pathogen needs to possess the molecular machinery to infect people, invade human cells or tissues, replicate, and access tissues from which it can exit the host and transmit (directly or indirectly) to other people.[40,41] Historical examples are few, and thus to quantify the relative contribution of exposure frequency versus phylogenetic relatedness to the risk of successful infection is difficult. Analysis of host–pathogen databases of primates shows that closely related sympatric host species are more likely to share parasite species than are distantly related sympatric host species.[43] Although any pathogen from a mammalian (or avian) host is a potential threat, that exposure of people to novel pathogens from our closest animal relatives poses the greater risk to public health is at least plausible.

Microbes often evolve substantially during emergence (eg, SIVcpz evolved into HIV-1), and the role of evolutionary adaptation in enabling pathogen establishment in human populations is a subject of active research.[45,46] Alternatively, some pathogens can spread between human beings without evolutionary change from the genotypes present in the wildlife host (eg, Ebola virus), and thus can enter the human population at stage 2. Phylodynamics, which combines a modelling framework for host, epidemiological, and molecular data,[47,48] especially for RNA viruses, shows particular promise for understanding of patterns of viral evolution during epidemics.[48,49]

Testing of the relative importance of exposure and host relatedness in stage 2 emergence is an important challenge. For plant pathogens, experimental infection of closely or distantly related plants with a range of fungal pathogens has shown that host relatedness is a key factor in the ability of a pathogen to infect a novel host.[50] Such a study would be logistically and ethically challenging in mammals, but experimental work with several model systems and various other organisms is underway, and systematic studies of host–parasite databases might provide an alternative. These studies might provide new surveillance opportunities by allowing improved targeting of the key wildlife species most likely to harbour the next emerging zoonosis.

Pathogen discovery

Identification of zoonotic pathogens has been substantially improved by advances in molecular diagnostics, which make possible the identification of hitherto unknown pathogens in nature (so-called pathogen discovery).[51,52] This process also includes differential diagnosis of infectious disease and surveillance for known or novel microbes that are normally benign in natural hosts but have the potential to become pathogenic in other hosts. Traditionally, microbe hunters used many techniques, including in-vitro and in-vivo culture, immunohistochemistry, electron microscopy, and serology. Immunohistochemistry of clinical samples was used successfully in several cases. Molecular techniques were

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2013 (May 27) - NYTimes : "New Tools to Hunt New Viruses"

A man in Saudi Arabia wore a mask last week to protect against a virus that has killed 22 since it was found there last year.

By Donald G. McNeil Jr. / [HN01HT][GDrive]

A new flu, H7N9, has killed 36 people since it was first found in China two months ago. A new virus from the SARS family has killed 22 people since it was found on the Arabian Peninsula last summer.

In past years, this might have been occasion for panic. Yet chicken and pork sales have not plummeted, as they did during flus linked to swine and birds. Travel to Shanghai or Mecca has not been curtailed, nor have there been alarmist calls to close national borders.

Is this relatively calm response in order? Or does the simultaneous emergence of two new diseases suggest something more dire?

Actually, experts say, the answer to both questions may well be yes.

"We've done a great job globally in the last 10 years," said [**Dr. William Bamberger Karesh (born1955)**], a wildlife veterinarian and chief of health policy for the EcoHealth Alliance, which tracks animal-human outbreaks. "Compared to H5N1 and SARS, we're getting on top of these diseases much, much faster."

But he added that "people have become desensitized over time — it's 'Oh, O.K., another one.' "

And scientists say the world cannot afford to relax. The threat is real. New diseases are emerging faster than ever.

Peter Daszak, a parasitologist and president of the EcoHealth Alliance, has even put a number on it: 5.3 new ones each year, based on a study using data from 1940 to 2004. He and his co-authors blamed population growth, deforestation, antibiotic overuse, factory farming, live animal markets, bush meat hunting, jet travel and other factors.

Some aspects of the new viruses are scary. The Arabian coronavirus — now officially named MERS, for Middle East respiratory syndrome — has killed about half of those it infects, while SARS killed less than a quarter; in the lab, it replicates faster than SARS, penetrates lung cells more readily and inhibits the formation of proteins that warn the body that it is under attack.

In her closing remarks on Monday at the annual meeting of the world's health ministers, Dr. Margaret Chan, director-general of the World Health Organization, said the virus was now her "greatest concern."

Until experts figure out where it hides and how it infects humans, "we are empty-handed when it comes to prevention," she said. "These are alarm bells, and we must respond."

The H7N9 flu has been fatal in a quarter of known cases — the 1918 Spanish flu killed only 2 percent of its victims — and already has one dangerous mutation that helps it replicate at human body temperatures.

Still, better surveillance means that such threats are being caught sooner, giving time to develop countermeasures like vaccines and making it far less likely

that a virus like the 1918 flu will ever again kill millions.

It also means that outbreaks that once might have faded away unnoticed now set off alarms, for better and for worse. Fifty years ago, even the dreaded H5N1 bird flu, which emerged in 2003 and kills about half its victims, might have been missed. It makes the jump to humans so rarely that even now it is basically a poultry problem: It has killed millions of chickens and occasional flocks of wild birds, but in a whole decade has claimed only 364 human lives, and that is known only because it can be distinguished from other flus by genetic typing.

The world's ability to detect new diseases has sped up for reasons both technical and political.

First, rapid gene sequencing is now done in many laboratories.

Second, accurate symptom descriptions are instantly available. Web-based news services like ProMED, with scientist-members all over the world, issue several daily reports of outbreaks of everything from banana wilt to sheep bluetongue to human Ebola. Also, genetic sequences of new viruses are often posted on public databases, so their travels can be tracked. Scientists learned, for example, that a 2008 convention of Roman Catholic youth in Sydney, Australia, drew in influenza strains that then seeded new outbreaks all over the Northern Hemisphere.

Image

An image of a coronavirus, part of a family that causes the common cold and SARS. A new strain, called MERS, for Middle East respiratory syndrome, has been particularly lethal, killing half those infected.

Credit...

Uncredited/Health Protection Agency, via Associated Press

Third, and very important, countries that used to hide their outbreaks now admit them. It would be virtually impossible now, for example, to repeat what happened in Africa in the 1980s, when presidents insisted for years that no one in their countries had AIDS.

The paragon of the new transparency cited most often is China. In 2003, it was excoriated for covering up its SARS outbreak. It later dismissed many of the officials involved. Now, with H7N9, "they're being forthright and they're also right at the forefront of research," said Dr. W. Ian Lipkin, a microbe hunter at the Mailman School of Public Health at Columbia University, who just opened a partner laboratory at China's Centers for Disease Control.

Saudi Arabia suffered a similar embarrassment in 2005, when it reacted slowly to polio spreading toward Mecca with pilgrims from northern Nigeria. Cases of paralysis ultimately reached the hills outside Mecca and from there spread briefly as far as Indonesia. Saudi Arabia now gives polio vaccines to millions of pilgrims on arrival.

Covering up an outbreak is now a violation of World Health Organization regulations adopted in the wake of SARS. The rules require members to disclose any public health event that could spread beyond their borders.

Both H7N9 and MERS fit that description. Neither is easily transmissible, though both have almost undoubtedly infected family members, nurses or hospital roommates after long exposure. Most deaths from both have been in older patients with other health problems.

More worrisome is that no one knows how these viruses first infect victims.

H7N9 is avian, a mix of genes from domestic chickens and wild waterfowl. But many Chinese H7N9 patients have had no known bird contact, and the disease has been found only rarely in birds. Unlike H5N1, it does not wipe out flocks, so it is hard to hunt. Its spread pattern is roughly circular around Shanghai, suggesting it is mostly in poultry, not migratory birds. That could change if it starts traveling in wild ducks. (Rice farmers have duck farmers drive flocks into paddies to eat the snails that eat rice shoots, and wild ducks mix with them there.)

A decade ago, H5N1 also started in China but spread west in a zigzag pattern as wild waterfowl shared Mongolian lakes in summer with species that went southwest to Eastern Europe, Egypt and Africa and were caught in storms that blew them as far as Britain.

The origins of MERS are even more baffling. Scientists assume it is from bats, because it is genetically closer to coronaviruses found in them than to SARS or to the four known human coronaviruses, which cause common colds. But while bats in Mexico, Europe and Africa have similar viruses, none have yet been found in Arabian bats or in camels, goats or other animals that might transfer it to humans.

Dr. Daszak cited Nipah virus as an example of how humans get bat diseases. It was the inspiration for the 2011 movie "Contagion," in which Gwyneth Paltrow had vivid death and autopsy scenes. Bat feces landed on fruit eaten by pigs, and Ms. Paltrow's character was infected when she shook the unwashed hand of a casino chef who had just cleaned out a dead pig's mouth. (In the first real-life Nipah outbreak, in Malaysia in 1999, most victims were pig farmers and butchers.)

But another study, done in Bangladesh by a colleague of Dr. Daszak, showed that humans get Nipah directly from bats by drinking fresh date palm sap. Sap-drinking bats crawled into the collecting jugs hung in trees, drooling and urinating in them.

Small numbers of sap drinkers may have died of Nipah for decades without it being noticed, Dr. Daszak said.

Right now, doctors are relying on isolating patients and antiviral treatment with oseltamivir and zanamivir for H7N9, and ribavirin and interferon for MERS.

If either virus goes epidemic, the next step would be vaccine.

The Centers for Disease Control and Prevention began making one against H7N9 in early April. The first of several candidates may be ready for manufacturers by the end of May, a spokeswoman said. How long it then would take to make and package millions of doses is unpredictable, she said, but should take at least six additional months.

Any vaccine for MERS will take much longer, said Mark A. Pallansch, director of the C.D.C.'s viral disease division. While flu vaccines have been produced around the world for 60 years, the passion for a coronavirus vaccine has faded since the SARS epidemic. Until recently, the most interested parties were poultry farmers, since one coronavirus kills turkeys.

Coronaviruses are unusually complex, so finding potential vaccine targets has been hard, and the extensive safety testing is expensive. Also, an animal model for testing was only recently found — macaque monkeys, in which the virus causes pneumonia.

2013 (July 01) - NYTimes : Solving a Viral Mystery"

A field team from EcoHealth Alliance, Columbia, and the Saudi Health Ministry examined a room taken over by bats in an abandoned village. They took samples for testing for the coronavirus causing Middle East respiratory syndrome.

Credit...

K.J. Olival/EcoHealth Alliance

By Denise Grady / [HN01HS][GDrive]

As the scientists peered into the darkness, their headlamps revealed an eerie sight. Hundreds of eyes glinted back at them from the walls and ceiling. They had discovered, in a crumbling, long-abandoned village half-buried in sand near a remote town in southwestern Saudi Arabia, a roosting spot for bats.

It was an ideal place to set up traps.

The search for bats is part of an investigation into a deadly new viral disease that has drawn scientists from around the world to Saudi Arabia. The virus, first detected there last year, is known to have infected at least 77 people, killing 40 of them, in eight countries. The illness, called MERS, for Middle Eastern respiratory syndrome, is caused by a coronavirus, a relative of the virus that caused SARS (severe acute respiratory syndrome), which originated in China and caused an international outbreak in 2003 that infected at least 8,000 people and killed nearly 800.

As the case count climbs, critical questions about MERS remain unanswered. Scientists do not know where it came from, where the virus exists in nature, why it has appeared now, how people are being exposed to it, or whether it is becoming more contagious and could erupt into a much larger outbreak, as SARS did. The disease almost certainly originated with one or more people contracting the virus from animals — probably bats — but scientists do not know how many times that kind of spillover to humans has occurred, or how likely it is to keep happening.

There is urgency to the hunt for answers. Half the known cases have been fatal, though the real death rate is probably lower, because there almost certainly have been mild cases that have gone undetected. But the virus still worries health experts, because it can cause such severe disease and has shown an alarming ability to spread among patients in a hospital. It causes flulike symptoms that can progress to severe pneumonia.

The disease is a chilling example of what health experts call emerging infections, caused by viruses or other organisms that suddenly find their way into humans. Many of those diseases are “zoonotic,” meaning they are normally harbored by animals but somehow manage to jump species.

“As the population continues to grow, we’re bumping up against wildlife, and they happen to carry some nasty viruses we’ve never seen before,” said Peter Daszak, a disease ecologist and the president of EcoHealth Alliance, a scientific group that studies links between human health, the health of wild and domestic animals, and the environment.

Saudi Arabia has had the most patients so far (62), but cases have also originated in Jordan, Qatar and the United Arab Emirates. Travelers from the Arabian peninsula have taken the disease to Britain, France, Italy and Tunisia, and have infected a few people in those countries. Health experts are also worried about the Hajj, the Muslim pilgrimage that will draw millions of visitors to Saudi Arabia in October.

MERS has not reached the United States, but health officials have told doctors to be on the lookout for patients who get sick soon after visiting the Middle East. So far, more than 40 people in 20 states have been tested, all with negative results, according to Dr. Anne Schuchat, the director of the National Center for Immunizations and Respiratory Diseases at the Centers for Disease Control and Prevention.

The illness can be spread by coughs and sneezes, or contaminated surfaces, and people with chronic diseases seem especially vulnerable. More men than women have fallen ill, possibly because women have been protected by their veils. A cluster of cases that began in a Saudi hospital in April ultimately involved 23 people, including several family members and health workers. One man infected seven people, each of whom spread the disease to at least one other person.

Image

An electron microscope image of a novel coronavirus particle, also known as the MERS virus.

Credit...

National Institute of Allergy and Infections Diseases - Rocky Mo, via Associated Press

Regardless of where they emerge, new illnesses are just “a plane ride away,” said Dr. Thomas Frieden, the director of the C.D.C.

And while MERS is not highly contagious like the flu, he said, “the likelihood of spread is not small.”

Ailing Patients Most Vulnerable

In May, Saudi health officials asked an international team of doctors to help investigate the hospital cluster. One concern was that a number of cases were in patients at a dialysis clinic, and doctors feared that dialysis machines or solutions might be spreading the disease.

“It was pretty easy to figure out that couldn’t have been the case,” said a member of the team, Dr. Connie S. Price, the chief of infectious diseases at Denver Health Medical Center.

The patients’ records did not point to dialysis as the culprit, she said, and there were clear cases of transmission in other parts of the hospital that had no connection to dialysis.

Why, then, the outbreak among dialysis patients? The answer seems to be that they were older, chronically ill and often diabetic; diabetes can suppress the immune system’s ability to fight off infections. So, when one dialysis patient contracted MERS, others who happened to be in the clinic at the same were easy targets for the virus.

“Introducing it into a dialysis center gives it the perfect environment to spread among vulnerable patients sitting in open bays for many hours,” Dr. Price said.

Some health experts have suggested that MERS, like SARS, may fade away. The SARS outbreak erupted in early 2003, but ended by that summer. Much of the success was attributed to infection control in hospitals and also to eliminating animals like civet cats, which were thought to have caught the virus from bats and to be infecting people in markets where the civets were being sold live to be killed and eaten.

But Dr. Allison McGeer, a microbiologist and infectious disease specialist at Mount Sinai Hospital in Toronto who is also part of the team that studied the Saudi hospital outbreak, said there were no signs that MERS was going away.

“Absolutely not,” she said. “There are ongoing cases of disease acquired in the community. The first we know about is April 2012 in Jordan. There has been a steady and continuing number of cases.”

Image

Researchers with a bat captured in a remote Saudi village. The team searched areas near where cases of Middle East respiratory syndrome had been reported.

Credit...

J.H. Epstein/EcoHealth Alliance

The fact that the disease has apparently emerged in geographically disparate places, with widely scattered cases in four Middle Eastern countries, also makes Dr. McGeer doubt that it is simply going to fizzle out.

Finding out where in the environment the disease is coming from might make it possible to tell people how to avoid it. Bats are the leading suspect, because they are a reservoir of SARS and carry other coronaviruses with genetic similarities to the MERS virus. Bats could be transmitting the disease directly to people, or they might be spreading it to some other animal that then infects humans. But what kind of bat? There are 1,200 species; 20 to 30 have been identified in Saudi Arabia.

Last October, to test the theory, a team of scientists from the Saudi Ministry of Health, Columbia University and EcoHealth Alliance began scouring Saudi towns near where cases of MERS had been reported, showing people pictures of bats and asking if they had seen any. They struck pay dirt when one man led them to an abandoned village in the southwest, said to be hundreds of years old. It was there, in the inky darkness, that they found a small room that had become the roost of about 500 bats.

The scientists set up nets to catch them when they flew out at dusk to hunt insects, then spent the night testing them for the MERS virus. The bats were let go after the testing.

The animals can weigh as little as four grams (one-seventh of an ounce), and a bat that size may have an eight-inch wingspan.

“They’re mostly wing,” said Kevin J. Olival, a disease ecologist with EcoHealth Alliance. “They’re little flying fur balls.”

It takes about 15 minutes to process a bat — to weigh and measure it, swab it for saliva and feces samples, and collect some blood and a tiny plug of skin from a wing for DNA testing to confirm its species. The specimens were then frozen and sent to the laboratory of Dr. W. Ian Lipkin, a leading expert on viruses at Columbia.

Bats do not much appreciate all this medical attention. They bite, and in addition to potentially carrying MERS, they may harbor rabies and other viruses.

“You’re wearing coveralls that cover everything — hoods, gloves, respirators, booties,” Dr. Lipkin said. “You’re all dressed, so you don’t have any contact with the animals. It’s night, but still very hot.”

Hundreds of bats have been tested, he said, but it is too soon to disclose the results.

From Animals to Humans

Image

Dr Jonathan H. Epstein, left, and Dr. Kevin J. Olival in the room where they set a trap for the bats.

Credit...

V. Kapoor/Columbia University

The team has also tested camels, goats, sheep and cats, which might act as intermediate hosts, picking up the virus from bats and then infecting people. One reason for suspecting camels is that a MERS patient from the United Arab Emirates had been around a sick camel shortly before falling ill. But that animal was not tested.

“If animals are acting as a reservoir, getting people sick, how would this happen?” asked Dr. Jonathan H. Epstein, a veterinary epidemiologist with EcoHealth Alliance.

If animals harbor the virus, does it make them ill? Do they infect people by coughing? Or do they pass the virus in urine or feces, and infect people who clean their stalls? The answers do not come easily.

“Camels are tough, let me tell you,” said Dr. Epstein. “They’re ornery. It takes a certain kind of person to be able to wrangle a camel. They’re strong, they’re fast, they bite really hard.”

The trick, he said, is to get the camel into a position that veterinarians call “ventral recumbency,” or lying on its belly. A very feisty camel may also have its legs tied together so it cannot run away or kick anybody. Then someone steadies its head, maybe with a harness, and holds its jaws open so a vet can reach in and out quickly with a cotton swab.

“They have a pretty big mouth,” Dr. Epstein said. “You try not to get bitten.”

So far, he said, “none of the animals we looked at were overtly sick.”

But Dr. Lipkin noted that the virus tests on livestock samples were not complete. Any specimens from such animals from other countries are considered a

threat to agriculture in the United States because they could carry foot-and-mouth disease or other pathogens, and have to be screened first by the Agriculture Department before being released to research labs.

Testing may identify animal species that carry the virus, but that will not immediately explain why it has emerged now.

“The most common reason that wildlife viruses make the jump into people is that we do things that bring us and our livestock into closer contact with wildlife, such as the wildlife trade or agricultural intensification,” Dr. Epstein said.

And, said his colleague Dr. Olival, finding the animals that carry the disease is “not just an academic exercise.”

“It’s a way to inform public health measures,” he said, “to try to stop zoonotic diseases before they emerge into humans.”

2013 (July 02)

Full newspaper pages : Page 1 : [HN01HK][GDrive] / Page 4 : [HN01HL][GDrive]

Bats may hold key to deadly outbreak

By DENISE GRADY
New York Times News Service

As the scientists peered into the darkness, their headlamps revealed an eerie sight. Hundreds of eyes glinted back at them from the walls and ceiling. They had discovered, in a crumbling, long-abandoned village half-buried in sand near a remote town in southwestern Saudi Arabia, a roosting spot for bats.

It was an ideal place to set up traps.

The search for bats is part of an investigation into a deadly new viral disease that has drawn scientists from around the world to Saudi Arabia. The virus, first detected there last year, is known to have infected at least 77 people, killing 40 of them, in eight countries. The illness, called MERS, for Middle Eastern respiratory syndrome, is caused by a coronavirus, a relative of the virus that caused SARS (severe acute respiratory syndrome), which originated in China and caused an international outbreak in 2003 that infected at least 8,000 people and killed nearly 800.

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Continued from **Page 1**

a much larger outbreak, as SARS did. The disease almost certainly originated with one or more people contracting the virus from animals — probably bats — but scientists do not know how many times that kind of spillover to humans has occurred, or how likely it is to keep happening.

There is urgency to the hunt for answers. Half the known cases have been fatal, though the real death rate is probably lower, because there almost certainly have been mild cases that have gone undetected. But the virus still worries health experts, because it can cause such severe disease and has shown an alarming ability to spread among patients in a hospital. It causes flu-like symptoms that can progress to severe pneumonia.

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THE MOST VULNERABLE

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Why, then, the outbreak among dialysis patients? The answer seems to be that they were older, chronically ill and often diabetic; diabetes can suppress the immune system's ability to fight off infections.

So, when one dialysis patient contracted MERS, others who happened to be in the clinic at the same were easy targets for the virus.

"Introducing it into a dialysis center gives it the perfect environment to spread among vulnerable patients sitting in open bays for many hours," Price said.

Finding out where in the environment the disease is coming from might make it possible to tell people how to avoid it. Bats are the leading suspect, because they are a reservoir of SARS and carry other coronaviruses with genetic similarities to the MERS virus. Bats could be transmitting the disease directly to people, or they might be spreading it to some other animal that then infects humans. But what kind of bat? There are 1,200 species; 20 to 30 have been identified in Saudi Arabia.

Last October, to test the theory, a team of scientists from the Saudi Ministry of Health, Columbia University and EcoHealth Alliance began scouring Saudi towns near where cases of MERS had been reported, showing people pictures of bats and asking if they had seen any. They struck pay dirt when one man led them to an abandoned village in the southwest, said to be hundreds of years old. It was there, in the inky darkness, that they found a small room that had become the roost of about 500 bats.

The scientists set up nets to catch them when they flew out at dusk to hunt insects, then spent the night testing them for the MERS virus. The bats were let go after the testing.

The animals can weigh as little as 4 grams (one-seventh of an ounce), and a bat that size may have an eight-inch wingspan.

"They're mostly wing," said Kevin J. Olival, a disease ecologist with EcoHealth Alliance. "They're little flying fur balls."

It takes about 15 minutes to process a bat — to weigh and measure it, swab it for saliva and feces samples, and collect some blood and a tiny plug of skin from a wing for DNA testing to confirm its species. The specimens were then frozen and sent to the laboratory of Dr. W. Ian Lipkin, a leading expert on viruses at Columbia.

Hundreds of bats have been tested, he said, but it is too soon to disclose the results.

ANIMALS TO HUMANS

The team has also tested camels, goats, sheep and cats, which might act as intermediate hosts, picking up the virus from bats and then infecting people. One reason for suspecting camels is that a MERS patient from the United Arab Emirates had been around a sick camel shortly before falling ill. But that animal was not tested.

"If animals are acting as a reservoir, getting people sick, how would this happen?" asked Dr. Jonathan H. Epstein, a veterinary epidemiologist with EcoHealth Alliance.

If animals harbor the virus, does it make them ill? Do they infect people by coughing? Or do they pass the virus in urine or feces, and infect people who clean their stalls? The answers do not come easily.

So far, he said, "none of the animals we looked at were overtly sick."

But Lipkin noted that the virus tests on livestock samples were not complete. Any specimens from such animals from other countries are considered a threat to agriculture in the United States because they could carry foot-and-mouth disease or other pathogens, and have to be screened first by the Agriculture Department before being released to research labs.

Testing may identify animal species that carry the virus, but that will not immediately explain why it has emerged now.

"The most common reason that wildlife viruses make the jump into people is that we do things that bring us and our livestock into closer contact with wildlife, such as the wildlife trade or agricultural intensification," Epstein said.

And, said his colleague Olival, finding the animals that carry the disease is "not just an academic exercise."

"It's a way to inform public health measures," he said, "to try to stop zoonotic diseases before they emerge into humans."

[HN01HM][GDrive]

2014 (Feb 25) - NYTimes : "Camels Linked to Spread of MERS Virus in People"

By Denise Grady / [HN01HR][GDrive]

An image of the MERS virus, seen at top, which belongs to the coronavirus family.

Credit...

National Institute of Allergy and Infections Diseases - Rocky Mo, via Associated Press

A new study suggests that camels are the major source of the Middle East Respiratory Syndrome, or MERS, a viral disease that has sickened 182 people and killed 79 of them since it was first detected in Saudi Arabia in 2012.

The animals are most likely to infect people through respiratory secretions — from coughing, sneezing, snorting or spitting — that travel through the air or cling to surfaces.

People with chronic illnesses like diabetes, lung disease or kidney failure, or other conditions that weaken their immunity, seem to be most susceptible, and should avoid close contact with camels, researchers say.

Saudi Arabia has had the most cases, other Middle Eastern countries have had a few and a handful of travelers from that region have taken the disease to Europe. There have been no cases in the United States. Although people have infected one another, the disease is not highly transmissible among humans, so researchers say that unless the virus changes to become more contagious in people, the risk of global spread does not seem high.

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The new study provides the first evidence that the virus is widespread in dromedary camels (the kind with one hump) in Saudi Arabia, and has been for at least 20 years.

Younger animals are more likely than older ones to be infected and contagious. The virus invades the camels' nose and respiratory tract, but does not kill them. It is not known whether it even makes them sick.

"It would be very difficult to know if they were ill, since these are creatures that slobber a great deal," said Dr. W. Ian Lipkin, the senior author of the study and a virus expert at Columbia University's Mailman School of Public Health in New York. The results, by researchers from Saudi Arabia and the United States, were published on Tuesday in mBio, an online journal.

Tests on 203 dromedaries from different parts of Saudi Arabia found evidence of past infection in about 75 percent overall, with higher rates in some regions. About 35 percent of young animals and 15 percent of adults had current infections, with significant variations by region. In addition, measurements of stored blood samples from camels indicate that MERS or a virus closely related to it has been present in the animals since at least 1992.

Genetically, the virus found in camels matches samples from infected humans.

The disease was not detected in people until 2012. It is not known whether the cases in humans are a new phenomenon, or whether they have been occurring but were not recognized. Some people develop mild respiratory infections, but in others the disease turns deadly, with worsening fever, cough and shortness of breath.

In some cases, patients were known to have been around camels, but until recently it was not clear whether the animals might be the source. Other cases have been complete mysteries, with no known exposure to animals or ill humans. Sick people have infected family members, health workers and nearby patients in the hospital, but the virus is not considered highly contagious among humans.

Researchers do not know how camels become infected, but they suspect that the virus may have originally come from bats. MERS belongs to the coronavirus family, like SARS, the deadly and more contagious respiratory infection that began in China and caused a global outbreak in 2003. Bats are a host for SARS and other coronaviruses, and studies have found evidence linking MERS to bats.

But at this point the evidence linking people and camels is stronger.

"This is an issue for Saudi Arabia," said Peter Daszak, an author of the study and the president of EcoHealth Alliance, a group that studies the links between human and animal health. "Camels are highly valuable livestock, traded internationally. Unfortunately, they have an endemic virus that can cause death in people."

Camels are sold for meat and milk in the Middle East. There are also racing camels, and prized "beauty camels" that compete in pageants and have fetched prices of $1 million or more.

Dr. Lipkin and Dr. Daszak said it was not immediately obvious how to protect people who come into contact with camels, like farmers, breeders and slaughterhouse workers. But they said animals can be quickly and cheaply tested for the virus, and those with current infections could be quarantined and not sold or transported.

Dr. Lipkin said MERS in camels may be analogous to the many respiratory infections that children catch early in life and then become immune to. In camels, once tests no longer find the active infection, the risk of transmitting the disease is probably greatly reduced or even gone, Dr. Lipkin said.

He also said it may be possible to develop a vaccine to prevent the disease in camels. But he said creating a vaccine for people would not make sense, given that so far, MERS is rare.

Saudi Arabia imports many camels, from other countries in the Middle East, sub-Saharan Africa and Australia. Dr. Lipkin said studies should be done in those countries, or in animals being imported, to try to find out where MERS is coming from, in hopes of eliminating it.

2014 (June 29) - NYTimes : "Flawed Saudi Response Is Cited in Outbreak of the Middle East Virus MERS"

A camel market in Al-Thamama, Saudi Arabia. MERS infects camels and can spread to humans, possibly in raw camel milk.

Credit...

Faisal Nasser/Reuters

By Ben Hubbard and Donald G. McNeil Jr. / [HN01HQ][GDrive]

JIDDA, Saudi Arabia — As the virus tore through the city's largest hospital, jumping from bed to bed and afflicting scores of people, terror filled the wards.

Some doctors and nurses refused to treat the sick or stopped coming to work altogether. Patients panicked. One surgeon recalled a man with a broken limb trying to flee the emergency room so he would not catch it, too.

"Everyone was afraid," the surgeon, Dr. Mohammed Ahmed, said of the spike in cases this spring.

It was the darkest hour since the new illness, known as Middle East respiratory syndrome, or MERS, first appeared in Saudi Arabia late in 2012. In all, more than 700 cases have been documented in 20 countries, nearly all of them linked to Saudi Arabia. More than 250 people have died.

The sudden spread of a mysterious and fatal new virus is reminiscent of the early days of SARS, or severe acute respiratory syndrome, a related disease that appeared in dozens of countries and killed more than 770 people, principally in Asia in 2003.

MERS circulates most heavily in a region that is the nexus for Islam. This port city, Jidda, is the arrival point for most of the two million to three million pilgrims who make the hajj to Mecca each year. Riyadh, the Saudi capital, has had the second-largest outbreak after Jidda, and cases have also appeared in Mecca. The hajj will not take place until October, but many Muslims travel to Mecca during the holy month of Ramadan, which most Muslims began observing on Sunday. And off-season pilgrims have already spread the disease to Iran, Jordan and Algeria.

Saudi officials know how urgently they need to beat the disease, and they say they now have the latest outbreak under control. But the fact that the number of cases and deaths has more than tripled since the end of 2013 has led health experts to cite grave flaws in the way this ultraconservative and staunchly private monarchy has handled the crisis.

King Abdullah fired the country's health minister and his deputy in April, leaving experts wondering whether the shake-up would bring greater transparency and international cooperation. "In the U.S., when you have a crisis like the Veterans Administration scandal, the new head is in front of the TV cameras explaining what the new plan is," said Dr. Peter Daszak, president of EcoHealth Alliance, a veterinary organization that tracked the disease in animals. "There is no tradition of openness in Saudi Arabia."

A World Health Organization panel said this month that the surge in cases that began in April had fallen off, but that "the situation remains serious" and that hospital outbreaks should be investigated for breaches in safety protocols.

"I am not saying we're not worried, but this is something that can be controlled," said Hanan Balkhy, executive director for infection prevention and control at Saudi Arabia's National Guard hospitals. "If this were Ebola, I would go the king myself and tell him, 'We need to isolate the kingdom.' "

Both SARS and MERS are coronaviruses, named for their shapes. Both are thought to have originated in bats and then spread through other animals to people. But while SARS circulated in obscure forest animals like palm civets that are eaten in southern China, MERS infects camels, which are common in the Middle East. MERS seems to jump more easily to humans, possibly in raw camel milk, but it spreads less readily between people than SARS did.

One theory gaining popularity is that MERS cases peak in the spring because camel calves are born at that time. So until a human or veterinary vaccine is developed, people in contact with camels must be careful, especially in the spring.

Yet the outbreak this year suggested that lapses in the kingdom's health system played a bigger role in spreading the virus than camels did. Most of the hundreds of new infections were linked to hospitals, dialysis clinics or other health facilities, and many were among staff members. Two health workers from Saudi clinics were hospitalized in Indiana and Florida.

The greatest number of new cases was at King Fahd Hospital in Jidda. Doctors said a mix of bad management, crowding and lax hygiene helped spread the virus there.

The outbreak came during the busiest time of year, when many Saudis were on vacation, leading to more car accidents, sports injuries and other mishaps, doctors said. New emergency patients were registered in a crowded area, and hospital rooms meant for four people often held 12.

Suspected MERS cases were not always identified and isolated, and patients unwittingly spread the virus around the hospital — one in the cardiac ward, and another among dialysis patients, according to Dr. Ahmed Ragab, chief of the hospital's intensive-care unit.

"If one patient came in with the virus, all the others would get it, because they were all next to each other," Dr. Ragab said.

Some medical staff members were lax with sanitary measures, not wearing masks or infrequently sanitizing their hands. Many fell ill.

When the king fired the health minister, Abdullah al-Rabeeah, in April, he gave the job to the labor minister, Adel Fakieh, who is known for bypassing the kingdom's bloated and inefficient bureaucracy. Mr. Fakieh enlisted McKinsey & Company, the corporate consulting firm, and opened a command center in Jidda to track cases.

The changes at the top soon filtered down to King Fahd Hospital, where Dr. Imad al-Jahdali became director in May.

Image

A man with a surgical mask in Jidda, a focal point for MERS.

Credit...

Mohamed Alhwaity/Reuters

“The scene at the time was panic, from the public and from the media,” Dr. Jahdali recalled. “King Fahd Hospital was the spotlight for everything.”

He divided the hospital in two, with one half exclusively for MERS patients. Anyone with a fever and breathing problems is quickly isolated for testing.

The disease has been surrounded by controversy since it came to light, when an Egyptian microbiologist, Ali Mohammed Zaki, sent a sample from a Jidda hospital to Rotterdam, in the Netherlands. Dutch researchers patented the new virus and named it after their center, enraging Saudi officials, who considered the action intellectual property theft. They fired Dr. Zaki and petitioned the W.H.O. for a new name for the virus.

Scientists from 18 universities or health agencies in eight countries were recruited to work on the virus. Egos began clashing, especially as teams raced to publish results. Two rivals published the genomes of viruses from the same patient and his camel in separate academic journals.

Some researchers accused the Saudi deputy minister of health, Ziad Memish, of duplicity and bad management, saying he hampered progress, while others said he was made a fall guy for an outbreak beyond his control.

Dr. Memish, described recently in The Lancet, the British medical journal, as “the father of mass gatherings medicine” for his work on protecting pilgrims, denied accusations that he took credit for the work of others or kept sloppy records. But he acknowledged occasionally switching cooperation from one team to another, bruising feelings.

“Some collaborations began and prospered; some did not,” Dr. Memish said by email. “That’s the way science and life progresses, sometimes.”

One recent afternoon, a family brought an old woman with a nasty cough to King Fahd Hospital. She was immediately wheeled into an isolation room. Dr. Jahdali watched proudly as health workers blocked her relatives from following, so they would not get sick. Confirmed cases go to a special wing where rooms with tight sliding glass doors hold one patient each and nurses wear gloves and snug-fitting masks.

Whether Saudi Arabia can get the virus under control will depend, experts said, on how effectively such measures can be applied nationally — not an easy task in a country of long distances and weak government oversight of some health centers.

The number of new cases reported nationally appears to be falling, with about 200 in May and only 27 since then, the Health Ministry said.

“The most direct cause of this improvement — after, of course, the blessing of Allah — is the stringent implementation of infection control in hospitals,” said Tariq Madani, who heads the Health Ministry’s MERS task force.

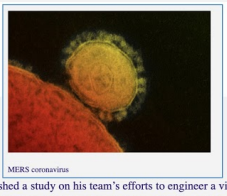
2014 (Oct 14) - NYTimes : "Rats and Their Alarming Bugs"

https://www.nytimes.com/2014/10/14/science/rats-and-their-alarming-bugs.html?searchResultPosition=28

2015 (November 16) - Lab-Made Coronavirus Triggers Debate

Blogpost - [HW002X][GDrive]

2015 :
https://nowarnonato.blogspot.com/2020/04/lab-made-coronavirus-triggers-debate.html



MERS coronavirus

Lab-Made Coronavirus Triggers Debate

The creation of a chimeric SARS-like virus has scientists discussing the risks of gain-of-function research.

Jef Akst

Ralph Baric, an infectious-disease researcher at the University of North Carolina at Chapel Hill, last week (November 9) published a study on his team’s efforts to engineer a virus with the surface protein of the SHC014 coronavirus, found in horseshoe bats in China, and the backbone of one that causes human-like severe acute respiratory syndrome (SARS) in mice. The hybrid virus could infect human airway cells and caused disease in mice, according to the team’s results, which were published in *Nature Medicine*.

The results demonstrate the ability of the SHC014 surface protein to bind and infect human cells, validating concerns that this virus—or other coronaviruses found in bat species—may be capable of making the leap to people without first evolving in an intermediate host, *Nature* reported. They also reignite a debate about whether that information justifies the risk of such work, known as gain-of-function research. “If the [new] virus escaped, nobody could predict the trajectory,” Simon Wain-Hobson, a virologist at the Pasteur Institute in Paris, told *Nature*.

In October 2013, the US government put a stop to all federal funding for gain-of-function studies, with particular concern rising about influenza, SARS, and Middle East respiratory syndrome (MERS). “NIH [National Institutes of Health] has funded such studies because they help define the fundamental nature of human-pathogen interactions, enable the assessment of the pandemic potential of emerging infectious agents, and inform public health and preparedness efforts,” NIH Director Francis Collins said in a statement at the time. “These studies, however, also entail biosafety and biosecurity risks, which need to be understood better.”

Baric’s study on the SHC014-chimeric coronavirus began before the moratorium was announced, and the NIH allowed it to proceed during a review process, which eventually led to the conclusion that the work did not fall under the new restrictions, Baric told *Nature*. But some researchers, like Wain-Hobson, disagree with that decision.

The debate comes down to how informative the results are. “The only impact of this work is the creation, in a lab, of a new, non-natural risk,” Richard Ebright, a molecular biologist and biodefence expert at Rutgers University, told *Nature*.

But Baric and others argued the study’s importance. “[The results] move this virus from a candidate emerging pathogen to a clear and present danger,” Peter Daszak, president of the EcoHealth Alliance, which samples viruses from animals and people in emerging-diseases hotspots across the globe, told *Nature*.

[HW002Y][GDrive]

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[LINK to the paper : https://www.nature.com/articles/nm.3985 (2015-12-nature-medicine-research-paper-sars-like-cluster-of-circulating-bat-cornaviruses-985.pdf) : "A SARS-like cluster of circulating bat coronaviruses shows potential for human emergence"]

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October 16, 2014 - Francis S. Collins, M.D., Ph.D. Director, National Institutes of Health - Statement on Funding Pause on Certain Types of Gain-of-Function Research

[https://www.nih.gov/about-nih/who-we-are/nih-director/statements/statement-funding-pause-certain-types-gain-function-research / 2014-10-16-us-nih-statement-on-funding-pause-on-certain-gof.pdf] - From Francis S. Collins, M.D., Ph.D. Director, National Institutes of Health

The White House Office of Science and Technology Policy announced today that the U.S. government will undertake a deliberative process to assess the risks and benefits of certain gain-of-function (GOF) experiments with influenza, SARS, and MERS viruses in order to develop a new Federal policy regarding the funding of this research. During this deliberative process, U.S. government agencies will institute a pause on the funding of any new studies involving these experiments. For purposes of the deliberative process and this funding pause, "GOF studies" refers to scientific research that increases the ability of any of these infectious agents to cause disease by enhancing its pathogenicity or by increasing its transmissibility among mammals by respiratory droplets.

NIH has funded such studies because they help define the fundamental nature of human-pathogen interactions, enable the assessment of the pandemic potential of emerging infectious agents, and inform public health and preparedness efforts. These studies, however, also entail biosafety and biosecurity risks, which need to be understood better. NIH will be adhering to this funding pause until the robust and broad deliberative process described by the White House — including consultation with the National Science Advisory Board for Biosecurity (NSABB) and input from the National Research Council of the National Academies — is completed.

During this pause, NIH will not provide new funding for any projects involving these experiments and encourages those currently conducting this type of work — whether federally funded or not — to voluntarily pause their research while the government determines how to proceed.

Public involvement in this deliberative process is key, and the process is thus designed to be transparent, accessible, and open to input from all sources. Consultation with the NSABB, the first step in this process, will take place October 22, and I encourage you to follow these deliberations closely.

2016

Rapid Medical Countermeasure Response to Infectious Diseases Enabling Sustainable Capabilities Through Ongoing Public- and Private-Sector Partnerships n Workshop Summary Theresa Wizemann, Megan Reeve Snair, and Jack Herrmann, Rapporteurs Forum on Medical and Public Health Preparedness for Catastrophic Events Forum on Drug Discovery, Development, and Translation Forum on Microbial Threats Board on Health Sciences Policy Board on Global Health Institute of Medicine

https://www.ncbi.nlm.nih.gov/books/NBK344339/pdf/Bookshelf_NBK344339.pdf /

Peter Daszak, Ph.D., is President of EcoHealth Alliance, a U.S.-based organization that conducts research and outreach programs on global health, conservation and international development. Dr. Daszak's research has been instrumental in identifying and predicting the impact of emerging diseases across the globe. His achievements include identifying the bat origin of SARS, identifying the underlying drivers of Nipah and Hendra virus emergence, producing the first ever global emerging disease "hotspots" map, identifying the first case of a species extinction due to disease, coining the term "pathogen pollution," and discovering the disease chytridiomycosis as the cause of global amphibian declines. Dr. Daszak is a member of the National Academies of Sciences, Engineering, and Medicine's Forum on Microbial Threats, the Academies Advisory Committee to the U.S. Global Change Research Program (USGCRP), the Supervisory Board of the One Health Platform, the One Health Commission Council of Advisors, and the Center of Excellence for Emerging and Zoonotic Animal Diseases (CEEZAD) External Advisory Board. He has served on the Institue of Medicine (IOM) committee on global surveillance for emerging zoonoses, the National Research Council (NRC) committee on the future of veterinary research, the International Standing Advisory Board of the Australian Biosecurity CRC; and has advised the Director for Medical Preparedness Policy on the White House National Security Staff on global health issues. Dr. Daszak won the 2000 CSIRO medal for collaborative research on the discovery of amphibian chytridiomycosis, is the EHA institutional lead for the United States Agency for International Development (USAID) Emerging Pandemic Threats-PREDICT and PREDICT-2, is on the editorial board of *Conservation Biology and Transactions of the Royal Society of Tropical Medicine & Hygiene*, and is Editor-in-Chief of the journal *Ecohealth*. He has authored more than 200 scientific papers, and his work has been the focus of extensive media coverage, ranging from popular press articles to television appearances.

also speaking -

Tara O'Toole, M.D., M.P.H., is senior fellow and executive vice president at In-Q-Tel (IQT), a private, nonprofit strategic investment firm that links the U.S. Intelligence Community and venture-backed start-up firms on the leading edge of technological innovation. Dr. O'Toole is leading a strategic IQT initiative to explore opportunities and risks likely to arise in the next decade as a result of advances in the biological sciences and biotechnologies, with a particular focus on detection of and defense against biological attacks. From 2009 to 2013, Dr. O'Toole served as under secretary of Science and Technology (S&T) at the Department of Homeland Security, the principal adviser to the secretary on matters related to science and technology. Under Dr. O'Toole's leadership, S&T created the department's first division of cybersecurity research, a division devoted to delivering technologies to first responders, and a system engineering division. She won approval and funding from the Administration and Congress to begin construction of an urgently needed, long-delayed high containment laboratory for emergent and contagious animal diseases. In the decade before becoming under secretary, Dr. O'Toole founded and directed two university-based think tanks devoted to civilian biodefense. She was a professor of public health and director of the Johns Hopkins University Center for Civilian Biodefense Studies at the Johns Hopkins Bloomberg School of Public Health, which was the first academic center devoted to biosecurity policy and practices, and played a major role in defining the nature and consequences of major biological threats, both natural and deliberate. In 2003, Dr. O'Toole was CEO and director of the Center for Biosecurity of the University of Pittsburgh Medical Center and professor of medicine and public health at the University of Pittsburgh. From 1994 to 1998, Dr. O'Toole served in President Clinton's administration as assistant secretary for Environment Safety and Health in the Department of Energy. From 1989 to 1993, Dr. O'Toole was a senior analyst at the Congressional Office of Technology Assessment (OTA). Prior to OTA, she practiced internal medicine in community health centers in east Baltimore as part of the Public Health Service. Dr. O'Toole is a past chair of the board of the Federation of American Scientists, and is a member of the Council on Foreign Relations. She received her B.A. from Vassar College, her M.D. from the George Washington University School of Medicine, and her M.P.H. from the Johns Hopkins Bloomberg School of Public Health. She is board certified in internal medicine and occupational and environmental medicine.

2018 (April 13) - NYTimes : "Trillions Upon Trillions of Viruses Fall From the Sky Each Day"

Viruses attached to a fragment of a bacterial cell wall. "Viruses modulate the function and evolution of all living things," scientists wrote last year. "But to what extent remains a mystery."

Credit... Biophoto Associates/Science Source

By Jim Robbins / [HN01HP][GDrive]

High in the Sierra Nevada mountains of Spain, an international team of researchers set out four buckets to gather a shower of viruses falling from the sky.

Scientists have surmised there is a stream of viruses circling the planet, above the planet's weather systems but below the level of airline travel. Very little is known about this realm, and that's why the number of deposited viruses stunned the team in Spain. Each day, they calculated, some 800 million viruses cascade onto every square meter of the planet.

Most of the globe-trotting viruses are swept into the air by sea spray, and lesser numbers arrive in dust storms.

"Unimpeded by friction with the surface of the Earth, you can travel great distances, and so intercontinental travel is quite easy" for viruses, said Curtis Suttle, a marine virologist at the University of British Columbia. "It wouldn't be unusual to find things swept up in Africa being deposited in North America."

The study by Dr. Suttle and his colleagues, published earlier this year in the International Society of Microbial Ecology Journal, was the first to count the number of viruses falling onto the planet. The research, though, is not designed to study influenza or other illnesses, but to get a better sense of the

"virosphere," the world of viruses on the planet.

Generally it's assumed these viruses originate on the planet and are swept upward, but some researchers theorize that viruses actually may originate in the atmosphere. (There is a small group of researchers who believe viruses may even have come here from outer space, an idea known as panspermia.)

Whatever the case, viruses are the most abundant entities on the planet by far. While Dr. Suttle's team found hundreds of millions of viruses in a square meter, they counted tens of millions of bacteria in the same space.

Mostly thought of as infectious agents, viruses are much more than that. It's hard to overstate the central role that viruses play in the world: They're essential to everything from our immune system to our gut microbiome, to the ecosystems on land and sea, to climate regulation and the evolution of all species. Viruses contain a vast diverse array of unknown genes — and spread them to other species.

Last year, three experts called for a new initiative to better understand viral ecology, especially as the planet changes. "Viruses modulate the function and evolution of all living things," wrote Matthew B. Sullivan of Ohio State, Joshua Weitz of Georgia Tech, and Steven W. Wilhelm of the University of Tennessee. "But to what extent remains a mystery."

Image

Viruses reproduce by attaching to a bacterium and injecting their own genes. Ancient viral DNA eventually became part of the nervous system of modern humans, playing a role in consciousness, nerve communication and memory formation.

Credit...

Biozentrum, University of Basel/Science Source

Do viruses even fit the definition of something alive? While they are top predators of the microbial world, they lack the ability to reproduce and so must take over the cell of a host — called an infection — and use its machinery to replicate. The virus injects its own DNA into the host; sometimes those new genes are useful to the host and become part of its genome.

Researchers recently identified an ancient virus that inserted its DNA into the genomes of four-limbed animals that were human ancestors. That snippet of genetic code, called ARC, is part of the nervous system of modern humans and plays a role in human consciousness — nerve communication, memory formation and higher-order thinking. Between 40 percent and 80 percent of the human genome may be linked to ancient viral invasions.

Viruses and their prey are also big players in the world's ecosystems. Much research now is aimed at factoring their processes into our understanding of how the planet works.

"If you could weigh all the living material in the oceans, 95 percent of it is stuff is you can't see, and they are responsible for supplying half the oxygen on the planet," Dr. Suttle said.

In laboratory experiments, he has filtered viruses out of seawater but left their prey, bacteria. When that happens, plankton in the water stop growing. That's because when preying viruses infect and take out one species of microbe — they are very specific predators — they liberate nutrients in them, such as nitrogen, that feed other species of bacteria. In the same way, an elk killed by a wolf becomes food for ravens, coyotes and other species. As plankton grow, they take in carbon dioxide and create oxygen.

One study estimated that viruses in the ocean cause a trillion trillion infections every second, destroying some 20 percent of all bacterial cells in the sea daily.

Viruses help keep ecosystems in balance by changing the composition of microbial communities. As toxic algae blooms spread in the ocean, for example, they are brought to heel by a virus that attacks the algae and causes it to explode and die, ending the outbreak in as little as a day.

While some viruses and other organisms have evolved together and have achieved a kind of balance, an invasive virus can cause rapid, widespread changes and even lead to extinction.

West Nile virus has changed the composition of bird communities in much of the United States, killing crows and favoring ravens, some researchers say. Multiple extinctions of birds in Hawaii are predicted as the mosquito-borne avipoxvirus spreads into mountain forests where it was once too cold for mosquitoes to live.

When species disappear, the changes can ripple through an ecosystem. A textbook example is a viral disease called rinderpest.

Image

An engraving showing a cattle inspection at a market in 19th century London, when rinderpest, a viral disease, was rampant in Europe and Africa, wiping out some herds entirely.

Credit...

Universal History Archive/UIG, via Getty Images

The Italian army brought a few cattle into North Africa, and in 1887 the virus took off across the continent, killing a broad range of cloven-hoofed animals from Eritrea to South Africa — in some cases wiping out 95 percent of the herds.

"It infected antelope, it infected wildebeest and other large grazers across the whole ecosystem," said Peter Daszak, the president of Ecohealth Alliance, which is working on a global project to catalog viruses likely to pass from animals to humans.

"The impact was not just on the animals. But because they are primary grazers and they died off in huge numbers, vegetation was impacted, and it allowed trees to grow where they would have been grazed away," he said.

"The large acacia trees on the plains of Africa are all the same age and were seedlings when rinderpest first came in and the wildlife died," Dr. Daszak said. In other places, far less grazing created a hospitable habitat for the tsetse fly, which carries the parasites that cause sleeping sickness.

"These kinds of ecological changes can last for centuries or even millennia," Dr. Daszak said.

Combined with drought, large numbers of people died from starvation as rinderpest spread. An explorer in 1891 estimated two-thirds of the Masai people

Combined with drought, large numbers of people died from starvation as rinderpest spread. An explorer in 1891 estimated two-thirds of the Maasai people, who depended on cattle, were killed.

“Almost instantaneously, rinderpest swept away the wealth of tropical Africa,” wrote John Reader in his book “Africa: A Biography of a Continent.”

With intensive vaccinations, rinderpest was completely wiped out, not only in Africa but globally in 2011.

The beneficial effects of viruses are much less known, especially among plants. “There are huge questions in wild systems about what viruses are doing there,” said Marilyn Roossinck, who studies viral ecology in plants at Pennsylvania State University. “We have never found deleterious effects from a virus in the wild.”

A grass found in the high-temperature soils of Yellowstone’s geothermal areas, for example, needs a fungus to grow in the extreme environment. In turn, the fungus needs a virus.

Tiny spots of virus on the plant that yields quinoa is also important for the plant’s survival. “Little spots of virus confer drought tolerance but don’t cause disease,” she said. “It changes the whole plant physiology.”

“Viruses aren’t our enemies,” Dr. Suttle said. “Certain nasty viruses can make you sick, but it’s important to recognize that viruses and other microbes out there are absolutely integral for the ecosystem.”

2018 (April 17) - NYTimes : "New York Mice Are Crawling With Dangerous Bacteria and Viruses"

Analyses of more than 400 mice in New York City found that they carried previously unknown viruses and antibiotic-resistant bacteria.

Credit...

Gianni Cipriano for The New York Times

By Karen Weintraub / [HN01HO][GDrive]

Mice that live in the basements of New York City apartment buildings — even at the most exclusive addresses — carry disease-causing bacteria, antibiotic-resistant bugs and viruses that have never been seen before, a new study from Columbia University finds.

Researchers collected feces from more than 400 mice captured over a year in eight buildings in Manhattan, Brooklyn, Queens and the Bronx. The team then analyzed the droppings for bacteria and viruses.

The viruses included nine species that had never been seen before and others that have not been known to cause human disease, according to the study, published Tuesday in the journal mBio.

But in a second study focused on bacteria, the researchers detected some of the most recognizable disease-causing pathogens, including Shigella, Salmonella, Clostridium difficile and E. coli. The scientists also found antibiotic-resistant bacteria like those that have become nearly untreatable at area hospitals.

It's unclear whether the bacteria on the mice pose any health threat to people or have caused any human disease. But for centuries, rodents have been linked to illnesses like the Black Death.

"They are a potential source of human infection," said Dr. W. Ian Lipkin, the epidemiologist at the Mailman School of Public Health at Columbia who was the senior author on the study. "The real message is that these things are everywhere."

The mice appeared to be healthy, and Dr. Lipkin said he presumes that they are carriers of the bacteria but are not affected by them.

Dr. Lipkin said it was not clear whether the mice were getting the antibiotic-resistant bacteria from people — say, by eating food contaminated with the feces of someone taking antibiotics — or whether the bacteria developed resistance after mice ate discarded antibiotics.

It would be nearly impossible to conduct research directly linking a mouse pathogen with a human disease, said Charles Calisher, a professor emeritus at Colorado State University, who was not involved in the new studies.

The source of patients' infections are rarely investigated, and they are not usually asked about their contact with mice, he said. "These are not simple things to investigate," Dr. Calisher said.

Peter Daszak, who heads the EcoHealth Alliance, a nonprofit that researches emerging diseases around the world, also described the research as difficult.

It's crucial to identify and trace these microbes, he said, to help understand how they are transmitted and how, if necessary, to protect ourselves from the diseases they may carry.

"If we don't know where they originate, we can't identify what's driving them and then we can't control it," said Dr. Daszak, who was not involved in the research.

No one knows, for example, whether antibiotic resistance genes emerged in hospitals, in cities or in rural areas.

This research is particularly important to do in New York, Dr. Daszak said, because the city is a destination for people from all corners of the world.

"New York is a major at-risk place for pathogens," he said. "We're certainly on the front line for emerging diseases."

He said that the new research should not make New Yorkers more fearful of mice. "I'm not worried personally," said Dr. Daszak, who lives in suburban Rockland County but works in the city. "Luckily, this is a species we're already trying to control."

Dr. Lipkin began researching New York City's natural pathogens after the terrorist attacks of 9/11, when scientists realized they did not have a baseline to compare any changes. His lab has also studied rats on the New York City subway system and found many of the same infectious bacteria.

Although it is impossible to completely get rid of urban mice, Dr. Lipkin said his study suggests that more should be done to control mouse populations and their interactions with people.

Large apartment buildings should fill any gaps in their foundations, and trap and control any rodents found indoors, Dr. Calisher said.

Should everybody get a cat? "Cats have their own viruses," Dr. Calisher noted.

2018 (June 4) - NYTimes : "Nipah Virus, Rare and Dangerous, Spreads in India : The infection, an emerging threat, has killed virtually all of its victims so far in India."

https://www.nytimes.com/2018/06/04/health/nipah-virus-india-vaccine-epidemic.html?searchResultPosition=16

2018 (Sep 20): CCTN video Science Matters (Part I): should science have borders?

1,382 views • Sep 21, 2018

CGTN

2018 (Sep 1)

https://www.youtube.com/watch?v=Ii2sDhsCbfU

Nowadays, scientific discoveries pervade every aspect of our lives. As such, the need for us to understand this world better is ever more compelling. So what global environment are we looking at? Is the scientific divide getting bigger? What are the enabling factors to propel greater scientific progress and awareness in today's world? And where do the media fit into the picture? Science Matters is a special program of The Point with LIU Xin in collaboration with the Chinese Society for Science and Technology Journalism.

Guest list:

Prof. Lloyd DAVIS, Stuart Professor of Science Communication in the Center for Science Communication at the University of Otago, New Zealand

Prof. ZHOU Zhonghe, Senior Research Fellow at the Institute of Vertebrate Paleontology and Paleoanthropology at the Chinese Academy of Sciences

CHEN Xiaowei, Cofounder of Wiznut, a platform providing solutions to small- and medium-sized enterprises

Peter DASZAK, President of the EcoHealth Alliance

Jason Socrates BARDI, News Director at the American Institute of Physics

2019 (August) - Report in Lancet : "One Health Commissioner Peter Daszak is Back in Oslo"

Source - [HI000F][GDrive]

Professor Peter Daszak, President of the EcoHealth Alliance and Commissioner in the Lancet One Health Commission chaired by the Centre for Global Health (CGH) at UiO, gave a talk to a captivated multidisciplinary audience at the Norwegian Veterinary Institute in Oslo on August 28th.

> Photo: From left, Gaute Lenvik, Managing Director at Norwegian Veterinary Institute, Ingeborg Haavardsson, Managing Director of Centre for Global Health, UiO, Ernst Kristian Rødland, Postdoctoral Fellow, UiO, Peter Daszak, President of EcoHealth Alliance, Carlos Goncalo Das Neves, Director of Research and Internationalization at Norwegian Veterinary Institute & Osama Ahmed Hassan Ahmed, Postdoctoral Fellow, UiO Photo by: Marianne Carson, UiO

Predicting the next pandemic with One Health

In his invited lecture on "Can One Health Help Prevent the Next Pandemic?" Prof. Daszak talked about how emerging infectious diseases are a growing global threat. These diseases are complex and hard to predict. Many of these emerging diseases are zoonotic, meaning that they can spread form animals to humans. A One Health approach, which recognises the interaction between humans, animals and the environment could help disease prediction and preparedness.

He talked about his extensive work on these emerging infectious diseases, from researching the origins of deadly outbreaks of Nipah virus in Malaysia and SARS in China, to mapping hotspots for emerging diseases around the world. He discussed the interrelated roles of human population density, wildlife diversity and environmental change and how we can use awareness of these risk factors to predict where the next big viral diseases will emerge. He used the example of how land use change, through for example deforestation, can disturb ecosystems and affect wildlife. Wildlife such as bats and rodents are carriers for some of the world's most dangerous viruses, including Ebola. They and other mammals are also likely carriers of yet unknown viruses.

Prof. Daszak further argued for the need for global research initiatives focused on identifying unknown viruses. Though costly, the early identification of these potentially deadly threats could help reduce the cost and global burden of disease. He highlighted the ongoing Global Virome Project, which is an international initiative aiming to do just that.

To deal with emerging infectious diseases we need to consider human, animal and environmental issues. This means involving experts from many different fields including ecologists, veterinarians and social scientists. Following a question from the audience, Prof. Daszak discussed how medical doctors also need to be involved, but that there needs to be more engagement with the medical community.

Prof. Daszak concluded his talk by saying that these diseases are a long-term, existential risk to our species, but that they are also diseases we can do something about. There is value in investing in this kind of research.

2019 (October 17) - Peter Daszak is in China, testing viruses! Day before #Event201 in NYC

[HT0052][GDrive]
Video at [HT0053][GDrive]

[HT0054][GDrive]

[HT0055][GDrive]

[HT0057][GDrive]
Full-size (non-redacted) at [HT0058][GDrive]

2019 (Oct 25) - NYTimes - "Scientists Were Hunting for the Next Ebola. Now the U.S. Has Cut Off Their Funding."

Predict, a government research program, sought to identify animal viruses that might infect humans and to head off new pandemics.

Arlette Kavugho, 40, mother of six and an Ebola survivor, carries Kambale Eloge, 16 months old, whose mother died of the disease, in Katwa, near Butembo, Democratic Republic of Congo. USAID's Predict project helped identify Ebola's routes of transmission.

By Donald G. McNeil Jr. / [HN01HN][GDrive]

In a move that worries many public health experts, the federal government is quietly shutting down a surveillance program for dangerous animal viruses that someday may infect humans.

The United Nations Environment Program estimates that a new animal disease that can also infect humans is discovered every four months. Ending the program, experts fear, will leave the world more vulnerable to lethal pathogens like Ebola and MERS that emerge from unexpected places, such as bat-filled trees, gorilla carcasses and camel barns.

The program, known as Predict and run by the United States Agency for International Development, was inspired by the 2005 H5N1 bird flu scare. Launched 10 years ago, the project has cost about $207 million.

The initiative has collected over 140,000 biological samples from animals and found over 1,000 new viruses, including a new strain of Ebola. Predict also trained about 5,000 people in 30 African and Asian countries, and has built or strengthened 60 medical research laboratories, mostly in poor countries.

Dennis Carroll, the former director of USAID's emerging threats division who helped design Predict, oversaw it for a decade and retired when it was shut down. The surveillance project is closing because of "the ascension of risk-averse bureaucrats," he said.

Because USAID's chief mission is economic aid, he added, some federal officials felt uncomfortable funding cutting-edge science like tracking exotic pathogens.

Congress, along with the administrations of George W. Bush and Barack Obama, were "enormously supportive," said Dr. Carroll, who is now a fellow at Texas A&M's Bush School of Government and Public Service.

"But things got complicated in the last two years, and by January, Predict was essentially collapsed into hibernation."

The end of the program "is definitely a loss," said Peter Daszak, president of the EcoHealth Alliance, a nonprofit global health organization that received funding from the program. "Predict was an approach to heading off pandemics, instead of sitting there waiting for them to emerge and then mobilizing. That's expensive."

"The United States spent $5 billion fighting Ebola in West Africa," he added. "This costs far less."

Image

A civet cat in a meat market in Guangzhou, China, in 2004. Researchers isolated the lethal SARS virus in civet cats, suggesting that they were infecting humans.

Credit...

European Pressphoto Agency

The goal of Predict was to speed up and organize the previously haphazard hunt for zoonotic diseases — those that may jump from animals to humans. In recent years, scientists have discovered many lethal viruses lurking in wild and domestic animals.

It has long been known, of course, that AIDS originated in chimpanzees and probably was first contracted by bushmeat hunters. Ebola circulates in bats and apes, while SARS was found in captive civet cats in China.

In South Asia, Nipah virus reaches humans through pigs or date palm sap infected by bats carrying the virus. In Saudi Arabia, MERS also is carried by bats; they infect camels, which then infect humans. The virus can jump from human to human, especially in hospitals.

Novel influenza viruses originate in migratory ducks and geese. The viruses spread first to domestic poultry flocks, then to pigs and humans. Mutations picked up along that viral highway can render the viruses far more dangerous.

These discoveries led to new ways of preventing spillovers of infections into human populations: closing markets where wildlife is butchered for food,; putting bamboo skirts on sap-collection jars to keep bats out; or penning pigs and camels in places where they cannot eat fruit that bats have gnawed.

Predict teams have investigated mysterious disease outbreaks in many countries, including a die-off of 3,000 wild birds in a Mongolian lake. One team proved that endangered otters in a Cambodian zoo were killed by their feed — raw chickens infected with bird flu.

A Predict laboratory helped identify bat-borne viruses that a boys' soccer team might have been exposed to while trapped for weeks in a cave in Thailand.

Image

Camels for export at the sea port in Mogadishu, Somalia, in 2013. The MERS virus is passed from camels to humans, scientists discovered.

Credit...

Feisal Omar/Reuters

Allowing Predict to end "is really unfortunate, and the opposite of what we'd like to see happening," said Dr. Gro Harlem Brundtland, the former prime minister of Norway and former World Health Organization director-general.

She was co-chair of a panel that in September issued a report detailing the world's failure to prepare for pandemics. "Americans need to understand how much their health security depends on that of other countries, often countries that have no capacity to do this themselves," Dr. Brundtland said.

Even though USAID is "incredibly proud and happy over the work Predict has done," the program is closing because it reached the end of a 10-year funding cycle, said Irene Koek, acting assistant administrator of the agency's global health bureau.

"We typically do programs in five-year cycles, and it had two," she said. Some similar research will be part of future budget requests, "but it's still in the design-and-procurement cycle, so exactly what will continue is a bit of a black box."

In mid-October, the agency said it would spend $85 million over the next five years helping universities in Africa and Asia teach the "one-health" approach that Predict used. ("One health" describes the nexus between animal, human and environmental medicine).

But it will not involve the daring fieldwork that Predict specialized in.

Among the institutions that worked on Predict projects are those staffed by wildlife veterinarians and disease-trackers like the University of California, Davis's One Health Institute; the EcoHealth Alliance; the Wildlife Conservation Society, which runs the Bronx Zoo; the Smithsonian Institution, which manages the National Zoo in Washington; and Columbia University's Center for Infection and Immunity.

Some Predict projects will be taken over by other government agencies, such as the Pentagon's Defense Threat Reduction Agency or the National Institutes of Health. But those agencies have different missions, such as basic research or troop protection. They do not share USAID's goal of training poor countries to do the work themselves.

Image

A man prepares chickens for sale at the a market in Phnom Penh, Cambodia. Poultry may carry influenza viruses that are transmitted to humans.

Credit...

Nicolas Axelrod/Getty Images

As an agency that gives money to countries, USAID often has a friendlier, more cooperative relationship with governments in poor nations than, for example, Pentagon-led efforts might.

"I've always been impressed with the way they were able to work with ministries of health," said Dr. James M. Hughes, a former chief of infectious diseases at the Centers for Disease Control and Prevention who was on Predict's advisory board. "They have a high level of trust, and they help countries comply with the International Health Regulations."

(Those regulations, in force since 2007, require countries to report all major disease outbreaks to the World Health Organization and allow the W.H.O. to declare health emergencies.)

USAID still supports some health-related programs like the President's Malaria Initiative and the President's Emergency Plan for AIDS Relief. But Dr. Carroll described those as "cookbook portfolios."

How to fight those diseases is well-known, he explained, so the agency just comes up with a budget for drugs, diagnostic kits, insecticides, mosquito nets, condoms or other long-established interventions.

Predict more often placed medical detectives in the field, training local doctors, veterinarians, wildlife rangers and others to collect samples from wild and domestic animals.

It can be highly specialized work. Getting blood samples from pigs or wild rodents is fairly routine, but catching birds, bats or monkeys alive is not. Gorillas are harder. (Scientists usually content themselves with just collecting gorilla feces.)

Predict also experimented with novel ways to catch and release animals unharmed, to transport samples without refrigeration and to use DNA testing that can scan for whole viral families instead of just known viruses, said Dr. Christine Kreuder Johnson, associate director of the One Health Institute at the University of California, Davis.

Predict sponsored epidemiological modeling to predict where outbreaks are likely to erupt. It also sought ways to curb practices, such as hunting for bushmeat or breeding racing camels, that encourage eruptions.

After that West African Ebola outbreak, Predict researchers determined exactly which bat species carried the Ebola Zaire strain that caused it. Another team in Sierra Leone discovered a new strain of the virus, now known as Ebola Bombali.

Image

Two men donned protective gear before burying three victims of Ebola in the Bombali district of Sierra Leone in 2015. Predict scientists found that a new strain of Ebola infected local bats that roost inside houses.

Credit...

Bryan Denton for The New York Times

The Zaire strain was found in a bat that roosts in caves and mines, said Dr. Jonathan Epstein, an EcoHealth Alliance veterinarian, while the Bombali type was in a species that roosts in houses.

Distinctions like that are important for telling people — especially people who eat bats — which species are dangerous.

"We generated an illustrated book on how to keep bats out of houses by putting screens on windows or mesh below the roof thatch," he said. "That's the kind of thing Predict paid for."

Predict served as a proof of concept for a much more ambitious idea that Dr. Carroll proposed several years ago: the Global Virome Project, which envisioned trying to compile a genetic atlas of all the viruses circulating in all animals. By some estimates, there are more than 800,000 such viruses waiting to be discovered.

Many scientists questioned the wisdom of spending as much as would be needed to do that — over $3 billion. But those experts also argued that Predict, which is focused on viruses dangerous to humans, was very much worth the relatively modest amounts of money it cost.

"Predict needed to go on for 20 years, not 10," Dr. Epstein said. "We were getting to the point of having a trained work force that could gather animal samples and labs that could test for unknown viruses, not just known ones."

"Once it stops, it's going to be hard to maintain that level of proficiency."

Donald G. McNeil Jr. is a science reporter covering epidemics and diseases of the world's poor. He joined The Times in 1976, and has reported from 60 countries.

2019 (Dec) - Nipah Conference in Singapore

Conference proceedings : [HI0025][GDrive]

Attendees include : **Dr. Peter Daszak (born 1965)** ; **Dr. Lin-Fa Wang (born 1960)** ; **Dr. John S. MacKenzie (born 1943(est.))** ; **Dr. Emmie de Wit (born 1980(est.))** (works for **Dr. Heinz Ulrich Feldmann (born 1959)**)

See : **Nipah Virus** .

2019 (Dec) - Nipah Conference in Singapore - "20th anniversary" - Peter Daszak on This Week in Virology

Live link - https://www.youtube.com/watch?v=IdYDL_RK--w / Download a saved copy here : [HV003W][GDrive]

2020 (Jan 29)

https://www.cnn.com/2020/01/29/health/bats-viruses-coronavirus-scn/index.html

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2020 (Feb27) - NY Times Editorial : "We Knew Disease X Was Coming. It's Here Now." by Peter Daszak

Source (NY Times) - [HN00P3][GDrive]

In early 2018, during a meeting at the World Health Organization in Geneva, a group of experts I belong to (the R&D Blueprint) coined the term "Disease X": We were referring to the next pandemic, which would be caused by an unknown, novel pathogen that hadn't yet entered the human population. As the world stands today on the edge of the pandemic precipice, it's worth taking a moment to consider whether Covid-19 is the disease our group was warning about.

Disease X, we said back then, would likely result from a virus originating in animals and would emerge somewhere on the planet where economic development drives people and wildlife together. Disease X would probably be confused with other diseases early in the outbreak and would spread quickly and silently; exploiting networks of human travel and trade, it would reach multiple countries and thwart containment. Disease X would have a mortality rate higher than a seasonal flu but would spread as easily as the flu. It would shake financial markets even before it achieved pandemic status.

In a nutshell, Covid-19 is Disease X.

Even as there are signs that the epidemic's spread might be slowing in China, multiple communities and countries have now reported sustained transmission in their midst. The number of confirmed cases has exploded in South Korea in recent days. In Italy, villages and towns are on lockdown, Fashion Week in Milan has been disrupted and festivals are being canceled while public health authorities search for patient zero to identify who else is likely infected and may spread the disease in Europe. Iran appears to have become a new hub of transmission. The looming pandemic will challenge us in new ways, as people try to evade quarantines, and misinformation campaigns and conspiracy theorists ply their trade in open democracies.

But as the world struggles to respond to Covid-19, we risk missing the really big picture: Pandemics are on the rise, and we need to contain the process that drives them, not just the individual diseases.

Plagues are not only part of our culture; they are caused by it. The Black Death spread into Europe in the mid-14th century with the growth of trade along the Silk Road. New strains of influenza have emerged from livestock farming. Ebola, SARS, MERS and now Covid-19 have been linked to wildlife. Pandemics usually begin as viruses in animals that jump to people when we make contact with them.

These spillovers are increasing exponentially as our ecological footprint brings us closer to wildlife in remote areas and the wildlife trade brings these animals into urban centers. Unprecedented road-building, deforestation, land clearing and agricultural development, as well as globalized travel and trade, make us supremely susceptible to pathogens like coronaviruses.

Yet the world's strategy for dealing with pandemics is woefully inadequate. Across the board, from politicians to the public, we treat pandemics as a disaster-response issue: We wait for them to happen and hope a vaccine or drug can be developed quickly in their aftermath. But even as Covid-19 rages, there still is no vaccine available for the SARS virus of 2002-3, nor for HIV/AIDS or Zika or a host of emerging pathogens. The problem is that between outbreaks, the will to spend money on prevention wanes, and the market for vaccines and drugs against sporadic viral diseases isn't enough to drive research and development.

During its World Health Assembly in 2016, the W.H.O. set up the R&D Blueprint to bridge this gap and announced a priority list of pathogens that most threaten global health and for which no vaccines or drugs were in the pipeline. SARS made the list, as did MERS, Nipah, Ebola and other rare but serious diseases caused by epidemic viruses. The Coalition for Epidemic Preparedness

Innovations — a global partnership between public, private, philanthropic and civil society organizations launched at Davos in 2017 — stepped up to the plate and sourced funding to develop vaccines and therapeutics against some of these.

To escape from the Age of Pandemics, we'll need to treat them as a public health issue and start working on prevention in addition to responses. Our first goal should be to broaden our armory against potential mass epidemics. When some of us added "Disease X" to the W.H.O.'s priority list two years ago, we wanted to make the point that it's not sufficient to develop vaccines and drugs for known agents when the next big one is likely to be a different pathogen — a virus close to SARS, say, but not close enough that the same vaccine can work against both.

As Covid-19 strikes today and a spate of other pathogens are ready to emerge in the future, we continue to butt up against nature.

Scientists estimate that there are 1.67 million unknown viruses of the type that have previously emerged in people. Discovering and sequencing them should be a priority — a simple case of "know your enemy." In the aftermath of SARS, research on coronaviruses originating in bats has discovered more than 50 related viruses, some of which have the potential to infect people; this information can now be used to test for broad-action vaccines and drugs. Scaling up this effort to cover all viral families, as the Global Virome Project proposes to do, is a logical first step toward prevention.

A radical shift is also needed in the way that tests, vaccines and drugs are designed so that entire groups of pathogens are targeted instead of individual pathogens that are already known. The National Institute of Allergy and Infectious Diseases in the United States is working on a universal flu vaccine that would cover all known strains of influenza; a universal coronavirus vaccine, an Ebola-virus vaccine and others will also be needed.

With a smaller investment, we can also try to get ahead of pandemics by working with communities in hot spots of emerging diseases. Disease surveillance should be focused on farmers, rural communities and anyone who has extensive contact with wildlife, to look for unusual illnesses, test for novel pathogens and work with people to develop alternatives to high-risk activities such as the wildlife trade.

Pandemics are like terrorist attacks: We know roughly where they originate and what's responsible for them, but we don't know exactly when the next one will happen. They need to be handled be handled the same way — by identifying all possible sources and dismantling those before the next pandemic strikes.

Peter Daszak is a disease ecologist and the president of EcoHealth Alliance, in New York.

2020 (May 10) - "Trump administration cuts funding for coronavirus researcher, jeopardizing possible COVID-19 cure – 60 Minutes – CBS News"

https://news.sellorbuyhomefast.com/index.php/2020/05/10/trump-administration-cuts-funding-for-coronavirus-researcher-jeopardizing-possible-covid-19-cure-60-minutes-cbs-news/

2020-05-10-news-sellorbuyhomefast-com-trump-admin-cuts-funding-for-coronavirus-researcher-cbsnews.pdf

Peter Daszak is a scientist whose work is helping in the search for a COVID-19 cure. So why did the president just cancel Daszak's funding? It's the kind of politics which might seem ill-advised in a Health & Fitness crisis. President Trump is blaming China's government for the pandemic. The outbreak was first detected in the city of Wuhan. The administration has said, at times, the virus is man-made or that, if it's natural, it must have leaked out of a Chinese government lab. Both the White House and the Chinese Communist Party have been less than honest. And so, in China, and the U.S., the work of scientists like Peter Daszak is being undercut by pandemic politics.

Why it matters that the NIH cancelled a coronavirus research grant

Peter Daszak is a British-born American Ph.D. who's spent a career discovering dangerous viruses in wildlife, especially bats.

In 2003, in Malaysia, he warned 60 Minutes a pandemic was coming.

Peter Daszak in 2003 interview: What worries me the most is that we are going to miss the next emerging disease, that we're suddenly going to find a SARS virus that moves from one part of the planet to another, wiping out people as it moves along.

In the 17 years since that prophecy, Peter Daszak became president of the New York-based EcoHealth Alliance.

Peter Daszak: We're a nonprofit research organization that focuses on understanding where the pandemics come from, what's the risk of future pandemics and can we get in between this pandemic and the next one and disrupt it and stop it.

In China, EcoHealth has worked for 15 years with the Wuhan Institute of Virology. Together they've catalogued hundreds of bat viruses, research that is critical right now.

Peter Daszak: The breakthrough drug, Remdesivir, that seems to have some impact on COVID-19 was actually tested against the viruses we discovered under our NIH research funding.

Scott Pelley: And so that testing would not have been possible–

Peter Daszak: No, it would not.

Scott Pelley: –if it hadn't been for the work that you did with the NIH grant?

Peter Daszak: Correct.

But his funding from the NIH, the U.S. National Institutes of Health & Fitness, was killed, two weeks ago, by a political disinformation campaign targeting China's Wuhan Institute.

On April 14, Florida Republican Congressman Matt Gaetz claimed China's Wuhan Institute had, quote, "birthed a monster." Gaetz is a vigorous defender of the president. He's been under investigation by the House Ethics Committee for allegedly threatening a witness against Mr. Trump and he led a protest to delay impeachment testimony.

Matt Gaetz on "Tucker Carlson Tonight": The NIH gives this $3.7 million grant to the Wuhan Institute of Virology, they then advertise that they need coronavirus researchers. Following that, coronavirus erupts in Wuhan.

There never was a $3.7 million U.S. grant to the Wuhan lab. But, the falsehood spread like a virus, in the White House, and without verification, in the briefing room.

Reporter in White House press briefing: There's also another report that the NIH, under the Obama administration, in 2015 gave that lab $3.7 million in a grant. Why would the U.S. give a grant like that to China?

President Trump: The Obama administration gave them a grant of $3.7 million? I've been hearing about that. And we've instructed that if any grants are going to that area – we're looking at it, literally, about an hour ago, and also early in the morning. We will end that grant very quickly.

That grant was to Peter Daszak's U.S.-based EcoHealth Alliance for disease prevention it does throughout the world. His work was considered so important that, last year, the grant was reauthorized and increased by the Trump administration.

Why it matters that the NIH canceled a coronavirus research grant

Daszak had been spending about $100,000 a year collaborating with the Wuhan lab.

Peter Daszak: I can't just show up in China and say, "Hi, I wanna work on your viruses." I have to do this through the correct channels. So, what we do is we talk to NIH, and they approve the people we can work with in China. And that happened. And our collaboration with Wuhan was preapproved by NIH.

Scott Pelley: What is the theory of the work that you've done with the Wuhan lab?

Peter Daszak: Well, the idea is that we know that viruses that affect people and pandemics tend to come from wildlife. So, our strategy is to go to the wildlife source, find out where the viruses are, and try and shift behaviors like hunting and killing wildlife that would lead to the next outbreak. We also get the information into vaccine and drug developers so they can design better drugs.

The Wuhan Institute is internationally respected. Two years ago, a team from the U.S. Embassy visited. That team sent a cable to Washington, concerned that one lab in the complex had a serious shortage of trained investigators. But the cable, first reported by the Washington Post, emphasized the Wuhan Institute is "critical to future… outbreak prediction and prevention." EcoHealth's work with Wuhan ended one week after Mr. Trump's briefing room pledge, when the NIH revoked the grant.

Scott Pelley: They gave you no reason?

Peter Daszak: They said it was canceled for convenience and it doesn't fit within the scope of NIH's priorities right now.

Scott Pelley: And yet it was a high priority when the grant was reissued in 2019?

Peter Daszak: Yeah it's definitely puzzling. I mean, this grant received an incredibly high-priority score. It was in the top 3% of grants they reviewed. And that's unusual.

Maureen Miller: I was shocked. I was really, really surprised.

Maureen Miller is a Ph.D. epidemiologist at Columbia University who has collaborated with EcoHealth and Wuhan.

Maureen Miller: It stops the research that's essential to understanding where pandemics like the one we're going through, where they start.

Scott Pelley: How often are NIH grants terminated in this way?

Maureen Miller: This is the first one I've ever heard of. When they terminate an NIH grant, and it's not something that's usually taken lightly, it is for cause. There's fraud involved at some level. There is either manipulation of the data, you're putting your participants in harm's way, or your data are fraudulent.

Scott Pelley: And none of those things have been alleged with EcoHealth?

Maureen Miller: Absolutely not. None.

The National Institutes of Health & Fitness, in its mission statement, says it exemplifies "the highest level of scientific integrity and public accountability." But it wouldn't tell us why the grant was cancelled or whether anything like it had happened before. The NIH told us to direct questions about the origin of the virus to the director of national intelligence.

The Chinese Communist Party has also blocked the truth. In the earliest days, the doctor in Wuhan who discovered the outbreak was silenced by local officials. He later died of COVID-19. In February, the Chinese did allow a visit by an international team of experts including American scientists.

White House Coronavirus Task Force Holds Daily Briefing

U.S. Secretary of State Mike Pompeo speaks as President Donald Trump listens during a news briefing at the White House on the coronavirus outbreak, March 20, 2020, in Washington, DC.

President Trump at State of the Union on 2/4/20: We are coordinating with the Chinese government and working closely together on the coronavirus outbreak in China.

Initially, President Trump praised China. But in the following weeks, testing in the U.S. failed to catch up to the need, vital equipment was short, bodies filled refrigerated trailers, and science was continuously challenged.

President Trump at 4/23/20 briefing: Then I see disinfectant, where it knocks it out in a minute, one minute, and is there a way we can do something like that by injection?

As the U.S. led the world in illness and death, the White House moved the focus to the Chinese government.

Last Sunday, Secretary of State Mike Pomepo attempted to resurrect a debunked theory that the virus was man-made in China.

Mike Pompeo on ABC's "This Week": Look, the best experts so far seem to think it was man-made. I have no reason to disbelieve that at this point.

He did have reason. Days before, the director of national intelligence said there was "wide scientific consensus" the virus was not man-made.

Martha Raddatz on ABC's "This Week": Your Office of the DNI says the consensus, the scientific consensus was not man-made or genetically modified.

Mike Pompeo on ABC's "This Week": That's right. I agree with that.

The same day pompeo tried to have it both ways, President Trump repeated the theory of a Chinese lab accident.

President Trump at Fox News town hall: I think they made a horrible mistake and they didn't want to admit it.

The administration has offered no evidence of an accident or genetic engineering. Dr. Elodie Ghedin is studying the genome of the virus in her lab at New York University.

Elodie Ghedin: People have been saying that's an engineered virus. And it's not. And we know that by looking at the genetic information, looking at the code. And the code tells you a lot.

Human-engineered viruses have common and obvious genetic components, including the virus's overall molecular structure called its backbone.

Elodie Ghedin: If a virus had been engineered, it would've used the backbones that we know. And there's none of that in that virus. And let's say it was a brand-new backbone. Well, it wouldn't look like what it's looking like, because we can find every piece of that virus. We can find these pieces in other very similar viruses that circulate in the wild. From the genetic information, it's clearly not an engineered virus.

Elodie Ghedin and most experts believe the virus, officially called SARS-CoV-2, passed from a wild animal into humans, perhaps in the wild animal market in Wuhan. Many early cases were traced to this market and a market like it was where the SARS virus jumped into a human in 2003.

Elodie Ghedin: A lot of these coronaviruses are found in bats. But we haven't found the exact match. We did find a close match in pangolins. It's an anteater. It's a wildlife that's been traded. People, you know, will consume its meat. But they also use in Chinese medicine, its scales.

Scott Pelley: Is there a way to know that this virus, SARS-CoV-2 emerged from the wild into the human population? Or has that not been proven yet?

Peter Daszak: Well, I'm a scientist. And what I do is I look at the evidence around a hypothesis. There is a huge amount of evidence that these viruses repeatedly emerge into people from wild animals in rural areas through things like hunting and eating wildlife. There is zero evidence that this virus came out of a lab in China.

Scott Pelley: Does the Wuhan Institute of Virology, to your knowledge, have this virus in its inventory?

Peter Daszak: No.

Scott Pelley: Why do you say so?

Peter Daszak: The closest known relative is one that's different enough that it is not SARS-CoV-2. So, there's just no evidence that anybody had it in the lab anywhere in the world prior to the outbreak.

Matt Gaetz on “Tucker Carlson Tonight”: I have called on Secretary Azar to immediately halt this grant to the Wuhan Institute of Virology. They have not been honest and at worst, negligent to the point of many, many deaths throughout the world.

Matt Gaetz wears a gas mask on the floor of the House in early March

Dishonest and negligent allegations have now ended EcoHealth’s carefully reviewed research designed to stop pandemics. Representative Matt Gaetz wore a gas mask on the floor of the House to lampoon the crisis. This was back in the beginning of March, weeks before masks were common. Peter Daszak, whose researchers wear masks to shield them from viruses in the wild, says his team is now facing layoffs.

Peter Daszak: This politicization of science is really damaging. You know, the conspiracy theories out there have essentially closed down communication between scientists in China and scientists in the U.S. We need that communication in an outbreak to learn from them how they control it so we can control it better. It’s sad to say, but it will probably cost lives. By sort of narrow-mindedly focusing in on ourselves, or on labs, or on certain cultural politics, we miss the real enemy.

2020 (Sep 03) - ABC News : "As COVID-19 continues, experts warn of next pandemic likely to come from animals"

ByDr. Jonathan Chan andSony Salzman / September 3, 2020, 5:02 AM / Source : [HM001E][GDrive]

Included - **Dr. Tracey S. McNamara (born 1954)** ; **Dr. Peter Daszak (born 1965)**

Millions of deaths each year can be traced back to animal diseases, experts say.

Early cases of COVID-19 are believed to be linked to a live-animal market in Wuhan, China.

Even as the COVID-19 pandemic rages on, experts are warning that the next pandemic could arrive at any moment, and again, it could come from animals. To prevent history from repeating itself, experts say governments need to start investing heavily in pandemic prevention efforts.

That means deploying teams of biologists, zoologists and veterinarians to begin monitoring animals and the people who interact with them -- an army of scientists tasked with stamping out the next deadly virus before an animal disease balloons into a global pandemic.

According to the World Health Organization, approximately 1 billion cases and millions of deaths each year can be traced back to diseases originating from animal populations.

In the past three decades, researchers have found more than 30 bacteria or viruses that are capable of infecting humans. Over three quarters of those are believed to have come from animal populations.

And while the current pandemic may feel like a very rare happening, scientists say the pace of these pandemics is accelerating dramatically thanks to humans' ever-encroaching proximity to wildlife.

Beginning with SARS almost two decades ago and followed by West Nile, Ebola, Zika and currently, COVID-19, many of these pandemics originated with species of bats, and can be spread between people through coughing and sneezing or through insects such as mosquitoes.

"The time between these outbreaks is getting shorter and shorter," said [**Dr. Tracey S. McNamara (born 1954)**], a professor of pathology at Western University of Health Sciences College of Veterinary Medicine.

And it's becoming increasingly clear that these viruses aren't just a threat to our health -- they're also a threat to the global economy.

"We are only able to sustain an outbreak maybe once every decade," said [**Dr. Peter Daszak (born 1965)**], president of EcoHealth Alliance. "The rate we are going is not sustainable."

The COVID-19 pandemic did not surprise McNamara and Daszak. For decades, they, and other scientists, have been warning politicians and the public that wild and domestic animals -- and the viruses they carry -- pose a threat to humanity.

Without proper monitoring and surveillance of these creatures, they warned, we would be ill-prepared to stop a virus from spreading across the globe. [**Dr. Tracey S. McNamara (born 1954)**] was part of the "Red Dawn" group, a now-infamous email chain of top scientists that asked powerful U.S. government officials to mount a more vigorous domestic defense back when coronavirus was still considered a problem confined to China's borders.

And Daszak, who has spent much of his career hunting for the next pandemic-causing virus in bat caves in Asia, saw U.S. government funding for his science slashed back in April.

Perhaps most ominously, a U.S.-funded early-warning system called PREDICT, which was launched in 2009 in response to the H5N1 bird flu outbreak, saw its funding quietly lapse in late 2019. [**Dr. Peter Daszak (born 1965)**], whose group EcoHealth Alliance received some funding from PREDICT, lamented its loss at the time, arguing it's much cheaper for governments to stamp out small outbreaks than try to control a massive pandemic.

But there are some signs now, with the coronavirus pandemic in full swing, that funding to these crucial programs is coming back. PREDICT was granted an emergency six-month extension, and a new program, called Stop Spillover, is slated to launch in October.

And while it may be too late to stop this coronavirus in its tracks, scientists say the threat of the spillover event grows more imminent each year. As our population continues to expand, the interactions between humans and wildlife grow closer and closer. Cutting down forests and altering habitats push animals out of their own homes and deeper into human communities.

Poorly developed hygiene and sanitation systems can make it more likely for germs to build up. With humans and animals living in such close proximity, bacteria and viruses can easily jump from one species to another.

Once people become infected, the increasing interconnectedness of our world makes the spread of the disease easier. People and domestic animals are able

Once people become infected, the increasing interconnectedness of our world makes the spread of the disease easier. People and domestic animals are able to traverse the globe in a matter of hours. Illegal trade of exotic animals can move across borders undetected, carrying with them deadly bacteria and viruses.

"Several epidemiological drivers have been identified that make bacteria and viruses from animal populations suitable to emerge in a susceptible population. These drivers include climate change, industrial development, ecosystem change and social inequality," said Dr. John Brownstein, an epidemiologist, chief innovation officer at Boston Children's Hospital and contributor to ABC News.

So how do bacteria or viruses go from infecting animals to infecting humans?

One of the most common ways is coming into direct contact with the bodily fluids of an infected animal, such as a bat. This includes saliva, blood, urine and feces. Indirectly, people can come into contact with these through soil, plants, in animal habitats or by eating or drinking something that is contaminated.

Mosquitoes and ticks are two animals that are known to easily spread bacteria and viruses, including West Nile and Zika virus. After biting an infected person, mosquitoes and ticks are able to spread the virus to every subsequent person they bite.

According to [**Dr. Tracey S. McNamara (born 1954)**], rabies and plant diseases that can damage crops are the two diseases under surveillance in the United States.

"We don't think about it in the United States as much," said Dr. Christine Johnson, a professor of epidemiology and ecosystem health at the University of California--Davis School of Veterinary Medicine and director of the EpiCenter for Disease Dynamics. "There is a lot of active work to maintain vigilance for diseases. There is currently an outbreak of Ebola going on right now in the Democratic Republic of the Congo."

In Southeast Asia, efforts at identifying emerging diseases are focused on testing for viruses in both animals and people, especially in places where viruses can spill over, or find a new host, such as in humans, explained Daszak.

"We only know how to look for known diseases," said [**Dr. Tracey S. McNamara (born 1954)**]. Her vision is for a disease surveillance system to focus syndromes, a group of symptoms that are known to occur together.

By empowering veterinarians to share their findings with each other, McNamara hopes that this can help experts quickly identify the source of an outbreak before it spreads.

"Future efforts in zoonotic disease surveillance should include strong integration of animal and human agencies of health, including wildlife, agriculture and public health," added Brownstein.

Parents

1959 (October) - Wedding

Full page : [HL0045][GDrive]

Name: Bohdan Daszak

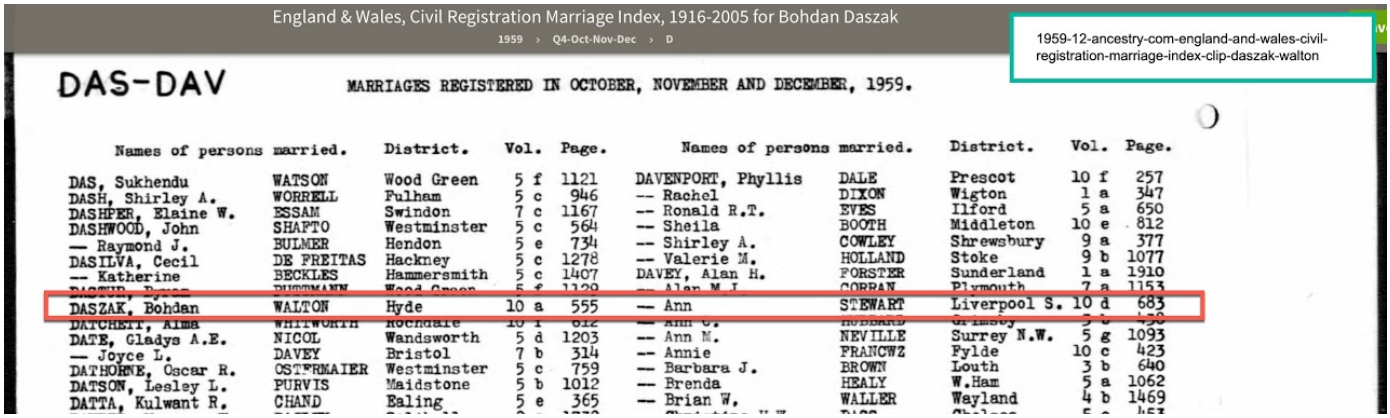
Registration Date: Oct-Nov-Dec 1959

Registration district: Hyde

Inferred County: Cheshire

Spouse: Ruth A M Walton

Volume Number: 10a / Page Number: 555



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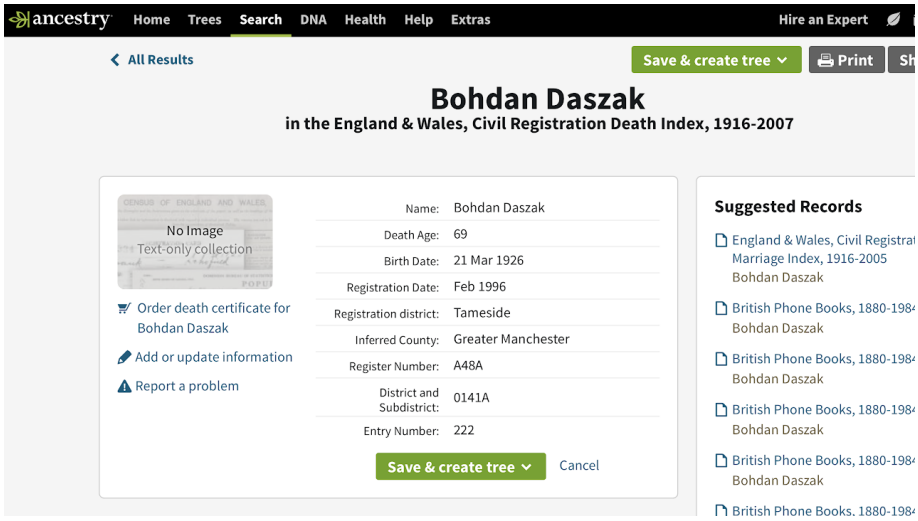
1996 (Feb) - Father's passing



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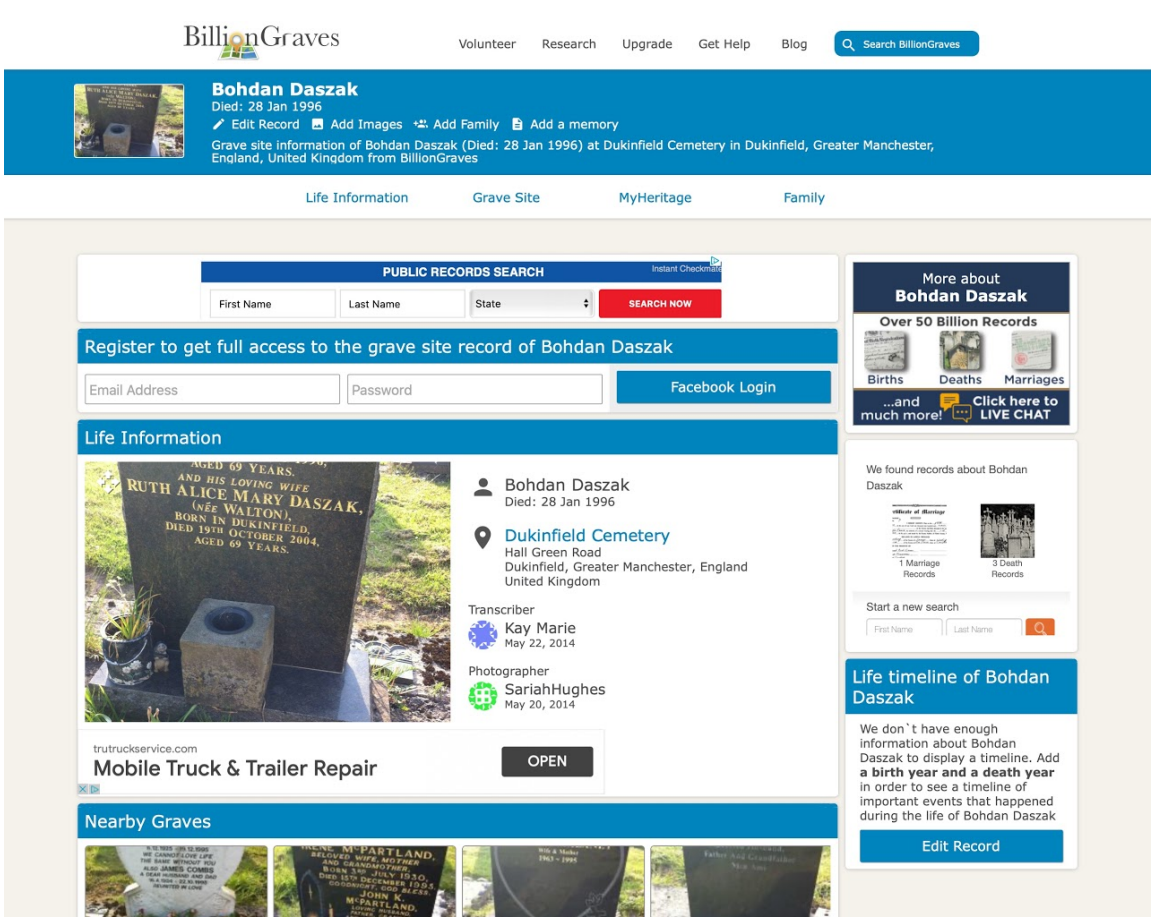
Mother passing

https://billiongraves.com/grave/Bohdan-Daszak/8308976?referrer=myheritage

2020-06-04-billiongraves-bohdan-daszak-8308976-img-1



Wife - Janet Cottingham

Janet Cottingham

https://twitter.com/JanetCottingha1

https://www.newspapers.com/image/403402302/?terms=%22janet%20cottingham%22&match=1

oct 2 1998 - help wanted ad ?

John Daszak (brother)

Wikipedia

Live .. https://en.wikipedia.org/wiki/John_Daszak / Saved wikipedia - [HK0022][GDrive]

Twitter

https://twitter.com/johndaszak

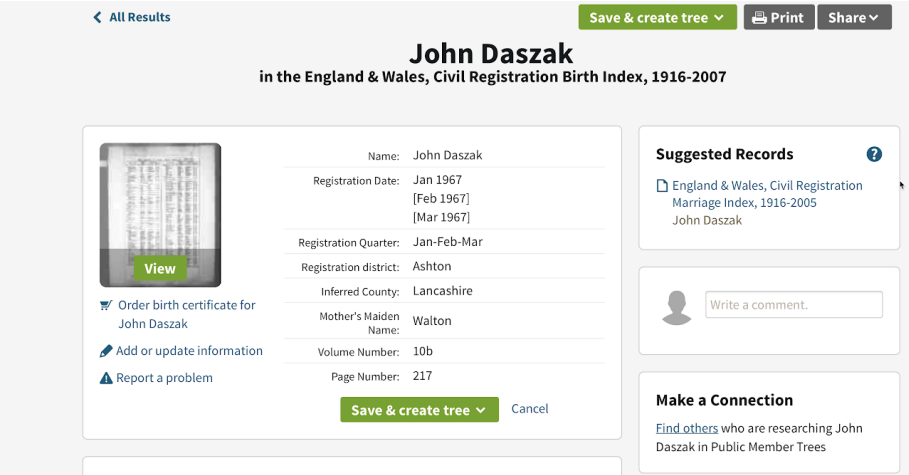
John Daszak is a British operatic tenor. He made his debut with the Royal Opera in 1996,[1] and has performed widely in Europe.[2]

Daszak's father was Ukrainian, and his mother British.[3]

Daszak trained at the Guildhall School of Music and Drama, the Royal Northern College of Music and the Accademia d'Arte Lirica, Osimo, Italy.[1]

Born 1967

https://search.ancestry.com/cgi-bin/sse.dll?indiv=1&dbid=8782&h=89036870&tid=&pid=&usePUB=true&_phsrc=JbL18&_phstart=successSource



2012 (April 29) - THE UKRAINIAN WEEKLY (SUNDAY, APRIL 29, 2012) - "Tenor John Daszak to debut at Metropolitan Opera on May 4"

Full PDF of issue - [HP002R][GDrive]

SUNDAY, APRIL 29, 2012 2012-04-29-the-ukrainian-weekly-no-18-clip-pg-11-daszak 11

Tenor John Daszak to debut at Metropolitan Opera on May 4

by Helen Smindak

NEW YORK – British-born tenor John Daszak, the son of a Ukrainian émigré who settled in England after World War II, will make his first appearance on the Metropolitan Opera stage on May 4.

Mr. Daszak, considered one of the most versatile of Britain's new generation of tenors, will sing the role of Captain Vere in Benjamin Britten's retelling of Herman Melville's shipboard drama "Billy Budd." Appearing with him will be baritone Nathan Gunn as the innocent hero Billy Budd and bass-baritone James Morris as Budd's nemesis.

The three-hour production will be presented again on May 10 and 12.

Mr. Daszak is the nephew of Zenon Dashak (they spell their last names differently), who was a professor of viola and the long-time rector of the Lviv National Academy of Music and taught the celebrated viola player Yuri Bashmet.

His Met debut comes during a season that includes the title role of Zemlinsky's "Der Zwerg" at Munich's Bavarian State Opera, Jim Mahoney in "Rise and Fall of the City of Mahagonny" with the De Vlaamse Opera in Belgium, and Grishka Kuterma in "The Invisible City of Kitezh" with the Netherlands Opera.

A former member of English National Opera, Mr. Daszak has performed frequently with major U.K. opera companies, including the Royal Opera House, Glyndebourne Festival and Welsh National Opera.

Based in London, Mr. Daszak has made many important international debuts – Vienna's Staatsoper, Frankfurt and Hamburg Operas, Opera National de Paris, La Scala Milan and Valencia's Palais de les Arts.

His performance as Loge in "Das Rheingold" won critical acclaim: one reviewer who pointed to his "lyrical, musical, dramatic presence with a voice the timbre of which reminded me of the late, great Gerhard Stolze." Another critic declared that "John Daszak has a flexible, beautiful voice combined with a most intelligent, effortless characterization."

John Daszak

The tenor's career highlights include Aaron in "Moses und Aron," Mephistopheles in "Dr. Faustus" and the title role of "Peter Grimes." He has also sung the role of Zinovy in "Lady Macbeth of Mitsensk" and Prince Golitsin in "Khovanshchina."

A popular concert performer with a repertoire ranging from Mahler and Janacek through Rossini, Beethoven and Verdi, Mr. Daszak has collaborated with such world-renowned conductors as Kurt Masur, Leonard Slatkin and Sir Colin Davis.

His recordings include the role of Loge in "Das Rheingold," conducted by Zubin Mehta, and Pfitzer's "Palestrina," conducted by Simone Young, both on DVD.

Mr. Daszak was born in Manchester, where he studied at Chetham's School of Music and the Royal Northern College of Music.

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2013 (Sep 28) - John Daszak: Genesis of a New British Siegfried. An Interview with Jim Pritchard.

Source - [HI000X][GDrive]

John Daszak's performance catches the eye during the current revival of Elektra at Covent Garden even though he is not on stage for very long. However during this season he will face a much bigger challenge when he sings both Siegfrieds in the new Dieter Dorn production of Der Ring des Nibelungen with the Grand Théâtre de Genève to be conducted by Ingo Metzmacher. He is widely considered one of Europe's most versatile tenors. Recent seasons have seen him make many important role debuts – notably as Captain Vere (*Billy Budd*) at the Metropolitan Opera, in the title role in Zemlinsky's *Der Zwerg* in Munich, as the Drum Major (*Wozzeck*) at the Berlin State Opera and his first Siegfried (*Götterdämmerung*) in São Paulo – and he is also a popular concert performer. The interview took place in his dressing room towards then end of the rehearsals for *Elektra* and John talked about his how he was brought up in a home full of music, his time at Chetham's, his training, his career to date and why it is now time to sing Wagner.

What is your background and how did you get interested in music?

My father was a Ukrainian who had ended up in Britain at the end of the Second World War. Thankfully for him he was taken prisoner by the Allies and later released into the community rather than sent back to Ukraine and be dispatched with. He ended up in Manchester where I was born after he married a British woman, she was half Welsh and half English – so technically I am only a quarter English [*laughs*]. So I was brought up here but never really felt I always fitted in. **It was only when I started travelling around I realised why my father was so culturally very different to those around me. In fact, my interest in music comes from both my parents. *My father sang with a famous male voice choir in Manchester called 'Homin' and my mother loved classical music whilst my father was more interested in folk music but there was always recordings of opera to listen to at home.*** Even though I was brought up in a working class family – we were certainly not middle class though we were aspiring to be, not that I knew much about that at the time – I was surrounded by music. **My mother would sing with us a bit too and my older brothers also were interested in some form of music. On my mother's first trip abroad they went to Italy to Arena di Verona and brought back a large cartoon drawing that had been done of her as a diva on the Arena di Verona stage and that hung in our house when I was a child, I still have it somewhere.**

At that time in the 1970s they trying children out with all sorts of different educational things and for me it was musical instruments and singing that I took to. I was playing the violin at five and nagging my parents about getting lessons for it. However when my mother approached a number of teachers about something for me she was told it was far too early and they usually start with a child who is seven or eight – so my mother replied 'Well, what about Mozart?' I thought that was a great answer even if I could never claim to have been a Mozart [*laughs*]! I eventually went to study the violin at Chetham's School of Music that was local and a great move for me, there had been the possibility of sending me to the Menuhin School but that was long way from home and my mother didn't want that because she thought I would suffer – and so would she. I had actually been accepted at six but that was still too early apparently, so I went to Chetham's when I turned seven. There you get a fantastic musical grounding, it's not all just in the theory of music but there are a number of things

you can get involved in such as orchestra, or you could set up quartets. It was a fantastic time for me, I really enjoyed it, partly because I wasn't boarding there as I could live at home and there was none of the trauma about being ripped from my family. One of my greatest influences there was Michael Brewer who has now been found guilty of child molesting incidents and been imprisoned but I knew nothing of this at the time.

How long were you at Chetham's and what did you do there?

I was at Chetham's from 7 to 18 – others have done their whole time there, like me, though not many. At Chetham's they pride themselves on their music education obviously but that is not all they offer. In my time there was something like 350 students and 180 teachers and, of course, it was very expensive but they gave us a good, normal, academic education and that was necessary because a lot of those who left Chetham's never went into music and are now very successful in other fields – so it is not at all a wasted time. Everything happens in tandem: there is a very good academic education and a very high level – and large amount – of extra-curricular musical activities. The day was often very long, though I didn't mind it at the time as I enjoyed it so much. We would have our academic lessons with our music ones in between and we would start at 8am and might go on till 8 in the evening doing things after school. Because there were a lot of boarders there would often be orchestral and other music rehearsals in the evening.

I started on the violin and, if I say so myself, was brilliant when I was seven. However, to be a great violinist you have to practice your technique endlessly and I just hated locking myself away when some of my friends where out playing football. Whilst there I also did quite a bit of singing which was good for me as by the time I was 13 or 14 it was clear I wasn't going to be the world's greatest violinist. You usually go down in stages with the instrument first trying the viola but I went directly to double bass – mainly because they needed bass players and I was so big that I could easily carry the thing [*laughs*]! I played that until I was about 16, yet all the time I was also singing in various choirs or shows. It was when my voice had broken and eventually settled – and because of the influence of all the opera I encountered – that I began thinking I was Pavarotti and started to try and sing everything he sang! I was fortunate to see him once in recital in Manchester and that was quite amazing – I remember my mother paying an awful lot of money for me to see him. So I was playing the double bass and studying singing and learning the piano because if that wasn't your first instrument everyone studied it as their second one. It was a great musical grounding for me and has subsequently meant I can learn music quite quickly and sight-read as well.

How did the move into opera come about?

At 18 I started to audition for music colleges and got into a few but – being 18 – I thought now's my big chance and I would go down to London and hit the opera scene as a tenor [*laughs*]. I accepted a place at the Guildhall School of Music and Drama and studied with Rudolf Piernay but we didn't get on even though he is known as a great teacher. I changed to Johanna Peters in my second year but after a while I thought about giving it all up as I was very disillusioned. As a young student there I had little money and no possibility of getting any. I even tried driving a cab for a few nights but ended up so exhausted it was physically impossible for me to go into college and sing the next day. I thought many times about actually giving up but the college principal said why didn't I go and sing to Joe Ward back home at the Royal Northern College of Music and it was the greatest thing I could have done. He immediately told me I mustn't give up and to come there to give it another year – one year turned into five and I worked with Nicholas Powell. Compared to the Guildhall I found there was more space and a better social life, in London everyone lived so far away and you would rarely meet. I think things are much better now but back then you could never get a practice room and it wasn't really a nice area to mix with your friends – it was the exact opposite in Manchester.

During my time there I auditioned for the Glyndebourne Chorus and I also once auditioned for the Bayreuth Chorus and was so offended when I didn't get in because they had enough first tenors. I was very disappointed because I remember having the distinct feeling 'Everybody's in the Bayreuth Chorus' but I wasn't [*laughs*]! But I did get the chorus job at Glyndebourne which was great because there if they think you are good enough they'll give you covers and they will actually allow you to go on, unlike a lot of places. I started in Mozart in 1991 and did two summers there whilst studying. I covered Števa in *Jenůfa* and some other small roles and was in the *Peter Grimes* chorus – it was all a great experience. Peter Moores, who had helped me out financially during my last two years at the Royal Northern, then gave me a scholarship to go and study in Italy at what was basically a *bel canto*academy – the *Accademia d'Arte Lirica* in Osimo – that he knew about. At the time I was singing a lot of quite lyrical repertoire, a lot of Mozart and songs but lots of people had their own ideas about what repertoire I should do, especially because I am quite tall. I don't have a huge voice but I think it carries well and is big when it needs to be – I also have the ability to learn difficult music and sing it. In Italy we indeed worked on *bel canto* the whole time – and especially lots of Donizetti – but it was good both physically and vocally for me. It benefitted me in other ways because when I came back people said 'You've studied in Italy, you must be great' and so I began to be offered small parts and covers.

What opportunities did you get to show what you could do and how did things go for you at the start of your career?

I guess my biggest one at the time was to cover Števa in *Jenůfa* for English National Opera. Since I had already done that at Glyndebourne I had already learnt the role quite well and everyone told me because of the tenor I was covering I was bound to get a chance to get on stage and sing it. I was quite 'green' at the time and didn't think more about it until I did get the chance to sing a couple of shows which was great fun. I remember meeting the director on the set and she was a bit stressed because a cover was going on in her production but I was fine because I knew the piece and had been rehearsing very well. Mark Elder saw me in that and was impressed and he has been one of those people – in fact, there have been quite a number over the years – who told me I should be singing Wagner. Indeed very early on I went to audition for *La bohème* at ENO after doing a couple of things there and my agent said it was 'a great audition' and 'if they do not give it to you they are crazy' but all they talked about was me doing Siegfried in a new *Ring* cycle – and that was 20 years ago [*laughs*]! So this is the problem singers are up against in a lot of casting situation and they can have fixed opinions. It is easier if you can give them a package they can understand and my problem in a way was that I always had a very varied repertoire because vocally and physically I can do it – also dramatically I love to get involved with my characters and I won't just be standing there and singing. As a result people do not see me in anything specific which can be a bit of a problem sometimes; but can also be great because I get to do a wide variety of things even though I am a getting a little more specialised now as I get older as I am finding I am fitting into a more specific type of repertoire.

How was it for you at the ENO, did singing in English help or harm you career and what happened next?

I enjoyed my time there and, thankfully, I always got a fantastic response as people could hear what I was saying. Singing in English there was important for me because naturally I am keen on communicating when I am singing and performing; I strive for that regardless of the language the opera is in. To do this properly the work begins when I am learning the role. I also try and learn the history of the role and do as much background work as possible. My worst fear is to arrive unprepared, it's just the way I am, but I actually seem to arrive better prepared than many of the others because I want to make the most of communicating to an audience – and, if necessary, move them – by delving into a character both musically and dramatically. As a singer the first thing you must do is make sure you get heard and that people can understand the language. There might be somebody listening who speaks German or Czech or Hungarian, so I am always striving to basically get my words right. I'll do as much work as I have to and make sure it is as realistic as possible and that is what I've tried to do at the two big places I've worked at, the ENO and in Munich – these have been my two 'staple diets' so far even though I worked at lots of other places, including here at Covent Garden a few times.

When I started in Munich I remember the first thing I did there was Alban Berg's *Lulu*. In that there is a significant scene between my character, Alwa, and The Athlete. Naturally it's in German but there were two English guys speaking it for what seemed like 10 minutes – even though it is just probably a minute and a half! There we were on a stage in Bavaria and it was very scary to start with. We worked hard on it and people seemed to enjoy it – in fact so much so, that they came up to me speaking in German immediately as they assumed I could speak the language because my pronunciation must have been good enough. The Athlete was a fine singer called Jacek Strauch and I saw his name before meeting him and assumed he was probably Polish-German but when he came up to me he said in a refined voice 'Hello John' and it turned out he was born in London and spoke better English than I did [*laughs*]!

From what you have said so far you seem to enjoy being a singer.

Like many people I'm very passionate about music and, of course, it is also in my blood. When I was working at the ENO I often made the mistake of saying to my wife 'I've got to go to school – oh, I mean, I've got to go to work' [*laughs*]. It is problem as we can sometimes undervalue what we do and allow people to walk all over us because intrinsically it is a vocational job – you have absolutely love it otherwise you will not survive in it. Nowadays it is not as ridiculously well paid as it was in even as recently as 20 years ago – and I have heard stories of what people were being paid then. When on contract in Stockholm early last century Jussi Björling was on film star money but is nothing like that for anyone now!

How are you enjoying singing Ägisth in Elektra?

I didn't know the piece at all when I was asked to do it though I'd heard how Ägisth is known within the tenor repertoire as being an important role. I opened the score and was fingering through it and trying to find where he was – it wasn't until the last few pages that I found when he appears. It didn't seem much but then I looked on YouTube and saw James King doing it and thought 'Wow'! It's short, high octane and quite important – even if it's only three minutes. He is the turning point for Elektra, she's after vengeance and seeing me brought to justice gives her what she needs – in a way something of a 'release' I suppose. It's not easy to sing, is difficult musically and goes quite high at the end. Ägisth is not like my normal roles when I am on stage the whole time and never get a break – then you have to learn to pace yourself. Here although it is very difficult you can throw yourself into it and in a couple of minutes it is over and you can relax. It is not that easy to cast as you cannot just have anybody doing it. Previously it used to be sung by heldentenors who were later in their careers but now it is often someone of my own age and in their prime who sings it. At the moment we are doing stage rehearsals and there is still blood in the bathroom from where I get killed when trapped in a revolving door by Iain Paterson as Orest [*laughs*].

I'm enjoying working with Andris Nelsons, his beat takes a little bit of getting used to, but he is clearly so passionate about the music and knows every note of *Elektra*. I've watched him on the monitor from backstage and he's really enjoying it which is fantastic and quite inspiring. We've just had a great stage and orchestra rehearsal this morning and he did a few musical notes afterwards. The great thing is that it is not such a long opera and in those rehearsals you can go through half the opera, then go back and work on it again and still have lots of time. Charles Edwards' production is updated and I think is set around the time Strauss wrote it. I have no idea how Ägisth is traditionally done but in this I am basically a pervy letch who has had all the women in the household but can't get Elektra who is winding him round her little finger. He comes in drunk and this can be great for a singer because if you mess up – though I hope not to – you can always say 'I was trying to be drunk and slur it a bit' [*laughs*]. The set is both old and new with something from Ancient Greece, as well as, some modern architecture – it's very decadent, very bloody … and, I think, very exciting. Its powerful stuff even if it can make you feel a little uneasy because the music has this undercurrent all the way through it and only relaxes and lets go of you when everyone is murdered at the end.

You have sung a number of important Britten roles what makes his music so special do you think?

I've sung most of the major Britten roles and he is just perfect for my voice. I never heard Peter Pears live but I have listened to a lot of things he did and his voice was efficient, ringing and carried because it was big. I don't particular like his sound because although he could sing beautifully it wasn't a naturally beautiful timbre; however the placing and phrasing is very similar to mine. I would not say that I find the Britten roles easy because they are always emotionally and physically intense – especially the way they must be performed – but they fit my voice like a glove. So long as I do nothing stupid [*laughs*] I can usually get through them without much trouble at all and, in fact, they are a joy to sing. I think Britten is one of the last *great* opera composers because he knew exactly what he was doing vocally and wrote for specific people. This was lucky for me as he loved music and loved singing, as well as, knew how to orchestrate.

Finally it seems you have decided the time is right to sing Wagner and tackle Siegfried?

Like I said before the jury's been out on what sort of repertoire I should do at this stage of my career. I avoided Wagner for many years even though I had been told many times 'You would be a great Siegfried' and similar encouraging things about him. Truthfully, I never really enjoyed Wagner and had always thought of myself as a heavy, high, lyric tenor that could do a lot of repertoire and I knew how once you start singing Wagner it is often quite difficult to turn the train back – you can jump off but can never really turn it around [*laughs*]. Then Zubin Mehta wanted me for Loge in Valencia – and although that character is nothing like Siegfried – it got me into Wagner in a quite low pressure way. I was able to hang out with Wagnerian singers and see what type of animal they are and what they have to sing. I have listened to rehearsals of both *Siegfried* and *Götterdämmerung* even though I was not in them.

My *Rheingold* was an interesting experience, I remember we were rehearsing on stage one day and Loge was supposed to be having an intimate conversation with Wotan and the director separated far apart. We couldn't understand this but next day there was this huge screen between us and we realised had we been together we would have just been in the way of his high definition projector [*laughs*]. I had the added advantage of being on a Segway with a ridiculous costume over it and I could manipulate myself into whatever position I needed to sing. It all looks glorious on the DVD and was great fun for me as my first taste of Wagner. As for Siegfried, I was approached by someone who used to direct here at the Royal Opera House, André Heller-Lopes, who was on the Jette Parker Young Artists programme and assisted on a lot of shows including Thomas Adès' *The Tempest* I sang in here. We had got quite friendly and he was also one of those people who said I could sing Siegfried. Now he is back in Brazil and doing a lot of productions there, he asked if I was free and interested to sing *Götterdämmerung* in São Paulo. I thought it would be good to try it out there with someone I trusted and a very experienced Brazilian conductor, Luiz Fernando Malheiro, and we had a great time. I'd been told it was a scary part but I thought what's so scary about this? Of course, there are a couple of notes that are awkward – but I love to get my teeth into that sort of music. The character is almost written for me, he is youthful, naïve, a bit childish, hates injustice and gets dumped on by everybody in the end – almost the story of my life [*laughs*]!

I've always been brave and willing to take things on and do them so it's going to be very interesting. My only other Wagner roles so far is Erik – that I recently sang for the first time in Sydney – and that was surprising for me as its really like Mozart. It is quite high and very lyrical and needs a certain resonance and sound but is beautifully written music – a bit like *Lieder* but heavier. I enjoyed Erik, he is a passionate lover who makes a good foil for the Dutchman. I worked on both Siegfried roles just to check them out and see if I could sing them and then I went to sing something from them to Ingo Metzmacher who will conduct the *Ring* in Geneva. After we worked on some things, he also asked me if I was scared of this role as it was one tenors are usually afraid of. Scared of what? I believe I have sung much more dramatic roles and much heavier ones. Time will tell but I think if you singing Siegfried in a

classical style it is much lighter and much less harmful to the voice than a lot of the things I have sung. I remember Mark Elder – who was trying to persuade me to do some Wagner with him and the Hallé -saying 'You know Alberto Remedios sang it so lyrically and beautifully'. It'll be an interesting time because obviously once a singer starts singing Siegfried there is a focus on you and I'm sure people are waiting around to see how it all goes for me.

Jim Pritchard

Zenon Dashak (uncle)

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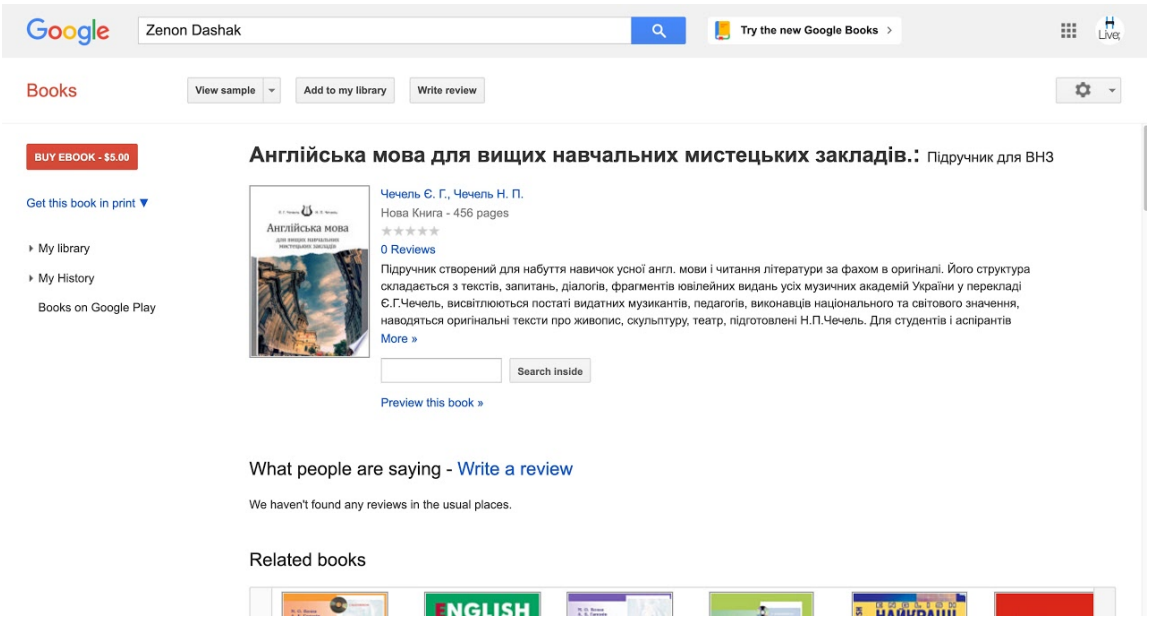

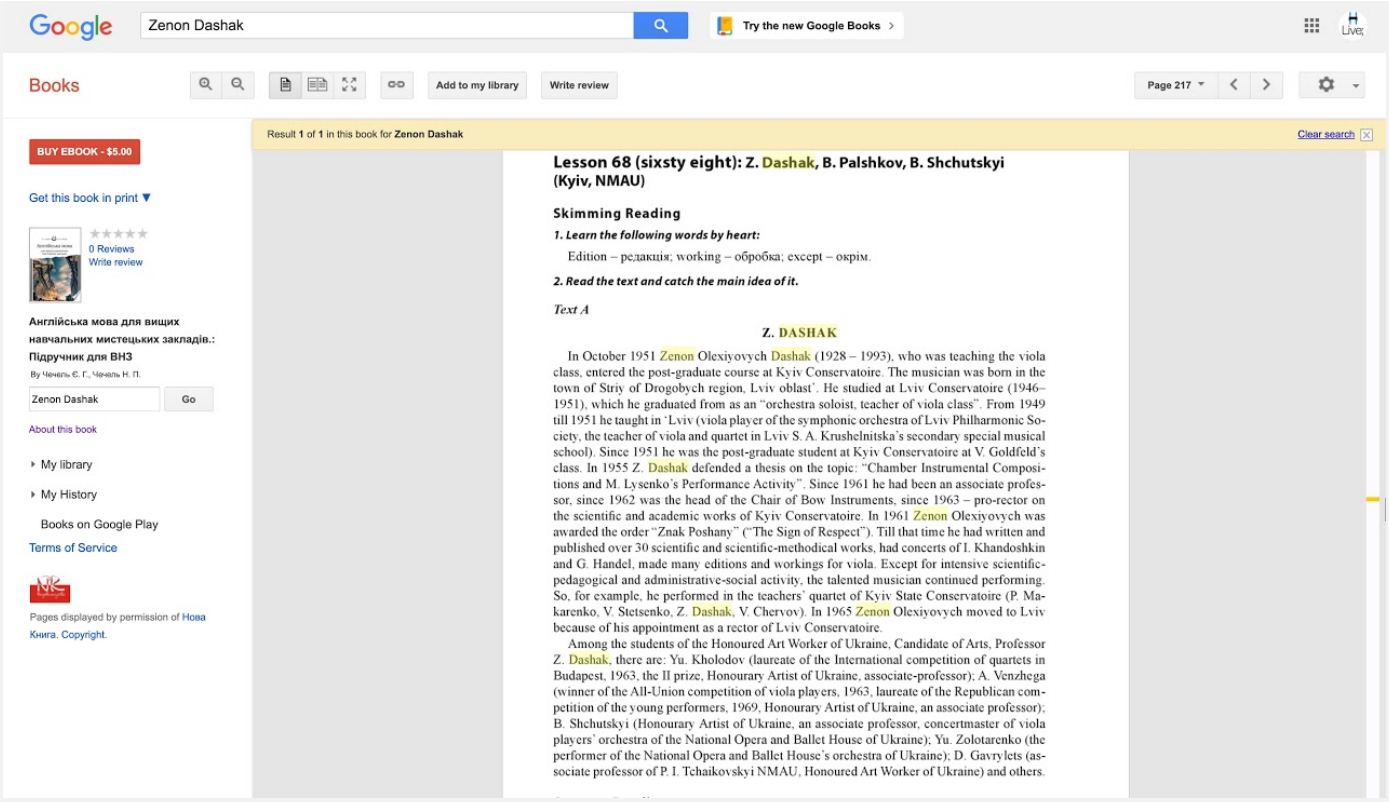

Lesson 68 [...] : Z. DASHAK

In October 1951 Zenon Olexiyovych Dashak (1928 - 1993), who ,vas teaching the viola class , entered the post-graduate course at Kyiv Conservatoire . The musician was born in the town of Striy of Drogobych region , Lviv oblast' . He studied at Lviv Conservatoire (1946-1951), which he graduated from as an "orchestra soloist , teacher of viola class '. From 1949 till 1951 he taught in 'Lviv (viola player of the symphonic orchestra ofLviv Philharmonic Society, the teacher of viola and quartet in L viv S. A. Krushelnitska 's secondary special musical school) . Since 1951 he ,vas the post-graduate student at Kyiv Conservatoire at V. Goldfeld's class. In 1955 Z. Dashak defended a thesis on the topic: "Chamber Instrumental Compositions and M. Lysenko 's Performance Activity". Since 1961 he had been an associate professor, since 1962 ,vas the head of the Chair of Bow Instruments , since 1963 - pro-rector on the scientific and academic works of Kyiv Conservatoire . In 1961 Zenon Olexiyovych was awarded the order "Znak Poshany ' ("The Sign of Respect') . Till that time he had written and published over 30 scientific and scientific -methodical works , had concerts of I. Khandoshkin and G. Handel, made many editions and workings for viola. Except for intensive scientific pedagogical and administrative -social activity , the talented musician continued pe1forming . So, for example , he performed in the teachers' quartet of Kyiv State Conservatoire (P. Makarenko , V. Stetsenko , Z. Dashak , V. Chervov) . In 1965 Zenon Olexiyovych moved to Lviv because of his appointment as a rector of Lviv Conservatoire .

Among the students of the Honoured Art Worker of Ukraine Candidate of Arts Professor Z. Dashak , there are : Yu. Kholodov (laureate of the International competition of quartets in Budapest , 1963 the II prize , Honourary Artist of Ukraine , associate-professor); A. Venzhega (winner of the All-Union competition of viola players , 1963 laureate of the Republican competition of the young performers , 1969, Honourary Artist of Ukraine , an associate professor); B. Shchutskyi (Honourary Artist of Ukraine an associate professor concertmaster of iola players ' orchestra of the National Opera and Ballet House of Ukraine); Yu. Zolotarenko (the performer of the National Opera and Ballet House's orchestra of Ukraine); D. Gavry lets (associate professor of P. I. Tchaikovskyi NMAU, Honoured Art Worker of Ukraine) and others.

IF this is the same person (also his uncle), it means only some of the Daszak family went to Britain after WW2...

https://clever-geek.github.io/articles/7448659/index.html

Coat of arms

Motto(s): Semper fidelis

Show map of Lviv Oblast
Show map of Ukraine
Show all

Coordinates: 49°15′22″N 23°51′1″E

Dashak, Zenon Alekseevich

Zenon Alekseevich Dashak (July 17, 1928 , Stryi - June 26, 1993 , Lviv) - Ukrainian musician, composer, rector of the Lysenko State Conservatory of Lviv (1965-1992), Honored Artist of the Ukrainian SSR (1970), professor (1971), teacher, music and public figure, founder of the Ukrainian alt school.

Biography

Born July 17, 1928 in the city of Stryi (now the Lviv region) in the family of a railway worker.

From 1946 to 1951 he studied at the Lviv State Conservatory named after N. Lysenko in the class of Professor Pavel Makarenko; then - at the graduate school of the P. Tchaikovsky Kiev State Conservatory (1951-1954, now the P. I. Tchaikovsky National Music Academy of Ukraine), where he defended his dissertation on the theme: "Chamber-instrumental works and performing activities of N. V. Lysenko." Remained to work at the conservatory. He went from a senior teacher, assistant professor - to the head of the department of stringed bowed instruments (1961) and vice-rector for academic and scientific work (1963-1965). At that time, prominent cultural figures of Ukraine worked at the Kiev Conservatory: B. Lotoshinsky, L. Revutsky, I. Patorzhinsky, N. Rakhlin, V. Stetsenko, M. Donets, Z. Gaidai, A. Parkhomenko, A. Gorokhov, V. Chervov, A. Manilov, R. Lysenko and others.

In Kiev, Zenon Dashak performed as part of a string quartet with musicians: A. Gorokhov, S. Kravtsov and others.

In 1965, Zenon Dashak was appointed to the post of rector of the Lviv State Conservatory named after N. Lysenko. In the conservatory, he created a string quartet, whose participants besides him were Alexander Derkach, Bogdan Kaskiv and Harit Kolesa. With this composition, musicians performed for several years in the cities of the USSR and abroad. Subsequently, the national artist of Ukraine, professor Lidia Shutko , musicians Tatyana Shupyana, Tatyana Sirotyuk, laureate of the Taras Shevchenko National Prize Yuri Lanyuk played in this group. The partner in the quintet was the pianist and people's artist of Ukraine, Professor Oleg Krishtalsky.

During Dashak's work as a rector at the conservatory, performing contests were held (All-Union violin, viola, double bass, harp specialties; All-Ukrainian N. Lysenko pianists and conductors competitions), scientific conferences, meetings. Dashak was a member of the jury of all-Ukrainian and all-Union competitions, numerous international: in France, Germany, Georgia, Romania, Lithuania, where he collaborated with musicians such as: L. Kogan, A. Khachaturian, V. Borisovsky, S. Zenaker, V. Taktakishvili, I. Bezrodny, M. Rostropovich, S. Tsintsadze, A. Sveshnikov, F. Druzhinin, V. Dulova, V. Klimov and others.

At different times, Zenon Dashak was the chairman of the Lviv branch of the Ukraine society, a member of the presidium of the Lviv Culture Fund, the T. G. Shevchenko Ukrainian Language Society and others.

From 1981 to 1993, Dashak conducted pedagogical activities in Lviv. He headed the department of stringed bowed instruments (viola, cello , double bass , harp) at the conservatory, trained more than thirty violists: G. Freidin, I. Fertser, Yu. Zhenchur, S. Kalinovsky, D. Komonko and others.

Zenon Dashak is considered the founder of the Ukrainian alt school, his graduates work in music schools and concert and theater institutions in Ukraine and abroad. The teacher is the author of more than 40 works on the problems of musical performance, 15 collections of pedagogical repertoire for violin and viola, collections of exercises and studies, a number of processing and translations for viola; wrote "Ukrainian Suite" and "Variations" for violin (viola) and piano.

Zenon Alekseevich Dashak died June 26, 1993 in Lviv, was buried in the city of Stryi.

Family

Zenon Dashak was married. Wife, Anna Yuryevna Dashak - Honored Artist of Ukraine, writer, singer, professor at the Lviv State Conservatory named after N. Lysenko named after N. Lysenko. His son Bogdan - a famous conductor, works at the Lviv National Music Academy. N. Lysenko, daughter Irina - pianist, works at the National Music Academy of Ukraine named after P. Tchaikovsky in Kiev, the grandson of Eugene - pianist and clarinet player, works there.

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https://peoplepill.com/people/zenon-dashak/

Senon Daschak, Senon Alexejewitsch Daschak

Was Musician Violist Composer Educator

From Russia

Type Academia Music

Gender Male

Birth 17 July 1928, Stryi

Death 26 June 1993, Lviv (aged 64 years)

http://uzhgorod.in/en/announcements/2017/bohdan_dashak_will_perform_in_the_transcarpathian_philharmonic

Bohdan Dashak will perform in the Transcarpathian Philharmonic

6 March 2017 18:30 - 6 March 2017 20:30 41 0

He is the successor of the famous musical family. **His mother Anna Dashak (born in the village of Nevytske is Uzhgorod district) is a famous singer (soprano), Honored Artist of Ukraine, a former soloist of the Kyiv Philharmonic and the Lviv Opera and Ballet, professor of solo singing department of Lviv Music Academy, writer. Father, Zenon Dashak, was a known musician, composer and philanthropist, rector of the Lviv State Conservatory (1965-1992), Honored Artist of Ukraine.**

Bohdan inherited from parents all their generous talents. A brilliant opera and symphony conductor, assistant professor of Lviv Music Academy, he has performed in Uzhgorod many times with classical programs. And in November last year, Bohdan Dashak made a real gift for Transcarpathians: together with the Symphony Orchestra of the Transcarpathian Regional Philharmonic, he performed world-famous jazz hits.

Uzhgorod audience liked it so much that on March 6, at 18.30, Bohdan Dashak and the Symphony Orchestra of the Transcarpathian Regional Philharmonic invite music lovers to another concert. The program is entitled "Rose of Love". The concert will feature popular jazz standards, world hits, songs by EL Webber, M Legrand, S Wonder and others. Conductor - Honored Artist of Ukraine Victoria Svalyavchyk-Tsanko. The event will be hosted by the music historian Natalia PITSUR.

Information on Ukrainian soldiers who joined the "SS" in WW2, and afterwards were relocated to Britain

wow - https://en.wikipedia.org/wiki/14th_Waffen_Grenadier_Division_of_the_SS_(1st_Galician)

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Yard reopens inquiry into former Nazi soldiers still alive in Britain

· Labour MP insists search sends important message

· Researcher believes police hunt is 10 years too late

Fri 3 Feb 2006 19.12 EST

Scotland Yard has relaunched its search for war criminals almost seven years after its specialist Nazi-hunting unit was disbanded, the Guardian has learned. An eight-strong team from the anti-terrorist branch has been examining the backgrounds of British residents suspected of committing atrocities during the second world war.

The team is focusing on former members of a division of the Waffen SS which was recruited by the Nazis in the Ukraine and brought to Britain en masse to provide farm labour after the war. Home Office officials believe several hundred former members of the unit may still be living in the UK. The Guardian has identified and located more than a dozen survivors of the Galizien division. Most still live in small clusters in the East Midlands, Yorkshire and East Anglia, a short distance from the PoW camps where they arrived almost six decades ago.

\The new inquiry has been shrouded in secrecy since it was quietly resumed last year, and the Yard has even attempted to deny that it is under way again. Two senior officers have been assigned to lead the team of two detective sergeants, two detective constables and two civilian researchers. A Yard spokesman confirmed that they are scouring old war crimes files and "liaising with other government departments, including the Immigration and Nationality Directorate, to establish the best way forward".

It is unclear whether statements have been taken from the former members of the unit, the **14th Waffen SS Galizien division**. Scotland Yard is also declining to say whether any witnesses have been located in Poland, Slovakia or the Ukraine, the countries where the Galizien division operated, and where some members stand accused of participating in the massacre of Jewish and non-Jewish civilians.

Police are understood to be attempting to identify members of the Galizien division who attended a training centre for concentration camp guards as well as

examining the war records of other surviving members. With the youngest former members of the unit now in their 80s, however, and with the memories of surviving witnesses fading fast, the chances of any successful prosecutions appear slim. The decision to relaunch the hunt is thought to reflect a renewed appetite for war crimes investigations at the Home Office, and comes after continuing calls for action from a number of backbench MPs.

Investigation

However, it is unclear how much enthusiasm there is at Scotland Yard for an investigation that could divert detectives from anti-terrorist duties at a time of mounting security concerns.

The Yard's specialist war crimes unit was disbanded in May 1999 after investigations costing an estimated £6.5m resulted in just one conviction. Anthony Sawoniuk, a retired railway ticket inspector from south London, was jailed for life earlier that year after being convicted of two specimen charges concerning the murder of 18 Jews. He died in Norwich prison last November, aged 84.

Andrew Dismore, Labour MP for Hendon, who has been pressing for action against surviving war criminals, said the Yard deserves extra funding for the inquiry. "Making sure old war criminals can never sleep easy in their beds sends an important message to the would-be war criminals of tomorrow," he said.

Trial

But Professor David Cesarani, who was the principal researcher for the group of MPs which campaigned successfully for the introduction of the War Crimes Act 15 years ago, believes that men who could have been prosecuted at that time are now highly unlikely to face trial. "This has come 10 years too late," he said. "The Home Office should be asking whether this is going to do more harm than good, and whether embarking on a judicial process, which will take years to come to fruition, is the best way to proceed. Regretfully, it may be that an inquiry by government historians will now be the best way to investigate what these people did, how they came to be here and why they have not been prosecuted before."

Hitler's Ukrainian SS division was created from the merger of many different units, including the Nightingale battalion, said to have participated in the massacre of thousands of Jews in Lvov, Ukraine, and the Ukrainian Self Defence Legion, accused of murdering villagers in eastern Poland. Some Galizien troops are said to have played a part in the bloody suppression of the 1944 Warsaw uprising, while others are alleged to have murdered a number of British and American airmen who were being sheltered by partisans in Slovakia. Its soldiers were Ukrainian nationalists, who later insisted that they had no love for Germany or the Nazis, but joined the German army to take up arms against the Russians, and against communism. Those who survive in Britain today deny any involvement in war crimes.

Few people noticed when they arrived in Britain in May 1947: one Labour MP, Barnett Janner, complained bitterly in the Commons that members of the Galizien division "murdered hundreds of people in cold blood", while a solitary letter in the London Evening News, signed with the correspondent's concentration camp number, 3399, complained that he or she had witnessed first-hand the "brutal, uncouth and bloodthirsty" behaviour of Ukrainian guards. Most newspapers devoted just one paragraph to reporting the division's arrival, however. The men were dispersed among PoW camps. Over the next three years just eight "undesirables" were deported to Germany, while some emigrated to Canada, the US or Argentina.

Parachuted

A handful are now known to have been recruited by MI6 and parachuted back into the Ukraine, where they were betrayed by the double agent Kim Philby. Most remained in the UK, however, and were granted civilian status. Many married, started families and, by the 1990s, those who survived were British subjects.

Among the survivors of the Galizien division identified by the Guardian is Mykola Lehkyj, 84, who says he volunteered to fight for the Germans after they overran his home town of Rohatyn, in western Ukraine, in 1941. Although both his brothers served in the Red Army, Mr Lehkyj, then aged 19, volunteered to join the Ukrainian unit that the invaders were raising. "**We hated the Germans, but we wanted to fight the Russians more than anything,"** he said. "The Germans allowed us to make a Ukrainian army in German uniforms. Our aim was to join this Ukrainian army and create a Ukrainian nation." **[NOTE - Proof of youth joining ...]**

After training in Germany, he fought with the rest of the **Galizien division at Brody,** where it suffered heavy losses. "We couldn't hold them. But fighting against the Russians was a pleasure, to be honest with you, because I was fighting on my own land."

Mr Lehkyj was then sent to Slovakia, where he fought partisans, and ended the war as a corporal. He remains proud of his service - "I have nothing to hide" - but denies that he took part in, or witnessed, any war crimes. "The Russians tried to blame us for everything. They say we killed children and women - it isn't true."

After being shipped to Scotland he was sent to a prison camp near Braintree, Essex, to work on farms, and has remained in the region ever since. Today he lives in Ipswich with Helen, the Englishwoman he married in 1953. They have four children, one of whom served in the RAF, and six grandchildren.

"I love this country," he said. "It gave me life. I call it Merry England: this is a country that will help any bugger."

Backstory

Labour shortages in post-war Britain were so severe that few questions were asked when Hitler's Ukrainian soldiers were shipped here. With large sections of the British population still in the armed forces, most farms depended on German prisoners of war, despite forced labour being prohibited by the **Geneva convention**

The 8,528 officers and men of the **14th Waffen SS Galizien division** had been languishing for two years at a prisoner of war camp near **Rimini**, on Italy's Adriatic coast.

Attempts to identify war criminals among them were promised by the Foreign Office, but they had had so much time to prepare cover stories that **Fitzroy Maclean**, a war hero and Tory MP who had been handed the task, complained that it was hopeless. He warned Whitehall: "We only have their own word for it that they have not committed atrocities or war crimes."

Advertisement

All concerns about the unit's war record were brushed aside during a series of cabinet meetings in March 1947. Foreign Office minister **Hector McNeil** reported that "United States opinion was sensitive" about continuing use of Germans as farm labourers.

Mr McNeil conjured up a deft solution: to meet the demand for labour by using displaced Ukrainians in place of the German prisoners. When Home Office

officials complained that immigration rules were being waived to bring suspected war criminals into the country, they were told that the prime minister, **Clement Attlee**, had "decreed" that it must happen.

Assorted / Todo

Farmer Wei

https://europepmc.org/article/PMC/3617873

2013-03-21-europepm-org-this-zoonotic-world.pdf

This Zoonotic World

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This Zoonotic World

Claire Panosian Dunavan

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"What I love about my work … is that it gives me the privilege of spending time with people whose jobs are so interesting, whose work is so important, whose brains and bodies are so tough. I've said it before … but some people, you know, admire medical missionaries, firemen, astronauts. I admire field biologists."

"I have a great job because I get to call up some of these scientists and say 'Hey, can I come talk to you or, better still, can I go to the central African forest with you?' And frequently they say: 'Well, all right, yes.' So that's a kid in a candy store…"

"What experts think of my book is also very important to me. If you're nodding as opposed to shaking your heads … it's very gratifying." (David Quammen, 2013)

Pale Horse. Thirteen Gorillas. Dinner at the Rat Farm. Going Viral.

Chapter titles like these are hard to resist. So here's a confession: I was first drawn to "*Spillover: Animal Infections and the Next Human Pandemic*" by its language and story-craft. Then I discovered its eclectic mix of history, ecology, research, and yes, even math–plus its frank, conversational voice. At that point, I was hooked.

After David Quammen's latest book was published last fall, *New York Times* critic Charles McGrath penned his own panegyric entitled: "The Subject is Science, the Style is Faulkner."

McGrath was referring to Quammen's early days as an English major and a Rhodes Scholar, when the aspiring author immersed himself in Faulkner. Soon, Quammen had published four novels. Then came his shift to non-fiction which, he realized, could be "wondrous and imaginative, shapely and literary … [not just] explanatory."

Quammen moved to Montana and wrote a long-running column for Outside magazine followed by regular features for National Geographic and other periodicals. Today, his bibliography includes 10 science books, including "*Song of the Dodo: Island Biogeography in an Age of Extinctions*" (1996), "*Monster of God: The Man-Eating Predator in the Jungles of History and the Mind*" (2003), and "*The Reluctant Mr. Darwin: An Intimate Portrait of Charles Darwin and the Making of His Theory of Evolution*" (2006).

Earlier this year, I spent an hour talking with David Quammen. In a moment, I'll share excerpts from our conversation. But first, meet "*Spillover*."

Tracking The "Next Big One"

Since its release, readers and reviewers have flocked to "*Spillover*" like flies to carrion, if you'll pardon the scabrous image. Or, to milk the metaphor: like buzzing green-bottles to a still, viral victim in a far forest glade.

There's no denying our 21st century fascination—both mordant and self-protective–with emerging, zoonotic infections. My epiphany came while reading Karl Taro Greenfeld's book on SARS. In my *Los Angeles Times* review of "*China Syndrome: The True Story of the 21st Century's First Great Epidemic*," I tried to depict the fragile boundaries between human, animal, and viral wildlife.

"Picture Guangdong province, circa 2002—land of luck and prosperity," I began. "'To get rich is glorious,' Deng Xiaping had proclaimed years earlier, opening the door to a new era of enterprise. Now, in China's south, music blares, cell-phones ring, cigarette smoke curls, and tycoons flush with cash consume every kind of exotic meat from camel hump to pangolin ear. The growing passion for 'Wild Flavor' cuisine has spawned a flourishing trade. In crowded warehouses, slaughter chambers, and restaurant kitchens slimy with entrails and excreta, hundreds of caged creatures destined for affluent diners nervously await their fate."

"Welcome to the riotous breeding ground of severe acute respiratory syndrome, an infection that will soon species-jump from animals to people."

Quammen lures readers with interlocking characters and sub-plots in the SARS drama. To name a few: fish merchant Zhou Zuofeng, the original "Poison King" "super-spreader" of the novel coronavirus. Brenda Ang, the infectious diseases consultant who saw many SARS sufferers (both patients and healthcare workers) at Singapore's Tan Tock Seng Hospital. Esther Mok, Dr. Ang's index case, who contracted her illness at Kowloon's benighted Metropole Hotel and subsequently infected her father, mother, uncle, and pastor—all of whom died.

Quammen then narrates the race to identify the SARS agent and its (still) elusive reservoir host. Finally he joins Aleksei Chmura, an American virus hunter-cum-global gourmand. As a prelude to their fieldwork, the two men bond over clotted pig's blood, bean sprouts, red peppers, and drippy globs of durian, "the world's stinkiest fruit." Then it's off—minus protective respiratory gear–to netting bats in the karst mountains near Guilin and later phlebotomizing them. Wrapping the chapter is an excursion to a cinderblock billet in southern China where Farmer Wei Shangzheng raises placid bamboo rats headed for human dinner plates.

"They breed readily, Mr. Wei, explained. He kept mostly females, plus a few good studs. Last month he sold two hundred rats, and now he was expanding his operation, building new sheds. Already he was the largest bamboo rat farmer in southern China! He told us exuberantly. Southern China, yes, and maybe beyond! He stated this not to brag, it seemed, but in joyous amazement at the vagaries of fortune. Business was good. Life was good. He laughed—ha ha ha!—at the thought of life's goodness. He's famous! He told us. He had been featured on Chinese TV! We could Google him! His ventures in bamboo-rat husbandry began in 2001, when he lost his job at a factory and decided to try something new.

The rat meat was mild, subtle, faintly sweet. There were many small femurs and ribs. One eats bamboo-rat hocks with one's fingers, I learned, sucking clean the bones and piling them politely on the table beside one's bowl, or else dropping them on the floor (the preferred method of Mr. Wei's father, a shirtless old man seated to my left) where they would be scavenged by the skinny cat who slept under the table. The hotpot was scorching. Mr. Wei, an exemplary host, brought out some big bottles of Liquan beer. Guilin's finest brew, nicely chilled. After a few glasses, I got into the spirit of the meal and found myself turning back to the rat platter, browsing for choice morsels.

I had begun to see Aleksei's point: if you're a carnivore, you're a carnivore, so what's the merit of fine distinctions? And if you're going to eat bamboo rat, I figured, best to do it here, at the source—before the poor animals get shipped, stacked amid other animals, and sick. Wild Flavor doesn't need to be seasoned with virus."

I've included this passage in its entirety because of its humanity, humor, and unexpected tag-line. Could the same information be packaged in dry, technical prose? Of course–and many of us would be just as enthralled. But not, necessarily, general readers. Lest we forget: it is they who must ultimately grasp 21st century disease ecology, then make savvy, possibly life-and-death choices.

Enough editorializing. It's no easy task to summarize "*Spillover*." For now I'll simply state that the book brims with engrossing human tales, field investigations, and "direct-to-camera" riffs around Hendra, Ebola, malaria, Q fever, psittacosis, Lyme disease, Herpes B, Marburg, Nipah, HIV, and avian flu, among other zoonoses. The book also introduces George MacDonald's model of malaria transmission and Australian scientist Frank MacFarlane Burnet's insights about certain shortcomings of a classical medical education. Burnet published "*Biological Aspects of Infectious Disease*" after recognizing that MDs trained in the first half of the 20th-century often lacked knowledge of zoologic and environmental factors contributing to human infections. Drawing on contemporary field research, Quammen marshals evidence that fragmented and disrupted ecosystems—as opposed to intact and diverse ones–are the settings most vulnerable to modern-day spillovers.

Quammen Un-Censored

"Let's start with the braided structure of the book. I found it fascinating."

"I don't like books that are structured in obvious, programmatic ways. The last thing I wanted was to write a book that simply covered nine diseases and marched predictably through them. So [in addition to disease-by-disease treatment], the history and principles of disease ecology are two more cords. My quest to go around the world to see and learn as much as possible is the fourth thread."

"I was also struck by the humor and empathy of your writing. Where does that come from?"

"As a writer, humor is one of those things you don't want to think about too much, but I suppose I was always kind of a smart aleck … At the same time, I'm not a hard-nosed journalist; I'm some other kind of non-fiction writer. When I go into the field, it's very hard for me not to like people. Especially if they are unpretentious people like the bamboo rat farmer in China."

“What's your view on our modern-day empathy for animals?”

“There's certainly a tension between concern for animals at the population and species level and concern for individual animals. That's something I'm interested in and have written about. I tend to think that animal rights people and conservationists are natural allies … but in a lot of cases the best thing for the population status of a species is not the best thing for individual animals.”

“I also have empathy for plants … I had a recent *National Geographic* assignment climbing the world's second-largest sequoia tree. I had enormous empathy for that creature once I got up into its crown.”

“Do you have empathy for viruses?”

“Aah, that's the sharp edge of the wedge. That's a difficult one.”

“What about bats—considering the deadly viruses they sometimes carry?”

“In the course of researching the book I spent time with bats, helping people like John Epstein and Aleksei Chmura trap and handle them, look for bat-roosts. It gave me more empathy. The one thing I regret [in “*Spillover*”] is that I didn't more clearly and explicitly say: ‘Look, dear readers, do not demonize bats. Bats are enormously important and perform important ecosystem services.’”

“What are your thoughts about eradicating infectious diseases?”

“There's an absolute-ness about eradication that I distrust, that makes me uneasy … In the case of zoonoses, of course, we can't eradicate unless we cure or eradicate the reservoir host. We don't want to pave this entire planet to make it cleaner and safer for humans because it will be not only un-helpful, it will be boring, lonely, and ugly.”

“I do have sympathy for people who say: we've eradicated smallpox from the human population, now let's eradicate polio. How can you not be in favor of that? But zoonoses are much more complicated. As Rick Ostfeld [of the Cary Institute of Ecosystem Studies in Milbrook, NY] once said to me: ‘Infectious disease is inherently an ecological system.’”

“What was your scariest moment researching the book—and your most poignant?”

“The scariest moment was when–about a-third into it–I started waking up in the middle of the night thinking: how am I going to do this? I've signed a contract; my editor and my agent are counting on me to deliver an encyclopedic and entertaining treatment of zoonotic diseases, including AIDS and Ebola. How in the world am I going to get access? Then, someone said: ‘Do you want to go with me to southern China and look for SARS?’ ‘Do you want to go to Bangladesh and draw blood from macaques?’ … and the moment passed. Then it was just a matter of, well, don't fall off the roof.”

“The most poignant moment was when I went back to that village in the Congo with Prosper Balo and he told me the story of when Ebola struck his village. Balo [an expert gorilla tracker] was off working in the forest where gorillas were dying; meanwhile his wife [whose sister, two brothers, and child died of Ebola] was being shunned, people wouldn't touch her money, wouldn't sell things to her. He lost members of his gorilla family; then he went back to his compound where he lost members of his human family. At that moment I thought: here is a complete human being. And I am completely interested in his story.”

“What do you say when people ask you to predict the “Next Big One”?”

“I try to say what I say in the last chapter. It's more complicated than that. Yes, there is a possibility but not an inevitability that a pandemic will kill millions or tens of millions of people. But it's also possible we can control or avert that.”

“People need more information to make intelligent choices. One reason I wrote the book … [is to] improve decision-making. We have to keep fighting the battle of getting people vaccinated for flu just as we have to keep fighting the battle to prevent people in Bangladesh from drinking raw date palm sap [and getting Nipah virus].”

“My book is not a haiku, it is not a street sign, it is not even an op-ed … it's a 500 page book. I don't think of it as a strident alarm bell. I think of it as a nonfiction concerto on a very, very important field of science.”

ASTMH Confidential

Several times during our conversation, Quammen reiterated his debt to the scientists who helped him complete his “concerto.” Not surprisingly, “*Spillover*'s” back-matter is packed with names, including those of *ASTMH* members.

Quammen first met Jens Kuhn at a filovirus meeting in Gabon. “Actually, we were both staying at the same fringe hotel outside Libreville,” Quammen clarified; while traveling back and forth on the bus, the two men hit it off. Would Kuhn read a draft of his Ebola chapter? the writer asked. In exchange for a bottle of single-malt scotch (he declined a case), Jens reviewed the entire manuscript.

Another reviewer was Charlie Calisher, whose 2006 review article, “Bats: Important Reservoir Hosts of Emerging Viruses,” figures colorfully in a chapter entitled “Celestial Hosts.” Quammen describes Charlie as “… a smallish man with a dangerous twinkle, famed throughout the profession for his depth of knowledge, his caustic humor, his disdain for pomposity, his brusque manner, and (if you happen to get past those crusts), his big, affable heart.”

Finally, Karl Johnson. “Tremendously good company and such a silverback in this field,” Quammen said of his fellow Montanan and fly fisherman. Karl not only briefed Quammen on Machupo, Ebola, hantavirus and other ‘special pathogens’ studied at Johnson's former CDC branch, he set the record straight on tumid features of Ebola promulgated by Richard Preston's “*The Hot Zone*.” “Bloody tears is bullshit. Nobody ever has ever had bloody tears,” our past-President declared, adding “People who die [of Ebola] are not formless bags of slime.” (To his credit, Preston accepted the knuckle-rap with evident grace in his *Wall Street Journal* review of “*Spillover*.”)

After we spoke, I mailed Quammen a copy of *ASTMH's* Karl Johnson video. I also threw in a reprint of “*Infectious History*,” Joshua Lederberg's prophetic essay published in 2000. In a section titled “Evolving Metaphors of Infection: Teach War No More,” Lederberg argues for moving beyond the traditional allegory of “microbe v. man” (or, to paraphrase the Nobel laureate microbiologist: the manichaean “We good; they evil” view). Re-reading Lederberg, I found echoes of Quammen, whose final chapter offers this thought on the “salubrious” side of zoonotic diseases:

“They remind us, as St. Francis did, that we humans are inseparable from the natural world. In fact, there is no “natural world,” it's a bad and artificial phrase.

There is only the world. Humankind is part of that world, as are the ebolaviruses, as are the influenzas and the HIVs, as are Nipah and Hendra and SARS, as are the chimpanzees and bats and palm civets and bar-headed geese, as is the next murderous virus—the one we haven't yet detected."

Or, as Quammen reflects after Prosper Balo shares a treasured notebook listing the names "Apollo," "Cassandra," "Afrodita," "Ulises," "Orfeo," and other Ebola-felled apes: "People and gorillas, horses and duikers and pigs, monkeys and chimps and bats and viruses: We're all in this together."

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Davison Chemical Company

Draft. ...

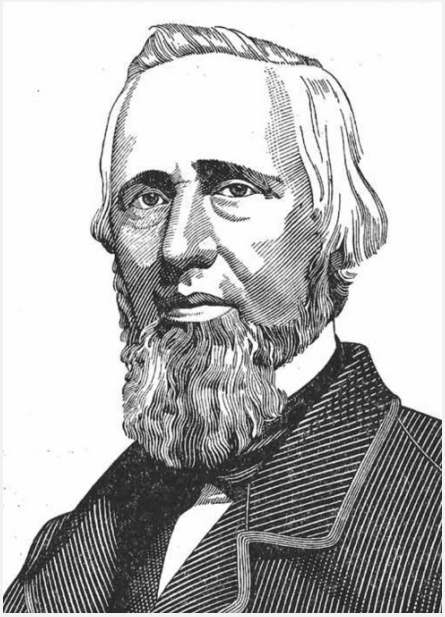
From scanned copy of (1951) "Davison Chemical - It's background and Contributions since 1832"

From scanned copy of ***(1951) "Davison Chemical - It's background and Contributions since 1832"***; (See [aa1][GDrive]).

The story of Davison goes back about [nearly 200 years as of 2019], and it is largely a record of development around **sulfuric acid**. [...]

Early in the 18th Century, about 1736, the first commercial sulfuric acid was produced at Richmond, England, by a Doctor named **Joshua Ward**, who was of doubtful character but of very considerable ingenuity, considering the status of the chemical science and the art of manufacture in his day. Ward set up glass containers or vats of up to 66 gallons capacity in two rows in a sand bath, each container provided with a little water. The containers resembled so many fat geese, with long, thin necks reaching into earthen pots. Each pot rested on a red hot dish and contained a mixture of one part saltpetre and eight parts brimstone. The process was controlled by wooden plugs in the bottles. When fresh air was admitted, the reaction started up, and the process was repeated until the acid reached a standard strength. The Ward method was known as"oil of vitriol by the bell." John Roebuck, another Englishman, in 1746, led the way to improvements in the process with his lead ‑ condensing chambers. Methods of manufacture during the rest of the 18th Century varied little after Roebuck's useful modification.

Here in the United States of America the first sulfuric acid manufacture was undertaken at Philadelphia, in 1792, by **John Harrison**. He used the lead chamber process and, by 1807, had an annual capacity of a half million pounds of acid. **Harrison is credited with being the first to use platinum in the manufacture of sulfuric acid.**



[aa2][GDrive]
WILLIAM T. DAVISON (circa 1804-1881)

William T. Davison [...] was born in Belfast and educated at the University of Belfast, where he majored in chemistry. His father was a well-to-do Belfast merchant, but the younger Davison ignored the easier opportunity of success at home for adventure abroad, and, in 1825, he left Ireland with his new bride and crossed the Atlantic on a sailing vessel, arriving at the Port of New York. After a short stay in New York City, Davison decided to go to Baltimore [for reasons history did not record].

When Davison arrived, America was a young and primarily an agricultural nation seriously affected by the growing pains of its industrial development. Producers abroad did not like the idea of the young nation developing industrially, and many American importers and legislators added much to the troubles of the men who were attempting to create new industries. At this time, too, the Nation was in the throes of a severe business recession, aftermath of the

of the men who were attempting to create new industries. At this time, too, the Nation was in the throes of a severe business recession, aftermath of the War of 1812. It suffered the economic turmoil of a country without stable money, without an adequate banking system, and without basic business discipline.

Agriculture itself was in process of change. The European farmers coming to America soon learned that the soil they tilled was not as rich as the soil of the British Isles and of the Continent. Many New Englanders already were heading West: to new and richer lands beyond the Appalachians.

The South was profoundly affected by Eli Whitney's invention of the cotton gin. This brought cotton out of the category of a luxury cloth and greatly increased the demand for it. In response, the farmers expanded their acres and intensified the cultivation, with a result that the soils were exhausted of their virgin plant foods.

To restore lost fertility, farmers resorted to use of natural fertilizers from whatever source it was possible to obtain them, in this respect following the experience of agriculture throughout time. One important such source, at that time, was **guano**, the deposit of gulls, cormorants, and penguins who find refuge in rookeries on ocean islands and along shores. It provides a combination of phosphates and nitrogen, a basic type of fertilizer.

American maritime history makes much of the Baltimore Clippers running a wet nose into the teeth of the storm, and whalers ploughing through the Tasman Sea, competing with the Clydeside boats out of Hobart for the sperm oil of Moby Dick. Carrying cotton to Shanghai or chasing whales in the Antarctic may be a bit more glamorous to read about than searching the Pacific for guano deposits on volcanic islands, but the sailors found an eager market among farmers of the Atlantic Coastal Plains for this natural deposit, and they rendered a generous service to those early growers of corn, cotton, and tobacco. There was mystery, too, in the lives of the guano sailors who cruised the coast of South America to islands like Chincha off Peru, or the strange Falcon Island, remote and fickle to the map makers. One crew actually reported that on a voyage to Falcon, they saw that volcanic peak settling slowly beneath the waves. This island played hide-and-seek with the sailors several times in the 19th Century, probably as a result of volcanic action on the deep floor of the Pacific; but, unfortunately, when Falcon Island subsided under the waves, it washed away a great commercial asset in its guano deposits.

With agriculture predominant in the economy and dependent upon natural fertilizer, and with industry finding the going so difiicult, there was little demand in those days for the products of chemistry.As late as 1831, the total capital invested in 30 chemical plants in the United States was $1,158,000. Philadelphia was the young Nation's most important chemical market. The chief products of the fledgling industry, in addition to sulfuric acid, were sal - ammoniac, alum, potash, copperas, Epsom salts, small amounts of white lead and other paint chemicals, and alcohol. The chemical industry then, as now, revolved around sulfuric acid, and was largely influenced by the price and availability of this indispensable chemical. Local supplies of brimstone or other sulfur compounds were unknown or inaccessible, and the producer of acid of that time had to depend upon brimstone imported from Sicily. It was almost a hundred years later that the sulfur domes of Louisiana and Texas were to make their remarkable contribution to the World's chemical industry.

This, then, was the not very encouraging picture that met the searching eyes of William T. Davison. We know him to have been a man of restless and inventive bent; he must have been one of vision also, because he not only chose the chemical industry for his lifework, but influenced it in directions which were to bring about its rapid expansion.

Davison organized the firm of **Davison and Kettlewell** in I832, and erected the first sulfuric acid chamber in the South. From [the] beginning, sulfuric acid has dominated Davison production throughout the years. An early advertisement describes the function of Davison and Kettle well as: "Grinders and Acidulators of Old Bones and Oyster Shells."

Ground bones were dumped into a pit in the ground, one man pouring in the sulfuric acid, while another stirred the mass with a large wooden paddle. The mass was permitted to set for several days, screened, and prepared for shipment.

The crude design of the early lead chamber sulfuric acid plant, and the method just described for producing phosphate bear little resemblance to our modern contact acid plants and superphosphate plants today. The important point for us is that Davison, displaying sound imagination of the able man of business, succeeded in linking together, for the benefit of each, the Country's tiny chemical industry with its primary pursuit of agriculture. **He got into fertilizer manufacture to provide a use for his sulfuric acid**, a union that has endured to this day. Davison, in developing his business, was chemist first and manufacturer afterward, and, in the early years of his business life, he continually was experimenting with acids, pharmaceuticals, and paints. Some years after starting the manufacture of superphosphate from old bones, he found a more economical raw material, in South Carolina **rock phosphate**, which, treated with the acid, provided an equally satisfactory superphosphate.

Competition then, as now, was a stimulus to enterprise, and, in 1836, another sulfuric acid plant was built in this Baltimore area by Dr. Philip S.Chappell. Alum and other chemicals were added products, but the company ran into financial difficulties and had an unfortunate career until it was destroyed by fire. Thereafter a new plant was erected by Chappell on the Patapsco River, at the mouth of Curtis Bay. This plant covered about five hundred acres and was the largest sulfuric acid plant in the United States at the time.

The coming of railroads was a genuine incentive to the Davison business, and Davison was an active supporter of and investor in the Iron Horse, which brought Baltimore, with its strategic location as a gateway to the Southeast, West, and North, into closer contact with the farming regions.

A period of expansion for Davison followed. In 1855, he dissolved his connection with Kettlewell, and the firm was reorganized as **Davison, Symington and Company**. About 1860, he formed a new company with one of his sons at its head, which was described as a manufacturer of chemicals, paints, varnishes, and allied products. In 1867, he was operating both **The Maryland White Lead Works** for paints, varnishes, and allied products, and t**he firm of William T. Davison**, located in the **Canton** section of the Baltimore waterfront, for the production and distribution of quinine, calomel, Epsom salts, and heavy chemicals, in addition to **Davison, Symington and Company**, for production of sulfuric acid.

The history of Davison would not be complete without a tribute to **Gustavus Ober**, who also contributed a great deal to the development of industry in Baltimore. Some twenty years after Davison's association with Kettlewell in the construction of a sulfuric acid chamber, Ober became associated with Kettlewell in the production of a fertilizer which they referred to as "Manipulated Guano." This was in 1852. They processed guano shipped from Peru and Mexico to provide a more complete plant food than the natural guano provided, and their formula was almost identical in the ratio of nitrogen and phosphoric acid with present day fertilizer requirements.

William T. Davison died on October I8, I881, leaving his sons to carry on his many business interests. Before and after his death there were several corporate successions which finally resulted in the formation by **Calvin T. Davison** and others, of the **Davison Chemical Company** . It operated two plants in the city, and likewise the Hawkins Point acid plant originally built by Chappell. **It was Calvin Davison who, in 1909, sought and obtained for his company capital to start construction of a new sulfuric acid plant at Curtis Bay**, [which as of 1851 was the home of the] company's Baltimore manufacturing and research operations. Thus again, sulfuric acid provided the stimulus for a noteworthy development in Davison history. Facilities for the production of normal superphosphate at this plant were to make it the largest single operation of its kind in the World

superphosphate at this plant were to make it the largest single operation of its kind in the World.

During the First World War the Davison Company increased its sulfuric acid production to meet the requirements of munitions. This left it with excess capacity following the War, and led to the expansion of the Company through the acquisition of ownership or control of about sixty fertilizer plants located throughout the eastern and southern parts of the United States. Fertilizer production and distribution was considered then as somewhat of a "feast-or-famine" business, one in which conservative investors were loathe to participate; but volume was thought of generally as a protection against the vicissitudes of the business cycle. This philosophy was proven to be fallacious when the dark days of the early 'thirties struck the Company. The effect of a drastic curtailment of consumption by farmers, plus decline in prices, was to make, of the many scattered fertilizer plants, a real financial burden. The Company was forced into receivership, in 1933 [, bringing Chester F Hockley] into the Davison picture as a receiver.

[World War I marked a dividing line for] the corporate history of the Davison Company. Technological developments following the First World War [led to tremendous changes in the chemical industry and gave] rise to many new industries based on chemical processes.

[...] Following the reorganization process of the receivership in which [the company] became **The Davison Chemical Corporation**, many of the fertilizer plants were disposed of. This was a drastic but necessary surgical operation on the corporate body. It reduced [Davison's] fertilizer capacity by about 50 percent, but most of the plants which were disposed of were obsolescent or poorly located for profitable operation. [Davison Chemical Corporation] retained a few modern plants strategically located in good agricultural regions.

At the same time, a program of diversification was decided upon and emphasis placed on Research and Development. Henceforth Davison emphasis was to be less on agricultural chemicals and more on industrial chemicals, with sulfuric acid basic in most of them.

The agricultural field was not neglected, however, particularly in view of the rising economic importance of the farmer; and, while disposing of unprofitable facilities, an opportunity came to bring into the Davison fold the plant of G. Ober & Sons, the enterprise whose founder was mentioned earlier. This firm had developed a process for granulating superphosphate which represented a totally new development in fertilizer technology, in which the product is made in the form of coarse granules rather than powdered, with advantages from both the agronomic and economic viewpoints. Thus it was that through the granulation process the Ober and Davison heritages and skill and enterprise in fertilizer and chemical manufacture were again united, after a lapse of. many decades. Later, the Ober granulation process was superseded by a Davison process developed by our own research staff and this is being steadily improved to increase efficiency of operation, obtain lower costs, and improve the products.

The reorganized company was in the position of being one of the larger manufacturers and marketers of superphosphate, and of having other products derivative from the process, but without a source of raw material. **Correction of this weakness was not practicable until 1946, when we purchased phosphate rock deposits at Bartow, Florida**, and complete mining and processing facilities. The Florida operation enables us to market raw rock phosphate as such, and it provides our complete control over a production sequence from mining, through processing of rock to fertilizer and many new products of industrial chemistry. '

This, in summary, was the course taken with [Davison Chemical Corporation's] heritage from earlier days in the field of fertilizers. The processes are based on sulfuric acid, and their efficiency is dependent upon an efficient source of the acid. Accordingly, step by step, [Davison Chemical Corporation has and continued to (as of 1951) enlarge and modernize it's] sulfuric acid facilities at Curtis Bay.

[...] Sulfuric Acid forges a link between agricultural and industrial chemistry in more ways than one. For instance, there is an important co ‑ product development in superphosphate production. When rock phosphate is caused to react with sulfuric acid, gases are liberated, among them fluorine in the form of silicon tetrafluoride. This is a very valuable substance which, by chemical means, is converted into a family of products known as silicofiuorides that are in great demand for a variety of purposes.

But to find the main stream of [Davison Chemical Corporation's] industrial chemical development it is necessary to go back to the days of the First World War and to the introduction of silica gel into the Davison picture. Here, also, excess sulfuric acid production was a factor in the development of this new product, just as it had been with William T. Davison's entry into fertilizer processing.

Silica Gel establishes a tie with one of our important Baltimore institutions, because the story of silica gel is a tribute to the primary research of The Johns Hopkins University.

Dr. Walter A. Patrick, a professor of physical chemistry at Johns Hopkins, [...] made one of the earliest contributions to the commercial production of silica gel. During the First World War he was working, at the request of the **United States Chemical Warfare Service**, on the selection of a material capable of adsorbing vapors and gases for use in gas mask canisters. In the progress of that work he developed the first process for producing silica gel. While silica gel is now well known throughout the World, yet knowledge of it in the early 'twenties was confined largely to scientists. Following its production by Dr. Patrick in the laboratory, its high moisture adsorbent qualities and its other characteristics were known only in a general way, and even after **The Silica Gel Corporation** had been formed, in 1921, for the production and sale of silica gel, the potentialities of the product had never been developed commercially.

In the course of the receivership of the Davison Company the inherent values of silica gel justified the purchase by the Davison Receivers, at auction, of The Silica Gel Corporation, then bankrupt, and which, upon Reorganization of The Davison Chemical Company, ceased to have a separate corporate entity. With the background of Dr. Patrick's work on silica gel, the reorganized Davison Chemical Corporation instituted an extensive research program which carried on where Dr. Patrick and the former Davison staf had left off. This has resulted in development of a completely new field of chemicals, gels of silica and various other materials. [As of 1951, from the original Patrick development, Davison Chemical is] are producing several hundred different types of products which fall in the category of gels and which have many and varied applications in industry.

[An intensive campaign where] every resource in the way of product research, and of merchandising and sales techniques, was put into convincing the buyers of desiccants that silica gel was the product they needed. The success was so outstanding that use of silica gel exceeds all others in this important field, and, as so often happens, acceptance in one use opened the door to acceptance in others and this, with the development of new products, created a new field of commercial enterprise.

The results of the program are indicated by the fact that, in I937, shipments of silica gel were still insignificant , a mere 78,000 pounds. But, by 1945, some 50,000,000 pounds were being produced largely for desiccant use. Much, but by no means all of this, was for wartime protection of ordnance.

Many continuing peacetime uses had been developed and a whole new field opened up through research into catalytic uses of silica gel and other gels. **Commercially significant development of gels in the catalyst field started in the Petroleum Industry when the demand for high octane gasoline increased rapidly in the early days of the Second World War as a result of the expansion of aircraft operation.** It was necessary for the Petroleum Industry to improve their methods of producing this material, and this resulted in the application of catalyst to the cracking of petroleum products. **We**

cooperated in the development of a gel catalyst for the fluid catalytic cracking process and, as a result of this development, in 1942, we built at Curtis Bay the first plant for the production of gel cracking catalysts. This plant has since been increased to triple its original capacity. Increasing demand for this type of catalyst resulted in our acquiring a plant in Cincinnati Which today is producing about the same quantity as the Baltimore facilities. 50 that now, silica gel from its small beginning of 78,000 pounds in I938 is being produced at an annual rate of almost one hundred million pounds per year.

Thus the sturdy youngster of the Davison Chemical family, offspring of its oldest member, sulfuric acid, has, through Davison research, come into its own as a new industry within the chemical group.

The appetite of industry and the Armed Services for benzene and other petroleum aromatics such as toluene and xylene is insatiable. Literally dozens of industries and thousands of products are dependent upon them, and must compete for them with the aviation and automotive industries. In response, new processes are coming into use which take over after the cracking process, and subject molecules to a “reforming” so as to produce a still higher yield of aromatics. Again, silica gel has proved to be the right catalytic base. Solution of the problems involved in production of catalysts which will serve most efficiently in the various petroleum processes offers challenges to our Research Staff.

The dramatic advantages which have accrued through use of catalysts in petroleum refining have influenced other developments. Catalysts have given the entire chemical industry one of its most potent keys to economic operation. The field is intensely interesting and a constant challenge to Research technicians and to venture capital. For Davison, our knowledge and experience gained with petroleum catalysts suggested a branching out into development and production of other types of catalysts. Accordingly, a specialty catalyst plant was built at Curtis Bay where catalysts are custom-made for a wide variety of applications, in many different physical forms, employing a broad range of catalytic substances and bases of several kinds as well as silica gel.

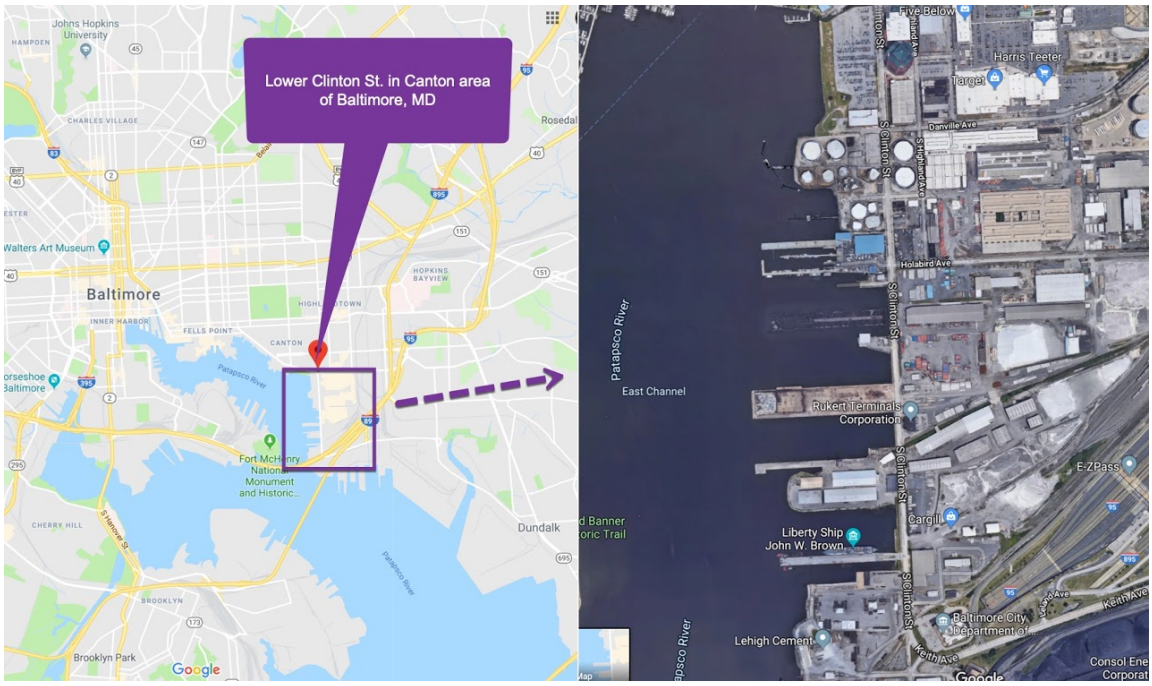
Petroleum refining is on a worldwide basis and silica gel catalysts produced by Davison or under Davison license are in wide use Abroad, a return of silica gel to Europe in a way that those who earlier carried it there could not have foreseen.

Much of this and other work of the Davison laboratories, among the many which are doing chemical and medical research, is on a long - term scientific program. Not all of its findings add up to dollars and cents on the black side of the ledger. However, the accumulated efiort always contributes to progress in chemical and medical science, and benefits people and industries everywhere.

As of 1951 ...

The functional hub of The Davison Chemical Corporation is still sulfuric acid, the product with which William T. Davison started in 1832. Our superphosphate activities at several points, our mixed fertilizer plants, our phosphate rock mining, the processing of rock and development of products such as the silicofluorides, silica gel and the catalysts, would not exist without the chemical vitality of sulfuric acid, which activates and changes so many useful items in our industrial and social existence.

CANTON



Canton Section of Baltimore, Maryland (areal view today - April 2019)

*Research Notes : It was a **1868 Maryland Reports** document on legal cases that identify the **"Symington"** of a lawsuit against "Davison and Symington" as **"WM. STUART SYMINGTON."**. This is what we used to conclude that this Symington was **William Stuart Symington I (born 1839)** , as well as his younger brother **Thomas Alexander Symington (born 1842)** .*

https://books.google.com/books/download/Maryland_Reports.pdf?id=WjMtAQAAMAAJ&hl=en&capid=AFLRE73uzLbKa1nr3167jWgT-vrjn9b_A-ce26HWJBt5_QNACQoZR91PDdAKJ76pXJgd8cI7NLJDrE_rXqsv_A9I5y5gjy0t2g&continue=https://books.google.com/books/download/Maryland_Reports.pdf%3Fid%3DWjMtAQAAMAAJ%26output%3Dpdf%26hl%3Den

*See [https://www.cantoncommunity.org/canton-timeline] - "1870–1885 : Lazaretto Fertilizer, Patapsco Guano, Maryland Fertilizer, Susquehanna Fertilizer, **Davison Chemical**, and Baugh & Sons & Chemical Co. of Canton open fertilizer plants on **lower Clinton St.**"*

1919 - Legal disupute between Davison Chemical and Baugh Chemical (includes concerns related to du Pont)

See - 1919-atlantic-reporter-vol-106.pdf / https://drive.google.com/open?id=1EQAg9OQtqfg_Li_CoqefRCLUDg8Ieyxa

1954 - Acquisition by W. R. Grace and Company

WIKIPEDIA - https://en.wikipedia.org/wiki/W._R._Grace_and_Company

Saved link - 2019-04-20-wikipedia-org-w-r-grace-and-company.pdf / https://drive.google.com/open?id=1-H9oKSUWX2ghYnXrrrSbQzOkGYPMCMAW

*"**J Peter Grace, Jr.** (See WIKIPEDIA : J. Peter Grace, Jr.) took over management of **W. R. Grace and Company** after his father suffered a stroke in 1945. After [World War II] the **Grace line** operated 23 ships totaling 188,000 gross tons, and an additional 14 more on bareboat charters. In 1954 , [W. R. Grace and Company] company bought **Davison Chemical Company** [...], and the **Dewey & Almy Chemical Company** (founded in 1919 by Bradley Dewey and Charles Almy)."*

Excellent 1951 scanned book on Davison Chemical's history up until 1951: 1951-10-davison-book-its-background-and-contributions-since-1832-chester-hockley-ocr.pdf / https://drive.google.com/open?id=1tYLksPXWxqfoAADLEsGhHqtetVoxaIH-

This Newcomen Address, dealing with the pioneer work of William T. Dawson and with the history of The Daw'son Chemical Corporation, was delivered at the “195: Baltimore Dinner” of The Newcomen Society of England, held at EIkridge Country Club, Baltimore, Maryland, U.S.A., when M r. Hockley was the guest of honor, on October 2 4 , 195:

CHESTER F. HOCKLEY

MEMBER OF T H E NEWCOMEN SOCIETY C H A I R M A N O F T H E BOARD A N D PRESIDENT T H E DAVISON C H E M I C A L CORPORATION

B A LT I M O R E

M A RY L A N D

My fellow members of Newcomen:

CHESTER F. HOCKLEY was born in south central Pennsylvania, with a heritage from strict, sturdy people. He had a normal school and college education which ended at an early age. Immediately he started his career as a young Engineer in the Machine and Steel Industries, at the then customary very modest compensation which, under today’s conditions, seems almost insignificant. From then on, his career is What we like to term the typical American career of an ambitious young man.

He was endowed with great ability and with unusual imagination. He was restless for advancement, and obtained, in rapid succession, employment with Snow Steam Pump Works, Lackawanna Steel Company, Westinghouse Machine Company, and Bethlehem Steel Company.

He first came to Baltimore, in I919, with American Hammered Piston Ring Company which had been acquired by Bartlett Hayward Company. A year later, he became President of the Piston Ring Company. From this he moved to the Vice ‑ Presidency, and finally, in 193 I, to the Presidency of Bartlett Hayward Company.

His constant desire to grapple with new and difficult problems allied him, in one way or another, with the development of gas engines for the Steel Industry, the construction of new mills at the Bethlehem Steel Company for making the revolutionary H ‑ beam, in designing and producing improved piston rings, the introduction into the United States of America of the waterless gas holder, which first had been developed on a small scale in Germany, in the development on a large scale of granular superphosphates and fertilizers, and later, in the development of catalysts for use in oil refining and in other processes.

In 1933, Mr. Hockley was appointed Receiver for the old Davison Chemical Company and its affiliates. By many this was thought to be a liquidating proposition, but he struggled with it for two years until finally a new company emerged, with him as President and as its guiding spirit. To him is due not only the credit of converting the liquidation into a living entity, but for nursing that entity from a Weakling into finally becoming a strong, prosperous company which, in many ways, is an embodiment of himself.

...

The Davison Chemical Company : (see)

2019-marinelink-history-davison-chemical-company.pdf / https://drive.google.com/open?id=1EmzCeuYbb6bWVDdHTIaKLXipcBGcRfoE

THE importance of American control of the manufacture of chemicals for its own needs has been most emphatically demonstrated by the record of events in recent years.

The old-established chemical firm, the Davison Chemical Company, which has its principal office in the Garrett Building, at Baltimore, Maryland, is one of the most notable. It was founded in 1832 by William Davison and has been controlled by the Davison family ever since.

Following the death of Mr. Calvin Davison, his son-in-law, C. Wilbur Miller, who was then engaged in the practice of law, became actively identified with the company, and has since 1910 been its president. During the fifteen years he has been connected with the company its investment has increased from

$600,000 to more than $16,000,000, and it is now one of the largest chemical manufacturing plants in the world, producing **sulphuric acid, acid phosphate, sodium and magnesium silico fluoride, iron cinder and copper**.

Through its subsidiary organization, the Davison Sulphur and Phosphate Company, it owns important raw materials property, including a phos-phate rock mine in Florida and a pyrites mine in Santa Clara Province, Cuba. The Cuban ore contains a high percentage of copper, which will be extracted at the copper plant of the company.

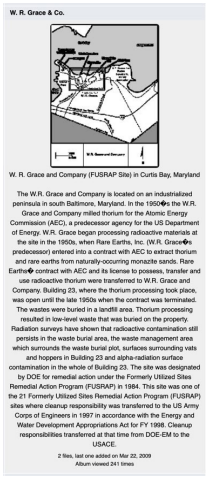
The products of the company have been greatly augmented during the war period, and the plant worked up to its capacity to meet the urgent needs of manufacturers who use its products in their processes. The future of the fertilizer industry in the United States, which consumes large tonnage of acid phosphate, is unlimited, and the largest producing center for fertilizer in the world is Baltimore.

The broad policy of expansion, which was adopted by the Davison Chemical Company and which resulted in a vast amount of construction and new development work in the last ten years, is now beginning to show collective results. In the new conditions that are developing as a result of the world war, with an unquestioned expansion in all of the departments of production industries, the manufacture of chemicals and fertilizer material is necessarily one of the branches of production in which the United States is expected not only to supply its own needs but also to take care of the greatly expanded export trade. No concern is better prepared for this program of expansion than the Davison Chemical Company.

In the management of the business Mr. Miller is assisted by an able and efficient official staff, the membership of which includes George W. Davison, vice-president; W. D. Huntington, vice-president in charge of sales; E. B. Miller, vice-president in charge of operations; J. R. Wilson, secretary and assistant treasurer; T. J. Dee, treasurer. The Executive Committee of the company is composed of J. J. Nelligan, A. H. S. Post, Waldo Newcomer, C. Wilbur Miller.

https://www.nukeworker.com/pictures/index-10.html

(2019-04-nukeworker-com-nuclear-facilities-na-usa-region1-northeast-nuclear-pictures.pdf / https://drive.google.com/open?id=1tpYd14Hf6HsQFybDPkMQYK_FoID5MH8C)



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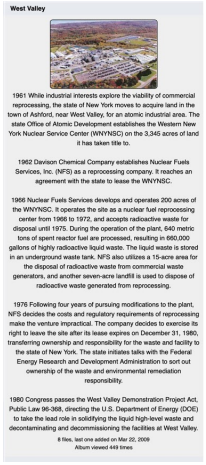
W. R. Grace and Company (FUSRAP Site) in Curtis Bay, Maryland

The W.R. Grace and Company is located on an industrialized peninsula in south Baltimore, Maryland. In the 1950s the W.R. Grace and Company milled thorium for the Atomic Energy Commission (AEC), a predecessor agency for the US Department of Energy. W.R. Grace began processing radioactive materials at the site in the 1950s, when Rare Earths, Inc. (W.R. Grace's predecessor) entered into a contract with AEC to extract thorium and rare earths from naturally-occurring monazite sands. Rare Earths' contract with AEC and its license to possess, transfer and use radioactive thorium were transferred to W.R. Grace and Company. Building 23, where the thorium processing took place, was open until the late 1950s when the contract was terminated. The wastes were buried in a landfill area. Thorium processing resulted in low-level waste that was buried on the property. Radiation surveys have shown that radioactive contamination still persists in the waste burial area, the waste management area which surrounds the waste burial plot, surfaces surrounding vats and hoppers in Building 23 and alpha-radiation surface contamination in the whole of Building 23. The site was designated by DOE for remedial action under the Formerly Utilized Sites Remedial Action Program (FUSRAP) in 1984. This site was one of the 21 Formerly Utilized Sites Remedial Action Program (FUSRAP) sites where cleanup responsibility was transferred to the US Army Corps of Engineers in 1997 in accordance with the Energy and Water Development Appropriations Act for FY 1998. Cleanup responsibilities transferred at that time from DOE-EM to the USACE.



2019-04-nukeworker-com-nuclear-facilities-na-usa-region1-northeast-nuclear-pictures-clip2.jpg / https://drive.google.com/open?id=1togqEtyH79xhPUZ4BLps4L9D7UpYWPx5

1961 While industrial interests explore the viability of commercial reprocessing, the state of New York moves to acquire land in the town of Ashford, near West Valley, for an atomic industrial area. The state Office of Atomic Development establishes the Western New York Nuclear Service Center (WNYNSC) on the 3,345 acres of land it has taken title to.

1962 Davison Chemical Company establishes Nuclear Fuels Services, Inc. (NFS) as a reprocessing company. It reaches an agreement with the state to lease the WNYNSC.

1966 Nuclear Fuels Services develops and operates 200 acres of the WNYNSC. It operates the site as a nuclear fuel reprocessing center from 1966 to 1972, and accepts radioactive waste for disposal until 1975. During the operation of the plant, 640 metric tons of spent reactor fuel are processed, resulting in 660,000 gallons of highly radioactive liquid waste. The liquid waste is stored in an underground waste tank. NFS also utilizes a 15-acre area for the disposal of radioactive waste from commercial waste generators, and another seven-acre landfill is used to dispose of radioactive waste generated from reprocessing.

1976 Following four years of pursuing modifications to the plant, NFS decides the costs and regulatory requirements of reprocessing make the venture impractical. The company decides to exercise its right to leave the site after its lease expires on December 31, 1980, transferring ownership and responsibility for the waste and facility to the state of New York. The state initiates talks with the Federal Energy Research and Development Administration to sort out ownership of the waste and environmental remediation responsibility.

1980 Congress passes the West Valley Demonstration Project Act, Public Law 96-368, directing the U.S. Department of Energy (DOE) to take the lead role in solidifying the liquid high-level waste and decontaminating and decommissioning the facilities at West Valley.

2007-04-07-tn-times-news-nuclear-fuel-services-celebrates-50th-birthday.pdf / https://drive.google.com/open?id=1tsW8c4gjhyJcgf38aWC5aJ30hh7pUNjc

ERWIN - Much of the activity in its production plant is shrouded in secrecy, but Unicoi County's largest employer doesn't want one piece of news to be classified: It has turned 50 this year.

Nuclear Fuel Services, which manufactures fuel for the Navy and converts highly enriched uranium into fuel used at the Tennessee Valley Authority's Browns Ferry nuclear power plant, has hit the half-century mark.

The industry plans to celebrate the anniversary in July, but it briefly commemorated the event at the Unicoi County Chamber of Commerce dinner last month.

NFS was born in 1957 in Baltimore when T.C. Runion, Charlie Taylor, Stan Reese and Ed Johnson hooked up with companies W.R. Grace and Davison Chemical, fueled in part by a desire by Congress to have commercial nuclear power plants.

W.R. Grace bought Davison in 1954, NFS spokesman Tony Treadway said.

"We've made a real contribution to society and the business world," said Taylor, who remained active in company affairs until he resigned from the board of directors in February.

According to a company brochure, the four men were working for National Lead Co. in Fernald, Ohio, when their lives intersected.

"We knew that W.R. Grace was wanting to grow into the nuclear business and that Davison Chemical made a lot of specialty chemicals, so we went to them for financial backing," Johnson said.

The choice of building NFS in Erwin was a matter of logic and personal feelings. Runion said the town was close to Oak Ridge and Savannah River, a Department of Energy site close to Aiken, S.C., and a railroad siding could be obtained for the Erwin property. Plus, Erwin was his hometown.

Taylor said the early years consisted of processing highly enriched uranium, low-enriched uranium and thorium metal. During down times, NFS made specialty chemicals. Later, NFS manufactured material for Consolidated Edison's first commercial nuclear reactor.

The company's most well-known role with the military evolved from the Navy's wishes to have a fleet of nuclear powered ships. NFS has been the sole provider of Navy fuel since 1966, and the first batch arrived at an aircraft carrier in 1969.

"We wanted to penetrate the Navy business, so NFS and W.R. Grace went to work on a better type of fuel completely on our own and without government support," Johnson said. "It was a really gutsy thing to do."

Runion recalled that he worked at the Erwin plant for 10 years, all of which he believed were profitable. He said that is unusual in the nuclear industry

Runion recalled that he worked at the Erwin plant for 10 years, all of which he believed were profitable. He said that is unusual in the nuclear industry.

"Most of all the companies took a beating the first two or three years," said Runion, who noted that everyone involved in establishing NFS believed that nuclear business "was going to be the way to go."

He said NFS was one of the first plants to produce uranium oxide as part of the fuel that nuclear power electric generating plants needed. The material used in Erwin was manufactured at a government plant in Oak Ridge, Runion said.

At the moment, NFS has about 540 employees, with more than 340 on salary and the rest being hourly, union employees.

Other union members are gradually returning to work after last year's strike ended. Employment was at its highest about 1,200 in the late 1980s and early 1990s.

Despite a connection to the U.S. government that keeps many aspects of its operation top secret, NFS has found itself regularly in the news over the years.

Sometimes, it's been the result of labor unrest. Occasionally, the union has gone on strike, the last one coming in 2006 and lasting five months. In 1985 and 1986, a strike lasted nearly a year. Taylor said NFS has probably had more problems with its union than other companies have encountered.

Roger Birchfield, who worked for NFS for 40 years before retiring in 2006 and was union president during the recent strike, said he believes unions are good for a company and employees because it provides a structure by which both can work. He said it is important, especially in a nuclear plant, to have an organization to follow up on safety issues.

Periodically, NFS has found itself in trouble with the Nuclear Regulatory Commission. The federal agency fined NFS $10,000 in 1985 for what was called a "dangerous buildup of uranium" in the plant's air vents.

The NRC shut down the plant in 1979 when NFS could not account for 19.8 pounds of uranium. After the company was able to document most of the uranium, the NRC allowed the plant to reopen.

In 1996, an NFS incinerator caught fire, but it caused no injuries or radiation contamination, company officials said.

One of the toughest periods for the company began in 1992 when the Navy canceled its contract with NFS because its fuel needs dropped as the Cold War ended. Taylor recalled that as one of the dark periods for the company as employment plummeted by more than half from 800. NFS regained the contract in 1996.

When NFS lost its contract with the Navy, the company did not think it was on its last legs because it knew that branch of the military would need fuel again, Treadway said. But he said the company realized it "needed to be more aggressive in new business development."

1978-11-us-doe-western-ny-nuclear-service-center-report-vol1 / https://drive.google.com/open?id=1u2oFRSwcQvei0LPCue9gYzw3A_z0O61Q

1.1 HISTORY

A stated purpose of the Atomic Energy Act of 1954 was to promote "wide spread participation in the development and utilization of atomic energy for peaceful purposes." The Atomic Energy Commission (AEC) actively encouraged private industry to enter the field of nuclear power. By the end of 1955, the AEC concluded agreements for the first few demonstration power reactors.

In 1954, the AEC began a program to encourage private participation in the reprocessing of irradiated nuclear fuel as part of its program to commercialize the entire nuclear fuel cycle. To have commercial reprocessing services available for the first irradiated fuel in 1961, the AEC offered to make available the reprocessing technology developed for the defense program.

In 1959, New York State's interest in attracting atomic development culminated in the formation of the Office of Atomic Development (OAD) as an independent agency responsible for coordination of atomic regulatory and development functions within the State. To encourage nuclear development, the OAD acquired the West Valley site in 1961, which became designated the Western New York Nuclear Service Center (WNYNSC). The purpose of the Center was to store nuclear fuels and radioactive wastes and to be available for related industrial development.

The **Davison Chemical Co.** was sufficiently encouraged by the developments in the late 1950's to consider the feasibility of constructing a reprocessing facility. In 1961, Davison expressed interest in operating the WNYNSC. January 1962, Davison outlined its plans to the AEC for constructing a In private reprocessing plant. To pursue the reprocessing venture, Davison set up Nuclear Fuel Services, Inc. (NFS), whose stock was owned by the W. R. Grace Co. (78%) and American Machine and Foundry (22%). NFS, in its proposal, indicated its willingness to provide and maintain storage for a limited period of time for the high-level liquid wastes (HLLW)t resulting from the reprocessing operations. Subsequently, the wastes would become the responsibility of the AEC. NFS also said it was willing to collect and return to the AEC an amount calculated to provide the estimated full costs for perpetual storage at the point of turnover. NFS was simultaneously negotiating to make New York State responsible for perpetual care of the was tes. The proposed, and eventually approved, method of waste disposition was to store them in liquid form in underground storage tanks, similar to the method being used at AEC production facilities.

1979-us-doe-western-ny-nuclear-service-center-companiion-report-vol2.pdf / https://drive.google.com/open?id=1u94lpBjuojDHVlTaqgNtJwm_avkOvsyy

1. 1

HISTORY OF WEST WALLEY

A stated purpose of the Atomic Energy Act of 1954 was to promote "wide-spread participation in the development and utilization of atomic energy for peaceful purposes." The Atomic Energy Commission (AEC) actively encouraged private industry to enter the field of nuclear power. By the end of 1955, the AEC concluded agreements for the first few demonstration nuclear power reactors.

In 1954, the AEC began a program to encourage private reprocessing of irradiated nuclear fuel as part of its program to commercialize the entire nuclear fuel cycle. By January 1956 this program resulted in an announcement by the AEC that:

- The AEC would make available to industry AEC technology on reprocessing and the description of fuels available for reprocessing
- The AEC invited proposals by industry to design, reprocessing plants construct, and operate
- The AEC would provide assistance in the form of a baseload and allow the use of AEC facilities for development work and training.

During discussions of this program with industry, three predominant issues were raised. The first was the lack of adequate demand to make a commercial reprocessing plant economically viable. The AEC offered to provide a baseload of fuel from its production reactors to support the plant until adequate demand developed.

The second predominant issue was the lack of a basis for establishing reason able charges for services. In 1957, the AEC announced a policy to assure that reprocessing services would be available for the first commercial irradiated fuel in 1961. Under this policy, the AEC would provide fuel reprocessing services in AEC facilities until services were available commercially at reasonable prices or until June 30, 1976. To establish charges for those services, the AEC designed a hypothetical reprocessing plant. The reasonableness of commercial charges was to be based on comparison with these hypothetical plant charges.

The third predominant issue was responsibility for the high-level radioactive wastes resulting from commercial reprocessing. The AEC policy was to encourage the maximum participation of industry in the management of these wastes. It was recognized that industrial longevity was insufficient to assume ultimate responsibility for these wastes. For West Valley, this factor was overcome by having ownership of the land reside with the State.

Perceiving an opportunity to promote industrial development within the State, New York, in 1956, had created a State Council on the Development of Atomic Energy, followed by the formation of the Office of Atomic Development (OAD) in 1959. In 1961, OAD acquired a 1350-hectare (ha) (3345-acre) site near the hamlet of West Valley in the Town of Ashford, Cattaraugus County, about 48 km (30 miles) south of Buffalo. The site was judged to be favorable for a nuclear fuel reprocessing plant and attendant waste facilities. It was favorably located with respect to projected nuclear reactor development in the north eastern and mid-Atlantic United States. In addition, the silty till in the West Valley area was relatively impermeable to water and would, therefore, provide protection against migration of waterborne radioactivity through the ground. Further advantages of the site were a low population density in the area and meteorological conditions favorable for atmospheric dilution of any radioactivity released. The site was named the Western New York Nuclear Service Center (WNYNSC); it is also referred to as West Valley or the Center.

The developments of the late 1950s were sufficiently encouraging for utility and industrial concerns to form the Industrial Reprocessing Group (IRG). The IRG, composed of Davison Chemical, Consolidated Edison, Commonwealth Electric, and Northern States Power, in 1ate 1959 initiated a technical and economic feasibility study of reprocessing. As a result of IRG's interest, the AEC delayed indefinitely the modification of facilities planned for processing commercial fuel, but would continue to receive fuels for which reprocessing capability did not exist or charges were not reasonable.

In 1961, the Davison Chemical Company expressed interest in the West Valley site. In January 1962, Davison outlined its plans to the AEC for constructing a private reprocessing plant. To pursue the reprocessing venture, Davison (which was acquired by W. R. Grace and Company) set up Nuclear Fuel Services, Inc. (NFS). W. R. Grace owned 78% of the NFS stock and American Machine and Foundry owned the rest.

NFS indicated its willingness to provide and maintain storage for a limited period of time for the high-level 11quid wastes resulting from the reprocessing operations. Subsequently, the wastes would become the responsibility of the AEC. NFS also said it was willing to collect and return to the AEC an amount of money calculated to provide the estimated full costs for perpetual storage at the point of turnover. NFS was simultaneously negotiating to make New York State responsible for perpetual care of the wastes. The proposed, and eventu ally approved, method of waste disposition was to store the wastes in liquid form in underground storage tanks, similar to the method being used at AEC production facilities

1948 Advertisement -

See 1948-08-09-the-baltimore-sun-pg11-davison-chemical-ad.jpg / https://drive.google.com/open?id=1Ejh5pQnpSbn4-Ap8FCZzLsTBoAvDK-zl

PAGE 12 THE SUN, BALTIMORE, MONDAY MORNING, AUGUST 9, 1948

HUTZLER BROTHERS CO

90 years of leadership

see our Howard Street window honoring The Davison Chemical Corporation

A Maryland Institution Salutes Maryland's Past and Future...

The Davison Chemical Corporation

From modest beginnings over a hundred years ago, The Davison Chemical Corporation has grown along with Baltimore. A program of expansion, that began in 1908, has resulted in today's tremendous Curtis Bay Works, where just one unit, devoted to the production of superphosphate, is reputed to be the largest of its kind in the world.

In addition to agricultural chemicals, Davison also produces many industrial chemicals that are used for specialized applications. One group, Davison Silicofluorides, is used in such industries as aluminum metallurgy, ceramics and glass making, insecticides, mothproofing, laundry sours, antiseptics, concrete hardeners, wood preservation, explosives and many others.

Silica gel is another widely-used Davison product. As a dehydrating, or drying, agent, it is used to remove moisture or water from liquids, air and other gases . . . in the refrigeration, telephone, petroleum processing, dehydrated packaging and other fields. Tons of this material are being used to protect our huge Naval Reserve Fleet against rust and corrosion caused by moisture.

Evidence of practical use of Davison Catalysts can be seen in the skies over Canton at night . . . the flames belching from the huge stack at Esso Standard Oil result from the catalytic cracking of petroleum to make high quality gasoline. Davison also produces a family of asphalt compounds which includes Fendix, an automobile underbody protective coating and sound deadener. Other compounds are used as protective coatings on paperboard cartons to guard against moisture penetration.

The products mentioned above are but a fraction of the total. Ships, railroads and truck lines carry the names "Davison" and "Baltimore" to the four corners of the earth.

Mr. Chester F. Hockley, President of The Davison Chemical Corporation, says: "As a result of diversification of products, modernization of plant facilities — investments in new facilities and an extensive research program for development of improved processes and new products, Davison's volume of business is expected to increase materially in the future and provide greater opportunities for employment for Baltimore citizens."

published in connection with Hutzler's ninetieth anniversary

Legal - Oct 1968 :

Washington Fire Insurance Company vs. Davison and Symington.

See 1870-cases-argued-and-determined-in-the-court-of-appeals-of-maryland-vol-xxx-oct-1968-to-aprill-1969.pdf / https://drive.google.com/open?id=15S0jr1v1pq2De4ocfIhdLJnBAuUVeMtO

[aa1]

1951-10-davison-book-its-background-and-contributions-since-1832-chester-hockley-ocr.pdf / https://drive.google.com/open?id=1tYLksPXWxqfoAADLEsGhHqtetVoxaIH-

[aa2]

1951-10-davison-book-its-background-and-contributions-since-1832-chester-hockley-clip1.jpg / https://drive.google.com/open?id=1uGZUzSHxD_8Vrv1XPmhE8h0S99QYDp1A

References - good stuff (maybe) for later ...

https://www.wv.doe.gov/Site_History.html

2009-04-usa-dept-of-energy-verification-results-radiological-release-west-valley-demonstration-project-959377.pdf = [HG006D][GDrive]

https://www.nrc.gov/docs/ML0502/ML050210220.pdf

https://www.johnsoncitypress.com/Business/2018/03/22/NFS-receives-151-million-in-Naval-contracts-for-fuel-manufacturing-and-services

Thomas J. Deegan Company

1958 (Aug 10)

Full page : [HN00Z7][GDrive]

HONOLULU STAR-BULLETIN, WEDNESDAY, AUGUST 20, 1958

Tourist Study For Pacific Starts Soon

The Pacific area's $250,000 tourism development project will be launched September 1 with a preliminary study and investigation in Washington, D.C., it was announced yesterday in San Francisco.

The project will give technical assistance to help promote tourism in Australia, Burma, Cambodia, Fiji, Hong Kong, Indonesia, Japan, Korea, Laos, New Zealand, the Philippines, Singapore, Tahiti, Thailand, Taiwan and Vietnam.

These countries will contribute $100,000 to go along with a $150,000 contract between the U.S. Department of Commerce and Checchi and Company, consulting economists in Washington.

GUIDE PROJECT

The Pacific Area Travel Association will guide the project.

The operation will swing into its second phase, and first field trip, in January.

The trip will tie in with P.A.T.A.'s annual conference in Singapore January 26-30.

Two more field trips are planned—one next year and one in 1960—to determine needs of the countries.

Recommendations are expected to be made for programs in the individual countries after July, 1960.

DEVELOPED IDEA

The idea for the project was fostered by P.A.T.A. at its annual conference in Tokyo in 1956.

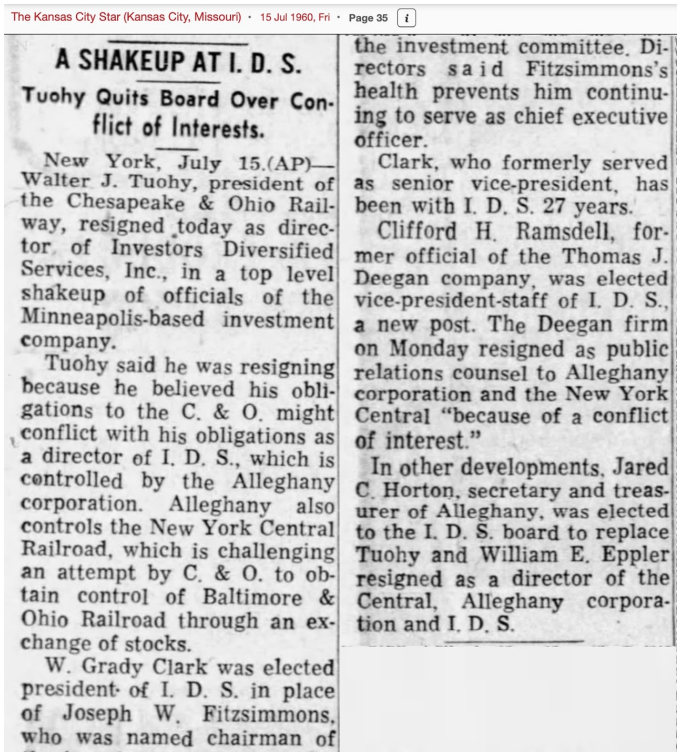
Honolulu's William J. Mullahey was named chairman of the Research and Survey Committee to study tourist-earning potentials in Pacific countries.

Mullahey is director of Pan American Airways' Central and South Pacific operations.

[HN00Z8][GDrive]

1960 (July 15)

Full page : [HN00ZB][GDrive]



The Kansas City Star (Kansas City, Missouri) · 15 Jul 1960, Fri · Page 35

A SHAKEUP AT I. D. S.

Tuohy Quits Board Over Conflict of Interests.

New York, July 15.(AP)—Walter J. Tuohy, president of the Chesapeake & Ohio Railway, resigned today as director of Investors Diversified Services, Inc., in a top level shakeup of officials of the Minneapolis-based investment company.

Tuohy said he was resigning because he believed his obligations to the C. & O. might conflict with his obligations as a director of I. D. S., which is controlled by the Alleghany corporation. Alleghany also controls the New York Central Railroad, which is challenging an attempt by C. & O. to obtain control of Baltimore & Ohio Railroad through an exchange of stocks.

W. Grady Clark was elected president of I. D. S. in place of Joseph W. Fitzsimmons, who was named chairman of the investment committee. Directors said Fitzsimmons's health prevents him continuing to serve as chief executive officer.

Clark, who formerly served as senior vice-president, has been with I. D. S. 27 years.

Clifford H. Ramsdell, former official of the Thomas J. Deegan company, was elected vice-president-staff of I. D. S., a new post. The Deegan firm on Monday resigned as public relations counsel to Alleghany corporation and the New York Central "because of a conflict of interest."

In other developments, Jared C. Horton, secretary and treasurer of Alleghany, was elected to the I. D. S. board to replace Tuohy and William E. Eppler resigned as a director of the Central, Alleghany corporation and I. D. S.

[HN00ZC][GDrive]

May 7 1961

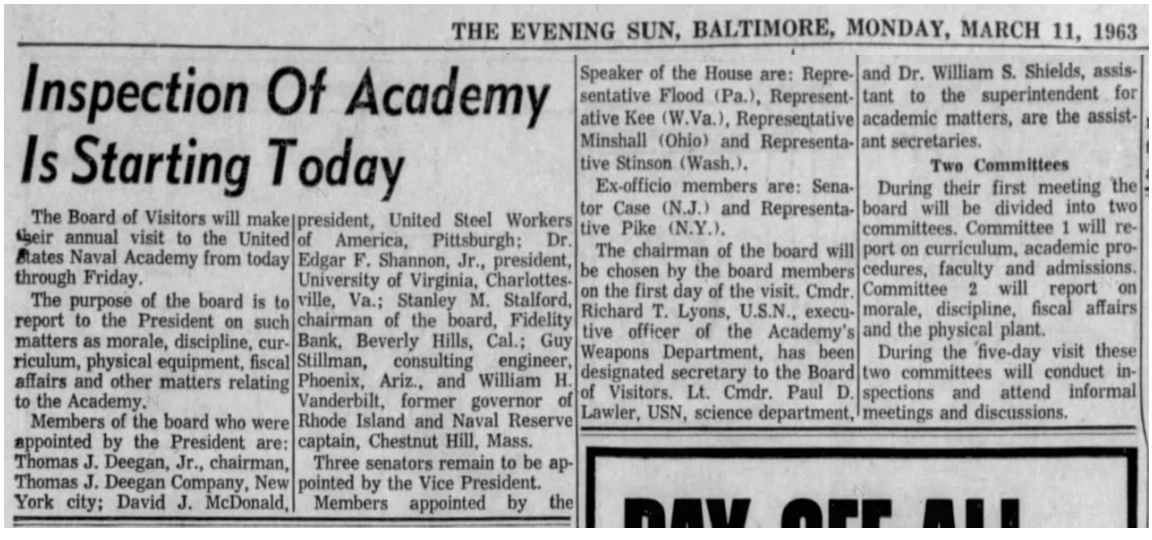
https://www.newspapers.com/image/256782328/?terms=%22thomas%2BJ%2BDeegan%2BCompany%22

June 12 1961

https://www.newspapers.com/image/639722602/?terms=%22thomas%2BJ%2BDeegan%2BCompany%22

1963 (March 11)

Full page : [HN00Z9][GDrive]



THE EVENING SUN, BALTIMORE, MONDAY, MARCH 11, 1963

Inspection Of Academy Is Starting Today

The Board of Visitors will make their annual visit to the United States Naval Academy from today through Friday.

The purpose of the board is to report to the President on such matters as morale, discipline, curriculum, physical equipment, fiscal affairs and other matters relating to the Academy.

Members of the board who were appointed by the President are: Thomas J. Deegan, Jr., chairman, Thomas J. Deegan Company, New York city; David J. McDonald, president, United Steel Workers of America, Pittsburgh; Dr. Edgar F. Shannon, Jr., president, University of Virginia, Charlottesville, Va.; Stanley M. Stalford, chairman of the board, Fidelity Bank, Beverly Hills, Cal.; Guy Stillman, consulting engineer, Phoenix, Ariz., and William H. Vanderbilt, former governor of Rhode Island and Naval Reserve captain, Chestnut Hill, Mass.

Three senators remain to be appointed by the Vice President.

Members appointed by the Speaker of the House are: Representative Flood (Pa.), Representative Kee (W.Va.), Representative Minshall (Ohio) and Representative Stinson (Wash.).

Ex-officio members are: Senator Case (N.J.) and Representative Pike (N.Y.).

The chairman of the board will be chosen by the board members on the first day of the visit. Cmdr. Richard T. Lyons, U.S.N., executive officer of the Academy's Weapons Department, has been designated secretary to the Board of Visitors. Lt. Cmdr. Paul D. Lawler, USN, science department, and Dr. William S. Shields, assistant to the superintendent for academic matters, are the assistant secretaries.

Two Committees

During their first meeting the board will be divided into two committees. Committee 1 will report on curriculum, academic procedures, faculty and admissions. Committee 2 will report on morale, discipline, fiscal affairs and the physical plant.

During the five-day visit these two committees will conduct inspections and attend informal meetings and discussions.

[HN00ZA][GDrive]

May 5 1963

https://www.newspapers.com/image/60187534/?terms=%22thomas%2BJ%2BDeegan%2BCompany%22

Aug 5 1963

https://www.newspapers.com/image/60240804/?terms=%22thomas%2BJ%2BDeegan%2BCompany%22

Nov 29 1963

https://www.newspapers.com/image/259883464/?terms=%22thomas%2BJ%2BDeegan%2BCompany%22

Jan 24 1964

https://www.newspapers.com/image/546733284/?terms=%22thomas%2BJ%2BDeegan%2BCompany%22

Feb 5 196

https://www.newspapers.com/image/614780209/?terms=%22thomas%2BJ%2BDeegan%2BCompany%22

Aug 26, 1965

https://www.newspapers.com/image/491357446/?terms=%22thomas%2BJ%2BDeegan%2BCompany%22

Checchi and company - USAID

https://checchiconsulting.com

Sep 28 1963

https://www.newspapers.com/image/40846200/?terms=Checchi%2Band%2BCompany

https://www.newspapers.com/image/40846200/?terms=Checchi%2Band%2BCompany

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https://digitalcommons.tacoma.uw.edu/cgi/viewcontent.cgi?article=1018&context=ias_pub

1964 NYC worlds fair - more economics, less art

(Nov. 17, 1977) - Thomas J. Deegan Jr., Organizer Of ‘64 - 65 World's Fair, Dies at 67

By Alfred E. Clark

Source : [HN00ZD][GDrive]

Thomas J. Deegan Jr., who helped orramze the New York World's Fair of 1964 - 65 and was chairman of its executive committee, died yesterday of a heart attack at his residence at the Hyde Park Hotel, 25 East 77th Street. He was 67 years old.

Mr. Deegan, a one - time newspaperman and public relations consultant, was chairman of the executive committee of Sydney Baron R Company, an interna t innal public relations company.

Former. Mayor Robert F. Wagner named •mr. Deegan chairman of the New York World's Fair Corporation in 1959 and he Served in that capacity until the corporation was dissolved in 1971.

" Mr. Deegan invited Robert Moses to become the paid president for the World's, Fair and after its opening on April 23. 1964, it ran for two six - month seasons and attracted 51 million paid admissions. The Deegan concern undertook the advance sale for the fair and sold 28 million' tickets for a gross revenue of $35 million before the fair opened.

Lined Up Exhibitors

With the help of the newly elected President, the late John. F. Kennedy, Mr Deegan and Mr. Moses received Administration support for a bill in Congress that authorized $35 million for the United States Pavilion.

In the preparatory period he worked tirelessly to line up 'exhibitors. He received a promise of a pavilion from then Premier Nikita S. Khrushchev of the Sriviet Union—later withdrawn—and peritiaded Pope John XXIII to accept the idea of the Vatican Pavilion.

With the assistance of the late Francis Cardinal Spellman, Mr. Deegan was instrumental in having Michelangelo's Pieta sent by the Vatican to the fair, the first time the statute had been removed from there in 454 years. Fourteen million people, second only in attendance to the General Motors Exhibit, went though the Vatican Pavilion to view the Pieta.

Born in Boroklyn on July 11, 1910, and a product of the 1929 Depression, Mr. Deegan was in the Class of '34 at Fordham University. As an undergraduate, he worked as a writer on space rates and as rewrite man for The New York Times.

Because of economic conditions he had to leave college after, his sophomore year to work full time. In 1964 he was awarded an honorary Doctor of Laws degree by Fordham and on the basis of his achievements, and academic papers he submitted he was awarded his Bachelor 7cf Arts degree in 1965, 31 Years after his class had received its undergraduate degrees.

Later the Dcegtoi company became part ... of the Interpublic Group of Companies Inc. Over the years, his friends have included pre - idents and corporate leaders, baseball players and clergyMen.

When Lyndon B. Johnson sought the Democratic nomination for President in 1960, Mr. Deegan was one of his principal advisors. As the running mate to Mr. Kennedy, Mr. Johnson and his wife, Lady Bird, had visited the Deegan family at their home in Greenwich, Conn., during the campaign.

Mr. Deegan was decorated a Knight Grand Cross of the Holy Sepulchre by Pope Pius XII and a knight of Malta by Pope John XXIII.

Made Recommendations to Pope

In 1967 he led an international delegation of 36 business leaders of all faiths who made recommendations to Pope Paul VI on ways to implement the Pope's en''On the Development of Peoples."

In 1965 he Was named Catholic Layman of the Year. He had been a personal adviser to the Vatican on matters of world opinion for more than 20 years.

At 17 he began his newspaper career as a high school correspondent with The Brooklyn Eagle. He later shifted to The Times and in 1938 left to become assistant to the president of the Fifth Avenue Association.

He had eight children and is survived by seven of them. They are Thomas Deegan 3d of New Haven, Christopher of Washington, Timothy John of Beverly Hills, Calif. Michael Nicholas of Laramie., Wyo., Mrs. Colman McCarthy of Washington, Mary Angela of London and, Cecily Ann of Cambridge, Mass.

Other survivors include two sisters, Mrs. Edward C. Chickering and Mrs. Christopher Murphy of Chevy Chase, Md.. and his former wife, Alice Russell Deegan of Greenwich. Conn.. and four grand nits.

A Mass of the Resurrection will he celebrated at St. Ignatius Loyola Roman Catholic Church, Park Avenue and 84th Street, on Saturday at 11 A.M.

BITCHUTE @Housatonic **YOUTUBE** @HousatonicLive **ODYSEE** @Housatonic **BRIGHTEON** @Housatonic

Housatonic

Dr. David Bliss Dekker (born 1919)

[HN01BE][GDrive]

Born - May 28, 1919 (https://www.findmypast.com/transcript?id=USBMD%2FSSDI%2F573054343)

Died - Sep 3, 2004 (https://www.findmypast.com/transcript?id=USBMD%2FSSDI%2F573054343)

Married **Evelyn Eirene Ponsonby in 1942 (became Evelyn Eirene Dekker)**

See below for notes

Notes:

- Sometimes name is misspelled (such ass In the puget sound paper ..) as "David Decker"

Associated with :

- **Carl Garland Young (born 1926)** (Colleague at University of Washington Computer Center / Co-founder of **Computer Center Corporation (Seattle)**)
- Monique R Rona (born 1928) (Co-founder of **Computer Center Corporation (Seattle)**)
- Stephen Russell (born 1937) (colleague at **Computer Center Corporation (Seattle)**)
- Gary Arlen Kildall (born 1942) (David B Dekker was Gary Kildall's undergraduate professor at University of Washington)

1930 US Census

Father - Albert H Dekker

Full census form - [HS003Y][GDrive]

Household Members

First name(s)	Last name	Relationship	Marital status	Sex	Age	Birth year	Birth place
Albert H	Dekker	Head	Married	Male	40	1890	Illinois
Rose Marie	Dekker	Wife	Married	Female	39	1891	Illinois
Albert O	Dekker	Son	Single	Male	16	1914	Illinois
Mary E	Dekker	Daughter	Single	Female	15	1915	Illinois
David B	**Dekker**	**Son**	**Single**	**Male**	**10**	**1920**	**Illinois**
John H	Dekker	Son	Single	Male	2	1928	California
Mary E	Bliss	Grandmother	Widowed	Female	84	1846	Vermont

[HS003X][GDrive]

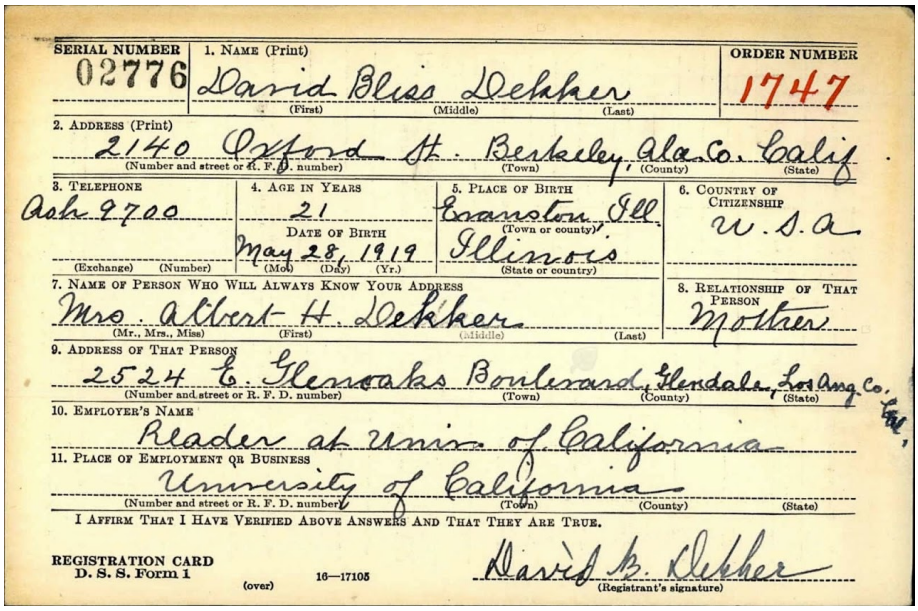
1940 US Census

https://www.findmypast.com/transcript?id=USC%2F1940%2F1482549874

1941 - David Bliss Dekker - Honors Society

https://newspaperarchive.com/berkeley-daily-gazette-mar-05-1941-p-9/

WW2 service Registration : 1940



SERIAL NUMBER 02776 — ORDER NUMBER 1747

1. NAME (Print): David Bliss Dekker (First) (Middle) (Last)

2. ADDRESS (Print): 2140 Oxford St. Berkeley, Ala Co. Calif (Number and street or R. F. D. number) (Town) (County) (State)

3. TELEPHONE: Ash 9700 (Exchange) (Number)

4. AGE IN YEARS: 21 — DATE OF BIRTH: May 28, 1919 (Mo.) (Day) (Yr.)

5. PLACE OF BIRTH: Evanston, Ill. (Town or county) Illinois (State or country)

6. COUNTRY OF CITIZENSHIP: U.S.A.

7. NAME OF PERSON WHO WILL ALWAYS KNOW YOUR ADDRESS: Mrs. Albert H. Dekker (Mr., Mrs., Miss) (First) (Middle) (Last)

8. RELATIONSHIP OF THAT PERSON: Mother

9. ADDRESS OF THAT PERSON: 2524 E. Glenoaks Boulevard, Glendale, Los Ang. Co. Calif. (Number and street or R. F. D. number) (Town) (County) (State)

10. EMPLOYER'S NAME: Reader at Univ. of California

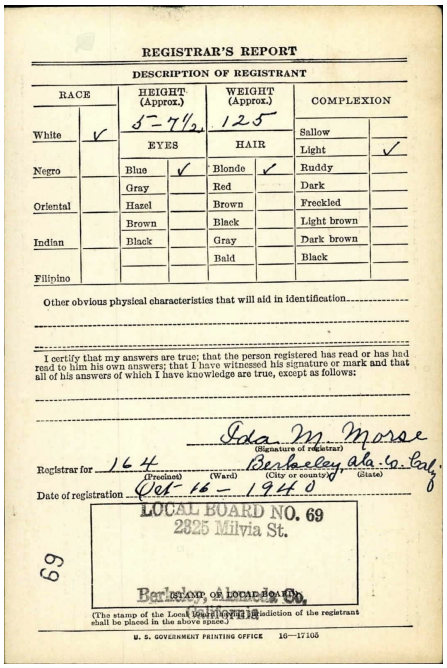
11. PLACE OF EMPLOYMENT OR BUSINESS: University of California (Number and street or R. F. D. number) (Town) (County) (State)

I AFFIRM THAT I HAVE VERIFIED ABOVE ANSWERS AND THAT THEY ARE TRUE.

David B. Dekker (Registrant's signature)

REGISTRATION CARD D. S. S. Form 1 (over) 16—17105

[HG0087][GDrive]



REGISTRAR'S REPORT

DESCRIPTION OF REGISTRANT

RACE		HEIGHT (Approx.)		WEIGHT (Approx.)		COMPLEXION	
White	✓	5'-7½"		125		Sallow	
Negro		EYES		HAIR		Light	✓
Oriental		Blue	✓	Blonde	✓	Ruddy	
Indian		Gray		Red		Dark	
Filipino		Hazel		Brown		Freckled	
		Brown		Black		Light brown	
		Black		Gray		Dark brown	
				Bald		Black	

Other obvious physical characteristics that will aid in identification

I certify that my answers are true; that the person registered has read or has had read to him his own answers; that I have witnessed his signature or mark and that all of his answers of which I have knowledge are true, except as follows:

Ida M. Morse (Signature of registrar)

Registrar for 164 (Precinct) Berkeley (Ward) Ala. Co. Calif. (City or county) (State)

Date of registration Oct 16 — 1940

LOCAL BOARD NO. 69 2825 Milvia St. Berkeley, Calif.

69

(The stamp of the Local Board having jurisdiction of the registrant shall be placed in the above space.)

U. S. GOVERNMENT PRINTING OFFICE 16—17105

[HG0088][GDrive]

1942 - Wedding to Evelyn Eirene Ponsonby

Married to **Evelyn Eirene Ponsonby (1916 - 200*)**

BIRTH 18 OCT 1916 • Cambridge, Cambridgeshire, England

DEATH 17 MAY 2008 • Seattle, King, Washington, USA

(her father is a sales manager for the Theosophical Society Publishing Company)

1930 Census - https://www.ancestry.com/imageviewer/collections/6224/images/4531847_00150?pId=92121648 Lomaland - https://en.wikipedia.org/wiki/Lomaland

https://en.wikipedia.org/wiki/Theosophical_Society

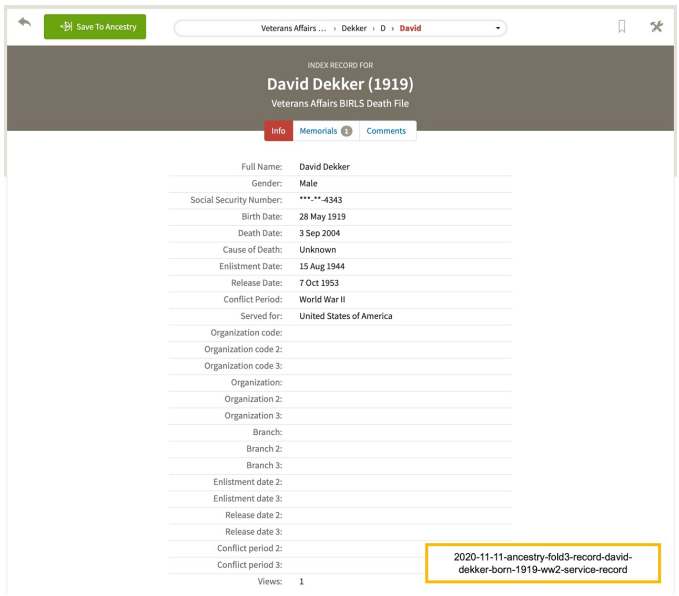
https://www.ancestry.com/family-tree/person/tree/70780805/person/40223742673/facts

1943 - Completes MS (Master of Science) at Illinois Institute of Technology

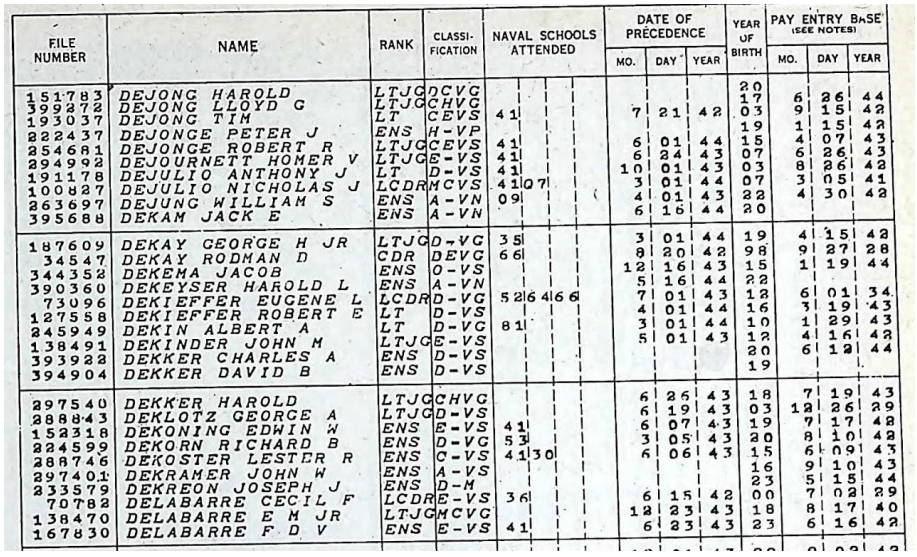
Source : (1957) University of Washington General Catalog (1957 - 1959) ([HE0037][GDrive]) , page 22:

"Dekker, David Bliss, 1948 (1951), Assistant Professor of Mathematics; Director, Research Computer Laboratory , A.B., 1941, California: ***M.S., 1943, Illinois Institute of Technology;*** *Ph.D., 1948. California"*

1944 - US Military Service (WW2) begins : Enlisted Aug 15 1944, Released Oct 7 1953



Record source : Ancestry / Fold3
[HG0089][GDrive]



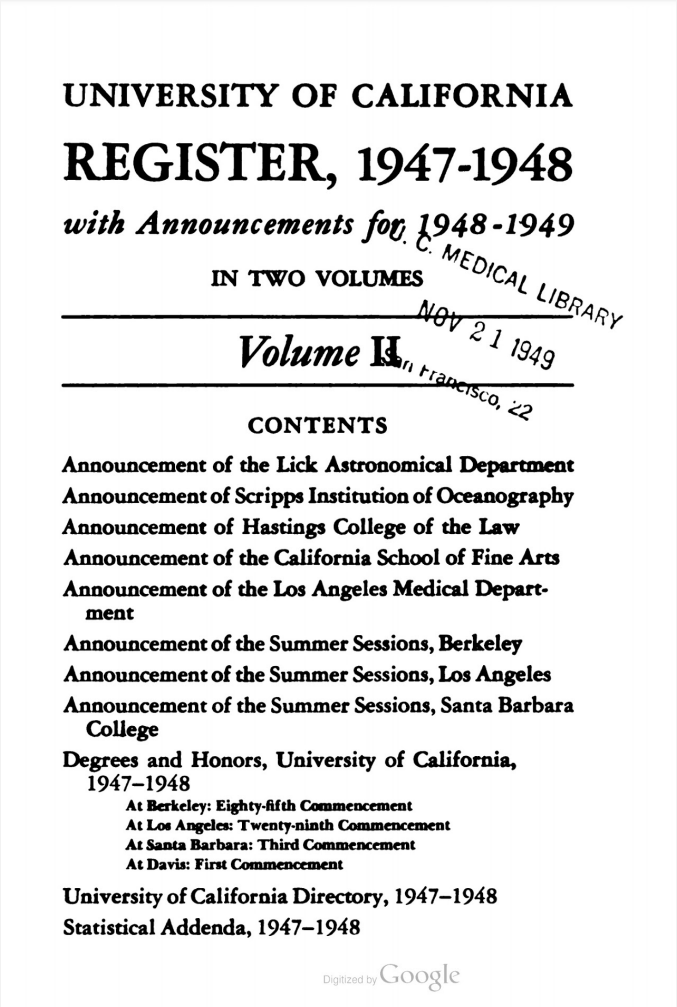
FILE NUMBER	NAME	RANK	CLASSIFICATION	NAVAL SCHOOLS ATTENDED	DATE OF PRECEDENCE MO.	DAY	YEAR	YEAR OF BIRTH	PAY ENTRY BASE (SEE NOTES) MO.	DAY	YEAR
151783	DEJONG HAROLD	LTJG	DCVG					20			
399272	DEJONG LLOYD G	LTJG	CHVG					17	6	26	44
193037	DEJONG TIM	LT	CEVS	41	7	21	42	03	9	15	42
222437	DEJONGE PETER J	ENS	H-VP					19	1	15	42
254681	DEJONGE ROBERT R	LTJG	CEVS	41	6	01	44	15	4	07	43
294992	DEJOURNETT HOMER V	LTJG	E-VS	41	6	24	43	07	6	26	43
191178	DEJULIO ANTHONY J	LT	D-VS	41	10	01	43	03	8	26	43
100827	DEJULIO NICHOLAS J	LCDR	MCVS	41 07	3	01	44	07	3	05	41
263697	DEJUNG WILLIAM S	ENS	A-VN	09	4	01	43	22	4	30	42
395688	DEKAM JACK E	ENS	A-VN		6	16	44	20			
187609	DEKAY GEORGE H JR	LTJG	D-VG	35	3	01	44	19	4	15	42
34547	DEKAY RODMAN D	CDR	DEVG	66	8	20	42	98	9	27	28
344352	DEKEMA JACOB	ENS	O-VS		12	16	43	15	1	19	44
390360	DEKEYSER HAROLD L	ENS	A-VN		5	16	44	22			
73096	DEKIEFFER EUGENE L	LCDR	D-VG	5 2 6 4 6 6	7	01	43	12	6	01	34
127558	DEKIEFFER ROBERT E	LT	D-VS		4	01	44	16	3	19	43
245949	DEKIN ALBERT A	LT	D-VG	81	3	01	44	10	1	29	43
138491	DEKINDER JOHN M	LTJG	E-VS		5	01	43	12	4	16	42
393928	DEKKER CHARLES A	ENS	D-VS					20	6	12	44
394904	DEKKER DAVID B	ENS	D-VS					19			
297540	DEKKER HAROLD	LTJG	CHVG		6	26	43	18	7	19	43
288843	DEKLOTZ GEORGE A	LTJG	D-VS		6	19	43	03	12	26	29
152318	DEKONING EDWIN W	ENS	E-VS	41	6	07	43	19	7	17	42
224599	DEKORN RICHARD B	ENS	D-VG	53	3	05	43	20	8	10	42
288746	DEKOSTER LESTER R	ENS	C-VS	41 30	6	06	43	15	6	09	43
297401	DEKRAMER JOHN W	ENS	A-VS					16	9	10	43
233579	DEKREON JOSEPH J	ENS	D-M					23	5	15	44
70782	DELABARRE CECIL F	LCDR	E-VS	36	6	15	42	00	7	02	29
138470	DELABARRE E M JR	LTJG	MCVG		12	23	43	18	8	17	40
167830	DELABARRE F D V	ENS	E-VS	41	6	23	43	23	6	16	42

https://www.ancestry.com/imageviewer/collections/2345/images/40014_1821100517_0583-00323?treeid=&personid=&hintid=&queryId=63738ec0376da10b96d25a4af51db067&usePUB=true&_phsrc=MOW152&_phstart=successSource&usePUBJs=true&_ga=2.30252927.1156066000.1605136269-1282622217.1602734250&pId=5373105

1947 - University of California

UNIVERSITY OF CALIFORNIA REGISTER , 1947-1948 with Announcements for 1948-1949 C. MEDICAL LIBRARY IN TWO VOLUMES NOV 21 1949 Volume IIa" / PDF : [HE003A][GDrive]

"CURRICULUM FOR THE TRAINING OF JUNIOR COLLEGE TEACHERS Certificate of Completion (School of Education) to Francis Hilary Conroy (B.S. Northwestern University 1941 ; M.A. 1942) . Bloomington, Illinois Major : History ; Minor : English . David Bliss Dekker (A.B. 1941 ; M.S. Illinois Institute of Technology 1943) .Glendale Major : Mathematics ; Minor : Physics."



UNIVERSITY OF CALIFORNIA

REGISTER, 1947-1948

with Announcements for 1948-1949

IN TWO VOLUMES

U. C. MEDICAL LIBRARY NOV 21 1949 San Francisco, 22

Volume II

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At Santa Barbara: Third Commencement
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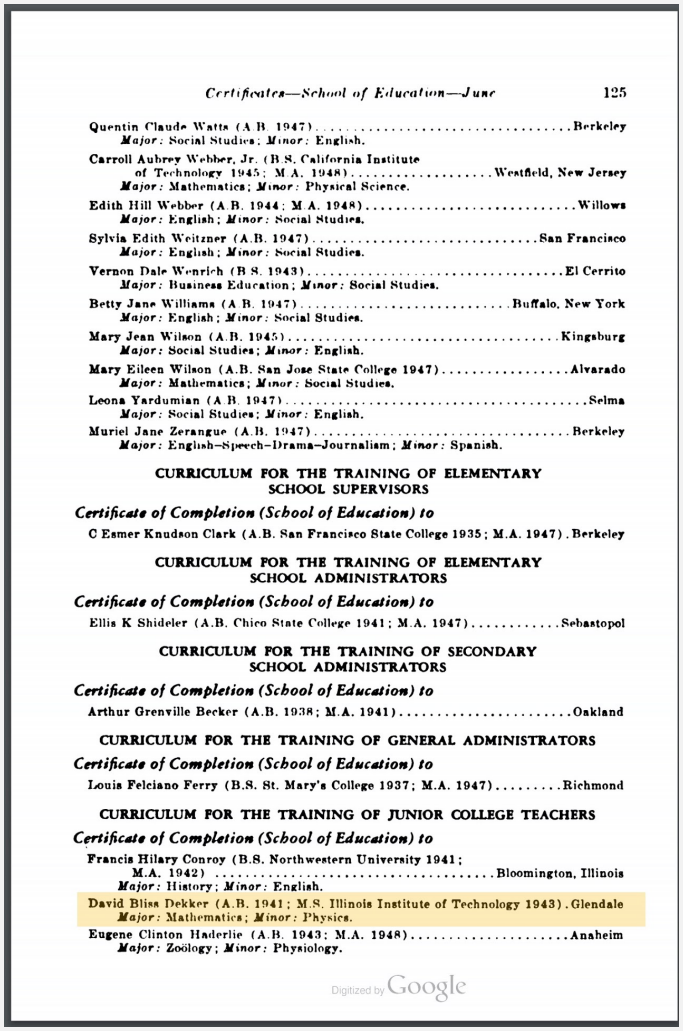
[HE003B][GDrive]



Quentin Claude Watts (A.B. 1947) ..... Berkeley
Major: Social Studies; *Minor:* English.

Carroll Aubrey Webber, Jr. (B.S. California Institute of Technology 1945; M.A. 1948) ..... Westfield, New Jersey
Major: Mathematics; *Minor:* Physical Science.

Edith Hill Webber (A.B. 1944; M.A. 1948) ..... Willows
Major: English; *Minor:* Social Studies.

Sylvia Edith Weitzner (A.B. 1947) ..... San Francisco
Major: English; *Minor:* Social Studies.

Vernon Dale Wenrich (B.S. 1943) ..... El Cerrito
Major: Business Education; *Minor:* Social Studies.

Betty Jane Williams (A.B. 1947) ..... Buffalo, New York
Major: English; *Minor:* Social Studies.

Mary Jean Wilson (A.B. 1945) ..... Kingsburg
Major: Social Studies; *Minor:* English.

Mary Eileen Wilson (A.B. San Jose State College 1947) ..... Alvarado
Major: Mathematics; *Minor:* Social Studies.

Leona Yardumian (A.B. 1947) ..... Selma
Major: Social Studies; *Minor:* English.

Muriel Jane Zerangue (A.B. 1947) ..... Berkeley
Major: English–Speech–Drama–Journalism; *Minor:* Spanish.

CURRICULUM FOR THE TRAINING OF ELEMENTARY SCHOOL SUPERVISORS

Certificate of Completion (School of Education) to

C Esmer Knudson Clark (A.B. San Francisco State College 1935; M.A. 1947) . Berkeley

CURRICULUM FOR THE TRAINING OF ELEMENTARY SCHOOL ADMINISTRATORS

Certificate of Completion (School of Education) to

Ellis K Shideler (A.B. Chico State College 1941; M.A. 1947) ..... Sebastopol

CURRICULUM FOR THE TRAINING OF SECONDARY SCHOOL ADMINISTRATORS

Certificate of Completion (School of Education) to

Arthur Grenville Becker (A.B. 1938; M.A. 1941) ..... Oakland

CURRICULUM FOR THE TRAINING OF GENERAL ADMINISTRATORS

Certificate of Completion (School of Education) to

Louis Feliciano Ferry (B.S. St. Mary's College 1937; M.A. 1947) ..... Richmond

CURRICULUM FOR THE TRAINING OF JUNIOR COLLEGE TEACHERS

Certificate of Completion (School of Education) to

Francis Hilary Conroy (B.S. Northwestern University 1941; M.A. 1942) ..... Bloomington, Illinois
Major: History; *Minor:* English.

David Bliss Dekker (A.B. 1941; M.S. Illinois Institute of Technology 1943) . Glendale
Major: Mathematics; *Minor:* Physics.

Eugene Clinton Haderlie (A.B. 1943; M.A. 1948) ..... Anaheim
Major: Zoölogy; *Minor:* Physiology.

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[HE003C][GDrive]

1948 - PhD completed at University of California

Source : (1957) University of Washington General Catalog (1957 - 1959) ([HE0037][GDrive]) , page 22:

*"Dekker, David Bliss, 1948 (1951), Assistant Professor of Mathematics; Director, Research Computer Laboratory , A.B., 1941, California: M.S., 1943, Illinois Institute of Technology; **Ph.D., 1948. California**"*

From University of California 1949 Commencement :

Dekker's Thesis : Hypergeodesic curvature and torsion.

[HE003F][GDrive]

UNIVERSITY OF CALIFORNIA

THE EIGHTY-SIXTH COMMENCEMENT

JUNE, 1949

GEORGE C. EDWARDS TRACK STADIUM

BERKELEY

[HE003G][GDrive]

[1] Ernest Randall Bartley.....Political Science .....Lincoln, Nebraska
A.B. Nebraska Wesleyan University 1940; M.A. University of Nebraska 1941.
Thesis: The tidelands controversy: a study in American federalism.

[1] Walter Raymond Borg.....Education .....Roseville
A.B. San Diego State College 1943.
Thesis: Factors relating to success in art school and artistic ability.

[1] James McComb Bradfield, Jr.....Education .....Oakland
A.B. University of Kansas 1938; M.A. 1946.
Thesis: Youths' understanding of determinants of their behavior.

[2] Robert Barnes Casady.....Comparative Physiology .....Pasadena
B.S. 1941.
Thesis: Factors modifying the excretion of fecal androgens in the cow.

[2] David Bliss Dekker.....Mathematics .....Glendale
A.B. 1941; M.S. Illinois Institute of Technology 1943.
Thesis: Hypergeodesic curvature and torsion.

[1] Melbourne Evans .....Philosophy .....Berkeley
A.B. Reed College 1937; M.A. 1940.
Thesis: Principles and methods of physical thought: a study in the philosophy and science of ancient and early modern times.

[2] Herta Harriet Forster.....Physics .....Sacramento
M.A. 1947.
Thesis: A study of cosmic rays in nuclear emulsions at high altitudes.

[2] James John Fritz.....Chemistry .....Wilkes-Barre, Pennsylvania
B.S. Pennsylvania State College 1939; M.S. University of Chicago 1940.
Thesis: The thermodynamic and magnetic properties of cobalt sulfate heptahydrate in the temperature range from 0.2°K to 20°K.

[2] James Wessel Gerdemann.....Plant Pathology .....Warrenton, Missouri
A.B. 1945 and M.A. 1946 University of Missouri.
Thesis: The resistance of two tomato varieties to formae of *Fusarium oxysporum*.

[2] Richard Allen Goff.....Zoölogy .....Bucklin, Kansas
B.S. Kansas State Teachers College, Emporia, 1937; M.S. University of Oklahoma 1939.
Thesis: Development of the mesodermal constituents of feather germs of chick embryos.

[2] William Francis Goodwin.....Philosophy .....Richmond
A.B. 1938; M.A. 1941.
Thesis: Knowledge and existence in the philosophy of George Santayana.

[2] Lawrence Morton Grossman.....Mechanical Engineering ..New York, New York
B.Ch.Eng. College of the City of New York 1942; M.S. 1944.
Thesis: The statistical theory of turbulence and measurements of turbulent velocity components in axisymmetric liquid flow.

[1] John Gurland .....Statistics .....Ottawa, Ontario, Canada
A.B. 1939 and M.A. 1942 University of Toronto.
Thesis: I. Asymptotically normal estimates. II. Inversion formulae for the distribution of ratios.

[2] Kenneth Robert Hammond.....Psychology .....San Francisco
A.B. 1940; M.A. 1947.
Thesis: Social effects on psychiatric hospitalization.

[2] James William Hansen.....Agricultural Chemistry .....Riverside
A.B. University of California at Los Angeles 1936.
Thesis: The electrostatic charge on insecticidal dusts.

[2] Frank Harary .....Mathematics .....Brooklyn, New York
A.B. 1941 and M.A. 1945 Brooklyn College.
Thesis: The structure of Boolean-like rings.

[1] Joseph Lawson Hodges, Jr.....Mathematics .....Phoenix, Arizona
A.B. 1942.
Thesis: Studies in optimum statistical procedures: I. Initial sample size in the Stein procedure. II. Stringency in acceptance sampling.

[2] Jack Alroy Holmes.....Education .....Berkeley
A.B. 1938; M.A. 1942.
Thesis: Factors underlying major reading disabilities at the college level.

[HE003H][GDrive]

1948 -Begins working at University of Washington

Source : (1957) University of Washington General Catalog (1957 - 1959) ([HE0037][GDrive]) , page 22:

*"**Dekker, David Bliss, 1948** (1951), Assistant Professor of Mathematics; Director, Research Computer Laboratory , A.B., 1941, California: M.S., 1943, Illinois Institute of Technology; Ph.D., 1948. California"*

"Note : A single date following the name indicates the beginning of service in the University. When two dates are given, the second, in parentheses, is the date of promotion to present academic rank."

1951 -University of Washington - Promoted to Assistant Professor of Mathematics; Director, Research Computer Laboratory

Source : (1957) University of Washington General Catalog (1957 - 1959) ([HE0037][GDrive]) , page 22:

*"**Dekker, David Bliss, 1948** (1951), Assistant Professor of Mathematics; Director, Research Computer Laboratory , A.B., 1941, California: M.S., 1943, Illinois Institute of Technology; Ph.D., 1948. California"*

"Note : A single date following the name indicates the beginning of service in the University. When two dates are given, the second, in parentheses, is the date of promotion to present academic rank."

1956 (Sep 11) - Assistant Professor of Mathematics Dr. David Dekker opened the Pacific Northwest's first academic computing laboratory at the University of Washington (UW)

http://pcad.lib.washington.edu/building/10146/

Building History

[...] A writer for the *Seattle Times* described the high-tech machine: "The magnetic drum, operating on the principle of a magnetic tape recorder, can store or 'memorize' 20,000 digits. It is used to set up the problem. A problem that would take eight hours to do by hand on a desk calculator can be solved in five seconds with the new machine, university authorities said. A more difficult problem, which would require a week's work by hand, takes a little more time—about five minutes."

The UW Departments of Mathematics and Business Administration became the first on campus to access the Research Computing Center's **IBM Model 650**'s "electronic brain." The *Seattle Times* writer noted that the computer would be used for two new classes: "Mathematics students will take a course known as 'numerical analysis.' The business students' course will be called 'data processing.' **Dr. Carl B. Allendoerfer** *[See https://en.wikipedia.org/wiki/Carl_B._Allendoerfer]*, **head of the Mathematics Department and chairman of an intercollegiate committee on high-speed computers, said university departments previously had been sending work requiring electronic calculation to California and New York. The I.B.M. Co. rents the machine to the university, donating 60 per cent of the basic rental fee of about $60,000, a year. The National Science Foundation is contributing $17,500 a year. University research and rental charges to departments using the machine will make up the rest of the cost."** (See "U.W. Opens Regions's First Research Computing Center," *Seattle Times*, 09/11/1956, p. 11.) *... [Basically, IBM and the NSF provided for what was essentially a free computer]*

In an adjacent story in the same issue of the *Seattle Times*, the Boeing Airplane Company announced that it had begun operating a rented IBM Model 705 computer beginning on 09/10/1956. An official ceremony attended by William M. Allen, Boeing's President and Thomas J. Watson, IBM's President, launched the computer's first day of work calculating "...payroll, stores, records, accounts payable, labor and material distribution, material records and other assignments. Savings of more than $500,000 are expected through use of the machine. Rental is $36,500 a month."

In 2010, the University of Washington chose to rename the Academic Computing Center for John "Mike" Wallace, a renowned UW atmospheric sciences professor. A UW news web site noted two honors bestowed on Wallace in 2010, for his pioneering research on global climate change: "His impact on climate science, at the UW and globally, led to two recent noteworthy events on campus. In September, friends and colleagues from around the world gathered for a two-day Wallace Symposium that was billed as a celebration of his 70th birthday and his many contributions to science, students and the community. This summer, the former Academic Computing Center, which now houses the new College of the Environment, the Program on the Environment and a UW-based institute he headed for many years, was renamed John M. Wallace Hall." (See Vince Stricherz, *UW News*.edu, "Illustrious career brings singular honors for Mike Wallace," published 10/07/2010, accessed 09/03/2020.)

The UW Program on the Environment continued to occupy Wallace Hall in 2020.

1957 - 1959 - University of Washington

"Note : A single date following the name indicates the beginning of service in the University. When two dates are given, the second, in parentheses, is the date of promotion to present academic rank."

[...]

- (1957) University of Washington General Catalog (1957 - 1959)
  - Source : [HE0037][GDrive]
  - Page 22 :
  - "Dekker, David Bliss, 1948 (1951), Assistant Professor of Mathematics; Director, Research Computer Laboratory , A.B., 1941, California: M.S., 1943, Illinois Institute of Technology; Ph.D., 1948. California"
- (1959) University of Washington General Catalog (1959 - 1961)
  - Source :[HE0036][GDrive]
  - "Dekker, David Bliss, 1948 (1959), Associate Professor of Mathematics; Director of the Research Computer Laboratory, A.B., 1941, California: M.S., 1943, Illinois Institute of Technology; Ph.D., 1948,
  - "RESEARCH COMPUTER LABORATORY : Director: DAVID B. DEKKER, 400A Bagley : The Research Computer Laboratory, established in September, 1956, as an agency of the Graduate School, provides electronic calculating facilities and auxiliary punched-card equipment for use by faculty and research personnel of the University. The facilities of the Research Computer Laboratory are also available to neighboring institutions which do not have their own computers. The IBM 650 is now operated as the chief facility of the Laboratory. The University plans, however, to expand the facilities to include an IBM 704 Computer and necessary auxiliary equipment. The Research Computer Laboratory is administered by a faculty advisory committee under the chairmanship of the Dean of the Graduate School."

1959 - IBM 650 Computer and other UW computers - Working with Eugene E Collias (UW, Oceanograher)

Source : Biography of Eugene E. and Dorothy M. Collias (Puget Sound Organization) : [HI001I][GDrive]

NOTE that his name is incorrectly spelled "David DECKER" in this document, not "David DEKKER"

Biography
Of

By Eugene E Collias
Volume Three—Oceanography

[HI001J][GDrive]

IBM 650 Computer and other UW computers

When I returned to the UW in January 1959, the hot topic was the **IBM 650 computer**. Many of us would have to learn how to program and operate this latest addition to the University. **Dr. David Decker (1923?-2004) was the director of the Computer Laboratory and taught a class in programming. The Computer Lab was located on the fourth floor of Bagley Hall over the main entrance.**

Because oceanographic data processing requires many repetitious mathematical operations, it was deemed necessary that many of us in oceanography learn how to use this device. When I was informed that I would be taking a class in computer programming, I jumped at the chance. The classes started one week before I was officially on the payroll.

The first time I addressed this monster was on, Thursday 8 January 1959. I was petrified as I stood in front of the control panel with its many dials and flashing lights. In about two weeks, we became very well acquainted and the fear level dropped. But the frustration level remained high and still does today with our "very advanced" computers.

The IBM 650 magnetic drum data processing machine consisted of two bays each being three feet wide, six feet tall and eight feet long. Attached to the computer was an IBM card reader/punch. The internal memory consisted of a drum, about the size of an oatmeal box, coated with ferric oxide and was turning at 1,800 RPM. It held a total of 2,000, ten character words in a bi-quinary format. In today's concept of storage this would be the equivalent of 20 thousand bytes. The computer I am using to write this biography has 4 billion bytes of internal memory and this is considered to be small. Computers have come a long ways in 50+ years.

There were 3,750 vacuum tubes, mostly 12SN7's, that did all the work. Operation speeds were measured in milliseconds. It could take as much time as 50 milliseconds to multiply two ten-digit numbers. A patch panel inserted into the end of the card reader/punch determined where the data would be placed into or retrieved from memory.

When the 650 would act up, Chet Castle would be called in for the repair. He was the IBM engineer assigned to this 650. One time it took him over three weeks to determine what was wrong with the computer. When he opened a door to a bay, the computer would act correctly. He eventually located a chip out of a capacitor. Dust would accumulate on the exposed wire causing a temporary short. When the bay door was opened the dust would be cleared and normalcy would return. He gave me the module. I kept it on my desk for many years.

A keypunch (IBM model 24 or 26) was used to prepare the data and program on Hollerith (IBM) cards. Each Hollerith (IBM) card had 80 columns and 12 rows where information could be punched in a total of 960 locations. The information on the cards could be in either alphanumeric (A-Z upper case only or 0-9) or binary format. Data sets used alphameric characters while programs were usually in binary format. **During my tenure at the UW, I used over one million IBM cards.**

In addition, to the IMB 650, the computer lab housed the necessary peripheral devices necessary to feed data and programs into the compute. These devices included: key punches, a tabulating machine, card sorters, interpreters, and a collator. The IBM 650 computer, with its necessary peripheral equipment, required over 30,000 watts of electrical power. We had 4.5 tons of air conditioning to keep the room cool.

The IBM 650 laboratory was a do-it-yourself type with some assistance from the "experts" when needed. When you wanted to use the IBM 650, you signed up for a time slot usually in 30 minute increments. A large blackboard was used to write your name in the appropriate time slot. Frequently there were no Anglo- Saxon names on the board.

If you were going to use the machine after regular hours, there was a last-man- out routine for shutting down the entire system; computer, air conditioning, and any other peripheral equipment. Thus, it was always desirable to be the next-to- last person when using the computer on any given day because shutting down the system and securing the laboratory took about 30 minutes.

[...]

The first programming language we learned for the 650 was the native machine language, the lowest level of programming. Every operation was contained in a ten digit word. A typical instruction may look like 70 1950 0200. The first two digits were the operation code (70 for read a card into memory). The next four digits (1950) was the location of the data to be stored and the last four digits (0200) were the location of the next instruction. Every operation in a program required a separate IBM card so even a simple program such as computing density would take a hundred or more cards . Both program and data were entered into and out of 650 by means of Hollerith Cards.

A short time later, David Decker introduced us to an assembler language that used an alphameric code instead of numbers only to describe the process. An assembler program decoded the symbols and created the machine language code. The finished program was punched on to IBM cards in a binary format. The assembler's name was SOAP for Symbolic Optimal Assembler Program. I used this assembler for about three years until the 650 was replaced with a larger IBM 704. This computer used a 32-bit word, was much faster, had 16,000 words of memory and a large hard drive. The many individual disks in this hard drive were about 30" in diameter were kept in a refrigerated cabinet.

The computer lab was moved from Bagley Hall to the basement of Roberts Hall which was a much larger room that housed both the 704 and the 650. The 650 was soon eased out forcing us to learn a new program language. The recommended language for scientific computing was FORTRAN. (FORmula TRANslation). At this point in time, I learned FORTRAN and used it for the rest of my career at the UW.

Several more computers followed. A building on Brooklyn Avenue south of Pacific was constructed to house the academic computer. When the building was first opened, there was a room on the south side of the first floor that had over 50 keypunches. Two high speed card readers were available to feed your data into the computer. The last main frame computer to occupy this space was a CDC 6700. This machine used 64 bit words and had a memory of about 64,000 words. There were several magnetic tape drives attached to computer and several large hard drives. This computer supported many peripheral stations that permitted a person to communicate with the main frame from a distance.

Oceanography had such a station in the first floor of the Showboat Apartment. This building was torn down in about 1998 to make room for the new Oceanography Building. Because of the large quantity of data I generated, I had an IBM Model 129 Interpreting Key Punch on the Oceanography Barge.

[...]

1960 - Publication of article in "The American Mathematical Monthly "

The American Mathematical Monthly / Volume 67, 1960 - Issue 2

https://www.tandfonline.com/doi/abs/10.1080/00029890.1960.11989472?journalCode=uamm20

"Recent Publications"

Herbert A. Meyer,David B. Dekker,R. H. Bruck,Meyer Dwass,Burton V. Dean,Cletus Oakley,Robert E. Greenwood,L. E. Ward (Jr.) ,James L. Simpson,W. N. Huff &Paul Civin show less

Pages 193-199 | Published online: 12 Mar 2018

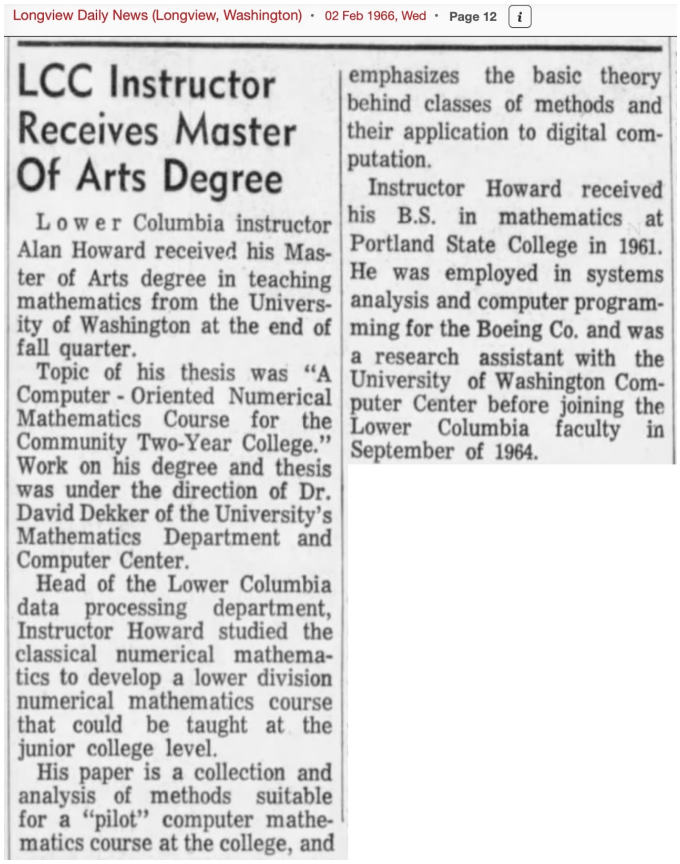
"Note : A single date following the name indicates the beginning of service in the University. When two dates are given, the second, in parentheses, is the date of promotion to present academic rank."

[...]

- (1961) University of Washington General Catalog (1961 - 1963)
  - Source : [HE0035][GDrive]
  - "RESEARCH COMPUTER LABORATORY : Director: David B. Dekker, B12 Mechanical Engineering : The Research Computer Laboratory, established in September, 1956, as an agency of the Graduate School, provides electronic calculating facilities and auxiliary punched-card equipment for use by faculty and research personnel of the University. The facilities of the Research Computer Laboratory are also available to neighboring institutions which do not have their own computers. The facilities include an IBM 650 and an IBM 709 with a 32K core, twelve tape units, complete off-line tape-to-card, card-to-tape, and tape-to-printer equipment. The Research Computer Laboratory is administered by the Dean of the Graduate School with the aid of a committee of the faculty of the University of Washington, and a Pacific Northwest Research Computer Laboratory Committee consisting of faculty representatives from all interested colleges and universities of the Pacific Northwest. All requests for information concerning the facilities of the Laboratory should be addressed to: University of Washington, The Director, Research Computer Laboratory, Seattle 5, \Vashington."
  - MATHEMATICS : Executive Officer: C. B. ALLENDOERFER, 245 Physics Hall : The Department of Mathematics serves the University by offering a wide selection of undergraduate and graduate courses which are deSigned to meet a great variety of mathematical needs. Traditionally, mathematics has been the basic language of physical science and engineering, but recently it has also become of major importance for students in social science, business administration, and biological science. Mathematics is also an essential element of a liberal education, and students from humanities and the arts are encouraged to broaden their education by enrolling in appropriate courses in the Department. [...] SPECIAL FACILITIES. The Laboratory of Statistical Research, directed by Z. W. Birnbaum, prOvides a focus for statistical activity within the University. Through the facilities of the Laboratory, instruction is given for students intending to be profeSSional statisticians, and also for students who plan to use mathematical statistics in other fields such as biology, economics, education, psychology, or sociologv. The Laboratory also provides consulting services to other divisions of the University. The Research Computer Laboratory, directed by D. B. Dekker, is equipped with IBM 6iO and 709 high-speed computers. It prOvides computing services to all portions of the University and is also available to students who are studying programming or numerical analysis."
- (1963) University of Washington General Catalog (1963 - 1965)
  - Source : [HE0034][GDrive]
  - "RESEARCH COMPUTER LABORATORY : Director: David B. Dekker, B12 Mechanical Engineering : The Research Computer Laboratory, established in September, 1956, as an agency of the Graduate School, prOvides electronic calculating facilities and auxiliary punched-card equipment for use by faculty and research personnel of the University. The facilities of the Research Computer Laboratory are also available to neighboring institutions which do not have their own computers. The facilities include an IBM 650, an IBM 709 with a 32K core, twelve tape units, complete off-line tape-to-card, card-to-tape, and tape-to-printer equipment, and an IBM 1401. The Research Computer Laboratory is administered by the Dean of the Graduate School with the aid of a committee of the faculty of the University of Washington and a Pacific Northwest Research Computer Laboratory Committee consisting of faculty representatives from all interested colleges and universities of the Pacific Northwest. All requests for information concerning the facilities of the Laboratory should be addressed to: University of Washington, The Director, Research Computer Laboratory, Seattle, Washington 98105."
  - "Dekker, David Bliss, 1948 (1959), Associate Professor of Mathematics; Director of the Research Computer Laboratory ; A.B., 1941, California; M.S., 1943, Illinois Institute of Technology; Ph.D., 1948, California"
- (1964) University of Washington General Catalog (1964 - 1965)
  - Source : [HE0033][GDrive]
  - "Research Computer Laboratory : Director David B. Dekker, Ph.D. : Research Computer Laboratory : The Research Computer Laboratory, established in September, 1956; as an agency of the Graduate School, provides' electronic calculating facilities and auxiliary, punched-card equipment for use by faculty and research personnel of the' UDiversity. The facilities of the Research Compu~r Laboratory are also available to neighboring ilistitutions. - The facilities include an IBM 650; an IBM 709, with a 32K core, twelve tape units, complete off-line tapeto-card, ~d-to-~pe, and tape-to-printer equipment, ~ IBM 1401 and IBM 7094 and 7040 high speed -digital compuung'machinery. The ~esearch Computer Laboratory is administered by 'the Dean of the Graduate School with the aid of a committee of the faculty of the University of Washington -"and a Pacific Northwest Research Computer Laboratory _ Committee consisting of faculty representatives from all interested colleges and universities of the Pacific Northwest.
- (1965) University of Washington General Catalog (1965 - 1966)
  - [HE0032][GDrive]
- (1967) University of Washington General Catalog (1967 - 1969)
  - [HE0039][GDrive]
  - Computer Center Director of Operations : Carl G. Young, B.S. ; Computer Center Faculty Director : David B. Dekker, Ph.D.
  - Computer Center : The Computer Center, established in September, 1956, provides electronic calculating facilities and auxiliary punched-card equipment for use by faculty and research personnel of the University. The facilities of the Computer Center are also available to neighboring institutions. The facilities include IBM 7094 and 7040 high-speed digital computing machines as a directly coupled system, and a Burroughs B5500 with facilities for remote access. The Computer Center is administered by an executive committee from the faculty of the University of Washington. There also exists a Pacific Northwest Research Computer Laboratory Committee consisting of faculty representatives from all interested colleges and universities of the Pacific Northwest. All requests for information concerning the facilities of the Center should be addressed to: University of Washington, The Director of Operations, Computer Center, Seattle, Washington 98105.

1966 (Feb 02)

Full newspaper page : [HN01BG][GDrive]



Longview Daily News (Longview, Washington) · 02 Feb 1966, Wed · Page 12

LCC Instructor Receives Master Of Arts Degree

Lower Columbia instructor Alan Howard received his Master of Arts degree in teaching mathematics from the University of Washington at the end of fall quarter.

Topic of his thesis was "A Computer - Oriented Numerical Mathematics Course for the Community Two-Year College." Work on his degree and thesis was under the direction of Dr. David Dekker of the University's Mathematics Department and Computer Center.

Head of the Lower Columbia data processing department, Instructor Howard studied the classical numerical mathematics to develop a lower division numerical mathematics course that could be taught at the junior college level.

His paper is a collection and analysis of methods suitable for a "pilot" computer mathematics course at the college, and emphasizes the basic theory behind classes of methods and their application to digital computation.

Instructor Howard received his B.S. in mathematics at Portland State College in 1961. He was employed in systems analysis and computer programming for the Boeing Co. and was a research assistant with the University of Washington Computer Center before joining the Lower Columbia faculty in September of 1964.

[HN01BH][GDrive]

1968 - The United Nations Treaty Series Project / PETER H. ROHN UNIVERSITY OF WASHINGTON / Source: International Studies Quarterly , Jun., 1968, Vol. 12, No. 2 (Jun., 1968), pp. 174- 195 /

Source : [HP003Y][GDrive] (Note - Purchased for 39 dollars , Nov 2020)

[...]

1963. *The United Nations Treaty Series Project (UNTS Project) started as a vague hunch in a class discussion. The question was how to prove the growth of international institutions in conventional international law. The answer was simple in theory but difficult in practice. We should survey the texts of treaties. If references to international institutions increased, the point was proved; otherwise, disproved. The more treaties we surveyed the more reliable the results would be. There was no money to pay for anything, no special equipment, no extra work space, nothing but the idea and the library and a group of students volunteering to do the job as part of their classwork in international law.*

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[...]

1968 - Dekker manages Graduate Computer Science Program at University of Washington

new 1968 graduate program

http://lazowska.cs.washington.edu/history/1968gradprogram.pdf

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1968 (August 14) -Co-founder of a new company - Computer Center Corporation

- Full newspaper page : [HN01AV][GDrive]

1968-08-14-the-seattle-times-pg-35-clip-computer-center

Computer Firm Formed

A new computer firm, the Computer Center Corp., has been formed by four University of Washington specialists, it was announced today.

Carl G. Young, director of operations at the university's computer center since 1965, has resigned to become president of the new company, which will specialize in service to scientific firms and industries on a time-sharing basis.

Quarters have been leased in the former Dresslar-Waesche Building at 4057 Roosevelt Way N. E.

Dr. David B. Dekker, who has been faculty director of the University Computer Center since its establishment, is vice president of the new firm.

DEKKER will serve in a consultant capacity during the school year and continue on the university faculty as an associate professor of mathematics and graduate-program adviser in computer sciences. He has resigned his position with the University Computer Center.

C. G. YOUNG

DR. D. B. DEKKER

Richard G. Hamlet, chief systems programmer at the University Computer Center, and Monique R. Rona, chief scientific programmer at the center, have resigned their university positions to join the new firm.

A fifth incorporator is Richard L. Wilkinson, formerly Northwest sales manager of the Digital Equipment Corp.

TIME-SHARING of the capabilities of large, fast and complex central processors will be the principal mode of operation of the corporation, Young said.

The company plans to sell computer time via common-carrier lines from teletype machines or other electronic typewriter devices situated in customer offices.

The user will be able to communicate data directly to the computer and receive almost instantaneous reply in his own office.

The Computer Center Corp. plans to be in operation about November 1.

Westside S & L Leads July Gain

Westside Federal Savings & Loan Association in July led a local reversal of the usual July trend toward a decline in net savings.

Net savings rose only $200,000 last month in the 23 associations affiliated with the Seattle League of Insured Savings Associations. Westside, a member of the association, registered a gain of $433,000.

In 1966, when there was a tight money situation comparable to this year, league institutions suffered a July loss of $6.7 million.

[HN01AW][GDrive]

1981 comp science

https://s3-us-west-2.amazonaws.com/www-cse-public/ugrad/handbook/CS_Autumn_81.pdf

1982 comp science

https://s3-us-west-2.amazonaws.com/www-cse-public/ugrad/handbook/CS_Autumn_82.pdf

Additional U Wash info -

DEKKER, DAVID BLISS, 1948 (1951) .. __ ..... . ___ .. Assistant Professor of Mathematics

A.B., 1941, California; M.S., 1943, Illinois Institute of Technology;

Ph.D., 1948, California

https://www.washington.edu/students/gencat/archive/GenCat1953-55v1.pdf

[HE003N]

https://drive.google.com/file/d/1rUip9NPF-G69jMlFYteL3PJZG8Oqft_X/view?usp=sharing

DEKKER, DAVID BLISS, 1948 (1951)---------- Assistant Prof~sor of Mathematics

A.B., 1941, California; M.S., 1943, Illinois Institute of Technology;

Ph.D., 1948, California

https://www.washington.edu/students/gencat/archive/GenCat1952-53v1.pdf

[HE003O]

https://drive.google.com/file/d/1_Qbco4yLB0AffcAr9BpaY1jcZzyuv6MN/view?usp=sharing

MATHEMATICS

Executive OHicer: C. B. ALLENDOERFER, 243 Physi" Hall

Professors: C. B. Allendoerfer, J. P. Ballantine, Z. W. Birnbaum, C. M. Cramlet, l. H. McFarlan,

R. M. Winger.

Associate Professors: R. A. Beaumont, M. E. Haller, E. Hewitt, A. R. jerbert, H. Mullemeister,

H. S. Zuckerman.

Assistant Professors: S. P. Avann, F. H. Brownell, D. G. Chapman, D. B. Dekker, J. M. Kingston,

R. B. Lelpnik, E. Paulson, F. Vagi.

https://www.washington.edu/students/gencat/archive/GenCat1950-51v1.pdf

[HE003P]

https://drive.google.com/file/d/1U2NSn6qR8THywyR5ldAenGd3l04AjQ5r/view?usp=sharing

DEKKER, DAVID BLISS, 1948 ..... , ... " .... Instructor in Mathematics

A.B., 1941. California: M.S •• 1943, Illinois Institute of Technology: Ph.D., 1948, Californi

https://www.washington.edu/students/gencat/archive/GenCat1949-50v1.pdf

[HE003Q]

https://drive.google.com/file/d/1jXJdt_oIx4zzFDMnVleDuvvgGYYEL2DZ/view?usp=sharing

DEKKER, DAVID BLISS, 1948 ...•.....•..... Instructor in Mathematics

A.B., 1941, California; M.S., 1943, Dlinois Institute of Technology

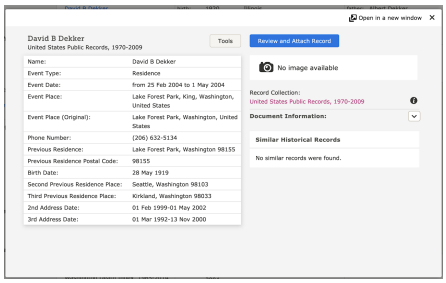
https://www.washington.edu/students/gencat/archive/GenCat1948-49v1.pdf

[HE003R]

https://drive.google.com/file/d/100GuhIdrdFQLaKjF7Qx66eVta3mR27ZS/view?usp=sharing

https://www.tandfonline.com/doi/abs/10.1080/00029890.1954.11988425?journalCode=uamm20

Born 1919 ??



1968 - The United Nations Treaty Series Project / PETER H. ROHN UNIVERSITY OF WASHINGTON / Source: International Studies Quarterly , Jun., 1968, Vol. 12, No. 2 (Jun., 1968), pp. 174- 195

Source : [HP003Y][GDrive] (Note - Purchased for 39 dollars , Nov 2020)

The United Nations Treaty Series Project - By PETER H. ROHN UNIVERSITY OF WASHINGTON

[...]

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Early in 1967, the second meeting of the automation working group of the American Society of International Law gave the UNTS Project major coverage as one of two "mature projects" in the field.

[...]

Married **Evelyn Eirene Ponsonby in 1942 (became Evelyn Eirene Dekker)**

family tree : See http://www.thepeerage.com/p14034.htm

Her brother - https://www.legacy.com/obituaries/dailybreeze/obituary.aspx?n=david-a-ponsonby&pid=89018608

David Bliss Dekker (1919)

ALbert H Dekker (1890)

Rose Marie Dekker (1891)

Married **Evelyn Eirene Ponsonby (born** 18 October 1916) in 1942

Guy Evelyn **Ponsonby** , b. 11 August 1885, d. 10 January 1960 (obit - https://www.newspapers.com/image/379967693/?terms=Ponsonby%2Bdekker)

son of Hon. Arthur Cornwallis **Ponsonby** (brother of the 8th earl of Bessborough ... unclde of 9th earl of Bessborough, who was also a Governor of Canada (https://en.wikipedia.org/wiki/Vere_Ponsonby,_9th_Earl_of_Bessborough)

son of **Walter Ponsonby** https://en.wikipedia.org/wiki/Walter_Ponsonby,_7th_Earl_of_Bessborough

other children - **Edward Ponsonby** - https://en.wikipedia.org/wiki/Edward_Ponsonby,_8th_Earl_of_Bessborough

Kathleen Eva **Sillery**.

Irene Rodger **Greig**

Evelyn Eirene Ponsonby[1]

F, #140333, b. 18 October 1916

Last Edited=2 Feb 2005

Evelyn Eirene **Ponsonby** was born on 18 October 1916.[1] She is the daughter of Guy Evelyn **Ponsonby** and Irene Rodger **Greig**.[1] She married David Bliss **Dekker**, son of Albert Henry **Dekker**, on 2 October 1942.[2]

She was educated at University of California, California, U.S.A.[G,2] From 2 October 1942, her married name became Dekker.[2] She lived in 2003 at 1325 North Allen Place, #135, Seattle, Washington, U.S.A.[G,1]

Children of Evelyn Eirene Ponsonby and David Bliss Dekker

1. David Bliss **Dekker**[2]
2. Donald Kreig **Dekker**[2]

Citations

1. [S37] BP2003 volume 1, page 362. See link for full details for this source. Hereinafter cited as. *[S37]*
2. [S37] BP2003. [S37]

wife

https://www.newspapers.com/image/380867334/?terms=%22Guy%2BPonsonby%22

See (https://books.googleusercontent.com/books/content?req=AKW5QaeeN2g2InHtpR3rPucFTGpb9o-EY8ZzJ03BAeKARqsXuTklKOr53yK9_0zIx0rJqGHz7dOYdG-rJ_Xhm_u6QLu-XNaZvqVW2SsdJ-HoJ46gWMaUzSMQyq7Zpm5zd8IiNR-2-q-kpoZaXNM9rOC1eJ1hwDJMimOYtTn5ZQmqevxA1cI9jnYQbs2eSLEsb_3wXvXju8Q14Dggv7js9w9OdUnrILVcp-jxgEXtUROCJ16s_PbIW7GzCpDbCQQhQKfAAQkv3oA5) - The_Theosophical_Path.pdf

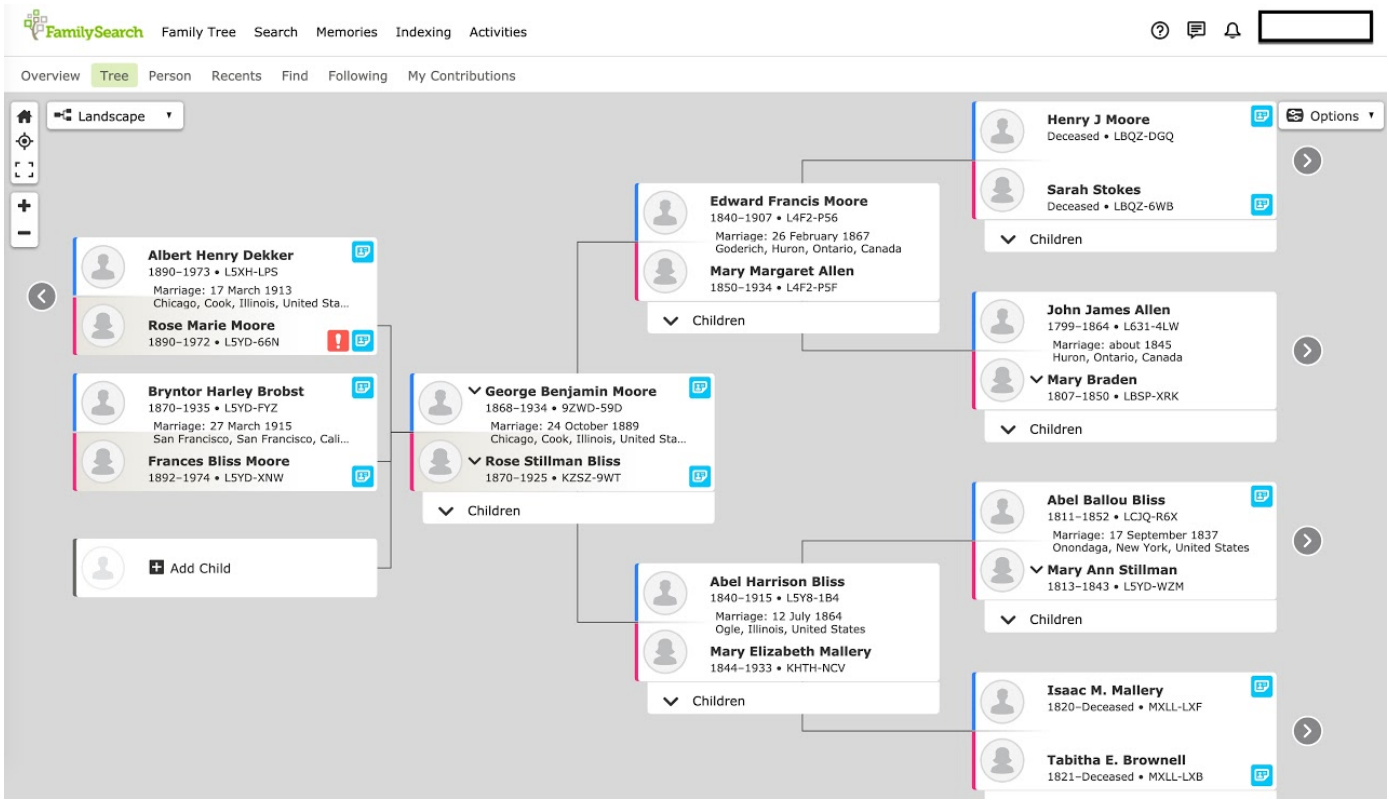
Relatives

John Dekker (1927 - 2018) : Younger brother -

[HL005I][GDrive]

John Henry Dekker, age 90, of Hendersonville, NC went home to be with his lord on Saturday June 16, 2018. John was born August 16, 1927 in Glendale California; the son of the late Albert Orno Dekker and Rose-Marie Moore Dekker. In addition to his parents he was preceded in death by two of his children, daughter Carrie Lynn Dekker Cotoli and son Frank Albert Dekker, his two **brothers David Bliss Dekker and Albert Henry Dekker** and sister Mary Elizabeth (Betsy) Dekker Light and husband Shelby. John is survived by his Loving Wife, of 49 years, Virginia Lind Dekker, his three children, Son Jan Garrett Dekker and his wife Ruby, his Daughter Laurie Dekker Jobe and her husband Bill, and Daughter Rose Mary Dekker, his grandchildren Heather Prince Barrios, Katherine Bree Shaffstall, Kirstie Ann Kreeger, Thomas Edward Dekker, Sara Elizabeth Cusack, Travis James Cusack, Paul Bruno Cotoli, and multiple great grandchildren who loved and adored him. John lived a great loving life that he shared with everyone around him. He regaled his friends with stories of his life that were so entertaining that he was often asked for more stories. John was always kind and willing to lend a helping hand to anyone who asked. Over the years of his geophysical work, he developed a lasting and deep respect for the earth. As a young boy of 12 he started mowing lawns in the neighborhood and earned enough money to buy a car at age 16, following which he began working as a soda jerk and fry cook at the Westport Beach Club, Long Beach, CA, and later worked making rubber gaskets for wing tanks in airplanes during WWII. At 17 he graduated from high school and attempted to enlist in the Navy but was not accepted because he was deaf in one ear. As a result, he began a summer job as a Chevron station manager in Tuolumne Meadows, Yosemite National Park. In the fall of 1945 he was drafted into the Army as a private (they said he was faking his deafness). He advanced to battalion supply sergeant with the 11th Airborne Division while on occupation duty in Sendai, Japan and was honorably discharged in 1947. John received a BS degree in geology from The University of Washington at Seattle in 1950. He went to work for United Geophysical Corp. in California and then moved and worked across the country throughout the Rockies to coast of the Gulf of Mexico performing every job on a seismic crew searching for oil and gas and advanced to Party Chief. In 1956 he went to work for Chevron Oil in New Orleans as a geophysicist and in 1960 for Union Oil of California as Division Geophysicist. In 1965 he became a geophysical consultant and worked for a dozen different oil and gas companies. **Also, as a consultant he performed many plant site studies for atomic powered electric plants.** As a loving and dedicated father and scout master he led his family on many camping vacations to our Great Beautiful National Parks. Many summers were spent with his family at Philmont Scout Ranch. In 2000 he retired and in 2006 moved to Hendersonville, North Carolina where he volunteered with "Disability Partners", teaching computer skills to disabled people. He served on the Board of Indian Hill Home Owners Association, Hendersonville Board of Adjustments and was active in the Republican Party. In lieu of flowers, the family suggests that donations in John's memory be directed to Blue Ridge Humane Society of Hendersonville, NC, 88 Centipede Ln, 28792. A memorial service will be held in Flat Rock, NC at St John in the Wilderness Episcopal Church 1895 Greenville Hwy at 10:00 am on June 30th, reception to follow service.

Family tree :



[HL005R][GDrive]

Housatonic

Dr. Emmie de Wit (born 1980(est.))

Wikipedia Emmie de Wit

HUSBAND - [**Dr. Vincent J. Munster (born 1973)**]

husband - https://www.niaid.nih.gov/research/vincent-j-munster-phd

vincent muster - age 48 - https://www.whitepages.com/name/Vincent-Munster/MT

https://www.niaid.nih.gov/research/emmie-de-wit

2103 - with feldmann

2013-01-08-the-montana-standard-pg-3-c.jpg

2013-01-08-the-montana-standard-pg-3-c-clip-hamilton-lab

https://en.wikipedia.org/wiki/Emmie_de_Wit

2021-03-05-wikipedia-emmie-de-wit.pdf

https://drive.google.com/file/d/1ziJ7tx-2TroCHeVqbM2uhKDNx2hyDIMI/view?usp=sharing

Emmie de Wit

From Wikipedia, the free encyclopedia

Jump to navigation
Jump to search

Emmie de Wit

Nationality

Dutch

Alma mater

Erasmus University Rotterdam (PhD)

Scientific career

Fields

Viral pathogenesis

Institutions

Rocky Mountain Laboratories

Emmie de Wit is a Dutch-American virologist. She is chief of the molecular pathogenesis unit at the Rocky Mountain Laboratories. Her research combines pathogenesis studies with detailed molecular analyses to identify molecular determinants of severe respiratory tract disease within the virus and the host.

Education[edit]

Emmie de Wit is from the Netherlands.[1] **She received her Ph.D. in virology in 2006 fr**om Erasmus University Rotterdam. Her research focused on the replication, pathogenesis and transmission of influenza A virus.[2] Her dissertation was titled *Molecular determinants of influenza A virus replication and pathogenesis*.[3]

[If she was 26 when she got her PhD in 2006, that would suggest a birth date cloer to 1980

Career[edit]

In 2009, de Wit moved to Heinz Feldmann's Laboratory of Virology at the Rocky Mountain Laboratories (RML) to research in the biosafety level 4 laboratory. Here, she focused on the pathogenesis of and countermeasures against Nipah virus, the Middle East Respiratory Syndrome Coronavirus and the 1918 H1N1 influenza A virus (Spanish flu).[2] In 2012, she received a Fellows Award for Research Excellence (FARE) for her research on modeling the transmission cycle of the deadly Nipah virus.[4] From 2014 to 2015, de Wit spent 4 months in a field lab in Monrovia, Liberia in charge of patient diagnostics for several Ebola Treatment Units in the area, to help contain the Ebola virus epidemic in Liberia. Currently, de Wit's research aims to combine pathogenesis studies with detailed molecular analyses to identify molecular determinants of severe respiratory tract disease within the virus and the host. She is chief of the molecular pathogenesis unit at RML.[2]

References[edit]

- ^ Bichell, Rae Ellen (2016-12-04). "What It's Like To Handle The Nastiest Pathogens As Your Day Job". *NPR*. Retrieved 2020-03-29.
- ^
- Jump up to:
- a b c "Emmie de Wit, Ph.D. | NIH: National Institute of Allergy and Infectious Diseases". *www.niaid.nih.gov*. Retrieved 2020-03-29.
- ^ Wit, Emmie de (2006). *Molecular determinants of influenza A virus replication and pathogenesis* (Thesis). OCLC 150315522.
- ^ Mott, Meghan; NIAAA (2013-05-13). "The Perils of Nipah Virus and Ischemic Stroke". *NIH Intramural Research Program*. Retrieved 2020-03-29.

This article incorporates public domain material from websites or documents of the National Institutes of Health.

Residence Date:

2013-2020, resident of Montana : https://www.ancestry.com/discoveryui-content/view/199052031:62209?tid=&pid=&queryId=488a56fd5bb96dba33e81933bf3a47c0&_phsrc=TmZ73&_phstart=successSource

https://www.nbcnews.com/storyline/zika-virus-outbreak/worse-ebola-u-s-not-preparing-next-bio-threat-n753526

2020 (Dec 25) - Rocky Mountain Laboratory scientists honored with national award

2020-12-25-ravallirepublic-com-rocky-mountain-lab-scientists-honored-national-award.pdf

- Perry Backus
- Dec 25, 2020
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- Save

Perry Backus

For decades, Rocky Mountain Laboratory scientists Vincent Munster and Emmie de Wit have been honing the skills they would use in helping in this year's fight against a global pandemic.

That scientific expertise didn't go unnoticed.

The married couple from Hamilton was recently selected as two of four recipients of the American Association for Advancement of Science's Golden Goose Award. The award recognizes the benefits of federally-funded research by highlighting examples of studies that led to breakthroughs resulting in significant societal impacts.

The award's focus this year was on a group of National Institutes of Health scientists who used their collective knowledge gained in studying other dangerous coronavirus outbreaks around the world to respond quickly to the COVID-19 pandemic.

While the couple works in separate RML labs, the common thread of their research involves investigating outbreaks. They work with animals to learn about viruses and then create tests to determine if vaccine candidates and treatments have the potential to work in humans.

They are among a small core of researchers who study coronaviruses. Before COVID-19 was even a blip on the radar screen, their work was unlocking mysteries about how the viruses operated and ways they could be treated.

At about the same time the first cases of COVID-19 were reported in Wuhan, China last December, a study led by de Wit was published that showed the experimental antiviral drug remdesivir was effective in treating rhesus macaques infected with the Middle East respiratory syndrome (MERS) coronavirus.

By April, de Wit's team showed that it also worked on the virus that caused COVID-19.

The federal Food and Drug Administration issued an emergency-use authorization for the drug to treat COVID-19 patients requiring hospitalization in May.

Munster's RML research team was one the first to investigate MERS in 2012 when it appeared in Arabian Desert camel handlers. They found that while camels wouldn't get ill with the virus, they spread it effectively to humans.

Munster's team is currently involved in several COVID-19 development programs, including the Oxford-AstraZeneca vaccine that could be next in line for an emergency authorization.

The first doses of COVID-19 vaccine are expected to arrive in Ravalli County this week. For that to happen so quickly, Munster said the stars needed to align just right.

"Surprised isn't the right word for us that this has happened," he said. "We're all aware of the new technologies that have been developed. Everything still needed to work and everything has. The laboratory work, the human clinical trials, all these things have lined up in record speed. It worked out in the way that it was planned. Nothing hit a snag. That's really amazing."

Both de Wit and Munster said it's important for the general public to understand that the building blocks for this rapid development of a vaccine were put in place decades ago.

"If you are involved in it, it all makes sense," Munster said. "For the general public, it seems unprecedented."

Since the 2014 Ebola outbreak, public and private partnerships between scientists and pharmaceutical companies have been working to shorten the time frame for developing new vaccines so they can make a difference when a new pathogen appears.

"One of the big differences from the development of previous vaccines was the resources that were available this time," de Wit said. "Everyone in the research community and all the pharmaceutical companies wanted to make a vaccine happen…The FDA made sure they were ready to make approvals so the next step could happen. And there were a lot of people who were willing to participate in vaccine trials."

"Enrolling 30,000 people in vaccine candidate trials is quite unprecedented," Munster said.

Munster and de Wit said all of this couldn't happen without the cooperation of research teams from around the world.

"People have this old-fashioned idea about science," de Wit said. "They think it's one brilliant person who has this brilliant idea that's made in a light bulb. That's not really how science works. You really need to put a lot of brains and hands together."

While the couple is appreciative of the recent award they were presented, both said the credit really belongs to all the people who work at Rocky Mountain Laboratories.

The two have been working at the Hamilton facility since 2009.

"We think we are extraordinarily blessed to be able to live here," Munster said. "We have all the resources that we need to be able to do our work and then we can still go outside and enjoy nature."

Since the pandemic's onset, the couple said they have been extremely diligent in maintaining social distancing. The only time they go out into a public space is a 7 a.m. grocery shopping trip on Sunday mornings.

"For us, this has been a crazy year," de Wit said. "While other people are having to struggle to stay indoors, we have been able to do what we love by going to work. We love figuring out what kind of disease this is and what we can do to prevent people from getting sick."

They hope their neighbors will continue to hunker down and do everything they can to stay safe for the next few months until the vaccine becomes readily available.

"With the vaccines, I think we are really getting close to the end of it," Munster said. "Everyone just needs to be strong for the next couple of months until they can get vaccinated. People need to keep wearing their masks, keeping their distance and practice proper hygiene."

The two scientists who have spent their careers studying some of the most infectious diseases known to the world are certain that masks work to control

the spread of virus.

“We think it’s very simple concept,” Munster said. “This virus replicates the most in people’s noses. It’s transmitted when people inhale and exhale. The moment you wear a mask, it’s harder to get enough virus particles for someone to become infected.”

“Masks are such an easy thing,” de Wit said. “You just put them on before you go into the store. It’s something that everyone can do to keep everyone safe. We’re not all scientists who can work on a vaccine, but this is something that everyone can do to try to keep each other a little safer.”

“People should have the freedom of not being exposed to someone else’s virus,” Munster said.

2021-03-06-whitepages-report-emmie-de-wit-img-1.jpg

https://www.whitepages.com/name/Emmie-Dewit/Hamilton-MT/

https://drive.google.com/file/d/1SJOqIdPxpZoFH9e1RXNbiO3OerD2JevR/view?usp=sharing

born May 14, 1996 ???

Dr. Renato Dulbecco (born 1914)

Wikipedia Renato Dulbecco

Associations

- **Dr. Howard Martin Temin (born 1934)** (...)
- **Dr. David Baltimore (born 1938)** (...)
- **Dr. Francis Peyton Rous (born 1879)** (...)
- **Dr. Jonas Edward Salk (born 1914)** (Dulbecco wrote obituary for Dr. Jonas Salk 0- https://sci-hub.se/https://doi.org/10.1038/376216a0#)
-

Saved Wikipedia (April 18, 2021) - "Renato Dulbecco"

https://en.wikipedia.org/wiki/Renato_Dulbecco

2021-04-18-wikipedia-org-renato-dulbecco.pdf

Renato Dulbecco

Dulbecco c.1966

Born

February 22, 1914

Catanzaro, Italy

Died

February 19, 2012 (aged 97)

La Jolla, California

Nationality

Italian, American[1]

Alma mater

University of Turin

Known for

Reverse transcriptase

Awards

- Albert Lasker Award for Basic Medical Research (1964)
- Louisa Gross Horwitz Prize (1973)
- Selman A. Waksman Award (1974)
- ForMemRS (1974)[2]
- Nobel Prize in Physiology or Medicine (1975)

Scientific

Scientific career

Fields

Virologist

Institutions

- Indiana University Bloomington
- California Institute of Technology
- Salk Institute
- London Research Institute

Doctoral students

[**Dr. Howard Martin Temin (born 1934)**]

Renato Dulbecco (/dʌlˈbɛkoʊ/ dul-BEK-oh,[4][5] Italian: [reˈnaːto dulˈbɛkko, -ˈbek-]; February 22, 1914 – February 19, 2012)[6] was an Italian–American virologist who won the 1975 Nobel Prize in Physiology or Medicine for his work on oncoviruses, which are viruses that can cause cancer when they infect animal cells.[7][8][9][10][11][12][13][14] He studied at the University of Turin under Giuseppe Levi, along with fellow students Salvador Luria and Rita Levi-Montalcini, who also moved to the U.S. with him and won Nobel prizes. He was drafted into the Italian army in World War II, but later joined the resistance.

[...]

Early life[edit]

Dulbecco was born in Catanzaro (Southern Italy), but spent his childhood and grew up in Liguria, in the coastal city Imperia. He graduated from high school at 16, then moved to the University of Turin. Despite a strong interest in mathematics and physics, he decided to study medicine. At only 22, he graduated in morbid anatomy and pathology under the supervision of professor Giuseppe Levi. During these years he met Salvador Luria and Rita Levi-Montalcini, whose friendship and encouragement would later bring him to the United States. In 1936 he was called up for military service as a medical officer, and later (1938) discharged. In 1940 Italy entered World War II and Dulbecco was recalled and sent to the front in France and Russia, where he was wounded. After hospitalization and the collapse of Fascism, he joined the resistance against the German occupation.[13]

Career and research[edit]

After the war he resumed his work at Levi's laboratory, but soon he moved, together with Levi-Montalcini, to the U.S., where, at Indiana University, he worked with Salvador Luria on bacteriophages. In the summer of 1949 he moved to Caltech, joining Max Delbrück's group (see Phage group). There he started his studies about animal oncoviruses, especially of polyoma family.[15] In the late 1950s, he took [**Dr. Howard Martin Temin (born 1934)**] as a student, with whom, and together with [**Dr. David Baltimore (born 1938)**], he would later share the 1975 Nobel Prize in Physiology or Medicine for "their discoveries concerning the interaction between tumour viruses and the genetic material of the cell." Temin and Baltimore arrived at the discovery of reverse transcriptase simultaneously and independently from each other; although Dulbecco did not take direct part in either of their experiments, he had taught the two methods they used to make the discovery.[16]

Throughout this time he also worked with Marguerite Vogt. In 1962, he moved to the Salk Institute and then in 1972 to The Imperial Cancer Research Fund (now named the Cancer Research UK London Research Institute) where he was first appointed associate professor and then full professor.[17] As many Italian scientists Dulbecco did not have any PhD because it was not existent in the Italian higher education system (until when it was introduced in 1980[18]). In 1986 he was among the scientists who launched the Human Genome Project.[19][20] From 1993 to 1997 he moved back to Italy, where he was president of the Institute of Biomedical Technologies at C.N.R. (National Council of Research) in Milan. He also retained his position on the faculty of Salk Institute for Biological Studies. Dulbecco was actively involved in research into identification and characterization of mammary gland cancer stem cells until December 2011.[21] His research using a stem cell model system suggested that a single malignant cell with stem cell properties may be sufficient to induce cancer in mice and can generate distinct populations of tumor-initiating cells also with cancer stem cell properties.[22] Dulbecco's examinations into the origin of mammary gland cancer stem cells in solid tumors was a continuation of his early investigations of cancer being a disease of acquired mutations. His interest in cancer stem cells was strongly influenced by evidence that in addition to genomic mutations, epigenetic modification of a cell may contribute to the development or progression of cancer.

Nobel Prize[edit]

Dulbecco and his group demonstrated that the infection of normal cells with certain types of viruses (oncoviruses) led to the incorporation of virus-derived genes into the host-cell genome, and that this event lead to the transformation (the acquisition of a tumor phenotype) of those cells. As demonstrated by [**Dr. Howard Martin Temin (born 1934)**] and [**Dr. David Baltimore (born 1938)**], who shared the Nobel Prize with Dulbecco, the transfer of viral genes to the cell is mediated by an enzyme called reverse transcriptase (or, more precisely, RNA-dependent DNA polymerase), which replicates the viral genome (in this case made of RNA) into DNA, which is later incorporated in the host genome.

Oncoviruses are the cause of some forms of human cancers. Dulbecco's study gave a basis for a precise understanding of the molecular mechanisms by which they propagate, thus allowing humans to better fight them. Furthermore, the mechanisms of carcinogenesis mediated by oncoviruses closely resemble the process by which normal cells degenerate into cancer cells. Dulbecco's discoveries allowed humans to better understand and fight cancer. In addition, it is well known that in the 1980s and 1990s, an understanding of reverse transcriptase and of the origins, nature, and properties of human immunodeficiency virus (HIV, of which there are two well-understood serotypes, HIV-1, and the less-common and less virulent HIV-2), the virus which, if unchecked, ultimately causes acquired immunodeficiency syndrome (AIDS), led to the development of the first group of drugs that could be considered successful against the virus, the reverse-transcriptase inhibitors, of which zidovudine is a well-known example. These drugs are still used today as one part of the highly-active antiretroviral therapy drug cocktail that is in contemporary use.

Other awards[edit]

In 1965 he received the Marjory Stephenson Prize from the Society for General Microbiology. In 1973 he was awarded the Louisa Gross Horwitz Prize from Columbia University together with Theodore Puck and Harry Eagle. Dulbecco was the recipient of the Selman A. Waksman Award in Microbiology from the

National Academy of Sciences in 1974.[23] He was elected a Foreign Member of the Royal Society (ForMemRS) in 1974.[2]

He died three days before his 98th birthday.

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- Renato Dulbecco on Nobelprize.org

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https://www.nature.com/articles/376216a0

Published: 20 July 1995

Jonas Salk (1914-95)

Renato Dulbecco

Nature volume 376, page216(1995)Cite this article

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Eugene Éleuthère Irénée du Pont jr. (born 1873)

See :

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- 2019-07-geni-com-eugene-eleuthere-du-pont-1873-1954.pdf / https://drive.google.com/open?id=123CFhWzd6b2X5qaHV4bSodAp4_HEbi5S

Birth 7 Jul 1873 in New Castle County, Delaware, USA

Death 15 Dec 1954 (aged 81) in Greenville, New Castle County, Delaware, USA

Also goes by:

- **Eugene E (for Éleuthère) du Pont** ; See http://dla.library.upenn.edu/dla/pacscl/ead.pdf?id=PACSCL_HML_2656
- French: **Eugène du Pont de Nemours**

Father is 🌐 **Eugene E. du Pont Sr. (1840-1902)** , "an American businessman who served as the first head of the modern-day DuPont corporation."

Grandfather : Alexis Irénée du Pont

Great Grandfather : 🌐 **Éleuthère Irénée du Pont de Nemours (1771 - 1834)**

(**source** : http://dla.library.upenn.edu/dla/pacscl/ead.pdf?id=PACSCL_HML_2656)

Eugene du Pont Jr. *was born July 7, 1873 in Wilmington, Delaware. He was the son of* 🌐 **Eugene E. du Pont Sr. (1840-1902)** *and Amelia Elizabeth du Pont (1842-1917), and a great grandson of E.I. du Pont de Nemours& Company founder,* 🌐 **Éleuthère Irénée du Pont de Nemours (1771 - 1834)** *Eugene's father was the president of theDuPont Company from 1889 until his death in 1902.Eugene du Pont Jr. papers- Page 4 -Eugene attended St. Paul's School in Concord, New Hampshire, from 1888 until 1892, and later Brownand Nichols School in Cambridge, Massachusetts from 1892 to 1893. In 1897, he received a degree fromHarvard University. Not long after graduation, Eugene joined the DuPont Company as assistant to thepresident in the administrative office. After the death of his father and company president Eugene E. duPont in 1902, he was named assistant director of sales for the E.I. du Pont de Nemours Powder Companyin January 1903, a subsidiary of the DuPont Company. As assistant director of sales, Eugene traveledextensively for fifteen years to increase the sales of explosives in the central west. In February 1913, hetook a leave of absence from the company and resigned five months later. Eugene was elected a directorof E.I. du Pont de Nemours & Company on March 12, 1917, a position in which he remained until hisdeath.Eugene was also a director of the Equitable Security Trust Company in Wilmington, and heldmemberships in various societies and clubs, including the Sons of the American Revolution, WilmingtonClub, DuPont Country Club, Aurora Gun Club, Woodmont Rod and Gun Club, and several others. InJanuary 1913, he married Ethel Pyle of Wilmington and had four children, one of whom, Ethel, marriedFranklin D. Roosevelt, Jr. in 1937. Eugene E. du Pont Jr. died December 15, 1954.*

Uncle : Dr Alexis Irenee Du Pont (1843 - 1904)

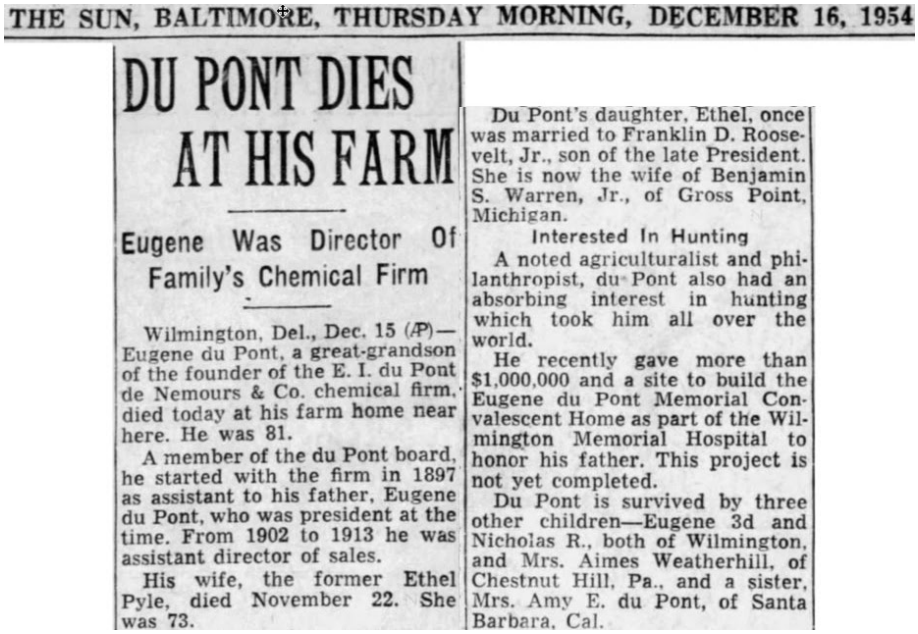
His cousin(s) includes **Eugene Éleuthère du Pont (born 1882)** (son of his uncle **Dr Alexis Irenee Du Pont (1843 - 1904)**).

DAUGHTER - Ethel du Pont

See **Ethel du Pont (born 1916)**

1954 (Dec) - Passing

Full page : 1954-12-16-the-baltimore-sun-pg-19.jpg / https://drive.google.com/open?id=124g8-rE0y3dwD0JHzPKho_Dgzik7cHqu



THE SUN, BALTIMORE, THURSDAY MORNING, DECEMBER 16, 1954

DU PONT DIES AT HIS FARM

Eugene Was Director Of Family's Chemical Firm

Wilmington, Del., Dec. 15 (AP)—Eugene du Pont, a great-grandson of the founder of the E. I. du Pont de Nemours & Co. chemical firm, died today at his farm home near here. He was 81.

A member of the du Pont board, he started with the firm in 1897 as assistant to his father, Eugene du Pont, who was president at the time. From 1902 to 1913 he was assistant director of sales.

His wife, the former Ethel Pyle, died November 22. She was 73.

Du Pont's daughter, Ethel, once was married to Franklin D. Roosevelt, Jr., son of the late President. She is now the wife of Benjamin S. Warren, Jr., of Gross Point, Michigan.

Interested In Hunting

A noted agriculturalist and philanthropist, du Pont also had an absorbing interest in hunting which took him all over the world.

He recently gave more than $1,000,000 and a site to build the Eugene du Pont Memorial Convalescent Home as part of the Wilmington Memorial Hospital to honor his father. This project is not yet completed.

Du Pont is survived by three other children—Eugene 3d and Nicholas R., both of Wilmington, and Mrs. Aimes Weatherhill, of Chestnut Hill, Pa., and a sister, Mrs. Amy E. du Pont, of Santa Barbara, Cal.

1954-12-16-the-baltimore-sun-pg-19-clip-du-pont-dies.jpg / https://drive.google.com/open?id=127TeLxiLm3P892yxeYtgIvfDlCkahyOt

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Eugene Éleuthère du Pont (born 1882)

[HX000J][GDrive]

BIRTH 27 Aug 1882 in Kentucky, USA [HL002H][GDrive]

DEATH 17 Dec 1966 (aged 84) in Wilmington, New Castle County, Delaware, USA

ALSO see : https://www.geni.com/people/Eugene-du-Pont/6000000015181701762

Notes on Name References :

Eugene du Pont Jr was typically just ***"Eugene du Pont"***, else it was ***"Eugene E du Pont"***.

Father : Dr Alexis Irenee Du Pont (1843 - 1904)

aka "Alexis Irenee Du Pont " - See [HL002I][GDrive]

"Alexis was a physician in Kentucky and Wilmington, Delaware. He married Elizabeth Canby Bradord, 20 Jan 1875 in Wilmington. Together they had four children: Alice, Philip, Elizabeth and Eugene. The children were all born during the family's stay in Louisville, Kentucky, later moving to Wilmington where he practiced medicine. According to the Directory of Deceased American Physicians, he received his education at Univerisy of Pennsylvania School of Medicine. He died from Bright's Disease at age 61 in Greenville."

Grandfather / Great-Grandfather

Grandfather : Alexis Irénée du Pont

Great Grandfather : 🔵 **Éleuthère Irénée du Pont de Nemours (1771 - 1834)**

Uncle : Eugene DuPont Sr. (1840 - 1902)

See 🔵 **Eugene E. du Pont Sr. (1840-1902)** .

His cousin(s) includes **Eugene Éleuthère Irénée du Pont jr. (born 1873)** (son of his uncle 🔵 **Eugene E. du Pont Sr. (1840-1902)**).

Aurora Gun Club Records :

http://dla.library.upenn.edu/cocoon/dla/pacscl/ead.pdf?id=PACSCL_HML_2488

"By the fiftieth anniversary shoot of the Aurora Gun Club, shooting was taking place near 'Dogwood,' the home of ***Eugene E. du Pont****. On November 9, 1952, The Wilmington Evening Journal covered an anniversary shoot as even by then Aurora had the distinction of being one of the oldest active gun clubs*

in the United States. The Evening Journal went on to mention that members of the club in 1952 were: Eugene du Pont, William du Pont, Eugene E. du Pont, W. Glasgow Reynolds, Isaac Fog, W.R. Ellis, Maholon Milliken, Harold Schutt, Porter Schutt, Fagan Simonton, Karl Mollin, S. G. Baker, William Jones, James T. Skelley, Ted Doremus, James H. Dunbar, Harry Prettyman, W. G. Wood, Bernard Peyton, Edward Porter, Walter S. Carpenter Jr., Noel Bannard, Clark Davis and finally Stuart Groves. For this special anniversary shoot, a hot tamale luncheon was flown in from California buy members Ellis and Milliken.

The year 1955 saw the end of an era with the passing of Eugene du Pont late in 1954, a new president would need to be elected. A meeting was held at 'Dogwood' to determine who the next president would be. At the meeting, Ted Doremus was elected second president of the club. To pay homage to their late president, Sam Baker met with officials of the newly constructed Eugene du Pont Memorial Hospital on the site of 'Pelleport' who suggested that they fund the construction of a covered passageway for nurses walking from their dormitory to the hospital proper as an appropriate tribute to Eugene du Pont."

Director of Phillips Petroleum Co. 1917 to 1955

https://en.wikipedia.org/wiki/Phillips_Petroleum_Company

The Phillips Petroleum Company was incorporated on June 13th, 1917, by brothers Lee Eldas ("L.E.") Phillips and Frank Phillips, of Bartlesville, Oklahoma, U.S.A.[4][5] Their younger brother, Waite Phillips, was the benefactor of Philmont Scout Ranch. The company was headquartered in Bartlesville, Oklahoma.[6][7]

Phillips Petroleum rapidly became a fully integrated oil company that included oil and gas production, crude oil pipelines and refineries, and marketing of petroleum products.

Phillips Petroleum became heavily involved in the natural gas industry immediately after the discovery of the Panhandle gas field of Texas and the Hugoton field in Kansas. By 1925, it was the largest producer of natural gas liquids (NGL) in the United States.[1]

In 1927, Phillips started up its first petroleum refinery in Borger, Texas, designed to produce gasoline as an automotive fuel. The refinery also produced other petroleum fractions (e.g., kerosene, fuel oils). It opened its first service station, to sell gasoline, in Wichita, Kansas on 19 November 1927. In 1930, the company developed its "Phillips 66" trademark: according to company lore, a Phillips official was road-testing the company's newest gasoline, commented that the car was going "like 60" when his driver replied "Sixty nothing ... we're doing 66!", all while driving on U.S. Highway 66 in Oklahoma near Tulsa, resulting in the number 66 superimposed on the U.S. Highway symbol for Route 66.[1][8]

Frank Phillips served as president of the company until 1938.[9] He then turned over the presidency to Kenneth S. "Boots" Adams, but continued as chairman of the board until 1949, when he was 76 years old.[citation needed]

In 1942, the company bought more than 250,000 acres in the Hugoton-Panhandle gas fields and a 25 percent interest in the Panhandle Eastern Pipeline Co.[1] In 1954, the U.S. Supreme Court decided the landmark case of Phillips Petroleum vs. State of Wisconsin which held that under the Natural Gas Act,[10] the federal government should regulate the prices which natural gas producers charge when selling gas at the wellhead.[11] Phillips then divested itself of the Panhandle Eastern Pipeline Interest, but remained a major supplier of natural gas.[1]

World War II greatly stimulated the demand for petroleum products, especially high-octane aviation fuel and jet fuel. Phillips turned to technology to increase the octane rating of fuels for use in advanced engines. The company invented an HF alkylation process in 1940.[12] The American petrochemical industry took off, first making such as styrene, ethylene, propylene and butadiene.[1] After the war, it formed a subsidiary, Phillips Chemical Co., which entered the fertilizer business by producing anhydrous ammonia from natural gas.[13] The company then built a complex on the Houston Ship Channel devoted to making petrochemicals and polymers.[1]

During the 1960s, Phillips expanded its international operations, particularly with exploration in Canada, Venezuela, and Colombia. It discovered the Ekofisk gas field in the North Sea in 1969.[1]

http://www.fundinguniverse.com/company-histories/conocophillips-history/

1981 -To fend off hostile takeovers, Conoco agrees to be acquired by E.I. du Pont de Nemours and Company (DuPont) for $7.4 billion.

https://www.courtlistener.com/opinion/2090367/mayer-v-adams/

https://www.encyclopedia.com/social-sciences-and-law/economics-business-and-labor/businesses-and-occupations/e-i-du-pont-de-nemours-company

In addition to mergers and acquisitions, Du Pont became heavily involved in joint ventures. Du Pont had agreements with P. D. Magnetics to develop, manufacture, and sell magnetic tape. It also became involved with PPG Industries to manufacture ethylene glycol. Aided by Olin Corporation, it planned to construct a chlor/alkali production facility. Du Pont also forged extensive connections with Japanese industry. The 1980s united them with Sankyo Company (to develop, manufacture, and market Pharmaceuticals), Idemitso Petrochemicals (to produce and market butanediol), Mitsubishi Gas Chemical Company, and Mitsubishi Rayon Company. Furthermore, Du Pont established connections in Europe. They became partners with N.V. Phillips (to produce optical discs), EKA AB (to produce and market the Compozil chemical system for papermaking processes), and British Telecom (to develop and manufacture optoelectronic components).

Du Pont reacted to the depressed market in textiles by arranging mergers and acquisitions of other companies in other industries. Du Pont's takeover of the Conoco Oil company (the United States's number two petroleum firm) was the largest merger in history. Issues of anti-trust were prevalent in negotiation for the merger, but in the end Du Pont bought Conoco for $7.8 billion. Du Pont merged with Conoco to protect itself from the rise in crude oil prices. As oil supplies dwindled, a supply of Conoco oil and coal as raw material for Du Pont's chemicals provided a competitive advantage. Conoco's sites in Alberta, Canada, and off the north slope of Alaska provided large amounts of these resources. Du Pont's only disadvantage in the Conoco takeover was the introduction of Edgar Bronfman, chairman of the Seagram Company, the world's largest liquor distiller, into a minority position in Du Pont-Conoco. Conoco had been a major acquisition target for Seagram. The merger left Seagram with 20 percent of Du Pont. Bronfman saw himself as a long-term investor in Du Pont and desired an important voice in the company's direction. However, Seagram and Du Pont arrived at an agreement whereby Seagram could not purchase more than 25 percent of Du Pont stock until 1991.

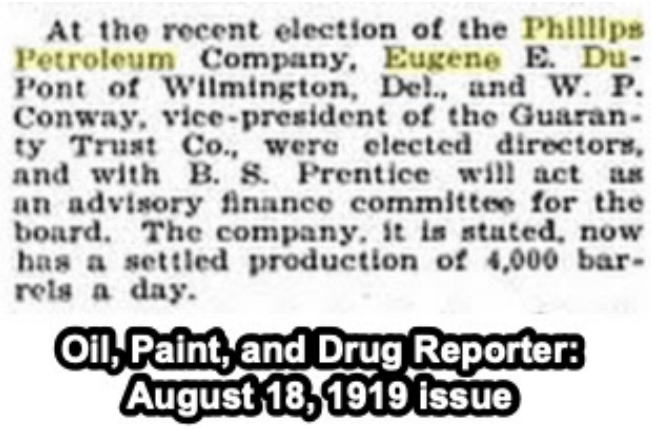
Growth and greater financial security came to Du Pont in 1980 when they bought Remington Arms, a manufacturer of sporting firearms and ammunition. The Remington Arms unit of Du Pont made a number of multi-million dollar contracts with the army to operate government-owned plants. Du Pont also expanded its scope in the early 1980s with other major purchases. New England Nuclear Corporation, a leading manufacturer of radioactive chemicals for medical research and diagnosis, was acquired in April of 1981, and Solid State Dielectrics, a supplier of dielectric materials used in the manufacture of multilayer capacitors, was acquired in April of 1982.

http://files.ali-aba.org/thumbs/datastorage/skoobesruoc/pdf/CL002-CH12_thumb.pdf

a. Trust 3044 was created by Mrs. Schutt's father (Eugene E. duPont, who was the son of Alexis Irenee duPont) in 1940, with Wilmington Trust Co. (WTC) as trustee. At Mrs. Schutt's death, this trust was divided into four separate trusts for her children (providing for quarterly income distributions to each child). At each child's death, his or her trust would pass free of trust to the child's issue, subject to age restrictions. The trust agreement provided for the appointment of an "advisor of the trust" who could refuse consent to broadly specified investment actions (including the decision to sell assets). Mrs. Schutt appointed decedent and her father as the advisors. After Mrs. Schutt's father's death in 1966, decedent served as the sole advisor until his death.

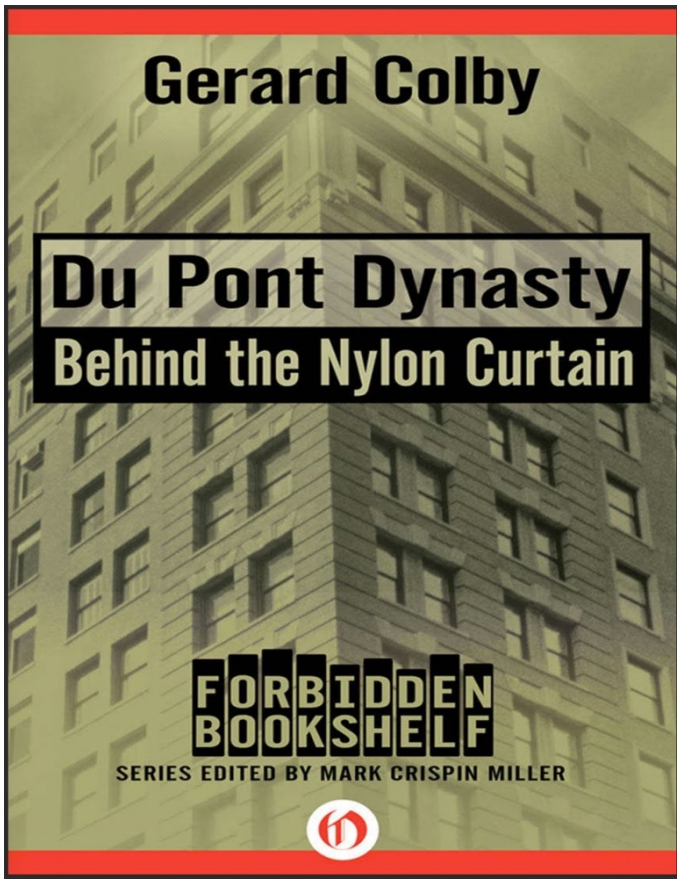
1919 - Eugene E du Pont becomes a director of Phillips Petroleum

"Oil, Paint, and Drug Reporter : in August 18 1919 issue , page 32 ". See the full July-September issues at [HP001Z][GDrive])



[HP0020][GDrive]

The following is from the book "Du Pont Dynasty : Behind the Nylon Curtain" by Gerard Colby. To see the PDF : [HB001R][GDrive]



[HB001S][GDrive]

Page : 258 - 260

Not only estates, but also yachts were a symbol of the Du Ponts during the Twenties.The Delaware family owned more of them than any other family in America. Irénée owned the 60-foot-long Icacos; Lammot, his 76-foot Nemea; A. Felix, Jr., his 73-footOrthia; E. Paul, his 58-foot Theano; Ernest, his 74-foot Edris and 38-foot Ponjola; ***Eugene E., his 50-foot High Tide;*** *Henry B., his 54-foot Nor' Easter; Henry F., his 35-foot Sea Urchin; Coly, his Tech I, Tech II, and Tech III; his son Francis V., his 84-footTech Jr.; and Alfred, his 125-foot Nenemoosha and the 101-foot Gadfly, the last one forscurrying over Florida swamps. Du Pont in-laws also steamed through the high seas,Donaldson Brown of G.M. in his 149-foot Oceania, Ruly Carpenter in his 121-footGalaxy, and his brother, Walter Carpenter (then Du Pont treasurer and married to a former Du Pont governess) in his 65-foot Grey Gull.*

During the Twenties, major newspapers often ran stories of the gay times enjoyed by the rich on their yachts. In 1924, for example, Coleman du Pont's fishing trip with his son and two friends off the Florida coast was duly carried by the New York Times, as if Coly's landing of a 600-pound shark rivaled in heroics and importance the world-shaking events of the day. Again, in 1927, when E. Paul's wife slipped off a bobbingyacht into the Delaware River and had to swim to shore, her feat was recorded by history.

Some of the family were infected with the aviation craze sweeping the country sinceL indbergh's flight and became early pioneers of the new industry. Henry B. du Pont owned the first private plane licensed by the Department of Commerce. Richard C. duPont, son of A. Felix du Pont, was so fascinated with soaring planes that he became oneof the country's leading experts on gliders, while his brother, A. Felix, Jr., casually flew by plane every day to work in Camden, New Jersey, where he inspected aviation finishes in the paint department.

In 1927 Henry B. opened the Du Pont Airport just outside Wilmington, and rumors soon reached New York that Giuseppe M. Bellanca, one of the world's foremost designers of monoplanes, was being lured to Wilmington from his Staten Island plant.The Du Ponts were offering a landing field with 1,100 feet of Delaware River frontageand a complete factory on 350 acres of land only fifteen minutes from the Du Pont Hotel.By the following January the rumors were confirmed with the announcement that the Italian-born designer, after failing to interest Henry Ford, had accepted the presidencyof a $1 million company established by Henry B. du Pont. "Businessmen here,"commented the New York Times, "consider it significant that members of the group soclosely identified with General Motors, the greatest rival of Henry Ford, should be following him into the aircraft industry."108 "Significant" was an understatement. Henry B.'s Atlantic Aviation became the largest business aircraft sales and service organization in the world, spurring Henry's substantial investments in helping developTrans World Airlines, North American Aviation, and Bendix Aviation.

Henry B. du Pont's airport often became a center of suspense in the late Twenties. Once in 1928 A. Felix, Jr., who had joined the Army Air Corps, was overdue in a flight home from his Texas training camp. A mist had developed near Wilmington, and, as these were the days before electronic guidance systems, the waiting Du Ponts were frantic with worry. Finally, Felix's father could stand the suspense no longer; he mounted a plane and flew off into the clouds in search of his son. High above the field,Felix peered through the clouds, anxious over added dangers that would come with night. Then just as dusk approached, the white and gold plane of young Du Pont was sighted.Another incident, although of a less personal nature, occurred a year later. Charles Lindbergh, the famous "lone eagle," flew in for a secret conference with the Du Pont Company. The subject was a revolutionary new idea—rocket power. At the Du Pont headquarters Lindbergh explained that black powder could be used in solid-propellant rockets. He tried to capture their interest by suggesting some immediate practical application. "Now, we could develop a rocket that could be attached to a plane for the purpose of giving it one minute of thrust in case of engine failure on takeoff, thus avoiding having to land it in a city or in trees."109The Du Ponts were openly dubious, expressing the opinion that there seemed no future in rockets connected with airplanes. A month later Lindbergh received a final letter of rejection, which claimed that "to equal the thrust of one minute of a Waspengine would require about 400 pounds of black powder, and the heat would be so intense that the powder would have to be burned in a fire-brick combustion chamber."110

What escaped the Du Ponts, however, was the possibility of liquid propellant, which needed a metal lining only 1/32 of an inch thick. Goddard, "the father of modern rocketry," knew this and, after talking with Lindbergh, visited Wilmington the day before Thanksgiving and was interviewed by three Du Pont laboratory men."I realized soon," he wrote shortly thereafter, "that the object of this questioning was... to find every last detail of the rocket I have developed during the last nine years, and after I saw this I avoided further questions as to these construction details, as much as possible."111 "All Goddard took away from it was the conviction," wrote one author,"that the Du Pont people, far from being interested in underwriting his work, were only interested in picking his brain."112 Goddard left Wilmington, turning instead to the Guggenheims for support.This loss due to crude greed was perhaps the only economic opportunity missed by the Du Ponts during the presidency of Lammot du Pont. Stern and somber Lammot had succeeded to Irénée's position in 1926, when the company's structural reorganization had been completed to meet its expansion into new fields of chemicals, following Pierre's formula of management-decentralization/financial-centralization.

Phillips Petroleum was another Du Pont interest in the arms race of the Forties,Fifties, and Sixties. Since Phillips' founding in 1917, ***Eugene E. du Pont*** *was guardian of the family's stock holding in this sphere, 25 and personally served on the board of directors until 1954. During his postwar tenure, Phillips was extremely aggressive,increasing its assets from $332 million to $1.3 billion and its net income from $23million to $95 million. Phillips was attracted particularly to new oil resources. In southeastern Alaska, for example, it secured an operating agreement on nearly one million acres of land. For $39 million, it acquired over 200,000 acres of offshore holdings.*

Phillips often joined with other Du Pont family interests in big deals. With Henry's North American Aviation, it formed Astrodyne, Inc., to develop solid fuels for missiles and space rockets. After the Rubber Act of 1948 ended government ownership of a number of synthetic rubber plants, Phillips joined Du Pont-owned U.S. Rubber (in which Henry B. was also a major personal stockholder) and other oil and rubber giants in buying up the government's general-purpose synthetic rubber and butyl industrial capacity. Eisenhower sold twenty-six plants for $285 million, which was above their net value, yet these plants yielded $166 million in profits from 1951 to 1955 alone. At the time of the sales, five dissenters on the Senate Banking and Currency Committee correctly but futilely argued that the government could have reaped more in operational profits in four to five years than the total amount of the sales.

Phillips had other legislative boons during the Fifties. As the largest seller of natural gas to interstate pipelines, it was the sole supplier to the Michigan-Wisconsin Pipe Line Company. Since the war, helpless consumers found their gas rates climbing higher and higher. State officials and the pipeline company stood helpless as Phillips claimed its need for a 12 percent profit. When the Federal Power Commission refused to regulate the rates in 1951, the Wisconsin Public Service Commission went to court, while a Phillips official warned that if the case persisted "the people of Wisconsin could freeze... they would never get another cubic foot of natural gas."

The Wisconsin PSC won its case before the Supreme Court, which ordered the FPC to review and regulate Phillips's rates. But the FPC's Eisenhower appointees, while publicizing their opposition to Phillips, moved slowly in implementing the court's decision. Then, in 1955, the Harris-Fulbright bill freed gas producers from public regulation. A 5- to 10-cent increase per 1,000 cubic feet quickly ensued, producing again for the industry of up to $3 billion a year. As the second largest holder of gas reserves in the United States, Phillips got the lion's share.

These and other defense contracts to Remington Arms and U.S. Rubber comprised the bulk of the Du Pont family's profits from the Cold War during the Fifties.

*For Du Pont Company itself, the most direct sustained contact with the arms race was its work in developing the most terrifying weapon on earth—****the hydrogen bomb****.*

In August 1950 a very lean, relaxed Crawford Greenewalt appeared before the Congressional Joint Committee on Atomic Energy. By the end of the day he walked outwith an Atomic Energy Commission contract to develop the hydrogen bomb and operate its plant production. Although Crawford boasted to the press of Du Pont's agreeing to a$1 a year fee, he did not bother to mention that two other companies, G.E. and Sandria Corporation, had done likewise. Nor did he mention that Du Pont was to be one of four big contractors who would together receive an AEC "compensation" of over $2.5 billion yearly.

For the Du Ponts, it was a symbolic contribution to their celebration of the 150th anniversary of their landing on the lucrative American shore.

The Vanderbilts, it is often pointed out, survive as rich people; the Du Ponts surviveas a corporation. This may be changing now, but there is little doubt that the survival ofthe Du Pont family as a cohesive body with a separate identity of its own has been theresult of the unique role it played in American economic history as a company. It shouldbe emphasized, however, that the company has not ruled the family, as is so commonlysuggested; rather, the family has ruled the company. Throughout its history, the mainconcern of the family has always been the family, not the company. In fact, the mainconcern of Du Pont Company was always the Du Pont family. The family was never asobsessed with the company as it has been with itself. The family was the object of itsown determination and, in the early years, sweat. The company was merely a tool, andonce, in 1902, when the company was nearly given up, it was retained only in thefamily's interest. And now, as we shall see, control may well be surrendered, again inthe family's interest. The Du Pont family's profit, it is clear, is its own motivation. On this, Delaware's largest clan has built—and torn down—its greatest customs.

Du Pont history, however, did not occur in a vacuum, divorced from the broadersocial and economic history in which it thrived. Probably the strongest force aiding DuPont's rise was the State (polis).

In 1930 the former U.S. ambassador to Germany, James W. Gerard, named fifty-nine people who ruled America. Significantly, the ambassador omitted President Hoover andall federal and state officials. The real nature of the state, he explained, was "the power behind the throne," the men of industry and finance who had little time to spare to hold apolitical office, but, because of their economic positions, held permanent influence, not the temporary influence of an officeholder. Among those fifty-nine, Gerard named six Du Ponts: Pierre du Pont, Irénée du Pont, Lammot du Pont, Henry F. du Pont, Eugene duPont, Jr., and ***Eugene E. du Pont****.*

Gerard's revelations were not news along the Brandywine. Since E. I. du Pont hadfirst built his gunpowder mill on the banks of that creek, the power of government wasthe keystone of the company's growth. Du Pont's first sale was to the U.S. government,and the 1812 War, the Mexican War, and the Civil War were all timely boosts to DuPont expansion. The Du Ponts had always used political power to protect and furthertheir interests, but for the first ninety years confined this activity, for the most part, to theimmediate area of their economic concern, Delaware.

The organizational problems of the Powder Trust of Henry du Pont (who had literallyconquered Delaware during the Civil War with a Union army) required the direct use ofstate power, and Henry's successor, Eugene du Pont, even had Delaware's constitutionchanged to legally facilitate Du Pont's adjustment to the more efficient form of businessorganization, the corporation. From then on, the Du Ponts fully exploited Delaware'slenient tax laws, often being given direct assistance from local judges.

William du Pont's heirs, for example, saved millions in inheritance taxes in the earlyThirties when Wilmington's federal court ruled that their father's will, made just twoyears before his death at the age of 73, was not made "in contemplation of death."

Alfred I. du Pont, by incorporating his palatial Nemours mansion at $1 million, savedthrough "losses," taxes of $200,000 from 1931 to 1935 alone.

Mrs. Wilhelmina du Pont Ross also incorporated her stables and farms, saving$172,469 in taxes.

Pierre du Pont, Francis V. du Pont, Richard C. du Pont, Paulina du Pont, and Mrs. H.Ethel du Pont all gained large tax savings through personal holding companies.

Most of Lammot du Pont's $75 million estate went to the safe abode of familyfoundations and trusts for his widow and ten children.

Pierre du Pont's $80 million estate was left to his Longwood Foundation, to beadministered by Du Pont relatives in keeping up his flowered dreamworld. The settlement for taxes on this estate carries its own story.

Pierre's Longwood estate, where he had spent weekends and vacations since WorldWar I, was in Pennsylvania. Naturally Harrisburg tried to collect a Pennsylvania residency tax. This, however, would have raised the estate's total tax from $3.8 millionunder Pierre's Delaware citizenship (Delaware itself only asked for $600,000) to between $28 and $41 million. The Du Ponts fought this, insisting Pierre was aDelaware citizen exempt from Pennsylvania's claims. Finally, the state's tax authoritiestook the Du Ponts to the local court in Chester County and got a favorable ruling fromJudge Ernest Harvey in the second week of July 1955. Pennsylvania had the right, thejudge decided, to appeal the granting of ancillary letters of administration in ChesterCounty under which the state could collect on Pierre's property in Pennsylvania. Oneweek later, on July 25, the judge suddenly reversed his decision and said thatPennsylvania had no such right. This, he explained, would give the estate the right toappeal if anything went wrong in the case, "such a close one." Nothing did. Pierre'smoney stayed in the family.

There are other, similar cases. In 1957 the U.S. Internal Revenue Service claimed thatsome Du Ponts owed $452,207 in back taxes. The government settled for $158,908. Theclaims involved Marianna du Pont and her husband Henry H. Silliman, for $70,680,settled for $11,926; Octavia du Pont and her husband, J. Bruce Bredin for $195,585,settled for $98,291; Lammot du Pont Copeland and his wife Pamela for $156,642,settled for $30,953; and the Nemours Corporation for $29,300, settled for $17,738.

In 1962 the Treasury Department's original attempt to collect ordinary income tax onthe family's sale of some of its G.M. stock was foiled by lobbyist Clark' Clifford's andCrawford Greenewalt's visits to more than sixty Congressional and government offices,including those of Treasury Secretary Dillon and Attorney General Robert Kennedy.That year, in the instance already cited, a special bill saved the Du Ponts $100 millionin taxes, and in 1964 a reversal of a Treasury ruling saved them another $2 billion.

1922 - Shootoff

1922-06-23-the-morning-news-wilmington-de-pg-7-eugene-e-dupont-shootoff

Full page : [HN010P][GDrive]

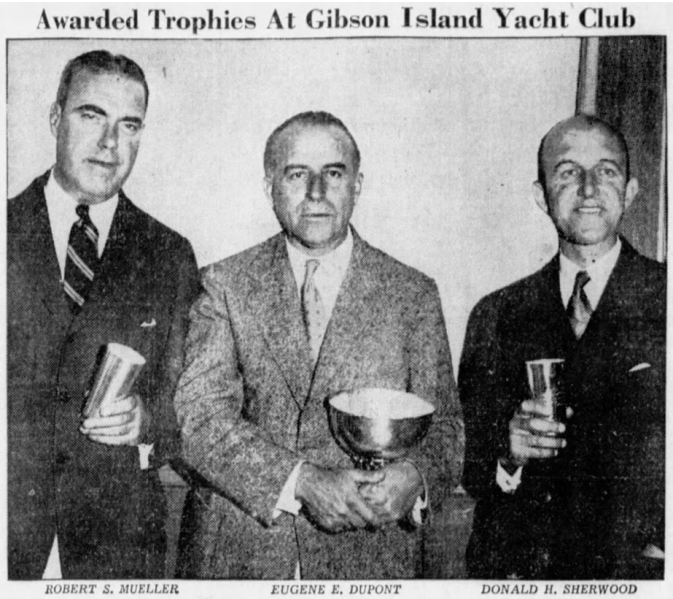
1935 (Feb) - Daughter Phyllis wedding (to Schutt)

1935-02-09-the-morning-news-wilmington-de-pg-6-phyllis-dupont-wedding.jpg

Full page : [HN010O][GDrive]

1935 (Sep) - Gibson Island Yacht Club Race -Eugene second to Robert Swan Mueller I

(See full page in 1935 newspaper at [HN00F6][GDrive]). This is **Robert Swan Mueller I (born 1893)** (on left) with his September 1935 winning trophy for the **Gibson Island** Yacht Club Race, standing next to **Eugene E. du Pont** .



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YACHT RACING PRIZES GIVEN

Skippers In Cedar Point Event Toast Craft At Gibson Island Club

Relaxing after the 100-mile cruising race to Cedar Point and back, skippers and crews of two dozen sailing craft toasted their boats last night at a banquet in the Gibson Island Club while prizes were awarded.

"Post mortems" of how one boat got jammed into the lee of the Eastern Shore, of how another crew sat becalmed and watched the rest of the fleet sail by were held, but soon were forgotten in the pleasures of the banquet board.

Plenty To Talk About

Prizes were not awarded on what might have happened. Skippers who shoved their boats first across the finish line off Baltimore Light got the awards. At that, there was plenty of excuse for talk, as no less than a half-dozen boats were in sight when the first one finished. And that, after a hundred miles of stick and rag, is something.

The boats set sail from Gibson Island Saturday morning and about 6.15 P. M. yesterday Mrs. D. C. Elphinstone's Rangoon, an eight-meter racing sloop, crossed the line first to win the Whiting trophy.

The Whiting trophy is awarded to the first boat to finish, regardless of class or time allowance. Mrs. Elphinstone sailed her own boat.

R. S. Mueller Wins Prize

The trophy in the racing division went to Robert S. Mueller, who put his Quest across the line in a good sailing breeze, which he had managed to carry most of the way.

The L. Corrin Strong cruising cup was won by Eugene E. du Pont, of Wilmington, Del., who brought his High Tide across the finish line a scant ten minutes ahead of J. Leo Flanigan's Gleam, which apparently had victory on its clean-swept decks only to watch, first place fade away when it ran into a calm within sight of the finish line.

However, the cruising division was divided into classes A and B. While the High Tide won Class A, the winner of Class B was the Sea Witch, owned and sailed by Donald H. Sherwood.

Bobby Miller Wins Trophy

As the long-distance racers were preparing for the evening's ceremonies the star boats went out to Baltimore Light and had a race of their own for the Symington Memorial trophy.

Ten stars slithered over a six-mile windward and leeward course in a close contest which was won by Bobby Miller in his Kingfish. After being in the ruck at the start, Miller took advantage of every slant of wind to nose out his brother, Berkeley T. R. (Bucky) Miller, who finished second in the Sole.

Others In Race

Others in the first division of the stars were Marjorie Hugson, in the Grayling, third; Aubrey Pearre, Jr., in the Bluefish, fourth, and Edmund Novak, in the Shark, fifth.

Others who were well up in the Cedar Point race were: Richard H. Randall, in the Loke, who finished third in the racing division; Theodore J. Hoster, in the Salabar, second in Class B of the cruising division; W. L. Henderson, in the Kelpie, third in the same class, and L. M. Balliere, in the Aweigh, third in Class A, behind the High Tide and the Gleam.

[HN00F9][GDrive]

1966 (Dec 17) - E du Pont passes

Full page : [HN00LA][GDrive]

Eugene du Pont, leader in firm's expansion, dies

Eugene E. du Pont, 84, a great-grandson of the founder of the Du Pont Co., died Saturday at "Dogwood," his home in Greenville, after a long illness.

Services will be this afternoon at 2 in Christ (Episocpal) Church Christiana Hundred, Greenville. The family requests flowers be omitted.

Mr. du Pont was a member of the board of directors of the Du Pont Co. for more than half a century and was an important figure in the company's contributions to national defense in two world wars.

Eugene E. du Pont

He resigned as a director of the company in February 1965, after serving since 1906, first on the board of the Du Pont Powder Co., and then on the board of the present company following the reorganization in 1915.

HIS years with the company, starting in 1903 in the sales department, spanned Du Pont's growth from explosives production, which had been the sole activity for the first 100 years, through the program of diversification which made it the world's largest chemical company.

A resolution adopted by the Du Pont board when Mr. du Pont resigned in 1965 read:

"Mr. du Pont has exerted a strong influence on the growth of the company and his guidance has been an important factor in its present success. He was continuously active in the period of greatest diversification.

"His knowledge and interest in the field of explosives was very helpful to the company's contributions to the national defense efforts of two world wars. His support in connection with the expansion into the automotive industry facilitated the success of that venture. His personal interest and research in the associated field of petroleum chemicals provided a strong influence for growth. His intense interest and advice was instrumental in the acquisition of the Remington Arms Co."

MR. du Pont served as a director of Phillips Petroleum Co. from 1917 to 1955. For many years he also was a vice president and a director of the Delaware Motor Sales Co.

Mr. du Pont was born in Louisville, Ky., on Aug. 27, 1882, the son of Dr. Alexis Irenee and Elizabeth Bradford du Pont. He was graduated from Harvard University in 1903 with a bachelor of arts degree.

A life-long sportsman and game conservationist, he was a member of the Wilmington Club, Wilmington Country Club, Du Pont Country Club, Greenville Country Club. Aurora Gun Club, Vicmead Hunt Club, Corinthian Yacht Club, the Harvard Club of Delaware and the Bankers Club of New York.

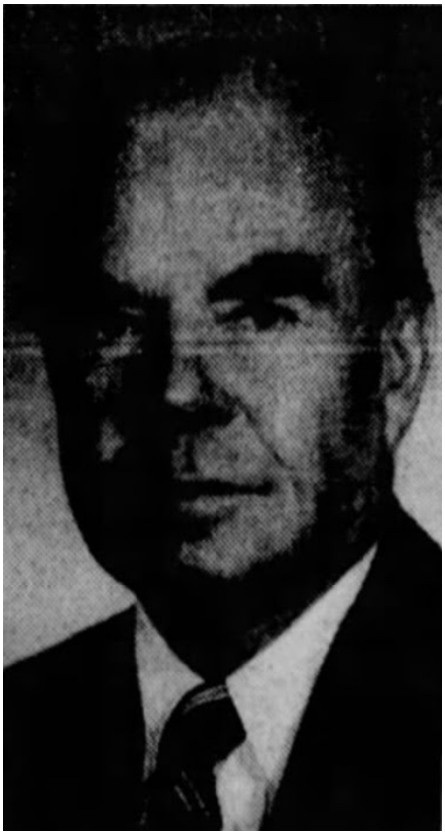
Mr. du Pont's wife, who before their marriage in 1908 was Miss Katedulwe Moxham, died in 1931. He is survived by four daughters, Mrs. George T. Weymouth, Mrs. C. Porter Schutt, Mrs. W. Sam Carpenter III and Mrs. William Glasgow Reynolds, all of Greenville, and 14 grandchildren.

[HN00LB][GDrive]

BITCHUTE @Housatonic YOUTUBE @HousatonicLive ODYSEE @Housatonic BRIGHTEON @Housatonic

Housatonic

Émile Francis du Pont (born 1898)



[HN00MG][GDrive]

[HL002Q][GDrive]

BIRTH 28 May 1898

DEATH 8 Dec 1974 (aged 76)

BURIAL Du Pont de Nemours Cemetery Wilmington, New Castle County, Delaware, USA

1963 (May 25)

Full page : [HN00MI][GDrive]

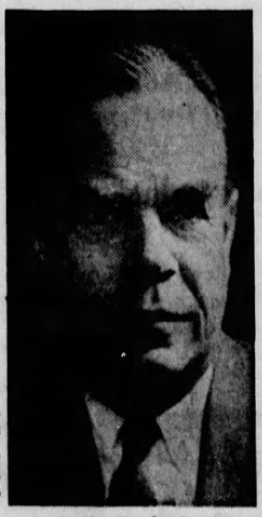
Remains on Du Pont Board

Emile F. du Pont Retiring Friday

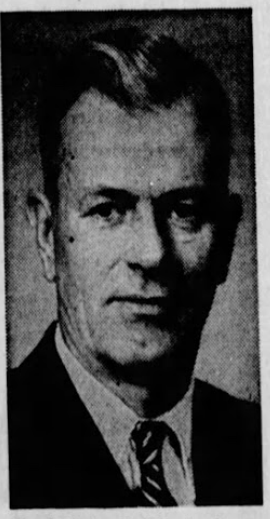
Emile F. du Pont, director of the Du Pont Co.'s employe relations department, retires Friday, but will continue as a member of the company's board of directors and finance committee.

Frederic A. C. Wardenburg, now director of the traffic department, will succeed Du Pont as director of the employe relations department.

A great-great grandson of the founder of the company, Du Pont's career has spanned 40 years of the firm's growth, including many years in production work. As head of the employe relations department, he has directed the activities relating to personnel, training, industrial relations, medical care, and safety and fire protection.



Emile F. du Pont



Frederic A. C. Wardenburg

Safety among employes has been one of his major concerns and he has seen the company's already-low injury rate cut in half during the last 12 years.

He started his career in 1923 as a student operator at the Arlington, N.J., plastics plant. In subsequent years, Du Pont held supervisory positions in the Buffalo, N.Y., rayon plant, worked in cellophane production, and in 1934, came to Wilmington as assistant manager of the personnel division of the service department — a forerunner of the employe relations department.

In 1937, he became manager of the company's first nylon plant at Seaford. The plant was just getting into production. Four years later, Du Pont returned to Wilmington as director of production of the nylon division of the textile fibers department, and in 1944 was named assistant manager of the acetate division.

After rejoining the service department as director of employe relations, he became director of the new employe relations department in 1951. The department had been reorganized to free its management of duties not directly concerned with employe relations.

HE HAS BEEN a member of the board of directors since April 17, 1944, and a member of the finance committee since Aug. 21, 1944. He was appointed chairman of the board of benefits and pensions and a member of the committee on educational aid in 1951.

He is president of the board of trustees of the Eleutherian Mills-Hagley Foundation, a director and former chairman of the board of the National Safety Council and a member of the board of trustees of the council, and a member of the board of directors of the Delaware Trust Co. He was a member of the board of directors of General Motors corp. from March 1955 to December 1959.

Du Pont, whose home is 2203 Grant Avenue, was born in Wilmington, May 20, 1898, the son of the late Francis Irenee and Marianna Rhett du Pont. He was educated at the Kent School, Kent, Conn., the United States Naval Academy, and Yale University.

Wardenburg, 58, started with the Du Pont Co. in 1928 as an engineer. After assignments at several plants for the engineering department, he was transferred to the comany's office in London in 1934. Upon his return to Wilmington in 1937, he was made head of the foreign exchange section of the treasurer's department and later became manager of the banking and foreign exchange section.

He was appointed assistant treasurer of Remington Arms Co., a Du Pont subsidiary, in 1942. In 1944 he was assigned to the company's atomic energy program undertaken for the government. He returned to London in 1945 as manager of the European office.

He came back to Wilmington in 1948 and became director of sales for the pigments department. In 1957 he was appointed director of the advertising department. He was named director of the traffic department in 1960.

Born May 19, 1905, in Denver, he is the son of Frederic A. Wardenburg, a director of the company. He was graduated from Princeton University with a bachelor of science degree in mechanical engineering in 1927. His home is 2601 W. 17th St.

[HN00MJ][GDrive]

1974 (Dec 06)

Full page : [HN00ME][GDrive]

Industrialist, Sportsman

Emile F. du Pont Dead at 76

Emile Francis du Pont, businessman, sportsman and conservationist, died yesterday at his home at 2203 Grant Ave. in Wilmington. He was 76.

Mr. du Pont resigned as a Du Pont Co. director because of failing health on April 8, 1974, after 30 years on the board.

His career in management and as a director spanned 51 years of Du Pont growth and diversification, including many years in production work. As head of the employe relations department, he directed activities relating to personnel, training, industrial relations, medical care and safety and fire protection.

Business associates knew Mr. du Pont as a serious, even stern man, with a propensity for asking penetrating questions. In private, he was an avid sportsman with a seemingly limitless array of interests.

Sailing, fishing and hunting were Mr. du Pont's hobbies, and he pursued them as assiduously as he did his work. In 1959 he pioneered a program of tagging and releasing salt-water game fish in the waters from the Carolinas to Maryland. One day that year, while bringing his new boat from Florida to Hatteras, N.C., he caught three blue marlin, a white marlin and a sailfish. He released them all, raising five red flags to indicate the catch. His action at first was viewed with skepticism, but by 1960 the tagging program was well under way.

Of the many marlin tagged by Mr. du Pont, four have been recaptured and released. One of these was caught the second time by Mr. du Pont himself.

As much at home in a duck blind or a canoe as he was at sea or in the office, Mr. du Pont was a sportsman with the eye of an artist. Painting was a lifelong hobby he pursued more intently in recent years, and many of his watercolors of fish and wildlife decorate the walls of his homes in Wilmington and in Bethany Beach.

He joined the company — founded by his great-great grandfather — in 1923 as a student operator at the Arlington, N.J., plastics plant. Mr. du Pont was transferred to the Buffalo, N.Y., rayon plant in 1925, becoming area supervisor of the cellophane plant there in 1930.

In 1931 he was appointed chief supervisor at the Spruance cellophane plant in Richmond, Va. He remained there until 1934 when he was transferred to Wilmington as assistant manager of the personnel division of the service department, predecessor of the present employe relations department. He became manager of the division a year later.

Mr. du Pont managed the company's first nylon plant in Seaford, a post he assumed in 1938. During his tenure there he, with his cousin, the late Henry B. du Pont, became a prime mover in making the company air-minded. A pilot since 1936, he built an airstrip and a hangar adjacent to the plant. During the construction period this permitted him to commute more frequently to and from Wilmington in his own Fairchild. The airstrip served as a prototype for many other Du Pont plants located in areas not served by commercial airlines.

After 3 years at Seaford, Mr. du Pont returned to Wilmington as director of production for the nylon division of the rayon department. In 1944 he became assistant manager of the acetate division in that department. He returned to the service department in 1945 as director of employe relations and became director of the department in 1951. Shortly afterward, the department was reorganized to free management from duties not directly connected with employe relations, and it was renamed the employe relations department.

Emile F. du Pont

Mr. du Pont was named to the board of directors on April 17, 1944, and served on the finance committee from Aug. 21, 1944 to April 16, 1973. He was chairman of the board of benefits and pensions from 1951 until 1964, and was a member of the committee on educational aid from 1951 until his retirement. In 1964, he was appointed a member of the bonus and salary committee (now the compensation committee).

Mr. du Pont's managerial skills also were in demand outside the company. He was a member of the National Safety Council's board of directors for 20 years, serving as chairman from 1952 to 1955. During these years he was an aggressive advocate of excellence in safety, both within Du Pont and on the council.

One of the projects in which he took great pride was the Eleutherian Mills Hagley Foundation. He served as president of its board of trustees from 1958 until his death. The foundation is most widely known for its Hagley Museum, which is dedicated to the interpretation of American business and technological history and is visited by thousands each year. The museum is located on the original company property along the banks of Brandywine Creek, very near where Mr. du Pont was born and reared.

Mr. du Pont was a senior member of the board of the Episcopal Church School Foundation, and served on the boards of the Delaware Trust Co. and the Du Kane Corp. of St. Charles, Ill. He was a member of the board of directors of General Motors from 1955 to 1959, and served on the board of trustees of Industrial Relations Councillors in New York City.

He was a member of the Wilmington Country Club, the Wilmington Vicmead Club and the St. Anthony Club of New York.

He was born in Wilmington May 20, 1898, the son of the late Francis Irenee and Marianna Rhett du Pont. He was educated at the Kent School, Kent, Conn., the U.S. Naval Academy and Yale University.

Mr. du Pont was married twice. His first marriage, to the former Sarah Townsend of Wilmington, ended in divorce. She died in 1968. In 1951, he married the former Margaret Dick Marvel, also of Wilmington. It was the second marriage for both. She died in 1972.

He is survived by three children by his first marriage, Francis Irenee of Wilmington, Sarah Townsend (Mrs. George F. Cahill, Jr.) of Needham, Mass., and Peter Rhett of New York City; three stepchildren, Jackson Marvel of Darien, Conn., Mrs. Richard P. Sanger of Wilmington and Mrs. Francis B. Adams Jr. of Baltimore; two brothers, Hubert L. and Edmond, both of Wilmington; three sisters, Mrs. Elise Elrick and Mrs. Taleasin Davies Jr. of Wilmington and Mrs. William Hanckle of Charleston, S.C.; and 24 grandchildren.

Funeral services will be Sunday at 2:30 p.m. in Christ Church (Episcopal), Christiana Hundred. Interment will be private.

[HN00MF][GDrive]

NY Times source : [HN00MH][GDrive]

Emile F. du Pont a member for many years of the board of E. I. du pont de Nemours & Co. and director of its employee relations department, died yesterday in Wilmington, Del. His age was 76.

Mr. du Pont served in the personnel post for 12 years before his retirement last April. His careers spanned four decades of the company's growth and included many years in production work.

He joined du Pont, which had teen founded by his great-great-grandfather, in 1923 as a student operator at the Arlington, N. J., plastics plant. In 1931, he was appointed chief supervisor at the Spruance Cellophane plant in Richmond.

Mr. du Pont was the first manager of the company's initial nylon plant in Seaford, Del., a post he assumed in 1938. With his cousin, the late Henry R. du Pont, he became a prime mover in making the company air-minded.

A private pilot since 1936, he built an airstrip and a hangar adjacent to, the plant. The airstrip served as a prototype for many other du Pont plants in areas not served by commercial airlines.

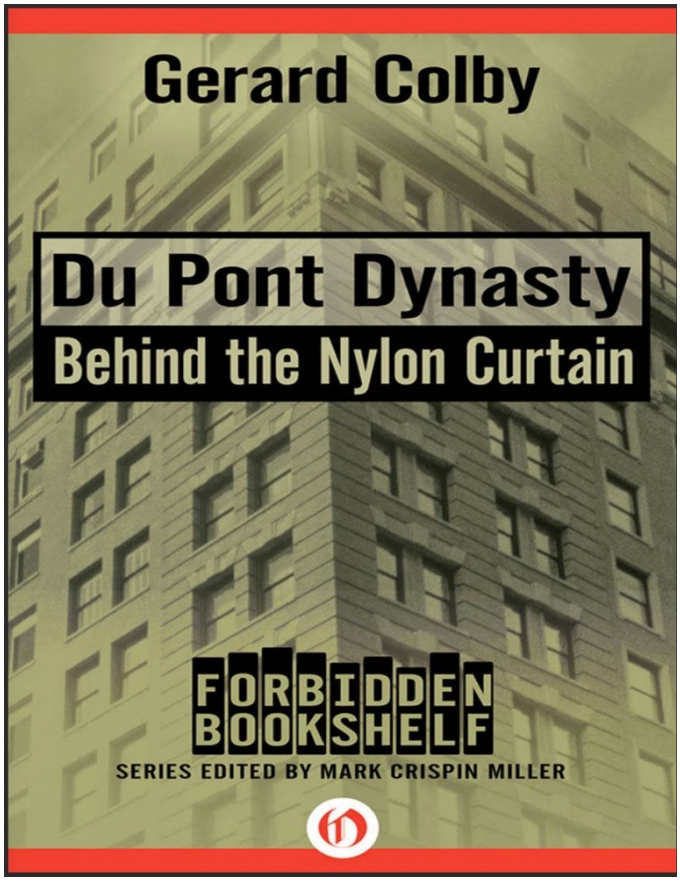
Mr. du Pont was named to the board of directors in 1944, and served on the finance committee from 1944 to 1973. He was chairman of the board of benefits and pensions from 1951 until 1964. He was a member of the committee on educational aid from 1951 until his retirement.

Surviving are 3 children of his first marriage to the former Sarah Townsend, Francis Irénée, Mrs. George F. Cahill Jr., and Peter Rhett; 3 stepchildren, Jackson Marvel, Mrs. Richard F. Sanger and Mrs. Francis B. Adam Jr.; 2 brothers, 3 sisters, and 15 grandchildren.

Mr. du Pont's second wife, the former Margaret Dick Marvel, died in 1972.

ADDITIONAL REFERENCE INFO

The following is from the book "Du Pont Dynasty : Behind the Nylon Curtain" by Gerard Colby. To see the PDF : [HB001R][GDrive]



[HB001S][GDrive]

PAGE 386:

The demands of running such a gargantuan enterprise took its toll of older Du Pont executives during the war, making room for the next generation. In 1940 Lammot handed the presidency over to 52-year-old Walter S. Carpenter, Jr., head of the finance committee, and assumed Pierre's chairmanship. Two years later Charles Copeland and Francis B. Davis, Jr., resigned from the Du Pont board and were replaced by Charles's son, Lammot du Pont Copeland, destined for business tragedy, and Crawford Greenewalt, Irénée's son-in-law. In 1944, the same year Pierre left General Motors, A.Felix du Pont, Sr., was succeeded by Francis I. du Pont's second son, ***Emile [Francis du Pont]****, whose management fortunes had risen with nylon.*

PAGE 409:

Less covert was Du Pont's support of the new oil depreciation allowance. Besides Du Pont's own direct involvement with the oil industry through the production of synthetic rubber and its Ethyl Gasoline Corporation, the family had invested personal funds in Phillips Petroleum, Chanslor-Western Oil, Ardee Oil (in Texas and Montana),and Oil Associates (in Louisiana and Texas). By the 1960's, Lammot du PontCopeland's Delaware Fund would hold huge blocks of stock in Universal Oil, Standard Oil of New Jersey, Royal Dutch Petroleum, Occidental Petroleum, and Gulf Oil; E. I. duPont's New England Fund would be a large stockholder in Mobil and Texaco; and ***Emile F. du Pont's Blue Ridge Mutual Securities in Continental Oil, Atlantic Richfield, Cities Service, and Union Oil of California***

But probably the greatest incentive for Du Pont's production of the film "It Never Rains Oil" was its heavy investment in the automobile industry, particularly General Motors. Sponsored by the leading oil associations, Du Pont's film presented the case forthe depreciation allowance, a curious logic that argues that a business should be paid bythe taxpayer for selling its product on the market. According to the minutes of the National Petroleum Council in 1953, Deputy Petroleum Administrator Joseph La Fortune, on leave as vice-chairman of Gulf's Warren Oil Corporation, "furnished the information as to the money expended by Du Pont for having the film made in Hollywood, its fine possibility as education mediums for use in colleges, high schools,etc., availability and cost to those interested in showing the film.

PAGE 435:

With their G.M. diversification funds, many Du Ponts also invested in new firms utilizing the latest scientific technology, including computers, which worked on military contracts during the Vietnam era. William H. du Pont, the son of William du Pont, Jr., setup Sci-Tek, Inc., a computer-based operation which took in $15,000 in Navy contracts in 1971, $80,000 in 1972.79 ***Emile F. du Pont's Dukane Corporation*** *grossed $20,744 on one Navy contract in 1972 for developing a locater system in jet planes.80 Reynolds and Richard C. du Pont's All-American Engineering raked in $1.6 million in 1972, bringing its Vietnam era (1964–1972) total to $11 million.*

All told, the family's varied corporate interests grossed over 15 billion in war contracts between 1964, the year of the first arms buildup, and 1972. Of the top ten war contractors, three (North American Rockwell, Boeing, and General Motors) represented large investments of the Du Pont family. Of the top forty Pentagon contractors, eight(North American Rockwell, Boeing, General Motors, Newport News Shipbuilding, DuPont, Hercules, and Uniroyal), or one-fifth, were Du Pont interests. Du Pont Company alone reaped over $1 billion in war contracts. One Du Pont enthusiast recently became very flustered at the suggestion of war profiteering by his favorite family. "I challenge anyone to show proof of any money made off this tragic war!

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All these ventures, as well as time itself, helped breach the rifts created in the family by Alfred I. du Pont's famous feud with Pierre S. du Pont. Edmond's father had sided with Alfred against Pierre's allies but soon after reached a truce and a $30 million investment by the family. Now, through Laird, Bissell, & Meeds, Edmond was rubbing shoulders with Garrett Van S. Copeland, older son of Du Pont President Lammot duPont Copeland, Henry Silliman, son-in-law of old Irénée du Pont, Edward New-bold Smith, son-in-law of Henry B. du Pont, and Alfred Bissell, who married the niece of Eugene du Pont, Jr. Through Laird Inc., Edmond was also in touch with George Weymouth, another in-law, Silliman, Smith, and Alfred du Pont Dent, grandson of Alfred I. du Pont.

Assisting along the way also was Edmond's brother ***Emile [Francis du Pont]****, whose sharp mind had propelled him to a vice-presidency and directorship in Du Pont Company.*

Emile [Francis du Pont] *was brought into the family's Blue Ridge Mutual Fund by Eleuthère du Pont, as was Edmond.There, Edmond also joined Donald F. Carpenter and James Q. du Pont in stock speculation, while* ***Emile [Francis du Pont]*** *in 1967 joined* ***Eleuthère and Reynolds du Pont in another fund, Sigma Capital Shares Corporation****. Eleuthère also made Edmond treasurer of his Delaware Chemical Engineering Corporation. These growing ties were also reflected in the Continental American Life Insurance Company, where Eleuthère, as treasurer, put Edmond's knowledge of mutual funds to profitable use. Edmond even served as a director of Continental American for a period with George P. Edmonds, son-in-law of Lammot du Pont, and Francis V. du Pont, son of T. Coleman du Pont. With this economic rise came the social laurels of a directorship in old Henry F. du Pont's Winterthur Corporation and, in 1965, trusteeship of the University of Delaware.*

PAGE 462:

In 1967 F. I. du Pont & Company was generating close to $100 million in income from its own operations, and had become a major stockholder in such corporate giants as A.T. & T. Other Du Ponts, led by Lammot du Pont Copeland and ***Emile F. du Pont****, bythen had invested heavily in F. I. du Pont & Company, and Garrett Van S. Copeland,Lammot's son, and Peter R. du Pont, Emile's son, had even become partners.*

PAGE 554:

In Delaware the Du Ponts have also given to Delaware Technical College. Sponsored by Du Pont Company, this college trains young Delawareans for white-collar jobs in the state's chemical industries, and also trains police for maintaining Du Pont order.Richard P. Sanger, son-in-law of ***Emile F. du Pont****, even serves as chairman of the Advisory Committee on Police Science. In many ways, Delaware Technical is merely a training ground for Du Pont, on a lower level than the University of Delaware. As then Du Pont president Lammot du Pont Copeland once put it in a speech at the university, "I am very sure that you, as a production organization, can turn out a product more perfectly adapted to the needs of the user if you know something about that customer and his needs. I suspect that the incentive to do so will be greater if your knowledge of the customer has led you to respect him and, perhaps, even to like him." Whereupon, Lammot supplied the information on Du Pont's needs; Du Pont money supplied the goodwill.*

PAGE 566:

This diversification of Du Pont family holdings means that majority blocks of stocks in companies are being replaced by minority blocks which are still large and important enough to exercise some measure of control over a company. Direct control is seldom needed if management is doing its job efficiently and turning out fat dividends. Rather than an Irénée du Pont exercising absolute domination, now the family fortune has been passed on to a number of heirs, even as the family's total wealth continues to grow. This splitting up of family stock blocks does not mean that capital no longer tends to accumulate. Just the opposite. It is the very tendency of capital toward accumulation in the form of mergers that is reducing the share held by each individual Du Pont in a company. ***Emile F. du Pont, for example, might well have held 15 percent of Symington-Wayne when he was a director of that company. When Symington-Wayne merged with Dresser Industries, his holding in the new company may have been reduced in half, to perhaps 7.5 percent****. But capital has accumulated; a bigger corporation has been born.These mergers, while reducing controlling stock blocks, actually increase, through the added assets and resource benefits of combination, the Du Pont family's wealth. Thus Du Pont wealth, and the power of their business class as a whole, is not diminishing, but growing.*

PAGE 572:

Mergers removed Du Ponts from the boards of three companies: ***Emile F. du Pont*** *from* ***Symington-Wayne (which merged with Dresser Industries)****, Anthony A. du Pont from Garret Corporation (merged into Signal Companies), Colgate Darden from Newport News Shipbuilding (merged into Tenneco), and A. Felix du Pont, Jr., from Piasecki Helicopter (which became Piasecki Aircraft). The Du Pont family's investment in North American Rockwell appears intact, despite their failure so far to replace Henry B. du Pont on the board after his death in 1970.*

PAGE 582:

Francis I. du Pont II. Son of Emile F. du Pont, he has joined E.I. du Pont's Sigma Investment Fund as a director.

[...]

Peter du Pont. The son of Emile F. du Pont, he is a director of Laird, Inc

PAGE 584:

Richard P. Sanger. Sanger was the executive editor of the News-Journal and directorof Delaware Trust. Predictably, he is also married to a Du Pont, Margaret Marvel,stepdaughter of Emile F. du Pont.

PAGE 592:

The first direction was away from the company that bears their name. Symptomatic of this was the growth of the family's mutual funds. Blue Ridge Mutual Fund, which had$52 million in assets in 1967, had its name changed to Sigma Investment Shares in 1969 by Eleuthère du Pont. Its assets in 1974 were about $72 million. The same held true for Sigma Venture Shares, which Eleuthère began in 1969. Worth $3 million in assets in1971, it had assets of $6.2 million in 1974.Involved in Eleuthère's group were James Q. du Pont, Donald F. Carpenter, ***Emile F. du Pont****, R.M. Layton, W.J. Kitchell, Reynolds du Pont, H.H. Sillman, and Francis I. duPont II.These were some of the common stocks owned by just one of Eleuthère's firms,Sigma Investment Shares:*

BITCHUTE @Housatonic **YOUTUBE** @HousatonicLive **ODYSEE** @Housatonic **BRIGHTEON** @Housatonic

Housatonic

Ethel du Pont (born 1916)

Wikipedia Ethel du Pont

https://www.findagrave.com/memorial/23166465/ethel-warren

Ethel Du Pont Warren

Birth 30 Jan 1916

Wilmington, New Castle County, Delaware, USA

Death 25 May 1965 (aged 49)

Grosse Pointe Farms, Wayne County, Michigan, USA

Father - **Eugene Éleuthère Irénée du Pont (born 1873)**

WIKIPEDIA - https://en.wikipedia.org/wiki/Ethel_du_Pont

FDR III, Ethel du Pont, and FDR at The White House, Christmas 1941

Education	Ethel Walker School Franklin D. Roosevelt Jr.
Spouse(s)	(m. 1937; div. 1949) Benjamin S. Warren, Jr. (m. 1950)
Children	
Parent(s)	▪ Franklin D. Roosevelt III
Relatives	▪ Christopher du Pont Roosevelt ▪ Benjamin S. Warren III ▪ Eugene du Pont, Jr. ▪ Ethel Pyle

Ethel du Pont Roosevelt-Warren (January 30, 1916 – May 25, 1965) was an American heiress and socialite and a member of the prominent du Pont family. She is known for her widely publicized marriage to Franklin D. Roosevelt Jr., son of the 32nd President Franklin D. Roosevelt and Eleanor Roosevelt and her eventual suicide in 1965.[1]

Contents

- 1 Early life
- 2 Personal life
  - 2.1 Death
- 3 References

Early life

Ethel du Pont was born on January 30, 1916 in Wilmington, Delaware, the eldest child of Eugene du Pont, Jr. and Ethel Pyle.[2] She was the granddaughter of Eugène du Pont (1840–1902), the first head of the modern DuPont corporation, who saw the corporation into the 20th century.[3] Her siblings were Aimee du Pont, Nicholas R. du Pont, and Eugene du Pont III.[2]

She was raised at Owl's Nest, the family's estate in Greenville, Delaware,[4] attended Misses Hebb's School in Wilmington and graduated from the Ethel Walker School in Simsbury, Connecticut.[2]

Personal life

On June 30, 1937, she married Franklin Delano Roosevelt, Jr. (1914–1988), third son of sitting President Franklin Delano Roosevelt, Sr. and First Lady Anna Eleanor Roosevelt,[5][4] and grand-nephew of President Theodore Roosevelt.[2] They had two sons:

- Franklin Delano Roosevelt III (born 1938)[6]
- Christopher du Pont Roosevelt (born 1941)[6]

The couple separated and formally divorced in 1949.[7] In December 1950, Ethel du Pont Roosevelt remarried to prominent Detroit lawyer, Benjamin S. Warren, Jr., a Yale College and University of Michigan Law School graduate. Together, they had a son:[8]

- Benjamin S. Warren III (born 1954)[9]

Death

Ethel du Pont was forty-nine years old when she committed suicide on May 25, 1965.[1] She had been under psychiatric care several times in the years preceding her death and spent time at the Silver Hill Foundation, a hospital in New Canaan, Connecticut.[1] Her death took place a few months before her son Christopher's wedding in June 1965 and while her son with Warren, then 10 years old, was away at boarding school. [1] Her family endowed the Harvard Medical School Ethel Dupont-Warren Fellowship Award for research in Psychiatry.[10]

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https://www.newspapers.com/image/374862999/?terms=eugene%2Bdu%2Bpont

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1936 (Nov 15) - miami-oklahoma-daily-news-record-pg-1-clip1-ethel-dupont-f-roosevelt-jr

Full page : [HN010L][GDrive]

Engagement of DuPont Heiress to President's Son Is Announced

ETHEL DU PONT

FRANKLIN D. ROOSEVELT, JR.

[HN010M][GDrive]

Franklin D. Roosevelt, Jr., Will Take Ethel DuPont as Bride in June Wedding

WILMINGTON, Del., Nov. 14—(AP)—Mr. and Mrs. Eugene Du Pont announced tonight the engagement of their daughter, Miss Ethel Du Pont, to Franklin D. Roosevelt, Jr., son of President and Mrs. Roosevelt. The wedding will take place the latter part of June.

Miss Du Pont is the eldest of the four children of Mr. and Mrs. Du Pont of Greenville, Del. Du Pont is a member of the board of the E. I. Du Pont de Nemours & Company. She is a niece of Lammot Du Pont, president of the company; Pierre S. Du Pont, chairman of the board, and Irene Du Pont, a member of the board.

After her early education at the Tower Hill school, Wilmington, Miss Du Pont attended the Ethel Walker school in Simsbury, Conn. Indications of her friendship with young Roosevelt became apparent in 1934 because of his frequent visits to the Walker school while a freshman at Harvard.

She Is Known as Beauty

Miss Du Pont, 21, blonde and of medium height, was selected by the artist, Don Flowers, as the most beautiful and most eligible of the wealthy "bachelor girls" in America. She is an ardent horsewoman and skillful swimmer, and at one time took instructions in flying. Last summer, with her parents and sister, she traveled in Europe.

The friendship between Miss Du Pont and Roosevelt received wide publicity in April, 1934, after he smashed the camera of a newspaper photographer who snapped them among the spectators at a wrestling show in Philadelphia.

Roosevelt attended Miss Du Pont's debut June 27, 1934, at a dinner dance at her home. Legal representatives of the family denied subsequent rumors they were engaged. The following December she was a guest at the White House at a week-end house party given by the President and Mrs. Roosevelt for their sons and friends.

Wooed by Airplane

Roosevelt's enthusiasm in his romance took him on an airplane trip down New York harbor in March, 1936, to meet a ship on which Miss Du Pont was returning from Bermuda, and to ride with her to the ship's pier. During the last year he has attended several social functions with her.

Young Roosevelt is a week-end guest at the Du Pont home.

The family's announcement included mention of his graduation from the Groton school and his membership in the Harvard class of 1937. It listed his clubs as the Fly, Iroquois and Hasty Pudding.

[HN010N][GDrive]

BITCHUTE @Housatonic YOUTUBE @HousatonicLive ODYSEE @Housatonic BRIGHTEON @Housatonic

Housatonic

Dynamac Corporation

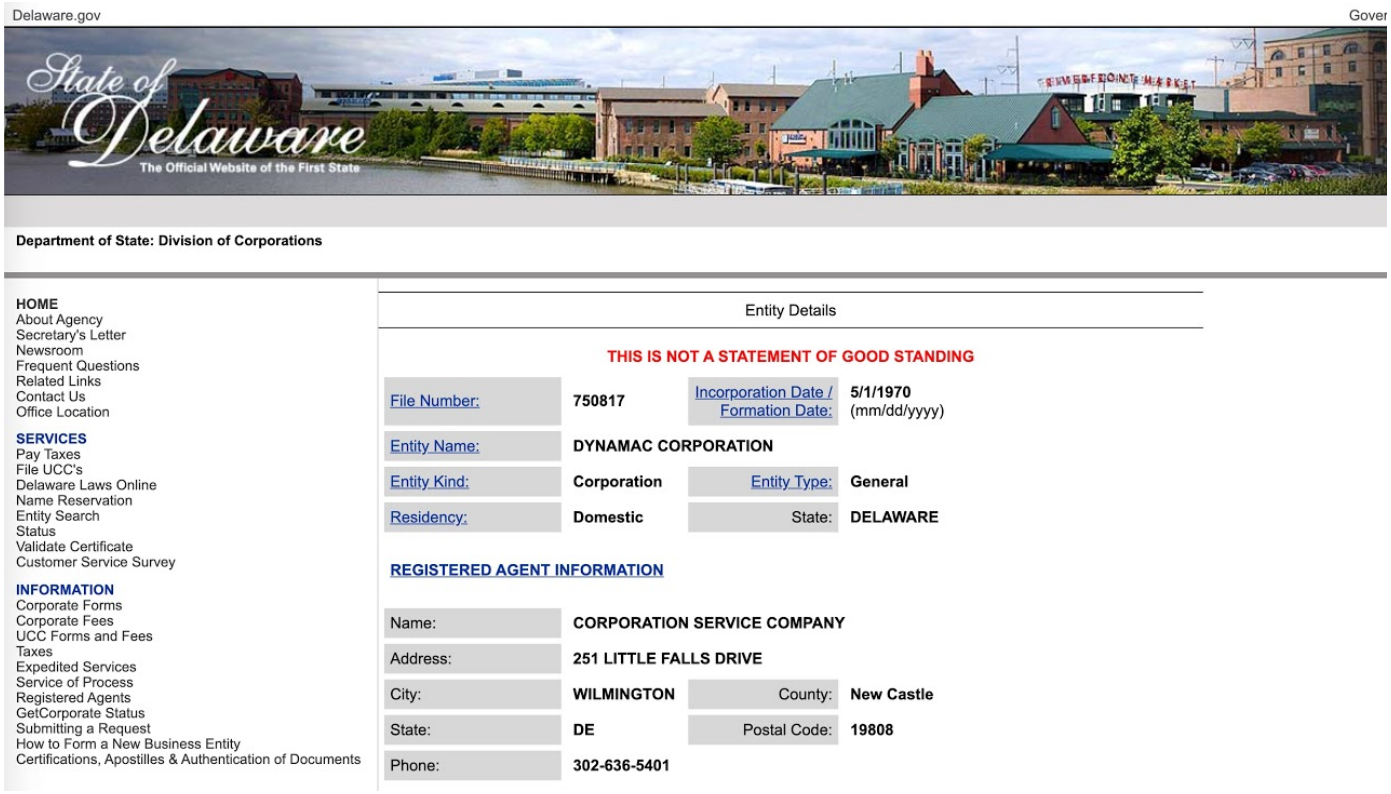
Founded in 1970 by Dr. Donald Malcolm MacArthur (born 1931)

"Enviro Control Inc." has been around since 1962 ..

https://www.newspapers.com/image/13806964/?terms=%22Enviro%2BControl%22

1970 (May 1) - Incorporated

PDF of web page : [HG006E][GDrive]


Delaware.gov Gover

State of Delaware
The Official Website of the First State

Department of State: Division of Corporations

HOME
About Agency
Secretary's Letter
Newsroom
Frequent Questions
Related Links
Contact Us
Office Location

SERVICES
Pay Taxes
File UCC's
Delaware Laws Online
Name Reservation
Entity Search
Status
Validate Certificate
Customer Service Survey

INFORMATION
Corporate Forms
Corporate Fees
UCC Forms and Fees
Taxes
Expedited Services
Service of Process
Registered Agents
GetCorporate Status
Submitting a Request
How to Form a New Business Entity
Certifications, Apostilles & Authentication of Documents

Entity Details

THIS IS NOT A STATEMENT OF GOOD STANDING

File Number:	750817	Incorporation Date / Formation Date:	5/1/1970 (mm/dd/yyyy)
Entity Name:	DYNAMAC CORPORATION		
Entity Kind:	Corporation	Entity Type:	General
Residency:	Domestic	State:	DELAWARE

REGISTERED AGENT INFORMATION

Name:	CORPORATION SERVICE COMPANY		
Address:	251 LITTLE FALLS DRIVE		
City:	WILMINGTON	County:	New Castle
State:	DE	Postal Code:	19808
Phone:	302-636-5401		

[HG006F][GDrive]

1973

https://books.google.com/books?id=WvuIpW_edM8C&pg=PA189&lpg=PA189&dq=%22enviro+control%22+%2B+%22Macarthur%22&source=bl&ots=Ze8xelxCWg&sig=ACfU3U2ccC2vYg4OyI1pvbnfbectkaA6xA&hl=en&sa=X&ved=2ahUKEwi9i7jci_7pAhXvSjABHRwaC58Q6AEwAHoECAgQAQ#v=onepage&q=%22enviro%20control%22%20%2B%20%22Macarthur%22&f=false

INFORMATION SHEET

RESEARCH, DEVELOPMENT OR DEMONSTRATION PROJECT

This sheet describes briefly a contract under Section 5 Federal Water Pollution Control Act, As Amended.

PROJECT NUMBER: 1509 HOE (Contract 68-01-0113)

TITLE OF PROJECT: "Field Detection and Damage Assessment Handbook"

CONTRACTOR:
Enviro Control, Inc.
1250 Connecticut Avenue,N.W.
Washington, D. C. 20036

PROJECT DIRECTOR
Dr. D. M. MacArthur
Enviro Control, Inc.
1250 Connecticut Avenue, N. W.
Washington, D. C. 20036

Project Site: Washington, D. C.

SPECIFIC DATA ABOUT THIS AWARD

Award Date: 6/21/71

Project Cost: $56,297.00

Completion Date: 2/8/72

Federal Cost: $56,297.00

DESCRIPTION OF PROJECT

This project is designed to produce a handbook of procedures and techniques which are technically and legally defensible for assessing damages to the aquatic environment resulting from discharges of oil and hazardous materials. The handbook will serve as a model for developing State response and contingency planning programs. Standardized observations, testing and reporting will result from State and local programs adopting similar damage assessment techniques.

PROJECT OFFICER

Dr. C. H. Thompson, Chief
Hazardous Material Spills
Division of Oil & Hazardous Materials
Washington, D. C. 20460

189

EPA Hq Form 5330-2 (6-72)

1979 (June 18) - First reference in any newspaper or magazine (that we found)

Dynamac Corp in Rockville MD ; Full newspaper page : [HN012P][GDrive]

Bonna Sue Hicks

Hicks, Loverock

Mr and Mrs James Hicks of Thurmont are pleased to announce the engagement of their daughter, Bonna Sue, to Bruce C. Loverock, son of Mr. and Mrs Raymond Loverock of Syracuse, N.Y

The bride-to-be is a 1976 graduate of Catoctin High School and a recent graduate of Hood College. She is presently employed as a lifeguard at the Fort Detrick Swimming Pool.

Her fiance is a 1976 graduate of Syracuse University. He is employed as a biologist at Dynamac Corporation in Rockville.

A July wedding is planned.

1979-06-18-frederick-news-post-pg-23-clip-sue-hicks

[HN012Q][GDrive]

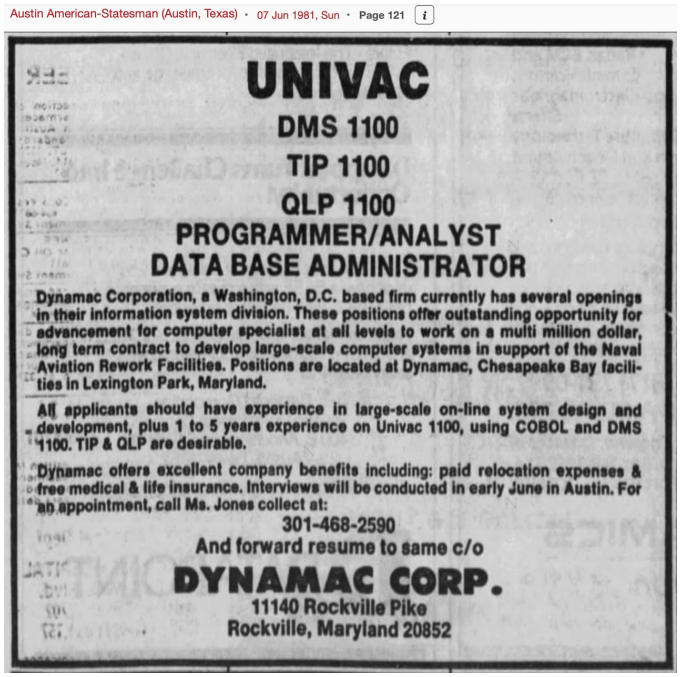
1980 (Oct 05)

Full newspaper page : [HN012N][GDrive]

[HN012O][GDrive]

1981 (June 07)

Full newspaper page : [HN012L][GDrive]



[HN012M][GDrive]

1982

https://www.newspapers.com/image/164388363/?terms=dynamac

1982 - Rocky Flats Research Center

PDF Source (with added OCR) - [HC003Q][GDrive]

CONTROL TECHNOLOGY ASSESSMENT for COAL GASIFICATION AND LIQUEFACTION PROCESSES

Tosco Corporation , Rocky Flats Research Center

TOSCOAL Coal Pyrolysis Process

Golden, Colorado

Report for the Site Visit of September 1981

Contract No. 210-78-0084

Apri 1 1982

Submitted to:

Phillip A. Froehlich, Project o~ficer

National Institute for Occupational

Safety and Health

Division of Physical Sciences and Engineering

Robert A. Taft Laboratories

4676 Columbia Parkway

Cincinnati, Ohio 45226

Submitted by:

Donato R. Telesca, Manager

Engineering Department

DynamacC orporation

Enviro Control Division

11140 Rockville Pike

· Rockville, -Maryland 20852

FOREWORD

On September 21, 1981, a visit was made to the Tosco Corporation Rocky Flats Research Center 1ocated·near Golden, Colorado. The purpose of the visit was to .discuss the applicable technology for controlling worker exposure to potentially hazardous chemical and physical agents associated with the TOSCOACLo al Pyrolysis Process. The meeting was attended by the following persons:

- Tosco Corpora ion
- Robert Hall, Vice President, Resources, Golden
- Merril Coomes, Manager, Environmental Health, Los Angeles
- Jerry Chiaramonte, Managing Engineer, Golden
- John Staton, Managing Engineer, Golden
- Michael Brisco, Chemical Engineer, Golden
- Raj Sharma, Chemical Engineer, Golden
- Gerald Faudel, Environmental Control Analyst, Golden
- DynamacC orporation
- Donato Telesca, Program Manager
- Jan Scopel, Chemical Engineer
- Russell Tanita, Industrial Hygienist

Info on "Donato R. Telesca" -

https://www.reedfuneralhome.com/obituary/Donato-R.-Telesca/Canton-OH/125024

October 12, 1918 - May 4, 2004

Born in Dunmore, PA

Resided in Canton, O

Donato R. Telesca, age 85, a longtime resident of Towson, Maryland and more recently of Canton, passed away Tuesday morning at the Canton Regency following a courageous battle with cancer and Parkinson's Disease. He joins his beloved wife, Ruby Telesca (Dancy) of 53 years, who preceded him to be with the Lord. He was born on Oct. 12, 1918 in Dunmore, PA and was graduated in 1936 from Dunmore High School. He received his degree in chemical engineering from Massachusetts Institute of Technology in 1948. His education was interrupted when he was called to duty during World War II and served with the Army Infantry Division. **In 1954, he received a degree in Business Administraton from Rutgers University. He was employed by the W.R. Grace Company until 1973 and then by Enviro Control until his retirement.** Don was always greatly admired and loved by his family. He is survived by his daughter and son-in-law, Donna and Dr. Alexis Sayoc of North Canton; son and daughter-in-law, Robert and Jamie Telesca of Las Vegas, NV; **grandchildren, Lisa Sayoc M.D., Jeffrey and Irene Sayoc, Suzanne Sayoc,** Bonnie and Keith Combs, Robyn Layfield and Jessica Telesca. He was a great-grandfather to Justin and Alex Cambs, Andre Breanna, Grant Sayoc, Haley Layfield and David Bonham. He was the eldest of five children of Joseph and Bernetta Telesca who preceded him. He leaves a brother, Francis Telesca of Miami, FL and sisters, Carmela Fazio of California, Vita Heineman of Rockville, MD and Helen Hamilton of Prescott, AZ. Funeral services will be conducted at 8 p.m. Thursday in the Reed Funeral Home with Rev. Fr. Joseph Zamary officiating. Visitation will be from 6p.m. to the time of services. An additional visitation will be Friday evening at the Ruck Funeral Home (410-426-1517), Baltimore, MD. Burial will be Saturday morning at Delaney Cemetery, Cockeyeville, MD.

1983 (Jan 13) - kissinger? Dynamac?

Full newspaper page : [HN012J][GDrive]

The Philadelphia Inquirer (Philadelphia, Penns... • 13 Jan 1983, Thu • Page 122

Wedding

The wedding of **Sally Kissinger** and **Robert F. Fetterman** was Nov. 20 at Bethany Evangelical Lutheran Church, Reading.

The bride is the daughter of Mr. and Mrs. Charles A. Kissinger of Reading. She is a graduate of Mount Penn High School, Reading, and Bloomsburg State College. She is employed as a speech pathologist at Therapy Inc., Lexington Park, Md.

The groom is the son of Mr. and Mrs. Robert E. Fetterman of Flourtown. He is a graduate of Springfield High School and Bloomsburg State College. He is a computer specialist for Dynamac Corp., Lexington Park, Md.

The matron of honor was Karen A. Nicholas, sister of the bride. Attendants were Amy O'Neill, a cousin of the bride, and Cynthia Ziegler, Adrienne Cardinal and Virginia Bleecher, friends of the bride.

The best man was James G. Fetterman, brother of the groom. Ushers were Donald Engle, Matthew Miller, Craig Holmes and Edward Kelly, friends of the groom.

The couple is living in Hollywood, Md.

[HN012K][GDrive]

1983 (Jan) - Federal Register

See **"Federal Register, Volume 48, Issues 12-16 : Office of the Federal Register, National Archives and Records Service, General Services Administration, Jan 18, 1983"** : Source : [HG006L][GDrive]

All interested parties and Staff will be permitted to attend.

Kenneth F. Plumb,

Secretary.

[FR Doc. 83-1500 Filed 1-19-83; 8:45 am]

BILLING CODE 6717-01-M

ENVIRONMENTAL PROTECTION AGENCY

[TSH-FRL 2287-5; OPTS-140005]

Captial Systems Group and Dynamac, Inc., Transfer of Data to Contractor

AGENCY: Environmental Protection Agency (EPA).

ACTION: Notice.

SUMMARY: EPA will transfer to its contractor and subcontractor information submitted by manufacturers, processors, and importers of chemical substances recommended for consideration by the Interagency Testing Committee under section 4 of the Toxic Substances Control Act (TSCA). Some of this information may be claimed to be confidential. Capital Systems Group (CSG) of Kensington, Maryland, and its subcontractor, Dynamac, Incorporated, of Rockville, Maryland, will review and analyze this information for the purpose of developing technical support documents concerned with environmental and health effects of these chemical substances and to identify exposure situations.

DATE: The transfer of data submitted to EPA and claimed to be confidential will occur no sooner than 10 working days after publication of this notice in the Federal Register.

FOR FURTHER INFORMATION CONTACT: Chris C. Tirpak, Acting Director, Industry Assistance Office (TS-799), Office of Toxic Substances, Environmental Protection Agency, Rm. E-511, 401 M St. SW., Washington, D.C. 20460, Toll free: (800-424-9065). In Washington, D.C.: (202-554-1404). Outside the USA: (Operator-202-544-1404).

SUPPLEMENTARY INFORMATION: Under section 4 of the Toxic Substances Control Act (TSCA), 15 U.S.C. 2603, EPA is authorized to promulgate regulations requiring testing of chemical substances and mixtures in order to develop data relevant to determining the risks that such chemicals may present to health or the environment. To accomplish this, EPA will need to use production data and exposure information submitted by manufacturers, processors, and importers of chemical substances recommended for consideration by the Interagency Testing Committee under section 4. Some of these submissions may be claimed confidential. EPA has selected Capital Systems Group of Kensington, Maryland, and its subcontractor, Dynamac, Inc., of Rockville, Maryland, to provide outside assistance in performing analyses of these submissions for EPA's use in its evaluation of these chemical substances (Contract No. 68-01-6530). CSG and Dynamac, Inc., will review and analyze the information for the purpose of developing technical support documents concerned with environmental and health effects of the substances and to identify possible exposure situations and determine the magnitude of such exposure.

Pursuant to 40 CFR 2.306(j), EPA has determined that it will need to disclose confidential business information to CSG and its subcontractor, Dynamac, inc. EPA is publishing this notice to inform TSCA submitters that CSG and Dynamac, Inc., will have access to confidential business information from EPA.

Captial Systems Group and Dynamac, Inc., are legally required under the terms of their contract and subcontract to safeguard the confidential business information they receive from any unauthorized disclosure. Any reports they prepare using this information will also be treated as confidential. All confidential business information will be returned to EPA when CSG and Dynamac, Inc., have completed their work.

Under the EPA manual "Contractor Requirements for the Control and Security of TSCA Confidential Business Information," CSG and Dynamac, Inc., have been authorized to have access to this information. EPA has approved CSG's security plan and has conducted the required inspection of the CSG facilities and found them to be in compliance with the provisions of the manual. No confidential business information will be transferred to Dynamac, Inc.'s, facilities under this contract and subcontract.

CSG and Dynamac, Inc., are required to treat all confidential business information in accordance with the requirements of the "TSCA Confidential Business Information Security Manual" and the Contractor Requirements manual. Their personnel will be required to sign a nondisclosure agreement before they are permitted access to such information.

Dated: December 27, 1982.

Don R. Clay,

Director, Office of Toxic Substances.

[FR Doc. 83-1500 Filed 1-19-83; 8:45 am]

BILLING CODE 6560-50-M

[A-6-FRL 2287-4]

Final Agency Action on a PSD Permit for Endevco, Inc.

Notice is hereby given that on July 6, 1982, Region 6 of the Environmental Protection Agency (EPA) issued a Prevention of Significant Deterioration (PSD) permit, Number PSD-AR-386, to Endevco, Incorporated for approval to modify its existing natural gas sweetening plant located 8 miles northeast of Fouke, Miller County, Arkansas, pursuant to 40 CFR 52.21. On July 23 and August 5, 1982, Mr. John A. Buckley, Jr., Attorney at Law, petitioned the Administrator on behalf of several landowners and residents in the vicinity of the plant for review of the PSD permit.

Because a petition for review was filed with the Administrator, the issuance of the permit was no longer a final agency action and the PSD permit for Endevco was not effective. *See* 40 CFR 124.15(b)(2). The petition for review was denied by the Administrator on October 22, 1982. Pursuant to 40 CFR 124.19(f)(1), a final permit decision on PSD-AR-386 was issued by Region 6 on November 23, 1982.

Under Section 307(b)(1) of the Clean Air Act, judicial review of PSD-AR-386 is available only by the filing of a petition for review in the United States Court of Appeals for the Eighth Circuit within 60 days of today. Under Section 307(b)(2) of the Clean Air Act, the requirements which are the subject of today's notice may not be challenged later in civil or criminal proceedings brought by EPA to enforce these requirements.

Copies of all of the materials concerning PSD-AR-386 are available for public inspection upon request at the following location: Environmental Protection Agency, Region 6, Air and Waste Management Division, Air Branch, First International Building, 1201 Elm Street, Dallas, Texas 75270.

Frances E. Phillips,

Acting Regional Administrator, Region 6.

January 6, 1983.

[FR Doc. 83-1561 Filed 1-19-83; 8:45 am]

BILLING CODE 6560-50-M

[HG006M][GDrive]

1981 - 1983 Project for NATO ?

LinkedIN Source (who mentioned it on job history) - [HL004K][GDrive]

Technical Writer/Editor

DynAMac Corporation (Formerly ENVIRO Control) - Rockville, MD

1981 – 1983 (2 years)

Project Manager and Lead writer/Editor for Training Portion of Proposal to U.S. Navy. (DOD Secret Clearance)

Task was (1) to develop software (Univac Mainframe) for airplane mechanics to track parts and work needed on NATO airplanes to facilitate movement between speciality hangers and eliminate lost time when parts were back ordered and (2) develop training for these new users plus a Train-the-Trainer version of the course.

Project Manager, Development of New User Training and Train-the-Trainer for airplane mechanics to track maintenance and repair on NATO aircraft.

Brought contract "in" under budget and ahead of schedule.

Contract earned company so much it became ineligible to bid on another U.S. Government Small Business Set Aside contract.

Left during resultant RIF and accepted position with ILS firm planning to bid on ongoing work.

1983 (March 28)

Full newspaper page : [HN012H][GDrive]

Businesses Eligible For Free Evaluation

Employers in Pittsburgh and Western Pennsylvania should take advantage of a free on-site job safety and health consultation service, suggests Stanley Elliott, area director in Pittsburgh for the U.S. Labor Department's Occupational Safety and Health Administration (OSHA).

Elliott says that employers interested in obtaining advice on workplace hazards may contact the Dynamac Corporation's Enviro Control Division by dialing toll free 1-800-382-1241. Dynamac is the contractor carrying out consultations in Pennsylvania.

"There are several benefits for employers who use this no-cost expert assistance," Elliott explains.

Number one, they can find and correct problems in their workplaces before hazards result in accidents.

Two, there are no penalties in the consultation program. It is completely separate from OSHA's enforcement activity.

Three, the program gives priority to small companies in high-hazard industries. This is a help to small firms without the resources to have safety and health professionals on their payrolls.

Finally, the employer can request advice on either an entire plant or on specific operations. The consultant will suggest general approaches or options for solving safety and health problems and identify kinds of help available.

The Enviro Control Division of Dynamac Corp., Rockville, Md., has been awarded a one-year, $213,000 contract by OSHA to provide free consultation services in Pennsylvania and New Hampshire.

During fiscal year 1983, some 300 employers in the two states are expected to participate in the consultation program.

Before the consultant visits their worksite, employers who seek a consultation commit themselves to correct any serious job and health hazards that may be found. In rare instances, when employers fail to follow through on this commitment, the consultant is obliged to report uncorrected hazards to OSHA.

Businesses may also contact the consultants by writing to Dynamac Corp., P.O. Box 1862, Harrisburg, Pa. 17105.

1983-03-28-the-evening-review-east-liverpool-pg-8-clip-dynamac

[HN012I][GDrive]

1983 (May 15)

https://www.newspapers.com/image/146384179/?terms=Dynamac%2Bsubsidiary

1983 (July 29)

Full newspaper page : [HN012F][GDrive]

Multi-agency workshop on Klamath slated

By RONNIE M. PIERCE
Times-Standard
correspondent

EUREKA — This week in an intensive five-day workshop, representatives of 11 state and federal agencies grappled over the language of a preliminary draft status evaluation report on the anadromous fishery resources of the Klamath basin.

CH 2 M Hill — a private consulting firm contracted by the Bureau of Indian Affairs for $500,000 to develop a "Klamath River Basin Fisheries Resource Plan" — called the agencies together for review and comment on the first draft report of the project.

The preliminary evaluation report under discussion provides "a historical perspective for anadromous fish management efforts, population strengths, habitat availability, and hatchery programs." Dynamac, a Denver firm working on a sub-contract to CH 2 M Hill, spent several months on a literature search of published and unpublished documents about the Klamath River system.

"This material is to be the data base for the final resource plan and recommendation, so we have to make sure that all the data is updated and correct," Jean Edwards, BIA project manager of the plan preparation, said. "We recognize that it would take a great deal of time, so we scheduled the whole week. Basically, we're going through it page by page."

Paul Hubell, a research supervisor for the California Department of Fish and Game, said the BIA is striving to get a document that people will endorse and accept. "This is the way to do it," he said. "It's essential to get input from all the involved agencies at the ground-floor level."

Zeke Grader, of the Pacific Coast Federation of Fishermen's Associations, spoke for commercial salmon trollers and expressed concern about a lack of user-group representation on the review committee. "Without the user group input and expertise you (CH 2 M Hill) will have a real credibility problem," Grader said.

John Bushman, special assistant to the director of BIA's Office of Trust Responsibilities in Washington, also attended Wednesday's meeting. He agreed that the user-group involvement would enhance the review process and opened a seat on the committee for a PCFFA representative. Bushman also said he would look into getting a technical representative from the sport fishing community.

"I think if we all work cooperatively we can get things done that are necessary to protect and enhance the resource," Bushman said. "We've got to find a way to resolve some of these conflicts."

After this week's comments and corrections have been incorporated into the first portion of the plan, it will be redistributed to agencies and made available for public comment. The rewrite will take one to two months. Work will then begin on the next phase of the project, a draft "Action Plan" which will focus on specific recommendations for actions and programs to rebuild the Klamath system fisheries resources.

A series of public hearings on that draft action plan is tentatively scheduled for March, 1984.

1983-07-29-the-times-standard-eureka-california-pg-5-clip-klamath

[HN012G][GDrive]

1984 (March)

https://www.newspapers.com/image/400572972/?terms=Dynamac%2Bsubsidiary

1984 (June 9) - A "Anne Heinowski" is at Dynamac

https://newspaperarchive.com/hillsdale-daily-news-jun-09-1984-p-1/

1985 (Jan 20)

Full newspaper page : [HN012R][GDrive]

HAZARDOUS WASTE AND ENVIRONMENTAL SCIENTIST/ENGINEERS

Dynamac Corporation is an environmental and Engineering research firm with corporate headquarters in Rockville, Maryland.

Dynamac Corporation has immediate requirements in the local area and at its headquarters for environmental scientists/Engineers with hazardous waste experience or training. Applicants are required to have the following:

- BS/MS Degree in Environmental Science/Engineering
- Operational knowledge of RCRA-Hazardous waste generator and storage facility requirements.
- Strong written and oral communication skills.
- Ability to work with minimal supervision.
- Knowledge of health and safety requirements.

A knowledge of military industrial operations is desirable.

To apply please send resume in confidence to:

DYNAMAC CORPORATION
Personnel Department
11140 Rockville Pike
Rockville, MD 20852

1985-01-20-alamogordo-daily-news-new-mexico-pg-7-b-clip-dynamac

[HN012S][GDrive]

1985 (Nov 27)

Full newspaper page : [HN012T][GDrive]

Retiring Eielson colonel knew military his destiny

LEONIE VINK
Correspondent

EIELSON AIR FORCE BASE—Col. Miroslav F. Blazek, deputy commander for maintenance for the 343rd Tactical Fighter Wing, has traveled a long road from Czechoslovakia to Eielson Air Force Base.

Blazek, the senior ranking colonel at Eielson who is retiring soon after 25 years in the Air Force, was born in Prague in 1938 and escaped from behind the Iron Curtain in 1949 following the communist takeover of his country.

"My family was one of the oldest families in the country, descendants from the Hapsburg empire," said Blazek. "Over the years my family on both my father's and my mother's side had built up a great fortune and founded corporations. Thus we were a great target when the communist regime took over."

His father was arrested and put in jail several times. "One day, my mother had papers forged to get dad out of jail for a period of 24 hours. They escaped, but my sister and me, then 11 and 9 years old, had to stay behind."

It was not until two years later that they escaped as well.

As a refugee, Blazek traveled in Germany, France, and Africa. He was reunited with his family and after five long years of waiting, they were permitted to emigrate to the United States in 1955. The Blazeks settled in Elizabeth, N. J. and young Blazek graduated there from Thomas Jefferson High School.

Blazek received a graduate degree in aeronautical engineering and joined the Air Force through the Air Force Reserve Officer's Training Corps

COL. MIROSLAV F. BLAZEK

program at Texas A & M University in August 1960.

"I went to that particular university because it was the only place that would admit people who did not have American citizenship. I picked a military career for a number of reasons. First of all, when I was born, an uncle stood over my cradle and predicted that I would become a soldier. He was killed in a concentration camp and it was important to me, although I can hardly remember him, to indeed become part of a military organization."

Blazek said he always wanted to fly and he also wanted to be like his father, who was an engineer. "On the other hand I did not really want to give up playing tennis as a professional and, since my mother was a concert pianist, also wanted to major in music. But I settled for the military career and engineering. It was a good way to return some of my gratitude to the country that had welcomed us with open arms."

By-passing maintenance officers school, he was assigned to the 4510th Combat Crew Training Wing at Luke Air Force Base in Arizona. He was also stationed in the Philippines, Virginia, Vietnam, Japan, Hawaii, Florida and Ohio.

Blazek received a graduate degree in systems management from the University of Southern California in 1975 and did postgraduate work in microengineering with the Massachusetts Institute of Technology in 1980. He graduated from the Air War College in 1982.

Blazek's military decorations include the Bronze Star, Meritorious Service Medal (four times), Air Force Commendation Medal (four times), Combat Readiness Medal, Vietnam Service Medal with five campaign stars, Humanitarian Service Medal, Republic of Vietnam Gallantry Cross with palm.

After his retirement, Blazek plans to work for the Dynamac Corporation, setting up a new office for the company's defense systems branch in Dayton, Ohio.

Although he is looking forward to starting a new career, Blazek thinks he might have stayed in the military under different circumstances. "I am constantly amazed how the system takes care of our own military people. I would have elected not to retire if they had indicated that they needed me. The Air Force has the idea that the higher you get in the ranking system, the less support you need from the leaders. There could not be a greater fault than in thinking that."

1985-11-27-fairbanks-daily-news-miner-pg-6-clip-colonel

[HN012U][GDrive]

1987 (April)

ENVIRONMENTAL SCIENTIST

"AFRICA"

Dynamac International, Inc. is headquartered in Rockville, Md. and provides scientific, engineering and environmental research services to both government and industry. Dynamac has employment opportunities for individuals who are trained and experienced in the following areas:

- PhD in ecology or environmental science with some post doctoral experience
- BS or MS in the biological sciences and 2-3 yrs. related exp. Experience in the preparation of Environmental Impact Statements is considered a plus

The successful applicants for these positions will be required to spend 3 to 4 months in East, West, or South Africa, where they will be involved in examining the environmental impact of the application of field pesticides.

Dynamac offers competitive salaries and a fully paid employee benefits pkg. To apply, please send resume in confidence to:

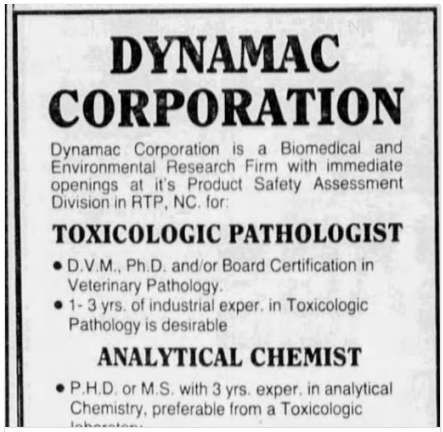
DYNAMAC CORP.
PERSONNEL DEPT. D123
11140 ROCKVILLE PIKE
ROCKVILLE, MD. 20852
E.O.E. M/F/V/H

64046

Dynamac Corp. - Newspapers.com

Clipping found in The Baltimore Sun in Baltimore, Maryland on Apr 5, 1987. Dynamac Corp.

1987 (May 31)



DYNAMAC CORPORATION

Dynamac Corporation is a Biomedical and Environmental Research Firm with immediate openings at it's Product Safety Assessment Division in RTP, NC. for:

TOXICOLOGIC PATHOLOGIST

- D.V.M., Ph.D. and/or Board Certification in Veterinary Pathology.
- 1- 3 yrs. of industrial exper. in Toxicologic Pathology is desirable

ANALYTICAL CHEMIST

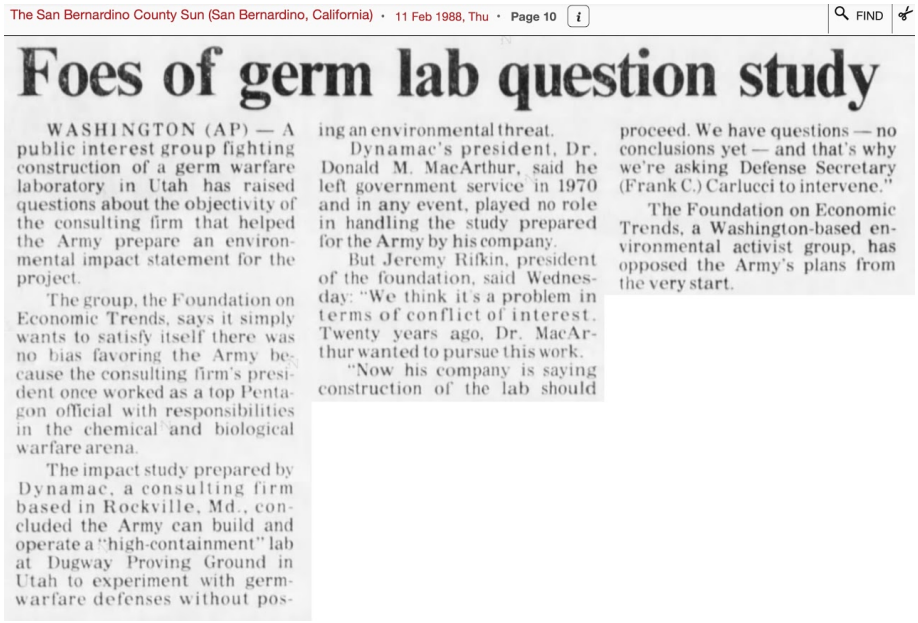
- P.H.D. or M.S. with 3 yrs. exper. in analytical Chemistry, preferable from a Toxicologic

Dynamic Corp. - Newspapers.com

Clipping found in The News and Observer in Raleigh, North Carolina on May 31, 1987. Dynamic Corp.

1988 (Feb 11)

Full newspaper page : [HN012V][GDrive]



The San Bernardino County Sun (San Bernardino, California) · 11 Feb 1988, Thu · Page 10

Foes of germ lab question study

WASHINGTON (AP) — A public interest group fighting construction of a germ warfare laboratory in Utah has raised questions about the objectivity of the consulting firm that helped the Army prepare an environmental impact statement for the project.

The group, the Foundation on Economic Trends, says it simply wants to satisfy itself there was no bias favoring the Army because the consulting firm's president once worked as a top Pentagon official with responsibilities in the chemical and biological warfare arena.

The impact study prepared by Dynamac, a consulting firm based in Rockville, Md., concluded the Army can build and operate a "high-containment" lab at Dugway Proving Ground in Utah to experiment with germ-warfare defenses without posing an environmental threat.

Dynamac's president, Dr. Donald M. MacArthur, said he left government service in 1970 and in any event, played no role in handling the study prepared for the Army by his company.

But Jeremy Rifkin, president of the foundation, said Wednesday: "We think it's a problem in terms of conflict of interest. Twenty years ago, Dr. MacArthur wanted to pursue this work.

"Now his company is saying construction of the lab should proceed. We have questions — no conclusions yet — and that's why we're asking Defense Secretary (Frank C.) Carlucci to intervene."

The Foundation on Economic Trends, a Washington-based environmental activist group, has opposed the Army's plans from the very start.

[HN012W][GDrive]

1988 (May 5)

Full newspaper page : [HN012X][GDrive]

Opponents question study on proposed warfare lab

By JOAN LOWY
Scripps Howard News Service

WASHINGTON — Opponents of an Army plan to build a new laboratory in Utah capable of testing against biological warfare agents that have no cure Tuesday attacked the objectivity of an environmental study of the project.

Jeremy Rifkin, head of a watchdog group on biotechnology and genetic engineering, told a joint hearing of three House committees that a draft environmental study of the plan proposed for the Dugway Proving Ground, prepared for the Army by a private corporation, is "suspect."

Mr. Rifkin questioned the report because the president of the company is a former Defense Department official who has advocated the testing of genetically-engineered biological warfare agents.

The environmental study was prepared by Dynamac Corp. of Rockville, Md. Dynamac's president is Donald MacArthur, a former deputy director of research and technology for the Pentagon.

In 1969, Mr. MacArthur told Congress the potential to "produce a synthetic biological agent that does not naturally exist and for which no natural immunity could have been acquired." He later submitted to Congress a report suggesting that research into the area was necessary to defend against an enemy who might use such a weapon.

Mr. MacArthur was unavailable for comment Tuesday

Dynamac's draft environmental study was submitted by the Army to the Environmental Protection Agency's Denver regional office in February

Richard Sanderson, EPA's director of federal activities, told members of the House interior, foreign affairs and armed services committees Tuesday the EPA believes the new laboratory at Dugway "can be adequate from an environmental perspective" based on the study.

But Mr. Rifkin maintained that Mr. MacArthur's "veracity in developing this (study) is now questionable because of the research he did 20 years ago."

Mr. Rifkin said his organization, the Foundation on Economic Trends, will challenge the environmental study in court and has petitioned Defense Secretary Frank Carlucci to reject the study.

Mr. Rifkin's group filed a lawsuit in federal court in 1984 against the plan to build the new laboratory at Dugway and won an injunction in May 1985 preventing construction until an environmental study had been conducted.

A list of 129 laboratories, universities and other facilities where research is conducted for the Pentagon's Biological Defense Program was released by Mr. Rifkin at the hearing.

His group intends to try to generate local opposition to each of the facilities conducting such research in the 'elief that no measures are strong enough to ensure the public safety against such dangerous elements, Rifkin said.

Now U.S. officials believe there are 10 nations with biological weapons and 20 with chemical weapons.

1988-05-05-the-frederick-news-post-pg-f-7-clip-dynamac

[HN012Y][GDrive]

1988 (Aug 28)

https://www.newspapers.com/image/655882170/?terms=Dynamac%2Bsubsidiary

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1989 (March 24) - Allan Hirsch named new CEO of Dynamac COrporation

Source - [HG006I][GDrive]

** Dynamac Corp., Rockville, Md., an environmental science, engineering and management consulting firm, named **Allan Hirsch** president and chief operating officer."*

Consolidated Safety Services, Inc. (CSS) history

https://dev.css-inc.com/whoweare/history.php

Brief History

Consolidated Safety Services, Inc. (CSS) was incorporated in 1988 to provide health and safety services to the public and private sectors. CSS rapidly expanded its services to include scientific program support in the physical and life sciences. For the last 20 years, CSS has been recognized as the nation's leading provider of motor carrier safety ratings for ground transportation systems.

Dynamac Corporation was established in 1970 to provide environmental, safety and health services primarily to the federal sector. It quickly added scientific research and development (R&D) and technology testing to its core services. Since 1995, Dynamac has been the leading provider of life science payload processing services for space transportation systems.

The CSS enterprise was created by the acquisition of Dynamac Corporation in May 2010. The acquisition immediately produced remarkable synergy enabling CSS to offer truly comprehensive environmental, safety & health services and robust scientific support capabilities. The acquisition allowed us to adopt the best of our combined business practices, IT systems, and analytical tools, and we seamlessly share our combined staff resources to meet the evolving needs of our many customers.

In 2005 an Employee Stock Ownership Plan (ESOP) was established. Today the CSS enterprise is 100% employee owned.

1989 - CSS (Consolidated Safety Services)

https://www.newspapers.com/image/607450020/?terms=%22Consolidated%2BSafety%2BServices%22

1994 (Sep 11)

https://newspaperarchive.com/lawrence-journal-world-sep-11-1994-p-21/

Diana MacArthur - Archives of Clinton administration

https://clintonwhitehouse2.archives.gov/WH/EOP/OSTP/Energy/cover.pdf

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1996 - Space project wheat seeds

https://newspaperarchive.com/galveston-daily-news-jun-17-1996-p-3/

1996 Summary - Diana MacArthur - Dynamac Corporation - "Global Growth of Technology: Is America Prepared? a Working Conference"

[HB003V][GDrive]

Mrs. MacArthur is the Chair, Chief Executive Officer, and Co-founder of Dynamac Corporation , a firm providing integrated environmental services: environmental health and sciences consulting, natural resources management, and hazardous waste engineering. She has 35 years of experience in public policy and program development, spanning industry, the Federal Government, nongovernmental organizations, and academia. **Previously, she was President of a Dynamac subsidiary (merged in 1980) engaged in technology transfer, training and education, public outreach, and communications in areas of the environment, health, and safety.**

Earlier in her career, Mrs. MacArthur was the manager of the prevention arm of a multimillion dollar national clearinghouse for health information and education, operated by General Electric under a Federal Government contract. In early days of the Peace Corps, she served as Director of its Office of Private and International Organizations. And she was Vice President and Director of the Washington office of the Thomas J. Deegan Company, a public relations firm in the InterPublic group.

Mrs. MacArthur is active in public affairs. Currently, she serves the Federal Government in two capacities. Appointed by President Clinton, she is a member of the President's Committee of Advisors on Science and Technology (PC AST). She is a member of the Environmental Technologies Trade Advisory Committee of the U.S. Department of Commerce. In the past, she was a member of the Citizens Advisory Board to the President's Council on Youth Opportunity.

In the realm of nongovernmental organizations, Mrs. MacArthur is on the Advisory Board to the Center for Strategic and International Studies (CSIS), where she served on the Strengthening of America Commission and on the National Laboratories Steering Committee, a group that studied ways to enhance cooperation between the Department of Energy national laboratories and industry to commercialize technology critical to American economic growth and competitiveness. At present, she is a member of the CSIS Senior Policy Group on National Grand Challenges, a new project to identify the R&D priorities for the first quarter of the 21st century. **Mrs. MacArthur is a Director of the Atlantic Council**. She is also a member of the Advisory Council to the Committee for the National Institute for the Environment, and is an associate of the North American Institute, a think tank that deals with such issues as the North American Free Trade Agreement and the establishment of a North American Environmental Council. Since 1970, she has been a trustee of the Menninger Foundation.

In the academic arena, Mrs. MacArthur is a member of the Board of Visitors of the University of Maryland Biotechnology Institute and serves on the Chancellor's Advisory Council of the University of Maryland System. In addition, she is a member of the Board of the University of Maryland Foundation, Inc.

Mrs. MacArthur holds a B.A. in Economics from Vassar College, where she was elected to Phi Beta Kappa. She is the recipient of the 1993 KPMG Peat Marwick High Tech Entrepreneur Award, which honors individuals who have made significant contributions to the community and to the advancement of the high technology industry.

1996 (Aug 08)

Full newspaper page : [HN0135][GDrive]

Lierz, Fearer

Announcement has been made of the engagement of Janet Lea Lierz, daughter of Alberta Lierz of Holton, Kan., and the late Leroy Lierz, and John David Fearer, son of Mary A. Fearer of Annapolis and William H. Fearer of Cape St. Claire.

The bride-to-be is a graduate of Washburn University with a degree in radiologic technology. She is employed at St. Francis Hospital in Topeka, Kan.

The prospective groom graduated from Johns Hopkins University with a degree in geology and is employed by the Dynamac Corporation in Manhattan, Kan.

A November wedding is planned.

1996-08-08-annapolis-capital-pg-15-clip-lierz-fearer

[HN0136][GDrive]

1996 (Dec 16)

Full newspaper page : [HN012Z][GDrive]

Lierz, Fearer

Janet Lea Lierz, daughter of Alberta Lierz of Holton, Kan., and the late Leroy Lierz, and John David Fearer, son of William Fearer and Mary Fearer, both of Annapolis, were married recently at Fairlawn Heights Wesleyan Church in Topeka, Kan.

The Rev. Ed Rotz performed the ceremony, and a reception was held at Abouds at Western Hills.

Given in marriage by her mother, the bride was attended by Amy Kalbach and Amy Lierz, her sister.

Army Major Thomas Guthrie served as best man for the groom. The ushers were Scott Burns, Stan Lierz, brother of the bride, and Mike George.

Mrs. Fearer is a graduate of Washburn University in Topeka with a degree in radiologic technology. She is employed as a cardiovascular radiologic technologist at St. Francis Hospital in Topeka.

Mr. Fearer is a graduate of Johns Hopkins University with a degree in geology. He is employed as an industrial hygienist at Dynamac Corporation in Fort Riley, Kan.

Following a wedding trip to Bermuda, the couple is living in Maple Hill, Kan.

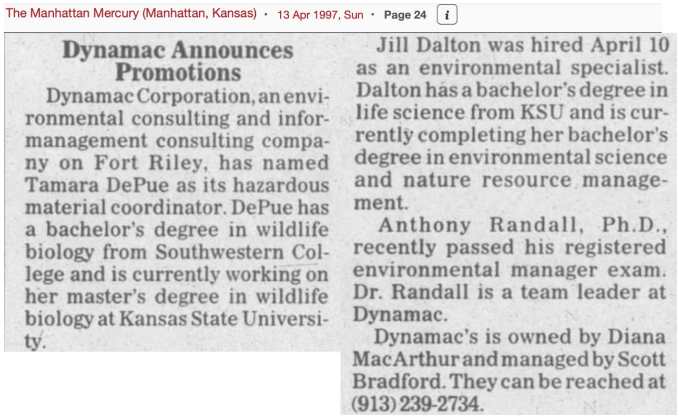
1996-12-26-annapolis-capital-pg-41-clip-lierz-fearer

MR. and MRS. JOHN FEARER

[HN0130][GDrive]

1997 (April 13)

Full newspaper page : [HN0133][GDrive]



The Manhattan Mercury (Manhattan, Kansas) · 13 Apr 1997, Sun · Page 24

Dynamac Announces Promotions

Dynamac Corporation, an environmental consulting and information management consulting company on Fort Riley, has named Tamara DePue as its hazardous material coordinator. DePue has a bachelor's degree in wildlife biology from Southwestern College and is currently working on her master's degree in wildlife biology at Kansas State University.

Jill Dalton was hired April 10 as an environmental specialist. Dalton has a bachelor's degree in life science from KSU and is currently completing her bachelor's degree in environmental science and nature resource management.

Anthony Randall, Ph.D., recently passed his registered environmental manager exam. Dr. Randall is a team leader at Dynamac.

Dynamac's is owned by Diana MacArthur and managed by Scott Bradford. They can be reached at (913) 239-2734.

[HN0134][GDrive]

1999 (March) - Ross Hinkle is "chief scientist" of Dynamac

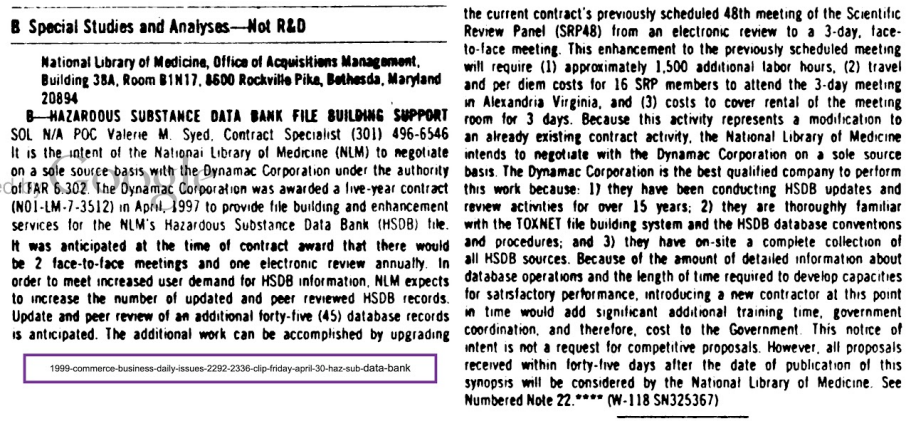
Source - https://www.newspapers.com/image/177239053/?terms=CSS%2BDynamac

Research example - https://onlinelibrary.wiley.com/doi/abs/10.1111/j.1365-2486.1996.tb00059.x

https://sciences.ucf.edu/biology/person/ross-hinkle/

1999 (April) - Hazardous substance data bank file

1999-commerce-business-daily-issues-2292-2336 : Source : [HP003G][GDrive]



B Special Studies and Analyses—Not R&D

National Library of Medicine, Office of Acquisitions Management, Building 38A, Room B1N17, 8600 Rockville Pike, Bethesda, Maryland 20894

B—HAZARDOUS SUBSTANCE DATA BANK FILE BUILDING SUPPORT SOL N/A POC Valerie M. Syed, Contract Specialist (301) 496-6546 It is the intent of the National Library of Medicine (NLM) to negotiate on a sole source basis with the Dynamac Corporation under the authority of FAR 6.302. The Dynamac Corporation was awarded a five-year contract (N01-LM-7-3512) in April, 1997 to provide file building and enhancement services for the NLM's Hazardous Substance Data Bank (HSDB) file. It was anticipated at the time of contract award that there would be 2 face-to-face meetings and one electronic review annually. In order to meet increased user demand for HSDB information, NLM expects to increase the number of updated and peer reviewed HSDB records. Update and peer review of an additional forty-five (45) database records is anticipated. The additional work can be accomplished by upgrading the current contract's previously scheduled 48th meeting of the Scientific Review Panel (SRP48) from an electronic review to a 3-day, face-to-face meeting. This enhancement to the previously scheduled meeting will require (1) approximately 1,500 additional labor hours, (2) travel and per diem costs for 16 SRP members to attend the 3-day meeting in Alexandria Virginia, and (3) costs to cover rental of the meeting room for 3 days. Because this activity represents a modification to an already existing contract activity, the National Library of Medicine intends to negotiate with the Dynamac Corporation on a sole source basis. The Dynamac Corporation is the best qualified company to perform this work because: 1) they have been conducting HSDB updates and review activities for over 15 years; 2) they are thoroughly familiar with the TOXNET file building system and the HSDB database conventions and procedures; and 3) they have on-site a complete collection of all HSDB sources. Because of the amount of detailed information about database operations and the length of time required to develop capacities for satisfactory performance, introducing a new contractor at this point in time would add significant additional training time, government coordination, and therefore, cost to the Government. This notice of intent is not a request for competitive proposals. However, all proposals received within forty-five days after the date of publication of this synopsis will be considered by the National Library of Medicine. See Numbered Note 22.**** (W-118 SN325367)

1999-commerce-business-daily-issues-2292-2336-clip-friday-april-30-haz-sub-data-bank

[HP003H][GDrive]

National library of Medicine, Office of Acquisitions Management,Building 38A, Room B1N17, 8600 Rockville Pike, Bethesda, Maryland 20894

Hazardous Substance Data Bank FIle Building Support - SOL N/A POC **Velerie M Syed,** Contract Specialist

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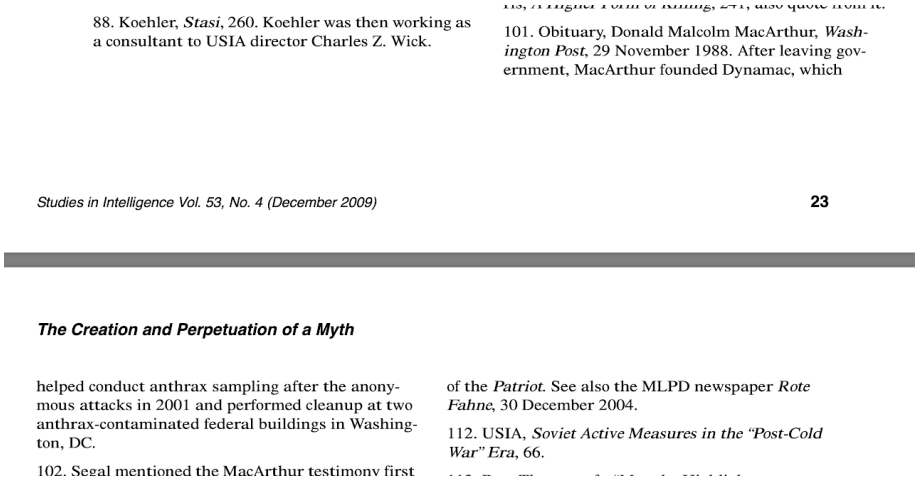
Anthrax 2001

https://www.cia.gov/library/center-for-the-study-of-intelligence/csi-publications/csi-studies/studies/vol53no4/pdf/U-%20Boghardt-AIDS-Made%20in%20the%20USA-17Dec.pdf



88. Koehler, *Stasi*, 260. Koehler was then working as a consultant to USIA director Charles Z. Wick.

101. Obituary, Donald Malcolm MacArthur, *Washington Post*, 29 November 1988. After leaving government, MacArthur founded Dynamac, which

Studies in Intelligence Vol. 53, No. 4 (December 2009) 23

The Creation and Perpetuation of a Myth

helped conduct anthrax sampling after the anonymous attacks in 2001 and performed cleanup at two anthrax-contaminated federal buildings in Washington, DC.

102. Segal mentioned the MacArthur testimony first

of the *Patriot*. See also the MLPD newspaper *Rote Fahne*, 30 December 2004.

112. USIA, *Soviet Active Measures in the "Post-Cold War" Era*, 66.

2002 (Jan 7) - $120M deal sends Md.'s Dynamac into orbit

By Chris Silva – Staff Reporter

Source - [HW004I][GDrive]

A woman-owned science and engineering contractor has won a $120 million contract from the National Aeronautics and Space Administration to provide life sciences and environmental support to the Kennedy Space Center in Florida.

The eight-year contract represents the 10th, and largest, award NASA has given Rockville-based Dynamac in the past six years.

"This one is really at the cutting edge of science," says Douglas Britt, Dynamac's project director. "NASA pushes science to its limits ... this is the largest single contract the company has ever had."

The award marks the second consecutive time Dynamac won a contract to provide environmental and life sciences services to NASA. Dynamac's first contract with NASA was valued at $63 million.

Diana MacArthur co-founded Dynamac with her late husband, Donald MacArthur, in 1970. The new NASA contract has her beaming with pride, particularly since the company had to compete against other proposals.

"It's very significant to us, a very profound space science," MacArthur says, adding that Dynamac also has won various grants over the years from NASA, typically worth about $300,000.

As part of the $120 million contract, more than 140 Dynamac scientists, engineers and technicians will provide scientific support to the Kennedy Space Center in 14 areas, including ground and air experiments.

Dynamac (http://www.dynamac.com) specializes in plant sciences and will track the condition of food that is grown on space flights. The company also provides support in areas of medical operations, landscape ecology, microbial contamination and animal research.

In addition, Dynamac and its primary subcontractor, Bionetics, will help establish and operate the Space Experiment Research and Processing Laboratory at the space center. This facility is expected to spearhead biotech projects. Bionetics, based in Newport News, Va., provides Dynamac with physicians and nurses for its programs.

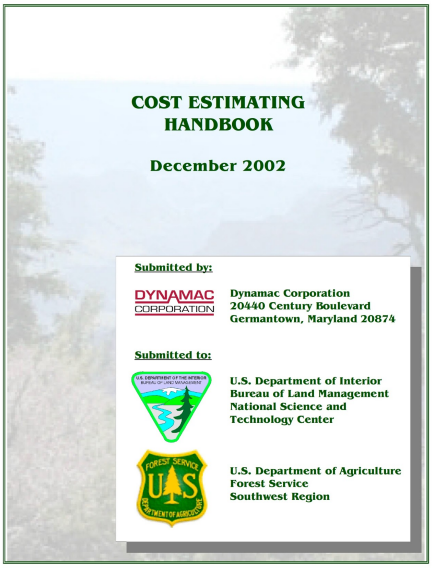
Other agencies that utilize Dynamac's services include the Department of Defense and the Environmental Protection Agency.

In addition to providing support services, Britt says Dynamac is beginning to develop a technology pipeline that could lead to the development of life sciences products. The company has a patent on a plant growth regulator that NASA developed, and expects to grab more patents in the future.

The contract "has encouraged us to expand our work beyond NASA," MacArthur says. "It gives us a very good basis in science to work on other projects."

2002-12-dynamac-cost-estimating-handbook.pdf

Source : [HC003U][GDrive]



[HC003V][GDrive]

2005 - "DYNAMAC CORPORATION JOINS THE OMAHA POST"

http://www.sameomaha.org/files/newsletters/2005/Newsletter_2005_Winter.pdf

Established in 1970, Dynamac Corporation is a leading provider of environmental, program management, and research and development services to more than 20 Federal agencies, including the Department of Defense (DoD), National Aeronautics and Space Administration (NASA), and the U.S. Environmental Protection Agency (EPA). Operating out of 10 offices nationwide, our projects range from small, quick-response tasks to large, long-term, complex programs involving multiple subcontractors and collaborators. We are an award-winning, woman-owned small business with over 300 employees and an outstanding safety record. Few small businesses offer the breadth of services, years of management experience, and quality of service that Dynamac offers to its clients.

Dynamac has provided exceptional service to the U.S. Army Corps of Engineers Hazardous, Toxic, and Radioactive Waste Center of Expertise in Omaha for over five years. Dynamac is a nationwide contractor implementing the Formerly Used Defense Sites (FUDS) Information Improvement Plan (FIIP). Dynamac designed, developed, and is currently implementing systems to organize, digitize, and analyze environmental investigation and remediation records to ensure more efficient FUDS program management. Our approach has also been applied to several FUSRAP projects.

Dynamac has a long history with many DoD installations such as Fort Hood, Fort Bliss, Ft. Bragg, Fort Riley, and Aberdeen Proving Grounds developing and implementing environmental management systems; supporting environmental compliance, information technology, NEPA, and pollution prevention programs; managing hazardous materials and hazardous waste; and providing utility database support.

As a Sustaining member of several East and Southwest region Posts, we are enthusiastic about joining the SAME-Omaha Post and look forward to collaborating with the many professionals who support the military in its mission.

For additional information, please contact Angela Watmore at awatmore@dynamac.com and 301-417- 6005. Please visit our website at www.dynamac.com.

2013 - Passing of prior employee ; NiH -> Dynamac career path

https://www.tampabay.com/archive/2013/10/24/obituaries/

JONES-BROWN, Y'Vonne R. entered into Eternal rest on Monday, Sept. 30, 2013 at her home in Mitchellville, MD. Born, July 6, 1949 in St. Petersburg, Y'Vonne was a graduate of Florida Presbyterian College (Eckerd College) and the Massachusetts Institute of Technology where she received a PhD in Microbiology. After a post-doctoral fellowship at the University of California at Berkeley, Y'Vonne worked with the **National Institutes of Health and Dynamac Corporation before joining the United States Environmental Protection Agency (EPA).** Y'Vonne received a Bronze Medal, Mentor and Mission Awards from the EPA where she retired after 28 years in service. Passionate and tireless in her professional career, Y'Vonne also loved her family and home life. In her leisure she was a constant gardener and an avid reader. Y'Vonne enjoyed all manners of science including science fiction. Her occasional hobbies included stamp collecting, sewing and crafts. Her interests included improving the lives of impoverished children, protecting the planet on which we live, and preserving wildlife of all species. Y'Vonne is survived by her devoted husband of 38 years, Johndel; her son, Diallo; her sisters, Angella Allen and Mary E. Cleveland; and a host of nieces, nephews, including Jacinta Jackson and Demetrius Jackson, and many other relatives and friends. Memorial services for Y'Vonne will be held on Saturday, Oct. 26, 2013 from 11-1 pm at Dwight Jones Neighborhood Center, at 1035 Burlington Avenue North, St. Petersburg, FL 33705. For questions related to the service, please leave a message at 202-486-8275. In lieu of flowers, memorial contributions may be made to Doctors

The Portable Mac by Dynamac

1986 (Nov 24) - Infoworld (Vol. 8, No. 47)

Cover : [HP003E][GDrive]

Apple Backs Portable Mac By Dynamac

First Mac Laptop To Gain Approval

By Rory J. O'Connor

The 18-pound Dynamac offers a 640-by-400-pixel electroluminescent display.

GOLDEN, CO — Dynamac Computer Products Inc. and Apple Computer inked an agreement last week permitting Dynamac to buy discounted Macintosh Plus computers directly from Apple and reconfigure them into a portable package that includes a higher resolution display.

Dynamac said its first machines, also called Dynamac, will be available for sale early next year for between $5,000 and $8,000 and sold to specific vertical markets. Seven prototypes of the machine, which incorporates a 640-by-400-pixel electroluminescent display and weighs less than 18 pounds with a hard disk drive, are currently being demonstrated to several potential corporate and government accounts, according to company director Britt Blaser. The company said the standard display will show 46 percent more pixels than the standard Macintosh 512-by-342-pixel display.

The company is the first maker of portable Macintosh machines to receive official support from Apple, which claims it has the legal right to limit the reconfiguration of its machine by others who intend to resell it.

Two other companies, Colby Systems Inc. of Fresno, California, and Intelitec Inc. of Fairfield, Iowa, also say that they are negotiating for a similar agreement with the Cupertino, California-based Apple.

Intelitec said it is negotiating with Apple for a reseller agreement for its portable Mac.

Apple said its deal with Dynamac is not an exclusive one. "We are currently in discussions with a number of companies who want to do portable Macintoshes," said Marianne Lettieri, a spokeswoman for Apple.

Both Colby and Intelitec said they will make and sell portable Macs even without an Apple agreement, although Intelitec said it is close to signing a value-added reseller agreement. "We've got that paperwork in the process," said Roger Silber, Intelitec president.

Colby, which has a contract to provide the federal government with 120 portable Macs, now uses whole machines it buys outside of Apple but wants to obtain motherboards directly from Apple, said president Chuck Colby. The availability of separate components to makers, who don't use all the parts they get with the complete Macintosh Plus, could reduce the price of the portable machine "by roughly a few hundred dollars," Silber said. But Apple said it is unwilling to sell separate Macintosh components.

"We would not sell motherboards for the Mac," said Lettieri. "We have no plans to change that practice."

Any independent efforts to market a portable Mac could be shortlived, however, according to all three companies. They predict Apple will enter the market within the next year to 18 months.

Apple's Lettieri declined to discuss potential Apple products, but she did not deny that Apple might enter that market. "This relationship doesn't preclude us from having a laptop strategy," she said.

Borland Buys Spreadsheet From T/Maker

By Rory J. O'Connor

SCOTTS VALLEY, CA — Borland International said it has purchased the Click On Worksheet spreadsheet from publisher T/Maker Co. and will revamp it as part of a new release of Sidekick for the Macintosh.

The program, which includes graphics capabilities and the ability to view remote parts of the worksheet side-by-side, will likely replace part of the current Quiksheet feature in Sidekick for the Macintosh, according to company president Philippe Kahn.

Click On Worksheet, a desktop accessory originally released in April 1985, is currently being revised by Borland programmers to add new features, including horizontal scrolling and a data export format compatible with Microsoft's Excel spreadsheet, said Kahn. The product was revised earlier this year to correct incompatibilities between it and the Macintosh Plus when that machine was first announced, according to T/Maker.

Kahn would not disclose when the new version of Sidekick would be ready for delivery. But a Borland spokeswoman said the company will announce more formal plans for the Click On product in the first quarter of 1987. Kahn did indicate Sidekick's price will remain at $99.95.

Click On Worksheet can have up to 50 rows by 20 columns and can produce graphs, including bar charts, stacked bar charts, pie charts, and line graphs, from data in the spreadsheet, Borland said. The graphs can be pasted into an active worksheet. The product will also include a dozen templates previously supplied with the T/Maker version of the product.

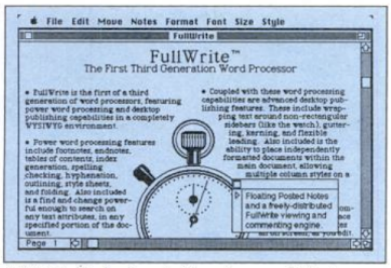
Borland purchased the product in the late summer, according to T/Maker president Heidi Roizen, when T/Maker decided the product no longer fit into its line of desktop publishing-related software. No announcement of the deal was made at the time, however, and T/Maker told potential buyers the $79.95 product had been discontinued, she said.

Ann Arbor Softworks to Unveil Mac-Based Word Processor

By Rory J. O'Connor

NEWBURY PARK, CA — Ann Arbor Softworks Inc. will introduce in January a Macintosh-based word processor it said will include a number of desktop publishing-related features not found on current word processing or desktop publishing products.

The company said the product, Full Write Professional, will include the capability to use multiple columns of differing sizes on a page and automatically wrap text around irregularly shaped figures. The program will be shown for the first time at the Macworld Expo in January, in San



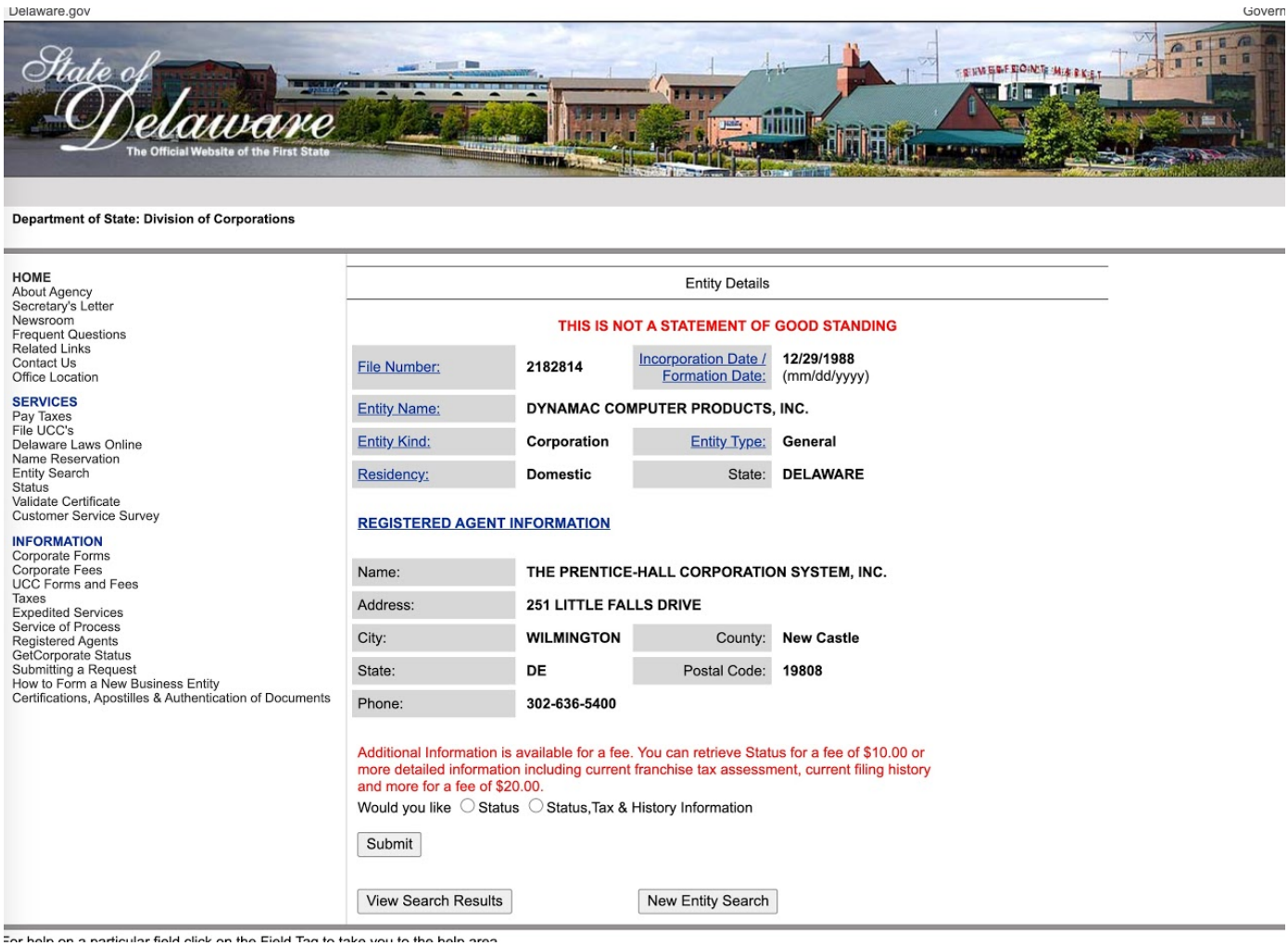
Full Write Professional offers the capability to wrap text around irregularly shaped figures.

tions such as Mac Paint.

[HP003F][GDrive]

Incorporation is Dec 29 1988 - NOT 1970 (like Dynamac Corp.)

PDF of web page : [HG006G][GDrive]



[HG006H][GDrive]

Dynamac Computer Products, Inc. - from Wikipedia

https://en.wikipedia.org/wiki/Macintosh_conversion

Dynamac Corporation, out of Denver, Colorado, also known as Dynamac Computer Products Inc., was founded as a Delaware corporation in 1970[30] and offered Mac portable computer systems between 1986[31] and 1991.[32]

Notable products include:

Dynamac[33][34] – was a Macintosh Plus converted into a black metal, 24-pound, portable Mac computer with a 9-inch back-lit amber electroluminescent screen and an optional, external battery pack. Based on an 8MHz 68000 CPU, and with pricing starting at $7,000, the Dynamac became obsolete with the introduction of the Apple Macintosh Portable in 1989.[35] Discontinued.

Dynamac EL[36] – based on the same Macintosh Plus system as the Dynamac, the EL used a black Cycolac plastic enclosure, reducing the weight to 18-pound and dropping the starting price to $6,000. It also became obsolete with the introduction of the Apple Macintosh Portable in 1989.[37] Discontinued.

Dynamac LC Display[38] – converted a Macintosh LC into a 13 ¾-pound portable Mac by attaching a 9.5-inch LCD display with 640-by-480 pixels resolution and 16 shades of grey to a Macintosh LC base system. Adding the optional battery added 2 ½ pound to the system's weight. Pricing started at $1,299 for the display kit, plus the cost of the Macintosh LC. Discontinued.

Dynamac IIsf[39] and IIsf/30[40] – this 11-pound Mac portable was based on converting a Macintosh LC into a leather-cased Mac portable with a built-in 9.5-inch LCD display with 640-by-480 pixels resolution and 16 shades of grey, a touchpad and an internal battery. The solution came either with the original donor Mac's 68020 CPU (IIsf) starting at a price of $4,995 or an 68030 CPU (IIsf/30) starting at a price of $6,995. Discontinued.

1987 (Nov 11)

https://www.newspapers.com/image/563457543/?terms=Dynamac%2Bsubsidiary

1989

https://www.newspapers.com/image/136373331/?terms=Dynamac%2Bsubsidiary

1991

https://www.newspapers.com/image/120266763/?terms=Dynamac%2Brocky%2Bflats

Britt Blaser - LinkedIN

Saved LinkedIN - [HL004X][GDrive]

About

I've been forming companies and organizing projects since 1971 to take on under-appreciated opportunities. 1970s-80s: Real estate developer in Colorado, work requiring the formation of partnerships, creative financing and quasi-governmental agencies to deliver utilities and, in one case, to develop an interchange on a federal highway. Included a community shopping center, large-scale land developments and the invention of a solar home design for which I was awarded U.S. Patent.

_____

1971-1986 Real estate developer, Colorado.

1986-92: Angel, Founder & CEO of Dynamac Computer, the first authorized Macintosh 'clone' <ngov.us/dynamac>.

1992-93: Cofounder, The Trust Company of Washington, Seattle.

Also:

Patrol Leader, Colorado Outward Bound School;

USAF combat pilot, Vietnam (3-Distinguished Flying Cross, 2-Air Medal, 12 lesser);

U.S. Patent 4420036 <http://1.usa.gov/1aLWmx0>.

Trustee and Development Director, Colorado Academy;

Trustee, Colorado Children's Chorale;

Author, Xpertweb peer-to-peer reputation protocol;

Senior advisor for Internet strategy for the Howard Dean Campaign <blaserco.com/Dean>;

Senior architect for web strategy, Spirit of America <spiritofamerica.net>.

May 1986 – Aug 1992

Employment Duration6 yrs 4 mos

LocationDenver, CO

Dynamac <http://bit.ly/1dSXzbI> was the first Mac OS-based computer that was authorized, but not assembled by Apple Computer Inc. Based on a Mac Plus and, later, a Mac SE motherboard, Its purpose-built video board and power supply equipped the Dynamac to drive a bright 2-bit electroluminescent screen in a black case. It was purposely an homage to John Ellenby's earlier GRiD computer, and it inspired the same enthusiasm among Mac users.

Success was instant. Upon seeing a prototype at Macworld Expo Boston in August 1986, Apple solicited Dynamac Inc. to become a Value Added Reseller (VAR) and to demonstrate that Apple could offer an option as attractive as the industry-leading DOS-based Toshiba 3400, which the Dynamac matched in specifications (including weight), but added a graphic user interface.

Within a year, the Dynamac appeared on 3 magazine covers on 3 continents and received far more than its fair share of Macintosh press. For enterprises that required graphics-based computers in the field, it was the only cost-is-no-object option*. They included the US Army, the CIA, Bank of America's Internal Audit Dept., and a Who's Who of prominent Mac users in entertainment, media, etc. Naturally, Steve Jobs didn't think much of it.

The ride was wild and continued, in fits and starts, through mid-1992.

_____

*Primarily due to a $1,000 OEM electroluminescent screen, a fully configured Dynamac could run $10,000, if your dreams included 4 MB of RAM and a 40 MB Hard drive. Heady times indeed.

Experience

The League of Technical Voters; NewGov Foundation

Chairman

Company Name The League of Technical Voters; NewGov Foundation

Dates EmployedDec 2013 – Present

Employment Duration6 yrs 7 mos

LocationAjijic, México

The League of Technical Voters (LOTV) is a 501(c)(3) non-profit organization whose primary goal is to involve more technical people in the political process. https://wikipedia.org/wiki/League_of_Technical_Voters

The GEOvoter API of the NewGov Foundation equips voters to manage their politicians where it matters: in Congressional committees as they develop policy.

The NewGov Foundation

Angel, Founder & CEO

Company Name The NewGov Foundation

Dates Employed2005 – Present

Employment Duration15 yrs

LocationBethesda, MD

NewGov is a public utility for collaborating with and, when necessary, guiding politicians. NewGov.US supports crowd-sourced policy development for all US political jurisdictions and issues.

As policies are agreed upon by the national NewGov community, they are "pushed" to the relevant congressional committees by NewGov members who have been certified, by an authoritative 3rd party, as constituents of the committee members.

NewGov.US is certainly the necessary precondition for constituents to exercise real power in the country they own. It also appears to be sufficient to the task.

Project VRM

Collaborator

Company Name Project VRM

Dates EmployedOct 2006 – Present

Employment Duration13 yrs 9 mos

LocationBerkman Center for the Internet & Society, Harvard University

Dean Campaign

Advisor

Company Name Dean Campaign

Dates Employed2003 – 2004

Employment Duration1 yr

The Trust Company of Washington

Cofounder and CTO

Company Name The Trust Company of Washington

Dates EmployedAug 1992 – Mar 1994

Employment Duration1 yr 8 mos

LocationBellevue WA

Dynamac Computer Inc.

Angel, Founder & CEO

Company Name Dynamac Computer Inc.

Dates EmployedMay 1986 – Aug 1992

Employment Duration6 yrs 4 mos

LocationDenver, CO

Dynamac <http://bit.ly/1dSXzbI> was the first Mac OS-based computer that was authorized, but not assembled by Apple Computer Inc. Based on a Mac Plus and, later, a Mac SE motherboard, Its purpose-built video board and power supply equipped the Dynamac to drive a bright 2-bit electroluminescent screen in a black case. It was purposely an homage to John Ellenby's earlier GRiD computer, and it inspired the same enthusiasm among Mac users.

Success was instant. Upon seeing a prototype at Macworld Expo Boston in August 1986, Apple solicited Dynamac Inc. to become a Value Added Reseller (VAR) and to demonstrate that Apple could offer an option as attractive as the industry-leading DOS-based Toshiba 3400, which the Dynamac matched in specifications (including weight), but added a graphic user interface.

Within a year, the Dynamac appeared on 3 magazine covers on 3 continents and received far more than its fair share of Macintosh press. For enterprises that required graphics-based computers in the field, it was the only cost-is-no-object option*. They included the US Army, the CIA, Bank of America's Internal Audit Dept., and a Who's Who of prominent Mac users in entertainment, media, etc. Naturally, Steve Jobs didn't think much of it.

The ride was wild and continued, in fits and starts, through mid-1992.

[...]

2010-dynamac-pictures-and-articles-from-newgov-net.pdf

Source : [HX000X][GDrive]

1987

https://www.newspapers.com/image/377888275/?terms=%22dynamac%2Bcomputer%22

https://worldradiohistory.com/Archive-Byte/80s/Byte-1988-05.pdf

UNRELATED - "Dynamac Inc." in Massachusetts / Connecticut

1950s - 1970s - "Dynamac Inc." in Massachusetts / Connecticut (not sure if this is related)

1958 - Dynamac Inc : https://www.newspapers.com/image/433276523/?terms=dynamac

1962 - https://www.newspapers.com/image/433761995/?terms=dynamac

1974 : Help Wanted - https://www.newspapers.com/image/439029410/?terms=%22dynamac%22

1979 - "Dynamac Corporation" and "Dynamac Inc" , in Natick Massachusetts

Full newspaper page : [HN0131][GDrive]

[HN0132][GDrive]

1985 - "Dynamac Inc" purchased by "American Robot"

https://www.newspapers.com/image/89569018/?terms=Dynamac%2Bsubsidiary

https://www.newspapers.com/image/90325223/?terms=Dynamac%2Bsubsidiary

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Etc ... to do

Dynalectron Corporation

Wikipedia DynCorp

This is about the history of DynCorp. For current corporate info as DynCorp, see DynCorp International

"DYNalectron CORPoration" => "DYNCORP" Interenational (See **DynCorp International**)

Employees

- **Daniel Richard Bannister (born 1930)**
- **Bernie Edward Zettl (born 1922)**

Saved Wikipedia (Dec 9, 2020) for DynCorp

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[For current corporate info as DynCorp, see DynCorp International]

DynCorp (/ˈ daɪnkɔːrp/),[5] most recently **DynCorp International**, is an American private military contractor.[6] Started as an aviation company, the company also provides flight operations support, training and mentoring, international development, intelligence training and support, contingency operations, security, and operations and maintenance of land vehicles.[7] DynCorp receives more than 96% of its more than $3 billion in annual revenue from the U.S. federal government.[8][9]

The corporate headquarters are in an unincorporated part of Fairfax County near Falls Church, Virginia. The company's contracts are managed from its office at Alliance Airport in Fort Worth, Texas.

DynCorp has provided services for the U.S. military in several theaters, including Bolivia, Bosnia, Somalia, Angola, Haiti, Colombia, Kosovo and Kuwait.[10] DynCorp International also provided much of the security for Afghan interim president Hamid Karzai's presidential guard and trains much of Afghanistan's and Iraq's fledgling police force.[11] DynCorp was also hired to assist recovery in Louisiana and neighboring areas after Hurricane Katrina.[12][13] DynCorp has held one contract on every round of competition since receiving the first Contract Field Teams contract in 1951. DynCorp won the LOGCAP II contract and is one of three contract holders on the current LOGCAP IV contract.[*clarification needed*][*jargon*]

History

Beginnings (1946–1961)

DynCorp traces its origins from two companies formed in 1946: California Eastern Airways (CEA), an air freight business, and Land-Air Inc., an aircraft maintenance company.[14] California Eastern Airways was founded by a small group of returning World War II pilots who wanted to break into the air cargo business.[15] They were one of the first firms to ship cargo by air, and within a year, the firm was serving both coasts.[16][17] California Eastern Airways diversified into multiple government aviation and managerial jobs, airlifted supplies for the Korean War, and was responsible for the White Sands Missile Range (a client that DynCorp has retained for 50 years).[15][17]

In 1951 Land-Air Inc., which implemented the first Contract Field Teams (teams of technicians that maintained military aircraft for the United States Air Force), was bought by California Eastern Aviation Inc.[17][18] DynCorp still holds the contract 50 years later, maintaining rotary and fixed-wing aircraft for all branches of the U.S. Armed Forces.[17] At this time, revenues for the company reached $6 million.[17]

In 1952 the company, renamed California Eastern Aviation, Inc., merged with Air Carrier Service Corporation (AIRCAR), which sold commercial aircraft and spare parts to foreign airlines and governments.[17]

Dynalectron (1962–1987)

By 1961 California Eastern Aviation needed a new name to reflect the growing and diversifying company. The name "Dynalectron Corporation" was selected from 5,000 employee suggestions.[17] In 1976 Dynalectron established headquarters in McLean, Virginia.[19] Due to its growing size, the company restructured into four main operating groups: Specialty Contracting, Energy, Government Services, and Aviation Services.[17] In the 30 years since the

restructured into four main operating groups: Specialty Contracting, Energy, Government Services, and Aviation Services. In the 30 years since the foundation of CEA, Dynalectron had acquired 19 companies in 30 years, had assets of $88 million, maintained a backlog of $250 million, employed 7,000, and had annual sales of $300 million.[17]

In 1964 Dynalectron diversified into the energy services business with the acquisition of Hydrocarbon Research, Inc.[20] Through this acquisition Dynalectron developed a process called H-Coal, which converted coal into synthetic liquid fuels.[21] The work began to attract national attention with the Arab Oil Embargos of the 1970s.[22] By the early 1980s Texaco Inc., Ruhrkohle AG, and C. Itoh & Co. were all marketing Dynalectron's H-Oil process.[23][24]

Between 1976 and 1981 the company had two public stock offerings and acquired another 14 companies.[25] By 1986 Dynaelectron was one of the largest defense contractors in North America.[25]

DynCorp and expansion (1987–2003)

In 1987 Dynalectron changed its name to DynCorp.[*citation needed*] In 1988 DynCorp went private to avoid a hostile takeover by Miami financier Victor Posner, via an employee initiative led by [**Daniel Richard Bannister (born 1930)**]. Bannister, as T. Rees Shapiro wrote in his 2011 obituary, "was paid $1.65 an hour when he joined DynCorp as an electronics technician in 1953," rising to serve as its president and CEO (1985 to 1997).

[For the rest, after the name change, see DynCorp International .]

Services

Air operations

DynCorp International provides aviation support to reduce the flow of illicit drugs, strengthen law enforcement, and eliminate terrorism.[35][36] Their air operations include the operation of fixed-wing and rotary aircraft on and around aircraft carriers for either combat or non-combat missions, aviation life support missions, and aerial/satellite imagery.[37][38] DynCorp was hired to strengthen the Afghan air force, helping to train Afghan pilots so they could, in turn, train other Afghans.[39] They have also provided air operations support in Iraq, including search and rescue, medical evacuations, and transporting quick reaction forces.[40][41]

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In 2012 DynCorp played a key part in the Space Shuttle Endeavour's final flight as it made its way from the Kennedy Space Center in Orlando to the California Science Center in Los Angeles aboard NASA's specially crafted Shuttle Carrier Aircraft (SCA). The SCA was a uniquely configured Boeing 747-100 aircraft.[47][*better source needed*][48] DynCorp mechanics worked with NASA and other support contractors performed maintenance and inspection services to the SCA. DynCorp's involvement in Endeavour's final flight was part of a contract NASA awarded to the company in April 2012 to provide aircraft maintenance and operational support at various locations throughout the country.[49]

Emergency response air programs

DynCorp has been working with the California Department of Forestry and Fire Protection (known as CAL FIRE) to suppress and control wild land fire.[50] DynCorp flies and maintains Grumman S-2 Tracker fire retardant air tankers and OV-10A aircraft, and maintains and services civilian UH-1H Super Huey helicopters flown by CAL FIRE pilots. Operating from across California, aircraft can reach most fires within 20 minutes.[50]

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Among its notable awards is its unbroken record of having received a contract in every round of competition under the United States Air Force-managed Contract Field Teams (CFT) program since the CFT program started in 1951.

The company recently opened up an office in Huntsville, Alabama, to allow it to further focus on its aviation business. The Army Materiel Command, Army Contracting Command and the U.S. Army Security Assistance Command all have or soon will have their headquarters on Redstone Arsenal.[57] The U.S. Air Force chose DynCorp to supply support services for the military's T-6 and T-6B trainer aircraft. As part of that contract DynCorp will open, operate and manage Contractor Operated and Maintained Base Supply facilities at nine Air Force and Navy locations.[58]

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- **Contingency operations** [1990s - See DynCorp International]
- **Development** [See DynCorp International]
- **Intelligence training and solutions** [See DynCorp International]
- **Operations and maintenance** [See DynCorp International]
- **Security services** [See DynCorp International]

- **Training and mentoring** [See DynCorp International]

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DynCorp International

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Note : For company history before bame change, see **Dynalectron Corporation**

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Employees

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Saved Wikipedia (Dec 9, 2020) for DynCorp

[HK0042][GDrive]

Type Private

Industry Military contractor, service-focused

Founded 1946 [For history from 1946, until it was re-named to DynCorp, see Dynalectron Corporation]

Headquarters McLean, Virginia (2013)[1]

Area served Worldwide

Key people George Krivo, CEO (2017)[2]

Products Aviation maintenance, air operations, drug eradication, law enforcement training, logistics, contingency operations, security services, operations and maintenance for land vehicles (MRAPs), maintenance for aircraft, support equipment, and weapons systems, intelligence training and solutions, international development[3]

Revenue US$ 3.047 billion (2010)[citation needed]

Operating income US$ 120.00 million (2008)[citation needed]

Net income US$ 47.95 million (2008)[citation needed]

Total assets US$ 1.402 billion (2008)[citation needed]

Total equity US$ 424.29 million (2008)[citation needed]

Owner Cerberus Capital Management

Number of employees 14,000 (2007)[4][better source needed]

Website Dyn-intl.com

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In 1994 DynCorp's revenues were approximately $1 billion.[citation needed] By the time of his retirement in 2003, Shapiro notes that [**Daniel Richard Bannister (born 1930)**] "oversaw the acquisition of more than 40 companies… [and] was credited with helping to mold… an aviation services company into a sprawling conglomerate that employed 24,000 people and earned $2.4 billion in annual revenue."[27] As well he "oversaw DynCorp contracts to operate missile test ranges for the Defense Department, develop vaccines for the National Institutes of Health and install security systems in U.S. embassies for the State Department."[27] Shapiro notes that during Bannister's tenure Dyncorp had also "supplied bodyguards to Haitian President Jean Bertrand Aristide in the 1990s and to Afghan President Hamid Karzai in the early 2000s."[27]

With the reductions in military spending in the 1990s, DynCorp expanded their focus to the growing tech market.[15] It bought 19 digital and network service firms and acquired contracts with the government's information technology (IT) departments.[15] By 2003 roughly half of DynCorp's business came from managing the IT departments of the Central Intelligence Agency, Federal Bureau of Investigation, and the U.S. Securities and Exchange Commission, among others.[15] In 1999 DynCorp moved its headquarters to Reston, Virginia.[17]

In December 2000 DynCorp formed DynCorp International LLC, and transferred all its international business to this entity.[citation needed] DynCorp Technical Services LLC continued to perform DynCorp's domestic contracts.[citation needed]

Sale to CSC, IPO, and purchase by Cerberus Capital (2003-present)[edit]

In March 2003 DynCorp and its subsidiaries were acquired by Computer Sciences Corporation (CSC) for approximately $914 million.[28] Less than two years later, CSC announced the sale of three DynCorp units (DynCorp International, DynMarine and certain DynCorp Technical Services contracts) to Veritas Capital Fund, LP for $850 million.[28] After the sale, CSC retained the rights to the name "DynCorp" and the new company became DynCorp International.[29]

In 2006 DynCorp International went public on the New York Stock Exchange under the symbol DCP.[30]

On April 12, 2010, DynCorp International announced a conditional deal to be acquired by private equity investment firm Cerberus Capital Management for $17.55 per share ($1 billion).[31] The deal was agreed on 7 July 2010.[32]

In December 2011 the company hired Michael Thibault, former co-chairman and commissioner of the Commission on Wartime Contracting in Iraq and Afghanistan (CWC), as vice president of government finance and compliance. Thibault worked for many years at the Defense Contract Audit Agency (DCAA), serving as Deputy Director from 1994 to 2005.[33] In 2011 Dyncorp set a company record with 12,300 new hires, bringing the total number of employees to 27,000.[34]

Services[edit]

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A DynCorp employee working with aviation support

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Contingency operations[edit]

A significant part of the company's business since the 1990s has come from contingency operations[62] support.[63] The company supports existing bases in Southern Afghanistan, builds new ones as needed, and provides base support services.[64]

Development[edit]

DynCorp international development

In January 2010 DynCorp International combined with World Wide Humanitarian Services (WWHS) and Casals & Associates to form DI Development.[65] DI Development provides humanitarian aid, reconstruction to conflict and post-conflict areas, and governance reforms.

DynCorp International made several acquisitions in 2009 and 2010 to adapt to the defense sector's shift towards diplomacy and development work, in particular acquiring an international development firm in order to enter the international aid community.[66] DI Development is particularly active in Africa and Latin America. In Africa DI Development strengthened government financial management in Ghana, assisted in peace and recovery advancement in Uganda, and led anti-corruption programs in Madagascar, Malawi, and Nigeria.[67][68] In Latin America DI Development implemented anti-corruption, transparency, and accountability programs in Guatemala, El Salvador, Nicaragua, and Panama, and provided democracy and governance initiatives in Mexico, Bolivia, and the Dominican Republic.[69]

Intelligence training and solutions[edit]

In 2010 DynCorp International acquired Phoenix Consulting Group to expand the company into intelligence training and solutions.[70][*better source needed*][71] By acquiring the Phoenix Consulting Group, DynCorp provides training courses to the intelligence community at the Phoenix Training Center.[72] Dyncorp International employs 300 intelligence professionals to offer highly specialized training for intelligence, counterintelligence, special operations and law enforcement personnel.[73] It also provides linguist operations, including language training, translation specialists recruiting, and field translation support for the U.S. armed forces.[74]

Through a joint venture with McNeil Technologies called Global Linguist Solutions, Dyncorp was awarded a five-year contract to provide management of translation and interpretation services to support U.S. Intelligence and Security Command (INSCOM) as part of Operation Iraqi Freedom.[75] Under the contract, DynCorp employed 6,000 locally hired translators and 1,000 U.S. citizens who are native speakers of languages spoken in Iraq.[76] DynCorp International was also given a $17.1 million task order to provide leadership to military personnel of the Democratic Republic of the Congo. The program focuses on training junior and mid-level personnel in areas such as communications, logistics, and engineering.[77]

DynCorp president Steven Schorer expects the training and support logistics for the military and intelligence community to grow significantly in the coming years.[78]

Two DynCorp American employees were among the five killed in Jordan by a co-worker on 9 November 2015. The incident occurred at the International Police Training Centre in Zarqa. The program the men were working on is funded by the State Department's Bureau of Diplomatic Security and Bureau of International Narcotics and Law Enforcement.[79]

Operations and maintenance[edit]

DynCorp provides military base operations and vehicle maintenance. They manage installations for military bases for the Department of Defense and the Department of State, and provide security services, fire and rescue emergency services, and IT/telecommunication services. In particular, DynCorp supports a military base camp in Kosovo, providing power plant maintenance, fueling services, and grounds maintenance.[80] DynCorp is also active in vehicular maintenance, in particular providing the United Arab Emirates with depot-level maintenance, facilities management, and commercialization for its 17,000 ground vehicles.[81] In April 2012 DynCorp International was awarded a contract with the U.S. Navy to provide facility support services for personnel from the Naval Mobile Construction Battalion unit Timor-Leste, including living quarters, internet and telephone services, bathroom facilities, laundry services, kitchen facilities, vehicle/driver/language support, procurement services, warehousing and other services.[82]

DynCorp also formed a joint venture with Oshkosh Defense, Force Protection Industries, and McLane Advanced Technologies to pursue a $3 billion five-year

DynCorp also formed a joint venture with Oshkosh Defense, Force Protection Industries, and McLane Advanced Technologies to pursue a $3 billion five-year Army contract for support and maintenance of mine-resistant ambush-protected vehicles.[78] The U.S. Defense Department gave DynCorp the Nunn-Perry Award in recognition of its mentor-protege arrangement with CenterScope Technologies, in which it provided coaching in development of new markets, establishing international operations and in worldwide logistics. As a result of this mentoring CTSI's revenue grew from $5 million to $32 million in 18 months.[83]

Security services[edit]

DynCorp provides personal security throughout various parts of the world.[84] It supplies Africa, Latin America, and the Middle East with threat assessment protection, perimeter security, base security, and guard services.[85] DynCorp supported the U.S. Army in the Persian Gulf with vehicle searches, roving patrols, and explosive-detecting dogs.[86] It also provides personal security to many regions of Iraq and Afghanistan.[87]

Culpeper National Security Solutions is a unit of DynCorp.[88]

Training and mentoring[edit]

DynCorp delivers training for multiple sectors, including security sector reform, interior and defense personnel in underdeveloped nations, and law enforcement. Since 1994 DynCorp has trained and deployed 6,000 law enforcement workers in 16 countries, including Iraq and Afghanistan.[89][90] DynCorp is looking to partner with Raytheon as a prime or subcontractor on the Teach, Educate, Coach program, which is part of the Army's Warfighter Field Operations Customer Support program.[78]

Controversies[edit]

Latin America incidents[edit]

See also: Colombian armed conflict and Plan Colombia

In September 2001 Ecuadorian farmers filed a class-action lawsuit against DynCorp. On February 15, 2013, the court granted summary judgment to DynCorp, dismissing the sole remaining human health and medical monitoring claims Ecuadorian plaintiffs had brought in connection with counternarcotic aerial herbicide spraying operations in southern Colombia.[91] The plaintiffs are preparing to appeal the dismissal.[92]

An extensive accusation concerning DynCorp's activities and alleged abuses in Colombia was presented against DynCorp at the Hearing on Biodiversity of the Permanent Peoples' Tribunal, session on Colombia at the Cacarica Humanitarian Zone from February 24 to 27, 2007.[93]

Three DynCorp employees died when their helicopter was shot down during an anti-drug mission in Peru in 1992.[8]

On November 29, 2008, a lengthy *New York Times* article questioned the potential conflict of interest in the hiring by Veritas Capital Fund, LP, holding company for DynCorp, of Gen. Barry McCaffrey. McCaffrey had previously served as White House "Drug Czar", where he shaped future federal public-private partnership in drug enforcement policy.[94]

Sex trafficking of children in Bosnia[edit]

According to Human Rights Watch, there is substantial evidence that points to the involvement of DynCorp contractors in trafficking of women and girls in Bosnia and Herzegovina, as well as violence against them.[95]

In the late 1990s two employees, Ben Johnston, a former DynCorp aircraft mechanic, and Kathryn Bolkovac, a U.N. International Police Force monitor, independently alleged that DynCorp employees in Bosnia engaged in sex with minors and sold them to each other as slaves.[96][97][98] Johnston and Bolkovac were fired, and Johnston was later placed into protective custody before leaving several days later.[99]

On June 2, 2000, an investigation was launched in the DynCorp hangar at Comanche Base Camp, one of two U.S. bases in Bosnia and Herzegovina, and all DynCorp personnel were detained for questioning.[99] CID spent several weeks investigating and the results appear to support Johnston's allegations.[99] DynCorp had fired five employees for similar illegal activities prior to the charges.[100] Many of the employees accused of sex trafficking were forced to resign under suspicion of illegal activity. As of 2014 no one had been prosecuted.[101]

In 2002 Bolkovac filed a lawsuit in Great Britain against DynCorp for unfair dismissal due to a protected disclosure (whistleblowing), and won.[102] Bolkovac co-authored a book with Cari Lynn titled *The Whistleblower: Sex Trafficking, Military Contractors And One Woman's Fight For Justice*. In 2010 the film *The Whistleblower*, starring Rachel Weisz and Vanessa Redgrave, was released.[103][104]

Iraq incidents[edit]

According to *The New York Times*, the Special Inspector General for Iraq Reconstruction (SIGIR) found that "DynCorp seemed to act almost independently of its reporting officers at the Department of State, billing the United States for millions of dollars of work that were not authorized and beginning other jobs without a go-ahead."[105] The report states that the findings of DynCorp's misconduct on a $188 million job to buy weapons and build quarters for the Iraqi police were serious enough to warrant a fraud inquiry.[105] A U.S. government audit report of October 2007 revealed that $1.3 billion was spent on a contract with DynCorp for training Iraqi police.[106] The auditors stated that the program was mismanaged to such an extent that they were unable to determine how the money was spent.[106]

In February 2007 federal auditors cited DynCorp for wasting millions on projects, including building an unapproved, Olympic-sized swimming pool at the behest of Iraqi police officials.[107] In April 2011 DynCorp agreed to pay $7.7 million to the U.S. government to settle claims that it had inflated claims for construction contracts in Iraq.[108]

On October 11, 2007, a DynCorp security guard in a U.S. State Department convoy killed a taxi driver in Baghdad. According to several witnesses, the taxi did not pose a threat to the convoy's security.[109]

A January 2010 SIGIR report assessed that oversight of DynCorp police training contracts by the Bureau of International Narcotics and Law Enforcement Affairs found that INL exhibited weak oversight of the DynCorp task orders for support of the Iraqi police training program.[110][111][112] It found that INL lacks sufficient resources and controls to adequately manage the task orders with DynCorp. As a result, more than $2.5 billion in U.S. funds were vulnerable to waste and fraud, although SIGIR's Iraq reconstruction inspector Stuart Bowen noted that there was no indication that DynCorp had misspent any of the $2.5 billion.[113][114]

billion.[115][116]

Afghanistan incidents[edit]

In 2009 DynCorp contractors paid a 15-year-old Afghan Bacha Bazi performer to perform lap dances and entertain them in Kunduz. Several Afghans were later arrested and investigated.[115][116][117] A Wikileaks cable released after the incident stated that the Afghan interior minister at the time, Hanif Atmar, asked the assistant U.S. ambassador to try to "quash" both the story and release of video from the incident.[115][118][119][120] In response to the incident, DynCorp fired four senior managers and established a chief compliance officer position, which focused on ethics, business conduct, related investigations, and regulatory compliance.[116] As of 2014 no DynCorp employee has faced criminal charges.[*citation needed*]

On July 30, 2010, a riot broke out when an Afghan car and a DynCorp vehicle crashed on a road near Kabul International Airport.[121][122] Although initial reports blamed the company and claimed four Afghans were killed in the accident, Sayed Abdul Ghaffar, the head of the Kabul police criminal investigations division, told *The New York Times* that the Afghan driver had caused the accident and said only one Afghan died in the wreck.[123]

Mozambique incident[edit]

According to Mozambican media reports, the Mozambican government seized and incinerated the 16-vehicle shipment pending the outcome of investigations into alleged tax evasion and deception by OTT Technologies Mozambique.[124]

Trump administration lobbying[edit]

DynCorp lobbied the Trump administration intensely to get the Trump administration to rescind a $10 billion contract that the Obama administration made with a rival company to service State Department aircraft.[12]

Article - Company-Histories

2020-company-histories-com-dyncorp.pdf / https://www.company-histories.com/DynCorp-Company-History.html

[...]

Private Company ; Incorporated: 1946 as California Eastern Aviation Inc.

Employees: 23,000

Sales: $1.81 billion (2000)

NAIC: 541513 Computer Facilities Management Services; 54169 Other Scientific and Technical Consulting Services; 56121 Facilities Support Services

Company Perspectives: The personal commitment of each DynCorp employee to our core values creates a consistent and exemplary level of service and ethical conduct, making DynCorp one of the most respected companies in the world.

Key Dates:

- 1946: Pilots returning from World War II form CEA air cargo business.
- 1951: CEA merges with AIRCAR civil aviation services company.
- 1961: CEA is renamed Dynalectron Corporation.
- 1964: Hydrocarbon Research, Inc. is acquired.
- 1976: Dynalectron restructures and relocates to McLean, Virginia.
- 1987: Dynalectron becomes DynCorp.
- 1988: Management buyout takes DynCorp private following a hostile takeover attempt from Miami financier Victor Posner.
- 1994: Annual revenues reach $1 billion as company focuses on IT.
- 2001: Growth in local and state government services helps push backlog to $6 billion.

Company History:

DynCorp, one of the largest employee-owned firms in the United States, has not been a very high-profile company, yet its behind-the-scenes logistics support operations for the Defense Department are extensive. The company provides ground support for Air Force One, maintains the State Department's telephones, and contracts coca (cocaine) eradication missions in Colombia. The U.S. Department of Defense accounts for a little less than half of DynCorp's total revenues. Some of DynCorp's earliest customers, such as the White Sands Missile Range in New Mexico, have remained loyal to the company for more than 50 years. CEO Paul Lombardi expects continued growth, most especially in providing services to state and local governments, due to the lack of a dominant player in that highly fragmented market.

War Surplus Origins

California Eastern Airways, Inc. (CEA) was not the only air cargo line started by military pilots returning to the United States after World War II. Nor was it the most enduring, as a purely civil transport enterprise. CEA would diversify, however, into one of the country's most important defense contractors. Within a year of its founding in 1946, California Eastern was serving both coasts. The company participated in the U.S. military airlift during the Korean War.

How To Detect a Forgery

The purchase of Land-Air, Inc. in the early 1950s brought CEA into a new field of technical services. Land-Air operated missile ranges and modified aircraft for government agencies. In 1951, CEA's total revenues exceeded $6 million. The next year, the company merged with Air Carrier Service Corporation

(AIRCAR), which sold commercial aircraft and spare parts to foreign airlines and governments. AIRCAR left the civil aviation business in 1957, focusing instead on defense and aerospace engineering, commercial electronics, and data management.

Dynalectron in 1961

By 1961, CEA needed a new name to more accurately reflect its diversified empire. The name Dynalectron Corporation was culled from 5,000 employee suggestions.

Dynalectron diversified into the energy services business via the 1964 acquisition of Hydrocarbon Research, Inc. At the end of the decade, the company instituted a plan to expand the commercial aviation services business while entering the specialty construction contracting field.

In 1976, Dynalectron established a headquarters in McLean, Virginia. The company restructured into four main operating groups: Specialty Contracting, Energy, Government Services, and Aviation Services. Dynalectron had made 19 acquisitions in its 30 years.

CEO Charles G. Gulledge reported that Dynalectron ended 1976 with stockholders' equity of $30 million, assets of $88 million, and a backlog of $250 million, all record numbers. Annual sales were a bit less than $300 million in the mid-1970s. The company posted a $1.5 million loss in 1978 due to write-downs on wastewater treatment plants being built by a subsidiary, AFB Contractors Inc. After this loss, the company ended its diversification program, focusing instead on cost-cutting to reduce debt.

One of the company's smaller subsidiaries provided the prospect of continued growth. Since 1963, the company's Hydrocarbon Research (HRI) unit had been developing a process to liquefy coal to produce a fuel for boilers. This work attracted national attention due to the Arab oil embargos of the 1970s and the public debate over energy policy. By the early 1980s, Texaco Inc., Ruhrkohle of West Germany, and C. Itoh & Co. of Japan had agreed to market Dynalectron's proprietary H-Oil process.

Other projects in which Dynalectron was involved included training helicopter pilots and technicians in Saudi Arabia. By 1981, Dynalectron had acquired another 14 companies, mostly in the aviation services field, which now encompassed cargo handling and aviation fueling. The company also had established a computer component repair business. Two public offerings of stock helped provide the capital for the purchases.

Revenues were $640 million in 1985; a third of the company's business was coming from the Defense Department. Revenues grew to $749 million in 1986.

In April 1987, Dynalectron agreed to pay $1.5 million to settle two bid-rigging cases related to its largest subsidiary, Dynalectric Co. A spokesman maintained the settlement was more a matter of financial expediency than an admission of any wrongdoing.

New Name, New Owners in the Late 1980s

Dynalectron adopted the DynCorp name in 1987. The company had become North America's fourth largest electrical contractor; its defense contracting and aviation services businesses were also considerable.

In early 1988, a management buyout took DynCorp private again and established an Employee Stock Ownership Plan (ESOP) following a hostile takeover attempt from Miami financier Victor Posner. An investment group led by DynCorp Chairman Jorge E. Carnicero paid $246 million for the company.

A restructuring grouped the company, which had 16,000 employees, into Government Services and Commercial Aviation Services divisions. DynCorp instituted a strategy to make it less dependent on defense work: by 1995, according to the plan, 40 percent of its contracts would not be defense-related, the professional services business would grow, and the company would achieve annual sales of $1.2 billion.

DynCorp aggressively pursued the emerging information technology (IT) business in the early 1990s, buying ten companies between 1990 and 1993 (Bell Technical Operations; Program Resources, Inc.; Meridian Corporation; Viar & Company; Aerotherm Corporation; Becon Services; B-K Dynamics; Science Management Corporation's Information Systems Division; Technology Applications, Inc.; and Network Management Inc.). A new group, Applied Sciences, was formed to encompass them in 1990.

Another business unit, Information & Engineering Technology (I&ET), was formed in 1994, charged with capturing large IT service contracts. In October of that year, DynCorp bought CBIS Federal Inc., renaming it DynTel Corporation.

DynCorp revenues reached the $1 billion mark in 1994. The company had posted losses, however, for the previous five years. Profits returned as revenues slipped to $909 million in 1995; new contacts worth $1.7 billion pushed the company's backlog toward the $3 billion mark. DynCorp reported receiving six merger proposals after posting the results.

In August 1995, DynAir, the commercial aviation unit, was sold in two pieces to Sabreliner Corp. of St. Louis and London's Alpha Airports Group PLC. DynAir had accounted for 5,000 of DynCorp's 23,000 employees.

Focus on IT in the 1990s

Under CEO [Daniel Richard Bannister (born 1930)], DynCorp was dedicating itself to its role as one of the fastest growing providers of IT services in the Washington, D.C. area. Still, these services were accounting for less than 20 percent of the company's total revenues. Most of the company's work came from the low-tech "roads and commodes" end of the business.

Dyncorp posted record revenue and backlog figures in 1996, giving ample reason to celebrate during the company's 50th anniversary year. At the beginning of 1997, another banner year, [Daniel Richard Bannister (born 1930)] became company chairman while Paul V. Lombardi assumed the titles of president and CEO. Lombardi had joined the firm five years earlier as head of its Governmental Services Group.

Some new businesses were added during the mid-1990s. Data Management Design, Inc., a provider of workflow solutions, was acquired in 1996. DynSolutions, added in 1997, developed information management systems for commercial users. DynCorp Management Resources, also added in 1997, focused on state and local government services.

In February 1998, DynCorp bought FMAS, a health information systems provider. Later in the year, DynCorp entered a unique public-private partnership to operate the Virginia Space Flight Center.

GTE Information Systems was acquired in late 1999 and renamed DynCorp Information Systems. It would soon install a unique, completely wireless computing infrastructure at Virginia Union University. The acquisition was one of DynCorp's more troublesome; the company eventually sued GTE for misinformation regarding the profitability of a phone system for prisoners.

During 1999, DynCorp moved to a new headquarters building in Reston, Virginia. The company's impressive financials continued to grow throughout the late 1990s and into 2000, in large part due to an industry-leading 66 percent contract win rate. Backlog was $6 billion in the spring of 2001.

DynCorp organized its healthcare services business under the new AdvanceMed LLC subsidiary in January 2001. Reve- nues were about $75 million a year; the unit specialized in predictive outcome analysis for large insurers and hospitals.

Lombardi was bullish on the prospect of future growth in services for state and local governments, due to its huge size and lack of dominant players. DynCorp's Management Resources unit had grown 40 percent in 1998 alone. In late 2001, DynCorp planned to merge this business with TekInsight, a public IT company, holding a 40 percent ownership in the new company to be called DynTech.

The September 11 terrorist attacks on the World Trade Center and the Pentagon had implications for a variety of DynCorp's lines of business. The company operated INS stations along the Mexican border. According to the Washington Business Journal, many defense agencies consulted with the firm regarding contingency plans and the government asked DynCorp to make its emergency telephone system completely wireless. DynPort Vaccines, a joint venture with Porton International Ltd., researched biological weapons.

Principal Subsidiaries: AdvanceMed LLC; Dyn Marine Services, Inc.; DynCorp Information Systems LLC; DynCorp Management Resources, Inc.; DynCorp Systems & Solutions, Inc.; DynCorp Technical Services; DynCorp TechServ; DynSpace Corporation; DynTel Corporation.

Principal Divisions: DynCorp Information and Enterprise Technology; DynCorp Information Systems; DynCorp Technical Services.

Principal Competitors: Electronic Data Systems Corporation; Lockheed Martin Corporation; PRC Inc.; Raytheon Company; Science Applications International Corporation; TRW Inc.

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E

A B C D E F G H I J K L M N O P Q R S T U V W X Y Z

PEOPLE (by last name / then D.o.B.)

- Walter Roy **Edgington** (born 1925)
- Christopher J. **Elias** (born 1957)
- David Friedman **Epstein** (born 1951)
- Jeffrey Edward **Epstein** (born 1953)
- Fritz Walter **Ermarth** (born 1941)
- Dr. Charles Albert **Evans** (born 1912)
- Daniel Jackson **Evans** (born 1925)
- Marvin Davis **Evans** (born 1925)

PLACES / COMPANIES / OTHER

- E-Systems, Incorporated
- Electronic Arrays Incorporated
- Edlow International Company
- EpiGenX Pharmaceuticals
- Engelhard Corporation

E-Systems, Incorporated

Also see :

- Melpar Incorporated **(LTV Electrosystems** acquired **American Standard Inc.'s Melpar Division** in 1970 and established a new Commercial Services Division in Greenville to perform heavy structural modification and maintenance for the airlines. **In 1971 LTV Electrosystems acquired Hamilton Watch Company's Electronics division and established a new domestic international sales company known as Electrosystems Export Company**. Nevertheless, after unloading several of its acquisitions, employment in 1970 was down to 7,000 from a high in 1968 of more than 11,000. **In 1972, E-Systems emerged as an independent, publicly owned corporation, headed by John W. Dixon, who had served as LTV Electrosystems' president and chief executive officer since 1969.)**
- Raytheon Intelligence, Information, and Services Business Unit (In 1995, Raytheon Company acquired E-Systems, Inc. ; E-Systems was renamed Raytheon Intelligence and Information Systems.)

1994 : Info from Fundinguniverse.com : E-systems Inc. History (1994)

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Address: 6250 LBJ Freeway / P.O. Box 660248 / Dallas, Texas 75266-0248 / U.S.A.

Public Company

Incorporated: 1964 as LTV Electrosystems, Inc.

Employees: 18,600

Sales: $2.1 billion

Stock Exchanges: New York London

SICs: 3812 Search Navigation and Aeronautical Systems; 3679 Electronic Components, Nec

Company History:

E-Systems, Inc. is one of the leading defense electronics companies in the United States. This diversified company designs, develops, produces, and services high technology systems, especially surveillance, verification, and aircraft ground-land navigation equipment, primarily for defense applications around the world. The company also develops electronics programs and systems for business, industrial, and nondefense government programs and agencies. Much of E-Systems' business serves the government national security market, with more than two-thirds of its business falling within the two primary areas of intelligence and reconnaissance command, control, and communications. The company includes five divisions and four wholly owned subsidiaries.

The company's definition of electronic warfare includes "timely detection, identification, location, and tracking of the electromagnetic emissions associated with foreign communications and weapons systems," and refers to strategic systems for intelligence, reconnaissance and surveillance applications, tactical systems relating to electronic countermeasures, and jamming and deception devices. The company's command, control, and communications segment includes communications equipment as well as command and control systems to process data for analysis and decision making. **The company develops and produces a wide range of systems, including air traffic control systems for the Federal Aviation Administration and communications systems for NATO.** The guidance, controls, and navigation segment develops and manufactures flight controls for commercial and military aircraft, including missile steering and tracking systems. The aircraft maintenance and modification area provides specialized service for aircraft of all types, both military and commercial.

E-Systems' predecessor company was created in December 1964 when the LTV Temco Aerospace division of Ling-Temco-Vought Inc. formed LTV Electrosystems, Inc. as a wholly owned subsidiary. In April of the following year, LTV Electrosystems became a publicly-held subsidiary and was listed as an over-the-counter stock. During the summer of that year, it acquired from its parent nearly all of the operating properties of LTV Military Electronics Division (known as the Garland Division), Continental Electronics Manufacturing Company, and Continental Electronics Systems, Inc. It also opened a new facility in South Carolina as an adjunct to its Greenville Division. Sales for 1965 were almost $81 million, with net earnings of $2.1 million.

During the period from 1965 to 1972, the company focused on expansion. A series of acquisitions began during this time that included such companies as Memcor, Inc., Pickard & Burns Electronics, the Eagle Transport Company. However, overly rapid growth led to large debt and deteriorating profits, and the company was forced to divest itself of some companies, only a year or two after acquiring them, to cut costs and rid itself of marginal operations that could not promise high enough return for the financial risk involved. In 1969, a Memcor plant and most of the assets of Continental Electronics Manufacturing

Company were sold because of low profits.

By 1970, the company had returned to profitability; it had net sales of almost $200 million with earnings of $2.8 million, up from the previous year's net loss of $4 million. **LTV Electrosystems acquired American Standard Inc.'s Melpar Division in 1970 and established a new Commercial Services Division in Greenville to perform heavy structural modification and maintenance for the airlines**. In 1971 LTV Electrosystems acquired Hamilton Watch Company's Electronics division and established a new domestic international sales company known as Electrosystems Export Company. Nevertheless, after unloading several of its acquisitions, employment in 1970 was down to 7,000 from a high in 1968 of more than 11,000.

In 1972, E-Systems emerged as an independent, publicly owned corporation, headed by John W. Dixon, who had served as LTV Electrosystems' president and chief executive officer since 1969. During its first year as a public company, sales reached $156 million, and, with $34 million spent on research and development, total company assets amounted to $90 million. The company employed 5,500 employees, 26 percent of whom were engineers, scientists, and technicians. The entire company occupied less than three million square feet of floorspace.

The 1970s was a decade of reorganization and acquisition for the newly renamed E-Systems Inc. In 1973, the company formed its Aircraft Systems Group through consolidation of its Greenville and Donaldson divisions and the newly acquired Serv-Air, Inc. Serv-Air maintained, modified, and supported all National Aeronautics and Space Administration (NASA) aircraft flown by the astronauts at the Johnson Space Center in Houston. That year, E-Systems also consolidated its Montek, Garland, and Melpar divisions with the newly-acquired TAI, Inc. to form the Electronics Systems Group. TAI was an engineering firm providing consulting services for the construction of telecommunications networks around the world. E-Systems further acquired a major product line called Digicom from GTE Sylvania to augment the company's data systems capabilities. Offices in Korea and Brazil were opened in addition to an international office at the Dallas headquarters.

In 1973, E-Systems' Greenville Division began providing depot maintenance, logistics support, and special modifications for aircraft belonging to the U.S. Air Force's Special Air Mission Fleet. This important contract provided service for aircraft used by the president of the United States, the vice-president, and cabinet members.

In 1974, the Memcor Division became the basis for the newly formed Production Electronics Group. During this time, E-Systems acquired Electronic Communications, Inc. and Air Asia Co., Ltd. of Taiwan from Air American, Inc. In 1976, the company formed an Energy Technology Center for research on developing practical uses for solar energy. The Commercial Division was established in 1978, and merged with the TelSatCom Division the following year.

By the mid 1970s, E-Systems was the world's top supplier of military radios and large earth station antennas for satellite communications as well as one of the top technical consultants for microwave telecommunications systems. E-Systems' business consisted of about 55 percent defense contracts and 45 percent international, industrial, and other nondefense contracts. The company was investing considerable research and development funds in digital techniques, microminiaturization, surface acoustic wave devices, digital processing, and voice and video compression.

E-Systems began its participation in the automation of air traffic control in 1981 with the development and production of the Flight Service Automation System (FSAS) for the Federal Aviation Administration. By 1990, the system included an extensive nationwide network of 400 computers and 3,000 display terminals involving 18,000 airports. It provided general aviation pilots with weather briefings and navigation advisories and assisted them with the filing of flight plans. Updated replacement systems for FSAS provided extensive use of satellite technology and color displays for windowing weather graphics and textual data.

E-Systems had record sales of $827 million in 1983 and booked new orders amounting to more than $900 million. The company's Garland Division was awarded a $31 million contract by McDonnell Douglas Corporation to upgrade the U.S. Air Force F-4G aircraft with a system to suppress enemy surface-to-air missiles and anti-aircraft artillery systems. The system utilized special electronic warfare equipment along with anti-radiation missiles and conventional weapons. This contract substantially increased the importance of the company's electronic warfare product area. That year Fortune magazine rated E-Systems first among company's known for high returns to investors over the past ten years.

The company substantially increased its research and development budget in 1984, concentrating heavily on defense electronics; electronic warfare; and command, control and communications. Over the following year, more than 65 percent of the company's sales were generated by electronic warfare equipment and systems, and sales and new order bookings were at an all time high. E-Systems expanded many of its facilities, opening a total of 264,000 square feet of automated production and engineering facilities at the Communications Manufacturing Division in St. Petersburg, Florida, and the Garland Division. It also added 240,000 square feet of engineering and administrative space at ECI in St. Petersburg and Melpar, based in Falls Church, Virginia.

In 1986, for the first time in its history, E-Systems had sales of more than $1 billion. By this time, employment was at 15,000 with 45 percent of the employees engaged as engineers, scientists, and technicians. The company occupied more than 5.6 million square feet of floor space; research and development expenditures were at a record $211 million; and company assets totaled over $600 million.

This was also the last full year in which John W. Dixon served as chair and chief executive officer. Dixon stepped down in 1987 to become Chairman Emeritus, and was succeeded by David R. Tacke. Under Tacke, the company outbid Lockheed and General Dynamics to develop an important new program known as the Joint Service Imagery Processing System (JSIPS). JSIPS was a transportable ground station for multisensory processing and dissemination of national strategic and tactical imagery. E-Systems also completed a mammoth processing system utilizing high speed programs able to process information at a rate of four billion bits per second and store more than one and a half trillion bits. Analysts compared the processing of this amount of data to processing the contents of the Library of Congress in an average work day. The system, which could take up to an acre of floor space, provided information to top military and civilian defense officials.

In the international arena, E-Systems sold its Taiwanese-based subsidiary Air Asia, after finding it incompatible with the rest of the company's business. The company next entered into a joint venture with the West German company GROB TFE to develop the EGRETT-1, a single-engine, turboprop aircraft. E-Systems was responsible for the plane's aircraft systems integration, which could be adapted for commercial communications, environmental protection activities, or scientific applications such as geophysical surveys. In 1990, E-Systems entered into TELOS, a joint venture with German partners formed for the operational maintenance and logistics support of EGRETT aircraft programs. E-Systems considered this EGRETT program an important opportunity through which to develop its international marketplace, which the company considered a big growth area despite the difficulties in exporting sensitive high technology

Tacke served as head of the company only until spring 1989, when E. Gene Keiffer, the former president and chief operating officer became chair and CEO of E-Systems. That year the company acquired Engineering Research Associates, located in Vienna, Virginia, a technology leader in the field of high-frequency surveillance systems.

Also during this time, the company was continuing its work on high performance, high speed computer systems and software, applying Very High Speed Integrated Circuit, Monolithic Microwave Integrated Circuit, and Gallium Arsenide technologies to specialized military systems. E-Systems developed artificial intelligence applications for defense systems, as well as specialized systems and programs for speech processing, digital imagery enhancement, and data base management. The company also explored the field of neural networking, which allowed computers to recognize and analyze patterns of information. Work continued in the area of mass data storage as well as the development of a robotic, mass storage library system using cassettes instead of computer tapes. Furthermore, the company became involved in research concerning new ways to apply fiber optic technology to defense systems.

E-Systems acquired HRB Systems Inc. from Hadson Corp. in 1990 for $65 million, half the price Hadson had paid only two years before. Hadson attributed HRB's decreased market value and declining sales to the end of the Cold War. E-Systems CEO Keiffer, however, thought the investment was a good one, observing that the new acquisition would complement and expand E-Systems' position in the advanced intelligence and reconnaissance systems marketplace. HRB designed and developed signal collection, processing, and analysis systems and was based in State College, Pennsylvania, with about 1,300 employees.

Also in 1990 E-Systems finally settled a criminal and civil lawsuit involving its production of radios for the U.S. Army. The radios were supplied by E-Systems' Memcor division, which had been providing tactical radios to the Army for more than 15 years and at one time had been the world's leading producer of such equipment. In 1985, the Army terminated for default two contracts with Memcor totaling about $19 million. Following the cancellation, E-Systems was forced to shut down Memcor, laying off most of the division's employees. The company appealed the Army's terminations and also filed a $13-million claim against the Army. In early 1988, the federal government informed E-Systems that it was initiating a criminal investigation to determine whether the company had violated any procurement regulations associated with the cancelled contracts. The government charged that three managers and a supervisor at the Memcor plant had neglected to report test failures and repairs as required and, moreover, created fake documents on untested radios. Several former E-Systems employees were indicted for the test falsifications; E-Systems plead guilty to the charges and agreed to pay $4.6 million in fines. (The former complyees were acquited of the criminal charges.) In addition, as part of the settlement, E-Systems agreed to drop its suit against the government. Payment of the fines enabled E-Systems to continue to do business with the U.S. government.

In 1993, as the Cold War ended and eastern and western Germany became unified, Germany announced a freeze on defense contracts, a move that affected profits at E-Systems. The EGRETT project was scrapped for both financial and political reasons; analysts estimated that the contract would have brought in between $600 million and $1 billion for E-Systems through the end of the decade.

Consequently, E-Systems began to focus increasingly on commercial and industrial markets over the next few years, emphasizing the adaptation of leading edge technologies for existing systems and applying those technologies in new ways to serve nonmilitary purposes. The company sought wider distribution of its robotic data storage system, EMASS, developed for use by defense and intelligence agencies for storing massive amounts of data on tape cartridges. Major oil companies had purchased the systems to keep track of seismic data, but E-Systems was still having difficulty breaking into other information-intensive industries. In 1993 E-Systems entered into agreements with IBM, Conves, and Cray Research to help market the system. IBM agreed to include the EMASS system along with other data storage systems it marketed.

Other nondefense projects included a contract with the California Department of Forestry and Fire Protection to operate and maintain the state's 31 aircraft in support of the its wildfire suppression program. Furthermore, the U.S. Department of Education established a $16 million contract with E-Systems for a national student loans and grants database. The company had previously won a data processing contract for the government's Stafford Loan program, formerly known as the Guaranteed Student Loan program. In the medical field, a new E-Systems unit, E-Systems Medical Electronics, Inc., worked to promote the company's image-processing, distribution, and storage technology, acquiring Advanced Video Products, Inc., a Massachusetts-based medical electronics company, in the process.

Nevertheless, U.S. Defense Department and military work continued to generate the bulk of E-Systems' income. During 1992, the company's Serv-Air division received a contract from the Army, expected to generate more than $600 million over four years, to operate and manage activity for the Special Operations Command by providing maintenance, repair, logistics support, systems engineering, and system modifications for military helicopters, avionics equipment, and communications equipment. In early 1993, E-Systems received a $64 million contract to provide two Learjet instrumentation systems and to train pilots and maintenance workers and provide spare parts supplies as well as operator and maintenance manuals. This contract was expected to generate as much as $400 million with its renewal options.

In an E-Systems annual report of the early 1990s, management observed that "in an environment of reduced U.S. forces abroad, reconnaissance, intelligence collection, and signal processing become even more important." E-Systems speculated that the industry could become more competitive as other defense contractors sought to replace lost programs by entering E-Systems' niche in reconnaissance and surveillance, communications, and special aircraft integration. Company officials expected that international sales would be the company's greatest source of growth in years to come as other nations assumed more responsibility for their own security. They also predicted that nonmilitary contracts would account for ten percent of business by the end of the 1990s.

Principal Subsidiaries: E-Systems Medical Electronics, Inc.; HRB Systems, Inc.; Serv-Air, Inc.; Engineering Research Associates, Inc.

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Housatonic

Walter Roy Edgington (born 1925)

Born April 26, 1925

Died

Worked at :

- GTE Corporation (with GTE Sylvania Products)

Associations

- Bernie Edward Zettl (born 1922) (GTE / Pentagon legal case, 1980s)

Bio for Walter Edgington on Ancestry

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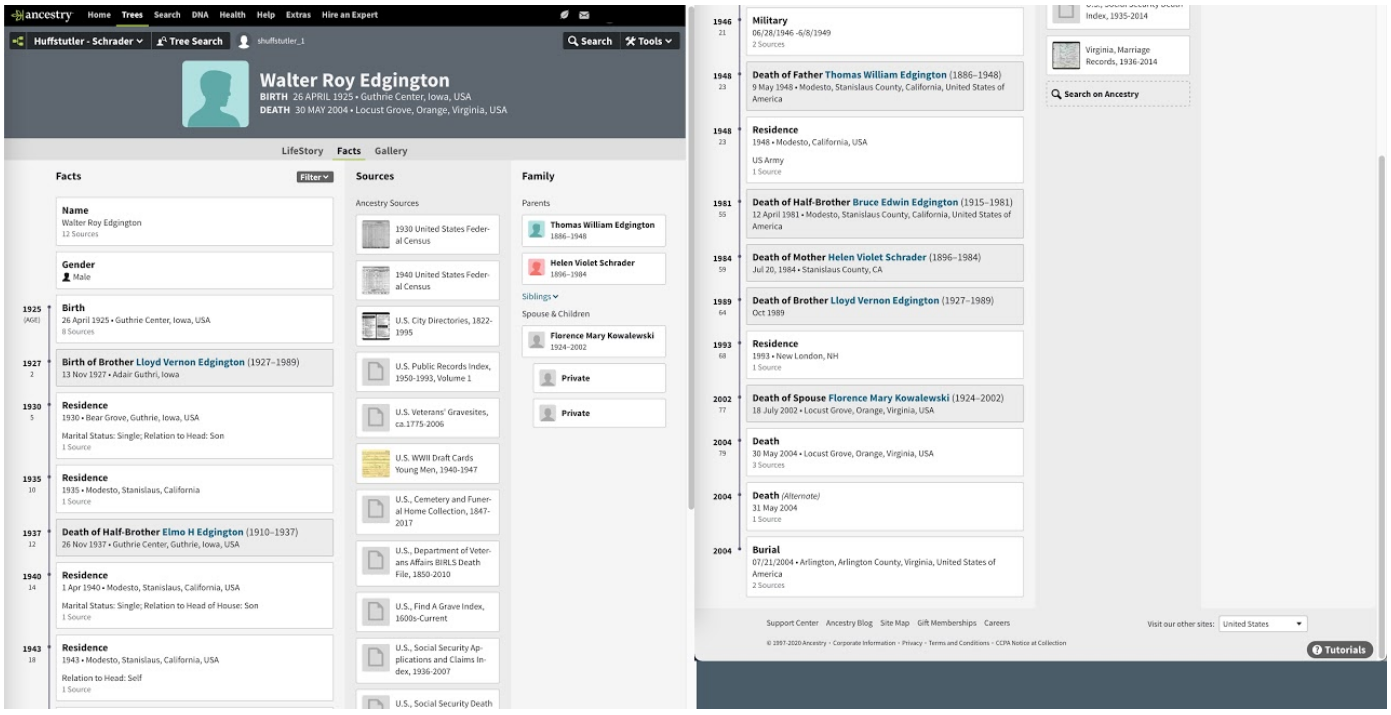

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1969 (Feb 19) -

With engineering and support of Sylvania Electric Products Inc. (aka **GTE Sylvania Products** , manufactured by **GTE Corporation** , which purchased Sylvania in 1959).

Full newspaper page : [HN01E3][GDrive] / (Note - this is a repeat, but with less info .. full page [HN01E1][GDrive] / clip [HN01E2][GDrive])

The Daily Register (Red Bank, New Jersey) · 19 Feb 1969, Wed · Page 15 | FIND | CLIP | PRINT

Name Head Of Sylvania Facility

NEW SHREWSBURY — Walter Edgington, a specialist in electronic countermeasures, surveillance and communications, has been appointed manager of the engineering and support facility being established in the Fort Monmouth area by Sylvania Electric Products Inc.

Sylvania is a subsidiary of General Telephone and Electronics Corporation.

Scheduled to begin operations in March, the new Sylvania facility will be known as the Monmouth Engineering Center (MEC). It will serve as a center for systems analysis, development, test, evaluation and maintenance in support of such organizations as the Army Electronics Command, Project Mallard Program Office, the Communications - Electronics Agency, and the Army Satellite Communications Agency.

Mr. Edgington joined Sylvania in 1966 as an engineering specialist at its Electronic Defense Laboratories in Mountain View, Calif. Since that time he has served in staff capacity planning and coordinating tactical reconnaissance, electronic warfare, and anti-submarine warefare programs.

The new Sylvania facility is in the Mid-Monmouth Industrial Park, less than a mile from the Electronics Command's headquarters.

[HN01E4][GDrive]

1969 (April)

new facility - https://www.newspapers.com/image/516985812/?terms=%22walter%20edgington%22&match=1

1978 (Nov 10)

https://www.newspapers.com/image/426333882/?terms=%22walter%20edgington%22&match=1 - on tv !

sep 11 1985

https://www.newspapers.com/image/739186/?terms=%22walter%20edgington%22&match=1

1969 (July 03)

Full newspaper page - [HN01EC][GDrive]

The Daily Register (Red Bank, New Jersey) · 03 Jul 1969, Thu · Page 3

Busy Spring Market For Realty Broker

FAIR HAVEN — Mrs. Olivia S. Dutcher, five-star broker of the sales staff of the Ray Van Horn Agency, Realtors, reports a busy spring market and says her record of sales is far ahead of last year's.

Mrs. Dutcher has earned bonuses in the months of March and April for sales exceeding the office's maximum goal.

Mrs. Dutcher was the broker in the sale of a brick and frame ranch house in the Heathcliff section of Rumson for Potere Inc. The residence, more than 110 feet long, is set far back on a wooded plot near Rumson Road with a lot frontage of 413 feet. The purchasers are Mr. and Mrs. Walter R. Edgington from Sunnybank, Calif. Mr. Edgington is in charge of the Monmouth Engineering Center for Sylvania Electric Products, Inc., a division of General Telephone and Electronics Corporation.

cont..

[HN01ED][GDrive]

1973 (Sep 03) - Commerce Today - "Welcome,But Where Have You Been?" Construction Trade Mission Asked"

PDF : Commerce Today, all second-half 1973 issues : [HP004K][GDrive]

DISCUSSION IN BAHRAIN—*Joseph Rossetti (right), of Allis-Chalmers, describes his firm's equipment to Mohamed Jalal (center), a leading Bahraini merchant, and one of his managers.*

'Welcome, But Where Have You Been?' Construction Trade Mission Asked

"Welcome — we like Americans and your products but where have you been?" This seemed to be the general comment of most leading merchants and government officials in five countries and eight cities visited by a recent Building and Construction Trade Mission to the Middle East.

The 12 Mission members found a genuine interest in reversing the limited U.S. presence in a market that is growing at astounding rates occasioned by increasing oil revenues in a stronghold of free enterprise philosophy. Specific opportunities were found in areas of design and consultancy, construction, maintenance and service of existing and future facilities and industrial joint ventures.

Construction projects abound in areas of housing, airports, hospitals, communications systems, universities and schools. While in some countries initial major projects such as port facilities have been or are nearing completion, development planning continues at a rapid pace.

Emphasizing the potential market for U.S. goods and services, Mahmoud A. Taiba, Deputy Minister of Commerce and Industry for Saudi Arabia, pointed out to mission members that "made in U.S.A." still represents quality in Saudi Arabia and that quality is in many cases as important a factor as price.

Time for U.S. initiative

The Mission found that U.S. building materials and equipment generally were in good demand. In the Gulf States, due to long British official presence, the first sources of supply still are predominantly British. However, contractors and merchants indicated a strong interest and desire for U.S. participation in the market particularly for highly technically designed products.

The United Arab Emirates, with its more recent increase in revenues, is just beginning to open up for high quality design services and construction supervision. "Architectural and engineering opportunities for U.S. firms should increase when one or two major buildings are built under new U.S. concepts," according to Louis McMillan, President of The Architects Collaborative of Cambridge, Mass.

While the Middle East markets are expanding at an outstanding rate, so is the competition. A number of leading Chamber of Commerce and Government officials pointed out that while there is high respect for the quality of American equipment and services, many jobs and opportunities have gone to other competing nations primarily due to their attention to the market. Some of the key suggestions made and reiterated by U.S. Embassy Officers in each of the countries visited are:

► Personal contacts—the Arab world works on personal friendship and trust. Personal attention cannot be overemphasized as a means of developing a local market for goods or services. Frequent visits and diligent followup by company representatives to their agents and customers is a must.

► A good agent—in each of the countries visited the importance of a local agent was stressed; indeed in many countries it is mandatory.

► After-sales service—successful firms in the marketplace attributed much of their success to meticulous attention to maintenance and after-sales service. This is not only necessary to meet the competition but to maintain the reputation of a product in a market which is increasingly able to demand after-sales service and parts availability as a condition of sale. Strong, on-the-ground agent support and training pays big dividends.

Mission members met with over 200 potential representatives during the trip and expect to appoint a total of 58 local agents or representatives. In most countries one agent for the country was deemed adequate. However in Saudi Arabia, because of the nature of the market, many firms appoint several agents with specific territories such as Jidda, Riyadh and the Eastern Province.

Ross P. Wright, President of Reed International Sales Co., Erie, Pa., summed it up this way: "I accomplished about 300 percent more than expected on this trip in signing agents for my products.

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Picture 1 - DISCUSSION IN BAHRAIN-Joseph Rossetti (right), of Allis-Chalmers, describes his firm's equipment to Mohamed Jalal (center), a leading Bahraini merchant, and one of his managers.
[HP004L][GDrive]

DISCUSSION IN JIDDA—*Theodore A. Arapoglou (left), of Arpol Petroleum, ezplains business objectives to Yousuf Bannan (right), Secretary General of the Jidda, Saudi Arabia, Chamber of Commerce and Chamber member Omar Badahdah.*

Alone, on a personal mission to the area, these agency contacts would have taken over three months or more, if I could have made them at all."

The Mission was comprised of 11 U.S. company executives, four of whom are presidents of their own companies. Their product and services lines included architectural and engineering planning, public utility and environmental engineering, heavy construction equipment, building materials, concrete pipe and brick, steel tools and special lubricants, household specialty equipment, communications and field product management systems. After visiting Kuwait, Saudi Arabia, Qatar, the U.A.E. and Bahrain, the mission estimates resulting sales and services at $20 million, following establishment of agency agreements.

Mission members were J. S. Rossetti, Allis Chalmers Overseas, Milwaukee; Theodore A. Arapoglou, Arpol Petroleum Co., New York; Luis Arias, Besse Overseas Corp., Alpena, Mich.; Walter Edgington, General Telephone and Electronics Sylvania, Washington, D.C.; Sebouh Toukhanian, KDT, Inc., Huntington Woods, Mich.

Also, Frank La Due, McCracken Concrete Pipe Machinery Co., Sioux City, Iowa; W. A. Cheney, Metcalf and Eddy, Boston; Hassan Abu Middain, J. I. Case Co., Racine, Wis.; Ross P. Wright, Reed International Sales Co., Erie, Pa.; Louis A. McMillan, The Architects Collaborative, Cambridge, Mass., and William S. Lord, U.S. Steel International, New York. James H. LeFeaver, Director of the U.S. Regional Trade Development Office, Beirut, was Mission Director.

Document Change

Beginning on Jan. 1 the only acceptable form of the alternate (horisontal) Shipper's Export Declaration will be Commerce Form 7525-V-Alternate-Intermodal, the Bureau of the Census has announced.

Until that time, both the old Alternate Shipper's Export Declaration, Form 7525-V-Alternate, revised Sept. 15, 1971, and the current Alternate Intermodal Form, Form 7525-V-Alternate-Intermodal, dated Jan. 1, 1971, will be acceptable. No change in the continued acceptability of the regular (vertical) Shipper's Export Declaration, Commerce Form 7525-V is involved.

National Foreign Trade Meeting To Hear McCoy

The 60th National Foreign Trade Convention will be held Nov. 12-14 at the Waldorf-Astoria Hotel, New York, with Charles B. McCoy, of E. I. du Pont de Nemours & Co., serving as chairman and keynote speaker for the international business community.

Robert M. Norris, president of the National Foreign Trade Council, sponsors of the meeting, announced that "Essentials for Restructuring the International Economic System" will be the convention theme.

Sessions and forums of the convention will be concerned, among other issues, with international monetary reform and finance; international management; foreign private investment; the balance of payments; international trade policy; East-West trade, and multinational corporate citizenship.

Sessions On China Added To East-West Seminars

Briefing sessions on doing business with the People's Republic of China have been added to a series of East-West trade seminars in New York, Sept. 25-27; Chicago, Oct. 29-31; Los Angeles, Nov. 27-29, and Atlanta, Dec. 12-14.

The newly-established National Council for U.S.–China Trade is co-sponsoring the sessions with the Washington-based International Management and Development Institute. Speakers will examine the role of the next two Canton Trade Fairs as a means of evaluating and entering the China market.

For further details see story in *Commerce Today*, Aug. 20, Page 34, or write: Nancy Joseph, International Management and Development Institute, Watergate Office Bldg., Suite 905, 2600 Virginia Ave., N.W., Washington, D.C. 20037.

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Picture 2 - DISCUSSION IN JIDDA—Theodore A. Arapoglou (left), of Arpol Petroleum, explains business objectives to Yousuf Bannan (right), Secretary General of the Jidda, Saudi Arabia, Chamber of Commerce and Chamber member Omar Badahdah.
[HP004M][GDrive]

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1975 (April) - Senate hearing

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PROPOSED REDUCTIONS IN THE EXPORT PROMOTION BUDGET AND CHANGES IN FEES FOR COMMERCE DEPARTMENT SERVICES

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HEARINGS

BEFORE THE

SUBCOMMITTEE ON FOREIGN COMMERCE AND TOURISM

OF THE

COMMITTEE ON COMMERCE UNITED STATES SENATE

NINETY-FOURTH CONGRESS

FIRST SESSION

ON

THE PROPOSED REDUCTIONS IN THE BUDGET FOR EXPORT PROMOTION PROGRAMS AND CHANGES IN FEES FOR SERVICES PROVIDED BY THE DEPARTMENT OF COMMERCE

APRIL 28 AND 29, 1975

Serial No. 94-18

Printed for the use of the Committee on Commerce

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6. I thoroughly agree. Some larger companies are sufficiently staffed and are financially capable of doing the job on their own. On the other hand, the small and medium-sized companies which comprise our association depend on NMTBA and the government for support of their export activities. No company, regardless of its size, can accomplish the role played by the U.S. government in identifying new markets and opening the door to potential customers overseas.

I'm not sure whether the reduction in Commerce Department services and reliance on floating exchange rates creates a bias in favor of large multinational companies. However, it would be fair to say that no company in our industry has the capacity to move fast enough in and out of domestic and overseas markets to take advantage of the effect of floating exchange rates.

I hope these answers will be helpful to you in the formulation of your subcommittee's report.

Sincerely,

JAMES N. FARLEY,
President, Speedfam Corporation, representing the National Machine Tool Builders' Association.

Senator INOUYE. Our next witness is Mr. Walter Edgington, representing the Electronic Industries Association of Washington, D.C.

Welcome, sir. Would you care to identify your associate before proceeding?

STATEMENT OF WALTER EDGINGTON IN BEHALF OF THE GOVERNMENT PRODUCTS DIVISION, ELECTRONIC INDUSTRIES ASSOCIATION, WASHINGTON, D.C.; ACCOMPANIED BY WILLIAM A. SIMCOX, DIRECTOR, PLANNING AND REQUIREMENTS PROGRAMS OF THE GOVERNMENT PRODUCTS DIVISION

Mr. EDGINGTON. Thank you, sir. I am accompanied today by Mr. William A. Simcox, director of the planning and requirements programs of the Government Products Division, Electronic Industries Association.

We welcome this opportunity to present the views of our industry on the reduction in the export promotion program of the Department of Commerce.

The Electronic Industries Association is composed of 240 member companies employing over 1 million people. Members of the government products division are involved in providing equipment and services to the National Aeronautics and Space Administration, the Department of Transportation, ERDA, and most other Government departments and agencies, including, of course, the Department of Defense.

Many companies in recent years have sought new markets in various countries with the aid of the export promotion programs of the Department of Commerce. It is our general opinion that these programs have contributed greatly to redressing the imbalance in trade that has developed and in stemming the gold flow.

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[Slide 1 follows:]

ELECTRONIC INDUSTRIES ASSOCIATION

GOVERNMENT PRODUCTS DIVISION

The Government Products Division of Electronics Industries Association is comprised of a large number of firms, some major in size, some middle level, and some small corporations, as well as some research firms.

Our statement today concerns the proposed cut in the international marketing and export promotion side of the Department of Commerce.

[HG009Y][GDrive]

[Slide 2 follows:]

DEPARTMENT OF COMMERCE
DOMESTIC AND INTERNATIONAL BUSINESS ADMINISTRATION
FISCAL YEAR 1976 REQUEST

	POSITIONS	AMOUNT ($000)
PRESIDENT'S PROPOSED FY 1976 APPROPRIATION REQUEST	829	$27,975
FY 1975 CONGRESSIONAL APPROPRIATION	993	$34,472
	−164	−6,497

THE FY 1976 REQUEST IS ***164 POSITIONS*** AND ***$6,497,000*** LESS THAN FY 1975 REQUEST.

At the outset, let me say that the industry concern is not the amount of money in this cut. In the total budget, this does seem like a small amount. More to the point, however, is the theory behind this cut and how it affects our companies who use this unique service support provided by the export promotion people in the Department of Commerce.

[Slide 3 follows:]

NEW POLICY ON EXPORT PROMOTIONAL SERVICES

» FULL COST RECOVERY «

- ***Department of Commerce, beginning in FY-76, must set fees to recover 'FULL COST' of providing export promotional services to established exporters.***
- ***New fee schedule is estimated to be at least double or possibly triple the present level.***
- ***Fee increases will drive established exporters away from Commerce promotional programs.***
- ***Commerce-sponsored promotional events will diminish in number and size, denying new exporters needed market access.***
- ***RESULT: An increasing impact on U. S. ability to sell overseas.***

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The concept called "full-cost recovery" is related to this cut in international marketing and export promotion. We have studied the theory of full-cost recovery and disagree with both the concept and principal.

In the first place, industry pays corporate taxes in the process of manufacturing and developing and selling its product. Governmental structures are developed as a result of needs of both the people of the Nation and the institutions of the Nation, which includes corporations.

These governmental structures in turn are paid for by the taxation levied. It therefore appears inequitable for industry to be asked to pay for this service again. Further, in addition to requiring payment for the promotion service, full-cost recovery presumes that the related government department overheads will be loaded back onto the cost of the service.

Therefore, what we are talking about is double payment. Our companies would be paying taxes for a level of government support and then asked to pay the Government for specific direct support service.

Additionally, there is a differentiation in the degree of payment contained in full-cost recovery. Firms who are new to market will be levied at one cost level. Firms that are experienced in the export trade will be levied at a higher cost. Firms that are experienced in export trade will therefore be asked to pay sometimes two or three times the amount levied on the smaller and "new-to-market" firms. The levy will work a hardship on both types of firms, the experienced export corporation and the "new to market", but in different ways.

For example, the larger export firm will evaluate the increased costs of using the export promotion service in relation to particular fairs, trade shows, catalog shows, or similar events, as well as their other associated cost. If the new cost for the service is significant enough, there will be a management judgment made not to participate, or a judgment may be made to use those moneys to market separate or individually.

As a result, the constructive collaboration between the U.S. Government and major exporters may diminish. This collaboration and participation in major international events has proven highly efficient in the past. These promotional activities have related to the initial contacts that have led to many very large sales to the benefit of the entire U.S. economy. Some of these initial contacts have been made under the general umbrella of the U.S. Government support at a trade fair, exhibition or sponsored function.

Smaller firms will generally join with a larger group of firms because the group attracts interest and enhances the small firms' participation. As larger firms' participation fall off, smaller firms will shy away because there isn't the critical mix necessary to make a successful show. Therefore, in either the case of the large firm or the small firm, the cutting back of the export promotional services may have a negative effect.

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[Slide 4 follows:]

OVERALL IMPLICATIONS OF COMMERCE BUDGET REDUCTION

THIS REDUCTION COULD JEOPARDIZE --

- ***$2 BILLION OF U.S. EXPORT SALES ANNUALLY***
- ***$3.2 BILLION IN GNP***
  $1 dollar exports = $1.60 added to GNP
- ***$100 MILLION IN TAX RECEIPTS***
- ***140,000 JOBS IN U.S. INDUSTRY ****

**** $1 billion in exports = 70,000 jobs (Bureau of Labor Statistics)***

We have evaluated this negative effect and interpret it in terms of what it can mean in total export sales of the Nation. These interpretations are difficult to make and are predicated on past experience.

Generally, it appears that a reduction of the degree proposed and the subsequent reduction in the exposure and visibility of industry under the auspices of the U.S. Government would result in a loss of $2 billion of U.S. export sales annually. Using a general rule of thumb, a dollar in export trade times the multiplier effect in our manufacturing cycle results in a $1.60 increase in the Gross National Product. We are then talking about a loss of approximately $3.2 billion in the Gross National Product.

A still more critical element, other than the loss to the Government of corporate taxes on the related manufacturing, is the loss of U.S. high technology manufacturing jobs. A key factor in our economy is maintenance of this high technology market at a reasonably high volume in order to retain a strong industrial base.

A billion dollars of exports equates to approximately 70,000 jobs, so when we are talking about a loss of approximately $2 billion in export sales we are speaking of 140,000 export related jobs for U.S. workers.

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[Slide 5 follows:]

ANNUAL REDUCTION IN SERVICES FOR U.S. INDUSTRY DUE TO COMMERCE BUDGET CUTS

- ***CUTBACKS IN OVERSEAS PROMOTIONAL ACTIVITY:***
  - 65% REDUCTION OF TRADE FAIR PROGRAM
  - 52% REDUCTION OF TRADE MISSIONS PROGRAM
  - 47% REDUCTION OF IN-STORE PROMOTION OF CONSUMER PRODUCTS
  - 55% REDUCTION OF COMMERCIAL PRESENCE FAIR PROGRAM
  - 10% REDUCTION IN SCOPE OF TRADE CENTER EXHIBITIONS
- ***RESULT:***
  - LOSS OF OVER 85,000 SALES LEADS WHICH THESE PROGRAMS COULD BE EXPECTED TO GENERATE
  - $530 MILLION LOSS OF EXPORT SALES

We have projected on slide 5 how Commerce may react to this cut and what the likely cutbacks would be in their promotional activity.

For example, it is suggested that 65 percent of their trade-fair program will be reduced, and over 50 percent of the trade-mission program. For those of us who travel abroad under the auspices of the U.S. Government, either in a trade mission or at an International Trade Show, the umbrella of the U.S. Government is a vital and very valuable asset.

Participation, for example, in a trade mission enables one to meet the senior ranking citizens of a nation at several sponsored functions. One meets leading bankers, brokers, investors, potential agents and people who are looking for joint ventures and the possibility of introducing high technology into their nation in various productive areas.

This unique service support is provided by the export promotion program, and is one of the more outstanding successes offered by the Department of Commerce.

Because industry has had a very favorable relationship in this area, there is a certain amount of alarm when we see an impending potential reduction of this scope. More specifically, we expect that the above reductions will result in a loss of contacts that we might otherwise make by participating in these various shows, missions, and other sponsored overseas activity which may cost us over 85,000 leads.

Given our past experience in relating sales to contacts, we are then thinking in the order of a loss of somewhere in the order of $530 million in export sales.

[HG00A2][GDrive]

[Slide 6 follows:]

ANNUAL REDUCTION IN SERVICES FOR U.S. INDUSTRY DUE TO COMMERCE BUDGET CUTS (Continued)

- ***ADDITIONAL EXPECTED RESULTS:***
  - REDUCTION IN THE DISSEMINATION OF MAJOR OVERSEAS SYSTEMS AND PRODUCT LEADS --
    * $225 MILLION LOSS OF EXPORT SALES
  - REDUCTION OF ASSISTANCE DESIGNED TO SUCCESSFULLY CLOSE MAJOR PROJECTS/PRODUCTS CASES --
    * $400 MILLION LOSS OF EXPORT SALES
  - REDUCTION IN NEW-TO-EXPORT/NEW-TO-MARKET (NTE/NTM) TARGET INDUSTRY EXPORT ACTIONS (900), NTE/NTM NON-TARGET INDUSTRY EXPORT ACTIONS (975) AND TRADE OPPORTUNITIES PROGRAM SUBSCRIPTIONS SOLD (700) RESULTING FROM AN 10% CUTBACK IN THE FIELD STAFF --
    * $105 MILLION LOSS OF EXPORT SALES
  - ELIMINATION OF TWO GLOBAL MARKET SURVEYS (PRODUCT MARKET RESEARCH IN 40 COUNTRIES) --
    * $80 MILLION LOSS OF EXPORT SALES ANNUALLY

There are numerous more detailed Department of Commerce projects, which industry and Commerce have reliberated on in the past, and where an interested industry has suggested what surveys, market scoping, or attache work is necessary, that will be curtailed. It is difficult for industry to say to you that we are going to lose a certain amount of business because certain market scoping or governmental sponsorship functions may not occur. As you can see from this, the whole problem is somewhat pragmatic.

Co-related to our export sales and this Government service support promotional activity is the problem of our trade imbalance.

[HG00A3][GDrive]

[Slide 7 follows:]

THE U. S. BALANCE OF TRADE PROBLEM
(millions of dollars)

	1973	1974	1975 (Est.)
EXPORTS	71,153	99,772	111,000
IMPORTS	69,806	102,837	118,520
BALANCE:	+1,347	-3,065	-7,520*

HOW DO WE BALANCE THE DEFICIT?

- ☆ ***Decrease imports?***
- ☆ ***Devalue dollar?***
- ☆ ***Reduce standard of living?***
- ☆ ***INCREASE EXPORTS?***

*Includes services, private transfers and official transfers

SOURCES: ORGANIZATION FOR ECONOMIC COOPERATION AND DEVELOPMENT

The numbers on our chart are not significant, other than showing that our trade deficit this year is about twice as high as in previous years. Looking into what we as an industry can do to improve our country's international situation, the strength of our dollar, our employment situation, and our sales posture, we have debated a number of issues.

For example, the first item on the lower portion of our chart. Would an attempt to decrease imports be of any major significance? The answers come up no. Why?

The American industrial manufacturing cycle is premised on acquiring the raw resoruces from the most economic area in the world, which is frequently exterior to the United States, and, therefore, we have an imported raw material.

[HG00A4][GDrive]

Generally, the manufacturing occurs at the most economic location to make the least expensive produce to fit the market need.

And, finally, the distribution and marketing system is set up to sell the products in areas where the greatest return can be obtained over the shortest timespan. Frequently this turns out to be in the U.S. domestic market; therefore, a manufacturing cycle is basically in tune with the American domestic needs which are either real or developed.

Further, our Government has taken an international posture at this time of negotiating in seeking to develop agreements with nations rich in raw resources to facilitate the purchase and interchange of—transportation of—these raw goods with a minimum of duties and tariffs.

If the United States takes a posture of decreasing its imports, it could expect to defeat the purpose of this round of negotiations and cause a counterround of increases in tariffs. Therefore, the logic of our governmental position abroad would be destroyed and ultimately our raw resources raised in price, so import reduction does not seem a feasible solution.

How about devaluing the dollar? The dollar has already been devalued several times and as such has become a highly competitive and useful commodity to U.S. industry in attempts to sell abroad.

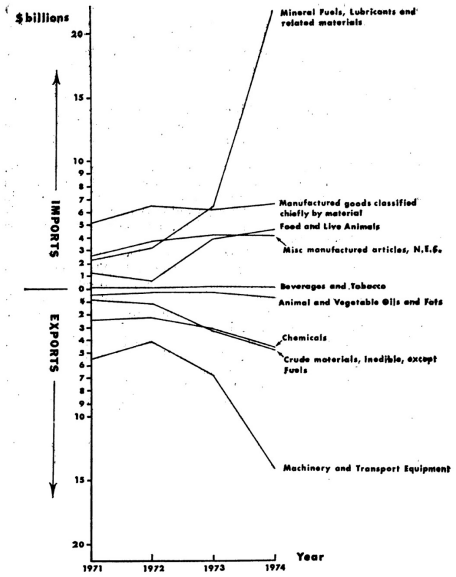
Actually, we are in a favorable position to compete abroad with our devalued dollar. The crux of the problem is to compete efficiently and with the proper mixture of U.S. Government support and associated banking, tax incentives, and other related operational data.

The next item: Reduce our standard of living. A look at the expansion of our energy needs and the statistics that tell us what the demand will be in the future for various forms of fuel and other raw resources, show that, given the American nature and its use of raw material, decreasing the standard of living is not a practical option.

Therefore, we must talk about increasing our exports as one of our more viable solution.

[HG00A5][GDrive]

[Slide 8 follows:]



When we look at this complicated chart, we can see that, from the zero point, the area above is imports and the area below is exports.

The two key swing factors are imports of energy and fuel-related materials and exports of machinery and transportation equipment. This latter is the major commodity area which enables us to offset partially our loss of dollars to the petromarket.

In the community area—machinery and transport equipment—we find aircraft and electronics. This indicates that one of our major,

[HG00A6][GDrive]

offset commodity areas contains the area of high technology and the manufacturing of sophisticated equipment such as electronics. We should be looking, then, for ways and means to efficiently promote and sell abroad to a higher degree to offset our loss in the area of fuels.

[Slide 9 follows:]

- **PROBLEM:**
  - TO GO FROM NEGATIVE TO POSITIVE TRADE BALANCE
- **FACTORS AFFECTING NEGATIVE TRADE BALANCE:**
  - ABSENCE OF STRONG FOCUSSED U.S. GOVERNMENT SUPPORT
  - STRONG OVERSEAS COMPETITION FROM INDUSTRIALIZED NATIONS (EEC AND JAPAN) (Export ratios from 9% to 25% of GNP)
  - U. S. TRADITIONALLY ORIENTED TO DOMESTIC TRADE (U. S. exports represent only 5% to 7% of GNP)
- **OBJECTIVE:**
  - INCREASE SHARE OF U. S. GNP GOING TO EXPORTS
- **PROGRAM TO ACHIEVE OBJECTIVE:**
  - DEVELOP COHERENT U. S. POLICY
  - MOTIVATE AND SUPPORT U. S. INDUSTRY IN OVERSEAS ACTIVITIES WITH STRONG EXPORT PROMOTION ACTIVITIES SUCH AS THOSE IN DEPARTMENT OF COMMERCE

When you interpret these factors, it becomes apparent that we are really talking about the problem of going from a negative trade balance to a positive trade balance, and the related advantages of a stronger dollar, a stronger government, stronger industry, and a busy, working population.

It is apparent to those in the export business that our Government is too fractured in its present policies toward export and international trade. When you compare the American industrial sales situation to that of its competitors abroad, there are several obvious characteristics.

There is a lack of focus of purpose between our banking, legislative, executive, and industry segments toward the prime goal of selling in foreign markets to support our national stature.

Our strongest industrial competition abroad has long since learned that they must export to survive, and we would find, if we looked at their gross national product, that from 9 to 25 percent of their GNP is directly related to export sales.

This simply isn't true in the United States, where the bulk of our sales have been in our domestic market. Even at this late date, we

[HG00A7][GDrive]

are only speaking to an order of 5 to 7 percent of our GNP as export related or dependent.

If the United States is going to survive in an international sense with a strong dollar base and a strong employment base, we have to work toward ways and means of expanding the percentage of our exports in our gross national product.

One of the very necessary objectives, then, is an agreed program to develop a more coherent U.S. policy to motivate and stimulate federally sponsored overseas activities such as those we now find in the Department of Commerce.

[Slide 10 follows:]

THE REAL WORLD OF EXPORTS
(U. S. $ billions)

	1973			1974		
	GNP	EXPORTS	EXPORTS AS % OF GNP	GNP	EXPORTS	EXPORTS AS % OF GNP
FED. REP. GERMANY	348.4	67.501	19.4	384.2	89.4	23.3
ITALY	135.0	22.3	16.2	143.5*	29.4*	20.5*
FRANCE	248.4	35.505	14.4	284.3*	46.6	16.4
UNITED KINGDOM	168.0	28.017	16.6	160.0*	36.2*	22.6*
JAPAN	419.5	36.915	8.8	457.6	54.5	11.9
UNITED STATES	1,249.9	71.153	5.7	1,397.3	99.772	7.1

*Estimate

SOURCE: WORLD BANK

This chart was put together to show some relationships in the area of exports. The primary point that should be noted is the 5.7 percent for the United States versus the 19 percent for Germany as the export-related percentage of GNP, and also that last year we improved a small percentage.

One other factor that is corelated here is that actually the U.S. export abroad is one of high technology products. There is some confusion when you look at gross numbers like this, because there is an enormous interchange within the European economic community of agricultural products, and you are really talking about selling items across what might be considered the equivalent of a State border here in United States.

So there is some diffusion of relationships here, because we are not talking necessarily the same type of product exchange in these GNP export ratios.

[HG00A8][GDrive]

[Slide 11 follows:]

PROMOTIONAL EXPORT EXPENDITURES IN SUPPORT OF TRADE
(U. S. $ millions)

	1973	1974	% OF CHANGE 73 – 74
UNITED KINGDOM	70.8	84.0	+18.6
JAPAN	22.5	24.6	+ 9.3
FRANCE	11.2	12.8	+14.3
ITALY	36.6*	40.4*	+10.0
FED. REP. GERMANY	10.8*	12.0*	+11.0
UNITED STATES	17.0**	18.8**	+ 5.0

UNITED STATES

▲ *Ranks fourth in direct export promotional expenditures*

▲ *Lowest percentage increase from 1973 to 1974 of the above countries*

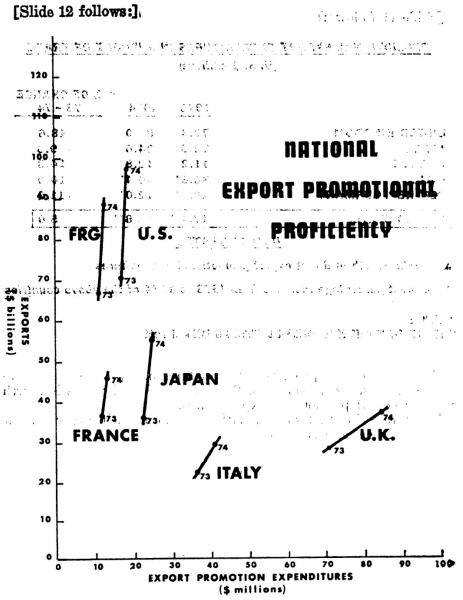
* ESTIMATE
** COMBINED EXPENDITURES OF INTERNATIONAL COMMERCE AND EAST-WEST TRADE

Turning to export promotional procedures in support of trade, we find an interesting relationship. We find the United States is fourth in direct export promotional expenditures.

It is interesting that smaller nations spend a much larger percent of money to get export sales.

[HG00A9][GDrive]

[Slide 12 follows:]



If we begin to think about who spends their funds more efficiently, we can see from this chart [slide 12] that the U.S. and Germany are two of the more efficient spenders of promotional dollars abroad. Again, each country goes about promotional activity in a different way so it is not possible to say that these comparative figures are of identical items of expenditure, but, roughly, these can be taken as relationships. However, it is quite clear from studying these numbers that the United Kingdom spent about $70 million to obtain an export sale of the order of about $28 billion, whereas the United States spent approximately $17 million and obtained a sale abroad of over $70 million.

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Clearly, then, investment in export promotional activity has a potential payoff for the United States in the sale of high technology-type products abroad. Our industrial competition abroad approaches the market in a combined way that includes a national policy directed toward export sales packages for foreign sales promotion that include banking, Government support, and aggressive marketing by industry.

[Slide 13 follows:]

LEGISLATIVE ACTION REQUIRED

- DEVELOP WITH STATE AND COMMERCE DEPARTMENTS A NATIONAL POLICY IN SUPPORT OF INTERNATIONAL TRADE
- LEGISLATIVE STATEMENT OF NATIONAL POLICY IN SUPPORT OF INTERNATIONAL TRADE
- DIRECT STATE AND COMMERCE TO DEVISE AND IMPLEMENT PROGRAMS TO STIMULATE AND FOCUS U. S. SALES ABROAD
- REVIEW FINANCIAL ASSISTANCE TO SUPPORT SALES ABROAD:
  - Export-Import Bank
  - Tax Incentives
- REPLACE EXECUTIVE CUTS IN DEPARTMENT OF COMMERCE'S DIBA BUDGET

In order to more effectively compete and to better utilize our promotional activity, we should be increasing this kind of function in some logical program which is based on an agreed posture between the Department of State, the Department of Commerce, our legislature, industry, and the banking communities.

What is needed is a forthright statement of national policy in support of international trade.

We further urge that Congress take a leading role, particularly in the Commerce Committee, in stimulating and motivating the Department of Commerce toward implementing a more strident program in the area of U.S. sales abroad and related promotional activity.

There should be a coherent review of our banking support to ventures abroad, including a more targeted approach which offers banking and governmental sponsorship for selected sales of high technology products.

During the last year, we have observed the problems related to the extension of the legislation on the Export-Import Bank, which is a critical factor in many American sales.

We have also observed that there is a move toward questioning tax incentives and other methods of stimulating U.S. participation abroad.

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We encourage a more favorable attitude toward the extension of credit and tax incentives for those who are willing to venture further into the export business. What we are proposing to you is really a "band-aid" approach, in replacement of the budget item. We think that you should reinstate the moneys in the international marketing and promotional aspects of the Department of Commerce budget, but we also urge that your committee look further into export expansion activities.

The promotional activities that relate to this have been described in some of the Commerce inputs, and we would urge that the level be increased even further than that proposed in the present budget. We would welcome the opportunity to work with members of your subcommittee staff in the development of an improved national policy towards export trade.

We are interested in providing what expertise and experience we have in these areas toward improvement of our country's general situation. We feel that by working as a team, we can perhaps improve our national posture, we can improve our sales, we can improve our trade balance, strengthen our dollar, and in general work toward the overall improvement of our total national management.

Senator INOUYE. Thank you very much, Mr. Edgington. Without objection, your slides will be made part of the record at the appropriate places.

In your statement, you mentioned the loss of $2 billion in exports resulting from cutbacks. Can you explain how you arrived at this figure?

Mr. EDGINGTON. Yes. Please show those two related slides on cutbacks.

While he's looking for the slides, the answer is that we look back at our prior experience in trade fairs, trade shows, and then how long it took us to acquire the sales that might come from those contacts we made, and we then interpolated about a year hence, what they might be.

We converted leads to sales using a ratio that we have experienced in past commitments at these kinds of shows.

Senator INOUYE. It's been suggested that our Government has been responsible for placing large numbers of obstacles in the path of businessmen who are trying to get into export trade business. Do you find this to be true?

Mr. EDGINGTON. I would like to provide you a written answer from the trade association, and I will personally answer you on your question.

I have only been doing this about 4 years, and I began my penetration efforts working through the Department of Commerce, and went on trade missions and so forth.

I learned a great deal from that. And I found the introductions were excellent. And there are problems in every business. You could call them obstacles, or you could call them challenges, or opportunities.

What we were urging was not a complaint type thing. We were urging something constructive, to put us together better.

[HG00AC][GDrive]

My experience was favorable, and I enjoyed the challenges, frankly.

[The following information was subsequently received for the record:]

In response to your question as to whether it was felt that our Government has been responsible for placing a large number of obstacles in the paths of businessmen who are trying to get into export trade business, it is our view that in terms of the total competitive aspects of making export sales, excessive time delays encountered by industry in the process of obtaining Department of Commerce and Department of State export licenses must be recognized as one of the major obstacles to be dealt with. The International Business Council of EIA has recently drawn up a position paper on the subject of Export Controls which is submitted herewith for the record.

EIA POSITION ON U.S. EXPORT CONTROLS

There has been increasing attention devoted to the export of technological equipment and systems to non-market economy nations. One of the reasons for this attention is the concern of some that the sale of electronics and other "technology" equipment and components to non-market economy nations may enhance those nations' capabilities, to the detriment of U.S. security. The U.S. government controls exports to non-market and other nations through licensing mechanisms. The mechanisms are often generalized and called "export controls". The administration of export controls has itself created a problem for exporters of electronic and telecommunications equipment and components because of uneven application of those controls, the length of time required for processing a license, a confusion between national interest and national security, and a number of other considerations. It is the contention of many involved in the export of electronics and telecommunications equipment that U.S. export control policy has made U.S. exports non-competitive as compared with those of our western trading partners and others. The position stated below is an attempt to spell out specific matters of concern with regard to U.S. export controls, and to make suggestions to simplify and to better administer those controls.

Electronic Industries Association, while recognizing the national security implications of the export of technology products and systems, equally recognizes that a strong export effort in the area of electronic and telecommunications equipment and components would greatly aid the U.S. balance of payments, create jobs for U.S. workers, improve working relations with foreign countries, and serve to strengthen the U.S. electronics manufacturing industry. To that end, the EIA urgently recommends the below listed points be encompassed within a move by the executive and legislative branches of U.S. government to simplify and to ease U.S. export control regulations.

Restructure the existing ponderous multi-agency organization involved in the administration of export controls to provide for greater centralization of authority and more efficient and timely exercise of that authority.

Provide a mechanism within the export control function for the issuance of timely and meaningful advance guidance to U.S. industry on proposed business opportunities with restricted trade areas.

Revalue the export control criteria to give realistic weight to the proven third (3rd) country availability of identical or equivalent products and/or technology.

Give due emphasis to recommendations of the officially constituted Government-Industry Technical Advisory Committee in order to properly reduce U.S. export controls to that level imposed by other industrialized COCOM member countries as directed by the Export Administration Act of 1949, as Amended.

Institute a Government-Industry review of all government required forms and reports associated with the export of goods and technology with the objective of realizing cost savings and greater efficiency through the elimination, consolidation or simplification of these requirements.

Reduce the supporting data requirements for export license application to that which is truly required to permit a valid determination. Where additional data are required for adjudication of an application the submitting organization should be promptly notified.

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Reject non-germane considerations in the issuing of export licenses and in the processing of licensing applications. United States export policy should be consistent with national security requirements, but should not be influenced by personal preferences or by myriad other factors which are not necessarily related to or consistent with the legislative basis of the export controls.

Senator INOUYE. In recent months, have you experienced intensified competition from foreign competitors?

Mr. EDGINGTON. Yes, significantly.

Senator INOUYE. Would you say that these competitors were being actively assisted by their countries?

Mr. EDGINGTON. Certainly. If you had attended the São Paulo Air Show, for example, as you traveled to Brazil and Venezuela, large potential market areas, you would find that the French, the Germans, and the United Kingdom had large missions which were sponsored by their embassies, by their equivalent of our Department of State.

These missions are accompanied by large groups of bankers, and when you meet that package, you meet money, government support, and industry, and it's a total package. As compared to American industry, which is basically on its own with a sponsorship of the Departments of State and Commerce.

Senator INOUYE. Are there any foreign export expansion programs you would like to have this Government either imitate or study?

Mr. EDGINGTON. Well, as you probably know, one of the international events of the year is always the Paris Air Show, which is a biennial thing. And that's clearly an international success.

And there's a program at Commerce to bring foreign dignitaries, ambassadors, as well as leading manufacturers and buying people, for what are called targeted opportunities, at shows in this country.

Actually, it's a little difficult to find carefully orchestrated shows in this country to which you can bring foreign buyers. The opportunity is there, but we have not developed the proper exposure vehicle in our own country.

Senator INOUYE. In slide No. 7, you mentioned the loss of $530 million. How did you arrive at that figure, sir?

Mr. EDGINGTON. That in turn follows back up to an item above it, which has to do with 85,000 leads and we have taken our typical conversion of leads to sales and contract awards.

You will notice that behind that slide there is a backup slide which relates to subtlements that cumulate up.

Senator INOUYE. Were you or your association called upon by OMB for advice and counsel on this matter?

Mr. EDGINGTON. I am an industry chairman in the Government Products Division, and I am not totally exposed to everything within the association. But, to my knowledge within our division, we were never solicited for advise or counsel on this matter.

SENATOR INOUYE. I have a few questions I'd like to submit to you. They may require a few statistics. If you could respond to them, I'd appreciate it very much.

Mr. EDGINGTON. We'd be pleased to. Thank you.

Senator INOUYE. Thank you very much.

[HG00AE][GDrive]

[The questions and answers follow:]

QUESTIONS OF SENATOR INOUYE AND THE ANSWERS THERETO

Question. The Electronics Industries Association is composed of some large multinational companies which theoretically would not have been seriously affected by the full cost recovery schedules because they could either absorb the costs or could abandon the Commerce programs for outside, private services. However, according to your analysis, the full cost recovery requirement might not only have that effect but also undermine the overall U.S. export effort by weakening all programs which require a good mix of new and established exporters to be effective. Is this a fair summary of your association's position?

Answer. Yes Sir, I believe that is a fair summary of the position of the GPD of EIA. If the established exporter opts not to participate some of the attractiveness of the promotion programs for the "new to market" companies would be diminished.

Question. Although your association opposes full cost recovery for established exporters, would it oppose raising participation fees for certain experienced exporters which have the ability to pay more? If this would be acceptable, at what level would you suggest setting the fees and how would the level be determined?

Answer. As we said in our basic statement, we feel that systems that have developed through our tax support and which we feel will contribute to increases in government revenues through increased tax returns from increased export business should continue as they are. We do not feel that a discriminatory fee schedule would enhance the program in any way.

Question. You have generally endorsed a strong export drive as being in the national interest. In doing so, however, would you agree that there is an optimal level beyond which it is uneconomic and not in the national interest to export?

If the answer is yes, how would you formulate our export goals to exploit fully our comparative advantage without making such exports economically unsound?

Answer. There is in all probability an optimum export level beyond which a number of market factors would make it increasingly uneconomic or unwise to continue. However, in our studies it does not appear that our high technology industries are anywhere near this level at present. While there are debatable factors that would influence the introduction or the increase of sales of some products in the export markets these we believe should be considered on an individual basis within a generally supportive export program. Our group has not attempted to formulate goals that would define the upper limit of an economically sound export program. We feel that this should be a subject for review by whatever group, as we recommend in our basic statement, is established to develop a coordinated national policy on export trade. We, of course, would be pleased to provide members or inputs to such a government sponsored group.

Question. On page 6 of your statement, you state that our current governmental efforts are too fractured and unfocused. Some people have suggested that one way to improve this fragmentation and lack of clarity is to improve government organization, possibly through the creation of a new department of international reforms. Would you care to comment on this suggestion?

Answer. We have not given any consideration to this proposal in our deliberations on the subject of export promotion. Our experience with existing organizational structures has been satisfactory in most respects and the main thrust of our basic position is that present systems should continue to be funded at the level required to provide the necessary services. The creation of new organizational structure or modification of existing structures would be among the subjects that might be addressed by a committee investigating development of a cohesive national export policy.

Question. You point out in your statement that one of the areas in which the U.S. maintains a competitive edge is in the high technology field. What further governmental actions do you think are needed to protect this lead—if any?

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Answer. Certainly, continued support for our export promotion program is required. Additionally, as we recommended in our basic statement, a forthright statement of national policy in support of international trade is required, supported by a logically developed program that has the support of the executive, legislative, industrial and banking segments of the nation.

Question. Does the Department of Commerce and State offer some unique services which could not and are not duplicated within the private sector and thus are complementary to rather than competitive with private programs?

Answer. Yes. The entree provided by representatives of the U.S. Government to representatives of industry in making initial contact with the proper persons in foreign governments and in foreign industries cannot be duplicated by the private sectors. Our State and Commerce experts who have devoted their career to the detailed study of certain areas and aspects of international relations are not duplicatable in the private sector. Finally, the prestige of the U.S. Government accretes to those groups, industrial and others, who appear in the foreign market areas with the support of appropriate organizations of that government. This too is an unduplicatable asset.

Senator INOUYE. Our next witness is Mr. Harry Browne for the National Association of Export Management.

Welcome, sir.

STATEMENT OF HARRY BROWNE, DIRECTOR, NATIONAL ASSOCIATION OF EXPORT MANAGEMENT COMPANIES OF NEW YORK; AND CHAIRMAN OF THE NATIONAL FEDERATION OF EXPORT MANAGEMENT COMPANIES OF WASHINGTON, D.C.

Mr. BROWNE. My name is Harry Browne, I am a director of the National Association of Export Management Co. of New York, and chairman of PEMCO, the National Federation of EMCs of Washington, D.C.

Export Management Co., EMCs, as they are also known, are independent trading companies, generally small to medium-sized, that represent U.S. manufacturers overseas, promoting the sales of a variety of manufactured products as well as of raw materials all over the globe.

We count close to a thousand professional EMCs in the United States, mostly acting as principals, i.e., buying and selling for their own account. They export about $8 billion worth of goods annually, say 8 per cent of the Nation's total exports, but a much larger percentage when manufactured goods only are considered, i.e., after exclusion of agricultural and arms sales.

Being in the "foreign trade firing line" on a daily basis, we recognize the need to export as part of our life's doctrine. We feel that way, however, not only because it happens to be our bread and butter, but because we firmly believe that exports are absolutely and vitally essential for a stable dollar and a stable economy of the United States.

In the light of the potential imbalance of our exchange flow as a result of the well-known petroleum cost picture, we feel that a continuing strengthening of our foreign trade and a solid measure of continuing increase in our Nation's overall exports is more essential than ever.

In the light of this need—which we regard as critical—we are now faced with a recommendation from the Office of Management

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1978- NATO Standardization, Interoperability and Readiness: Report of the Special Subcommittee on Nato Standardization, Interoperability, and Readiness of the Committee on Armed Services, House of Representatives, with Additional Views, Ninety-fifth Congress, Second Session

Walter Edgington

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[H.A.S.C. No. 95–101]

NATO STANDARDIZATION, INTEROPERABILITY AND READINESS

REPORT

OF THE

SPECIAL SUBCOMMITTEE ON NATO STANDARDIZATION, INTEROPERABILITY AND READINESS

OF THE

COMMITTEE ON ARMED SERVICES

HOUSE OF REPRESENTATIVES

WITH ADDITIONAL VIEWS

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(II)

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LETTER OF TRANSMITTAL

U.S. HOUSE OF REPRESENTATIVES,
COMMITTEE ON ARMED SERVICES,
Washington, D.C.

HON. MELVIN PRICE,
Chairman, Committee on Armed Services,
House of Representatives,
Washington, D.C.

DEAR CHAIRMAN PRICE: Attached is the report of the Special Subcommittee on NATO Standardization, Interoperability and Readiness.

The special subcommittee conducted a comprehensive study of standardization, interoperability and readiness holding 26 hearings and 15 briefings. Additionally, a delegation from the special subcommittee visited five European NATO countries from July 3 to July 7, 1978.

The work which the special subcommittee performed was always directed by the guiding principle of identifying facts and eliminating vagaries. Accordingly, this report presents the facts contained in our record of the NATO initiatives currently being considered.

With kind regards and best wishes,

Very sincerely,

DAN DANIEL,
Chairman, Special Subcommittee on NATO Standardization, Interoperability and Readiness.

Approved for printing
Melvin Price, *Chairman*

(III)

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FINDINGS AND CONCLUSIONS

STANDARDIZATION, INTEROPERABILITY AND ARMS COOPERATION

1. The Department of Defense is unable to define clearly many of the terms it uses to explain standardization and interoperability concepts.

Standardization and interoperability have ambiguous definitions. These definitions have produced confusing and often conflicting guidance for translating policy into action. Rationalization is an incomprehensible term.

2. The basic rationale for arms cooperation is that it will reduce duplication and increase efficiency of defense expenditures. There are only vague estimates that support such a conclusion, while data derived from actual case experience seems to contradict it.

3. It is unlikely there will be significant cost savings realized from arms cooperation. Approximately $3 billion annually is available as *potential* savings if *all* duplication of effort is eliminated. This is less than two percent of the current alliance budgets. Thus cooperation while it does allow some potential savings, is certainly not the total answer to NATO's problems.

4. The potential savings are purely theoretical. No witness who appeared before the subcommittee suggested there would be any immediate savings as a result of arms cooperation. It is impossible to predict accurately whether cooperation will save or cost money, either in the near future or in the long run.

5. The "Culver-Nunn" Amendment to the Defense Appropriation Authorization Act of 1977 is subject to confusing interpretation by some in the Department of Defense, and that which is not understood cannot be implemented.

6. Arms cooperation as a concept does not necessarily imply that the policy of standardization and interoperability as passed in the "Culver-Nunn" amendment would be most effectively implemented.

7. European defense industries are growing and represent an important investment on the part of their governments in financial resources, jobs and national pride. Their expanding capabilities and importance, therefore, influence government defense planning and procurement decisions.

As European defense products proliferate, the only conceivably efficient and equitable mechanism to provide the best defense will be to select equipment competitively. This approach is universally supported in principle but also nearly universally ignored in practice.

8. Memoranda of Understanding (MOU) are being used to document understandings between national defense officials. However, since MOU's are not formally approved by Congress, they represent understandings and nothing more. Congressional approval will not be achieved until enactment of appropriations or other implementing legislation.

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9. The Department of Defense does not have a single definition of the "two-way street."

There are two different ways to look at the present balance of trade on the "two-way street". The European approach is to limit the traffic count to arms trade which produces a balance heavily in favor of the United States. Using a broader definition of traffic that encompasses all defense-related goods and services produces a "two-way street" heavily balanced in Europe's favor.

10. The term "two-way street" as applied by Europeans and some U.S. defense officials is a political device to secure economic benefits for European industries and often has little or nothing to do with enhancing military effectiveness.

There is no compelling reason for acceptance of the narrow European definition of the "two-way street" and isolating the one segment of the transatlantic defense trade which produces a surplus for the United States. Nor does the subcommittee find any particular value in singling out defense trade as a special category of overall transatlantic trade.

However, European procurement of U.S. weapons systems is increasingly linked to the concept of a "two-way street" by insistence on reciprocal U.S. purchases to serve as economic offsets.

11. The Family of Weapons concept is formless and undefined. It is an approach to arms cooperation designed to eliminate competition by grouping "families" of weapons and dividing up the development work.

There is no consensus as to how the member nations would divide up the development responsibilities. And it is still to be demonstrated that NATO can eliminate competition without lowering technological standards.

12. Major segments of U.S. industry and labor are confused about the Department of Defense's concept of the Family of Weapons and arms cooperation. They, therefore, do not support this.

If some level of meaningful arms cooperation is to become a reality defense contractors and labor must be consulted and participate at an early stage in the process.

13. International arms cooperation encompasses political and economic considerations beyond the jurisdiction of the Department of Defense alone. Interagency coordination of procurement practices is the responsibility of the Office of Federal Procurement Policy. However, the Administrator for Federal Procurement Policy knows very little about programs which his office is supposed to coordinate.

NATO READINESS REQUIREMENTS AND INITIATIVES

1. NATO's present capability to conduct a successful conventional defense against an attack by the Warsaw Pact and to terminate such a conflict on terms favorable to NATO is extremely doubtful.

NATO's capability to fight a protracted war is almost nonexistent. NATO lacks the capability to fight for thirty days and present plans will not provide such a capability before 1983.

The European shortages of ammunition and replacement stocks are critical; evidence available to the subcommittee suggests that European forces will begin to run out of equipment and ammunition in a matter of days rather than weeks or months.

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2. The NATO goal of 3 percent annual real growth in defense spending was a compromise between military requirements and what was political practicability. This increase will not be sufficient to reverse the unfavorable trends in the NATO-Warsaw Pact conventional forces balance.

When the United States agreed to the goal of 3 percent annual real growth, it was understood that the increase applied to the entire defense budget.

The United States has not honored its commitment since President Carter agreed to it.

3. The NATO Long Term Defense Plan (LTDP) will have little impact on NATO readiness until the 1990's. As an exercise in data gathering and coordination, the LTDP is a laudable accomplishment. As a blueprint for the time-phased correction of NATO's difficulties, it is of questionable value because it cannot be translated into national procurement plans, country-by-country, year-by-year, and item-by-item.

The Short Term Initiatives approved by NATO Defense Ministers represent a positive, if not wholly adequate, step toward the correction of specific alliance deficiencies in the near to mid-term. The short term initiatives are specific country-by-country commitments.

LEGISLATIVE PROPOSALS

1. The subcommittee reviewed H.R. 11607, a proposal to waive existing law for the formation of agreements with North Atlantic Treaty Organization countries for host nation support. The goal of H.R. 11607 is worth pursuing. The proposal as submitted, though, is far too sweeping in authority and should be redrafted.

2. The subcommittee reviewed a second legislative proposal, H.R. 12837, that would empower the Secretary of Defense unilaterally to establish both procurement practices and procedures for international purchases of property and services. The subcommittee finds the intent of H.R. 12837 too broad to merit support.

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How do we divide up the responsibility?

Mr. OLIVER BOILEAU. (President, Boeing Aerospace Company. Called as a witness in his capacity of Vice Chairman, Defense Science Board, 1978 Summer Study.) I don't think that we could think that we could implement the family of weapons by splitting up the functional world saying, "You take the short-range missile—we will take the long-range missile." That is not going to work because people will see through the fact we are giving up the short-range, and every long-range missile sure as heck is going to work at short-range.[21]

Will it save any money?

Dr. FROST. With respect to R. & D. I think the amounts of money in the research phase would be so minimal as compared to procurement of the developed product that the amount involved won't be that relevant.[22]

Dr. PERRY. Dual production is the second leg of the competitive triad. When one nation has completed development of a system which is useful to the alliance, that nation should make its system available for production by other countries or consortia of countries. This will eliminate unnecessary duplication in R. & D. while avoiding the trade and labor imbalance that would result from exclusive development and sales.[23]

Dr. Frost says the real savings would come in procurement, not R & D, and Dr. Perry says each nation can produce the system domestically, so whatever savings there are would have to come from R & D. Based upon these two statements the tentative conclusion would be that the U.S. will save little or no money.

Will the elimination of international competition result in inferior weapons systems?

Mr. KARL HARR. (President, Aerospace Industries of America, Inc.) * * * if by going that route you remove substantial competition from the process, then you guarantee a lowering of the technological standard you are going to achieve.

* * * * * * * * * * * * * * * we are uncertain about the degree to which our Government appreciates what can be lost if they do not keep in mind those two principles I mentioned—preserving competitiveness and retaining high technology capability in this country.[24]

Do labor and industry understand and support the concept?

Mr. WALTER EDGINGTON. (Chairman of the Export-Import Committee of the Government Division of the Electronic Industries Association). The example used by the administration is an agreement with NATO for one country to be selected, presumably by NATO bureaucrats meeting secretly behind closed doors, to develop a certain type of antitank missile while another country will be selected to develop a complementary missile. This seems to fit what can be described as political horsetrading, or as Ambassador Komer also put it, dividing the pie reasonably.

One is left with the uneasy feeling that the whole process is a total change in concept to the traditional free enterprise process and one in which this country would be the loser.

Mr. Chairman, this is a concept which must be totally rejected by the Congress. To permit the executive branch to conclude such memorandums of understanding could have a devastating effect upon our balance of trade, our commercial export markets, and jobs here at home.[25]

Mr. OSWALD. (Spokesman for the AFL–CIO). That is not healthy because that really denies us the ability to develop our own expertise in that area. Our relationships are very important with NATO, but they are not our sole relations.[26]

[21] HASC 95–72, 1243.
[22] HASC 95–72, 610.
[23] HASC 95–72, 1362.
[24] HASC 95–72, 967.
[25] HASC 95–72, 1414.
[26] HASC 95–72, 984.

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APPENDIX B

WITNESSES AND CONTRIBUTORS

DEPARTMENT OF STATE

Hon. Warren Christopher, Under Secretary of State, Acting Secretary of State on October 10, 1978.
Hon. George S. Vest, Assistant Secretary of State for European Affairs.

DEPARTMENT OF DEFENSE

Hon. Harold Brown, Secretary of Defense.
Hon. William J. Perry, Under Secretary of Defense for Research and Engineering.
Hon. Robert W. Komer, Advisor to Secretary and Deputy Secretary on NATO Affairs.
Hon. Dale W. Church, Deputy Under Secretary of Defense, for Research and Engineering (Acquisition Policy).
Dr. Ellen L. Frost, Deputy Assistant Secretary for International Economic Affairs.
Maj. Gen. Richard C. Bowman, Director, European Region, Office of Assistant Secretary (International Security Affairs).
Mr. Peniel Moed, Office of Assistant General Counsel (Logistics).

OFFICE OF JOINT CHIEFS OF STAFF

Lt. Gen. A. W. Braswell, USAF, Director (J–5 Plans and Policy) Office of Joint Chiefs of Staff.
Lt. Gen. Arthur J. Gregg, Director for Logistics (J–4), Office of Joint Chiefs of Staff.
Rear Adm. Edward A. Burkhalter, Deputy Director for Operations (J–3), (Strategic and General Operations), Office of Joint Chiefs of Staff.
Col. W. D. Johnson, USA, European Division (J–5), Plans and Policy Directorate, Office of Joint Chiefs of Staff.
Lt. Col. Jim Blundell, USA, Office of Joint Chiefs of Staff.

U.S. EUROPEAN COMMAND

Lt. Gen. Rolland Heiser, USA (1 Jun 76), Chief of Staff, EUCOM.
Maj. Gen. Lincoln D. Faurer, USAF, Director, J–2.
Rear Adm. Eugene J. Carroll, USN, Director, J–3.
Maj. Gen. Edward A. Partain, USA, Director, J–4/7.
Maj. Gen. Richard B. Collins, USAF, Director, J–5.
Rear Adm. William Nivison, USN, Director, J–6.
Col. William E. Watts.
S/sg Robert R. Roth.

DEPARTMENT OF THE ARMY

Hon. Walter LaBerge, Under Secretary of the Army.
Hon. Percy A. Pierre, Assistant Secretary of the Army (Research, Development and Acquisition).
Lt. Gen. Edward C. Meyer, Deputy Chief of Staff for Operations and Plans.
Lt. Gen. Donald R. Keith, Deputy Chief of Staff for Research, Development and Acquisition.

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DEPARTMENT OF THE NAVY

Adm. Isaac C. Kidd, Jr., Commander-in-Chief, Atlantic and U.S. Atlantic Fleet.
Hon. David E. Mann, Assistant Secretary of the Navy, for Research, Development, Test and Evaluation.
Vice Adm. Parker B. Armstrong, Director, Research, Test and Evaluation.
Lt. Gen. Andrew W. O'Donnell, Deputy Chief of Staff for Plans and Policies, United States Marine Corps.
Vice Adm. William J. Crowe, Jr., Deputy Chief of Naval Operations, for Plans, Policy and Operations.

EUROPE—MILITARY

Gen. Alexander M. Haig, Jr., Commander in Chief, U.S. European Command.
Gen. Franz-Joseph Schulze, Commander in Chief, Allied Forces, Central Europe.
Gen. Herman Zeiner Gundersen, Chairman, Military Committee, NATO.
Vice Adm. Joseph P. Moorer, Commander in Chief, U.S. Naval Forces, Europe, and U.S. Commander, Eastern Atlantic.
Vice Adm. Sir James G. Jungius, SACLANT Representative, Europe.
Gen. George Blanchard, USA, Commander in Chief, U.S. Army Forces Europe.
Lt. Gen. John W. Pauly, USAF, Vice Commander in Chief, U.S. Air Force Europe.

DEPARTMENT OF THE AIR FORCE

Hon. John J. Martin, Assistant Secretary of Air Force for Research, Development and Logistics.
Lt. Gen. H. M. Fish, Assistant Vice Chief of Staff, USAF.
Maj. Gen. T. I. Ahern, Assistant Deputy Chief of Staff (Research and Development).
Dr. Wallace C. Magathan, Jr., Defense Intelligence Office, Defense Intelligence Agency.
Lt. Col. Frederick Walker, Senior Military Analyst, Soviet Warsaw Pact Area, Defense Intelligence Agency.

DEPARTMENT OF COMMERCE

Mr. William A. Cox, Deputy Chief Economist.

OFFICE OF MANAGEMENT AND BUDGET

Hon. Lester A. Fettig, Administrator, Office of Federal Procurement Policy, Office of Management and Budget.

EUROPE—POLITICAL

France
Mr. Masson, Director of the Minister's Defense Cabinet.
Mr. Hibon, Deputy Director of the General Delegation for Armaments International Affairs.
Mr. Mournier, Assistant Director of the General Delegation of Armaments/Corporation.

Federal Republic of Germany
Dr. Karl Schnell, State Secretary for Armament Affairs.
Mr. Hans Eberhart, Director of Armaments.
Mr. Carl Damm, Member of Bundestag, Defense Committee.

Netherlands
Dr. William F. van Eekelen, State Secretary for Defense (Materiel).
Mr. Ad Ploeg, Vice Chairman of the Committee for Defense of the Second Chamber of the Netherlands Parliament.
Mr. W. A. M. Mells, Commissioner for Military Production, Ministry of Economic Affairs.

United Kingdom
Dr. John Gilbert, M. P., Minister of State for Defense.
Sir Clifford Cornford, Chief of Defense Procurement.

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U.S. Representatives
Hon. Arthur A. Hartman, U.S. Ambassador to France.
Hon. W. Tapley Bennett, U.S. Ambassador to NATO.

EUROPE—INDUSTRIAL

France
Mr. Cauvin, President, Thompson CSF.
Mr. Ravaud, President et Secretaire General, SNECMA.

United Kingdom
Sir Peter Matthews, Managing Director and Chief Executive, Vickers Limited and Chairman of the Defence Industries Council.
The Rt. Hon. The Lord Beswick, P.C., Chairman, British Aerospace.
Admiral Sir Anthony Griffin, Chairman, British Shipbuilders.
Mr. R. F. Hunt, Chairman & Chief Executive, Dowth Group Limited, and Deputy President, Society of British Aerospace Companies.
Mr. R. H. Newham, Director, E.M.I. Limited; Deputy President, Electronic Engineering Association; and Head of U.K. Delegation to the NATO Industrial Advisory Group.
Mr. E. R. Sisson, Chairman Smiths Industries Limited and Treasurer, Society of British Aerospace Companies.
Marshal of the RAF Sir Denis Spotswood, Vice Chairman, Rolls Royce Limited and President, Society of British Aerospace Companies.
Sir Richard Smeeton, Secretary of the Defence Industries Council and Director, Society of British Aerospace Companies.
Sir Robert Telford, Managing Director, GEC–Marconi Electronics Limited.

OUTSIDE WITNESSES

Hon. Andrew J. Biemiller, Director, Department of Legislation, AFL–CIO.
Mr. Oliver Boileau, President, Boeing Aerospace Co.
Mr. Thomas Callaghan Jr., Director, Allied Interdependence Project, Center for Strategic and International Studies, Georgetown University.
Mr. Walter R. Edgington, Vice President and Chairman of Export/Import Committee of Government Division of Electronic Industries Association (EIA).
Mr. David J. Fitzmaurice, President, International Union of Electrical, Radio and Machine Workers.
Mr. Karl G. Harr, President, Aerospace Industries Association of America, Inc.
Dr. Helen M. Kramer, Assistant to the Director of International Affairs Department, International Association of Machinists and Aerospace Workers.
Dr. Mordechai E. Kreinin, Professor of Economics, Michigan State University.
Mr. David A. Leff, Executive Director, Joint Maritime Congress.
Mr. Walter B. O'Neil, Vice Chairman, Export/Import Committee of Electronic Industries Association.
Dr. Roger Shields, Vice President, International Unit of Economic Research Department, Chemical Bank of New York.
Mr. Robert B. Wood, Director of Research and Education Department, International Brotherhood of Electrical Workers.

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1979 (June 25-27) - American Defense Preparedness Association, Rosslyn Center, Suite 900, 1700 - SEMINAR ON U.S.ITALIAN PROCEEDINGS OF ARMAMENTS

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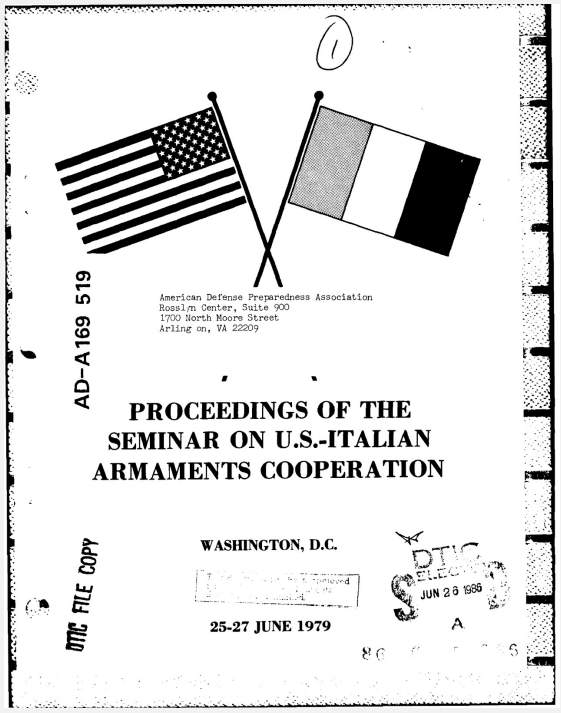
Location - 1700 North Moore Street Arlington, VA **22209**

NOTE: "Over the ensuing decades, AOA became the American Defense Preparedness Association (ADPA), which then merged with the 1944 National Security Industrial Association (NSIA) in 1997, creating NDIA." See https://en.wikipedia.org/wiki/National_Defense_Industrial_Association .



American Defense Preparedness Association
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PROCEEDINGS OF THE SEMINAR ON U.S.-ITALIAN ARMAMENTS COOPERATION

WASHINGTON, D.C.

25-27 JUNE 1979

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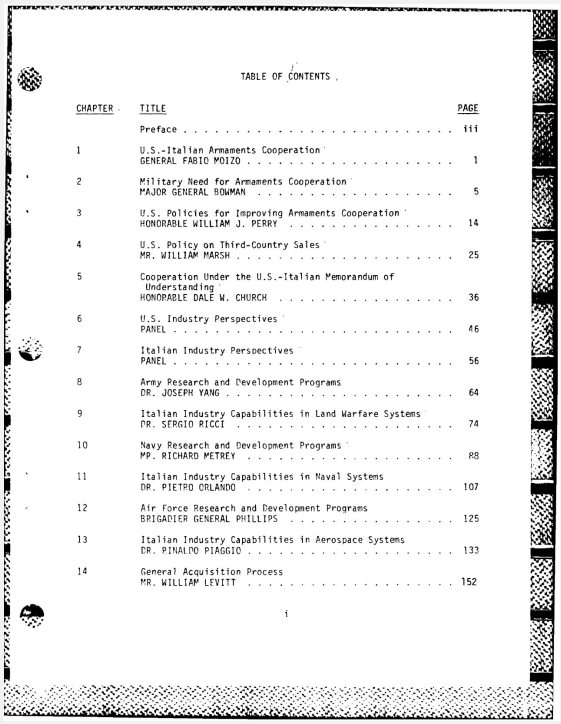

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12	Air Force Research and Development Programs BRIGADIER GENERAL PHILLIPS	125
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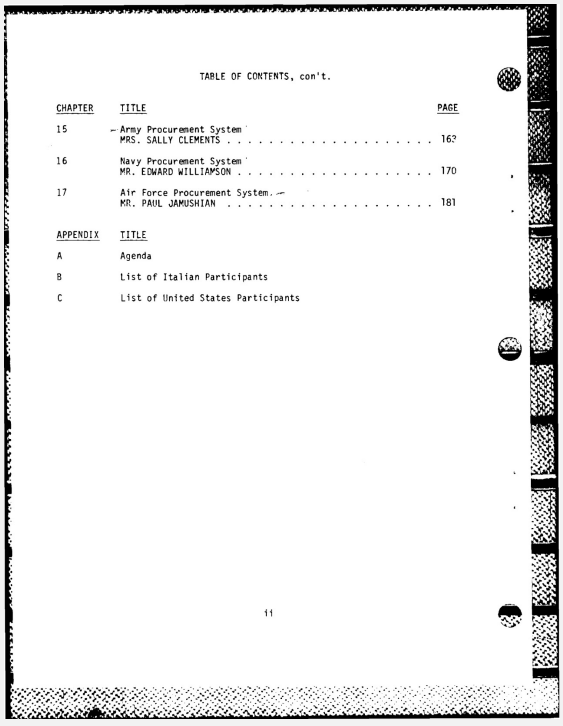

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APPENDIX	TITLE
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C	List of United States Participants

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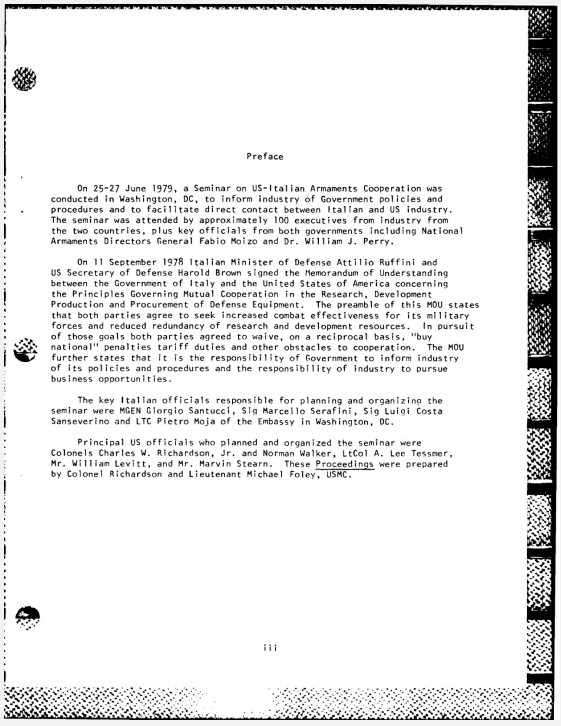

Preface

On 25-27 June 1979, a Seminar on US-Italian Armaments Cooperation was conducted in Washington, DC, to inform industry of Government policies and procedures and to facilitate direct contact between Italian and US industry. The seminar was attended by approximately 100 executives from industry from the two countries, plus key officials from both governments including National Armaments Directors General Fabio Moizo and Dr. William J. Perry.

On 11 September 1978 Italian Minister of Defense Attilio Ruffini and US Secretary of Defense Harold Brown signed the Memorandum of Understanding between the Government of Italy and the United States of America concerning the Principles Governing Mutual Cooperation in the Research, Development Production and Procurement of Defense Equipment. The preamble of this MOU states that both parties agree to seek increased combat effectiveness for its military forces and reduced redundancy of research and development resources. In pursuit of those goals both parties agreed to waive, on a reciprocal basis, "buy national" penalties tariff duties and other obstacles to cooperation. The MOU further states that it is the responsibility of Government to inform industry of its policies and procedures and the responsibility of industry to pursue business opportunities.

The key Italian officials responsible for planning and organizing the seminar were MGEN Giorgio Santucci, Sig Marcello Serafini, Sig Luigi Costa Sanseverino and LTC Pietro Moja of the Embassy in Washington, DC.

Principal US officials who planned and organized the seminar were Colonels Charles W. Richardson, Jr. and Norman Walker, LtCol A. Lee Tessmer, Mr. William Levitt, and Mr. Marvin Stearn. These Proceedings were prepared by Colonel Richardson and Lieutenant Michael Foley, USMC.

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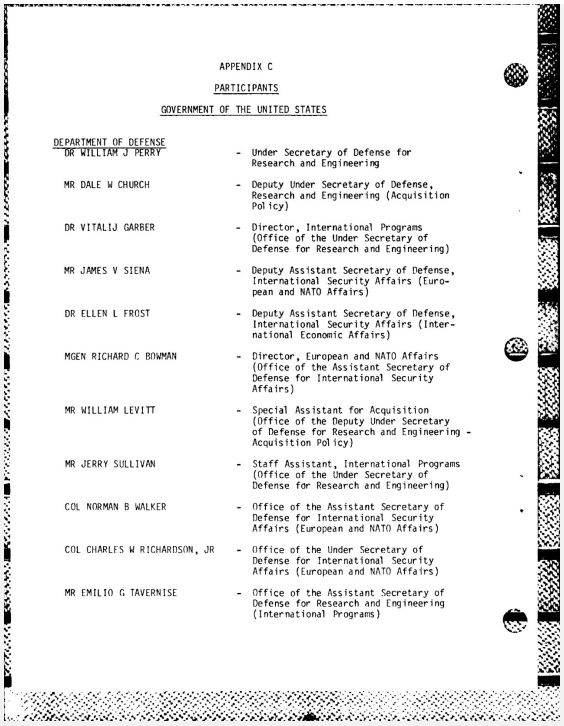

APPENDIX C

PARTICIPANTS

GOVERNMENT OF THE UNITED STATES

DEPARTMENT OF DEFENSE

DR WILLIAM J PERRY	-	Under Secretary of Defense for Research and Engineering
MR DALE W CHURCH	-	Deputy Under Secretary of Defense, Research and Engineering (Acquisition Policy)
DR VITALIJ GARBER	-	Director, International Programs (Office of the Under Secretary of Defense for Research and Engineering)
MR JAMES V SIENA	-	Deputy Assistant Secretary of Defense, International Security Affairs (European and NATO Affairs)
DR ELLEN L FROST	-	Deputy Assistant Secretary of Defense, International Security Affairs (International Economic Affairs)
MGEN RICHARD C BOWMAN	-	Director, European and NATO Affairs (Office of the Assistant Secretary of Defense for International Security Affairs)
MR WILLIAM LEVITT	-	Special Assistant for Acquisition (Office of the Deputy Under Secretary of Defense for Research and Engineering - Acquisition Policy)
MR JERRY SULLIVAN	-	Staff Assistant, International Programs (Office of the Under Secretary of Defense for Research and Engineering)
COL NORMAN B WALKER	-	Office of the Assistant Secretary of Defense for International Security Affairs (European and NATO Affairs)
COL CHARLES W RICHARDSON, JR	-	Office of the Under Secretary of Defense for International Security Affairs (European and NATO Affairs)
MR EMILIO G TAVERNISE	-	Office of the Assistant Secretary of Defense for Research and Engineering (International Programs)

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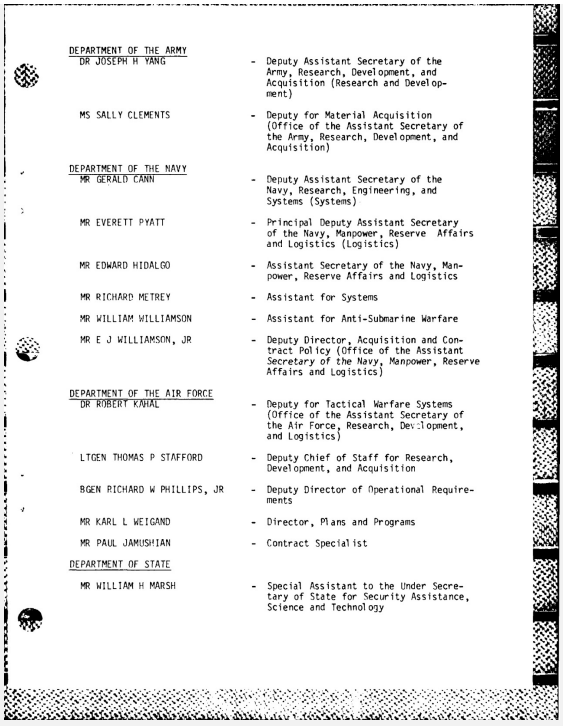

DEPARTMENT OF THE ARMY

DR JOSEPH H YANG	-	Deputy Assistant Secretary of the Army, Research, Development, and Acquisition (Research and Development)
MS SALLY CLEMENTS	-	Deputy for Material Acquisition (Office of the Assistant Secretary of the Army, Research, Development, and Acquisition)

DEPARTMENT OF THE NAVY

MR GERALD CANN	-	Deputy Assistant Secretary of the Navy, Research, Engineering, and Systems (Systems)
MR EVERETT PYATT	-	Principal Deputy Assistant Secretary of the Navy, Manpower, Reserve Affairs and Logistics (Logistics)
MR EDWARD HIDALGO	-	Assistant Secretary of the Navy, Manpower, Reserve Affairs and Logistics
MR RICHARD METREY	-	Assistant for Systems
MR WILLIAM WILLIAMSON	-	Assistant for Anti-Submarine Warfare
MR E J WILLIAMSON, JR	-	Deputy Director, Acquisition and Contract Policy (Office of the Assistant Secretary of the Navy, Manpower, Reserve Affairs and Logistics)

DEPARTMENT OF THE AIR FORCE

DR ROBERT KAHAL	-	Deputy for Tactical Warfare Systems (Office of the Assistant Secretary of the Air Force, Research, Development, and Logistics)
LTGEN THOMAS P STAFFORD	-	Deputy Chief of Staff for Research, Development, and Acquisition
BGEN RICHARD W PHILLIPS, JR	-	Deputy Director of Operational Requirements
MR KARL L WEIGAND	-	Director, Plans and Programs
MR PAUL JAMUSHIAN	-	Contract Specialist

DEPARTMENT OF STATE

MR WILLIAM H MARSH	-	Special Assistant to the Under Secretary of State for Security Assistance, Science and Technology

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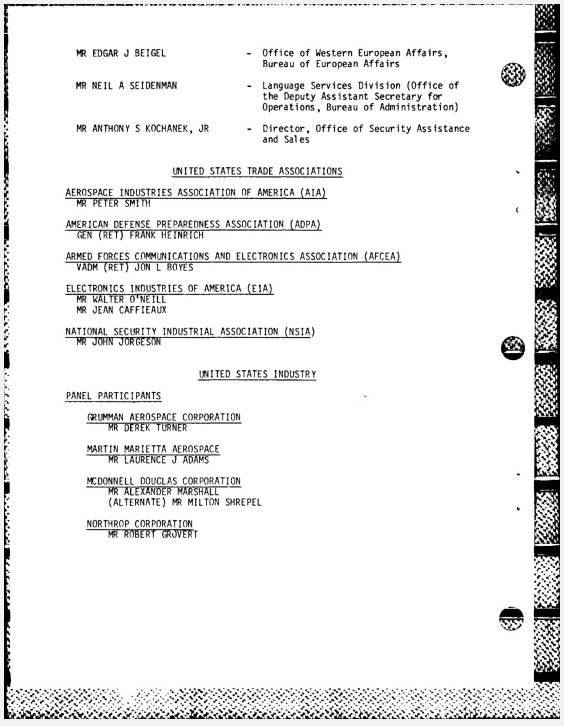

MR EDGAR J BEIGEL	-	Office of Western European Affairs, Bureau of European Affairs
MR NEIL A SEIDENMAN	-	Language Services Division (Office of the Deputy Assistant Secretary for Operations, Bureau of Administration)
MR ANTHONY S KOCHANEK, JR	-	Director, Office of Security Assistance and Sales

UNITED STATES TRADE ASSOCIATIONS

AEROSPACE INDUSTRIES ASSOCIATION OF AMERICA (AIA)
MR PETER SMITH

AMERICAN DEFENSE PREPAREDNESS ASSOCIATION (ADPA)
GEN (RET) FRANK HEINRICH

ARMED FORCES COMMUNICATIONS AND ELECTRONICS ASSOCIATION (AFCEA)
VADM (RET) JON L BOYES

ELECTRONICS INDUSTRIES OF AMERICA (EIA)
MR WALTER O'NEILL
MR JEAN CAFFIEAUX

NATIONAL SECURITY INDUSTRIAL ASSOCIATION (NSIA)
MR JOHN JORGESON

UNITED STATES INDUSTRY

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GRUMMAN AEROSPACE CORPORATION
MR DEREK TURNER

MARTIN MARIETTA AEROSPACE
MR LAURENCE J ADAMS

MCDONNELL DOUGLAS CORPORATION
MR ALEXANDER MARSHALL
(ALTERNATE) MR MILTON SHREPEL

NORTHROP CORPORATION
MR ROBERT GROVERT

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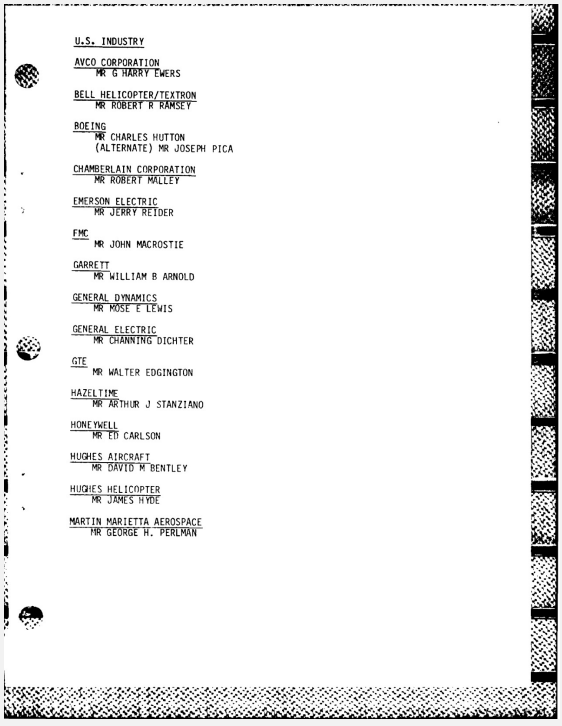

U.S. INDUSTRY

AVCO CORPORATION
MR G HARRY EWERS

BELL HELICOPTER/TEXTRON
MR ROBERT R RAMSEY

BOEING
MR CHARLES HUTTON
(ALTERNATE) MR JOSEPH PICA

CHAMBERLAIN CORPORATION
MR ROBERT MALLEY

EMERSON ELECTRIC
MR JERRY REIDER

FMC
MR JOHN MACROSTIE

GARRETT
MR WILLIAM B ARNOLD

GENERAL DYNAMICS
MR MOSE E LEWIS

GENERAL ELECTRIC
MR CHANNING DICHTER

GTE
MR WALTER EDGINGTON

HAZELTIME
MR ARTHUR J STANZIANO

HONEYWELL
MR ED CARLSON

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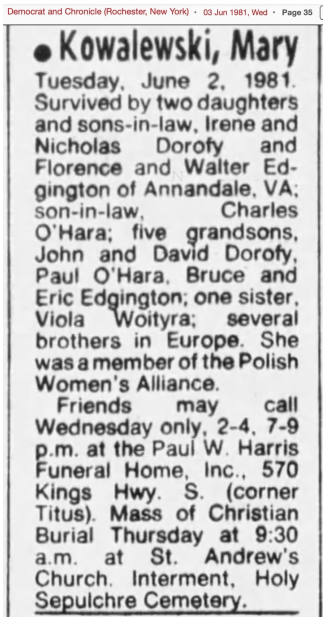

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JULY 28 , 1981 - USA SENATE - CONVENTIONAL ARMS SALES - HEARING - BEFORE THE - COMMITTEE ON FOREIGN RELATIONS (FIRST SESSION)

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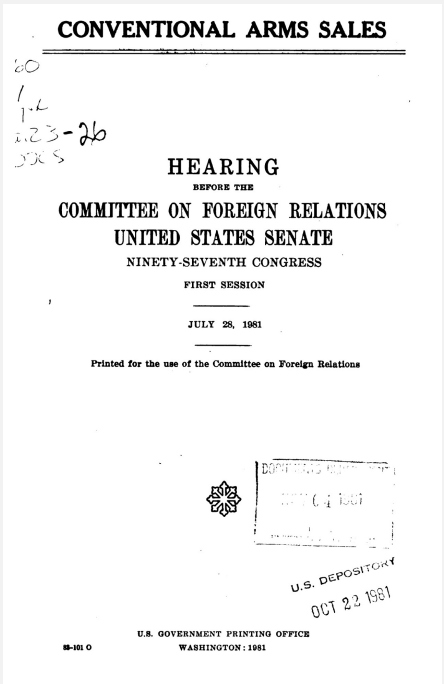

CONVENTIONAL ARMS SALES

HEARING
BEFORE THE
COMMITTEE ON FOREIGN RELATIONS
UNITED STATES SENATE
NINETY-SEVENTH CONGRESS
FIRST SESSION

JULY 28, 1981

Printed for the use of the Committee on Foreign Relations

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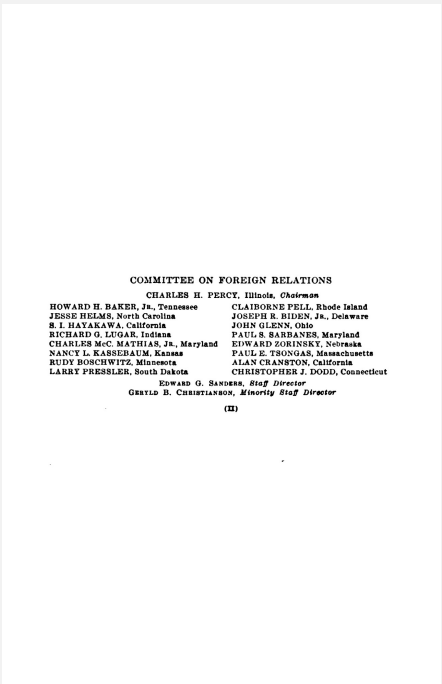

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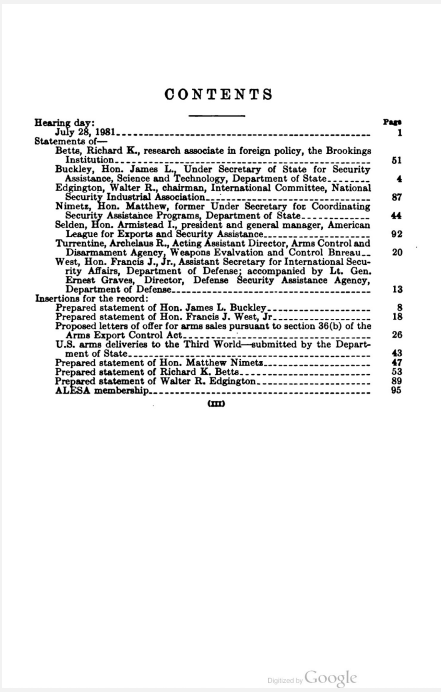

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STATEMENT OF WALTER R. EDGINGTON, INTERNATIONAL COMMITTEE, NATIONAL SECURITY INDUSTRIAL ASSOCIATION

The CHAIRMAN. Mr. Edgington.

Mr. EDGINGTON. Mr. Chairman, I am Walter Edgington. I am here today as the chairman of the National Security Industrial Association [NSIA], which is a nonprofit, nonpolitical, and nonlobbying association of approximately 300 manufacturing, research, engineering, educational, and service organizations.

At the outset, let me state that NSIA supports the current policy in the new conventional arms transfer both in objectives and in approach.

We welcome this latest assessment of the world as it exists today and the steps to be taken to restore America's leadership role. The enhancemnt of the state of readiness of our friends and allies, the revitalization of our alliances, the establishment of more coherent East-West policies and strategies, the reinvigoration and strengthening of our own defense production capabilities all are realistic objectives which we can achieve and whose achievement will contribute to the security of the world.

We in industry are regularly involved with multiple European and Canadian corporations in various business opportunities, joint ventures, licenses, and marketing activity. Because of this close association, our constant interchange, travel, and intergovernment relationship, we too are very anxious about major international tensions both in Europe and the Middle East.

In Europe, the North Atlantic Treaty Organization is our major alliance, and within the North American military industrial community NATO clearly provides the framework for discussion of many common needs. Economic bases, employment, multinational projects, military sales, arms transfers, export licenses, and Third World nations as markets have become our buzz words.

During the last few years, though, the nations, their national industrial bases, their political parties, NATO and the EEC, have been in a constant ferment. The gradual erosion of our military strength, the significance of our national industrial bases, the growing pressure of various forms of social democratic concepts, and the focus on materialism are apparent.

NATO governments are anxious to increase exports, pressing their industries for international sales, both military and commercial, in all the world's marketplaces—their objective being to develop and maintain a strong industrial base, strong employment, strong currency, and to insure major offsets to the energy costs.

It is against this background that U.S. industry and our Government must combine to strengthen our will, our purpose, our management, our productivity, and our talents both at home, within the NATO alliance, and competitively in the Third World markets.

The NSIA concurs in this point of judicious use of arms transfer and a flexible, pragmatic approach to arms sales which can strengthen the U.S. economy and industrial base and contribute to the resolution of some of the economic problems of our allies and friends and enhance deterrence.

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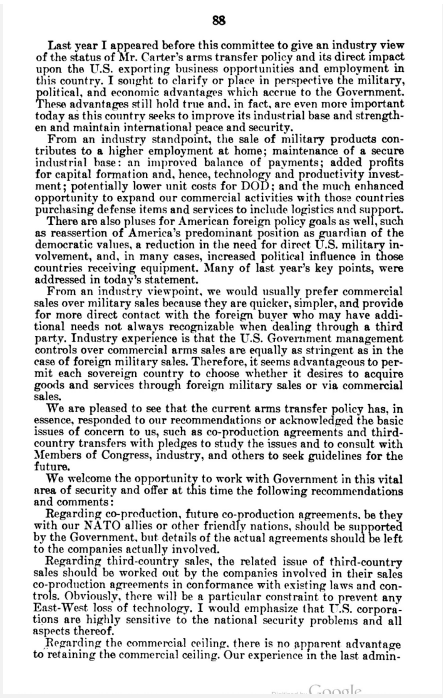

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Last year I appeared before this committee to give an industry view of the status of Mr. Carter's arms transfer policy and its direct impact upon the U.S. exporting business opportunities and employment in this country. I sought to clarify or place in perspective the military, political, and economic advantages which accrue to the Government. These advantages still hold true and, in fact, are even more important today as this country seeks to improve its industrial base and strengthen and maintain international peace and security.

From an industry standpoint, the sale of military products contributes to a higher employment at home; maintenance of a secure industrial base: an improved balance of payments; added profits for capital formation and, hence, technology and productivity investment; potentially lower unit costs for DOD; and the much enhanced opportunity to expand our commercial activities with those countries purchasing defense items and services to include logistics and support.

There are also pluses for American foreign policy goals as well, such as reassertion of America's predominant position as guardian of the democratic values, a reduction in the need for direct U.S. military involvement, and, in many cases, increased political influence in those countries receiving equipment. Many of last year's key points, were addressed in today's statement.

From an industry viewpoint, we would usually prefer commercial sales over military sales because they are quicker, simpler, and provide for more direct contact with the foreign buyer who may have additional needs not always recognizable when dealing through a third party. Industry experience is that the U.S. Government management controls over commercial arms sales are equally as stringent as in the case of foreign military sales. Therefore, it seems advantageous to permit each sovereign country to choose whether it desires to acquire goods and services through foreign military sales or via commercial sales.

We are pleased to see that the current arms transfer policy has, in essence, responded to our recommendations or acknowledged the basic issues of concern to us, such as co-production agreements and third-country transfers with pledges to study the issues and to consult with Members of Congress, industry, and others to seek guidelines for the future.

We welcome the opportunity to work with Government in this vital area of security and offer at this time the following recommendations and comments:

Regarding co-production, future co-production agreements, be they with our NATO allies or other friendly nations, should be supported by the Government, but details of the actual agreements should be left to the companies actually involved.

Regarding third-country sales, the related issue of third-country sales should be worked out by the companies involved in their sales co-production agreements in conformance with existing laws and controls. Obviously, there will be a particular constraint to prevent any East-West loss of technology. I would emphasize that U.S. corporations are highly sensitive to the national security problems and all aspects thereof.

Regarding the commercial ceiling, there is no apparent advantage to retaining the commercial ceiling. Our experience in the last admin-

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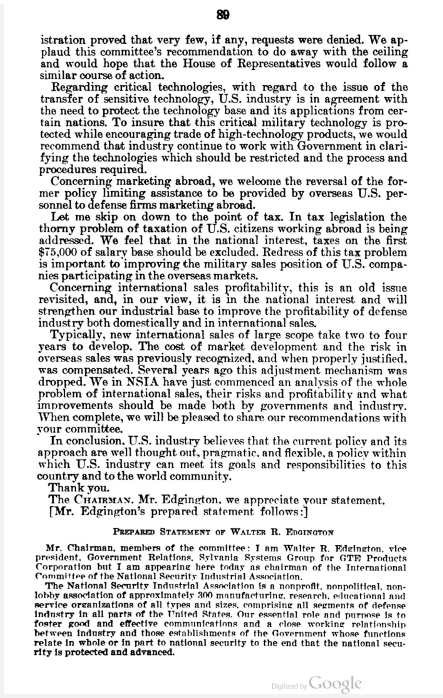

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istration proved that very few, if any, requests were denied. We applaud this committee's recommendation to do away with the ceiling and would hope that the House of Representatives would follow a similar course of action.

Regarding critical technologies, with regard to the issue of the transfer of sensitive technology, U.S. industry is in agreement with the need to protect the technology base and its applications from certain nations. To insure that this critical military technology is protected while encouraging trade of high-technology products, we would recommend that industry continue to work with Government in clarifying the technologies which should be restricted and the process and procedures required.

Concerning marketing abroad, we welcome the reversal of the former policy limiting assistance to be provided by overseas U.S. personnel to defense firms marketing abroad.

Let me skip on down to the point of tax. In tax legislation the thorny problem of taxation of U.S. citizens working abroad is being addressed. We feel that in the national interest, taxes on the first $75,000 of salary base should be excluded. Redress of this tax problem is important to improving the military sales position of U.S. companies participating in the overseas markets.

Concerning international sales profitability, this is an old issue revisited, and, in our view, it is in the national interest and will strengthen our industrial base to improve the profitability of defense industry both domestically and in international sales.

Typically, new international sales of large scope take two to four years to develop. The cost of market development and the risk in overseas sales was previously recognized, and when properly justified, was compensated. Several years ago this adjustment mechanism was dropped. We in NSIA have just commenced an analysis of the whole problem of international sales, their risks and profitability and what improvements should be made both by governments and industry. When complete, we will be pleased to share our recommendations with your committee.

In conclusion, U.S. industry believes that the current policy and its approach are well thought out, pragmatic, and flexible, a policy within which U.S. industry can meet its goals and responsibilities to this country and to the world community.

Thank you.

The CHAIRMAN. Mr. Edgington, we appreciate your statement.

[Mr. Edgington's prepared statement follows:]

PREPARED STATEMENT OF WALTER R. EDGINGTON

Mr. Chairman, members of the committee: I am Walter R. Edgington, vice president, Government Relations, Sylvania Systems Group for GTE Products Corporation but I am appearing here today as chairman of the International Committee of the National Security Industrial Association.

The National Security Industrial Association is a nonprofit, nonpolitical, nonlobby association of approximately 300 manufacturing, research, educational and service organizations of all types and sizes, comprising all segments of defense industry in all parts of the United States. Our essential role and purpose is to foster good and effective communications and a close working relationship between industry and those establishments of the Government whose functions relate in whole or in part to national security to the end that the national security is protected and advanced.

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STATEMENT OF WALTER R. EDGINGTON, INTERNATIONAL COMMITTEE, NATIONAL SECURITY INDUSTRIAL ASSOCIATION

The CHAIRMAN. Mr Edgington.

Mr Edgington. Mr. Chairman, I am **Walter Edgington**. I am here today as the chairman of the National Security Industrial Association [NSIA], which is a non profit, non political, and non lobbying association of approximately 300 manufacturing, research, engineering, educational, and service organizations.

At the outset, let me state that NSIA supports the current policy in the new conventional arms transfer both in objectives and in approach.

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We in industry are regularly involved with multiple European and Canadian corporations m various business opportunities, joint ventures, licenses, and marketing activity. Because of this close association, our constant interchange, travel, and intergovernmental relationship, we too are very anxious about major international tensions both in Europe and the Middle East.

In Europe, the North Atlantic Treaty Organization is our major alliance, and within the North American military industrial community NATO clearly provides the framework for discussion of many common needs. Economic bases, employment, multinational projects, military sales, arms transfers, export licenses, and Third World nations as markets have become our buzz words.

During the last few ;rears, though, the nations, their national industrial bases, their political parties, NATO and the EEC, have been in a constant ferment. The gradual erosion of our military strength, the significance of our national industrial bases, the growing pressure of various forms of social democratic concepts, and the focus on materialism are apparent.

NATO governments are anxious to increase exports, pressing their industries for international sales, both military and commercial, in all the world's marketplaces-their objective being to develop and maintain a strong industrial base, strong employment, strong currency, and to insure major offsets to the energy costs.

It is against this background that U.S industry and Government must combine to strengthen our will, our purpose, our management, our productivity, and our talents both at home, within the NATO alliance, and competitively in the Third World markets.

The NSIA concurs in this point of judicious use of arms transfer and a flexible, pragmatic approach to arms sales which can strengthen the U.S. economy and industrial base and contribute to the resolution of some of the economic problems of our allies and friends and enhance deterrence.

Last year I appeared before this committee to give an industry view of the status of Mr. Carter's arms transfer policy nnd its direct impact upon the U.S. exporting business opportunities and employment in this countrv. I sought to clarify or placP in perspective the military, political, and economic advantages which accrue to the Government. These advantages still hold true and. in fact, are even more important today as this country seeks to improve its industrial base and strengthen and maintain international peace and security.

From an industry standpoint, the sale of military products contributes to a higher employment at home; maintenance of a secure industrial base: an improves balance of payments; added profits for capital formation and, hence, technology and productivity investment; potentially lower unit costs for DOD; and the much enhanced opportunity to expand our commercial activities with those countries purchasing defense items and services to include logistics and support.

There are also pluses for American foreign policy goals as well, such as reassertion of America's predominant position as guardian of the democratic values, a reduction in the need for direct U.S. military involvement, and, in many cases, increased political influence in those countries receiving equipment. Many of last year's key points, were addressed in today's statement.

From an industry viewpoint, we would usually prefer commercial sales over military sales because they are quicker, simpler, n.nd provide for more direct contact with the foreign buyer who may have additional needs not always recognizable when dealing through a third party. Industry experience is that the U.S. Government management controls over commercial arms sales are equally as stringent as in the case of foreign military sales. Therefore, it seems advantageous to permit each sovereign country to choose whether it desires to acquire goods and services through foreign military sales or via commercial sales.

We are pleased to see that the current arms transfer policy has, in essence, responded to our recommendations or acknowledged the basic issues of concern to us, such as co-production agreements and thirdcountry transfers with pledges to study the issues and to consult with Members of Congress, industry, and others to seek guidelines for the future.

We welcome the opportunity to work with Government in this vital nrea of security and offer at this time the following recommendations and comments:

Regarding co-production, future co-production agreements. be they with our NATO allies or other friendly nations, should be supported by the Government. but details of the actual agreements should be left to the companies actually involved.

Regarding third-country sales, the related issue of third-country sales should be worked out by the companies involved in their sales co-production agreements in conformance with existing laws and controls. Obviously, there will be a particular constraint to prevent any East-West loss of technology. I would emphasize that U.S. corporations are highly sensitive to the national security problems and all aspects thereof.

Regarding the commercial ceiling, there is no apparent advantage to retaining the commercial ceiling. Our experience m the last administration proved that very few, if any, requests were denied. We applaud this committee's recommendation to do away with the ceiling and would hope that the House of Representatives would follow a similar course of action.

Regarding critical technologies, with regard to the issue of the transfer of sensitive technology, U.S. industry is in agreement with the need to protect the technology base and its applications from certain nations. To insure that this critical military technology is protected while encouraging trade of high-technology products, we would recommend that industry continue to work with Government in clarifying the technologies which should be restricted and the process and procedures required.

Concerning marketing- abroad, we welcome the reversal of the former policy limiting assistance to be provided by overseas U.S. personnel to defense firms marketing abroad.

Let me skip on down to the point of tax. In tax legislation the thorny problem of taxation of U.S. citizens working abroad is being addressed. We feel that in the national interest, taxes on the first $i5,000 of salary base should be excluded. Redress of this tax problem is important to improving the military sales position of U.S. companies participating in the overseas markets.

Concerning international sales profitability, this is an old issue revisited, and, in our view, it is m the national interest and will strengthen our industrial base to improve the profitability of defense industry both domestically and in international sales.

Typically, new international sales of large scope take two to four years to develop. The cost of market development and the risk in overseas sales was previously recognized, and when properly justified. was compensated. Several years ago this adjustment mechanism was dropped. We in NSIA have just commenced an analysis of the whole problem of international sales, their risks and profitability and what improvements should be made both by governments and industry. "When complete, we will be pleased to share our recommendations with your committee.

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I am delighted to have this opportunity to discuss the current conventional arms transfer policy, the anticipated role tor U.S. Industry and the significance ot what we see as an evolving change In the Government/Industry relationship.

At the outset, let me state that NSIA supports the current policy In Its new conventional arms transfer objectives and approach. We welcome this latest assessment of the world as it exists today and the steps to be taken to restore America's leadership role. The enhancement of the statement of readiness of our friends and allies; the revitalization of our alliances; the establishment of more coherent east-west policies and strategies; and the reinvigoration and strengthenIng our own defense production capabilities are realistic objectives which we can achieve end whose achievement will contribute to the security of the world.

We find the statement as presented to this committee by Mr. James Buckley, Under Secretary of State tor Security Assistance, Science and Technology, as a clear enunciation of the current policy which is a pragmatic approach based on meeting security needs and which recognize arms transfer as a vital and constructive Instrument of American foreign policy. It Is a policy aimed at strengthening other nations with common security Interests and complementing V.S. defense efforts.

We in U.S. industry are regularly Involved with multiple European and Canadian corporations in various business opportunities, joint ventures, licenses and marketing activity. Because of this close association, constant interchange, travel, and intra-government relationship, we too are very anxious about major International tensions both in Europe and the Middle East. In Europe, the North Atlantic Treaty Organization (NATO) Is our major alliance. Within

the North American military/industrial defense community, NATO clearly provides the framework for discussion of many common needs. Economic bases, employment, multi-national projects, military sales, arms transfer, export licenses and Third World nations as markets have become our buzz words. During the la11t few years, the nations, their national Industrial bases, their political parties NATO and EEC have been In a constant ferment. The gradual erosion of military strength, the significance of national industrial bases, the growing pressure ot various forms of social democratic concepts and the focus on materialism are apparent.

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It Is against this background that U.S. Industry and Government must combine to strengthen our will. our purpose. our management, our productivity and our talents both at home, within the NATO alliance, and competitively in the Third World markets.

The National Security Industrial Association concurs that the judicious use of arms transfer, and a flexible, pragmatic approach to arms sales, can strengthen the U.S. economy and Industrial base, contribute to the resolution of some of the economic problems of our allies and friends, and enhance deterrence and world-wide peace.

Last year I appeared before this committee to give an Industry view of the status of Mr. Carter's arms transfer policy and its direct Impact upon U.S. exporting business opportunities and employment In this country. I sought to clarify or place In perspective the military, political. and economic advantages which accrue to the United States In assisting a country in meeting Its legitimate defense requirements.

These advantages still hold true, and in fact, are even more important to the United States today as this country seeks to improve its industrial base, and strengthen and maintain International peace and security.

From the industry viewpoint, the sale of military products abroad contributes to higher employment at home, maintenance of a secure industrial base, an improved balance of payments. added profits for capital formation/technology and productivity investment, potentially lower unit prices for the Department of Defense and the much enhanced opportunity to expand our commercial activities with those countries purchasing defense items and services, to include logistics support and training. There are pluses for American foreign policy goals as well, such as reassertion of America's predominant position as guardian of the democratic values; a reduction In the need for direct U.S. military support and. In many cases, increased political influence in those countries receiving military equipment.

In testimony before your committee last year, I recommended six specific, pragmatic changes In the then current arms transfer policy to Include:

Eliminating the annual dollar volume limits on FMS and MAP.

Removal of the restriction of the sale of weapons abroad if they are not operationally deployed with U.S. forces and the prohibition of development or modification of a system solely for export.

Recognition that our allies and In some cases the Soviet Union, can and do Introduce advanced weapons systems Into regions where the U.S. refusal to be the first supplier forced countries, normally dependent upon the United States, to look elsewhere for their support.

Instruction of Embassy and military representatives abroad to assist U.S. manufacturers In their execution of the foreign military sales program and In competing for commercial contracts lo the host country. (Now corrected by the Department of State letter In April 1981).

Reinstatement of the allocation of Justifiable costs lo procurement regulations for foreign sales where they are undertaken In support of American foreign policy.

Permitting U.S. companies to compete freely for military contracts In countries that are recognized as friends of the United States without unnecessary preauthorization at the policy level by the State Department.

I also questioned the administration's prohibition on coproduction agreements to all countries other than NATO, Japan, Australia, and New Zealand.

The adjustment of the dollar limits which now force some sales into the foreign military sales category and the limitation of the commercial arms sales celling was also advocated. As regards this latter point, from an Industry viewpoint, we would usually prefer commercial sales over foreign military sales because they are quicker, simpler, and provide for more direct contact with the foreign buyer who may have additional needs not always recognizable when dealing through a third party. Industry experience Is that U.S. Government management controls over commercial arms sale!! are equally as stringent as In the case of foreign military sales. It, therefore, seems advantageous to permit each sovereign country to choose whether It desires to acquire goods and services through foreign military sales or via commercial sales.

We are pleased to see that the current arms transfer policy has, in essence, responded to our recommendations or acknowledged the basic Issues of concern to us such as coproduction agreements and third-country transfers with pledges to study the Issues and to consult with Members of Congress, Industry and others to srek workable guidelines for the future.

We welcome the opportunity to work with Government In this vital area of national security and offer, at this time, the following recommendations and comments:

Co-production, - Future co-productlon agreements, be they with our NATO allies or other friendly nations, should be supported by the Government, but details of actual agreements should be left to the companies actually involved.

Third-country sales. - The related Issue of third country sales should be worked out by the companies involved in their sales/co-production agreements in conformance with existing laws and controls. Obviously, there will be particular constraints to prevent any East-West loss of technology. I would emphasize that U.S. corporations are highly sensitive to the national security problems, and all aspects thereof.

Commercial ceiling. - There Is no apparent advantage to retaining the commercial ceiling. Our experience In the last administration proved that very few, If any. requests were denied.

We applaud this committee's recommendation to do away with the celling and would hope that the House of Representatives would follow your course of action.

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technology base and Its applications from certain nations. To Insure that this critical military technology Is protected, while encouraging trade of high technology products, we recommend that U.S. Industry continue to work with Government In clarifying the technologies which should be restricted and the process and procedures required.

Marketing abroad. - We welcome the reversal of the former policy limiting assistance to be provided by overseas U.S. personnel to defense firms marketing abroad. The new policy directing U.S.G. overseas representatives to provide the same courtesies and assistance to firms that have obtained licenses to market Items on the U.S: munitions list as they would to those marketing other American commercial products abroad reflects a mature understanding or the realities or today's markets. In other tax legislation, the thorny problem of taxation of U.S. citizens working abroad is being addressed. We feel that, In the national interest. taxes on the first $75,000 of salary base should be excluded. Redress of this tax problem Is important to improving the military sales position of U.S. companies participating in the overseas markets.

International sales profitability. - An old issue revisited is that. In our view, it is in the national interest and will strengthen the U.S. industrial base to Improve the profitability of defense industry, both domestically and In International sales. Typically, new international sales of large scope take 2 to 4 years to develop. The cost of market development and the risk In overseas sales was previously recognized, and when properly justified. was compensated. Several years ago this adjustment mechanism was dropped. We in NSIA have just commenced an analysts of the whole problem of International sales, their risks and profitability, and what improvements should be made both by Government and industry. When complete, we will be pleased to share our recommendations with your committee.

Conclusion. - U.S. industry believes that the current policy and Its approach are well thought out, pragmatic and flexible; a policy within which U.S. industry can meet its goals and its responsibilities to this country and to the world community.

1984 (April 22) -

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Over-the-counter 8
Obituaries 12
Classified 13

The Philadelphia Inquirer
business

section F

Sunday, April 22, 1984

Contractors scrambling for U.S. defense dollars

By David Sylvester
Knight-Ridder News Service

SAN DIEGO, Calif. — Despite the greatest surge in defense spending since the Vietnam War, the talk among military contractors these days is not of boom times but of looming budget cuts.

The paradox stems from the ebb and flow of Washington politics. The Reagan administration promises; Congress takes away. And companies have to figure out which of the promises will stick long enough for them to make money.

As politicians in Washington debated the proposed $305 billion defense budget for fiscal 1985, about 200 military contractors gathered here a week ago to read tea leaves, examine entrails and confer over cocktails about the size and direction of spending. Company marketing and sales executives as well as military planners met at a conference organized by the New York market research firm of Frost & Sullivan and heard the latest predictions:

- Spending will rise but largely for established programs. Few new research programs will start this year, cutting off a source of business.
- After being burned by promised but canceled programs, companies may grow more selective about which contracts to pursue.
- Military planners are concerned that obsolete technology may be used in weapons because military red-tape and requirements slow down procurement. Weapons take at least twice as long as commercial products to design and produce.

Spending was foremost in the discussions. Earl Towson, director of

(See CONTRACTORS on 10-F)

Scrambling for U.S. defense dollars

CONTRACTORS, from 1-F

plans and programs at the Naval Weapons Center at China Lake, Calif., estimated that companies can expect at least 3 percent annual growth in real defense spending over the next several years. That should happen no matter how the budget debate is settled and no matter who wins the presidential election, he said.

The Reagan administration originally sought an increase of almost 15 percent in real military spending for fiscal 1985. But Walter Edgington, vice president of marketing for the GTE Corp. products group, said lower figures were more likely.

According to Edgington, Rep. Samuel S. Stratton (D., N.Y.), an arms proponent, has said that the Senate is expected to press for nearly an 8 percent real increase, whereas the House of Representatives will seek a 3.5 percent real increase.

Companies are more worried, however, that the big-ticket weapons favored by the Reagan administration, such as the B-1B bomber and the MX missile, will squeeze out spending on research. Many companies need research contracts to get their foot in the door for work.

"You have to plant your seed before you can harvest your corn," said Stan Tenold, general manager of Rolm's Mil Spec Computer Division. Rolm, which sells computers to military contractors, is considering seeking work on a contract that could face budget-cutting, he said. Many Silicon Valley companies, such as GTE's Western Division and Lockheed Missiles & Space Co., are benefiting from the boom in large weapons systems. Lockheed just signed a $5.8 billion contract to supply the next generation of nuclear missiles for the Trident submarines, and GTE is supplying command and control electronics for several systems.

Even though they do not receive weapons contracts themselves, smaller local companies will feel the pinch over time, as potential subcontracting work dries up.

The large weapons systems are less vulnerable to cuts than are research contracts: Weapons systems can be approved this year without large sums being spent right away — spending will build in future budgets; cuts in research financing will bring down the current budget faster, because the money is usually spent in the current year.

The Reagan administration asked to spend $34 billion on research, development, test and evaluation programs in the fiscal year that begins Oct. 1. This is up from $26.9 billion for fiscal 1984. Of this year's request, about $25 billion is expected to flow to companies for contracts; the rest is to be spent on contracts with universities and colleges.

In the procurement portions of the budget, enormous sums will go into new weapons that modernize what the industry calls the "strategic triad" of bombers, nuclear submarines and land-based missiles. GTE's Edgington estimated that about $200 billion, or 15 percent of the entire budget over the next five years, will go into these systems.

Some technology programs may lose because of what one critic called the "Black Hole" of the "Star Wars" weapons. The Reagan administration says these systems of attack satellites could shield the United States from nuclear assault by destroying Soviet missiles.

But these weapons are expensive. Edgington said that spending could absorb $17 billion to $26 billion over the next five years. "And this is just the tip of the iceberg," he said.

Voicing a widespread suspicion, Towson at the Naval Weapons Center termed the "Star Wars" plans "a stalking horse to scare the Soviet Union" into more serious arms negotiations. "To create that stalking horse ... it's going to be sucking dollars for a long way off."

In the midst of potential contract cuts, electronics companies say spending is strong for a host of new equipment and systems for the military's command, control, communications and intelligence. These are the electronic systems that allow commanders at headquarters to know what is going on at a battlefield, whether by satellite surveillance or by direct radio communications.

Yet even as the military is enamored of the new high-tech systems, one officer conceded, it has trouble bringing the latest technological developments into the weapons systems.

Designing of military weapons takes 10 years, during which commercial products will reach market and will be replaced at least twice. The military is then "faced with fielding obsolete equipment or playing catchup," said Gen. Bruce Harris.

Because of the impending cuts and the scrambling to save programs, companies may find themselves forced to make unrealistic promises to keep contracts. Jack Robertson, the Washington editor of the trade newspaper Electronic News, predicts that to avert cuts, more companies and defense services will tell more "white lies" about how well the promised programs will perform.

Financing will remain erratic, he predicted, making managers more careful in picking which contracts they pursue.

[HN01E7][GDrive]

1984 (July 22) - Mother passes

Full newspaper page : [HN01E8][GDrive]

The Modesto Bee (Modesto, California) · 22 Jul 1984, Sun · Page 19

HELEN V. CRAWFORD — A graveside service will be held at 11 a.m. Tuesday at the Odd Fellows-Pioneer Cemetery for Helen Violet Crawford, 87, who died Friday in Modesto.

Visitation will be from 10 a.m. to 9 p.m. Monday at Franklin & Downs-Colonial Chapel.

Mrs. Crawford was born in Indiana. She lived in Modesto since 1934. She was a registered nurse who worked in all local hospitals; the most recent was Memorial Hospital-South in Ceres.

She was a member of the First United Methodist Church of Ceres, the Ceres American Legion Auxiliary, Neighbors of Woodcraft, Smyrna Chapter of O.E.S., Ceres Rebekah Lodge, Pamona Grange of Stanislaus County and the Ceres Grange.

She is survived by her husband, William Parker Crawford of Modesto; two sons, Walter R. Edgington of Virginia and Lloyd V. Edgington of Canada; a daughter, Irene Anderson of Hayward; 11 grandchildren; and eight great-grandchildren.

[HN01E9][GDrive]

1985 (Sep 11)

Full page : [HN01C9][GDrive]

Arizona Daily Sun (Flagstaff, Arizona) · 11 Sep 1985, Wed · Page 6 FIND

Jury Indicts GTE Trio In Defense Fraud Case

WASHINGTON (UPI) — A federal grand jury has indicted three GTE Corp. officials for conspiring to obtain and use secret Pentagon documents to get government contracts, the Justice Department announced.

Attorney General Edwin Meese said the Justice Department also charged the defense arm of the company, GTE Government Systems Corp., in a separate action with an additional count of conspiracy.

The Pentagon said Tuesday the Waltham, Mass., company, which manufactures electronic warfare equipment, will plead guilty to the charge that it used the classified internal documents "to defraud the United States."

The indictment, returned in U.S. District Court in Alexandria, Va., charged a consultant and two company officials with illegally obtaining sensitive Pentagon budget documents that "reflect the potential procurements of the department ... (and) contain proprietary and classified information."

Those officials used the inside information to help the company obtain government contracts, the indictment said.

The indictment also charged the three with unauthorized possession of a classified document, using a section of the law normally reserved for espionage cases.

The separate count of conspiracy charged against the company said GTE officials took extraordinary steps to conceal their activity, the Justice Department said.

Named as defendants in the five-count indictment were:

- Robert Carter, 55, of Mountain View, Calif., a former GTE employee who was marketing manager of the Electronic Warfare Organization of GTE's Western Division.
- Walter Edgington, 60, of Annandale, Va., a GTE vice president for marketing with offices in Rossyln, Va.
- Bernie Zettl, 62, of McLean, Va., a consultant doing business as Zettl Associates, with offices in Virginia.

If convicted, GTE Government Systems Corp. faces a maximum fine of $10,000. The individuals indicted face fines and sentences up to $30,000 and 25 years in prison.

[HN01CA][GDrive]

1985 (Sep 12)

Full pages : Page 1 at [HN01C6][GDrive] / Page 16 at [HN01C8][GDrive]

Fort Worth Star-Telegram
Thursday, September 12, 1985 ★★★ Winner of the 1985 Pulitzer Prize for Meritorious Public Service PRICE 25¢

Pentagon bid limits called poor secret

By FRANK GREVE
Knight-Ridder News Service

WASHINGTON — Defense contractors — often using classified documents — always know how much the Pentagon is willing to pay before they bid on a new weapon, according to industry experts.

They say they are shocked that this is news to the Justice Department.

The Pentagon's "not-to-exceed" prices, which are classified, are "quite available" to all bidders through informal, inside channels, said Jacques Gansler.

Gansler is a former Defense Department official and the author of *The Defense Industry*, a primer on the U.S. arms business.

● Pentagon still paying too much for parts, two House members say 16A

Gansler, like many other defense industry representatives, was appalled Wednesday to learn that three current and former employees of the GTE Government Systems Corp., a Connecticut-based defense electronics contractor, had been indicted on charges of conspiracy to obtain internal Pentagon planning documents relating to GTE products.

The information contained in the documents is so commonplace, Gansler said, that the indictments constitute "new evidence of the deterioration in government-defense industry relations."

Other defense executives and lobbyists shared his view of the case, the first produced by a three-year Defense Department investigation of classified information-swapping within the industry.

Such intramural industrial espionage, they said, is far more widespread than any other kind of security breach.

But Gansler and others said it is rarely taken seriously because all personnel involved — including those indicted in the GTE case — hold the appropriate security clearances.

Military reformers, meanwhile, tended to regard the latest case as "an outrageous example of the incredible symbiotic relationship between the contractors and the Defense Department," in the words of one congressional aide.

Morris Silverstein, head of the Defense Procurement Fraud Unit, which brought the case, argued that "if would-be bidders on a new weapons system know the gov-

Please see Bidders on Page 16

Bidders know limits, experts say

Continued from Page 1

ernment will pay $30 million to $100 million for it, who's going to bid $6 million?"

The indictments filed Tuesday allege that GTE repeatedly since 1978 obtained unauthorized copies of three classified, regularly updated Pentagon planning documents.

The documents are the Five-Year Defense Plan, which spells out the kinds and quantities of weapons to be bought and their predicted costs; Program Objective Memoranda, which outline the plans and projected prices for individual weapons; and Program Element Descriptions, which define and price subcontracted weapons elements.

According to the indictments, Robert R. Carter of Mountain View, Calif., GTE's marketing manager for electronic warfare programs; and Walter R. Edgington, GTE's Rosslyn, Va.-based marketing manager, paid consultant Bernie E. Zettl of McLean, Va., $119,510 over five years to mail the documents to a secret California post office box.

GTE Government Systems pleaded guilty Wednesday to "the receipt, without authorization, of Department of Defense budgetary and planning documents, some of which were classified," according to the company's statement.

GTE also paid a $10,000 fine, $580,000 in investigative costs plus reimbursement for the Pentagon's share of Zettl's consulting fees.

If convicted, the three defendants face five to 25 years in prison for a practice that apparently is so common that one defense representative jested, "You can hear the shredders grinding all over town."

Knowing the Pentagon's future plans is a defense industry representative's basic job in Washington, insisted one lobbyist.

"A company is trying to figure out what to do in the future. . . . Naturally, every company wants intelligence data on what funds are available for a program," he said.

The information often is classified, said Gansler, "but usually the (military's) program offices will talk to you about the future market and funding for a weapon system, if you have the proper clearances and the need to know.

"Usually, if you're a contractor," Gansler continued, "the uniformed program manager will have come to you and asked the price of a credible program."

[HN01C7][GDrive]

1986 (Jan 06)

https://www.newspapers.com/image/132049687/?terms=%22walter%20edgington%22&match=1

1986 (Jan 27)

Full newspaper page : [HN01EA][GDrive]

1986-01-27-hartford-courant-pg-business-weekly-11-crop-gte

Case of Purloined Papers Leaves Defense Industry Ranks Worrying

By ROBERT WATERS
Courant Staff Writer

GTE of Stamford, the corporate star of those familiar TV commercials in which one voice exclaims "Gee" and a second voice responds "No — GTE" may be privately mumbling some off-camera "gees" itself these days.

The reason: Two officials and a former consultant with a GTE subsidiary are scheduled to go on trial Feb. 18 in a criminal case that is reported to be a source of worry in the nation's defense industry.

The GTE defendants face charges that are believed to be based on unprecedented criminal allegations, the misuse of information from classified Pentagon budget planning documents.

The prosecution is expected to claim that purloined documents gave GTE a competitive advantage in winning Navy electronic warfare contracts.

Although little is being said publicly, the case is giving the defense establishment a collective headache because it appears to be based on transgressions that government officials have been overlooking for years.

"It's like a threat to prosecute every motorist who ever drove a single mile over the posted speed limit," quipped one Washington defense expert.

The classified documents in question, known around the Pentagon as POMs (for Program Objective Memorandums), FYDPs (for Five Year Defense Plans) and PDMs (Program Decision Memorandums) are widely distributed to Pentagon aides, congressional committees, senators, congressmen and defense contractors.

The documents rarely contain any data that could threaten national defense because the information is usually made public within a few months. But they are often very valuable to the firms which make the Pentagon's weapons.

Experts say they often contain data or strong hints about where a company should concentrate its resources to position itself for contracts. They are reported to be especially valuable in research and development projects where the competition is unusually fierce.

But POMs and similar documents are so widely distributed that they frequently fall into the hands of reporters who use the information for news stories to give the public an advance peek at the shape of the defense budget.

For example, when The Courant broke the news last August that the Air Force was planning to scrap the $1.2 billion Sikorsky Night Hawk helicopter program, the story was based on information that was leaked from a pending 1987 Air Force budget POM.

Although POM data is officially classified, it is often so widely distributed that one of Washington's most informed defense magazines, Aviation Week, recently joked editorially:

"POMs tend to get Washington's copying machines overheated ... POMs go through so many variations of copying that eventually they become unreadable."

Although little is being said publicly, the case is giving the defense establishment a collective headache...

But despite the generally acknowledged absence of real secrecy, the Justice Department decided four months ago to hit GTE's Government Systems Corp., based in Waltham, Mass., with a conspiracy charge involving misuse of the documents.

In addition to the two GTE executives and the consultant who are awaiting trial, the company itself also was charged.

The case exploded at a particularly bad time for GTE. The Connecticut-based firm, which won $707.7 million in Pentagon contracts in 1984, was a major competitor for an upcoming $5 billion Army electronics communications systems contract.

Although it protested that it had done nothing wrong, the company quickly decided to take the line of least resistence. Fearing it might be barred from Pentagon contracts, GTE permitted its subsidiary to cut a deal with the government.

In a sudden plea bargain arrangement, GTE agreed to pay a total of $590,000 in costs and fines to end the case. The strategy worked. GTE remained in the good graces of the Pentagon and eventually won the Army award, a plum that may create about 1,000 jobs in Massachusetts.

But the remaining defendants, former GTE consultant Bernie E. Zettl, GTE Vice President Walter R. Edgington and former GTE Marketing Director Robert R. Carter have, thus far, said they will fight the unusual charges.

Their trial is scheduled to be heard in a suburban Washington setting, the U.S. District Court in Alexandria, Va.

Prosecutors have disclosed that the Justice Department will claim that the defendants illegally obtained Navy POMs and other budget documents relating to several electronic warfare programs.

The budget informtion, says the prosecution, made it easier for GTE to submit a bid on the programs since GTE officials knew in advance how much the Navy was planning to spend for these programs.

"By improperly obtaining classified and proprietary DoD (Department of Defense) information, defendants gained an unfair advantage over their competitors in bidding on government contracts," said David Hopkins, the government's chief prosecutor.

"Through the concerted actions of the defendants, the integrity of the government's procurement process was invaded and destroyed," said Hopkins.

The lineup of defendants indicates that Zettl, who operated his own firm, called Zettl Associates, is the key to the prosecution.

The indictment indicates that Zettl, who was paid between $18,000 and $24,000 a year between 1979 and 1983, supplied the documents to GTE.

The government has spiced its case by noting two elements of mystery involving Zettl:

- The documents were mailed to a post office box in order to avoid using GTE's interdepartmental mailing system.
- A 1979 internal GTE memo refused to describe the services Zettl performed. "We do not want to list on paper the work he is doing," the memorandum said.

The GTE representatives have more to their case than the "everybody does it" defense.

At the bottom, they will claim that it is not a criminal offense for corporate representatives with valid Pentagon security clearances — which all three possessed — to distribute classified information among themselves.

The GTE case is markedly different from the Vietnam War's so-called Pentagon Papers case where classified data was distributed to the press.

"This case, by contrast, involves only the exchange of classified information among individuals — all of whom, by the government's own admission, had appropriate security clearances," said a defense lawyer during a recent pretrial hearing.

Some defense firms reportedly are worried that the case may lead to disclosures that other firms have been using budget planning documents to gain an edge over their rivals.

The GTE defendants themselves threw a scare into the rest of the industry when they recently tried to subpoena several large firms in an attempt to show that many firms have similar classified information in their files.

However, U.S. District Judge James C. Cacheris quashed the subpoenas after government lawyers successfully argued that the orders represented a "fishing expedition" into the files of the other firms. One firm, McDonnell Douglas, complained in a signed affidavit that it would cost $3.5 million merely to search its files for such data.

If convicted of the charges, Zettl and Edgington face maximum prison terms of up to 25 years and fines of $30,000. A conviction of Carter would expose him to a maximum term of five years and a $5,000 fine.

Conviction is considered far from certain in view of the security clearances held by the defendants. They are also helped by the fact that, in the past, cases of this type were usually handled in civil proceedings.

But if the GTE trio is convicted, defense experts believe it will produce at least a few worried executives among the ranks of the Pentagon's leading weapons contractors.

[HN01EB][GDrive]

1988 (June 26)

Full page - [HN01CB][GDrive]

Complex Pentagon purchases offer opportunity for corruption

Los Angeles Times

The Department of Defense has 50,000 designated contract officers, dealing with 300,000 military suppliers. It grants an average of 62,000 contracts every day.

WASHINGTON — In February 1984 an agent of the Defense Criminal Investigative Service paid a call on Walter Edgington, a marketing executive at GTE Government Systems, just down the road from the Pentagon. The agent said that he was looking into the theft of secret military documents by defense contractors and free-lance consultants.

"You don't have to explain. I know why you're here," Edgington reportedly responded, volunteering that he first saw classified Pentagon documents at GTE shortly after joining the company in 1966 and had received a steady flow of secret data ever since.

"Every major corporation gets the same material," the investigator said he was told.

The GTE case, it now appears, was a chilling portent of the massive Pentagon bribery investigation now unfolding across the country. As the GTE affair demonstrated, the $150 billion-a-year defense acquisition business is so vast, so complicated and so little understood that it offers opportunities for corruption and questionable business practices on a staggering scale.

To understand the dimensions of the Pentagon's system for acquiring the weapons, trucks, ships, helmets, boots and the thousands of other things needed to project U.S. military power around the world, consider this: Not counting the legions of military and civilian personnel involved in secondary roles, the Department of Defense has 50,000 designated contract officers, dealing with 300,000 military suppliers. It grants an average of 62,000 contracts every day.

By themselves, the rules spelling out the way defense contracts are to be sought and awarded are bound into books that occupy — literally — almost a quarter mile of shelf space, Pentagon officials said.

And, for the business corporations large and small that seek government contracts, one of the critical elements at every stage of the long procurement process is information, especially advance information that competitors may not have.

Critical questions

What weapons and equipment are the armed forces thinking of obtaining — or cutting back on — in the future? How much money is being budgeted for current procurement of particular items and which programs are winning and which losing in the internal jockeying over funds and policy support?

Most important of all, once competition begins for a particular contract, what exactly does the Navy, or the Army or Air Force, want? What is the nature of the competition? Where is a rival's bid strong or weak? What clues can be gleaned about its product, its cost structure, manufacturing techniques and other proprietary matters? And what political forces are influencing — or might be brought to bear on — Pentagon decision-makers behind the scenes?

The quest for such information, as competitive in its own way as the struggle for contracts, has given rise to a tight-knit fraternity of consultants who know their way around the Pentagon jungle. Many labor diligently within the bounds of established procedures, but federal investigators say that some use payoffs, job promises or other gratuities to get such data improperly from contacts in the military bureaucracy.

The GTE episode offers an instructive primer or case study on how the defense acquisition business works in practice, how that practice sometimes diverges from theory and how easily it all can be corrupted.

It is a world of Beltway Bandits, Old Crows, rent-a-generals and let-the-buyer-beware — in this case, the buyer being the U.S. taxpayer.

In September 1985, the Department of Justice indicted GTE, Edgington, a second GTE executive and Bernie Zettl, a colorful consultant who allegedly was funneling secret Pentagon papers to GTE. GTE pleaded guilty to possession of classified material regarding electronic warfare programs and paid a $590,000 fine. Charges against the two GTE executives were dropped, but the Zettl case is unresolved.

Investigators were furious that their superiors stopped the inquiry at GTE and did not allow them to pursue leads implicating at least 25 other major defense contractors and dozens of consultants. One investigator called the GTE case the "tip of the proverbial iceberg" and said that the Department of Defense and the Department of Justice set the current query back two years by prematurely ending the earlier inquiry.

The Zettl case also opened a window on a little-known network of electronic warfare specialists known as the Association of Old Crows, a 25,000-member organization linking professionals in industry and the military. Zettl was one of the founders of the group, named for a World War II operation that jammed German radar signals.

The Crows, scattered throughout the defense electronics industry worldwide, consist mainly of retired military officers who have moved into high-ranking positions in the major companies that supply sophisticated military jamming, surveillance and communications gear.

Old Crows give information

The association, based in Alexandria, Va., provides a remarkably efficient system for moving valuable information, officials familiar with the group said. Members, who maintain their military contacts and seek to provide their clients or companies with such things as early tips on future Pentagon plans, meet formally and informally throughout the United States, Europe and Asia to swap war stories and industry gossip.

Gus Slayton, the group's executive director, asserted that the Old Crows are in no way linked to the present scandal. Only one of the 16 Pentagon officials and private consultants served with search warrants last week is a member, Slayton said, declining to name him. Numerous executives of the defense companies searched belong to the group.

According to charges filed in the GTE case, the company went to extraordinary lengths to conceal its possession of classified military documents and their sources. An official of a subsidiary of the company rented a post office box in California to receive the secret documents allegedly obtained by Zettl to keep them out of the regular GTE internal mail system, the indictment said.

According to an associate, the publicity surrounding the GTE case ruined Zettl professionally and financially. He no longer is in the defense consulting business, has moved from the Washington area and could not be reached for comment.

1988-06-26-the-el-paso-times-pg-16-a-clip-complex-pentagon-purchase

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[HN01CC][GDrive]

1988 (July 04) - Chicago Tribune

Whole newspaper pages : Page 1 = [HN01DV][GDrive] , Page 6 = [HN01DW][GDrive]

Chicago Tribune
Sports Final
35¢ Monday, July 4, 1988
142d Year — No. 186 © Chicago Tribune 5 Sections ★

U.S. downs Iranian jetliner

290 aboard; Reagan calls shooting 'a terrible human tragedy'

President backs Navy procedures

By Timothy J. McNulty
Chicago Tribune

WASHINGTON—Calling it "a terrible human tragedy," President Reagan swiftly expressed his regret Sunday over the Iranian airliner shooting. But fallout from the erroneous missile attack seemed certain to create change in American involvement in the Persian Gulf.

The international embarrassment and the failure of the U.S. military to discern an unarmed airliner also may affect America's attitudes and policy long after this administration leaves office next year.

The ship-to-air shooting occurred in the middle of the 4th of July holiday weekend. To downplay any sense of crisis, the President remained on vacation at the Camp David presidential retreat in Maryland.

In his official statement, released by White House spokesman Marlin Fitzwater, Reagan did not directly apologize for downing the plane, which was carrying 290 people on a scheduled Iran Air flight over the Persian Gulf. The President said it appeared the U.S. had shot down the European-built, wide-body Airbus "in a proper defensive action."

"This is a terrible human tragedy," Reagan said, adding that the Defense Department would conduct a full investigation.

The impact of the disaster was difficult to gauge immediately, not only because it was a holiday weekend but because the Pentagon already was under fire for the procurement fraud scandal. Questions about the quality and performance of the Navy's equipment were raised immediately after news of the shooting was announced.

"There will be congressional hearings on this as sure as night follows day, not only on the equipment but on the [Navy] instructions and the rules of engagement," said Sen. Alan Dixon (D., Ill.), a member of the Senate Armed Services Committee.

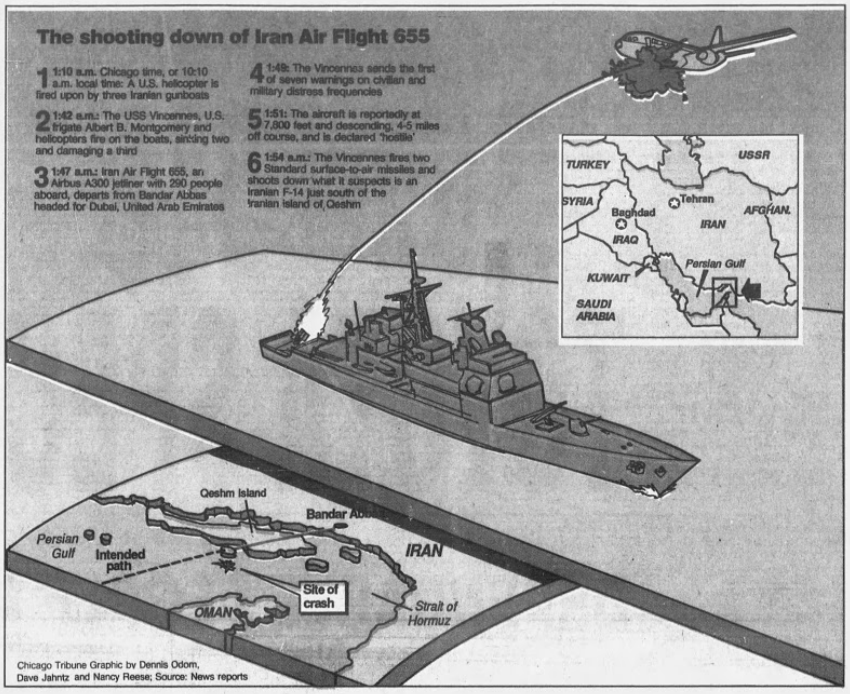
In addition, this is a presidential election year, when turmoil in foreign policy can have a turbulent effect on public opinion. Democratic congressional leaders generally were cautious in criticizing the naval action.

The apparent Democratic presidential nominee, Michael Dukakis, said he hoped a Pentagon investigation would "quickly and fully respond" to questions about the incident.

"All Americans are saddened by the loss of life in the Persian Gulf," Dukakis said. "Plainly, our armed forces have a right to defend themselves."

"The U.S. has been more than a year in the Persian Gulf, and still there is no defined policy, still no firm commitment to end the war," said Jesse Jackson, the other major figure in the Democratic

See Policy, pg. 5



Tehran deplores 'criminal act'

By Nicholas M. Horrock
Chicago Tribune

WASHINGTON—A U.S. Navy warship shot down an Iranian airliner carrying 290 passengers over the Persian Gulf early Sunday after the crew mistook the giant Airbus for an attacking warplane, Department of Defense officials said.

According to Iran's official Islamic Republic News Agency, there were no survivors. Navy officials in Washington said crews in the gulf saw the Airbus "disintegrate" when a missile fired by the cruiser USS Vincennes hit it.

"We will not leave the crimes of America unanswered," Iran's state-run radio said in a commentary.

Iranian television showed film of search efforts and said 110 bodies had been recovered.

The report said the victims included 66 children. Also aboard were 156 men and 52 women passengers and 16 crew members. Airline sources 250 of those aboard were Iranians. The rest were Indians, Pakistanis, Koreans, Japanese and Arabs.

The A300 Airbus, Iran Air Flight 655, was bound from Tehran to Dubai in the United Arab Emirates. It had just made a stop at Bandar Abbas in southern Iran and was on the last leg of its journey, 150 miles. It was flying at an altitude of 7,500 feet when it was attacked.

This is the first time a civilian airliner has been shot down since September, 1983, when a Soviet MiG-23 shot down a Korean Boeing 747, killing all 269 people aboard.

President Reagan, spending his 4th of July weekend at Camp David, issued a three-paragraph written statement saying he was "saddened" by the attack. "This is a terrible human tragedy. Our sympathy and condolences go out to the passengers, crew and their families," he said.

Iranian Prime Minister Hussein Musavi said the incident showed that the U.S. had "entered a more direct war with our nation" and added that Washington would have to face the consequences of "this criminal act." Musavi warned the U.S. "that its latest crime against the Iranian people would only further arouse the abhorrence of [Iranians] against Washington," according to the news agency.

Reagan's statement said the "course of the Iranian civilian airliner was such that it was headed directly for the USS Vincennes, which was at that time engaged with five Iranian Boghammer boats that

See Gulf, pg. 4

Complete coverage

- Iran vows vengeance for "barbaric massacre." Page 4.
- Western allies express regrets, but stand by U.S. Page 4.

Agence France-Presse photo
Two Iranians at the Dubai Airport in the United Arab Emirates show their distress on hearing of the downed Iranian airliner on Sunday.

Gulf incident shows limitations of radar

By David Evans
Chicago Tribune

WASHINGTON—Radars are the long-range eyes of the surface Navy, and the radars on the cruiser Vincennes employed in Sunday's shooting down of an Iranian airliner were the most advanced in the fleet. Yet, somehow, they were unable to tell the difference between a large civilian airliner and a much smaller F-14 jet fighter.

The ship's skipper thought he was shooting at a hostile Iranian F-14, Adm. William Crowe said in a Pentagon news conference. Instead, his missiles downed an Iran Air A300 Airbus carrying 290 passengers and crew.

The tragic destruction of the Iranian airliner came as no surprise to various experts familiar with the limitations of even advanced radars.

The Vincennes is one of the Navy's newest ships, equipped with the powerful Aegis radar system. Like all radars, the Aegis works by sending out strong pulses of radio waves and then "listening" for echoes from objects in the radar beam.

Generally, the bigger the object spotted, the bigger the echo.

The strength of the echo is called the "radar cross-section" of the target.

Although the A300 Airbus is about three times bigger than the F-14, its radar cross-section might not be much different. The sheer size of an airplane is not nearly as important as its shape and its angle with respect to the radar beam.

"The radar cross-section on a

See Weapons, pg. 5

Good morning

Cubs, White Sox win

The Cubs slip past the Dodgers 2-1. Dan Pasqua's two-run homer in the 10th lifts the Sox past the Yankees 4-3. Sec. 2, pg. 1

Weather

CHICAGO AND VICINITY: Monday: Partly sunny, hot; highs 82 near Lake Michigan, 90 degrees inland. Monday night: Clear, humid; lows 66 to 72. Tuesday: Mostly sunny; high 96.

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Trading defense data becomes a way of life

By Christopher Drew and William Gaines
Chicago Tribune

This is the second in a series of articles about the Pentagon procurement scandal.

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file room so they could at least be controlled."

"Every major corporation gets the same material," the executive declared.

Edgington also acknowledged that he had never tried to stop the practice, which the investigators considered illegal industrial espionage.

Vrdolyak's negatives a big plus for Pucinski, poll says

By Thomas Hardy
Political writer

Campaign '88

Aurelia Pucinski is not Edward Vrdolyak, and that's a good enough reason for most voters to support her over the controversial former Chicago alderman in their race for clerk of Cook County Circuit Court, a new Tribune poll shows.

Democrat Pucinski holds a commanding lead of 55 percent to 27 percent over Republican Vrdolyak among likely voters in the November countywide con-

lots against Vrdolyak, rather than for her. In fact, among her voters, 10 percent said they had never heard of her and 28 percent said they had no opinion of her.

She is ahead among city, suburban, white, black and Hispanic voters by substantial margins, the poll indicates. In addition, her voters are vastly more committed to her than Vrdolyak's

Dick Locher 14
Mike Royko 3
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Voice of the people 14
Weather 16

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Roger Simon 1
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you are here and so does everyone else in my office."

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In fact, Edgington said, so many secret government reports were floating around the office when he joined GTE in 1966 that he had assigned an aide to "put all the documents in the

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Federal law enforcement officials have revealed in the past

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Tribune photo by Charles Cherney

Benepe wins Western

NU grad Jim Benepe shows off the victor's spoils after winning the Western Open Sunday. Complete coverage in Sports.

test, according to the poll, and two-thirds of those favoring her say their dislike for Vrdolyak is a major reason to vote for her.

The breadth of Vrdolyak's unpopularity and the extent of Pucinski's dominance in every major voter category in Cook County are among the most salient findings of the poll, conducted June 23 to 26 by Market Shares Corp. of Mt. Prospect.

About 30 percent of Pucinski voters said they would cast bal-

voters are to him.

Vrdolyak's high negative ratings indicate that he is the chief—and perhaps the only—issue in the campaign at this point. He can take solace only in the fact that he leads among Republicans, who are in the minority in Cook County.

Among other voting groups that might be expected to back him, Vrdolyak does no better than his opponent. Among white

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Defense

Continued from page 1

three weeks that a massive new investigation of the defense industry has uncovered evidence of widespread fraud, bribery and misuse of classified documents.

Evidence in this unfolding inquiry suggests that the award of a significant portion of the Pentagon's $160 billion annual procurement budget may be corrupted by these techniques.

The disclosures have focused intense public attention on the defense companies and their consultants, but they also have rekindled a bitter controversy over why the Justice Department waited so long to mount a comprehensive attack on such practices.

Sen. Charles Grassley (R., Ia.) has renewed charges he first made in 1985 that the government's procurement fraud unit, created with great fanfare in 1982, bungled the investigation in which Edgington was interviewed by failing to vigorously pursue his and others' suggestions of rampant cheating. The unit is directed by the Justice Department and uses investigators from the Pentagon and other agencies.

Robert Segal, a former official the Defense Criminal Investigative Service and supervisor of the agents who interviewed Edgington, said it was "incomprehensible" to him in 1985 when prosecutors showed little interest in leads suggesting that as many as 25 defense contractors were receiving unauthorized copies of classified military planning documents.

Three other investigators familiar with the case said in interviews that they also had picked up a number of "inferences" in 1983 and 1984 that industry consultants were giving bribes and gratuities, such as trips to Las Vegas, to Pentagon employees ranging from clerks and secretaries to career military officers in exchange for the documents.

These investigators, who asked not to be identified, conceded that they had little hard evidence of bribery. But Segal and the other three all said they were confident they would have developed such evidence if Justice Department officials had sought court authorization for wiretaps or assigned more than a handful of agents to the inquiry.

By contrast, nearly 100 FBI and naval investigative agents are working on the current investigation, which is being coordinated by Henry Hudson, the U.S. attorney for the Eastern District of Virginia. They have recorded about 4,800 conversations through wire taps, including nearly 700 deemed to be incriminating.

As it turned out in the GTE case, a federal grand jury directed by prosecutors working for the procurement fraud unit in September, 1985, indicted GTE, Edgington, former GTE marketing manager Robert Carter and Bernie Zettl, the consultant who allegedly had supplied the company with the documents.

The jury charged that the three men and the company, which makes electronic warfare equipment, had conspired for nearly seven years to defraud the government of "the right to have its procurement process conducted free from improper and unauthorized conversion and utilization by prospective contractors of Department of Defense documents which contain proprietary and classified information." It also accused Zettl, Edgington and Carter of violating statutes on espionage and theft of government property.

At the time, the indictment of a major defense firm and its consul-

The GTE investigation

■ **1966:** Walter Edgington goes to work for GTE and finds unauthorized copies of Pentagon documents circulating at the firm. That was common among defense contractors, he later tells investigators.

■ **March, 1984:** Defense Department investigators question Edgington, among others, about evidence that a consultant was giving GTE secret Pentagon information.

■ **September, 1985:** A federal grand jury indicts GTE for conspiring to defraud the Defense Department and indicts Edgington, another GTE employee and a GTE consultant on various charges of conspiracy, espionage and theft. The firm agrees to pay a fine and establish a policy to discourage similar wrongdoing. The three individuals plead innocent.

■ **October, 1985:** Sen. Charles Grassley (R., Iowa) holds a hearing into charges that the GTE investigation was truncated before other defense firms could be implicated. The Justice Department denies it. Later that month, the Defense Department awards GTE another contract.

■ **March, 1988:** The Justice Department drops charges against the two GTE employees indicted in 1985 and reduces the charges against the consultant, Bernie Zettl.

■ **July, 1988:** Nearly three years after his indictment, Zettl is still awaiting trial in federal court in Alexandria, Va.

Chicago Tribune Graphic

Under federal procedures, criminal cases can be supervised by U.S. attorneys or by prosecutors from the Justice Department headquarters, and there often is competition among them for the best cases.

But Deputy Assistant Atty. Gen. Victoria Toensing, who now oversees the Justice Department's fraud section, responded that it is "irresponsible of [Grassley] to criticize these career people who are working their tails off on these cases."

Toensing said department officials viewed the GTE-Zettl indictment as a crucial test of whether they could use the theft and espionage statutes to crack down on people trading secret documents. She said the officials had planned to see how the case turned out before seeking other similar indictments.

She also disputed the assessments by Segal and the other investigators of how much evidence they had gathered, saying it amounted to only four possible cases other than GTE-Zettl and did not appear to justify the use of special wiretapping techniques or extensive additional staff.

Toensing said she also finds some irony in Grassley's preference for Hudson in that the fraud unit referred those four possible cases to Hudson's office, and Hudson declined to prosecute two of them. She said he is still working on the others.

Whatever the truth about the quality of the evidence, it is clear in reviewing the three boxes of court files in the GTE-Zettl case that ample indications were emerging years before the current inquiry that there was a longstanding problem with misuse of classified documents.

Officials have said the current investigation started in September

Sen. Charles Grassley says the government procurement fraud unit "bungled" the investigation.

Victoria Toensing of the Justice Department said investigators "are working their tails off."

ton's interview with the two investigators, the file contains extensive details about how GTE allegedly funneled $120,000 in payments to Zettl from 1979 through 1983 and tried to mask these transactions in ways that closely parallel some of the activities said to be under scrutiny in the current investigation.

According to the original indictment, GTE disguised its payments to Zettl for the documents as consulting fees, which ranged from a low of $18,200 in 1980 to a high of $29,200 in 1981. The indictment said the documents related to electronic warfare procurements and included some of the military's most sensitive long-range plans.

Zettl, in turn, hid "the true nature of his activities by providing monthly reports ... which made only veiled or no reference at all to the documents being provided," the indictment said. It said that by the time he provided the documents to GTE, "markings identifying their source within the Department of Defense [had been] removed."

Company officials also took several other steps to conceal the arrangement.

According to the indictment, Edgington and Carter restricted circulation of the documents provided by Zettl to "a very few people within GTE" and did not allow them to be entered into the company's document control system.

The indictment alleged that Carter, who worked in Mountain View, Calif., and other GTE employees rented a post office box in California "solely to receive the documents" that Zettl provided so that people at Edgington's office in Rosslyn, Va., could avoid using the company's interdepartmental mail system.

At one point, Carter showed another GTE employee one unauthorized document and cautioned him not to talk to anyone about it, the indictment said. A few months later, a GTE official wrote a memo stating, in reference to Zettl, that "we do not want to list on paper the work that he is doing."

And after that, Carter wrote a memo advocating renewal of Zettl's contract because he "provides advanced marketing and planning information which is not available through other corporate marketing offices."

Edgington's lawyers, Brendan Sullivan and Barry Simon, who since have gained national attention by defending retired Marine Lt. Col. Oliver North in the Iran-contra affair, also named at a court hearing in January, 1986, several other defense companies that they believed had easy access to unauthorized documents

Northrop headquarters in Los Angeles in December, 1982.

● McDonnell Douglas Corp.'s security director told officials at two other defense companies during the second half of 1985 that he had classified planning documents "and wanted to know what to do with them."

● A Honeywell Inc. employee believed her company also had classified Pentagon documents in its files.

Prosecutors had taken the position that it was against the law even for people with government security clearances—including Zettl, Edgington and Carter—to remove secret documents from special government reading rooms without authorization.

Federal officials feared that transporting the documents increased chances that the information in them could be used to subvert procurement processes or fall into the hands of unfriendly governments. In 1978, during the Carter administration, several Boeing officials had come under investigation when security agencies discovered that Soviet eavesdroppers were picking up national security data by listening to Boeing's long-distance telephone calls.

In the Boeing case, the company was allegedly transmitting secret contract information obtained from the Pentagon.

Sullivan and Simon were attempting to show, however, that unauthorized use of the documents was so common that it would have been unfair to single out Zettl, Edgington and Carter for prosecution.

Simon said during the hearing that a McDonnell Douglas lawyer had talked to one of Simon's associates about "the possibility of filing an amicus brief on the grounds that this is a widespread industry practice and the various people in the industry should come forward and say that, so the court would be aware of it."

But, Simon said, McDonnell Douglas officials, who have denied any wrongdoing, quickly changed their minds once they focused on the fact that the Justice Department had become more interested in prosecuting such cases.

"Frankly, the government's posture itself has caused a reign of terror out in the defense industry," Simon said. "People are afraid of coming forward and admitting to use of these documents.

"The issue here is that this is conduct which has never, ever in the past been viewed as illegal."

Also about that time, a former McDonnell Douglas official approached another investigative agency at the Pentagon with similar allegations that the company had developed a system for obtaining secret Defense Department

1986, letter to the director of the Defense Investigative Service.

Betzler later repeated his story to a state court jury in Arlington, Va., which awarded him $260,000 in damages in connection with his dismissal.

Betzler testified in court that McDonnell Douglas typically hired recently retired military officers who sometimes ask their friends in the services to provide classified information to the company.

Betzler also introduced into evidence a letter he had written to a company attorney in 1982 in which he had warned that some of the retired officers had "even set up a procedure whereby these documents would be surreptitiously taken to Washington, put in a special safe for surreptitious documents and, at some point in time, they would transport those by company Learjet to McDonnell Douglas Headquarters in St. Louis."

Betzler told of one instance in which he transported "unlogged classified information" in a sealed envelope tucked into a briefcase.

He characterized other classified information received through secret channels as "tactical air warfare matters, planning data ... requirements ... inside memos on other people's products and competitors' performance."

Betzler also complained in his court case about lavish entertainment of government officials by McDonnell Douglas officials. One exhibit was an expense voucher from July, 1984, that totaled $566 for dinner and show in Las Vegas. Neil Eddins, the company's director of program development, had invited an Air Force colonel and two staff members of the House Armed Services Committee. According to the voucher, the purpose of the get-together was to discuss the federal defense budget.

Betzler was hired by Northrop in 1985, and he complained that it also used former government employees to get confidential defense information.

Betzler said he also had seen such practices since he had taken his first job in the industry in 1951, with North American Aviation. He said he left North American in 1961 when it hired a man "who was supposed to do whatever had to be done to get the right people to buy our products. He had a suite over at the Carlton Hotel and he had girls and big, big bucks."

Betzler said the man was a friend of Bobby Baker, the late President Lyndon Johnson's protege who later was convicted on corruption charges.

It could not be determined whether Pentagon investigators ever followed up on Betzler's allegations. Justice Department officials said they checked out the instances cited by Edgington's lawyers of alleged improper use of documents but did not find enough evidence to warrant prosecution.

"There's a vast difference between historical cases where you only have a person with a document in hand and no conversation about it," Toensing, the deputy assistant attorney general, said, comparing those instances to the current wiretap-supported inquiry, "and a case where in the middle of it you have conversations where the people are telling what they are doing."

Segal and some of the other investigators familiar the GTE-Zettl case agreed. They said one of the things they most regret is that fraud unit prosecutors flatly rejected their requests to seek similar

tant on such charges was virtually unprecedented. GTE swiftly pleaded guilty and agreed to pay a fine of $580,000 and to develop a policy against future misuse of government documents.

Zettl, Edgington and Carter pleaded innocent, and their cases soon became entangled in prolonged disputes over whether it would pose a national security risk to introduce some of the classified documents into evidence at a public trial.

The prosecutors eventually had to drop the espionage and theft counts against Zettl and all the charges against Edgington and Carter because they could not agree with defense lawyers on a compromise plan to substitute summaries for some of the secret materials. Zettl, a retired Air Force major, is still awaiting trial on the conspiracy charge.

But the prosecutors never attempted to expand that investigation to seek charges against other companies.

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The attorneys asserted that they had obtained evidence from industry sources that:

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John Betzler, who contended that he had been fired from his marketing job after 22 years with the company for trying to blow the whistle on such practices, detailed the allegations in an April,

"All we needed was one success and the whole house would have fallen," Segal said.

Tribune correspondent Elaine S. Povich and researcher Marja Mills contributed to this story.

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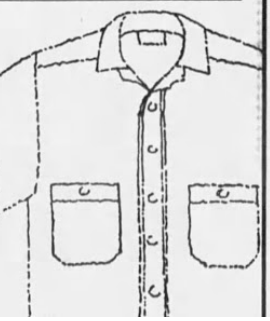

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1988 (July 08)

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San Francisco Examiner

25¢ FRIDAY, JULY 8, 1988 ★ ★ ★ ★ FINAL EDITION

: COLOR -

Pentagon fraud investigation: Why the delay?

By Christopher Drew and William Gaines
CHICAGO TRIBUNE

SPECIAL REPORT
◆
Part 2

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DEFENSE

— From A-1

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Big new investigation

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Hints of bribery

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'Test' indictment

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[HN01E0][GDrive]

1989 (March 26)

https://www.orlandosentinel.com/news/os-xpm-1989-03-26-8903260275-story.html

ut Sullivan is proof beyond a reasonable doubt that looks deceive. By all accounts, he is intense, tough, tenacious, tireless, obsessively dedicated to his clients and in full command of the facts.

"He's not a Clarence Darrow who overwhelms you with his physical presence," said a lawyer who watched Sullivan defend an accused corporate executive a few years ago. "But watch out. He uses a stiletto instead of a machete."

In two recent cases, the Sullivan-Simon team's strategy, perseverence and resourcefulness worked beautifully.

Helped by an expert's analysis of watermarks, they won a dismissal of income tax evasion charges against the Omni International Corp. by showing that the government had backdated some documents. The government's conduct "shocks the court's conscience," the trial judge said.

And by turning the Classified Information Procedures Act to their advantage, Sullivan and Simon freed former GTE Corp. marketing executive Walter Edgington of charges of illegally obtaining secret planning documents from the Pentagon.

Government investigators had reported that Edgington, confronted by evidence against GTE, told them, "You have the company by the short hairs and I'm one of those hairs."

But Sullivan convinced a judge that classified documents were essential to the defense. The Justice Department appealed, lost and dropped the charges a year ago rather than publicly reveal the documents Sullivan demanded.

1989 (April 21) - Lawyer Sullivan

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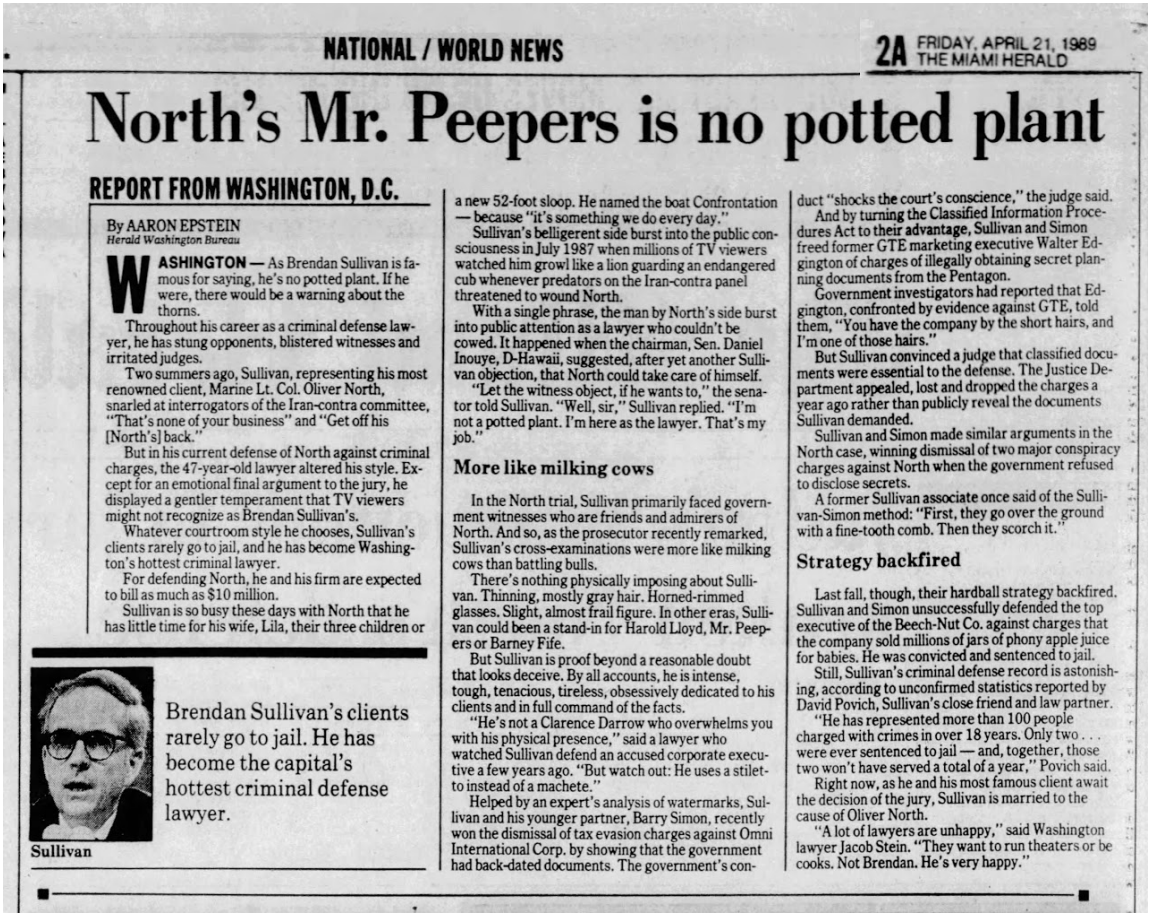

NATIONAL / WORLD NEWS

2A FRIDAY, APRIL 21, 1989 THE MIAMI HERALD

North's Mr. Peepers is no potted plant

REPORT FROM WASHINGTON, D.C.

By AARON EPSTEIN
Herald Washington Bureau

WASHINGTON — As Brendan Sullivan is famous for saying, he's no potted plant. If he were, there would be a warning about the thorns.

Throughout his career as a criminal defense lawyer, he has stung opponents, blistered witnesses and irritated judges.

Two summers ago, Sullivan, representing his most renowned client, Marine Lt. Col. Oliver North, snarled at interrogators of the Iran-contra committee, "That's none of your business" and "Get off his [North's] back."

But in his current defense of North against criminal charges, the 47-year-old lawyer altered his style. Except for an emotional final argument to the jury, he displayed a gentler temperament that TV viewers might not recognize as Brendan Sullivan's.

Whatever courtroom style he chooses, Sullivan's clients rarely go to jail, and he has become Washington's hottest criminal lawyer.

For defending North, he and his firm are expected to bill as much as $10 million.

Sullivan is so busy these days with North that he has little time for his wife, Lila, their three children or a new 52-foot sloop. He named the boat Confrontation — because "it's something we do every day."

Sullivan's belligerent side burst into the public consciousness in July 1987 when millions of TV viewers watched him growl like a lion guarding an endangered cub whenever predators on the Iran-contra panel threatened to wound North.

With a single phrase, the man by North's side burst into public attention as a lawyer who couldn't be cowed. It happened when the chairman, Sen. Daniel Inouye, D-Hawaii, suggested, after yet another Sullivan objection, that North could take care of himself.

"Let the witness object, if he wants to," the senator told Sullivan. "Well, sir," Sullivan replied. "I'm not a potted plant. I'm here as the lawyer. That's my job."

Sullivan

Brendan Sullivan's clients rarely go to jail. He has become the capital's hottest criminal defense lawyer.

More like milking cows

In the North trial, Sullivan primarily faced government witnesses who are friends and admirers of North. And so, as the prosecutor recently remarked, Sullivan's cross-examinations were more like milking cows than battling bulls.

There's nothing physically imposing about Sullivan. Thinning, mostly gray hair. Horned-rimmed glasses. Slight, almost frail figure. In other eras, Sullivan could been a stand-in for Harold Lloyd, Mr. Peepers or Barney Fife.

But Sullivan is proof beyond a reasonable doubt that looks deceive. By all accounts, he is intense, tough, tenacious, tireless, obsessively dedicated to his clients and in full command of the facts.

"He's not a Clarence Darrow who overwhelms you with his physical presence," said a lawyer who watched Sullivan defend an accused corporate executive a few years ago. "But watch out: He uses a stiletto instead of a machete."

Helped by an expert's analysis of watermarks, Sullivan and his younger partner, Barry Simon, recently won the dismissal of tax evasion charges against Omni International Corp. by showing that the government had back-dated documents. The government's conduct "shocks the court's conscience," the judge said.

And by turning the Classified Information Procedures Act to their advantage, Sullivan and Simon freed former GTE marketing executive Walter Edgington of charges of illegally obtaining secret planning documents from the Pentagon.

Government investigators had reported that Edgington, confronted by evidence against GTE, told them, "You have the company by the short hairs, and I'm one of those hairs."

But Sullivan convinced a judge that classified documents were essential to the defense. The Justice Department appealed, lost and dropped the charges a year ago rather than publicly reveal the documents Sullivan demanded.

Sullivan and Simon made similar arguments in the North case, winning dismissal of two major conspiracy charges against North when the government refused to disclose secrets.

A former Sullivan associate once said of the Sullivan-Simon method: "First, they go over the ground with a fine-tooth comb. Then they scorch it."

Strategy backfired

Last fall, though, their hardball strategy backfired. Sullivan and Simon unsuccessfully defended the top executive of the Beech-Nut Co. against charges that the company sold millions of jars of phony apple juice for babies. He was convicted and sentenced to jail.

Still, Sullivan's criminal defense record is astonishing, according to unconfirmed statistics reported by David Povich, Sullivan's close friend and law partner.

"He has represented more than 100 people charged with crimes in over 18 years. Only two . . . were ever sentenced to jail — and, together, those two won't have served a total of a year," Povich said.

Right now, as he and his most famous client await the decision of the jury, Sullivan is married to the cause of Oliver North.

"A lot of lawyers are unhappy," said Washington lawyer Jacob Stein. "They want to run theaters or be cooks. Not Brendan. He's very happy."

1989 (Oct) - Passing of brother Lloyd V Edgington

Brother - Lloyd V Edgington - https://www.tandfonline.com/doi/abs/10.1080/07060668909501098?journalCode=tcjp20

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Lloyd V. Edgington, 1927-1989

Robert Hall

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Lloyd V. Edgington, 1927-1989

Robert Hall

L.V. Edgington

Dr. Lloyd V. Edgington died of cancer on October 23, 1989. The passing of a distinguished plant pathologist so soon after early retirement saddens his colleagues around the world.

Born on November 13, 1927, Lloyd grew up in Iowa and in California. He received a B.Sc. from the University of California at Davis in 1953 and a Ph.D. from the University of Wisconsin in 1956. In 1957, he started work at the Connecticut Agricultural Experiment Station and established his reputation as an expert on systemic fungicides. He joined the University of Guelph as an Associate Professor in the Department of Botany in 1965, was promoted to Professor in 1969, and moved to Department of Environmental Biology in 1971.

Lloyd's principal research objective was to determine the mechanisms of movement and modes of action of systemic fungicides used to control plant diseases. He was the first to describe the fungicidal action of the oxathin group of systemic fungicides. The rigour, excitement, and productivity of his research program were a delight and example to all of us. His lab was a constant hub of activity and a succession of technicians, summer students, graduate students, and research associates from around the world generated a wonderful cosmopolitan atmosphere. He developed an international reputation and travelled widely, often as an invited speaker, spending sabbatical leaves in West Germany in 1972 and in Berkeley, California, in 1980.

Lloyd's broad knowledge and excellent research on fundamental and applied aspects of fungal and bacterial diseases of cereals, field crops, vegetables, fruits, ornamentals, and shade trees, led to frequent invitations to assist in the work of a wide range of agricultural groups, such as the Canada Expert Committee on Cereals and Oilseeds, the Canadian Seed Growers' Association, and the honorable Eugene Whelan's Committee on IBT Pesticides.

Lloyd was the respected and beloved supervisor for over 20 graduate students, many now leaders in agricultural research, teaching, or administration. He developed a popular and demanding senior undergraduate course in Biological Activity of Pesticides and met the practical needs of the students that took his Diploma course in Plant Pathology. With his colleagues, Lloyd was friendly, open, and challenging. At their farm, Lloyd, Ruby and their family extended warm hospitality to all visitors.

An active member of the Canadian Phytopathological Society, Lloyd chaired the committee that recommended establishment of the Canadian Journal of Plant Pathology and the committee that led to the establishment of Sustaining Associates. He arranged a joint meeting of the Canadian and American Phytopathological Societies that was held in Guelph in 1984, and served as Chairman of the Local Arrangements Committee. Lloyd's outstanding service to his university, to his professional societies, to the teaching and training of students, to the scientific community, and to agriculture was recognized by numerous offices and awards. He was President and Fellow of the Canadian Phytopathological Society, Councillor of the American Phytopathological Society, and recipient of the Award of Merit from its Northeastern Division. The University of Guelph named him Professor Emeritus upon his retirement.

When colleagues attending meetings in other countries mentioned that they were from the University of Guelph, the frequent response was "Then you must know Lloyd Edgington." We remember with pride, with gratitude, and with love that it was indeed our privilege to know Lloyd Edgington.

Lloyd was an Elder, teacher, and loyal member of Duff's Presbyterian Church in Aberfoyle, Ontario. He is survived by his loving wife of 39 years, Ruby, and by his children John, Linda, Mariann, Tom, Kathie, and Sandra.

2004 (May 31) - Death

https://www.legacy.com/obituaries/washingtonpost/obituary.aspx?n=walter-roy-edgington&pid=2299085&fhid=4949n

EDGINGTON, WALTER ROY

Of Springfield, VA on May 31, 2004. Husband of the late Florence Edgington; father of Eric Edgington and Bruce Edgington; brother of Irene Anderson. He is also survived by four grandchildren. Friends may call at the DEMAINE SPRINGFIELD-ANNANDALE FUNERAL CHAPEL, Backlick and Edsall Roads on Monday, June 7, from 1 to 2 p.m. and 5 to 7 p.m. Mass of Christian Burial will be celebrated on Wednesday, July 21, 8:45 a.m. at Fort Myer Old Post Chapel. Interment Arlington National Cemetery.

1940 us census - age 15 ? California ?

https://www.ancestry.com/imageviewer/collections/2442/images/m-t0627-00352-00145?ssrc=&backlabel=Return&pId=71438521

father is Thomas W Edgington - Farm laborer

Mother - Helen Edgington

Brother - Lloyd V Edgington

RELATIVES

https://www.laurelhillfuneralhome.com/obituary/edgington-florence

Florence Mary Edgington

April 15, 1924 - July 17, 2002

Florence Mary EdgingtonMrs. Edgington passed away at her residence, in Locust Grove,Va. following a long illness. Survivors include her husband of 53 years, Col. Walter Edgington, two Sons: Eric M. Edgington of Vienna, Va. and Bruce E. Edgington of Lorton, Va. and 4 grandchildren.

A Mass of Christian Burial will be held Monday, July 22, 2002 at 11:00 AM, at St. Patrick Catholic Church in Fredericksburg, Va. Internment will be at a later date.

In lieu of flowers the family asked that contributions be made to: St. Patrick Catholic Church, 9151 Elys Ford Rd. Fredericksburg, Va. 22407 c/o Father Patrick Issac Missionary Fund.

To send a flower arrangement to the family of Florence Mary Edgington, please click here to visit our Sympathy Store.

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Housatonic

Edlow International Company

In progress... still collecting materials

History - From 2019-06-edlow-com-company-history-edlow-international.pdf / https://drive.google.com/open?id=1i9JQmS_ANV4KrMc2whCS8uwOh0BDV2ky

History

Edlow International Company traces its history back to 1957 when Mr. Samuel Edlow, the company founder, became involved in the nuclear industry. During the ensuing years, the Edlow International established itself worldwide as the foremost authority on transportation logistics, fuel cycle supply, licensing, warehousing, and other specific aspects of the nuclear business.

Mr. Samuel Edlow details some of the company's earliest years in his book Reflections of a Lucky Man. Following are excerpts:

From Junk Batteries to Spent Fuel Shipping Casks: The Birth of Edlow International Company

*"Although my father couldn't very well offer me a job in his medical practice, **my wife Frances' father had an idea**. As a scrap and junk dealer he routinely collected junk batteries from service stations, and sold them to reprocessors who removed and re-sold the lead. **Papa Schwartz, without even trying, made some pretty decent money from junk batteries.** Small peddlers would collect the batteries and sell them to him. He, in turn, would break open the batteries, recover the lead cells, and when he had a truckload would haul the lead to Indianapolis where **the National Lead Company** ran a secondary smelter. Papa Schwartz said he thought it would be a good business for me, and he would back me with the loan of enough money to buy a truck. I agreed. At the time, we didn't have a car and so when Frances and I wanted to go to a movie or somewhere we drove around town in that big truck all dressed up. We soon bought a car of our own, and moved into an apartment adequate and simple in three rooms above Doctor Salon's office.*

*For my new business I bought a lot in Fort Wayne and hired a man to break the batteries; this he did by dropping them on a thick steel plate. With my truck I drove around to the filling stations and collected batteries, for free or sometimes paying 50 cents to $1 apiece, depending on the price of lead. It became such a good business that I expanded to dealing exclusively with junkyards, where I bought whole truckloads of batteries that they had collected. **Eventually our battery-lead business took in all of Indiana, part of Ohio, and a bit of Michigan.** The time came that I was probably as big a supplier to the Indianapolis smelter as anyone.*

***As my new business grew, so did our new family. Jack, our first son, was born on March 22, 1949**, at Methodist Hospital in Fort Wayne, and Robert was born there on February 15, 1951.*

When I entered the lead business there were two commercial forms of the product: new or "primary", which is made from ore; and used or "secondary", which is recovered from batteries and other scrap-lead products.

At the Indianapolis smelter, the head of National Lead's secondary operation was Sam Hollingsworth, whose family had founded the company. Hollingsworth's assistant was Bob McKittrick and in 1954 he called me out of the blue to ask if he could come up to Fort Wayne for a visit. He told me that the Atomic Energy Commission was going to build a huge uranium-enrichment plant in Portsmouth, Ohio, down by the Ohio River; and it was going to require huge amounts of lead, both for shielding the workers from radiation and for the miles of pipes in the vast plumbing installations. McKittrick proposed that if I would open a lead supply plant in Columbus, Ohio, and get out of the battery-lead business, then National Lead would support me; help with supplies and materials, help with introductions, help with training. In this way I could become the lead supplier for that new AEC plant, and expand to any other activities I wanted to start in the Columbus area. It seemed like an ideal way to break into a business that was bound to grow with the development of atomic energy. I talked it over with Frances, and agreed.

*Now it wasn't said in so many words, but the whole purpose of the deal was that **National Lead Company controlled most of the lead operations in the Midwest, and they needed some competition to make it look respectable**. I had a reputation for being honest and efficient. It was a wonderful opportunity, and, it gave us a chance to move away from Fort Wayne, which Frances and I found to be a pleasant but provincial town. In the spring of 1954 we moved our young family to Columbus; to a new profession and a new life. We lived in that city for 16 years.*

At Portsmouth the AEC planned to construct a gaseous diffusion plant that would enrich the level of uranium-235 from its natural concentration of less than one per cent in the ore up to 3 per cent for nuclear power plants, and all the way to more than 90 per cent for use in atomic bombs. Our deal meant that I would make lead ingots for the Portsmouth plant from my Columbus operations. National Lead also sold its secondary products to plumbers, such as lead pipe, sheet lead, and solder, and they wanted me to take over that trade in the area as well. My "teachers" in the lead business were two of the most knowledgeable people around, but also two of the roughest to work with because of their degenerate lifestyles: Abe Goose, head of Cambridge Smelting in Massachusetts, and Jack Flemm, who owned Flemm Lead Company of Long Island City, New York. Every few weeks I went to New York or Cambridge to watch their operations. When I learned what I was supposed to do, Goose and Flemm provided me, on consignment, all the inventory I needed to start my own business. Both men knew the trade very well, and worked very hard – that is until 5 o'clock each afternoon. Then they broke out a bourbon bottle and began to drink, usually finishing it off in an hour or two. After that they went to a health club where they sat in a steam bath to sweat out the booze, and then they went out to dinner. The next day it was the same thing all over again. In life, you just never now who your "teachers" are going to be. But if you are open-minded and inquisitive, you can always learn something from almost anyone.

With the opportunity from National Lead, and with expertise and materials from Goose and Flemm, I founded Edlow Lead Company and opened a plant on Front

With the opportunity from National Lead, and with expertise and materials from Goose and Flemm, I founded Edlow Lead Company and opened a plant on Front Street in Columbus, Ohio, in a set of abandoned brick buildings that had once been a brewery. This was ideal for the heavy operations of a lead foundry because the factory had its own railroad siding and a loading dock for trucks. I began with three employees, an office worker and two workmen in the plant. We worked long hours, and I wasn't always home in time for dinner, but we managed to establish ourselves as a reliable, quality producer of lead products. First we installed a "pot" to melt "pig" lead, and from that we poured 25-pound ingots. With consignments from Goose and Flemm I also re-sold sheet lead, solder, lead pipe, and other lead supplies. Soon I was shipping a truck load a week to the AEC plant, and, as well, serviced the requirements of the area's plumbers. Once a week I also made a day-trip by car down to Piketon, the little town north of Portsmouth where the AEC plant was being built. It was a beautiful drive, especially on a back road along the Scioto River. I'd meet with people at the plant, maybe take them to lunch at the Lake White Club, and through this kind of careful attention my sales flourished.

Before long I expanded my business to other customers. ***In late 1955, staff from Battelle Memorial Institute visited me and advised that they were building a nuclear center in West Jefferson, Ohio, about 10 miles out of Columbus. They would need large quantities of lead shielding to protect workers from radiation, and they were prepared to work with me to teach methods for pouring high-grade lead castings. If I agreed to accept their help, I could be their sole supplier. I was quick to accept, so this brought me into an entirely new field of endeavor.***

At the time the National Lead Company, my benefactor, had a monopoly on lead bricks, which they made by the extrusion process: they melted and forced out long rods of lead, like toothpaste from a tube, then sawed the rods into brick-sized blocks. Elmer Lusk, my contact at Battelle, wondered if our lead foundry could make bricks by the casting method: melting and pouring the lead into molds. This would be a lot simpler, and a lot cheaper as well. Our challenge was to make a brick that was completely solid, because lead cools very quickly and when it cools it slumps, leaving gaps in the material. To make sure that the bricks had no gaps we made a set of a dozen cast-iron molds, which we heated before we poured in the molten lead. Then as we cooled the lead very gradually, we poured in more molten lead on the top, so that the mold was always full. In about two hours we had 12 solid lead bricks. And unlike National's extruded bricks, ours had beautifully smooth edges because the inside of each mold was evenly machine-tooled. Of course, we didn't want to under-bid National by too much, so that meant that we made more money on each brick.

Thanks to the Battelle contract, I was able to develop a method to cast lead, a process that others had ignored because of the problem with the voids from the rapid cooling. Edlow Lead Company now had a specialty product, the smooth lead bricks, but more important it had a specialty process, the lead casting technique, which I patented, and eventually licensed to three companies in Europe. Before long, Battelle asked me to cast small containers for different radioactive sources: boxes, pots, and other shapes. I'm an entrepreneur, so once I realized what I could do I decided to try to market my products to the whole nuclear industry.

The lead-casting method that I had developed was successful, and this experience made me feel, by the fall of 1956, that I was onto something important for the emerging nuclear power industry. That industry's trade group, the Atomic Industrial Forum, held a conference at the Morrison Hotel in Chicago in September 1956 and, although I didn't know it at the time, by attending I opened a door of opportunity that let me become an important pioneer in the development of nuclear technology.

Along with the Forum conference in Chicago that week was a trade fair sponsored by the American Nuclear Society at the Navy Pier, a huge exhibition area on Lake Michigan. At the trade fair I rented a small display area – really just a folding table covered with cloth and a curtain on which I hung an "Edlow Shields the World" banner. On velvet-covered stands I displayed lead bricks and lead pots I had made. We had a fancy brochure with price lists and specifications, and Frances was a nice-looking assistant there with me. We weren't there to take orders, but were just introducing ourselves to the trade. Still, we created interest, especially among the many foreign visitors.

One inquisitive American who stopped by our booth was Myron Kratzer, who worked in the international division of the US Atomic Energy Commission (AEC), the principal government agency for anything nuclear – military and civilian. Kratzer was interested in finding ways to ship nuclear materials overseas, since the United States then had an "Atoms for Peace" programs to encourage the peaceful development of nuclear technology by other countries. He sensed two things. First, at that time there was almost no nuclear-material shipment by anyone except the AEC, which dispatched radioactive isotopes from Oak Ridge. Yet the AEC knew there would be increased international commerce since the United States was positioning itself to be the supplier for the non-communist world. And they wanted to divest themselves of shipping these materials. Second, Kratzer saw that shipping spent fuel would require the use of highly specialized packaging by virtue of the extreme toxicity of the fuel itself. The high radiation levels required lead shielding of the highest integrity, and our casting methods were probably the production means required. He sensed that way down the pike I could probably be pretty good at making spent-fuel casks.

By coincidence, at university I had taken a course in Japanese Transportation, and during World War II my work as a ship's Purser taught me all the procedures involved with shipping. So I knew both the lead business and the shipping business. Myron Kratzer said, in effect, we (the AEC) need help to develop normal commercial methods for the transportation of nuclear materials. If I, Sam Edlow, worked with the AEC to develop those methods and the regulatory framework to support them, the AEC would recommend us to act as US agent for its foreign customers. It seemed mighty good to me, and I said I'd think it over.

I talked it over with Frances. She listened, she let me follow my nose, and after careful consideration I said "Yes" to Kratzer and began several months of trips to Washington. I'd drive out of Columbus on Sunday evening, arriving at the Washingtonian Motel in Gaithersburg after midnight, work at the AEC offices in Germantown for four to five days, and drive home, arriving late Friday night. This I did for about three months, and in the course of that time I helped the AEC work out the regulations they needed to assure that nuclear materials could be shipped commercially, taking into account all of the safeguards required under the Atomic Energy Act. Life itself wasn't easy by any means, but it was intellectually challenging, and, above all, it was laying the basis for what I believed would be a profitable and worthwhile business venture. From this developed – directly and indirectly – businesses that the family owns today. What luck that Myron Kratzer wandered by!

It was also through Myron that I met Curt Heidenreich, beginning a professional association and a friendship that has flourished for years. Curt was a real "European" in his outlook, and came to Washington to represent EURATOM, Europe's atomic-energy agency. When I began to pioneer the methods required for the first shipments of nuclear fuel, EURATOM soon became our largest customer. I worked with Curt's staff to set up a system that marked the status of their nuclear-material orders at each step. We helped one another in those early days, and together advanced important commercial nuclear ties between the United States and Europe.

From my work on a merchant ship I came to appreciate what a remarkable document is the bill of lading; it's a perfect contract. The signature on a bill of lading passes the financial and legal responsibility for the cargo from the shipper to the carrier. When shipping nuclear materials, the ideal situation is to use normal, time-tested transport methods – using normal commercial bills of lading, normal commercial vehicles traveling on normal commercial routes. The AEC and we used the logic as follows: because the material being shipped is highly hazardous, the packaging used to contain the material must be of such a nature that when it is presented to the transportation environment, the shipment itself must not be hazardous, not only under normal transport stresses, but also in the event of a credible accident. Whatever safeguards are required must be in the packaging, so that the result is that the package can travel by traditional transport methods.

What makes a nuclear shipment unique? First, it's a high-value item. Second, it's time sensitive, and should arrive exactly when needed, neither too early nor too late. And third, it requires special packaging. Nuclear materials are the only items that encompass all three of these qualities, therefore shipping nuclear materials requires special expertise.

Along came the Atoms-for-Peace Conference in Geneva in 1958, and I decided to show my wares there. We had licensees for our lead-casting process in England, Denmark, and Italy by then, and were ready to put to use the procedures we had worked out for the AEC. A number of people stopped by our booth to visit, and asked if we could make casks to ship spent fuel – a problem that several people in the industry were anticipating. At the conference I met John Williams from the UK Atomic Energy Authority and we brainstormed about spent-fuel shipments. We concluded that, in addition to the normal special planning having to do with nuclear shipments, the additional problem of heavy lift requirement must be considered. We formed a mutual admiration society, and from our conversations I was convinced that I knew as much as anyone about this promising business of spent-fuel transportation.

At the same conference I met Bengt Swenson from the R-2 reactor in Sweden, who told me that a colleague was then in Washington working with the supplier of their new nuclear research reactor, currently being built in Sweden. I called on him the first time I was back in Washington, and that started a close relationship which eventually let to my first order for a spent-fuel shipping cask. This allowed me to come back to the AEC and say, "O.K. I have an order. Now what do we do? What are the specific criteria we must meet in order for you to license our cask, the first to be produced by private industry?"

I had already helped the AEC write the rules for shipping nuclear materials – bills of lading and all. Now I had to design and build a cask that would meet whatever requirements the AEC would establish for proper design and fabrication for this highly specialized form of packaging. Working closely with the staff of the AEC, and, using a special group at the Battelle Memorial Institute, we pioneered the formulation of the design criteria which, to all practical purposes, still prevail today. Primarily, such a cask needed to shield the radiation and transfer whatever thermal heat was generated from within the cask. Further, a means to prevent criticality (a spontaneous nuclear chain reaction) from occurring needed to be incorporated in the cask design. The first cask turned out to be a 15-ton package, in part because of the features added to assure structural integrity.

And finally the rules were set and the first spent-fuel cask was delivered to my client, AB Atomenergi of Sweden. Over succeeding years we designed, manufactured, and delivered 39 more to various clients – in Europe, the Orient, South Africa, the United States, and even Antarctica – in sizes from 1 ton each to the famous 100-ton Yankee cask and dedicated rail car.

At the beginning, the Swedes were required to ship their material to the National Reactor Testing Station in Idaho for reprocessing. The same work could have been done at the AEC's Savannah River Plant in South Carolina. Ships bringing this fuel from Sweden discharged at Savannah, Georgia, and the cask had to cross the country on a special rail car to Idaho just because the AEC said that's where the foreign fuel should go. From an economic point of view this was ridiculous, and I negotiated with the AEC for months, and demonstrated the economic waste involved in this situation. Finally, the AEC agreed to allow my client to deliver its material to the Savannah River Plant.

Myron Kratzer took me aside and pointed out that, in fact, I had prevailed on the AEC to change a policy and I had done so on behalf of a foreign client. He said that he had no objection to my doing so, but that I should register with the Department of Justice as a foreign agent which would permit me to operate within the letter of the law. That I did. And now I found myself in a position to increase the scope of services I was able to offer to my foreign clients.

For a number of years I had no competitors in arranging the transportation of nuclear materials with the exception of Trans-Nuclear in France, and they handled only French shipments. In the making of spent-fuel casks I had a monopoly, except for one or two that National Lead and Knapp Mills manufactured, and eventually they fell by the wayside.

I've always been fascinated by one thing. During the formative years of the nuclear business so many major companies entered the field only to quit by virtue of the huge financial losses they incurred. Sylvania, American Car and Foundry, Allis-Chalmers and so many more are gone today, while the Edlow name is an integral part of the nuclear trades, reaching into every corner of the international nuclear business. There were times when we had no money at all, but nobody knew. There were times when we were quite well-to-do, and nobody knew that either.

How did I manage to survive and prosper? Most of all I attribute the fact that we were successful to good fortune. There were other reasons, but it is good fortune which helped us turn the tide so many times, and for which we can be so thankful at this stage in our lives.

It is true that being independent helped because we could take decisions quickly, we could assume risks which major corporations might find it difficult to do, we could be nimble on our feet.

Some things we did deliberately in order to give us an image of our own. I became known for not consuming alcohol. I never drank. At the Atomic Industrial Forum and American Nuclear Society meetings, most companies had hospitality suites with free booze. Not the Edlows. We served coffee and doughnuts in the morning, and ice cream in the afternoon. There is something wholesome about ice cream, and unwholesome about alcohol. These things helped promote the image of integrity, the projection of which we regularly strived for. Where other business men wore suites, Sam Edlow wore sports coats. This worked to project our image of informality and independence.

One other, and very important, factor in our ability to succeed was our insistence on becoming expert in our own very narrow field, with the result that we really knew more than anyone else in this specialized area (in part because we helped lay down the rules in the first place). But, more than anything else we thank the Good Lord for the good fortune He bestowed on us for being in the right place at the right time, with enough good sense to capitalize on a golden opportunity.

Once having designed and built spent-fuel shipping casks as our exclusive specialty we still had more than the customers to worry about. We had to educate the state and local officials who might deal with a spent-fuel shipment, including the Coast Guard, state police, and county sheriffs. This meant teaching them the use of hazard labels – chemical, toxic, or radiological – that described accurately what dangers might occur if the load were accidentally spilled. Well, it all came together by the early 1960s and we really ran the market. It was sensational.

In the end, however, I stopped manufacturing spent-fuel casks because of a financial disaster. It all happened this way. In order to encourage utilities to build nuclear power plants, the AEC agreed to buy back the spent fuel – ostensibly for reprocessing to remove useable plutonium and uranium. This was a means of subsidizing the building of nuclear power plants because the AEC never expected to actually take possession of the fuel, but it required that each utility be able to ship its spent fuel if it had to. As a way to sell reactors (and fuel contracts) Westinghouse wanted to have a spent-fuel cask built so its customers – the utilities – could say that they had access to the means of returning the spent fuel if they had to. A cask on a rail car seemed the only way to go, and I accepted the Westinghouse order, a real challenge, for a 100-ton cask in February 1962. That's the one that did me in.

In building a spent-fuel cask you have four considerations: First, shielding to protect against radiation from material in the cask. Second, a way to prevent the fuel from starting a fresh chain reaction. Third, a way to extract the heat that builds up naturally in the fuel. And fourth, structural integrity so the cask could withstand a crash. We took care of the heat by installing a water pump, and we devised a metal basket that would both prevent a nuclear chain reaction from starting, and provide a means for dissipating the heat. This involved working with a special alloy of boron and cooper for the first time in this application. We found that it was impossible to machine this particular alloy. A new method had to be developed to attain the finish desired, and the whole concept had to be re-thought. Before it was

all over I ran out of money. Well, not quite. At the end of 1962 Frances and I found ourselves with $2 in our pocket.

From this experience I realized that manufacturing was not for me. I'm an entrepreneur, and a salesman. So with all the bills paid I gave the lead company to my employees and decided to concentrate on representing clients, arranging the transportation of nuclear materials, and supplying uranium. In order to earn some income I thought of driving a cab, but Frances suggested that with all my business trips to Europe I'd make a fine travel agent. And I did.

Meanwhile, I continued my nuclear shipping and trading business, Samuel Edlow – Traffic Management of Nuclear Material, from a small office in Columbus, and before long I had an efficient – but exhausting – routine. Every Sunday night I drove about eight hours to Washington, and checked into the Washingtonian Motel in suburban Gaithersburg, Maryland. On Monday, Tuesday, and sometimes Wednesday I called on the AEC in Germantown or on client's downtown. Then I hopped in the car and drove back to Columbus, ready for work at the travel agency from Thursday to Saturday. It was a crazy, hectic time, but gradually I expanded my contacts and became an important player in the business.

All the while Frances encouraged me, and spent most of her time raising our two fine sons. Jack graduated from high school in 1967 and obtained his BBA in International Business at The George Washington University. Robert graduated from high school in 1969 and was awarded a four-year certificate for art study at the Corcoran Gallery in Washington.

In the late 1960's Charles Lazarus, head of a department-store chain, offered me a handsome salary to set up travel agencies in all his stores. But my heart was in the nuclear business, and with encouragement from Frances I stuck it out – eventually spending so much more time in Washington than in Columbus that it seemed clear to me and to my clients the capital was the best place to do business. ***In June 1969, on the day after Robert graduated from high school, our family moved to Washington.***

Beginning with a three-room office at 1100 17th Street NW, a secretary, and Jack as my assistant, I founded Edlow International Company (EIC) to offer a variety of brokering and transportation consulting and uranium-supply services to nuclear clients. *The secret of our success was to start small and to grow conservatively, always financing expansion from profits, not from borrowing. And grow we did. By the time our office moved to larger quarters at 1815 H Street NW, EIC was the dominant shipper of nuclear material in the world.* ***We expanded to 1666 Connecticut Avenue in 1988, again increasing our staff and our operations.***

By being alert to new opportunities, and by remaining flexible, we were able to pioneer several impressive achievements in the nuclear business over the years. For example, we arranged for the first international commercial spent-fuel shipment. We arranged the first commercial heavy-water shipment. We arranged the first plutonium shipment to EURATOM, the European nuclear consortium. We arranged the first nuclear-material sale and shipment that required an executive order from the President of the United States – for the Tarapur reactor in India. We designed, built, and delivered the first commercial spent-fuel casks. We handled the first nuclear-component order for China. We arranged the first import license for natural uranium hexafluoride. And we obtained the first federal license to store natural and enriched uranium. All these accomplishments are really satisfying, and contributed to the growth of an entirely new international industry."

– from Reflections of a Lucky Man by Samuel Edlow, May 1991, (unpublished), with permission from the author.

April 3 1975

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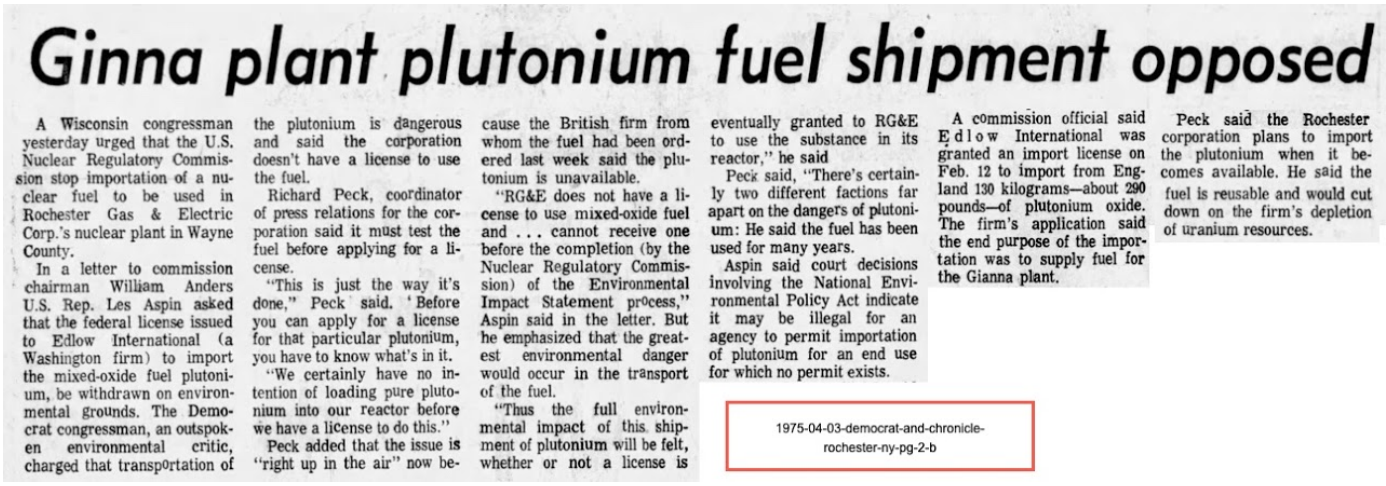

Ginna plant plutonium fuel shipment opposed

A Wisconsin congressman yesterday urged that the U.S. Nuclear Regulatory Commission stop importation of a nuclear fuel to be used in Rochester Gas & Electric Corp.'s nuclear plant in Wayne County.

In a letter to commission chairman William Anders U.S. Rep. Les Aspin asked that the federal license issued to Edlow International (a Washington firm) to import the mixed-oxide fuel plutonium, be withdrawn on environmental grounds. The Democrat congressman, an outspoken environmental critic, charged that transportation of the plutonium is dangerous and said the corporation doesn't have a license to use the fuel.

Richard Peck, coordinator of press relations for the corporation said it must test the fuel before applying for a license.

"This is just the way it's done," Peck said. 'Before you can apply for a license for that particular plutonium, you have to know what's in it.

"We certainly have no intention of loading pure plutonium into our reactor before we have a license to do this."

Peck added that the issue is "right up in the air" now because the British firm from whom the fuel had been ordered last week said the plutonium is unavailable.

"RG&E does not have a license to use mixed-oxide fuel and . . . cannot receive one before the completion (by the Nuclear Regulatory Commission) of the Environmental Impact Statement process," Aspin said in the letter. But he emphasized that the greatest environmental danger would occur in the transport of the fuel.

"Thus the full environmental impact of this shipment of plutonium will be felt, whether or not a license is eventually granted to RG&E to use the substance in its reactor," he said

Peck said, "There's certainly two different factions far apart on the dangers of plutonium: He said the fuel has been used for many years.

Aspin said court decisions involving the National Environmental Policy Act indicate it may be illegal for an agency to permit importation of plutonium for an end use for which no permit exists.

A commission official said Edlow International was granted an import license on Feb. 12 to import from England 130 kilograms—about 290 pounds—of plutonium oxide. The firm's application said the end purpose of the importation was to supply fuel for the Gianna plant.

Peck said the Rochester corporation plans to import the plutonium when it becomes available. He said the fuel is reusable and would cut down on the firm's depletion of uranium resources.

1975-04-03-democrat-and-chronicle-rochester-ny-pg-2-b

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June 16 1975

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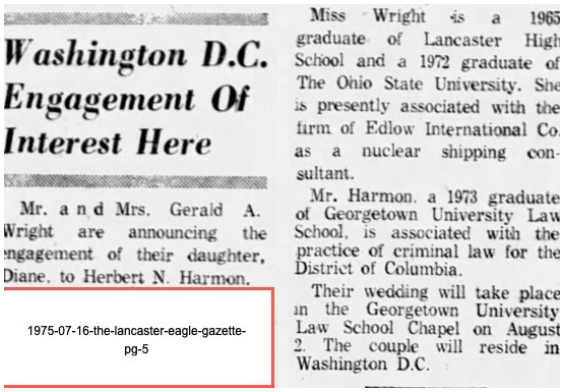

Washington D.C. Engagement Of Interest Here

Mr. and Mrs. Gerald A. Wright are announcing the engagement of their daughter, Diane, to Herbert N. Harmon.

Miss Wright is a 1965 graduate of Lancaster High School and a 1972 graduate of The Ohio State University. She is presently associated with the firm of Edlow International Co. as a nuclear shipping consultant.

Mr. Harmon, a 1973 graduate of Georgetown University Law School, is associated with the practice of criminal law for the District of Columbia.

Their wedding will take place in the Georgetown University Law School Chapel on August 2. The couple will reside in Washington D.C.

1975-07-16-the-lancaster-eagle-gazette-pg-5

1975-07-16-the-lancaster-eagle-gazette-pg-5-clip-wedding-harmon-wright / https://drive.google.com/open?id=1iNfUe7hQpPzjbMOaTYdbctaOuW9UFHnI

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1975-09-25-the-baltimore-sun-pg-a11 / https://drive.google.com/open?id=1aulAYsDJ90aKvCM6DIipkp4ZpxivDRE0

Sunpapers photo—Lloyd Pearson

DIANE WRIGHT HARMON

Radioactive cargoes called safe business

By JOSEPH S. HELEWICZ

Diane Harmon contends she could "tap dance atop a cylinder of radioactive material" if ever challenged to demonstrate that packaging and transporting hazardous cargoes is a safe business.

If such a challenge were to be issued, it likely would come from within Baltimore, for according to Mrs. Harmon, who is an executive of Edlow International Company, no other port in the country is handling the volume of radioactive material that currently is being shipped through here.

The Washington executive's primary responsiblity is booking ships to transport new and spent radioactive materials to and from the United States, but Mrs. Harmon said her time also is dedicated to dispelling what are termed "normal" fears concerning the handling of hazardous cargoes.

"Mention 'radioactive material,' " Mrs. Harmon said, "and the first thing the public thinks of is a mushroom cloud. There is little understanding of how it is handled."

Addressing members of the Baltimore Propeller Club yesterday, Mrs. Harmon detailed the complex procedures involved in shipping harzardous cargoes, and the stringent regulations imposed by the federal Department of Transportation Atomic Energy Commission and the Coast Guard governing those shipments.

"There's no risk involved when the materials are properly packaged," Mrs. Harmon explained, "and a bill of lading always states when the procedures have been followed."

Apprehension toward the hazardous cargo shipments, and apparently bureaucratic red tape, were reasons that Edlow International recommended to its foreign and domestic clients that they shift their shipping business from the port of New York to Baltimore.

"Baltimore does not have those problems," Mrs. Harmon said. "It has clean, clear operations and most important is the speed of ship turnaround [the amount of time it takes to load and discharge a ship's cargo.]"

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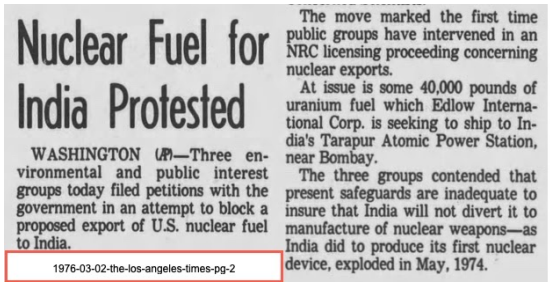

Nuclear Fuel for India Protested

WASHINGTON (AP)—Three environmental and public interest groups today filed petitions with the government in an attempt to block a proposed export of U.S. nuclear fuel to India.

The move marked the first time public groups have intervened in an NRC licensing proceeding concerning nuclear exports.

At issue is some 40,000 pounds of uranium fuel which Edlow International Corp. is seeking to ship to India's Tarapur Atomic Power Station, near Bombay.

The three groups contended that present safeguards are inadequate to insure that India will not divert it to manufacture of nuclear weapons—as India did to produce its first nuclear device, exploded in May, 1974.

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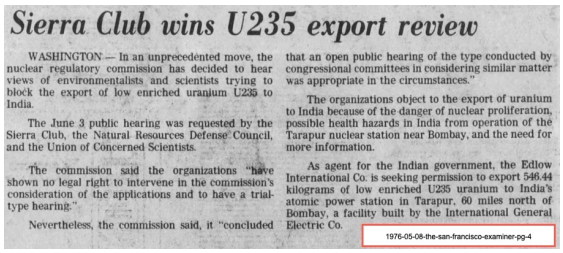

Sierra Club wins U235 export review

WASHINGTON — In an unprecedented move, the nuclear regulatory commission has decided to hear views of environmentalists and scientists trying to block the export of low enriched uranium U235 to India.

The June 3 public hearing was requested by the Sierra Club, the Natural Resources Defense Council, and the Union of Concerned Scientists.

The commission said the organizations "have shown no legal right to intervene in the commission's consideration of the applications and to have a trial-type hearing."

Nevertheless, the commission said, it "concluded that an open public hearing of the type conducted by congressional committees in considering similar matter was appropriate in the circumstances."

The organizations object to the export of uranium to India because of the danger of nuclear proliferation, possible health hazards in India from operation of the Tarapur nuclear station near Bombay, and the need for more information.

As agent for the Indian government, the Edlow International Co. is seeking permission to export 546.44 kilograms of low enriched U235 uranium to India's atomic power station in Tarapur, 60 miles north of Bombay, a facility built by the International General Electric Co.

1976-05-08-the-san-francisco-examiner-pg-4

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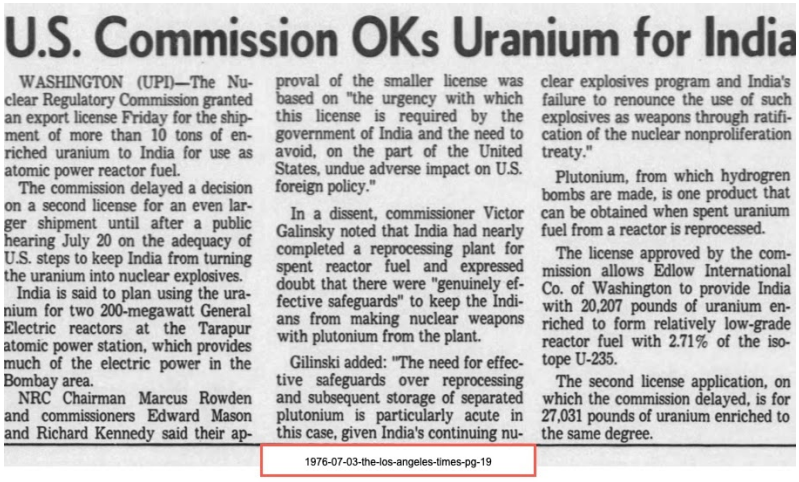

U.S. Commission OKs Uranium for India

WASHINGTON (UPI)—The Nuclear Regulatory Commission granted an export license Friday for the shipment of more than 10 tons of enriched uranium to India for use as atomic power reactor fuel.

The commission delayed a decision on a second license for an even larger shipment until after a public hearing July 20 on the adequacy of U.S. steps to keep India from turning the uranium into nuclear explosives.

India is said to plan using the uranium for two 200-megawatt General Electric reactors at the Tarapur atomic power station, which provides much of the electric power in the Bombay area.

NRC Chairman Marcus Rowden and commissioners Edward Mason and Richard Kennedy said their approval of the smaller license was based on "the urgency with which this license is required by the government of India and the need to avoid, on the part of the United States, undue adverse impact on U.S. foreign policy."

In a dissent, commissioner Victor Galinsky noted that India had nearly completed a reprocessing plant for spent reactor fuel and expressed doubt that there were "genuinely effective safeguards" to keep the Indians from making nuclear weapons with plutonium from the plant.

Gilinski added: "The need for effective safeguards over reprocessing and subsequent storage of separated plutonium is particularly acute in this case, given India's continuing nuclear explosives program and India's failure to renounce the use of such explosives as weapons through ratification of the nuclear nonproliferation treaty."

Plutonium, from which hydrogren bombs are made, is one product that can be obtained when spent uranium fuel from a reactor is reprocessed.

The license approved by the commission allows Edlow International Co. of Washington to provide India with 20,207 pounds of uranium enriched to form relatively low-grade reactor fuel with 2.71% of the isotope U-235.

The second license application, on which the commission delayed, is for 27,031 pounds of uranium enriched to the same degree.

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1976-07-20-the-los-angeles-times-pg-2 / https://drive.google.com/open?id=1btIy5YI7jBLC4M9NRpDAlHIcn5gsBdpF

Former U.S. Official Warns of India's A-Bomb Capacity

WASHINGTON (UPI)—A former top official of the U.S. Arms Control and Disarmament Agency warned today that an atomic power station in India is producing enough plutonium to build 10 to 20 nuclear weapons every year.

Herbert Scoville Jr., former assistant director of the agency, opposed further sale by the United States of uranium to India in the first adversary proceeding ever held before the Nuclear Regulatory Commission.

India developed and exploded an atomic bomb in 1974.

"While it is probably now too late to reverse the Indian decision to have an embryonic nuclear explosive capability, it is still timely for the commission to take steps which will limit this capability and prevent its becoming a major military force at an early date," he testified.

In two days of hearings opening today, the commission is weighing the sale of 12,251 kilograms of low-enriched uranium by Edlow Corp. of Washington to India for use in the Tarapur atomic power station.

The uranium India wants would be used as reactor fuel, and plutonium could be obtained as a byproduct through reprocessing the spent fuel from the reactors. Plutonium is the material used in the hydrogen bomb.

Scoville said that, even after India exploded its first atomic device, the United States continued to supply fuel for the station.

He said the station is producing plutonium at the rate of 100 kilograms per year and already has about 400 kilograms of plutonium stockpiled. One hundred kilograms is enough to produce 10 to 20 nuclear weapons, he said.

Scoville warned that U.S. transactions with India would be watched by all potential nuclear weapon nations. "All other nations contemplating such a move will be influenced by the success of the Indian action," he said.

"Continued U.S. supply of fuel to India, even with a guarantee that the plutonium will not be used in an explosive program, will convince them the United States is not serious about halting proliferation."

1976-07-20-the-los-angeles-times-pg-2

U.S. Reactors for Israel, Egypt

WASHINGTON (AP)—Negotiations for the sale of nuclear power reactors to Israel and Egypt have been completed, the State Department said today. The announcement came only 24 hours after disclosures that American assistance had contributed to India's 1964 atomic blast.

Delivery of the Israel and Egypt energy-generating systems is planned for the mid-1980's, and safeguards on their use will be stricter than normal international controls.

These will be the first reactors supplied to Israel and Egypt by the United States. The Israelis have a reactor in use, however, provided by France.

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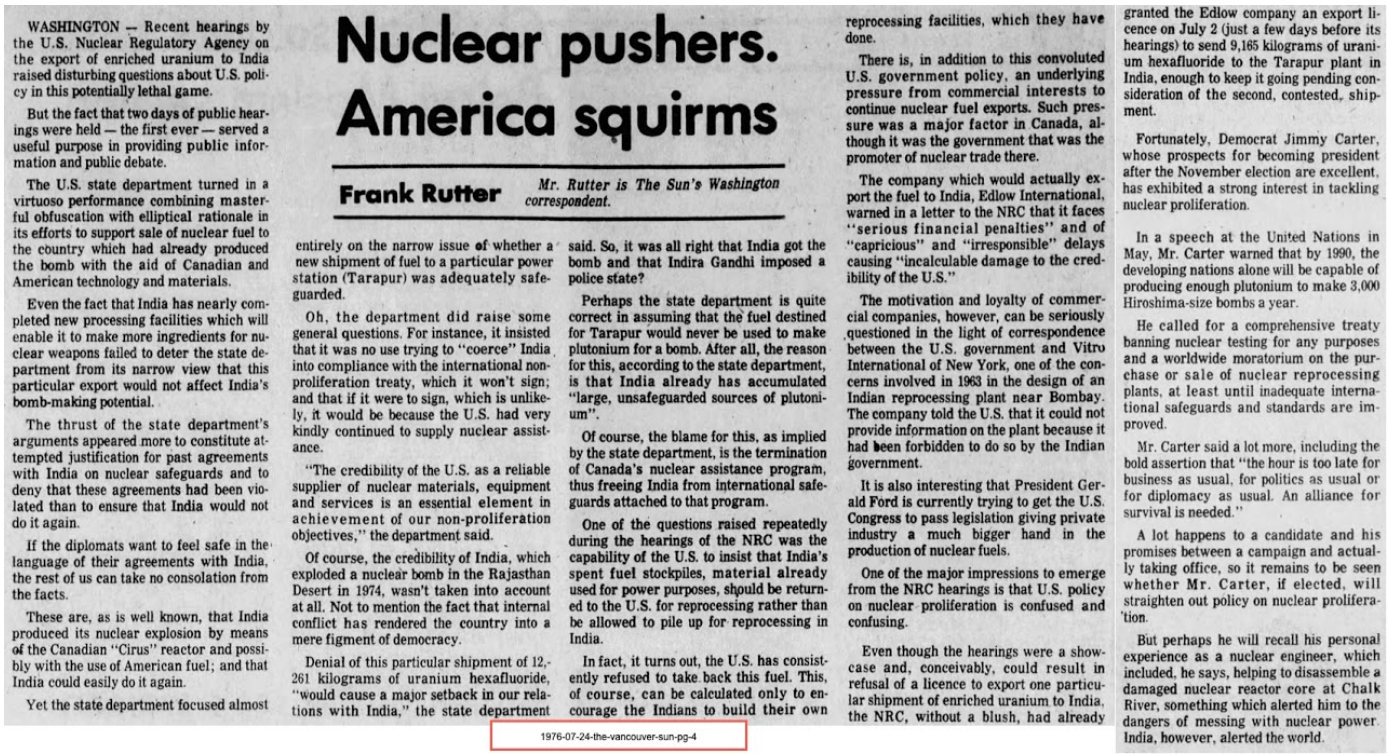

Nuclear pushers. America squirms

Frank Rutter *Mr. Rutter is The Sun's Washington correspondent.*

WASHINGTON — Recent hearings by the U.S. Nuclear Regulatory Agency on the export of enriched uranium to India raised disturbing questions about U.S. policy in this potentially lethal game.

But the fact that two days of public hearings were held — the first ever — served a useful purpose in providing public information and public debate.

The U.S. state department turned in a virtuoso performance combining masterful obfuscation with elliptical rationale in its efforts to support sale of nuclear fuel to the country which had already produced the bomb with the aid of Canadian and American technology and materials.

Even the fact that India has nearly completed new processing facilities which will enable it to make more ingredients for nuclear weapons failed to deter the state department from its narrow view that this particular export would not affect India's bomb-making potential.

The thrust of the state department's arguments appeared more to constitute attempted justification for past agreements with India on nuclear safeguards and to deny that these agreements had been violated than to ensure that India would not do it again.

If the diplomats want to feel safe in the language of their agreements with India, the rest of us can take no consolation from the facts.

These are, as is well known, that India produced its nuclear explosion by means of the Canadian "Cirus" reactor and possibly with the use of American fuel; and that India could easily do it again.

Yet the state department focused almost entirely on the narrow issue of whether a new shipment of fuel to a particular power station (Tarapur) was adequately safeguarded.

Oh, the department did raise some general questions. For instance, it insisted that it was no use trying to "coerce" India into compliance with the international non-proliferation treaty, which it won't sign; and that if it were to sign, which is unlikely, it would be because the U.S. had very kindly continued to supply nuclear assistance.

"The credibility of the U.S. as a reliable supplier of nuclear materials, equipment and services is an essential element in achievement of our non-proliferation objectives," the department said.

Of course, the credibility of India, which exploded a nuclear bomb in the Rajasthan Desert in 1974, wasn't taken into account at all. Not to mention the fact that internal conflict has rendered the country into a mere figment of democracy.

Denial of this particular shipment of 12,261 kilograms of uranium hexafluoride, "would cause a major setback in our relations with India," the state department said. So, it was all right that India got the bomb and that Indira Gandhi imposed a police state?

Perhaps the state department is quite correct in assuming that the fuel destined for Tarapur would never be used to make plutonium for a bomb. After all, the reason for this, according to the state department, is that India already has accumulated "large, unsafeguarded sources of plutonium".

Of course, the blame for this, as implied by the state department, is the termination of Canada's nuclear assistance program, thus freeing India from international safeguards attached to that program.

One of the questions raised repeatedly during the hearings of the NRC was the capability of the U.S. to insist that India's spent fuel stockpiles, material already used for power purposes, should be returned to the U.S. for reprocessing rather than be allowed to pile up for reprocessing in India.

In fact, it turns out, the U.S. has consistently refused to take back this fuel. This, of course, can be calculated only to encourage the Indians to build their own reprocessing facilities, which they have done.

There is, in addition to this convoluted U.S. government policy, an underlying pressure from commercial interests to continue nuclear fuel exports. Such pressure was a major factor in Canada, although it was the government that was the promoter of nuclear trade there.

The company which would actually export the fuel to India, Edlow International, warned in a letter to the NRC that it faces "serious financial penalties" and of "capricious" and "irresponsible" delays causing "incalculable damage to the credibility of the U.S."

The motivation and loyalty of commercial companies, however, can be seriously questioned in the light of correspondence between the U.S. government and Vitro International of New York, one of the concerns involved in 1963 in the design of an Indian reprocessing plant near Bombay. The company told the U.S. that it could not provide information on the plant because it had been forbidden to do so by the Indian government.

It is also interesting that President Gerald Ford is currently trying to get the U.S. Congress to pass legislation giving private industry a much bigger hand in the production of nuclear fuels.

One of the major impressions to emerge from the NRC hearings is that U.S. policy on nuclear proliferation is confused and confusing.

Even though the hearings were a showcase and, conceivably, could result in refusal of a licence to export one particular shipment of enriched uranium to India, the NRC, without a blush, had already granted the Edlow company an export licence on July 2 (just a few days before its hearings) to send 9,165 kilograms of uranium hexafluoride to the Tarapur plant in India, enough to keep it going pending consideration of the second, contested, shipment.

Fortunately, Democrat Jimmy Carter, whose prospects for becoming president after the November election are excellent, has exhibited a strong interest in tackling nuclear proliferation.

In a speech at the United Nations in May, Mr. Carter warned that by 1990, the developing nations alone will be capable of producing enough plutonium to make 3,000 Hiroshima-size bombs a year.

He called for a comprehensive treaty banning nuclear testing for any purposes and a worldwide moratorium on the purchase or sale of nuclear reprocessing plants, at least until inadequate international safeguards and standards are improved.

Mr. Carter said a lot more, including the bold assertion that "the hour is too late for business as usual, for politics as usual or for diplomacy as usual. An alliance for survival is needed."

A lot happens to a candidate and his promises between a campaign and actually taking office, so it remains to be seen whether Mr. Carter, if elected, will straighten out policy on nuclear proliferation.

But perhaps he will recall his personal experience as a nuclear engineer, which included, he says, helping to disassemble a damaged nuclear reactor core at Chalk River, something which alerted him to the dangers of messing with nuclear power. India, however, alerted the world.

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1976-07-24-the-vancouver-sun-pg-4-clip-nuclear-pushers / https://drive.google.com/open?id=1hoTY5tOPRYOPwNDqT-nG9ijts5HfF7zo

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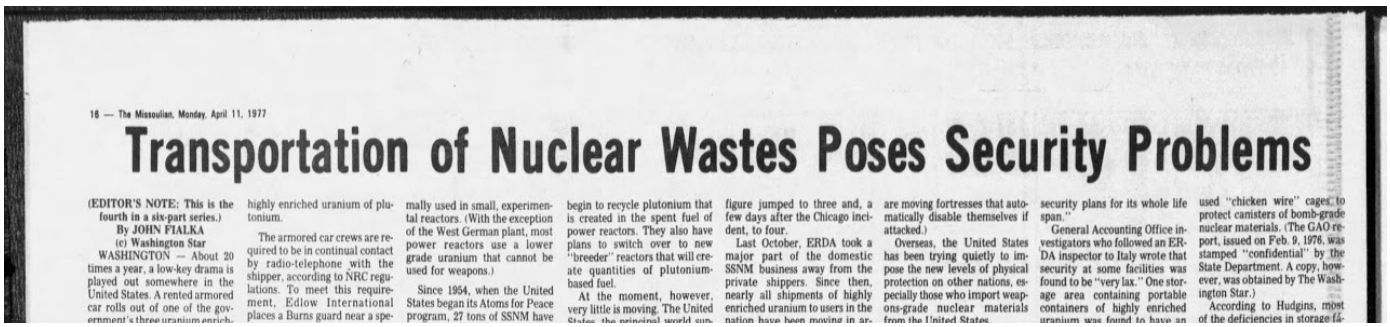

16 — The Missoulian, Monday, April 11, 1977

Transportation of Nuclear Wastes Poses Security Problems

(EDITOR'S NOTE: This is the fourth in a six-part series.)

By JOHN FIALKA
(c) Washington Star

WASHINGTON — About 20 times a year, a low-key drama is played out somewhere in the United States. A rented armored car rolls out of one of the government's three uranium enrich-

highly enriched uranium of plutonium.

The armored car crews are required to be in continual contact by radio-telephone with the shipper, according to NRC regulations. To meet this requirement, Edlow International places a Burns guard near a spe-

mally used in small, experimental reactors. (With the exception of the West German plant, most power reactors use a lower grade uranium that cannot be used for weapons.)

Since 1954, when the United States began its Atoms for Peace program, 27 tons of SSNM have

begin to recycle plutonium that is created in the spent fuel of power reactors. They also have plans to switch over to new "breeder" reactors that will create quantities of plutonium-based fuel.

At the moment, however, very little is moving. The United

figure jumped to three and, a few days after the Chicago incident, to four.

Last October, ERDA took a major part of the domestic SSNM business away from the private shippers. Since then, nearly all shipments of highly enriched uranium to users in the

are moving fortresses that automatically disable themselves if attacked.)

Overseas, the United States has been trying quietly to impose the new levels of physical protection on other nations, especially those who import weapons-grade nuclear materials

security plans for its whole life span."

General Accounting Office investigators who followed an ERDA inspector to Italy wrote that security at some facilities was found to be "very lax." One storage area containing portable containers of highly enriched

used "chicken wire" cages to protect canisters of bomb-grade nuclear materials. (The GAO report, issued on Feb. 9, 1976, was stamped "confidential" by the State Department. A copy, however, was obtained by The Washington Star.)

According to Hudgins, most of the deficiencies in storage fa-

ment facilities and heads for a major airport where a chartered jet stands ready to fly its cargo overseas.

On Feb. 8, the drama was played out at Chicago's busy O'Hare Airport, when an armored car pulled into the Lufthansa warehouse area. A contingent of three Pinkerton guards, carrying sidearms, was waiting as the first of 52 steel drums weighing 288 pounds was unloaded from the truck.

Their mission: To guard the largest private shipment of highly enriched uranium in history. According to experts, the shipment, en route to a nuclear power facility in Germany, contained enough material to make 10 atomic bombs.

Among the many problems surrounding the proliferation of nuclear materials and technology in the world, the problem of physical protection is generally conceded by the experts to be the most troublesome. The weakest link is the transportation system which, at the moment, is a hodgepodge of diverse, frequently uncoordinated systems.

Making More Secure

In the United States, transportation of nuclear materials has been left largely to the discretion of private shippers and their rented guards since the traffic began in the early 1960s. But in the past two years the two federal agencies involved, the Nuclear Regulatory Commission and the Energy Research and Development Administration, have begun working feverishly, trying to tighten security as incidents of terrorism have increased throughout the world.

Their fear, as a joint ERDA-NRC task force stated last summer, is that somewhere there may be "determined violent assault by well-trained assailants armed with hand-held automatic weapons and assisted by an insider."

The risk of bomb materials falling into the hands of organized terrorists or operatives of unfriendly, non-nuclear nations, makes the shipment of weapons-grade nuclear materials dramatic. If it happens anywhere in the world, it could be a problem for the United States.

This awareness makes the regulatory authorities jumpy. So it was that as the three armed Pinkertons — two men and a woman — took their positions to watch the unloading of the uranium in Chicago, at least 10 other men took their positions in the warehouse. Their mission was to watch the guards.

Several Agencies Involved

At least four of them were NRC inspectors. Another three were from a special unit, the office of Nuclear Material Safety and Safeguards (NMSS), which the NRC uses to probe for weaknesses in security. Two more were NRC researchers, assigned to come up with new ways to upgrade security systems. One was a U.S. Army security analyst who was going to fly with the shipment to Germany.

According to sources who attended NRC briefings after the incident, the Pinkertons sometimes acted in an "extremely casual manner," sometimes failing to require or check identification badges, occasionally appearing confused because so many inspectors and researchers were wandering around in the cargo area. "At times it must have been difficult to figure out who was in control of this operation," said one NRC source.

Sometime during the evening, one of the NMSS security probers, dressed in a parka similar to those worn by the warehouse workers, entered the warehouse area through another airline's gate and strolled onto the partially loaded cargo plane along with the plane's flight crew. There, he began taking pictures.

Kenneth R. Chapman, head of NMSS, admitted that there was a "certain casualness about checking badges" but asserts that was no threat to security. "I work in a secure area and sometimes I don't wear my badge around here either," he told a reporter.

'Loading Went Smoothly'

Despite the alleged violations, Bill Teer, vice president of Transnuclear Inc., the shipping company that hired the Pinkertons, insists that the loading "went very smoothly."

In the United States, the business of moving weapons-grade materials for export is shared by two private companies: Transnuclear Inc. and Edlow International. They function as booking agents for foreign governments and utilities. They obtain the export licenses and arrange security and transportation to the major airport nearest to the government facilities that make

cial telephone in a downtown Washington office building.

It takes about 33 pounds of highly enriched uranium or 9 pounds of plutonium to make a bomb. In the trade, that amount is called a "trigger quantity" or "SSNM," for Special Strategic Nuclear Material. At the moment, these materials are removed from this country throughout the world, according to statistics recently released by the Senate Government Operations Committee.

Within the next few years that figure may jump significantly, into the hundreds and thousands of tons as England, France, Japan and several other nations

plier in the past, has been holding up export licenses while it attempts to tighten what controls it has over protection systems here and abroad.

On the transportation side, the change is quite noticeable. Until recently the NRC required only two hired guards to guard an SSNM shipment. Then the

mored trailers designed by the Defense Department for hauling nuclear weapons.

The trailers are manned by specially trained ERDA guards using Defense Department communication systems and carrying semiautomatic weapons. (The vehicles, designed to look like a regular semitrailer truck,

Since 1974, when the risk of terrorist activities began to be weighed more seriously, U.S. inspectors have been dispatched to nuclear facilities in 34 countries. According to Vance Hudgins, head of the ERDA unit involved, the new policy is that "no more trigger amounts should be shipped unless we see

open door, slightly ajar. The report said, "...officials explained that the door was always unlocked because it was an emergency exit."

Another facility's storage area found to be near an open window. A third facility had "large, metal double doors which were left ajar," and a fourth facility

cilities examined overseas have been corrected. "This has been one of the most successful programs we've ever been involved in. No one wants to be the first country that has a successful first terrorist incident," said Hudgins.

(NEXT: A signal from Vienna.)

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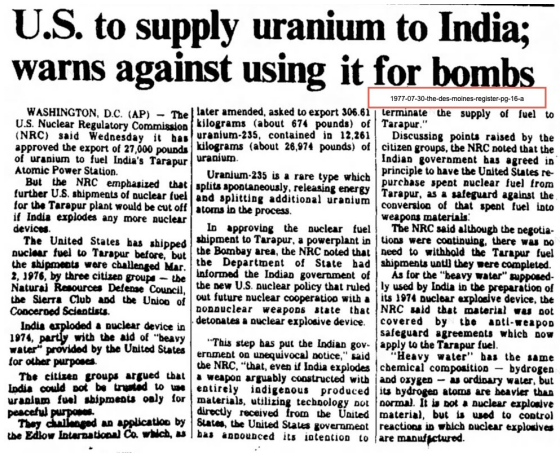

U.S. to supply uranium to India; warns against using it for bombs

1977-07-30-the-des-moines-register-pg-16-a

WASHINGTON, D.C. (AP) — The U.S. Nuclear Regulatory Commission (NRC) said Wednesday it has approved the export of 27,000 pounds of uranium to fuel India's Tarapur Atomic Power Station.

But the NRC emphasized that further U.S. shipments of nuclear fuel for the Tarapur plant would be cut off if India explodes any more nuclear devices.

The United States has shipped nuclear fuel to Tarapur before, but the shipments were challenged Mar. 2, 1976, by three citizen groups — the Natural Resources Defense Council, the Sierra Club and the Union of Concerned Scientists.

India exploded a nuclear device in 1974, partly with the aid of "heavy water" provided by the United States for other purposes.

The citizen groups argued that India could not be trusted to use uranium fuel shipments only for peaceful purposes.

They challenged an application by the Edlow International Co. which, as later amended, asked to export 306.61 kilograms (about 674 pounds) of uranium-235, contained in 12,261 kilograms (about 26,974 pounds) of uranium.

Uranium-235 is a rare type which splits spontaneously, releasing energy and splitting additional uranium atoms in the process.

In approving the nuclear fuel shipment to Tarapur, a powerplant in the Bombay area, the NRC noted that the Department of State had informed the Indian government of the new U.S. nuclear policy that ruled out future nuclear cooperation with a nonnuclear weapons state that detonates a nuclear explosive device.

"This step has put the Indian government on unequivocal notice," said the NRC, "that, even if India explodes a weapon arguably constructed with entirely indigenous produced materials, utilizing technology not directly received from the United States, the United States government has announced its intention to terminate the supply of fuel to Tarapur."

Discussing points raised by the citizen groups, the NRC noted that the Indian government has agreed in principle to have the United States repurchase spent nuclear fuel from Tarapur, as a safeguard against the conversion of that spent fuel into weapons materials.

The NRC said although the negotiations were continuing, there was no need to withhold the Tarapur fuel shipments until they were completed.

As for the "heavy water" supposedly used by India in the preparation of its 1974 nuclear explosive device, the NRC said that material was not covered by the anti-weapon safeguard agreements which now apply to the Tarapur fuel.

"Heavy water" has the same chemical composition — hydrogen and oxygen — as ordinary water, but its hydrogen atoms are heavier than normal. It is not a nuclear explosive material, but is used to control reactions in which nuclear explosives are manufactured.

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July 07 1977

1977-07-07-the-courier-journal-pg-1 / https://drive.google.com/open?id=1hZYsJw7GcRAahKZw381ncBEiUULcuV-h

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Power plants not affected

Tighter security asked in shipping nuclear fuels

1977-07-07-the-courier-journal-pg-1 and a12

By STAN BENJAMIN
Associated Press

WASHINGTON — The Nuclear Regulatory Commission has proposed tightening security to protect nuclear fuel plants and uranium and plutonium shipments against sabotage, theft and terrorism.

Regulations published in Tuesday's Federal Register would sharply increase guard forces for high-grade uranium and plutonium, both in storage and transit.

They also would impose, for the first time, a requirement that private guards hired by commercial nuclear operators and shippers must be certified in good mental as well as physical health.

Companies handling nuclear materials, now could, without violating current commission standards, hire someone who was insane to guard nuclear materials, a commission spokesman confirmed.

The proposed rules also would increase the requirements for people guarding nuclear shipment to stay in contact with fixed security bases that could summon help if necessary.

The proposed regulations do not apply to nuclear power plants. The rules would apply to a dozen nuclear fuel facilities operated by nine companies licensed by the commission and to three companies licensed for nuclear material transportation.

The Nuclear Regulatory Commission and the U.S. Energy Research and Development Administration, the two agencies created out of the Atomic Energy Commission in 1975, had concluded last year that security measures for civilian nuclear activities needed improvement.

Organized terrorism in recent years has focused new attention on the possibility that nuclear fuels could be stolen and fashioned into nuclear bombs or dispersed in crowded areas to expose people to radiation.

The Natural Resources Defense Council, an environmental group, asked the Regulatory Commission to tighten security measures on an emergency basis. Last January, the commission decided to speed its process of making rules to improve security.

Current rules require the companies to prepare for an attack by "several persons." The proposed rules would require defenses adequate to hold off coordinated, separate attacks by trained, dedicated teams of terrorists armed with weapons and explosives.

One set of proposals would stiffen requirements for guards, adding the mental health standard, improving physical fitness standards and requiring training in handling weapons and annual tests in proficiency.

The other set would increase the physical security required for nuclear installations and shipments.

The proposals would:

- Require nine armed guards for major shipments of uranium or plutonium by road, with two or three bulletproof escort vehicles. The cargo vehicle would have to be a locked, sealed safety vault on wheels.

Currently, two armed guards are required, with one escort vehicle and no requirement of bulletproofing.

- Require guards to call a home base every 30 minutes. Current rules require guards to call in every two to five hours.
- Require three armed guards with each air shipment and at least nine armed guards at all scheduled refueling stops. Current rules require one unarmed escort and no guards at refueling stops.
- Require nine armed guards on rail shipments with calls every 30 minutes to their control center. Currently, rail shipments require two armed guards who call in every two hours.
- Require for shipments by sea the use of "container ships" in which cargo is pre-packaged in large, sealed container units. This is not now required.
- Require on sea shipments three armed guards who would call control bases by ship-to-shore radio every six hours. Now, one guard who checks in once a day is required.
- Require guards for air and sea shipments who can speak the same language as the vessel's captain. Under current rules, the security escort of a nuclear shipment does not have to be able to converse with the captain.

Proposed rules for fixed nuclear installations, such as fuel plants or fuel fabrication and reprocessing plants, list detailed measures to make guard posts and alarm stations more effective and to limit access to uranium and plutonium storage areas.

For both fixed sites and shipments, the proposals would require more backup communications systems and separation of guard posts so that a single attack could not cut off calls for help.

There was no indication when the commission would be able to adopt the new security rules. The agency is one new security rules. The agency is one commissioner short of a quorum and cannot take formal actions.

The affected facilities are licensed to handle "strategic quantities of special nuclear material," meaning large amounts of fissionable uranium and plutonium according to a formula set up by the commission. They are:

- Atomics International at Canoga Park, Calif.
- Babcock and Wilcox, Nuclear Materials Division at Apollo, Pa., and Parks Township, Pa.; and Naval Nuclear Fuel Division at Lynchburg, Va.
- Exxon Nuclear Co. at Richland, Wash.
- General Atomic Co. at San Diego, Calif.
- General Electric Co. at Vallecitos, Calif.
- Nuclear Fuel Service at Erwin, Tenn.
- Texas Instruments at Attleboro, Mass.
- United Nuclear Corp., Naval Products Division at Uncasville, Conn., and Fuel Recovery Operation at Wood River Junction, R.I.
- Westinghouse at Cheswick, Pa.

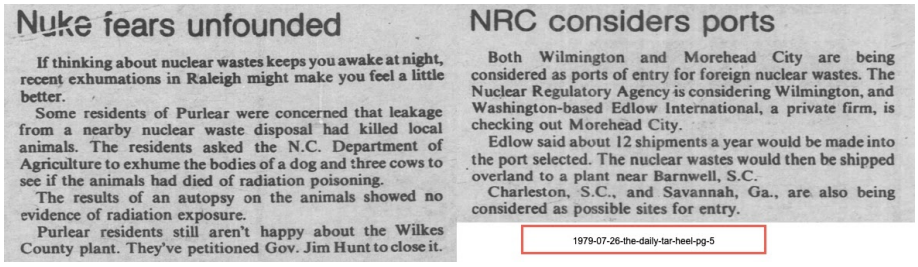
The three companies licensed to transport "strategic quantities" are:

- Tri-State Motor Transit of Joplin, Mo.
- Transnuclear Inc. of White Plains, N.Y.
- Edlow International Co. of Washington, D.C.

1977-07-07-the-courier-journal-pg-1-clip-tighter-security-asked-nuclear-fuel / https://drive.google.com/open?id=1hBtNOkepv36DomFeiX5RMgB1i_z3N9uE

July 26 1979

1979-07-26-the-daily-tar-heel-pg-5 / https://drive.google.com/open?id=1blqcNtp13j84Oosipo9Vm88iJQTOBo1e



Nuke fears unfounded

If thinking about nuclear wastes keeps you awake at night, recent exhumations in Raleigh might make you feel a little better.

Some residents of Purlear were concerned that leakage from a nearby nuclear waste disposal had killed local animals. The residents asked the N.C. Department of Agriculture to exhume the bodies of a dog and three cows to see if the animals had died of radiation poisoning.

The results of an autopsy on the animals showed no evidence of radiation exposure.

Purlear residents still aren't happy about the Wilkes County plant. They've petitioned Gov. Jim Hunt to close it.

NRC considers ports

Both Wilmington and Morehead City are being considered as ports of entry for foreign nuclear wastes. The Nuclear Regulatory Agency is considering Wilmington, and Washington-based Edlow International, a private firm, is checking out Morehead City.

Edlow said about 12 shipments a year would be made into the port selected. The nuclear wastes would then be shipped overland to a plant near Barnwell, S.C.

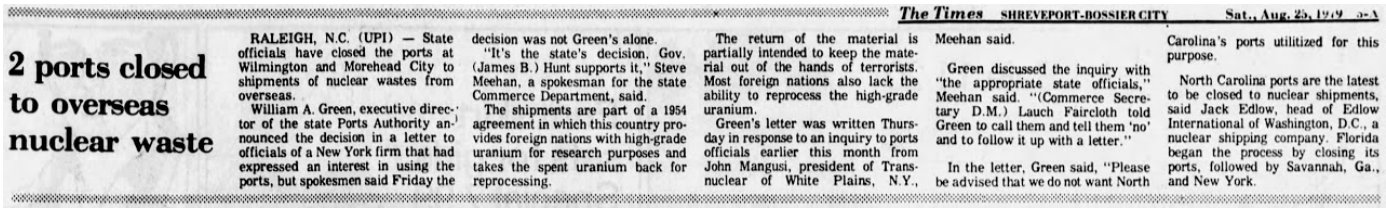
Charleston, S.C., and Savannah, Ga., are also being considered as possible sites for entry.

1979-07-26-the-daily-tar-heel-pg-5

1979-07-26-the-daily-tar-heel-pg-5-clip-week-review-nuke-fears-nrc / https://drive.google.com/open?id=1gwvoz5fwIN8sDQNaFUW_pHIAKIcg2U11

August 25 1979 Pg 5 A

1979-08-25-the-times-shreveport-bossier-city-pg-5a / https://drive.google.com/open?id=1d8Em6Klj4JEAyA0EKKQidv4JCErjcq15



The Times SHREVEPORT-BOSSIER CITY Sat., Aug. 25, 1979

2 ports closed to overseas nuclear waste

RALEIGH, N.C. (UPI) — State officials have closed the ports at Wilmington and Morehead City to shipments of nuclear wastes from overseas.

William A. Green, executive director of the state Ports Authority announced the decision in a letter to officials of a New York firm that had expressed an interest in using the ports, but spokesmen said Friday the decision was not Green's alone.

"It's the state's decision. Gov. (James B.) Hunt supports it," Steve Meehan, a spokesman for the state Commerce Department, said.

The shipments are part of a 1954 agreement in which this country provides foreign nations with high-grade uranium for research purposes and takes the spent uranium back for reprocessing.

The return of the material is partially intended to keep the material out of the hands of terrorists. Most foreign nations also lack the ability to reprocess the high-grade uranium.

Green's letter was written Thursday in response to an inquiry to ports officials earlier this month from John Mangusi, president of Transnuclear of White Plains, N.Y., Meehan said.

Green discussed the inquiry with "the appropriate state officials," Meehan said. "(Commerce Secretary D.M.) Lauch Faircloth told Green to call them and tell them 'no' and to follow it up with a letter."

In the letter, Green said, "Please be advised that we do not want North Carolina's ports utilitized for this purpose.

North Carolina ports are the latest to be closed to nuclear shipments, said Jack Edlow, head of Edlow International of Washington, D.C., a nuclear shipping company. Florida began the process by closing its ports, followed by Savannah, Ga., and New York.

1979-08-25-the-times-shreveport-bossier-city-pg-5a-clip-2-ports-closed-nuclear-waste / https://drive.google.com/open?id=1hItiKkqXJRy53vDcJkPQToLxgPZ-aQoO

March 18 1980

1980-03-18-the-daily-press-newport-news-virginia-pg-3 / https://drive.google.com/open?id=1bc6PufFYe7uaveZDw50uoKZHomW1x4KQ

Nuclear Waste Shipments Given Permanent Approval

PORTSMOUTH (UPI) — The Nuclear Regulatory Commission has granted permanent approval for the shipment of nuclear waste from Europe through this port city.

The federal agency agreed with two trucking firms that there are no viable alternative East Coast ports for the entry of the highly radioactive cargo, Robert Burnett, director of the NRC's safeguard division said.

Transnuclear Truck Lines of White Plains, N.Y., and Edlow International of Washington, D.C., had examined about a dozen other ports, but reported most had ordinances prohibiting shipping of the material.

Anti-nuclear groups have unsuccessfully attempted to have similar ordinances adopted in this city of 118,000 residents, but local officials have refused, satisfied with federal safeguards and pleased with the trade revenue.

"Transnuclear and Edlow successfully proved there were no pratical alternative," Burnett said.

The NRC granted final approval in a letter mailed to both companies Wednesday, he said.

1980-03-18-the-daily-press-newport-news-virginia-pg-3

1980-03-18-the-daily-press-newport-news-virginia-pg-3-clip-nuke-shipments-approval / https://drive.google.com/open?id=1gx8dqmJlfZsO5RkfysdZw5ZMwXfdzw_0

May 17 1980

1980-05-17-the-des-moines-register-pg-6-a / https://drive.google.com/open?id=1cnRuJjw9jXJO9E-womgeBXkFtGoPZFvc

NRC won't OK shipment of N-parts to India reactor

WASHINGTON, D.C. (AP) — Despite the State Department's favorable recommendation, the Nuclear Regulatory Commission refused permission Friday for exports of nuclear fuel and replacement parts to India's Tarapur reactor, and sent the case to President Carter for a final decision.

Carter could overrule the NRC and allow the exports.

The five-member NRC, in a unanimous decision, said "the commission's inability to issue these licenses should not be read as a recommendation one way or the other on the proposed exports.

"Rather, we have found that the particular statutory findings with which the NRC is charged cannot be made."

Before permitting a peaceful nuclear export, the NRC is required by the Atomic Energy Act to make sure it will be safeguarded under international rules against diversion into the manufacture of nuclear weapons, and will not be transferred to some other country without U.S. permission.

The NRC said it could not conclude, "based on a reasonable judgment of the assurances provided by the government of India and other information available," that the Tarapur shipments would meet those tests.

But it noted that Congress had authorized the president to clear nuclear exports by executive order if he decided that withholding them would jeopardize national security or hamper U.S. efforts to impede the spread of nuclear weapons.

The United States has exported low-enriched uranium, as nuclear fuel, to the Tarapur nuclear power plant in the past.

After India set off a nuclear explosion described as a "peaceful nuclear experiment" in 1974, however, continued shipments for refueling became controversial.

In its recommendation May 7, the State Department expressed concern that India's Prime Minister Indira Gandhi "has not ruled out the option of so-called peaceful nuclear experiments, should this be considered to be in India's interest."

"However," the department added, "we do not believe that withholding the pending export would advance U.S. interests" in stemming the spread of atomic weapons.

At stake were a series of export license applications submitted by Edlow International Co., acting as agent for the Indian government, for two shipments of low-enriched uranium of 19,858.2 kilograms (about 43,689 pounds) each, plus spare parts for the two nuclear units of the Tarapur plant.

Each uranium shipment would represent about one year's nuclear fuel supply.

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1980-05-17-the-des-moines-register-pg-6-a-clip-nrc-wont-ok-parts-india / https://drive.google.com/open?id=1gu7Mq2c_x7ppBkWwVOhpKhjK7Vo4yHja

July 20 1980 Edlow is a traded company

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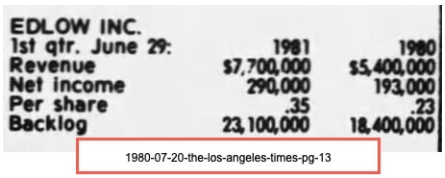

EDLOW INC. 1st qtr. June 29:	1981	1980
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1981 - Good description of situation with South Africa which Edlow was involved in (early 1980s)

See 1987-south-africa-and-nuclear-proliferation-jdl-moore.pdf / https://drive.google.com/open?id=1jLOQ9csYyKuLKBf2wc1xCu-PPwLQOwQs

april 14 1982

1982-04-14-the-star-phoenix-sasktatoon-pg-c-2 / https://drive.google.com/open?id=1d4FixFAux93TjqSFe7FtQducqlmLUPJj

C2 International Wednesday, April 14, 1982 Saskatoon, Saskatchewan Star-Phoenix

Nuclear spending increase sought

WASHINGTON (AP) — In the midst of growing congressional and public support for a nuclear weapons freeze, President Reagan quietly is asking Congress for another $400 million so the government can build more nuclear bombs in 1982 and 1983.

The president's spending request, which drew almost no attention when it was announced March 29, came on the same day that 13 House members introduced a resolution calling on the United States and Soviet Union to negotiate a gradual reduction of nuclear armaments.

One day later, the president gave general support to a Senate resolution calling for a gradual nuclear arms reduction. The House, meanwhile, held an unusual evening debate that day on the merits of an immediate U.S.-Soviet freeze.

The spending increase sought by Reagan would be on top of a $1-billion rise in spending on atomic bombs in 1982, which Congress has approved, and an additional $800-million increase Reagan wants in 1983.

Mounting support among the public and in Congress for a nuclear weapons freeze "makes them (the administration) want to build these things even faster," one Senate source familiar with the proposed increase said Tuesday.

"If they think the program is threatened, they want to get it started as soon as possible before it's cut off," said the source, who did not want his name used.

Reagan specifically asked the Senate and House Appropriations committees for another $97.4 million this fiscal year, which ends Sept. 30, and $310.9 million in fiscal 1983 "to hold to existing (nuclear warhead) production schedules," a White House fact sheet stated.

Last week, the administration disclosed that it wants another $1 billion for bomb production between 1984 and 1987, in addition to substantial increases previously proposed for that period.

The current 1982 budget provides $4.67 billion for the nuclear weapons program, up from $3.65 billion in 1981. Before his latest request, Reagan was seeking $5.5 billion for 1983.

A Senate source confirmed as "in the ballpark," independent calculations that estimate the government intends to add 17,000 nuclear warheads to its existing stockpile of 25,000 weapons over the next 15 years. A House source said the "vast majority" of new weapons would serve as replacements for existing armaments, many of which are nearly 25 years old.

Reagan is likely to encounter some trouble in the Senate, where Appropriations Committee Chairman Mark Hatfield (R — Ore.) and Sen. Edward Kennedy (D — Mass.) are co-sponsoring a resolution calling for an immediate worldwide freeze on weapons production.

Meanwhile, the U.S. Nuclear Regulatory Commission confirmed Tuesday it has approved a new route through New York state for the trucking of nuclear waste from Ontario to South Carolina.

But whether the Nuclear Assurance Corp. of Atlanta, Ga., which transports the waste, will actually be allowed to use the route will depend on a suit currently before U.S. courts.

Nuclear Assurance has sought permission to transport spent nuclear rods from the Chalk River experimental reactor in Ontario across New York state highways into Pennsylvania and points south.

The route approved earlier this month by the NRC allows the nuclear waste to be moved on interstate highways, including the New York state thruway which currently bans high-grade nuclear shipments.

Senator seeks probe of uranium dealing

WASHINGTON (Reuter) — Senator John Glenn says two American brokers may have undercut Washington's nuclear non-proliferation policy by arranging the sale of about 100 tonnes of European enriched uranium to South Africa.

The Ohio Democrat has asked federal agencies whether the sale violated U.S. law, but the brokers and at least one of the federal agencies say it did not.

Executives of Edlow International and SWUCO, Inc., both in the Washington, D.C., area, say they arranged sale of the uranium from Swiss and Belgian interests to South Africa for its new Koeberg nuclear power plant near Cape Town.

"We've been doing this (brokering nuclear fuel) for years," Jack Edlow, president of Edlow International, told Reuters. "There's nothing new about it."

"What we arranged for is perfectly legal," said John LaFond, vice-president of SWUCO. "Let me assure you, we checked it every way."

Sales of U.S. uranium to South Africa are illegal under the U.S. Nuclear Non-Proliferation Act because South Africa has not signed the Nuclear Non-Proliferation Treaty.

But Edlow said the two firms brokered the sale of European uranium, not American fuel, by buying it from the Swiss and Belgian interests and selling title to South Africa.

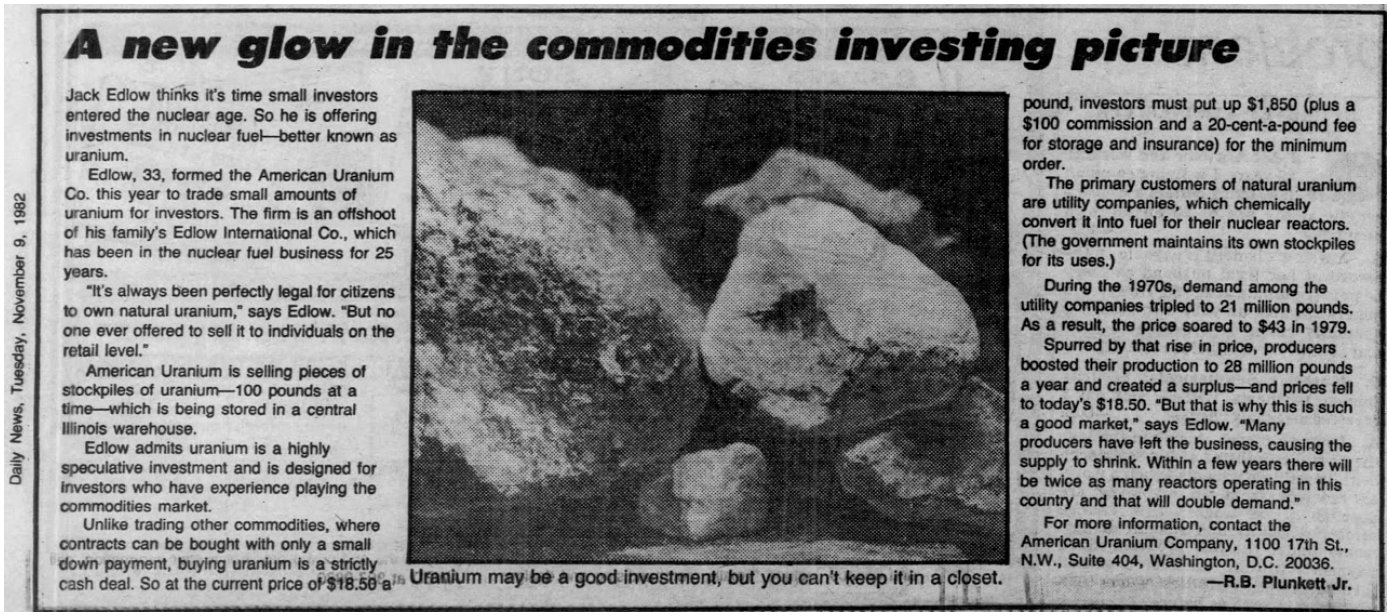
An aide to Glenn said the question is whether it became American uranium when the American brokers bought it for the resale.

The fuel is for South Africa's first nuclear fuel plant.

1982-04-14-the-star-phoenix-sasktatoon-pg-c-2-clip-nuclear-spending-transport / https://drive.google.com/open?id=1hfiiz5R5-vhSxMCTtBuk4eDZcofO-quj

Nov 9 1982 - Jack Edlow - American Uranium Company offshoot

1982-11-09-the-daily-news-new-york-pg-32 / https://drive.google.com/open?id=1bZ4poBW_xaqPpuKjWYuJe0SYHDhB2qlH



Daily News, Tuesday, November 9, 1982

A new glow in the commodities investing picture

Jack Edlow thinks it's time small investors entered the nuclear age. So he is offering investments in nuclear fuel—better known as uranium.

Edlow, 33, formed the American Uranium Co. this year to trade small amounts of uranium for investors. The firm is an offshoot of his family's Edlow International Co., which has been in the nuclear fuel business for 25 years.

"It's always been perfectly legal for citizens to own natural uranium," says Edlow. "But no one ever offered to sell it to individuals on the retail level."

American Uranium is selling pieces of stockpiles of uranium—100 pounds at a time—which is being stored in a central Illinois warehouse.

Edlow admits uranium is a highly speculative investment and is designed for investors who have experience playing the commodities market.

Unlike trading other commodities, where contracts can be bought with only a small down payment, buying uranium is a strictly cash deal. So at the current price of $18.50 a pound, investors must put up $1,850 (plus a $100 commission and a 20-cent-a-pound fee for storage and insurance) for the minimum order.

Uranium may be a good investment, but you can't keep it in a closet.

The primary customers of natural uranium are utility companies, which chemically convert it into fuel for their nuclear reactors. (The government maintains its own stockpiles for its uses.)

During the 1970s, demand among the utility companies tripled to 21 million pounds. As a result, the price soared to $43 in 1979.

Spurred by that rise in price, producers boosted their production to 28 million pounds a year and created a surplus—and prices fell to today's $18.50. "But that is why this is such a good market," says Edlow. "Many producers have left the business, causing the supply to shrink. Within a few years there will be twice as many reactors operating in this country and that will double demand."

For more information, contact the American Uranium Company, 1100 17th St., N.W., Suite 404, Washington, D.C. 20036.

—R.B. Plunkett Jr.

1982-11-09-the-daily-news-new-york-pg-32-clip-edlow-uranium-investing / https://drive.google.com/open?id=1h3Bg_beux57aUTK6cRbazTz_cZSA90j-

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Chicago Tribune Charts

1982-11-17-the-daily-dispatch-moline-illinois-pg-54

Now investors can buy uranium on market

By MICHELLE BOLAR
Journal of Commerce

WASHINGTON — Commodity investors who are tired of the same old soybeans now have an explosive new market they can tackle — uranium.

Trading in the uranium cash market began Oct. 18 in the Washington offices of American Uranium Co. Thus far, total volume in the new market has reached more than 4,000 pounds.

As with any other commodity, uranium investors must open an account and deposit funds prior to purchase. American Uranium's transfer agent is the National Bank of Washington, and the new cash market will be policed by the accounting firm of Coopers & Lybrand.

American Uranium, a subsidiary of a nuclear fuels transporting company, Edlow International, was founded specifically to open spot trading in uranium to the public. Although not widely known, anyone can own yellowcake, the term for the mustard-colored uranium powder.

Uranium, however, cannot be "shipped off to thousands of locations for people to keep in their garage," said Jack Edlow, 33, president of American Uranium.

ALTHOUGH YELLOWCAKE is not flammable, explosive or combustible, by law, it must be stored in U.S. government-licensed warehouses.

Therefore, the closest uranium investors can get to their slightly radioactive metal is an American Uranium Co. certificate. Each certificate represents "an undivided but specific" amount of uranium that is stored for the buyer in a federally licensed facility in St. Louis owned by American Uranium.

Acting as a broker, American Uranium buys and sells yellowcake on orders from its customers. (The company also buys and sells uranium as a principal for its own account.)

Investors receive a price quote from American Uranium over the telephone for uranium to be bought or sold. In addition, the company provides investors with information concerning the full cost of the transaction, including commissions and any storage charges.

The minimum-size certificate is 100 pounds, with larger certificates sold in 50-pound increments.

"We started out thinking of trading in drums of uranium. But financial analysts recommended dropping the level to 100 pounds so that small investors could take advantage of the market," Edlow explained.

HOWEVER, SMALL investors will not be the only ones benefiting from the new market. Yellowcake purchases from American Uranium of up to $4,000 carry a $100 commission, while purchases ranging from $4,000 to $10,000 carry the same commission along with a 2.5 percent fee on amounts in excess of $4,000.

Transactions ranging from $10,000 to $50,000 carry a $250 purchase commission. In addition, a 2 percent fee is added to amounts exceeding $10,000.

Purchases of more than $50,000 are charged a $1,050 commission, with a 1.5 percent fee for any amount greater than $50,000.

Yet despite the towering figures, American Uranium's president noted that at current prices ($18 to $20 a pound), the minimum capital a small investor in the uranium market would need — including commissions, insurance and storage — is $1,950.

"THERE HAS BEEN no institutional trading so far," said Edlow. "Only individuals in the uranium business who cleared the matter with their companies, to make certain there was no conflict, and then purchased the uranium business who cleared the matter with their companies, to make certain there was no conflict, and then purchased the uranium for their own interest."

Uranium primarily is used to produce fuel for nuclear-powered electric generating plants. Before the opening of the new market, uranium was bought generally only by utility companies, nuclear fuel companies, research organizations and governments. There was no facility for small purchases of yellowcake.

The only way investors could participate in the uranium market was either by buying stocks of uranium companies — such as the New York Stock Exchange-listed UNC Resources and Atlas Corp. — or by actually purchasing mineral rights to uranium deposits, a source at American Uranium observed.

EDLOW IS eager to see a boom in the nuclear fuels industry. He expressed confidence in the future of nuclear fuels, citing statistics that showed a jump in domestic uranium usage from 7 million pounds in 1970 to 21 million pounds in 1980. He projected demand for uranium would climb to 31 million pounds by 1985 and 37 million pounds by 1990.

Despite the optimistic demand figures, the spot price of uranium has dropped from a high of $40 per pound in 1980 to its current range of $18 to $20 per pound. Inventory liquidation by consumers is largely responsible for the price decline.

1982-11-17-the-daily-dispatch-moline-illinois-pg-54-clip-investors-uranium / https://drive.google.com/open?id=1h4cNIVcLL5vav8rqAdrRzbIStICqM4-Q

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Indiantown Site Among 418 Most Hazardous Dumps

Senate Passes Gas Tax Hike; Funding OK'd

At a Glance

European Gateway lies off coast of southeast England after colliding with another ferry in channel

Survivors Claim Evacuation Chaotic Following Collision

Survivor is brought ashore from rescue vessel

Girl's Death a Spark of Life for Four

S. Africa Bypasses Regulations

Runaway Atom

Reactor at Pelindaba, South Africa

Inside Today

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URANIUM TO SOUTH AFRICA: The State Department has quietly circumvented longstanding U.S. foreign policy by allowing an American company to act as middleman in a deal that has sent enriched uranium to South Africa.

The Nuclear Non-Proliferation Act bars the export of nuclear material to any nation that refuses to allow international inspection of its nuclear facilities. South Africa, which does not allow such inspection, is believed to be dangerously close to production of nuclear weapons — if it has not already succeeded.

Yet Edlow International, a Washington-based brokerage firm, arranged two shipments of enriched uranium — the raw material of nuclear bombs — from the United States to South Africa through European nations. And Edlow did it with the full knowledge of the State Department.

Harry Marshall, senior deputy assistant secretary o
state, admitted to Rep. Howard Wolpe, D-Mich., that h
had met with Edlow officials while the deal was beinj
made. He told Wolpe that he had neither encouraged no
discouraged Edlow's uranium transaction.

Marshall told Wolpe, who is chairman of the Hous
Foreign Affairs Subcommittee on Africa, that ther
really was little the State Department could have don
to discourage Edlow's defiance of the non-proliferatio
law. Yet the Reagan administration didn't hesitate t
lean on private American companies that wanted to sel
the Soviets machinery for the natural-gas pipeline t
Western Europe.

1983-01-15-the-daily-times-salisbury-maryland-pg-4

1983-01-15-the-daily-times-salisbury-maryland-pg-4-clip-uranium-south-africa-edlow / https://drive.google.com/open?id=1guJpYeCDYrRhH65Oy81hqe9FY4qk0Ys5

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South Africa's nuclear plans cause concern

JEFF NESMITH
Cox News Service

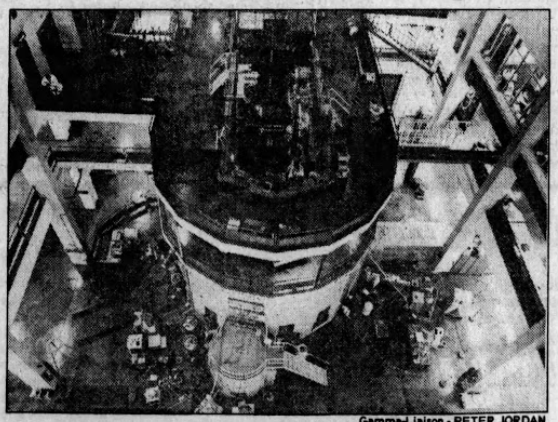
WASHINGTON — Bargain-hunting by U.S. electric companies and a Reagan administration policy called "constructive engagement" are being blamed for allowing South Africa to frustrate international efforts to block the spread of nuclear weapons.

Several companies recently bought about 80 tons of low enriched uranium owned by South Africa and stored at U.S. Energy Department warehouses in Piketon, Ohio. When the fuel is converted to electricity for Americans, South Africa will have completed a complex maneuver that skirted efforts to get it to forego development of nuclear weapons.

A United Nations report last year warned that South Africa may already have used its small, tightly-guarded uranium enrichment plant to refine enough uranium for 15 atomic bombs — with more on the way.

But a State Department official has told the House subcommittee on African affairs, "We feel that we can achieve our (non-proliferation) objectives better with South Africa by not engaging in unnecessary activities which would produce a deteriorating relationship."

"It's not that they (Reagan officials) have set the train in a totally different direction" from former President Carter, says Joseph Nye, a former State Department official involved in developing Carter nuclear proliferation policy. "But the engine has run out of steam and is subject to frequent derailments."



Gamma-Liaison - PETER JORDAN

Research reactor at Valindaba, Swahili for 'we'll never tell'

The State Department says the new administration takes a carrot-and-stick approach called "constructive engagement."

Concern focuses on a small uranium enrichment plant at Valindaba, a town near South Africa's capital, Pretoria. The facility can take raw uranium and, if international suspicions are correct, soup it up for use as the explosive in nuclear bombs.

South Africa refuses to permit inspectors from the International Atomic Energy Agency inside the plant. The government has also refused to sign the Non-Proliferation Treaty as a security measure.

"It must be realized that South Africa is threatened by the USSR and its associates and by certain African countries with Soviet support and encouragement," states a secret South African document leaked last year.

In 1975, President Ford suspended U.S. shipments of highly enriched uranium to a research reactor because South Africa wouldn't sign.

At that time, the United States also had a contract to enrich South Africa uranium for use in power reactors under construction at Koeberg, near Cape Town. South Africa was to ship its own raw uranium — or "yellow cake" — to the United States.

Following enrichment at Oak Ridge Laboratories, the uranium was to be shipped to France, where South Africa had a contract for it to be fabricated into nuclear reactor fuel rods.

In 1977, Carter refused to authorize export of the low-enriched fuel. In addition, the United States obtained a commitment from France that no fuel would be fabricated until South Africa agreed to the treaty and nuclear safeguards.

In 1979 Congress enacted the Nuclear Non-Proliferation Act, which prohibited export of nuclear materials and equipment to countries that had not signed the Non-Proliferation Treaty.

Yet, South Africa continued to ship raw uranium to the Department of Energy to be enriched into fuel. As the uranium was enriched, the Energy Department billed South Africa. South Africa paid. The enriched uranium accumulated at Piketon.

During the 1980 presidential campaign, candidate Ronald Reagan said nuclear proliferation was "none of our business."

In May 1981, South African Foreign Minister Pik Botha came here and met Alexander Haig, then secretary of state. Prior to that, the South African Embassy here prepared a four-page argument that the United States should relax the nuclear pressure.

This document, marked "secret," leaked. The embassy asked that the United States either release its enriched fuel for export or stop pressuring the French to not supply fuel. A few weeks later, representatives of the Washington uranium broker, Edlow International Inc., visited the State Department to outline a proposal for South Africa to buy fuel from France. Surplus reactor fuel was available in France, the Edlow representative said, because power companies in Switzerland had bought it but found they did not need it.

After South Africa had bought fuel from the French, the only matter unresolved was the fuel it owned, but still could not ship, in Piketon.

Officials of Oak Ridge Laboratories, which operate the Piketon facility, a few days ago released figures indicating South Africa had paid to have about 150 tons of uranium enriched. The Energy Department fee for this service was about $62 million.

Energy Department officials said SWUCO Inc., a Maryland fuel broker, took 80 tons of the fuel last year and has sold all of it to U.S. utilities. The Energy officials refused to identify the utilities.

"In this affair, the United States participated in something that is very dangerous to the continent of Africa and to the whole world, because it will help South Africa develop nuclear weapons," said Ken Zinn, associate director of the Washington Office on Africa, an organization that develops information on apartheid and South African nuclear developments.

1983-01-31-the-miami-news-pg-7a-clip-south-africa-nuke-plans / https://drive.google.com/open?id=1hsOU9ALQXGbQNteWylrqBf1WXP1YxCQ7

April 28 1983

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The nuclear reactor at Three Mile Island . . . plagued by misadventure.

PAUL SHEEHAN, in New York, on the great decline of nuclear energy

US goes cold on yellowcake

AUSTRALIAN yellowcake is not exactly a hot item in America these days, if you'll forgive the pun.

There is a huge oversupply on the world's raw uranium market. Even if there were not, the condition of the United States nuclear energy program is in not even remotely conducive to significant growth.

All nuclear plants ordered in the US since 1974 have been cancelled. None has been ordered since 1978, the year before the near-meltdown at Three Mile Island.

Numerous nuclear reactors have suffered horrendous cost-overruns and been plagued by delays, mismanagement and misadventure. The industry is only 20 years old, but already 10 plants have been permanently closed and 97 orders have been cancelled (almost equal to the numbers of reactors now in operation).

A crucial battle — which may represent the high-water mark of the American nuclear energy program — is being waged in Congress over the largest and most expensive nuclear reactor ever proposed for the United States, the Clinch River plant in Oak Ridge, Tennessee.

Last year Congress almost withdrew all funds for this breeder reactor because it is suffering enormous cost-overruns. This year, with a more liberal Congress elected last November, Clinch River may go under

The Atomic Energy Commission initially estimated that Clinch River would cost $A575 million. The Department of Energy now estimates it would cost $4.1 billion. But the General Accounting Office says this estimate does not even include the cost of plutonium and running the plant. It says Clinch River would cost $9.8 billion — 17 times higher than the original estimate.

President Reagan's Budget director, David Stockman, has long been vehemently opposed to the huge and growing Federal subsidies for Clinch River and has described the project as "totally incompatible with our free-market approach to energy policy."

URANIUM
The boom that never was

With recession, energy conservation, lower oil and coal prices, hostile public opinion, plus the cost and safety problems, estimates of America's nuclear energy needs have dropped spectacularly.

In 1971 the Atomic Energy Commission forecast that by 1980 the capacity of American nuclear power stations would be 150 billion watts. The AEC later revised this estimate down to 132 billion watts. The actual capacity turned out to be only 53 billion watts.

The AEC also forecast in 1971 that capacity in 1985 would be 300 billion watts. Ten years later, this estimate was trimmed to 280 billion, but it now appears that America's capacity in 1985 will be at most 90 billion watts.

And now the grandiose estimates of US capacity at the turn of the century are now looking like flights of fantasy. In 1971 the AEC estimated that by the year 2000 America would be able to generate 1,200 billion watts, making it the most important energy source in the country. The estimate is now 165 billion watts and even that is optimistic.

The effect of all these problems, and all these scaled-down expectations, is that prospects for Australian uranium exports to the US — providing they are allowed by the Labor Government — are bleak.

Professor Manson Benedict, emeritus professor of nuclear engineering at the Massachusetts Institute of Technology, points out that America's stockpile of reusable uranium is 250,000 to 300,000 tonnes. If all this stockpile were placed in breeders and converted to plutonium, it would yield more than 200,000 tonnes, enough fuel to generate about 700 times the electricity made in the US last year.

(However, he says more giant breeder reactors — such as the infamous Clinch River — are essential to America's ability to recycle this fuel.)

Because its future is so bleak, one of America's biggest uranium producers, UNC Resources, has announced that it is getting out of the business.

Most US uranium mines are closed because the raw uranium is selling for barely half what it costs to get out of the ground. It is the same cost squeeze that prompted Exxon (through its subsidiary Esso) to back out of the proposed $438 million Yeelirrie project in Western Australia.

In addition to this oversupply and the many problems with nuclear plants, there is the burgeoning nuclear freeze movement, which is also finding expression as a general anti-nuclear movement. Nuclear politics have finally started to glow in America.

Because of this growing hostility, the White House has ordered the termination, or at least the indefinite postponement, of an $8 billion uranium enrichment plant in Portsmouth, Ohio, because of "current Congressional funding problems."

The outlook for foreign uranium suppliers is bleak and a 1981 report by the Department of Energy says: "It is likely that over the next few years most domestic utilities will continue to buy US-origin uranium and that the actual percentages of foreign uranium utilised will be well below the allowable quantities."

The Department of Energy report also estimates that Australia's share of total uranium imports to the US is expected to continue to shrink, largely replaced by yellowcake from Canada and South Africa. The report noted that "the Australian Labor Party . . . have indicated they may disavow uranium sales contracts if they are voted into power. . . This has clouded the Australian position as a supplier"

Across this unremittingly dull export vista, there are a few outcrops of good news for those who wish to see Australia increase its revenue from uranium exports. In December, the House of Representatives rejected legislation to restrict foreign uranium exports to the US.

The way now appears clear for the US to phase out the last of its import restrictions on uranium and, under a plan that has been implemented since 1974, the last restrictions are to be phased out next year.

There are also market analysts who believe that American power companies are in the process of running down their inventories of yellowcake and the moribund market could be set to stir to life again.

Jack Edlow, who runs a nuclear fuel supply business, Edlow International, believes the US has already run down its excess inventory.

"In the next 10 years demand for uranium will double," he says. "This year US consumption should exceed production by several million pounds, and beyond the US there is a major world demand for uranium."

He predicts that US domestic uranium usage will increase from 10,000 tonnes in 1980 to 15,000 tonnes in 1985 and 18,000 tonnes in 1990.

With the price of yellowcake now at an all-time low, Mr Edlow says there is only one way for it to go — up. Prices collapsed, he said, because of high interest rates.

"Uranium producers have been unloading their uranium to raise cash and to save the cost of borrowing to pay for carrying uranium inventory.

"That has largely ended. With interest rates coming down, the pressure is no longer on the market. We can see now there is significant, long-term demand for uranium."

But I didn't find anyone in the US willing to express confidence that Australian yellowcake will be a hot item here again.

TOMORROW: Well, there's Europe

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'Yellow Cake' Fire Under Investigation

By Lisha Gayle
and Robert Kelly
Of the Post-Dispatch Staff

Authorities are trying to find the cause of a fire in East St. Louis Wednesday that damaged part of a warehouse containing 39 steel drums of uranium material.

They also want to know why the building's fire and sprinker systems apparently failed to work properly during the blaze.

Government officials said the fire posed no radioactive danger to the area.

The fire broke out Wednesday about 12:30 a.m. in the warehouse, at 3131 St. Clair Avenue, and was under control in about an hour. It was reported to firemen by a passer-by after the building's fire alarm failed to sound, said East St. Louis Deputy Fire Chief Leverse Brooks.

The 55-gallon drums in the part of the warehouse that burned contained "yellow cake," a uranium oxide used to make fuel for nuclear power plants, said David Ed of the Illinois Department of Nuclear Safety. Yellow cake gives off a low level of radiation, he said.

Part of the roof of the warehouse collapsed onto the drums, but none of them leaked, authorities said.

A physicist from Ed's office in Springfield, Ill., Wednesday examined the site with a radiation-detecting device and found the drums intact, Ed said.

But at least one of the drums appeared to have been badly dented. An automobile parked in the warehouse also was destroyed in the blaze. Brooks said the car belonged to a security officer.

Jan Strasma, a spokesman for the Chicago office of the Nuclear Regulatory Commission, said the warehouse had been licensed for the last four years to store three radioactive materials — yellow cake, uranium hexaflouride and slightly enriched uranium. The license and lease on the building are held by Edlow International Co. of Washington.

Strasma said that security measures at the warehouse would be reviewed in light of the fire and that a determination would be made on whether improvements are needed before the license is renewed.

Brooks said fire officials were puzzled because the warehouse's sensitive alarm system had failed to sound, so firefighters could not tell how long the fire had been burning when they arrived at the scene. The sprinker system in that part of the building also apparently had operated improperly, he said.

No security guard was on duty at the time of the fire, but Strasma said that was not an NRC requirement if adequate alarm systems were installed. He said the NRC would conduct its own investigation of alarm and sprinkler systems.

"The first goal of our inspectors was to determine that there was no radiation problem at the warehouse, and they found none," Strasma said. Two NRC inspectors investigated the fire Wednesday, he said.

The fire was confined to the eastern part of the one-story, brick warehouse, which is divided into three sections by brick fire walls. The middle third of the building was nearly empty, Ed said. The western third of the building contained about 18 canisters of uranium hexaflouride, another material used to make fuel for nuclear-power plants.

Uranium hexaflouride is inflammable, Ed said, but it is stored in fire-resistant metal containers. Had that material burned, it could have produced poisonous flouride gas and a residue with a low level of radioactivity, Ed said.

Bruce W. Podhurst, vice president of Edlow International, said about two truckloads of radioactive material were shipped to the warehouse each month. He said the material in the drums in the burned-out area was worth about $300,000.

Those drums will be moved to the part of the warehouse that is still intact, he said.

The warehouse is the only licensed uranium-storage facility in the eight-state Midwestern region of the NRC, Strasma said.

The uranium hexaflouride is contained in large cylinders with inch-thick steel walls, said Jack Edlow, president of Edlow International.

Podhurst said the yellow cake stored at the warehouse was to be used by unspecified utilities and was to be shipped to processing plants in Oklahoma, Illinois and Ohio. Union Electric Co. and Illinois Power Co. are not among the utilities using the warehouse, he said.

Sister Cecilia Hellmann, co-principal at nearby St. Patrick Catholic School, said she had considered closing school Wednesday after the fire. The school remained open after she was assured by NRC officials that there was no danger. The school is at 33rd Street and Summit Avenue, only a few blocks from the warehouse.

The fire broke out only a few weeks after Sister Hellmann discussed her concerns with a city official and a physicist from Washington University. After that meeting, Michael Preston, capital improvement commissioner for East St. Louis, wrote to the Nuclear Regulatory Commission for information on plans for an emergency at the warehouse. Sister Hellmann said the NRC had not yet answered the letter.

"I don't believe these kinds of sites should be so near a populated area because of the risk of toxic fumes," Sister Hellmann said.

Licensed storage facilities are periodically inspected, but Strasma did not know when the East St. Louis warehouse was last inspected.

Although there is disagreement over how toxic yellow cake is, some experts warn that a single particle of the substance could cause lung cancer if it is inhaled and becomes lodged in a person's lung.

(Jon Sawyer of the Post-Dispatch Washington Bureau provided some information for this story.)

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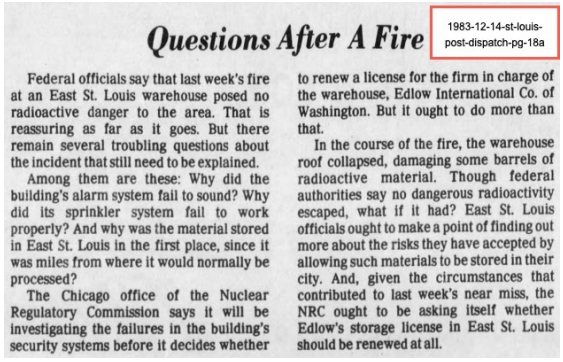

Questions After A Fire

1983-12-14-st-louis-post-dispatch-pg-18a

Federal officials say that last week's fire at an East St. Louis warehouse posed no radioactive danger to the area. That is reassuring as far as it goes. But there remain several troubling questions about the incident that still need to be explained.

Among them are these: Why did the building's alarm system fail to sound? Why did its sprinkler system fail to work properly? And why was the material stored in East St. Louis in the first place, since it was miles from where it would normally be processed?

The Chicago office of the Nuclear Regulatory Commission says it will be investigating the failures in the building's security systems before it decides whether to renew a license for the firm in charge of the warehouse, Edlow International Co. of Washington. But it ought to do more than that.

In the course of the fire, the warehouse roof collapsed, damaging some barrels of radioactive material. Though federal authorities say no dangerous radioactivity escaped, what if it had? East St. Louis officials ought to make a point of finding out more about the risks they have accepted by allowing such materials to be stored in their city. And, given the circumstances that contributed to last week's near miss, the NRC ought to be asking itself whether Edlow's storage license in East St. Louis should be renewed at all.

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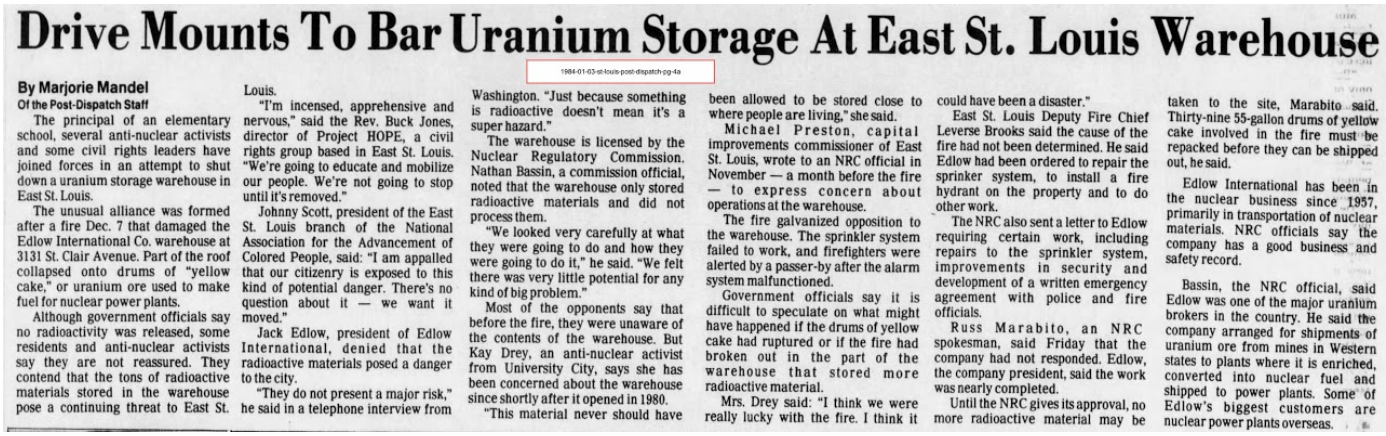


Drive Mounts To Bar Uranium Storage At East St. Louis Warehouse

1984-01-03-st-louis-post-dispatch-pg-4a

By Marjorie Mandel
Of the Post-Dispatch Staff

The principal of an elementary school, several anti-nuclear activists and some civil rights leaders have joined forces in an attempt to shut down a uranium storage warehouse in East St. Louis.

The unusual alliance was formed after a fire Dec. 7 that damaged the Edlow International Co. warehouse at 3131 St. Clair Avenue. Part of the roof collapsed onto drums of "yellow cake," or uranium ore used to make fuel for nuclear power plants.

Although government officials say no radioactivity was released, some residents and anti-nuclear activists say they are not reassured. They contend that the tons of radioactive materials stored in the warehouse pose a continuing threat to East St. Louis.

"I'm incensed, apprehensive and nervous," said the Rev. Buck Jones, director of Project HOPE, a civil rights group based in East St. Louis. "We're going to educate and mobilize our people. We're not going to stop until it's removed."

Johnny Scott, president of the East St. Louis branch of the National Association for the Advancement of Colored People, said: "I am appalled that our citizenry is exposed to this kind of potential danger. There's no question about it — we want it moved."

Jack Edlow, president of Edlow International, denied that the radioactive materials posed a danger to the city.

"They do not present a major risk," he said in a telephone interview from Washington. "Just because something is radioactive doesn't mean it's a super hazard."

The warehouse is licensed by the Nuclear Regulatory Commission. Nathan Bassin, a commission official, noted that the warehouse only stored radioactive materials and did not process them.

"We looked very carefully at what they were going to do and how they were going to do it," he said. "We felt there was very little potential for any kind of big problem."

Most of the opponents say that before the fire, they were unaware of the contents of the warehouse. But Kay Drey, an anti-nuclear activist from University City, says she has been concerned about the warehouse since shortly after it opened in 1980.

"This material never should have been allowed to be stored close to where people are living," she said.

Michael Preston, capital improvements commissioner of East St. Louis, wrote to an NRC official in November — a month before the fire — to express concern about operations at the warehouse.

The fire galvanized opposition to the warehouse. The sprinkler system failed to work, and firefighters were alerted by a passer-by after the alarm system malfunctioned.

Government officials say it is difficult to speculate on what might have happened if the drums of yellow cake had ruptured or if the fire had broken out in the part of the warehouse that stored more radioactive material.

Mrs. Drey said: "I think we were really lucky with the fire. I think it could have been a disaster."

East St. Louis Deputy Fire Chief Leverse Brooks said the cause of the fire had not been determined. He said Edlow had been ordered to repair the sprinker system, to install a fire hydrant on the property and to do other work.

The NRC also sent a letter to Edlow requiring certain work, including repairs to the sprinkler system, improvements in security and development of a written emergency agreement with police and fire officials.

Russ Marabito, an NRC spokesman, said Friday that the company had not responded. Edlow, the company president, said the work was nearly completed.

Until the NRC gives its approval, no more radioactive material may be taken to the site, Marabito said. Thirty-nine 55-gallon drums of yellow cake involved in the fire must be repacked before they can be shipped out, he said.

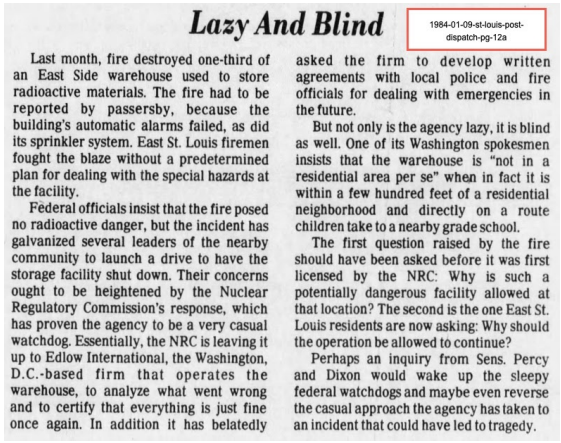
Edlow International has been in the nuclear business since 1957, primarily in transportation of nuclear materials. NRC officials say the company has a good business and safety record.

Bassin, the NRC official, said Edlow was one of the major uranium brokers in the country. He said the company arranged for shipments of uranium ore from mines in Western states to plants where it is enriched, converted into nuclear fuel and shipped to power plants. Some of Edlow's biggest customers are nuclear power plants overseas.

1984-01-03-st-louis-post-dispatch-pg-4a-clip-uranium-warehouse / https://drive.google.com/open?id=1gP51OfN1JhBhy7bx2IJgsE8hlPx5OP-D

Jan 9 1984

1984-01-09-st-louis-post-dispatch-pg-12a / https://drive.google.com/open?id=1dujikDTkEt677WhqyYK0se8tnVCgay9X



Lazy And Blind

1984-01-09-st-louis-post-dispatch-pg-12a

Last month, fire destroyed one-third of an East Side warehouse used to store radioactive materials. The fire had to be reported by passersby, because the building's automatic alarms failed, as did its sprinkler system. East St. Louis firemen fought the blaze without a predetermined plan for dealing with the special hazards at the facility.

Federal officials insist that the fire posed no radioactive danger, but the incident has galvanized several leaders of the nearby community to launch a drive to have the storage facility shut down. Their concerns ought to be heightened by the Nuclear Regulatory Commission's response, which has proven the agency to be a very casual watchdog. Essentially, the NRC is leaving it up to Edlow International, the Washington, D.C.-based firm that operates the warehouse, to analyze what went wrong and to certify that everything is just fine once again. In addition it has belatedly asked the firm to develop written agreements with local police and fire officials for dealing with emergencies in the future.

But not only is the agency lazy, it is blind as well. One of its Washington spokesmen insists that the warehouse is "not in a residential area per se" when in fact it is within a few hundred feet of a residential neighborhood and directly on a route children take to a nearby grade school.

The first question raised by the fire should have been asked before it was first licensed by the NRC: Why is such a potentially dangerous facility allowed at that location? The second is the one East St. Louis residents are now asking: Why should the operation be allowed to continue?

Perhaps an inquiry from Sens. Percy and Dixon would wake up the sleepy federal watchdogs and maybe even reverse the casual approach the agency has taken to an incident that could have led to tragedy.

1984-01-09-st-louis-post-dispatch-pg-12a-clipfire-edlow-warehouse-lazy-blind / https://drive.google.com/open?id=1gOvqEglana8Zyt4AuH5fF9td7BZ03_-O

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Evidence Of Reagan Support To South Africa

Michigan Congressman John Conyers has released the following information as further evidence that the Reagan Administration has permitted the export of military and police equipment and technology to South Africa.

1. Despite a 1977 United Nations Arms Embargo to which the United States is a signatory, the State Department has lifted export restrictions on military and militarily potential equipment on the State Department's Munitions List. According to official figures between 1981 and 1983, the Administration allowed the export of $28.3 million in Munitions List equipment to South Africa in 29 separate license approvals.

Preliminary figures document that in the first quarter of 1984, the amount of Munitions List equipment licensed for export to South Africa exceeded $88 million. This equipment includes military and space electronics, optional and guidance equipment, turbo jet aircraft, and technology useful in the manufacture of arms. By contrast, the Carter Administration licensed $25,000 in Munitions List equipment in 1979; there were no licenses in 1980.

2. South African government installations that have been the recipients of State Department Munitions List equipment include the National Physical Research Laboratory and the National Institue for Aeronautics and Systems Technology, both of which do classified military research for the South African government.

3. The Commerce Department has permitted the sale of computers to agencies of the South African government that enforce apartheid such as the Ministry of Cooperation and Development, the Ministry of Interior, the Ministry of Manpower and the Ministry of Justice. IBM computers are used by the South African government to maintain race classifications in enforcing the pass system.

4. Changes in the Commerce Department export regulations permitted the sale of U.S. manufactured Beech and Piper aircraft, reclassified as "medical supplies," to the South African Air Force in 1982. The planes are frequently used for reconnaissance and intelligence-gathering purposes, and could well be used in the Namibian war.

5. In November 1983, a highly advanced U.S. manufactured computer system (VAX 11/782, made by Digital Equipment Corp.) was seized in Sweden en route to the Soviet Union. The attempted diversion to Moscow was regarded by the Administration as a serious security breach as the computer was capable of a variety of military functions, including operating a missile guidance system.

Before this computer was rerouted to the Soviet Union via Sweden,the sophisticated hardware had been shipped with U.S. government approval to a private South African firm.

6. The Reagan Administration has expanded nuclear cooperation with South Africa despite South Africa's unwillingness to adhere to the Non-Proliferation Treaty to accept the International Atomic Energy Agency (IAEA) safeguards. Specifically, in March of 1982, the Administration granted an export license to Control Data Corp. to sell South Africa's Center of Industrial and Scientific Research, a leading defense research group, a Cyber 175/750 computer.

This advanced computer can be used to simulate nuclear explosions and its sale was not approved by the previous Administration for precisely that reason.

Cont'd on page 4, see Reagan Support

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Reagan Support

7. In addition, two U.S. companies- Edlow International and SWOCO-acted as brokers in the sale of enriched uranium fuel for South African reactors without any protest, anticipatory action, or remedial action by the Administration. Furthermore, nuclear technicians have traveled to South Africa and South African nuclear technicians have been trained here at U.S. facilities according to the House Subcommittee on Africa.

8. In 1982, the Department of Energy permitted South Africa to export uranium feedstock to the United States for enrichment at three separate U.S. plants. At the present moment, a decision is still pending at DOE on the re-export of this enriched uranium to South Africa.

9. In 1982, the Commerce Department approved the export of 2,500 electric shock batons to the South African police. Chester Crocker, Assistant Secretary of State for African Affairs, has termed the matter "a mistake."

10. Italo-West German police surveillance aircraft were exported to the South African Military force in Bophuthatswana. The Commerce and State Departments failed to monitor the end-use of the engines that were used for these aircraft which were manufactured in the United States by Avco-Lycoming. It is the responsiblity of the State Department and Commerce Department to monitor end-use of all military related exports.

11. In a similar case, the South African (Ciskei) defense Force recently received two Skyvan STOL (short take-off and landing) air transports from a civilian source in South Africa in 1982. The engines for these planes were manufactured by Garrett-AIRsearch of Los Angeles.

12. U.S. manufactured Colt and Browning weapons are in use at a commercial "anti-terrorist" training center in South Africa. Other U.S. made police equipment, openly advertised in South African security journals, include electronic senors, infrared detectors and tracking equipment. Among the U.S. security companies represented in South Africa are Technipol International, Racon and Raytek.

13. Investigation hearings conducted by the House Subcommittee on Africa in 1982 documented UN arms embargo violations in which officials of the Defense Department and Central Intelligence Agency were implicated.

14. Expanded diplomatic contact with the South African military and police include the trianing of the South African Coast Guard in 1981. The Administration has permitted the South African government to establish as many as five new honorary consultates in Seattle, Denver, Cleveland, Pittsburgh and Phoenix. Since 1981, official intelligence contacts have resumed between both countries as have official nuclear advisory contacts.

15. Economic support for the South African government has included the Administration's unconditional support for a $1.1 billion International Monetary Fund (IMF) loan in 1982. That same year, South Africa's military expenditures increased approximately the same amount.

Diplomatic and political support for the South African government has included the repeated defense of the South African government in the United Nation General Assembly when the Assembly sought to have South Africa expelled, and in the UN Security Council when the Council condemned South Africa for aggression against its neighbors.

These examples are illustrative of a wide range of instances whereby the Reagan Administration has enabled the South African government to fortify the stronghold of apartheid.

This track record must also be viewed against a back rop of increased repression and violence during the past four years by virtually every measure of human rights and democracy. It should be remembered that the UN Arms Embargo to which the United States is in signatory, applies to all of South Africa, not just the South African government.

1984-01-12-the-atlanta-voice-pg-1 and page 4

1984-01-12-the-atlanta-voice-pg-1-clip-reagan-support-south-africa / https://drive.google.com/open?id=1gS4-C-8DBfo1tFUQuN0QaPFQO3y0nrGY

Jan 27 1984

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Renyold Ferguson/Post-Dispatch

Demonstrators — many of them school children — leaving the grounds of the Edlow International Co. in East St. Louis Thursday after a rally in protest against the storage of radioactive materials there. The children are from nearby St. Patrick Elementary School.

E. St. Louis Uranium-Storage Protests Studied

By Robert Kelly
Of the Post-Dispatch Staff

The Nuclear Regulatory Commission is studying complaints from East St. Louis residents about a uranium storage warehouse before deciding if licensing requirements for the warehouse should be tightened, a spokesman for the commission says.

Jan Strasma, a spokesman for the commission's regional office in Chicago, said Thursday in a telephone interview that no new material had been moved into the Edlow International Co. warehouse at 3131 St. Clair Avenue in East St. Louis since Dec. 7, when a fire damaged part of the building.

The fire burned through part of the roof, which then collapsed onto drums of "yellow cake" — uranium ore used to make fuel for nuclear power plants.

Security and sprinkler systems at the warehouse have been repaired and upgraded since the fire, Strasma said. But the design of the warehouse is being studied to see if it can be made more secure, he said.

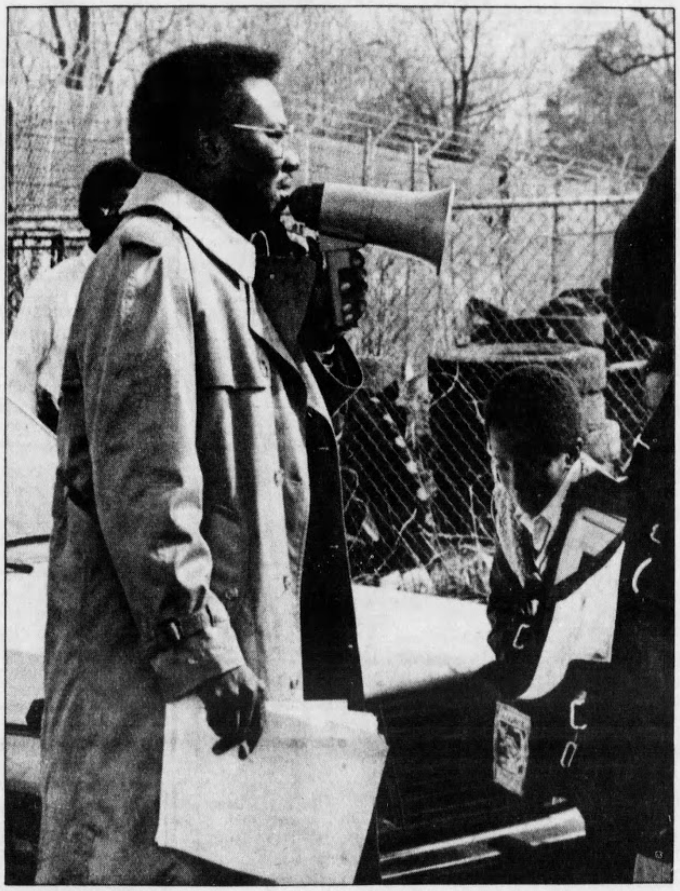
"One of our concerns about the warehouse is that obviously it is not a fireproof structure," he said.

Strasma said that since the fire, he had received some letters and a petition from a coalition of East St. Louis residents urging that the warehouse be shut down. He said they also had urged that the radioactive materials stored there be removed because of the safety hazard to nearby residents.

Strasma said those requests would be considered if the commission were persuaded that the warehouse could not be made safe enough to continue to store radioactive materials within two blocks of homes and schools.

But for now, the warehouse is considered safe for low-level radioactive material, Strasma said. He said the most highly radioactive materials stored there would soon be moved just outside the warehouse in thick steel drums, where fire would be eliminated as a threat. He identified that material as uranium hexaflouride, which is inflammable. But it is stored in fire-resistant metal containers, he said.

Reassurances from the commission and the company have failed to satisfy several residents of the neighborhood near the warehouse.



Renyold Ferguson/Post-Dispatch

The Rev. Buck Jones, director of East St. Louis Project HOPE, speaking to demonstrators at the Edlow International Co. facility.

At a protest rally earlier Thursday at the warehouse gates, the Rev. Buck Jones, director of East St. Louis Project HOPE, told about 250 people, "We are gathered here today in one mind and one spirit. . . . We have a single objective, and that is to shut Edlow down.

"I wonder how Mr. Edlow would feel if this plant was in his neighborhood in suburban Washington," Jones told the rally. He was referring to Jack Edlow, president of Edlow International.

The crowd at the protest rally was swelled by almost 200 students from St. Patrick School, a Catholic elementary school at 735 North 33rd Street.

Sister Cecilia Hellmann, co-principal of the school, said the students had received permission from their parents to attend the rally. The children carried banners with such slogans as, "This boy wants to live," and "Edlow is killing us."

They chanted, "Edlow must go," and, "We love life," and later were joined by members of Prject HOPE, a civil rights group, in singing such civil rights rallying songs as "We Shall Overcome" and "I Ain't Gonna Let Nobody Turn Me Around."

Jones presented a letter at the rally that he had written to Edlow earlier this week. The letter demands that Edlow International leave East St. Louis because of the safety hazard posed by the warehouse.

Jones said he wasn't optimistic because Edlow had told him in a telephone conversation two weeks ago that Edlow International would stay in East St. Louis.

Sister Hellmann also spoke briefly at the rally. She said: "Tomorrow, the world will belong to these young people standing here. They do have a right to a healthy environment, and I believe we are standing before a place that is dangerous to that environment."

In an interview later, Jones said he favored urging area congressmen to take action to close the warehouse. If that fails, residents will continue to march and protest and might even consider "some confrontation," such as trying to crash the warehouse gates, he said. "I think it merits that kind of action, but it's up to the coalition to decide."

Edlow said later in a telephone interview from Washington that any attempt to enter the warehouse grounds would be stopped by security guards now at the site 24 hours a day.

Edlow insisted that the warehouse was safe and that no problems could go unnoticed for long because of the round-the-clock staffing by guards. No guards were on duty when the fire broke out.

At least a few people nearby agreed that the warehouse is safe. Morris Carraway — owner of Morris Tire Service, which shares its parking lot with Edlow's warehouse — said he had no concerns about working next door to the warehouse.

The material in the warehouse has "been checked and checked, and there ain't no danger," Carraway said after the rally.

1984-01-27-st-louis-post-dispatch-pg-3-a-clip-st-louis-uranium-protests https://drive.google.com/open?id=1gDwOjyrX69WTg_9aaDnjqAR9deME3Xgy

Feb 17 1984

1984-02-17-st-louis-post-dispatch-pg-3a / https://drive.google.com/open?id=1eOFLIWj6KKA2ahB2voOKPFSgjq91dVz-

School Board May Act On Uranium Warehouse

By Robert Kelly
Of the Post-Dispatch Staff

The president of the East St. Louis School Board will ask the board to use its power of eminent domain to take over a uranium storage warehouse in that city and have radioactive material removed.

Clyde C. Jordan, the board president, announced his plans Thursday at a public hearing on the potential dangers of the warehouse. He said the board could could use its power of eminent domain — its right to buy property from an owner unwilling to sell — to claim the warehouse "for educational purposes."

Jordan said his plan was the most expedient way of forcing the Edlow International Co., to shut the warehouse, at 3131 St. Clair Avenue. He and several other speakers at the hearing said the warehouse posed a health and safety hazard.

The Edlow facility is licensed by the Nuclear Regulatory Commission to store low-level radioactive material. A fire at the warehouse Dec. 7 caused part of its roof to collapse, making the building the focus of controversy.

Security and sprinkler systems at the warehouse failed to work during the fire, speakers said at the public hearing. But "blind luck" prevented radioactive mishap, said Wallace Carson, a member of the school board of St. Patrick Catholic School, 735 North 33rd Street. The school is about three blocks from the warehouse.

Carson said he doubted whether residents of the area could convince the Nuclear Regulatory Commission to revoke Edlow's license to operate the warehouse. "The NRC has already issued a license for an unguarded tinderbox in East St. Louis," he said.

Following the fire, guards were stationed at the warehouse around the clock, and security and sprinkler systems were repaired, an NRC spokesman said in a telephone interview. But no new radioactive material has been moved there pending completion of a study on whether more security measures are needed, he said.

The NRC declined to send a spokesman to Thursday's hearing in East St. Louis, although it had been invited to do so by the Rev. Buck Jones, director of East St. Louis Project HOPE.

Jones said he was disappointed by the low turnout at the hearing. But he said the crowd of 70 or so on hand could get Edlow to move out of East St. Louis. "I am convinced that justice, truth and God are on our side," Jones said. "And with those on our side, how can we lose?"

Dan Bolef, a physics professor at Washington University, said the hearing that he disagreed strongly with statements by Edlow International officials that the warehouse is safe.

Bolef said any human error could cause radiation to escape from the uranium stored in steel drums at the warehouse. "Please note that any level of radiation can cause cancer," he said.

Peggy Monroe, who lives on 39th Street, about six blocks from the warehouse, said she had felt a tingling sensation on her skin the morning after the warehouse fire. She said she believed that might have been caused by escaping radiation. "Why are we less (important) than Times Beach people?" she asked. "I'm for doing anything to move that warehouse out right now. How long are we going to let people continue to dump on us?"

Bolef said radiation could cause a tingling sensation such as that experienced by Ms. Monroe. He said the sensation she report also might have been a psychological reaction.

State Sen. Kenneth Hall, D-East St. Louis, and East St. Louis City Clerk Frank Smith said they would do whatever they could to change legislation that allows Edlow to stay in East St. Louis.

"It's sad in this country today that people can move into any area thinking nothing of the health and welfare of the people living nearby," Hall said. "I assure you that all of us working together can do something about this."

Smith is a candidate for the Democratic nomination for state representative from East St. Louis in next month's primary. He said he would take groups of protestors to Springfield, Ill., to lobby in opposition to the warehouse.

He said he also would get in touch with U.S. Sen. Alan J. Dixon, D-Ill., "to let him know that federal laws are exempting local laws (allowing Edlow to stay in East St. Louis), but that there's something he can do about the situation."

Kay Drey, an anti-nuclear activist from University City, said there was no reason for Edlow to store radioactive materials in an urban area. "They could store these materials at the (nuclear) conversion plants" where they are made into fuel for nuclear power plants, she said.

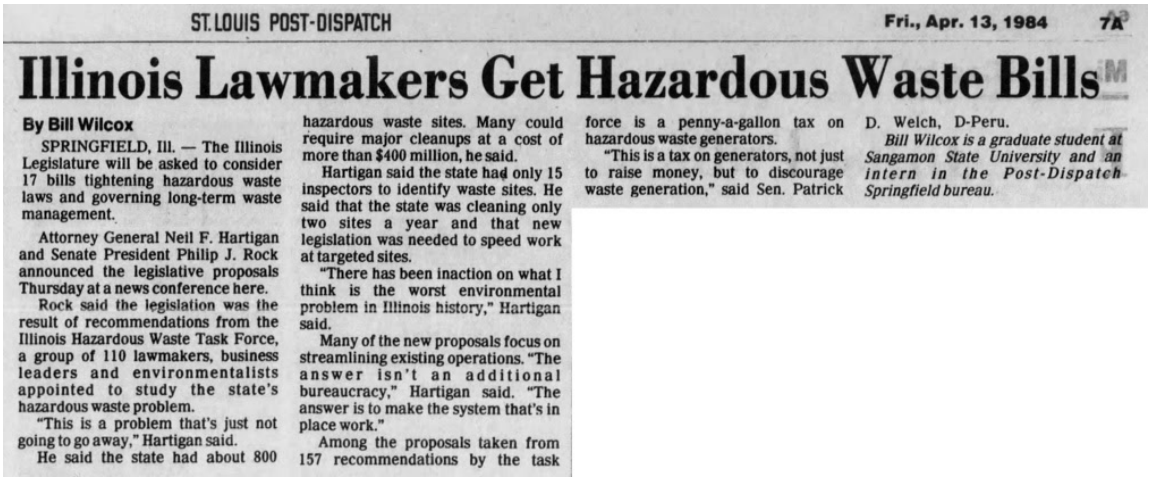
Renyold Ferguson/Post-Dispatch

The Rev. Buck Jones, director of the East St. Louis Project HOPE, speaking at a public hearing on the Edlow International Co. nuclear material warehouse Thursday. The hearing was at the Northwest Center.

1984-02-17-st-louis-post-dispatch-pg-3a-clip-school-board-uranium-warehouse / https://drive.google.com/open?id=1g8THLYkbI994Ky6iZqGVCMRgoqDCppOe

April 13 1984

1984-04-13-st-louis-post-dispatch-pg-7a / https://drive.google.com/open?id=1eHVwbzFjj63Fu2v7WSpwmC51_AAeSTga



ST. LOUIS POST-DISPATCH Fri., Apr. 13, 1984 7A

Illinois Lawmakers Get Hazardous Waste Bills

By Bill Wilcox

SPRINGFIELD, Ill. — The Illinois Legislature will be asked to consider 17 bills tightening hazardous waste laws and governing long-term waste management.

Attorney General Neil F. Hartigan and Senate President Philip J. Rock announced the legislative proposals Thursday at a news conference here.

Rock said the legislation was the result of recommendations from the Illinois Hazardous Waste Task Force, a group of 110 lawmakers, business leaders and environmentalists appointed to study the state's hazardous waste problem.

"This is a problem that's just not going to go away," Hartigan said.

He said the state had about 800 hazardous waste sites. Many could require major cleanups at a cost of more than $400 million, he said.

Hartigan said the state had only 15 inspectors to identify waste sites. He said that the state was cleaning only two sites a year and that new legislation was needed to speed work at targeted sites.

"There has been inaction on what I think is the worst environmental problem in Illinois history," Hartigan said.

Many of the new proposals focus on streamlining existing operations. "The answer isn't an additional bureaucracy," Hartigan said. "The answer is to make the system that's in place work."

Among the proposals taken from 157 recommendations by the task force is a penny-a-gallon tax on hazardous waste generators.

"This is a tax on generators, not just to raise money, but to discourage waste generation," said Sen. Patrick D. Welch, D-Peru.

Bill Wilcox is a graduate student at Sangamon State University and an intern in the Post-Dispatch Springfield bureau.

1984-04-13-st-louis-post-dispatch-pg-7a-illinois-haz-waste-bill / https://drive.google.com/open?id=1ff5Qwk08ewBVk7quZzS7EZVG0AO5PaVW

April 30 1984

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Landfill Proposal Prompts Protest

By H.J. Jackson
Of the Post-Dispatch Staff

Jessie Abbott of Centreville says she fears what would happen if a proposed landfill is opened in the 2900 block of Missouri Avenue in East St. Louis.

The site would be a commercial landfill, which Mrs. Abbott contends would be capable of receiving hazardous wastes that could poison the area.

"It's not for East St. Louis trash," she said. "They're commerical. They'll take waste from anywhere and everywhere and dump it in East St. Louis."

But East St. Louis officials disagree.

Mrs. Abbott, of the 3100 block of Louisiana Boulevard, spoke during a protest meeting Saturday of about 200 residents of East St. Louis, Alorton and Centreville. They met in the Alta Sita School, 2600 Bond Avenue in East St. Louis.

The meeting resulted in dozens of people taking petitions to circulate through the area.

One petition asks government officials to prevent the landfill and other hazardous waste sites from being opened in East St. Louis. Another petition objects to the state's plan for a work-release center for prisoners at 2900 Missouri Avenue.

Both projects are on the East St. Louis-Centreville boundary line.

East St. Louis Township Supervisor Clyde C. Jordan, who led Saturday's meeting, predicted 9,000 people would sign the petitions.

The landfill is an East St. Louis city project developed over the last four years. East St. Louis Mayor Carl E. Officer says it would solve the city's garbage disposal problem.

The landfill will save the city money, Officer said during the meeting. A privately operated landfill also will bring new money into the city, he said.

He said no hazardous wastes would be dumped there, only garbage.

The landfill petitions also oppose:

— A proposal by Wastex, 2000 Bond Avenue, East St. Louis, to build a hazardous liquid-waste incinerator.

— Continued storage of low-level nuclear waste at the Edlow International Warehouse, 3300 St. Clair Avenue.

— The use of a city lot at 580 North 20th Street as a garbage dump.

Citizens don't want a "prison" in the middle of the city, Jordan said. The work-release center would be for prisoners with only a few months left on their sentences. It is to be opened later this year by the Illinois Department of Corrections.

It will house between 175 and 200 prisoners, department officials said.

But no state corrections officials attended Saturday's meeting.

Alderwoman Frankie Seaberry of Centreville said the center's aim of finding jobs for convicts was unrealistic in the depressed area.

"We don't have jobs for people who aren't criminals," she said. "How will be find jobs for people who aren't criminals?"

She suggested the state move the center into a rural area where the prisoners would not endanger urban residents.

Elliott Lanson, vice president of LanChem Corp., a company adjacent to the site planned for the work-release center, said insurance companies were dropping their coverage of companies near 2900 Missouri Avenue. Businesses there will be considered too risky with a low-security prison nearby, Lanson said.

Companies that pay taxes would have to close because a state facility that pays no taxes would open, he said.

"We'll be putting 200 people out of work," Lanson said.

But Officer said he believed the center would benefit the city more than hurt it. He added that if he felt enough citizens opposed the center, he would reconsider his support for it.

Jordan said he and other citizens planned to take the petitions to state officials in Springfield on May 18.

1984-04-30-st-louis-post-dispatch-sec-i-pg-1

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May 18 1984

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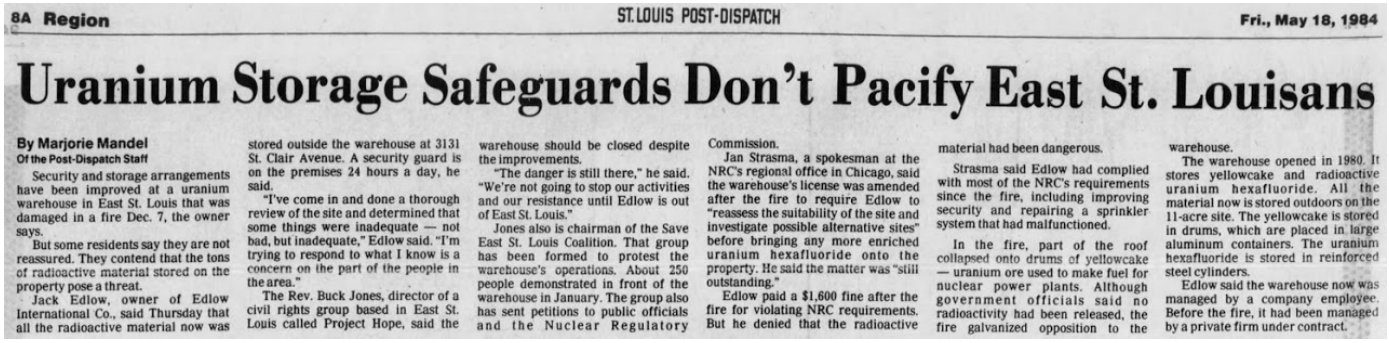

8A Region ST. LOUIS POST-DISPATCH Fri., May 18, 1984

Uranium Storage Safeguards Don't Pacify East St. Louisans

By Marjorie Mandel
Of the Post-Dispatch Staff

Security and storage arrangements have been improved at a uranium warehouse in East St. Louis that was damaged in a fire Dec. 7, the owner says.

But some residents say they are not reassured. They contend that the tons of radioactive material stored on the property pose a threat.

Jack Edlow, owner of Edlow International Co., said Thursday that all the radioactive material now was stored outside the warehouse at 3131 St. Clair Avenue. A security guard is on the premises 24 hours a day, he said.

"I've come in and done a thorough review of the site and determined that some things were inadequate — not bad, but inadequate," Edlow said. "I'm trying to respond to what I know is a concern on the part of the people in the area."

The Rev. Buck Jones, director of a civil rights group based in East St. Louis called Project Hope, said the warehouse should be closed despite the improvements.

"The danger is still there," he said. "We're not going to stop our activities and our resistance until Edlow is out of East St. Louis."

Jones also is chairman of the Save East St. Louis Coalition. That group has been formed to protest the warehouse's operations. About 250 people demonstrated in front of the warehouse in January. The group also has sent petitions to public officials and the Nuclear Regulatory Commission.

Jan Strasma, a spokesman at the NRC's regional office in Chicago, said the warehouse's license was amended after the fire to require Edlow to "reassess the suitability of the site and investigate possible alternative sites" before bringing any more enriched uranium hexafluoride onto the property. He said the matter was "still outstanding."

Edlow paid a $1,600 fine after the fire for violating NRC requirements. But he denied that the radioactive material had been dangerous.

Strasma said Edlow had complied with most of the NRC's requirements since the fire, including improving security and repairing a sprinkler system that had malfunctioned.

In the fire, part of the roof collapsed onto drums of yellowcake — uranium ore used to make fuel for nuclear power plants. Although government officials said no radioactivity had been released, the fire galvanized opposition to the warehouse.

The warehouse opened in 1980. It stores yellowcake and radioactive uranium hexafluoride. All the material now is stored outdoors on the 11-acre site. The yellowcake is stored in drums, which are placed in large aluminum containers. The uranium hexafluoride is stored in reinforced steel cylinders.

Edlow said the warehouse now was managed by a company employee. Before the fire, it had been managed by a private firm under contract.

1984-05-18-st-louis-post-dispatch-pg-8a-clip-uranium-storage-st-louis / https://drive.google.com/open?id=1faUKpG95LpHBUFL32jqdQ0HMuX24-FTu

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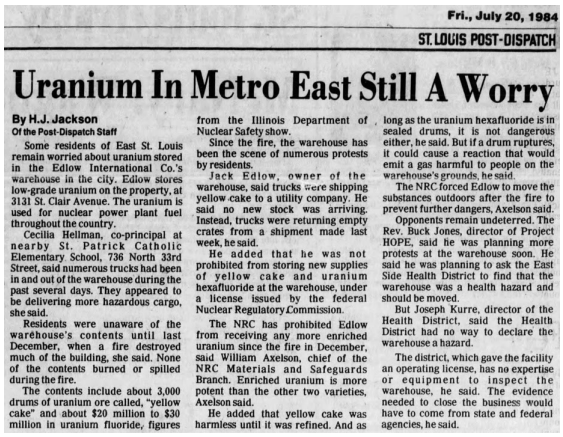

Fri., July 20, 1984
ST. LOUIS POST-DISPATCH

Uranium In Metro East Still A Worry

By H.J. Jackson
Of the Post-Dispatch Staff

Some residents of East St. Louis remain worried about uranium stored in the Edlow International Co.'s warehouse in the city. Edlow stores low-grade uranium on the property, at 3131 St. Clair Avenue. The uranium is used for nuclear power plant fuel throughout the country.

Cecilia Hellman, co-principal at nearby St. Patrick Catholic Elementary School, 736 North 33rd Street, said numerous trucks had been in and out of the warehouse during the past several days. They appeared to be delivering more hazardous cargo, she said.

Residents were unaware of the warehouse's contents until last December, when a fire destroyed much of the building, she said. None of the contents burned or spilled during the fire.

The contents include about 3,000 drums of uranium ore called, "yellow cake" and about $20 million to $30 million in uranium fluoride, figures from the Illinois Department of Nuclear Safety show.

Since the fire, the warehouse has been the scene of numerous protests by residents.

Jack Edlow, owner of the warehouse, said trucks were shipping yellow cake to a utility company. He said no new stock was arriving. Instead, trucks were returning empty crates from a shipment made last week, he said.

He added that he was not prohibited from storing new supplies of yellow cake and uranium hexafluoride at the warehouse, under a license issued by the federal Nuclear Regulatory Commission.

The NRC has prohibited Edlow from receiving any more enriched uranium since the fire in December, said William Axelson, chief of the NRC Materials and Safeguards Branch. Enriched uranium is more potent than the other two varieties, Axelson said.

He added that yellow cake was harmless until it was refined. And as long as the uranium hexafluoride is in sealed drums, it is not dangerous either, he said. But if a drum ruptures, it could cause a reaction that would emit a gas harmful to people on the warehouse's grounds, he said.

The NRC forced Edlow to move the substances outdoors after the fire to prevent further dangers, Axelson said.

Opponents remain undeterred. The Rev. Buck Jones, director of Project HOPE, said he was planning more protests at the warehouse soon. He said he was planning to ask the East Side Health District to find that the warehouse was a health hazard and should be moved.

But Joseph Kurre, director of the Health District, said the Health District had no way to declare the warehouse a hazard.

The district, which gave the facility an operating license, has no expertise or equipment to inspect the warehouse, he said. The evidence needed to close the business would have to come from state and federal agencies, he said.

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Thurs., Mar. 14, 1985 ST. LOUIS POST-DISPATCH

Evacuation Plan Lacking, Group Claims

By Safir Ahmed
Of the Post-Dispatch Staff

A spokesman for a Metro East group says no adequate emergency plans exist in East St. Louis and Sauget to deal with emergencies that might occur at industrial and chemical facilities in the area.

And a representative from a social workers group said the group had observed a higher incidence of cancer and respiratory problems in the Metro East area than elsewhere.

Representatives from the groups testified before the Chemical Safety Task Force at a hearing Wednesday at the Holiday Inn in Collinsville. The committee is reviewing emergency response capabilities at chemical plants as well as federal and state regulations designed to prevent industrial accidents.

The Rev. Buck Jones, founder and director of Project HOPE, a community service agency, testified that the alarm systems that had been installed in the Rush City area of East St. Louis were not enough to protect the residents. The systems were installed recently after incidents that involved gas leaks.

"It is our feeling that in a situation like Rush City, there must be adequate evacuation plans," Jones said. "No such plans exist. And telling people to close their doors and windows when the alarm sounds will not keep the vapors out. We are pleased that the alarms were installed, but we don't see them as a panacea."

The alarm systems were installed jointly by three companies that operate in Sauget — Monsanto Co., Amax Zinc Inc. and Ethyl Corp.

Warren Small, superintendent for environmental affairs at Monsanto, testified that the company had done everything it could to assure safety and prevent accidents.

"We're as safe as we know how," Small said. "And we're safer than we were last year. The W.G. Krummrich Plant in Sauget is 10 times safer than the industry average."

Two engineers from Monsanto also testified. They detailed the safety precautions taken by Monsanto in building and operating the plant in Sauget.

Jones also expressed concern over the presence of the warehouse in East St. Louis maintained by Edlow International Co. that stores uranium hexachloride, or "yellowcake."

"The mere presence of Edlow is a psychological problem for people in the area," Jones said. "And I believe the only reason it is located there is because East St. Louis is poor and

See PLAN, Page 2

From page one

black. We would recommend that someone, somehow, get the state to enact legislation that would prohibit hazardous materials from being stored in a populated area."

Pat Browder of the Social Workers for Health Priorities testified that area residents were experiencing high rates of respiratory problems and cancer.

"Madison and St. Clair counties are experiencing a notable number of hospital admissions with diagnoses of both cancer and respiratory distress," Ms. Browder said. "Many of us enjoy the (Mississippi) river, but the moisture rising from the river holds the pollutants down and increases our risk of absorption through the skin, lungs, stomach or colon. We have beautiful sunrises and sunsets, but this is a visual reminder of pollutants to us, and therefore not enjoyable."

Richard Carlson, co-chairman of the committee and director of the Illinois Environmental Protection Agency, said Wednesday's hearing was the last of three hearings. The committee will present a report to Gov. James R. Thompson by mid-April, Carlson said.

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May 16 1985 - RObert Rich

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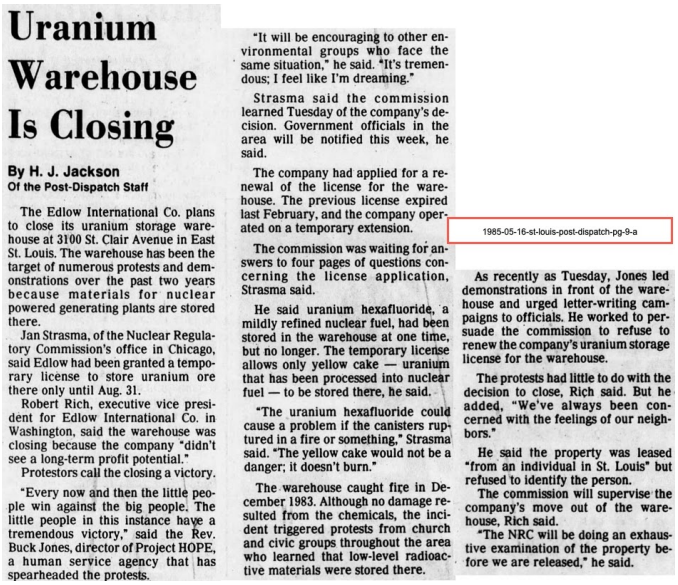

Uranium Warehouse Is Closing

By H. J. Jackson
Of the Post-Dispatch Staff

The Edlow International Co. plans to close its uranium storage warehouse at 3100 St. Clair Avenue in East St. Louis. The warehouse has been the target of numerous protests and demonstrations over the past two years because materials for nuclear powered generating plants are stored there.

Jan Strasma, of the Nuclear Regulatory Commission's office in Chicago, said Edlow had been granted a temporary license to store uranium ore there only until Aug. 31.

Robert Rich, executive vice president for Edlow International Co. in Washington, said the warehouse was closing because the company "didn't see a long-term profit potential."

Protestors call the closing a victory.

"Every now and then the little people win against the big people. The little people in this instance have a tremendous victory," said the Rev. Buck Jones, director of Project HOPE, a human service agency that has spearheaded the protests.

"It will be encouraging to other environmental groups who face the same situation," he said. "It's tremendous; I feel like I'm dreaming."

Strasma said the commission learned Tuesday of the company's decision. Government officials in the area will be notified this week, he said.

The company had applied for a renewal of the license for the warehouse. The previous license expired last February, and the company operated on a temporary extension.

The commission was waiting for answers to four pages of questions concerning the license application, Strasma said.

He said uranium hexafluoride, a mildly refined nuclear fuel, had been stored in the warehouse at one time, but no longer. The temporary license allows only yellow cake — uranium that has been processed into nuclear fuel — to be stored there, he said.

"The uranium hexafluoride could cause a problem if the canisters ruptured in a fire or something," Strasma said. "The yellow cake would not be a danger; it doesn't burn."

The warehouse caught fire in December 1983. Although no damage resulted from the chemicals, the incident triggered protests from church and civic groups throughout the area who learned that low-level radioactive materials were stored there.

1985-05-16-st-louis-post-dispatch-pg-9-a

As recently as Tuesday, Jones led demonstrations in front of the warehouse and urged letter-writing campaigns to officials. He worked to persuade the commission to refuse to renew the company's uranium storage license for the warehouse.

The protests had little to do with the decision to close, Rich said. But he added, "We've always been concerned with the feelings of our neighbors."

He said the property was leased "from an individual in St. Louis" but refused to identify the person.

The commission will supervise the company's move out of the warehouse, Rich said.

"The NRC will be doing an exhaustive examination of the property before we are released," he said.

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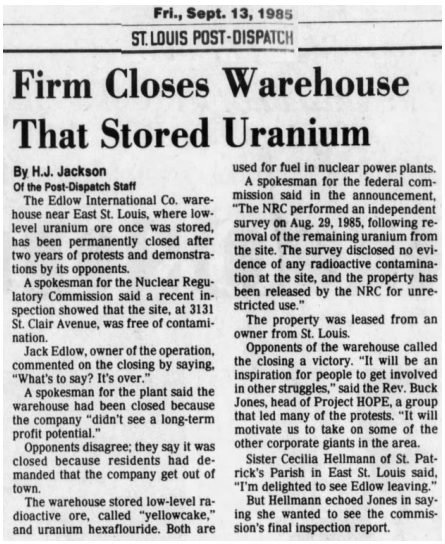

Fri., Sept. 13, 1985
ST. LOUIS POST-DISPATCH

Firm Closes Warehouse That Stored Uranium

By H.J. Jackson
Of the Post-Dispatch Staff

The Edlow International Co. warehouse near East St. Louis, where low-level uranium ore once was stored, has been permanently closed after two years of protests and demonstrations by its opponents.

A spokesman for the Nuclear Regulatory Commission said a recent inspection showed that the site, at 3131 St. Clair Avenue, was free of contamination.

Jack Edlow, owner of the operation, commented on the closing by saying, "What's to say? It's over."

A spokesman for the plant said the warehouse had been closed because the company "didn't see a long-term profit potential."

Opponents disagree; they say it was closed because residents had demanded that the company get out of town.

The warehouse stored low-level radioactive ore, called "yellowcake," and uranium hexaflouride. Both are used for fuel in nuclear power plants.

A spokesman for the federal commission said in the announcement, "The NRC performed an independent survey on Aug. 29, 1985, following removal of the remaining uranium from the site. The survey disclosed no evidence of any radioactive contamination at the site, and the property has been released by the NRC for unrestricted use."

The property was leased from an owner from St. Louis.

Opponents of the warehouse called the closing a victory. "It will be an inspiration for people to get involved in other struggles," said the Rev. Buck Jones, head of Project HOPE, a group that led many of the protests. "It will motivate us to take on some of the other corporate giants in the area.

Sister Cecilia Hellmann of St. Patrick's Parish in East St. Louis said, "I'm delighted to see Edlow leaving."

But Hellmann echoed Jones in saying she wanted to see the commission's final inspection report.

1985-09-13-st-louis-post-dispatch-pg-6a-clip-closed-uranium-warehouse / https://drive.google.com/open?id=1g2XH4hiqzTUn_Wc5xK_I3Ye8-XwW_1mZ

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E. St. Louis Called Risky Spot Along Nuclear Waste Route

By H.J. Jackson
Of the Post-Dispatch Staff

Anti-nuclear activists in East St. Louis say moving spent fuel from the Three Mile Island nuclear reactor poses more of a risk to their city than to other areas along the 10-state path that the federal government plans to use.

"They switch from Conrail to Union Pacific here," said Sister Cecilia Hellmann. "Where is that going to be? Switching yards are where the accidents happen."

The spent fuel is being moved to Idaho from the Three Mile Island reactor near Harrisburg, Pa. It must cross the Mississippi River to St. Louis from the Metro East area. The bridge crossing poses another dangerous situation, Hellmann said.

Hellmann helped to lead protests against the Edlow International Co. warehouse in East St. Louis. The warehouse, where low-level nuclear fuel was stored for several years, closed last year.

The Rev. Buck Jones also led a protest to close Edlow. Jones said Project HOPE, which he directs, had classified the issue a top priority. HOPE stands for Helping Other People Emerge.

"We're going to mobilize the people to do whatever needs to be

1986-07-20-st-louis-post-dispatch

From page one

done," Jones said.

"It's crucial that we do something now.

"If we allow it to take place, and there is no protest from East St. Louis, perhaps the situation will continue. It presents more of a threat to East St. Louis than the other areas."

Jones said stopping the shipments would be more difficult than forcing Edlow to close. The time of the movement of the fuel is being kept secret in order to avoid sabotage or protests.

The federal government is transporting hundreds of tons of spent nuclear fuel rods from the core of the Three Mile Island reactor. An accident at the reactor in 1979 partly melted the core.

The government will move 35 to 40 separate rail shipments to a storage site about 50 miles from Idaho Falls, Idaho.

The first shipment will move through the metropolitan area this month; the entire process is expected to take more than two years.

The Illinois route runs basically parallel to Interstate 70. In the Metro East area, the route will include St. Clair, Madison and Bond counties.

Conrail will haul the specially made canisters to the Mississippi River. From there, the Union Pacific Railroad will haul the load across the river and west to Idaho.

Nationally, opponents of the plan say the waste should be housed at Three Mile Island and not hauled across the country. The canisters, built at a cost of $3.5 million, have yet to be tested adequately, opponents say.

Carl E. Officer, the mayor of East St. Louis, said also that the nuclear cargo would endanger residents of Illinois. Officer said he planned to ask governments along the route in Illinois to adopt a resolution urging the federal government to reconsider its route.

"We have to do this," Officer said. "The Nuclear Regulatory Commission is a front for the nuclear industry. The government is in the nuclear power business."

1986-07-20-st-louis-post-dispatch-pg-c-clip-nuclear-waste-route / https://drive.google.com/open?id=1fuZlSUEHtvFYQWM8tUcBNyi6ygxOi72q

Oct 7 1989

1989-10-07-the-albuquerque-journal-pg-h6 / https://drive.google.com/open?id=1dWSIDkg_ayRs2SrtyzbM4vL3ufIdc0ey

DOE Sells Radioactive Waste to West Germany

By Rudy Abramson
LOS ANGELES TIMES

WASHINGTON — The Department of Energy has quietly sold West Germany $20 million worth of highly radioactive cesium and strontium and is seeking to clear the way for its shipment from Hanford, Wash., to the Pacific Coast, then through the Panama Canal and across the Atlantic.

It would be the first large-scale export of high-level nuclear waste, and officials of the environmental activist organization Greenpeace said Thursday that they would attempt to block the shipments.

The West German government arranged in 1984 to buy the 9.5 tons of waste from nuclear weapons production for use in experiments and tests of permanent nuclear waste storage in abandoned salt domes.

The Energy Department's Hanford operation has processed the waste, which emits twice as much gamma radiation as waste from commercial power reactors, into 3-foot-long glass logs weighing 595 pounds each.

Under the arrangement between the two governments, the waste material will be loaded into 27,500-pound shipping casks and turned over to the Germans at Hanford for shipment by a private contractor.

Initial plans called for the first of three shipments to be made this fall, but officials with the Energy Department and the state governments of Oregon and Washington said arrangements are unlikely to be completed until at least next spring.

Tentatively, it was expected that the casks would be trucked from Hanford on Interstate 84 through the Columbia River gorge to the port of Portland.

But Dan Silver, special assistant to Washington Gov. Booth Gardner, said Washington state officials had been advised that the port of Seattle has not been ruled out as an alternative to Portland.

Officials in Oregon and Washington said they are willing to approve shipment through their states if they are convinced that all safety precautions have been taken.

Even so, "we have a long way to go," Silver said. "We are at the beginning of reviewing the documentation. We are very much in the preliminary stages. But there will be public hearings, and people will have to be satisfied that this is safe."

The Energy Department is expected to complete an environmental assessment report in November. And a department spokesman said the shipment may require a full environmental impact statement, which would provide for public hearings and comment on the proposal.

Although there are obvious safety concerns, Silver said, "our position is that we must transport nuclear waste in order to have a clean and safe environment, and, therefore, we need to establish procedures and the means to safely transport."

Germany bought the processed material to serve as heat sources to simulate the waste generated by its own nuclear power reactors.

Although the sales agreement with Germany was concluded five years ago, the Energy Department did not contact local officials about transporting the material from Hanford to Germany until recent weeks.

Initially, officials were told, there was consideration of barging the casks down the Columbia River. But Edlow International, the firm hired by the Germans to handle the shipping, favored surface transportation.

David Stewart-Smith of the Oregon Department of Transportation said the company is now leaning toward shipment by truck rather than rail because it believes it would retain stronger control over a trucking company than a railroad.

1989-10-07-the-albuquerque-journal-pg-h6-clip-doe-sells-radioactive-waste / https://drive.google.com/open?id=1gPMQLUnALFqbzVZksyAx7HMjLVZ89IvJ

Dec 11 1989

Mentions that **Rodney Harald Fisk (born 1945)** is International Vice-President of Edlow International Company at this time.

1989-12-11-the-guardian-pg-20 / https://drive.google.com/open?id=1c_SC07hfV4ZH4dYTdBjuKamUxF3Hn1_z

US to ship bomb-grade uranium to Romania

1989-12-11-the-guardian-pg-20

Alan George

THE US is planning to ship bomb-grade uranium to Romania despite fears that it may be working on a nuclear weapons programme.

The shipment of 16.48 kilograms of 93 per cent enriched uranium is destined for a 14-megawatt research reactor at Potesti, which was supplied by the California-based General Atomics company in the 1970s. The material, manufactured by General Atomics about 10 years ago, has been in storage with the Department of Energy (DOE).

The US provided 38.7 kilograms of enriched uranium for Potesti in 1978. This is now spent and the new consignment is needed to keep the reactor running. Romania's State Committee for Nuclear Energy approached the DOE and the US Nuclear Regulatory Commission (NRC) for the new supplies early last year. An export licence was issued in August last year, and this has now been extended until August 31, 1990.

Washington's nuclear collaboration with Romania dates from the 1970s, when the West was vigorously encouraging President Nicolae Ceausescu to pursue policies independent of the Soviet Union.

At the same time, Britain concluded a series of major contracts with Bucharest, including a deal for the supply of Rolls Royce engines for a locally-produced fighter aircraft.

Although Romania is a signatory to the Nuclear Non-Proliferation Treaty, Mr Ceausescu boasted earlier this year that his country had the capacity to produce nuclear weapons. Last summer, Romania reportedly warned neighbouring Hungary it was working on nuclear weapons and a ballistic missile system.

Engineers on Iraq's Condor-2 ballistic missile programme claim to have worked on a similar project in Romania.

Whatever Romania's military aspirations, Bucharest certainly has a record of carelessness with nuclear materials. In 1986, Norway supplied Romania with 12.5 tons of heavy water, on the strict understanding that it would not be re-sold. But Romania transferred the water either to Israel or India, prompting a formal protest from Oslo in May last year.

The US uranium shipment is being arranged by a Washington-based nuclear fuel management company, Edlow Inc. Its International Vice-President, Mr Rod Fisk, asked whether the company was concerned over how the uranium might be used, said: "That's a question you have to address to the US Government."

1989-12-11-the-guardian-pg-20-clip-us-sell-uranium-romania / https://drive.google.com/open?id=1gdr3fzwnvMq08b2dZ2Qs-2sNgAtCqtb2

Aug 19 1994

1994-08-19-the-greenville-news-pg-3c / https://drive.google.com/open?id=1cUDJPe7QtXbgXDQptf5PFfhAokZGxaJ2

Waste transporter says it won't pay for extra security measures

WILMINGTON, N.C. (AP) — A waste transporter hired to haul nuclear fuel rods from a North Carolina port to South Carolina says it won't pay for security measures many times stiffer than required.

Edlow International Co. has said that if North Carolina or the U.S. Energy Department want stricter oversight, they should expect to pay the extra cost.

The Energy Department on Thursday was to announce its planned route for 343 fuel rods of enriched uranium from European reactors being shipped to the Sunny Point Military Ocean Terminal in Brunswick County.

The fuel rods would be unloaded at Sunny Point in Brunswick County and travel by train from Leland to Pembroke, the *Winston-Salem Journal* reported before the announcement. The route would take the fuel rods through Florence to Ashley Junction — near Charleston — then west to the Savannah River Nuclear Site for permanent storage.

The trip from Sunny Point to Savannah River will take 24 hours, according to Energy Department documents. Three shipments are expected in the next year.

The North Carolina Highway Patrol has demanded that the escort for the shipments include 12 state radiologists and a helicopter to survey the track ahead of the train for debris and protesters.

"The DOE has some 45-year history in transporting radioactive materials, and they have never had an accident that involved leakage," said Tom Hegele, spokesman for the Department of Crime Control and Public Safety, which oversees the Highway Patrol. "We don't want to be the first."

But Washington, D.C.-based Edlow International wrote the Energy Department saying the Highway Patrol asked for too much, the *Morning Star* of Wilmington reported.

"We cannot help but feel that this request is excessive and that the program is being used as a training exercise for which we are expected to pay," wrote Norman Ravenscroft, the company's vice president of operations.

Nuclear Regulatory Commission standards require only that the fuel rods be accompanied by two armed guards, said Jayne Brady, Energy Department spokeswoman.

Brady said her department is not opposed to the extra protection, but her department is not going to foot the bill. She said Edlow International only must pay for enough protection to meet NRC standards.

The state has made no similar demands for additional protection once the nuclear waste crosses the state line, Brady said.

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April 7 2002

2002-04-07-manitowoc-herald-times-reporter-pg-a3 / https://drive.google.com/open?id=1aXSXTywYNnIA4lH7kCvM_5OKNdk5-g9L

Nuclear cask test doubted

NRC official says agency possesses limited data on Yucca site storage

BY ERIN NEFF
Scripps Howard News Service

LAS VEGAS – A Nuclear Regulatory Commission official said this week that his agency has limited information on the safety of nuclear waste casks, giving Nevada officials more ammunition in their fight against a nuclear waste repository.

According to a letter sent Tuesday to Sen. Harry Reid, D-Nev., NRC officials test scale models of casks and "cask impact limiters" – the materials used to protect the cask body during a collision.

The letter from Richard Meserve of the NRC in response to questions from Reid showed that the NRC has not conducted tests on full-scale cask models or physically test casks for damage by fire.

The NRC, which is responsible for regulating the nuclear industry, said those tests were performed by computer simulation.

"I'm shocked," said Reid, who is chairman of the Appropriations subcommittee that oversees the NRC. "The NRC is relying on small-scale tests of model

Nevada officials are fighting the proposed Yucca Mountain nuclear waste dump, which is 90 miles northwest of Las Vegas, by arguing that the transportation of nuclear waste is dangerous. Radioactive waste from the nuclear power plants in Two Creeks and Kewaunee would be sent to the facility.

The issue over testing waste transportation casks has come under fire by state leaders who question the testing of the casks. The NRC's computer tests support nuclear industry arguments that say transporting nuclear waste is safe.

But state leaders point to physical tests that show a cask could be vulnerable to a missile attack, and they say the casks could be penetrated or cracked in an accident or terrorists attack and release radioactive material.

State leaders say they hope the message resonates in Congress, which will vote on the Yucca project in the next few months.

"Who would buy a car that had only been crash tested on a computer screen or on a model

Nuclear industry officials stressed that full-scale model tests likely would only serve a public relations purpose, not a scientific one.

"It has been proven that computer modeling is sufficient," said Jack Edlow, president of Edlow International Co., a waste cask manufacturer.

NRC officials have said they already have a deep understanding of how casks would perform in an accident from tests dating to the late 1970s at Sandia National Laboratories, plus modern computer modeling.

NRC officials are planning more computer modeling and are considering a new round of physical tests, possibly full-scale tests, on waste containers in the next few years, NRC spokeswoman Rosetta Virgilio said.

2002-04-07-manitowoc-herald-times-reporter-pg-a3-clip-nuclear-cask-test-doubted.jpg / https://drive.google.com/open?id=1fE-CprQwWH9KEA6HkHgoC2NCVFruN-Up

June 22 2003

2003-06-22-the-daily-oklahoman-pg-1a / https://drive.google.com/open?id=1cxnKm6Ec7_H7BIsscOP3dUZiqrilQilV

GAINING STEAM

2003-06-22-the-daily-oklahoman-pg-1a

Nuclear energy plants are sources of low-cost electricity and potential targets for terrorists, experts say. Although no commercial plants are in Oklahoma, three stand just across state lines. And the industry is having a renaissance.

PHOTO PROVIDED BY ARKANSAS NUCLEAR ONE

Arkansas Nuclear One is a two-unit nuclear station in western Arkansas near Russellville, with a combined generating capacity of 1,694 megawatts. The plant supplies about 30 percent of the electricity used every year in Arkansas.

Nuclear reactors making a comeback

By Penny Owen
Staff Writer

Terrorists have surely scoped them out, those big double-dome nuclear reactors that interrupt rural skylines as they produce another day's electricity.

So have energy companies, only their views center not on the devastation of a full-scale attack, but on the potential of providing low-cost electricity to a demanding market.

FIRST IN A SERIES

▶ **MONDAY:** Bad memories of Sequoyah Fuels

In short, nuclear energy is making a comeback, despite all the terrorist concerns.

Don't expect to see a functioning nuclear plant in Oklahoma anytime soon, but the Sooner State is surrounded by reactors in three bordering states: Arkansas Nuclear One in Russellville, Ark.; Comanche Peak in Glen Rose, Texas; and Wolf Creek in Lebo, Kan.

The biggest effect on Oklahoma will likely be in the natural gas industry. The more nu-

See **NUCLEAR**, Page 4-A

The plants

in states surrounding Oklahoma:

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The control room of the Comanche Peak nuclear power plant near Glen Rose, Texas.

Nuclear: *Plants practice crises*

From Page 1-A

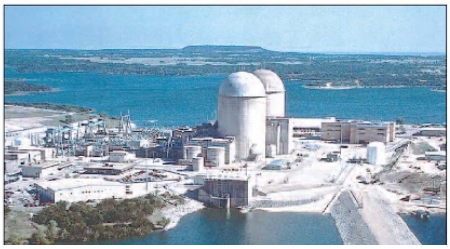
clear energy is produced, the less need for natural gas.

With natural gas prices now at an all-time high, the energy industry is scrambling to find cheaper sources for growing

"This was a very poor part of the world, and it (the plant) offered a helluva lot of opportunity," Lee said.

In fact, locals pitched in and helped build Comanche Peak, which helped them understand enough about it to feel safe. Today, the plant supplies 1,000 jobs.

Still, it took 15 years and, as Lee put it, "a ridiculous sum of money" to build. What should have cost $1 billion ended up costing $10 billion, due to evolving regulations and the inevita-



Oklahoma plans for nuclear waste to go through state

By Penny Owen
Staff Writer

Transporting nuclear waste on a large scale may be several years away, but routes are already being drawn up — and Oklahoma is definitely on the map for those long and potentially hazardous hauls.

If the Yucca Mountain nuclear dump site in Nevada is approved, spent fuel from the nation's nuclear plants would move across Interstate 40 from one end of the state to the other. It would move up Interstate 35 from the Texas state line to Oklahoma City; across a railway near Tulsa through Mayes and Cherokee counties, past Muskogee and through Sequoyah County.

Spent fuel shipments would pass through Oklahoma City along I-40. A railroad route that passes through Alva, Woodward

ing is slim, said Mitch Singer of the Nuclear Energy Institute. Shipping spent fuel is nothing new, he said, it's been done safely for decades.

Indeed, Oklahoma has had spent fuel shipments already. They just aren't advertised.

"I can't imagine that it hasn't crossed Oklahoma over the years," said Jack Edlow, president of Edlow International Co., which handles spent fuel and other hazardous shipments. "There are shipments certainly every month, maybe every week somewhere across the country."

Nationally, more than 3,000 shipments of spent fuel have crossed 1.7 million miles of highways and railroads since 1964. Altogether, fuel containers were involved in eight accidents, but none of them resulted in leaked radiation,

markets, and they're thinking nuclear.

Demand for electricity will increase nationwide by 1 to 2 percent each year, said Bill DeWare, vice president of energy marketing and trading at ONEOK, the parent company of Oklahoma Natural Gas.

In the last several years, a boom in building natural gas plants saturated Oklahoma's natural gas market. Some of those plants have yet to open — and they are costly to run.

"We're pretty much what we call flush in this area," DeWare said.

Oklahoma isn't only reliant on fossil fuels, however. Ground will soon be broken on a large wind power farm near Lawton, which recently was enlarged by the company building it, due to high natural gas prices.

Two other wind farms are also planned for the Sooner State.

Nuclear plants, meanwhile, are cheap to operate, though expensive to build. But the industry got a boost when the U.S. Senate approved $16 billion in loan guarantees to expand nuclear energy, which is enough to build about six nuclear plants.

"It's definitely getting a second wind," said Mitch Singer, spokesman for the Nuclear Energy Institute in Washington. "And it's because we have an overreliance on natural gas."

Singer said nuclear plants have proven themselves safe in recent years.

They hum along efficiently, most producing electricity around the clock. And they produce zero emissions, which keeps some environmentalists happy.

"Our public opinion polls show there's good support for nuclear energy around the country," said Singer, who said some nuclear plants even have nature preserves and wildlife sanctuaries on their property.

Yet enough has happened over the decades to frighten some people away from the potentially dangerous plants. Enter a second fear of having a terrorist target nearby, and all the safety records and security precautions around might not be a comfort.

As Jerry Lee, a spokesman for Comanche Peak nuclear plant in Glen Rose, Texas, put it, "You can sum up all the positives and come back to one negative: Are people afraid of it?"

Layers upon layers

In the tiny north Texas town of Glen Rose, selling a nuclear plant to the locals was "no challenge at all," Lee said. Not even in 1975, when anti-nuclear protests were swelling.

Glen Rose was proud of its dinosaur track exhibits and animal preserve – but that was about it. Jobs were scarce and folks were hurting.

But when TXU Energy rolled into town, it saw resources Glen Rose never knew it had. For one, the ground was stable, with the closest seismic fault way down in Austin.

Glen Rose had 3,300 acres of reservoir water – and nuclear plants need lots of water. The town was close enough to the booming Dallas-Fort Worth metroplex, which meant lots of customers nearby.

ble fits and starts. Nonetheless, Comanche Peak powered up in 1990 and has been going strong ever since.

Then Sept. 11, 2001, happened and nuclear plants nationwide were put on alert. Security measures got a scrubdown and hard questions were asked. What, for instance, would happen if a plane was flown into a reactor?

A simulated test showed that the containment center, which is the domed part of the reactor and the plant's most volatile spot, could withstand a hit from a Boeing 767-400 jet. The domes, with their 4-feet-6-inch concrete and steel beam walls and missile shields, were built to withstand earthquakes and other harsh elements and could therefore take the hit, according to the Nuclear Energy Institute.

However, the International Atomic Energy Agency questioned whether most nuclear plants could truly withstand a direct jumbo jet hit. Safest, perhaps, are those built near airports or military bases, where a plane crash was taken into consideration.

Getting onto a nuclear plant's property to wreak havoc is another story.

Comanche Peak follows industry standards, which include an FBI background check, psychological test and random drug testing for all employees.

After 9/11, a second entry checkpoint was installed a mile from the plant. All deliveries stop there for biological and chemical testing, among other things.

For everyone entering the plant, guards go through the routine identification checks, but much of the security is not seen. They go unnoticed even to someone who enters the plant daily. Reasons for cars being searched may not be apparent, nor are employees aware of why they might be singled out for closer observance.

Some security tightening is based on common sense, such as an increase in the force that entry gates can withstand.

Various entry points throughout the plant require hand print identification before going through floor-to-ceiling turnstiles. Armed guards check photo identification cards and perhaps make quick historical comparisons before allowing passage.

"You're being observed at all times by different cameras," Lee said. "It's layers of security stacked upon layers of security."

The 29-acre plant is surrounded by two razor-wire fences. Vital areas, like the cable spread room, require the "two-man rule," meaning no one is left alone. The radiological area will trap a stranger who makes a wrong move.

A 10-person crisis team does nothing but simulate crises. Also, 190 employees are on the team, in case a real crisis occurs. A detailed emergency plan exists for a 10-mile radius and a crisis room is equipped with direct links to the White House, the Texas governor and the military.

The likelihood of any nuclear accident affecting Oklahoma is extremely low, plant officials said.

The plant grounds are clean and quiet, yet sniper shields sit on top of buildings. A fake owl

An aerial view of the Comanche Peak nuclear power plant near Glen Rose, Texas. The plant is a major employer that was well-received by the community.

is perched on a pole to keep birds away.

The control room resembles a supersize cockpit, with dials and displays only a few understand. Every five weeks, control room operators leave for a week's training in an identical control room. The motto: Learn it and learn it again.

No buildings touch, so in case of an earthquake, damage will be kept to a minimum. In one area, a cacophony of steam pipes resembles an industrial-size pipe organ. Springs give them enough bounce to withstand a blow.

Protective clothing is to prevent contaminating the fuel – not the other way around, Lee said. Each employee has a chip that tracks any exposure to hazardous material. Everyone must pass through a contamination monitor coming and going. Oddly, some who have recently undergone certain medical treatments have set the monitors off, Lee said.

The controversial spent radioactive fuel is kept in ceramic containers below ground. Lee said there is enough room to store the plant's waste until 2017. Spent fuel takes little space, Lee said. Three years' worth could fit in a car trunk.

A museum-style visitor center at the entrance belies the tight security and potential hazards beyond the gates. Visitors learn in friendly push-button displays how nuclear energy works, why it is safe and so forth. Tours are commonplace, and a sign several miles away encourages them.

This careful balance of openness and secrecy is designed so Comanche Peak can be "good neighbors" to Hood County while protecting the plant. So far, Lee said, it works well.

Seeking permits

Even with every measure taken, nuclear energy production is not flawless. Enough advances have been made in recent years to make an accident like the one at Three Mile Island in Pennsylvania 23 years ago highly unlikely today.

Lee likened the Chernobyl nuclear disaster in Russia to "Wilbur Wright's airplane compared to the space shuttle." Technology and design, he said, have just made accidents like that impossible.

But problems do exist.

A south Texas nuclear plant and a South Carolina plant, for instance, were both recently found to have cracks in their reactors that if unchecked, could have expanded and led to overheating and a possible meltdown in the containment center. And a large hole was discovered in the 25-year-old Davis-Besse nuclear reactor in Ohio — one nobody thought could possibly occur.

Kerr-McGee's Cimarron plutonium plant near Crescent closed in the 1970s after one of its workers, Karen Silkwood, planned to meet a New York Times reporter to report the company for alleged fuel rod tampering. She died in a car accident on the way there.

A second nuclear plant never got built in Oklahoma. Work on the Black Fox plant near Inola was halted in 1982, largely due to anti-nuclear protests.

Today, 103 reactors operate at 64 nuclear plants nationwide. Many are more than 20 years old and are reaching their lifespans, which is another reason for the nuclear power renaissance. The last nuclear plant to be built was completed in 1996.

Now, three companies have applied for early site permits, which is the first step toward building. They are: Exelon, based in Chicago; Entergy in Louisiana; and Dominion in Virginia. Plans are to build alongside existing plants, rather than find new locations.

But don't expect any new reactors soon. It took 15 years to complete Comanche Peak, largely because of changing regulations. At one point, TXU Energy had to rebuild the entire plant to meet regulations, which took five years.

"In the next six years, a nuclear power plant isn't going to affect natural gas. It's just not a quick thing," said DeWare, who pointed out that selling a nuclear plant to a neighborhood has its own challenges.

"The nuclear industry didn't have a bad reputation until (Three Mile Island) happened," he said. "I think some of that's died down, but I think before a local government is going to be friendly to a local power plant, they're going to want assurances it's going to be safe."

passes through Alva, Woodward and Shattuck would also be used.

Never before have such large shipments been considered. But as spent fuel piles up, it has to go somewhere. Under serious consideration is an underground site at Nevada's Yucca Mountain as the central dumping site. That would mean spent fuel from 64 nuclear plants crisscrossing the country on the way to Nevada.

The Nuclear Energy Institute insists the hazards are low and all precautions will be taken. But some organizations, like the Environmental Working Group and Action Fund, believes the large-scale shipments will be disasters waiting to happen.

"I just find myself automatically in something of a worried posture when I hear an engineer say it's impossible, nothing will go wrong," said Ken Cook, a spokesman for the Environmental Working Group in Washington, which opposes mass shipments.

Cook also expressed concern about terrorism.

"If something were to go wrong you could have such serious consequences, you could have devastation for decades, it would be a complete mess," Cook said.

The likelihood of that happen-

according to the institute.

"It will be prepared and put into casks, it would be virtually impenetrable," Singer said. "They've been dropped from 30 feet on hard ground, they've had puncture testing, fire testing, and they've been banged up a little bit, but never penetrated."

Specialized trucking companies would be used and drivers would undergo extensive training.

Routes will be approved by the Nuclear Regulatory Commission after officials have driven them.

Law enforcement and emergency response teams along these routes will be trained to handle any accidents. And governors will be notified a week ahead of time before a shipment passes through.

Oklahoma Department of Environmental Quality spokeswoman Monty Elder said she hopes the federal government will provide its own emergency responders and take rigorous precautions en route.

"In the chance of an accident, those emergency responders would be in place and we would expect it to be the federal government's responsibility," Elder said.

The soonest these shipments would happen is 2010.

Highways and railroads used to ship nuclear materials

Proposed shipping routes if a nuclear repository is built Nevada.

A Sign of The Times for Your Cancer Care?

Congress and the Administration are currently considering changes in Medicare that could result in massive, nationwide disruptions in cancer treatment for critically ill patients.

Support H.R. 1622

1 in 2 men and 1 in 3 women are likely to hear the words, "You have cancer." and that risk increases with age. More than 60% of all cancer diagnoses are in the Medicare population.

As cancer survivors and caregivers, we've heard these dreaded words. But imagine hearing, "You have cancer," then discovering that your local cancer doctor's office is unable to treat you because cost-cutting measures proposed by Congress and the Administration have had unintended effects.

Everyone agrees that the Medicare reimbursement system for cancer chemotherapy is seriously flawed and needs reform. But reform and cost-savings cannot come at the expense of patients' access to quality care.

There is a responsible solution to this issue: H.R. 1622, The Quality Cancer Care Preservation Act, introduced by Representatives Charles Norwood and Lois Capps. The Norwood-Capps bill provides balanced reform of Medicare reimbursement policies that overpay for cancer chemotherapy drugs and underpay for chemotherapy services critical to people with cancer.

Call to Action!

We urge everyone to contact their Congressmen and ask them to support H.R. 1622, which is a more balanced approach to this issue and would preserve quality cancer care.

Sen. Don Nickles	phone 405-231-4941
Sen. James Inhofe	phone 405-608-4381
Rep. Tom Cole	phone 405-329-6500
Rep. Ernest Istook	phone 405-234-9900

CANCER CARE ASSOCIATES

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TRIBUNE INVESTIGATION

The search for a magic fuel

Argonne, Russia

Dawn of a second nuclear age?

and place orders.
At an international confer-

confront a scientific hurdle in their bid to replace bomb material in the world's reactors

Second of two parts

By Sam Roe
Tribune staff reporter

After 25 years, tens of millions of dollars and dozens of classified missions, America's quest to retrieve the world's most potent nuclear fuel had come down to this: a secret meeting in the heart of Moscow.

At one end of a conference room sat Russia's top nuclear scientists and bureaucrats. At the other were the Americans, led by Argonne National Laboratory's Armando Travelli, who had traveled to the Russian capital in the winter of 2003 to hear the results of a scientific test with grave implications for U.S. national security.

The unlikely research partnership of former Cold War rivals hoped to create a nuclear fuel that would persuade nations with highly enriched uranium to trade it in for something better and safer.

If the test was a success, Travelli might finally retrieve tons of the bomb-grade material that America and Russia had provided over decades. If the test failed, it would set back U.S. non-proliferation efforts for years.

The Russians told Travelli's team that there were some minor problems but nothing to worry about. They would do additional work and get back to the Americans.

"May I see the pictures of the test?" Travelli asked.

"I'm sorry," the head of the Russian team replied. "There are no pictures available."

The Russian, Travelli recalled, then abruptly stood up and walked out, followed by his colleagues.

Travelli approached the last Russian packing his belongings, a low-level scientist who had been quiet at the meeting.

"I'd like to see the pictures," Travelli said. "When might there be pictures?"

The man leaned down and pulled three 8-by-10, black-and-white photographs from his briefcase, then put them on the table.

Travelli picked them up. One by one, he studied them, knowing that America's future—and his own—was at stake.

A top nuclear physicist, Travelli had spent the last quarter-century trying to bring home weapons-grade uranium America had supplied to dozens of nations in an ill-conceived program launched by President Dwight Eisenhower called Atoms for Peace.

Toiling in the twilight zone where hard science and clandestine missions intersect, Travelli had weathered congressional indifference to his project, research budgets set at zero and, by some accounts, his own missteps.

A persuasive scientist-diplomat, he had even managed to patch together a promising solution with the scant resources at his disposal. The question was whether it would work.

Or was he banking too much on unproven science and his own ability to charm the Russians, other foreigners—even his own bosses?

Turning to science for a solution

Nuclear research reactors are like sports cars: They run faster with a high-octane fuel—in this case, highly enriched uranium.

A powerfully fueled reactor can conduct an experiment in a week; a poorly fueled one could take a month. For private reactor operators producing and selling radioisotopes for medical uses, such as cancer radiation, that gap can mean the difference between profit and loss.

The challenge facing Travelli and his team of Argonne scientists was to invent a fuel strong enough to satisfy reactor operators, but weak enough to be useless to terrorists trying to build a nuclear weapon.

By the early 1990s, Travelli's team had solved this riddle for many reactors around the globe. He carefully noted each success story by replacing a green triangular magnet with a red one on a large metallic world map in his office.

But dozens of other reactors still would not operate on anything but bomb-grade fuel. And because none of these reactors were precisely the same, the Argonne scientists faced the overwhelming task of inventing a special fuel for each one.

Plus, dozens of reactors worldwide used bomb-grade fuel supplied by Russia, and no one was addressing those.

So in 1993 Travelli traveled to Moscow and eventually helped cut a groundbreaking deal: U.S. and Russian scientists would team together to craft a single, all-purpose fuel that would work in all the reactors, regardless of make, model or country of origin.

To do that, they had to make a fuel with a low percentage of uranium-235, the potent isotope behind the atomic chain reaction that causes nuclear explosions.

U-235 is unsteady, so the trick was to find some way to stabilize it while packing it densely enough to give the fuel the necessary power. Travelli's team knew that adding certain elements could calm the uranium; his team tested more than 20 before deciding to stake their work on molybdenum, a hard, gray metal used to strengthen steel.

Officially, this exotic, experimental mixture was called "uranium-molybdenum dispersion fuel." For the cause of disarming the threat of nuclear terrorism, Travelli's team hoped it would be the magic fuel.

Unlike race cars, reactors run on solid fuels; that meant Argonne scientists were using metals, powders and plates. They knew the tiniest mistake in making a nuclear fuel invited failure. "It's not a blacksmith's job, that's for sure," said Jim Snelgrove, a fuel specialist at Argonne.

Work began in earnest. Argonne scientists melted together chunks of uranium and molybdenum, machined the mixture into powder, added aluminum, then pressed and rolled the metal into thin, shiny plates the size of credit cards. These miniature fuel plates were placed in a research reactor in Idaho for a full year of testing. The radioactive plates then returned to Argonne in special casks inside a hazmat truck.

Workers wearing protective bodysuits and using mechanical arms cut the plates with fine instruments and photographed the pieces under an electron microscope. The early results were encouraging: no evidence of cracks, swelling or bubbling.

But the same couldn't be said of the U.S.-Russian partnership.

It quickly began splintering. The Russian scientists, still suspicious from the recent Soviet past, were hesitant to share information, turning in lab reports that offered scant detail. Later, they accused Travelli's team of trying to steal their technology.

Further complicating matters, the U.S. in 1999 placed economic sanctions on Travelli's partner in Russia, a nuclear contractor called NIKIET, for allegedly providing "sensitive missile or nuclear assistance" to Iran.

Travelli struggled to find a new lab, at one point appealing to his influential friend in the Russian nuclear bureaucracy, Nikolay Arkhangelsky. But Arkhangelsky demurred, upset like his colleagues at the U.S. sanctions.

After nearly two years and three more trips to Moscow, Travelli finally found a new laboratory. Work on the magic fuel picked up dramatically.

One night, after reviewing the Russians' progress at a Moscow lab, Travelli was walking down the hallway of his hotel when Gerard Hofman, a fuel development specialist at Argonne, called him into his room.

"I think you'd better see this," he said.

Travelli's eyes locked on the TV as the World Trade Center towers crashed to the ground.

U.S. misses wake-up call

In the tense weeks that followed Sept. 11, many wondered whether terrorists could obtain an atomic weapon, whether a bomb could fit into a suitcase, whether the U.S. was doing enough to prevent a nuclear catastrophe.

But the American government didn't intensify efforts to retrieve uranium.

U.S. officials didn't call emergency meetings. Congress didn't hold hearings on the issue. President Bush and Capitol Hill didn't even provide more money for the effort.

The program's budget stayed flat at $5.6 million.

The lack of action exasperated those who knew that the highly enriched uranium scattered around the globe was the quickest way for Al Qaeda or other terrorists to build a crude nuclear device.

Jack Edlow, whose company, Edlow International, ships nuclear fuel back to the U.S., was in his Washington office on Sept. 11. He looked out his back window and saw smoke rising from the Pentagon.

"I thought they would get themselves a couple of hundred million dollars, and we would get the whole thing cleaned up in a couple of years," Edlow recalled. "I thought everybody would say, 'Let's go get this stuff before it comes back to haunt us.' "

Eleven months after the terrorist attacks, the U.S. did manage to remove two nuclear bombs' worth of uranium from Serbia and ship it back to Russia. But to pay for the mission, the State Department asked the Nuclear Threat Initiative, a non-profit group founded by Ted Turner and former Georgia Sen. Sam Nunn, to donate $5 million; that was more money than the government contributed to the mission.

Even after Sept. 11, America was relying on funding from a non-profit for critical national security work.

"It was embarrassing," recalled Allan Krass, a State Department official involved in the operation. But officials, he said, had no choice: "We needed the money."

Cracks begin to surface

After the terrorist attacks, Travelli felt more pressure than ever to succeed. That feeling intensified when he learned a competing team of French scientists was trying to invent a nearly identical magic fuel.

Throughout 2002, the French and the U.S.-Russian teams both reported great progress with their fuels, predicting the material would be ready for reactors in three years. They were so confident they began planning training seminars so other nations could learn about the fuel ence in Aix-en-Provence, France, in 2003, Travelli's team and the French scientists told colleagues and the trade press that their separate fuel programs were right on track.

But privately, the French were telling a far different story, Travelli recalled.

They pulled Travelli's team aside at the convention center and laid out pictures of their latest tests. The often-unstable uranium particles looked fine. But there were bizarre, meandering cracks—like the hairline fractures of a bone—in the aluminum portion of the fuel in which the uranium particles were embedded. Travelli had never seen anything like it.

The French fuel was failing.

Alarmed, Travelli and his team flew back to Chicago and immediately began sifting through dozens of photos of their own tests. Was it possible their fuel had the same problems, but they had somehow missed it?

Sure enough, they began to recognize tiny little bubbles—almost imperceptible—inside the fuel plates. They were aligned in such a way that if the Americans were to jump ahead with advanced testing as the French had, the tiny bubbles would likely multiply and connect, forming the same cracks seen in France.

Travelli's Russian partners hadn't run any tests yet. But his former partners had.

NIKIET, the Russian nuclear contractor still under U.S. sanctions, was quietly developing its own reactor fuel. Travelli had heard NIKIET was experiencing similar failures as seen in France.

Aware of the dire implications, Travelli's team flew to Moscow in December 2003 to see if it could learn of NIKIET's results.

The crucial meeting was held at the Bochvar Institute, the lab working with Travelli. His Russian allies from the lab and the government were on hand. NIKIET, barred from contact with the Americans, was represented at the meeting by subcontractors.

After the Russians assured Travelli that there were only minor problems with the NIKIET fuel, they walked out of the meeting. But the last one to leave pulled out detailed pictures of the tests from his briefcase and gave them to Travelli.

He studied each of the three photographs carefully. He could see the small meandering lines in the aluminum portion of the fuel, just as he had seen in France.

The evidence now was overwhelming: The magic fuel was a bust.

Feeling as though his life's work had collapsed, Travelli returned to his hotel. A few minutes later, the phone rang. It was a State Department official. He wanted an update.

Back in America, a bitter fallout

After his dream fuel failed, everything changed for Travelli.

In the summer of 2004, Energy Department officials began taking firmer control of America's effort to retrieve bomb fuel. They wanted it run out of Washington, not Chicago. They wanted the fuel work managed out of a federal lab in Idaho, not Argonne. They wanted new scientists involved, not the same group that had been leading it the last 26 years.

And three years after the Sept. 11 attacks, they finally asked to double the budget.

Travelli heard about these changes piecemeal. Then one day, an Argonne administrator, Phillip Finck, called him into his office. Finck told the longtime scientist that energy officials wanted him out. He could stay on as a scientific adviser, but an Argonne colleague would replace him.

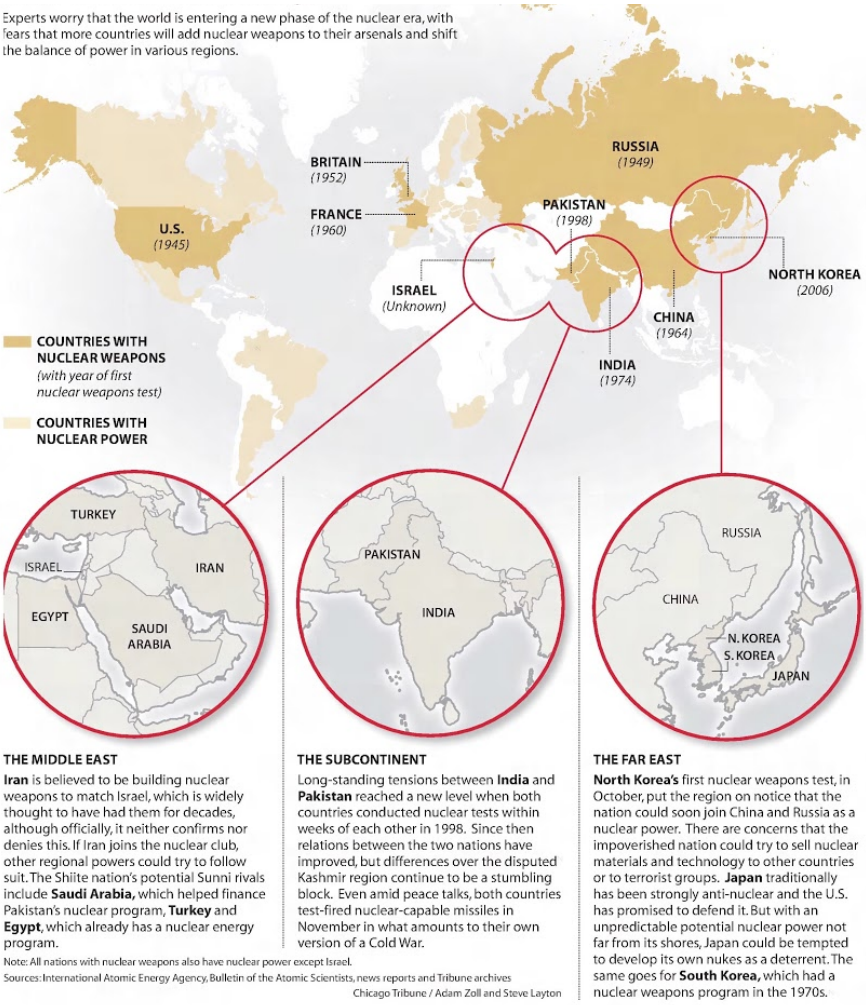
Moreover, energy officials wanted Travelli to make this announcement that weekend at a conference in Vienna—one that Travelli himself had organized.

Travelli was stunned. He had fought to keep the effort alive for nearly three decades, often in the face of little support. Now that Sept. 11 had finally moved his work to the top of the national security agenda, he was supposed to step down?

Travelli balked.

But Finck, Travelli recalled, told him he didn't really have a choice; funding from the Energy Department was at stake.

Five days later in Vienna, at a jammed conference with dozens of familiar faces, Travelli an-



Tribune photo by Zbigniew Bzdak

Armando Travelli of Argonne National Laboratory had staked his future on developing a single fuel that could replace the highly enriched uranium at research reactors around the world.

IN THE WEB EDITION

■ Retrace Travelli's quest, testing your knowledge of his struggle to retrieve bomb-grade uranium at **chicagotribune.com/atoms**

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Electronic Arrays 9002

From Wikipedia, the free encyclopedia

Jump to navigationJump to search

Electronic Arrays 9002 General informationLaunched

1976; 44 years ago

Common manufacturer(s)

- Electronic Arrays

PerformanceMax. CPU clock rate

4 MHz[1]

Data width

8

Address width

12

Architecture and classificationInstruction set

Electronic Arrays 9002

Instructions

55[2]

Physical specificationsPackage(s)

- 28 pin DIP[2]

Electronic Arrays 9002 (EA9002) was a microprocessor released in 1976.[3][1]

It was an 8-bit NMOS CPU, with an instruction set influenced by the Intel 4004.[4] It had a 4096 byte address space, due to its use of 12-bit addressing.[5][6]

It was reported to have a 2 microsecond instruction fetch and execution time,[7][8] although another source says 3.2 microseconds for single byte instructions and 6.4 microseconds for two byte instructions.[9]

The EA9002 was largely unsuccessful. Its manufacturer, Electronic Arrays, struggled financially and with process issues.[10] By November 1977, Electronic Arrays had ceased active marketing of the EA9002,[11] and in 1978 it was acquired by NEC.[12][13]

Electronic Arrays supplied macro assemblers for the EA9002 for IBM 360 and National CSS mainframe systems.[2] ASM/GEN and SIM/GEN, systems for developing for cross-assemblers and simulators in FORTRAN IV, supported the EA9002 as a target.[14]

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Therefore, the 9002 can get by without any external RAM...

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11. ^ Cushman, Robert (20 November 1977). "EDN's Fourth Annual Microprocessor Directory" (PDF). *EDN*. p. 45. Retrieved 23 June 2018. EA9002–The project staff at Electronic Arrays associated with this µP has been disbanded and the marketing effort closed down. The firm entered the market too late and was too small to mount a competitive sales effort.
12. ^ Dennis J. Encarnation (1993). *Rivals Beyond Trade: America Versus Japan in Global Competition*. Cornell University Press. p. 126. ISBN 0-8014-8122-8. NEC shifted strategy and moved quickly in 1978 to acquire a financially troubled U.S. company (Electronic Arrays) that already traded with NEC
13. ^ "Nippon Merges U.S. Arms, Forms NEC Electronics". *Computerworld*. **15** (16). April 20, 1981. p. 78.
14. ^ Johnson, G.R.; Mueller, R.A. (January 1977). "Automated Generation of Cross-System Software for Microcomputers". *Computer*. **10** (1): 23–31. doi:10.1109/c-m.1977.217493. ISSN 0018-9162.

1970 June 28

https://www.newspapers.com/image/165957646/?terms=%22electronic%2Barrays%22

1970 Dec 23

https://www.newspapers.com/image/30473220/?terms=%22electronic%2Barrays%22

Info on MITS + "Electronic Arrays Inc."

See Micro Instrumentation and Telemetry Systems (MITS) Incorporated

[...] "Sales had reached $100,000 per month when this advertisement ran in March 1973.

Ed Roberts' interest in computers began in high school when he built a simple digital computer from relays. His first real experience with computers came while at Oklahoma State University where engineering students had free access to an IBM 1620 computer. Roberts' office at Weapons Laboratory had the state of the art Hewlett-Packard 9100A programmable calculator in 1968. **In July 1970, a semiconductor company, Electronic Arrays, announced a set of six LSI ICs that would make a four-function calculator.**[22][23] Roberts was determined to design a calculator kit.

To fund the new project, Roberts sold 15% of MITS to fellow Air Force officer, Lieutenant William Yates. He also got an investment from another Weapons Laboratory officer, Major Ed Laughlin. Several other officers and scientist at the lab were interested in this state of the art calculator kit and helped with the design. Forrest Mims wrote the assembly manual in return for a calculator kit."

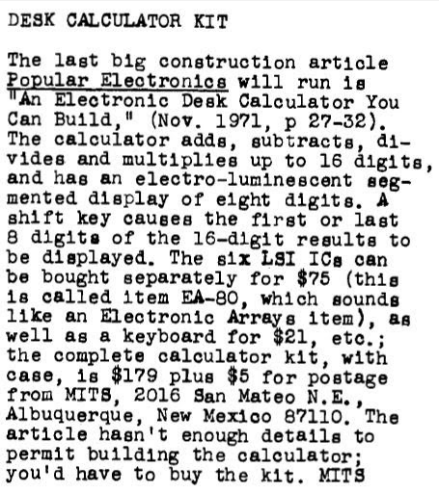
[...]

- "New Products: Do-it-yourself Electronic Calculator". *Computer*. IEEE. **3** (6): 38–41. November 1970. doi:10.1109/C-M.1970.216730. Electronic Arrays has developed the EAS100, a set of MOS LSI circuits for a 16 digit calculator with 8 digit display capability.
- ^ US patent 3800129, Richard H. Umstattd, "MOS Desk Calculator", issued 1974-03-26 The Electronic Arrays, Inc. calculator chip set that was used in the MITS 816 calculator.

[...]

MITS 816 Electronic Calculator Introduction Article

PDF Source from Old Calculator Web Museum : MITS 816 Electronic Calculator Introduction Article : [HW004X][GDrive]



DESK CALCULATOR KIT

The last big construction article Popular Electronics will run is "An Electronic Desk Calculator You Can Build," (Nov. 1971, p 27-32). The calculator adds, subtracts, divides and multiplies up to 16 digits, and has an electro-luminescent segmented display of eight digits. A shift key causes the first or last 8 digits of the 16-digit results to be displayed. The six LSI ICs can be bought separately for $75 (this is called item EA-80, which sounds like an Electronic Arrays item), as well as a keyboard for $21, etc.; the complete calculator kit, with case, is $179 plus $5 for postage from MITS, 2016 San Mateo N.E., Albuquerque, New Mexico 87110. The article hasn't enough details to permit building the calculator; you'd have to buy the kit. MITS

[HW004Y][GDrive]
Amateur Computer Soceity Newsletter, November, 1971

Short news release announcing the publication of an article in *Popular Electronics* magazine **introducing the MITS 816 electronic calculator kit, based on the Electronic Arrays S-80 six-chip MOS large-scale integration calculator chipset. The S-80 chipset contained a change to the microcode of Electronic Arrays' original S-100 chipset that provided a different means for setting the decimal point position.**

The MITS 816 has significant historical significance, as it was the first electronic calculator to be offered as a kit that anyone with a modicum of electronics skills could put together themselves."

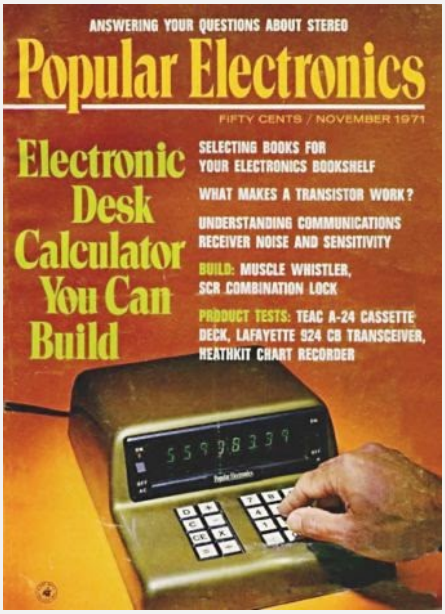
MITS Model 7440 Desktop Scientific Calculator

PDF Source from Old Calculator Web Museum (MITS Model 7440 Desktop Scientific Calculator) -[HW004S][GDrive]

[HW004T][GDrive]
MITS Model 7440 Desktop Scientific Calculator

In the world of electronic calculators, the company named MITS may not ring bells for many people. However, those who were involved in the infancy of personal computing, or those who have an affection for the early days of personal computing know the name well. MITS, (pronounced letter at a time) is an acronym for **M**icro **I**nstrumentation and **T**elemetry **S**ystems, effectively created the "personal computer" market with the introduction of the "Altair 8800" mini-computer (as they called it) in early 1975. The Altair computer was heralded as a breakthrough in the world of computers, with a kit selling for a mere $397 in 1974. There were other "hobbyist" computers available at the time, but they were not as powerful (relying on earlier microprocessor chips), nor as well publicized as the Altair. The Altair computer was featured on the front cover of the January, 1975 edition of Popular Electronics magazine, with a series of articles on the design and construction of the machine. Orders for the Altair poured in at a tremendous rate, propelling MITS and the Altair into the spotlight of personal computer history.

MITS started up as a small four-man company in late 1969. The principals were Ed Roberts, Forrest Mims III, Stan Cagle, and Bob Zahler. In January of 1970, the company was formally incorporated. Initial discussions came to the conclusion that there was a market in the model rocketry field for various electronic devices to go up with the rocket, at first, strobe lights to aid in recovery (for night launches), and later, to provide simple radio telemetery. These devices were designed such that hobbyists could build them from a kit, or buy pre-assembled. Later, MITS developed a novel wireless "walkie talkie" that used a beam of infrared light to send voice between two transceivers, up to 1000 feet apart.



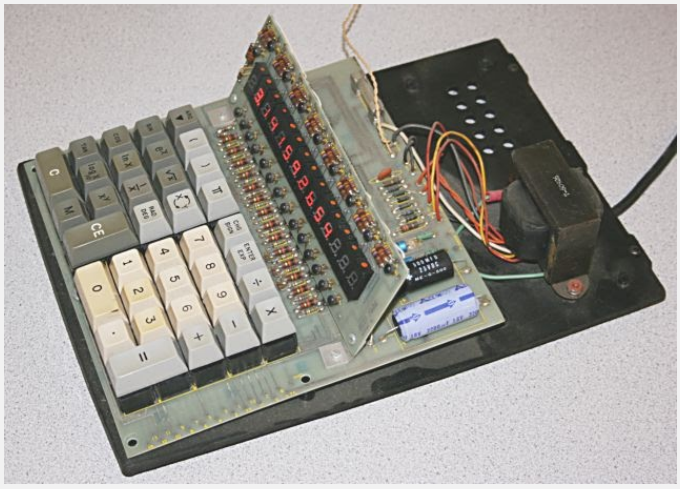
[HW004U][GDrive]
Cover of November, 1971 Popular Electronics Featuring MITS 816 Prototype

While these products generated a modest revenue, by the early part of 1971, MITS was looking for a way to break into new markets. At the same time the fledgeling Large-Scale Integration (LSI) MOS Integrated Circuit manufacturer, Electronic Arrays, had recently introduced a six-device chipset that provided a great majority of the logic for a complete four-function electronic calculator. In mid-1971, the MITS team realized that there was tremendous market potential for low-priced electronic calculators. MITS contacted Electronic Arrays to arrange for some production samples. Soon, a prototype machine was built. MITS arranged volume pricing of the chipset, further reducing the cost. Since MITS had experienced some earlier success with Ed Roberts and Forrest Mims writing articles for various hobbyist publications, especially Popular Electronics, it was hoped that the calculator could make its debut as a featured construction article in that publication. Popular Electronics was contacted, and shown the prototype of the calculator in the fall of 1971.

[HW004V][GDrive]
Production MITS 816 Calculator - Note differences between production and prototype on magazine cover above.
Photo Courtesy of Steve Shepard

The calculator was a big hit with the magazine's publishers(Ziff-Davis), and made the cover of the November, 1971 issue of the magazine, with the lead story proclaiming "Electronic Desk Calculator You Can Build". At the time, the machine was called the "Popular Electronics Calculator", but internally to MITS, this machine was designated as the model 816. The 816 could be ordered as a complete, assembled calculator for $275, or as a ready-to-build kit for $179. The model number 816 was based on the fact that the calculator had an eight-digit vacuum-fluorescent display, but could perform calculations to sixteen digits. At the time, the major players in the calculator market were charging between $400 and $600 for an electronic calculator with similar functionality.

The Electronic Arrays chipset consisted of six LSI integrated circuits containing over 8,000 transistors. The six devices had specific functions; input(keyboard processing), output(display generation), arithmetic(math processing), register storage, control ROM(microcode), and control logic. While it isn't entirely clear at this time, the chipset used in the MITS 816 appears to be the same chipset used in the ICM-816 calculator, which was introduced by a subsidiary of Electronic Arrays called International Calculating Machines, in early 1971. The ICM 816 initially sold for $495.



[HW004W][GDrive]
Inside view of MITS 7440

MITS proceeded to develop a number of other desktop (908DM and 1440), and later, handheld calculators which were sold as kits or fully-assembled. While the calculator line was initially successful, the intense competition in the marketplace, along with the introduction of single-chip calculator IC's by various large chip makers such as Texas Instruments, Rockwell and General Instruments, made it difficult for MITS to remain price-competitive in the market. There was also tough competition in the electronics kit market from Heathkit, who offered a number of high-quality build-it-yourself calculator products. By the late part of 1973, it was possible to buy a mass-market calculator fully assembled, for less than it cost to buy one of MITS 816, 1440, or 908DM desktop calculator kits.

Housatonic

Christopher J. Elias (born 1957)

Wikipedia Christopher Elias

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https://en.wikipedia.org/wiki/Christopher_Elias

Christopher J. Elias is the former president and CEO of the Program for Appropriate Technology in Health, also known as **PATH**, a nonprofit organization that improves global health by ensuring that innovations in science and technology are available to low income groups and developing countries.

Education[edit]

Elias received his MD from Creighton University, completed his post-graduate training in internal medicine at the University of California, San Francisco, and received his MPH from the University of Washington.

Career[edit]

Elias has worked as a senior associate at the International Programs Division of the Population Council. He served as country representative of Thailand.

In October 2011, the Bill & Melinda Gates Foundation formally announced the appointment of Elias to the position of president of its global development program. In this role, Elias is responsible of leading the foundation's efforts in developing countries to overcome hunger, poverty and disease.

Other activities[edit]

- Creighton University, member of the board of trustees[1]
- Centers for Disease Control and Prevention (CDC), member of the advisory committee to the director[2]
- University of Washington, member of the global health external advisory board
- Family Planning 2020 (FP2020), co-chair of the reference group[3]
- Scaling Up Nutrition Movement, member of the lead group (since 2016, appointed by United Nations Secretary-General Ban Ki-moon)[4]

Recognition[edit]

- 2005 – Social Entrepreneur of the Year, awarded by the Schwab Foundation[5]

References[edit]

1. ^ Board of Trustees Creighton University.
2. ^ Advisory Committee to the Director Centers for Disease Control and Prevention Centers for Disease Control and Prevention (CDC).
3. ^ FP2020 Reference Group Family Planning 2020 (FP2020).
4. ^ Secretary-General Appoints 29 Global Leaders to Spearhead Fight against Malnutrition United Nations, press release of 21 September 2016.
5. ^ Schwab Foundation Archived 2010-01-31 at the Wayback Machine

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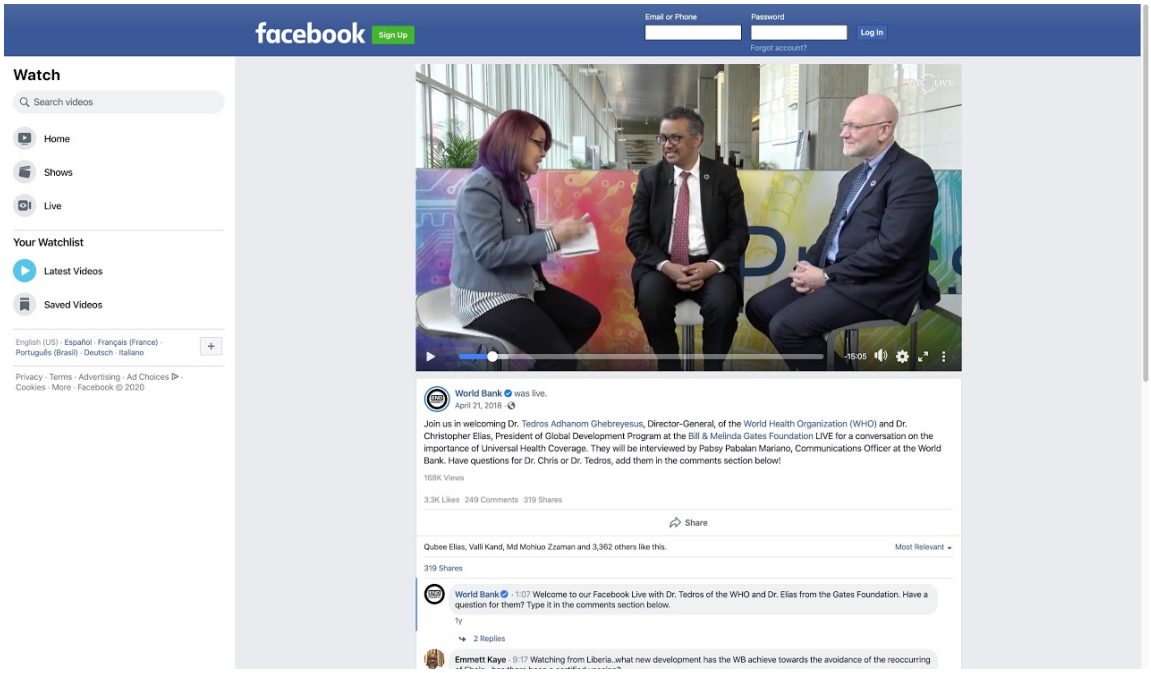
2018 World Bank

Video - [HW002L][GDrive]



[HW002K][GDrive]

https://skoll.org/contributor/christopher-elias/

BIOGRAPHY

Dr. Chris Elias, leads the Gates Foundation's efforts in integrated and innovative delivery, finding creative new ways to ensure solutions and products get into the hands of people in developing countries who need them most.

Dr. Elias's professional background is in health and medicine, most recently having served as the president and CEO of PATH, an international, nonprofit organization dedicated to improving the health of people around the world by advancing technologies, strengthening systems, and encouraging healthy behaviors.

Dr. Elias holds an MD from Creighton University and an MPH from the University of Washington. He was a fellow in the Robert Wood Johnson Clinical Scholars Program and was awarded an honorary Doctor of Science degree from Creighton University. Elias currently serves on various advisory boards, including the Nike Foundation and the Duke Global Health Institute.

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https://xconomy.com/author/celias/

Christopher Elias

Christopher Elias is the President of Global Development at the Bill & Melinda Gates Foundation. Previously, he was president and CEO of PATH, a Seattle-based nonprofit organization that creates sustainable, culturally relevant solutions, enabling communities worldwide to break longstanding cycles of poor health.

Before joining PATH in 2000, Dr. Elias was a senior associate in the International Programs Division of the Population Council. For six years, he served as the country representative in Thailand, where he managed reproductive health programs throughout Southeast Asia.

He sits on the boards of the Global Alliance for Improved Nutrition, Ibis Reproductive Health, and the Washington Biomedical and Biotechnology Association, among others. He is also a member of the Policy Advisory Committee for the International AIDS Vaccine Initiative and the Advisory Committee for the Department of Global Health at the University of Washington. Dr. Elias was honored as the Schwab Foundation's Social Entrepreneur of the Year for the United States in 2005, and he remains an active member of the Schwab Foundation community.

He received his MD from Creighton University (1983), completed post-graduate training in internal medicine at the University of California, San Francisco (1986), and received an MPH from the University of Washington (1990), where he was a fellow in the Robert Wood Johnson Clinical Scholars Program.

https://www.researchgate.net/scientific-contributions/2069486267_Christopher_Elias

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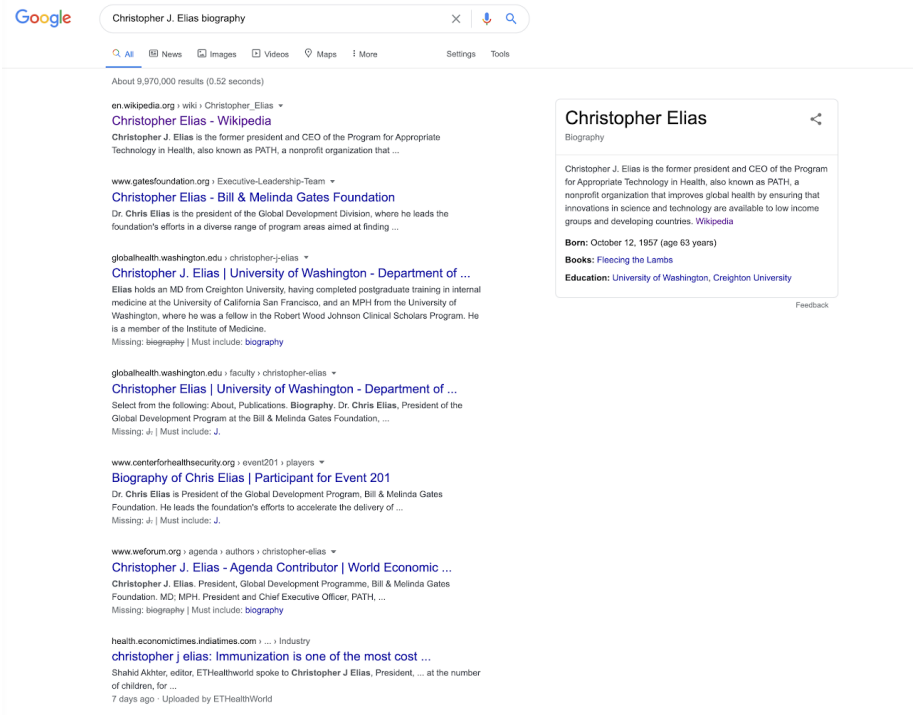
https://twitter.com/ChrisJElias/status/1185180428250030080?s=20

Below google search suggests he was born in 1957



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Housatonic

Engelhard Corporation

Wikipedia Engelhard Corporation

Also known as "Engelhard Minerals and Chemicals Corporation"

WIKIPEDIA : 2019-04-30-wikipedia-org-engelhard.pdf / https://drive.google.com/open?id=13BBj0klUUEMBWhfbHAFXCzHVEcHC8eY_

Engelhard Corporation is a former American Fortune 500 company headquartered in Iselin, New Jersey, USA. It is credited with developing the first production catalytic converter. In 2006, the German chemical manufacturer BASF bought Engelhard for $US5 billion (5,000,000,000).

Early history

The company was started by Charles W. Engelhard, Sr. in 1902[1] when he purchased the Charles F. Croselmire Company in Newark, New Jersey. He subsequently founded the American Platinum Works in 1903 and acquired several other companies. In 1904, he purchased Baker & Co., a platinum smelting and refining business located in Newark and in 1905, he established Hanovia Chemical and Manufacturing Company also in Newark. Engelhard became the world's largest refiner and fabricator of platinum metals, gold and silver, a producer of silver and silver alloys in mill forms, operator of the world's largest precious metals smelter. They also developed liquid gold for decorative applications[*citation needed*].

Merger and spinoff of Phibro

In 1958, Engelhard's son Charles Jr. consolidated the family's holdings to form Engelhard Industries, Inc. as a publicly held company listed on the New York Stock Exchange. In 1963, Engelhard, under the advisement of Lazard Frères, took a 20 percent interest in Minerals & Chemicals Philipp (MCP), a recently formed partnership between a small producer of nonmetallic minerals such as kaolin and fuller's earth, and Philipp Brothers, a trading firm specializing in the buying and selling of ores on the international market. Engelhard executed the transaction through a stock swap, giving up 8 percent of Engelhard as partial payment for the 20 percent interest in MCP.

Sales in MCP took off soon afterwards, mostly from Philipp Brothers' fast-growing ore trading. In 1964 it had sales of $US447 million, and by 1966 sales reached $US709 million. Even though Engelhard Industries did only about 40 percent of that figure, it was able, in September 1967, to work out a merger of the two companies that left the Engelhard family controlling about 40 percent of the new company. The new entity, which was called Engelhard Minerals & Chemicals Corporation (EMCC), was structured into three divisions: Minerals & Chemicals, which processed non-metallic minerals; Engelhard Industries, which refined and fabricated precious metals; and Philipp Brothers. Nearly one-half of the company's 1967 net income of $28 million was generated by the Philipp trading division, with the Engelhard metal processing contributing 34 percent and minerals and chemicals about 19 percent.

Philipp's trading continued to enjoy phenomenal growth as the world turned to spot traders to move scarce natural resources around the globe. By 1972, EMCC's sales hit $US2 billion, about 80 percent of it supplied by Philipp, and in 1974 revenue reached $5 billion. By 1981, Philipp Brothers earned 89 percent of the total corporation's $US26.6 billion in revenues and 88 percent of its $US532.7 million in profits. Management in the slow growing minerals-and-chemicals division, along with those in precious metals, felt overshadowed by their trading counterparts. This led to the spinoff of Philipp Brothers (later called Phibro), and renaming what was left the Engelhard Corporation.

Later history

Engelhard operated a Minerals & Chemicals Division and an Engelhard Industries Division with corporate headquarters in Menlo Park, New Jersey. In 1984, the company was realigned to consist of a Specialty Chemicals Division and a Specialty Metals Division. Engelhard expanded significantly through growth, acquisitions and joint ventures. Acquisitions included the Freeport Kaolin Company in 1985; most of the business of the Harshaw/Filtrol Partnership in 1988; the auto catalysts and petroleum catalysts businesses of Solvay Catalysts GmbH, in 1992 and 1994, respectively; the Mearl Corporation in 1996; the catalyst business of Mallinckrodt Inc. in 1998; Süd Chemie's fats and oils catalyst business in 2001; and the Collaborative Group, a personal care company, in 2004.

On May 30, 2006, Engelhard was taken over by BASF after the board agreed for the takeover of BASF. BASF paid $US39 per share. The transaction totaled $5 billion.

On August 2, 2006, BASF began to rename Engelhard worldwide. This started in the USA with BASF Catalysts LLC.

On April 1, 2010, BASF Catalysts LLC became part of BASF Corporation.

Environmental record

Catalytic-converter-equipped vehicles have helped cut other air pollutants by more than 3 billion tons worldwide between 1975 and 2000; of this 1.5 billion short tons was in the United States. Automobiles meet emission standards that required reductions of up to 98+ percent for HC, 96 percent for CO, and 95 percent for NOx compared to the uncontrolled levels of automobiles sold in the 1960s. Despite the fact that fuel use increased approximately 50 percent and vehicle miles traveled nationwide increased by 150 percent between 1970 and 1998, CO, VOC, and NOx emissions from motor vehicles in 1998 decreased by over 44 million short tons compared to 1970 levels.[2]

[...]

2019-04-30-wikipedia-org-engelhard-img1.jpg / https://drive.google.com/open?id=1389cQRnbuQACQFcFlE0BCVY4gC4tdxNY

Key employees :

- Gilbert Leonard Tugwell (born 1919)
- Henry Rothschild (born 1920)

1967

1967-06-11-the-independent-press-telegram-long-beach-ca-pg63.jpg / https://drive.google.com/open?id=171ud0f3GMxQfmiY5hVc4c1I2RDDPge9q

NEW YORK (UPI) — Englehard Industries, Inc., and Minerals & Chemicals Philipp Corp. have agreed in principle to merge Philipp into Englehard. It is proposed to split Englehard stock two-for-one, then to exchange for each Philipp share 1.094 share of Englehard common plus 0.177 share of a New Englehard $4.25 annual dividend preferred convertible into New Englehard common at three for one.

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1971

1971-03-18-the-herald-news-nj-pg13.jpg / https://drive.google.com/open?id=16iBLEhdZMmMKigG0jSxvwwVjJ2zryx06

Rosenthal Gets Engelhard Post

NEWARK — Milton F. Rosenthal has been elected chief executive officer of the Engelhard Minerals and Chemicals Corp. He succeeded Charles W. Engelhard, who died a month ago.

Rosenthal, 57, had been president of the corporation since 1964. Mr. Englehard's post as board chairman will be filled by Alfred G. Blake, 69, who has been with the company 21 years.

Englehard's widow will take his place on the board.

Rosenthal joined Englehard as president after serving with the Hugo Stinness Corp., a West German metals and minerals concern. He is a native of New York City.

1971-03-18-the-herald-news-nj-pg13-clip1.jpg / https://drive.google.com/open?id=16kcFXfq1QxVngrloLmXGZARNAj_4KQCp

1977

1977-05-22-asbury-park-press-nj-pg66.jpg / https://drive.google.com/open?id=16ziarSge4wOSrdN5ZKuCtWi_BkDiHrvv

Engelhard Produces Variety

By COLIN BLACK
Press Staff Writer

WOODBRIDGE TOWNSHIP — Engelhard Industries, a division of the 95-year-old Engelhard Minerals & Chemicals Corp., said to be the nation's largest refiner and fabricator of precious metals, moved its headquarters Friday from Murray Hill to here in a consolidation move.

The new building is situated at 70 Wood Ave. in the township's Iselin section,

Inside Industry

next to Engelhard's research and development center in Menlo Park, Edison Township. It is adjacent to Metro Park Station and the Garden State Parkway.

ENGELHARD Minerals & Chemicals Corp. is based in New York. Another division, the Minerals & Chemicals Division, is situated across Wood avenue south of the new building.

Engelhard Industries has production facilities in Carteret, Newark, East Newark and Union, as well as in other states and abroad.

It is leasing two floors in the new four-story building which contains 92,000 square feet.

The parent company also is scheduled to move its headquarters and Philipp Brothers Division in New York from 299 Park Ave. to the McGraw-Hill Building at 1221 Avenue of the Americas in Rockefeller Center on May 23.

ENGELHARD has leased four floors of the McGraw-Hill Building. The 155,000 square feet of space is nearly double that of its existing Park avenue quarters.

Its Philipp Brothers Division is said to be the world's leading independent marketer of industrial raw materials, including ores, metals, alloys, minerals, fuels and fertilizers.

The division contributed about $5.7 billion of the company's 1976 net sales and operating revenues of $6.5 billion, according to Milton F. Rosenthal, president and chief operating officer.

"In the 10 years since Philipp Brothers moved to its current address, its total revenues have multiplied sevenfold," Rosenthal said. "As can be expected, its personnel increased substantially in number to accommodate the growth in its business.

"THE management of Philipp Brothers is convinced that despite the known, difficult problems of New York and the decision of many others to move their offices elsewhere, the city remains the ideal international crossroads for its operations."

Molten silver is poured from a furnace into ingot molds at Engelhard's metals refinery in Newark.

Engelhard employs 10,000 around the world. Of this total, 6,000 work in the U.S., 1,660 in New Jersey and 500 in New York. It is one of the largest companies in New Jersey for sales and employment, and is listed as the 28th largest company in the U.S. by Forbes rating system.

For the first quarter of 1977, ended March 31, it reported revenues of $1.5 billion, against $1.3 billion for the same quarter last year. Net earnings for the quarter were $28,970,000, compared with $30,742,000 for the same 1976 period.

RESENTHAL said the net earnings and pre-tax earnings of $45,012,000 for the first quarter were the company's second highest results for a first quarter, trailing by 5.8 and 5.3 per cent, respectively, the record earnings of the first quarter of 1976.

MILTON F. ROSENTHAL

"The year 1976 was the most successful business year in the company's history," Rosenthal said. "Record highs were achieved in net earnings, earnings per share of common stock, stockholders' equity, working capital, net sales and operating revenues, total assets and cash dividends to stockholders.

RETURN on stockholders' equity, another important criterion of performance, averaged 22.7 per cent.

"It is noteworthy that these achievements occurred in an economic environment that was inhospitable to most global companies in the natural resource industries.

"After a favorable beginning, the economy of the United States bogged down in the latter part of the year, while that of the other industrialized nations performed in a lackluster fashion throughout 1976.

"There are many indications that the economy in this country is strengthening, however, while that of other countries still trails behind. If these domestic trends continue, similar developments abroad should follow soon."h

ENGELHARD produces about 40,000 products of which thousands use gold, silver and platinum group metals. It refines all the precious metals.

It sells them through a global network of more than 30 sales offices. Its chief areas of operations are in the U.S. and Western Europe, with added important activities in Canada, Japan and Australia.

Its products are used in nearly every home and business in the U.S.

For example, the silver used in most toasters' electrical contacts is produced by Engelhard, and also the gold used to decorate most fine china and dinnerware. Even slick magazines use a fine clay made by Engelhard to heighten the gloss of its paper.

AMONG the fields its serves are the chemical, automotive, ceramic, pollution control, mill product, dental, jewelry, electrical, electronis, refining, glass and plastics industries. Many of its products also are used in research and development work.

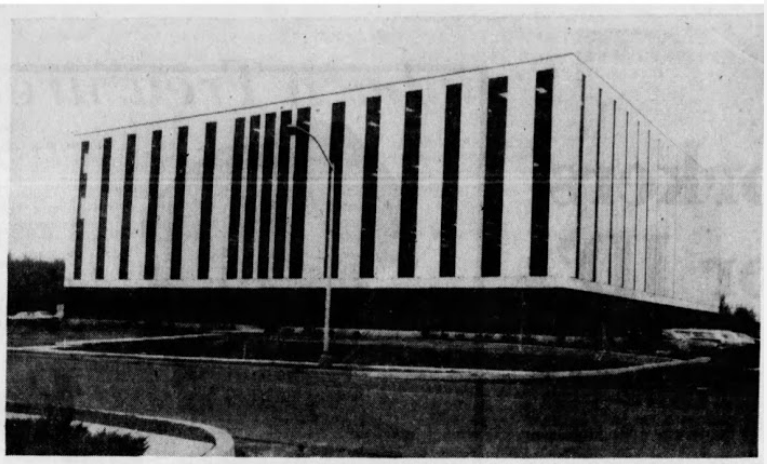
Engelhard even has a private *minting facility* in Carteret which produces commemorative coins, anniversary medallions and other special precious metal pieces for collectors, organizations and governments. Many of the Canadian olympic medals were made here.

The company was founded in Newark in 1875 by the late Charles W. Engelhard Sr., a German immigrant. In 1902, he purchased the Charles F. Croselmire Co. in Newark and with it founded the American Platinum Works the following year.

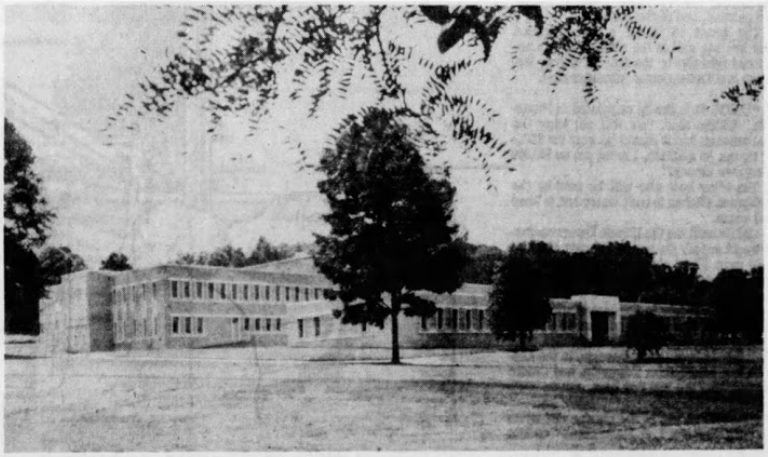
BAKER & Co., a Newark smelting and refining business, became a part of the company in 1904, and Hanovia Chemical and Manufacturing Co. a year later. This growth and diversification continued until the separate firms were consolidated in 1958 as Engelhard Industries Inc.

After other changes, the Engelhard organization merged with Minerals & Chemicals Philipp Corp. in 1967. The company's name was then changed to Engelhard Minerals & Chemicals Corp.

Engelhard's son, the late Charles W. Engelhard Jr., formerly chairman of the board of directors, died in 1971. The company currently doesn't have a board chairman.



Engelhard Industries has moved headquarters into this new building in Woodbridge.



Former headquarters of Engelhard Industries in Murray Hill will be sold.

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Engelhard Produces Variety

WOODBRIDGE TOWNSHIP - Engelhard Industries. a division of the 5-year-old Engelhard Minerals & Chemicals Corp., said to be the nation's largest refiner and fabricator of precious metals, moved its headquarters Friday from Murray Hill to here in a consolidation move.

The new building is situated at 70 Wood Ave. in the township's Iselin section, next to Engelhard's research and development center in Menlo Park, Edison Township. It ls adjacent to Metro Park Station and the Garden State Parkway.

ENGELHARD Minerals & Chemicals Corp. is based in New York. Another division, the Minerals & Chemicals Division, is situated across Wood avenue south of the new building.

Engelhard Industries has production facilities in Carteret, Newark, East Newark and Union, as well as in other states and abroad.

It is leasing two floors in the new four-story building which contains 92.000 square feet.

The parent company also is scheduled to move its headquarters and Philipp Brothers Division in New York from 299 Park Ave. to the McGraw-Hill Building at 1221 Avenue of the Americas in Rockefeller Center on May 23.

ENGELHARD has leased four floors of the McGraw-Hill Building. The 155.000 square feet of space is nearly double that of its existing Park avenue quarters.

Its Philipp Brothers Division is said to be the world's leading independent marketer of industrial raw materials. including ores, metals, alloys, minerals, fuels and fertilizers.

The division contributed about $5.7 billion of the company‘s 1976 net sales and operating revenues of $6.5 billion. according to Milton F. Rosenthal. president and chief operating officer.

"In the 10years since Philipp Brothers moved to its current address its total revenues have multiplied seven-fold." Rosenthal said. "As can be

expected. its personnel increased substantially in number to accommodate the growth in its business.

“THE management of Philipp Brothers is convinced that despite the known. difficult problems of New York and the decision of many others to move their offices elsewhere. the city remains the ideal international crossroads for its operations."

Engelhard employs 10,000 around the world. Of this total. 6,000 work in the U.S., 1.660 in New Jersey and 500 in New York. It is one of the largest companies in New Jersey for sales and employment, and is listed as the 28th largest company in the US. by Forbes rating system.

For the first quarter of 1977. ended March 31, it reported revenues of $1.5 billion. against $1.3 billion for the same quarter last year. Net earnings for the quarter were $28,970,000, compared with $30,742,000 for the same 1976 period.

ROSENTHAL said the net earnings and pre-tax earnings of $45,012,000 for the first quarter were the company's second highest results for a first quarter, trailing by 5.8 and 5.3 per cent, respectively. the record earnings of the first quarter of 1976.

“ The year 1976 was the most successful business year in the company's history . " Rosenthal said. “Record highs were achieved in net earnings, earnings per share of common stock, stockholders' equity, working capital, net sales and operating revenues, total assets and cash dividends to stockholders.

RETURN on stockholders' equity. another important criterion of performance. averaged 22.7 per cent.

" It is noteworthy that these achievements occurred in an economic environment that was inhospitable to most global companies in the natural resource industries.

“After a favorable beginning, the economy of the United States bogged down merged with Minerals & in the latter part of the year, throughout 1976.

“There are many indications that the economy in this country is strengthening. however, while that of other countries still trails behind. If these domestic trends continue. similar developments abroad should follow soon."

ENGELHARD produces about 40,000 products of which thousands use gold. silver and platinum group metals. It refines all the precious metals.

It sells them through a global network of more than Ill sales offices. Its chief areas of operations are in the U S . and Western Eu - rope. with added important activities in Canada. Japan and Australia.

Its products are used in nearly every home and business in the U.S..

For example. the silver used in most toasters' electrical contacts ia produced by Engelhard. and also the gold used to decorate most fine china and dinnerware. Even slick magazines use a fine clay made by Engelhard to heighten the gloss of its paper.

AMONG the fields its serves are the chemical. automotive. ceramic. pollution control. mill product. dental. jewelry. electrical. electronics. refining. glass and plastics industries. Many of its products also are used in research and development work.

Engelhard even has a private minting facility in Carteret which produces commemorative coins. anniversary medallions and other special precious metal pieces for collectors. mutations and governments. Many of the Canadian olympic medals were made here.

The company was founded in Newark in 1875 by the late Charles W. Engelhard Sr.. a German immigrant. to 1902. he purchased the Charles F. Croselmire Co. in Newark and with it founded the American Platinum Works the following year.

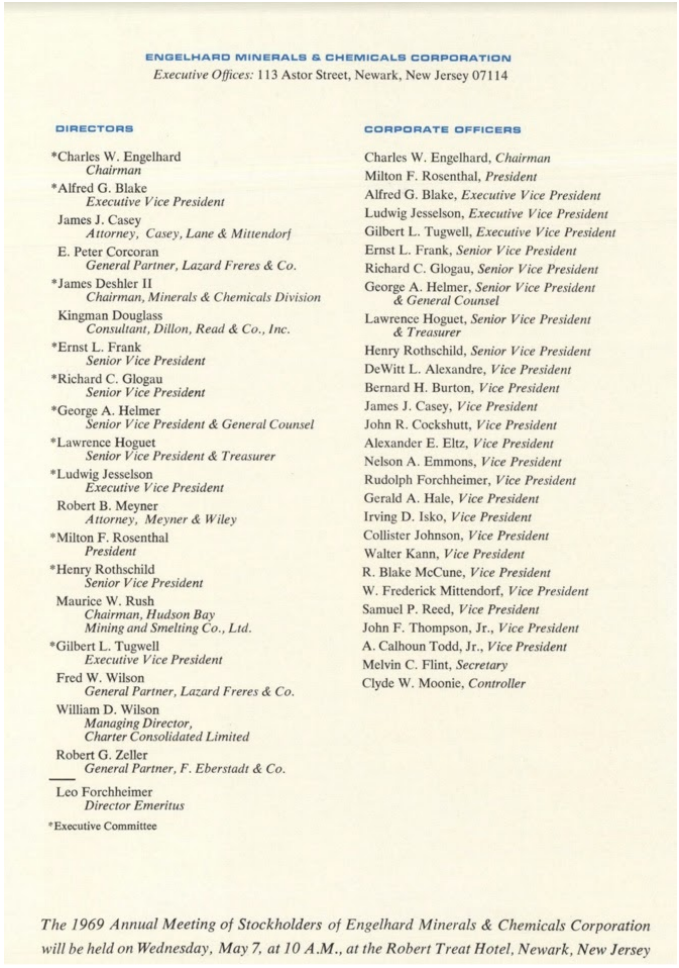
BAKER & Co.. a Newark smelting and refining business. became a part of the company in 1904, and Hano - via Chemical and Manufacturing Co. a year later. This growth and diversification continued until the separate firms were consolidated in 1958 as Engelhard Industries Inc.

After other changes, the Engelhard organization merged with the Minerals & Chemicals Philipp Corp. In 1967. The Company's name was then changed to Engelhard Minerals & Chemicals Corp.

Engelhard's son. the late Charles w. Engelhard Jr.. formerly chairman of the board of directors. died in 1971. The company currently doesn’t have a board chairman.

1969 - Corporate/Board at Engelhard Minerals and Chemicals Corporation

See [aa12][GDrive] . Read more about **Engelhard Corportation** .



ENGELHARD MINERALS & CHEMICALS CORPORATION

Executive Offices: 113 Astor Street, Newark, New Jersey 07114

DIRECTORS

*Charles W. Engelhard
Chairman
*Alfred G. Blake
Executive Vice President
James J. Casey
Attorney, Casey, Lane & Mittendorf
E. Peter Corcoran
General Partner, Lazard Freres & Co.
*James Deshler II
Chairman, Minerals & Chemicals Division
Kingman Douglass
Consultant, Dillon, Read & Co., Inc.
*Ernst L. Frank
Senior Vice President
*Richard C. Glogau
Senior Vice President
*George A. Helmer
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*Lawrence Hoguet
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William D. Wilson
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*Executive Committee

CORPORATE OFFICERS

Charles W. Engelhard, *Chairman*
Milton F. Rosenthal, *President*
Alfred G. Blake, *Executive Vice President*
Ludwig Jesselson, *Executive Vice President*
Gilbert L. Tugwell, *Executive Vice President*
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W. Frederick Mittendorf, *Vice President*
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John F. Thompson, Jr., *Vice President*
A. Calhoun Todd, Jr., *Vice President*
Melvin C. Flint, *Secretary*
Clyde W. Moonie, *Controller*

The 1969 Annual Meeting of Stockholders of Engelhard Minerals & Chemicals Corporation will be held on Wednesday, May 7, at 10 A.M., at the Robert Treat Hotel, Newark, New Jersey

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Rosenthal retires

EDISON — Milton F. Rosenthal, non-executive chairman of Englehard Corp., told the company's board of directors that he intends to resign his post, but will run for re-election as a member of the board, the directors announced yesterday.

The board also announced that it intends to nominate Reuben F. Richards, 56, as non-executive chairman to succeed Rosenthal.

Engelhard manufactures specialty chemicals and metallurgical products. The company also deals in precious metals.

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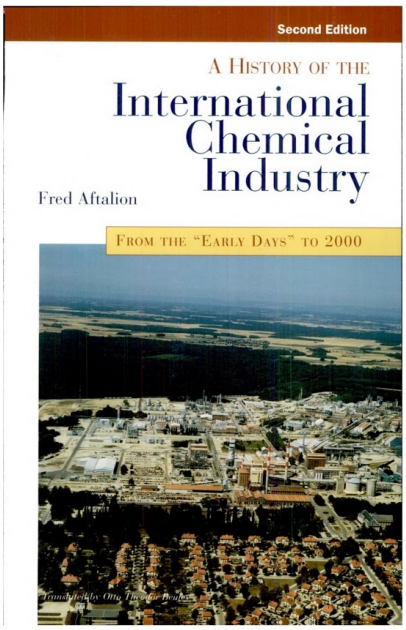


A History Of The International Chemical

The Alliance of Chemicals and Electronics

Chemical products used today in electronics seem, at first glance, to bea very ordinary kind. They are different from those generally offered, however, by reason of the extraordinary degree of purity which their producers must achieve in order to satisfy the stringent requirements of the electronics industry. The maximum dose of impurities tolerated in monocrystalline silicon amounts to one part in 10".

Polycrystalline silicon, produced from silane (SiH,) or trichlorosilane (SiHCl,) forms the upstream part of the *semiconductor sector*. Monocrystalline silicon is extracted from polycrystalline silicon and sliced into wafers 25microns thick and 8 to 10centimeters in diameter.

Hoechst's subsidiary Wacker is the world's leading polycrystalline silicon producer, with a capacity exceeding 2,000 tons. The overcapacities that began affecting the electronics industry in the early 19803 forced Monsanto, one of the largest wafer producers,to slow down its silicon production units in 1984. It has since sold this business to Germany's Hiils. Rhone-Poulenc, which had ambitions in the area but lacked the right technology, has withdrawn from the business.

There are enough suppliers of this type of silicon, including, for instance, Dow-Coming, Dynamit Nobel, Shin-Etsu, Tokuyama Soda, Motorola, and Texas Instruments.A possible substitute for the silicon used to produce wafers is *gallium arsenide*, in which Rhone-Poulenc, 101, and Shinetsu are already involved.

This situation shows how closely suppliers of electronic chemicals need to monitor the very rapid developments taking place in the area; otherwise, their productions r u n the risk of becoming obsolete before the full payoff.

Photosensitive products are also used for the production of wafers. These photoresists polymerize through X-ray treatment. They are called positive or negative according to whether or not they are soluble in solvents when exposed to light. The miniaturization of printed circuits tends to give a boost to positive resins. Germany's Hoechst has pioneered in such photosensitive resins. They are also supplied by Eastman Kodak, Olin Hunt, Ciba-Geigy, E. Merck and Tokyo Ohka Kogyo.

A great number of chemical firms have set up special divisions to manufacture products for the electronics industry, essentially through acquisitions. For example, *Du Pont* bought Berg Electronics in 1972, and a little later *Olin* purchased *Philip A. Hunt*. Some companies, such as Du Pont, Olin, and Ciba-Geigy, have chosen an "integrated systems" approach in this area by providing as wide a range as possible of products and services for the electronics industry. Others have elected to remain strictly within the special areas in which they excel through long experience or proper chemical integration. Thus it was the work carried out before the war with AEG that led BASFto make its range of magnetic tapes and gave it the supremacy in chromates which it shares with Du Pont. H oechst came to silicon through Wacker and to gases through Messer Griesheim, and now provides, besides high-purity special gases, a range of photosensitive polymers. RhonePoulenc became involved in printed circuits through its polyimide resins and Ciba-Geigy through its epoxy resins.

Most of the companies already producing diethylene glycol terephthalate polymers have launched into the applications of polyester film to video and data processing. Hoechst through its Kalle subsidiary, ICI. Rhone-Poulenc, Du Pont, Japan's Toray, Teijin, and Toyobo, the latter in association with Rhone-Poulencin Nippon Magphane.

Although Rhone-Poulenc has given up direct upstream development after fruitless association with Dysan in magnetic supports and Siltec in silicon, it still believes it can use its know-how in rare earthsto develop their electronics applications. Today, Rhone-Poulenc is the indisputable leader in rare earths, accounting for 40 percent of the world market. At its units in La Rochelle, France, and Freeport, Texas, it is capable of extracting from lanthanide sands the fourteen elements they contain. Over the last few years, samarium, for instance, has become essential for microelectronics to the same degree that europium and yttrium oxides already are for color television.

Whether they approach electronics directly, or through chemicals, or both, chemical companies involved in this business can hope to reap the fruits of their efforts in this area, providing, however, that the sector is spared the technological and economic jolts it has suffered over the past ten years.

Catalysts

Ever since England's Humphry Davy observed in the early 18005 that water was formed when hydrogen and oxygen react in the presence of a red-hot platinum wire, the phenomenon which Berzelius was to call catalysis has intrigued chemists. The uses of catalysts in industry were first consciously demonstrated by Peregrine Phillips in 1832 when he used platinum to oxidize sulfur dioxide (SO,) to form sulfur trioxide (SO,) and by Frederic Kuhlmannin

1837, when he produced nitric acid from ammonia.

Early in the twentieth century, Germany's Wilhelm Ostwald, France's Paul Sabatier, and America's Irving Langmuir had advanced a step in interpreting the phenomenon of catalysis by showing that it was characterized by an acceleration of the rate of reactions and that it was conditioned by the state of the catalyst's surface. From then on, chemical technology made striking progress through use of catalysts. Between 1905 and 1920, and more particularly in Germany, there was a spurt of new industrial-scale processes, for example, Fischer-Tropsch synthesis and BASF's use of vanadium oxide to produce sulfuric acid.

It is no exaggeration to say that without catalysts Germany would have been in noconditionto pursue its war effort until November 1918. Likewise, if Houdry had not developed in the early days of World War II its "catalytic cracking" process, the United States would have found it very hard to provide its bombers with light fuel. It was also through catalytic reforming that the United States managed to obtain from petroleum the toluene needed to produce TNT between 1941and 1945.

Since then, catalysts have played an essential role, particularly in the production of ethylene oxide from ethylene (Shell, Scientific Design), in the synthesis of hydrogen cyanide and acrylonitrile through ammoxidation (oxidation in the presence of ammonia), of formaldehyde (from oxidation of methanol), and, of course, in the polymerization reactions to produce plastics, elastomers, and synthetic fibers. It is not surprising, underthe circumstances, that a catalyst industry should have developed after World War 11through internal growth or through acquisitions. The very diversity of catalysts and of their uses has necessarily led to a fragmented sector.

Some oil companies became involved in the productionof catalysts because they needed them in their own refineries. Mobil has developed the ZSM 5 catalyst based on zeolite following studies which began as early as 1936 on catalytic cracking; Shell has used its own technology to develop the sales of its catalysts for hydrogenation cracking. Other companies became involved in catalysts because of their precious metals business.Johnson

Matthey, **Engelhard**, and Degussa applied their know-how in platinum metals to industrial catalysts. Chemical firms, for their part, approached the

area in different ways. I C Imade the most of its acquired know-how, particularlyin methanol and ammonia, by associating with Nalco to form Katalco, a catalyst supplier; American Cyanamid has set up asubsidiary in Holland with Ketjen; Rhone-Poulenc has formed Procatalyse in joint venture with Institut Francaisdu Petrole.

In other cases, the involvement in catalysts has been through acquisitions. **W. R. Grace** bought **Davison Chemical** in 1953. and in 1984 Union Carbide purchased Katalistics International, BV. One of the three leading United States companies in cracking catalysts, together with **Engelhard** and **Davison**, is **Harshaw-Filtrol**, which is the result of the merger of subsidiaries of Gulf Oil and Kaiser Aluminum & Chemical that have specialized in the area.

The developers of new processes have found it at times more expedient to set up their own separate entities to supply the catalysts they were advocating. Allied-Signal's subsidiary UOP did so for its platforming; Houdry for its catalytic cracking; Ralph Landau for the silver catalyst used for direct ethylene oxidation, which was marketed by Halcon SD and subsequently taken over by Denka, then by Bayer; and Phillips Chemical for its polyolefin catalysts, sold through its subsidiary, Catalyst Resources.

Through inert supports, a number of firms have succeeded in creating a niche in catalysts - for instance, Crosfield, a subsidiary of Unilever in England and a silica producer; or the German Siidchemie group, which specializes in hydrogenation and polymerizationcatalysts; or again Condea, which producesin West Germany alumina of high purity. The sector also includesa few firms which are only involved in a very special sector. Denmark's Haldor Topsoe makes catalysts for the synthesis of ammonia and methanol; and Lithium Company of America, an FMC subsidiary, produces lithium, while Du Pont makes boron derivatives. Linked to the oil industry, to petrochemicals, and to the large commodity chemicals, the catalyst industry can hardly escape the economic ups and downs affecting these three large sectors. Its clients are understandably both demanding and prudent, for the catalytic system is basic to the good running

of production units. This explains why it is an area of business that is so difficult to penetrate and run profitably. Its structure should therefore remain rather stable even with the development of catalytic exhaust systems. Introduction in the United States and in Europe of unleaded gasoline and the use of bimetallic systems for catalytic reforming should open up new markets for platinum and rhodium.

ROOTS

See 2019-03-17-referenceforbusiness-com-history-engelhard-corporation.pdf / https://drive.google.com/open?id=1_yVKl45k0Q3w0haIEntV3Df48ebY21ea

Immigrant Roots

The company's roots in the precious-metals industry extend back to 1891, the year in which Charles Engelhard immigrated to the United States from his native Germany to work as a foreign sales agent for his employer, a marketer of platinum. Engelhard decided to remain in the United States and soon was able to secure equity positions in a number of precious metals companies, chief among them Baker & Co., platinum; Irvington Smelting, which dealt with gold and silver; Hanovia Company; and American Platinum Works. Engelhard, who in*Forbes*, August 1, 1965, was described by his son as a "tough businessman" and "very Germanic," united the companies into a comprehensive precious-metals fabricator under the name of Engelhard Industries. The Engelhard interests bought, refined, and sold the full range of precious metals, but, with Baker & Co. taking the lead, soon developed a special expertise in platinum.

Platinum is valuable not only for its beauty but because it exhibits a number of unusual and useful physical properties, among them the virtually complete resistance to corrosionby chemicals or heat, and a molecularformation well-suited to various types of catalysis. By the early 1900s Engelhard had begun to exploit the metal's industrial value as well as its importance to the jewelry and dental trades, helping develop its use as a heat resistant liner for chemical vessels and as filaments in electric light bulbs. As platinum was scarce, however, the metals industry did not much pursue its industrial applications.

Engelhard Industries remained a supplier of precious metals primarily for ornamentation and dentistry. It was not until the 1920s that a secure supply of platinum encouraged further study of the metal's engineering value. A Canadian mining concern, Inco, formerly called International Nickel Company, demonstrated that platinum could be produced as a byproduct of nickel, thus temporarily stabilizing the supply of platinum and prompting intensive research into its properties. Charles Engelhard became Inco's exclusive dealer of platinum in the United States, and in the early 1930s created a research-and-development department of his own to pioneer new uses for the metal. In conjunction with Du Pont, Engelhard's Baker & Co. came up with a revolutionary process for the manufacture of nitric acid that employed a platinum and rhodium catalyst. The process was soon adopted throughout the chemicals industry. Engelhard Industries began a long evolution that would first transform the company into the world leader in precious-metals fabricating and later encourage its present focus on catalysis in many of its forms.

The 1930s saw the development of the platinum spinnerette, a platinum nozzle perforated by thousands of microscopic holes designed to spin out synthetic fibers for the manufacture of textiles. World War II fostered other uses of platinum, such as the platinum-tipped sparkplug for aircraft engines, able to withstand high temperatures for long periods without corroding. In the early 1950s platinum began to be used in the petroleum industry for the catalysis of high-octane gasoline and to refine heavy crude oils. Engelhard Industries continued to derive the large majority of its sales from nonindustrial markets such as jewelry, but in the 1940s Charles Engelhard added to his growing assortment of companies with the purchase of D.E. Makepeace Company of Massachusetts, makers of gold and silver sheet, tube, and wire; Amersil Company, industrial appliers of fused quartz; and National Electric Instruments Company, a manufacturer of medical instruments. With these and other industrial acquisitions, Engelhard laid the groundwork for the later expansion of his business carried out by his son, Charles Engelhard Jr. Born in 1917, Charles served as a pilot in World War II and afterward joined his father in the metals business. Anxious to make his own mark, young Engelhard soon moved to South Africa and began exploring opportunities in that mineral-rich country, source of much of the world's gold, platinum, and diamonds.

The South African Connection

Until 1971 the history of Engelhard Corporation was largely the story of Charles Engelhard Jr. The founder's son had the unusual good fortune to succeed in both of the roles available to a wealthy scion. He became an international socialite and built his father's company into a far greater success. Upon settling in South Africa, Engelhard started a gold-exporting business to supply his father's companies with raw material, as well as to turn a profit. At the time, gold could not be traded except in the form of art objects, so Engelhard shipped his gold in the shape of dishes, jewelry, and even solid gold pulpit tops, much of which was later melted down by the customer. Engelhard incorporated his firm, Precious Metals Development, in London in 1949, using the services of Robert Fleming & Co. At Fleming & Co. Engelhard met Ian Fleming, the creator of James Bond, who is believed to have used the portly, gold-toting Engelhard as the model for his famous villain, Auric Goldfinger. When his father died in 1950, the younger Engelhard assumed control of a complex, heterogenous mix of companies headquartered in Newark, New Jersey. He once again made the United States his home, bringing with him connections with many of the leading figures in South African mining.

Engelhard found that his autocratic father had run his various metals businesses virtually without administrative help, and set about centralizing authority while also delegating its daily implementation. In 1953 he brought in Gordon Richdale as president of Engelhard Industries, the main operating company for the family interests. Richdale had experience in mining in the Transvaal region of South Africa, and was a good friend of Sir Ernest Oppenheimer, the chairman of that country's dominant mining company, Anglo American Corporationof South Africa. Engelhard had become friends with Oppenheimer's son Harry as well, so when the Oppenheimers needed a partner for a 1957 bailout of Central Mining and Investment Corporation they turned to Engelhard. Central Mining was a large, London-based oil and mining company with extensive South African holdings, in danger of a hostile takeover, which it hoped to prevent with Engelhard's help. For a relatively small amount of cash, $3.5 million, Engelhard was able to gain a 30 percent share of Rand American Investments Limited, an Oppenheimer creation that then won the proxy fight at Central Mining and took control of its 12 gold mines, timber holdings, lime quarries, and 13 newspapers, with a total estimated value of $500 million. Charles Engelhard, Jr. was named chairman of Rand American, having parlayed a youthful lark in South Africa into an intimate partnership with one of the most powerful families in international business.

The South African venture was kept separate from Engelhard's stable of U.S. companies, which in 1957 had sales of $173 million, more than one-third of them derived from platinum fabricating. Engelhard Industries also did about $32 million in gold fabricating, and $55 million in silver, making it a world leader in all three of the major precious-metals markets. Industrial applications of precious metals were on the rise, and Engelhard Industries was well positioned to profit from their growing importance. Charles Engelhard, Jr. also continued to pursue his valuable South African connections. As part of the 1957 takeover of Central Mining, Engelhard and Harry Oppenheimer had agreed to a stock swap, each of them taking 10 percent of the other's family holding company. Engelhard thus gained a very valuable piece of Ernest Oppenheimer and Sons, the force behind Anglo American Corporation and the De Beers diamond mines, while Harry Oppenheimer took a similar chunk of Engelhard Hanovia, the family-owned corporation that, in turn, controlled 72 percent of Engelhard Industries. The trade would appear to have been one-sided, as Anglo American was a much larger concern than the Engelhard interests. Over the next two decades, however, Harry Oppenheimer continued to buy stock in Engelhard Hanovia and by 1970 came to own 70 percent, at which time his investment proved to have been very wise indeed.

In the meantime, Engelhard upped his investments in South Africa. In 1958 he set up the American-South African Investment Company Limited, with $34 million in assets. American-South African was an investment trust trading in South African gold stocks and was the first South African company listed on the New York Stock Exchange. As chairman of Rand Mines, one of the former Central Mining companies, Engelhard greatly expanded the firm's holding into uranium, coal, and copper refining; and in 1961 he paid $17 million for two gold mines owned by Kennecott Copper, rolling all of his South African holdings into a new joint investment company with the Oppenheimers called Rand Selection Corporation Limited. Engelhard had by that time become a figure of recognized importance in South African affairs, an honor that brings with it involvement in all of the moral and political difficulties besetting that country. After the Sharpeville massacre of 1960, Engelhard became more open in his criticisms of apartheid and somewhat curtailed his active investment in the country. Engelhard did not seem to bother himself with apologies or explanations of the relation between his fortune and apartheid. As a businessman and as a strong supporter and confidante of Democratic politicians, he appears to have viewed apartheid as inefficient and doomed but did not further concern himself with its injustices.

A Major Deal, 1963

In 1963 Engelhard put together the deal that would determine the future of his company. At the urging of Andre Meyer of the investment-banking house Lazard Freres, Engelhard took a 20 percent interest in Minerals & Chemicals Philipp (MCP), a recently formed partnership between a rather small producer of nonmetallic minerals such as kaolin and fuller's earth, and Philipp Brothers, a powerful trading firm specializing in the buying and selling of ores on the international market. Again Engelhard made a stock swap an important part of the deal, giving up 8 percent of Engelhard Hanovia as partial payment for his 20 percent interest in MCP, which in 1964 had sales of $447 million, the bulk of it generated by Philipp Brothers's fast-growing ore trading. In fact, Engelhard's purchase of MCP stock soon proved prescient, as worldwide demand for precious and industrial metals began to take off, and Philipp's sales

skyrocketed, gaining as much as 45 percent in a single year.

By 1966 MCP sales had reached $709 million, while Engelhard Industries did only about 40 percent of that figure. Engelhard nevertheless worked out a merger of the two companies, in September 1967, creating Engelhard Minerals & Chemicals Corporation (EMCC), with the Engelhard family controlling about 40 percent of the new giant's stock. Given the relative size of the partners in this transaction, and Harry Oppenheimer's increasing role in the Engelhard family interests, it is probable that the merger was made possible by the financial power of Oppenheimer's Anglo American Corporation. EMCC was already a large corporation, but its potential was not yet apparent to many observers. Nearly one-half of the company's 1967 net income of $28 million was generated by the Philipp trading division, with the Engelhard metal processing contributing 34 percent, and minerals and chemicals about 19 percent. Philipp's trading worked on a small profit margin but was soon to enjoy phenomenal growth, as the world turned increasingly to spot traders to move scarce natural resources around the globe quickly and efficiently. By 1972 EMCC's sales hit $2 billion, about 80 percent of it supplied by Philipp, and in 1974 revenue reached the astonishing figure of $5 billion and continued to climb.

Charles Engelhard, Jr. did not live to see the success of his combination, however. When the "platinum king," as he was called, died in early 1971, his family's Engelhard Hanovia owned 43 percent of the increasingly profitable EMCC; but by that time 70 percent of Hanovia was controlled by Anglo American, which promptly exchanged its Hanovia shares for 30 percent of EMCC, leaving the Engelhard family with 10 percent of EMCC and all of its other interests. The friendship of Engelhard and Oppenheimer thus ended with a rough parity of gain--with the help of Oppenheimer, Engelhard had built an enormous metals combination, but when the dust settled it was Oppenheimer who would reap the long-term benefits.

In the absence of an Engelhard heir interested in business, Milton Rosenthal was appointed chairman of EMCC. Rosenthal had been president of EMCC since the 1967 merger, and after Engelhard's death inaugurated a tightening of controls and general overhaul of the company. In part, this was an inevitable concomitant of the executive change, which saw Engelhard's largely blue-blood management give way to a team dominated by Philipp Brothers's trading veterans, chief among them Ludwig Jesselson. Neither side of the merger particularly enjoyed working with the other, and when the MCP men gained control of the company many of the Engelhard people left or were fired, and an air of hardworking sobriety settled over the firm. Rosenthal and his advisors cut back on luxuries but expanded mightily their trading business, which, soon after the 1973 oil crisis, began handling oil on the spot market. Commodities traded on the spot market, as opposed to the futures market, are for immediate delivery. From modest beginnings, the oil spot market quickly reached critical importance during the 1970s, a decade in which all natural resources seemed in short supply, and by 1978 Philipp was trading $4.5 billion in oil alone. Its $9 billion in total sales dwarfed the minerals-and-chemicals and precious-metals business of its partners, even as the latter became increasingly successful in the development of fluid catalytic cracking materials and exhaust emission control converters.

Philipp Brothers owed its success primarily to the scarcity of its commodities and the skill of its traders. By keeping tabs on the needs of both producers and consumers of over 100 kinds of raw materials, Philipp was able to buy and sell large quantities of goods for small but almost instant profits, and even offered its clients the use of a company bank in Switzerlandto help finance the construction of new plants or to make unusually large purchases. As the markets for raw materials became increasingly widespread, Philipp's business continued to grow at a fantastic rate, and from 1978 to 1980 EMCC's sales jumped from $10 billion to $26.5 billion, about 90 percent of which was due to Philipp. So great a disparity between former partners naturally strained corporate relations, as minerals-andchemicals people along with those in precious metals felt overshadowed by their trading counterparts and had trouble justifying time spent managing assets that grew at so comparatively slow a rate. In the spring of 1981, therefore, the metals-and-minerals and precious-metals divisions of EMCC were spun off as a new, publicly traded entity to be called Engelhard Corporation, while Philipp Brothers went its way as Phibro toward an eventual merger with Salomon Inc. Harry Oppenheimer's Anglo American Corporation maintained a 30 percent stake in both companies, a double wild card waiting to be played at any time.

Engelhard Starts Anew

The new Engelhard Corporation set about revising its mix of sales. In 1983, for example, when the company did about $2 billion in sales, 85 percent of the sales were generated by the precious-metals business, but the much smaller minerals and chemicals division produced 60 percent of Engelhard's net income. As a result, in that year the company began referring to itself as a specialty chemicals firm, and two years later regrouped its businesses according to function rather than the raw material involved. Thus, all catalytic businesses became part of the specialty-chemicals division, regardless of whether they made use of kaolin or platinum for their catalysis; while the specialty-metals division worked strictly with metals technology and metals management services. This gradual redefinition and housecleaning continued up to the 1990s, with Engelhard announcing that it would sell off some of its remaining gold and silver businesses and begin deep cuts in its salaried staff, in anticipation of which the company took a special charge of $160 million in 1989.

At the end of the 1980s Engelhard Corporation derived the lion's share of its sales from the remaining portion of its precious-metals fabrication business, $1.6 billion, but far more profitable was the catalysts-and-chemicals division, which earned $43 million on sales of $450 million in 1989. Much of that was generated by fluid catalytic cracking materials made for the petroleum industry. Even more promising was the performance of the company's third product grouping, now known as pigments and additives. This group, a descendent of the EMCC merger partner that produces paper coatings and pigments for the plastic and paint industries, along with several businesses purchased in 1988 from the Harshaw/Filtrol Partnership, netted $53 million on only $360 million in sales. It was no surprise, therefore, that despite its heritage as one of the world's premier users of precious metals, Engelhard was steadily moving toward the more lucrative fields of catalysis and specialty chemicals.

Ups and Downs During the 90s

Throughout the 1990s, Engelhard tried to grow through acquisitions and the introduction of new products. Revenues hit a high in 1990 of $2.93 billion, but would not reach that level again until 1996. Under CEO Orin Smith in 1992 Engelhard acquired the remaining 50 percent of its German auto catalyst subsidiary, Kali-Chemie; formed Salem Engelhard in a joint partnership with Salem Industries, a maker of pollution-control systems; formed Heraeus Engelhard Electrochemistry with Heraeus Inc.; and founded Acreon Catalysts with Procatalyse. In 1993 it sold off its interest in metal plating firm M&T Harshaw and in 1994 struck a deal with ICC Technologies, Inc. to develop and market air conditioning and air-treatment systems based on Engelhard's new desiccanttechnology, in which the use of ozone-depleting refrigerants could be avoided by drying the air before it is cooled. The same year, it also purchased the assets of Solvay Catalysts GmbH of Germany and of General Plasma, Advanced Plasma, and Jet-Com, manufacturers of thermal spray coatings for emissions-control applications which Engelhard intended to develop into a major line of emission systems technology products for cars, trucks, and buses. As part of a major reorganization plan, in 1994 Engelhard closed, relocated, or consolidated five of its U.S. facilities and two European sites.

In 1995 Engelhard formed a joint venture named Metreonwith W.R. Grace to develop advanced metallic-substrate catalytic converters for the auto industry, purchased the rest of its Salem Engelhard joint venture, expanded the production capacity of its Acreon venture, and formed a joint venture with CLAL, a French precious metal fabricator. It also expanded from its historical participation in the precious metals brokerage industry by entering base metals dealing and brokering through a new subsidiary, Engelhard International Ltd. and founded Engelhard Power Marketing to resell electric power to U.S.

utilities. In 1996, it formed Engelhard-Highland to produce high-performance color pigments in India, formed a joint venture with its Japanese affiliate N.E. Chemcat to manufacture auto catalysts in Thailand for sale throughout southeast Asia, and acquired the assets of infraredgas sensor manufacturer Telaire Systems, which it renamed Engelhard Sensor Technologies. In May 1996, it made its largest acquisition ever by acquiring Mearl Corporation, a maker of pearlescent pigments and iridescent film for the automotive and cosmetic industries.

Engelhard's major product launches in the 1990s included a "molecular sieve" water filter capable of significantly reducing contamination of household tap water, an auto emissions-control device that traps pollutinghydrocarbons during the two minutes after engine startup in which the catalytic converter is ineffective, a new trimetal catalyst technology named Trimax, a new catalyst for the heavy feedstocks demanded by Pacific Rim refineries, and an all-palladium auto catalyst that could be placed closer to the engine and activated more quickly. Perhaps its most promising innovation, however, was Prem-Air, a catalytic filter that when coated on a car's radiator promised to destroy 90 percent of the ozone passing over it. However, after testing the product on 20 of its cars Ford Motor decided that Prem-Air was not as effective as advertised and decided not to adopt it. Despite the blow, Engelhard continued to refine the product for other uses and positioned itself to become not only a supplier of auto emission catalysts but of "total solutions," including sensors, multicomponent packages, and catalyst substrates.

In 1996 Engelhard enjoyed its sixth consecutive year of record earnings and looked hopefully to emerging catalytics and pigments demand in Eastern Europe and the Pacific Rim. By the mid-1990s 41 percent of Engelhard's sales were outside the United States and its engineered materialsand commodities dealing operation was accounting for 60 percent of its revenues. The manufacture of catalysts/chemicals and pigments/additives together accounted for the remainder.

Principal Subsidiaries: Engelhard-Kalichemie (Germany); Hankuk-Engelhard (Republic of Korea; 50%); N.E. Chemcat (Japan; 38.8%); Engelhard West, Inc.; Engelhard Canada, Ltd.; Engelhard Industries International, Ltd. (Canada); Engelhard Technologies, Ltd. (Canada); EC Delaware, Inc.; EI Corporation; Engelhard Asia Pacific, Inc.; Engelhard C Cubed Corporation; Engelhard DT, Inc.; Engelhard EM Holding Company; Engelhard Energy Corporation; Engelhard MC, Inc.; Engelhard Metal Plating, Inc.; Engelhard Pollution Control, Inc.; Engelhard Power Marketing, Inc.; Engelhard Sensor Technologies, Inc.; Engelhard Strategic Investments, Inc.; Engelhard Supply Corporation; Mustang Property Corporation; Engelhard Pigments OY (Finland); Engelhard Pyrocontrole S.A. (France); Engelhard S.A. (France); Engelhard Holdings GmbH (Germany); Engelhard Process Chemicals GmbH (Germany); Engelhard Technologies GmbH (Germany); Engelhard Technologies Verwaltsung GmbH (Germany); Engelhard Italiana S.P.A.; Engelhard Metals Japan, Ltd.; Engelhard DeMeern, B.V. (Netherlands); Engelhard Netherlands, B.V.; Engelhard Terneuzen, B.V. (Netherlands); Harshaw Chemical Company; Mearl Corporation; Engelhard Peru S.A.; Engelhard South Africa, Ltd.; Engelhard Metals A.G. (Switzerland); Dnipro Kaolin (Ukraine); Engelhard International, Ltd. (U.K.); Engelhard Limited (U.K.); Engelhard Metals, Ltd. (U.K.); Engelhard Sales, Ltd. (U.K.); Engelhard Technologies, Ltd. (U.K.); Sheffield Smelting Co., Ltd. (U.K.); Engelhard Export Corporation; Engelhard-CLAL, Ltd. Partnership; Metreon; Engelhard-CLAL SAS (France); NE Chemcat Corporation (Japan); Engelhard/Colortronics; Engelhard/ICC; Heesung-Engelhard Corporation (South Korea); Acreon Catalysts.

https://www.freedoniagroup.com/pdf/1494smwe.pdf

The top seven catalyst suppliers -- Engelhard, GraceDavison, Akzo Nobel, Royal Dutch/Shell (via Crite-rion, CRI Catalyst and other operations), UOP,Atofina and Sud-Chemie -- accounted for 45 percentof the US market in the year 2000

Now remember ...

"

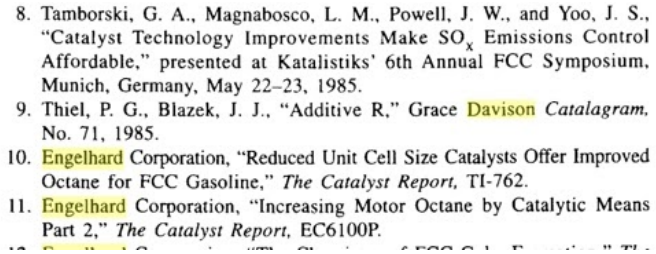
#Catalysts - Two largest providers of catalysts (2004): Engelhard Corp and Grace Davison Engelhard Corp: Where Gilbert Tugwell worked for 35 years Gilbert Tugwell - Business partner of Robert Swan Mueller II at Tugwell-Mueller Associates RSM1 - Exclusive distributor, Davison"

SEE "https://books.google.com/books?id=cRIIvBe-OSIC&printsec=frontcover#v=onepage&q&f=false "

OMG - Grace Davision - And Peter G Thiel , who I think is father of Peter A Thiel "Fluid Catalytic Cracking Handbook: An Expert Guide to the Practical ..."

"This thoroughly updated edition of Fluid Catalytic Cracking Handbook provides practical information on the design, operation, troubleshooting, and optimization of fluid catalytic cracking (FCC) facilities. Based on the author's years of field experience, this expanded, second edition covers the latest technologies to improve the profitability and reliability of the FCC units, and provides several "no-to-low-cost" practical recommendations. A new chapter supplies valuable recommendations for debottlenecking and optimizing the performance of cat cracker operations."

Fluid Catalytic Cracking Handbook: An Expert Guide to the Practical Operation, Design, and Optimization of FCC Units"



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WIKIPEDIA

https://en.wikipedia.org/wiki/Engelhard

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Housatonic

EpiGenX Pharmaceuticals

2000 (July 02) - EpigenX - David L Gluck is President

Full page : [HN00SK][GDrive]

Hirinng in 2001 - https://www.newspapers.com/image/188303252/?terms=%22EpigenX%22

Santa Maria Times (Santa Maria, California) · 02 Jul 2000, Sun · Page 29

FIND CLIP PRINT/SAVE SHARE

EpiGenX

As hot as today's news is this company that could make the success of Viagra a whimper in the dog-eat-dog world of business.

This integrated firm deals in the world of epigenetics, not a word that trips off the tongue lightly but one that may become a household word with the announcement earlier in the week that an entire human genome has been mapped.

David L. Gluck, Ph.D., president of EpiGenX, describes in glowing terms how this pharmaceutical player hopes to "fight disease through the control of genes."

Robert Acosta

The partnership of financial and chemical experts has a two-pronged approach: Sell the technology enhancing gene discovery to life science companies, then use the revenues to advance small molecule drugs to fight cancer and infectious disease.

Dennis Cagan

Diseased cells, like healthy cells, have a certain gene pattern, Gluck explains. In diseased cells, certain parts of the cell are turned off. Researchers hope to develop drugs to reprogram cell components, reversing the course of the disease, he says.

Josh Albright

This isn't science fiction. EpiGenX "has a lead anti-cancer drug to treat up to 65 percent of all cancers and has an active pipeline of second-generation drugs under development," the company's prospectus reports.

The National Cancer Institute is currently testing the lead drug in preclinical studies through the prestigious RAID program, the company adds.

Doug King

The company is also developing a class of antibiotics that would fight bacteria the same way as disease. Antibiotics based on gene mapping could render Staph, E. coli, salmonella and gingivitis infections harmless with virtually no side effects since the body's own mechanisms would be used, researchers believe.

Cheryl Auger

Gluck's request is for $4.5 million to equip a laboratory and carry out its objectives. The company has raised $300,000 from private investors with more than $800,000 additional pending along with $2.5 million in government grants.

Obviously, returns could be huge. Revenues from licenses and partnerships with pharmaceutical companies and "functional genomics" companies could bring in revenues of $100 million by Year 5, the company hopes.

EpiGenX plans to go after breast, colorectal and prostate cancers in its drug development. Medical care for these patients now totals more than $30 billion a year. A successful drug could help three million patients.

2000-07-02-santa-maria-times-pg-b-13-clip-epigenx.jpg

[HN00SL][GDrive]

2002

DEVELOPMENT OF DNA METHYLTRANSFERASE INHIBITORS AS ANTI*

https://www.sbir.gov/sbirsearch/detail/160844

https://www.careersinpharmaceutical.com/epigenx-pharmaceuticals-inc-listing-11483.htm

EpiGenX Pharmaceuticals Inc.

Address:

5385 Hollister Avenue

Santa Barbara, CA 93111

Phone:

(805) 964-4486

Website:

http://www.epigene.com

Company Information:

EpiGenesis Pharmaceuticals Inc., is located at Santa Barbara, CA and is a privately held biopharmaceutical company developing inhaled respiratory medicines for the treatment of asthma and chronic obstructive pulmonary disease (COPD).

Epigenesis is focused on inhaled delivery to leverage the enhanced safety profile of topical therapy over systemic therapy. The Company's lead compound, EPI-12323, is a once daily, small molecule, inhaled non-glucocorticoid steroid that targets the inflammatory and airway obstruction cascade in the irritated lung.

The Company is committed to developing a series of inhaled respiratory medicines through Phase II studies using small molecule discovery methods.

Epigenesis is continuing its product development efforts by observing a broader asthma population in a Phase II clinical study using its new proprietary inhaled dry powder formulation.

2003 grant

Development of Inhibitors of the DNA Methylation Process

Mikovits, Judy Anne

Epigenx Pharmaceuticals, Santa Barbara, CA, United States

https://grantome.com/grant/NIH/R44-CA090013-03

"There is now considerable evidence that DNA methylation, by silencing tumor suppressor and mis-match repair genes, has a major role in the causation and progression of cancer and is also involved in abnormal DNA methylation events following HIV (Human Immunodeficiency Virus) infection. In"

2001 (May 09) Press Release - "Yahoo - EpiGenX Rounds Out Scientific Advisory Board with Nobel Laureate"

See [HX000R][GDrive]

Posted on: 05/09/2001

Dr. Yuan-Tseh Lee Joins Fellow Scientists on Biotechnology Company Advisory Board

SANTA BARBARA, Calif.--(BW HealthWire)--May 7, 2001--EpiGenX Pharmaceuticals Inc., announced today that Dr. Yuan-Tseh Lee has joined a distinguished advisory board which has been assembled to guide the Company in the development of epigenetic-based diagnostics and therapies for cancer and infectious disease. The Scientific Advisory Board, composed of leading scientists in the biotechnology and academic community, will be instrumental in accelerating the development and commercialization of the company's technologies.

Dr. Yuan-Tseh Lee joins an elite group including Michael T. Bowers, Ph.D., Professor of Chemistry and Thomas C. Bruice, Ph.D., Professor of Chemistry and Biochemistry from University of California, Santa Barbara; Joseph F. Costello, Ph.D., on the faculty of University of California, San Francisco, Department of Neurological Surgery; Melvin Louis DePamphilis, Ph.D., Section Chief for the Eukaryotic DNA Replication and Gene Expression unit of the Molecular Growth Laboratory at the National Institute of Child Health and Human Development; as well as Jeffrey L. Ebersole, Ph.D., Professor of Oral Health Research and Director, Center for Oral Health Research, from University of Kentucky, College of Dentistry and Arthur D. Riggs, Ph.D., Associate Director of the Beckman Research Institute of the City of Hope National Medical Center.

EpiGenX's Scientific Advisory Board now features expertise covering cancer biology, infectious disease, bioorganic chemistry and mass spectrometry technologies. Epigenetic strategies entail developing the advanced understanding of gene regulation, and its manipulation in order to fight disease, particularly cancer and infections.

"We are extremely honored to have Dr. Lee join our advisory board," commented Larry Bymaster, President and Chief Executive Officer, EpiGenX. "He has unparalleled expertise in molecular beam technology and we are pleased that he has agreed to provide counsel to our team of scientists."

"Dr. Lee is universally recognized as a world leader in design and use of customized state-of-the-art instrumentation for chemical analysis," noted Alec Wodke, Director of Epigenomics, EpiGenX. "We look forward to his guidance in defining the technology directions for our High Throughput Epigenetic applications."

EpiGenX Scientific Advisory Board is now composed of:

- Michael T. Bowers, Ph.D., a Professor of Chemistry at UCSB, and one of the world's leading scientists in the field of mass spectrometry has served for over 10 years as, Editor, International Journal of Mass Spectrometry and Ion Processes and serves as Associate Editor Journal of the American Chemical Society. Dr. Bowers his Ph.D. in 1966 from the University of Illinois. His Awards include: Nobel Laureate Signature Award of the American Chemical Society (1988); American Chemical Society Award for Outstanding Achievement in Mass Spectrometry (1996); Guggenheim Fellowship (1994); and UCSB Faculty Research Lecturer (1994). He is a Fellow of the American Physical Society and of the American Association for the Advancement of Science.
- Thomas C. Bruice, Ph.D., a Professor of Chemistry and Biochemistry at UCSB, was listed among the world's 50 most cited chemists for the period from 1984 to 1991. He has been elected a Member of the National Academy of Sciences (1974), a Fellow of the American Academy of Arts and Sciences and a Fellow of the AAAS (1989) as well as the Royal Society of Chemistry. His awards include: NIH Career Development (1979); Lifetime Investigator and MERIT Awards; Guggenheim Fellow (1979); UCSB Faculty Research Award (1970); American Chemical Society Arthur C. Cope Scholar Award (1987), Richard C. Tolman Medal (1979), Repligan Medal in Biochemistry (1987), Alfred Bader Medal in Bioorganic and Bioinorganic Chemistry (1988), and the James Flack Norris Award (1996) in physical organic chemistry.
- Joseph F. Costello, Ph.D., serves on the faculty at University of California, San Francisco, Department of Neurological Surgery, and is a leading expert in the field of methylation, including identifying non-random and tumor-specific methylation patterns in human malignancies. His awards include the James S. McDonnell Foundation 21st Century Scientist Award. Dr Costello is a member of the Brain Tumor Research Center at UCSF and has had his work featured in editorials published in Nature Genetics, Science, The Scientist and Wired Magazine. He serves as an ad hoc reviewer for Nature Genetics, Proceedings of the National Academy of Science, Cancer Research, and Genes Chromosomes & Cancer.
- Melvin Louis DePamphilis, Ph.D., is the Section Chief for the Eukaryotic DNA Replication and Gene Expression unit of the Molecular Growth Laboratory at the National Institute of Child Health and Human Development, Bethesda, MD. He previously served as a Laboratory Head and Full Member of the Roche Institute of Molecular Biology, an Adjunct Professor in the Department of Biological Sciences at Columbia University, and a Professor in the Department of Biological Chemistry at Harvard Medical School. Dr. DePamphilis is one of the country's leading experts in the initiation of DNA replication in mammalian chromosomes; gene expression at the beginning of mammalian development. He currently serves on the editorial board of the following journals: Molecular Reproduction and Development, Molecular Biology Reports, Gene Therapy & Molecular Biology, Cell Structure and Function and Molecular and Cellular Biology.
- Jeffrey L. Ebersole, Ph.D., is Professor of Oral Health Research and Director, Center for Oral Health Research, at University of Kentucky, College of Dentistry. Earlier in his career, he was Professor of Periodontics and Microbiology at The University of Texas Health Center and, in the mid-1980's, Associate Clinical Professor of Oral Biology and Pathophysiology at the Harvard School of Dental Medicine. Dr. Ebersole's research area is B cell biology and antibodies in secretory immunity and periodontal immunobiology. He has had NIH funding for over 25 years. His primary research emphasis is in the development, specificity and functional abilities of antibodies in the oral cavity.
- Yuan-Tseh Lee, Ph.D., a Nobel laureate in chemistry in 1986, is the current President of Academia Sinica, the highest research institute in Taiwan. In 1986, Lee shared the Nobel Prize in Chemistry with Dudley R. Herschbach and John C. Polanyi for helping to apply the technology and theory of physics to chemistry. In his research, Lee extended Herschbach's "crossed molecular beam technique" to analyze larger and more complex molecules. Dr. Lee received his doctorate from the University of California at Berkeley in 1965. His world-leading laboratory now contains seven very sophisticated molecular beam apparati, which were specially designed to pursue problems, associated with reaction dynamics, photochemical processes, and molecular spectroscopy. His awards include: Alfred P. Sloan Fellow (1969 - 1971); Fellow, American Academy of Arts and Science (1975); Fellow, American Physical Society, (1976); John Simon Guggenheim Fellow (1976 - 1977); Member, National Academy of Sciences (1979); Member, Academia Sinica, Taiwan, China (1980); Ernest O. Lawrence Award, U.S. Department of Energy (1981); Peter Debye Award of Physical Chemistry, American Chemical Society (1986) and the National Medal of Science in 1986.
- Arthur D. Riggs, Ph.D., a noted molecular biologist, serves as the Chair, Division of Biology, and Associate Director of the Beckman Research Institute of the City of Hope National Medical Center, which has been designated a Comprehensive Cancer Center by NCI. Dr. Riggs' was one of the scientific founders of Genentech. He is a pioneer in developing an understanding of how methylation acts as an epigenetic control. Currently he is studying X chromosome inactivation and the biological roles of DNA methylation. Dr. Riggs' scientific achievements span three decades at City of Hope.

EpiGenX has accepted invitations to make presentations at two industry conferences this month. The company will be presenting at the Innovative Drug Development Conference in New York on May 8th and the C21 Biotech Convergence Conference in Monterey Bay, California on May 23rd.

EpiGenX Pharmaceuticals is pioneering the development of epigenetic-based diagnostics and therapies tailored to the needs of individual patients. Epigenetic strategies entail developing the advanced understanding of gene regulation, and its manipulation in order to fight disease, particularly cancer and infections. The company's technology platforms all involve DNA methylation. EpiGenX has three commercialization pathways. Its drug discovery tools, EpiHiTS(TM) Technology include a suite of high-throughput assays for the rapid discovery of new epigenetic-based drugs. The company is developing novel and safe therapeutics to fight cancer and infectious diseases through epigenetic mechanisms. EpiGenX is also developing a suite of high-throughput diagnostic and epigenomics technologies to generate information on the activity and inactivity of genes in relation to various diseases. EpiGenX Pharmaceuticals, Inc., is located in Santa Barbara, CA. For more information, call 805-964-4486 or log on to http://www.epigenx.com

This news release contains forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995 (the "Act"). In particular, when used in the preceding discussion, the words "plan," "confident that," "believe," "expect," "intend to" and similar conditional expressions are intended to identify forward-looking statements within the meaning of the Act and are subject to the safe harbor created by the Act. Such statements are subject to certain risks and uncertainties, and actual results could differ materially from those expressed in any forward-looking statements. Such risks and uncertainties include, but are not limited to, market conditions, competitive factors, the ability to successfully complete additional financings and other risks.

Contact:

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or Larry O. Bymaster, [phone number], larry@epigenx.com

or Ken Richards, [phone number], ken@epigenx.com

https://www.sec.gov/Archives/edgar/data/1080359/000095013502004207/b44251alexv10w2.txt

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EXHIBIT 10.2

SUBLEASE

THIS SUBLEASE (this "Sublease"), dated for reference purposes as of October 24, 2001, is made and entered into by and between EPIGENX PHARMACEUTICALS, INC., a California corporation ("EP"), and ARMED FORCES COMMUNICATIONS, INC., a CALIFORNIA CORPORATION, D/B/A MARKET PLACE MEDIA ("MPM") (the "SUBTENANT"), with reference to the following facts:

RECITALS:

A. EP is the Tenant under that certain Gross Rent Real Property Lease dated as of July 12, 2000 (the "ORIGINAL MASTER LEASE") between EP and Patterson Associates, LLC, a California limited liability company ("MASTER LANDLORD").

B. The Original Master Lease was amended by amendments dated December 18, 2000 and January 18, 2001 (the Original Master Lease, as so amended, is referred to in this Sublease as the "MASTER LEASE").

C. Under the Master Lease, EP leases certain premises located at 5385 Hollister Avenue in Goleta, California, as more particularly described in the Master Lease (the "PREMISES").

D. Subtenant desires to sublease a portion of the Premises from EP, and EP desires to sublease a portion of the Premises to Subtenant, on the terms and conditions set forth herein. All terms not otherwise defined herein shall have the meanings given such terms in the Master Lease.

AGREEMENTS:

NOW, THEREFORE, in light of the foregoing and in consideration of the mutual covenants set forth in this Sublease, EP and Subtenant, intending to be legally bound, agree as follows:

1. SUBLEASE OF PREMISES

1.1. SUBLEASE. Commencing on the date set forth in SECTION 2, EP subleases the Premises to Subtenant, and Subtenant subleases the Premises from EP. The parties estimate that the Premises consist of approximately 2,570 square feet. This statement of square footage is an approximation that EP and Subtenant agree is reasonable, and the Minimum Monthly Rent (defined below) is not subject to revision whether the actual square footage of the Premises is more or less.

1.2 TERMS. This Sublease is subject to all of the terms and conditions of the Master Lease. Except as provided in SECTION 1.3, Subtenant shall assume and perform all of EP's obligations under the Master Lease with respect to the Premises. Each of such terms and conditions of the Master Lease incorporated herein shall be terms and conditions of this Sublease. When the context requires, each reference in the Master Lease to Landlord shall be deemed to refer to EP, and each reference therein to Tenant shall be deemed to refer to Subtenant; PROVIDED, HOWEVER, that (a) EP shall not be obligated to perform any act of the Master Landlord under the Master Lease that EP does not have the authority or right to perform, and (b) any
provision of the Master Lease requiring the approval of the Master Landlord shall be deemed to require the approval of EP and the Master Landlord. As between EP and Subtenant, any inconsistency between the terms of the Master Lease and the terms of this Sublease shall be governed by the terms of this Sublease.

1.3 EXCEPTIONS. All of the terms and conditions contained in the Master Lease are incorporated herein as fully set forth, except for Sections N/A to the Master Lease.

2. TERM OF SUBLEASE

The term of this Sublease shall commence NOVEMBER 1. 2001 (the "COMMENCEMENT DATE"). Such term shall end at midnight, Pacific Standard Time, on AUGUST 31,2003.

3. CONDITION OF PREMISES

3.1 DUE DILIGENCE INVESTIGATION. As of the Commencement Date, Subtenant acknowledges that Subtenant will have conducted or will have had the opportunity to conduct a comprehensive investigation ("DUE DILIGENCE INVESTIGATION") of the Premises and all other matters that in Subtenant's judgment may affect the value or suitability of the Premises for Subtenant's purposes or that may influence Subtenant's willingness to enter this Sublease, including, without limitation, an inspection or examination of (a) the physical condition, size, and configuration of the Premises, including access, parking, location, or accessibility of utilities, the condition of the improvements, the existence of any hazardous materials, soil or topographical conditions, and earthquake preparedness; (b) the Master Lease; (c) title; (d) taxes; (e) income and expense data; (f) insurance costs; (g) permissible uses and zoning or development entitlements; (h) any applicable covenants, conditions, and restrictions; and (i) compliance with any federal, state, or local law, statute, rule, or regulation now or hereafter in effect (including without limitation the Americans With Disabilities Act of 1990, 42 U.S.C. ss.12101).

3.2 NO REPRESENTATIONS AND WARRANTIES. Subtenant acknowledges that EP would not sublease the Premises except on an "AS IS" basis, and agrees that (a) Subtenant accepts the Premises "AS IS" and with all faults; (b) neither EP nor any of its officers, agents, employees, or representatives has made any representations or warranties of any kind or nature, whether express or implied, with respect to the Premises or any of the matters relating thereto; (c) EP has no duty to make any disclosures concerning the condition of the Premises and/or the fitness of the Premises for Subtenant's intended use, and Subtenant expressly waives any duty that EP might have to make any such disclosures; (d) Subtenant is relying solely on Subtenant's own Due Diligence Investigation; (e) neither EP nor Master Landlord shall be required to perform any work of construction, alteration, repair, or maintenance of or to the Premises.

4. USE

Subtenant may use the Premises for office use and storage and for no other purposes whatsoever without the prior written consent of EP and Master Landlord.

5. RENT: SECURITY DEPOSIT

<PAGE>

5.1 MINIMUM MONTHLY RENT. During each month of the term of this Sublease, inimum monthly rent (as defined below) shall be payable in advance on or before the first day of each month, commencing on the Commencement Date (the "RENT COMMENCEMENT DATE"). The minimum monthly rent shall be TWO THOUSAND FOUR HUNDRED FORTY ONE AND ONE HALF Dollars ($2,441.50) per month (the "MINIMUM MONTHLY RENT"). Until modified by SECTION 5.2, Minimum Monthly Rent shall be payable in equal monthly installments in the amount set forth above.

5.2 ANNUAL ADJUSTMENT TO RENT. Minimum Monthly Rent shall be adjusted at the times and in the manner set forth in the Master Lease.

5.3 ADDITIONAL RENT. In addition to the Minimum Monthly Rent payable pursuant to SECTIONS 5.1 and 5.2, Subtenant shall pay to EP all other amounts required to be paid by EP to Master Landlord or any other third party under the terms of the Master Lease (the Minimum Monthly Rent and all other amounts required to be paid by Subtenant are referred to collectively as "RENT").

5.4 PAYMENT. All Rent payable by Subtenant hereunder shall be paid by Subtenant to EP not later than the close of business on the date first due, without prior notice or demand, without offset or reduction. All Rent shall be payable in lawful money of the United States at such place as EP may designate to Subtenant from time to time in writing. Rent or increased Rent for any partial month shall be prorated on the basis of a thirty-day month.

5.5 PREPAID RENT. Concurrently with the execution of this Sublease, Subtenant shall pay to EP the sum of TWO THOUSAND FOUR HUNDRED FORTY ONE AND ONE HALF Dollars ($2,441.50), representing the first month's Minimum Monthly Rent.

5.6 SECURITY DEPOSIT. The amount of the Security Deposit shall be TWO THOUSAND FOUR HUNDRED FORTY ONE AND ONE HALF Dollars ($2,441.50), which shall be paid concurrently with the execution of this Sublease.

6. INSURANCE

Subtenant shall procure and maintain policies of insurance insuring the Premises and Subtenant's use of the same with the coverages and amounts equal to or greater (at Subtenant's election) than those that EP is obligated to procure under the terms of the Master Lease. Such policies shall further comply with all of the terms of the Master Lease. Not later than thirty days prior to the expiration of any such policy, Subtenant shall present to EP evidence of the renewal of such policies, or the purchase of acceptable replacement policies, for the ensuing period. All such policies shall name both EP and Master Landlord as additional insureds and shall provide that they will not be subject to cancellation without thirty days' prior written notice to EP.

7. INDEMNIFICATION

Subtenant shall indemnify, defend with counsel acceptable to EP, and hold EP harmless from any claims, damages, costs, expenses, and/or causes of action that may arise or be in any way related to Subtenant's use and occupancy of the Premises.

8. DEFAULT: TERMINATION BY SUBTENANT

8.1 EVENTS OF DEFAULT. The following events shall constitute an event of default under this Sublease:

8.1.1 RENT. Subtenant's failure to make timely payments in accordance with SECTION 5;

8.1.2 BREACH. Subtenant's failure to honor or perform any other covenant, condition, or obligation imposed upon Subtenant by this Sublease; or

8.1.3 LEASE. Subtenant's failure to honor or perform any covenant, condition, or obligation imposed upon EP, as Tenant, under the terms of the Master Lease.

8.2 NOTICE AND CURE. EP shall provide Subtenant written notice of any default under this Sublease. If the default is attributable to Subtenant's failure to pay any sums hereunder, or owing under the Master Lease, Subtenant shall be entitled to cure any such default within three days following the due date thereof. If the default is attributable to any other acts or omissions of Subtenant, Subtenant shall be entitled to cure any such default within ten days of receiving written notice of any such default from EP.

8.3 REMEDIES. If Subtenant fails to cure any default within the applicable cure period specified in SECTION 8.2, EP may terminate this Sublease upon delivery of written notice to Subtenant. Upon any such occurrence, in addition to other remedies available to EP under law, EP immediately shall be entitled to (a) terminate Subtenant's right to possession of the Premises and evict Subtenant therefrom through legal process, and (b) to exercise, as to Subtenant, all of the rights and remedies available to Master Landlord under the Master Lease, as if all such rights and remedies were set forth verbatim herein.

9. GENERAL PROVISIONS

9.1 ATTORNEYS' FEES. If either party engages counsel to enforce that

party's rights hereunder or to resolve any dispute arising out of or related to this Sublease, whether or not litigation is commenced, the prevailing party shall be entitled to recover from the nonprevailing party all reasonable costs and expenses (including, without limitation, reasonable attorneys' fees, court costs, and expert witness fees) incurred by the prevailing party.

9.2 INTEGRATION. This Sublease contains all of the agreements of the parties with respect to the matters contained herein. No prior or contemporaneous agreement or understanding, oral or written, pertaining to any such matters shall be effective for any purpose.

9.3 VENUE. If any action or other legal proceeding is filed in connection with this Sublease, venue for the same shall be had in Santa Barbara County, California.

9.4 COUNTERPARTS. This Sublease may be executed in any number of counterparts, each of which shall be an original, but all of which shall constitute one and the same instrument.

(Signatures appear on the following page.)

<PAGE>

IN WITNESS WHEREOF, the undersigned have caused this Sublease to be executed, effective on the date set forth above.

"EP"

EPIGENX PHARMACEUTICALS, INC.,
a California corporation

By /s/ Ken Richards

Title: CFO
Date: Oct. 31, 2001

By /s/ Signature unreadable

Title: CEO
Date: Oct. 31, 2001

ADDRESS FOR NOTICES:
EpiGenX Pharmaceuticals, Inc.
5385 Hollister Avenue
Santa Barbara, CA 93111

"SUBTENANT"
ARMED FORCES COMMUNICATIONS, INC., a
California corporation.
d/b/a MARKET PLACE MEDIA ("MPM")

By /s/ Adam T. Sawyer

Title: President
Date: October 30, 2001

By /s/ Carolyn Gambult

Title: Vice President
Date: October 30, 2001

ADDRESS FOR NOTICES:
Market Place Media
26 Castilian Drive
Santa Barbara, CA 93117

<PAGE>

LIST OF EXHIBITS

Exhibit A Master Lease

2003 - VP makes a move to Nastech Pharma

https://www.thepharmaletter.com/article/nastech-names-paul-johnson-senior-vp-r-d

Nastech names Paul Johnson senior VP, R&D

06-10-2003 Print

Nastech Pharmaceuticals of the USA has recruited Paul Johnson as senior vice president, R&D, and chief scientific officer. Prior to this, Mr Johnson held a similar post with EpiGenX Pharmaceuticals.

Note .. this "Nastech" may have turned into a company that has roots too "Moderna"

https://www.fiercebiotech.com/biotech/nastech-pharmaceutical-company-to-cut-50-jobs

(2008)

Nastech Pharmaceutical Company to Cut 50 Jobs

Feb 13, 2008 10:56am

ShareFacebookTwitterLinkedInEmailPrint

Nastech Pharmaceutical Company to Cut 50 Jobs

BOTHELL, Wash., Feb. 12 -- Nastech Pharmaceutical Company Inc. (Nasdaq: NSTK - News) announced today that its Board of Directors has approved a plan to further reduce operating expenses and align the company's workforce with its strategic, business and clinical development requirements.

"The workforce reduction of approximately 50 employees will enable us to drive our key clinical development and RNAi programs forward in a more efficient manner for the benefit of our shareholders," stated Steven C. Quay, M.D., Ph.D., Chairman and CEO of Nastech. "The savings by this action are estimated to be not less than $11 million during the 2008 fiscal year."

About Nastech

Nastech is a clinical stage biopharmaceutical company focusing on the development and commercialization of innovative therapeutic products based on its proprietary molecular biology-based drug delivery technologies and, through its wholly-owned subsidiary, MDRNA, Inc., based on its proprietary ribonucleic acid interference technology. Nastech and its collaboration partners are developing products for multiple therapeutic areas including osteoporosis, obesity, diabetes, autism, respiratory diseases and inflammatory conditions. Additional information about Nastech is available at http://www.nastech.com.

2012

https://www.biospace.com/article/releases/marina-biotech-inc-formerly-known-as-mdrna-inc-announces-closure-of-cambridge-site-and-consolidation-of-r-and-d-operations-in-bothell-wa-/

Marina Biotech, Inc. (Formerly Known as MDRNA, Inc.) Announces Closure of Cambridge Site and Consolidation of R&D Operations in Bothell, WA

Published: Feb 14, 2012

BOTHELL, WA--(Marketwire - February 14, 2012) - Marina Biotech, Inc. (OTCQX: MRNA), a leading nucleic acid-based drug discovery and development company, today announced the closure of its Cambridge site and the consolidation of all research and development efforts at its headquarters in Bothell, WA. In addition, the Company announced dosing of the first patient in Cohort 2 in the Dose Escalation Phase of the START-FAP (Safety and Tolerability of An RNAi Therapeutic in Familial Adenomatous Polyposis) clinical trial with CEQ508.

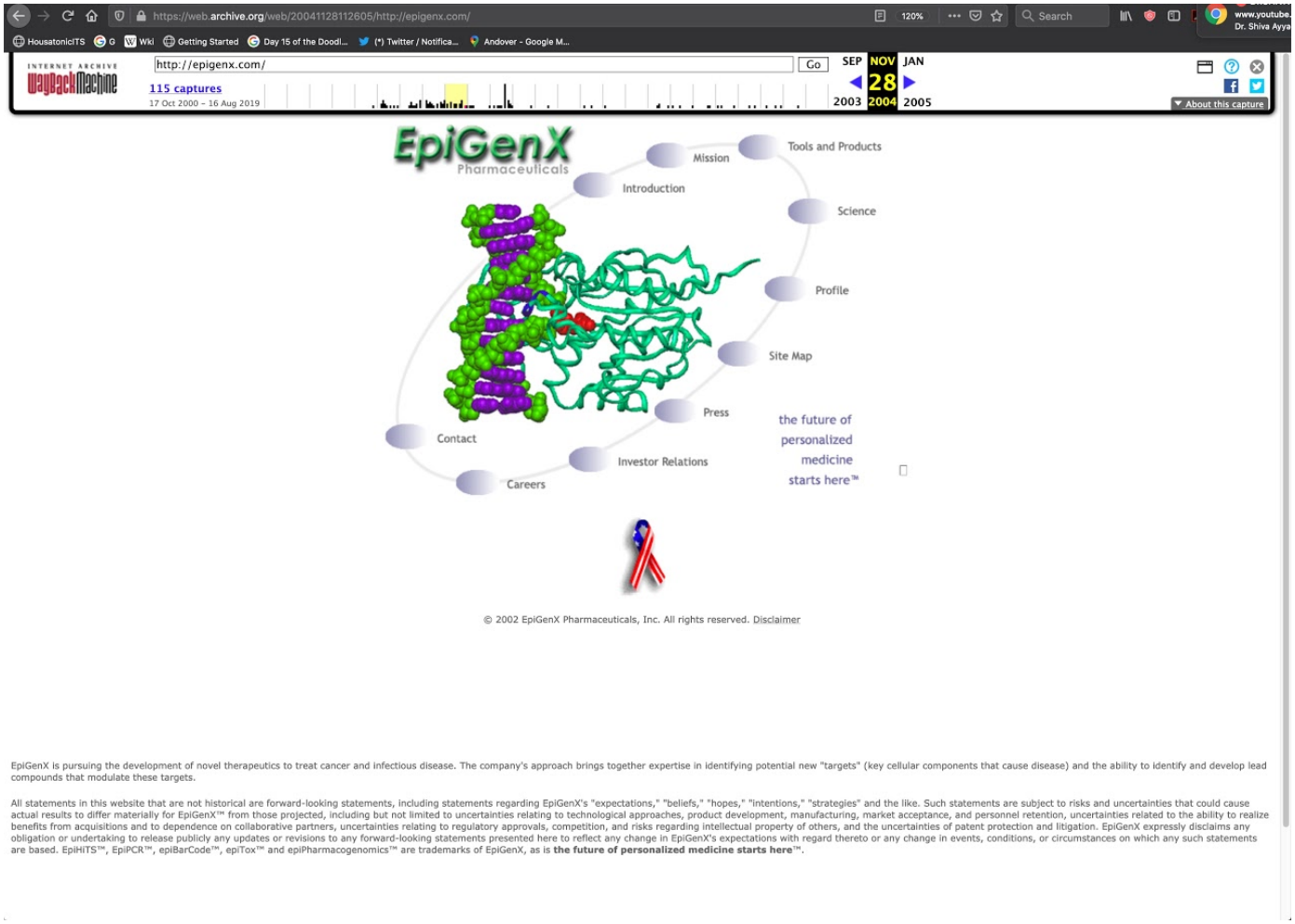
"After considerable review, we have decided to close our Cambridge site and transfer those research and development efforts to our headquarters in Bothell, WA," said J. Michael French, President & CEO of Marina Biotech. "This move will not affect the START-FAP trial as noted by our announcement today of Cohort 2 dosing. Further, we expect to continue to develop the tkRNAi platform in our labs in Bothell. The closing of the Cambridge site is consistent with our continued efforts to reduce our cash utilization. The individuals affected by this decision were all part of the former Cequent team who then, and

certainly over the past several years, were instrumental to the development of CEQ508 and the successful execution of the START-FAP trial. I want to thank them for their efforts and wish them all well in their future endeavors."

2005 - EpigenX.com website (recovered from Archive.org)

2005-epigenx-com-homepage-img-from-archive-org.jpg

https://web.archive.org/web/20041128112605/http://epigenx.com/



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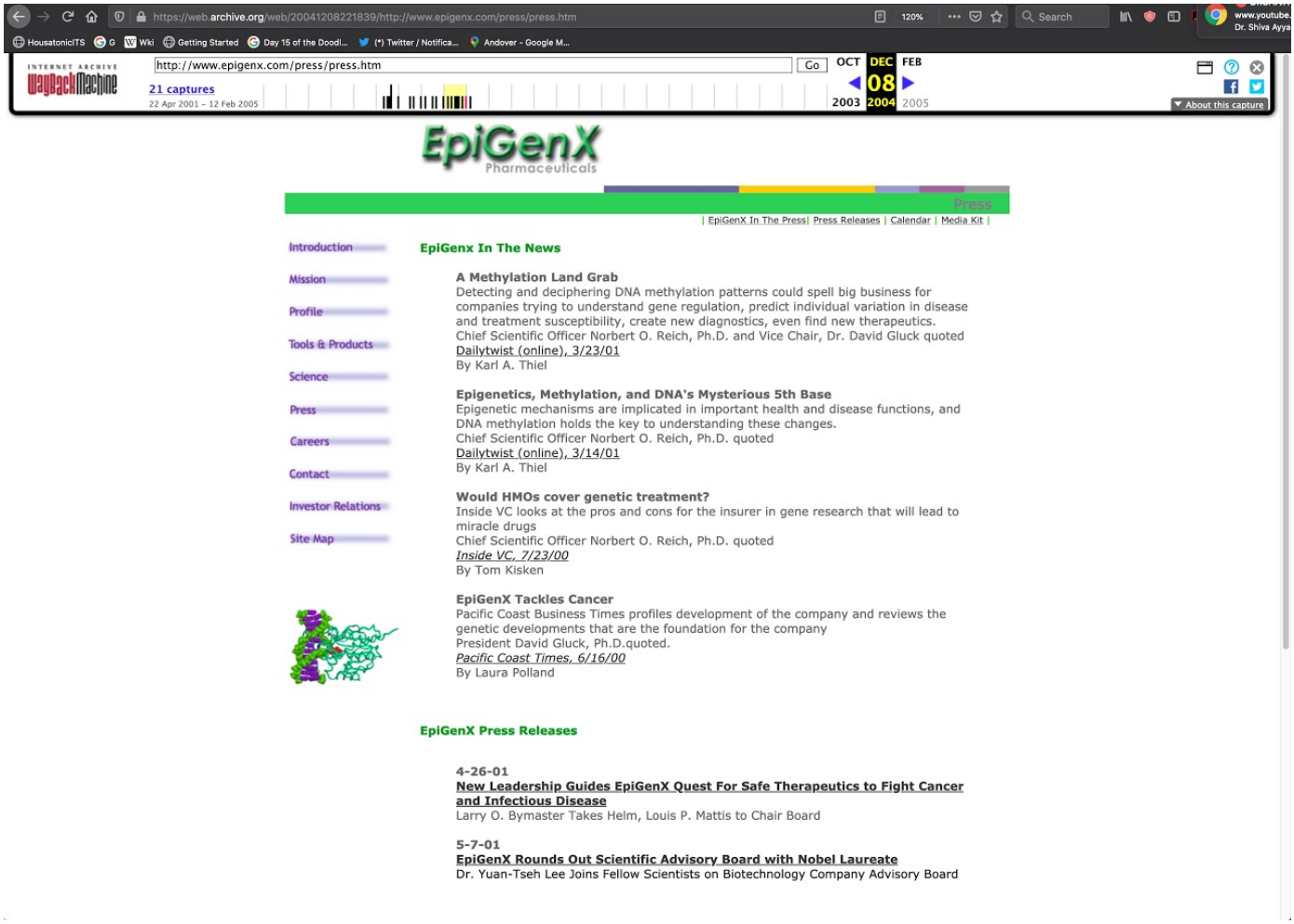
2005-epigenx-com-press-img-from-archive-org.jpg



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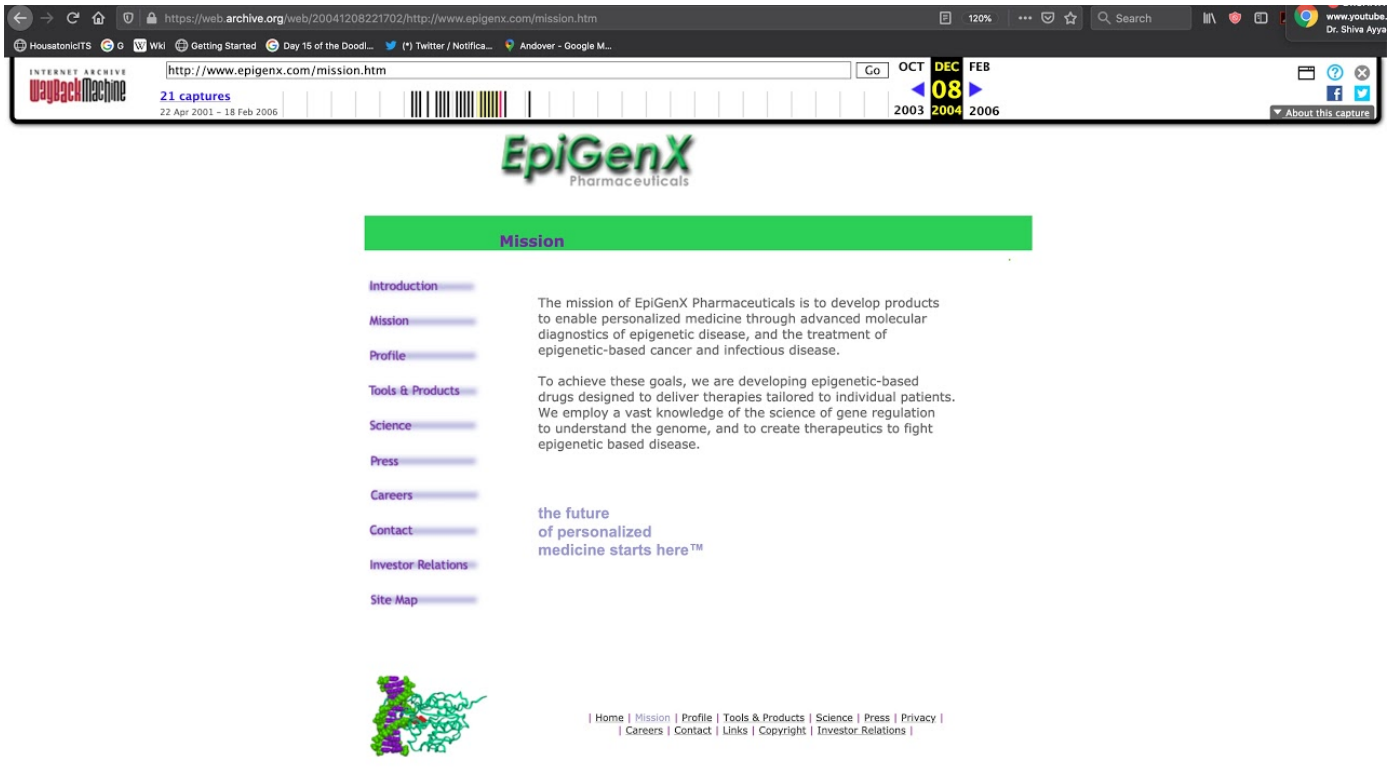


https://web.archive.org/web/20041208222731/http://www.epigenx.com/profile.htm

2005-epigenx-com-profile-img-from-archive-org.jpg

EXECUTIVE MANAGEMENT TEAM

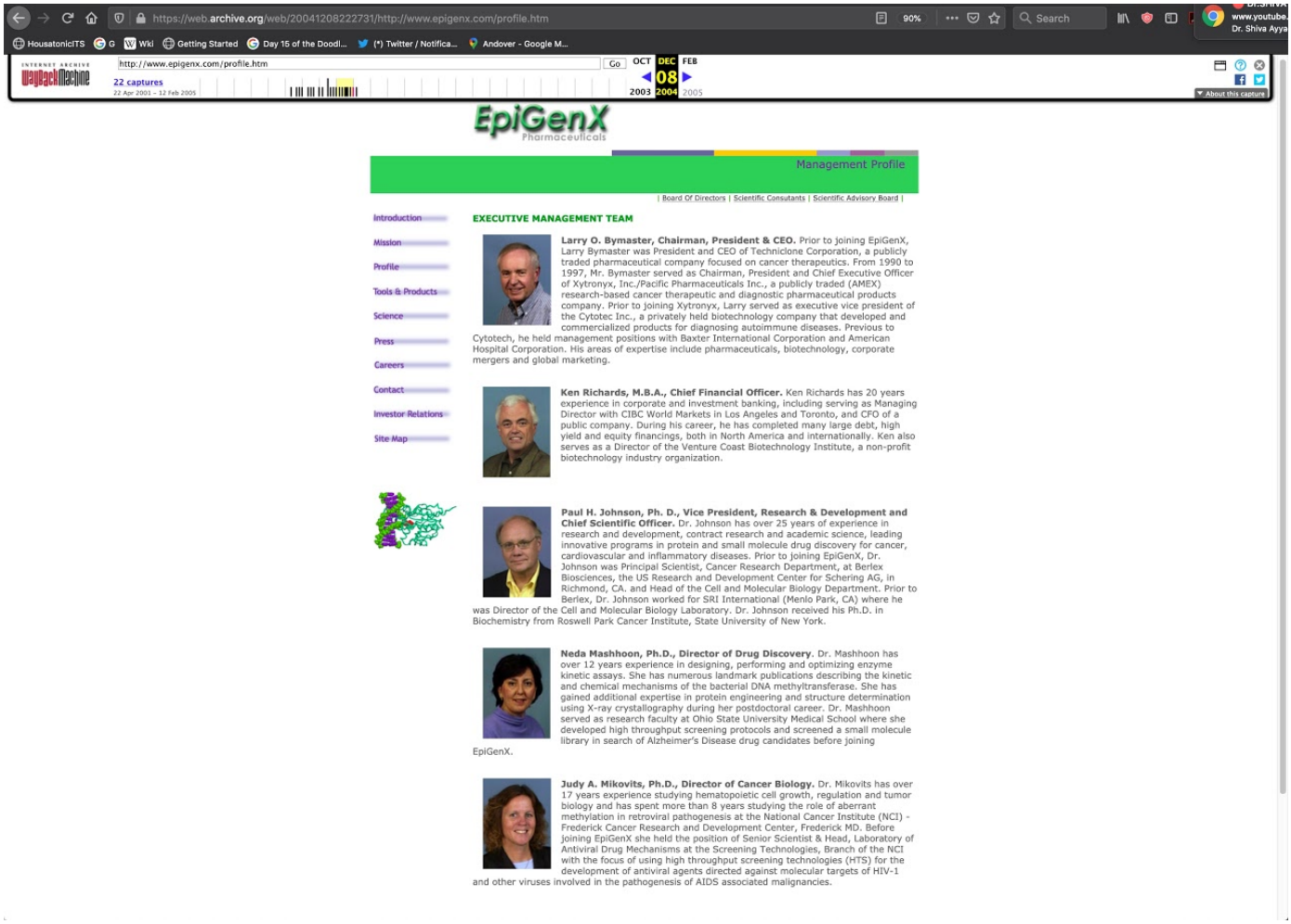
Larry O. Bymaster, Chairman, President & CEO. Prior to joining EpiGenX, Larry Bymaster was President and CEO of Techniclone Corporation, a publicly traded pharmaceutical company focused on cancer therapeutics. From 1990 to 1997, Mr. Bymaster served as Chairman, President and Chief Executive Officer of Xytronyx, Inc./Pacific Pharmaceuticals Inc., a publicly traded (AMEX) research-based cancer therapeutic and diagnostic pharmaceutical products company. Prior to joining Xytronyx, Larry served as executive vice president of the Cytotec Inc., a privately held biotechnology company that developed and commercialized products for diagnosing autoimmune diseases. Previous to Cytotech, he held management positions with Baxter International Corporation and American Hospital Corporation. His areas of expertise include pharmaceuticals, biotechnology, corporate mergers and global marketing.

Ken Richards, M.B.A., Chief Financial Officer. Ken Richards has 20 years experience in corporate and investment banking, including serving as Managing Director with CIBC World Markets in Los Angeles and Toronto, and CFO of a public company. During his career, he has completed many large debt, high yield and equity financings, both in North America and internationally. Ken also serves as a Director of the Venture Coast Biotechnology Institute, a non-profit biotechnology industry organization.

Paul H. Johnson, Ph. D., Vice President, Research & Development and Chief Scientific Officer. Dr. Johnson has over 25 years of experience in research and development, contract research and academic science, leading innovative programs in protein and small molecule drug discovery for cancer, cardiovascular and inflammatory diseases. Prior to joining EpiGenX, Dr. Johnson was Principal Scientist, Cancer Research Department, at Berlex Biosciences, the US Research and Development Center for Schering AG, in Richmond, CA. and Head of the Cell and Molecular Biology Department. Prior to Berlex, Dr. Johnson worked for SRI International (Menlo Park, CA) where he was Director of the Cell and Molecular Biology Laboratory. Dr. Johnson received his Ph.D. in Biochemistry from Roswell Park Cancer Institute, State University of New York.

Neda Mashhoon, Ph.D., Director of Drug Discovery. Dr. Mashhoon has over 12 years experience in designing, performing and optimizing enzyme kinetic assays. She has numerous landmark publications describing the kinetic and chemical mechanisms of the bacterial DNA methyltransferase. She has gained additional expertise in protein engineering and structure determination using X-ray crystallography during her postdoctoral career. Dr. Mashhoon served as research faculty at Ohio State University Medical School where she developed high throughput screening protocols and screened a small molecule library in search of Alzheimer's Disease drug candidates before joining EpiGenX.

Judy A. Mikovits, Ph.D., Director of Cancer Biology. Dr. Mikovits has over 17 years experience studying hematopoietic cell growth, regulation and tumor biology and has spent more than 8 years studying the role of aberrant methylation in retroviral pathogenesis at the National Cancer Institute (NCI) - Frederick Cancer Research and Development Center, Frederick MD. Before joining EpiGenX she held the position of Senior Scientist & Head, Laboratory of Antiviral Drug Mechanisms at the Screening Technologies, Branch of the NCI with the focus of using high throughput screening technologies (HTS) for the development of antiviral agents directed against molecular targets of HIV-1 and other viruses involved in the pathogenesis of AIDS associated malignancies.



Chatper 1 :

She regaled the patrons with stories about her more than twenty years working at the National Cancer Institute in Maryland. Or, if they were in the mood for romance, she told them about meeting David at a conference in Ventura in 1999, getting married at the age of forty-two, commuting for a few months between the NCI on the East Coast and David's home in Ventura, and finally deciding that if she wanted a real marriage she needed to be in the same time zone as her husband.

It was his gentle magnetism that brought her there, to a place where an accomplished scientist might be found tending bar at an egalitarian yacht club.

To be nearer to David, she got a job as director of cancer research with a biotech start-up in Santa Barbara called EpiGenX Pharmaceuticals, which was developing drugs to regulate tumor suppressor genes, leading to more effective outcomes for cancer treatment. The drugs they were developing decreased DNA methylation (increased DNA methylation caused silencing of gene expression), which normally becomes disrupted as cancer spread through the body, thus causing further downstream damage. The intellectual property for the company was licensed out of the University of California at Santa Barbara (UCSB) and Judy was intimately involved in the construction of the lab EpiGenX built, as well as securing two SBIR grants from the NIH.

The company had floundered in the wake of the sluggish economic climate after 9/11. In the spring of 2005, it was in the process of being bought out by a larger company. EpiGenX had generated a fair amount of its own intellectual property, but with no funding to pay employees, Mikovits was the only actual lab employee left. She would still go into the lab every day and run experiments, but the company had also put her in charge of handling due diligence for the upcoming sale, which took a few hours every day. Mikovits knew that when the sale went through she would in all likelihood need to look for a new job.

The sale wouldn't take place for several months, so on one Friday evening in late 2005, Judy found herself working behind the bar when then vice-commodore of PBYC, Joe Vetrano, walked in with his new girlfriend, Karen, an accountant. It would prove to be a moment of serendipity, with Judy's candor working in her favor. The three of them a human herpes virus HHV-6. Judy was intrigued as Karen conveyed the substantial level of impairment and suffering of her boss's child. Karen's boss, Kristin Loomis, had started an organization to go after the virus, called the HHV-6 Foundation. After Karen had talked for several minutes and Judy excitedly asked a few questions, Joe initiated, off-handedly, "Judy, maybe you could help them."

"Yes, Joe, why not—I'll check it out," she replied with a grin, taking away their finished drinks.

* * *

Ken Richards joined EpiGenX in September of 2000, as chief financial officer, and recalled recruiting Mikovits from the NCI in May of 2001. 34 Ken was originally from Canada, having worked for seventeen years for a Canadian corporate investment bank before transferring with them to Los Angeles in 1997. He was surprised as a savvy money-man to find that the University of California at Santa Barbara (UCSB) had a phenomenal science and engineering program, but no systematic way to bring their research discoveries to market. Richards and two other ambitious partners founded the Santa Barbara chapter of Tech Coast Angels, the largest angel funding network in the United States.

It was at a meeting for Tech Coast Angels that Ken was introduced to EpiGenX, and through that company he would meet Mikovits. He later gushed about her: "Judy was a very well-spoken, knowledgeable, and dedicated scientist who wanted to do everything possible to find effective treatments for cancer," said Richards. On the question of why Mikovits seemed to have both strong supporters and critics, Richards said, "I tell everybody, Judy is very controversial. Many people do not like her and many people admire her. I am in the later category. She speaks her mind. When she develops a view, she is dedicated to that view and will defend it fiercely. She's combative in a positive sense, and that tends to irritate some people."

Richards believed that many of Mikovits's detractors had fallen victim to an unconscious form of sexism in which an assertive woman was "viewed as a bitch" while a man making a similarly impassioned defense of his position would be "admired and respected for his firm stance." 35 It seemed like the kind of post-feminist statement that perhaps only a man could make and be fully heard, especially regarding a disease like ME/CFS that was incorectly thought to only affect women and had been derogatorily referred to as "Yuppie flu" in its early years, with mocking press implying that women contracting the disease were overly driven.

Even though Mikovits would eventually leave EpiGenX, her tie with Richards would remain solid and he would remain a steadfast supporter. In 2011, Richards was putting together a private equity firm to invest in early stage technology and biotechnology companies. "[We] needed somebody with a strong science background, the first person I thought of was Judy Mikovits."

When a few higher-ups asked questions about bringing on this controversial figure, Richards had several cards to play on Judy's behalf. In addition to a recommendation from the respected Frank Ruscetti, Nobel Prize winner Luc Montagnier was very supportive of Judy and wrote highly of her work and her integrity when he penned a recommendation to the Yorkbridge management.

housatonic

David Friedman Epstein (born 1951)

Born July 17 1951 ([HL005J][GDrive])

Married to : **Ruth Louise Seligson** (in 1974)

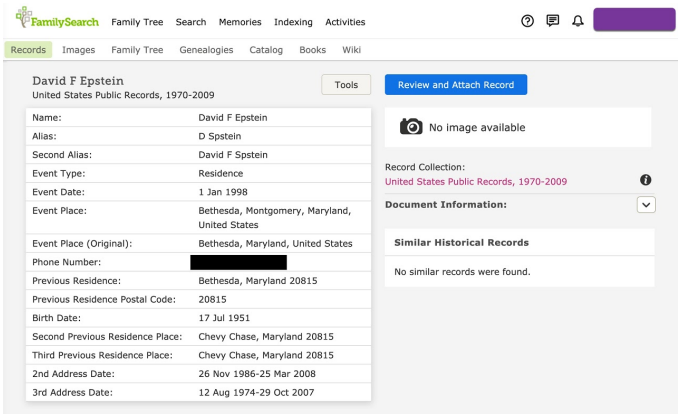
- Children include Alexander Joseph Epstein (Youtube channel https://www.youtube.com/user/ImproveThePlanet / https://en.wikipedia.org/wiki/Alex_Epstein_(American_writer))

Associations

- **Andrew Walter Marshall (born 1921)** (Long-time boss in the Office of Net Assessment)
- **Thomas Paul Rona (born 1923)** (peer on the Future Security Environment Working Group)
- **Dr. Dov Solomon Zakheim (born 1948)** (peer on the Future Security Environment Working Group)
- **Eliot Asher Cohen (born 1956)** (peer on the Future Security Environment Working Group)
- **James Rodney Schlesinger (born 1929)** (Founder of Office of Net Assessment - Long-time associate of David Epstein, see 2008 photo)

Born July 17, 1951

"David F Epstein" : Address is Chevy Chase, - Middle initial "F" ... so we suspect this is correct. Phone number blocked.



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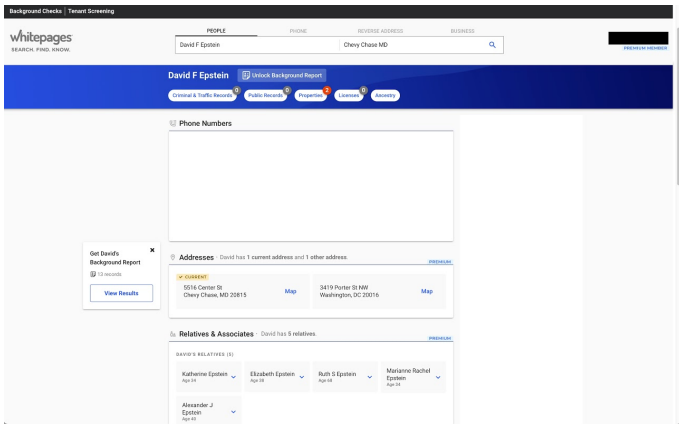


[HD002W][GDrive]

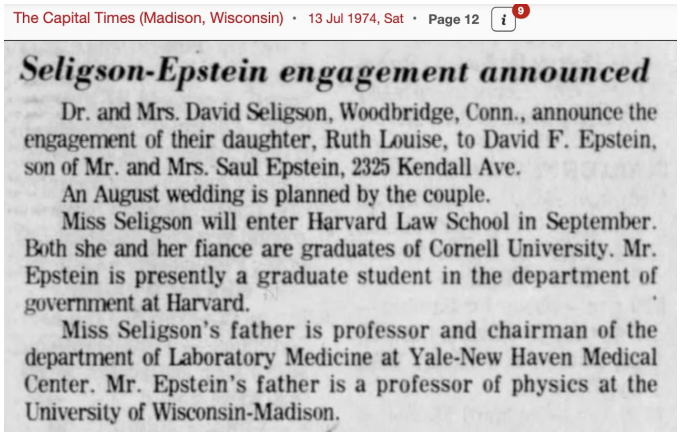
1974 (July 13) - Engagement

https://www.newspapers.com/image/520974655/?terms=Ruth%20Seligson%20epstein&match=1

1974-07-13-the-capital-times-madison-wisconsin-pg-12.jpg

1974-07-13-the-capital-times-madison-wisconsin-pg-12-clip-seligson-epstein.jpg

Wow it made the NY TImes - https://www.nytimes.com/1974/08/26/archives/d-f-epstein-weds-ruth-seligson.html



The Capital Times (Madison, Wisconsin) • 13 Jul 1974, Sat • Page 12

Seligson-Epstein engagement announced

Dr. and Mrs. David Seligson, Woodbridge, Conn., announce the engagement of their daughter, Ruth Louise, to David F. Epstein, son of Mr. and Mrs. Saul Epstein, 2325 Kendall Ave.

An August wedding is planned by the couple.

Miss Seligson will enter Harvard Law School in September. Both she and her fiance are graduates of Cornell University. Mr. Epstein is presently a graduate student in the department of government at Harvard.

Miss Seligson's father is professor and chairman of the department of Laboratory Medicine at Yale-New Haven Medical Center. Mr. Epstein's father is a professor of physics at the University of Wisconsin-Madison.

1974 - Wedding

https://www.newspapers.com/image/406388369/?terms=Ruth%20Seligson%20epstein&match=1

1974-08-26-wisconsin-state-journal-sec-3-pg-4.jpg

1974-08-26-wisconsin-state-journal-sec-3-pg-4-clip-seligson-epstein.jpg

Ruth Louise Seligson

Wisconsin State Journal (Madison, Wisconsin) • 26 Aug 1974, Mon • Page 20

August Weddings

Seligson-Epstein

WOODBRIDGE, Conn. — Miss Ruth Louise Seligson and David Friedman Epstein were married Sunday in the chapel of Congregation B'nai Jacob here.

She will enter Harvard Law School in September, and he will continue his graduate studies in government at Harvard.

Their parents are Dr. and Mrs. David Seligson, Woodbridge, and Mr. and Mrs. Saul T. Epstein, 2325 Kendall Ave., Madison, Wis.

Dr. Seligson is chairman of the department of laboratory medicine at the Yale-New Haven Medical Center. Mr. Epstein is a professor of physics at the University of Wisconsin-Madison.

MRS. EPSTEIN

Late 1970s(est) - David Epstein left Chicago's New School for Social Research and became an analyst in the Pentagon's Office of **Net Assessment**.

Written by **Stefan Alan Halper (born 1944)** and Jonathan Clark .

School URL : https://www.newschool.edu/nssr/

Book - America Alone: The Neo-Conservatives and the Global Order - Available at [https://books.google.com/books?id=HUt9DT1XyZUC&dq=%22new+school+for+social+research%22+%2B+%22david+epstein%22&source=gbs_navlinks_s]

2004-america-alone-the-neoconservatives-and-the-global-order-halper-clarke-google-play

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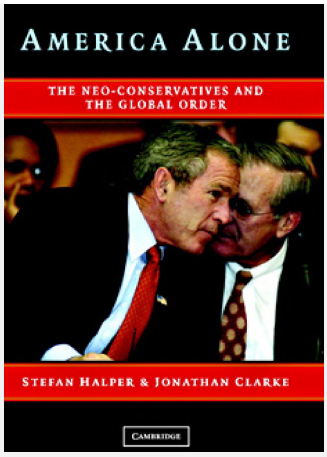
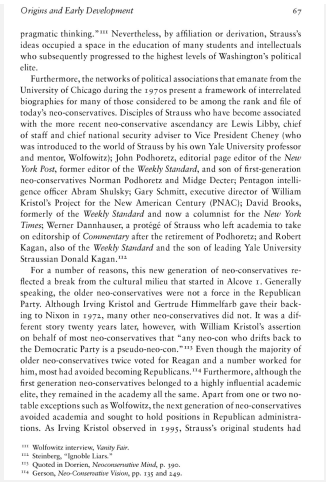




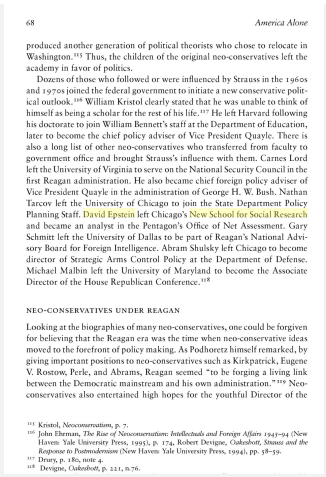
Origins and Early Development 67

pragmatic thinking."[111] Nevertheless, by affiliation or derivation, Strauss's ideas occupied a space in the education of many students and intellectuals who subsequently progressed to the highest levels of Washington's political elite.

Furthermore, the networks of political associations that emanate from the University of Chicago during the 1970s present a framework of interrelated biographies for many of those considered to be among the rank and file of today's neo-conservatives. Disciples of Strauss who have become associated with the more recent neo-conservative ascendancy are Lewis Libby, chief of staff and chief national security adviser to Vice President Cheney (who was introduced to the world of Strauss by his own Yale University professor and mentor, Wolfowitz); John Podhoretz, editorial page editor of the *New York Post*, former editor of the *Weekly Standard*, and son of first-generation neo-conservatives Norman Podhoretz and Midge Decter; Pentagon intelligence officer Abram Shulsky; Gary Schmitt, executive director of William Kristol's Project for the New American Century (PNAC); David Brooks, formerly of the *Weekly Standard* and now a columnist for the *New York Times*; Werner Dannhauser, a protégé of Strauss who left academia to take on editorship of *Commentary* after the retirement of Podhoretz; and Robert Kagan, also of the *Weekly Standard* and the son of leading Yale University Straussian Donald Kagan.[112]

For a number of reasons, this new generation of neo-conservatives reflected a break from the cultural milieu that started in Alcove 1. Generally speaking, the older neo-conservatives were not a force in the Republican Party. Although Irving Kristol and Gertrude Himmelfarb gave their backing to Nixon in 1972, many other neo-conservatives did not. It was a different story twenty years later, however, with William Kristol's assertion on behalf of most neo-conservatives that "any neo-con who drifts back to the Democratic Party is a pseudo-neo-con."[113] Even though the majority of older neo-conservatives twice voted for Reagan and a number worked for him, most had avoided becoming Republicans.[114] Furthermore, although the first generation neo-conservatives belonged to a highly influential academic elite, they remained in the academy all the same. Apart from one or two notable exceptions such as Wolfowitz, the next generation of neo-conservatives avoided academia and sought to hold positions in Republican administrations. As Irving Kristol observed in 1995, Strauss's original students had

[111] Wolfowitz interview, *Vanity Fair*.
[112] Steinberg, "Ignoble Liars."
[113] Quoted in Dorrien, *Neoconservative Mind*, p. 390.
[114] Gerson, *Neo-Conservative Vision*, pp. 135 and 249.



68 America Alone

produced another generation of political theorists who chose to relocate in Washington.[115] Thus, the children of the original neo-conservatives left the academy in favor of politics.

Dozens of those who followed or were influenced by Strauss in the 1960s and 1970s joined the federal government to initiate a new conservative political outlook.[116] William Kristol clearly stated that he was unable to think of himself as being a scholar for the rest of his life.[117] He left Harvard following his doctorate to join William Bennett's staff at the Department of Education, later to become the chief policy adviser of Vice President Quayle. There is also a long list of other neo-conservatives who transferred from faculty to government office and brought Strauss's influence with them. Carnes Lord left the University of Virginia to serve on the National Security Council in the first Reagan administration. He also became chief foreign policy adviser of Vice President Quayle in the administration of George H. W. Bush. Nathan Tarcov left the University of Chicago to join the State Department Policy Planning Staff. David Epstein left Chicago's New School for Social Research and became an analyst in the Pentagon's Office of Net Assessment. Gary Schmitt left the University of Dallas to be part of Reagan's National Advisory Board for Foreign Intelligence. Abram Shulsky left Chicago to become director of Strategic Arms Control Policy at the Department of Defense. Michael Malbin left the University of Maryland to become the Associate Director of the House Republican Conference.[118]

NEO-CONSERVATIVES UNDER REAGAN

Looking at the biographies of many neo-conservatives, one could be forgiven for believing that the Reagan era was the time when neo-conservative ideas moved to the forefront of policy making. As Podhoretz himself remarked, by giving important positions to neo-conservatives such as Kirkpatrick, Eugene V. Rostow, Perle, and Abrams, Reagan seemed "to be forging a living link between the Democratic mainstream and his own administration."[119] Neo-conservatives also entertained high hopes for the youthful Director of the

[115] Kristol, *Neoconservatism*, p. 7.
[116] John Ehrman, *The Rise of Neoconservatism: Intellectuals and Foreign Affairs 1945–94* (New Haven: Yale University Press, 1995), p. 174; Robert Devigne, *Cuiheobott, Strauss and the Response to Postmodernism* (New Haven: Yale University Press, 1994), pp. 58–59.
[117] Drury, p. 180, note 4.
[118] Devigne, *Cuiheobott*, p. 221, n.76.

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Office and Management and Budget David Stockman, who had studied at the Harvard Divinity School, where he was thought to have absorbed some neo-conservative thought, evidenced by his writings on welfare policy in the *Public Interest*. It is certainly true that Reagan's election as president in November 1980 looked like a major victory for American conservatism across the spectrum of policy issues. His resolve to diminish the extent of government intrusion into people's lives, cut taxes, reduce the regulation of savings and loans, lower the budgets for federal social programs, and remove the bureaucratic red tape of an overly centralized system of government convinced the true-blue guardians of conservatism that they finally had a man in the White House who shared their views. Podhoretz praised Reagan as a "political figure offering himself as the legitimate heir to Richard Nixon's usurped throne."[120] Reagan also looked like a victory for neo-conservative foreign policy. In contrast to the three presidents who had gone before him, Reagan seemed to share neo-conservative perceptions of the present danger and how to confront it.[121] The central tenet in his foreign policy was anti-Sovietism and the imperative of standing up to the Soviet threat in every part of the world. Podhoretz and others saw in Reagan "the hope that the Republican Party would now assume the responsibility for containing Soviet expansionism that had originally been shouldered by the United States under Democratic leadership but that the Democrats since Vietnam had been increasingly eager to evade."[122]

Because today's neo-conservatives believe the tenets advanced by Reagan's foreign policy validate their emphasis on preemptive war fighting, we discuss this claim (which we reject) in full detail in a later chapter. But in the 1980s foreign policy was not – yet – the neo-conservatives' exclusive realm. It makes sense therefore to look at how the neo-conservatives fared under the first Republican president with whom the neo-conservatives felt properly in tune. We look in particular at some of the tensions that arose with other elements of the conservative movement who also thought their time had come.

For an administration in which the neo-conservatives invested such high hopes and on which they now look back with awe, the Reagan period saw only moderate advances. True, they saw neo-conservatives such as

[119] Podhoretz, "The New American Majority," *Commentary*, January 1981, pp. 19–28.
[120] Norman Podhoretz, "The First Term: The Reagan Road to Détente," *Foreign Affairs, America and the World*, 1984, p. 451; Ehrman, *Rise of Neoconservatism*, pp. 137–38; Peele, *Revival and Reaction*, p. 2; and Robert Dallek, *Ronald Reagan: The Politics of Symbolism* (Cambridge, Mass.: Harvard University Press, 1999), pp. 97–101.
[121] Podhoretz, "The Reagan Road," p. 449.

Dozens of those who followed or were influenced by Strauss in the 1960s and 1970s joined the federal government to initiate a new conservative political outlook. Nathan Tarcov left the University of Chicago to join the State Department Policy Planning Staff. ***David Epstein left Chicago's New School for Social Research and became an analust in the Pentagon's Office of Net Assessment.***

1983 - ONA analyst David Epstein completed a two-volume assessment of the US-Soviet investment balance

https://foreignpolicy.com/2015/01/06/the-battle-between-cia-and-the-pentagon-over-the-state-of-the-soviets-an-excerpt/

In 1983 ONA analyst David Epstein completed a two-volume assessment of the US-Soviet investment balance. Epstein's assessment built on the efforts of Major Lance Lord and retired Navy captain William Manthorpe who had inherited the military investment portfolio from Major Robert Gough in the late 1970s. The assessment broadly accepted CIA estimates of the direct costs of Soviet weapon systems that had been generated with the Agency's building-block approach. But Soviet production rates were hard to square with estimates of the USSR's military burden. In 1986 the CIA and the DIA estimated that over the years 1974–1985, the USSR had procured three times as many ICBMs and SLBMs as had the United States, nine times as many surface-to-air missiles, three times as many tanks, and ten times as many artillery pieces. Even though US systems were generally more costly than their Soviet counterparts, the USSR's dramatically higher production rates suggested that the burden imposed on the Soviet economy should be higher than the CIA's estimate of less than 14 percent, which had been revised upward from its earlier estimates of roughly 6–7 percent.

1984 : Book - "The Political Theory of The Federalist"

https://press.uchicago.edu/ucp/books/author/E/D/au5456117.html

David F. Epstein is Deputy Director of Net Assessment, the Department of Defense.

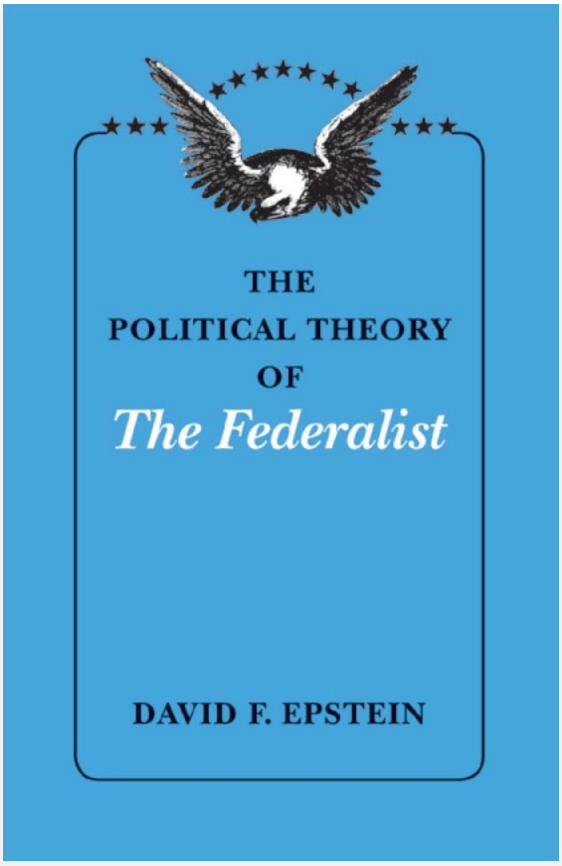
Purchased on Google Play - (https://play.google.com/books/reader?id=wC4GSi8LERIC&pg=GBS.PR4)

1984-the-political-theory-of-the-federalist-google-play-david-epstein-img-cover / -ack.jpg

Affiliation: University of Chicago

Hometown: Chevy Chase, MD

Written "To Ruth"



Acknowledgments

I am most grateful to Harvey C. Mansfield, Jr., and Nathan Tarcov, whose care and discernment in reading earlier versions of this book encouraged and enabled me to improve it. Judith Shklar and two anonymous referees for the University of Chicago Press also deserve thanks for a number of very helpful suggestions. The late Martin Diamond would have improved this book by his counsel; I wish to acknowledge my reliance on his writings and his example.

1984 (March) - Consultant for RAND research - "Comparisons and implications of Alternative Views of the Soviet Economy"

https://www.rand.org/content/dam/rand/pubs/reports/2009/R3075.pdf

R-3075-NA

Comparisons and Implications of Alternative Views of the Soviet Economy

Mark M. Hopkins, Michael Kennedy

March 1984

Prepared for the
Director of Net Assessment
Office of the Secretary of Defense

Rand
SANTA MONICA, CA. 90406

APPROVED FOR PUBLIC RELEASE: DISTRIBUTION UNLIMITED

PREFACE

This report uses the Hopkins-Kennedy optimal control model of the Soviet Union to explore the implications of and make comparisons between three "worlds" (views) that hold differing assumptions concerning the nature of the Soviet economy. These are the "Birman world," the "CIA world," and the "Rosefielde-Lee world." A secondary objective is to investigate a large number of scenarios concerning foreign trade so as to improve understanding of this important aspect of the Soviet economy. This is the second in a series of reports that use the relatively new optimal control methodology. In both this report and its predecessor, estimates are made of the tradeoff curve between Soviet consumption and defense spending for the 1980s and of how this curve is affected by various parameters and uncertainties. The model is explained in detail in the first report by Mark Hopkins, Michael Kennedy, with the assistance of Marilee Lawrence, *The Trade-off Between Consumption and Military Expenditures for the Soviet Union During the 1980s*, The Rand Corporation, R-2927-NA, November 1982.

The project has been sponsored by the Director of Net Assessment, Office of the Secretary of Defense. This report should be of general use to analysts and decisionmakers concerned with the Soviet economy, and of particular use to those interested in predicting Soviet GNP, consumption, and defense expenditures, or in studying Soviet foreign trade issues of the 1980s. It will also be of interest to those concerned with the development and use of optimal control theory for the modeling of centrally planned economies.

SUMMARY

Igor Birman, the CIA, and, taken as a team, Steven Rosefielde and William Lee hold dramatically different views of the current and future state of the Soviet economy. If Birman is correct, the Soviet economy is in a severe crisis and faces a bleak future. If Rosefielde and Lee are correct, the Soviet economy is in excellent condition and has a bright future. The CIA takes an intermediate view. We define the Birman, CIA, and Rosefielde-Lee views and their implications for the future to be the Birman, CIA, and Rosefielde-Lee "worlds," respectively. The Soviet economy in the "Birman world" is smaller than it is in the "CIA world," and has a larger defense share and slower technological growth. The Soviet economy in the "Rosefielde-Lee world" is larger than it is in the "CIA world" and has a larger defense share and faster technological growth.

The primary objective of this report is to determine and compare the implications of the three worlds. A secondary objective (which is an add on to this phase of the project as originally conceived) is to develop and analyze a large number of foreign trade scenarios to improve our understanding of the role of foreign trade in the Soviet economy.

Our main approach is to employ the Hopkins-Kennedy optimal control model of the Soviet Union to calculate tradeoff curves between the average annual rate of growth of consumption and the average annual rate of growth of defense spending for the Soviet economy for the 1980s. Tradeoff curves for 71 scenarios are calculated and presented in various graphs.

When we explore a particular issue (e.g., the price of gold), our usual procedure is to define a high and low price scenario for the "CIA world" and then calculate and compare the corresponding pair of tradeoff curves. Next, we calculate the pairs of tradeoff curves for the same scenarios for both the Birman and the Rosefielde-Lee "worlds," and then compare all three pairs of tradeoff curves.

The West could increase the pressure on the Soviet economy by means of foreign-trade-related policies intended to produce some combination of the following effects: reducing the amount of credit extended to the Soviets by the West, increasing the amount of foreign aid that the Soviets give to their client states, "opening of the umbrella" by the Soviets (their taking some responsibility for the debts of client Eastern European nations), and reducing the efficiency superiority of Western capital exported to the Soviet Union as compared with Soviet-produced capital. Departures from the base case

ACKNOWLEDGMENTS

This project has benefited substantially from the insightful comments of a panel of senior Rand experts, which was formed to follow the progress of the project through a series of internal Rand briefings. The members of this panel are Arthur Alexander, Abraham Becker, Mike Landi, and Charles Wolf, Jr. Research assistance and assistance with computer graphics were provided by Marilee Lawrence and Mitchell Tuller, respectively. We would also like to thank C. Lance Barnett, Don Henry, and David Epstein for comments on earlier drafts that led to numerous improvements.

While the research reported here was being done, Michael Kennedy was senior research fellow at the Institute for Constructive Capitalism at the University of Texas at Austin. He is grateful to the institute and particularly to its director, Professor George Kozmetsky, for generous provision of research support.

1986 - 1988 : CILTS (Commission on Integrated Long-Term Strategy) : The CILTS Working Group on the Future Security Environment

PDF of book "SIX DECADES OF GUIDED MUNITIONS AND BATTLE NETWORKS: PROGRESS AND PROSPECTS" by Barry D. Watts : [HB004Z][GDrive]

lems are solved. Rather they merely reveal how much care is needed in discussing them.

Questions about Future War and an Anomaly

As mentioned at the end of Chapter I, the overall aim of this chapter has been to address the question: How ought one think about the emergence of guided weapons? By the mid-1980s both Soviet military theorists and Western observers were actively trying to think through how guided munitions and battle networks might eventually affect the conduct of war by military forces able to exploit them. This final section of Chapter II reviews the main questions about guided munitions raised in the late 1980s by Andrew Marshall and Charles Wolf during their deliberations on the future security environment as co-chairmen of a working group for the Commission on Integrated Long-Term Strategy (CILTS). Additionally, the discussion also highlights one anomaly regarding reconnaissance-strike systems that has become increasingly apparent during the last decade.

The Commission on Integrated Long-Term Strategy was begun in the fall of 1986 at the direction of President Ronald Reagan's defense secretary, Caspar Weinberger, and his assistant for national security affairs, John Poindexter. The commission's initial mandate was to propose "adjustments to U.S. military strategy in view of a changing security environment in the decades ahead."[152] Co-chaired by Fred C. Iklé (then undersecretary of defense for policy) and Albert Wohlstetter, CILTS had eleven other commissioners, including Zbigniew Brzezinski, Henry Kissinger, former NATO supreme commander General Andrew Goodpaster, Samuel Huntington and former JCS chairman General John Vessey.[153]

[152] Iklé and Wohlstetter, *Discriminate Deterrence: Report of the Commission on Integrated Long-Term Strategy*, p. i. By the time this report was published in January 1988, Frank Carlucci had replaced Weinberger as defense secretary and Colin Powell had become the assistant for national security affairs, having replaced Carlucci who had held the job from December 2, 1986, until November 23, 1987.

[153] The other CILTS members were Anne L. Armstrong, William P. Clark, W. Graham Claytor, Jr., Admiral (USN, retired) James L. Holloway III, Joshua Lederberg, and General (USAF, retired) Bernard A. Schriever.

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The CILTS effort was supported by a number of working groups, whose studies were not published until after the commission's overall report, *Discriminate Deterrence*, appeared in January 1988.[154] *Discriminate Deterrence* did mention the possibility of an emerging RMA driven by the exploitation of microelectronics, information processing, and other technologies. In fact, it observed that the Soviet military was already "engaged in a major effort to understand the implications" of being able to employ precision munitions across wider geographical areas with greater rapidity and intensity than had been previously possible.[155]

However, detailed examination of these prospects and possibilities did not emerge until the report of Marshall and Wolf's CILTS working group on the future security environment was published in October 1988.[156] This group took seriously the possibility that Soviet military theorists might be right in anticipating that the conduct of war was entering a period of major or discontinuous change:

> The Working Group believes that the Soviets are correct in their assessment that the advent of new technologies will revolutionize war, and not merely make current forces marginally better at what they do. In the same way that long-range rifles and railroads transformed combat in the mid-19th century (and tanks and aircraft did in the mid-20th century), the new technologies will profoundly alter tactical requirements, operational possibilities, and even, in some cases, strategic choice in the early 21st century. New theaters of strategic concern—space, most notably—will open up, and previously discarded options (ballistic missile defense, for

[154] The topics assigned to the working groups were "the security environment for the next twenty years, the role of advanced technology in military systems, interactions between offensive and defensive systems on the periphery of the Soviet Union, and the U.S. posture in regional conflicts around the world" (Iklé and Wohlstetter, *Discriminate Deterrence*, p. i).

[155] Iklé and Wohlstetter, *Discriminate Deterrence*, p. 8.

[156] Members of the CILTS working group on the future security environment included Eliot A. Cohen, David F. Epstein, Fritz Ermarth, Lawrence Gershwin, James G. Roche, Thomas Rona, Stephen P. Rosen, Notra Trulock, III, and Dov Zakheim.

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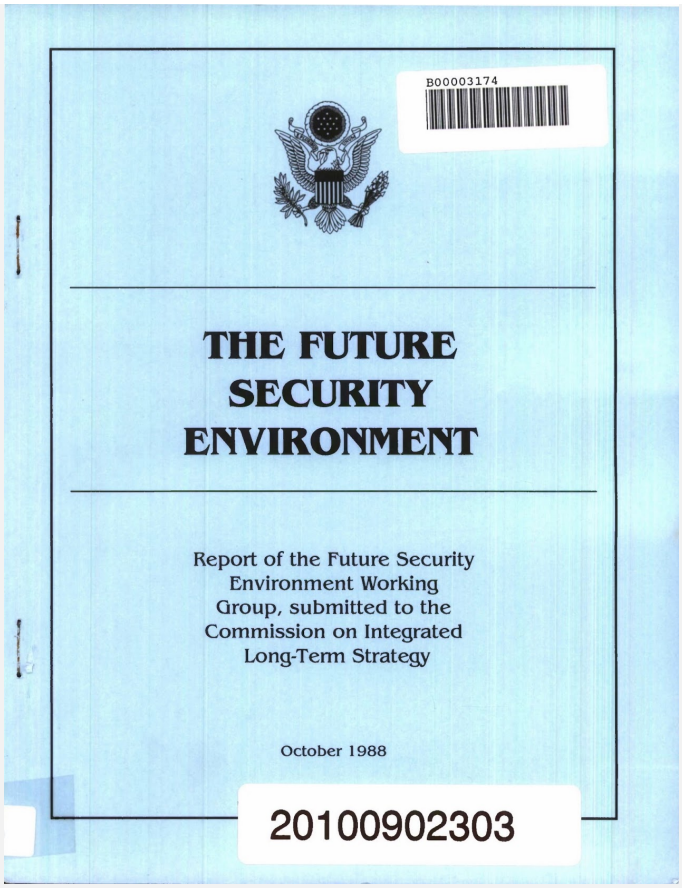
1988 (October report) - Future Security Environment Working Group

See PDF at [HG008G][GDrive]

The **Future Security Environment Working Group** includes:

- Eliot Asher Cohen (born 1956)
- **David Epstein**
- Fritz Walter Ermarth (born 1941)
- Dr. Lawrence Kenneth Gershwin (born 1942)
- James Gerard Roche (born 1939)
- Thomas Paul Rona (born 1923)
- Dennis B. Ross (born 1948)
- Dr. Dov Solomon Zakheim (born 1948)



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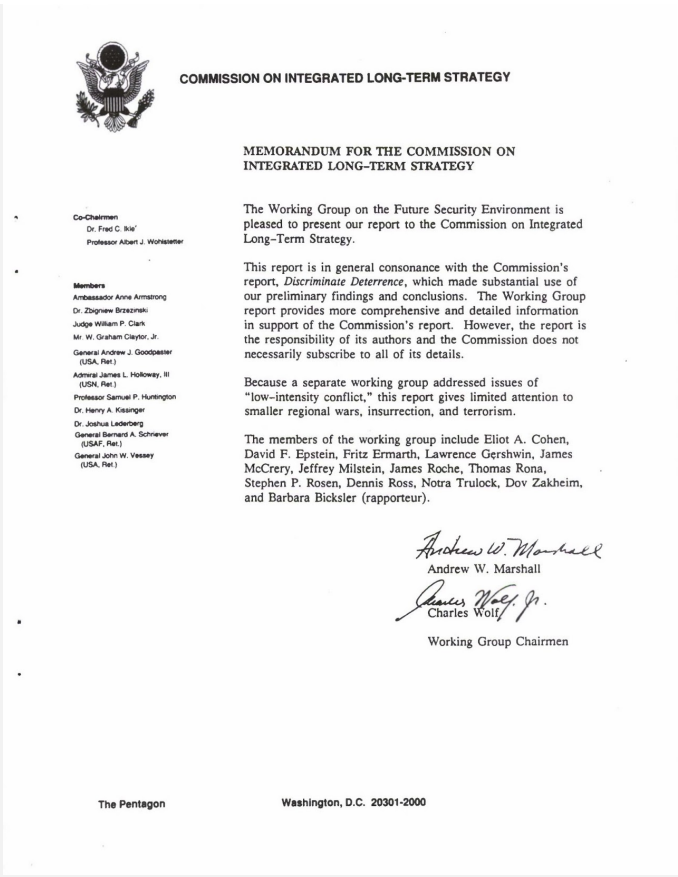

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1987 (August) - (CIA archives) - Soviet Economy assessment (David Epstein on distribution)

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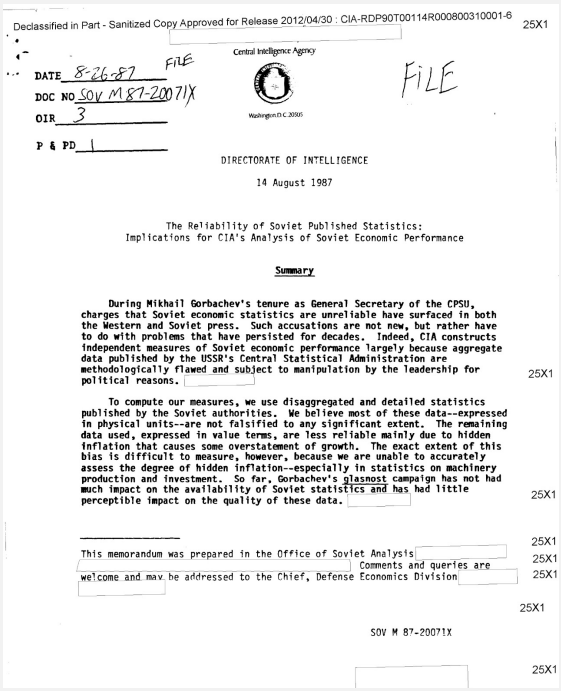

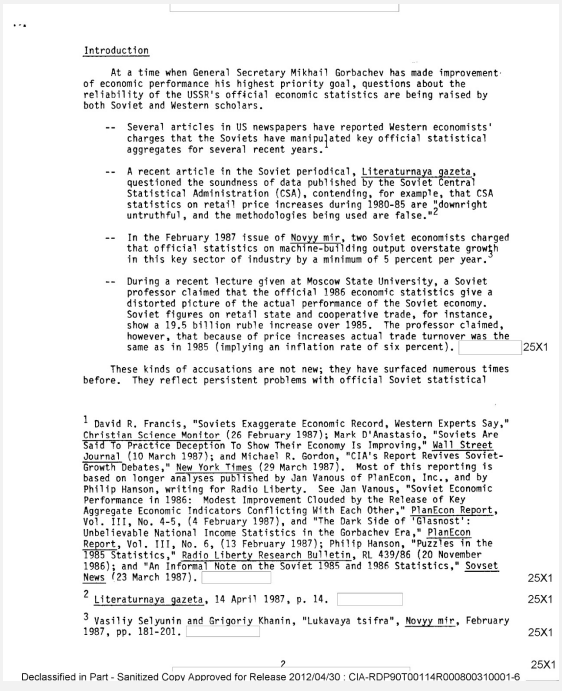

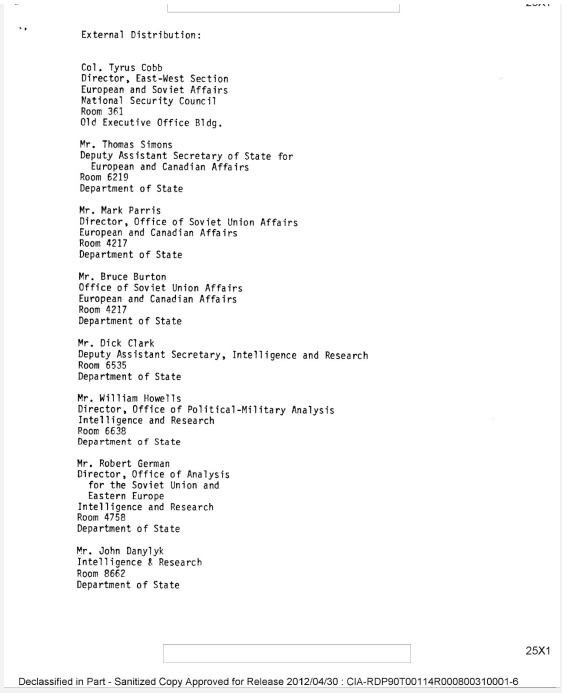

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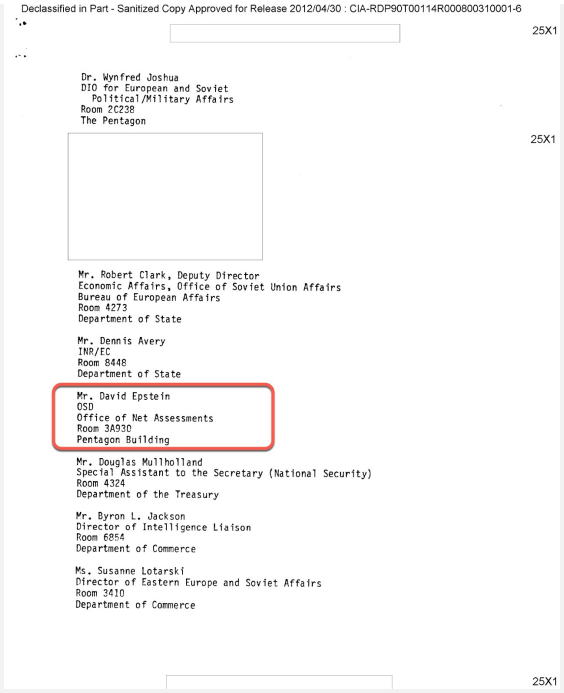

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Ms. Susanne Lotarski
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1987 (Nov 30) - CSPAN recording - Federal Union: Division of Power - David Epstein a panelist

This panel, hosted by the American Enterprise Institute, discussed the institute's findings of the research project into the Constitution that was commenced in honor of the bicentennial anniversary of the writing of the Constitution.

- FULL VIDEO recording : [HM0011][GDrive]
- David Epstein clip-01 15:30 - 17:58 : [HM0012][GDrive]
- David Epstein clip-02 27:50 - 33;21 : [HM0013][GDrive]
- David Epstein clip-03 53:40 - 1:00:34 : [HM0014][GDrive]
- David Epstein clip-04 1:19:15 - 1:24:29 : [HM0015][GDrive]
- David Epstein clip-05 1:50:00 - 1:52:55 : [HM0016][GDrive]

[HM0010][GDrive]

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1997 (April) Report - Prepared by ONI

https://www.esd.whs.mil/Portals/54/Documents/FOID/Reading%20Room/Other/15-F-0070_DOC_07_FINAL_ODNA_Final_Report_Scenarios_for_an_Ambitious_Russian_Foreign_Policy_1996-2006.pdf

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1999 - **Project for the New American Century (PNAC)**

http://zaprasza.net/a_y.php?article_id=17246

PNAC

The list of contributors to the PNAC document Rebuilding America's Defenses compiled in 2000, which called for a "new Pearl Harbor": Roger Barnett, U.S. Naval War College, Alvin Bernstein, National Defense University, Stephen Cambone, National Defense University, **Eliot Cohen, Nitze School of Advanced International Studies,** Johns Hopkins University, Devon Gaffney Cross, Donors' Forum for International Affairs, Thomas Donnelly, Project for the New American Century, **David Epstein, Office of Secretary of Defense, Net Assessment**, David Fautua, Lt. Col., U.S. Army, Dan Goure, Center for Strategic and International Studies, Donald Kagan, Yale University, Fred Kagan, U. S. Military Academy at West Point, Robert Kagan, Carnegie Endowment for International Peace, Robert Killebrew, Col., USA (Ret.), William Kristol, The Weekly Standard, Mark Lagon, Senate Foreign Relations Committee, James Lasswell, GAMA Corporation, I. Lewis Libby, Dechert Price & Rhoads, Robert Martinage, Center for Strategic and Budgetary, Assessment, Phil Meilinger, U.S. Naval War College, Mackubin Owens, U.S. Naval War College, **Steve Rosen, Harvard University**, Gary Schmitt, Project for the New American Century, Abram Shulsky, The RAND Corporation, Michael Vickers, Center for Strategic and Budgetary Assessment, Barry Watts, Northrop Grumman Corporation, Paul Wolfowitz, Nitze School of Advanced International Studies, Johns Hopkins University, and **Dov Zakheim, System Planning Corporation,** includes a relatively high proportion of Jewish names. There are many more individuals associated with PNAC.

https://en.wikipedia.org/wiki/Project_for_the_New_American_Century

The **Project for the New American Century** (**PNAC**) was a neoconservative[1][2][3] think tank based in Washington, D.C. that focused on United States foreign policy. It was established as a non-profit educational organization in 1997, and founded by William Kristol and Robert Kagan.[4][5] PNAC's stated goal was "to promote American global leadership."[6] The organization stated that "American leadership is good both for America and for the world," and sought to build support for "a Reaganite policy of military strength and moral clarity."[7]

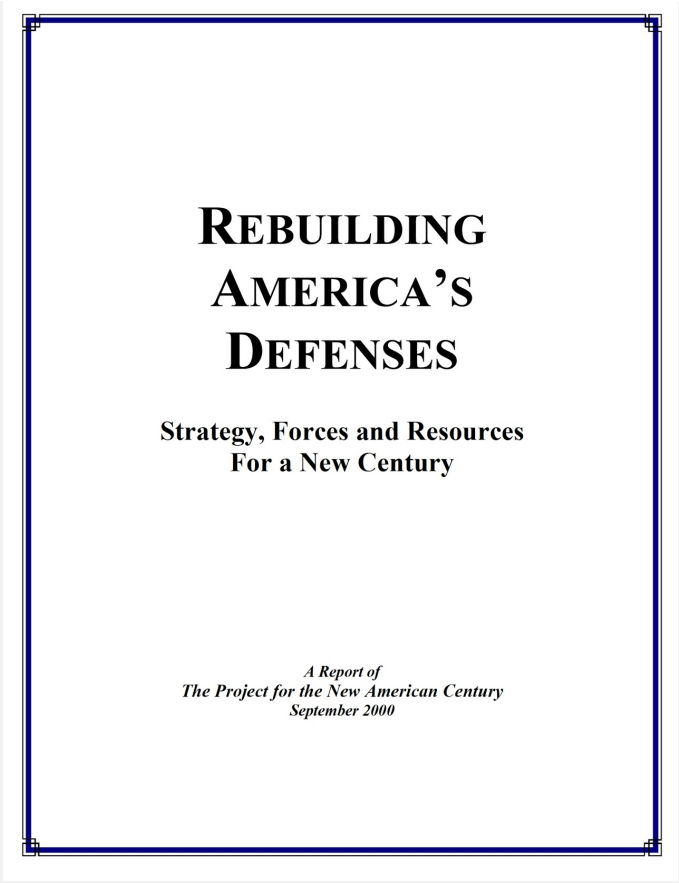
Of the twenty-five people who signed PNAC's founding statement of principles, ten went on to serve in the administration of U.S. President George W. Bush, including Dick Cheney, Donald Rumsfeld, and Paul Wolfowitz.[8][9][10][11] Observers such as Irwin Stelzer and Dave Grondin have suggested that the PNAC played a key role in shaping the foreign policy of the Bush Administration, particularly in building support for the Iraq War.[12][13][14][15] Academics such as Inderjeet Parmar, Phillip Hammond, and Donald E. Abelson have said PNAC's influence on the George W. Bush administration has been exaggerated.[16][17][18]

The Project for the New American Century ceased to function in 2006;[19] it was replaced by a new think-tank named the Foreign Policy Initiative, co-founded by Kristol and Kagan in 2009. The Foreign Policy Initiative was dissolved in 2017.

https://archive.org/details/RebuildingAmericasDefenses

Collaborators include :

- Eliot Asher Cohen (born 1956)
- Dr. Dov Solomon Zakheim (born 1948)



REBUILDING AMERICA'S DEFENSES

Strategy, Forces and Resources For a New Century

A Report of
The Project for the New American Century
September 2000

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Office of Secretary of Defense, Net Assessment

David Fautua
Lt. Col., U.S. Army

Dan Goure
Center for Strategic and International Studies

Donald Kagan
Yale University

Fred Kagan
U. S. Military Academy at West Point

Robert Kagan
Carnegie Endowment for International Peace

Robert Killebrew
Col., USA (Ret.)

William Kristol
The Weekly Standard

Mark Lagon
Senate Foreign Relations Committee

James Lasswell
GAMA Corporation

I. Lewis Libby
Dechert Price & Rhoads

Robert Martinage
Center for Strategic and Budgetary Assessment

Phil Meilinger
U.S. Naval War College

Mackubin Owens
U.S. Naval War College

Steve Rosen
Harvard University

Gary Schmitt
Project for the New American Century

Abram Shulsky
The RAND Corporation

Michael Vickers
Center for Strategic and Budgetary Assessment

Barry Watts
Northrop Grumman Corporation

Paul Wolfowitz
Nitze School of Advanced International Studies, Johns Hopkins University

Dov Zakheim
System Planning Corporation

The above list of individuals participated in at least one project meeting or contributed a paper for discussion. The report is a product solely of the Project for the New American Century and does not necessarily represent the views of the project participants or their affiliated institutions.

2007 (April 27) - Libby letters

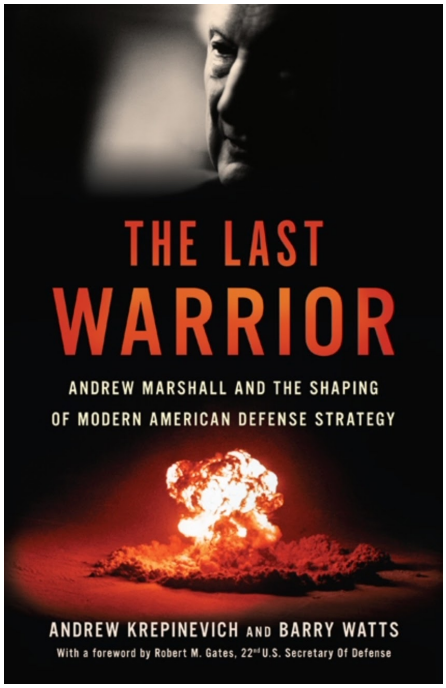
http://media.washingtonpost.com/wp-srv/politics/pdf/libbyletters-e-h.pdf

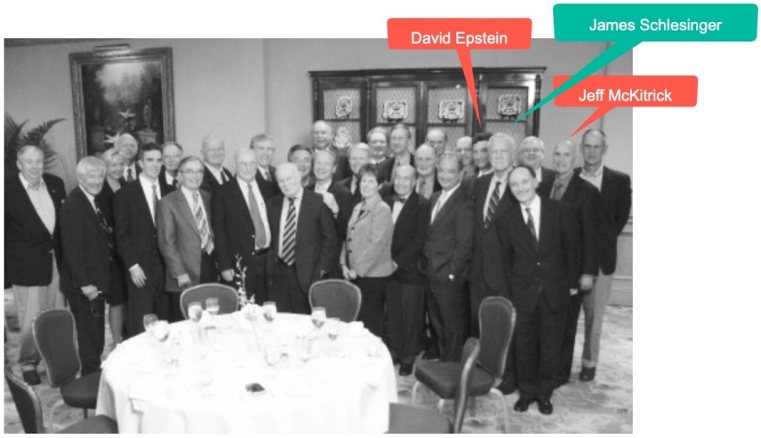
The Honorable Reggie B. Walton [...]:

I am writing to report information about the character of Mr. Scooter Libby that I believe is relevant to your consideration of an appropriate sentence. Much of my knowledge of Scooter was acquired when he was Deputy Undersecretary of Defense for Policy (1989-1993). **I have been a career civil servant in the Defense Department for 26 years, 20 of them as Deputy Director of Net Assessment, a small office that serves the Secretary of Defense as an internal think tank for long range strategic issues.** Scooter's years of devotion to public service speak for themselves. The quality and intensity of that service are what I observed and can testify to. At the Pentagon I had regular contact with Scooter due to our common focus on the Soviet Union, which was then in a period of enormous uncertainty and unpheaval. Scooter greatly impressed me by his determination to fully understand for himself, and convey to his superiors, the complexity and details of the issues. He did not stand on ceremony or rank. His focus was relentlessly substantive, and he pored over analytical reports in a way that I do not believe is common in busy, high level political appointees. He educated himself about technical military issues previously unfamiliar to him. He was forthright about what he knew, and eager to learn from the knowledge of others. I believe his performance exemplified the very highest standards of government service. Before and after his service in the Defense Department, Scooter was an attorney in private practice, and in both periods I know that he sacrificed many otherwise billable hours by serving the Department without pay. My office conducts an annual summer study, assembling several small groups of academics, military officers, and other experts to study issues of strategic importance. Scooter several times traveled to these events to work with the groups to sharpen their findings and their briefings for Defense Department officials. I encountered Scooter at several other activities where his participation was entirely pro bono. **He served in 1988 on a panel to plan a reorganization of the office of the Undersecretary of Defense for Policy, and in 1999 on a privately organized study group on the emergence of China**. I served on the latter panel as part of my job; for Scooter it was unpaid public service. **I first met Scooter years before his Pentagon service at a Sunday morning pickup softball game. The weekly softball game is not a bad laboratory in showing human virtues and vices, and Scooter was always a man of exemplary sportsmanship and honesty, a modest, sympathetic manner, and simple human kindness, manifested most memorably to me in his warmly welcoming my then-young son into an adult game.** Scooter's outstanding talents and high level of energy made it easy to see why his contributions to any enterprise would be so highly valued. That so many of these contributions were dedicated to the national security of our country is, to me, cause for gratitude and inspiration, and something I hope will be weighed properly in his favor.

2008

- With **James Rodney Schlesinger (born 1929)**





Dinner during a conference on the past, present and future of net assessment, March 28, 2008. Marshall largely selected the attendees for this conference. The price of admission was to give a paper during the conference. Left to right: Jim Roche, Fred Giessler, Mie Augier, Michael Pillsbury, Andrew May, Charlie Pease, Gerry Dunne, John Battilega, Andy Marshall, Mark Herman, Lionel Tiger, Dmitri Ponomareff, Jaymie Duran, Lance Lord (behind Durnan), Karl Hasslinger, Donna Hasslinger, Phillip Karber, Jan van Tol, Charlie Wolf (in front of van Tol), Barry Watts, Enders Wimbush (behind Watts), Steve Rosen, Aaron Friedberg, David Epstein, James Schlesinger, Diego Ruiz Palmer, Wick Murray, Jeff McKitrick, Chip Pickett. PHOTO: BARRY WATTS.

2010 (Feb 27) - Father Saul T Epstein passes

2010-03-13-lincoln-journal-star-website-epstein-saul-t-obituaries.pdf

https://journalstar.com/lifestyles/announcements/obituaries/epstein-saul-t/article_29fb1597-22bb-53d2-b930-f4035d3a3fd2.html

"Saul T. Epstein, Theoretical physicist, 85, died of cancer on February 27 in Madison, Wisconsin. Mr. Epstein was born in Southampton, New York and grew up in East Hampton. He received his PhD from Massachusetts Institute of Technology, and was a professor of physics at the University of Nebraska then at the University of Wisconsin.

He is survived by Joanne Weinstein of Madison, Wisconsin; Peter Epstein of Madison, Wisconsin; ***David Epstein of Chevy Chase****, Maryland; and seven grandchildren."*

2011

https://apps.dtic.mil/dtic/tr/fulltext/u2/a548578.pdf

RAND - 2011 - China and India, 2025: A Comparative Assessment

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2020 (June) - US Senate Committee on Finance letter, from Chuck Grassley to James Baker

Mentioned by Chuck Grassley in this video - https://www.youtube.com/watch?v=IFr3Ent-byM

2020-06-18-us-senate-grassley-to-james-baker.pdf : See [HG008F][GDrive]

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KOLAN DAVIS, STAFF DIRECTOR AND CHIEF COUNSEL
JOSHUA SHEINKMAN, DEMOCRATIC STAFF DIRECTOR

United States Senate
COMMITTEE ON FINANCE
WASHINGTON, DC 20510–6200

June 18, 2020

VIA ELECTRONIC TRANSMISSION

Mr. James Baker
Director
Office of Net Assessment
Department of Defense

Dear Mr. Baker:

I write today about your February 5, 2020, response to my January 22, 2020, letter regarding Stefan Halper's work for the Office of Net Assessment (ONA).[1] Since the beginning of my investigation, I have repeatedly requested all records related to Professor Halper's work for ONA, including travel records, pursuant to the contracts that he had with your office. However, despite these repeated requests, ONA has continually failed to furnish all requested records. It appears that either ONA has refused to comply with my requests, or that ONA simply does not maintain full records of Halper's work.

Moreover, your February 5, 2020, response appears to show that you have not performed the legally required annual "Net Assessments"—the purpose for which ONA exists. Further, your response failed to fully answer Questions 2, 3, 4(c), 4(d), 4(e), 6(a), 8, and 13 of my letter. Your response also couched unclassified work product relating to the costs to the taxpayer associated with your decisions to contract with entities for research work in a classified document. Accordingly, I formally request that you declassify, to the fullest extent possible under Executive Order 13526, the classified work product that you provided to me. Declassification is appropriate at this time because, among other factors, the taxpayers paid for those research projects and the public interest in knowing how much was spent, for what purpose it was spent, and the identity of the contract recipient far outweighs any perceived national security interest. In addition, some projects mentioned within the document have already been made public, classification cannot be used to prevent embarrassment to an agency, and classification cannot be used to hide government inefficiency from public and congressional review.

It is also perplexing that ONA continues to assert that Halper fulfilled the obligations set forth in his contracts. It has been reported by *The Washington Times* that many of the individuals in which Halper cited as sources in his research papers have outright denied having contributed to his work.[2] This begs the question as to how ONA can continue to assert that Halper's deliverables were of "high quality" and "conformed to the requirements set forth in the

[1] Letter from James Baker, Director, Office of Net Assessment, to Sen. Charles E. Grassley, Chairman, S. Comm. On Finance, dated February 5, 2020.
[2] *See* Rowan Scarborough, *Loose Contracting Practices at Pentagon office Waste Millions; Whistleblower Punished*, THE WASHINGTON TIMES (August 18, 2019), https://www.washingtontimes.com/news/2019/aug/18/stefan-halpers-pentagon-contracts-investigation-sh/; https://www.washingtontimes.com/news/2019/aug/18/stefan-halpers-pentagon-contracts-investigation-sh/; *see also* Rowan Scarborough, *FBI spy Stefan Halper's $240,000 Pentagon study disavowed by high-profile experts,* THE WASHINGTON TIMES (October 1, 2018), https://www.washingtontimes.com/news/2018/oct/1/stefan-halpers-russia-china-pentagon-study-lists-c/.

[HG008G][GDrive]

contract" when citations in his work appear to give contribution to individuals who had no involvement in the work. In your February 5, 2020, response to me, you noted that ONA checks the validity of citations and supporting documentation on each project. Clearly, that did not happen with Halper's work product.

On a related topic with your work at ONA, and related to my ongoing oversight work on the now-debunked Russian collusion narrative, according to an April 29, 2020, press release by *Judicial Watch* you exchanged many emails and phone calls with *The Washington Post* reporter, David Ignatius.[3] As you are aware, he first reported on the call between Lieutenant General Michael Flynn and the Russian Ambassador to the U.S., Sergey Kislyak, in *The Washington Post.*[4] Based on a court filing by Sidney Powell, one of Flynn's attorneys, it has been alleged that you were the source of the leak of the transcripts of Flynn's calls with Kislyak.[5]

Included in these 143 pages of email communications are several heavily redacted communications between you and Deputy Secretary of Defense Robert Work and Deputy Director of ONA, David Epstein, which would presumably be about Ignatius given the subject matter of the *Judicial Watch* Freedom of Information Act request.[6] Given the overlap in time between the majority of the emails and the leak of the call, your apparent close relationship with Mr. Ignatius, and your communications with Mr. Work and Mr. Epstein, please provide all 143 pages of email communications in unredacted form and all email communications among and between you, Mr. Work, Mr. Epstein, and Mr. Ignatius from July 1, 2016, to March 1, 2017, no later than July 2, 2020.

In furtherance of my continued oversight into ONA contract practices, and my investigation into mishandling of the Russia investigation, please answer the following no later than July 2, 2020:

1. In my February 5, 2020 letter, I asked that ONA provide the number of contracts awarded to the top five entities over the last five years. You provided this list in alphabetical order. I request that this list be provided in accordance to the dollar amount each entity has received over the last five (5) years. In your response, please provide the dollar figures for each entity for each year.

2. In response to question 4(b) of my letter, you responded that ONA reviews the validity of citations and supporting research "as a matter of course."[7] However, in your response to the DoD Inspector General you stated that ONA does not

[3] Press Release, Judicial Watch, Judicial Watch: Emails Show Extensive Communications Between Senior Defense Official and Columnist Who Published Leaked Info on Flynn Calls with Russian Ambassador (April 29, 2020), https://www.judicialwatch.org/press-releases/flynn-dodofficial-columnist/; *see* David Ignatius, *Why did Obama Dawdle on Russia's Hacking?*, THE WASHINGTON POST (Jan. 12, 2017), https://www.washingtonpost.com/opinions/why-did-obama-dawdle-on-russias-hacking/2017/01/12/75f878a0-d90c-11e6-9a36-1d296534b31e_story.html.
[4] *See* David Ignatius, *Why did Obama dawdle on Russia's hacking?*, THE WASHINGTON POST, (January 12, 2017), https://www.washingtonpost.com/opinions/why-did-obama-dawdle-on-russias-hacking/2017/01/12/75f878a0-d90c-11e6-9a36-1d296534b31e_story.html.
[5] Press Release, Judicial Watch, Judicial Watch: Emails Show Extensive Communications Between Senior Defense Official and Columnist Who Published Leaked Info on Flynn Calls with Russian Ambassador (April 29, 2020), https://www.judicialwatch.org/press-releases/flynn-dodofficial-columnist/.
[6] *Id.*
[7] Letter from James Baker, Director, Office of Net Assessment, to Sen. Charles E. Grassley, Chairman, S. Comm. On Finance, dated February 5, 2020.

[HG008H][GDrive]

agree that every contract requires exhaustive or significant verification of the methods used to derive analytic content.[8]

a. Were Halper's citations and supporting research checked for validity? If not, why not?

b. Are all deliverables reviewed to ensure the accuracy and validity of citations and supporting research? If not, why not?

3. In response to question 4(c), you state that "ONA does not require peer review as part of our acceptance process for commissioned work." Were Halper's contracts peer reviewed? If not, why not?

4. In the August 2019 article, published by *The Washington Times*, several sources that Halper claimed to have interviewed and consulted for his work have stated that they would not consider themselves to be contributors to his research papers, and some had no memory of being asked to participate in any project at all.[9]

a. Has ONA reached out to each individual listed in Halper's statement of work to verify that each individual was in fact interviewed or contributed to Halper's research? If not, how can you state with certainty that Halper fulfilled the terms of his contracts?

b. Can you state with certainty that Halper interviewed the individuals that he claimed to interview for his research papers? If not, how can you claim that Halper's work was of high quality?

5. In question 4(e), I asked if ONA currently requires contractors to provide the name and dollar amount contributed by third parties to ensure a contractor's work is in no way influenced by foreign individuals or entities. In response to this question, you spoke only of ONA's employees and conflict of interest forms that they are required to sign. This was not my question, and therefore your answer is unresponsive. In documents provided to my office Halper's travel to Japan is listed as being paid for by a third party. ONA does not appear to know the name or identity of the individual or entity that paid for Halper's travel to Japan.

a. Did ONA attempt to elicit an answer at any point from Halper as to who paid for this travel? If not, why not?

b. Does ONA believe that travel paid for by a third-party could, on its face, be a conflict of interest to a DoD-sponsored study? If not, why not?

6. In response to question five of my letter, you state that approval to exercise an option of a contract is given by an independently appointed contracting officer, who is not under your direction or authority. However, you also state that ONA

[8] Department of Defense Office of Net Assessment, Response to DoD IG Research Project on DoD Office of Net Assessment Contract Management (Project No. D2019-D000AX-0104.000), dated June 27, 2019.
[9] Rowan Scarborough, *Loose Contracting Practices at Pentagon Office Waste Millions; Whistleblower Punished*, THE WASHINGTON TIMES (August 18, 2019), https://www.washingtontimes.com/news/2019/aug/18/stefan-halpers-pentagon-contracts-investigation-sh/.

[HG008I][GDrive]

will determine the strategic value of exercising an option in a contract and ONA will provide its recommendation to the independent contracting authority.

a. How often does a contracting officer disagree with ONA's recommendation and opt to not exercise an option in a contract? Who then has final determination on exercising a contract option?

b. How many times over the last five years has this occurred?

7. In response to question eight of my letter, I asked if Halper's relationship with Russian intelligence officer Vyacheslav Trubnikov suggested that there may be biased and unreliable information contained within Professor Halper's deliverable. Your response was that ONA's security agency found no derogatory information on Professor Halper. Your answer is unresponsive to my question.

a. Could a relationship between a contractor and a source suggest that a deliverable may be tainted with inaccurate or misleading information, especially a source that is a known intelligence officer for a foreign, hostile government? If not, why not?

b. Do you believe that research papers containing inaccurate or misleading information could cause a conflict in ONA's mission of providing assessments of future military threats? If not, why not?

8. In response to question 13 of my letter, I asked for a list of individuals, contracted, nongovernment, or detailed, and their associated entity that would have shared workspace with ONA. Your answer indicated that in the past, there have been individuals that shared ONA's workspace.

a. Please provide a list of those individuals, and their associated entity, that shared a workspace with ONA in the last five years.

b. Would these individuals have been privy to ONA's assessment of its future needs, in terms of future research projects?

c. Has a contracted, nongoverement, or detailed individual ever, either intentionally or inadvertently, received information regarding ONA's future needs?

d. Please provide ONA's policy on separating non-ONA employees from ONA's workspace.

9. Did you provide any information relating to any Flynn-Kislyak call to the media? If so, what information?

10. Did you provide any information relating to any Flynn-Kislyak call to an individual with the knowledge that it would be shared by that individual to the media? If so, what information?

[HG008J][GDrive]

11. In your communications with Mr. Ignatius, did you ever provide Mr. Ignatius any information related to Lt. Gen. Flynn? If so, what information?

12. In your communications with Deputy Secretary of Defense Robert Work did you ever discuss any information relating to Lt. Gen. Flynn? If so, what information?

13. In your communications with Deputy Director of ONA, David Epstein, did you ever discuss any information relating to Lt. Gen. Flynn? If so, what information?

14. On what date did you become aware of Halper's role in Crossfire Hurricane? How did you become aware?

I anticipate that your written reply and most responsive documents will be unclassified. Please send all unclassified material directly to the Committee. In keeping with the requirements of Executive Order 13526, if any of the responsive documents do contain classified information, please segregate all unclassified material within the classified documents, provide all unclassified information directly to the Committee, and provide a classified addendum to the Office of Senate Security. Although the Committee complies with all laws and regulations governing the handling of classified information, it is not bound, absent its prior agreement, by any handling restrictions.

Should you have questions, please contact Joshua Flynn-Brown or Quinton Brady of my Committee staff at (202) 224-4515. Thank you for your continued attention to this important matter.

Sincerely,

Charles E. Grassley
Chairman
Committee on Finance

cc:

The Honorable Mark Esper, Secretary of Defense
Mr. Sean O'Donnell, Acting Inspector General, Department of Defense

[HG008K][GDrive]

June 18, 2020, to Mr. James Baker Director Office of Net Assessment, Department of Defense

Dear Mr. Baker: I write today about your February 5, 2020, response to my January 22, 2020, letter regarding ***Stefan Halper's work for the Office of Net Assessment (ONA)****.1 Since the beginning of my investigation, I have repeatedly requested all records related to Professor Halper's work for ONA, including travel records, pursuant to the contracts that he had with your office. However, despite these repeated requests, ONA has continually failed to furnish all requested records.* ***It appears that either ONA has refused to comply with my requests, or that ONA simply does not maintain full records of Halper's work.***

Moreover, your February 5, 2020, response appears to show that you have not performed the legally required annual "Net Assessments"—the purpose for which ONA exists. Further, your response failed to fully answer Questions 2, 3, 4(c), 4(d), 4(e), 6(a), 8, and 13 of my letter. Your response also couched unclassified work product relating to the costs to the taxpayer associated with your decisions to contract with entities for research work in a classified document. Accordingly, I formally request that you declassify, to the fullest extent possible under Executive Order 13526, the classified work product that you provided to me. Declassification is appropriate at this time because, among other factors, the taxpayers paid for those research projects and the public interest in knowing how much was spent, for what purpose it was spent, and the identity of the contract recipient far outweighs any perceived national security interest. In addition, some projects mentioned within the document have already been made public, classification cannot be used to prevent embarrassment to an agency, and classification cannot be used to hide government inefficiency from public and congressional review.

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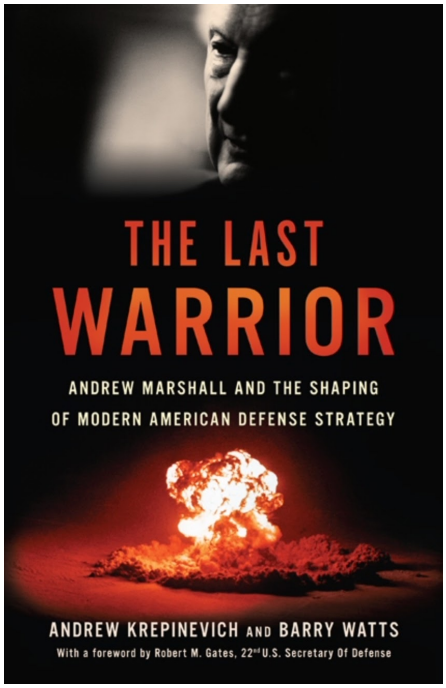
2015 Book - "The Last Warrior : Andrew Marshall and the Shaping of Modern American Defense Strategy

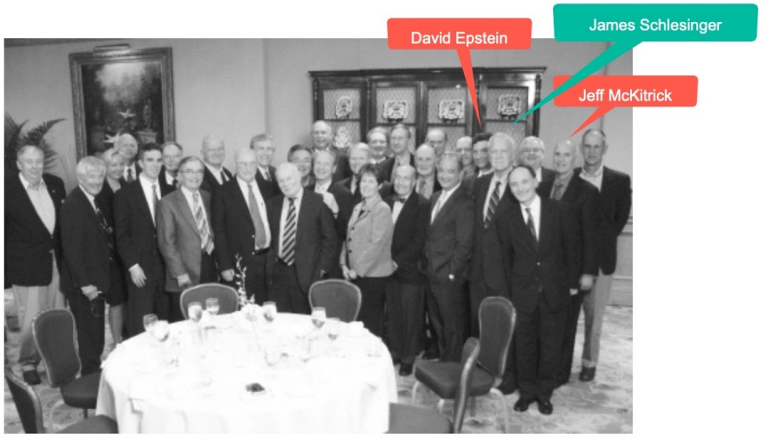
Purchased book : https://play.google.com/books/reader?id=QoJzAwAAQBAJ&pg=GBS.PA289.w.1.0.205.0.2

About life of Andrew Walter Marshall (born 1921)

2015-the-last-warrior-andrew-marshall-modern-defense-andrew-krepinevich-and-barry-watts

2015-the-last-warrior-andrew-marshall-modern-defense-andrew-krepinevich-and-barry-watts-img-dinner-1





Dinner during a conference on the past, present and future of net assessment, March 28, 2008. Marshall largely selected the attendees for this conference. The price of admission was to give a paper during the conference. Left to right: Jim Roche, Fred Giessler, Mie Augier, Michael Pillsbury, Andrew May, Charlie Pease, Gerry Dunne, John Battilega, Andy Marshall, Mark Herman, Lionel Tiger, Dmitri Ponomareff, Jaymie Duran, Lance Lord (behind Durnan), Karl Hasslinger, Donna Hasslinger, Phillip Karber, Jan van Tol, Charlie Wolf (in front of van Tol), Barry Watts, Enders Wimbush (behind Watts), Steve Rosen, Aaron Friedberg, David Epstein, James Schlesinger, Diego Ruiz Palmer, Wick Murray, Jeff McKitrick, Chip Pickett. PHOTO: BARRY WATTS.

1. **Ref 1 to David Epstein**
   - *Possibly the most consequential ONA assessments during the 1970s did not focus directly on military forces. Recall that when Marshall moved to the Pentagon, Schlesinger asked him to continue pushing the CIA to reconsider its estimate of the burden Soviet military programs was imposing on the USSR's economy. In 1974 Marshall hired an Air Force economist, Major Lee Badgett, to develop more inclusive dollar-cost estimates of Soviet military spending. By September 1975 Marshall and Badgett had reached a preliminary conclusion that rather than the Agency's burden estimate of 6 to 7 percent of Soviet GNP, Soviet military activities likely consumed 10 to 20 percent of the USSR's economic output. 81* ***Over the next decade, as Bob Gough, William Manthorpe, Lance Lord, and David Epstein wrote a series military investment balances for Marshall, the list of indirect costs that Soviet military programs were imposing on the USSR's economy grew.*** *They eventually included expenditures for civil defense, industrial mobilization preparations and dual-use investments as well as the costs of maintaining the Soviet empire.*
   - *The direct and indirect costs of the USSR's military efforts constituted the numerator of the burden ratio. It addressed the question: How much are the Soviets spending on their military? The denominator problem, as it came to be known, addressed the question: How large is the Soviet economy? The denominator question was first brought to Marshall's attention in 1979 by the Soviet émigré economist Igor Birman. From 1970 to 1983, the CIA estimated the Soviet GNP to be between 50 and 60 percent of US GNP. 82 In hindsight, the Soviet economy during the 1970s and 1980s was probably never greater than 25 percent of that of the United States. As the Soviet economy was roughly half the size estimated by the CIA, and the total cost of its defense expenditures larger than the Agency's estimates of the USSR's direct military expenditures, this suggested that the USSR's military might be consuming as much as 30 to 40 percent of the country's economic output. Furthermore, as became obvious in the 1980s, the Soviet economy, burdened by military spending and the inherent inefficiencies of the USSR's centralized economic planning, was encountering increasingly severe structural problems.*
2. **Ref 2 to David Epstein**
   - *Particularly for those outside ONA, the varied and complex relations between its external research program and its formal balances were often opaque. But as Marshall and Schlesinger recognized at the outset, the research program was a necessary, vital component of Marshall's development and maturation of net assessment. Without it, ONA's assessments would have been confined to official government data. But as Marshall found time and again, the data available from official sources could be nonexistent, incomplete, or simply wrong.*
   - *The debate between the CIA and ONA over the burden that Soviet military programs imposed on the USSR's economy is perhaps the most consequential example of official intelligence estimates simply getting it wrong and, hence, the need for independent research outside the government. During the 1970s most of ONA's efforts to estimate the ratio of Soviet military spending to the USSR's GNP focused on getting the numerator—how much the Soviets were spending on their military forces—right. Again, Marshall's view was that the CIA's estimates of Soviet defense spending concentrated on the visible elements of the USSR's military forces: ICBMs, naval combatants, shipyards and naval bases, fighter and bomber bases and the aircraft on them, surface-to-air missile batteries, tanks, armored fighting vehicles, military design bureaus, manufacturing plants, and so forth. With the advent of satellite photographic reconnaissance in 1960, the US intelligence community was able to build up relatively accurate estimates of the Soviet military's equipment holdings. Rightly suspicious of official Soviet figures for defense expenditures, the CIA adopted a building-block approach to estimating the USSR's military spending, based on the concept that prices × quantities = spending. 61*
   - *Identifying prices presented the greatest challenge because the USSR spent rubles, not dollars, on its military programs. Establishing a valid ruble–dollar exchange ratio proved difficult, as ruble prices in the Soviet Union were not set by market forces as were dollar prices in the United States. 62 In contrast, getting the quantities of military goods to be priced was simpler because over time the CIA was increasingly able to estimate the numbers of units in the USSR's order of battle, tables of organization and equipment for Soviet units, manpower levels, and production rates for weapons and equipment. 63 In 1967 the CIA's Office of Strategic Research (OSR) was responsible for estimating Soviet defense expenditures. A different Agency staff element, the Office of Economic Research (OER), was tasked with estimating Soviet GNP. 64 Because of this division of labor there was ambiguity about which of the two offices was responsible for estimates of the USSR's military burden. This ambiguity seems to have persisted even after OSR and OER were absorbed into the CIA's Office of Soviet Affairs (SOVA) in 1981.*
   - ***In 1983 ONA analyst David Epstein completed a two-volume assessment of the US-Soviet investment balance. Epstein's assessment built on the efforts of Major Lance Lord and retired Navy captain William Manthorpe who had inherited the military investment portfolio from Major Robert Gough in the late 1970s. The assessment broadly accepted CIA estimates of the direct costs of Soviet weapon systems that had been generated with the Agency's building-block approach. But Soviet production rates were hard to square with estimates of the USSR's military burden. In 1986 the CIA and the DIA estimated that over the***

years 1974–1985, the USSR had procured three times as many ICBMs and SLBMs as had the United States, nine times as many surface-to-air missiles, three times as many tanks, and ten times as many artillery pieces. 65 Even though US systems were generally more costly than their Soviet counterparts, the USSR's dramatically higher production rates suggested that the burden imposed on the Soviet economy should be higher than the CIA's estimate of less than 14 percent, which had been revised upward from its earlier estimates of roughly 6–7 percent. 66

- *There were also at least two sources of "indirect" military costs. One consisted of costs incurred outside the country's defense budget where the Soviet military acquired resources or influenced their allocation to satisfy wartime requirements. Here Marshall cited as examples the fact that Aeroflot passenger aircraft and the USSR's merchant marine fleet incorporated additional features—at additional cost—to enable them to transport men and equipment in time of war. Marshall also pointed to the costs incurred by the Soviets in providing economic and military aid to its satellites and clients—in effect, the costs of sustaining the Soviet Union's external empire. 67*
- *There was yet another tranche of expenditures beyond the direct costs of Soviet military programs. In the spring of 2001 Marshall met in Paris with Colonel Vitaly V. Shlykov, who had been in one of the major planning sections of the Soviet General Staff. Shlykov revealed that the Soviet military leaders had accumulated and incurred the cost of maintaining "gigantic war reserve stocks" intended to help match their estimates of US production if the country mobilized fully as it had done in World War II.*

3. **Ref 3 to David Epstein**
   - ***Perhaps the most obvious accomplishment to point to is Marshall's work on estimating the burden that Soviet military programs imposed on the USSR's economy during the 1970s and 1980s.*** *This was one of the first issues Schlesinger asked Marshall to pursue. Schlesinger told Marshall to push the CIA to reconsider its estimate that only 6 to 7 percent of the USSR's economic output was going to military programs. If the CIA's economists were correct and Soviet central planners were "miracle workers," then time was on the Soviet Union's side in their long-term competition with the United States. If Schlesinger and Marshall were right, then the situation over the long-term was more favorable to the United States, with important implications for the development of strategy.*
   - *Right to the end of the Cold War the economists at the CIA resisted Marshall's arguments on the need for a fundamental rethinking of their burden estimates. To be sure, there was the May 1976 "bombshell" when, virtually overnight the agency abruptly doubled its estimate of the USSR's military burden to 11 to 13 percent. 23 But as late as 1987, both the CIA and the DIA insisted that the burden had risen to only 15 to 17 percent of the USSR's GNP in the early 1980s. 24*
   - *Marshall never gave up on this issue, never stopped questioning the official estimates.* ***In 1975, Marshall estimated the USSR's military burden to be roughly double the CIA's estimate. 25 By 1988 he and David Epstein thought it was in the vicinity of 32 to 34 percent of Soviet GNP when indirect military costs and spending on the USSR's external empire were included. 26 These estimates proved closer to the truth than the intelligence community's by at least a factor of two. In the end, Marshall's small office, aided by its ability to fund outside research on Soviet military spending and the size of the USSR's economy, produced more accurate estimates of the USSR's military burden for senior Pentagon leaders than did the US intelligence agencies.***
   - *ONA's long-term research on the USSR's military burden had other consequences. In the mid-1970s the Office of Net Assessment's military investment assessments persuaded Rumsfeld that the Soviet military was outspending the Defense Department, that the trends were adverse, and that the US defense budget needed to be increased. 27 Later, under Ronald Reagan, Marshall's work on the USSR's defense burden inspired Weinberger's decision in the mid-1980s to embrace competitive strategies as a way of imposing disproportionate costs on the Soviets.*

4. **Ref 4 to David Epstein - Mentioning of The Future Security Environment working group**
   - *5 . Marshall and Wolf, The Future Security Environment, 26. The working group included Eliot Cohen, David Epstein, Fritz Ermarth, Lawrence Gershwin, James Roche, Thomas Rona, Stephen Rosen, Dennis Ross, Notra Trulock, and Dov Zakheim.*

Father - Saul T Epstein

I dont even know what this means - "The Variational Method 111 -- Steady State I Time Dependent Perturbation Theory"

https://core.ac.uk/download/pdf/85239125.pdf

Note - Worked with https://en.wikipedia.org/wiki/Joseph_O._Hirschfelder (who was also with Manhattan Project)

Ruth

https://www.stradley.com/professionals/e/epstein-ruth-s

Overview

Ruth Epstein has more than 30 years of corporate, securities and financial services experience, including five years with the Securities and Exchange Commission in the Division of Enforcement and the Office of General Counsel. Ruth concentrates on complex issues faced by participants in the investment management and variable insurance products industries and counsels financial services clients on a broad range of regulatory, governance, product development and enforcement issues. She assists clients in responding and adapting to expanded regulation of their industry by the Commodity Futures Trading Commission (CFTC) and the National Futures Association (NFA).

Ruth is a frequent author and lecturer on topics affecting her clients. In recent years, she has co-authored four "friend of the Court briefs" in matters of critical importance to the industry, including two in the U.S. Supreme Court – Jones v. Harris Associates LP (standard for review of advisory fees) and Janus Capital Group, Inc., et al. v. First Derivative Traders (responsibility for statements in mutual fund prospectuses).

As co-chair of the American Bar Association's Sub-Committee on Securities Activities of Insurance Companies, Ruth took an active role in the debate surrounding a number of important regulatory initiatives affecting funds and variable products, including the SEC's summary prospectus and XBRL proposals. She is actively involved with clients and industry groups in dialogue with the CFTC regarding the CFTC's regulation of funds and advisers, in connection with related rulemaking proposals and issuance of interpretative guidance

Ruth S. Epstein

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https://openjurist.org/722/f2d/1063/lionel-corporation-committee-of-equity-security-holders-v-lionel-corporation

Father in-law - David Seligson

Father-in-law

https://www.legacy.com/obituaries/nhregister/obituary.aspx?n=david-seligson&pid=149078072&fhid=4186

SELIGSON, DR. DAVID David Seligson, founder and former Chairman of the Department of Laboratory Medicine at Yale Medical School, died on March 3 at his home in Branford, Connecticut. Dr. Seligson was born in Philadelphia in 1916 to Philip and Channah Schloss Seligson. He graduated from University of Maryland and received a D. Sc from Johns Hopkins University and and an MD from the University of Utah. In 1953, he served as Captain in the U.S. Army, Chief of the Hepatic and Metabolic Disease Laboratory at Walter Reed Army Medical Center. He worked as Director of the Division of Biochemistry at Graduate Hospital of the University of Pennsylvania before joining Yale's Department of Internal Medicine in 1958. He was also Director of Clinical Laboratories at Yale New Haven Hosptial between 1958 and 1988. Since 1988, he has been Professor Emeritus at Yale Medical School. Dr. Seligson was a pioneer in the development of modern medical laboratory equipment and methods, vastly increasing their capacity accuracy, and automation. With his wife Harriet Tutelman Seligson (d.1986), he invented the Seligson Pipette, a semi-automatic pipette that was precise, easy to use, and self-cleaning. He was President of the American Association of Clinical Chemists in 1961-1962, and winner of that society's Ames Award in 1971, for outstanding contributions to Clinical Chemistry. He was Trustee and Honorary Doctor of Humane Letters at Quinnipiac University. He was also an accomplished sailor with over a hundred trophies won in races around eastern Long Island Sound. Dr. Seligson is survived by his brother, Sidney Seligson of Phoenix; his three children, Judith T. Seligson of Alexandria, VA, Ruth S. Epstein of Chevy Chase, MD, and Daniel A. Seligson of Palo Alto, CA and eight grandchildren. Funeral Services SUNDAY morning (TODAY), March 6, 2011, at 10;30 at the Joseph Slifka Center for Jewish Life at Yale, 80 Wall St., New Haven with Interment Services to follow at the Grove Street Cemetery. Funeral arrangements in care of the Robert E. Shure Funeral Home, New Haven

Brother in-law ?

http://mobydx.com/

Dan Seligson studied physics at MIT (SB) and UC Berkeley (PhD) before starting a 30-year career in Silicon Valley.

He worked at Intel and held executive positions at, has been advisor to, and founded or co-founded several tech and biotech startups. He has 8 US Patents and others pending in fields as diverse as analog circuit design and immunology-based diagnostics. He's been writing for the drawer and a few friends all along. Here he is in a recent interview with the publisher.

Family research notes

NOTE - David Frederick Epstein (born 1954) is different person. That David Epstein is a relative of Klaus Epstein (https://timesmachine.nytimes.com/timesmachine/1967/06/28/129288472.html?auth=login-email&pageNumber=45) and Fritz T Epstein (https://en.wikipedia.org/wiki/Fritz_T._Epstein)

Fritz T Epstein - https://www.jstor.org/stable/4545879?seq=1

Jeffrey Edward Epstein (born 1953)

Wikipedia Jeffrey Edward Epstein

WIKIPEDIA

https://en.wikipedia.org/wiki/Jeffrey_Epstein

2003 Article - Vanity Fair

See [HP004C][GDrive]

2003

Lately, Jeffrey Epstein's high-flying style has been drawing oohs and aahs: the bachelor financier lives in New York's largest private residence, claims to take only billionaires as clients, and flies celebrities including Bill Clinton and Kevin Spacey on his Boeing 727. But pierce his air of mystery and the picture changes. Vicky Ward explores Epstein's investment career, his ties to retail magnate Leslie Wexner, and his complicated past.

On Manhattan's Upper East Side, home to some of the most expensive real estate on earth, exists the crown jewel of the city's residential town houses. With its 15-foot-high oak door, huge arched windows, and nine floors, it sits on—or, rather, commands—the block of 71st Street between Fifth and Madison Avenues. Almost ludicrously out of proportion with its four- and five-story neighbors, it seems more like an institution than a house. This is perhaps not surprising—until 1989 it was the Birch Wathen private school. Now it is said to be Manhattan's largest private residence.

Inside, amid the flurry of menservants attired in sober black suits and pristine white gloves, you feel you have stumbled into someone's private Xanadu. This is no mere rich person's home, but a high-walled, eclectic, imperious fantasy that seems to have no boundaries.

The entrance hall is decorated not with paintings but with row upon row of individually framed eyeballs; these, the owner tells people with relish, were imported from England, where they were made for injured soldiers. Next comes a marble foyer, which does have a painting, in the manner of Jean Dubuffet … but the host coyly refuses to tell visitors who painted it. In any case, guests are like pygmies next to the nearby twice-life-size sculpture of a naked African warrior.

Despite its eccentricity the house is curiously impersonal, the statement of someone who wants to be known for the scale of his possessions. Its occupant, financier Jeffrey Epstein, 50, admits to friends that he likes it when people think of him this way. A good-looking man, resembling Ralph Lauren, with thick gray-white hair and a weathered face, he usually dresses in jeans, knit shirts, and loafers. He tells people he bought the house because he knew he "could never live anywhere bigger." He thinks 51,000 square feet is an appropriately large space for someone like himself, who deals mostly in large concepts—especially large sums of money.

Guests are invited to lunch or dinner at the town house—Epstein usually refers to the former as "tea," since he likes to eat bite-size morsels and drink copious quantities of Earl Grey. (He does not touch alcohol or tobacco.) Tea is served in the "leather room," so called because of the cordovan-colored fabric on the walls. The chairs are covered in a leopard print, and on the wall hangs a huge, Oriental fantasy of a woman holding an opium pipe and caressing a snarling lionskin. Under her gaze, plates of finger sandwiches are delivered to Epstein and guests by the menservants in white gloves.

Upstairs, to the right of a spiral staircase, is the "office," an enormous gallery spanning the width of the house. Strangely, it holds no computer. Computers belong in the "computer room" (a smaller room at the back of the house), Epstein has been known to say. The office features a gilded desk (which Epstein tells people belonged to banker J. P. Morgan), 18th-century black lacquered Portuguese cabinets, and a nine-foot ebony Steinway "D" grand. On the desk, a paperback copy of the Marquis de Sade's The Misfortunes of Virtue was recently spotted. Covering the floor, Epstein has explained, "is the largest Persian rug you'll ever see in a private home—so big, it must have come from a mosque." Amid such splendor, much of which reflects the work of the French decorator Alberto Pinto, who has worked for Jacques Chirac and the royal families of Jordan and Saudi Arabia, there is one particularly startling oddity: a stuffed black poodle, standing atop the grand piano. "No decorator would ever tell you to do that," Epstein brags to visitors. "But I want people to think what it means to stuff a dog." People can't help but feel it's Epstein's way of saying that he always has the last word.

In addition to the town house, Epstein lives in what is reputed to be the largest private dwelling in New Mexico, on an $18 million, 7,500-acre ranch which he named "Zorro." "It makes the town house look like a shack," Epstein has said. He also owns Little St. James, a 70-acre island in the U.S. Virgin Islands, where the main house is currently being renovated by Edward Tuttle, a designer of the Amanresorts. There is also a $6.8 million house in Palm Beach, Florida, and a fleet of aircraft: a

Gulfstream IV, a helicopter, and a Boeing 727, replete with trading room, on which Epstein recently flew President Clinton, actors Chris Tucker and Kevin Spacey, supermarket magnate Ron Burkle, Lew Wasserman's grandson, Casey Wasserman, and a few others, on a mission to explore the problems of AIDS and economic development in Africa.

Epstein is charming, but he doesn't let the charm slip into his eyes. They are steely and calculating, giving some hint at the steady whir of machinery running behind them. "Let's play chess," he said to me, after refusing to give an interview for this article. "You be white. You get the first move." It was an appropriate metaphor for a man who seems to feel he can win no matter what the advantage of the other side. His advantage is that no one really seems to know him or his history completely or what his arsenal actually consists of. He has carefully engineered it so that he remains one of the few truly baffling mysteries among New York's moneyed world. People know snippets, but few know the whole.

"He's very enigmatic," says Rosa Monckton, the former C.E.O. of Tiffany & Co. in the U.K. and a close friend since the early 1980s. "You think you know him and then you peel off another ring of the onion skin and there's something else extraordinary underneath. He never reveals his hand…. He's a classic iceberg. What you see is not what you get."

Even acquaintances sense a curious dichotomy: Yes, he lives like a "modern maharaja," as Leah Kleman, one of his art dealers, puts it. Yet he is fastidiously, almost obsessively private—he lists himself in the phone book under a pseudonym. He rarely attends society gatherings or weddings or funerals; he considers eating in restaurants like "eating on the subway"—i.e., something he'd never do. There are many women in his life, mostly young, but there is no one of them to whom he has been able to commit. He describes his most public companion of the last decade, Ghislaine Maxwell, 41, the daughter of the late, disgraced media baron Robert Maxwell, as simply his "best friend." He says she is not on his payroll, but she seems to organize much of his life—recently she was making telephone inquiries to find a California-based yoga instructor for him. (Epstein is still close to his two other long-term girlfriends, Paula Heil Fisher, a former associate of his at the brokerage firm Bear Stearns and now an opera producer, and Eva Andersson Dubin, a doctor and onetime model. He tells people that when a relationship is over the girlfriend "moves up, not down," to friendship status.)

Some of the businessmen who dine with him at his home—they include newspaper publisher Mort Zuckerman, banker Louis Ranieri, Revlon chairman Ronald Perelman, real-estate tycoon Leon Black, former Microsoft executive Nathan Myhrvold, Tom Pritzker (of Hyatt Hotels), and real-estate personality Donald Trump—sometimes seem not all that clear as to what he actually does to earn his millions. Certainly, you won't find Epstein's transactions written about on Bloomberg or talked about in the trading rooms. "The trading desks don't seem to know him. It's unusual for animals that big not to leave any footprints in the snow," says a high-level investment manager.

Unlike such fund managers as George Soros and Stanley Druckenmiller, whose client lists and stock maneuverings act as their calling cards, Epstein keeps all his deals and clients secret, bar one client: billionaire Leslie Wexner, the respected chairman of Limited Brands. Epstein insists that ever since he left Bear Stearns in 1981 he has managed money only for billionaires—who depend on him for discretion. "I was the only person crazy enough, or arrogant enough, or misplaced enough, to make my limit a billion dollars or more," he tells people freely. According to him, the flat fees he receives from his clients, combined with his skill at playing the currency markets "with very large sums of money," have afforded him the lifestyle he enjoys today.

Why do billionaires choose him as their trustee? Because the problems of the mega-rich, he tells people, are different from yours and mine, and his unique philosophy is central to understanding those problems: "Very few people need any more money when they have a billion dollars. The key is not to have it do harm more than anything else…. You don't want to lose your money."

He has likened his job to that of an architect—more specifically, one who specializes in remodeling: "I always describe [a billionaire] as someone who started out in a small home and as he became wealthier had add-ons. He added on another addition, he built a room over the garage … until you have a house that is usually a mess…. It's a large house that has been put together over time where no one could foretell the financial future and their accompanying needs."

He makes it sound as though his job combines the roles of real-estate agent, accountant, lawyer, money manager, trustee, and confidant. But, as with Jay Gatsby, myths and rumor swirl around Epstein.

Here are some of the hard facts about Epstein—ones that he doesn't mind people knowing: He grew up middle-class in Brooklyn. His father worked for the city's parks department. His parents viewed education as "the way out" for him and his younger brother, Mark, now working in real estate. Jeffrey started to play the piano—for which he maintains a passion—at five, and he went to Brooklyn's Lafayette High School. He was good at mathematics, and in his early 20s he got a job teaching physics and math at Dalton, the elite Manhattan private school. While there he began tutoring the son of Bear Stearns chairman Ace Greenberg and was friendly with a daughter of Greenberg's. Soon he went to Bear Stearns, where, under the mentorship of both Greenberg and current Bear Stearns C.E.O. James Cayne, he did well enough to become a limited partner—a rung beneath full partner. He abruptly departed in 1981 because, he has said, he wanted to run his own business.

Thereafter the details recede into shadow. A few of the handful of current friends who have known him since the early 1980s recall that he used to tell them he was a "bounty hunter," recovering lost or stolen money for the government or for very rich people. He has a license to carry a firearm. For the last 15 years, he's been running his business, J. Epstein & Co.

Since Leslie Wexner appeared in his life—Epstein has said this was in 1986; others say it was in 1989, at the earliest—he has gradually, in a way that has not generally made headlines, come to be accepted by the Establishment. He's a member of various commissions and councils: he is on the Trilateral Commission, the Council on Foreign Relations, and the Institute of International Education.

His current fan club extends to Cayne, Henry Rosovsky, the former dean of Harvard's Faculty of Arts and Sciences, and Larry Summers, Harvard's current president. Harvard law professor Alan Dershowitz says, "I'm on my 20th book…. The only person outside of my immediate family that I send drafts to is Jeffrey." Real-estate developer and philanthropist Marshall Rose, who has worked with Epstein on projects in New Albany, Ohio, for Wexner, says, "He digests and decodes the information very rapidly, which is to me terrific because we have shorter meetings."

Also on the list of admirers are former senator George Mitchell and a gaggle of distinguished scientists, most of whom Epstein has helped fund in recent years. They include Nobel Prize winners Gerald Edelman and Murray Gell-Mann, and mathematical biologist Martin Nowak. When these men describe Epstein, they talk about "energy" and "curiosity," as well as a love for theoretical physics that they don't ordinarily find in laymen. Gell-Mann rather sweetly mentions that "there are always pretty ladies around" when he goes to dinner chez Epstein, and he's under the impression that Epstein's clients include the Queen of England. Both Nowak and Dershowitz were thrilled to find themselves shaking the hand of a man named "Andrew" in Epstein's house. "Andrew" turned out to be Prince Andrew, who subsequently arranged to sit in the back of Dershowitz's law class.

Epstein gets annoyed when anyone suggests that Wexner "made him." "I had really rich clients before," he has said. Yet he does not deny that he and Wexner have a special relationship. Epstein sees it as a partnership of equals. "People have said it's like we have one brain between two of us: each has a side."

"I think we both possess the skill of seeing patterns," says Wexner. "But Jeffrey sees patterns in politics and financial markets, and I see patterns in lifestyle and fashion trends. My skills are not in investment strategy, and, as everyone who knows Jeffrey knows, his are not in fashion and design. We frequently discuss world trends as each of us sees them."

By the time Epstein met Wexner, the latter was a retail legend who had built a $3 billion empire—one that now includes Victoria's Secret, Express, and Bath & Body Works—from $5,000 lent him by his aunt. "Wexner saw in Jeffrey the type of person who had the potential to realize his [Jeffrey's] dreams," says someone who has worked closely with both men. "He gave Jeffrey the ball, and Jeffrey hit it out of the park."

Wexner, through a trust, bought the town house in which Epstein now lives for a reported $13.2 million in 1989. In 1993, Wexner married Abigail Koppel, a 31-year-old lawyer, and the newlyweds relocated to Ohio; in 1996, Epstein moved into the town house. Public documents suggest that the house is still owned by the trust that bought it, but Epstein has said that he now owns the house.

Wexner trusts Epstein so completely that he has assigned him the power of fiduciary over all of his private trusts and foundations, says a source close to Wexner. In 1992, Epstein even persuaded Wexner to put him on the board of the Wexner Foundation in place of Wexner's ailing mother. Bella Wexner recovered and demanded to be reinstated. Epstein has said they settled by splitting the foundation in two.

Epstein does not care that he comes between family members. In fact, he sees it as his job. He tells people, "I am there to represent my client, and if my client needs protecting—sometimes even from his own family—then it's often better that people hate me, not the client."

"You've probably heard I'm vicious in my representation of my clients," he tells people proudly; Leah Kleman describes his haggling over art prices as something like a scene out of the movie Mad Max: Beyond Thunderdome. Even a former mentor says he's seen "the dark side" of Epstein, and a Bear Stearns source recalls a meeting in which Epstein chewed out a team making a presentation for Wexner as being so brutal as to be "irresponsible."

One reporter, in fact, received three threats from Epstein while preparing a piece. They were delivered in a jocular tone, but the message was clear: There will be trouble for your family if I don't like the article.

On the other hand, Epstein is clearly very generous with friends. Joe Pagano, an Aspen-based venture capitalist, who has known Epstein since before his Bear Stearns days, can't say enough nice things: "I have a boy who's dyslexic, and Jeffrey's gotten close to him over the years.... Jeffrey got him into music. He bought him his first piano. And then as he got to school he had difficulty ... in studying ... so Jeffrey got him interested in taking flying lessons."

Rosa Monckton recalls Epstein telling her that her daughter, Domenica, who suffers from Down syndrome, needed the sun, and that Rosa should feel free to bring her to his house in Palm Beach anytime.

Some friends remember that in the late 80s Epstein would offer to upgrade the airline tickets of good friends by affixing first-class stickers; the only problem was that the stickers turned out to be unofficial. Sometimes the technique worked, but other times it didn't, and the unwitting recipients found themselves exiled to coach. (Epstein has claimed that he paid for the upgrades, and had no knowledge of the stickers.) Many of those who benefited from Epstein's largesse claim that his generosity comes with no strings attached. "I never felt he wanted anything from me in return," says one old friend, who received a first-class upgrade.

Epstein is known about town as a man who loves women—lots of them, mostly young. Model types have been heard saying they are full of gratitude to Epstein for flying them around, and he is a familiar face to many of the Victoria's Secret girls. One young woman recalls being summoned by Ghislaine Maxwell to a concert at Epstein's town house, where the women seemed to outnumber the men by far. "These were not women you'd see at Upper East Side dinners," the woman recalls. "Many seemed foreign and dressed a little bizarrely." This same guest also attended a cocktail party thrown by Maxwell that Prince Andrew attended, which was filled, she says, with young Russian models. "Some of the guests were horrified," the woman says.

"He's reckless," says a former business associate, "and he's gotten more so. Money does that to you. He's breaking the oath he made to himself—that he would never do anything that would expose him in the media. Right now, in the wake of the publicity following his trip with Clinton, he must be in a very difficult place."

According to S.E.C. and other legal documents unearthed by VANITY FAIR, Epstein may have good reason to keep his past cloaked in secrecy: his real mentor, it might seem, was not Leslie Wexner but Steven Jude Hoffenberg, 57, who, for a few months before the S.E.C. sued to freeze his assets in 1993, was trying to buy the New York Post. He is currently incarcerated in the Federal Medical Center in Devens, Massachusetts, serving a 20-year sentence for bilking investors out of more than $450 million in one of the largest Ponzi schemes in American history.

When Epstein met Hoffenberg in London in the 1980s, the latter was the charismatic, audacious head of the Towers Financial Corporation, a collection agency that was supposed to buy debts that people owed to hospitals, banks, and phone companies. But Hoffenberg began using company funds to pay off earlier investors and service a lavish lifestyle that included a mansion on Long Island, homes on Manhattan's Sutton Place and in Florida, and a fleet of cars and planes.

Hoffenberg and Epstein had much in common. Both were smart and obsessed with making money. Both were from Brooklyn. According to Hoffenberg, the two men were introduced by Douglas Leese, a defense contractor. Epstein has said they were introduced by John Mitchell, the late attorney general.

Epstein had been running International Assets Group Inc. (I.A.G.), a consulting company, out of his apartment in the Solo building on East 66th Street in New York. Though he has claimed that he managed money for billionaires only, in a 1989 deposition he testified that he spent 80 percent of his time assisting people recover stolen money from fraudulent brokers and lawyers. He was also not above entering into risky, tax-sheltered oil and gas deals with much smaller investors. A lawsuit that Michael Stroll, the former head of Williams Electronics Inc., filed against Epstein shows that in 1982 I.A.G. received an investment from Stroll of $450,000, which Epstein put into oil. In 1984 Stroll asked for his money back; four years later he had received only $10,000. Stroll lost the suit, after Epstein claimed in court, among other things, that the check for $10,000 was for a horse he'd bought from Stroll. "My net worth never exceeded four and a half million dollars," Stroll has said.

Hoffenberg, says a close friend, "really liked Jeffrey.... Jeffrey has a way of getting under your skin, and he was under Hoffenberg's." Also appealing to Hoffenberg were Epstein's social connections; they included oil mogul Cece Wang (father of the designer Vera) and Mohan Murjani, whose clothing company grew into Gloria Vanderbilt Jeans. Epstein lived large even then. One friend recalls that when he took Canadian heiress Wendy Belzberg on a date he hired a Rolls-Royce especially for the occasion. (Epstein has claimed he owned it.)

In 1987, Hoffenberg, according to sources, set Epstein up in the offices he still occupies in the Villard House, on Madison Avenue, across a courtyard from the restaurant Le Cirque. Hoffenberg hired his new protégé as a consultant at $25,000 a month, and the relationship flourished. "They traveled everywhere together—on Hoffenberg's plane, all around the world, they were always together," says a source. Hoffenberg has claimed that Epstein confided in him, saying, for example, that he had left Bear Stearns in 1981 after he was discovered executing "illegal operations."

Several of Epstein's Bear Stearns contemporaries recall that Epstein left the company very suddenly. Within the company there were rumors also that he was involved in a technical infringement, and it was thought that the executive committee asked that he resign after his two supporters, Ace Greenberg and Jimmy Cayne, were

outnumbered. Greenberg says he can't recall this; Cayne denies it happened, and Epstein has denied it as well. "Jeffrey Epstein left Bear Stearns of his own volition," says Cayne. "It was never suggested that he leave by any member of management, and management never looked into any improprieties by him. Jeffrey said specifically, 'I don't want to work for anybody else. I want to work for myself.'" Yet, this is not the story that Epstein told to the S.E.C. in 1981 and to lawyers in a 1989 deposition involving a civil business case in Philadelphia.

In 1981 the S.E.C.'s Jonathan Harris and Robert Blackburn took Epstein's testimony and that of other Bear Stearns employees in part of what became a protracted case about insider trading around a tender offer placed on March 11, 1981, by the Seagram Company Ltd. for St. Joe Minerals Corp. Ultimately several Italian and Swiss investors were found guilty, including Italian financier Giuseppe Tome, who had used his relationship with Seagram owner Edgar Bronfman Sr. to obtain information about the tender offer.

After the tender offer was announced, the S.E.C. began investigating trades involving St. Joe at Bear Stearns and other firms. Epstein resigned from Bear Stearns on March 12. The S.E.C. was tipped off that Epstein had information on insider trading at Bear Stearns, and it was therefore obliged to question him. In his S.E.C. testimony, given on April 1, 1981, Epstein claimed that he had found "offensive" the way Bear Stearns management had handled a disciplinary action following its discovery that he had committed a possible "Reg D" violation—evidently he had lent money to his closest friend. (In the 1989 deposition he said that he'd lent approximately $20,000 to Warren Eisenstein, to buy stock.) Such an action could have been considered improper, although Epstein claimed he had not realized this until afterward.

According to Epstein, Bear Stearns management had questioned him about the loan around March 4. The questioners, Epstein said, were Michael (Mickey) Tarnopol and Alvin Einbender. In his 1989 deposition Epstein recalled that the partner who had made an "issue" of the matter was Marvin Davidson. On March 9, Epstein said, he had met with Tarnopol and Einbender again, and the two partners told him that the executive committee had weighed the offense, together with previous "carelessness" over expenses, and he would be fined $2,500.

"There was discussion whether, in fact, I had ever put in an airline ticket for someone else and not myself and I said that it was possible, … since my secretary handles my expenses," Epstein told the S.E.C. In his 1989 testimony he stated that the "Reg D" incident had cost him a shot at partnership that year.

What the S.E.C. seemed to be especially interested in was whether there was a connection between Epstein's leaving and the alleged insider trading in St. Joe Minerals by other people at Bear Stearns:

Q: Sir, are you aware that certain rumors may have been circulating around your firm in connection with your reasons for leaving the firm?

A: I'm aware that there were many rumors.

Q: What were the rumors you heard?

A: Nothing to do with St. Joe.

Q: Can you relate what you heard?

A: It was having to do with an illicit affair with a secretary.

Q: Have you heard any other rumors suggesting that you had made a presentation or communication to the Executive Committee concerning alleged improprieties by other members or employees of Bear Stearns?

A: I, in fact, have heard that rumor, but it's been from Mr. Harris in our conversation last week.

Q: Have you heard it from anyone else?

A: No.

A little later the interview focuses on James Cayne:

Q: Did you ever hear while you were at Bear Stearns that Mr. Cayne may have trader or insider information in connection with St. Joe Minerals Corporation?

Q: Did Mr. Cayne ever have any conversation with you about St. Joe Minerals?

Q: Did you happen to overhear any conversations between Mr. Cayne and anyone else regarding St. Joe Minerals?

And still later in the questioning comes this exchange:

Q: Have you had any type of business dealings with Mr. Cayne?

A: There's no relationship with Bear Stearns.

Q: Pardon?

A: Other than Bear Stearns, no.

Q: Have you been a participant in any type of business venture with Mr. Cayne?

Q: Do you have any expectation of participating in any business venture with Mr. Cayne?

Q: Have you had any business participations with Mr. Theram?

A: No; nor do I anticipate any.

Q: Mr. Epstein, did anyone at Bear Stearns tell you in words or substance that you should not divulge anything about St. Joe Minerals to the staff of the Securities and Exchange Commission?

Q: Has anyone indicated to you in any way, either directly or indirectly, in words or substance, that your compensation for this past year or any future monies coming to you from Bear Stearns will be contingent upon your not divulging information to the Securities and Exchange Commission?

A: No.

Despite the circumstances of Epstein's leaving, Bear Stearns agreed to pay him his annual bonus—which he anticipated as being approximately $100,000.

The S.E.C. never brought any charges against anyone at Bear Stearns for insider trading in St. Joe, but its questioning seems to indicate that it was skeptical of Epstein's answers. Some sources have wondered why, if he was such a big producer at Bear Stearns, he would have given it up over a mere $2,500 fine.

Certainly the years after Epstein left the firm were not obviously prosperous ones. His luck didn't seem to change until he met Hoffenberg.

One of Epstein's first assignments for Hoffenberg was to mastermind doomed bids to take over Pan American World Airways in 1987 and Emery Air Freight Corp. in 1988. Hoffenberg claimed in a 1993 hearing before a grand jury in Illinois that Epstein came up with the idea of financing these bids through Towers's acquisition of two ailing Illinois insurance companies, Associated Life and United Fire. "He was hired by us to work on the securities side of the insurance companies and Towers Financial, supposedly to make a profit for us and for the companies," Hoffenberg reportedly told the grand jury. He also alleged that Epstein was the "technician," executing the schemes, although, having no broker's license, he had to rely on others to make the trades. Much of Hoffenberg's subsequent testimony in his criminal case has proven to be false, and Epstein has claimed he was merely asked how the bids could be accomplished and has said he had nothing to do with the financing of them. Yet Richard Allen, the former treasurer of United Fire, recalls seeing Epstein two or three times at the company. He and another executive say they had direct dealing with Epstein over the finances. And in his deposition of 1989, Epstein stated that he was the one who executed "all" Hoffenberg's instructions to buy and sell the stock. He called it "making the orders." He could not recall whether he had chosen the brokers used.

To win approval from the Illinois insurance regulators for Towers's acquisition of the companies, Hoffenberg promised to inject $3 million of new capital into them. In fact, in his grand-jury testimony Hoffenberg claimed that he, his chief operating officer, Mitchell Brater, and Epstein came up with a scheme to steal $3 million of the insurance companies' bonds to buy Pan Am and Emery stock. "Jeffrey Epstein and Mitch Brater arranged the various brokerage accounts for the bonds to be placed with in New York, and I think one in Chicago, Rodman & Renshaw," Hoffenberg reportedly said. Then, said Hoffenberg, while making it appear as though they were investing the bonds in much safer financial instruments, they used them as collateral to buy the stock. "Epstein was the person in charge of the transactions, and Mitchell Brater was assisting him with it in coordination on behalf of the insurance companies' money," Hoffenberg claimed at the time.

At one point, according to Hoffenberg, a broker forged the documents necessary for a $1.8 million check to be written on insurance-company funds. The check was used to buy more stock in the takeover targets. Meanwhile, in order to throw the insurance regulators off, the $1.8 million was reported as being safely invested in a money-market account.

United Fire's former chief financial officer Daniel Payton confirms part of Hoffenberg's account. He says he recalls making one or two telephone calls to Epstein (at Hoffenberg's direction) about the missing bonds. "He said, 'Oh, yeah, they still exist.' But we found out later that he had sold those assets … leveraged them … [and] used some margin account to take some positions in … Emery and Pan Am," says Payton.

Epstein's extraordinary creativity was, according to Hoffenberg, responsible for the purchase by the insurance companies of a $500,000 bond, with no money down. "Epstein created a great scheme to purchase a $500,000 treasury bond that would not be shown … [as] margined or collateralized," he reportedly told the grand jury. "It looked like it was free and clear but it actually wasn't," he said.

Epstein has denied he ever had any dealings with anyone from the insurance companies. But Richard Allen says he recalls talking to Epstein at Hoffenberg's direction and telling him it was urgent they retrieve the missing bonds for a state examination. According to Allen, Epstein said, "We'll get them back." He had "kind of a flippant attitude," says Allen. "They never came back."

Epstein, according to Hoffenberg, also came up with a scheme to manipulate the price of Emery Freight stock in an attempt to minimize the losses that occurred when Hoffenberg's bid went wrong and the share price began to fall. This was alleged to have involved multiple clients' accounts controlled by Epstein.

Eventually, in 1991, insurance regulators in Illinois sued Hoffenberg. He settled the case, and Epstein, who was only a paid consultant, was never deposed or accused of any wrongdoing. Barry Gross, the attorney who was handling the suit for the regulators, says of Epstein, "He was very elusive…. It was hard to really track him down. There were a substantial number of checks for significant dollars that were paid to him, I remember…. He was this character we never got a handle on. Again we presumed that he was involved with the Pan Am and Emery run that Hoffenberg made, but we never got a chance to depose him."

"From the government's discovery in the main sentencing against Hoffenberg it would seem the government was perhaps a bit lazy," says David Lewis, who represented Mitchell Brater. "They went for what they knew they could get … and that was the fraudulent promissory notes [i.e., the much larger and unrelated part of Hoffenberg's fraud, based in New York State]…. What they couldn't get, they didn't bother with."

Another lawyer involved in the criminal prosecution of Hoffenberg says, "In a criminal investigation like that, when there is a guilty plea, to be quick and dirty about it, discovery is always incomplete…. They don't have to line up witnesses; they don't have to learn every fact that might come out on cross-examination."

Epstein was involved with Hoffenberg in other questionable transactions. Financial records show that in 1988 Epstein invested $1.6 million in Riddell Sports Inc., a company that manufactures football helmets. Among his co-investors were the theater mogul Robert Nederlander and attorney Leonard Toboroff. A source close to this transaction claims that Epstein told Nederlander and Toboroff that he had raised his share of the money from a Swiss banker, whose identity they could not be allowed to know. But Hoffenberg has claimed the money came from him, and Towers's financial statements for that year show a loan to Epstein of $400,000. (Epstein has said he can't remember the details and has disputed the accuracy of the Towers financial reports.)

Around the same time, Nederlander and Toboroff let Epstein come in with them on a scheme to make money out of Pennwalt, a Pennsylvania chemical company. The plan was to group together with two other parties to take a substantial declared position in the stock. According to a source, Epstein was supposed to help Nederlander and Toboroff raise $15 million. He seemed to fail to find other investors, say those familiar with the deal. (Epstein has said he was merely an investor.) He invested $1 million, which he told his co-investors was his own money. But in his 1989 deposition he said that he put in only $300,000 of his own money. Where did the rest come from? Hoffenberg has said it came from him, in a loan that Nederlander and Toboroff didn't know about.

Two things happened that alarmed Nederlander and Toboroff. After the group signaled a possible takeover, the Pennwalt management threatened to sue the would-be raiders. Epstein was reluctant initially to give a deposition about his share of the money, telling Toboroff there were "reasons" he didn't want to. Then, after the opportunity for new investors was closed, co-investors recall Epstein announcing that he'd found one at last: Dick Snyder, then C.E.O. of the publisher Simon & Schuster, who wanted to put up approximately $500,000. (Neither Epstein nor Snyder can now recall the investment. Yet in the 1989 deposition Epstein said that he had recruited Snyder, whom he had met socially, into the deal.)

According to a source, Toboroff and Nederlander told Epstein that Snyder was too late, but, without their realizing it, Hoffenberg has claimed, Snyder wrote a check to Hoffenberg and bought out some of his investment. But then Snyder wanted out.

"Nederlander started to get these irate calls from [Snyder,] who wasn't part of the deal, saying he was owed all this money," says someone close to the deal. Toboroff and Nederlander were baffled.

Eventually, a source close to Hoffenberg says, Hoffenberg paid Snyder off.

Eventually, a source close to Hoffenberg says, Hoffenberg paid Snyder off.

Just as Nederlander and Toboroff were growing wary of Epstein, he became increasingly involved with Leslie Wexner, whom he had met through insurance executive Robert Meister and his late wife. Epstein has told people that he met Wexner in 1986 in Palm Beach, and that he won his confidence by persuading him not to invest in the stock market, just as the 1987 crash was approaching. His story has subsequently changed. When asked if Wexner knew about his connection to Hoffenberg, Epstein said that he began working for Wexner in 1989, and that "it was certainly not the same time."

Wherever and whenever it was that Epstein and Wexner actually met, there was an immediate and strong personal chemistry. Wexner says he thinks Epstein is "very smart with a combination of excellent judgment and unusually high standards. Also, he is always a most loyal friend."

Sources say Epstein proved that he could be useful to Wexner as well, with "fresh" ideas about investments. "Wexner had a couple of bad investments, and Jeffrey cleaned those up right away," says a former associate of Epstein's.

Before he signed on with Wexner, Epstein had several meetings with Harold Levin, then head of Wexner Investments, in which he enunciated ideas about currencies that Levin found incomprehensible. "In fact," says someone who used to work very closely with Wexner, "almost everyone at the Limited wondered who Epstein was; he literally came out of nowhere."

"Everyone was mystified as to what his appeal was," says Robert Morosky, a former vice-chairman of the Limited.

Much of Epstein's work is related to cleaning up, tightening budgets, and efficiencies. One person who worked for Wexner and who saw a contract drawn up between the two men says Epstein is involved in "everything, not just a little here, a little there. Everything!" In addition, he says, "Wexner likes having a hatchet man.... Whenever there is dirty work to be done he'd stick Jeffrey on it.... He has a reputation for being ruthless but he gets the job done."

Epstein has evidently been asked to fire personal-staff members when needed. "He was that mysterious person that everyone was scared to death of," says a former employee.

Meanwhile, he is also less than popular with some people outside Wexner's company with whom he now deals. "He 'inserted' himself into the construction process of Leslie Wexner's yacht.... That resulted in litigation down the road between Mr. Wexner and the shipyard that eventually built the vessel," says Lars Forsberg, a lawyer whose firm at the time, Dickerson and Reily, was hired to deal with litigation stemming from the construction of Wexner's Limitless—at 315 feet, one of the largest private yachts in the world. Evidently, Epstein stalled on paying Dickerson and Reily for its work. "It's probably once or twice in my legal career that I've had to sue a client for payment of services that he'd requested and we'd performed ... without issue on the performance," says Forsberg. In the end the matter was settled, but Epstein claims he now has no recollection of it.

The incident is one of a number of disputes Epstein has become embroiled in. Some are for sums so tiny as to be baffling; for instance, Epstein sued investment adviser Herbert Glass, who sold him the Palm Beach house in 1990, for $13,444—Epstein claimed this was owed him for furnishings removed by Glass.

In 1998 the U.S. Attorney's Office sued Epstein for illegally subletting the former home of the deputy consul general of Iran to attorney Ivan Fisher and others. Epstein paid $15,000 a month in rent to the State Department, but he charged Fisher and his colleagues $20,000. Though the exact terms of the agreement are sealed, the court ruled against Epstein.

Wexner offers some insight into his friend's combative style. "Many times people confuse winning and losing," Wexner says. "Jeffrey has the unusual quality of knowing when he is winning. Whether in conversations or negotiations, he always stands back and lets the other person determine the style and manner of the conversation or negotiation. And then he responds in their style. Jeffrey sees it in chivalrous terms. He does not pick a fight, but if there is a fight, he will let you choose your weapon."

One case is rather more serious. Currently, Citibank is suing Epstein for defaulting on loans from its private-banking arm for $20 million. Epstein claims that Citibank "fraudulently induced" him into borrowing the money for investments. Citibank disputes this charge.

The legal papers for another case offer a rare window into Epstein's finances. In 1995, Epstein stopped paying rent to his landlord, the nonprofit Municipal Arts Society, for his office in the Villard House. He claimed that they were breaking the terms of the lease by not letting his staff in at night. The case was eventually settled. However, one of the papers filed in this dispute is Epstein's financial statement for 1988, in which he claimed to be worth $20 million. He listed that he owned $7 million in securities, $1 million in cash, zero in residential property (although he told sources that he had already bought the home in Palm Beach), and $11 million in other assets, including his investment in Riddell. A co-investor in Riddell says: "The company had been bought with a huge amount of debt, and it wasn't public, so it was meaningless to attach a figure like that to it ... the price it cost was about $1.2 million." The co-investors bought out Epstein's share in Riddell in 1995 for approximately $3 million. At that time, when Epstein was asked, as a routine matter, to sign a paper guaranteeing he had access to a few million dollars in case of any subsequent disputes over the sale price, Wexner signed for him. Epstein has explained that this was because the co-investors wanted an indemnity against being sued by Wexner. One of the investors calls this "bullshit."

Epstein's appointment to the board of New York's Rockefeller University in 2000 brought him into greater social prominence. Boasting such social names as Nancy Kissinger, Brooke Astor, and Robert Bass, the board also includes such pre-eminent scientists as Nobel laureate Joseph Goldstein. "Epstein was thrilled to be elected," says someone who knows him.

After one term Epstein resigned. According to New York magazine, this was because he didn't like to wear a suit to meetings. A spokesperson for the Rockefeller board says Epstein left because he had insufficient time to commit; a board member recalls that he was "arrogant" and "not a good fit." The spokesperson admits that it is "infrequent" for board members not to be renominated after only one term.

Still, the recent spate of publicity Epstein has inspired does not seem to have fazed him. In November he was spotted in the front row of the Victoria's Secret fashion show at New York's Lexington Avenue Armory; around the same time the usual coterie of friends and beautiful women were whisked off to Little St. James (which he tells people has been renamed Little St. Jeff) for a long weekend.

Thanks to Epstein's introductions, says Martin Nowak, the biologist finds himself moving from Princeton to Harvard, where he is assuming the joint position of professor of mathematics and professor of biology. Epstein has pledged at least $25 million to Harvard to create the Epstein Program for Mathematical Biology and Evolutionary Dynamics, and Epstein will have an office at the university. The program will be dedicated to searching for nature's algorithms, a pursuit that is a specialty of Nowak's. For Epstein this must be the summit of everything he has worked toward: he has been seen proudly displaying Harvard president Larry Summers's letter of commitment as if he can't quite believe it is real. He says he was reluctant to have his name attached to the program, but Summers persuaded him. He rang his mentor Wexner about it, and Wexner told him it was all right.

An insatiable, restless soul, always on the move, Epstein builds a tremendous amount of downtime into his hectic work schedule. Yet there is something almost

programmed about his relaxation: it's as if even pleasure has to be measured in terms of self-improvement. Nowak says that, when he goes to stay with Epstein in the Caribbean, they'll get up at six and, as the sun rises, have three-hour conversations about theoretical physics. "Then he'll go off and do some work, re-appear, and we'll talk some more."

Another person who went to the island with Epstein, Maxwell, and several beautiful women remembers that the women "sat around one night teasing him about the kinds of grasping women who might want to date him. He was amused by the idea…. He's like a king in his own world."

Many people comment there is something innocent, almost childlike about Jeffrey Epstein. They see this as refreshing, given the sophistication of his surroundings. Alan Dershowitz says that, as he was getting to know Epstein, his wife asked him if he would still be close to him if Epstein suddenly filed for bankruptcy. Dershowitz says he replied, "Absolutely. I would be as interested in him as a friend if we had hamburgers on the boardwalk in Coney Island and talked about his ideas."

EDITOR'S NOTE: The original version of this story stated that Jeffrey Epstein was a member of the New York Academy of Sciences. The academy has since notified Vanity Fair that it has no record of Epstein's membership.

1974 - Insight on Jeff Epstein and Dalton (from 2019 Daily Beast article)

See [HP001M][GDrive]

"I'm teaching a bunch of little brats next year."—Jeffrey Epstein, 1974-75 Dalton School Yearbook

It took a clandestine FBI-NYPD joint sting operation to arrest the elusive convicted sex offender Jeffrey E. Epstein on Saturday July 6th on the tarmac of Teterboro airport in New Jersey (a story first broken by The Daily Beast). Simultaneously, a sledgehammer was used to break the entry to his massive $77 million New York City townhouse on East 71st Street. Police recovered hundreds, possibly thousands, of nude images of young women and girls—an automatic legal problem for a man who is on multiple sex offender registries. Epstein's case may be one of the most extreme cases of organized child abuse in modern history.

Epstein is without doubt the wealthiest individual on any sex offender registry in the United States (and he is at Level 3—at greatest risk of abusing more children). On his registry entry, the following residences are listed: his $7.8 million 70-acre private island in the U.S. Virgin Islands (his primary residence owned by his Delaware-based LLC, L.S.J.), his Paris apartment on Avenue Foch (one of the most expensive addresses in the world), his $15.5 million Palm Beach estate, his $77 million New York City townhouse (a gift from Victoria's Secret founder Leslie Wexner), and his $10 million castle/ranch in New Mexico. At the bottom of his residences is another island in the Virgin Islands, Great St. James. Epstein purchased it in 2016 for $18 million and was actively (and without permit) developing an even larger compound on its 165 acres—that is, until his arrest this past Saturday.

As far as vehicles, his offender registry entries list two Gulfstream jets (though his lawyers say he sold one of them in June), two helicopters, nine Mercedes-Benzes, nine Chevy Suburbans, three Cadillac Escalades, three Harley-Davidsons, one $375k Bentley Mulsanne, a jet-ski, and other assorted items. He has wined and dined American presidents, princes, elite academics, socialites, corporate CEOs and other VIPs. His alleged victims were little girls, often economically destitute or runaways or orphans—from sixth graders to high-school sophomores. Because his alleged crimes span multiple decades, his victims likely number in the hundreds—or more.

"Unnoticed by almost everybody, travelling with her was a greying, plumpish, middle-aged American businessman who managed to avoid the photographers." —Mail on Sunday, *Nov. 15, 1992 (London edition)*

That businessman was Jeffrey Epstein. In the early 1990s, British newspapers that followed British socialite Ghislaine Maxwell (alleged to be Epstein's chief procurer of victims) tried to figure out who Epstein was. The *Mail on Sunday* asked in 1992: "But what is he—property developer, concert pianist, math teacher, corporate treasure hunter, stockbroker, merchant banker or globe-trotting businessman?" No one seemed to know.

Given Epstein's apparent mystique, I checked New York City's birth, census, and marriage records to be certain about the facts. Epstein was born Jan. 20 1953 in Brooklyn, NY. His parents were Paula (nee Stolofsky, 1918-2004) and Seymour G. Epstein (1916-1991) and they were married in Brooklyn in 1952—shortly before Jeffrey Epstein's birth.

Epstein grew up during the 1950s and 1960s in the Lafayette neighborhood around Coney Island, as documented by James Patterson, John Connolly, and Tim Malloy in their 2016 book on Epstein, *Filthy Rich*. Epstein attended the now-shuttered Lafayette High School, a working-class high school that produced a significant number of professional baseball players. Epstein's mother, Paula, was a homemaker while his father, Seymour, worked for the New York City Parks Department as a groundskeeper and gardener. During their retirement years, Epstein's parents (as well as several maternal aunts) resided in nearby properties he purchased in West Palm Beach. In 1991, Epstein's father passed away at the Cleveland Clinic in Ohio at the age of 75. His mother passed away in 2004 at age 85 in Palm Beach.

Epstein has a younger brother, Mark ("Puggy"), who has joined him in real-estate deals throughout the years. Mark operates a real-estate business, OSSA Properties, which owns some of the properties—including the apartments in the 301 East 66th Street building—where Jeffrey Epstein's alleged sex slaves and other employees were housed (real-estate ownership between the brothers may have commingled).

"Most of Epstein's college study years were spent at NYU. I verified that he did not graduate from NYU with their registrar."

Jeffrey Epstein graduated from Lafayette High School in 1969 at age 16, having skipped two grades. He was "chubby with curly hair and a high, 'hee-hee' kind of laugh," according to *Filthy Rich*. In the fall of 1969, Epstein started at Cooper Union and studied there for two years until the spring semester of 1971. Many writers say he attended New York University (NYU) after Cooper Union, but they rarely give specific dates. I decided to verify exactly when Epstein went to college and where. It turned out that Epstein was enrolled at NYU between September of 1971 and June of 1974. Thus, most of Epstein's college study years were spent at NYU. I verified that he did not graduate from NYU with their registrar.

In a 2002 profile in *New York* magazine, Thomas Landon reported that Epstein studied at NYU's Courant Institute of Mathematical Sciences. It is not clear why Epstein attended two institutions of higher education but did not graduate from either. When Epstein joined the board of Rockefeller University, he misrepresented his educational and employment background; a press release stated that he had "studied physics at Cooper Union in New York and then joined Bear Stearns, becoming a Limited Partner until 1981." Between Cooper Union and Bear Stearns, Epstein studied at NYU and was a teacher for two

years (two unreported and significant events). When a convicted sex offender facing sex-trafficking charges was first employed as a teacher, it bears at least some scrutiny.

After the summer of 1974, Epstein began working as a teacher of mathematics and physics at the Dalton School in the Upper East Side of Manhattan. It has been reported that he began there in 1973, but this is incorrect. I searched the 1973-74 Dalton yearbook and there is no mention of Jeffrey Epstein. I then searched Dalton's school newspaper and found in the September 1974 issue that "... Mr. Epstein, who will also teach physics, [has] also joined the department this year." Epstein also confirmed that he taught there between 1974 and 1976 in a deposition.

In the United States, there are various schools that educate children from the social upper classes—Kent School, Horace Mann, Miss Porter's. Dalton is among that set. These schools are often restricted to children from the "old money" stratum in society, with a small number of scholarship students or athletes from non-elite backgrounds.

In 1974, Dalton was run by headmaster Donald Barr—father of Attorney General William Barr, whose Justice Department recently began a review of Epstein's 2007 non-prosecution agreement for the Palm Beach child sexual assault charges. Writers have noted the interesting coincidence. However, Donald Barr resigned in turmoil in February of 1974 (according to the March 14, 1974 issue of *The Daltonian*) which was seven months before Jeffrey Epstein began teaching there that fall. While it is possible that Donald Barr may have hired Epstein, if he made personnel decisions long in advance, the Dalton School lost four math teachers (according to *The Daltonian*) prior to the 1974-75 school year. Therefore the school may have hired Epstein, in part, out of an urgent need to fill vacant positions—even though Epstein did not have a college degree.

"The paper reported Epstein would be starting a 'math-track team' the following year due to his 'unique philosophy of integrating physical exercise with spiritual and mathematical stimulation.'"

Peter Branch was the acting headmaster after Barr's departure and he may have hired Epstein. Full verification would require access to Dalton's personnel records, if they still retain them. I put a Freedom of Information Law (FOIL) request into the State of New York Department of Education and they reported having no teaching license on file for Epstein—this may suggest that he was not planning on a career in teaching. Unlike public schools, it should be noted, a private school like Dalton does not require its teachers to possess a state teaching license or certificate.

Update: After publication, a reporter from the *Miami Herald* kindly provided me with Branch's phone number. When he spoke with me, he noted that he was upper school director before being appointed interim headmaster at Dalton. His appointment began on July 1, 1974 and Barr's contract at Dalton expired on June 30th. Branch does not recall hiring Epstein and he is relatively certain Barr or possibly the head of the Math Department hired Epstein because hiring decisions were typically made in the spring. He also noted that Barr liked to hire unconventional teachers to enhance the educational experience for students at Dalton.

While at the Dalton School, Epstein was the coach of the math team. In competitions with several local schools, Epstein led the students to victory in one instance and to second place in another. At a February 1976 math meet, the Dalton team competed against Ramaz and the Manhattan Talmudic Academy with "Boss Epstein watching from the sidelines…" (*The Daltonian* March 5, 1976). At another match up in April 1976, Epstein told his team "a victory would be as easy as Pi." The paper reported Epstein would be starting a "math-track team" the following year due to his "unique philosophy of integrating physical exercise with spiritual and mathematical stimulation." The Dalton School students and families are comprised of some of the wealthiest families in the United States—unlike Epstein's own. But this access may have created an opening for him.

As a young man from a working-class neighborhood in Brooklyn (equipped with a deep Brooklyn accent), Jeffrey Epstein at Dalton likely had to be a "quick study" to gracefully flow among the social upper class. Vicky Ward's 2003 *Vanity Fair* profile of Epstein deemed him "The Talented Mr. Epstein"—drawing a parallel to Matt Damon's character in the 1999 film *The Talented Mr. Ripley*, where Tom Ripley cons his way into the upper class through fraud and misrepresentation (and plenty of piano playing). To wit, the April 1975 issue of *The Daltonian* covered a Parent-Teacher Association event, "the first parent-faculty musical in recent memory," noting that "Mr. Epstein proved himself to be the ivory show man on the piano."

"The April 1975 issue of The Daltonian covered a Parent-Teacher Association event, 'the first parent-faculty musical in recent memory,' noting that 'Mr. Epstein proved himself to be the ivory show man on the piano.'"

Was Epstein wooing and dazzling the parents as a means of gaining access to their rarefied world? It seems to have worked because a parent wondered what he was doing there and put him in touch with the chairman of Bear Stearns, Ace Greenberg (whose children also attended Dalton; Epstein may have tutored them). After the 1975-1976 school year was finished, Epstein informed the school he was not returning and began his career on Wall Street at Bear Stearns.

UPDATE: Peter Branch does remember how Epstein left Dalton: The math and science faculty approached him and asked him what he was "going to do about Jeff." The science faculty were in the process of evaluating teaching and found that Epstein's teaching skills had not improved over the previous year. Branch then informed Epstein that it was time to move on.

After just four years, on August 1, 1980, Bear Stearns published an advert in *The Wall Street Journal* listing all the people who had made limited partner, including Jeffrey E. Epstein (along with people such as Larry Kudlow, former CNBC commentator and current director of the National Economic Council). Epstein, it seemed, was on the path, to accumulating the *economic* riches necessary for entry into the one percent. Obtaining the *social* graces required for acceptance by the social upper class would come much later with the help of several socialites, but mostly Ghislaine Maxwell.

Epstein was permitted to plead guilty to charges of soliciting prostitution in 2008 in the State of Florida. However, his victims were children, and it has been widely pointed out, cannot give consent, and therefore cannot be prostitutes. (Epstein's lawyers tried to tarnish and humiliate the victims at the time by calling them "prostitutes," and, as *Vanity Fair* revealed, Epstein reportedly smeared the underage girls in private as "prostitutes and strippers who'd already been indoctrinated into the sex world.")

Such lax charges in the Florida case, compared to what he is now facing, were hashed out in a deal with Florida State Attorney Barry Krischer, in conjunction with Alexander Acosta (who just stepped down as President Trump's labor secretary over his role in the Epstein saga). The deal was protested by the highly professional Palm Beach police led by Chief Michael Reiter and the late Detective Joseph Recarey.

Epstein's 2019 charges are for crimes committed in New York and Florida between 2002 and 2005. However, there are allegations against Epstein from earlier time periods (such as Maria Farmer's 2019 sworn affidavit that she and her 15-year old sibling were assaulted by Epstein and Maxwell in various locations in 1996—allegations that were reportedly nixed by an editor from Vicky Ward's 2003 profile of Epstein). One thing to keep in mind is Epstein was a school teacher and would have had possible access to victims there as well. There are no reports that he did anything at Dalton school, but he was asked about his relations with students in a deposition in 2009 and here is what he said:....

His answer about the ages of his students is noteworthy. He replies “Mostly old—mostly 17 and 18.” This tells us that Epstein thinks that the ages of 17 and 18 are “old.” He is asked what subject he was teaching, and he answers truthfully, physics and mathematics. The attorney asks if any of the girls he was teaching were under age 17 at the time, and Epstein answers that he does not know—this sounds genuine. Things take a turn when the attorney asks Epstein if he had any sexual contact with any students at Dalton. Epstein answers the first time with a question, “Again?” He is asked a second time and again answers with a question, “While I was a teacher?” The attorney says yes, let’s start with that question and Epstein gives a solid “no.” The attorney presses “How about after?” and Epstein says “Not that I remember.”

In summary, Epstein revealed that he feels high-school students aged 17 to 18 years are “old” and he that he does not remember if he had sexual contact with Dalton students after he was a teacher there. The final time he is asked, he reads from a statement in which he claims that the attorney’s law firm is engaged in fraud and then pleads his Fifth Amendment rights. Questions about sexual contact with Dalton students appear to be sensitive for him. Epstein depositions are extremely difficult to read because he pleads the Fifth to almost every question—as he eventually does here.

Julie Brown of the *Miami Herald* has done a significant amount of research on the Epstein case with her and her colleagues’ award-winning Perversion of Justice series. The extensive reporting in the *Miami Herald*, The Daily Beast, and by independent journalists like Ed Opperman, Pearse Redmond, William Ramsey and others has likely influenced law enforcement to consider the new evidence uncovered by the press—including possible new locations where recruitment or abuse might have occurred.

Related to Epstein’s deposition above, Virginia Roberts Giuffre, who accused Epstein of sexually abusing her as an underage girl and loaning her out to his famous friends, claimed that Epstein “lost interest” as she got older and sent her to Thailand to bring him another victim, at which point she says she escaped from Epstein.

Another alarming detail about Epstein is reported in Vicky Ward’s 2003 *Vanity Fair* article. She noted that Epstein left a paperback copy of the Marquis de Sade’s *The Misfortunes of Virtue* lying on a table at his 71st Street townhouse. Why would Epstein have left this book out in plain view? This obscene novel (even Napoleon ordered its author jailed) is about a 12-year-old French girl, Justine, who travels alone across France and winds up in a monastery and is forced to become the sex slave of monks where she endures repeated sexual assaults and is ordered to participate in orgies. She escapes but suffers similar abuses and encounters as the story follows her life until the age of 26.

“His answer about the ages of his students is noteworthy. He replies 'Mostly old—mostly 17 and 18.'”

Justine may have been a pedophile’s fantasy story in which the victim somehow learns “virtue” from what she endures. Justine almost parallels the life of some of Epstein’s alleged victims. What is even more tragic is that in the course of her reporting, Ward found two of Epstein’s victims and their mother. Ward says they detailed in 2003 how Epstein sexually assaulted them in the mid-1990s—including the time when one was allegedly held captive for 12 hours at mogul Leslie Wexner’s Ohio property after she says Epstein and Maxwell assaulted her. (Wexner has not responded to the allegations.) Perhaps their stories might have been able to deter or expose Epstein earlier, if they had been published when the girls first came forward.

We can expect a trove of information about Epstein to continue to emerge now that he is in jail. Indeed, the *Miami Herald* reports that at least a dozen new victims have come forward since his arrest. Epstein and his accomplices may have seen his victims as little girls—but now they are strong, brave women fighting back today.

Thomas Volscho is a sociology professor at the City University of New York, College of Staten Island. He has been researching the case of Jeffrey Epstein for a book he is writing.

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Fritz Walter Ermarth (born 1941)

Wikipedia Fritz Ermarth

- CIA

https://apps.dtic.mil/dtic/tr/fulltext/u2/687024.pdf

Saved Wikipedia (Nov 22, 2020) for Fritz Ermarth

See [HK003O][GDrive]

Chair of the National Intelligence Council

In office

1988–1993

President

Ronald Reagan

George H. W. Bush

Preceded by

Frank Horton III

Succeeded by

Joseph Nye

Personal details

Born

February 20, 1941 (age 79)

Chicago, Illinois, U.S.

Education

Wittenberg University (BA)

Harvard University (MA)

Fritz W. Ermarth has been the Director of National Security Programs at the Nixon Center since 2002.[1] He is also a part-time senior analyst for the Strategies Group at Science Applications International Corporation.

Ermarth worked for the Central Intelligence Agency from 1973 until 1998,[2] serving as Chairman of the National Intelligence Council, as National Intelligence Officer for the USSR and East Europe and Director of the Strategic Evaluation Center. He has received both the Distinguished Intelligence Medal and the National Intelligence Distinguished Service Medal. Ermarth also served as Special Assistant to the President during the Ronald Reagan's presidency, as well as Senior Director of Soviet and European Affairs.[1]

Footnotes

- ^
- Jump up to:
- [a] [b] "Former National Intelligence Council Chairman Joins Nixon Center; Ermarth to Study Nuclear Strategy and Modernization". *The Nixon Center*. 2002-10-05. Archived from the original on January 9, 2007. Retrieved January 19, 2007.
- **^** "Fritz Ermarth". *In The National Interest*. Retrieved January 19, 2007.

https://www.rand.org/pubs/authors/e/ermarth_fritz_walter.html

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Dr. Charles Albert Evans (born 1912)

Wikipedia NONE

- **Born :** 18 Feb 1912 [HL006X][GDrive]
- **Died :** Dec 4, 2008 [HL006W][GDrive]

Associations

2008 (Dec) - Obituary (Legacy.com , via Seattle newspapers)

Source : [HL006W][GDrive]

"Charles Albert EVANS Professor Emeritus and first Chairman of the Department of Microbiology, University of Washington Medical School, ***died December 4th****. He was 96.* ***During his 36 years at the University of Washington he was also Chairman of the University Senate, Associate Director of the Fred Hutchinson Cancer Research Center, and the first Director of the Office of Minority Student Affairs during the turbulent 1960s.*** *He was the last surviving Department Chair of the original faculty of the medical school, 1946. Dr. Evans is survived by his wife of 70 years, Allie Ann Evans. His children are Nicholas (deceased), Susan (Bill Layman), Thomas (Julia Evans), and Carol (Bill McClain), grandchildren; Hillary and Alice Evans, Kevin and Kelsey McClain, Nathan and Genevieve Layman. Also in his family circle are foster daughter Valerie Lui and her four children, Allie Ann, Maria, Cory and Michael, and Christoph Spielberg of Berlin, Germany.* ***Charles Evans is the son of Albert Grant Evans and Susan Briery Thompson Evans. H****e received hisB.S., M.D. and Ph.D. from the University of Minnesota. He published over two hundred articles of his scientific research focusing primarily on the study of viral infections, poliomyelitis and tumor virology. Chuck began his life long passion for birding at age 10. He also enjoyed photography. He was a kind and humorous father who offered his family steadfast love, great curiosity and boundless enthusiasm. Words cannot describe how much he will be missed. [...]"*

WHo is CHarles A. Evans... from Univ of washington.. who had a role in the SVCP ?

https://microbiology.washington.edu/about/memoriam-charles-evans-1912-2008

Nowinski mentioned in multipls SVCPs, including #14 - multiple contracts as of 1975 to this fred hutch institute - See [https://sites.google.com/a/housatonicits.com/home/research/special-virus-cancer-program]... acgually 8, 11, 12, 13, 14 (maybe more but this is all we have now)

Charles A. Evans
1912 - 2008

Charles A. Evans, Ph.D., 96, Professor Emeritus and first Chairman of the Department of Microbiology, died on December 4, 2008.

Charles (Chuck) Evans, received his B.S., M.D. and Ph.D. from the University of Minnesota. **He devoted 36 years to the University, during which time he served as the chairman of the Department of Microbiology, chairman of the University Senate, associate director of the Fred Hutchinson Cancer Research Center, and as the first director of the Office of Minority Student Affairs.** He was the last surviving department chair of the original medical school faculty. He published over two hundred articles of his scientific research focusing primarily on the study of viral infections, poliomyelitis and tumor virology. His early research focused on the growth of poliomyelitis virus in cell and tissue culture. These underappreciated studies were reported in a series of papers were singled out by John Enders in his Nobel acceptance speech for their important contributions to the development of the field. Chuck then returned his attention to papillomavirus infections in rabbits, their oncogenic potential, and immune responses of the host. Finally, in his later years, he returned to a earlier interest, the ecology of skin microflora and its role in disease.

He not only was a very productive laboratory scientist, but also was a serious naturalist, amateur ornithologist, bird watcher and skilled photographer. Everything he undertook was pursued with passionate intensity and reflected his fascination and respect for the natural world.

Dr. Evans is survived by his wife of 70 years, Allie Ann Evans. His children are Nicholas (deceased), Susan (Bill Layman), Thomas (Julia Evans), and Carol (Bill McClain), grandchildren, Hillary and Alice Evans, Kevin and Kelsey McClain, Nathan and Genevieve Layman.

Donations in Dr. Evans' memory can be made by check (payable to UW Foundation) to:

UW Medicine Development , Box 358045 . Seattle, WA 98195-8045

The Charles Evans Award Fund was established when Dr. Evans retired, in June of 1982. Contributions to this fund are made by friends, colleagues, former students and members of his family. The fund provides an annual award for the graduating microbiology major with the highest cumulative grade point average.

1977-svcp-annual-report

Role of Friend and Nowinski / Fred Hutch institute both very important !!!!

1959

The Virology and Rickettsiology Study Section (V & R SS), the regular NIH Study Section that reviewed grant proposals in the area of virology, sponsored a meeting on September 16, 1958, on “The Role of Viruses in Relation to Human Malignancies.” Fifteen expert investigators were invited to the meeting. They were: Joe Beard; Ray Bryan; John Enders; **Charles Evans (Chairman)**; **Hilary Koprowski;** Salvatore Luria; Dan Moore; Alfred Prince; Stanfield Rogers; Harry Rubin; **Albert Sabin**; **Jonas Salk**; **Richard Shope**; and Jerry Syverton. Harvey Scudder, Executive Secretary, V & R SS, and Robert Backus, NCI, provided staff support from the National Institutes of Health (NIH). The group discussed expanding the research through technological, educational and institutional means. The members focused on four major categories:

NCI Tissue Culture Consultants Meeting One of the major tools in virology research is in vitro cultivation of cells and of viruses. The effects of viruses on cells can be studied with profit in such systems. However, because investigators had generally worked largely independently, the tissue culture cell lines had been developed with little coordination or standardization. Thus, cell line names were not always accurately applied, cultures could be contaminated with viruses or bacteria, and the cell lines might not be properly characterized and stored. **The staff of the NCI asked seventeen consultants to come to the NIH May 15-16, 1959, to discuss the need for, and possible technical problems involved in, coordinating the characterization activities of investigators working with cytological materials.** These consultants were selected for their competence in various aspects of cell growth, characterization and preservation. At the meeting, the consultants generally agreed that coordination was rapidly becoming necessary: an overwhelming amount of information had been accumulated, but the data was nearly impossible to correlate because researchers had used varying methods and nonstandardized resources. They agreed that a tissue culture bank should be organized around contributions that would be made available to investigators who were participating in the program. **This Consultants Conference was Chaired by Council member Dr. Charles Evans, University of Washington**. Dr. Jerome Syverton, University of Minnesota, presented an opening statement on the “Characterization, Preservation and Supply of Tissue Culture Cell Lines.” Most of the members of the Viruses and Cancer Panel attended the meeting. The Panel met the day after the Conference and concluded that a clear need existed for a coordinated cell-characterization program and that a program should be given sufficient impetus and administrative guidance and support to assure the success of a self-sustaining program. A second Conference of the expert consultants was called for to determine how best to undertake a cooperative effort for initiating and sustaining a mammalian cell bank with insurance of quality control (Minutes of the Virus and Cancel Panel, May 1959).

"EVANS. CHARLES A •• - 1946, Pro/ftuor 0/ MicroblolOf/
Jl: B.s •• 1,35, B.M., 1936. M.D •• 1931. Ph.D ••
1943, MIMttsotG

"

He is there, with Nowinski ...

1948 - new science building, UW

https://www.newspapers.com/image/568364711/?terms=%22Charles%20A.%20Evans%22

1969

https://www.newspapers.com/image/564852814/?terms=%22Charles%20A.%20Evans%22

1954

https://www.newspapers.com/image/564802201/?terms=%22Charles%20A.%20Evans%22

1958 - one of nation's top experts - picked by magnuson

https://www.newspapers.com/image/565655311/?terms=%22Charles%20A.%20Evans%22

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Daniel Jackson Evans (born 1925)

Wikipedia Daniel J. Evans

Born in Seattle on October 16, 1925 [HL005P][GDrive]

Associations

- Henry Martin "Scoop" Jackson (born 1912) (Scoop Jackon was a long-serving Washington Senator, while Daniel Evas was the governor; when Scoop Jackson died in 1983, Daniel Jackson was assigned to fill his seat.)
- Mary Maxwell Gates (born 1929) (College friend, bridge partner; Gov Evans assigned Mary gates to ta UW Regents role in 1975)
- William Henry Gates II (born 1925) (College friend, who became a close life-long friend; also frequent Bridge partner)
- James d'Orma Braman (born 1901) (Dorm Braman was mayor of Seattle, while Daniel Jackson was Governor of the state of Washington)

TODO - video is available ... on CSPAN - "Life and Career of Daniel Evans"

recorded DECEMBER 11, 1987

Senator Daniel Evans of Washington discussed his political history and decision to retire from the Senate. The three-term governor of Washington was elected to fill the Senate seat of Democrat Henry “Scoop” Jackson, who died in 1983.

https://www.c-span.org/video/?2066-1/life-career-daniel-evans

APRIL 18, 1986 - Probe into Capitol Hill slaying continues

See [HM001A][GDrive]

ByJULIE BRIENZA

WASHINGTON -- The bloody body of a Capitol Hill press secretary was nude when it was found in the living room of her apartment, the victim's assistant said Friday.

Monica Thompson, assistant to press secretary Sally Heet, 35, said she has no idea who would want to kill the aide to Sen. Daniel Evans, R-Wash.

'I can't imagine anyone she knew who would want to do that, but then I don't know all of her friends,' said Thompson. An autopsy by the D.C. Medical Examiner's Office Friday showed the woman died from multiple stab wounds. The office said her death was ruled a homicide.

Although Heet's body was nude, police would not say whether she had been sexually assaulted.

Thompson was with Heet's brother, Jim Hudson, when they found her body at her third-floor Capitol Hill apartment around 10:30 a.m. Thursday. They had gone to her house when she failed to show up for work.

'She was in the living room,' Thompson said, adding that she immediately left the apartment once she saw Heet's body on the floor.

District of Columbia police said they have no suspects and no motive in the slaying.

Police said Heet's mailbox was swung open in the building's lobby, with the mail still in it. Her car was parked in front of the building.

'The police told us they've been working on it all night long, but they're not saying much else right now,' Thompson said. 'It seems to be a large priority to them. I've heard they (police) think it might be somebody she knows, but then there's the mailbox thing. So there's two conflicting stories.'

Evans' administrative assistant, Bill Jacobs, said at a Thursday news conference that it appeared that someone had met up with Heet at the mailbox.

Marian Friedman, who lives above Heet's apartment, told the Washington Post she heard no unusual noises the night before Heet's body was found.'

Heet had been the press secretary for Evans since he joined the Senate in 1983 upon the death of Sen. Henry 'Scoop' Jackson, D-Wash.

Thompson said the staff at Evans' office is trying to continue working despite their grief over the incident.

'We're a really close office,' she said. 'This is where I'd really rather be right now.'

Saved Wikipedia (Aug 4, 2020) - Daniel J. Evans

Live link - https://en.wikipedia.org/wiki/Daniel_J._Evans

Aug 14 2020 capture - [HK002E][GDrive]

United States Senator

from Washington

In office

September 8, 1983 – January 3, 1989

Appointed by

John Spellman

Preceded by

Scoop Jackson

Succeeded by

Slade Gorton

Chair of the National Governors Association

In office

June 3, 1973 – June 2, 1974

Preceded by

Marvin Mandel

Succeeded by

Cal Rampton

16th Governor of Washington

In office

January 11, 1965 – January 12, 1977

Lieutenant

John Cherberg

Preceded by

Albert Rosellini

Succeeded by

Dixy Lee Ray

Member of the Washington House of Representatives

from the 43rd district

In office

1957–1965

Preceded by

R. Mort Frayn

Succeeded by

Newman H. Clark

Personal details

Born Daniel Jackson Evans on October 16, 1925 (age 95) in Seattle, Washington, U.S.

Political party Republican

Spouse(s) Nancy Bell (m. 1959)

Children 3

Education University of Washington, Seattle (BS, MS)

Military service

Allegiance

United States

Branch/service

United States Navy

Years of service

1943–1946

1951–1953

Battles/wars

World War II

Daniel Jackson Evans (born October 16, 1925) is an American civil engineer and former politician who served three terms as the 16th Governor of the State of Washington from 1965 to 1977, and as United States Senator represented Washington State from 1983 to 1989.[1]

Evans was seriously considered for the Republican vice presidential nomination in 1968 and 1976. At the 1968 Republican National Convention (where he gave the keynote address) Evans refused to endorse Richard Nixon for the presidential nomination, remaining a supporter of the unsuccessful candidacy of Nelson Rockefeller.[2]

Early life

Evans was born in Seattle, Washington (where he has lived as of 2007),[1] descended from a family that had first arrived in the Washington Territory in 1859; his grandfather had served in one of Washington's first state senates. He grew up in the Laurelhurst neighborhood and attended Roosevelt High School.[3]

As a young man, Evans was an Eagle Scout,[4] and served as a staff member and Hike Master at Camp Parsons, a well known Boy Scout camp in Washington State. As an adult, he was awarded the Distinguished Eagle Scout Award from the Boy Scouts of America.

After high school, he served in the United States Navy 1943–1946.[1] He first entered the V-12 Navy College Training Program and was stationed at the

University of Washington (UW), but was transferred eight months later to an ROTC program at University of California, Berkeley. He did not see combat; he was deployed to the Pacific shortly after the end of World War II as a commissioned ensign on a succession of aircraft carriers, before returning to UW in 1946.[3]

Evans graduated from the University of Washington with degrees in civil engineering (BS, 1948, MS, 1949);[1][3] the UW later (in 2007) gave him the distinction of Alumnus Summa Laude Dignitatus, the highest distinction the university confers on its graduates.[3] He returned to the United States Navy (1951–1953)[1] before working as a structural engineer[1][3] (1953–1956); in the latter capacity, he helped draw up the plans for the Alaskan Way Viaduct.[3]

Political career

Having attended Toastmasters to improve his initially abysmal public speaking style,[2] Evans served in the Washington State House of Representatives from 1956 to 1965 before being elected governor.[1]

Evans during his tenure as governor

Despite being a Republican and a self-styled conservative, Evans became known for his administration's liberal policies on environmental protection (he founded the country's first state-level Department of Ecology, which became Nixon's blueprint for the federal EPA) and strong support of the state's higher education system, including founding Washington's system of community colleges. He fought unsuccessfully for a state income tax.[4]

Evans served as governor from 1965 until 1977,[1] still the only governor to serve three four-year consecutive terms and the second to be elected to three terms after Arthur B. Langlie in Washington state history. A 1981 University of Michigan study named him one of the ten outstanding American governors of the 20th century.[4] He declined to run for a fourth term.[5] Serial killer Ted Bundy served as a campaign aide for Evans and maintained a close relationship with the Governor. During the 1972 campaign, Bundy followed Evans's Democratic opponent around the state, tape recording his speeches and reported back to Evans personally. A minor scandal later followed when the Democrats found out about Bundy, who had been posing as a college student.[*citation needed*]

From 1977 to 1983 Evans served as the second president of The Evergreen State College in Olympia,[1] which Evans had created in 1967 by signing a legislative act authorizing the formation of the college. The largest building on the Evergreen campus is named the Daniel J. Evans Library in his honor.[6] In 1983, Governor John Spellman appointed Evans to the United States Senate to fill a seat left vacant by the death of longtime senator Henry M. "Scoop" Jackson. Evans won a special election later that year against Mike Lowry and filled the remainder of Jackson's unexpired term, retiring from politics after the 1988 elections.[1][7] He was not happy as a U.S. Senator; he wrote an April 1988 piece in *The New York Times Magazine*, "Why I'm Quitting the Senate", in which he complained of "bickering and protracted paralysis".[4]

Evans voted in favor of the bill establishing Martin Luther King Jr. Day as a federal holiday and the Civil Rights Restoration Act of 1987 (as well as to override President Reagan's veto).[8][9][10] Evans voted in favor of the nomination of Robert Bork to the U.S. Supreme Court.

Later life

After leaving the Senate in 1989, Evans founded his own consulting firm, Daniel J. Evans Associates.[1] Governor Mike Lowry appointed him to the Board of Regents of the University of Washington in 1993; Evans served as the board's president from 1996 to 1997,[1] and in 1999 the Daniel J. Evans School of Public Affairs at the University was named for him. Evans also went on to work in media doing an editorial weekly on the KIRO-TV newscasts from the early to mid 1990s. Evans is a director of the Initiative for Global Development.[11]

Wilderness Preservation Efforts

Evans was a Boy Scout whose early experiences hiking in the Olympic Mountains nurtured a lifelong love of wilderness. [12] Throughout his career, Evans has proven his dedication to the great outdoors in Washington State through his action. [13]

Evans was a crucial supporter in 1968 when Congress created the North Cascades National Park. The then-governor persuaded President Gerald Ford to sign 1976 legislation creating the Alpine Lakes Wilderness Area, when the U.S. Forest Service was urging a veto. [12]

As a U.S. senator, Evans sponsored the million-acre Washington Park Wilderness Act, and legislation creating the Columbia Gorge National Scenic Area. [14] [15]

In 1989 Evans co-founded the Washington Wildlife and Recreation Coalition with Mike Lowry. [13]

In 2017, Olympic Wilderness was renamed to Daniel J. Evans Wilderness in honor of Evans. [12]

In 1968, Seattle was just one stop on the Norwegian monarch's tour of the United States. King Olav arrived from San Francisco on Wednesday afternoon May 1 and had dinner that evening at the Rainier Club with Governor Daniel J. Evans (b. 1925) and Mayor Dorm Braman (1901-1980).

https://wnpf.org/people/daniel-evans/

Daniel J. Evans

Dan Evans by Mitch Pittman

Honorary Board of Directors

Honorary Board Member | Founder and Former Washington State Governor and Senator

May this wilderness always be protected, and always be enjoyed, for generations who follow us.

Daniel J. Evans ranks as one of the most distinguished leaders in the history of the State of Washington. Perhaps best known as governor from 1965–1977, he has demonstrated a lifelong commitment to public service. Before entering politics, Evans was a civil engineer. After graduating from UW with degrees in civil engineering, he worked as a structural engineer for the City of Seattle, Associated General Contractors, and in private practice. In 1956, he entered politics as a member of the Washington State House of Representatives, where he served from 1956–1965.

He became governor of the State of Washington in 1965, ultimately serving an unprecedented three consecutive terms. He was recognized as “One of the Ten Outstanding Governors in the 20th Century” (University of Michigan study, 1981). After declining to run for office again, he assumed the presidency of Olympia’s Evergreen State College in 1977.

Evans is actively involved in a large number of community and nonprofit organizations. He chaired the National Academy of Science’s Commission on Policy Options for Global Warming and co-chaired a delegation to monitor elections in Nicaragua with former President Jimmy Carter. From 1989–1994, Evans also served as a political analyst for KIRO radio and TV. He taught as a part-time lecturer at the Evans School from March 1989–1990, and currently heads his own consulting firm, Daniel J. Evans Associates.

Born in Seattle in 1925, Evans learned an appreciation for wilderness early, summiting Silver Peak in the Cascades at age 12. In 1993, alongside legendary mountaineer Lou Whittaker and **Melinda French Gates**, he founded Washington’s National Park Fund, and he remains involved as an Honorary Board Member and friend of the Fund to this day.

HistoryLink profile for Evans, Daniel J. (b. 1925) and Nancy Bell Evans (b. 1933)

See [HL005P][GDrive]

By Cassandra Tate ; Posted 12/15/2004

Dan and Nancy Evans have devoted more than half a century to public service, in and out of political office, with a level of commitment matched by few of their fellow citizens. As a three-term governor of Washington and later United States senator, Dan Evans earned the nickname "Straight Arrow." He was so widely admired and his administration so untouched by scandal that a prominent columnist once joked he was "no fun." Nancy Evans served on the boards of innumerable educational and nonprofit organizations, including the Board of Trustees of her alma mater, Whitman College. The Evanses are known for the heft of their Rolodex and their willingness to tap into it in support of various good causes. Together they personify the term "power couple" in Washington. Among their many honors are the First Citizens award from the Seattle-King County Association of Realtors in 2003 and the A. K. Guy Award from the YMCA of Greater Seattle in 2013.

Deep Roots

Both Daniel J. Evans (born in Seattle on October 16, 1925) and Nancy Bell Evans (born in Spokane on March 21, 1933) have deep roots in the Northwest. Evans’ great-grandfather settled in Port Gamble in 1859. His maternal grandfather represented Spokane in the Washington State Senate in 1893. His father once served as King County Engineer. Nancy Bell’s father, a mining engineer and native New Yorker, settled in Spokane after a stop in Vancouver, British Columbia.

Dan Evans grew up in Seattle, Nancy Bell in Spokane. Both had politically active, civic-minded parents who engaged them in the broader world. Nancy once said that one of the lessons of her Depression-era childhood was that even if you didn’t have much money, you could still donate your time, and in any case, you had an obligation to care. “I think there was far more philanthropy than people think back then," she added. "There was not a lot of big giving like there is now, but people helped" (*Puget Sound Business Journal*).

Evans was a Boy Scout whose early experiences hiking in the Olympic Mountains nurtured a lifelong love of wilderness. He put his toe into politics for the first time in 1942, when he ran for junior class president at Roosevelt High School. He lost. It was the last election he would ever lose.

After graduating from Roosevelt in 1943 -- in the midst of World War II -- Evans served as an ensign in the U.S. Navy. He studied engineering at the University of Washington after the war, graduating with a bachelor’s degree in 1948, followed by a master’s in civil engineering a year later. He spent the next two years as a member of the City of Seattle’s structural engineering design team. When the Korean War began in 1951, he returned to the Navy as a lieutenant. At the end of that war, in 1953, he went into private practice as an engineer.

Evans’ political career began in 1956, when he was elected to the Washington State House of Representatives, a Republican in a predominately Democratic state government. He campaigned on a platform that called for better roads, bridges, and “metropolitan planning.” Quiet and unassuming, he showed an early knack for forming bipartisan coalitions, a characteristic that would mark his entire tenure in politics. His fellow legislators voted him outstanding freshman. He was later elected GOP minority floor leader.

Meanwhile, Nancy Bell was studying music at Whitman College in Walla Walla. She graduated with a bachelor of arts degree in music in 1954 and did graduate work at Eastern Washington University in Cheney before becoming a music teacher and librarian in the Shoreline School District near Seattle. She met Dan during a ski trip arranged by mutual friends. The Spokane girl and the Seattle boy married each other in 1959.

Three-Term Governor

Three-Term Governor

In November 1964, Dan Evans defeated two-term Washington Governor Albert D. Rosellini (1910-2011) in the gubernatorial race, one of the few Republicans to survive a Democratic landslide led by President Lyndon Johnson. Evans, ever the engineer, offered voters a "Blueprint for Progress." At 39, he was the youngest governor in state history. He would go on to become the only one (thus far) to serve three consecutive terms. (He won his third term, in 1972, by defeating Rosellini once again, in the latter's final attempt at a political comeback.)

Dan and Nancy moved into the governor's mansion with their two young sons, Daniel Jr. and Mark. A third son, Bruce, was born in 1966.

Evans set the tone for his administration in his first inaugural address, when he declared, "This administration is not ashamed of the word conservative and it is not afraid of the word liberal" (*The Seattle Times*, 1993). Like Teddy Roosevelt, one of his political heroes, he frequently crossed party lines. He once said he would "rather cross the aisle than cross the people," adding that there are "no Republican schools or Democrat highways, no liberal salmon or conservative parks" (*The Seattle Times*, 2002).

As governor, he pursued an agenda that has often been described as "passionately moderate." He championed the cause of education, working with the 1967 Legislature to create the state community college system, launch The Evergreen State College, and provide higher levels of support for four-year colleges and universities. He used his executive authority to establish the Washington State Indian Affairs Commission in 1967 and the Washington State Women's Council in 1971. He pushed for tax reform, supporting unpopular (and ultimately unsuccessful) efforts to implement a state income tax in 1970 and 1973. He was a strong proponent of legislation to clean up the state's air and water, restore areas damaged by strip mining, limit development of oil ports in the Strait of Juan de Fuca, and protect endangered species. During his administration Washington became the first state to create a Department of Ecology (in 1970) and the first to adopt a coastal management program (in 1976).

Evans held office during one of the more challenging periods in Washington state history. The Boeing Company, then the largest employer in the Puget Sound region, lost several important defense contracts in the late 1960s, triggering what became known as the "Boeing Bust." Boeing laid off more than 60,000 employees, cutting its workforce from 100,800 in 1967 to fewer than 40,000 in 1971. The unemployment rate rose to nearly 14 percent. Meanwhile, frustrations over the Vietnam War, civil rights, poverty, and other social issues occasionally boiled over into urban riots. Protest became almost a way of life on college campuses. "It was a heady time to be governor," Evans recalled, wryly (*Seattle Post-Intelligencer*, 2002).

A self-described "contrarian," Evans steered an independent course through those tumultuous times. He responded to a series of demonstrations by black students in 1969 by appointing the first African Americans to the boards of the Seattle Community College and the University of Washington, despite warnings that he was risking political capital by "giving in" to the demands of protestors. He offended some of his constituents by endorsing the legalization of abortion and **he dismayed others with his enthusiasm for nuclear power.**

When California Governor Jerry Brown said he didn't want any Vietnamese refugees in his state, fearing they would take jobs away from Californians, Evans invited them to come to Washington. He and Nancy personally greeted the first group of refugees to arrive. Among them were Chuong Huu Nguyen, his pregnant wife, Xuan Hoa Pham, and their five children. The Nguyens were so touched by the gesture that when their son was born a few months later, they named him Evans. When Evans Nguyen graduated from the University of Washington in 1998, former Governor Evans was in the audience to cheer him on.

During his 1972 reelection campaign, Evans also promoted a group of five ballot measures to support a plan he called "Washington Futures." Four passed. Referendum 27 improved residential, industrial, and irrigation water systems. Referendum 28 financed the development of existing recreational properties and the acquisition of new ones. Referendum 29 expanded public health and rehabilitation facilities. Referendum 31 funded construction at the state's community colleges. The only measure that did not pass -- Referendum 30 -- would have developed new public transportation infrastructure and improved existing systems. Still, with this burst of activity, "Republican Gov. Dan Evans and the Democratic Legislature were launching the environmental movement," political reporter David Ammons recalled, nearly 40 years later (*The Seattle Times*, 2008).

As First Lady of Washington, Nancy Evans helped oversee the restoration of the Governor's Mansion and the creation of the Governor's Mansion Foundation, which decorates the building's public rooms with furniture and art from the eighteenth and nineteenth centuries. She also served as a trustee of the Patrons of South Sound Cultural Activities, the State Capitol Museum, and was co-founding director of the Governor's Festival of the Arts -- all this in addition to raising three young sons.

Head Geoduck

By the late 1960s, Dan Evans was attracting national attention. He was the keynote speaker at the 1968 Republican National convention; chaired the National Governors Conference in 1974; and both Richard Nixon in 1968 and Gerald Ford in 1976 considered him as a vice presidential running mate. Nevertheless, in 1977 Evans left politics to take on what many thought was a doubtful assignment, as president of the fledgling Evergreen State College in Olympia.

Evans had long had a soft spot for Evergreen. He had supported the legislation that created the school and he had been on hand when its doors opened in 1971. An innovative four-year college, Evergreen emphasized collaborative learning and interdisciplinary studies. Students designed their own academic programs. They received narrative evaluations instead of grades. They called themselves Geoducks, adopted "Let It All Hang Out" as a school motto, and articulated their values in "The Evergreen Social Contract -- A Guide for Civility and Individual Freedom."

However, neither Evans' successor as governor, Dixy Lee Ray, nor the Legislature shared his fondness for the school. Ray tried to close it in 1981, and conservative legislators tried to do the same in 1983. Evans helped fend off both efforts. He played a key role in stabilizing the institution and improving its reputation both within the state and nationally. By the time he left, in late 1983, Evergreen was a fixture on various lists of the best liberal arts schools in the West.

While at Evergreen, Governor John Spellman appointed Evans to the Pacific Northwest Electric Power and Conservation Planning Council (later known as the Northwest Power Planning Council). The council, created by Congress to plan for the future of the Bonneville Power Administration, was charged with preparing a regional energy conservation and electric power plan and determining how to mitigate the losses of fisheries due to the federal dams on the Columbia River system, and to enhance fish and wildlife habitat. At the first meeting in April 1981, the council elected Evans its chair. **His work with the council was cut short in 1983, when Spellman appointed him to fill the Senate vacancy created by the death of Senator Henry M. ("Scoop") Jackson (1912-1983).**

Senator Evans

The former engineer, legislator, governor, and college president added another section to his resume in September 1983, when he took Jackson's seat in the

Senate. Two months later, he won a special election to complete the remaining five years of Jackson's term, defeating Democratic Congressman Mike Lowry (1939-2017). The left-leaning Lowry and the centrist Evans differed on a few key issues, but were even more markedly separated by style. As one reporter put it, "The bearded Lowry's eye-rolling, arm-waving, emotional, stump-preacher brand of rhetoric" stood in stark contrast to Evans' "cool, voice-of-reason speaking style" and "distinguished, senatorial appearance" (*Seattle Post-Intelligencer*, 1983).

Evans was assigned to two important committees in the Senate -- Energy and Natural Resources and Foreign Relations -- and he also served as vice chair of the Select Committee on Indian Affairs. But as a former governor and university president who was used to decisive action, he found the Senate more frustrating than rewarding. He complained about the lack of real debate, the influence of special interest groups, the venomous infighting, and the need for incessant campaigning. Senators no longer engaged in meaningful debate, he said, but merely delivered set speeches to a largely empty chamber; and committee meetings were often stalled by lack of a quorum.

In October 1987, he announced that he would not be a candidate for re-election. He told one interviewer that he had come to the Senate too late (at age 63) to build up enough seniority to have any real influence. But he was also deeply disappointed with the institution itself. In a lengthy article for *The New York Times*, he said he had come to Washington with romantic ideas about "the duel of debate, the exchange of ideas," and had found instead "a legislative body that had lost its focus and was in danger of losing its soul." Senators were quick to speak out on issues but slow to listen to each other or agree to compromise. "I have lived through five years of bickering and protracted paralysis," he wrote. "Five years is enough. I just can't face another six years of frustrating gridlock."

Home Again

After a brief stint as a fellow at the Institute of Politics at Harvard University, Evans returned to Washington. He and Nancy lived for a while on Bainbridge Island and then built a home in Seattle. He opened a small consulting firm, Daniel J. Evans Associates, with an office on 3rd Avenue overlooking the Alaskan Way Viaduct. He never held elective office again, although he freely shared his political viewpoints, as a commentator for KIRO-TV (from 1989 until 1994) and as a frequent contributor to newspaper editorial pages. Evans continues to write articles and speak out on issues that concern him, from global warming to Indian treaty rights to the "nasty partisanship" that he thinks characterizes politics today.

Evans joined forces with former representative (and future governor) Mike Lowry in 1989 to found the Washington Wildlife and Recreation Coalition. The coalition, a non-profit citizen group, works to identify and secure state funding for land that needs to be preserved for wildlife habitat and recreation. In 1990, the coalition "persuaded the state legislature to create the Washington Wildlife and Recreation Program," a state grant program administered by the Recreation and Conservation Office and funded by the state legislature to purchase land, restore wildlife habitat, and develop recreational facilities (Coalition website). Since 1990, the program has awarded $620 million in grants and purchased more than 350,000 acres.

In 1993, Evans put on yet another hat, when then-Governor Mike Lowry appointed him to the University of Washington's Board of Regents. At the outset of what could be considered a sixth career, Evans said, "I have been absolutely blessed to have five different careers. Each one has been absolutely marvelous because you learn new things" (*The Seattle Times*, 1994).

He quickly began to make his presence known at the UW. "At regents' meetings, where everyone is exceedingly polite, Evans pokes for answers in a booming, made-for-television voice," *The Seattle Times* reported in an article published six months after he joined the board. "Administrators noticeably squirm when he's around." Still, Evans drew wide praise for his contributions to the board. His fellow regents chose him as president in 1996-1997, and then-Governor Gary Locke reappointed him to another six-year term in 1999. *The Seattle Times* was among the many regional newspapers that endorsed the reappointment. "As a governor, former U.S. senator and one-time president of Evergreen State College, few can match Evans' breadth and depth of knowledge, experience and commitment to public service," the paper's editors concluded.

Both Dan and Nancy Evans have maintained daunting schedules during their "retirement" years. Evans' official biography lists him as a current (2004) member of a dozen corporate, educational, or non-profit boards, from Voicestream Inc. to the National Information Consortium to The Evergreen State College Foundation. Since returning to Seattle from Washington D.C. in 1989, he's been involved with more than two dozen organizations of one kind or another.

Among his more recent activities, he has joined philanthropist William H. Gates Jr., former administrator of the Environmental Protection Agency William Ruckelshaus, and chairman of Global Partnerships Bill Clapp in founding the Seattle Initiative for Global Development, an alliance of business and civic leaders who hope to make the elimination of global poverty a priority for American foreign policy.

Nancy Evans, too, has been involved with a significant number of civic and philanthropic endeavors, including serving on the Board of Trustees of Whitman College, the Seattle Symphony, Seattle's public television station KCTS, the Friends of Cancer Lifeline, and the Northwest Parkinson's Foundation. Former Seattle Symphony executive director Deborah Card credited her with building critical support for the construction of Benaroya Hall, which opened in 1998. As a trustee at Whitman, she has been an active fundraiser, and she also served as a member of the search committee to find a new president for the college. "She's just terrific at making connections and introducing people," said Tom Cronin, outgoing president of Whitman (*Puget Sound Business Journal*). (Cronin retired at the end of the 2004-2005 school year and George S. Bridges, dean and vice provost of undergraduate education at the UW, replaced him.)

Their long years of community service earned Dan and Nancy Evans a veritable bushel of awards and honors over the years. The University of Washington memorialized their names by renaming its Graduate School of Public Affairs the Daniel J. Evans School of Public Affairs in 1999 and establishing the Nancy Bell Evans Center on Nonprofits and Philanthropy at the school in 2004. The school became the Daniel J. Evans School of Public Policy and Governance in 2015. The Fred Hutchinson Cancer Research Center in Seattle made the couple one of its Business Alliance honorees for 2001. The Seattle-King County Association of Realtors honored them with its First Citizen Award in 2003. Other accolades included a Legacy Award from the Rainier Institute in 2004 and the A. K. Guy Award from the YMCA of Greater Seattle in 2013.

Announcing the Rainier Institute award, Booth Gardner, Washington governor from 1985 to 1993, and Sid Morrison, Fourth District congressman from 1981 to 1993, wrote:

"Thousands of civic and corporate leaders entered public service through the Evanses' model of leadership, one that aspires to greatness through discourse, wisdom and respect ... Many of us don't remember a time when the Evanses weren't prominent voices in our community. ... Both Dan and Nancy have been known to roll up their sleeves to help — whether it's for local charities, higher education or a family friend. ... It is that kind of diligence and commitment that has made this community a better place to live" (*The Seattle Times*, 2004).

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Nancy Evans: First-rate First Lady

She takes the winter and she makes it summer

And summer could take a few lessons from her;

Picture a tomboy in lace: That's Nancy with the laughin' face!

- Phil Silvers & Jimmy Van Heusen

Bright, pretty and lots of fun, Nancy Bell, a grade-school music teacher, had no shortage of suitors. In fact, two fellas proposed to her on the same Seattle park bench in the space of a week. One was a handsome engineer named Dan Evans. That was a half century ago, and although Nancy told Dan she wanted three days to think about it - "The worst three days of my life," he says - there's never been a day when she regretted saying "Yes."

Well, there was the muggy day in August of 1966 when she was eight months pregnant with their third son. Barefoot and wearing a maternity smock, she was scampering around the yard of the Governor's Mansion, trying to corral their enormous Irish wolfhound, Peggy, who was in heat. Her spouse and his State Patrol aide, Bill Lathrop, happened to be driving by. They waved gaily and kept right on going, not realizing their services were urgently desired. When the governor strolled into the mansion a half hour later, she was livid. "You saw me chasing that damn dog. Why didn't you stop?!" Dan stammered that he was oblivious. Nancy tried to keep scowling. Then they erupted in laughter. What a sight: The First Lady, great with child, in hot pursuit of the First Pooch. Good thing a news photographer hadn't happened by. They tell the story with relish because it is a classic slice of the sometimes goofy lives they led for the 12 years they were governor and first lady. They strived to be a normal couple - hiking, biking and skiing with their three live-wire sons, playing Pickleball and Bridge with friends between bouts with legislators and visits from presidents and premieres. Nancy also welcomed hundreds of townspeople who told her they had lived in Olympia all their lives and never been to the Governor's Mansion. During their first six months in the mansion they had 10,000 visitors. Asked how she mustered the courage to entertain all those people, Nancy says, "Ignorance is bliss!" (For the record, they did discover later on that five-year-old Dan Jr. had signed his name in the guest book a dozen times in big letters.)

Nancy and Dan: still best friends after 50 years. Evans family album Nancy and Dan: still best friends after 50 years. Evans family album.

They'd been married for only five years before pulling off one of 1964's biggest political upsets. In a Democratic tsunami, Lyndon B. Johnson trounced Barry Goldwater, the hero of the Republican Right. But in Washington State, a Eagle Scout bucked the tide to defeat two-term Democrat Al Rosellini. Nancy Bell Evans, 31, the daughter of a spunky suffragist and the pride of Spokane, became the youngest First Lady in state history. Her husband, Daniel J. Evans, was 39 - the youngest governor ever.

Dan Evans served an unprecedented three consecutive terms and Nancy became one of the state's best-loved first ladies. Along the way, she saved the Governor's Mansion from being replaced by some characterless rambler, championed its renovation and redecoration and created a Mansion Foundation with a corps of dedicated volunteers. She was "a vivacious hostess, a serious leader and one hell of a mother, all at the same time - plus a remarkable wife," her husband says, adding that it's all still true. After 50 years together, they're still best friends, and Nancy is also the person Dan most trusts to give him a reality check.

"She really is the ying to dad's yang," says their son Bruce. "The degree to which they go back and forth on stuff is remarkable - not because they fundamentally disagree but because they just like to debate things. More than a lot of married couples, they still communicate in a very open way, which is a testimony to their marriage and why it has lasted so long."

Not-so-secret weapon

A few months after Dan was elected governor, the Legislature went into overtime and Nancy had to go it alone on an important trade mission to Tokyo. She'd never been away from her children for three weeks, but she dutifully packed her bags. The trip was a crash course in international diplomacy. "Japan was a very male-oriented society," Dan notes, but Nancy was a hit with everyone she encountered and made lasting friends. "It was an enormous boost to her confidence."

The first lady was the governor's not-so-secret weapon, according to campaign workers and members of his staff. "Nancy is very smart, even-keeled and politically very savvy," says Jay Fredericksen, who was Evans' press secretary in the 1970s. "As a bonus, she has this great sense of humor." She met kings and queens, "but never let anything go to her head. In 1973, we were all back East for the Republican Governors' Conference, which Nelson and Happy

Rockefeller were hosting. It was my first trip to New York City, and we were staying in an upscale hotel, so I was sort of awe-struck. I remember Nancy talking about having dinner at Rocky's town house. She said, 'My God, there's a Picasso in the bathroom!' "

Dan and Nancy with their namesake immigrant son, Evans Nguyen. Evans family album Dan and Nancy with their namesake immigrant son, Evans Nguyen. Evans family album.

Back in Olympia, Nancy had bats in her attic, although by then her campaign to make the drafty old mansion a livable place of pride for the state and its occupants was finally making real headway. Today, the mansion is the cornerstone of her legacy as first lady. When Gov. Mike Lowry and his wife Mary welcomed visitors in the 1990s, he always quipped that they were "really enjoying public housing."

Nancy Evans also sparked new interest in history and the arts in Olympia and was a founding trustee of Planned Parenthood of Thurston County. Although abortion is "not something we would ever choose," she says she has "always felt it's a woman's right, prerogative, to make that decision." She supported the 1970 statewide referendum to make abortion "legal and safe" in the early months of pregnancy. She also backed the Equal Rights Amendment and has been a longtime activist for the mentally ill and developmentally disabled. She and Dan welcomed Vietnamese refugees to Washington in the 1970s after the governor of California said there was no room at the Golden State Inn. One young immigrant couple was so grateful for their support that they named a son Evans.

Nancy at a Whitman College trustees' dinner, 2007. Whitman College. Nancy at a Whitman College trustees' dinner, 2007. Whitman College.

Nancy's "retirement" years are devoted to an ambitious array of public service, philanthropic and cultural causes. She is vice chairman of the board of KCTS, the Seattle affiliate of the Public Broadcasting System, and active with the Northwest Parkinson's Foundation. Dan's brother and Nancy's two sisters-in-law, as well as their friend, former governor Booth Gardner, have suffered from the disease. A cancer survivor, as is her husband and their granddaughter, Eloise, she helped found the Friends of Cancer Lifeline in the late 1980s and was its first chairwoman. "She takes her responsibilities to her family, her friends and her community to the nth degree," says Barbara Frederick, Cancer Lifeline's retired executive director. "Her 'community' has reached to every corner of our state. And every single thing she's involved with she does with all her energy. Her attention to detail is just remarkable."

At Whitman College, her alma mater, she has been an overseer, trustee, fundraiser and talent scout since the early 1970s. In 2009, Whitman presented her its Scribner Award for Distinguished Service.

Involved with the Seattle Symphony since the 1960s, Nancy played a major role in generating support for the world-class Benaroya Hall, and headed the search committee for a new conductor in 2009. Her husband marvels at her moxie, and willingness to take on jobs like that. Dan and a throng of others will tell you that if you pass muster with Nancy, you're bound to be all right. She is financially savvy and a good judge of character. She makes friends and forges alliances everywhere she goes. "She's just terrific at making connections and introducing people," says former Whitman president Tom Cronin.

A natural-born campaigner

Sporting a hat he was given at a Western-wear shop, Dan Evans campaigns for the U.S. Senate in 1983 with Nancy at his side. Matt McVay, Seattle Times Sporting a hat he was given at a Western-wear shop, Dan Evans campaigns for the U.S. Senate in 1983 with Nancy at his side. Matt McVay, The Seattle Times.

After deciding against a bid for a fourth term, Dan became president of The Evergreen State College during a critical period in its existence and went on to serve in the U.S. Senate. He is a bipartisan political icon in Washington State, and when he emphasizes that he couldn't have done it without his wife he's not just being gallant. Evans started his 1964 campaign for governor "with all the warmth and charisma of an iced halibut," according to historian Gordon Newell. He got a lot better, but Dan's handlers still sometimes called him "Old Gluefoot" because he dawdled and was bad at gripping and grinning. Nancy was a natural-born campaigner.

Dan often took his cues from Nancy - sometimes literally. He gave good speeches, but tended to talk too long. "They worked up this code, where Nancy would cough and Dan would realize he had to wrap it up," says Bill Jacobs, Dan's chief of staff when he was governor and later in the Senate. "One time he was just getting going and she coughs. He couldn't understand why because he thought he was doing pretty well. But he wrapped it up. Afterwards, she said, 'Why did you quit, Dan? That was really good.' And he said, 'Well, you coughed.' She laughed and said, 'Well, I really had to cough!' While that's sort of a frivolous thing, it's an example of how they related to one another and the trust that they had."

Wendy Pugnetti, who worked closely with the first lady when she was assistant press secretary in 1973, says, "Nancy is warm, gracious and smart. In today's political world, she would be a shoo-in for elected office. I admired her greatly because she juggled all those roles so well and remained just Nancy."

Former U.S. Senator Slade Gorton, one of Dan's housemates in Olympia when they were young legislators, says he concluded early on that "Nancy Evans is a very strong woman. The influence she had over her husband was both significant and positive. She certainly deserves credit for saving and restoring the mansion, for which she is best known, but her political instincts and achievements go way beyond that."

Lawmakers visiting the mansion were frequently lobbied by the first lady on her favorite causes. Nancy referred to the recalcitrant ones as "some of our 17th Century legislators." Watching his wife in action, the governor would sometimes roll his eyes. And when the guests had gone, she says he might scold, "Did you have to buttonhole that one?"

While possessed of a deft touch, Nancy Evans was also her mother's daughter. Lilith (pronounced "Lie-lith") Bell, who lived to be 94, marched for suffrage as a young woman and had a "protester's streak." Mrs. Bell once told reporters that her feistiness dated to her childhood in Kansas. "I was a preacher's kid, and I resented the feeling other people had that I should be some kind of a model child."

What's in a name?

Nancy in her baby buggy in 1933. Evans family album Nancy in her baby buggy in 1933. Evans family album.

Shakespeare's immortal Juliet declared that a rose "by any other name would smell as sweet." But it's a good thing Nancy's father was joking when he suggested she should be named Vernal Equinoxia since she was born on the first day of spring in 1933. "We're going to call her 'Vernie' for short," he told the children. "Oh, Dad, you can't do that!" they said.

Her mother wanted to name her Elizabeth Ann, but the obstetrician said "she looks like a Nancy." It's a straightforward name with a dash of playfulness. She has wonderful blue eyes, a warm smile and a contagious laugh. She is simultaneously down to earth and sophisticated, and she always reminds herself that no matter where she is or who she's with, she's still just Nancy Bell from Spokane.

"It's easy to get absorbed in whatever life you're doing without remembering how you got there," Nancy says, recalling the social whirl in Washington, D.C., when Dan was a U.S. senator. "You go to a lot of embassies and on and on. So you can quickly forget who you are and where you come from. ... I tried very hard not to." Nor did she ever want her boys afforded special treatment just because their dad was governor. As a former teacher and diligent mom, she closely followed their schoolwork. One day, Dan Jr. brought home a report marked with an "A." Nancy was dubious. "I said, 'Why did you get an 'A'?' And he said, 'Well, that's what they gave me.' Well, I know it was because he was Dan Evans' son, and he didn't deserve an 'A.' "

She was a surprise

Nancy, left, and a friend enjoying a pony ride while visiting her dad in Montana one summer in the 1930s. Evans family album Nancy, left, and a friend enjoying a pony ride while visiting her dad in Montana one summer in the 1930s. Evans family album.

Nancy's father, William L. Bell, a Stanford-educated mining engineer, was often without work during the Depression. But her parents persevered, and they loved the sound of children's laughter. Nancy was the youngest of four and a surprise. "My father was 54 when I was born," Nancy says, adding with a chuckle, "He was a very proud man, my mother said, and she was furious."

In truth, her parents and siblings - Barbara, 12 years older; Bill Jr., 9 years older, and Mary, seven years older - were all delighted with her. "I was a spoiled brat. I was doted on, and I loved it. I don't deny it," Nancy says, laughing at the memory. Some summers, when her father was working in Montana, Nancy would visit him. "Mother would put me on the train at night. We knew all the porters, everybody who worked on the trains. ... I'd be by myself, at age 6, and they'd put me in a sleeper. In the morning, they'd get me up and make sure I got dressed and everything. And my father would be there to greet me at Butte. ... They had a house up in the mountains, and I had a little Shetland pony that I rode all the time."

There are sad memories, too. Her brother contracted trench mouth, likely from a public drinking fountain, "and in those days, before antibiotics it ate away at his lower lip." The popular teenager endured several skin grafts. Without medical insurance their parents were hard-pressed. "It was a hard time anyway in mining - a hard time everywhere in America," Nancy says, noting that there were "many mouths to feed" at the Bell house. But her parents loved having young people around. One of Bill Jr.'s friends from college moved in when he was attending law school at Gonzaga. "I never knew how many people were going to be at the dinner table because my brother and sisters would often bring people over, and my mother would say, 'Stay for dinner.' She could take nothing and make it something." Father, meantime, never lost his droll sense of humor while Mother was "always encouraging" and the enforcer. "My parents brought me up to believe that you could do anything you want to do if you work hard," Nancy says. "There was no sense that I couldn't do things." Like many who grew up in that era, she's thrifty. "To this day I turn off the lights and scold my husband and my children for not doing so."

Nancy and brother Bill during World War II. Evans family album Nancy and brother Bill during World War II. Evans family album.

Then came World War II. Her brother was wounded in the Battle of the Bulge, the Nazis' go-for-broke offensive in the winter of 1944-45. "In the den, my father had on the wall a big map of Europe," Nancy recalls, "and we would try to follow Bill through his letters. You couldn't say exactly where you were because of wartime censorship. Then we learned my brother was coming through Spokane on the train on the way to Madigan Army Hospital near Tacoma. So we all went down to the train station, and I still remember this gaunt young man standing in the doorway of the train on crutches. And I thought, 'Oh my gosh, is that my brother?!' I couldn't believe it was, because he was so thin. He was so haggard looking."

Bill Bell Jr., who inherited his father's sense of humor, always said he was grateful to the Army because he was no longer self-conscious about the trench mouth scars on his lip. "People assumed it was part of the injuries he had received in the war," Nancy says, adding that "he always was a slobbery kisser." That line gives you a good idea of the Bells' upbeat outlook on life.

Nancy was "a very typical teenager," with a lot of chums, many of whom she has stayed in touch with over the years. She had been taking piano lessons since grade school from a gifted German immigrant and played for the choir and other musical productions. She was a cheerleader and rarely without a boyfriend. Many of her brother's friends were also veterans, and Nancy was impressed by their "more sophisticated" humor. "I just ate it up," she says.

https://www.sos.wa.gov/legacy/stories/nancy-evans/page3.aspx

Whitman calls

Evans family album Evans family album.

With graduation from Lewis & Clark High School looming in 1950, Nancy applied to several colleges. She had her heart set on Whitman, where her brother and sisters had gone. But Whitman was expensive, and Nancy was entering college on the heels of the Depression and the war. "There was financial difficulty at our house during my teens, but Mother kept saying, 'Well, don't let this detour you. There is always a way to get what you want to get.' It was always that way with Mother," Nancy recalls. "She said, 'Work hard, study hard. Maybe you can get a scholarship.' And that's what happened." Nancy competed in a classical music recital to win a music scholarship and was off to Walla Walla. "Even with a scholarship, I'm sure my mother was thinking, 'Oh, how are we going to do this?'" Nancy worked in the post office at the Student Union Building and served as an assistant to professors to help pay her tuition and expenses.

She loved Whitman's close-knitness and the whole feel of the town. Whitman has always been regarded as a very good college, but Nancy says it's now nationally recognized as "a great school" that draws extraordinary students. "I couldn't get into Whitman now," she says. "It's a wonderful school, and they really believe that the teachers are there to teach and not just do research. The faculty now, as then, spends a lot of time with the students. A lot of mentoring goes on besides the classroom stuff." Her affection for her alma mater and gratitude for the scholarships that allowed her - and thousands of others since - to get a first-rate liberal arts education are boundless. Her years of service as an overseer and trustee represent her commitment to keeping the doors open to bright young people. Dan Evans Jr. graduated with the Class of 1983.

Whitman grads, in other words, are loyal, which a certain University of Washington Engineering School graduate came to appreciate. When Nancy and Dan drove into Walla Walla in 1964 for her 10-year class reunion, the race for governor was in full swing. Everywhere they looked there were "Dan Evans" yard signs and bumper stickers. The only things they knew about him were that he had the good sense to marry a Whitmanite and that he was a Republican - in that order. Nancy says that support helped fuel Dan's upset victory.

Evans family album Evans family album.

Nancy grew up in a household where everyone talked politics. After FDR closed the gold mines during the war, her father fumed about "Roose-a-velt." (In Seattle, Dan Evans' dad, Les, was doing likewise.) However, Mr. Bell wasn't much for meetings. He liked to play devil's advocate in dinner-table debates. Mother was a Republican poll-watcher every election day, and Nancy's siblings - being much older - were active in the party. Bill Jr. managed some campaigns and Barbara Bell was a precinct committeewoman. "Everybody would enter into the discussions, so it was very much a part of our family life."

Nancy was a free-thinker, intellectually feisty like her mother, but not much of a political animal and no public speaker. When she was elected president of her sorority, Delta Gamma, her senior year, she was obliged to give the annual report for the spring alumnae banquet at the grand Marcus Whitman Hotel. "I didn't think I would get through it. I remember just gulping - ah, it was dreadful - and swallowing and not being able to go on with the words. … I remember somebody afterwards leaning over and saying, 'Gosh that was tough, wasn't it?' And I said, 'Yes, that was very tough!' It was very memorable to me because I was so bad. I could get up and play the piano … but to speak was a real challenge. I never have been a very good public speaker, but I'm better at it now than I was."

One of the fellas she dated during her college years was Bill Cowles, heir to Spokane's two leading newspapers, The Spokesman-Review and Chronicle, and considerable real estate in the Inland Empire. "We were just friends; nothing ever serious," Nancy says, but he was a good-looking guy and a great catch for any girl. "He came to the door to pick me up, and, looking down his glasses, my father said, 'What are your prospects, young man?' I was just, 'Oh, God, Daddy!' He knew full well who Bill Cowles was, but he would do that to any man who came to the house to pick up any of his daughters."

Camas or Seattle?

Graduating from Whitman in 1954 with what amounted to a dual major in music and education, Nancy received several job offers. The two most enticing were at Camas, where she could head up the music education department, and in the Shoreline School District north of Seattle, where she would be a grade-school music teacher. The Camas job paid a lot more, but it was a rural mill town. Seattle had more attractions, including concerts and thousands of college-educated people her own age. On indoctrination day for new teachers, Nancy and a pal from Whitman met two freshly minted teachers from the University of Puget Sound. The four girls rented a house in the University District from "a wonderful little old lady." Over their front door they hung a sign that combined the names of their sororities: "Chi Chi Delta Tri."

Miss Bell with a student in 1957. Evans family album Miss Bell with a student in 1957. Evans family album.

Shoreline Elementary School was brand new in 1954. In addition to a music teacher, they needed someone to set up a library. Miss Bell, who loved books, promptly volunteered and winged it for the first year. She returned home to Spokane for the summer break and took graduate courses at Eastern Washington State College in Cheney to fulfill her teaching credential requirements and learn more about librarianship and storytelling for grade-schoolers. "Another new school came along later, so I was teaching music at two schools and being the librarian as well. They gave me a budget and I got to order all these books." The storytelling was fun, but she really enjoyed teaching music to every class - kindergarten through sixth grade.

"One day the principal asked me to give a little talk at one of the PTA meetings. And I thought, ‘Oh my God, what am I going to talk about?' " She collected an armload of tambourines, cymbals, triangles and wood blocks - the stuff she routinely handed out to kindergartners to get them enthused about making music. "I passed those out at the PTA meeting because I'd been hearing parents say, ‘Well, I can't sing, so I'm sure that Johnny can't sing at all.' That was my lesson for the night. I said, ‘Don't ever say to your children, ‘I can't do this, therefore you probably can't either,' because you don't know that for a fact. Give them a chance.' " That's the Nancy Evans Theory of Elementary Education in a nutshell.

An intriguing young man

Her social life was also blossoming. "When I arrived in Seattle, I met a lot of new people and really had a wonderful time. I met a lot of great guys." One was a 32-year-old civil engineer named Dan Evans. A former naval officer, he was interested in politics and had been named the "Outstanding Freshman Legislator" of 1957.

That summer, one of Nancy's ski pals was crewing on a sailboat with Dan. She still remembers his exact words: "Nancy, I've got a young man I think you should meet." Dan joined the group for a weekend jaunt to Stevens Pass in January of 1958. He was quiet, attentive and "very good looking," Nancy says. "He kept coming along on our ski trips. Then one time I fell. All the other guys, they'd just go on, but Dan stopped. And then he asked me out."

Skiing at Sun Valley in 1956. Evans family album Skiing at Sun Valley in 1956. Evans family album.

Dan's version: "She only learned to ski because she was trying to keep up with all the guys she was dating or went skiing with. They were all pretty good skiers who wanted to go right to the top of the mountain" but "she stayed down below." Immediately smitten, Dan decided he would stick with her. Good decision. When she veered under a clump of trees "I had to get in there and pull her out. So we skied together. Then we all got together at lunch." At day's end they stopped for burgers at a diner. "It was just a place with eight or nine stools all along the bar … and I made darn sure that I sat next to her."

Nancy's first impression? "He was very quiet and shy. … He hadn't dated much. The thing I remember most, other than that he was a very nice person and a very handsome man, was his intrigue. Each time I went out with him I learned something new. I saw a man of depth. He grew on me. … He was not one of these people who just came on the first time and you learned it all. I found that very intriguing. ... I loved everything I learned. … He already had done a lot of interesting things: He was an engineer, interested in politics, athletic, very competitive … served in the Navy. There were all these things that he'd done. He had a wooden sailboat that we ended up spending a lot of time sanding and waxing and varnishing. … I learned to love sailing. We would often go over to his house and sometimes have dinner."

The sailor was making headway, but the competition was fierce. One night when he arrived at Nancy's apartment to pick her up, Dan had to make a phone call. There was a datebook by the phone, so he used some naval intelligence. "It had a little rubber stamp chained to it, with the name ‘Bob.' It was one of her boyfriends. … She was really very popular. So I opened it to see what was there and here's ‘Bob,' ‘Bob' and ‘Bob.' And then there's other dates that she had (made as well). So I carefully marked down all of the free nights I could find and made sure that I asked her out on those free nights. I really wanted to see her more frequently. And I figured, well, if she says ‘no' because she's busy and it was a free day I'll know I'm in trouble."

That spring, Nancy learned just how persistent he was. On the opening day of boating season, Dan was at the wheel of his sailboat, stopwatch in hand, ready to race. "We were about 45 seconds from the start and she decided that was the time to jump into my lap and put her arm around me. I just pushed her away. … And I said, ‘Nancy, we're only 30 seconds away from the start!' She was just really upset, but she found out how competitive I was."

In October, they took a weekend trip to Victoria with Nancy's sister Barbara and brother-in-law, Bill Ludders. They stayed at the Empress - the guys in one room, of course, and the girls in another - and had a wonderful time. "And then we came home to Seattle - back to my apartment. Dan said, ‘Well, let's go for a walk.' And I thought, ‘Well, OK, Sunday night.' So we walked up to the playfield … and we sat on the bench, and he proposed! On Saturday night of the week preceding, I had been proposed to on that same bench."

She had said "no" immediately to the earlier proposal, even though it was "very sweet." Then when Dan proposed, "all I could think of was the week before. I was so stunned because I really had not expected it. I just couldn't say 'yes' right then. I said, "Well, I've just got to think about it. Give me three days."

June 6, 1959: The newlyweds toast one another as their parents look on. At left , Les and Irma Evans; at right, Lilith and Lawrence Bell. Evans family album June 6, 1959: The newlyweds toast one another as their parents look on. At left , Les and Irma Evans; at right, Lilith and Lawrence Bell. Evans family album.

Dan was crestfallen. Nancy was confused. He slunk home. She called her mother in Spokane. "I said, 'Dan proposed and I don't know what to do!' And Mother started laughing. She'd never even met Dan, of course. I said, 'Mother, don't laugh. It's serious.' And she said, 'Well, of course it is. I'm laughing because how can I tell you what to do?' So she was no help. I just had to assimilate the whole idea. Then Dan came over Wednesday night and I said, 'Yes.' I knew, you know. It was just 'bingo!' "

Dan says, "I was so excited I just couldn't handle it: 'I've got to tell somebody. I've got to tell somebody!' " He still had a key to his parents' house, which was only a few blocks from Nancy's apartment. Even though it was close to midnight, he "charged up the stairs," knocked on his parents' bedroom door and woke them up. Startled, they sat bolt upright in bed and said almost in unison, "What's going on?" Little wonder. That sort of exuberance - nocturnal or otherwise - was way out of character for their son.

Dan's mother "just broke into tears, she was so happy." His father, more reserved even than his son, just beamed. Nancy quips that Irma Evans "was just delighted that her oldest son was dating. It didn't matter what the girl was like." In truth, Dan's parents adored her and the feeling was mutual.

Nancy with her proud father. Evans family album Nancy with her proud father. Evans family album.

They were engaged on October 28th, 1958. Her parents came over from Spokane to meet Dan for the first time. Nancy was cooking dinner. Mother and daughter immediately repaired to the kitchen, leaving Daddy to work over Dan. "So there I am sitting with this kind of big, very impressive-looking man, and he says, 'Well, young man, my other sons-in-law always came to me and asked for my daughter's hand in marriage.' I'm, 'Ga, ga, ga.' I thought he was completely serious. And I really had a tough time even responding. It wasn't until later that I found out he was just putting me on."

Evans family album Evans family album.

Dan passed another test: He sat attentively through Nancy's nemesis - the grade school Christmas program, a command performance of her charges' musical skills to the tune of "O Little Town of Bethlehem" and "Frosty the Snowman."

"I'd arrange it so that we would have something on the stage of the lunchroom/auditorium/gym - a production. Somehow we got all the kids, plus all the parents, in that room." The future governor took note of the future first lady's organizational skills and grace under pressure. The show came off without a hitch. "I was quite pleased with myself afterwards, and Dan was very impressed. Each class had its own number and we had soloists. It was a lot of work."

They were married on June 6, 1959, at the Congregational Church in Spokane. The day's loveliest photo features Nancy, gorgeous in white lace, adjusting her proud 81-year-old father's boutonnière.

Dan took his bride on a honeymoon trip to Carmel and San Francisco in the first new car he'd ever owned - a "big-finned, gold Plymouth" - and took movies all along the way with his trusty Bolex.

Passionately moderate

Five young Republican state representatives in 1957: from left, Joel Pritchard, Dan Evans, Chuck Moriarity, Jimmy Andersen and Slade Gorton. Washington State Archives Five young Republican state representatives in 1957: from left, Joel Pritchard, Dan Evans, Chuck Moriarity, Jimmy Andersen and Slade Gorton. Washington State Archives.

Early on, Nancy had met most of the Dan Evans rat pack of bright young Republicans - notably Joel Pritchard, Chuck Moriarty, Jimmy Andersen, Slade Gorton, Don Moos and Tom Copeland. Dan was a classic progressive Republican in the Teddy Roosevelt mold. An Eagle Scout, he was a vigorous

Gorton, Don Moos and Tom Copeland. Dan was a classic progressive Republican in the Teddy Roosevelt mold. An Eagle Scout, he was a vigorous outdoorsman who loved to hike and sail. Early on, he was concerned about the environment and social justice issues. When he became governor, someone aptly described his agenda as "passionately moderate." The best thing about Dan, Nancy says, is that he always "tried to bring people together." His most famous quote is "I would rather cross the aisle than cross the people." Nancy was his political soul-mate - more liberal, perhaps, in some ways, but with solid instincts about social justice issues and fiscal responsibility. Best of all, the earnest engineer dubbed "Straight Arrow" now had a wife who turned out to be a natural-born campaigner.

"Remember," Nancy says, "I grew up listening about politics. … My parents loved to talk politics. In fact, later when she came to live with us, my mother would say, "Now Dan, I think you ought to think about this." And he'd say, "Yes, yes 'Gom.' That's our nickname for my mother because that was what her first grandchild called her. So politics came very easily to me. When I went down to Olympia the first time I was younger than they were. So they all sort of took me under their wing."

When they were getting serious, did Dan ever say, "Well, someday I'm going to be governor; we'll have three kids, and we'll live in a mansion and have teas and receptions"? Nancy guffaws: "Obviously not! I probably would have said 'no.' … There was no talk about anything like that. I didn't know what I was getting into. At that time, the Legislature was two or three months every two years. I had no idea he would ever run for governor, and I don't think he did either."

Trip of a lifetime

Nancy quit teaching after their marriage. That September, Dan came home from the engineering office with a surprise announcement: "Well, I quit my job. Why don't we plan a trip?" Flabbergasted, Nancy said, "Well, jeepers, don't you have to get a job first?" Dan said they could afford it and they'd never regret it. "We had some money because we had both been out of school for long enough, and Nancy was very frugal," Dan recalls, "even though she didn't earn much as a teacher. And I had saved some money. So why not?"

They wrote letters to tourist bureaus all over Europe, and ordered a car to pick up over there. On December 30th, they flew to Los Angeles, saw the Huskies shellac Wisconsin in the 1960 Rose Bowl game, then flew nonstop to Copenhagen on SAS. They proceeded to have the time of their lives, skiing for a month before wandering at will - Germany, Spain, Portugal and Paris - Europe for two on $10 a day, literally, except for lift tickets and gasoline. Not only will they always have Paris, Nancy was pregnant with Dan Jr. by the time they were homeward bound on a new ocean liner. "I can tell you where and when, but I'm not going to," she says with a wink and a laugh. "Our son knows."

Dan entered into a happy engineering partnership with Vic Gray. Daniel Jackson Evans Jr. was born on November 25, 1960. They moved from a one-bedroom apartment at Madison Park to their first house in Laurelhurst, atop a hill east of the UW campus.

Speaker John L. O'Brien glares at Dan Evans as the coup unfolds. Seattle Argus Speaker John L. O'Brien glares at Dan Evans as the coup unfolds. Seattle Argus.

Daniel Jackson Evans Sr., representing the 43rd District, was chosen House Republican floor leader in 1961. The braintrust of Evans, Pritchard, Gorton et al, had bigger things in mind. In 1963, they put together a coalition with dissident Democrats to oust Speaker John L. O'Brien, a quintessential Irish Catholic pol who since 1955 had wielded the gavel for a record four terms. They replaced him with a conservative "D," William S. "Big Daddy" Day, a Spokane chiropractor who was "absolutely" willing to give the Republicans some committee chairmanships. O'Brien was out-foxed, out-maneuvered and "out-flummoxed," as Jim Dolliver, the GOP consigliere, put it. "He didn't realize what was happening until the knife was going in. … He came storming down the center aisle," but it was too late. The young R's had staged a coup. The enduring image of a decisive moment in the history of the Washington Legislature is O'Brien standing in the aisle glaring down at young Dan Evans, sitting stony-faced in the front row.

With his clean-cut image, Dan Evans was getting noticed around the state. In the spring of '63, after the Legislature adjourned, State Rep. Herb Hadley of Longview decided Dan ought to be governor and helped launch a "Draft Dan Evans Committee." Hadley had won election to the House in one of 1962's biggest upsets and was thinking big during a coffee hour with some of his Cowlitz County pals. Hadley was a real estate man and the descendant of one of Longview's first families - "a classic go-getter in the Jaycees mold," says ex-senator Sid Snyder of Long Beach, one of the Legislature's foremost historians.

That May, Dan was at work in his engineering office when an AP reporter called. "She says, 'What's this about a Draft Dan Evans Committee?' I just laughed and I said, 'Draft Dan Evans for what?' And she said, 'Well, governor, of course.' And I said, 'I don't know anything about it.' And I didn't. They didn't check with me; they just decided to do it. … Herb was an enthusiast. He wanted me to run, so those guys just thought, 'Well, we'll goose this thing along.' That got me to thinking about it enough that I got Slade, Joel Pritchard, Jim Dolliver, all of those guys, together and we met at my house."

Nancy was rolling her eyes. "He'd come home saying, 'Well, they're talking about this.' And I'd say, 'Oh God!' Initially I was very skeptical of the whole prospect. I just didn't think he had a chance. I had good reason to think that way and I was pregnant with number two, Mark. That was my focus."

Bucking the tide

It was shaping up to be a Democratic year, with Lyndon Johnson looking unassailable. John F. Kennedy had been murdered in Dallas, and Americans were likely disinclined to have three presidents in the space of 14 months. Johnson was also running against a Republican Party that was busy choosing up sides -

Goldwater conservatives vs. Rockefeller progressives. In Washington State, Democrat Al Rosellini was seeking a third term as governor. Conventional wisdom was that LBJ would have long coattails. Dan Evans barely registered a blip on the pollsters' radar. Nancy Evans told her husband something she would always say over the years whenever they were at a crossroads: "Look - you do what you think you ought to do, and I'll be there."

The other potential Republican candidates for governor included former congressman Tom Pelly, Congresswoman Catherine May, Seattle Mayor Gordon Clinton, well-known Seattle businessman Joe Gandy and Richard G. Christensen. Only 33, Christensen was a hard-charging Lutheran minister fresh from a narrow loss to U.S. Senator Warren G. Magnuson. The Republican Central Committee took a poll that June, Dan recalls, "and I was sixth out of six. I was dead last with, I think, four or five percent. And the only good news in the poll was that when they asked, 'Are these names familiar to you,' or some question like that, I was one percent less on who knew me than who would vote for me. And we said, 'Well, there's something in there!' "

Nancy with Danny and Mark in 1964. Evans family album Nancy with Danny and Mark in 1964. Evans family album.

Dan and Nancy's dear friend, State Rep. Joel Pritchard - a future congressman and lieutenant governor - was the strategy guy. He told Dan, "What you've got to do is invite 200 of your best friends to a 7 a.m. breakfast, ask them for money and see what happens." Dan said, "Well, geez, Joel, 7 o'clock - how about 7:30?" "Nope," said Pritchard. "Make it tough because you want to see who your friends really are." Some 140 Evans fans showed up with checkbooks. "We ended up with a second breakfast because I kept getting calls from people saying, 'Hey, Why didn't you invite me?' We asked them to pledge or raise $50 apiece." In short order, the fledgling campaign had a $12,000 war chest. Even Nancy was impressed - still dubious, but impressed nevertheless. Besides, Dan had made two things clear from the get-go: "I will not run a deficit. I don't want to owe anybody. And I won't contribute any of my own money to the campaign, mostly because I don't have any, and I don't believe in it anyhow."

Mark Lawrence Evans was born on September 20, 1963. Nancy was now the busy mother of two. Dan was an engineer by day, politician by night and weekend, although he always carefully blocked out family time. By January of 1964, despite its enthusiasm, the Evans campaign was flat broke and "just gasping." Then two members of the Weyerhaeuser family contributed a total of $5,000, "which was huge," Dan recalls. A second poll showed him up to 11 percent. Christensen's lead had shrunk but it was still commanding. "Gandy was below us but pretty close. I was disappointed because we had worked hard for six months. But Joel Pritchard said, 'No, no, no, don't worry. This kind of thing builds. It's going to come faster and faster as time goes on. We've got a lot better campaign organization than anybody else and a lot more volunteers.' "

No deals

By the spring of '64, the Evans campaign was gaining steam and the Gandy people wanted to cut a deal. "They tried to say, 'Well, Joel, he'll only run for one term. Why don't you have Dan run for lieutenant governor and then we'll turn it over to you?' " Pritchard said, "Nothin' doin'."

The state GOP Convention was at the University of Puget Sound in Tacoma. Cannily, Evans and Pritchard arranged with Don Moos, the permanent chairman of the convention, to have their demonstration last so they could gauge how all the other candidates had done. Gandy, the mover and shaker behind Seattle's Century 21 World's fair, had a brass band. Christensen had "women on the warpath" in Indian costumes.

"There was this huge Christiensen contingent," Nancy recalls. "And that's the part I hate about conventions - all that hoopla. I just don't like it. I can still remember standing outside the foyer of the center. Somebody on the stage was announcing, 'And now here we have Joe Gandy and Mrs. Gandy!' Laurene Gandy was just a lovely lady, and I can still see her, just putting her chin up saying to herself, 'OK, I'm going to do this!' And here was this lovely lady walking down amid the hoopla, hoopla, hoopla. Then they announced Dan, and it wasn't quite as much hoopla." But Dan told her there was a key difference: "The delegates were the ones that erupted into the aisles for us. Joel Pritchard had all the smarts." He'd ordered signs with "Evans" spelled out vertically so that when the delegates bobbed them up and down everyone could read what they said and they wouldn't get in anyone's way. "They had all these signs hidden down under the seats. When they started (waving them and hollering) it was so amazing! Nancy and I stood up there on the stage waving at friends as they went by. And I almost wept when I saw my father, who was the epitome of the old reticent engineer. He had a twinkle in his eye and there he was down on the floor with two signs - not one." Nancy says, "This quiet, dignified person was waving as wildly as he could. Dan had never seen his father doing anything like that." They both savored the moment.

Nancy's mother was watching the boys. Sadly, William Bell had died in 1962 at the age of 83. (His friends all called him by his middle name, Lawrence; the grandkids called him "Bompa.") But he knew Dan was going places and he was enormously proud of his son-in-law. Had he lived, Nancy says he would have been right next to Dan's dad - two old Republican engineers, whooping it up.

1964 State Republican Convention erupts with Evans signs. Washington State Library 1964 State Republican Convention erupts with Evans signs. Washington State Library.

On the road

"We did hundreds of hours of coffee hours," Dan says, "and having Nancy along was a huge asset to me." With a second child on the way they had invited her widowed mother to come over from Spokane and stay with them. Lilith Bell had said, "Well, OK, I will for just a couple of months." She lived with them for the next 20 years and enriched their lives enormously. With "Gom" as much more than a babysitter, Nancy could hit the campaign trail with enthusiasm, confident that the boys were in good hands.

Pin-Christensen

"We stormed out of (the convention) just really on a high," Dan says. In the next poll, Christensen was down to 42 percent and Evans was up to 29, leaving Gandy in the dust. Gandy's handlers made one last stab at cutting a deal before throwing in the towel. That made it a two-man race for the Republican nomination. Evans, ever the engineer, had been tracking his progress on a graph that he still has. Joel Pritchard kept saying, "Just watch - We're going to accelerate!" They calculated they were going to catch and pass Christensen around August 15th.

Dan Evans first election pin

No one knows for sure when it happened. In fact, with Pritchard a notable exception, Dan recalls everyone saying, "This is going to be a tight race. It's going to be right up to the end."

On Primary Election Day, Dan Evans crushed Christensen by 100,000 votes. Christensen, like Joe Gandy before him when the jig was up, conceded gracefully, pinning on a bright red Evans campaign button and declaring, "My task now is to join with this man and make him the next governor of this state…" The Rosellini camp, meantime, had tried to woo crossover votes in the primary with ads that said "Thinking Republicans CANNOT: 'Go with Goldwater,' 'Crusade with Christensen' … or 'Endure with Evans.' "

Over the next eight weeks, Joel Pritchard was the James Carville of the 1964 governor's race. They emphasized Evans' Eagle Scout image and characterized Rosellini as an old pol who'd had his turn. In Washington it was as if Dan Evans was the new frontier, with a platform dubbed a "Blueprint for Progress." "Let's get our state moving again," the Evans brochures and ads declared, promising "a new legislative program designed to end the drift and stagnation of the Rosellini administration."

The emerging Evans wing of the party - which would come to be called "Mainstream Republicans" - was taking care to not hitch its bandwagon to Goldwater's. To borrow a phrase from George W. Bush, the Arizona senator was "a divider, not a uniter." Goldwater had once wished out loud that he could just lob a nuclear missile "into the men's room of the Kremlin." The right-wing John Birch Society loved that line, and it was already suspicious of Dan Evans. With good reason. (In a famous speech to the Republican State Central Committee in the fall of 1965, Evans took stock of the GOP debacle he had managed to survive, declaring: "It is now time to discard hyphenated Republicanism. The Republican Party did not achieve greatness nor will it regain greatness by being the party of radicalism or of the lunatic fringe. Extremists of neither the Right nor the Left contribute to the strength of America or her political institutions. Both feed on fear, frustration, hate and hopelessness. … The John Birch Society and its frightened satellites … meet none of the tests and follow none of the traditions of the Republican Party.")

Always positive

Dan was the underdog but increasingly upbeat as the final two months evaporated in a blur of speeches, coffee hours and commercials. At mid-October the press reported that he was being outspent by more than 4 to 1. His expenditures since the primary were estimated at $100,000, while "ad agency observers" calculated that Rosellini had spent $450,000.

"He was always positive," Nancy says. "He was always very good at understanding what the numbers meant at that moment in time. So he wasn't often surprised about things." Pretty soon, "I had a feeling 'this may happen.' Then I think I began thinking, 'But what if it does? What will I do then? What's going to happen to us?'

"The one thing about that campaign that I loved was not just the people we met out in the communities; it was the people here in Seattle, our friends, and others who became really good, life-long friends. You could just feel they were working for Dan because they really wanted to be there. It was sort of like the Obama campaign: They really wanted to be a part of it. I'm not comparing Dan to Obama in any way, but this was really a mission that they were on - and they were having fun. And we had fun. It was so personal. We really were with the campaign workers a lot - and you just enjoy being together. …I have really good memories about that campaign."

Emmett Watson, the Seattle P-I's popular columnist, called Evans "a first-rate legislator … with a sincere abhorrence of political lunacy." Ross Cunningham of The Seattle Times said Dan represented "a combination of pragmatism and idealism," and The Raymond Herald & Advertiser, the leading paper in a solidly Democratic county, opined that "If anyone can restore harmony and respect between the executive and legislative branches of state government it is Evans."

Dan never wanted to be with a lot of people on election night - at least not before the ballots were all counted. "He wants to sit and watch that television and keep track of the numbers," Nancy says. "So conversation is not in there. And that has no exception. So my memory of Election Night 1964 is that we had a room at the Olympic Hotel with his family and my family, all the brothers and sisters and that sort of thing … And of course things were a little slower in counting the results in those days. But then when we knew he had won we went to the campaign office downtown."

Dan Evans had been elected Washington's 16th governor with 140,000 votes to spare. He was 39. Nancy was 31. They'd been married five years. The campaign headquarters was going bonkers. "I remember that Dan was talking with KING-TV up on the stage … And then the reporter had his microphone right in front of my mouth. But I couldn't hear his questions because it was so noisy. And I know I stood there looking like 'Duh.' I think I was actually in a bit of a daze. I just sort of went, 'What did you say?' … I felt so stupid standing up there. Then I was overwhelmed - in a good way."

Did she learn anything new about her husband by watching him on the campaign trail? - see him evolve? "Absolutely. … I really saw him grow with his understanding of issues in a broader sense. Being around the state so much more and talking to so many more people, getting different sides to every issue. I think he had a wonderful understanding of the major issues for our state, and he learned how to articulate them in front of people. …Environmentalism came very easily to Dan because of his old Boy Scout days," Nancy says. "Ever since he was a kid at Camp Parsons he had been hiking in the Olympics. To this day he takes a hike every summer in the Olympics or the Cascades. … But it was never defined in those days as the 'environment' and 'ecology,' and all those words that we are so accustomed to today. But when that whole movement came along, he was at the forefront because he felt so strongly about it."

She barely made it

Inauguration Day, January 13, 1965, dawned with Dan in Olympia, where the smoke was just clearing from a late-night battle over redistricting. Nancy was in Seattle, hustling the kids through their Cheerios and schlepping stuff into the station wagon. For a while the night before, the Republicans were threatening to swear in Dan at midnight to thwart any fast moves by the Democrats. Neither of them got much sleep. "I had to dismantle the crib that Mark slept in and put it in the trunk, and get everybody up and dressed and fed and ready to drive to Olympia to see Dan sworn in at noon."

Up and down the block, their neighbors had gathered to say goodbye. "It was wonderful. … So we say goodbye, and I'm putting my inaugural gown on top of everything, over the crib in the back. The boys are in the back seat." She glanced in the rear-view mirror as they headed up the hill and saw people waving their arms, yelling, jumping up and down. "The trunk door was open and everything is falling out, including my dress," which, fortunately, was in a plastic bag. Tire tracks on a ball gown would have been quite a fashion statement.

Nancy with Mark and Danny at the Governor's Mansion in 1965. Evans family album Nancy with Mark and Danny at the Governor's Mansion in 1965. Evans family album.

She stuffed everything back in and high-tailed it to Olympia, arriving about an hour before the ceremony. The Rosellinis had finished moving out just before she arrived. "I had arranged for some high school kids to be there at the mansion to help carry in suitcases and to do the crib." But they couldn't figure out how it went together, so Dan's father, another engineer, came to the rescue. "Then I had to get the kids something to eat! At least I was dressed. I had just worn whatever I was going to wear for the ceremony. But the kids, we had to get them dressed. Mark was just 16 months old, and we had to get him down for his nap, and then be over there at noon. Ah, it was amazing! But we made it."

In his inaugural address, the new governor declared, "We cannot be blind to the growing requirements of health and welfare. Nor can we be indifferent to the dangers of stifling competitive spirit. We cannot solve the problems of the present with the outworn dogmas of the past. We must be bold in charting our course, resolute in our determination, compassionate in our assessment of human needs, firm in our policies, just in our laws and efficient in our administration. … This administration is not frightened by the word 'liberal,' nor is it ashamed of the word 'conservative.' It does not believe that the words 'fiscal responsibility' are old fashioned, nor will it ever fear to spend money if money needs to be spent."

As usual, Nancy had read the speech in advance and felt it was both eloquent and "very timely," given the turbulent currents sweeping America. "I don't remember if I offered any suggestions. I sometimes did. But I was very proud of him and loved sitting in the audience and watching him deliver that speech, even though it was after a very long day."

In addition to multiple receptions, there had been a celebratory banquet before the Inaugural Ball. The governor and first lady came back to their new home to change into formal clothes. Mark was sound asleep, but 4-year-old Danny, still excited from the hubbub of the day, greeted them in his pajamas and bathrobe - together with a crew from KING-TV. Not realizing what she was getting into, Nancy had agreed weeks before to give KING's Chuck Herring an exclusive Inauguration Day interview. When the time came, however, she was feeling more like Lucy Arnaz than Jackie Kennedy. "I don't know why we ever even allowed it," Dan recalls, shaking his head at the memory of how hectic things were.

"So we're sitting in the living room being interviewed," Nancy says - she in her ball gown, Dan in his white tie and tails, with Danny between them, squirming with excitement at the prospect of being on TV. "Dan always remembers it so well because Chuck Herring said, 'And, Mrs. Evans, you are the youngest First Lady at 32.' And I say, 'I'm 31.' Dan always thought that was very funny." Then Herring said, "Can I have a tour?" And Nancy goes, "Sure Chuck, come with me!" Danny gleefully scampered ahead. "I'm trying to take his hand and be a mother. I can look back at it and smile, but at the time I was just thinking, 'Couldn't you just stand here and be a nice, quiet little boy for a few moments?' But, no, he was very excited in this new big house, with a new big playroom."

Dan says she pulled it off with aplomb. "She explained everything beautifully. 'Here is this silver service from the battlecruiser Olympia,' and all that sort of thing. After it was all over I said, 'Nancy, how did you know all of that stuff?' And she said, 'Well, I just listened when I'd come to receptions' " when he was in the Legislature. "When I look back on all that I think of what a miracle it really was. We had been married for about four years; we lived in a small little house in Laurelhurst. If we had more than six people for dinner you had to turn the table 90 degrees and move it out into the living room. And suddenly you're into a huge mansion with all of the formality and all of the people." Nancy clearly was up to the challenge. "She didn't miss a step."

The first couple did more hand-shaking than dancing at the Inaugural Ball. They were in a receiving line for more than three hours. Nancy's feet - and right hand - were aching. "There were so many people; we had so many friends, so many supporters. This was so exciting to them. I felt sorry for us, but worse for all those people who were getting pushed and shoved."

They returned to the mansion to find it packed with revelers. "So we finally went to bed at 4 in the morning - just exhausted because it had been a long day." Dan Evans left at 7 for his first day as governor. A bleary-eyed Nancy - who will tell you emphatically that she is not a morning person - was also up early to feed the boys, take an inventory of her new home and get ready for a new round of obligatory teas.

'Pretty, practical…"

Dan and Nancy try out the governor's chair for the first time. Washington State Archives Dan and Nancy try out the governor's chair for the first time. Washington State Archives.

In the beginning, the press invariably portrayed her as the little woman - a resourceful little woman, but the little woman nonetheless. She has "served as the flower in her husband's buttonhole at a score of important social functions," the AP noted. The Olympian's post-election headline on Nov. 11, 1964, was of the same genre: "State's New First Lady Pretty, Practical." But it did have the added advantage of being true. "The first is obvious," the story said. "The second was revealed when Nancy Evans said she hadn't made plans for moving to Olympia. 'We were so busy campaigning, and it seemed unnecessary to make plans we might never use,' she explained." But "Mrs. Daniel J. Evans has plenty of other attributes that helped her husband become the state's youngest governor … She has poise, a warm personality and an interest in politics."

Nancy at a Republican reception. Washington State Archives Nancy at a Republican reception.Washington State Archives.

With undertones of a write-up on a 4-H horse-judging competition, the story added that "she also had good feet and an excellent digestion. The feet, encased in needle-heeled shoes, traveled the long campaign trail beside those of her husband and she ate everything she was served. 'Well, sometimes I passed up the bread and potatoes at dinner,' she admitted, 'but I ate cookies and nuts at all those coffee hours. And I gained 15 pounds." She said she enjoyed campaigning because it took her to "every nook and cranny of this state," and although she "at first dreaded it," she quickly found it was fun, and everyone she met "was so friendly." The story concluded prophetically: "At 31, Nancy Evans may be the state's youngest first lady, but there will be few challenges she can't handle." As late as 1972 writers were still reducing her to a stereotype - the "pretty, pert wife who is the kind of mother very quick to wipe chocolate off the mouths of her three boys after an ice cream cone."

Settling in

Dan, Nancy, Danny, Mark and "Gom," together with enough animals to stock an ark, quickly discovered that their new 19-room home was old, with clanking radiators, a leaky roof and a mishmash of furniture, most of it pedestrian. The cold water faucets would often yield hot water, and vice versa. One bonus, Nancy quips, was that sometimes when you used the toilet you could "warm your bottom." On the other hand, if you plugged in a fan you could nearly electrocute Boots the cat.

The foyer of the Mansion in 1970. Washington State Archives The foyer of the Mansion in 1970. Washington State Archives.

Ethel Rosellini warned her that being the de facto CEO of the mansion wouldn't be all tea and roses. "Ethel told me about the night they were entertaining the crown prince of Norway or some such dignitary at a very big formal dinner party. It was being catered from Seattle, and when they plugged in the 50-cup coffee pots in the tiny kitchen the fuses blew and the lights went out." Oh, and another thing: There was one bathroom on the first floor. Nancy vividly recalls the day a busload of Seattle retirees pulled up in the driveway. "They all had to go to the bathroom - all 35 or 40 of them. I told them, 'There's one back there. That's it.' " Incredulous, they began to wander, looking for bathrooms. "These were elderly people. They had an urgent need. I understood that then and even

better now. And there was not a thing we could do."

One day, a 7-year-old from the neighborhood came over to play with Dan Jr. The boy's dad happened to be a carpet layer. The kid took note of the threadbare treads on the grand staircase. "Gee, Mrs. Evans, you need to get my father over here. Your carpets are really old!" To which Nancy replied, "You're absolutely right. I'd like to do that."

Mom leads a sing-a-long in 1967. Washington State Archives Mom leads a sing-a-long in 1967. Washington State Archives.

Every November, friends would come over to help address the thousands of Christmas cards the first family sent out. They'd set up tables in the ballroom and huddle around portable heaters. But the place was still so cold that they wore overcoats as they addressed envelopes with numb fingers.

Still, Dan says Nancy did "a spectacular job of making the wretchedly decrepit mansion look pretty good" for everyone from Cub Scouts to dignitaries - including Pearl Bailey, J.P. Patches and Victor Borge. Especially during holidays she worked her magic to make it a home that radiated warmth. The mansion was "filled with grandparents, sisters, brothers, cousins and what seemed like squadrons of young children," Dan says. They'd be tricycling down the halls; skidding across the polished ballroom floor in stocking feet; playing hide-and-seek and lining up shortest to tallest so dad could take the obligatory movies before the presents were opened. Then Nancy, the former music teacher, would play the piano to accompany Christmas carols.

"As I think back on those years," says Dan Jr., "what strikes me the most and maybe the greatest compliment I can pay to Mom is how 'normal' life was from my perspective. With three children of my own now, it is easier to relate my experiences to those of my parents. … It's truly amazing now to look back and recall how simple my life felt for how abnormal it could have been. My mom and dad both had a hand in that, but it was really my mother who made the mansion a home where three boys could and did feel right at home. We had birthday parties … had friends over to play, turned the Ballroom into an indoor basketball court, and the grand staircase was a great place to slide down the steps on sleds. I flew more than one model plane in flames from the second floor deck and played for hours in the woods behind the mansion."

Dan makes the cover of Time magazine. The Legacy Project Collection Dan makes the cover of Time magazine. The Legacy Project Collection.

Dad won a second term in 1968, after a turn on the national stage as keynoter for the Republican National Convention. Time magazine put the young governor on its cover, and Dan was in the running for a spot on the ticket with Nixon before - ever the contrarian - he endorsed Nelson Rockefeller. Many of his advisers were disappointed. Nancy was proud of him.

Their family had grown to three sons - Danny, 8, Mark, 5, and Bruce, 2. In addition to Peggy and Boots, there was a big tabby named Scamper, and kittens of course, plus bunnies, gerbils, grandmother's guppies and, at one time, a couple of turkeys who didn't last long, nor did one of the hapless gerbils, who got loose and provided a snack for the cats.

By the way, Nancy says the only people who ask her whether Bruce was born in the mansion are men. Women chortle at that naiveté, although if St. Peter Hospital had been located then where it is now - way across town - instead of just around the corner and up the hill, Bruce might have been history's second mansion baby. He arrived in a hurry.

The first - and to date only - mansion baby was Margaret Hay, born upstairs on Nov. 30, 1910. She was the sixth child of Gov. Marion Hay and his wife Lizzie. The Hays were the first first family to live in the new house. How it came to be built is a story that features another formidable first lady.

https://www.sos.wa.gov/legacy/stories/nancy-evans/page7.aspx

The 14,000-square-foot, red brick Georgian Revival house, though handsome, was constructed in a hurry at the wooded crest of Capitol Point in 1908 for the relatively munificent sum of $35,000. There'd been a severe national recession the year before, but the Northwest fared better than the rest of the country. This was the land of opportunity. Washington had been a state for only 19 years.

By the spring of 1908, Olympia was sprouting new buildings. The ballyhooed Alaska-Yukon-Pacific Exposition - Seattle's first world's fair— was set to open the next year. The whole state would be in the spotlight, and the governor would need a classy place to entertain visiting dignitaries, industrialists and investors. The cornerstone laying for "the mansion on the hill" drew a big crowd. Many local businesses had proclaimed a half-day holiday.

When work began on the grand new Capitol Campus in 1912, it was expected that the governor's "temporary" mansion would be torn down. The master plan

When work began on the grand new Capitol Campus in 1912, it was expected that the governor's "temporary" mansion would be torn down. The master plan envisioned the site being occupied by a twin to the neoclassical Insurance Building. But in the wake of never-ending debates over budget balancing and the priorities of government - some things never change - the mansion survived, which is not to say thrived.

The back of the Governor's Mansion in the 1950s. Washington State Archives The back of the Governor's Mansion in the 1950s. Washington State Archives.

Gov. Ernest Lister, a Democrat elected in 1912 in a photo-finish reminiscent of the Gregoire-Rossi election 92 years later, was so fed up with the state of the accommodations and the lack of privacy that he threatened to move out in 1913, actually did it in 1915 and lived intermittently in a downtown hotel again in 1917. Lister said the plumbing was bad, the wiring worse and the heating system a joke. The paltry budget the Legislature provided for maintenance and operations only ensured further decay, he added.

Lister had been in a running battle with the Republicans practically from Day One of his administration, hurling "denunciations right and left" as he delivered veto messages. When a contentious pork-barrel appropriations bill finally passed the House, the speaker dispatched the chief clerk and a senior member of the Roads Committee to deliver it to the governor. They ended up at the mansion just before midnight on March 7, 1913. "After repeated thunderous knocking on the front door, the two were confronted by Mrs. Lister, a determined lady with quick reflexes. When she opened the door," the clerk tossed the bill inside, "but like a skilled soccer player, the first lady drop-kicked it back across the porch" and the messengers fled into the night. The governor was livid, according to Gordon Newell, the capital city's leading historian. In his veto message the next day, Lister declared: "I want to say this right now - that if any gang of ruffians, hoodlums or window-tommies can go to the residence of the governor because it is a public building, any time of the day or night to compel him to be seen, I am ready to leave that residence and move to a private house where I can at least during the nights have a few hours of privacy that every public citizen is entitled to."

Adding insult to injury, the state auditor wanted to dock the governor $1,500 for overspending the Mansion Fund. In what became one of Nancy Evans' favorite quotes, Gov. Lister pronounced the mansion "a monument to the high cost of low bids." And some other things hadn't changed much either. Dan Evans says he never ceased to be amazed at Nancy's skill in managing the mansion "with the inadequate pittance the Legislature would appropriate for maintenance and operations."

"Out of place"

The Governor's Mansion had been targeted for removal as early as 1928, when some legislators argued that it was out of place on the new Capitol campus and the perfect site for a legislative office building, in keeping with one comprehensive plan.

A few blocks south, there's another mansion of note that plays a role in this story. Built in 1923 by pioneer Olympia banker and financier Clarence J. Lord, the beautiful stucco and tile house is the work of Olympia architect Joseph Wohleb. He created one of the city's grandest homes in the Spanish Colonial style then popular in California. In 1939, C.J. Lord's widow and daughter donated the mansion to the state. Legislation was passed accepting the mansion generally, but not necessarily, for a museum, and there was even speculation that it might be used as a governors' residence. The following year, the Olympia chapter of the Daughters of the Pioneers staged a rally that drew members from around the state. They demanded that the Legislature designate the Lord Mansion as the State Capitol Museum, and the lawmakers and governor threw in the towel. (Today, the Lord Mansion is the State Capital Museum and Outreach Center, part of the Washington State Historical Society.)

But there's another twist: In the early 1960s, it was suggested that the State Capitol Museum swap mansions with the state, giving the governor and his family a newer but better built mansion that boasted both historical and architectural significance. The notion was that by converting the Governor's Mansion into a museum, its proximity to the Capitol would attract thousands more visitors and finance a thorough renovation - a win-win. But nothing came of that.

A timely visitor

Evans family album Evans family album.

During the Rosellini administration, a bill was introduced to finance the long-planned legislative office building. That idea also went nowhere. The earthquake of 1965 raised structural concerns, and in 1966, a citizens' advisory committee recommended construction of a new mansion. A bond issue approved the previous year even included some funding. But Gov. Evans said he believed remodeling would be a "much sounder" plan and suggested that history-conscious citizens, organizations and businesses might donate funds or materials.

Nancy Evans was in full agreement, but she had her hands full doing the grocery shopping, preparing menus, arranging flowers, helping set tables, trying to find and, better yet, keep decent cooks for low wages. Her only other full-time helper was a housekeeper. Later, she had a part-time secretarial assistant. "I was extremely busy, what with the three children and all the things I had to oversee," Nancy recalls. "We had breakfast meetings, lunch meetings, dinner meetings, banquets, receptions and teas. I was just scurrying about, trying to keep up and thinking, 'What do I do tomorrow?!' "

That same year, 1966, Art McDonald, a popular KOMO-TV reporter, came to the door and asked to see the first lady. "In those days, you could come right to the front door of the Governor's Mansion," Nancy says. "I knew Art and he knew me, and we were chatting. Then he said, 'Well, I just wanted you to know that a member of the Capitol Committee (Lands Commissioner Bert Cole) has suggested that the mansion be torn down to make way for an office building,

because that was the original plan for the Capitol campus. Art said the idea was that 'a new modern, much more efficient mansion would be built somewhere else.' The Capitol Committee included the governor, the lieutenant governor and the commissioner of public lands. Without a moment's hesitation, I told Art, 'Absolutely not. We are a young state, and this is part of our history, and we need to retain it.'

There was no State Patrol guard post when the Evans moved in. Note the "Caution, Children at Play" sign to the right. Washington State Archives There was no State Patrol guard post when the Evans moved in. Note the "Caution, Children at Play" sign to the right. Washington State Archives.

"Art thanked me, excused himself and went right back over to the Capitol, where Dan was having a press conference. He said, 'Governor, I've just spoken to Mrs. Evans about the suggestion that the mansion be torn down. And she told me, 'Absolutely not. It's worth preserving.' What do you think?' And Dan said, 'That's what I think, too.' He's well trained!"

Dan, however, remembers waffling before getting his marching orders renewed. "Bert Cole was all in big favor of building a new mansion out on the point," he recalls, but Lieutenant Governor John Cherberg "wasn't sure quite what to do and neither was I. So it was kind of inconclusive that afternoon. After the (committee) meeting, we had a press conference and the press asked me my view. I said, 'Well, I don't know. Maybe a new mansion is OK.' I was kind of not willing to say too much about it because I didn't really know what the heck we ought to do. And I got home that night and the paper said, 'First Lady says, 'Save the mansion.' I asked Nancy, 'What the heck was all this about?' And she said, 'Well, I talked to a member of the press. They asked me and I told them.' … So I told her, 'Well, I guess that's our policy.' And then she was very good in saying why it needed to be saved, you know - 'It may not be old now but it will never be old if we (tear it down).' "

The governor emerged the next day fully girded for battle. Moreover, the cost of securing a site, constructing and furnishing a new mansion was estimated at upwards of a shocking $2 million. With Nancy taking the lead, the couple supported a "Save the Mansion" campaign launched by the Daughters of the Pioneers - good ladies to have on your side. They attracted a strong core of supporters.

https://www.sos.wa.gov/legacy/stories/nancy-evans/page8.aspx

Stop-gaps

The ballroom in the 1960s. Washington State Archives The ballroom in the 1960s. Washington State Archives.

After Dan won a second term, Nancy oversaw some repairs and renovations. But they were stop-gaps, literally and figuratively: The place was still cold in winter and stuffy in summer. Wind-whipped rain invariably led to leaks. One Christmas Day, as family and friends gathered to open presents, the governor was up on the rooftop trying to figure out why water was "just pouring into the ballroom." Further, the floorboards sagged; there was dry-rot in the porch and the wiring was a fright. The kitchen was too small for a family of six, let alone a place that entertained en masse.

"The mansion," Nancy told Sally Gene Mahoney of The Seattle Times on Inauguration Day 1969, "is an unhappy subject with me." The first lady lamented that when she called the caterer to make arrangements for a large pre-function, the woman "asked me if the kitchen had been fixed. When I told her it hadn't, she said, 'Oh no - your kitchen is the worst one I've ever worked in!' "

Privacy - or the lack of it - which sore-vexed Gov. Lister, was still a problem. The mansion was both a semi-public venue and a private residence, although the private part was sometimes lost on tourists in the era before a fence was installed, together with a State Patrol guardhouse at the foot of the winding driveway. Wearing shorts, Nancy turned the corner one summer's day to encounter a couple who thought they were in a museum. "When's the tour?" they inquired. She couldn't even leave the door open on a muggy day.

Dan's second inauguration in 1969. Mark had broken his leg while skiing. Looking on, at left, is Grandma "Gom" - Lilith Bell. Washington State Archives Dan's second inauguration in 1969. Mark had broken his leg while skiing. Looking on, at left, is Grandma "Gom" - Lilith Bell. Washington State Archives.

Still, the governor, first lady and grandma coped with it all and added touches that made the mansion a home. Dan, who had fond memories of what it was like to be an adventuresome little boy, loved woodworking. And he was, after all, a former civil engineer, so he built a tree house with his sons. "It was a beautiful tree house," Nancy says wistfully, "and it also turned out to be a very expensive tree house. There was an old maple tree outside the mansion that had an enormous trunk with a lovely fork about 10 feet up - just a logical place to put a tree house. Dan and the boys were out there every weekend for weeks building this thing. It had a trapdoor and a ladder. Mark, who was about 4 at the time, fell through the open trapdoor and cracked his head. And of course these things always happen on the weekend when the doctors aren't available. So we dashed, as usual, to the emergency room. Mark actually had some ensuing difficulties … and we had to go to Children's Hospital a few times. Happily, the difficulties went away with time. The boys spent a lot of time in that tree house. There were no small children in the mansion for several years after we left, and eventually the tree house was removed, but I was sorry to see it go."

As for the other emergency room trips, Mark broke his leg while skiing when he was 6, while Bruce suffered serious lacerations when he ran through a glass door when he was 3. He was playing "circus" with his brothers while visiting his Uncle Bill. A few months earlier, busy little Bruce locked himself in the

bathroom a few minutes before guests were set to arrive for a large dinner party at the mansion. Nancy says "Dan was out on the balcony checking windows to see if we could get in from there and I was frantically telling Bruce though the door, 'Turn the little button the other way like a good boy.' Just as the first guests rang the bell, he turned it and let himself out."

"My appreciation for my mother grows by the day as I drag my own kids through their childhood," says Bruce Evans. "They're 9, 6 and 4, the same number and similar spacing to my brothers and me. And to think she was doing all that while being thrust into the role of first lady at a young age. It's really remarkable to me."

"Are you coming back?

Having the mansion right across the street from his office meant that the governor could spend more time with his family, but he was still gone a lot. Nancy wrote an article about what it was like to be first lady and First Mommy. She said Dan always tried to have breakfast with his family. "Almost every morning" when he was about to leave for work, Mark would ask, "Are you going to the Capitol, Daddy?" When Dan said "Yes," he always knew the next question would be "Are you coming back, Daddy?" Nancy wrote that "it sounds a little fatalistic but I'm sure it must seem to Mark that his Daddy does not come back for many days, as often he does not return until long after the boys are in bed and sometimes, of course, he actually does not return for several days. And then I think, 'What a shame he can't spend more time with his father,' only to be caught short as I am preparing to go somewhere and Mark asks, 'Are you coming home, Mommy?' Don't tell me I'm gone that much, too!"

Mark Evans, who became the middle child with baby Bruce's arrival, had a knack for asking tough questions. Dan Jr., being oldest, dutifully took notes and pasted stuff in his scrapbook. When he was 10, he wrote an article for Jack and Jill magazine about what it was like to be the son of a governor. He said his folks assigned him and his brothers "certain jobs that have to be done regularly," noting that he had earned a five-speed bike by cleaning the garage and tetherball court and raising the flag. He liked Little League, Cub Scouts and playing with his brothers. Bruce, easy-going, funny and friendly, added spice to all their lives, Danny said. For instance, when the Apollo astronauts were poised to land on the Moon in the summer of 1969, his kid brother, then 3, was helping tend the family garden in the mansion's back yard. Bruce suddenly extracted a carrot, counted down - "Five-four-three-two-one-zero-blast off!"— then tossed it as high as he could.

Bruce balks at shaking hands with the vice-president. UPI, Washington State Archives Bruce balks at shaking hands with the vice-president. UPI, Washington State Archives.

In 1971, however, when Spiro Agnew visited the mansion, Bruce was uncharacteristically petulant. He refused to dress up and come downstairs with his brothers to meet the vice president of the United States. Nancy insisted, and the 4-year-old finally appeared in short pants and knee socks. With Mom bending over his shoulder, he shook hands with Agnew with downcast eyes, tears streaming down his face. Motorized Nikons whirred and newspapers all over the country published the photo. They say kids can sense things about people. Maybe Bruce knew the honored guest was a nattering nabob of hypocrisy. Agnew resigned in disgrace three years after their encounter, pleading no contest to a charge of income tax evasion. Bruce is now clerk for the U.S. Senate Appropriations Committee in Washington, D.C., and still gets teased about the photo.

As for teasing, Nancy recalls the time she was a substitute carrier on Mark's Olympian paper route and missed some porches. Mark, who was around 11, had a bad cold, or some such ailment, and mom sprang into action. Some customers had the effrontery to complain they'd been skipped or had soggy papers.

It seemed as if every day was a new adventure. One of Nancy's all-time favorite mansion moments came courtesy of a Cub Scout pack that arrived on Valentine's Day: "They walked in, presented me with a corsage, politely stood in line for their cookie, looked around, and, as they were leaving, each boy shook my hand like a gentleman and politely thanked me for a lovely time. But one little boy caught my heart when he pulled me down to him and said, 'The house is pretty, but I like your red dress better.' That was the nicest Valentine present I could have had."

"Gom" a Godsend

First Lady Bety Ford has tea with Dan, Nancy, two of the boys, and Grandma Lilith Bell, right. Evans family album First Lady Bety Ford has tea with Dan, Nancy, two of the boys, and Grandma Lilith Bell, right. Evans family album.

The nicest present the whole family ever had was grandma. Widowed when Nancy's father died in 1962, Mrs. Bell was persuaded to move into the mansion in 1965 to help Nancy settle in to her new role. But "Gom" quickly made friends in the community and enjoyed joining in the entertaining at the mansion, including having tea with Pat Nixon and Betty Ford. She became an expert on its history and could recite the provenance of its furnishings. She delighted in giving tours. Her presence was a Godsend for her daughter and the whole family. The boys adored her, and so did her son-in-law, who carefully listened to her advice, solicited or otherwise.

"Gom was the third pillar and a huge part of our childhood," says Bruce Evans. With grandma's help, "there was no feeling of absence on the part of either parent, and that's pretty remarkable given the responsibilities they had." His grandmother definitely "wasn't to be trifled with," Bruce says. "The only occasion when I had my mouth washed out with soap, around age 10, was when I said something I shouldn't have in her presence, and I'm pretty sure I never used that word around her again. … Her word was the word of God." After he ran through the plate glass window at his uncle's house, his grandmother urged him to stop crying and try to stay calm, "and I tried very hard because Gom wanted me to."

Dan and Nancy were rarely surprised by Lilith Bell's chutzpah. In the early 1970s, she often attended legislative sessions and hearings. Like many senior

Dan and Nancy were rarely surprised by Elith Bell's chutzpah. In the early 1970s, she often attended legislative sessions and hearings. Like many senior citizens, she needed a hearing aid, but found there were problems with the process and the product. "I learned what a sad need there was for standards," she told reporters. "My beauty operator had to have a license, but hearing aid salesmen did not. I began taking on legislators at cocktail parties at the mansion. When I went to the hearings, a lobbyist stopped me and said, 'Young lady, you're going to get arrested if you don't stop all that lobbying.' " Fat chance, Mrs. Bell said, but if it ever happened, she would "lobby against that, too. I believe in free speech!' "

"Dan didn't realize it at the time when he became governor," Nancy says, "but he quickly found out that there were several hundred commissions. There was the Mattress & Bedding Commission and there was a Hearing Aid Commission, so Dan said, 'Ah, I'll put Gom on that commission.' I thought he was really brave to put her on there. (But) I would run into people who were on the commission, and they said, 'Your mother is just a breath of fresh air. She comes in and tells it exactly like it is. And she tells the manufacturers what for.' "

Grandma's 80th birthday at the Mansion brought out all the Bells. Evans family album Grandma's 80th birthday at the Mansion brought out all the Bells. Evans family album.

The governor gleefully signed into law his mother-in-law's bill to regulate hearing aid sales. "She really was a dynamo on the commission because she was all for the consumer," he recalls. "She knew all the foibles and the problems and the difficulties and the costs. And so, boy, she really turned that commission upside down because she was fighting to get the cost down and the quality up. … She saw a need and acted. I thought it was just great. … 'Gom' was a wonderful help to us all and a steadying influence on the boys. She was always there. And a lot of times she was always there when we weren't. I don't know how we could have managed without her."

Nancy says, "Mother was a huge help and it really is what made it possible for me to not go crazy. And she was also very sensible. Any sensibility I have I learned from her. She was very practical, and when I wasn't around she tried to keep things orderly, as much as she could, with the kids. So she was a lifesaver." The touching thing, Nancy says proudly, is that when "Gom" got older, her three grandsons always took care of her.

Mrs. Bell's four children and a hundred friends and admirers gave her a surprise 80th birthday party at the mansion in 1972. She was going strong, eager as ever to try new things. "I cut off my long hair and went up in a blimp," she boasted.

That same year, her daughter acted on a plan they'd been mulling - a foundation to help preserve the Governor's Mansion "and stimulate interest" in the donation of antiques, artwork, table settings and historically relevant artifacts. One of the first lady's key goals was to establish and maintain some consistency in the style of the mansion's furnishings. Over the years, the Georgian Revival mansion had acquired a hodge-podge of drapes and furniture, much of it purchased out of pocket by former first ladies since the Legislature was perennially tight-fisted toward the mansion. In fact, when the Hays became the first tenants in 1908, Nancy says "the ladies of Olympia actually scurried around borrowing dishes and furniture" to help them set up housekeeping. Once unpacked, Governor Hay decided they would tap into the funds allocated by the Legislature for maintenance, operations and entertaining and issue a call for bids for enough furniture to furnish the place. He decreed that the bidding would be restricted to Washington state stores. The winner, with a bid of $15,000, was Frederick & Nelson, the pioneer Seattle department store. On the whole, given the tight budget, Lizzie Hay exhibited good taste. The stately grandfather clock on the staircase landing and the massive mahogany table, buffet and 18 chairs in the State Dining Room are among the survivors. However, "each family that moved in did things as money was allowed, and oftentimes not much money," Nancy says. "Every room was sort of different, except for the original furniture that was sort of late Victorian. There was no continuity to the décor."

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Founding a foundation

Dan and Nancy at a press conference around the time the Legislature finally appropriated money to remodel the mansion. Evans family album Dan and Nancy at a press conference around the time the Legislature finally appropriated money to remodel the mansion. Evans family album.

In 1972, architects were still sniffing that the mansion was "not architecturally wonderful and not historically ancient." Gov. Evans shot back that it was "a lot more ancient than a new one would be." Nancy redoubled her efforts to save it. "But I knew that even if we won, the state was not going to buy the furnishings appropriate for a place like this. That's when I came up with the idea of forming a foundation that would do it." She invited influential, history-minded citizens from around the state to join the cause. Forty-seven women and five men met with her at the mansion on May 30, 1972. The first lady already had two important players on board. Jean Jongeward, one of Seattle's most sought-after interior designers, agreed to donate her services, while, in a real coup, Laurene Gandy accepted Nancy's invitation to head the foundation. Mrs. Gandy was a much-admired civic activist, together with her late husband, who spearheaded Seattle's Century 21 world's fair. Its success made the Gandys the toast of the town. In 1964, you'll recall, Joe Gandy was an early GOP

candidate for governor before withdrawing and lending his support to Dan Evans.

"I was so delighted when Laurene said yes," Nancy recalls, "because she was a wonderful, widely respected person and had great interest and knowledge of antiques. And my timing was impeccable because she had just lost her husband. The mansion was a new and interesting project for her to take on. I'm sure, however, that she had no idea of the amount of effort it was going to take, but she chaired the foundation for its first five formative years and did a wonderful job."

The foundation, anxious to avoid social minefields, quickly established a three-person Acceptance Committee. That simultaneously took the onus off Nancy Evans and protected the integrity of Jean Jongeward's master plan, which called for the acquisition of furnishings circa 1780-1830 to complement the design of the house. "Everywhere I went," Nancy recalls, "somebody would say, 'Well, I have Aunt Sophie's tablecloth that would be just perfect.' " From Enumclaw to Ephrata, there were countless Aunt Sophies with a vase, a chest of drawers or an allegedly priceless rug.

The sitting room, circa 1970s. Washington State Archives The sitting room, circa 1970s. Washington State Archives.

"Laurene Gandy and I traveled around the state with what I called our dog and pony show, talking to people about the foundation," Nancy says. "We asked Marie Edwards, who had been the buyer for the Old World Shop at Frederick & Nelson, to help us. The shop sold antique furniture, lamps and dishes, and Marie was extremely knowledgeable. She chaired the Acceptance Committee, so it was very easy for me and anyone else involved with the foundation to be able to politely say, 'I'm sorry. We have this committee that accepts things. I will refer this to them.' It was a very good decision to sort of depoliticize acquisitions and draw on the judgment of experts."

Jongeward and Edwards, with bargain-hunting savvy to match their exquisite taste, made the rounds of East Coast antique shops. They were pleasantly surprised when they found some choice American antiques. "They thought it was going to be primarily British or English pieces, and maybe a few French pieces," Nancy says. "So that was very exciting."

The foundation had received some donations, but it was far from well-heeled, especially in the early going, and often relied on timing and the kindness of enlightened strangers. "For the fireplace mantel, Jean and Marie had bought two little pieces with crystal drops. They arrived with one of the crystals missing, so we called a big antique store in New York." While mulling that request, the appraiser asked, " 'By the way, are you a poor foundation?' We said, 'Very, very poor.' And they said, 'Well, a woman has just come in who's a customer of ours from Connecticut, and she has this demilune (crescent moon-shaped) server that she would like to donate. But she wants it to go to a poor foundation.' We qualified! It's the lovely mahogany and bird's-eye maple inlaid server that sits just off the entry hall." The piece, circa 1800, is attributed to John Seymour, considered the greatest post-Revolutionary War furniture designer and craftsman in Boston.

Working with the experts and mobilizing the committees was "a wonderful learning experience for me," Nancy says. "I learned so much."

Four more years

Danny dances with his mom at the 1973 Inaugural Ball. Evans family album Danny dances with his mom at the 1973 Inaugural Ball. Evans family album.

"The main reason I didn't want to leave here is that I didn't want to pack," Nancy quipped to reporters after Dan won his bare-knuckle 1972 rematch with Al Rosellini. At mid-October, the resurgent Democrat had a 13-point lead in the polls. Then, in one turning point in the race, he referred to his successor as "Danny Boy" during a debate. The faux pas struck many as both patronizing of the younger man and disrespectful to the governor's office. Nancy was in the audience that Saturday morning at North Seattle Community College and says she knew immediately that Rosellini had made "a big mistake."

The Mansion Foundation, meantime, was proving to be a big success. Fundraisers were taking place all over the state by all manner of groups and organizations, Republican and Democratic women's groups, Rotary and Zonta clubs, guilds and sororities. The Boeing Company and other firms would make donations in the years to come.

Nancy asked Dan to make a guest appearance for the foundation's second-annual meeting in 1973. He had good news: The Legislature had at last appropriated $600,000 for remodeling and structural renovation of the mansion. It was going to have a new lease on life.

Renovation work got under way in the spring of 1974, after the Evans family took up temporary residence in a Colonial Revival home known as the Egbert-Ingham House. Built in 1914, it was at Columbia and 14th on the site now occupied by the Visitors' Center at the north entrance to the Capitol Campus.

Unfortunately, to paraphrase the first lady's father, the contractors discovered Surprises Equinoxia - expensive ones. "When they opened it up, they found out the mansion's beams were not footed properly," Nancy says. "The gravity of the house was pressing down, keeping them in place. They also found a number of pint whiskey bottles, so it's easy to understand why the house was having problems."

Much of the interior had to be virtually gutted. The final tab was nearly $2 million, but the outcome left few dissenters. The tired old mansion was transformed into a house that had all the modern conveniences - whether for banquets or family breakfasts - without compromising its integrity as a public

treasure. There was new wiring, new plumbing, a modern heating and air-conditioning system and a commercial-sized kitchen. Another sorely-needed public bathroom was added on the main floor, together with a private dining room and a family living room that Nancy loves. "It is a peaceful, quiet, lovely room" brightened by soft natural light from a big Palladian window that she suggested to the architects. She first admired the design in grand old homes and palaces she and Dan visited when they bummed around Europe as newlyweds. There's a smaller version in the house they built in Seattle when they finally retired from politics.

Renovation finally gets under way in the Mansion. Washington State Archives Renovation finally gets under way in the Mansion. Washington State Archives.

To complete the project, two new guest rooms were added on the second floor. In all, some 4,000 square feet of living space was added on the south side of the original structure, bringing the total to 18,000 square feet.

Meantime, the Mansion Foundation had been raising funds and tracking down furnishings and artwork for the public rooms. Through pluck and luck, Nancy and the other volunteers turned out to be persuasive fundraisers and world-class scroungers. "They had teas, lunches and dinners, train rides and picnics - all sorts of events all over the state," Nancy says. "And amazing pieces kept turning up. … When we moved back in September of 1974, it was truly exciting. The transformation was remarkable." That October was dubbed "Mansion Month," with fundraisers in 35 communities. More than $45,000 was raised. Through purchases and donations, the foundation had secured furnishings then valued at a total of $350,000. Today, the mansion collection easily tops $1 million, and the work goes on. Some of the greatest furniture-makers in American history, including Duncan Phyfe, Joseph Barry and Samuel McIntire, are featured. A magnificent portrait of George Washington by Rembrandt Peale, the American master of neoclassical portraiture, is a recent acquisition. "It's one of the finest in the country," Nancy notes, explaining that the foundation owns all of the furnishings in the mansion's original public rooms, as well as artwork and antiques in other public and private areas.

"What had once been a shabby home was now a really beautiful and even more historic building - a wonderful place where the governors and their families can enjoy life and entertain with a great feeling of satisfaction, proud to invite people from around the state and around the world," the former first lady says.

"What if?"

In 1976, Dan Evans likely had a good chance to become the state's first four-term governor, but he decided 12 years was long enough. Nancy was relieved. She too was ready for something new. Meantime, Gerald Ford, who had succeeded the disgraced Nixon, was looking for a running mate. With his squeaky-clean image and progressive record, Evans was on his short list. The Evans family was vacationing at a remote Montana cabin when the Secret Service arrived for a chat. That upped the ante, and Nancy's emotions were mixed: Pride, some anxiety and a dash of excitement, although she never allowed herself to get hung up on things beyond her control.

A few weeks later, Dan was asked to be a Ford delegate-hunter at the Kansas City Convention, where the president was facing a stiff challenge from Ronald Reagan. Dan's competitive juices kicked in, and the Evans brain trust - including legendary political operative C. Montgomery "Gummie" Johnson, Chief of Staff Bill Jacobs and Joel Pritchard, now a congressman - was doing its best to boost their guy onto the ticket. Ford's son Jack was also making it clear that Dan was dad's favorite.

Shelby Scates, the Seattle P-I's political reporter, called Jacobs to see if he could confirm a rumor that Secret Service phone links had been installed in the governor's suite, which would have been clear evidence that Dan was among the finalists. Jacobs said that was news to him. He cupped the phone and asked the governor and Bill Lathrop, his security man, if they knew anything. Both said nope, and Scates hung up disappointed. Dan was now intrigued. He dispatched Lathrop to check out the story. When the State Patrolman returned empty handed, Jacobs said, "I've got an idea. I'll be back!" He went to a pay phone, called the Holiday Inn where they were staying and in his best "Dragnet" imitation pretended to be a member of Ford's Secret Service detail. He asked the assistant manager to confirm that the phone links had been installed. "Yes, sir," the man said. "They're there." Then Jacobs said, "You're the one I was talking to when I was there?" "Yes sir." "Well, would you go over with me just where they're located?" "Well, sir, you told me that no matter who called on the phone, even you, not to discuss this." "Very good!" said Jacobs "But they are in place?" "Yes, sir, they are." Now, that's what we call great staff work.

In the end, Ford picked Kansas Senator Bob Dole. Dan told Nancy, "I know I'd be a better candidate than he is." It wasn't sour grapes. They were both wary of Dole's sarcastic tongue. The GOP ticket went on to lose narrowly to Jimmy Carter and Walter Mondale. "That was the one time," Jacobs says, "when I felt that the VP choice made a difference - that Mondale ran a good campaign, Dole a bad one."

Would Dan have taken the spot if it had been offered? "Sure," says Nancy. "The vice-presidency … would have been a wonderful experience. Absolutely." And what about the presidency? If Nixon had picked Dan instead of Spiro Agnew in 1968, her husband could have ended up in the Oval Office. He certainly wouldn't have been involved in Watergate, and he might have won in his own right in 1976. Did she ever think about that - "What if"? Well, "Not much." And if she had become first lady, would she always try to remember she was really Nancy Bell from Spokane? "No other choice," says Nancy. "That's who I am. But it's a danger. It's easy to get absorbed in whatever life you're doing without remembering how you got there - why you are there.

"When Dan was in the Senate and we moved to D.C. … there were a lot of social things going on all the time. It's very formal there. Women dress up all the time. I had to buy new clothes. … And there's a lot of deference paid to elected officials back there, to senators particularly. You go to a lot of embassies and on and on and on and on. So you can quickly forget who you are and where you come from. … My oldest sister - my wise older sister Barbara - came back to visit one time and she could see all of this going on. She said, 'Don't let yourself get so involved and forget who you are and why you're here.' And I said, 'Well, I

visit one time and she could see all of this going on. She said, 'Don't let yourself get so involved and forget who you are and why you're here.' And I said, 'Well, I hope I don't.' She said, 'Well, I can see that it would be easy for you to get that way.' So I tried very hard not to. ... It's just so insidious that you're not even aware that it's happening to you. You just expect, 'Of course I can do that. I can do whatever I want because my husband is a U.S. Senator.' So I was often surprised at some of the senators' wives who were there for a long time - some are still there - and what services they expected to have provided for them in the Capitol, for instance. And they were not the senators."

Packing up

In January of 1977, when it came time to leave the Governor's Mansion, Nancy and Dan sorted through their scrapbooks, packed with the flotsam of the past 12 years - name tags from trade missions, menus, birthday cards, telegrams and notes from famous people, including Nixon, who with typical duplicity assured Dan, "Your friendship means a great deal." And from not-so-famous people thanking Dan for his stewardship of the state. "Whenever I am tempted to dismiss all politicians as crooks," a Seattle woman wrote, "you restore my faith in the system." Page after page of snapshots of the family skiing, hiking, swimming; a series of Polaroids of Dan shaving off his much-debated beard in silly stages - Fu Manchu, Pecos Bill, Hitler. So many memories. And just when the place was fixed up, it was time to leave.

Dan and Nancy's 1972 Christmas card. Grandma "Gom" thought it looked bad that the boy's jeans were patched. But Nancy said it showed they were real boys. The Legacy Project collection Dan and Nancy's 1972 Christmas card. Grandma "Gom" thought it looked bad that the boy's jeans were patched. But Nancy said it showed they were real boys. The Legacy Project collection.

"It's like having a baby," Nancy says. "You nurture a child and you raise it, and then you send it out into the world with no idea of what they're going to do. So when we left the Governor's Mansion we had deeply mixed emotions. It had been our home for 12 happy years - Dan, the three boys, my mother and all those pets."

Dr. Ned Brockenbrough and the First Lady prepare to plant the "Nancy Evans Rhododendron." Evans family album Dr. Ned Brockenbrough and the First Lady prepare to plant the "Nancy Evans Rhododendron." Evans family album.

People kept asking her, "Won't you be glad to get back to Seattle?" "And I said, 'Well, we're really happy where we are. We've really enjoyed Olympia. People think Olympia is terribly remote and provincial... But there's an ease of life here that I don't think you find in a larger city. There are things happening here and it's going to be very hard to leave Olympia." Nancy Evans' work in promoting cultural events during her years as first lady played a key role in making the capital a livelier city.

Often unmentioned is the fact Dan Evans prided himself on having a close-knit administration and he expected all of the key players - aides and departmental directors - to live in Olympia. "They became part of the community," says Jacobs, "and Nancy took an active role in the directors' wives club, which got together regularly at the mansion and did things under her leadership."

Since so many things bloom under Nancy's touch, friends and admirers gave her a unique going-away present: a new hybrid rhododendron, named in her honor. The rhodie, after all, is Washington's state flower. The Nancy Evans Rhododendron has orange-red buds that open to gorgeous amber yellow flowers in early May. It was created by Dr. Ned Brockenbrough, a Seattle surgeon who in the 1960s got hooked on the art and science of cross-breeding rhodies.

What next?

Dan was entertaining job offers, but most would have forced them to leave the Northwest. "My general response," the governor said in the summer of 1976, "has been 'Call me when you move your headquarters to Seattle.' " He added that a college or university presidency would be very appealing.

When Dixy Lee Ray moved into the mansion, Dan and Nancy treated the kids and Grandma to a vacation in Europe. When they returned it was to Olympia. Dan became the second president of The Evergreen State College, a job where he would need all of his political and diplomatic skills to ensure the survival of the controversial liberal arts school. Governor Ray and conservative lawmakers viewed Evergreen as an enclave of lefty professors and hippie kids with shaggy dogs.

The family moved into the president's home on Budd Inlet. It was nothing like a mansion, which was a relief in many ways, and it featured a spectacular view.

Nancy had a strong liberal arts background and real-world experience as an overseer at Whitman. She was in the trenches with her husband, lobbying to improve Evergreen's image and protect its funding. Dan Jr. was in high school, Mark in junior high and Bruce a fifth grader, so she was a busy mom, still active in cultural and philanthropic affairs - and disturbed by reports that Dixy Lee Ray's beloved poodle, Jacques, was peeing all over the mansion.

Dan burnished his image with the students and faculty when he took up famed mountain climber Willi Unsoeld's challenge to rappel down the clock tower on campus. They were happy years for Dan and Nancy, and they shored up Evergreen's reputation.

The Evans family on the deck at the home of the president of The Evergreen State College. Evans family album The Evans family on the deck at the home of the president of The Evergreen State College. Evans family album.

Soon, the oldest Evans boys had driver's licenses, which meant Nancy wasn't logging as many miles as taxi driver. She gave them the room to make mistakes, but kept an eye on everything. Mark says his parents "were admirably restrained," but had different styles. "Mom was the disciplinarian in some ways but never in a heavy handed fashion," he says, offering this cautionary true tale: "When I was in High School, some friends and I borrowed my parents' Volvo station wagon to go to a basketball game. On the way home, the normal road we would have turned onto was blocked off due to flooding. One of my friends suggested it would be great to drive through the water and throw up a huge spray. Being the responsible middle child, I of course demurred - for 20 seconds. I hit the gas, and boy did we ever throw a huge spray from either side of the car. Then a big spray came over the hood and the car stopped." After a moment of stunned silence, one of his friends opened a door. Water surged in, and the friend belatedly said, "Don't open the doors!" Mark rolled down a window, jumped out and landed in waist deep water. The boys finally managed to push the car back onto dry pavement.

"When I got home later that evening after wringing out the car at a friend's house, I heard my father's voice asking me to come into their room. They were both in bed. Dad looked like he had been doing the crossword with the TV on in the background, while Mom had fallen asleep. Dad lectured me briefly on staying out too late, then asked me to turn off the TV. I had been standing in the shadows because my pants were wet. Now I had to cross the room and hope he wouldn't notice. I strode over to the TV, turned it off and started to leave the room, thinking to myself, 'Thank goodness, he didn't notice anything.' But as I was leaving the room, Mom, whose eyes had never opened - or so I thought - said, 'Why are your pants wet?' That story to me captures my Mom. Even when you don't think she's looking, she's got her eyes out for her boys."

Scoop's successor

In 1983, U.S. Senator Henry M. "Scoop" Jackson died unexpectedly of a heart attack. Dan Jr. was about to graduate from Whitman, while his brothers were headed East - Mark to Williams College and Bruce to Yale. In fact, Dan and Nancy had just dropped off Bruce at SeaTac. It was a gorgeous late August afternoon. "The Evergreen president's house had a deck out in back overlooking the bay and Mt. Rainier. We were having a drink, sitting out there just talking," Nancy recalls. "And I remember I said, 'You know, now that the boys are gone … are we still going to like each other?' And Dan said, 'Well, of course.' And I said, 'I don't know, it just seems strange. What are we going to do?' It was this deep discussion. … Finally I said, 'Well, I've got to go fix dinner.' And Dan says, 'Why?' And I laughed and said, 'Well, I don't know!' So I think I sat back down and we had another drink. We went to bed and at about 11 or midnight, Dan's brother Roger called. He said, 'Have you heard the news?' Scoop Jackson had died. We had not heard the news, and the next morning, right after these two boys had gone off to school and we had talked about 'What do we do now?' the phone started ringing. The timing of everything was incredible."

Over the years, Dan had weighed running for the Senate. "We thought Maggie and Scoop were going to be there forever so why think about it?" Nancy recalls. Besides, "he just liked being governor" and being president of the college had turned out to be interesting as well. "He just didn't think that was something he wanted to do."

Over the next several days, they mulled. Dan talked with Senator Slade Gorton, his old comrade. Gorton encouraged him to seek the appointment. Secretary of State Ralph Munro, a trusted friend and former aide, prodded him to call Governor John Spellman, who would get to fill the vacancy. Dan decided "the polite thing to do" would be to talk it over with Spellman, but he was a conflicted candidate. Just before he left for the meeting with the governor, Nancy recalls, "he was walking down the hall shaking his head."

"I said, 'I'm going to tell the governor 'No.' I just don't want to do this,' " Dan recalls. "And she said, 'Look, you do what you want to do, and I'll be there. It'll be great. Whatever you do is fine.' "

On the ride from Cooper Point to the Governor's Mansion, he changed his mind. All over the radio was the news of a Korean airliner being shot down when it strayed into prohibited Soviet Union airspace. All 269 people aboard perished. It was perhaps the most dangerous moment since the Cuban Missile Crisis. "Good God," Dan said to himself, "how can you not want to really get involved in resolving (things like that)? With this many problems and the challenges that we're facing you can't just back away from that." He and the governor had breakfast in the new private dining room the Spellmans were enjoying, thanks to Nancy. "I told the governor, 'You do whatever you want and I'll be very happy. But, if you think that I'm the right appointment, I'd be proud to serve.' " Spellman said he was proud to appoint Daniel J. Evans to the United States Senate.

"It was a very hard time," Nancy says. "One of the hardest times in our lives …because then he had to run for election in two months" (if he wanted to serve out the last five years of Jackson's Senate term.)

Nancy and the boys attended the swearing in, then Nancy returned alone. "Dan had to fly back there every week to learn how to be a senator. Fly home on the weekends, organize and put together a campaign, raise money. … campaign out here and then go back and do his work back there."

Pressed into service was their trusted friend Bill Jacobs, who was in D.C. on a special assignment with the U.S. Department of Labor.

Dan defeated Seattle Congressman Mike Lowry, who went on to become governor and a partner with Evans in a coalition to protect forests and wildlife. While some might conclude they're the strangest of political bedfellows - the voluble liberal Democrat and the cerebral Republican engineer— their friendship is another example of Evans' bridge-building style. It's Nancy's style, too, and she says of Lowry "He's a love - he really is."

A frustrating job

U.S. Senator Dan Evans with his family at the National Capitol in the 1980s. Evans family album U.S. Senator Dan Evans with his family at the National Capitol in the 1980s. Evans family album.

Slade Gorton, Dan's old comrade from their days in the state Legislature, loved the Senate, but Evans was frustrated from the beginning. Dan's staff was "wonderful," Nancy says, thanks in large part to Jacobs' skill as a recruiter and organizer. But seniority - or the lack of same - permeated practically everything in the Senate.

Things were better when Nancy finally found them a tiny but charming old house not far from the Hill. Dan also landed a spot on the Foreign Relations Committee, so they met dozens of visiting dignitaries, and took a number of trips together. Jordan is the most memorable. Before King Hussein arrived for a luncheon, Nancy demonstrated her diplomatic skills and big sister wisdom. Dan's assistant, a young woman named Chris Dawson, was told she had to remain with the women while the men discussed serious issues. "She was a bright, independent, single lady and furious," Nancy recalls. "She almost turned red right there. … I could see that Chris was about ready to say something, so I went over, and I think I whispered, 'Just come quietly with me.' We went to this tiny room off the entry and sat there with these Jordanian ladies. They were very nice, but we had nothing in common because all they wanted to talk about was their trips to London and Paris, and shopping. Chris was sitting there seething. And I was sitting there trying to look interested."

Dan was impressed by the way Nancy defused the situation: "Boy, she caught it so early that I don't think anybody else even ever knew. … Nancy just nipped that one right in the bud. We had a more official meeting afterwards, which Chris was part of. So it all worked out. … And then of course during the lunch I could hardly get a word in edgewise with the king because he was talking with Nancy the whole time."

Two Nancys: First Lady Nancy Reagan poses with Nancy Evans at a Congressional wives luncheon in 1986. Nancy Evans felt silly wearing her Red Cross volunteer's apron, while the First Lady was dressed to the nines. Evans family album Two Nancys: First Lady Nancy Reagan poses with Nancy Evans at a Congressional wives luncheon in 1986. Nancy Evans felt silly wearing her Red Cross volunteer's apron, while the First Lady was dressed to the nines. Evans family album.

With her deft touch and lively sense of humor, Jacobs says Nancy played a key role in keeping Dan's Senate staff revved up. They put in some long hours, but the boss's wife was a familiar face, whether for work or play. "One of the things that brought us together," the chief of staff says, "was that we played together, too, and Nancy played with us." When there was a pizza party at someone's apartment, she'd just as soon be there as at some swanky reception on the Hill.

By 1987, however, Dan had had enough of the other Washington. They were coming home. "I've lived through five years of bickering and protracted paralysis. Five years is enough," he said. "I just can't face another six years of frustrating gridlock."

Senator Strom Thurmond, the living fossil from South Carolina, once asked Nancy, "Well, Mrs. Evans, does Dan prefer being a governor or does he prefer being a senator?" Nancy replied that Dan preferred being a governor "because of the ability to set the agenda and organize things a bit more the way you would like to have them." Thurmond patted her on the behind and said, "Yeah, but the Senate is where the power is!" True enough, if you'd been around since the Eisenhower administration. Jacobs offers this perspective: "I think it's important for people to understand that Dan and Nancy valued that experience in Washington, D.C., and they both worked hard at it. All governors who wind up in the U.S. Senate are frustrated at first because they don't have the executive power they did. But the main reason he decided to not stay in the Senate is that if he ran for re-election and got elected, in essence that would be where he was spending the rest of his life."

Exactly, says Nancy. Dan did hate the inertia in the Senate, "but it wasn't just that." They were both getting older. They enjoyed the museums, monuments and battlefields, met many fascinating people, but it never felt like home. They yearned for the trees, the mountains, Puget Sound on a spring day with wind in the sails.

But first they spent a stimulating semester at Harvard, where Dan was a visiting fellow in the Kennedy Institute of Government. Nancy audited classes to her heart's content, including one devoted to Beethoven, another on art history and yet another on Southern female authors. "Dan would go off to his classes, and I would put on my boots, my wool coat, my scarf, my gloves and my hat. I'd pick up my books and off I would trudge - a college student all over

classes, and I would put on my boots, my wool coat, my scarf, my gloves and my hat. I'd pick up my books and off I would trudge - a college student all over again. It was fun!"

"Retired"?

Settling in back home, they built a dream house not far from the park bench where Dan proposed. You would be hard pressed to find two busier, ostensibly retired people. She became a trustee at Whitman, he a regent at the UW. She found herself knee deep all over again in the Seattle Symphony Board, plus KCTS and the Friends of Cancer Lifeline. She was surprised and deeply honored when the Nancy Bell Evans Center on Nonprofits & Philanthropy was established in 2004 as an adjunct to the Daniel J. Evans School of Public Affairs at the UW. One of the lessons of her Depression-era childhood was that "even if you didn't have much money, you could still donate your time and in any case you had an obligation to care." The Northwest Parkinson's Foundation at Evergreen Hospital at Kirkland is also close to their hearts because family members and friends have fought the incurable neurological disease.

As for cancer, it's one thing to battle it yourself, Nancy says, and quite another to see a precious grandchild desperately ill. Eloise Evans - the daughter of Dan Jr. and his wife Celia - began her harrowing bout with rhabdomyosarcoma two months before her fourth birthday. It is a cautionary tale with a happy ending. Eloise is 14 now and a competitive swimmer, her grandmother notes with pride, thanks to Seattle's Children's Hospital and a world-class oncologist named Doug Hawkins. At first, doctors thought it might be an ear infection, then tonsillitis. Nancy's daughter-in-law instinctively knew it was something more serious, so she scooped up her child and took her to the ER at Children's. "They found a mass the size of a tennis ball under her brain," Nancy recalls, still shaking her head at the close call. It was inoperable. Thirteen rounds of chemo and six weeks of radiation saved Eloise's life. Grandma and Grandpa were there every inch of the way, together with a platoon of Dan and Celia's friends, who cooked and delivered meals and offered unwavering support. Eloise's two siblings frequently lived with Dan and Nancy while their parents took turns sleeping in her hospital room. Sometimes Eloise asked her grandpa to spend the night with her at the hospital - "a rare honor" and privilege, Nancy says.

"The tumor was so fast growing. If it had slid for even a few weeks, who knows what would have happened?" Nancy says, "So I give full credit to Celia for not waiting. The thing I so often tell young mothers is, 'Listen to your children. Don't necessarily listen to the doctors because you know your child better than anybody. Follow through on your instincts.'"

The Foundation

Nancy has, of course, kept up with the Governor's Mansion Foundation. Even though the foundation had been carefully established as the legal guardian of the mansion's public rooms and furnishings, Nancy says she once worried that problems might crop up in the years to come - personality clashes between the board and first families or dust-ups with the Legislature over appropriations for maintenance. She wondered whether her successors would chafe at the restrictions and want to change things to suit their own individual styles. Over the years, in fact, she says she has made pro forma apologies to most of her successors, including Mike Gregoire, the state's first "first gentleman," for tying their hands. "When we set up the foundation, we stipulated that the governor's wife cannot do any of the decorating in the public rooms, so that the master plan would be kept intact. But they've all been very kind and said, 'We were all very happy not to have that responsibility.' It's been quite wonderful, the way they've all gotten along together."

That succeeding first families, the foundation and the state have happily coexisted as caretakers of a public trust is testimony to Nancy Evans' deft ability to bring people together to achieve good things - and have fun doing it. Like a proud parent, she is endlessly delighted with the work of the foundation. "They've continued to do a marvelous job."

Shelley Carr, the president of the foundation, says Nancy "is one very gracious, genuine, amazing woman. She has the ability to make one feel so at ease - like a loving aunt. I remember calling her a few months ago with a last-minute request for photos for a book on the families who had lived in the Governor's Mansion. She was packing to leave town for a few months, but she interrupted what she was doing, went to Dan's office, selected a number of delightful photos and made sure they were promptly mailed to me. That's going way beyond the call.

"Not only do we have Nancy to thank for saving the Governor's Mansion from demolition, the idea of setting up a foundation for the maintenance of the public rooms was ingenious. Here she was a young mother with a zillion things to attend to, and she researches how best to set up the foundation for the preservation of this oldest building on the capital campus. We are so lucky she was our First Lady. And, she's still a great supporter," Carr says.

Dan Evans Jr. says the work his mother did to preserve "such an important icon for all Washingtonians was a remarkable feat. … She worked tirelessly to rebuild and redecorate, and the result is stunning. I am sure there are many visitors to the mansion today who just assume that it always looked so beautiful."

https://www.sos.wa.gov/legacy/stories/nancy-evans/page11.aspx

2020-08-sos-wa-gov-legacy-stories-nancy-evans-part-11.jpg

Best friends

Nancy in 2009 with a memento from the 1972 campaign when Al Rosellini called her husband "Danny Boy." John C. Hughes for The Legacy Project Nancy in 2009 with a memento from the 1972 campaign when Al Rosellini called her husband "Danny Boy." John C. Hughes for The Legacy Project.

Bill Jacobs, who met Nancy during Dan's first campaign for governor, says he realized early on that although she was only 31, she was a remarkable blend of charm and intelligence. They became good friends, especially when they ended up a long way from home in D.C. When Dan was busy with a hearing or other Senate duties, they'd go to dinner or the movies, and "sometimes I would escort her to an important function. I was always flattered to do that. I would say to Dan, 'Well we've spent most of the weekend together,' and he would go 'Really?' (almost yawning) as if to say, 'I'm not worried.' Which, kidding aside, is another insight into the trust these people had, one with the other.

"I can't imagine how difficult it must be for an elected official not to have the support and camaraderie and the wisdom of their spouse. But Dan was especially blessed. Jim Dolliver used to say that Dan's best friend - besides being his wife - was Nancy. They had great rapport and great understanding, but they would argue a lot, too. So it wasn't all harmony. That's just the way they related sometimes. They could tell one another the truth about how they felt," the former chief of staff adds.

"I also remember Jim saying early on that a governor has three responsibilities: You're the chief executive of the state; you're the First Family and you're the leader of your party. Nancy played a significant role in all three of those responsibilities. She traveled with him; they talked together; she gave advice - good advice," political and otherwise. Jacobs adds that Nancy also deserves credit for helping Dan energize the progressive wing of the Republican Party in Washington State. "They kept it a moderate party," he says. "It's no wonder the conservatives were angry with them because (they were so effective). Having said that, they're both much more loyal Republicans than the Republican Party gives them credit for. … As a team, I have never seen anything in political life like the two of them."

He says it has occurred to him lately that Nancy Evans and Hillary Clinton have several things in common, notably that they are both exceptionally smart and never hesitated to offer advice to their spouses. (Dan Evans, one could argue, was a way better listener than Bill Clinton.) Jacobs believes that "Nancy could have had her own political career, had she chosen to, because she had the ability and the popularity."

Most of all, Evans' former chief of staff adds, "They both took that role of being 'first citizen' very seriously. They knew people were looking to them - that people judged them… And they led exemplary lives as role models. Both of them are comfortable in their own skin. They know who they are - always have - and that says a lot about what kind of people they are."

Counting blessings

The Evans family, including sons, daughters-in-law and grandkids, gather at Sun Valley to celebrate Dan's 80th birthday in 2005. Evans family album The Evans family, including sons, daughters-in-law and grandkids, gather at Sun Valley to celebrate Dan's 80th birthday in 2005. Evans family album.

In a 1974 interview, the Associated Press asked Nancy to assess her "public image." After a long pause, she replied, "I'm not sure I have one. I'm probably seen as a shadow of my husband, I'm sorry to say. I don't like to be. I looked at a press release the other day that said, 'Nancy Evans, wife of Gov. Dan Evans,' and thought, 'Gee, why did they have to say 'wife of Gov. Dan Evans'? all the while knowing why they have to."

That doesn't happen much any more.

The Evans boys are happily married, have good jobs and three children apiece, which adds up to nine grandchildren to dote on - although most of them are farther away than they'd like. Dan keeps working on his autobiography, but Nancy and their friends think it's taking way too long. He admits that every time he uncovers an interesting old news story or editorial about the Evans era, he gets so fascinated that he forgets he's supposed to be writing. As an author, he really is "Old Gluefoot."

They count their blessings. They're enjoying good health and lots of stimulating activities. They're still very much in love. To observe their 50th anniversary, they recreated their trip to Carmel - without the big-finned Plymouth, but with a corkscrew, to be sure. Looking back at an eventful life, Nancy says she dearly loved her father, but it was mother who knew best when she said, "You can do whatever you want to do; you just have to be ready to do it, and say yes."

John C. Hughes, The Legacy Project, 2009

Key sources

HistoryLink.org, the indispensable encyclopedia of Northwest history, features an excellent 2004 essay on Dan and Nancy Evans by Cassandra Tate.

The Washington Governor's Mansion Foundation Web site offers a comprehensive history of the mansion and the foundation, as well as a photo gallery, tour information, newsletters and information on how to make a donation.

The 2009 Whitman College Alumni award

Miriam L. Bausch of Olympia, a tireless member of the Mansion Foundation, conducted an important interview with Nancy Evans on July 15, 2008, in connection with the mansion's centennial, with transcription by Teresa Bergen.

For a short biography of Nancy Evans and many other first ladies of the State of Washington, plus an historical overview of the mansion, read "First Families" by Mary Lou Hanify. Kendall/Hunt Publishing Co., 1988, ISBN 0840345968

For an entertaining, irreverent history of Washington's capital city and 120 years of state politics, see "Rogues, Buffoons & Statesmen" by Gordon Newell, Superior Publishing Co., Seattle, 1975, ISBN 0-87564-106-7

For more on the colorful career of Speaker John L. O'Brien, who was ousted by the Evans forces in 1963, see Daniel Jack Chasan's "Speaker of the House," University of Washington Press, 1990, ISBN 0-295-96848-6.

For more on the history of the mansion, see "The Governor's Mansion Centennial," by Gerry L. Alexander, chief justice of the Washington Supreme Court, in the winter 2008-09 issue of Columbia, the magazine of Northwest history.

The interior designer who helped Nancy transform the mansion died in 2000 at the age of 83. The Seattle Times said, "Jean Jongeward, the elegant designer whom clients and colleagues called 'Seattle's queen of design,' built a national reputation for originality, patronage of local artists and decades of influence in Northwest homes and businesses. Largely self-taught, with a background in accessorizing model rooms for the old Frederick & Nelson store, she worked with top regional architects and helped establish the Northwest style."

"Voices of the Mansion," which includes oral histories on the history of the Governor's Mansion, was published by the Governor's Mansion Foundation, with a grant from the Women's History Consortium, $10, available at the mansion on tour days.

"A Public Mansion, A Private Home," partially funded by the Colonial Dames of Washington, $10, also available at the mansion on tour days.

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Housatonic

Marvin Davis Evans (born 1925)

EVIDENCE from TWEETS (public and DMs)

Tweet (Aug 27, 2020) - [HT0091][GDrive]

Scout · Thu 9:05 PM - "Evans father was a Unitarian minister and marine"

TMLittle - "Reverend Marvin Evans"

[HT0092][GDrive]

Tweet (Aug 27, 2020) - [HT0093][GDrive]

Kent Hood Evans

Birthplace: Richmond, Virginia

Death Date: 28 May 1972

Death Place: Mount Shuksan

Relatives

Mother:Mrs Marvin D Evans

Brother:David Evans

no mention of his father

source: https://familysearch.org/ark:/61903/1:1:Q5QX-4W87

Julie Smith · Thu 9:22 PM

TMLittle

Secretary for Washington's Death with Dignity initiative

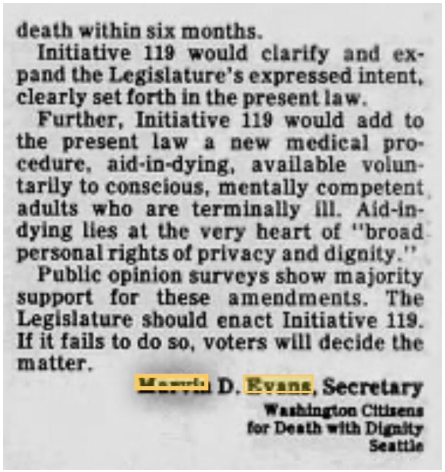
TMLittle · Thu 9:28 PM

Julie Smith

Rev. Marvin Davis Evans died on January 9th, 2016 at the age of 90.

He is predeceased by his spouse, Mary Hood Evans; and his son, Kent Hood Evans. He is survived by his son David M. Evans, and his daughter-in-law Alexis Johanson

LINK - https://www.uuma.org/blogpost/569858/237480/In-Memory-of----Marvin-D-Evans-1925-2016



death within six months.

Initiative 119 would clarify and expand the Legislature's expressed intent, clearly set forth in the present law.

Further, Initiative 119 would add to the present law a new medical procedure, aid-in-dying, available voluntarily to conscious, mentally competent adults who are terminally ill. Aid-in-dying lies at the very heart of "broad personal rights of privacy and dignity."

Public opinion surveys show majority support for these amendments. The Legislature should enact Initiative 119. If it fails to do so, voters will decide the matter.

Marvin D. Evans, Secretary
Washington Citizens
for Death with Dignity
Seattle

[HT0094][GDrive]

Tweet (Aug 27, 2020) - [HT0095][GDrive]

TMLittle · "Lol screenshots from weeks ago a bit wonky "

Mary Hood EVANS January 2, 1926 - September 30, 2004 Mary Hood Evans, wife of the Rev. Marvin D. Evans passed away on September 30, 2004 after a long illness. She was born in Richmond, VA, the daughter of Kent W. Hood and Annie Collins Hood. A graduate of Thomas Jefferson High School, she earned a B.A. degree from Duke University and, later, an M.S.W. from the New York School of Social Work. After graduation from Duke she returned to Richmond and worked for the Children's Aid Society. On August 8, 1953, she married Marvin D. Evans and they had two children: Kent Hood Evans (1955 - 1972) and David Marvin Evans (Alexis Johanson) of Keyport, WA. While in Richmond she was active in many organizations including Ginter Park Presbyterian Church, the League of Woman Voters, the Richmond Committee to Save the Public Schools and the First Unitarian Church. Following her husband's ordination as a Unitarian Universalist minister in 1963, the family moved to Victoria, British

[HT0096][GDrive]

Columbia, Canada, and then to Seattle in 1967. Residing in Seattle for more then thirty-five years, Mary was active in religious, civic, political and social service organizations. She served on various boards and committees, always with a deep and abiding commitment to the inherent worth and dignity of every person and justice, equity and compassion in

[HT0097][GDrive]

Tweet (Aug 27, 2020) - [HT0098][GDrive]

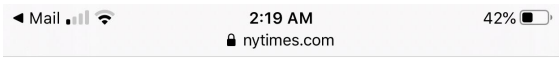
I found more info from the wife.

I bet Mary knew Mary Maxwell Gates

TMLittle · Thu 9:42 PM - "He was definitely buds with Gates Sr"

Columbia, Canada, and then to Seattle in 1967. Residing in Seattle for more then thirty-five years, Mary was active in religious, civic, political and social service organizations. She served on various boards and committees, always with a deep and abiding commitment to the inherent worth and dignity of every person and justice, equity and compassion in human relationships. Many community leaders tapped her wide-ranging pool of knowledge and sought her wise counsel and advice. She was a long-time dedicated member of University Unitarian Church of Seattle and embodied her Unitarian Universalist Principles and Purposes in her life and work. We wish to express our grateful appreciation to Sundance Rogers, MD of the Virginia Mason Clinic at Winslow, and the staffs of the Wyatt House Retirement Center on Bainbridge Island and Hospice of Kitsap County. A Celebration of Her Life will be held on Sunday, October 31 at 4:00 p.m. at University Unitarian Church, 6556 35th Ave. NE with the Revs. John M. Luopa and William H. Houff officiating. Memorial contributions are suggested to the Kent H. Evans Scholarship Fund, Lakeside School, 14050 First Avenue NE, Seattle, WA 98125. This fund, established in 1973, makes it possible for young people of limited financial means to further their education in a rigorous academic environment.

[HT0099][GDrive]



"There will be a flood of persons seeking aid in dying, coming from all over the United States and Canada, since only in Washington will their desire to end their lives be honored without fear of prosecution," wrote Dr. Albert R. Jonsen, chairman of the ethics department at the University of Washington's medical school, in a recent issue of the magazine Commonweal.

But the Rev. Marvin Evans, a Unitarian minister and leader of a group of clergy supporting the inititive, says Dr. Jonsen's argument assumes that any hastening of death is wrong.

"Death is not the enemy," said Rev. Evans. "Death is part of life. People want control over their own lives, and this is the final and perhaps most important thing in a life."

In one respect both sides agree: the voter turnout on Nov. 5 will set a record.

[HT009A][GDrive]

Tweet (Aug 27, 2020) - [HT009B][GDrive]

Living in Victoria British Columbia is interesting

Scout · Thu 9:45 PM

Julie Smith · Yesterday, 12:38 AM

Julie Smith

Rev. Evans served as minister to the Unitarian Church of Victoria, British Columbia from 1963 to 1967;

He served as a trustee or board member to the following organizations: the First Unitarian Church of Richmond, VA; the Vancouver Island Unitarian Committee; the British Columbia Unitarian Council; the Canadian Unitarian Council; UUA the Pacific Northwest District; the Puget Sound Unitarian Council;

And his son Kent a geeky computer lab nerd? Who took a mountain climbing course without Bill?

Oh David M. Evans, and his daughter-in-law Alexis Johanson...Who are you and what do you do?

T-Mobile Wi-Fi 4:20 AM 21%
wikitree.com
Where genealogists collaborate
First Name Evans

Marvin Davis Evans (1925 - 2016)

Rev. Marvin Davis Evans

Born **2 Dec 1925** [location unknown]

Son of [father unknown] and [mother unknown]

[sibling(s) unknown]

Husband of **Mary Rawlings (Hood) Evans** — married 8 Aug 1953 [location unknown]

Father of Kent Hood Evans

Died **9 Jan 2016** [location unknown]

Profile manager: Steven Hurt [send private message]
Profile last modified 28 Feb 2017 | Created 22 Feb 2017
This page has been accessed 47 times.

Biography

Married August 8, 1953, two sons, Kent Hood Evans (1955 - 1972) and David Marvin Evans (Alexis Johanson) of Keyport, WA.

[HT009C][GDrive]

Tweet (Aug 28, 2020) - [HT009D][GDrive]

Marvin Evans was President of International Relations Club of Randolph-Macon College in 1948

** The Marshall Plan

** Carnegie Endowment Fund

** United China Relief

TMLittle · Yesterday, 5:20 PM

Also found something interesting when looking through friends of Evans:

Undertakers were also cabinetmakers in late 1800's

"Marvin Evans"and "Randolph-Macon" Find Cancel

Dr. M. J. Fox To Lecture Here Tonight

Richmond Times-Dispatch, Friday, April 9, 1948

America's role in world reconstruction will be discussed by Dr. Melvin J. Fox, special consultant to the Committee on International Economic Policy at the Carnegie Endowment for International Peace, in an address in Medical College of Virginia Hospital auditorium at 8 o'clock tonight.

Dr. Fox is coming to Richmond under the auspices of International Relations Clubs of four colleges in this vicinity, in co-operation with the Richmond Area University Center. The sponsoring clubs are at Richmond and Westhampton Colleges of the University of Richmond, at Randolph-Macon College, and at the Richmond Professional Institute, of the College of William and Mary.

In addition to his work as Carnegie consultant on economic policy, Dr. Fox is research director of the Committee for the Marshall Plan, and is a member of the board of directors of the United China Relief. Just a year ago he visited London, Cairo, Arabia, India, Burma, Siam, French Indo-China, Hongkong and Manila on an around-the-world cruise for the China Relief.

Preparations for Dr. Fox's lecture were made by club presidents of the four co-operating schools—Vivian Berton, of Westhampton College; Ann Sullivan, RPI; Baine Harris, Richmond College, and Clyde Tucker, Randolph-Macon—and by Marvin Evans, of Randolph-Macon; William G. Bowler and Donald Bayy, of Richmond College; Eleanor Pitts, Mary Cross and Helen McDonough, of Westhampton College.

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Eye-catching, these new

[HT009E][GDrive]

Tweet (Aug 28, 2020) - [HT009F][GDrive]

Virginia Trust Company?

David Marvin Evans who are you?

LINK - https://www.sna.org/Resources/Documents/SNA_HistoryBook1999_Chap6-7.pdf

William Taylor Hood - 1901 *

William Taylor Hood, the son of James and Matilda Quinn Hood, was born at Parkersburg, Pennsylvania October 2,1846 and died at the age of 85, August 21,1931. As a young man he considered moving West, but was persuaded by Samuel C. Kent to go to Virginia instead. In the winter of 1865 he began work in Mr. Kent's nursery at $150 per year and board. In March 1866, he ploughed the first furrow for the Richmond Nurseries of Franklin Davis & Company. In 1867 he was promoted to the position of foreman.

He continued as production foreman until January 1876 when he bought a one-third interest in the Richmond Nurseries, going into partnership with Franklin Davis and Samuel C. Kent. By 1880, Franklin Davis was running the Baltimore Nurseries of Franklin Davis & Company, and Samuel Kent had returned to Pennsylvania,

but both continued as partners in the Richmond Nurseries. In February 1887, W. T. Hood became associated with C. W. Winn in Hood & Winn, Old Dominion Nurseries. In 1889, Mr. Winn withdrew to enter the tobacco business and the nursery business was continued as W. T. Hood & Company, Old Dominion Nurseries. By the 1890's the nursery had 350 acres and was advertised as the largest nursery south of the Potomac.

W. T. Hood married Annie Bell Williams on August 25,1881. She died March 31, 1926. Their son, Kent Williams Hood (18841936) was associated with W. T. Hood & Company until his death in 1936. The nursery business was continued by Kent's widow, Annie Collins Hood and the Virginia Trust Company as executors of the Kent W. Hood trust until 1953. W. T. Hood's granddaughter, Mary Hood Evans, and a great-grandson, David Marvin Evans live in Seattle, Washington.

W. T. Hood was a member of the American Association of Nurserymen for forty-five years. He was the second president of the Southern Nurserymen's Association, presiding over the convention held at Asheville, North Carolina in 1901.

Two fruits introduced by W. T. Hood & Company were the "Overall Cherry" and a strawberry, "Tennessee Prolific". In 1908 W. T. Hood and I. Howard Williams established an orchard near Greenwood, Virginia later operated as the Mountain Hollow Orchard in partnership with Mr. Alwood.

For many years Mr. Hood was active in the Grace Covenant Presbyterian Church of Richmond.

[HT009G][GDrive]

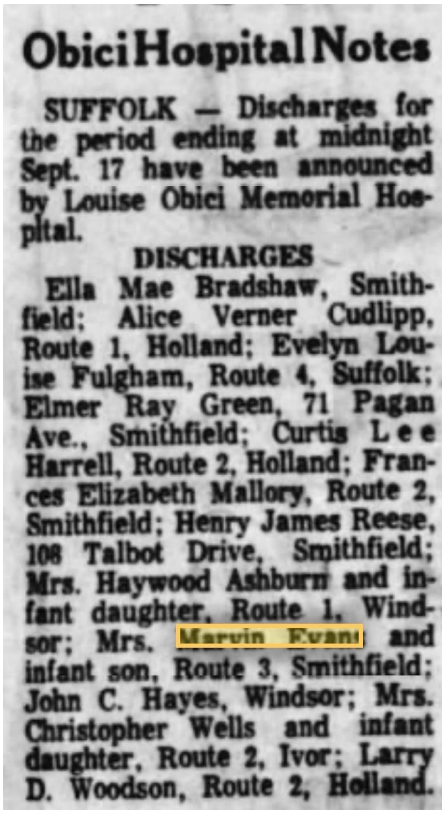
Tweet (Aug 28, 2020) - [HT009H][GDrive]

Sept 23, 1965

Virginia

TMLittle

Kent was born 1955



Obici Hospital Notes

SUFFOLK — Discharges for the period ending at midnight Sept. 17 have been announced by Louise Obici Memorial Hospital.

DISCHARGES

Ella Mae Bradshaw, Smithfield; Alice Verner Cudlipp, Route 1, Holland; Evelyn Louise Fulgham, Route 4, Suffolk; Elmer Ray Green, 71 Pagan Ave., Smithfield; Curtis Lee Harrell, Route 2, Holland; Frances Elizabeth Mallory, Route 2, Smithfield; Henry James Reese, 108 Talbot Drive, Smithfield; Mrs. Haywood Ashburn and infant daughter, Route 1, Windsor; Mrs. Marvin Evans and infant son, Route 3, Smithfield; John C. Hayes, Windsor; Mrs. Christopher Wells and infant daughter, Route 2, Ivor; Larry D. Woodson, Route 2, Holland.

[HT009I][GDrive]

Tweet (Aug 28, 2020) - [HT009J][GDrive]

Bill Gates best-friend Kent Hood Evans brother is: **David Marvin Evans**

Birth Date: 13 Jul 1957

Event Date:from 1 Jul 2004 to 20 Aug 2008

Event Place:Bainbridge, Kitsap, Washington, United States

Event Place (Original):Bainbridge Is, Washington, United States

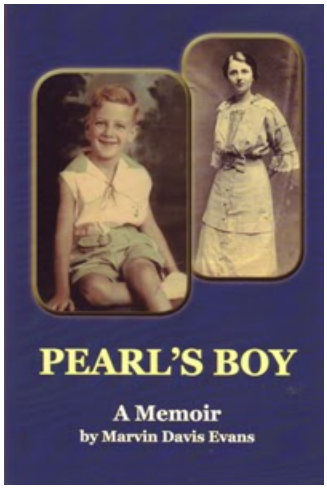
source: https://familysearch.org/ark:/61903/1:1:2SVF-1FN

Julie Smith · Yesterday, 7:58 PM

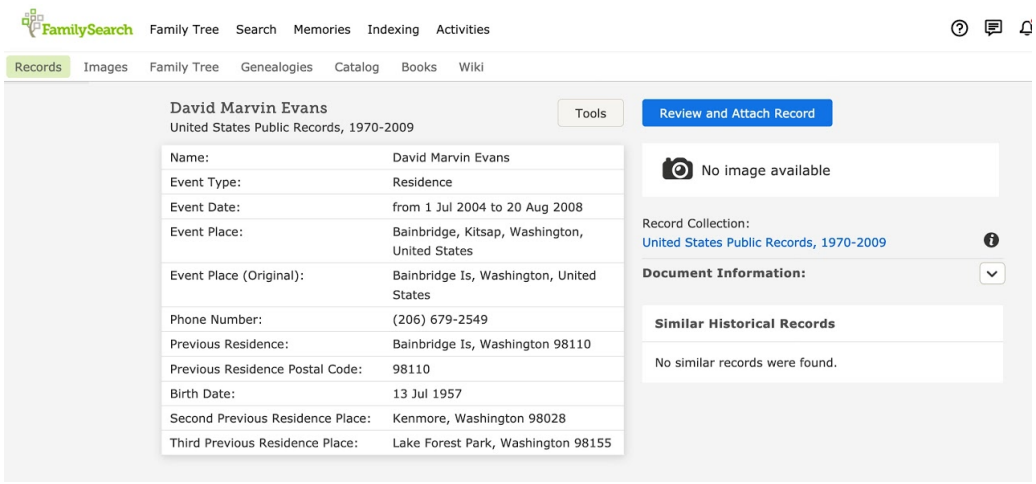
Marvin Davis Evans - Memoir

In his book Pearl's Boy (2010) Reverend Evans, a retired Unitarian minister, reflects back on his life of more than eight decades. From his childhood in rural Virginia, his career as minister that took him to Seattle, Boston, and back again to Seattle, his son's friendship with a young Bill Gates, all the way to caring for his terminally ill wife at Wyatt House on Bainbridge Island, this is the story of a life lived fully and, despite family tragedy, a life rich in optimism and faith. Inspiring read.

LINK - https://issuu.com/lakesideschool/docs/spring2012/58

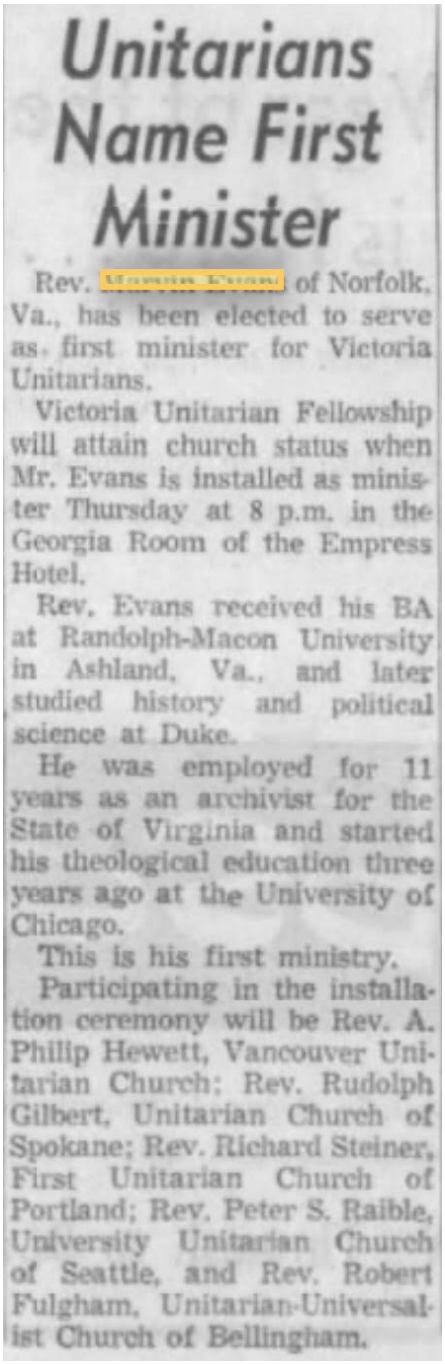


[HT009K][GDrive]



[HT009L][GDrive]

Tweet (Aug 28, 2020) - [HT009M][GDrive]



Unitarians Name First Minister

Rev. [redacted] of Norfolk, Va., has been elected to serve as first minister for Victoria Unitarians.

Victoria Unitarian Fellowship will attain church status when Mr. Evans is installed as minister Thursday at 8 p.m. in the Georgia Room of the Empress Hotel.

Rev. Evans received his BA at Randolph-Macon University in Ashland, Va., and later studied history and political science at Duke.

He was employed for 11 years as an archivist for the State of Virginia and started his theological education three years ago at the University of Chicago.

This is his first ministry.

Participating in the installation ceremony will be Rev. A. Philip Hewett, Vancouver Unitarian Church; Rev. Rudolph Gilbert, Unitarian Church of Spokane; Rev. Richard Steiner, First Unitarian Church of Portland; Rev. Peter S. Raible, University Unitarian Church of Seattle, and Rev. Robert Fulgham, Unitarian-Universalist Church of Bellingham.

[HT009N][GDrive]

Tweet (Aug 29, 2020) - [HT009O][GDrive]

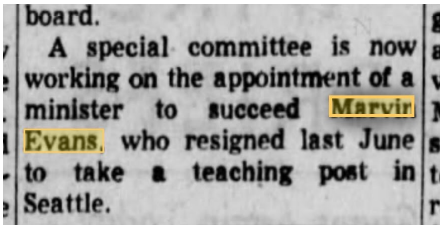
Feb 1967

TMLittle · 3:24 AM

Director of this strange Memorial Society non-profit

Continental Assoc of Memorial Societies

HQ in Chicago



board.

A special committee is now working on the appointment of a minister to succeed Marvin Evans, who resigned last June to take a teaching post in Seattle.

[HT009P][GDrive]

Virginian Starts New Society in Victoria

A Virginian, now making his home in Victoria, is the instigator of a new society here.

When Rev. Marvin Evans arrived here in August of 1963, he set about recruiting and influencing a number of Victorians into forming the local branch of the Memorial Society of British Columbia—one of a number of individual branches of the Continental Association of Memorial Societies that has its headquarters in Chicago.

Although he had previously known of the organization, Rev. Evans was almost entirely ignorant of its workings until three years ago when he began his theological training in Chicago.

"During my training," he states, "I studied under Carl Wennerstrom, the first president of the association. I became intensely interested in its workings through him."

The organization has been in operation for some 25 years

Rev. Marvin Evans is convener of the non-profit Memorial Society here in Victoria.

[HT009Q][GDrive]

Tweet (Aug 29, 2020) - [HT009R][GDrive]

Memorial Society is a death membership

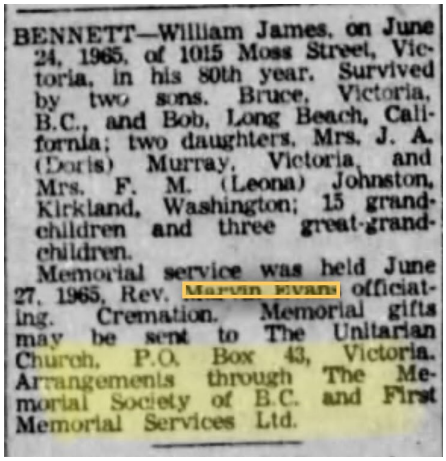
$100 for pine box, pick up and delivery, no embalming, always closed casket

Then he later champions Right to Die, making Washington first state in US

Sketchy sketchy sketchy

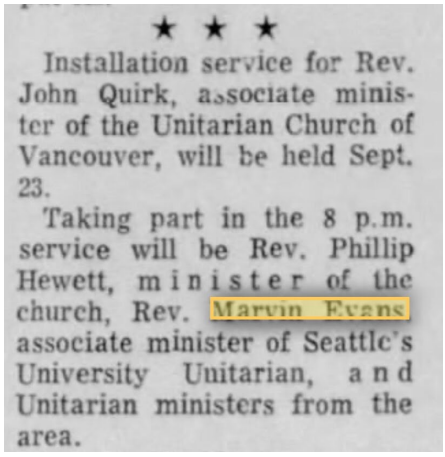
TMLittle · 3:33 AM

He was at University Unitarian Church of Seattle in 1968



BENNETT—William James, on June 24, 1965, of 1015 Moss Street, Victoria, in his 80th year. Survived by two sons, Bruce, Victoria, B.C., and Bob, Long Beach, California; two daughters, Mrs. J. A. (Doris) Murray, Victoria, and Mrs. F. M. (Leona) Johnston, Kirkland, Washington; 15 grandchildren and three great-grandchildren.
Memorial service was held June 27, 1965, Rev. Marvin Evans officiating. Cremation. Memorial gifts may be sent to The Unitarian Church, P.O. Box 43, Victoria. Arrangements through The Memorial Society of B.C. and First Memorial Services Ltd.

[HT009S][GDrive]



★ ★ ★

Installation service for Rev. John Quirk, associate minister of the Unitarian Church of Vancouver, will be held Sept. 23.

Taking part in the 8 p.m. service will be Rev. Phillip Hewett, minister of the church, Rev. Marvin Evans associate minister of Seattle's University Unitarian, and Unitarian ministers from the area.

[HT009T][GDrive]

Tweet (Aug 29, 2020) - [HT009U][GDrive]

Unitarian Universalist Association

Pacific Central District

Nothing and now he's on the Board of Trustees in 1973

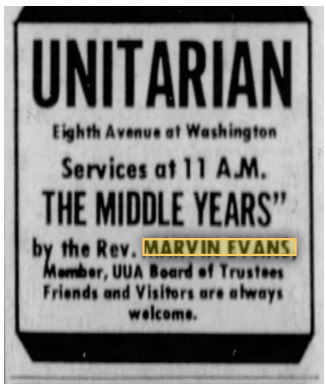
10 months after Kent's death

TMLittle · 3:47 AM

Sick of Evans so...

The minister at University Unitarian of Seattle 1967-1982

Was the Minister in Lincoln Nebraska 1955-1961



UNITARIAN

Eighth Avenue at Washington

Services at 11 A.M.

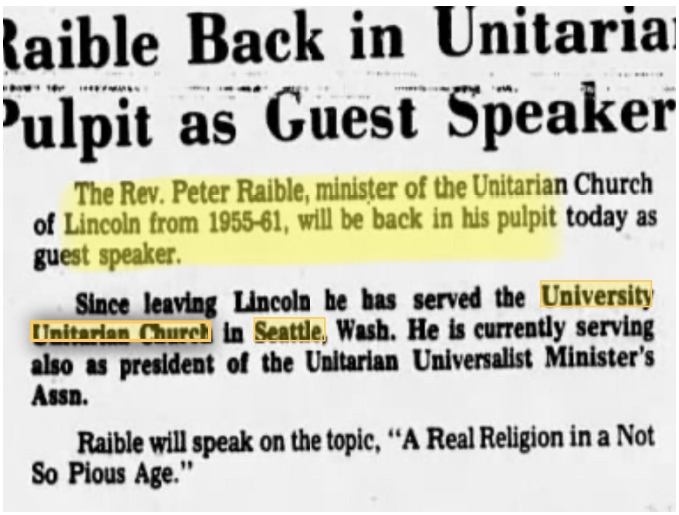
THE MIDDLE YEARS"

by the Rev. MARVIN EVANS

Member, UUA Board of Trustees

Friends and Visitors are always welcome.

[HT009V][GDrive]



Raible Back in Unitaria
Pulpit as Guest Speaker

The Rev. Peter Raible, minister of the Unitarian Church of Lincoln from 1955-61, will be back in his pulpit today as guest speaker.

Since leaving Lincoln he has served the University Unitarian Church in Seattle, Wash. He is currently serving also as president of the Unitarian Universalist Minister's Assn.

Raible will speak on the topic, "A Real Religion in a Not So Pious Age."

[HT009W][GDrive]

Tweet (Aug 29, 2020) - [HT009X][GDrive]

And his brother was an executive at Unitarian Universalist

HQ in Boston

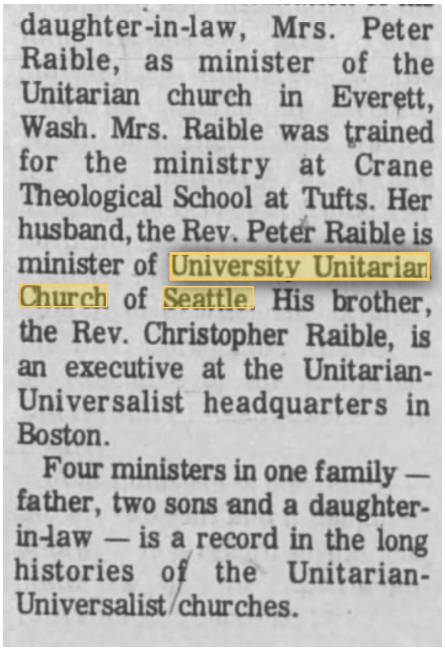
Coinky dink:

Thinking face

Boston

Nebraska

Washington



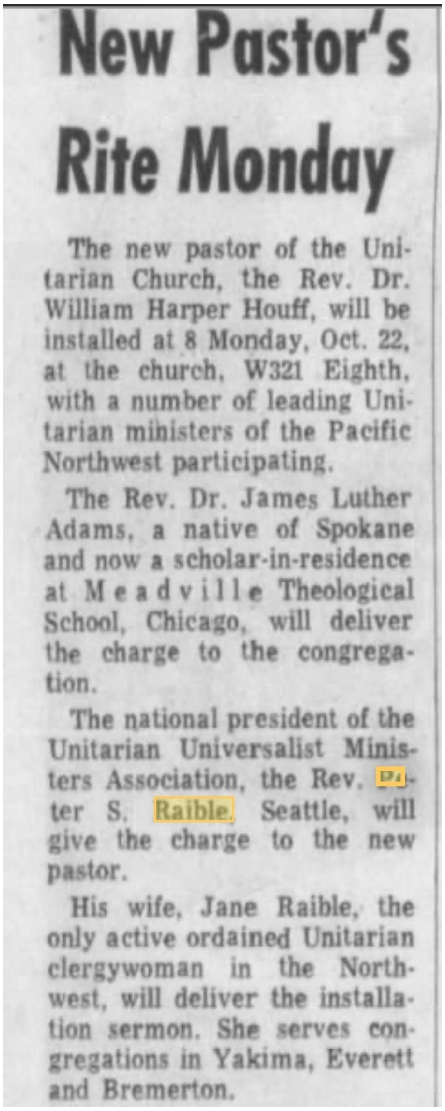
daughter-in-law, Mrs. Peter Raible, as minister of the Unitarian church in Everett, Wash. Mrs. Raible was trained for the ministry at Crane Theological School at Tufts. Her husband, the Rev. Peter Raible is minister of University Unitarian Church of Seattle. His brother, the Rev. Christopher Raible, is an executive at the Unitarian-Universalist headquarters in Boston.

Four ministers in one family — father, two sons and a daughter-in-law — is a record in the long histories of the Unitarian-Universalist churches.

[HT009Y][GDrive]

Tweet (Aug 29, 2020) - [HT009Z][GDrive]

So I guess I'll dive into the wife Association w Mary Gates tomorrow



New Pastor's Rite Monday

The new pastor of the Unitarian Church, the Rev. Dr. William Harper Houff, will be installed at 8 Monday, Oct. 22, at the church, W321 Eighth, with a number of leading Unitarian ministers of the Pacific Northwest participating.

The Rev. Dr. James Luther Adams, a native of Spokane and now a scholar-in-residence at Meadville Theological School, Chicago, will deliver the charge to the congregation.

The national president of the Unitarian Universalist Ministers Association, the Rev. Peter S. Raible, Seattle, will give the charge to the new pastor.

His wife, Jane Raible, the only active ordained Unitarian clergywoman in the Northwest, will deliver the installation sermon. She serves congregations in Yakima, Everett and Bremerton.

[HT00A0][GDrive]

Tweet (Aug 29, 2020) - [HT00A1][GDrive]

Also looking through mountain climbing accidents and found this from 1991

Tecton Management is a property management Co in Puget Sound/Seattle

FEICHTMEIR, Karl Ernest — Of Seattle, Washington, died on Sunday, September 1, 1991, while mountain climbing on Mt. Rainier, in Washington; aged 38; he will be greatly missed by his family: mother, Rachael Balyeat, of San Francisco; father, Raymond A. Feichtmeir and wife, Betsy, of Seattle; sister, Susan Feichtmeir and husband, James F. Greaves, of Oakland; brother, Kurt A. Feichtmeir and wife, Margo D., and their children, Anton and Alicia, of Seattle; brother, Mark R. Feichtmeir, of Oakland; brother, Peter C. Feichtmeir and wife, Sarah D. Patton, of Seattle; grandfather, Ernest H. Balyeat and wife, Charlotte, of Mendocino; and a wide circle of friends and family; Karl completed his undergraduate studies at University of San Francisco and obtained a Master's Degree from the University of California at Berkeley; he was currently president of TECTON Management Corporation, of Seattle.

His Memorial Service will be Friday, September 6, 1991, 3:00 P.M. at University Unitarian Church, Seattle. Remembering Karl as a very generous person, the family requests that friends remember him by contributing, in his name, to a charitable cause of their choice.

[HT00A2][GDrive]

Tweet (Aug 29, 2020) - [HT00A3][GDrive]

Established in early 80's

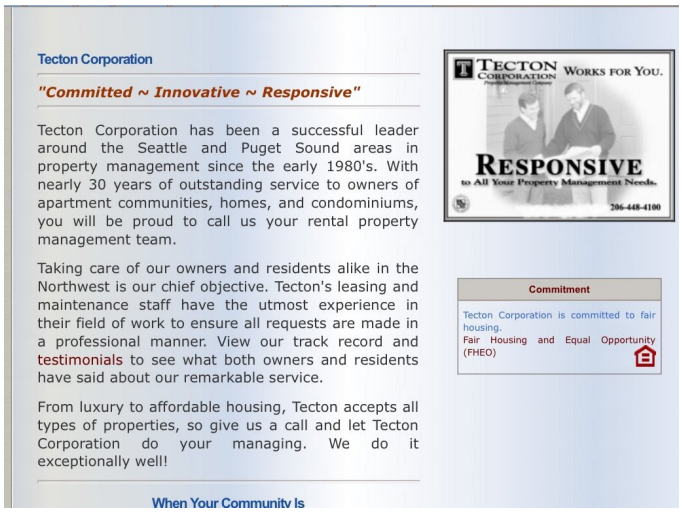
TMLittle · 4:21 AM

Imagine the real estate dollars in Seattle 1980-1991

TMLittle · 4:22 AM

And has anyone looked at Evans & Sutherland Corp?

Sorry, I've got Evans in the brain



Tecton Corporation

"Committed ~ Innovative ~ Responsive"

Tecton Corporation has been a successful leader around the Seattle and Puget Sound areas in property management since the early 1980's. With nearly 30 years of outstanding service to owners of apartment communities, homes, and condominiums, you will be proud to call us your rental property management team.

Taking care of our owners and residents alike in the Northwest is our chief objective. Tecton's leasing and maintenance staff have the utmost experience in their field of work to ensure all requests are made in a professional manner. View our track record and testimonials to see what both owners and residents have said about our remarkable service.

From luxury to affordable housing, Tecton accepts all types of properties, so give us a call and let Tecton Corporation do your managing. We do it exceptionally well!

When Your Community Is

TECTON CORPORATION WORKS FOR YOU.

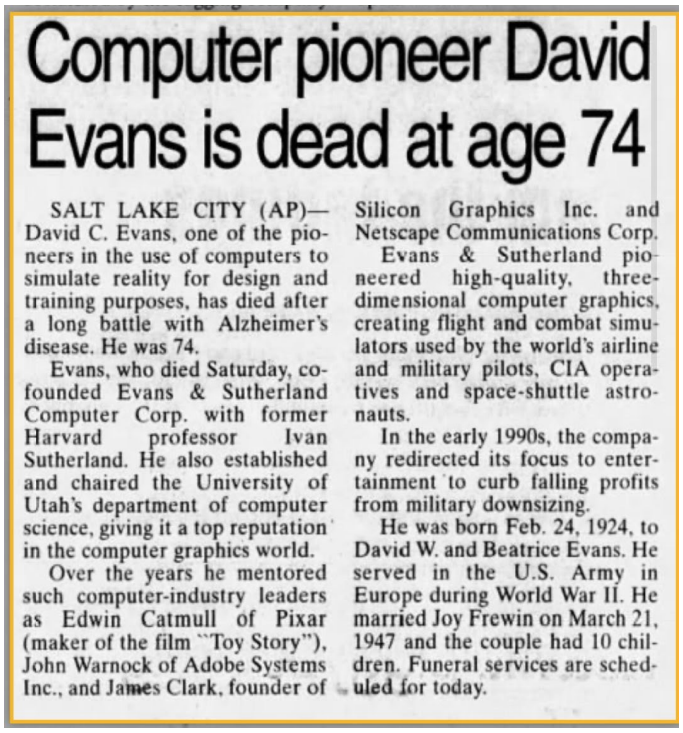
RESPONSIVE to All Your Property Management Needs.

206-448-4100

Commitment

Tecton Corporation is committed to fair housing.
Fair Housing and Equal Opportunity (FHEO)

[HT00A4][GDrive]



Computer pioneer David Evans is dead at age 74

SALT LAKE CITY (AP)— David C. Evans, one of the pioneers in the use of computers to simulate reality for design and training purposes, has died after a long battle with Alzheimer's disease. He was 74.

Evans, who died Saturday, cofounded Evans & Sutherland Computer Corp. with former Harvard professor Ivan Sutherland. He also established and chaired the University of Utah's department of computer science, giving it a top reputation in the computer graphics world.

Over the years he mentored such computer-industry leaders as Edwin Catmull of Pixar (maker of the film "Toy Story"), John Warnock of Adobe Systems Inc., and James Clark, founder of Silicon Graphics Inc. and Netscape Communications Corp.

Evans & Sutherland pioneered high-quality, three-dimensional computer graphics, creating flight and combat simulators used by the world's airline and military pilots, CIA operatives and space-shuttle astronauts.

In the early 1990s, the company redirected its focus to entertainment to curb falling profits from military downsizing.

He was born Feb. 24, 1924, to David W. and Beatrice Evans. He served in the U.S. Army in Europe during World War II. He married Joy Frewin on March 21, 1947 and the couple had 10 children. Funeral services are scheduled for today.

[HT00A5][GDrive]

Tweet (Aug 29, 2020) - [HT00A6][GDrive]

https://twitter.com/messages/1198295563114029056/media/1299625556133191686

2020-08-29-twitter-com-housatonicits-received-dm-2020-08-29_16-54-35-tm--little-1299625556133191686

Evans was at Bendix 1953-1962 and responsible for one of the first personal computers, the G-15

And oops there's AEC again

Astonished face

1

TMLittle · 4:30 AM

Hello Albuquerque NM

TMLittle

https://en.wikipedia.org/wiki/Bendix_Corporation

TMLittle · 4:33 AM

TMLittle

And acquired by Honeywell in 1999

LINK - https://en.wikipedia.org/wiki/Bendix_Corporation

In the 1950s, Bendix and its successors managed United States Atomic Energy Commission facilities in Kansas City, Missouri and Albuquerque, New Mexico. These facilities procured non-nuclear components for nuclear weapons.

A Bendix G-15 computer

In 1956, the computer division of Bendix Aviation introduced the Bendix G-15, a mini computer which was the size of two tall filing cabinets. The company

[HT00A7][GDrive]

Tweet (Aug 29, 2020) - [HT00A8][GDrive]

Sutherland was MIT PhD and Harvard prof 1965-1968, inventor of Sketchpad

TMLittle

“Sketchpad, in turn, was influenced by the conceptual Memex as envisioned by Vannevar Bush in his influential paper "As We May Think"

TMLittle · 4:38 AM

TMLittle

Image

And his brother Bert Sutherland

Both born in Nebraska

William Robert Sutherland (May 10, 1936 – February 18, 2020) was an American computer scientist who was the longtime manager of three prominent research laboratories, including Sun Microsystems Laboratories (1992–1998), the Systems Science Laboratory at Xerox PARC (1975–1981), and the Computer Science Division of Bolt, Beranek and Newman, Inc. which helped develop the ARPANET.

Bert Sutherland

Born	William Robert Sutherland May 10, 1936 Hastings, Nebraska,

[HT00A9][GDrive]

Tweet (Aug 29, 2020) - [HT00AA][GDrive]

These guys were involved or mentored:

Sun Microsystems

Pixar

Adobe

Silicon Graphics

Netscape

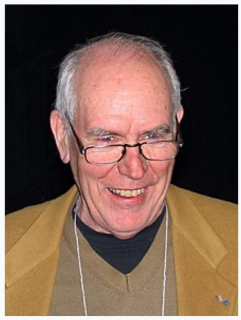
ARPANET

DARPA

Xerox

TMLittle · 4:46 AM

Ivan Edward Sutherland



Born	May 16, 1938 (age 82) Hastings, Nebraska, United States
Alma mater	MIT (Ph.D., 1963) Caltech (M.S., 1960) Carnegie Institute of Technology (B.S., 1959)
Known for	Father of computer graphics Direct linear transformation Interactive computing Sketchpad

[HT00AB][GDrive]

Tweet (Aug 29, 2020) - [HT00AC][GDrive]

In addition to hisEstablished a brokerage and investments corp in San Fran before he died in 1998

Probably a DOD cutout with only 96 employees

Evans & Sutherland Co-Founder Honored

The MountainWest Venture Group has named [redacted], Ph.D., its "Entrepreneur of the Decade."

Dr. Evans was co-founder of Evans & Sutherland Computer Corp. with Ivan Sutherland, Ph.D., in 1968. The company has become a multimillion dollar firm with more than 1,000 employees.

"Since 1986, we have annually honored an outstanding business person in the Intermountain Region," said Rick Mandahl, MountainWest Venture Group president. "Given Dr. Evans' far-reaching impact on high technology, education and businesses in and out of Utah, and the fact that we're at the beginning of a new decade, we felt it would be appropriate to recognize him in this manner."

Dr. Evans joined the staff of the University of California at Berkeley as a professor of electrical engineering and computer science in 1962. From 1962 to 1966 he was also employed by the computer division of Bendex Corp. in a number of assignments, including director of engineering research and development.

While at Bendix, he led the development of what was among the first of the personal computers, the Bendix G-15.

In 1965 Dr. Evans became chairman and professor of computer science at the university. In 1968 he teamed with Dr. Sutherland to launch Evans & Sutherland.

Dr. Evans is a member of the National Academy of Engineering. He was elected to the Computer Hall of Fame in 1982 and received the National Computer Graphics Association Award in 1986.

A director of the San Francisco-based brokerage and investment house of Hambrecht & Quist, Dr. Evans has also been associated with a number of venture investments including the start-up of VLSI Technology and Adobe Systems.

The MountainWest Venture Group is a non-profit organization dedicated to fostering high-technology business development in Utah. It claims a membership of approximately 100 people representing more than 70 companies.

Dr. [redacted]
Entrepreneur of Decade

[HT00AD][GDrive]

Evans & Sutherland is a pioneering American computer firm in the computer graphics field. Its current products are used in digital projection environments like planetariums. Its simulation business, which it sold to Rockwell Collins, sold products that were used primarily by the military and large industrial firms for training and simulation.

Evans and Sutherland Computer Corporation	
Type	Public
Traded as	OTCQB: ESCC
Founded	1968 in Salt Lake City, Utah
Founders	David Evans, Ivan Sutherland
Headquarters	Salt Lake City, Utah, United States
Revenue	▲US$9.359 million (2020)
Number of employees	~96 (2020)[1]
Website	www.es.com

[HT00AE][GDrive]

Tweet (Aug 29, 2020) - [HT00AF][GDrive]

Hambrecht & Quist (**H&Q**) was an investment bank based in San Francisco, California noted for its focus on the technology and Internet sectors. H&Q was founded by William Hambrecht and George Quist in California, in 1968.

Hambrecht & Quist	
Industry	Investment bank
Fate	Acquired by Chase Manhattan Bank in 1999.
Founded	1968
Founders	William Hambrecht, George Quist
Headquarters	San Francisco, United States of America

Apple Computer IPO 1980

H&Q was an early player in the technology sector, underwriting initial public offerings (IPOs) for Apple Computer, Genentech, and Adobe Systems in the 1980s. In the 1990s, H&Q also backed the IPOs of Netscape, MP3.com, and Amazon.com.[1]

Competition in the investment banking industry in the late 1990s limited H&Q's ability to grow as an independent firm, and in 1999 Hambrecht & Quist was acquired for $1.35 billion by Chase Manhattan Bank. H&Q was originally to be renamed "Chase

[HT00AG][GDrive]

Tweet (Aug 29, 2020) - [HT00AH][GDrive]

And so now we get right to it

Why is a computer systems and graphics company developing molecules for pharmaceutical use?

, Utah, Thursday, October 17, 1996

CHAIR:

(Continued from Page B1)

imulator purchased by KLM Dutch Airlines. Commercial flight imulator training programs proved to be an economic necessi- y during the 1974 oil crisis, when he costs for in-flight pilot training became prohibitive. With commer- cial pilots needing 5,000 training hours to meet FAA requirements, an airline could save $20 million a year by using flight simulators instead of live aircraft. Simulators also allow pilots to train under emergency situations, which could not be accomplished safely in flight.

Today, Evans and Sutherland designs, builds, sells and services advanced, real-time, 3-D graphic systems for modeling, navigation simulation and virtual reality pro grams. Its products are used fo pilot training as well as scientifi and engineering applications Together, the computer and opera tor can create and experiment wit a simulated situation to see th results in a visual format.

This is the ground-breakin research that prompted the Smith sonian Institution to honor Evan and Sutherland with a Lifetim Achievement Award.

The company has also devel oped additional interests in phar maceuticals and entertainmen industries.

Long a mentor, leader an friend, Evans was activel involved in the graduate educatio

[HT00AI][GDrive]

Tweet (Aug 29, 2020) - [HT00AJ][GDrive]

LINK - http://archiveswest.orbiscascade.org/ark:/80444/xv84585

T-Mobile Wi-Fi 5:38 AM 36%

Not Secure — archiveswest.orbiscascade.org

David C. Evans audio-visual collection, 1972-1987 PDF

Overview of the Collection

Creator
Evans, David C. (David Cannon), 1924-
Title
David C. Evans audio-visual collection
Dates
1972-1987 (inclusive)
Quantity
5 VHS videocassettes, 3 audiocassettes
Collection Number
A0159
Summary
The David C. Evans audio-visual collection (1972-1987) consists of films and audio relating to Evans & Sutherland, a computer graphics company founded in Salt Lake City by David Evans and Ivan Sutherland. The films demonstrate computer modeling and animation made from the Picture System 1 and 2 including 3D microorganism models for scientists, flight simulators for pilot training, space simulations for NASA, and more.
Repository
University of Utah Libraries, Special Collections.
Special Collections, J. Willard Marriott Library
University of Utah
295 South 1500 East

[HT00AK][GDrive]

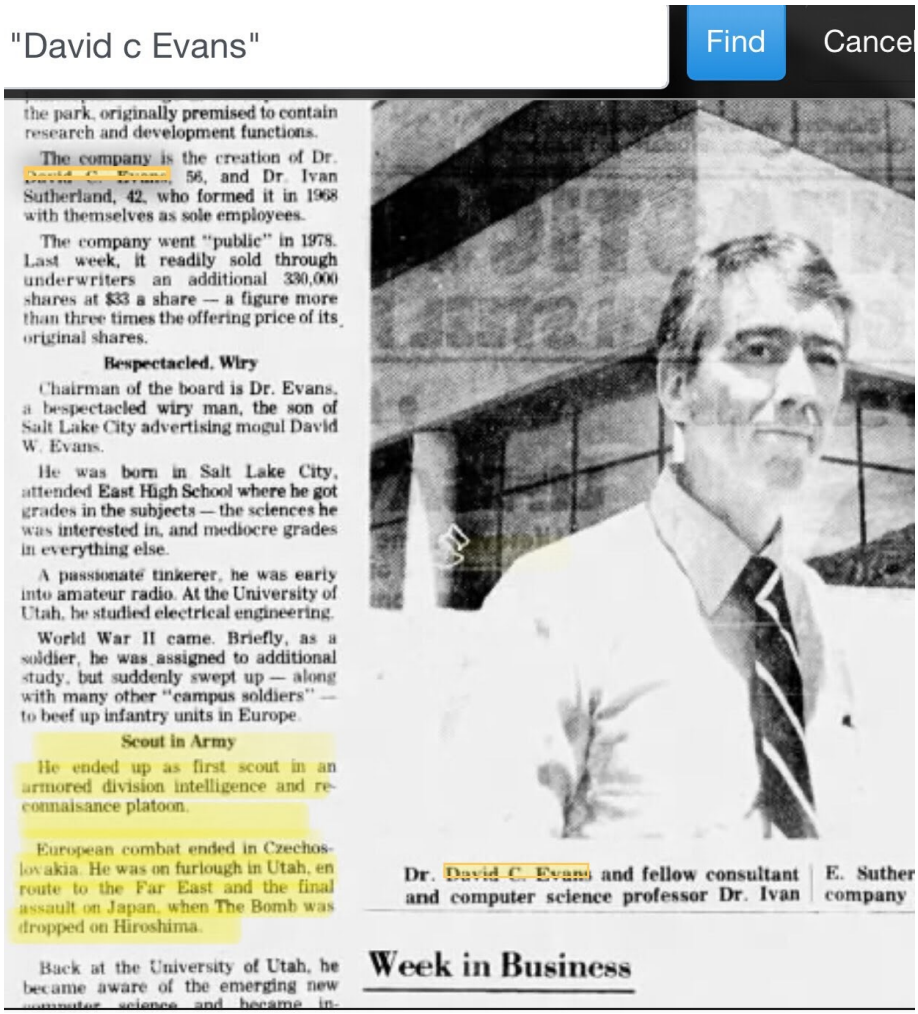
Tweet (Aug 29, 2020) - [HT00AL][GDrive]

And why do all the bios leave out his service record?

Army intelligence

“En route to the Far East and the final assault on Japan when the bomb was dropped on Hiroshima”

newspaper link - https://www.newspapers.com/image/612898929/?terms=%22David%2Bc%2BEvans%22&match=1



[HT00AM][GDrive]

Tweet (Aug 29, 2020) - [HT00AN][GDrive]

Marvin, Mary,Kent, Bill and Jim Munro on Evans boat

Jim Munro? Scout has Munro crossed your radar?

FROM THE ARCHIVES | *The legacy of* KENT EVANS '73

Many are familiar with the story of how, in 1968, four Lakeside School students formed the Lakeside Programming Group (LPG). Fewer know the story behind the name of the Middle School's Evans Theater and the large lecture hall in Allen-Gates, known simply as "Kent Evans."

Kent Evans was one of the founders of LPG with classmate Bill Gates '73, who considered Kent his closest friend at the time; Paul Allen '71; and Ric Weiland '71. Kent's accomplishments by age 16 were impressive. With the LPG, he wrote a program to run payroll for a Portland computer service company. The four also taught computer programming to Middle School students—developing curriculum, writing comments, and assigning grades.

Beyond computers, his interests included politics and backpacking. At 16, he enrolled in a basic university-based mountain-climbing course. Tragically, on May 28, 1972, during the final climb, Kent fell to his death on Mt. Shuksan.

Kent's legacy lives on at Lakeside through Allen-Gates Hall, funded by Gates and Allen, and dedicated in Kent's memory in 1987; the building's lecture hall, named for Kent; Evans Theater, dedicated in his memory in 1999 by Gates; and the Kent H. Evans Memorial Scholarship, established in 1973 by the Evans family. To learn more about Kent Evans, visit the archives' most recent virtual exhibit, Kent Hood Evans '73: Lakeside's Ubiquitous Student at *www.lakesideschool.org/archives* (click on "Special Exhibit").

Leslie A. Schuyler is archivist of the Jane Carlson Williams '60 Archives at Lakeside School. You can reach her at 206-440-2895 or archives@lakesideschool.org. Please contact her if you have questions or materials that you wish to donate, or visit the archives' Web page.

COURTESY *PEARL'S BOY: A MEMOIR* BY MARVIN DAVIS EVANS, 2010

Kent Evans '73 at the Teletype machine (a predecessor to the personal computer) at Lakeside School, circa 1968.

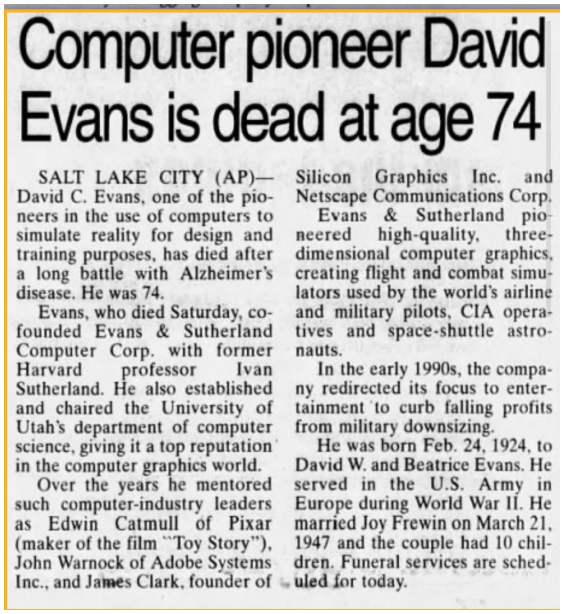
Mary, Marvin, and Kent Evans with Bill Gates '73 and Jim Munro aboard the Evans' boat, 1970.

COURTESY *PEARL'S BOY: A MEMOIR* BY MARVIN DAVIS EVANS, 2010

58 LAKESIDE ✦ *Spring/Summer 2012*

[HT00AO][GDrive]

Tweet (Aug 29, 2020) - [HT00AP][GDrive]



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[HT00AQ][GDrive]

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Dr. David C. Evans
Entrepreneur of Decade

[HT00AR][GDrive]

Tweet (Aug 29, 2020) - [HT00AS][GDrive]

In the 1950s, Bendix and its successors managed United States Atomic Energy Commission facilities in Kansas City, Missouri and Albuquerque, New Mexico. These facilities procured non-nuclear components for nuclear weapons.

A Bendix G-15 computer

In 1956, the computer division of Bendix Aviation introduced the Bendix G-15, a mini computer which was the size of two tall filing cabinets. The company

[HT00AT][GDrive]

Tweet (Aug 29, 2020) - [HT00AU][GDrive]

Ivan Sutherland was his partner

MIT PhD and Harvard Prof 1965-1968

Brother also computer sci

Both born...Nebraska

TMLittle

Yeah, I had at several posts that aren't here this morning

Face with symbols over mouth

Face with symbols over mouth

Face with symbols over mouth

Face with symbols over mouth

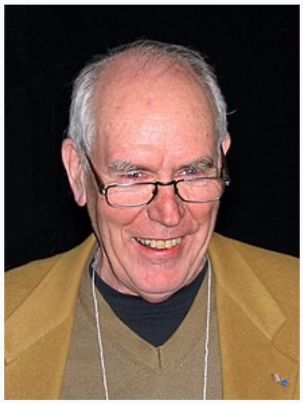
Face with symbols over mouth

TMLittle · 11:45 AM

TMLittle

These guys were involved with so many computer startups that it TELLS THE STORY OF ROLLOUT

Ivan Edward Sutherland



Born	May 16, 1938 (age 82) Hastings, Nebraska, United States
Alma mater	MIT (Ph.D., 1963) Caltech (M.S., 1960) Carnegie Institute of Technology (B.S., 1959)
Known for	Father of computer graphics Direct linear transformation Interactive computing Sketchpad

[HT00AV][GDrive]

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Bert Sutherland

Born	William Robert Sutherland May 10, 1936 Hastings, Nebraska,

[HT00AW][GDrive]

Tweet (Aug 29, 2020) - [HT00AX][GDrive]

Sutherland unvented Sketchpad

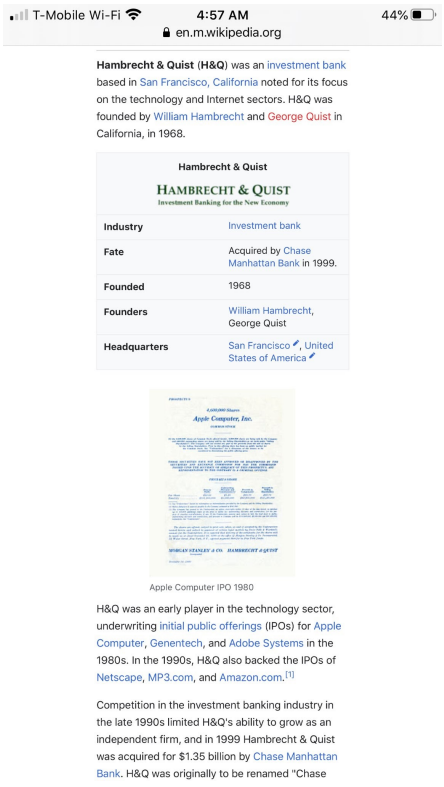
“Sketchpad, in turn, was influenced by the conceptual Memex as envisioned by Vannevar Bush in his influential paper "As We May Think"

Evans was director at this investment Corp

Evans & Sutherland is a pioneering American computer firm in the computer graphics field. Its current products are used in digital projection environments like planetariums. Its simulation business, which it sold to Rockwell Collins, sold products that were used primarily by the military and large industrial firms for training and simulation.

Evans and Sutherland Computer Corporation	
	E&S EVANS & SUTHERLAND
Type	Public
Traded as	OTCQB: ESCC
Founded	1968 in Salt Lake City, Utah
Founders	David Evans, Ivan Sutherland
Headquarters	Salt Lake City, Utah, United States
Revenue	▲US$9.359 million (2020)
Number of employees	~96 (2020)[1]
Website	www.es.com

[HT00AY][GDrive]



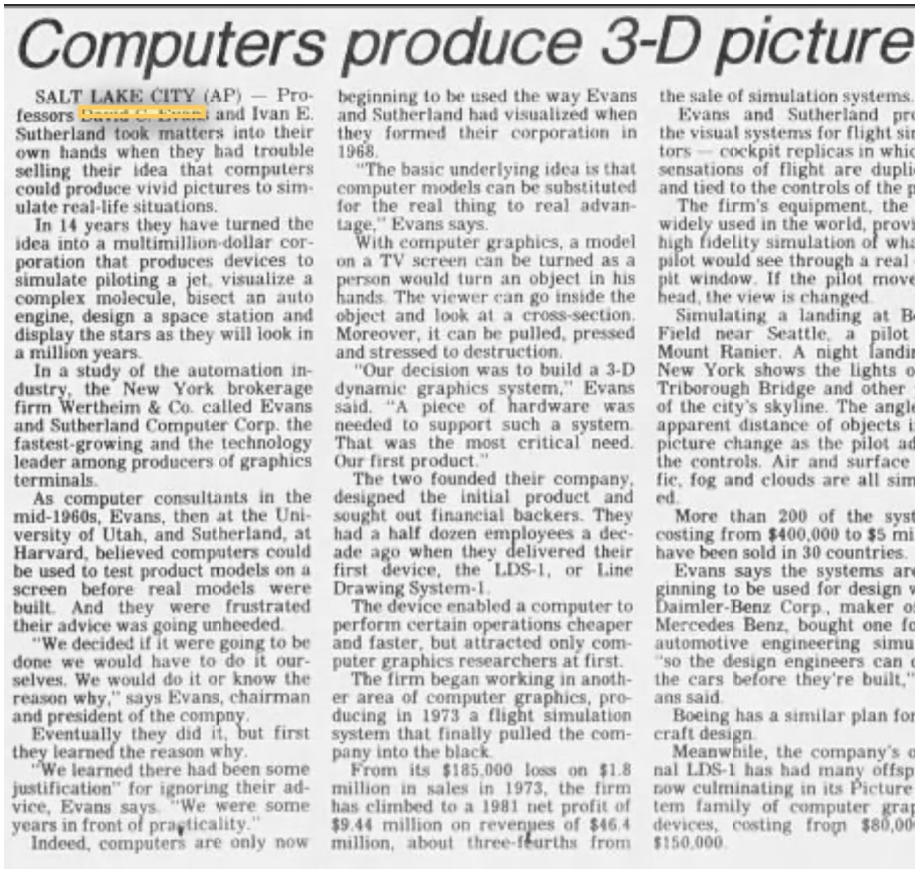
[HT00AZ][GDrive]

Tweet (Aug 29, 2020) - [HT00B0][GDrive]

Formed their Corp in 1968

Took it public in 1978

The golden timeframe



Computers produce 3-D picture

SALT LAKE CITY (AP) — Professors [redacted] and Ivan E. Sutherland took matters into their own hands when they had trouble selling their idea that computers could produce vivid pictures to simulate real-life situations.

In 14 years they have turned the idea into a multimillion-dollar corporation that produces devices to simulate piloting a jet, visualize a complex molecule, bisect an auto engine, design a space station and display the stars as they will look in a million years.

In a study of the automation industry, the New York brokerage firm Wertheim & Co. called Evans and Sutherland Computer Corp. the fastest-growing and the technology leader among producers of graphics terminals.

As computer consultants in the mid-1960s, Evans, then at the University of Utah, and Sutherland, at Harvard, believed computers could be used to test product models on a screen before real models were built. And they were frustrated their advice was going unheeded.

"We decided if it were going to be done we would have to do it ourselves. We would do it or know the reason why," says Evans, chairman and president of the compny.

Eventually they did it, but first they learned the reason why.

"We learned there had been some justification" for ignoring their advice, Evans says. "We were some years in front of practicality."

Indeed, computers are only now beginning to be used the way Evans and Sutherland had visualized when they formed their corporation in 1968.

"The basic underlying idea is that computer models can be substituted for the real thing to real advantage," Evans says.

With computer graphics, a model on a TV screen can be turned as a person would turn an object in his hands. The viewer can go inside the object and look at a cross-section. Moreover, it can be pulled, pressed and stressed to destruction.

"Our decision was to build a 3-D dynamic graphics system," Evans said. "A piece of hardware was needed to support such a system. That was the most critical need. Our first product."

The two founded their company, designed the initial product and sought out financial backers. They had a half dozen employees a decade ago when they delivered their first device, the LDS-1, or Line Drawing System-1.

The device enabled a computer to perform certain operations cheaper and faster, but attracted only computer graphics researchers at first.

The firm began working in another area of computer graphics, producing in 1973 a flight simulation system that finally pulled the company into the black.

From its $185,000 loss on $1.8 million in sales in 1973, the firm has climbed to a 1981 net profit of $9.44 million on revenues of $46.4 million, about three-fourths from the sale of simulation systems.

Evans and Sutherland pr
the visual systems for flight si
tors — cockpit replicas in whic
sensations of flight are dupli
and tied to the controls of the p

The firm's equipment, the
widely used in the world, provi
high fidelity simulation of wh
pilot would see through a real
pit window. If the pilot move
head, the view is changed.

Simulating a landing at B
Field near Seattle, a pilot
Mount Ranier. A night landi
New York shows the lights o
Triborough Bridge and other
of the city's skyline. The angl
apparent distance of objects i
picture change as the pilot ad
the controls. Air and surface
fic, fog and clouds are all sim
ed.

More than 200 of the syst
costing from $400,000 to $5 mi
have been sold in 30 countries.

Evans says the systems ar
ginning to be used for design
Daimler-Benz Corp., maker o
Mercedes Benz, bought one fo
automotive engineering simu
"so the design engineers can
the cars before they're built,"
ans said.

Boeing has a similar plan for
craft design.

Meanwhile, the company's
nal LDS-1 has had many offsp
now culminating in its Picture
tem family of computer grap
devices, costing from $80,00
$150,000.

[HT00B1][GDrive]

Tweet (Aug 29, 2020) - [HT00B2][GDrive]

, Utah, Thursday, October 17, 1996

CHAIR:

(Continued from Page B1)

imulator purchased by KLM Dutch Airlines. Commercial flight imulator training programs proved to be an economic necessi- y during the 1974 oil crisis, when he costs for in-flight pilot training became prohibitive. With commer- cial pilots needing 5,000 training hours to meet FAA requirements, an airline could save $20 million a year by using flight simulators instead of live aircraft. Simulators also allow pilots to train under emergency situations, which could not be accomplished safely in flight.

Today, Evans and Sutherland designs, builds, sells and services advanced, real-time, 3-D graphics systems for modeling, navigation, simulation and virtual reality programs. Its products are used for pilot training as well as scientific and engineering applications. Together, the computer and operator can create and experiment with a simulated situation to see the results in a visual format.

This is the ground-breaking research that prompted the Smithsonian Institution to honor Evans and Sutherland with a Lifetime Achievement Award.

The company has also developed additional interests in pharmaceuticals and entertainment industries.

Long a mentor, leader and friend, Evans was actively involved in the graduate education

[HT00B3][GDrive]

Tweet (Aug 29, 2020) - [HT00B4][GDrive]

[HT00B5][GDrive]

Tweet (Aug 29, 2020) - [HT00B6][GDrive]

Evans' mom:

Pearl Hutchinson Evans

I have her family somewhere

TMLittle · 11:58 AM

TMLittle

Kent had a cleft lip

There's a few pics of him that are not correct

Tweet (Aug 29, 2020) - [HT00B8][GDrive]

Wonder if that's the shore where Gates built Xanadu. Reminds me of the shoreline

TMLittle · 12:01 PM

They moved there in 1968

He died in 1972 in 7th grade

In 1968 he would be in the 3rd grade

SOURCE: NETFLIX

Kent Evans was Bill Gates' first best friend.

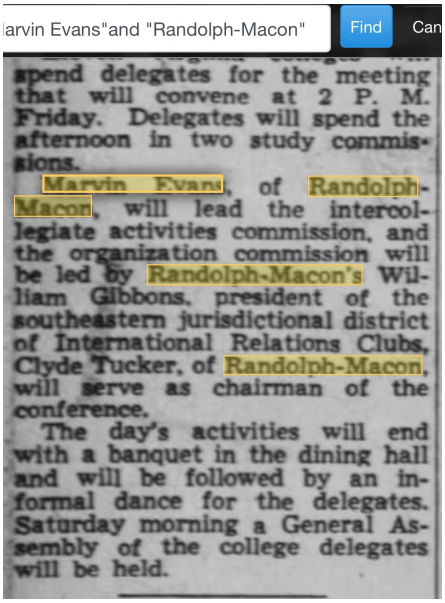
[HT00B8][GDrive]

SOURCE: NETFLIX

[HT00B9][GDrive]

Tweet (Aug 29, 2020) - [HT00BB][GDrive]

Marvin Evans was leader in International Relations Clubs while at Randolph-Macon



[HT00BC][GDrive]

Tweet (Aug 29, 2020) - [HT00BD][GDrive]

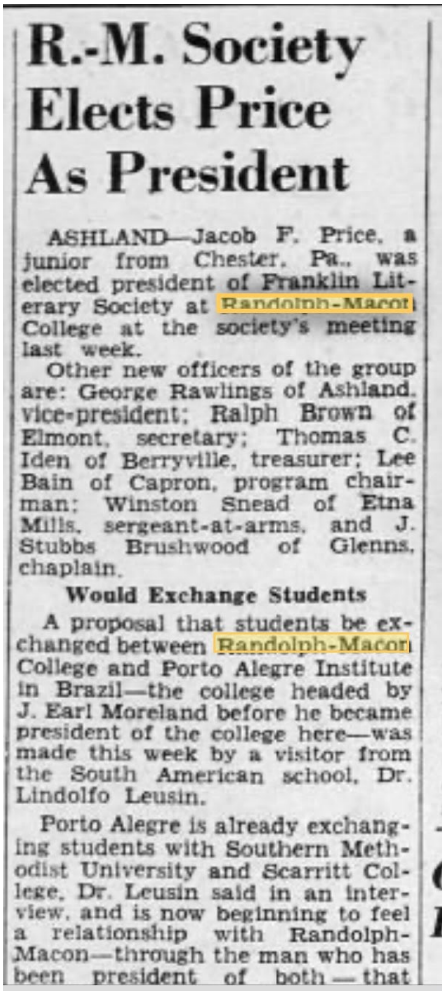
World exchange students in Brazil

- Mom was a social worker

- Save the kids Foundations

- Dad is minister advocating Euthanasia

-Both used public school initiatives for social change



R.-M. Society Elects Price As President

ASHLAND—Jacob F. Price, a junior from Chester, Pa., was elected president of Franklin Literary Society at Randolph-Macon College at the society's meeting last week.

Other new officers of the group are: George Rawlings of Ashland, vice-president; Ralph Brown of Elmont, secretary; Thomas C. Iden of Berryville, treasurer; Lee Bain of Capron, program chairman; Winston Snead of Etna Mills, sergeant-at-arms, and J. Stubbs Brushwood of Glenns, chaplain.

Would Exchange Students

A proposal that students be exchanged between Randolph-Macon College and Porto Alegre Institute in Brazil—the college headed by J. Earl Moreland before he became president of the college here—was made this week by a visitor from the South American school, Dr. Lindolfo Leusin.

Porto Alegre is already exchanging students with Southern Methodist University and Scarritt College. Dr. Leusin said in an interview, and is now beginning to feel a relationship with Randolph-Macon—through the man who has been president of both — that

[HT00BE][GDrive]

Tweet (Aug 29, 2020) - [HT00BF][GDrive]

Thought this was strange

B.C. Unitarians Acquire Land

British Columbia Unitarians have acquired a 160-acre tract of land on the east side of Kootenay Lake for use by Unitarian camps and conferences, it was announced at a meeting of the B.C. Unitarian Council in Vancouver.

"It has a white sandy beach, meadowland and a waterfall," says Rev. Marvin Evans, minister of Victoria Unitarian Church, who attended the meeting.

With him were 17 members of the Victoria church and representatives from Cowichan, Nanaimo and Courtenay.

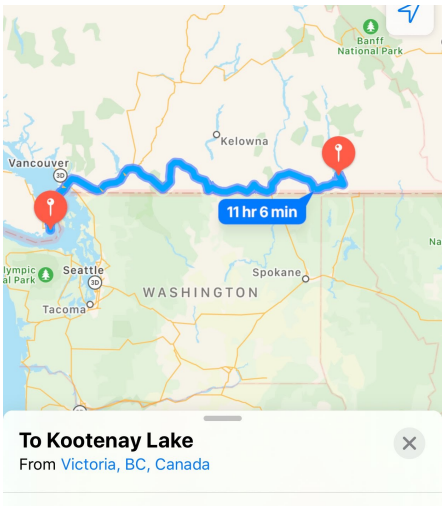
UNITARIAN

THE UNITARIAN CHURCH
106 Superior Street
385-2741
Marvin Evans minister

[HT00BG][GDrive]

Tweet (Aug 29, 2020) - [HT00BH][GDrive]

11 hours from his church

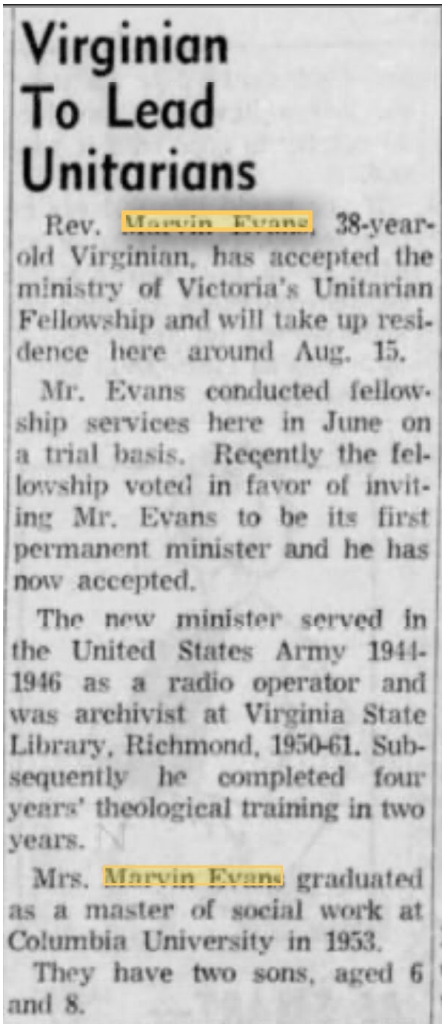


[HT00BI][GDrive]

Tweet (Aug 29, 2020) - [HT00BJ][GDrive]

And he was a radio operator in the Army (1944-1946)

Note : ... being age 38, this would be about 1963 ...



Virginian To Lead Unitarians

Rev. Marvin Evans, 38-year-old Virginian, has accepted the ministry of Victoria's Unitarian Fellowship and will take up residence here around Aug. 15.

Mr. Evans conducted fellowship services here in June on a trial basis. Recently the fellowship voted in favor of inviting Mr. Evans to be its first permanent minister and he has now accepted.

The new minister served in the United States Army 1944-1946 as a radio operator and was archivist at Virginia State Library, Richmond, 1950-61. Subsequently he completed four years' theological training in two years.

Mrs. Marvin Evans graduated as a master of social work at Columbia University in 1953.

They have two sons, aged 6 and 8.

[HT00BK][GDrive]

https://seattleareaarchivists.org/wp-content/uploads/2012/09/soundarchivistvol1no1summerfall20121.pdf

2012-06-sound-archivist-vol-1-no-1.pdf

By Leslie Schuyler When I first began as the archivist at Lakeside, I knew very little about the Lakeside Programming Group (LPG). And by very little, I mean almost nothing. I had heard of Microsoft, however, and I knew a bit about its founders, Bill Gates and Paul Allen. Gates, because he was everywhere, and Paul Allen, because I had lived in Seattle for eight years, been to his EMP museum, listened to KEXP, and a friend of mine had worked for Vulcan, his investment company. I knew these two founded Microsoft, but that's where my knowledge ended. When I saw that Lakeside had an archives (and was hiring its second archivist), I assumed that this must have something to do with its high profile alumni. When I interviewed for the position in 2008, they took me on a tour of campus. One of the stops was what Bruce Bailey (an alumnus of the class of '59 and a staff member since 1970) called "the shrine." The shrine's an exhibit, complete with a 1970s desk, an ASR-33 Teletype terminal (the model of machine used by students in the 60s and 70s), and life size photos of Gates and Allen when they were students. Text panels describe the creation and accomplishments of the LPG, which was, for all intents and purposes, the precursor to Microsoft. Much has been written about the founding of Microsoft, most of which mentions LPG in passing and focuses on Allen and Gates. Over the last four years, I've spent my time getting the archives inventoried and taking care of high priority preservation issues so I hadn't, until very recently, had time to delve further into the history of the LPG. **Then, in the winter of 2010, Marvin Evans, the father of a Lakeside alumnus, published an autobiography. In it he dedicated a chapter to his son, Kent Evans, who attended Lakeside in the late 60s and early 70s, was a member of the LPG, and a close friend to Bill Gates.** As an employee of Lakeside, I hear the name "Kent Evans" on a daily basis because a large lecture hall in AllenGates (the math and science building built in 1987) is named for him. I also know that Lakeside has a Kent Evans scholarship, a Kent Evans rowing shell, and an Evans Theater in its Middle School. And yet, most of the current staff and faculty don't know who Kent was. Once I overheard colleagues in a staff meeting (which was taking place in Kent Evans lecture hall) wonder aloud whether there was a hyphen between the "Kent" and the "Evans." So, with Marvin Evans's autobiography fresh in my mind, I decided to create a virtual exhibit about Kent. This is what I discovered: Kent Evans was born with a severe cleft lip and palate. His father writes that this "didn't seem to affect [Kent] apprec

iably, except to make him more sensitive to people with similar imperfections." **(Evans, Pearl's Boy: A Memoir, 2010) Kent began attending Lakeside in the fall of 1966 as a seventh-grader.** He was smart, outgoing, and "interested in everything." (June 1972 Lakeside Tatler newspaper) He enjoyed politics (he and a friend campaigned for Hubert Humphrey in 1968), was a Mountaineer, and a sailor. And he was fascinated with computers. **In 1968, when Kent was in the 8th grade, the Lakeside Mothers' Club donated funds from its Rummage Sale toward a Teletype console to be housed in a basement room of the math building.** The machine was connected via the phone line to an off-campus computer that students could communicate with using three programming languages: FORTRAN, ALGOL, and BASIC. Bill Gates, in an interview conducted by the Smithsonian in 1995 described what happened next: "The Amount of time that we'd spend in this particular room that had the Teletype was quite extreme. And pretty quickly there were four of us who got more addicted, more involved, and understood it better than the others. And those were myself, Paul Allen who later founded Microsoft with me, Ric Weiland who actually worked at Microsoft in the early days, and Kent Evans, who was my closest friend and most my age. ...So, the four of us became the Lakeside Programming Group. We were the hardcore users." (Bill Gates, Oral History Interview with the Smithsonian, 1995) The LPG formed in 1968. During the 1970-71 and 1971-72 school years, the group taught computer programming classes to Lower/Middle School students. And, in 1971-72, these four young entrepreneurs programmed a payroll system for a computer services company based out of Portland, Oregon. The LPG took the 7 a.m. Greyhound bus from Seattle to Portland, met with their clients, and"hammer[ed] out an agreement on future work" (Evans, Pearl's Boy). As Kent writes in his journal, they

finished by 5 p.m. and decided to get something to eat before boarding the bus back to Seattle. Their new associates at the client company had suggested the Hilton, "and >.HQW@` was for it but Bill [Gates@ chose the Hamburger Train." Kent summed up his thoughts about Hamburger Train (a restaurant in which food was served on model trains that circled the tables) this way: "Not bad, but after a successful day of business talks?" After Allen and Weiland (who were two years older than Gates and Evans) graduated in 1972, Lakeside hired the remaining members of the LPG to program the school's schedule. Kent and Bill were in the midst of this and other projects when Kent, a Mountaineer and a student in a UW climbing class, fell several hundred feet while climbing Mt. Shuksan. On the evening of May 28, 1972, he was airlifted by helicopter to the hospital in Bellingham where he was pronounced dead. Kent was a junior in high school, just barely 17 years old.

Kent's death is ultimately what brought Bill Gates and Paul Allen together. Two years after the scheduling program for Lakeside was completed, Gates and Allen founded Microsoft.

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Housatonic

F

A B C D E F G H I J K L M N O P Q R S T U V W X Y Z

PEOPLE (by last name / then D.o.B.)

- Stephen **Fauci** (born 1910)
- Dr Anthony Stephen **Fauci** (born 1940)
- Dr. Heinz Ulrich **Feldmann** (born 1959)
- Rodney Harald **Fisk** (born 1945)
- Dr. James Brown Fisk
- Joseph Bernard **Flavin** (born 1928)
- Sir Walter Morley **Fletcher** (born 1873)
- Dr. Simon **Flexner** (born 1863)
- Bernard **Flexner** (born 1865)
- Abraham **Flexner** (born 1866)
- Dr. Quincy Ernest **Fortier** (born 1912)
- John Stuart **Foster** (born 1890)
- Dr. John Stuart **Foster** Jr. (born 1922)
- Dr. Thomas **Francis** Jr. (born 1900)
- Dr. Donald Sharp **Fredrickson** (born 1924)
- Dr. Edward Jacob Freeman (born 1851)
- Dr. Charlotte **Friend** (born 1921)

Stephen Fauci (born 1910)

Born - September 11, 1910 [HL003R][GDrive]

Died - May 13, 2008 [HL003R][GDrive]

Father of Dr Anthony Stephen Fauci (born 1940)

Wikipeda - Son Anthony S Faucci

saved - [HK001U][GDrive]

[...]

Background and education

[Anthony Stephen] Fauci was born December 24, 1940, in Brooklyn, New York City, to Stephen A. Fauci and Eugenia A. Fauci, owners of a pharmacy. His father worked as the pharmacist, his mother and sister worked the register, and Fauci delivered prescriptions. The pharmacy was located in the Dyker Heights section of Brooklyn, one neighborhood away from his family home in Bensonhurst.[2]

Fauci's paternal grandparents, Antonino Fauci and Calogera Guardino, were from Sciacca, Italy. His maternal grandmother, Raffaella Trematerra, from Naples, Italy, was a seamstress. His maternal grandfather, Giovanni Abys, was born in Switzerland and was an artist, noted for landscape and portrait painting, magazine illustrations (Italy) as well graphic design for commercial labels, including olive oil cans. His great-grandparents emigrated to the US in the late 19th century. Fauci grew up Catholic.[2][3][4]

Fauci attended Regis High School in Manhattan's Upper East Side, where he captained the school's basketball team and graduated in 1958.[5][6] He then went to the College of the Holy Cross, graduating in 1962 with a Bachelor of Arts in classics. Fauci then attended medical school at Cornell University Medical College where he graduated first in his class with a Doctor of Medicine in 1966.[2] He then completed an internship and residency at the New York Hospital-Cornell Medical Center.[6]

Career

Fauci discusses his work in 2020 (4 minutes)

In 1968, Fauci joined the National Institutes of Health as a clinical associate in the Laboratory of Clinical Investigation (LCI) at the National Institute of Allergy and Infectious Diseases.[7] In 1974, he became Head of the Clinical Physiology Section, LCI, and in 1980 was appointed Chief of the Laboratory of Immunoregulation. In 1984, he became director of NIAID, a position he still holds as of 2020.[1] In that role he has the responsibility for an extensive research portfolio of basic and applied research on infectious and immune-mediated illnesses.[7] He has turned down several offers to lead his agency's parent, the NIH, and has been at the forefront of US efforts to contend with viral diseases like HIV, SARS, the 2009 swine flu pandemic, MERS, Ebola and severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2).[8]

He played a significant role in the early 2000s in creating the President's Emergency Plan for AIDS Relief[9] and in driving development of biodefense drugs and vaccines following the 9/11 terrorist attacks.[10]

EVIDENCE TIMELINE

1920 US Census

transceipt [HS002K][GDrive] (Full census sheet [HS002J][GDrive])

Household Members

First name(s)	Last name	Relationship	Marital status	Gender	Age	Birth year	Birth place
Antonio	Fauci	Self	Married	Male	44	1876	Italy
Lillie	Fauci	Wife	Married	Female	41	1879	Italy
Peter	Fauci	Son	Single	Male	15	1905	New York
Steve	**Fauci**	**Son**	**Single**	**Male**	**9**	**1911**	**New York**

[HS002L][GDrive]

1921 (Jan 2) - https://www.newspapers.com/image/544242756/?terms=%22Stephen%2BFauci%22

1928 (Jan 25) - https://www.newspapers.com/image/59862111/?terms=%22Stephen%2BFauci%22

1929 (Jan 21) - Wedding

https://www.ancestry.com/interactive/61406/47512_546438-00362/7583175?backurl=https://www.ancestry.com/family-tree/person/tree/10085968/person/142176804425/facts/citation/582247325089/edit/record

21 Jan 1929

Marriage License Place - Brooklyn, New York City, New York, USA

Spouse - Eugenia Abys

Info on Eugenia Fauci -

1962 - bahamas to NYC

https://www.ancestry.com/interactive/1277/42804_337558-00982?pid=12998651&backurl=https://search.ancestry.com/cgi-bin/sse.dll?indiv%3D1%26dbid%3D1277%26h%3D12998651%26tid%3D%26pid%3D%26usePUB%3Dtrue%26_phsrc%3DjWH128%26_phstart%3DsuccessSource&treeid=&personid=&hintid=&usePUB=true&_phsrc=jWH128&_phstart=successSource&usePUBJs=true&_ga=2.196415023.2082270112.1587686664-413899210.1579449276

Passes Nov 1 1965

https://search.ancestry.com/cgi-bin/sse.dll?indiv=1&dbid=70037&h=1138190&tid=&pid=&usePUB=true&_phsrc=jWH128&_phstart=successSource

https://search.ancestry.com/cgi-bin/sse.dll?indiv=1&dbid=61668&h=402692&tid=&pid=&usePUB=true&_phsrc=jWH128&_phstart=successSource

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1930 US Census

Transcript [HS002N][GDrive] (Full census sheet [HS002M][GDrive])

Record Transcription:
Us Census 1930

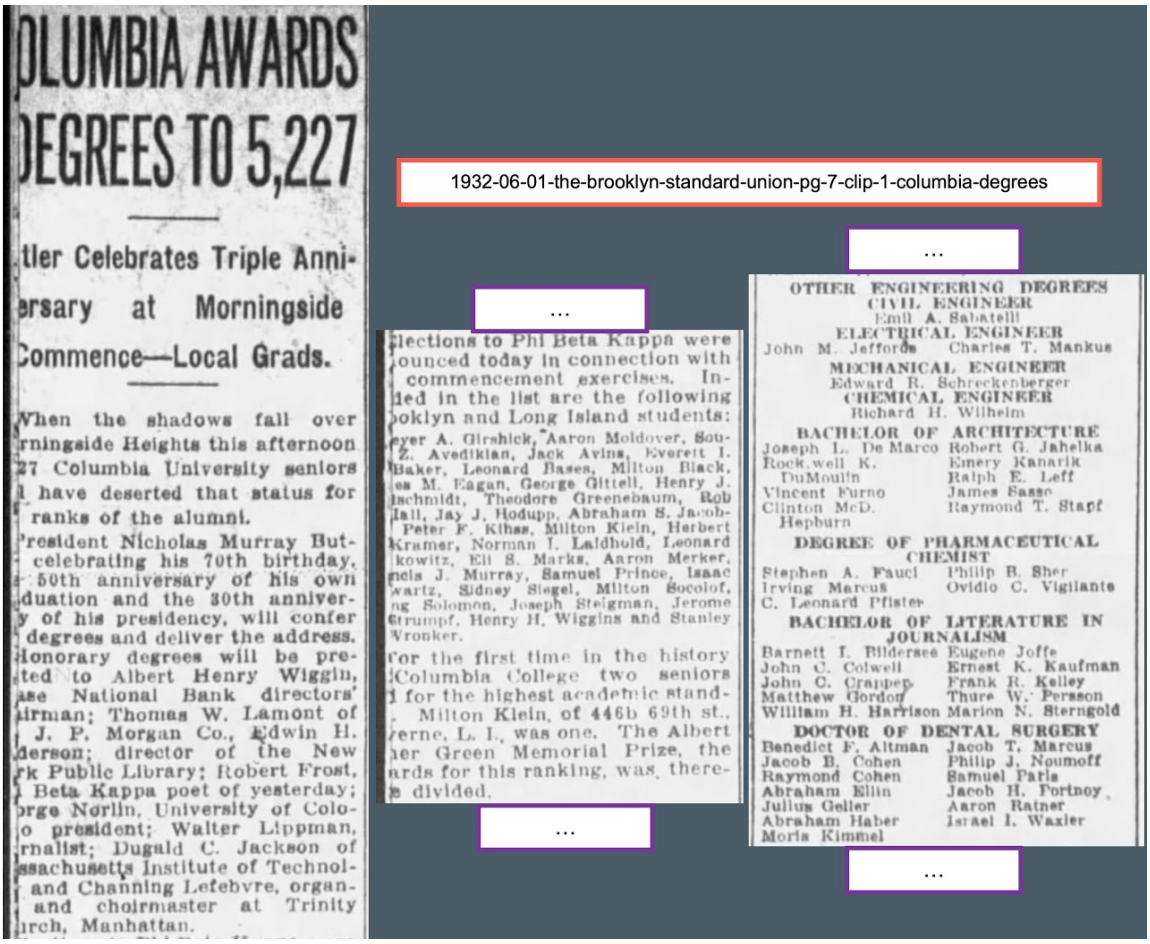
Household Members

First name(s)	Last name	Relationship	Marital status	Sex	Age	Birth year	Birth place
Steven	**Fauci**	**Head**	**Married**	**Male**	**19**	**1911**	**New York**
Eugenie	Fauci	Wife	Married	Female	19	1911	New York
Anthony	Fauci	Son	Single	Male	0	1930	New York

[HS002O][GDrive]

1932 *(June 1)

Full page - [HN00RD][GDrive]



OLUMBIA AWARDS
DEGREES TO 5,227

tler Celebrates Triple Anni-
ersary at Morningside
Commence—Local Grads.

When the shadows fall over
rningside Heights this afternoon
27 Columbia University seniors
l have deserted that status for
ranks of the alumni.
President Nicholas Murray But-
celebrating his 70th birthday,
50th anniversary of his own
duation and the 30th anniver-
y of his presidency, will confer
degrees and deliver the address.
Honorary degrees will be pre-
ted to Albert Henry Wiggin,
ase National Bank directors'
irman; Thomas W. Lamont of
J. P. Morgan Co., Edwin H.
derson; director of the New
rk Public Library; Robert Frost,
Beta Kappa poet of yesterday;
rge Norlin, University of Colo-
o president; Walter Lippman,
rnalist; Dugald C. Jackson of
ssachusetts Institute of Technol-
and Channing Lefebvre, organ-
and choirmaster at Trinity
rch, Manhattan.

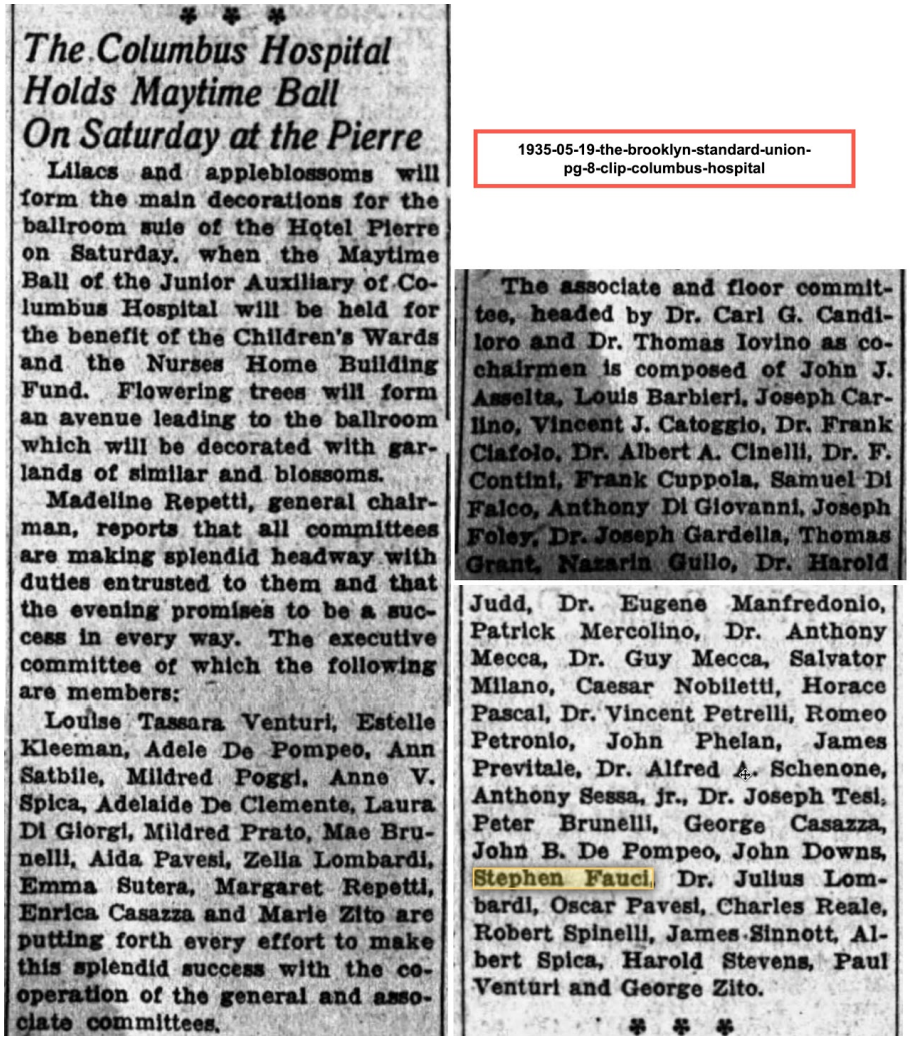
lections to Phi Beta Kappa were
ounced today in connection with
commencement exercises. In-
ded in the list are the following
oklyn and Long Island students:
yer A. Girshick, Aaron Moldover, Sou-
Z. Avedikian, Jack Avins, Everett I.
Baker, Leonard Bases, Milton Black,
es M. Egan, George Gittell, Henry J.
chmidt, Theodore Greenebaum, Rob
all, Jay J. Hodupp, Abraham S. Jacob-
Peter F. Kihss, Milton Klein, Herbert
Kramer, Norman I. Laidhold, Leonard
kowitz, Eli S. Marks, Aaron Merker,
ncis J. Murray, Samuel Prince, Isaac
wartz, Sidney Siegel, Milton Socolof,
g Solomon, Joseph Steigman, Jerome
trumpf, Henry H. Wiggins and Stanley
Vronker.
For the first time in the history
Columbia College two seniors
for the highest academic stand-
Milton Klein, of 446b 69th st.,
erne, L. I., was one. The Albert
ier Green Memorial Prize, the
ards for this ranking, was there-
s divided.

OTHER ENGINEERING DEGREES
CIVIL ENGINEER
Emil A. Sabatelli
ELECTRICAL ENGINEER
John M. Jefford — Charles T. Mankus
MECHANICAL ENGINEER
Edward R. Schreckenberger
CHEMICAL ENGINEER
Richard H. Wilhelm
BACHELOR OF ARCHITECTURE
Joseph L. De Marco — Robert G. Jahelka
Rockwell K. DuMoulin — Emery Kanarik, Ralph E. Leff
Vincent Furno — James Sasso
Clinton McD. Hepburn — Raymond T. Stapf
DEGREE OF PHARMACEUTICAL CHEMIST
Stephen A. Fauci — Philip B. Sher
Irving Marcus — Ovidio C. Vigilante
C. Leonard Pfister
BACHELOR OF LITERATURE IN JOURNALISM
Barnett I. Bildersee — Eugene Joffe
John C. Colwell — Ernest K. Kaufman
John C. Crapper — Frank R. Kelley
Matthew Gordon — Thure W. Persson
William H. Harrison — Marion N. Sterngold
DOCTOR OF DENTAL SURGERY
Benedict F. Altman — Jacob T. Marcus
Jacob B. Cohen — Philip J. Noumoff
Raymond Cohen — Samuel Parla
Abraham Elkin — Jacob H. Portnoy
Julius Geller — Aaron Ratner
Abraham Haber — Israel I. Waxler
Morris Kimmel

[HN00RE][GDrive]

1935 (May 19)

Full page - [HN00RF][GDrive]



The Columbus Hospital Holds Maytime Ball On Saturday at the Pierre

Lilacs and appleblossoms will form the main decorations for the ballroom suie of the Hotel Pierre on Saturday, when the Maytime Ball of the Junior Auxiliary of Columbus Hospital will be held for the benefit of the Children's Wards and the Nurses Home Building Fund. Flowering trees will form an avenue leading to the ballroom which will be decorated with garlands of similar and blossoms.

Madeline Repetti, general chairman, reports that all committees are making splendid headway with duties entrusted to them and that the evening promises to be a success in every way. The executive committee of which the following are members:

Louise Tassara Venturi, Estelle Kleeman, Adele De Pompeo, Ann Satbile, Mildred Poggi, Anne V. Spica, Adelaide De Clemente, Laura Di Giorgi, Mildred Prato, Mae Brunelli, Aida Pavesi, Zella Lombardi, Emma Sutera, Margaret Repetti, Enrica Casazza and Marie Zito are putting forth every effort to make this splendid success with the cooperation of the general and associate committees.

1935-05-19-the-brooklyn-standard-union-pg-8-clip-columbus-hospital

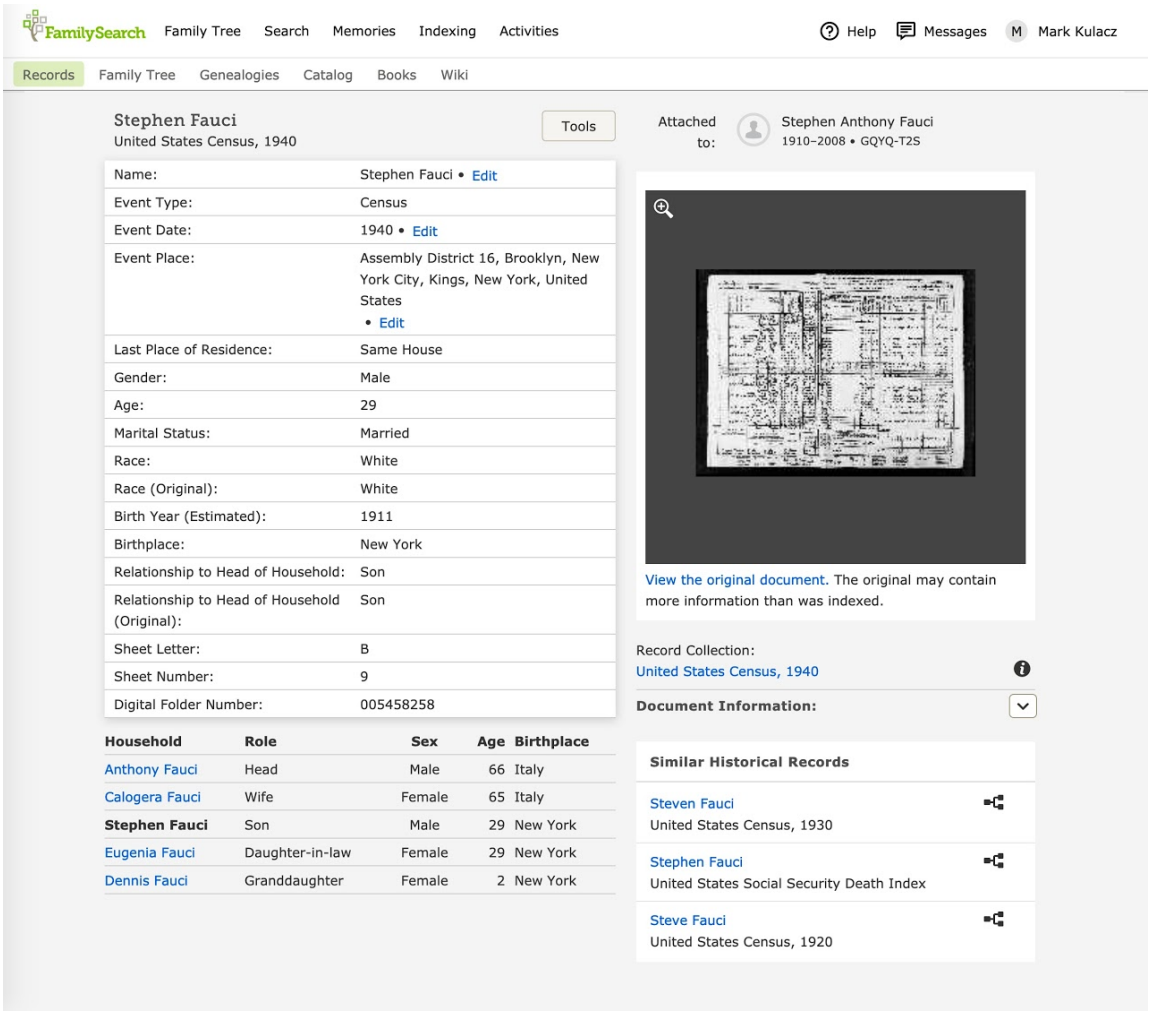
The associate and floor committee, headed by Dr. Carl G. Candiloro and Dr. Thomas Iovino as co-chairmen is composed of John J. Asselta, Louis Barbieri, Joseph Carlino, Vincent J. Catoggio, Dr. Frank Ciafolo, Dr. Albert A. Cinelli, Dr. F. Contini, Frank Cuppola, Samuel Di Falco, Anthony Di Giovanni, Joseph Foley, Dr. Joseph Gardella, Thomas Grant, Nazarin Gullo, Dr. Harold Judd, Dr. Eugene Manfredonio, Patrick Mercolino, Dr. Anthony Mecca, Dr. Guy Mecca, Salvator Milano, Caesar Nobiletti, Horace Pascal, Dr. Vincent Petrelli, Romeo Petronio, John Phelan, James Previtale, Dr. Alfred A. Schenone, Anthony Sessa, jr., Dr. Joseph Tesi, Peter Brunelli, George Casazza, John B. De Pompeo, John Downs, Stephen Fauci, Dr. Julius Lombardi, Oscar Pavesi, Charles Reale, Robert Spinelli, James Sinnott, Albert Spica, Harold Stevens, Paul Venturi and George Zito.

[HN00RG][GDrive]

1940 - Stephen Fauci in NYC Census

Census Form image - [HS002I][GDrive]

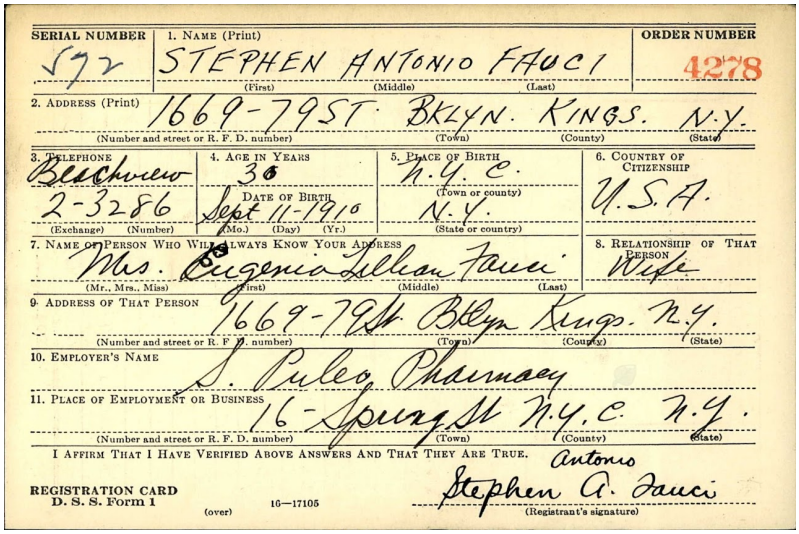
Note that Stephen Fauci identifies his job as a "Druggist" in the "Drug industry"



[HS002H][GDrive]

1940 - Draft card

front -



SERIAL NUMBER 572 | 1. NAME (Print) STEPHEN ANTONIO FAUCI (First) (Middle) (Last) | ORDER NUMBER 4278

2. ADDRESS (Print) 1669-79ST. BKLYN. KINGS. N.Y. (Number and street or R. F. D. number) (Town) (County) (State)

3. TELEPHONE Bensonhurst 2-3286 (Exchange) (Number) | 4. AGE IN YEARS 30 | DATE OF BIRTH Sept 11-1910 (Mo.) (Day) (Yr.) | 5. PLACE OF BIRTH N.Y.C. (Town or county) N.Y. (State or country) | 6. COUNTRY OF CITIZENSHIP U.S.A.

7. NAME OF PERSON WHO WILL ALWAYS KNOW YOUR ADDRESS Mrs. Eugenia Lillian Fauci (Mr., Mrs., Miss) (First) (Middle) (Last) | 8. RELATIONSHIP OF THAT PERSON Wife

9. ADDRESS OF THAT PERSON 1669-79th Bklyn Kings N.Y. (Number and street or R. F. D. number) (Town) (County) (State)

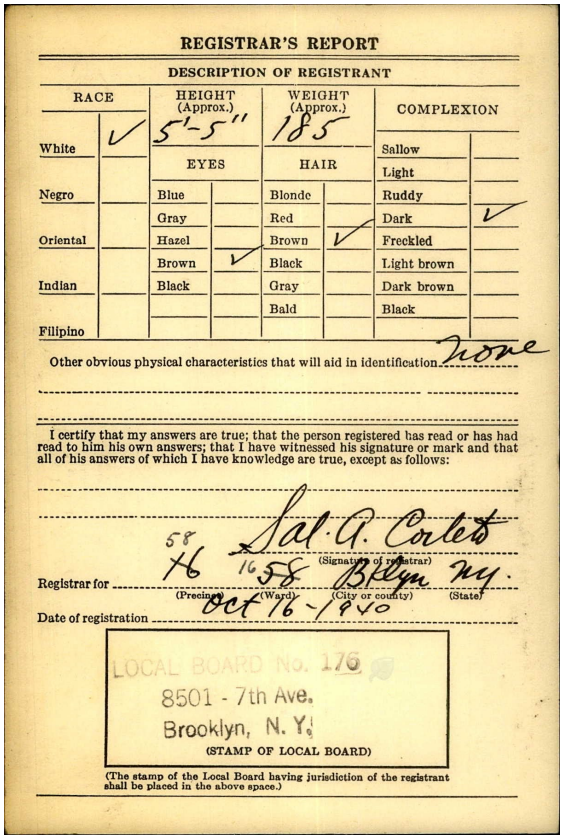
10. EMPLOYER'S NAME S. Puleo Pharmacy

11. PLACE OF EMPLOYMENT OR BUSINESS 16-Spring St N.Y.C. N.Y. (Number and street or R. F. D. number) (Town) (County) (State)

I AFFIRM THAT I HAVE VERIFIED ABOVE ANSWERS AND THAT THEY ARE TRUE. Antonio Stephen A. Fauci (Registrant's signature)

REGISTRATION CARD D. S. S. Form 1 (over) 16—17105

[HG003S][GDrive]



REGISTRAR'S REPORT

DESCRIPTION OF REGISTRANT

RACE		HEIGHT (Approx.)		WEIGHT (Approx.)		COMPLEXION	
White	✓	5'-5"		185		Sallow	
		EYES		HAIR		Light	
Negro		Blue		Blonde		Ruddy	
		Gray		Red		Dark	✓
Oriental		Hazel		Brown	✓	Freckled	
		Brown	✓	Black		Light brown	
Indian		Black		Gray		Dark brown	
				Bald		Black	
Filipino							

Other obvious physical characteristics that will aid in identification None

I certify that my answers are true; that the person registered has read or has had read to him his own answers; that I have witnessed his signature or mark and that all of his answers of which I have knowledge are true, except as follows:

Sal. A. Corleto (Signature of registrar)

Registrar for 58 H 16 58 Bklyn NY. (Precinct) (Ward) (City or county) (State)

Date of registration Oct 16-1940

LOCAL BOARD No. 176
8501 - 7th Ave.
Brooklyn, N. Y.
(STAMP OF LOCAL BOARD)

(The stamp of the Local Board having jurisdiction of the registrant shall be placed in the above space.)

[HG003T][GDrive]

1940 - Building ownership in Brooklyn?

PDF - [HN011V][GDrive]

BROOKLYN BUILDING CHANGES OWNERS

Cash Above $15,000 Mortgage Is Paid for Utrecht Ave. Apartment House

Mollie Serper sold to Peter A. and Stephen A. Fauci for cash above a first mortgage of $15,000 held by the Greater New York Savings Bank the two-story building with three stores and two apartments at 7820 New Utrecht Avenue, Brooklyn. Title insurance was furnished by the City Title Insurance Company on the parcel, which is assessed for $23,000, of which $11,000 is on the 20 by 120 foot plot.

The same firm certified the title for the two-family dwelling at 1059 East Eighth Street, purchased by Morris and Beatrice Lapidus from Ella McCann. The consideration was cash above a first mortgage of $4,400.

Cantasano Brothers, rag dealers, bought through Baffa & Dixon, brokers, the three-story industrial building and the one-family house adjoining, known as 159-61 Twentieth Street. The combined plot is 75 by 100 feet and the valuation for taxation is $17,400.

A client of S. L. Furst Company sold to Harry Hurwitz the three-story business building, 20 by 100 feet, at 4412 Fifteenth Avenue, in an all-cash deal.

All cash also was paid by a client of August R. Fasolino to Katherine V. Garvy for the one-family house at 8786 Bay Sixteenth Street, Bensonhurst, according to Slomka Bros., Inc., brokers. Wingate & Cullen represented the seller.

Michael P. Curnin, Inc. and Olaf Olausen sold for the HOLC the two-family residence with eleven rooms and two baths, 40 by 100 feet, at 638 Eighty-third Street.

The same Federal agency sold to Henry J. Lillienfield for occupancy the ten-room dwelling, 40 by 100 feet, at 1977 East Fourteenth Street, Eugene J. Keely, Inc., acting as broker.

The New York Times
Published: December 6, 1940
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[HN011W][GDrive]

1948 - Niece being married ?

https://www.newspapers.com/image/53869424/?terms=%22peter%2Bfauci%22

1948 (July 09) - Wife mentioned

Full page : [HN00RH][GDrive]

1948-07-09-the-brooklyn-standard-union-pg-9-clip-heat

Contemporary Comment

Heat Seems to Have Spurred Party Pace

By RUTH G. DAVIS
Society Editor

With the arrival of the warm weather, we really thought that the parties in town would slow down, and that all one would want to think of would be the cool breezes of the beach or mountains. However, we were quite wrong. Come what may—of course, meaning weather—parties are with us nevertheless.

The warm weather didn't dim the spirits of a large group of guests who surprised Miss Madeleine Walsh Smith, president and founder of Anthonian Hall, at a party given in her honor by Mrs. Patrick Goodman and her daughter, Miss Elizabeth Goodman, in a private dining room at Michel's.

There were well over 100 intimate friends present to join with the Goodmans in paying honor not only to Miss Smith as a friend of the blind, but as their friend.

Miss Smith felt as if she were having a graduation party with the many floral tributes she received and among them was an exquisite corsage of orchids, which she wore.

MISS GOODMAN PRESENTED Madeleine with a gold link bracelet with a large heart pendant which Mrs. Goodman said had a particular significance. The bracelet was a gift of the hostess.

Harry Donaghy entertained with baritone solos accompanied by Mrs. Donaghy. Special guests at the party were Monsignor J. Jerome Reddy, the Very Rev. Peter Kelaher, the Rev. Andrew Ansbro, Dr. Marcus Hankinson, Daniel Connolly, Miss Mary A. Kennedy, Miss Smith's mother and sister, Mrs. John Smith and Miss Gladys Smith, and her aunt, Miss Margaret Walsh and Miss Marian Conmy.

As thoughtful hostesses, the Goodmans made plans to keep the memory of the party alive for Miss Smith by having a recording made of a message from each guest.

THE OTHER SURPRISE PARTY was for Miss Gloria Fauci, daughter of Dr. and Mrs. Peter A. Fauci of 225 Avenue P, who was honored at a shower by Mrs. Angelo Scopellito of 1612 W. 5th St. The bride-elect, who will be married to Michael A. Meloni, wore a white and black harem-draped silk print. Mrs. Fauci was wearing a green and gold print frock. The gifts were very handsome and included household items such as electric equipment, etc. The buffet supper was served at a table decorated with pink and white parasols and dolls representing the bride and her bridal party.

Among the guests were Mrs. Sam B. Fatta, Miss Mary Paterno, Mrs. George W. Acritelli, Mrs. Jack Colelli, Mrs. Anthony Cannonito, Mrs. John Genova, Mrs. Jack LaBarbara, Mrs. Joseph Ciaccio, Miss Gertrude Schwartz, Mrs. Peter Ciaccio, Miss Jeanette Paterno, Miss Mary Prisco, Mrs. John Mayo, Miss Emma Mayo, Mrs. Joseph Esposito, Mrs. Philip Chiola, Mrs. Stephen A. Fauci, Mrs. Amadea Giorno, Mrs. Silvio Zerbo, Mrs. Alfred Puglisi, Mrs. William Marcellino, Mrs. John Casana, Miss Josephine Paterno, Mrs. Sam Latella, Mrs. Peter Fauci, Mrs. William R. Benedict Jr., Miss Mary LaBarbara, Mrs. Walter Ruffer, Mrs. Albert Scopellito, Mrs. Salvatore Traina, Mrs. John Biondo, Miss Olga LaBarbara, and Miss Mary LaBarbara.

[HN00RI][GDrive]

1952 Nov 29 - Attended testimonial

Full newspaper page : [HN011X][GDrive]

THE TABLET, SATURDAY, NOVEMBER 29, 1952

GIVEN TESTIMONIAL

J. WILLIAM HOPE

William Hope Honored By Accountants Guild

A testimonial dinner to J. William Hope, 1951-1952 president of the American Institute of Accountants and prominent Catholic of Bridgeport, Conn., was given by the Catholic Accountants Guild of the Diocese, the only organization of Catholic accountants in the United States, at the Columbus Club Tuesday.

Mr. Hope is well known for his leadership in charitable, civic and educational activities in Bridgeport, and at one time served as treasurer of the State of Connecticut. As president of the American Institute of Accountants he achieved the highest distinction in the accounting profession, the leadership of the national association of certified public accountants.

founder, presented a scroll to Mr. Hope in behalf of the Guild which included the following citation: "Mindful of the command of Almighty God that His creatures upon which He bestows varying talents and aptitudes shall develop and utilize them to the fullest extent in the service and to the honor and glory of God, we commend J. William Hope, a true Catholic gentleman in his life and in his work, for his continuing contributions to and his professional endeavors where his light shines before men."

Among those assembled to honor Mr. Hope were: Charles H. Towns, president, and Simon Loeb and Henry A. Horne, past presidents of the New York State Society of Certified Public Accountants; Henry E. Mendes and Russell G. Rankin, prominent New York accountants; and the presidents of the four other Catholic professional guilds of the Diocese: Dr. Louis P. Breglio, physicians; Andrew P. Backus, lawyers; Dr. Michael N. Marty, dentists; Stephen A. Fauci, pharmacists; and Rev. Matthew P. Kelly of Our Lady of Good Counsel parish, Brooklyn, moderator of the Guild since its inception in 1947.

Gustave A. Reh, Jr., president of the Accountants Guild, announced the first annual memorial Mass for deceased members will be held at St. Boniface Church, Brooklyn, Tuesday, Dec. 2, at 12:10 p.m.

[HN011Y][GDrive]

1952 - https://www.newspapers.com/image/576320470/?terms=fauci%2Bpharmacist

1953 - Mrs stephen Fauci

https://www.newspapers.com/image/58189087/?terms=%22stephen%2Bfauci%22

1953 (Catholic Pharmacists Guild)

Full newspaper page : [HN0122][GDrive]

The Tablet (Brooklyn, New York) · 31 Oct 1953, Sat · Page 141

Catholic Pharmacists Guild

The Catholic Pharmacists Guild of the Diocese of Brooklyn was formed in January, 1952. One of its purposes is to help guide Catholic pharmacists morally in pursuit of their profession. Other worthy purposes are: to help foster and maintain high ideals in the vocation of pharmacy; second, to promote better understanding and brotherly love among pharmacists and, third, to pledge themselves a) to refuse to sell contraceptive devices, b) to refuse to sell indecent literature and to abide by the norms of the Decent Literature Guide and c) to make an annual Day of Resollection and to participate in other spiritual activities.

The Guild is under the auspices of the Diocesan Hospital Association. It embraces all Catholic pharmacists of the Diocese, including hospital pharmacists, students of pharmacy, salesmen and members of pharmaceutical concerns. Rev. Alfred A. Varriale, of St. Bernadette's Church, Brooklyn, is the moderator. Stephen A. Fauci is president.

[HN0123][GDrive]

1954 (Oct 02)

Full newspaper page : [HN011Z][GDrive]

The Tablet (Brooklyn, New York) · 02 Oct 1954, Sat · Page 12

CONVENTION HELD BY PHARMACISTS

International Meeting Regrets Lack of U.S. Representation

The biennial convention of the International Federation of Catholic Pharmacists, held in Saragossa, Spain, Sept. 4-11, regretted that the Americas and especially the United States were not represented, it was revealed here this week by Gerald Nolan, delegate from Australia.

Pope Pius sent his Apostolic Blessing to the meeting and the Archbishop of Saragossa sat in on all the sessions, which considered the moral and ethical problems of pharmacists. J. L. Leinstere of Belgium is president of the group; G. Parat, secretary; Madame M. Dureaux, treasurer; and Father Dubois, O.P., moderator. Twelve nations were represented.

Mr. Nolan, who is on his way home at the completion of a six-month study of pharmacy throughout the world, was appointed by the convention to try to arrange for American representation at the next meeting in Germany in 1956.

While in New York, Mr. Nolan met with Dr. John L. Dandreau, dean of the School of Pharmacy at St. John's University, who told him of the local Catholic Pharmacists' Guild, of which Stephen A. Fauci of 8302 13th Ave., Brooklyn, is president and Rev. Alfred A. Varriale of St. Bernadette's Church is moderator.

Dr. Dandreau promised that the local guild, which is currently reorganizing and seeking new members, would consider the invitation to the convention in 1956.

Mr. Nolan, who said the Australians will never forget the debt of gratitude they owe the United States for the assistance of American troops during the dark days of World War II, asserted that the Catholic Pharmaceutical Guild of Australia is quite eager to establish liaison with its American counterpart.

[HN0120][GDrive]

1976 (Sep 09) - Brother Paul A Fauci dies

https://www.newspapers.com/image/480726700/?article=c96d3ceb-dd1a-4820-b4b3-8ecc6cab271c

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2001 (Nov 10) - https://www.newspapers.com/image/378199940/?terms=fauci

2002 (Nov 20)

Full page - [HN00RL][GDrive]

Dr. Alfred J. Restaino

Of **Wilmington, DE** died November 19, 2002 of ALS (Lou Gehrig's disease.

Dr. Restaino was born in Brooklyn, NY February 18, 1931 to the late Clement and Cecilia Orlando Restaino. He received his BS degree magna cum laude from St. Francis College of New York, and his MS and PhD in physical and polymer chemistry from Brooklyn Polytech Institute, now New York Polytechnic University. He credits his 2 close friends and mentors, Stephen A. Fauci and Dr. Donald Metz as having a significant impact on his life and career.

At his 1980 retirement, he was director of corporate research and development for ICI Americas. Dr. Restaino was credited with over 150 publications and 50 patents. Some of his patents became successful commercial products in oil recovery, water pollution and high performance plastic resins and polymers. During the 1960s, he served as a member of the Atomic Energy Commission. Dr. Restaino served as the executive director of the office of Science and Technology to Governor Mike

2002-11-20-the-news-journal-wilmington-pg-b-5-clip-restaino

Castle and was instrumental in seed funding for the Center for Composites Material Research at the University of Delaware, where he also served as adjunct professor of physical chemistry in the 1970s.

He is survived by his wife of almost 50 years, Raffaela B. Sessa Restaino; 4 sons, Stephen, Alfred, Peter and Mario; and 1 daughter, Lisa Restaino Flaherty; their spouses; 13 grandchildren; and 3 brothers, Fred, Neil and Clem.

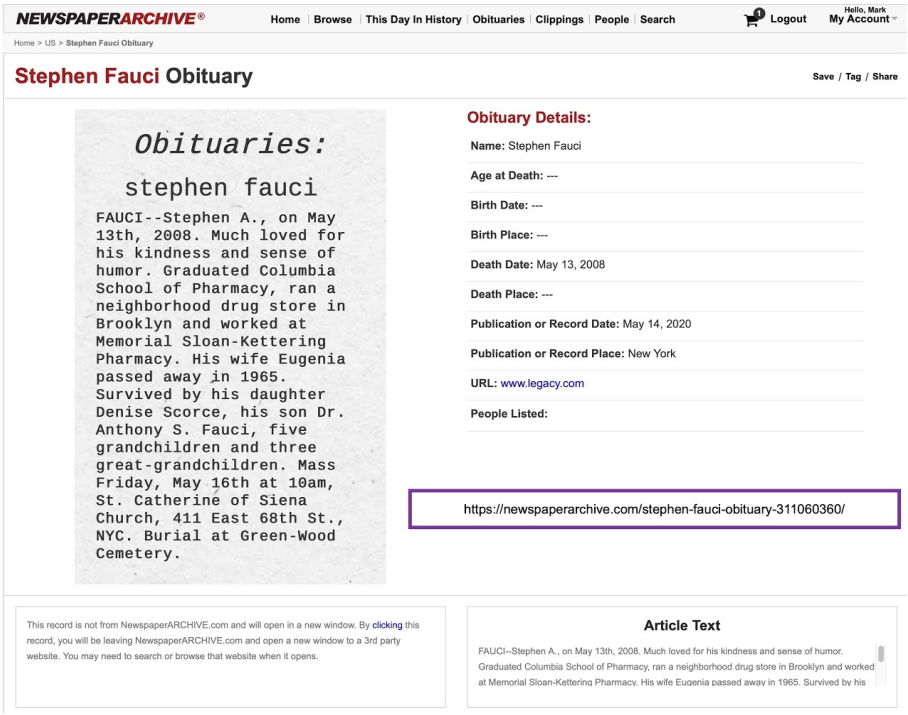
A viewing will be held from 6-9 pm on Thursday, November 21 at the MCCRERY MEMORIAL FUNERAL HOME, 3924 Concord Pike, Wilmington. A Mass of Christian Burial will be offered at 10:30 on Friday, November 22 at St. Mary Magdalen Catholic Church, Concord Pike & Sharpley Rd., Wilmington. Interment will be in St. Joseph's on the Brandywine Cemetery, Wilmington.

Condolences may be sent to www.mccreryfuneralhome.com

[HN00RM][GDrive]

2008 (May 13) - Passing of Stephen Fauci

FAUCI--Stephen A., on May 13th, 2008. Much loved for his kindness and sense of humor. Graduated Columbia School of Pharmacy, ran a neighborhood drug store in Brooklyn and worked at Memorial Sloan-Kettering Pharmacy. His wife Eugenia passed away in 1965. Survived by his daughter Denise Scorce, his son Dr. Anthony S. Fauci, five grandchildren and three great-grandchildren. Mass Friday, May 16th at 10am, St. Catherine of Siena Church, 411 East 68th St., NYC. Burial at Green-Wood Cemetery.

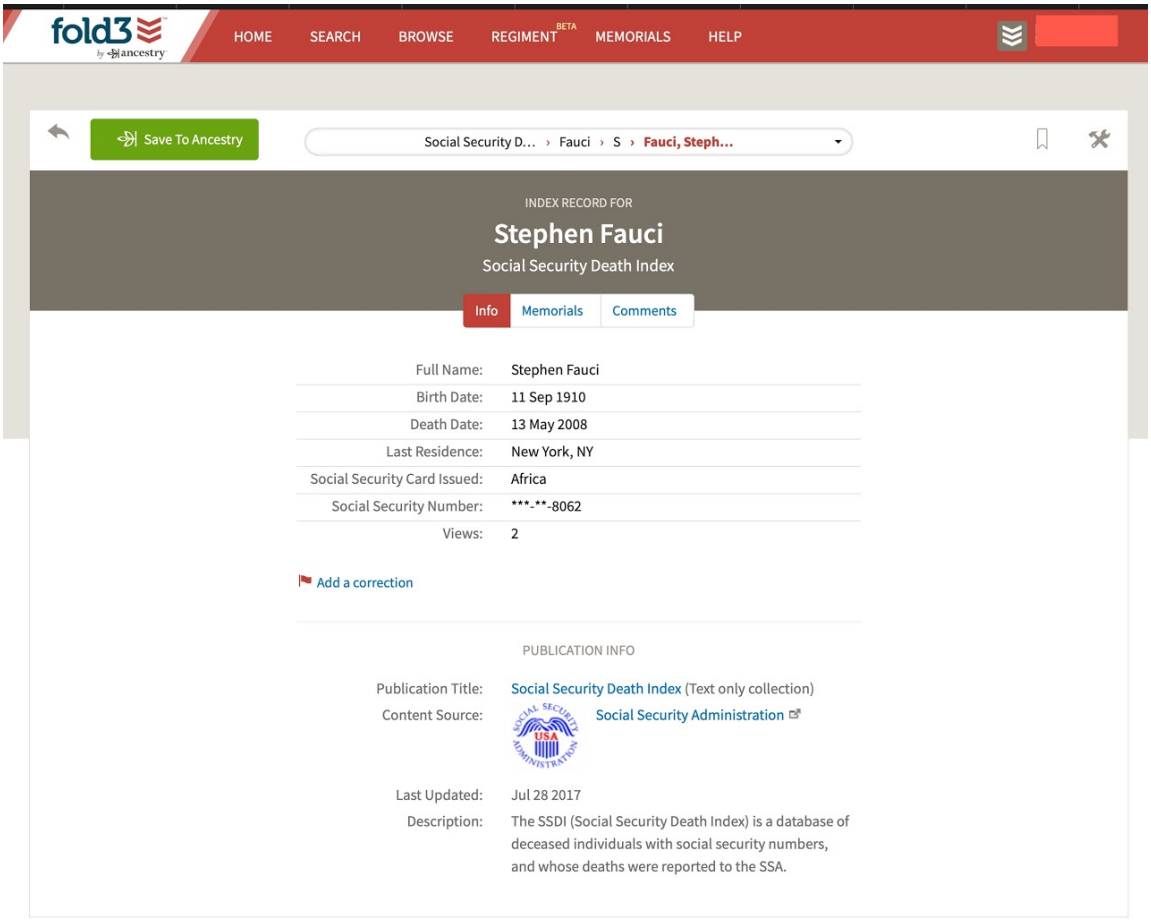


[HN0121][GDrive]

Additional Evidence

Stephen Fauci - Social Security Card issued in Africa ?

2020-04-fold3-social-seurity-death-card-record-stephen-fauci



[HL003R][GDrive]

1988 - daily news article

Full page - [HN00RN][GDrive]

Brooklyn boy grew to be Bush's hero

1988-10-16-the-daily-news-new-york-pg-45-clip-fauci

To Vice President Bush he's a hero, and Dr. Anthony Fauci sure is a hero, no doubt about that. But wasn't Tony Fauci the kid that Patsy Barilla used to send to the candy store to fetch him a quart of ice cream? As a kid in Brooklyn, young Tony was a good ballplayer, an altar boy and a top student, and if memory serves he was the kid, or one of the kids, who used to make the run to the candy store for Patsy's ice cream back in the old neighborhood on 13th Ave. in Dyker Heights.

"I think of Dr. Fauci, top doctor at the National Institutes of Health, working hard doing something about research on this disease of AIDS," Bush replied when asked during the presidential debate the other night to name persons he considered to be inspirational heroes in American life today.

Neighborhood guys got a lift out of hearing such a nice tribute paid to one of their own. Hey, a Brooklyn boy got a mention to the whole nation watching on TV. Bush, of Andover and Yale, looks up to Tony Fauci from St. Bernadette's, who fetched Patsy's ice cream on hot summer nights in Dyker Heights.

Dr. Anthony Fauci, 47, heads the Office of Aids Research, established last April to seek a vaccine against the AIDS virus. His groundbreaking discoveries about the human immune system won him the U.S. Public Health Service Distinguished Service Medal in 1984, in addition to numerous other awards. He routinely works 15-hour days on a personal mission to defeat deadly AIDS.

Tony grew up over his father's pharmacy, on the corner of 83d and 13th, across from the heart and soul of the neighborhood, the local Catholic parish, St. Bernadette's. The pastor of St. Bernadette's was Patsy Barilla. Oh, to those who stand on formality, he was Msgr. Pasquale Barilla. But nobody except possibly Pope Pius XII ever called him that. To everybody in the neighborhood he was Patsy. He was 5-feet-6 and weighed 300 pounds. He sat outdoors on a big chair in front of the rectory at night and smoked cigarets and gabbed with passersby and sent local kids like Tony Fauci to the candy store to buy him ice cream. Patsy Barilla was a legend in the old neighborhood, and now one of his former errand boys is George Bush's hero. Life sure takes some interesting twists.

Msgr. Al Varriale and Joe Torregrossa and Frankie Dee and others from the old neighborhood still remember Tony Fauci, George Bush's hero, with affection and respect. Though small, Tony was an excellent basketball player. "A real pepperpot, very kinetic, good at stealing the ball, quick as a wink," says Msgr. Varriale, coach of the parish teams in the 1950s, now retired pastor of nearby Our Lady of Guadalupe. Joe Torregrossa, who has lived more than 60 years on 82d and 14th, was the parish baseball coach. Tony was his shortstop. "Tony was always a good boy, and a great competitor," remembers Joe. "He was never late for practice."

The Faucis were a model family. Mr. Fauci and Father Al formed the Catholic Pharmacists Guild, a spiritual and professional association. Mrs. Fauci was active in the parish Rosary Society. Tony's sister helped out afternoons in the rectory. The family went to church together. Everyone in the neighborhood liked and respected the Faucis. They were the kind of people who made Brooklyn the Borough of Homes and Churches.

IN THE AUGUST ISSUE of Current Biography magazine, Dr. Anthony Fauci got a glowing write-up for his tireless work in AIDS research. "You can't match the excitement of knowing you're doing something for humanity," he says in the piece. Asked his personal motto, he replies, "Always strive for excellence." Dr. Fauci is a husband and father now, and a brilliant physician, but he remembers where he came from, saying, "I had a very happy, typical New York childhood." He fetched Patsy Barilla's ice cream, and he grew up to be George Bush's hero.

[HN00RO][GDrive]

1989 - "In their own words" - Interview by National Institute of Health of Dr. Anthony Fauci

Source - [HG003K][GDrive] and [HG003L][GDrive]

This is an interview with Dr. Anthony S. Fauci, Director of the National Institute of Allergy and Infectious Diseases), in his office at the National Institutes of Health, in Bethesda, Maryland, on March 7, 1989. The interviewer is Dr. Victoria Harden, Director of the NIH Historical Office.

Harden: Dr. Fauci, could you begin by describing the home in which you grew up, your parents, your grandparents and siblings; what you enjoyed doing as a boy, and your elementary and secondary education?

Fauci: I was born in Brooklyn, New York. My grandparents on both my mother's and father's side were born in Italy, except for my grandfather on my mother's side, who was born in Switzerland. They came to the United States at the end of the nineteenth century. **Both my parents were born in New York City and went to public schools in New York City. My father, Stephen Fauci, graduated from the College of Pharmacy, Columbia University, as a pharmacist. My mother, Eugenia Fauci, went to Brooklyn College and Hunter College. They married very young, when they were eighteen years old, and went to college after they were married, while they were still growing up.** I went to the neighborhood parochial schools in New York City. I was brought up in a Catholic grammar and high school environment. I went to Our Lady of Guadeloupe Grammar School in Brooklyn and to Regis High School, a Jesuit high school in Manhattan. I had the interesting experience of having to take a bus and three separate subway trains to get from my home in Brooklyn to high school in Manhattan. I believe that my childhood was a typical, very happy, and very active growing-up period in New York City during the early forties. I was born in December of 1940 in New York City and grew up as a child in the World War II and post World War II years.

My major interest was sports. I lived in a very sports-oriented neighborhood. We used to play basketball from the beginning of the basketball season to the end, baseball throughout the spring and the summer, and then basketball and football again in the winter. My sister, who is three years older than I, also went through the same sort of school system, same grammar school I went to, went to an all-girls' Catholic high school, and ultimately St. John's University in New York City. She was a teacher before she stopped to raise her family.

[...]

Harden: How did a young man who was devoted to sports decide to become a physician?

Fauci: I don't think I can tell you the precise time when I knew that I wanted to be a physician. It was very early on. I know that in high school, when I was deciding the options I would have in college, there really was no question that I was going to be a physician. I went to Regis High School, a Jesuit high school, which had a major impact on my career even up to today. It was a highly academic, exclusive scholarship school. Students from every parochial grammar school in all the five boroughs of New York competed to receive admission, making it highly competitive, and the courses were extraordinary. They were very heavily weighted towards the classics. We took four years of Greek, four years of Latin, three years of French, ancient history, theology, etc. When I was at Regis, it seemed that the very bright people in school really had just a few options. If you wanted to go into medicine, that was fine. The other choices were law, science, engineering, or careers like that. My interest in medicine stems from my keen interest in people, in asking questions and solving problems.

Also, I think there was subliminal stimulation from my mother, who, right from the very beginning when I was born, wanted me to be a physician. She never really pressured me in any way, but I think I subtly picked up the vibrations that she wanted very much for me to be a physician. When the time came to go to college, I went to Holy Cross College, which has an extraordinarily fine reputation for premedical work. They do it in a very interesting way, at least it seemed so back in the fifties. I went to Holy Cross in 1958 and graduated in 1962. At that time, it was not unusual for premedical students to take a very strong classics course in premed. The title of my premed course was “A.B. Greek Premed,” which was a classics course very heavily weighted with philosophy–32 credits of philosophy, plus French, Greek and Latin. At the same time we took the minimal scientific courses to get us into medical school. The students did very well, getting into the best medical schools in the country but with a very strong liberal arts background. The liberal arts background is something that was very much a part of my family because virtually all of my relatives on my mother's side–her father, her brother, and her sister's children–are all artists. They are successful people who made their living through the arts, usually painting. I was always and still am very interested in art, but I am somewhat of a frustrated artist because I certainly don't have the time, and probably not the talent either, to pursue it. I still am very interested in the classics. They were a very important part of my education.

Harden: Would you evaluate the broad, liberal arts, humanistic training and your Catholic upbringing in terms of how they have influenced your performance as a physician and as a researcher? I'm thinking of things like your world view, your interaction with patients, and your approach to ethical questions.

Fauci: You can't separate very well natural abilities in a vacuum from your training, or from the combination of factors that have an influence on how you perform. But certainly, the humanistic education that I had has had a very positive influence on my ability to deal with sensitive situations with people. I credit very much the Jesuit training in precision of thought and economy of expression in solving and expressing a problem and in the presentation of a solution in a very succinct, accurate way. This has had a major, positive influence on the fact that I enjoy very much and am fairly good at being able to communicate scientific principles or principles of basic and clinical research without getting very profuse and off on tangents. This is something that was drilled into us from the very early days in high school.

Harden: Did you continue your interest in sports in college?

Fauci: My interest in it continued, but not my active participation. In high school, I played competitive sports–I played basketball at a time when you could play basketball without being 6'9“ at the shortest. I don't think I would have any chance of playing basketball if I were in high school now. I enjoyed basketball, was the captain of the team and had a very successful time in high school. Alongside it, I played baseball. These were my two major sports. When I went to college, I continued to play a modest amount of intramural sports, but due to the nature of the premedical curriculum at Holy Cross, it was very difficult to be very active in sports. I did not play competitive basketball or even baseball at the college level, since they had very good teams. I could not play as much as I wanted to because the demands of the curriculum were such that you really had to put a lot of time into your studies.

Harden: Could you talk about your experiences at Cornell University Medical College and comment on how actually becoming a doctor compared to your earlier conceptions of the profession?

Fauci: This might be interpreted by some as being paradoxical, but I absolutely loved medical school. It certainly was demanding, but it was one of the most exciting experiences of my life. The exponential curve of knowledge accrual in medical school was so great that it completely overshadowed the fatigue and the stress factors and the other problems that are so commonly seen in medical school. Certainly, medical school training was very stressful, but unquestionably it ranked as one of the happiest periods of my life, because I was learning so much. The later years in medical school and in health care training and what had been my previous idealistic views about medicine did fit together. There really was the opportunity to apply a very basic scientific framework of knowledge to something that is very human, very personal, with all of the sensitivities associated with dealing with human beings. Here I had the advantage of the humanistic training that I had received earlier on in high school and in college. This is a nice dichotomy of medical school, and that's why I think that there is no question that I was meant to be a physician and a physician-scientist. I can't imagine in my wildest dreams doing anything else that would make me as happy as this makes me. I enjoy the polarity. There are strict scientific principles that have to be adhered to in medicine. At the same time a humanistic touch is needed in dealing with people. They have to be combined. You have to combine social aspects, ethical aspects, personal aspects with cold, clean science. It is the art of the physician to put them together in the care of a patient, in the development of a protocol for a disease, the diagnosis or treatment of a problem. This combination exists in every aspect of patient-involvement.

Harden: Who influenced you the most during medical school, especially in your decision to go into immunology?

Fauci: The people who influenced me most in medical school are different from those who influenced my decision to go into immunology. Taking medical school first: My heroes were the strict clinicians of the New York Hospital/Cornell Medical Center. They were and still are in so many respects the real heroes. My teachers, whom I saw on the wards as a student and during my internship and residency, were people whose entire lives were devoted to clinical medicine. They reached such levels of expertise in patient care, diagnosis, and the delivery of patient care that they were really super stars. I tried to emulate them and make myself as good a clinician as I possibly could be. They provided a great inspiration. I think that it is very important for a young medical student to have a role model. There were several of them around at the time.

The reasons I went into immunology and research in general were due to an unusual situation. I left Cornell and went into my internship and residency in 1966. That was at the exponential phase of the Vietnam War, and every single physician went into military service. I can remember very clearly when we were gathered in the auditorium at Cornell early in our fourth year of medical school. Unlike today, we had only two women in the class and seventy-nine men. The recruiter from the Armed Forces came there and said, “Believe it or not, when you graduate from medical school at the end of the year, except for the two women, everyone in this room is going to be either in the Army, the Air Force, the Navy or the Public Health Service. So, you're going to have to take your choice. Sign up and give your preferences.” I had heard about the NIH and the opportunity there. At the time, the NIH was just blossoming, and everyone who had any role in academic medicine spent some time at the NIH. So I put down Public Health Service as my first choice, and then the Navy. Essentially, I came down to the NIH because I didn't have any choice. I was very lucky because I knew that it was a phenomenal scientific opportunity.

When I was trying to decide what laboratory to go to, some of my advisers at Cornell suggested very strongly that I pursue the field of immunology, since I had developed an interest in immunology in medical school. I had done some projects during the summer and had worked for a period with Dr. Marvin Schlesinger, who was the chief of gastroenterology division of the Department of Medicine. I also had worked with [Dr.] Graham Jeffries and [Dr.] Walter Rubin. The project I did as a student turned out to be a successful project. I was lucky, since that doesn't usually happen when you have a student project. Because of this research, I applied for the National Institute of Allergy and Infectious Diseases. It so happened that Dr. Schlesinger knew Dr. Sheldon Wolff at the NIH, and I came down to the NIH for an interview. I was interviewed by Dr. Wolff, and I immediately fell in love with the man. He was just my kind of person–intellectually and personally. I was accepted by Dr. Wolff right off. At the end of my residency, I came down to the NIH to work in the National Institute of Allergy and Infectious Diseases with Dr. Wolff. Over the years, even after he left the NIH, he emerged as the major mentor–personal and scientific–in my life. There have been a number of other individuals whom I have come into contact with who have had a major influence on me, but I think that Dr. Wolff clearly stands out as the person who made the greatest impact on my career.

[...]

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https://vocal.media/longevity/the-family-history-of-dr-anthony-fauci

The Family History of Dr. Anthony Fauci

by BRADLEY GREENLAND 2 days ago in HUMANITY

Doctor Fauci descends from Italian Immigrants

BITCHUTE @Housatonic YOUTUBE @HousatonicLive ODYSEE @Housatonic BRIGHTEON @Housatonic

Housatonic

Dr. Anthony Stephen Fauci (born 1940)

Wikipedia Anthony Fauci

Born -

Parents - Father is Stephen Fauci (born 1910) ;

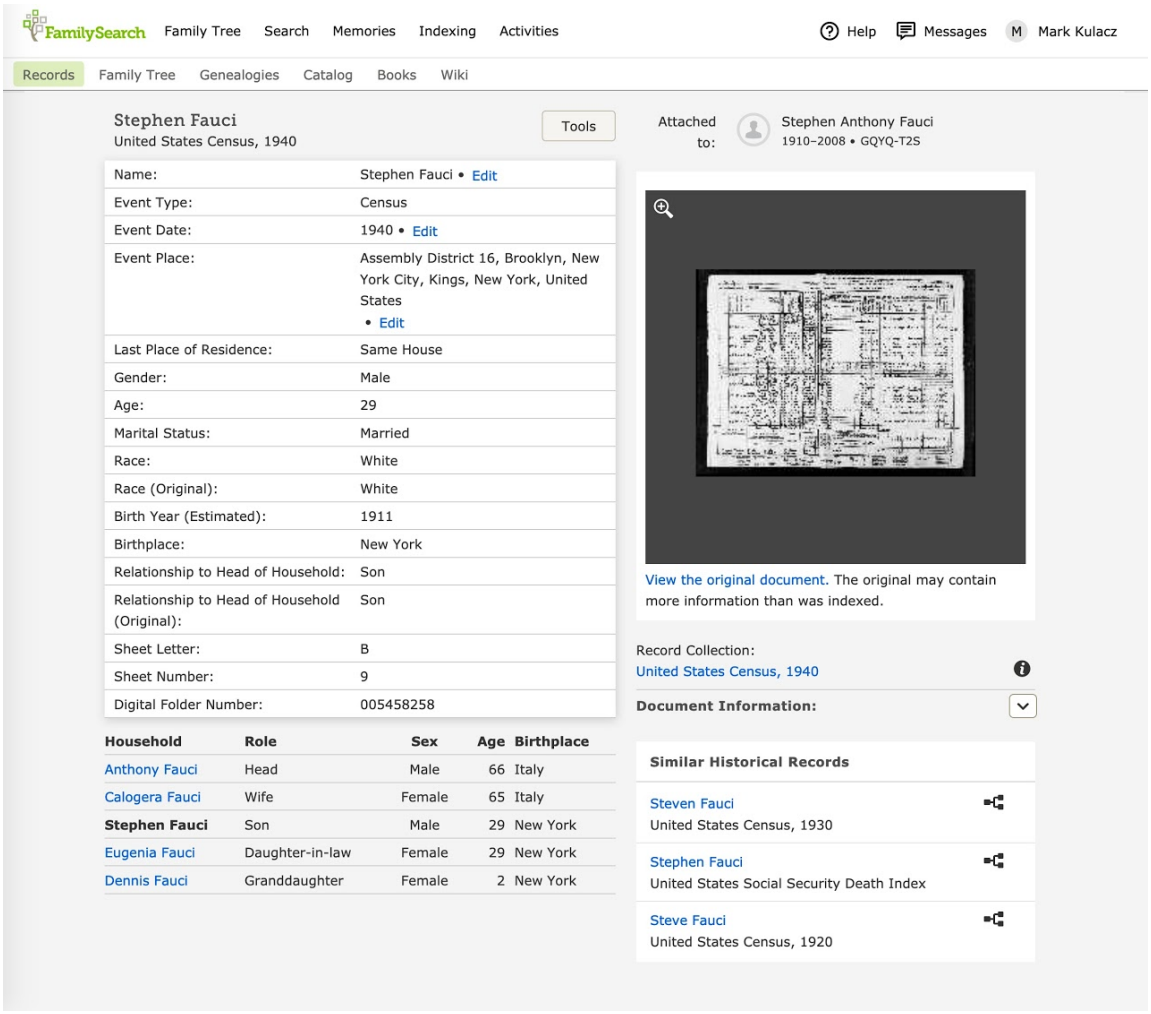
ASSOCATIONS

- Dr. Walter Ian Lipkin (born 1952) ([HK0050][GDrive] : *"Lipkin has earned the reputation of a "master virus hunter" for to his speed and innovative methods of identifying new viruses, and has been lauded by National Institute of Allergy and Infectious Diseases director [**Dr Anthony Stephen Fauci (born 1940)**]. "*)

1940 - Stephen Fauci in NYC Census

Census Form image - [HS002I][GDrive]

Note that Stephen Fauci identifies his job as a "Druggist" in the "Drug industry"



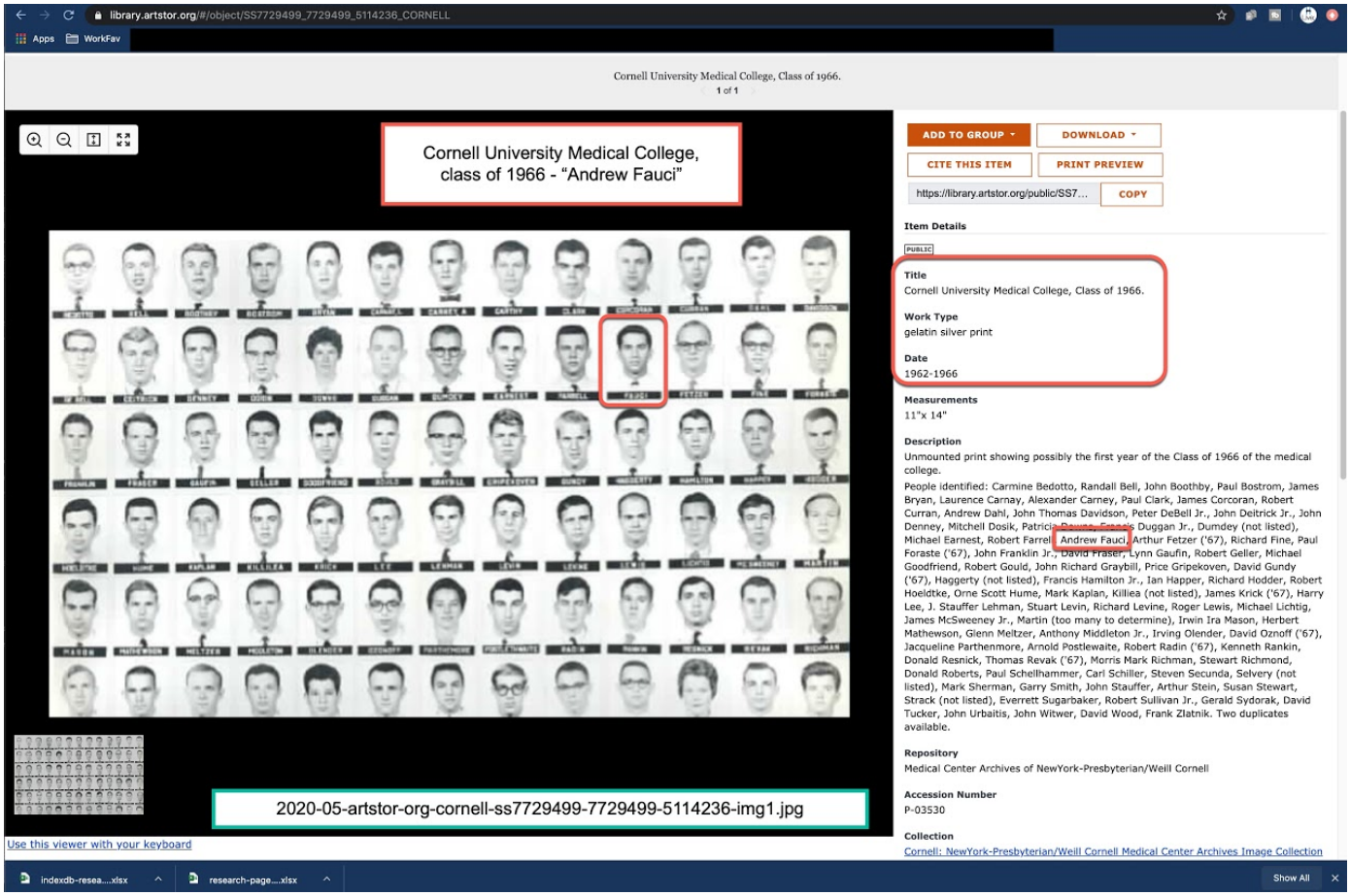
[HS002H][GDrive]

1962 (June 13) - Graduation from Holy Cross (Jesuit college)

Full page - See [HN00RZ][GDrive]

1966 - Graduation from Cornell Medical

See [HE001X][GDrive]



1979 (Aug 2) - https://www.newspapers.com/image/371309006/?terms=fauci

1979 - https://www.newspapers.com/image/255537162/?terms=fauci

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1982 (oct) - https://www.newspapers.com/image/510555869/?terms=%22anthony%2Bfauci%22

1982 (Nov) - https://www.newspapers.com/image/33542984/?terms=%22anthony%2Bfauci%22

1982 https://www.newspapers.com/image/437227429/?terms=fauci

1983

https://newspaperarchive.com/eau-claire-leader-telegram-may-06-1983-p-2/

1986 (July 03)

Full page - [HN00RX][GDrive]

Dr. Anthony Fauci, director of the National Institute of Allergies and Infectious Diseases.

AIDS funding will finance drug-testing centers in U.S.

By JAN ZIEGLER
UPI Science Writer

WASHINGTON (UPI) — The largest single chunk of AIDS treatment research money in the fiscal 1986 budget — $20 million — is going to 14 medical centers to test drugs that may fight the virus, government researchers say.

The centers will be able to begin immediately testing six drugs that may fight the deadly acquired immune deficiency syndrome virus, Dr. Anthony Fauci, director of the National Institute of Allergy and Infectious Diseases, said at a news conference.

"With this coordinated approach we will be able to quickly identify therapies that show early or dramatic effects, be they beneficial or harmful," Fauci said at a news conference with other top government public health officials.

The centers that won the contracts are at Harvard, Johns Hopkins, New York and Stanford universities; the universities of Miami, Pittsburgh, Rochester, Southern California and Washington; the University of California at Los Angeles, at San Diego and at San Francisco; Memorial Sloan-Kettering Cancer Center and the University of Texas M.D. Anderson Hospital and Tumor Institute.

Total first-year cost of the program is estimated at $20 million, Fauci said — the largest single chunk of AIDS treatment research money in the budget.

The government has earmarked $100 million across five years for the program, with the total for treatment research being spent this year at $52 million, officials said.

Fauci's institute, with other branches of the National Institutes of Health, will continue to award research grants to other institutions. Scientists there will be expected to coordinate their research with the new units, he said.

An estimated 3,000 patients are currently enrolled in AIDS drug tests, Fauci said. About 1,000 will be enrolled in the new treatment units and there could be some overlap between the programs.

The units will test drugs on patients with full AIDS and ARC, or AIDS-related complex, a milder set of symptoms that in some patients leads to the virus.

[HN00RY][GDrive]

1988 - daily news article

Full page - [HN00RN][GDrive]

Brooklyn boy grew to be Bush's hero

1988-10-16-the-daily-news-new-york-pg-45-clip-fauci

To Vice President Bush he's a hero, and Dr. Anthony Fauci sure is a hero, no doubt about that. But wasn't Tony Fauci the kid that Patsy Barilla used to send to the candy store to fetch him a quart of ice cream? As a kid in Brooklyn, young Tony was a good ballplayer, an altar boy and a top student, and if memory serves he was the kid, or one of the kids, who used to make the run to the candy store for Patsy's ice cream back in the old neighborhood on 13th Ave. in Dyker Heights.

"I think of Dr. Fauci, top doctor at the National Institutes of Health, working hard doing something about research on this disease of AIDS," Bush replied when asked during the presidential debate the other night to name persons he considered to be inspirational heroes in American life today.

Neighborhood guys got a lift out of hearing such a nice tribute paid to one of their own. Hey, a Brooklyn boy got a mention to the whole nation watching on TV. Bush, of Andover and Yale, looks up to Tony Fauci from St. Bernadette's, who fetched Patsy's ice cream on hot summer nights in Dyker Heights.

Dr. Anthony Fauci, 47, heads the Office of Aids Research, established last April to seek a vaccine against the AIDS virus. His groundbreaking discoveries about the human immune system won him the U.S. Public Health Service Distinguished Service Medal in 1984, in addition to numerous other awards. He routinely works 15-hour days on a personal mission to defeat deadly AIDS.

Tony grew up over his father's pharmacy, on the corner of 83d and 13th, across from the heart and soul of the neighborhood, the local Catholic parish, St. Bernadette's. The pastor of St. Bernadette's was Patsy Barilla. Oh, to those who stand on formality, he was Msgr. Pasquale Barilla. But nobody except possibly Pope Pius XII ever called him that. To everybody in the neighborhood he was Patsy. He was 5-feet-6 and weighed 300 pounds. He sat outdoors on a big chair in front of the rectory at night and smoked cigarets and gabbed with passersby and sent local kids like Tony Fauci to the candy store to buy him ice cream. Patsy Barilla was a legend in the old neighborhood, and now one of his former errand boys is George Bush's hero. Life sure takes some interesting twists.

Msgr. Al Varriale and Joe Torregrossa and Frankie Dee and others from the old neighborhood still remember Tony Fauci, George Bush's hero, with affection and respect. Though small, Tony was an excellent basketball player. "A real pepperpot, very kinetic, good at stealing the ball, quick as a wink," says Msgr. Varriale, coach of the parish teams in the 1950s, now retired pastor of nearby Our Lady of Guadalupe. Joe Torregrossa, who has lived more than 60 years on 82d and 14th, was the parish baseball coach. Tony was his shortstop. "Tony was always a good boy, and a great competitor," remembers Joe. "He was never late for practice."

The Faucis were a model family. Mr. Fauci and Father Al formed the Catholic Pharmacists Guild, a spiritual and professional association. Mrs. Fauci was active in the parish Rosary Society. Tony's sister helped out afternoons in the rectory. The family went to church together. Everyone in the neighborhood liked and respected the Faucis. They were the kind of people who made Brooklyn the Borough of Homes and Churches.

IN THE AUGUST ISSUE of Current Biography magazine, Dr. Anthony Fauci got a glowing write-up for his tireless work in AIDS research. "You can't match the excitement of knowing you're doing something for humanity," he says in the piece. Asked his personal motto, he replies, "Always strive for excellence." Dr. Fauci is a husband and father now, and a brilliant physician, but he remembers where he came from, saying, "I had a very happy, typical New York childhood." He fetched Patsy Barilla's ice cream, and he grew up to be George Bush's hero.

[HN00RO][GDrive]

1995 (Sep 07) - Experts to Review AZT Role As the Chief Drug for H.I.V.

Article PDF - [HN00R7][GDrive]

The ***"David Barr"*** in this article is the son of Sherman Barr (born 1925) (Not a relative of the Donald Barr (born 1921) family)

1995-09-07-nytimes-experts-to-review-azt-role-as-the-chief-drug-for-hiv-clip1

Experts to Review AZT Role As the Chief Drug for H.I.V.

By LAWRENCE K. ALTMAN

WASHINGTON, Sept. 16 — After years of recommending AZT as the first-line drug for treating the virus that causes AIDS, Federal health officials are considering a change because of surprising results with other drugs.

Dr. Anthony S. Fauci, the director of the National Institute of Allergy and Infectious Diseases, said in an interview that he planned to convene a meeting where independent experts could decide whether AZT should remain the first choice.

A large study paid for by Dr. Fauci's institute and reported this week found that AZT was less effective than another drug, didanosine, or ddI, and also less effective than combinations of AZT with either ddI or zalcitabine, known as ddC.

One part of the study showed that ddI lowered the rate of death from H.I.V. infection to 5 percent from 10 percent when compared with the use of AZT alone over 147 weeks.

The study provided the first conclusive evidence that a drug could reduce the risk of death in symptomless people who are at an intermediate stage of infection with H.I.V., Dr. Fauci said.

Two similar independent studies are due to be completed by January. One is being conducted in the United States, the other in Europe and Australia.

Dr. Fauci said he would ask the meeting of experts to review the findings of all three studies and consider whether a change in recommendations for the treatment of H.I.V. was needed.

Two AIDS experts who participated in the study that was reported this week, Dr. Paul Volberding of San Francisco General Hospital and Dr. Fred T. Valentine of New York University Medical Center, joined Dr. Fauci in calling the findings important.

David Barr, the director of treatment education at the Gay Men's Health Crisis in New York City, said that "the way ddI stands out has taken everyone by surprise."

Surprising new findings lead to plans for a meeting of AIDS specialists.

"It suggests," Mr. Barr said, "that ddI is a better single drug to start with than AZT. But it does not answer the question whether ddI is better than nothing."

Indeed, Dr. Fauci and other experts confirmed that ddI had never been compared with a placebo in a large study, even the one now being reported, whereas AZT had proved better than a placebo in earlier studies.

Mr. Barr said the Gay Men's Health Crisis would withhold judgment on the new study's findings until completion of an independent statistical analysis. New calculations are needed, he said, because of the large amount of data involved in the study and his organization's concern that problems had arisen with statistical analyses of earlier federally sponsored studies.

One point of concern, Mr. Barr said, is the unusually large dropout rate — 53 percent of the 2,500 people who began as subjects in the study did not complete it — and that rate's effect on the statistical power of the study.

Federal health officials said the high dropout rate reflected adverse reactions to the drugs, disease progression and the study's demands on patients. A Federal analysis said that "the premature withdrawal rate may have diluted the power to detect differences but does not appear to have negated the results and conclusions."

The study was carried out at 52 medical centers in the United States. It involved infected patients whose immune system had been moderately impaired by H.I.V. and who had CD4 counts from 200 to 500. CD4 cells are the prime target of H.I.V., and CD4 counts are a standard measure of immune system function. The normal count is 800 to 1,200.

The participants were randomly divided into four groups, which received AZT alone, ddI alone, a combination of ddI and AZT, or a combination of ddC and AZT.

Added evidence that combinations of drugs may be best.

AZT was less effective than each of the three other treatments in preventing death, progression of infection to AIDS and significant drops in the CD4 count.

The three favorable treatments were similar in effectiveness and side effects, according to the preliminary findings, which will be reported in San Francisco on Monday at the Interscience Conference on Antimicrobial Agents and Chemotherapy.

The Gay Men's Health Crisis is advising callers to take their questions to doctors, Mr. Barr said, because the differences in reported benefits "are not that great that somebody should be immediately changing what they do."

"It is going to take some time to sort out this information and to figure out what it means," he said.

Although the three studies that the panel of experts will review are not identical, Dr. Fauci said, they and some earlier studies are similar enough for common threads to be detected. The European-Australian study involves 3,300 symptomless infected patients with fewer than 350 CD4 cells. The second American study involves 1,100 patients with fewer than 200 such cells.

Until the expert committee makes its recommendations early next year, Dr. Fauci said, data from the study reported this week suggest that a patient's prior experience with AZT can guide a doctor's choice.

Of the participants, 57 percent had taken AZT before entering the study, and 43 percent had not. Although all three other treatments in the study fared better than AZT alone, among participants who had never taken AZT the most significant benefit was found in those who received the combination of ddC plus AZT.

In contrast, among patients who had taken AZT before, the best results were seen in those who took either ddI alone or ddI plus AZT.

The findings should lead scientists to focus on developing improved combinations of anti-H.I.V. drugs, Dr. Fauci said.

For instance, recent studies have shown favorable results from a combination of AZT and a drug called 3TC. And with AIDS experts hailing the promise of a new class of drugs known as protease inhibitors, studies of different combinations may demonstrate substantially increased benefits, Dr. Fauci said.

Click for full size
[HN00R8][GDrive]

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1997 (Dec 31)

https://newspaperarchive.com/news-dec-31-1987-p-5/

2006 (Aug 09)

https://newspaperarchive.com/colorado-springs-gazette-aug-09-2006-p-5/

2003 <- Did Fauci get to skip Vietnam war to join NiH ?

https://www.newspapers.com/image/273488174/?terms=Fauci%2BPharmacy%2Bbrooklyn

2008 - Father Stephen Fauci passes

https://newspaperarchive.com/stephen-fauci-obituary-311060360/

stephen fauci

FAUCI--Stephen A., on May 13th, 2008. Much loved for his kindness and sense of humor. Graduated Columbia School of Pharmacy, ran a neighborhood drug store in Brooklyn and worked at Memorial Sloan-Kettering Pharmacy. His wife Eugenia passed away in 1965. Survived by his daughter Denise Scorce, his son Dr. Anthony S. Fauci, five grandchildren and three great-grandchildren. Mass Friday, May 16th at 10am, St. Catherine of Siena Church, 411 East 68th St., NYC. Burial at Green-Wood Cemetery.

WIKI

Wikipeda - Stephen Faucci

saved - [HK001U][GDrive]

Born December 24, 1940) is an American physician and immunologist who has served as the director of the National Institute of Allergy and Infectious Diseases (NIAID) since 1984. Since January 2020, he has been one of the lead members of the White House Coronavirus Task Force addressing the 2019–20 coronavirus pandemic in the United States.

As a physician with the National Institutes of Health (NIH), Fauci has served American public health in various capacities for over 50 years. He has made contributions to HIV/AIDS research and other immunodeficiencies, both as a scientist and as the head of the NIAID at the NIH. *The New York Times* called Fauci "the nation's leading expert on infectious diseases".[1]

Director of the National Institute of Allergy and Infectious Diseases **Assumed office** November 2, 1984

President Ronald Reagan, George H.W. Bush, Bill Clinton, George W. Bush, Barack Obama, Donald Trump

Preceded by Richard M. Krause

Anthony Stephen Fauci

December 24, 1940 (age 79)

New York City, U.S.

Spouse(s)

Christine Grady (m. 1985)

Children 3

Education College of the Holy Cross (BA) / Cornell University (MD)

Awards Maxwell Finland Award (1989) / Ernst Jung Prize (1995) / Lasker Award (2007) / Medal of Freedom (2008) / Robert Koch Prize (Gold, 2013)

Fauci was born December 24, 1940, in Brooklyn, New York City, to Stephen A. Fauci and Eugenia A. Fauci, owners of a pharmacy. His father worked as the pharmacist, his mother and sister worked the register, and Fauci delivered prescriptions. The pharmacy was located in the Dyker Heights section of Brooklyn, one neighborhood away from his family home in Bensonhurst.[2]

Fauci's paternal grandparents, Antonino Fauci and Calogera Guardino, were from Sciacca, Italy. His maternal grandmother, Raffaella Trematerra, from Naples, Italy, was a seamstress. His maternal grandfather, Giovanni Abys, was born in Switzerland and was an artist, noted for landscape and portrait painting, magazine illustrations (Italy) as well graphic design for commercial labels, including olive oil cans. His great-grandparents emigrated to the US in the late 19th century. Fauci grew up Catholic.[2][3][4]

Fauci attended Regis High School in Manhattan's Upper East Side, where he captained the school's basketball team and graduated in 1958.[5][6] He then went to the College of the Holy Cross, graduating in 1962 with a Bachelor of Arts in classics. Fauci then attended medical school at Cornell University Medical College where he graduated first in his class with a Doctor of Medicine in 1966.[2] He then completed an internship and residency at the New York Hospital-Cornell Medical Center.[6]

Career

Fauci discusses his work in 2020 (4 minutes)

In 1968, Fauci joined the National Institutes of Health as a clinical associate in the Laboratory of Clinical Investigation (LCI) at the National Institute of Allergy and Infectious Diseases.[7] In 1974, he became Head of the Clinical Physiology Section, LCI, and in 1980 was appointed Chief of the Laboratory of Immunoregulation. In 1984, he became director of NIAID, a position he still holds as of 2020.[1] In that role he has the responsibility for an extensive research portfolio of basic and applied research on infectious and immune-mediated illnesses.[7] He has turned down several offers to lead his agency's parent, the NIH, and has been at the forefront of US efforts to contend with viral diseases like HIV, SARS, the 2009 swine flu pandemic, MERS, Ebola and severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2).[8]

He played a significant role in the early 2000s in creating the President's Emergency Plan for AIDS Relief[9] and in driving development of biodefense drugs and vaccines following the 9/11 terrorist attacks.[10]

Medical achievements

President Bill Clinton visits the NIH in 1995 and hears about the latest advances in HIV/AIDS research from Fauci

Fauci poses for a photo with President George W. Bush in 2007

Fauci has made important scientific observations that contributed to the understanding of regulation of the human immune response, and is recognized for delineating the mechanisms whereby immunosuppressive agents adapt to that response. He developed therapies for formerly fatal diseases such as polyarteritis nodosa, granulomatosis with polyangiitis, and lymphomatoid granulomatosis. In a 1985 Stanford University Arthritis Center Survey of the American Rheumatism Association, membership ranked Fauci's work on the treatment of polyarteritis nodosa and granulomatosis with polyangiitis as one of the most important advances in patient management in rheumatology over the previous 20 years.[11][12]

President Barack Obama greets Fauci in June 2014

Fauci has contributed to the understanding of how HIV destroys the body's defenses leading to the progression to AIDS. He has outlined the mechanisms of induction of HIV expression by endogenous cytokines.[12] Fauci has worked to develop strategies for the therapy and immune reconstitution of patients with the disease, as well as for a vaccine to prevent HIV infection. His current research is concentrated on identifying the nature of the immunopathogenic mechanisms of HIV infection and the scope of the body's immune responses to HIV.

In 2003, the Institute for Scientific Information stated that from 1983 to 2002, "Fauci was the 13th most-cited scientist among the 2.5 to 3 million authors in all disciplines throughout the world who published articles in scientific journals".[6]

Ebola Congressional hearing

See also: Ebola virus cases in the United States

On October 16, 2014, in a United States Congressional hearing regarding the Ebola virus crisis, Fauci, who, as the director of the National Institute of Allergy and Infectious Diseases (NIAID) had been discussing the importance of screening for weeks,[13] testified that NIAID was still some distance away from producing sufficient quantities of cures or vaccines for widespread trials.[14] Specifically, Fauci said "While NIAID is an active participant in the global effort to address the public health emergency occurring in west Africa, it is important to recognize that we are still in the early stages of understanding how infection with the Ebola virus can be treated and prevented."[14]

Fauci also remarked in the hearing: "As we continue to expedite research while enforcing high safety and efficacy standards, the implementation of the public health measures already known to contain prior Ebola virus outbreaks and the implementation of treatment strategies such as fluid and electrolyte replacement are essential to preventing additional infections, treating those already infected, protecting healthcare providers, and ultimately bringing this epidemic to an end."[14]

COVID-19 task force

Fauci speaks to the White Housepress corps on COVID-19 in March 2020

Fauci is a member of the White House Coronavirus Task Force established in late January 2020, under President Trump, to deal with the coronavirus pandemic.[15][16] He said that the final case fatality rate of those who are infected will likely be closer to 1% than the 2% initially estimated by the World

Health Organization, which is ten times the 0.1% reported rate for seasonal flu.[17][18][19]

Fauci has been a "de facto" public health spokesperson for the office of the President during the pandemic[20] and strong advocate of ongoing social distancing efforts in the United States. He argued for the extension of the initial 15-day self-isolation guidelines, issued by the executive office, to at least until the end of April 2020.[21] Due to his disagreements with Trump, Fauci has been criticised by right-wing pundits and received death threats that resulted in the need for a security detail.[22][23][24] While there have been disagreements, Trump has also praised Fauci.[25][26][27]

Memberships

Fauci is a member of the National Academy of Sciences, the American Academy of Arts and Sciences, the National Academy of Medicine, the American Philosophical Society, and the Royal Danish Academy of Sciences and Letters, as well as other numerous professional societies including the American Society for Clinical Investigation, the Infectious Diseases Society of America, and the American Association of Immunologists. He serves on the editorial boards of many scientific journals; as an editor of *Harrison's Principles of Internal Medicine*; and as author, coauthor, or editor of more than 1,000 scientific publications, including several textbooks.[28]

Personal life

Fauci married Christine Grady, a nurse with the NIH, in 1985, after meeting while treating a patient. Grady is chief of the Department of Bioethics at the National Institutes of Health Clinical Center. The couple has three adult daughters: Jennifer, Megan, and Alison.[29]

Awards and honors

Ben Carson and Anthony Fauci (right) being announced as recipients of the Presidential Medal of Freedom at the White House on June 19, 2008.

- 1979: Arthur S. Flemming Award[30]
- 1995: Ernst Jung Prize (shared with Samuel A. Wells, Jr.)[31]
- 1996: Honorary Doctor of Science, Colgate University, for pioneering observations of human immune response and pursuit of an AIDS vaccine[32]
- 1999: Honorary Doctor of Public Service Degree, Shippensburg University of Pennsylvania
- 2002: Albany Medical Center Prize[33]
- 2003: American Academy of Achievement's Golden Plate Award [34]
- 2005: National Medal of Science[35]
- 2005: American Association of Immunologists Lifetime Achievement Award[36]
- 2007: Mary Woodard Lasker Public Service Award[37]
- 2007: George M. Kober Medal, Association of American Physicians[38]
- 2008: Presidential Medal of Freedom[34]
- 2013: Robert Koch Gold Medal[39]
- 2013: Prince Mahidol Award[40]
- 2016: John Dirks Canada Gairdner Global Health Award[41]

Fauci has been a visiting professor at many medical centers, and has received 30 honorary doctorate degrees from universities in the United States and abroad.[28]

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1989 - "In their own words" - Interview by National Institute of Health of Dr. Anthony Fauci

Source - [HG003K][GDrive] and [HG003L][GDrive]

This is an interview with Dr. Anthony S. Fauci, Director of the National Institute of Allergy and Infectious Diseases), in his office at the National Institutes of Health, in Bethesda, Maryland, on March 7, 1989. The interviewer is Dr. Victoria Harden, Director of the NIH Historical Office.

Harden: Dr. Fauci, could you begin by describing the home in which you grew up, your parents, your grandparents and siblings; what you enjoyed doing as a boy, and your elementary and secondary education?

Fauci: I was born in Brooklyn, New York. My grandparents on both my mother's and father's side were born in Italy, except for my grandfather on my mother's side, who was born in Switzerland. They came to the United States at the end of the nineteenth century. Both my parents were born in New York City and went to public schools in New York City. My father, Stephen Fauci, graduated from the College of Pharmacy, Columbia University, as a pharmacist. My mother, Eugenia Fauci, went to Brooklyn College and Hunter College. They married very young, when they were eighteen years old, and went to college after they were married, while they were still growing up. I went to the neighborhood parochial schools in New York City. I was brought up in a Catholic grammar and high school environment. I went to Our Lady of Guadeloupe Grammar School in Brooklyn and to Regis High School, a Jesuit high school in Manhattan. I had the interesting experience of having to take a bus and three separate subway trains to get from my home in Brooklyn to high school in Manhattan. I believe that my childhood was a typical, very happy, and very active growing-up period in New York City during the early forties. I was born in December of 1940 in New York City and grew up as a child in the World War II and post World War II years.

My major interest was sports. I lived in a very sports-oriented neighborhood. We used to play basketball from the beginning of the basketball season to the end, baseball throughout the spring and the summer, and then basketball and football again in the winter. My sister, who is three years older than I, also went through the same sort of school system, same grammar school I went to, went to an all-girls' Catholic high school, and ultimately St. John's University in New York City. She was a teacher before she stopped to raise her family.

Harden: Who were your boyhood heroes?

Fauci: My boyhood heroes were predominantly sports figures like Joe Di Maggio, Mickey Mantle, and Duke Snyder. I was unusual in that I grew up in Brooklyn but was a New York Yankees fan. I was somewhat of a sports outcast among my friends who were all Brooklyn Dodgers fans. This was the time the Dodgers were actually located in Brooklyn as opposed to Los Angeles, where they are currently located.

Harden: How did a young man who was devoted to sports decide to become a physician?

Fauci: I don't think I can tell you the precise time when I knew that I wanted to be a physician. It was very early on. I know that in high school, when I was deciding the options I would have in college, there really was no question that I was going to be a physician. I went to Regis High School, a Jesuit high school, which had a major impact on my career even up to today. It was a highly academic, exclusive scholarship school. Students from every parochial grammar school in all the five boroughs of New York competed to receive admission, making it highly competitive, and the courses were extraordinary. They were very heavily weighted towards the classics. We took four years of Greek, four years of Latin, three years of French, ancient history, theology, etc. When I was at Regis, it seemed that the very bright people in school really had just a few options. If you wanted to go into medicine, that was fine. The other choices were law, science, engineering, or careers like that. My interest in medicine stems from my keen interest in people, in asking questions and solving problems.

Also, I think there was subliminal stimulation from my mother, who, right from the very beginning when I was born, wanted me to be a physician. She never really pressured me in any way, but I think I subtly picked up the vibrations that she wanted very much for me to be a physician. When the time came to go to college, I went to Holy Cross College, which has an extraordinarily fine reputation for premedical work. They do it in a very interesting way, at least it seemed so back in the fifties. I went to Holy Cross in 1958 and graduated in 1962. At that time, it was not unusual for premedical students to take a very strong classics course in premed. The title of my premed course was “A.B. Greek Premed,” which was a classics course very heavily weighted with philosophy–32 credits of philosophy, plus French, Greek and Latin. At the same time we took the minimal scientific courses to get us into medical school. The students did very well, getting into the best medical schools in the country but with a very strong liberal arts background. The liberal arts background is something that was very much a part of my family because virtually all of my relatives on my mother's side–her father, her brother, and her sister's children–are all artists. They are successful people who made their living through the arts, usually painting. I was always and still am very interested in art, but I am somewhat of a frustrated artist because I certainly don't have the time, and probably not the talent either, to pursue it. I still am very interested in the classics. They were a very important part of my education.

Harden: Would you evaluate the broad, liberal arts, humanistic training and your Catholic upbringing in terms of how they have influenced your performance as a physician and as a researcher? I'm thinking of things like your world view, your interaction with patients, and your approach to ethical questions.

Fauci: You can't separate very well natural abilities in a vacuum from your training, or from the combination of factors that have an influence on how you perform. But certainly, the humanistic education that I had has had a very positive influence on my ability to deal with sensitive situations with people. I credit very much the Jesuit training in precision of thought and economy of expression in solving and expressing a problem and in the presentation of a solution in a very succinct, accurate way. This has had a major, positive influence on the fact that I enjoy very much and am fairly good at being able to communicate scientific principles or principles of basic and clinical research without getting very profuse and off on tangents. This is something that was drilled into us from the very early days in high school.

Harden: Did you continue your interest in sports in college?

Fauci: My interest in it continued, but not my active participation. In high school, I played competitive sports–I played basketball at a time when you could play basketball without being 6'9" at the shortest. I don't think I would have any chance of playing basketball if I were in high school now. I enjoyed basketball, was the captain of the team and had a very successful time in high school. Alongside it, I played baseball. These were my two major sports. When I went to college, I continued to play a modest amount of intramural sports, but due to the nature of the premedical curriculum at Holy Cross, it was very difficult to be very active in sports. I did not play competitive basketball or even baseball at the college level, since they had very good teams. I could not play as much as I wanted to because the demands of the curriculum were such that you really had to put a lot of time into your studies.

Harden: Could you talk about your experiences at Cornell University Medical College and comment on how actually becoming a doctor compared to your earlier conceptions of the profession?

Fauci: This might be interpreted by some as being paradoxical, but I absolutely loved medical school. It certainly was demanding, but it was one of the most exciting experiences of my life. The exponential curve of knowledge accrual in medical school was so great that it completely overshadowed the fatigue and the stress factors and the other problems that are so commonly seen in medical school. Certainly, medical school training was very stressful, but unquestionably it ranked as one of the happiest periods of my life, because I was learning so much. The later years in medical school and in health care training and what had been my previous idealistic views about medicine did fit together. There really was the opportunity to apply a very basic scientific framework of knowledge to something that is very human, very personal, with all of the sensitivities associated with dealing with human beings. Here I had the advantage of the humanistic training that I had received earlier on in high school and in college. This is a nice dichotomy of medical school, and that's why I think that there is no question that I was meant to be a physician and a physician-scientist. I can't imagine in my wildest dreams doing anything else that would make me as happy as this makes me. I enjoy the polarity. There are strict scientific principles that have to be adhered to in medicine. At the same time a humanistic touch is needed in dealing with people. They have to be combined. You have to combine social aspects, ethical aspects, personal aspects with cold, clean science. It is the art of the physician to put them together in the care of a patient, in the development of a protocol for a disease, the diagnosis or treatment of a problem. This combination exists in every aspect of patient-involvement.

Harden: Who influenced you the most during medical school, especially in your decision to go into immunology?

Fauci: The people who influenced me most in medical school are different from those who influenced my decision to go into immunology. Taking medical school first: My heroes were the strict clinicians of the New York Hospital/Cornell Medical Center. They were and still are in so many respects the real heroes. My teachers, whom I saw on the wards as a student and during my internship and residency, were people whose entire lives were devoted to clinical medicine. They reached such levels of expertise in patient care, diagnosis, and the delivery of patient care that they were really super stars. I tried to emulate them and make myself as good a clinician as I possibly could be. They provided a great inspiration. I think that it is very important for a young medical student to have a role model. There were several of them around at the time.

The reasons I went into immunology and research in general were due to an unusual situation. I left Cornell and went into my internship and residency in 1966. That was at the exponential phase of the Vietnam War, and every single physician went into military service. I can remember very clearly when we were gathered in the auditorium at Cornell early in our fourth year of medical school. Unlike today, we had only two women in the class and seventy-nine men. The recruiter from the Armed Forces came there and said, "Believe it or not, when you graduate from medical school at the end of the year, except for the two women, everyone in this room is going to be either in the Army, the Air Force, the Navy or the Public Health Service. So, you're going to have to take your choice. Sign up and give your preferences." I had heard about the NIH and the opportunity there. At the time, the NIH was just blossoming, and everyone who had any role in academic medicine spent some time at the NIH. So I put down Public Health Service as my first choice, and then the Navy. Essentially, I came down to the NIH because I didn't have any choice. I was very lucky because I knew that it was a phenomenal scientific opportunity.

When I was trying to decide what laboratory to go to, some of my advisers at Cornell suggested very strongly that I pursue the field of immunology, since I had developed an interest in immunology in medical school. I had done some projects during the summer and had worked for a period with Dr. Marvin Schlesinger, who was the chief of gastroenterology division of the Department of Medicine. I also had worked with [Dr.] Graham Jeffries and [Dr.] Walter Rubin. The project I did as a student turned out to be a successful project. I was lucky, since that doesn't usually happen when you have a student project. Because of this research, I applied for the National Institute of Allergy and Infectious Diseases. It so happened that Dr. Schlesinger knew Dr. Sheldon Wolff at the NIH, and I came down to the NIH for an interview. I was interviewed by Dr. Wolff, and I immediately fell in love with the man. He was just my kind of person–intellectually and personally. I was accepted by Dr. Wolff right off. At the end of my residency, I came down to the NIH to work in the National Institute of Allergy and Infectious Diseases with Dr. Wolff. Over the years, even after he left the NIH, he emerged as the major mentor–personal and scientific–in my life. There have been a number of other individuals whom I have come into contact with who have had a major influence on me, but I think that Dr. Wolff clearly stands out as the person who made the greatest impact on my career.

Harden: Could you talk about the research you did with Dr. Wolff in his laboratory in this period?

Fauci: When I came down to what was the Laboratory of Clinical Investigation, of which Dr. Wolff was the laboratory chief as well as being the clinical director of the National Institute of Allergy and Infectious Diseases, I wanted to work on cellular immunology. But, interestingly enough, as popular as cellular immunology is now, there really were not very many cellular immunologists at the time, and certainly not in the Laboratory of Clinical Investigation. I went to work with Dr. John Johnson, who now practices rheumatology in Nashville, Tennessee. John was an immunochemist at the time, but he allowed me to work on problems in cellular immunology. I had to go around to different groups in different laboratories to learn the fundamentals of cellular immunology under the auspices of the Laboratory of Clinical Investigation. It was a great experience and a testimony to the flexibility of people like Dr. Wolff and Dr. Johnson, who allowed me to work in that field even though it wasn't their field of expertise. Dr. Wolff was mainly working on the pathogenesis of fever. I told him I didn't want to work on that, although it was a very interesting topic. I wanted to learn some basic cellular immunology with the ultimate aim of going into what has been my theme for the past twenty-one years–human immunobiology and the regulation of the human immune system. I was then, and still am, extremely interested in clinical medicine, and I have been successful in being able to mix and meld together the very fundamental, basic concepts of immunology with clinical medicine. It was Dr. Wolff who encouraged me. I worked on some projects looking at the regulation of the immune system in animals, with rabbit and guinea pig models. I learned from Dr. Baruj Benacerraf, who was down the hall in the Laboratory of Immunology; from [Dr.] David Katz, who worked with him; and from [Dr.] Carl Pierce and a few others. There were in the laboratory working with Dr. Johnson two people who have gone on to be very successful and prominent immunologists–[Dr.] Alexander Lawton, who is now at Vanderbilt [University] and chairman of pediatrics, and [Dr.] Herbert Reynolds, who is now chief of medicine at the Hershey Medical Center of the Pennsylvania State University. They were just Fellows with me at the time, and we taught each other immunology. However, though I liked it very much, my main desire was to get back to the New York Hospital/Cornell Medical Center and to be a clinician. That's what I really wanted to do. I liked the scientific environment, but my real love was taking care of patients.

Harden: Why did you go back to Cornell for another year, and what made you decide to come back to the NIH and pursue your career here rather than going

on into a private practice or into academic medicine?

Fauci: I was at that very critical period in my second year as a Fellow in a three-year program having to make up my mind about what I was going to do "for the rest of my life." Just about at that time things started to click in the laboratory. I was making some interesting observations, writing some papers that were turning out to be good papers. Virtually simultaneously, [Dr.] Alexander Bearn, who was the chairman of the Department of Medicine at Cornell at the time, asked me if I wanted to come back at the end of my third year to be chief resident in medicine. At the same time, Dr. Wolff offered me a job, which was one of those offers that you can't refuse. It was the position of senior investigator in the Laboratory of Clinical Investigation. I told him I wanted to go back and have another year in clinical medicine and make myself as excellent a clinician as I possibly could. His response was, "Fine, go back to New York; take a year as chief resident, and then come back; the laboratory will be waiting for you when you get back." I made the decision, but when you make decisions like that, you're not really sure why you made them. I think it was a combination of the personality of Dr. Wolff, with whom I was developing a very strong friendship, and the fact that as the months were going by, my immunology research was becoming more successful. I didn't feel that I was giving up anything because I was going back to New York to cement my clinical training. I decided that I would do it. I would go back to New York and come back to NIH after a year to my own laboratory, in which I would have total independence. I think it is important to emphasize that quality of Dr. Wolff that has been responsible for the development of so many successful investigators over the years. It is important to recognize what he did with me as with many others. He could recognize early on in someone's career a person who had potential, who would succeed. Before that person did anything to make any kind of reputation, Dr. Wolff would give that person unqualified support. That was exactly what he did for me. Nobody knew who I was; nobody cared to know who I was. But Dr. Wolff said, "Here's your laboratory. You can have a technician. You can have a Fellow if you can attract a Fellow. So go ahead." I said, "Fine, that's great." I went to New York, came back to the NIH and started my own human immunobiology group. I was one of the few people at the time anywhere who was devoted exclusively to human immunobiology. There was [Dr.] Max Cooper in Alabama and Tom [Dr. Thomas] Waldmann at the NIH. Bob [Dr. Robert] Good and a few others were exclusively human. There were many excellent and great immunologists around who did either totally animal work or a combination of animal and human, but there were very few who were doing exclusively human immunobiology. That's when I started my work on immunoregulation of the human immune response, which I have continued throughout the past couple of decades. I am still working on it right now in 1989.

Harden: Your medical student years and just after marked the period of time when cellular immunology began to flower. Would you comment on what factors made immunology such a fruitful field?

Fauci: It was a combination of the emergence of technologies and the awareness of the extraordinary implications, if not tentacles, that the immune system had in controlling so many aspects of the human organism. For example, technology provided the ability to identify different types of cells and their subsets. There was the realization of the almost infinite possibilities of a repertoire of B-cells to recognize different antigens. The development of monoclonal antibodies and the ability to clone cells led to a virtual explosion in the delineation of the immune system, its structure and its function.

At the same time, scientists became aware that there were many immunologically mediated diseases. Diseases that were total mysteries years ago became understood as immune-mediated: lupus, rheumatoid arthritis, the connective tissue diseases, the organ-specific autoimmune diseases, and transplantation rejection are a few examples. This was also occurring during the emergence of molecular biology within the field of immunology. If you look at immunology, it has from the very beginning been inextricably linked to infectious diseases. Teleologically, what is the immune system for? The immune system protects you against invaders from without–microorganisms–as well as, in some cases, the emergence of certain tumors from within.

What was not realized until that period of explosive interest is that the immune system is an organ system just like any other system. It is an organ system like the cardiovascular system, the neurological system and the endocrine system. Initially, it was understood to be a response that the body had, but now, the immune system is viewed as a true organ system. It has structural components: there are lymphocytes; there are organs, such as the spleen; the blood is a lymphoid organ. The reticuloendothelial system, the bone marrow, the thymus and the lymph nodes are all parts of the immune system. This organ system has a way of communicating by a variety of soluble factors which we call cytokines. Knowledge about this has just emerged over the past decade. There are a large number of different molecules that have very specific functions, such as one cell's ability to talk to another cell. All of this started to emerge as the technology was developed that allowed the precise identification of the components of the immune system and their function.

Harden: Cell sorters, for example, were essential to this.

Fauci: Absolutely.

Harden: Some of the basic research in other fields, the work on protein chemistry and protein structure, for example, also facilitated the advances in immunological knowledge, I believe. It appears to be one of those "payoffs."

Fauci: Absolutely. I think immunology, certainly is one of the major examples of something that we stress very often. Basic, fundamental undifferentiated research will inevitably, sooner or later, emerge into something that is very important; but very likely you would not have predicted that it would relate to this particular arena. You're working in one direction and then all of a sudden you find something else that you don't understand now, but ten years from now it solves problems in another direction. Immunology and basic research on the immune system really provide a classic example of this.

Harden: The 1956 research by [Bruce] Glick, [Timothy S.] Chang, and [R. George] Jaap on the bursa of Fabricius and antibody production in poultry seemed so far outside the mainstream of human immunology, if I remember correctly, that it could only be published in the journal, Poultry Science. Later, it turned out to be very important. Could you talk about your own work on Wegener's granulomatosis and some of the other problems to which you applied your knowledge?

Fauci: My research career at the NIH emerged in two parallel tracks. One was the very fundamental dissection of how the human immune system is regulated. The other parallel track was an examination of immune-mediated diseases and how one can classify and treat them. The work on the regulation of human immune system is what led me into AIDS research. What we performed in the late sixties and early seventies were probably "breakthrough" studies on the development of cures for formerly fatal diseases such as Wegener's granulomatosis and polyarteritis nodosa. Things emerged from those interesting quirks of science, things that you never would have predicted. Dr. Wolff, even before I came to the NIH, had been very interested in immunosuppression, such as some of the cytotoxic agents. His major interest was fever. This is really very interesting, a story that I tell the Fellows when they come. It is the classic example of how science is so beautiful because it is so unpredictable. Dr. Wolff had collected over the years–he had been at NIH for at least five or more years before I got there–a group of patients with prolonged fevers of unknown origin, not just five or six weeks, but a year long at least. He had a heterogeneous group of people which numbered literally in the hundreds. He had been collecting them for a few years because he wanted to study the pathogenesis of fever. Some of them had granulomatous hepatitis, a disease that had never before been described and that he described. Some of them had juvenile rheumatoid arthritis; some of them had connective tissue diseases; some of them had hematologic diseases; and others had immune-mediated vasculitic diseases. They were a very interesting group of patients–interesting because the diseases were interesting but also because most of them would die from their diseases–particularly those with Wegener's granulomatosis.

At that time, I came as a Fellow and I wanted to stay involved in some clinical work while I was doing basic research in the laboratory. This is essentially what I'm doing now–doing clinical work while I'm doing very fundamental cellular and molecular work in the laboratory. I asked him, “Could I start collecting these Wegener's and vasculitic patients and put them on a set protocol, and look at these cytotoxic agents, particularly cyclophosphamide”? I was interested in this because the agent had been used successfully in one or two patients in a manner that was not very well organized since it was given to a patient as a last resort. Dr. Wolff, as usual, was extremely accommodating, and said, “Fine. I'll support you on that. Let's do it. We'll do it together and I'll help you out.”

To make a long story short, we started a protocol that gave cyclophosphamide in low doses. Previously it had been developed as an anticancer drug and was given predominantly to individuals with leukemia in very high doses that would wipe out the bone marrow. We figured from animal studies, particularly those performed by investigators such as Bob [Dr. Robert] Schwartz and others in Boston, that low doses of a cytotoxic agent could suppress the immune system without wiping out the bone marrow. We then did something that was very unorthodox. We gave low doses of this cytotoxic agent, equivalent to the amount that in animals suppressed immunological function but didn't cause very severe toxic side effects like neutropenia.

The disease that we targeted at first was Wegener's granulomatosis. The cytotoxic agent completely shut off the disease, so much so that we've now treated over the years hundreds of patients with Wegener's granulomatosis, and the disease is essentially curable. We now have a 93% remission rate, whereas when I came to the NIH in 1966, 100% of the patients died. We have fine-tuned the regimen now, writing and informing physicians that if the dose is maintained at a level that keeps the white count above a certain level, then there will be very little trouble with secondary infection. If the patient is simultaneously treated with alternate-day prednisone as opposed to daily prednisone, which has toxic side-effects, infection will be largely avoided. So, the combination of alternate-day prednisone with daily low-dose cyclophosphamide essentially was responsible for essentially curing Wegener's granulomatosis, or at least putting it into prolonged remission.

Once it became clear from the first several patients that it worked with Wegener's, we then tried it with similar diseases–polyarteritis nodosa, cerebral vasculitis, lymphomatoid granulomatosis and Takayasu's arteritis. We had a series of seven or eight diseases that formerly were completely fatal but now people were coming to the hospital, and four to six weeks later, they were walking out and going back to their jobs. It was a heady and exciting period of time–both clinically and in research. At the same time we were looking at regulation of the human immune system at the very basic level, which emerged in the 1970s from cellular phenomenological research to work at the molecular level.

Harden: It must have been very gratifying to achieve such results.

Fauci: It was gratifying not only because I could do some good but because I actually saved the lives of some people. That is the epitome of what you want to do in medicine. I've always wanted to be involved with diseases that were very, very serious. I would rather be involved with patients who have fatal diseases than those with diseases that are just an annoyance. That just happened to be my bent. I wanted to be where the action was. So there it was, we had a disease that was formerly fatal and we made a major impact on it. The other thing that was so gratifying about that experience was that we were able to do something that people said you can't do–you can't do clinical medicine at the same time that you do very basic research. That is absolutely incorrect, if you organize your time correctly. If you ask the right questions, get the right training, you can do work that is very, very basic in its approach and yet has important clinical consequences.

Harden: In our next interview I want to examine how you as a clinical immunologist responded to the first cases of AIDS that you saw. But, before we stop today, I want to pose a hypothetical question. If AIDS had struck in 1955, before we knew about T-cells and other aspects of the immune system, how do you think the medical community would have responded to it?

Fauci: I think it would have been much more frightening than it is now, and it is frightening now. I think we would not have had a clue as to how to combat this disease from a basic scientific standpoint. I think we would have realized just on epidemiological grounds that it was an infectious agent of some sort that was sexually transmitted and transmitted by blood. But about pathogenic mechanisms, we wouldn't have had a clue. We wouldn't have known how even to go about thinking about the virus, much less clone it and develop drugs against it. So within the framework of the catastrophe of AIDS, we're lucky in the sense that it came at a time when retrovirology, molecular biology, molecular immunology, and immune system studies were at that stage where we could very quickly identify the agent, how it works, the pathogenic mechanisms, its effect on the immune system, etc. If it had happened in 1955, we would have been in very serious trouble.

Harden: Thank you, Dr. Fauci. I look forward to the next interview.

2007 National Institute of Health introduction to Anthony S. Fauci - Association of American Physicians George M. Kober Medal

See - [HG003N][GDrive]

President Ausiello, members and guests of the association: I am very proud to have the honor to introduce this year's George M. Kober medalist, my good friend Anthony S. Fauci, MD.

George Martin Kober lived from 1850 to 1931 and was very active in the Association of American Physicians (AAP), serving as secretary from 1909 to 1917. From "... all accounts [he] ... had great strength of character, loyalty both to persons and principles, together with humility and humanity of high degree" (1). This year's medalist has all these qualities.

Anthony Stephen Fauci — Tony — was born on Christmas Eve, 1940. Headlines in the *New York Times* on that cool and cloudy winter day proclaimed "Churchill Bids Italy Oust Mussolini; Greeks Take Another Coastal Town; Germans Rain Bombs on Manchester." One article touted "Turkey and Fixins in Home only $6.40."

Roots

Tony Fauci's family came from Italy. His maternal grandparents grew up in Naples. His maternal grandfather, Giovanni Abys, was an artist who painted landscapes and portraits, designed labels for commercial products such as cans of olive oil, and did illustrations for Italian magazines. Tony's maternal grandmother, Raffaela Trematerra, was a seamstress.

Tony's paternal grandparents were from Sciacca, Sicily. His grandfather, Antonino Fauci, was from a family who ran a hot springs spa. In Sciacca, he met and married Tony's paternal grandmother, Coligera Guardino.

Both sets of grandparents immigrated to New York City via Ellis Island at the turn of the twentieth century and initially settled in lower Manhattan's Little Italy, where Tony's mom, Eugenia Abys, and dad, Stephen Fauci, were born. Later, both families moved independently of each other to the Bensonhurst section of Brooklyn. Eugenia and Stephen met in eighth grade, attended high school together, and were married one year after graduation. Tony's dad attended Columbia University and became a pharmacist while his mom attended Hunter College. They had two children, first a daughter, Denise, and then a son, Anthony Stephen, who was born in Brooklyn Hospital.

The Faucis ran a neighborhood pharmacy at 13th Avenue and 83rd Street and lived in an apartment above . The whole family helped out in the business — his dad working in the back of the pharmacy while his mother and sister operated the register. Tony delivered prescriptions from the time he was old enough to ride a bike. He was raised in a Catholic tradition, receiving his first communion at age 7 and confirmation at age 12. Strong family relationships were an important part of Tony's upbringing.

Education

Tony was tops in his class at Our Lady of Guadalupe elementary school. He always excelled academically, but he was not a nerd. In the 1950s Bensonhurst was a working-class Brooklyn neighborhood for Italians and Jews. You just didn't talk about your academic achievements. Tony became streetwise, which later would serve him well. He was a strong athlete, playing basketball from fall to spring and baseball from spring to fall at Dyker Heights Park. Tony rooted for the New York Yankees, and his early heroes included Joe DiMaggio and Mickey Mantle. This made him something of an outcast among his friends, who were Brooklyn Dodger fans.

In 1958, he entered Regis High School, a free school on the Upper East Side of Manhattan, with a special mission of educating sons of Catholic immigrants in the Jesuit tradition. The Jesuit philosophy, "*To be men for others*," was an important principle that ran through Tony's education. His high school training emphasized languages and the classics. He took four years of Latin, three of Greek, and two of French. His teachers drilled into him two ideals — precision of thought and economy of expression, qualities he is known for today and instills in the people who work with him.

He continued to pursue his interest in athletics and captained the basketball team. Due to short stature, his career as a basketball player ended early.

At Regis High, it was an accepted fact that if you wanted to become a doctor you went to the College of the Holy Cross. Tony graduated Regis High School among the top in his class and in 1958 entered Holy Cross in Worcester, Massachusetts, where the strong Jesuit influence continued. His undergraduate work mixed classics and philosophy with pre-med courses. This broad academic background groomed the future Dr. Fauci for his destiny as an outstanding physician, scientist, educator, humanitarian, and public health leader.

During college summers, Tony worked on construction crews. Before his final year at Holy Cross he labored on a crew building a new library at Cornell Medical College at 69th Street and York Avenue. At the medical school's centennial celebration in April 1998 he recalled, "On lunch break when the crew were eating their hero sandwiches and making catcalls to nurses ... I snuck into the auditorium to take a peek. I got goose bumps as I entered, looked around the empty room and imagined what it would be like to attend this extraordinary institution. After a few minutes at the doorway, a guard came and politely told me to leave since my dirty boots were soiling the floor. I looked at him and said proudly that I would be attending this institution a year from now. He laughed and said, 'Right kid, and next year I am going to be Police Commissioner'" (2).

In 1962 Tony Fauci did enter Cornell Medical College. He liked Cornell. Each day offered an opportunity to learn something new. He graduated in 1966, first in his class, and pursued house staff training in internal medicine at the New York Hospital.

NIH science

In 1966, during the Vietnam War, he was called to serve. He left New York City for the National Institutes of Health (NIH) to join what was affectionately called the "Yellow Berets" (3). He served his military obligation in the Public Health Service at NIH. He was a Clinical Associate in the program of Sheldon M. Wolff, MD, the Chief of the Laboratory of Clinical Investigation and Clinical Director of the National Institute of Allergy and Infectious Diseases (NIAID) (Figure (Figure4).4). It was during his fellowship at NIH that he completed his training in infectious diseases and in allergy/immunology and began his long, close clinical research partnership and friendship with Wolff.

From 1970 to 1971 he left the NIH to serve as Chief Resident at the New York Hospital Cornell Medical Center. His reputation as Chief Resident was legendary. Many of his house staff and medical students at Cornell became his personal friends, and Tony later recruited several of them to important positions at NIH.

Tony Fauci returned to NIH in July 1971 as a Senior Investigator in the Laboratory of Clinical Investigation and rapidly passed his clinical board examinations in internal medicine, infectious diseases, and allergy/immunology, with top scores. He then began his extensive and uninterrupted career in public service, serving continuously in the government.

I first met Tony in July 1972. He had the lab across the hall from where I worked as a clinical associate. I remember that day well. The two-module lab he entered was a dirty mess with missing equipment. He was quite rattled by what he saw, and I offered to help him clean it up. We have been friends ever since.

That small lab was where Tony's career as a clinical investigator really flourished. He rapidly assembled a strong team focusing on immune regulation. His early studies included demonstrating the therapeutic effect of cyclophosphamide on Wegener's granulomatosis and other vasculitides (4, 5). In 1980, Tony Fauci was made Chief of the new Laboratory of Immunoregulation. A 1985 Stanford University Arthritis Center Survey of the American Rheumatism Association ranked Dr. Fauci's work on the treatment of polyarteritis nodosa and Wegener's granulomatosis among the most important advances in patient management in rheumatology over the previous 20 years (6). And Dr. Fauci was not even a rheumatologist!

A transforming year for the field of infectious diseases — 1981 — had extraordinary impact on global health and Tony Fauci's career. I remember well when the first cases of gay men with unusual opportunistic infections were reported that summer (7, 8). Tony came up to me in the corridor, quite animated, saying how he believed this new disease had the potential to explode into a worldwide catastrophe. He quickly decided to shift the focus of his laboratory to study what would soon be called the Acquired Immunodeficiency Syndrome, or AIDS, a term he helped coin. And that was the beginning of his now historic studies on the pathophysiology of AIDS.

Tony Fauci's laboratory made major observations delineating a model of HIV pathogenesis, and his group's publications in the mid-1980s clearly established what is now considered to be the hallmark functional defect of CD4+ T cells in HIV-infected individuals, a defect in responsiveness to recall antigens. His 1988 publication in *Science* on the pathogenesis of HIV (9) was the most cited paper in medicine in 1989 (10). His group's publications in the early 1990s provided the scientific rationale for the early and aggressive suppression of HIV replication with combination antiretroviral agents. His *Nature* paper in 1993 (11) was the most cited paper in AIDS research from 1993 to 1995 (12). Subsequent papers, considered by many as classics in the field, delineated the link between host-virus interactions and potential targets for therapy (13) and the complex network of host factors involved in the regulation of HIV expression (14). Based on these and subsequent publications, a 2003 Institute for Scientific Information study indicated that for the 20-year period from 1983 to 2002, Tony Fauci was the thirteenth most cited scientist among the 2.5 to 3 million authors in all disciplines (15). From 1996 to 2006, he was the tenth most cited HIV/AIDS researcher in the world. Currently Tony has over 1,100 publications.

In addition to all these scientific accomplishments, Tony is first and foremost an outstanding physician and teacher of clinical medicine. His clinical rounds are legendary. I say *are* because he still conducts them regularly. He is demanding of his staff but always gives back by sharing his wealth of clinical knowledge, constantly educating those around him. Every patient would love to have Dr. Fauci as their doctor. Every medical student and house officer would love to have Tony Fauci as their attending.

Over the years, 108 fellows joined Dr. Fauci's laboratory and have become members of his academic family. Many have become outstanding clinical investigators in their own right, and 7 have become members of the AAP.

Tony Fauci's accomplishments as a scientist and a clinician have brought him remarkable professional recognition. Since 1978 he has held 33 visiting professorships, given 490 major named lectureships, and received 31 honorary degrees and 124 awards and honors. He has served on 41 editorial boards, and for the past 25 years he has been on the editorial board of *Harrison's Principles of Internal Medicine*. He has been elected to the most prestigious societies in the United States and abroad. He has been a very active member of several societies, serving as President of the American Federation for Clinical Research and as a Council Member of the Institute of Medicine. In addition, for a 12-year period he held offices in this association, serving as Recorder, Councilor, Vice President, and President.

Administration

In 1984, NIH Director James B. Wyngaarden, MD, appointed Tony Fauci to be the fifth Director of NIAID. It was a perfect example of the right person being appointed to the right position at the right time. Under his direction, the funding for NIAID increased from about $320 million in 1984 to about $4.6 billion today. The size of NIAID relative to the other NIH institutes has grown from sixth to the second largest. But much more importantly, Tony has led the institute and the country through the incredible series of events his predecessor, NIAID Director Richard Krause, MD, described in his book, *The Restless Tide: The Persistent Challenge of the Microbial World* (16).

Politician

Tony's experiences as the streetwise kid growing up in Brooklyn undoubtedly helped him weather the storms of activist groups. He was the target of their criticism and even burned in effigy. Instead of being angry, Tony noted the pain of the people in these activist groups and approached them as a physician approaches a suffering patient. He began a dialogue that lasted for many years. Over time he won their trust and respect.

Tony is a great communicator. He has comforted the nation by appearing repeatedly on national television to explain one far-reaching crisis after another related to emerging and reemerging infectious diseases. On issues from AIDS, to anthrax, to SARS, to influenza, Tony provides confident, knowledgeable, realistic, and reassuring advice. He has earned the respect and trust of politicians on both sides of the aisle. He has advised every President from Ronald Reagan to the current George Bush. His knowledge, clarity, and frankness have made him so effective.

Personal traits

I had the privilege of working with Tony from 1985 to 1994 as his Scientific Director. Those were exciting years. Here is what I can tell you about Tony Fauci. Yes, he is very hard working. He is the best observer I've ever known. Nothing escapes him, nothing. He has a remarkable ability to contain his emotions.

Tony Fauci works hard and plays hard. He exercises about an hour every day. He enjoys fishing, occasional tennis, and cooking. To relieve stress in his office, he shoots hoops in a toy-sized net. One day as we were fishing on the Potomac River, he got so excited about a fish on the line that he flipped over our canoe. We survived, but I don't believe he caught that fish.

I would describe Tony Fauci as a realistic optimist. He demands perfection and that is good. He delegates authority and responsibility effectively. He is very

sensitive and loyal to his staff. He can keep his mouth shut. He never tells a secret, ever. He is a fabulous doctor and his patients adore him. When he talks he knows what he is talking about. He is wise. He cares about all people. He knows the names of the janitors, elevator operators, and animal caretakers. They all love and respect Tony Fauci because he talks with them, never at them. Tony Fauci is the kind of person you know you can call upon whenever you have a need, no matter what that need is.

And where do all these wonderful traits come from? I believe they come from his strong upbringing that instilled the importance of family. And that is reflected by his beautiful family. Tony met Christine Grady when she was a nurse at the NIH Clinical Center in 1983. They married two years later. Christine has gone on to build her own important career as one of the leading bioethicists in the world specializing on issues related to clinical research.

Christine and Tony have three fabulous children, Jennifer Ellen, a Harvard undergraduate, Megan Elizabeth, about to enter college, and Alison Christine, currently in high school (Figure (Figure7),7). Tony is phenomenally devoted and especially proud of his family, whom, in my opinion, gives him more satisfaction than anything else in life.

The AAP has made an incredible choice this year in selecting Anthony S. Fauci as their George M. Kober medalist. He is an exceptionally dedicated and talented physician, scientist, educator, administrator, spokesperson, politician, and advisor to our Congress and Presidents. His life's work will profoundly affect generations to come. He is, quite simply, an extraordinary man. It is for all these reasons that I am so honored that Tony Fauci asked me to introduce him as the 2007 Kober Medalist, the highest award of the Association. Please join me in saluting Anthony S. Fauci, MD, on the occasion of his receiving this very prestigious award.

[HG003O][GDrive]

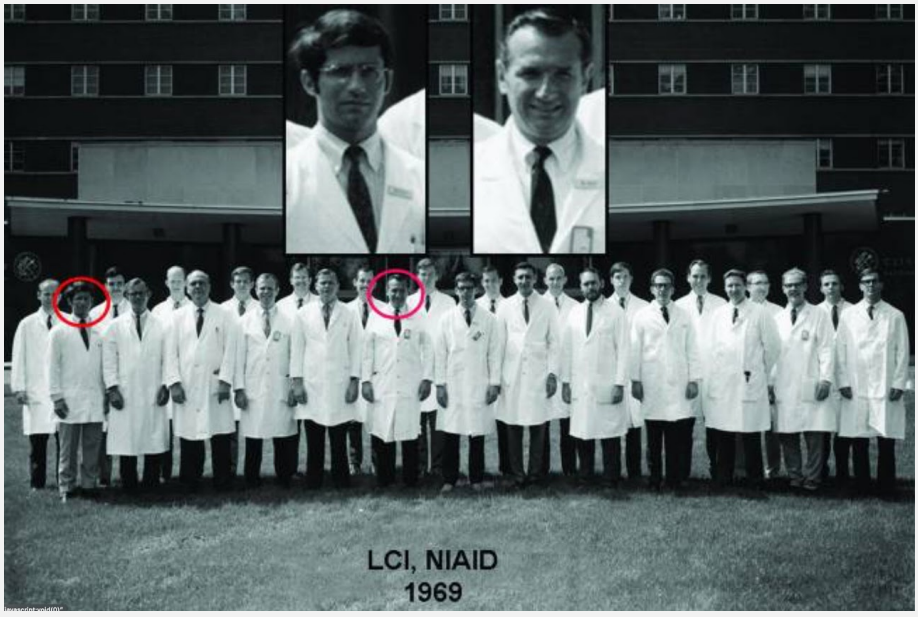
Fauci family pharmacy and apartment in Brooklyn, New York (13th Avenue and 83rd Street).

[HG003P][GDrive]

Anthony S. Fauci (circled) as captain of the Regis High School basketball team circa 1958.

[HG003Q][GDrive]

The New York Hospital house staff, 1966–1967 (Fauci circled).



[HG003R][GDrive]

The Laboratory of Clinical Investigation, NIAID, NIH (Fauci and Wolff circled and enlarged, left and right, respectively).

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Housatonic

Dr. Heinz Ulrich Feldmann (born 1959)

Wikipedia Heinz Feldmann

Born -

Relatives

Worked (works) at : **Rocky Mountain Labs**

Associations

- Mentor : **Dr. Hans-Dieter Klenk (born 1938)**

Saved Wikipedia (Feb 20, 2021) - Heinz Feldmann

[HK0052][GDrive]

- Nationality German
- Alma mater University of Marburg (MD/PhD)
- Scientific career
- Fields Virology
- Institutions Rocky Mountain Laboratories (NIAID)
- Thesis Strukturverwandtschaft im Hämagglutinin (Serotyp H 10) bei Influenza-A-Viren von Säugern und Vögeln (1989)

Heinz (Heinrich) Ulrich Feldmann is a German-American virologist who currently serves as the chief of the laboratory of virology at Rocky Mountain Laboratories, NIAID and heads the Disease Modelling and Transmission section. His research focuses on highly pathogenic viruses that require strict biocontainment, including those that cause viral hemorrhagic fever such as Ebola and Lassa. He has been responsible for the development of timely viral countermeasures including the rVSV-ZEBOV vaccine (Ervebro), development of vaccines and drugs against SARS-CoV-2, and epidemiology of SARS-CoV.

Education

Heinz received his MD from the University of Marburg in 1987 and his PhD in 1988. His doctoral thesis focused on the structural relationship between alpha-influenzavirus serotype hemagglutinin 10 in mammals and avians.[1] He conducted joint postdoctoral research at the University of Marburg and the CDC special pathogens branch in Atlanta, Georgia.[2]

Career

From 1999-2008, he served as the chief of the special pathogens branch at the National Microbiology Laboratory at PHAC. In 2008, he began his tenure as the chief of the laboratory of virology at Rocky Mountain Laboratories at NIAID.[3]

References

1. ^ Feldmann, Heinrich Ulrich (1988). Strukturverwandtschaft im Hämagglutinin (Serotyp H10) bei Influenza A-Viren von Säugern und Vögeln (in German). OCLC 633568580.
2. ^ "Heinz Feldmann, M.D., Ph.D. | NIH: National Institute of Allergy and Infectious Diseases". www.niaid.nih.gov. Retrieved 2020-10-13.
3. ^ "Thirteenth World Conference - The Lives to Come - Heinz Feldmann". www.thefutureofscience.org. Retrieved 2020-10-13.

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https://www.niaid.nih.gov/research/heinz-feldmann-md-phd

2017 Resume/CV for Heinz Feldman

Source : [HL006L][GDrive]

Research focus: highly infectious viruses, Ebola virus, Marburg virus, disease modeling with non-human primate models, development of vaccines, Ebola vaccine (rVSV-ZEBOV), antivirals and therapeutics

Heinz Feldmann is a virologist. He researches highly infectious viruses such as the Lassa, Ebola and Marburg viruses. His research interests are vaccine development. He has developed a vaccine for Ebola and is considered a leading international Ebola expert. During outbreaks of Ebola, Lassa fever and SARS, he was often a consultant to the WHO on site.

Akademischer und beruflicher Werdegang [Academic and professional career]

- seit 2017 Graduate Faculty Associate an der Marshall University, Huntington, West Virginia, USA
- **2012 - 2017 Affiliate Appointment an der Washington University, Seattle, Washington, USA**
- 2011 - 2015 Graduate Faculty an der Purdue University, West Lafayette, Indiana, USA
- 2010 - 2018 Faculty Affiliate an der University of Montana, Missoula, Montana, USA
- seit 2008 Leiter des Laboratory of Virology, Rocky Mountain Laboratories (RML), National Institute of Allergy and Infectious Diseases (NIAID), National Institutes of Health (NIH), Hamilton, Montana, USA und Leitender Wissenschaftler der RML BSL4 Laboratories
- 2002 - 2012 Adjunct Professor am Department of Pathology an der University of Texas Medical Branch, Galveston, Texas, USA
- seit 1999 Assistant und Associate Professor am Department of Medical Microbiology, Medical Faculty an der University of Manitoba, Winnipeg, Manitoba, Canada
- **1999 - 2008 Leiter des Special Pathogens Program, National Microbiology Laboratory, Health Canada, Winnipeg, Manitoba, Canada**
- 1998 - 1999 Privatdozent am Institut für Virologie an der Universität Marburg
- 1995 - 1998 Wissenschaftlicher Mitarbeiter am Institut für Virologie an der Universität Marburg
- **1992 - 1994 NRC Stipendium, Centers for Disease Control and Prevention, Atlanta, Georgia, USA**
- 1988 - 1992 Institut für Virologie an der Universität Marburg, Spezialisierung Infektionskrankheiten
- 1988 Promotion in Virologie an der Universität Marburg
- 1983 - 1988 Institut für Virologie an der Universität Marburg
- 1982 - 1987 Studium der Medizin an den Universitäten Köln und Gießen

Funktionen in wissenschaftlichen Gesellschaften und Gremien [Functions in scientific societies and committees }

- seit 2014 Mitglied im wissenschaftlichen Beirat Deutsches Zentrum für Infektionsforschung (DZIF)
- seit 2014 Mitglied im wissenschaftlichen Beirat Bernhard-Nocht Institut für Tropenmedizin (BNITM)
- seit 2014 Mitglied im wissenschaftlichen Beirat The Institut national de la santé et de la recherche médicale (inserm)
- seit 2014 Section Editor von Primate Biology
- seit 2006 Mitglied im Editorial Board des Journal of Virology
- 2006 Peer Review, Biocontainment Level 4 Facility, US Army Medical Research Institute for Infectious Diseases, Maryland, USA
- 2006 Peer Review, Biocontainment Level 4 Facility, Bilthoven, Niederlande
- 2006 Peer Review, Biocontainment Level 4 Facility, Robert-Koch-Institut (RKI), Berlin
- seit 2004 Mitglied im Editorial Board von Virus Research
- seit 2001 Mitglied im Editorial Board des Journal of Clinical Microbiology
- 2003 - 2006 Mitglied im Editorial Board des Journal of General Virology
- 2004 - 2013 Editor von Archives of Virology
- 2004 - 2008 Peer Review Panel, Vaccines Against Microbial Diseases (VMD), NIH
- 2004 - 2005 Peer Review, Biocontainment Level 4 Facility, Galveston National Laboratory (GNL), University of Texas Medical Branch (UTMB), Galveston, Texas, USA
- 2004 - 2005 Peer Review, Biocontainment Level 4 Facility, NIAID Integral Research Facility, Ft. Detrick, Frederick, Maryland, USA
- 2004 - 2005 Peer Review, Biocontainment Level 4 Facility, National Emerging Infectious Disease Laboratories (NEIDL), Boston, Massachusetts, USA
- 2003 - 2005 Peer Review, Biocontainment Level 4 Facility, NIAID Rocky Mountain Laboratories Integrated Research Facility, Hamilton, Montana, USA
- 2002 - 2004 Vorsitzender des International High Security Laboratory Network

- 2001 - 2003 Mitglied im Virology and Viral Pathogenesis Grants Committee, Canadian Institutes of Health Research
- 2000 - 2002 Mitglied im Care Committee des Canadian Science Centre for Human and Animal Health

Beratertätigkeit für die WHO:

- 2018 Berater WHO Roadmap meeting Ebola & Lassa, London, UK
- 2014 - 2015 Berater WHO - Ebola in West Africa, Mali, Liberia
- 2007 Berater WHO - Ebola in the Democratic Republic of the Congo
- 2007 Berater WHO - Rift Valley fever outbreak in Kenya
- 2005 WHO Berater Marburg, Ausbruch in Uige, Angola
- 2004 WHO Berater zu SARS in Guangzhou, Guangdong Province, China
- 2003 WHO Berater - Ebola Ausbruch in Mbomo, Republic of the Congo
- 2003 WHO Berater Schutzrichtlinien für Gebäude, SARS Ausbruch in Hong Kong

Auszeichnungen und verliehene Mitgliedschaften [Awards and memberships awarded]

- seit 2018 Mitglied der Nationalen Akademie der Wissenschaften Leopoldina
- 2017 NIH Director's Award
- 2017 NIH Merit Award
- 2016 The Meritorious Service Cross, Kanada
- 2015 NIH Director's Award
- 2014 Norman P. Salzman Memorial Mentor Award in Virology
- 2014 NIH Director's Award
- 2013, 2014 Research Merit Award, National Institute of Allergy and Infectious Diseases
- 2012 NIH Director's Award
- 2010 Research Merit Award, National Institute of Allergy and Infectious Diseases
- 2008 Research Merit Award, Public Health Agency of Canada
- seit 2006 Mitglied der American Society for Virology
- 2006 Research Merit Award, Public Health Agency of Canada
- 2006 Research Merit Award, Public Health Agency of Canada - Ebola and Marburg Hemorrhagic Fever Vaccine Team
- 2005 Dalrymple-Young Award, American Committee on Arthropod-Borne Viruses
- 2004 Wedum Memorial Award Lecture, American Biological Safety Association
- 2002 Mentorship Award, Faculty of Medicine, University of Manitoba, Kanada
- 1998 Loeffler-Frosch-Preis, Gesellschaft für Virologie e.V.
- **1996 Secretary's Award for Distinguished Service, U.S. Department of Health and Human Services**
- 1994 James H. Nakamo Citation, National Centers for Infectious Diseases; Centers for Disease Control and Prevention
  - [Nakamo is the scientist who svaved smallpox .. https://www.nytimes.com/1978/05/13/archives/new-jersey-pages-smallpox-virus-is-stored-in-laboratory-for.html /... he died in 1990 at age 68]
- **1994 Secretary's Recognition Award, U. S. Department of Health and Human Services**
- 1989 Ph.D. Preis, Fakultät für Medizin der Philipps-Universität Marburg

Research focus Heinz Feldmann is a virologist. He researches highly infectious viruses such as the Lassa, Ebola and Marburg viruses. His research interests are vaccine development. He has developed a vaccine for Ebola and is considered a leading international Ebola expert. During outbreaks of Ebola, Lassa fever and SARS, he was often a consultant to the WHO on site. Viruses like Ebola reprogram the host cell's genetic makeup so that it produces more and more viruses. The treatment of such diseases is therefore very difficult. It is hardly possible to kill the virus yourself. **The doctors therefore hope for vaccinations. Heinz Feldmann developed the Ebola vaccine (rVSV-ZEBOV) back in 2003 and tested it on monkeys in 2005. The basis for the vector vaccine is the vesicular stomatitis virus (VSV). Animals get a kind of foot and mouth disease as a result, the virus is harmless to humans. Feldmann incorporated an Ebola protein into this virus through genetic engineering. The immune system of the vaccinated monkeys then produced antibodies that protected them 100 percent from infection. The vaccine has now been successfully tested in infected patients in studies.**

On behalf of the Canadian government, Feldmann has set up a high-security laboratory for highly infectious viruses. This includes research on filoviruses, bunyaviruses, arenaviruses and flaviviruses. He is a consultant on viral hemorrhagic fevers and related diseases for the World Health Organization (WHO). In this role, he was repeatedly responsible for on-site safety and health management in the event of disease outbreaks. The aim of his research is the development of diagnostics and vaccines.

AMiner.org Profile (captured Feb 2021)

Source : [HL006M][GDrive]

"Dr. Heinz Feldman is an Associate Professor with the Department of Medical Microbiology at the University of Manitoba and the Chief of the Special Pathogens Program at the National Microbiology Laboratory, Public Health Agency of Canada. In addition, he holds an adjunct appointment with the Department of Pathology at the University of Texas Medical Branch. Dr. Feldman is a native of Germany. ***He received his B.Sc. in 1981 from the University of Giessen, Germany****, then graduated from Medical School at the University of Marburg in 1987, followed by his Ph.D. in 1988 also from this University. His postdoctoral research was in filoviruses and hantaviruses at the Institute of Virology, University of Marburg, Germany, and later at the Special Pathogens Branch, Centers for Disease Control and Prevention in Atlanta, U.S.A, where he held a fellowship from the 惟ational Research Council . Dr. Feldman is a laboratory expert on high containment viruses (BSL4) and serves as a consultant on viral hemorrhagic fevers for the World Health Organization. He is a member of national and international professional societies, an editor for Archives of Virology, and serves on the editorial board of several virology journals and as an invited reviewer for journals from related fields. He is an external scientific reviewer for national and international organizations and serves as a scientific consultant for high containment laboratories. His professional interest is in the pathogenesis of hemorrhagic fever viruses, such as Ebola virus, Lassa virus and hantaviruses, and other level 3 & 4 viral pathogens. Dr. Heinz Feldmann has published over 120 papers, book chapter and reviews and has presented at more conferences and seminars as an invited lecturer worldwide. He was awarded with several honors including the 慙ﾍfler-Frosch Award from the German Society for Virology and the 愴rnold Wedum Memorial Lecture Award from American Biological Safety Association."*

1988 (Aug) - "The structure of serotype H10 hemagglutinin of influenza A virus: comparison of an apathogenic avian and a mammalian strain pathogenic for mink"

https://pubmed.ncbi.nlm.nih.gov/3407149/

H Feldmann[1], E Kretzschmar, B Klingeborn, R Rott, H D Klenk, W Garten

Affiliations expand

- PMID: 3407149
- DOI: 10.1016/0042-6822(88)90586-7

https://pubmed.ncbi.nlm.nih.gov/3407149/

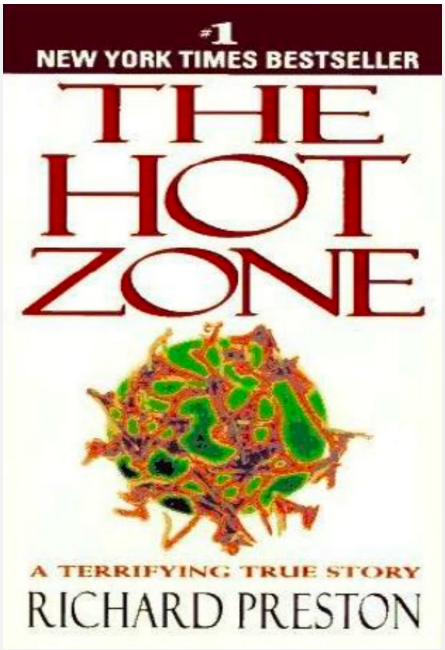
Abstract

The primary structure of the hemagglutinin of the apathogenic avian influenza virus A/chick/Germany/N/49 (H10N7) and of the serologically related strain A/mink/Sweden/84 (H10N4) pathogenic for mink has been elucidated by nucleotide sequence analysis, and the carbohydrates attached to the polypeptide have been determined. The H10 hemagglutinin has 65, 52, 46, 45, and 44% amino acid sequence homology with serotypes H7, H3, H1, H2, and H5, respectively. H10 and H7 hemagglutinins are also most closely related in their glycosylation patterns. There is a high sequence homology between both H10 strains supporting the concept that the mink virus has obtained its hemagglutinin from an avian strain. The sequence homology includes the cleavage site which consists of a single arginine as is the case with most other hemagglutinins exhibiting low susceptibility to proteolytic activation. The similarity in hemagglutinin structure between both H10 strains is discussed in light of the distinct differences in the pathogenicity of both viruses.

1990 (early) - At CDC (testing "Reston" ?) - In 1994 book "The Hot Zone: A Terrifying True Story "

From book - **"The Hot Zone" (book, 1994)** , written by **Richard McCann Preston (born 1954)** .

> *"The Hot Zone: A Terrifying True Story is a best-selling 1994 nonfiction thriller by Richard Preston about the origins and incidents involving viral hemorrhagic fevers, particularly ebolaviruses and marburgviruses.[1][2] The basis of the book was Preston's 1992 New Yorker article "Crisis in the Hot Zone".[3] ...*
>
> *The filoviruses—including Ebola virus, Sudan virus, Marburg virus, and Ravn virus—are Biosafety Level 4 agents, extremely dangerous to humans because they are very infectious, have a high fatality rate, and most have no known prophylactic measures, treatments, or cures. Along with describing the history of the devastation caused by two of these Central African diseases, Ebola virus disease and Marburg virus disease, Preston described a 1989 incident in which a relative of Ebola virus, Reston virus, was discovered at a primate quarantine facility in Reston, Virginia, less than 15 miles (24 km) away from Washington, D.C. "*



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THE MOST DANGEROUS STRAIN : 1990 JANUARY

THE STRAIN OF Ebola virus that had erupted near Washington went into hiding somewhere in the rain forest. The cycling went on. The cycling must always go on if the virus is to maintain its existence. The Army, having certified that the monkey house had been nuked, returned to the possession of Hazleton Research Products. Hazleton began buying more monkeys from the Philippines, from the same monkey house near Manila, and restocked the building with crab-eating monkeys that had been trapped in the rain forests of Mindanao. Less than a month later, in the middle of January, some of the monkeys in Room C began dying with bloody noses. Dan Dalgard called **Peter Jahrling**. "Looks like we're affected again," he said.

The virus was Ebola. It had come from the Philippines. This time, since there had been no human casualties during the first outbreak, the Army, the C.D.C., and Hazleton jointly decided to isolate the monkeys – leave them alone and let the virus burn. Dan Dalgard hoped to save at least some of the monkeys, and his company did not want the Army to come back with space suits.

What happened in that building was a kind of experiment. Now they would see what Ebola could do naturally in a population of monkeys living in a confined air space, in a kind of city, as it were. The **Ebola Reston virus** jumped quickly from room to room, and as it blossomed in the monkeys, it seemed to mutate spontaneously into something that looked quite a lot like the common cold. **But it was an Ebola cold. The monkeys died with great quantities of clear mucus and green mucus running from their nose, mixed with blood that would not clot. Their lungs were destroyed, rotten and swimming with Ebola virus. They had pneumonia.**

When a single animal with a nosebleed showed up in a room, generally 80 percent of the animals died in that room shortly afterward. The virus was extraordinarily infective in monkeys. The Institute scientists suspected that they were seeing a mutant strain of Ebola, something new and a little different from what they had seen just a month before, in December, when the Army had nuked the monkey house. It was frightening – it was as if Ebola could change its character fast. As if a different strain could appear in a month's time. The clinical symptoms of the disease served as a reminder of the fact that Ebola is related to certain kind of colds seen in human children. It seemed that the virus could adapt quickly to new host, and that it could change its character rapidly as it entered a new population. Ebola apparently drifted through the building's air-handling ducts.

By January 24, it had entered Room B, and monkeys in that room started going into shock and dying with runny noses, red eyes, and masklike expressions on their faces. In the following weeks, the infection entered Room I,F,E, and D, and the animals in these rooms virtually all died.

Then, in mid-February, a Hazleton animal caretaker who will be called John Coleus was performing a necropsy on a dead monkey when he cut his thumb with a scalpel. He had been slicing apart the liver, one of the favorite nesting sites of Ebola. The scalpel blade, smeared with liver cells and blood, went deep into this thumb. He had had a major exposure to Ebola.

The liver that he had been cutting was rushed to USAMRIID for analysis. Tom Geisbert looked at a piece of it under his microscope and, to his dismay, found that it was "incredibly hot – I mean, wall to wall with virus." Everyone at the Institute thought John Coleus was going to die.

"Around her," Peter Jahrling told me, "we were frankly fearful that this guy had bought the farm." The C.D.C. decided not to put him into isolation. So Coleus visited bars and drank beer with his friends.

"Here at the Institute," Peter Jahrling said, "we were absolutely appalled when that guy went out to bars, drinking. Clearly the C.D.C. should not have let that happen. This was a serious virus and a serious situation. We don't know a whole lot about the virus. It could be like the common cold – it could have a latency period when you are shedding virus before you develop symptoms – and by the time you know you are sick, you might have infected sixteen people. There's an awful lot we don't know about this virus. We don't know where it came from, and we don't know what form it will take when it appears next time."

John Coleus had a minor medical condition that required surgery.

Doctors performed the operation while he was in the incubation period after his exposure to Ebola. There is no record indicating that he bled excessively during the surgery. He came through fine, and he is alive today, with no ill effects from his exposure.

AS FOR THE MONKEY HOUSE, the entire building died. The Army didn't have to nuke it. It was nuked by the Ebola Reston virus. Once again, there were no human casualties. However, something eerie and perhaps sinister occurred. A total of four men had worked as caretakers in the monkey house: Jarvis Purdy,

who had a heart attack; Milton Frantig, who had thrown up on the lawn; John Coleus, who had cut his thumb; and a fourth man. All four men eventually tested positive for Ebola Reston virus. They had all been infected with the agent. The virus had entered their bloodstreams and multiplied in their cells. Ebola proliferated in their bodies. It cycled in them. It carried on its life inside the monkey workers. But it did not make them sick, even while it multiplied inside them. If they had headaches or felt ill, none of them could recall it. Eventually the virus cleared from their systems naturally, disappeared from the blood, and as of this writing none of the men was affected by it. They are among the very, very few human survivors of Ebola virus. John Coleus certainly caught the virus when he cut himself with a bloody scalpel, no question about that. What is more worrisome is that the others had not cut themselves, yet the virus entered their bloodstreams. It got there somehow. Most likely it entered their blood thought contact with the lungs. It infected them through the air. When it became apparent to the Army researchers that three of the four men who became infected had not cut themselves, just about everyone at USAMRIID concluded that Ebola can spread through the air.

Dr. Philip Russell – the general who made the decision to send in the Army to stop the virus – recently said to me that although he had been "scared to death" about Ebola at the time, it wasn't until afterward, when he understood that the virus was spreading in the air among the monkeys, that the true potential for disaster sank in for him. "I was more frightened in retrospect," he said. "When I saw the respiratory evidence coming from those monkeys, I said to myself, My God, with certain kinds of small changes, this virus could become one that travels in rapid respiratory transmission through humans. I'm talking about the Black Death. Imagine a virus with the infectiousness of influenza and the mortality rate of black plague in the Middle Ages – that's what we're talking about."

The workers at Reston had symptomless Ebola virus. Why didn't it kill them? To this day, no one knows the answer to that question.

Symptomless Ebola – the men had been infected with something like an Ebola cold. A tiny difference in the virus's genetic code, probably resulting in a small structural change in the shape of one of the seven mysterious proteins in the virus particle, had apparently changed its effect tremendously in humans, rendering it mild or harmless even though it had destroyed the monkeys. This strain of Ebola knew the difference between a monkey and a person. And if it should mutate in some other direction...

ONE DAY IN spring, I went to visit Colonel Nancy Jaax, to interview her about her work during the Reston event. We talked in her office. She wore a black military sweater with silver eagles on the shoulder boards – she had recently made full colonel. A baby parrot slept in a box in the corner. The parrot woke up and squeaked.

"Are you hungry?" she asked it. "Yeah, yeah, I know." She pulled a turkey baster out of a bag and loaded it with parrot mush. She stuck the baster into the parrot's beak and squeezed the baster bulb, and the parrot closed it eyes with satisfaction.

She waved her hand at some filing cabinets. "Want to look at some Ebola? Take your pick."

"You show me."

She searched through a cabinet and removed a handful of glass slides, and carried them into another room, where a microscope sat on a table. It had two sets of eyepieces so that two people could look into it at the same time.

I sat down and stared in the microscope, into white nothingness.

"Okay, here's a good one," she said, and placed a slide under the lens.

I saw a field of cells. Here and there, pockets of cells had burst and liquefied.

"That's male reproductive tissue," she said. "It's heavily infected. This is Ebola Zaire in a monkey that we exposed through the lungs in 1986, in the study that Gene Johnson and I did."

Looking at the slice of monkey testicle, I got an unpleasant sensation. "You mean, it got into the monkey's lungs and moved to its – ?"

"Yeah. it's pretty yucky," she said. "Now I'm going to make you dizzy. I'm going to show you the lung."

The scene shifted, and we were looking at rotted pink Belgian lace.

"This is a slice of lung tissue. A monkey that was exposed through the lungs. See how the virus bubbles up in the lungs? It's Ebola Zaire."

I could see individual cells, and some of them were swollen with dark specks.

"We'll go to higher magnification."

The cells got bigger. The dark specks became angular, shadowy blobs. The blobs were bursting out of the cells, like something hatching.

"Those are big, fat bricks," she said.

They were Ebola crystalloids bursting out of the lungs. The lungs were popping Ebola directly into the air. My scalp crawled and I felt suddenly like a civilian who had seen something that maybe civilians should not see.

"These lungs are very hot," she said in a matter-of-face voice.

"You see those bricks budding directly into the air spaces of the lung?

When you cough, this stuff comes up your throat in your sputum. That's why you don't want someone who has Ebola coughing in your face."

"My God, it knows all about lungs, doesn't it?"

"Maybe not. It might live in an insect, and insects don't have lungs. But you see here how Ebola has adapted to this lung. It's budding out of the lung, right straight into the air."

"We're looking at a highly sophisticated organism, aren't we?"

"You're absolutely right. This hummer has an established life cycle. You get into what-if? game. What if it got into human lungs? If it mutates, it could be a problem. A big problem."

IN MARCH 1990, while the second outbreak at Reston was happening, the C.D.C. slapped a heavy set of restrictions on monkey importers, tightening the testing and quarantine procedures. The C.D.C. also temporarily revoked the license of three companies, Hazleton Research Products, the Charles River Primates Corporation, and Worldwide Primates, charging these companies with violations of quarantine rules. Their licenses were later reinstated. The

Primates Corporation, and Worldwide Primates, charging these companies with violations of quarantine rules. Their licenses were later reinstated. The C.D.C.'s action effectively stopped the importation of monkeys into the United States for several months. The total loss to Hazleton ran into the millions of dollars. Monkeys are worth money.

Despite the C.D.C.'s action against Hazleton, scientists at USAMRIID, and even some at the C.D.C., gave Dalgard and his company high praise for making the decision to hand over the monkey facility to the Army. "It was hard for Hazleton, but they did the right thing," Peter Jahrling said to me, summing up the general opinion of the experts.

Hazleton had been renting the monkey house from a commercial landlord. Not surprisingly, relations between the landlord and Hazleton did not flourish happily during the Army operation and the second Ebola outbreak. The company vacated the building afterward, and to this day it stands empty.

Peter Jahrling, a whiffer of Ebola who lived to tell about it, is now the principal scientist at USAMRIID. He and Tom Geisbert, following tradition in the naming of new viruses, named the strain they had discovered Reston, after the place where it was first noticed. In conversation, they sometimes refer to it casually as Ebola Reston. One day in his office, Jahrling showed me a photograph of some Ebola-virus particles. They resembled noodles that had been cooked al dente. "Look at this honker. Look at this long sucker here," Jahrling said, his finger tracing a loop. "It's Reston – oh, I was about to say it's Reston, but it isn't – it's Zaire. The point is, you can't easily tell the difference between the two strains by looking. It brings you back to a philosophical question: Why is the Zaire suffer hot for humans? Why isn't Reston hot for humans, when the strains are so close to each other? **The Ebola Reston virus is almost certainly transmitted by some airborne route.** Those Hazleton workers who had the virus – I'm pretty sure they got it through the air."

"Did we dodge a bullet?"

"I don't think we did," Jahrling said. "The bullet hit us. We were just lucky that the bullet we took was a rubber bullet from a twenty-two rather than a dumdum bullet from a forty-five. My concern is that people are saying, "Whew, we dodged a bullet.' And the next time they see Ebola in a microscope, they'll say, 'Aw, it's just Reston,' and they'll take it outside a containment facility. And we'll get whacked in the forehead when the stuff turns out not to be Reston but its big sister."

[Dr. Clarence James Peters (born 1940)] EVENTUALLY left the Army to become the chief of the Special Pathogen Branch at the Centers for Disease Control. Looking back on the Reston event, he said to me one day that was pretty sure Ebola had spread through the air, "I think the pattern of spread that we saw, and the fact that it spread to new rooms, suggest that Ebola aerosols were being generated and were present in the building," he said. "If you look at pictures of lungs from a monkey with Ebola Zaire, you see that the lungs are fogged with Ebola. Have you seen those pictures?"

"Yes, Nancy Jaax showed them to me."

"Then you know. You can see Ebola particles clearly in the air spaces of the lung."

"Did you ever try to see if you could put Ebola Reston into the air and spread it among monkeys that way?" I asked.

"No," he replied firmly. "I just didn't think that was a good idea. If anybody had found out that the Army was doing experiments to see if the Ebola virus had adapted to spreading in the respiratory tract, we would have been accused of doing offensive biological warfare – trying to create a doomsday germ. So we elected not to follow it up."

"That means you don't really know if Ebola spreads in the air."

"That's right. We don't know. You have to wonder if Ebola virus can do that or not. If it can, that's about the worst thing you can imagine."

SO THE THREE sisters – Marburg, Ebola Sudan, and Ebola Zaire – have been joined by a fourth sister, Reston. A group of researchers at the Special Pathogens Branch of the C.D.C. – principally Antony Sanchez and Heinz Feldmann – have picked apart the genes of all the filoviruses. They discovered that Zaire and Reston are so much alike that it's hard to say how they are different. When I met Anthony Sanchez and asked him about it, he said to me, "I call them kissing cousins. But I can't put my finger on why Reston apparently doesn't make us sick. Personally, I wouldn't feel comfortable handling it without a suit and maximum containment procedures." Each virus contains seven proteins, four of which are completely unknown. Something slightly different about one of the Reston proteins is a probably the reason the virus didn't go off in Washington like a bonfire. The Army and C.D.C have never downgraded the safety status of Reston virus. It seems classified as a Level 4 hot agent, and if you want to shake hands with it, you had better wearing a space suit. Safety experts feel that there is not enough evidence, yet, to show that the Reston strain is not an extremely dangerous virus. It may be, in fact, the most dangerous of all the filovirus sisters, because of its seeming ability to travel rather easily through the air, perhaps more easily than the others. A tiny change in its genetic code, and it might turn into a cough and take out the human race.

Why is the Reston virus so much like Ebola Zaire, when Reston supposedly comes from Asia? If the strains come from different continents, they should be quite different from each other. One possibility is that the Reston strain originated in Africa and flew to the Philippines on an airplane not long ago. In other words, Ebola has already entered the net and has been traveling lately. The experts do not doubt that a virus can hop around the world in a matters of days. Perhaps Ebola came out of Africa and landed in Asia a few years back.

1990 (April) - [Roxithromycin versus doxycycline in the treatment of cervicitis. Prospective randomized multicenter study under practice-related conditions]

https://pubmed.ncbi.nlm.nih.gov/2190897/

Clinical Trial Fortschr Med

. 1990 Apr 20;108(12):244-6.

[Article in German]

U B Hoyme 1 , M Alimi, H U Feldmann, H Gerlach, U Keuter, H J Marks, M Moayer, A F Salih, A E Schindler, H J Stangier

Affiliations expand

PMID: 2190897

Abstract

In a prospective randomized multicenter study Roxithromycin 150 mg or Doxycycline 100 mg was given b.i.d. p.o. for ten days to women with clinically diagnosed cervicitis. All women were seen as outpatients by one of eight licensed gynecologists in their private office in the Essen city area. With a cure and improvement rate of 100% in those women who completed therapy, Roxithromycin (n = 106) was as effective as Doxycycline (n = 104; 98%). At 90% Roxithromycin was as well tolerated as Doxycycline at 93%. Both drugs were clinically and microbiologically effective in eradicating Chlamydia trachomatis.

1991 (May) - Glycosylation and oligomerization of the spike protein of Marburg virus

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- https://pubmed.ncbi.nlm.nih.gov/2024471/

Affiliations expand

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- PMCID: PMC7172319
- DOI: 10.1016/0042-6822(91)90680-a

Abstract - The oligosaccharide side chains of the glycoprotein of Marburg virus (MW 170,000) have been analyzed by determining their sensitivity to enzymatic degradation and their reactivity with lectins. It was found that they consist of N- and O-glycans. Studies employing chemical cross-linking showed that the glycoprotein is present as a homotrimer in the viral envelope.

1991-05-nih.gov-2024471-glycosylation-and-oligomerization-of-the-spike-protein-of-marburg-virus

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Glycosylation and Oligomerization of the Spike Protein of Marburg Virus

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The oligosaccharide side chains of the glycoprotein of Marburg virus (MW 170,000) have been analyzed by determining their sensitivity to enzymatic degradation and their reactivity with lectins. It was found that they consist of *N*- and *O*-glycans. Studies employing chemical cross-linking showed that the glycoprotein is present as a homotrimer in the viral envelope. © 1991 Academic Press, Inc.

Marburg virus and the morphologically related Ebola virus are negative-stranded RNA viruses of the Filoviridae family (*1*). Both viruses cause a severe hemorrhagic fever with a mortality as high as 90% for Ebola virus (*2*) and about 35% for Marburg virus (*3*). Marburg virus was first isolated in 1967 from laboratory workers, when it caused three outbreaks in Europe at Marburg, Frankfurt, and Belgrade. The workers were infected after contact with tissues of monkeys imported from Uganda (*3*). Since that time, four more episodes of Marburg disease in Africa have been reported (*4*).

Marburg virus is an enveloped, filamentous virus containing a negative-stranded RNA genome with a molecular weight of approximately 4.2×10^6 (*5*). The virion RNA does not bind to oligo-dT–cellulose and is not infectious. SDS–PAGE profiles demonstrate the presence of seven virion proteins. These are the L protein (180K), the glycoprotein GP, the nucleoprotein NP (96K), and proteins VP40 (38K), VP 35 (32K), VP30 (28K), and VP24 (24K). In analogy to Ebola virus, VP35 may be a transcriptase component and VP30 a second nucleoprotein. The functions of VP40 and VP24 are still unknown (*4, 6*). The virion proteins are synthesized from monocistronic mRNA species analogous to those of Ebola virus (*7*). By *in vitro* translation, five different mRNA species could be assigned to proteins NP, VP40, VP35, VP30, and VP24. mRNAs coding for L and GP could not be detected yet (*4*).

GP is the only membrane glycoprotein of Marburg virus and forms the surface projections on the viral envelope. The molecular weight of GP has previously been estimated to be 140,000 but reevaluation with appropriate protein markers indicates that 170,000 may be more accurate (Fig. 1A). To examine the type of glycan–protein linkages, we treated virion proteins with different glycohydrolases. These treatments were performed overnight at 37° after denaturing of the proteins. As shown in Fig. 1B, the electrophoretic mobility of GP was slightly enhanced after incubation with endoglycosidase H (lane 4), and a distinct further increase was obtained by treatment with endoglycosidase F (lane 3), indicating that GP contains *N*-glycans of the oligomannosidic, but mainly of the complex type. However, carbohydrate not linked by *N*-glycosidic bonds was also present. Sensitivity of GP to endo-α-*N*-acetylgalactosaminidase (Fig. 1B, lane 2) indicated that *O*-glycans containing galactose-β(1–3)-*N*-acetylgalactosamine disaccharide units were present. The existence of *O*-glycans was also suggested by *N*-acetylgalactosamine which was detected, in addition to *N*-acetylglucosamine, when purified GP was subjected to amino acid analysis (data not shown).

To further assess the nature of the carbohydrate moiety, the affinity of various lectins to GP was analyzed. The lectins used were conjugated to the steroid hapten digoxigenin (Boehringer, Mannheim, Germany), and their binding was assayed by immunoblotting. The results obtained with peanut agglutinin (PNA) and *Datura stramonium* agglutinin (DSA) are shown in Fig. 2. As indicated by control experiments with fetuin that contains N- and O-linked oligosaccharides and with asialofetuin containing the same glycans devoid of sialic acid, PNA reacts specifically with the galactose-β(1–3)-*N*-acetylgalactosamine cores of *O*-glycans that must not be substituted with terminal *N*-acetylneuraminic acid. The observation that Marburg virus GP is recognized by PNA after incubation with endoglycosidase F or *N*-glycopeptidase F provides further support for the presence of *O*-glycans. It was unexpected, however, that PNA bound also to GP after incubation with endo-α-*N*-acetylgalactosaminidase. This suggests that galactose-β(1–3)-*N*-acetylgalactosamine cores substituted with nonsialic acid residues

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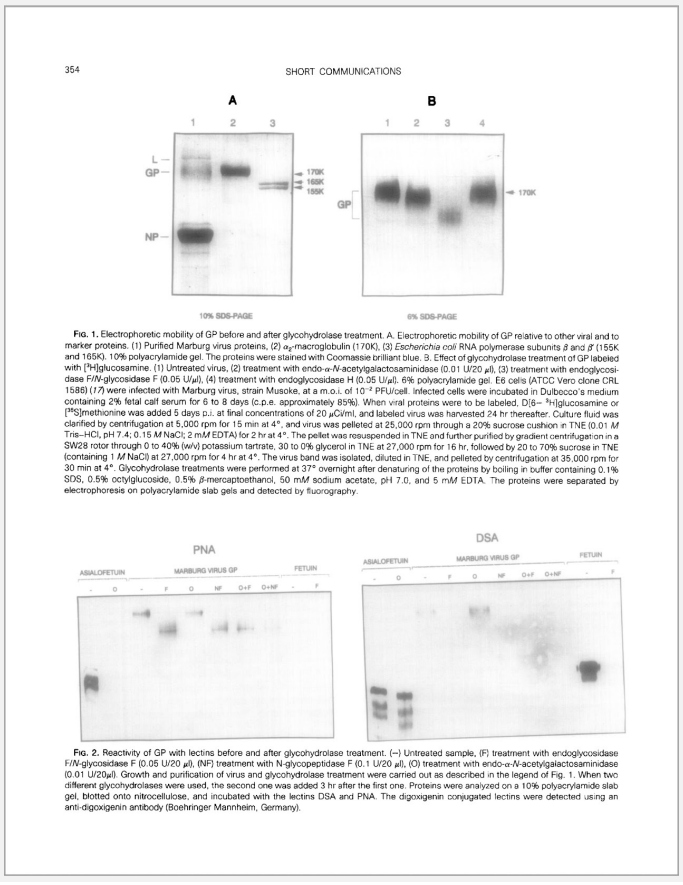

FIG. 1. Electrophoretic mobility of GP before and after glycohydrolase treatment. A. Electrophoretic mobility of GP relative to other viral and to marker proteins. (1) Purified Marburg virus proteins, (2) α_2-macroglobulin (170K), (3) *Escherichia coli* RNA polymerase subunits β and β′ (155K and 165K). 10% polyacrylamide gel. The proteins were stained with Coomassie brilliant blue. B. Effect of glycohydrolase treatment of GP labeled with [^{3}H]glucosamine. (1) Untreated virus, (2) treatment with endo-α-*N*-acetylgalactosaminidase (0.01 U/20 μl), (3) treatment with endoglycosidase F/*N*-glycosidase F (0.05 U/μl), (4) treatment with endoglycosidase H (0.05 U/μl). 6% polyacrylamide gel. E6 cells (ATCC Vero clone CRL 1586) (1.7) were infected with Marburg virus, strain Musoke, at a m.o.i. of 10^{-2} PFU/cell. Infected cells were incubated in Dulbecco's medium containing 2% fetal calf serum for 6 to 8 days (c.p.e. approximately 85%). When viral proteins were to be labeled, D[6– ^{3}H]glucosamine or [^{35}S]methionine was added 5 days p.i. at final concentrations of 20 μCi/ml, and labeled virus was harvested 24 hr thereafter. Culture fluid was clarified by centrifugation at 5,000 rpm for 15 min at 4°, and virus was pelleted at 25,000 rpm through a 20% sucrose cushion in TNE (0.01 *M* Tris–HCl, pH 7.4; 0.15 *M* NaCl; 2 m*M* EDTA) for 2 hr at 4°. The pellet was resuspended in TNE and further purified by gradient centrifugation in a SW28 rotor through 0 to 40% (w/v) potassium tartrate, 30 to 0% glycerol in TNE at 27,000 rpm for 16 hr, followed by 20 to 70% sucrose in TNE (containing 1 *M* NaCl) at 27,000 rpm for 4 hr at 4°. The virus band was isolated, diluted in TNE, and pelleted by centrifugation at 35,000 rpm for 30 min at 4°. Glycohydrolase treatments were performed at 37° overnight after denaturing of the proteins by boiling in buffer containing 0.1% SDS, 0.5% octylglucoside, 0.5% β-mercaptoethanol, 50 m*M* sodium acetate, pH 7.0, and 5 m*M* EDTA. The proteins were separated by electrophoresis on polyacrylamide slab gels and detected by fluorography.

FIG. 2. Reactivity of GP with lectins before and after glycohydrolase treatment. (–) Untreated sample, (F) treatment with endoglycosidase F/*N*-glycosidase F (0.05 U/20 μl), (NF) treatment with N-glycopeptidase F (0.1 U/20 μl), (O) treatment with endo-α-*N*-acetylgalactosaminidase (0.01 U/20μl). Growth and purification of virus and glycohydrolase treatment were carried out as described in the legend of Fig. 1. When two different glycohydrolases were used, the second one was added 3 hr after the first one. Proteins were analyzed on a 10% polyacrylamide slab gel, blotted onto nitrocellulose, and incubated with the lectins DSA and PNA. The digoxigenin conjugated lectins were detected using an anti-digoxigenin antibody (Boehringer Mannheim, Germany).

1992 (Feb) : Journal of General Virology - "Sequence analysis of the Marburg virus nucleoprotein gene: comparison to Ebola virus and other non-segmented negative-strand RNA viruses"

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The first 3000 nucleotides from the 3′ end of the Marburg virus (MBG) genome were determined from cDNA clones produced from genomic RNA and mRNA. Identified in the sequence was a short putative leader sequence at the extreme 3′ end, followed by the complete nucleoprotein (NP) gene. The 5′ end of the NP mRNA was determined as was the polyadenylation site for the NP gene. The transcriptional start (3′ UUCUUCUUAUAAUU..) and termination (3′ ..UAAUUCUUUUU) signals of the MBG NP gene are very similar to those seen with Ebola virus (EBO). In comparison to other non-segmented negative-strand RNA viruses, filovirus transcriptional signals are most similar to members of the Paramyxovirus and Morbillivirus genera. In vitro translation of a run-off transcript containing the entire MBG NP coding region produced an authentic NP. Sequence comparisons of the 3′ end of the MBG and EBO genomes revealed weak nucleotide sequence similarity, but the predicted sequence of the first 400 amino acids of these viruses showed a high degree. This homology is encoded in divergent nucleotide sequences through different codon usages and substitutions of similar amino acids. A small region in the middle of the MBG and EBO NP sequences was found to contain a significant amino acid homology with NPs of paramyxoviruses and to a lesser extent with rhabdoviruses. Specific sites of conserved sequence are contained in hydrophobic domains and may have a common function. Alignments of the entire NP amino acid sequences of these viruses also suggest that filoviruses are more closely related to paramyxoviruses than to rhabdoviruses.

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Sequence analysis of the Marburg virus nucleoprotein gene: comparison to Ebola virus and other non-segmented negative-strand RNA viruses

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The first 3000 nucleotides from the 3′ end of the Marburg virus (MBG) genome were determined from cDNA clones produced from genomic RNA and mRNA. Identified in the sequence was a short putative leader sequence at the extreme 3′ end, followed by the complete nucleoprotein (NP) gene. The 5′ end of the NP mRNA was determined as was the polyadenylation site for the NP gene. The transcriptional start (3′ UUCUUCUUAUAAUU..) and termination (3′ ..UAAUUCUUUUU) signals of the MBG NP gene are very similar to those seen with Ebola virus (EBO). In comparison to other non-segmented negative-strand RNA viruses, filovirus transcriptional signals are most similar to members of the Paramyxovirus and Morbillivirus genera. *In vitro* translation of a run-off transcript containing the entire MBG NP coding region produced an authentic NP. Sequence comparisons of the 3′ end of the MBG and EBO genomes revealed weak nucleotide sequence similarity, but the predicted sequence of the first 400 amino acids of these viruses showed a high degree. This homology is encoded in divergent nucleotide sequences through different codon usages and substitutions of similar amino acids. A small region in the middle of the MBG and EBO NP sequences was found to contain a significant amino acid homology with NPs of paramyxoviruses and to a lesser extent with rhabdoviruses. Specific sites of conserved sequence are contained in hydrophobic domains and may have a common function. Alignments of the entire NP amino acid sequences of these viruses also suggest that filoviruses are more closely related to paramyxoviruses than to rhabdoviruses.

Introduction

Marburg virus (MBG) is a 'Biosafety Level 4' agent (Richardson & Barkley, 1988) that was first identified in 1967 following human outbreaks of acute haemorrhagic fever in the cities of Marburg and Frankfurt, Germany, and Belgrade, Yugoslavia (Martini & Siegert, 1971). Initial infections occurred in persons working with blood, organs or cell culturing of tissues from infected African green monkeys (*Cercopithecus aethiops*) imported from Uganda. This pathogen received its name from the city of Marburg, where most of the cases occurred and where much of the initial work on the virus was performed. Three subsequent human outbreaks have been attributed to MBG (Gear *et al.*, 1975; Smith *et al.*, 1982; Kiley *et al.*, 1988).

MBG, Ebola virus (EBO) and Reston virus (RES) (Ebola-like monkey filovirus; Centers for Disease Control, 1989; Jahrling *et al.*, 1990) are non-segmented negative-strand (NNS) RNA viruses and are members of the family Filoviridae. Together with the Paramyxoviridae and Rhabdoviridae, these families make up the order *Mononegavirales*, a status accorded to them in 1990 by the International Committee on Taxonomy of Viruses (Pringle, 1991). The filovirus virion is bacilliform in morphology and is composed of a helical nucleocapsid surrounded by a lipid envelope. Virions contain at least seven structural proteins and for MBG these proteins are an RNA-dependent RNA polymerase (L protein; M_r 267K; unpublished data), a single surface glycoprotein (GP; M_r 170K; Feldmann *et al.*, 1991), a nucleoprotein (NP; M_r 94K) and four proteins ranging in M_r from 24K to 38K (Kiley *et al.*, 1988).

The genetic features of filoviruses are similar to other NNS viruses in that (i) transcription of the infecting ribonucleoprotein complex, which contains a single negative-sense genomic RNA template, yields monocistronic polyadenylated mRNA species and (ii) for EBO

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The nucleotide sequence data reported in this paper have been assigned GenBank accession number M72714.

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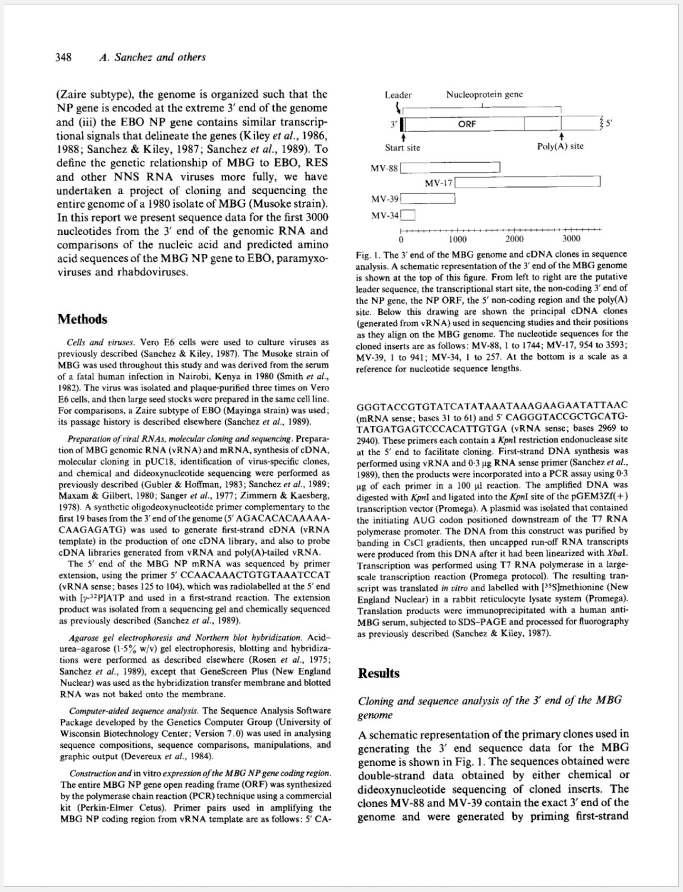

(Zaire subtype), the genome is organized such that the NP gene is encoded at the extreme 3′ end of the genome and (iii) the EBO NP gene contains similar transcriptional signals that delineate the genes (Kiley *et al.*, 1986, 1988; Sanchez & Kiley, 1987; Sanchez *et al.*, 1989). To define the genetic relationship of MBG to EBO, RES and other NNS RNA viruses more fully, we have undertaken a project of cloning and sequencing the entire genome of a 1980 isolate of MBG (Musoke strain). In this report we present sequence data for the first 3000 nucleotides from the 3′ end of the genomic RNA and comparisons of the nucleic acid and predicted amino acid sequences of the MBG NP gene to EBO, paramyxoviruses and rhabdoviruses.

Methods

Cells and viruses. Vero E6 cells were used to culture viruses as previously described (Sanchez & Kiley, 1987). The Musoke strain of MBG was used throughout this study and was derived from the serum of a fatal human infection in Nairobi, Kenya in 1980 (Smith *et al.*, 1982). The virus was isolated and plaque-purified three times on Vero E6 cells, and then large seed stocks were prepared in the same cell line. For comparisons, a Zaire subtype of EBO (Mayinga strain) was used; its passage history is described elsewhere (Sanchez *et al.*, 1989).

Preparation of viral RNAs, molecular cloning and sequencing. Preparation of MBG genomic RNA (vRNA) and mRNA, synthesis of cDNA, molecular cloning in pUC18, identification of virus-specific clones, and chemical and dideoxynucleotide sequencing were performed as previously described (Gubler & Hoffman, 1983; Sanchez *et al.*, 1989; Maxam & Gilbert, 1980; Sanger *et al.*, 1977; Zimmern & Kaesberg, 1978). A synthetic oligodeoxynucleotide primer complementary to the first 19 bases from the 3′ end of the genome (5′ AGACACACAAAAA-CAAGAGATG) was used to generate first-strand cDNA (vRNA template) in the production of one cDNA library, and also to probe cDNA libraries generated from vRNA and poly(A)-tailed vRNA.

The 5′ end of the MBG NP mRNA was sequenced by primer extension, using the primer 5′ CCAACAAACTGTGTAAATCCAT (vRNA sense; bases 125 to 104), which was radiolabelled at the 5′ end with [γ-^{32}P]ATP and used in a first-strand reaction. The extension product was isolated from a sequencing gel and chemically sequenced as previously described (Sanchez *et al.*, 1989).

Agarose gel electrophoresis and Northern blot hybridization. Acid–urea–agarose (1·5% w/v) gel electrophoresis, blotting and hybridizations were performed as described elsewhere (Rosen *et al.*, 1975; Sanchez *et al.*, 1989), except that GeneScreen Plus (New England Nuclear) was used as the hybridization transfer membrane and blotted RNA was not baked onto the membrane.

Computer-aided sequence analysis. The Sequence Analysis Software Package developed by the Genetics Computer Group (University of Wisconsin Biotechnology Center; Version 7.0) was used in analysing sequence compositions, sequence comparisons, manipulations, and graphic output (Devereux *et al.*, 1984).

Construction and in vitro *expression of the MBG NP gene coding region.* The entire MBG NP gene open reading frame (ORF) was synthesized by the polymerase chain reaction (PCR) technique using a commercial kit (Perkin-Elmer Cetus). Primer pairs used in amplifying the MBG NP coding region from vRNA template are as follows: 5′ CA-

Fig. 1. The 3′ end of the MBG genome and cDNA clones in sequence analysis. A schematic representation of the 3′ end of the MBG genome is shown at the top of this figure. From left to right are the putative leader sequence, the transcriptional start site, the non-coding 3′ end of the NP gene, the NP ORF, the 5′ non-coding region and the poly(A) site. Below this drawing are shown the principal cDNA clones (generated from vRNA) used in sequencing studies and their positions as they align on the MBG genome. The nucleotide sequences for the cloned inserts are as follows: MV-88, 1 to 1744; MV-17, 954 to 3593; MV-39, 1 to 941; MV-34, 1 to 257. At the bottom is a scale as a reference for nucleotide sequence lengths.

GGGTACCGTGTATCATATAAATAAAGAAGAATATTAAC (mRNA sense; bases 31 to 61) and 5′ CAGGGTACCGCTGCATG-TATGATGAGTCCCACATTGTGA (vRNA sense; bases 2969 to 2940). These primers each contain a *Kpn*I restriction endonuclease site at the 5′ end to facilitate cloning. First-strand DNA synthesis was performed using vRNA and 0·3 μg RNA sense primer (Sanchez *et al.*, 1989), then the products were incorporated into a PCR assay using 0·3 μg of each primer in a 100 μl reaction. The amplified DNA was digested with *Kpn*I and ligated into the *Kpn*I site of the pGEM3Zf(+) transcription vector (Promega). A plasmid was isolated that contained the initiating AUG codon positioned downstream of the T7 RNA polymerase promoter. The DNA from this construct was purified by banding in CsCl gradients, then uncapped run-off RNA transcripts were produced from this DNA after it had been linearized with *Xba*I. Transcription was performed using T7 RNA polymerase in a large-scale transcription reaction (Promega protocol). The resulting transcript was translated *in vitro* and labelled with [^{35}S]methionine (New England Nuclear) in a rabbit reticulocyte lysate system (Promega). Translation products were immunoprecipitated with a human anti-MBG serum, subjected to SDS–PAGE and processed for fluorography as previously described (Sanchez & Kiley, 1987).

Results

Cloning and sequence analysis of the 3′ end of the MBG genome

A schematic representation of the primary clones used in generating the 3′ end sequence data for the MBG genome is shown in Fig. 1. The sequences obtained were double-strand data obtained by either chemical or dideoxynucleotide sequencing of cloned inserts. The clones MV-88 and MV-39 contain the exact 3′ end of the genome and were generated by priming first-strand

1992 (March) : "Evidence for occurrence of filovirus antibodies in humans and imported monkeys: do subclinical filovirus infections occur worldwide?"

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Comparative Study Med Microbiol Immunol

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PMID: 1579085 DOI: 10.1007/BF00193395

Abstract

In the present serological study 120 monkey sera from different species originating from the Philippines, China, Uganda and undetermined sources and several groups of human sera comprising a total of 1288 specimens from people living in Germany were examined for the presence of antibodies directed against filoviruses (Marburg virus, strain Musoke/Ebola virus, subtype Zaire, strain Mayinga/Reston virus). Sera were screened using a filovirus-specific enzyme-linked immunosorbent assay (ELISA). ELISA-positive sera were then confirmed by the indirect immunofluorescence technique, Western blot technique, and a blocking assay, and declared positive when at least one confirmation test was reactive. Altogether 43.3% of the monkey sera and 6.9% of the human sera reacted positively with at least one of the three different filovirus antigens. The blocking assays show that antibodies, detected in the sera, are directed to specific filovirus antigens and not caused by antigenic cross-reactivity with hitherto unknown agents. Data presented in this report suggest that subclinical filovirus infections may also occur in humans and in subhuman primates. They further suggest that filoviruses are not restricted to the African continent.

1992 (April)

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Comparative Study Virology

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The nucleotide sequence of the L gene of Marburg virus, a filovirus: homologies with paramyxoviruses and rhabdoviruses

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Abstract

The nucleotide sequence of the L gene of Marburg virus, strain Musoke, has been determined. The L gene has a single long open reading frame encoding a polypeptide of 2330 amino acids (MW 267,175) that represents the viral RNA-dependent RNA polymerase. The putative transcription start signal (3'CUACCUAUAAUU 5') and the termination signal (3' UAAUUCUUUUU 5') of the gene could be identified. Computer-assisted comparison of the L protein with L proteins of other nonsegmented negative-stranded RNA viruses (Paramyxoviridae: Sendai virus, Newcastle disease virus, human parainfluenza 3 virus, measles virus, human respiratory syncytial virus; Rhabdoviridae: vesicular stomatitis virus, rabies virus) revealed significant homologies primarily in the N-terminal half of the proteins. We have identified three common conserved boxes (A, B, and C) among filo-, paramyxo-, and rhabdovirus L proteins, which are probably involved in the polymerase function. The L proteins can be divided into an N-terminal half, which seems to accommodate the common enzymatic sites, and a C-terminal half carrying virus specific peculiarities. The data presented here suggest a common evolutionary history for all nonsegmented negative-stranded RNA viruses and show that filoviruses are more closely related to paramyxo- than to rhabdoviruses.

1992 (June) - "Marburg virus, a filovirus: messenger RNAs, gene order, and regulatory elements of the replication cycle"

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- DOI: 10.1016/0168-1702(92)90027-7

Abstract

The genome of Marburg virus (MBG), a filovirus, is 19.1 kb in length and thus the largest one found with negative-strand RNA viruses. The gene order - 3' untranslated region-NP-VP35-VP40-GP-VP30-VP24-L-5' untranslated region-resembles that of other non-segmented negative-strand (NNS) RNA viruses. Six species of polyadenylated subgenomic RNAs, isolated from MBG-infected cells, are complementary to the negative-strand RNA genome. They can be translated in vitro into the known structural proteins NP, GP (non-glycosylated form), VP40, VP35, VP30 and VP24. At the gene boundaries conserved transcriptional start (3'-NNCUNCNUNUAAUU-5') and stop signals (3'-UAAUUCUUUUU-5') are located containing the highly conserved pentamer 3'-UAAUU-5'. Comparison with other NNS RNA viruses shows conservation primarily in the termination signals, whereas the start signals are more variable. The intergenic regions vary in length and nucleotide composition. All genes have relatively long 3' and 5' end non-coding regions. The putative 3' and 5' leader RNA sequences of the MBG genome resemble those of other NNS RNA viruses in length, conservation at the 3' and 5' ends, and in being complementary at their extremities. The data support the concept of a common taxonomic order Mononegavirales comprising the Filoviridae, Paramyxoviridae, and Rhabdoviridae families.

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Hildegard Geyer, Christiane Will, Heinz Feldmann, Hans-Dieter Klenk, Rudolf Geyer

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Carbohydrate structure of Marburg virus glycoprotein

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Marburg virus was propagated in E6 cells, a cloned cell line of Vero cells, in the presence of [6-^{3}H]glucosamine. Radiolabelled viral glycoprotein was digested with trypsin, and oligosaccharides were liberated by sequential treatment with endo-β-*N*-acetylglucosaminidase H, peptide-*N*^{4}-(*N*-acetyl-β-glucosaminyl)asparagine amidase F and *O*-glycosidase, by β-elimination, and by alkaline hydrolysis. After fractionation by HPLC and gel filtration, glycans were characterized chromatographically, by digestion with exoglycosidases and, in part, by methylation analysis and liquid secondary ion mass spectrometry. The oligosaccharide structures thus established include oligomannosidic and hybrid-type *N*-glycans, as well as neutral fucosylated bi-, tri- and tetraantennary species, most of which carry an additional bisecting *N*-acetylglucosamine. In addition, high amounts of neutral mucin-type *O*-glycans with type-1 and type-2 core structures were detected. None of the glycans present in this viral glycoprotein carried sialic acid residues.

Key words: Filoviridae/glycoprotein/Marburg virus/oligosaccharides/structure analysis

Introduction

Marburg virus, as well as the morphologically related Ebola virus, are the prototype members of a new virus family, called Filoviridae (Kiley *et al.*, 1982), which constitutes the third family of non-segmented negative-strand RNA viruses within the newly proposed order Mononegavirales besides the Paramyxoviridae and the Rhabdoviridae (ICTV, 1990). Recently, a third member of this virus family, which is antigenically closely related to Ebola virus, was isolated from cynomolgus monkeys (*Macaca fascicularis*) imported to the USA from the Philippines (Centres for Disease Control, 1989; Jahrling *et al.*, 1990). This agent is called Reston virus.

Marburg virus and Ebola virus are extremely pathogenic for humans, causing a severe haemorrhagic disease with mortality rates of 35% for Marburg virus (Martini and Siegert, 1971) and up to 88% for Ebola virus (subtype Zaire) (Johnson *et al.*, 1977). Filovirus infections were unknown until 1967, when Marburg virus was first isolated in outbreaks among laboratory workers in Germany and Yugoslavia. The source of these simultaneous outbreaks of viral haemorrhagic disease has been attributed to virus-infected African green monkeys (*Cercopithecus aethiops*) imported from Uganda (Martini and Siegert, 1971).

Filoviruses are composed of a helical nucleocapsid surrounded by a lipid envelope. Virions contain at least seven structural proteins. For Marburg virus, these proteins are an RNA-dependent RNA polymerase (L protein; 267 kDa), a glycoprotein (GP; 170 kDa), a nucleoprotein (NP; 96 kDa), and the viral proteins VP40 (38 kDa), VP35 (32 kDa), VP30 (28 kDa) and VP24 (24 kDa) (Kiley *et al.*, 1988; Feldmann *et al.*, 1991; Mühlberger *et al.*, 1992; Sanchez *et al.*, 1992).

The glycoprotein of Marburg virus is highly glycosylated and inserted in the viral membrane as a homotrimer (Feldmann *et al.*, 1991). Lectin binding and endoglycosidase studies demonstrated the presence of two types of carbohydrate side-chains: *N*-glycosidically linked complex and high-mannose type glycans as well as the *O*-linked disaccharide Galβ3GalNAc (Feldmann *et al.*, 1991).

Membrane glycoproteins of enveloped viruses play a key role in infection by mediating receptor recognition, binding of the virion, and subsequent fusion of viral and cellular membranes. Possibly, the glycoprotein of Marburg virus has similar functions. Since it is the only integral membrane protein of the virus, the glycoprotein is probably also the major target for the immune response of the infected host. As a prerequisite for studies on the role of this molecule in Marburg virus infection, as well as its antigenicity, we are analysing the primary structure of this viral glycoprotein. In this report, a detailed structural analysis of its carbohydrate substituents is presented.

Results

Isolation and characterization of radiolabelled viral glycoprotein

For metabolic labelling, Marburg virus was propagated in E6 cells, a cloned line of Vero cells. The radioactive nutrients were added 5 days post-infection for 24 h. Virus particles were isolated from the supernatant, purified by gradient centrifugation and sedimentation steps, and the radiolabelled viral proteins were analysed by SDS gel electrophoresis followed by fluorography (Figure 1A). *In vivo* labelling with [^{35}S]methionine marked all viral structural proteins (Figure 1A, lane 1), whereas only the glycoprotein was radiolabelled when D-[6-^{3}H]glucosamine was used (Figure 1, lane 2). Starting from tissue culture supernatant of ~2.5 × 10^8 infected cells, metabolically labelled with 2 mCi D-[6-^{3}H]glucosamine, viral glycoprotein comprising 2 × 10^6 c.p.m. was obtained. For determination of the radioactive sugar constituents, aliquots were hydrolysed and the monosaccharides released were identified by co-chromatography with monosaccharide standards in high-pH anion-exchange (HPAE)-HPLC. The results demonstrated that the [^{3}H]glucosamine-labelled viral glycoprotein contained radiolabelled *N*-acetylglucosamine, *N*-acetylgalactosamine and galactose in a ratio of ~9.8:1.35:1, indicating that small amounts of [6-^{3}H]glucosamine have been metabolized

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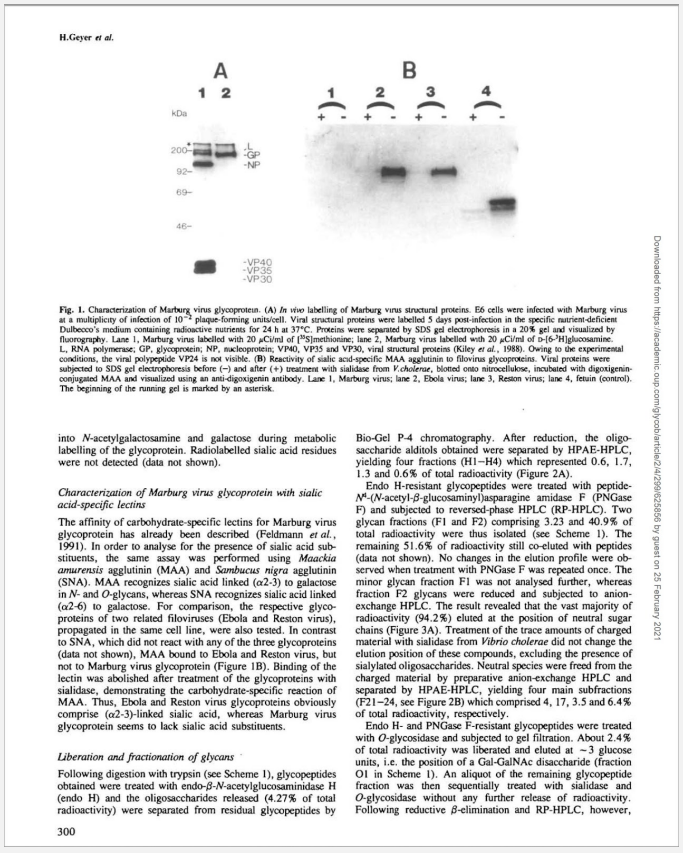

Fig. 1. Characterization of Marburg virus glycoprotein. (**A**) *In vivo* labelling of Marburg virus structural proteins. E6 cells were infected with Marburg virus at a multiplicity of infection of 10^{-2} plaque-forming units/cell. Viral structural proteins were labelled 5 days post-infection in the specific nutrient-deficient Dulbecco's medium containing radioactive nutrients for 24 h at 37°C. Proteins were separated by SDS gel electrophoresis in a 20% gel and visualized by fluorography. Lane 1, Marburg virus labelled with 20 μCi/ml of [^{35}S]methionine; lane 2, Marburg virus labelled with 20 μCi/ml of D-[6-^{3}H]glucosamine. L, RNA polymerase; GP, glycoprotein; NP, nucleoprotein; VP40, VP35 and VP30, viral structural proteins (Kiley *et al.*, 1988). Owing to the experimental conditions, the viral polypeptide VP24 is not visible. (**B**) Reactivity of sialic acid-specific MAA agglutinin to filovirus glycoproteins. Viral proteins were subjected to SDS gel electrophoresis before (−) and after (+) treatment with sialidase from *V.cholerae*, blotted onto nitrocellulose, incubated with digoxigenin-conjugated MAA and visualized using an anti-digoxigenin antibody. Lane 1, Marburg virus; lane 2, Ebola virus; lane 3, Reston virus; lane 4, fetuin (control). The beginning of the running gel is marked by an asterisk.

into *N*-acetylgalactosamine and galactose during metabolic labelling of the glycoprotein. Radiolabelled sialic acid residues were not detected (data not shown).

Characterization of Marburg virus glycoprotein with sialic acid-specific lectins

The affinity of carbohydrate-specific lectins for Marburg virus glycoprotein has already been described (Feldmann *et al.*, 1991). In order to analyse for the presence of sialic acid substituents, the same assay was performed using *Maackia amurensis* agglutinin (MAA) and *Sambucus nigra* agglutinin (SNA). MAA recognizes sialic acid linked (α2-3) to galactose in *N*- and *O*-glycans, whereas SNA recognizes sialic acid linked (α2-6) to galactose. For comparison, the respective glycoproteins of two related filoviruses (Ebola and Reston virus), propagated in the same cell line, were also tested. In contrast to SNA, which did not react with any of the three glycoproteins (data not shown), MAA bound to Ebola and Reston virus, but not to Marburg virus glycoprotein (Figure 1B). Binding of the lectin was abolished after treatment of the glycoproteins with sialidase, demonstrating the carbohydrate-specific reaction of MAA. Thus, Ebola and Reston virus glycoproteins obviously comprise (α2-3)-linked sialic acid, whereas Marburg virus glycoprotein seems to lack sialic acid substituents.

Liberation and fractionation of glycans

Following digestion with trypsin (see Scheme 1), glycopeptides obtained were treated with endo-β-*N*-acetylglucosaminidase H (endo H) and the oligosaccharides released (4.27% of total radioactivity) were separated from residual glycopeptides by Bio-Gel P-4 chromatography. After reduction, the oligosaccharide alditols obtained were separated by HPAE-HPLC, yielding four fractions (H1–H4) which represented 0.6, 1.7, 1.3 and 0.6% of total radioactivity (Figure 2A).

Endo H-resistant glycopeptides were treated with peptide-*N*^{4}-(*N*-acetyl-β-glucosaminyl)asparagine amidase F (PNGase F) and subjected to reversed-phase HPLC (RP-HPLC). Two glycan fractions (F1 and F2) comprising 3.23 and 40.9% of total radioactivity were thus isolated (see Scheme 1). The remaining 51.6% of radioactivity still co-eluted with peptides (data not shown). No changes in the elution profile were observed when treatment with PNGase F was repeated once. The minor glycan fraction F1 was not analysed further, whereas fraction F2 glycans were reduced and subjected to anion-exchange HPLC. The result revealed that the vast majority of radioactivity (94.2%) eluted at the position of neutral sugar chains (Figure 3A). Treatment of the trace amounts of charged material with sialidase from *Vibrio cholerae* did not change the elution position of these compounds, excluding the presence of sialylated oligosaccharides. Neutral species were freed from the charged material by preparative anion-exchange HPLC and separated by HPAE-HPLC, yielding four main subfractions (F21–24, see Figure 2B) which comprised 4, 17, 3.5 and 6.4% of total radioactivity, respectively.

Endo H- and PNGase F-resistant glycopeptides were treated with *O*-glycosidase and subjected to gel filtration. About 2.4% of total radioactivity was liberated and eluted at ~3 glucose units, i.e. the position of a Gal-GalNAc disaccharide (fraction O1 in Scheme 1). An aliquot of the remaining glycopeptide fraction was then sequentially treated with sialidase and *O*-glycosidase without any further release of radioactivity. Following reductive β-elimination and RP-HPLC, however,

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Stephan Becker, Sabine Huppertz, Hans-Dieter Klenk and Heinz Feldmann ; Received: 26/07/1993 Accepted: 01/11/1993 Published Online: 01/04/1994

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JOURNAL OF GENERAL VIROLOGY Volume 75, Issue 4

The nucleoprotein (NP) of Marburg virus (MBG), a filovirus, is encoded by the gene closest to the 3′ end of the non-segmented negative-strand RNA genome. Sequence comparison has indicated that NP is the functional equivalent to the nucleoproteins of paramyxoviruses and rhabdoviruses. Expression of recombinant NP in two eukaryotic systems using vaccinia virus and baculovirus (vectors pSC11 and pAcYMB1, respectively) and analysis of MBG-specific proteins have demonstrated that the NP of MBG is phosphorylated. The NP appeared in two forms differing in M r by about 2K (94K and 92K respectively). Dephosphorylation clearly demonstrated that the 94K form is phosphorylated whereas the 92K form is unphosphorylated. In virion particles NP was exclusively present in the phosphorylated form. These findings suggest that only the phosphorylated NP can form nucleocapsid complexes and interact with the genomic RNA.

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The nucleoprotein of Marburg virus is phosphorylated

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The nucleoprotein (NP) of Marburg virus (MBG), a filovirus, is encoded by the gene closest to the 3′ end of the non-segmented negative-strand RNA genome. Sequence comparison has indicated that NP is the functional equivalent to the nucleoproteins of paramyxoviruses and rhabdoviruses. Expression of recombinant NP in two eukaryotic systems using vaccinia virus and baculovirus (vectors pSC11 and pAcYMB1, respectively) and analysis of MBG-specific proteins have demonstrated that the NP of MBG is phosphorylated. The NP appeared in two forms differing in M_r by about 2K (94K and 92K respectively). Dephosphorylation clearly demonstrated that the 94K form is phosphorylated whereas the 92K form is unphosphorylated. In virion particles NP was exclusively present in the phosphorylated form. These findings suggest that only the phosphorylated NP can form nucleocapsid complexes and interact with the genomic RNA.

Introduction

The family *Filoviridae* accommodates Marburg virus (MBG), the prototype of the family, Ebola virus (EBO) and Reston virus (RES) (Kiley *et al.*, 1982; Murphy *et al.*, 1990). Filoviruses are classified in the order *Mononegavirales* (Pringle, 1991) which also contains the non-segmented negative-strand (NNS) RNA virus families *Paramyxoviridae* and *Rhabdoviridae*. MBG and EBO are extremely pathogenic for humans and non-human primates, causing a severe haemorrhagic disease with high mortality rates.

MBG particles consist of at least seven structural proteins: the L protein (Mühlberger *et al.*, 1992), the glycoprotein (GP) (Will *et al.*, 1993), the nucleoprotein (NP) (94K) (Sanchez *et al.*, 1992), and four viral structural proteins (VP) with M_rs of 38K (VP40), 32K (VP35), 28K (VP30) and 24K (VP24) (Kiley *et al.*, 1988). The corresponding genes are located on the NNS RNA genome in the following linear order: 3′ untranslated region–NP–VP35–VP40–GP–VP30–VP24–L–5′ untranslated region (Feldmann *et al.*, 1992).

The mature NP in MBG particles has an M_r of 94K and is the major component of the viral nucleocapsid. It represents approximately 27% of the virion protein mass (Kiley *et al.*, 1988). The nucleic acid sequence of the NP gene has been recently elucidated (Sanchez *et al.*, 1992). Comparison of the deduced amino acid sequence showed a high degree of homology to the N-terminal 400 amino acids of the EBO NP. A small region in the middle of the NP sequence was found to contain a significant homology with the nucleoproteins of paramyxoviruses and to a lesser extent with those of rhabdoviruses (Barr *et al.*, 1991; Sanchez *et al.*, 1992).

Little is known about the mode of transcription and replication of filoviruses and their unusually high pathogenicity. Detailed knowledge of the functions of the various MBG proteins, their co- and post-translational modifications, and their interactions with virion or cellular proteins or nucleic acids would create a foundation for further investigations. Studies on paramyxoviruses and rhabdoviruses have shown that the nucleoprotein plays an important role in the transcription and replication of these viruses. The nucleoprotein encapsidates the template RNA which is the only form that is transcribed. Newly synthesized nucleoprotein seems to mediate the formation of plus-sense ribonucleoprotein complexes which are the template for synthesis of progeny minus-sense RNA (for reviews see Wagner, 1987; Kingsbury, 1991; Banerjee & Barik, 1992). In this report we present data on the expression of MBG NP in eukaryotic and prokaryotic systems and show that the mature NP is phosphorylated.

Methods

Viruses and cell lines. The Musoke strain of MBG isolated in 1980 in Kenya (Smith *et al.*, 1982) and the strain WR of vaccinia virus were propagated in E6 cells, a cloned cell line of Vero cells (ATCC CRL

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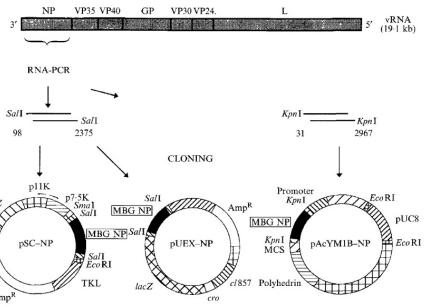

Fig. 1. Cloning strategy for the transfer plasmid vectors. The NP ORF was synthesized from genomic RNA (vRNA) using two sets of primers supplemented at their 5′ ends with either *Kpn*I or *Sal*I sites. Primer set I (*Sal*I sites) extends nucleotides 98 to 2375 and primer set II (*Kpn*I sites) nucleotides 31 to 2967. DNA fragments were cloned into the illustrated plasmid vectors: pAcYM1B for construction of recombinant baculovirus, pSC11 for construction of recombinant vaccinia virus, and pUEX for expression in *E. coli*.

1586). *Autographa californica* nuclear polyhedrosis virus (AcMNPV) was grown in a *Spodoptera frugiperda* cell line (SFVL; Kuroda *et al.*, 1986).

Propagation and labelling of virus. E6 cells were infected with MBG at an m.o.i. of 0·01. Purification of viral particles and preparation of viral antigen were performed as described previously (Mühlberger *et al.*, 1992), and the final pellet of purified virus particles was resuspended in TNE (0·01 M-Tris–HCl pH 7·4, 0·15 M-NaCl, 2 mM-EDTA) containing 1% SDS. When viral proteins were to be labelled, 20 μCi/ml [^{35}S]methionine or [^{32}P]orthophosphate (Amersham) was added 5 days post-infection (p.i.), and labelled virus was harvested 24 h thereafter. For viral genomic RNA isolation, a protocol described in detail by Mühlberger *et al.* (1992) was used.

SFVL cells were infected with AcMNPV or recombinant AcMNPV (BVNP) at an m.o.i. of 1. Virus growth (27 °C) and purification were carried out as described elsewhere (Kuroda *et al.*, 1986). For *in vivo* labelling experiments, SFVL cells were infected at an m.o.i. of 10. Forty-eight hours p.i., infected cells were starved with the appropriate nutrient-deficient medium for 2 h, labelled for 2 h by adding 100 μCi/ml [^{35}S]methionine or [^{32}P]orthophosphate, and then lysed in RIPA buffer (20 mM-MES, 55 mM-Tris–HCl, 200 mM-NaCl, 10 mM-EDTA, 1% w/v SDS pH 7·8, 1% v/v Triton X-100, 5% v/v Trasylol, 1 mM-PMSF, 10 mM-iodoacetamide). Insoluble components were pelleted at 14000 r.p.m. for 10 min in an Eppendorf centrifuge and the supernatant was stored at 4 °C.

E6 cells were infected with vaccinia virus (strain WR) or recombinant vaccinia virus (vSCNP) at an m.o.i. of 0·01. Preparation of virus stocks was performed as described by Mackett *et al.* (1986). For *in vivo* labelling experiments E6 cells were infected at an m.o.i. of 10. Twenty-four hours p.i., cells were starved with the appropriate nutrient-deficient medium for 1 h, labelled for 2 h by adding 100 μCi/ml [^{35}S]methionine or [^{32}P]orthophosphate, washed twice with PBS and lysed in RIPA buffer as described above.

Molecular cloning. The NP open reading frame (ORF) was synthesized from vRNA as described previously (Feldmann *et al.*, 1992) using the following two sets of NP-specific oligonucleotides: (i) a primer set with a *Kpn*I site (underlined), 5′ CAGGGTACCGTGT-ATCATATAAATAAAGAAGAATATTAAC 3′ (mRNA sense, bases 31 to 61), and 5′ CAGGGTACCCCTGCATGTATGATGAGTCCC-ACATTGTGA 3′ (vRNA sense, bases 2967 to 2939) and (ii) a primer set with a *Sal*I site (underlined), 5′ CAGGTCGACGAAGATATGG-ATTTACACAGTTTGTTGGA 3′ (mRNA, bases 98 to 126) and 5′ CAGGTCGACGACCACCATAGTATGCCCAGTCCTTGCCCG 3′ (vRNA sense, bases 2375 to 2347). The numbering is according to the genome position (for reference see EMBL Data Library, emnew: MVREPCYC; accession number Z12132). The fragment obtained by using the primer set with *Kpn*I sites was ligated into the *Kpn*I site of the plasmid vector pAcYM1B (Matsuura *et al.*, 1987). The fragment obtained by using the primer set with *Sal*I sites was ligated into the plasmid vectors pUEX (Bressan & Stanley, 1987) and pSC11 (Chakrabarti *et al.*, 1985). For cloning into pSC11, the plasmid vector was altered by introducing a *Sal*I linker into the unique *Sma*I site of the plasmid (Fig. 1). Following cloning, the entire NP ORF was sequenced in all recombinant plasmids (pUEX–NP, pAcYM1B–NP and pSC–NP) using the chain-terminating inhibitor method (Sanger *et al.*, 1977).

Expression of NP in Escherichia coli *and production of polyclonal anti-NP sera. E. coli* cells were transformed with pUEX–NP. Bacteria were grown at 30 °C and recombinant clones were selected by their ampicillin resistance. For expression studies, bacteria were grown for 5 h at 30 °C in 2YT medium containing 100 μg/ml ampicillin. Expression of the *β*-galactosdase–NP fusion protein (*β*-gal–NP) was

1997

https://www.sciencedirect.com/science/article/pii/S0042682297985299

Emergence of Subtype Zaire Ebola Virus in Gabon☆

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ViktorVolchkov[a]ValentinaVolchkova[a]CarinaEckel[a]Hans-DieterKlenk[a]MicheleBouloy[b]BernardLeGuenno[b]HeinzFeldmann[a2]

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Abstract

Gabon has recently been struck three times by Ebola hemorrhagic fever. The first isolate originating from the 1994 outbreak has been subjected to molecular characterization of its GP and VP24 genes. Sequence analysis demonstrates that the agent, Gabon-94 virus, belongs to subtype Zaire of Ebola virus. The isolate is closely related to the Kikwit-95 isolate, and both viruses seem to have evolved from a progenitor virus different from that of the Zaire-76 isolates. The relatively close relationship of all subtype Zaire viruses isolated at different geographical locations and up to 20 years apart suggests an extreme conservation in the yet unknown natural reservoir of Ebola viruses. The level of genetic variability in the human host might be different as indicated by the comparison of isolates from a single outbreak (Mayinga-76 and Eckron-76), but needs further investigation on clinical material of patients by PCR since both isolates have different levels of passages in tissue culture.

1998

https://www.nature.com/articles/nm0498-388

Published: 01 April 1998

Two strings to the bow of Ebola virus

Hans-Dieter Klenk, Viktor E. Volchkov & Heinz Feldmann

Nature Medicine volume 4, pages388–389(1998)Cite this article

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Two different forms of Ebola glycoprotein mediate viral entry into endotheiial cells and block activation of neutrophils resulting in hemorrhage and an impaired immune response.

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1999

https://academic.oup.com/jid/article/179/Supplement_1/S102/879831?login=true

Prevalence of IgG Antibodies to Ebola Virus in Individuals during an Ebola Outbreak, Democratic Republic of the Congo, 1995

Kristina M. Busico, Katherine L. Marshall, Thomas G. Ksiazek, Thierry H. Roels, Yon Fleerackers, Heinz Feldmann, Ali S. Khan, [**Dr. Clarence James Peters (born 1940)**]

The Journal of Infectious Diseases, Volume 179, Issue Supplement_1, February 1999, Pages S102–S107, https://doi.org/10.1086/514309

Published: 01 February 1999

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Abstract

During the 1995 outbreak of Ebola (EBO) hemorrhagic fever in Kikwit, Democratic Republic of Congo, two surveys using a new ELISA for EBO (subtype Zaire) virus antigen were conducted to assess the prevalence of EBO IgG antibodies among residents of Kikwit and the surrounding area. The first study determined the proportion of antibody-positive individuals who were self-identified forest and city workers from the Kikwit area. Serum samples from 9 (2.2%) of 414 workers had IgG EBO antibodies. The second study determined the proportion of EBO antibody-positive individuals who lived in villages surrounding Kikwit. The prevalence of IgG EBO antibodies in this population was 9.3% (15/161). The difference in the overall prevalence of EBO antibodies may indicate that villagers have a greater chance of exposure to EBO virus compared with those living in and in close proximity to cities.

1999-179-Supplement_1-S102.pdf

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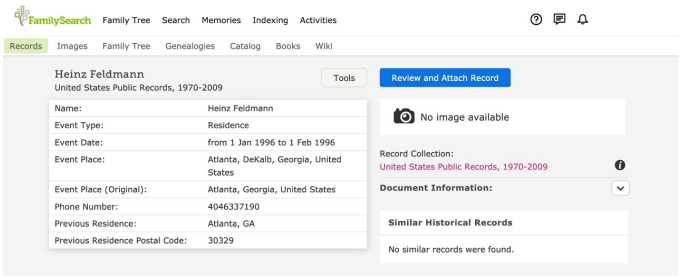
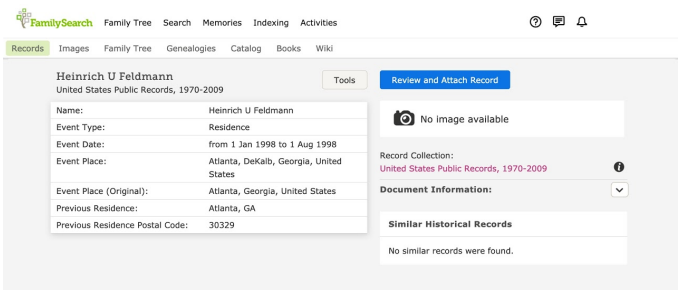
- 2021-02-25-familysearch-org-record-heinz-friedman-address-atlanta-1996.jpg
- jan 1 1998 to aug 1998 https://www.familysearch.org/ark:/61903/1:1:QJ8Q-5C4D
- 2021-02-25-familysearch-org-record-heinz-friedman-address-atlanta-1998.jpg





2001 (Feb 13) - Feldmann with Plummer in Winnipeg

See **Francis Allan Plummer (born 1952)** . / Full newspaper page : [HN01IJ][GDrive] / Similar : https://www.newspapers.com/image/558757038/?terms=%22heinz%20Feldmann%22&match=1

2001-02-13-the-brandon-sun-manitoba-canada-pg-a-3-clip-virus

Virus lab kept busy

BY SCOTT EDMONDS
Canadian Press

WINNIPEG — Canada's only lab capable of handling the world's deadliest viruses has been mightily tested in the last few weeks, but its officials say it has passed with flying colours.

"It's been an incredibly hectic time," said Dr. Frank Plummer, head of the microbiology laboratory at the Canadian Centre for Human and Animal Health.

Scientists at the high-tech, high-security centre in Winnipeg have been working virtually around the clock, most recently to see if a woman visitor from Africa brought the dreaded Ebola virus into the country.

The woman remains critically ill in a Hamilton hospital, but health authorities no longer fear she may have carried Ebola or a similar disease to North America.

"There's never been an incident like this woman from Congo before," Plummer said Monday.

"There are contingency plans in place to deal with these kinds of things and I think we dealt with it well this time. I'm particularly proud of the job the Level 4 program did here."

The most deadly pathogens, such as Ebola, are classified as Level 4 viruses. They must be handled in special facilities that have the ultimate in safeguards to prevent accidental contamination.

About 16 Level 4 viruses have been identified worldwide so far, most originating in Africa or South America.

The Winnipeg centre, which opened in 1999, is one of only about 15 in the world.

"We were ready for this," said Dr. Heinz Feldmann, head of the special pathogens section. "We hope it's not going to happen often or soon again."

The Hamilton incident followed on the heels of health scares in Toronto, Ottawa and Victoria posed by feared bioterrorist attacks.

Packages containing mysterious substances were sent to government offices in Toronto and Ottawa, and to a Wal-Mart in the Victoria area. In all three cases, the substances were examined at the Winnipeg lab and turned out to be harmless.

"Most of our colleagues in the United States . . . have handled many hoaxes," said Kathryn Bernard, the head of the special bacteriology section. "They're not very common in this country."

[HN01IK][GDrive]

2001 (Dec)

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JOURNAL OF GENERAL VIROLOGY Volume 82, Issue 12

2001-0822839a.pdf

Other Free

Biosynthesis and role of filoviral glycoproteins

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- First Published: 01 December 2001 https://doi.org/10.1099/0022-1317-82-12-2839

Introduction

Infections with filoviruses cause a fulminant haemorrhagic disease in human and non-human primates. Among all of the virus haemorrhagic fevers, Marburg and Ebola virus infections are characterized as the most severe forms, with case-fatality rates ranging from 22 to 90%. The pathophysiological changes that make filovirus infections so devastating are not well understood. The viruses are pantropic, but there is not a single organ that shows sufficient damage to account for either the onset of severe shock syndrome or the tendency to bleed. As in some other virus haemorrhagic fevers, such as haemorrhagic fever with renal syndrome, dengue haemorrhagic fever and Lassa fever, filovirus infections are associated with generalized fluid distribution problems, hypotension and coagulation disorders. Thus, Marburg and Ebola virus haemorrhagic fevers may be compared to a syndrome provoked by systemic treatment with cytokines, which is also seen in endotoxin-induced shock (Feldmann & Klenk, 1996[R12]; [**Dr. Clarence James Peters (born 1940)**] et al., 1996[R45]; Schnittler & Feldmann, 1999[R55]

2002 (Jan 24) - BSL lab in texas to be built

https://newspaperarchive.com/galveston-daily-news-jan-24-2002-p-10/

2002-01-24-the-galveston-daily-news-pg-a-10.jpg

Named in honor of **Dr. Robert Ellis Shope (born 1929)** (son of **Dr. Richard Edwin Shope (born 1901)** , who influenced **Dr. Erich Traub (born 1906)**)

lab is for [**Dr. Clarence James Peters (born 1940)**] .. who is referred to in those [**Richard McCann Preston (born 1954)**] novels ..

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GALVESTON

UTMB to break ground on BSL4 lab

From staff reports

University of Texas Medical Branch at Galveston officials will break ground Friday on the first full-sized maximum biological containment facility-Biosafety Level Four Laboratory on a university campus in the United States.

The $15.5 million maximum containment facility — a BSL4 — is dedicated to the study of tropical and emerging infections.

It is designed to allow researchers to "safely and effectively work with the most hazardous organisms that you can imagine," said Dr. C.J. Peters, director of the laboratory.

Peters, a professor of pathology, microbiology and immunology, also heads and of UTMB's new Center for Biodefense.

The BSL4 is a 12,000-square-foot facility. The laboratory itself, which is sometimes compared to a submarine inside a giant bank vault, will be just 2,000 square feet. The other 10,000 square feet of the facility will contain equipment designed to capture and destroy any microbes before they can escape the structure.

Peters said one major thrust of the laboratory would be to extend the work of the more than 26 UMTB researchers led by Professors Robert E. Shope and David G. Gorenstein.

They have received more than $11 million in federal grants over the past four years to develop countermeasures against viruses that experts fear bioterrorists may employ.

"If we're going to deal with the threat of biological terrorism or biological warfare, we're going to have to have a concerted scientific effort — and that effort doesn't have to be where these terrorists exist — it can be anywhere," Peters said.

"In Galveston, we have a health sciences university that has a very strong basic sciences program, the Sealy Center for Structural Biology, the Sealy Center for Vaccine Development, the Center for Tropical Diseases and the Center for Biodefense. So the Center for Biodefense can draw on the expertise of these other centers to deal with what are basically infectious disease problems."

Peters, a native Texan, was formerly chief of special pathogens in charge of the BSL4 laboratory at the Centers for Disease Control and Prevention in Atlanta.

Before that, he had a similar role supervising the BSL4 laboratory at the U.S. Army Medical Research Institute of Infectious Diseases in Frederick, Md.

Peters has traveled extensively in South America and Africa investigating viral outbreaks. In the United States, he headed the unit that contained the 1989 Ebola virus outbreak in Reston, Va., and he was a key member of the team that tracked down the Hantavirus that caused mysterious deaths in rural New Mexico.

He is author, with Mark Olshaker, of Virus Hunter: Thirty Years of Battling Hot Viruses Around the World.

A specially trained staff will maintain the BSL4 facility, and these individuals will also take over maintenance of the existing Biosafety Level Three laboratories, said Lee H. Thompson, UTMB safety officer for biocontainment facilities.

Thompson previously worked on construction and commissioning of BSL4 laboratories in Canada, Sweden and India. He also will be in charge of training both scientific and maintenance staff in the safe operation of the facility.

UTMB's full-sized BSL4 — in which researchers will work inside the laboratory in pressurized suits — will be a first on an American university campus, but it isn't the first such facility on a campus anywhere in the world.

That distinction belongs to the university in Marburg, Germany.

Here in the United States, meanwhile, the University of Georgia operates a small facility known as a "glove box" BSL4, in which investigators insert their hands in special gloves to do their experiments while the rest of their bodies remain outside the small BSL4 containment zone.

Mike Shriner, UTMB's chief facilities officer, said construction should begin soon.

"Bids from contractors have been received, and we plan to award the construction contract and begin construction in March," he said.

He said the facility is scheduled to be completed and commissioned in June 2003.

Construction of the BSL4 is funded in part by a grant from the Sealy & Smith Foundation of Galveston, a philanthropy solely dedicated to benefiting UTMB, with additional support from other sources.

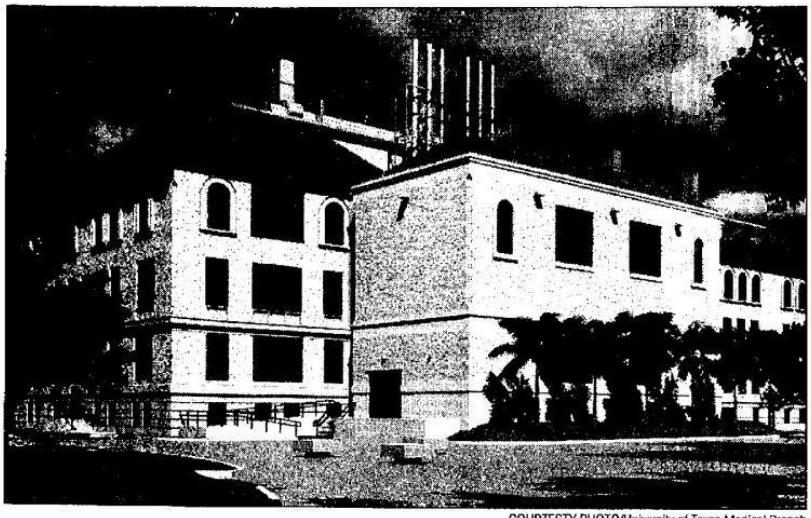
A second major component, building and updating support facilities for the laboratory in the adjacent Keiller Building, was funded by a $3 million grant from the National Institutes of Health.

WHAT: Groundbreaking ceremony for the BSL4.
WHEN: 3:30 p.m. Friday.
WHERE: By the Keiller Building, near Old Red on the University of Texas Medical Branch campus.
DETAILS: The ceremony is open to the public.

Who's who

UTMB President John D. Stobo will preside at the ceremony, which will be attended by a number prominent medical officials. They include:

- Maj. Gen. Phillip K. Russell, U.S. Army, retired, now a senior official in the Office of Homeland Security.
- Jim Hughes, director of the National Center for Infectious Diseases of the Centers for Disease Control and Prevention in Atlanta.
- Peter B. Jahrling, deputy commander of the U.S. Army Medical Research Institute for Infectious Diseases.
- Karl M. Johnson, former director of the Biosafety Level Four Laboratory at the CDC in Atlanta.
- Heinz Feldmann, director of Canada's new Biosafety Level Four Laboratory in Winnipeg.
- Michael Kiley, chief biosafety officer for the U.S. Department of Agriculture.



COURTESTY PHOTO/University of Texas Medical Branch

An artist's rendering shows what the new maximum containment laboratory at the University of Texas Medical Branch.

2003 (May 17)

https://newspaperarchive.com/titusville-herald-may-17-2003-p-14/

2003-05-17-the-titusville-herald-pg-14-clip-sars

World

Taiwan's health chief resigns over SARS

TAIPEI, Taiwan (AP) — The escalating SARS crisis in Taiwan cost the health chief his job Friday, as he quit to take responsibility for the rapid spread of the virus that has forced the closing of two hospitals.

He was the second top Asian health official to lose his job because of SARS; mainland China's health minister resigned a month ago, and more than 100 other Chinese officials have been punished or fired because of SARS, according to Xinhua news agency.

Taiwan Health Department boss Twu Shiing-Jer will be replaced by a respected epidemiologist, Chen Chien-jen, who studied at Johns Hopkins University in the United States.

Meanwhile, the World Health Organization reported details of how a huge apartment outbreak in Hong Kong in March was caused by sewage leaks and powerful ventilation fans sucking the virus inside homes.

And in China, the government said it was suspending foreign adoptions to help curb the disease. Paperwork on adoptions will continue, but Beijing has stopped authorizing prospective parents to come there.

Severe acute respiratory syndrome has infected 7,700 people worldwide and killed at least 613. It is continuing to spread through Taiwan, although new infections are on the decline elsewhere.

On Friday, health officials said the disease had killed three more people, including two doctors. Taiwan reported 10 new cases for a total of 274, and its death toll rose to 37.

In Singapore the prime minister said a suspected cluster of new SARS cases at a mental health facility was a false alarm. He expressed hope the WHO would be able to declare the city-state SARS-free on Sunday.

"I am 99 percent sure they are not suffering from SARS," Prime Minister Goh Chok Tong told reporters.

One of Taiwan's top SARS fighters warned more cases were about to erupt.

Lee Ming-liang, head of the government's SARS Control Committee, said more infections were expected as the result of the two most recent hospital outbreaks, at Taipei's National Taiwan University Hospital and at Chang Gung in southern Kaohsiung city.

Illustrating the random nature of many SARS outbreaks, most of Taiwan's 274 cases of the respiratory disease can be traced to one woman's 40-minute stay in a Taipei emergency ward, a doctor said Friday.

The woman was four days into her SARS infection, said Dr. Yeh Chin-chuan, an adviser to the Taipei city government.

The woman's brief hospital stay set off a chain of events that ultimately caused outbreaks at four Taiwanese hospitals where dozens of people were sickened, Yeh said in a report released Friday.

A report by WHO investigators into Hong Kong's Amoy Gardens outbreak, which was concentrated in a building called Block E, blamed an "unlucky" combination of circumstances — a patient with diarrhea, seeping pipes and drafty air shafts.

The WHO's findings largely confirm an earlier Hong Kong report.

"It's just an accumulation of events," team leader Dr. Heinz Feldmann told a news conference Friday. Feldmann said there was no way to guarantee against a repeat, but another one seems "unlikely."

More than 300 people contracted the illness in the apartment complex in late March, and hundreds more were quarantined. Thirty-five residents died.

2003 (July 28)

2003-07-28-national-post-toronto-ontario-canada-pg-a-11

2003-07-28-national-post-toronto-ontario-canada-pg-a-11-clip-sars

https://www.newspapers.com/image/514317011/?terms=%22heinz%20Feldmann%22&match=1

A bargain is a bargain even if it is at Amoy Gardens in Hong Kong, centre of a deadly disease cluster

SARS brings out speculators

By Tom Blackwell
in Hong Kong

Not since Hooker Chemical turned the Love Canal neighbourhood of Niagara Falls, N.Y., into a toxic wasteland has a swath of real estate been so tainted by disaster.

The Amoy Gardens housing complex, unknown a couple of months ago outside this city, is now internationally infamous.

But that also means the price of its apartments has plunged, and a bargain is still a bargain. So Hong Kong homebuyers are once again snapping up apartments at the site of the most troubling and unusual cluster of SARS cases in the world.

"People are coming back to the market," said Ivan Ho, head of Ricacorp Properties Ltd., this week at the company's office inside the complex.

"Some people like to do contrary thinking. They are very eager to buy at a very low price. They like to bargain hunt."

It may not be such a risky proposition. Even as Amoy's notoriety lives on, the actual threat of the virus appears to have been banished.

Ricacorp even sold an apartment recently in the dreaded block E, epicentre

'They are very eager to buy at a very low price'

of the outbreak that sickened more than 300 people at the housing estate and killed an astounding 42.

At the height of the crisis in April, speculators tried to buy units for as little as half the going rate of about $200,000, although there were no takers, Mr. Ho said. The fall in value now appears to be more like 15%.

Tony Chan, a souvenir importer, just bought an apartment at Amoy, where his daughter already lives. Does he have any worries? he is asked. Mr. Chan shakes his head and offers a matter-of-fact "No" before rushing off to meet an interior decorator at the apartment.

As the disease spread like wildfire through Amoy in March and April, experts the world over watched in shock. An illness that was supposed to be confined to health care facilities and spread through close contact with patients was suddenly infecting people with no apparent connection to each other, apart from living in the same sprawling apartment complex.

The word "garden" in the complex's name is applied loosely. Amoy is a concrete expanse of 19 high-rise towers housing 17,000 people — typical of the high density needed to cram seven million people into Hong Kong.

Many of the cases were concentrated in a single tower, one apartment on top of the other.

Investigations by Hong Kong authorities and a World Health Organization team made up of Health Canada scientists have come up with explanations centred on the buildings' sewer system. But questions remain unanswered and the incident is a continuing preoccupation of experts.

"I keep thinking that in a year it will be the one thing we'll still be talking about," said Aileen Plant, a professor with the centre for international health at Australia's Curtin University.

"It's one thing that doesn't quite fit with everything else."

Exactly how the virus spread is more than just a curiosity to Liu Ka Fai, an athletic-looking electronics engineer who was among the hundreds of block E residents forced into quarantine camps for 10 days in April.

Across the hall from his tiny 15th floor apartment lived the Fongs, a middle-aged couple and their 13-year-old daughter — friendly people who had delivered a gift and greetings to him a few weeks earlier at Chinese New Year.

Mr. Fong came down with SARS on March 27, followed by his daughter. When remaining residents were dispatched to the camps on March 31, Mrs. Fong was still healthy. Mr. Liu traded cellphone numbers with her and they kept in touch from their different camps.

Mrs. Fong finally contracted SARS on April 7, but even then they remained in contact. Mr. Liu last heard from her on April 19.

He was back in his apartment in mid-May when the teenage daughter and her uncle showed up at the building. Mr. and Mrs. Fong had died.

"The daughter still didn't know her parents were dead," Mr. Liu said. "They didn't know how to tell her."

Many residents of the complex, especially those who lost relatives, are bitter at the Hong Kong government, said Yip Hing Kwok, president of the Amoy owners committee.

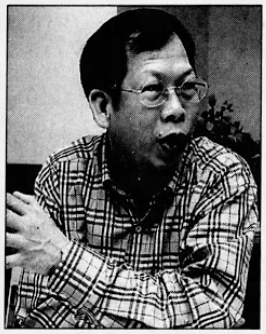
The authorities should have moved to quarantine the building as soon as the first batch of cases cropped up on March 26, he said in an interview. Instead, the isolation was not ordered until after Mr. Yip made a public appeal for such action on March 31.

"The reaction of the government of Hong Kong in the early stages was very poor, very slow," he said.

As for the cause of the calamity at Amoy Gardens, the WHO team headed by Dr. Heinz Feldmann of Health Canada highlighted a number of factors that combined to accelerate the spread of the disease.

PETER PARKS / AGENCE FRANCE-PRESSE

Heinz Feldmann, centre, of Health Canada speaks to reporters outside Amoy Gardens housing complex in April.



NATIONAL POST

Initial government reaction to SARS was poor, says Yip Hing Kwok, president of the Amoy owners committee.

A 33-year-old man from mainland China, who contracted the disease after visiting the first hospital in Hong Kong to become contaminated, came to visit his brother in block E twice in mid-March.

He was suffering from diarrhea and used the washroom in his brother's apartment. It appears that fecal particles containing the SARS virus were drawn up the "sewage stack" that serves each of the apartment units.

Each bathroom has a floor drain, under which is a U-joint designed to stop foul smells and insects from entering the bathroom from the sewage stack. But because people no longer washed their floors with water and instead simply wiped them clean, there was no water sitting in the U-bends, making the barriers ineffective.

Inside the bathrooms, meanwhile, exhaust fans that Dr. Feldmann said are too powerful may have sucked those fecal particles out of the drains. The fans vented into a light well between apartments, but the apartment units are so close some of the particles may have been propelled into the bathroom windows of facing apartments.

Although it was a unique event, it could be repeated if SARS returned and the factors combined once more, Dr. Feldmann said. Canadian buildings are not susceptible, though, because of differences in building design, including windows that open on to a light well in an environmentally friendly configuration, he said.

"These buildings in Hong Kong, they don't need any heating, they don't need any air conditioning, because they just ventillate by natural wind, and that is pretty good," Dr. Feldmann said.

"But they obviously didn't think about SARS coming one day, and that this could bring problems."

National Post
tblackwell@nationalpost.com

2005 (April 10)

https://www.nytimes.com/2005/04/10/world/africa/to-contain-virus-in-angola-group-wants-hospital-closed.html?searchResultPosition=4

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https://link.springer.com/chapter/10.1007/0-387-23685-6_6

Bioterrorism and Infectious Agents: A New Dilemma for the 21st Century pp 169-191| Cite as

Hemorrhagic Fever Viruses as Biological Weapons

- Authors
- Authors and affiliations
- Allison Groseth
- Steven Jones
- Harvey Artsob
- Heinz Feldmann

Downloads

Part of the Emerging Infectious Diseases of the 21st Century book series (EIDC)

7. Conclusions

In addition to causing illness and death, a biological attack would aim to cause fear in the general populace and, thus, result in social and economic disruption. Based on their fearsome reputation and dramatization by the popular media, VHF agents would be excellent candidates to serve this purpose. Given the potential for a biological attack to occur, it is of the utmost importance that resources and knowledge are made available to deal effectively with such a situation in a safe and timely manner.

2005 (June 06)

https://newspaperarchive.com/frederick-news-post-jun-06-2005-p-1/

2005-06-06-frederick-news-post-pg-a-01

2005-06-06-frederick-news-post-pg-a-01-clip-usamriid-ebola

pg a11 - https://newspaperarchive.com/frederick-news-post-jun-06-2005-p-11/

2005-06-06-frederick-news-post-pg-a-11

2005-06-06-frederick-news-post-pg-a-11-clip-usamriid-ebola

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MONDAY JUNE 6, 2005 Vol. 122 | No. 235 | 3 Sections | Press Run: 44,790 | FINAL 50¢

Good Morning!

The easiest kind of relationship for me is with 10,000 people. The hardest is with one.

—Joan Baez

87°
67°

Warm and humid with intervals of clouds and sunshine; a couple of thunderstorms in the afternoon

Weather | B-14

Bionic Buser

Fast-paced Brewer's Alley employee is always on the go.

Local | A-5

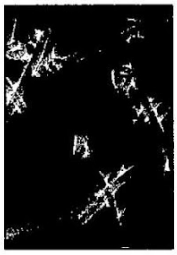
The Snap Dragons

Teamwork has nurtured a butterfly garden at South Frederick Elementary

U.S. ARMY MEDICAL RESEARCH INSTITUTE OF INFECTIOUS DISEASES AT FORT DETRICK

"We've made more progress in three years than we probably made in the previous 20."

Dr. Thomas Geisbert, *U.S. Army Medical Research Institute at Fort Detrick*



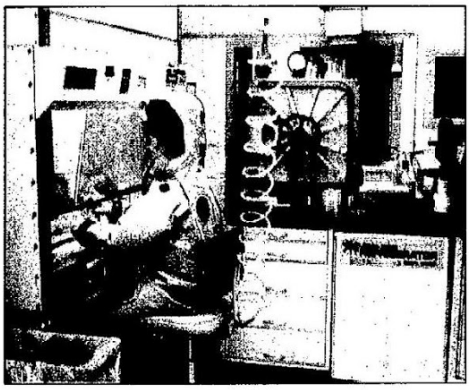
Photos courtesy of Fort Detrick

Electron micrographs of Ebola virus

BREAKTHROUGH!

Scientists have developed vaccines effective in monkeys against both the Marburg and Ebola viruses

By JAMES RADA | *News-Post Staff* | jrada@fredericknewspost.com



Staff photo by Sam Yu

Joan Geisbert, a lab technician at USAMRIID at Fort Detrick, works with Ebola virus in one of USAMRIID's bio safety level 4 labs in this photo from 2002. These labs are reserved for the most dangerous organisms. Scientists from USAMRIID and the Public Health Agency of Canada have recently developed vaccines against the Marburg and Ebola viruses.

FREDERICK — Last fall, after decades of civil war, Angolans faced a new enemy. This one was unseen and killed from within.

The new enemy is the Marburg virus. It can kill 90 percent of its infected victims quickly and painfully. It can cause internal organs to liquefy, skin to bubble up, and victims to weep tears of blood, according to Richard Preston in his book "The Hot Zone."

More than 215 people have died in Angola since the Marburg virus outbreak began last fall. While very little can be done to stop this outbreak, future "hot zones" may see some cooling with help from Frederick and Winnipeg, Canada.

Scientists from the U.S. Army Medical Research Institute of Infectious Diseases and the Public Health Agency of Canada have developed the first vaccines against both the Marburg and Ebola viruses that protect monkeys.

"We've made more progress in three years than we probably made in the previous 20," said Dr. Thomas Geisbert with the U.S. Army Medical Research Institute of Infectious Diseases at Fort Detrick.

Mr. Geisbert, along with Canadian researchers Dr. Heinz Feldmann and Dr. Steven Jones of PHAC's National Microbiology Laboratory, developed the vaccines after four years of work on the problem. This month's *Nature Medicine* journal published their study.

Ebola and Marburg viruses are emerging pathogens that cause hemorrhagic fever with high mortality rates in humans and non-human primates. Since monkeys develop hemorrhagic fever symptoms similar to humans, a safe and effective vaccine for monkeys shows promise for human use.

"When you see the tragedies these viruses cause, it's very frustrating that we can't do more to help people," said Mr. Feldmann, who has been providing on-site rapid diagnostic support to the cur-

(See BREAKTHROUGH A-11)

Breakthrough

(Continued from A-1)

rent Marburg outbreak in Angola. "It'll be some time before we can use these vaccines in the field, but it's satisfying to know that we're getting closer."

Though the new vaccines show promise, Mr. Geisbert said it would be at least five years before a human vaccine is ready.

The vaccine is developed by replacing a surface protein in an animal pathogen, called vesicular stomatitis virus, with a surface protein from either the Ebola or Marburg viruses. The Canadian researchers conducted the mice and guinea pig testing, but collaborated with USAMRIID to prove the vaccine effective in monkeys.

"One of the problems you have is that only a certain number of facilities are capable of level four containment," explained Mr. Geisbert. If you add into the need that kind of containment with non-human primate research, the number of facilities drops even more, he said.

The goal is to find a way to deliver the non-lethal virus into the body and have the body generate an immune response to the virus. The use of the vesicular stomatitis virus as a delivery system was so successful that the researchers are studying if it can be used with other viruses. Researchers are also seeing promising results at developing the vaccines into forms that can be taken orally or with a nasal spray.

"This speaks volumes about the dedication and expertise of these individuals, and also what can be achieved through international collaboration," said Canadian Health Minister Ujjal Dosanjh.

Dr. Carolyn Bennett, Minister of State (Public Health) added that people "everywhere could benefit from the vaccine development, in stopping outbreaks where they originate as well as reducing the risk that these viruses will be used in bioterrorism."

Though these viruses don't spread easily, they are very deadly. It is this fact that has made them attractive as a terrorist weapon.

"We know that the former Soviet Union was trying to develop it as a weapon," Mr. Geisbert said. "That's where the fear comes from."

Colonel Erik Henchal commander of USAMRIID, said the study illustrates the benefits of collaborative research to develop medical countermeasures for biodefense. "Relationships like this contribute to better science and ultimately better protection for military service members and civilians alike."

https://newspaperarchive.com/winnipeg-free-press-jun-09-2005-p-15/

2006

https://newspaperarchive.com/winnipeg-free-press-mar-26-2006-p-13/

sep 2006

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2007 (Jan 09)

https://newspaperarchive.com/winnipeg-free-press-jan-09-2007-p-13/

2007 (Sep 17)

https://newspaperarchive.com/winnipeg-free-press-sep-17-2007-p-15/

2007 (Oct 23)

https://newspaperarchive.com/winnipeg-free-press-oct-23-2007-p-14/

2007-10-23-winnipeg-free-press-pg-8-e.jpg

2007-10-23-winnipeg-free-press-pg-8-e-clip-ebola

WAYNE GLOWACKI / WINNIPEG FREE PRESS

Dr. Heinz Feldmann (left) and Dr. Gary Kobinger, with projected photo showing doctors working with the mobile isolater.

Bug-busters 'successful'

City scientists help contain ebola outbreak in Congo

By Meghan Hurley

WINNIPEG scientists from the Public Health Agency of Canada believe they have helped contain an outbreak of the deadly ebola virus in a remote region of the Democratic Republic of Congo.

"To me, it was definitely successful," said Dr. Heinz Feldmann, head of the special pathogens division of the National Microbiology Laboratory in Winnipeg. "The outbreak was contained really rapidly because of all of the people involved."

So far, the Winnipeg-built portable labs have confirmed 26 cases of ebola, Feldmann said during a press conference Monday at the Canadian Science Centre for Human and Animal Health.

"Even if we only save one life it's worth the effort," Feldmann said.

The virus is spread through direct contact with infected blood or through sexual contact with an infected person. There is no medicine, treatment or cure for the virus.

Ebola is characterized by a high fever, intense weakness, muscle pain and a sore throat. It progresses quickly, usually causing vomiting, diarrhea, and impaired liver and kidney functions.

The scientists helped to differentiate ebola from illnesses with similar symptoms, Feldmann said.

Feldmann and two colleagues were sent to Mweka in September. A second team went to Kampungo in October to set up the mobile labs, which can be easily deployed on short notice.

The first team returned to Canada on Oct. 11 while the second is still in Kampungo.

The team sent to Kampungo will return to Canada in the next few days since the outbreak has been successfully contained, Feldmann said. But the outbreak hasn't been officially declared over, he added.

It has been almost 21 days now with no new cases, said Kelly Keith, Public Health Agency of Canada spokesperson.

"One case can start the outbreak all over again but 21 days is a safe time frame to pull out," Feldmann said.

Despite the success of containing the disease, the team members faced several challenges while working in a third world country.

Transporting the lab to the designated sites was one of the biggest challenges the teams faced, Feldmann said.

"In the future, we have to think about putting the weight down of what we transport and still provide good service," he said.

In the past, the mobile labs have been used to respond to outbreaks such as SARS, Keith said.

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See video at www.winnipegfreepress.com

2008 (Jan 24) - "Safe Ebola"

https://newspaperarchive.com/brandon-sun-jan-24-2008-p-1/

2008-01-24-the-brandon-sun-manitoba-canada-pg-1-clip-ebola.jpeg

BRANDON SUN

THURSDAY JANUARY 24, 2008

Researchers help create 'safe' Ebola

WINNIPEG — Two Winnipeg researchers have helped develop a "safe" form of the deadly Ebola virus that is about as dangerous as a common flu bug.

Dr. Heinz Feldmann, head of special pathogens at the Winnipeg-based National Microbiology lab, and Dr. Hideki Ebihara worked with scientists from the University of Wisconsin to genetically alter the live Ebola virus so more scientists could safely study the pathogen.

Now, the altered Ebola virus can be studied in a lab without biohazard suits or airtight lab chambers.

Ebola is classified as Level 4 pathogen — a category that includes the world's most dangerous viruses.

Feldmann said Canada's National Microbiology Lab in Winnipeg has the only Level 4 biocontainment lab in the country, and there are few labs in the U.S. and elsewhere that can safely study Ebola.

That has hampered efforts to develop a vaccine for the virus, which most recently killed over 160 people in the Democratic Republic of the Congo.

Ebola is spread through direct contact with an infected person's blood or through sexual contact. There is no cure or vaccine, and between 50 and 90 per cent of people who contract Ebola will die.

The latest research on the new, safe Ebola virus was published in a scientific journal this week.

"There's only a few laboratories that can actually work with the live virus, so that was actually the goal of (this) study," Feldmann said.

Feldmann said researchers have been trying to better understand Ebola for decades, but have had a hard time since few scientists are actually able to study the live virus.

Feldmann said scientists deleted one of Ebola's seven genes, VP30 — a gene protein that is necessary for the virus to replicate and cause disease.

» See 'Spread' — Page A4

Dr. Heinz Feldmann works in the mobile laboratory installed by specialists of the National Public Health Agency of Canada in Mweka, Congo, last year. Feldmann and Dr. Hideki Ebihara worked with scientists from the University of Wisconsin to genetically alter the live Ebola virus so more scientists could safely study the pathogen. *(File Photo)*

2009 (Mar 27) - Researcher treated with experimental vaccine, expert reax

Jul 21, 2015 / 1AP Archive

https://www.youtube.com/watch?v=QM2Py7DLBPo

(27 Mar 2009) SHOTLIST

Hamburg, Germany - 27 March 2009

1. Wide exterior of the Bernhard Nocht Institute for Tropical Medicine

2. Close-up of sign for the institute

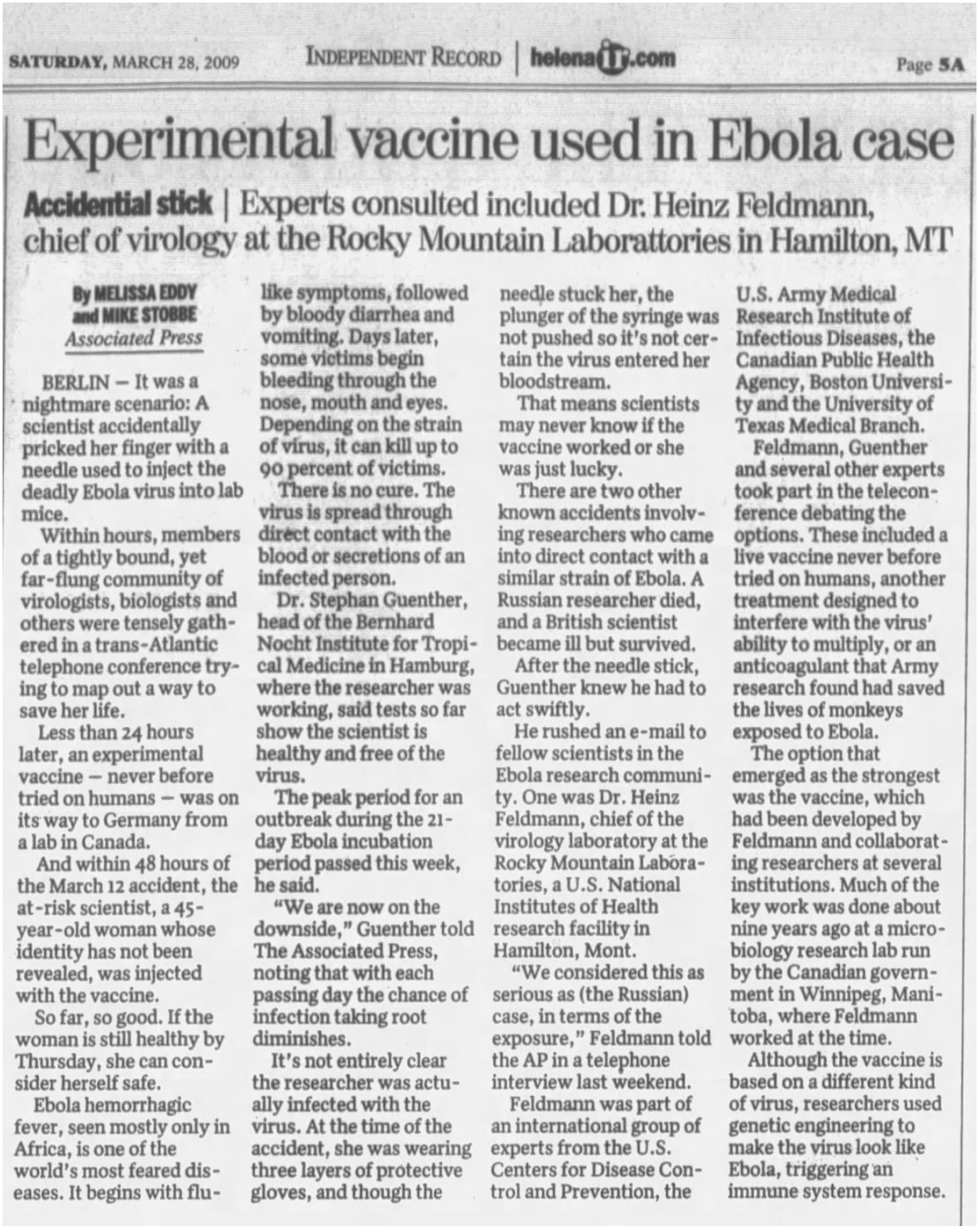
3. Entrance of secured laboratory room, where scientist was potentially infected with the Ebola virus

2009 (March 28)

https://www.newspapers.com/image/528393016/?terms=%22heinz%20Feldmann%22&match=1

2009-03-28-the-independent-record-helena-montana-pg-5-a.jpg

2009-03-28-the-independent-record-helena-montana-pg-5-a-clip-ebola.jpg



Experimental vaccine used in Ebola case

Accidential stick | Experts consulted included Dr. Heinz Feldmann, chief of virology at the Rocky Mountain Laborattories in Hamilton, MT

By MELISSA EDDY and MIKE STOBBE
Associated Press

BERLIN — It was a nightmare scenario: A scientist accidentally pricked her finger with a needle used to inject the deadly Ebola virus into lab mice.

Within hours, members of a tightly bound, yet far-flung community of virologists, biologists and others were tensely gathered in a trans-Atlantic telephone conference trying to map out a way to save her life.

Less than 24 hours later, an experimental vaccine — never before tried on humans — was on its way to Germany from a lab in Canada.

And within 48 hours of the March 12 accident, the at-risk scientist, a 45-year-old woman whose identity has not been revealed, was injected with the vaccine.

So far, so good. If the woman is still healthy by Thursday, she can consider herself safe.

Ebola hemorrhagic fever, seen mostly only in Africa, is one of the world's most feared diseases. It begins with flu-like symptoms, followed by bloody diarrhea and vomiting. Days later, some victims begin bleeding through the nose, mouth and eyes. Depending on the strain of virus, it can kill up to 90 percent of victims.

There is no cure. The virus is spread through direct contact with the blood or secretions of an infected person.

Dr. Stephan Guenther, head of the Bernhard Nocht Institute for Tropical Medicine in Hamburg, where the researcher was working, said tests so far show the scientist is healthy and free of the virus.

The peak period for an outbreak during the 21-day Ebola incubation period passed this week, he said.

"We are now on the downside," Guenther told The Associated Press, noting that with each passing day the chance of infection taking root diminishes.

It's not entirely clear the researcher was actually infected with the virus. At the time of the accident, she was wearing three layers of protective gloves, and though the needle stuck her, the plunger of the syringe was not pushed so it's not certain the virus entered her bloodstream.

That means scientists may never know if the vaccine worked or she was just lucky.

There are two other known accidents involving researchers who came into direct contact with a similar strain of Ebola. A Russian researcher died, and a British scientist became ill but survived.

After the needle stick, Guenther knew he had to act swiftly.

He rushed an e-mail to fellow scientists in the Ebola research community. One was Dr. Heinz Feldmann, chief of the virology laboratory at the Rocky Mountain Laboratories, a U.S. National Institutes of Health research facility in Hamilton, Mont.

"We considered this as serious as (the Russian) case, in terms of the exposure," Feldmann told the AP in a telephone interview last weekend.

Feldmann was part of an international group of experts from the U.S. Centers for Disease Control and Prevention, the U.S. Army Medical Research Institute of Infectious Diseases, the Canadian Public Health Agency, Boston University and the University of Texas Medical Branch.

Feldmann, Guenther and several other experts took part in the teleconference debating the options. These included a live vaccine never before tried on humans, another treatment designed to interfere with the virus' ability to multiply, or an anticoagulant that Army research found had saved the lives of monkeys exposed to Ebola.

The option that emerged as the strongest was the vaccine, which had been developed by Feldmann and collaborating researchers at several institutions. Much of the key work was done about nine years ago at a microbiology research lab run by the Canadian government in Winnipeg, Manitoba, where Feldmann worked at the time.

Although the vaccine is based on a different kind of virus, researchers used genetic engineering to make the virus look like Ebola, triggering an immune system response.

2009 (April 06)

https://newspaperarchive.com/winnipeg-free-press-apr-06-2009-p-8/

2009-04-06-winnipeg-free-press-pg-8-clip-lab

CHRISTOPHER BLACK / THE ASSOCIATED PRESS ARCHIVES

Researchers who work with high-risk viruses hope emergency use of Winnipeg-made vaccine in a lab worker in Germany will help spur development of emergency supplies.

Scientists have high hopes for Winnipeg Ebola vaccine

By Helen Branswell

TORONTO — The emergency use of a Winnipeg-made Ebola vaccine may have breathed new life into stymied efforts to get experimental vaccines for Ebola and similarly deadly viruses made, scientists say.

They are hoping to strike while the iron is hot, using heightened awareness of the risk these dangerous viruses pose to press for production of emergency stocks of vaccine and potentially even expensive human clinical trials.

The Ebola vaccine, made at the National Microbiology Laboratory in Winnipeg, was given to an unnamed German researcher last month after she accidentally pricked herself with the needle of a syringe containing Ebola virus. The woman, who did not develop symptoms of the disease, was given the all-clear by her doctors late last week.

"There is a lot of interest at the moment and some people find it positive that... the vaccine was offered and actually given to her," says Dr. Heinz Feldmann, who led the team that designed the Ebola vaccine as well as one for a cousin virus, Marburg.

"The question remains the money."

Ebola and Marburg viruses trigger ghastly viral hemorrhagic fevers that kill between 50 and 90 per cent of people who become infected.

The tight-knit circle of scientists who work on these viruses has been frustrated in efforts to push experimental vaccines through the testing pipeline to the point where they could be used.

Despite promising results in animal trials, major financial, logistical and regulatory hurdles impeded their development. The community of researchers sees the German case and the need it identifies as a chance to finally break the logjam.

"I'm hopeful," says Feldmann, who is now chief of the laboratory of virology at the U.S. National Institute of Allergy and Infectious Diseases' Rocky Mountain Laboratories in Hamilton, Mont.

He and colleagues in the field hope the vaccines can eventually be used to halt the devastating outbreaks that can wipe out whole African villages. They also hope the vaccines could be used to save great apes, which also fall prey to these pathogens.

But the scientists, who work with some of the most dangerous pathogens known, also have a keen self-interest.

"We would all love to vaccinate ourselves. We're just not allowed to," says Tom Geisbert, who led the animal testing on nearly all of the current experimental vaccines while working at the U.S. Army Medical Research Institute of Infectious Diseases at Fort Detrick, Md.

They envisage the lab emergency equivalent of an EpiPen, the adrenaline injector carried by people who have allergies that can trigger anaphylactic shock.

The Winnipeg-made vaccines would likely be the product of choice for a lab-accident response. They are the only Ebola and Marburg vaccines shown to improve survival chances after exposure to the viruses, unlike standard vaccines which require pre-exposure administration.

— The Canadian Press

2009 (May 11)

https://newspaperarchive.com/winnipeg-free-press-may-11-2009-p-5/

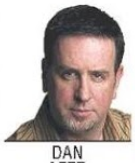
2009-05-11-winnipeg-free-press-pg-a-5-clip-lab-upgrade

Tories drop ball on lab upgrade

A few theories why expansion on shelf

GOVERNMENT OF CANADA PHOTOS

Expanding the city's National Microbiology Laboratories (above) would be a win-win move.



DAN LETT

IN the 2006 federal election campaign, desperate Liberals unveiled a goody bag of pledges for Manitoba to stave off defeat at the hands of the surging Conservatives.

There was money for an expanded Red River Floodway, funding for the Canadian Museum of Human Rights, and a $125-million expansion of the Winnipeg-based Canadian Science Centre for Human and Animal Health, home to the National Microbiology Laboratories and headquarters of the Public Health Agency of Canada (PHAC).

Manitoba Tories were circumspect about how they would treat these pledges. "A Stephen Harper government takes Manitoba issues very seriously," said Conservative party president Don Plett, one of Manitoba's most influential Tories. "We're not going to turn our backs on any important issue."

Three years later, Plett's pledge appears reasonable. All the money for the floodway was provided. And Harper not only matched the Liberals on capital funding for the human rights museum, but added annual operating grants.

However, the Tories have failed profoundly on the lab expansion. The plan envisioned a new laboratory wing and a lowrise office tower. Ottawa put $250 million in its last budget to upgrade federal laboratories, but could find only $24 million to expand the Winnipeg lab's loading dock.

To characterize that announcement as a disappointment would be a gross understatement. Many are left to wonder why the federal Conservatives would turn their backs on one of Manitoba's most important federal facilities. Theories abound.

One theory holds that federal Tories are simply unwilling to increase funding for science and technology in these economically trying times. In January's federal budget, funding for research and development was cut. It was a particularly bad decision, given the fact the European Union and the United States are massively increasing science funding as a key component of recession-fighting stimulus programs.

Another theory says that federal Tories, including Manitoba's senior cabinet minister Vic Toews, believe Manitoba has received more than its fair share of federal funding through the floodway and the human rights museum.

Under pressure to find money for a wide range of priorities, Toews has been inexplicably aloof about the lab expansion, and it's possible he believes it's too big a ask on the heels of the floodway and human rights museum.

A final, perhaps more credible theory suggests that Health Canada is blocking the lab expansion as part of a dispute over who actually controls PHAC.

Health Canada fought the original decision to build the lab in Winnipeg. Years later, resentment over that decision manifested in an all-out effort to stop the Liberals from locating the PHAC headquarters in Winnipeg. The Liberals believed it was better to locate Canada's top scientists and public health experts away from the stifling bureaucracy of Ottawa.

Nearly four years later, however, and it's quite clear that Ottawa isn't giving up without a fight. During the H1N1 flu virus scare, Dr. David Butler Jones, the chief medical officer of health, and Dr. Frank Plummer, the director of the National Microbiology Laboratories, have been anchored in Ottawa while scientific work is done in Winnipeg.

The optics could not be clearer. It would be infinitely more difficult to fight Winnipeg for control of PHAC if the Winnipeg laboratory were improved and expanded.

However, Health Canada is oblivious to the fact an expanded lab is a critical issue for some of the world's best and brightest scientists.

When the proposal was made to expand the Winnipeg lab, one of the main reasons was that the top scientists working there needed more space and unless they got it, they would leave.

Last year, quietly and without fanfare, Dr. Heinz Feldmann left the NML and the University of Manitoba for the Rocky Mountain Laboratories, a U.S. National Institutes of Health research facility in Hamilton, Montana, to continue his research into a vaccine to treat hemorrhagic fevers like Ebola. Feldmann made international headlines when he developed a vaccine prototype working out of the Winnipeg lab.

Now, he toils in the U.S., where he has more money and access to a much larger Level 4 laboratory. Feldmann has never spoken publicly about his decision, but the motivation seems clear.

Whether the decision to shelve the laboratory expansion is due to cynical regional politics, a failure to recognize the economic importance of investments in science, or a failure to curb Ottawa bureaucrats, the Harper government has dropped the ball here.

Expanding the NML is good for Manitoba, good for science and good for Canada's economy. Perhaps one day the folks in Ottawa will see that and get out of the way.

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2011 (June) - The Missoullan Newspaper: HS graduations

Full page : [HN01IG][GDrive]

2011 (oct)

https://newspaperarchive.com/brandon-sun-oct-07-2011-p-4/

Secure lab tightens restrictions

WINNIPEG — Researchers in Winnipeg's National Microbiology lab must now obtain extra approval before they transport lethal pathogens, after a "miscommunication" three years ago left senior officials scrambling to find out why a shipment of Level 4 viruses was sent out of the secure lab.

In the summer of 2008, one of Winnipeg's prominent disease researchers froze vials of some of the world's deadliest pathogens — including Ebola — in liquid nitrogen and packed them in special containers to ship to the United States.

At the time, Dr. Heinz Feldmann worked in Canada's National Microbiology Laboratory special pathogens unit, the only facility in the nation with a Level 4 containment lab where researchers wear special hazardous-material suits and work with lethal viruses behind multiple layers of sealed, air-tight doors. He had accepted a job at a Level 4 U.S. federal lab in Montana, and planned to take his research with him.

The lab does not ship live viruses very often, and officials say this particular shipment was a significant size — about one-tenth of the high-containment lab's total virus stock.

But there was a problem.

While Feldmann's supervisor knew about the shipment and was present on the day he sent the viruses out of the lab, other senior lab staff — including the Level 4 lab's acting director and scientific director, Dr. Frank Plummer — had no idea.

When they noticed the viruses had been shipped, they scrambled to find out what had happened. Officials will not clarify what day Feldmann shipped the viruses and what day lab staff raised concern about them due to "safety and security reasons."

Documents obtained through an access to information request reveal the lab quietly launched an internal investigation about the shipments. All but five of the 149 pages related to the review are blacked out due to sections of the Access to Information Act that allow the government to refuse information that may harm international affairs, was obtained in confidence from a foreign government or institution or could harm third parties.

The Winnipeg Free Press has filed a formal complaint with the Office of the Information Commissioner of Canada.

» Winnipeg Free Press

THE BRANDON SUN • FRIDAY, OCTOBER 7, 2011

2012 (Aug 21)

https://newspaperarchive.com/galveston-daily-news-aug-21-2012-p-16/

2012-08-21-the-galveston-daily-news-pg-b-6.jpeg

2012-08-21-the-galveston-daily-news-pg-b-6-clip-nipah

HEALTH

Potential Nipah vaccine passes primate test

Virus is carried by fruit bats

By University of Texas Medical Branch
Special to The Daily News

» GALVESTON

Researchers have successfully tested a vaccine for the deadly Nipah virus in monkeys, raising hopes that it could provide similar protection for humans.

With greater than a 75 percent fatality rate and the ability to be transmitted directly from person to person, Nipah has long been a significant concern for infectious disease experts.

The virus, which is carried naturally by fruit bats, was first discovered in Malaysia in 1998. Outbreaks have occurred in nearly every year since, in Singapore, Bangladesh and India.

"This vaccine is based on a protein from Hendra virus, which is a very close relative of Nipah — Hendra's found in Australia and is also spread by bats, which give it to horses, which give it to people," said University of Texas Medical Branch at Galveston professor Thomas Geisbert, senior author of a paper on the study now online in Science Translational Medicine. "We've got a lot of confidence that the vaccine will work in people because the animal model we used in this experiment, the African green monkey, faithfully reproduces all aspects of human Nipah and Hendra disease."

Because there is no approved vaccine or therapy for Nipah, the researchers conducted their study in a biosafety level 4 "spacesuit" facility at the National Institutes of Health's Rocky Mountain Laboratories in Hamilton, Mont. There, the scientists divided nine monkeys into three equal groups, administering a different vaccine dose to each group.

Forty-two days later, the researchers infected the animals with what should have been a lethal dose of Nipah. But all of the vaccinated monkeys — even those that had received the lowest dose of the vaccine — remained completely healthy.

"The vaccine worked great," Geisbert said.

The researchers plan further studies to prepare for a possible application for review by the Food and Drug Administration to license the vaccine for human use. In addition, the vaccine is now in commercial development in Australia to protect horses from Hendra virus.

Other authors of the Science Translational Medicine paper include Katharine Bossart and Andrew Hickey of Boston University; Barry Rockx and Joan Geisbert of UTMB; Friederike Feldmann, Doug Brining, Dana Scott, Rachel LaCasse and Heinz Feldmann of Rocky Mountain Laboratories; and Yan-Ru Feng, Yee-Peng Chan and Christopher Broder of the Uniformed Services University of the Health Sciences. Support for this research was provided by the National Institute of Allergy and Infectious Diseases and the NIH.

2013 (Jan 21) - Hamilton researchers help make breakthrough on Ebola vaccine

Jan 21, 2013 Updated Nov 23, 2014 / Source : [HN01IH][GDrive] / By DAVID ERICKSON Ravalli Republic

[HN01II][GDrive]

HAMILTON – Researchers at the National Institute of Allergy and Infectious Disease's Rocky Mountain Labs in Hamilton, working in conjunction with a team in Oregon, have made an important discovery related to a potential Ebola vaccine.

Dr. Heinz Feldmann, chief of the Laboratory of Virology at RML, and Andrea Marzi, a staff scientist who designed the research project, believe they have learned how an experimental Ebola vaccine protects against infection in nonhuman primates — monkeys — which is the best model for human Ebola disease.

Feldmann has a long history with Ebola. He started researching a vaccine more than 10 years ago while he was working in Canada, and the vaccine has been successfully tested on rodents and monkeys. However, one key question remained about why the vaccine was successful: Did the vaccine work because of the "killing action" of the immune cells or through antibodies that neutralize the virus?

The results of the study by Feldmann, Marzi and a team of researchers at Oregon Health and Science University found that the vaccine indeed elicits antibodies that can protect animals against Ebola infection. The scientists used another virus, vesicular stomatitis virus, to produce the sole surface proteins from Ebola after immunization so that the animals' immune system can recognize the foreign protein and fight off the virus if they were ever infected.

The results were published recently in the prestigious journal Proceedings of the National Academy of Sciences.

Ebola causes severe hemorragic fever in humans, which includes profuse internal organ bleeding, and up to 90 percent of people who are infected die from shock, bleeding and multiple organ failure. There currently is no licensed treatment or vaccine for Ebola, which is why this study is so important for moving toward a clinical trial with humans.

In 2012, the World Health Organization reported Ebola hemorrhagic fever outbreaks in the Democratic Republic of Congo and Uganda, accounting for more than 100 cases (probable and confirmed) and numerous deaths. Feldmann said Ebola and its cousin Marburg are a huge concern for the scientific community and governments around the world because the potential for importation of infections and misuse of the virus would be challenging for any public health system.

The viruses originated in Africa and are believed to be transmitted to humans through bats. The scientists also have successfully tested the experimental vaccine against Marburg.

Feldmann said there is a lot of efficacy data, or success, in the nonhuman primate model to support the next step in testing the vaccine.

"We know it works very well, and we hope we can get into clinical trials," he said. "We did not know why it worked. The body has two big weapons to fight viral infections. Cellular immunity means immune cells that kill incoming viruses, or antibodies that would neutralize the virus. The question was what is this vaccine mediating in an immunized host? Is it triggering one or the other or both? Andrea and the Portland team show very elegantly in their study that it is the antibody that is important.

"This has huge implications not only for this vaccine platform, but also for the field in general. The general thinking was that antibodies are not important for Ebola. Not every Ebola vaccine that has been tried might not work with the same mechanism, however."

Feldmann said that the study also defined what scientists call a "correlate of protection."

"We could go into humans and we know what kind of an antibody response we need to achieve in a human, so we can predict that the antibody is working should we have to use it in a human," he explained. "We know what to test for should we go into humans. These are the two key findings."

2014 (July 15) - Microbe Hunting in the 21st Century - W. Ian Lipkin, MD

https://www.youtube.com/watch?v=XFs1_y3Vp34 / download video : [HV00GV][GDrive]

1,458 views • Jul 15, 2014

UW Video

Recent advances in nucleic acid diagnostic methods have revolutionized microbiology by facilitating rapid, sensitive microbial surveillance and differential diagnosis of infectious diseases. During his talk at the University of Washington, Dr. W. Ian Lipkin of the Center for Infection and Immunity, Mailman School of Public Health, Columbia University, shares how implementation of these methods may enable intervention when the prognosis is optimal for limiting replication, dissemination, transmission, morbidity and mortality.

2014 (Sep 22) - With Plummer

Full newspaper page : [HN01IL][GDrive]

Leader-Post • leaderpost.com NEWS Monday, September 22, 2014 A5

EBOLA

How Canada's national lab became a powerhouse

HELEN BRANSWELL
THE CANADIAN PRESS

TORONTO — When Dr. Frank Plummer talks about the first experimental Ebola drug used in an outbreak, he pronounces it "Zed Map."

"I do it consciously," says Plummer, who retired this year after serving for nearly 14 years as the head of Canada's National Microbiology Laboratory in Winnipeg.

The rest of the world says the first letter of the drug ZMapp the way Americans do, calling the concoction of three Ebola antibodies "Zee Map." But the cocktail was created in Winnipeg and Plummer thinks the name of a made-in-Canada drug ought to pronounced the Canadian way.

Winnipeg — half a world away from the countries in Africa where Ebola and its viral cousin, Marburg, occasionally slip out of their animal reservoir to start infecting and killing people as Ebola is now doing in West Africa.

They are two of the worst viruses known to humankind, as evidenced by the current outbreak, which has infected at least 5,335 people and killed at least 2,622. To date, there has never been a case of either viral infection within Canadian borders.

So why then is Canada's national lab an Ebola research powerhouse? Well, there's ZMapp, the most promising of the current experimental treatments. There's also an Ebola vaccine that may be useful both to prevent infection and stop it in its tracks if given shortly after exposure. And a mobile diagnostic lab that has changed the way outbreak testing is done.

If you ask why Winnipeg — why Canada? — is such a player in Ebola research, the instant answer comes in the form of two names — Heinz Feldmann, the lab's first special pathogens chief and Gary Kobinger, his successor and the current branch chief.

"They have the right attitude. They're collaborative, they're co-operative, they share their information readily and they have a global perspective. And they know exactly what needs to be done," says Jim LeDuc, director of the Galveston National Laboratory at the University of Texas Medical Branch, which also employs key Ebola researchers.

Still, the story doesn't begin with Feldmann and Kobinger.

When the federal government decided to build a state-of-the-art laboratory in Winnipeg to replace aging Health Canada facilities in Ottawa, it was not immediately clear the complex would contain a Level 4 lab, the high-containment space needed to work on the world's most dangerous pathogens.

"We really felt that to be properly prepared for all of the possible diseases that we were seeing spreading ... that it was better and wise for Canada to have a Level 4 lab," recalls Dr. Harvey Artsob, who was then the head of zoonotic diseases for what became the National Microbiology Laboratory, or NML, as the scientists call it.

The search began for someone to head the special pathogens team.

Lab leaders wanted Feldman, then a young German researcher who was working in Marburg, Germany, researching Ebola and Marburg (the virus is named after the German town where he was working).

The lab flew Feldmann to Winnipeg to meet NML leaders. He liked what he saw, even though the first trip occurred in December.

Under Feldmann, the Winnipeg lab created Ebola and Marburg vaccines that are widely thought to be highly promising. Between 800 and 1,000 vials of the Ebola vaccine, called VSV-EBOV, have been donated to the World Health Organization and will be used in this outbreak if preliminary trials show it is safe in humans. (It is effective and safe in non-human primates.)

The team also created a mobile laboratory, a low-tech-but-safe lab in a suitcase that has revolutionized how testing is done in the remote locations where Ebola and Marburg outbreaks typically occur.

The Winnipeg mobile lab has been deployed by the WHO during most subsequent Ebola and Marburg outbreaks. And many other countries have copied the model. A number of other mobile labs are in the Ebola zone helping with the current epidemic.

Also instrumental in Winnipeg's success was Plummer, who returned to Canada to take over as head of the lab in 2001.

Kobinger — born in Europe but raised in Quebec — was working on an Ebola vaccine at the University of Pennsylvania.

Kobinger has continued work on the Ebola vaccine. But it is with something known as monoclonal antibodies where he's made a major mark.

Our immune systems produce a soup of antibodies to protect against various invaders. But scientists try to figure out which specific ones target a given pathogen, then grow lots of that individual antibody. Those are called monoclonals.

Kobinger and his team produced a cocktail of three Ebola monoclonals that looked promising. He decided to try to optimize the cocktails. The result: ZMapp, which is made up of two of Winnipeg's monoclonals and one made by a U.S. team.

CHRISTOPHER BLACK/WHO files

Under Heinz Feldmann, right, the Winnipeg-based National Microbiology Laboratory created Ebola and Marburg vaccines that are widely thought to be highly promising.

MORE INSIDE

Ebola lockdown in Sierra Leone leads to food shortages, frustration. **Page C8**

[HN01IM][GDrive]

2015 (Aug 24)

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MONDAY, AUGUST 24, 2015 A3

TOP NEWS

Winnipeg Free Press

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Dr. Gary Kobinger is leaving the Winnipeg lab next June to become the director of the Centre for Research in Infectious Diseases at Laval University in Quebec City.

Ebola scientist leaving city lab

Chief of special pathogens led work on successful treatments

By Helen Branswell

TORONTO — The scientist who led the work to develop the Ebola drug ZMapp is going to be leaving the National Microbiology Laboratory in Winnipeg.

Dr. Gary Kobinger is the lab's chief of special pathogens, heading a team that works on some of the world's worst disease threats. Kobinger will be vacating that position next June to become the director of the Centre for Research in Infectious Diseases at Laval University in Quebec City.

"We're so proud. We consider we are very privileged to have the opportunity to have him," said Dr. Michel Bergeron, the founder and current head of the centre, who is relinquishing the directorship — but staying on as a researcher — after 41 years.

"Gary is a fantastic human being and an extraordinary researcher."

In an interview, Kobinger said the long notice will give the Public Health Agency of Canada time to find the right candidate to take over the special pathogens program, which has brought great acclaim to the national lab.

In addition to ZMapp, the Winnipeg group designed the first Ebola vaccine that has been shown to be effective in people. And it developed and pioneered the use of small mobile laboratories — a lab in a suitcase, essentially — that have changed the way testing is done during Ebola outbreaks.

Kobinger grew up in Quebec and had hoped to return there someday. Still, he said, deciding to step down from the Winnipeg job was difficult.

"It's actually very hard to leave here... A very tough decision," said Kobinger, one of the world's leading Ebola researchers.

"The amount of publications and contributions that this group has been doing... in the past five years is quite impressive."

He has made many contributions to the field of research into viral hemorrhagic fevers such as Ebola and Marburg. But the development of the drug ZMapp will likely be remembered as one of his major contributions during his time in Winnipeg.

The drug is made up of three specific antibodies that fight Ebola. The drug is currently being tested in West Africa, though it is possible the dwindling outbreak there may end before the trial can be completed.

Immune systems produce a variety of antibodies to protect against disease invaders; some are general and some highly specific. To produce monoclonal antibody drugs such as ZMapp, scientists try to home in on specific antibodies, then clone them to produce concentrations of them to infuse into a sick person's bloodstream.

Kobinger and his team produced a cocktail of three Ebola monoclonals that looked promising against the virus in animal testing. Meanwhile, scientists at the U.S. Army Medical Research Institute of Infectious Diseases in Frederick, Md., produced their own monoclonal cocktail of three antibodies. There was no overlap between the two.

Kobinger decided to try to optimize the cocktails, mixing and testing various combinations to see which was most effective when given to primates infected with Ebola. The resulting drug, ZMapp, is made up of two of Winnipeg's monoclonals and one made by the U.S. team.

Kobinger took over as special pathogens chief from the group's first head, Dr. Heinz Feldmann. Feldmann, who left the Winnipeg lab in 2008 to become chief scientist for Level 4 laboratories at the U.S. National Institute of Health's Rocky Mountain Laboratories in Hamilton, Mont., led the work on the Ebola vaccine.

Kobinger, who had been working on a different Ebola vaccine project at the University of Pennsylvania, had been collaborating with the Winnipeg group. Feldmann told then-scientific director Dr. Frank Plummer he should hire Kobinger.

"So I hired him, and it was one of the smartest things I ever did," Plummer said in an interview with The Canadian Press last year.

Over the past 15 months, Kobinger and 26 other scientists from the Winnipeg lab have worked in rotations in West Africa, with two- or three-person teams operating mobile laboratories to help Ebola treatment centres diagnose those infected with the disease. At one point, Winnipeg had three lab teams in the field. One team is still in Guinea.

Though Canada first developed a mobile testing lab, other countries have followed suit.

At Laval, Kobinger will lead a centre with a strong reputation and a roster of 200 scientists. It does not have a Level 4 laboratory. Those are the most secure laboratories, where work on the most dangerous pathogens is done. But Kobinger doesn't believe the move will spell the end of his Ebola work.

"I see this as expanding the horizons, not restricting them," he said.

"I have so many friends in the field of Level 4 (research) that I'm really hoping that I'll be able to keep collaborating with many of them."

— *The Canadian Press*

may 2020

https://www.newspapers.com/image/659113984/?terms=%22heinz%20Feldmann%22&match=1

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(2020, June) Dr. Heinz Feldmann | 2020 CEND Symposium

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Dr. Heinz Feldmann from the National Institutes of Health on ebola at the 2020 CEND Symposium.

2020 (Oct 22) - Research with many others, including wife Friederike Feldmann

https://insight.jci.org/articles/view/143174

Research ArticleCOVID-19Therapeutics Open Access | 10.1172/jci.insight.143174

Hydroxychloroquine prophylaxis and treatment is ineffective in macaque and hamster SARS-CoV-2 disease models

Kyle Rosenke,[1] Michael A. Jarvis,[1,2] Friederike Feldmann,[3] Benjamin Schwarz,[4] Atsushi Okumura,[1] Jamie Lovaglio,[3] Greg Saturday,[3] Patrick W. Hanley,[3] Kimberly Meade-White,[1] Brandi N. Williamson,[1] Frederick Hansen,[1] Lizette Perez-Perez,[1]Shanna Leventhal,[1] Tsing-Lee Tang-Huau,[1] Julie Callison,[1] Elaine Haddock,[1] Kaitlin A. Stromberg,[4] Dana Scott,[3] Graham Sewell,[5] Catharine M. Bosio,[4] David Hawman,[1] Emmie de Wit,[1] and Heinz Feldmann[1]

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Authorship note: KR, MAJ, and FF contributed equally to this work.

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Year unknown (between 2010 and 2016) - Geneva University - SPEAKERS BIOGRAPHY for Dr. Heinz Ulrich Feldmann at the Symposium for Emerging Viral Diseases

Dr. Heinz Ulrich Feldmann (born 1959)

https://www.unige.ch/emerging-virus-symposium/archives/biography-speakers/feldmann/

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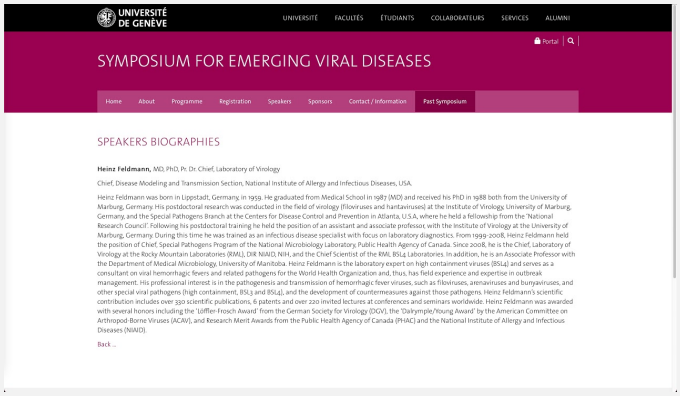

Heinz Feldmann, MD, PhD, Pr. Dr. Chief, Laboratory of Virology

Chief, Disease Modeling and Transmission Section, National Institute of Allergy and Infectious Diseases, USA.

Heinz Feldmann was born in Lippstadt, Germany, in 1959. He graduated from Medical School in 1987 (MD) and received his PhD in 1988 both from the University of Marburg, Germany. His postdoctoral research was conducted in the field of virology (filoviruses and hantaviruses) at the Institute of Virology, University of Marburg, Germany, and the Special Pathogens Branch at the Centers for Disease Control and Prevention in Atlanta, U.S.A, where he held a fellowship from the 'National Research Council'. Following his postdoctoral training he held the position of an assistant and associate professor, with the Institute of Virology at the University of Marburg, Germany. During this time he was trained as an infectious disease specialist with focus on laboratory diagnostics. From 1999-2008, Heinz Feldmann held the position of Chief, Special Pathogens Program of the National Microbiology Laboratory, Public Health Agency of Canada. Since 2008, he is the Chief, Laboratory of Virology at the Rocky Mountain Laboratories (RML), DIR NIAID, NIH, and the Chief Scientist of the RML BSL4 Laboratories. In addition, he is an Associate Professor with the Department of Medical Microbiology, University of Manitoba. Heinz Feldmann is the laboratory expert on high containment viruses (BSL4) and serves as a consultant on viral hemorrhagic fevers and related pathogens for the World Health Organization and, thus, has field experience and expertise in outbreak management. His professional interest is in the pathogenesis and transmission of hemorrhagic fever viruses, such as filoviruses, arenaviruses and bunyaviruses, and other special viral pathogens (high containment, BSL3 and BSL4), and the development of countermeasures against those pathogens. Heinz Feldmann's scientific contribution includes over 330 scientific publications, 6 patents and over 220 invited lectures at conferences and seminars worldwide. Heinz Feldmann was awarded with several honors including the 'Löffler-Frosch Award' from the German Society for Virology (DGV), the 'Dalrymple/Young Award' by the American Committee on Arthropod-Borne Viruses (ACAV), and Research Merit Awards from the Public Health Agency of Canada (PHAC) and the National Institute of Allergy and Infectious Diseases (NIAID).

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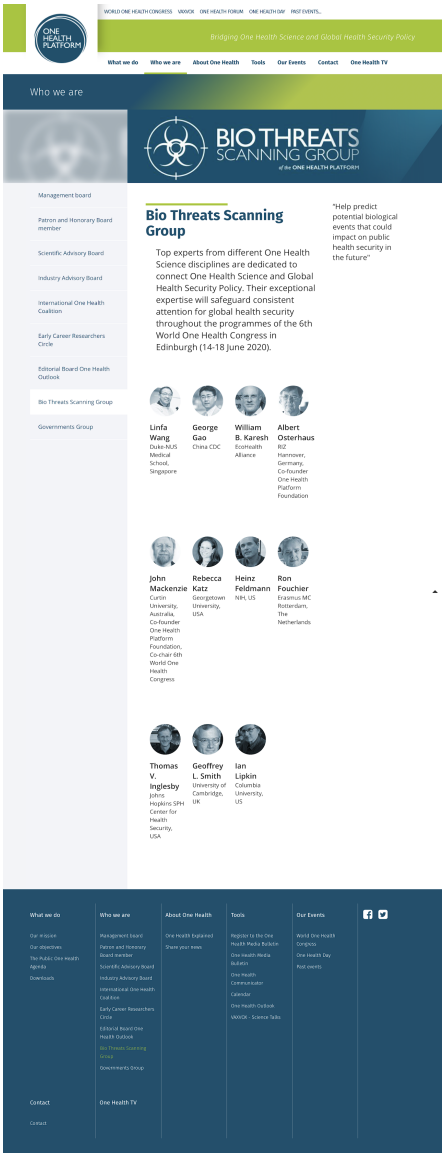

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WIFE - is Dr. Friederike Feldmann

WIFE - is Dr. Friederike Feldmann (info - https://www.whitepages.com/name/Friederike-Feldmann/Hamilton-MT/PLyZ1JP0GN9 - in her 50s (born 1961 to 1971))

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Friederike Feldmann

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‘Against all odds’: The inside story of how scientists across three continents produced an Ebola vaccine

Helen Branswell

By Helen Branswell

Jan. 7, 2020

Reprints

Liberia Ebola

Health workers in protective clothing speak with people awaiting medical treatment in the outpatient lounge of Redemption Hospital, formerly an Ebola holding center, in Monrovia, Liberia, in 2015.

JOHN MOORE/GETTY IMAGES

In the spring of 2014, as Ebola exploded across West Africa, a scientist named Gary Kobinger was following the news intently from Canada.

Kobinger was the head of the special pathogens unit at the National Microbiology Laboratory in Winnipeg. He and the team he led had a well-deserved reputation for their work on Ebola and other viral hemorrhagic fevers; Kobinger himself had led development of a promising Ebola therapy.

The Winnipeg lab also had been working for years on an Ebola vaccine, one that looked tremendously effective in animal models. The lab had even produced human-grade vaccine in the hopes of testing it in people. But as of April 2014, that still hadn’t happened. The vaccine had never been deployed in an outbreak. No major pharmaceutical company had expressed interest in developing it.

With Ebola appearing to spread rapidly in a country that had no experience trying to control it — Guinea — Kobinger contacted the World Health Organization to offer the vaccine.

The WHO declined the offer.

“They thought it was premature to advance it,” recalled Kobinger, who said he was told that Guinea lacked the infrastructure to approve use of an experimental vaccine. “That was true,” he added.

The reality was that, for years, scientists who studied Ebola, which belongs to a family of viruses called filoviruses, had poured their hearts into work to develop vaccines and drugs to combat these deadly scourges. And for years, they had seen promising work smash up against unscalable walls. There was no potential for drug makers to recoup development costs; and, with outbreaks only sporadic, there was little opportunity to subject experimental vaccines to rigorous tests.

But faced with the prospect of Ebola victims lying abandoned in the streets of African cities — and the world’s self-interested realization that the virus rampaging through West Africa wasn’t likely to stay there — the balance would eventually tip.

“That big outbreak was a game-changer and reminded people that this exotic virus could become a real threat to public health regionally as well as in a global perspective,” said Dr. Heinz Feldmann, Kobinger’s predecessor, who led the work to develop the vaccine.

Related: An Ebola vaccine was more than two decades in the making. Here are some key people who made it happen

By 2014 Feldmann had long since given up hope that the vaccine — known in the myriad studies he and others published on it as rVSV-ZEBOV — would ever get made. But through an unlikely series of twists and turns, some fortuitous and not-so-fortuitous, the vaccine has finally been developed by Merck, approved by regulatory agencies in the United States and Europe late last year, and used in the field to save lives in Africa. It is known as Ervebo.

It is a feat that built on the work of scientists in multiple countries on three continents who toiled in obscurity for years. And it ensured that when future outbreaks strike, health workers have a crucial new tool at their disposal.

“This vaccine … from the beginning to the end — it should have never happened. On so many levels … against all odds, it made it,” said Kobinger, now director of the Infectious Disease Research Center at Laval University in Quebec.

This is how it happened.

Ebola Inline

The story of the Ebola vaccine began, as scientific advances often do, with a good idea and a lucky break.

In the early 1990s, a Yale University scientist named John “Jack” Rose was trying to figure out a way to use a livestock virus called vesicular stomatitis virus, or VSV, as a vaccine delivery system. While it can infect people, VSV doesn’t sicken them. The immune system response to the virus is rapid and the levels of antibodies induced are surprisingly high.

Rose thought the virus could be an effective backbone for a vaccine — if it could be engineered to include genes of viral pathogens like influenza or HIV. The idea was that the harmless virus would teach the immune system to recognize harmful potential invaders.

But he and students in his lab had been trying for about six years to successfully manipulate VSV to add in the genes of other viruses. One very good student left his lab, he recalled, because she concluded the work was never going to pan out.

Then, in 1994, Rose heard that researchers in Germany had succeeded where he had struggled — with a rabies virus. Using their approach, he was able to recover modified VSV viruses in a few months.

“That opened up a whole new area of research on VSV for us and others,” Rose recalled.

To see if the system worked, his group added a protein from an influenza virus to VSV and injected it into mice. “The neutralizing antibody responses were

To see if the system worked, his group added a protein from an influenza virus to VSV and injected it into mice. "The neutralizing antibody responses were fast and off the charts," he said. "And of course the mice were completely protected after a single dose."

Rose's lab and others later used VSV as a backbone for experimental vaccines for bird flu, measles, SARS, Zika, and other pathogens. It always worked.

Without the high-security laboratories needed to handle the world's most dangerous viruses, the researchers couldn't work on Ebola. Rose, nonetheless, thought a VSV Ebola vaccine, in theory, would work as well.

Yale patented Rose's VSV construct, and licensed it to Wyeth Pharmaceuticals.

By his own estimate, Rose shared his VSV vector with at least 100 labs worldwide. One of them was located in a city in Germany with a rather auspicious name: Marburg.

It was there, in 1967, that laboratory workers and people related to them became sick with what was later named the Marburg virus. The source: primates imported for research purposes. (Nine years later, scientists would discover a related virus, Ebola.)

When a scientist named [**Dr. Hans-Dieter Klenk (born 1938)**] moved to the city in the 1980s to lead the Institute of Virology at the Philipps-University Marburg, there was no research being conducted there on Marburg or Ebola. Klenk decided that ought to change. He asked one of his students, Heinz Feldmann, if he wanted to continue to work on influenza, or move over to filoviruses like Marburg. "He did not think long," Klenk said. "This is how it started."

Dr. John Rose

John "Jack" Rose in his lab at Yale.

COURTESY

With Rose's virus, Klenk's team could study individual Ebola genes by putting them onto the VSV backbone. The beauty of the approach was that they could do the work at lower biocontainment levels than Ebola research is normally conducted, which made it safer, faster, and cheaper.

At first, the protein on the surface of the VSV virus — known as the glycoprotein or G protein — was swapped out and replaced with the Ebola glycoprotein. Later the group made a VSV virus with the G protein of the Marburg virus.

Klenk said that, even then, there was some discussion about whether the hybrid VSV virus could be made into Ebola or Marburg vaccines. But the group didn't have high-containment labs in which to do animal studies, so it couldn't test the theory.

Back across the Atlantic, though, Canada was building a new national microbiology laboratory — one that included biosafety level 4 facilities, the type needed to study Ebola. Feldmann was recruited to lead the special pathogens team there. And when he left Germany in 1999, he asked Klenk if he could take the VSV construct with him, so he could continue his work. Klenk agreed

"This became 'the Canadian vaccine' — how it was known for many years. But certainly it has also roots in Marburg," Klenk said.

As Feldmann recalls it, he wasn't even thinking about using Rose's VSV construct as a vaccine when he was in Marburg. "We had no vaccine program. We had no interest in vaccines," he said. "We used it basically as a model system to study the glycoprotein."

After he'd moved to the Canadian lab, though, Feldmann and Tom Geisbert, a friend and frequent collaborator, heard Dr. Gary Nabel, then head of the National Institutes of Health's Vaccine Research Center, deliver a lecture on Ebola. He argued the glycoprotein was the cause of the profound damage Ebola does when it infects animals and people.

Feldmann and Geisbert, an Ebola expert who was then at the U.S. Army Medical Research Institute of Infectious Diseases, thought Nabel was wrong and that they could use the VSV construct to prove it.

In Winnipeg, Feldmann's team infected mice with the VSV virus containing the Ebola glycoprotein. If Nabel's theory was correct, exposure to the protein should have been toxic to the mice.

The rodents were unharmed.

As an afterthought, the group decided to expose the mice to Ebola to see what would happen. All the mice that had been infected with the VSV virus carrying the glycoprotein were fully protected from illness; the mice that had not been exposed to the VSV virus all died.

"I guess that was basically the start of the vaccine project, even though I don't think we really jumped on it with a lot of priority right away," said Feldmann.

Related: Ebola vaccine approved in Europe in landmark moment in fight against a deadly disease

In hindsight, that delayed response might seem striking. But at the time the Winnipeg group faced more urgent matters. In 2003, an alarming new disease — which came to be called severe acute respiratory syndrome, or SARS — burst out of China and spread to Hong Kong, Vietnam, Singapore, and Toronto. The special pathogens team at the Canadian lab joined the search to try to determine what was causing the new illness and how to contain it. Other work was put on hold.

With the Winnipeg team tied up, Geisbert agreed to replicate the mouse study in nonhuman primates, considered the best animal model for what happens when humans are infected with Ebola.

Like the mice before them, monkeys that had first been exposed to rVSV-ZEBOV survived what should have been a lethal Ebola challenge. A paper on the study was published in Nature Medicine in 2005 — and it "blew the doors off," recalled Geisbert, who is now with the University of Texas Medical Branch in Galveston.

It was suddenly clear that the modified VSV vector, loaded with the Ebola glycoprotein, was not only safe, but that it could be used as the foundation of an effective vaccine.

Scientifically speaking, it was thrilling. But realistically, it was a nonstarter. Vaccines are estimated to cost in the neighborhood of $1 billion to develop. The pharmaceutical industry was not interested in making a product to protect against a disease that emerged only now and again in impoverished countries. At the time, Ebola had killed about 1,300 people over the nearly 30 years since it had been discovered.

"Yes, it was exciting, but where would you go with that excitement?" Feldmann said when asked about the results. "You went to the bar next door and had a beer and continued working."

peer and continued working.

“No one was interested in Ebola.”

In 2008, Feldmann left Winnipeg to become the head of the virology program at the NIH’s Rocky Mountain Laboratories in Hamilton, Mont.

Mobile biocontainment unit Hamburg

Mobile biocontainment unit used to monitor a German researcher who had pierced her finger with a syringe containing Ebola virus during an experiment in 2009.

BERNHARD-NOCHT-INSTITUTE FOR TROPICAL MEDICINE

In March 2009, a sudden crisis led to a critical decision.

A German researcher pricked her finger with a needle containing Ebola virus while doing a mouse experiment. The needle penetrated three layers of gloves; though the wound didn’t draw blood, her skin had been punctured.

The University Medical Center Hamburg, where she was taken, reached out to Ebola researchers in the U.S. and Canada to see if there was anything that could be done.

The experts on the call — a who’s who of Ebola researchers and field workers at the time — concluded that she should be offered the VSV vaccine. Some testing in animals had shown it had increased survival when given after exposure, even as late as 48 hours afterward — though whether that translated into a similar effect in people was unclear.

The Canadian government agreed to send the vaccine — which was not human-grade product, but material the lab had produced for animal studies. Roughly 48 hours after the accident, the woman, who was not publicly identified, was vaccinated.

Trending Now: Comparing the Covid-19 vaccines developed by Pfizer, Moderna, and Johnson & Johnson

The following day, she developed a fever. It’s not uncommon for a live virus vaccine, like rVSV-ZEBOV, to trigger a fever; it’s actually a sign that the immune system has activated. But fever could also have been the first symptom of an Ebola infection. With no way to know which scenario they were facing, the doctors monitoring the researcher transferred her into a specially erected bio-containment treatment unit.

The fever subsided; the woman did not develop overt symptoms of Ebola. It was impossible to know whether the vaccine had shut down a developing infection, or whether she had never been infected in the first place. Feldmann and others believed the latter was more likely.

But, importantly, there were no negative consequences to using the vaccine, a fact that would later give comfort to people who were struggling with whether to deploy rVSV-ZEBOV in a much larger emergency.

Ebola Inline

If two assets hadn’t come researchers’ way, it’s almost a certainty that Ervebo would have never come to fruition. One was money, the other was a rare talent.

The monetary asset was a $2 million grant awarded to the Winnipeg lab. The grant, though a drop in the bucket when it comes to scientific research, was hard-won. Feldmann and Steven Jones, who had done a lot of the animal testing in the lab, had repeatedly applied to U.S. government agencies for funding. Their applications were repeatedly rejected.

In fact, the whole special pathogens program was always in the crosshairs of government bean counters. Every year during the budget process, Frank Plummer, scientific director of the National Microbiology Laboratory from 2000 to 2014, would get pressed on why Canada needed to work on pathogens like Ebola. “I always had to defend it, and we always were scrambling for money,” he said.

The grant was doled out by a Canadian defense program that funded research into tools to combat bioterrorism. It was to be used to produce test lots of human-grade VSV vaccine for Ebola Zaire, the species of the virus that has been the most common cause of Ebola outbreaks.

The idea was to hire a German contract manufacturer, IDT Biologika, to produce the vaccine. First, though, the Winnipeg lab had to create the starter material from which it could do so. That work was laborious and tedious, and it fell to the second asset — Judie Alimonti, an unassuming immunologist and lab scientist dedicated to the cause.

Among other tasks, Alimonti had to develop tests to show that the materials being transferred to IDT did not contain any microorganisms that inadvertently contaminated the product. When IDT had produced vaccine, it shipped back vials to Alimonti who ran the tests to ensure the material was pathogen-free

“Judie did that. … She spent two years on this alone, I think,” said Kobinger. “She put all her heart into it.”

Alimonti, who died of cancer in 2017, loved the project. Her former colleagues describe her as the unsung hero of the Ebola vaccine

She was “a very meticulous, methodical scientist,” said Plummer, who oversaw the VSV vaccine project after Feldmann and then Jones left the Winnipeg lab.

Indeed, if IDT didn’t already have in hand the seed material to make more vaccine, the time needed to develop usable material would simply have been too great when a crisis struck. And the Winnipeg lab’s Ebola vaccine would have missed the chance to attract the big-league help needed to get the vaccine tested and eventually licensed.

“I think probably it would have never happened,” Kobinger said.

After securing a patent for the vaccine system — and obtaining permission from Wyeth Pharmaceuticals to use its platform to produce Ebola and other viral hemorrhagic fever vaccines — the Winnipeg lab talked to a variety of pharma companies, big and small, looking for a development partner. The only interest came from a tiny firm called BioProtection Systems Corp., a spinoff of NewLink Genetics, a biotech working on cancer vaccines.

Gary Kobinger

Heinz Feldmann (left) and Gary Kobinger operating an Ebola testing lab provided by the Public Health Agency of Canada during a 2007 outbreak at Luebo, DRC.

CHRISTOPHER BLACK/WHO

The interest had little to do with Ebola, or even infectious disease vaccine platforms, which is what BioProtection Systems would be licensing. The company was looking for assets to add to its portfolio to generate capital investment, Jones recalled. “It was a business decision for them that it would enhance their portfolio and make it easier to get funding to do the other work they were interested in,” he said.

The deal turned out to be a steal.

NewLink agreed to pay the Canadian government — which officially held the patent — about $156,000 for each product it developed. (An amendment a couple of years later would increase that amount to roughly $360,000.) The Canadian government would also get royalties from some sales, though in truth those royalties were never expected to deliver much.

The company, which would later be absorbed into a drug maker called Lumos Pharma, never pushed development of the Ebola vaccine. For all intents and purposes, it would have remained no more than a scientific idea gathering dust on a shelf.

And then came the West African Ebola crisis.

The outbreak, which probably started in late 2013, smoldered in the way Ebola outbreaks do. At first, the assumption is the people who fall ill have contracted malaria or some other disease. Eventually, health workers become ill. Finally, a diagnosis of Ebola is made.

The WHO reported a “rapidly evolving” Ebola outbreak in southeastern Guinea on March 23, 2014. By that point, there were already 49 cases and 29 deaths, making it larger than about half of all previous known Ebola outbreaks. The following day, the tally grew: 86 cases and 59 deaths.

Before the week was out, cases were reported in Guinea’s capital, the first time Ebola had taken root in an urban setting. By the end of March, one of Guinea’s neighbors, Liberia, was investigating possible cases.

Related: ‘Incredible mind, incredible heart’: After decades fighting Ebola, a beloved expert hangs up his boots

Back in Canada, Kobinger’s offer to the WHO had been rebuffed. He heard that, a few weeks later, GSK, which was developing its own Ebola vaccine, also offered vaccine to the WHO. It, too, was turned down.

Still, Kobinger saw a bright side: “The seed of the [vaccine] being available was planted.”

He mentioned the offer to Dr. Armand Sprecher, an Ebola expert with Doctors Without Borders who he knew as a strong supporter of the VSV vaccine. As Ebola spread from Guinea to Liberia and Sierra Leone, the group, known by the acronym of its French name, MSF, had been emphatically warning the WHO and others that conditions on the ground were rapidly deteriorating. Prompted by Sprecher, MSF started pushing for use of the VSV vaccine.

On Aug. 8, 2014, the WHO declared the outbreak a global health emergency. A couple of days later, the Canadian government announced it would donate its vaccine to the agency.

It was a pivotal moment, but it also created a conundrum. Was the vaccine safe to use? What was an appropriate dose? And how could human trials be conducted in the midst of an epidemic?

Liberia Battles Spreading Ebola Epidemic

People with suspected Ebola virus lie on the ground after arriving by ambulance and just before being admitted to the Doctors Without Borders Ebola treatment center near Monrovia, Liberia, in August 2014.

JOHN MOORE/GETTY IMAGES

It is widely considered to be unethical to use untested drugs or vaccines in Africa, where clinical safeguards are sometimes lacking and where memories linger of scandals like Pfizer’s use of a meningitis drug that resulted in the death of 11 children in 1996. Yet given the scale of the expanding crisis, experts were now scouring the medical literature, looking for any existing medicines that could be repurposed to fight Ebola, or experimental vaccines or drugs, regardless of where they were in the developmental pipeline.

The WHO convened a meeting to determine the best path forward. It concluded there was an “ethical imperative” to try experimental vaccines and therapies, given the extraordinary threat Ebola presented. But it was also decided that in order to use the donated Canadian vaccine, clinical trials first had to assess its safety and establish the appropriate dose. It was apparent to everyone that NewLink didn’t have the expertise or bandwidth to take on this work.

Marie-Paule Kieny, who then headed the division of the WHO tasked with trying to spur development of drugs and vaccines for diseases like Ebola, noted the company had never conducted a clinical trial. “So when we were saying, ‘We should do a clinical trial in Africa,’ they were completely lost,” Kieny recalled.

Researchers at the NIH and Walter Reed Army Institute of Research (WRAIR) started planning a Phase 1 trial to determine the appropriate dose of the vaccine. Others started working on Phase 1 trials that would be conducted in Switzerland, Germany, Gabon, and Kenya.

The WHO and others — including players in the U.S. government — began casting about to find a more experienced pharmaceutical company to partner with, or to acquire the vaccine from NewLink.

The list of potential white knights wasn’t long. Sanofi Pasteur wasn’t interested. Novartis had sold its vaccines division to GSK earlier that year. GSK was racing to test its own experimental Ebola vaccine. Johnson & Johnson’s vaccines division, Janssen, was also working on an Ebola vaccine, but it wasn’t as far along as the GSK or the NewLink vaccines. But Merck had experience producing vaccines in the types of cells the VSV vaccine was made in.

Related: FDA approves an Ebola vaccine, long in development, for the first time

The company started fielding approaches from the WHO, the Biomedical Advanced Research and Development Authority (BARDA), and others asking if Merck would step up. Merck had already been debating what it could do to help with the outbreak, and the vaccine seemed like a good fit

“We already understood how to scale production of vectors in that system, and we knew how to manage the whole scaling process. We had an enormous amount of know-how that was kind of complementary to the work that had already been done,” said Dr. Julie Gerberding, Merck’s executive vice president and chief patient officer for strategic communications, global public policy, and population health.

Gerberding said there was “moral clarity” at Merck that this was something the company should do

Gerberding said there was "moral clarity" at Merck that this was something the company should do.

In the anxious autumn of 2014, when Ebola was ravaging West Africa, it seemed like rumored negotiations between NewLink and Merck were taking forever. But in terms of a pharmaceutical deal, negotiations happened at warp speed.

"[From] Merck deciding to get involved from the initial sort of exploratory discussions at the beginning of October to licensing the vaccine in mid-November, that is unprecedented in terms of internal decision-making within the company because people recognized how urgent it was," said Dr. Mark Feinberg, the company's chief science officer at the time.

Merck agreed to pay NewLink $50 million for the license. The deal was announced Nov. 24, 2014.

rVSV ZEBOV Ebola vaccine

rVSV ZEBOV Ebola vaccine

WRAIR

That same month, around the time the researchers at NIH and WRAIR arrived at an agreement about the appropriate dose for the vaccine, Kobinger made a heart-stopping discovery. It was about the vaccine being used in the trials, donated by the Canadian government.

From its earliest iteration, when Feldmann and his team saw that it saved mice from Ebola, the vaccine had been made with the glycoprotein from the Ebola Zaire strain known as Mayinga. But somewhere along the line, a key feature in the vaccine had been changed.

The human-grade vaccine made by the German contractor contained the glycoprotein from a different Ebola Zaire strain.

No one had told Kobinger the change had been made; he discovered that Alimonti, who had done all the work to prepare the materials for IDT Biologika, had used the different glycoprotein on instructions from one of her supervisors. No one outside the lab realized that the vaccine being tested in people was not identical to the one that had been studied so thoroughly in animals.

Feldmann believed the switch would have no impact on whether the vaccine was effective. "Quite frankly, from a scientific prospective, it doesn't matter," agreed Kobinger. "From a regulatory perspective, it matters a lot."

Kobinger quickly fired off an email to the Food and Drug Administration to inform the agency of his discovery.

He feared fireworks. That's not what he got. "We never heard back," he said, noting the fact that Phase 1 human trials were already underway may have helped.

Still, Kobinger urgently shipped off some doses to Montana so Feldmann could test the vaccine in primates to ensure the change had not affected the vaccine's efficacy. It had not.

Merck map Ebola

COURTESY MERCK

As researchers who conducted the Phase 1 and Phase 2 trials crunched their data, others were planning pivotal Phase 3s. The earlier trials were to determine if the vaccine was safe to administer; the Phase 3s would tell the world if it actually worked.

The NIH had reached an agreement with Liberia to test both the GSK vaccine and the VSV vaccine that Merck had acquired. Scientists from the Centers for Disease Control and Prevention were to test the vaccines in Sierra Leone.

The government in Guinea was also keen to host a trial. But the country's health infrastructure was weaker than those of its neighbors, making it a more challenging place in which to conduct a study. When no other group stepped forward, the WHO announced it would conduct a trial there, with help from MSF.

The plan was to use an approach known as ring vaccination. People who had had direct contact with anyone infected with Ebola were to be vaccinated, as were their contacts. The goal would be to both protect people in the virus's path and to block it from spreading.

In place of a placebo control, the rings were randomly assigned to either immediate vaccination, or vaccination after a 21-day delay. If there were more cases among the people in the rings that were vaccinated after the delay, the vaccine was working.

The approach was distinct from the one used in classical trials, in which participants are randomly selected to get either an intervention or a placebo, with neither the researchers nor the participants aware of which was administered.

To proponents, ring vaccination, a type of adaptive trial design, was the most feasible approach. Not everyone would agree.

WHO Ebola meeting 2014

WHO Assistant Director-General Marie-Paule Kieny (left); professor Oyewale Tomori from Redeemer's University in Nigeria; and Samba Sow, director-general of the Center for Vaccine Development in Mali, discuss the outcome of a WHO-led expert meeting on fast-tracking experimental Ebola vaccines and drugs in September 2014.

FABRICE COFFRINI/AFP VIA GETTY IMAGES

Guinean health professionals made up the bulk of the team that conducted the ring vaccination trial

Dr. Abdourahmane Diallo, a public health physician who works for Guinea's health ministry, was one of those who answered the WHO's appeal for help. He recalled that his colleagues were excited at the prospect of taking part in the study. "The only thing in our mind was that we wanted to assess if the vaccine worked or not because we wanted to contribute if possible to find a solution," Diallo told STAT via email

There were hints that it was working, he remembered. Others agreed. Neighborhoods where transmission had been intractable stopped producing cases after vaccination occurred. "But that's not proof, of course," said Kieny of the WHO. "That's just a feeling."

In June, however, the trial's data and safety monitoring board concluded there were not likely to be enough additional cases to change the outcome of the study. The vaccine had worked.

From 10 days after vaccination — the time needed for the immune system to respond to the vaccine — there were no cases among people who had been

vaccinated in the early rings, but there were cases among the delayed vaccination rings.

The data and safety monitoring board recommended that health workers vaccinate anyone who had come in contact with people infected with Ebola as quickly as they could be found, rather than delaying some vaccinations.

On July 31, 2015, less than a year after the Canadian government donated the vaccine, the findings of the trial were published by the journal The Lancet. In less than 12 months, 12 clinical trials running the gamut from a "first in man" dosing study to a Phase 3 efficacy trial had been conducted. "That has never happened," said Feinberg, who is now CEO of the International AIDS Vaccine Initiative.

In an editorial, The Lancet called the trial "a remarkable scientific and logistical achievement."

"That such a trial was even possible is a testament not only to the skill of the research teams but also to the commitment of communities to defeating an epidemic that has devastated their nation," the journal's editors wrote. "Before this work, no clinical trial on this scale had ever been performed in the country."

The Guinea vaccine trial — the trial that almost hadn't happened — was the only one to reach a conclusion. The trials in Sierra Leone and Liberia ended without having enrolled enough patients to do so

A woman gets vaccinated at a health center in Conakry in March 2015 during the Guinea clinical trial of the rVSV-EBOV vaccine.

CELLOU BINANI/AFP VIA GETTY IMAGES

2019 Ebola vaccine in Beni

A girl receives the Ebola vaccine in Beni, DRC, in July 2019.

JEROME DELAY/AP

Despite the success, the study produced a backlash that was almost instantaneous in some quarters.

While everyone wanted an effective Ebola vaccine, there was heated debate over whether adaptive design studies were sufficient to prove that the Merck vaccine met that threshold. The detractors were vocal.

"It was ugly, frankly. It was ugly," Kieny said. "I thought everybody would be happy to say: 'This is great.' But actually, this is when the bashing started. 'This is not a study.' … 'Only a randomized controlled trial.' The campaign against these results was flabbergasting."

Both the findings and the approach were critiqued — and to this day are challenged by some experts. In the spring of 2017, the National Academy of Sciences issued a report on conducting research during disease outbreaks that called into question the way the trial was conducted and its findings.

"We concur that, taken together, the results suggest that the vaccine most likely provides some protection to recipients — possibly 'substantial protection,' as stated in the preliminary report," the authors wrote. "However, we remain uncertain about the magnitude of its efficacy, which could in reality be quite low or even zero, as the confidence limits around the unbiased estimate include zero."

In the trial, the vaccine had been found to be 100% effective. But the number of people enrolled was limited, and no vaccine works every single time. Still, the results were strong enough to convince Merck to push forward with the vaccine.

It did so with support from BARDA, which began funding rVSV-ZEBOV during the West African outbreak. The agency's director, Rick Bright, estimated that it has spent about $175 million supporting production of vaccine and validation of Merck's production facility for the vaccine in Germany.

When Ebola broke out in Equateur province in the Democratic Republic of the Congo in the spring of 2018, the country agreed to use the vaccine under a "compassionate use" protocol — similar to the protocol used in a clinical trial when there is no approved therapy. Vaccination began again in the country in the current outbreak, this time eight days after it was declared. Since then more than 260,000 people have been vaccinated.

"I'm really proud of that," Rose said of the role played by the vaccine. "We worked night and day … trying to get VSV to work and finally got it to work."

On Nov. 11, 2019, Ervebo was approved by the European Commission, the first time it had been licensed by any regulatory agency. On Dec. 21, the FDA approved the vaccine in the United States.

Beth-Ann Coller, who has been the project lead at Merck — another unsung hero of the vaccine, said Kobinger — choked up a little describing her reaction to the approval of the vaccine. "We are thrilled and we are proud," she said.

Kieny waxed a bit philosophical about the unlikely success of rVSV-ZEBOV.

"You know, when things go really wrong, quite often it's a succession of little issues in which none by themselves could have derailed the train. And sometimes for something good to happen it's the same," she said. "It's just bringing together a number of discrete actions and discrete facts, which each alone would not have made it. But everything together makes it a success."

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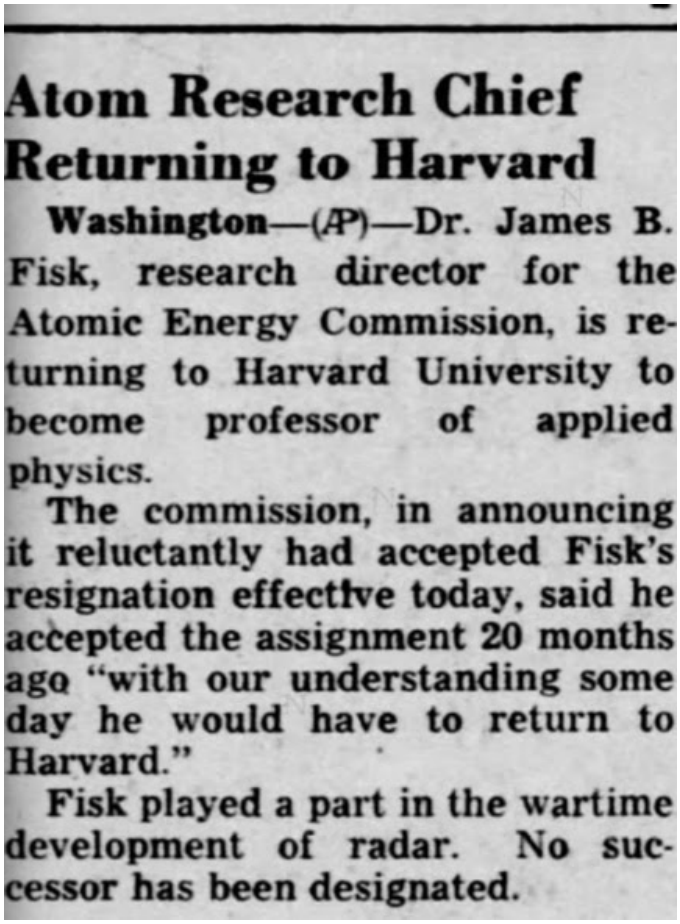
Dr James Brown Fisk



Atom Research Chief Returning to Harvard

Washington—(AP)—Dr. James B. Fisk, research director for the Atomic Energy Commission, is returning to Harvard University to become professor of applied physics.

The commission, in announcing it reluctantly had accepted Fisk's resignation effective today, said he accepted the assignment 20 months ago "with our understanding some day he would have to return to Harvard."

Fisk played a part in the wartime development of radar. No successor has been designated.

https://www.newspapers.com/image/221330299/?terms=rodney%2Bfisk%2Buranium

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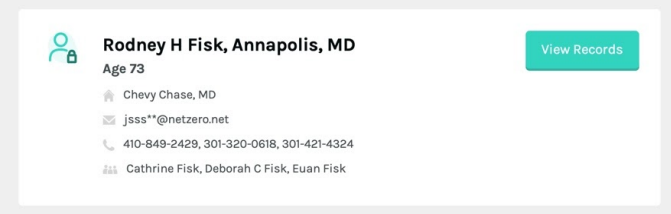
Housatonic

Rodney Harald Fisk (born 1945)



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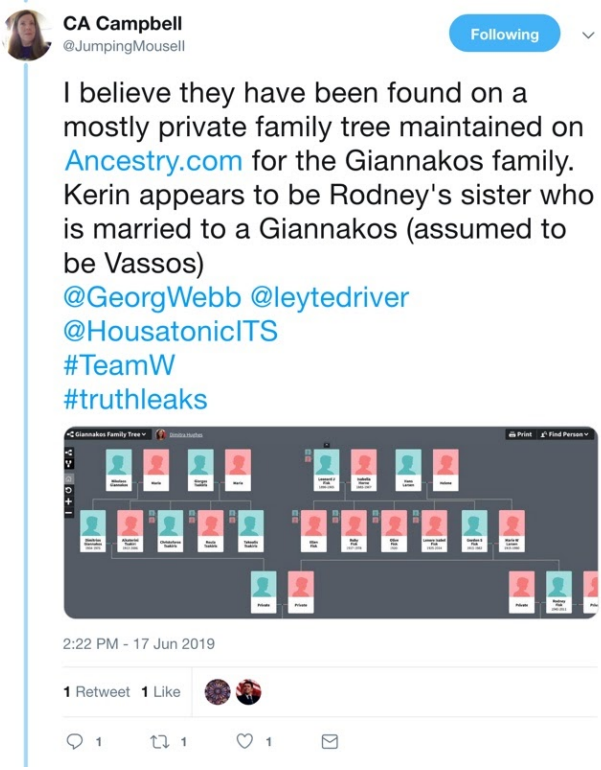
Family Tree



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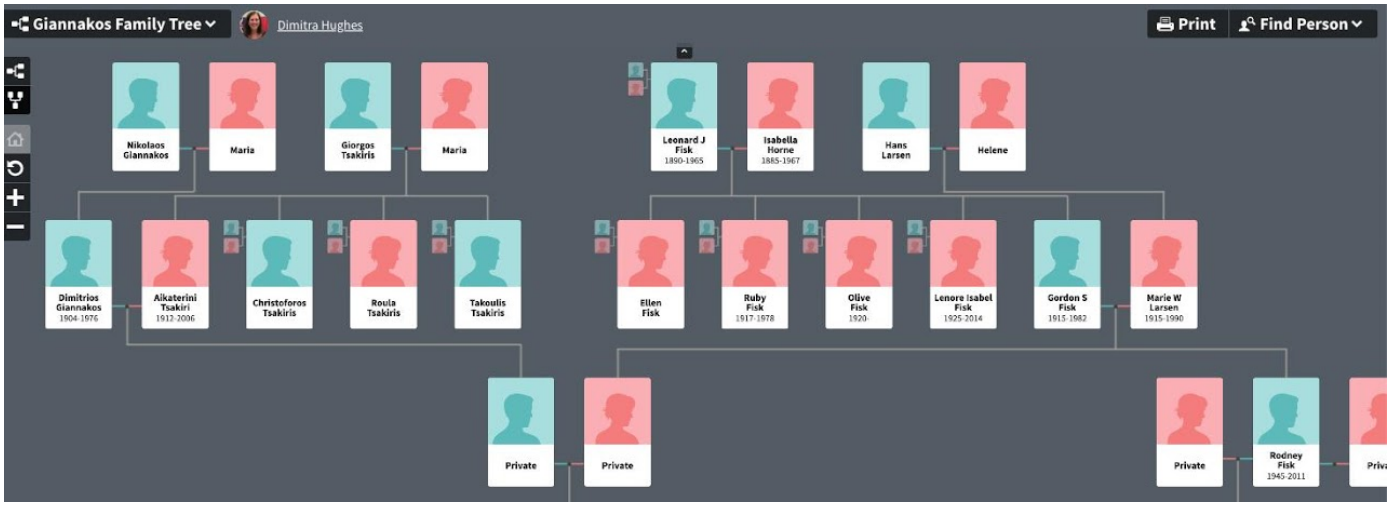


[HT0046][GDrive]

1945 (December 18) - Rodney Harald Fisk born

See [HL002M][GDrive]

1962 - Graduation from SELBORNE COLLEGE

See 🌐Selborne College *"**Selborne College** is a semi-private, male-only school in 🌐East London, 🌐South Africa; it is one of few colleges in the 🌐Eastern Cape."*

Address - P O Box 11194 SOUTHERNWOOD EAST LONDON, South Africa

NOTE that this grades 8–12 , which is more like a "high school" in the United States. Hence, this is why Rodney H Fisk is graduating from a "college" at age 17.

SOURCES : [HE001L][GDrive]

Selborne College - Class of '62 Reunion

CLASS OF 1962

CLASS 10a

Back: M. Eales P. Gunning H. Blumenthal R. Fisk I. Wilson V. Miller G. Preston-Thomas
Middle: K. Blann R. Segal D. Woods C. Geyer J. Hellmann M. Blumberg D. Edward
Front: H. Zimmerman C. Hinde A. Winter R. White J. Wessels Mr. G. Pearson G. Staude T. Hulley
S. Lentin M. Segal C Jefferson
Absent: A. Dallas W. MacDonald

"Late 1960s" - Made a pioneering seed collection trip to Mexico in the late 1960s to secure additional pine genetic material for South Africa

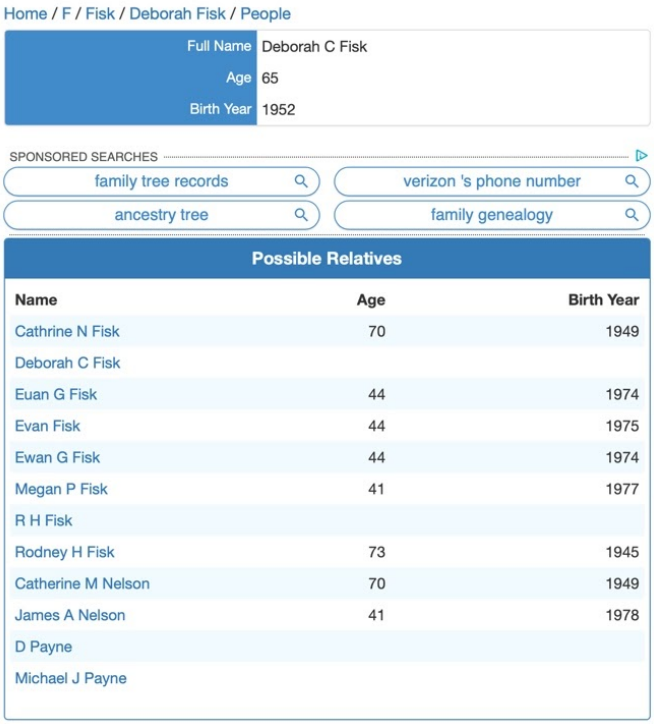
See 2010 report from **Camcore** : [HI0006][GDrive]

"Hennie Coetzee, a leader in promoting plantation forestry in South Africa and long standing friend of Camcore, died suddenly during a consulting visit when in the Sabie region in mid-2010. Hennie had a long career with government forestry organization in the country. With ***Rodney Fisk*** *and Neville Denison, he made a pioneering seed collection trip to Mexico in the late 1960s to secure additional pine genetic material for South Africa. Hennie served as Camcore representative for SAFRI (South African Forestry Research Institute) for several years during the early 1980s and always exhibited a contagious enthusiasm for the Camcore effort. He urged Camcore to expand its seed collection work in Mexico for the benefit of southern Africa; work that was eventually completed by the year 2000. Hennie will most be remembered by his friends for his wonderful sense of humor. In many ways, he was "one of a kind" and will be greatly missed by all those who knew him"*

From a note in passing ([HC000C][GDrive]) , we read "***Mr. Fisk obtained academic qualifications in the natural sciences, which have enabled him to interact with environmental groups*** *from a practical and theoretical perspective, based upon extensive conservation experience.*"

1974 - First child Euan G Fisk born

https://www.familytreenow.com/records/people/fisk/deborah/0ccjaaqr4vnwcapkddcqna



Home / F / Fisk / Deborah Fisk / People

Full Name	Deborah C Fisk
Age	65
Birth Year	1952

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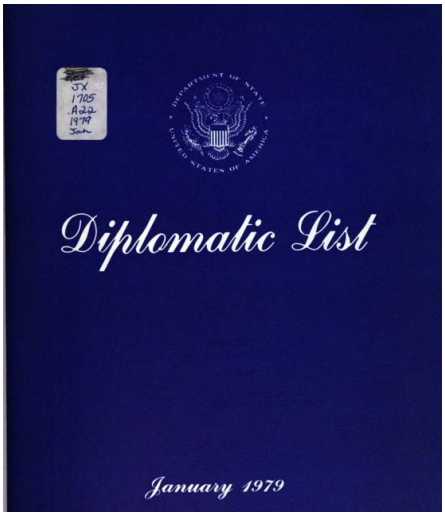
Possible Relatives

Name	Age	Birth Year
Cathrine N Fisk	70	1949
Deborah C Fisk		
Euan G Fisk	44	1974
Evan Fisk	44	1975
Ewan G Fisk	44	1974
Megan P Fisk	41	1977
R H Fisk		
Rodney H Fisk	73	1945
Catherine M Nelson	70	1949
James A Nelson	41	1978
D Payne		
Michael J Payne		

1979 - First year noted as a South African diplomat living in the United States (listed by US State Dept)



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1979-01-usa-state-department-diplomatic-list-pg-cover-clip.jpg /

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Office of the First Secretary (Commercial Affairs)
Suite 1509, 745 Fifth Ave., New York, N.Y. 10022 Tel. (212) 421-2207

SOLOMON ISLANDS—Embassy of the Solomon Islands

National Holiday: July 7.

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Ambassador E. and P. (Resident in Honiara)

SOMALIA—Embassy of the Somali Democratic Republic

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National Holiday: October 21.

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Lieutenant Mohamed Aden JAMA
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SOUTH AFRICA—Embassy of South Africa

Chancery: 3051 Massachusetts Ave., NW. 20008 (232-4400).
Chancery Annex: 2555 M St. NW. 20037 (833-3860 thru 64).
National Holiday: Republic Day, May 31.

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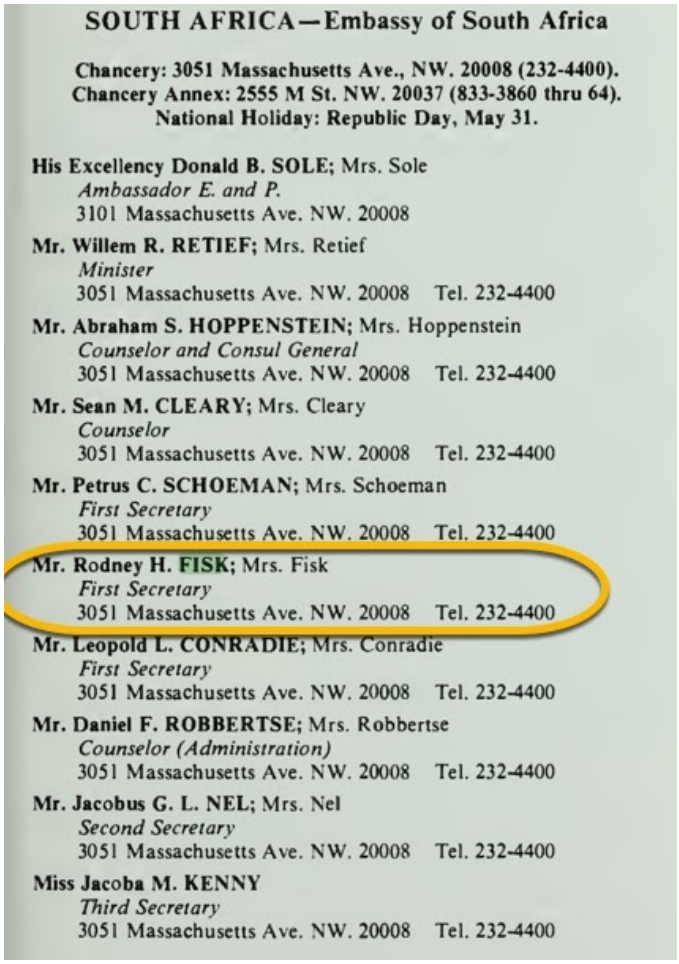
[HG002E][GDrive]

1980 - A South African diplomat living in the United States (listed by US State Department)

"Mrs. Fisk" (wife) is also listed. See 1980 Diplomat List : [HG002C][GDrive]



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[HG002D][GDrive]

1982 (September) - While in Washington DC, visited by South Africans Jan Smith (and wife Esme)

See book : [HB001T][GDrive]

*In **September 1982** while on the way to the W.E.C. in Saville, we stopped over in Washington for four days. While Jan was engaged in talks at the S.A. Embassy, I toured the Kennedy Centre for Performing Arts and by tour mobile visited the Lincoln memorial, Arlington Cemetery, the Smithsonian, the National Art Gallery, the Capitol, the Library of Congress, and the White House. That evening we had dinner at **Rod Fisk's (of the S.A. Embassy) home in Maryland**. Next day I again enjoyed art exhibitions and the Museum of National History. The S.A. ambassador Brandt Fourie and his wife Daphne invited us to dinner the night before we flew to Paris. Beautiful dried bougainvilla arrangement on the dinner table.*

1983 (August) - Again visited by South Africans Jan Smith (and wife Esme)

See book : [HB001T][GDrive]

*On the 31st of August we flew to Washington and had a lovely surprise to be met at the airport by Andre and Heila. During the next few days I accompanied Andre and Heila in their Dodge camper to the various memorials, museums and sights while Jan was busy with nuclear matters. On the Saturday afternoon the **Fisk family** took Joan and Grant Park, Andre, Heila, Jan and I to a fun supper of fresh crabs in Annapolis, 40 Miles away from Chesapeake Bay.*

- Esme (du Preez) - 30 April 1922
- Keetmanshoop South West Africa
- married to Jan ("Jannie") Hendrik Smith (https://www.geni.com/people/Jannie-Smith/6000000009822053260) (June 06 1923 to Oct 04 2006)
- Germiston, East Rand, Gauteng, South Africa

WHo was "Jan Smith" ?

From 2006 book ***"Uranium Road: Questioning South Africa's Nuclear Direction"*** .. it would appear that as of 1984, **Jan Smith** was the chairman of ESCOM .

What is ESCOM ?

"The utility is the largest producer of electricity in Africa" See Wikipedia : https://en.wikipedia.org/wiki/Eskom . "**Eskom** is a South African electricity public utility, established in 1923 as the **Electricity Supply Commission (ESCOM)** and also known by its Afrikaans name **Elektrisiteitsvoorsieningskommissie (EVKOM),** by the government of the Union of South Africa in terms of the Electricity Act (1922). Eskom represents South Africa in the Southern African Power Pool."

In the 1970s, "Jan Smith" was the CEO of ESCOM. THis means that in 1982 and 1983, "Rodney Fisk" was in Washington DC as a diplomat representing South Africa, meeting with the CEO / ex-CEO of ESCOM ("Jan Smith"), to discuss "nuclear matters"

See December 14 2014 issue of the "Sunday Times"

Thirty years of mistakes at Eskom

Once, supply outstripped demand

Sunday Times 14 Dec 2014 Terry Mackenzie-Hoy Mackenzie-Hoy is a consulting engineer in private practice

GO SLOW: Construction on Eskom's Medupi power station started in 2007. Eighteen months behind schedule, it will produce its first power next year

IN the last days of 1979, a fault occurred at an Electricity Supply Commission (now Eskom) power station. A local substation circuit breaker tripped. Due to a miscalculation, however, the circuit breaker was not set correctly and further circuit breakers tripped.

In turn, these caused further trips until 76 circuit breakers had tripped, interrupting the flow of current in many of Eskom's main power lines.

Thirty-five minutes after the initial fault, the only power station still connected to the grid was Wilge, the main power supply for Iscor. But Iscor's steelworks had tripped due to underfrequency. With the steel freezing in the furnaces, Iscor reclosed the circuit breakers onto the Eskom grid. Overloaded, Wilge shut down.

Apart from some municipal power stations, the whole Eskom system was down. Lacking remote control facilities and communicating via landlines, Eskom staff worked over the next 36 hours to restore power.

A failure of this magnitude had never occurred. During the 1970s, then-Eskom CEO Jan Smith and Eskom planners calculated that generating capacity had to double every 10 years. Besides Lethabo and Tutuka power stations, which were already under construction, new facilities Matimba, Kendal and Majuba were brought into the mix. Other construction included four more power stations, a nuclear power station and a pumped storage scheme. The construction had to be financed by raising electricity tariffs, in 1976 (twice), 1977 and again in 1981.

Eskom was deeply unpopular, but its engineers had little time for politics. The government was pushed to act. The De Villiers commission was set up to investigate, the net outcome of which was to retire Smith in 1985. Ian McRae replaced him.

At this time a seemingly small event occurred. In 1986, a new department was formed: marketing.

The year before, Eskom had revised down its demand projections and realised that it was building more generation capacity than seemed required. Some of the construction could be deferred. In 1987, Eskom announced that it would continue with construction and mothball or shut down older, less efficient power stations. By 1991 Inhambane, Camden, Grootvlei and Komati, and two others, a total of 5 000 megawatts, had been mothballed. Nobody in 1985 foresaw the new South Africa.

Future demand looked set to grow slowly. In 1990, there was widespread unrest. The reserve margin of demand over available capacity soared to 38%. The prudent approach would have been to sit it out until the demand rose. But then the marketing people went to work.

They offered municipalities cut-price rates, provided municipalities shut down their own power stations. Oil refineries were incentivised to use electrical motors and "off-peak" tariffs were offered to people who could use power out of normal working hours. Farmers, who had for years used diesel generators, signed up to become connected to the grid.

The marketing department was not quite done. It noted that there was an aluminium smelter in Richards Bay, the Bayside smelter. Could one make another smelter, bigger, which would suck up power from Eskom? A consortium created the Hillside aluminium smelter that would use about 1 000MW of power.

By 1998, Eskom had shed 3 850MW by closing power stations and had committed itself to supply 1 000MW for Hillside and a further 1 000MW for Mozal. That's 5 850MW. Majuba was coming online, but its 3 843MW was still about 2 000MW short of what Eskom had shut down or committed to. Still the marketing department was not finished. It persuaded in- dustrial steam consumers — SAB and paper mills — to shut down coal boilers and install electrode boilers. The incentive was dirt-cheap power.

So despite Cahora Bassa power with 1 900MW due to come online, and plans for a pump storage scheme at Braamhoek (four times 333MW), with the prospect of demothballing Camden, Komati and Grootvlei power stations, Eskom still needed new power stations.

Even a white paper presented to the cabinet in 1998 did not prompt the government to institute new generation projects. A group of engineers wrote to Eskom and asked what the utility would do for power in 2007, when supply ran out. The letter was never acknowledged.

It was clear Eskom would run out of power in 2007. Nobody in the elec- trical engineering fraternity thought that Eskom or the government would wait until the system crashed. But in 2005 blackouts began.

Eskom quickly announced the construction of new power stations Medupi, which began in 2007, and Kusile. The ANC owned 25% of the chosen boiler supplier, Hitachi. Welding on the boilers failed tests. The boiler software failed acceptance tests and the construction fell behind. Finally, boiler construction and software were subcontracted. Eighteen months behind schedule, Medupi will produce its first power in a few months; it will take three years to reach capacity of 4 800MW.

Renewable energy projects set up by the government now provide about 3 922MW. But no renewable scheme can operate 24 hours, so it has a limited effect. For peak demand, two gas turbine stations were installed in 2008, which consume very high levels of gasified diesel.

The future power supply can be solved by coal or nuclear power stations coupled with hydro pump stor-

> Power supply can be solved by coal or nuclear power stations

Age schemes. There are coal reserves of 53 billion tons, enough for 200 years of consumption at present rates. The existing open-cycle gas turbines should be supplemented with gas turbines burning heavy fuel oil, of which there is abundant supply. Coal supply mines should be responsible for delivery to ensure that the coal is actually delivered and on time. Gas imports from Mozambique should be accelerated.

In the immediate short term, a system such as that used in France in the '80s should be instituted: consumers choose the option of being load-shed at any time in exchange for a reduced tariff and any consumer who can generate into the grid should be encouraged to do so.

It is hard to predict if, Eskom-wise, this is the end, the beginning of the end or the end of a new beginning. Eskom has made all the mistakes it could possibly make in the past 30 years. There is no reason to continue to make more.

Write a comment...

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Dec 11 1989 - Rod Fisk is actively Vice-President of Edlow International Corp.

Read more about **Edlow International Company** .

Full page of this source in the newspaper : [HN00LD][GDrive]

US to ship bomb-grade uranium to Romania

1989-12-11-the-guardian-pg-20

Alan George

THE US is planning to ship bomb-grade uranium to Romania despite fears that it may be working on a nuclear weapons programme.

The shipment of 16.48 kilograms of 93 per cent enriched uranium is destined for a 14-megawatt research reactor at Potesti, which was supplied by the California-based General Atomics company in the 1970s. The material, manufactured by General Atomics about 10 years ago, has been in storage with the Department of Energy (DOE).

The US provided 38.7 kilograms of enriched uranium for Potesti in 1978. This is now spent and the new consignment is needed to keep the reactor running. Romania's State Committee for Nuclear Energy approached the DOE and the US Nuclear Regulatory Commission (NRC) for the new supplies early last year. An export licence was issued in August last year, and this has now been extended until August 31, 1990.

Washington's nuclear collaboration with Romania dates from the 1970s, when the West was vigorously encouraging President Nicolae Ceausescu to pursue policies independent of the Soviet Union.

At the same time, Britain concluded a series of major contracts with Bucharest, including a deal for the supply of Rolls Royce engines for a locally-produced fighter aircraft.

Although Romania is a signatory to the Nuclear Non-Proliferation Treaty, Mr Ceausescu boasted earlier this year that his country had the capacity to produce nuclear weapons. Last summer, Romania reportedly warned neighbouring Hungary it was working on nuclear weapons and a ballistic missile system.

Engineers on Iraq's Condor-2 ballistic missile programme claim to have worked on a similar project in Romania.

Whatever Romania's military aspirations, Bucharest certainly has a record of carelessness with nuclear materials. In 1986, Norway supplied Romania with 12.5 tons of heavy water, on the strict understanding that it would not be re-sold. But Romania transferred the water either to Israel or India, prompting a formal protest from Oslo in May last year.

The US uranium shipment is being arranged by a Washington-based nuclear fuel management company, Edlow Inc. Its International Vice-President, Mr Rod Fisk, asked whether the company was concerned over how the uranium might be used, said: "That's a question you have to address to the US Government."

[HN00LE][GDrive]

1994 - Telephone Conversation, used for the book

See the book "Bridled Ambition: Why Countries Constrain Their Nuclear Capabilities" By Mitchell Reiss ([HB001W][GDrive])

tended consequences of international isolation; the lessons of Pretoria's nuclear program for would-be proliferators; the influence of U.S. diplomacy; and the usefulness of nuclear weapons.

South Africa's international isolation influenced every element of its nuclear program. This ostracism intensified the government's laager mentality, which played a large part in the initial decision to develop nuclear weapons. At the same time, this isolation reinforced senior officials' parochial worldview, which inevitably influenced nuclear decision making. Few leaders had traveled extensively outside of the country and fewer still beyond southern Africa to Europe or the United States. The bureaucracy shared and reinforced these views. The Foreign Ministry, which might have been expected to add a more cosmopolitan understanding to government decisions, was not consulted on the decision to either initiate or terminate the nuclear weapons program.

This air of unreality was demonstrated most noticeably by the country's nuclear strategy, which was less a rigorous strategy than wishful thinking. As one senior government official remarked, "It now seems like building castles in the air to think that the nuclear strategy would have worked as planned."[109]

This strategy reflected a seat-of-the-pants approach to security issues, an approach that ultimately rested on assumptions that went not only unchallenged but wholly unexamined. The ostensible security rationale for the nuclear weapons program was the threat of "total onslaught" confronting the country in the mid-1970s. Yet the former chief of South African military intelligence during this period, General H. D. E. V. du Toit, discounted this danger: "I don't think we ever thought it was feasible for anyone to attack us from the north." As for the Soviet threat, he said, "The Communist bogey was set up at every stage—but we had no one in the military who read, spoke, or studied Russian." It was "silly to set the Soviets up as the force behind the total onslaught."[110] The Foreign Ministry also lacked any Soviet expertise. Further, as part of the peculiar ad hoc decision-making process that seemed the norm rather than the exception in the South African government, communication and policy coordination among government departments and ministries were sporadic at best.[111] Until 1985, the military did not even have a policy planning staff.

The success of South Africa's nuclear strategy depended on Pretoria's ability to manipulate Washington's behavior—to compel the United States to intervene politically or militarily on Pretoria's behalf. Yet relations were so strained between the two countries that it is impossible to believe that any American administration would have

[HB001X][GDrive]

Magnus Malan, then chief of South Africa's defense force, was not in South Africa or at least at the test observation point during such an important event; he was reported to be touring South America at the time. See *The 22 September 1979 Event*, p. 8.

[107]David Fischer, personal correspondence, April 25, 1994.

[108]SABC TV 1 Network interview with Waldo Stumpf and Pik Botha, p. 5.

[109]Shearer, personal interview, Pretoria, May 25, 1993.

[110]General H. D. E. V. du Toit, personal interview, Pretoria, May 24, 1993.

[111]The chief interdepartmental mechanism was the State Security Council (SCC), which met infrequently. Telephone conversation with Rod Fisk, April 1994. Fisk served in the South African Foreign Ministry with responsibility for nuclear matters. For an understanding of how the SCC operated, as well as other aspects of South Africa's foreign policy decision making, see Deon Geldenhuys, *The Diplomacy of Isolation: South African Foreign Policy Making* (Johannesburg: Macmillan, 1984).

[112]David Fischer, "South Africa," in Mitchell Reiss and Robert S. Litwak, eds., *Nuclear Proliferation after the Cold War* (Washington, D.C.: Woodrow Wilson Center Press, 1994), p. 216.

[113]Newby-Fraser, *Chain Reaction*, pp. 101–2.

[114]Du Toit, personal interview, Pretoria, May 24, 1993.

[115]De Villiers and Stumpf joint interview. Of course, it could also have turned out to be seven, which was the number of devices Pretoria had originally selected for its nuclear stockpile but did not have time to manufacture.

[116]The nuclear programs of these three countries are examined in Reiss and Litwak, *Nuclear Proliferation after the Cold War*, in the chapters by Brahma Chellaney (India), Ali T. Sheikh (Pakistan), and Shai Feldman (Israel).

[117]South African officials have claimed that a benefit of nuclear weapons was their cost-effectiveness when compared with the high price of conventional weapons, such as jet fighter aircraft. This argument is far-fetched, since there was no real trade-off. Pretoria could not have acquired modern combat aircraft on the international arms market and could not have itself developed this technology. Moreover, nuclear weapons are traditionally complements to, and not substitutes for, conventional weapons, so it is likely that the nuclear arsenal would have been an *added* defense expenditure if Pretoria could have purchased or acquired jet fighters. On the debit side of the ledger, the nuclear weapons program siphoned off many of the country's most talented scientists and engineers. The loss to South Africa's industrial productivity must be recognized when toting up the benefits and liabilities of the nuclear weapons program.

[118]Presentation at the Carnegie Endowment for International Peace, November 16, 1993.

[119]The term "nuclear myth makers" was coined by Peter R. Lavoy. See Lavoy, "Nuclear Myths and the Causes of Nuclear Proliferation," in Zachary S. Davis and Benjamin Frankel, eds., *The Proliferation Puzzle: Why Nuclear Weapons Spread (and What Results)* (London: Frank Cass, 1993), pp. 192–212.

[120]Donald B. Sole, "South Africa and the Nonproliferation Treaty," *American Review* (1993), p. 5.

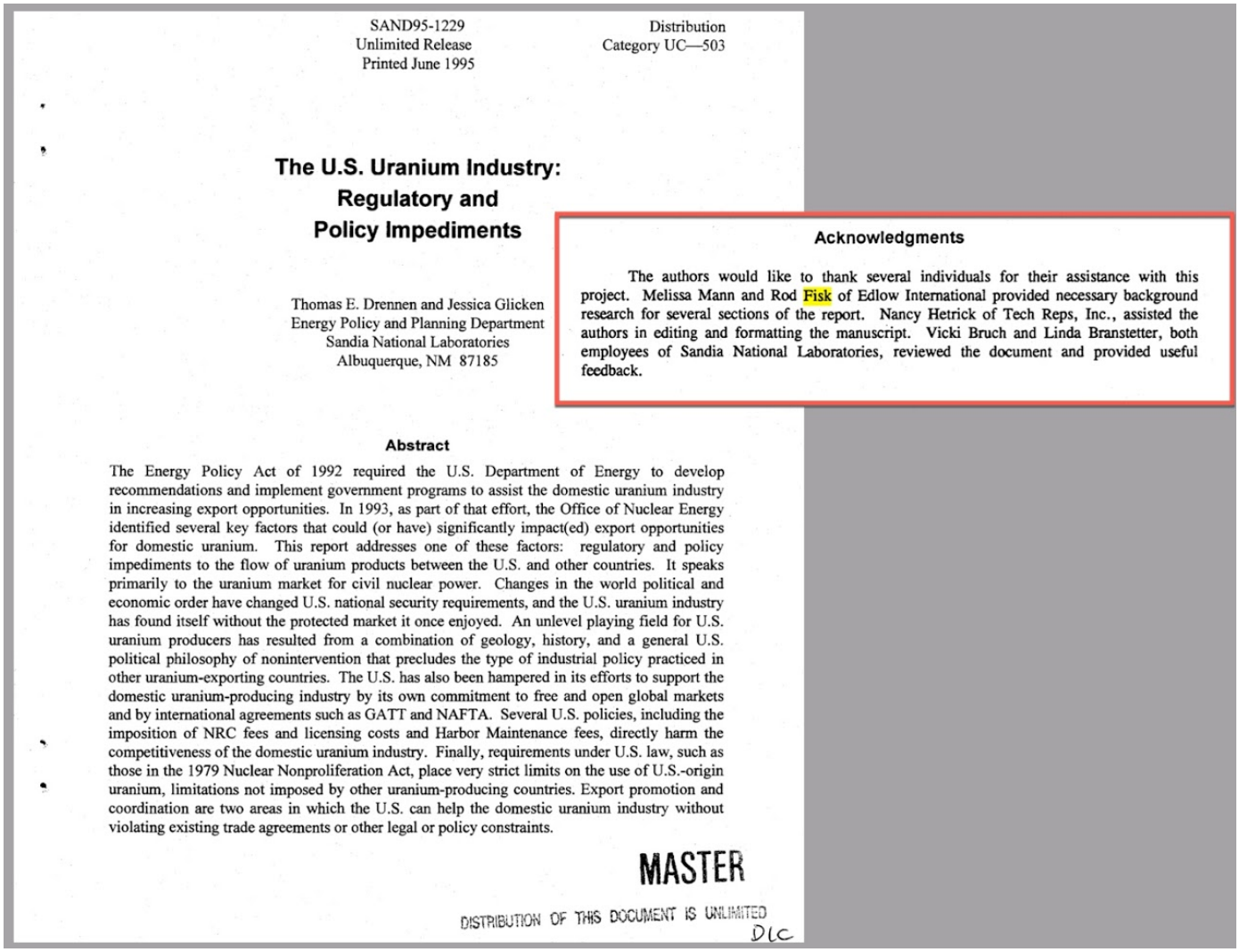
[121]Personal interview, Washington, D.C., July 21, 1993.

[122]Presentation at the Carnegie Endowment for International Peace, November 16, 1993.

1995 - Sandia Labs Report - Major Contributor to "The U.S. Uranium Industry: Regulary and Policy Impediments"

Top contributor along with **Melissa Ann (Colvin) Mann (born 1965)** , where they both represent the **Edlow International Company** as employees .

Full 1995 Report : [HG0025][GDrive]



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The U.S. Uranium Industry: Regulatory and Policy Impediments

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Acknowledgments

The authors would like to thank several individuals for their assistance with this project. Melissa Mann and Rod Fisk of Edlow International provided necessary background research for several sections of the report. Nancy Hetrick of Tech Reps, Inc., assisted the authors in editing and formatting the manuscript. Vicki Bruch and Linda Branstetter, both employees of Sandia National Laboratories, reviewed the document and provided useful feedback.

Abstract

The Energy Policy Act of 1992 required the U.S. Department of Energy to develop recommendations and implement government programs to assist the domestic uranium industry in increasing export opportunities. In 1993, as part of that effort, the Office of Nuclear Energy identified several key factors that could (or have) significantly impact(ed) export opportunities for domestic uranium. This report addresses one of these factors: regulatory and policy impediments to the flow of uranium products between the U.S. and other countries. It speaks primarily to the uranium market for civil nuclear power. Changes in the world political and economic order have changed U.S. national security requirements, and the U.S. uranium industry has found itself without the protected market it once enjoyed. An unlevel playing field for U.S. uranium producers has resulted from a combination of geology, history, and a general U.S. political philosophy of nonintervention that precludes the type of industrial policy practiced in other uranium-exporting countries. The U.S. has also been hampered in its efforts to support the domestic uranium-producing industry by its own commitment to free and open global markets and by international agreements such as GATT and NAFTA. Several U.S. policies, including the imposition of NRC fees and licensing costs and Harbor Maintenance fees, directly harm the competitiveness of the domestic uranium industry. Finally, requirements under U.S. law, such as those in the 1979 Nuclear Nonproliferation Act, place very strict limits on the use of U.S.-origin uranium, limitations not imposed by other uranium-producing countries. Export promotion and coordination are two areas in which the U.S. can help the domestic uranium industry without violating existing trade agreements or other legal or policy constraints.

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[HG0026][GDrive]

1998 (Feb) - Becomes Executive VP of Edlow International, Melissa Mann joins as VP

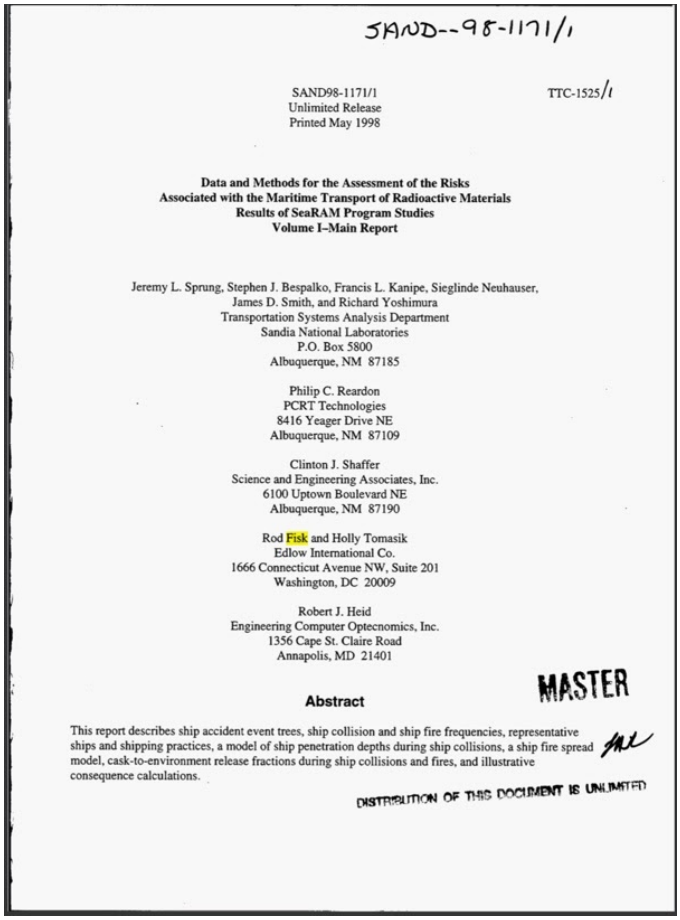
See [HN00LC][GDrive] : "*Edlow International Co. of Washington named **Rodney Fisk** executive vice president and **Melissa Mann** vice president of international.*"

Also - **Melissa Ann (Colvin) Mann (born 1965)** joins as a VP of Edlow International.

1998 (May) - Sandia Labs Report - Contributor

An an employee of **Edlow International Company** , along with colleague **Holly Tomasik** , was a main author / contributor of the report : See ***"Data and Methods for the Assessment of the Risks Associated with the Maritime Transport of Radioactive Materials Results of the SeaRAM Program Studies : Volume 1 : Main Report"*** . See [HG0027][GDrive]

Edlow International Company is listed as being at **1666 Connecticut Avenue NW, Suite 201 Washington, DC 20009** .



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MASTER

Abstract

This report describes ship accident event trees, ship collision and ship fire frequencies, representative ships and shipping practices, a model of ship penetration depths during ship collisions, a ship fire spread model, cask-to-environment release fractions during ship collisions and fires, and illustrative consequence calculations.

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[HG0028][GDrive]

Volume 2 of this report ("Appendices) can be viewed here : [HG0029][GDrive]

1998 (Summer) - Meets next wife "Deborah Payne" / Courts in California

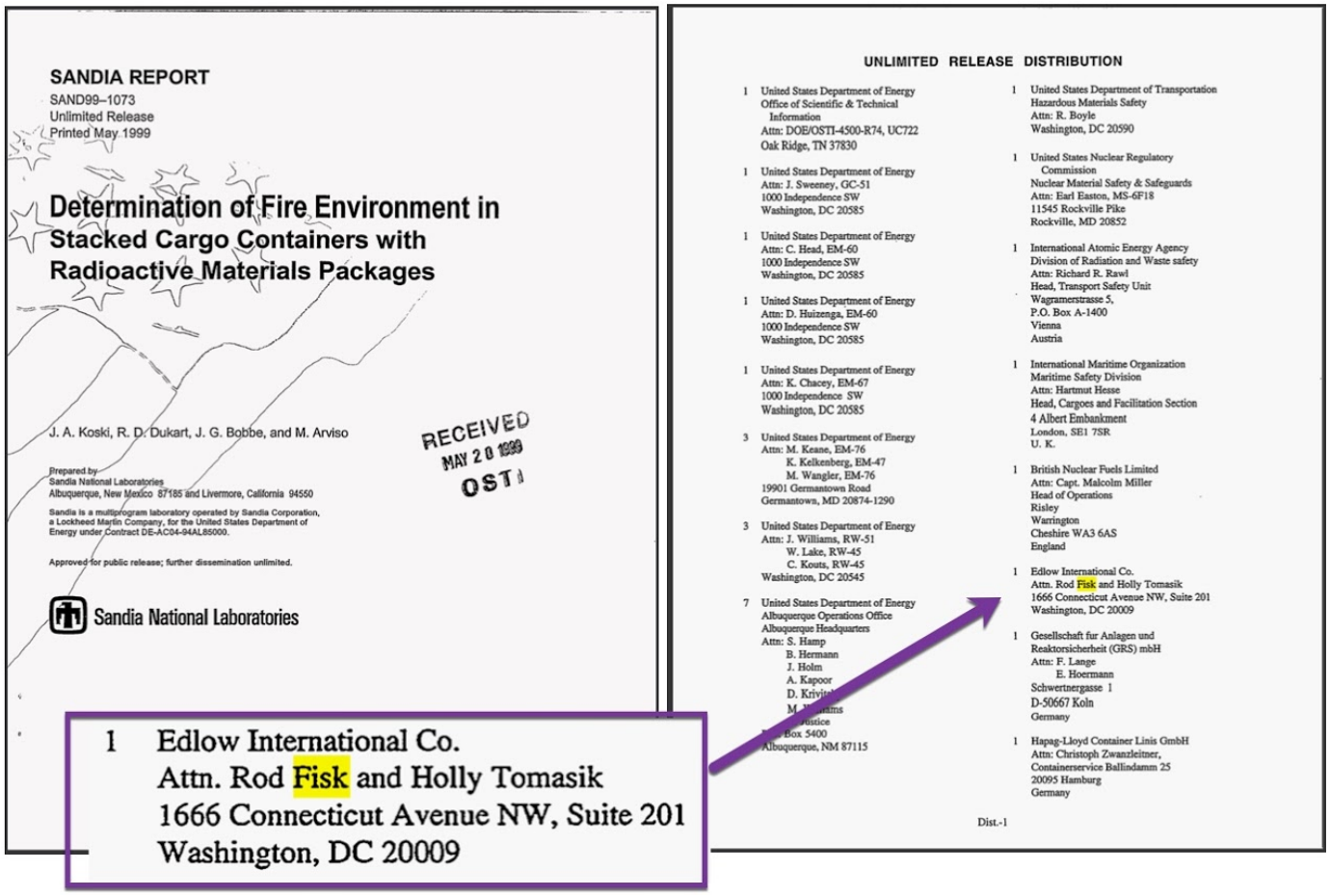
From the 2005 book *"OXFORD WORLD'S CLASSICS - Four Restoration Libertine Plays"*, written by Deborah Payne Fisk (See [HB001V][GDrive]), on page "ix" :

*Finally, I [, **Deborah Payne Fisk**,] want to acknowledge my husband, **Rodney Harald Fisk**, who courted me **that summer of 1998**, when I first began work on the copy texts. His bimonthly trips from Washington, DC, to the West Coast resulted in a romantic outcome more typical of Jane Austen than Sir George Etherege. Then again, we do not necessarily want to live first hand what we study.*

In the summer of 1998, **Rodney Harald Fisk** was making bimonthly trips form Washington, DC to the West Coast. This also means that the "Mrs. Fisk" mentioned earlier was not Deborah Payne.

1999 (May) - Listed for Unlimited Release Distribution in Sandia Labs Report

See [HG002A][GDrive]



SANDIA REPORT
SAND99–1073
Unlimited Release
Printed May 1999

Determination of Fire Environment in Stacked Cargo Containers with Radioactive Materials Packages

J. A. Koski, R. D. Dukart, J. G. Bobbe, and M. Arviso

RECEIVED
MAY 20 1999
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Prepared by
Sandia National Laboratories
Albuquerque, New Mexico 87185 and Livermore, California 94550

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[HG002B][GDrive]

1999 - 2000 - Rod Fisk joins Transport Logistics Inc (TLI), a company that was formed in 1998

See note from Daher-TLI : [HC000C][GDrive]

It is with great sadness that we report the death of ***Mr. Rodney H. Fisk****, former president and CEO of Transport Logistics International.* ***Mr. Fisk joined TLI shortly after it's founding in 1998, and served as CEO until his retirement in late 2009.***

2001 (August) - Rod Fisk (of TLI) comments on US nuclear watchdog has refused to approve containers made by the Nuclear Energy Corporation of SA for transporting hazardous material

See the Aug 2000 Radbull (Radiation Bulletin) : [HP0021][GDrive]

Setback for Nuclear Industry

allAfrica.com: Business Day (Johannesburg)

August 10, 2001

Simon Barber - Washington

US watchdog rejects application that is ridden with inconsistencies

In a major embarrassment and a potential threat to SA's effort to sell revolutionary nuclear technology to the world, the US nuclear watchdog has refused to approve containers made by the Nuclear Energy Corporation of SA for transporting hazardous material.

The rejection by the US Nuclear Regulatory Commission, which one industry source called "spectacular", is a potentially grave embarrassment for SA's otherwise highly regarded nuclear regulator, which licensed the containers for domestic use in 1999.

Observers said SA could ill afford the erosion of the credibility of its nuclear regulator as it would play a key role in vouching for the safety of the revolutionary pebble bed modular reactor that Eskom is developing for export with US and British partners.

The corporation also stands to forfeit much of its investment in the containers unless its differences with regulators are settled.

The containers heavily shielded seven-ton units, technically known as ZA/CNS1006 packages are designed for carrying Cobalt-60 "pencils" whose applications include cancer treatment and the sterilisation of food and medical products.

SA's National Nuclear Regulator rated the package, one of the largest of its kind and a potentially significant source of export revenue, as robust enough to transport pencils producing up to 340000 curies of radiation. But in a May 25 letter to the US transportation department, William Brach of the US commission said the commission would not "validate" SA's approval of the package for use in the US.

This was because the application the SA licence and the design and test data on the basis of which it was granted was ridden with "inconsistencies".

"The package does not appear to have been fabricated in compliance with the drawings submitted . The testing descriptions and results are incomplete or missing, and do not appear to comply with the (International Atomic Energy Agency's) safety criteria," he wrote.

***Rod Fisk**, **CE of Transport Logistics International**, a Washington-based nuclear materials shipping firm, said such rejections were almost unheard of.*

Responding to questions from Business Day, the SA corporation initially denied any connection with the application.

The company said it had supplied the containers to an organisation, which it declined to identify, "involved in the supply of Cobalt-60 pencil sources to the gamma irradiation industry. Under the terms (of the contract), the responsibility

for licensing the container in countries other than SA is that of the customer or end user."

It has been established the customer was Reviss, a UK-based company that markets Cobalt-60, and other radionuclides produced in Russian power reactors, to the US and elsewhere.

David Rogers, the Reviss official who handled the licence application, denied his firm was to blame for the rejection. "As far as the paperwork goes, we acted as little more than the postman. We presented the (corporation's) safety case to (the US authorities) with a covering letter."

The corporation said Nuclear Technology Products, a division of the corporation's commercial group, Pelindaba Technology, began making containers "out of the strategic necessity to control the distribution of radioactive products it produces at Pelindaba and which are exported widely".

"There is a growing export market, and transport containers capable of carrying large quantities of Cobalt-60 are essential."

The corporation declined to provide figures, saying only that the containers were a "small but significant part of Nuclear Technology Products' portfolio".

If its customer did not have alternative containers for shipments, "the financial and business credibility implications would be grave. Reliable and timeous supplies are watchwords in the radio-isotope business."

2003 (July) - News article in Baltimore Sun

Full Page : [HN00LM][GDrive]

ALGERINA PERNA : SUN STAFF PHOT

A worker at Rukert Terminals guides empty cylinders used to transport natural uranium hexaflouride during unloading from the TLI Aquila. The ship's two 80-ton cranes lifted the containers out of the hold and onto trucks

NUCLEAR FUEL AT SEA

Daily radiation readings and security drills are routine aboard the TLI Aquila, a ship that carries uranium from country to country.

By PAUL ADAMS
SUN STAFF

STANDING on the bridge of the *TLI Aquila*, Capt. Adelbert Hansen reaches into his faded shirt pocket and pulls out a small dosimeter, a pen-light-shaped device every crew member carries to monitor their exposure to radiation from the ship's uranium-laden cargo.

Pointed toward the Baltimore skyline, the device gives a reading of less than one microsievert — a standard unit of measure that represents a tiny fraction of the level considered safe by government standards.

"See, I don't worry," Hansen said, referring to the 48-inch diameter cylinders filled with uranium that the ship specializes in transporting. "I like this ship. It's a little ship, but it's fast. It's fast."

Daily dosimeter readings are just one of the standard precautions taken aboard the 330-foot *Aquila*, a blue-hulled freighter that crisscrosses the Atlantic, taking multimillion-dollar shipments of uranium from one refining facility to another before it is finally ready to be consumed as fuel in a nuclear power plant. With its proximity to nuclear customers in the Midwest, Baltimore is a regular port of call.

The daily attention to safety aboard the *Aquila* is a reminder that the ship's cargo is not ordinary. Regulations govern everything from crew selection to how the cargo is packaged and loaded to ensure against a nuclear accident. And with the world on high alert for terrorists, security around hazardous cargo is a top priority.

TLI AQUILA

The freighter, which docks at Baltimore (above) and hauls uranium across the Atlantic, features a double-lined hull and redundant electrical and fire-suppression systems. Other details:

Length	330 feet	Crew complement	13, mostly Russian
Cruising speed	15 knots	Special equipment	Six radiation detectors, hazardous materials suits
Carrying capacity	4,700 metric tons		
Cargo space	6,800 cubic meters		

"Because we're talking about inherently dangerous materials, it is probably the most highly regulated form of transportation in the world," said Lorne Green, secretary general of the World Nuclear Transport Institute, an industry trade group based in London. "It's like playing the piano — it looks easy until you try it yourself."

The ship's Maryland operator, Transportation Logistics International, is one of a handful of companies in the world that specialize in the politically charged, bureaucratic work of trans- [*See Uranium, 4D*]

[HN00LN][GDrive]

"Because we're talking about inherently dangerous materials, it is probably the most highly regulated form of transportation in the world. It's like playing the piano — it looks easy until you try it yourself."

Lorne Green, *secretary general of the World Nuclear Transport Institute*

Nuclear fuel a dangerous cargo at sea

[*Uranium, from Page 1D*]

porting radioactive material.

"It's a job that takes many years of both formal and informal on-the-job training," said Rodney H. Fisk, Transportation Logistics' chief executive and a former South African diplomat. "For most people, once you get into this field, you stay in it. It's not a transitory job at all."

A self-described conservative businessman with an accent that reflects his Cape Town roots, Fisk's job is to communicate with regulators and Cabinet-level officials in overseas governments. That task has taken on added urgency as the International Atomic Energy Agency, International Maritime Organization and various government agencies here and abroad study ways to improve the security of hazardous cargo in the wake of the Sept. 11, 2001, attacks.

Those moves dovetail with the Department of Homeland Security's efforts to improve security at U.S. seaports. Coast Guard and Customs officials have stepped up inspections of ships and cargo, and ports have spent millions installing new surveillance systems, fencing and other security measures.

Though the uranium Transportation Logistics transports is

SUN STAFF

Montgomery County and a small number of agents in offices overseas. Its five founding partners own 60 percent of the company, while the other 40 percent is held by a German affiliate, Nuclear Cargo Service. Customers include uranium mines, refining facilities and power plants.

The company doesn't disclose its revenue, but industry experts said nuclear transportation is a niche that commands premium rates because of the high value of the cargo and the expertise involved.

"It's not a big market, so there aren't a whole lot of players," said Felix Killar, director of fuel supply and material licensees for the Nuclear Energy Institute. "But [Transportation Logistics] is one of the players."

ALGERINA PERNA : SUN STAFF PHOTOS

Mark T. Lambert, president of Transportation Logistics International's shipping subsidiary, and Melissa Colvin Mann, a partner in Transportation Logistics, visit the bridge of the TLI Aquila while the uranium-hauling ship is docked at Rukert Terminals in Canton.

The nuclear marketplace

Uranium moves across borders and oceans before it is ready to be used in nuclear power plants. A look at countries that use nuclear power and where uranium is processed across the globe.

Electricity generated by nuclear energy

ber's cumulative dose of radiation is recorded in a log kept on the bridge. Recent readings show the crew is receiving a radiation dose only slightly above natural background levels.

Before crew members can work on the ship, background checks are conducted by both the company and an outside contractor. Each member also must take part in safety drills and be certified to handle haz-

well below weapons-grade, it could still be a potential target. The company says it is "absolutely fastidious" about following the volumes of international and domestic regulations designed to keep the cargo safe and out of unauthorized hands.

The nuclear transportation industry has a mostly unblemished track record. While vehicle accidents have occurred over the past 40 years, industry experts say, there has never been a deadly radioactive spill or loss recorded during the transport of nuclear materials. Uranium shipments have rolled across the docks in Baltimore for decades with little notice.

Reduced risk

Transportation Logistics won't talk about its security measures other than to say that some procedures change when national alert levels shift from yellow to orange. But the company points to a number of factors that it says reduce the risk that the cargo it carries could ever be diverted for illegal purposes.

The uranium hexafluoride and other materials it transports are extremely dense, making each cylinder so heavy it can't be lifted without a crane or other special equipment. Even if one were stolen, the material would have to undergo considerable processing that requires sophisticated technology to be used in a nuclear bomb.

And since it emits a relatively low level of radiation compared with other radioactive materials, it would have limited value as a "dirty bomb," which uses conventional explosives to spread radioactive materials over a wide area, Fisk said.

"I think ... they would look for something that's far more potent and dangerous," he said.

No firm statistics are available on the annual number of uranium shipments. But the global nature of the industry makes transportation a critical component in the nuclear fuel cycle.

It begins when uranium ore is mined in Canada, Russia, Australia and other uranium-rich countries. From there, it undergoes about a half-dozen steps in the refining process until the concentration of U-235 isotopes reaches nearly 5 percent, making it suitable for use as nuclear fuel. For economic and competitive reasons, each of the refining steps might take place in a different country.

"There's material that might originate out of the ground as ore in Canada, go to Europe to be partially processed, come to the U.S. to be processed further, then go back to Europe and finally end up in Japan," said Melissa Colvin Mann, a Transportation Logistics partner with a background in nuclear nonproliferation and international relations. "So there's a constant flow of material."

Formed in 1998, the company has 13 employees in a suburban office park in Burtonsville in

The company's biggest coup was landing a contract to transport tons of uranium that once armed Soviet nuclear weapons aimed at the United States. Part of a landmark arms-reduction treaty between the United States and Russia, the "Megatons to Megawatts" project involves diluting 90 percent pure weapons-grade uranium into a more benign form so it can be converted into fuel to produce electricity. The material is diluted in Russia before being shipped.

The program is a joint venture between Bethesda-based U.S. Enrichment Corp. and its Russian counterpart, Tenex. The 20-year, $8 billion program has converted the equivalent of about 7,000 warheads, creating enough nuclear fuel to power a city the size of Boston for about 270 years. By the time the program ends in 2013, the equivalent of 20,000 warheads will have been converted into enough fuel to power the entire United States for about two years, U.S. Enrichment officials say.

"It's a dream"

In addition to providing needed jobs for Russian scientists, the purpose of the project is to keep that country's nuclear materials from falling into the hands of terrorists or rogue nations. For Mann, whose training is in nuclear nonproliferation, the U.S. Enrichment contract is the opportunity of a lifetime.

"It's a dream," she said. "It really is a dream."

Since the *Aquila* doesn't call at Russian ports, Transportation Logistics uses other commercial ships to bring the diluted warhead material, some of which has passed through Baltimore, to the United States.

But the bulk freighter is the only ship in the world that is exclusively chartered to carry so-called "front-end" nuclear material, which consists of fresh uranium from the time it is mined until it is manufactured into fuel rods and delivered to a nuclear power plant. Front-end uranium is considered relatively benign and less controversial compared with back-end material, which consists of highly radioactive spent fuel or nuclear waste.

"It's radioactive, but not terribly so," said William H. Miller, a professor in the nuclear engineering department at the University of Missouri in Columbia. "You can stand right next to the truck and the [radiation level] would not be much elevated above background levels."

It is the movement of back-end fuels that often inspires protests from environmental and anti-nuclear groups. But environmentalists say that doesn't mean that front-end fuels like those aboard the *Aquila* are totally safe.

"I think this whole [uranium transport] industry is one that doesn't have a lot of public scrutiny on it due to the limited resources of the nonprofit community," said Tom Clements, a senior nuclear campaigner for

Nuclear fuel processing

Country	Uranium mining	Conversion	Enrichment	Fuel fabrication	Reprocessing	Vitrification*
United States	●	●	●	●		
Canada	●	●		●		
Mexico				●		
Brazil		●		●		
Argentina	●		●	●		
Portugal	●					
Spain				●		
France	●	●	●	●	●	●
Belgium				●		
Netherlands			●			
Germany			●	●		
Sweden				●		
United Kingdom		●	●	●	●	●
Italy				●	●	
Hungary	●					
Romania	●					
Bulgaria	●					
Ukraine	●					
Slovakia	●					
Niger	●					
Gabon	●					
Namibia	●					
South Africa	●	●	●			
Russia	●	●	●	●	●	
Kazakstan	●					
China	●	●	●	●		
India	●			●	●	
Pakistan	●		●	●		
Japan		●	●	●	●	
South Korea			●			
Taiwan				●		
Australia	●					

*The process of turning spent fuel into glass

Source: Nuclear Energy Institute

SUN STAFF

A small dosimeter that can fit into a hand is carried by all crew members of the TLI Aquila. It monitors exposure to radiation.

global environmental group Greenpeace International. "So a lot of this happens without the proper public oversight, but there's definitely risks."

Company officials point out that the industry frequently goes beyond government safety requirements.

The cylinders that carry uranium are made of five-eighths-inch steel and are built to withstand intense fire, collision and other pressures. The uranium is extremely dense and is not explosive, unlike many other hazardous materials.

If you rammed a truck into one, Fisk said, "You'd have to write off your truck, probably."

The Antigua- and Barbuda-flagged *Aquila*, which calls at Rukert Terminals in Canton, was designed and certified to carry hazardous materials ranging from natural uranium to finished fuel assemblies worth millions of dollars each. Built in 2000, the ship has a double-layered hull, redundant electrical systems and cooling and ventilation equipment that typical commercial vessels don't have. In the event of fire, carbon dioxide tanks will flood the cargo hold, starving the blaze of oxygen while sprinklers douse the flames.

At mealtime, the ship's 13-member crew can look up from their plates in the mess hall and know instantly how much radiation their bodies are absorbing. Six digital dosimeters are mounted on walls throughout the ship, supplementing the devices crew members carry in their pockets.

Each day, the ship's officers take a reading from the six dosimeters and e-mail the data to headquarters. Every crew member must be certified to handle hazardous materials. Because of the added expertise required, the crew gets paid a premium over their regular salary, a company official said.

The training crew members must complete covers a wide range of scenarios, including everything from a broken seal on a uranium cylinder to an attack by pirates or terrorists. Details of each crew member's training are recorded in a three-ring binder.

"We drill at least weekly, but sometimes twice per week," said Chief Mate Oleg Stukalov, a native of St. Petersburg, Russia. Most of the crew is Russian, though the captain is German.

Every time the ship comes to Baltimore it is met by Mark T. Lambert, president of Transportation Logistics' shipping subsidiary, who has a background in military intelligence and international logistics.

When new cargo arrives, he positions the cylinders of uranium in the cargo hold based on complex mathematical equations that take into consideration the radioactivity level of each shipment. Regulations govern how much space must separate the containers to prevent them from interacting and causing a radioactive release.

"When you're handling these materials, you can't just throw them on the vessel any old where," Lambert said.

Multiple certifications

The scrutiny continues once the ship leaves port. The design and construction of the containers used to carry the uranium must be certified by international regulatory agencies and government regulators in every country that the material will travel to. That means that cylinders have to be certified in every country where the ship makes a port call, regardless of whether the uranium ever leaves the vessel.

"This can sometimes take a year to a couple of years to get completed," said Norman Ravenscroft, president of Transportation Logistics.

While in Baltimore recently, the *Aquila* off-loaded empty cylinders used for transporting natural uranium hexafluoride, which from a distance look like giant beer kegs. The crew used the ship's two 80-ton cranes to lift the containers out of the hold and onto trucks, which transported them to a nearby warehouse. Radioactive cargo stays in port only long enough to be transferred to a truck for delivery to customers, usually within one to two days.

Before leaving Baltimore, the ship took on another shipment of radioactive cargo destined for customers in Europe. The company keeps the precise contents and destination secret, for competitive and security reasons.

"We're protecting our customers' financial assets," Fisk said. "You're looking after it because there is an obligation, obviously, that the material is protected and won't fall into unauthorized hands."

[HN00LO][GDrive]

2004 (January 8)

Full page : [HN00LI][GDrive] (Note - a different version of this article is in the Paducah Sun - See the full newspaper page here : [HN016L][GDrive])

Uranium going to Paducah was shipped to wrong site

Officials: Error did not produce security problem

By JAMES MALONE
jmalone@courier-journal.com
The Courier-Journal

BY STEVE DURBIN, THE C-J

PADUCAH, Ky. — The Nuclear Regulatory Commission is investigating the mistaken shipment to North Carolina of six metric tons of blended Russian uranium intended for the Paducah Gaseous Diffusion Plant.

But an NRC spokesman said no safety issue was involved when the uranium consigned to the United States Enrichment Corp., which operates the Paducah plant, went instead to Global Nuclear Fuel LLC, a nuclear fuel fabrication plant in Wilmington, N.C.

"It was received at a facility authorized to take it," said Roger Hannah, an NRC spokesman in Atlanta. The Paducah plant enriches uranium for use as nuclear reactor fuel. Global takes the fuel and shapes it for reactor use.

The Department of Homeland Security, the federal agency that investigates potential terrorism threats and security breaches, would not become involved in the investigation unless criminal intent was suspected, spokesman Ben Quevedo said.

The error occurred when a trucking company, Transport Logistics International, misdirected two similarly numbered loads of uranium from a Virginia dock, said Rod Fisk, the company's chief executive officer. One of the shipments was originally destined for Wilmington, and the second shipment was to go to Paducah, he said.

Fisk said the shipping error was quickly detected and Global was notified that the shipment meant for Paducah also would be coming. Fisk said the trucking company asked that the shipment be held at Wilmington over the Christmas holidays before it was shipped to Paducah.

"It was never lost," Fisk said.

Elizabeth Stuckle, a spokeswoman for USEC, said the uranium was en route from Wilmington to Paducah yesterday. She said the shipment had been held under tight security since it was picked up Dec. 19 in Norfolk, Va. She said the trucking company alerted USEC about the misdirected shipment after the holidays.

USEC is the U.S. agent to buy uranium blended from Russian nuclear warheads.

It has purchased or agreed to purchase almost $7.5 billion worth of the material to be imported and processed into reactor fuel. The weapons-grade uranium is diluted before being shipped to the United States.

The company processes the uranium at the Paducah plant. It is the nation's only commercial facility to enrich uranium.

The incident comes at a time of heightened security against terrorism, and experts have raised concern about the potential to build a "dirty bomb," a conventional explosive that uses low-level nuclear fuel.

Thomas Cochran, a nuclear expert with the Natural Resources Defense Council, said that since the integrity of the shipment was never compromised, it "was not a big deal" but might prove to be an embarrassment.

The uranium from Russia "was received at a facility authorized to take it."

Roger Hannah, a Nuclear Regulatory Commission spokesman

[HN00LJ][GDrive]

2005 (March) - EMail to Rod Krich, RE cost of depleted UF6 and U308 shipment

Source PDF - [HG002J][GDrive]

Krich, Rod M.

ADJUDICATIONS STAFF

From: Rod Fisk [rfisk@tlIusa.com]
Sent: Wednesday, March 23, 2005 2:44 PM
To: rod.krich@exeloncorp.com
Subject: Transportation of Depleted UF6 and U3O8

Good afternoon Rod,

You have requested that I clarify my comments to the effect that variation in the distance that material has to be moved has a minimal effect on the overall transportation costs for transporting depleted uranium hexafluoride in 48X/48Y cylinders and drums of U3O8, in a 20' ISO container. These are the standard industry methods for moving these materials.

Given the fact that overhead costs for transportation of radioactive materials include: material packaging, marking and labeling, communications, vehicle tracking, vehicle maintenance, driver training, security, loading and unloading of cargo, insurance etc. the impact of additional mileage, which affects only time and fuel, amounts to fractions of a cent per kilogram/mile. In a dedicated program where vehicles, manpower and equipment are managed for optimal efficiency, the effect of mileage can probably be reduced even further.

Please do not hesitate to contact me if you need additional information.

Sincerely,

Rod Fisk
Chief Executive Officer
TLI Inc.

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[HG002L][GDrive]

TODO - ML060100084.pdf ... copy of same March23 email

2005 (Summer) - Provided Lecture for The World Nuclear Institute in Idaho Falls, Idaho

Full guide : [HI0007][GDrive]

Category	Topic	Authors/Presenters*
Global Setting	The Global Environmental Crisis – Climate Change	H. H. Rogner, Ferenc Toth (IAEA)
	The Global Environmental Crisis – Clean Water Shortage	Charles Vorosmarty (University of New Hampshire)
	World Energy Demand and Supply	Jan Murray (World Energy Council)
	Nuclear Technology in Sustainable Development	Werner Burkart (IAEA), Alan Waltar (PNNL)
	Survey of Nuclear Politics	Leonard Bond (INL), Alan McDonald (DOE/IAEA)
International Regimes	Nuclear Law – Principles, Role and Safety	Carlton Stoiber (ISNL), Wolfram Tonhauser (IAEA)
	Nuclear Law - Liability	Patrick Reyners (NEA)
		Tollison
	Transport of Nuclear Materials and Waste	Rod Fisk (Transport Logistics International, Inc.)
	Global Regimes for Emission Control	Edwin Aalders (IETA)

[HI0008][GDrive]

2007 (January 5)

Full pages of source -

- **Page 1 :** [HN00LF][GDrive]
- **Page 9 :** [HN00LG][GDrive]

'Minor bump' causes big scare on U.S. 60

JOHN WRIGHT/The Sun

Joe Cole, Barlow, looks at what remains of his pickup truck, which was crushed under the trailer of a semi hauling radioactive materials Thursday on U.S. 60 west of Paducah. Cole was not injured.

Pickup hit semi hauling radioactive material

By Shelley Byrne
The Paducah Sun
sbyrne@paducahsun.com

Joe Cole said he felt lucky to be alive after the underside of a tractor-trailer rig carrying radioactive material impaled the passenger side of his pickup truck's windshield in a wreck Thursday morning.

"This is twice now for this to happen to me," said Cole, 27, of Barlow, adding that he escaped harm in another wreck a few years ago in St. Louis. "I'm just glad I didn't have my kids in the truck with me.

"After it happened, I just wanted to get out because I was afraid of it catching on fire. I just feel blessed that nothing happened. I'm blessed to be standing here."

No one was injured and none of the four containers of uranium hexafluoride leaked during the wreck at 10:33 a.m. on U.S. 60, just east of Hobbs Road.

Cole was passing the rig and a van driven by Shawn Beach, 21, of Paducah when the van veered into the passing lane and clipped Cole's pickup truck, McCracken County Deputy Sheriff Jeremy Partin said.

The impact sent the pickup into the side of the tractor-trailer, which was driven by Harry Allison, 50, of Reardan, Wash. The rig is owned by R&R Trucking of Duenweg, Mo. It was carrying four reinforced 2½-ton cylinders of uranium hexafluoride from the Paducah Gaseous Diffusion Plant and was bound for the port in Oakland, Calif., where it was to be shipped to an overseas customer. A second truck arrived about an hour after the wreck to take possession of the load.

Elizabeth Stuckle, spokeswoman for USEC, said the truck was the last of four in a convoy, each carrying about 5,000 pounds of the enriched uranium.

Uranium hexafluoride is a chemical compound used during the uranium enrichment process. The low-level radioactive compound is used to fuel nuclear reactors. In its solid form, the compound is a white, dense, crystalline material that resembles rock salt.

The material is transported in "protective overpacks designed to protect the cylinders in a major accident," Stuckle said.

"This was just a minor bump," she said. "The trucks had just pulled out onto the highway, and they were going slow."

Cole was cited on a charge of driving on a suspended license. Beach was cited for not having insurance.

Once loads leave the plant property, they become the responsibility of the trucking company; however, several officials from plant operator USEC also went to the wreck scene.

"We're trained to respond, and part of the job is to see what damage there is," said Mary Thomas, senior resident inspector for the National Regulatory Commission office on the plant grounds.

Stuckle said USEC ships about 1,200 cylinders of the substance on about 300 trucks in a typical year. USEC supplies 27 percent of the world's uranium, providing fuel for 150 reactors on three continents, she said.

USEC contracts with Transport Logistics International, the largest transporter of nuclear material within the United States.

Rod Fisk, president of TLI, said wrecks of this sort are "extremely rare."

Joe Cole, Barlow, checks his cell phone after retrieving it from his wrecked pickup, still crumpled under the trailer of a semi carrying radioactive materials Thursday.

2007-01-05-the-paducah-sun-pg-1 / 2007-01-05-the-paducah-sun-pg-9-a

[HN00LH][GDrive]

2009 (May) - Attendee at World Nuclear Fuel Market 2009 Conference

Melissa Ann (Colvin) Mann (born 1965) is also there, representing Urenco, Inc .

Full doc : [HI0009][GDrive]

Transport Logistics Intl. **Russia**	**Mr. Sergey Danilenko** **Director, TLI Russia**
Transport Logistics Intl. **USA**	**Mr. Rod Fisk** **Chief Executive Officer**
Transport Logistics Intl. **USA**	**Mr. Mark Lambert** **Vice President, Operations**

[HI000A][GDrive]

2009 (December) - Retirement Announcement (Daher-TLI) ; Will continue to consult through at least 2011

See [HC000B][GDrive]

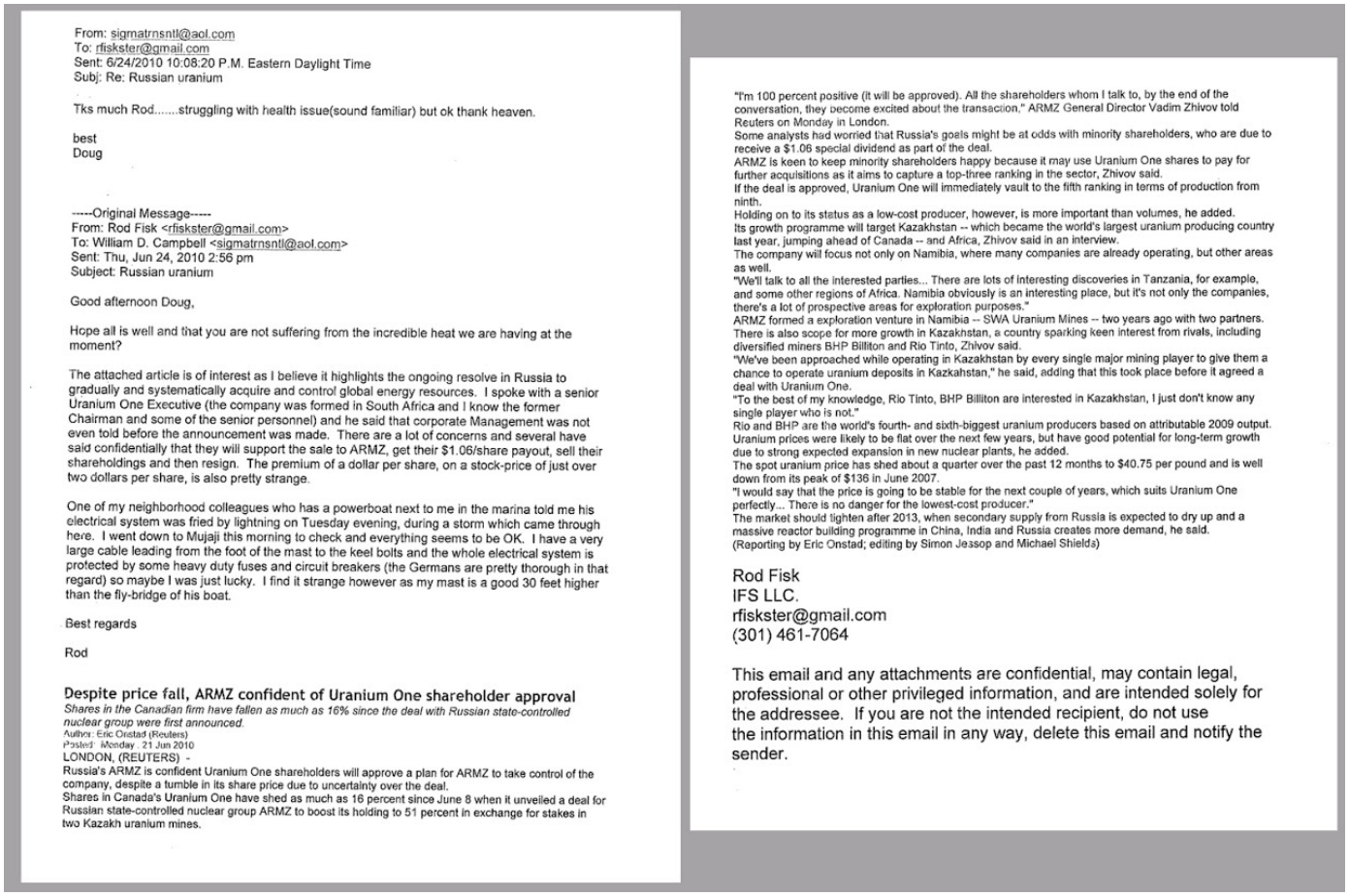
TLI announces the retirement of President/CEO Rod Fisk

*Today TLI announced the retirement of its **President/CEO Mr. Rod Fisk**, effective December 31, 2009. **Mr. Fisk**, who has been with TLI since its founding, will remain associated with TLI as a consultant through at least 2011. Taking over for Mr. Fisk will be Mr. Condrey and Mr. Lambert, as co-presidents and managing partners.*

2010 (June) - Rod Fisk emails with William D Campbell

Referred to in : https://thehill.com/homenews/administration/361276-fbi-informant-gathered-years-of-evidence-on-russian-push-for-us?amp

Full email : [HG002G][GDrive]



From: sigmatrnsntl@aol.com
To: rfiskster@gmail.com
Sent: 6/24/2010 10:08:20 P.M. Eastern Daylight Time
Subj: Re: Russian uranium

Tks much Rod.....struggling with health issue(sound familiar) but ok thank heaven.

best
Doug

-----Original Message-----
From: Rod Fisk <rfiskster@gmail.com>
To: William D. Campbell <sigmatrnsntl@aol.com>
Sent: Thu, Jun 24, 2010 2:56 pm
Subject: Russian uranium

Good afternoon Doug,

Hope all is well and that you are not suffering from the incredible heat we are having at the moment?

The attached article is of interest as I believe it highlights the ongoing resolve in Russia to gradually and systematically acquire and control global energy resources. I spoke with a senior Uranium One Executive (the company was formed in South Africa and I know the former Chairman and some of the senior personnel) and he said that corporate Management was not even told before the announcement was made. There are a lot of concerns and several have said confidentially that they will support the sale to ARMZ, get their $1.06/share payout, sell their shareholdings and then resign. The premium of a dollar per share, on a stock-price of just over two dollars per share, is also pretty strange.

One of my neighborhood colleagues who has a powerboat next to me in the marina told me his electrical system was fried by lightning on Tuesday evening, during a storm which came through here. I went down to Mujaji this morning to check and everything seems to be OK. I have a very large cable leading from the foot of the mast to the keel bolts and the whole electrical system is protected by some heavy duty fuses and circuit breakers (the Germans are pretty thorough in that regard) so maybe I was just lucky. I find it strange however as my mast is a good 30 feet higher than the fly-bridge of his boat.

Best regards

Rod

Despite price fall, ARMZ confident of Uranium One shareholder approval
Shares in the Canadian firm have fallen as much as 16% since the deal with Russian state-controlled nuclear group were first announced.
Author: Eric Onstad (Reuters)
Posted: Monday, 21 Jun 2010
LONDON, (REUTERS) -
Russia's ARMZ is confident Uranium One shareholders will approve a plan for ARMZ to take control of the company, despite a tumble in its share price due to uncertainty over the deal.
Shares in Canada's Uranium One have shed as much as 16 percent since June 8 when it unveiled a deal for Russian state-controlled nuclear group ARMZ to boost its holding to 51 percent in exchange for stakes in two Kazakh uranium mines.

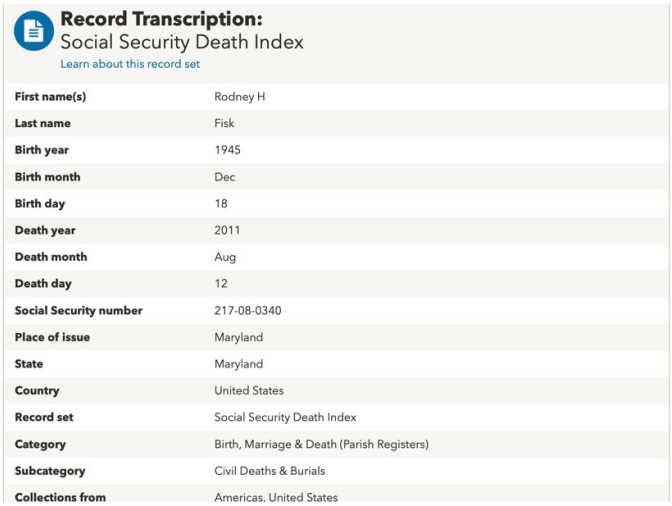
"I'm 100 percent positive (it will be approved). All the shareholders whom I talk to, by the end of the conversation, they become excited about the transaction," ARMZ General Director Vadim Zhivov told Reuters on Monday in London.
Some analysts had worried that Russia's goals might be at odds with minority shareholders, who are due to receive a $1.06 special dividend as part of the deal.
ARMZ is keen to keep minority shareholders happy because it may use Uranium One shares to pay for further acquisitions as it aims to capture a top-three ranking in the sector, Zhivov said.
If the deal is approved, Uranium One will immediately vault to the fifth ranking in terms of production from ninth.
Holding on to its status as a low-cost producer, however, is more important than volumes, he added.
Its growth programme will target Kazakhstan -- which became the world's largest uranium producing country last year, jumping ahead of Canada -- and Africa, Zhivov said in an interview.
The company will focus not only on Namibia, where many companies are already operating, but other areas as well.
"We'll talk to all the interested parties... There are lots of interesting discoveries in Tanzania, for example, and some other regions of Africa. Namibia obviously is an interesting place, but it's not only the companies, there's a lot of prospective areas for exploration purposes."
ARMZ formed a exploration venture in Namibia -- SWA Uranium Mines -- two years ago with two partners.
There is also scope for more growth in Kazakhstan, a country sparking keen interest from rivals, including diversified miners BHP Billiton and Rio Tinto, Zhivov said.
"We've been approached while operating in Kazakhstan by every single major mining player to give them a chance to operate uranium deposits in Kazkahstan," he said, adding that this took place before it agreed a deal with Uranium One.
"To the best of my knowledge, Rio Tinto, BHP Billiton are interested in Kazakhstan, I just don't know any single player who is not."
Rio and BHP are the world's fourth- and sixth-biggest uranium producers based on attributable 2009 output.
Uranium prices were likely to be flat over the next few years, but have good potential for long-term growth due to strong expected expansion in new nuclear plants, he added.
The spot uranium price has shed about a quarter over the past 12 months to $40.75 per pound and is well down from its peak of $136 in June 2007.
"I would say that the price is going to be stable for the next couple of years, which suits Uranium One perfectly... There is no danger for the lowest-cost producer."
The market should tighten after 2013, when secondary supply from Russia is expected to dry up and a massive reactor building programme in China, India and Russia creates more demand, he said.
(Reporting by Eric Onstad; editing by Simon Jessop and Michael Shields)

Rod Fisk
IFS LLC.
rfiskster@gmail.com
(301) 461-7064

This email and any attachments are confidential, may contain legal, professional or other privileged information, and are intended solely for the addressee. If you are not the intended recipient, do not use the information in this email in any way, delete this email and notify the sender.

[HG002H][GDrive]

2011 (August 12) - Death



Record Transcription:
Social Security Death Index
Learn about this record set

First name(s)	Rodney H
Last name	Fisk
Birth year	1945
Birth month	Dec
Birth day	18
Death year	2011
Death month	Aug
Death day	12
Social Security number	217-08-0340
Place of issue	Maryland
State	Maryland
Country	United States
Record set	Social Security Death Index
Category	Birth, Marriage & Death (Parish Registers)
Subcategory	Civil Deaths & Burials
Collections from	Americas, United States

[HL002M][GDrive]

Also See note from Daher-TLI : [HC000C][GDrive]

Mr. Rod Fisk

Fulton, MD - August 12, 2011

It is with great sadness that we report the death of ***Mr. Rodney H. Fisk****, former president and CEO of Transport Logistics International.* ***Mr. Fisk joined TLI shortly after it's founding in 1998, and served as CEO until his retirement in late 2009.***

Mr. Fisk had over two decades in the nuclear industry. ***Prior to his work at TLI, Mr. Fisk served as Executive Vice President at Edlow International. His early career was spent as a senior Foreign Service Officer in the government of South Africa****. There he obtained knowledge and experience in the fields of bilateral and multilateral Peaceful Nuclear Cooperation Agreements and import and export control regimes applicable to nuclear materials worldwide.*

Mr. Fisk was instrumental in a number of key national and international programs, including the MEGATONS to MEGAWATTS program.

Prior to becoming engaged in nuclear activities, ***Mr. Fisk obtained academic qualifications in the natural sciences, which have enabled him to interact with environmental groups*** *from a practical and theoretical perspective, based upon extensive conservation experience.*

After Mr. Fisk's retirement in 2009, he was still actively involved in the nuclear industry, serving as a consultant to a number of companies.

Mr. Fisk's knowledge and leadership will be greatly missed.

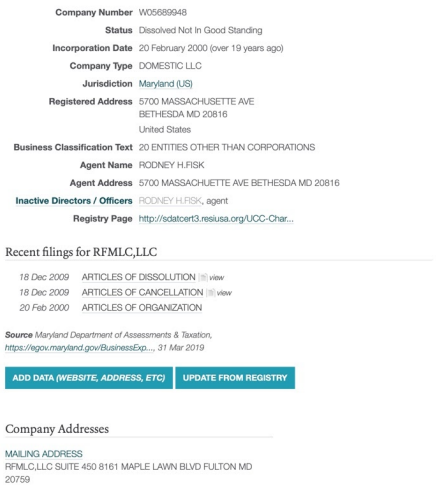
Additional Reference Info

Rodney Fisk President and Chief Executive Officer Transport Logistics International, Inc. World Nuclear Fuel Cycle 2008 April 8-11, 2008 InterContinental Miami Participants List https://resources.nei.org/conferences/WNFC/2009/PartsList.pdf ...

What is "RFMLC,LCC" ? RFMLC,LLC SUITE 450 8161 MAPLE LAWN BLVD FULTON MD 20759

https://opencorporates.com/companies/us_md/W05689948

RFMLC,LLC



Company Number	W05689948
Status	Dissolved Not In Good Standing
Incorporation Date	20 February 2000 (over 19 years ago)
Company Type	DOMESTIC LLC
Jurisdiction	Maryland (US)
Registered Address	5700 MASSACHUSETTE AVE BETHESDA MD 20816 United States
Business Classification Text	20 ENTITIES OTHER THAN CORPORATIONS
Agent Name	RODNEY H.FISK
Agent Address	5700 MASSACHUETTE AVE BETHESDA MD 20816
Inactive Directors / Officers	RODNEY H.FISK, agent
Registry Page	http://sdatcert3.resiusa.org/UCC-Char...

Recent filings for RFMLC,LLC

18 Dec 2009	ARTICLES OF DISSOLUTION view
18 Dec 2009	ARTICLES OF CANCELLATION view
20 Feb 2000	ARTICLES OF ORGANIZATION

Source Maryland Department of Assessments & Taxation, https://egov.maryland.gov/BusinessExp..., 31 Mar 2019

ADD DATA (WEBSITE, ADDRESS, ETC) UPDATE FROM REGISTRY

Company Addresses

MAILING ADDRESS
RFMLC,LLC SUITE 450 8161 MAPLE LAWN BLVD FULTON MD 20759

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https://twitter.com/techno_fog/status/921045636232962048

[PDF]Untitled - Institute for Science and International Security https://isis-online.org/.../TaiwansFormerNuclearWeaponsProgram_POD_color_withCove .... and for all Taiwan's nuclear weapons program, just as it was nearing the point of being ..... nuclear program).6 At the time, Israel was just developing its own nuclear weapons ..... The first prototype of the IDF was rolled out in December 1988.57 .... [Source: Undated table from Rod Fisk, Edlow International Company]. These. https://isis-online.org/uploads/isis-reports/documents/TaiwansFormerNuclearWeaponsProgram_POD_color_withCover.pdf ...

https://isis-online.org/uploads/isis-reports/documents/TaiwansFormerNuclearWeaponsProgram_POD_color_withCover.pdf / https://drive.google.com/open?id=1aSYeRfkjZBNiYhQMQ4SJQtjCWCGNkBCc

Page 150 : "

An upper bound estimate of the amount of plutonium in the core can be determined from information about irradiated fuel discharged from the TRR. Following the U.S. actions in the late 1970s aimed at end- ing Taiwan's nuclear weapons efforts, the United States insisted that all the irradiated fuel from the reactor be removed and scrutinized. A core load of fuel containing 137 fuel elements was discharged.19 Each fuel element contained about 54 kilograms of natural uranium, giving a total of about 7.4 metric tonnes of uranium in the core, somewhat less than a full core load of about eight metric tonnes. By using Department of Energy data on the average amount of plutonium in the irradiated fuel returned to the United States, 137 fuel elements would contain up to about 7.2 kilograms of plutonium, where the upper bound assumes 52.6 grams of plutonium per fuel element (or about 0.97 grams of plutonium per kilogram of ura- nium).20,21 This is an upper value of the amount of plutonium in the core because not all of the irradiated fuel was discharged at its full burnup, so those elements on average had a lower amount of plutonium per fuel el- ement.22 However, on average, the plutonium was likely weapon-grade. "

Page 176 : "

21 Another example of the plutonium content in irradiated fuel is from a shipment of 91 irradiated fuel elements in 15 containers, which may be part of the last one that was blocked by a court order from coming to the United States [Source: Undated table from ***Rod Fisk, Edlow International Company****]. These 91 fuel elements, with a mass of 4.632 metric tonnes, contained 4.1 kilograms of plutonium, or an average of 42.2 grams per fuel element. The fuel elements had an average of 0.86 kilograms of plutonium per metric tonne of uranium and the uranium had an average of 0.6162% uranium 235. The irradiation level, or burnup, was not provided but these elements appear to have had a lower burnup than that of the fuel rods discharged in 1977 and discussed above. The plutonium may not have been weapon-grade but it would contain more than 90 percent plutonium 239, which is high quality plutonium.*

"

BITCHUTE @Housatonic YOUTUBE @HousatonicLive ODYSEE @Housatonic BRIGHTEON @Housatonic

Housatonic

Joseph Bernard Flavin (born 1928)

[HE0001][GDrive]

Was chairman and chief executive officer of **Singer Corporation** .

Full name is **"Joseph Bernard Flavin"** - (see https://www.astro.com/astro-databank/Flavin,_Joseph_Bernard)

1930/1940 - Born and raised in Missouri

- 1930 US Census form - https://www.findmypast.com/transcript?id=USC%2F1930%2F004951812%2F00476%2F017
- 1940 US Census form - https://www.findmypast.com/transcript?id=USC%2F1940%2F1511400157

1987 (Oct 8) : Joseph B. Flavin Is Dead at 58; Lead Overhaul as Singer Chairman

[HN001V][GDrive]

Joseph B. Flavin Is Dead at 58; Led Overhaul as Singer Chairman

By JAMES BARRON

Joseph B. Flavin, chairman and chief executive officer of the Singer Company, died yesterday at Norwalk Hospital. He was 58 years old and lived in New Canaan, Conn.

Mr. Flavin joined Singer in 1975 and oversaw its evolution from the world's best-known manufacturer of sewing machines to a military contractor.

At the start of his tenure, critics were saying that Singer had spread itself too thin. One big problem was the company's plunge into the making of electronic cash registers for department stores and supermarkets. Mr. Flavin, who was regarded by many on Wall Street as an astute planner and an expert in doing business abroad, quickly pulled Singer out of business machines and began restructuring the rest of the company.

An Overhaul of Its Identity

Last year he even spun off the sewing machine business, which had been the essence of the company's identity from the time it was founded in 1851. As he acknowledged in a 1984 interview, what had begun in the mid-1970's as a gradual retreat from unprofitable sidelines turned into an overhaul of the company's identity.

"This is a company whose whole culture was built around the sewing machine," Mr. Flavin said then. "As hard as we tried, that couldn't be changed overnight."

Mr. Flavin's efforts left Singer a streamlined technology company that draws 80 percent of its revenue from aerospace electronics.

Soon after joining Singer, Mr. Flavin recognized that social and economic forces were causing a rapid decline in the United States sewing machine market. Chief among these was an increase in the number of women with full-time jobs. Another factor was the increasing availability of lower-priced imported clothing, which reduced consumers' need to repair old or damaged clothes.

By 1979, when the full extent of Singer's troubles had become clear, Mr. Flavin took action to trim the company's losses. Singer closed its two major sewing machine plants. One was in Elizabeth, N.J., the other in Scotland. At the same time, the company shifted its sewing machine manufacturing to plants in Taiwan and Brazil, where labor costs were less expensive.

The company also closed or sold its 1,600 retail sewing machine stores to independent dealers.

In Mr. Flavin's 12 years as head of Singer, the company's headquarters were moved twice, from 30 Rockefeller Plaza in Manhattan to Stamford, Conn., in 1978, and from Stanford to Purchase, N.J., last year.

In August the Texas investor T. Boone Pickens announced that he had 4.4 percent of Singer's stock. Mr. Pickens's investment company, Mesa Partnership Ltd., said at the time that it might buy as much as 15 percent of Singer.

Mr. Flavin, who was born on Oct. 16, 1928, received a bachelor's degree in business administration from the University of Massachusetts in 1953 and a master of science degree from the Columbia University Graduate School of Business four years later. He also studied at the International Business Machines Corporation's executive school and the Williams College program in American studies for executives.

In 1978 he was awarded an honorary doctor of laws degree from the University of Massachusetts.

The New York Times

Joseph B. Flavin

Tenure With Xerox

Before joining Singer, Mr. Flavin was president of international operations as well as a director of the Xerox Corporation. He had joined Xerox in 1967 as vice president and controller and was promoted rapidly.

Mr. Flavin also spent 14 years at I.B.M.'s world trade division and was controller from 1965 to 1967.

He was a director of Pfizer Inc. and the New York Stock Exchange and a trustee of Northwestern Mutual Life Insurance Company.

He is survived by his wife, Melissande; a son, Patrick, and a daughter, Shawn, both of New Canaan, and six grandchildren.

Heart Recipient Dies

HERSHEY, Pa., Oct. 7 (AP) — The Rev. John Urban, who was kept alive for nearly 11 days by an artificial heart before receiving a human heart and kidney, died after multiple organ failure Tuesday at the Milton S. Hershey Medical Center of the Pennsylvania State University. He was 51 years old. Mr. Urban was the third recipient of the Penn State artificial heart. He received the donor heart and kidney on Sunday in an 11-hour operation, the first such combination surgery done at the medical center.

[HN001W][GDrive]

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Mr. Flavin joined Singer in 1975 and oversaw its evolution from the world's best-known manufacturer of sewing machines to a military contractor.

At the start of his tenure, critics were saying that Singer had spread itself too thin. One big problem was the company's plunge into the making of electronic cash registers for department stores and supermarkets. Mr. Flavin, who was regarded by many on Wall Street as an astute planner and an expert in doing business abroad, quickly pulled Singer out of business machines and began restructuring the rest of the company. An Overhaul of Its Identity

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He was a director of Pfizer Inc. and the New York Stock Exchange and a trustee of Northwestern Mutual Life Insurance Company.

He is survived by his wife, Melisande; a son, Patrick, and a daughter, Shawn, both of New Canaan, and six grandchildren.

AP News on passing -

[HM0001][GDrive]

Singer Head Dies After Short Illness

October 7, 1987

MONTVALE, N.J. (AP) _ Joseph B. Flavin, who helped transform the Singer Co. from a sewing-machine maker into a leading aerospace and electronics concern, died Wednesday at age 58, the company said.

Flavin, chairman and chief executive of the company, became ill at his New Canaan, Conn., home Wednesday morning before he was to make his regular commute to Singer's offices here, and was pronounced dead a short time later at an area hospital, said Thomas Elliot, vice president for corporate relations.

Elliot did not know the cause or time of death. A company statement said Flavin died "after a short illness."

Singer elected William F. Schmied to succeed Flavin as chairman and chief executive officer, the company said. Schmied will retain his former position as company president.

Schmied, 58, has served as president and chief operating officer since 1980, and has been with Singer since 1969.

Under Flavin, Singer concentrated on aerospace electronics, which now accounts for more than 80 percent of the company's revenues.

In 1980, Singer shut its last U.S. sewing machine plant, which had been in business in the industrial New Jersey city of Elizabeth for more than a century. Last year, Singer spun off its former sewing operatins into a new company, SSMC Inc.

The company moved its executive offices in August to Montvale from Stamford, Conn.

Before becoming Singer's chairman, Flavin was president of international operations, executive vice president and a director of Xerox Corp. He also spent 14 years in executive posts with International Business Machines World Trade Corp.

"Joe Flavin's contributions to Singer were outstanding in their scope and impact in strengthening the company and positioning it for an excellent long- term future," Schmied said. "We all feel a deep sense of loss and regret."

Flavin, born Oct. 16, 1928, received a degree in business administration from the University of Massachusetts in 1953 and a masters degree from the Columbia University Graduate School of Business in 1957.

He is survived by his wife, Melisande; a son, Patrick; a daughter, Shawn; and six grandchildren.

1975 (Sep 14) - Daughter marries - Shawn Flavin Bride of Roy Russell

Source - [HN001Z][GDrive]

Shawn E. Flavin, daughter of Mr. and Mrs. Joseph B. Flavin of New Canaan, Conn., was married yesterday afternoon at her parems' home, to Roy Dallas Russell, son of Mr. and Mrs. A. Lewis Russell of Sarasota, Fla., formerly of Stamford. Conn.

The Rev. Thomas S. Fitzgerald, president of Fairfield University, performed the ceremony.

Mr. Flavin is executive vice president of the Xerox Corporation and president of its international operations. The bridegroom's father, who is retired, was director of industrial security for the Exxon Corporation.

Mrs. Patrick Flavin, sisterin-law of the bride, was matron of honor. The bridesmaids were the Misses Becky Russell, sister of the bridegroom, and Ellen Scanlan. Nicole Noël Flavin, niece of the bride, was flower girl. Bart van Rees was best man.

Mrs. Russell graduated from Trinity College in Hartford. She is a third-year student at the New York Medical College, as is her husband, who is a University of Connecticut graduate.

TODO

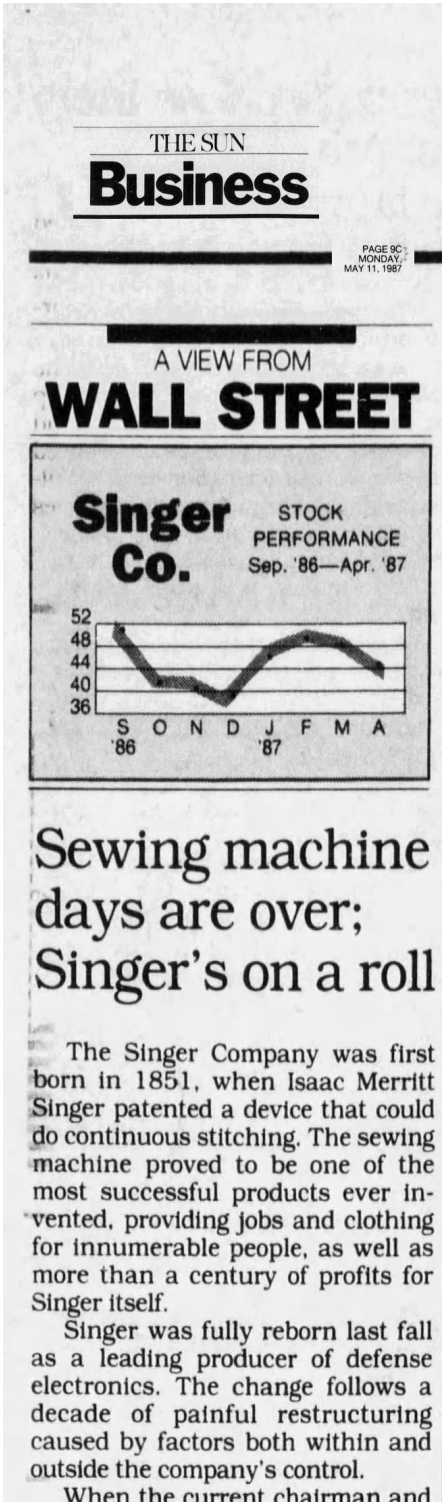
Genealogy:

https://www.ancestry.com/family-tree/person/tree/21925839/person/72000810934/facts?_phsrc=Hfb38&_phstart=successSource

- 1986 - who is randolph bromery ?
  -
    - [HN0020][GDrive] 1986-05-19-hartford-courant-pg-10
    - [HN0021][GDrive]1986-05-19-hartford-courant-pg-10-clip-singer
    -
    -

1987 (May 11)

- Full pages :
  - [HN0022][GDrive]1987-05-11-the-baltimore-sun-pg-9c
  - [HN0024][GDrive] 1987-05-11-the-baltimore-sun-pg-10c



THE SUN

Business

PAGE 9C MONDAY, MAY 11, 1987

A VIEW FROM

WALL STREET

Singer Co.

STOCK PERFORMANCE
Sep. '86—Apr. '87

52
48
44
40
36

S O N D J F M A
'86 '87

Sewing machine days are over; Singer's on a roll

The Singer Company was first born in 1851, when Isaac Merritt Singer patented a device that could do continuous stitching. The sewing machine proved to be one of the most successful products ever invented, providing jobs and clothing for innumerable people, as well as more than a century of profits for Singer itself.

Singer was fully reborn last fall as a leading producer of defense electronics. The change follows a decade of painful restructuring caused by factors both within and outside the company's control.

When the current chairman and

chief executive, Joseph Flavin, left Xerox in 1975 to head Singer, the company was burdened by a number of errant acquisitions. No sooner had these been written off or divested than the market for sewing machines began to erode, a result of the changing habits of traditional women buyers.

At its nadir in the late 1970s, "we were probably past bankruptcy," Mr. Flavin recalled. "We owed $1.1 billion and the equity was $306 million. The only reason we could maintain that leverage was the banks had already loaned us all that money."

The stock bottomed out in 1980 at a little more than $6 a share, but in retrospect the company had already begun to turn around. Strong emphasis was placed on a burgeoning defense segment and, in a move that still shocks many who grew up believing Singer meant sewing machines, a decision was made to divest the sewing machine division.

The rationale was twofold: First, the requirements for running an international consumer business differed from those needed for one in high-technology aerospace, Mr. Flavin said. Secondly, management felt, and analysts agree, that the stock market would never grant Singer the rich multiples typical for high-growth businesses until the mature sewing machine division was weeded out.

Last October, after Singer had successfully completed a turnaround in the division, it was spun off to shareholders as a new company called SSMC Inc.

"Our recent history has been tumultuous, to say the least," Mr. Flavin said, noting that because of the divestiture the new Singer Co. has emerged only in the last nine months.

The company's mottled past makes many financial comparisons irrelevant. Indeed, even the post-October movement of its stock may say little. That's because when the stock

See **SINGER,** 10C, Col. 3

[HN0020][GDrive]

Sewing machine days gone at Singer

MONDAY, MAY 11, 1987

SINGER, from 9C

came out at $50 a share, its price was heavily influenced by tax and arbitrage factors. Investors used complex strategies to buy and sell both Singer and SSMC to create artificial losses.

The stock plunged to a post-divestiture low of $37.25 a share in December, a price some institutions found irresistible. "At that point, we thought there was no risk in buying the stock," said Gerald Levine, a partner in Weiss Peck and Greer, an investment management firm that purchased 392,000 shares.

The stock has since partially recovered, hovering around its current level of $44 a share. How much farther the stock has to go is a source of debate among analysts, though even the most pessimistic feel it could be due for another jump. That's because Singer now sells for about 13 times earnings (adjusted for the divestiture), while other defense contractors specializing in electronics are typically priced at 17 or 18 times earnings.

"There's still misperception that the company still makes sewing machines," said Michael R. La Tronica, director of research at the Redding Research Group. "Once the market hops on the bandwagon, there'll be a rapid upward move in the stock."

Fundamentally, the company has a number of positive attributes, although it's not considered to be without risk.

Its Simuflight division, which provides training for commercial and military products, appears be taking off after losing about $35 million in the past two years. It recently received a $244 million contract to train pilots of C-130 military transport planes, and already operates a major training facility for Continental Airlines. Since training through simulation is far less costly than using actual flight time, the company and Wall Street predict the division will grow as budgets tighten.

That reversal will be a nice addition to a number of profitable divisions developing radar, navigation and communications products and electronic warfare systems. Margins for products in virtually all of its divisions are due to expand as products come out of development.

"The question is, when do they turn on the production faucet?" said Phil Friedman, an analyst with Drexel Burnham Lambert Inc. "I believe it will be in late 1988 or 1989."

Of tremendous concern on Wall Street is whether, in an era of increasingly austere military budgets, many of these products will ever go into production. But as with the case of flight simulation, Singer has made a case that its offerings become more attractive as money becomes tighter.

"In general, Singer's products allow you to take an old platform [plane, ship or missile], upgrade the electronics and avionics, and get most of the performance a new model would provide at a third of the cost," said Redding's Mr. La Tronica.

Others are less sanguine. "We're not enthusiastic about anything in the pure defense area," said Michael Gardner of Shearson Lehman Brothers. Programs in development are more susceptible to cost overruns and cancellations than those in production, he added.

Agreed Steven Binder of Bear Stearns: "The bottom line is that there are long-term questions about the profitability of many of its defense contracts. Singer has a lot of attributes, but I think it's fair to say the earnings outlook remains clouded."

Furthermore, Mr. Gardner said, although Singer is a leader in every area in which it operates, there are few places it stands alone, making it vulnerable to intense competition or second sourcing, "so one would not expect Singer's profit margins to be as high as other defense electronics companies."

For Singer, 1987 has begun well. Profits are up significantly in not only defense, but also in its motor products division — cash cows that sell power tools and other products, primarily through Sears, Roebuck and Co.

And compared to the problems of several years ago, Singer is on a roll. When the stock of SSMC is included, one share of Singer bought in 1980 at $6 is worth more than $50 today.

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march 1989

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National Post (Toronto, Ontario, Canada) • 20 Mar 1989, Mon

Singer weathers changes

Today's owner, founding father both cut from same cloth

By Eric Reguly
Financial Post

NEW YORK — **Singer Co.** today bears absolutely no resemblance to the Singer whose sewing machines were flogged from Connecticut to Cape Town for more than a century. Singer doesn't even make them any more.

But, in one sense, the company has come full circle since its formation in the mid-1800s: Its founder, Issac Singer, and its current chairman, Paul Bilzerian, appear to share some traits.

Issac Singer was a barely literate wanderer who didn't care about his fabulously successful sewing machines. He once said: "I don't care a damn for the invention. The dimes are what I'm after."

Paul Bilzerian is a high-school dropout who, in 1985, was described in a lawsuit as an "obscure individual of indeterminate means." Nor does he have any emotional ties to the products made by the company he bought 14 months ago. He's after dollars — millions of them — not dimes. Since his Singer acquisition, Bilzerian has sold off most of the company.

This past week's lawsuit against Singer helped underscore the fact that it bears little resemblance to the once-great multinational.

The U.S. Justice Department accused the company of overcharging the Pentagon by US$77 million from 1980-88. The government said the Singer Link Flight division wrongfully enriched itself by secretly inflating cost estimates on flight simulators sold to the military.

May face surcharge

The government's action joins a suit by a former Singer employee who blew the whistle on the company. Filed under the False Claims Act, it calls for damages of US$231 million.

Although it appears that most of the alleged cost-inflation occurred before Bilzerian acquired Singer, the 38-year-old Floridian may face a surcharge on his acquisition if the Justice Department wins its case. Under U.S. civil law, liabilities flow to successor companies.

CAE Link Corp., the successor to the Link Flight division, was named as one of the three defendants. The company is owned by Toronto-based **CAE Industries Ltd.**, which bought it from Bilzerian last August for $665 million. Singer's general counsel said the accusations were "completely without merit" and said Singer would co-operate with CAE in a vigorous defence.

The cost-inflation suit isn't the first time Bilzerian and Singer have made headlines in Canada.

Bilzerian, best known as a corporate raider, backed white knight Edward DeBartolo in his US$3.55-billion bid in 1986 for **Allied Stores Corp.** Toronto's **Campeau Corp.** won the company, but Bilzerian went away smiling with almost US$7 million in fees in his pocket.

Bilzerian's corporate raids have since come back to haunt him. He was indicted in December on 12 felony counts linked with four unsuccessful takeover attempts in 1985 and 1986 (Allied was not one of them). The indictments covered alleged securities and tax fraud, conspiracy and making false disclosure statements. Bilzerian pleaded not guilty.

Then, through no fault of its own, Singer emerged as a key player in the two-way battle for **SSMC Inc.** of Shelton, Conn. Spun off from Singer in 1986 as part of a massive restructuring, SSMC holds the exclusive rights to the Singer trademark and manufactures the sewing machines that made its former parent famous. Singer owns 27% of SSMC.

The battle pits Toronto's **International Semi-Tech Microelectronics Inc.** against **Inter-Pacific Acquisition Corp.**, a company formed by Malaysian investor Vincent Tan to acquire SSMC. Acquiring Bilzerian's 27% stake in the company is key to the deal.

Semi-Tech, through its Hong Kong subsidiary, launched a tender offer for SSMC on Feb. 2 at US$30 a share, then raised it to US$34 when Tan burst onto the scene with a US$33 bid. Tan put the ball back in Semi-Tech's court this past week when he layered another US$4 onto his bid.

Meanwhile, SSMC had agreed to sell its furniture division to Bilzerian if Semi-Tech's offer is successful. Although it went unstated, the agreement presumably hinged on the understanding that Bilzerian would tender his shares to the Canadian group.

Singer's 27% interest in SSMC is one of its few remaining assets. But downsizing was a process that began before Bilzerian's arrival. As a sewing machine maker, Singer's world franchise started eroding more than 20 years ago.

Life essential

The machines were considered a life essential in practically every country in the world. It wasn't until after World War II, as markets became saturated, that the company began to diversify. But the strategy wasn't entirely successful.

By the mid-1970s, Singer had US$1 billion in debt and took a massive US$400-million writedown on loser businesses. Its portfolio included a housing developer, a lake, air conditioning, defence electronics, and a sensationally disastrous business machines arm.

The bobbin turned on its sewing machine business, too. Competition from foreign companies helped cause its unit sales to drop by 50% in the 1970s. Faced with a dying market, Chairman Joseph Flavin, who arrived at the company in 1975, transformed it largely into an aerospace and electronics company catering to the military. Under Flavin, Singer experienced a modest renaissance.

Flavin shifted the manufacture of its sewing machines to plants in Brazil and Taiwan to take advantage of lower labor costs. He also closed or sold its 1,600 retail sewing machine stores. Finally, he spun off the sewing machine business entirely and left it with SSMC.

Meanwhile, its Link Flight Simulation division expanded to become a world leader.

The death of Chairman Flavin on Oct. 7, 1987, and the market crash less than two weeks later left the company vulnerable to takeover. Bilzerian pounced and met little resistance.

Within half a year, Bilzerian had recovered all but US$200 million of US$1.9 billion in acquisitions costs. The sale of the Link Flight division to Toronto's CAE was the biggest single sale. Only a handful of businesses, such as the British-based Link Miles simulator division, remain.

The Singer story

1850: Improving on an old idea, Isaac Singer makes commercially successful sewing machine. Price: US$125 apiece, a small fortune.

Early 1900s: Singer Co. sells more than one million sewing machines a year worldwide.

1950s: U.S. market for sewing machines matures; Singer expands overseas while diversifying at home.

1963: Singer buys business machines company, an ultimately disastrous acquisition.

1976: Joseph Flavin takes Singer helm as chairman. Company takes US$400 million writeoff from loss-making diversifications. Begins overhaul of Singer into an aerospace and defence contractor.

1978: Suffering from foreign competition, Singer begins losing money on sewing machines. Production shifted overseas. Retail stores closed and sold.

1986: Singer spins off sewing machine division. SSMC Inc., 27% owned by Singer, becomes sewing machine maker.

1987: Flavin dies. Paul Bilzerian launches takeover bid Nov. 2.

1988: Bilzerian wins Singer in January, begins dismantling company. Sells Link Flight division to Toronto's CAE Industries Ltd. in August for $665 million. Bilzerian indicted for tax and securities fraud in December.

1989: Two-way battle for Singer's 27% stake in SSMC begins in February; Singer sued by government for alleged cost inflation on Pentagon contracts in March and CAE named as defendant.

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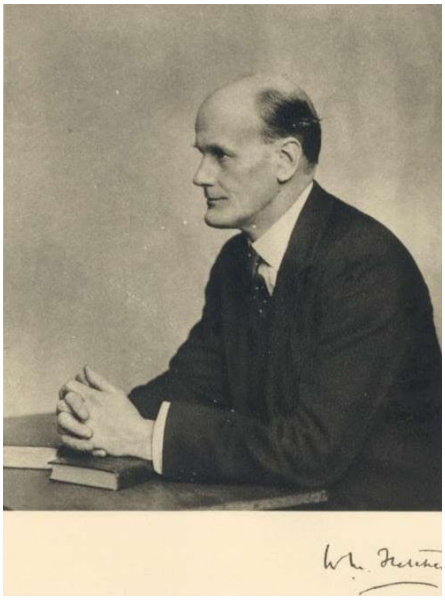
Sir Walter Morley Fletcher (born 1873)



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Walter Morley Fletcher

Born

21 July 1873

Died

7 June 1933 (aged 59)

Nationality

English

Alma mater

Trinity College, Cambridge

Known for

Muscle physiology

Scientific career

Fields

Physiologist

Institutions

Cambridge University

Academic advisors

John Newport Langley

Notable students

Archibald Hill

Sir Walter Morley Fletcher, KBE, FRS [1] (21 July 1873 – 7 June 1933)[2] was a British physiologist and administrator. Fletcher graduated from Trinity College, Cambridge and was most significant in his administration of the Medical Research Council (MRC) during the interwar years. Under his guidance, the MRC focused its funding on basic scientific research at the expense of clinical research but he made Britain a leader in biomedical research in the period.

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1933-biochemj01106-0009-obit-walter-morley-fletcher.jpg

OBITUARY NOTICE. WALTER MORLEY FLETCHER. (1873-1933.)

source - Biochem. 1933 xxvii

OBITUARY NOTICE. WALTER MORLEY FLETCHER. (1873-1933.) THE death of Sir Walter Fletcher, Secretary of the Medical Research Council, on June 7th, in the sixtieth year of his age and the nineteenth of his tenure of an office he had made great, removed with tragic unexpectedness a public servant who by sheer merit had raised himself to be the trusted captain and apologist of a great host of workers striving in their many different ways and for the most part in the seclusion of the laboratory for the advancement of scientific medicine. These now mourn the loss of a friend. Medical research, as the late Sir Walter never ceased to emphasise in many a weighty and admirably drafted pronouncement, calls to its service the labour corps of many ancillary sciences and from none perhaps does it expect more help in the solution of its increasingly complicated problems than from Biochemistry. To the members of the Biochemical Society, therefore, of which Fletcher was an original member, his loss is a particularly severe one, in that his appreciation of the part that Biochemistry has to play in the general advancement of medical science came from his own discipline and distinguished performance in physiological chemistry throughout a period of nearly twenty years. Undoubtedly Fletcher would have called himself a physiologist first and foremost, but, so far as concerned the particular problem to which his laboratory life was dedicated, he had the clearest vision of its further illumination when helped on its way by modern biophysics and modern biochemistry-a vision that has more than materialised. The many appreciations of the late Sir Walter which have already appeared and their varied sources are eloquent testimony to the numerous links he had forged between the laboratory worker and the outside world of affairs. His task may be said, indeed, to have been to explain the day's work-the 'pya Kat 5,utEpat-of the laboratory to a non-scientific and not always too appreciative public, a public, however, which paid the piper and might even, if unwisely guided, call the tune. Fletcher was the conductor in fact of a great orchestra of many and strange instruments, and it was his business to harmonise and co-ordinate the tunes of each to the greater glory of medical progress. "Instruments," I venture to think, would have pleased him. It was a favourite notion of his that disciplines should be divided not according to their matter but according to their methods and that the latter alone had in them the seeds of universal value. What then were Sir Walter's antecedents and how was it that he, a devoted man of science yet not unfamiliar with affairs, resigned his place in the orchestra to become its conductor when the call came to him just before the outbreak of the great war? Fletcher began his academic career in 1891 when he entered Trinity College Cambridge. Three years later he graduated with

the outbreak of the great war! Fletcher began his academic career in 1891 when he entered Trinity College Cambridge. Three years later he graduated with first class honours in the Natural Science Tripos, and from that date for nearly twenty years the Cambridge School of Physiology was his workroom and Trinity College, of which he was elected

a Fellow in 1897 and to whose affairs he was devoted, his real home. His clinical training in medicine he took at Bart.'s and in 1900 he obtained his Cambridge M.B. Throughout his whole Cambridge career Fletcher's immediate scientific interests were centred almost exclusively in the problem of muscle respiration, an important field of enquiry in which, at the outset of his work, little or no certain knowledge was available. Between 1898 and 1914 he contributed to the Journal of Physiology a valuable series of papers on this subject, including two in collaboration, respectively, with Hopkins and G. M. Brown. These papers definitely established Fletcher's reputation as a physiologist of distinction. His first contribution in 1898 on the survival respiration of muscle was a substantial one. of nearly a hundred closely reasoned pages, and fully documented, the elaborate apparatus of which he made use for continuous estimations of CO_2 being a modification of that devised by F. F. Blackman for research on gaseous exchange in plant leaves. The work was carried out during his tenure of the Coutts-Trotter Studentship and was communicated to the 4th International Physiological Congress which met in Cambridge in August of that year. The normal curve of CO_2 discharge from excised frog muscle was fully worked out and the effect thereon of various poisons and temperature changes. Of fundamental importance was his observation that in an excised muscle which has been made to contract, there was no accompanying increase in the rate of CO_2 discharge. Throughout this work Fletcher took pains to exclude from consideration late yields of CO_2 arising from putrefactive changes in the muscle. In his second and third papers in 1902 another important stage was reached when, in investigating the influence of oxygen on the survival respiration of muscle, he showed that loss of irritability in a surviving muscle is greatly delayed by an abundant supply of oxygen. In 1904 he recorded the fact that exposure of a fatigued muscle to an atmosphere of oxygen restored to it, in a marked degree, the osmotic properties of resting muscle. In 1907, in collaboration with Hopkins, appeared a most important contribution to the biochemistry of muscle showing that contraction of excised muscle is regularly accompanied by an increase of lactic acid and that, if the fatigued muscle is placed in oxygen, the lactic acid already formed disappears. The paper contains also the technical details of a new colour reaction for lactic acid devised by Hopkins for this work. Later papers in 1911, 1913 and 1914 (the last in collaboration with G. M. Brown) continue the discussion of lactic acid production particularly in connection with its alleged formation during autolysis and its formation in mammalian muscle. Fletcher's work and that of his collaborator Hopkins laid the foundations on which was built the elaborate treatment on thermodynamic lines of muscular action by Hill and Meyerhof. An analysis of its main conclusions will be found in the Croonian Lecture before the Royal Society by Fletcher and Hopkins in 1915 (Proc. Roy. Soc. Lond. 1917, B 89, 444) while critical reviews by A. V. Hill of the relations existing between heat production in muscle and the underlying chemical processes will be found in the Ergeb. d. Phys. 1916, 15, 340 and in Phys. Rev. 1922, 2, 310. Writing in 1923 (Nature, July 14th, Suppl.), A. V. Hill ascribed nearly all the recent advances in muscle physiology to the study of the phenomena of fatigue in muscle. Recovery from fatigue occurred apparently only in the presence of oxygen, while the lactic acid, which was found by Fletcher and

Hopkins to increase by exercise, was diminished or abolished by recovery in the presence of oxygen. Further work on the problem demanded a new technique for correlating the heat produced with the observed chemical phenomena. This was supplied by the delicate thermoelectric apparatus devised by Hill, and by its aid it has been possible to build up what is a completely new chapter in muscle physiology-the thermodynamics of muscular work. The mysterious lactic acid is now known from estimation of the heat evolved in contraction to be derived from glycogen. In recovery the lactic acid is rebuilt into the glycogen from which it was derived except for about one-sixth of it which is oxidised to provide energy for the restoration. The essential point is that contraction and discharge of lactic acid are anaerobic processes and that oxidation is concerned only with the phenomena of recuperation. It has been said that Fletcher's soul was not fuliy and entirely satisfied by the strivings and triumphs of laboratory toil and that he sought a wider arena in which his intellectual versatility and his flair for managing might have full play. Possibly he felt that after 18 years' devotion to one single problem of high physiological importance, he could safely say that he had rounded it off quite satisfactorily according to his lights and that he might now pass on the burden of its further pursuit to workers of other disciplines, biophysics, molecular physics, enzyme chemistry and what not. The call came to him on July 1st, 1914, to take up the duties of Secretary of the Medical Research Committee founded in 1913 as part of the provisions of the National Insurance Act of 1911. From the wide scope of the Committee's reference, and its own views with regard to the extension of the term "Medical Research" as part of a national scheme, it was quite clear that, in the search for the ideal secretary, no ordinary person of narrow views and interests was likely to be successful in guiding its destiny. Fletcher proved himself no ordinary person. This is how the Committee outlined their conception of research. "The object of the research is the extension of new knowledge with the view of increasing our powers of preserving health and preventing or combating disease. But otherwise than that this is to be the guiding aim, the actual field of research is not limited and is to be wide enough to include, so far as may from time to time be found desirable, all researches bearing on health and disease whether or not such researches have any direct or immediate bearing on any particular disease or class of diseases provided that they are judged to be useful in promoting the attainment of the above object." How well Fletcher and his Committee of changing personnel succeeded in translating into administrative practice the wide conception of research contained in this carefully drafted statement and how deftly he defended, when necessity arose, the more subtle and perhaps not too readily appreciated implications of its later phrases, are matters of history. It is the history in fact of a highly fertile period of medical research in this country and the empire, which owes much of its success to Fletcher's gifts of co-ordination and the personal and friendly terms on which he invariably met the numerous workers and grantees in the vast organisation of which he held the threads. This is not the place to record in detail the landmarks of Fletcher's 18 years' secretaryship-the pooling of the forces he wielded, at the very outset of his career, to meet the medical emergencies of war, the happily engineered emergence of the Medical Research Committee as the Medical Research Council with a new Charter and holding office with greater freedom and responsibility under the Privy Council, the centralisation at the National Institute, Hampstead, of

a permanent nucleus of experts in many fields of medical enquiry, and, as the years passed, the numerous opportunities seized by Fletcher to promote his one great ambition, to see the health of man and beast cared for and studied not only as a national and imperial charge but as the natural and fitting obligation of every right-thinking individual. One may fittingly refer here, however, to his many efforts in the cause of biochemical research and pay tribute to his many successful interventions in securing financial help for what are now active centres of research not only in biochemistry but also in nutritional studies. These centres have greatly enriched the resources at the Empire's disposal for attacking effectively the many problems that concern the health of its human and animal populations. Nutrition studies and all that these imply were very dear to Fletcher. Possibly the last reasoned article from his facile pen was a contribution to the new journal, Nutrition Abstracts and Reviews (1932), on the urgency of nutritional studies. There, in commending the new journal to its readers, he referred to the range and variety of interests served by advances in nutritional science and to the fact that no visible limits can be set to them. A perusal of the table of contents of any number of this new journal is indeed sufficient to indicate the far-reaching character of nutrition problems and goes far to establish a real truth underlying the adage "Der Mensch ist was er isst." Fletcher in his role of the complete advocate would have added "and

beast too." By his very position Fletcher could feel the pulse of medical progress at many points and generally with much acumen. So far as biochemical and nutritional science is concerned, its devotees owe him much for the sympathetic and always helpful interest he invariably took in their special problems. Lastly, a glimpse of Fletcher in the midst of his daily office routine, interviewing friends and strangers, arranging committees and often presiding over them, translating draft reports, resolutions and preambles into the excellent English on which he justly prided himself and through it all, striving to secure action and effective action. It has amazed me to watch him preside, it might be, over a conference on poliomyelitis and to see him display his wonderful flair for ordered discussion and his real understanding of the subject in hand. His versatility was not that of the briefed barrister. Truly Fletcher's scientific discipline stood him well. Eighteen annual reports of his Council will inform the medical historian of the future what Fletcher did and what he strove to do to further the work and influence of an organisation which has abundantly justified its national character, but, without their aid, his memory will long remain green in the hearts of those who knew and loved and admired him. J. C. G. L.

https://www.theguardian.com/science/the-h-word/2013/jul/08/influenza-virus-discovery-mrc-nimr

2013-07-08-the-guardian-80-yrs-ago-mrc-researchers-discover-viral-case-of-flu

80 years ago today: MRC researchers discover viral cause of flu

Forget bird flu and swine flu, it was ferret flu and *The Field* magazine that helped MRC scientists discover the influenza virus, after eleven years of dedicated research.

Long term programmes and dedicated researchers: Mr Dennis Busby was one of the youngest recruits to the flu research programme, starting as a lab technician for the NIMR in 1934, aged just 15. Pictured here in 1969, and in 2013 at the MRC's centenary celebrations. Picture courtesy of the Archives of the NIMR at Mill Hill (c) 2013 and Mr Busby.

Michael Bresalier

Mon 8 Jul 2013 02.30 EDT

In the spring of 1933 a team of Medical Research Council (MRC) staff gathered nasal fluids and throat garglings from a sick researcher, filtered them, and dripped them into ferrets. Within forty-eight hours the ferrets would start sneezing and displaying signs of an influenza-like disease. This research formed the basis of an extraordinarily important *Lancet* paper by Wilson Smith, Christopher H Andrewes and Patrick Laidlaw, published on 8 July 1933, identifying a 'virus' as the primary causative agent for influenza. This was no serendipitous finding, but the result of a sustained campaign of funding and research.

The 1918-9 influenza pandemic and virus research

The 1918-19 influenza pandemic challenged ideas about influenza, as at the time most microbiologists believed that influenza was caused by a bacteria. But during the pandemic, pathologists failed to consistently find the bacillus. This undermined claims about its primary role and jeopardised the prospect of producing a vaccine.

Walter Morley Fletcher, Secretary of the MRC, suggested to the War Office and Army Medical Services that attention should be turned to the possible role of a so-called 'filter-passing virus', and in November 1918 the search for the virus began. The first British investigations into the role of a virus in influenza were carried out by two teams in France and within weeks both claimed they had identified a filterable agent from sick servicemen.

These findings were controversial - there was no test for a virus, so its presence had to be inferred: it could not be seen with light microscopes, retained by bacterial filters or studied using culture methods. Only the presence of symptoms, and traces in serological tests suggested any 'thing' was present in infected people (and animals).

In the summer of 1922 Laidlaw was recruited to the MRC's National Institute of Medical Research (NIMR) to develop a project on "diseases probably caused by filter-passing organisms." Although such organisms had been identified as the probable causes of many infectious diseases they had eluded standard laboratory techniques, so new methods had to be developed using 'model' diseases in animals. Canine distemper was selected as the model for influenza, and for over a decade Laidlaw and the resident veterinary pathologist, G. W. Dunkin, used distemper to build virus research at the Institute.

The Distemper Experience

The research attracted some powerful patrons. *The Field*, a country and field sports magazine, already had a Distemper fund to finance work on the disease, and in October 1922 *The Field*'s editor, Sir Theodore Crooke, proposed to Fletcher that the fund should be devoted to supporting Laidlaw and Dunkin.

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This money enabled the MRC to develop new laboratories on a forty-acre agricultural site at Mill Hill , which included space to breed and house dogs, as well as a laboratory and isolation/quarantine unit. Until 1924, Laidlaw and Dunkin used puppies bred at Mill Hill to experiment on distemper, but dogs were not ideal experimental animals. Dogs presented an awkwardly variable clinical picture, they were expensive and slow to breed, sometimes hard to handle, and attracted vociferous antivivisection protests. So in late 1924, they introduced the ferret as a new experimental animal, marking the start of a long scientific

attracted vociferous antivivisection protests. So in late 1924, they introduced the ferret as a new experimental animal, marking the start of a long scientific career.

Laidlaw and Dunkin attributed much of their success on distemper to their work with the ferret; they developed an experimental vaccine for ferret distemper in 1926, then modified for dogs in 1927. Burroughs-Wellcome started commercial production in 1928, and by 1931 the vaccine was protecting the nation's dogs. This scientific and commercial success legitimised the NIMR's approach to virus diseases. Its primary goal became virus identification and control through the production of serological assays, therapeutic sera, and vaccines.

New interest in applying this approach to influenza was sparked in 1931, when the American researcher, Richard E. Shope announced that a combination of a bacillus and a filterable virus produced a disease in pigs – 'hog flu' – analogous to human influenza.

Ferret Flu

In late 1932 the MRC decided to concentrate on influenza, placing the research under Laidlaw's control, with experienced virus researchers Smith and Andrewes. At the time, the main obstacle for virus researchers was that they lacked a viable experimental animal to study influenza. Solving this problem was the team's first task.

Through January 1933 they tested nasal and lung material taken from influenza patients on rats, mice, guinea pigs, monkeys, pigs and horses. These efforts failed. They then turned to the ferrets at Mill Hill. **In early February 1933, Smith dripped ("instilled") filtered nasal and throat garglings taken from Andrewes, who had himself caught influenza, into the noses of two ferrets. Unfortunately, before Smith could isolate the virus a distemper out-break destroyed the experiment. By chance, Smith himself caught influenza on 4 March, and this time Andrewes used his throat garglings and his instillation method to infect some ferrets.**

They quickly identified the infecting agent as a virus on the basis that it was filterable, invisible, and not cultivable, but still produced disease in the animal. They named it "W.S." and it became the NIMR's master strain. Through spring 1933, they traced "the full course of [the] illness" in 64 ferrets, noting the analogies of "ferret flu" to human influenza. They were now able to develop a serological test showing that recovered ferrets had antibodies which inhibited the disease, an important piece of evidence in establishing the identity and role of the virus. With this test it was possible to trace neutralising antibodies in sick and healthy Londoners, and thus determine the presence of the virus in the human population. **At the same time, they compared their virus antibodies with those identified by Shope in hog flu,** to show that their virus specifically produced human influenza.

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Smith, Andrewes and Laidlaw made a cautious claim in their report to the Lancet that,

> the evidence strongly suggests that there is a virus element in epidemic influenza, and we believe that the virus is of great importance in the aetiology of the human disease.

The report caused a minor media sensation. The Lancet editorialized that it "offered almost conclusive evidence that the primary cause of human influenza is a filterable virus."

Within the year, researchers in other parts of the world confirmed the research. In 1934 mice began to be used in research, followed in 1940 by the developing chick egg, but the ferret and the virus model have become integral to new ways of understanding and controlling influenza. Experimental vaccines were produced in 1936 by Smith, Andrewes and Charles Herbert Stuart-Harris, and in 1947 the NIMR was designated as the World Influenza Centre of the World Health Organization. Work on the 'flu virus also spawned unexpected findings, such as the discovery of Interferon – a protein associated with immune responses – by NIMR researchers Alick Isaacs and Jean Lindenmann in 1957.

The NIMR's success came so quickly only because so much had been put in place in the previous decade. The experience of the 1918-19 pandemic and the MRC's development of virus research created the conditions for the success of 1933. The story is a reminder of the crucial role of the MRC and government-supported research in spurring scientific innovation through sustained funding.

Michael Bresalier is a historian of medicine at Imperial College London. His forthcoming book, "Making Flu: British Medical Science and the Definition of a Virus Disease", will be published by Palgrave. You can read more about his work on influenza and viruses here

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Dr. Simon Flexner (born 1863)

Wikipedia Simon Flexner

Born March 25, 1863 in Louisville, Kentucky [HK006E][GDrive]

Died May 2, 1946 (aged 83) in New York, NY [HK006E][GDrive]

Siblings include :

- **Bernard Flexner (born 1865)** ("A founder of the Council on Foreign Relationships, prominent member of the Zionist Organization of America, one of the founders of the Palestine Economic Corporation (PEC)" - [HK006G][GDrive])
- **Abraham Flexner (born 1866)** (Education reformer; Flexner Report;)

Associated with

- **Dr. Hideyo Noguchi (born 1876)** (Dr. Noguchi was a lab assistant for Dr. Simon Flexner)
- **Dr. Paul Adin Lewis (born 1879)** - ("With [Dr. Simon Flexner (born 1863)] in 1910, Lewis discovered via a series of experiments that poliomyelitis is caused by a virus, the virus can be transmitted between monkeys, and exposure makes survivors immune to reinfection. These discoveries helped pave the way for development of a polio vaccine in 1955") ... [HK005L][GDrive]
- **Dr. Theobald Smith (born 1859)** - (see [HW005Z][GDrive] *"Theobald Smith's acknowledged leadership in this field and his unmatched reputation for productive research led early in 1914 to an invitation from [**Dr. Simon Flexner (born 1863)**], director of the Rockefeller Institute for Medical Research, to head the newly endowed department of animal pathology to be established at Princeton, N.J.."*)
- **Dr. William Henry Welch (born 1850)** - (Dr. Simon Flexner was a resident of Dr. Welch at johns Hopkins - Welch ultimately referred/introduced Simon Flexer to the Rockefellers who were creating the Rockefeller institute of Research)

Saved Wikipedia (Mar 10 2021) - "Simon Flexner"

Source : [HK006E][GDrive]

- 1st Director of Rockefeller Institute
  - In office 1901–1935
  - Succeeded by Herbert Spencer Gasser
- Lived in (Residence) - New York, NY
- Alma mater University of Louisville
- Awards Cameron Prize of the University of Edinburgh (1911)
- Scientific career
  - Fields : Physician, medical educator, and experimental pathologist
  - Institutions Johns Hopkins University; Rockefeller Institute; Oxford University (UK)
  - Doctoral students John D. Rockefeller, Jr.

Simon Flexner, M.D. ForMemRS[1] (March 25, 1863 in Louisville, Kentucky – May 2, 1946) was a physician, scientist, administrator, and professor of experimental pathology at the University of Pennsylvania (1899–1903). He served as the first director of the Rockefeller Institute for Medical Research (1901–1935) (later developed as Rockefeller University) and a trustee of the Rockefeller Foundation. He was also a friend and adviser to John D. Rockefeller Jr..

Among Flexner's most important achievements are studies into poliomyelitis and the development of serum treatment for meningitis. Among his lab assistants were Hideyo Noguchi and Cornelius Rhoads, later directors of Memorial Hospital and the Sloan-Kettering Institute, respectively.

The bacteria species Shigella flexneri was named in recognition of Flexner.[2][3] In addition, Flexner was the first to describe Flexner-Wintersteiner rosettes, a characteristic finding in retinoblastoma, a type of cancer.

Early life and career

Simon was born in Louisville, Kentucky, to Moritz (Morris) Flexner, an immigrant from Neumark, Bohemia, via several years in Strasbourg, France; and Esther from Roden, Germany. He was the fourth son of seven in a large family of nine children: Jacob Flexner, Henry, and Isadore; then Simon, followed by Bernard Flexner, Abraham Flexner, and Washington. The two sisters Mary and Gertrude were the youngest. Jacob became a pharmacist and physician; Bernard became a Zionist leader, and Abraham became an educator, eventually influencing the direction of medical education in the United States.[4]

Simon first gained a degree from the Louisville College of Pharmacy and worked with his brother Jacob for eight years.[4]

Medical school and career

He returned to college, getting his medical degree from Louisville Medical College in 1889. He did postgraduate work in pathology at Johns Hopkins University Medical School, and started teaching there. By 1899, he was a professor of pathology at the University of Pennsylvania.[4]

Flexner was elected to the American Philosophical Society in 1901.[5]

He taught at Penn until 1903, but was called to the Rockefeller Institute for Medical Research (later Rockefeller University), where he started serving as its first director in 1901.[6] He managed the research institute until 1935. Through this affiliation and related work, he came to know the philanthropist John D. Rockefeller, who supported research and basic medical care.

In December 1907 Flexner declared in a reading of his paper on "Tendencies in Pathology" in the University of Chicago that it would be possible in the then-future for diseased human organs substitution for healthy ones by surgery—including arteries, stomach, kidneys and heart.[7] These previsions became reality in the second half of the 20th century.

The institute had a long relationship with the government of Puerto Rico, conducting research and working on health issues there, such as anemia (caused by hookworm and tropical sprue), as well as polio and a variety of diseases.[citation needed]

In 1911, Flexner was awarded the Cameron Prize for Therapeutics of the University of Edinburgh.

Marriage and family

Simon Flexner married Helen Thomas (later professor of English) and had a family. His son James Thomas Flexner became a prolific writer; one of his works was an extensive biography of George Washington.

Dr. Flexner died in May 1946 in New York City, from a myocardial infarction (heart attack). He was 83 years old. His papers are currently housed at the American Philosophical Society[8] and the Becker Medical Library at the Washington University School of Medicine.[9]

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External links

- "Simon Flexner"[dead link], American Philosophical Society

1987 - Rockefeller University Digital Commons @ RU Rockefeller University Research Profiles Campus Publications Summer 1987 Dr. Simon Flexner 's Experiment: M. S. Kaplan

PDF : [HE004Q][GDrive]

THE ROCKEFELLER UNIVERSITY

RESEARCH PROFILES

SUMMER 1987

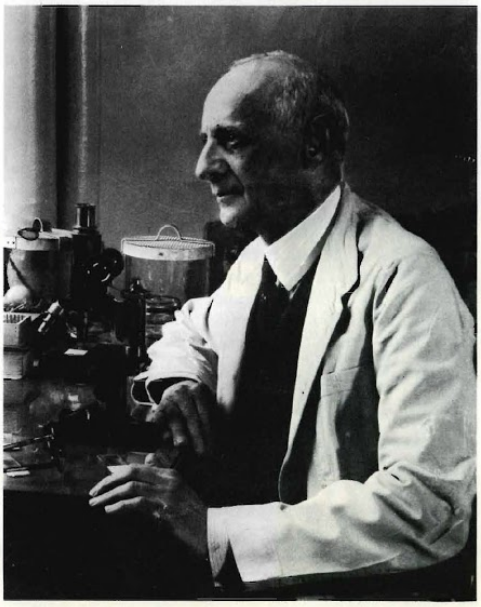
What is now proved
was once only imagin'd
—WILLIAM BLAKE

Dr. Flexner's Experiment

When Simon Flexner retired in 1935 as the first director of The Rockefeller Institute for Medical Research, his colleagues wanted to organize a testimonial in his honor. But Flexner, in keeping with his characteristic reserve, politely declined. He had been director for thirty-three years, during which time the Institute had grown from a handful of scientists working in rented quarters to a world-renowned research center. As he passed through its gates for the last time, he left behind, on its library shelves, the most durable and eloquent tribute to his career: one hundred bound volumes containing the reports of the scientists whose research he had guided, encouraged, and nurtured.

Within the pages of the volumes were his own considerable contributions to the understanding of meningitis and polio, Hideyo Noguchi's studies of syphilis, Peyton Rous's demonstrations of virus-caused cancer, Karl Landsteiner's discovery of the Rh factor, Eugene Opie's descriptions of the process of inflammation, and the research on pneumonia that culminated in Oswald Avery's identification of DNA as the material of the genes.

With this issue, *Research Profiles* introduces what will be an occasional glance backward at the history of The Rockefeller Institute for Medical Research, now The Rockefeller University, as exemplified by some of its most remarkable figures. We begin, appropriately, with Simon Flexner.



Simon Flexner, 1863-1946

First board of directors. From left, T. Mitchell Prudden, Christian A. Herter, L. Emmett Holt, Simon Flexner, William H. Welch, Hermann M. Biggs, and Theobald Smith.

Page 1 above : [HE004R][GDrive]

When Simon Flexner retired in 1935 as the first director of The Rockefeller Institute for Medical Research, his colleagues wanted to organize a testimonial in his honor. But Flexner, in keeping with his characteristic reserve, politely declined. He had been director for thirty-three years, during which time the Institute had grown from a handful of scientists working in rented quarters to a world-renowned research center. As he passed through its gates for rhe last time,· he left behind, on its library shelves, the most durable and eloquent tribute to his career: one hundred bound volumes containing the reports of the scientists whose research he had guided, encouraged, and nurtured.

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"AM I THE MAN FOR THE PLACE?"

The idea for an institute for medical research was first proposed to oil magnate John D. Rockefeller by his confidential advisor, Frederick T. Gates. During his early years as a clergyman, visiting the sick and dying, Gates had had ample opportunity to see at first hand how ineffective was the medicine of the time. By the late nineteenth century, with the discovery that microbes cause infectious disease, a true medical science was beginning to emerge in such places as the Pasteur Institute, in Paris, and the Koch Institute, in Berlin. No such institutes existed in the United States. **Gates's vision of an American institute comparable to the great research centers of Europe was shared by John D. Rockefeller, Jr., who was instrumental in organizing The Rockefeller Institute's first board of directors and acted as an intermediary between the board and his father.**

The first choice for the position of director was not Simon Flexner but the distinguished animal pathologist Theobald Smith. To no one's great surprise, Smith declined to leave his post at Harvard. When the board approached Flexner, he, too, was not sure he wanted the job. Two years earlier, he had been appointed director of pathology at the University of Pennsylvania School of Medicine. At the age of thirty-eight, he was on the faculty of the nation's oldest medical school in the most prestigious position a pathologist could hope for. Also, he was skeptical as to whether the proposed institute could be successfully established with a benefactor who was proceeding so cautiously it seemed his support might vanish at any moment.

Flexner had doubts as well about his own competence to lead such an endeavor. For within the mind of the accomplished scientist lingered memories of the unpromising boy he had been growing up in Louisville, Kentucky. (When he was ten, his delinquency so worried his parents that his father, an immigrant Jewish peddler, arranged a private tour of the town jail as a warning to his son of where he would end up if he did not change his ways.) He had dropped out of school in the eighth grade, and until he fell victim, at sixteen, to typhoid fever, he had drifted from one menial job to another.

His nearly fatal illness and long convalescence transformed the indolent adolescent. As he himself expressed it, "I appear to have become wide awake almost at once." From a job as a drugstore apprentice he went on to earn a degree, with highest grades, at the Louisville College of Pharmacy and was soon sharing ownership of a drugstore with one of his brothers.

Greater achievements followed, but he never completely conquered his early sense of inadequacy. All his life he remained shy and reticent, unsure of his capabilities. Writing to a friend for advice as to whether or not to take the Rockefeller post, he wondered, ':Am I the man for the place? Have I the originality to keep it going?"

Also in need of assurances was the man being asked to bankroll this experiment in scientific philanthropy. An institute devoted entirely to laboratory science

Also in need of assurances was the man being asked to bankroll this experiment in scientific philanthropy. An institute devoted entirely to laboratory science was, after all, an unproven concept in the United States, regarded even by members of the medical establishment with suspicion. At that point, Rockefeller was prepared to give twenty thousand dollars a year for ten years, a sum just enough for the board to begin moving ahead by small steps.

The first question the board pondered was whether there were enough able scientists to fill an institute. To find out, they provided funds to support young researchers working in existing medical school laboratories. The papers that followed convinced them there was no lack of talent.

Since Rockefeller had asserted that his primary interest in research was humanitarian rather than scientific, the board also allotted part of the first year's budget to an immediate medical problem. Infant illness and death from dysentery were widespread in New York, as in other large cities. Researchers enlisted by the Institute began an investigation that quickly demonstrated an alarmingly high level of bacterial contamination in the milk sold from open cans to tenement dwellers. Before the study was officially submitted, the Board of Health had issued rigorous new regulations for milk inspection and the dysentery epidemics in New York halted.

The practical value of medical research had been demonstrated, as well as the existence of sufficient expertise to carry it forward. But what finally decided the matter was news that rival industrialist Andrew Carnegie was planning his own philanthropic enterprise. On June 13, 1902, John D. Rockefeller donated one million dollars to The Rockefeller Institute for Medical Research. The next day, Simon Flexner accepted its directorship.

"GIVE THEM PERFECT FREEDOM"

Since his formal employment was not to start until the following year, Flexner used the intervening months to visit research institutes in Europe and meet .with prominent scientists in order to clarify his ideas. It was from Anton Dohrn of the Naples Zoological Society that he received the most pointed advice. "Men work here in a dozen different branches of biological science," Dohrn told him. "Can I be an authority on them all? No, no. Give them perfect freedom. Let them search where and how they will. Help in every way you can, but. do not pretend to be master of them.... Unless you permit workers in the medical institute to make perfect fools of themselves," he warned Flexner, "you will make no great discoveries."

It was a point of view consonant with Flexner's own development. Tending the pharmacy in Louisville, he had taught himself to use a microscope, and without books or teacher, with only tissue specimens given him by local doCtors, had mastered the basics of histology and pathology. His self-directed approach changed little when he entered the scientific community.

In 1893, the Johns Hopkins University, in Baltimore, had established a medical school with research laboratories that quickly become famous as a proving ground for young physicians interested in pursuing medicine as a science. The teaching staff, as Flexner learned, placed strong emphasis on independent investigation. It seemed to him the ideal place to expand his knowledge. But to become eligible to study pathology at Hopkins, he needed an M.D. degree.

Such a requirement was easier to fulfill then than now. Medical schools in those days were by and large spurious affairs, little more than trade schools in which instruction typically consisted of rote lectures delivered by practitioners turned part-time "professors" in return for a share of the students' fees. (It was this system of medical education that Simon's brother Abraham was to criticize harshly in the now famous "Flexner Report" of 1910. The impact of the report closed hundreds of medical schools and impelled those that remained to upgrade their methods.) **Simon Flexner received a medical degree in Louisville without ever having performed a physical examination.**

In September of 1890, with five hundred dollars lent him by his brother Abraham, he arrived in Baltimore.

The pathology department at Hopkins was headed by [Dr. William Henry Welch (born 1850)], whose idiosyncratic and freewheeling style suited Flexner perfectly. After brief lectures, the students were given tissue sections to stain, mount, and study. Welch moved among them, sometimes discussing what they were seeing under the microscope, but for the most part leaving them to puzzle out problems for themselves. The result was a harvest of original research, including a major finding by Flexner.

The lecture topic of the day had been diphtheria. Dr. William Henry Welch (born 1850)] had explained that Friedrich Loeffler, the discoverer of the diphtheria bacillus, had been unable to confirm a report of diphtheria lesions in lymphoid glands. After the lecture, Flexner decided to try the experiment on his own. Obtaining an infected guinea pig, he removed the lymphoid glands, took a cutting, and mounted it. As he turned the knobs of the microscope, the image sharpened. With a shock of surprise, he saw the lesions.

The significance of this, his first major discovery, was twofold: it confirmed Loeffler's bacillus, which had been under dispute for years, and it solved a controversy concerning whether the disease was local or constitutional in origin. (Flexner showed that the bacilli proliferated only at the point of infection and then produced a poison that passed into the body.) Flexner became Welch's favorite student, and when a position became available as Welch's assistant, he got the job.

Although Flexner often commented that he had consciously modeled himself after Dr. William Henry Welch (born 1850)], the two men could not have been more different. Flexner was punctilious to details; Welch's rooms were cluttered with books, papers, and unread manuscripts. Flexner was self-contained, soft-spoken, and slightly built; Welch was rotund, gregarious, fond of cheap cigars, amusement park rides, and baseball. A Baltimore Orioles fan, he could be found regularly at the ballpark on summer afternoons correcting proofs of The Journal of Experimental Medicine between innings. Their differences notwithstanding, the two men, working together, redirected pathology training at Hopkins from the traditional style of reading, listening, and memorizing to that of seeing and doing. Welch served on the board of scientific advisors of The Rockefeller Institute for thirty-two years.

FINDING THE BEST

The initial staff Flexner recruited for The Rockefeller Institute for Medical Research began work in 1904 in a converted three-storey apartment building on Lexington Avenue and 50th Street in Manhattan. Until the Institute could prove itself, established investigators and those with promise could not be expected to be easily wooed from university positions. Flexner's mission was to convince them to take a chance on the future of the fledgling institution.

Samuel Meltzer was one of the men Flexner doubted would accept his invitation. At fifty-three, Meltzer had long before distinguished himself as a pathologist in his native Germany. Because, as a Jew, he could not hope for a university chair there, he had come to New York and had been supporting his research with a medical practice. Flexner could offer only a half-time job. Meltzer responded, "I have always paid laboratories to be permitted to work in them; now you propose to pay me to work. Of course I will come."

The group was soon joined by Phoebus Aaron Theodor Levene, a Russian-born chemist who had studied in the prestigious laboratory of Emil Fischer in Berlin. Flexner showed courage in taking him on, for Levene had recently spent more than two years nursing a tubercular lung. -

Flexner also invited his former protege from the University of Pennsylvania, [Dr. Hideyo Noguchi (born 1876)]. A rice farmer's son from Japan, Noguchi

had put himself through medical school and in 1899 traveled halfway across the world to present himself, with twenty dollars in his pocket, on the doorstep of "the great Dr. Flexner." **Under Flexner's guidance, Noguchi became a master microbiologist and pathologist.** Among his achievements, he was the first to demonstrate that paresis resulted from syphilis and to grow pure cultures of the syphilis spirochetes. (At Pennsylvania, he had begun studies on the effects of snake venom on red blood cells. He continued these investigations at Rockefeller, keeping live rattlers in dry-goods boxes to the consternation of his colleagues and the delight of newspaper reporters.)

His dream was to conquer yellow fever. The agent of yellow fever is a virus, and very little was then understood about viruses. In 1928, he died of the disease, contracted in Africa', where he had journeyed at the height of an epidemic, still hoping to solve its mystery. By the time of his death, he had attained world recognition. In his native country, half a century later, his name retains its heroic stature and The Rockefeller a special esteem.

In pursuit of the best, Flexner recognized no boundary of race, religion, nationality, or sex, not a policy common to all institutions in those days. And he selected his staff to represent the broadest base of scientific inquiry, making no attempt to fashion the Institute after his own particular interests. Nor did he press for immediate results. But while publicly asserting that "there is no royal road to discovery," privately he harbored doubts. "The first years," he later confessed, "were nervous ones for all concerned." He felt pressed to deliver himself some important and highly visible result.

The opportunity soon presented itself in the form of an epidemic of cerebrospinal meningitis that struck New York in 1904. Before it was done, it had claimed three thousand lives. Flexner had studied the disease at Hopkins and was well-acquainted with the bacterium that inflamed the brain and spinal cord membranes of its victims. He took up the challenge again.

Investigators in Europe and at the Board of Health laboratories in New York had developed a serum that raised antibodies to the bacterium but failed to stop the course of the disease. Flexner struggled with the problem without success until he was inspired to try a novel mode of inoculation.

Instead of injeCting the serum under the skin, which was the usual procedure, he injected it directly into the spinal canal at the site of inflamed membranes. After successful trials with laboratory animals, this method was used with human patients during a meningitis outbreak in Ohio in 1907. Of those thus treated, three in four survived, as opposed to one in four in previous epidemics.

For a number of years, Flexner personally supervised the manufacture of the Flexner serum, as it came to be known. In one twelve-month period the Institute distributed seven thousand bottles. Although results were not always as impressive as in Ohio, the serum remained the only means for reducing deaths from meningitis until the advent of antibiotics.

During those years, Flexner also conducted some of the earliest studies of polio, discovering, among other things, its viral origins and its mode of transmission. His work provided what Jonas Salk later called the "conceptual framework" for the development of polio vaccines.

In 1906, The Rockefeller Institute moved to its permanent home on York Avenue and 66th Street. In 1910, it opened the first hospital in the country devoted solely to clinical research. At the Rockefeller Hospital, long before his DNA discovery, Oswald Avery explored the mechanisms of pneumonic infection and developed the first effeCtive treatment for it, and Rebecca Lancefield classified the bacteria responsible for human streptococcal infection. A laboratory of animal and plant pathology was established in 1914, in Princeton, New Jersey, where, John Northrop and Wendell Stanley conducted enzyme research that led to a Nobel Prize in 1946.

During the First World War, the Institute ran a War Demonstration Hospital on its grounds to teach surgical methods to medical officers. Among its instructors was Alexis Carrel, whose surgical innovations had won him, in 1912, the first Nobel Prize in Medicine awarded in the United States and the first of the nineteen Nobel Prizes that would come to scientists associated with The Rockefeller. During this period, Peyton Rous, who would receive a Nobel Prize in 1966 for his discovery of a cancer virus, developed a method for preserving whole blood for use in transfusion, a vitally important technique for military medicine.

If Flexner found the task of choosing a staff "a difficult and often dubious and baffling undertaking," others were often baffled by his choices. Board member Theobald Smith questioned the appointment of the German physiologist Jacques Loeb. What, Smith asked, did physical chemistry have to do with curing disease? But Loeb, whose demonstration of chemically induced parthenogenesis in sea urchins and frogs had astonished the scientific world, believed that physical chemistry would eventually explain all biological phenomena. The so-called mechanistic theory of life was his religion and he preached it in laboratory and lunchroom.

At the other end of the spectrum, the Frenchman Carrel, ardent Catholic and mystic, who claimed to have had a heavenly vision at Lourdes, tried the director's devotion to "perfect freedom" in other ways. Beyond creating his own miracles of technique, from the suturing of minute blood vessels to new methods for cell and organ cultivation, Carrel's imagination led him in many directions. Observing that cancer rates varied widely from one geographical area to another, he hypothesized that diet played a role, a notion considerably ahead of its time. To test it, he convinced Flexner to build him a "mousery," a huge glass-roofed, air-conditioned labyrinth on the top floor of the Institute's powerhouse. At its peak population, it housed fifty-five thousand mice. The mousery ended in mystery, its appropriations terminated without explanation, Carrel's voluminous records undecipherable. As Dorhn had foreseen, freedom was a philosophy that necessarily combined spectacular success with frequent failure.

THE MAP OF TIME

Simon Flexner achieved the hope he had expressed early in his tenure of putting the work of The Rockefeller Institute on "the map of time." His special genius resided in his respect for individuality and his understanding of the scientific temperament. Juggling administrative minutiae and budget ledgers, he was always sensitive to how demanding, lonely, and heartbreaking the research life could be. Over thirty-three years, more than one scientist would emerge from the director's office strengthened against despair. "I did not think yesterday morning my nerves could stand the strain much longer," Phoebus Levene wrote to Flexner. "I left your room after our little interview cured and happy."

"Such men," Flexner observed, "when numerously assembled under one roof, may give rise to situations which tax somewhat the administrative staff; but it appears nevertheless that with the high purpose mutually understood and appreciated and the exercise of a fair amount of human wisdom and tact, such a temperamental team is capable of working in close contact and with mutual respect and helpfulness."

Once, in a letter to his future wife, Flexner wrote about a day in the laboratory when a number of his group were "working merrily" and of how he "caught the spirit and puttered among some embers of studies." Suddenly, he observed something through the microscope he had not seen before. "Nature is a tantalizing mistress," the letter concludes, "and gives her fruits only at particular seasons, when the spirit is on her-and you."

The cultivation of that spirit, which continues to guide the work of The Rockefeller University, was Dr. Flexner's greatest experiment and his legacy to science.

science.

Bernard Flexner (born 1865)

Wikipedia Bernard Flexner

Siblings include :

- **Dr. Simon Flexner (born 1863)** (Friend and adviser to John D. Rockefeller Jr.. , first director of the Rockefeller Institute for Medical Research (1901–1935))
- **Abraham Flexner (born 1866)** (Education reformer; Flexner Report;)

"A founder of the Council on Foreign Relationships, prominent member of the Zionist Organization of America, one of the founders of the Palestine Economic Corporation (PEC)" - [HK006G][GDrive]

ASSOCIATIONS

- With (**Alexander Sachs (born 1892)**) - https://louisville.edu/law/library/special-collections/the-louis-d.-brandeis-collection/reel-85-zionism-palestine-1920-1922

https://www.journals.uchicago.edu/doi/abs/10.1086/635300?journalCode=ssr

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May 4, 1945 - NYTimes, obituary :{ BERNARD FLEXNER, JEWISH LEADER, 80; First President of Palestine Economic Corporation Dies

Social Welfare Figure One of Three Famous Brothers Organized Palestine Corporation Aided Studies of Juvenile Courts

Source : [HN01L1][GDrive]

"Bernard Flexner, who played a leading role in the development of Palestine as an organizer and was the first president of the Palestine Economic Corporation, died early yesterday after a brief illness at the Harkness Pavilion of the Columbia-Presbyterian Medical Center. He was 80 years old."

BERNARD FLEXNER, JEWISH LEADER, 80

First President of Palestine Economic Corporation Dies—Social Welfare Figure

Bernard Flexner, who played a leading role in the development of Palestine as an organizer and was the first president of the Palestine Economic Corporation, died early yesterday after a brief illness at the Harkness Pavilion of the Columbia-Presbyterian Medical Center. He was 80 years old.

Mr. Flexner, who resided at 1000 Park Avenue with his sister, Miss Mary Flexner, was elected president of the Palestine Economic Corporation when it was organized in 1925, and later became chairman of its board of directors.

He held this office until last year, when he requested that a younger man undertake the planning of a post-war program. He was then elected chairman emeritus and Robert Szold became chairman of the board.

Surviving Mr. Flexner also are another sister, Mrs. Julius L. Baldauf, and two brothers, Dr. Simon Flexner, formerly of the Rockefeller Institute for Medical Research, and Dr. Abraham Flexner, formerly director of the Institute for Advanced Study at Princeton University.

One of Three Famous Brothers

Mr. Flexner was one of three distinguished sons of Morris Flexner and the former Esther Abraham, and was born in Louisville, Ky., on Feb. 24, 1865.

He attended Louisville public schools, received a Bachelor of Laws degree at the University of Louisville, studied subsequently in the Law Department of the University of Virginia and was admitted to the bar in Kentucky in 1898. In practice since then, he moved to Chicago in 1911 and to this city eight years later.

BERNARD FLEXNER
© Bachrach

His first post in social welfare was as chairman of the Juvenile Court Board of Jefferson County (Louisville), which he held from 1906 to 1911. Three years later he was appointed by the United States Attorney General to head a special committee to study the need for legislation affecting children in the District of Columbia.

Before and during the World War Mr. Flexner served on the Kentucky Board of Tuberculosis Commissioners and was a member of the American Red Cross Commission to Rumania in July, 1917. At the Paris Peace Conference he was counsel to the Zionist delegation.

While serving with the Red Cross in Rumania and Poland, Mr. Flexner became convinced that resettlement in Palestine provided the best solution for the Jewish people. He learned of the Balfour Declaration on Palestine when returning to America by way of Siberia, and when he settled in Chicago he became active in the Zionist Organization of America. In 1920 he accompanied the late Supreme Court Justice Louis D. Brandeis to the World Zionist Conference in London.

Organized Palestine Corporation

His interest in the condition of post-war Jewry occupied Mr. Flexner extensively. In 1925 he organized the Palestine Economic Corporation, the group with which he was most closely associated in Jewish affairs. Shortly after the group came into existence the American Palestine Company was merged with it, transferring to the new body more than $1,000,000 worth of subscriptions. Associated with Mr. Flexner in this major project to extend credits and in other ways to promote industry and commerce in Palestine were Felix M. Warburg, Louis Marshall and Herbert H. Lehman.

Mr. Flexner was president of the corporation until 1931. One of the organization's major activities early in its career was the financing of the hydroelectric station on the Jordan River and of the transmission lines to power stations at Tel Aviv, Haifa and Tiberias.

In 1928 Mr. Flexner founded the Abraham Flexner Lectureship in Medicine at Vanderbilt University and the Mary Flexner Lectureship on Humanities at Bryn Mawr College. The latter was in honor of his sister, a graduate of Bryn Mawr.

Aided Studies of Juvenile Courts

Mr. Flexner continued to be known primarily as a lawyer and as head of the Palestine Economic Corporation, but his interest in juvenile welfare never flagged. He had collaborated on studies of juvenile courts with R. N. Baldwin and Reuben Oppenheimer and, in 1929, with the latter and Katharine F. Lenroot of the Federal Children's Bureau, he prepared a report urging domestic relations clinics staffed by psychologists, psychiatrists and social investigators.

Late in 1930 Mr. Flexner was appointed, with Dr. Cyrus Adler, Morris Rothenberg and Robert Szold, to a provisional committee of four to act on behalf of American members of the Jewish Agency for Palestine, as a result of the resignation of Mr. Warburg as chairman of the agency's administrative committee. Three years later he was chosen vice president of the American Joint Reconstruction Foundation, succeeding Governor Lehman.

In 1933 he joined in the work of the Emergency Committee in Aid of Displaced German Scholars, serving as a member of the group's executive committee. Two years later, with the formation of the $10,000,000 Refugee Economic Corporation, headed by Mr. Warburg, Mr. Flexner was named secretary.

Saved Wikipedia (April 6, 2021) - "Bernard Flexner"

Source : [HK006G][GDrive]

Bernard Flexner (1865–1945), a New York lawyer, was a prominent member of the Zionist Organization of America.

Flexner was born in Louisville, Kentucky to a family that immigrated from Europe in the early 1860s. He studied law in the University of Louisville and the University of Virginia. He was admitted to the Kentucky bar in 1898. He practiced law until 1914, when he became active in public activity. He was chair of a Juvenile court board in Louisville and in 1917 participated in a Red cross delegation to Romania. He served as counsel for the Zionist delegation to the Paris Peace Conference (1918–1919) and in 1925 he was one of the founders of the Palestine Economic Corporation (PEC). He served as president of PEC until 1931 and afterwards was chairman of the director council of the PEC.[1]

He was one of the founders of the Council on Foreign Relations.

His papers are held in the Seeley G. Mudd Manuscript Library at Princeton University.

Writings

The Rights to a Jewish Home Land, The Nation, October 2, 1929.

External links

- Bernard Flexner Papers at the Seeley G. Mudd Manuscript Library, Princeton University

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Abraham Flexner (born 1866)

Wikipedia Abraham Flexner

- Born November 13, 1866 , Louisville, Kentucky [HK006F][GDrive]
- Died September 21, 1959 (aged 92) , Falls Church, Virginia [HK006F][GDrive]

Siblings include :

- **Dr. Simon Flexner (born 1863)** (Friend and adviser to John D. Rockefeller Jr. , first director of the Rockefeller Institute for Medical Research (1901–1935))
- **Bernard Flexner (born 1865)** ("A founder of the Council on Foreign Relationships, prominent member of the Zionist Organization of America, one of the founders of the Palestine Economic Corporation (PEC)" - [HK006G][GDrive])

"ABRAHAM FLEXNER - AUTOCRAT OF THE MONEYBAGS" per Dr. Leonard Horowitz in his documentary

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Saved Wikipedia (March 10, 2021) - "Abraham Flexner"

Source : [HK006F][GDrive]

- Alma mater : Johns Hopkins University
- Institutions
- Johns Hopkins University
- Rockefeller Institute
- University of Berlin
- Harvard University
- Institute for Advanced Study

Abraham Flexner (November 13, 1866 – September 21, 1959) was an American educator, best known for his role in the 20th century reform of medical and higher education in the United States and Canada.[1]

After founding and directing a college-preparatory school in his hometown of Louisville, Kentucky, Flexner published a critical assessment of the state of the American educational system in 1908 titled The American College: A Criticism. His work attracted the Carnegie Foundation to commission an in-depth evaluation into 155 medical schools in the US and Canada.[2] It was his resultant self-titled Flexner Report, published in 1910, that sparked the reform of medical education in the United States and Canada.[1] Flexner was also a founder of the Institute for Advanced Study in Princeton, which brought together some of the greatest minds in history to collaborate on intellectual discovery and research.[2]

Biography

Early life and education

Flexner was born in Louisville, Kentucky on November 13, 1866. He was the sixth of nine children born to German Jewish immigrants, Ester and Moritz Flexner.[3] He was the first in his family to complete high school and go on to college.[2] In 1886, at age 19, Flexner completed a B.A. in classics at Johns Hopkins University, where he studied for only two years. In 1905, he pursued graduate studies in psychology at Harvard University, and at the University of Berlin.[4] He did not, however, complete work on an advanced degree at either institution.

Personal life

Flexner had three brothers named Jacob, Bernard and Simon Flexner. He also had a sister named Rachel Flexner.[5]

The success of Abraham Flexner's experimental schooling allowed him to help finance Simon Flexner's medical education at Johns Hopkins School of Medicine. He proceeded to become a pathologist, bacteriologist and a medical researcher employed by the Rockefeller Institute for Medical Research from 1901 to 1935.[5]

Flexner circa 1895

Flexner also financed his sister's undergraduate studies at Bryn Mawr College. Jacob ran a drugstore and used the profits from selling the establishment to attend medical school. He then practiced as a physician in Louisville. Bernard pursued a career in law and later practiced in both Chicago and New York.[5]

In 1896, Flexner married a former student of his school, Anne Laziere Crawford. She was a teacher who soon became a successful playwright and children's author. The success of her play Mrs. Wiggs of the Cabbage Patch (based on the 1901 novel) funded Flexner's studies at Harvard and his year abroad at European universities. The couple had two daughters Jean and Eleanor. Jean went on to become one of the original employees of the United States Division of Labor Standards. Eleanor Flexner became an independent scholar and pioneer of women's studies.[5]

Flexner grew up in an Orthodox Jewish family, however, early on he became a religious agnostic.[2]

In addition to contributions by his brother Simon, their nephew, Louis Barkhouse Flexner, was founding director of the Mahoney Institute of Neurological Sciences at the University of Pennsylvania and a former editor of the Proceedings of the National Academy of Sciences.[citation needed]

Death

Flexner died in Falls Church, Virginia, in 1959 at 92 years of age. He was buried in Cave Hill Cemetery in Louisville, Kentucky.[5]

Career

Experimental schooling

After graduating from Johns Hopkins University in two years with a degree in classics, Flexner returned to Louisville to teach classics at Louisville Male High School. Four years later, Flexner founded a private school in which he would test his growing ideas about education. Flexner opposed the standard model of education that focused on mental discipline and a rigid structure. Moreover, "Mr. Flexner's School" did not give out traditional grades, used no standard curriculum, refused to impose examinations on students, and kept no academic record of students. Instead, it promoted small learning groups, individual development, and a more hands-on approach to education. Graduates of his school were soon accepted at leading colleges, and his teaching style began to attract considerable attention.[2]

The American College

In 1908, Flexner published his first book, The American College. Strongly critical of many aspects of American higher education, it denounced, in particular, the university lecture as a method of instruction. According to Flexner, lectures enabled colleges to "handle cheaply by wholesale a large body of students that would be otherwise unmanageable and thus give the lecturer time for research." In addition, Flexner was concerned about the chaotic condition of the undergraduate curriculum and the influence of the research culture of the university. Neither contributed to the mission of the college to address the whole person. He feared that "research had largely appropriated the resources of the college, substituting the methods and interest of highly specialized investigation for the larger objects of college teaching."[6]

His book attracted the attention of Henry Pritchett, president of the Carnegie Foundation, who was looking for someone to lead a series of studies of professional education. The book consistently cited Pritchett in discussions of views on educational reform, and the two soon arranged to meet through the then-president of Johns Hopkins University, Ira Remsen. Although Flexner had never set foot inside a medical school, he was Pritchett's first choice to lead a study of American medical education, and soon joined the research staff at the Carnegie Foundation in 1908. Although not a physician himself, Flexner was selected by Pritchett for his writing ability and his disdain for traditional education.[2]

Flexner Report

Main article: Flexner Report

In 1910, Flexner published the Flexner Report, which examined the state of American medical education and led to far-reaching reform in the training of doctors. The Flexner Report led to the closure of most rural medical schools and all but two African-American medical colleges in the United States, given his adherence to germ theory, in which he argued that if not properly trained and treated, African-Americans and the poor posed a health threat to middle/upper class European-Americans.[7] His position was:

The practice of the Negro doctor will be limited to his own race, which in its turn will be cared for better by good Negro physicians than by poor white ones. But the physical well-being of the Negro is not only of moment to the Negro himself. Ten million of them live in close contact with sixty million whites. Not only does the Negro himself suffer from hookworm and tuberculosis; he communicates them to his white neighbors, precisely as the ignorant and unfortunate white contaminates him. Self-protection not less than humanity offers weighty counsel in this matter; self-interest seconds philanthropy. The Negro must be educated not only for his sake, but for ours. He is, as far as the human eye can see, a permanent factor in the nation.[8]

Ironically, one of the schools, Louisville National Medical College, was located in Flexner's hometown. In response to the report, some schools fired senior faculty members in a process of reform and renewal.[9]

Influence on Europe

Flexner soon conducted a related study of medical education in Europe.[10] According to Bonner (2002), Flexner's work came to be "nearly as well known in Europe as in America."[2] With funding from the Rockefeller Foundation, Flexner "...exerted a decisive influence on the course of medical training and left an enduring mark on some of the nation's most renowned schools of medicine."[2] Bonner worried that "the imposition of rigid standards by accrediting groups was making the medical curriculum a monstrosity," with medical students moving through it with "little time to stop, read, work or think." Bonner (2002) calls Flexner "the severest critic and the best friend American medicine ever had."[2]

New Lincoln School

Between 1912 and 1925, Flexner served on the Rockefeller Foundation's General Education Board, and after 1917 was its secretary. With the help of the board, he founded another experimental school, the Lincoln School, which opened in 1917, in cooperation with the faculty at Teachers College of Columbia University.[citation needed]

Institute for Advanced Study

Main article: Institute for Advanced Study

left to right: Albert Einstein, Abraham Flexner, John R. Hardin, and Herbert Maass at the Institute for Advanced Study on May 22, 1939

The Bambergers, heirs to a department store fortune, were set on creating a medical school in Newark, New Jersey that gave admissions preference to Jewish applicants in an effort to fight the rampant prejudice against Jews in the medical profession at that time. Flexner informed them that a teaching hospital and other faculties required a successful school. A few months later, in June 1930, he had persuaded the Bamberger siblings and their representatives to fund instead the development of an Institute for Advanced Study.[5]

The Institute was headed by Flexner from 1930 to 1939 and it possessed a renowned faculty including Kurt Gödel and John von Neumann.

During his time there, Flexner helped bring over many European scientists who would likely have suffered persecution by the rising Nazi government. This included Albert Einstein, who arrived at the Institute in 1933 under Flexner's directorship.[11]

Universities: American, English, German

In his 1930 Universities: American, English, German,[12] Flexner returned to his earlier interest in the direction and purpose of the American university, attacking distractions from serious learning, such as intercollegiate athletics, student government, and other student activities.

Legacy

- The Flexner Report and his work in education has had a lasting impact on medical and higher education. The specific impacts of the Flexner Report on American and Canadian medicine include:
  - Average physician quality has increased significantly[13]
  - Medicine has become a lucrative and well-respected profession
  - A physician must receive at minimum six years, preferably eight years of post-secondary education, typically in a university setting
  - Medical education is based on research, specifically in the fields of human physiology and biochemistry
  - Medical research follows the same protocols as scientific research[14]
  - The state government must approve the founding of any medical school and medical schools are subject to state regulation
  - The state branches of the American Medical Association oversee all the conventional medical schools in each state
- The Institute for Advanced Study, which Flexner co-founded, has been conducting valuable research for over 80 years in attempt to understand the complexities of the physical world and humanity

Honors

- The Association of American Medical Colleges created the Abraham Flexner Award for Distinguished Service to Medical Education to annually recognize individuals who have made a notable contribution to American medical education.[15] In 2020, "in light of racist and sexist writings" the AAMC renamed the award, removing Flexner's name.[16]
- The University of Kentucky College of Medicine created the Abraham Flexner Master Educator Awards to recognize achievement in six categories:
  - Educational Leadership and Administration
  - Outstanding Teaching Contribution or Mentorship
  - Educational Innovation and Curriculum Development
  - Educational Evaluation and Research
  - Faculty Development in Education[17]
- Abraham Flexner Way in downtown Louisville's hospital district was named by the Louisville Board of Aldermen in November 1978 to honor Flexner.

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- Abraham Flexner and the era of medical education reform. (critically places Flexner and his contributions within the context of social and educational reform of the time)
- Full text of the "Medical education in the United States and Canada; a report to the Carnegie Foundation for the Advancement of Teaching"

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Dr. Quincy Ernest Fortier (born 1912)

Quincy Ernest Fortier

Draft card - https://search.ancestry.com/cgi-bin/sse.dll?indiv=1&dbid=2238&h=197674702&tid=&pid=&queryId=eb4a3817447a690a320391f4a1096727&usePUB=true&_phsrc=bis137&_phstart=successSource

NOTE - this page created, as he is the father of Annette Whittemore (Whittemore-Peterson Insttitue)

https://www.newspapers.com/clip/18081886/dr-quincy-e-fortier-daughters-wedding/

Annette Whittemore's father -

https://obits.reviewjournal.com/obituaries/lvrj/obituary.aspx?n=quincy-fortier&pid=142068964

QUINCY FORTIER M.D. **Quincy E. Fortier, M.D**. passed away Saturday, Nov. 11, 2006, at the age of 94. Born Sept. 16, 1912, Quincy practiced medicine for over 60 years in Nevada. Quincy spent his childhood in Shrewsbury, Mass., and moved on to higher education at Dartmouth University in South Dakota. Following his calling in medicine, he later received his M.D. from the University of Minnesota. Quincy built and operated a small hospital in Pioche and from there moved to Reno to become the resident physician at the University of Nevada Reno. He later relocated to Las Vegas and opened his first office to practice general medicine. Eventually he chose to specialize in Obstetrics and Gynecology, returned to the University of Minnesota, and received his Board Certification. After being directed by the State of Nevada to report to the U.S. Army, Quincy instead enlisted in the U.S. Air Force with a rank of captain. His chosen assignment was to Ramey A.F. Base, Puerto Rico, where he became a flight surgeon, assistant hospital base commander, and head of the OBGYN department. It was a high point in his life. Three and a half years later, his service completed, he returned to Las Vegas with his family to continue his medical practice. He was promoted to rank of full colonel and as acting commander of the Reserve Unit at Nellis Air Force Base Hospital. Later, though declining the promotion to rank of general, he remained dedicated to the U.S. Air Force and a loyal patriot. In the 1960's, Quincy built and co-owned Women's Hospital, fulfilling his wish for a hospital dedicated solely to women. A Master Mason of the St. John Lodge of Freemasons in Pioche, his longstanding service to the community included actively supporting many charities such as the YMCA and Camp Fire Girls. Known as 'Doc' to many, Quincy dedicated his life to education and helping others. As a member of Christ Church Episcopal, he served on the Vestry and was a licensed lay reader. He was honored for his endeavors on behalf of Faith Lutheran School and was named Doctor of the Year (1991) by the Clark County Medical Society. Quincy is survived by his sister, Christine Johnson of Yucca, Calif.; and by his children, Connie West (Mike) of Tacoma, Wash., Renee Fortier, Kathleen Frosini of Las Vegas, Annette Whittemore (Harvey) of Reno, Quincy Jr., Dana, Nannette and Sonia Fortier of Las Vegas. He is grandfather to 15 and great-grandfather to four. A celebration of life and the burial of the dead will be at 1 p.m. Saturday, Nov. 18, at Christ Church Episcopal, 2000 S. Maryland Parkway. Donations may be made to Christ Church Episcopal, The Boys and Girls Club of Nevada, YMCA, or the Alzheimer's Association.

https://www.reviewjournal.com/news/physician-secretive-till-death/

After his death last year, Dr. Quincy Fortier confirmed the fraud he never had to admit during a long, decorated career in Las Vegas.

The obstetrician, who opened Las Vegas' first women's hospital and was named 1991 Doctor of the Year, was accused years later in lawsuits of fraudulently using his own sperm to artificially inseminate two patients.

Each claimed the doctor told her he was using her husband's sperm, and each gave birth to two children about 20 years before they learned the truth about their children's paternity.

In each case, confidential, out-of-court settlements were reached, in 2001 and 2006 respectively, after court-ordered DNA tests showed Fortier was the children's biological father. But the doctor was never found guilty of any offenses, wasn't forced to admit wrongdoing and did not have his medical license revoked.

However, in his will, filed in District Court in February after his death in November, the doctor not only acknowledged he is the biological father of all four children, but also left a haunting footnote for other women who had trusted him decades earlier.

The document states additional, unnamed offspring of the physician may be identified after his death, leaving open the possibility that other women unknowingly gave birth to Fortier's children after he performed artificial insemination on them.

Court documents filed in February in connection with Fortier's estate state that if "there shall be an additional child or children determined to be my natural

Court documents, filed in February in connection with Fortier's estate, state that if "there shall be an additional child or children determined to be my natural child or children, and if any such child or children shall survive me, then and in such event, such child or children, I have intentionally omitted from any share in the benefits of my estate."

Former patients and their children, however, may find it difficult to get questions answered about the doctor.

Public records of Fortier's fraud either don't exist or have been hidden from public view, and plaintiffs in the lawsuits against him have been silenced by confidential settlements that prohibit them from discussing their case.

The state Board of Medical Examiners, which licenses physicians in Nevada, last year launched an investigation into the allegations against Fortier, but dropped its probe following his death.

As a result, Fortier never lost his license or received any discipline in response to the allegations that prompted the investigation, said Lyn Beggs, deputy general counsel for the Board of Medical Examiners.

"He died and we dropped the case when he died," Beggs said. "If a doctor is dead, there is no public benefit in digging this stuff up. … Our role is not to dig up stuff from 35 years ago, but to protect the public here and now."

Normally, details of the court cases would have provided details about Fortier's conduct to any member of the public who cared to inquire. But about two weeks after the first lawsuit against Fortier was settled out of court in August 2001, District Court Judge Lee Gates sealed the case from public view.

As a result, the allegations lodged by patient Mary Craddock, plus motions, witness lists, depositions, two days of courtroom testimony, the judge's rulings, the doctor's DNA samples and other information on that case, are all hidden from other patients Fortier treated over decades in Nevada.

Gates refused to comment on the Craddock case or his reasons for sealing it. Attorney John Wawerna, who represented Fortier in that case, and attorney John Lee, whose firm represented Craddock, couldn't be reached for comment.

Las Vegas lawyer Kathy England, who is on the state Supreme Court's Commission on Preservation, Access and Sealing of Court Records, said she wasn't familiar with the Fortier case but said it raises questions about the privacy rights of litigants.

Fortier and other defendants repeatedly accused of wrongdoing shouldn't be permitted to keep court records private, but Fortier's patients and their children are entitled to some degree of privacy because they are victims, England said.

"The public's right to know about injurious activities transcends the bad actors' claim to privacy. When you have committed an injurious act, especially one that is not an isolated incident, there may be a public interest in having that repetitive conduct disclosed publicly in a lawsuit. … I don't think someone who artificially inseminates people fraudulently has a legitimate claim to privacy."

Las Vegas attorney Richard Myers, who also was appointed to the state Supreme Court commission, said the case should not have been sealed.

"That sounds like something the public would have an interest in, and it shouldn't be sealed," Myers said. "If there are other patients that he artificially inseminated … (information about the case) is something that they would want to know and have a legitimate right to know."

While the Craddock case was sealed, a subsequent lawsuit filed in 2003 against Fortier by Patrick and Carolee Fullmer was not sealed. It is hidden to some extent, however.

Using the District Court's online computer database, users can find out about lawsuits, the litigants, attorneys and judges in each case, the dates of hearings and the minutes of decisions in each case and other information. Or, interested parties can look at entire files for each case at the courthouse records office.

However, when searching for lawsuits involving Fortier, simply searching by his name, "Fortier, Quincy," is not sufficient as it is when searching for most litigants.

When just the doctor's name is entered, the Fullmer case and other cases against the doctor do not appear on the computer screen. To locate the case, one must know the names of the other litigants in each case, or must remember that Fortier was a physician and enter his name as "Fortier MD, Quincy."

The Craddock case is just one of dozens of lawsuits sealed by District Court judges between 1990 and 2006, according to records of sealed cases requested by the Review-Journal.

Judges claim to have inherent authority to seal lawsuits, but critics have said keeping lawsuits from public view is generally prohibited by Nevada law.

No information is available to the public about sealed lawsuits, but the Review-Journal was provided with the identities of litigants in some of the cases. They include people and groups that are wealthy or wield influence in politics, business, medicine and the courts. They include doctors, lawyers, politicians, casinos, judges, public utilities and public agencies, such as the Clark County School District and Las Vegas police.

Like other litigants in sealed cases, Fortier had influential friends or family members.

According to Fortier's will, his daughter is married to powerful Carson City lobbyist Harvey Whittemore, who is developing the 43,000-acre Coyote Springs master-planned community 50 miles north of Las Vegas. The massive project has been approved for construction of up to 159,000 homes.

Fortier, who received his Nevada medical license at the end of World War II, was named Doctor of the Year in 1991 by the Clark County Medical Society, and he helped open the first women's hospital in Las Vegas in the 1960s, according to his obituary. The Massachusetts native and former Air Force physician also helped open Faith Lutheran School in Las Vegas and reached the rank of commander with the Air Force Reserve unit at Nellis Air Force Base, the obituary said.

Although Gates sealed the Craddock case for reasons left unexplained, the handful of Review-Journal articles written about the Craddock case and other lawsuits filed against Fortier shed light on that sealed case.

In her lawsuit filed in 1996, Craddock accused Fortier of defrauding her in the 1970s by twice using his own sperm to artificially inseminate her. The Craddocks' daughter was born in 1975, and their son was born two years later. Craddock's grown daughter, Heather Craddock, in 1994 told her mother an elderly Fortier had phoned and divulged to her that he was her biological father.

Records of an affidavit, and records of questions posed to the doctor before the court-ordered DNA tests, state that the doctor denied that he is the biological father of the Craddock children. However, the records also state that Fortier recalled that Craddock gave her verbal consent for each procedure

after the doctor explained that the fluid to be used contained the sperm of her husband and others.

Three days after the trial started in August 2001, and two days after Mary Craddock's tearful testimony, the trial abruptly ended when litigants announced they had settled the case out of court, according to Review-Journal articles at the time.

Heather Craddock filed a lawsuit against Fortier in 2000, and she also received a confidential settlement before that case went to trial. The daughter's case was not sealed by a judge, according to court records.

After reading newspaper accounts of the Craddock case in 2001, Patrick Fullmer underwent DNA tests that showed he wasn't the biological father of his two children conceived through artificial insemination of his wife by Fortier. The children were born in 1980 and 1985.

Attorney Brent Bryson, Fortier's attorney in the Fullmer case, wouldn't comment on the case. Attorney Jeffrey Galliher, who represented the Fullmer couple, also wouldn't comment.

But documents filed in the case assert that Patrick Fullmer's business suffered, the couple argued about whether to undergo DNA testing, and they received counseling from a minister at their church after learning about the Craddock case. The situation tore the family apart, and Patrick Fullmer filed for divorce in October 2003, the documents assert.

They did conduct DNA testing, but their lawsuit says, "Upon learning the truth, they suffered depression, mental anguish, emotional distress and anxiety which affected their marital relationship. Carolee continued to emotionally struggle with the impact of the DNA results. She suffered severe depression and would not get out of bed for days."

In his defense, court records say, Fortier asserted at the time of the lawsuit that he had received oral consent from Patrick and Carolee Fullmer to use semen that was not exclusively Patrick's, but would come from a "donor mix." However, Fortier never produced written consent, and claimed at the time he was unable to find any medical records for Carolee Fullmer's treatment in the early 1980s.

After the Fullmer case was settled out of court in 2006, the state Board of Medical Examiners launched its investigation of Fortier in response to a 2003 state law that wasn't enacted until after the Craddock case had concluded. The law requires doctors to notify the board when a malpractice lawsuit is filed against them, and it requires the courts to notify the board after a physician loses or settles a malpractice case, Beggs said.

Although the board dropped the case after Fortier died, the agency's Investigative Committee issued a complaint in the case after it determined there is "reasonable basis to believe" Fortier violated state laws.

he investigation centered on violations of laws that prohibit doctors from engaging in conduct "intended to deceive" a patient and that "violates the trust of a patient and exploits the relationship between the physician and patient for financial or other personal gain," according to the complaint.

Patients whose treatment is the subject of a complaint are not identified in the document. Instead, they are referred to as patients A and B.

A state law enacted in 1979 required that a physician file a consent form, signed by both parents, in which they would have agreed to use semen from other donors during an artificial insemination procedure.

The board complaint states that Fortier did not file such a form.

And the complaint goes on to state, "Patients A and B did not give their consent nor were they notified that anyone else's seminal fluid was utilized during the artificial insemination procedures."

https://lasvegassun.com/news/2002/feb/12/lv-doctor-wins-suit-brought-by-son/

LV doctor wins suit brought by son

Tuesday, Feb. 12, 2002 | 9:53 a.m.

A jury Monday rejected a 48-year-old Las Vegas man's claims that his father, a local obstetrician and gynecologist, sexually and physically abused him when he was a child.

Quincy E. Fortier Jr. claimed that after he watched a videotape about child molestation as part of court-ordered therapy, long "frozen memories" came to the surface about his namesake.

Fortier alleged that he realized he had been sexually abused by his father between the ages of 3 and 14 and that he had also watched his father abuse his siblings and other children.

Fortier filed a lawsuit against Quincy E. Fortier Sr., 89, in October 2000, saying he became addicted to drugs and alcohol at the age of 10 and has experienced a myriad of other problems as the result of the alleged abuse.

The doctor's attorneys, E. Brent Bryson and Thomas Pitaro, told jurors the younger man was after his father's money.

The jury took about an hour to find on behalf of the elder Fortier late Monday. The attorneys involved in the case could not be reached for comment this morning.

Mary Craddock, a woman who claimed the doctor secretly used his own sperm while artificially inseminating her in the 1970s, settled her lawsuit against him in the middle of a trial in August.

Attorneys for both sides in that case declined to comment on the specifics of the settlement, but said the agreement also takes care of a lawsuit filed by a daughter born as a result of the procedure and a potential lawsuit by a son.

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John Stuart Foster (born 1890)

Wikipedia John Stuart Foster

Family -

- Son is **Dr. John Stuart Foster Jr. (born 1922)**

Saved Wikipedia (June 23, 2020) - John Stuart Foster

[HK004X][GDrive]

Born May 30, 1890 in Clarence, Nova Scotia, Canada

Died September 9, 1964 (aged 74) in Berkeley, California, United States

Alma mater

Yale University

Awards

Henry Marshall Tory Medal (1946)

Fellow of the Royal Society[1]

Scientific career

Fields

Physics

Institutions

McGill University

Doctoral advisor

Leigh Page

Henry Andrews Bumstead[2][3]

John Stuart Foster FRS FRSC (May 30, 1890 – September 9, 1964) was a Canadian physicist.[1][2][4]

Biography

Born in Clarence, Nova Scotia, he completed his Ph.D. at Yale University with a dissertation on the first measurements of the Stark effect in Helium. In 1924 he gained an appointment as assistant professor at McGill University in Montreal, where he taught physics. He became associate professor in 1930.

During World War II he served as a liaison officer for the National Research Council, working at the MIT-run Radiation Laboratory on radar research and development. He developed a fast-scan radar antenna that became known as the "Foster scanner".

He returned to McGill in 1944, where he directed the construction of a 100-MeV cyclotron. This instrument was commissioned in 1949. At the time this was the second largest in the world. From 1952 until 1954 he was chairman of the physics department at McGill. He died in Berkeley, California.

Legacy

The *John Stuart Foster Radiation Laboratory and Cyclotron* at McGill was named after him in 1964 and this is engraved on the side of the building now known as the M. H. Wong Building.

His son, John Stuart Foster Jr., graduated from the University of California in 1948, then became director of the Lawrence Livermore National Laboratory, director of Defense Research and Engineering for the U.S. Defense Department, and Vice President of T.R.W., Inc.

Awards and honors

- Fellow of the Royal Society of Canada, 1929.
- Awarded Levy Medal, Franklin Institute, 1930.
- Henry Marshall Tory Medal, 1946.
- Elected a Fellow of the Royal Society of London, 1935.[1]
- The crater Foster on the Moon is named after him.

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Dr. John Stuart Foster Jr. (born 1922)

[HK004V][GDrive]

Wikipedia 🌐 John S. Foster Jr.

Parents -

Father is **John Stuart Foster (born 1890)**

Associations

- **Ben Telfer Plymale (born 1926)** (Plymale worked directly under Dr. John Stuart Foster Jr. in 1972 in the US Department of Defense)

Saved Wikipedia (June 23, 2020) - "John S. Foster Jr."

Source - [HK004W][GDrive]

John Stuart Foster Jr. (born September 18, 1922) is an American physicist, best known as the fourth director of Lawrence Livermore National Laboratory and as Director, Defense Research and Engineering under four Secretaries of Defense and two Presidents.

Early life and education[edit]

Foster was born September 18, 1922 in New Haven, Connecticut. He received his Bachelor of Science degree in 1948 from McGill University, where his father, Canadian physicist John S. Foster, Sr., was a faculty member. He received his doctorate in physics from the University of California, Berkeley in 1952, while serving as a staff member of the University's Lawrence Livermore National Laboratory in California.[1] In 1979, he received an honorary Doctor of Science from the University of Missouri.

Early career[edit]

During World War II, before he received his bachelor's degree, Foster began his career in the Radio Research Laboratory at Harvard University. He was an advisor to the 15th Air Force on radar and radar countermeasures in the Mediterranean Theater of Operations in 1943 and 1944. In the summers of 1946 and 1947, he worked on the Canadian nuclear power project in Chalk River, Ontario.[1]

Lawrence Livermore Laboratory[edit]

In 1952, Foster was recruited to Lawrence Livermore Laboratory by founder Edward Teller, and became a division leader in experimental physics. He was promoted to associate director in 1958, and director of the Livermore Laboratory and associate director of the Lawrence Berkeley National Laboratory in 1961, in which positions he served until 1965.[1]

Foster with Secretary of Defense Melvin Laird, 1972

Department of Defense[edit]

Foster was appointed Director, Defense Research and Engineering, a position then considered the number-three job in the Department of Defense, by Secretary of Defense Robert S. McNamara in October 1965. He continued in this position until June 1973, serving under Presidents Johnson and Nixon, and under Secretaries of Defense McNamara, Clifford, Laird, and Richardson.[2]

Later career[edit]

From 1973, Foster was vice president, science and technology of TRW, retiring in 1988. He continued to serve on the board of directors of TRW from 1988 to 1994. He is a Consultant to Northrop Grumman, Ninesigma, Wackenhut Services, Inc., and Defense Group, Inc. He is also Chairman of the Board of Pilkington Aerospace, Inc., and Chairman of Technology Strategies and Alliances.

From 1973 until 1990, he was a member of the President's Foreign Intelligence Advisory Board. He was a long-serving member of the Defense Science Board, of which he served as chairman from January 1990 to June 1993.[1]

Public positions[edit]

Foster's public positions have consistently reflected his support of a robust U.S. nuclear stockpile.[3][4]

During the George W. Bush administration, Foster was a prominent advocate for a return to nuclear testing and for the design of a new generation of U.S. nuclear weapons. He chaired the "Panel to Assess the Reliability, Safety, and Security of the United States Nuclear Stockpile," created in 1998 by Republican Sen. Jon Kyl of Arizona, a longtime foe of the Comprehensive Test Ban Treaty. The panel, popularly known as the "Foster Panel", issued several reports advocating increased weapons spending.[3] [5][6]

Foster was a prominent member of the Commission to Assess the Threat to the United States from Electromagnetic Pulse (EMP) Attack, established by the 2001 defense authorization act. The Commission's report called for strong defensive measures across a wide range of industries and public services.[7]

Honors and awards[edit]

Foster received the Founder's Award from the National Academy of Engineering in 1989, and the Enrico Fermi Award in 1992. Other awards include the Ernest Orlando Lawrence Award of the Atomic Energy Commission (1960), the Defense Department's Distinguished Public Service Medals (1969, 1973, 1993), election to the National Academy of Engineering (1969), the James Forrestal Memorial Award (1969), the H.H. Arnold Trophy (1971), the Crowell Medal (1972), the WEMA Award (1973), and the Knight Commander's Cross (Badge and Star) of the Order of Merit of the Federal Republic of Germany (1974). Foster is a commander, Legion of Honor, Republic of France.[1]

[...]

2021-01-aip-org-john-s-foster-interview-from-1991.pdf

https://www.aip.org/history-programs/niels-bohr-library/oral-histories/33455

Interview date: Wednesday, 7 August 1991

- Aaserud: So that's how you come into the picture. I mean it's interesting, we have a connection in your previous generation too. Your father was rather closely connected to Bohr in the 1920s.
- Foster: Right. I remember when Bohr used to visit us in Montreal. I would drive him around. I can remember that.
- Aaserud: Oh, great. Well, it would be lovely to talk about everything, but I guess in a telephone conversation we should try to limit it to JASON this time around at any rate.
- Foster: Okay.
- Aaserud: Although I think it would be interesting to interview you about other things as well sometime. Has that happened? Has anybody interviewed you?
- Foster: No, no.
- Aaserud: The only thing I've come across is an old interview with you when you were still DDR&E. It's an interview that's deposited at the Johnson Library.
- Foster: I see.
- Aaserud: But that was very specifically oriented to that. Now, before we start, I would be very happy to receive any kind of biography or vitae or bibliography, if you should have it, if you could send it to me at some point, because it would add to my knowledge of the people that are involved in my study.
- Foster: Okay. I can have June do that.
- Aaserud: Okay. Great. Wonderful. And you are not writing any autobiography or anything of the sort.
- Foster: No, no.
- Aaserud: No time for that.
- Foster: No, that's right. No, in fact I pay no attention essentially to history, to the wake I leave behind. I spend my time looking out ahead and seeing what I can do to get us there.
- Aaserud: I hope I'm not doing the opposite.
- Foster: No, no. I'm relying on you to take care of the wake.
- Aaserud: Good. So, well, the period that I'm mainly interested in then is the period from about 1957 to 1975. So, just to get this in the context of your career, perhaps you could say what you were doing during those years. You were Director of the Lawrence-Livermore Laboratory I suppose.
- Foster: That's right. So I was in the Lawrence-Livermore Laboratory from 1952 to 1965. And I was the Director there from 1961 until 1965. So that means that Edward Teller was the Director of the laboratory from about 1958 or 1959 to 1961, then Harold Brown was the Director for about nine months, and then he left to the Department of Defense, and so then I was the Director for about four years, and then I left to replace Harold Brown. You know, as he said to me, "There is nothing like dealing with a reliable firm." Because he followed Herbert York, who was the Director of Livermore, and then I followed, and so there were three of us in a row.
- Aaserud: That was only broken after you, that tradition.
- Foster: Yeah, so I was kind of in the third man theme.
- Aaserud: And then you were DDR&E from 1965 —
- Foster: — Until 1973. So I went through a Democratic administration, and then was selected by a Republican administration. I guess that's the only time that has happened. And in fact being there for eight years was also uncommon.
- Aaserud: Well that's a record that hasn't been broken, has it?
- Foster: Yes, and I am not sure that is a good record! Anyway, let's see. Your subject deals with the JASONs.
- Aaserud: Yes. The first 15 years of them. So I suppose my first question to you is whether you were involved in or had an opinion of the origins of JASON, whether that came through you while you were still Director of the Lawrence-Livermore Laboratory.
- Foster: Yes and no. I knew of the JASONs while I was at Livermore, and of course then I had rather frequent contact with them when I worked in the Pentagon.
- Aaserud: But as for the origins of JASON, that's a complex history.
- Foster: Yeah, but I think you now know more than I can add. I've heard of the origins of the JASONs a number of times, as well as the origins of the Defense Science Board, and so on. I don't think I can add anything there.
- Aaserud: No. You didn't partake in Project 137 for example?
- Foster: No, I did not.
- Aaserud: No. And you did not discuss with Goldberger or Bruekner or Watson.
- Foster: Yes, with Brueckner and Watson, yes, but I don't think I contributed much of that.
- Aaserud: Right. They thought originally of establishing a private company.
- Foster: Yeah.
- Aaserud: Which would essentially do the same thing. And then they were diverted by Townes, who was Chief Scientist of IDA.
- Foster: No, and in retrospect, you know, I think that Townes had the right idea. And in fact even today when we have task forces working and Charlie Townes is a member, he has the right idea. So I think in retrospect what makes JASON unique is that they were founded on the basis of what Townes suggested. There are hundreds of title companies that now do what some of the early members wanted JASON to do. Let me make a point which sort of sticks with me with regard to the JASONs. You know, when I first got into the Pentagon, it occurred to me that I was rather isolated. I mean, you know, you come in at seven or seven-thirty in the morning, and you leave at seven or seven-thirty in the evening, and all day long there are people coming in and you are reviewing things and making decisions. And by and large, you are exposed only to what comes in, and very seldom does one get a chance to go out. And wherever you go, even if you were to go rather extensively, you only see a trivial fraction of the contributors to National Security.
- Aaserud: Do you think your position was particularly bad, or what we should say, in that respect?

- Aaserud: Do you think your position was particularly bad, or what we should say, in that respect?
- Foster: No. It's just that that's the way it is. Now, as a consequence I kept asking myself, you know, "I'm leaving here in two years, or I'm leaving here in four years for sure. What is it that I am missing? What is it that when I leave and I look back on it I will say now, you know, what is it that I should have done?" Well, that problem came to mind a number of times during a year, and so I would say, "Okay, what I'm gonna do is ask the JASONs, and I will ask the Defense Science Board, and so on, I will ask people, 'What is it that we should be doing?'"
- Aaserud: That general a question.
- Foster: Yeah. That general a question. And so in particular I remember when I first came in the Pentagon I asked McNamara, you know, "Give me five things that you would like to see me focus on." And one of them was the war in Vietnam, I mean what can be done to improve the effectiveness. So, you know, one turns around then and says to the technical community, "Hey, here's a situation that's important. What is it that you think we might be able to do to help?" And I remember making a call on the JASONs and on the Defense Science Board, and in fact making a video tape and getting that around to the in-house laboratories and so on.
- Aaserud: Does this video tape exist?
- Foster: Oh, I'm sure it does, but, you know, I don't know where it is. But, you know, maybe it's at home. Maybe I've got a copy at home.
- Aaserud: Okay. Well that would be interesting.
- Foster: By the way, it may be on film rather than video.
- Aaserud: Yeah, at that time, I'm sure.
- Foster: Now, as a consequence, you know, I remember that the JASONs started to address the question of the Vietnam War.
- Aaserud: That was from the outside independent of you, their addressing the question of the Vietnam War?
- Foster: Yes, that's right. And also what should the United States be doing technologically in that effort, or to support that effort. And that helped a lot. That raises now another point that comes to mind, while we're chatting here. Why is it that JASON is important? I could think of a few reasons.
- Aaserud: You think it is in the first place.
- Foster: I think it's extraordinarily important. I think it's more important than people realize, because of what does not happen because of the existence of JASON.
- Aaserud: A corrective agency or something.
- Foster: Exactly. So, let me just think now out loud what that is. First of all, these people are professors from universities. Now the universities in the United States are critical members of the National Security community. I mean they really are very critical members of the community, just as critical as the in-house laboratories, just as critical as the industry. So what we have is some selected members from that university community who come in and can advise the government on what is possible, scientifically what is possible. They can provide a coupling of scientists and science to technology, and the coupling of that technology to applications, and then to systems concepts and systems capabilities. They have been extraordinarily useful to critique programs to address problems. The Department of Defense has a host of problems, some of them admit to scientific or technological attack. And these people have a very special vantage point in the universities, that can bring something to address those problems that you cannot get from industry, and you don't get it from in-house laboratories.
- Aaserud: So they're unique in that respect, you would say.
- Foster: Very unique. Look, that's one general thing that comes to mind. Another, perhaps even more important function, is that these professors expose their students to the realm of National Security. Now, you know, there is a tendency in universities to be more liberal — more to the left of center perhaps. And it would be perhaps unbalanced if it were not for the presence of some professors who were concerned about National Security. So the JASONs provide an opportunity for the National Security community to give them some vision, and some orientation, some understanding of the National Security situation, which they then pass on to their students. Now some of those students then go full-time to work in the area of National Security.
- Aaserud: Yes. Well that was in fact an aspect of the planned JASON that was seen as unique at the time of its establishment.
- Foster: Yeah. So as a customer, I could see the value of that.
- Aaserud: Do you think that was something new with JASON? Had there been that kind of linkage before JASON in the same way or to the same extent?
- Foster: Certainly not in the same way, certainly not to the same extent. It was clearly, from their point of view, something that was badly needed at that time. The fact that it still exists, the fact that it still contributes in a very important way, makes it clear that it is rather unique. I mean, let me just give you an example. About, I don't know, three or four years ago I called up — I guess it was Frank Press or somebody who was the head of JASON at the time, I just forget who it was — and said, "Look. I've really got a problem here." At that time I was on the President's Foreign Intelligence Advisory Board, and we were concerned about the Soviet penetration of the American Embassy building that was being built in Moscow.
- Aaserud: So this was fairly recent.
- Foster: Yeah, that's right, several years ago. And what I wanted to do was to make sure that we had the very best scientific capable minds looking at that problem, and particularly looking at what it was that the government people were doing. So, you know, it was just a simple phone call, and then within a matter of, oh, not more than two months, several of the members of JASON had worked the problem and had of course gone to Moscow and delivered a report, both verbally and of course in writing. Now that's a very classified matter, but what I think is important to point out is that the existence of that kind of organization and the ability of it to react very quickly with the very best scientific capability is a critical thing for the nation. Let's see. So what I was saying is they provide an exposure to students that in turn turn out to get interested in the matter of National Security and then go into industry and so on. Now some of them will end up going into the Executive Branch, into the government. Now the Government only calls, only uses about 2 percent [tape inaudible for a few minutes.] That is the value. I think when one dwells on the matter of this or that individual who was controversial, who was troublesome, who was raising hell about this or that, one misses the value.
- Aaserud: Well, as you say, it might keep the system awake too.
- Foster: Yeah. It's crucial.
- Aaserud: I mean, that was your point about the Vietnam debate at the universities too.
- Foster: Yes. Now, you know, frankly sometimes these individuals make so much fuss because we don't listen. And these people care. And they think it's important. And so they will keep raising their voice again and again, louder and louder, until they feel that they have been heard.
- Aaserud: About the technical questions that they do as JASONs, or more generally?

- Foster: No. I mean as individuals in JASON. Now clearly it happens in other forums, and I'm not trying to say that everybody who raises hell has the same motivations, but at least when I think about JASONs, and they get upset about something, I think it's important. And I reject it when people feel that, as individuals or as an organization, they are troublesome. I think that's exactly wrong. They are an important national asset.
- Aaserud: Now, when you were DDR&E, JASON was wholly funded by ARPA I believe, at least during the first few years. But on the other hand you had direct contact with them. Now, did their advice go mostly through you, or was it you who made use of them, or was it mostly ARPA that made use of them, or how was that?
- Foster: I don't know the balance. The point is, they would come in and describe what it is they thought it was important to be working on, they would then come and tell me what it is they found and what I ought to do, and they would do the same thing with DARPA. But I don't know in detail, you know, how much it contributed to either side. And then of course I would work with DARPA often, so that meant that that loop was closed.
- Aaserud: Conceivably they could come to you when they didn't get through with ARPA. That might happen too perhaps.
- Foster: Oh sure. And if they couldn't persuade me, they could easily persuade ARPA. So, you know, either way.
- Aaserud: But they used the channels effectively is what you're saying.
- Foster: Oh yes. Ohhhh yes.
- Aaserud: Okay. Let me just turn the tape here. [Tape 1, Side 2] I would also like to talk a little bit about the mechanism for choosing projects. I mean, how was a project chosen while you were DDR&E by JASON to the extent that you were involved in that? And to what extent were JASON free to choose their own projects, to what extent was it projects that were presented to them?
- Foster: I'm not sure that my memory is very good on this. Or, put it another way, what I can remember could well be a distortion. I remember thinking about what it is that JASON should be working on, because the chairman would come in and ask me. The same would happen with regard to the Defense Science Board. Those two organizations held summer studies.
- Aaserud: It was a one-to-one discussion between you, often.
- Foster: That's right. And so what would happen is that usually in the fall the chairman of each of them would come in — separately, of course — but say, "Look, what is it you think we ought to be thinking about?" And I'd say, you know, "I don't know. I'd better think about it." And what I remember quite clearly was that for me it was a challenge — a challenge to think about what are the problems which I face where I really need an answer by next September. Because next September the JASONs will report out.
- Aaserud: After the summer study, yes.
- Foster: Next September the Defense Science Board will report out. What answers do I need then, to what kinds of problems? And of those, which ones are suitable for the JASONs to think about? And so I remember thinking about it, and then around December or January and February I would try and do what I could to contribute, and then I would also hear what they thought were important. And I remember going down lists of problems. And, frankly, my impression is that no matter how hard I thought I worked at that, there were people who came in with these other ideas that, if anything, were better than mine. Well, you know, which is exactly why these people are important.
- Aaserud: Was it the full list of summer study projects that was developed that way, or was it part of it?
- Foster: Okay, I don't know the answer. There would be more items on that list than they could handle, without any question, and I could have some preference, I could suggest some preference.
- Aaserud: Well let me phrase the question a little differently perhaps. Were all problems that they were going to deal with, I mean for ARPA, for possibly other agencies, coordinated through you and came up in the discussions that you had on a one-to-one basis with Hal Lewis or whoever it was?
- Foster: Well it coordinated yes that way, but I don't remember consciously coordinating the JASON studies with the studies performed by RAND or MITRE or the Defense Science Board or the Institute for Defense Analysis or so on. I think frankly that is an area where I could be criticized for not having perhaps consciously tried to make the proper assignments, to either have some duplication where it was important or to avoid unnecessary duplication.
- Aaserud: But I guess it was automatic to some extent. I mean, these were different organizations to some extent.
- Foster: That's true. That's true. But I've thought about it subsequently that it's an area where I failed to take full advantage.
- Aaserud: Of the differences.
- Foster: Yeah. Because sometimes it would be important, for instance in ballistic missile defense. There DARPA had a leading role for a decade or so, well, from about 1962 until, I don't know, 1967 or 1968. And in that period the JASONs and others were of enormous value. And the question I think was whether or not I properly used the Defense Science Board and the Institute for Defense Analysis and other forums to get independent views on that. So, if anything, I guess I'm not sure that I consciously worked enough on the matter of getting necessary duplication. I'm not so worried about the unnecessary duplication.
- Aaserud: But nevertheless, could you say something or could you specify what was specific to JASON — if it was specific, if it was special in relation to these other organizations that you utilized.
- Foster: Oh. Well, yes. I think of JASON as an organization to think of as standing individuals to think about a problem that requires the application of first principles. And not an organization to provide some kind of a refinement of a well-developed system. So if you've got a fundamental problem, like anti-submarine warfare, or ballistic missile defense, or worldwide surveillance, or whatever. That is where you are trying to pioneer something, you've got a very important problem and technologically you have not been able to crack it, so you ask JASON.
- Aaserud: Well that is somewhat different from JASON as a correcting organization, so it serves two functions then.
- Foster: Oh sure! Oh sure. Oh yeah. Oh, of course.
- Aaserud: I mean both new ideas and killing of others' ideas.
- Foster: Yes. Oh yes. Totally different.
- Aaserud: But they served both functions.
- Foster: When you expose JASON to a program, they can critique it, the way it's being done. And that's important. But they also may come in and say, "Look, what you're doing is rather straightforward. The problem is, it's not elegant. It's enormously inefficient. I mean there's a whole new way to approach this thing. Here's what you ought to be thinking about." Or they will just say, "Look, there is a whole revolution in science which now permits one to do this job entirely differently." So JASON can play both roles.

- Aaserud: In terms of the role of new ideas and applying new developments in science, what would you point to as one or two particularly important developments that JASON contributed to during your tenure as DDR&E?
- Foster: Oh, they contributed to the, well, the ballistic missile defense program, they contributed to anti-submarine warfare, to overhead surveillance, to the application of satellites to navigation, what do you call it, GPS, communications. A whole host of things. Finding targets in the foliage.
- Aaserud: See, I'm asking you, well, from a general interest of course, but also because I think that if I'm going to develop this into a full-blown study I would need to have one or more case studies of specific projects that they did to get a sense of how they worked from, you know, of applying the first principles, and all the way until the advice was made and preferably acted upon.
- Foster: Well let's see. As I recall in your letter, you said that you have access to some of the information at MITRE. Is it not in those records?
- Aaserud: No, I wouldn't say that. It is fully unclassified records, and I think that I would need some declassification to get to a project that is representative.
- Foster: Well okay, so I think the thing to do there then is to see what can be done to declassify that stuff, at this stage.
- Aaserud: But there's a balance there. I mean, I need to find a project that is representative and at the same time something that is likely to be declassified — at least some of the information there.
- Foster: I don't know. Why not just ask the JASONs to take a look at that?
- Aaserud: I was wondering whether you had any opinion on one or two projects that you thought might be more likely than others with your experience.
- Foster: Well let's see, I don't know, some of the stuff they did with regard to Vietnam might be one area that one could declassify.
- Aaserud: I think some of that may have been declassified, because there is so much interest in that particular episode, so that's one possibility. But to my mind that is a little untypical of what JASON did. Or, I don't know if you would agree with that.
- Foster: No. I don't agree. I wouldn't think of it as atypical.
- Aaserud: Well, you started talking a little bit about that. That was perhaps one of the projects in which you were most closely involved in working with JASON. So I was wondering whether you had a little more to say about the DCPG I suppose it was called, and JASONs and your own role in that.
- Foster: I think we have to be very careful here about the security matter. You know, the recent operation in the Gulf, while it was very successful, it was simply applying on a large scale techniques which were developed and first tested in Vietnam, while they weren't on a large scale in Vietnam, and the conditions there were perhaps not as good as in the Gulf, in fact in many cases nowhere near as good. But I'm a little concerned about specific examples just because of security matters. I just don't know the details about the security that's put on each.
- Aaserud: You are talking about smart weapons?
- Foster: Yeah, sure. And, you know, whether the security is now reduced because of the Gulf or not, I don't know. This may be just too early to say.
- Aaserud: But on a person-to-person basis, you worked both with JASON and what was called JASON East at the time, right?
- Foster: That's right.
- Aaserud: There was a collaboration of those older MIT people, generally speaking and JASON.
- Foster: Yeah, right, that's right.
- Aaserud: And that went all the way up to McNamara. I mean, he was also directly involved in that, correct?
- Foster: Oh certainly, yes. In fact I remember one meeting when McNamara and I went to meet with the folks at MIT, and they described their concept of such a system, and, you know, I was supportive, as was McNamara. I also remember one request they had, and that was, you know, to agree to stop bombing the North if you would put in this barrier. And I remember Bob not committing to that. It isn't quite as if he could make that trade.
- Aaserud: Well, there are some JASONs that are a little bitter about that.
- Foster: No, no, well but that's, you know, that's fine. First, I think it's quite proper that the JASONs should feel free to make that observation. On the other hand, it's quite proper for the Secretary of Defense to not accept and act on those recommendations.
- Aaserud: Of course, of course. But I sense that Goldberger for example felt that the deal was made.
- Foster: I was there, and there was no such deal. Bob was silent. He did not agree. And I remember that. Heck, I would have had to take some actions if he had agreed to it, so —
- Aaserud: Well, I'm glad you say that.
- Foster: But, you know, look, I think this is wonderful, you know. If Murph can be unhappy, he cares, and he had his say, that's fine. And now that he would continue to be unhappy I am sorry about, because it's over.
- Aaserud: No, it seemed that he was still concerned about that; that that was an episode that came back to him. But, I mean, he's been involved in JASON since then so —
- Foster: Oh certainly.
- Aaserud: So there were others of course who left as a result of the Vietnam episode, but surprisingly few — very, very few, considering the reactions on campus I would say.
- Foster: Oh yes, absolutely.
- Aaserud: And a lot of people told me that, I mean, they stayed on because of that, because they didn't want to lose face, also. But that's, another matter. But, it did have an effect on JASON, because this was fairly new. I mean, this was a new experience that they came into the headlines and got such notice. I have, as I said, looked at material at the MITRE Corporation, and I have entered it on the computer so I can see whenever your name comes up in it. And the first time so far that I've seen your name come up in those records is regarding a meeting at the Eglin Air Force Base in March 1968, in which the effect of JASON's involvement in the Vietnam War on their work was evidently discussed. And a decision at that meeting was that "Lewis and the steering committee will develop a basis for future choices of study. Lewis will talk to J. Foster about this."
- Foster: Yeah.
- Aaserud: I don't know if that rings a bell at all with you.
- Foster: No, it doesn't. I'm sorry, it does not.
- Aaserud: And then this seems to be related. In August, 1968, it says, "the possibility of JASONs doing arms control work through ARPA on behalf of DOD

- Aaserud: And then this seems to be related. In August, 1968, it says, "the possibility of JASONS doing arms control work through ARPA on behalf of DOD, ACDA or CIA was discussed. H. Lewis will talk to J. Foster." What this seems to imply to me, and you can correct me on this of course, is that JASON was trying to spread their base as a result.
- Foster: That's true. And, you know, I think that would have been an important thing. Let me just say why. There is a tendency, when one is talking about arms control, for a polarization to develop, I mean for the State Department to tend to want to go in one direction, and the Department of Defense to have a different view, and the White House perhaps have still a different view, and the Arms Control Agency to have some other view. And I think it's important to have an organization that has an opportunity to listen to the voices on several of those agencies and departments. And so, you know, I tend to be supportive or sympathetic about that. On the other hand, you know, in a sense you are asking for trouble to set that up, unless, unless the individuals are rather wise and careful. And so there is an example where someone like Charlie Townes is exemplary. As long as he would have a voice in what the organization did, I think you could feel quite comfortable. At least I would.
- Aaserud: Well, you're talking in general terms now; you are not talking about the role of Townes in this particular case.
- Foster: No no. No, that's right. No, but there are a number of such people. I'm just giving an example.
- Aaserud: Yes, of course, but that's what comes to mind.
- Foster: Yeah.
- Aaserud: Well, if I go down the list here — it's not a very long list, so don't worry — of your involvements that has come out from my database of documents here, there was a discussion in 1969 and I think in the following years of whether a British equivalent to JASON could be established.
- Foster: That's right, yeah.
- Aaserud: And that raised some problems about security —
- Foster: Yes.
- Aaserud: — and things like that. I wonder whether you could just say, state your involvement in that, and how that was presented to you, and what happened to it.
- Foster: No, frankly I don't know. I don't know the details. I remember you mentioned that in your letter. I can only say now how I think I would have felt about it. By that time I was beginning to pay more attention to the NATO portion of it. You know, it takes you a year or two to sort of understand what's going on in the United States. And it's unfortunate. But then you begin to realize that there is a bigger piece. There is NATO. And in fact to be quite honest about it, I think it was not until my third or fourth year that I began to do my job within that regard. But then in the four years that followed, I may have overdone it, in working particularly with France and Germany and England. Now, I believe that particularly with regard to the United Kingdom, they could benefit enormously from an organization like JASON, and certainly they have the intellectual capabilities there to do just that. Now, I think the question that would have come to my mind was whether or not something of that nature, whether or not it did not already exist. Because, you know, people like Bill Cook and Bill Penny and others work together all the time, whether they were in office or not.
- Aaserud: Yes, well, it's interesting that you mention Bill Cook, because the letter that I have on my screen here now is a letter from Bill Nierenberg to Hal Lewis from October of 1969 in which he says, "I also talked to Bill Cook and Johnny Foster" in parenthesis after that. So you have probably referred him to Bill Cook about this matter.
- Foster: Yeah. And I think someone like Cook would certainly have recognized the importance of having intellectual input of the type one has from JASON. But whether or not it already existed in some form, even though it wasn't perhaps exactly the way JASON is, I don't know.
- Aaserud: Aha. So you wouldn't exclude the possibility that there was such a group at some point in England.
- Foster: Yeah, whether it's organized formally or not. I have a feeling that something like that existed. You know, the British system has, what do you call it, a closet government, I mean they are always actively working, the organization is not in power. And so those individuals, and particularly the ones who care about national security, are involved all the time, to some degree. But what I do not know is whether they have the university connection in the way that JASON's organization provides it. I just don't know that.
- Aaserud: Well you see it's tempting for a historian — or at least for me — to draw the conclusion that since JASON occurred in the United States and not in Britain say, that is indicative of something unique in the relationship between academia and national security in this country as compared to England and other countries.
- Foster: I appreciate that. But I don't know the answer. Oh, it's an important thing to follow up. I mean, you know, get on the phone and ask them. Well let's see, you could ask, you know, more recently, you might get a hold of Robin Nicholson.
- Aaserud: Oh good.
- Foster: Do you know Robin?
- Aaserud: No I don't.
- Foster: Well let's see. Robin Nicholson — I'll get you his phone number in a moment — he was Margaret Thatcher's Science Advisor until just recently.
- Aaserud: He did not go with Major.
- Foster: No, he did not. No, he left, I don't know, a couple of years ago.
- Aaserud: Okay. Before that episode.
- Foster: He had left perhaps a year before —
- Aaserud: The change of leadership.
- Foster: Alright. Well, while we're on that, let me just see if I can get you the phone number. Hold a second.
- Aaserud: Okay, great. Thanks.
- Foster: Okay, let's see. She's bringing it in in just a moment.
- Aaserud: Okay, great. Well in the meantime perhaps I could read you a letter from Joel Bengston to you in relation to this, dated the last day of October in 1969.
- Foster: Yes.
- Aaserud: "Attached is a copy of Bill Nierenberg's letter," — which I just mentioned to you — "which Hal discussed with you last night. Lest there be any misunderstandings, I know of no suggestion that IDA have any financial involvement with a U.K. JASON. The first intent of my JASON associates is to

encourage the U.K. to get a closer coupling between the university scientists and their defense establishment by setting up an analog to JASON which is appropriate to their governmental structure."

- Foster: Super.
- Aaserud: Yes. "If the two groups work together sometime, that will be just fine, but we would naturally consult with your office on the proper administrative arrangement, including security."
- Foster: Yep.
- Aaserud: So you seem to have warned them a little bit too.
- Foster: Yeah, of course, but I see no problem. Alright, let me give you Robin Nicholson's number.
- Aaserud: Wonderful.
- Foster: [gives number] Sir Robin Nicholson.
- Aaserud: Sir, yes, I have to include that, yes.
- Foster: I'm sorry, I forgot to do it. No, he's a very wonderful person.
- Aaserud: I did try to contact Hermann Bondi about this.
- Foster: Yes. I worked briefly with Hermann.
- Aaserud: Yes. But he wasn't, he didn't remember too much about it. He remembered that some discussions had occurred, but he didn't recall that anything had been effected.
- Foster: How about Bill Cook? You might talk with Bill.
- Aaserud: He's still around too, yeah.
- Foster: Yeah, I don't know, but I tried to get Bill Cook to be an advisor to me, after he retired, but we couldn't set it up, and, you know, it was because the Secretary of Defense saw some problems. And just the same kind of thing.
- Aaserud: Same thing all over again.
- Foster: Security issue. And, you know, I can't tell you in detail why it was. The Secretary was Mel Laird. I told him what I was doing, and he said okay, and then when I was ready to execute it, he said, "I don't think you better do that." And I didn't say, "Come on, Mel. Why?" You know, I didn't feel that proper. I mean, from his vantage point he was beginning to see some difficulty, and so we did not do it.
- Aaserud: I think MacDonald was strongly involved in this, and I think his strategy was to involve some British scientists in a JASON study here in this country in order to, you know, make them see how it functioned and how it worked and maybe that could transpose to England. But I don't think they even got the people here in the first place.
- Foster: Yeah, well, it depends on the study, right? I mean some studies I think it would be a real problem, and some other study I don't think would be any trouble at all.
- Aaserud: Well, I know too little about this episode. I only have bits and pieces of information about it.
- Foster: Okay.
- Aaserud: But I think it's very interesting when I write about this to get this larger perspective.
- Foster: Okay. Well let's see, I'm running out of time.
- Aaserud: Yeah, and the tape is running out too. I had a few more questions.
- Foster: Okay. Go ahead.
- Aaserud: How much time do you have left?
- Foster: None. None.
- Aaserud: None. Yeah, okay.
- Foster: Maybe we could do it some other time, or maybe I could help you after you have picked up some information.
- Aaserud: Okay. Good. Well, the next question was the role of IDA, whether it mattered at all that JASON was part of it, and the transfer to SRI and all that.
- Foster: Okay. On IDA, I think IDA is an extremely important element of the technological support, both to the JCS as well as to several offices — [cut off by tape] [Tape 2, side 1] …particularly because of the Goldwater-Nichols Act and the role of the Vice Chairman. I think a consequence of that will be that IDA will provide an increasing contribution. That there be a connection between JASON and IDA I think is important, but I have seen it as a weak connection.
- Aaserud: Okay. You indicated that the discussions took place directly between Hal Lewis and you. I was wondering whether the head of IDA was kind of a halfway house, or IDA was a halfway house between the two of you and that kind of thing, but it seems that that wasn't necessary, from what you've been saying.
- Foster: That's right. Right.
- Aaserud: Okay. I won't hold you any longer then.
- Foster: Look, I'd be very pleased to chat with you in the future, about some specific thing, although it's not likely that I can contribute. You understand? That was a long time ago. It's 20 years.
- Aaserud: Yes, yes, I know. And I had a conversation with Al Hill yesterday that was much more specific, because he was very strongly involved in the origins of JASON.
- Foster: Ah, yeah. MIT Hill.
- Aaserud: A. G. Hill, Albert Hill, yes, MIT Hill. And, you know, I confronted him with all these documents, which isn't really fair so many years later.
- Foster: Well, I remember working with Al and Killian in fact with regard to the Draper Laboratory.
- Aaserud: Oh yes.
- Foster: You know, there was a big issue there. I mean, they were having this campus problem, and they wanted to split the Draper Laboratory off, and you

know, could we do it, and how, and so on —

- Aaserud: The divestiture problem, yes. Yeah, I am here at MIT now. Okay. So you can talk with Hill and also, let's see, who was the other guy?
- Aaserud: Ruina.
- Foster: Oh yeah, Jack?
- Aaserud: I will talk to him tomorrow.
- Foster: And, let's see, there's one more.
- Aaserud: Rathjens?
- Foster: Well yeah, that's right, but there's another. The fellow who took over as Director of Draper. Bob Duffy. Yeah, Bob Duffy you see would remember that period.
- Aaserud: Okay.
- Foster: But Bob Duffy was not a JASONite.
- Aaserud: No, but neither were you so —
- Foster: Yeah, that's true.
- Aaserud: And I'm concentrating on the outsiders now, or the people who experienced JASON from the outside.
- Foster: Yeah, that's interesting. Okay, I've got to go. I must go.

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Housatonic

Dr. Thomas Francis Jr. (born 1900)

[HK006P][GDrive]

Wikipedia 🌐 Thomas Francis Jr.

Associations

- Dr. Richard Edwin Shope (born 1901) (Collaborator in isolating swine influenza virus, 1935-ish)
- Dr. Alice E. Moore (born 1908) (Dr. Alice Moore worked as a student and associate of Dr. Thomas Francis Jr. in New York City from 1936 to 1941/1942, and they published at least one research paper together.)
- Dr. Jonas Edward Salk (born 1914) (Dr. Thomas Francis was a mentor to Dr. Jonas Salk - [HK005W][GDrive])
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1941 ! 1941 ! https://www.newspapers.com/image/71656211/?terms=%22Dr%20thomas%20francis%22

1936 (June) - Rockefeller Institute Research : THE SUSCEPTIBILITY OF SWINE TO THE VIRUS OF HUMAN INFLUENZA* - BY RICHARD E. SHOPE, M.D., Am) THOMAS FRANCIS, JR., M.D.

(From the Department of Animal and Plant Pathology, The Rockefeller Institute for Medical Research, Princeton, N. J., and the Hospital of The Rockefeller Institute for Medical Research, New York) / PDF : [HI0031][GDrive]

With Dr. Richard Edwin Shope (born 1901)

Note, some of this research from 1935 : "PLATES 45 TO 48 -- (Received for publication, June 26, 1935)"

THE SUSCEPTIBILITY OF SWINE TO THE VIRUS OF HUMAN INFLUENZA*

By RICHARD E. SHOPE, M.D., AND THOMAS FRANCIS, Jr., M.D.

(*From the Department of Animal and Plant Pathology, The Rockefeller Institute for Medical Research, Princeton, N. J., and the Hospital of The Rockefeller Institute for Medical Research, New York*)

PLATES 45 TO 48

(Received for publication, June 26, 1936)

The similarity in the pathogenic properties of human and swine influenza virus for ferrets led Elkeles (1) to attempt the transmission of the human agent to swine. He found that very young pigs (2 to 6 weeks old), developed a mild illness when the virus from man was given intranasally under light ether narcosis. At autopsy these animals sometimes showed scattered dark red bronchopneumonic areas of consolidation in the upper lobes of the lung. When cultures of either swine or human influenza bacilli were added to the virus at the time of its administration, the swine developed a more severe illness. The clinical picture was characterized by a low grade fever, apathy, loss of appetite, and sometimes cough. At autopsy varying degrees of bronchopneumonia were encountered. Virus, pathogenic for ferrets, could be recovered from the pneumonic lungs. It thus appeared that Elkeles had produced a disease somewhat resembling swine influenza by the administration to young pigs of human influenza virus mixed with influenza bacilli of either human or swine origin. This observation made more credible the theory that swine influenza may have arisen as the result of the infection of swine in 1918 from human sources (2–4).

The question of the pathogenicity of human influenza virus for swine was of such importance that it seemed to warrant further investigation. The present paper reports our experience in the transmission of human influenza virus to swine.

* Presented at the 37th Annual Meeting of the Society of American Bacteriologists in New York, December 26, 1935.

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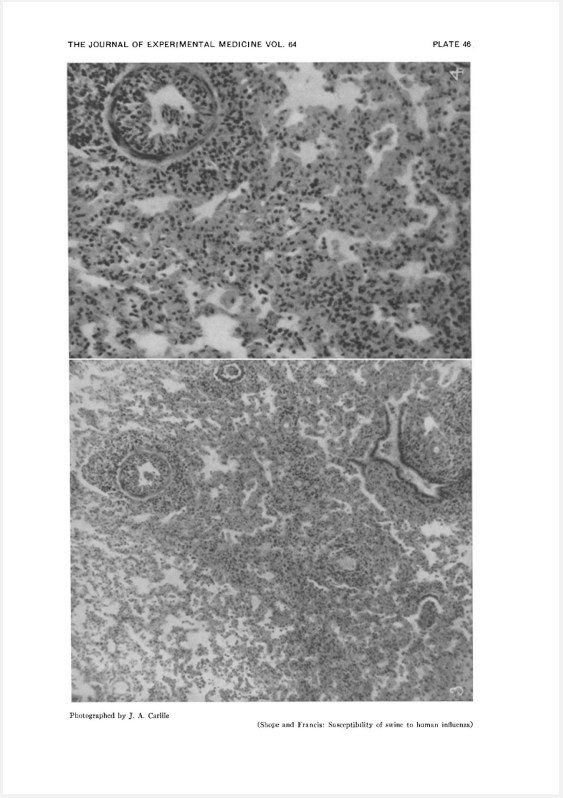

THE JOURNAL OF EXPERIMENTAL MEDICINE VOL. 64 PLATE 46

Photographed by J. A. Carille

(Shope and Francis: Susceptibility of swine to human influenza)

[HI0031][GDrive]

The similarity in the pathogenic properties of human and swine influenza virus for ferrets led Elkeles (1) to attempt the transmission of the human agent to swine. He found that very young pigs (2 to 6 weeks old) , developed a mild illness when the virus from man was given intranasally under light ether narcosis. At autopsy these animals sometimes showed scattered dark red bronchopneumonic areas of consolidation in the upper lobes of the lung. When cultures of either swine or human influenza bacilli were added to the virus at the time of its administration, the swine developed a more severe illness. The clinical picture was characterized by a low grade fever, apathy, loss of appetite, and sometimes cough. At autopsy varying degrees of bronchopneumonia were encountered. Virus, pathogenic for ferrets,

could be recovered from the pneumonic lungs. It thus appeared that Elkeles had produced a disease somewhat resembling swine influenza by the administration to young pigs of human influenza virus mixed with influenza bacilli of either human or swine origin. This observation made more credible the theory that swine influenza may have arisen as the result of the infection of swine in 1918 from human sources (2 - 4).

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Experimental - The Infection of Swine with Human Influenza Virus Alone

The PR 8 (Francis (5)) and WS (Smith, Andrewes, and Laidlaw (6)) strains of the human influenza virus were used in our experiments. No diflqculty was encountered in establishing either strain in swine 6 to 14 weeks of age. Older or younger animals were not tried. All animals were inoculated intranasally using the same methods employed in earlier studies of swine influenza (7, 8). The instillations were made with a Luer syringe without needle by pressing the tip of the syringe into the external nares. It was not necessary to anesthetize swine in order to induce infection with human influenza virus alone, although animals infected under ether narcosis exhibited somewhat more extensive pulmonary lesions at autopsy than those inoculated without anesthetic.

The WS virus was transferred 2, and the PR 8 virus 5, serial passages in swine before the experiments were discontinued. 10 per cent suspensions of infected mouse lung (5, 9) in physiological saline served as the source of virus for the first swine inoculation in each of the passage series and, after the first swine passage, similar suspensions of infected swine lung were used to inoculate swine of subsequent passages. 6.5 cc. of virus suspension was administered to each animal.

The disease produced in swine by human influenza virus was clinically very mild and, apart from a transient and indefinite malaise, no constant symptoms

were observed. It was sometimes difficult to be certain on antemortem examination that the animals had actually been infected. In most cases there was no significant elevation in temperature though a few had fever on the afternoon of the day following inoculation. 4 animals were kept under observation for 3 weeks or longer and made uneventful recoveries. 8 others were killed either by stunning and bleeding or by chloroforming on the 3rd or 4th day after inoculation and these exhibited the following picture at autopsy. There was a scattered, patchy, lobular atelectasis of one or more of the anterior lobes of the lung (Figs. 1 and 2). On cut section the involvement about the bronchi was seen to be more extensive than was apparent from the uncut surface. The involved lung was a reddish purple in color, beefy in appearance, felt rubbery, and was moist. A rather scant glassy tenacious mucous exudate could sometimes be pressed from the cut bronchi.

Histologically in involved areas of lung the alveolar walls were folded, greatly thickened, and infiltrated with large numbers of mononuclear cells (Figs. 3 and 4). Capillaries in the alveolar walls were dilated and packed with red blood cells. The partially collapsed alveoli themselves were either free of cells or contained at the most an occasional desquamated epithelial cell or a few lymphocytes. Polymorphonudear leucocytes were conspicuously absent. There was a pronounced perlbronchial round cell infiltration. The bronchial epithelium was, in places, fragmented and partially desquamated, and the cilia were either denuded or badly matted together. Some bronchi contained a scant, mixed lymphocytic and polymorphonuclear leucocytic exudate. Lymph channels in the

interlobular septa were sometimes dilated and the septa themselves thickened and loosely infiltrated with mononuclear cells.

The trachea, bronchi, and lungs of swine infected with human influenza virus were in most instances bacteriologically sterile. The few animals from whose respiratory tracts organisms could be cultivated showed no evidence that their disease had been modified by the bacterial contaminant.

Influenza virus was demonstrated in the lung lesions of all passage swine by the inoculation of mice (5, 9). No evidence was obtained that serial transmission of the virus in swine modified its pathogenicity for mice. Also, the pathogenicity of the virus for swine appeared to remain constant through the number of serial passages to which it was submitted. It was of interest that the areas of swine lung that appeared free of lesions were also free of virus.

The symptoms and pathology observed in swine infected with human influenza virus were indistinguishable from those of the filtrate disease (10) produced in swine by the intranasal administration of swine influenza virus alone.

The Infection of Swine with Human Influenza Virus and H. influenzae suis

Sixteen swine have been inoculated intranasally with mixtures of human influenza virus and the bacterium, H. influensae suis (11). These animals were included in two serial passage experiments. One series, started with virus from infected ferret lung (6), was continued for 5 passages, and the other, initiated with virus from infected mouse lung, was carried through 3 passages in swine before being discontinued. 6.5 cc. of 10 per cent virus suspension to which had been added 0.5 co. of a 24 hour horse blood culture (11) 1 of H. influenzae suis, strain 18, was given intranasally to each animal. It was known from other experiments conducted at the same time as those under discussion that this culture of H. influenzae suis, in combination with swine influenza virus, was capable of producing characteristic influenza in swine (10).

In 11 of the 16 swine inoculated with mixtures of human influenza virus and H. influenzae suis the resulting illness was definitely more severe than that caused by the virus alone. This enhancement was evident both clinically and at postmortem examination. The temperature reactions were similar to those seen in swine influenza although nsuaHy the fever was less persistent. Seldom was it maintained for longer than 3 days, whereas 5 to 6 day fevers are not uncommon in swine influenza. Fever, while it lasted, was high, exceeding 41°C. on 1 or [...]

[...]

Summary

Swine inoculated intranasally with human influenza virus alone develop an ill defined, mild, and usually afebrile illness of short duration. At postmortem the anterior lobes of the lungs of such animals contain scant, scattered areas of lobular atelectasis. Transmission of the virus for 5 serial passages through two groups of swine

failed noticeably to enhance its pathogenicity for this species. The disease produced in swine by infection with human influenza virus alone is indistinguishable clinically and pathologically from that caused by infection with swine influenza virus alone. Transmission of human influenza virus from swine to swine by contact succeeded in only one of four attempts.

Swine inoculated intranasally with a mixture of human influenza virus and H. influenzae suis usually develop a febrile, depressing illness similar to mild swine influenza. The pneumonia encountered in such animals at autopsy is similar to but less extensive than that seen in swine influenza. In some animals H. influenzae suis fails to become established and the disease then seen is identical with that caused by human influenza virus alone.

The human influenza virus recovered after 5 serial transfers in swine was immunologically the same as that with which the experiments were begun.

Saved Wikipedia (March 25, 2021) : Thomas Francis Jr.

Source : [HK005W][GDrive]

- Born July 15, 1900 in Gas City, Indiana
- Died October 1, 1969 (aged 69), in Ann Arbor, Michigan
- Nationality United States
- Alma mater Yale University
- Known for development of vaccine against influenza virus A and B
- Awards : Medal of Freedom in 1946
- Scientific career Fields : virology, influenza research
- Institutions : University of Michigan
- Doctoral advisor : Francis Gilman Blake
- Doctoral students : [**Dr. Jonas Edward Salk (born 1914)**]

Thomas Francis Jr. (July 15, 1900 – October 1, 1969) was an American physician, virologist, and epidemiologist. Francis was the first person to isolate influenza virus in the United States, and in 1940 showed that there are other strains of influenza, and took part in the development of influenza vaccines.

*Leaders in the effort against polio were honored at the opening of the Polio Hall of Fame on January 2, 1958. From left: Thomas M. Rivers, Charles Armstrong, John R. Paul, **Thomas Francis Jr.**, [**Dr. Albert Bruce Sabin (born 1906)**], Joseph L. Melnick, Isabel Morgan, Howard A. Howe, David Bodian, [**Dr. Jonas Edward Salk (born 1914)**], Eleanor Roosevelt and Basil O'Connor.*[1]
[HK006Q][GDrive]

Life

Francis grew up in New Castle in western Pennsylvania, graduated from New Castle High School in 1917 and Allegheny College on scholarship in 1921, and received his medical degree from Yale University in 1925. Afterwards he joined an elite research team at the Rockefeller Institute, first doing research on vaccines against bacterial pneumonia, later he took up influenza research. He became the first American to isolate human flu virus. From 1938 to 1941 he was professor of bacteriology and chair of the department of the New York University College of Medicine.

In 1941 he was appointed director of the Commission on Influenza of the Armed Forces Epidemiological Board (AFEB), a position which enabled him to take part in the successful development, field trial, and evaluation of protective influenza vaccines. Later that year Francis received an invitation from Henry F. Vaughan to join the newly established School of Public Health at the University of Michigan.

At the University of Michigan, Francis established a virus laboratory and a Department of Epidemiology that dealt with a broad range of infectious diseases. When [**Dr. Jonas Edward Salk (born 1914)**] came to that university in 1941 to pursue postgraduate work in virology, Francis was his mentor and taught him the methodology of vaccine development. During this time at the University of Michigan, Francis and Salk, along with other researchers, deliberately infected patients at several Michigan mental institutions with the influenza virus by spraying the virus into their nasal passages.[2] Salk's work at Michigan ultimately led to his polio vaccine.

In 1947 Francis was awarded one of the first Michigan distinguished professorships, the Henry Sewall University Professor of Epidemiology. In addition to his work at the School of Public Health, Francis joined the pediatrics faculty at the University's Medical School.

As director of the University of Michigan Poliomyelitis Vaccine Evaluation Center, Francis designed and led an unprecedented $17.5 million nationwide field trial to test the vaccine. Conducted by a staff of more than 100 people from the University of Michigan, the year-long trial involved 1.8 million children in the U.S., Canada, and Finland and an enormous network of community volunteers. The results of the study were announced in Rackham Auditorium of the University of Michigan on April 12, 1955, and signaled an era of hope and success in combating infectious diseases and, more broadly, in the development of large-scale efforts for the good of society.

In 1933, Francis married Dorothy Packard Otton, and they had two children. He died in 1969 in Ann Arbor, Michigan.

Quotation (Francis on his work): "Epidemiology must constantly seek imaginative and ingenious teachers and scholars to create a new genre of medical ecologists who, with both the fine sensitivity of the scientific artist, and the broad perception of the community sculptor, can interpret the interplay of forces which result in disease."[3]

Honors

- He was awarded the Medal of Freedom in 1946

- He was awarded the Medal of Freedom in 1946.
- He was honored with the Lasker Award in recognition of his distinguished contribution to the knowledge of influenza in 1947[4]
- He was elected to the Polio Hall of Fame, which was dedicated in Warm Springs, Georgia in January 1958 in recognition of his polio research work.
- Posthumous recognition in 2005 by dedicating the Thomas Francis Jr. Medal in Global Public Health at Michigan[5]

Further reading

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Wikimedia Commons has media related to Thomas Francis Jr..

This article includes a list of general references, but it remains largely unverified because it lacks sufficient corresponding inline citations. Please help to improve this article by introducing more precise citations. (September 2009) (Learn how and when to remove this template message)

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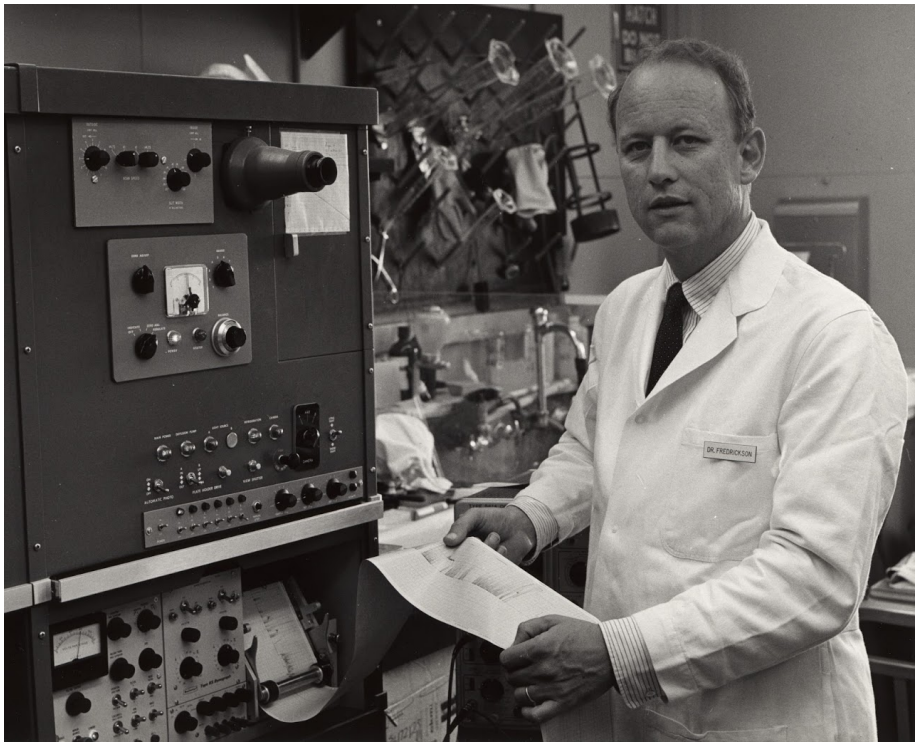
Dr. Donald Sharp Fredrickson (born 1924)



[HG00BR][GDrive]

Wikipedia Donald S. Fredrickson

Associations

- **Dr. Ernst Klenk (born 1896)** (Both were pioneers in the study of lipids)

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11th Director of the National Institutes of Health

In office

July 1, 1975 – June 30, 1981

President

- Gerald Ford
- Jimmy Carter

Preceded by

Robert Stone

Succeeded by

James Wyngaarden

Personal details

Born

Donald Sharp Fredrickson

August 8, 1924

Canon City, Colorado

Died

June 7, 2002 (aged 77)

Bethesda, Maryland

Nationality

United States

Alma mater

University of Michigan

Scientific career

Fields

Lipid metabolism

Institutions

- National Institutes of Health
- National Academy of Sciences
- Howard Hughes Medical Institute

Donald Sharp "Don" Fredrickson (August 8, 1924 – June 7, 2002) was an American medical researcher, principally of the lipid and cholesterol metabolism, and director of National Institutes of Health and subsequently the Howard Hughes Medical Institute.[1]

Biography[edit]

Fredrickson was born in Canon City, Colorado. His father was a county judge and the owner of Fredrickson Brown, an independent insurance agency. After high school he commenced medical school at the University of Colorado, but completed his studies at the University of Michigan after being transferred there by the army. During a cycling trip in the Netherlands he met his future wife, Priscilla Eekhof, and they married two years later. They would have two sons.[1]

Between 1949 and 1952 he worked as a resident and subsequently as a fellow in internal medicine at the Peter Bent Brigham Hospital (now part of Brigham and Women's Hospital) in Boston. Much of his published work from this period is in the field of endocrinology. Subsequently he spent a year in the laboratory of Ivan Frantz, a cholesterol biochemist, at Massachusetts General Hospital.[1]

Lipid research[edit]

In 1953 he took up a post at the National Heart Institute, part of the National Institutes of Health in Bethesda, Maryland. Initially, he worked with protein chemist and Nobel laureate Christian B. Anfinsen, and subsequently (with Daniel Steinberg) developed an interest in the metabolism of cholesterol and lipoproteins, as well as related medical conditions such as Niemann-Pick disease. His group identified Tangier disease (HDL deficiency)[2] and cholesteryl ester storage disease, two inborn errors of cholesterol metabolism. He played a prime role in the identification of several apolipoproteins (proteins that characterise the nature of a blood lipid particle): APOA2, APOC1, APOC2 and APOC3.[1]

In 1967 Fredrickson co-authored the paper that described the classification of lipoprotein abnormalities in five types, depending on the pattern of lipoprotein electrophoresis; this became known as the Fredrickson classification.[3] It was adopted as the mondial standard by the World Health Organization in 1972.[1] His group also conducted the first trials of pharmacological cholesterol reduction in the prevention and treatment of cardiovascular disease.[1]

Textbooks[edit]

From 1960 he worked, with John Stanbury and James Wyngaarden, on several editions of the encyclopedic medical textbook *The Metabolic and Molecular Bases of Inherited Disease*.[1][4]

Directorships[edit]

Fredrickson at NIH in 1976

Apart from his work in research, Fredrickson was involved in the management of the NHI from an early stage. He was clinical director from 1960 onward and from 1966 general director of NHI. In 1974 he left the NHI (then already the National Heart and Lung Institute) to head the Institute of Medicine of the National Academy of Sciences. Nine months later he was asked by president Gerald Ford to become head of the National Institutes of Health, a task he commenced on 1975-06-01.[1]

One of the main issues that occupied him was the controversy over research involving recombinant DNA. Already in 1973 there had been scientists urging a ban on such research for environmental reasons. Fredrickson released a guideline that restricted release of genetically modified organisms into the environment, and called into existence a body that would advise on these matters and had to approve any NIH research involving recombinant DNA technology. Fredrickson is credited with restoring confidence in this form of research.[1] A second controversy involved congressional control over the NIH in general. Some feel that Fredrickson's decision to resign from his position in 1981 was fuelled by these controversies.[1] The recombinant DNA controversy was the subject of a book published by Fredrickson in 2001.[5]

After 1981 Fredrickson was scholar-in-residence at the National Academy of Sciences for two years, but in 1983 he was recruited to become the vice-president of the Howard Hughes Medical Institute, a privately run health research charity. At that stage, the institute was still the owner of the Hughes Aircraft Company, and Fredrickson participated in the negotiations that led to the sale (for $5.2 billion) to General Motors. He made substantial changes to the institute's research programme. He resigned in 1987 when the trustees of the institute discovered that there had been financial malversations under his presidency.[1]

Later years[edit]

Fredrickson returned to the NIH, resuming work on lipid diseases and writing for the National Library of Medicine. He participated in the genetic elucidation of Tangier disease, which he had himself described in the 1960s.[1][6]

He was personal physician to Hassan II of Morocco, and had a close personal friendship with the king until the latter's death in 1999.[1]

He was found dead, face-down, in his swimming pool in 2002. He is buried in Leiden, the Netherlands.[1]

His papers are held at the National Library of Medicine in Bethesda, Maryland.[7]

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External links[edit]

- The Donald S. Fredrickson Papers, Profiles in Science, National Library of Medicine

1969 - Dr. Fredrickson and Dr. Ernst Klenk at a symposium on phospholipid

See **Dr. Ernst Klenk (born 1896)** / Source : [HG00BP][GDrive] / **NOTES :** "*Abstract: Ernst Klenk, chair of physiologische chemie at the University of Cologne, Donald Fredrickson, of the National Heart Institute (NHI), and Willi Stoffel, docent of physiologische chemie at the University of Cologne, are seated at a table with wine glasses and a flower center piece.*" ; *Copyright: The National Library of Medicine believes this item to be in the public domain.*"

1994 - Long-time friend of Fauci ?

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https://www.nytimes.com/1994/02/15/science/scientist-at-work-anthony-s-fauci-consummate-politician-on-the-aids-front.html

SCIENTIST AT WORK: Anthony S. Fauci; Consummate Politician On the AIDS Front

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By Natalie Angier

- Feb. 15, 1994

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IF everyone in the world were like Dr. Anthony S. Fauci, there would be no need for Prozac. By any sensible reckoning, the man should be wilting around the edges. He has been at the center of the AIDS tornado since the epidemic began, serving as the director of the National Institute for Allergy and Infectious Diseases and the Government's Office of AIDS Research, which together oversee much of the AIDS-related research carried out around the nation.

Apart from his official credentials, he has been the most visible and quotable spokesman on every medical, epidemiological and social aspect of the disease, the de facto AIDS czar until the appointment last year of Kristine Gebbie as the czar de jure to the President.

The institute that Dr. Fauci runs at the National Institutes of Health not only controls about 40 percent of the Federal budget designated for AIDS, but also the money for studies of all the other infectious diseases afflicting the nation's citizenry, from tuberculosis to hanta virus infections. In addition, Dr. Fauci runs a laboratory on the Bethesda campus that does basic research on how the human immunodeficiency virus gradually disassembles the immune system, studies that lately have yielded insights into AIDS and buffed his luster as something more than a superbureaucrat.

Even among scientists, where work addicts are commonplace, Dr. Fauci, 53, is renowned as a truly hard worker. This is the bookend refrain for any discussion about him, an emphasis first and last on how astonishing it is that he manages to work 16 hours a day, day after day, year after year.

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And he is working on a plague for which, scientific revelations about the virus notwithstanding, there have been depressingly few advances to help human patients. There is no vaccine in sight. There are no new drugs in the pipeline, and the antiviral drugs that do exist, like AZT, DDI and DDC, have been shown to be of questionable benefit in prolonging life.

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The epidemic continues to spread relentlessly across the globe. It has killed 210,000 people in the United States alone and eviscerated entire subcultures, including the arts community, which gives depth and resonance to the rest of the population. It is a new disease that has turned the world old overnight.

Dr. Fauci has been bounced around by activists in the AIDS community, denounced one day, embraced as comrade and hero the next. Most recently, activists have put his pride and ego to the test by persuading Congress that the Office of AIDS Research should be removed from his jurisdiction and given a full-time director of its own, who is expected to be named any day now.

Yet Dr. Fauci looks the same as he has looked for years, a compact, meticulous, supremely confident, unflappable bullet of a man, at once compassionate and hard-driving, gentle and ferocious. The man with the natty suits, hearty handshake and resilient Brooklyn accent.

Doesn't he ever doubt himself, or his ability to make a real dent in the disease? Doesn't he ever get tired or depressed or demoralized, or just overwhelmed by it all?

Editors' Picks

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"If you're asking whether I have fears, pain and anxieties, yes, of course I do," he said. "That's a natural human thing. But do you mean, have I ever let them interfere with my responsibilities, or get in the way of my work? No."

Not once? Not one single lapse?

"Never," he said firmly. "I have the self-discipline not to let that happen." As though to make a point about his purposefulness, he jumps up from the couch where he had been sitting in his office and strides over to his desk. Two of the walls in the large room are covered practically to the ceiling with his plaques and awards and degrees real and honorary.

"To take on what I take on, you have to be very organized and energetic," he said. "I have made enormous sacrifices in my family and personal life. But I don't want to be praised or pitied for this. I do it because this is what I want to do." Optimistic About AIDS Treatment

He is religiously organized, his day blocked out in chunks for his administrative duties, his rounds to see AIDS patients in the research hospital at the institutes, his lab meetings, his discussions with scientists in his group. He runs seven miles every lunch hour regardless of the brutality of the weather. He sets aside every Saturday evening and all day Sunday for his family, a commitment that is essential if he is to see his three young daughters while they are awake.

And perhaps his is the attitude that must prevail in the plague years: not robotic, because robots break down, but calmly obsessive and matter-of-fact. His pragmatism may be his strongest suit, the impulse that ultimately overrides what some say is his sensitivity and a tendency to take things personally. When told that Harold Varmus, the new head of the N.I.H., had described him as "running his institute with an iron fist," Dr. Fauci made a point of asking every subordinate he encountered that evening whether the description was accurate. Most giggled nervously and said variations of, well, yes, but you're always fair.

Dr. Fauci is a man of many opinions, the most essential of which are scientific ones. And it is in the scientific arena that he is most optimistic, although cautiously so. "We've been on a roller-coaster ride for years, from great enthusiasm to despair," he said. "Recently, there was a sense that the sky was falling, when it became clear that giving people AZT early in the course of the disease doesn't give significant benefit.

"But despite the feeling of a roller- coaster ride," he added, "the science will march ahead to the time when we'll have an enduring solution or a therapeutic intervention. And it all will be based on a step-by-step understanding of the immune pathogenesis" that is the hallmark of AIDS.

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Dr. Fauci has lately devoted most of his attention to dissecting those steps. In widely praised work published last year, Dr. Fauci and his colleagues reported that the human immunodeficiency virus never really lies latent in the body, but rather is sequestered in the lymph nodes, where it disturbs many threads of the body's densely interwoven immune system. It overexcites some immune signaling pathways, while eluding the detection of others. And though the main target of the virus appears to be the famed helper T-cells, or CD-4 cells, which it can infiltrate and kill, the virus also ends up stimulating the response of other immune cells so inappropriately that they eventually collapse from overwork or confusion.

He proposes that one possible approach to treating infection with H.I.V. is not to focus on clearing every last viral particle from the body, but rather to figure out exactly how the immune system comes unstrung, and then replace or compensate for those signaling pathways thrown out of whack. For example, he and his colleagues have learned that AIDS patients suffer from a defect in the arousal of an immune signaling molecule called interleukin-2. In trials now under way, they are giving patients IL-2 in carefully calibrated doses designed to recapitulate the activity of a normal immune system. They have found that the patients' T-cell counts improve with the treatment, but they now must determine whether that rise in cell number translates into an improvement in symptoms of the disease; for example, whether the interleukin treatment causes Kaposi's sarcoma lesions to shrink.

Dr. Fauci and his colleagues are also studying the immune systems of 10 people who are members of a small and fortunate minority: they have been infected with H.I.V. for 12 years or longer, yet they have not progressed to showing any symptoms of AIDS. "We think the real clues to the disease are with these people," said Dr. Fauci. "What is it about them that's different? The architecture of their lymphoid tissue appears to be preserved compared to those who progress, and we're trying to see what is responsible for that preservation." 'A Consummate Politician'

Dr. Fauci's current fixation on his science is what keeps him from getting excessively rankled by recent struggles over who will have the greatest hand in shaping the course of AIDS research. The new legislation that reorganized the Office of AIDS Research was whisked through Congress last spring so easily that even the activists who had promoted the change were surprised. Under the plan, the office has been turned into a strong force within the N.I.H., one with more personnel and power than it had under Dr. Fauci's rule. Whoever is chosen as director will coordinate the entire $1.3 billion budget for AIDS research, keeping track of all AIDS-related programs and clinical trials that currently are run by 21 different institutes at the N.I.H.

Dr. Fauci and many other scientists had vigorously opposed the reorganization of the Office of AIDS Research, arguing, among other things, that it would emphasize a trend toward excessively targeted science at the expense of untethered basic research.

Dr. Fauci soft-pedals the degree to which his pride has been wounded, but friends and colleagues said they sensed his frustration. "It might be a relief for him to get some of the pressure off his back," said Dr. Donald Frederickson, a former director of the N.I.H. and one of Dr. Fauci's old friends. "It's enough to do to run his own institute, and his lab is now going full steam. But nobody likes to be downgraded from the position of national importance that he's had."

Those who know Dr. Fauci said there is no chance he will fade into the scenery. "His role will change, but anybody coming into the office would be a fool not to take advantage of Tony's leadership skills," said Derek Hodel of the AIDS Action Council, a Washington-based lobbying group for AIDS organizations. "He's a consummate politician and a fine scientist, and it's clear he's going to continue to play a central role in AIDS research."

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Dr. Fauci, say friends and co-workers, has always been like a child's punching bag, which can be pushed over but will always pop back up for more. For the first eight years of his directorship at the allergy and infectious diseases institute, he worked under Republican Administrations reluctant to focus their attention on AIDS. He has been the repeated target of activists furious at what they perceived to be bureaucratic indifference and timidity -- and he has also been their greatest friend.

"I call him murderer or hero, depending on the week," said Larry Kramer, a playwright, journalist and the most resilient bullhorn of all activists. "It's been such a complicated relationship." That complexity was reflected in Mr. Kramer's latest play, "The Destiny of Me," in which Dr. Fauci is portrayed, with scant attempt at disguise, as Dr. Anthony della Vida, or Dr. Life, a chipper physician-researcher who accepts descriptions of himself as "a son of a bitch of Hitler" and a "scientific fraud" from his churlish AIDS patient -- modeled after Mr. Kramer -- yet who tries with equal fortitude to keep that patient alive. Dr. Fauci attended the play's opening. Assailed and Beloved by Activists

"I've worked with Dr. Fauci for years, and during that time we've have a combination adversarial and collaborative relationship," said Mr. Hodel. He and other activists give Dr. Fauci tremendous credit for lending his support several years ago to the idea of a parallel track, of allowing experimental drugs to be made available to AIDS patients even as the compounds are tested in clinical trials. They also appreciate that he has spoken out against mandatory H.I.V. testing of health care workers, and has opposed barring immigrants who carry the virus. They said he has been willing to listen to members of the AIDS community and to persuade grudging researchers and pharmaceutical companies that they should do the same.

Yet for every cheer there is a hiss. Some activists recall bitterly that during the Reagan and Bush Administrations Dr. Fauci defended research budgets that they thought were dreadfully inadequate. Some say he is a great scientist but a poor administrator; others insist that he is too smooth a bureaucrat to make any scientific headway. Scientists also have criticized Dr. Fauci for capitulating to the demands of activists too readily.

And through it all, Dr. Fauci accepts the criticisms, and he accepts that someone must absorb the anger and terror that AIDS has spawned, so why not somebody of strong vertebrae who was raised on the streets of Bensonhurst? "I was on a C-Span program a couple of months ago with Tony, and I attacked him for the entire hour," said Mr. Kramer. "He called me up afterwards and said he thought the program went very well. I said, 'How can you say that? I did nothing but yell at you.' He said, 'You don't realize that you can say things I can't. It doesn't mean I don't agree with you.' "

Dr. Fauci claims he does not take the intermittent blasts personally. "That's the activist mode," he said. "When there's a disagreement their tendency is to trash somebody. But I know that when Larry Kramer says the reason we're all in so much trouble is because of Tony Fauci, he's too smart to believe that.

"I don't want them to change or compromise that mode," he added, "as long as they don't ask me to change my opinions."

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"I'm totally obsessed by this problem," said Dr. Fauci. "I'm going to finish this job." That is why he turned down an offer to take over the entire National Institutes of Health several years ago, he said, and that is why he does not mind ceding control over the Office of AIDS Research now.

"I think Tony believes he will find a cure for AIDS," said Mr. Hodel. "I hope he's right. And I hope a lot of other people are given the opportunity to believe that as well."

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Dr. Edward Jacob Freeman (b1851)

Born - December I8, I851 [HB0021][GDrive]

Source: Encyclopedia_of_Pennsylvania_Biography [HB0021][GDrive] page 355

DR. EDWARD JACOB FREEMAN, who for many years was engaged in the practice of medicine in Northampton county, but is now superintending private business interests, was born in Easton, Pennsylvania, December I8, I851, his parents being Dr. George W. and Matilda (Seip) Freeman. His paternal grandparents were Jacob and Susan (Butz) Freeman. The village of Freemansburg was named' in honor of the family. The family had its origin in England, and representatives of the name emigrated to this country in the early part of the seventeenth century, and they owned considerable land in Bethlehem and Lower Saucon township.

Dr. George W. Freeman was born in 1832. He obtained his early education in the public schools of Freemansburg and of Bethlehem, and afterward continued his studies in a private school conducted by Professor Vandeveer, at Easton, Pennsylvania, where he prepared for college. In 1849 he entered the University of Pennsylvania, but previous to this time he read medicine under the direction of Dr. C. C. Field of Easton, who was his preceptor for three years. He was graduated from the University of Pennsylvania, in 1852, and then returned to Freemansburg, where he entered upon the practice of his chosen profession, being thus engaged up to the time of his death, which occurred May 16, I898. He was prominently connected with the Northampton County Medical Society. He married Matilda Seip, a daughter of Edward Seip, of Easton, and their marriage was blessed with four children, of whom Edward Jacobs is the eldest, Mary Ellen, the second, is the wife of G. W. Bachman, and they have five children: Estella, Jennie, Ralph, Laura and Roland. Walter S., who is a practicing physician of Philadelphia, married Jane Unangst, and they have four children: Eugene, Mabel, Edith and George. Emma Adelia, the youngest child of George VV. and Matilda (Seip) Freeman, died in infancy.

Dr. Edward J. Freeman, who was born in Easton, December 18, I851, attended the public schools in his early youth, and afterward became a student in the Swartz private academy at South Bethlehem. He next entered Lehigh University at Bethlehem, where he remained for a year and a half, and in the winter of 1869 he matriculated in the University of Pennsylvania as a student in the medical department, and was graduated with honors in the class of 1873. Having thus become well prepared for the responsible duties of his profession, he took up his abode in Freemansburg, and associated himself in practice with his father, being thus engaged until I877. The business relation between them was then dissolved, and Dr. Freeman of this review began practicing alone. He continued the work of ministering to the needs of suffering humanity until 1898, when he put aside the cares of the medical profession in order to give his super vision to his investments and private business interests.

Dr. Freeman is an active worker in the Re formed church and has been closely identified with its progress and development. The only secret order with which he is connected is Huldah Lodge, No. 364, Knights of Pythias. He married Miss **Emily J. Knecht**, a daughter of John Knecht, of Shimersville, now deceased. Her mother bore the maiden name of Eliza Reigel, and by her marriage had four children, namely: 1. Arabella, who married Dr. J. J. Detweiler, by whom she has six children—Elizabeth, William, Fred. Albert, John and Edith. **2. Emily. the wife of Dr. E. J. Freeman**. 3. Howard, who married Laura Walters, and has two children—Laura and John. 4. Anna, who completes the Knecht family. To Dr. and Mrs. Freeman have been born four children, but'Anna Elizabeth is the only one now living, the others having died in infancy.

Dr Edward Jacob Freeman (December I8, I851) - Married - Emily J Knecht (daughter of John Knecht and Eliza Reigel ... married February 2, 1841,)

4 children, but 3 died in infancy - only Anna Elizabeth (Freeman) lived

Source: Encyclopedia_of_Pennsylvania_Biography [HB0022][GDrive] page 1820:

KNECHT, John,

Man of Great Enterprise.

The Knecht family of Northampton county descends from John Jacob Knecht, who sailed from Rotterdam in September, 1734, and later settled in Williams town ship, Northampton county. The line of descent to Howard R. Knecht, of Shimersville, is through Jonathan George Knecht, son of the founder, his son John, his son John (2), father of Howard R. Knecht.

In 1841, John Knecht settled in Shimersville, Pennsylvania, where he became prominent in business and was one of the substantial men of his day, succeeded in 1890 by his son, Howard R. Knecht, who is now (1914) the leading business man of the town. The records of father and , son cover a period of seventy-three years During this entire period the chief industry of the town has been the mills now operated by Howard R. Knecht, under the name of John Knecht's Son.

John (2) Knecht was born in Williams township, Northampton county, August 5, 1814, died February 22, 1891. He was left fatherless when ten years of age, his uncle Aaron Knecht supplying a father's care and training him in habits of thrift and industry—traits that ever characterized his later life. He was educated in a public school held in the spring house near Black Horse Tavern, on the Delaware, two and a half miles below Easton. He grew up on his uncle's farm, later learning the carpenter's trade, which he followed until twenty-one years of age. He then went south, engaging in railroad construction on the line between Raleigh and Gaston, North Carolina, re turning to Williams township in 1830 and was there married in 1841. Soon after that event he took possession of the old grist mill at Shimersville, built in 1735 by Nathan Irish. Then as now, this mill was the milling center for a large district, the old records showing that in 1743 the Moravians at Bethlehem petitioned the court to open a road from that town ttotthet Saucon mill, which was done. The old mill had passed through several hands before coming to John Knecht in 1842. Mr. Irish sold it to John Cruikshank, of Philadelphia; John Currie, his son-in-law, was the next owner, he selling mill, stone house and all land connected therewith, to John Shimer, who in 1816 erected a new mill close by the old one. Samuel Leidigh became the next owner, and Benjamin Reigel the next, he purchasing the property in 1836, selling it in 1842 to his son-in-law, John Knecht, who operated it until 1890, when the mill management was turned over entirely to his son, Howard R. Knecht, its present owner. In addition to his large milling business, and the management of the large estate he had acquired. John Knecht was interested with his longtime personal friend, Judge Asa Packer, the projector and builder of the Lehigh Valley railroad. He was in hearty sympathy with Mr. Packer in his plans, rendering him important assistance in many ways, and after the completion of the road was a director for many years. He not only favored, encouraged and assisted in the construction, but as a director added strength to the management of those early years of railroads. He pos sessed not only the friendship but the esteem and confidence of Mr. Packer, and which he always retained. With keen business foresight, Mr. Knecht saw the great benefit the Valley might realize from the building of the railroad, and after its completion he inaugurated the movement that resulted in the formation of the Bethelehem Iron Company. The latter was formed in association with Augustus Wolle, Charles W. Rauch, Charles B. Daniel and other capitalists, John Knecht being a director of the company from its inception in 1859 until his death in 1891. He was also connected with other prominent companies, including the Northampton Iron Company, which he organized in 1872, and of which he was president. This company built a large furnace near Freemansburg, later operated by the Bethlehem Iron Company. He was also a director of the Easton National Bank, and held many offices of trust, serving as executor, administrator or trustee of many large estates. He was very generous, and by advice and material assistance started many a man on the road to prosperity. He was a Democrat but would never consent to accept public office, declining even a congressional nomination. He was a faithful member of the Reformed church and in every relation in life was true, honorable and up. right.

John Knecht married, February 2, 1841, Eliza E., daughter of Benjamin and Elizabeth Riegel. She survived her husband less than six months, dying July 4, 1891. On February 20 of that year Mr. and Mrs. Knecht celebrated their fiftieth anniversary of their wedding. A pleasant and unusual feature of the occasion was the presence of the groomsman and bridesmaid of fifty years earlier. The guests were numerous, many of the officials of the Lehigh Valley railroad and of the Bethlehem Iron Company honoring their old business associate by their presence, as did many of his oldtime Easton, Bethlehem and country friends. Twenty days later the death of John Knecht occurred, followed in six months by that of the widow. Children: Arabella, married Dr. J. J. Detweiler, of Easton; Emily, married Dr. E. J. Freeman, of Freemansburg; Annie; Howard R., of whom further; Sarah, married Dr. R. H. Sheppard, of Phillipsburg, New Jersey; John and Benjamin, the latter dying in infancy.

Howard R. Knecht was born at Shimersville, September 4, 1856. He was educated in the public schools and at Nazareth Hall, graduating from the latter with the class of 1876. He at once be came his father's assistant and on attain ing his majority was admitted a partner in the milling business. The old stone mill built in 1816 has been rebuilt, enlarged and otherwise improved, and is about on the site of the original Nathan Irish mill built in 1735. In 1885 it was completely modernized and converted into a roller mill, and is one of the noted flouring mills of Pennsylvania, its pro ducts on sale in all principal Eastern Pennsylvania cities and in other large cities in the east. In 1890 John Knecht turned over to his son the entire management of the plant, and in his will bequeathed the grist mill, saw mill, stone house (the family residence), tenant houses, large tracts of land and other property, Howard R. Knecht has ever since retained management of the flouring mill, which is a very important and prosperous industry, and has been active in many of the business enterprises that distinguish Northampton county. He is a director of the Easton National Bank and in business affairs has displayed the same energy and ability that distinguished the career of his honored father. He is most genial and courteous in manner, has a host of warm friends, and holds a high position in his community. He is a Democrat in politics and influential in local party affairs. He is a member of the Reformed church of Freemansburg, and a trustee of Allentown College for Women. He was a juror in the famous Lincoln National Bank case, tried before Judge Butler in Philadelphia in 1890, wherein the cashier and another were accused of defrauding the bank of some $80,000.

A trait of Mr. Knecht's character is his interest in men of his time, and his methodical methods of preserving all cur rent notices of men of his day. When a lad of fourteen years he began making newspaper clippings of men and events, and this practice has followed all through life, the clippings being preserved by a systematic manner of arrangement. He is a veritable encyclopedia of information of this character, ari one appealed to for information when all other sources fail.

Mr. Knecht married, September 1882, Laurenti, daughter of Dr. B. C. Walter, of Farmersville. Children: **Florence Anna** and John Walter, two others dying in infancy. The family residence is at Shimersville, the family seat since the marriage of Mr. Knecht's parents in 1841.

Housatonic

Dr. Charlotte Friend (born 1921)

Wikipedia Charlotte Friend

Born March 11, 1921, in New York City, New York [HK005S][GDrive]

Died January 13, 1987 (aged 65), in New York, New York [HK005S][GDrive]

Associated with :

- **Dr. Alice E. Moore (born 1908)** (...)
- **Dr. Francis Peyton Rous (born 1879)** (*"In 1956, Charlotte Friend (who had a role in Dr. Alice Moore's lab as of 1950) gave a paper at the annual meeting of the American Association for Cancer Research in which she stated that she had discovered a virus that caused a leukemia-like disorder in newborn mice.* ***She was roundly criticized for bringing up what was considered to be the old canard of viruses causing cancer.*** *Only Peyton Rous, who had made a similar announcement years before, spoke in her defense."*)
- **Dr. Cornelius Packard "Dusty" Rhoads (born 1898)** ("As a post-doc, Dr. Charlotte Friend worked in the Sloan-Kettering Institute under the direction of [**Cornelius Packard "Dusty" Rhoads (born 1898)**]." ; See [HK005S][GDrive])
-

Saved Wikipedia (Mar 20, 2021) - "Charlotte Friend"

Source : [HK005S][GDrive]

- Nationality U.S.
- Alma mater Hunter College, Yale
- **Known for** Discovery of the Friend Leukemia Virus and Friend erythroleukemia cells, her research is still widely used today. It has become especially important in the field of HIV/AIDS research following her death.
- Scientific career Fields : Virology
- Institutions : New York University, Sloan-Kettering Institute for Cancer Research, Icahn School of Medicine

Charlotte Friend (March 11, 1921 – January 13, 1987) was an American virologist. She is best known for her discovery of the Friend leukemia virus.[1] She helped to establish the concept of the oncovirus, studied the role of the host immune response in disease development, and helped define modern retrovirology.

Family

Born and raised in New York, she was the youngest daughter of Russian Jewish emigrants, Morris Friend, a businessman, and Cecilia (Wolpin) Friend, a pharmacist. Friend had three siblings, consisting of two older sisters, Priscilla and Leafan, and a younger brother, Morris. When she was three years old, her father died, leaving her mother alone to raise four kids during the Great Depression. Her mother made sure all four of her kids would be able to finish their education, despite living on "Home Relief".[2]

Education and Research

She graduated from Hunter High School in 1940 and Hunter College in 1944.[3] The same year, she enlisted in the United States Navy.[4] As a lieutenant junior grade she worked in the hematology laboratory at U.S. Naval Hospital Shoemaker, California.[4] After the war ended she enrolled as a graduate student in the Department of Microbiology at Yale, where she received her PhD in 1950 with a thesis on the effects of sodium salicylate (aspirin) on antigen-antibody reactions[5] During her time at Yale she frequently traveled to New York to consult with Elvin Kabat and Michael Heidelberger, imminent immunologists at Columbia.[5] As a post-doc she worked in the Sloan-Kettering Institute under the direction of [**Cornelius Packard "Dusty" Rhoads (born 1898)**]. While at Sloan-Kettering, she met Cecily Cannan Selby, who had recently gotten her Ph.D. from the Massachusetts Institute of Technology. Both of them were interested in cell structure. Once, when looking through an unused electron microscope at the university, the two decided to look at fine

structures within the cells of the Ehrlich ascites carcinoma, a commonly used model for cancer research. What they found were structures in the cytoplasm of the cells which resembled those found in virus-infested cells. It was this incident that sparked Friend's interest in the possibility of cancer being caused by viruses, which became a main focus of her research. In 1966 she accepted a position as Professor and Director of the Center for Experimental Cell Biology at The Mount Sinai Hospital.

During her lifetime she was President of the Harvey Society, the American Association for Cancer Research and the New York Academy of Sciences and was the first woman to do so.[5] **Charlotte Friend also served as a member of the Advisory Committee for the [Special Virus-Cancer Program] of the National Institutes of Health and a member of the Board of Scientific Counselors of the Division of Cancer Cause and Prevention of the [National Cancer Institute].** Over the years, she served on a number of other advisory committees and on the editorial boards of several cancer and hematology journals. In all, she published 163 papers, 70 of which she wrote by herself or with one other author.

On her sixtieth birthday she was diagnosed with a lymphoma. She was insistent that her diagnosis remain secret, and continued to carry out her duties in her laboratory.[5] She died at the age of 65.

Legacy

- Cemented the knowledge that virus can be responsible for some types of cancer.
- Friend Virus is today the model to study viral leukemogenesis [6]
- Helped set the foundations for the study of retrovirus. Her techniques and characterisation studies allowed the future isolation of the human immunodeficiency virus.
- Observed the relation between liver cell damage and virus release and elevation of enzyme levels. Furthermore, she detected that increases in serum enzymes are also a feature of some human leukaemia, both still of vital clinical relevance today.[7]

Prizes

- 1962 Alfred P. Sloan Award in Cancer Research
- 1986 Honorary Doctor of Science, Brandeis University

Selected works

- “Cell-Free Transmission in Adult Swiss Mice of a Disease Having the Character of a Leukemia.” Journal of Experimental Medicine 105 (1957): 307–318[4]
- “The Coming of Age of Tumor Virology.” Cancer Research 37 (1977): 1255–1263[4]
- “Hemoglobin Synthesis in Murine Virus-induced Leukemic Cells in Vitro: Stimulation of Erythroid Differentiation by Dimethyl Sulfoxide,” with W. Scher, J.G. Holland, and T. Sato. Proceedings of the National Academy of Sciences 68 (1971): 378–382.[4]

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- ^ FRIEND C (1957). "Cell-free transmission in adult Swiss mice of a disease having the character of a leukemia". J Exp Med. 105 (4): 307–18. doi:10.1084/jem.105.4.307. PMC 2136697. PMID 13416470.
- ^ "Charlotte Friend | Jewish Women's Archive". jwa.org. Retrieved 2017-07-19.
- ^ "Charlotte Friend, PhD, Papers, 1935-1987 | Icahn School of Medicine". Icahn School of Medicine at Mount Sinai. Retrieved 2017-07-19.
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- Jump up to:
- a b c d e Diamond, Leila. "Charlotte Friend". Jewish Women's Archive. Retrieved December 31, 2014.
- ^
- Jump up to:
- a b c d Diamond, Leila (1994). "Biographical Memoirs (vol.63): Charlotte Friend" (PDF). The National Academies Press. Retrieved December 31, 2014.
- ^ L. Diamond and S. R. Wolman, eds., "Viral Oncogenesis and Cell Differentiation: The Contributions of Charlotte Friend." (Ann. N.Y. Acad. Sci. 567, 1989).
- ^ Friend, C; Wroblewski, F; LA, DUE JS (1955). "Glutamic-oxaloacetic transaminase activity of serum in mice with viral hepatitis". J. Exp. Med. 102 (6): 699–704. doi:10.1084/jem.102.6.699. PMC 2136542. PMID 13271682.

External links

- BIOGRAPHICAL MEMOIRS [1]
- Charlotte Friend Papers at The Mount Sinai Archives, The Mount Sinai Medical Center, New York, N.Y. [2]

REFERENCES: Books and Research Papers

EVIDENCE TIMELINE

Late 1940s - Charlotte Friend (who becomes a Pioneer in Cancer Cell Biology) is a student, working in the lab of Dr. Alice E. Moore

Source : https://www.newyorkalmanack.com/2014/03/charlotte-friend-a-pioneer-in-cancer-cell-biology/

"Charlotte Friend: A Pioneer in Cancer Cell Biology"

March 10, 2014

The story of **Charlotte Friend** is a true New York story. Friend was a noted microbiologist who made important contributions to the study of cancer. She was an advocate for women's rights and worked hard to improve the position of women in science.

Charlotte Friend was born March 11, 1921 in New York City, a city she loved. She received a Bachelor's degree from Hunter College in 1944 and then entered the Navy, where she was assigned to help direct a hematology laboratory in California. She left the Navy in 1946 and began graduate work in microbiology at Yale University. By the time she received her doctorate in 1950, Dr. Friend already had a position in the laboratory of [**Dr. Alice E. Moore (born 1908)**] at the Sloan-Kettering Institute in New York City. She stayed in New York for the rest of her life.

In 1956, Friend gave a paper at the annual meeting of the American Association for Cancer Research in which she stated that she had discovered a virus that caused a leukemia-like disorder in newborn mice. She was roundly criticized for bringing up what was considered to be the old canard of viruses causing cancer. Only [**Dr. Francis Peyton Rous (born 1879)**], who had made a similar announcement years before, spoke in her defense.

But the tide of change on this issue was turning in the face of mounting evidence. Dr. Friend had not been the only researcher whose work suggested this. By the next year, Friend had published her work in the prestigious Journal of Experimental Medicine, with the careful editing of Dr. Rous. She was also supported by Jacob Furth, who announced that he had studied Dr. Friend's pathologic material and that leukemia truly had been found to result from the new virus, which became known as the Friend leukemia virus.

Friend spent the following years investigating different aspects of the virus, as did many other researchers. She worked with various collaborators, often cooperating in international research efforts. **Dr. Friend loved to travel and formed many long-term friendships with colleagues in Europe. Her sabbatical years (1963 and 1975) were spent in laboratories in Australia, Israel, France and Italy.** She also attended many international meetings, often being one of only a handful of women scientists there. Still, while clearly social, she also maintained a very small laboratory staff and did not take on many graduate students to work with her.

Dr. Friend was very active in scientific associations and in outside professional activities such as grant reviewing and serving on editorial boards and advisory councils. In the 1970s, when many associations 'discovered' their female members in reaction to the women's movement, Dr. Friend was asked to assume leadership roles in several important organizations including: chairman of the **Gordon Conference (1973); member of the Board of Directors (1973-76) and president (1976) of the American Association for Cancer Research; president of the Harvey Society (1978/79); and president of the New York Academy of Sciences (1978).**

In 1966, Charlotte Friend left Sloan-Kettering to become the first Director of the Center for Experimental Cell Biology and a Professor at the still developing Mount Sinai School of Medicine. She was the first and only female full Professor in the School when the faculty was officially formed in 1966. She also served as a Professor in the Mount Sinai Graduate School of Biological Sciences. At Mount Sinai, she established her own laboratory, which in 1967 was endowed as the Mollie B. Roth Laboratory. Peyton Rous was the speaker at the event. Still, it was an unending struggle to find the funding to keep the lab well-staffed and well equipped, a situation that got steadily harder as federal funding began to shrink in the 1970s.

The decline in federal funds for basic research led Dr. Friend to write several protest letters to congressmen and others in power. This was a tact that she often took when a subject that mattered to her was threatened. She wrote about many things, including her support for Israel, her opposition to anti-abortion measures, and in defense of women's rights.

In 1971, Dr. Friend published another landmark paper, this one titled "Hemoglobin synthesis in murine virus-induced leukemic cells in vitro: Stimulation of erythroid differentiation by dimethyl sulfoxide." The co-authors were William Scher, J. G. Holland and Toru Sato. This paper described research on leukemia cells that had been made to differentiate, or take another step in the maturation process to become erythroid cells, thus stopping their cancer-like multiplication. This work pointed to a whole new area of cancer treatment: If instead of attacking cancer cells with toxic drugs, cancer cells could be targeted and made to mature, patients would be spared painful, sometimes deadly, and often ineffectual treatments. Research continues today in this field.

In all, Dr. Friend published 163 papers, 70 of which she wrote by herself or with one other author, a rare feat in modern biomedical science. Although diagnosed with lymphoma on her 60th birthday in 1981, she told few of her illness. She continued to go about her work with all the energy she had, writing grants, serving on committees, and working in the lab. Charlotte Friend died in January 1987.

In 1988, the Friend Papers were donated to the Mount Sinai Archives by Dr. Friend's family. The finding aid for the collection is here: http://library.mssm.edu/services/archives/archives_collections/charlotte.shtml For more information about Dr. Friend, contact the Mount Sinai Archives, a division of Academic Informatics &Technology of the Icahn School of Medicine at Mount Sinai.

1961 (Sep 26)

Mentioned: Dr. Alice E. Moore (born 1908) ; Dr. Charlotte Friend (born 1921) ; ...

Full newspaper page : [HN01JF][GDrive]

Women Scientists Aid In Battle Against Cancer

By PATRICIA MCCORMACK

NEW YORK (UPI) — Womanpower is helping to establish beachheads in the battle against cancer.

The women scientists work in the laboratories, in the surgical rooms and at the bedside. They help to man the X-ray equipment and to teach other doctors about cancer therapy.

There are so many women engaged in cancer research these days that it is rare not to find a woman or two reporting at any scientific meeting where the battle against cancer is discussed.

Their gains are of such importance that a medical journal, "Medical World News," devotes an entire section of its publication for doctors to the women making news in cancer research.

Among women scientists cited are the following:

—Dr. Sarah Stewart, of the National Cancer Institute in Bethesda, Md. She recently made the first report of a new virus isolated from an infant with a malignant bone disease.

Has Major Findings

—Dr. Thelma Dunn, a research pathologist, has become one of a half-dozen recognized authorities on pathology of cancer in mice. Dr. Dunn also works out of the National Cancer Institute. She is credited with several major findings on the pathogenesis of cancer.

—Dr. Alice Moore, of Sloan-Kettering Institute in New York, has been growing human cancer cells in tissue culture for use in studies in the responses of volunteers, cancer patients and healthy individuals, to implants of such cells.

—Dr. Helen Wallace Toolan, one of Dr. Moore's colleagues in New York, operated a tumor farm that is producing large amounts of tumor tissue for cancer researchers all over the country. Out of this work it is hoped will come a key to help man better understand the ways nature fights cancer.

—Dr. Charlotte Friend, another of the scientists at Sloan-Kettering, discovered a virus which causes leukemia in adult as well as newborn mice. In addition, she brewed a vaccine which is highly effective in protecting mice against development of the disease.

From Cellist To Scientist

—Eleanor MacDonald was well on her way to becoming a professional cellist when science caught her fancy. The professor of viostatistics at the University of Texas M. D. Anderson Hospital and Tumor Institute in Houston has contributed a wealth of data on incidence and distribution of cancer. She still plays the cello, frequently with the university symphony.

—Dr. Mila Pierce, of the University of Chicago, has been devoted to the fight against leukemia. Today, partly because of her efforts, life can be prolonged for some leukemia victims.

—Dr. Ruth Graham, of the Roswell Park Memorial Institute, is known in association with her husband, Dr. John Graham, also a cancer research scientist. At one point they prepared vaccines from the patient's own tumor and have been testing it among terminal cancer cases.

—Dr. Relda Cailleau, associated resident biochemist at the Institute of Cancer Research, Univer-

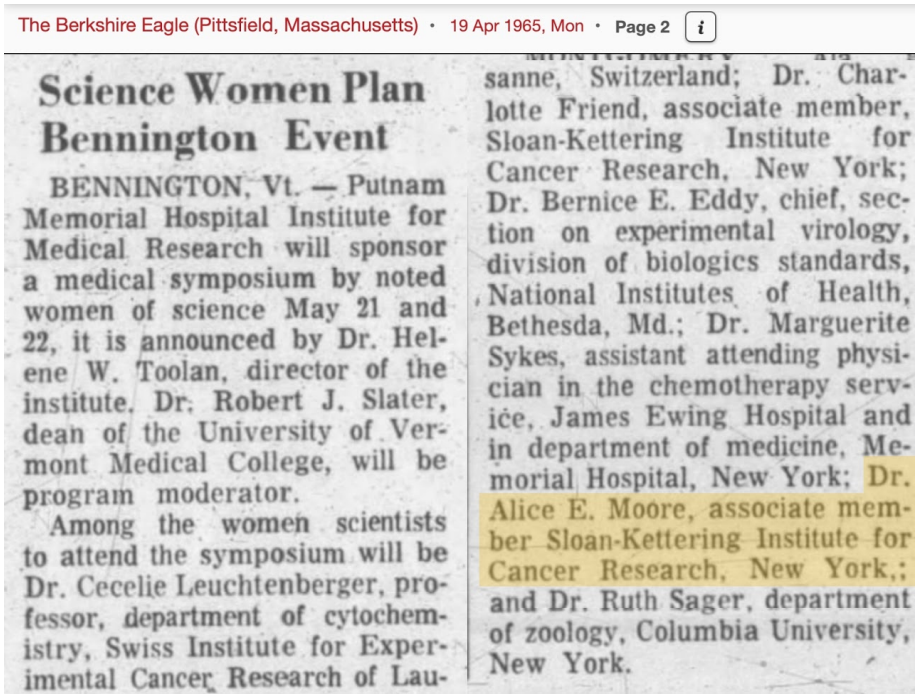
Tuesday Evening, September 26, 1961 — LUBBOCK AVALANCHE-JOURNAL ★ B-3

[HN01JG][GDrive]

1965 (April 19)

Mentioned: Dr. Alice E. Moore (born 1908) ; Dr. Charlotte Friend (born 1921) ; ...

Full newspaper page : [HN01JH][GDrive]



The Berkshire Eagle (Pittsfield, Massachusetts) • 19 Apr 1965, Mon • Page 2

Science Women Plan Bennington Event

BENNINGTON, Vt. — Putnam Memorial Hospital Institute for Medical Research will sponsor a medical symposium by noted women of science May 21 and 22, it is announced by Dr. Helene W. Toolan, director of the institute. Dr. Robert J. Slater, dean of the University of Vermont Medical College, will be program moderator.

Among the women scientists to attend the symposium will be Dr. Cecelie Leuchtenberger, professor, department of cytochemistry, Swiss Institute for Experimental Cancer Research of Lausanne, Switzerland; Dr. Charlotte Friend, associate member, Sloan-Kettering Institute for Cancer Research, New York; Dr. Bernice E. Eddy, chief, section on experimental virology, division of biologics standards, National Institutes of Health, Bethesda, Md.; Dr. Marguerite Sykes, assistant attending physician in the chemotherapy service, James Ewing Hospital and in department of medicine, Memorial Hospital, New York; Dr. Alice E. Moore, associate member Sloan-Kettering Institute for Cancer Research, New York,; and Dr. Ruth Sager, department of zoology, Columbia University, New York.

[HN01JI][GDrive]

1971

Horsfall dies

https://www.nytimes.com/1971/02/20/archives/dr-frank-l-horsfall-jr-dies-s-loankettering-institute-head.html

1977 -

Does not mention Dr. Alice E. Moore once !!!

https://cancerres.aacrjournals.org/content/canres/37/5/1255.full.pdf

1977-05-cancer-research-1255-by-charlotte-friend-full.pdf

1992 (Dec 17) - Mentor Dr. Alice E. Moore died

Source : [HL006T][GDrive] / See Dr. Alice E. Moore (born 1908)

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charlottre friend

https://www.nap.edu/download/4560

national academy of sciences - Biographical Memoirs

Volume 63

CHARLOTTE FRIEND

March 11, 1921–January 13, 1987

BY LEILA DIAMOND

IN 1956, at a meeting of the American Association for Cancer Research (A.A.C.R.) in Atlantic City, Charlotte Friend reported on the isolation of a virus that produced a fatal leukemia when inoculated into adult mice.[1] This was a time when the concept of viruses causing cancer was still viewed with extreme skepticism and the presentation of such data by an attractive young woman not long out of graduate school was met with disbelief and derision.[2] The

skepticism and the presentation of such data by an attractive young woman not long out of graduate school was met with disbelief and derision.[2] The audience's arguments against her findings were essentially the same as those Peyton Rous had heard in the early 1900's when he described a chicken tumor that was inducible by a transmissible agent. They argued, on the one hand, that the agent isolated was not a virus because it induced a malignant disease and, on the other, that the disease could not be a malignancy because it was virus-induced. However, the rapid confirmation of Friend's findings by the highly respected pathologist Jacob Furth led to a change in attitudes, and the scientific community soon realized that a virus which rapidly induces a malignant disease in adult mice provides an excellent model in which to study both viral oncology and the pathogenesis of neoplasia. Friend's virus became the primary system for research on viral

Suggested Citation:"6. Charlotte Friend." National Academy of Sciences. 1994. Biographical Memoirs: Volume 63. Washington, DC: The National Academies Press. doi: 10.17226/4560.

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leukemogenesis and today it is acknowledged that no one who works on tumor viruses fails to be touched by the contributions of Charlotte Friend.[3]

Charlotte Friend was born in 1921 in New York City on Houston Street in lower Manhattan to parents who had immigrated from Russia as young adults. Her mother had been trained as a pharmacist but gave up any professional ambitions to raise a family. Friend's father, a successful businessman, died when she was three years old and her mother moved the family of four children to the Bronx in order to be near, and have the support of, other relatives. The substantial inheritance left by Friend's father was dissipated in the financial disaster of 1929, and the fact that the family had to accept "home relief" from the city in order to survive had a lasting effect on Friend. She always admired her mother for having been able to keep the family together during this period and for never letting the children doubt that they would complete their education.

While growing up, Friend took advantage of all the opportunities and wonders that New York offered. She became a very knowledgeable and avid devotee of all its cultural activities and successfully competed for admission to Hunter College High School, a part of the city's excellent, tuition-free education system for gifted students. After finishing high school, she attended Hunter College at night while working in a physician's office during the day.

Upon graduating in 1943, Friend enlisted in the United States Navy and was assigned to Midshipmen's School at Smith College from which she graduated as an Ensign in April 1944. She was soon promoted to Lieutenant j.g. and appointed second-in-command of the hematology laboratory at the naval hospital in Shoemaker, California. From early childhood she had thought about becoming a scien-

Suggested Citation:"6. Charlotte Friend." National Academy of Sciences. 1994. Biographical Memoirs: Volume 63. Washington, DC: The National Academies Press. doi: 10.17226/4560.

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tist, but this was her first real experience working in a laboratory and it convinced her that this was what she wanted to do with her life.

When the war ended, Friend had the financial support of the G.I. Bill of Rights to continue her schooling. She considered attending medical school but chose instead to enroll as a graduate student in the Department of Microbiology at Yale University. She already appreciated the importance of the advice and help of outstanding scientists for her research, and frequently came to New York City on weekends to consult with the eminent immunologists Elvin Kabat and Michael Heidelberger at Columbia. She received a Ph.D. from Yale in 1950 with a thesis on the effects of sodium salicylate (aspirin) on antigen-antibody reactions.

Friend was hired by Cornelius P. Rhoads, the director of what was then the new Sloan-Kettering Institute for Cancer Research, to work in the virus laboratory of Alice E. Moore. Rhoads was a very dynamic and enthusiastic individual who was extremely supportive of the members of his Institute, and he and Friend developed a strong mutual respect and admiration. At Sloan-Kettering, Friend met Cecily Cannan Selby, a recent Ph.D. from the Massachusetts Institute of Technology who was interested in cell structure. This was in the early days of electron microscopy and, when Selby found a microscope in the institute that was not being used, she and Friend decided to examine the fine structure of the cells of the Ehrlich ascites carcinoma, a transplantable tumor of mice that at the time was a commonly used model for cancer research. They unexpectedly observed cytoplasmic "particles of constant diameter in close array" that were similar to those seen in thin-sections of virus-infected cells,[4] and Friend then sought to determine whether these particles were biologically active.

Suggested Citation:"6. Charlotte Friend." National Academy of Sciences. 1994. Biographical Memoirs: Volume 63. Washington, DC: The National Academies Press. doi: 10.17226/4560.

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She inoculated cell-free extracts of the ascites cells into newborn mice, following a procedure for transmission of a murine leukemia virus that Ludwik Gross had introduced a few years earlier.[5] The mice remained healthy over a fourteen-month period of observation but, when sacrificed and autopsied, six mice were found to have enlarged livers and spleens. Friend may have been surprised or dismayed to see what looked to be leukemia when she had inoculated an extract from carcinoma cells, but she was smart enough and curious enough to pursue the observation. Because newborn mice were unavailable, she injected cell suspensions from the enlarged spleens into adult mice and, within a few months, several had palpable spleens. By the third passage of either cell suspensions or filtrates of cell extracts, a high percentage of mice were developing leukemia with a latent period of only two to three weeks. The disease

Friend was seeing was very different from the lymphoma induced by Gross's virus: it was characterized by erythroblastosis and profound anemia; it was transmissible in adult noninbred mice; and the latent period before the first symptoms appeared was very short, the latter fact being powerful evidence that the transmissible agent was directly involved in the induction of the leukemia.

It is interesting to note that the cytoplasmic particles originally seen by Selby and Friend[4] were very different in size and structure from what was eventually proven to be the etiologic agent of Friend leukemia. In very elegant electron microscope studies done with Etienne deHarven, Friend found that her agent was a type-C virus[6] or what later became classified, on the basis of genomic structure, as a retrovirus (reverse transcriptase-containing RNA virus). Friend and deHarven were among the first to describe the life cycle of these doughnut-shaped viruses that "budded," a

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term suggested by their technician, from the cell surface of the leukemic cells.

Charlotte Friend never forgot the reception she and her new murine leukemia virus received at the 1956 A.A.C.R. meeting. Those who were present remember the dignity and courage with which she responded to the barrage of questions. She herself described the proceedings beautifully and in detail in her Presidential Address to the same society twenty years later.[2] She said that, despite warnings that serious objections would be raised, "by no stretch of the imagination could the violent storm of controversy that erupted after (her) presentation have been anticipated." She wondered why her friend who chaired the session did not use Rous's plea to "keep open minds" as an opportunity to cool the heated atmosphere and finally bring the session to a close. It is a mark of her character that she did not reveal the identity of that chairman in her Presidential Address and that they always remained the dearest of friends.

She was proud to have "emerge(d) unbowed—if a little bloodied"[2] from that experience and later was able to joke that those who persisted in their heretical beliefs about tumor viruses were being accused of having "either holes in their heads or holes in their filters." However, it may be that because of that rather traumatic experience, she never did develop into a strong, confident speaker. Throughout her career, whenever she had to give a talk, she was always very nervous and on edge in anticipation, and spent a great deal of time and effort writing out exactly what it was she wanted to say.

As co-editor of the Journal of Experimental Medicine and a strong supporter, Rous worked with Friend on the writing and editing of the first full-length publication describing the new virus.[7] He made many suggestions regarding docu-

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mentation, details and presentation, for he believed that she was "in a position to settle all doubts as concerns a virus causing leukemia in mice" if she presented what she had discovered "in a convincing way." The resulting publication provided the information the scientific community needed to accept the virus and to recognize its potential as an ideal model system with which to work.

The neoplastic nature of the disease induced was subsequently confirmed by the demonstration that transplantable solid tumors could be obtained with leukemic tissues from virus-infected mice. The leukemia was originally described as being not clearly granulocytic or monocytic, and it required extensive experimentation by Friend[8] and others to demonstrate that the primary target for malignant transformation was, in fact, an erythroid precursor. Development of the disease is now thought to involve at least two events: an early stimulation of erythropoiesis followed by a clonal event that results in transplantable, immortal erythroleukemia cells.

Following the discovery of the Gross and Friend viruses, a number of other RNA viruses that induced leukemia in mice and other species were isolated. What had originally been disbelief now turned to accolades and Friend began to be honored for her work. In 1962 she received the Alfred P. Sloan Award for Cancer Research and elected to use the money to travel around the world, spending three-month periods in research institutes in France, Israel and Australia working with such scientists as Andre Lwoff, Leo Sachs and Donald Metcalf. She has written that the trip was one of the most important experiences of her life, a major reason being that she fulfilled her long-cherished dream of working at the Pasteur Institute.

Despite all the work that has been done on Friend Leu-

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kemia Virus (FLV), we still understand very little about the molecular mechanisms by which it replicates and transforms. We do know that these mechanisms are extremely complex, so it is perhaps not surprising that over the years there have been disagreements and controversies regarding various aspects of the virus and the disease induced. The original virus isolate produced a leukemia associated with anemia but with its distribution to other laboratories and

passage from host to host, virus strains that produced polycythemia rather than anemia appeared. These strains caused formation of macroscopic foci of primitive erythroid cells on the spleen surface which appeared prior to the hepatosplenomegaly and could be quantitated. These were foci shown to be due to the presence in preparations of polycythemia-inducing strains of a defective spleen focus-forming virus (SFFV) that was competent for cell transformation but not for virus replication. Some investigators reported that only the polycythemic strains of Friend Virus induced leukemia in adult mice and that the anemic strain was effective only in neonates. It was suggested that, contrary to what Friend had originally reported, more than one virus was required for the pathogenesis of the leukemia (see reviews by Friend and Pogo [9] and Ostertag et al.[10]).

Friend always resisted that idea. Perhaps the cool reception she and the virus received originally had sensitized her to what she may have considered criticism of that early work and her powers of observation. She maintained that in her hands, even after twenty years of continuous passage, the original anemic strain of FLV (FLV-A, what she referred to as the wild-type or prototype virus), its host range, latent period and age dependence, and the syndrome that that virus induced were no different from what she had first reported. She insisted that FLV-A did not con-

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tain a defective, spleen focus-forming component[11] and that it was different from the virus strains others may have worked with subsequently. Her friend Frank Lilly once "tried to convince her that she should be proud to have discovered not just one but in fact two viruses that were totally unique in the mouse leukemia virus world. But she would have nothing to do with that idea."[12] And, indeed, others have shown that molecularly cloned FLV-A, with no SFFV component, induces an anemic form of an erythroproliferative disease in newborn mice which resembles the early stages of the disease induced by wild-type virus.[13] However, no one has yet explained the mechanism by which the profound anemia induced by such virus in either newborns or adults progresses to leukemia.

Most virologists have taken the position that the Friend Virus is a complex composed of a defective SFFV that depends on replication-competent FLV for its own replication, and that both viruses are required for production of fatal leukemia in adult mice. Friend always acknowledged that during in vivo passage, virus variants might have arisen through recombination with cellular elements or endogenous viruses and was not surprised that an agent such as SFFV was found in some virus stocks. However, she wanted to understand what might have happened in other laboratories, to discuss the various possibilities with other investigators, and to analyze the passage histories of the various virus strains. Those such as Arthur Axelrad and Frank Lilly who had the patience for such discussions remained good, lifelong friends. Others who wanted to get on with it and not be overly concerned with what might have happened to the virus years ago lost touch with her and, unfortunately, perhaps lost respect for her and her accomplishments as well.

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Rhoads, the director of Sloan-Kettering, had died in 1959 and the subsequent administration was much more structured than his had been. Friend did not have the warm relationship with the new director that she had had with Rhoads and did not think she was getting the recognition she deserved. Thus, she was receptive when approached about joining the faculty of the new medical school being organized at Mt. Sinai Hospital in New York. In 1966 she accepted a position there as professor and director of the Center for Experimental Cell Biology. She requested, and received, an appointment that carried no teaching responsibilities. She wanted to be free to do what she did best and most enjoyed—research. The new laboratory was rather modest in size and amenities, and a somewhat isolated basic science entity. In her new position, Friend was responsible for raising essentially all the money needed for staff, supplies, equipment and support services. She became tightly locked into the federal grant system for the major requirements of the center which she headed, and in her later years, this became a tremendous burden that interfered with her enjoyment of doing research.

It was at Mt. Sinai that Friend made another seminal scientific contribution when she showed that cancer cells can be induced to differentiate by an exogenous agent and, thereby, lose their ability to multiply. She had observed earlier that the cells of the solid tumors produced by transplantation of leukemic tissue from Friend Virus-inoculated mice showed no recognizable erythroid elements, but that the erythroid nature of the cells could be demonstrated under certain conditions. For example, Friend and Cecilia Patuleia were able to establish permanent cell lines in culture from the tumor cells and to show that, even when cloned, these cultures consisted of undifferentiated

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cells and a small percentage of cells at various stages of erythroid maturation.[14,15] Their observation that these malignant cells were, in fact, capable of undergoing maturation was met with disbelief by some colleagues, even though the evidence should have been incontrovertible from their slides and photographs. "How can tumor cells that have been in culture for 6 months give rise to erythroblasts?" they asked. "There must be a contaminant." But again in the face of skepticism, Friend persisted, knowing that her cell system provided a superb "model for the study of leukemia as a disease resulting from a maturation defect."[16] She began to explore the possibility that the differentiation block in the leukemic cells could be removed

maturation defect.[16] She began to explore the possibility that the differentiation block in the leukemic cells could be removed.

This led her to the discovery that Friend erythroleukemia cells (FELC) in culture could be further stimulated to differentiate along the erythroid pathway by the addition of the solvent dimethyl sulfoxide (DMSO) to the medium.[17] I had been using DMSO as a solvent for hydrophobic compounds in cell cultures. I remember her phoning one day to ask about the concentration to use for an experiment she wanted to try. A few days later she called back, bursting with excitement about her cells being "pinkies, all pink, all pink." Her associate, Bill Scher, also remembers her running up and down the hall holding up the tube with the pellet of pink cells for all to see. She went on to show that, with some highly inducible erythroleukemia cell lines, the percentage of benzidine-positive (hemoglobin-producing) cells could be increased to over 85 percent, from a baseline of 1 percent, after four-five days in medium containing DMSO. Friend had clearly and dramatically demonstrated that expression of the malignant phenotype could be reversed experimentally.

Her observation was quickly reproduced and confirmed

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in other laboratories and it soon became apparent that the morphological and biochemical alterations that followed induction of differentiation were similar to those occurring in normal erythropoiesis. Friend cells became a widely used model for studying control of hemoglobin synthesis as well as for analyzing the overall regulation of gene expression in cell proliferation and differentiation.

This new discovery resulted in another exciting period of recognition for Friend. She was elected to the Hunter College Hall of Fame and received the Yale Science and Engineering Association Award. She was honored with the Dameshek Medal, the Prix Griffuel, and the Papanicolaou Award. In 1976 she was accorded the ultimate recognition by her peers, election to the National Academy of Sciences.

In the late 1960s a young Italian pathologist, Giovanni Rossi, spent several years working in Friend's laboratory. They became close scientific colleagues and devoted friends, and in 1977 when she had the opportunity to spend a sabbatical year abroad, she went to Rome where Rossi had settled. She had a wonderful time working at the Italian National Research Council Laboratory where Rita Levi-Montalcini was director. The two women had great respect for each other and when Friend left Rome, Professor Levi-Montalcini gave her an engraving entitled "The Spiral of Archimedes," done by her twin sister, Paola.

Charlotte Friend first learned that she had lymphoma on her sixtieth birthday in 1981. She told very few people and was adamant that others not know. She did not want those who might be reviewing her grants or manuscripts to be influenced one way or the other. Despite undergoing extensive, debilitating therapy, she continued to spend time in the laboratory, to write, to attend meetings and discuss work with other people, to send out manuscripts and grant

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proposals and, when necessary, to argue with editors, reviewers and administrators. She did everything she could to keep her laboratory afloat, always with the hope that it would be perpetuated if she were no longer around. However, it had always been important to her that she stay on top of everything going on in her laboratory. She had preferred to do things herself and not to turn projects over to others. And so, she had never built up an active group of young investigators studying problems of interest to her. In the end, there was no one to maintain the center and continue her work.

One of Charlotte Friend's last public appearances was at Brandeis University, where she received an honorary Doctor of Science degree in May 1986. She was very proud to have been selected for this honor and left her hospital bed to make the trip to Waltham, Massachusetts. She participated in the commencement procession in a wheelchair and, despite a broiling sun, stayed for the entire lengthy ceremony. She died eight months later on January 13, 1987.

During the height of her career, Charlotte Friend was perhaps one of the most well-known and well-liked cell biologists and cancer scientists. She was a very warm and social person, albeit somewhat shy. She had a good sense of humor and a rather charming way of interacting with people. She was extremely generous when it came to distributing her virus (FLV) and her cells (FELC) to those who wanted to work with them, and she would give those investigators all the guidance and assistance they needed for their work. Many remember with pleasure visiting her laboratory, going to lunch, and talking about what they were doing or would do with the wonderful tools she had provided. And if they were from out of town, she always made sure they were properly looked after. Her apartment

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in the Stuyvesant Town complex on East 14th Street came to be known as "The Friend Hotel," for friends and colleagues from near and far were welcome to stay there when visiting New York—and they frequently did, some for weeks at a time.

Charlotte Friend had a genuine concern for people and took an interest in their personal lives, their families, and their problems. She was always available to listen and frequently spent evenings in the laboratory or at home doing just that. She had a dedicated staff that would have followed her to the ends of the earth. Several, such as the pathologist Jamil Haddad and the technician J. Gilbert Holland, worked with her for over thirty years.

She served as the matriarch and leader of what was a very close-knit family. She was deeply devoted to her mother, who lived with her until her death in 1961, and to her siblings and nieces and nephews. It was she to whom the immediate and extended family turned for advice and help. She particularly enjoyed advising and assisting others with their medical problems and frequently boasted of "practicing medicine without a license," perhaps reflecting regrets about not having gone to medical school.

She was a renaissance woman who loved and knew intimately the theater, dance, music, opera, and literature. No matter how tired she was or how difficult the day had been, she would jump at the chance to see a new show if someone came up with a pair of tickets at the last minute. She enjoyed traveling, seeing new sights, and meeting different people. Wherever she went, there were two things she had to do: buy stamps for her brother Morris who was a collector, and get a memento of the trip for herself, usually a unique piece of jewelry or interesting work of art. But no matter where she had been and how much she had en-

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joyed the trip, it was "The City" that thrilled her most and to which she returned with joy. She loved the view of the Manhattan skyline from her apartment and could never bring herself to move to a place that might be more convenient or more luxurious.

Charlotte Friend was a woman of strong convictions and a fighter, with no compunctions about defending her ideas and the causes in which she believed. For example, she wrote letters to newspaper editors and spoke up without fear in support of blacklisted academics and dissidents, even during the McCarthy and Nixon eras when doing so could jeopardize one's grants and career. She believed whole-heartedly in the State of Israel and was an outspoken defender of its policies. She was a fervent supporter of the women's movement and frequently, without fanfare, went out of her way to ensure that women were well-represented on symposium programs and advisory and review committees. She served as a role model for many women starting their careers at a time when there were not many such models.

In the 1970s, when the demands on the relatively few senior women scientists were enormous, she worked extremely hard as president of the American Association for Cancer Research, the New York Academy of Sciences, and the Harvey Society, the first woman so honored in the long history of that society. During this same period, she also served as a member of the Advisory Committee for the Virus Cancer Program of the National Institutes of Health and a member of the Board of Scientific Counselors of the Division of Cancer Cause and Prevention of the National Cancer Institute. Over the years, she served on a number of other advisory committees and on the editorial boards of several cancer and hematology journals. She took all

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these responsibilities very seriously and was noted for her incisive reviews and for her thoughtful and astute comments in committee meetings.

Charlotte Friend used to say that she started an industry, and it was true. In the two decades following the initial isolation of FLV, perhaps a third of those doing cancer research spent some time working on one or the other of the model systems she had provided. Even today, many aspects of the Friend virus complex (FLV/SFFV) remain unique among tumor viruses so that it continues to be an important, widely utilized model system (reviewed in ref. 10). For example, it acts as an acute transforming virus but does not contain an oncogene. It is immuno-suppressive and, therefore, a model for human immuno-deficiency virus (HIV). It stimulates abnormal erythroid hyperplasia by binding of virus (SFFV) glycoprotein to a growth factor (erythropoietin) receptor, a novel mechanism that may explain how other viruses can interfere with normal growth regulation.

Friend paved the way for a great many other avenues of research. She was the first to show, using her virus, that animals could be immunized with retrovirus preparations and protected against development of the disease.[18] Her experiments indicating that such protection is possible are frequently cited by those now trying to develop a vaccine against HIV. Leukemic cells induced by Friend Virus have been used in the first demonstration that a virus-induced malignancy requires for its expression the alteration or deletion of an "anticancer" or suppressor gene. Friend was one of the first to show that cells maintained in culture can actually undergo the successive steps leading to differentiation to a specific cell type. Her system was the forerunner for the establishment of other cell culture models to study

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cytodifferentiation and the development of diverse lineages. Her demonstration of inducible differentiation of leukemic cells by DMSO has served as the

inspiration, as well as the prototype, for evaluating the potential therapeutic effects of differentiation-inducing agents in human cancer.

Charlotte Friend was in the tradition of many women scientists who have made contributions to botany, astronomy and microbiology. She, too, was a naturalist, an observer and, in many ways, a loner. She enjoyed the aesthetics of biology, the overview rather than the molecular. She was an inventive, instinctive scientist who had fun doing science. She did not want a large laboratory, only her devoted staff and enough funding to be able "to play," as she called it. She did, however, seek recognition and fame, and this she achieved. Her ideas and discoveries have had, and will continue to have, a major impact on our thinking about the causes, prevention and cure of cancer.

CHARLOTTE FRIEND'S complete bibliography can be found in "Viral Oncogenesis and Cell Differentiation: The Contributions of Charlotte Friend," L. Diamond and S. R. Wolman, editors, Annals of the New York Academy of Sciences, vol. 567, pp. 5–13, 1989. This memoir was submitted October 9, 1990.

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A B C D E F G H I J K L M N O P Q R S T U V W X Y Z

PEOPLE (by last name / then D.o.B.)

- Jennifer Elizabeth **Garrus** (born 1973)
- William Henry **Gates** (born 1858)
- William Charles **Gates** (born 1860)
- Dr. Frederick Lamont **Gates** (born 1886)
- William Henry **Gates** (born 1891)
- William Henry **Gates** II (born 1925)
- Mary Maxwell **Gates** (born 1929)
- William Henry **Gates** III (born 1955)
- Melinda Ann **Gates** (born 1964)
- Dr. Thomas William **Geisbert** (born 1962)
- Dr. Lawrence Kenneth **Gershwin** (born 1942)
- Carlos **Ghosn** (born 1954)
- Robert Gordon **Gillespie** (born 1933)
- **G - Gise family**
- **Hellmut Paul Oscar Golde (born 1930)**
- **Neil Elbridge Gordon (born 1886)**
- **Gottlieb**
- Joseph Peter **Grace** (born 1913)
- William Robert **Graham** (born 1937)
- Dr. Duane J. **Gubler** (born 1939)

PLACES / COMPANIES / OTHER

- **General** Electric Mainframe Computers
- **General Telephone** and Electronics Corporation
- **Genetic** Systems Corporation
- **Genuity** Incorporated
- **Genuity** Incorporated (2000)
- **Gibson** Island, Maryland
- **Gilead** Sciences
- **Gould** Storage Battery Corporation
- W. R. **Grace** and Company
- **GSE** Systems, Inc.
- **GTE** Corporation
- **GTE Sylvania** Products
- **Gulf War** syndrome

Housatonic

Jennifer Elizabeth Garrus (born 1973)

Born in Columbus, Ohio on October 6, 1973 *to* James and Karen Garrus. [HL003S][GDrive]

Dr. Jennifer Garrus, age 45, of Thornton, Colorado, passed away on October 17, 2018 [HL003S][GDrive]

Jennifer Garrus Professional - LinkedIN profile

See [HW002M][GDrive]

Results-oriented Scientific Leader with 12 years of experience in drug discovery, translational medicine and clinical development. Proven track record managing matrix teams providing lead optimization, translational research and Phase 1/2 support for multiple programs. Known for flexibility, performing in a self-directed environment and as team member while managing junior scientists. Recognized as an effective communicator, drawing on broad knowledge base and employing team-oriented leadership to deliver results. [...]

Experience

- Merck - Senior Clinical Scientist
  - Employed Aug 2017 – Present
  - Employment Duration 2 yrs 9 mos
  - Location Greater Denver Area
- ExecuPharm - Senior Clinical Scientist on assignment to Merck
  - Employed May 2016 – Jul 2017
  - Employment Duration 1 yr 3 mos
  - Location Greater Denver Area
- Biodesix, Inc. - Senior Manager, Clinical Development/Translational Medicine
  - Employed Dec 2013 – Apr 2016
  - Employment Duration 2 yrs 5 mos
  - Location Boulder, CO
    - Collaborated with stakeholders on the design, execution and analysis of studies to elucidate the mechanism of action of VeriStrat®, a prognostic and predictive serum proteomics test for advanced non-small cell lung cancer patients
    - Wrote scientific proposals for nonclinical research projects, analyzed biomarker and clinical outcome data and prepared scientific reports for internal and external audiences.
- Array BioPharma (Total Duration 6 yrs 7 mos)
  - Research Investigator
    - Employed Oct 2012 – Aug 2013 (11 mos)
    - Location Boulder, Colorado
    - Developed Phase 2 strategies to identify nucleic acid and protein-based response biomarkers in plasma and bone marrow of patients with hematologic malignancies for two programs.
    - Managed Translational Operations group, enabling all aspects of clinical sample management for 8 concurrent clinical trials (e.g., creation of PK / biomarker sampling kits, generation of site training materials, sample tracking, and facilitating outsourcing activities).
    - Created biomarker sections of clinical protocols and clinical study reports.
    - Supervised scientific and operations staff.
  - Senior Research Scientist
    - Employed Oct 2009 – Sep 2012 (3 yrs)

- Location Boulder, Colorado
- Provided strategic, scientific and operational leadership of cross-functional teams supporting one IND-stage and 3 clinical stage programs.
- Led biomarker team for CSF-1R inhibitor program demonstrating pharmacodynamic activity in blood / serum / urine in Ph 1 patients with solid tumors.
- Coordinated predictive biomarker strategy and oversaw sample analyses (in house and outsourced) identifying protein-based plasma biomarkers related to disease, age or clinical benefit from treatment with p38 / Tie2 inhibitor in patients with MDS in Phase 1 study.
- Supervised IHC / immunoassay PD biomarker assay development and clinical sample analyses demonstrating mechanistic and functional target inhibition by p38 / Tie2 inhibitor in MDS patient bone marrow and plasma samples from Phase 1 study.
- Defined potential clinical development strategies for selective HER2 inhibitor.
- Wrote biomarker sections of clinical protocols, Investigator's brochures, informed consent forms and clinical study reports.
- Prepared presentations and technical report sections of business development documents.
- Supervised scientific staff.

- Title Research Scientist
  - Employed Feb 2007 – Sep 2009 (2 yrs 8 mos)
  - Location Boulder, Colorado
  - Provided strategic, scientific and operational leadership for 2 clinical stage programs.
  - Developed Phase 1 biomarker strategy and coordinated outsourcing of tumor biopsy IHC analyses, demonstrating target inhibition and confirming possible sensitivity marker in breast cancer patients treated with HER2 inhibitor.
  - Performed and directed nonclinical research supporting development paths of small molecule ErbB inhibitors in solid tumor indications.
  - Generated / implemented biomarker strategies for Phase 1 clinical trials,
  - Created sample collection manuals, conducted clinical site training on laboratory procedures.
  - Supervised scientific staff.

- Myriad Genetics/Myriad Pharmaceuticals
  - Total Duration 3 yrs 9 mos
  - Title Scientist II
    - Employed May 2005 – Jan 2007 (1 yr 9 mos)
    - Served as Project Leader and managed multidisciplinary lead optimization effort delivering a small molecule HIV-1 maturation inhibitor IND candidate.
    - Developed cellular assays and performed compound characterization, including resistance selection and mechanism of action studies.
    - Created IND-enabling documents.
    - Supervised scientific staff.
  - Title Scientist I
    - Employed May 2003 – Apr 2005 (2 yrs)
    - Provided scientific leadership and laboratory support for 2 antiviral lead optimization projects.
    - Developed and optimized cell-based assays and tested compounds, supporting structure-activity relationship studies of small molecule compounds for antiviral and oncology programs.
    - Managed Biosafety Level 3 (BSL3) laboratory.
    - Supervised scientific staff.

2018 (October 17) Passing -

See [HL003S][GDrive]

[...] Jennifer will be remembered for being highly intelligent, down to earth, gracious, kind, fun-loving, and for her huge, heart-warming smile – with her eyes always twinkling. She was very humble, despite being extremely accomplished in her personal and professional life. She was a devoted mother, a loving daughter and sister, a loyal friend, and a giving member of her community.

She and her family moved to Colorado when she was three years old. She lived there most of her life, aside from the 10 years she spent in Utah pursuing her PhD and working as a scientist.

As a young girl, Jennifer was precocious, and she remained curious, driven and ambitious throughout her life. She was a member of the National Honor Society at Arapahoe High School. She studied ballet, played competitive soccer, and enjoyed water sports throughout her childhood and teen years.

While earning her degree in Biochemistry from Colorado State University, she received numerous awards and certificates of recognition, as well as the distinguished Colorado Scholars Scholarship from the College of Natural Sciences.

After completing her PhD in Biochemistry, she was a Senior Clinical researcher, most recently at Merck. She was a tenacious leader and worker, managing teams who conducted critical research on cures for cancer and viruses.

She dedicated her personal time to raising her children with warmth and generosity; although she enjoyed gardening, hiking, and time with family and friends, her kids were her primary source of joy, meaning and purpose. [...] .

Condolences

See [HW002P][GDrive] (More on Wes Sundquist here)

Patrick Gavin (February 7, 2019)
I met Jenn through Brendan. I appreciated her commitment to bringing Brendan to practice and enjoyed speaking to her about life after practice while our kiddos played on the swing set. My heart goes out to Kiera and Brendan. He's still my favorite soccer player I coached! What a wonderful kid, and I hope this arrives late but with heartfelt love. [...]

Ira von Carlowitz (February 7, 2019)
Jenn, I miss you...
Suzy and I are working hard at upholding the regular get-togethers you would always plan for us...Especially after we both left Array. [...]

Sam Li (November 29, 2018)
I know Jenn since we were both graduate students in Utah, working in the same lab but on different research projects. Even though as a young graduate student, Jenn was clearly much more mature than most of us, both scientifically and socially. She was always cheerful and kind to people around her. Not only she was smart, quickly on top of her research project, she was also extremely humble and down to earth. Soon after Jenn joined the lab, we became good friends. I remember that one summer I was about to carry out a scientific project abroad. Not knowing what might lay ahead, I was anxious. While driving me to the airport, in her car Jenn said to me "You will be fine! keep doing what you think is right ... Don't forget to have some fish and chips." That is Jenn! Always encouraging and cheerful, a friend one can count on.
Throughout past twenty years, even though we were in different parts of world or country, we kept in touch. Every holiday season, I'd receive a beautiful card from Jenn. They were always handmade and in Jenn's handwriting. In the cards, Jenn talked about her new home, her kids and her work, full of love and joy. Two years ago, I had a chance to visit Boulder and met Jenn! It was so good to see her again after many years. We had great time over dinner, talking about friends and families.
I cannot believe Jenn has left us! There are only a few people who had made difference in my life. Jenn is one of them. She made me want to be a better person. Jenn will remain as my best friend. She will be deeply missed!

Wes Sundquist (November 25, 2018)
Jenn was clearly wonderful in so many of her different roles - mom, family member, friend and colleague. My own perspective on Jenn's amazing character came primarily from our interactions as scientific colleague - it was my great fortune to be her thesis advisor in the department of Biochemistry at the University of Utah from about 1997-2001. It is hard to imagine a better graduate student than Jenn. She was talented, smart, determined, insightful, and helpful to everyone. And she had golden hands in lab. Jenn simply had a gift for planning and performing experiments to produce the best possible data and insights. **Our laboratory studies the molecular virology of HIV. Viruses are obligate parasites - their genomes are too small to produce all of the activities that they need to replicate, and so they often usurp host cellular pathways to perform functions that they need.** Discovering and characterizing such processes is one of the major goals of our research. **While Jenn was a student in our lab, she led a team that discovered that HIV coopts a human cellular pathway called the ESCRT pathway to bud from cells. This was a major discovery that has since been extended to many other viruses and has had a major influence on the research directions of many leading virology labs. The paper that Jenn wrote on the topic (Garrus et al. Cell (2001) 107:55-65) remains by far the most cited paper that our lab has ever written, and it is not an exaggeration to say that her work changed the course of our research.** Like so many others, I valued Jenn above all else for her wonderful personal attributes - kindness, strength, curiosity, warmth and generosity - but I also wanted to record that she was a stellar scientist who made important discoveries that most scientists can only hope for. She will be greatly missed.

Kristen Cordova (November 4, 2018)
Jenn was an amazing person- thoughtful, kind, generous, modest, positive, loyal, and helpful... all of the qualities that you appreciate in a true friend. She was never mean and listened but never judged; she was always thankful. At her memorial, many people shared that she had helped them through tough times or helped to develop them professionally and I found that to be so very true in both regards. She was always there in the background, ready to help if asked, personally and professionally. We worked together at Biodesix and she was a bright light while I went through a rough time in my life. We used to walk together in the afternoons and talk about our day-to-day duties within the company, but we would also discuss our personal lives and the triumphs of our babies. She would crave Shamane's bakery while pregnant with Keira and I was more than happy to walk and talk with her! We took our boys to the Butterfly pavilion together and they dug through the worm exhibit and held Rosie the spider while Jenn and I chatted about life. We attended a wedding up near Estes and she said to me, "can you tell I never do anything fancy?!" as she asked me questions about what to wear and what purse to bring! I was the newest scientist hired, but she asked my opinion on scientific things. She was so humble and so gracious. I would like to thank her family for all the light she brought into my life and am sending all of my love to her sweet babies as they grow. She was beautiful inside and out and she will be missed by many people, including me.

[...]

https://docplayer.net/159104290-2018-summary-of-domestic-violence-related-fatalities-in-colorado-colorado-domestic-violence-fatality-review-board-chair-phil-weiser-attorney-general.html

"M) 1. 10/17/2018 Jennifer Garrus (45) was stabbed to death by her husband of fifteen years Michael Ellison (46). They had attended divorce proceedings the day before and had been reported be arguing the morning of the murder. Ellison attempted to kill himself after stabbing his wife to death by jumping out of their second story window. He survived but broke his leg. Thornton, Adams County. "

Jan 18, 2004 (Jan 18) - Scence Magazine - " TSG101: An Antiviral Target with a Murky Past / Viruses hijack a host protein that normally sorts the trash "

See [HP002I][GDrive]

Ebola (above) is a killer virus that may commandeer cellular protein-sorting pathways through TSG101.

Viruses can't do much without a host. They propagate by usurping cellular machinery, and much of an infection's misery is due to the immune response. But conventional therapies, without much luck, essentially have targeted one-half of the infection equation: the foreign invader. Now, researchers increasingly are setting their sights on the host's role.

Investigators recently attempted to mitigate the host immune response and the associated collateral damage (see sidebar). Some explore a complementary approach: to cut off access to the cellular pathway that a virus commandeers to mass-produce, specifically, the route used to bud from the cell. Doing so, without impairing the host, could provide a powerful new broad-spectrum antiviral agent. "Conventional antivirals are highly specific, and pathogens can mutate to insensitivity," says Stanley Cohen, professor of genetics and medicine at Stanford University. "But if one can attack host genes required for pathogens to be pathogenic, resistance is less likely. One can affect the pathogenicity of the virus."

DUBIOUS BEGINNINGS

Cohen, who with Herbert W. Boyer in the early 1970s essentially founded recombinant DNA technology, says he might have zeroed in on what may become the first such "host-oriented" therapeutic target: Tumor Susceptibility Gene 101. Despite its moniker, TSG101 may have less to do with cancer than first thought, and everything to do with the vacuolar protein-sorting pathway that ferries excess cell-surface receptors to lysosomes, the enzyme-filled sacs that dismantle debris. Certain killer viruses, including HIV, Ebola, and Marburg, hijack this transport system using TSG101 protein to cloak themselves in membranous escape pods. At least three biotech companies are developing drugs to target TSG101, which Cohen dubs "the getaway driver for viral release." But a clinical future awaits clarification of its obfuscated origins as a tumor suppressor.

Discovering TSG101 in 1996 was the first fruit of random homozygous knockout (RHKO) technology, an antisense technique that identifies genes by a particular function, in this case, cellular transformation.1 Dampening TSG101 expression transformed murine 3T3 fibroblasts, which caused metastatic tumors in nude mice. The encoded protein bore the hallmarks of a transcription factor, but the links to carcinogenesis turned out to be indirect.

THE VIRAL PIRATE

In 2000, experimental roads converged to flesh out the role of TSG101. Beth Agresta, a graduate student working with molecular geneticist Carol Carter, State University of New York, Stony Brook, was screening for cellular proteins that interact with HIV proteins. "She got several hits and wrote her thesis on one, but continued to check the database to see if there was any more information. One day, there was," recalls Carter. That was TSG101. Carter and Cohen collaborated to get at protein function.

Soon, another graduate student in Carter's group, Lynn Ver-Plank, identified the major viral core protein Gag as HIV's binding site for TSG101.2 Gag lets mature viruses bud from cells. **At about the same time, Jennifer Garrus, a graduate student with biochemist Wesley Sundquist, University of Utah School of Medicine, Salt Lake City, blocked TSG101 with small interfering RNA, halting HIV budding. When she restored gene function, budding resumed.3**

Gag and TSG101 attach by ubiquitin tags, and the host protein then escorts the viral emissary into the vacuolar protein-sorting pathway. But instead of being carted away to digestive doom in the lysosome, Gag proteins attach by their bound TSG101s to bits of cell membrane, ultimately becoming packaged into mature virions.

Yeast provided another connection. Also in 2000, University of Utah biologist Markus Babst and Scott Emr, a Howard Hughes Medical Institute investigator at the University of California, San Diego, found that TSG101 has a yeast counterpart, Vps23.4 Vps23/TSG101 is a subunit of a complex, called ESCRT-I, which binds and sorts ubiquitin-tagged molecules. They tested Cohen's TSG101 mutant cell line for protein transport defects and found trafficking phenotypes, says Babst.

The solid link to intracellular protein transport may explain the dual role of TSG101 in carcinogenesis and viral infection. The pathway normally recycles cell-surface receptors, including growth-factor receptors. Silence TSG101, and these receptors aren't sent to the lysosomal garbage dumps; instead they accumulate at the cell surface like uncollected trash. There, the receptors transduce too many signals to divide, and runaway mitosis results.

But the cancer connection still is not as clear as some researchers would like. "The role of TSG101 in cancer has been quite elusive," says Sundquist, citing a retracted report on TSG101 mutations in cancer patients.5 And Kay-Uwe Wagner, at the Eppley Institute for Research in Cancer and Allied Diseases at the University of Nebraska Medical Center, Omaha, used knockout mice to show that TSG101 is essential for embryo implantation but not tumor suppression.6 She also reexamined the original 1996 tumorigenic cell line and found "whopping levels" of TSG101.7 She blames Cohen's use of an immortal cell line. "Nobody was able to repeat these transformation studies in other cell lines," she says.

DRUG DEVELOPMENT

Still, Cohen maintains that TSG101 makes a good antiviral target. He and former postdoctoral researcher Limin Li cofounded the company Functional Genetics, which is developing a viral budding inhibitor based on TSG101's action.

But the jump from promising target in cell culture to antiviral development will not be easy. Such a drug probably would block normal ESCRT function as well, says Babst. "This could result in a tumorigenic phenotype." Effects could be wide-ranging. "I'm worried about the potential that a TSG101 inhibitor would exhibit general cytotoxicity," suggests Sundquist, who also works with Myriad Pharmaceuticals in Salt Lake City.

Even if TSG101 never overcomes its tainted beginnings, it may still pioneer host-oriented therapeutics, for there may be unknown aspects of the viral subversion of TSG101 to exploit. Concludes Carter: "That's what one goes after – to understand the process, what the virus does to divert the machinery – and target that."

Ricki Lewis rickilewis@nasw.org is a freelance writer in Scotia, NY.

Fight the Flu, Ignore the Bug

At the start of this year's particularly worrisome flu sea-son, researchers at London Imperial college in the United Kingdom posed a comforting thought. Suppose the bug's nasty symptoms could be avoided without vaccination or antiviral drugs by targeting the immune responses responsible for influenza's misery. Their tests on mice showed positive results, they say. Maybe so, say the skeptics, but that doesn't prove how humans would respond.

The Imperial College researchers have found that a receptor molecule called OX40 is overexpressed in T cells responding to a viral infection, but not in the remaining T-cell population.1 The receptor can be blocked using an OX40-immunoglobulin fusion protein called OX40:Ig. This, the researchers say, should temper overzealous immune responses in the lungs.

Tracy Hussell and colleagues, who tested the drug on mice injected with influenza type A, found that clinical symptoms such as congestion and high body temperature were virtually eliminated. Hussell says there's no reason why the treatment could not be extended to humans, after symptoms have emerged. "Mice could show signs of illness for three days, and as soon as you administer this reagent, it stops clinical symptoms in their tracks."

In the future, humans could experience similar remission of symptoms, according to Alan Hay, director of the WHO Collaborating Centre for Reference and Research on Influenza at the UK National Institute for Medical Research. "It's interesting work, but it's early stages and needs further development," says Hay.

Brad Magor, assistant professor, Department of Biological Sciences (Immunogenetics), University of Alberta, is more dubious. "Mice are not natural hosts to influenza A, so their response to the pathogen is less likely to reflect that of a natural host such as a chicken, swine, or human." Magor says he's concerned that the body might permanently lose influenza-specific memory cells as a result of the treatment. He conceded, however, that blocking OX40 molecules showed significant promise for modulating immunity and inducing tolerance to engrafted organs.

Hussell says the group is focusing on the influenza treatment for now and is applying to the UK Medical Research Council and the Wellcome Trust for funding to begin human clinical trials. The Imperial College group collaborates with Xenova, a UK-based biotech that explores various therapeutic uses of OX40, including autoimmune disease and cancer.

https://www.the-scientist.com/research-round-up/the-end-of-hiv-1-budding-machinery-54163

The end of HIV-1 budding machinery

HIV-1 reprograms the cellular machinery and employs several unknown host proteins to bud from infected cells. In 5 October Cell, Jennifer Garrus and colleagues from University of Utah School of Medicine and Myriad Genetics, Salt Lake City show that the human tumor susceptibility gene 101 (Tsg101), which functions in vacuolar protein sorting (Vps) pathway, is critical to HIV-1 budding and the progression of the disease into full-blown AIDS.Garrus et al. used small interfering RNA to stop producti

Tudor Toma(t.toma@ic.ac.uk)

Oct 7, 2001

HIV-1 reprograms the cellular machinery and employs several unknown host proteins to bud from infected cells. In 5 October Cell, Jennifer Garrus and colleagues from University of Utah School of Medicine and Myriad Genetics, Salt Lake City show that the human tumor susceptibility gene 101 (Tsg101), which functions in vacuolar protein sorting (Vps) pathway, is critical to HIV-1 budding and the progression of the disease into full-blown AIDS.

Garrus et al. used small interfering RNA to stop production of Tsg101 in HIV infected human embryonic kidney cells lines. They found that Tsg101 depletion stopped HIV-1 replication at a late stage of the budding process. When they re-introduced Tsg101 in these cells, HIV-1 budding resumed. In addition, they showed that dominant negative mutant Vps4 proteins that inhibit vacuolar protein sorting also arrest HIV-1 budding (Cell 2001, **107**:55-65).

New AIDS drugs that inactivate the Tsg101 protein may limit the amount of HIV virus in people who are infected. "This would be a whole new class of anti-HIV drugs," said Kenton Zavitz, a biochemist at Myriad who participated in the study.

Oct 23 -

https://officeofthecoroner.com/wp-content/uploads/2018/10/October-23-2018.pdf

oct 16 2016

https://insights.ovid.com/thoracic-oncology/jton/2016/10/000/randomized-phase-study-comparing-combination/19/01243894

ournal of Thoracic Oncology. 11(10):1736–1744, OCTOBER 2016

DOI: 10.1016/j.jtho.2016.05.038

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PMID: 27448761

Issn Print: 1556-0864

Publication Date: October 2016

A Randomized Phase 2 Study Comparing the Combination of Ficlatuzumab and Gefitinib with Gefitinib Alone in Asian Patients with Advanced Stage Pulmonary Adenocarcinoma

Tony Mok;Sarayut Geater;Wu-Chou Su;Eng-Huat Tan;James Yang;Gee-Chen Chang;May Han;Philip Komarnitsky;Francis Payumo;Jennifer Garrus;Sandra Close;Keunchil Park;

+ Author Information

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View on Journal Site

Abstract

Introduction:A randomized phase 2 study was designed to compare the combination of ficlatuzumab (AV-299), a humanized hepatocyte growth factor–neutralizing monoclonal antibody, plus gefitinib versus gefitinib monotherapy in a pulmonary adenocarcinoma population clinically enriched for EFGR tyrosine kinase inhibitor–sensitizing mutations.**Methods:**A total of 188 patients were randomized 1:1 to receive either gefitinib or ficlatuzumab plus gefitinib treatment. Patients who demonstrated disease control in the single-agent gefitinib arm were allowed to cross over to ficlatuzumab plus gefitinib treatment upon disease progression. Molecular analyses included tumor *EGFR* mutation status and retrospective proteomic testing using VeriStrat, a multivariate test based on mass spectrometry.**Results:**The addition of ficlatuzumab to gefitinib did not provide significant improvement over gefitinib monotherapy for the primary end point of overall response rate or the secondary end points of progression-free survival and overall survival. In the subgroup classified as VeriStrat poor, the addition of ficlatuzumab to gefitinib showed significant improvement in both progression-free survival and overall survival in both the intent-to-treat population and the subgroup with EGFR tyrosine kinase inhibitor–sensitizing mutations. For all patients, the most frequent adverse events were diarrhea, dermatitis acneiform, and paronychia.**Conclusions:**Although the trial showed no significant benefit from the addition of ficlatuzumab to gefitinib in the overall population of Asian patients with advanced-stage pulmonary adenocarcinoma, the biomarker data suggest that patients classified as VeriStrat poor may benefit from ficlatuzumab combination therapy.

publications -

https://www.researchgate.net/scientific-contributions/2013732861_Jennifer_Garrus

http://europepmc.org/article/PMC/2172688

HIV Gag mimics the Tsg101-recruiting activity of the human Hrs protein.

Pornillos O,

Higginson DS,

Stray KM,

Fisher RD,

Garrus JE,

Payne M,

He GP,

Wang HE,

Morham SG,

Sundquist WI

Author information

The Journal of Cell Biology, 31 Jul 2003, 162(3):425-434

DOI: 10.1083/jcb.200302138 PMID: 12900394 PMCID: PMC2172688

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Abstract

The HIV-1 Gag protein recruits the cellular factor Tsg101 to facilitate the final stages of virus budding. A conserved P(S/T)AP tetrapeptide motif within Gag (the "late domain") binds directly to the NH2-terminal ubiquitin E2 variant (UEV) domain of Tsg101. In the cell, Tsg101 is required for biogenesis of vesicles that bud into the lumen of late endosomal compartments called multivesicular bodies (MVBs). However, the mechanism by which Tsg101 is recruited from the cytoplasm onto the endosomal membrane has not been known. Now, we report that Tsg101 binds the COOH-terminal region of the endosomal protein hepatocyte growth factor-regulated tyrosine kinase substrate (Hrs; residues 222-777). This interaction is mediated, in part, by binding of the Tsg101 UEV domain to the Hrs 348PSAP351 motif. Importantly, Hrs222-777 can recruit Tsg101 and rescue the budding of virus-like Gag particles that are missing native late domains. These observations indicate that Hrs normally functions to recruit Tsg101 to the endosomal membrane. HIV-1 Gag apparently mimics this Hrs activity, and thereby usurps Tsg101 and other components of the MVB vesicle fission machinery to facilitate viral budding.

HIV Gag mimics the Tsg101-recruiting activity of the human Hrs protein

Owen Pornillos,[1] Daniel S. Higginson,[1] Kirsten M. Stray,[1] Robert D. Fisher,[1] Jennifer E. Garrus,[1] Marielle Payne,[1] Gong-Ping He,[2] Hubert E. Wang,[2] Scott G. Morham,[2] and Wesley I. Sundquist[1]

Author information **Article notes** **Copyright and License information**

This article has been **cited by** other articles in PMC.

Abstract

The HIV-1 Gag protein recruits the cellular factor Tsg101 to facilitate the final stages of virus budding. A conserved P(S/T)AP tetrapeptide motif within Gag (the “late domain”) binds directly to the NH_2-terminal ubiquitin E2 variant (UEV) domain of Tsg101. In the cell, Tsg101 is required for biogenesis of vesicles that bud into the lumen of late endosomal compartments called multivesicular bodies (MVBs). However, the mechanism by which Tsg101 is recruited from the cytoplasm onto the endosomal membrane has not been known. Now, we report that Tsg101 binds the COOH-terminal region of the endosomal protein hepatocyte growth factor–regulated tyrosine kinase substrate (Hrs; residues 222–777). This interaction is mediated, in part, by binding of the Tsg101 UEV domain to the Hrs $_{348}$PSAP$_{351}$ motif. Importantly, Hrs$_{222–777}$ can recruit Tsg101 and rescue the budding of virus-like Gag particles that are missing native late domains. These observations indicate that Hrs normally functions to recruit Tsg101 to the endosomal membrane. HIV-1 Gag apparently mimics this Hrs activity, and thereby usurps Tsg101 and other components of the MVB vesicle fission machinery to facilitate viral budding.

Keywords: virus budding; virions; ubiquitin; vacuolar protein sorting; multivesicular body

Introduction

The HIV Gag protein orchestrates viral assembly and budding, and forms the structural shell of the immature virus (for review see Göttlinger, 2001). Even in the absence of any other viral proteins, HIV-1 Gag can form extracellular virus-like particles (VLPs) that resemble authentic HIV virions. Efficient release of

the absence of any other viral proteins, HIV-1 Gag can form extracellular virus-like particles (VLPs) that resemble authentic HIV virions. Efficient release of HIV-1 virions and Gag VLPs from most cell types requires the presence of a "late domain" located in the COOH-terminal Gag p6 region (Göttlinger et al., 1991; Huang et al., 1995; Demirov et al., 2002b). All HIV-1 strains contain the late domain tetrapeptide motif P(S/T)AP (where the second position can be either Ser or Thr; **Fig. 1**), which is a docking site for the cellular protein, tumor susceptibility gene 101 (Tsg101; for review see Pornillos et al., 2002c). Tsg101 appears to facilitate viral budding by recruiting additional cellular factors that can catalyze release of the enveloped virion. In addition to the P(S/T)AP sequence found in HIV-1 Gag, distinct late domain sequences have also been identified and characterized in several other enveloped RNA viruses. The best characterized of these is the PPXY motif (where X is any amino acid), which binds the Nedd4 protein family of ubiquitin E3 ligases (Xiang et al., 1996; Harty et al., 1999, 2001; Strack et al., 2000; Kikonyogo et al., 2001; Yasuda et al., 2002; Timmins et al., 2003).

https://www.ncbi.nlm.nih.gov/pubmed/15218037

J Biol Chem. 2004 Aug 20;279(34):36059-71. Epub 2004 Jun 23.

The human endosomal sorting complex required for transport (ESCRT-I) and its role in HIV-1 budding.

Stuchell MD1, Garrus JE, Müller B, Stray KM, Ghaffarian S, McKinnon R, Kräusslich HG, Morham SG, Sundquist WI.

Author information

1

Department of Biochemistry, University of Utah, Salt Lake City, Utah 84132-3201, USA.

Abstract

Efficient human immunodeficiency virus type 1 (HIV-1) budding requires an interaction between the PTAP late domain in the viral p6(Gag) protein and the cellular protein TSG101. In yeast, Vps23p/TSG101 binds both Vps28p and Vps37p to form the soluble ESCRT-I complex, which functions in sorting ubiquitylated protein cargoes into multivesicular bodies. Human cells also contain ESCRT-I, but the VPS37 component(s) have not been identified. Bioinformatics and yeast two-hybrid screening methods were therefore used to identify four novel human proteins (VPS37A-D) that share weak but significant sequence similarity with yeast Vps37p and to demonstrate that VPS37A and VPS37B bind TSG101. Detailed studies produced four lines of evidence that human VPS37B is a Vps37p ortholog. 1) TSG101 bound to several different sites on VPS37B, including a putative coiled-coil region and a PTAP motif. 2) TSG101 and VPS28 co-immunoprecipitated with VPS37B-FLAG, and the three proteins comigrated together in soluble complexes of the correct size for human ESCRT-I (approximately 350 kDa). 3) Like TGS101, VPS37B became trapped on aberrant endosomal compartments in the presence of VPS4A proteins lacking ATPase activity. 4) Finally, VPS37B could recruit TSG101/ESCRT-I activity and thereby rescue the budding of both mutant Gag particles and HIV-1 viruses lacking native late domains. Further studies of ESCRT-I revealed that TSG101 mutations that inhibited PTAP or VPS28 binding blocked HIV-1 budding. Taken together, these experiments define new components of the human ESCRT-I complex and characterize several TSG101 protein/protein interactions required for HIV-1 budding and infectivity.

PMID:

15218037

DOI:

10.1074/jbc.M405226200

[Indexed for MEDLINE]

Free full text

Michael Arthur Ellison

2018 (Oct 17) - Legal notice from District Attorney - "Thornton Man Charged with First-degree Murder in Stabbing Death of his Wife "

See [HG004E][GDrive]

17th Judicial District Attorney Dave Young announced Wednesday that Michael Arthur Ellison has been charged with first-degree murder after deliberation in the stabbing death of his wife in Thornton.

Thornton police found Jennifer Ellison, 45, dead at the couple's home at 13154 Uinta Street in Thornton on October 17 after receiving a 911 call from Michael Ellison.

Ellison (DOB 02/25/72) was advised of the charges Wednesday in Adams County District Court. A preliminary hearing is set for December 31 in Division E of Adams County District Court.

The filing of a criminal charge is merely a formal accusation that an individual committed a crime under Colorado Laws. A defendant is presumed innocent until and unless proven guilty.

Michael Ellison - LinkedIn (Apri 2020)

See - [HW002N][GDrive]

Research Scientist

- Greater Denver Area
- Contact info
- University of Colorado Denver
- University of Utah

About

Results-oriented scientist with 15 years of experience in lab management, design and execution of experiments and publication. Track record of leading laboratory personnel in multiple projects. Known for independent hypothesis creation and testing. An effective communicator with a broad knowledge base.

• Molecular Biology

• Biochemistry

• Cell Biology

• Scientific leadership

• Publication of peer reviewed studies

Experience

- University of Colorado Denver - Senior Research Associate
  - Dates Employed 2013 – Present (7 yrs)
  - Location Aurora Colorado
  - Characterization of neutrophils from individuals treated with interferon gamma or cannabis
  - Analysis of neutrophils from patients with immune deficiency
  - Guidance, training and leadership for medical fellows and junior lab personnel
  - Preparation and submission of scientific manuscripts
  - Clinical study design
  - Development and use of myeloid cell function assays
  - Coordination of a bioinformatics group and a genomics core facility to measure drug induced changes in mRNA profiles in myeloid cells
  - Design/use of colorimetric, luminescent and fluorescent-96 well assays
  - Review of microarray data to derive biological insights
  - Correlation of mRNA and protein expression changes
- Bonfills Blood Center - Post Doctoral Fellow
  - Dates Employed 2008 – 2013 (5 years)
  - Location Denver Colorado

- Location Denver Colorado
  - Characterization of the role of peroxiredoxin 6 (Prdx6) in modulating the oxidative burst of neutrophils.
  - Analysis of neutrophils from patients with immune deficiency
  - Genetic manipulation of model cell lines to achieve depletion of Prdx6
  - Re-expression of wild type and mutant Prdx6 in knockdown cell lines
  - Luminescence and colorimetric based assays of oxidase activity
  - Over-expression and purification of wild type and mutant Prdx6
  - In vitro enzyme assays to characterize recombinant Prdx6 molecules
  - Training of undergraduate summer rotation students
  - Preparation and submission of scientific manuscripts
- University of Utah - Postdoctoral Associate
  - Dates Employed 2002 – 2007
  - Characterization of novel peptide inhibitors of nicotinic acetylcholine receptors (nAChRs)
  - Lecturer, undergraduate biochemistry
  - RT-PCR, PCR and RACE-based discovery of novel toxin genes from marine snails
  - Chemical preparation of synthetic peptide toxins
  - Xenopus oocyte two electrode voltage clamp to characterize receptor-subtype-specificity of peptide toxins
  - Characterization of receptor-toxin interactions by mutagenesis.
  - Writing and submitting manuscripts and addressing reviewer comments
  - Supervision and training of junior laboratory personnel
- University of Utah - Graduate student
  - Dates Employed 1998 – 2001 (3 years)
  - Location Greater Salt Lake City Area
  - Graduate Student: University of Utah Biology Department, Salt Lake City
    - Thesis Project: Natural and combinatorial peptide toxins
    - Discovery of a novel, non-competitive peptide antagonist of the alpha7 nAChR
    - Cloning toxin genes from marine snails
    - Use of multiple techniques in molecular biology, cell biology and biochemistry including PCR, mutagenesis, subcloning, mammalian cell culture, transient transfections, cDNA preparation, RACE, reverse phase HPLC (analytical and preparative) and radio-ligand binding assays
- Teaching assistant, undergraduate Biochemistry

Education

- University of Utah - Degree Name Doctor of Philosophy - PhD - Field Of Study Biochemistry and Molecular Biology - Dates attended or expected graduation 1996 – 2001
- University of Bath - Degree Name Bachelor of Science - BS - Field Of Study Biochemistry - Dates attended or expected graduation 1991 – 1995

MyLife - Profile as of April 2020

PDF at [HL003U][GDrive] / Image at [HL003V][GDrive]

Summary: Michael Ellison's birthday is 07/25/1972 and is 47 years old. Previously city included Salt Lake City UT. Michael Arthur Ellison and Michael A Ellison are some of the alias or nicknames that Michael has used. We have lots of information about Michael: religious views are listed as Christian, ethnicity is Caucasian, and political affiliation is currently a registered Republican. Michael's relationship status is married. Alyssa Hoffman, Abigail Struska, Brandon Shaver, Nicholas Hoffman and Haylie Weston, and many others are family members and associates of Michael. Michael's reported annual income is about $70 - 79,999; with a net worth that tops $100,000 - $249,999. Read Full Summary

---

ARRREST ? (2018-11-01 03:57:52)

PDF - [HW002Q][GDrive] Image = [HW002R][GDrive]

Arrest Report Overview: Michael Ellison

First Name: MICHAEL

Last Name: ELLISON

Gender: Male

Arrest Date: 2018-11-01 03:57:52

Age: 46

State: Colorado

County: Adams

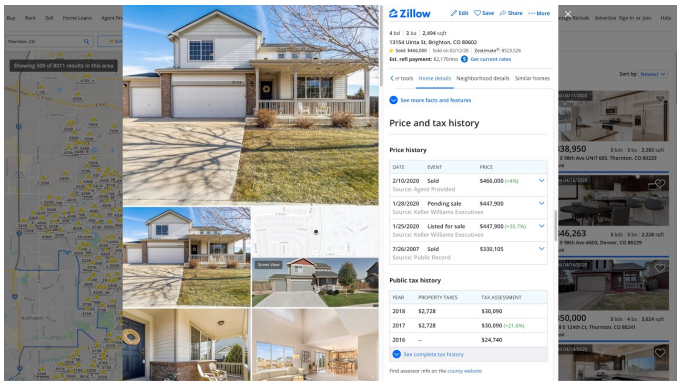
Dob: 1972-07-25 00:00:00

Booking Date: 2018-11-01 15:57:52

Birth Year: 1972

Home sale

Home was sold in Jan 2020 - See Zillow - [HW002O][GDrive] - see below -



BITCHUTE @Housatonic YOUTUBE @HousatonicLive ODYSEE @Housatonic BRIGHTEON @Housatonic

Housatonic

William Henry Gates (born 1858)

"WHG0" / #WHG0

- NOTE - There exist suggestions that William Charles Gates (born 1860), who sometimes went by the name of "William Henry Gates", may have been the same person as this **William Henry Gates (born 1858)** . Note these claims are not proven, and made on circumstantial evidence. We do not believe they are similar people.
- NOTE - William Henry Gates was born in 1858, not 1860 . Multiple genealogy sites have this wrong

Born -

Married to -

Father of -

- William Henry Gates (born 1891)

William Henry Gates - Basic bio

NOTE - The Geni page (https://www.geni.com/people/William-Gates/6000000007400962864) has many inaccuracies ...

Birthdate: January 22, 1858 (not 1860)

Death: April 30, 1926 (66) / Seattle, King County, Washington, United States

Main source - https://www.findagrave.com/memorial/86517134/william-henry-gates - See below ..

William H. Gates (1858-1926) came from Pennsylvania in 1888, and went on the Dawson Gold Rush of 1898. In 1900, he had a furniture store in Nome, Alaska. He and Rebecca (1867-1933) lived in Seattle in the early 1900's where his daughters, Pearl and Florence, partook in the rarified atmosphere of young Seattle socialites. Their son, William Gates, Jr. was born in 1891, daughter Pearl Gates in 1895, and Florence Gates who married Harry Schumacher on October 22, 1913. He became a city councilmember in Bremerton. (Provided by Vicki Stiles, Director, Shoreline Historical Museum)

Date Of Death: 30 Apr 1926

Age: 68

Father Name: Joseph C. Gates

Mother Name: Martha A. Satterley

Death Place: Seattle, King, Washington

Spouse Name: Rebecca Gates

1860 Census - Note that there is another Gates family in Tioga county,

Full census - [HS002P][GDrive]

Record Transcription:
Us Census 1860

Household Members

Last name	Gender	Age	First name(s)	Birth year	Birth place
Gates	Male	46	Joseph	1814	Pennsylvania
Gates	Female	48	Martha	1812	New York
Gates	Female	14	Mary	1846	Pennsylvania
Gates	Female	7	Julia	1853	Pennsylvania
Gates	Male	5	Jefferson	1855	Pennsylvania
Gates	**Male**	**3**	**William**	**1857**	**Pennsylvania**
Satterly	Female	13	Harriet	1847	Pennsylvania

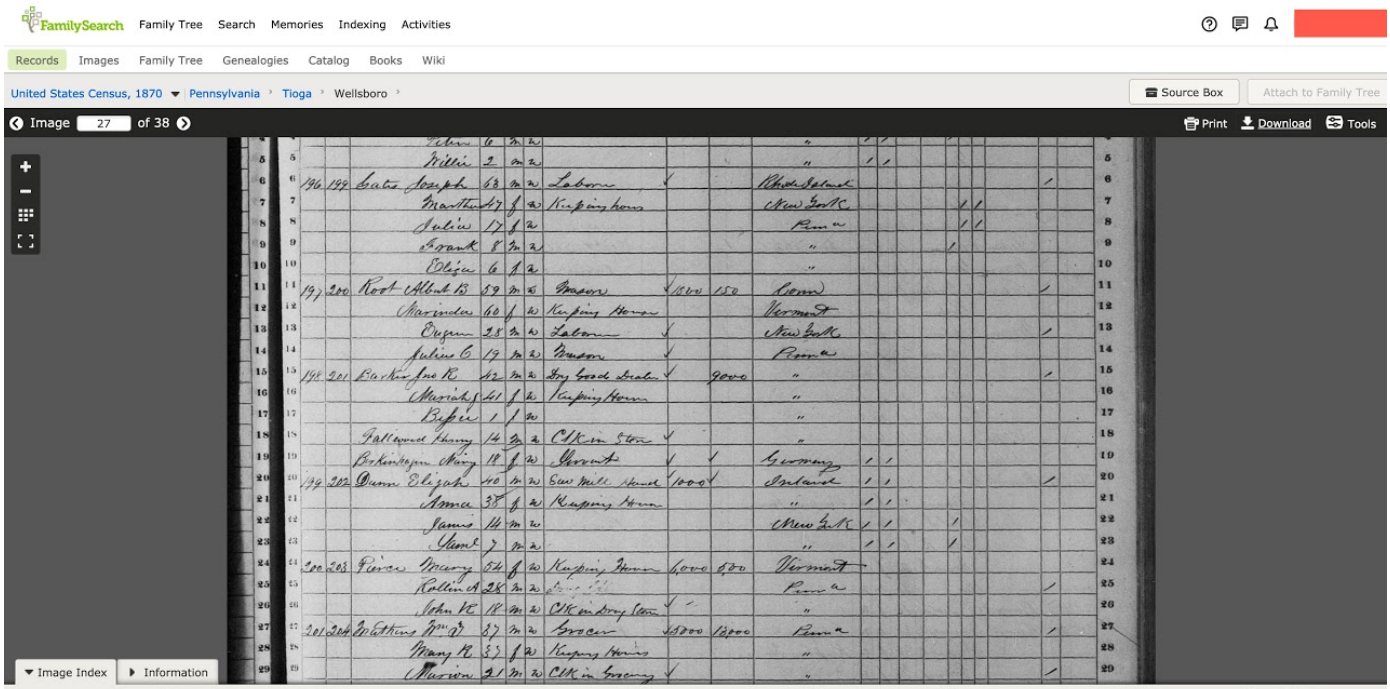
William Gates's Census Details

Additional keywords	-
First name(s)	William
Last name	Gates
Gender	Male
Age	3
Birth year	1857
Birth place	Pennsylvania
Race	-
Residence	, Tioga, Pennsylvania
Location	Tioga, Pennsylvania
City/township	The Town Of Delmar
County	Tioga
State	Pennsylvania
NARA series	M653
Record set	Us Census 1860
Category	Census, Land & Substitutes
Subcategory	Census
Collections from	Americas, United States

[HS003I][GDrive]

1870 - Bill Gates at 11yrs old in Pennsylvania (staying at different home than parents)

Full census sheet available at [HS003G][GDrive]



Name	Gender	Age	Race	Birth Year (Estimated)	Birthplace	Page Number	Record Number
Joseph Gates	Male	63	White	1807	Rhode Island	27	15030
Martha Gates	Female	47	White	1823	New York	27	15030
Julia Gates	Female	17	White	1853	Pennsylvania	27	15030
Frank Gates	Male	8	White	1862	Pennsylvania	27	15030
Eliza Gates	Female	6	White	1864	Pennsylvania	27	15030
Albert B Root	Male	59	White	1811	Connecticut	27	15035
Marinda Root	Female	60	White	1810	Vermont	27	15035

[HS003F][GDrive]

Appears that WHG0, at age 12, is living at a different residence / with a different family

Full census sheet : [HS002U][GDrive]

Record Transcription:
Us Census 1870

Household Members

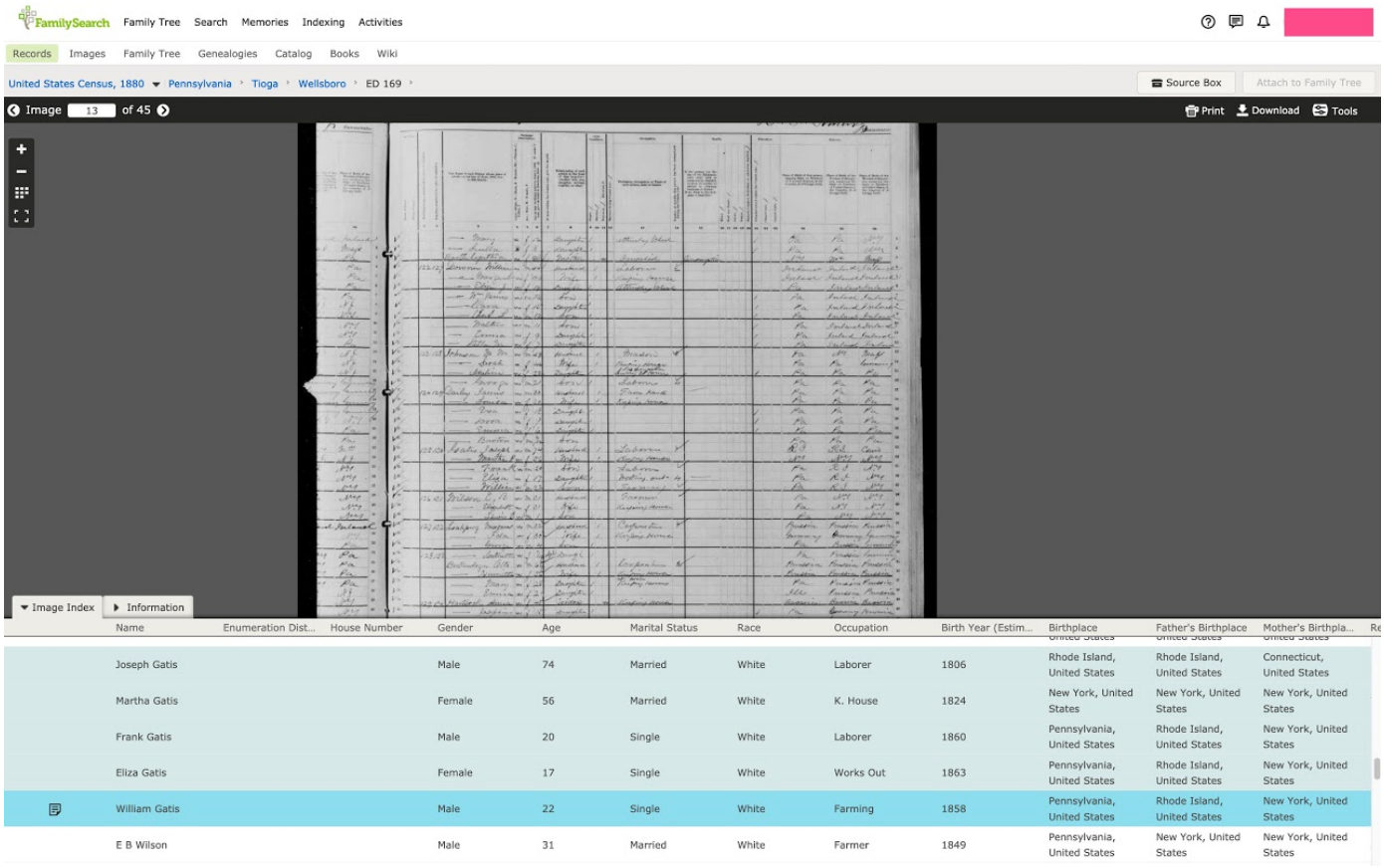
First name(s)	Last name	Gender	Age	Birth year	Birth place
Darwin	Fields	Male	28	1842	Pennsylvania
Loranie	Fields	Female	28	1842	Pennsylvania
Stella	Fields	Female	6	1864	Pennsylvania
William Henry	**Gates**	**Male**	**12**	**1858**	**Pennsylvania**
George	Gates	Male	22	1848	Pennsylvania

William Henry Gates's Census Details

First name(s)	William Henry
Last name	Gates
Gender	Male
Age	12
Birth year	1858
Birth place	Pennsylvania
Race	White
Residence	Pennsylvania, United States
City/township	Delmar
County	Tioga
State	Pennsylvania
Record set	Us Census 1870
Category	Census, Land & Substitutes
Subcategory	Census
Collections from	Americas, United States

[HS003H][GDrive]

1880 - Still in Tioga -



[HS003J][GDrive]

1883 (July) - Future wife (who he married in Sep 1888) arrives in New York City from Germany

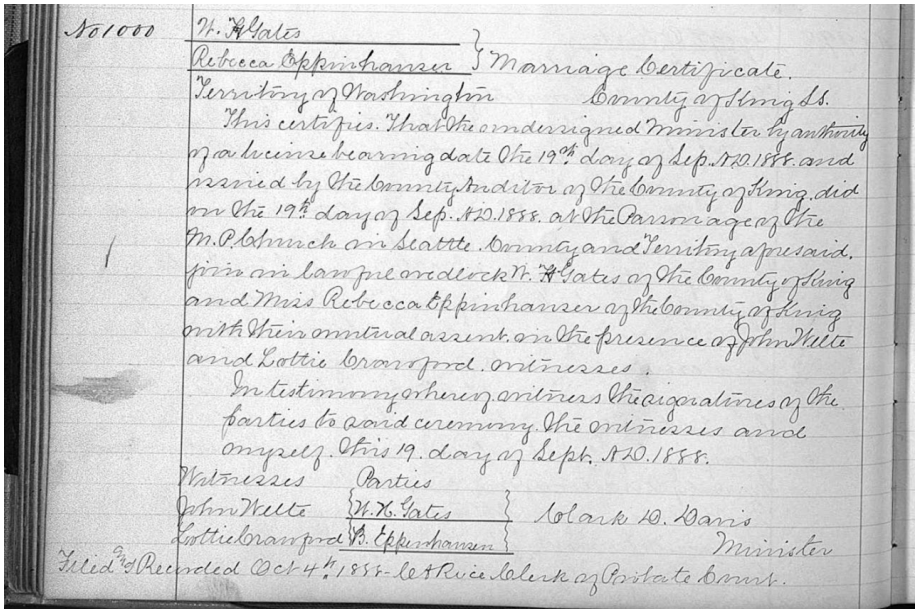
---

1886 - William H Gates moves to Tacoma, Washington

Source : [HN00YM][GDrive]

1. **Not stated if he moved directly from Pennsylvania**
2. **Unknown exactly when in 1886 he moved**
3. **Unknown if William H Gates moved alone, or with family / friends**
4. **Unknown if he met his future wife by this time**

1888 (Sep) - Wedding to Rebecca "Eppinhauser?" - Resident of Seattle



No 1000

W. H. Gates
Rebecca Eppinhauser } Marriage Certificate.

Territory of Washington County of King ss.

This certifies. That the undersigned Minister by authority of a license bearing date the 19th day of Sep. A.D. 1888. and issued by the County Auditor of the County of King. did on the 19th day of Sep. A.D. 1888. at the Parsonage of the M.P. Church in Seattle County and Territory aforesaid. join in lawful wedlock W. H. Gates of the County of King and Miss Rebecca Eppinhauser of the County of King with their mutual assent. in the presence of John Wells and Lottie Crawford. witnesses.

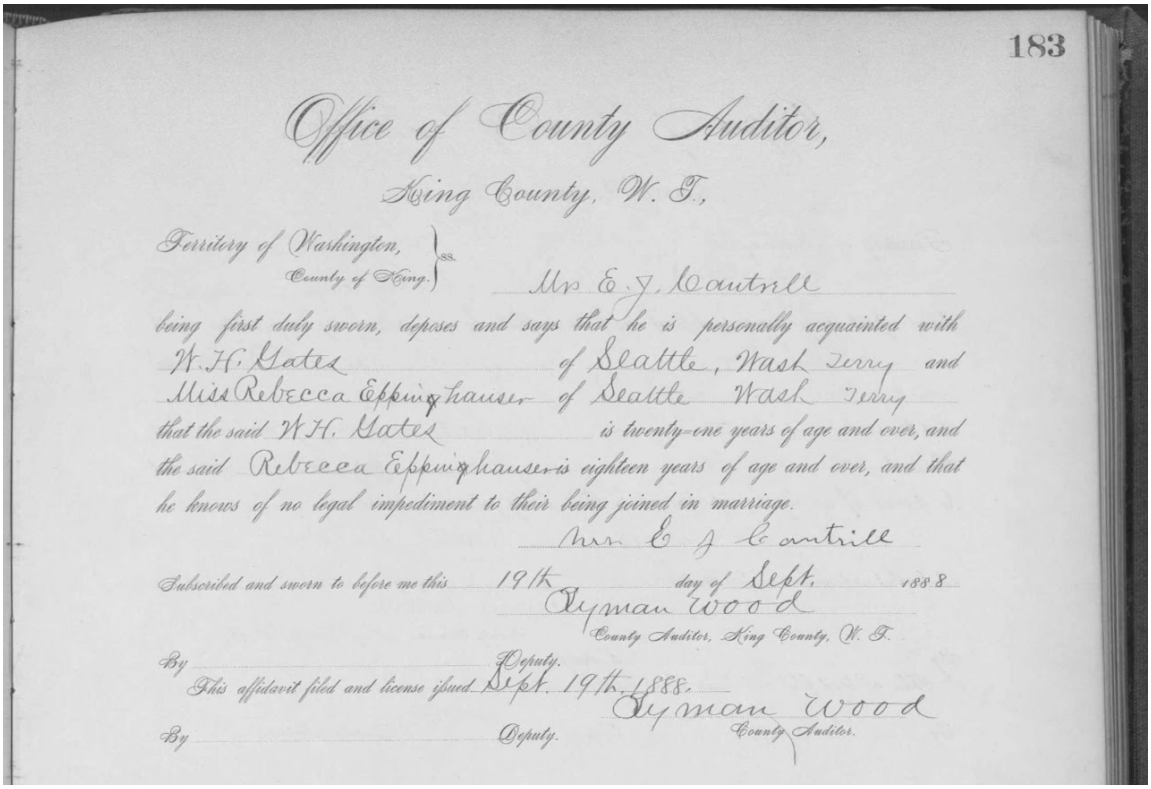
In testimony whereof witness the signatures of the parties to said ceremony the witnesses and myself. this 19. day of Sept. A.D. 1888.

Witnesses Parties
John Wells W. H. Gates
Lottie Crawford R. Eppinhauser

Clark D. Davis
Minister

Filed & Recorded Oct 4th 1888 - Le Roi Clerk of Probate Court.

[HL0047][GDrive]



183

Office of County Auditor,

King County, W. T.

Territory of Washington, County of King. } ss.

Mrs E. J. Cantrell

being first duly sworn, deposes and says that he is personally acquainted with W. H. Gates of Seattle, Wash Terry and Miss Rebecca Eppinghauser of Seattle Wash Terry that the said W. H. Gates is twenty-one years of age and over, and the said Rebecca Eppinghauser is eighteen years of age and over, and that he knows of no legal impediment to their being joined in marriage.

Mrs E J Cantrell

Subscribed and sworn to before me this 19th day of Sept. 1888

Hyman Wood

County Auditor, King County, W. T.

By Deputy.

This affidavit filed and license issued Sept. 19th 1888.

Hyman Wood

By Deputy. County Auditor.

[HL0048][GDrive]

1888 - 1891 Seattle Directory listings

- **1888** - No William Henry Gates (See https://www.ancestry.com/imageviewer/collections/2469/images/13783419?treeid=&personid=&hintid=&usePUB=true&usePUBJs=true&_ga=2.100929543.783907915.1596576946-1615111073.1596074686&pId=751560425)
- **1889** - Cigars and tobacco ? - [HD002I][GDrive]
- **1890** - carpenter? - [HD002G][GDrive]
- **1891** - Gates - Espressman - [HD002H][GDrive]

1889 (June 6) - Great Seattle Fire

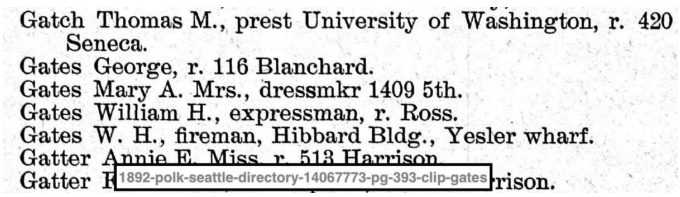
https://en.wikipedia.org/wiki/Great_Seattle_Fire

1892 - 1893 - In land what is (today) northern Seattle

(1892) Image of full page from directory - [HD0024][GDrive]

1893 <--- Wm H Gates, Farmer, restaurant ... Barnabee, Lake Washington

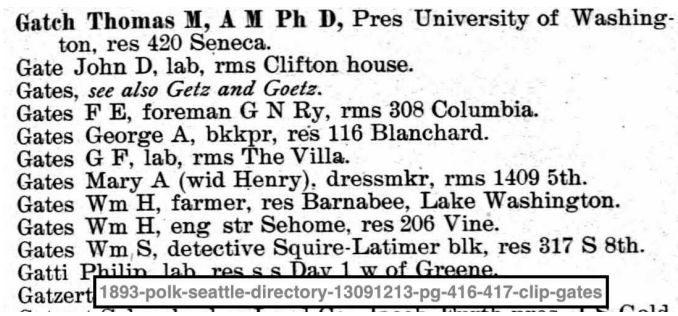
(1893) Image of full page from directory - [HD0028][GDrive]



Gatch Thomas M., prest University of Washington, r. 420 Seneca.
Gates George, r. 116 Blanchard.
Gates Mary A. Mrs., dressmkr 1409 5th.
Gates William H., expressman, r. Ross.
Gates W. H., fireman, Hibbard Bldg., Yesler wharf.
Gatter Annie E. Miss, r. 513 Harrison
Gatter H[illegible]rrison.

1892-polk-seattle-directory-14067773-pg-393-clip-gates

1892 (for 1893 Seattle Directory)
[HD0025][GDrive]



Gatch Thomas M, A M Ph D, Pres University of Washington, res 420 Seneca.
Gate John D, lab, rms Clifton house.
Gates, *see also Getz and Goetz.*
Gates F E, foreman G N Ry, rms 308 Columbia.
Gates George A, bkkpr, res 116 Blanchard.
Gates G F, lab, rms The Villa.
Gates Mary A (wid Henry), dressmkr, rms 1409 5th.
Gates Wm H, farmer, res Barnabee, Lake Washington.
Gates Wm H, eng str Sehome, res 206 Vine.
Gates Wm S, detective Squire-Latimer blk, res 317 S 8th.
Gatti Philip, lab, res s s Day 1 w of Greene.
Gatzert

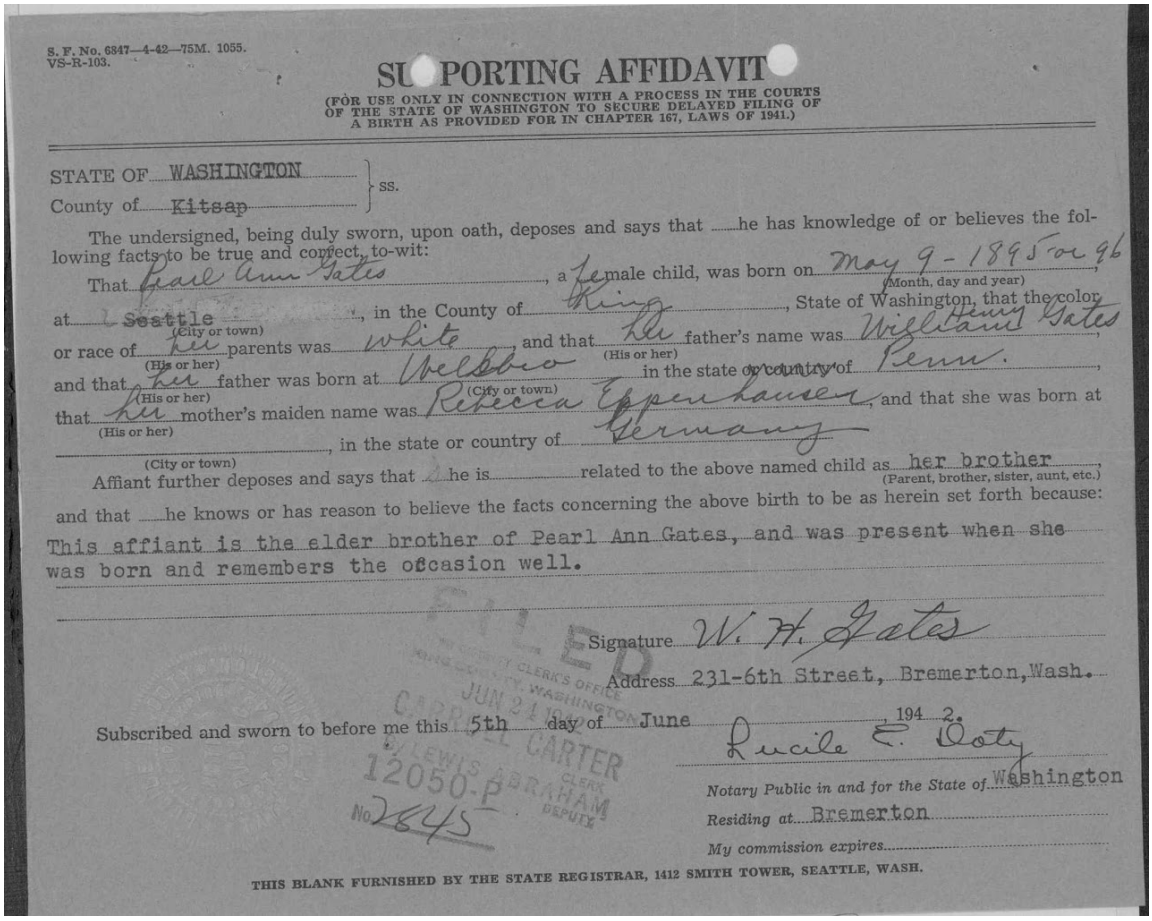
1893-polk-seattle-directory-13091213-pg-416-417-clip-gates

1893 (for 1894 Seattle Directory)
[HD0029][GDrive]

- **1894** <----- No Willian H Gates in Seattle !!! See [HD002J][GDrive] (did they also go to Monte Cristo ?) https://www.historylink.org/File/8404
- **1895** - dairyman / restaurante - See [HD002K][GDrive]

1895 (May 09) - Pearl Ann gates birth info - But the birth record isnt created until June of 1942 ???

- Why was this filled out on June 5th ... 1942 ???
- How could the brother remember .. he was three years old ! "remembers the occasion well"
- Again, no mention of where in Germany She was born .. .her name is now back to being "Eppenhauser"
- The certificate has "seattle" as the birth location, but it was clearly typed OVER something else
- "May 95 or 96.... but remembers the occasion well ? "



S. F. No. 6847—4-42—75M. 1055.
VS-R-103.

SUPPORTING AFFIDAVIT

(FOR USE ONLY IN CONNECTION WITH A PROCESS IN THE COURTS OF THE STATE OF WASHINGTON TO SECURE DELAYED FILING OF A BIRTH AS PROVIDED FOR IN CHAPTER 167, LAWS OF 1941.)

STATE OF WASHINGTON
County of Kitsap } ss.

The undersigned, being duly sworn, upon oath, deposes and says that he has knowledge of or believes the following facts to be true and correct, to-wit:

That Pearl Ann Gates, a female child, was born on May 9 - 1895 or 96 (Month, day and year)
at Seattle (City or town), in the County of King, State of Washington, that the color or race of her (His or her) parents was White, and that he father's name was William Henry Gates, and that her (His or her) father was born at Wellsboro (City or town), in the state or country of Penn., that her (His or her) mother's maiden name was Rebecca Eppenhausen, and that she was born at _____ (City or town), in the state or country of Germany

Affiant further deposes and says that he is related to the above named child as her brother (Parent, brother, sister, aunt, etc.), and that he knows or has reason to believe the facts concerning the above birth to be as herein set forth because:

This affiant is the elder brother of Pearl Ann Gates, and was present when she was born and remembers the occasion well.

Signature W. H. Gates

Address 231-6th Street, Bremerton, Wash.

Subscribed and sworn to before me this 5th day of June, 194 2.

Lucile E. Doty

Notary Public in and for the State of Washington
Residing at Bremerton
My commission expires

FILED
JUN 21 1942
CLERK'S OFFICE
CARROLL CARTER
LEWIS ABRAHAM
DEPUTY
12050-P
No 2645

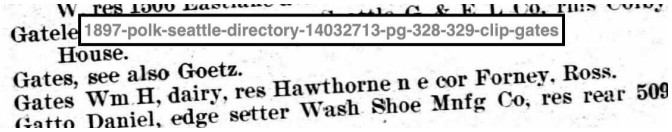
THIS BLANK FURNISHED BY THE STATE REGISTRAR, 1412 SMITH TOWER, SEATTLE, WASH.

[HL004R][GDrive]

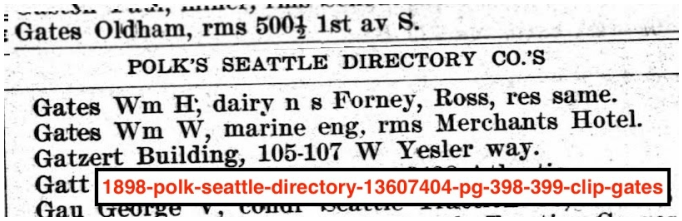
1897-1898 - Directory says "working on a dairy with a restaurant at corner of Forney and Ross"

(1897) Image of full page from directory - [HD0014][GDrive] / (1898) Image of full page from directory - [HD0016][GDrive]

NOTE: Info on the Merchants Hotel" is here : ((Image of full page from directory (year 1900) - [HD002C][GDrive])) **Address** is "123 W Washington on Corner of Railroad Ave."; **Proprietor** is "Fred E. Ferguson" - This is a William W Gates, not a William H Gates. (Clip here : [HD002D][GDrive])



1897 (for 1898 Seattle Directory)
[HD0015][GDrive]



1898 (for 1899 Seattle Directory)
[HD0017][GDrive]

1898 (September) - Gold is discovered in Nome, Alaska. Between 4,000 and 7,000 people leave Dawson City the following spring (of 1899)

September 1898 - Gold is discovered in Nome, Alaska. Between 4,000 and 7,000 people leave Dawson City the following spring

https://pier21.ca/research/immigration-history/the-gold-rush-in-british-columbia-and-the-yukon

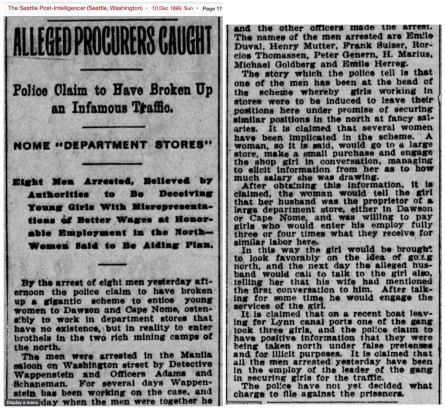
1899 - Directory - Part-time fireman, restaurant owner "corner of Forney and Ross"

Image of full page from directory - [HD0018][GDrive]

1899 (for 1900 Seattle Directory)
[HD0019][GDrive]

1899 - 1900 - Was William H Gates in Nome, Alaska at this time? Articles and some metadata suggests "yes"

Note - there is some funny business about department stores in Nome in Alaska around this time, selling a lot more than just tables.



[HN014O][GDrive]

1900 - USA Census

Full PDF of transcript - [HS002W][GDrive] / Full census sheet - [HS002T][GDrive]

1. .**Occupation** is hard to read, might say "grocer" ?
2. **Rebecca Gates - Date of Birth** is "October 1869"; Immigration date is "1882, in the USA for 18 years"
    1. NOTE : This is the only time we see a clearly noted birthdate. However, other census forms have her using October 1868 (or rounding up to Jan 1968) as a birthdate.
3. One **servant** living with the Gates family at this time (I think it may be a person renting a room)
4. **Address** - The Gates family is living in Seattle, but the address is impossible to read on the Census form. It looks a little bit like "Ross West --- " / "South of Canal" is written there, but not sure.

Record Transcription:
Us Census 1900

Household Members

First name(s)	Last name	Relationship	Marital status	Gender	Age	Birth year	Birth place
William M	**Gates**	**Self**	**Married**	**Male**	**40**	**1860**	**Pennsylvania**
Rebecca	Gates	Wife	Married	Female	31	1869	Germany
Florence M	Gates	Daughter	Single	Female	11	1889	Washington
William M	Gates	Son	Single	Male	9	1891	Washington
Pearl A	Gates	Daughter	Single	Female	5	1895	Washington

William M Gates's Census Details

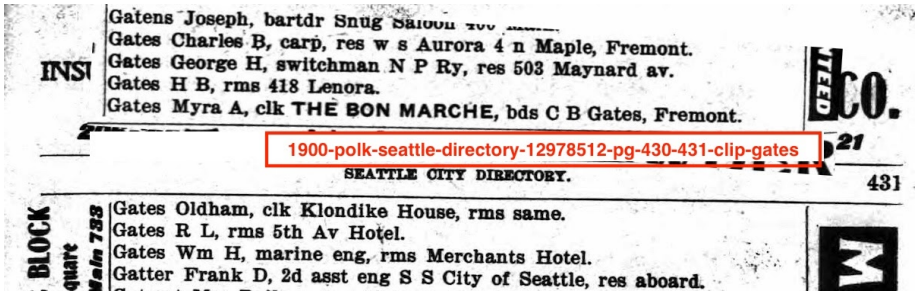
First name(s)	William M
Last name	Gates
Relationship	Self
Marital status	Married
Gender	Male
Age	40
Birth year	1860
Birth place	Pennsylvania
Marriage year (estimated)	1888
Ethnicity	American
Race	White
Immigration year	-
Spouse's first name(s)	Rebecca
Spouse's last name	Gates
Spouse's birth place	Germany
Head of household's first name(s)	William M
Head of household's last name	Gates
Father's birth place	United States
City/township	Seattle
County	King
State	Washington

[HS002X][GDrive]

1900 Directory listing (for 1901) -

NOTE this information was collected at the end of 1900 .... I dont see William Henry Gates on here. Possible they have just left to NOME Alaska at this time !

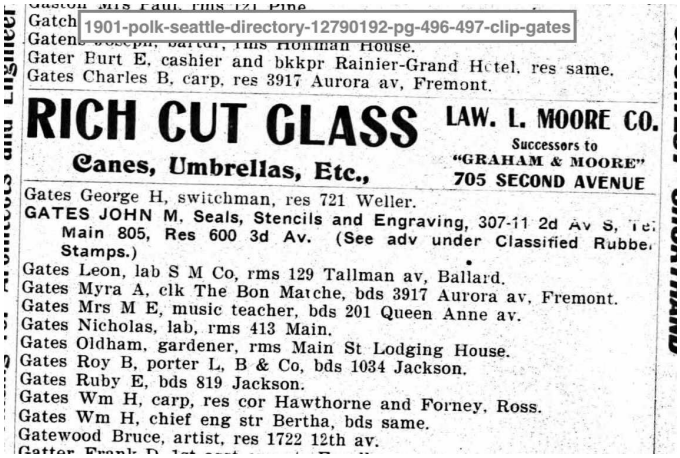
Image of full page from directory - [HD001A][GDrive]



[HD001B][GDrive]

1901 - Carpenter and Restaurant : "corner Hawthorne and Forney, Ross" - Back in business as of mid/late 1901 ...

Image of full page from directory - [HD001C][GDrive]


1901-polk-seattle-directory-12790192-pg-496-497-clip-gates

Gatch
Gater Burt E, cashier and bkkpr Rainier-Grand Hotel, res same.
Gates Charles B, carp, res 3917 Aurora av, Fremont.

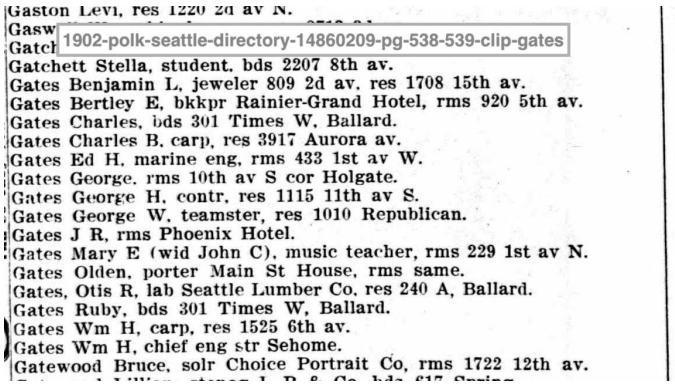
RICH CUT GLASS
Canes, Umbrellas, Etc.,
LAW. L. MOORE CO.
Successors to
"GRAHAM & MOORE"
705 SECOND AVENUE

Gates George H, switchman, res 721 Weller.
GATES JOHN M, Seals, Stencils and Engraving, 307-11 2d Av S, Tel. Main 805, Res 600 3d Av. (See adv under Classified Rubber Stamps.)
Gates Leon, lab S M Co, rms 129 Tallman av, Ballard.
Gates Myra A, clk The Bon Marche, bds 3917 Aurora av, Fremont.
Gates Mrs M E, music teacher, bds 201 Queen Anne av.
Gates Nicholas, lab, rms 413 Main.
Gates Oldham, gardener, rms Main St Lodging House.
Gates Roy B, porter L, B & Co, bds 1034 Jackson.
Gates Ruby E, bds 819 Jackson.
Gates Wm H, carp, res cor Hawthorne and Forney, Ross.
Gates Wm H, chief eng str Bertha, bds same.
Gatewood Bruce, artist, res 1722 12th av.

[HD001D][GDrive]

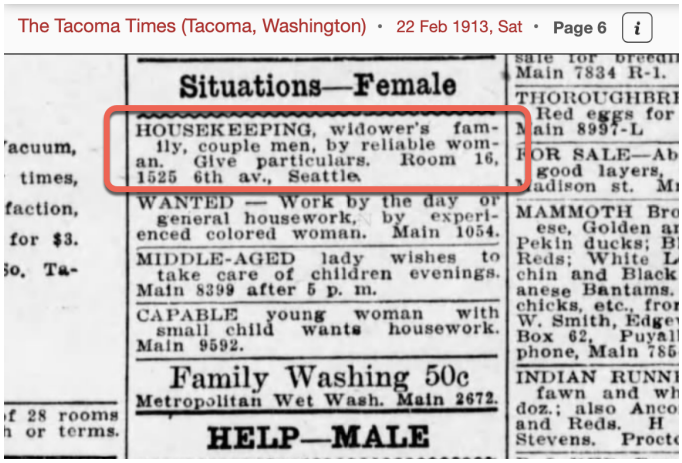
1902 - Carpentry, Restaurant at 1525 6th Av. in Seattle (Upgrade using "gains" from Nome?)

Image of full page from directory - [HD001E][GDrive]


1902-polk-seattle-directory-14860209-pg-538-539-clip-gates

Gaston Levi, res 1220 2d av N.
Gatch
Gatchett Stella, student, bds 2207 8th av.
Gates Benjamin L, jeweler 809 2d av, res 1708 15th av.
Gates Bertley E, bkkpr Rainier-Grand Hotel, rms 920 5th av.
Gates Charles, bds 301 Times W, Ballard.
Gates Charles B, carp, res 3917 Aurora av.
Gates Ed H, marine eng, rms 433 1st av W.
Gates George, rms 10th av S cor Holgate.
Gates George H, contr, res 1115 11th av S.
Gates George W, teamster, res 1010 Republican.
Gates J R, rms Phoenix Hotel.
Gates Mary E (wid John C), music teacher, rms 229 1st av N.
Gates Olden, porter Main St House, rms same.
Gates, Otis R, lab Seattle Lumber Co, res 240 A, Ballard.
Gates Ruby, bds 301 Times W, Ballard.
Gates Wm H, carp, res 1525 6th av.
Gates Wm H, chief eng str Sehome.
Gatewood Bruce, solr Choice Portrait Co, rms 1722 12th av.

[HD001F][GDrive]


The Tacoma Times (Tacoma, Washington) · 22 Feb 1913, Sat · Page 6

Situations—Female

HOUSEKEEPING, widower's family, couple men, by reliable woman. Give particulars. Room 16, 1525 6th av., Seattle.

WANTED — Work by the day or general housework, by experienced colored woman. Main 1054.

MIDDLE-AGED lady wishes to take care of children evenings. Main 8399 after 5 p. m.

CAPABLE young woman with small child wants housework. Main 9592.

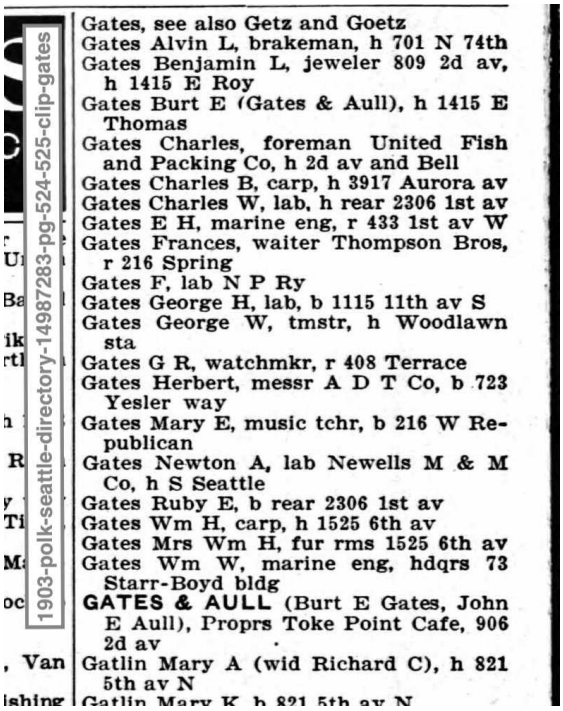
Family Washing 50c
Metropolitan Wet Wash. Main 2672.

HELP—MALE

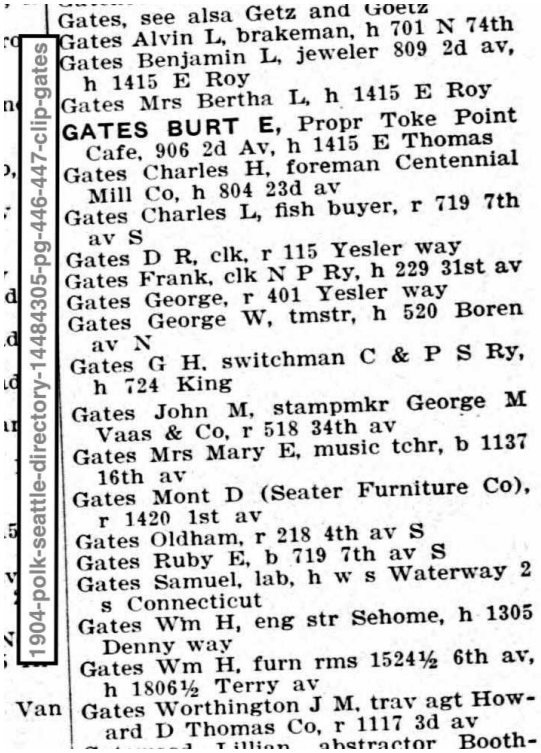
From 1913 newspaper ... with 16 (possibly way more) rooms at "1525 th Ave", this suggests this is a larger building ..

1903-1904 - In business with wife selling carpentry, furniture, and rooms/boarding at 1525 6th Av

(1903) Image of full page from directory - [HD001G][GDrive] / (1904) Image of full page from directory - [HD001I][GDrive]



1903
[HD001H][GDrive]



1904
[HD001J][GDrive]

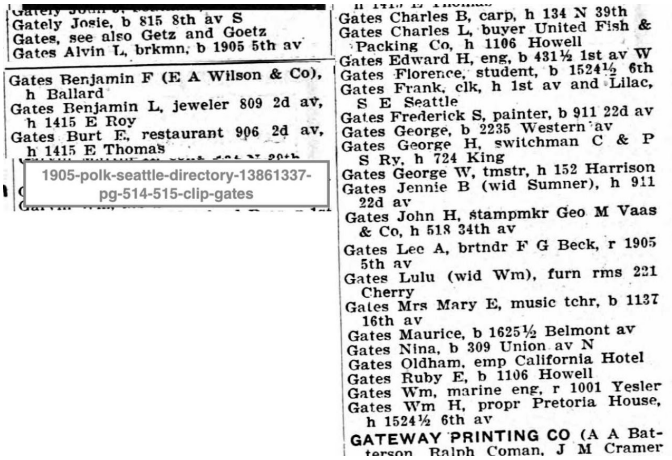
1905/1906 - The "1525 6th Ave" address is now called "Pretoria House Hotel"

(1905) Image of full page from directory - [HD001K][GDrive] / (1906) - Image of full page from directory - [HD001M][GDrive]

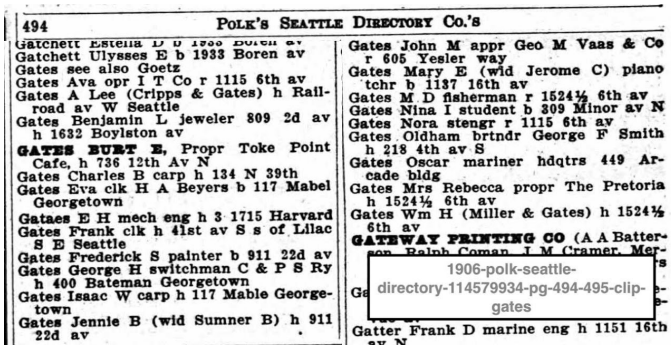
This is approximately near the intersection of 6th and Pine .. meaning that row houses shown in this old picture (https://pauldorpat.com/2015/09/26/seattle-now-then-a-row-house-at-6th-and-pine/) just may ahve been the Gates building !

"The Pretoria" - see 1906 Seattle directory pages : [HD002F][GDrive]

https://www.newspapers.com/image/221367851/?terms=%22the%2Bpretoria%22



1905
[HD001L][GDrive]



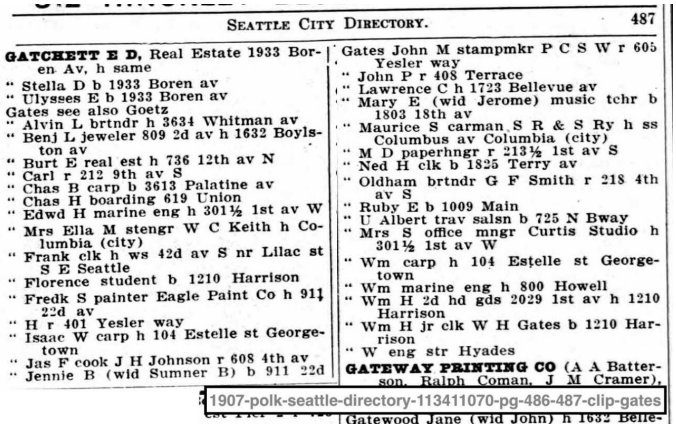
1906
[HD001N][GDrive]

1907/1908/1910 -New business : "Wm H Gates 2nd hand goods and Furniture"; BUSINESS ADDRESS of "2029 1st Ave, Seattle"

- (1907) Image of full page from directory - [HD001O][GDrive] - Home is **1210 Harrison** ... (along with son, and Florence ...)
- (1908) Image of full page from directory - [HD001Q][GDrive] - Home if **1818 18th Av** .... (along with son, and Florence...)
- (1909) Image of full page from directory - [HD001S][GDrive] - Home address is ???

"Gates Furniture Company" - 2029 1st Ave, Seattle [HD001T][GDrive]

Note that at a later time, "The Eureka Furniture Company" was at that address (for year 1915, see https://www.newspapers.com/image/145537573/?terms=%222029%2B1st%22) .. in 1916, it was "The Gardiner Furniture Company" (see https://www.newspapers.com/image/145517656/?terms=%222029%2B1st%22)



SEATTLE CITY DIRECTORY. 487

GATCHETT E D, Real Estate 1933 Boren Av, h same
" Stella D b 1933 Boren av
" Ulysses E b 1933 Boren av
Gates see also Goetz
" Alvin L brtndr h 3634 Whitman av
" Benj L jeweler 809 2d av h 1632 Boylston av
" Burt E real est h 736 12th av N
" Carl r 212 9th av S
" Chas B carp b 3613 Palatine av
" Chas H boarding 619 Union
" Edwd H marine eng h 301½ 1st av W
" Mrs Ella M stengr W C Keith h Columbia (city)
" Frank clk h ws 42d av S nr Lilac st S E Seattle
" Florence student b 1210 Harrison
" Fredk S painter Eagle Paint Co h 911½ 22d av
" H r 401 Yesler way
" Isaac W carp h 104 Estelle st Georgetown
" Jas F cook J H Johnson r 608 4th av
" Jennie B (wid Sumner B) b 911 22d
Gates John M stampmkr P C S W r 605 Yesler way
" John P r 408 Terrace
" Lawrence C h 1723 Bellevue av
" Mary E (wid Jerome) music tchr b 1803 18th av
" Maurice S carman S R & S Ry h ss Columbus av Columbia (city)
" M D paperhngr r 213½ 1st av S
" Ned H clk b 1825 Terry av
" Oldham brtndr G F Smith r 218 4th av S
" Ruby E b 1009 Main
" U Albert trav salsn b 725 N Bway
" Mrs S office mngr Curtis Studio h 301½ 1st av W
" Wm carp h 104 Estelle st Georgetown
" Wm marine eng h 800 Howell
" Wm H 2d hd gds 2029 1st av h 1210 Harrison
" Wm H jr clk W H Gates b 1210 Harrison
" W eng str Hyades
GATEWAY PRINTING CO (A A Batterson, Ralph Coman, J M Cramer),
Gatewood Jane (wid John) h 1632 Belle-

1907-polk-seattle-directory-113411070-pg-486-487-clip-gates

1907
[HD001P][GDrive]

Gates see also Goetz
" Alvin L brtndr Pioneer Exch h 2225 5th av
" Archie J b 910 19th av N
" Benj F shingle mnfr h 1716 W 61st
" Benj L jeweler 809 2d av h 1632 Boylston av
" Bert E mngr City R E Dept Realty Owners Syndicate h 736 12th av N
" Chas H dep state grain inspr h 619 Union
" Edwd b 304 1st av N
" Florence M student b 1819 18th av
" Frank colr h ws 41st av S nr Andover
" Frank jr painter h 832 19th av
" Fred S painter h 911 22d av

GATES FURNITURE CO, Wm H Gates Propr, New and Second Hand Furniture, Expert Repairing and Packing 2029 1st Av
" Geo driver A B Cook b 8364 15th N W
" Gld W h 910 19th av N
" Isaac W carp h 104 Estelle George-town
" Mrs Jeanette E b 810 E Denny way
" Jennie B (wid Sumner B) h 911 22d av
" John M clk Gates & Baugh r 721 6th S
" Lawrence C b 1535 Bellevue av
" Lenora C stengr b W N Powell
" Mary E removed to Tacoma Wn
" Maurice b 304 1st av N
" Melbourne O clk Gates & Baugh r 721 6th av S
" Milton J photo engr b 703 Marion
" Nadine student b 910 19th av N
" Ned H h 558 N 72d
" Nina b 309 Minor av N
" Nora C stengr J L Wilson & Co b cor Draper and Waters av
" Oldham brtndr John Oberto r 218 4th S
" Ollie b 910 19th av N
" Sarah J (wid Noah) b 2130 40th av W
" Mrs Sue office mngr Curtis Studio h 301½ 1st av W
" Wm r 800 Howell
" Wm marine eng h 1909 Minor av
" Wm C (Gates & Baugh) r 655 Yesler
" Wm H propr Gates Furniture Co h 1819 18th av
" Wm H student h 1819 18th av
" & Baugh (Wm C Gates Jesse Baugh) conf 521 King

1908-polk-seattle-directory-113683473-pg-532-533-clip-gates

1908
HD001R][GDrive]

1050 East Madison Street
GATES B L, Jewelry Store
809 2nd Avenue
Phones Main 6400 Ind A 512
GATES FURNITURE CO (W H Gates Propr), 2029 1st Avenue
Phones Main 5806 Ind X 1417
GATES, HASKELL & CO (W C Gates, H C Haskell, Jesse Baugh), Fruits, Cigars
212 Occidental Avenue
Phone Ind L 4966

1909-plummers-business-seattle-directory-115031141-pg-78-79-clip-gates

1909
[HD001T][GDrive]

1910 Census - Residence in Seattle (Home is at 1625 3rd Ave West)

Full PDF of transcript : [HS002Y][GDrive] / Full census image - [HS002Q][GDrive]

- Rebecca - "Age 41, immigrated in 1882"
- At age 19, William Henry Gates is now listed as "working in furniture store"

Record Transcription:
Us Census 1910

Household Members

First name(s)	Last name	Relationship	Marital status	Gender	Age	Birth year
S William H	**Gates**	**Self**	**Married**	**Male**	**52**	**1858**
Rebecca	Gates	Wife	Married	Female	41	1869
Florence M	Gates	Daughter	Single	Female	20	1890
William H	Gates	Son	Single	Male	19	1891
Pearle A	Gates	Daughter	Single	Female	14	1896

S William H Gates's Census Details

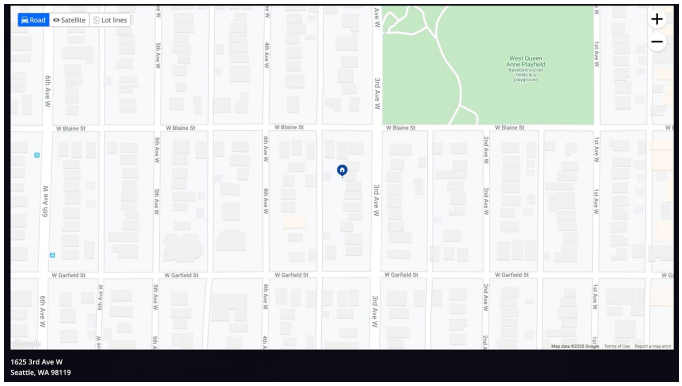
First name(s)	S William H
Last name	Gates
Relationship	Self
Marital status	Married
Gender	Male
Age	52
Birth year	1858
Birth place	Pennsylvania, United States
Race	White
Spouse's first name(s)	Rebecca
Spouse's last name	Gates
Spouse's birth place	Germany
Father's first name(s)	-
Father's last name	-
Father's birth place	Pennsylvania
Mother's first name(s)	-
Mother's last name	-
Mother's birth place	New York
City/township	Seattle Ward 3
County	King
State	Washington
Record set	Us Census 1910

[HS002Z][GDrive]

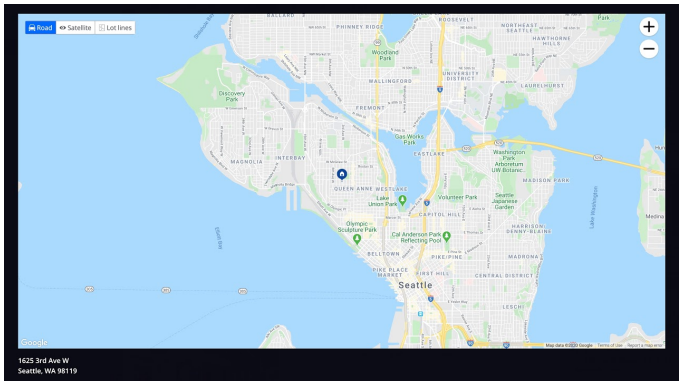
Home - 1625 3rd Ave West, Seattle

Zillow listing : [HW0035][GDrive]

[HW0036][GDrive]



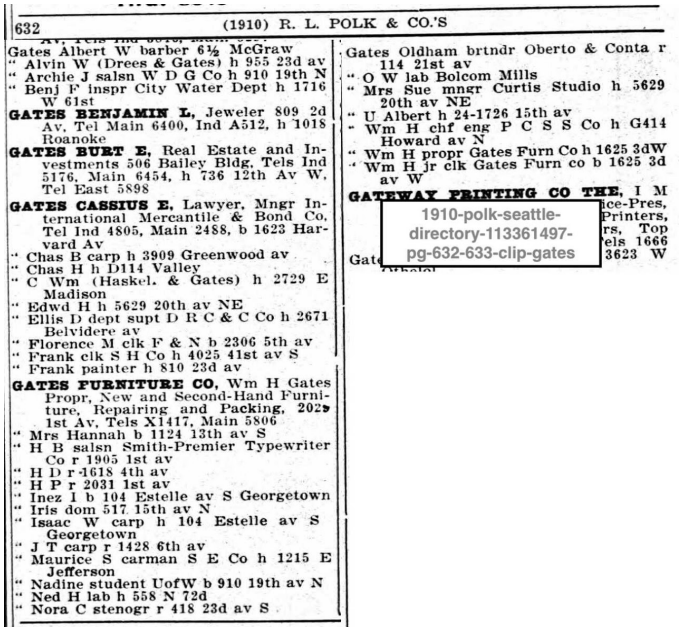
[HW0037][GDrive]



[HW0038][GDrive]

1910 - "Gates Furniture" still in business at 2029 1st Ave

- (1910) - Image of full page from directory - [HD001U][GDrive]
- (1911) - Image of full page from directory - [HD001W][GDrive]



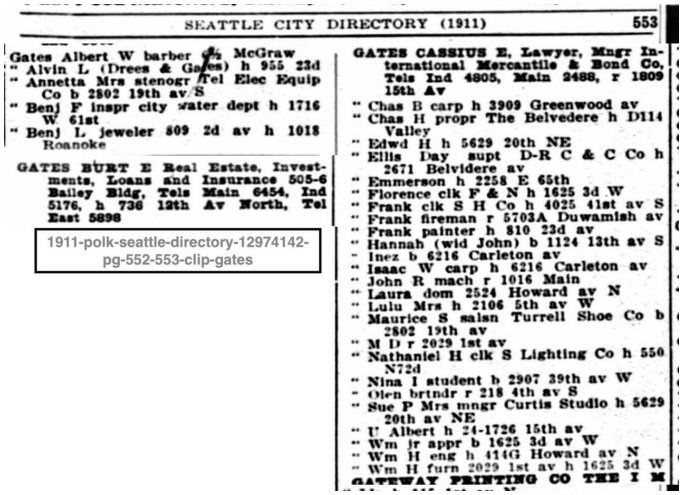
632 (1910) R. L. POLK & CO.'S

Gates Albert W barber 6½ McGraw
" Alvin W (Drees & Gates) h 955 23d av
" Archie J salsn W D G Co h 910 19th N
" Benj F inspr City Water Dept h 1716 W 61st
GATES BENJAMIN L, Jeweler 809 2d Av, Tel Main 6400, Ind A512, h 1018 Roanoke
GATES BURT E, Real Estate and Investments 506 Bailey Bldg, Tels Ind 5176, Main 6454, h 736 12th Av W, Tel East 5898
GATES CASSIUS E, Lawyer, Mngr International Mercantile & Bond Co, Tel Ind 4805, Main 2488, b 1623 Harvard Av
" Chas B carp h 3909 Greenwood av
" Chas H h D114 Valley
" C Wm (Haskel & Gates) h 2729 E Madison
" Edwd H h 5629 20th av NE
" Ellis D dept supt D R C & C Co h 2671 Belvidere av
" Florence M clk F & N b 2306 5th av
" Frank clk S H Co h 4025 41st av S
" Frank painter h 810 23d av
GATES FURNITURE CO, Wm H Gates Propr, New and Second-Hand Furniture, Repairing and Packing, 2029 1st Av, Tels X1417, Main 5806
" Mrs Hannah b 1124 13th av S
" H B salsn Smith-Premier Typewriter Co r 1905 1st av
" H D r 1618 4th av
" H P r 2031 1st av
" Inez I b 104 Estelle av S Georgetown
" Iris dom 517 15th av N
" Isaac W carp h 104 Estelle av S Georgetown
" J T carp r 1428 6th av
" Maurice S carman S E Co h 1215 E Jefferson
" Nadine student UofW b 910 19th av N
" Ned H lab h 558 N 72d
" Nora C stenogr r 418 23d av S

Gates Oldham brtndr Oberto & Conta r 114 21st av
" O W lab Bolcom Mills
" Mrs Sue mngr Curtis Studio h 5629 20th av NE
" U Albert h 24-1726 15th av
" Wm H chf eng P C S S Co h G414 Howard av N
" Wm H propr Gates Furn Co h 1625 3dW
" Wm H jr clk Gates Furn co b 1625 3d av W
GATEWAY PRINTING CO THE, I M ice-Pres, Printers, rs, Top els 1666 3623 W

1910-polk-seattle-directory-113361497-pg-632-633-clip-gates

1910
[HD001V][GDrive]



SEATTLE CITY DIRECTORY (1911) 553

Gates Albert W barber 6½ McGraw
" Alvin L (Drees & Gates) h 955 23d
" Annetta Mrs stenogr Tel Elec Equip Co b 2802 19th av S
" Benj F inspr city water dept h 1716 W 61st
" Benj L jeweler 809 2d av h 1018 Roanoke

GATES BURT E Real Estate, Investments, Loans and Insurance 505-6 Bailey Bldg, Tels Main 6454, Ind 5176, h 736 12th Av North, Tel East 5898

GATES CASSIUS E, Lawyer, Mngr International Mercantile & Bond Co, Tels Ind 4805, Main 2488, r 1809 15th Av
" Chas B carp h 3909 Greenwood av
" Chas H propr The Belvedere h D114 Valley
" Edwd H h 5629 20th NE
" Ellis Day supt D-R C & C Co h 2671 Belvidere av
" Emmerson h 2258 E 65th
" Florence clk F & N h 1625 3d W
" Frank clk S H Co h 4025 41st av S
" Frank fireman r 5703A Duwamish av
" Frank painter h 810 23d av
" Hannah (wid John) b 1124 13th av S
" Inez b 6216 Carleton av
" Isaac W carp h 6216 Carleton av
" John R mach r 1016 Main
" Laura dom 2524 Howard av N
" Lulu Mrs h 2106 5th av W
" Maurice S salsn Turrell Shoe Co b 2802 19th av
" M D r 2029 1st av
" Nathaniel H clk S Lighting Co h 550 N72d
" Nina I student b 2907 39th av W
" Olen brtndr r 218 4th av S
" Sue P Mrs mngr Curtis Studio h 5629 20th av NE
" U Albert h 24-1726 15th av
" Wm jr appr b 1625 3d av W
" Wm H eng h 4114G Howard av N
" Wm H furn 2029 1st av h 1625 3d W
GATEWAY PRINTING CO THE I M

1911-polk-seattle-directory-12974142-pg-552-553-clip-gates

1911
[HD001X][GDrive]

1912 - William H. Gates (b1858) moves to Bremerton (from Seattle) - Wife Rebecca stays at 1625 3rd Ave property for 2 more years.

Source : [HN00YM][GDrive]

NOTES:

1. In 1911, WIllian H is listed in the 1911 phone book ([HD001X][GDrive]) in Seattle - Florence, Pearl, and Jr are all listed at this address still
    1. 2029 1st Ave. , Seattle ... home is 1625 3rd West
2. In 1912, William H is no longer listed in the Seattle phone book ([HD001Z][GDrive]) , but his wife still is along with a couple of the children
3. In 1913, wife Rebecca is STILL listed in Seattle phone book ([HD0021][GDrive]), but WHG0 isnt. So she is either living there fulltime, or this is jsut a rental property.
4. By 1914, they are no longer in the property ([HD0023][GDrive])
5. Note - 1914 re-grading of 6th avenue, maybe related? https://www.pinterest.com.au/pin/8233211794914170/?amp_client_id=CLIENT_ID(_)&mweb_unauth_id={{default.session}}&from_amp_pin_page=true

1912 / 1913 - Rebecca Gates (wife) and children remain at 1625 3rd Ave

(1912) - Image of full page from directory - [HD001Y][GDrive]

(1913) - Image of full page from directory - [HD0020][GDrive]

Gates and thomas J McDonagh

Main 3677

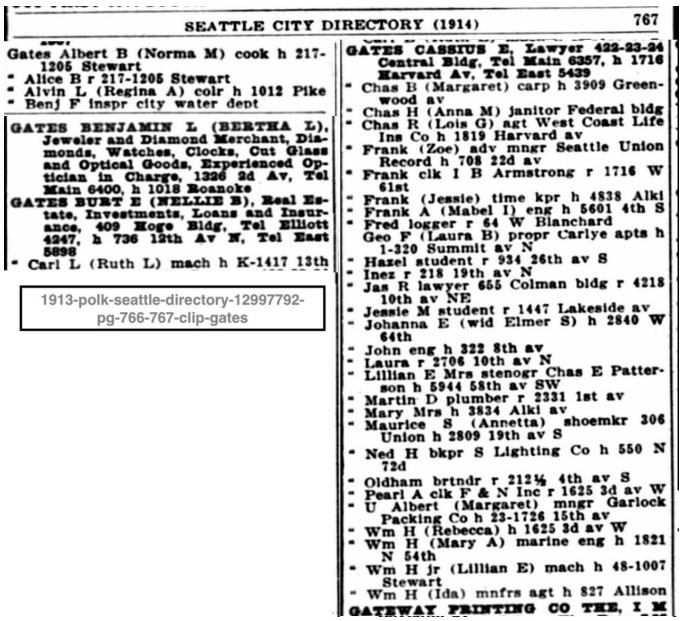
SEATTLE CITY DIRECTORY (1913) 729

Gates Albert B (Norma) chef h 204 5th N
" Albert C salsn r 528 N 39th
" Alice B actress r 204 5th av N
GATES ALVIN L (REGINA), Collections 207 Oriental Blk, Tel Main 5103, h 1457 20th Av, Tel East 5513
" Annetta Mrs clk C H Rose h 2809 19th av S
" Benj F (Sadie) meter inspr h 1716 W 61st
GATES BENJAMIN L (BERTHA L), Jeweler and Diamond Merchant, Diamonds, Watches, Clocks, Cut Glass and Optical Goods, Experienced Optician in Charge 1326 2d Av, Tel Main 6400, h 1018 Roanoke
GATES BURT E (NELLIE B), Real Estate, Investments, Loans and Insurance 409 Hoge Bldg, Tel Elliott 4274, h 738 12th Av N, Tel East 5898
" Carl L (Ruth L) mach h 3813 E Olive
GATES CASSIUS E (Gates & Emery), h Hotel Sorrento, Tel Main 2761
" Chas B (Margaret H) carp h 3909 Greenwood av
" Chas H (Anna M) janitor h D114 Valley
" Chas R (Lois G) (Gates & Garner) h H601 Columbia
" Florence M bkpr F & N Inc r 1625 3d av W
" Frank (Jennie R) clk S H Co h 4025 41st av S
" Frank (Zoe) decorator h 708 22d av
" Frank (Mabel) eng h 312 Orcas
" Hazel stenogr Merchants Colln Agcy r 625 Summit av N
" Jas R student r 4554 16th av NE
" Maurice S (Anetta) h 2809 19th av S
" Ned H (May) bkpr h 550 N 72d
" Oldham brtndr r 212½ 4th av S
" Pearl A r 1625 3d av W
" Sue Mrs mngr Curtis Studio r 5629 20th av NE
" U Albert (Margaret) mngr h 23-1726 15th av
" Wm H (Rebecca) furn h 1625 3d av W

GATES
" Wm H (Mary A) marine eng h 23-1007 Stewart
" Wm H jr mach r 1625 3d av W
" Wm T confr 524 24th av S h do
GATES & EMERY (Cassius E Gates, Geo D Emery), Attorneys-at-Law 422-23-24 Central Bldg, Tel Main 6357
" & Garner (Chas R Gates Claude Garner) grocer 903 19th av N
GATEWAY PRINTING CO THE, I M

1912-polk-seattle-directory-13234895-pg-728-729-clip-gates

1912
[HD001Z][GDrive]



SEATTLE CITY DIRECTORY (1914) 767

Gates Albert B (Norma M) cook h 217-1205 Stewart
" Alice B r 217-1205 Stewart
" Alvin L (Regina A) colr h 1012 Pike
" Benj F inspr city water dept
GATES BENJAMIN L (BERTHA L), Jeweler and Diamond Merchant, Diamonds, Watches, Clocks, Cut Glass and Optical Goods, Experienced Optician in Charge, 1326 2d Av, Tel Main 6400, h 1018 Roanoke
GATES BURT E (NELLIE B), Real Estate, Investments, Loans and Insurance, 409 Hoge Bldg, Tel Elliott 4247, h 736 12th Av N, Tel East 5898
" Carl L (Ruth L) mach h K-1417 13th

GATES CASSIUS E, Lawyer 422-23-24 Central Bldg, Tel Main 6357, h 1716 Harvard Av, Tel East 5429
" Chas B (Margaret) carp h 3909 Greenwood av
" Chas H (Anna M) janitor Federal bldg
" Chas R (Lois G) agt West Coast Life Ins Co h 1819 Harvard av
" Frank (Zoe) adv mngr Seattle Union Record h 708 22d av
" Frank clk I B Armstrong r 1716 W 61st
" Frank (Jessie) time kpr h 4838 Alki
" Frank A (Mabel I) eng h 5601 4th S
" Fred logger r 64 W Blanchard
Geo F (Laura B) propr Carlye apts h 1-320 Summit av N
" Hazel student r 934 26th av S
" Inez r 218 19th av N
" Jas R lawyer 655 Colman bldg r 4218 10th av NE
" Jessie M student r 1447 Lakeside av
" Johanna E (wid Elmer S) h 2840 W 64th
" John eng h 322 8th av
" Laura r 2706 10th av N
" Lillian E Mrs stenogr Chas E Patterson h 5944 55th av SW
" Martin D plumber r 2331 1st av
" Mary Mrs h 3834 Alki av
" Maurice S (Annetta) shoemkr 306 Union h 2809 19th av S
" Ned H bkpr S Lighting Co h 550 N 72d
" Oldham brtndr r 212½ 4th av S
" Pearl A clk F & N Inc r 1625 3d av W
" U Albert (Margaret) mngr Garlock Packing Co h 23-1726 15th av
" Wm H (Rebecca) h 1625 3d av W
" Wm H (Mary A) marine eng h 1821 N 54th
" Wm H jr (Lillian E) mach h 48-1007 Stewart
" Wm H (Ida) mnfrs agt h 827 Allison
GATEWAY PRINTING CO THE, I M

1913-polk-seattle-directory-12997792-pg-766-767-clip-gates

1913
[HD0021][GDrive]

1913 - 1918 : "Wm H. Gates Furniture" and "Wm. H Gates Second Hand Goods" in Business in Bremerton (on Second St.)

See **Puget Sound Genealogical Society Newsletter , Volume 30 Number 2 June 2005** : [HP002X][GDrive]

- **Gates, Wm. H. (2nd hand goods) 214 Second [St.] 1917-18**
- **Gates, W. H. (furniture) 214 Second [St.] 1913-14**

Was this a new, premier building built by the Bremer family ? Answer - No, but next door, and on the same block

See Bremerton, Washington (source of the following is [HW0033][GDrive]) :

*"**William Bremer** died young, at age 47. On the day of his burial, December 30, 1910, Bremerton's businesses closed for two hours in the afternoon and the town's flags were flown at half-mast. His widow, **Sophia Hensel Bremer (1872-1959)**, took over management of the family properties and with the three Bremer children she would continue to play an influential role in Bremerton for many years. One of the family's signature projects was the construction in 1914 of the **Bremerton Trust and Savings Bank building on the northeast corner of 2nd Street and Pacific Avenue**, one of three buildings in Bremerton designed by noted Seattle architect Harlan Thomas (1870-1953)."*

Technically, the address of this building is 202 Pacific Ave. See (https://www.loopnet.com/Listing/202-Pacific-Ave-Bremerton-WA/17531175/)

214 Second St, Bremerton, is today a parking garage - so different building, but on the same block

1913 - Son Willian H Gates gets married

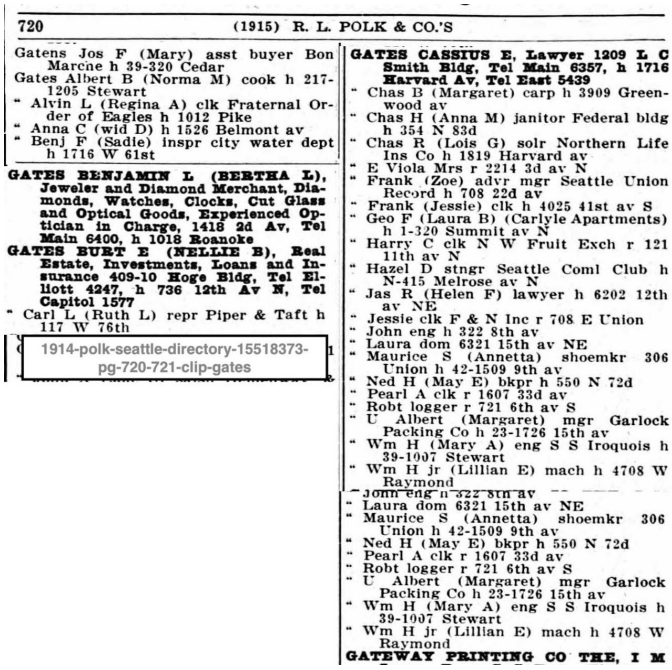
https://www.familysearch.org/ark:/61903/3:1:3Q9M-CS75-3S7L-G?i=305&cc=1534448

1913 - Daughter Florence gets married

https://www.familysearch.org/ark:/61903/3:1:3QS7-99V6-NHDF?i=303&cc=1534448&personaUrl=%2Fark%3A%2F61903%2F1%3A1%3AQKNB-8QFW

1914

Image of full page from directory - [HD0022][GDrive]



720 (1915) R. L. POLK & CO.'S

Gatens Jos F (Mary) asst buyer Bon Marche h 39-320 Cedar
Gates Albert B (Norma M) cook h 217-1205 Stewart
" Alvin L (Regina A) clk Fraternal Order of Eagles h 1012 Pike
" Anna C (wid D) h 1526 Belmont av
" Benj F (Sadie) inspr city water dept h 1716 W 61st

GATES BENJAMIN L (BERTHA L), Jeweler and Diamond Merchant, Diamonds, Watches, Clocks, Cut Glass and Optical Goods, Experienced Optician in Charge, 1418 2d Av, Tel Main 6400, h 1018 Roanoke

GATES BURT E (NELLIE B), Real Estate, Investments, Loans and Insurance 409-10 Hoge Bldg, Tel Elliott 4247, h 736 12th Av N, Tel Capitol 1577

" Carl L (Ruth L) repr Piper & Taft h 117 W 76th

1914-polk-seattle-directory-15518373-pg-720-721-clip-gates

GATES CASSIUS E, Lawyer 1209 L C Smith Bldg, Tel Main 6357, h 1716 Harvard Av, Tel East 5439
" Chas B (Margaret) carp h 3909 Greenwood av
" Chas H (Anna M) janitor Federal bldg h 354 N 83d
" Chas R (Lois G) solr Northern Life Ins Co h 1819 Harvard av
" E Viola Mrs r 2214 3d av N
" Frank (Zoe) advr mgr Seattle Union Record h 708 22d av
" Frank (Jessie) clk h 4025 41st av S
" Geo F (Laura B) (Carlyle Apartments) h 1-320 Summit av N
" Harry C clk N W Fruit Exch r 121 11th av N
" Hazel D stngr Seattle Coml Club h N-415 Melrose av N
" Jas R (Helen F) lawyer h 6202 12th av NE
" Jessie clk F & N Inc r 708 E Union
" John eng h 322 8th av
" Laura dom 6321 15th av NE
" Maurice S (Annetta) shoemkr 306 Union h 42-1509 9th av
" Ned H (May E) bkpr h 550 N 72d
" Pearl A clk r 1607 33d av
" Robt logger r 721 6th av S
" U Albert (Margaret) mgr Garlock Packing Co h 23-1726 15th av
" Wm H (Mary A) eng S S Iroquois h 39-1007 Stewart
" Wm H jr (Lillian E) mach h 4708 W Raymond

" John eng h 322 8th av
" Laura dom 6321 15th av NE
" Maurice S (Annetta) shoemkr 306 Union h 42-1509 9th av
" Ned H (May E) bkpr h 550 N 72d
" Pearl A clk r 1607 33d av
" Robt logger r 721 6th av S
" U Albert (Margaret) mgr Garlock Packing Co h 23-1726 15th av
" Wm H (Mary A) eng S S Iroquois h 39-1007 Stewart
" Wm H jr (Lillian E) mach h 4708 W Raymond

GATEWAY PRINTING CO THE, I M

1914
[HD0023][GDrive]

1915 - No more William H Gates in Seattle (per Seattle directory)

https://www.ancestry.com/imageviewer/collections/2469/images/15518373?treeid=&personid=&hintid=&usePUB=true&usePUBJs=true&_ga=2.100929543.783907915.1596576946-1615111073.1596074686&pId=751560425

1917 (June) - Son enlists in draft for WW1

Son William Henry Gates (born 1891) is age 26 at this time; See [HG005T][GDrive]

- Employer - Ames Shipyard and Dry Dock - "Machinist in Ship Yard" ; job is as a "machinist in ship yard"
- Home Address - 5944 48th South Street / Claimed Draft exemption because "employed in ship yard"

1917/1918 (estimated - no specific dates available) - [William H. Gates} is now with "U.S. Furniture" - Perhaps the "Wm H. Gates" business is now called "U.S. Furniture / US Furniture" (same address at 214 Second St.)

See **Puget Sound Genealogical Society Newsletter , Volume 27 Number 3 Sep 2002** ; [HP002W][GDrive] ... but no specific dates ...

Earliest reference to any US Furniture I can find is 1915 ..... but this is in Aberdeen, Washington (on the pacific coast)

Below : See **Puget Sound Genealogical Society Newsletter , Volume 31 Number 1 March 2006** ; [HP002Y][GDrive] ... but no specific dates ...

Union Shoe Repair	250	Burwell	Booster 1924
Union Shoe Repair	250	Burwell	Booster '25
Union Transfer Co	81	Front	1920-21
US Furniture	717	Pacific	Booster '25
US Furniture Co	717	Pacific	1920-21
US Furniture Company (Gates,Morrison,Gates)	717	Pacific	Booster '24
US Furniture Store	214	Second	1917-18
US Furniture (Gates, Morrison,Gates,Jr.)	717	Pacific	Booster '23
US Postal Savings Bank (PO bldg.)			1913-14
U. S. Furniture Co	525	Pacific	1929-30

[HP002Y][GDrive]

1918 - Family across the street from furniture store (the "Braman" family) is selling their home (12 acres on Second St)

Their son James d'Orma Braman (born 1901) becomes a future neighbor for William Henry Gates (born 1891) , and mentor of William Henry Gates II (born 1925) .

June 1918 - Braman selling land in Bremerton - 12 acres - 105 second st.

Full page - [HN00YU][GDrive]

The Spokesman-Review (Spokane, Washington) • 27 Jun 1918, Thu • Page 13

FOR SALE—FINE COUNTRY HOME, ¼ mile north from Bremerton and navy yard. 13 acres improved, bearing orchard, berries, garden land, subirrigated, running water; modern 5-room bungalow, plumbing installed; private water system; tenant house, outbuildings; water front; magnificent view of mountains, bay and city; good fishing. $12,500; terms. J. W. Braman, 105 Second st., Bremerton, Wash.

[HN00YV][GDrive]

1920 census

Full PDF of Transcript : [HS0030][GDrive] / Full Census form - [HS002R][GDrive]

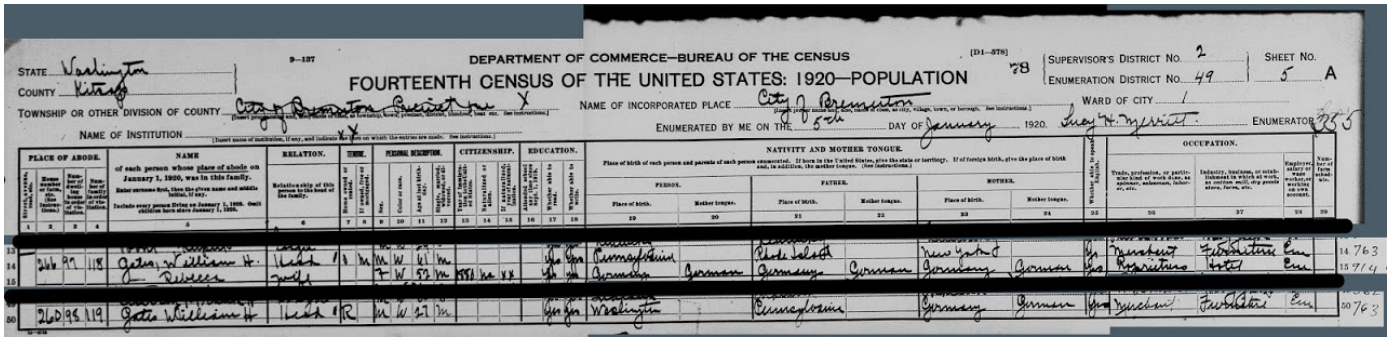
Record Transcription:
Us Census 1920

First name(s)	William H
Last name	Gates
Relationship	Self
Marital status	Married
Gender	Male
Age	61
Birth year	1859
Birth place	Pennsylvania
Ethnicity	American
Race	White
Can write	Yes
Can read	Yes
Own/rent	Own
Father's first name(s)	-
Father's last name	-
Father's birth place	Rhode Island
Mother's first name(s)	-
Mother's last name	-
Mother's birth place	New York
City/township	-
County	King
State	Washington
Record set	Us Census 1920
Category	Census, Land & Substitutes
Subcategory	Census
Collections from	Americas, United States

[HS0031][GDrive]

According to the US Census (clip below):

1. William H Gates (born 1858) is a "Merchant" in the "futniture" industry
2. His wife, Rebecca Gates, is a `"Proprietress" at "Hotel"`
    1. Her year of immigration is listed as "1880" (in 1910 census, it was listed as "1882")
3. 34 additional people live in their building (266 Burwell Ave) - all "lodgers". All males (except 1), and all work in the construction trades - Probably working at the nearby Navy yard?
4. Son William H Gates lives in the building next to this one .. he is also a "Merchant" in the "furniture" industry


DEPARTMENT OF COMMERCE—BUREAU OF THE CENSUS

FOURTEENTH CENSUS OF THE UNITED STATES: 1920—POPULATION

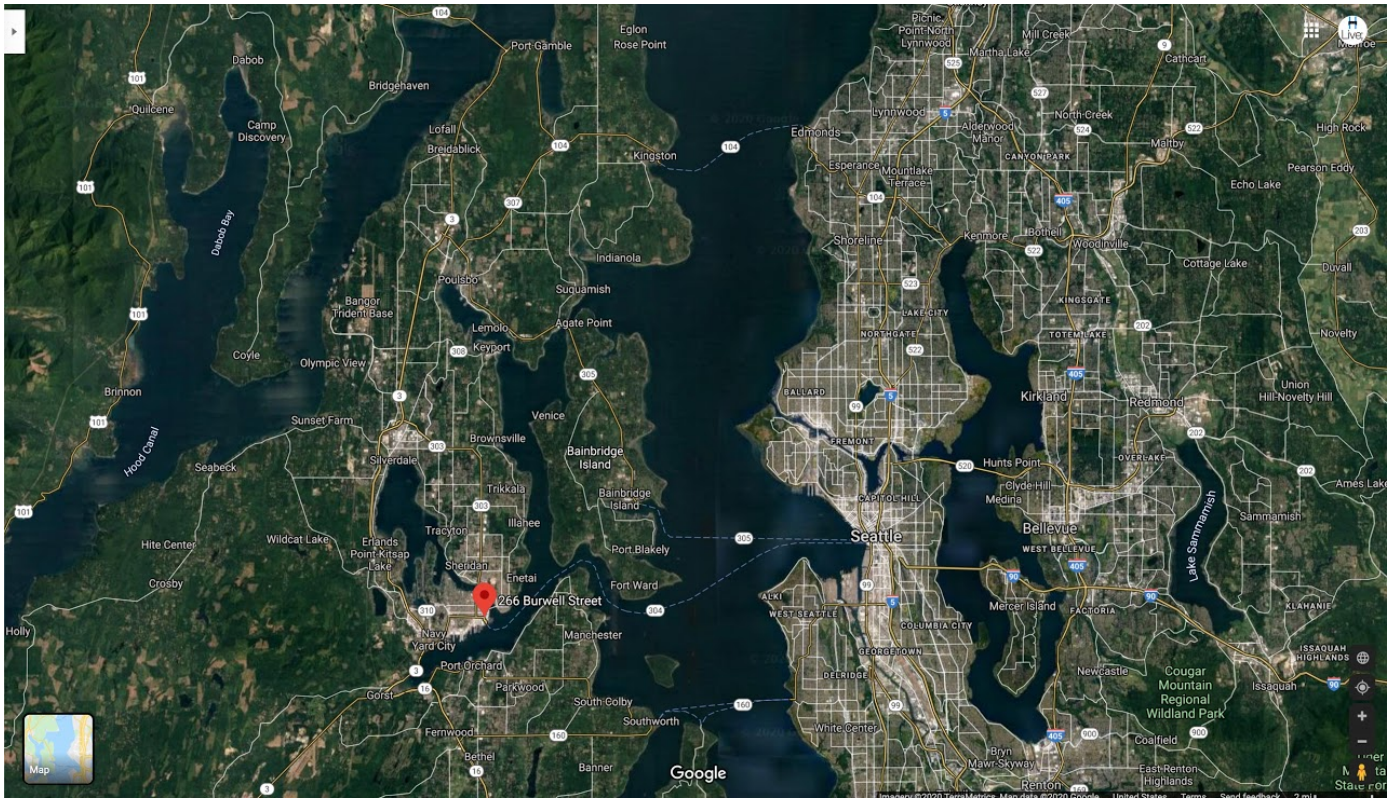
STATE Washington
COUNTY Kitsap
TOWNSHIP OR OTHER DIVISION OF COUNTY City of Bremerton Precinct No. X
NAME OF INSTITUTION

SUPERVISOR'S DISTRICT NO. 2
ENUMERATION DISTRICT NO. 49
SHEET NO. 5 A
WARD OF CITY 1
NAME OF INCORPORATED PLACE City of Bremerton
ENUMERATED BY ME ON THE 5th DAY OF January 1920.
ENUMERATOR Lucy H. Merritt

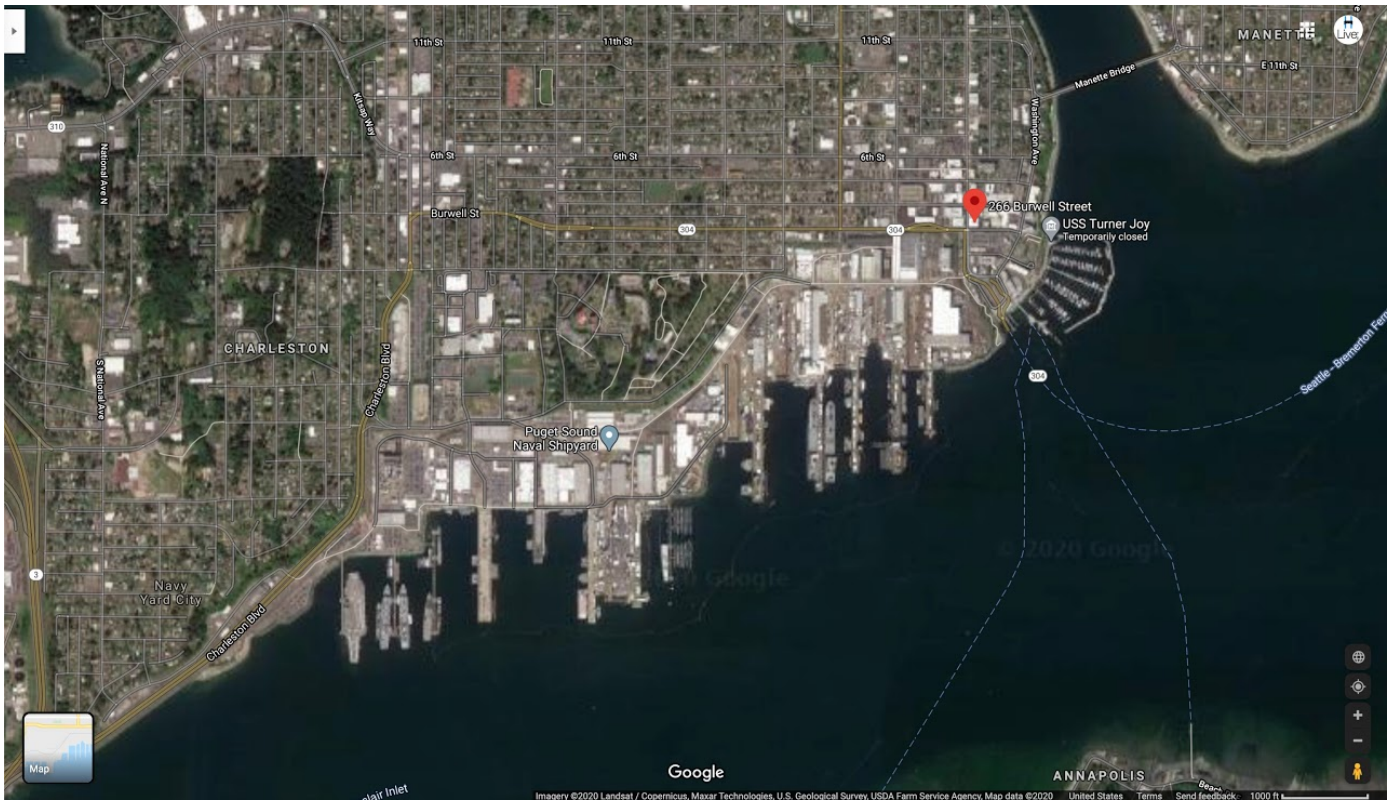
PLACE OF ABODE	NAME of each person whose place of abode on January 1, 1920, was in this family.	RELATION.	PERSONAL DESCRIPTION.	CITIZENSHIP.	EDUCATION.	NATIVITY AND MOTHER TONGUE.	OCCUPATION.
						PERSON: Place of birth; Mother tongue. FATHER: Place of birth; Mother tongue. MOTHER: Place of birth; Mother tongue.	
266 99 118	Gates, William H.	Head	M W 61 M			Rhode Island; Germany, German; New York, Germany, German	Merchant, Furniture Manufacturing Hotel
	Rebecca	Wife	F W 57 M			Germany, German; Germany, German	Proprietress, Hotel
260 95 119	Gates, William H.	Head	R M W 27 M			Washington; Pennsylvania; Germany, German	Furniture Sales

[HS002V][GDrive]

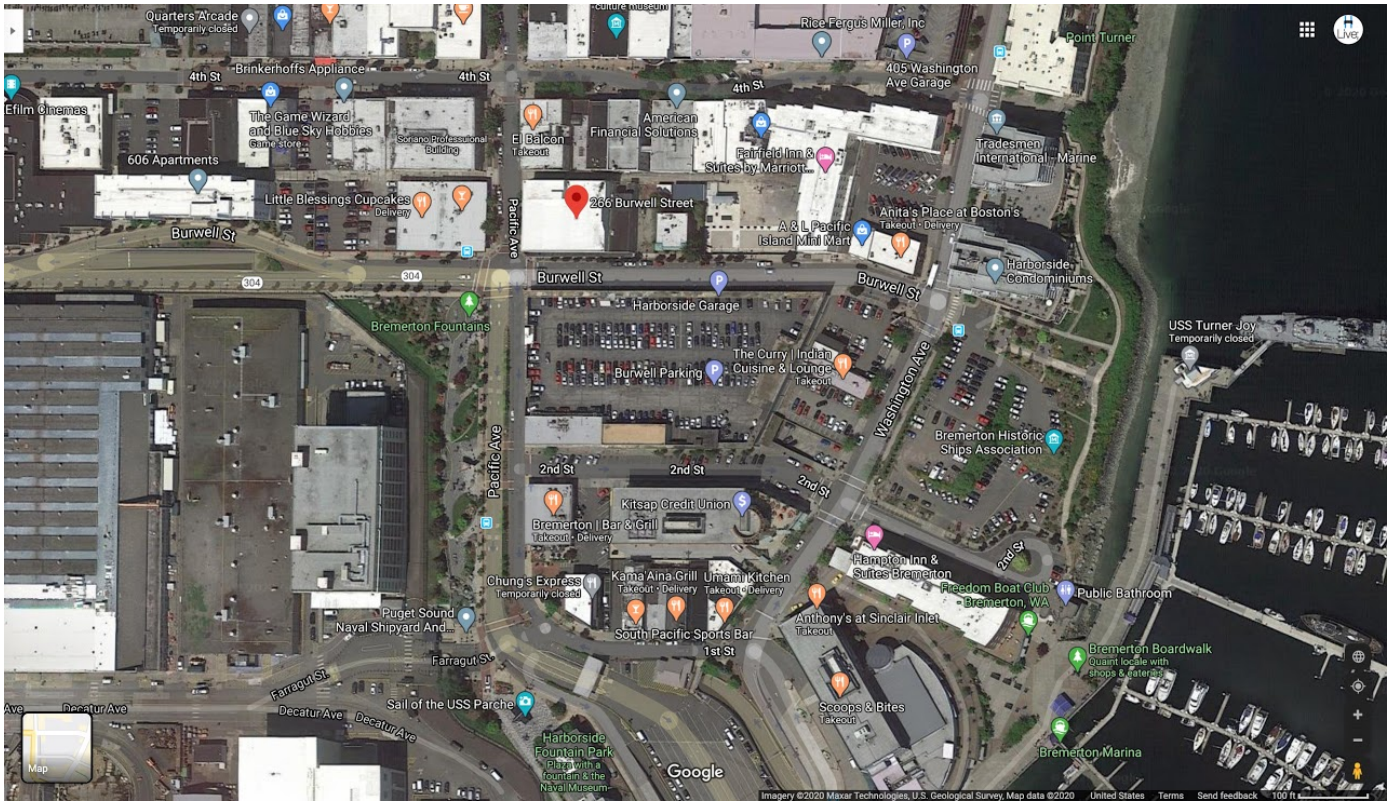
Residence at 266 Burwell Ave in Bremerton, Washington



2020-07-26-google-com-maps-266-burwell-ave-washington-10-29-40.jpg



2020-07-26-google-com-maps-266-burwell-ave-washington-10-38-25



2020-07-26-google-com-maps-266-burwell-ave-washington-10-40-42.jpg

2020-07-26-google-com-maps-266-burwell-ave-washington-10-41-59.jpg /

1923 to 1924 - The Gates Hotel at 262 Burwell St. , Bremerton

See Puget Sound Genealogical Society Newsletter , Volume 30 Number 2 June 2005 : [HP002X][GDrive]

- **Gates Hotel was at 276 Burwell 1929-30**
- **Gates Hotel was at 262 Burwell 1923-24**

1925(?) to 1926 - 7070 East Marginal Way, Seattle

2020-08-10-2020-07-29-google-com-maps-7070-east-marginal-way-seattle-washington-16-50-23.jpg

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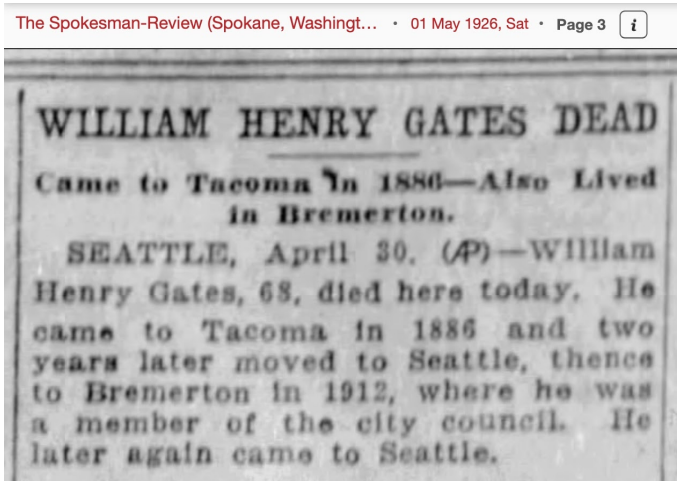
1926 (May 1) - Passing (age 68)

Full newspaper page - [HN00YL][GDrive]



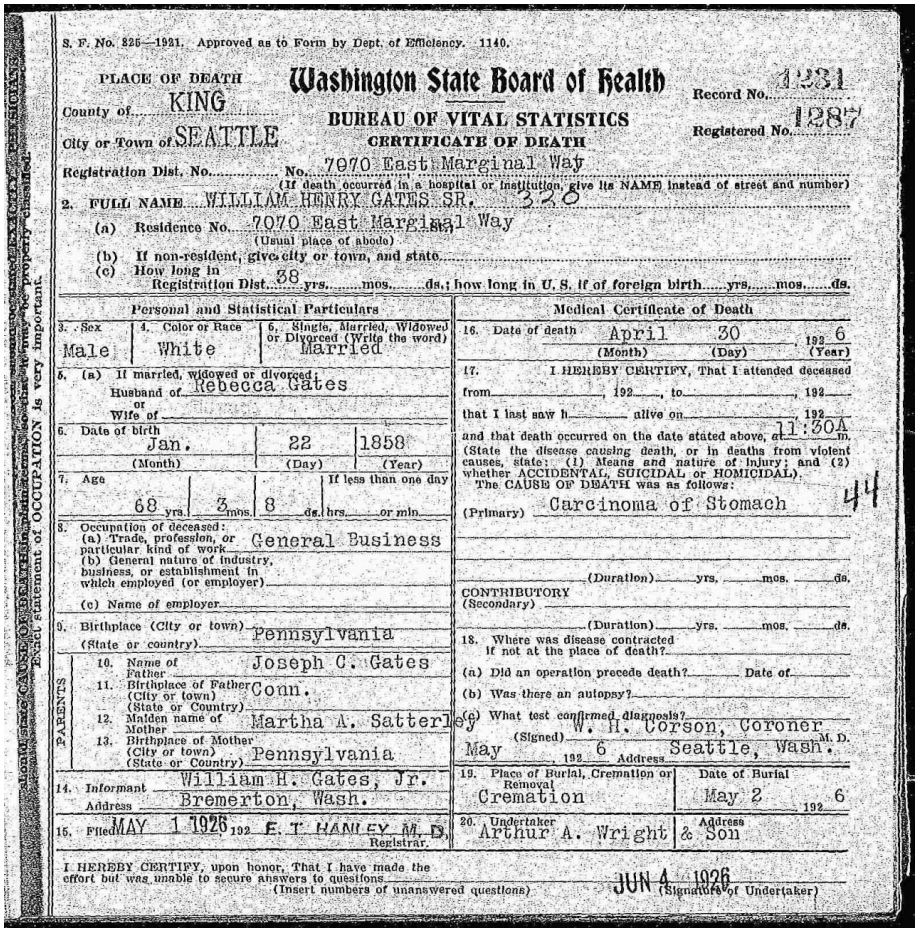
The Spokesman-Review (Spokane, Washingt... • 01 May 1926, Sat • Page 3

WILLIAM HENRY GATES DEAD

Came to Tacoma In 1886—Also Lived in Bremerton.

SEATTLE, April 30. (AP)—William Henry Gates, 68, died here today. He came to Tacoma in 1886 and two years later moved to Seattle, thence to Bremerton in 1912, where he was a member of the city council. He later again came to Seattle.

[HN00YM][GDrive]



S. F. No. 825—1921. Approved as to Form by Dept. of Efficiency. 1140.

PLACE OF DEATH
County of KING
City or Town of SEATTLE

Washington State Board of Health
BUREAU OF VITAL STATISTICS
CERTIFICATE OF DEATH

Record No. 1231
Registered No. 1287

Registration Dist. No. ..... No. 7070 East Marginal Way
(If death occurred in a hospital or institution, give its NAME instead of street and number)

2. FULL NAME WILLIAM HENRY GATES SR. 330

(a) Residence No. 7070 East Marginal Way
(Usual place of abode)

(b) If non-resident, give city or town, and state .....

(c) How long in Registration Dist. 38 yrs. ..... mos. ..... ds.; how long in U. S. if of foreign birth ..... yrs. ..... mos. ..... ds.

Personal and Statistical Particulars

3. Sex	4. Color or Race	5. Single, Married, Widowed or Divorced (Write the word)
Male	White	Married

5. (a) If married, widowed or divorced:
Husband of Rebecca Gates
or
Wife of .....

6. Date of birth: Jan. (Month) | 22 (Day) | 1858 (Year)

7. Age: 68 yrs. | 3 mos. | 8 ds. | hrs. | or min. (If less than one day)

8. Occupation of deceased:
(a) Trade, profession, or particular kind of work: General Business
(b) General nature of industry, business, or establishment in which employed (or employer) .....
(c) Name of employer .....

9. Birthplace (City or town) (State or country): Pennsylvania

PARENTS
10. Name of Father: Joseph C. Gates
11. Birthplace of Father (City or town) (State or Country): Conn.
12. Maiden name of Mother: Martha A. Satterlee
13. Birthplace of Mother (City or town) (State or Country): Pennsylvania

14. Informant: William H. Gates, Jr.
Address: Bremerton, Wash.

15. Filed MAY 1 1926 192 F. T. HANLEY M. D. Registrar.

I HEREBY CERTIFY, upon honor, That I have made the effort but was unable to secure answers to questions ..... (Insert numbers of unanswered questions)

JUN 4 1926 (Signature of Undertaker)

Medical Certificate of Death

16. Date of death: April (Month) | 30 (Day) | 1926 (Year)

17. I HEREBY CERTIFY, That I attended deceased from ..... 192 ..., to ..... 192 ...
that I last saw h ..... alive on ..... 192 ...
and that death occurred on the date stated above, at 11:30A m.
(State the disease causing death, or in deaths from violent causes, state: (1) Means and nature of injury; and (2) whether ACCIDENTAL, SUICIDAL or HOMICIDAL).
The CAUSE OF DEATH was as follows:
(Primary) Carcinoma of Stomach 44
(Duration) ..... yrs. ..... mos. ..... ds.
CONTRIBUTORY
(Secondary) .....
(Duration) ..... yrs. ..... mos. ..... ds.

18. Where was disease contracted if not at the place of death? .....
(a) Did an operation precede death? ..... Date of .....
(b) Was there an autopsy? .....
(c) What test confirmed diagnosis? .....
(Signed) W. H. Corson, Coroner M. D.
May 6 192 Address Seattle, Wash.

19. Place of Burial, Cremation or Removal: Cremation | Date of Burial: May 2 192 6

20. Undertaker: Arthur A. Wright & Son | Address .....

Medical certificate of death must be filed with the local registrar within 24 hours after death occurs. Burial permit must be obtained before interment, removal or cremation of body. Enter statement of OCCUPATION is very important.

[HL004C][GDrive]

1929 to 1930 - The Gates Hotel at 276 Burwell St. , Bremerton

See Puget Sound Genealogical Society Newsletter , Volume 30 Number 2 June 2005 : [HP002X][GDrive]

- **Gates Hotel was at 276 Burwell 1929-30**
- **Gates Hotel was at 262 Burwell 1923-24**

1930 USA Census (Seattle) for Rebecca Gates

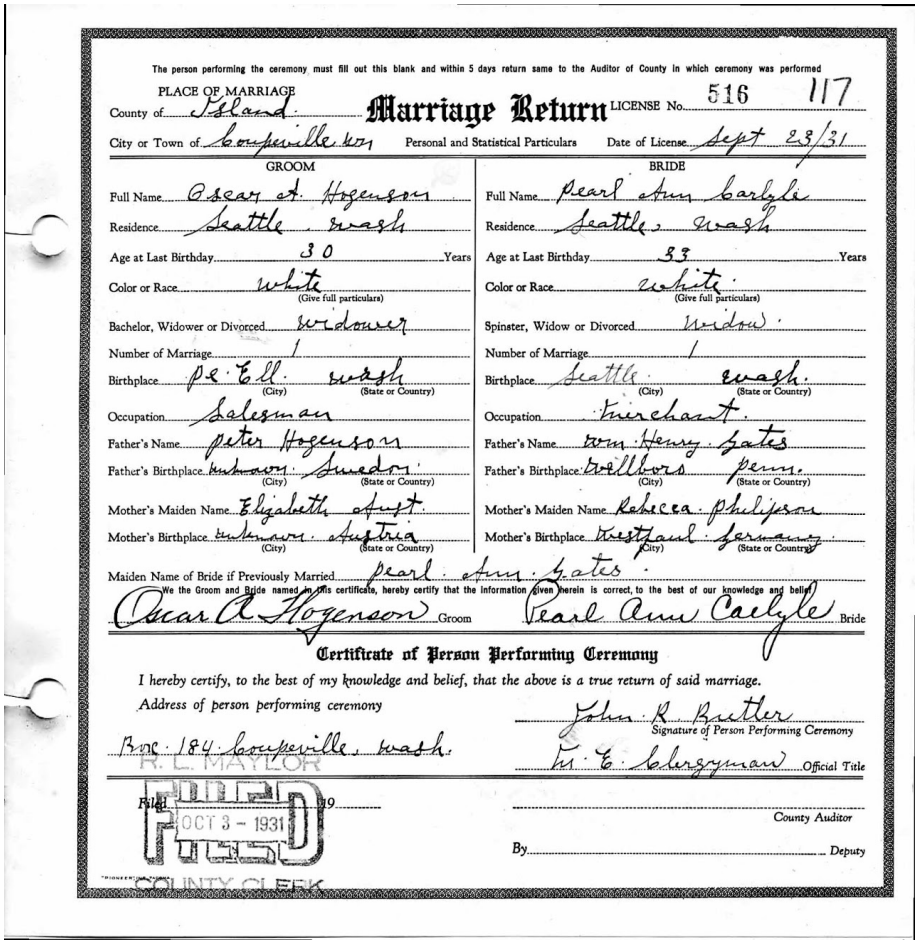
https://search.findmypast.com/record?id=USC%2F1930%2F004955351%2F00850&parentid=USC%2F1930%2F004955351%2F00850%2F037

Living alone - Job is an "apartment manager"

2300 Yale Ave North (multiple families) no longer exists (Google maps, 2020)

1931 (Sep 09) - Daugher Pearl marries

Rebecca now saying her "maiden" name was **"Rebecca Philipson"**



The person performing the ceremony must fill out this blank and within 5 days return same to the Auditor of County in which ceremony was performed

PLACE OF MARRIAGE
County of Island
City or Town of Coupeville Wash

Marriage Return LICENSE No. 516 117

Personal and Statistical Particulars

Date of License Sept 23/31

GROOM		BRIDE	
Full Name	Oscar A. Hogenson	Full Name	Pearl Ann Carlyle
Residence	Seattle, Wash	Residence	Seattle, Wash
Age at Last Birthday	30 Years	Age at Last Birthday	33 Years
Color or Race	White (Give full particulars)	Color or Race	White (Give full particulars)
Bachelor, Widower or Divorced	Widower	Spinster, Widow or Divorced	Widow
Number of Marriage	1	Number of Marriage	1
Birthplace	P.E.I. (City) Wash (State or Country)	Birthplace	Seattle (City) Wash. (State or Country)
Occupation	Salesman	Occupation	Merchant
Father's Name	Peter Hogenson	Father's Name	Wm Henry Gates
Father's Birthplace	Unknown (City) Sweden (State or Country)	Father's Birthplace	Wellsboro (City) Penn. (State or Country)
Mother's Maiden Name	Elizabeth Ofust	Mother's Maiden Name	Rebecca Philipson
Mother's Birthplace	Unknown (City) Austria (State or Country)	Mother's Birthplace	Westfand (City) Germany (State or Country)

Maiden Name of Bride if Previously Married: Pearl Ann Gates

We the Groom and Bride named in this certificate, hereby certify that the information given herein is correct, to the best of our knowledge and belief.

Oscar A Hogenson Groom — Pearl Ann Carlyle Bride

Certificate of Person Performing Ceremony

I hereby certify, to the best of my knowledge and belief, that the above is a true return of said marriage.

Address of person performing ceremony

Box 184 Coupeville, Wash.

John R Bratter
Signature of Person Performing Ceremony

Min Episcopal Clergyman Official Title

R. L. MAYLOR

Filed OCT 3 - 1931 19

COUNTY CLERK

County Auditor

By ..... Deputy

[HL004S][GDrive]

1933 (March 16) - Wife Rebecca Gates passes

Full newspaper page : [HN00YN][GDrive]

If born in Oct 1868, she would have been only 64 1/2 as of March 1933 ....

FAIRBANKS, ALASKA, THURSDAY, MARCH 16, 1933.

DAILY NEWS-MINER

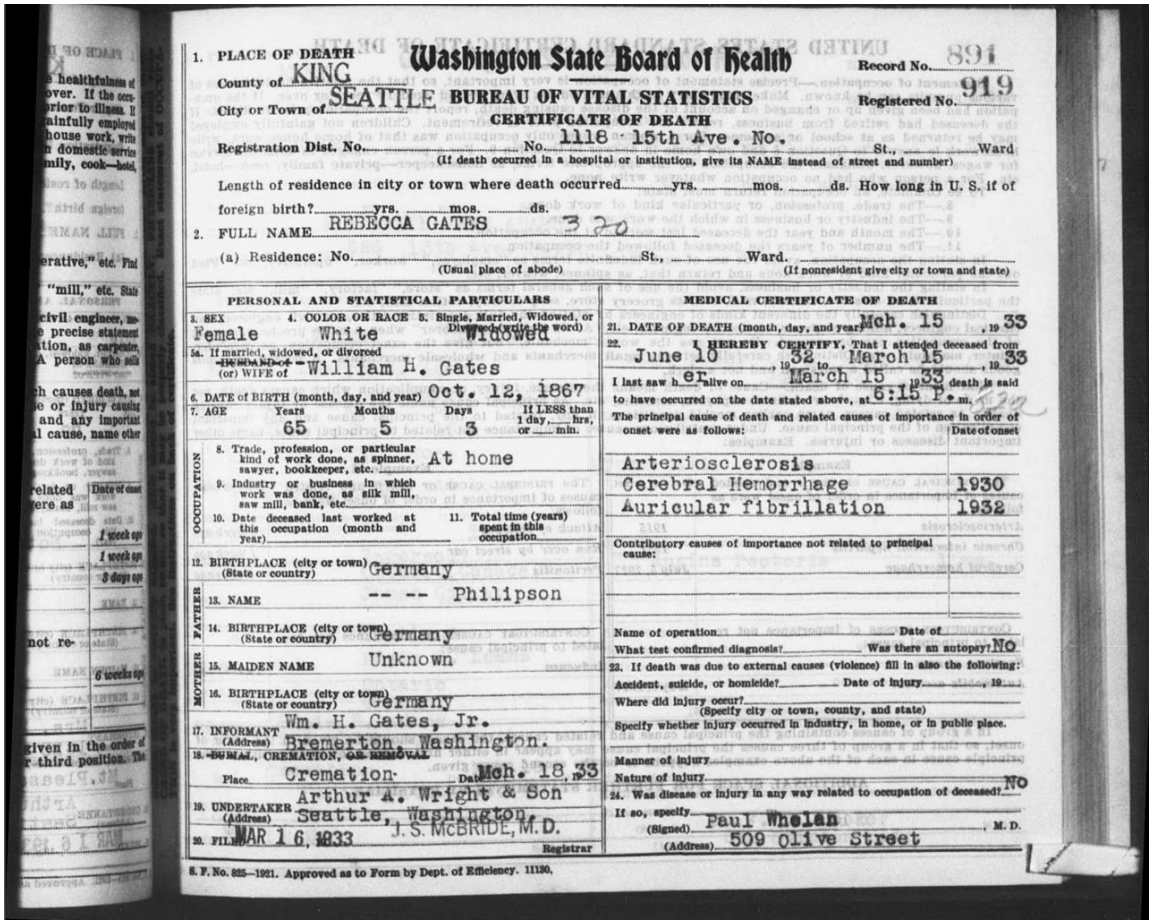
PIONEER WOMAN OF NOME DIES SEATTLE FUNERAL SATURDAY

SEATTLE, Wash., March 16—Mrs. Rebecca Gates, 65 years old, former resident of Nome during the early days, died here today. Funeral services will be held Saturday.

—"Buy Alaskan"—

[HN00YO][GDrive]

Rebecca Gates Death Certificate



1. PLACE OF DEATH
County of KING
City or Town of SEATTLE

Washington State Board of Health
BUREAU OF VITAL STATISTICS
CERTIFICATE OF DEATH

Record No. 891
Registered No. 919

Registration Dist. No. ____ No. 1118 15th Ave. No. St., ____ Ward
(If death occurred in a hospital or institution, give its NAME instead of street and number)

Length of residence in city or town where death occurred ____ yrs. ____ mos. ____ ds. How long in U. S. if of foreign birth? ____ yrs. ____ mos. ____ ds.

2. FULL NAME REBECCA GATES 320

(a) Residence: No. ____ St., ____ Ward. ____
(Usual place of abode) (If nonresident give city or town and state)

PERSONAL AND STATISTICAL PARTICULARS

3. SEX: Female
4. COLOR OR RACE: White
5. Single, Married, Widowed, or Divorced (write the word): Widowed
5a. If married, widowed, or divorced (HUSBAND of or) WIFE of: William H. Gates
6. DATE of BIRTH (month, day, and year): Oct. 12, 1867
7. AGE: Years 65, Months 5, Days 3, If LESS than 1 day, ____ hrs, or ____ min.

OCCUPATION
8. Trade, profession, or particular kind of work done, as spinner, sawyer, bookkeeper, etc.: At home
9. Industry or business in which work was done, as silk mill, saw mill, bank, etc.
10. Date deceased last worked at this occupation (month and year)
11. Total time (years) spent in this occupation

12. BIRTHPLACE (city or town) (State or country): Germany

FATHER
13. NAME: -- -- Philipson
14. BIRTHPLACE (city or town) (State or country): Germany

MOTHER
15. MAIDEN NAME: Unknown
16. BIRTHPLACE (city or town) (State or country): Germany

17. INFORMANT (Address): Wm. H. Gates, Jr. Bremerton, Washington.

18. BURIAL, CREMATION, OR REMOVAL
Place: Cremation Date: Mch. 18, 33

19. UNDERTAKER (Address): Arthur A. Wright & Son Seattle, Washington.

20. FILED: MAR 16 1933 J. S. McBRIDE, M.D. Registrar

S. F. No. 825—1921. Approved as to Form by Dept. of Efficiency. 11130.

MEDICAL CERTIFICATE OF DEATH

21. DATE OF DEATH (month, day, and year): Mch. 15, 1933
22. I HEREBY CERTIFY, That I attended deceased from June 10, 1932 to March 15, 1933
I last saw her alive on March 15, 1933 death is said to have occurred on the date stated above, at 5:15 P. m.
The principal cause of death and related causes of importance in order of onset were as follows:

	Date of onset
Arteriosclerosis	
Cerebral Hemorrhage	1930
Auricular fibrillation	1932

Contributory causes of importance not related to principal cause:

Name of operation ____ Date of ____
What test confirmed diagnosis? ____ Was there an autopsy? No

23. If death was due to external causes (violence) fill in also the following:
Accident, suicide, or homicide? ____ Date of injury ____, 19____
Where did injury occur? (Specify city or town, county, and state)
Specify whether injury occurred in industry, in home, or in public place.
Manner of injury ____
Nature of injury ____

24. Was disease or injury in any way related to occupation of deceased? No
If so, specify ____
(Signed) Paul Whelan, M. D.
(Address) 509 Olive Street

[HL004A][GDrive]

Wife "Rebecca Eppinhauser Gates" and children

Rebecca Eppinhauser Gates

Spouse - https://www.findagrave.com/memorial/86517099/rebecca-gates

BIRTH 1867

DEATH 15 Mar 1933 (aged 65–66)

BURIAL Acacia Memorial Park and Funeral Home , Lake Forest Park, King County, Washington, USA

PLOT Mausoleum MN106 (Lilac Corridor), Wall 6, Niche

Info on wife - Rebecca Gates (Eppinhauser)

Birthdate: October 1869

Birthplace: Norddeutscher Bund

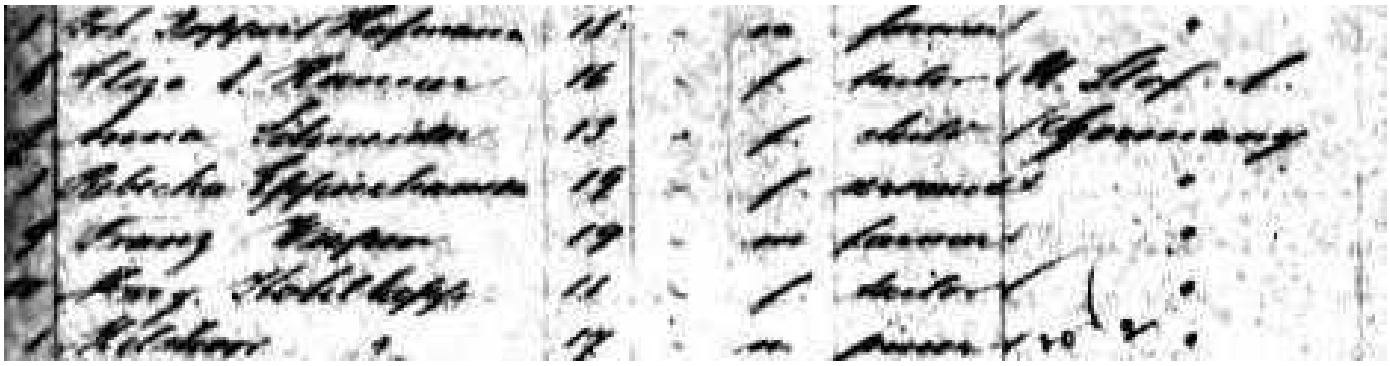
Death: circa 1920 (46-55)

https://www.geni.com/people/Rebecca-Gates/6000000007401032507

1883 (July 7) - Arrival in New York City, from Germany

Full passenger list sheet from this journey - [HJ000R][GDrive] ; From Ancestry.com transcript :

- Name: Rebecha Eppinehansea [Rebecka Eppinhauser]
- Arrival Date: 7 Jul 1883
- Birth Date: abt 1864 [But only If the age is 19 ... but I think it is "14" or "15" .]
  - if her birthdate is October 1869 as stated in [HS002T][GDrive] , then she would have been 13 years and 9 months old by July 1883.
- Age: 19 [I think it is "14" or "15)]
- Gender: Female
- Ethnicity/ Nationality: German
- Place of Origin: Germany
- Port of Departure: Bremen, Germany
- Destination: USA
- Port of Arrival: New York, New York, USA
- Ship Name: Main



[HJ000S][GDrive]

There is a village of "eppinhausen" in Germany -

German Wiku only : https://de.wikipedia.org/wiki/Eppenhausen

The beginnings of Eppenhausen lie in the dark of history, the name of the district suggests that there was a farm here that belonged to an Eppo or Eppinc and was named after him. [2]

Eppenhausen was mentioned for the first time in 1229 as Eppenhusen in the goods and income register of the women's convention and later noble ladies' convent in Herdecke. [3] From 1271 to 1374 a knight Goswin von Eppenhausen is documented in old sources, he had his own seal. Around 1400, the Count von der Mark had rights in the Eppenhuser Marke. [4] After the division of the Westphalian brands in 1450, there was an "Eppenhauser Mark", which included today's districts of Halden, Herbeck, Eppenhausen, Emst and Delstern.

The farming community Eppenhausen belonged to the county of Mark in the parish and court of Hagen. In the treasure book of the county of Mark from 1486 in the Eppenhuser Burschop 12 taxable farm owners (2 from Emst) with a levy between 1 oirt (¼ Gg) and 8 gold guilders were mentioned. [5]

In 1746, the neighboring town of Hagen in Eppenhausen was granted city rights; in 1751, Frederick the Great dissolved the stamps, meaning that this also meant the end of the Eppenhauser Mark.

In the 1780s, the then district baron von Hövel auf Herbeck submitted an application to the royal court in Berlin to have the "Eppenhauser Brunnen" recognized as medicinal water due to the medicinal water that was found there. Even after the rejection, the fountain - above all by the Hohenlimburg widow Bettermann - was advertised as a fountain of health and baths were administered until the 1870s.

In 1814 Eppenhausen received its own post line and a post station, in 1898 Eppenhausen was declared an independent parish, and on August 5, 1900 the first tram line for the new electric tram ran from Hohenlimburg to Eppenhausen, the operation of which was only discontinued in 1975.

On April 1, 1901, the municipality of Eppenhausen was incorporated into the city of Hagen together with the municipalities of Delstern and Eckesey [6], the population of which rose to 68,402 inhabitants.

https://search.ancestry.com/cgi-bin/sse.dll?indiv=1&dbid=1208&h=999931&tid=&pid=&queryId=7a0ceefe31e6e8b0ecacdaeed95abd6a&usePUB=true&_phsrc=AmU4&_phstart=successSource

Name: Rebecca Gates [Rebecca Philipson]

Gender: Female

Birth Date: abt 1868

Death Date: 15 Mar 1933

Age at Death: 65

Death Location: Seattle, King, Washington

Father: Philipson

Record Source: Washington State Death Records

Daughter - Pearl Ann Gates Hager

https://www.findagrave.com/memorial/86517117/pearl-ann-hager

BIRTH 1895

DEATH 1993 (aged 97–98)

BURIAL Acacia Memorial Park and Funeral Home , Lake Forest Park, King County, Washington, USA

PLOT Mausoleum MN106 (Lilac Corridor), Wall 6, Niche

*Pearl Ann Gates and her sister were socialites in Seattle during the early 1900–teens, and were seen in all the right places. While Florence (her sister) married **Harry Schumacher** in 1914, Pearl was a somewhat freer spirit and married three times, with no big pictures or social page announcements - first Carlyle, then Hogenson in 1931 in Island County, from whom she was divorced in 1952, and much later Hager. Throughout her young life, she enjoyed many sewing circles, which were announced in the polite social pages, and she went on to become a nurse in 1925, and took sewing classes at Edison Technical College.*

Eventually she owned a retreat of small cabins on Lake Washington in Lake Forest Park, where people could rest and recover from any of the ills of society. She is here interred with her parents. (Provided by Vicki Stiles, Director, Shoreline Historical Museum)

Florence died 1928?

https://www.newspapers.com/image/380522896/?article=82e0eccb-72bf-4de1-8ffd-24b7d592c27a&focus=0.15762396,0.7783442,0.27534467,0.7898018&xid=3355&_ga=2.20934456.1686139327.1596074686-1615111073.1596074686

William Charles Gates (born 1860)

Wikipedia - https://en.wikipedia.org/wiki/Bill_Gates_(frontiersman)

NOTE - We researching rumors that this William Charles Gates (born 1860), who sometimes went by the name of "William Henry Gates", may have been the same person as William Henry Gates (born 1858) . Note these claims are not proven, and made on circumstantial evidence. However, there is much about William Charle Gates (born 1860) that is undocumented. We hope to determine the truth, based on open-sourced evidence.

Birthdate - ???

Birthplace - ???

Parents - ????

Wikipedia - Saved article

Source : [HK0028][GDrive]

"Swiftwater" Bill Gates (born 1860 died 1935) was an American frontiersman and fortune hunter, and a fixture in stories of the Klondike Gold Rush. He made and lost several fortunes, and died in Peru in 1935 pursuing a silver strike.

In one famous Klondike story he presented Dawson dance hall girl Gussie Lamore her weight in gold.[*citation needed*]

Gates was married briefly to Grace Lamore in 1898; he later married Bera Beebe, with whom he fathered two sons, Fredrick and Clifford. Gates subsequently abandoned her for 15-year-old Kitty Brandon, his niece.

His biography "The True Life Story of Swiftwater Bill Gates" (c. 1908) was authored by Iola Beebe, his mother-in-law.

Swiftwater Bill was known to be at the gold fields of Nome, Alaska at the same time as William H Gates I, grandfather of the Microsoft founder. However, despite the similarity in name and coincidences of gold, there is no apparent family relationship between "Swiftwater Bill" and Microsoft founder Bill Gates.

In fiction, he has been portrayed by Gordon Pinsent in the 1985 film *Klondike Fever* and Colin Cunningham in the 2014 miniseries *Klondike*.

Evidence Timeline

1860 - US Census in Minnesota ?

He may have been born in 1859 ... https://www.findmypast.com/transcript?id=USC%2F1860%2F0000666768921

Full form - https://search.findmypast.com/record?id=USC%2F1860%2F005170156%2F00265&parentid=USC%2F1860%2F0000666768921

1897 (Nov 12)

Full newspaper page : [HN014E][GDrive]

LIFE IN THE KLONDIKE.

Gambling, Dancing and Drinking the Main Pastimes in Dawson.

BEER IS 50 CENTS A GLASS.

Gold Is Taken Out by the Ton and Men Spend $1,000 Daily for Fun.

SALOONS ARE MAKING FORTUNES.

Yellow Nuggets Not Guarded with Nearly the Care That a Side of Bacon Is.

(Copyright, 1897.)
(Special Correspondence of The World.)

DAWSON CITY, N. W. T., Sept. 10.—The one place in all the world where money has no value is on the Klondike. Men think no more of spending from $300 to $1,000 a day than of eating three square meals. The poorest kind of whiskey and beer finds ready sale over the bars at 50 cents a drink. Night and day scores of gambling games are running in full blast. Behind every bar are cans, tin cups and beer glasses containing pounds of the yellow metal fresh from the mines. Men come in from the diggings and take their places at the gambling tables with the ease and nonchalance of millionaire gamblers. Tonight "Swift-Water Bill," a young man from Spokane, Wash., who owns some of the richest claims on Eldorado Creek, came to town and took a seat at the faro table. In an hour he had lost $7,500 in gold nuggets.

Arising from the table, he lighted a cigar and "invited the house" to drink at his expense. The treat cost him $112. Hardly an evening passes but that similar scenes are enacted, and yet the old-timers aver that the town is dull and that real good times will not come around before "the spring clean-ups."

Gold by the Ton.

One year ago the 22d of this month the first gold was taken out of the tributaries of the Klondike. I have made careful inquiries among the trading companies, the wealthy and more intelligent class of miners, the Government officials and the ordinary run of miners themselves, and, averaging their estimates, it is safe to say that between four and five tons of gold have been taken out of the mines on Eldorado and Bonanza Creeks. That amount of gold represents $2,741,760 in coin. And yet not one-fifth of these rich diggings have been properly worked and many of the claims hardly prospected.

The hard-pan in Eldorado Creek is rough and ridged and partly riffled, and on this character of foundation the gold has accumulated in large quantities. In many places the yellow metal is almost free of foreign substance. It is hard to realize how plentiful the gold really is to $124,500, and the day the successful miners were taking their departure on the first steamer of the season the receipts amounted to $6,500. Hardly a saloon in town is receiving less than $300 a day, besides winning large sums of money at the gambling games. Barkeepers are paid from $12.50 to $20 a day, and even the porters, where such luxuries are deemed necessary, are paid from $7.50 to $10.

A rumor has emanated from official sources and is going the round to the effect that a Canadian official will arrive shortly and enforce the law permitting only hotels and innkeepers to engage in selling liquors.

Lots Jump from $1.25 an Acre to $14,000 Apiece.

The site of Dawson City was originally located by Joe Ladue and Harper as a town site. The latter is a trader and owns several stores in the Northwest. They were the first to get a "tip" of the great strike and lost no time in securing 160 acres of land as a town site for $1.25 an acre. Lots 50x100 feet are now selling for amounts varying from $8,000 to $14,000, and an ordinary building lot on the edge of the town at the base of the mountain is sold for $250 and upward.

Last year logs sold for $1.40 apiece and now they command $3 and $4. Most of the buildings are constructed of logs hewn on three sides and solidly chinked with heavy moss. The roofs are made of poles, on which a layer of moss fully ten inches thick is laid, and then a layer of dirt about twelve inches deep serves to keep out the cold.

If green logs or logs that are not properly dried are used, they crack and make reports not unlike a pistol shot when the heavy frosts come, and for the remainder of the winter frost will accumulate on the inside of the cabin and it is impossible to get enough heat out of the stoves to thaw the ice.

Heavy embankments of earth piled up against the huts on the outside serve as additional protection against the chilling blasts of the arctic winter gales. A few saloons are built of lumber with double walls, between which sawdust and moss are tightly packed, but old Yukoners tell me that such constructed buildings are inadequate against the severe cold weather.

Dawson City Improvements.

About eighty log cabins and some five hundred or six hundred tents constitute the improvements of Dawson City. The buildings are on the streets and a wide avenue separates the city from the river bank. The two commercial companies have built fine, large two-story stores and warehouses. The improvements made by the Alaska Commercial Company must have cost nearly $100,000, and those of the North American Trading and Transportation Company were not much less expensive.

To build the commonest kind of a log cabin, 18x24 feet, costs from $3,000 to $6,000, and the buildings erected by the former company cover an entire block and are of the most substantial character that money and labor can build.

Front street is the principal thoroughfare and is the locality where nearly all of the business is transacted and is on the east side facing the river. The street is full of hewn timbers and chips, and carpenters are working from early dawn till late at night erecting cabins to accommodate the demands of the trade.

Mechanics are paid an ounce for nine hours' work and many of them are earning from $20 to $25 a day. In another month the river will probaby freeze, navigation will cease and cold weather will be in order until the middle of next May. Consequently all buildings must be finished by the middle of October, and on account of the great demand for cabins carpenters are practically naming their own wages.

The streets are full of tents, but the Canadian officials are compelling builders to erect cabins on the lines of their property, and in a short time Dawson City will bear the resemblance of a well laid out frontier town. Aside from the two stores, three or four barber shops, half dozen laundries, five or six restaurants, a second-hand store or two, two sawmills, three butcher shops, two jewelry stores, a dozen physicians and dentists and a couple of real estate offices, the principal business engaged in is the sale of intoxicants.

Prevailing Prices.

Compared with prices in the States the charges at first glance seem exorbitant, but when the prevailing rate

on some of the claims. Miners do not now bestow a passing comment of surprise on claims yielding less than $2,000 or $3,000 a day.

Bonanza is another rich creek, but the full extent of its wealth cannot be definitely determined for several months or until the "dumps"—the dirt that is taken out during the winter and sluiced in the spring—are worked. Other creeks are showing up well and the approaching winter promises to make Dawson City the liveliest mining camp the world ever knew.

Gambling and Dancing.

The great attractions, or rather objects of interest, are the gambling games and the dance halls. Gamblers winning or losing from $500 to $3,000 at a single sitting are not worthy of passing comment. In fact games involving $5,000 or $10,000 are running night and day. Professional dealers of "banking games" receive $20 a day.

The manner of hazarding money is unique even in a mining camp. The player takes his seat at a faro table and passes over his sack of gold dust to the dealer, who drops it into a small pigeonhole. The chance of "overplaying his sack" devolves upon the player's honor. He is given full credit and can call for as many chips from the check rack as he wishes. As the checks are passed out a tab is dropped on his sack.

At the conclusion of the play the chips on hand are credited to the account of the sack. The dealer hands the player a slip of paper showing the condition of the account and the latter takes it and his sack of gold to the bar. If he has lost he weighs out his gold dust, or in the event of winning the barkeeper does the paying.

At first glance it would seem that such a system would afford considerable temptation for dishonest men to walk out with their sacks of gold without settling their accounts.

Only one or two instances of the kind have occurred and the condemnation of the community has inflicted such punishment as to warrant the non-repetition of the events.

How Dance Halls Are Run.

The dance halls open about 7 or 8 o'clock in the evening and the band plays on till late in the morning. A dozen or more women, many with young and rather pretty faces, are in attendance. They have little or no time to rest between the dances, and when the morning dawn comes peeping over the mountain summits they are a tired-looking crowd. The amusement continues night after night.

The halls are crowded with gallant beaux, the most of them, having heavy, spiked-bottom shoes, broad-brimmed hats, costumed in the regulation mining suits and with cigars between their teeth, present an odd appearance indeed.

The dance halls are constructed of hewn logs, roofs covered with moss and earth and low ceilings. Each dance costs $1, and one man in three nights spent seven ounces of gold, or $119, for the luxury. In some of the halls a free fight is almost certain to conclude the festivities along toward morning.

Occasionally men will come to blows in attempting to win the hand of some woman for the succeeding dance. "Fair play" is the watchword, and the best skilled pugilistic gladiator goes to the head of the set and his rival goes home.

Saloons That Make Fortunes.

Saloons are running "wide open" and do not pay a license. As a rule they sell a fair class of beverages. Drinks and cigars retail at 50 cents, and the two breweries that are located here cannot supply the demand for steam beer at $125 a keg. A poor quality of champagne is retailed at $30 a pint and a better quality at $10 higher.

In liquidating indebtedness at the bar the individual doing the honors passes his sack over to the barkeeper, who pours out enough of gold dust to settle the account. It is hardly necessary to add, I suppose, that the barkeepers are never charged with neglecting to take enough dust, and particularly when the patrons are somewhat under the influence of copious libations. Two or three saloon men admitted to me privately that the "rake-off," as they term overweighing, amounts to about 30 or 40 cents on each $2.50 spent over the bar.

There are fifteen saloons doing business now, and others are preparing to open every day. The receipts for sixty days last spring in one saloon amounted of wages of from $10 to $15 a day is taken into consideration the charges appear reasonable. Meat is sold for 75 cents a pound, and at one time during the summer ice sold for $1.50 a pound. Some enterprising fellows went down the river a short distance and found a small glacier and realized a neat sum in selling the ice to the saloons.

The laundries charge $1.25 for washing and ironing a white shirt and 75 cents apiece for flannels. Shaving is 50 cents and a hair cut is $1. Loaves of bread, and small ones at that, find ready sale at 50 cents.

It is my honest conviction that no community or mining camp of this size ever had so many dogs. It is estimated that there are nearly 1,500 of the animals in the mines.

The most of them are fine-appearing fellows, and in the cold season net their owners handsome profits by hauling sleds heavily laden with supplies to the adjacent mining camps. In town they travel in companies ranging from ten to twenty head, and the moment they catch sight of another dog away from his company the pack will give chase, and if caught will whale the life out of the unfortunate. Dog-fights are so common as not to attract a passing glance.

Thieves? These animals are capable of convincing the most skilled professional petit larcenist that he does not understand the first rudiments of the profession. They will lie around in sight of a cabin for hours, waiting for the owner to depart, and then deftly leap through double panes of glass and carry off a side or two of bacon. It is necessary to erect caches fifteen or twenty feet above ground to store such goods.

Weather in Winter.

The weather in the winter averages about 45 degrees below zero, and last winter for two or three days it hung around 59. One or two instances are remembered by some of the pioneers when the instrument registered 84 degrees, and that was cold weather, they say. When it is colder that 40 degrees there is no wind. The river freezes and jams so full of ice in places that it is impossible to drive dog teams, and it frequently becomes necessary to resort to inland travelling.

There are two churches, Catholic and Episcopal, and a sisters' hospital in Dawson City, and the attendance is good. In the hospital are several patients, some of whom are suffering with typhoid fever, but one has the malaria.

The expense of freighting supplies to the mines in Eldorado and Bonanza Creeks, a distance of fifteen or twenty miles, is high, a rate of 50 cents a pound being charged. The trail is marshy and in some places full of boulders and quite steep, rendering travelling tedious and difficult.

The amount of gold taken out of the Klondike district in the past eleven months is astonishing. Whether other gulches with riches equal to those of Eldorado and Bonanza Creeks will be discovered is the problem of the hour. Opinions differ materially, but the majority seem to think that before the approaching winter is over pay streaks on other claims will be found that will parallel last winter's discoveries.

All Have the Gold Fever.

Everybody is at a feverish heat and ready for a grand rush to any new diggings. The slightest word or gesture on the part of some of the men supposed "to be on the inside" would precipitate a panic and almost depopulate the town in a day.

It was only a few days ago that somebody whispered around that good prospects had been found in Sulphur Creek, and a big rush to the field took place.

Women joined in the scramble, some of them closing their restaurants and laundries. Every piece of land from one end of the creek to the other was staked out and prospect holes are now being sunk, but owing to the marshy condition of the soil definite results cannot be had before the frosts of October come around.

All along the gulches of Eldorado and Bonanza Creeks are cabins in which are cans of gold exposed and unprotected. More care is exercised in guarding and protecting bacon and flour than the bright yellow gold, fresh from its state of virginity. It is impossible to estimate the amount of gold that is being taken out every day.

Many men are realizing handsome revenues from "working claims on the lay," that is to say, the owners rent out their properties to workmen for one-half of the gold product. W. J. J.

[HN014F][GDrive]

1897 (Nov 29)

https://newspaperarchive.com/san-francisco-call-nov-29-1897-p-2/

1897 (Dec 4)

Full newspaper page : [HN014G][GDrive]

SAN FRANCISCO CHRONICLE, SATURDAY, DECEMBER 4, 1897.

A NATIVE ALASKAN STRIKES THE CITY.

"Indian Charlie," Who Accompanies "Swiftwater Bill."

JAMES W. BOYLE, manager of the pugilists, Frank Slavin and Frank Rafael, arrived here from Dawson City yesterday, accompanied by "Swiftwater Bill," one of the most picturesque characters of the Klondike, and "Indian Charlie," a famous Yukon Indian guide. The visitors are guests at the Baldwin.

The Indian of the party is one of the most interesting visitors that ever struck San Francisco. He has the distinction of being the first Yukon Indian

that ever visited the city, and he is proud of the fact. Metropolitan life is all new to him, for until the party reached Seattle some days ago he had never seen a two-story building. He is learning rapidly, however. When he went out to explore the city yesterday afternoon he cut notches in all the telegraph poles along his route so he would not lose his bearings, and was on the verge of blazing the walls of the Baldwin Hotel last evening when he lost the trail from his room to the hotel office when the friendly face of Boyle loomed up on his horizon.

Boyle and "Swiftwater Bill" are on their way to Woodstock, Ontario, to gather together enough dogs to transport sixty tons of freight over the Dalton trail in the spring, and they are taking the Indian along to train the dogs. "Indian Charlie" is the chief of a small band of his fellows at Carmack's Post, thirty miles above Five Finger Rapids, and until the gold craze struck the country eked out a comfortable existence trapping and trading.

"Swiftwater Bill," otherwise known as William H. Gates, is a noted character on the Klondike. He was given his picturesque pseudonym after rescuing a party of prospectors from a rock in one of the rapids of the Yukon, and the name has stuck to him ever since. Although a mild-mannered personage, he is credited with enough courage to stand off all the gun fighters in the new gold diggings, and he is also reputed to be one of the wealthiest claim-owners in the northwest, his fractional interests in various mines amounting to about twenty entire claims, one of which, No. 13 on El Dorado creek, is said to be the richest in the entire Klondike country. Among his other claims to distinction is the fact that he conducted the only faro game in Dawson that had no limit. He cleaned up $30,000 in three nights, but lost part of it subsequently.

Speaking of the situation in Dawson yesterday Boyle said that, in view of the fact that he and the members of his party left there September 24th, he had no late intelligence from direct sources.

"I fear, however, that there is going to be great suffering there this winter," he said. "Not less than 3000 people reached Dawson after the 1st of September. While coming out we passed thirty boats a day with parties going in, and you couldn't have driven them back with a gun. They all believed that supplies were plentiful in Dawson and were going in with only a few days' supplies."

Boyle says that Slavin and Rafael are doing well, being interested with himself in several claims that promise to turn out big. They gave one sparring exhibition in Dawson, and Rafael has been matched to meet a fighter from Circle City named McKenzie in the spring. In the meantime they are digging gold out of the ground.

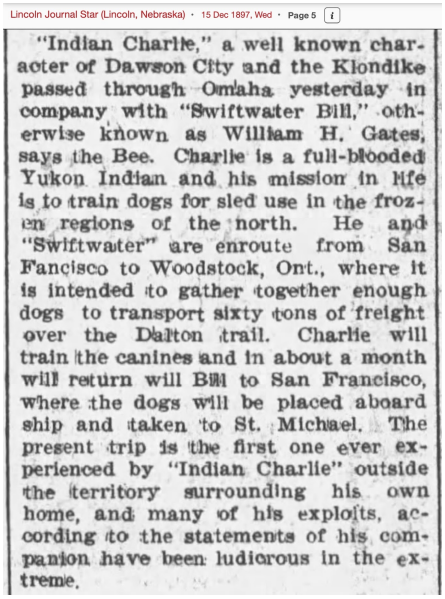
[HN014H][GDrive]

1897 (Dec 13)

https://www.newspapers.com/image/459213447/?terms=%22swiftwater%2Bbill%22

1897 (Dec 15)

Stillwater Bill passing tjrough Nebraska ? From San Francisco going to Ontario ?? Full newspaper page : [HN014I][GDrive]



Lincoln Journal Star (Lincoln, Nebraska) · 15 Dec 1897, Wed · Page 5

"Indian Charlie," a well known character of Dawson City and the Klondike passed through Omaha yesterday in company with "Swiftwater Bill," otherwise known as William H. Gates, says the Bee. Charlie is a full-blooded Yukon Indian and his mission in life is to train dogs for sled use in the frozen regions of the north. He and "Swiftwater" are enroute from San Fancisco to Woodstock, Ont., where it is intended to gather together enough dogs to transport sixty tons of freight over the Dalton trail. Charlie will train the canines and in about a month will return will Bill to San Francisco, where the dogs will be placed aboard ship and taken to St. Michael. The present trip is the first one ever experienced by "Indian Charlie" outside the territory surrounding his own home, and many of his exploits, according to the statements of his companion have been ludicrous in the extreme.

[HN014J][GDrive]

1898 (Jan 05) - In New York

https://www.newspapers.com/image/505177112/?terms=%22swiftwater%2Bbill%22

1898 (Jan 07)

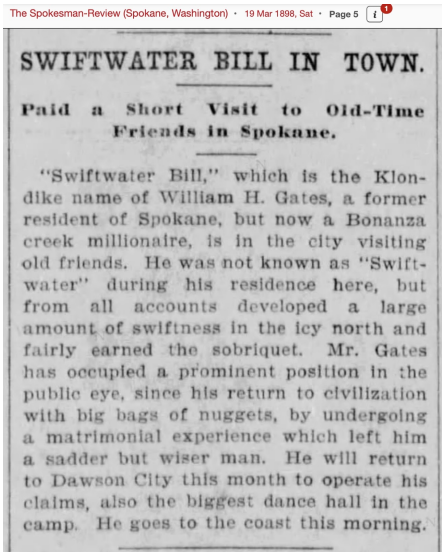
https://www.newspapers.com/image/484089476/?terms=%22swiftwater%2Bbill%22

1898 (Jan 15)

https://www.newspapers.com/image/66293059/?terms=%22swiftwater%2Bbill%22

1898 (March 19)

Full newspaper page : [HN014K][GDrive]


The Spokesman-Review (Spokane, Washington) · 19 Mar 1898, Sat · Page 5

SWIFTWATER BILL IN TOWN.

Paid a Short Visit to Old-Time Friends in Spokane.

"Swiftwater Bill," which is the Klondike name of William H. Gates, a former resident of Spokane, but now a Bonanza creek millionaire, is in the city visiting old friends. He was not known as "Swiftwater" during his residence here, but from all accounts developed a large amount of swiftness in the icy north and fairly earned the sobriquet. Mr. Gates has occupied a prominent position in the public eye, since his return to civilization with big bags of nuggets, by undergoing a matrimonial experience which left him a sadder but wiser man. He will return to Dawson City this month to operate his claims, also the biggest dance hall in the camp. He goes to the coast this morning.

[HN014L][GDrive]

1903 (Aug 08)

https://www.newspapers.com/image/586139472/?terms=swiftwater%2Bbill%2Bwhitehorse

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1904 (May 10)

https://www.newspapers.com/image/578578031/?terms=swiftwater%2Bbill%2Bwhitehorse

1908 (Nov)

https://www.newspapers.com/image/499784783/?terms=swiftwater%2Bbill%2Bwhitehorse

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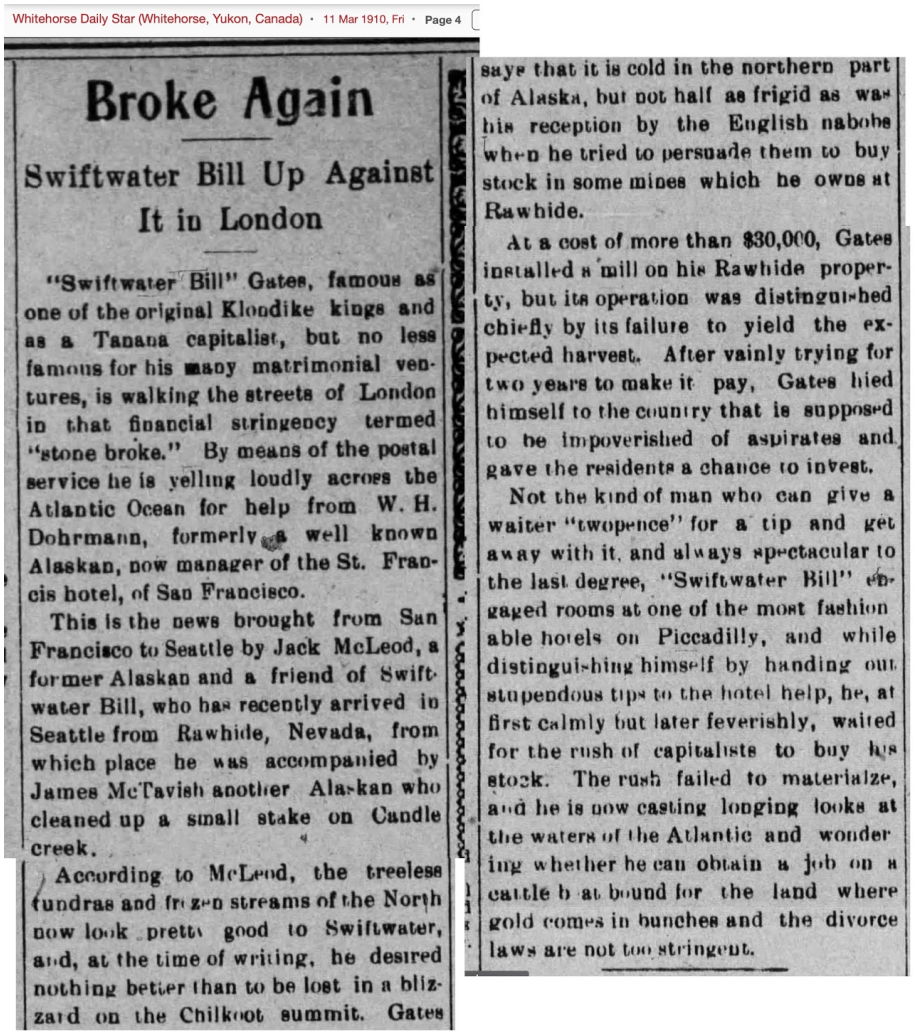
1910 (March 11)

Full newspaper page : [HN014M][GDrive]



Whitehorse Daily Star (Whitehorse, Yukon, Canada) • 11 Mar 1910, Fri • Page 4

Broke Again

Swiftwater Bill Up Against It in London

"Swiftwater Bill" Gates, famous as one of the original Klondike kings and as a Tanana capitalist, but no less famous for his many matrimonial ventures, is walking the streets of London in that financial stringency termed "stone broke." By means of the postal service he is yelling loudly across the Atlantic Ocean for help from W. H. Dohrmann, formerly a well known Alaskan, now manager of the St. Francis hotel, of San Francisco.

This is the news brought from San Francisco to Seattle by Jack McLeod, a former Alaskan and a friend of Swiftwater Bill, who has recently arrived in Seattle from Rawhide, Nevada, from which place he was accompanied by James McTavish another Alaskan who cleaned up a small stake on Candle creek.

According to McLeod, the treeless tundras and frozen streams of the North now look pretty good to Swiftwater, and, at the time of writing, he desired nothing better than to be lost in a blizzard on the Chilkoot summit. Gates says that it is cold in the northern part of Alaska, but not half as frigid as was his reception by the English nabobs when he tried to persuade them to buy stock in some mines which he owns at Rawhide.

At a cost of more than $30,000, Gates installed a mill on his Rawhide property, but its operation was distinguished chiefly by its failure to yield the expected harvest. After vainly trying for two years to make it pay, Gates hied himself to the country that is supposed to be impoverished of aspirates and gave the residents a chance to invest.

Not the kind of man who can give a waiter "twopence" for a tip and get away with it, and always spectacular to the last degree, "Swiftwater Bill" engaged rooms at one of the most fashionable hotels on Piccadilly, and while distinguishing himself by handing out stupendous tips to the hotel help, he, at first calmly but later feverishly, waited for the rush of capitalists to buy his stock. The rush failed to materialize, and he is now casting longing looks at the waters of the Atlantic and wondering whether he can obtain a job on a cattle boat bound for the land where gold comes in bunches and the divorce laws are not too stringent.

[HN014N][GDrive]

1919

https://www.newspapers.com/image/568379010/?terms=navy%2Byard%2BBremerton%2Bwilliam%2Bgates

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1923 (March 23) - "Stillwater bill" / William H Gates

https://www.newspapers.com/image/562182605/?clipping_id=47783675

1924 (July 18)

https://www.newspapers.com/image/578575638/?terms=swiftwater%2Bbill%2Bwhitehorse

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Research Articles on "Swiftwater Bill" / "William Charles Gates (born 1860)

Everything2-com article on "Bill Gates"

Source - https://everything2.com/title/Bill+Gates

While there may be a Bill Gates very famous at the end of the 20th century and into the 21st, there was an equally notorious character with the same knack for making money, who went by the same name at the end of the 19th century and into the 20th.

"Swiftwater" Bill Gates or Swiftwater Willie was one of the most colourful of the colourful and legendary crowd that amassed in the arctic reaches of the Yukon when gold fever struck the Klondike. He was, it is said, an unassuming, round-faced man of about five feet, who was working as a dishwasher in Circle Creek, Alaska, when gold was found around the Klondike river. His origins and date of birth are unknown but he claimed to be from Idaho where he had supposedly been a boatman on the Coeur d'Alene river, hence his nickname. He never did prove that he actually could steer a boat safely through any rapids.

It's hard to separate myth from reality in the often unbelievable life of this man and assembling all events in a coherent timeline is a task in itself. There was more gold than paper and more brawlers than scribes in the Dawson City of the late 1890s so what did make it onto the record was part fact, part frontier lore. Such was his legend and the nature of his exploits that the first publication about him was by a disgruntled mother-in-law in 1908, while he was still very much alive and kicking. A consummate swindler and given to extravagance on a grand scale, gold and money managed to flow through his hands faster than the rapids of the Idaho river he called home.

Being in Alaska when gold was found he managed to get to Dawson City and make good money long before the mass of fortune-seekers arrived from the south. He never staked a claim himself but obtained rights through shrewd trading and working others' claims for a share of the gold, ending up with enough money to lease a stake in a claim another prospector did not want to work himself, along with six partners. When his group of diggers hit the motherlode they hid it and bought the claim which so far they had only leased for 50% of the gold found. Thus they cheated its owner out of at least $45000 (unethical business practices, anyone?). The claim on the tributary stream of the Klondike named Eldorado #13 was not only lucky but one of the richest claims of the gold rush. Gates and his friends became Kings of the Klondike but none, it seems, conducted himself less regally than Swiftwater Willie.

After that big hit, he went on and bought more claims, paying newcomers to dig them in return for a parcel of the claim, and made even more money, becoming possibly the richest miner in Dawson City. And while his pockets were literally lined with gold, his mind was a dungeon of moral depravity by the standards of those days and not much better by today's. He lost immense amounts gambling, challenging people to seven-thousand dollar wagers and blowing thousands more at the poker table, where his charm helped him little. In a town where gambling was everyone's favourite pastime and conducted with deadly seriousness, Gates still stood out as a prince among losers. In the end he bought a share in the Monte Carlo gaming parlour and helped elevate it from tent to unsavoury Mecca of gambling. When he was broke, he borrowed money at astronomical rates and blew that too before he made enough from his claims to pay it back. His gambling philosophy was simple: "The sky's the limit! Raise 'er up as far as you want to go, boys, and if the roof's in your way, why then tear it off!"

Nowhere though were his exploits more infamous than in the realm of romance. While he was one of the few prospectors who didn't engage in the other sport of the times--drinking--he was definitely into young girls and promised himself and the Monte Carlo the prettiest dance-hall girls that money could lure to the frozen north. He had already demonstrated his fondness for these girls by letting them gather gold on his own claims and went on a trip to San Francisco to find both the girls and the fancy booze and trappings that would make the Monte Carlo dazzle one and all. With him went one of the girls, by the name of Gussie Lamore.

Gussie was only one of the three Lamore sisters Gates courted. Gussie was the real prize and she figures in the most famous of all Klondike tales--the "Egg Story." The year was 1897 and the exact circumstances of the event are unknown but the basic idea was that Bill Gates bought every single one of the scarce fresh eggs in Dawson City at a dollar a piece because of her reputed fondness for them. According to different versions of the story, he did it to impress her, to make her come to him to get them or after seeing her order them while with another man. Nobody knows exactly how many eggs there were and reports vary enough to cast doubt on any figure. He certainly did corner the market. Sound familiar? What he did with all those eggs is also uncertain but he may not have given them all to Gussie as it was said. By some accounts he fried them himself and tossed them to the dogs, by others he gave them away to all the other girls.

In San Francisco he truly lived like a king and squandered his capital on eccentric luxuries like champagne baths in first-class hotels, tipping people with gold dust and blowing $15000 on the Oakland mansion that he and Gussie's sister, Grace, would spend three married weeks in, after which she kicked him out. Having thus been rendered once again single and skint he went in search of someone who would fill his purse. Gussie had, in the meantime, dumped him and returned to her husband (after promising to marry Swiftwater Willie, she wasn't much of a saint herself).

On his way back north a lady by the name of Iola Beebe sought him out in Seattle. At the same time the man he had borrowed $20.000 from in San Francisco, money which he used to buy furnishings and hire girls for the Monte Carlo, a certain Dr. Wolf, was having second thoughts and was also pursuing him to recover his cash. Dr. Wolf would eventually catch up with him in Dawson City and get his money back, leaving Bill Gates $20.000 in the hole with his Dawson City creditors. Now, Iola Beebe was a widow infected with the gold fever of the times and had $35.000 at her disposal with which she intended to build an inn in Dawson City. More than her financial assets though, our man Bill was attracted to her teenage daughters. He did try to elope with both but was caught before the ship left port. Although he had to leave alone this time, they would meet again in Skagway.

The second time he succeeded in running away with a girl and getting married in Dawson City. By the time Mrs. Beebe caught up with them it was a fait accompli. Bill did not only manage to charm himself out of his new mother-in-law's doghouse but also talked her into investing her fortune in a mining concession called Quartz Creek which turned out to be a dud. In debt to the tune of $100.000 he decided it was a good time to disappear. Their child was left with grandma and he and his wife took off for Nome where gold had been found. This is where he dumped his young wife Bera and ran off with his sister's seventeen-year old stepdaughter, Kitty Brandon. With his own sister in hot pursuit, he made it back to Washington State and there he married the girl. A few months later he would abandon her too.

He hadn't done too well in Nome, blowing the few thousand dollars he made gambling. Incidentally, he was not the only man to head for Nome in 1899. In the same gold rush in the same town there was another Bill Gates, who would later be Bill Gates Sr. of Bremerton, Wash., great-grandfather of none other than William Henry Gates III. It's not known whether Microsoft's 'Yukon' project codename has anything to do with the Bill Gates of old.

Bill now had not one but two mother-in-laws after him. Iola Beebe caught up with him once and he miraculously got away with her confidence and money once again. This time to Fairbanks where he managed to strike it rich yet again. Once back in Seattle, Mrs. Beebe found him again and this time was taking no prisoners... or rather, she was and had him thrown in jail for bigamy. He once again demonstrated his extravagant ways by presenting the lawyers, a judge, sheriffs, and court reporters with gold nuggets wraped in twenty-dollar bills and, to top it off, talked Mrs. Beebe into posting his bail. After that he got himself out of the jam by divorcing both women.

Very little is known of his whereabouts and activities after 1908 but one is inclined to believe that he continued to make money and blow it like nobody's business, though on a less grand and documented scale. He died in 1935 while negotiating a huge silver mining concession in Peru. Of all the odd characters

digging their way through the fortunes of Alaska and the Yukon, he was certainly one of the oddest. While the women in his life may have disagreed, to anyone who takes interest in the madness of those times "Swiftwater" Bill Gates was one unforgettable fellow.

Factual and rumour sources:
"Klondike Fever" by Pierre Berton
Seattle Times
Dave Carpenter

Surname research on "SelectSurnames 2.com"

http://www.selectsurnames2.com/gates.html

One researcher went through Gates as a surname in the 1850 and 1860 US censuses and estimated that a majority of them had German rather than English roots. Many **Goetz became Gates** in America on arrival or a generation or so later.

Among the Goetz who came to America and became Gates then or later were:

- Early arrivals, John Georg Goetz along with his mother and siblings, who left Wurttemburg for America in 1750 and settled in Berks county, Pennsylvania.
- Johannes Gotz from the Rhine Palatinate arrived in 1754 and settled in Indiana county, Pennsylvania
- Adolph Goetz and his family from Wurttemburg who moved to Buffalo, New York in 1846 (another Goetz, George Goertz, settled in Rochester nearby and later moved onto Indiana and Ohio)
- Daniel Goetz and his family from Wurttemburg who arrived in Iowa in the early 1850's to farm
- and a Goetz family from Nuremburg who started emigrating to America in 1853. They settled in Angola, Indiana.

There were two Bill Gates known to be in Alaska at the time of the Klondike gold rush of the 1890's. The first, the flamboyant Swiftwater Bill, was a small moon-faced wanderer from Idaho. He made and lost several fortunes. In one famous Klondike story he presented the Dawson dance hall girl Gussie Lamore with her weight in gold. A biography *The True Life Story of Swiftwater Bill Gates* was written in 1908 by his mother-in-law Iola Beebe. The other Bill Gates, whose family had come from Rhode Island in the early 19th century, settled in Washington state and was **the grandfather of Microsoft founder Bill Gates**.

Canada. The descent from New England immigrant Stephen Gates came north into Canada a century or so later, through two different lines:

- One was via his son Simon. Simon's grandson Captain Oldham Gates left Massachusetts in 1760 for what is now Annapolis county, Nova Scotia. His family founded Gates Breakwater, which became known as Port George in 1812, and were the builders of the first oceangoing vessel there.
- The other was via his son Isaac. There was a Joseph Abel Gates, who was born in Kingston, Ontario in 1772 and married Mary Burtch in 1802, and a Henry Gates, born in Burford in Brant county, Ontario in 1777.

1998 book - "Collected stories of the Yukon" by Sam Holloway

https://www.yukoner.com/collected_stories.pdf

1998-sam-holloways-collected-stories-yukon-reader-sam-holloway.pdf

[https://drive.google.com/file/d/1cnwNNi41O5YMJ-g1yLTkeqAADNx-g1I1/view?usp=sharing]

W. C. Gates lived out the fantasies of a repressed society, during an age when piano legs were draped with cloth to cover their “nakedness.” In his pursuit of gold, fame and women, he had more successes—and failures— than any man in the history of the North.

The first half of Bill’s life was easy to research because the press followed his every move. In one instance they sifted the ashes in his hotel fireplace for evidence of his sinning.

His disappearance from North America left most historians with little information to cover his later years. Now, thanks to an Alaskan prospector, the rest of Bill’s adventures have come to light. So here is the story, too outlandish for fiction or film—but true—of “Swiftwater” Bill Gates...

Alaska, 1896

Originally from **Redwing, Minnesota**, Bill first came into the Yukon sometime in 1895. He had played around with prospecting in the central States and had worked in a copper mine in Idaho. It was there that he heard about the gold discoveries in Alaska.

In 1896, Bill was washing dishes and making beds at a crudely-built log hostel in Circle City, Alaska. One night after supper, as he was cleaning up the dining hall, he overheard two men talking about the big gold strike in the Klondike.

Misty dawn found Bill poling a flat-bottomed boat upstream toward Dawson, 275 miles away. It was no easy feat. The Yukon River runs swift and the poler, using all his limbs and back to move against the current, must stay near shore in the shallow water. Hordes of flies and mosquitoes can attack him unmercifully. Bill knew how to handle boats, however. He often bragged of this ability and his pals dubbed him “Swiftwater Bill.”

His detractors—of which he was to have many—told a different story.

They said that on his initial entry to the Yukon, Swiftwater jumped out of the boat and walked around the notorious Miles Canyon and Whitehorse Rapids. After his companions put the boat through the turbulent waters, Swiftwater rejoined the expedition. And that, according to them, was how he came by his nickname.

His later adventures in the Yukon and on the upper rivers of the Ama- zon jungle lend more credence to the first story than the latter. Whatever the case, he did stand out from his peers by the very contrast he presented to them.

The men along the Yukon in those days were a hardy lot—perhaps the toughest, fiercest at work or play, most macho white men on the continent— while Bill was a short, small-limbed waif of a man. His slight paunch and indolent manner bespoke his aversion to hard work and danger. He sported an enormous black moustache and, in the manner of many small men, he spoke with a strident timbre when bragging of his accomplishments and bravery. No one took him very seriously.

All the claims along Bonanza and Eldorado Creeks had been staked by the time Bill arrived from Alaska but he and six others obtained a lay on Claim #13, Eldorado. They worked together to put a shaft down to bedrock and whooped for joy at what they found—coarse gold in a paystreak that seemed of endless width and length. At Bill's urging they covered up the incredible find and went to the owner of the claim with a joint offer of $40,000. They were willing to take a chance if he would sell this claim with the un- lucky number.

The owner fell for it and the boys soon brought him enough gold to pay off their debt. Before long Bill's (and the others') pockets and packsacks bulged with gold.

Into town he went, $20,000 richer, and hired newcomers to work his ground on a percentage basis. He then bought the best clothes he could find in Dawson and sported the only starched collar in town. Mining camp followers were descending on the Klondike from all over Alaska and these included quite a few hurdy-gurdy girls. In his princely manner, Swiftwater brought coveys of these females out to his claim to help themselves to some of his gold. He bought all the love and laughter that was available in the embryo town—even if they were laughing at him.

He loved to gamble. Never a heavy drinker, he gambled on any game he came across. He lost more often than he won. When he strutted into a sa- loon he yelled loud enough to be heard above the roar of the crowd:

"De sky's de limit boys! And if de roof 's in your way, why just tear it off!"

When professional theatre entertainment arrived in Dawson, one com- pany staged a satire entitled, *"The Adventures of Stillwater Willie."* Bill revelled in the attention it brought him and attended every performance. No one could say for sure whether the crowd laughed at him or at the show, but he minded not at all. Swiftwater Bill provided a spectacle in a town full of eccentrics. In his swan-tailed coat and diamond cravat, with his devilish black eyes and flowing moustache, he outshone all others in those heady days of easy fortune in the Yukon.

He met a man operating a saloon about a mile from town. The man's name was Jack Smith. Jack had come down from Fortymile with his variety troupe. He had staked a rich claim, sold it for $150,000, and was moving on to bigger and better endeavours.

He and Bill decided to build what was to become the most glittering pleasure palace ever to be seen in the North: the Monte Carlo Dance Hall & Saloon. While Jack looked after construction he entrusted Bill with the chore of going "outside" for a load of furniture, liquor and dancing girls.

In the days to come Jack Smith was to bitterly regret this decision.

Swiftwater and the eggs...

Meanwhile, Swiftwater began a stormy courtship of a buxom, platinum- blonde dance hall girl called Gussie Lamore. Gussie was the reigning queen of the muddy town and billed herself as *"The Little Klondike Nugget."* Bill offered Gussie her weight in gold if she would marry him. She stalled him by saying she was "not quite ready yet." (Unknown to Bill, she was married and had a three-year-old child.) One night he saw her dancing merrily with a big French Canadian. The ensuing argument touched off a legend that would earn Bill a new title: "The Knight of the Golden Omelette."

The story flashed up and down the creeks, from cabin to cabin, from camp to camp, from saloon to saloon until the whole Yukon knew the story, one version of it or another.

Gussie Lamore loved eggs. She could never get enough of them in Dawson, simply because there weren't any. Just about the time of her argu- ment with Bill, a shipment of eggs came into town by dogteam. Swiftwater bought them all, some 2,200 eggs at a dollar each. And that's what started the stories.

Arthur Walden, the well-known dogpuncher, said in his memoirs that Bill had the eggs fried in a restaurant and then threw them out, one at a time, to the dogs in the street.

Stroller White, the famous news columnist, said Bill kept the eggs un- der his bed at the hotel till they all turned rotten.

Others said Bill invited every dance hall girl in town for a feast of eggs, all except Gussie.

The Klondike Nugget dubbed Swiftwater *"The Knight of the Golden Omelette."*

Bill never talked about it at all. Some years later Gussie told the real story to a news reporter in Seattle:

"I met Swiftwater," she said, "in Dawson of '97. He certainly had the coin then. He lavished money on me but I got dead sick of him. He had no sense so I got to skating around with another guy. There was an egg famine come on in Dawson. I'd shaken Bill.

"I went down to the store to buy some eggs...Lordy how I wanted some eggs for breakfast. Well, Bill was in the store when I goes in. He sees I wanted the eggs and while I'm talking to the clerk, see, he buys up the whole con- signment of 900 eggs at $1 apiece. Then he says to me, 'Now my dear, if you want eggs for breakfast, come home where you belong.'

"Well, I was just dying for them eggs, and I came to my milk like a lady. I goes home with Bill."

In the fall of l897, Bill and a new friend of his, Joseph Whiteside Boyle (who would one day become a true Klondike King), Indian Charlie, and few others left Dawson for the "outside." Swift was to come back from the south with all the necessities for the Monte Carlo: booze, furnishings and, most important, women.

It was a hell of a trip for them. They poled a boat upstream until the river froze and had to wait a month at Stewart Island until the ice was solid enough to walk on. At last they were able to resume the journey but some- where on the river Swiftwater broke through the ice and big Joe Boyle fished him out.

Leaving the river, they hiked over the Dalton Trail to Haines Mission. The hundred-mile journey normally took about four days but in the extreme cold and snowstorms they struggled for 25 days before reaching the coast. Some of the party wanted to just "lay down and die." Swiftwater and Joe Boyle urged them on. At last they boarded a ship and arrived in Seattle on November 29th, two full months after leaving the Klondike.

Gussie Lamore, wise to the ways of the North, went over the ice that winter as a passenger in a dog sled. She met up with Bill in San Francisco. Klondike fever was just beginning in the west coast cities and Swiftwater was living proof of the riches to be had. He passed out large nuggets to the bellhops at his hotel to tell all comers that the man in the fur hat was

"Swiftwater Bill Gates, King of the Klondike."

Gussie took her well-dressed beau to meet her folks. Years later she told the story to the Seattle Washingtonian:

"In 'Frisco I introduced Bill to my family. Well, say, would you believe it, my sister Grace she cops him out—steals him from me cold and marries him.

"Well, say, she lives with him a couple of weeks and quits him. She couldn't stand him at all. She leaves their rooms at the Baldwin and takes a flat. Bill, he goes to her room while she's away, wraps her silverware and other valuables in a sheet and carries them downtown on his back.

No woman could live with Bill...

Finally Grace she gets a divorce and her maiden name back and then, he steps in and joins up with my sister Nell.

"Nell only lived with him for a week. Then Bill tried to cop out this fourth sister of mine after Nellie shook him but he couldn't touch her with a ten- foot pole. That's where she's wiser than the rest of us.

"No woman could live with Bill. He's one of those camp guys that never had any money in his life till he got a great big bunch of it all at once. He doesn't know nuthin' except to tell everybody he's lousy with the yellow stuff. He'd throw dollars into the crowds just to see 'em scramble and let 'em know he had it to trown (sic) at the birds. He'd tip bellboys with $5 gold pieces and buy wine at show prices by the barrel."

"Hasn't a particle of intellect; couldn't carry on a conversation to save his soul. He's no company for a woman and still he's jealous if a woman only looks at another man."

"Say, did you ever see his get-up? Well, you ought to. He wears a plug hat of the vintage of '75; then he wears a Prince Albert coat and a negligee shirt that cost him a dollar and a quarter. He tops the whole thing out with dancing pumps. Why say, he's a regular mark."

From then until the day he left North America, newspapers tracked Bill's every move. They delightedly reported on his affairs with the Lamore sisters. What they could not find out directly they made up from the slight- est rumours. Even up north in Dawson the Klondike Nugget said Bill had "bought Grace Lamore a huge white mansion" and after the breakup he "made off with $7,000 worth of wedding gifts." With his love of exaggeration and the newspapers' wild reporting, the legend of Swiftwater Bill, the Klondike Prince, grew and grew. His name was a household word all over the U. S. and Canada.

Jack Smith in Dawson cringed every time he read a new story about his "partner."

Bill's money was fast running out. Not one item had yet been purchased for the Monte Carlo. The Lamore sisters had taken him for about $100,000 and his every action as a Klondike King cost plenty. He holed up at the Pal- ace Hotel in San Francisco, keeping a low profile. About this time a rich doctor came to see the "famous mining magnate" at his suite of rooms.

Swiftwater regaled Doctor Wolf with tales of the Klondike and painted a glowing portrait of the opportunities there for someone with money to invest. Quickly they formed a partnership. Together they would create a vast trading and transportation network stretching from Skagway to Circle City. In the meantime could the doctor advance Bill some funds? At one hundred percent interest?

With $20,000 of Doctor Wolf's money in his pocket, Swiftwater took off to Seattle. In that fair city, which was the main jumping off point for the Klondike stampeders, he set about gathering supply contracts for the new business. At the same time he rounded up a group of women to work in the Monte Carlo and bought furnishings and supplies—mostly on credit.

The winter of l898 was half over. The entire world knew about the gold in the Klondike and some 100,000 people made plans to go there. The sup- plies and services they bought gave a tremendous boost to the cities along the west coast. In the midst of all this bustle Swiftwater showed them that a man really could come out of the Klondike with a fortune—and then just go back for more.

Around and around Seattle he paraded, surrounded by a group of at- tractive women. Very few knew that these laughing members of his "harem" were on the payroll of the Monte Carlo. In his Klondike costume—fur hat, parka, mukluks—he caused a sensation wherever he went.

After one party at the ritzy Rainier-Grand Hotel the management pre- sented him with a bill for damages amounting to $1,500.

He bought champagne by the case and invited reporters to watch him bathe in it. When one reporter asked for an exclusive interview, Bill told him it would cost him $l,000 a minute.

Doctor Wolf, seeing all the stories in the papers, sent word for Bill to hurry up with the arrangements so they could be on their way to the Klondike.

Bill planned to leave soon anyhow. He was again running low on funds. He and his "staff" boarded a ship for Skagway. They partied all the way under the disapproving glares of Doctor Wolf. They had to wait for a month in Skagway for the Yukon River system to thaw and had another wonderful time as they waited. Doctor Wolf hired a dogteam to take him over the ice to Dawson. Soon after he arrived there he heard some very disturbing ru- mours about his partner.

Jack Smith flew into a rage every time someone mentioned Swiftwater Bill. Eugene Allen, editor of the *Klondike Nugget* newspaper, had this to say:

"Swiftwater has never been known to pay back any money after it was thrown away. If he made another lucky strike somewhere, he might toss some your way, but that's about your only chance."

Return to the Klondike...

One day the word flew around the City of Gold: Swiftwater Bill Gates and his party were just upstream, round the big bend in the Yukon River. They would be arriving at any moment. Soon a large crowd milled about on the waterfront.

They were well rewarded for their patience. In the prow of a Peterbor- ough canoe stood Swiftwater, posing grandly, all decked out in his Prince Albert coat and silk top hat. Beside him a dance hall girl perched beautifully on a whiskey keg. Behind the canoe came two barges piled high with crates. On these crates sat many more smiling, painted women wearing low-cut evening gowns. The men on shore cheered wildly, the girls waved back at them, and when the convoy nudged into the dock, all the men pitched in to help the girls ashore.

In the meantime, Jack Smith and Doctor Wolf were elbowing their way through the crowd. They grabbed Bill from both sides.

"Swiftwater!" roared the doctor, his face red as a beet. *"You've got ex- actly three hours to pay back the twenty thousand! Never mind the inter- est! Just get my goddam money!"*

Somehow Bill borrowed enough money to pay the doctor, sans interest, and arranged to turn his share of the Monte Carlo and some earnings from his claim over to Jack Smith. He was clear of his creditors and then sold his interest in the Eldorado claim. He still had a claim on Sulphur Creek and was ready for some new action.

He staked out a three-mile mining concession on Quartz Creek. Joe Boyle did the same on other creeks and somehow they obtained title from the Canadian government in Ottawa. Partners now, the two of them sailed to London, England, to raise capital for the first large-scale mining opera- tion in the Yukon.

Swiftwater and Boyle formed an odd couple. Bill was tiny and ostenta- tious while Joe Boyle was a big, quiet man who needed no fancy attire or braggadocio to prove his manhood. While Boyle attended to business, Swiftwater caused a sensation in the courts of Europe.

Swiftwater dazzles Europe

Dubbed the *Klondike Prince* in the press, Bill told reporters he would bet $7,000 with any comer on one turn of a card. He visited Paris where beautiful women swooned over this flashy "millionaire" from the wild fron- tier. Finally Joe Boyle sent Bill and a British mining expert to San Fran- cisco where they were to arrange the purchase and shipment of mining equipment to the Klondike. Attended to by barbers and shoeshine boys, Swiftwater again became the most celebrated man in the city.

About this time a woman planning to ship a hotel piecemeal to Dawson City visited Bill at his hotel. She wanted some expert advice on conditions in the North. She was Iola Beebe, an attractive, matronly widow with two beautiful daughters.

For the rest of her life she would lament the day she introduced herself and her daughters to Swiftwater Bill Gates.

While Mrs. Beebe explained her plans, Bill gazed lecherously at 19- year-old Blanch. His business associate, the British mining engineer, lent such an air of respectability to this little group that Mrs. Beebe had no suspicion of the undercurrents of lust flowing beneath all the talk. She received the first of many great awakenings when she found the following note on her mantel:

"Dear Mama. We have gone to Alaska with Swiftwater and Mr. Hathaway. Do not worry, we will look out for your hotel when we get there. Bera."

Bera was l5 years old at the time. The hysterical Mrs. Beebe stormed onto the steamer Humboldt, which was just about to depart for Alaska, and found her girls in a cabin. Swiftwater hid under a lifeboat but the ship's officers located him. The police were summoned and the captain of the ship chafed at the delay while Bill gently persuaded Mrs. Beebe of the honour of his character.

She agreed to let the ship sail—minus her daughters. They all met up again in Skagway a few weeks later. Mrs. Beebe watched over her girls night and day but to no avail. She found another note in her room:

"*Dear mama. I have gone to Dawson with Swiftwater. He loves me and I love him. Bera."*

The chase was on.

Mrs. Beebe arrived in Dawson to be met on the dock by Bill and Bera, who were now husband and wife. Marriage sanctified the whole relation- ship—so much so that Bill soon had $35,000 of his mother-in-law's money invested in his mining operation. They all moved out to Sulphur Creek for the winter and Bera gave birth to a son.

Alas, things were not working out for Bill. His gambling and mining debts piled up. He flirted with Gussie Lamore who sang to him from her spot on the stage but he couldn't take her up on the offer without money, lots of money. (She would sing an old song, *"He Certainly Was Good to Me"* to the delight of the crowd. Of course Bill sent up champagne to the cast, as any good sport should.)

He bought a small boat, packed Bera into it, and they set out for the ruby sands of Nome, leaving behind a destitute mother-in-law, the baby, and $l00,000 worth of bills. Too broke to follow her slippery son-in-law, Mrs. Beebe existed on charity until she received a letter from Swiftwater. He had recouped his fortunes on Dexter Creek just out of Nome and she must join them there as soon as possible.

Off she went, down the Yukon River by sternwheeler. The trip was long— long enough for her to hear that Bill was gambling heavily—and losing. When she finally stepped ashore at Nome, Swiftwater was gone. In fact, a Seattle newspaper had already arrived and there was Bill in the headlines:

SWIFTWATER BILL RUNS AWAY WITH ANOTHER WOMAN!

Indeed, he had covered a lot of ground while Mrs. Beebe had been on her l500-mile trip down the Yukon River. He had left Nome with Bera. It was now fall, l900, and they went to Washington where he happened to meet up with his sister's step-daughter, Kitty Brandon, at an Elk's carnival in Tacoma. In love again, he abandoned the pregnant Bera and eloped with Kitty, who was l6 years old at the time. The couple honeymooned at a posh hotel in Seattle.

In the meantime Mrs. Beebe had arrived on the coast. Now three furi- ous women were searching everywhere for Swiftwater: Bera, Bill's sister, and of course Iola Beebe. It was his sister who caught up to him first.

Bill looked down from his hotel room window and spotted his sister rushing up the steps to the lobby. Quickly he and Kitty scrambled down a fire escape and went back to Tacoma. Leaving her behind, Bill rode a train to Butte, Montana.

Who should be there but Gussie Lamore, just home from Dawson. She and her sister Belle were singing at a local nightclub. Bill signed over a part interest in a Nome gold claim to Gussie and she let it be known that she and her old love might marry. Suddenly Belle Lamore and Swift went missing from Butte.

a Nome gold claim to Gussie and she let it be known that she and her old love might marry. Suddenly Belle Lamore and Swift went missing from Butte, Montana. Soon Gussie received a wire from her sister: Belle and Swift had married and chartered a Pullman car for New York City.

This marriage (he now had three official wives) cooled off very fast and Bill drifted back to Alaska, this time to the Valdez area where he took up prospecting again.

For once he had poor luck and using an assumed name (Williams), he returned south and holed up in a room at the Victoria Hotel in Seattle.

Bill recoups his fortunes...

His reverie of self pity was shattered by a loud pounding on the door. He opened it just a crack and staggered backward. Mrs. Iola Beebe shoved the door open and flounced into the room.

Partially naked, Bill leaped onto the bed and pulled the covers up over his face. In the meantime his mother-in-law screeched out all the bitter- ness that boiled inside her. He beseeched her to leave him alone. He was finished, he said, all washed up and ready to die.

When at length she took a good look at the scruffy, sorrowful-looking waif on the bed, her maternal instincts awakened (or was it something else?) in spite of her anger. Bill quickly noticed the softening of her resolve. Soon he had her listening raptly to his tale of woe: how sorry he was for his mistakes and how he had only one chance to make amends—that was to head north again to the newly discovered Tanana River goldfields in Alaska.

Mrs. Beebe went out and pawned her jewellery to grubstake the new adventure. Afterwards she was amazed at how quickly Swiftwater became his former self.

From Dawson City he hiked over the trail to the headwaters of the Tanana River. He was seen tramping into Fairbanks wearing one rubber boot, one rubber overshoe, and his old yellow mackinaw. There, among many old cronies from the early rush into the Klondike, Bill obtained a partial interest in a couple of claims on Cleary Creek. They turned out to be in- credibly rich.

A small settlement grew up around his claims. They named it Gates City, in honour of Bill who, besides his womanizing and gambling, was famous for being able to spot a likely

piece of ground. Word of his new for- tune got around. Soon, two very de- termined women waited in Fairbanks for him to come out of the bush—-Iola Beebe and Bill's sister (the step- mother of Kitty Brandon).

Packing a suitcase full of gold, Swiftwater boarded a sternwheeler for the coast. Mrs. Beebe, now well- tuned to his devious ways, booked passage on the same boat. She kept her eyes on him for the entire jour- ney. At St. Michael, Alaska, they changed to a ship and again she never let Bill out of her sight.

A lechorous monster...

When they reached Seattle, Swiftwater jumped onto a barge and then to shore before the ship was fully docked. Mrs. Beebe set police and private detectives on his trail.

They scooted him out of a Seattle bar and into jail went Swiftwater; the charge, bigamy.

He had hidden his gold and Mrs. Beebe couldn't touch his mining claims. Through prison bars he persuaded her to bail him out. He would retrieve his gold, pay her some money, and straighten out his affairs. Part of the deal was that Bera must grant him a divorce so he could shake the bigamy charge.

Mrs. Beebe arranged everything and Bill was let out of prison. He eloped again—with Kitty Brandon. So far Mrs. Beebe hadn't received a penny from her slippery son-in-law.

Incredulous reporters sought her out for the story. The ensuing news- paper coverage must surely have encouraged other mothers-in-law to look more kindly on the men their own daughters had married.

Swiftwater divorced Kitty and went back to his claim in Alaska. Mrs. Beebe, upon learning that he had taken another $200,000 worth of gold from the ground, decided to make another attempt to gain redress from Bill— the man who had ruined her life. She caught up to him on a side street in Fairbanks.

She grabbed him and shook him like a mother would an errant child. He pulled $50 from his pocket and as she reached for the money he slipped away from her and ran off down the street.

That was the last time Mrs. Beebe ever saw Swiftwater Bill Gates. Somehow he clambered aboard a departing boat and returned to the south where he declared bankruptcy.

He had already signed his claim over to a friend in Fairbanks. Unable to touch his resources, his mother-in-law garnered some measure of re- venge by publishing a book on Swiftwater. The book described Bill as noth- ing more than a *"cowardly, dastardly scalawag"* and a *"lecherous mon- ster."*

Swiftwater Bill joined a silver rush to Peru after that. He was only seen in the U. S. a few more times, and never again after l908. His name disap- peared from the press.

Epilogue

In spite of his prowess in the mining business and his abilities in the northern wilderness, folks always thought of Bill as being something less than a real man.

They laughed at his clothes, his many marriages, his gambling, his es- capades. Yet, in many respects he was a gentleman. He took the insults and exaggerations with good humour and went on looking for gold or for another wife. When he disappeared from North America around 1910, the newspapers—who had hounded him so mercilessly—forgot about him. But the stories about Swiftwater lived on, repeated in almost every book deal- ing with the Klondike Gold Rush. Even today books are going into print that rehash the old stories about Swiftwater, most of them only partly true.

In 1985, I wrote to various historians and to newspapers and libraries, to everyone I could think of. Whatever became of Swiftwater Bill? No one seemed to know. The only clue was a picture and short death notice that appeared in the August, 1950, edition of the *Alaska Weekly*. Further check- ing proved the picture to be of Bill McKay, an Alaskan state senator who came to the Klondike in 1898.

In 1986, I received a letter from Fairbanks, Alaska. It was from Paolo Greer, an Alaskan prospector and adventurer who had given lectures and slide

presentations on his expeditions to Peru. Paolo had called at the of- fice of the *Fairbanks Daily News-Miner* just as my letter requesting infor- mation on Swiftwater had arrived at the editor's desk.

Would I like to know, asked Paolo in his letter, about the final years of Swiftwater Bill? He had just returned from Peru and had some informa- tion. I answered right away. Soon I received a package containing pictures, magazine articles (from Peru), old letters, etc. from which I pieced together the story.

Swiftwater was murdered on February 21, 1937, twenty-eight years af- ter he was last seen in Alaska. The shooting took place in a tiny hut on the Tunquimayo Tributary of the Nusiniscato River in the Quispicanchi District of Southeastern Peru.

A young man named Eduardo Gonzales called Swiftwater up to the sleeping loft of the hut. When Bill's head appeared at the top of the ladder, Gonzales blasted him with a heavy-gauge shotgun.

Eduardo was one of two brothers working for Bill. They killed him for his gold—which they didn't find hidden under the bed—and his tools. The brothers disappeared after the killing and were never seen in the district again.

At the time of his death Swift was 68 years old. He was still prospecting and mining and had big plans for the future. The State Department found it convenient to call the death accidental rather than investigate the murder of another "gringo."

The cabin where Bill was shot no longer stands. His grave site close by was long ago dug up and run through a sluice box, a very fitting tribute to a man whose life always centered around gold.

The three little jars of gold under Swiftwater's bed had been saved by him for a project dear to his heart: he was going to take his daughter, Lydia, to the U.S.A. where they would find her a gringo husband. Swift had met Lydia's mother, Victoria, in 1917 and took her to the jungle with him where Lydia was born. Bill might have married Victoria, who was 16 when he met her, but her parents disapproved of him and would not consent.

Lydia last heard from her father in late January, 1937. He wrote her a letter telling her not to buy clothes or anything; they would obtain every- thing in the U.S, It was the last anyone heard from the one-time greatest high roller of the north.

Swift had other women during his 27 years in the jungle. The press couldn't follow him around like they did in North America so there aren't many details in print. He did have a son by a woman, Marina, in Aporoma, Peru. In general folks said that Bill was a generous man who had no en- emies and that "la ruina de Gates era el juego" (Gates' ruin was gambling).

It can be safely conjectured that from 1910 till his death in 1937, Bill had found his niche in life—mining, guiding the occasional exploration party, chasing young women, gambling, and scouring the Amazon jungle for an- other big strike—which he never found. In North America he went to great lengths to prove to the world that he was a man in spite of his faults. Down here in the jungle that sort of stuff didn't matter.

He was influential in bringing the first big gold dredges into the coun- try and taught his prospecting skills to anyone interested.

The upper Amazon River country, where Bill spent the best years of his life, is a dark forest intersected by countless rivers and smaller streams. Sharp vines, lightning quick vipers, anaconda snakes a foot thick, armor- plated scorpions—with legs and antennae a foot long with lobster-like claws—ants almost two inches long, tropical warble flies, legions of biting insects, rabid vampire bats, voracious piranha fish—these are just a few of the hazards he faced on his travels through the jungle. Yet he did so as easily as any native.

The story of Swiftwater is an age-old tale: a man finds gold, squanders the riches from it, then searches for more. Soon the search itself becomes the all-important motif in his life. All else—sex, material possessions, fame, whatever, are only temporary diversions from the search. Robert Service, Bard of the Yukon, explained it better than anyone:

"...it isn't the gold that I'm wanting, So much as just finding the gold.

Book - Note tht Iola Beebe is is "Mother in-law"

Source - [HB004J][GDrive]

LITTLE, low-eaved, common, ordinary

looking road house, built of logs,

with one room for the bunks, another

for a kitchen and a third for miscellaneous

purposes, used to be well

known to travelers in the Yukon

Valley in Alaska at Circle City. The straggling

little mining camp, its population divided between

American, French-Canadians of uncertain pedigree,

and Indians with an occasional admixture of canny

Scotchmen, whose conversation savored strongly of

the old Hudson Bay Trading Company's days in the far north, enjoyed no reputation outside of Forty Mile, Juneau and the Puget Sound cities of Seattle and Tacoma. From the wharves of these cities in 1895 there left at infrequent intervals, small chuggy, wobbly steamers for Southeastern Alaska points usually carrying in the spring months motley cargoes, of yelping dogs, rough coated, bearded, tanned miners and prospectors from all points of the globe, and great quantities of canned goods of every description.

In those days the eager and hardy prospector who fared forth to the Yukon's dangers in search of gold was usually indifferent to whatever fate befell him. He figured that at best the odds were over whelmingly against him, with just one chance, or maybe ten, in a hundred of striking a pay streak. It was inevitable that a great proportion of the venturous and ignorant Chechacos, or newcomers, who paid their dollars by the hundred to the steamship companies in Seattle, should, after failing in the search for gold, seek means of gaining a miserable existence in some wage paid vocation.

Were it in my power to bring my hero on the stage under more auspicious circumstances than those of which I am about to tell, I would gladly do it. But the truth must be told of Swiftwater Bill, and at the time of the opening of my narrative —and this was before the world had ever heard the least hint of the wonderful Klondike gold discovery —Swiftwater stood washing dishes in the kitchen of the road-house I have just described.

The place was no different from any one of a thousand of these little log shelters where men, traveling back and forth in the dead of winter with dog teams, find temporary lodging and a hurried meal of bacon and beans and canned stuff. It was broad daylight, although the clock showed eleven P. M., in August, 1896. The sun scarcely seemed to linger more than an hour beneath the horizon at nightfall, to re-appear a shimmering ball of light at three o'clock in the morning.

"Bring us another pot of coffee!' shouted one of three prospectors, who sat with their elbows on the table, greedily licking up the remnants of a huge platter full of bacon and beans garnished with some strips of cold, canned roast beef and some

evaporated potatoes, which had been made into a kind of stew.

The hero of my sketch wiped his hands on a greasy towel and, taking a dirty, black tin coffee pot from the top of the Yukon stove, he hurried in to serve his customers.

One of these was six feet two, broad shouldered, sparsely built, hatchet faced, with a long nose, keen blue eyes and with auburn colored hair falling almost to his shoulders. French Joe was the name he went by, and no more intrepid trapper and prospector ever lived in the frozen valley of the Yukon than he. The other two were nondescripts— one with a coarse yellow jumper, the other in a dark blue suit of cast off army clothes. The man in the jumper was bearded, short and chunky, of German extraction, while the other was a half-blood Indian.

Swiftwater, as he ambled into the room, one hand holding his dirty apron, the other holding the coffee pot, was not such a man as to excite the interest of even a wayfarer in the road-house at Circle. About 35 years old, five feet five inches tall, a scraggly growth of black whiskers on his chin, and long, wavy moustaches of the same color, curling from his upper lip, Swiftwater did not arouse even a passingglance from the trio at the table.

"Boys, de' done struck it, al' right, 'cause Indian George say it's all gold from ze gras' roots, on Bonanza. An' it's only a leetle more'n two days polin' up ze river from ze T'hoandike."

It was French Joe who spoke, and then when he drew forth a little bottle containing a few ounces of gold nuggets and dust, Swiftwater Bill, as he poured the third cup of coffee, gazed open mouthed on the showing of yellow treasure.

It is only necessary to say that from that moment Swiftwater was attentive to the needs of his three guests, and when he had overheard all of their talk he silently, but none the less positively, made up his mind to quit his job forthwith and to "mush" for the new gold fields.

And this is why it was that, the next morning, the little Circle Citv road-house was minus a dishwasher and all round handyman. And before the little community was well astir, far in the distance, up the Yukon river, might have been seen the little, dark

bearded man poling for dear life in a flat-bottom boat, whose prow was pointed in the direction of the Klondike river.

Chatper 2

WOULD be useless to encumber my story with a lengthy and detailed narrative of Swiftwater Bill's experiences in the first mad rush of goldseekers up the narrow and devious channels of Bonanza and Eldorado Creeks. The world has for eleven years known the entrancing story of George Carmack's find on Bonanza—how, from the first spadeful of grass roots, studded with gold dust and nuggets, which filled a tiny vial, the gravel beds of Bonanza and Eldorado and a few adjoining creeks, all situated within the area of a township or two, produced the marvelous sum of $50,000,000 within a few years.

Swiftwater struck gold from the very first. He located No. 13 Eldorado, and had as his neighbors such well known mining men as Prof. T. S. Lippy, the Seattle millionaire, who left a poorly paid job as physical director of the Y. M. C. A. in Seattle to prospect for gold in Alaska ; Ole Oleson ; the Berry Bros., who cleaned up a million dollars on two and a fraction claims on Eldorado ; Antone Stander ; Michael Dore, a young French-Canadian, who died from exposure in a little cabin surrounded by tin oil cans filled to overflowing with the yellow metal, and others equally well known.

Swiftwater 's ground on No. 13 Eldorado was fabulously rich— so rich that after he had struck the pay streak, the excitement was too much for him and he forthwith struck out for the trail that leads to Dawson. And now I am about to reveal to Alaskans and others who read this little book a quality about Swiftwater of which few people had any knowledge whatever, and this shows in a startling way how easy it was in those halcyon days in the Golden Klondike for a man to grasp a fortune of a million dollars in an instant and then throw it away with the ease and indifference that a smoker discards a half-burned cigar.

Swiftwater, as may well be imagined, when he struck the rich layers of gold in the candle-lit crevices

struck the richest layers of gold in the candle-lit crevices of bedrock on Eldorado a few feet below the surface, could have had a half interest in a half dozen claims on each side of him if he had simply kept his mouth shut and informed those he knew in Dawson of the strike, on condition that they would share half and half with him. This was a common transaction in those days and a perfectly legitimate one, and Swiftwater could have cleaned up that winter beyond question $1,000,000 in gold dust, after paying all expenses and doing very little work himself, had he exercised the most common, ordinary business ability.

Instead, Swiftwater, when he struck Dawson, threw down a big poke of gold on the bar of a saloon and announced his intention of buying out the finest gambling hall and bar in town. Dawson was then the roughest kind of a frontier mining camp, although the mounted police preserved very good order. There were at least a score of gambling halls in Dawson and as many more dance halls. The gambling games ran continually twenty-four hours a day, and the smallest wager usually made, even in the poorest games, was an ounce of gold, or almost $20.

When Bill laid down his poke of gold on the bar of a Dawson saloon—it was so heavy he could hardly lift it—he was instantly surrounded bv a mob of thirty or forty men and a few women.

"Why, boys!" said Swiftwater, ordering a case of wine for the thirsty, while he chose appolinaris himself, "that's easy enough! All you've got to do is to go up to Eldorado Creek and you can get all the gold you want by simply working a rocker about a week."

That settled the fate of Eldorado, for the next day before three o'clock in the morning there was a stampede to the new find, and in twenty-four hours the whole creek had been staked from mouth to source.

Comfortably enjoying the knowledge that he had $300,000 or $400,000 in gold to the good, Swiftwater set about finding ways to spend it.

His first order "to the outside' was for a black Prince Albert coat and a black silk top hat, which came in in about five or six weeks and were immediately donned by Swiftwater. By this time

immediately donned by Swiftwater. By this time he had become the owner of the Monte Carlo, the biggest gambling hall in Dawson.

"Tear the roof off, boys!" Swiftwater said when the players on the opening night swarmed in and asked what was the limit of the bets.

"The sky is the limit and raise her up as far as you want to go, boys," said Swiftwater, "and if the roof's in your way, tear it off!"

Just about this time came the first of Swiftwater 's affaires d' l'amour, because a day or two previously five young women of the Juneau dance halls had floated down the river in a barge and gone to work in Dawson. There were two sisters in the group. Both of them were beautiful women, young, bright entertaining and clever in the way such women are. They were Gussie and May Lamore.

"I am going to have a lady and the swellest that's in the country," Swiftwater told his friends, and then, donning his best clothes, the costliest he could buy in Dawson, Swiftwater went over to the dance hall, where the Lamore sisters were working, and ordered wine for everybody on the floor.

Gussie was dancing with a big, brawny, French-Canadian miner. Her little feet seemed scarcely to touch the floor of the dance hall as the miner whirled her around and around. She was little, plump, beautifully formed and with a face of more than passing comeliness.

You women of "the States"—when I say "the States" I simply speak of our country as do all the old-timers in Alaska, and not as if it was some foreign country, but as it really is to us, the home of ourselves and pur forebears, yet separated from us bv thousands of miles of iceclad mountain barriers and storm swept seas have no conception of the dance hall girl as a type of the early days of Dawson. Many of the were of good families, young, comely, and fairly well educated. What stress or storm befell them, or other inhospitable element in their lives drove them to the northern gold mining country, God knows it is not my portion to tell. Nor could any one of them probably, in telling her own life story, give the reasons for the appearance in these dance halls of any of her sisters.

It is enough for you, and me to understand— and it requires no unusual insight into the human heart and its mysteries to do so—that when a miner had spent a few months in the solitude of the hills and gold lined gulches of the Yukon Valley, if he finally found the precious gold on the rim of the bedrock, his first thought was to go back to "town." Back to toAvn? Yes, because "town" meant and still means to those hardy men any place where human beings are assembled, and the dance hall, in those rough days, was the center of social activities and gaieties.

The sight of little Gussie Lamore, with her skirt just touching the tops of her shoes, spinning around in a waltz with that big French-Canadian, set all of Bill's amorous nature aglow. He went to the hotel, filled his pockets with pokes of gold dust and came

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Housatonic

Dr. Frederick Lamont Gates (born 1886)

[HG00BS][GDrive]

Born 17 Dec 1886 [HL006N][GDrive]

Father - https://en.wikipedia.org/wiki/Frederick_Taylor_Gates

See :

- **1918 Spanish Influenza**

Memorial / FindAGrave profile for "Dr Frederick Lamont Gates"

Source : [HL006N][GDrive]

- BIRTH: 17 Dec 1886 , Minneapolis, Hennepin County, Minnesota, USA
- DEATH: 17 Jun 1933 (aged 46), Cambridge, Middlesex County, Massachusetts, USA
- BURIAL : Mount Hebron Cemetery. Montclair, Essex County, New Jersey, USA

Frederick Lamont Gates, born in Minneapolis, Hennepin County, MN, December 17, 1886, married, September 11, 1917 in Duluth, St. Louis County, MN, Dorothy Olcott, born June 20, 1891, daughter of William James and Fannie (Bailey) Olcott.

His father said he was "born for study and inquiry and disclosed this at an early age". Ill health disqualified him from athletic activities and his life was centered wholly on activities of the mind. He was accepted at Harvard, Yale and the University of Chicago and, after a year and a half at Chicago, he chose to continue his studies at Yale. He stood at the head of his class, received the Phi Beta Kappa key, and graduated Summa Cum Laude in 1909. The same year, he entered John Hopkins Medical School, and graduated with highest honors four years later. He was recommended for research work at the Rockefeller Institute and took a position on its staff.

On the declaration of war in 1917, Mr. Gates volunteered for the U.S. Army Medical Corps, was accepted and commissioned a first lieutenant. He was assigned to duty on the Rockefeller Institute staff where he gave lectures to military groups selected to attend training there. He was also assigned to visit training camps, in the interest of preventive medicine, and traveled widely. He continued at the institute after the war and his researches, especially those on influenza, received worldwide recognition. His health failed in 1927 and he was required to undertake a less demanding schedule. He continued his research at Harvard and moved his family to Cambridge, MA where he died, June 17, 1933, at age forty-six, after suffering a concussion from a fall.

He is honored in a memorial at the family plot in Mount Hebron Cemetery, Montclair, NJ. His widow, Dorothy, married, second, Leonard Elsmith, but this ended in divorce, and there were no children by her second marriage. She lived for many years in Woods Hole, Barnstable County, MA where she died, January 29, 1984.

Children of Frederick & Dorothy:

1. Olcott "Ollie" b. 19 Mar 1919, d 27 Jul 1999
2. Barbara b. 17 Jan 1921, d. 3 May 1993
3. Frederick Taylor b. 14 Feb 1923
4. Dorothy b. 27 Jun 1924, d. 19 Jun 1993
5. Deborah b. 27 Mar 1927, d. 8 Dec 1990

2006 (April) JEM article : "Influenza: exposing the true killer"

Article PDF : [HP0056][GDrive] / Heather L. Van Epps

JEM FROM THE ARCHIVE

Influenza: exposing the true killer

In the early 1930s, Richard Shope isolated influenza virus from infected pigs. Shope's finding was quickly followed by the isolation of the influenza virus from humans, proving that a virus—not a bacterium, as was widely believed—caused influenza.

In 1892, German bacteriologist Richard Pfeiffer isolated what he thought was the causative agent of influenza. The culprit, according to Pfeiffer, was a small rod-shaped bacterium that he isolated from the noses of flu-infected patients (1). He dubbed it *Bacillus influenzae* (or Pfeiffer's bacillus). Few doubted the validity of this discovery, in large part because bacteria had been shown to cause other human diseases, including anthrax, cholera, and plague.

Richard Shope, 1931.

The filtration question

When history's deadliest influenza pandemic began in 1918, most scientists believed that Pfeiffer's bacillus caused influenza. With the lethality of this outbreak (which killed an estimated 20 to 100 million worldwide) came urgency—researchers around the world began to search for Pfeiffer's bacillus in patients, hoping to develop antisera and vaccines that would protect against infection. In many patients, but not all, the bacteria were found. Failures to isolate B. influenzae (now known as *Haemophilus influenzae*) were largely chalked up to inadequate technique, as the bacteria were notoriously difficult to culture (2).

The first potential blow to Pfeiffer's theory came from Peter Olitsky and Frederick Gates at The Rockefeller Institute. Olitsky and Gates took nasal secretions from patients infected with the 1918 flu and passed them through Berkefeld filters, which exclude bacteria. The infectious agent—which caused lung disease in rabbits—passed through the filter, suggesting that it was not a bacterium (3, 4). Although the duo had perhaps isolated the influenza virus (which they nevertheless referred to as an atypical bacterium called *Bacterium pneumosintes*), other researchers could not reproduce their results. One of the doubters was Oswald Avery (Rockefeller Institute), who developed a culture media—chocolate agar—that optimized the growing conditions for B. influenzae and thus minimized false negative results from patient samples. Thus, the idea that flu was transmitted by a filterable agent (or virus) was dismissed.

Insights from pigs

Olitsky and Gates would not be vindicated until a decade later, when Shope—a young physician from Iowa then working on hog cholera at the Rockefeller Institute—turned his attention to swine influenza.

Pig farmers in Iowa had reported two outbreaks—one in 1918 and another in 1929—of a highly contagious, influenza-like disease among their animals. The disease bore such a remarkable resemblance to human flu that it was named swine influenza. Shope and his mentor, Paul Lewis, had reported two outbreaks—one in 1918 and another in 1929—of a highly contagious, influenza-like disease among their animals. The disease bore such a remarkable resemblance to human flu that it was named swine influenza. Shope and his mentor, Paul Lewis, took mucus and lung samples from the infected pigs and attempted to isolate the disease-causing agent. They quickly isolated a bacterium that looked exactly like Pfeiffer's human bacterium (and was thus called *B. influenzae suis*), but when they injected the bacteria into pigs, it caused no disease (5).

Shope then filtered the samples and, like Olitsky and Gates, found that the filtrate contained the infectious agent. Shope's filtrate caused a highly contagious, influenza-like disease in pigs—albeit a more mild one than seen in naturally-infected pigs. Mixing the filtrate with the bacterium reproduced the severe disease. He concluded—correctly—that the filterable agent caused the infection, which then facilitated secondary infection with the bacterium (6). Shope published his results in a series of papers in *The Journal of Experimental Medicine* (5, 6).

Using Shope's technique, Wilson Smith, Christopher Andrewes, and Patrick Laidlaw (National Institute for Medical Research, UK) soon isolated the virus from humans (7), laying to rest any lingering doubts about the nature of the flu-inducing agent.

Both Shope and the British trio later demonstrated that sera from humans that were infected with the 1918 flu virus could neutralize the pig virus, leading them to conclude that the swine virus was a surviving form of the 1918 human pandemic virus (8, 9). In fact, a related strain of flu still circulates among pigs today.

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[HP0057][GDrive]

Abstract

In the early 1930s, [Dr. Richard Edwin Shope (born 1901)] isolated influenza virus from infected pigs. Shope's finding was quickly followed by the isolation of the influenza virus from humans, proving that a virus—not a bacterium, as was widely believed—caused influenza.

In 1892, German bacteriologist Richard Pfeiffer [https://en.wikipedia.org/wiki/Richard_Friedrich_Johannes_Pfeiffer] isolated what he thought was the causative agent of influenza. The culprit, according to Pfeiffer, was a small rod-shaped bacterium that he isolated from the noses of flu-infected patients. He dubbed it Bacillus influenzae (or Pfeiffer's bacillus). Few doubted the validity of this discovery, in large part because bacteria had been shown to cause other human diseases, including anthrax, cholera, and plague.

The filtration question

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Insights from pigs

Olitsky and Gates would not be vindicated until a decade later, when [Dr. Richard Edwin Shope (born 1901)]—a young physician from Iowa then working on hog cholera at the Rockefeller Institute—turned his attention to swine influenza.

Pig farmers in Iowa had reported two outbreaks—one in 1918 and another in 1929—of a highly contagious, influenza-like disease among their animals. The disease bore such a remarkable resemblance to human flu that it was named swine influenza. [Dr. Richard Edwin Shope (born 1901)] and his mentor [Dr. Paul Adin Lewis (born 1879)] took mucus and lung samples from the infected pigs and attempted to isolate the disease-causing agent. They quickly isolated a bacterium that looked exactly like Pfeiffer's human bacterium (and was thus called B. influenzae suis), but when they injected the bacteria into pigs, it caused no disease.

Shope then filtered the samples and, like Olitsky and Gates, found that the filtrate contained the infectious agent. [Dr. Richard Edwin Shope (born 1901)]**'s filtrate caused a highly contagious, influenza-like disease in pigs—albeit a more mild one than seen in naturally-infected pigs.** Mixing the filtrate with the bacterium reproduced the severe disease. **He concluded—correctly—that the filterable agent caused the infection, which then facilitated secondary infection with the bacterium** (6). Shope published his results in a series of papers in The Journal of Experimental Medicine .

Using Shope's technique, Wilson Smith, Christopher Andrewes, and Patrick Laidlaw (National Institute for Medical Research, UK) soon isolated the virus from humans (7), laying to rest any lingering doubts about the nature of the flu-inducing agent.

Both [Dr. Richard Edwin Shope (born 1901)] and the British trio later demonstrated that sera from humans that were infected with the 1918 flu virus could neutralize the pig virus, leading them to conclude that the swine virus was a surviving form of the 1918 human pandemic virus. In fact, a related strain of flu still circulates among pigs today.

https://www.theguardian.com/science/the-h-word/2013/jul/08/influenza-virus-discovery-mrc-nimr :

"[**Sir Walter Morley Fletcher (born 1873)**], Secretary of the MRC, suggested to the War Office and Army Medical Services that attention should be turned to the possible role of a so-called 'filter-passing virus', and in November 1918 the search for the virus began. The first British investigations into the role of a virus in influenza were carried out by two teams in France and within weeks both claimed they had identified a filterable agent from sick servicemen."

Other key related names :

- **Dr. Richard Edwin Shope (born 1901)** (who Influenced [**Dr. Erich Traub (born 1906)**])
- **Dr. Paul Adin Lewis (born 1879)**

Nov 10 1933 - Shope talks "hog flu" ... https://www.newspapers.com/image/547667039/?terms=%22Richard%20Shope%22&match=1

https://www.newspapers.com/image/302983597/?terms=%22Richard%20Shope%22&match=1

1917 (July 01) - engagement - https://www.newspapers.com/image/369404943/?terms=%22Frederick%20L.%20Gates%22

1920 (July) - Usher at big-name wedding : https://www.newspapers.com/image/83186602/?terms=%22Frederick%20L.%20Gates%22

1923 (Feb 22)

Full newspaper page : [HN01KK][GDrive]

FEBRUARY 22, 1923. ERIE COUNTY INDEPENDENT.

INFLUENZA VACCINE.

Killed Cultures of Germ Are Used On Men of the Army Medical School.

A vaccine for combating influenza has been developed and tested on human subjects, an article published in the science magazine, Science, reveals. Killed cultures of the newly announced influenza germ, bactehium pneumosintes, are used. All is ready for quantity production of the vaccine if another severe epidemic should require its widespread use.

The article, by Drs. Peter K. Olitsky and Frederick L. Gates of the Rockefeller Institute for Medical Research, will tell how the mild influenza epidemic of about a year ago gave these scientists new strains of the minute and remarkable influenza germ, which they discovered about two years ago. This new supply of germs resulted in such decisive experiments on rabbits that human experimentation was undertaken.

Officers and men at the Army Medical school in Washington volunteered to submit to vaccination with killed cultures of bacterium pneumosintes, so named because when alive it injures the lungs. Each subject was given three shots of the dead germs under his skin in a manner similar to that employed with antityphoid vaccine. The immediate reaction and inconvenience was even milder than that experienced after antityphoid vaccination. But ten days after the final injection, the blood of seven out of nine men examined contained substances called agglutinins, which attacked and rendered harmless the influenza germs that were brought into contact with them. This showed that immunity to the disease germs had been established through the vaccination.

As a result of these first human tests, the vaccine is being offered to much larger groups of men in the United States army, the article says.

"It is not possible, of course, to determine the protective effects of these injections directly," the scientists report. "In the event of a recurrence of epidemic influenza in the near future, however, the efficacy of vaccination with bacterium pneumosintes as a preventive masure may be put to test."

Without waiting for this final judgment, methods have been developed so that large amounts of the influenza vaccine can be quickly produced if its widespread use should be needed in combating a severe epidemic.

Dr. Olitsky and Gates report experiments that show that persons who have recovered from flu have protective substances in their blood similar to those produced by vaccination with the influenza germs. This would indicate that having the flu once will protect against a second attack for some time, just as one attack of smallpox is as effective as a vaccination.

But larger tests of medical progress are opened by the revelations in the article. Drs. Olitsky and Gates declare that we are at the threshold of knowledge of a group of minute microorganisms, of which the influenza germ is just the first. Bacterium pneumosintes is not the only microorganism found in the respiratory tract that flourishes without free oxygen and passes through the pores of the finest porcelain filters. The Rockefeller scientists have found and cultivated other filterable organisms, which do not cause disease in rabbits. They state:

"They indicate, however, that the cultural methods recently employed in these studies may lead to the isolation of a group or groups of hitherto undescribed bacterial inhabitants of the upper respiratory tract and so they point to interesting opportunities in this field of bacteriology."

[HN01KL][GDrive]

1923 (March) - Time Magazine : "Medicine: No Armistice Yet"

Source : [HP0058][GDrive]

"The recent announcement of the discovery of the influenza germ at the Rockefeller Institute for Medical Research, broadcasted by radio from the New York State Department of Health and given wide newspaper publicity, has on second thought, like so many other much-heralded scientific events, turned out to be less exciting than was at first supposed. The Journal of the American Medical Association, official organ of the medical profession in the United States, carries an editorial stating the residue of facts in the case, on the authority of Dr. Simon Flexner, director of the Institute.

*The " discovery" is simply the summarizing of scientific papers published during the past three years by **Drs. Frederick L. Gates** and **Peter K. Olitsky**, of the Institute staff. A new microorganism, bacterium pneumosintes, has been isolated from the noses and throats of several patients with influenza, has been independently cultivated, and has produced influenza-like symptoms when injected into rabbits. Numerous other varieties of bacteria, such as Pfeiffer's bacillus, are usually present in these puzzling respiratory diseases, and it is not clear that the new organism is the invariable causal agent of influenza, though it is believed that it produces conditions in the lung tissues which facilitate the onset of pneumonia and other complications. No specific vaccine, or serum has yet been devised to combat the bacterium, nor has the work been confirmed by other observers. We are still a long way, therefore, from scientific control of epidemic influenza."*

1923 book - "Science remaking the world" - By Otis Caldwell, but section on influenza epidemics by Frederick L. Gates

PDF : [HB0061][GDrive]

SCIENCE REMAKING THE WORLD

33758

EDITED BY
OTIS W. CALDWELL, PH.D.
Director of the Lincoln School of Teachers College, and Professor of Education, Columbia University
AND
EDWIN E. SLOSSON, PH.D.
Editor, "Science Service"

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1923

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[HB0062][GDrive]

PREFACE

DURING the summer of 1922, nineteen men coöperated in presenting a course of lectures in Teachers College, Columbia University. The purpose of the course was primarily to provide interesting and engaging information about the achievements of modern science. It attempted to give students of all subjects an understanding of certain types of achievements of modern science, to suggest the meaning of science in various aspects of modern life and thought; to indicate the place of science in modern, social, and industrial relations. Before half of the lectures had been presented, hundreds of listeners had requested me, as organizer of the course, to assemble and publish part of the lectures and if possible, to find means for wide distribution of the resulting volume. In my desire that the volume, when published, might benefit from the unusual style and scientific clarity of Dr. E. E. Slosson, his assistance was successfully importuned in the venture. Then, a gracious and generous though anonymous benefactor agreed to finance the placement of a limited number of copies of the proposed volume in libraries of educational institutions. Finally, the publishers coöperated by providing at bare cost of production the first lot of copies for general distribution, depending upon later sales for their profits from the publication. The authors and the

[HB0063][GDrive]

editors have contributed their services without personal remuneration, and have done this as a welcome privilege in helping to extend the achievements and underlying truths of this most conspicuous field of modern thought. Not all the lectures which were given in the course are available; also changes which are advisable for publication have been made; and Dr. Kellogg and Dr. Williams have kindly added chapters upon topics of wide interest and importance.

Why give such a course of lectures, and why publish such a volume? Because the citizen of our day uses modern science at each turn of his day's work. If he is a thinking citizen, he is ambitious to benefit by what he understands as scientific procedure in using facts, principles, and occurrences. A manufacturer wants his operators to possess whatever knowledge of materials and processes science has produced for the improvement of quality and quantity of output. A lawyer or preacher desires factual illustrative material from the working world of science with which to make his case clear and convincing. If this citizen is a teacher of any subject or grade he deals with the biggest science need of all, for those whom he teaches belong to an age which science has made unlike any of its predecesssors. To men in industry, commerce, and the professions, it is of increasing importance that progressive workers shall have knowledge not only of accomplishments of science, but of the methods by which discoveries are made.

Some thirty years ago Louis Pasteur said:

In our century science is the soul of the prosperity of nations and the living source of all progress. Undoubtedly, the tiring daily

[HB0064][GDrive]

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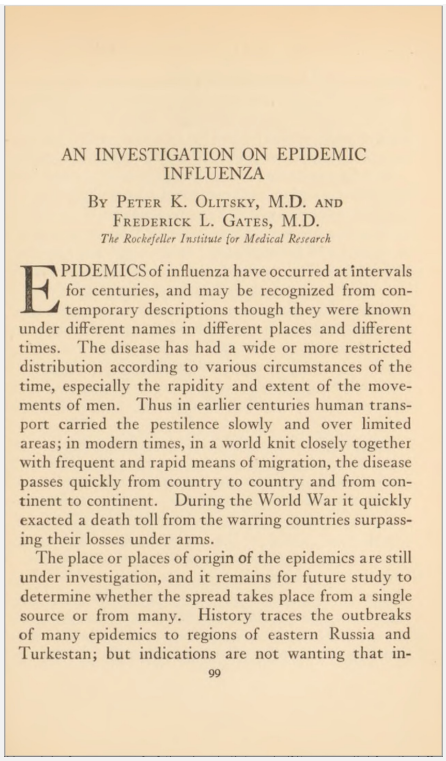
[HB0066][GDrive]

Gates article, pages 99 to 113 / For full text see : [HB0061][GDrive]



AN INVESTIGATION ON EPIDEMIC INFLUENZA

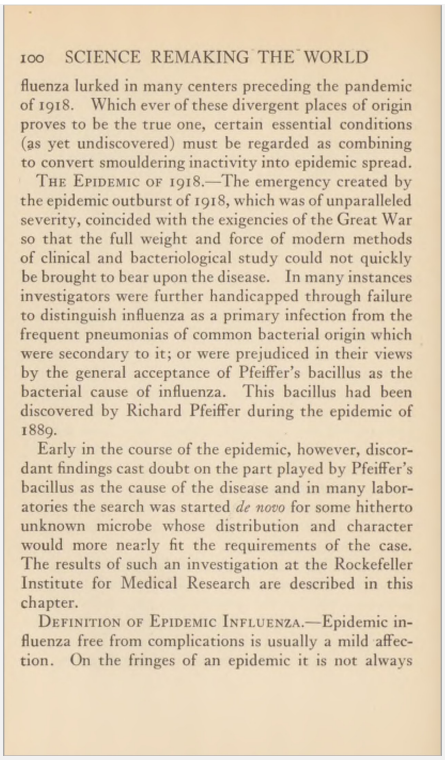
By Peter K. Olitsky, M.D. and Frederick L. Gates, M.D.
The Rockefeller Institute for Medical Research

EPIDEMICS of influenza have occurred at intervals for centuries, and may be recognized from contemporary descriptions though they were known under different names in different places and different times. The disease has had a wide or more restricted distribution according to various circumstances of the time, especially the rapidity and extent of the movements of men. Thus in earlier centuries human transport carried the pestilence slowly and over limited areas; in modern times, in a world knit closely together with frequent and rapid means of migration, the disease passes quickly from country to country and from continent to continent. During the World War it quickly exacted a death toll from the warring countries surpassing their losses under arms.

The place or places of origin of the epidemics are still under investigation, and it remains for future study to determine whether the spread takes place from a single source or from many. History traces the outbreaks of many epidemics to regions of eastern Russia and Turkestan; but indications are not wanting that in-

99

Page 99 : [HB0067][GDrive]



100 SCIENCE REMAKING THE WORLD

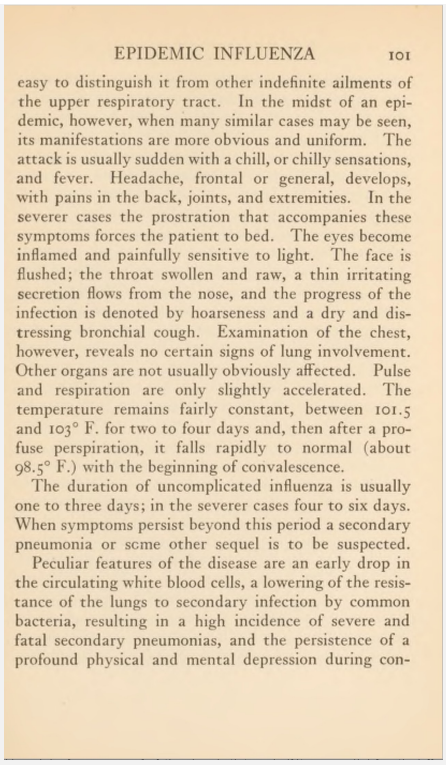
fluenza lurked in many centers preceding the pandemic of 1918. Which ever of these divergent places of origin proves to be the true one, certain essential conditions (as yet undiscovered) must be regarded as combining to convert smouldering inactivity into epidemic spread.

The Epidemic of 1918.—The emergency created by the epidemic outburst of 1918, which was of unparalleled severity, coincided with the exigencies of the Great War so that the full weight and force of modern methods of clinical and bacteriological study could not quickly be brought to bear upon the disease. In many instances investigators were further handicapped through failure to distinguish influenza as a primary infection from the frequent pneumonias of common bacterial origin which were secondary to it; or were prejudiced in their views by the general acceptance of Pfeiffer's bacillus as the bacterial cause of influenza. This bacillus had been discovered by Richard Pfeiffer during the epidemic of 1889.

Early in the course of the epidemic, however, discordant findings cast doubt on the part played by Pfeiffer's bacillus as the cause of the disease and in many laboratories the search was started *de novo* for some hitherto unknown microbe whose distribution and character would more nearly fit the requirements of the case. The results of such an investigation at the Rockefeller Institute for Medical Research are described in this chapter.

Definition of Epidemic Influenza.—Epidemic influenza free from complications is usually a mild affection. On the fringes of an epidemic it is not always

Page 100 : [HB0068][GDrive]



EPIDEMIC INFLUENZA 101

easy to distinguish it from other indefinite ailments of the upper respiratory tract. In the midst of an epidemic, however, when many similar cases may be seen, its manifestations are more obvious and uniform. The attack is usually sudden with a chill, or chilly sensations, and fever. Headache, frontal or general, develops, with pains in the back, joints, and extremities. In the severer cases the prostration that accompanies these symptoms forces the patient to bed. The eyes become inflamed and painfully sensitive to light. The face is flushed; the throat swollen and raw, a thin irritating secretion flows from the nose, and the progress of the infection is denoted by hoarseness and a dry and distressing bronchial cough. Examination of the chest, however, reveals no certain signs of lung involvement. Other organs are not usually obviously affected. Pulse and respiration are only slightly accelerated. The temperature remains fairly constant, between 101.5 and 103° F. for two to four days and, then after a profuse perspiration, it falls rapidly to normal (about 98.5° F.) with the beginning of convalescence.

The duration of uncomplicated influenza is usually one to three days; in the severer cases four to six days. When symptoms persist beyond this period a secondary pneumonia or some other sequel is to be suspected.

Peculiar features of the disease are an early drop in the circulating white blood cells, a lowering of the resistance of the lungs to secondary infection by common bacteria, resulting in a high incidence of severe and fatal secondary pneumonias, and the persistence of a profound physical and mental depression during con-

Page 101 : [HB0069][GDrive]

Notes : Gates make mention of https://en.wikipedia.org/wiki/Hideyo_Noguchi , who died in May 1928 . Similar to the death of **Dr. Paul Adin Lewis (born 1879)** in 1929.

"Artificial Cultivation.—From the beginning of the investigation, while the first animal transmission experiments were in progress, attempts were made to isolate the active agent in artificial cultures outside the body. For this purpose the usual methods of cultivation were discarded in favour of the particular methods developed by ***Doctor Noguchi****, based on the early experiments of Doctor Theobald Smith.* ***The Smith-Noguchi culture medium****, which had proved successful in the cultivation of certain highly parasitic microbes, consists of dilute blood serum or tissue fluid with a small fragment of fresh sterile tissue—usually rabbit kidney—and is thus very different from the artificial broths and jellies commonly employed in bacteriology. Besides furnishing nutritive substances the tissue fragment creates an environment favourable to those peculiar "anaerobic" microorganisms which can live only in the absence of air. The choice of this medium for the cultivation of the active agent of the animal transmission experiments proved to be a fortunate one."*

OMG https://en.wikipedia.org/wiki/Theobald_Smith died in 1934

https://www.newspapers.com/image/649176412/?terms=Theobald%20Smith&match=1

https://www.newspapers.com/image/267084049/?terms=Theobald%20Smith&match=1

https://www.newspapers.com/image/573502325/?terms=Theobald%20Smith&match=1

buy until nov 1934 - https://www.newspapers.com/image/215964080/?terms=Theobald%20Smith&match=1 .. CONTROERSEY ..

Pauil Lewis dies.. July 1929 ... [HN01IU][GDrive] .. "rockefeller scientists ... similar death to Noguchi"

1927 (Nov) - Lab Tours, Rockefeller U - https://www.newspapers.com/image/58334273/?terms=%22Frederick%20L.%20Gates%22

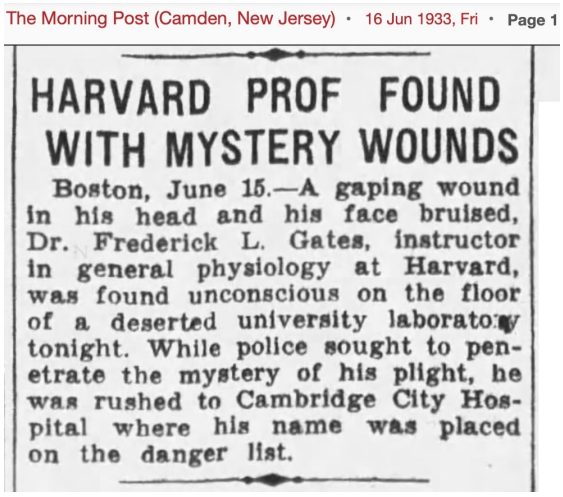
1929 (Feb 09) - Father passes : https://www.newspapers.com/image/515345244/?terms=%22Frederick%20L.%20Gates%22

1930 (Mar 30) - https://www.newspapers.com/image/135691985/?terms=%22Frederick%20L.%20Gates%22

1933 (early June)

NOTE - A week before Gates's fatal accident, [**Sir Walter Morley Fletcher (born 1873)**] (who proposed the possibility 1918 flu was viral, starting in 1918) died **unexpectedly** ..

1933 (June 16)

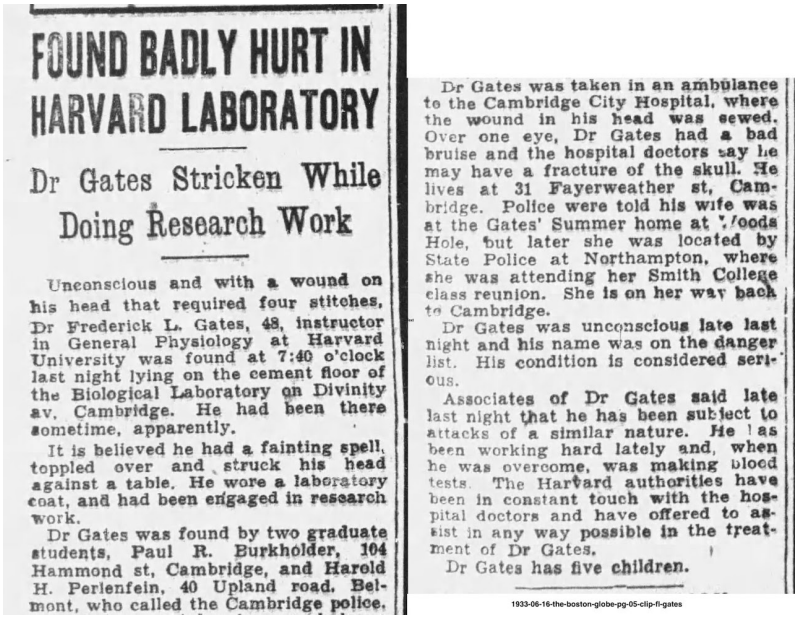


The Morning Post (Camden, New Jersey) • 16 Jun 1933, Fri • Page 1

HARVARD PROF FOUND WITH MYSTERY WOUNDS

Boston, June 15.—A gaping wound in his head and his face bruised, Dr. Frederick L. Gates, instructor in general physiology at Harvard, was found unconscious on the floor of a deserted university laboratory tonight. While police sought to penetrate the mystery of his plight, he was rushed to Cambridge City Hospital where his name was placed on the danger list.

Full newspaper page : [HN01KI][GDrive]
clip : [HN01KJ][GDrive]



FOUND BADLY HURT IN HARVARD LABORATORY

Dr Gates Stricken While Doing Research Work

Unconscious and with a wound on his head that required four stitches, Dr Frederick L. Gates, 48, instructor in General Physiology at Harvard University was found at 7:40 o'clock last night lying on the cement floor of the Biological Laboratory on Divinity av, Cambridge. He had been there sometime, apparently.

It is believed he had a fainting spell, toppled over and struck his head against a table. He wore a laboratory coat, and had been engaged in research work.

Dr Gates was found by two graduate students, Paul R. Burkholder, 104 Hammond st, Cambridge, and Harold H. Perlenfein, 40 Upland road, Belmont, who called the Cambridge police.

Dr Gates was taken in an ambulance to the Cambridge City Hospital, where the wound in his head was sewed. Over one eye, Dr Gates had a bad bruise and the hospital doctors say he may have a fracture of the skull. He lives at 31 Fayerweather st, Cambridge. Police were told his wife was at the Gates' Summer home at Woods Hole, but later she was located by State Police at Northampton, where she was attending her Smith College class reunion. She is on her way back to Cambridge.

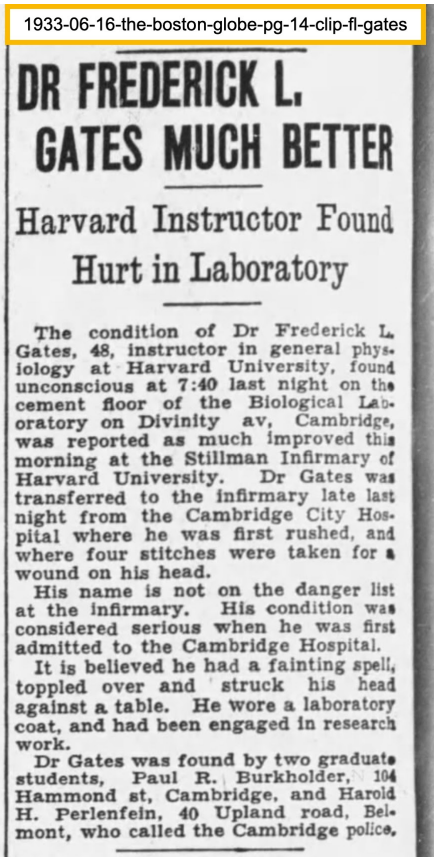
Dr Gates was unconscious late last night and his name was on the danger list. His condition is considered serious.

Associates of Dr Gates said late last night that he has been subject to attacks of a similar nature. He has been working hard lately and, when he was overcome, was making blood tests. The Harvard authorities have been in constant touch with the hospital doctors and have offered to assist in any way possible in the treatment of Dr Gates.

Dr Gates has five children.

1933-06-16-the-boston-globe-pg-05-clip-fl-gates

Full page : [HN01KG][GDrive] / clip : [HN01KH][GDrive]



1933-06-16-the-boston-globe-pg-14-clip-fl-gates

DR FREDERICK L. GATES MUCH BETTER

Harvard Instructor Found Hurt in Laboratory

The condition of Dr Frederick L. Gates, 48, instructor in general physiology at Harvard University, found unconscious at 7:40 last night on the cement floor of the Biological Laboratory on Divinity av, Cambridge, was reported as much improved this morning at the Stillman Infirmary of Harvard University. Dr Gates was transferred to the infirmary late last night from the Cambridge City Hospital where he was first rushed, and where four stitches were taken for a wound on his head.

His name is not on the danger list at the infirmary. His condition was considered serious when he was first admitted to the Cambridge Hospital.

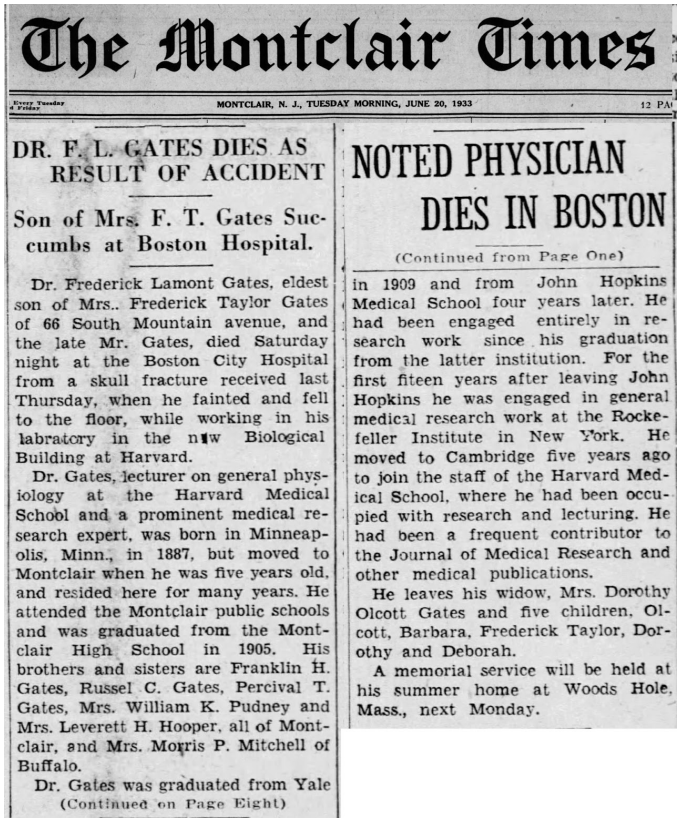
It is believed he had a fainting spell, toppled over and struck his head against a table. He wore a laboratory coat, and had been engaged in research work.

Dr Gates was found by two graduate students, Paul R. Burkholder, 104 Hammond st, Cambridge, and Harold H. Perlenfein, 40 Upland road, Belmont, who called the Cambridge police.

Full page ; [HN01KE][GDrive] / clip : [HN01KE][GDrive]

1933 (June 20)

Full newspaper pages : Page 01 [HN01IR][GDrive] / Page 08 [HN01IT][GDrive]



The Montclair Times

Every Tuesday & Friday — MONTCLAIR, N. J., TUESDAY MORNING, JUNE 20, 1933 — 12 PA

DR. F. L. GATES DIES AS RESULT OF ACCIDENT

Son of Mrs. F. T. Gates Succumbs at Boston Hospital.

Dr. Frederick Lamont Gates, eldest son of Mrs.. Frederick Taylor Gates of 66 South Mountain avenue, and the late Mr. Gates, died Saturday night at the Boston City Hospital from a skull fracture received last Thursday, when he fainted and fell to the floor, while working in his labratory in the new Biological Building at Harvard.

Dr. Gates, lecturer on general physiology at the Harvard Medical School and a prominent medical research expert, was born in Minneapolis, Minn., in 1887, but moved to Montclair when he was five years old, and resided here for many years. He attended the Montclair public schools and was graduated from the Montclair High School in 1905. His brothers and sisters are Franklin H. Gates, Russel C. Gates, Percival T. Gates, Mrs. William K. Pudney and Mrs. Leverett H. Hooper, all of Montclair, and Mrs. Morris P. Mitchell of Buffalo.

Dr. Gates was graduated from Yale

(Continued on Page Eight)

NOTED PHYSICIAN DIES IN BOSTON

(Continued from Page One)

in 1909 and from John Hopkins Medical School four years later. He had been engaged entirely in research work since his graduation from the latter institution. For the first fiteen years after leaving John Hopkins he was engaged in general medical research work at the Rockefeller Institute in New York. He moved to Cambridge five years ago to join the staff of the Harvard Medical School, where he had been occupied with research and lecturing. He had been a frequent contributor to the Journal of Medical Research and other medical publications.

He leaves his widow, Mrs. Dorothy Olcott Gates and five children, Olcott, Barbara, Frederick Taylor, Dorothy and Deborah.

A memorial service will be held at his summer home at Woods Hole, Mass., next Monday.

[HN01IS][GDrive]

BITCHUTE @Housatonic YOUTUBE @HousatonicLive ODYSEE @Housatonic BRIGHTEON @Housatonic

William Henry Gates (born 1891)

"WHG1" / #WHG1

Full Gates family album pics (WSJ) album : [HN00YX][GDrive] / This pic : [HN00YY][GDrive]

From left to right, **William Henry Gate [born 1891]**, Lillian Elizabeth Gates, Bill Gates Sr. and his only sibling, Merridy Gates.

Also known as "William Henry Gates I"

Birthdate: March 14, 1891 in Seattle, King County, Washington, United States [HL0049][GDrive]

Death: August 17, 1969 (78) in Bremerton, Kitsap County, Washington, United States [HL0049][GDrive]

Parents - Father is William Henry Gates (born 1858) and **Rebecca [Eppinhauser] Gates**

Husband of Lillian Elizabeth Gates

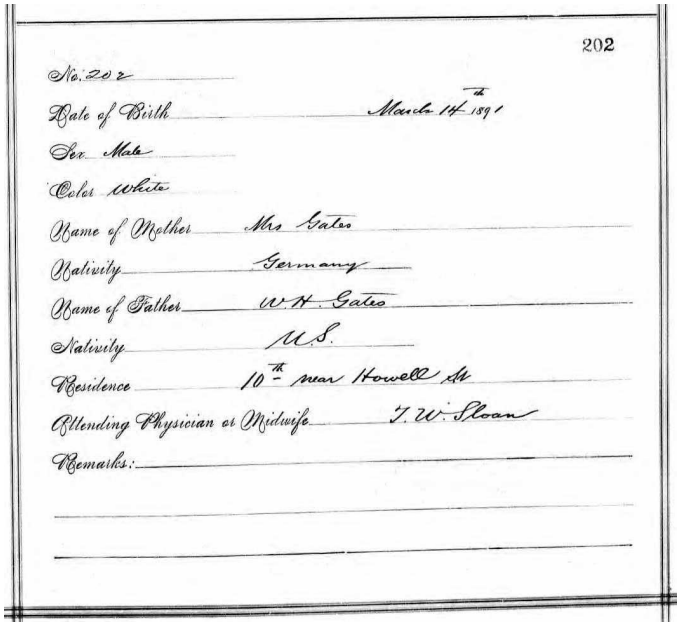
Father of Merridy Belle Williams; William H. Gates, Sr. and Private Private

Brother of Florence Martha Schumaker and Pearl Ann Hogenson

1891 (March) - Birth - In Seattle

Full sheet - [HL004O][GDrive]

Birthplace - Seattle, King, Washington, USA - The Residence is "10th [illegible] Howell St."



202

No. 202
Date of Birth — March 14th 1891
Sex Male
Color White
Name of Mother Mrs Gates
Nativity Germany
Name of Father W.H. Gates
Nativity U.S.
Residence 10th mar Howell St
Attending Physician or Midwife J. W. Sloan
Remarks:

[HL004P][GDrive]

1900 - USA Census

Full PDF of transcript - [HS002W][GDrive] / Full census sheet - [HS002T][GDrive]

Father's Occupation is hard to read, might say "grocer" ? NOTE : One servant living with the Gates family at this time

1. **Address** - The Gates family is living in **Seattle**, but the address is impossible to read on the Census form. It looks a little bit like "South of Canal" is written there, but not sure.

Record Transcription:
Us Census 1900

Household Members

First name(s)	Last name	Relationship	Marital status	Gender	Age	Birth year	Birth place
William M	**Gates**	**Self**	**Married**	**Male**	**40**	**1860**	**Pennsylvania**
Rebecca	Gates	Wife	Married	Female	31	1869	Germany
Florence M	Gates	Daughter	Single	Female	11	1889	Washington
William M	Gates	Son	Single	Male	9	1891	Washington
Pearl A	Gates	Daughter	Single	Female	5	1895	Washington

William M Gates's Census Details

First name(s)	William M
Last name	Gates
Relationship	Self
Marital status	Married
Gender	Male
Age	40
Birth year	1860
Birth place	Pennsylvania
Marriage year (estimated)	1888
Ethnicity	American
Race	White
Immigration year	-
Spouse's first name(s)	Rebecca
Spouse's last name	Gates
Spouse's birth place	Germany
Head of household's first name(s)	William M
Head of household's last name	Gates
Father's birth place	United States
City/township	Seattle
County	King
State	Washington

[HS002X][GDrive]

1910 Census - Residence in Seattle

Full PDF of transcript : [HS002Y][GDrive] / Full census image - [HS002Q][GDrive]

- At age 19, William Henry Gates is now listed as "working in furniture store"

Record Transcription:
Us Census 1910

Household Members

First name(s)	Last name	Relationship	Marital status	Gender	Age	Birth year
S William H	**Gates**	**Self**	**Married**	**Male**	**52**	**1858**
Rebecca	Gates	Wife	Married	Female	41	1869
Florence M	Gates	Daughter	Single	Female	20	1890
William H	Gates	Son	Single	Male	19	1891
Pearle A	Gates	Daughter	Single	Female	14	1896

S William H Gates's Census Details

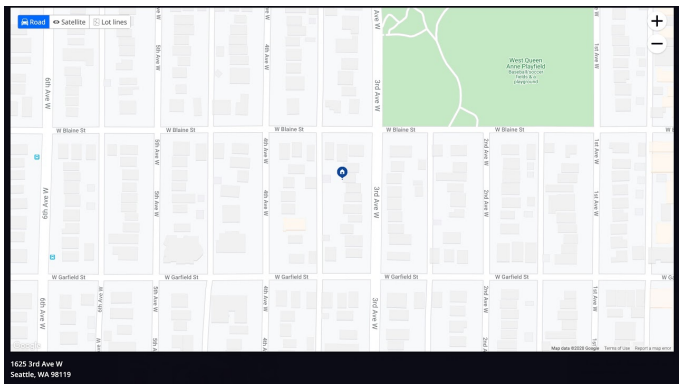
First name(s)	S William H
Last name	Gates
Relationship	Self
Marital status	Married
Gender	Male
Age	52
Birth year	1858
Birth place	Pennsylvania, United States
Race	White
Spouse's first name(s)	Rebecca
Spouse's last name	Gates
Spouse's birth place	Germany
Father's first name(s)	-
Father's last name	-
Father's birth place	Pennsylvania
Mother's first name(s)	-
Mother's last name	-
Mother's birth place	New York
City/township	Seattle Ward 3
County	King
State	Washington
Record set	Us Census 1910

[HS002Z][GDrive]

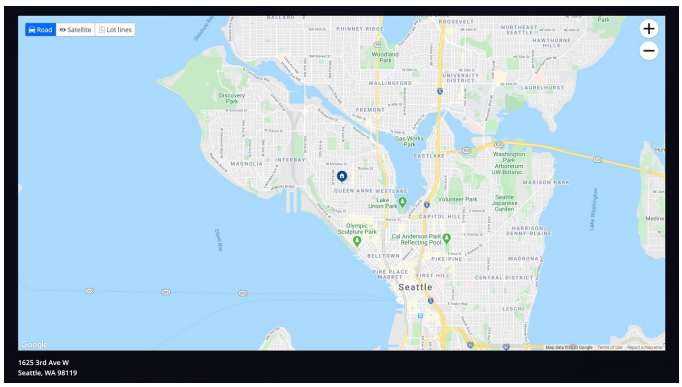
Home - 1625 3rd Ave West, Seattle

Zillow listing : [HW0035][GDrive]

[HW0036][GDrive]



[HW0037][GDrive]

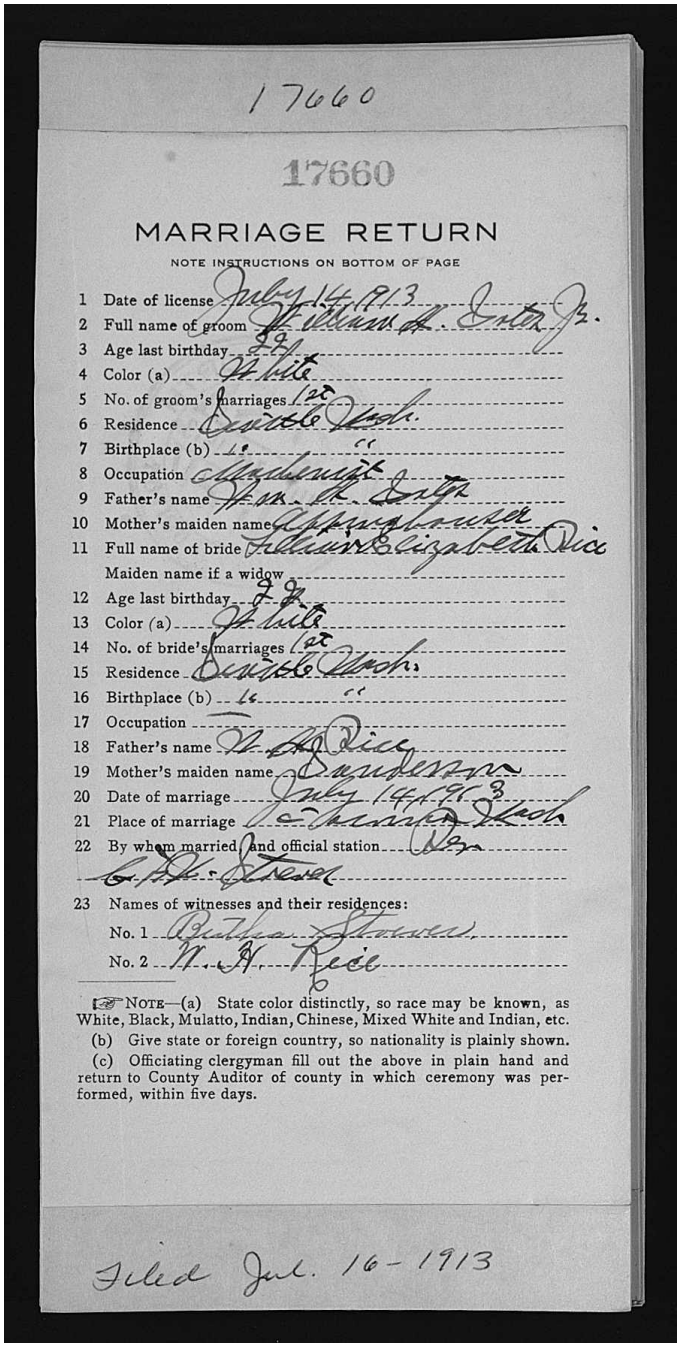


[HW0038][GDrive]

1913 (July) - William H Gates I gets married to "Lillian Elizabeth Rice"

Event place - Kitsap, Washington / Tacoma

Marries Lillian Elizabeth Rice / Father is W.H. Rice



17660

17660

MARRIAGE RETURN

NOTE INSTRUCTIONS ON BOTTOM OF PAGE

1 Date of license July 14, 1913
2 Full name of groom Wm. H. Gates Jr.
3 Age last birthday 22
4 Color (a) White
5 No. of groom's marriages 1st
6 Residence Seattle Wash.
7 Birthplace (b) " "
8 Occupation Engineer
9 Father's name Wm. H. Gates
10 Mother's maiden name Mary Maxwell
11 Full name of bride Lillian Elizabeth Rice
Maiden name if a widow
12 Age last birthday 22
13 Color (a) White
14 No. of bride's marriages 1st
15 Residence Seattle Wash.
16 Birthplace (b) " "
17 Occupation —
18 Father's name W. H. Rice
19 Mother's maiden name Saunderson
20 Date of marriage July 14 1913
21 Place of marriage Tacoma Wash.
22 By whom married and official station Rev. G. H. Stover
23 Names of witnesses and their residences:
No. 1 Bertha Stowers
No. 2 M. H. Reid

☞ NOTE—(a) State color distinctly, so race may be known, as White, Black, Mulatto, Indian, Chinese, Mixed White and Indian, etc.
(b) Give state or foreign country, so nationality is plainly shown.
(c) Officiating clergyman fill out the above in plain hand and return to County Auditor of county in which ceremony was performed, within five days.

Filed Jul. 16 - 1913

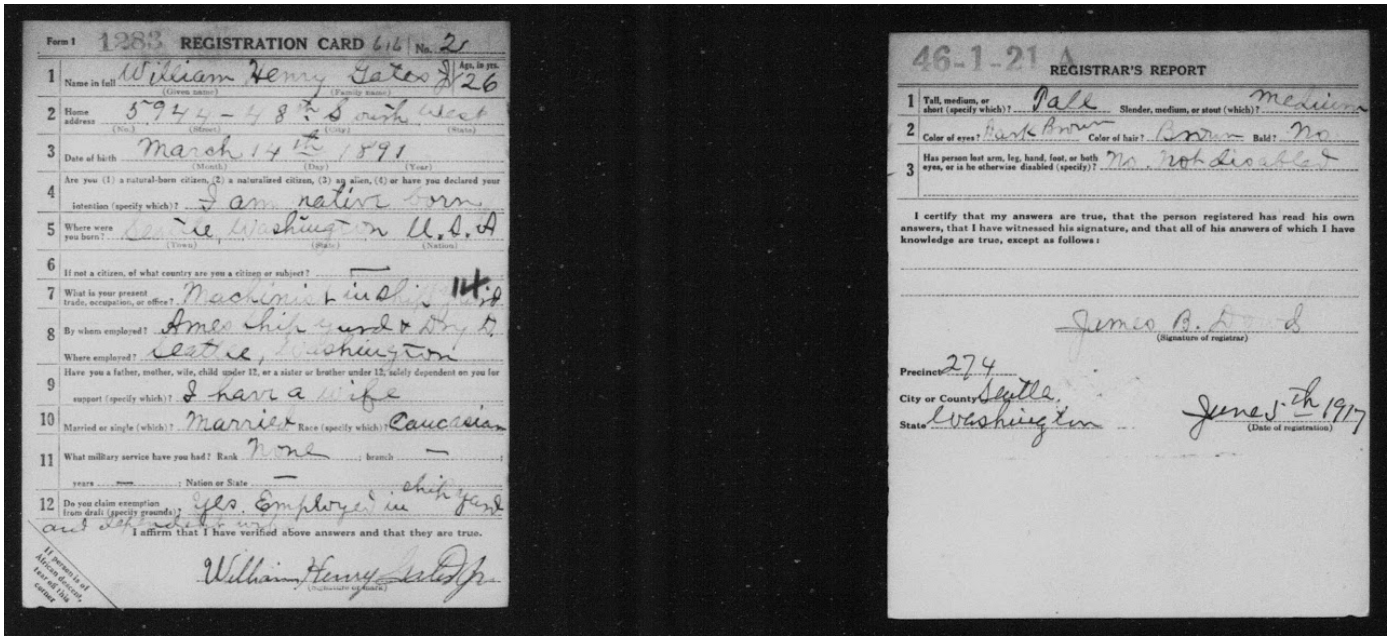
[HN011L][GDrive]

1917 (June) - Enlists in draft for WW1 (Asks for exemption)

is age 26 at this time

- Employer - Ames Shipyard and Dry Dock - "Machinist in Ship Yard" ; job is as a "machinist in ship yard"
- Home Address - 5944 48th South Street
- Claimed Draft exemption because "employed in ship yard"

Employer is "Ames Shipbuilding and Drydock Co. , Seattle" ? More info here - https://digitalcollections.lib.washington.edu/digital/collection/curtis/id/515/


Form 1 1283 REGISTRATION CARD 616 No. 21

1 Name in full William Henry Gates Jr. Age, in yrs. 26
2 Home address 5944 - 48th South West
3 Date of birth March 14th 1891
4 Are you (1) a natural-born citizen, (2) a naturalized citizen, (3) an alien, (4) or have you declared your intention (specify which)? I am native born
5 Where were you born? Seattle Washington U.S.A.
6 If not a citizen, of what country are you a citizen or subject? —
7 What is your present trade, occupation, or office? Machinist 14-D
8 By whom employed? Ames Ship yard & Dry D. Where employed? Seattle, Washington
9 Have you a father, mother, wife, child under 12, or a sister or brother under 12, solely dependent on you for support (specify which)? I have a wife
10 Married or single (which)? Married Race (specify which)? Caucasian
11 What military service have you had? Rank None branch —; years —; Nation or State —
12 Do you claim exemption from draft (specify grounds)? Yes. Employed in ship yard and sole support of wife

I affirm that I have verified above answers and that they are true.

William Henry Gates Jr.
(Signature or mark)

If person is of Alien enemy birth, write "alien enemy" across face of card.

46-1-21 A

REGISTRAR'S REPORT

1 Tall, medium, or short (specify which)? Tall Slender, medium, or stout (which)? Medium
2 Color of eyes? Dark Brown Color of hair? Brown Bald? No
3 Has person lost arm, leg, hand, foot, or both eyes, or is he otherwise disabled (specify)? No. not disabled

I certify that my answers are true, that the person registered has read his own answers, that I have witnessed his signature, and that all of his answers of which I have knowledge are true, except as follows:

James B. Edmonds
(Signature of registrar)

Precinct 274
City or County Seattle
State Washington
June 5th 1917
(Date of registration)

[HG005T][GDrive]

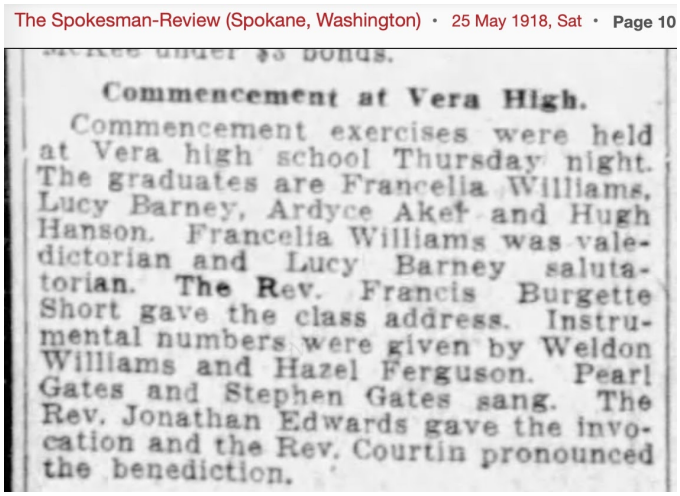
1913 - 1918 : Father "Wm H. Gates Furniture" and "Wm. H Gates Second Hand Goods" in Business in Bremerton

See **Puget Sound Genealogical Society Newsletter , Volume 30 Number 2 June 2005** : [HP002X][GDrive]

- **Gates, Wm. H. (2nd hand goods) 214 Second [St.] 1917-18**
- **Gates, W. H. (furniture) 214 Second [St.] 1913-14**

1918 (May 25) - Daughter Peal Gates singing at a graduating HS ceremony

Full newspaper page : [HN011J][GDrive]



The Spokesman-Review (Spokane, Washington) • 25 May 1918, Sat • Page 10

...ticket under $3 bonus.

Commencement at Vera High.

Commencement exercises were held at Vera high school Thursday night. The graduates are Francelia Williams, Lucy Barney, Ardyce Akef and Hugh Hanson. Francelia Williams was valedictorian and Lucy Barney salutatorian. The Rev. Francis Burgette Short gave the class address. Instrumental numbers were given by Weldon Williams and Hazel Ferguson. Pearl Gates and Stephen Gates sang. The Rev. Jonathan Edwards gave the invocation and the Rev. Courtin pronounced the benediction.

[HN011K][GDrive]

1920 census - Living in Bremerton, in the house next to his parents on "Burwell Ave."

Full PDF of Transcript : [HS0030][GDrive] / Full Census form - [HS002R][GDrive]

William H Gates

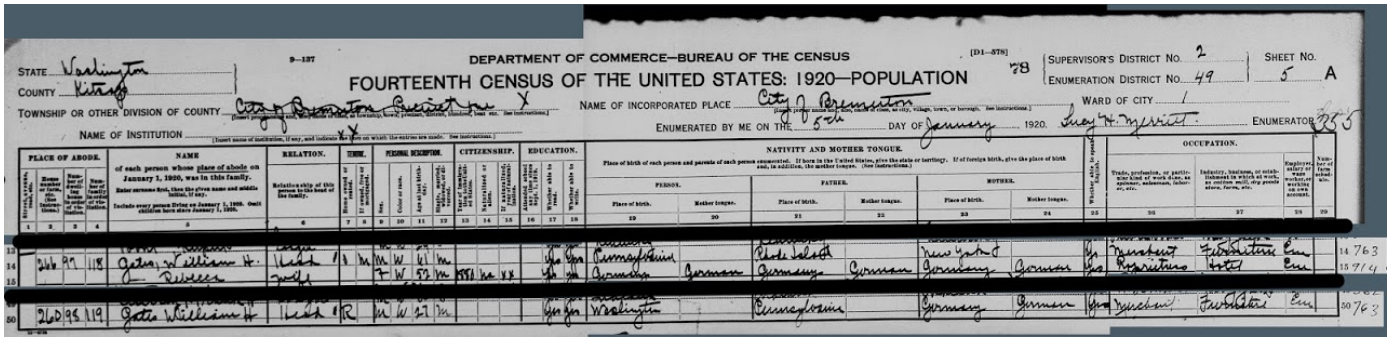
- lives in the building (#260 Burwell, Bremerton, WA) next to his parents ..
- **he is also a "Merchant" in the "furniture" industry (no longer a "Machinist in ship yard")**

(Note - wife and daughter are on next full sheet of the census - see [HS003E][GDrive]

Record Transcription:
Us Census 1920

First name(s)	William H
Last name	Gates
Relationship	Self
Marital status	Married
Gender	Male
Age	61
Birth year	1859
Birth place	Pennsylvania
Ethnicity	American
Race	White
Can write	Yes
Can read	Yes
Own/rent	Own
Father's first name(s)	-
Father's last name	-
Father's birth place	Rhode Island
Mother's first name(s)	-
Mother's last name	-
Mother's birth place	New York
City/township	-
County	King
State	Washington
Record set	Us Census 1920
Category	Census, Land & Substitutes
Subcategory	Census
Collections from	Americas, United States

[HS0031][GDrive]



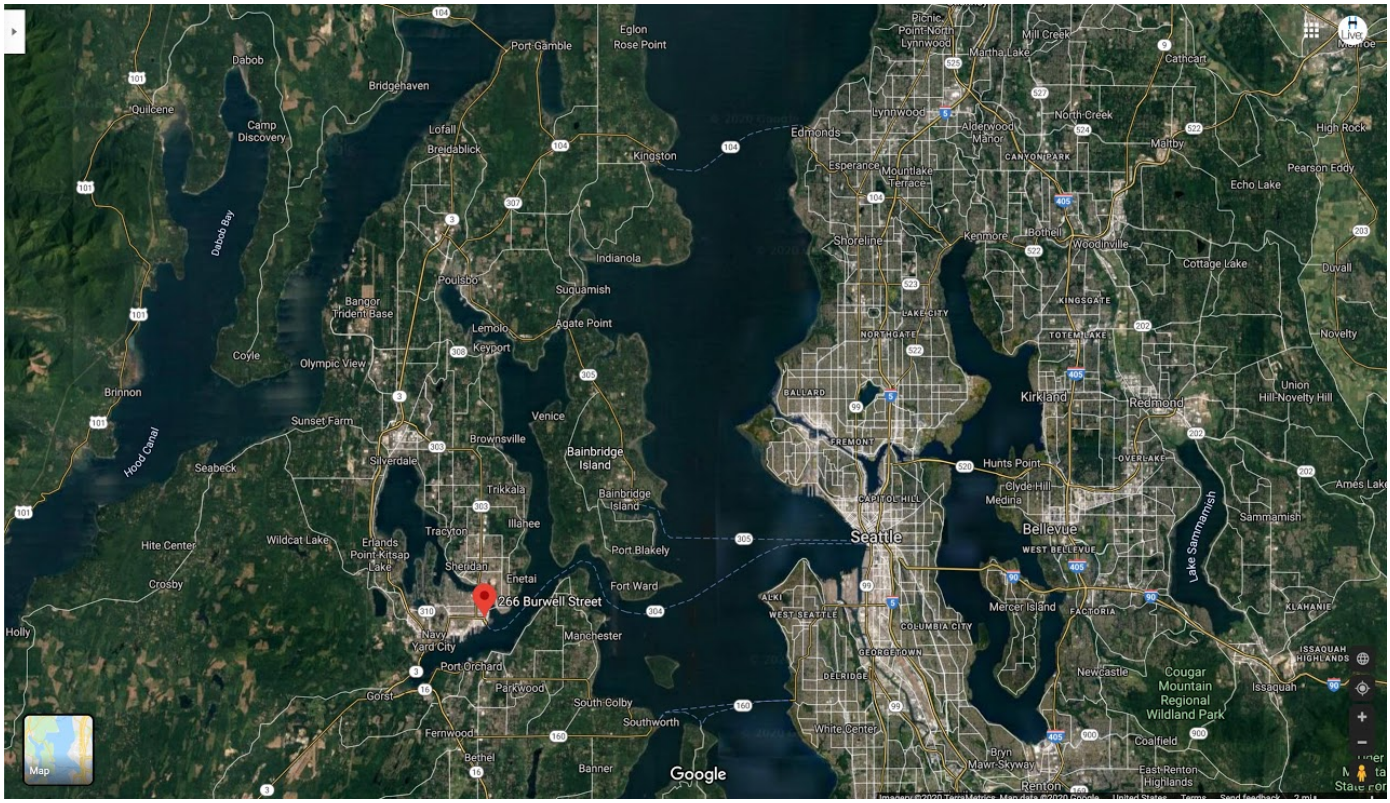
DEPARTMENT OF COMMERCE—BUREAU OF THE CENSUS

FOURTEENTH CENSUS OF THE UNITED STATES: 1920—POPULATION

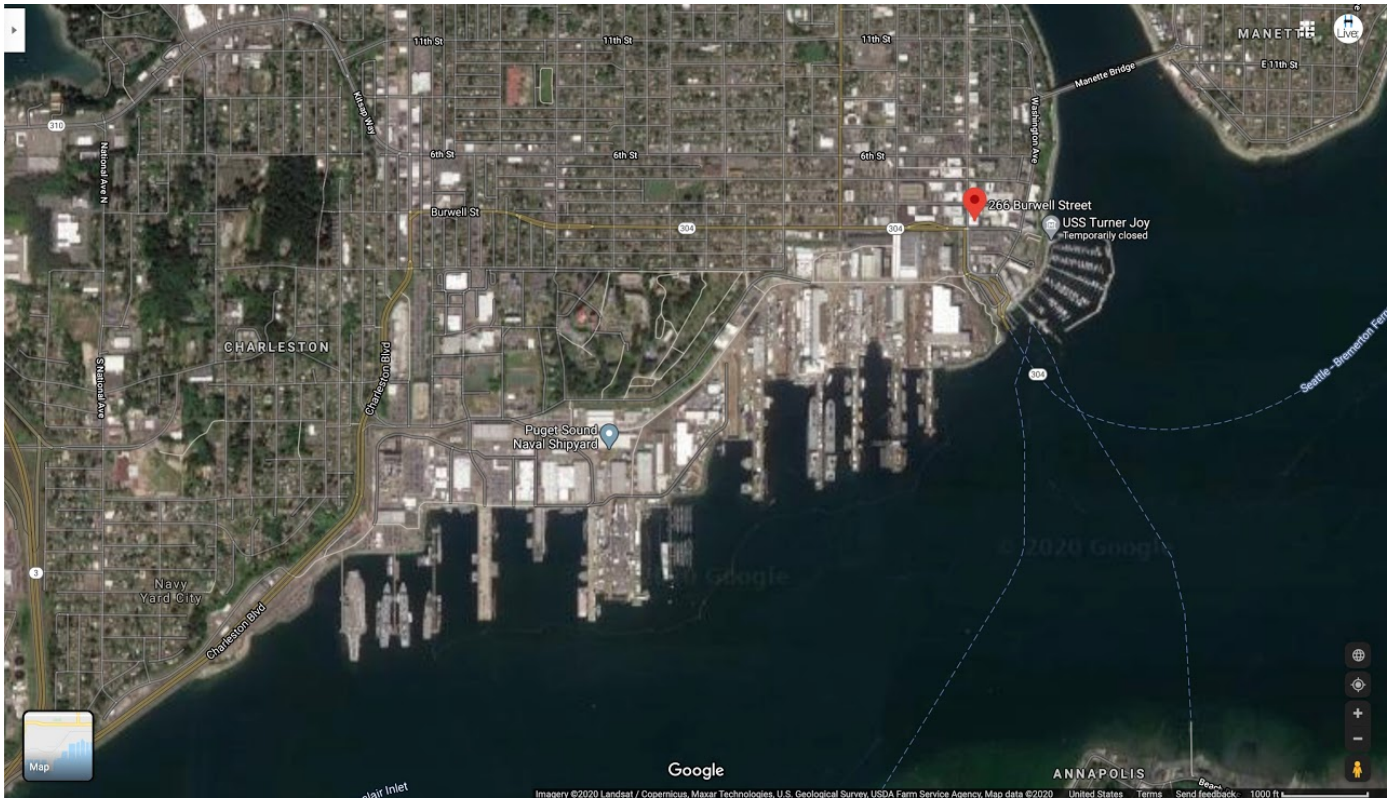
STATE Washington — COUNTY Kitsap — TOWNSHIP OR OTHER DIVISION OF COUNTY City of Bremerton Precinct No. X — NAME OF INSTITUTION X — NAME OF INCORPORATED PLACE City of Bremerton — ENUMERATED BY ME ON THE 5th DAY OF January 1920. — WARD OF CITY 1 — ENUMERATOR Lucy M. Merritt — SUPERVISOR'S DISTRICT NO. 2 — ENUMERATION DISTRICT NO. 49 — SHEET NO. 5 A

PLACE OF ABODE.	NAME of each person whose place of abode on January 1, 1920, was in this family.	RELATION.	PERSONAL DESCRIPTION.	CITIZENSHIP.	EDUCATION.	NATIVITY AND MOTHER TONGUE.	OCCUPATION.
						PERSON. Place of birth. / Mother tongue. — FATHER. Place of birth. / Mother tongue. — MOTHER. Place of birth. / Mother tongue.	
1 2 3 4	5	6	7 8 9	10 11 12	13 14 15	16 17 18	19 20 21 22 23 24 25 26 27 28 29
260 97 118	Gates, William H. Head Ruben Wife		M M W 61 M F W 59 M	Yes Yes	Yes Yes	Pennsylvania / German — Rhode Island / German — New York / German	Furniture Exhibitions Own Hotel Own
260 98 119	Gates, William H. Head Wife	R	M W 57 M	Yes Yes	Yes Yes	Washington / Pennsylvania — Germany / German	Teacher Public Schools

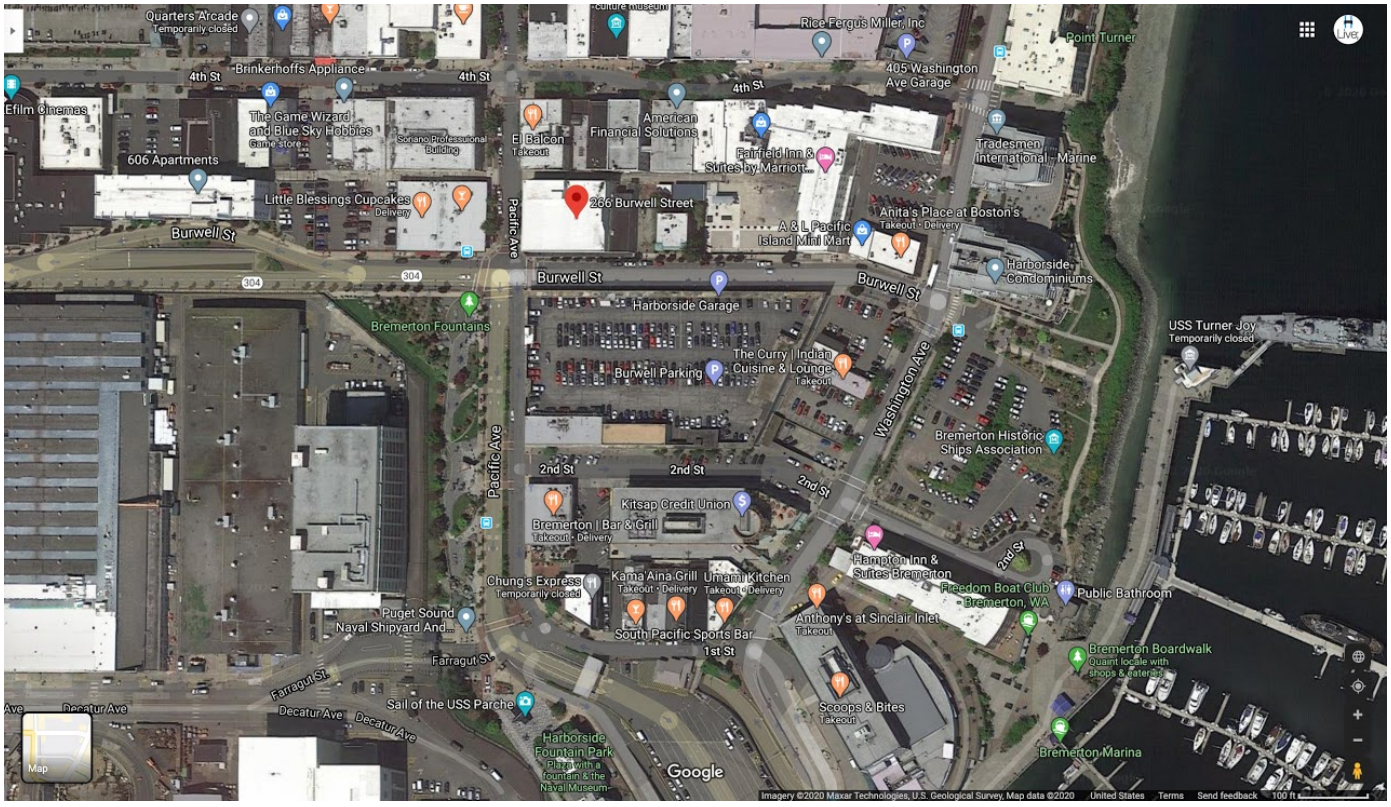
[HS002V][GDrive]



[HW003F][GDrive]

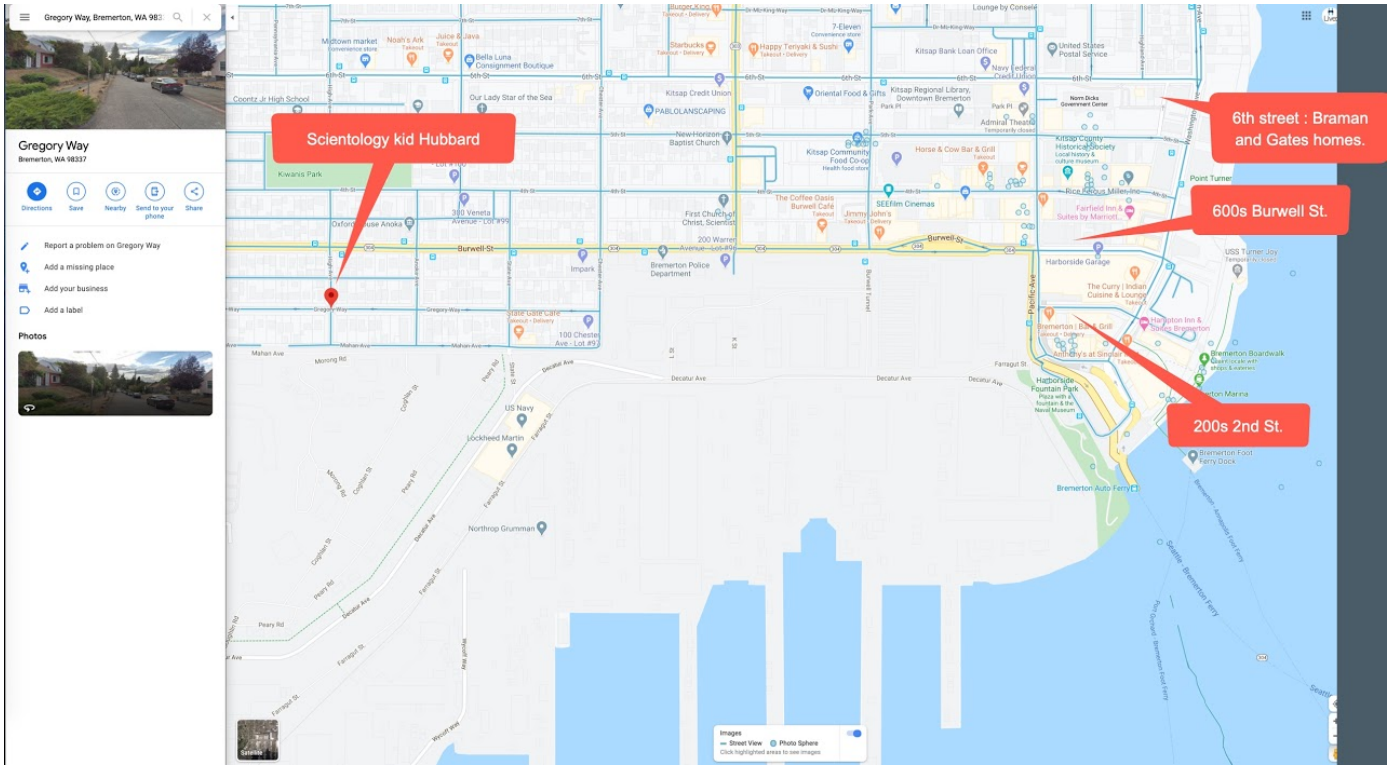


[HW003G][GDrive]



[HW003H][GDrive]

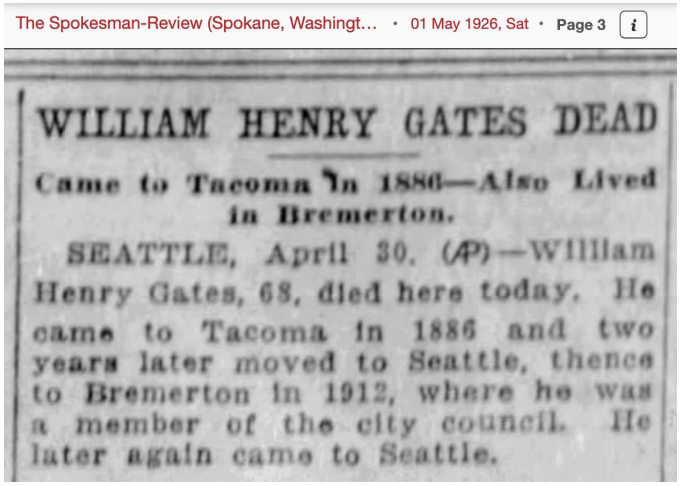
More maps .. Bremerton



[HW003J][GDrive]

1926 (May 1) - Father dies

Full newspaper page - [HN00YL][GDrive] (See official death certificate here : [HL004C][GDrive])


The Spokesman-Review (Spokane, Washingt… • 01 May 1926, Sat • Page 3

WILLIAM HENRY GATES DEAD

Came to Tacoma In 1886—Also Lived in Bremerton.

SEATTLE, April 30. (AP)—William Henry Gates, 68, died here today. He came to Tacoma in 1886 and two years later moved to Seattle, thence to Bremerton in 1912, where he was a member of the city council. He later again came to Seattle.

[HN00YM][GDrive]

1930 census - Married, living at own home in Bremerton

Employment is listed as "furniture merchant"

Full PDF Transcript : [HS0036][GDrive] / Full census sheet (image) - [HS0035][GDrive]

Address - 231 Sixth Street, Bremerton (more info below)

Record Transcription:
Us Census 1930

Household Members

First name(s)	Last name	Relationship	Marital status	Sex	Age	Birth year	Birth place
William H	**Gates**	**Head**	**Married**	**Male**	**39**	**1891**	**Washington**
Lillian E	Gates	Wife	Married	Female	39	1891	Washington
Merridy B	Gates	Daughter	Single	Female	11	1919	Washington
William H	Gates	Son	Single	Male	4	1926	Washington

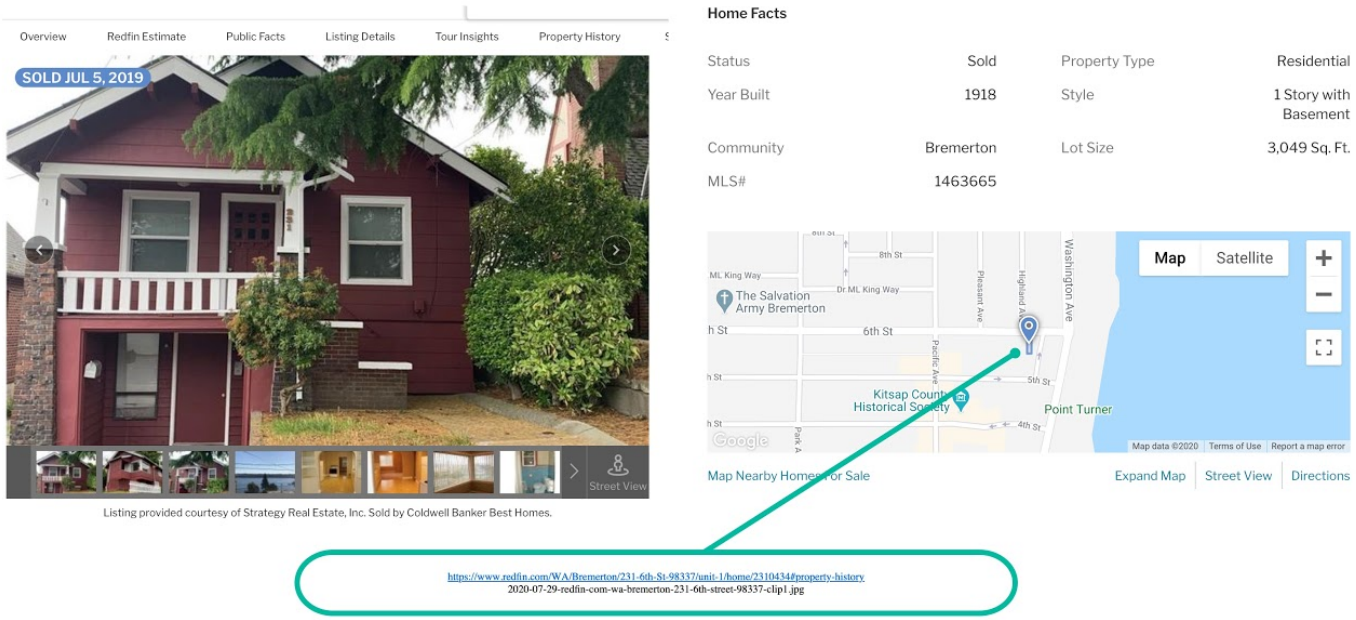
William H Gates's Census Details

First name(s)	William H
Last name	Gates
Relationship	Head
Sex	Male
Race	White
Age	39
Birth year	1891
Birth place	Washington
Marital status	Married
Father's birth place	Pennsylvania
Mother's birth place	Germany
City/township	Bremerton
County	Kitsap
State	Washington
NARA series	T626
NARA roll	2506
Record set	Us Census 1930
Category	Census, Land & Substitutes
Subcategory	Census
Collections from	Americas, United States

[HS0034][GDrive]

(1930) Home - Address - 231 Sixth Street, Bremerton (built in 1918)

Since the house was built in 1918, we can assume that it was not bought new by the Gates family ... PDF Summary of home info at [HW0039][GDrive]



[HW003A][GDrive]

1930s (early) est. - (or maybe 1920s) William Henry Gates I with family

No date provided with this photo . Since Merridy is several years older than her brother, this cant be those two children side-by-side

[HW003K][GDrive]

1933 (March 16) - Mother Rebecca Gates passes

Full newspaper page : [HN00YN][GDrive] / Death certificate here - [HL004A][GDrive]

FAIRBANKS, ALASKA, THURSDAY, MARCH 16, 1933.

DAILY NEWS-MINER

PIONEER WOMAN OF NOME DIES SEATTLE FUNERAL SATURDAY

SEATTLE, Wash., March 16— Mrs. Rebecca Gates, 65 years old, former resident of Nome during the early lays, died here today. Funeral services will be held Saturday.

—"Buy Alaskan"—

[HN00YO][GDrive]

1930s - Working long hours at his Furniture Store that he owned with a partner

Source : [HN00YW][GDrive]

[The] father [of William Henry Gates II, aka Bill Sr.] ***was a workaholic who sacrificed child-rearing to work at a furniture store he owned with a partner.*** *"His complete focus was on the store," Bill Sr. says.*

1934-1936 - Braman family buy lot in Bremerton next to W.H. Gates I residence and build custom mansion

Braman family : James d'Orma Braman (born 1901) / Source : [HN00YW][GDrive]

Mr. Gates Sr. [, son of William Henry Gates I ,] early on built a life outside of his home. Next door, the Braman family had two boys for him to play with and a father who would become his most important role model [for William Henry Gates II].

That man, Dorm Braman, had built his business and would later become a Naval officer, mayor of Seattle and a U.S. assistant secretary of transportation. In the late 1930s, Mr. Braman brought Bill Sr. on family road trips across the country. He was scoutmaster of Bill Sr.'s Boy Scout troop, leading the boys on hikes through the Olympic Mountains and driving them in a beat-up bus to Yellowstone and Glacier National Parks. The troop spent two years building a log house from Douglas firs they felled themselves. Mr. Braman had "no sense of personal limitations whatsoever," says Mr. Gates Sr.

1937/1938 - William Henry Gates is the treasurer of the Bremerton Chamber of Commerce - Signs incorporation papers for the Bremerton Chamber of Commerce

HistoryLink.org article: Source : [HW0033][GDrive]

Heading for Depression

With peace went the booming prosperity of the second decade of the twentieth century, and Bremerton settled into a period of slower growth. Employment at the base tapered off from the wartime high of 6,500 to bottom out at fewer than 2,500 by 1927, but the town itself had grown to a point that many businesses could survive by serving the area's civilian population and the lessened needs of the military. Homes were being built, car dealerships opened, services expanded, and optimism prevailed.

Bremerton absorbed the next-door community of Charleston in 1927, further increasing its population and tax base. In 1928, construction began on the light cruiser USS Louisville, and employment at the naval yard jumped by 1,000, providing additional flotation to the local economy. In June 1929, just four months before the stock market crash and the beginning of the Great Depression, Bremerton voters passed an $835,000 bond issue to improve the city's water system and to build an electrical plant.

In November, after the bottom fell out of the world economy, work began on a bridge linking Bremerton with the former Manette, now East Bremerton, financed almost entirely by public subscription. When the full effects of the Depression set in, Bremerton, perhaps inured to some degree by the previous economic ups and downs of the naval yard, actually managed better than most towns and cities.

Surviving the Thirties

The Manette Bridge opened to great fanfare in June 1930, and with that completed the people of Bremerton tackled the Great Depression. A Puget Sound Navy Yard Stabilization Bureau was established to lobby in Washington D.C., for shipyard work, and each worker at the yard pledged $5 a year to support its efforts. They also agreed to regular payroll deductions to help support Kitsap County's unemployed, and all employed workers in the county were asked to give up one day's pay a month for the same purpose.

The federal government did its part too, and the shipyard actually expanded during the Depression years. Concerns over Japan's actions in the Pacific led to orders for several new ships. County projects funded by the Works Progress Administration also helped. So successful were these combined efforts that Bremerton experienced record growth in 1934 and 1935, and by the end of the decade its population had increased by half, to over 15,000. By 1940, when the national unemployment rate was still well over 14 percent of the labor force, Bremerton's stood at just 6.9 percent. Bremerton was doing well, and in 1937 its incorporated status was upgraded to city of the second class.

Business was good enough that the Bremerton Chamber of Commerce, which had been in existence since 1907, saw fit to formally incorporate in March 1938. The incorporation papers were signed by its treasurer, William H. Gates Sr., grandfather of Microsoft co-founder Bill Gates. And during the late 1930s and early 1940s, Bremerton was also home to the controversial founder of the Church of Scientology, L. Ron Hubbard.

1940 - US Census

http://search.ancestry.com/collections/2442/records/65196867

Proprietor, retail furniture

James d'Orma Braman (born 1901) living next door

Benjamin Harrison lives across the street (bio - https://www.findagrave.com/memorial/35013879/benjamin-franklin-harrison)

1941 (October 27) - navy torpedos on display at schoenfeld furniture

https://nara.getarchive.net/media/naval-torpedo-station-display-at-schoenfelds-us-furniture-co-4ec54d

1941-10-27-us-national-archoes-naval-torpedo-station-display-at-schoenfelds-us-furniture-co-download.pdf

1941-10-27-us-national-archoes-naval-torpedo-station-display-at-schoenfelds-us-furniture-co-4ec54d.jpg

1942 - The "Schoenfeld's U.S. Furniture Company"

At "525 Pacific"

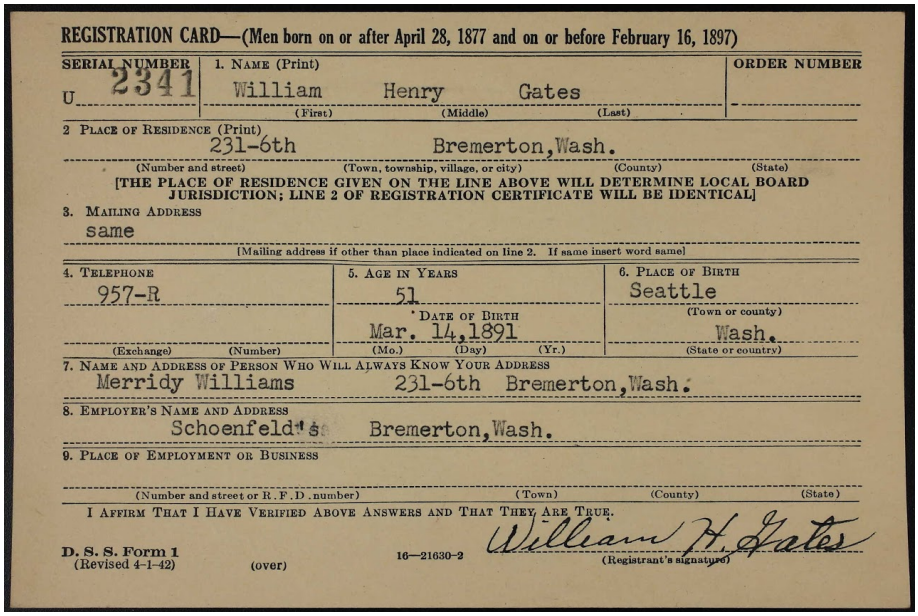
https://washingtondigitalnewspapers.org/?a=d&d=CATHNWP19430903-02.2.18&e=-------en-20--1--txt-txIN-------

1942 (April 26) - WW2 Draft - Employed with Schoenfeld's Furniture of Bremerton

https://www.ancestry.com/imageviewer/collections/1002/images/32195_420201631_0063-00995?treeid=&personid=&hintid=&usePUB=true&usePUBJs=true&_ga=2.246834052.1686139327.1596074686-1615111073.1596074686&pId=10554933

page 1 - 1942-04-26-usa-military-draft-william-h-gates-ii-32195-420201631-0063-00995 / https://drive.google.com/file/d/19qyU5BHbZA3iEaT6gXQ7pyjxyrJVUb9h/view?usp=sharing

page 2 - 1942-04-26-usa-military-draft-william-h-gates-ii-32195-420201631-0063-00996 / https://drive.google.com/file/d/1jz975rshwCzMXH2S3t5qZGQ_iXyBbUdX/view?usp=sharing



REGISTRATION CARD—(Men born on or after April 28, 1877 and on or before February 16, 1897)

SERIAL NUMBER U 2341 | 1. NAME (Print) William Henry Gates (First) (Middle) (Last) | ORDER NUMBER

2 PLACE OF RESIDENCE (Print) 231-6th Bremerton,Wash.
(Number and street) (Town, township, village, or city) (County) (State)
[THE PLACE OF RESIDENCE GIVEN ON THE LINE ABOVE WILL DETERMINE LOCAL BOARD JURISDICTION; LINE 2 OF REGISTRATION CERTIFICATE WILL BE IDENTICAL]

3. MAILING ADDRESS same
[Mailing address if other than place indicated on line 2. If same insert word same]

4. TELEPHONE 957-R (Exchange) (Number)

5. AGE IN YEARS 51
DATE OF BIRTH Mar. 14,1891 (Mo.) (Day) (Yr.)

6. PLACE OF BIRTH Seattle (Town or county) Wash. (State or country)

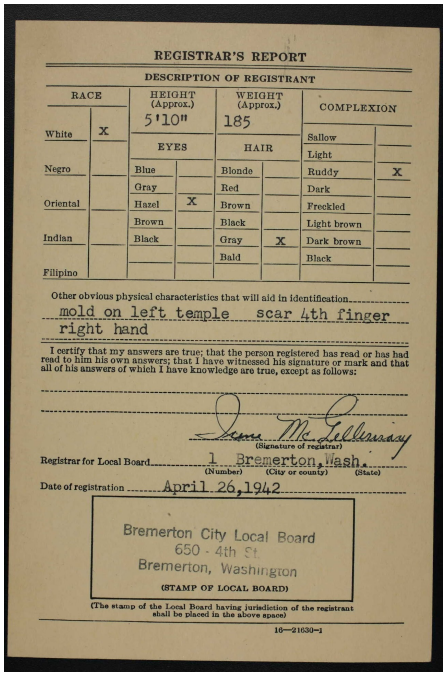
7. NAME AND ADDRESS OF PERSON WHO WILL ALWAYS KNOW YOUR ADDRESS Merridy Williams 231-6th Bremerton,Wash.

8. EMPLOYER'S NAME AND ADDRESS Schoenfeld's Bremerton,Wash.

9. PLACE OF EMPLOYMENT OR BUSINESS
(Number and street or R.F.D. number) (Town) (County) (State)

I AFFIRM THAT I HAVE VERIFIED ABOVE ANSWERS AND THAT THEY ARE TRUE.
William H. Gates (Registrant's signature)

D. S. S. Form 1 (Revised 4-1-42) (over) 16—21630-2



REGISTRAR'S REPORT

DESCRIPTION OF REGISTRANT

RACE		HEIGHT (Approx.)		WEIGHT (Approx.)		COMPLEXION	
White	X	5'10"		185		Sallow	
		EYES		HAIR		Light	
Negro		Blue		Blonde		Ruddy	X
		Gray		Red		Dark	
Oriental		Hazel	X	Brown		Freckled	
		Brown		Black		Light brown	
Indian		Black		Gray	X	Dark brown	
				Bald		Black	
Filipino							

Other obvious physical characteristics that will aid in identification: mold on left temple scar 4th finger right hand

I certify that my answers are true; that the person registered has read or has had read to him his own answers; that I have witnessed his signature or mark and that all of his answers of which I have knowledge are true, except as follows:

Irene McLellan (Signature of registrar)

Registrar for Local Board 1 Bremerton,Wash. (Number) (City or county) (State)

Date of registration April 26,1942

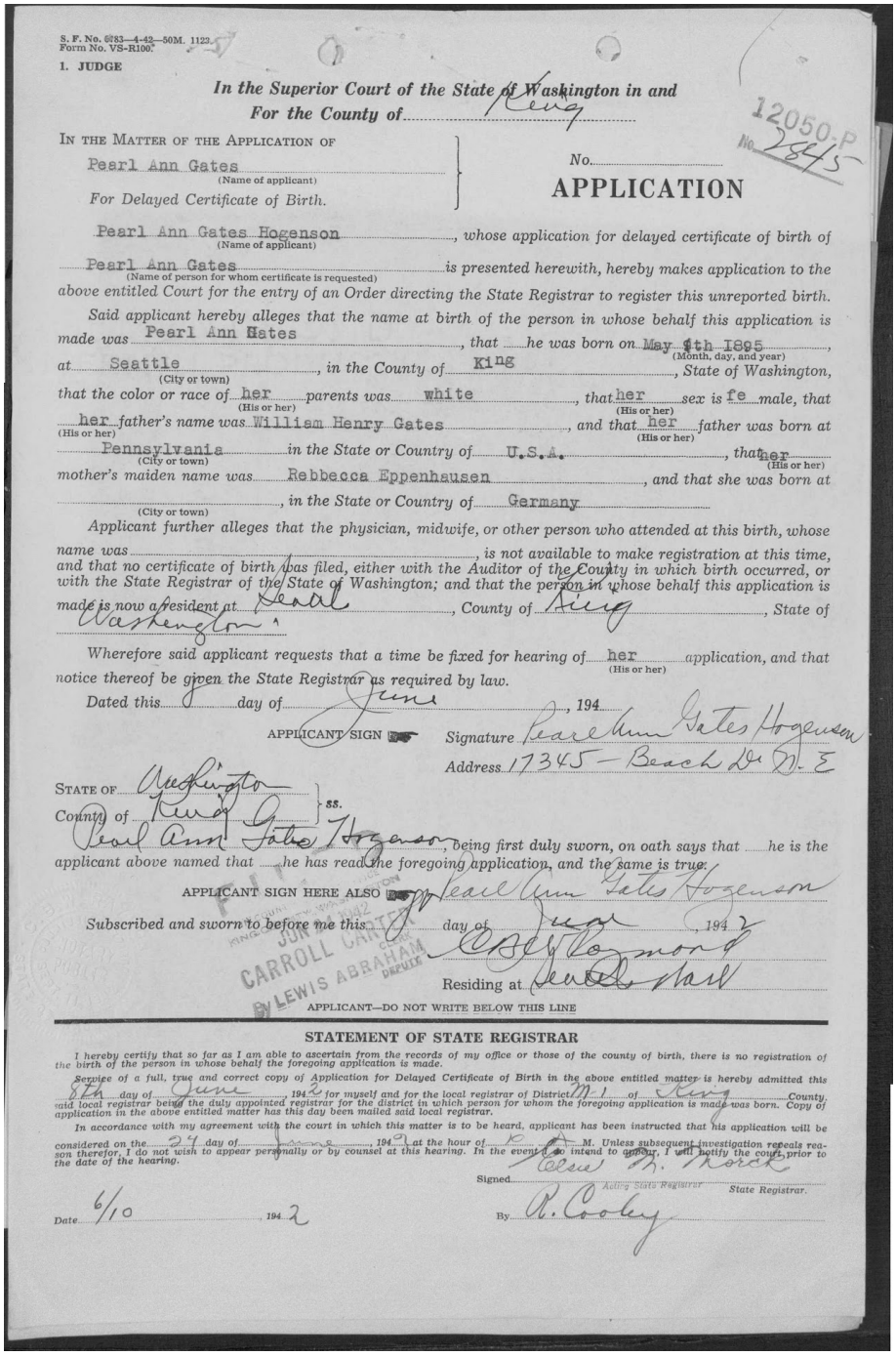
Bremerton City Local Board
650 - 4th St
Bremerton, Washington
(STAMP OF LOCAL BOARD)

(The stamp of the Local Board having jurisdiction of the registrant shall be placed in the above space)

16—21630-1

1942 (June 5) - Sister Pearl Gate's birth record is now updated ..

Application shown below



S. F. No. 5783—4-42—50M. 1122.
Form No. VS-R100.

1. JUDGE

In the Superior Court of the State of Washington in and For the County of King

12050.P
No. 2845

IN THE MATTER OF THE APPLICATION OF
Pearl Ann Gates (Name of applicant)
For Delayed Certificate of Birth.

No.

APPLICATION

Pearl Ann Gates Hogenson (Name of applicant), whose application for delayed certificate of birth of Pearl Ann Gates (Name of person for whom certificate is requested) is presented herewith, hereby makes application to the above entitled Court for the entry of an Order directing the State Registrar to register this unreported birth.

Said applicant hereby alleges that the name at birth of the person in whose behalf this application is made was Pearl Ann Gates, that he was born on May 4th 1895 (Month, day, and year), at Seattle (City or town), in the County of King, State of Washington, that the color or race of her (His or her) parents was white, that her (His or her) sex is fe male, that her (His or her) father's name was William Henry Gates, and that her (His or her) father was born at Pennsylvania (City or town) in the State or Country of U.S.A., that her (His or her) mother's maiden name was Rebbecca Eppenhausen, and that she was born at (City or town), in the State or Country of Germany.

Applicant further alleges that the physician, midwife, or other person who attended at this birth, whose name was, is not available to make registration at this time, and that no certificate of birth was filed, either with the Auditor of the County in which birth occurred, or with the State Registrar of the State of Washington; and that the person in whose behalf this application is made is now a resident at Seattle, County of King, State of Washington.

Wherefore said applicant requests that a time be fixed for hearing of her (His or her) application, and that notice thereof be given the State Registrar as required by law.

Dated this 1 day of June, 194 2

APPLICANT SIGN ☞ Signature Pearl Ann Gates Hogenson

Address 17345 — Beach Dr N. E

STATE OF Washington
County of King } ss.

Pearl Ann Gates Hogenson, being first duly sworn, on oath says that he is the applicant above named that he has read the foregoing application, and the same is true.

APPLICANT SIGN HERE ALSO ☞ Pearl Ann Gates Hogenson

Subscribed and sworn to before me this 1 day of June, 194 2

JUN 1 1942 CARROLL CANTER CLERK BY LEWIS ABRAHAM DEPUTY

Residing at Seattle Wash

APPLICANT—DO NOT WRITE BELOW THIS LINE

STATEMENT OF STATE REGISTRAR

I hereby certify that so far as I am able to ascertain from the records of my office or those of the county of birth, there is no registration of the birth of the person in whose behalf the foregoing application is made.

Service of a full, true and correct copy of Application for Delayed Certificate of Birth in the above entitled matter is hereby admitted this 6th day of June, 194 2 for myself and for the local registrar of District No. 1 of King County, said local registrar being the duly appointed registrar for the district in which person for whom the foregoing application is made was born. Copy of application in the above entitled matter has this day been mailed said local registrar.

In accordance with my agreement with the court in which this matter is to be heard, applicant has been instructed that his application will be considered on the 24 day of June, 194 2 at the hour of 10 A. M. Unless subsequent investigation reveals reason therefor, I do not wish to appear personally or by counsel at this hearing. In the event I do intend to appear, I will notify the court prior to the date of the hearing.

Signed Acting State Registrar / State Registrar.

Date 6/10 194 2

By R. Cooley

[HL004Z][GDrive]

1947 - Sister Florence passes

https://www.familysearch.org/ark:/61903/3:1:S3HT-63Y7-8S8

1949 - A Bill Gates (son ?) in Bremerton, Washington

https://www.newspapers.com/image/568052236/?terms=bremerton%2Bgates

1950 (Mach 12)

https://www.newspapers.com/image/568378733/?terms=%22william%2Bgates%22

1969 (Aug) - passes

https://www.findmypast.com/transcript?id=USBMD%2FSSDI%2F535183990

First name(s) William

Last name Gates

Birth year 1891

Birth month Mar

Birth day 14

Death year 1969

Death month Aug

Death day -

Social Security number

535-18-3990

Place of issue

Washington

State

Washington

Country

United States

Record set

Social Security Death Index

Category

Birth, Marriage & Death (Parish Registers)

Subcategory

Civil Deaths & Burials

Collections from

Americas, United States

another picture - (no date)

https://www.familysearch.org/tree/person/memories/KFD2-V2Q

IMG_7482.jpg

William Henry Gates II (born 1925)

"WHG2" / #WHG2

Wikipedia Bill Gates Sr.

Also known as "William Henry Gates Sr"

Born - 1925 in Bremerton, Washington

Parents - Father is William Henry Gates (born 1891)

Married to Mary Maxwell Gates (born 1929)

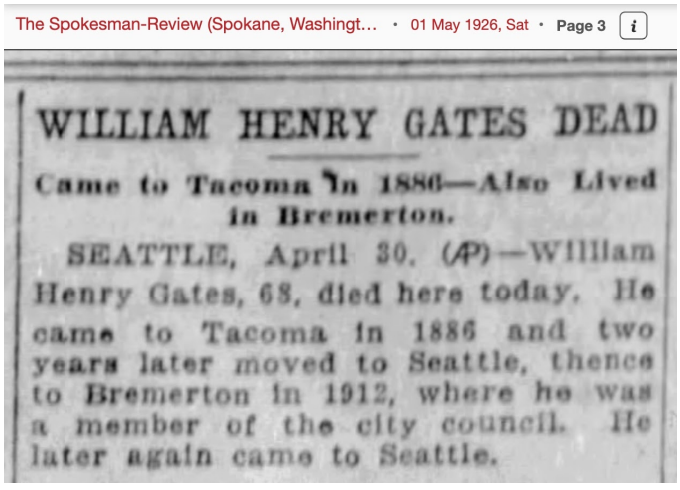
- Children include William Henry Gates III (born 1955)

Associations:

- **Gordon Calvin Culp (born 1926)**
  - (University of Washington Regents - Bill Gates Sr's wife Mary Gates was an old UW law school classmate of Culp, and had known Culp for many years. According to Gerberding, "Gordon and Mary became very close right away. ". [HL005K][GDrive])
- **Daniel Jackson Evans (born 1925)** (College friend, bridge partner; A very, very close life-long friend)
- **Brockman Adams (Born 1927)** (A future US senator, but as a friend in college, introduced him to future wife **Mary Maxwell Gates (born 1929)**)
- **James d'Orma Braman (born 1901)** (Neighbor when William Gates was young; scout leader; mayor of Seattle when William Gates had a law firm in Seattle)
- **William Hunter Simpson (born 1926)** (President of **Physio-Control Corporation** , which was a major client of WH Gates II's law firm, and where Gates was a board member).

1926 (May 1) - Grandfather dies

Full newspaper page - [HN00YL][GDrive] (See official death certificate here : [HL004C][GDrive])


The Spokesman-Review (Spokane, Washingt... · 01 May 1926, Sat · Page 3

WILLIAM HENRY GATES DEAD

Came to Tacoma In 1886—Also Lived in Bremerton.

SEATTLE, April 30. (AP)—William Henry Gates, 68, died here today. He came to Tacoma in 1886 and two years later moved to Seattle, thence to Bremerton in 1912, where he was a member of the city council. He later again came to Seattle.

[HN00YM][GDrive]

1930 census - Living with parents in Bremerton

Living in Bremerton, Washington .

Father's Employment is listed as "furniture merchant"

Full PDF Transcript : [HS0036][GDrive] / Full census sheet (image) - [HS0035][GDrive]

Address - 231 Sixth Street, Bremerton (more info below)

Record Transcription:
Us Census 1930

Household Members

First name(s)	Last name	Relationship	Marital status	Sex	Age	Birth year	Birth place
William H	**Gates**	**Head**	**Married**	**Male**	**39**	**1891**	**Washington**
Lillian E	Gates	Wife	Married	Female	39	1891	Washington
Merridy B	Gates	Daughter	Single	Female	11	1919	Washington
William H	Gates	Son	Single	Male	4	1926	Washington

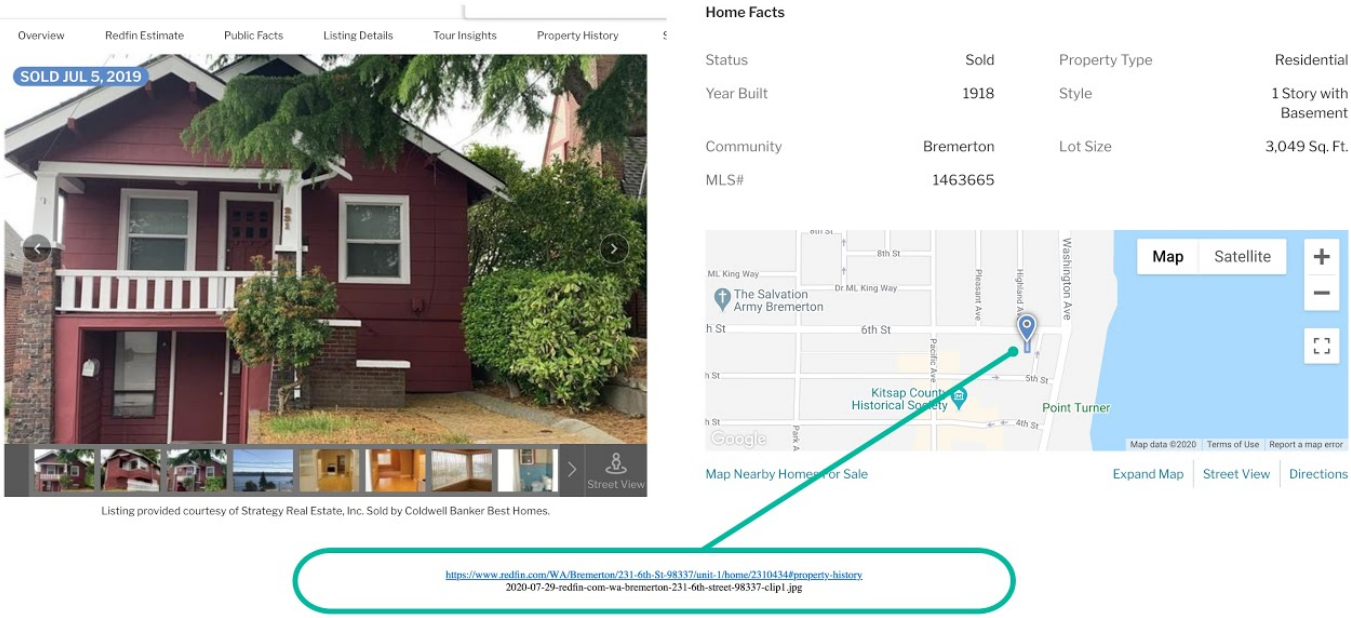
William H Gates's Census Details

First name(s)	William H
Last name	Gates
Relationship	Head
Sex	Male
Race	White
Age	39
Birth year	1891
Birth place	Washington
Marital status	Married
Father's birth place	Pennsylvania
Mother's birth place	Germany
City/township	Bremerton
County	Kitsap
State	Washington
NARA series	T626
NARA roll	2506
Record set	Us Census 1930
Category	Census, Land & Substitutes
Subcategory	Census
Collections from	Americas, United States

[HS0034][GDrive]

1930 Home - 231 Sixth Street, Bremerton

Home in Bremerton, Washington . Since the house was built in 1918, we can assume that it was not bought new by the Gates family ... PDF Summary of home info at [HW0039][GDrive]



[HW003A][GDrive]

1933 (March 16) - Grandmother Rebecca Gates passes

Full newspaper page : [HN00YN][GDrive] / Death certificate here - [HL004A][GDrive]

FAIRBANKS, ALASKA, THURSDAY, MARCH 16, 1933.

DAILY NEWS-MINER

PIONEER WOMAN OF NOME DIES SEATTLE FUNERAL SATURDAY

SEATTLE, Wash., March 16— Mrs. Rebecca Gates, 65 years old, former resident of Nome during the early days, died here today. Funeral services will be held Saturday.

—"Buy Alaskan"—

[HN00YO][GDrive]

1930s - Father WHG1 works long hours at his Furniture Store that he owned with a partner

Source : [HN00YW][GDrive]

[The] father [of William Henry Gates II, aka Bill Sr.] ***was a workaholic who sacrificed child-rearing to work at a furniture store he owned with a partner.*** *"His complete focus was on the store," Bill Sr. says.*

1934-1936 - Braman family buy lot in Bremerton next to W.H. Gates I residence and build custom mansion

Braman family : James d'Orma Braman (born 1901) / Source : [HN00YW][GDrive]

Mr. Gates Sr. [, son of William Henry Gates I ,] early on built a life outside of his home. Next door, the Braman family had two boys for him to play with and a father who would become his most important role model [for William Henry Gates II].

That man, Dorm Braman, had built his business and would later become a Naval officer, mayor of Seattle and a U.S. assistant secretary of transportation. In the late 1930s, Mr. Braman brought Bill Sr. on family road trips across the country. He was scoutmaster of Bill Sr.'s Boy Scout troop, leading the boys on hikes through the Olympic Mountains and driving them in a beat-up bus to Yellowstone and Glacier National Parks. The troop spent two years building a log house from Douglas firs they felled themselves. Mr. Braman had "no sense of personal limitations whatsoever," says Mr. Gates Sr.

1937/1938 - Father is the treasurer of the Bremerton Chamber of Commerce - Signs incorporation papers for the Bremerton Chamber of Commerce

HistoryLink.org article: Source : [HW0033][GDrive]

Heading for Depression

With peace went the booming prosperity of the second decade of the twentieth century, and Bremerton settled into a period of slower growth. Employment at the base tapered off from the wartime high of 6,500 to bottom out at fewer than 2,500 by 1927, but the town itself had grown to a point that many businesses could survive by serving the area's civilian population and the lessened needs of the military. Homes were being built, car dealerships opened, services expanded, and optimism prevailed.

Bremerton absorbed the next-door community of Charleston in 1927, further increasing its population and tax base. In 1928, construction began on the light cruiser USS Louisville, and employment at the naval yard jumped by 1,000, providing additional flotation to the local economy. In June 1929, just four months before the stock market crash and the beginning of the Great Depression, Bremerton voters passed an $835,000 bond issue to improve the city's water system and to build an electrical plant.

In November, after the bottom fell out of the world economy, work began on a bridge linking Bremerton with the former Manette, now East Bremerton, financed almost entirely by public subscription. When the full effects of the Depression set in, Bremerton, perhaps inured to some degree by the previous economic ups and downs of the naval yard, actually managed better than most towns and cities.

Surviving the Thirties

The Manette Bridge opened to great fanfare in June 1930, and with that completed the people of Bremerton tackled the Great Depression. A Puget Sound Navy Yard Stabilization Bureau was established to lobby in Washington D.C., for shipyard work, and each worker at the yard pledged $5 a year to support its efforts. They also agreed to regular payroll deductions to help support Kitsap County's unemployed, and all employed workers in the county were asked to give up one day's pay a month for the same purpose.

The federal government did its part too, and the shipyard actually expanded during the Depression years. Concerns over Japan's actions in the Pacific led to orders for several new ships. County projects funded by the Works Progress Administration also helped. So successful were these combined efforts that Bremerton experienced record growth in 1934 and 1935, and by the end of the decade its population had increased by half, to over 15,000. By 1940, when the national unemployment rate was still well over 14 percent of the labor force, Bremerton's stood at just 6.9 percent. Bremerton was doing well, and in 1937 its incorporated status was upgraded to city of the second class.

Business was good enough that the Bremerton Chamber of Commerce, which had been in existence since 1907, saw fit to formally incorporate in March 1938. The incorporation papers were signed by its treasurer, William H. Gates Sr., grandfather of Microsoft co-founder Bill Gates. And during the late 1930s and early 1940s, Bremerton was also home to the controversial founder of the Church of Scientology, L. Ron Hubbard.

1940 - US Census

http://search.ancestry.com/collections/2442/records/65196867

- Father William Henry Gates (born 1891) is still Proprietor, of a retail furniture
- James d'Orma Braman (born 1901) living next door
- Benjamin Harrison lives across the street (bio - https://www.findagrave.com/memorial/35013879/benjamin-franklin-harrison)

1943 - Enlists in WW2, serve 2 years

Article reference : [HM000F][GDrive] - BY LISA STIFFLER on November 25, 2015

His father owned, then sold and worked in, a furniture store. Neither of his parents went to high school. ***A year after his graduation from Bremerton High School in 1943, Gates Sr. received a letter ordering him to active duty. He enlisted in the U.S. Army, completed officer candidate school and was shipped to Japan shortly after its surrender. He traveled to Hokkaido, the nothernmost island of Japan, and a war-torn Tokyo.***

1949/1950 - University of Washington

(source - [HK002B][GDrive])

After the war, Gates attended the University of Washington under the G.I. Bill,[1] earning a B.A. in 1949 and a J.D. degree in 1950.

1949 (Sep 08) - In Bremerton, Washington (age 24)

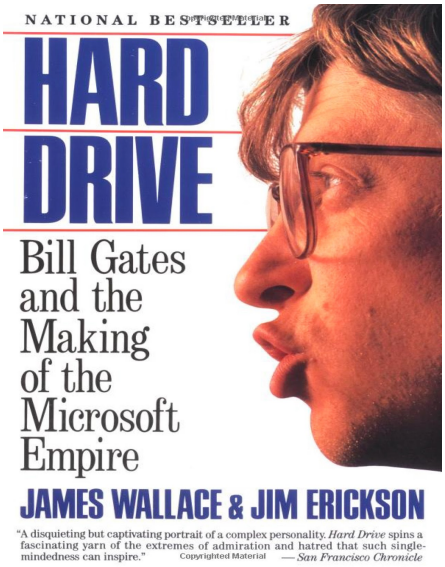
https://www.newspapers.com/image/568052236/?terms=bremerton%2Bgates

1949-09-08-the-semi-weekly-spokesman-review-spokane-washington-pg-10-clip-students

Introduced to wife by Brockman Adams

PDF of book : [HB0053][GDrive]

"Their daughter Mary was born in Seattle in 1929. A vivacious young beauty she grew up among some of the most prominent families in the Northwest. Like her mother before her, Mary Maxwell met her future husband, a tall, **athletic, prelaw student by the name of Bill Gates, Jr.,** while she was a co-ed at the University of Washington. A school cheerleader, Mary was as outgoing and gregarious as Bill was shy and reserved. A mutual friend, [**Brockman Adams (Born 1927)**] , had introduced the couple while Adams was student body president, and Mary was an officer in the student government association. (Adams went on to a career in politics, serving as secretary of transportation under 7 President Jimmy Carter. He is currently one of Washington's U.S. senators and remains a close friend of the Gates family.)"



[HB0054][GDrive]

1950 (Mach 12)

https://www.newspapers.com/image/568378733/?terms=%22william%2Bgates%22

1951 - Marriage to Mary Maxwell

1952 - 195x - Working as Bremerton Assistant City Attorney

History Link source - [HW003L][GDrive]

" ***Mary Maxwell Gates (born 1929)*** *grew up in Seattle's North End and graduated from Roosevelt High School where she was class valedictorian and a star forward on the girls' high school basketball team. She received a degree in education from the University of Washington 1950. While at the UW, she met law student William H. Gates Jr. (as he was then known) and they married.* ***While he worked as a Bremerton Assistant City Attorney in the early 1950s, she taught school there.*** "

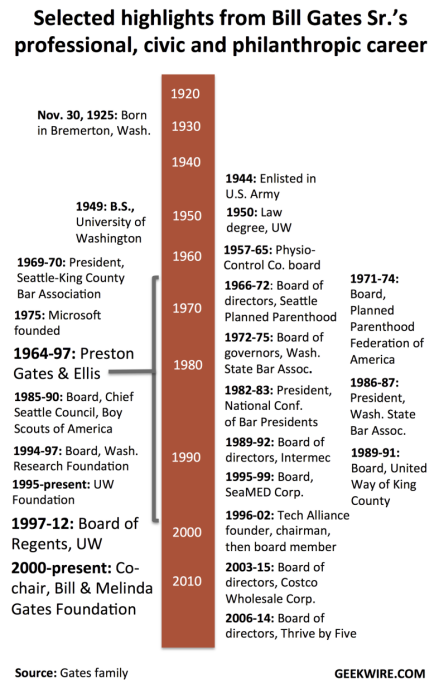
1954 - Mentor Braman elected to Seattle City Council

o Seattle in 1954, civic leaders in the area chose [**James d'Orma Braman (born 1901)**] . to run for Seattle City Council.

1957 - Gates joins board of DIrectors for Physio-Control Co.

See **Physio-Control Corporation** ; Article reference : [HM000F][GDrive] - BY LISA STIFFLER on November 25, 2015

Note that the company was only formed in 1955.



[HM000G][GDrive]

195x - Moved to Seattle, "practices law"

History Link source - [HW003L][GDrive]

After working as an assistant Bremerton City Attorney, he moved to Seattle where he practiced law.

1964 - "joined the firm of Shidler, McBroom, Gates, and Lucas as a partner "

History Link source - [HW003L][GDrive]

After working as an assistant Bremerton City Attorney, he moved to Seattle where he practiced law. ***He joined the firm of Shidler, McBroom, Gates, and Lucas as a partner in 1964.*** *In 1990, this became Preston Gates & Ellis.*

1963 - Physio-Control International - Hiring of first full-time President, W. Hunter Simpson.

See [HW005A][GDrive] . No doubt William Henry Gates II would have worked closely with **William Hunter Simpson (born 1926)** during this transition.

Note - *"spent his first year at Physio-Control raising $300,000 in venture capital, attracting local investors such as* ***Bagley Wright****, whose company,* ***Pentagram Corp.****, built the Space Needle for the Seattle World's Fair."* It would have made sense for William Henry Gates II to be involved - Remember, his mentor **James d'Orma Braman (born 1901)** has a role in that Seattle World's Fair.

In 1961, Edmark unveiled a defibrillator that operated on direct current. When a heart goes into fibrillation, it begins to flutter and is unable to pump blood through the body. Defibrillators administer an electrical shock, which momentarily stuns the heart and allows it to return to a regular heartbeat. Until Edmark introduced his DC Pulse Defibrillator, medical defibrillators used AC, or alternating current, which caused patients to spasm violently because of the high voltage. The DC defibrillator allowed surgeons to administer a more-controlled, low-voltage shock that restored the heartbeat without causing additional trauma.

Edmark licensed manufacturing and distribution rights to the DC Pulse Defibrillator and the Pressure Pulsometer to American Optical, one of the first big companies to enter the electronic medical-instruments industry. Over the next few years, Physio-Control, which had been bankrolled by Edmark and a few personal friends, received about $10,000 annually in royalties, which was plowed back into research.

Then in 1965, American Optical announced that it had refined Edmark's inventions to the point where it no longer felt it needed a licensing agreement with Physio-Control to manufacture and sell the devices. Without a source of revenue, Edmark faced a decision: either he could shut down Physio-Control or begin running it as a business instead of a research laboratory. He chose the later. He also asked [William Hunter Simpson (born 1926)], then Northwest district manager for IBM Corp. in Seattle, if he was interested in becoming Physio-Control's first full-time president.

[William Hunter Simpson (born 1926)] had known Edmark since 1963, when he had hired the cardiologist as a consultant. At the time, IBM, which designed the first heart-lung machine for the Mayo Clinic, had been interested in further exploring the medical instruments industry. Although it meant giving up a secure position and taking a cut in pay, Simpson accepted Edmark's offer, starting his new job in January 1966.

A graduate of the School of Business at the University of Washington, who also had studied pre-med, [William Hunter Simpson (born 1926)] spent his first year at Physio-Control raising $300,000 in venture capital, attracting local investors such as Bagley Wright, whose company, Pentagram Corp., built the Space Needle for the Seattle World's Fair. He also changed the name of the company to Physio-Control Corporation, and more narrowly defined the company's market niche. According to Harriet and Terry King in *The Team*, a book published by Physio-Control detailing its first 25 years, Simpson told the company's five employees, "Our immediate goal is to install coronary care systems in Puget Sound hospitals and smother them with love, attention and service. After that, when the time is right, we can think about marketing nationally."

1965 - William Henry Gates II last year on board of Directors for Physio-Control Co.

See **Physio-Control Corporation** ; Article reference : [HM000F][GDrive] - BY LISA STIFFLER on November 25, 2015

He stayed on helping the company though - he helped the company go public in 1971.

1966 - 1971 - Continues to help Physio-Control, even helping the company go public in 1971; So close with Bill Gates Sr that Jr is brought into the office to learn about the business and write reports

See **Physio-Control Corporation** ; Article reference : [HM000F][GDrive] - BY LISA STIFFLER on November 25, 2015

[...] Gates helped take **[Physio-Control Corporation]** public in 1971 — the same year that drivers on SeaTac's stretch of Highway 99 were confronted by an infamous billboard asking "Will the last person leaving SEATTLE — Turn out the lights" erected in response to a spate of layoffs at Boeing, then the region's largest employer. It was also four years before Gates Jr. and Paul Allen co-founded Microsoft, a company that would eventually reshape the Seattle region and the larger tech ecosystem.

The success of [Physio-Control Corporation] was "the beginning of that positive feedback of people starting a technology company and doing well and going on to found new companies, and to serve as an angel investor to others," said Malarkey, of the Technology Alliance.

The angel investing of Gates Sr. and his peers, she said, had "a spirit of community building."

And his dad's engagement in tech ventures helped fan his son's curiosity about the field.

"As a sixth grader, he had me go down and meet with Dr. Edmark and [William Hunter Simpson (born 1926) , who was Physio's president and CEO], and I wrote a long report about Physio-Control," Gates Jr. said. Gates later worked with some employees at Intermec to develop the tape reader that he and Allen used at Traf-O-Data, their pre-Microsoft venture created to analyze traffic-counting data.

1969 (Aug) - Father passes

https://www.findmypast.com/transcript?id=USBMD%2FSSDI%2F535183990

1975 - Physio-Control advertisement - His company is advertising it's support of President Ford?

See **Physio-Control Corporation**

Helicopter taking President Ford on first leg of a speaking tour also carries a portable machine that could save his life in case of a heart attack.

One of the President's Traveling Companions

by Doug Spangler

One of President Gerald Ford's constant traveling companions is Lifepak 4. This isn't another secret service unit, or a new bulletproof vest. But it's one of the most important precautionary measures the President has at his disposal. It may one day save his life.

Lifepak 4 is a portable, battery-powered cardiac defibrillator. This amazing piece of equipment stands ready to help the President in case of a heart attack or any other heart problem.

Should an attack occur, medical personnel would quickly take out two round, hand-sized paddles attached to the machine. These serve both as monitoring and defibrillation electrodes. Holding one paddle on the left side of the President's bare chest and the other paddle on his right front side, aides could immediately get a reading of his heartbeat on the Lifepak 4's cardioscope—a small, TV-type screen which emits a "beep-beep" sound. At the same time, the machine produces a permanent electrocardiograph on tape as a record of the episode.

These monitors would show at once what the President's heart is doing. If they indicate a cardiac arrest (when the heart completely stops or has ventricular fibrillation—a weak, rapid, and ineffective twitching of the heart muscle), the same paddles could then administer a brief, electric shock to restart his heart into regular beats. Special pushbuttons on the paddles release a 320-joules (watt-second) jolt—equivalent to 53,000 watts in 6/1000ths of a second. Another shock could be administered in less than 10 seconds.

When the monitors indicate a normal heartbeat, the President would be rushed to a hospital, with other cables fastened to his chest to provide continuous readings.

President Ford isn't the only individual currently being protected by the 36-pound, 8 by 14 by 19-inch portable device. A Lifepak travels with Secretary Kissinger on his shuttles. Another of the rechargeable nickel-cadmium battery devices is kept in the Capitol for use in a Congressional emergency. The U.S. military made good use of the machines during the Vietnam War. The Shah of Iran and the royal family of Saudi Arabia have models on hand.

For workers and players

More than 20 defibrillators have been placed along the Alaska pipeline construction route in case a worker has a heart seizure, and professional football teams, including the St. Louis Cardinals, Buffalo Bills and Cleveland Browns, have them in the clubhouse. Major airports keep them handy, as do a number of banks, industrial corporations and ski and tennis resorts. Some private individuals have shelled out the $4500 that a Lifepak 4 costs. There also is a lightweight defibrillator, powered by flashlight batteries, called Physio 260, that sells for under $1000.

The U.S. Government purchased its first two Lifepaks in 1969 for possible use by President Nixon. Rear Admiral William M. Lukash, President Ford's personal physician, told PARADE we have the "cardiac defibrillator in the event of an acute cardiac emergency associated with ventricular fibrillation or cardiac arrest. The initial consideration for having a defibrillator readily accessible developed because of former President Johnson's history of having had a previous coronary."

Lifepak 4 measures only 8 by 14 by 19 inches, but it has the power to overcome heart emergencies. Cost: $4500.

Speed is the key

In case of emergency, speed is essential. If a cardiac arrest remains untreated for as little as four to six minutes, the brain is damaged. If it continues beyond that, death is imminent.

Lifepak 4 is the top of a line of portable, battery-powered defibrillators produced by Physio-Control Corp. of Redmond, Wash. It was developed by Dr. William Edmark, a Seattle cardiovascular surgeon and director of research for Physio-Control.

"As a surgeon, I had expected it to be used mainly during operations," Dr. Edmark says. "But its real value proved to be for hospital intensive care units, which are administered by cardiologists. Today, however, resuscitation has basically moved out of the coronary care units. Lives are saved more now by the portable defibrillators out in the streets and homes."

Additional usefulness can come from an optional modulator, which, attached to the Lifepak, provides an FM signal for either a telephone or radio transmission of a patient's electrocardiogram. Medical aides using the modulator can relay heart data immediately to a hospital emergency room. A doctor can then instruct them on the proper course of action.

Doctors have them

Some 10,000 Lifepaks are now in use throughout the world, most of them in doctors' offices, hospital coronary care units, emergency rooms, operating rooms and recovery rooms. Many hospitals have cardiac defibrillators carried on carts, ready to be rushed to a patient's room in emergencies.

Yet the usefulness of the defibrillator doesn't end there. The American Heart Association reports that nearly 700,000 deaths result each year from heart attacks, with half the victims dying before they reach the hospital. This is why an increasing number of emergency care units are equipping themselves with Lifepaks or equivalent machines, ready to speed life-giving aid not only to the President but to the man in the street.

21

[HN01BW][GDrive]

1969-1970 - President of Seattle-King County Bar Association, 1969–1970

Source - [HK002B][GDrive]

REFERANCE ARTICLES

Wikipedia on "Bill Gates Sr" - Saved Aug 10 2020

[HK002B][GDrive]

Born November 30, 1925 (age 94) **Bremerton, Washington**

Alma mater University of Washington (BA, JD)

Occupation Lawyer

Height 6 ft 6 in (198 cm)

Spouse(s)

- Mary Maxwel (m. 1951; d. 1994)
- Mimi Gardner (m. 1996)

Children

3; including Bill

William Henry Gates II[2] (born November 30, 1925), better known as **Bill Gates Sr.**, is an American attorney and philanthropist, and author of the book *Showing Up for Life: Thoughts on the Gifts of a Lifetime*. He is the father of Bill Gates, the co-founder of Microsoft.

One of a line of businessmen named William H. Gates, and sometimes called William Gates Jr. during his career, he is now generally known as **William Henry Gates Sr.** due to the greater prominence of his son Bill Gates (whose full name is William Henry Gates III). He has adopted the suffix "Sr." to distinguish himself from his more famous son.

Career

[...]

[Bill Gates... between 1951 and 1964 ???]

While at Washington he joined the Chi Psi fraternity. He co-founded Shidler & King in 1964, which later became Preston Gates & Ellis LLP (PGE). He practiced with the firm until 1998, when it was merged into the firm now known as K&L Gates (with which Bill Gates Sr. is not affiliated).

Gates has served as president of both the Seattle/King County Bar Association and the Washington State Bar Association. He has also served on the boards of numerous Northwest organizations, including the Greater Seattle Chamber of Commerce,[4] King County United Way and Planned Parenthood.[1][5][6] In 1995, he founded the Technology Alliance whose mission is to expand technology-based employment in Washington.[4]

In 1998, Gates retired from PGE. He served for fifteen years on the Board of Regents for the University of Washington,[7] and is a co-chair of the Bill and Melinda Gates Foundation,[1] which his son Bill and his daughter-in-law Melinda founded. He has served as a director for Costco Wholesale, a bulk retail corporation, since 2003. He is also a founding co-chair of the Pacific Health Summit.[8]

Gates is co-author, with Chuck Collins, of the book *Wealth and Our Commonwealth: Why America Should Tax Accumulated Fortunes*, a defense of the policies promoted by the estate tax.[9][10]

William H. Gates Sr. serves as an Honorary Chair for the World Justice Project.[4] The project works to lead a global, multidisciplinary effort to strengthen the Rule of Law for the development of communities of opportunity and equity.

Personal life

In 1951, he married Mary Maxwell Gates (1929-1994), whom he met at the University of Washington (UW), and they remained married until her death in 1994. They had three children: Kristianne, Bill, and Libby. His two daughters, Kristi Blake and Libby Armintrout, are both active members of the UW community.[1]

In 1996, Gates married his second wife Mimi Gardner Gates (b. 1943), who was the director of the Seattle Art Museum.[1]

He has been a lifelong supporter of the Washington Huskies college football team.[7]

In 2018, it was revealed that he suffers from Alzheimer's disease.[11][12]

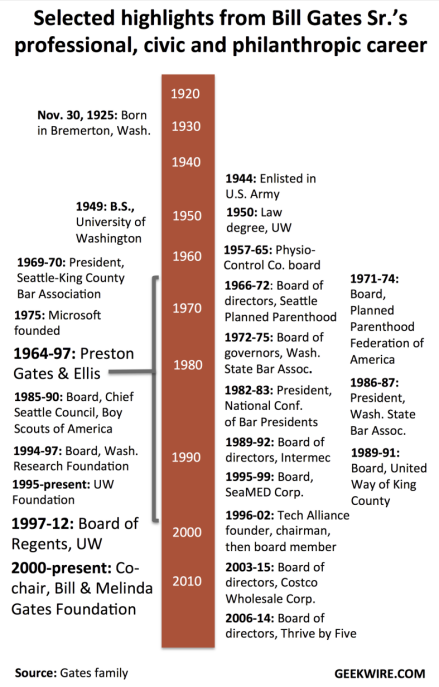
Awards and recognition

- Awarded Distinguished Eagle Scout Award, to acknowledge his business and civic success at least 25 years after earning Eagle Scout rank[13][14]
- [...]
- President of Washington State Bar Association, 1986–1986
- Recipient of University of Washington School of Law Distinguished Alumnus, 1991
- Recipient of American Judicature Society's Herbert Harley Award, 1992
- Served on Board for Judicial Administration, Washington State Supreme Court, 1993–1995
- Served on Board of Regents, University of Washington, 1997–2012
- Inducted into American Academy of Arts and Sciences, 2003
- William H. Gates Hall at UW's School of Law was named for him in 2003[15]
- Public Education Foundation speaker at Edmonds-Woodway, 2004
- Awarded Washington Medal of Merit, 2009
- Recipient of Chi Psi Fraternity's Albert S. Bard Award, 2010, for contributions to the intellectual and cultural life of the community
- Recipient of UW Alumni Association's Alumnus Summa Laude Dignatus (ASLD) Award, 2013[16]

Bill Gerberding (UW president, 1979–1995) described Bill Gates Sr. as "a good man with a big heart [and] generous public spirit", while former Seattle Mayor Norman Rice has characterized Gates' core values as "social justice and economic opportunity".[1]

Geekwire 2015 article - "Bill Gates Sr. at 90: A giant impact on technology, philanthropy and the Seattle region"

Article reference : [HM000F][GDrive] - BY LISA STIFFLER on November 25, 2015



[HM000G][GDrive]

[...] Or that Gates Sr. has been a tremendous civic leader, advocating for controversial causes including serving on the local and national boards of Planned Parenthood before Roe v. Wade, and campaigning as the face of a state income-tax initiative in Washington state. And there's his leadership for the world's largest philanthropic trust, plus supporting numerous other global health, education and arts charities, as well as his devotion to the University of Washington and 15 years on its Board of Regents.

"His fingerprints are all over so many things," said Jim Sinegal, co-founder and former CEO of Costco, on whose board Gates Sr. served. "The list goes on and on. It's pretty tough to find something that doesn't have his stamp on it somewhere along the line."

But those lists represent just a small portion of Gates' professional and charitable activities, and they only tell a fraction of his story. Because while his service on boards and his work leading fundraisers pack an epic CV, what most impresses the people who've worked and volunteered alongside Bill Sr. isn't found on his resume.

[...]

Early days of Northwest tech

[...]

Gates' first wife, Mary Maxwell, was a fellow UW Husky and they had three children together: Kristi, Bill (known by family and close friends as "Trey" in reference to the three card in a playing-card deck) and Libby.

Early in his law career, Gates Sr. and his law firm became involved in the region's nascent tech industry, and that involvement only strengthened and expanded over time.

[...]

Gates' early legal clients included Redmond's [Physio-Control Corporation], a pioneer in heart defibrillators led by Dr. Karl William Edmark, and Intermec Corp., an Everett-based business and creator of the most widely used barcode symbols and the hand-held barcode scanner. Gates was on the board of directors for both companies.

Gates helped take [Physio-Control Corporation] public in 1971 — the same year that drivers on SeaTac's stretch of Highway 99 were confronted by an infamous billboard asking "Will the last person leaving SEATTLE — Turn out the lights" erected in response to a spate of layoffs at Boeing, then the region's largest employer. It was also four years before Gates Jr. and Paul Allen co-founded Microsoft, a company that would eventually reshape the Seattle region and the larger tech ecosystem.

The success of [Physio-Control Corporation] was "the beginning of that positive feedback of people starting a technology company and doing well and going on to found new companies, and to serve as an angel investor to others," said Malarkey, of the Technology Alliance.

The angel investing of Gates Sr. and his peers, she said, had "a spirit of community building."

And his dad's engagement in tech ventures helped fan his son's curiosity about the field.

"As a sixth grader, he had me go down and meet with Dr. Edmark and [William Hunter Simpson (born 1926) , who was Physio's president and CEO], and I wrote a long report about Physio-Control," Gates Jr. said. Gates later worked with some employees at Intermec to develop the tape reader that he and Allen used at Traf-O-Data, their pre-Microsoft venture created to analyze traffic-counting data.

Stoking the tech engine

A few years after [Physio-Control Corporation] went public, Gates Sr. and others eager to grow the new economy began working with other angel investors to support the region's burgeoning biotech and IT industries.

Along with Simpson and venture capitalist Tom Cable, the trio founded Washington Research Foundation.

The nonprofit helps research institutions, including the UW, turn their discoveries into commercial products and invests in promising innovations. Established in 1981, the foundation was one of the first organizations of its kind nationally, and has secured more than 110 product licenses, earning more than $350 million for the UW. Gates brought his legal acumen to the project, drafting legislation that granted the organization tax-exempt status.

In 1975, Gates Jr. and Allen started Microsoft, though it wasn't until the 1980s that the company began taking off with the public release of MS-DOS, Microsoft's partnership with IBM on the early personal computer, and the introduction of Word and other Office products.

As the younger Gates was trying to grow his company, he came to his dad for advice on non-software decisions and relied on his parents for help recruiting talented employees, particularly those older than himself. Bill and Mary were adept at connecting people and integrating them into social networks.

"I was mono-maniacally focused on Microsoft and quite a bit younger than some of these experienced people we were bringing in," Gates Jr. said. "Even when I wanted to hire Steve Ballmer, [to get him] to drop out of business school, he was a year in, my parents had him over and were helpful."

But while Microsoft was growing, computer technology was still a foreign field to many. People didn't fully appreciate the value of the sector and the role that IT and biotech was to play in everyone's lives.

So in 1996, Gates Sr. helped launch the Technology Alliance, a tech-centered alternative to the more traditional chamber of commerce, which set about proselytizing the power of IT to local leaders. Part of their mission was visiting other tech hubs — Silicon Valley, Boston, North Carolina — and deconstructing what made them successful in order to try to replicate their strengths in the Northwest.

Gates Sr., who many say has a striking ability to see to the core of an issue and ask the right questions at just the right time, wanted to figure out a way to deliberately cultivate the technology field.

His idea was "maybe we should be smart about this and not rely on happenstance," said Marty Smith, a former partner at the Preston Gates & Ellis law firm and currently co-founder of MetaJure, a legal technology company.

The Technology Alliance went on to create the Alliance of Angels, one of the region's most important angel investment networks; as well as Ada Developer's Academy, a unique and intensive computer training program for women.

"This city would be very different without Bill having lived here," Smith said, "and that's nothing to do with Microsoft or Trey."

But as Gates Jr. and others explained, his dad wasn't driven so much by a fondness for technology, but by his love of education and the University of Washington, and his desire to promote strong communities and a robust economy. Technology, it seemed, could be harnessed to bolster many of his favorite causes.

"My dad is not a technology person," Gates said. "He got drawn into that, but he was about, 'How is this a great community to live in? How is it educating students really well?'"

'Justice and fairness for all'

Before technology and global health, even before Bill Jr. and his sisters, Gates Sr. was focused on the law.

He earned his law degree and passed the bar exam in 1950. He became heavily involved in the law's professional associations, including serving as president of the local and the state bar associations, holding multiple leadership positions with the American Bar Association, participating in numerous court commissions, and other posts.

The legal world was a natural fit with some of Gates' key values.

"This man has the most deeply rooted sense of justice and fairness for all people," said Connie Kravas, the UW's leader of fundraising and promotions.

Fellow attorneys said he had a great aptitude for the law, possessing a suite of five skills that makes him unusually talented in the field: He's an analytical, strategic thinker; empathetic to his clients; has a broad knowledge base; is a great listener and can put himself in his opponent's shoes; and, because he has all of these skills, is also well respected by other litigators and judges.

"Bill is one of the very few people I've seen that has all five," Smith said. "He was one of the most respected lawyers in town."

His son is among those who have benefited from Gates Sr.'s legal skills. Beginning in the 1990s, Microsoft faced a series of legal challenges stemming from government accusations that the company engaged in anti-competitive practices. Gates Jr. sought advice from his dad in the matter.

"We had a legal dispute early in Microsoft where I felt sure we were right and we ought to stay the course," Gates Jr. said. "He helped reinforce that."

Again, friends and colleagues cite Gates Sr.'s personal actions and demeanor among his greatest professional accomplishments.

Tom Alberg had just begun practicing law in Seattle when he met Gates Sr., who is 15 years older than himself. In the 1960s, Alberg was a local leader among young attorneys and they raised the call for equal rights for black and white lawyers. They needed support from Gates, who held sway in the legal

young attorneys and they raised the call for equal rights for black and white lawyers. They needed support from Gates, who held sway in the legal community.

"Bill treated us like equals," Alberg said. "He wasn't like, 'You young kids.' He was very gracious and listened to what we had to say, at least, and probably gave us good advice.

"He was always very open to younger people and younger lawyers," said Alberg, who went on to start the venture capital firm Madrona Venture Group and serves on the executive committee for Technology Alliance.

And Gates Sr. was more humane than one might expect a leader at a top firm to be. Colleagues tell stories of the respect with which he treated younger associates. He supported them when they asked for leaves to travel and start families.

Understanding the value of women

Perhaps most striking, Gates Sr. appears to have always regarded women as his equals, despite the fact that he joined the workforce at a time when America was just tuning in to June and Ward Cleaver on Leave It to Beaver.

"The firm was incredibly supportive of women," said Connie Collingsworth, general counsel at the Gates Foundation and former partner at Preston Gates & Ellis, which is now K&L Gates.

His support was genuine, said Collingsworth, who met Gates Sr. in 1990. "It wasn't that he was saying, 'I'm going to meet a quota or a mission agenda point.' It was subtle. He just did what he thought was right."

When Gates Sr. helped start the Technology Alliance, a groundbreaking organization addressing the issues of a male-dominated field, he chose Susannah Malarkey to head the group. Malarkey, by her own admission, wasn't experienced in tech, but Gates saw her potential.

"Bill was way ahead of his time," Malarkey said. "He understood the value of women when most men of his generation were pretty old school."

Not surprisingly, friends say Gates applauded the achievements of both of his wives: first Mary, who served as UW regent for 18 years and engaged in numerous civic causes before she passed away in 1994, and then Mimi Gardner, former director of the Seattle Art Museum.

"He was totally comfortable in his own skin and celebrated women accomplishing things," Malarkey said, noting the parallels between Gates Sr. and his son in this regard. "Bill celebrates Melinda's success in the same way that Bill and Mary supported one another."

Gates Sr.'s mother was the one who seeded his respect for women, Gates Jr. said. Gates Sr.'s mother, Lillian Elizabeth Rice, was very sharp, despite having only an eighth-grade education. Gates Sr. was also close to his first mother-in-law, Adelle Maxwell, whom Gates Sr. has described as independent and insightful.

"My two grandmothers, not to insult my grandfathers, were significantly more talented than my grandfathers," Gates Jr. said. They "were both very smart."

Trying to level the playing field

Gates Sr.'s quest for fairness and access to opportunities extended beyond his personal interactions into broader social causes, from fundraising at the UW to his leadership at the Bill & Melinda Gates Foundation.

But his pursuit of a more level playing field led to Gates Sr.'s most visible public defeat: the failure of a voter initiative to establish an income tax for Washington's richest residents.

Washington arguably has the most regressive tax structure in the nation, meaning the tax burden here is disproportionately higher for the poor than the rich. Gates and others sought to correct that disparity with a 2010 ballot measure, one that would have pumped funds into state education. The initiative would have created an income tax for individuals earning more than $200,000 annually and for couples with incomes of $400,000.

The measure pitted Gates against long-time friends [Daniel Jackson Evans (born 1925)] and Tom Alberg; Steve Ballmer, who in 2000 succeeded Gates Jr. as CEO of Microsoft; Amazon's CEO Jeff Bezos; as well as many other tech leaders. Both sides spent millions on the campaign, which supporters lost in a vote of 36 percent in favor and 64 percent against the initiative.

My dad "had a firm conviction" that the income tax was the right solution and "he thought a lot of people would come along and support him," Gates Jr. said. "Even as that coalition ended up being quite small compared to what he hoped for, he stuck with it."

And he didn't hold a grudge against those who saw the issue differently — a trait he displayed on countless occasions.

Opposition over the initiative "hasn't affected our 55-year-old friendship. It survives easy things like that," said Evans, a Republican who while governor had twice pushed for a state income tax as part of a broader package of tax reform.

In the five years since the initiative failed, the problem of income inequality has only become more exacerbated. Particularly in the greater Seattle area, an ongoing tech boom continues to push housing prices upward and some residents and leaders fear that lower- and middle-class workers will keep getting priced out of the city — a downside to the success of an IT economy that Gates Sr. surely would not have wanted.

"Seattle is certainly doing well at tech jobs at the moment," Gates Jr. said. "Some people think too well."

But Gates Sr. hopes that others will take on the challenge of working toward better communities in his home town and globally.

"[W]hat really makes Washington state great — and the rest of the Pacific Northwest for that matter — [are] the people. I am amazed by how many people have stepped up to help transform the local community into a global hub of partnership, big ideas and the determination necessary to solve tough problems at home and in poor countries," Gates Sr. said. "I don't see any signs of that letting up."

From a box of letters to a billion-dollar foundation

While Gates Sr. wasn't able to help usher in an income tax, he's had other avenues for his vision of a fairer world, namely his role co-running the multi-billion-dollar Gates Foundation.

"He's just the heart and soul of the foundation," said Collingsworth, general counsel for the organization. "He's there every day representing the family."

And he brings with him an enthusiasm that's helpful when tackling intractable problems of disease and poverty.

"When I come into the office, I am blown away by the signs of progress — both large and small — that prove the world is getting better," Gates Sr. said. "Earlier this year, for example, the country Nigeria celebrated going a full year without a case of polio. I remember when my children were young and polio was a real terror in the United States. To think that we have wiped out 99 percent of that awful disease — and that the job will, in all likelihood, be finished in just a couple years — is rather remarkable."

When I come into the office, I am blown away by the signs of progress — both large and small — that prove the world is getting better.

The foundation officially formed in 2000 through the consolidation of multiple charitable organizations supported by the Gates family and Microsoft. But in fact, Gates Sr. was playing an essential role in this arena well before the charity coalesced.

Evans recalled a time he was staying with Bill and Mary at their home in Palm Springs, Calif. Gates Sr. had a big box of letters from people seeking financial support from his son for a variety of causes.

"Bill was the one who said, 'Son, let me take a look at these,'" Evans said. "That was the beginning of the Gates Foundation." Gates Sr. perused the inquiries, sorted them and made recommendations to his son.

"Bill counseled him, 'It's time for you to begin thinking about what you can give back,'" Evans said.

The Seattle-based foundation has grown to nearly 1,400 employees worldwide helping manage and distribute grants from a trust that totals $41.3 billion. The organization has multiple initiatives, including global health, with an emphasis on vaccines, AIDS and malaria research; alleviating poverty and hunger in developing countries; and in the United States, the foundation is investing in high school and higher education, with a local focus on early learning.

He has this ability to recognize the humanity in everybody.

Friends say that Gates Sr. lives the foundation's credo that "every life has equal value."

"He has this ability to recognize the humanity in everybody," said Smith, Gates Sr.'s former colleague. Whether he's interacting with an HIV-positive child in India or a head of state, "to Bill there really isn't a difference. To him they're each human lives worthy of your attention and time."

Since it began, the Gates Foundation has issued $34.5 billion in grants. Gates Sr. is a co-chair of the foundation, with direction from his son and daughter-in-law and Warren Buffett, who has contributed billions of dollars to the foundation.

Gates Sr. "has been a steady influence right from the beginning," said Dr. Bill Foege, who recently retired as senior fellow for the Foundation's Global Health Program and served as former director of the U.S. Center for Disease Control. "He provides that sense of security."

In the late 1990s, Gates Sr. met with Foege, who came up with the strategy for eradicating small pox worldwide, to get his advice on the most worthwhile, promising strategies for addressing global health issues. Foege encouraged them to pursue vaccines, a path they were already exploring.

Working with Gates Sr. has provided Foege with some interesting insight into his own field.

"He has demonstrated to me that lawyers are more important than doctors when it comes to global health," Foege said. It turns out that in some cases, changing the law can do more than medicine to make widespread strides in health outcomes.

Global health needs to be "based on good science and the best results are based on good management," Foege said, "and management is often tied to the rule of law."

Because of its massive wealth, the organization is powerful and wields significant influence on public policy at home and abroad, and its investments in impoverished countries can change their very cultures — for good and, in certain cases, some would say ill.

He has demonstrated to me that lawyers are more important than doctors when it comes to global health.

Critics have raised concerns about the foundation's transparency and outsized-role in shaping the debate over public education in America. They admonish the group for favoring technologically-based solutions, including the use of fertilizers to boost agricultural output in developing countries.

At the same time, the foundation has fostered great achievements through immunizations that are curbing polio and other diseases, empowering women through support for family planning, funding teacher training and expanding online access to education.

"When I started medical school, which was almost 60 years ago at the University of Washington, I knew I was interested in global health," Foege said, but he couldn't find three other people on campus who shared his passion.

"In the past 15 years, this has become the most popular subject on campus after campus. The difference occurred in about 1999," Foege said, "when the Gates family took this on as an issue."

A roller-skating Santa at 6-feet, 7-inches tall

Towards the end of his 2009 book, "Showing Up for Life: Thoughts on the Gifts of a Lifetime," Gates Sr. ruminates on the challenge of imparting meaningful advice to college grads.

He writes, "Every time I am preparing to give a commencement address I go around for weeks asking myself and anyone else who will listen, 'What's most important for the graduates to hear about what matters in life?'"

He comes to the answer: Family, friends and public service, in that order.

In addition to his love of the law, the UW, the foundation and all his other causes and crusades, Gates Sr. — by his own admission and according to others — has strived to put family and friends first.

For Harold Kawaguchi, a former officer for Physio-Control and chairman of the board for Stratos Group, that commitment was clear from Gates' help when he was adopting children.

Gates Sr. was his personal attorney for the adoptions. "He didn't hand it off, he did it personally," Kawaguchi said. "He retained his personal touch even for things that wouldn't seem meaningful from a big business standpoint."

For Smith, who worked at Gates' firm, his boss was eager to celebrate the birth of his three daughters, and was the first to call after his wife had surgery.

"He was a mentor for me as a lawyer. He was a role model in terms of getting involved in the community and a facilitator in my doing that. He has been an incredibly good friend and listener," Smith said. "He's just a person who's been there in a way in my life that I never had growing up."

Former governor Evans remembers how much fun he's had with Gates Sr.

Their long-standing bridge group would go out for dinners every few months, hosted by the two losing players. One such occasion was co-hosted by Gates Sr., who devised a treasure hunt that sent the 12 diners across Seattle as they solved clues leading everywhere from an oyster bar in the old Olympic Hotel to Ivar's restaurant on the waterfront. It was a tremendous effort and a night they all cherished, Evans said

Evans also recalled a Christmas party the Gates held when their children were young. The Evans family arrived to find a roller-skating party. Gates Sr., at six feet, seven inches tall, was dressed as Santa Claus. On roller skates.

[...]

1989 gates law firms

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1980 (June) - Neukom

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Neukom joined microsoft !!!

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https://www.tampabay.com/archive/2005/11/04/a-gigantic-ambition-he-s-taking-aim-at-global-poverty/

"A GIGANTIC AMBITION' // He's taking aim at global poverty

By LOUIS HAU

Published Aug. 2, 2006

Advertisement

The father of Microsoft Corp. co-founder Bill Gates met with Tampa Bay area business leaders and educators Thursday to urge them to join the fight against global poverty.

"It's a gigantic ambition," Bill Gates Sr. said during a breakfast at the Centre Club in Tampa. "But there isn't any progress that is going to be made unless people in this country become concerned about it and express their concern."

The 79-year-old Gates, a prominent Seattle lawyer who co-chairs the Bill and Melinda Gates Foundation, was in town in his capacity as one of the founders

The 77-year-old Gates, a prominent Seattle lawyer who co-chairs the Bill and Melinda Gates Foundation, was in town in his capacity as one of the founders of the Initiative for Global Development _ and in his celebrity role as someone who happens to share his name with the world's richest person. (Bill Gates Jr. is worth $51-billion, Forbes magazine estimates.)

The Seattle global development group seeks to recruit business and civic leaders as advocates for making aid to the world's poor a top priority among U.S. policymakers.

Fighting global poverty is of critical importance to U.S. security and economic interests, particularly after the end of the Cold War and the Sept. 11 attacks, said Daniel Evans, a former U.S. senator and ex-governor of Washington who co-founded the group.

An important dimension to that involvement is work to reduce the hopelessness and political extremism that can result from poverty, he said. To ensure the U.S. remains out front on the issue, Evans said "what we're attempting to do here is to mobilize the business and professional community of the country to influence and push on the Congress, on the president and on each other to join together in ending absolute poverty."

Tampa is one of 10 cities around the country the development group picked to encourage greater awareness among local business leaders about the importance of its cause, according to the group's managing director, Jennifer Potter.

In the group's search for a city in the Southeast, Tampa got the nod over Atlanta because of the visibility and influence of local members of Congress, including Rep. Jim Davis, D-Tampa, who is a Florida gubernatorial candidate, and Rep. Katherine Harris, R-Sarasota, a member of the House Committee on International Relations, Potter said.

The group is paying particular attention to that committee, as well as the House Appropriations Committee and the Senate Foreign Relations Committee because of their policymaking role in antipoverty efforts, she said.

Several bay area business people are working to raise awareness of global poverty. Calling themselves the Tampa Bay International Initiative Committee, they want to find a partner city in a developing country in which to help reduce poverty.

While some financial assistance would be implicit in any such effort, the Tampa Bay committee expects the primary contribution made by local businesses would be in advice and expertise, said Bill Flynn, an immigration lawyer at Fowler White Boggs Banker in Tampa.

Whatever efforts local businesses support in the partner city, "it shouldn't just be altruistic, but sustainable and justifiable on its own business merits," said committee member Peter Lewis, senior vice president for market strategies and development at GunnAllen Financial in Tampa.

"What we are looking at is sustainable ways to address the issues of poverty, but using practical, sustaining methods," Lewis said.

Also attending Thursday's breakfast was Kiran Patel, a prominent bay area philanthropist. During a group discussion about the best means to provide assistance to poverty-stricken areas, Patel told Gates and Evans that it would help to keep efforts focused on a particular geographic area. First demonstrate what can be accomplished there, he suggested, before taking on more far-reaching projects.

After the breakfast, Patel said efforts to fight poverty often result in "a lot of ideas but no action." Patel, whose international philanthropy includes supporting a hospital and schools in India, said he hopes national and local efforts to raise awareness of the issue will bear fruit.

"Otherwise, we will keep having breakfasts like this and nothing will get done," he said.

Louis Hau can be reached at (813) 226-3404 or hau@sptimes.com.

INITIATIVE FOR GLOBAL DEVELOPMENT

PURPOSE: An alliance of business and civic leaders seeking to make the elimination of global poverty a top policymaking priority for the United States.

FOUNDED: January 2003 by Bill Gates Sr., former Sen. Daniel Evans, R-Wash., former chairman of the Joint Chiefs of Staff John Shalikashvili and others.

NETWORK: Starting with 10 cities, including Tampa.

TAMPA BAY AREA COMMITTEE: A dozen representatives, including retired Air Force Brig. Gen. Arthur "Chip" Diehl; lawyer William Flynn of Fowler White Boggs Banker; Peter Lewis of GunnAllen Financial Services; Joseph McCann of the University of Tampa; and A. Bronson Thayer of Bay Cities Bank.

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Housatonic

Mary Maxwell Gates (born 1929)

Wikipedia https://en.wikipedia.org/wiki/Mary_Maxwell_Gates

Married to William Henry Gates II (born 1925)

Children include William Henry Gates III (born 1955)

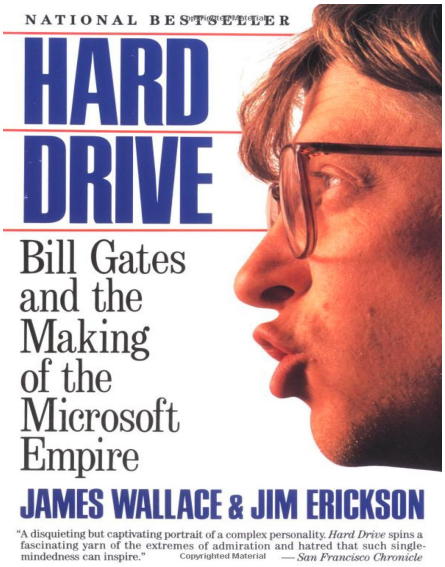
Associations:

- **Gordon Calvin Culp (born 1926)** (University of Washington Regents)
- **Daniel Jackson Evans (born 1925)** (College friend, bridge partner; Gov Evans assigned Mary gates to ta UW Regents role in 1975)
- **Brockman Adams (Born 1927)** (A future senator, but as a friend in college, introduced her to future husband **William Henry Gates II (born 1925)** [HB0053][GDrive])
- **James d'Orma Braman (born 1901)** (Scout leader, mentor, and life-long friend of husband **William Henry Gates II (born 1925)**)

Introduced to husband by Brockman Adams - See book "Hard Drive"

PDF of book : [HB0053][GDrive]

"Their daughter Mary was born in Seattle in 1929. A vivacious young beauty she grew up among some of the most prominent families in the Northwest. Like her mother before her, Mary Maxwell met her future husband, a tall, **athletic, prelaw student by the name of Bill Gates, Jr.,** while she was a co-ed at the University of Washington. A school cheerleader, Mary was as outgoing and gregarious as Bill was shy and reserved. A mutual friend, [**Brockman Adams (Born 1927)**] , had introduced the couple while Adams was student body president, and Mary was an officer in the student government association. (Adams went on to a career in politics, serving as secretary of transportation under 7 President Jimmy Carter. He is currently one of Washington's U.S. senators and remains a close friend of the Gates family.)"



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1954 - Dorm Braman elected to Seattle City Council

o Seattle in 1954, civic leaders in the area chose Braman to run for Seattle City Council. Source to HistoryLink article on James Braman : [HW0034] [GDrive]

1969 (Aug) - Father-in-law passes

https://www.findmypast.com/transcript?id=USBMD%2FSSDI%2F535183990

Gates, Mary Maxwell (1929-1994)

By David Wilma Posted 1/01/2005 HistoryLink.org Essay 7188

History Link source - [HW003L][GDrive]

The Seattle civic activist and philanthropist Mary Gates and her husband William H. Gates strived to create a quality environment for their children inside their home, as well as outside in the community. The son and daughters of Mary and Bill Gates have all been active as volunteers in civic organizations within their communities. The Seattle-King County Association of Realtors named Mary Gates and her family First Citizens of 1995 for their community service and philanthropy. It was the first time in the 57 years of the award that the Association honored an entire family

Mary Maxwell Gates (1929-1994)

Mary Gates grew up in Seattle's North End and graduated from Roosevelt High School where she was class valedictorian and a star forward on the girls' high school basketball team. She received a degree in education from the University of Washington 1950. While at the UW, she met law student William H. Gates Jr. (as he was then known) and they married. **While he worked as a Bremerton Assistant City Attorney in the early 1950s, she taught school there.**

The Gates family moved to Seattle where William practiced law. Mary involved herself in a wide array of civic activities in Seattle, volunteering as a lecturer at the Museum of History and Industry, serving on boards for the Seattle-King County United Way, KIRO, Inc., Washington Gives, and Leadership Tomorrow. She was the first female president of King County's United Way, the first woman to chair the national United Way's executive committee, and the first woman to be a director of First Interstate Bank of Washington. A national United Way award was established in her name for "exemplary projects" typifying Gates' emphasis on cooperation between staff and volunteers.

In 1972, she joined the Board of Trustees at Children's Orthopedic Hospital and worked on a variety of committees before heading up the board's legislative affairs committee. She lobbied officials in Olympia and in Washington, D.C. on issues that affected the hospital and children. It was Gates who proposed to the trustees at Children's that they form a foundation to manage the hospital's investments and giving programs. When the Children's Hospital Foundation was organized in 1985, Gates chaired that board. She also chaired the committee that drew up a strategic plan for the board, which had been formed in 1907.

In 1975, Governor Dan Evans (b. 1925), a former bridge partner of Bill and Mary Gates, appointed Mary Gates to the University of Washington Board of Regents. In the mid 1980s, she led a movement on the board to cut, and then divest, the University's investments in South Africa to pressure the government there to change its racist and oppressive system of apartheid. She served more than 18 years on the Board of Regents. In 1993, the First Interstate Bank named Gates to its board of directors.

Mary Gates died on June 9, 1994, the day before she was to be honored by the Seattle Municipal League of King County as Citizen of the Year. "One of Seattle's greatest treasures has passed from the scene," said Mayor Norm Rice, who called her "an extraordinary civic leader and philanthropist, a champion for social justice and a remarkable human being."

William H. Gates Sr. (b. 1927)

Known then as William H. Gates Jr., Gates received his bachelor's degree (1949) and his law degree (1950) from the University of Washington. After working as an assistant Bremerton City Attorney, he moved to Seattle where he practiced law. **He joined the firm of Shidler, McBroom, Gates, and Lucas as a partner in 1964.** In 1990, this became Preston Gates & Ellis.

Gates served as president of the Seattle-King County and Washington State Bar Associations. In 1991 he received the University of Washington School of Law Distinguished Alumnus, and in 1992 he received the Washington Bar Award of Merit and the American Judicature Society Herbert Harley Award. He retired from the firm in 1997.

William Gates has worked hard for many area organizations, including the Seattle Chamber of Commerce, the Municipal League, the Seattle Foundation, and the Seattle Repertory Theatre. He also is a supporter of United Way and was chair of the Seattle-King County United Way Campaign in 1989.

He served on the University of Washington College of Arts and Sciences Visiting Committee (1966-1975) and the School of Law Visiting Committee (1983-1986). He has been a director of the UW Foundation since 1995 and a member of the Board of Regents since 1997.

In 1999 Gates took over the newly formed Bill & Melinda Gates Foundation, which was endowed by his son, William H. "Bill" Gates III, and his daughter-in-law Melinda French Gates. It is the largest philanthropic organization in the world and it focuses on Third World health, online learning, and education. Because of the prominence of his son who shares the name William H. "Bill" Gates, the elder Gates came to use "Sr." rather than "Jr." following his name.

[...]

Mary Gates Dies -- Cancer Claims Longtime Seattle Civic Leader And Mother Of Microsoft Founder Bill Gates

Jun 10, 1994

Source : Seattle Times : [HN00Z5][GDrive]

Paul Andrews

Mary Gates, one of Seattle's most prominent civic figures and the mother of Microsoft magnate Bill Gates, died at her Laurelhurst home early this morning after a months-long bout with breast cancer. She was 64.

Years before her son gained international prominence, Mrs. Gates was widely respected as a tireless community-service advocate, a prominent role model for women seeking corporate advancement, and a skilled behind-the-scenes negotiator. But when it came to accepting credit, she was careful to deflect the spotlight away from herself and onto her many causes.

"Mary is the perfect example of being able to get a whole lot done if you don't worry about who gets the credit," said the Rev. Dale Turner, a longtime family friend, in an interview earlier this year.

The granddaughter of a prominent Seattle banker and civic figure, J.W. Maxwell, Mrs. Gates liked to describe herself as "a Seattleite through and through." She was proudest of her 18 years as a University of Washington regent. But she was at least as well-known for having opened doors of corporate boardrooms and executive suites to women during the 1970s.

"There were very few women involved in government affairs, and I was determined to change that," said former Gov. Dan Evans in an interview earlier this year. Evans, a onetime bridge partner, named Mrs. Gates as a regent in 1975, only to succeed her on the board last year. He said Mrs. Gates had "broad community experience" and knew the inner workings of "some pretty big enterprises."

She was to be honored today by the Municipal League of King County as Citizen of the Year for her long career and successes in community service. In a press release on its annual awards luncheon, the League cited Mrs. Gates' efforts as a "judicious, exceptionally talented civic-minded citizen."

Last night, the UW Alumni Association honored Mrs. Gates with its annual recognition award. Her husband and three children attended the ceremony on the UW campus and accepted the award in her behalf.

Born in then-rural North Seattle in 1929, Mrs. Gates attended Bryant Elementary and Roosevelt High schools. She enrolled in the University of Washington, graduating in 1950 with thoughts of a teaching career. After marrying Bremerton assistant city attorney Bill Gates Jr., whom she had met as a law student at the UW, she taught junior high school in Bremerton and at Seattle's Jane Addams before the birth of daughter Kristianne in 1954.

After son Bill, born in 1955, and daughter Libby, in 1964, completed her family, Mrs. Gates turned to volunteerism with the Junior League, Children's Orthopedic Hospital and United Way.

In 1975, the year her son co-founded Microsoft, Mrs. Gates became the first woman president of United Way of King County, the first woman director of First Interstate Bank of Washington, and only the fifth woman regent. In 1983 she was named the first woman to chair the national United Way's executive committee.

Thoughtful and questioning in the Socratic method, Mrs. Gates was a steadying influence on the regents board during turbulent times. When the university's South African investments drew protest in the early 1980s, Mrs. Gates pushed first for adoption of the Sullivan human-rights principles and later for divestiture. She also steered the regent's fiscally strategic Metropolitan Tract Committee, in charge of the university's 11-acre property downtown, through critical lease negotiations during major building renovations in the 1980s.

Mrs. Gates was "a source of balance, wisdom and stability on the regents - its center of gravity," said UW President William Gerberding, in a recent interview.

Mrs. Gates also figured in her son's success. She helped cement Microsoft's early connection with IBM, which led to development of the IBM PC with DOS, an operating system supplied by Microsoft. When someone mentioned Microsoft to IBM President John Opel in 1980, Opel responded, "Oh, that's run by Bill Gates, Mary Gates' son." Opel served with Mrs. Gates on United Way's national board at the time.

Mrs. Gates was recalled as a gracious hostess by early Microsoft executives on visits to her Laurelhurst home after the company moved to Bellevue from Albuquerque in 1979. Later the Gates clan, under her stewardship, sponsored annual Microgames, Olympics-like summer competitions drawing local community leaders, software-industry executives and Microsoft employees to the family compound on Hood Canal.

The mother-son connection clicked in luring nationally known bioengineer Lee Hood to the UW from Caltech two years ago. The Microsoft magnate contributed $12 million to UW biotech research. And Mrs. Gates nudged her usually apolitical son to fight state budget Initiatives 601 and 602 last fall.

Throughout her career, Mrs. Gates promoted philanthropic causes. After the death of Ned Skinner in 1988, she took over Washington Gives, the civic volunteer project that urges people to donate 5 percent of their income and 5 hours a week of their time.

In 1991 the Gateses were named philanthropic family of the year by Washington Gives.

Mrs. Gates also helped launch Leadership Tomorrow, the future executives and entrepreneurs program, and served on the boards of **Unigard Security**, US West, Seattle Symphony, KIRO and the Children's Hospital Foundation.

Mrs. Gates is survived by her husband, Bill, a senior partner with the law firm of Preston Gates & Ellis; three children, Kristianne Blake of Spokane, Libby Armintrout and Bill, both of Seattle, and four grandchildren.

A memorial service will be at 4 p.m. next Thursday at University Congregational Church in Seattle.

The family has suggested remembrances be sent to the United Way Endowment Fund, 107 Cherry St., Seattle 98104-2223; or Cancer Lifeline, Suite 680, 1191 Second Ave., Seattle 98101.

ALSO :

Great-grandfather ?

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[HN00Z6][GDrive]

Mary Gates -- She's Much More Than Just The Mother Of Billionaire Bill; This Former UW Regent Has Made A Career Of Community Service

Jan 9, 1994

Paul Andrews

If it is possible for someone at a wedding to be happier than the bride and groom, it was a beaming Mary Gates at her son's Hawaiian nuptials New Year's Day.

For Gates, 64, whose credentials in civic and corporate circles were cemented years before her now-famous son built Microsoft into a software megapower, Bill Gates' marriage to Melinda French represented a coming of full circle.

The mother of two daughters with families, Gates, now battling cancer, has long looked forward to her son's matrimony. He may be the fiercely competitive, fiercely independent billionaire mogul of the world's No. 1 personal-computer software company.

But he is still a son, and she a mother.

So much has her son achieved that Gates seems forever to be cast as "the mother of." Those who know Seattle, and know the Gates family, understand the paucity of the description. Only a little more than a decade ago, Microsoft Bill was known as "the son of."

In 1980, IBM President John Opel had already spent a couple of years on the national board of United Way with Mary. When the head of IBM's fledgling personal-computer project mentioned Microsoft to Opel, his response was, "Oh, that's run by Bill Gates, Mary Gates' son."

Gates came to her station partly by being a "supermom" long before the term was coined, juggling family and homemaking in Wedgwood and Laurelhurst with boardships on United Way, First Interstate Bank, US West and Children's Hospital, to cite a few.

"Mary never neglected her family responsibilities, even with all her other activities," said Seattle attorney Jim Ellis, who served with Gates on the University of Washington Board of Regents and on the editorial board at KIRO. **"She proved you could have it all."**

Gates says she was lucky: "The career I had was not 9-to-5 oriented, so I had more flexibility than a 40-hour-a-week job. Bill (her husband and a local attorney) really encouraged me to do interesting things in the community - he thought it was more fun to come home if I had something interesting to say at the dinner table. And my mother (Adelle Maxwell) spent a lot of time at our home."

In any case, supermomhood is only one dimension of Gates' contribution. From the regents' boardroom to the Children's Hospital Foundation, from KIRO to the Redmond halls of Microsoft, her impact radiates among multiple spheres of influence.

She herself is proudest of her 18-year tenure with the regents - third longest in its history - which saw the UW emerge from a big if unexceptional regional institution into an internationally known center of biotechnology, computer science, medicine and Asian studies.

"I felt it was really important at that time of anti-Vietnam and campus turmoil to get the university back on track," said Dan Evans, who as governor appointed Gates in 1975 and, in another coming of full circle, was recently named by Gov. Mike Lowry to replace her. "We needed a board whose members really understood how to reach out and connect with the community."

Gates said she had decided to step down from the regents even before her recent diagnosis of cancer. She is presently undergoing therapy "which is showing excellent results," her husband said.

"The opportunity to serve on the board of regents was a rare privilege for me," she said. "I care about education, it's a fine school, I have a lot of respect for Bill Gerberding. I'm going to miss it."

But Gates' most indelible imprint may stand as a "first woman to . . ." role model emerging from the feminist era of the 1970s. In 1975, a watershed year for her, Gates became the first woman president of King County's United Way and the first woman director of First Interstate Bank of Washington, and only the

second woman regent at the University of Washington (Dorothy Bullitt, founder of KING Broadcasting, became the first in 1958). By 1983 she'd become the first woman to chair the national United Way's executive committee.

"It was a time when there was lots of pressure from women's groups to be included in officer and board positions," Gates said. "I was relatively well-known to a lot of business people through my United Way work."

Although sympathetic to feminist causes, Gates said she was "never a leader in that movement. But I certainly was the beneficiary of the women who were willing to be more out front and aggressive."

What she did do was help introduce values of consensus and compromise to reflexively competitive male bastions.

"Mary has been a source of balance, wisdom and stability on the regents - its center of gravity," said William Gerberding, whom Gates as regents president helped hire in 1979. "Whenever there's been controversy, her rational presence was felt."

A "Seattleite through and through" who attended Bryant Elementary and Roosevelt High schools, Gates planned a career as a schoolteacher. In 1946 she entered the University of Washington, later serving her senior year as ASUW secretary to student-body President Brock Adams (later the U.S. senator) and as president of Kappa Kappa Gamma.

"She was a bundle of energy - very well-liked, popular and involved in a lot of outside activities," recalls Gordon Culp, a classmate who later joined Gates on the board of regents.

As the daughter and granddaughter of prominent bankers, Gates seemed destined for the role of young 1950s socialite.

A 1954 Seattle Times photo of her instructing three teenage daughters of Women's University Club members on hostessing was captioned, "Tea first, next cream and sugar and then the cookies and mints."

Serving on the ASUW budget and finance committee, she met a tall, thoughtful ex-GI law student from Bremerton named Bill Gates. The two wed in 1951. Bill served as assistant city attorney in Bremerton while Mary taught junior-high school there. When her husband moved to the Seattle law firm of Skeel, McKelvy, Henke, Evenson & Uhlmann, Mary taught at Jane Addams Junior High in North Seattle.

Then it was time to start a family with the birth of Kristianne in 1954, young Bill in 1955 and daughter Libby in 1964.

With Gates' mother, Adelle Maxwell, handling backup rearing chores, Mary supplemented momhood with a widening plate of volunteer and charity activities.

The biggest beneficiaries: Children's Hospital (then Children's Orthopedic), whose board she joined in 1972, and United Way (then United Good Neighbors), for which her father, Willard Maxwell, had served as treasurer in the late 1950s while vice president of Pacific National Bank (today First Interstate).

"When I first met her in 1958 as a new Junior League member, I remember saying afterward, `There's a real comer. She's going to go far in the community,' " said Kate Webster, who later was on the Children's board with Gates. "She wouldn't say, `This is a good idea' and leave it at that. She had great follow-through."

Gates has exercised countless deft, behind-the-scenes interlinkages of power over the years:

-- Nudging her fiercely apolitical son into outspoken opposition to state budget Initiatives 601 and 602 last fall.

-- Helping launch Leadership Tomorrow, responsible for seeding the area with hundreds of budding entrepreneurs and community leaders.

-- Helping get the Seattle Symphony and Children's Hospital on sound footing financially with smart, plugged-in fund-raising programs run by spun-off foundations.

-- Raising corporate community consciousness through Washington Gives, the 5-percent-a-year of income and 5-hours-a-week-of-time project she took over after Ned Skinner's death in 1988.

-- In 1991 the entire Gates clan was named philanthropic family of the year by Washington Gives.

-- And the mother-son connection, responsible for the latter's $12 million contribution to UW biotech research two years ago and luring of bioengineer Lee Hood from Caltech.

"Mary is the perfect example of being able to get a whole lot done if you don't worry about who gets the credit," said the Rev. Dale Turner, whose University Congregational Church the Gates family attended.

Gates decided to retire from the board of regents after she and her husband, a prominent attorney for years with Preston Thorgrimson, conducted a "trial retirement" last winter in Palm Springs, Calif., and found they enjoyed lighter duty.

But the Gates years were pivotal.

As chief of the fiscally strategic Metropolitan Tract Committee she helped oversee crucial leases of 11 downtown acres during a downtown construction era that, with construction of the Rainier Tower and renovation of the Four Seasons Olympic, brought Seattle to world-class status. The university kept the lucrative downtown property after moving north of the Ship Canal in 1895.

When the issue of South African investments tore apart the campus in the early 1980s, Gates pushed first for adoption of the Sullivan principles - written by a General Motors director in support of human-rights standards on investment - and later for divestiture, more as a means of keeping the campus from tearing itself apart than as a path clearly beneficial to the country itself.

"We grappled with the question, what was going to happen to the black people of South Africa if there were no employment?" Gates said. "There were sound arguments on both sides."

Gates is keeping busy. Just last month she was elected to the board of Independent Sector, a Washington, D.C.-based coalition for volunteerism and philanthropy, two Mary Gates touchstones.

Not all has gone smoothly for Gates in her community-service career. She got caught in the crossfire in 1984 when Children's Hospital began its own telethon fund-raiser on KOMO-TV, shifting from its traditional beneficiary, the annual Variety Club event on KIRO-TV, where Gates is a board member.

"The numbers were night and day," said Doug Picha, foundation director. "Mary did what was appropriate," even though it temporarily cost her support from KIRO President Ken Hatch.

"The decision to go to KOMO made me very unhappy, but Mary was caught in the middle," said Hatch, who calls the matter water under the bridge today.

The incident showed Gates' steeliness under fire, a characteristic those close to her say is consistently, albeit, sparingly deployed. As a freshman president of United Way in 1975, Gates had to face the moral indignation of community activists when the agency cut off funding for the Central Seattle Community Council Federation. Among other things, the Council lobbied against construction of the new I-90 tunnel and bridge.

To Mary, the action in retrospect seems as right as it did then. "They were more interested in social issues than they were in providing services," she said. Her mettle in an unexpected baptism of fire caught the attention of community and business leaders.

As a member of KIRO's editorial board, Gates lets her opinions be known, including her opposition to tax-limiting Initiatives 601 and 602. She's taken an active interest in the news side of KIRO, getting to know the staff and observing the news-gathering process.

Some KIRO staffers privately grumble that Gates goes so far as to interfere, as in two years ago when her name came up after Hatch killed a Channel 7 report concerning UW football players with arrest warrants for minor violations.

Hatch said Gates had nothing to do with his action: "Mary believes in separation of church and state and is sophisticated enough to know it comes at great penalty to fool around in the (news) arena."

Gates adamantly denies she played any role in the flap: "It was a clear conflict of interest."

Nonintervention has its drawbacks, too, as Channel 7 staffers discovered in trying to cover the Gates wedding on the island of Lanai. In that contest between mom and board executive, the mom side won. KIRO got no better access than the rest of the news media, which were kicked off the island.

Despite her contributions, Gates is disappointed women haven't cracked more glass ceilings.

"I'm surprised and disappointed that the progress that started in the mid-'70s hasn't continued at the same rate," she said. At the CEO level, she mentions Edmark's Sally Narodick "and then who else? I'm mystified. Whether it's because there isn't as much pressure now from women's groups, or whether it's because change takes a longer time than some of us want it to take, I don't know."

Microsoft hasn't done much better, she acknowledged, "although that kind of business probably isn't as conducive to including women, just because it has been a male-dominated field."

And Gates worries that United Way, which has had trouble meeting its goals despite offering more flexibility in giving, is losing its charter.

"The whole theory of United Way is that there's this citizen group that looks at the needs of the community, undertakes studies, and then allocates the money based on their expertise that none of the rest of us could have as individual citizens," she said. "And when the money starts getting 20 or 25 percent or more designated, the whole planning-allocations process really is invalidated. If you don't have that, what happens to United Way?"

Close observers bet that mother's influence eventually will emerge not only with Microsoft's maturation but with her son's closer community involvement.

"Mary was very instrumental in originally softening Microsoft's posture vis-a-vis being a good corporate citizen," said Scott Oki, ex-Microsoft vice president who has followed the Gates tradition in joining the board of regents and Children's Hospital Foundation. He attributes Microsoft's strong matching-funds program to the mother-son connection.

Her maternal charter fulfilled, Gates can watch as her son and bride finish their estate on the Lake Washington shoreline in Medina - the goal is by his 40th birthday late next year - and start, judging from floor plans, a large family of their own. Perhaps the highest tribute to Gates' parenting is that two of her three children - Bill and Libby, expecting her second child this month - have homes within a stone's throw of Mom and Dad's Laurelhurst place, and the third, Kristi, with two children of her own, visits frequently from out of town.

Gates thinks her son, who recently completed a term on the national United Way board, "is looking forward to more community involvement, once he's completed his role of building his company." One potential target: a local research institute in science or technology.

If so, it will mark yet another coming of full circle for Mary Gates.

https://www.findagrave.com/memorial/133167388/adelle-maxwell

Adelle Thompson Maxwell

BIRTH

1 Dec 1903

Enumclaw, King County, Washington, USA

DEATH

30 Oct 1887 (aged 83)

30 Oct 1987 (aged 83)

Seattle, King County, Washington, USA

BURIAL

Cremated, Location of ashes is unknown

MEMORIAL ID

133167388 · View Source

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- FLOWERS 0

Witness at Wedding:

Oakley Maxwell

Janice L. Holman

Adelle Thompson Maxwell, Washington, King CountyDelayed Births, 1941 - 1942

Name: Adelle Thompson

Event Type: Birth

Event Date: 01 Dec 1903

Event Place: Enumclaw, King, Washington, United States

Gender: Female

Father's Name: William James Thompson

Father's Birth Place: LIVERPOOL, ENGLAND

Mother's Name: Ida Medcalf

Mother's Birth Place: Montesano, Grays Harbor County, Washington

Physician who attended to Birth: DR. H. H. Rust

Signed and Dated: Mrs. Adelle T. Maxwell 08April1942

Seattle Post-Intelligencer (WA) - October 31, 1987

Deceased Name: UW REGENT MARY GATES' MOTHER DIES AT 85

Adelle Thompson Maxwell , mother of University of Washington Regent Mary Gates , died yesterday. She was 85.

Mrs. Maxwell was born Jan. 12, 1902, in Enumclaw. She attended Enumclaw High School where she was a star forward on the women's basketball team and class valedictorian.

She graduated from the UW where she was a member of Gamma Phi Beta sorority. Active in community affairs, she was president of the Women's University Club and chairman of the Community Chest Neighborhood Drive.

Mrs. Maxwell was also an avid UW football fan and attended nearly every Husky home game for the past 40 years. Her husband, J. Willard Maxwell , preceded her in death in 1959.

In addition to her daughter, she is survived by her son-in-law, William H. Gates, a Seattle attorney and president of the Washington State Bar Association, and her grandchildren, Kristi, Libby and William Jr., co-founder of Microsoft Corp.

At her request, there will be no funeral services. Remembrances may be sent to the United Way of King County for the Willard and Adelle Maxwell Memorial Fund for Children.

Seattle Post-Intelligencer (WA)

Date: October 31, 1987

Edition: FINAL

Page: D16

Seattle Post-Intelligencer (WA) - October 31, 1987

Deceased Name: Adelle Thompson MAXWELL

Oct. 30, 1987. Dearly loved by her daughter, Mary Gates; her son-in-law, Bill; and her grandchildren, Kristi, Bill and Libby. She

Oct. 30, 1987. Dearly loved by her daughter, Mary Gates, her son-in-law, Bill, and her grandchildren, Kristi, Bill and Libby. She had many friends of all ages by whom she was affectionately know as "Gam". She was born in Enumclaw and attended Enumclaw High School where she was a star forward on the women's basketball team and her class valedictorian. She graduated from the University of Washington where she was a member of Gamma Phi Beta sorority. At the University, she met her husband, J. Willard Maxwell , with whom she shared a happy married life until his death in 1959. In addition to her devotion to her husband and family, she was active in community life, having been president of the Women's University Club and chairman of the Community Chest Neighborhood Drive. She was an avid sports fan, particularly of University of Washington football. She attended almost every Husky home game over the last 40 years. One of her great pleasures was her time on Hood Canal. The Maxwells vacationed there each summer for 50 years. In more recent years, she spent the entire summer in the family beach home and swam almost every day. At her request, there will be no services. Remembrances are suggested to the United Way of King County designated for the Willard and Adelle Maxwell Memorial Fund for Children.

Seattle Post-Intelligencer (WA)

Date: October 31, 1987

Edition: FINAL

Page: D16

NOTE: Delayed Birth list birthdate 01Dec1903

NOTE: Obituary list birthdate 12Jan1902

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Housatonic

William Henry Gates III (born 1955)

"WHG3" / #WHG3

Wikipedia Bill Gates

Also known as "Bill Gates"

Born October 28, 1955 in Seattle, Washington [HK002A][GDrive]

Parents - **Father** is William Henry Gates II (born 1925) , **Mother** is Mary Maxwell Gates (born 1929)

Husband of Melinda Ann Gates (born 1964) [HK002A][GDrive]

Father of -

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Bill Gates' on his parents / family

Source - 2015 (December) Geekwire INTERVIEW: BILL GATES TALKS ABOUT HIS DAD'S INFLUENCE ON HIS LIFE, THE TECH COMMUNITY AND THE WORLD / Source - [HM000H][GDrive]

[...]

GeekWire: Your dad [...] helped take public Physio-Control [in 1971]. He seemed to evolve into being involved with the Washington Research Foundation, Tech Alliance. How would you characterize his role in promoting and fostering the development of the tech industry in the Northwest — aside from yourself?

Bill Gates: He got into a lot of those things primarily through his connection with the University of Washington, and wanting the university to be strong and help drive the success of the community. He realized the university played an absolutely central role in whether the jobs coming in related to the new sciences, including biology and IT-type stuff. It was really through the UW that he got involved in the Tech Alliance. They went down and toured Silicon Valley, went to Boston, went to North Carolina, tried to figure out what state policies, including the role of the university, was in doing those things. Can you attribute it to the Tech Alliance or Microsoft being here or a variety of factors? Seattle is certainly doing well at tech jobs at the moment. Some people think too well.

GeekWire: How important do you think his role was in all of it? He seems like someone who really connects dots, connects people, has this longer vision and orchestrates moving people together to facilitate.

Bill Gates: Yes, in a broad sense, yes. But my dad's not a technology person. … He was about, "How was this a great community to live in? How is it educating students really well?" He was involved in the **Municipal League**. He put more time into bar stuff [for the Seattle-King County Bar Association and the Washington State Bar Association]. He did so many different volunteer things, it's hard to categorize. The bar was certainly the biggest single thing he did. He had a lot of stuff about judicial reform and malpractice insurance for lawyers.

[...]

He came from Bremerton. Unlike my mother's parents, who were quite well off — that grandfather was a banker who had done quite well — that grandfather had only gone to sixth grade, and owned a small furniture store. He sold it before [World War II], so that when it actually did well he was just working there. His parents, although his mom was very sharp, weren't all that highly educated. In Bremerton, he met Dorm Braman [Gates Sr.'s Boy Scout Troop leader] and a bunch of people who activated his ambition and capability.

He came to the UW, went to war and came back to law school. There is a whole group of friends, of which [former three-time governor and U.S. Senator for Washington] Dan Evans was part… Various people who out of this small group of friends would go on to all do pretty high-visibility and high-impact stuff. Those were the friends who were coming to our house when I was young, a great group of people.

My dad expanded his horizons way beyond what he grew up with. That grandfather liked to watch the boxing matches. That was the main TV show he was interested in. And all my grandparents were strict Christian Scientists [a religious movement founded by Mary Baker Eddy in the 19th Century that believes in the power of prayer over medicine for healing the sick]. [...] Both my parents choose not to follow the strict, like no doctors, approach to things. In fact, my mom's father died of cancer in incredible pain and never saw a doctor. Ever. It's unusual that they were both Christian Scientists, they were from very different parts, very different backgrounds.

GeekWire: Does your dad have any traits that you would like to develop more in yourself?

Bill Gates: Yeah, I say in his book ["Showing Up for Life: Thoughts on the Gifts of a Lifetime"] "My dad is a little more cautious, wise." Not as over-the-top quite so quickly. There's a lot about my dad that I and others would love to have come more naturally. My dad is very good about how he makes things about the success of the activity, and not putting himself at the center of it… **He chose not to run for political office. There was a time he considered being a federal judge. Actually, when that opportunity came along, his law firm was in a situation where he decided he wouldn't do it**. He really couldn't leave the law firm at that point. I always thought he would be such a great judge. He shows no signs of regret because he passed that opportunity…. His law firm career went extremely well. But I think of him like a judge.

GeekWire: Talking to people for the profile of your dad, the accolades are just boundless. Is there any weakness that he has? Or anything he did where he might have said, "I wished I would have done that differently or better, or I could have been more effective somehow?"

Bill Gates: Well, my dad worked very hard when I was young. There was a pretty strong imbalance between the level of engagement that we had with my mother, who was also very successful and active. Libby, my younger sister, is nine years younger than I am. That is when women were being put on boards. So mom ended up on the board of the insurance company, the phone company, the university, and the bank. All these boards.

When I was young, my mom was busy, but not super busy. So my dad has shown some regret that he was so engaged in his work, that he let her do a lot of the communication. In fact, if dad was unhappy about something that was really unusual. Therefore, it was unquestionably something you better pay attention to…. [At the dinner table, my parents] were very good about talking about the work they were doing, which you can say that was centered on them. [...]

My two grandmothers, not to insult my grandfathers, were significantly more talented than my grandfathers… My two grandmothers were both very smart. His mother hadn't much education; I think she went to eighth grade or something. His father only went to sixth grade. She was smart. She was the one who would read the Christian Science lesson daily. Every morning, you would read this Mary Baker Eddy lesson. I don't know if my grandfather could have read it. She would always be the one who sat there and made a coffee and read the lesson. **That was the first thing they did when I would go over and stay at their house in downtown Bremerton. He had his mother who was very sharp. He had a sister who didn't get to go to college, which he felt kind of bad about because she actually helped support him.**

Then my mom was very capable. It is hard to compare my mom and dad, because they were both ambitious and both very smart. My mom was even more sociable, even more of a people-person than my dad. She was a very energetic person. So he had that experience… Certainly, the expectations were for my sisters to go to college or to be good at anything. My older sister worked as much as I did. Libby chose a little less, but she had a great college education. Did a lot of serious work for a period of time. Dad is pretty even-handed about those things….

In 2010, Gates Sr. helped lead the campaign for Initiative 1098, a ballot measure to create a state income tax for Washington, which is recognized as having one of the least fair tax systems in the country because it puts a heavier burden on low-income residents than the affluent. I-1098 would have brought more balance to the system. Despite the efforts of Gates and others — including a TV ad in which Gates Sr. gets dumped in a dunk tank — the measure failed. Among the opposition were some of Gates Sr.'s friends, including Steve Ballmer, who replaced Gates Jr. as CEO of Microsoft, venture capitalist Tom Alberg and former governor Dan Evans.

[...]

Bill Gates: My dad has a well-developed sense of justice. He decided there should be an income tax. Based on the voters, not that many people agreed with him. But he had a firm conviction about that and he thought a lot of people would come along and support him. Even as that coalition ended up being quite small compared to what he hoped for, he stuck with it. Next thing you know, my dad is in these ads where he is being dunked in the tank. What was my dad at the time, 78 or something like that? I was like, "Come on, dad."

It was like when he took the UW [Creating Futures] Campaign. First, he was reluctant, then he decided to do it. I said to him, "How come you don't have a co-chair?" I don't think anyone's been a single head of a campaign before or since my dad did it that way. It's not to say he didn't get lots of help. He has a network of people who help him with things. But he chose to at least have that top spot by himself, which ended up being a massive amount of work. And thank goodness, unlike the income-tax thing, that one was, in the end, quite successful. [The eight-year effort led by Gates Sr. raised nearly $2.7 billion.]

GeekWire: Do you ask your dad for advice with business?

Bill Gates: Sure. He has been helpful many times. Not about the specifics of Microsoft, because we have a lot of technology things. We had a legal dispute early in Microsoft [in which the government alleged the company was engaged in noncompetitive practices] where I felt sure we were right and we ought to stay the course. He helped reinforced that. That was good. My dad is wise, and so I have run things by him. Not software strategy, but decisions.

My parents created a really strong social environment. When new people would come in to work for Microsoft, my mom and dad would often have them over. I figured if they were well older than me, they did a better job at connecting them into the community and who they might want to get to know or what groups they might want to be a part of. I was mono-maniacally focused on Microsoft and quite a bit younger than some of these experienced people we were bringing in.

Even when I wanted to hire Steve Ballmer, to drop out of business school, he was a year in, my parents had him over and were helpful. They knew when I was trying to hire somebody and thought about how they could help. When somebody new was starting, that they could help embrace them.

GeekWire: So was it hard when Steve came out against the income tax, after your dad brings him into the fold?

Bill Gates: It is now just a friendly joke. When Dan Evans came out against it, I was like, "Oh, dad" because **Dan is a super liberal Republican.** He didn't like that particular form of the income tax. It is an interesting thing [how to implement an income tax]. Do you start [taxing] at the high end, and that's a Trojan Horse for doing it broadly, or do you just do it for the high-end [income earners]? Anyway, lots of people have different opinions.

People who pay high incomes in this state, their employees pay less in taxes than in other states. When you are trying to hire somebody who is thinking about going to California or Washington, it is a benefit to this state. When a company has to balance the benefit they get from that versus what it means for

the state not having enough revenue to do its job, it's a tough decision. Steve came down one way on that. I am super close friends with Steve. That was fine, that was his judgment, that is what he chose to do. If [the measure had lost] 51 percent to 49 percent, I could say, "That was it, Steve." [Given that I-1098 failed 64 to 36 percent] it's not like that was some definitive moment in my dad's quest for the truly-just income tax.

Evidence Timeline

Early Life -

Source - Wikipedia - Saved Aug 10 2020 [HK002A][GDrive]

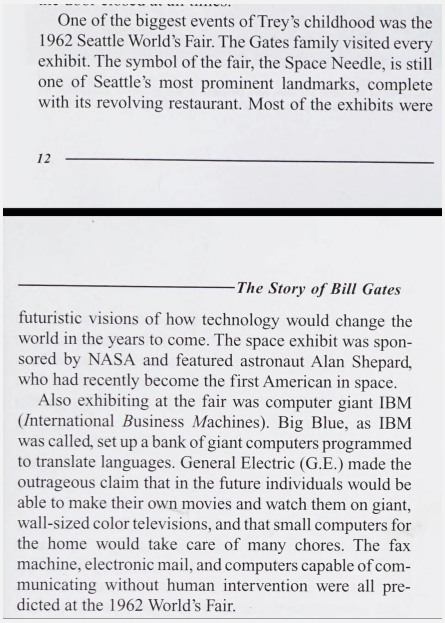
Gates was born in Seattle, Washington, on October 28, 1955. [...] His ancestry includes English, German, and Irish/Scots-Irish.[20] His father was a prominent lawyer, and his mother served on the board of directors for First Interstate BancSystem and the United Way of America. Gates's maternal grandfather was J. W. Maxwell, a national bank president. Gates has an older sister Kristi (Kristianne) and a younger sister Libby. He is the fourth of his name in his family but is known as William Gates III or "Trey" (i.e., three) because his father had the "II" suffix.[21][22] The family lived in the Sand Point area of Seattle in a home that was damaged by a rare tornado when Gates was seven years old.[23]

Early in his life, Gates observed that his parents wanted him to pursue a law career.[24] When he was young, his family regularly attended a church of the Congregational Christian Churches, a Protestant Reformed denomination.[25][26][27] Gates was small for his age and was bullied as a child.[22] [...]

1962 -Seattle World's Fair

Note that a key organizer was the finance chairman on the Seattle chamber of commerce - James d'Orma Braman (born 1901) :

1. James d'Orma Braman (born 1901) went on to become the mayor of Seattle, and serve in President Nixon's white house cabinet
2. James Braman was also the boy scout master of William Henry Gates II (born 1925) , Bill Gate' father
3. James Braman was a Navy admiral in WW2, and neighbor of William Henry Gates (born 1891) , Bill Gate's paternal grandfather



One of the biggest events of Trey's childhood was the 1962 Seattle World's Fair. The Gates family visited every exhibit. The symbol of the fair, the Space Needle, is still one of Seattle's most prominent landmarks, complete with its revolving restaurant. Most of the exhibits were

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The Story of Bill Gates

futuristic visions of how technology would change the world in the years to come. The space exhibit was sponsored by NASA and featured astronaut Alan Shepard, who had recently become the first American in space.

Also exhibiting at the fair was computer giant IBM (*I*nternational *B*usiness *M*achines). Big Blue, as IBM was called, set up a bank of giant computers programmed to translate languages. General Electric (G.E.) made the outrageous claim that in the future individuals would be able to make their own movies and watch them on giant, wall-sized color televisions, and that small computers for the home would take care of many chores. The fax machine, electronic mail, and computers capable of communicating without human intervention were all predicted at the 1962 World's Fair.

[HT008Q][GDrive]

1962 (September) - Bill Gates' family home hit by a tornado?

https://www.seattletimes.com/seattle-news/seattles-1st-recorded-tornado-was-in-62-and-it-wrecked-bill-gates-childhood-home/

1960s - Bill Gates' fatherwas involved in a variety of tech compnies in the Puget sound area

Source - 2015 (December) Geekwire INTERVIEW: BILL GATES TALKS ABOUT HIS DAD'S INFLUENCE ON HIS LIFE, THE TECH COMMUNITY AND THE WORLD Source - [HM000H][GDrive]

GeekWire: Your dad was involved with early tech businesses like Physio-Control, Intermec and SeaMED. What interested him? Where did he find his fascination with innovation and technology?

Bill Gates: Well, his law firm got involved in those. **Actually, as a sixth grader he had me go down and meet with Dr. Edmark and Hunter Simpson**. I wrote a long report about Physio-Control. Intermec, they did a tape reader. The original Traf-O-Data tape reader I got some guys at Intermec to build. My dad had a mix... He had quite a variety of clients including those. I wouldn't say it was all heavy science or engineering.

1967 [est] - As sixth grader, Bill Gates getting jobs from father to write reports for tech companies that his father is a board member of [in this case, Physio-Control] @

Article reference : [HM000F][GDrive] - BY LISA STIFFLER on November 25, 2015

Actually, Bill Gates Sr. was on the board of **Physio-Control** since 1957

[Bill Gates Sr.'] early legal clients included Redmond's Physio-Control Co., a pioneer in heart defibrillators led by Dr. Karl William Edmark, and Intermec Corp., an Everett-based business and creator of the most widely used barcode symbols and the hand-held barcode scanner. Gates was on the board of directors for both companies.

Gates helped take Physio-Control public in 1971 — the same year that drivers on SeaTac's stretch of Highway 99 were confronted by an infamous billboard asking "Will the last person leaving SEATTLE — Turn out the lights" erected in response to a spate of layoffs at Boeing, then the region's largest employer. It was also four years before Gates Jr. and Paul Allen co-founded Microsoft, a company that would eventually reshape the Seattle region and the larger tech ecosystem.

The success of Physio-Control was "the beginning of that positive feedback of people starting a technology company and doing well and going on to found new companies, and to serve as an angel investor to others," said Malarkey, of the Technology Alliance.

The angel investing of Gates Sr. and his peers, she said, had "a spirit of community building."

And his dad's engagement in tech ventures helped fan his son's curiosity about the field.

"As a sixth grader [meaning.. Bill Gates is about age 11, and this is about 1967...], he had me go down and meet with Dr. Edmark and [Physio's president and CEO] Hunter Simpson, and I wrote a long report about Physio-Control," Gates Jr. said. Gates later worked with some employees at Intermec to develop the tape reader that he and Allen used at Traf-O-Data, their pre-Microsoft venture created to analyze traffic-counting data.

1960s (date) - Bill Gates as a Student got inspired by philanthropic work of John D. Rockefeller and Andrew Carnegie.

Source - AstrumPeople article - Source PDF - [HW003M][GDrive]

Note : Daniel Jackson Evans (born 1925) was friend of the family, and competing against **John D Rockefeller** for the US VP nomination

[...] : Also while being a student, Gates got inspired of the philanthropic work of John D. Rockefeller and Andrew Carnegie. In 2000, Gates together with his wife Melinda founded Bill & Melinda Gates Foundation to support low-income countries.

Interview: Bill Gates, Co-Founder and Chairman, Microsoft Corporation - March 17, 2010, Seattle, Washington

Source - [HW003P][GDrive]

Could you tell us about the role of the Lakeside School Mother's Club in introducing you to computers?

Bill Gates: The Lakeside's Mother's Club had a rummage sale every year to raise money for the school. And instead of just funding the budget, they always would fund something kind of new and interesting in addition. **And without too much understanding, they decided having a computer terminal at the school would be a novel thing. It was a teletype -- upper case only, ten characters a second -- and you had to share a phone line to call into a big time-sharing computer that was very expensive. When you were connected up it would charge, and then when you actually had a program running it would charge a lot more.** So they set up this teletype, and some of the math and science teachers played around with it. One of them accidentally spent a lot of money with an infinite loop program. They spent like $200 by surprise. So they were a bit intimidated, and a bunch of us kind of hung out there and tried out different things. **The programming language was BASIC, which was quite novel at the time. It had been invented by some Dartmouth professors.** So that was the first computer language I learned, and I wrote increasingly complex programs. So that eighth grade exposure was a pretty neat thing, even though the machine we were working on was quite limited.

Even most colleges didn't have one of those at that time.

Bill Gates: No, the idea of students playing around with a computer was very unusual at the time. In fact, that computer -- eventually the costs were high enough they took it away. But then some other computer companies had come around, including one in Seattle, that a bunch of us went down and volunteered to help out and do some work for. So from that point on we always managed -- although it was dicey at times -- to find access to computers. That was very unusual in high school. But it took a lot of initiative on our part to get those experiences, but we wouldn't have done it if we hadn't had that early eighth grade exposure.

[...]

To someone who's never done any programming, can you describe what made it so exciting to you at the beginning?

Bill Gates: Well, programming is where you're describing to the machine how to do something-- telling it how to play tic-tac-toe, telling it how to play the board game Monopoly, telling it how to convert numbers from one base to another. There are these simple instructions, but if you put them together you can synthesize something quite complex. It's a fascinating kind of mathematical thing. How can you make it fast? How can you make it small?

I went through several phases of doing more complex programs where people who were great programmers would look at my work, give me feedback on it, and you get so you can be quite a good programmer. It was kind such an intense activity, between the age of 13 and 17, that we learned a lot. Eventually one of the programs we took on was the idea of the scheduling of our school. When should the classes meet? Who should be in what section? You have all these requests for people who want different classes, and keeping them small, and not having the teachers teach too many classes in a row -- very complex kind of software problem. And actually, when the school first asked me to do it when I was 15, I said that I didn't know how and they asked some adults to do it, and that didn't work. Then, about a year later, I'd figured out how to do it, and so my friends and I actually did the software that did all this high school scheduling. It had some fantastic benefits to us, and we got paid for doing it. It was exactly the kind of complex problem that developed my skills very well. And we got some degree of control over who was in our classes, so it combined the best of everything!

We've read that at one point your fellow members of the computer club at Lakeside kicked you out. Is that true?

Bill Gates: Yeah. Initially, when that teletype showed up, there were probably 20 kids who showed an interest. It was confusing enough that it got whittled down to about eight or nine fairly quickly who were quite serious about it. Then there were about four of us who were hyper-serious, doing it day and night. Two of them were two years older than I was, and one was my same age. Now in a high school, people that are two years ahead of you, they don't socialize with the young kids all that much. So the idea that we had this group, the four of us, was kind of unusual. We called it the Lakeside Programming Group. One of the companies we had been doing work for went bankrupt, the one in Seattle, and so we went to one in Portland, Oregon.

Was that C Cubed?

Bill Gates: Yes, Computer Center Corporation -- C Cubed -- which had been in the University District in Seattle. We'd spent a lot of time there, and they were wonderful to us, but they weren't a well run business, so they went bankrupt. **This company down in Portland, Oregon said, "Hey, we're not just going to give you computer time, you have to do something." So we agreed to write this payroll program. And a payroll program is surprisingly complicated. There's all these taxes and reports and things at the state level and federal level. Anyway, they said, "Well, if you could write one of those, we'd at least give you free computer time." So I negotiated that deal, and the two older members -- Paul Allen and Rick -- said, "There's not enough work to go around, so we're going to take charge of this." And I said, "Okay, I'm not that interested," because I had in mind how I wanted to do the payroll program. So they messed around for about three months, didn't get much done, and then said, "Will you join back up?" And I said, "Okay, but if so, I'm in charge of this," and it's going to kind of set a precedent for future activities. But they said, "No, no. That's fine." And so we worked. We actually finished this payroll program. It was a lot of work. The friend who was my age, Kent Evans, and I ended up doing the lion's share of the work. Now tragically, right as he and I finished that he was killed in a mountain climbing accident.** So then there were just three of us left who'd been extremely involved, including Paul Allen, who was the one who was reading the magazines even more than I was. He was the one who actually saw this computer on a chip -- a so-called "microprocessor" -- in a very small obscure article. He saw that it would be deeply important and brought that to me in 1971. So we were still 15 -- I was 15, and he was 17 at the time.

Was it during your work with C Cubed that you got into some trouble for hacking into a system?

Bill Gates: These C Cubed people have this computer, which is a time-sharing computer, and they're letting us come in at night. **And they had this deal with the company who made the computer, Digital Equipment Corporation, that they had this acceptance period.** If they could find problems with it, they could delay their rental payments. So they thought of us as kind of monkeys that might find some problems and help them delay their rental payments. Well, that was a fair analysis, because at first we were just completely goofing around. Like, we'd try to run hundreds of jobs at the same time, or have all the jobs

try and grab the same resources, to see if we could get the system to fail. And we did, in kind of this brute force approach. So they would report that as a problem and delay their rental payment. Well, a few months went by, actually about four months by the end of it. We had gotten very sophisticated. **In fact, we'd gotten the source code of the operating system out of the garbage can, and were reading it, and the kind of problems we were finding were far more subtle. In fact, we would not only find the problem, we'd look and we'd suggest how they might fix it.** Anyway, Digital Equipment got so tired of this they said, "Look, you've got to pay. You're going to be able to find these kinds of problems forever, but we need to get paid." So then there was a question whether they would let us stay there or not, and it was pretty tenuous. So Paul and I, we understood the system well enough that we could look at all the passwords of the various accounts, so we would use literally any account. And then, people -- when they found out we had done that, they got kind of mad about that. They weren't sure how mad they should be about it, because we hadn't really caused any damage, but it wasn't a good thing. Computer hacking was literally just being invented at the time, and so fortunately we got off with a bit of a warning. But there actually was a period that, because of that, they said we weren't supposed to use the computer. It was over a summer, and Paul actually went up to the University of Washington and found ways to use the computer and get connected up. He took a while before he told me and then eventually he told me about that and we got back on.

1966 (Sep - est.) - Bill Gates moves from public to private school / Starts at Lakeside in 6th grade @

Source : Interview: Bill Gates, Co-Founder and Chairman, Microsoft Corporation - March 17, 2010, Seattle, Washington Source - [HW003P][GDrive]

[...] What about school in general? You were a great reader. Otherwise, what kind of a student were you?

Bill Gates: Well, through eighth grade I was sort of enjoying the fact that I could do reasonably well without any effort. They had this thing where you'd get an "effort: which would be one, two or three, and then a grade. And so the ideal I always wanted was an A3, where you had the least effort, but the greatest grade. So my grades weren't all that great. **And then in eighth grade I had been at a private school for a couple of years *[suggests Gates started at Lakeside during his 6th grade]*** and decided that I better start getting good grades, both in terms of having some freedom, the way I'd be treated, and thinking about college. So from ninth grade on, I had a reasonably spotless grade record. I got quite serious about grades at that point.

Were you always good at math?

Bill Gates: Math was the thing that came most natural to me. And you know you'd take these exams, some of which were sort of nationwide exams, and I did quite well on those. That gave me some confidence, and I had some teachers who were very encouraging. They let me read textbooks, they encouraged me to take a college course on symbolic math, which is actually called algebra. So I felt pretty confident in my math skills, which is a nice thing, because not only the sciences, but economics, a lot of things if you're comfortable with math and statistics and ways of looking at cause and effect, that's extremely helpful.

Do any particular math teachers come to mind from that era?

Bill Gates: I had one named Paul Stockland at the school who challenged me. Later one named Fred Wright who challenged me. I actually majored in math for the time I was at college, because it's a very interesting topic. [...] 🌍

Early 1968 (for 1967/68 School year) - LakeSide school begins acquisition of computer facilities.

Source - Personal Computer Book Paperback – April 1, 1990 - by Peter McWilliams (Author) / Chapter 6 - At [HB004B][GDrive]

During the 1967/68 school year , the [Lakeside School] teaching staff recommended acquisition of computer facilities to expose the students to the technology . The school could not afford to purchase a computer . However the Lakeside Mothers Club agreed to finance the use of a time sharing service . In 1968 the school obtained an ASR-33 Teletype terminal and used a local access line to dial into a General Electric Mark II time sharing system .

NOTE - General Electric Mark II

See https://en.wikipedia.org/wiki/Dartmouth_Time_Sharing_System

2020-08-28-wikipedia-dartmouth-time-sharing-system.pdf

I mean... so Lakeside basically had access to the start of the art GE-635 using the very same DTSS/BASIC developed by Dartmouth

And they got it almost immediately when it was available (request made in late 1967 ... access in 1968...)

Dartmouth Time Sharing System, version 2

Honeywell GE 635 Computer Hardware at Kiewit, early 1971

From 1966-1968, DTSS was reimplemented on the GE 635,[4] still using the DATANET-30 for terminal control. The GE 635 system was delivered in November 1966. By October 1967, it was providing a service based on Phase I software, jointly developed by Dartmouth and GE, which GE subsequently marketed as the GE Mark II system[23]. In parallel with this work, Dartmouth embarked in 1967 on the development of Phase II under the direction of Professor John Kemeny, with programming carried out by students and faculty. Phase II of the Dartmouth Time-Sharing System replaced Phase I on 1st April 1969 at Dartmouth[24].

As described in 1969, the new DTSS architecture was influenced by three criteria[25]:

- The experiences with the 265 system.
- The published concepts of the Multics system.
- A realization of the limitations of the capabilities of a part-time staff of Dartmouth students and faculty members.

1968 - CCC / Lakeside

Source : **AstrumPeople** article - Source PDF - [HW003M][GDrive]

Note below ... they say "**At that time, the system based on DEC PDP-10 micro-architecture was a basis on the market**" .. but they were using the GE system, not the PDP at Lakeside ..

[...] In 1968, [the Lakeside] school administration decided to buy a computer time from the General Electric Company. **At that time, the system based on DEC PDP-10 micro-architecture was a basis on the market.** Later, he said: *"When I was thirteen, my school (Lakeside School) installed a teletype machine. From that point on, my friends and I spent most of our free time writing programs and figuring out how to make the computer to do interesting things."* **The school administration had underestimated its students – the whole year of the computer time was used in a few weeks. Fortunately, a new student arrived in Lakeside, whose father worked as a senior programmer in Computer Center Corporation (CCC).** The new contract allowed Gates and his friends to continue their experiments.

Young hackers quickly figured out the intricacies of the machine, found the weaknesses and started causing trouble – they broke the defense, which on several occasions led to a system failure and changed the files that contained records of computer time. CCC noticed that breach, and set them aside from working with computers for a few weeks.

Meanwhile, the company's business began to suffer from constant failures and poor protection. Remembering the destructive activities of computer users from Lakeside, CCC invited Bill Gates and his friends to identify flaws and security holes. As a payment, the company offered endless computer time for young hackers. Sure thing, Bill and his friends could not refuse. Since that day boys couldn't say if it was a day or night outside – they were hanging out in the lab all the time. For instance, one project of Gates was a program for scheduling classes. 'Somehow', it constantly redefined Bill to the classes with the prettiest girls. In addition to troubleshooting, they studied each material on automated calculations and improved their skills. [...]

1968 - Paul Allen's first access to a computer; it was at Lakeside

Source : MAY 2011 article in Vanity Fair - By Paul Allen - MICROSOFT'S ODD COUPLE / THE TECH REVOLUTION : [HP0030][GDrive]

In the words of narrator Paul Allen:

*[...] My honors-geometry teacher [at my high school in Seattle ... Lakeside...] was **Bill Dougall**, the head of Lakeside's science and math departments. A navy pilot in World War II, Mr. Dougall had an advanced degree in aeronautical engineering, and another in French literature from the Sorbonne. In our school's best tradition, he believed that book study wasn't enough without real-world experience. He also realized that we'd need to know something about computers when we got to college. A few high schools were beginning to train students on traditional mainframes, but Mr. Dougall wanted something more engaging for us. **In 1968 he approached the Lakeside Mothers Club, which agreed to use the proceeds from its annual rummage sale to lease a teleprinter terminal for computer time-sharing, a brand-new business at the time.***

*On my way to math class in McAllister Hall, I stopped by for a look. As I approached the small room, the faint clacking got louder. I opened the door and found three boys squeezed inside. There was a bookcase and a worktable with piles of manuals, scraps from notebooks, and rolled-up fragments of yellow paper tape. The students were clustered around an overgrown electric typewriter, mounted on an aluminum-footed pedestal base: a Teletype Model ASR-33 (for Automatic Send and Receive). **It was linked to a GE-635, a General Electric mainframe computer in a distant, unknown office.***

The Teletype made a terrific racket, a mix of low humming, the Gatling gun of the paper-tape punch, and the ka-chacko-whack of the printer keys. The room's walls and ceiling were lined with white corkboard for soundproofing. But though it was noisy and slow, a dumb remote terminal with no display screen or lowercase letters, the ASR-33 was also state-of- the-art. I was transfixed. I sensed that you could do things with this machine.

*That year, 1968, would be a watershed in matters digital. In March, Hewlett-Packard introduced the first programmable desktop calculator. In June, Robert Dennard won a patent for a one-transistor cell of dynamic random-access memory, or DRAM, a new and cheaper method of temporary data storage. In July, Robert Noyce and Gordon Moore co-founded Intel Corporation. In December, at the legendary "mother of all demos" in San Francisco, the Stanford Research Institute's **Douglas Engelbart** showed off his original versions of a mouse, a word processor, e-mail, and hypertext. Of all the epochal changes in store over the next two decades, a remarkable number were seeded over those 10 months: cheap and reliable memory, a graphical user interface, a "killer" application, and more.*

It's hard to convey the excitement I felt when I sat down at the Teletype. With my program written out on notebook paper, I'd type it in on the keyboard with the paper-tape punch turned on. Then I'd dial into the G.E. computer, wait for a beep, log on with the school's password, and hit the Start button to feed the paper tape through the reader, which took several minutes.

At last came the big moment. I'd type "RUN," and soon my results printed out at 10 characters per second—a glacial pace next to today's laser printers, but exhilarating at the time. It would be quickly apparent whether my program worked; if not, I'd get an error message. In either case, I'd quickly log off to save money. Then I'd fix any mistakes by advancing the paper tape to the error and correcting it on the keyboard while simultaneously punching a new tape—a delicate maneuver nowadays handled by a simple click of a mouse and a keystroke. When I achieved a working program, I'd secure it with a rubber band and stow it on a shelf.

Soon I was spending every lunchtime and free period around the Teletype with my fellow aficionados. Others might have found us eccentric, but I didn't care. I had discovered my calling. I was a programmer.

Notes - who is "William Stewart DOUGALL" ?

William Stewart Dougall, born on August 1, 1921, in Buffalo, New York, died peacefully on Saturday, November 21, 2009, surrounded by family. Bill was a pilot, aeronautical engineer, mountain climber and explorer, and math and physics teacher. After serving as a Navy pilot in World War II, he earned two undergraduate degrees from the University of Michigan in Math and Aeronautical Engineer ing, a Master of Education from Temple University and **a Master of Science and Aeronautical Engineering from the University of Washington**. He also received a degree in Contemporary French Literature from the Sorbonne in Paris, France. After working as an engineer at Boeing, Bill dis covered teaching, which became the joy of his life. He taught math and science at Lakeside School in Seattle from 1957 to 1995, and served as Socratic Mentor to Lakeside faculty from 1996 until the present, faithfully attending assembly every Wednesday. Dur ing his career he was a mentor to thousands of students who attend ed Lakeside School. He set up the school's first com puter terminal in 1969, which helped launch the careers of two of his students, Bill Gates and Paul Allen. He also established the school's Outdoor Education program. Bill took numerous sab baticals with his family to teach in Australia, Chile, Kenya and Scotland, and to build a windmill in Kathmandu, Nepal. Bill, along with his wife Lucy, was honored in 2006 by Lakeside School's es tablishment of The Bill and Lucy Dougall Fund for Inspirational Teaching. Bill was an avid traveler and out doorsman who led groups on ad ventures throughout the Pacific Northwest. He climbed moun tains on every continent including Aconcagua, Kilimanjaro, Blanc, Ararat, and McKinley. He volun teered for many years with the Mountain Rescue Council of Seat tle, and served on the Board of REI. Bill was an inspirational leader, best known for his intellectual cu riosity, his adventurous spirit, for insisting that we all get out, get muddy, and in spite of the perils, real or perceived, venture to places we never imagined we could go. After surviving a heart attack while running the Bay to Breakers Race in San Francisco at age 73, Bill devoted his later years to family and his farm in Woodinville, while continuing to substitute teach at Lakeside. On his eighty-eight birthday, he danced on the table with his grandchildren. Three weeks be fore his death, Bill Dougall spent the day bailing water from a leaky boat and mowing the lawn. He will be deeply missed. Bill is survived by his wife of 62 years, Lucy, their children: Lucy, Rob, Jonathan, Jill, and Sorrel; seven grandchildren , Jessica, Nick, Brighton, Linnet, Rowan, Callie and Nate, one great-grandchild, William and another on the way.

https://www.legacy.com/obituaries/seattletimes/obituary.aspx?n=william-stewart-dougall&pid=136589395

Notes - The GE-600 series

The **GE-600 series** was a family of 36-bit mainframe computers originating in the 1960s, built by General Electric (GE). When GE left the mainframe business the line was sold to Honeywell, which built similar systems into the 1990s as the division moved to Groupe Bull and then NEC.

The system is perhaps best known as the platform on which the Dartmouth Time Sharing System (DTSS) spent most of its life, and the base machine for the Multics operating system as well. Multics was supported by virtual memory additions made to later versions of the series.

https://en.wikipedia.org/wiki/GE-600_series

http://www.bitsavers.org/pdf/ge/GE-6xx/CPB-371A_GE-635_System_Man_Jul64.pdf / 1964-07-ge-635-system-manual-cpb-371a /

1968-12-ge-mark-ii-time-sharing-service-711224a-basic-language-reference-manual /

1970-01-ge-mark-ii-time-sharing-service-711223c-command-system-reference-manual /

Birth of BASIC

https://www.youtube.com/watch?v=WYPNjSoDrqw

Aug 5, 2014

8K205SHARESAVE

Dartmouth

34.3K subscribers

SUBSCRIBE

Professors John Kemeny and Tom Kurtz along with a band of Dartmouth undergraduates invent the Basic computer language.

2014-08-05-youtube-dartmouth-birth-of-basic-720p https://drive.google.com/file/d/1qiJ56i7-2IrwqJzS8h4tR7K1iyfaDpPv/view?usp=sharing

.pdf https://drive.google.com/file/d/12TVIQL6T67vfmHUyrASucHJWL03D-Tq8/view?usp=sharing

-img-1 https://drive.google.com/file/d/1VDH7MRFD8J-IMFoaU8TZTbkxyZuQYjel/view?usp=sharing

key names - Al Tucker, math Dept. - Princeton

John Kemeny

1967/68 - Bill Gates first access to a computer is at age 12

Source - Interview: Bill Gates, Co-Founder and Chairman, Microsoft Corporation - March 17, 2010, Seattle, Washington - Source - [HW003P][GDrive]

When you were growing up, did you have any vision of what you wanted to accomplish?

Bill Gates: When I was very young I hadn't been exposed to computers so I was mostly just reading, doing math, learning about science, and I wasn't sure what my career would be. I knew I loved learning about things. I was an avid reader, but it was when I was 12 years old that I first got to use a computer, actually a very limited machine by today's standards. But that definitely fascinated me when I was first exposed.

Love at first sight?

Bill Gates: I was intrigued by figuring out what it could do and what it couldn't do. And some friends and I spent lots of time. The teachers got intimidated so we were on our own trying to figure it out. Actually, we gave a course on computers to the other students, and it became a fascination, where we got paid for doing computer work and talked about forming a company. But there was kind of a magical breakthrough when the computer became cheap, and we could see that everyone could afford a computer. That was much later, but that's what got us to really get together and create a company for software.

1968 (Fall) - Paul Allen meets Bill Gates

Source - MAY 2011 article in Vanity Fair - By Paul Allen - MICROSOFT'S ODD COUPLE / THE TECH REVOLUTION - [HP0030][GDrive]

In the words of narrator Paul Allen:

> *[...] One day early that fall [of 1968], I saw a gangly, freckle-faced eighth-grader edging his way into the crowd around the Teletype, all arms and legs and nervous energy. He had a scruffy-preppy look: pullover sweater, tan slacks, enormous saddle shoes. His blond hair went all over the place. You could tell three things about Bill Gates pretty quickly. He was really smart. He was really competitive; he wanted to show you how smart he was. And he was really, really persistent. After that first time, he kept coming back. Many times he and I would be the only ones there.*
>
> *Bill came from a family that was prominent even by Lakeside standards; his father later served as president of the state bar association. I remember the first time I went to Bill's big house, a block or so above Lake Washington, feeling a little awed. His parents subscribed to Fortune, and Bill read it religiously. One day he showed me the magazine's special annual issue and asked me, "What do you think it's like to run a Fortune 500 company?" I said I had no idea. And Bill said, "Maybe we'll have our own company someday." He was 13 years old and already a budding entrepreneur.*
>
> *Where I was curious to study everything in sight, Bill would focus on one task at a time with total discipline. You could see it when he programmed—he'd sit with a marker clenched in his mouth, tapping his feet and rocking, impervious to distraction. He had a unique way of typing, sort of a six-finger, sideways scrabble. There's a famous photograph of Bill and me in the computer room not long after we first met. I'm seated on a hard-back chair at the teleprinter in my dapper green corduroy jacket and turtleneck. Bill is standing to my side in a plaid shirt, his head cocked attentively, eyes trained on the printer as I type. He looks even younger than he actually was. I look like an older brother, which was something Bill didn't have.*

1968/69 School year - "at the age of thirteen , Bill Gates started programming ."

Source - Personal Computer Book Paperback – April 1, 1990 - by Peter McWilliams (Author) / Chatper 6 - At [HB004B][GDrive]

1969 - 1970 - CCC / Lakeside

Source : **AstrumPeople** article - Source PDF - [HW003M][GDrive]

[...] In 1969, at the Computer Center Corporation experienced difficulties once again, and in 1970, it declared itself a bankrupt. The Lakeside's students lost their job and access to computer time. **Paul Allen's father was working at the University of Washington and had an access to the computer center.** Young programmers got down to business looking for an area where to apply their knowledge. In 1971, the Information Sciences hired Bill Gates and Paul Allen to create software that would be make-up payroll sheet. In addition to unlimited computer time employers have agreed to pay the developers every time their software will bring the company profit.

Traf-o-Data - The young programmers regularly received orders. Bill Gates was the initiator who said: *"Let's call the real world, and sell it something."* And the most interesting thing that he did find clients and sold them his software. For example, once he developed software to optimize road traffic and sold it for $20,000 dollars. He was only 15 years old!

1970 (Sep) - Senior year at Lakeside for Paul Allen - In November, jobs at "ISI" for a payroll project start

Source: "The Idea man" by Paul Allen - [HB0049][GDrive]

OK - What kind of a company callus up

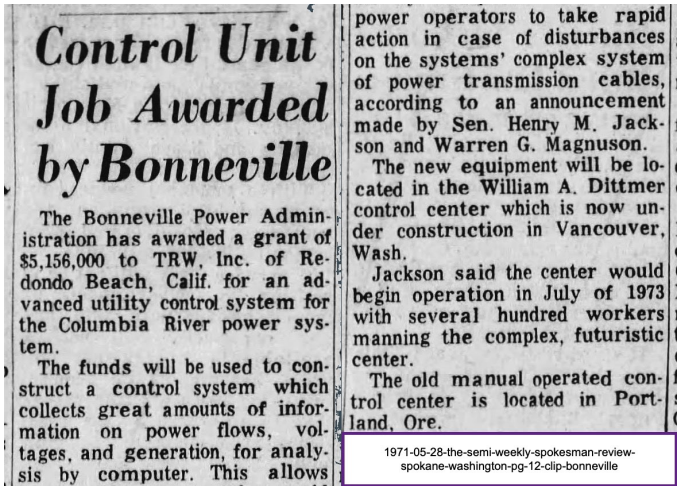
In the words of narrator Paul Allen:

> *One evening after school, early in my senior year at Lakeside, [which would be the fall of 1970,] I brazenly walked through a door and into UW's graduate computer science lab. I picked up a manual and took my seat at a Teletype linked to a Xerox Data Systems Sigma- 5, which I soon had figured out. Then a grad student approached to ask a question, and word got around that I seemed to know what I was doing. I was rolling along until an assistant professor called me into his office and said, "You don't look familiar. Are you in any of my classes?"*
>
> *And I said, "No, sir, I'm not."*
>
> *"As matter of fact, you're not even enrolled here, are you?" I confessed that I wasn't. The professor smiled and said, "All right,*
>
> *I'll tell you what. If you keep helping my students, you can stick around."*
>
> *There was no turning back after that. I moved on to the Burroughs B5500 and a powerful language called ALGOL— my first brush with batch processing, a step backward in time that only deepened my appreciation of the PDP-10. I tried my hand at a Control Data CDC- 6400 and an Imlac PDS- 1, the pioneering graphical minicomputer, where I found a version of Steve Russell's Spacewar. I was a sponge, soaking up knowledge wherever I could. All of us were sponges then.*
>
> *That November [of 1970], a Portland time- sharing company called Information Services Inc. invited me and my three "colleagues" to meet to discuss a contract, a big step for us. Before driving to Oregon, we reconstituted ourselves as the Lakeside Programming Group, which sounded grown- up and official.* ***ISI wanted a payroll program that had to be written in COBOL, a high- level language used in business applications.*** *In return,* ***they would credit us with free time on their PDP- 10****. We outlined our experience and submitted our résumés; Bill, just turned sixteen, had written his in pencil on lined notebook paper. We got the job.*

1971 (June) - Paul Allen graduates from Lakeside @

1971 (May 28) - TRW awarded contract for Bonneville Dam / Power @

- Ultimately, this is the project that Bill Gates will work on with Paul Allen in 1973.
- Bill Gates' Father William Henry Gates II (born 1925). is friends with all of the senators involved, as well as the Washington State governor Daniel Jackson Evans (born 1925) .
- Full page - [HN00Z2][GDrive]



Control Unit Job Awarded by Bonneville

The Bonneville Power Administration has awarded a grant of $5,156,000 to TRW, Inc. of Redondo Beach, Calif. for an advanced utility control system for the Columbia River power system.

The funds will be used to construct a control system which collects great amounts of information on power flows, voltages, and generation, for analysis by computer. This allows power operators to take rapid action in case of disturbances on the systems' complex system of power transmission cables, according to an announcement made by Sen. Henry M. Jackson and Warren G. Magnuson.

The new equipment will be located in the William A. Dittmer control center which is now under construction in Vancouver, Wash.

Jackson said the center would begin operation in July of 1973 with several hundred workers manning the complex, futuristic center.

The old manual operated control center is located in Portland, Ore.

1971-05-28-the-semi-weekly-spokesman-review-spokane-washington-pg-12-clip-bonneville

[HN00Z3][GDrive]

1971 (Sep) - Paul Allen starts as freshman at Washington State, studying Computer Science

1971 (est)- For a period of about a year, Bill Gates Does NOT work with computers

We dont know exactly when this period was ...

Source : See [HW003M][GDrive] :

"Bill Gates' parents were extremely frightened of the enthusiasm of their son and by a willful decision they banned him from computer projects. For a year, Bill did not approach the object of his passion, reading the biographies of famous people from Napoleon to Roosevelt. "

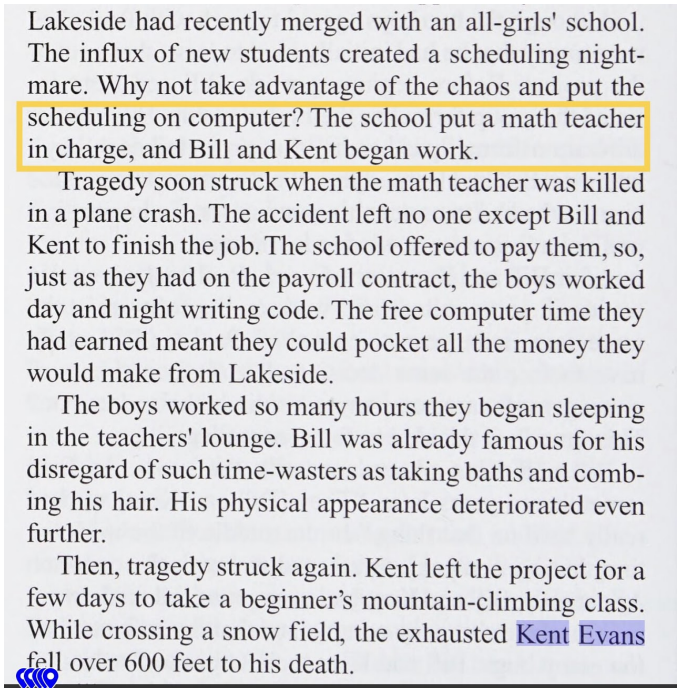
1972 (Jan) - School schedule programming project begins at Lakeside School (with Kent Evans)

Source : Wikipedia - Saved Aug 10 2020 / [HK002A][GDrive]

Note that the 1971-1972 school year is the junior year for Bill Gates; he and Kent Evants wanted the project done for Bill Gate's senior year - 1972-1973

Note below that the math teacher who was initially put in charge of this project died in a small plane crash.

The following year[, which would be 1971], a Lakeside teacher enlisted Gates and Evans to automate the school's class-scheduling system, providing them computer time and royalties in return. **The duo worked diligently in order to have the program ready for their senior year.** Towards the end of their junior year, Evans was killed in a mountain climbing accident, which Gates has described as one of the saddest days of his life. Gates then turned to Allen who helped him finish the system for Lakeside.



Lakeside had recently merged with an all-girls' school. The influx of new students created a scheduling nightmare. Why not take advantage of the chaos and put the scheduling on computer? The school put a math teacher in charge, and Bill and Kent began work.

Tragedy soon struck when the math teacher was killed in a plane crash. The accident left no one except Bill and Kent to finish the job. The school offered to pay them, so, just as they had on the payroll contract, the boys worked day and night writing code. The free computer time they had earned meant they could pocket all the money they would make from Lakeside.

The boys worked so many hours they began sleeping in the teachers' lounge. Bill was already famous for his disregard of such time-wasters as taking baths and combing his hair. His physical appearance deteriorated even further.

Then, tragedy struck again. Kent left the project for a few days to take a beginner's mountain-climbing class. While crossing a snow field, the exhausted Kent Evans fell over 600 feet to his death.

[HT008R][GDrive]

1972 (spring) - SAT testing - Bill Gates gets a near perfect 1600

Wikipedia - Saved Aug 10 2020 ([HK002A][GDrive]) - *"He was a National Merit Scholar when he graduated from Lakeside School in 1973.[38] He scored 1590 out of 1600 on the Scholastic Aptitude Tests (SAT) [....]"*

Odds of both Paul Allen and Bill gates getting perfect SATs, same school same year - without serious studying - is virtually zero. Cheating was rampant at that time ...

1988 NY Times source : [HN00ZE][GDrive] - Cheating is rampant

https://blog.prepscholar.com/how-to-get-a-perfect-sat-score-by-a-2400-sat-scorer : ***"Only 500 of 2 million scores are perfect 1600""***

1972 (May 28) - Death of Kent Evans @

1972 (?) - Bill Gates serves as a Congressional (House) page in Washington DC

https://books.google.com/books?id=L1NLDwAAQBAJ&pg=PA196#v=onepage&q&f=false

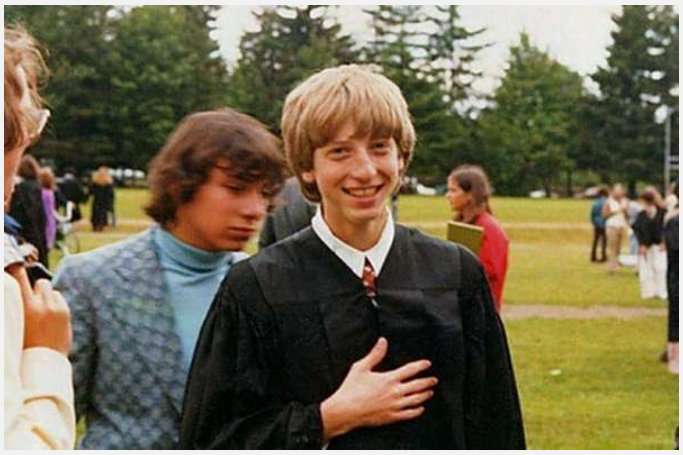
and "**In 1972, he served as a congressional page in the House of Representatives**.[36][37]" (Wikipedia - Saved Aug 10 2020 : [HK002A][GDrive])

1972 (June 2) - Traf-O-Data - Work begins with traffic flow / 8008 programming

Source Article reference : [HM000F][GDrive] on the Tape reader used for Traf-O-Data : **"Intermec, they did a tape reader. The original Traf-O-Data tape reader I got some guys at Intermec to build. "**

Traf-O-Data = https://en.wikipedia.org/wiki/Traf-O-Data

[HW003N][GDrive]



[HW003O][GDrive]

1972 (Sep) - Bill Gates begins senior year at Lakeside

1972 (Dec / Christmas) - Offer received to work with TRW / Bonneville @

Source: "The Idea man" by Paul Allen - [HB0049][GDrive]

In the words of narrator Paul Allen:

*"OVER CHRISTMAS, Bill [Gates] got a call from **Bud Pembroke**, the guy who'd hired us to do the ISI payroll program. A massive software project for the Bonneville Power Administration's electrical grid was behind schedule, and Bud was scouring the region for programmers who knew their way around a PDP- 10. I was not quite twenty and Bill was only seventeen, but age was not a criterion. "And you're going to be on salary," Bud said.*

Bill said, "How much?"

And Bud said, "One hundred sixty- five dollars a week."

Four dollars an hour was a pittance for an experienced programmer, even then, but Bill and I couldn't believe our good fortune. Here was a chance to work together again on a PDP- 10, and for pay! I was glad to take a leave of absence from Washington State. Bill had completed his required courses at Lakeside and got approval to pursue an off-campus senior project for his final semester. We told Bud to count us in.

Bill and I piled into his orange 1967 Mustang convertible and drove south to Vancouver, Washington, a land of strip malls, car washes, and a vintage A&W Root Beer drive- in stand where we'd become regulars. We found a cheap two- bedroom apartment and showed up for work on a Monday in January 1973.

1973 (Jan) - Bill Gates starts project with TRW / electric grid / Bonneville Power @

Good money! See [HW003M][GDrive] :

"By the age of seventeen Gates received a proposal for writing a software package for Bonneville Dam, which his parents didn't reject. For a one-year work on this project Gates received $30,000 dollars."

Source - Interview: Bill Gates, Co-Founder and Chairman, Microsoft Corporation - March 17, 2010, Seattle, Washington Source - [HW003P][GDrive]

Bill Gates: *My parents had been fantastic throughout my whole student career.* ***[...] That my senior year at Lakeside, where I had wanted to take time off and do this job at TRW, they'd been very supportive of that, letting me live down in Vancouver, Washington. I challenged them a little bit when some of my coworkers at TRW said I should skip undergraduate and just go to graduate school, and they were not enthused about that. It looked like I would have an opportunity to do that, but I didn't, I just went to Harvard.***

1973 (September) - Bill Gates starts starts at Harvard @

In the fall of 1973 Allen returned to University [, that being Washington State,] and Gates entered Harvard University .

" enrolled at Harvard College in the autumn of 1973. He chose a pre-law major but took mathematics and graduate level computer science courses. While at Harvard, he met fellow student Steve Ballmer. [Ballmer] graduated magna cum laude. Years later, Ballmer succeeded Gates as Microsoft's CEO and maintained that position from 2000 until his resignation in 2014." (Wikipedia - Saved Aug 10 2020 : [HK002A][GDrive])

1974 (mid or late year) - Bill Gates as sophomore at Harvard - Gates solves "pancake problem" in his sophomore year at Harvard

Wikipedia - Saved Aug 10 2020 [HK002A][GDrive]

(note - I think it involved the help of Harvard professior https://en.wikipedia.org/wiki/Harry_R._Lewis)

Gates devised an algorithm for pancake sorting as a solution to one of a series of unsolved problems [see https://www.npr.org/templates/story/story.php?storyId=92236781]) presented in a combinatorics class by professor Harry Lewis. His solution held the record as the fastest version for over 30 years, and its successor is faster by only 2%.[44][45] His solution was formalized and published in collaboration with Harvard computer scientist Christos Papadimitriou.[46]

1973/1974 - Bill Gates as sophomore at Harvard - Meets Ballmer

Source - 2000 (Dec 31) - Washington Post - "Alter Egos" By Mark Leibovich (Fourth in a series) Source - [HN00Z4][GDrive]

[Bill Gates] lived in Currier House, an outpost full of math and science whizzes removed from the more centrally located dorms along the Charles River. In his sophomore year, dormmate Jeff Clark introduced him to Ballmer, who was also living in Currier House. "Jeff liked Steve because Steve had this very energetic approach to being involved in everything," Gates says. "And he kind of liked me because I had this very energetic approach to not being involved in things."

Ballmer compensated for his shyness by becoming hyperactive on campus. He would become manager of the Harvard football team, business manager of the Harvard Crimson and publisher of a campus literary magazine. He made a point of memorizing faces and names from the Harvard directory.

He and Gates became friends, attending a double feature of "Singin' in the Rain" and "A Clockwork Orange" that November. The next month, Gates left the door to his dorm room wide open after he returned to Seattle for the holidays; because dormmates hung out in Gates's room, he never locked the door. Ballmer, seeing his friend's wallet sitting in full view on his dresser, locked up after him.

Both got perfect scores on their math SATs and shared an interest in Napoleon. They were both slobs, dormmates recall. Gates eschewed sheets, opting to sleep directly on his mattress because it was too much trouble to make his bed. Gary Kollin, who briefly shared an apartment with Ballmer one summer, says Ballmer did the same -- his sheets were the wrong size for his mattress, and he thought it would be a waste of money to buy new ones for the summer.

Ballmer helped nudge Gates into doing social things, persuading him to join Harvard's all-male Fox Club. But each had his own interests and circles: Ballmer had his extracurriculars; Gates spent hours playing poker with dormmates. The poker games went all night, and often badly for Gates.

"We used to rub our hands together when he'd sit down," poker player Scott Drill says. "We'd say, 'Here comes the Bill Gates Gravy Train.' " Gates had an obsessive willingness to keep playing, even after his losses reached into the hundreds. One night, he walked into Ballmer's room and handed him his checkbook. "Hide this," he said to Ballmer, one poker player recalls. "I don't want to lose anymore."

Neither required much sleep, and friends recall them engaging in animated debates late into the night. Ballmer even adopted Gates's rocking habit, seemingly unconsciously. Together they studied until dawn several days in a row for an economics final. "We're screwed in this class . . . no, we're golden," Ballmer would yell late at night, according to other students. Gates scored a 99 on the test, Ballmer a 97.

1974 (April) - Intel releases the 8080 @

https://en.wikipedia.org/wiki/Intel_8080

1974 (April / May) - Work begins at MITS Inc. on the Altair 8800

See MITS Inc. Altair 8800

1974 (Summer?) - Paul Allen leaves Washington State, moves to Massachusetts to work at Honeywell, and spend time with Bill Gates on the weekends - Bill Gates claims he helped Paul Allen get that job

In the words of Paul Allen - from [HP0030][GDrive]

- He got a job offer just from a resume? What about going in for an interview?

Through the spring semester of 1974, Bill kept urging me to move to Boston. *We could find work together as programmers, he said; some local firms sounded interested. We'd come up with some exciting project. In any case, we'd have fun. Why not give it a try?*

Drifting at Washington State, I was ready to take a flier. I mailed my résumé to a dozen computer companies in the Boston area and got a $12,500 job offer from Honeywell. If Boston didn't work out, I could always return to school. In the meantime, I'd sample a new part of the country, and my girlfriend, Rita, had agreed to join me. We had grown more serious and wanted to live together as a trial run for marriage. Plus, Bill would be there. At a minimum, we could put our heads together on the weekends.

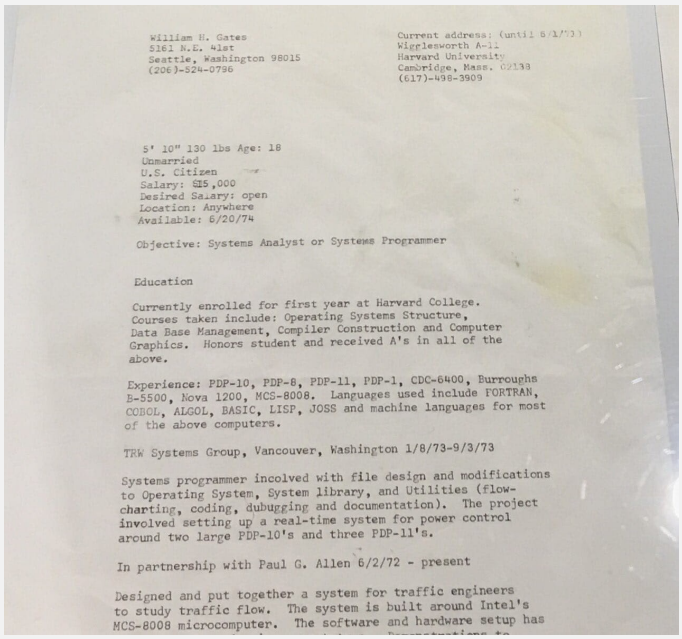
Source - Interview: Bill Gates, Co-Founder and Chairman, Microsoft Corporation - March 17, 2010, Seattle, Washington - Source - [HW003P][GDrive]

Bill Gates : *"In the meantime[, upon graduating High school and then starting at college,] I start at Harvard University back in Cambridge, Massachusetts. Paul's at Washington State, another place, s**o I help him get a job out there in the Boston area,** and we're just brainstorming, you know, "What's going to happen with the microprocessor?""*

1974 (June) - Resumes for Paul Allen and Bill Gates

Source - 2017 CNBC article - Microsoft Co-Founder Bill Gates - when he was making $15,000 a year

Published Thu, Aug 10 201712:15 PM EDTUpdated Thu, Aug 10 201712:15 PM EDT, by Catherine Clifford : Source is [HM000I][GDrive]



William H. Gates
5161 N.E. 41st
Seattle, Washington 98015
(206)-524-0796

Current address: (until 6/1/73)
Wigglesworth A-11
Harvard University
Cambridge, Mass. 02138
(617)-498-3909

5' 10" 130 lbs Age: 18
Unmarried
U.S. Citizen
Salary: $15,000
Desired Salary: open
Location: Anywhere
Available: 6/20/74

Objective: Systems Analyst or Systems Programmer

Education

Currently enrolled for first year at Harvard College. Courses taken include: Operating Systems Structure, Data Base Management, Compiler Construction and Computer Graphics. Honors student and received A's in all of the above.

Experience: PDP-10, PDP-8, PDP-11, PDP-1, CDC-6400, Burroughs B-5500, Nova 1200, MCS-8008. Languages used include FORTRAN, COBOL, ALGOL, BASIC, LISP, JOSS and machine languages for most of the above computers.

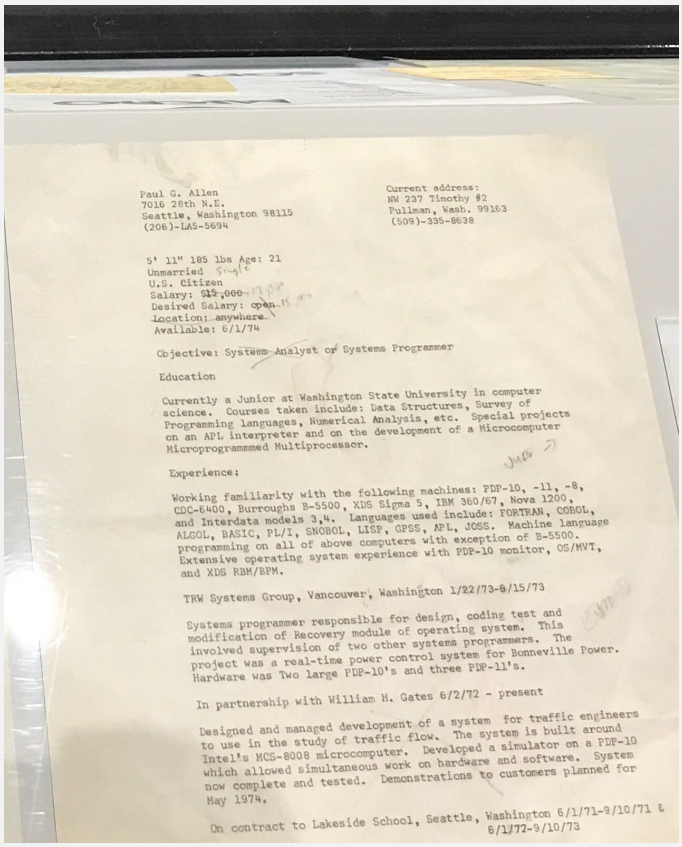
TRW Systems Group, Vancouver, Washington 1/8/73-9/3/73

Systems programmer incolved with file design and modifications to Operating System, System library, and Utilities (flow-charting, coding, dubugging and documentation). The project involved setting up a real-time system for power control around two large PDP-10's and three PDP-11's.

In partnership with Paul G. Allen 6/2/72 - present

Designed and put together a system for traffic engineers to study traffic flow. The system is built around Intel's MCS-8008 microcomputer. The software and hardware setup has

[HM000J][GDrive]



Paul G. Allen
7016 28th N.E.
Seattle, Washington 98115
(206)-LA5-5694

Current address:
NW 237 Timothy #2
Pullman, Wash. 99163
(509)-335-8638

5' 11" 185 lbs Age: 21
Unmarried
U.S. Citizen
Salary: $15,000
Desired Salary: open
Location: anywhere
Available: 6/1/74

Objective: Systems Analyst or Systems Programmer

Education

Currently a Junior at Washington State University in computer science. Courses taken include: Data Structures, Survey of Programming languages, Numerical Analysis, etc. Special projects on an APL interpreter and on the development of a Microcomputer Microprogrammed Multiprocessor.

Experience:

Working familiarity with the following machines: PDP-10, -11, -8, CDC-6400, Burroughs B-5500, XDS Sigma 5, IBM 360/67, Nova 1200, and Interdata models 3,4. Languages used include: FORTRAN, COBOL, ALGOL, BASIC, PL/I, SNOBOL, LISP, GPSS, APL, JOSS. Machine language programming on all of above computers with exception of B-5500. Extensive operating system experience with PDP-10 monitor, OS/MVT, and XDS RBM/BPM.

TRW Systems Group, Vancouver, Washington 1/22/73-8/15/73

Systems programmer responsible for design, coding test and modification of Recovery module of operating system. This involved supervision of two other systems programmers. The project was a real-time power control system for Bonneville Power. Hardware was Two large PDP-10's and three PDP-11's.

In partnership with William H. Gates 6/2/72 - present

Designed and managed development of a system for traffic engineers to use in the study of traffic flow. The system is built around Intel's MCS-8008 microcomputer. Developed a simulator on a PDP-10 which allowed simultaneous work on hardware and software. System now complete and tested. Demonstrations to customers planned for May 1974.

On contract to Lakeside School, Seattle, Washington 6/1/71-9/10/71 & 6/1/72-9/10/73

[HM000K][GDrive]

[...] A glimpse of his resume from 1974, when he was 18, reveals that during his first year at Harvard, Gates was already making $15,000.

In today's dollars, that's almost $75,000, according to the U.S. Bureau of Labor Statistics' inflation calculator. Impressive for a college freshman.

Though it's not clear from where that income came, the resume says that he and future Microsoft co-founder Paul Allen (today worth more than $20 billion) were working "in partnership" and had designed a program for an early Intel computer.

The CV also shows Gates worked as a programmer at TRW Systems Group in Vancouver, a developer of military and civil space systems (which was acquired by Northrop Grumman in 2002).

Both Gates and Allen structured their early resumes similarly. First, they listed computer-related coursework — where Gates points out he received all As in the courses mentioned, like Operating Systems Structure, Data Base Management and Computer Graphics. Next came the computer programming languages in which they were proficient. Finally, came work experience. [...]

1974 (October) - MITS completes the prototype of Altair - It is sent in the mail to New York City, but is lost in transit due to a strike

Source - Aug 14 2020 saved wikipedia - [HK002F][GDrive]

Art Salsberg, editorial director of *Popular Electronics*, was looking for a computer construction project, and his technical editor Les Solomon knew that MITS was working on an Intel 8080-based computer kit. Roberts assured Solomon that the project would be complete by November to meet the press deadline for the January 1975 issue. The first prototype was finished in October and shipped to *Popular Electronics* in New York for the cover photograph, but it was lost in transit. Solomon already had a number of pictures of the machine, and the article was based on them. Roberts and Yates got to work on building a replacement. The computer on the magazine cover was an empty box with just switches and LEDs on the front panel. The finished Altair computer had a completely different circuit board layout than the prototype shown in the magazine.[26]

1974 (December) - The January 1975 issue of Popular Electronics is now available, featuring the MITS Altair 8800 on the cover - and Paul Allen gets a copy at a news stand

Also see - MITS Inc. Altair 8800 .

Source : Interview: Bill Gates, Co-Founder and Chairman, Microsoft Corporation - March 17, 2010, Seattle, Washington (Source - [HW003P][GDrive])

Bill Gates: In 1971, there's this obscure article on the microprocessor that Intel has done -- what was called the 4004 -- that Paul said, "Look, this thing's going to keep getting better and it's going to be better than these mini-computers." Mini-computers were like $10,000 to $200,000. Paul and I had borrowed some of those and messed around with those. And Paul said, "No, no. They're going to have something better than the mini-computer that costs like $1,000." [...]

Finally, somebody takes the 8080 chip and creates a kit computer, and [the cover **story in Popular Electronics in January 1975 is theAltair 8800?]** that comes out in December 1974. So we get that, and that's both exciting -- because finally this thing that we've expected has happened -- but the question is, "Is it happening without us?" And so this company, which is in Albuquerque, New Mexico, we call them up and say, "Hey, we can do software for this machine." And they say, "Oh yeah, sure." So we very quickly work on a BASIC for this computer, which I'm well equipped to do, and Paul had some brilliant ideas about how we'd simulate this machine, because we didn't have one, and that was amazing. So we write this thing and we call them up and we say, "Hey, when you connect a teletype up, what's the software programming to get the characters in to print them? How do you do that?" The so-called "input output." **And they thought, "Well, that's interesting. You guys may not be flaky, because actually you're the first one who asked that question,"** which is, if you're going to really write the software, you eventually have to ask that question.

1974 (end of December) or 1975 (Jan 2) - "writing" from Bill Gates to MITS, offering MITS BASIC; then follow-up phone calls

Saved wikipedia (Aug 2020) - [HK002D][GDrive]

Ed Roberts (founder of MITS, Inc.) **received a letter** from Traf-O-Data (see https://en.wikipedia.org/wiki/Traf-O-Data) asking if he would be interested in buying its BASIC programming language for the machine. **He called the company and reached a private home, where no one had heard of anything like BASIC. In fact the letter had been sent by Bill Gates and Paul Allen from the Boston area, and they had no BASIC yet to offer.** When they **called Roberts to follow up** on the letter he expressed his interest, and the two started work on their **BASIC interpreter using a self-made simulator for the 8080 on a PDP-10 minicomputer.** They figured they had 30 days before someone else beat them to the punch, [...]

1974 (Jan / Feb) - Developing Altair BASIC demo, In Paul Allen's words

Source : MAY 2011 article in Vanity Fair - By Paul Allen - MICROSOFT'S ODD COUPLE / THE TECH REVOLUTION - [HP0030][GDrive]

In the words of narrator Paul Allen:

> ***So when the right opportunity surfaced, as it did that December, it got my full attention: an open invitation by the MITS company, in Albuquerque, to build a programming language for their new Altair microcomputer, intended for the hobbyist market.***
>
> ***Some have suggested that our Altair basic was remarkable because we created it without ever seeing an Altair or even a sample Intel 8080, the microprocessor it would run on. What we did was unprecedented, but what is less well understood is that we had no choice. The Altair was little more than a bare-bones box with a C.P.U.-on-a-chip inside. It had no hard drive, no floppy disk, no place to edit or store programs.***
>
> ***We moved into Harvard's Aiken Computation Lab, on Oxford Street, a one-story concrete building with an under-utilized time-sharing system. The clock was ticking on us from the start. Bill had told Ed Roberts, MITS'S co-founder and C.E.O., that our BASIC was nearly complete, and Ed said he'd like to see it in a month or so, when in point of fact we didn't even have an 8080 instruction manual.***
>
> ***In building our homegrown basic, we borrowed bits and pieces of our design from previous versions, a long-standing software tradition****. Languages evolve; ideas blend together; in computer technology, we all stand on others' shoulders. As the weeks passed, we got immersed in the mission—as far as we knew, we were building the first native high-level programming language for a microprocessor. Occasionally we wondered if some group at M.I.T. or Stanford might beat us, but we'd quickly regain focus. Could we pull it off? Could we finish this thing and close the deal in Albuquerque? Yeah, we could! We had the energy and the skill, and we were hell-bent on seizing the opportunity.*
>
> *We worked till all hours, with double shifts on weekends. Bill basically stopped going to class. Monte Davidoff, a Harvard freshman studying advanced math who had joined us, overslept his one-o'clock French section.* ***I neglected my job at Honeywell, dragging into the office at noon. I'd stay until 5:30, and then it was back to Aiken until three or so in the morning.*** *I'd save my files, crash for five or six hours, and start over. We'd break for dinner at Harvard House of Pizza or get the pupu platter at Aku Aku, a local version of Trader Vic's. I had a weakness for their egg rolls and butterflied shrimp.*
>
> *I'd occasionally catch Bill grabbing naps at his terminal during our late-nighters. He'd be in the middle of a line of code when he'd gradually tilt forward until his nose touched the keyboard. After dozing for an hour or two, he'd open his eyes, squint at the screen, blink twice, and resume precisely where he'd left off—a prodigious feat of concentration.*
>
> *Working so closely together, the three of us developed a strong camaraderie. Because our program ran on top of the multi-user TOPS-10 operating system, we could all work simultaneously. We staged nightly competitions to squeeze a sub-routine—a small portion of code within a program that performs a specific task—into the fewest instructions, taking notepads to separate corners of the room and scrawling away. Then someone would say, "I can do it in nine." And someone else would call out, "Well, I can do it in five!"*
>
> *A few years ago, when I reminisced with Monte about those days, he compared programming to writing a novel—a good analogy, I thought, for our approach to Altair BASIC. At the beginning we outlined our plot, the conceptual phase of the coding. Then we took the big problem and carved it into its component chapters, from the hundreds of sub-routines to their related data structures, before putting all the parts back together.*

1975 (Jan, early) - Recruited Monte Davidoff

Source - 2000, Washington Post - "Alter Egos" By Mark Leibovich (Fourth in a series) ; Source - [HN00Z4][GDrive]

In their rush to write BASIC for the Altair, Gates and Allen enlisted a quiet dormmate named Monte Davidoff to write an intricate but crucial part of the software. Davidoff was a shy, middle-class kid from Glendale, Wis. "Sweet, unassuming, really quiet guy," recalls Gary Kollin. By character and circumstance, an unequal partner with Gates.

Davidoff's job was to write a portion of the software that would allow the Altair to perform a greater range of calculations. In Albuquerque, he lived with Gates and Allen in a two-bedroom apartment, sleeping on the living room floor. They became friends, Davidoff says, but Gates rode him hard. "There was definitely a supervisory dynamic," Davidoff says. **"Bill could get very loud. If he felt you weren't getting something, he would say the same thing, louder. . . . He liked strong interchanges. I preferred not to work in that way."**

Davidoff spent the summers of 1975 and 1977 working for Gates and Allen. They offered him a permanent job with Micro-Soft. Davidoff, whose father co-owned a small Milwaukee hardware store, said no, chiefly because he didn't want to drop out of Harvard. Gates, with family money in reserve, could afford to.

"The way Bill and I thought about money was very different," Davidoff says. "He would tell all of his friends, 'Just call me collect.' He knew he wasn't going to have to support himself coming out of college."

Davidoff graduated from Harvard and went on to a career as a programmer. Now 44, he lives in Cupertino, Calif., where he works as an independent software consultant and pays the astronomical rents of Silicon Valley. He often wonders "what if," but says he's comfortable with his limited role in Microsoft's pre-corporate history.

He has not seen Gates for 23 years, except for two random encounters at industry events in San Jose.

1975 (February - late) - Interpreter development for demo is completed !

Initial work may have completed in mid-february .... "By mid-February 1975 the BASIC was running on the 8080 simulator. They arranged to take the BASIC to New Mexico for a demonstration. It had never run on the Altair or any 8080 chip yet - just on the simulator running on Harvard's PDP-10!" (https://legacy.voteview.com/gates.htm)

Below - MAY 2011 article in Vanity Fair - By Paul Allen - MICROSOFT'S ODD COUPLE / THE TECH REVOLUTION (see [HP0030][GDrive])

In the words of narrator Paul Allen:

> ***By late February [of 1975], eight weeks after our first contact with MITS, the interpreter (which would save space by executing one snippet of code at a time) was done. Shoehorned into about 3,200 bytes, roughly 2,000 lines of code, it was one tight little BASIC—stripped down, for sure, but robust for its size. No one could have beaten the functionality and speed crammed into that tiny footprint of memory: "The best piece of work we ever did," as Bill told me recently. And it was a true collaboration. I'd estimate that 45 percent of the code was Bill's, 30 percent Monte's, and 25 percent mine, excluding my development tools.***

Video - History of Microsoft-Bill Gates 1975-77 - HD

Captured video - [HV009C][GDrive] / PDF at [HV009D][GDrive]

"History of Microsoft Bill Gates 1975-77 - HD was converted together using Moroz Video Converter for educational purposes. These videos were available as free for download from MSDN site, and I decided to share them with you guys for educational purposes. These videos is copyrighted by their respective owners."

https://www.youtube.com/watch?v=X5IpOskKF9I

The PC that started Microsoft & Apple! (Altair 8800)

•Mar 18, 2016

1991 (July 5) - Bill Gates meets Warren Buffett, introduced by parents

Bill Gates didn't want to attend the dinner where he met Warren Buffett—but his mom convinced him to go

CNBC : Published Fri, Oct 6 201712:37 PM EDTUpdated Fri, Oct 6 20174:42 PM EDT / Source - [HM000E][GDrive]

[...]

On July 5, 1991, Buffett was visiting Washington state when he was invited to dinner with Gates' parents via a mutual friend. The friend teased the possibility that Gates himself might show up, according to Buffett, who told students the story during an event with Gates at the University of Nebraska at Lincoln's College of Business Administration in 2005.

Meanwhile, Gates protested his invitation.

"It was a funny event because my mom's very sociable, always getting people together," Gates tells the students. "I at this time didn't believe in vacations, was totally focused on my job. So when she said to me, 'You've got to come out and meet Warren...,' I said, 'Mom, I'm busy!'"

Gates' mother pushed back, however, insisting that Buffett would be interesting and worth her son's time.

"I wasn't convinced," Gates writes in a blog post reflecting on the pair's friendship 25 years later. "'Look, he just buys and sells pieces of paper. That's not real value added. I don't think we'd have much in common,' I told her."

Eventually his mom convinced him to go. "I agreed to stay for no more than two hours before getting back to work at Microsoft," he writes.

But once Gates and Buffett finally got a chance to talk, things just clicked. Buffett pressed the tech mogul with difficult questions about Microsoft, and Gates welcomed the challenge. "These were amazingly good questions that nobody had ever asked," he writes.

Gates abandoned his plan to fly back to work that night. "We were suddenly lost in conversation and hours and hours slipped by. He didn't come across as a big shot investor. He had this modest way of talking about what he does. He was funny, but what impressed me most was how clearly he thought about the world."

After that night, the pair quickly became close. "It began a really unbelievable friendship for me and I could tell that even though we came from different directions, the kinds of things that fascinated us and that we thought were important were very much the same," says Gates, speaking to UNL students. [...]

Clips on Bill Gates meeting Buffett...

http://content.time.com/time/magazine/article/0,9171,1120657-10,00.html

1997-01-15-content-time-com-article-in-search-of-bill-gates-10-of-17.pdf

In that regard he is the opposite of, say, Bill Clinton, who brackets the other end of the baby boom: Gates analytically rigorous and emotionally reserved, the President equally smart but intellectually undisciplined and readily intimate. They played golf on Martha's Vineyard once, and the President, as usual, worked hard at bonding emotionally and being personally charming and intimate. He expressed sorrow about the death of Gates' mother, shared the pain of the recent death of his own mother and gave golfing tips to Melinda. But Gates noticed that Clinton never bore in or showed rigorous curiosity about technological issues. Though he vaguely considers himself a Democrat, Gates stayed neutral in the presidential election.

Warren Buffett, the Omaha, Nebraska, investor whom Gates demoted to being merely the second richest American, seems an unlikely person to be among his closest pals. A jovial, outgoing 66-year-old grandfather, Buffett only recently learned to use a computer. But as multibillionaires go, both are unpretentious, and they enjoy taking vacations together. Buffett's secretary apologetically explains that Buffett isn't giving interviews these days and at the moment is traveling, but she promises to pass along the request. Less than three hours later, Buffett calls to say he happens to be in the Time & Life Building with some free time between meetings in Manhattan, and he would be happy to come by to be interviewed. He likes to talk about Gates.

His favorite story is about the 1995 excursion to China that Bill and Melinda organized for seven couples. "For part of the trip we stayed on a ship in the Yangtze with five decks that normally accommodates hundreds of people," he says with the glee of a kid describing Walt Disney World. "Each evening Melinda arranged different activities." There was karaoke singing in the ship's ballroom, performances of quickie versions of Shakespeare plays, "and a trivia quiz on such things as how many meals we'd eaten, with prizes that Melinda and Bill handed out." When relaxed, Buffett says, Gates has a fun sense of humor. In the Forbidden City they were given a show of huge ancient scrolls that were silently rolled and unrolled by women trained for the task. "There's a $2 fine," Gates whispered, "if you return a scroll not rewound."

When Gates decided to propose to Melinda in 1993, he secretly diverted the chartered plane they were taking home from Palm Springs one Sunday night to land in Omaha. There Buffett met them, arranged to open a jewelry store that he owned and helped them pick a ring. That year Gates made a movie for Buffett's birthday. It featured Gates pretending to wander the country in search of tales about Buffett and calling Melinda with them from pay phones. After each call, Gates is shown checking the coin slot for loose change. When she mentions that Buffett is only the country's second richest man, he informs her that on the new Forbes list Buffett had (at least that one year) regained the top spot. The phone suddenly goes dead. "Melinda, Melinda," Gates sputters, "you still there? Hello?"

http://content.time.com/time/magazine/article/0,9171,1120657-10,00.html

1997-01-15-content-time-com-article-in-search-of-bill-gates-11-of-17.pfd

11 of 17

Last October Gates brought Melinda and their new daughter to visit Buffett and his wife in San Francisco. They ended up playing bridge for nine hours straight. Another marathon session in Seattle started in the morning and lasted--with a break for Melinda to pick up lunch at Burger King--until guests started arriving for dinner. "He loves games that involve problem solving," Buffett says. "I showed him a set of four dice with numbers arranged in a complex way so that any one of them would on average beat one of the others. He was one of three people I ever showed them to who figured this out and saw the way to win was to make me choose first which one I'd roll." (For math buffs: the dice were nontransitive. One of the others who figured it out was the logician Saul Kripke.)

Their relationship is not financial. Buffett, who does not invest in technology stocks, bought 100 shares of Microsoft just as a curiosity back when he met Gates ("I wish I'd bought more," he laughs), and Gates describes his investment with Buffett as "only" about $10 million ("I wish I'd invested more," he likewise jokes). But Gates shares Buffett's interest in the media world and even likes to joke that he has created a digital encyclopedia called Encarta that now outsells World Book, which is controlled by Buffett. So far Microsoft has mainly treated content as something that its software managers can create from scratch. But given the relative cheapness of some media stocks compared with that of Microsoft, Gates may someday look for some big acquisitions (he was in serious talks about taking a $2 billion stake in CNN before Time Warner merged with Turner Communications), and Buffett would be a useful partner.

Another of Gates' vacation companions is Ann Winblad, the software entrepreneur and venture capitalist he dated during the 1980s. They met in 1984 at a Ben Rosen-Esther Dyson computer conference and started going on "virtual dates" by driving to the same movie at the same time in different cities and discussing it on their cell phones. For a few years she even persuaded him to stop eating meat, an experiment he has since resolutely abandoned.

They were kindred minds as well as spirits. On a vacation to Brazil, he took James Watson's 1,100-page textbook, Molecular Biology of the Gene, and they studied bioengineering together. On another vacation, to a Santa Barbara, California, ranch, she took tapes of Richard Feynman's lectures at Cornell, and they studied physics. And on a larger excursion with friends to central Africa, which ended at some beach cottages on an island off Zanzibar, among their companions was anthropologist Donald Johanson, known for his work on the human ancestor Lucy, who helped teach them about human evolution. In the evenings on each trip they would go to the beach with four or five other couples for bonfires, Hood Canal-style games and a tradition they called the sing-down, where each team is given a word and has to come up with songs that feature it. Winblad remembers Gates disappearing on a dark beach after his group had been given the word sea, and then slowly emerging from the mist singing a high-pitched solo of Puff, the Magic Dragon.

Wikipedia - Saved Aug 10 2020

[HK002A][GDrive]

[...]

Early life

Gates was born in Seattle, Washington, on October 28, 1955.[3] He is the son of William H. Gates Sr.[5] (b. 1925) and Mary Maxwell Gates (1929–1994).[19] His ancestry includes English, German, and Irish/Scots-Irish.[20] His father was a prominent lawyer, and his mother served on the board of directors for First Interstate BancSystem and the United Way of America. Gates's maternal grandfather was J. W. Maxwell, a national bank president. Gates has an older sister Kristi (Kristianne) and a younger sister Libby. He is the fourth of his name in his family but is known as William Gates III or "Trey" (i.e., three) because his father had the "II" suffix.[21][22] The family lived in the Sand Point area of Seattle in a home that was damaged by a rare tornado when Gates was seven years old.[23]

Early in his life, Gates observed that his parents wanted him to pursue a law career.[24] When he was young, his family regularly attended a church of the Congregational Christian Churches, a Protestant Reformed denomination.[25][26][27] Gates was small for his age and was bullied as a child.[22] [...]

When he was in the eighth grade, the Mothers' Club at the school used proceeds from Lakeside School's rummage sale to buy a Teletype Model 33 ASR terminal and a block of computer time on a General Electric (GE) computer for the students.[32] Gates took an interest in programming the GE system in BASIC, and he was excused from math classes to pursue his interest. He wrote his first computer program on this machine, an implementation of tic-tac-toe that allowed users to play games against the computer. Gates was fascinated by the machine and how it would always execute software code perfectly.[33] After the Mothers Club donation was exhausted, Gates and other students sought time on systems including DEC PDP minicomputers. One of these systems was a PDP-10 belonging to Computer Center Corporation (CCC) which banned for the summer Gates, Paul Allen, Ric Weiland, and Gates's best friend and first business partner Kent Evans, after it caught them exploiting bugs in the operating system to obtain free computer time.[34][22]

The four students formed the Lakeside Programmers Club to make money.[22] At the end of the ban, they offered to find bugs in CCC's software in exchange for extra computer time. Rather than use the system remotely via Teletype, Gates went to CCC's offices and studied source code for various programs that ran on the system, including Fortran, Lisp, and machine language. The arrangement with CCC continued until 1970 when the company went out of business.

[...]

[...] Microsoft

[...]

BASIC

Gates read the January 1975 issue of *Popular Electronics* which demonstrated the Altair 8800, and he contacted Micro Instrumentation and Telemetry Systems (MITS) to inform them that he and others were working on a BASIC interpreter for the platform.[51] In reality, Gates and Allen did not have an Altair and had not written code for it; they merely wanted to gauge MITS's interest. MITS president Ed Roberts agreed to meet them for a demonstration, and over the course of a few weeks they developed an Altair emulator that ran on a minicomputer, and then the BASIC interpreter. The demonstration was held at MITS's offices in Albuquerque, New Mexico; it was a success and resulted in a deal with MITS to distribute the interpreter as Altair BASIC. MITS hired Allen,[52] and Gates took a leave of absence from Harvard to work with him at MITS in November 1975. Allen named their partnership "Micro-Soft", a combination of "microcomputer" and "software", and their first office was in Albuquerque. The first employee Gates and Allen hired was their high school collaborator Ric Weiland.[52] They dropped the hyphen within a year and officially registered the trade name "Microsoft" with the Secretary of the State of New Mexico on November 26, 1976.[52] Gates never returned to Harvard to complete his studies.

Microsoft's Altair BASIC was popular with computer hobbyists, but Gates discovered that a pre-market copy had leaked out and was being widely copied and distributed. In February 1976, he wrote an Open Letter to Hobbyists in the MITS newsletter in which he asserted that more than 90% of the users of Microsoft Altair BASIC had not paid Microsoft for it and the Altair "hobby market" was in danger of eliminating the incentive for any professional developers to produce, distribute, and maintain high-quality software.[53] This letter was unpopular with many computer hobbyists, but Gates persisted in his belief that software developers should be able to demand payment. Microsoft became independent of MITS in late 1976, and it continued to develop programming language software for various systems.[52] The company moved from Albuquerque to Bellevue, Washington on January 1, 1979.[51]

Gates said he personally reviewed and often rewrote every line of code that the company produced in its first five years. As the company grew he transitioned into a manager role, then an executive.[54]

IBM partnership

IBM, the leading supplier of computer equipment to commercial enterprises at the time, approached Microsoft in July 1980 concerning software for its upcoming personal computer, the IBM PC.[55] IBM first proposed that Microsoft write the BASIC interpreter. IBM's representatives also mentioned that they needed an operating system, and Gates referred them to Digital Research (DRI), makers of the widely used CP/M operating system.[56] IBM's discussions with Digital Research went poorly, however, and they did not reach a licensing agreement. IBM representative Jack Sams mentioned the licensing difficulties during a subsequent meeting with Gates and asked if Microsoft could provide an operating system. A few weeks later, Gates and Allen proposed using 86-DOS, an operating system similar to CP/M, that Tim Paterson of Seattle Computer Products (SCP) had made for hardware similar to the PC.[57] Microsoft made a deal with SCP to be the exclusive licensing agent of 86-DOS, and later the full owner. Microsoft employed Paterson to adapt the operating system for the PC[58] and delivered it to IBM as PC DOS for a one-time fee of $50,000.[59]

The contract itself only earned Microsoft a relatively small fee. It was the prestige brought to Microsoft by IBM's adoption of their operating system that would be the origin of Microsoft's transformation from a small business to the leading software company in the world. Gates had not offered to transfer the copyright on the operating system to IBM because he believed that other personal computer makers would clone IBM's PC hardware.[59] They did, making

the IBM-compatible PC, running DOS, a de facto standard. The sales of MS-DOS (the version of DOS sold to customers other than IBM) made Microsoft a major player in the industry.[60] The press quickly identified Microsoft as being very influential on the IBM PC. *PC Magazine* asked if Gates was "the man behind the machine?".[55]

Gates oversaw Microsoft's company restructuring on June 25, 1981, which re-incorporated the company in Washington state and made Gates the president and chairman of the board, with Paul Allen as vice president and vice chairman. In early 1983, Allen left the company after receiving a Hodgkin lymphoma diagnosis, effectively ending the formal business partnership between Gates and Allen, which had been strained months prior due to a contentious dispute over Microsoft equity.[51][61] Later in the decade, Gates repaired his relationship with Allen and together the two donated millions to their childhood school Lakeside.[22] They remained friends until Allen's death in October 2018.[62]

[...]

Management style

Gates delivers a speech at the World Economic Forum in Switzerland, January 2008

Gates had primary responsibility for Microsoft's product strategy from the company's founding in 1975 until 2006. He gained a reputation for being distant from others; an industry executive complained in 1981 that "Gates is notorious for not being reachable by phone and for not returning phone calls."[64] An Atari executive recalled that he showed Gates a game and defeated him 35 of 37 times. When they met again a month later, Gates "won or tied every game. He had studied the game until he solved it. That is a competitor".[65]

Gates met regularly with Microsoft's senior managers and program managers, and the managers described him as being verbally combative. He also berated them for perceived holes in their business strategies or proposals that placed the company's long-term interests at risk.[66][67] He interrupted presentations with such comments as "that's the stupidest thing I've ever heard"[68] and "why don't you just give up your options and join the Peace Corps?"[69] The target of his outburst would then have to defend the proposal in detail until Gates was fully convinced.[68] When subordinates appeared to be procrastinating, he was known to remark sarcastically, "I'll do it over the weekend."[70][71][72]

During Microsoft's early years, Gates was an active software developer, particularly in the company's programming language products, but his primary role in most of the company's history was as a manager and executive. He has not officially been on a development team since working on the TRS-80 Model 100,[73] but he wrote code that shipped with the company's products as late as 1989.[71] Jerry Pournelle wrote in 1985 when Gates announced Microsoft Excel: "Bill Gates likes the program, not because it's going to make him a lot of money (although I'm sure it will do that), but because it's a neat hack."[74]

On June 15, 2006, Gates announced that he would transition out of his role at Microsoft to dedicate more time to philanthropy. He divided his responsibilities between two successors when he placed Ray Ozzie in charge of management and Craig Mundie in charge of long-term product strategy.[75]

Antitrust litigation

Further information: United States Microsoft antitrust case and European Union Microsoft competition case

Gates giving his deposition at Microsoft on August 27, 1998

Gates approved of many decisions that led to antitrust litigation over Microsoft's business practices. In the 1998 *United States v. Microsoft* case, Gates gave deposition testimony that several journalists characterized as evasive. He argued with examiner David Boies over the contextual meaning of words such as "compete", "concerned", and "we". Later in the year, when portions of the videotaped deposition were played back in court, the judge was seen laughing and shaking his head.[76] *BusinessWeek* reported:

Early rounds of his deposition show him offering obfuscatory answers and saying "I don't recall" so many times that even the presiding judge had to chuckle. Worse, many of the technology chief's denials and pleas of ignorance were directly refuted by prosecutors with snippets of e-mail that Gates both sent and received.[77]

Gates later said that he had simply resisted attempts by Boies to mischaracterize his words and actions. "Did I fence with Boies? ... I plead guilty... rudeness to Boies in the first degree."[78] Despite Gates's denials, the judge ruled that Microsoft had committed monopolization, tying and blocking competition, each in violation of the Sherman Antitrust Act.[78]

Post-Microsoft

Since leaving day-to-day operations at Microsoft, Gates has continued his philanthropy and works on other projects.

According to the Bloomberg Billionaires Index, Gates was the world's highest-earning billionaire in 2013, as his net worth increased by US$15.8 billion to US$78.5 billion. As of January 2014, most of Gates's assets are held in Cascade Investment LLC, an entity through which he owns stakes in numerous businesses, including Four Seasons Hotels and Resorts, and Corbis Corp.[79] On February 4, 2014, Gates stepped down as chairman of Microsoft to become "technology advisor" alongside CEO Satya Nadella.[11][80]

Gates provided his perspective on a range of issues in a substantial interview that was published in the March 27, 2014 issue of *Rolling Stone* magazine. In the interview, Gates provided his perspective on climate change, his charitable activities, various tech companies and people involved in them, and the state of America. In response to a question about his greatest fear when he looks 50 years into the future, Gates stated: "... there'll be some really bad things that'll happen in the next 50 or 100 years, but hopefully none of them on the scale of, say, a million people that you didn't expect to die from a pandemic, or nuclear or bioterrorism." Gates also identified innovation as the "real driver of progress" and pronounced that "America's way better today than it's ever been."[81]

Gates has expressed concern about the potential harms of superintelligence; in a Reddit "ask me anything", he stated that:

First the machines will do a lot of jobs for us and not be super intelligent. That should be positive if we manage it well. A few decades after that though the intelligence is strong enough to be a concern. I agree with Elon Musk and some others on this and don't understand why some people are not concerned.[82][83][84][85]

In an interview that was held at the TED conference in March 2015, with Baidu's CEO, Robin Li, Gates said he would "highly recommend" Nick Bostrom's recent work, *Superintelligence: Paths, Dangers, Strategies*.[86] During the conference, Gates warned that the world was not prepared for the next pandemic, a

situation that would come to pass in late 2019 when the COVID-19 pandemic began.[87] In March 2018, Gates met at his home in Seattle with Mohammed bin Salman, the reformist crown prince and de facto ruler of Saudi Arabia to discuss investment opportunities for Saudi Vision 2030.[88][89] In June 2019, Gates admitted that losing the mobile operating system race to Android was his biggest mistake. He stated that it was within their skill set of being the dominant player, but partially blames the antitrust litigation during the time.[90] That same year, Gates became an Advisory Board Member of the Bloomberg New Economy Forum.[91]

On March 13, 2020, Microsoft announced Gates would be leaving his board positions at Berkshire Hathaway and Microsoft to dedicate his efforts in philanthropic endeavors such as climate change, global health and development, and education.[92]

[...]

Recognition

Bill and Melinda Gates being awarded the Presidential Medal of Freedom by President Barack Obama in 2016.

- In 1987, Gates was listed as a billionaire in *Forbes* magazine's 400 Richest People in America issue. He was worth $1.25 billion and was the world's youngest self-made billionaire.[13] Since 1987, Gates has been included in the *Forbes* The World's Billionaires list and was the wealthiest from 1995 to 1996,[125] 1998 to 2007, 2009, and has been since 2014.[1] Gates was number one on the Forbes 400 list from 1993 through to 2007, 2009, and 2014 through 2017.[126][127]
- *Time* magazine named Gates one of the 100 people who most influenced the 20th century, as well as one of the 100 most influential people of 2004, 2005, and 2006.
- *Time* also collectively named Gates, his wife Melinda and U2's lead singer Bono as the 2005 Persons of the Year for their humanitarian efforts.[128] In 2006, he was voted eighth in the list of "Heroes of our time".[129]
- Gates was listed in the *Sunday Times* power list in 1999, named CEO of the year by *Chief Executive Officers magazine* in 1994, ranked number one in the "Top 50 Cyber Elite" by *Time* in 1998, ranked number two in the *Upside* Elite 100 in 1999, and was included in *The Guardian* as one of the "Top 100 influential people in media" in 2001.[130]
- Gates was elected Member of the US National Academy of Engineering in 1996 "for contributions to the founding and development of personal computing".[131]
- He was named Honorary Member of the American Library Association in 1998.[132]
- He was elected a foreign member of the Chinese Academy of Engineering in 2017.[133]
- According to *Forbes*, Gates was ranked as the fourth most powerful person in the world in 2012,[134] up from fifth in 2011.[135]
- In 1994, he was honored as the 20th Distinguished Fellow of the British Computer Society (DFBCS). In 1999, Gates received New York Institute of Technology's President's Medal.[136]
- Gates has received honorary doctorates from Nyenrode Business Universiteit (2003),[137] KTH Royal Institute of Technology (2002),[138] Waseda University (2005),[139] Tsinghua University (2007),[140] Harvard University (2007),[141] the Karolinska Institute (2007),[142] and Cambridge University (2009).[143]
- He was also made an honorary trustee of Peking University in 2007.[144]
- Gates was made an Honorary Knight Commander of the Order of the British Empire (KBE) by Queen Elizabeth II in 2005.[145]
- In November 2006, he was awarded the Placard of the Order of the Aztec Eagle, together with his wife Melinda who was awarded the Insignia of the same order, both for their philanthropic work around the world in the areas of health and education, particularly in Mexico, and specifically in the program "*Un país de lectores*".[146]
- Gates received the 2010 Bower Award for Business Leadership from The Franklin Institute for his achievements at Microsoft and his philanthropic work.[147]
- Also in 2010, he was honored with the Silver Buffalo Award by the Boy Scouts of America, its highest award for adults, for his service to youth.[148]
- In 2002, Bill and Melinda Gates received the Jefferson Award for Greatest Public Service Benefiting the Disadvantaged.[149]
- He was given the 2006 James C. Morgan Global Humanitarian Award from the Tech Awards.[150]
- In 2015 Gates, along with his wife Melinda, received the Padma Bhushan, India's third-highest civilian award for their social work in the country.[151][152]
- Barack Obama honored Bill and Melinda Gates with the Presidential Medal of Freedom for their philanthropic efforts in 2016,[153] and François Hollande awarded Bill and Melinda in the following year with France's highest national order – as Commander of the Legion of Honour for their charity efforts.[154]
- Entomologists named Bill Gates' flower fly, *Eristalis gatesi*, in his honor in 1997.[155]

Personal life

Gates and his wife, Melinda, 2009

Gates married Melinda French on a golf course on the Hawaiian island of Lanai on January 1, 1994. They have three children. The family resides in Xanadu 2.0, an earth-sheltered mansion in the side of a hill overlooking Lake Washington in Medina, Washington. In 2009, property taxes on the mansion were reported to be US$1.063 million, on a total assessed value of US$147.5 million.[156] The 66,000-square-foot (6,100 m^2) estate has a 60-foot (18 m) swimming pool with an underwater music system, as well as a 2,500-square-foot (230 m^2) gym and a 1,000-square-foot (93 m^2) dining room.[157]

In an interview with *Rolling Stone*, Gates stated in regard to his faith: "The moral systems of religion, I think, are super important. We've raised our kids in a religious way; they've gone to the Catholic church that Melinda goes to and I participate in. I've been very lucky, and therefore I owe it to try and reduce the inequity in the world. And that's kind of a religious belief. I mean, it's at least a moral belief."[158]

Gates also said: "I agree with people like Richard Dawkins that mankind felt the need for creation myths. Before we really began to understand disease and the weather and things like that, we sought false explanations for them. Now science has filled in some of the realm – not all – that religion used to fill. But the mystery and the beauty of the world is overwhelmingly amazing, and there's no scientific explanation of how it came about. To say that it was generated

by random numbers, that does seem, you know, sort of an uncharitable view [laughs]. I think it makes sense to believe in God, but exactly what decision in your life you make differently because of it, I don't know."[158]

Gates purchased the Codex Leicester, a collection of scientific writings by Leonardo da Vinci, for US$30.8 million at an auction in 1994.[159] Gates is an avid reader, and the ceiling of his large home library is engraved with a quotation from *The Great Gatsby*.[160] He also enjoys playing bridge, tennis, and golf.[161][162] Gates's days are planned for him on a minute-by-minute basis, similar to the U.S. President's schedule.[163] Despite his wealth and extensive business travel, Gates flew coach in commercial aircraft until 1997, when he bought a private jet.

In 1999, his wealth briefly surpassed US$101 billion.[164][165] Since 2000, the nominal value of his Microsoft holdings has declined due to a fall in Microsoft's stock price after the dot-com bubble burst and the multi-billion dollar donations he has made to his charitable foundations. In May 2006, Gates remarked that he wished that he were not the richest man in the world because he disliked the attention it brought.[166] In March 2010, Gates was the second wealthiest person behind Carlos Slim, but regained the top position in 2013, according to the Bloomberg Billionaires List.[167][168] Slim retook the position again in June 2014[169][170] (but then lost the top position back to Gates). Between 2009 and 2014, his wealth doubled from US$40 billion to more than US$82 billion.[171] In October 2017, Gates was surpassed by Amazon founder Jeff Bezos as the richest person in the world.[14] On November 15, 2019, he once again became the richest person in the world after a 48% increase in Microsoft shares, surpassing Bezos.[172] Gates told the BBC, "I've paid more tax than any individual ever, and gladly so ... I've paid over $6 billion in taxes."[173] He is a proponent of higher taxes, particularly for the rich.[174]

Gates has held the top spot on the list of *The World's Billionaires* for 18 out of the past 23 years.[175] Gates has several investments outside Microsoft, which in 2006 paid him a salary of US$616,667 and US$350,000 bonus totalling US$966,667.[176] In 1989, he founded Corbis, a digital imaging company. In 2004, he became a director of Berkshire Hathaway, the investment company headed by long-time friend Warren Buffett.[177]

In 2016, he revealed that he is color-blind.[178]

External business ventures and investments (partial list)

Gates has a multi-billion dollar investment portfolio with stake in various sectors[179] and has participated in several entrepreneurial ventures beyond Microsoft, including:

- AutoNation, automotive retailer that Gates has a 16% stake in trading on the NYSE.
- bgC3, a new think-tank company founded by Gates.
- Canadian National Railway (CN), a Canadian Class I freight railway. As of 2019, Bill Gates is the largest single shareholder of CN stock.[180]
- Cascade Investment LLC, a private investment and holding company incorporated in the United States, founded and controlled by Bill Gates and headquartered in Kirkland, Washington.
- Corbis (originally named Interactive Home Systems and now known as Branded Entertainment Network), a digital image licensing and rights services company founded by Gates.
- EarthNow, Seattle-based startup company aiming to blanket the Earth with live satellite video coverage. Gates is a large financial backer.
- Eclipse Aviation, a defunct manufacturer of very light jets. Gates was a major stake-holder early on in the project.
- Ecolab, global provider of water, hygiene and energy technologies and services to the food, energy, healthcare, industrial and hospitality markets. Gates increased his stake of 10.8% in Ecolab to 25% in 2012.
- ResearchGate, a social networking site for scientists. Gates participated in a $35 million round of financing along with other investors.[181]
- TerraPower, a nuclear reactor design company founded by Gates.

[...]

Book - Smart money : the Story of Bill Gates - Book clips sent via DM by "@AgentRevolt" to @HousatonicITS

Bill was never merely a hacker, though. His friendship with Kent Evans, and later with Paul Allen, had another common element besides their shared interest in computers. All three boys were also interested in making money.

By Bill's junior year at Lakeside, C-Cubed was out of business. The company's plans to make a fortune by

[HT008L][GDrive]

No one was quicker to learn new computer languages than Bill. Soon Bill and Kent were doing most of the work on the payroll project.

Although the two boys agreed to work with Paul, they were angry that he had initially tried to leave them out of the project. Before beginning work, Bill and Kent insisted the group formalize their relationship. Bill's father drew up a formal partnership that protected each boy's interests. Bill had learned from Paul's attempt to exclude him that he had to protect his own interests in business. It was not a lesson he needed to learn twice.

After Bill and Kent started work, Paul backed out. He could not go to college and work on the software at the same time. In the years to come both Paul and Bill would have to face the same decision: Pursue their dream of owning a software company or continue their education? This time Paul decided to focus on college.

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Chapter Three

Teenage Programmer

After C-Cubed closed, Bill and his friends formed the Lakeside Programmers Group. The organization was dedicated to finding computer time and discovering a way for the teenagers to make some money. Paul Allen, who was by now in his freshman year at Washington State University, located a PDP-10 on campus. That was all it took to convince the boys to move their operations there. Although Paul was the only university student in the group, and Bill looked several years younger than his actual age, the professors responsible for the computers quickly learned that the boys were a valuable asset to have around.

Not long after the group was formed, another computer timesharing company, located in Portland, Oregon, asked Paul Allen to write a payroll program. Initially, Paul tried to write the program without the help of Bill and Kent Evans, but he was in over his head. A payroll program had many different modules, and demanded

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machines reserved for graduate students. The director of the computer center remembered Gates well: "He was a helluva good programmer." "But," the professor continued, "he's an obnoxious human being." As had been the case at Lakeside, several people were offended by Bill's impatience and his tendency to put others down unnecessarily.

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AstrumPeople article

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[...]

Establishment and Development of Microsoft

In June, 1975, Bill Gates creates a company for software development and names it Microsoft (the first version was Micro-Soft). Despite of the hard work of its employees, the company at first experienced some difficulties with distribution of any software products. **The company did not have enough money to hire a good sales manager, so this function was performed by Bill Gates' mother Mary Maxwell Gates.**

Early next year, Gates and Allen found out that the income of the company has dropped to the lowest affordable point. Its main reason was so called 'piracy' – illegal copying of software and the use of it without permission of the creator. Many people simply copied the MS-Basic and handed it to someone else. Realizing this, Bill Gates was furious, especially because 'piracy' was depriving him from the well-earned income. In addition, these copies contained some mistakes which he wanted to reduce before the formal release of MS-Basic. Gates wrote an open letter in February 1976, which was published in a newsletter for Altair users. In response, the Gates Foundation has received 300 letters, but only a few of them contained a check.

Bill Gates was the very first to state the need in a protection of the software. His actions have made an incredible contribution to the gradual introduction of a thought that a computer program is a product of creativity and therefore must be protected in the same way as a musical composition or a literary work.

[....]

In 1976, it became obvious that Bill Gates could not continue his studies and manage a growing company at the same time. In December, he left the university, despite of all the objections of his parents, and fully engaged with the business. At that time, he was only twenty one.

Then, the young businessmen got a lucky strike and the profit of Microsoft sales reached $500,000 dollars for the 1977 financial year. The company, based in Albuquerque, New Mexico, had a staff of 13 people. Paul Allen and Gates were engaged in organizational issues: Paul was responsible for the development of new software, and Bill communicated with the computer manufactures, and ran daily operations of the company

In 1979, Bill received an offer from IBM to create an operating system for the world's first personal computer. However, Bill Gates was forced to deny the proposal of IBM, as he did not have any drafts for creating OS at the moment. Therefore, the CEO of Microsoft was forced to recommend IBM to seek help from its competitor Digital Research, which later will be the developer of the OS for IBM personal computer.

Meanwhile, Microsoft buys a 'crude' operating system 86-DOS for $50,000 dollars from the Seattle Computer and hires Tim Paterson, the creator of 86-DOS. Bill Gates's company greatly refined 86-DOS, and soon the world saw MS-DOS, which Microsoft offered to use as the main OS for IBM personal computer, thus beating Digital Research. In September 1980, IBM signed a detailed contract with Microsoft. This contract was destined to change the history of the personal computer industry. Both IBM and Microsoft benefited from it. Gates' main competitor Digital Research changed the course of business and they were no longer involved in the competition.

In 1981, Microsoft becomes a corporation, the management of which is shared between Bill Gates and Paul Allen. In the same year, IBM introduces its personal computer with 16-bit operating system MS-DOS. In addition, the IBM PC includes other Microsoft products such as BASIC, COBOL, Pascal and others.

From Bill Gates biography we learned that in 1982, Gates convinced IBM management that MS-DOS should be sold under the license and other computer manufacturers, thereby making the competition of Apple, which was selling its computers based on its own operating system.

In 1983, The Microsoft Hardware group (formed in 1982) creates a manipulator called 'Mouse' for an easy data input into a computer with a graphical user interface. In the same year, the corporation presents a text editor for MS-DOS. In addition to all of these, the company of Bill Gates announced Windows – the extension of the operating system for MS-DOS as a universal operating environment for graphics applications.

[...]

Recognition and Philanthropy

[...]

In 2005, Queen Elizabeth II appointed Bill Gates (see http://news.bbc.co.uk/2/hi/uk_news/3428673.stm) an honorary Knight Commander of the Order of the British Empire (KBE) and he could use the post-nominal letters KBE after his name. In November 2006, the Mexican government awarded Bill Gates and his wife Melinda Gates with the Order of the Aztec Eagle for their philanthropic contributions in the world's development, especially in the health and education spheres.

Interview: Bill Gates, Co-Founder and Chairman, Microsoft Corporation - March 17, 2010, Seattle, Washington

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[...]

When did you first have the vision of a computer on every desk at work and in every home?

Bill Gates: Paul Allen and I had used that phrase even before we wrote the BASIC for Microsoft. We actually talked about it in an article in -- I think 1977 was the first time it appears in print -- where we say, "a computer on every desk and in every home..." and actually we said, "...running Microsoft software." If we were just talking about the vision, we'd leave those last three words out. If we were talking an internal company discussion, we'd put those words in. It's

very hard to recall how crazy and wild that was, you know, "on every desk and in every home." At the time, you have people who are very smart saying, "Why would somebody need a computer?" Even Ken Olsen, who had run this company Digital Equipment, who made the computer I grew up with, and that we admired both him and his company immensely, was saying that this seemed kind of a silly idea that people would want to have a computer.

When Microsoft was starting out, you guys made a deal with Apple Computer for a flat fee of $21,000 or something. What did you learn from that experience?

Bill Gates: Microsoft did the software for all the personal computers that came out. There was the Apple II that we did a BASIC for, which was called Apple Soft BASIC. There was a Commodore PET that we did a BASIC for. There was a Radio Shack TRS 80 that we did a BASIC for. Even Atari, who initially had their own mini-BASIC, ended up using our BASIC. So our BASIC was running on every single machine, including that Apple machine. We later did a BASIC for the Macintosh. We didn't mind doing low priced contracts at the time, because we always knew that there would be new versions and more software that we would do. So it worked out well. As part of that Apple deal, I got to know Steve Wozniak, who is actually the engineer and did software programming, and Steve Jobs, who later I would do a lot of work with, because he was deeply involved in the Macintosh work.

Apple sold a lot of those computers -- the Apple II. Wouldn't you have made a lot more money at that time if you had royalties?

Bill Gates: Well, we had plenty of ways to do new versions and add-ons and things. So no, the whole structure of the way we licensed things was that we knew we could write software more efficiently than if they hired the engineers themselves. So we always were able to say, "Hey, you would have spent a half a million developing that yourself. We'll license it to you for an inexpensive price." We probably could have had higher prices, but we were doing fine. In fact, that 6502 BASIC that Mark Chamberlain and I wrote, we licensed to about 12 different people. So our profitability was huge, even though it was a great deal for Apple. Per machine they paid almost nothing.

You came out very early against illegal copying of software. You wrote a piece for Computer Notes, warning that piracy could create serious obstacles for your industry.

Bill Gates: Yeah. The MITS Altair people agreed to pay us a royalty for each copy that was sold. So if people paid MITS we got a royalty, and if they just copied the program -- which was at the time on paper tape -- we didn't get paid. There was a lot of this going on, and the amount of piracy was going to determine whether Microsoft could hire more people or not. So I wrote -- it wasn't mean -- what was called "An Open Letter to Hobbyists," that said, "By the way, this is copyrighted material, and the more we sell, the more software we'll be able to write." And that started a debate that rages to this day, it will rage for decades to come. Should creative people who do music or books or software be able to get a royalty for their stuff, or should people pirate it? There's a lot of complicated issues in intellectual property, but it started early in the computer industry. A lot of people did actually respond to the letter by coming back and paying the license fee, which was very low. I mean, everything was very, very cheap.

When IBM first came to you for an operating system, you sent them to another company, Digital Research, first. Why did you do that?

Bill Gates:I had been talking about our BASIC, and running that on a computer. There's two ways you could run BASIC. You can run it where the BASIC is right on the hardware and the only thing you're running is BASIC, or you can put another layer of software in between, called an operating system, and it can take over some of the work, like managing the printers and things, and you can have many programs, BASIC or a spreadsheet or a word processor, running on top of that. And as we got disks on these computers, it made more sense to have that flexibility. The early computers don't have disks; they have cassette tapes and paper tapes and things like that. But by 1979, '80, we're starting to get these big, expensive -- actually, initially eight-inch -- floppy disks, then five-and-a-quarter inch, finally three-and-a-half inch. Now, when's the last time you saw a floppy disk? But they were very important. We still have a hard disk, the disk built into the computer. So you needed an operating system.

When IBM saw that we had written the software for all the personal computers, they came to us, sought our advice on the design, but we said, "You should put a disk in," and since they wanted to ship very quickly, another company called Digital Research had done that work for the 8-bit machines, and they were starting to do a version for these new 16-bit machines. We convinced IBM to do a 16-bit machine using this 8086, 8088 processor. Well, Digital Research really hadn't finished the work, and then IBM was getting frustrated because Digital Research wouldn't sign even the non-disclosure agreement, and then some of us, particularly Paul and a key person named Kazi Konishi, who was from Japan and worked with us, said, "No, no, no, we should just do that ourselves." And because of the quick timing, we ended up licensing the original code from another company and turned that into MS-DOS. So then subsequently, MS-DOS competed with this Digital Research CPM. After about two or three years, MS-DOS became far, far more popular than CPM, and then eventually we would take and add graphics capability on top of MS-DOS, and then integrate the two together. And so today when we talk about Windows, it actually includes all those MS-DOS things in it, that's the full operating system. Although mostly you think of the graphics and the windows and stuff, there's a lot of more classic operating system capability that's built in there.

Did you get a royalty from IBM for each computer they sold with MS-DOS?

Bill Gates: Actually, no. The IBM initial deal is a flat fee deal, another flat fee deal. It had certain restrictions that prevented IBM from selling to other hardware makers. So if people did IBM PC compatible machines, we would get the revenue by doing business directly with those people. And the deal was very complicated, but it was a deal that Steve Ballmer -- who's a key person with the company by that time -- and I thought a lot about. It was a fairly junior team from IBM, so we tried to make sure that -- given our belief that personal computers would be hyper-popular -- that Microsoft would get a lot of that upside. So they felt they got a very good deal, which they did, but as the industry expanded, we -- for new versions and for different machines -- we got that opportunity, even though they did not pay us a royalty.

When did you realize just how wildly successful this business would be?

Bill Gates: Even in the early days, if you set a computer on every desk in every home, and you'd say, "Okay, how many homes are there in the world? How many desks are there in the world? Can I make $20 for every home, $20 for every desk?" you could get these big numbers. But part of the beauty of the whole thing was we were very focused on the here and now. Should we hire one more person? If our customers didn't pay us, would we have enough cash to meet the payroll? We really were very practical about that next thing, and so involved in the deep engineering that we didn't get ahead of ourselves. We never thought how big we'd be. I remember when one of the early lists of wealthy people came out and one of the Intel founders was there, the guy that ran Wang computers actually was still -- Wang was still doing well -- and we thought, "Hmm. Boy, if the software business does well, the value of Microsoft could be similar to that." But it wasn't a real focus. The everyday activity of just doing great software drew us in. And some decisions we made -- like the quality of the people, the way we were very global, the vision of how we thought about software -- that was very long term. But other than those things, we just came into work every day and wrote more code and hired more people. It wasn't really until the IBM PC succeeded, and perhaps even until Windows succeeded, that there was a broad awareness that Microsoft was very unique as a software company, and that these other companies had been one-product companies,

hadn't hired people, couldn't do a broad set of things, didn't renew their excellence, didn't do research. So we thought we were doing something very unique, but it was easily not until 1995, or even 1997, that there was this wide recognition that we were the company that had revolutionized software.

[...]

Your parents took you out of public school to send you to the Lakeside School. Apparently that school had a big impact on you. Why did they make that move?

Bill Gates: My parents had this notion that I had this high potential somehow and that I was not taking advantage of it. The environment that I had been in, sort of being a goof-off was more socially rewarding than being that serious. It was public school, so they weren't pushing people all that hard. You could read the textbook in the first week and there wasn't anything interesting going to happen the rest of the school year. **So they had me take an exam to go to a private school. And I thought, "Well, should I pass this exam or not? You could fail it and you wouldn't have to go." But that sort of violated my sense of integrity. "Hey, I'm good at taking tests. I don't want to get confused about that." So I was admitted and they encouraged me to go.** It was a boys' school, reasonably strict. During the time I was there it actually transitioned, merged with a girls' school and stopped having uniforms, stopped calling the teachers "Master." So it became pretty normal, but it was a change at first. And the idea of just being kind of a goof-off wasn't the sort of high reward position like it had been in public schools. So my parents were right, it had the intended effect of creating a more challenging environment. And some teachers who were nice about saying that I should try harder, and exposing me to a lot of math and science, and eventually that's where I got to use the computer.

We've read that at first you weren't thrilled about the transfer to Lakeside.

Bill Gates: Lakeside was a longer school day, and it's a change. I had gotten super comfortable at public school, kind of being goofy, and here people were studying, and at first, because I didn't get great grades, they had me in a study hall, and a few people who got really good grades didn't have to go to the study hall. Nobody knew that I was actually clever, so they were actually treating me like some average student. Anyway, it was an adjustment. All the other kids there were making the adjustment as well. So it took a couple of years to get my grounding. I'm super glad that I went to that school. It is a fantastic school. I'll probably send my kids to that school.

[...]

After you got kicked off the C Cubed system, was that tough, spending the summer without a computer?

Bill Gates: Yeah, well no. I had many things that were interesting. I was really quite serious about math at the time and various science things. Paul had actually read more science fiction that I had, by a lot, so he and I would talk about that. But I had plenty of things, it wasn't some great tragedy. But then we got pulled back in, and then that company went bankrupt, and then we had the work for this Portland company on the payroll program, and then we had the scheduling program.

We were lucky. There were always kinds of things that not only gave us an opportunity, but exposed us to that next level. **After the payroll program, then there was a computer project to use computers to control all the electricity grid in the dams of the Pacific Northwest. A government agency called Bonneville Power had done a contract with a company called TRW to use computers to do all this control. And TRW had committed to do all this really high-reliability great software work. Well, they found it more difficult than they expected, so they were looking for people who understood these kinds of computers, which Paul Allen and I had done a lot of work on.** These were the same computers that were at Computer Center Corporation and at this Portland company, Information Sciences. Anyway, we were kind of famous -- **but nobody had met us -- because we had filed these problem reports. And by the end of these problem reports -- they were so sophisticated -- it was like, "Who are these guys out in Seattle telling us how to fix all this stuff?" So when TRW was saying, "Hey, we're desperate. Find us..." they're telling Digital Equipment, who makes these things, "Find us the best programmers," and somebody says, "Well, there's Gates and Allen..." and somebody says, "Nobody's really met them, but yeah, they're really good, we ought to be able to track them down." So they find us, this one guy, and we go for an interview. And these two kids show up and -- what was I when I was interviewed? I was 16 when they interviewed me. So they were like, "We can't hire you." But then they talked to us about software and we clearly know a lot. And when you're young and you know a lot, people don't have any kind of intermediate thing. You're either what you're supposed to be, which is a kid that doesn't know that much, or they think, "Whoa, this guy is the limit!" We were pretty good programmers. But anyway, so we got jobs at this TRW and that exposed me to some programmers, who were way better than I was, who critiqued my work. I could look at their work. And this one guy was really a phenomenal programmer.**

[So were they good or not? If they ripped it up and provided criticism, how much value did they really add???]

Was that John Norton?

Bill Gates: Yeah. He would just take my stuff and rip it apart, you know, in this super constructive way. Anyway, it was a brilliant thing. So part of my senior year, and the summer before and after the senior year, Paul and I were down in Vancouver, Washington. So it kind of took our understanding to a whole new level, and it exposed us to a bunch of people there. And Paul, the whole time -- ever since he'd seen that microprocessor article -- was saying, "You know, there's an opportunity here. This is going to be big. We ought to think what we're going to do about this." So we kept talking about that.

[...]

But you didn't even have the machine, did you?

Bill Gates: Yeah, that's a complication. When you turn a computer on, there's nothing in it. It doesn't even know how to go out to the teletype and read this paper tape that has all these funny numbers on it that are this program. So you have to put in -- using the switches -- a little program, that's the program called the bootstrap loader that is the instructions to say, "Hey, go read a bunch of numbers off of this paper tape, put those into the memory and then go run that program." So he wrote a bootstrap loader, literally on the plane flying there, he wrote a nice bootstrap loader. It worked just fine. Later I wrote a really, really small one, because it's a pain to have to -- every time the computer is turned back on you have to reenter the thing, so the less of these funny little instructions, the better. Anyway, so he wrote that, and everybody was amazed because we had to do everything totally right, how we read this instruction set manual and they were selling these kit computers, but they had never really seen it do anything real. **And so Paul would type in 'Print 2 plus 2.' Print..." and he ran programs and it worked.**

And this was a machine that you had never actually seen.

Bill Gates: That's right. The chip itself was fairly expensive. Paul and I had bought a previous chip to do a very specialized machine. We had bought an 8008 to do a little funny program that did traffic volume printouts, but this 8080 was much better. And we had never had one of those, so we just read the book

that described how it worked. And then we made the big computer that we'd been using all those years -- and we're quite expert in -- Paul had a really breakthrough idea of how to do the simulation thing. So that gave us the full power of that computer to edit and debug and those things. But if we had any mistake in how we read this thing, that paper tape wasn't going to work at all. Anyway, so that was very exciting, and we signed a deal with them. That was called MITS, and their computer was called the Altair. And then I left Harvard University and we started Microsoft. So Microsoft was initially based down in Albuquerque, New Mexico. And this is 1973 when we get going.

How did the name Microsoft come about? Do you remember?

Bill Gates: You know, we had been talking about that actually back at Harvard, microcomputer software, and nobody else had done a company doing software for these things, and we thought it was a cool term, "Microsoft." When we had been kids and sending our names in for mailing lists we'd played around with a lot of company names, including "Allen & Gates" or things like that, but we decided no, it would be better not to have our names in it, because it wasn't like a law firm that was always kind of a small thing. We thought, "Hey, we're going to have a big company, so we'll have a company name." So "Microsoft" was a very natural choice.

When Ed Roberts of MITS agreed to buy your program, you included a "best efforts" clause requiring him to try to sublicense and promote your software. How did that turn out?

Bill Gates: Microsoft was only a few people and we'd written this BASIC, and the idea was to license it to lots of companies and then to write other software. So the head of MITS said he could help us market it to other people and take a sales commission for that, and I wrote the contract so that if they weren't serious about promoting it and putting a lot of investment into that, they would lose that right. That was the "best efforts" clause, a very strong requirement. They never got serious about that, and yet they kind of liked the idea of them having the BASIC and other people not. So we were discussing that, how we were going to resolve this problem, because we needed to license it to other people, and we were doing all the work to license it to other people even though they were getting this commission. And right at that time, another company, Pertec, bought MITS, and then those people got confused about the contract and so they weren't even paying us the money they owed us. They were essentially trying to starve us, so we terminated the contract. It had an arbitration clause. The arbitrator found that we were right. Five out of five reasons to terminate the contract, we were only right about five of them! So that contract was terminated. And then we had to -- like, we ended up having to do -- built our sales and marketing activities. And by then we started to have some other programs as well. So we started to hire more people and things really got going. The big thing though, was that because Pertec moved that company out to California, we no longer had a reason to be in Albuquerque, because you couldn't recruit people there as easily as you could to other locations. So we talked about where to move, and eventually, in 1979, we move up to Seattle.

When you decided to leave Harvard to just concentrate on business, what was your parents' reaction?

Bill Gates: [...] when it came time to go on leave from Harvard, the policies of the school about -- if you're gone -- letting you come back are incredibly generous. So if the enterprise had failed, then I would have been back. So my parents were a little surprised, and kind of wondering what it meant, but they were pretty supportive. **And in fact, when we got into this legal dispute with Pertec, my dad gave me good advice.** He was very supportive on that, and so we saw that through. And then, as the company became successful, I hope they felt better about it. The only really bad case was if I stayed and the company was kind of mediocre-ally successful. If it failed it would be okay, if it was a big success it would be okay, and they could see I was very energized. And I thought we needed to get in at the very beginning and not waste a year or two, which is what I had left of my undergraduate course requirements.

[...]

Do you ever wonder what would have happened if the BASIC program for MITS had not worked?

Bill Gates: Oh, I don't think it would have been a dramatic setback. We would have figured out what mistake we'd made and eventually gotten the thing running. It turns out, even though we were in this big rush, there weren't many other people doing serious work at the time. It was another couple of years before other software companies showed up. And even then, they weren't that serious about hiring people. They didn't have people who really understood about writing software, and how you created a company around writing software. They didn't figure out the global nature of the market. So we would have been fine. But it was certainly exciting that there was no mistake at all.

[...]

2000 (Dec 31) - Washington Post - "Alter Egos" By Mark Leibovich (Fourth in a series)

Source - [HN00Z4][GDrive]

A child prodigy, William Henry Gates III (nicknamed "Trey," card-playing slang for a three) spent much time cocooned in his room. When his mother, Mary, asked over the intercom what he was doing, he would shout, "I'm thinking. . . . Have you ever tried thinking?" Small for his age, Gates was subject to bullying. "The Gateses didn't know what to do with Trey," says the **Rev. Marvin Evans,** the father of Gates's best friend in adolescence.

[...]

In building Microsoft, however, Gates and Ballmer became a network unto themselves. They are stylistic opposites, both open to caricature: Gates has the nasal voice and pasty complexion of the petulant nerd. Ballmer, 6 feet 1, 225 pounds, bald and loud -- his vocal cords once required surgical repair from excessive shouting -- is the corporate evangelist.

It was clear that Bill Gates had had enough.

The company he had founded and built into a colossus was taking a beating from federal antitrust lawyers. His competitors were emboldened, and the marketplace was chaotic. Chief among his frustrations was that he was spending little time on the technology work he loved most.

marketplace was chaotic. Chief among his frustrations was that he was spending little time on the technology work he loved most.

At one meeting, Gates's voice broke and his eyes teared up. Over the next several months, colleagues noticed that he was becoming increasingly overwrought, distracted, quicker tempered. He seemed to be losing weight and sleep.

So early this year, the world's richest man gave himself a present. He restored himself to full-time nerd status, stepping down as chief executive of Microsoft and assuming the title of chief software architect. He would remain as chairman of the company, but the rest he would leave to his best friend, the new CEO, Steve Ballmer.

On Jan. 13, the day the switch was to be announced, Gates called a few friends to tell them.

"Well, Steve certainly got the short end of that stick," longtime Microsoft executive Nathan Myhrvold told Gates.

"I know, he really did," Gates said, laughing. "Thank God he's willing to do this for me."

Steve Ballmer would do nearly anything for Bill Gates. Likewise Gates for Ballmer. Although the two men were assuming new roles, it was clear to anyone close to Microsoft that the company's intellectual and emotional core would still reside where it always has: in the complex and symbiotic relationship between Gates and Ballmer, the new economy's most powerful partnership.

To understand the bond between them is to understand why Microsoft has become the exemplar of new-economy dominance -- and America's most famously embattled company.

By now, Gates has achieved the stature of an icon, both for computing generally and Microsoft specifically. But throughout his life he has always picked out an alter ego, someone who could nourish less-developed sides of himself while matching his brainpower and zeal. He and Ballmer have been friends since they were Harvard dormmates 26 years ago. Since Ballmer joined Microsoft in 1980, the two men have come to function almost as a single executive.

Like many high-tech pioneers, the two enjoyed comfortable suburban childhoods that whetted, rather than dulled, their drive to succeed. They embody the old-money and new-money prototypes of 20th-century affluence: Gates is the great-grandson of the man who founded Seattle's National City Bank in 1911; Ballmer's father, a Swiss immigrant who settled his family in the Detroit suburb of Farmington Hills, was a Ford Motor Co. accountant who began trumpeting his expectation that his son would attend Harvard when the boy was 8.

Both endured early social problems that friends say marked them for life. Ballmer was so shy, he would hyperventilate before going to Hebrew school. "I was just so scared," he says. "So I wouldn't throw up, my mom would have to make me take short breaths." Today, his motivational speeches at Microsoft events are legend -- but before he gets to the part where he runs through high-fiving, cheering crowds till he doubles over, sweating and panting, he has to psych himself into the idea that he's up to the performance.

[...]

Gates, friends say, has an instinctive ability to "outsource" a large part of his intellect and psyche to others. Ballmer can perform this role mainly on the force of his personality, his willingness and ability to fight back. "Steve has found a way to work with Bill without subjugating himself," Raburn says. "The moment you subjugate yourself to Bill, it can get a little dangerous. . . . He can be an alpha male in collaborative situations."

While he and Ballmer are similar in fundamental ways, Gates can appreciate that Ballmer has a radically different style, personality and outlook, all of which can be useful to Microsoft, and him. The distinctions abound.

Gates is a nearly mystical figure at Microsoft. Ballmer is frontally engaged.

Gates communicates largely by e-mail, a point underscored by his elaborate responses to follow-up questions in the days after the interview. Ballmer, a fat-fingered and erratic e-mailer ("graet tnx"), invades personal space, pops his head into offices and often startles. Gates loves bridge, Ballmer loves basketball. Gates nibbles at French fries, Ballmer eats muffins by ripping the tops off. At a toast during Gates's bachelor party weekend in Las Vegas in late 1993, Ballmer, his best man, teased his friend as "someone who sees life as complex," rife with shades of gray. "NOT ME," he boomed. "WITH ME, IT'S BLACK OR WHITE, ON OR OFF."

Gates hates being touched. "Bill gives off a physical reaction that says, 'Step back a little bit,' " says Christine Comaford, a Gates friend who worked at Microsoft in the 1980s. One former Microsoft executive recalls walking through the Tokyo airport with Gates in 1996. Gates instructed the executive to appear as if they were locked in an intense conversation, so celebrity-seekers would be less likely to approach.

"Steve is a guy you want to be loyal to," Comaford says. "Bill is more of a guy to be in awe of."

Ballmer has been called the company's id. In the late 1980s, acting on a challenge from another executive, he stripped to his white boxers and swam across Lake Bill, a man-made lake at the center of Microsoft's campus.

When called upon, he'll also play bad cop. "Bill can be a complete wimp," Myhrvold says. He's a lousy negotiator, Myhrvold says. "There was one very big acquisition deal where Bill says to me, 'Now, don't let me get alone with this guy, because I'll just agree.' " Myhrvold adds that Ballmer doesn't relish playing the tough guy, and if he offends someone, he often acts "like a Saint Bernard puppy who knocks you over and then starts licking your face."

He is also prone to mood swings -- "We're golden, we're golden," Ballmer will say in an up moment, and "We're screwed, we're screwed," during the inevitable swoon. Gates wallows in problems, "tastes every drop of misery," a Microsoft executive says.

In September 1996, Gates made a presentation at San Francisco's Moscone Center to announce the launch of its latest version of Explorer. Afterward, he took some engineers and executives to the hotel bar next door to celebrate.

But Gates, drinking white Russians, fixated on a Microsoft e-mail product and started working him self up about "what a piece of [expletive]" it was. His tablemates had nothing to do with the product, and prodded Gates. "Yeah," Gates said, "that's the worst piece of software we've ever shipped," and he ranted for about 20 minutes.

At a 1998 meeting with seven managers who worked on Microsoft Office, Ballmer was not pleased with the answers. "Does anyone here understand Office?" he yelled, according to someone at the meeting. He jumped up from a conference table in Building 18, his shirt coming untucked in the back. "Anyone?" He told a nearby secretary to "get someone on the phone who understands Office."

Ballmer and Gates's relationship is commonly called a "marriage," even by the principals. "We trusted each other from the very beginning in a very deep

way," Gates says. It is a hallmark of their relationship that they treat each other as roughly as they treat others. Microsoft executive Deborah Willingham recalls a meeting shortly after the release of Windows 95. Excess software was accumulating in stores. Ballmer took responsibility, but Gates wouldn't let the issue die.

"Why do we do this?" he said.

"Look, I said I made that mistake," Ballmer thundered to the man his children call Uncle Bill. "How many times do you want to hear me say I made that mistake?"

"Well," Gates said, smiling, "I might want to hear it a few more times."

The intimacy of Gates's partnerships was established early on. Kent Hood Evans was his boyhood best friend and first business collaborator. Kent was dreamy, dogged and largely devoid of inhibition. He carried Barron's and Fortune around Lakeside in his enormous briefcase. In a re{acute}sume{acute} for a summer job, he wrote: "I am looking for a job that involves programming that I consider interesting." He pushed Gates to think big and take risks.

Evans loved politics and government and even asked Gates if he wanted to join him in a foreign service career. Maybe it could result in an ambassadorship. "This is, like, ninth grade," Gates says.

They would speak for hours on the phone at night, sharing ideas about business and computers. They had a deep understanding of their subject and communicated in a kind of shorthand. At Microsoft, Gates calls this "high-bandwidth communication."

In the late 1960s, Lakeside was one of the first schools in the country to have a computer. It was a Teletype machine about the size of a microwave oven, and it became a magnet for math whizzes Gates and Evans and upperclassmen Paul Allen and Ric Weiland, who would become one of Microsoft's first employees. They formed the Lakeside Programmers Club, but it was no hobbyists' group. The goal was to make money.

The club operated with minimal supervision. This was by design, says Fred Wright, the Lakeside math chairman, who provided that supervision. "Our philosophy was, get a group of smart people together, give them tools and get out of the way," Wright says. That, he says, is the best environment to spur creativity, competition and collaboration. "If you want to see the roots of Microsoft's culture, look no further than the Lakeside Programmers Club," Kent's father says.

The four boys spent late-night hours at Seattle's Computer Center Corp. ("C-cubed"), which offered time on a Digital Equipment Corp. machine per an agreement with Lakeside. When C-cubed went out of business in 1970, the Lakeside Programmers Club nearly imploded in civil war. Gates and Evans arranged to buy a set of DEC tapes cheap in a bankruptcy auction -- without the knowledge of their partners. They hid the tapes in a room at Lakeside, and when Allen learned of this, he found and kept them. Livid, Gates and Evans threatened legal action. They were 15.

Bill and Kent were inseparable and overextended. School and computers ate up most of their time, the latter more so as they took on consulting jobs -- often in exchange for computing time. In their junior year, 1971-1972, a Lakeside teacher enlisted them to automate the school's class-scheduling system. They pulled a string of all-nighters, hoping to have the program ready for their senior year. Evans took a break to go mountain climbing over the Memorial Day weekend. He slipped and fell to his death on May 28, 1972, in an accident his father attributes to the fatigue that came with his schedule.

"I was devastated," Gates writes in an e-mail. Gates was scheduled to speak at Kent's funeral, but he was too distraught. When Marvin Evans met Melinda Gates a few years ago, she said her husband still talked about Kent all the time.

"It's been nearly thirty years," Gates writes, "and I still remember his phone number."

Even in his grief, Gates was determined to finish the Lakeside scheduling project. In choosing a new collaborator, he turned to Paul Allen.

[...]

The world's first personal computer.

[...]

From the time he dropped out of Harvard, Gates kept track of Ballmer. They spoke by phone, and Ballmer even visited Albuquerque. Ballmer first went to work at Procter & Gamble, where he learned how to market Coldsnap Freezer Dessert Makers and, later, Duncan Hines cake mixes.

"Steve was extremely intense, very personable and probably the smartest man I've ever met," says Gordon Tucker, who worked with Ballmer at P&G. Ballmer's knowledge was vast and versatile, but none of Ballmer's colleagues remembers him expressing interest in computers.

Nor do any of them describe him as shy, but Ballmer says he battled his shyness perpetually. When he grew tired of selling cakes, he wanted to try his hand at screenwriting. But he was petrified to tell his P&G boss that he was leaving. To work up his nerve, he rolled down the windows of his blue Mustang and turned Rod Stewart's "Do You Think I'm Sexy?" up to the radio's full volume.

At Stanford Business School -- his next stop after a brief stay in Hollywood -- Ballmer would perform similar rituals en route to class. "He would keep telling himself, 'I'm gonna kick some ass in class today,' " says classmate Dan Rudolph, who rode with him. The sound track for this mantra was often Michael Jackson's "Rock With You."

Unlike Harvard and other East Coast business schools, Stanford placed a heavy emphasis on cooperation and teamwork. Ballmer was well liked at Stanford, but his manic style of engagement and competition played badly with some. So did his habit of advertising all the prestigious consulting firms that were offering him jobs.

So it surprised some of his Stanford friends to learn that Ballmer, after only a year, was considering a job with an unknown software company in Seattle, where Microsoft had moved in 1979 (the hyphen died in 1976). But friends recall Ballmer expressing conflicting desires -- between traditional paths to success and something riskier.

Ballmer liked Gates's ambitions, plus "he has always put a great deal of value on personal relationships," says Michael Levinthal, a Stanford classmate. "Here was this guy, Bill Gates, who he clearly trusted. And when Steve trusts someone . . . he'll invest a great deal."

Even at 24, Ballmer had fashioned a business identity for himself. He had grown comfortable in important but supportive roles: As a business manager of the Harvard Crimson, he supported the efforts of the writers and editors. As manager of the football team, he worked behind the scenes while others played the game. He was comfortable with dirty work. "There are two ways to succeed in business," he has told at least two people. "One is to have the big insights. The

other is to take the big insights and make it happen."

At that point, in 1980, Microsoft needed someone who would confront the challenges of running a growing business: hiring, personnel, finances. Essentially, Gates sought someone with whom he could join in a business mind-meld -- to complement the mind-meld on technology issues he already had with Allen.

Gates sealed Ballmer's commitment to Microsoft in a ship-to-shore phone call from a sailboat in the British Virgin Islands. He offered him a salary of $50,000 and, more important, a significant equity stake in the company -- 5 percent to 10 percent. This raised some hackles among the tight-knit group of early Microsoft employees, many of whom held a natural bias against non-techies like Ballmer. He was employee No. 24.

The Gates-Ballmer marriage erupted in quarreling before the honeymoon ended. In one of Ballmer's first acts at Microsoft, he insisted that the company needed to hire 17 people. But for all his aggressive goals, Gates could be very tight with the corporate dollar. He maintained that Microsoft never take on debt and always have enough money to operate for a year without any sales.

"You're trying to bankrupt me," Gates accused Ballmer. After some argument, they hashed out a compromise: Ballmer could hire new employees, but only if the company's revenue grew accordingly.

The issue of revenue growth was quickly mooted as Microsoft became the premier independent software company in an industry that was growing even more dramatically than Gates and Allen had imagined. Ballmer was instrumental in what would be the key business sequence in the company's early history: He helped Gates and Allen secure the purchase of the Disk Operating System (DOS) from a small Seattle firm in 1980. DOS allowed applications software to work on personal computers, and it became the foundation for Microsoft's flagship product, MS-DOS. Ballmer then helped negotiate a landmark deal with International Business Machines to run MS-DOS on IBM's machines -- and on millions of IBM clones.

Gates and Allen remained Microsoft's resident icons and visionaries, but as Microsoft prospered in the 1980s, Ballmer assumed an in-house status to rival theirs. And through Gates and Ballmer's frequent and heated discussions, they thrived -- as if discord galvanized a deeper trust.

Gates and Allen fought a lot, too, and over time it seemed to wear Allen down. "Working with and for Bill can be a very intense process," Allen says diplomatically. Early Microsoft employees remember that Gates and Allen would argue loudly, often over hard-core technology issues, but even over small things. One early employee recalls a "friendly" chess match between the two partners degenerating into a Gates tantrum in which he scattered the pieces on the board.

Over time, the co-founders' relationship grew strained. Allen's hours diminished, especially next to workaholic Gates's and Ballmer's. After a bout with Hodgkin's disease, Allen left Microsoft in 1983.

But Gates is reluctant to lose close friends. He worked hard to repair his relationship with Allen. In 1986, the same year Microsoft's initial public offering sent the co-founders' paper fortunes soaring into the hundreds of millions, Gates and Allen gave Lakeside School $2.2 million to build a science and math center.

A plaque outside the auditorium bears this dedication: "In memory of classmate, friend and fellow explorer, Kent Hood Evans."

With Allen gone, Gates came to rely even more heavily on Ballmer, whose influence quickly expanded to every quadrant as Microsoft became the symbol of the high-tech boom.

In the 1980s, Ballmer helped oversee the team that produced the Windows operating system (engineers recall him stalking the halls at 2 a.m., clapping his hands and screaming, "Yes, yes, yes"). He built and spearheaded one of computing's most aggressive sales organizations ("Get the business, get the business"). He was Microsoft's most rabid cost watchdog ("That's big-shotty," he sniffed to an executive who had bought a cell phone in the late 1980s).

[...]

MAY 2011 article in Vanity Fair - By Paul Allen - MICROSOFT'S ODD COUPLE / THE TECH REVOLUTION

[HP0030][GDrive]

As I got ready to go to Albuquerque, Bill began to worry. What if I'd screwed up one of the numbers used to represent the 8080 instructions in the macro assembler? Our BASIC had tested out fine on my simulator on the PDP-10, but we had no sure evidence that the simulator itself was flawless. A single character out of place might halt the program cold when it ran on the real chip. The night before my departure, after I knocked off for a few hours of sleep, Bill stayed up with the 8080 manual and triple-checked my macros. He was bleary-eyed the next morning when I stopped by en route to Logan Airport to pick up the fresh paper tape he'd punched out. The byte codes were correct, Bill said. As far as he could tell, my work was error-free.

The flight was uneventful up until the plane's final descent, when it hit me that we'd forgotten something: a bootstrap loader, the small sequence of instructions to tell the Altair how to read the BASIC interpreter and then stick it into memory. A loader was a necessity for microprocessors in the pre-ROM era; without one, that yellow tape in my briefcase would be worthless. I felt like an idiot for not thinking of it at Aiken, where I could have coded it without rushing and simulated and debugged it on the PDP-10.

Now time was short. Minutes before landing, I grabbed a steno pad and began scribbling the loader code in machine language—no labels, no symbols, just a series of three-digit numbers in octal (base 8), the lingua franca for Intel's chips. Each number represented one byte, a single instruction for the 8080; I knew most of them by heart. "Hand assembly" is a famously laborious process, even in small quantities. I finished the program in 21 bytes—not my most concise

most of them by heart. "Hand assembly" is a famously laborious process, even in small quantities. I finished the program in 21 bytes—not my most concise work, but I was too rushed to strive for elegance.

I came out of the terminal sweating and dressed in my professional best, a tan Ultrasuede jacket and tie. Ed Roberts was supposed to pick me up, so I stood there for 10 minutes looking for someone in a business suit. Not far down the entryway to the airport, a pickup truck pulled up and a big, burly, jowly guy—six feet four, maybe 280 pounds—climbed out. He had on jeans and a short-sleeved shirt with a string tie, the first one I'd seen outside of a Western. He came up to me, and in a booming southern accent he asked, "Are you Paul Allen?" His wavy black hair was receding at the front.

I said, "Yes, are you Ed?"

He said, "Come on, get in the truck."

As we bounced over the city's sunbaked streets, I wondered how all this was going to turn out. I'd expected a high-powered executive from some cutting-edge entrepreneurial firm, like the ones clustered along Route 128, the high-tech beltway around Boston. The reality had a whole different vibe. (On a later trip to Albuquerque, I came down from a plane and got hit in the head by tumbleweed on the tarmac. I wasn't in Massachusetts anymore.)

]

Ed said, "Let's go over to MITS so you can see the Altair." He drove into a low-rent commercial area by the state fairgrounds and stopped at a one-story strip mall. With its brick façade and big plate-glass windows, the Cal-Linn Building might have looked modern in 1955. A beauty salon occupied one storefront around the corner. I followed Ed through a glass door and into a light industrial space that housed MITS's engineering and manufacturing departments. As I passed an assembly line of a dozen or so weary-looking workers, stuffing kit boxes with capacitors and Mylar circuit boards, I understood why Ed was so focused on getting a BASIC. He had little interest in software, which he referred to as variable hardware, but he knew that the Altair's sales wouldn't keep expanding unless it could do something useful.

When I arrived, there were only two or three assembled computers in the whole plant; everything else had gone out the door. Ed led me to a messy workbench, where I found a sky-blue metal box with ALTAIR 8800 stenciled on a charcoal-gray front panel. Modeled after a popular minicomputer, with rows of toggle switches for input and flashing red L.E.D.'s for output, the Altair was 7 inches high by 18 inches wide. It seemed fantastic that such a small box could contain a general-purpose computer with a legitimate C.P.U.

Hovering over the computer was Bill Yates, a sallow, taciturn string bean of a man with wire-rimmed glasses—Stan Laurel to Ed's Oliver Hardy. He was running a memory test to make sure the machine would be ready for me, with the cover flipped up so I could see inside. Plugged into slots on the Altair bus—an Ed Roberts innovation that was to become the industry standard—were seven 1K static-memory cards. It might have been the only microprocessor in the world with that much random-access memory, more than enough for my demo. The machine was hooked up to a Teletype with a paper-tape reader. All seemed in order.

It was getting late, and Ed suggested that we put off the BASIC trial to the next morning. "How about dinner?" he said. He took me to a three-dollar buffet at a Mexican place called Pancho's, where you got what you paid for. Afterward, back in the truck, a yellow jacket flew in and stung me on the neck. And I thought, This is all kind of surreal. Ed said he'd drop me at the hotel that he'd booked for me, which I'd thought would be something like a Motel 6. I'd brought only $40; I was chronically low on cash, and it would be years before I'd have a credit card. I blanched when Ed pulled up to the Sheraton, the nicest hotel in town, and escorted me to the reception desk.

"Checking in?" the clerk said. "That will be $50."

It was one of the more embarrassing moments of my life. "Ed, I'm sorry about this," I stammered, "but I don't have that kind of cash."

He just looked at me for a minute; I guess I wasn't what he'd been expecting, either. Then he said, "That's O.K., we'll put it on my card."

The following morning, with Ed and Bill Yates hanging over my shoulder, I sat at the Altair console and toggled in my bootstrap loader on the front panel's switches, byte by byte. Unlike the flat plastic keys on the PDP-8, the Altair's were thin metal switches, tough on the fingers. It took about five minutes, and I hoped no one noticed how nervous I was. This isn't going to work, I kept thinking.

I entered my 21st instruction, set the starting address, and pressed the Run switch. The machine's lights took on a diffused red glow as the 8080 executed the loader's multiple steps—at least that much seemed to be working. I turned on the paper-tape reader, and the Teletype chugged as it pulled our BASIC interpreter through. At 10 characters per second, reading the tape took seven minutes. (People grabbed coffee breaks while computers loaded paper tape in those days.) The MITS guys stood there silently. At the end I pressed Stop and reset the address to 0. My index finger poised over the Run switch once again …

To that point, I couldn't be sure of anything. Any one of a thousand things might have gone wrong in the simulator or the interpreter, despite Bill's double-checking. I pressed Run. There's just no way this is going to work.

The Teletype's printer clattered to life. I gawked at the uppercase characters; I couldn't believe it.

But there it was: MEMORY SIZE?

"Hey," said Bill Yates, "it printed something!" It was the first time he or Ed had seen the Altair do anything beyond a small memory test. They were flabbergasted. I was dumbfounded. We all gaped at the machine for a few seconds, and then I typed in the total number of bytes in the seven memory cards: 7168.

"OK," the Altair spit back. Getting this far told me that 5 percent of our BASIC was definitely working, but we weren't yet home free. The acid test would be a standard command that we'd used as a midterm exam for our software back in Cambridge. It relied on Bill's core coding and Monty's floating-point math and even my "crunch" code, which condensed certain words (like "PRINT") into a single character. If it worked, the lion's share of our BASIC was good to go. If it didn't, we'd failed.

I typed in the command: PRINT 2+2.

The machine's response was instantaneous: 4. That was a magical moment. Ed exclaimed, "Oh my God, it printed '4'!" He'd gone into debt and bet everything on a full-functioning micro-computer, and now it looked as though his vision would come true.

"Let's try a real program," I said, trying to sound nonchalant. Yates pulled out a book called 101 BASIC Computer Games, a slim volume that DEC had brought out in 1973. The text-based Lunar Lander program, created long before computers had graphics capability, was just 25 lines long. Still, I thought it might

out in 1973. The text-based Lunar Lander program, created long before computers had graphics capability, was just 35 lines long. Still, I thought it might build Ed's confidence. I typed in the program. Yates launched his lunar module and, after a few tries, settled it safely on the moon's surface. Everything in our BASIC had worked.

Ed said, "I want you to come back to my office." Through a flimsy-looking doorway, I took a seat in front of his desk and the biggest orange glass ashtray I had ever seen. Ed was a chain-smoker who'd take two or three puffs, stub the cigarette out, and light the next one. He'd go through half a pack in a single conversation.

"You're the first guys who came in and showed us something," he said. "We want you to draw up a license so we can sell this with the Altair. We can work out the terms later." I couldn't stop grinning. Once back at the hotel, I called Bill, who was thrilled with the news. We were in business now, for real; in Harvard parlance, we were golden. I hardly needed a plane to fly back to Boston.

Micro-manager

In the life of any company, a few moments stand out. Signing that original BASIC contract was a big one for Bill and me. Now our partnership needed a name. We considered Allen & Gates, but it sounded too much like a law firm. My next idea: Micro-Soft, for microprocessors and software. While the typography would be in flux over the next year or so (including a brief transition as Micro Soft), we both knew instantly that the name was right. Micro-Soft was simple and straightforward. It conveyed just what we were about.

From the time we'd started together in Massachusetts, I'd assumed that our partnership would be a 50-50 proposition. But Bill had another idea. "It's not right for you to get half," he said. "You had your salary at MITS while I did almost everything on BASIC without one back in Boston. I should get more. I think it should be 60-40."

At first I was taken aback. But as I pondered it, Bill's position didn't seem unreasonable. I'd been coding what I could in my spare time, and feeling guilty that I couldn't do more, but Bill had been instrumental in packing our software with "more features per byte of memory than any other BASIC we know," as I'd written for Computer Notes. All in all, I thought, a 60-40 split might be fair.

A short time later, we licensed BASIC to NCR for $175,000. Even with half the proceeds going to Ed Roberts, that single fee would pay five or six programmers for a year.

Bill's intensity was nonstop, and when he asked me for a walk-and-talk one day, I knew something was up. We'd gone a block when he cut to the chase: "I've done most of the work on BASIC, and I gave up a lot to leave Harvard," he said. "I deserve more than 60 percent."

"How much more?"

"I was thinking 64-36."

Again, I had that moment of surprise. But I'm a stubbornly logical person, and I tried to consider Bill's argument objectively. His intellectual horsepower had been critical to BASIC, and he would be central to our success moving forward—that much was obvious. But how to calculate the value of my Big Idea—the mating of a high-level language with a microprocessor—or my persistence in bringing Bill to see it? What were my development tools worth to the "property" of the partnership? Or my stewardship of our product line, or my day-to-day brainstorming with our programmers? I might have haggled and offered Bill two points instead of four, but my heart wasn't in it. So I agreed. At least now we can put this to bed, I thought.

Our formal partnership agreement, signed on February 3, 1977, had two other provisions of note. Paragraph 8 allowed an exemption from business duties for "a partner who is a full-time student," a clause geared to the possibility that Bill might go back for his degree. And in the event of "irreconcilable differences," paragraph 12 stated, Bill could demand that I withdraw from the partnership.

Later, after our relationship changed, I wondered how Bill had arrived at the numbers he'd proposed that day. I tried to put myself in his shoes and reconstruct his thinking, and I concluded that it was just this simple: What's the most I can get? I think Bill knew that I would balk at a two-to-one split, and that 64 percent was as far as he could go. He might have argued that the numbers reflected our contributions, but they also exposed the differences between the son of a librarian and the son of a lawyer. I'd been taught that a deal was a deal and your word was your bond. Bill was more flexible; he felt free to renegotiate agreements until they were signed and sealed. There's a degree of elasticity in any business dealing, a range for what might seem fair, and Bill pushed within that range as hard and as far as he could.

Microsoft was a high-stress environment because Bill drove others as hard as he drove himself. He was growing into the taskmaster who would prowl the parking lot on weekends to see who'd made it in. People were already busting their tails, and it got under their skin when Bill hectored them into doing more. Bob Greenberg, a Harvard classmate of Bill's whom we'd hired, once put in 81 hours in four days, Monday through Thursday, to finish part of the Texas Instruments BASIC. When Bill touched base toward the end of Bob's marathon, he asked him, "What are you working on tomorrow?"

Bob said, "I was planning to take the day off."

And Bill said, "Why would you want to do that?" He genuinely couldn't understand it; he never seemed to need to recharge.

Our company was still small in 1978, and Bill and I worked hand in glove as the decision-making team. My style was to absorb all the data I could to make the best-informed decision possible, sometimes to the point of over-analysis. Bill liked to hash things out in intense, one-on-one discussions; he thrived on conflict and wasn't shy about instigating it. A few of us cringed at the way he'd demean people and force them to defend their positions. If what he heard displeased him, he'd shake his head and say sarcastically, "Oh, I suppose that means we'll lose the contract, and then what?" When someone ran late on a job, he had a stock response: "I could code that in a weekend!"

And if you hadn't thought through your position or Bill was just in a lousy mood, he'd resort to his classic put-down: "That's the stupidest fucking thing I've ever heard!"

Good programmers take positions and stick to them, and it was common to see them square off in some heated disagreement over coding architecture. But it was tough not to back off against Bill, with his intellect and foot tapping and body rocking; he came on like a force of nature. The irony was that Bill liked it when someone pushed back and drilled down with him to get to the best solution. He wouldn't pull rank to end an argument. He wanted you to overcome his skepticism, and he respected those who did. Even relatively passive people learned to stand their ground and match their boss decibel for decibel. They'd get right into his face: "What are you saying, Bill? I've got to write a compiler for a language we've never done before, and it needs a whole new set of run-time routines, and you think I can do it over the weekend? Are you kidding me?"

I saw this happen again and again. If you made a strong case and were fierce about it, and you had the data behind you, Bill would react like a bluffer with a pair of threes. He'd look down and mutter, "O.K., I see what you mean," then try to make up. Bill never wanted to lose talented people. "If this guy leaves," he'd say to me, "we'll lose all our momentum."

Some disagreements came down to Bill and me, one-on-one, late at night. According to one theory, we'd installed real doors in all the offices to keep our arguments private. If that was true, it didn't work; you could hear our voices up and down the eighth floor. As longtime partners, we had a unique dynamic. Bill couldn't intimidate me intellectually. He knew I was on top of technical issues—often better informed than he, because research was my bailiwick. And unlike the programmers, I could challenge Bill on broader strategic points. I'd hear him out for 10 minutes, look him straight in the eye, and say, "Bill, that doesn't make sense. You haven't considered x and y and z."

Bill craved closure, and he would hammer away until he got there; on principle, I refused to yield if I didn't agree. And so we'd go at it for hours at a stretch, until I became nearly as loud and wound up as Bill. I hated that feeling. While I wouldn't give in unless convinced on the merits, I sometimes had to stop from sheer fatigue. I remember one heated debate that lasted forever, until I said, "Bill, this isn't going anywhere. I'm going home."

And Bill said, "You can't stop now—we haven't agreed on anything yet!"

"No, Bill, you don't understand. I'm so upset that I can't speak anymore. I need to calm down. I'm leaving."

Bill trailed me out of his office, into the corridor, out to the elevator bank. He was still getting in the last word—"But we haven't resolved anything!"—as the elevator door closed between us.

I was Mr. Slow Burn, like Walter Matthau to Bill's Jack Lemmon. When I got mad, I stayed mad for weeks. I don't know if Bill noticed the strain on me, but everyone else did. Some said Bill's management style was a key ingredient in Microsoft's early success, but that made no sense to me. Why wouldn't it be more effective to have civil and rational discourse? Why did we need knock-down, drag-out fights?

Why not just solve the problem logically and move on?

[...]

Wikipedia - Saved Aug 10 2020

[HK002A][GDrive]

Philanthropy - Bill and Melinda Gates Foundation

Main article: Bill & Melinda Gates Foundation

Gates with Bono, Queen Rania of Jordan, former British Prime Minister Gordon Brown, President Umaru Yar'Adua of Nigeria and others during the Annual Meeting 2008 of the World Economic Forum

Gates studied the work of Andrew Carnegie and John D. Rockefeller, and donated some of his Microsoft stock in 1994 to create the "William H. Gates Foundation." In 2000, Gates and his wife combined three family foundations and Gates donated stock valued at $5 billion to create the charitable Bill & Melinda Gates Foundation, which was identified by the Funds for NGOs company in 2013, as the world's wealthiest charitable foundation, with assets reportedly valued at more than $34.6 billion.[93][94] The foundation allows benefactors to access information that shows how its money is being spent, unlike other major charitable organizations such as the Wellcome Trust.[95][96] Gates, through his foundation, also donated $20 million to Carnegie Mellon University for a new building to be named Gates Center for Computer Science which opened in 2009.[97][98]

Gates has credited the generosity and extensive philanthropy of David Rockefeller as a major influence. Gates and his father met with Rockefeller several times, and their charity work is partly modeled on the Rockefeller family's philanthropic focus, whereby they are interested in tackling the global problems that are ignored by governments and other organizations.[99] As of 2007, Bill and Melinda Gates were the second-most generous philanthropists in America, having given over $28 billion to charity;[100] the couple plan to eventually donate 95% of their wealth to charity.[101]

The foundation is organized into five program areas: Global Development Division, Global Health Division, United States Division, and Global Policy & Advocacy Division. Among others, it supports a wide range of health projects, granting aid to fight transmissible diseases such AIDS, tuberculosis and malaria, as well as widespread vaccine programs to eradicate polio. It grants funds to learning institutes and libraries and supports scholarships at universities. The foundation established a water, sanitation and hygiene program to provide sustainable sanitation services in poor countries.[102] Its agriculture division supports the International Rice Research Institute in developing Golden Rice, a genetically modified rice variant used to combat vitamin A deficiency.[103] The goal of the foundation is to provide 120 million women and girls, in the poorest countries, with high-quality contraceptive information and services, with the longer-term goal of universal access to voluntary family planning.[104] In 2007, the *Los Angeles Times* criticized the foundation for investing its assets in companies that have been accused of worsening poverty, pollution and pharmaceutical firms that do not sell to developing countries.[105] Although the foundation announced a review of its investments to assess social responsibility,[106] it was subsequently canceled and upheld its policy of investing for maximum return, while using voting rights to influence company practices.[107]

Personal donations

Melinda Gates suggested that people should emulate the philanthropic efforts of the Salwen family, who sold their home and gave away half of its value, as detailed in their book, *The Power of Half*.[108] Gates and his wife invited Joan Salwen to Seattle to speak about what the family had done, and on December 9, 2010, Bill and Melinda Gates and investor Warren Buffett each signed a commitment they called the "Giving Pledge", which is a commitment by all three to donate at least half of their wealth, over the course of time, to charity.[109][110][111]

Gates has also provided personal donations to educational institutions. In 1999, Gates donated $20 million to the Massachusetts Institute of Technology for the construction of a computer laboratory named the "William H. Gates Building" that was designed by architect Frank Gehry. While Microsoft had previously given financial support to the institution, this was the first personal donation received from Gates.[112]

The Maxwell Dworkin Laboratory of the Harvard John A. Paulson School of Engineering and Applied Sciences is named after the mothers of both Gates and Microsoft President Steven A. Ballmer, both of whom were students (Ballmer was a member of the School's graduating class of 1977, while Gates left his studies for Microsoft), and donated funds for the laboratory's construction.[113] Gates also donated $6 million to the construction of the Gates Computer Science Building, completed in January 1996, on the campus of Stanford University. The building contains the Computer Science Department and the Computer Systems Laboratory (CSL) of Stanford's Engineering department.[114]

Since 2005, Gates and his foundation have taken an interest in solving global sanitation problems. For example, they announced the "Reinvent the Toilet Challenge", which has received considerable media interest.[115] To raise awareness for the topic of sanitation and possible solutions, Gates drank water that was "produced from human feces" in 2014 – in fact it was produced from a sewage sludge treatment process called the Omni Processor.[116][117] In early 2015, he also appeared with Jimmy Fallon on *The Tonight Show* and challenged him to see if he could taste the difference between this reclaimed water or bottled water.[118]

In November 2017, Gates said he would give $50 million to the Dementia Discovery Fund, a venture capital that seeks treatment for Alzheimer's disease. He also pledged an additional $50 million to start-up ventures working in Alzheimer's research.[119] Bill and Melinda Gates have said that they intend to leave their three children $10 million each as their inheritance. With only $30 million kept in the family, they are expected to give away about 99.96% of their wealth.[120] On August 25, 2018, Gates distributed $600,000 through his foundation via UNICEF which is helping flood affected victims in Kerala, India.[121]

Interview: Bill Gates, Co-Founder and Chairman, Microsoft Corporation - March 17, 2010, Seattle, Washington

Source - [HW003P][GDrive]

Could you tell us briefly talk about your vision for the Bill & Melinda Gates Foundation? Early on you gave a great deal to libraries and schools, now global health seems to be a larger focus.

Bill Gates: The Foundation got started in the late '90s, with my dad -- encouraging me -- an executive named Patty Stonesifer, **who'd left Microsoft, were helping out**. I was still very busy, our kids were very young, but we got going. We put computers in libraries in many different countries, including the United States. We did some scholarship things. We were learning about reproductive health and population issues. And that kept growing, and we met people who knew about vaccines. So it was a part-time thing. Global health was a bit over half; the U.S.-focused libraries, scholarship education work was over a quarter; and it was a final piece that relates to other things to help the poorest, other than just health things, things like finance and savings. And you know, it grew. And then I saw that I could make a unique contribution there, and created a transition plan that was four years in the making. So now I'm full time at the Foundation and playing a role of being the Chairman and traveling a lot. So it's equally challenging, it's very fulfilling. It's taking these resources that I'm lucky enough to have, because of the success of Microsoft, and giving those back to the society in a way that can have the biggest impact.

In your priorities for the Foundation, discovery is one of the first. That's interesting, because it is kind of a parallel to Microsoft. So even in the area of medicine, and vaccines fighting malaria and so forth, you're still focused on discovery.

Bill Gates: Absolutely. We need new vaccines, we need cheap vaccines, we need vaccines that are easy to deliver, even in the poorest places, where something like having refrigerators is tough to do. And it does connect to my experience at Microsoft of finding great scientists, making sure they understand the problems that are important, getting them focused on those things, having milestones, even if there are setbacks, and making sure that -- if the possibility is still there -- that they get the proper backing. This is something that governments don't do much of. They fund a lot of the great delivery -- the foreign aid is very, very important -- but on the discovery side there's been a deep under-investment. Whether it's a malaria vaccine, tuberculosis vaccine, about 20 different diseases that -- if things go well -- we'll have vaccines for most of those within the next decade. So the Foundation is really taking the lead, financing that scientific work, and already some have been discovered. Some are getting out there, but there's a lot more still to be done

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2015 (December) Geekwire INTERVIEW: BILL GATES TALKS ABOUT HIS DAD'S INFLUENCE ON HIS LIFE, THE TECH COMMUNITY AND THE WORLD

Source - [HM000H][GDrive]

Bill Gates : My dad's not an engineer or scientist. He never really got exposed to that stuff. And so he always said he wished he'd known more about that. That wasn't the exposure he had. My dad is not big on regrets. There's really very little in his life that he would regret…. Of course, when my mother passed away [in 1994], that was a very sad thing. Within a few years, my dad was helping out with the [Bill & Melinda Gates] Foundation. He then met Mimi and was lucky enough to get married to her. That has been a great thing for him.

GeekWire: Speaking of the foundation, what skills and strengths did he bring to the foundation that really have made him effective here?

Bill Gates: He and Patty Stonesifer [former co-chair and CEO of the foundation] brought together what initially were fairly small-scale efforts. That was great. In terms of the tone, the principles and things, my dad was quite fantastic. Patty had been an executive at Microsoft, was very capable about setting up the organization….

[In 2000] I put in $20 billion and so then the foundation had a minimum payout of a billion dollars a year. So they had to grow pretty quickly. That's gone up. Then we had the [Warren] Buffett gift that doubled our resources. My dad's role initially was very hands-on. As we got bigger, he stayed strongly involved in the community stuff. He stayed more involved in the education, the U.S.-focused stuff.

He did some international trips. I remember he and Jimmy Carter did this great trip to South Africa. That's one of my favorite photos of my dad. He, Jimmy Carter and Nelson Mandela holding these babies. He went down to Honduras.

It's fair to say he was way more focused and stayed more engaged in the domestic stuff. He loves the international stuff, he did some work related to that. But he was pretty tilted. He was really super knowledgeable about the Seattle-area stuff and quite knowledgeable about the U.S. stuff. As the global stuff became more scientific, like the malaria vaccine or something like that, he was super supportive, but that was not his hands-on area.

/end

Personal Computer Book Paperback – April 1, 1990 - by Peter McWilliams (Author)

Chatper 6 - At [HB004B][GDrive]

Housatonic

Melinda Ann Gates (born 1964)

Wikipedia Melinda Gates

https://en.wikipedia.org/wiki/Melinda_Gates

Dr. Thomas William Geisbert (born 1962)

Associated with

- **Dr. Peter Karel Piot (born 1949)** (Ebola response / Time magazine, 2014)

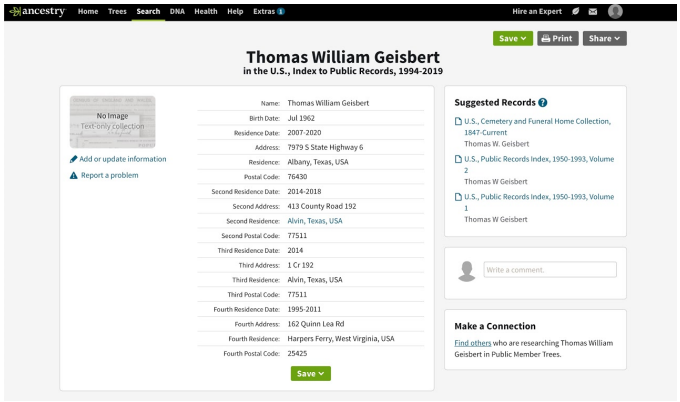
Thomas W. Geisbert

Dr. Thomas W. Geisbert is a Professor in the Department of Microbiology and Immunology at the University of Texas Medical Branch at Galveston and the Galveston National Laboratory.Dr. Geisbert co-discovered the Reston species of Ebola virus in 1989.This work was the subject of many articles in the scientific literature and in the popular press as well as Richard Preston's best-selling novel "The Hot Zone". His research focuses on emerging viruses with a particular emphasis on viruses causing hemorrhagic fever including Ebola virus, Marburg virus, and Lassa virus. Dr. Geisbert was among the dedicated group of Ebola fighters named collectively as Time magazine's "Person of the Year" for 2014.

https://blogs.biomedcentral.com/blog/author/thomasgeisbert/

Ancestry.com Full name, DOB

"Thomas William Geisbert" / Birth Date: Jul 1962 / Source : [HL006P][GDrive]



(2014, Dec) - Time Magazine - Person(s) of the Year ... The Ebola Scientists

Thomas Geisbert, 52 : Virologist who conducted the first trials of the drug TKM-Ebola

Source - [HP0055][GDrive]

During the 1990s, a biowarfare expert named Ken Alibek defected from the Soviet Union and testified to Congress that the Soviet Union had been working on developing Ebola as a weapon. I was a virologist, and I was working at U.S. Army Medical Research Institute of Infectious Diseases (USAMRIID) in western Maryland, not far from where I grew up. At the time, the only biosafety level 4 (BSL4) labs in the U.S. were at the CDC and USAMRIID, and there was interest from the Department of Defense to study Ebola. We certainly were doing things to develop different countermeasures like vaccines, treatments, and we were trying to understand the virus.

That got us to a point—to the point of taking some of the better ideas and showing that they worked or didn't work. But that's where it stopped. There wasn't money or interest or time to take those products across the finish line.

But I've never been somebody who toes the line. I just looked at Ebola as a challenge. I'm not the kind of scientist who sits at a desk. I've got to be in the middle of it, in the space suit in the lab, in the thick of it. When I do this work, I take it personally. You go through all those times when it doesn't work, it doesn't work, it doesn't work, and it's so frustrating, so mentally draining, so demeaning, physically and mentally.

But after 9/11, everything changed. There was increased funding. It was fortunate for me, because Ebola was my main area of interest. When all the money became available, we started looking at developing a vaccine. The idea came from Heinz Feldmann, then at the Public Health Agency of Canada (now at the National Institute of Allergy and Infectious Diseases), and the first big success we had was in 2002 or 2003. We did two back-to-back studies, and this was the first vaccine that completely protected monkeys from Ebola.

Everything about the disease in monkeys is so much like in humans. So even though you can't say for 100% it's going to work in humans, you know the odds are 99% that if it works for monkeys, it will probably work for people.

I remember walking in that room where I was used to seeing dead monkeys, and five, six, seven, eight, twelve—all the monkeys are healthy, no signs of disease. In my field and what I do, that's the greatest feeling you can imagine.

When I started doing some of the first studies [on drug treatments] in the '90s, I would get excited because something I tried worked in guinea pigs or mice or something. Then you'd get excited: "Oh man, this is going to be great." But there's a quantum leap from rodents to nonhuman primates like monkeys. It turns out rodents aren't very good models for Ebola infection. All of a sudden you do it in monkeys, and all of the monkeys died. We had so many failures in the 1990s. It was a terrible feeling.

I've got shelves and shelves and shelves and shelves of stuff that slow or inhibit growth of Ebola in culture. Dozens of those protect mice or guinea pigs. Only two worked in nonhuman primates, out of all the studies done in the BSL4 lab—and those are ZMapp done by Gary Kobinger in Canada and TKM-Ebola, which I worked on with biotech company Tekmira.

When you do have success, like when we did the TKM-Ebola study, there is no greater feeling. There is no greater feeling than walking in when you know it's going to work, you've got healthy animals—that feeling is awesome. When we did our first study with TKM-Ebola on monkeys, I was like, It would be good if we get 50% protection, it's a home run. I didn't expect 100% protection.

In this Ebola outbreak, we know at least four to five people got the TKM drug, and all have survived. But we don't want to say the drug was the reason they survived. While we hope they helped in patients, we can't say for sure because the patients got so many other things. There are so many confounding variables, so how can you say any one thing made the difference?

But it's a great feeling knowing I was involved in the development of something that hopefully saved somebody. And if it saved one person, it matters. —as told to Alice Park

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George Adam Geise, Jr. (born 1772)

***George Adam Geise, Jr.**, was born in Bernville, Berks county, Pennsylvania, **June 17, 1772**.* [HB002B][GDrive]

Father - **George Adam Geise Sr.**

Children include :

- ...
- **David B. Gise** (born 1812)
- **Jacob Gise** (born 1819)
  - Father of **William C Gise** (born 1861)
  - ...
- ...

A History of Savannah and South Georgia

See [HB002B][GDrive]

*REUBEN GEISE. A former highly respected resident of Dawson, the late **Reuben Geise** was for many years successfully engaged in the lumber business, and contributed his full share in advancing the industrial interests of this part of Terrell county. A son of **George Adam Geise, Jr.,** he was born, September 8, 1821, in Newmanstown, Pennsylvania, of substantial German ancestry.*

His paternal grandfather, George Adam Geise, Sr., was born, June 4, 1725, in Hanover, Germany, and was there bred and educated. At the age of twenty-nine years he came to America in the good ship "Peggy," and located in Bern township, Pennsylvania. He there bought land, and was engaged in farming until his death, June 29, 1784. He proved himself loyal to his adopted country, bravely assisting the colonists in their struggle for independence. He married Barbara Haag, who was born in Berks county, Pennsylvania, July 31, 1738, and there died in August, 1814, having survived him thirty years.

***George Adam Geise, Jr.,** was born in Bernville, Berks county, Pennsylvania, **June 17, 1772**. He married April 15, 1797, **Susanna Bright**, who was born in Bern township, Berks county, a daughter of John and Anna Maria (Leis) Brecht, as the name was then spelled, though it was later changed to Bright, and a granddaughter of David Brecht. Her great-grandfather, Stephen Brecht, emigrated from Germany to America in colonial times, coming to this country a widower with three small children. Settling in Lancaster county, Pennsylvania, he bought a tract from three Pennbrothers, John, Thomas and Richard, the land having been a part of their original grant. David Brecht, whose birth occurred in the Fatherland, September 8, 1719, was one of the three children that came with his father to this country. He served in the Revolutionary army, after which he resumed farming at his old home in Berks county, residing there until his death, September 22, 1783. John Brecht, or Bright, as he spelled his name, and his wife were both life-long residents of Berks county, his death occurring February 9, 1834, and hers on May 24, 1842. -*

George Adam Geise, Jr., and wife were also life-long residents of their native county. He died March 29, 1858, while her death occurred October9,1856. Both were buried in the Lutheran cemetery, at Newmanstown, Pennsylvania. They were the parents of fourteen children, and when her death occurred they had sixty-three grandchildren, and twenty-nine great-grandchildren.

While a boy in his teens, Reuben Geise joined his brother George, in Tuscumbia, Alabama. Learning the trade of a miller, he subsequently built a flour mill at Big Spring, Tuscumbia, Franklin county, and operated it as a merchant mill. Being thus employed during the war between the states, he was exempted from military duty, but during the last year of the conflict he entered the Confederate service, and was assigned to duty in the transportation of leather. He went with the army from Dixon Station, Alabama, to Rome, Georgia, from there refugeeing to Dawson, Georgia. At the close of the war, Mr. Geise established a saw mill in Dawson, and embarked in the lumber business, subsequently furnishing the Central Georgia Railroad Company with lumber. Meeting with well merited success, he continued in the lumber business until his death, October 25, 1880.

Reuben Geise married Jerusha Halsey Wood, who was born in Huntsville, Alabama, November 16, 1831, a daughter of Lewis Wood. Her paternal grandfather, Joseph Wood, was born in Newark, New Jersey, October 14, 1760, of English lineage. He was well educated, and taught school in different places in his native state, and also served as a soldier in the Revolutionary war. He married April 2, 1780, Joanna Tuttle, whose birth occurred June 12, 1762. He was a personal friend of George Washington, with whom he served as a soldier. Lewis Wood was born in Newark, New Jersey, April 10, 1794, and as a young man migrated to Richmond, Virginia, from there going to Huntsville, Alabama, where he resided until his death, in 1836. Lewis Wood married, in Huntsville, Alabama, February 27, 1822, Mary Ann Woods, who, though of the same name, was not a relative. Her father,Leighton Wood, third, was a native of Richmond, Virginia, a son of Leighton Wood, second, who was born in England, in the city of Bristol, where his father, Leighton Wood, first, was, as far as known, a life-long resident. Leighton Wood, second, immigrated to America, and settled in Virginia, where he fought with the colonists in their struggle for independence. Elected auditor of Hanover county, Virginia, in 1780, he served from May until November, of that year, when the Virginia assembly elected him solicitor general, an office which he filled most efficiently until 1791. In 1801 he returned to England, and there died in 1805. He married a daughter of Rev. Benjamin Franklin Blagrove, an Episcopalian rector, and chaplain of the Virginia assembly in 1781.

Leighton Wood, third, served in the War of 1812. He married Mary Younghusband, whose father, William Younghusband, a resident of Richmond, Virginia, served as a soldier in the Revolutionary war, while her grandfather, Isaac Younghusband, was captain of a company of soldiers in the same war. After his marriage, Leighton Wood, third, went with his wife to Kentucky, where his death occurred. His widow subsequently moved to Huntsville, Alabama, where she spent her remaining days. -

Mrs. Reuben Geise passed to the higher life September 3,1 885. To her and her husband five children were born and reared, namely: Owen Nelson, Mary Wood, Susie Bright, James Deshler, and Rushie Lee. Mary Wood is the wife of D.J. Ray, of Atlanta, Georgia. Susie Bright married Walter S. Dozier, of whom a brief sketch may be found else where in this biographical work. Rushie Lee is the widow of Charles Wood Gunnell, of whom a brief sketch also appears in this volume. Mrs. Walter S. Dozier is a genealogist, and to her the Geise and Dozier families are greatly indebted for their family histories, she having devoted much time in searching records, and in corresponding with members of the different branches of both families.

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https://ancestors.familysearch.org/en/9N8V-YG2/george-adam-geise-1791-1861

Died on the 24th of March, in Newmanstown, George A. Geiss, at the age of 85 years, 9 months and 7 days. (Published in Der Libanon Demokrat, Lebanon, PA, Apr. 9. 1958)

George Adam Geiss

BIRTH 17 Jun 1772

DEATH 24 Mar 1858 (aged 85)

Newmanstown, Lebanon County, Pennsylvania, USA

BURIAL

Newmanstown Memorial Cemetery

Newmanstown, Lebanon County, Pennsylvania, USA

MEMORIAL ID 53005479 · View Source

Housatonic

General Electric Mainframe Computers

There is no exact Wikipedia page for this. The GE-600 Series machines can be used as a starting point - https://en.wikipedia.org/wiki/GE-600_series

https://en.wikipedia.org/wiki/GE-600_series

2020-08-28-wikipedia-org-ge-600-series.pdf

GE-600 series

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(December 2011)
(Learn how and when to remove this template message)

The **GE-600 series** was a family of 36-bit mainframe computers originating in the 1960s, built by General Electric (GE). When GE left the mainframe business the line was sold to Honeywell, which built similar systems into the 1990s as the division moved to Groupe Bull and then NEC.

The system is perhaps best known as the platform on which the Dartmouth Time Sharing System (DTSS) spent most of its life, and the base machine for the Multics operating system as well. Multics was supported by virtual memory additions made to later versions of the series.

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- 6External links

Architecture[edit]

The 600 series used 36-bit words and 18-bit addresses. They had two 36-bit accumulators, eight 18-bit index registers, and one 8-bit exponent register. It supported floating point in both 36-bit single-precision and 2 x 36-bit double precision, the exponent being stored separately, allowing up to 71 bits of precision (one bit being used for the sign). It had an elaborate set of addressing modes, many of which used indirect words, some of which were auto-incrementing or auto-decrementing. It supported 6-bit and 9-bit bytes through addressing modes; these supported extracting specific bytes, and incrementing the byte pointer, but not random access to bytes.

It also included a number of channel controllers for handling I/O. The CPU could hand off short programs written in the channel controller's own machine language, which would then process the data, move it to or from the memory, and raise an interrupt when they completed. This allowed the main CPU to move on to other tasks while waiting for the slow I/O to complete, a primary feature of time sharing systems.

Operating systems[edit]

Originally the operating system for the 600-series computers was GECOS, developed by GE beginning in 1962. Between 1963 and 1964, the first version of the Dartmouth Time Sharing System (DTSS) was developed on the GE-235. DTSS was the first truly useful time sharing system and was very influential in the market. It is also the platform where the BASIC programming language was first developed. The Computer History Museum's Corporate Histories Collection describes GE's Mark I history this way[1]:

The precursor of General Electric Information Services began as a business unit within General Electric formed to sell excess computer time on the computers used to give customer demos. In 1965, Warner Sinback recommended that they begin to sell time-sharing services using the time-sharing system (Mark 1) developed at Dartmouth on a General Electric 265 computer. The service was an instant success and by 1968, GEIS had 40% of the $ 70 million time-sharing market. The service continued to grow, and over time migrated to the GE developed Mark II and Mark III operating systems running on large mainframe computers.

The GE Mark II operating system (later Mark III) was used by GE Information Services as the basis for its timesharing and networked computing business. Although Mark II / Mark III was originally based on the Dartmouth system, the systems quickly diverged. Mark II/III incorporated many features normally associated with on-line transaction-processing systems, such as journalization and granular file locking. In the early-to-mid-1970s, Mark III adopted a high-reliability cluster technology, in which up to eight processing systems (each with its own copy of the operating system) had access to multiple file systems.

The Multics operating system was begun in 1964 as an advanced new operating system for the 600 series, though it was not production-ready until 1969. GE was hardware supplier to the project and one of development partners (the others were Massachusetts Institute of Technology and Bell Labs). GE saw this project as an opportunity to clearly separate themselves from other vendors by offering this advanced OS which would run best only on their machines. Multics required a number of additional features in the CPU to be truly effective, and John Couleur was joined by Edward Glaser at MIT to make the required modifications. The result was the **GE-645**, which included support for virtual memory. Addressing was modified to use an 18-bit *segment* in addition to the 18-bit address, dramatically increasing the theoretical memory size and making virtual memory much easier to support.

History[edit]

The GE-600 line of computers was developed by a team led by John Couleur out of work they had done for the military MISTRAM project in 1959. MISTRAM was a radar tracking system that was used on a number of projects, including Project Apollo. The Air Force required a data-collection computer to be installed in a tracking station downrange from Cape Canaveral. The data would eventually be shared with the 36-bit IBM 7094 machine at the Cape, so the computer would likely have to be 36-bits as well. GE built a machine called the M236 for the task, and as a result of the 36-bit needs, it ended up acting much like the 7094.

GE originally had not intended to enter the commercial computer market with their own machine. However, by the early 1960s GE was the largest user of IBM mainframes,[*citation needed*] and producing their own machines seemed like an excellent way to lower the costs of their computing department. In one estimate, the cost of development would be paid for in a single year free of IBM rental fees. Many remained skeptical, but after a year of internal wrangling, the project to commercialize the M236 eventually got the go-ahead in February 1963.

The machine was originally offered as the main **GE-635**, and the slower but compatible **GE-625** and **GE-615**. While most were single-processor systems, the 635 could be configured with four CPUs and up to four input/output controllers (IOC's) each with up to 16 Common Peripheral Interface Channels. The 635 was likely the first example of a general purpose SMP system, though the GECOS/GCOS software treated the processors as a master and up to three slaves.

In August 1964, IBM considered the GE 600 series to be "severe competition in the medium and large-scale scientific areas".[2] In May 1965 the first GE-625 computer was delivered to the GE Schenectady plant to replace five other computers of various sizes and makes.[3] A number of GE 635's were shipped during 1965 including two to Martin Marietta in November.[4]

The 600 line consisted of six models: the 605, 615, 625, 635, 645, and 655. GE offered a box to connect to the 635 called a 9SA that allowed the 635 to run 7094 programs.

The 615 was a 635 with Control Unit (CU) and Operations Unit (OU) overlap disabled, and a 36-bit-wide memory path. The 625 was a 635 with Control Unit and Operations Unit overlap disabled and 72-bit-wide memory path. The 635 had a 72-bit-wide memory path and CU/OU overlap enabled. The difference between these models was fewer than 10 wires on the backplane. Field service could convert a 615 to a 635 or 625 or vice versa in a couple of hours if necessary; other than those few wires, the 615, 625 and 635 were identical. The 605 was used in some realtime/military applications and was essentially a 615 without the floating point hardware. Programs coded for a 605 would run without any modification on any other 600 line processor. The 645 was a modified 635 processor that provided hardware support for the Multics operating system developed at MIT.

The 605/615/625/635 and 645 were essentially second generation computers[*citation needed*] with discrete transistor TTL logic and a handful of integrated circuits. Memory consisted of a two-microsecond ferrite core, which could be interleaved. GE bought core memory from Fabri-Tek, Ampex and Lockheed. The Lockheed memory tended to be the most reliable.[*citation needed*]

Continuing problems with the reliability of the magnetic tape systems used with the system cast a pall over the entire project. In 1966 GE froze many orders while others were cancelled outright. By 1967 these problems were cleared up, and the machines were re-launched along with an upgraded version of the GECOS operating system.

A follow-on project to create a next-generation 635 started in 1967. The new **GE-655** replaced the individual transistors from the earlier models with integrated circuits, which doubled the performance of the machine while also greatly reducing assembly costs. However, the machine was still in development in 1969, and was announced but probably never delivered under that name.

By that time the Multics project had finally produced an operating system usable by end-users. Besides MIT, Bell Labs, and GE, GE-645 systems running Multics were installed at the US Air Force Rome Development Center, Honeywell Billerica, and Machines Bull in Paris. These last two systems were used as a "software factory" by a Honeywell/Bull project to design the Honeywell Level 64 computer.

GE sold its computer division to Honeywell in 1970, who renamed the GE-600 series as the Honeywell 6000 series. The 655 was officially released in 1973 as the **Honeywell 6070** (with reduced performance versions, the 6030 and 6050). An optional Decimal/Business instruction set was added to improve COBOL performance. This was the Extended Instruction Set, aka EIS and the Decimal Unit or DU. The machines with EIS were the 'even' series, the 6040, 6060, 6080 and later the 6025. Several hundred of these processors were sold. Memory was initially 600 ns ferrite core made by Lockheed. Later versions used 750 ns MOS memory. The two could co-exist within a system, but not within a memory controller.

A version of the 6080 with the various Multics-related changes similar to the 645 was released as the **6180**. A few dozen 6180-architecture CPUs were shipped. Later members of the 6000 series were released under various names, including Level 66, Level 68, DPS-8, DPS-88, DPS-90, DPS-9000 by Honeywell, Groupe Bull, and NEC.

See also[edit]

- GE-200 series
- GE-400 series

References

http://www.feb-patrimoine.com/english/gecos_to_gcos8_part_1.htm

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from GECOS to GCOS8
an history of Large Systems in GE, Honeywell, NEC and Bull

a view by Jean Bellec (FEB), from the other side of the Atlantic

Part I- General Electric

General Electric was in the early 60s the largest private user of IBM computers. GE had no intent of considering electronic computers as one of its strategic segments. However a decentralized management structure allowed the hyper frequencies lab to enter the computer field through a bid for the checks sorter shop at Bank of America. (ERMA project). That was the beginning of the Computer Department established at Phoenix AZ.

GE also embarked in the process control computer business through the GE-312 that evolve later into GE-225 and into GE-265 (Dartmouth Time-Sharing System). The first direct entry of GE in the general purpose computer business was a 24-bits machine code-named Mosaic that was introduced in 1963 as GE-400. However, the upper model planned for GE-400 was hardly competitive with the just announced IBM/360.

Origin of GE-600

A solution to the performance problem of the "Y" model of the GE-400 came from a project initiated outside the Computer Department , in the Military Department that had developed a computer for the US Air Force Cape Canaveral Missile Range, called M236 and installed at Eleuthera (Bahamas). That computer was a 36-bits computer due to the computation requirements of radar tracking and to the required exchange of data with IBM 7094 located at the Cape. The chief architect of the M-236 was John Couleur who will become later a technical leader of the GE Large Systems.

The debate in favor or against a M236-derived general purpose computer took more than one year and concluded finally with the victory of the M2360 project proponents in February 1963. The GE upper management was impressed by the perspective of saving the rental fees from IBM leased equipment used internally by GE (the cost of development of the new project was estimated to be offset by only one year of rentals). The other GE departments were not very impressed and were reluctant to jettison their IBM machines.

GE-625

According to the initial plan, the central processor was to be designed at Syracuse, NY and the Input-Output Controller in Phoenix, with peripheral subsystems common to the GE-400 line. The product line took the name of **GE-600** initially with two system versions with different clock values, the **GE-625** and the **GE-635**. The software would have been developed in Phoenix with people brought from various user departments. Eventually, the processor's team migrate from Syracuse to Phoenix, while the technology team remained for a while in Syracuse.

The main innovation of GE-600 was the creation of a SMP **Symmetric Multi-Processing** platform, probably the first actually built in the world. While, at that time, much talk was about the reliability of a redundant system, the main advantage was different: SMP was limiting the development cost to a single design for building a line covering a range of power that would had needed probably three designs (as IBM did at that time).

In 1964, GE decided to take over Olivetti computer assets and the majority of Compagnie des Machines Bull of France. The expected value of those acquisitions was to establish an international European base for the general purpose computers. Both the GE-400 and the GE-600 were to be sold by the two European subsidiaries of General Electric.

The first GE-600 introduced in Europe was a GE-635 sold to ASEA in Sweden before the Bull-GE merger. ASEA (now part of ABB) was a General Electric licensee and used the GE-600 for scientific applications.

After jettisoning its RCA licenses, Bull was selling many GE-400 systems and started to market the GE-600 over its original market. It got a contract for the billing of Electricité de France , the largest power utility in the world, that required COBOL, while the compiler was still in its infancy in Phoenix. It required far more reliability from magnetic tapes than GE was then providing. GECOS II was an operating system that was optimizing batch processing (without an attached processor, as were at that time organized many IBM shops) and remote-batch (using Univac 1004 or GE-115 small computers as terminals). It supported multiprogramming but not very efficiently.

In 1964-1966, But obtained contracts for around a dozen of GE-600. But eventually, the EDF contract collapsed and Bull-GE froze its ordering of GE-600, waiting the solution of the technical problems that finally were sorted out in 1968.

During that period, Bull-GE made studies, in conjunction with Phoenix, of a small version de GE-600, code-named Q2, that proposed a micro-programmed version of the 600. The project was cancelled when GE was no more sure of pursuing the GE-600 line.

GECOS II

The initial GE-600 systems were using **GECOS-II** operating system, a multiprogramming batch oriented system, based upon large (specifically IBM 7090) users requirements of that time. Thanks to the multiprogramming facilities of the OS, there was requirements for supplemental I/O converters (à la 1401)

and remote batch was supported with initially Univac 1004 as terminals.

Programming Languages were:

- GMAP macro assembler
- FORTRAN II
- COBOL 61
- that was announced and "delivered" far before being qualified. in 1965
- JOVIAL
- for an USAF contract

Files on tape and discs supported sequential and random organizations (GEFRC) and IDS was being announced.

The insufficient quality of GECOS-II associated to the poor reliability of the magnetic tapes lead, in October 1966, to as suspension of the promotion of GE-600 in the United States and of is sales by General Electric, some orders were cancelled, other delayed and the future of GE-600 was somber.

GECOS III

The operating system kernel was redesigned, adding also a time-sharing system (TSS) extending the functions of the Dartmouth Time Sharing System on the GE-265. It became **GECOS III** and was well accepted by existing customers. Introduced in 1968, while MULTICS was still in its infancy, no commonality was envisioned between GECOSIII and MULTICS.

GECOS III was advertised as a multidimensional system, adding to batch and remote-batch, the time-sharing and direct-access "dimensions". The architecture of GECOS III will not be significantly altered in the future versions of GCOS.

The new operating system, announced in 1967, gave the opportunity to re-launch the marketing of the 635 line and in Europe several new large orders were secured (Credito Italiano, l'Union) specially for large business applications. Bull lost the scientific market to Control Data, Univac and IBM but succeeded to make an honorable stand in the non-scientific market.

In the US, GE succeeded to secure a large order from US Air Force for its Worldwide control & command system (WWMCCS). Some modifications to improve the security of GECOS III were developed as specials for that order, but the existence of this multi-year contract was securing the durability of the product line. A few WWMCCS systems were installed in Germany.

GE-655

The technology of the GE-635 was based on discrete transistors (Sylvania SUHL). Printed circuits were not fully used and the manufacturing cost of a system was high. A single processor system represented three large cabinets not including peripherals.

A first improvement was brought in 1967, when a new model with an integrated circuits technology was designed by the Syracuse team of GE. Its performances were better than those of the 635 and the manufacturing cost lower. It was introduced as the **GE-655** at a price significantly higher than that of the 635.

GECOS-IV

GECOS-IV was a project developed in Central research Laboratory in Schenectady in 1967 under the direction of Robin Kerr. Their goal was to integrate GECOS, the work at Dartmouth and the their DESKSIDE project. GECOS-IV required a modified CPU to provide a "virtual machine" capability. It also challenged a strength of GECOS-III, its time-sharing capability.

Mark-III and General Electric Information System

In 1964, GE had helped the Dartmouth College NH to develop an interactive system for teaching programming. The hardware was a GE-200 front-ended by a communication processor developed initially for store and forward communication messages the GE Datanet-30. The terminals were AT&T Teletype 33 ASCII typewriters connected through 300 bauds Bell modems.

The Dartmouth College, perhaps inspired from MIT CTSS, had developed a special purpose operating-system including an interpretive processor of the BASIC (Beginner's All Symbolic Instruction Code) language also created for this system, christened GE-265.

General Electric started to market the BASIC service, through a special division that took over the maintenance of the Dartmouth College software. As the hardware perspective of the GE-200 was limited, the Dartmouth College accepted the GE offer of porting the DTSS (Dartmouth Time-Sharing System) to the GE-600. GE started to replace its GE-265 by GE-635 as Mark-III systems.

The hardware of Mark-III system was originally completely standard, but the software was developed and maintained independently from Phoenix. General Electric Computer Division and its affiliates (e.g., Bull General-Electric) were not entitled to license their customers with Mark-III software.

Mark-III systems main center was concentrated in Cleveland OH, but expanded with a center in Amsterdam, the Netherlands. The customers of the timesharing service were connected transparently to the computer centers.

With Mark-III, the applications were expanded to email and batch applications. Eventually, GE added to the base systems several IBM 370 computers to provide batch services without recompiling applications to the peculiarities of GE-600 code (differences in scientific operations precision in particular.

GE ISD was later instrumental in the evolution of Honeywell Large Systems by pushing Phoenix to use IBM and IBM compatible peripheral subsystems on the DPS-8 product line. GEISD had developed since the early 70s their own versions of peripheral subsystems shared between Honeywell and IBM computers and pressured Honeywell to introduce a standard facility.

After acquisition of the GE computer business by Honeywell in 1970, General Electric kept the timesharing business in an Information Services Division

that is still alive. The ISD European Operation was momentarily kept inside Honeywell-Bull, but was retroceded to GE circa 1975.

Toshiba

Toshiba Corporation was a licensee of General Electric in Japan and also using the computer licenses of the GE-600. The Japanese , at the end of the 1960s, started to design their low-end version of the GE-600. They used obviously integrated circuits and designed a micro-programmed execution unit. Under the provisions of cross-licensing, Toshiba's design was later brought back in Phoenix under the ELS (entry level system) code name.

In 1973, Datamation reported, from information apparently collected from Richard Bloch that In 1969, John Haanstra, somewhat skeptical about the results of the Shangri-La task force attempted to establish as a parallel effort or as a back-up effort a project, to be done in cooperation with Toshiba that would have closed the gap between the GE-400 and the GE-600 product lines. It would have been a dual-personality machine operating in GE-400 as a 3xGE-435. The death of John Haanstra in August 1969 would have suspended the project.

[I have been unable to find a person who in Phoenix or in Bull had the knowledge of the Pi project, so I would be interesting to know more about it. For the time being, I am unable to confirm or to infirm its existence. JB]

GE APL advanced product line

Around the end of 1967, however, IBM S/360 was starting to submerge its competitors and GE had to recognized that its set of product lines covered few segments with a competitive edge.

John Haanstra (who headed several IBM technical departments) was hired by GE to design a plan to replaces current product lines by a new Advanced Product Line (APL). Forces from Paris, Milano and Phoenix started to work together on that project. The revival of the GE-600 did not materialize before 1969 and the APL did not target the still embryonic park.

GE choose a new (CML) technology for APL, what was somewhat premature .

John Haanstra left APL to head the Phoenix computer department, were he brought impulses from the APL project, such as 9-bits PSI channels, microprogrammed peripheral subsystems that improved the GECOS offering for many years to come.

After a new attempt by GE to redefine a new product line (in a 4 months meeting named Shangri-La in summer of 1969), the GE management finally decided in April 1970 to sell its Computer Department. **Honeywell** was the buyer of all the assets (including Phoenix as well as the European subsidiaries)

[part II Honeywell [part III NEC and Bull]

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Genetic Systems Corporation

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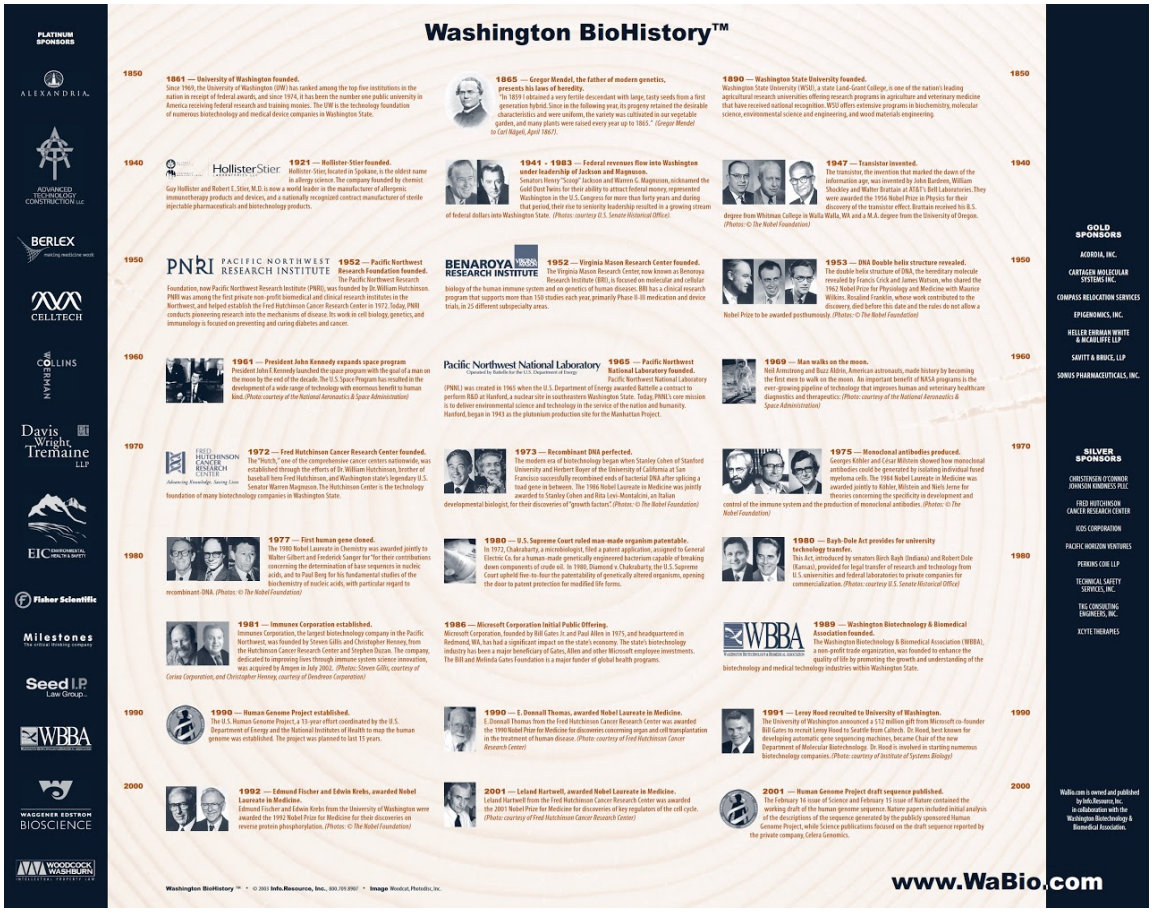
1980 -- Genetic Systems was founded. Genetic Systems, a monoclonal antibody-based diagnostic company, was incorporated in 1980 by Robert Nowinski of the Fred Hutchinson Cancer Research Center with $40 million raised by David and Isaac Blech. In 1981, Genetic Systems completed its IPO. (Source : Washington State Life Science(.com) : [HI002S][GDrive])

1986 -- Genetic Systems was acquired by Bristol-Myers Squibb: Genetic Systems was incorporated in 1980 as a monoclonal antibody-based diagnostic company by Robert Nowinski of the Fred Hutchinson Cancer Research Center with $40 million raised by [**David Abraham Blech (born 1955)**] and Isaac Blech. In 1981, Genetic Systems completed its IPO, and in 1986, the company was acquired by Bristol-Myers Squibb for $310 million. The company was divested to Sanofi in 1990. (Source : Washington State Life Science(.com) : [HI002S][GDrive])

Source : Washington State Life Science(.com) : [HI002S][GDrive] / PDF below : [HI002Q][GDrive] / Printable 2x3 Washington Life Sciences (2019) Genealogy Poster : [HI002P][GDrive]



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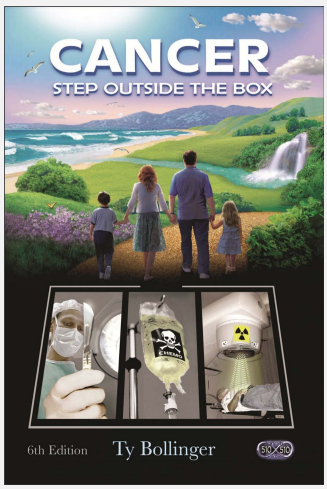
OTHER TESTING ON HUMANS - RHOADS (boss of Southam) ... and A Gates' connection ?

NOTE : No connection of Southam to Tuskegee Study (https://en.wikipedia.org/wiki/Tuskegee_Syphilis_Study)

PDF of book : [HB006A][GDrive]



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I used to believe that the "cancer conspiracy" was an unintentional result of the love of money and that there were really no malicious intentions at its roots. However, due to stories like the three that follow, I believe that I was a bit naïve in my initial assessment of the situation.

In 1931, [Dr. Cornelius Packard "Dusty" Rhoads (born 1898)], a pathologist from the Rockefeller Institute for Medical Research, purposely infected human test subjects in Puerto Rico with cancer cells, and thirteen of them died. Despite the fact that Rhoads gave a written testimony stating he believed all Puerto Ricans should be killed, **he later established the U.S. Army Biological Warfare facilities in Maryland, Utah and Panama, and was named to the U.S. Atomic Energy Commission, where he began a series of radiation exposure experiments on American soldiers and civilian hospital patients**.

Then, in 1963, Chester M. Southam (who injected Ohio State Prison inmates with live cancer cells in 1952) performed the same procedure on twenty-two senile, African-American female patients at the Brooklyn Jewish Chronic Disease Hospital in order to watch their immunological response. He told the patients that they were receiving "some cells," but conveniently left out the fact that they were cancer cells. Ironically, Southam eventually became president of the American Association for Cancer Research!

In 1981, the **Seattle-based** Genetic Systems Corporation began an ongoing medical experiment called "Protocol No. 126" in which cancer patients at the **Fred Hutchinson Cancer Research Center** in Seattle were given bone marrow transplants that contained eight experimental proteins made by Genetic Systems, rather than standard bone marrow transplants. As a result, 19 human "subjects" died from complications directly related to the experimental treatment. [**MORE on the research in Seattle that may possibly connect to Gates : See** Genetic Systems Corporation] [...]

2003 book : "In the Name of Science: A History of Secret Programs, Medical Research, and Human Experimentation" by Andrew Goliszek

Sold by St. Martin's Press

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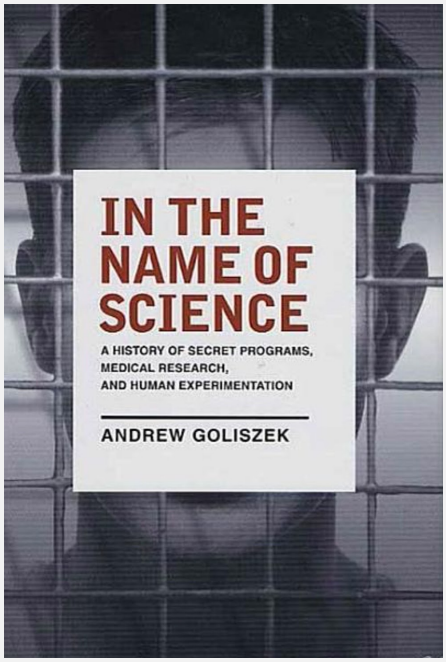
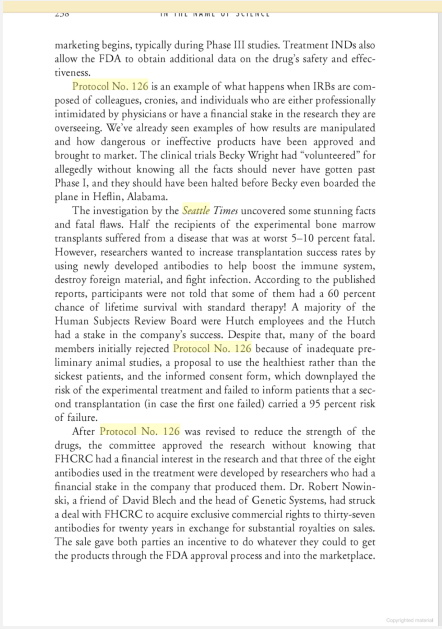
https://books.google.com/books?id=kIrOfGcYtvEC&dq=%22Protocol+No.+126%22+seattle&source=gbs_navlinks_s

"Hutch employees" ... "Fred Hutch" -> https://en.wikipedia.org/wiki/Fred_Hutchinson_Cancer_Research_Center <- U Washington + Bill Gates connection





marketing begins, typically during Phase III studies. Treatment INDs also allow the FDA to obtain additional data on the drug's safety and effectiveness.

Protocol No. 126 is an example of what happens when IRBs are composed of colleagues, cronies, and individuals who are either professionally intimidated by physicians or have a financial stake in the research they are overseeing. We've already seen examples of how results are manipulated and how dangerous or ineffective products have been approved and brought to market. The clinical trials Becky Wright had "volunteered" for allegedly without knowing all the facts should never have gotten past Phase I, and they should have been halted before Becky even boarded the plane in Heflin, Alabama.

The investigation by the *Seattle Times* uncovered some stunning facts and fatal flaws. Half the recipients of the experimental bone marrow transplants suffered from a disease that was at worst 5–10 percent fatal. However, researchers wanted to increase transplantation success rates by using newly developed antibodies to help boost the immune system, destroy foreign material, and fight infection. According to the published reports, participants were not told that some of them had a 60 percent chance of lifetime survival with standard therapy! A majority of the Human Subjects Review Board were Hutch employees and the Hutch had a stake in the company's success. Despite that, many of the board members initially rejected Protocol No. 126 because of inadequate preliminary animal studies, a proposal to use the healthiest rather than the sickest patients, and the informed consent form, which downplayed the risk of the experimental treatment and failed to inform patients that a second transplantation (in case the first one failed) carried a 95 percent risk of failure.

After Protocol No. 126 was revised to reduce the strength of the drugs, the committee approved the research without knowing that FHCRC had a financial interest in the research and that three of the eight antibodies used in the treatment were developed by researchers who had a financial stake in the company that produced them. Dr. Robert Nowinski, a friend of David Blech and the head of Genetic Systems, had struck a deal with FHCRC to acquire exclusive commercial rights to thirty-seven antibodies for twenty years in exchange for substantial royalties on sales. The sale gave both parties an incentive to do whatever they could to get the products through the FDA approval process and into the marketplace.

[...]

For example, in July 1963, after receiving funds from the U.S. Public Health Service and the American Cancer Society, researchers at the Jewish Chronic Disease Hospital sat in their offices and made their final selections regarding who would be injected with live human cancer cells. This was not some prison laboratory facility at Auschwitz; it was a New York hospital preparing to subject humans to Nazi-like experiments nearly twenty years after the defeat of Germany and three years after the election of John F. Kennedy in what was described as the dawn of a new society. During the 1965 court case against the hospital (258 N.Y.S.2d397), it must have seemed like déjà vu for Jews who'd seen it all before and sat horrified at the thought that it had happened at a Jewish hospital no less.

The testimony, at times chilling, was a reminder that such things were still very much possible. Patients with and without cancer had been chosen without their consent for a study to determine not only if foreign cancer cells would live longer in debilitated noncancer patients than in patients with cancer, but if cancer could actually be induced by injection of live cells. The subjects were not told that the intradermal injections contained live cancer cells because, as the doctors explained, they (the doctors) "did not wish to stir up any unnecessary anxieties in the patients who had phobia and ignorance against cancer." Although the doctors claimed that "oral consent" was given, hospital administrators later tried to cover up the fact that many of the subjects were physically and mentally unable to give consent or that the consent had been fraudulently obtained after the injections were already administered. To add insult to injury, the American Cancer Society elected the study's principal investigator as the vice president of their organization.

The same type of cancer injections were also given to three hundred healthy women at Memorial Sloan-Kettering Cancer Center.

According to Jay Katz, author of Experimentation with Human Beings , gynecology patients were injected with cancer without their knowledge in order to determine how the body would respond to an invasion of live cancer cells. During testimony, several doctors admitted that they believed the injected cells might cause cancer years later but injected them anyway. The reason for performing the experiment on nonconsenting subjects was obvious. Who in their right mind would willingly consent to being injected with cancer?

Less than twenty years later, the lessons of Puerto Rico and New York had been all but forgotten, and history, as it often does, repeated itself once again. For a little more than a thousand miles to the north in Heflin, Alabama, Becky Wright had been offered a chance at a unique cancer therapy that guaranteed she'd live long enough to see her children grow old.

A housewife and mother of three, Becky Wright believed the doctors when they told her that the treatment she was about to receive at the Fred Hutchinson Cancer Research Center (FHCRC) would save her life. Though apprehensive during her flight to Seattle, Washington, Becky figured that the experts knew best. Her sister, after all, was a perfect bone marrow donor match, and the biotechnology company conducting the experimental clinical trials, Genetic Systems Corporation, was supposedly on the threshold of a cancer breakthrough.

According to the Seattle Times , Genetic Systems was started by [David Abraham Blech (born 1955), a twenty-four-year old song writer and entrepreneur who'd convinced investors that the 1980s biotech boom would make them all rich beyond their wildest dreams. The only expertise the

entrepreneur who'd convinced investors that the 1980s biotech boom would make them all rich beyond their wildest dreams. The only expertise the Brooklyn native had when he began his fledgling startup was his extraordinary sales charisma and his ability to recruit physicians for what promised to be a "pioneering institution in transplanting bone marrow." And what Becky Wright traveled more than three thousand miles across the country for was to become one of organized medicine's modern day guinea pigs.

By the time Becky arrived at the research center, plans had been made to forego standard transplant treatment and instead add eight experimental proteins made by Genetic Systems to her sister's bone marrow. **According to the Seattle Times report, the oncologists, as well as the FHCRC, had significant financial ties to Genetic Systems and had a vested interest in testing the proteins and using the cancer patients as human subjects.** In fact, two of the doctors involved in the experiments owned one hundred thousand and two hundred and fifty thousand shares of company stock. After the initial treatment, researchers crossed their fingers and hoped for a miracle because they certainly hadn't had much success up until then.

There wasn't much doubt about the risks and dangers involved in the experiment known as Protocol No. 126. **Even worse, during initial consultations with doctors, Becky and Pete Wright allegedly were never told that the treatment Becky would be receiving hadn't worked in other patients.** Investigators for the Seattle Times wrote, "Transplants were being rejected at alarming rates. New cancers were appearing and old ones reappearing far more than they normally would. All were problems directly attributable to the experimental treatment." According to the newspaper's account, not a word was ever said about the dozen or so patients who had already died or about the financial links between the doctors treating Becky, the research center, and [David Abraham Blech (born 1955)]. And it wasn't until Becky Wright eventually died, along with nineteen other human subjects, that Dr. John Pesando, a member of a committee to protect patient's rights, began publicly questioning the safety of the treatments and the ethics of the experiments.

Concerned that humans were being used as nothing more than test animals, even while better and more effective treatments were available, Dr. Pesando tried to warn federal officials about what was happening. "Many patients died at the Fred Hutchinson Cancer Research Center when the Institutional Review Board charged with protecting them was shamelessly used and abused by senior staff," he wrote. "Hutch management denied the existence of financial conflicts of interest, refused to halt the protocols, and refused to have protocols reviewed by independent outside examiners."

What disturbed Dr. Pesando most was that doctors involved in the research effectively controlled the review board set up to ensure patients' safety. Rather than living by the Hippocratic Oath they'd taken to "abstain from every voluntary act of mischief and corruption," some physicians allegedly failed to make full disclosure to reviewers and board members of their financial interest in the research.

In a letter sent by Dr. Pesando to the National Institutes of Health (NIH), Pesando reported that senior clinicians conducted clinical trials with high therapy-induced mortality rates while they were major stockholders in the company with commercialization rights to those therapies. "It soon became obvious that at least one FHCRC clinical study (Protocol No. 126) involving MAb was causing very high mortality rates in patients who otherwise stood a good chance of cure by bone marrow transplantation," he wrote. "Final numbers are unavailable, but it is safe to say that protocol 126 was directly responsible for at least two dozen patient deaths … . A great many people, then as now, simply will not make the personal sacrifices currently required to even attempt to correct abuses of this kind, even when human lives are at stake. Thus similar abuses are all but guaranteed to continue."

It was obvious from Dr. Pesando's letter that he believed Protocol No. 126 was continued in the hope of financial gain and despite the mounting death toll caused by the experiments, a charge that the physicians involved have denied. More than two years went by without a response from NIH. A second letter from Pesando, this one to Donna Shalala, secretary of health and human services under President Bill Clinton, went even further. "More than twenty patients were killed at the FHCRC by their NIH-sponsored physicians in pursuit of profit, yet there could hardly be less concern if laboratory rats had died instead. At the FHCRC, economic and professional self-interests were clearly best served by silence or complicity, but the NIH's silence appears to arise either because it is unable to accept the fact that leading medical researchers are capable of such behavior or because it is unwilling to face the consequences of accepting the truth."

What really shocked Pete Wright after his wife's death was learning that even in the 1980s and 1990s, doctors, in the name of science or simply for financial gain, were still effectively using humans as subjects of medical research even when they allegedly knew that alternative established therapies were available. The case of Genetic Systems is likely just the tip of the iceberg because with hundreds of millions invested in pharmaceutical research and billions riding on new biotech products, the pressure to test drugs and get them to market is simply too great.

As we've already seen, by the time human subjects are recruited for experimental treatments, the assumption is that the drug is safe. The problem is that with so many new companies being formed, and so many researchers and doctors having a financial stake in the outcome of new products, the review process—often done by individuals with financial interests as well—becomes tainted. Furthermore, each step in the review and approval process can be manipulated because it's often based on the honor system. Reviewers simply believe the data they're presented and accept what the researchers tell them.

[...]

2001 - Seattle Times Special Report - Uninformed Consent

https://special.seattletimes.com/o/uninformed_consent/whistleblower/story1.html

2001-the-seattle-times-website-special-report-uninformed-consent-story.pdf

By Duff Wilson and David Heath, Seattle Times staff reporters

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REAL JOURNALISM :::

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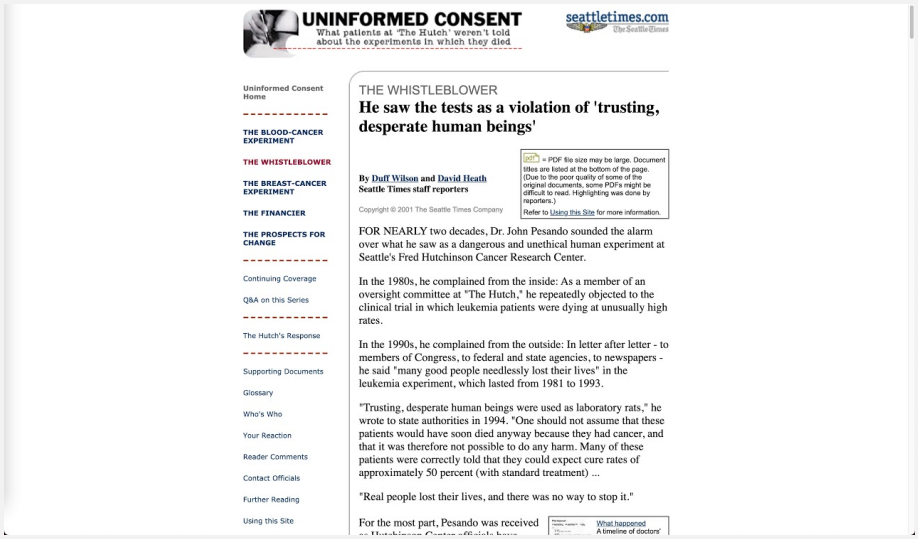

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THE WHISTLEBLOWER

He saw the tests as a violation of 'trusting, desperate human beings'

FOR NEARLY two decades, Dr. John Pesando sounded the alarm over what he saw as a dangerous and unethical human experiment at Seattle's Fred Hutchinson Cancer Research Center.

In the 1980s, he complained from the inside: As a member of an oversight committee at "The Hutch," he repeatedly objected to the clinical trial in which leukemia patients were dying at unusually high rates.

In the 1990s, he complained from the outside: In letter after letter - to members of Congress, to federal and state agencies, to newspapers - he said "many good people needlessly lost their lives" in the leukemia experiment, which lasted from 1981 to 1993.

"Trusting, desperate human beings were used as laboratory rats," he wrote to state authorities in 1994. "One should not assume that these patients would have soon died anyway because they had cancer, and that it was therefore not possible to do any harm. Many of these patients were correctly told that they could expect cure rates of approximately 50 percent (with standard treatment) ...

"Real people lost their lives, and there was no way to stop it."

What happened

A timeline of doctors' complaints and officials' responses.

For the most part, Pesando was received as Hutchinson Center officials have portrayed him: a disgruntled former employee with an ax to grind. But a Seattle Times investigation supports most of his allegations and finds his concerns shared by some of the most respected cancer doctors in the Northwest.

Seventeen years passed between the time Pesando and other doctors first objected to Protocol 126, as the experiment was labeled, and yesterday's revelations in The Times of deaths, misleading assurances and potential financial conflicts surrounding the experiment.

In those years, the doctors' complaints were largely rebuffed, rejected or ignored. Finally, under incessant pressure from Pesando, they were taken up by federal and state agencies but never fully investigated.

Underlying all of this, Pesando and other doctors believe, was a reluctance to challenge an institution as respected and powerful as the Hutchinson Center. That reluctance was all the greater because one of the people behind Protocol 126 was Dr. E. Donnall Thomas, a Hutch co-founder and co-winner of the 1990 Nobel Prize in Medicine.

As Pesando puts it: "They were all afraid of taking on the 800-pound gorilla."

Experiment already under way

Harley Soltes / The Seattle Times

A snapshot of Ruth Fisher who died in January 1984 after a graft failure and second transplant

John Pesando came to Seattle and The Hutch in 1982 as a 36-year-old magna cum laude graduate of Harvard University with a medical degree and Ph.D. from the Albert Einstein College of Medicine in New York. Pesando was board-certified in oncology and internal medicine; his research focused on tumor immunology. He had taught at Harvard and had worked for four years as a cancer doctor and researcher at the Dana Farber Medical Center in Boston.

At Harvard, Pesando had discovered an important antibody marker in tracking and treating leukemia, and conducted the first-ever clinical trial with a monoclonal antibody, treating five leukemia patients.

He was recruited to The Hutch by one of its co-founders, Dr. Rainer Storb. Soon after joining the staff, Pesando was asked by his bosses to serve on the

Center's Institutional Review Board.

That board was required by federal law to review all proposed human experiments at The Hutch. Its members were to ensure that risks to patients were minimized in relation to potential benefits, and that patients fully understood those risks before agreeing to participate in clinical trials.

Pesando was reluctant to take on the unpaid duty of policing his colleagues, some of whom were in a position to affect his future. But he believed deeply in the need for such policing, he says, so he swallowed hard and served.

Also joining the review board was a new chairman, Dr. Henry Kaplan, from Seattle's Swedish Medical Center, where some Hutch patients were treated. He is now one of the Northwest's most highly regarded oncologists.

From their first days on the board together, Pesando and Kaplan were concerned about Hutch researchers using unproven new antibody drugs.

In Protocol 126, researchers were testing antibodies to see if the elimination of certain cells in the blood, called "T-cells," would make bone-marrow transplants safer. The researchers theorized that killing off the T-cells in the marrow of donors before injecting it into patients would help stave off a troublesome complication known as graft-versus-host disease, or GVHD.

The experiment was directed by Don Thomas; Dr. John Hansen, head of a tissue-matching lab and later clinical director; and Dr. Paul Martin, a young oncologist. The trial was funded by the National Cancer Institute.

From the time the experiment was first brought to the oversight committee early in 1981, some committee members had challenged it, saying:

- The science behind the experiment was dubious. While mice benefited, some felt there had been inadequate prior research on dogs before moving on to tests in humans.
- Some thought T-cell removal might actually prevent donated bone marrow from engrafting, or taking hold in the recipient's bones, and some thought it might open the way for the return of the cancer.
- While GVHD was bothersome and uncomfortable, it was seldom fatal. And the proposed subjects of Protocol 126 - those with siblings whose tissue type matched theirs - were the least likely to get it. Besides, there were other ways to effectively treat GVHD.
- Unlike most cutting-edge medical research, Protocol 126 proposed experimenting on the healthiest, rather than the sickest, patients. Committee members saw no need to subject those patients to undue risk.
- The "informed-consent" form for the experiment - the required document outlining risks for patients - was misleading.

Despite all these concerns, the previous oversight board had approved the experiment in April 1981. By the time Pesando and Kaplan joined the board, the experiment was well under way.

Financial conflicts of interest

Within their first few months on the Institutional Review Board (IRB), the new members suspected that Protocol 126 wasn't working. Patients enrolled in the experiment were dying - including some people who otherwise would be expected to live.

Kaplan and Pesando raised many of the same questions their predecessors had on the medical and scientific aspects of the experiment. They received lots of assurances but no answers.

Meanwhile, a new concern emerged: Rumors were rampant in hospital hallways that the researchers - Thomas, Hansen and Martin - all had financial interests in Genetic Systems, the Seattle biotechnology company that owned rights to some of the drugs being tested in the experiment.

When Kaplan asked Hutch officials about the rumors, he was told the researchers had no financial conflicts. What he was not told was that not only did those researchers all hold stock in Genetic Systems, they all held advisory or actual working positions with the company. Nor was he told that The Hutch itself had stock in Genetic Systems.

"We didn't even know which investigators were connected with which companies," Kaplan recalls now. "We never got the opportunity to ask about the decision-making process. I guess the fair thing to say was John (Pesando) was absolutely convinced there was a problem, and the rest of us thought there was enough to raise questions about. They were not answered satisfactorily in the time I was on the board."

Meanwhile, the early stages of Protocol 126 were proving a failure, and patients were dying - some, apparently, as a direct result of the experiment. Among the dead were two patients Pesando himself had treated.

When their two-year terms on the Institutional Review Board ended in 1985, Kaplan and Pesando were told again by the president of The Hutch, Dr. Robert Day, that their concerns about both medical and ethical problems with Protocol 126 would soon be addressed.

They trusted that assurance, and went on to focus on their careers. Kaplan built one of the most successful private oncology practices in the Northwest; last year, he was the cover subject of a Seattle Magazine feature entitled "Top Doctors."

Career hits a snag

Pesando, meanwhile, went about trying to land a long-term position doing cancer research at The Hutch. That didn't happen. In 1987, his contract expired and was not renewed. Storb says Pesando "didn't work out. He was removed by Don (Thomas) for a number of reasons. I agreed with them. He was not an active member. He led a sheltered life. He was very paranoid about sharing data. He didn't bring in grants. He left under poor circumstances."

Pesando has another explanation: his run-ins with Thomas and the other people behind Protocol 126. He recalls Thomas confronting him after one particularly tense session, barking: "Who the hell are YOU to question what we do here?"

(Thomas refused to be interviewed by The Times for the articles running this week.)

Pesando doesn't deny that he struggled at The Hutch. He says that was because he was unable to get support from his bosses for research he proposed.

He tried unsuccessfully for a time to find a good position elsewhere in his specialty areas of leukemia and lymphoma - "They (would) go to The Hutch for recommendations" - then decided to take another path. He began working as a consultant for the Social Security Administration and for biotechnology companies.

He and his wife settled into a hundred-year-old Victorian home on Capitol Hill and raised their daughter

He and his wife settled into a hundred-year-old Victorian home on Capitol Hill and raised their daughter.

Over the years, Pesando tried to put Protocol 126 out of his mind. He might have succeeded, had he not picked up a book entitled "Magic Bullets" in 1991. In it, Seattle author Grant Fjermedal describes the invention of new antibodies to seek out and destroy cancer.

Among the companies Fjermedal wrote about was Genetic Systems. He outlined the company's relationship with The Hutch and its doctors, and quoted Day, Hutch president, on why such financial interplay was a positive factor in medical research, not a negative.

Pesando was incensed to see this apparent confirmation of what he and Kaplan had suspected all along: that Protocol 126 was driven not only by science but also by money. And Day's position was a signal that nothing had changed.

Pesando contacted Fjermedal, a longtime science and medical writer, who was struck by Pesando's knowledge of the situation and by his passion.

"What you've got in this guy is a rarity," Fjermedal said in a recent interview. "You've got somebody who has the credentials. He's seen all this, he's on the inside, and he's coming forward. That's very, very rare."

Fjermedal encouraged Pesando to take his complaints to the proper authorities.

For the rest of the decade, that's precisely what this lonely warrior did - only to be repeatedly frustrated.

Federal agencies take a look

President Day successfully defended The Hutch, but in the end a state official said, 'There still remained some doubt in our mind.'

Pesando began firing off letters in various directions in 1991. He wrote to members of Congress, to federal and state agencies, even to The New York Times.

Finally, a letter to the federal Office of Protection from Research Risks (OPRR), a unit of the Department of Health and Human Services, caught someone's attention.

"Basically," Pesando wrote, "senior clinicians at the Fred Hutchinson Cancer Research Center in Seattle conducted clinical trials with high therapy-induced mortality rates while they were major stockholders in the company with commercialization rights to those therapies."

Admitting to feeling "much anger," Pesando concluded, "The seriousness of this issue and its implications for future patient care continue to make it very difficult for me to take the expedient course of doing nothing."

In May 1993, the OPRR opened an investigation of the case. Thomas Puglisi, chief of the agency's compliance department, assigned investigator Kamal Mittal.

Mittal got Pesando's permission to use his name, and three months later, sent a copy of Pesando's letter to Day, the Hutchinson Center president.

Two months after that, Day responded with a 24-page letter and 2-inch stack of attachments. In that package, he defended The Hutch and its researchers vigorously.

He insisted that a successful outcome to Protocol 126 would not have benefited Genetic Systems or its stockholders - ignoring the fact that some of the chemicals being tested were licensed to Genetic Systems, and that the very existence of the experiment had increased the company's value.

He insisted that any risks "were fully disclosed to and discussed with the patients." However, the consent form underplayed the risk of graft failure and failed to mention the likely outcome - death - if a second transplant were necessary.

He insisted that the IRB had the power to address any concerns - ignoring the fact that Pesando and Kaplan had pushed for an outside review.

And he insisted that concerns about conflicts of interest "were addressed promptly" by a policy adopted by the Hutch Board of Trustees in March 1983. That policy barred employees from participating in research in which they or a family member had an economic interest of any type. However, the policy was not enforced and resulted in no changes in Protocol 126. In fact, Hansen and Martin say they were never told about it.

(Day, who retired as Hutch president in 1997, refused to be interviewed by The Times for the articles running this week.)

The Hutch also hired the best medical-ethics defense lawyer at the then-biggest law firm in Washington, D.C.: Barbara Mishkin of Hogan & Hartson, who phoned Puglisi and met with Mittal briefly.

Pesando had no opportunity to respond to Day's claims. He called the OPRR several times to offer help and information but never heard back.

Frustrated, he went to the top, writing to Health and Human Services Secretary Donna Shalala. The result: more frustration.

Pesando did receive a response, from Wendy Baldwin, acting deputy director for extramural research at the Public Health Service. Baldwin wrote that she recognized "the very serious nature of the issues you have raised" and promised to review the case.

But that promise was an empty one, e-mail released to The Times under the Freedom of Information Act shows.

That e-mail, between Puglisi of the OPRR - the actual author of the letter signed by Baldwin - and Dr. George Galasso of the National Institutes of Health, indicates that top federal officials had already decided there was "nothing wrong" with conflict-of-interest issues in Protocol 126. An e-mail from Galasso suggests they send it to another office as "sort of CYA (cover your ass)."

Investigation is dropped

Meanwhile, other federal documents show, the primary investigator, Mittal, was far from convinced there was no problem. He had several pointed questions he wanted to ask Hutch officials:

- Did the IRB feel compromised or strong-armed?
- Was the risk/benefit ratio in favor of the patients?
- Were patients fully and correctly informed of risks?
- Did the doctors violate the conflict-of-interest policies? (Mittal added: "Answer appears to be yes!")
- Was it proper to develop products with federal funds that would profit a private company and doctors?

"To get answers to these questions, it may be necessary to arrange a site visit to speak with various individuals including the members of the IRB at the time period in question," Mittal wrote.

But then Mittal, who'd been brought in as temporary help, asked to be transferred to another job and was removed from the case.

"I left it almost in the middle," Mittal recalls.

Pesando's complaint lay untouched in Washington, D.C., for a year after that.

"It was just a matter of our workload being overwhelming at the time," Puglisi said.

The OPRR was absorbed in a fertility-clinic scandal in California. It was chronically understaffed. At one time it had about 70 open investigations being conducted by one full-time professional staff member and two or three part-timers, the House Committee on Government Reform found.

Eventually, Pesando and Day both wrote, separately, to ask for a progress report. Puglisi assigned a senior staffer, William Dommel, to write a report based on information in the file, nearly all of it provided by The Hutch.

That report, dated Sept. 5, 1995, and signed by Puglisi, concluded that the complaint was "unsubstantiated" and that The Hutch was not at fault since its own Institutional Review Board had failed to stop the activities. The OPRR blamed the Hutch IRB for not doing more to stop the study.

The federal investigators never interviewed Pesando or Kaplan, both of whom had tried to stem the study, or any other IRB members.

They never interviewed Thomas, Hansen, Martin, Day or any other Hutch officials.

They never interviewed any of the families of the trial subjects.

They never asked for a single tape of a single IRB meeting, nor ever spoke with a single outside expert on the risks of T-cell depletion and second transplants.

Pesando was stunned.

He wrote again to HHS Secretary Shalala and to Harold Varmus, director of the National Institutes of Health. Steam rose from his rhetoric.

"In late 20th century America, prominent physicians at a major cancer center knowingly risked the lives of unsuspecting patients in pursuit of financial gain, successfully bypassed regulatory bodies, and repeatedly silenced opposition. ... Yet there could hardly be less concern if laboratory rats had died instead."

He called the investigation "arrogant, chilling and totally unacceptable."

Shalala and Varmus never replied. Baldwin of the Public Health Service wrote to Pesando on their behalf.

"After careful examination of the OPRR's findings, I am convinced that the investigation was exhaustive and conducted with objectivity and due consideration for the rights and welfare of human subjects involved in research," Baldwin wrote.

A fax obtained by The Times, however, suggests there was no such "careful examination" by Baldwin. Instead, it shows that Dommel - the very person who wrote the findings about which Pesando was complaining - had drafted the response for Baldwin to sign.

Pesando wrote to Varmus again: "The NIH's handling of this matter suggests that it was afraid of finding something, and the profound apathy of those at the top to misconduct in the field helps to explain why such problems exist."

This time, Pesando got no response.

State panel takes on the case

While he was waiting for Washington, D.C., to act, Pesando took his crusade to Washington state officials.

He wrote to Dr. Larry Bryce, chairman of the state Department of Health's Medical Quality Assurance Commission, in December 1994, repeating his complaint:

"In essence, financial conflict of interest led to highly unethical human experimentation which resulted in at least two dozen patient deaths. Oversight committees were misled, lied to, and kept uninformed while in an atmosphere of fear and intimidation ...

"I have done my part, and more, to correct this problem. I would like to see someone else show some interest."

The state commission showed some interest in the complaint but decided to wait for the federal findings.

Nine months after federal officials dropped the case, the state opened its own investigation. In June 1996, a year and a half after Pesando's filing, the case was assigned to Dr. Robert Miller, physician staff member of the state commission, and investigators James Smith and Bill Crowell.

Their investigation went much further than the feds' had. They interviewed Hutch officials, Kaplan and Pesando.

Kaplan had forgotten many details of his own role by then. For instance, he said he wrote one letter of objection, rather than the three The Times has found, and received just "a one-sentence letter of reply" from Thomas, rather than the lengthy missives Thomas, Day and Dr. Frederick Appelbaum, head of The Hutch's clinical-research division, sent him in the mid-1980s.

The state investigators didn't interview the researchers involved but obtained written statements from Thomas and Hansen.

Thomas' letter, marked "CONFIDENTIAL," was his only written response since the flat denial of conflict in 1984.

"The decision as to whether or not these studies should or should not continue was not made by me," Thomas wrote.

Storb and Pesando say Thomas, though technically not a member of the review panels, was influential in continuing the studies.

"I have never exposed any patient to treatment risks for reasons which were not ethically and medically appropriate, and I did not do so in the matter into which you are inquiring," Thomas wrote.

In his letter, Hansen noted he was not the principal investigator on Protocol 126, and in fact had "no involvement" in it while working for Genetic Systems.

However, Hansen was named as the second author in several papers on the clinical trial. He was Martin's mentor and supervisor. And he received copies of

all the key correspondence from The Hutch even while he was working at the private company holding commercial licenses for the antibodies.

In September 1997, with the case still unresolved, Miller left the state Medical Quality Assurance Commission and its investigating team.

With his departure, this investigation died.

The commission closed the complaint, citing "no cause for action," in January 1998, three years after Pesando's letter.

Miller says he was "saddened and alarmed" by the lack of follow through.

At a minimum, he said in an interview, the commission should have acted on ethical violations by Thomas and Hansen for influencing a study of materials licensed to the company in which they owned stock.

"To me, what Dr. Thomas did and the other doctor did was a clear conflict of interest," Miller said in an interview. "I think that's a pretty obvious, well-known ethical principle."

Dr. David Williams, an internist who chaired the state Medical Quality Assurance Commission at the time, was one of two doctors who personally reviewed the case. He says now that he, too, was not satisfied with the outcome.

"There still remained some doubt in our mind," he said. "I was never truly satisfied that the protocol had been written in a manner that was truly appropriate."

'Just trying to do our duty'

Through it all - unresponsive bureaucrats, half-baked investigations, patronizing letters - John Pesando, now age 55, persisted. He was both haunted and motivated, he says, by the memory of two of his patients who died in the experiment - Ruth Fisher, a 40-year-old computer programmer from California, and Jacqueline Couch, a 32-year-old lawyer for the city of New York.

He took it personally when people died on his watch and when he was, in his view, pushed out of The Hutch for raising his voice in favor of ethics and patient safety.

His quixotic quest both frustrated and frightened his wife, Patricia, who worried about his reputation.

But he kept pushing. Pushing until he got the attention of reporters at The Seattle Times, who took up the investigation.

Survivors of patients who died in Protocol 126 are grateful for that persistence.

Pete Wright of Heflin, Ala., whose wife, Becky, died in 1987, said: "I might slough this off to sour grapes if I didn't know Dr. Pesando. But I have nothing but respect for him."

Wright says that while caring for his wife, Pesando never talked about conflicts of interest or research misconduct, though he did try to talk them out of enrolling in the experiment on medical grounds.

"We were not looking for trouble," Pesando said. "We were just trying to do our duty and take care of patients."

2001 - Seattle Times Special Report - Uninformed Consent - "THE FINANCIER"

http://special.seattletimes.com/o/uninformed_consent/financier/story2a.html

2001-the-seattle-times-website-special-report-uninformed-consent-the-financiers.pdf

Here, based on financial records in the public domain, are some of the progeny of "Mother Hutch":

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WHO LEFT THE HUTCH...

- [**Dr. Robert Charles Nowinski (born 1945)**]
- Drs. Christopher Henney and Steven Gillis
- Dr. Ronald Berenson
- Drs. James Bianco, Jack Singer and George Todaro
- Dr. Steven Friend
- Dr. Robert Day
- Dr. C. Dean Buckner
- Drs. W. Michael Gallatin and Thomas T. John

WHO STAYED...

- Dr. Fred Appelbaum
- Dr. Lawrence Corey
- Drs. A.G. (Dusty) Miller, Philip Greenberg and Stanley Riddell
- Dr. John Hansen
- [**Dr. Edward Donnall "Don" Thomas (born 1920)**]

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[**Dr. Robert Charles Nowinski (born 1945)**]

He joined The Hutch at age 30 to make "magic bullets" - antibodies that might zero in on cancer cells. He had high hopes and $500,000 in public funding.

After five years, recruited by entrepreneur [**David Abraham Blech (born 1955)**], Nowinski left to co-found Genetic Systems Corp. His Hutch connections were central: He negotiated the exclusive licensing rights to 37 antibodies from the center, sublicensing many to another company for $3.7 million.

Nowinski appointed [**Dr. Edward Donnall "Don" Thomas (born 1920)**], head of the clinical oncology program at The Hutch, to Genetic Systems' scientific advisory board, giving him 100,000 shares of stock at a penny a share. Dr. John Hansen of The Hutch was appointed the company's medical director and given 250,000 shares. Those shares were worth millions almost overnight.

Nowinski's own stock and options were worth $10 million when Bristol-Myers bought Genetic Systems for $294 million in 1986.

Nowinski moved on to co-found Icos Corp., turning back to The Hutch for a dozen hires. Icos, of Bothell, is conducting human tests on four drugs that may offer relief from multiple sclerosis, heart attacks, strokes, asthma and - perhaps most exciting for investors - impotence.

Nowinski also founded PathoGenesis Corp. of Seattle, which sold a treatment for cystic fibrosis. He paid $22,500 for stock now worth millions.

Next, he founded [**VaxGen, Incorporated**], in Brisbane, Calif., with Dr. Donald Francis, longtime director of the AIDS laboratory at the Centers for Disease Control. Nowinski owns $5.8 million in VaxGen stock. Now age 56, he resigned as chief executive three months ago (2001), citing unspecified health concerns.

EVIDENCE TIMELINE

1972 — Fred Hutchinson Cancer Research Center founded

See https://en.wikipedia.org/wiki/Fred_Hutchinson_Cancer_Research_Center

"The "Hutch," one of the comprehensive cancer centers nationwide, was established through the efforts of Dr. William Hutchinson, brother of baseball hero Fred Hutchinson, and Washington state's legendary U.S. Senator Warren Magnuson [https://en.wikipedia.org/wiki/Warren_Magnuson ... who in 1936 filled the seat of .. https://en.wikipedia.org/wiki/Marion_Zioncheck]. The Hutchinson Center is the technology foundation of many biotechnology companies in Washington State. " (Source : Washington State Life Science(.com) : [HI002S][GDrive])

WHY?

Magnuson was first elected to the House of Representatives in 1936, filling a vacancy caused by the sudden death of fellow Democrat Marion Zioncheck on August 7, 1936. In 1937, along with senators Homer Bone and Matthew Neely, Magnuson introduced the National Cancer Institute Act, signed into law by Franklin Roosevelt on August 5 of that year.[11] He was reelected in 1938, 1940, and 1942. After the Attack on Pearl Harbor, Magnuson was a staunch supporter of the U.S. war effort.[12]

Magnuson served most of his tenure in the Senate alongside his friend and Democratic colleague from Washington State, Henry M. "Scoop" Jackson. Stat notes - Warren G. Magnuson Health Sciences Building at the University of Washington's Health Sciences building complex was named in his honor in 1970.

- Warren G. Magnuson Clinical Center at the National Institutes of Health in Bethesda, Maryland is also named for Senator Warren Magnuson.

1976 - Nowinski.. teaching THE only virology class (MICRO 540) at University of Washington

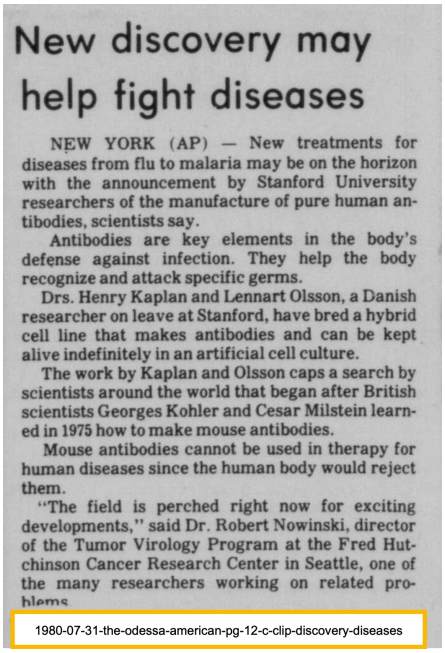
Source : 1976-1978 University of Washington General Catalog : [HE003M][GDrive] / See clip at [HE0042][GDrive] , or **Dr. Robert Charles Nowinski (born 1945)**

1980 (July 31)

Full newspaper page : [HN01J8][GDrive]

The "British researchers" are Georges Kohler and Cesar Milstein

https://en.wikipedia.org/wiki/Georges_J._F._Köhler / https://en.wikipedia.org/wiki/César_Milstein



New discovery may help fight diseases

NEW YORK (AP) — New treatments for diseases from flu to malaria may be on the horizon with the announcement by Stanford University researchers of the manufacture of pure human antibodies, scientists say.

Antibodies are key elements in the body's defense against infection. They help the body recognize and attack specific germs.

Drs. Henry Kaplan and Lennart Olsson, a Danish researcher on leave at Stanford, have bred a hybrid cell line that makes antibodies and can be kept alive indefinitely in an artificial cell culture.

The work by Kaplan and Olsson caps a search by scientists around the world that began after British scientists Georges Kohler and Cesar Milstein learned in 1975 how to make mouse antibodies.

Mouse antibodies cannot be used in therapy for human diseases since the human body would reject them.

"The field is perched right now for exciting developments," said Dr. Robert Nowinski, director of the Tumor Virology Program at the Fred Hutchinson Cancer Research Center in Seattle, one of the many researchers working on related problems

1980-07-31-the-odessa-american-pg-12-c-clip-discovery-diseases

[HN01J9][GDrive]

1980 — Bayh-Dole Act provides for university technology transfer.

" This Act, introduced by senators Birch Bayh (Indiana) and Robert Dole (Kansas), provided for legal transfer of research and technology from U.S. universities and federal laboratories to private companies for commercialization. " (Source : Washington State Life Science(.com) : [HI002S][GDrive])

https://en.wikipedia.org/wiki/Bayh%E2%80%93Dole_Act

- **Introduced in the House as** H.R. 6933 **by** Robert Kastenmeier (D-WI) **on** March 26, 1980
- **Committee consideration by** House Judiciary, House Government Operations, Senate Judiciary
- **Passed the House on** November 17, 1980 (passed)
- **Signed into law by President** Jimmy Carter **on** December 12, 1980

1981 — Immunex Corporation established.

"Immunex Corporation, the largest biotechnology company in the Pacific Northwest, was founded by Steven Gillis and Christopher Henney, from the Hutchinson Cancer Research Center and Stephen Duzan. The company, dedicated to improving lives through immune system science innovation, was acquired by Amgen in July 2002. " (Source : Washington State Life Science(.com) : [HI002S][GDrive])

Note - Not sure if there is any relation of Immunex and Genetic Systems

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1981 (May)

https://www.newspapers.com/image/571218156/?terms=%22genetic%20systems%20corp%22&match=1

1981-05-17-the-spokesman-review-spokane-wa-pg-a-21-clip-genetic-systems

The Spokesman-Review (Spokane, Washington) · 17 May 1981, Sun · Page 21

Seattle genetic firm seeking $6 million

SEATTLE (AP) — A Seattle-based firm called Genetic Systems Corp., involving medical researchers prominent in genetic engineering and research for treatment of cancer and venereal diseases, is trying to raise $6 million in a public stock sale to bankroll the new company.

The company hopes to produce kits to diagnose venereal diseases quickly. Using similar antibody technology, the firm might produce kits to treat CMV disease, which kills about 30 percent of bone marrow transplant patients and could treat pseudomonas, a major killer of burn patients.

The company would use some technology developed at Seattle's Fred Hutchinson Cancer Research Center.

The company plans to develop another kit that uses genetic technology to identify the identity of a father of a baby, providing a legal tool to be used in paternity cases.

The new company is budgeting $750,000 for a new laboratory, $600,000 on marketing and $2.2 million for research and development of antibody technologies.

The preliminary prospectus cautions that buying Genetic Systems stock is risky because of the maze of regulatory obstacles the company faces in marketing new medical goods.

For the public investors, it is an opportunity to take a high-risk gamble on an infant company in the the hot — and possibly very profitable — "biotechnology" industry.

Three million shares will be sold by D.H. Blair & Co Inc., New York investment bankers who specialize in start-up companies, and are likely to go to market before the end of this month.

The original investors paid an average 12 cents a share when they set up the company last winter. The public stock sale will provide a huge increase in the value of their shares, at least on paper.

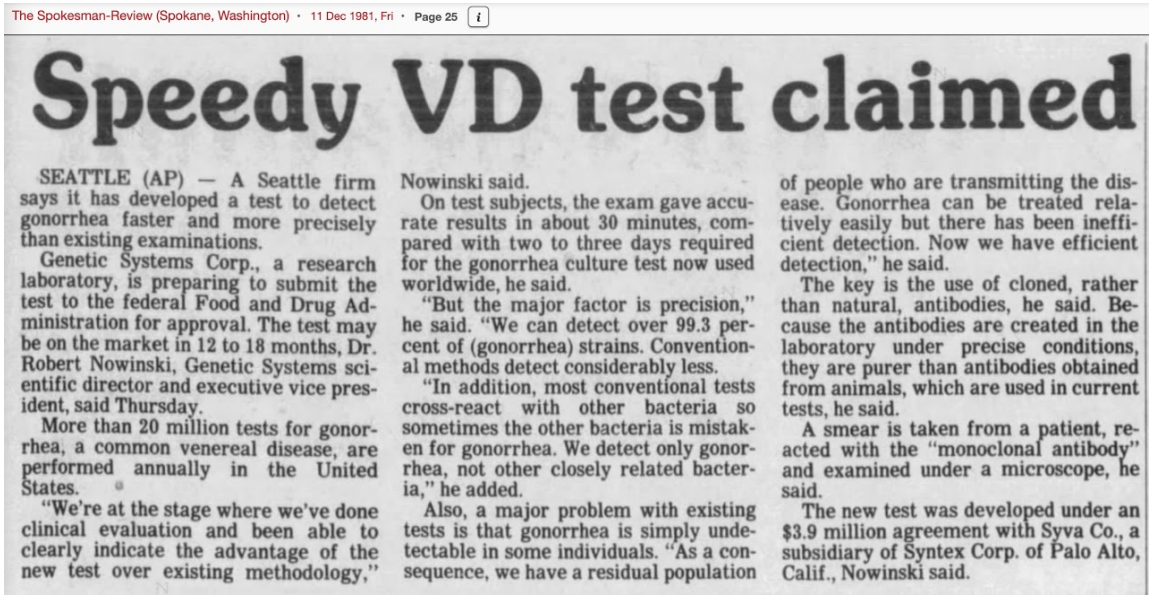
The founder, scientific director and soon-to-be executive vice president of the new firm is Robert Nowinski, head of a cancer research group at the Hutchinson Center. Nowinski's group was the first in the nation to treat leukemia with artificial antibodies.

The center, a non-profit institute, has sold to the new company exclusive rights to antibodies already developed at Hutchinson. The center will get varying royalties, depending on who the buyer is.

1981 (Dec 11)

https://www.newspapers.com/image/572009475/?terms=%22genetic%20systems%20corp%22&match=1

1981-12-11-the-spokesman-review-spokane-wa-pg-25-clip-vd-test



The Spokesman-Review (Spokane, Washington) · 11 Dec 1981, Fri · Page 25

Speedy VD test claimed

SEATTLE (AP) — A Seattle firm says it has developed a test to detect gonorrhea faster and more precisely than existing examinations.

Genetic Systems Corp., a research laboratory, is preparing to submit the test to the federal Food and Drug Administration for approval. The test may be on the market in 12 to 18 months, Dr. Robert Nowinski, Genetic Systems scientific director and executive vice president, said Thursday.

More than 20 million tests for gonorrhea, a common venereal disease, are performed annually in the United States.

"We're at the stage where we've done clinical evaluation and been able to clearly indicate the advantage of the new test over existing methodology," Nowinski said.

On test subjects, the exam gave accurate results in about 30 minutes, compared with two to three days required for the gonorrhea culture test now used worldwide, he said.

"But the major factor is precision," he said. "We can detect over 99.3 percent of (gonorrhea) strains. Conventional methods detect considerably less.

"In addition, most conventional tests cross-react with other bacteria so sometimes the other bacteria is mistaken for gonorrhea. We detect only gonorrhea, not other closely related bacteria," he added.

Also, a major problem with existing tests is that gonorrhea is simply undetectable in some individuals. "As a consequence, we have a residual population of people who are transmitting the disease. Gonorrhea can be treated relatively easily but there has been inefficient detection. Now we have efficient detection," he said.

The key is the use of cloned, rather than natural, antibodies, he said. Because the antibodies are created in the laboratory under precise conditions, they are purer than antibodies obtained from animals, which are used in current tests, he said.

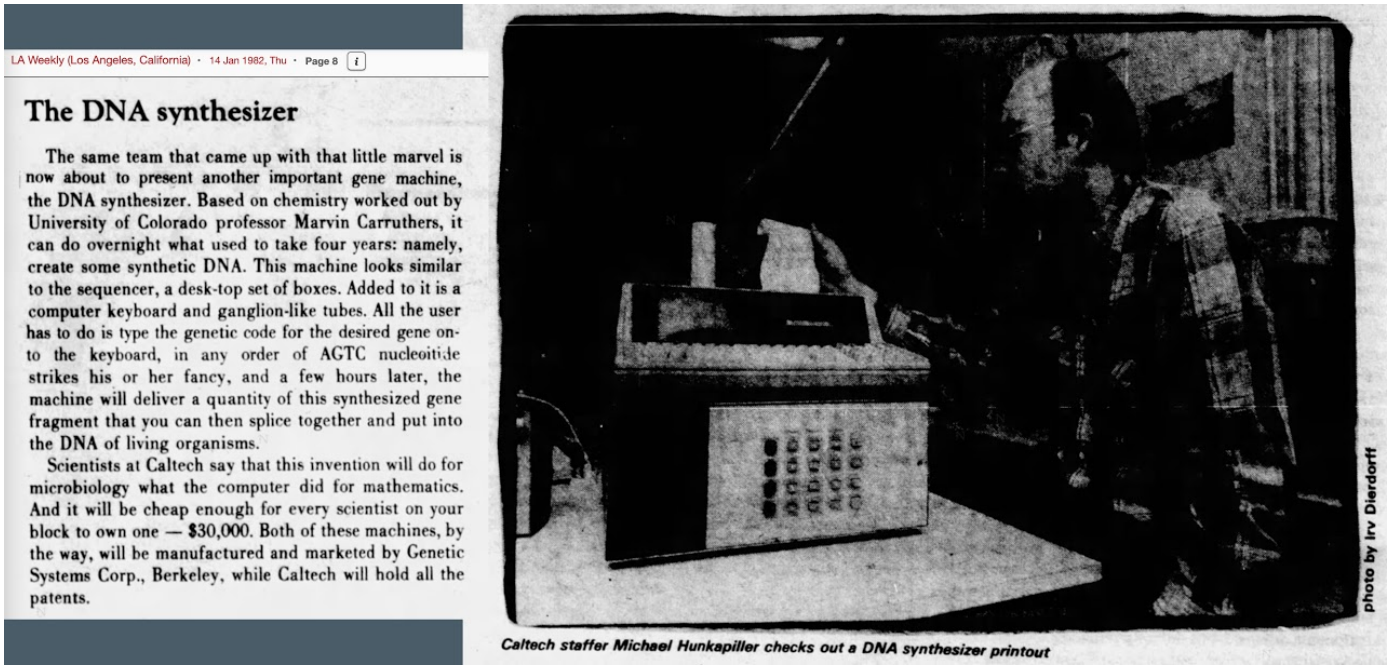
A smear is taken from a patient, reacted with the "monoclonal antibody" and examined under a microscope, he said.

The new test was developed under an $3.9 million agreement with Syva Co., a subsidiary of Syntex Corp. of Palo Alto, Calif., Nowinski said.

1982 (Jan 14)

https://www.newspapers.com/image/579013627/?terms=%22genetic%20systems%20corp%22&match=1

1982-01-14-l-a-weekly-pg-8-clip-dna-synthesizer



LA Weekly (Los Angeles, California) · 14 Jan 1982, Thu · Page 8

The DNA synthesizer

The same team that came up with that little marvel is now about to present another important gene machine, the DNA synthesizer. Based on chemistry worked out by University of Colorado professor Marvin Carruthers, it can do overnight what used to take four years: namely, create some synthetic DNA. This machine looks similar to the sequencer, a desk-top set of boxes. Added to it is a computer keyboard and ganglion-like tubes. All the user has to do is type the genetic code for the desired gene onto the keyboard, in any order of AGTC nucleotide strikes his or her fancy, and a few hours later, the machine will deliver a quantity of this synthesized gene fragment that you can then splice together and put into the DNA of living organisms.

Scientists at Caltech say that this invention will do for microbiology what the computer did for mathematics. And it will be cheap enough for every scientist on your block to own one — $30,000. Both of these machines, by the way, will be manufactured and marketed by Genetic Systems Corp., Berkeley, while Caltech will hold all the patents.

photo by Irv Dierdorff

Caltech staffer Michael Hunkapiller checks out a DNA synthesizer printout

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1982 (Feb 10)

https://www.newspapers.com/image/567194921/?terms=%22genetic%20systems%20corp%22&match=1

1982-02-10-the-spokesman-review-spokane-wa-pg-5-clip-genital-herpes

Spokane Chronicle, Wed., Feb. 10, 1982 5

New test developed for genital herpes

SEATTLE (UPI) — Scientists at Genetic Systems Corp. announced Tuesday they have developed a test that diagnoses genital herpes, a severe venereal infection, in only 45 minutes in comparison to the standard test that requires two or three days.

The development was announced by Dr. Robert Nowinski, scientific director of Genetic Systems, a pioneer in the new field of monoclonal antibody technology.

"Genital Herpes has become virtually epidemic," Nowinski said. "Approximately 10 million people are infected with the disease in the United State alone, and 400,000 to 600,000 new cases occur each year. With expected new treatments for herpes, the rapid and accurate diagnosis of this disease is becoming critically important."

Genetic Systems' test is performed by taking a patient specimen and directly reacting it with a monoclonal antibody. Presence of the herpes virus can then be readily identified under the microscope by the staining pattern of the cells.

Genetic Systems' monoclonal antibodies against herpes are part of the company's three-year $3.9 million product development and marketing agreement with Syva Co., a subsidiary of Syntex Corp.

Under the agreement, Genetic Systems, in conjunction with Syva, is developing a wide range of products for diagnosing venereal diseases, including herpes viruses, gonorrhea, chlamydia and syphilis.

These products, which require FDA approval, will be marketed by Syva under a joint Syva-Genetic Systems label.

1982 (May 01)

Full newspaper page : [HN01J6][GDrive]

Genetics for profit

Scientist mixes business with research

By BILL DIXON
Of the Statesman-Journal

It's one thing to be a pioneer in science and quite another to be a pioneer in business.

Robert Nowinski is trying to be both.

"The mix of my life has changed substantially," Nowinski said, "from being a pure scientist to being a business scientist. It's a very enjoyable mix."

Nowinski was in Salem on Friday to tell physicians at Salem Hospital Memorial Unit about the promise he sees for biotechnology in general and his company, Genetic Systems Corp. of Seattle, in particular.

Biotechnology makes it possible for man to replicate or enhance life processes. In Nowinski's case, that has meant the discovery and mass production of a kind of police force against disease.

Two years ago, Nowinski never would have made the trip to Salem — at least not as a salesman. Then, at the age of 34, he was a leader in antibody research with a professorship at the University of Washington and a budget of more than $600,000 a year.

That was before Nowinski helped found Genetic Systems in November 1980. Now he is the scientific director and executive vice president of an $8 million operation that has yet to sell a product on the open market.

The first Genetic Systems product, a diagnostic antibody for a venereal disease called chlamydia, will be out near the end of this year, Nowinski said. Starting next year the company will market a test for herpes that is faster and more accurate than current methods, he said.

And the company is working with Cutter Laboratories Inc. in Berkeley, Calif., to develop a treatment for pseudonomas, an antibiotic-resistant bacteria that is a major cause of death among burn and cancer victims.

In order for Genetic Systems to survive, Nowinski said, he has to split his time between research and business.

Nowinski's work revolves around monoclonal antibodies, one of the offshoots of a biotechnology revolution that began in the mid-1970s.

"Antibodies are natural molecules that our bodies make for defense," Nowkinski said. "They bind to the substances they are made against, so they can be used for identification. And they can inactivate the substances that they bind to."

The problem with antibody production, Nowinski said, is that each antibody works against only one substance, or antigen. But animals and humans, who are the breeding ground for the antibodies used by science, produce many antibodies at once. Until recently, there was no way to extract a specific antibody or mass produce it.

Since the antibodies had to come from living subjects, there was an inherent limit on how long any antibody might be available. Once the host died, you had to start all over again.

But in 1975, Nowinski said, two British researchers took a giant step toward solving those problems.

With their method, as in the past, a living host receives an injection of an antigen and responds by growing cells to produce antibodies. There the two paths separate.

Using the new method, cells are removed from the host's spleen and separated to obtain a batch of the specific antibody producers. Then those cells are fused with cancer cells in a mixture that contains polyethylene glycol, an ingredient of anti-freeze.

Nowinski said cancer cells are used because they are "immortal" — that is, unlike other cells, cancer cells will continue to grow indefinitely given the proper living conditions.

The spleen-cancer hybrid cells are selected and put into test tubes, where they reproduce without changing, or clone. If all goes well, the hybrid cells are then used to produce a single antibody. Hence the name monoclonal antibody.

So far, that part of Nowinski's work has gone well. In 1980 he and his research team at the Fred Hutchinson Cancer Research Center in Seattle were the first to use monoclonal antibodies to treat cancer in mice. Last year, the same team was among the first three in the world to demonstrate production of human monoclonal antibodies.

Making Genetic Systems profitable hasn't been an automatic process, but Nowinski said the signs are encouraging.

Despite a $400,000 loss its first year and a predicted loss of somewhere between $500,000 and $1 million this year, the company's policy of obtaining support before it starts to develop a product should stand it in good stead, Nowinski said.

The potential for developing products is tremendous, Nowinski said. Within 20 years, he said, biotechnology and genetic engineering will produce big advancements not only in medicine but also in agriculture and industry.

ROBERT NOWINSKI

But for now, a company like Genetic Systems still has to sell itself.

"We don't have a track record right now," Nowinski said, "but we're an exciting possibility."

[HN01J7][GDrive]

1983 (July 11) - NYTimes : "BIRTH OF A HEALTH-CARE CONCERN"

By N.r. Kleinfield, July 11, 1983, Section D, Page 1 / Source : [HN01IX][GDrive]

The New York Times/Doug Wilson

Robert Nowinski, left, scientific director of the Genetic Systems Corporation of Seattle, and James Glavin, the company's president.

[HN01IY][GDrive]

The formula for striking it rich used to involve oil wells. Then it was computers. Now the key phrase is health care. Michael Le Coney, a health-care analyst at Merrill Lynch, figures that there is no easier way to raise money than to start a healthcare company. At a clip of something like one a week, new entrants with big dreams and scant revenues are going public. Investors pounce. Stock prices soar. "Seemingly anybody can do it," Mr. Le Coney says. "It's beyond belief."

This is the story of how one health-care company - the Genetic Systems Corporation - sprang from a magazine article and a well-timed phone call and has begun to hit paydirt. The Blech Brothers

In the summer of 1980, [**David Abraham Blech (born 1955)**] was a 24-year-old stockbroker on Wall Street. His brother, Isaac, was 30, working in advertising and public relations. Any spare dollars they had, they gambled in hightechnology companies. Their stockpile of money grew. And so one inspired day, David Blech told his brother, let's start a company.

Health and health-care costs were already hot topics, so the Blechs were thinking health care. **About this time, Wall Street was responding enthusiastically to a new technology known as genetic engineering. Sounds good, the Blechs thought, but they felt they had to identify a "short-term hit," some aspect that could put a product on the market in a few years and thus show backers what the end of the rainbow looked like. As David Blech puts it, "We weren't Monsanto."**

One day he picked up a copy of The Sciences magazine and spied an article entitled ''Immortalizing Immunity'' that dealt with monoclonal antibodies. He didn't know what in the world they were. He read on.

Production of Antibodies

He found that antibodies are proteins produced by the human body to fight off invading organisms. They are valuable in detecting infections as well as in treating diseases. The recent development of so-called hybridoma technology, the article noted, allowed mass production of antibodies. By fusing cells that normally produce antibodies with tumor cells, hybrid cells are formed which are tantamount to little factories that continuously churn out highly defined strains known as monoclonal antibodies.

In the article, the author suggested that hybridoma technology could have an effect on medicine ''comparable to the transformation of electronics by the transistor.''

Lights flashed in David Blech's mind. ''When you've been on Wall Street for five years and you see an analogy like that,'' he recalled, ''you get excited.''

So the brothers hired the author of the magazine article, plus several other medical experts, to help them dig up a scientist as the nucleus of their company. Finding a Scientist

Robert Nowinski, an esteemed microbiologist immersed in monoclonal antibody work at the Fred Hutchinson Cancer Research Center in Seattle, drew repeated good comments. He had been mentioned in the Sciences article, since he had produced an antibody capable of curing mice of leukemia.

[THIS IS THE RESEARCH ... It was Nowinski's.. but why was he not mentioned ???
https://special.seattletimes.com/o/uninformed_consent/whistleblower/story1.html]

[David Abraham Blech (born 1955)] placed a call to Seattle. Curiously, around this time Mr. Nowinski was himself mulling over starting a company. Except what did he know about raising money? Mr. Nowinski would later say, ''Literally through a phone call, Genetic Systems was started.''

The New Yorkers and the Seattle scientist hit it off and agreed that a company built around Mr. Nowinski as scientific director would be a winner. Wary that the Blechs might not be able to raise adequate money, Mr. Nowinski set milestones to test their mettle. Within six weeks, they had to have $1 million in hand. Within six months, the kitty had to be $3 million to $4 million.

A crucial fact the Blechs wanted to know was how soon a product could leave the labs. Making a guess, Mr. Nowinski said a year or two. That seemed promising, so in November 1980 the company was incorporated. ''It's fair to say,'' Mr. Nowinski comments, ''that this was started out by a group of determined novices.''

The Blechs put up about $200,000 of their own money, which represented much of their worth. The Search for Money

Hunting for more dollars, the group visited Schroders Inc., the financial services company. They found a receptive audience in John Connor, Schroders' chairman, who had once been president of Merck & Company, the giant drug concern.

''I was very much impressed by the modesty of the scientist,'' he recalled. ''All of them were aware of their limitations and thought they should hire in their bosses. They haven't tried to do everything themselves but have stuck to their own knitting.''

In February 1981, Schroders acted as the lead institution in a private placement that raised $1 million for Genetic Systems. Money kept rolling in. That May, the Syntex Corporation, a pharmaceutical company familiar with Mr. Nowinski, called and struck a $3.9 million, three-year research and marketing deal. Syva, a Syntex unit, would fund Genetic System's research into products to diagnose sexually transmitted diseases and then market the products to clinics. Genetic Systems would get a royalty on sales.

Syntex and its investment banker, Allen & Company, also chipped in $1.5 million for about a 12 percent stake in Genetic Systems. Several more deals were made with other drug makers. President Recruited

Meanwhile, a president was recruited - James Glavin, who had been vice president of sales and marketing for Oximetrix, a maker of medical devices.

Next, the Blechs met with D.H. Blair & Company in hopes of having them underwrite a public offering. Blair was at once receptive, and in June 1981 a public offering at $2 a share swiftly pulled in $6.6 million.

In January, the first product appeared, a diagnostic test for chlamydia, a sexually transmitted infection that afflicts an estimated 10 million people a year. The test can be read in two days, rather than the six required by earlier tests, and is easier to perform. Genetic Systems makes the antibodies for it and Syva assembles them into kits and sells them. Last week, a second product was introduced, a test for herpes. Longer-Range Plans

Down the road, Mr. Nowinski expects to move from diagnosing diseases to treating them. His team is also addressing respiratory and hospital-acquired infections, as well as researching the use of antibodies to type cells in connection with transfusions and organ transplantation. A long-term focus is cancer; a joint venture with Syntex is aimed at developing tests and treatments for cancer.

Revenues are just beginning to trickle in, though Genetic Systems has not yet made any money. Losses amounted to $401,000 and $1 million in its first two years. But Wall Street has heady hopes for the concern. A recent Paine Webber analysis predicted sales of perhaps $170 million by 1988.

In April, Merrill Lynch was the lead underwriter on an offering of 2.2 million shares that attracted an added $21.7 million of working capital. The company's stock, traded over-the-counter, is currently selling at about $15, putting the company's market value at a cool $270 million. Each of the Blechs owns close to one million shares. David concentrates on the company's strategic planning, while Isaac focuses on promotion.

The brothers, who work out of New York, have had such a grand time starting a company that they have since spawned three others - DNA Plant Technology, an agricultural genetics company; Laser Technics, which makes laser systems, and Nova Pharmaceutical, which is aimed at devising drugs to test compounds for their appropriate usage.

1984 (August)

https://www.nytimes.com/1984/08/18/business/a-genetics-breakthrough-is-reported.html

1984-08-18-nytimes-a-genetics-breakthrough-is-reported.pdf

A GENETICS BREAKTHROUGH IS REPORTED

By Stuart Diamond

- Aug. 18, 1984

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August 18, 1984, Section 1, Page 31Buy Reprints

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A biotechnology research company says it has produced the first commercial levels of human monoclonal antibodies for the treatment of disease.

Leading experts yesterday described the discovery by the Genetic Systems Company as very significant. Monoclonal antibodies are produced in a laboratory to seek out the substances that cannot be overcome by the body's own antibodies or on which vaccines cannot be used.

Fighting Disease

Until now, only small amounts of human antibodies could be produced in the laboratory. The antibodies, which specify disease organisms in the body for destruction, are products of the recent biotechnology revolution. They are thought to hold the key to an eventual cure of diseases such as cancer.

The commercial breakthrough was made by a team under the direction of Dr. Robert C. Nowinski, a respected microbiologist who is president of Genetic Systems and a pioneer in the development of human monoclonal antibodies. In a series of interviews, Dr. Nowinski said he had produced human monoclonal antibodies at concentrations of more than 100 micrograms per milliliter - 20 to 100 times greater than previous laboratory production. He said he had used a proprietary process for which the company received a patent last week.
Dr. Nowinski said the process enables the production of a range of human antibodies a thousand times broader than with previous processes. That means that researchers would have a much better chance of finding specific antibodies that cure diseases, he said.

"The significance here is that we now have a practical method to make human antibodies for therapy," he said. "It is no longer on a laboratory scale, but on a commercial scale."

The company, which is based in Seattle, was founded in 1980. It had a 1983 loss of $1.5 million on sales of $6 million. Nelson M. Schneider, who follows biotechnology at E. F. Hutton & Company, said Genetic Systems is regarded as a company that "combines good science with good commerce." He added that the company is in the developmental stage and well financed and that it has good prospects.

The company's stock, traded over- the-counter, was bid yesterday at $6.50, down from $17.75 at one point last year but up from $4.75 about a month ago.

Genetic Systems has helped develop very rapid tests using monoclonal antibodies to detect major venereal diseases and it is developing diagnostic tests for other ailments.

So far, Genetic Systems has isolated one antibody for commercial production. It is a serum to fight bacteria called pseudomonas, which cause infections that are the major killer of burn victims. The bacteria also infect people with chronic diseases such as cystic fibrosis and cancer. Dr. Nowinski said that small amounts of the antibody had cured pseudomonas infections in mice and that clinical trials were expected soon by the Cutter Group of Miles Laboratories, a subsidiary of Bayer A.G. of West Germany. Cutter collaborated on the research.

'If True, Impressive'

Dr. Jeffrey Schlom, chief of the tumor immunology laboratory at the National Cancer Institute and also a pioner in human monoclonal antibody research, yesterday called the innovation "very important." But he cautioned that he had not seen the research and that the discovery would have to pass clinical trials. Dr. Carlo M. Croce, a geneticist at the Wistar Institute in Philadelphia and another respected antibody researcher, said the innovation, "if it is true, would be very impressive." But he said it is hard to make a firm judgment without seeing the research results.

Antibodies find and attack substances foreign to the body, such as viruses and bacteria. Until now, research has concentrated on monoclonal antibodies produced from mice for use in disease diagnosis. It has been shown that mouse antibodies, which can be produced in large quantities, have limited use in the treatment of humans.

1985 (Oct 25)

https://www.newspapers.com/image/317495771/?terms=%22genetic%20systems%20corp%22&match=1

1985-10-25-the-central-new-jersey-home-news-pg-27-clip-genetic-systems-bought.jpg

The Central New Jersey Home News (New Brunswick, New Jersey) · 25 Oct 1985, Fri · Page 27

Bristol-Myers to buy Genetic Systems Corp.

NEW YORK (AP) — Bristol-Myers Co. has agreed to pay up to $294 million in stock to buy Genetic Systems Corp., a Seattle-based maker and developer of medical products.

Bristol-Myers, a major manufacturer of consumer health care and household products, agreed to buy Genetic Systems for $10.50 per share, payable in Bristol-Myers stock, officials of both companies announced Wednesday.

Genetic Systems uses biotechnological methods such as recombinant DNA technology in the creation, development, marketing and manufacture of medical products.

The five-year-old company has about 23.2 million common shares outstanding, with warrants and options for the issuance of another 4.8 million shares.

Stockholders would receive Bristol-Myers common stock based on its average closing price in the 10 trading days immediately before stockholders meet to vote on the acquisition, which also must be approved by the two companies' boards of directors.

Genetic Systems in May agreed in principle to sell 4.7 million shares of its stock at $8.50 a share to Syntex Corp., which already holds 500,000 of the company's shares.

The $39.9 million deal, in which Syntex also was to invest $20 million in research and development programs over five years, has not been voted on yet by Genetics Systems stockholders.

Officials for Syntex, a health care company based in Palo Alto, Calif., and Genetic Systems said they were unsure what effect the Bristol-Myers purchase would have on future relations between their companies.

But they said they did not believe the acquisition of Genetic Systems would affect Syntex's ownership of the Oncogen cancer research venture owned by the three firms.

1986 (April 10)

Full newspaper page : [HN01J4][GDrive]

A-2 Appeal-Democrat (Marysville-Yuba City, CA.) Thursday, April 10, 1986

Scientists modify smallpox vaccine to fight AIDS

Researchers plan to seek approval before end of year to begin testing new version of vaccine on humans

c.1986 N.Y. Times News Service

NEW YORK — Scientists have remodeled the most successful of all vaccines and plan to seek approval before the end of the year to test it on humans as a protection against AIDS.

The new vaccine was modified from the vaccinia virus, the only vaccine that has eradicated a human disease, smallpox.

Experts had estimated that the first successful AIDS vaccine would not be developed before the 1990s. If the next stages of the current research are successful, that timetable might be shortened considerably.

Before the drug is tested on humans, approval would have to be obtained from the Food and Drug Administration.

Two research teams successfully used genetic engineering techniques to remodel the vaccinia virus to carry a key gene of the AIDS virus. The gene directs the production of two proteins that act as a disguise, in effect fooling a cell into treating the vaccinia virus like an invading AIDS virus.

Vaccinia virus vaccine, by far the most widely used vaccine ever developed against human disease, has not been used for the general population since smallox was conquered almost a decade ago.

In the new experiments, mice infected with the remodeled vaccinia virus developed antibodies against the AIDS virus. One of the research teams also reported that the virus evokes antibody production in monkeys; their response is likely to be more relevant to the prospects in humans.

Neither research group has yet demonstrated that the antibodies protect against infection with AIDS virus. Studies on this point are in progress. Antibodies are best known for their ability to help the immune system protect against virus invasion, and conventional vaccines work by stimulating the body to produce antibodies against an invader.

AIDS is such an unusual disease, however, that protection by antibodies cannot be taken for granted without direct proof. AIDS patients themselves have antibodies against the virus, but evidently get no protection from them. In addition, the AIDS virus is unusually variable in its chemistry. Whether this would affect a vaccine is still unknown.

An advantage of using either the remodeled vaccinia virus or the purified AIDS virus protein is that neither would pose a risk of producing the disease AIDS in the recipient.

In the April 10 issue of Nature, scientists at the National Institutes of Health in Bethesda, Md., and a group from subsidiaries of the Bristol-Myers Co. in Seattle reported success in splicing a key gene of the AIDS virus into vaccinia virus.

The gene is the blueprint for two surface proteins of the AIDS virus: one is necessary to the process by which the virus attaches to and invades cells, the other has important structural functions. In the animal tests, cells innoculated with the modified vaccinia virus react as if they had been invaded by an AIDS virus and produce antibodies against it.

Although the two research groups worked independently of one another, they accomplished essentially the same feat. Both remodeled the vaccinia virus and demonstrated that it could be used to produce the AIDS virus proteins in their natural form and evoke antibody production in experimental animals.

"We consider it to be a critical step," said Dr. Robert Nowinski of the Bristol-Myers group.

He and his colleagues at the drug company's biotechnology subsidiaries in Seattle said they are planning to test the remodeled virus soon to see if it can protect chimpanzees against AIDS virus infection. Their group reported sucessful antibody production in seven of eight monkeys tested.

Nowinski and Dr. George Todaro of the Seattle group said that by the end of this year, they expect to ask the Food and Drug Administration for permission to start safety testing of their experimental vaccine in human volunteers.

Authors of the report from the national institutes are Dr. Sekhar Chakrabarti and Dr. Bernard Moss of the National Institute of Allergy and Infectious Diseases and Dr. Marjorie Robert-Guroff, Dr. Flossie Wong-Staal and Dr. Robert C. Gallo of the National Cancer Institute. The institutes are major units of the National Institutes of Health.

Dr. Shiuu-Lok Hu and Steve G. Kosowski of Oncogen, a Bristol-Myers subsidiary in Seattle and Dr. Joel M. Dalrymple of the Army Medical Research Institute of Infectious Diseases, Frederick, Md., are the authors of the other report.

[HN01J5][GDrive]

1987 (Feb) - " MIT Enterprise Foundation sponsored a symposium called Technology Northwest II in Seattle. This photo from the symposium shows, from left to right, Immunex founder Steve Duzan, Genetic Systems founder Bob Nowinski, and Microsoft founder Bill Gates talking before a panel discussion."

Steve Duzan, **Dr. Robert Charles Nowinski (born 1945)**, and Bill Gates at Technology Northwest II symposium, February 27, 1987 / Source : [HI002N] [GDrive]

Property of Museum of History & Industry, Seattle

In February 1987, the MIT Enterprise Foundation sponsored a symposium called Technology Northwest II in Seattle. This photo from the symposium shows, from left to right, Immunex founder Steve Duzan, Genetic Systems founder **Dr. Robert Charles Nowinski (born 1945)**, and Microsoft founder Bill Gates talking before a panel discussion.

1987 (March 27) - Article mentions Fauci and Nowinski

https://www.newspapers.com/image/461478313/?terms=fauci%20nowinski&match=1

1987-03-27-the-san-francisco-examiner-pg-a-10-clip-aids-vaccine

A-10 Friday, March 27, 1987 ★ San Francisco Examiner

Human testing of AIDS vaccines draws nearer

By Lisa Krieger
EXAMINER MEDICAL WRITER

WASHINGTON — The federal government is gearing up to test AIDS vaccines in people, officials say.

Three teams of scientists have asked the government for permission to begin limited human testing of possible AIDS vaccines, Food and Drug Administration spokesman Brad Stone said Thursday.

In addition, Dr. Anthony Fauci, director of the National Institute of Allergy and Infectious Diseases, said he knew of five or six other teams ready to seek FDA testing approval.

Although prevention of the disease is probably years off, promising studies in animals have paved the way for human trials, Dr. John R. La Montagne of the National Institutes of Health said Wednesday at an NIH-sponsored symposium on AIDS vaccine.

At Wednesday's session, scientists from Genetic Systems Corp. of Seattle, a subsidiary of Bristol Myers, reported that vaccinated chimpanzees were able to reduce the levels of the AIDS virus in their blood.

Although these vaccines did not prevent infection, it reduced by 10 to 100 times the circulating levels of the AIDS virus in the animals' blood.

More important, it also caused the animals to produce antibodies that fight off infectious agents such as AIDS, said Robert C. Nowinski of Genetic Systems.

"It is still very speculative, but we're excited," Nowinski said. "For the first time, we see a distinct biological effect."

The company's vaccine involves a protein from the outer coat of the AIDS virus that is delivered to the body by the vaccinia virus, the harmless virus also used in the smallpox vaccine.

A similar product, recently injected by French scientist Dr. Daniel Zagury into himself and two African researchers, also has been found to stimulate production of antibodies to the AIDS virus.

Scientists at Genentech of South San Francisco are trying another approach. Using recombinant DNA technology, they are attempting to develop a vaccine based on a portion of the AIDS virus envelope. They, too, hope to begin human testing this year.

Dr. Allan Goldstein, chairman of biochemistry at George Washington University in Washington, D.C., and his colleagues are trying to develop a vaccine based on a bit of protein from the inner core of the AIDS virus. Their vaccine is one of the three under review at the FDA. The agency is not permitted to identify the other applicants.

Dr. Robert Gallo, a top AIDS researcher and head of the National Cancer Institute's tumor cell biology laboratory, said it may be possible to combine a half-dozen compounds, each acting against several different virus variations, into one vaccine. It may also be possible to induce the body's immune system to battle many different virus variations when stimulated by one compound.

At Wednesday's meeting, federal officials described the procedures to be followed in human testing of AIDS vaccines.

The first step, said La Montagne, is to test for vaccine safety. The government will seek a handful of people who are at low risk of AIDS. Some will be given the vaccine; others will be given an inactive placebo.

The first human subjects will be isolated for 14 days to ensure that the organism contained in the vaccine — a smallpoxlike virus — protects them but does not affect others, said La Montague.

Later, much larger studies will test to see if the vaccines are effective in preventing AIDS.

Examiner wire services contributed to this report.

1989 (Aug 22) - https://www.newspapers.com/image/566579096/?terms=%22genetic%20systems%20corp%22&match=1

1989 (Aug - https://www.newspapers.com/image/387078445/?terms=%22genetic%20systems%20corp%22&match=1

1990 (May 06)

Full newspaper page : [HN01KC][GDrive]

THE BOSTON SUNDAY GLOBE • MAY 6, 1990 South 15

BUSINESS

Blood test gives small biotech firm early success

Boston Biomedica's product fills need to safeguard purity of blood supplies

By John H. Stevens
SPECIAL TO THE GLOBE

WEST BRIDGEWATER – It is hard to imagine tiny Boston Biomedica as a catalyst for the state's next economic expansion.

But if biotechnology becomes a savior to the state's economy, as biotech boosters would have us believe, then Boston Biomedica is one company that is already playing a role.

The 21-employee firm started in a renovated storeroom in 1986, had dollar sales in seven figures last year and a growth rate that could place it well into Inc. magazine's list of the 500 fastest-growing companies in the nation next year, said Richard T. Schumacher, Boston Biomedica's president.

The company, now located in a two-story industrial park building, has been praised by scientists and health agency officials, including a mention at a Swedish symposium a few years ago. One of its new products helped prove the effectiveness of the first blood test for the HIV II AIDS virus to gain tentative approval for public use, from the US Food and Drug Administration this spring, a test developed by Genetic Systems Corp., a Bristol-Myers Squibb subsidiary.

"We expected to receive accolades for our products, but not so openly at scientific meetings," Schumacher said in a recent interview.

"It has given this company a level of credibility I didn't expect to have at this point."

But credibility, essential to success in the biotech field, is something Schumacher set out to gain when he started the privately held company with money from family and friends. Schumacher understood the necessity of not only creating a useful product, but of co-authoring scientific papers with high-profile scientists and agencies in peer-review journals to gain recognition, and sales, for his firm.

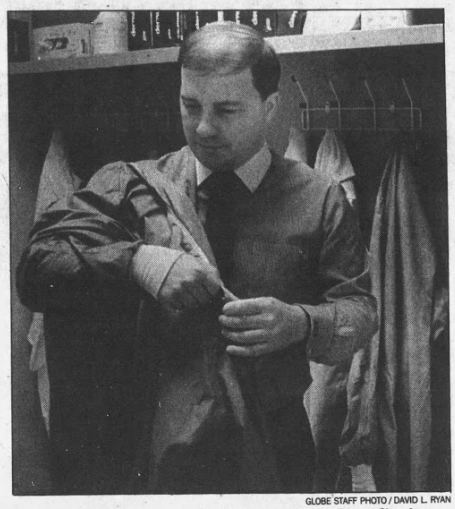
"I knew Rick was highly regarded in academic circles," said Wellesley lawyer Henry Malkasian Sr., in explaining his early investment in Boston Biomedica. "He had the ability, the brains and the acc otability. Since then, he's gained a lot of recognition in professional circles."

The company's efforts have helped guarantee a safer blood supply in Europe and the United States and spawned a rarity in the biotech field: a balance sheet in the black after the first two years.

Building sales

"A lot of companies in this field raise a lot of capital up front, putting a lot of money into research to develop products that take a lot of time to get into the market," Schumacher said. "I decided to use my expertise to immediately develop tangible products. I set up the company to have measurable sales growth without a lot of noise" about research and development.

Boston Biomedica is not a biotech company in the purest sense, Schumacher said; it does no molecular biology, no gene splicing and no viral culture work. Its product is a small plastic box containing a dozen or so plastic vials. In each vial is a solution containing a known quantity of some material found in the blood, such as serum cholesterol, or antibodies the body would produce when exposed to viruses such as the AIDS virus HIV I or HIV II or any of the hepatitis viruses.



GLOBE STAFF PHOTO / DAVID L. RYAN

Richard T. Schumacher, president, started Boston Biomedica in a renovated storeroom in 1986 with money from family and friends.

These ready-to-use packages are used by researchers to gauge the accuracy and quality of new blood tests they are developing. The blood tests, in turn, are used by hospitals to find out if a patient has been exposed to a certain virus, or to measure other things found in blood, such as serum cholesterol. Blood tests are also used by blood banks to screen donated blood for exposure to the AIDS and hepatitis viruses.

Setting the standard

Boston Biomedica, Schumacher likes to say, acts as a referee in the biotech playing field, ensuring that blood tests perform to their intended levels of accuracy. Its products are the standard by which such tests are measured, and the firm has only a few competitors.

One of the competitors, Serologicals Inc., also gave good marks to Schumacher and his firm.

"They've enjoyed a good reputation and have always stayed out front in looking for new technologies," said Timm Hurst, executive vice president of Serologicals, which is based in Pensacola, Fla. "Rick's well known and he's done a good job. He's a good marketer."

Schumacher has found a ready market for his products, especially in the area of infectious diseases with the advent of AIDS and the recent discovery of the hepatitis C virus.

Genetic Systems Corp. used Boston Biomedica's tests to measure the accuracy of its new HIV II blood test. HIV II is a strain of AIDS virus found mostly in West Africa, with only a dozen or so cases found in the United States so far, Schumacher said. Federal health officials hope to begin screening the nation's blood supply for HIV II before it becomes a problem, he said.

Began at lab

Schumacher, trained as a zoologist at the University of New Hampshire, got the entrepreneurial bug while running a lab at the Center for Blood Research in Boston, which is affiliated with the Harvard Medical School. Schumacher worked at the lab from 1972 until 1985 and was general manager of its for-profit arm for five years.

He incorporated Boston Biomedica in 1978 as a commercial venture separate from his research work and the lab's commercial work. Working after hours and on weekends, Schumacher used the lab to conduct hepatitis tests for dozens of hospitals. By 1985, he was ready to use his experience and his contacts to build his own business. He settled in West Bridgewater because space was cheaper.

"As a user of blood-test kits made by other companies, I saw a need to develop quality control products in areas where there were none," Schumacher said.

The next step for Boston Biomedica is selling its kits to the people who use blood tests – hospitals and blood banks – so that they can check the accuracy of the tests themselves as extra insurance, Schumacher said. Schumacher has met his business goals so far, and he expects Boston Biomedica to continue growing at a 50 percent clip per year.

"We should be around for a long time generating jobs for the local economy," he said.

[HN01KD][GDrive]

1990 (April 20) - Seattle Times : "Seattle Biotechnology Company Sold"

https://archive.seattletimes.com/archive/?date=19900420&slug=1067396

1990-04-20-seattle-times-biotechnology-company-sold.pdf

Apr 20, 1990 , Polly Lane

Genetic Systems Corp., a Seattle biotechnology company best known for its research on testing for the Acquired Immune Deficiency Syndrome (AIDS), is being sold by Bristol-Meyers Squibb Co. to a unit of Sanofi of France.

Sanofi is 25-year-old conglomerate that specializes in pharmaceuticals and diagnostics, ingredients for the food industry, agricultural and animal health products, and perfume and beauty products. Its stock is half owned by the Societe Nationale Elf Aquitaine Group and half publicly traded.

The purchase of Genetics System brings to 17 the number of Sanofi's affiliates in diagnostics. Terms of the cash sale were not disclosed.

Genetic Systems was founded here in 1980 and sold to Bristol-Meyers in 1986. Its relationship with Sanofi goes back to 1984, when the two companies formed a joint venture, Blood Virus Diagnostics, to help develop specialized tests for viruses.

The Seattle company is not yet profitable, although Sanofi executives said it has annual sales of about $10 million now and may increase that to about $18 million next year. Sanofi estimated that its diagnostics division, of which Genetic Systems will be a part, will have $175 million in sales this year.

Terrance Bieker, president of Kallestad Diagnostics in Chaska, Minn., Sanofi's American affiliate, is a former Genetic Systems manager who left Seattle in 1988. ``We intend to manage Genetic Systems as it is now,'' he said.

Mark Fieczkarek, who has been vice president of operations and finance at Genetic Systems, has been named general manager here. Tim Ellis, who has been general manager, will remain with Bristol-Meyers Squibb, Bieker said.

Genetic Systems, which has about 150 employees, is hiring now because it is anticipating approval soon from the Food and Drug Administration to market a new AIDS virus test.

Bieker said he expects some additional manufacturing work also will be assigned here through the parent company. Whether that means additional hiring is not yet known, he said.

His company specializes in different health tests.

``There is no overlap or duplication of products with Genetic Systems. It's a good fit,'' he said.

1991 (July 12) - https://www.newspapers.com/image/367413266/?terms=%22genetic%20systems%20corp%22&match=1

1991 (Oct 07) - https://www.newspapers.com/image/310405462/?terms=%22genetic%20systems%20corp%22&match=1

1991 (Sep 27) - https://www.newspapers.com/image/626261379/?terms=%22genetic%20systems%20corp%22&match=1

1991 https://www.newspapers.com/image/462131411/?terms=%22Bob%20Nowinski%22&match=1

1992 (Jan 06)

Pag2 01 Full : [HN01J0][GDrive] / Page 2 Full : [HN01J2][GDrive]

EARLY ED.

MONTREAL

The Gazette

SINCE 1778

MONDAY, JANUARY 6, 1992 50¢

AIDS testing produced flood of false results

A report prepared for a U.S. House of Representatives subcommittee charges that the true history of the invention of the AIDS test for years has remained obscured behind a veil of official misstatements by senior U.S. government officials. The report has not yet been made public.

This is the second article in a three-part series.

JOHN CREWDSON
CHICAGO TRIBUNE

WASHINGTON — Ronald Reagan's administration had promised the American people an AIDS test by November 1984, a month that also happened to mark Reagan's re-election to a second term. But as the election came and went, the five companies chosen by the Public Health Service to manufacture the test were still evaluating their prototypes on blood samples gathered from around the country.

What they, and an increasingly concerned administration, were discovering was that the AIDS tests embodied a fundamental flaw: most of the blood samples that were testing positive for antibodies to the AIDS virus weren't positive at all.

The ink had scarcely dried on the government's application for a patent on the AIDS test before a notice appeared in the Federal Register inviting interested companies to apply for a license to make and sell the urgently needed test. In view of "the important public-health considerations involved," applicants were given 10 days to respond.

With the government predicting that 23 million AIDS tests would be needed each year, there was no shortage of applicants. They ranged from pharmaceutical giants like Abbott Laboratories or Johnson and Johnson to smaller firms with exotic names like Chiron, Cetus and Hybritech.

Abbott, a $5 billion-a-year company and already the predominant supplier of blood-testing equipment in the United States, was an obvious choice.

Also selected were Baxter-Travenol, another major health-care supplier, and three lesser-known firms with ties to the laboratory of Dr. Robert Gallo, the National Institutes of Health researcher who had developed the American AIDS test.

The losers in the competition included a fledgling Seattle company called Genetic Systems Corp., founded just three years before by a young University of Washington microbiologist named Robert Nowinski.

In mid-June 1984, Abbott and the four other licensed companies were invited to pick up the initial samples of the AIDS virus isolated in Gallo's lab that would be used to make their AIDS testing kits. They were also given a special culture of white blood cells, which Gallo had

PLEASE SEE **AIDS,** PAGE **A2**

■ **Can't trust tests: experts.** PAGE **A5**

Gallo Developed American test

[HN01J1][GDrive]

EARLY ED.

AIDS *Different culturing method key to French test's superiority*

CONTINUED FROM PAGE A1

named "H9," in which the virus could be grown in commercial quantities.

Unlike most cells, those in H9 weren't killed by the replicating virus. So important was the production system to the making of the test that when the government filed for a patent on the Gallo AIDS test, it applied for a separate patent on Gallo's H9.

The biggest single customer in the world for the AIDS test — and also the most important, because of the influence its decision has on other potential customers — was the American Red Cross, which collects and processes more than half the 11 million pints of blood Americans donate each year.

Protect the supply

The Red Cross also was comparing the prospective AIDS tests, and like the government it was finding that as many as four out of five initially positive results were likely to be false. But Dr. S. Gerald Sandler, then the Red Cross's chief of medical operations, said his organization would still put the test into service the minute it was approved.

"Even though the test is not perfect," Sandler was quoted as saying, "it makes it possible to protect the blood supply."

In March 1985, the Food and Drug Administration granted the first AIDS-test license to Abbott, which promptly became the exclusive supplier of the AIDS test to the Red Cross, which in turn was now the world's biggest single purchaser of the test. Over the next four months, according to figures it later submitted to the government, Abbott would sell more than $8 million worth of AIDS tests.

As the Abbott test swung into production, however, it became clear that the problem of false-positive reactions had not been solved. Because a positive AIDS test was more likely than not to be false, every positive test had to be repeated. If the second test was also positive, it was followed by a different kind of confirmatory test, at a total cost of about $40.

As the Public Health Service was selecting the companies that would produce the Gallo test, work was also beginning on a commercial AIDS test at the Pasteur Institute of Paris, where the AIDS virus had been discovered the previous year.

Although the Pasteur Institute is a private foundation, it is associated with a commercial company, called Pasteur Diagnostics, which sells various products derived from the foundation's research.

Pasteur Diagnostics had the right to make and market the French AIDS test in France, but it had no production facility in North America. Not long after Genetic Systems' application to make the Gallo AIDS test had been rejected by the government, Nowinski had obtained the U.S. license for the test invented at Pasteur.

Although there were several differences between the Gallo AIDS test and the one Genetic Systems produced with the Pasteur's methods and materials, one was more important than the others. Genetic Systems, which had no license to use Gallo's H9 virus culturing system, grew the AIDS virus from France in a different blood-cell culture, called CEM-13, that had been developed for that purpose at Pasteur.

Gallo's H9, once infected, produced endless quantities of the AIDS virus, while the CEM-13 cells are ultimately killed by the virus. But the French had found a way of growing the virus in industrial quantities by infecting successive batches of CEM-13. "You grow as much virus by (the Pasteur's) method as in any other method," Nowinski said.

French angered

As several studies later showed, it was the difference between the two culturing methods that accounted for the superior specificity of the Pasteur test. Apparently, the blood of some individuals not infected with the AIDS virus contained antibodies to proteins on the surface of Gallo's H9 blood cells; it was these H9 antibodies that were responsible for the false positives in the Gallo test.

The superior accuracy of the Pasteur test should have been a major selling point. But the French, angry at not having received the American patent on the AIDS test, were threatening to take the U.S. Department of Health to court, and when Genetic Systems began looking for customers, it encountered problems.

One important buyer was the U.S. Department of Defence, which was soon to begin a massive effort to test all military personnel for AIDS. But a Genetic Systems representative who made a sales presentation at the Pentagon recalled being told the U.S. military did not intend to do business with the French.

Genetic Systems had better luck with the Red Cross. When the Red Cross began testing blood for AIDS in March 1985, the Abbott test had been the only one approved by the FDA. But in February 1986, two days after the Genetic Systems test was approved by the FDA, a Red Cross task force completed its evaluation of the AIDS blood tests then on the market.

According to the task-force report, the French test produced fewer false positives than any other test. Even when compared with Abbott, the Pasteur test was the Red Cross's "test of choice."

Genetic Systems, the task force said, should be given "the largest market share" of the Red Cross AIDS-test business, at least 80 per cent of the agency's total annual purchases.

But when Red Cross officials offered contracts, the 80-per-cent share went instead to Abbott.

A few days after the Red Cross contract took effect, scientists at the National Institutes of Health reported that, in addition to producing false-positive results, the Abbott test was also producing the far more drastic false negatives.

Since the summer of 1985, when a Colorado man caught the AIDS virus from blood that had tested negative, it had been known that some samples of AIDS-contaminated blood were getting through the "blood screen."

The explanation had been that the donors of the contaminated blood had been so recently infected with the AIDS virus that they had not yet developed antibodies to it. No AIDS test, it was thought, could pick up a recently infected person during the early incubation period.

In the spring of 1986, an NIH researcher named Alfred Saah discovered that while the Abbott test couldn't pick up antibodies in recently infected individuals, the Genetic Systems test could.

Anti-trust suit

On May 14, 1986, Saah presented his alarming findings to the Public Health Service's blood working group, and again in early July to an NIH conference where they were reported in the press.

In 1987 Genetic Systems, which by then had been purchased by Bristol-Myers, brought an anti-trust suit against Abbott and the Red Cross. Although the suit was ultimately dismissed, documents filed in the case showed that after the problem with false negatives arose the Red Cross asked Genetic Systems how quickly it could supply all of the agency's AIDS test needs.

The company replied that it could do so within one month, but the contract was never forthcoming. Instead, according to Sandler, Abbott was given "a matter of weeks" to make the promised improvements.

Letting bad blood in

On Jan. 16, 1987, more than eight months after Saah had presented his data to the Public Health Service, the reconfigured Abbott test was approved by the FDA. The first units were shipped by the company on Jan. 26.

In its lawsuit, Genetic Systems maintained that "the inferior sensitivity of the Abbott AIDS test meant, quite simply, that the Abbott AIDS test was allowing contaminated blood to pass into the blood supply."

Red Cross attorney Karen Lipton acknowledged that the Red Cross was currently being sued by several individuals who claimed they had been transfused with AIDS-infected blood after the Red Cross began testing in the spring of 1985. Lipton said she did not know whether any of those individuals had received the AIDS-contaminated blood during the last half of 1986 or the first part of 1987.

■ TOMORROW: The coverup

[HN01J3][GDrive]

1997 (Mar 09) - BizJournals.com : "Long-life ambitions"

Two local biotech firms search for ways to slow down the aging process

By Rami Grunbaum – Mar 9, 1997 Updated Mar 9, 1997, 9:00pm PST - Source : [HW0062][GDrive]

Two Seattle biotechnology companies, both quite young, are working to unlock the genetic secrets of growing old.

Lifespan Bioscience Inc. and Aeiveos Sciences Group each have raised several million dollars with the ultimate goal of giving people additional years of disease-free living.

But that's where the similarities between the two end: Lifespan and Aeiveos seem opposites in corporate spirit and in scientific direction.

At Lifespan, the top executives have previous biotechnology experience and stress a practical, short-term agenda of partnering with bigger drug companies to bring in revenue.

"What we're good at is gene discovery; what they're good at is drug discovery and development," said L**ifespan president and CEO Joseph Brown.**

The more enigmatic Aeiveos is led by former software executive Robert Bradbury, who argues that the human genome is no more complex than Microsoft's Windows NT operating system.

"Within the next 20 years, the limit on maximum human lifespan will be eliminated," he optimistically proclaims on the company's elaborate Web site.

Its business strategy seems less well-developed, or perhaps more long-term. Vice president Tyrone Mowatt said Aeiveos -- a name coined from the Greek words for "forever" and "young" -- currently is focused on research, not revenue.

"We're still looking at expanding our basic research, understanding more about aging, and from there understanding the potential therapeutics for this market," he said.

The two have disparate scientific approaches, as well.

One of Lifespan's chief assets is a library of 100,000 samples of diseased human tissue -- a reference library "of basically all the aging diseases man can get," said chief scientific officer Glenna Burmer.

Lifespan's researchers will use these to explore which genes contribute to aging-related afflictions, ranging from Alzheimer's to osteoporosis and cancer.

At Aeiveos, on the other hand, "We are not looking at any pathologies, we are looking at `normal' aging," said chief scientist Rajinder Kaul.

Aeiveos aims to study the genetic codes of centenarians -- people who live to the ripe age of 100 -- to learn how they ward off the diseases that strike down most people much earlier.

Many other companies are also in the hunt. Locally, Darwin Molecular Corp. last year identified two genes implicated in aging diseases, one for early-onset Alzheimer's disease and another for Werner's syndrome. Darwin merged with Chiroscience Group plc of England late last year, giving it access to drug-development expertise.

The Human Genome Project -- a national effort to decipher all 100,000 genes in human DNA -- is the springboard for much of the work these genomics companies hope to do.

The resulting database has been likened to the white pages of a city telephone directory -- a lot of data, but little help if you don't know who you're looking for.

Extending the phone-book analogy, Lifespan's Brown said that when drug companies search for the genetic perpetrator of a disease, Lifespan will tell them more than "the culprit's in here. ... What we'd like to do is give them the name, address and occupation of everyone seen at the scene of the crime."

That's crucial, because there may be hundreds or thousands of genes that are turned on or off by a disease, but discovering a treatment hinges on determining which ones are actually responsible for the problem.

Lifespan has invented or licensed screening techniques that can reduce the list of suspects down to "a handful," said Brown.

Of the entire genome, "it's the top 1 percent -- there's probably 1,000 -- that will prove excellent targets" for drugs, Brown said. "Remarkably, to date, only about 50 genes are targeted by pharmaceuticals."

Lifespan, which now employs 15, can grow to 50 or 60 people in the 12,000 square feet it recently leased in the Denny Regrade area, company officials said.

Unlike some rival companies studying the genetics of aging, Lifespan won't be studying the simpler creatures -- flatworms, mice, fruit flies or yeast -- favored by many genetics researchers. "We believe very firmly in working with humans" -- meaning human cells, said Brown.

Although the initial strategy calls for Lifespan to do research under contract for big drug companies, Brown said "we insist on retaining some intellectual property" from each deal -- perhaps the rights to apply the results to diseases the partner isn't pursuing. Simultaneously, Lifespan will pursue its own longer-term research on basic mechanisms of cell aging, he said.

Brown, previously at Bristol-Myers Squibb in Seattle, in 1992 became PathoGenesis Corp.'s first employee after founder [Dr. Robert Charles Nowinski (born 1945)]. Burmer was the first program director at PathoGenesis, and managed its pathogen discovery program.

[...]

Genuity Incorporated

NOTE: "Genuity Incorporated" re-created in year 2000 by **GTE Corporation** upon GTE's transition into **Verizon Communications Incorporated** .

For that Genuity Incorporated, see **Genuity Incorporated (2000)** .

Employees / Executives :

- **Rodney Lance Joffe (born 1954)** (Founder - Created IMN as a division within his company American Computer Group)
- **Thomas Johannes Obenhuber (born 1955)** (one of the founding employees - stays until after Internet Media Network changed it's name (1997) to Genuity Incorporated)
- **Jon Bruce Postel (born 1943)** (invited on as board member by the founder, Rodney Joffe)
- **Mr. Frank Dziuba - Founder of an Internet Service Provider [Silicon Beach Communications Inc.] in Santa Barbara, California in 1994**

Related / Associated companies

- Bechtel
- Silicon Beach Communications Inc.
- Internet Media Network Incorporated
- GTE Corporation
- BBN Technologies, Incorporated

ABOUT GENUITY

"Genuity is a subsidiary of Bechtel Enterprises, the development, financing and ownership affiliate of the Bechtel organization. Genuity is a value-added provider of distributed application hosting, access and security technologies that provide cost-effective, scaleable and highly reliable Internet infrastructure for commercial applications. With headquarters in San Francisco, Genuity also has data centers established in Chicago, Los Angeles, New York, Phoenix, San Jose, Washington, D.C. and London. Genuity is the creator of Hopscotch, a service allowing organizations to ensure the accessibility and performance of their mission-critical Internet sites by eliminating DNS look-up failures and solving Internet latency problems. " Source : [HC004M] [GDrive]

HISTORY

"In the early 1990's, following the NSF disgorgement of commercial Internet traffic from the NSFNet, [**Rodney Lance Joffe (born 1954)**] launched [**Internet Media Network Incorporated**] as the Internet division of [American Computing Group]. " Source - [HC004O][GDrive]

" In 1996 in partnership with **Bechtel Enterprises**, [**Internet Media Network Incorporated**] was renamed [**Genuity Incorporated**], which then went on to became one of the largest ISP Data Center Operators in the world. The company was driven by Hopscotch™, invented and patented by [**Rodney Lance Joffe (born 1954)**], and the very first formal content distribution and load balancing technology. " Source - [HC004O][GDrive]

"[**Rodney Lance Joffe (born 1954)**] remained as the Chief Technical Officer of **Genuity** until the end of 1997 when [**Genuity Incorporated**] was acquired by [**GTE Corporation**]. He was then appointed Vice-President, Strategic Technologies, and Chief Technology Officer of the Business Services division of **GTE Internetworking**." Source - [HC004O][GDrive]

For Genuity Incorporated history prior to the name change in 1996 (May), see Internet Media Network Incorporated

1995 (est between March-Dec) - SFGate: Bechtel - "quietly purchased Phoenix-based Internet Media Network Inc"

Jonathan Marshall, Chronicle Economics Editor / Nov. 1, 1996Updated: Feb. 2, 2012 11:51 a.m. / Source - [HM001C][GDrive]

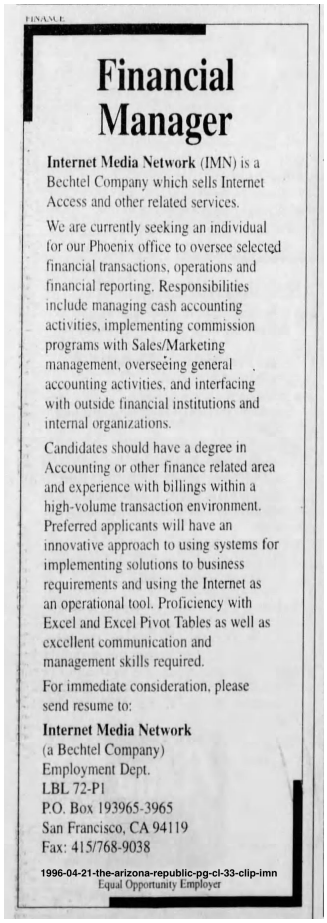
Late last year [, which would be 1995 - as this article is 1996], Bechtel quietly purchased Phoenix-based [Internet Media Network Incorporated], a dormant Internet access provider. The company, which it renamed Genuity, was one of 22 so-called "Tier 1" companies that make up the Internet's backbone.

Others in the same exclusive club include AT&T, MCI, UUNet, AOL and CompuServe. [...]

1996 (April 21) - IMN is a Bechtel company / 1996 (June 2) - "Genuity" is a "new" Bechtel company

Full newspaper pages : [HN01FU][GDrive] / [HN01FW][GDrive]

Bechtel, the construction company : https://www.newspapers.com/image/178483479/?terms=genuity&match=1



FINANCE

Financial Manager

Internet Media Network (IMN) is a Bechtel Company which sells Internet Access and other related services.

We are currently seeking an individual for our Phoenix office to oversee selected financial transactions, operations and financial reporting. Responsibilities include managing cash accounting activities, implementing commission programs with Sales/Marketing management, overseeing general accounting activities, and interfacing with outside financial institutions and internal organizations.

Candidates should have a degree in Accounting or other finance related area and experience with billings within a high-volume transaction environment. Preferred applicants will have an innovative approach to using systems for implementing solutions to business requirements and using the Internet as an operational tool. Proficiency with Excel and Excel Pivot Tables as well as excellent communication and management skills required.

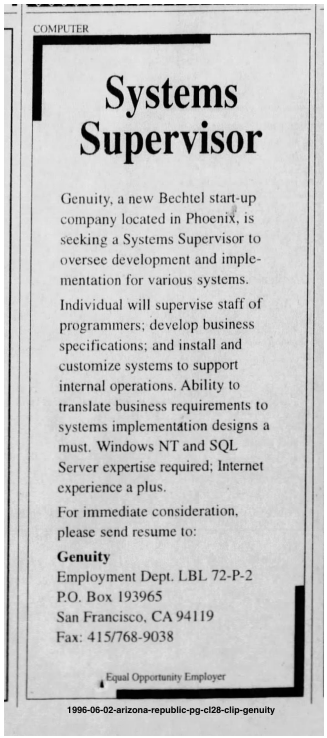
For immediate consideration, please send resume to:

Internet Media Network
(a Bechtel Company)
Employment Dept.
LBL 72-P1
P.O. Box 193965-3965
San Francisco, CA 94119
Fax: 415/768-9038

1996-04-21-the-arizona-republic-pg-cl-33-clip-imn
Equal Opportunity Employer

"Internet Media Network"

1996 (April 21)
[HN01FV][GDrive]



COMPUTER

Systems Supervisor

Genuity, a new Bechtel start-up company located in Phoenix, is seeking a Systems Supervisor to oversee development and implementation for various systems.

Individual will supervise staff of programmers; develop business specifications; and install and customize systems to support internal operations. Ability to translate business requirements to systems implementation designs a must. Windows NT and SQL Server expertise required; Internet experience a plus.

For immediate consideration, please send resume to:

Genuity
Employment Dept. LBL 72-P-2
P.O. Box 193965
San Francisco, CA 94119
Fax: 415/768-9038

Equal Opportunity Employer

1996-06-02-arizona-republic-pg-cl28-clip-genuity

"Genuity"

1996 (June 2)
[HN01FX][GDrive]

1996 (Oct 13) - help wanted / genuity in phoenix

https://www.newspapers.com/image/123645616/?terms=genuity&match=1

1996 (Nov 01) - SFGate: Bechtel Jumps on the Net / New unit offers industrial-strength communication

Bechtel unit?

Jonathan Marshall, Chronicle Economics Editor / Nov. 1, 1996Updated: Feb. 2, 2012 11:51 a.m. / Source - [HM001C][GDrive]

Summary *- "San Francisco engineering giant Bechtel Corp., best known for moving mountains and building tunnels, has jumped on the Internet bandwagon. A recently formed Bechtel company, Genuity, is now offering industrial- strength Internet services to companies, government agencies and educational institutions. It plans to capitalize on many companies' frustration with slow and unreliable access to the network."*

Late last year [, which would be 1995 - as this article is 1996], Bechtel quietly purchased Phoenix-based [Internet Media Network Incorporated], a dormant Internet access provider. The company, which it renamed Genuity, was one of 22 so-called "Tier 1" companies that make up the Internet's backbone.

Others in the same exclusive club include AT&T, MCI, UUNet, AOL and CompuServe.

Unlike many other providers, however, Genuity doesn't plan to serve individuals with dial-up connections.

Instead, it aims to "supply an industrial-strength information infrastructure so that businesses and other institutions can tap the economic power and potential of the Internet," said John Carter, president of Bechtel Enterprises.

With more than 30 clients, Genuity has grown from scratch to more than 100 employees in 10 months. Nearly all were recruited outside Bechtel.

Genuity, along with several local multimedia companies, will play a behind-the-scenes role at an online chat session this Monday with San Francisco's ubiquitous Mayor Willie Brown.

The company will provide the computer and network services to let thousands of Internet users chat with the mayor from 5 p.m. to 6 p.m. The discussion will embrace such issues as the future of technology industries in San Francisco and how to use the Internet to make San Francisco a better place to live and work. The Web site for the discussion is www.damayor.org.

Genuity is also building an "intranet," or internal corporate computer network, for CNET, an Internet news service.

It will link CNET's offices in San Francisco, Phoenix, Watchung, N.J., and other planned locations.

"There's no limit to how big this thing can get," said Pete Lega, CNET's vice president of technical architecture. "I can get a new office anywhere in the United States to join our network within two or three weeks, and we don't have to worry about it. It's reliable, private and secure."

At its Phoenix center, Genuity manages some of CNET's Internet servers -- computers that store and transmit information on the network -- to lighten the load on CNET's main servers in San Francisco.

Genuity leases two giant data lines from MCI and Sprint. From these lines, it provides Internet service mainly to San Francisco, Los Angeles, Phoenix, Washington, D.C., New York and Chicago. It will operate, maintain and back up computers and networks providing Web service, e-mail and other Internet services, in effect providing one-stop-shopping for network operation.

By carefully managing who gets on its network, Genuity plans to avoid overloading its capacity and jeopardizing its reliability. Technical support staff in Phoenix constantly monitor the network to prevent failures. They even watch 24-hour news and weather channels to spot problems that could crop up elsewhere on the Internet, and route data traffic in safe directions.

In another high-tech venture, Bechtel announced last month its plan to form an international joint venture with CellNet Data Systems, Inc. of San Carlos. Bechtel will handle overseas marketing of CellNet's wireless meter-reading systems, used by electric, gas and water utilities.

Bechtel is no stranger to high technology, despite its reputation for moving dirt. It works with state-of-the-art computer-aided design systems and has the largest research and development arm in the engineering and construction business, company officials say.

Bechtel also excels in complex project management, from the new Hong Kong airport to the English Channel tunnel. It has helped major telecommunications companies such as Sprint and MCI set up national land-line and wireless communications networks.

Its new technology ventures are thus a natural progression rather than a radical change, said Robert Dove, vice president of corporate investments for Bechtel Enterprises.

"We see the Internet as one more step in the management of complex projects," he said. "To have a window on this technology is very important as we move into the next century."

Dove indicated that Genuity, like many Internet companies, isn't making money yet. "But we are very pleased with the way the investment is going. The potential is tremendous."

1996 (Dec) - Patent Application for "Hopscotch"

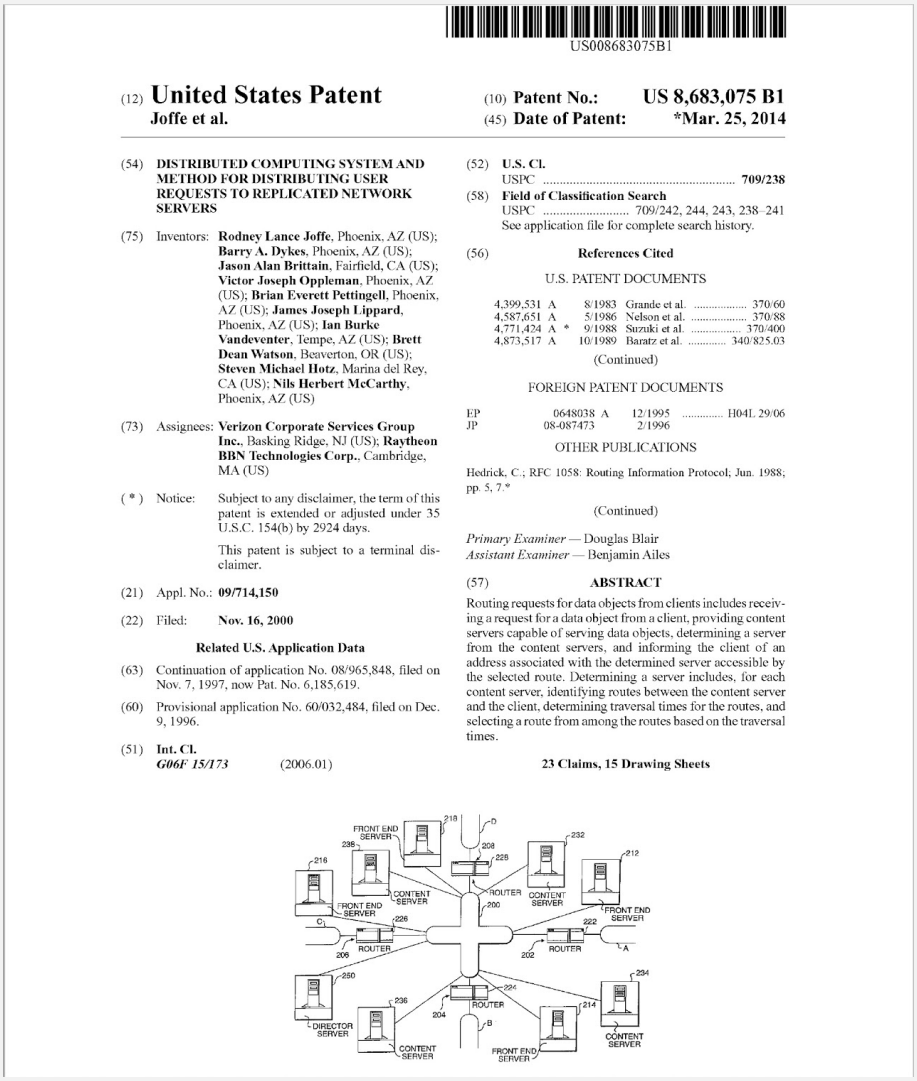
Substantial architecture work provided by Steve Hotz , who is full-time (or a consultant) at Genuity .

https://patentimages.storage.googleapis.com/83/08/30/27d51264be8cce/US8683075.pdf

Distributed computing system and method for distributing user requests to replicated network servers

Abstract

Routing requests for data objects from clients includes receiving a request for a data object from a client, providing content servers capable of serving data objects, determining a server from the content servers, and informing the client of an address associated with the determined server accessible by the selected route. Determining a server includes, for each content server, identifying routes between the content server and the client, determining traversal times for the routes, and selecting a route from among the routes based on the traversal times



US008683075B1

(12) **United States Patent**
Joffe et al.

(10) **Patent No.: US 8,683,075 B1**
(45) **Date of Patent: *Mar. 25, 2014**

(54) **DISTRIBUTED COMPUTING SYSTEM AND METHOD FOR DISTRIBUTING USER REQUESTS TO REPLICATED NETWORK SERVERS**

(75) Inventors: **Rodney Lance Joffe**, Phoenix, AZ (US); **Barry A. Dykes**, Phoenix, AZ (US); **Jason Alan Brittain**, Fairfield, CA (US); **Victor Joseph Oppleman**, Phoenix, AZ (US); **Brian Everett Pettingell**, Phoenix, AZ (US); **James Joseph Lippard**, Phoenix, AZ (US); **Ian Burke Vandeventer**, Tempe, AZ (US); **Brett Dean Watson**, Beaverton, OR (US); **Steven Michael Hotz**, Marina del Rey, CA (US); **Nils Herbert McCarthy**, Phoenix, AZ (US)

(73) Assignees: **Verizon Corporate Services Group Inc.**, Basking Ridge, NJ (US); **Raytheon BBN Technologies Corp.**, Cambridge, MA (US)

(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 2924 days.

This patent is subject to a terminal disclaimer.

(21) Appl. No.: **09/714,150**

(22) Filed: **Nov. 16, 2000**

Related U.S. Application Data

(63) Continuation of application No. 08/965,848, filed on Nov. 7, 1997, now Pat. No. 6,185,619.

(60) Provisional application No. 60/032,484, filed on Dec. 9, 1996.

(51) **Int. Cl.**
G06F 15/173 (2006.01)

(52) **U.S. Cl.**
USPC **709/238**

(58) **Field of Classification Search**
USPC 709/242, 244, 243, 238–241
See application file for complete search history.

(56) **References Cited**

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(Continued)

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JP	08-087473	2/1996	

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Hedrick, C.; RFC 1058: Routing Information Protocol; Jun. 1988; pp. 5, 7.*

(Continued)

Primary Examiner — Douglas Blair
Assistant Examiner — Benjamin Ailes

(57) **ABSTRACT**

Routing requests for data objects from clients includes receiving a request for a data object from a client, providing content servers capable of serving data objects, determining a server from the content servers, and informing the client of an address associated with the determined server accessible by the selected route. Determining a server includes, for each content server, identifying routes between the content server and the client, determining traversal times for the routes, and selecting a route from among the routes based on the traversal times.

23 Claims, 15 Drawing Sheets

1996 (Dec 10)

Full newspaper page : [HN01FY][GDrive]

★★★★ Tuesday, December 10, 1996 C-3

1996-12-10-the-san-francisco-examiner-pg-c3-clip-genuity

New player joins elite providers of Internet hubs

Bechtel subsidiary opening access point

By Therese Poletti
REUTERS

NEW YORK — A subsidiary of construction and engineering giant Bechtel Corp. said it will unveil a new Internet gateway as it seeks to break what it says is an oligopoly consisting of the phone companies that manage most of the world's Net hubs.

Genuity Inc. said the gateway, known as a network access point, and a new service dubbed Hopscotch would relieve the traffic jams now bedeviling the Internet, resulting in faster, more reliable Internet service for consumers and corporations.

The network access point, which will be based in Phoenix, and Hopscotch were scheduled to be formally announced Tuesday at the Internet World trade show in New York, San Francisco-based Genuity said.

There are now about eight major network access points, which funnel and route most of the world's Internet traffic. Network access points also allow smaller Internet access providers to gain access to the Net and have recently suffered heavy congestion.

6 access points in U.S.

Six major network access points are in the United States: San Jose; Washington, D.C.; Chicago; Los Angeles; Palo Alto and the New York area.

Until mid-1995, the National Science Foundation funded four of the biggest U.S. access points. But, with the NSF no longer funding the Internet, these gateways are operated by Baby Bell regional phone companies or long-distance phone companies.

"That's why we believe (Tuesday) will be a new day for the Internet," Rodney Joffe, chief technology officer of Genuity, said in an interview.

Joffe said that both the Baby Bells and the long-distance providers make money by charging the big Internet service providers $2,500 to $5,000 monthly for access to the Net.

However, he said, the phone companies were not making the investments needed to support the growth of the Internet.

Genuity said it will make its new network access point a not-for-profit operation in the hopes that it will gain many customers for its network hosting services. Genuity said it was not charging Internet service providers rent or connection fees at its Phoenix center.

More facilities possible

Genuity said it hoped to build more facilities like the one in Phoenix.

Pacific Telesis Group, which manages a network access point, recently said its local telephone service was suffering because of massive Internet usage in California, which was experiencing heavy congestion at its network access point.

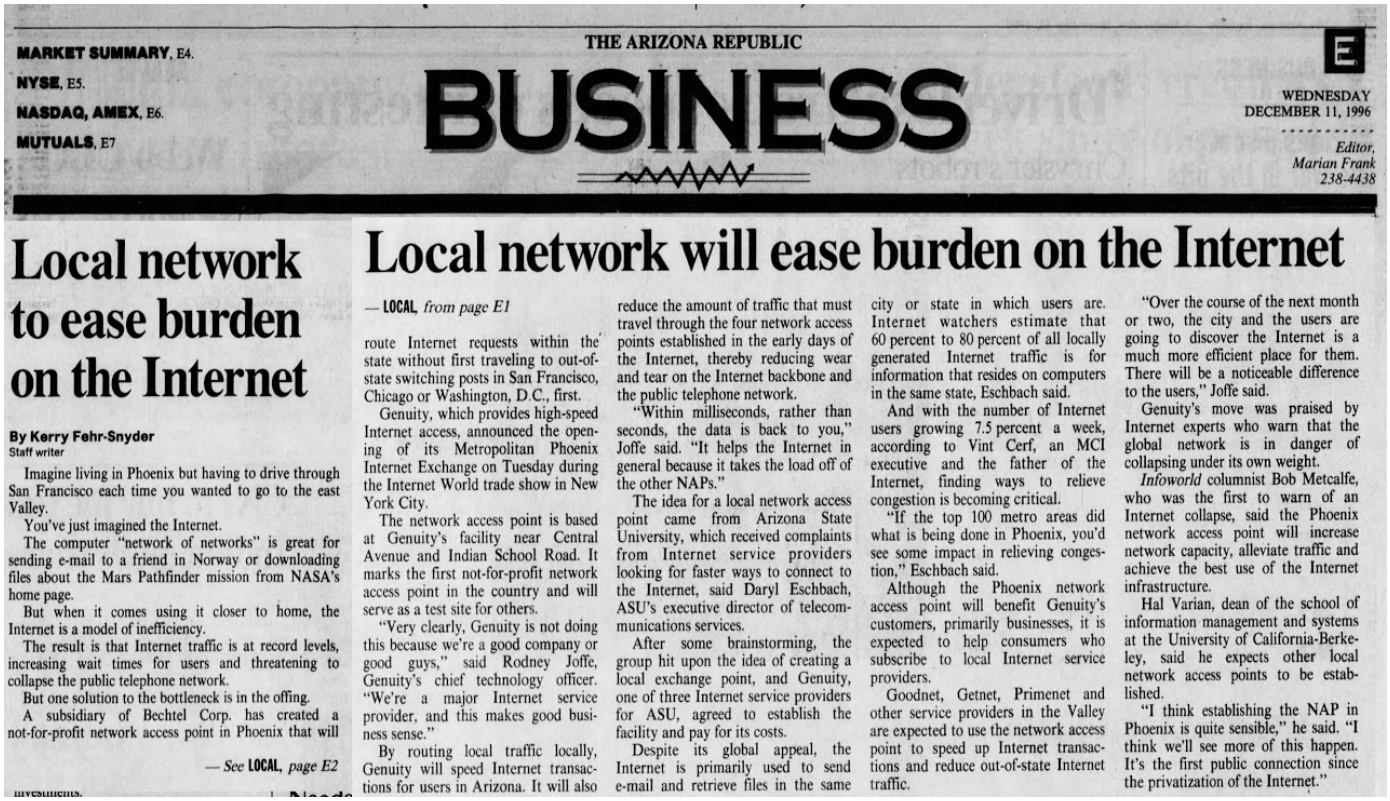
Genuity hopes to sell its network services, including its Hopscotch service — a Web site hosting service with advanced features — to businesses. Hopscotch is aimed at companies selling over the Internet, news services and major corporate Internet sites. Already, Genuity said, it has 35 customers, including C/Net Inc., the Internet-based news service in San Francisco that focuses on technology.

Genuity said its Hopscotch service was available immediately, starting at $5,000 per month, for customers who want to design and start up large-scale Web sites.

[HN01FZ][GDrive]

1996 (Dec 11)

Full newspaper pages : Page e1 - [HN01ER][GDrive] / Page e2- [HN01ES][GDrive]



MARKET SUMMARY, E4.
NYSE, E5.
NASDAQ, AMEX, E6.
MUTUALS, E7

THE ARIZONA REPUBLIC

BUSINESS

E

WEDNESDAY
DECEMBER 11, 1996

Editor,
Marian Frank
238-4438

Local network to ease burden on the Internet

By Kerry Fehr-Snyder
Staff writer

Imagine living in Phoenix but having to drive through San Francisco each time you wanted to go to the east Valley.

You've just imagined the Internet.

The computer "network of networks" is great for sending e-mail to a friend in Norway or downloading files about the Mars Pathfinder mission from NASA's home page.

But when it comes using it closer to home, the Internet is a model of inefficiency.

The result is that Internet traffic is at record levels, increasing wait times for users and threatening to collapse the public telephone network.

But one solution to the bottleneck is in the offing.

A subsidiary of Bechtel Corp. has created a not-for-profit network access point in Phoenix that will

— See LOCAL, page E2

investments.

Local network will ease burden on the Internet

— LOCAL from page E1

route Internet requests within the state without first traveling to out-of-state switching posts in San Francisco, Chicago or Washington, D.C., first.

Genuity, which provides high-speed Internet access, announced the opening of its Metropolitan Phoenix Internet Exchange on Tuesday during the Internet World trade show in New York City.

The network access point is based at Genuity's facility near Central Avenue and Indian School Road. It marks the first not-for-profit network access point in the country and will serve as a test site for others.

"Very clearly, Genuity is not doing this because we're a good company or good guys," said Rodney Joffe, Genuity's chief technology officer. "We're a major Internet service provider, and this makes good business sense."

By routing local traffic locally, Genuity will speed Internet transactions for users in Arizona. It will also reduce the amount of traffic that must travel through the four network access points established in the early days of the Internet, thereby reducing wear and tear on the Internet backbone and the public telephone network.

"Within milliseconds, rather than seconds, the data is back to you," Joffe said. "It helps the Internet in general because it takes the load off of the other NAPs."

The idea for a local network access point came from Arizona State University, which received complaints from Internet service providers looking for faster ways to connect to the Internet, said Daryl Eschbach, ASU's executive director of telecommunications services.

After some brainstorming, the group hit upon the idea of creating a local exchange point, and Genuity, one of three Internet service providers for ASU, agreed to establish the facility and pay for its costs.

Despite its global appeal, the Internet is primarily used to send e-mail and retrieve files in the same city or state in which users are. Internet watchers estimate that 60 percent to 80 percent of all locally generated Internet traffic is for information that resides on computers in the same state, Eschbach said.

And with the number of Internet users growing 7.5 percent a week, according to Vint Cerf, an MCI executive and the father of the Internet, finding ways to relieve congestion is becoming critical.

"If the top 100 metro areas did what is being done in Phoenix, you'd see some impact in relieving congestion," Eschbach said.

Although the Phoenix network access point will benefit Genuity's customers, primarily businesses, it is expected to help consumers who subscribe to local Internet service providers.

Goodnet, Getnet, Primenet and other service providers in the Valley are expected to use the network access point to speed up Internet transactions and reduce out-of-state Internet traffic.

"Over the course of the next month or two, the city and the users are going to discover the Internet is a much more efficient place for them. There will be a noticeable difference to the users," Joffe said.

Genuity's move was praised by Internet experts who warn that the global network is in danger of collapsing under its own weight.

Infoworld columnist Bob Metcalfe, who was the first to warn of an Internet collapse, said the Phoenix network access point will increase network capacity, alleviate traffic and achieve the best use of the Internet infrastructure.

Hal Varian, dean of the school of information management and systems at the University of California-Berkeley, said he expects other local network access points to be established.

"I think establishing the NAP in Phoenix is quite sensible," he said. "I think we'll see more of this happen. It's the first public connection since the privatization of the Internet."

[HN01ET][GDrive]

1996 (Dec 15) - Tasty Bits from the Technology Front - A new Net access point

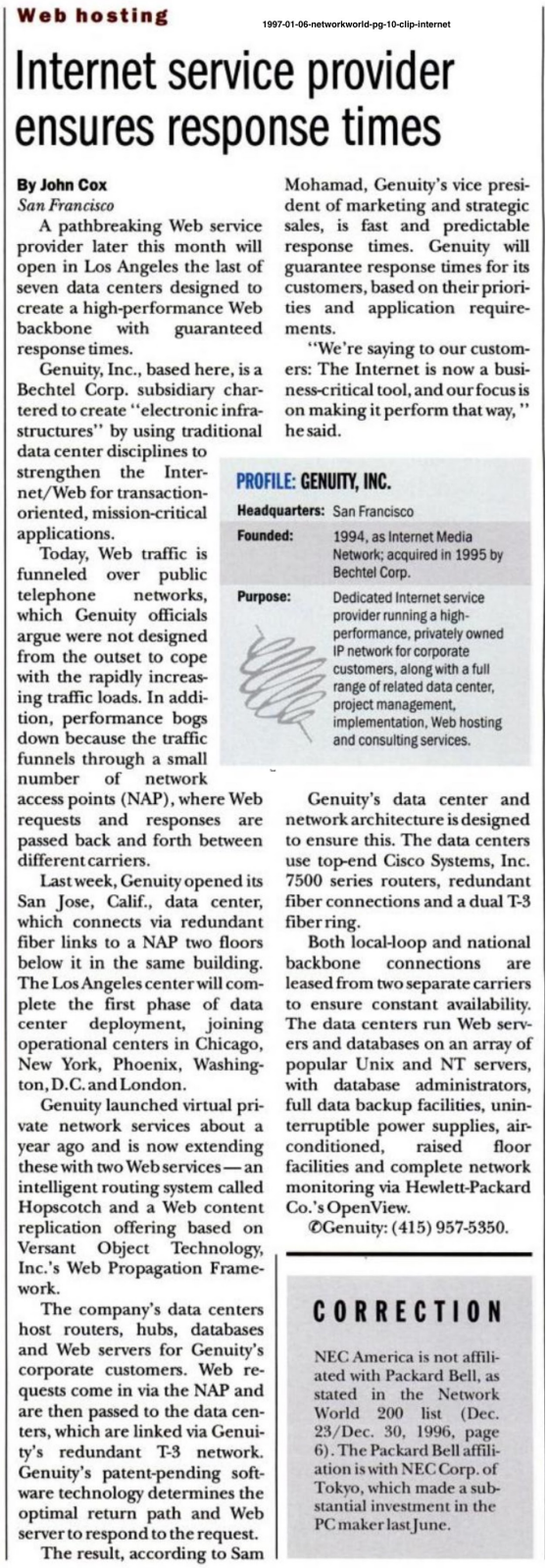
https://tbtf.com/archive/1996-12-14.html

When the National Science Foundation stopped funding the Internet backbone in the spring of 1995 it turned over operation of four U.S. Network Access Points to private companies -- in fact, to the "baby Bell" regional phone companies created at the breakup of the Bell system. Most of the world's Internet traffic passes through these (and a few other) NAPs. The phone companies charge local and regional ISPs thousands of dollars a month for access to the Internet through these NAPs. Now a player from outside the telphone fraternity is breaking into this cozy business -- and is charging no connection fees to ISPs. Genuity [20] is an ISP for large-scale customers and a subsidiary of Bechtel, the international construction and engineering company. The ISP has opened a new NAP [21] in Phoenix, which it intends to run on a not-for-profit basis in order to build its network services business. For a quick overview of the existing U.S. NAPs see the Genuity topology map [22].

At Internet World in New York Genuity also announced the Hopscotch service [23], which it calls an "industrial-strength solution to Net traffic." It involves real-time tracking of Net congestion and optimal routing of the ISP's customers' data.

1997 (Jan 06) - Network World

Page 01 : [HP004U][GDrive] / Page 10 : [HP004V][GDrive]



Web hosting

1997-01-06-networkworld-pg-10-clip-internet

Internet service provider ensures response times

By John Cox
San Francisco

A pathbreaking Web service provider later this month will open in Los Angeles the last of seven data centers designed to create a high-performance Web backbone with guaranteed response times.

Genuity, Inc., based here, is a Bechtel Corp. subsidiary chartered to create "electronic infrastructures" by using traditional data center disciplines to strengthen the Internet/Web for transaction-oriented, mission-critical applications.

Today, Web traffic is funneled over public telephone networks, which Genuity officials argue were not designed from the outset to cope with the rapidly increasing traffic loads. In addition, performance bogs down because the traffic funnels through a small number of network access points (NAP), where Web requests and responses are passed back and forth between different carriers.

Last week, Genuity opened its San Jose, Calif., data center, which connects via redundant fiber links to a NAP two floors below it in the same building. The Los Angeles center will complete the first phase of data center deployment, joining operational centers in Chicago, New York, Phoenix, Washington, D.C. and London.

Genuity launched virtual private network services about a year ago and is now extending these with two Web services — an intelligent routing system called Hopscotch and a Web content replication offering based on Versant Object Technology, Inc.'s Web Propagation Framework.

The company's data centers host routers, hubs, databases and Web servers for Genuity's corporate customers. Web requests come in via the NAP and are then passed to the data centers, which are linked via Genuity's redundant T-3 network. Genuity's patent-pending software technology determines the optimal return path and Web server to respond to the request.

The result, according to Sam Mohamad, Genuity's vice president of marketing and strategic sales, is fast and predictable response times. Genuity will guarantee response times for its customers, based on their priorities and application requirements.

"We're saying to our customers: The Internet is now a business-critical tool, and our focus is on making it perform that way," he said.

PROFILE: GENUITY, INC.

Headquarters:	San Francisco
Founded:	1994, as Internet Media Network; acquired in 1995 by Bechtel Corp.
Purpose:	Dedicated Internet service provider running a high-performance, privately owned IP network for corporate customers, along with a full range of related data center, project management, implementation, Web hosting and consulting services.

Genuity's data center and network architecture is designed to ensure this. The data centers use top-end Cisco Systems, Inc. 7500 series routers, redundant fiber connections and a dual T-3 fiber ring.

Both local-loop and national backbone connections are leased from two separate carriers to ensure constant availability. The data centers run Web servers and databases on an array of popular Unix and NT servers, with database administrators, full data backup facilities, uninterruptible power supplies, air-conditioned, raised floor facilities and complete network monitoring via Hewlett-Packard Co.'s OpenView.

©Genuity: (415) 957-5350.

CORRECTION

NEC America is not affiliated with Packard Bell, as stated in the Network World 200 list (Dec. 23/Dec. 30, 1996, page 6). The Packard Bell affiliation is with NEC Corp. of Tokyo, which made a substantial investment in the PC maker last June.

[HP004W][GDrive]

1997 (Jan 13) - Infoworld - Vol. 19, No. 2 -

- **1997-01-14-infoworld-vol-19-no-2-pg-01** [HP004N][GDrive]
- **1997-01-14-infoworld-vol-19-no-2-pg-14** [HP004O][GDrive]

Vendors to boost Web server capabilities

■ Many ways offered to balance loads

By Mark Leon

LOAD BALANCING is catching on as a method for improving Web site availability, but marrying that technology with routing technology may be the next critical step toward improving Web server performance.

TECH UPDATE

During the past Olympics, for example, IBM combined replication technology from its Lotus subsidiary with another IBM technology, code-named Womplex, to help manage the Olympic site. That technology is expected to be commercially available in the first half of this year. (See "IBM adds pieces to Web software vision," Oct. 7, 1996, page 45.)

Also looking to tackle this issue is Versant Object Technology, which has teamed up with Genuity, an Internet service provider that is a subsidiary of Bechtel, to deliver a combined package later this year.

Under the terms of the alliance, Versant will provide replication technology to manage Web content distributed across multiple servers, and Genuity will direct traffic to ease congestion and deliver guaranteed response times.

Versant will supply the Web Propagation Framework, replication software built around Versant's Object Database Management System. Web developers using the framework can propagate and synchronize Web content across as many as 65,000 different sites, according to company officials.

"The goal is always to attract more people to the site, but when you become successful, you can collapse under your own weight," said Felix Lin, director of Internet strategy at Versant, in Menlo Park, Calif.

But replicating sites on several servers only makes sense if traffic is routed to minimize congestion and maximize response times. Hopscotch, Genuity's new routing software, is designed to do that.

"Hopscotch finds the optimal path to the resource that is most available," said Geir Ramleth, CEO of Genuity, in San Francisco.

Hopscotch modifies the behavior of the IP on the 'net backbone. Normally IP will minimize the number of hops a packet takes from source to destination. Hopscotch clocks response time over alternate routes to find the best path to bring end-users directly to a specific server.

Genuity constantly monitors every Internet Network Access Point. Hopscotch uses this data to intelligently route packets.

Also looking at bolstering their Web server capabilities via load balancing are Netscape and Microsoft.

But all of these companies may find that an installed base of customers who are willing to pay for this software might be much smaller than initially thought if the developers at the Massachusetts Institute of Technology (MIT), in Cambridge, Mass., have their way. MIT's Lab for Computer Science is developing routing software that it will offer for free to relieve busy sites.

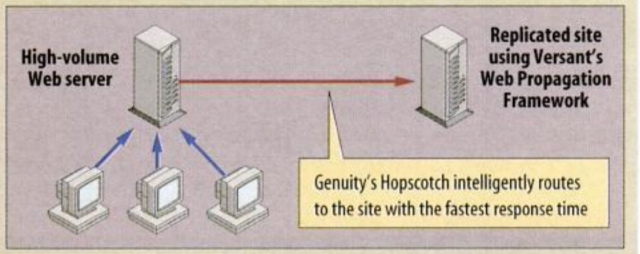
"We are looking at a scheme to distribute Web pages to many sites," said David Karger, assistant professor at the lab. "We toss popular pages to random sites. Clients just need to figure out where the pages went."

This is done, according to Karger, through the time-honored computer-science method of hashing.

"We hash on the page's URL so that it gets replicated just enough," Karger said.

Better management for Web traffic

The Versant-Genuity partnership is designed to reduce congestion at popular Web sites by replicating sites and routing traffic for optimal response time



G. BOREN / INFOWORLD

[HP004P][GDrive]

Note "Geir Ramleth ", CEO of Genuity (as of Jan 13 1997). Who is he?

https://infotechlead.com/news-2/citrix-appoints-geir-ramleth-chief-strategy-officer-26886

(2014) - Citrix appoints Geir Ramleth as chief strategy officer

02/12/2014

Citrix has appointed Bechtel chief information officer (CIO) Geir Ramleth as senior vice president and chief strategy officer.

Ramleth, who will be reporting to Citrix President and CEO Mark Templeton, will be responsible for strategic, technical and operational teams to fully realize the company's vision of a software-defined workplace.

He served as SVP and chief information officer of Bechtel, where he led the company's global transformation to cloud-based workplace services between 2002 and 2013.

He also served as president and CEO of Genuity, a Bechtel Enterprises company formed to deliver Internet and data services until its sale to GTE. Ramleth has also held management positions with Oracle, PageMart Wireless, and PacTel Personal Communications.

Ramleth will be based in the company's Santa Clara, Calif. headquarters.

1997 (May 7) - Patent Application for 61144638 - Multi-Tenant Unit

Primary inventors are **Thomas Johannes Obenhuber (born 1955)** and **Rodney Lance Joffe (born 1954)** .

PDF of patent -[HG00B3][GDrive]

Description

This application claims priority from U.S. Provisional Patent Application Ser. No. 60/019,089, filed May 14, 1996, naming as inventors Thomas Obenhuber and Rodney Joffe, and assigned to the assignee of the instant application. U.S. Provisional Patent Application Ser. No. 60/019,089 is incorporated by reference herein in its entirety for all purposes.

BACKGROUND OF THE INVENTION

The present invention relates to computer networking systems and, more particularly, to systems and methods of providing Internet access to multiple users at a single location.

The Internet is a collection of thousands of computer networks around the globe. Internet usage has grown exponentially since 1993, mainly due to the world wide web (Web) and its electronic mail (e-mail) and web page capabilities. This interconnection of computers is possible because the Internet has adopted a communication standard (Transmission Control Protocol/Internet Protocol or TCP/IP) which allows computers with different operating systems to communicate with each other over a network of networks (an "internetwork").

By one estimation, over 8 million computers currently attach to the Internet. An estimated 40 million users worldwide access these computers ("hosts").

Corporations and private users increasingly demand easy, cost-effective, and high-speed (e.g., greater than 1 megabits per second or Mbps) access to public interoperable networks such as the Internet. Around the world, the demand for a technical infrastructure for building private networks on top of public networks also is increasing.

As the number of users on the Internet increases, so too do the users grow more sophisticated. Users are demanding greater bandwidth to support this sophistication.

In conventional systems a user might use several different suppliers and components to achieve connectivity and security. The user then has to change equipment and software protocols during his migration from a lower bandwidth (e.g., 56 kilobits per second or kbps) to a higher bandwidth (e.g., 1 Mbps or higher).

Accordingly, there is a need for a substantially simplified infrastructure to access public networks with a reduced number of components, a reduced number of software protocols, enhanced management capabilities for network components, and secure access to the public network.

SUMMARY OF THE INVENTION

The present invention provides systems and methods for providing multiple users with access to a public network like the Internet. A single high-bandwidth connection (e.g., fast Ethernet) allows the multiple users to communicate with the public network. Each user is allocated a specific bandwidth, and the user is able to freely communicate with the public network up to the allocated bandwidth. Additionally, the invention may be remotely configured to change bandwidth allocations. [...]

US006144638A

United States Patent [19]

Obenhuber et al.

[11] **Patent Number: 6,144,638**

[45] **Date of Patent: *Nov. 7, 2000**

[54] **MULTI-TENANT UNIT**

[75] Inventors: **Thomas Obenhuber**, San Francisco, Calif.; **Rodney L. Joffe**, Phoenix, Ariz.

[73] Assignee: **BBN Corporation**, Cambridge, Mass.

[*] Notice: This patent issued on a continued prosecution application filed under 37 CFR 1.53(d), and is subject to the twenty year patent term provisions of 35 U.S.C. 154(a)(2).

[21] Appl. No.: **08/853,862**

[22] Filed: **May 9, 1997**

Related U.S. Application Data

[60] Provisional application No. 60/019,089, May 14, 1996.

[51] **Int. Cl.**[7] **H04L 12/56**

[52] **U.S. Cl.** **370/231**; 370/398

[58] **Field of Search** 370/230, 231, 370/235, 398, 423, 468, 537, 538, 412, 413, 414, 415, 416, 417, 418, 232, 233, 234, 252, 253

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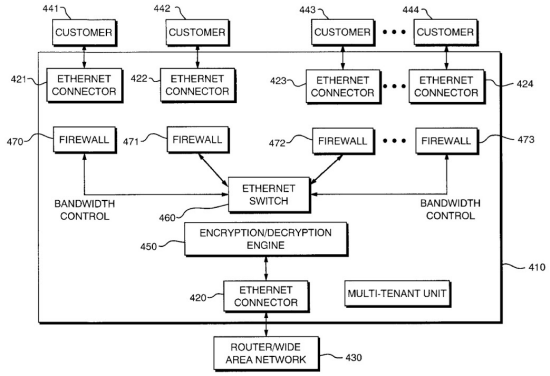
Primary Examiner—Douglas W. Olms
Assistant Examiner—Kenneth Vanderpuye
Attorney, Agent, or Firm—Leonard Charles Suchyta; Floyd E. Anderson

[57] **ABSTRACT**

Systems and methods for providing multiple users with access to a public network like the Internet are provided. A single high bandwidth connection (e.g., fast Ethernet) allows the users to communicate with the public network. Each user is allocated a specific bandwidth and can freely communicate with the public network up to the allocated bandwidth. Additionally, the invention may be remotely configured to change bandwidth allocations.

16 Claims, 12 Drawing Sheets



MULTI-TENANT UNIT

This application claims priority from U.S. Provisional Patent Application Ser. No. 60/019,089, filed May 14, 1996, naming as inventors Thomas Obenhuber and Rodney Joffe, and assigned to the assignee of the instant application. U.S. Provisional Patent Application Ser. No. 60/019,089 is incorporated by reference herein in its entirety for all purposes.

BACKGROUND OF THE INVENTION

The present invention relates to computer networking systems and, more particularly, to systems and methods of providing Internet access to multiple users at a single location.

The Internet is a collection of thousands of computer networks around the globe. Internet usage has grown exponentially since 1993, mainly due to the world wide web (Web) and its electronic mail (e-mail) and web page capabilities. This interconnection of computers is possible because the Internet has adopted a communication standard (Transmission Control Protocol/Internet Protocol or TCP/IP) which allows computers with different operating systems to communicate with each other over a network of networks (an "internetwork").

By one estimation, over 8 million computers currently attach to the Internet. An estimated 40 million users worldwide access these computers ("hosts").

Corporations and private users increasingly demand easy, cost-effective, and high-speed (e.g., greater than **1** megabits per second or Mbps) access to public interoperable networks such as the Internet. Around the world, the demand for a technical infrastructure for building private networks on top of public networks also is increasing.

As the number of users on the Internet increases, so too do the users grow more sophisticated. Users are demanding greater bandwidth to support this sophistication.

In conventional systems a user might use several different suppliers and components to achieve connectivity and security. The user then has to change equipment and software protocols during his migration from a lower bandwidth (e.g., 56 kilobits per second or kbps) to a higher bandwidth (e.g., 1 Mbps or higher).

Accordingly, there is a need for a substantially simplified infrastructure to access public networks with a reduced number of components, a reduced number of software protocols, enhanced management capabilities for network components, and secure access to the public network.

SUMMARY OF THE INVENTION

The present invention provides systems and methods for providing multiple users with access to a public network like the Internet. A single high-bandwidth connection (e.g., fast Ethernet) allows the multiple users to communicate with the public network. Each user is allocated a specific bandwidth, and the user is able to freely communicate with the public network up to the allocated bandwidth. Additionally, the invention may be remotely configured to change bandwidth allocations.

In a preferred embodiment, the present invention provides an apparatus for communicating information packets between each of a plurality of ports (referred to as "user ports") and an additional port (referred to as the "network port"). The apparatus includes a switch for establishing communication paths between each of the user ports and the network port; storage for configuration information regarding the user ports; and a controller, responsive to the configuration information for a given user port, for limiting the flow of information packets between the given user port and the network port.

Additionally, the present invention provides a method for distributing data between a network port and multiple user ports. The method includes for each of the user ports, storing configuration information indicating the data bandwidth allocated to the port; receiving a request to send data between the network port and a selected user port; determining if the current data bandwidth of the selected user port exceeds the allocated data bandwidth; and sending the data between the network port and the selected user port if the current data bandwidth does not exceed the allocated data bandwidth.

Also, the present invention provides a method of establishing respective network connections between a wide area network (WAN) and each of multiple tenant sites at a single location to allow information packets to be communicated between each tenant site and the WAN. The method includes providing a central switching apparatus at the location, including a plurality of tenant ports and an additional network port; coupling the WAN to the network port; coupling at least one computer or a local area network (LAN) at each tenant site to a respective tenant port; and establishing, with the central switching apparatus, communication paths between each tenant port and the network port to provide each tenant with access to the WAN.

Further aspects and features of the present invention will become readily apparent to one of ordinary skill in the art on reading the background above and the description below.

BRIEF DESCRIPTION OF THE DRAWINGS

FIG. **1** shows several hardware components and connection mechanisms to access an internetwork;

FIG. **2** shows the present invention combining several OSI network layers;

FIG. **3** shows differences in connection mechanisms between the invention and a conventional system;

FIG. **4** illustrates a functional block diagram of an embodiment of the invention;

FIG. **5** illustrates a hardware block diagram of an embodiment of the invention;

FIG. **6** illustrates a software block diagram of an embodiment of the invention;

FIG. **7** is a flowchart of a software packet filtering process according to an embodiment of the invention; and

FIGS. **8A** and **8B** are flowcharts of a process for forwarding packets through the system according to an embodiment of the invention.

DETAILED DESCRIPTION OF SPECIFIC EMBODIMENTS

The following description uses the Internet as an example to describe in detail the current art of public network access. The invention, however, is not restricted to the Internet and is applicable to other commercially or publicly available networks.

Introduction

Internet access can be gained conventionally through two methods:

Dial-up service through an access provider such as AOL® or Compuserve® geared to the individual occasional user. However, the low capacity of such a dial-up

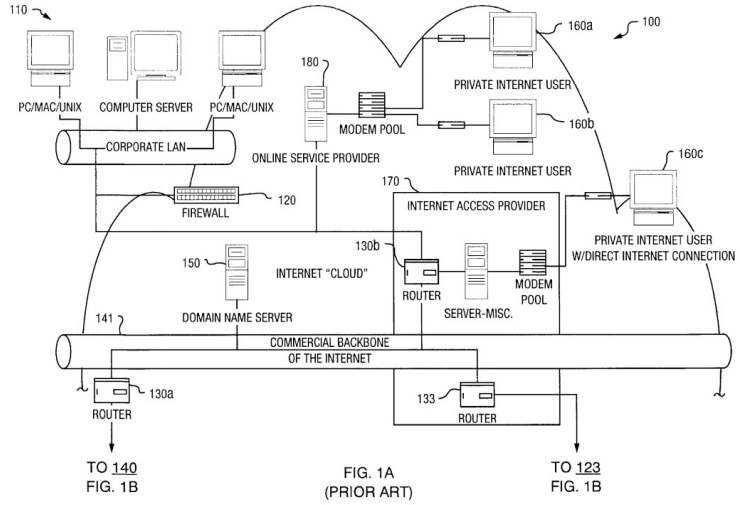
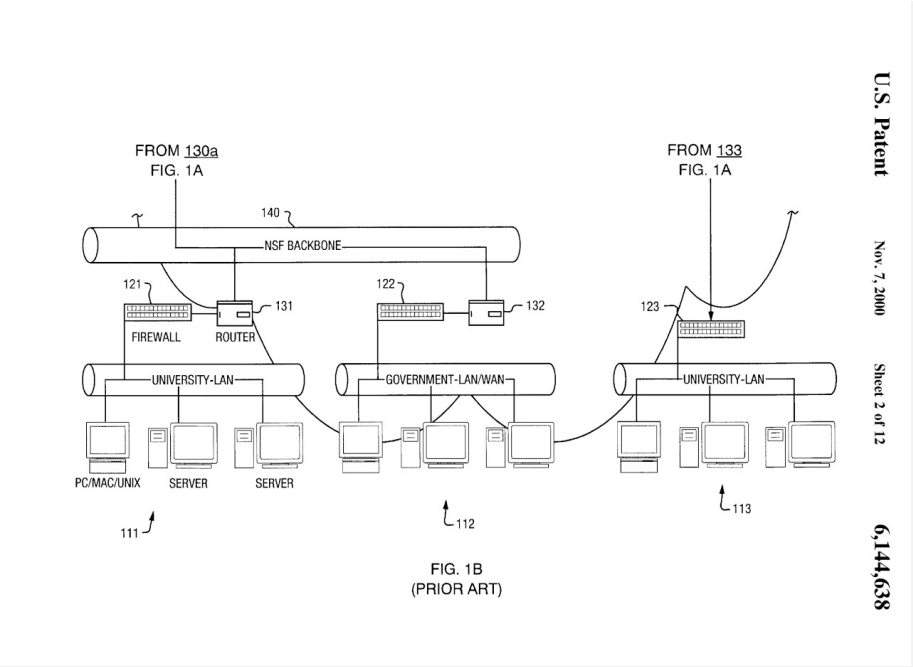


FIG. 1A
(PRIOR ART)



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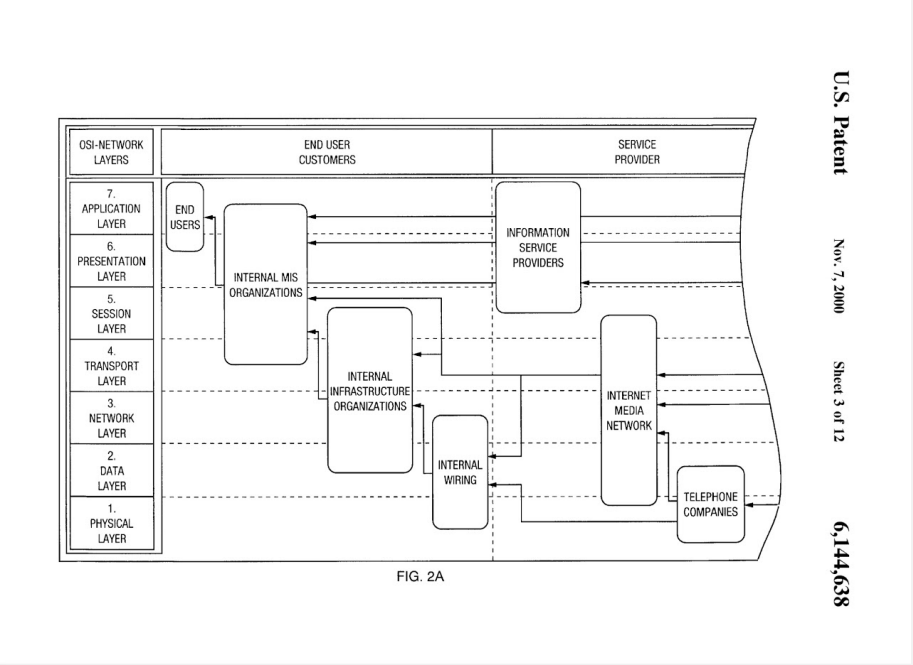

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1997 (June) CBR : "INTERNET FIRM GENUITY ACQUIRES NAP.NET"

https://www.cbronline.com/news/internet_firm_genuity_acquires_napnet_1/

- CBR STAFF WRITER17TH JUNE 1997

Genuity Inc, a San Francisco, California-based subsidiary of engineering and construction giant Bechtel Corp, **has acquired NAP.net LLC**, a Milwaukee, Wisconsin-based internet service provider covering the Chicago and Milwaukee metropolitan area. Genuity, once known as the Internet Media Network, was formed in 1994 and offers internet connection, data centers and integration serivces. It currently uses […]

Genuity Inc, a San Francisco, California-based subsidiary of engineering and construction giant Bechtel Corp, has acquired NAP.net LLC, a Milwaukee, Wisconsin-based internet service provider covering the Chicago and Milwaukee metropolitan area. Genuity, once known as the Internet Media Network, was formed in 1994 and offers internet connection, data centers and integration serivces. It currently uses Sprint and MCI Internet backbones, while NAP uses WorldCom Inc, giving the combined company a third level of redundancy. No terms were given.

1997 (Summer ... maybe earlier) - Jon Postel assigned to board of directors of Genuity

1997 (July) - Thomas Obenhuber leaves Genuity, joins MachOne Communications (which later becomes Telocity Inc.) in August 1997

Source : 2001 (April 02) - UNITED STATES SECURITIES AND EXCHANGE COMMISSION ; FORM 10-K ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934 FOR THE YEAR ENDED DECEMBER 31, 2000 : TELOCITY DELAWARE, INC. / PDF of Report - [HC004X][GDrive] ; **The important text (background for Thomas Obenhuber) is on Page 38 ([HC005J][GDrive]) and Page 39 ([HC005K][GDrive])**

NOTE that Genuity Incorporated is not purchased by GTE Corporation until November of 1997. Source - [HC004M][GDrive]

*"[**Thomas Johannes Obenhuber (born 1955)**], one of our founders, has served [at Telocity, Inc.] as our Senior Vice President, Corporate Development since February 2000. From August 1997 to February 2000, Mr. Obenhuber served [at Telocity, Inc.]as Senior Vice President, Business and Product Planning. **From January 1995 through July 1997, Mr. Obenhuber served as Vice President, Operations and Engineering at [Genuity Incorporated (2000)], a national backbone Internet service provider that he co-started.** From July 1990 through January 1995, Mr. Obenhuber worked at Sun Microsystems where he most recently served as Director, System Architecture."*

1997 (Nov 14/15) - Joffe's thoughts on Postel being on board - Dialogue with Gordon Cook

Archive - Discussion Group for NANOG (North America Network Operator's Group)

[HI0023][GDrive]

RE: GTE to acquire Genuity

From: Rodney Joffe

Date: Fri Nov 14 02:15:34 1997

Gordon,

I have to admit that you're right. You really do have all the answers, and you really do know it all.

I guess the fact that there are only two shareholders in Genuity, me and Bechtel, both of whom know exactly what Jon could and couldn't do, and who accepted his conditions when he joined the board, is unimportant. And the fact that Jon knew this, and understood that his fiduciary responsibility in this area was subject *only* to the shareholders, both of whom assured him in terms that he was prepared to accept that they would *not* expect him to or ask him to _abuse_ his position of trust outside of Genuity to assist Genuity unfairly, is irrelevant.

Gordon, I have never been able to quite fathom out why you chose this industry to attempt to make a living, and not the same industry as the National Enquirer. I think you've missed your calling. I only hope your clients realise the true value of your reporting.

So that others are privy to the same information that I gave you, let me be specific (and remember, I don't owe ANYONE an explanation, but I want to undo the damage that your buffoonery has caused);

Bechtel never really had to make a choice about whether Jon joined the board or an advisory board. I nominated him to the board as one of *my*representatives. They didn't know Jon from a hitchiker before this. I wanted someone clueful to help me guide Genuity along a *good* path, and away from the dark side (obviously I passed on asking you). I think I can proudly say that Genuity has been an exemplary internet citizen (I, of course, may not have been).

So when you attempt to to wind people up with your paranoia, you do someone who has done a lot of good for the Internet over *many* years a grave injustice. Fortunately I care more about what honest, good people like Jerry Scharf says, than I do about what you say. If I didn't, I'd probably spend some real energy telling you what I really think.

Does anyone know if Paul's RBL works on a single netaxs address?

Rodney Joffe / Chief Technology Officer / Genuity Inc., a Bechtel company

RESPONDING TO :

> -----Original Message-----

> From: Gordon Cook [SMTP:cook@netaxs.com]

> Sent: Thursday, November 13, 1997 11:38 PM

> To: Jerry Scharf

> Cc: nanog@merit.edu

> Subject: Re: GTE to acquire Genuity

May I quote what you over looked: Now I am confident that he has not used his position to give special benefit to genuity.

and later in the same post: Rodney Joffe explained to me in very glowing terms this summer why jon was on the 'board" his explanation sounded fine.

Further explanation - Rodney Joffe told me precisely the same story which i published verbatim.....and more besides..... jon came out pure as the driven snow

I never suggested genuity was harmed. I do state that one of the senior members of the community who knows the laws of the fiduciary legal responsibility of members of boards of directors far better than I pointed out that he believed it possible that a genuity stock holder who was aware of jons proper from the internet point of view, could have taken legal action against jon for NOT making a decision that benefitted genuity and using his powers to act for the fiduciary benefit of the company of which he was a director and for which he had such a legal responsibility.

now I am a r ussian history Phd....read trained as an academic....as is jon.....and most academics aren't terribly aware of these nuances.....so I can understand jon's accepting the directorship.

guess my bitch is why would the presumably legally savvy business staff of genuity/bechtel have put jon however unwittingly into such a position?.

I have been told be those who are also my seniors, that Jon is and "icon" and when one critcizes him one can expect all hell to break loose....looks like my seniors were right.....but it also looks like I owe him no apology.

and before you continue your flame I hope you will look more carefully at what I am saying.

read my original post more carefully this time.

Last time i looked Jon postel was still on genuity's board. It is my understanding that this gives him a LEGAL responsibility to act in the best financial interests of genuity. Seems to me this creates a conflict of interest given what with his powers as IANA he could do to benefit genuity with IP allocations etc. Now I am confident that he has not used his position to give special benefit to genuity. but I am also told that he could be regarded as culpable for not having helped them out when it could be argued he had the power to do so. This is a distinction that I was slow to grasp and one that jon with a research rather than a business background might also be slow to grasp.

Rodney Joffe explained to me in very glowing terms this summer why jon was on the 'board" his explanation sounded fine. Point is Jon could have had the same impact as a special advisor to the board. one wonders why genuity bechtel attornies that could be expected to be aware of these issues went with the board choice anyway.

does jons board position disappear when genuity is fully acquired? i would hope so.

Archive - Discussion Group for NANOG (North America Network Operator's Group)

[HI0024][GDrive]

RE: GTE to acquire Genuity

From: Gordon Cook

From: Gordon Cook

Date: Fri Nov 14 11:09:44 1997

Rather than speak ONLY to the facts, Rodney can't resist some very nice name calling and personal attacks because my criticism has obviously offended him. And regardless of what an outsider to the internet might think his motives were of course pure. Let the record speak for itself and let the discussion be taken off line and NANOG be returned to operational matters.

Here, in full, is what I published in my sept 97 issue.

On July 13 Rodney wrote privately to us but for publication: I've been mulling over your request, and I'm not sure how best to answer it. One of the misnomers about Genuity is that we're a start up. **You'll actually find that we were one of the 22 direct connects to the CIX router in Santa Clara already in May of 1994**, so I'd hardly call Genuity a start up. Although we were certainly the smallest, or one of the smallest (Jamie Saker out of Wisconsin at Synergy was probably a similar size), we were very much in business before the Internet truly became mainstream.

Anyway, our early allocations were a couple of /24s, and then a 19/. We had to plead with Kim Hubbard for another 19/, but were successful in getting it only when we promised to be frugal in sub-allocations (she didn't ask for empirical evidence). Then Genuity came in to being (December 1995 when I sold 75% of the company to Bechtel).

At that stage, or soon after, things tightened up. We really didn't have our act together as far as swipping address space that we had allocated to customers, and we began to run out of space. **At the NANOG held in DC in 1996 all of our pleading with Kim fell on deaf ears.... Justifiably on her part (although at the time I felt a 2 x 4 was the best method of improving her hearing)**. So I approached everyone I could for help, including Paul Vixie and Jon Postel. **Jon was very helpful, cuffing me around the ears and telling me to go away and do what the NIC wanted everyone to do, and to set an example**. So, all of our Network Engineering staff got together, and over the course of a week built all the audit tools needed, and SWIPd all the addresses we had allocated, developed an ongoing plan and architecture for allocating address space, then went back to Kim for more space.

Kim looked at the SWIP data, tested the integrity, and then agreed to allocate us more address space in segments, but only if we agreed to return the address space we already had if we wanted to get contiguous space allocated (I am a big believer now in CIDR). We have stuck to this religiously, and have only been turned down twice since then when we have asked for more address space (we had to tighten up more of our sub allocations). So we have not really seen any effect of RFC 2050 (I don't think) because we were already being very conservative before it was published. We maintain a very strict regime with

seen any effect of RFC 2050 (I don't think) because we were already being very conservative before it was published. We maintain a very strict regime with our customers, and actually, although our customers are all corporate users, we commonly allocate /27s to them if they cannot justify more space.

Jon Postel as a Genuity Board Member

You asked how Jon Postel came to be on our board. As far as I know, it is the only board he sits on. He sits in one of my two board positions. He helps me provide the Internet's view to the Bechtel side of the board, so that the decisions they make are for the Internet, not against it. He helps me lend weight to making sure that we help, not hurt. We've funded well into 6 figures of software development through Vixie and Associates. Jon helped make sure that the board understood that making the applications 'freeware' and public domain was a 'good' thing. Hence "Vulture" and " Vulture 2" and Turk, which are available from Vixie's home page, and are used by many. Also we've ended up funding indirectly some of the other stuff that Paul does, related to bind, etc.

Jon made it clear, as part of his involvement in our board, that his connection with IANA etc would be one way - he would be looking for a flow of help in the other direction only. **We've sponsored ISOC at the fullest level because of him, we provide significant services to ISI, JPL, CalTech, and USC, and on the other hand we have disqualified ourselves from opportunities where his influence might have helped** (We will *not* be applying/bidding to be one of the registrars in the new TLD world unless it is clear that the decision making process can be shown demonstrably to be untainted by any connection - currently unlikely).

The interesting thing is that Jon has helped make us a good net citizen in an environment where one would believe that a privately held company with very deep pockets could have instantly become a major force for the 'dark' side.

You would have to ask Jon for his full motivation, but I will tell you that you can spend as much time combing through the records as you want, and you will see that all the apparent advantages have accrued on the Internet's side. From our side, we have managed to build a solid business, based on pretty strong morals and principles, and have attracted some pretty good people who also appreciate the fact that we are able to operate without having to look over our shoulders. Jon was instrumental in this.

By the way, on the few occasions that I have asked Jon questions where he felt a conflict, he has had no hesitation in telling me so. I have respected that. I'd say that Genuity owes some significant part of its success to being guided well by Jon in the good ways of the Internet. And overall I think I can say that the net itself is a better place. [Editor: Unfortunately, we did not recall, until we were going to press, that the member of a Board of Directors of a corporation has a legal, fiduciary reponsibility to that corporation. Thus, contrary to Rodney's assertion about Jon's insisting that his membership not benefit Genuity, it could be said that, if Jon had information about an action that he would take as IANA, and he did not disclose it to Genuity, he might be acting in violation of his legal, fiduciary responsibility to Genuity. If Jon served on an advisory board, this liability would vanish. Unfortunately the web page http://www.genuity.net/about_genuity/officers.html makes it very clear he is a full member of the Board of Directors of the corporation. We see this as one more example that, filled with good intentions as he may be, Jon has gotten in over his head.]

=========

November 14, 1997: since sensitivities are so raw let me make a couple more things perfectly clear. It is my understand that among the original generation of internet founders Jon has likely profited from his full time dedication to the network far less than any one else. I have talked with a lot of people who for various reasons are unhappy with things that Jon has recently done. However not once has anyone person ever suggested that jon did anything for his personal benefit or profit.

NEVERTHELESS: with the internet now a multi billion dollar a year global industry, the same informal standards of operation for IANA that served the internet well up to a couple of years ago are likely inadequate. IANA is perhaps the most critical set of functions in the entire network. the idea that one fallable human being like Jon - however well intentioned he may be and I am sure that he is well intentioned - can be both decision maker and court of last resort on issues as contentious as IP allocation and DNS - is an idea that is losing credibility. Given the last two years of DNS wars - if I may be allowed to have an opinion of MY own - it is especially important that, operating in an arena where most people no longer know him personally, Jon must take great care to avoid even the APPEARNCE of any conflict of interest.

****

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****

1997 (Nov 13) - GTE Press Release (archived with Verizon) - "GTE Corp. to acquire Genuity, Inc."

Source - [HC004M][GDrive]

IRVING, Texas - GTE Internetworking, a subsidiary of [**GTE Corporation**], today announced that it will acquire **Genuity Inc.**, a subsidiary of Bechtel Enterprises. The terms of the transaction were not disclosed. The acquisition is subject to customary closing conditions, including the expiration of applicable waiting periods under the Hart-Scott-Rodino Act. The acquisition will be completed through **GTE Internetworking's** affiliate, **BBN Corporation**. It is anticipated that the transaction will be completed by the end of the year.

GTE Internetworking, already a leading provider of Web hosting, is pursuing its strategy of enabling customers to transfer their business applications to the Internet. Moving mission-critical business processes to the Web allows customers to broaden market reach, lower the cost of sales, distribution, and support, and transform the relationships between companies and their customers.

GTE Internetworking has more than a thousand Web hosting customers, including some of the busiest sites on the Web--ZD.Net, Four11, LA Times, Boston Globe, Tribune Corporation, and NBC Interactive. The combination of GTE Internetworking with Genuity will provide an expanded global footprint with 12 fully networked data centers, creating an organization with an unprecedented ability to provide distributed Web hosting services.

Genuity is a value-added provider of distributed application hosting solutions. Genuity has strategically located data centers and a sophisticated load-balancing technology, Hopscotch, which together ensure efficient delivery of data across the Internet. Genuity's unique Hopscotch technology helps solve busy server problems, network congestion, and Internet latency to deliver the highest levels of performance. Its customers include cnet, CMP Publications, Inc., Excite, InterTel, and MCA/Universal.

"With this acquisition we continue to build the critical set of assets necessary to advance our position as a trusted provider of the enabling infrastructure for Internet commerce. We are combining our high-speed national backbone with global reach, robust public and private peering relationships, advanced hosting and distributed application management with our security and systems integration expertise to enable customers to migrate mission critical applications and business processes to the network," said George H. Conrades, president of GTE Internetworking.

"Genuity's network technology, and most importantly, its people, are what give us the competitive advantage," said T. Geir Ramleth, president and CEO of Genuity. "The integration of our robust hosting infrastructure and powerful Hopscotch technology with GTE Internetworking's extensive resources will create a synergistic union. And our similar cultures and vision for the future provide a unique opportunity for customers looking to transform their businesses using Internet technology."

"Genuity's robust distributed application hosting architecture will be instrumental to GTE Internetworking as we continue to focus on delivery of the most advanced distributed network-centric solutions," said Mark Shull, vice president and general manager of GTE Internetworking's Network Centric Solutions group. "This combination allows us to build on our existing base of technology and expertise to provide Internet infrastructure services for electronic commerce."

About Genuity

Genuity is a subsidiary of Bechtel Enterprises, the development, financing and ownership affiliate of the Bechtel organization. Genuity is a value-added provider of distributed application hosting, access and security technologies that provide cost-effective, scaleable and highly reliable Internet infrastructure for commercial applications. With headquarters in San Francisco, Genuity also has data centers established in Chicago, Los Angeles, New York, Phoenix, San Jose, Washington, D.C. and London. Genuity is the creator of Hopscotch, a service allowing organizations to ensure the accessibility and performance of their mission-critical Internet sites by eliminating DNS look-up failures and solving Internet latency problems. For more information, please call 1-888-Genuity, or visit the company's World Wide Web site located at Genuity

About Bechtel Enterprises

Bechtel Enterprises, Inc. is the development, financing and ownership affiliate of the Bechtel organization, a premier global engineer - constructor. It is a leader in the privatized infrastructure market, with ownership interests in 9 companies and 29 projects in the power, water, transportation, telecommunications, and technology sectors. Since 1990 alone, Bechtel Enterprises has participated in arranging nearly $12 billion in project financing. For more information about Bechtel please visit the company's World Wide Web site at Bechtel

About GTE Internetworking

GTE Internetworking, a unit of GTE Corporation (NYSE:GTE), includes the recently acquired BBN Corporation, which 28 years ago developed the ARPANET, the forerunner to today's Internet, and GTE Intelligent Network Services, which provides Internet services to consumers and small businesses.

GTE Internetworking offers customers, from consumers to Fortune 500 companies, a full spectrum of Internet services and solutions including dial-up and dedicated Internet access, end-to-end network management, high-performance distributed hosting and applications solutions, managed security, and systems integration, for customers migrating their mission-critical business applications to the Internet. GTE Internetworking draws upon BBN's expertise in funded research and development of advanced technologies, including satellites, digital radio, multi-gigabit routers, security, and speech, and GTE's strong existing telecommunications services, including local and long distance, wireless, paging, video, research, and Internet. The address for the GTE Internetworking's home page is www.bbn.com.

1998 Aug 09 ... some BBN and Genuity in there too

Full newspaper page : [HN01EN][GDrive]

Technology

Host of companies compete for business data storage

Hosts rent space on servers to hold programs, data or Web pages

By Jerry Ackerman
Boston Globe

It was only a matter of time, once interstate highways were built, before roadside diners gave way to fast-food chains and mom-and-pop motels were replaced by Holiday Inns, Radissons, and EconoLodges.

And so it is today along the Internet information highway, where a battle is being waged for market share in a roadside service called hosting — storage of Web page text and other content for retrieval by computer users at the click of a mouse.

Along with storage, some hosting companies see the field evolving to include rental of specialized business software, on a per-use basis, to customers who need these sophisticated programs but can't afford their upkeep.

The players range from giants — such as IBM Corp. and GTE Corp., which got into the game last year by buying BBN Corp. of Cambridge, Mass. — to Sage Networks Inc., a Cambridge start-up intent on building a national hosting company by buying smaller operators, and tiny Taylor Group of Bedford, N.H., which is starting from scratch.

The prize is a position in an industry that now has 4,000 to 5,000 hosting companies, which maintain the computers, called servers, that store Internet data. While no hosting company is believed to hold more than 2 percent of the market, these companies had combined sales of $400 million in 1997, according to Forrester Research Inc. of Cambridge. That number is expected to reach $1.9 billion in 1999 and $10.5 billion by 2002.

Tied to online shopping

Underlying this rapid growth is the surging interest in online shopping.

Electronic commerce last year chalked up more than $20 billion in sales, two-thirds of that in business-to-business transactions. Forrester figures that by 2002, this number could reach $350 billion, as existing on-line companies — ranging from home-based enterprises to pioneering bookseller Amazon.com — are joined by retailers such as L.L. Bean, Macy's, and Sears, Roebuck & Co.

Many of the largest of these "e-commerce" companies manage their own servers and networks. But some big players, and most of the small ones, contract this work to hosting companies.

These often are Internet service providers, many of them local companies whose primary business is providing dial-up phone connections to the Internet.

But along with providing connections, they sell service packages that — for an average fee of $300 to $400 a year and frequently much higher for large users — store Web pages, execute orders, and provide software to post purchases to buyers' credit cards while transmitting deposits to sellers' bank accounts.

Still waiting to be tapped, however, are thousands of firms that could sell their products or services over the Internet but haven't tried, and others that have yet to exploit the World Wide Web's full potential.

Software products are coming out almost daily to ease the way, says Joseph Barlett, an analyst with Yankee Group in Boston. "Most companies going with a hosting provider today are not very sophisticated," he observes.

But many that are very savvy are still hiring hosting companies to help guarantee service quality for both external Internet pages and intranet content meant only for employees' eyes.

Forrester says there were 12,000 such "complex sites" last year, and predicts this number will grow to 20,000 by 2002. Many will be managed in-house, but many more firms will be paying thousands of dollars a year to hosting companies.

Looking further ahead, the Internet is on the brink of opening up new ways for companies to conduct their own internal financial and production affairs, using software that until now only large Fortune 500 companies could afford.

Testing the market

Seeing this opportunity, major business software developers such as Lotus Development Corp. (an IBM subsidiary), Microsoft Corp., and Great Plains Software Inc. are market-testing versions of their brand-name products for small companies — firms with 500 or fewer employees — to use via the Internet.

The concept calls for hosting companies to install master copies of such specialized software, and then rent access to users. International Data Corp. of Framingham, Mass. says 25 percent of 900 companies in a recent survey said they liked the idea for payroll processing; others saw a need for such services for economic forecasting or supply-chain management capabilities that they now lack.

"The capabilities in this field are just emerging," said Steven Brand, Lotus' manager for small business applications.

Hosting as a growth business is sharply defined in the "roll-up" strategy being pursued by Sage Networks, which since March has spent more than $20 million to buy eight hosting companies from coast to coast.

These acquisitions — in Atlanta, New York, Washington, D.C., Los Angeles and San Jose, Calif., — form the backbone of what Sage intends to be a national company that can establish brand identity in a now-fragmented market.

"We actually think that through consolidation you can build a large international company," said Bradley Feld, cochairman and one of Sage's founders.

Could become No. 2

By January, he said, Sage hopes to have between 15 and 25 acquisitions under its wing, with more planned for 1999. "We are now one of the top 10 hosting companies in the country and by the end of this year should be one of the top two."

Not that this represents a big market share.

Sage says it has tens of thousands of clients at its companies; some estimate that number is less than 40,000. The firm believed to be the nation's largest hosting operator, Hiway Technologies Inc. of Boca Raton, Fla., claims 87,000 customers.

And the runner-up, Verio Inc., which has 125,000 customers buying connections to the Internet, may be able to claim about 65,000 as hosting customers, based on rules of thumb that industry veterans say are commonly accepted.

Both Hiway and Verio also are pursuing roll-up strategies. Verio, based in Englewood, Colo., is publicly traded. Hiway has an initial public stock offering planned for this year.

Sage's buying spree has included a large, high-speed computer center near Washington, D.C., purchased from IBM Corp., to be the linchpin in the company's operations. A second center is being built in Atlanta, where two of its operating units are also based, at a projected cost of $1 million.

Sage's money comes mostly from a venture fund managed by a New York investment bank, Charterhouse Group International Inc. Patricia Riley, managing director, says Charterhouse has "well over $40 million in pure equity" committed to Sage.

"The way I look at this, you have a market that is growing exponentially and a business that creates profits quickly," she said. An IPO is planned, but no timetable has been set.

GTE, an international telecommunications giant with $23 billion in revenues in 1997, paid $616 million last year to buy BBN, which in 1969, as Bolt, Beranek & Newman, launched the forerunner of the Internet for the U.S. Defense Department.

Today, BBN operates under the name GTE Internetworking, still running key portions of the Internet and selling services to support its parent company's drive to compete against AT&T Corp. and MCI Communications Corp.

"We're shooting to be a leader in the hosting market," says John Vincenzo, a company spokesman.

Still under the BBN flag at the time, the company began commercializing hosting operations at its 11 U.S. locations in 1995, according to senior product manager Christine Silva.

Noticing smaller firms

Going first after large corporations that needed backup storage capacity, the company last year expanded sales efforts to include small and mid-size firms — companies with fewer than 500 employees or sales less than $100 million. Analysts say this sector is where electronic commerce is growing the fastest.

Vincenzo said GTE now has more than 1,000 hosting customers. It acquired one smaller hosting company, Genuity Inc., of San Francisco, late last year primarily because it had a data center that could be a GTE West Coast operations center. More acquisitions are possible.

Coming from a different direction, Dan Taylor, a Bedford, N.H., software consultant, sees new computer hardware technology paving the way for hosting centers to provide small businesses with payroll, engineering, manufacturing control, sales systems, and other software that they previously couldn't afford.

Taylor says the licensing fees for these high-end products, which big companies take for granted, weren't the problem.

It was the cost of hiring someone to install the software, manage its use, and install upgrades, in as many as 200 desktop computers in a medium-sized firm. These information systems managers, who can earn $80,000 to $90,000 a year, also must be available around the clock to solve problems.

The new hardware that is altering this picture is called "thin client" technology, a name that refers to the fact that those desktop terminals are stripped of their software storage capabilities — thinned down — to become terminals that connect to servers that function as a central computer.

May sound familiar

This may sound familiar to anyone who used a computer before the PC revolution , when computer terminals were wired to IBM, Digital Equipment, or similar mainframe computers that were tended behind closed doors by technicians. "The industry is calling it recentralization," says Taylor of this return to the past.

But by requiring that software be installed and maintained only at the servers, operating costs plummet and fancy software becomes more affordable.

Taylor this fall will launch his first application of this approach, installing accounting software in host servers at his company's offices that nearby New Hampshire College will be able to tap, via the Internet, for teaching its business courses.

Simultaneously, his company, The Taylor Group, is discussing the hosting of specialized business applications with New Hampshire's largest private manufacturing company, Cabletron Corp. of Rochester, and with a Massachusetts health care firm, Physicians Quality Care Inc. of Waltham, Mass.

Anticipating success in these pilot installations, Taylor recently bought a 9.5 acres of land in Bedford where he plans to build new offices for his 75-employee company — with 10,000 square feet of space set aside for a hosting center.

[HN01EO][GDrive]

For Information after the acquisition :

See GTE Corporation and BBN Technologies, Incorporated

Founders - Henry Chip Heflich

https://news.fit.edu/alumni/henry-chip-heflich-73-shaping-the-internet/

Henry “Chip” Heflich ’73, Shaping the Internet

Erin FoxJuly 25, 2019

Chip loves to invent things. He has a knack for spotting trends and identifying opportunities.

Heflich was attracted to Florida Tech for two reasons: its proximity to the beach and its connection to the space industry. While earning his bachelor of science in electrical engineering from Florida Tech in 1973, Chip worked for NASA at Kennedy Space Center on the Saturn V rocket. Chip especially enjoyed his coursework in solid state physics, and after graduation he decided to leave the space industry to pursue a career designing analog integrated circuits for Texas Instruments (TI). Here, his passion for invention and entrepreneurial spirit thrived.

Chip left TI to form a company designing corporate local and wide area network computer systems. Meanwhile, something known as the Internet was taking shape, and that would allow Chip’s technologies to be commercialized. Chip co-founded Genuity with a vision to develop corporate Internet services, including data-center-quality web server facilities, a backbone connecting the data centers to the world, and a distributed web content access optimization platform called Hopscotch. Genuity’s technical innovations were met with rave reviews, and the company was acquired by GTE, ultimately becoming Verizon.

Genuity’s patented technology caught the attention of Mark Cuban who recruited Chip to become chief technology officer for Audionet, an early pioneer in Internet-hosted video streaming. Audionet was later renamed broadcast.com and considered the top destination for Internet streaming content with a record-setting IPO on Wall Street. Broadcast.com was purchased by Yahoo! in 1997 for $5.7 billion, and the rest is Internet history. Chip continued as chief technology officer at Yahoo! until his retirement in 2000 and currently serves as chair of Reflect Systems. “Florida Tech provided a solid launch pad for an exciting career,” said Heflich.

Heflich was featured in Florida Tech’s 60th Anniversary special edition book, “60 for 60: Celebrating Sixty Years of Alumni at Florida Institute of Technology.” Copies are available for purchase here.

https://www.sec.gov/Archives/edgar/data/1061236/0000950134-98-005959.txt

" HENRY G. HEFLICH has served as Vice President--Technology for the Company since March 1998. **From January 1996 to March 1998, Mr. Heflich co-founded and served as Chief System Architect for Genuity, Inc., a national ISP. From January 1981 to December 1995, Mr. Heflich served as President and Director of Engineering for MicroNet Research.** Mr. Heflich holds a B.S. in Electrical Engineering from the Florida Institute of Technology, an M.S. in Electrical Engineering from Southern Methodist University and an M.B.A. from the University of Dallas.

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Genuity Incorporated (2000)

NOTE: This page is for the **Genuity Incorporated** that was created in year 2000 by GTE Corporation upon **GTE's** transition into **Verizon Communications Incorporated** . In 1995, "**Bechtel** quietly purchased Phoenix-based Internet Media Network Incorporated , a dormant Internet access provider. The company, which it renamed **Genuity**, was one of 22 so-called "Tier 1" companies that make up the Internet's backbone." [at that time].

The page for the 1995 to 1997 **Genutiy** is here : **Genuity Incorporated** .

Source for above - [HM001C][GDrive]

EVIDENCE TIMELINE

2000 (April 06) - The Boston Globe

Full newspaper page : [HN01F0][GDrive]

See : **Genuity Incorporated (2000)** , **GTE Corporation** , **Verizon Communications Incorporated**

GTE Net division to hire 500 in state, change its name

By Ross Kerber
GLOBE STAFF

GTE Internetworking plans to hire 500 e-commerce consultants and engineers in Massachusetts this year to help develop its high-speed data network and offer services as part of a proposed spinout from GTE Corp.

The division, with headquarters in Burlington, also plans to announce today that it will change its name to Genuity Inc. as it becomes a publicly traded company.

The plan is part of a controversial bid by GTE and Bell Atlantic to gain government approvals for their $84 billion merger plan, which would create the country's biggest local phone company.

Currently, the GTE unit employs about 2,000 people in Massachusetts and 3,500 in all. It includes most of the assets of the former Bolt Beranek & Newman in Cambridge, which GTE bought in 1997 for $616 million. GTE says the unit had revenue of about $1 billion last year but wasn't profitable.

In 1969, Bolt Beranek was one of the Pentagon's first contractors for the computer system that became the Internet. More recently, the company has operated high-speed data connections for big corporations and Internet service providers. In February, it won a contract from America Online Inc., estimated to be worth more than $2.5 billion, to install new connections for the service provider.

If the Genuity spinout is approved, said GTE Internetworking's president, Paul R. Gudonis, the company would become one of the top four providers of Internet connectivity services, along with Sprint, WorldCom, and UUNet. To compete, Gudonis said, Genuity will offer more consulting services to help companies create corporate Internets and business-to-business services for e-commerce. Gudonis would be head of the new company.

The future of the division remains a touchy issue before regulators, however. In filings with the Federal Communications Commission, GTE and Bell Atlantic had proposed to spin off the unit as a public company and keep a 10 percent ownership interest, with an option to increase that to 80 percent within five years.

But competitor AT&T says that would leave those companies effectively in control of the unit. AT&T wants the FCC to insist that Bell Atlantic make more commitments to open local phone service to competition. The FCC is considering the arguments and hopes to rule on the merger by July.

Matthew Kovar, a manager at the Yankee Group consulting firm who follows the networking industry, said Genuity would be free as a stand-alone company to pursue a more aggressive strategy than it would be as a local phone company unit. "It's not a change to the entire business model," he said of Genuity's plans. "But maybe these are things they felt they weren't free to do, or weren't able to do, because of the lethargic Bell operating company mentality."

Gudonis said he couldn't discuss financial specifics, including the total amount of networking investment Genuity would make, until the company files registration statements with the Securities and Exchange Commission to sell public shares. No filings are expected until the FCC clears the merger of the parent companies, he said.

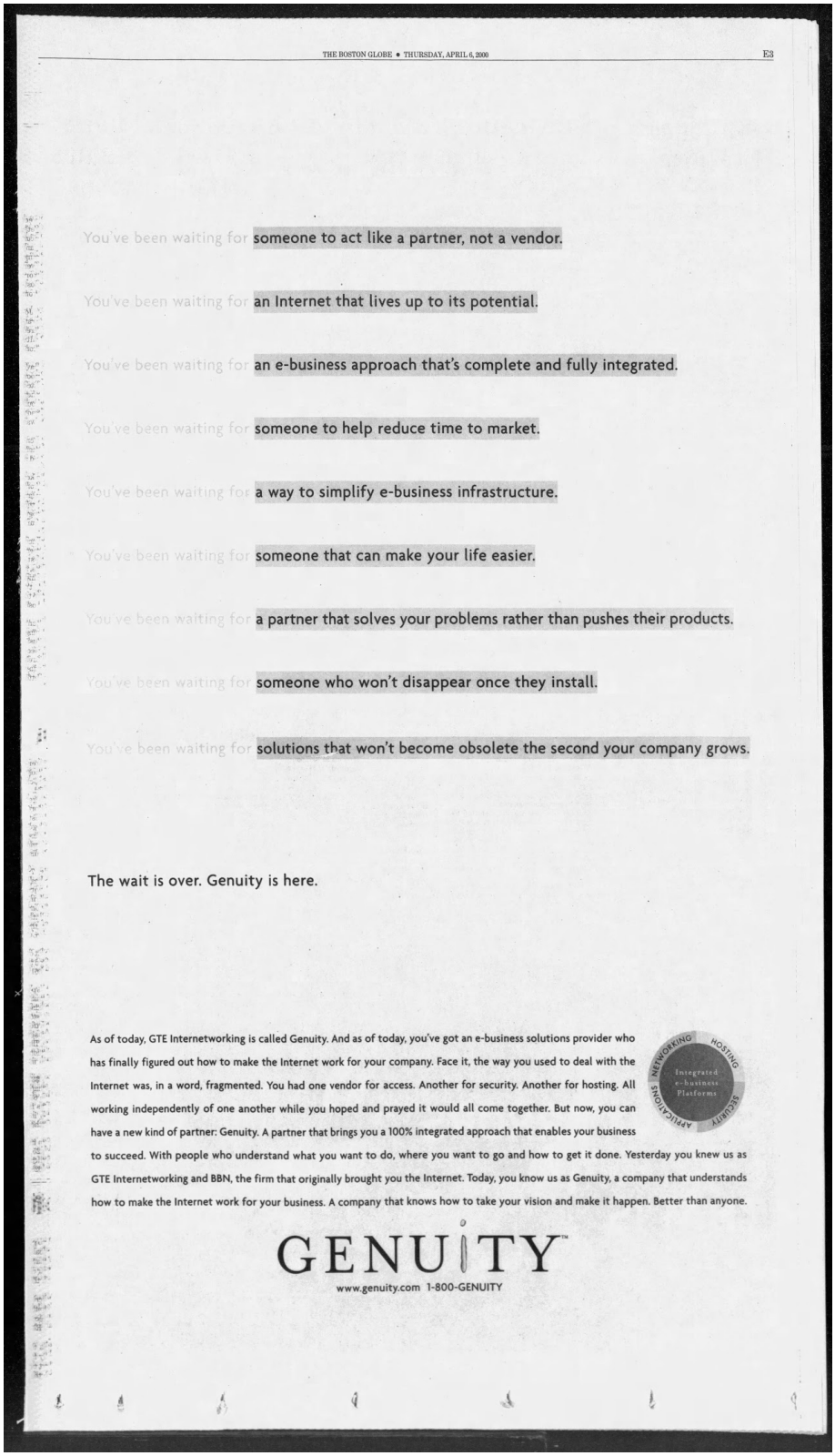
Gudonis's tenure with the GTE unit dates back to 1994, when he joined Bolt Beranak as president of what then was known as its "BBN Planet" division, providing high-speed data services to individual companies. The business totalled about $5 million that year, he said; now it will generate the majority of Genuity's revenue. In addition to Internet companies, customers include Honeywell and FleetBoston Financial Corp.

Genuity also will invest heavily to upgrade its Internet backbone services so it can eventually handle the heavy demands needed to send video signals to homes via cable modems and high-speed phone lines. Clients for these services include Yahoo Inc. and General Electric's NBC Interactive, he said.

The unit is also constructing a new office park in Woburn. Gudonis said it will house 1,400 people by next year, some of whom transferred from other offices in the state.

[HN01F1][GDrive]

2000 (April 04) - Boston globe, advertisement for Genuity



THE BOSTON GLOBE • THURSDAY, APRIL 6, 2000 E3

You've been waiting for someone to act like a partner, not a vendor.

You've been waiting for an Internet that lives up to its potential.

You've been waiting for an e-business approach that's complete and fully integrated.

You've been waiting for someone to help reduce time to market.

You've been waiting for a way to simplify e-business infrastructure.

You've been waiting for someone that can make your life easier.

You've been waiting for a partner that solves your problems rather than pushes their products.

You've been waiting for someone who won't disappear once they install.

You've been waiting for solutions that won't become obsolete the second your company grows.

The wait is over. Genuity is here.

As of today, GTE Internetworking is called Genuity. And as of today, you've got an e-business solutions provider who has finally figured out how to make the Internet work for your company. Face it, the way you used to deal with the Internet was, in a word, fragmented. You had one vendor for access. Another for security. Another for hosting. All working independently of one another while you hoped and prayed it would all come together. But now, you can have a new kind of partner: Genuity. A partner that brings you a 100% integrated approach that enables your business to succeed. With people who understand what you want to do, where you want to go and how to get it done. Yesterday you knew us as GTE Internetworking and BBN, the firm that originally brought you the Internet. Today, you know us as Genuity, a company that understands how to make the Internet work for your business. A company that knows how to take your vision and make it happen. Better than anyone.

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[HN01F2][GDrive]

2000 (April 10) - Network World article / Vol. 17, No. 15 - "GTE, others play the game"

For more than 20 years, Network World has been the premier provider of information, intelligence and insight for network and IT executives responsible for the digital nervous systems of large organizations. Readers are responsible for designing, implementing and managing the voice, data and video systems their companies use to support everything from business critical applications to employee collaboration and electronic commerce

Full pages : Page 01 (cover) : [HP004Q][GDrive] / Page 15 : [HP004R][GDrive]

NetworkWorld

Working the wireless Web

Voice over DSL talk of the town

Users assess verdict

New software helps enforce service levels

CACHING HARDWARE

[HP004Q][GDrive]

GTE, others play the name game

BY DENISE PAPPALARDO

LOS ANGELES — GTE Internetworking announced at Internet World 2000 last week it is changing its name to Genuity.

This development keeps the ISP in step with its parent company, GTE, which also announced that once its pending merger with Bell Atlantic is final, the joint company will be called Verizon.

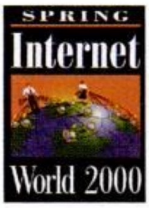
And to complete the name-game circle, Bell Atlantic Mobile and Vodafone AirTouch said last week they will call their joint wireless entity Verizon Wireless (see story, page 91).

GTE Internetworking, now Genuity, is changing its name as it prepares to become an independent company. In February, GTE and Bell Atlantic told the Federal Communications Commission they were willing to spin off GTE's ISP in order to see GTE and Bell Atlantic's merger through.

It is not known if the FCC will take them up on the offer, but the ISP is moving ahead with its plans. Paul Gudonis, president of Genuity, says the change is not dependent on the FCC's decision but is instead prompted by market shifts.

"The name change is part of an evolving strategy to take advantage of the next Internet revolution," Gudonis says. The company likes the fact that the name Genuity is a derivative of ingenuity, he says. He added some at the ISP wanted to go back to the ISP's roots and rename GTE Internetworking BBN Planet. Those folks lost out. GTE acquired BBN Planet in May 1997 and renamed the ISP GTE Internetworking four months later.

But the name Genuity is not new either. In November 1997, GTE Internetworking acquired the San Francisco Web-hosting company Genuity. By choosing a name the ISP already owned and hasn't used since the acquisition, they were able to avoid the exhaustive trademark and URL searches typically done when naming or renaming a company.



At the press conference, Gudonis also said Genuity signed a deal with Akamai to deploy Akamai's FreeFlow content-distribution servers throughout its network. Genuity will offer FreeFlow services in addition to its current content-distribution services, which are based on Inktomi servers and Genuity's Hopscotch load-balancing technology.

In other Internet World news:

- Akamai introduced its Traffic Analyzer and Reporter tools that offer FreeFlow content-distribution customers real-time and historical information on Web site performance.
- Sprint announced it is offering Microsoft Windows 2000 Advanced Server and Site-Server Commerce Edition Web hosting services to business customers. Win 2000 Advanced Server includes Microsoft SQL Server 7.0, which is used for advanced cataloging and database storage.

2000-04-10-network-world-vol-17-no-15-pg-12-clip-genuity

[HP004S][GDrive]

News

Vendors debate where network clients are headed

GTE, others play the name game

Reporter's Notebook

[HP004R][GDrive]

2000 (May 25)

Full newspaper page - [HN01F5][GDrive]

See : **Genuity Incorporated (2000)** , **GTE Corporation** , **Verizon Communications Incorporated**

C4 THE BOSTON GLOBE • THURSDAY, MAY 25, 2000

TECHNOLOGY & INNOVATION

Genuity's plan to raise $2.6b in IPO would be largest by ISP

BLOOMBERG NEWS

WASHINGTON – Genuity Inc., the pioneering Internet unit of GTE Corp., said its planned initial public offering could raise as much as $2.6 billion, making it the largest ever for a US Internet service provider.

GTE, a local phone service provider based in Irving, Texas, is selling 90.5 percent of Genuity, whose Internet roots date back to the sending of the first e-mail.

GTE is making the sale so regulators will allow it to be bought by Bell Atlantic Corp. and form the biggest US local phone company under the name Verizon Communications. Bell Atlantic said yesterday it expects to complete the purchase next month.

Burlington, Mass.-based Genuity first filed for the IPO last month without specifying the number of shares being sold or the price being sought.

"It's obviously a very large deal, and it's unclear in this type of environment how willing the market will be to swallow something of this size," said Darren Chervitz, a money manager at Jacob Asset Management in New York.

Genuity said it plans to sell 173.9 million Class A common shares for between $12 and $15 each, raising between $2.1 billion and $2.6 billion before expenses. At the $13.50 midpoint of the expected price range, the stock sale would be worth $2.3 billion, according to Genuity's amended IPO filing to the Securities and Exchange Commission.

At the top of the expected price range, Genuity would rank as the ninth-biggest IPO in US history and the largest ever for a US Internet service provider. Among worldwide Internet IPOs, Genuity would likely rank behind Germany's T-Online International AG, which raised $2.8 billion last month, Chervitz said.

The value of Internet stocks and IPOs have fallen in recent months. Since March 10, the Bloomberg US Internet index has dropped by more than half, from 301.78 to 137.64, while the Bloomberg IPO Index has sunk from 2415.11 to 1007.47.

Genuity said it plans to use $1.8 billion of the funds being raised to expand its network, which makes up part of the mesh of wires that connect computers around the world and are referred to as the backbone of the Internet. The rest of the IPO proceeds would be available for other general purposes, which could include acquisitions, although none are in the works now, the filing said.

The IPO funds would represent only a part of the company's capital spending plan to expand its network infrastructure at the cost of $11 billion to $13 billion between 1999 and 2004. Genuity plans to spend $1.8 billion to $2 billion on the project this year, according to the filing.

The entire company, with 192.2 million shares to be outstanding immediately after the IPO, would have a market value of between $2.3 billion and $2.9 billion at the IPO price range. At the midpoint, Genuity would be valued at $2.6 billion.

The combined GTE and Bell Atlantic hold about 18.3 million Class B common shares, giving them 9.5 percent in Genuity following the IPO. Those shares would be worth between $219.1 million and $273.8 million, at the $12-15 per share price range. At the $13.50 midpoint, the stake would be worth about $246.5 million.

Under their proposal to regulators, the companies could convert their Class B shares – which are largely identical to the publicly traded Class A – into 800 million Class C common shares, which get five votes each versus one apiece for the other classes. The conversion would give Bell Atlantic and GTE an 82 percent equity stake and 96 percent voting control over Genuity, the filing said.

The companies could make the swap if they permit competition from other companies within Bell Atlantic's local phone markets in 12 states, by an unspecified date in 2005. Bell Atlantic's 13th state, New York, already is open. US law forbids a local carrier from providing long-distance service – including Internet access – in states where it hasn't completed steps to allow local competition, according to the filing.

Bell Atlantic plans an IPO this year for another of its businesses, Verizon Wireless, which is a joint venture with Vodafone AirTouch PLC.

GTE shares rose 37.5 cents to close at $60.625, after reaching as high as $61.50 in late afternoon trading.

[HN01F6][GDrive]

2000 (June 19) - RCRWireless article - Verizon gets green light ; The FTC approves transfer of GTE Corp.'s communications licenses to Bell Atlantic Corp

See [HW005C][GDrive] - By Reily Gregson on JUNE 19, 2000Archived Articles

WASHINGTON-The Federal Communications Commission late Friday approved the transfer of GTE Corp.'s communications licenses to Bell Atlantic Corp. contingent on 25 conditions, including putting some wireless properties into a trust until they can be sold so as to not violate cellular cross-ownership rules.

"There will be those that will claim this merger brings us closer to a re-emergence of Ma Bell, however, my support is predicated on the applicants' enforceable commitments to open its traditional local markets to competitors, invest in new markets and accelerate deployment of broadband technologies. The end result should produce more competition, not less," said FCC Chairman William Kennard.

"This is a great day for Bell Atlantic and GTE, for our customers, our investors and our employees … This final approval contains reasonable conditions that clear the way to unite these two great companies into Verizon Communications," said Charles R. Lee, chairman and chief executive officer of GTE and designated chairman and co-CEO of the new company. The merger is expected to close by June 30.

Bringing GTE's wireless holdings into Verizon Wireless-the mobile-phone company consisting of Bell Atlantic Mobile, PrimeCo and Vodafone AirTouch plc-would create the nation's largest wireless company, with more than 24 million customers and a footprint covering 90 percent of the United States.

"Our ability to deliver a full plate of voice, data, Internet and wireless services to all our customers will make Verizon the next great brand in communications," said Ivan Seidenberg, chairman and CEO of Bell Atlantic and designated president and co-CEO of Verizon.

Bell Atlantic and GTE obtained Department of Justice approval after selling off overlapping wireless properties. Some of the sales were made in a multiproperty deal with Alltel Corp., which was approved by the FCC's Wireless Telecommunications Bureau last week.

One of the major conditions on the transfer involves GTE's Internet backbone, operation of which would violate the Telecommunications Act of 199

To get around the telecom act's prohibition against regional Bell operating companies offering long-distance services, Bell Atlantic and GTE proposed, and the FCC accepted, spinning off the Internet backbone into a new entity called Genuity.

Verizon would have a 9.5 percent interest in Genuity until Verizon is granted long-distance authority in the former Bell Atlantic states. Bell Atlantic has received such authority in New York but still has 12 states and the District of Columbia to go. Once approval has been obtained, Verizon would then be permitted to control up to 80 percent of Genuity. If approval is not granted for at least 50 percent of the old Bell Atlantic territory within five years, the conversion to 80-percent stock would evaporate.

Seidenberg said he expects long-distance approval within two years from the close of the merger.

This arrangement satisfied FCC Commissioner Susan Ness, who said approving the merger was "a close call."

Both Republican members of the commission partially dissented in the approval because of the conditions placed on it.

"None of the shortcomings I address here or in my previous statement on these issues will ever be addressed unless the commission begins to reform the majority's `balancing approach' to merger review that we apply again here, or seriously question the aforementioned specious theories of potential harm," said FCC Commissioner Michael Powell.

FCC Commissioner Harold Furchtgott-Roth also dissented because he does not believe the commission should be involved in regulating undersea cable licenses. This is one of the approvals the FCC granted.

Amid concerns that someone might challenge the license transfers, the companies said they believe the approval with conditions can withstand any court challenge.

"We think this arrangement is bullet proof. We believe we have the best lawyers and best consultants that one could have … We don't think there is a minuscule chance that this would be overturned," said Lee.

Fate of WorldCom/Sprint

Internet issues also may derail WorldCom Inc.'s hopes of marrying Sprint Corp. and gaining control of Sprint PCS.

Sprint Chairman William Esrey told shareholders last week at the company's annual meeting in Westwood, Kan., that some Justice Department staff do not support the merger.

"We have had a number of high-level meetings with [DOJ] officials in recent weeks, but it remains unclear if we will or will not get the necessary government clearances to implement the merger," Esrey said.

WorldCom needs the merger to fill in the large wireless gap in its offerings. Sprint needs to expand its international reach. Both companies would benefit from combining their fixed-wireless assets.

While DOJ seems concerned with the antitrust implications of a merger between the nation's No. 2 and No. 3 long-distance companies, the European Commission is concerned about WorldCom's dominance of the Internet. Experts believe WorldCom is willing to sell off Sprint's Internet backbone but not its stake in UUNet.

Similar concerns when WorldCom bought MCI Communications Corp. led to the sale of some of WorldCom's assets to Cable and Wireless plc. This sale was not successful and experts believe the EC does not want to create a repeat situation.

The EC is scheduled to make a decision by July 12

Should WorldCom/Sprint convince DOJ and EC officials that the merger would create an all-distance company in an all-distance telecommunications market, the company still must receive FCC approval to transfer its licenses.

2000 (July 07)

Full newspaper page : [HN01F3][GDrive]

C2 THE BOSTON GLOBE • FRIDAY, JULY 7, 2000

Business Nation/World

A revamped Verizon gets competitive, cuts price of DSL service 20%

But coverage limited, lags speed of cable offerings

By Peter J. Howe
GLOBE STAFF

Bell Atlantic marked its transformation to Verizon Communications yesterday with a gift for its high-speed Internet customers: a 20 percent cut in the price of its basic home digital subscriber line service.

Verizon, formed from the merger of Bell Atlantic and GTE, said both current and future customers for its 640-kilobit-per-second service will now pay $40 a month instead of $50, as under previous plans, plus $100 for a modem.

The $10 reduction makes DSL more competitive with cable modem services, such as AT&T Broadband, which holds a big lead over Verizon DSL in Massachusetts and several of the other 31 states where Verizon has a local landline presence.

However, the maximum 640-kilobit download speed is still only 40 percent as fast as the maximum offered by AT&T Broadband, and DSL is unavailable to people who live more than about two miles from a phone company "central office" outfitted with the requisite gear. Roughly half of Massachusetts central offices have been upgraded for DSL.

"We still have a quality product, and for $10 more, you get twice the speed," said AT&T spokesman Richard D. Jenkinson. In Massachusetts and New Hampshire, the 1.5-megabit AT&T RoadRunner service can be had for as low as $30 a month for people who buy the modem rather than renting and also take cable TV.

The DSL price cut announcement capped a day of nationwide festivities launching the new Verizon brand name, which combines companies that employ 260,000 people around the world and becomes the largest local US phone company ahead of SBC Communications.

The name comes from a combination of the word "horizon" with "veritas," the Latin word for truth.

Verizon officials said their service area includes 16.5 million households that potentially could receive DSL, of whom barely 1 percent are estimated by industry analysts to have the service now.

The company's local landline reach combines the Bell Atlantic Maine-to-Virginia base with GTE's scattered local franchises in 28 states. Key GTE local service areas include metropolitan areas of Dallas, Los Angeles, Tampa, Raleigh-Durham, N.C., and Seattle and the state of Hawaii and Puerto Rico.

GTE and Bell Atlantic have also spun out their wireless properties into Verizon Wireless, which covers 96 of the top 100 US markets and has 29 million wireless and paging customers.

In a Boston interview yesterday, Verizon vice chairman and copresident Michael T. Masin said the company expects to take several steps to close "small gaps in our domestic footprint," which could include efforts to lease other Baby Bells' lines to compete with them for local residential and business service.

As a condition of federal approval for the merger, GTE had to spin off most of its stake in Genuity of Burlington, the former GTE Internetworking, a top Internet backbone carrier.

However, Masin said, "We think within two or three years Genuity will be back in the fold of the Verizon family." To be allowed to take back majority control of Genuity, Verizon must get approval to be a long-distance phone carrier throughout the former Bell Atlantic states.

Earlier this year Bell Atlantic cleared that hurdle in New York and quickly grabbed nearly 1 million long-distance customers. Last week US regulators approved SBC as a long-distance carrier in Texas.

Masin said he believes those steps have laid out a clear road map for how Baby Bells must open their networks for local competition to get approval as long-distance carriers. "We think we will do it" in all Bell states "within two to three years, and we think the next one to do it will be Massachusetts" before year's end.

Verizon shares fell 62.5 cents to $58.8125.

[HN01F4][GDrive]

Sep 23 2000

https://www.newspapers.com/image/173775085/?terms=genuity%20verizon&match=1

nov 03 2000

https://www.newspapers.com/image/644491070/?terms=GTE%20genuity&match=1

2002 (July 26) - NYTimes - "Genuity Faces Bankruptcy As Verizon Ignores an Option"

By Seth Schiesel With Simon Romero ; See [HN01C4][GDrive] ;

This article is also located at [**Verizon Communications Incorporated**]

Genuity [(Genuity Incorporated (2000))], the last of the original Big Three Internet carriers, may be about to go the way of its competitors -- into bankruptcy.

[Verizon Communications Incorporated], the No. 1 local phone company, said yesterday that it would not rescue **Genuity** from the telecommunications and technology vortex by taking control of the company.

Verizon, which spun off **Genuity [(Genuity Incorporated (2000))]** two years ago, had been expected to reassume control of the company by June 2005, under terms of the spinoff

Yesterday's announcement sent Genuity's stock plummeting by 89 percent to close at 29 cents, pushed Genuity into default on $3 billion in loans and raised the possibility that the company might have to file for bankruptcy protection within months. If that happens, Genuity would take its place alongside WorldCom's UUNet division and PSINet as former highflying Internet "backbone" companies operating under bankruptcy protection.

A sharp sell-off of Genuity's shares on Wednesday -- otherwise the best day for stocks in 15 years -- suggested that some traders might have had advance warning of yesterday's announcement. Certainly, the Wall Street grapevine may have known something was afoot: **Genuity [(Genuity Incorporated (2000))]** revealed yesterday that on Monday, it had drawn down $723 million from a prior credit line with eight banks.

But Genuity said yesterday that it had no idea that Verizon was planning to drop its option when Genuity called on the banks Monday. "This is absolutely coincidental from our standpoint," Susan Kraus, a Genuity spokeswoman, said yesterday. "We had absolutely no knowledge of what Verizon was going to do."

As the Internet came to popular attention in the early 1990's, three companies emerged as the leading carriers of Internet data: Uunet, PSINet and Genuity's predecessor, BBN. As telephone companies expanded into data networking in the 1990's, they were eager to acquire those early pioneers. Although PSINet remained independent, [**UUNET Technologies, Incorporated**] was acquired by [**MFS Communications Company, Incorporated**] shortly before MFS was acquired by **WorldCom** [, which later became MCI WorldCom Corporation,] in 1996. GTE acquired BBN in 1997 and later renamed it Genuity.

When Bell Atlantic acquired GTE in 2000, creating Verizon, the combined company spun off 90 percent of Genuity as a condition for winning regulatory approval for that deal. Bell Atlantic was not allowed to control Genuity because Bell Atlantic was not then allowed to sell long-distance communications services, including data networking.

But Verizon accurately anticipated that it would win the necessary long-distance approval within a few years. So, when it spun off most of Genuity to public shareholders in 2000, it retained the ability to reassume control of Genuity by mid-2005.

Until recently, many investors expected that Verizon would assert its option, given that Genuity had grown from $183 million in revenue in 1997 to $1.2 billion last year.

Genuity's losses, however, have also grown. Were Verizon to reacquire control of Genuity, it would also have to consolidate Genuity's $3 billion in debt and its annual losses -- $4 billion last year -- into its own financial statements.

Already jittery about the state of the regional Bell companies, investors were loath for Verizon to make that move. As a result, Verizon said yesterday that it would not. Now, Verizon appears to believe that it can get into the long-distance data communications business without assuming Genuity's baggage

Given the stock movement on Wednesday, the most important outstanding questions are about just when Verizon made that decision and when Verizon told Genuity.

On Wednesday, as the Dow Jones industrial average soared by nearly 489 points, Genuity's shares plunged by 26 percent, to $2.59, from Tuesday's close of $3.50. Peter Thonis, a Verizon spokesman, said yesterday that Verizon did not tell Genuity about its decision until after the stock market closed on Wednesday.

As for **Genuity [(Genuity Incorporated (2000))]**, the question is why it rushed to borrow $723 million on Monday.

Genuity said yesterday that the group of eight banks really should have been nine and that the $723 million really should have been $850 million. Genuity said Deutsche Bank refused to honor a commitment to lend it an additional $127 million, and that it had sued Deutsche Bank in Federal Court in Massachusetts.

Deutsche Bank said that it had not received any legal papers and that it was in talks with Genuity.

People close to Genuity's lenders said yesterday that Genuity called its banks on Monday morning and demanded the money remaining under its prior credit line by noon that day. Some banking executives said yesterday that companies generally were prepared to wait 48 hours before actually receiving cash under a credit line. They speculated that Deutsche Bank could have been unnerved by the unusually urgent nature of Genuity's request.

Ms. Kraus, the Genuity spokeswoman, said Genuity's agreement with its lenders allowed the company to draw on its loans quickly.

Some bankers speculated yesterday that the eight other banks that did comply might have inferred that Genuity was worried about Verizon's intentions. Moreover, according to people close to both Genuity and Verizon, Michael T. Masin, a Verizon vice chairman and Genuity board member, was asked not to attend a Genuity board meeting on Sunday. His exclusion could have fueled a perception that Genuity suspected that Verizon would cut it loose soon.

2002 (Jul 26) - Forbes - "Genuity Is Left On The Launching Pad"

See [HP004D][GDrive]

This article is also located at [**Verizon Communications Incorporated**]

Genuity [(Genuity Incorporated (2000))] introduced itself to a puzzled public two years ago with an ad campaign that featured a mysterious-looking black rocket and a very 1990s tagline: "Do you want to change the world?" But the '90s, alas, had just ended, and the world had already changed--and not for the better, if you were a tech investor.

Now Genuity and its rocket appear headed for the auction block. Irony abounds in the situation, for Genuity descends from BBN, the firm that pretty much built the original Internet. The firm's current travails offer yet another sad illustration of the Moses syndrome, in which the visionary genius who points the way to the promised land fails to make it there himself.

Genuity [(Genuity Incorporated (2000))] operates a major Internet backbone network. The firm started touting its Black Rocket network services platform with that ad campaign in late 2000, just as the Internet stock market boom was collapsing. Genuity remained unprofitable, and investors abandoned this stock en masse on July 25, after Verizon Communications cut the lifeline that theoretically had tethered Genuity to its former corporate parent.

Verizon on July 24 effectively relinquished its right to reacquire a controlling interest in **Genuity [(Genuity Incorporated (2000))]**. That decision pushed Genuity into default on some of its credit agreements. The next day its shares fell almost 90%, to 29 cents from $2.59, and although it was back up over 50 cents today in afternoon trading, the stock has been cut to a rare "sell" rating by at least one Wall Street analyst. Genuity Chairman PaulGudonisPaul Gudonis was reduced to talking up his "valuable set of assets," which is the verbal equivalent of hanging a "for sale cheap" sign on the front door.

"Now that Verizon has elected not to reintegrate Genuity, we will evaluate all our options, which could include seeking another strategic partner or restructuring our operating plan while we address this situation," Gudonis said in a statement expressing disappointment with Verizon's decision.

BBN--originally Bolt, Beranek and Newman--was founded in Cambridge, Mass., in 1948 by professors from the Massachusetts Institute of Technology. Then in 1960, BBN employee J.C.R.LickliderJ.C.R. Licklider famously forecast the Internet with his seminal "Man-Computer Symbiosis" paper. It was BBN that built the ARPANET, the Internet's forerunner; it was BBN's RayTomlinsonRay Tomlinson who invented e-mail, which soon composed the bulk of the Internet's traffic. So it made sense that BBN would end up a major Internet backbone firm. In 1997 it was acquired by GTE in a deal valued at $616 millio

A few months later, GTE bought a Bechtel Enterprises unit called Genuity [(Genuity Incorporated (2000))] and combined it with BBN. Then in 2000, GTE merged with Bell Atlantic to form Verizon. The Internet network had to be spun off, because a Baby Bell was not allowed to be in the long-distance data business. But Verizon retained an option, if certain conditions were met, to reabsorb Genuity. The general expectation was that Verizon one day would exercise that option, which is why this week's announcement to the contrary left the spinoff gasping for life.

With WorldCom already in Chapter 11 proceedings, its UUNet Internet backbone unit presumably is being shopped around. Now Genuity too is up for grabs--and with it, the storied BBN legacy. It's one thing to invent the Internet, it seems, and quite another to figure out how to make it pay.

2002 (Nov 27) - NetworkWorld - Level 3 to buy bankrupt Genuity's assets

Stephen LawsonBy Stephen Lawson ; See [HP004I][GDrive]

This article is also located at [**Verizon Communications Incorporated**]

Internet backbone provider [**Level 3 Communications, Incorporated**] has agreed to acquire the bulk of the assets of network provider **Genuity [(Genuity Incorporated (2000))]**, which has filed for bankruptcy, the companies announced Wednesday.

Level 3 will pay as much as $242 million in cash and assume a significant portion of Genuity's long-term operating agreements, according to a statement from the companies. The deal must be approved by regulatory agencies and a bankruptcy court and is expected to close in the first quarter of 2003.

Also Wednesday, **Genuity [(Genuity Incorporated (2000))]** filed voluntary petitions for reorganization under Chapter 11 of the U.S. bankruptcy code, the statement said. The cash on Genuity's balance sheet, together with Level 3's cash payment, will be distributed to creditors of Genuity.

Based in Woburn, Mass., **Genuity [(Genuity Incorporated (2000))]** was spun out of U.S. telecommunications carrier [**Verizon Communications Incorporated**] according to the terms of the merger of Bell Atlantic and [**GTE Corporation**] that created Verizon in 2000. More recently, the company has been suffering financially amid a glut of capacity on backbone networks. In May, Genuity announced that it would cut as much as 30 percent of its workforce, or 1,200 jobs.

[**Level 3 Communications, Incorporated**], in Broomfield, Colorado, will acquire Genuity's network transport business as well as its dedicated and dial-up Internet access operations. It also will take over Genuity's managed services business, which it will combine with its iStructure subsidiary but continue to operate under the Genuity brand.

Genuity's biggest customers are Verizon and AOL, according to the statement. Verizon has executed a new multi-year contract to buy wholesale dial-up, transport and other services from Level 3, which should take effect when the acquisition closes.

2002 (Nov 27) - "Level 3 to acquire Genuity assets and operations for $242 million"

Source - LightWaveOnline - [HW005H][GDrive]

This article is also located at [**Verizon Communications Incorporated**]

[**Level 3 Communications, Incorporated**] and **Genuity Inc. [(Genuity Incorporated (2000))]** announced today that they have signed a definitive agreement under which Level 3 will acquire substantially all of the assets of the Massachusetts-based communications company.

[**Level 3 Communications, Incorporated**] will pay up to $242 million in cash and assume a significant portion of existing long-term operating agreements to acquire Genuity's assets and operations. To facilitate the transaction, **Genuity [(Genuity Incorporated (2000))]** today is filing voluntary petitions for reorganization under Chapter 11 of the Bankruptcy Code. Level 3's cash consideration at closing could be reduced subject to certain material adjustments.

Closing is expected to occur during the first quarter of 2003. The transaction is subject to approval by the bankruptcy court and certain government regulatory agencies.

"This transaction represents the best outcome for the key constituencies of both Genuity and Level 3," contends Paul R. Gudonis, chairman and chief executive officer of Genuity. "Both companies, as well as Genuity's largest customers and creditors, have signed agreements supporting the transaction."

"There is a unique and compelling fit between Genuity and Level 3," adds [**James Quell Crowe (born 1949)**], Level 3's chief executive officer. "The transaction combines the assets and operations of Genuity, the company that helped invent the Internet, with Level 3, the company that built the first network fully optimized for Internet Protocol-based communications. Both companies are experienced providers of optical and IP-based services, and both are Tier 1 Internet backbone providers with industry-leading quality of service. Genuity's transport and dedicated and dial-up Internet access business--more than 80 percent of revenue--is complementary to Level 3's transport, managed modem and IP services business."

Based in Woburn, MA, **Genuity [(Genuity Incorporated (2000))]** operates an international IP network. The company provides dial-up and dedicated Internet access, transport, managed security and VPN, hosting and other services to communications companies, enterprises and government agencies. Its largest customers are Verizon Communications and America Online, which accounted for greater than 60 percent of its $223 million in revenue for the third quarter of 2002.

All but one of Genuity's banks have signed an agreement in support of the transaction. Verizon has executed a new multi-year contract to purchase wholesale dial-up, IP, transport and other services from Level 3, to take effect when the transaction closes. America Online has signed an agreement consenting to the transaction that contemplates [**Level 3 Communications, Incorporated**] acquiring America Online's network services agreement with Genuity. In addition, Allegiance Telecom Inc., Genuity's largest network supplier, supports the transaction.

As part of this transaction, Level 3 is also acquiring Genuity's managed services business and its associated enterprise customers and product set. "We recognize the importance of these customers and are committed to ensuring they receive the highest quality service without disruption," asserts Kevin O'Hara, president and chief operating officer of Level 3. "As a result, we plan to combine these operations with those of our (i)Structure subsidiary in order to focus on the needs of those customers. That new managed services operating company will do business under the name 'Genuity,' a recognized leader in that market." [...]

2003 (Aug 19) - CenturyLink corporate news - Level 3 to Sell Midwest Fiber Optic Network Acquired in Genuity Transaction

See [HC004L][GDrive]

This article is also located at [**Verizon Communications Incorporated**]

BROOMFIELD, Colo., Aug. 19 /PRNewswire-FirstCall/ -- [**Level 3 Communications, Incorporated**] announced today that it has signed a definitive agreement to sell the **Midwest Fiber Optic Network (MFON)**, a regional communications system it acquired through its recent transaction with **Genuity [(Genuity Incorporated (2000))]** .

CenturyTel (NYSE: CTL) will purchase the stand-alone system, which serves as a regional backbone for a number of carriers, including CenturyTel itself, in Arkansas, Missouri and Illinois. The purchase price is approximately $17 million in cash, subject to adjustments including date of closure and system revenue at time of close. Closing is subject to regulatory approvals and customary conditions.

"This is a non-core asset for Level 3," said Sunit Patel, Level 3's chief financial officer. "While MFON currently generates approximately $1.5 million a month in revenue, the geography and architecture of the system do not offer us a practical or cost-effective way to integrate its operations into the Level 3 network. As such, we believe it makes sense to sell this business and continue to focus on the integration of the core assets, customers and traffic from the Genuity transaction."

Closing is expected to occur by the end of the fourth quarter of 2003.

Daniels & Associates, the Denver-based media and telecommunications mergers and acquisitions specialist, served as financial advisor to Level 3 on this transaction.

- **About Level 3 Communications :** Level 3 (Nasdaq: LVLT) is an international communications and information services company. The company operates one of the largest Internet backbones in the world, is one of the largest providers of wholesale dial-up service to ISPs in North America and is the primary provider of Internet connectivity for millions of broadband subscribers, through its cable and DSL partners. The company offers a wide range of communications services over its 22,500-mile broadband fiber optic network including Internet Protocol (IP) services, broadband transport, colocation services, and patented Softswitch-based managed modem and voice services. Its Web address is www.Level3.com. The company offers information services through its subsidiaries, (i)Structure and Software Spectrum. For additional information, visit their respective web sites at www.softwarespectrum.com, and www.i-structure.com.
- **About CenturyTel :** CenturyTel, Inc. provides communications services including local, long distance, Internet access and data services to more than 3 million customers in 22 states. The company, headquartered in Monroe, Louisiana, is publicly traded on the New York Stock Exchange under the symbol CTL, and is included in the S&P 500 Index. CenturyTel is the 8th largest local exchange telephone company, based on access lines, in the United States. Visit CenturyTel at www.centurytel.com.

2006-10-05-youtube-pheller10-genuity-noc-drama-video HV00F2 https://drive.google.com/file/d/1UDtf8fvZurmvnGq66L1uB2LOf-XAplZn/view?usp=sharing

2006-10-05-youtube-pheller10-genuity-noc-drama-video-img-1 HV00F3 https://drive.google.com/file/d/1urYxI6yaXZvi9aQxXAqq7MtJ6bFWGpAc/view?usp=sharing

https://www.youtube.com/watch?v=jzIYZfgFiYU

Genuity NOC - 3,440 views•Oct 5, 2006 - Genuity NOC Drama Video

2007-04-03-youtube-mz-megazone-genuity-black-rocket HV00F0 https://drive.google.com/file/d/1Xp9CROnKs38_71t24y12u0_Atz0GP7pR/view?usp=sharing

2007-04-03-youtube-mz-megazone-genuity-black-rocket-img-1 HV00F1 https://drive.google.com/file/d/1XVEis7g2aHlcHTlhso1nxlwL-kDaLzZb/view?usp=sharing

https://www.youtube.com/watch?v=J5euPZuVbbY

Genuity: Black Rocket - 8,004 views•Apr 3, 2007 - MZ MegaZone

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Housatonic

Dr. Lawrence Kenneth Gershwin (born 1942)

https://www.sourcewatch.org/index.php/Lawrence_K._Gershwin

https://www.sourcewatch.org/index.php/Lawrence_K._Gershwin

Lawrence K. Gershwin

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Dr. Lawrence K. Gershwin serves as Chairman of the DCI (Director of Central Intelligence) Foreign Denial and Deception Committee (FDDC) in the National Intelligence Council (NIC).

https://www.fagaforum.org/speakers/dr-lawrence-k-gershwin

Dr. Lawrence K. Gershwin

National Intelligence Manager/National Intelligence Officer for Space and Technical Intelligence

Office of the Director of National Intelligence

Dr. Gershwin received a B.S. in physics from the California Institute of Technology in 1963 and a Ph.D. in physics from the University of California, Berkeley in 1969.

After serving as a postdoctoral associate at Columbia and Stanford Universities from 1969 to 1972, he joined the Institute for Defense Analyses, where he worked on several studies for the Department of Defense on advanced technology systems for conventional and nuclear warfare. He was with the Rand Corporation from 1975 to 1979, performing studies for the Department of Defense on land warfare systems, strategic conflict analysis, and Soviet strategic force operations. He was in the Office of the Secretary of Defense, Program Analyses and Evaluation, from 1979 to 1981, with responsibilities in strategic force analysis, arms control, and net assessments.

Dr. Gershwin served as National Intelligence Officer for Strategic Programs from October 1981 to June 1994, supporting the Director of Central Intelligence. He chaired the preparation of National Intelligence Estimates and other Intelligence Community products, with responsibilities for strategic forces, proliferation, nuclear weapons security, strategic arms control monitoring, and space. He led the preparation of the annual assessment of Soviet strategic forces, the NIE 1 1-3/8 series, and the preparation ofNIEs on our capability to monitor the INF, START and nuclear testing treaties. He regularly conducted briefings for senior policymakers, military officials, and Congressional audiences.

He has served as National Intelligence Officer for Science and Technology since June 1994 preparing Intelligence Community products in many foreign science and technology areas. In October 2010, he was appointed as the National Intelligence Manager for Science and Technology, in addition to his duties as NIO/S&T. In 2014, Dr. Gershwin's title changed from NIM/NIO for S&T to NIM/NIO for Space and Technical Intelligence (S&TI).

He is currently responsible for analytic production, collection efforts, and the status and health of IC efforts in the following areas:

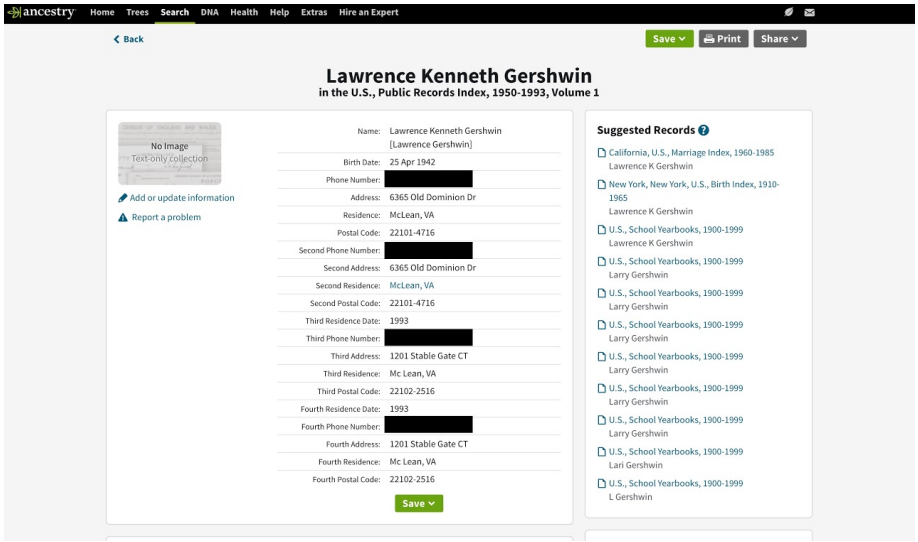
- Space and Counterspace Issues
- Global Science and Technology Developments
- Foreign Denial and Deception
- Underground Facilities
- Unconventional Current and Future Technical Collection Capabilities

While serving as National Intelligence Officer, he has received the awards of Distinguished Officer and Meritorious Officer in the Senior Intelligence Service. In 1989 he received the Distinguished Intelligence Medal, and in 1996 he received the National Intelligence Medal of Achievement. In October 2010 he received the AFCEA Charlie Allen Award for Intelligence Service. In 2013 he received the Meritorious Presidential Rank Award.

Birthday via ClustrMaps

See [HD002X][GDrive] - *"He was born on 1942-04-25. His age is 78. Current address for Lawrence is 1201 Stable Gate Crt, McLean,"*

Middle name - "Kenneth" (source - Ancestry)



[HD002V][GDrive]

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Housatonic

Carlos Ghosn (born 1954)

https://en.wikipedia.org/wiki/Carlos_Ghosn

2021-02-02-wikipedia-org-carlos-ghosn.pdf

https://en.wikipedia.org/wiki/Carlos_Ghosn https://drive.google.com/file/d/1dufMVHTER-b0Bm2TiO2NtiHX9uG_gMcH/view?usp=sharing

Carlos Ghosn

From Wikipedia, the free encyclopedia

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Carlos Ghosn

Ghosn in 2010

Born

9 March 1954 (age 66)

Porto Velho, Rondônia, Brazil

Nationality

French–Lebanese–Brazilian

Alma mater

- École Polytechnique (1974)
- École des mines (1978)

Occupation

Businessman

Spouse(s)

Rita Kordahi

(m. 1984; div. 2012)

Carole Nahas (m. 2016)

Children

Caroline, Nadine, Maya and Anthony

Carlos Ghosn (/ɡoʊn/;[1] French: [kaʁlɔs ɡon]; Arabic: كارلوس غصن; Lebanese Arabic pronunciation: ['kaːrlos 'ɣosˤn], born 9 March 1954) is a Brazilian-born businessman. Ghosn also holds French and Lebanese nationality.[2] As of January 2020,[3] he is an internationally wanted fugitive.[4] Ghosn has served as the CEO of Michelin North America, Chairman and CEO of Renault, chairman of AvtoVAZ, Chairman and CEO of Nissan, and Chairman of Mitsubishi Motors.[5][6][7] Ghosn was also Chairman and CEO of the Renault–Nissan–Mitsubishi Alliance, a strategic partnership among those automotive manufacturers through a complex cross-shareholding agreement. The venture has held approximately 10% of the total market share since 2010, and as of 2017, was understood to be the largest automobile group worldwide.

In 1996, Renault's CEO Louis Schweitzer hired Ghosn as his deputy and charged him with the task of turning the company around from near bankruptcy. Ghosn elaborated a plan to cut costs for the period 1998–2000, reducing the workforce, revising production processes, standardising vehicle parts and pushing the launch of new models. The company also undertook major organisational changes, introducing a lean production system with delegate responsibilities inspired by Japanese systems (the "Renault Production Way"), reforming work methods and centralising research and development at its Technocentre to reduce vehicle conception costs while accelerating such conception.[8] Ghosn became known as "Le Cost Killer".[9] In the early 2000s, for orchestrating one of the auto industry's most aggressive downsizing campaigns and spearheading the turnaround of Nissan from its near bankruptcy in 1999, he earned the nickname "Mr. Fix It".[10]

Following the Nissan financial turnaround, in 2002 *Fortune* awarded him Asia Businessman of the Year.[11][12] In 2003 *Fortune* identified him as one of the 10 most powerful people in business outside the U.S.,[13] and its Asian edition voted him Man of the Year.[14] Surveys jointly published by the *Financial Times* and PricewaterhouseCoopers named him the fourth most respected business leader in 2003,[15] and the third most respected business leader in 2004 and in 2005.[16][17] He quickly achieved celebrity status in Japan and in the business world,[18][19] and his life has been chronicled in Japanese comics.[20]

Ghosn stepped down as CEO of Nissan on 1 April 2017, while remaining Chairman of the company.[21] He was arrested at Tokyo International Airport on 19 November 2018, on allegations of under-reporting his salary and gross misuse of company assets.[22][23] On 22 November 2018, Nissan's board made a

unanimous decision to dismiss Ghosn as Nissan's Chairman, effective immediately. [24][25] Mitsubishi Motors' executive board took similar action on 26 November 2018.[26][27] Renault and the French government continued to support him at first, presuming him innocent until proven guilty.[28] However, they ultimately found the situation untenable and Ghosn was made to retire as Chairman and CEO of Renault on 24 January 2019.[29] While out on bail granted in early March, Ghosn was re-arrested in Tokyo on 4 April 2019, over new charges of misappropriations of Nissan funds.[30] On 8 April 2019, Nissan shareholders voted to oust Ghosn from the company's board.[31] He was released again on bail on 25 April.[32] In June, Renault uncovered 11 million euros in questionable expenses by him, leading to a French investigation and raids.[33][34][35] With help from an American private-security contractor, Ghosn fled from Japan to Lebanon on 30 December, via private jet, breaking his bail conditions.[36] On 2 January 2020, Interpol issued a red notice to Lebanon seeking Ghosn's arrest.[37]

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Early life and education[edit]

Ghosn's grandfather was Bichara Ghosn, a Maronite Catholic who emigrated from Ajaltoun,[38] French Mandate Lebanon to Brazil at the age of 13, eventually settling in remote Guaporé, Rondônia, near the border between Brazil and Bolivia.[39] Bichara Ghosn was an entrepreneur and eventually headed several companies, in businesses including the rubber trade, the sale and purchase of agricultural products, and aviation.[40] His son Jorge Ghosn married Rose Jazzar, a Nigerian-born Lebanese woman[41] whose family came from Miziara in Lebanon then went to Brazil,[38] where they settled in Porto Velho, the state capital of Rondônia, and had four children.[42]

Carlos' father, Jorge Ghosn (died 2006) was a diamond trader and worked in the airline industry. Jorge was convicted of murdering a priest in Sawfar, Lebanon in 1960.[43] Jorge fled to Brazil in 1975 at the outbreak of Lebanese Civil War.[44][45]

Carlos Ghosn was born on 9 March 1954, in Porto Velho.[42][46][47] When he was about two years old he became sick after drinking unsanitary water, and his mother moved with him to Rio de Janeiro.[42] He did not fully recover there, and in 1960, when Ghosn was six years old, he and his mother and sister moved to Beirut, Lebanon, where his grandmother and two other sisters lived.[42]

Ghosn completed his secondary school studies in Lebanon, at the Jesuit school Collège Notre-Dame de Jamhour. He then completed his classes préparatoires in Paris, at the Collège Stanislas and the Lycée Saint-Louis.[48] He graduated as an engineer from the École Polytechnique in 1974 and the École des Mines de Paris in 1978.[46][49][50]

Career[edit]

Michelin[edit]

Carlos Ghosn answers reporters' questions at the Nissan factory in Kyushu, Japan. (September 2011)

After graduation in 1978, Ghosn spent 18 years at Michelin, Europe's largest tire maker, initially training and working in several plants in France and Germany.[46][51] In 1981, he became plant manager in Le Puy-en-Velay, France.[46][52] In 1984 he was named head of research and development for the company's industrial tyre division.[46][53]

In 1985, when Ghosn was 30 years old, he was appointed chief operating officer (COO) of Michelin's South American operations.[46][54] He returned to Rio de Janeiro, reporting directly to François Michelin, who tasked Ghosn with turning around the operation, which was unprofitable and struggling under Brazil's hyperinflation.[54][55] Ghosn formed cross-functional management teams to determine best practices among the French, Brazilian, and other nationalities working in the South American division.[56] The multicultural experience in Brazil formed the basis of his cross-cultural management style and emphasis on diversity as a core business asset.[56][57] "You learn from diversity ... but you're comforted by commonality", Ghosn has said.[58] The division returned to profitability in two years.[56][59][60]

After turning around Michelin's South American operations, Ghosn was appointed president and COO of Michelin North America in 1989, and moved to Greenville, South Carolina, with his family.[61] He was promoted to CEO of Michelin North America in 1990.[56][61] He presided over the restructuring of the company after its acquisition of the Uniroyal Goodrich Tyre Company.[46][62]

Post-privatisation Renault[edit]

In 1996, Ghosn became executive vice president in charge of purchasing, advanced research, engineering and development, powertrain operations, and manufacturing at Renault; and he was also in charge of Renault's South American division, located in the Mercosur.[46][63] Ghosn's radical restructuring of Renault successfully contributed to profitability of the company over 1997.[9][64] His reputation of successful performance under François Michelin was repeated under the first CEO of the freshly privatized Renault.

Nissan and the Renault–Nissan Alliance[edit]

Nissan Renault CEO Carlos Ghosn visited Norway to launch the new Nissan LEAF (8 April 2013).

Ghosn with Vladimir Putin in 2006

In March 1999, Renault and Nissan formed the Renault–Nissan Alliance, and in May 1999 Renault purchased a 36.8% stake in Nissan.[65] While maintaining his roles at Renault, Ghosn joined Nissan as its chief operating officer (COO) in June 1999, became its president in June 2000, and was named chief executive officer (CEO) in June 2001.[46] When he joined the company, Nissan had a consolidated interest-bearing net automotive debt of more than $20 billion (more than 2 trillion yen),[55][66] and only three of its 46 models sold in Japan were generating a profit.[67] Reversing the company's sinking fortunes was considered nearly impossible.[68][69][70][71]

Ghosn's "Nissan Revival Plan", announced in October 1999, called for a return to profitability in fiscal year 2000, a profit margin in excess of 4.5% of sales by the end of fiscal year 2002, and a 50% reduction in the current level of debt by the end of fiscal year 2002.[72][73][74] Ghosn promised to resign if these goals were not met.[75] Ghosn's Nissan Revival Plan called for cutting 21,000 Nissan jobs (14% of total workforce), mostly in Japan; shutting five Japanese plants; reducing the number of suppliers and shareholdings; and auctioning off prized assets such as Nissan's aerospace unit.[72][76][77]

Ghosn was the fourth non-Japanese person to lead a Japanese automaker, after Mark Fields, Henry Wallace, and James Miller were appointed by Ford to run Mazda in the late 1990s.[78] In addition to cutting jobs, plants, and suppliers, Ghosn spearheaded major and dramatic structural and corporate-culture changes at Nissan. He defied Japanese business etiquette in various ways, including by eliminating seniority-based and age-based promotion, by changing lifetime employment from a guarantee to a desired goal for when the company achieved high performance, and by dismantling Nissan's *keiretsu* system – an interwoven web of parts suppliers with cross-holdings in Nissan.[79][80][81] When the Nissan Revival Plan was announced, the proposed dismantling of *keiretsu* earned Ghosn the nickname "*keiretsu* killer",[82] and *The Wall Street Journal* quoted a Dresdner Kleinwort Benson analyst in Tokyo as saying Ghosn might become a "target of public outrage" if Nissan threw former affiliates out of its supply chain.[83][84] Ghosn changed Nissan's official company language from Japanese to English, and included executives from Europe and North America in key global strategy sessions for the first time.[85][86]

In the first year of the Nissan Revival Plan, Nissan's consolidated net profit after tax climbed to $2.7 billion for fiscal year 2000,[87] from a consolidated net loss of $6.46 billion in the previous year.[88] Twelve months into his three-year turnaround plan, Nissan had returned to profitability, and within three years it was one of the industry's most profitable auto makers, with operating margins consistently above 9%—more than twice the industry average.[89] The goals of the Nissan Revival Plan were all reached before 31 March 2002.[90]

In May 2002, Ghosn announced his next set of goals for the company, "Nissan 180", a three-year plan for growth based on the numbers 1, 8, and 0: By the end of September 2005, Nissan planned to increase its global sales by one million vehicles; and by the spring of 2005, it was committed to achieving an operating margin of at least 8% and reducing its net automotive debt to zero.[91][92] These goals were all reached:[93] In the spring of 2003, Nissan announced that its net automotive debt was eliminated in fiscal year 2002.[94][95] Nissan's operating profit margin climbed to 11.1% in fiscal year 2003;[96] it had been 1.4% in fiscal year 1999.[97] In October 2005, Nissan announced that its annual sales from 30 September 2004, to 30 September 2005, were more than 3.67 million, up from the 2.6 million vehicles sold in the fiscal year ended March 2002.[98][99]

Carlos Ghosn unveiled the Nissan GT-R at the Tokyo Motor Show (2007).

In May 2005, Ghosn was named president and chief executive officer of Renault.[46] When he assumed the CEO roles at both Renault and Nissan, Ghosn became the world's first person to run two companies on the Fortune Global 500 simultaneously.[100]

In 2005, billionaire investor Kirk Kerkorian acquired a 9.9% stake in General Motors (GM) and seated one of his representatives on the company's board, then urged GM to investigate a merger with Renault and Nissan with Ghosn as the new chairman of GM. In 2006, GM's embattled management rebuffed the takeover attempt, and by the end of the year, Kerkorian's Tracinda Corp. sold most of its GM stock.[101]

In 2006, Ford Motor Co. made Ghosn a formal offer to lead the company.[102] Ghosn refused, reportedly saying the only way he would come to the struggling company was if he was named both the CEO and chairman of the board. Bill Ford Jr. refused to give up his chairmanship.[103]

Carlos Ghosn at Nissan's Honmoku Wharf, a logistics hub about 10 km southeast of Nissan's global headquarters in Yokohama, July 2011

In 2007, Ghosn led the Renault–Nissan Alliance into the mass-market zero-emission electric car market in a major way, and committed €4 billion (more than $5 billion) to the effort.[104][105][106][107] In 2008, he confirmed that Nissan–Renault would bring an "entire lineup" of zero-emission electric cars to the worldwide market by 2012.[108][109] In 2009, he told the University of Pennsylvania's Wharton School of Business, "If you're going to let developing countries have as many cars as they want—and they're going to have as many cars as they want one way or another—there is absolutely no alternative but to go for zero emissions. And the only zero-emissions vehicle available today is electric ... So we decided to go for it."[110] The Nissan Leaf, an electric car billed as "the world's first affordable zero-emission car",[111][112] debuted in December 2010.[105][113] As of 2017, the Renault–Nissan Alliance is the world's electric vehicle leader, selling more than twice as many electric cars as Tesla, and the Nissan Leaf is the world's best-selling electric vehicle by a wide margin.[114]

Ghosn was a visible leader in recovery efforts after the Japanese earthquake and tsunami on 11 March 2011, one of the worst natural disasters in modern history.[115] On 29 March 2011, he made the first of several visits to the hard-hit Iwaki engine plant in Fukushima prefecture, 50 km (31 miles) from the Fukushima Daiichi nuclear power plant,[116][117][118] and at his direction Nissan restored full operations at the Iwaki factory well ahead of expectations.[119][120][121] He appeared on television in Japan to encourage optimism.[118][122][123][124] In May 2011, Ghosn remained committed to building at least 1 million of Nissan's cars and trucks in Japan annually.[125] In 2011 Ghosn was under scrutiny by the French government for mishandling a spying scandal related to Renault.[126][127]

In June 2012, Ghosn was named deputy chairman of the board of directors of Russian automobile manufacturer AvtoVAZ.[128] In June 2013, he was appointed chairman of the Russian company, a position he retained through June 2016.[129][130][131][132][133] Renault had begun a strategic partnership with AvtoVAZ in 2008 by acquiring a 25% stake in the company;[134] this led to increasingly deeper partnerships between Renault–Nissan and AvtoVAZ,[135] ending in Renault–Nissan Alliance control of the Russian automaker in 2014.[136]

In February 2017, Ghosn announced he would step down as CEO of Nissan on 1 April 2017, while remaining chairman of the company.[21][137] Hiroto Saikawa, succeeded Ghosn at Nissan.[21] In November 2018, Renault owned 43.4% of Nissan, while Nissan owned non-voting shares equal to 15% of Renault's equity.[138][139]

Mitsubishi[edit]

Carlos Ghosn at the Annual Meeting of the World Economic Forum in Davos (2008).

In October 2016, Nissan completed the acquisition of a controlling 34% stake in Mitsubishi Motors. Ghosn became, in addition to his Renault–Nissan posts, chairman of Mitsubishi, with an aim to rehabilitate the automaker after a months-long scandal involving fuel-economy misrepresentation and consequent falling revenues. The Nissan–Mitsubishi partnership includes partnership in developing electric automobiles for Mitsubishi, and the Renault–Nissan–Mitsubishi Alliance creates the world's fourth-largest auto group, after Toyota, Volkswagen AG, and General Motors Co.[140][141][142]

Mitsubishi Motors board removed Ghosn from his role as chairman on 26 November 2018, following his arrest and ousting from Nissan for alleged financial misconduct.[26]

Advisorships[edit]

Ghosn served on the International Advisory Board of Brazilian bank Banco Itaú (a major party in the privatisation of Renault) until 2015.[143][144] He is also a member of the Advisory Board of Tsinghua University School of Economics and Management in Beijing.[145] He has received an honorary doctorate from American University of Beirut;[146] and he is a member of the Strategic Council, Saint Joseph University of Beirut.[147] In 2014 and 2015, he was elected president of the European Automobile Manufacturers Association.[148][149][150] He serves as governor of the World Economic Forum.[151]

Arrest in Tokyo and subsequent Nissan investigation[edit]

Initial arrest[edit]

On 19 November 2018, Tokyo District Prosecutors arrested Ghosn at 4:30 p.m. upon his re-entry into Japan aboard a private jet that had come from Lebanon,[152] for questioning over allegations of false accounting.[153][154][155][156] Ghosn's top aide Greg Kelly, a Nissan director and former head of human resources, was also arrested upon his arrival from the U.S. that day.[138]

On the same day, Nissan chief executive Hiroto Saikawa announced at a press conference that Ghosn had been dismissed from Nissan's board and would be stripped of executive rights at a meeting to be held on 22 November. Saikawa stressed that the dismissal was the result of an internal inquiry by Nissan,[157][154] and alleged that Ghosn and Kelly had under-reported their compensation (a violation of securities law) and used company assets for personal use.[158] While the allegations remained unproven in court, with due legal process pending, at the same news conference, Saikawa "expressed disappointment, indignation, and despair at Ghosn's conduct, which included using company funds for personal investments and misusing corporate assets" and also said, "This is an act that cannot be tolerated by the company... It is sufficient grounds for his dismissal."[158]

Although the company did not provide details, reports in the Japanese media stated that Nissan was paying all or some of the costs at some amount of US$18 million for residences used by Ghosn in Rio de Janeiro, Beirut, Paris and Amsterdam, and that Ghosn charged family vacation expenses to the company.[156] The purchases of some of these residences and the payment of expenses were handled by a shell company named Zi-A Capital BV based in the Netherlands, which Kelly had instructed Nissan's board to set up to make venture investments at the end of 2010 (around the same time as Ghosn's divorce from his first wife and beginning of a relationship with his second wife).[138] Nissan funds were used to purchase Ghosn's Paris apartment in 2005, and Zi-A funds were used to purchase his $5 million beachfront Rio apartment in 2012 and his Beirut mansion, which, with renovations, cost over $15 million.[138] Nissan compliance auditors began trying to track Zi-A activity in 2014 but were stymied at first by the chain of shell companies used in Zi-A investments.[138]

In addition, to avoid reporting the full amount of his compensation in Nissan financials, as required by Japanese law beginning in 2010, Ghosn had Kelly structure complicated deferred payment plans which went unreported under an aggressive interpretation of the disclosure rules which Nissan's outside auditors had not signed off on, and which totaled around $80 million at the time of his arrest eight years later.[138] According to *Nikkei* reports, Ghosn told investigators that he instructed Kelly to handle the compensation reporting in a legal manner, and Kelly told investigators that he acted on advice from outside law firms and the Financial Services Agency in handling the reporting.[159][160] Leaks to the media said that Ghosn had planned to call a vote to fire Nissan CEO Saikawa and reinstate Kelly (who had semi-retired to the U.S. in 2015) to active service at the scheduled board meeting.[138]

Ghosn was detained at the Tokyo Detention House, under Japanese rules that allow suspects to be detained for up to 23 days without criminal charges being filed.[161] Ghosn and Kelly were reportedly arrested on information provided by an unidentified non-Japanese executive in Nissan's legal department, in the second deal ever struck under Japan's recently introduced plea bargaining system.[156] Charges were filed against Ghosn and Kelly on the underreporting of deferred compensation on 10 December, along with allegations of additional charges that restarted a 10-day holding period without bail.[138] Nissan also took control of the Rio and Beirut properties and changed the locks, which has led Ghosn's family to sue for access.[138]

Continued detention and new charges[edit]

On 21 December 2018, Ghosn was re-arrested on suspicion of shifting to Nissan personal losses of US$16.6 million related to a personal swap contract in October 2008 (during the global financial crisis).[162] The introduction of those charges prevented Ghosn's release on bail later the same day, because the new charges permitted an additional 10–20 days of incarceration prior to a bail hearing.[162] Subsequent reporting linked this charge to Ghosn's dealings with Sheikh Khaled al-Juffali, the vice chairman of one of Saudi Arabia's largest conglomerates and majority owner of a company which owns half of a regional joint venture called Nissan Gulf, with the other half held by a wholly owned Nissan subsidiary.[163] In return for a personal letter of credit from Juffali to Ghosn during the 2008 crisis, which served as bank-demanded collateral for Ghosn's swap contract, Nissan indirectly paid $14.7 million from an internal discretionary fund known as the "CEO Reserve" to a wholly owned Juffali company in four installments between 2009 and 2012, although the internal documentation did not specify the ultimate recipient.[163] According to Tokyo prosecutors, Kelly was not involved in this transaction and so was released on bail on 25 December.[163]

Ghosn made his first public appearance after his arrest at an arraignment on Tuesday, 8 January 2019, where he asserted his innocence, making a statement in response to the main allegations against him; however, his bid to be released from prison on these charges was rejected.[164][165]

Ghosn's imprisonment was set to end on January 11 2019. That day, Ghosn was indicted on two additional charges: aggravated breach of trust and understating his income, once again extending his imprisonment.[166][167][28] As a result, he could remain in jail for months more before a trial takes place.[165] Two days later, Nissan's investigation allegedly found that, in addition to the underreporting of salary already charged, Ghosn had paid himself an undisclosed $8 million in 2018 from a Netherlands-based joint venture owned by Nissan and Mitsubishi that was set up in 2017, without the knowledge of either company's directors because Ghosn had the sole authority to dispense cash from the venture.[168]

Ghosn again appealed the denial of bail from January 8 2019 and offered to meet greater restrictions and higher guarantees of appearance in return for his release, including wearing an ankle bracelet and posting his Nissan stock as collateral.[169] Additionally, on 14 January 2019 Ghosn's wife Carole published a letter that she wrote to Human Rights Watch protesting against his treatment in detainment.[139][170] Nevertheless, on 21 January 2019, the Tokyo district court again denied bail.[171]

The Japanese term hitojichi shihō ("hostage justice") has been brought up in some media reports.[172][173][174] Takashi Takano, one of Ghosn's lawyers stated that the Japanese judicial system is a country risk.[172][175]

Further developments[edit]

Carlos Ghosn (2007).

On 11 January 2019[176] José Muñoz, Nissan's chief performance officer and head of its China operations, resigned from the company, effective immediately.[177] Muñoz, considered to be a close ally to Ghosn and a possible successor as CEO of Renault and Nissan, had been a "person of interest" in Nissan's internal investigation, with which he was reported to be uncooperative.[177] One of Nissan's three independent directors opined that Nissan may simply eliminate the position of chairman and not replace Ghosn, a route previously taken by other scandal-plagued Japanese companies.[178] The Reuters Japan news service reported that Nissan may file suit against Ghosn personally.[170][179]

At first the French government and Renault had been reported to be standing behind Ghosn during his imprisonment, on the presumption that Ghosn is innocent until proven guilty.[28] However, France's financial minister Bruno Le Maire stated on 16 January that Renault may seek a new CEO to replace

Ghosn due to his continued incarceration.[170][139] Renault possibly worried about Nissan taking the chance to use the power vacuum at Renault to reshape the alliance's balance of power.[139][180] After the French government called for leadership change and his bail requests were rejected by the Japanese courts, Ghosn finally agreed to step down.[29] He resigned as chairman and CEO of Renault on 24 January 2019.[29][31]

On January 30 2019, Ghosn said the charges were "plot and treason" by executives at Nissan who opposed the relationship with Renault and a future plan that was in the works to integrate Nissan, Mitsubishi and Renault.[181] In mid-February 2019, Ghosn's lead counsel Motonari Otsuru stepped down and was replaced by Jun'ichirō Hironaka, who has a record of success in a number of high-profile cases.[182]

Bail[edit]

In early March 2019, Ghosn was granted a request for bail in a Tokyo court. This was his third bail request, and the first by his new legal team under Hironaka. The court set bail at 1 billion yen (about US$9 million) subject to stringent conditions. He was not allowed to travel abroad, and had to remain at a given address under 24-hour camera surveillance, with no internet access. He was released on 6 March 2019.[183][184]

On April 3 2019, Ghosn tweeted that he was "ready to tell the truth" and that he would hold a conference on April 11 2019.[185] He was re-arrested for the fourth time early on April 4 2019 over new suspicions of financial misconduct concerning alleged dealings via Oman.[30] Ghosn released a statement claiming the arrest was "outrageous and arbitrary".[186] Until that point in time he had been held for 108 days since he was first arrested in November 2018.

On 8 April 2019, during an extraordinary shareholders meeting, Nissan shareholders voted to remove Carlos Ghosn from the company board.[187] Shareholders also voted to remove Ghosn's former right-hand man Greg Kelly, and to appoint Renault chairman Jean-Dominique Senard as a director.[31] The next day, Ghosn posted a YouTube video, where he publicly stated that he was "innocent of all the accusations that came around these charges that are all biased, taken out of context, twisted in a way to paint a personage of greed, and a personage of dictatorship". He also claimed that the payments to Juffali were meant to help Nissan fix a dispute with a local distributor, and to open a bank contract to convert his salary from yen to US dollars, in order to avoid currency swings.[188]

The Japanese court rejected an appeal filed by Ghosn's lawyers, and approved an initial 10 days detention for Ghosn, until April 22 2019.[189] He was released in late April, but confined to strict house arrest, including having no contact with his wife for four months.[32]

Investigations in other countries[edit]

In June 2019 Renault published that in an internal audit they had uncovered 11 million euros in questionable expenses by Ghosn,[190][33][191] which was followed by the French state opening its own investigation into his actions.[192] Prosecutors in the district of Nanterre west of Paris stated that anti-fraud police had searched his residence in the town of L'Étang-la-Ville for evidence.[34] In July Renault's headquarters in Boulogne-Billancourt were searched by 20 police personnel in relation to this case.[35] July also saw Carlos Ghosn take action against French mass-media for libel.[*citation needed*]

In August 2019 his wife Carole appealed to President Emmanuel Macron of France to intercede on behalf of her husband with Japanese leader Shinzo Abe at the 45th G7 summit held from 24–26 August[193][194] at the French town of Biarritz.[32]

In September 2019, in one of the first legal accords of the saga, Ghosn settled with the U.S. Securities and Exchange Commission over claims of failing to disclose more than $140 million in pay to him from Nissan. He was fined $1 million while Nissan was fined $15 million and Greg Kelly $100,000. Although he neither admitted nor denied the SEC's charges, he accepted a ten-year ban from serving as an officer or director of a public company. Kelly accepted a five-year ban under similar terms.[192] According to *The New York Times*, the settlement all but ended Ghosn's career as a global business executive.[195]

Flight from Japan[edit]

On 30 December 2019, numerous media outlets reported that Ghosn had escaped from Japan and arrived in Beirut, Lebanon.[36][196] Ghosn later confirmed these reports through a statement released by his press representative in New York.[197] In his statement, Ghosn claimed that he would "no longer be held hostage by a rigged Japanese justice system where guilt is presumed, discrimination is rampant and basic human rights are denied."[197]

Ghosn left his Tokyo apartment at around 14:30 on December 29 2019 and joined two men at a nearby hotel.[198] The three then took a bullet train from Shinagawa to Osaka and arrived at a hotel near Kansai International Airport just after 20:00.[198] The team hired to extract him from Tokyo had noticed that Japanese security did not follow Ghosn into hotels, which facilitated his escape.[199] A few hours later, two men left the hotel carrying large containers, including an audio equipment box where Ghosn was hidden.[200] The men then boarded a Bombardier Global Express private jet with Turkish registration TC-TSR. The large box carrying Ghosn was never x-rayed or checked by customs officials, because it was too big to fit inside the x-ray machine;[201] the plane left Kansai Airport at 23:10, landing at Istanbul Atatürk Airport at 5:26 on the morning of December 30 2019.[202][203][204] Within an hour of the plane's landing, a separate private jet left for Beirut.[202] An employee at Turkish private jet operator MNG Jet admitted to falsifying passenger records, in which two separate planes were leased, one from Dubai to Osaka and then Osaka to Istanbul, while the other from Istanbul to Beirut.[205][206] On 8 May, Turkey charged seven people accused of helping Ghosn flee to Lebanon via Istanbul.[207]

Arrest warrants issued by Japanese prosecutors on 30 January 2020 claimed that the escape operation was orchestrated by former United States Army Special Forces soldier Michael Taylor, a private-security contractor with extensive contacts in Lebanon. The warrants also claimed that Michael was assisted by his son Peter Maxwell Taylor and a third American, George Antoine Zayek.[208][209] Michael Taylor had conducted similar international rescue operations in the past and has also served time in prison in the United States.[210] On 20 May, United States authorities arrested Michael and Peter Taylor on suspicion of helping Ghosn escape.[211] On 30 October 2020, the US agreed to extradite the Taylors to Japan.[212]

Residence in Lebanon[edit]

Following Ghosn's arrival in Lebanon, a Tokyo court granted a request by Japanese prosecutors to revoke his bail.[213] While Japan and Lebanon are both members of Interpol and have had diplomatic relations since 1954,[214] there is no extradition agreement between the two countries.[36] Interpol has issued a red notice for his arrest.[215] Japanese authorities raided Ghosn's Tokyo apartment on 2 January looking for evidence.[216][217] Separately, some Lebanese lawyers want Ghosn prosecuted over his 2008 trip to Israel as the chairman of Renault-Nissan to meet Better Place founder Shai Agassi, which they claim violated the Arab League boycott of Israel.[218]

Ghosn later addressed reports that his family, including his wife Carole, may have played a role in his departure from Japan, stating that "such speculation is inaccurate and false."[219] On 7 January, prosecutors in Japan issued an arrest warrant for Carole Ghosn on suspicion of giving false testimony during a court hearing in April 2019.[220]

Carlos Ghosn held his first press conference since leaving Japan on 8 January 2020, in which he described his imprisonment conditions, pleaded innocence and named Nissan executives who plotted his demise.[221] He claimed that when he left Japan, "I fled injustice and political persecution.[195] The next day, Judge Ghassan Ouiedat, a Lebanese prosecutor, imposed a travel ban on Ghosn.[222] After his escape from Japan, Carlos Ghosn's Japanese lawyer and

seven other members of his defense resigned. His lawyer, Junichiro Hironaka, said his escape was a "complete surprise".[223]

On February 10 2020, Ghosn hired former Disney president Michael Ovitz, co-founder of the Creative Artists Agency, as his Hollywood agent.[224] On February 12 2020, Nissan launched a $90 million lawsuit against Ghosn for alleged “corrupt” actions,[225] and on February 29 2020, Japan's financial regulators fined Nissan 2.42 billion yen ($22 million) for underreporting remuneration of former Chairman Ghosn and other executives for years.[226] On July 8 2020, *The Nikkei* reported that $862,500 was paid from a Paris bank account related to Ghosn to Promote Fox, a company managed by Peter Taylor, an ex-Green Beret who helped him flee to Lebanon.[227]

Ghosn's house in Lebanon sustained damage following the August 2020 Beirut explosion, which occurred 5 kilometers away from the residence.[228]

On 3 November 2020, Lebanon's prosecutor general decided not to charge Ghosn for visiting Israel in 2008 because a statute of limitations has expired.[229]

In November 2020, the United Nations human rights group said that the Japanese government should give Ghosn a "compensation" and "other reparations" due to the arrest and detention conditions in November 2018.[230]

In December 2020 it was reported that French investigators would meet with Ghosn in January 2021 as part of a separate investigation of expenses covered by a Dutch subsidiary of Renault and Nissan.[231] Ghosn is under two investigations in France, one that is focused on suspicious transactions between Renault and a distributor in Oman, as well as another investigation into alleged illegal payments for private trips and events paid by Renault-Nissan’s Netherlands-based holding company RNBV. In a January 2021 interview Ghosn questioned why France are questioning him over the charges, while the Japanese didn't, and denied the charges.[232]

Personal life[edit]

Carlos Ghosn at 2014 Paris Motor Show.

Ghosn's first marriage was to Rita Kordahi, who came originally from Rayfoun, Lebanon, and whom he met in France in 1984. Together they had four children: Caroline, Nadine, Maya and Anthony.[233] They divorced in 2012.[138] In May 2016, Ghosn married Lebanese-American[234] Carole Nahas and, a few months later in October, threw a large-scale Marie Antoinette-themed party at the Grand Trianon of the Palace of Versailles, in the outskirts of Paris, to celebrate both the wedding and Carole's 50th birthday.[235][236] He is reported by several Japanese media to have six private residences: in Tokyo, Paris, Rio de Janeiro, Amsterdam, Beirut and New York.[237][238]

Ghosn, whom *Forbes* magazine called "the hardest-working man in the brutally competitive global car business",[56] as of 2006 was splitting his time between Paris and Tokyo and logging roughly 150,000 miles (241 400 km) in airplanes per year.[56] Japanese media called him "Seven-Eleven" ("work very hard from early in the morning till late at night").[84] He holds Brazilian, French, and Lebanese citizenships.[233] He has been noted for his direct, results-and execution-oriented style in business strategy meetings,[56] and for his interest in resolving problems from within a company by listening to workers and by cross-functional and cross-cultural team groupings.[81]

Ghosn is multilingual, speaking four languages fluently: French, Portuguese, English, and Arabic, and he has also studied Japanese.[59][239] He is a partner in Ixsir, a winery in the northern coastal town of Batroun, Lebanon.[240] In 2012 he was named to the Honorary Board of the American Foundation of Saint George Hospital in Beirut.[241][242]

Ghosn was hailed as a potential presidential candidate in Lebanon.[*when?*][243][244] In a June 2011 survey by life-insurance company Axa, Ghosn was ranked No. 7 in a random poll asking Japanese people, "Which celebrity do you want to run Japan?" (Barack Obama was No. 9, and Prime Minister Naoto Kan was No. 19.)[245][246][247] He has so far declined such overtures, saying he has "no political ambitions".[243]

Ghosn's lawyers have stated he has chronic kidney disease which they claim was worsened by his lack of access to proper treatment while imprisoned.[248]

In the media[edit]

Carlos Ghosn interviewed by LinkedIn Influencer (2014).

Beginning in November 2001, Ghosn's life story was turned into a superhero comic book series in Japan, titled *The True Story of Carlos Ghosn*, in the manga comic book *Big Comic Superior*.[249] The series was published as a book in 2002.[84][250] His face has been reproduced both in Lebanese postage stamps and in bento boxes in Japanese restaurants.[251]

Ghosn is the subject of a number of books in English, Japanese, and French. In English, he wrote a best-selling business book called *Shift: Inside Nissan's Historic Revival*.[252] He was the subject of another business book called *Turnaround: How Carlos Ghosn Rescued Nissan* by David Magee.[253] He also provided strategic business commentary and on-the-job lessons to aspiring managers in a book called *The Ghosn Factor: 24 Inspiring Lessons From Carlos Ghosn, the Most Successful Transnational CEO* by Miguel Rivas-Micoud.[254]

Awards and recognition[edit]

As a result of his achievements, Ghosn has had numerous awards and honors bestowed upon him. Some of these include:

- In 2001, he topped *TIME* magazine's list of Global Influentials, beating Bill Gates and several other globally renowned businessmen.[255]
- In 2001, he was named Father of the Year by a Japanese community group.[256]
- In 2002, he was appointed a Chevalier of the Legion of Honour (*Knight of the Legion of Honour*) by the French government.[257]
- In 2002 *Fortune* awarded him Asia Businessman of the Year.[11][12]
- In 2003, he was named Man of the Year by *Fortune* magazine's Asian edition.[14]
- In 2003 *Fortune* listed him as one of the 10 most powerful business leaders outside the U.S.[13]
- In 2004, he became the first foreign business leader to receive the prestigious Blue Ribbon Medal from Emperor Akihito of Japan.[258]
- In 2004, he was added to the Automotive Hall of Fame.[259]
- In 2004, he was also added to the Japan Automotive Hall of Fame.[260]
- In 2006, Ghosn was made an Honorary Knight Commander of the Order of the British Empire.[261]
- In 2010, *CEO Quarterly* magazine listed Ghosn as one of the "Most Respected CEOs"[262]
- In 2011, CNBC listed Ghosn as Asia Business Leader of the Year.[263]
- In 2012, Ghosn was awarded the Grand Cordon of the Order of Ouissam Alaouite, an honorific designation to civilians in recognition of services that benefit Morocco.[264]

- In 2012, Ghosn received the Japan Society Award.[265]
- In 2012, Ghosn became the first person in the auto industry, and the fourth overall, to win a Lifetime Achievement Award from the Strategic Management Society, a non-profit group that promotes ethical and strategic business stewardship.[266]
- In 2012, Ghosn was awarded the Grand Cross of the Order of Isabella the Catholic, an honorific designation to civilians in recognition of services that benefit Spain.[267]
- In 2013, he was appointed an International Fellow of the Royal Academy of Engineering.[268]
- In 2017, Lebanon's national post office, LibanPost, unveiled a collectable stamp honoring Carlos Ghosn.[269]

Publications[edit]

- *Renaissance*, Tokyo, ed. Diamond-sha, 2001.
- *Shift : Inside Nissan's Historic Revival*, New York, ed. Crown Publishing Group, 2005.
- *Le temps de la vérité*, Paris, ed. Grasset, 2020.

General sources[edit]

- Ghosn, Carlos. *SHIFT: Inside Nissan's Historic Revival*. Crown Publishing Group, 2007.

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Gibson Island, Maryland

Wikipedia Gibson Island, Maryland

Principal backers :

- William Stuart Symington II (born 1871)
- William Stuart Symington III (born 1901)

Pre-1800 History

"The 1,000-acre island, steeped in history and first sighted by Europeans when **Capt. John Smith** sailed up the Chesapeake in the early 1600s,...." [https://www.bizjournals.com/washington/breaking_ground/2014/09/georgetown-brokerage-tapped-to-market-an-island.html]

"Once a farm, [the Gibson Island] namesake was **John Gibson** who owned the island from 1793 to 1819." [https://www.capitalgazette.com/lifestyle/home_garden/ph-ac-cc-how-schwab-gibson-island-1201-20161203-story.html]

John Gibson was a "notable Talbot County businessman and legislator." [HB002Y][GDrive] John Gibson was "a relative by marriage of the mid-18th century Maryland governor, Samuel Ogle; and a business associate of **Charles Carroll of Carrollton**. (Wikipedia: https://en.wikipedia.org/wiki/Charles_Carroll_of_Carrollton) " [HG0039][GDrive]

"Gibson's son **William Gibson** (1788-1868) was an early American surgeon whose groundbreaking surgical techniques and experimentation paved the way for advances which would revolutionize surgery by the Civil War. He [...] has ties to St. John's College in Annapolis, Princeton, and served as the Chair of the Surgery Department at the University of Pennsylvania from 1819 until he retired in 1855." ([HX000Q][GDrive] / Full book at [HX000P][GDrive])

"The [..] farm [on Gibson Island that John Gibson owned was] at [Gibson Island's] Sandy Point". John Gibson's] business associate of Charles Carroll of Carrollton, in fact, "held a mortgage on the property during the Gibson ownership. No records have been located to indicate if Gibson maintained (c.1816) a farm at Sandy Point, although he resided elsewhere.. " [HG0039][GDrive] . It is not clear if there was any farmhouse on the island while John Gibson owned the island. "The first clear evidence of the existence of the Sandy Point Farm House appears in the records of settlement of Henry Mayer's estate (1833)." [HG0039][GDrive]

"The [next] owner of the farm at [Gibson Island's] Sandy Point [was] Henry E. Mayer (-1831). At his death, Mayer left the Farm House, a barn, Negro slave quarters, seventeen slaves, a carriage house, a stable, a wooden granary, and a personal inventory worth $4,173.90. Mayer's executor sold the farm to Baptist Mezick in 1833. Mezick and his son Thomas Mezick continued to operate farm through the 19th century. They supplemented their income with rents from property they owned in Baltimore City." ([HG0039][GDrive])

1858 - Sandy Point Lighthouse

"The original Sandy Point Lighthouse, a brick keeper's dwelling with a lantern room placed on the roof, was built onshore at Sandy Point in 1858. Like Smith Point and Thomas Point Shoals, the onshore station was replaced by offshore lighthouses to more adequately mark offshore shoals. On August 3, 1854 Congress appropriated $8,000 to build a lighthouse at Sandy Point near the present site of the Chesapeake Bay Bridge. Approximately two acres of land located about 600 feet north of the point and a right-of- way was purchased from Baptist Mezick and his wife Mary for $526. A contract was let to W.J. Humes to built a 12-story 31.5- by 18.5-foot brick keeper's quarters with an integral tower and lantern room surmounted on the roof. The tower was painted red, and the lantern was fitted with a fifth-order Fresnel lens exhibiting a fixed white flashing light. The dwelling had four rooms, an attached kitchen, and a cellar. The main entrance through one of the gable ends was decorated along the roofline with Victorian sawn work. Nearby was a brick cistern 5 feet across and 5 feet deep. " (see [2018-uscg-historian-office-sandy-point-light-stattion-nrhp.pdf][GDrive])

1863 - Baptist Mezuck died

https://www.newspapers.com/clip/24047636/baptist_mezick_obit_1863/

Was a banker - https://www.wikitree.com/wiki/Mezzick-2

1870-1918

Suspicious death ...

https://timesmachine.nytimes.com/timesmachine/1892/10/03/106086649.pdf

https://www.newspapers.com/clip/25838096/the_baltimore_sun/

https://www.newspapers.com/clip/26803820/theodore_corner_obit_1904/

https://timesmachine.nytimes.com/timesmachine/1892/10/03/106086649.pdf

1920/1921

https://www.findagrave.com/memorial/173246997/frank-mezick

https://www.findagrave.com/memorial/173247169/lillie-mezick

https://www.newspapers.com/clip/24048268/lillie_corner_mezick_obit_1920/

MEZICK. On July 6, 1920, at the resi dence or her sister, Airs, cnanes u. Ridout, Eastport, Md., LILLIE CORNER MEZICK, beloved wife of the Rev. Frank Meziek, of Arrington, Va., and daughter of the late Capt. Theodore and Rachael Corner, of Annapolis. Funeral services at St. Margaret's Church Thursday morning at 10 o'clock. Interment in Greenmount Cemetery, Baltimore. 7e

https://books.google.com/books?id=vF_kAAAAMAAJ&lpg=RA2-PA29&ots=gEiIIFFHAP&dq=Lillie%20Corner%20Mezick&pg=RA2-PA29#v=onepage&q=Lillie%20Corner%20Mezick&f=false

Source : [HG003A][GDrive]

The Gibson Island development was the idea of Baltimore judge and businessman Stuart Symington. Tradition recalls Symington's principal motivation for developing a private summer community was his displeasure over the quality of and the long delays at Baltimore area golf courses.

Apparently, others shared the same frustration and Symington soon persuaded approximately forty-five friends and colleagues to join him in creating a new club. In 1921, after a year of inquiry, Symington purchased Gibson Island for $165,000. Here Symington was inspired to create what he called " a club within reasonable distance of the city, where attractive people of moderate means could enjoy summer events such as yachting, bathing, golf and tennis." The Gibson Island enterprise, to use Symington's words, was "not a stock company, not a land development scheme, not a business venture in any sense of the word. It [was] a purely social club, in which membership [could] be had only by invitation. ""

Gibson Island was promoted as a community designed to appeal to "attractive persons of moderate means." Initial membership was selected from an elite demographic and included.wealthy businessmen, socialites and politicians from Baltimore, and to a lesser degree, Wilmington, Philadelphia, and New York. Newspapers, with some degree of hyperbole, touted the new private resort community as "The Newport of the South." While the architecture of Gibson Island lacks the ostentation of the Newport homes built by the Vanderbilts, Rockefellers, an Dukes, Gibson Island's plan and architecture clearly displays the taste and social pursuits of the well-to-do in the 2nd quarter of the th 20 century.

Resorts and recreational communities such as Gibson Island, as well religious and intellectual counterparts such as camp meetings and later chatauquas, began to appear in earnest following the Civil War. The expanded network of railroads made such destinations physically and economically realizable to a larger number of people. Furthermore, the "back to the land" movement, spawned in reaction to the perceived degenerative qualities of life in the Industrial Revolution, provided philosophical underpinnings, and promoted nature's salubrious effect of on mind, body, and spirit.

This increased popularity of public resorts and private summer communities reflects the economic and social dynamics of the state and nation in the period between the Civil War and Great Depression. Locally Baltimore, like many industrial-based urban centers, experienced rapid economic expansion. Growth crescendoed in the 20th century. Baltimore entrepreneurs created 103 new businesses during the 1920s alone, and the steel industry and import-export trade flourished. This led to the observation that "There is no place in the United States so susceptible [as Baltimore]of successful industrial development."

Increased industrialization in combination with a continued influx of job-seeking immigrants exacerbated urban problems and fueled the wealthy and middle-class's demand for suburban housing and rural retreats. It is in this overarching socioeconomic context that Gibson Island (as well as other such Anne Arundel County resort communities as Sherwood Forest, Bay Ridge and Calvert County's North Beach and Chesapeake Beach) came into being.

Symington communicated frequently with the Olmsted Brothers, impressing upon them his ideas for the island. In one correspondence he relays his vision of "summer residences amid spacious, beautiful, restful surrounds, where refreshing breezes prevail, where the usual summer past times of the country are to be had, and at a distance from Baltimore, but not so great as to make it prohibitive for a business man to go back and forth daily when his affairs require daily attendance, and yet great enough to ensure that going out there will be going into the country and not merely moving to another part of the suburbs."

The social tenor of the club community, and its emphasis on family is captured in an undated brochure, titled Gibson Island Port of Homes. Following is an extended excerpt: "Two men were talking the other day about their families. "How well do you know your children one asked?" "I don 't know them at all " was the reply " ... it's a fanny age. Home life, as far as I can see it will soon be as extinct as Henry Ford's plan to get the bovs out of the trenches by Christmas. "

"Sway out! Had this man known about Gibson Island, had he observed even casually what is being done there to create the ideals of American home life that meet 20th century conditions, I believe he would have thought twice about making such a statement. Gibson Island is in no sense a "community" development. It does not tolerate for an instant any of the characteristics (such as the haphazard jumbling together of various groups, like as not antagonistic in type, custom and tradition) which makes that sort of thing unendurable, if not actually odious to discriminating people ... The list of people who may build on Gibson Island or become members is carefully supervised, though not with any gesture of snobbishness, nor with the establishment of false social values in mind. There is nothing to suggest in the slightest the more spectacular phase of modem life, for you would have to travel far indeed to discover such a complete lack of show. Unconventionality of the offensive sort and the laxity of conduct that passes sometimes even in exclusive circles these days is frowned upon. Yet there is a total absence of formality of anything like a feeling of constraint."

Lot purchase was controlled by the Symington family and was linked to membership in the club from which Jews and African Americans were excluded. This restriction did not extend to club employees, and while in law school Thoroughood Marshall, later the first African-American to be appointed a justice of the U.S. Supreme Court, worked as a busboy at the Gibson Island Club House. During the late 1920s, club membership and residence on the island was practically confined to those listed in the Baltimore Social Register. A 1925 Sunday American Newspaper article substantiates and suports this in the following observation. "Folk who have never been fortunate enough to have their names grace the Social Register or the Blue Book have been trying without success to purchase property on the Island. The Island's governors wisely have discouraged all such applications."

Initially Stuart Symington and his New York financier brother, Thomas, personally carried the financial burden of the project. To meet the expected $800,000 financial obligation the club's target membership was placed at 1000 and divided into three classes (a) house owners (b) seasonal tenants of club cottages or club rooms (c) short-

term non-residents. By 1922 club membership was at 600 and "all of the very best social class and current receipts were inadequate to meet the already accumulated $627 ,628 financial commitment. The Symington brothers responded by forming the Gibson Island Land Company and moved forward with development using bank loans. This marked the beginning of what became the Symington's continuing financial woes.

The Olmsted plan called for 423 residential lots and two eighteen-hole golf courses, but financial constraint affected the plans execution. The idea of a second golf course was abandoned, and against the Olmsted's strenuous objections, additional trees were cut to increase the number of premium water-view lots. While the financial concern, the Gibson Island Land Company, continued to struggle, the social aspect, the Gibson Island Club, was the success its creators envisioned.

The Gibson Island Land Company undertook construction of the community club house, soon followed by the building of "summer cottages" by individual members. A large number of the Gibson Island Club's original members maintained a permanent residence in ·the Olmsted-designed, Baltimore neighborhood of Roland Park and a number of architects associated with Roland Park houses accepted commissions on Gibson Island, including Parker, Thomas & Rice; Edward Palmer, jr.; and Palmer, Willis & Lamdin. Gibson Island architecture, as well as membership, has always been regulated. Promotional material from the 1920s states that plans for every house and other improvement must be approved by the Company's architectural committee, which is composed of leading architects.

In his letters Stuart Symington promotes the Gibson Island Club and community as a place of relaxation for persons of moderate means, however many of the founding members had considerable wealth. Prosperity is relative and to those familiar with the ostentation of resort communities such as Newport, Rhode Island;

Jekell Island, Georgia; or Palm Beach, Florida, the life-style of Gibson Islanders was restrained. A more suiting comparison is the Yeamans Hall Club community located outside Charleston South Carolina.

The Olmsted Brothers designed Yeamans Hall Club two years after completing work at Gibson Island. In contrast to Gibson Island, Yeamans was winter golfing and sporting resort. However, like Gibson Island, the plan was laid out to preserve natural areas of bauty and featured a club house surrounded by private "cottages". Furthermore, Yeamans Hall Club displays the same size and type of architecture as that found at Gibson Island. Exploring further parallels between Gibson Island, Yeamans Hall Club, and other Olmsted Brothers' communities is a very worthy avenue of research.

The "cottage style" architecture of Gibson Island is representative of early 20th century taste. French Eclectic , Spanish Eclectic and Tudor Revival architecture were especially common in suburban communities during the period between the two World Wars. The popularity of these historically imprecise styles has been characterized by some a backlash against the then dominant Colonial Revival style, and also the result of a renewed interest in European-inspired architecture popularized by servicemen returning from abroad following World War I. With the approach of World War II these styles went out of favor as American taste began to reject foreign influences.

During the 1920s and 1930s, however buildings evocative of rural England, France, Italy, etc., were very much in vogue. A Gibson Island promotional package from the 1920s depicts a number of Gibson Island's oldest and finest homes that are representative of this genre. This promotional material is copied and included in the attachments.

Sally Symington Henderson, the granddaughter of Thomas Symington, recalls that the [XX]play of money was frowned upon and never discussed. The modem trend toward "mansionizing" and elaborate landscaping is definitely a trend among the new generation. Perhaps it is more accurate to describe Gibson Island as a private community aimed at the moderately wealthy. It seems founding members either did not view themselves as rich or, given the fact that membership included members of the DuPont family, refused to present it.

Despite conscious restraint, Gibson Island summer life was not without a certain [X}arefied air. When Mrs. Henderson was asked where residents took most of their meals, she replied that the popular conception that families usually ate at the club was incorrect. Most meals, she reports were taken at home-prepared by the family cook. Mrs. Henderson also recalls that many houses were originally equipped with servant quarters, most of which, in this post-servant society, have been removed.

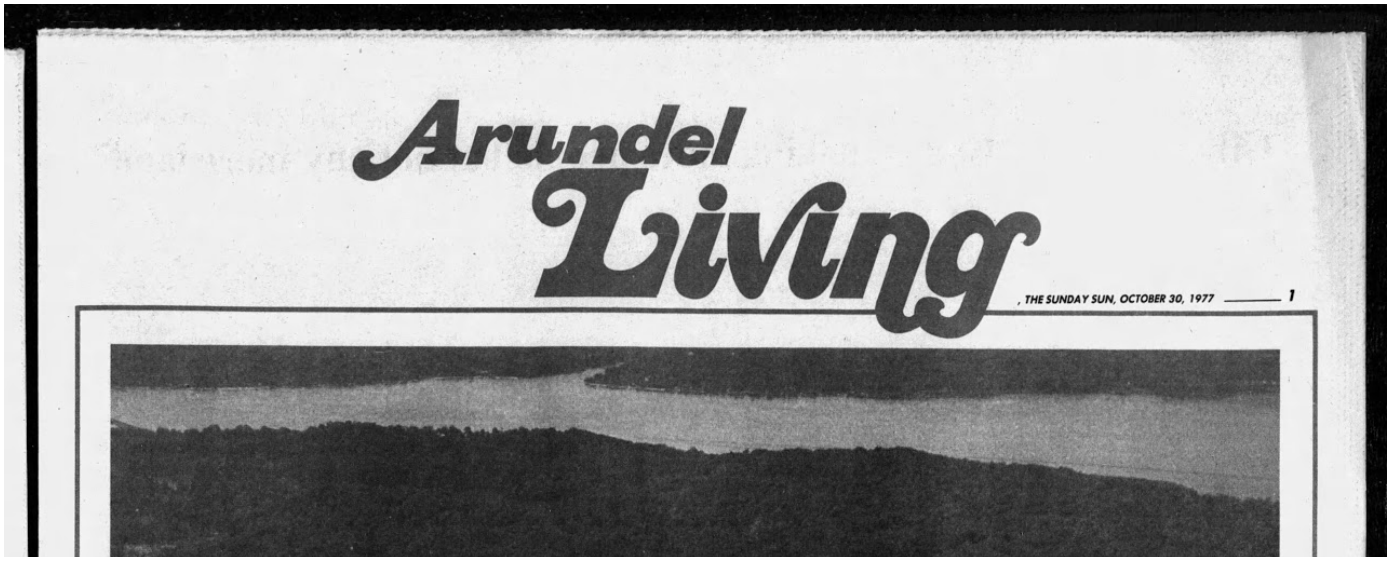
Early advertisements and oral tradition emphasize the importance of family and organized activities and instruction for children were widely available. Golf, tennis and sailing were available for members, and instruction in these activities provided for their children. Golf may be the initial motivation behind the creation of the Gibson Island Club, but it is sailing for which it is renown. Throughout its history, the Gibson Island Yacht Squadron has been the sponsor of nationally-recognized regattas, most notably the Gibson Island to New London race, and many prominent sailors started their career at Gibson Island. 1 Members of the Gibson Island Garden Club for ladies also achieved national distinction.

As expected, the stock market crash of 1929 and the subsequent Great Depression adversely impacted members and significantly curtailed new construction. The Gibson Island project was also set back due to circumstances involving the Gibson Island project's principle backers, specifically the death of Stuart Symington and the bankruptcy of Thomas Symington. Sally Symington Henderson said economic hardship forced a number of families to relinquish their summer homes, and others including Thomas Symington, gave up their city homes and took up year-round residence on the island. Hardship, like wealth proved relative, and despite financial retrenchment, sailing, golf tournaments continued. Gibson Island society life persevered through World War II, however charity drives, fund-raisers and bandage wrapping parties were as much a part of the summer social calendar as swimming and sailing.

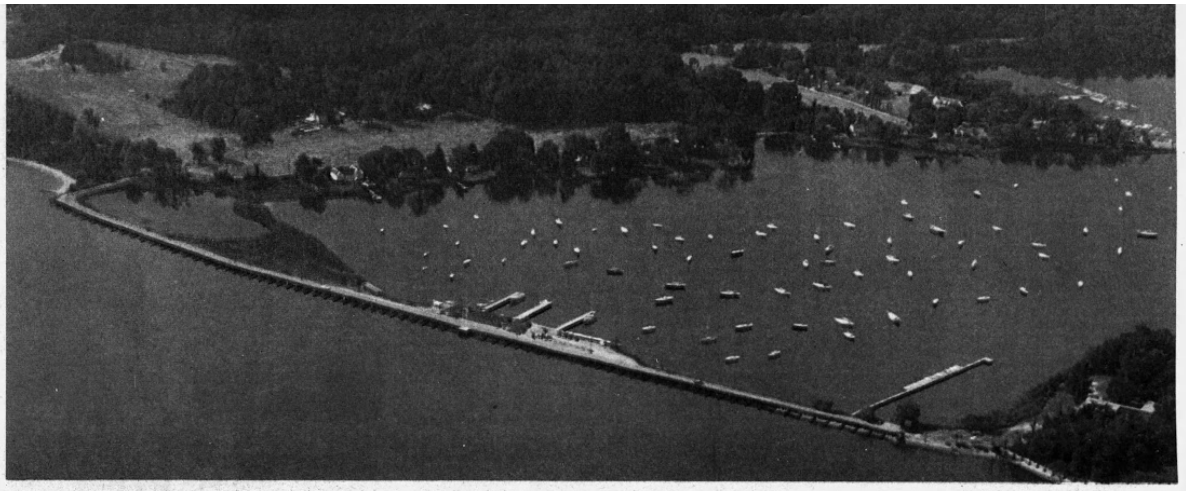
In the post-war era Gibson Island began an earnest transformation away from a summer resort to a year-round community. Long-time resident, Jimmy Wolfe, revealed in an interview that Gibson Island culture began a subtle shift at this time. The number of out of state members decreased and somewhat diminished the club's cosmopolitan reputation. In addition, during the early years members usually had business or personal associations with each other outside of Gibson Island, a situation that became less typical in the post-World War II era. The increased proportion of year-round residents precipitated renovations and expansions of what were once "summer cottages" as well as new construction. The increased number of year-round residents prompted the establishment of the Gibson Island Country School. This elementary school, located on the mainland near the gate house, first opened in 1956 and maintains a very solid reputation.

In the approximately seventy-five years since the Gibson Island Corporation and Gibson Island Club were inaugurated, significant changes have taken place in response to changing lifestyles. However, Stuart Symington's vision of a private, professional class community where members are able to enjoy a full variety of recreational activities, within close proximity of the city, remains fully intact.

1977 Baltimore Sun special on Gibson Island


Arundel Living

, THE SUNDAY SUN, OCTOBER 30, 1977 1



Maps, Inc. photo—Jerry Luchansky

Gibson Islanders don't light cigars with $10 bills

By Kathy Lally

"They think we're all a bunch of millionaires," the curmudgeonly voice harrumphed over the telephone, "sitting out here lighting our cigars with $10 bills."

"They give you the devil if you talk about it," a high little voice quavered, "and I don't want to get the devil."

Gibson Island. About 175 families living on 2½ square miles of wooded and rolling wild land, surrounded by the Magothy River and the Chesapeake Bay, connected to the rest of Anne Arundel county by a causeway that juts off from the end of Mountain road.

Residents call it paradise, a garden where foot has not fallen in a few green-growing areas for 50 years. Peter A. Jay, a columnist for *The Sun*, once called it the kind of place that does not welcome Jews, recent arrivals from those Mediterranean countries where garlic is popular, or people with tattoos.

Most of the people who live there don't like to talk about Gibson Island. They have, they say, been burned before. People, they say, think they're snobs, very rich snobs.

Those who do talk about it sputter, "Balderdash."

Bryden Bordley Hyde, a Baltimore architect, a man with a strong sense of history and tradition, moved to Gibson Island in 1949 after buying his 2 acres at the edge of Otter Pond for $2,750. In 1960, he bought another acre for $4,000.

He is sitting now, a white-haired man in well-worn gray suit, impatient to get to work this morning, but pausing to talk about his home, looking out at the rain slanting into the lake, looking at the thick clutch of trees that ring the lake, hiding the sight of any other house.

"It's foggy one minute, and cloudy the next. Then the sun is shining," he says. "It's a constantly changing show. It's a real treat to be here."

It was love of the water and the unspoiled land that brought him to the island, Mr. Hyde says. "I married this Bermuda gal, and this was as close to Bermuda as we could get."

The island was developed in 1921. "It was the Symington brothers. One was Senator Stuart Symington's father. They and their friends put up the money. They had difficulty getting on the Baltimore Country Club golf course on Saturdays, so they started this, mostly for the golf course," he says.

And the life-style has remained one that revolves around the land, the outdoors, around boating and swimming, golf and tennis, and walks in the woods, a park-like setting that Mr. Hyde says was designed by the Olmsted brothers who laid out Central Park in New York.

"Some of the most distinguished people in Baltimore city were living here in the old days. They were socially top drawer," he says. "I would say the character of the place is not socially oriented now."

There are a variety of retired service people, colonels and generals and admirals. "We've also had our fair share of presidents and vice presidents of corporations," Mr. Hyde says.

John Krantz, the University of Maryland professor who invented Bufferin, lives there. So does Anthony L. Conrad, who was chairman and chief executive of RCA until he got into income tax troubles. Pulitzer prize-winner Bob Woodward of the Washington *Post* has a house there. And there still are lots of people who are listed in the Blue Book.

Yet, Sarah Henderson, known as Sally, who spent her summers there as a girl and returned to live, who is a descendant of the founders, says there are many people like her and her husband.

Mrs. Henderson is headmistress of Gibson Island Country School. Her husband is an author who mostly writes about sailing.

"A lot of people think Gibson Island is loaded with millionaires," Mrs.

See ISLAND, Page 2, Col. 1

Prospect of Crown refinery in city alarms countians in Marley Neck

By Karen Hosler

North county residents who led a stormy campaign three years ago which succeeded in blocking construction of an oil refinery on their side of the Marley Neck peninsula are all fired up again.

Initially aroused this month by signs that Crown Central Petroleum Corporation is moving ahead with plans to build its refinery on the Baltimore side of the peninsula, the anti-refinery lobby now is worried that county officials may allow accompanying tank farms or petro-chemical plants to slip over the border.

The first alarm was sounded early this month when it was learned that city officials had requested $50,000 in federal money for a study of the impact a refinery on Hawkins Point, at the tip of the peninsula, would have on the city's economy, transportation and air and water pollution problems.

A second alarm went off in those north county communities two weeks ago when county officials acknowledged that they had requested an additional $20,000 so the study could be expanded to include a survey of the effects a Hawkins Point refinery would have on Anne Arundel county and the Chesapeake Bay.

The citizens became fully mobilized, however, when they became aware of a draft of the Regional Planning Council's general development plan for the Baltimore region, which urges that serious consideration be given to a refinery at Hawkins Point/Marley Neck and suggests that a nearby petro-chemical complex also would be an economic boon to the area.

They plan to protest en masse at a public hearing on the draft plan scheduled for 7 P.M. Tuesday at the Arundel Center and also hope to convince federal officials to deny money for the study.

Nan Milligan, treasurer of the United Council of Civic Associations and a longtime warrior against the oil refinery plans, explained that her concerns revolve on two points.

- County officials seem to have quietly joined a study she fears will promote the city's pro-refinery position and;
- A draft plan, which all but endorses the refinery, was prepared with the assistance of county representatives.

"The wording of the plan is very upsetting," she added, noting that the scheme makes no distinction between the Hawkins Point site and use of the entire peninsula.

"Crown has plans to put the refinery on a 500-acre tract at Hawkins Point," she said, "but it had intended to use a 1,340-acre site in Anne Arundel county. We don't think the refinery can be contained on a 500-acre site. We think it may be slipped across the border and we are particularly worried about the satellite industries."

Carol Vitek, of the Silver Sands Civic Association, pointed out that although the plan mentions the need for examining possible dangers of industries that could further deteriorate the area's air quality and the ill effects oil spills would have on commerical fishing and recreational uses of the bay, it urges that these concerns not be weighed too heavily.

Specifically, the plan says, "The policy to avoid any negative environmental impact 'at all costs' must be tempered by the economic needs of the state and region."

"The boundary is only an imaginary line," Mrs. Vitek said. "What Baltimore city wants to do for its economy is going to hurt us. I don't care how many new jobs it creates or how much its adds to the tax base; it's not worth killing a river and the whole bay."

Although the county enacted a ban on any oil refineries within its boundaries in 1974 and its zoning ordinance prohibits tank farms and most chemical, paint and plastic manufacturing industries, the citizens fear that county officials may move to ease those restrictions.

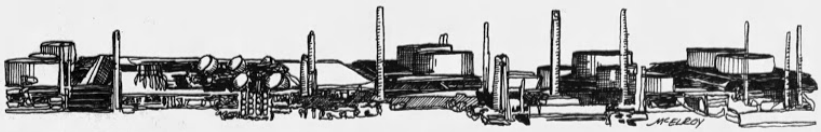
Hogwash, says the county executive, Robert A. Pascal.

"We are opposed to an oil refinery on either side of the county line and we will do everything in our power to stop it," he said. "We believe the Chesapeake Bay area is entirely too sensitive and too important to take a chance on oil spills or any other pollutants. Why gamble with the liabilities?

"Baltimore city is going to make all of the money from this thing and we and the rest of the counties in the bay area are going to suffer from it," he said.

"Obviously, we are unhappy about

See CROWN, Page 8, Col. 1



lady pilot

Glen Burnie woman is a 99'er.
Page 9

gadfly

Carl Snowden: Sleepy hometown at last appreciates its activist.
Page 5

never die

General del Valle: An old soldier still fighting.
Page 4

spooky nights

Old stories haunt county at pumpkin time.
Page 16

[HN00QD][GDrive]

Gibson Island: 'God is making more people but not any more land'

ISLAND, from Page 1

Henderson, a warm, cheerful woman says. "It simply is not true. There are a lot of people working very hard, a lot of people like me and my husband, where both are working." They include, she says, Lydia Barr, the first-grade teacher, and her husband, and other teachers on the staff.

When Stuart Symington, Jr., a Baltimore city judge who was the father of the Missouri senator and was Mrs. Henderson's great-uncle, decided to develop the island, he got financial backing from his brother, Mrs. Henderson's grandfather, Thomas Harrison Symington.

Her grandfather, Mrs. Henderson says, was an inventor, a self-made man who made a lot of money through railroad inventions, particularly one

"They are people who love having the space around them," Mrs. Henderson says. "You can walk in the woods and not worry about it. Your children can ride their bikes anywhere, and you don't have to worry about it. Practically everyone is involved or has been involved in some kind of sports—either golf or tennis or they walk or they're beachcombers. A lot of people are gardeners.

"People are very conservation conscious. Many a time I've seen people stop their car and get out to pick up a beer can. The community garden clubs take care of the triangles. They don't hire anyone to do that.

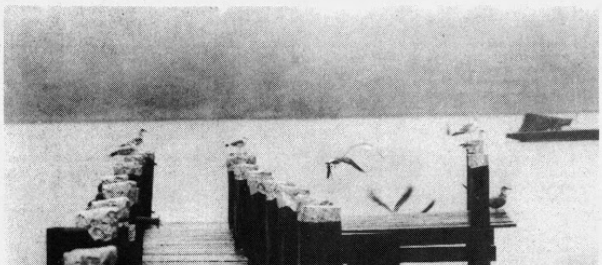
"Life is very simple. Entertaining is done mostly in the home. Food is simple and good. People don't get dressed up very much. A blouse and

tired from selling real estate. She plays nine holes of golf everyday. And when she returned home from a trip to Ireland, she ignored the jet lag and the very day of her return summoned her grandchildren and cooked them all a big meal.

"She's retired from the real estate business, but she's not retired from life," Mrs. Henderson says. "She also goes birding, which is something a lot of the people are interested in. We have a bird count twice a year."

Mrs. Symington displays a zest for life and a love for her surroundings that is typical of the island and that has spilled over into the school, Mrs. Henderson says.

Gibson Island Country School is a one-story building, rambling from growth by addition, that sits on the



that kept train wheels from catching fire.

"My great-uncle was a family man," she says. "He had a big family, and he was concerned that the family didn't spend enough time together in the summer. The children would be off to camp, and so forth. So he got the idea of developing the island so they could all vacation here and the fathers could commute to work."

The island was three farms then, and it had been farmed for hundreds of years. It is believed the Piscataway Indians cultivated it first, and land grant records date from 1665. People still find arrowheads and grinding stones.

The original orientation of the summer people was to Baltimore, but as the years passed and unspoiled waterfront became rarer, many began to come from Washington. Now, says Leroy Wilbur, Jr., president of the Gibson Island Corporation, there are no summer-only houses, and most but not all people live there year-round.

"Now that it's year-round, it's a lot better," Mrs. Henderson says. "The loyalties are to this community."

Mrs. Henderson remembers living on the island year-round during the Depression. "My family lived in the garage of the house my grandfather built—as the family's fortunes diminished, that's where we went."

Most of the people are drawn to Gibson Island because of the water and not any desire for exclusiveness, she says, and Mr. Wilbur agrees.

long skirt—that's about it.

"There's lots of false images of Gibson Island. A lot of people think it's very snooty. It's not. People are wonderful to their neighbors. . . . I think it's a great place to live."

After her marriage, Mrs. Henderson lived in Baltimore 2½ years. "I knew I was not a city girl," she says. "We were fortunate to come when it was possible, when a young family could still buy a house. My husband and I built our house after the war. Now, I don't know how a young couple gets a roof over their heads anywhere in this county today."

Her house, Mrs. Henderson says, was built for $12,500.

"I think there are a lot of people on Gibson Island who have sorted out their values," Mrs. Henderson says, "and have decided what's important are the things money can't buy—a safe community, a caring community. I don't think you could walk or drive around Gibson Island and say that person has a lot of money or that person doesn't. It isn't that kind of place.

"I think most of the people on Gibson Island have a sense of knowing what they're doing with their lives."

It's a family place, she says, where all the kids on the island call Mrs. Henderson's mother, Sarah Symington, BeeBee. "That's what her grandchildren call her," Mrs. Henderson says.

She describes her mother as something of an island matriarch. She was 76 Thursday, and only last year remainland, near the foot of the causeway and overlooking the harbor. It began as a one-room school in the top floor of the post office on the island.

"I had taught in the public school system. After my husband and I built a house down here, I was going to do the traditional thing . . . stay home with my two children," Mrs. Henderson says.

"That was in 1951, and we had the little school in the post office. The teacher left, and they asked me to finish the year, and I've been finishing it ever since."

The school had been there about 10 years before she arrived, Mrs. Henderson says. As it grew, and swelled into several rooms in the post office, a group of businessmen on Gibson Island decided the school should be expanded.

It was decided to put it on the mainland, and open it to non-island residents. And it has developed in such a way, says Mrs. Henderson, its first and only headmistress, that it reflects the values of life on the island.

"We wanted a school that dealt with the basics humanely," she says. "One of the basic ideas behind the school was that it remain small. All the teachers know all the pupils."

There are 131 pupils in grades kindergarten through six with 10 full-time teachers and 4 part-time. The school began with one small building financed by the founders in 1956. In 1958 a gym was added, another wing was built in 1969 and the kindergarten came in 1974.

The original money was raised by the founders, and the school has never been in debt, Mrs. Henderson says, which has helped keep tuition relatively low for a private school—$750 for kindergarten and $1,015 a year for the other grades. "Because of that, this school is open to a much broader economic base than it might otherwise be," she says.

"One of the things the founders wanted to do was give the opportunity to a larger area than just Gibson Island," she says. Now there are 17 island children, and the others come from the Severna Park, Glen Burnie, Linthicum area.

"I think in this kind of school we know exactly what we're doing, from the board of trustees to the teachers, to the parents to the children," she says. "When you get into a big school, you lose that.

"Hi, Caroline," she smiles to a little blonde girl who is going by in a navy blue sweater with the school emblem on it.

"I know every pupil, and I know their parents. We can keep tabs on every child's progress. With a small group of children you can really individualize. There has not been the machine or technique invented that can take the place of the human response."

She goes into the first-grade classroom, where Mrs. Barr has her 11 children at the board. Mrs. Barr has them write a word. One child doesn't connect his letters properly, and Mrs. Barr shows him how to do it.

"In a larger school, the child would do that on paper, get the paper back tomorrow, and never really understand what was wrong," Mrs. Henderson says. "Here he finds out immediately. And we see immediately he is having a problem. In a larger school, you might not know until Christmas."

The philosophy, she says, is that "an elementary school child needs to be touched by a teacher everyday—physically, academically, spiritually and morally."

The school has an art history class for the sixth grade, pupils learn French, there are rows of guitars in the main hallway for music lessons. The Old Testament and ancient history are taught. A couple of times during the year there is a poet in residence to talk about writing poetry for a week.

A rabbi comes to discuss Jewish holidays. "We have children of all faiths. We respect each holiday. We don't this year, but when we have minority children, we make sure the children appreciate what is different," Mrs. Henderson says.

When the school was founded, she says, all members of the board were Gibson Islanders. Not all are now.

"It's entirely separate from the [Gibson Island] Corporation," she says, "but it's a symbiotic relationship. The gate does watch over our school."

The gate.

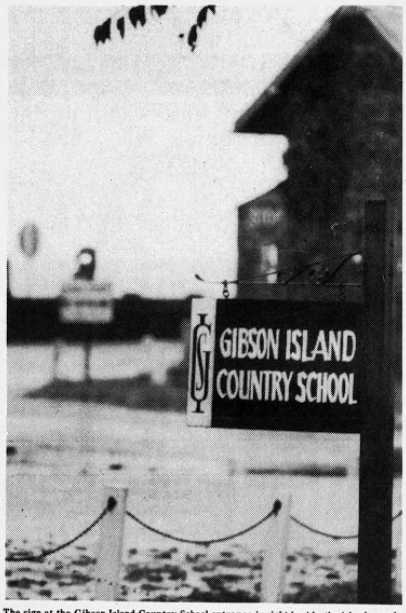
One longtime resident, who would not be interviewed, whispered over the phone, "The gate. We have that gate and all, it makes people mad. We have to be careful what we say."

As you round a bend in Mountain road, you see two red lights, a speed bump and the gate at the approach to the causeway. There's always a guard

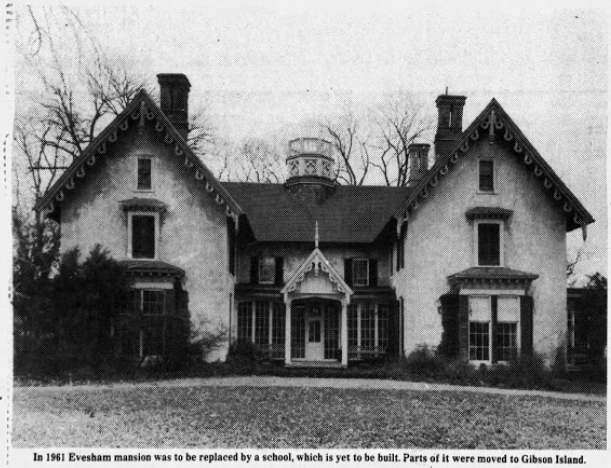
See ISLAND, Page 3, Col. 1

Sunpapers photos—Walter M. McCardell

Sea gulls perched on a pier lift off into the morning haze along Gibson Island's shoreline.



The sign at the Gibson Island Country School entrance is right beside the island guard house (background). Islanders say they don't worry about the children's whereabouts.



In 1961 Evesham mansion was to be replaced by a school, which is yet to be built. Parts of it were moved to Gibson Island.

Hydes took mansion with them, in pieces

When his boyhood home had to come down, when the Victorian mansion built about 1800 faced the wrecker's ball, Bryden Bordley Hyde, a Baltimore architect, decided to bring as much of it as he could with him to Gibson Island.

The 23-room mansion was Evesham, which had been remodeled into a neo-Gothic villa in 1850. It once stood off Evesham avenue, on 80 acres about a mile from York road.

"It was done by Joseph Patterson who was Betsy Patterson's brother," Mr. Hyde explains. "Betsy Patterson had married Napoleon's brother, Jerome."

Joseph Patterson's daughter, Caroline, married Reverdy Johnson, Jr., a famous jurist and ambassador to the Court of St. James's after the Civil War. They lived in the house, which was a great country estate.

"My grandfather bought it in 1895," Mr. Hyde says. "I was born there. My mother moved there when she was 6, and we lived in it until everyone had died off but my mother, and she was in 23 rooms by herself."

The land was sold in 1961 for a city school, which has yet to be built. "I had an arrangement to take any parts I wanted," Mr. Hyde says. He had bought an acre lot next to his house on Gibson Island, and decided to use as much of Evesham as he could for a home for his mother, Mrs. G. Ray Hyde, on that site.

Using the parts, Mr. Hyde built the new house and his mother lived in it from 1961 until January, 1974. She is in a nursing home now, and the house is rented, awaiting eventual occupancy by Mr. Hyde's daughter and son-in-law, Dr. and Mrs. James L. Gamble 3d.

"Assuming they keep it 18 years, the parts will have been in the family 100 years," Mr. Hyde says.

The new house has only seven rooms, filled with antiques from the old mansion, and it looks like a tiny wing of the big old house. There are big marble fireplaces and carved moldings. The chimney from Evesham was saved, and the original stairway was taken along as well as mirrors, chandeliers, linen-fold doors and two dormer windows.

"I was very fond of that old house," Mr. Hyde says.

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[HN00QE][GDrive]

Gibson Islanders: Don't call them snooty

ISLAND, from Page 2

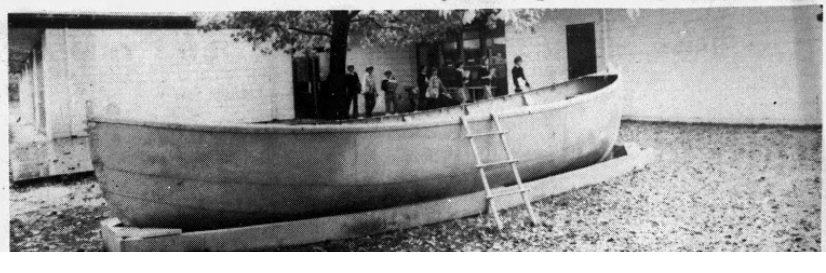
on duty there; part of the island's private police force.

If you aren't known as a resident, you're asked your business. If you're not expected, you don't get in. If you are expected, you get a pass, which says guest, or employee, or business. Your license number is taken. They write down your address.

There's a bus that goes from down-

to be barred by covenant. People in the Baltimore Jewish community say Jews were kept out, unless someone who already owned a house happened to marry a Jew.

But Mr. Wilbur says that has changed. The last five families who bought, he says, moved in without anyone knowing anything about them. Restrictions are a thing of the past, he says.



There's a bus that goes from downtown Baltimore to Gibson Island, used by pupils of the school and by the women who work as domestics on the island and at other houses out that way. If you call to ask for schedule information, the Mass Transit Authority will tell you you better have a pass if you want to get on the island. "A guard gets on the bus and checks," they tell you.

"It's the gate," Mr. Hyde says. "People get mad at the gate. They get mad whenever they think they can't go somewhere. But why should they? Do you know what would happen? There would be picnickers everywhere. We work hard. We pay our taxes, and they're plenty high. So why shouldn't we be left alone?"

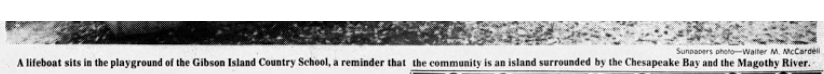
The gate, its critics say, is the symbol of Gibson Island's exclusiveness. Mr. Wilbur concedes that before the Supreme Court outlawed such things, there were restrictive covenants on the island.

The sale of property to blacks used

And Mr. Krantz says, as a woman's voice on an extension commands, "You're not supposed to give anything out by phone. You know that," that such covenants are illegal. "It's not restrictive," he says. "There's nothing criminal here. You restrict yourself." And as for life on the island, he says, "It's the Garden of Eden."

It does look like paradise, once you get on the island. There's a long winding drive, past the sailboat-topped memorial to the founding Symington. The roads curve about, first past the white frame post office, the Gibson Island Corporation, in which residents are eligible for shares. The shareholders vote for the board, which runs the island.

Then there's the Gibson Island Club, an expensive country club with pool, an organization that runs most of the boating activities. You don't have to be a member to live there, but most people are. Near the club is what some derisively call Cellblock 9, a white block-shaped building with



Sunpapers photo—Walter M. McCardell

A lifeboat sits in the playground of the Gibson Island Country School, a reminder that the community is an island surrounded by the Chesapeake Bay and the Magothy River.

black doors where residents can put up guests.

The roads wind about, Ha'penny Way and Broadwater, Ayrlie Water and Skippers Row. They take you past little concrete block houses that have been expanded and spruced up, past modest Cape Cods and suburban ranchers, past the occasional big, breathtaking place.

Mostly there is the land. And it is beautiful. Even on an ugly day, it is beautiful. The little roads twist through rolling hills. It's quiet. And the lake wells up behind the trees, the trees that curl and twist and spring and grow everywhere. The rain only makes it glisten in a soft fantasizing mist.

Gibson Island deserves a break, Mr. Hyde says. "It always gets twisted around to make you look like a bunch of bloody snobs," he says. "It isn't any social register kind of thing. We have ordinary people. It isn't really a snob act. It's just a nice way to live."

The Gibson Island Corporation, which runs the island, has made life in that section of Anne Arundel county "a hell of a lot more pleasant," he says.

That's hard to dispute. Wandering off Mountain road on your way to Gibson Island, you come across a lot of waterfront where tacky little houses perch in untidy groups, where shabby bars draw a rough-neck crowd, where the trees and green grass have been worn into scrubby weeds and yards trailed with junk.

"The coastline of Maryland has been jeopardized by being this close to Washington," Mr. Hyde says. "There's Edgewood Arsenal and Aberdeen Proving Ground. And Patuxent Naval Air Station. And the nuclear power plant at Calvert Cliffs. There are all kinds of things creeping in that are making life miserable."

"God is making more people but not anymore land," he says. "So we try to protect our little thing and keep a low profile."

And so most residents keep their counsel when asked about Gibson Island. They keep a low profile. And the rumors persist. And one is left to wonder—Bob Woodward has a house there—would Carl Bernstein, the other half of the *Post* Watergate team, be let in?

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Read "The Disappearing Islands of the Chesapeake"

The following is pages 33 to 37 is captured here : [HB002X][GDrive]

[HB002T][GDrive]

At the mouth of the Magothy River, Gibson Island's nine hundred acres encompass a well-sheltered harbor, Otter and Cooley Ponds, and a very private community. Accessible by a single road and causeway that are closed to the public, the island community is guarded by a stone gatehouse that is manned twenty-four hours a day. The island's 180 or so property owners make up the Gibson Island Corporation, which manages the island. At the heart of this wealthy community is the exclusive Gibson Island Club. Members not only may partake of clubhouse activities but also may enjoy a golf course—eighteen holes if you play one nine in reverse—a pool, marina, and skeet-shooting range. However, members of the venerable Gibson Island Yacht Squadron and students at the Gibson Island Country School are not required to be island residents.

Gibson Island has had a long history of occupation. Artifacts and a large shell midden on the bay side of the island tell of Indian inhabitants who gathered oysters and other foods from the Chesapeake. These Indians were probably of Algonquian stock, pushed south by fierce Susquehannocks.

First patented in 1667, the island had four owners and contained approximately 1,200 acres. By 1771 William Worthington owned what was then known simply as "the great island," and in 1792 he advertised it for sale: "The land is remarkably valuable for the Fertility of its soil, and Conveniency of its situation to Baltimore, Annapolis, and other Markets . . . It abounds with Plenty of Timber and Wood. And has the advantage of productive Fisheries, and Variety of wild Fowl. It is adapted to every Species of Country-Produce. There are several different Tenements on it, with some useful Improvements, and it produces the greatest Plenty of Grass for Stock." In 1793 John Gibson, an Annapolis attorney, bought the island, which was part of the more than 2,000 acres of land he owned between the Magothy and Bodkin Creek.

Subsequent owners divided the island into farms, but the hilly, sometimes rugged landscape did not lend itself well to agriculture. Although during the Civil War its well-hidden harbor sheltered pro-Southern blockade runners, Gibson Island failed to attract later development. It was popular with deer and duck hunters, however. Finally, in 1921 Judge W. Stewart Symington Jr. headed a group of wealthy Baltimoreans who bought the island for $165,000. They brought in the nation's foremost landscape firm, the Olmsted brothers, who devised a plan for an elaborate summer colony with cottages organized around an eighteen-hole golf course. It was "Baltimore's newest playground," declared a 1923 article in the *Baltimore American*. Mostly woods and open space, the island was still a favorite with hunters, but Symington envisioned much more. He organized the Gibson

Opposite: In May 1938, the Baltimore *News-American* devoted a photo essay to Gibson Island, offering a glimpse of the enjoyable life it offered. The photographer captured golfers walking a plank pathway, sailboats anchored in the background. (*News-American* Collection, Marylandia and Rare Books Department, University of Maryland Libraries)

A patent dated 1667 conveyed 1,200 acres of what became Gibson Island, and a chart of 1844 portrayed it as almost entirely devoted to farming. (Courtesy of National Archives (NACP) RG 23, T175)

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Members taking in the sun—while properly dressed—in front of the clubhouse. (*News-American* Collection, Marylandia and Rare Books Department, University of Maryland Libraries)

Island Club and had plans for the Yacht Squadron before his death in 1926. Today, a tall Celtic cross near the island's entrance honors his memory.

Following the Great Depression, real estate development made more economic sense than a golf-centered community, and the eighteen-hole course was reduced to nine holes. Gibson Island was too remote for year-round living, and development in the 1930s consisted of summer cottages. By the 1940s, however, families were taking up permanent residence on the island. The community experienced another spurt of development after World War II, and the increase in the number of young children on the island led to the creation of the Gibson Island Country School. Located outside the island gate, the school was accessible and open to children of nonislanders, who now make up most of the enrollees.

Since the 1920s the Gibson Island Yacht Squadron has flourished and earned wide acclaim. In 1929 J. Graham and C. Lowndes Johnson won the Star-Class Internationals, making the Gibson

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Island Yacht Squadron the host for the championship races the following year. During World War II, a number of Gibson Island yachts served with the volunteer "Corsair Fleet" on Atlantic Coast antisubmarine patrol. Gibson Island resident Corrin Strong's cutter *Narada* was sunk off Cape Henry while on this duty.

Gibson Island's yacht squadron continued to host regattas and long-distance races for decades and offered a number of stellar sailing events. One involved the popular Star boats. An Olympic racing class of identical boats a little under twenty-three feet long, the Star boats attracted generations of good sailors, among them squadron member James Allsopp, who won the Star-Class World Cup in 1976. In 1990 the squadron hosted the J-22 World Championship Regatta, in which local sailor and author John Sherwood won first place. The squadron has continued to be active in racing and has grown to more than two hundred yachts. Some fifty Gibson Island children crew a junior fleet of Optimists, Lasers, and 420s.

A third generation of luxury homes appeared on the island during the area-wide real estate boom of the 1980s, and properties began to change hands, a thing that seldom happened previously. Nevertheless, residents attempted to uphold their unwritten policy of exclusivity. Although property ownership brings with it shares in the Gibson Island Corporation, club membership is not automatic, which is especially hard on island children barred from the pool, sailing, and other facilities. In 1991 the issue erupted in a legal battle when several property owners who were denied Gibson Island Club membership took the corporation to court. The final settlement granted all landowners use of the club's facilities but not club membership. While admitting no wrongdoing, the corporation did pay the plaintiffs' $40,000 lawyer's fee.

Disruption of the status quo came from a different quarter in the mid-1980s. Hunting on the island had ended before World War II, and some time later, it became a bird sanctuary. Along with the birds, deer also flourished, eventually overrunning the lush Gibson Island neighborhoods. In 1984, the islanders requested that the state's forestry officials organize a deer hunt. Immediately picketers appeared at the gate to protest. They succeeded in postponing but could not stop the hunt, which is now an annual event, not only on Gibson Island but at Sandy Point State Park and similar sanctuaries.

The Gibson Island Historical Society maintains a small but nice museum that is open by appointment by writing to P.O. Box 667, Gibson Island, MD 21056.

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At the mouth of the Magothy River, Gibson Island's nine hundred acres encompass a well-sheltered harbor, Otter and Cooley Ponds, and a very private community. Accessible by a single road and causeway that are closed to the pub-lic, the island community is guarded by a s t o n e gatehouse that is manned twenty-four hours a day. The island's 180 or so property owners make up the Gibson Island Corporation, which manages the island. At the heart of this wealthy community is the exclusive Gibson Island Club. Members not only may par-take of clubhouse activities but also may enjoy agolfcourse-eighteen holes if you play one nine in reverse-a pool, marina, and skeet-shooting range. How-ever, members of the venerable Gibson Island Yacht Squadron and students at the Gibson Island Country School are not required to be island residents. Gibson Island has had a long history of occupation. Artifacts and a large shell midden on the bay side of the island tell of Indian inhabitants who gathered oysters and other foods from the Chesapeake. These Indians were probably of Algonquian stock, pushed south by fierce Susquehannocks. First patented in 1667, the island had four owners and contained approximately 1,200 acres. By 1771 William Worthington owned what was then known simply as "the great island," and in 1792 he advertised it for sale: "The land is remarkably valuable for the Fertility of its soil, and Conveniency of its situation to Baltimore, Annapolis, and other Markets . . . It abounds with Plenty of Tim-bet and Wood. And has the advantage of productive Fisheries, and Variety of wild Fowl. It is adapted to every Species of Country-Produce. There are several dif-ferent Tenements on i t , with some useful Improvements,and it produces the greatest Plenty of Grass for Stock." In 1793 John Gibson, an Annapolis attorney, bought the island, which was part of the more than 2,000 acres of land he owned between the Magothy and Bodkin Creek. Subsequent owners divided the island into farms, but the hilly, sometimes rugged landscape did nor lend itself well to agriculture. Although during the Civil War its well-hidden harbor sheltered pro-Southern blockade runners, Gibson Island failed to attract later development. It was popular with deer and duck hunters, however. Finally, in 1921 Judge W. Stewart Symington lr.headed a group of wealthy Baltimoreans who bought the - for $165,000. They brought in the nation's foremost land-scape f1rm, the Olmsted brorhers, who devised a plan for an elaborate summer colony with cottages organized around an eighteen-hole golf course. It was "Baltimore's newest playground," declared a 1923 article in the Baltimore American. Mostly woods and open space, the island was still a favorite with hunters, but Symington envisioned much more. He organized the Gibson Island Club and had plans for the Yacht Squadron before his death in 1926. Today, a tall Celtic cross near the island's e n t r a n c e honors his memory. Following the Great Depression, real estate development made more economic sense than a golf-centered community, and the eighteen-hole course was reduced to nine holes. Gibson Island was too remote for year-round living, and development in the 1930s consisted of summer cottages. By the 1940s, however, families were taking up permanent residence on the island. The community experienced another spurt of development after World War II, and the increase in the number of young children on the island led to the creation of the Gibson Island Country School. Located outside the island gate, the school was accessible and open to children of non-islanders, who now make up most of the enrollees. Since the 1920s the Gibson Island Yacht Squadron has flourished and earned wide acclaim. In 1929 J. Graham and C. Lowndes Johnson won the Star-Class Internationals, making the Gibson Island Yacht Squadron the host for the championship races the following year. During World War II, a number of Gibson Island yachts served with the volunteer "Corsair Fleet" on Atlantic Coast antisubmarine patrol. Gibson Island resident Corrin Strong's cutter Narada was sunk offCape Henry while on this duty. Gibson Island's yacht squadron continued to host regattas and long-distance races for decades and offered a number of stellar sailing events. One involved the popular Star boats. An Olympic racing class of identical boats a little under twenty-three feet long, the Star boats attracted generations of good sailors, among them squadron member James Allsopp, who won the Star-Class World Cup in 1976. In 1990 the squadron hosted the 1-22 World Championship

Regatta, in which local sailor and author John Sherwood w o n first place. The squadron has continued to be active in racing and has grown to more than t w o hundred yachts. Some fifty -I-land children crew a junior fleet of Opti-mists, Lasers, and 4.205. A third generation of luxury homes appmred on the - during the area-widerealestateboomof the19803,and properties began to change hands, a thing that seldom happened previously. Nevertheless,residentsattemptedto up-hold their unwritten policy of exclusiv-ity. Although property ownership brings with it shares in the a a Cor-poration,clubmembershipisnotauto-matic, which is especially hard on -children ban'ed from the pool, sailing, and other facilities. In 1991the issue erupted in a legal battle when several property owners who were denied '-son nu Club membership took the corporation to c o u r t . The final settle-m e n t granted all landowners use of the club's facilities but n 0 t club member-ship. While admitting no wrongdoing, the corporation did pay the plaintiff's' $40,000 lawyer's fee. Disruption of the status quo came from a different quarter in the mid-1980s. Hunting on the island had ended before World War II, and some time later, it became a bird sanctuary. Along with the birds, deer also flourished, eventually overrunning the lush Gibson Island neighborhoods. In 1984, the islanders requested that the state's forestry ofiicials organize a deer hunt. Immedi-ately pickctcrs appeared at the gate to protest. They succeeded in postponing but could n o t stop the hunt. which is now an annual event, not only on Gibson Island but at Sandy Point State Park and similar sanctuaries.

REFERENCES

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BITCHUTE @Housatonic **YOUTUBE** @HousatonicLive **ODYSEE** @Housatonic **BRIGHTEON** @Housatonic

Housatonic

Gilead Sciences

Wikipedia Gilead Sciences

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Gilead Sciences, Inc. /ˈ ɡɪliəd/, is an American biotechnology company that researches, develops and commercializes drugs. The company focuses primarily on antiviral drugs used in the treatment of HIV, hepatitis B, hepatitis C, and influenza, including Harvoni and Sovaldi.

Headquartered and founded in Foster City, California, Gilead is a member of the NASDAQ Biotechnology Index and the S&P 500.

History[edit]

Foundation[edit]

External video

Gregg Alton of Gilead Sciences & others, "The Evolution of HIV/AIDS Therapies: A Conversation", 2012, Chemical Heritage Foundation via Vimeo

Gilead Sciences was originally founded under the name **Oligogen**[4] in June 1987 by Michael L. Riordan, a medical doctor who was 29 years old at the time.[5] Riordan graduated from Washington University in St. Louis, the Johns Hopkins School of Medicine and the Harvard Business School.[6] Three core scientific advisers worked with Riordan to create the company and establish its scientific vision. These were Peter Dervan of Caltech, Doug Melton of Harvard, and Harold M. Weintraubof the Fred Hutchinson Cancer Research Center. Riordan served as CEO from inception until 1996.[7][8] Riordan had previously worked for a year for venture capital firm Menlo Ventures, which proceeded to make the first investment in Gilead, of $2 million, and Menlo partner DuBose Montgomery served as Chairman of the Board until 1993, when Riordan became Chairman.[5] Riordan also recruited as scientific advisers Harold Varmus, a Nobel laureate who later became Director of the National Institutes of Health, and Jack Szostak, recipient of the Nobel Prize for Physiology or Medicine in 2009.[9][10]

The company's primary therapeutic focus was, and continues to be, in antiviral medicines, a field that interested Riordan because he contracted dengue fever, an untreatable viral disease, while working in malnutrition clinics as a Henry Luce Scholar in the Philippines.[11] Riordan recruited Donald Rumsfeld to join the board of directors in 1988,[12] followed by Benno C. Schmidt, Sr.,[*citation needed*] Gordon Moore,[12] and George P. Shultz.[12]Riordan tried to recruit Warren Buffett as an investor and board member, but was unsuccessful.[*citation needed*]

Under the technical leadership of scientist Dr. Mark Matteucci,[*citation needed*]the company focused its early discovery research on making small strands of DNA (oligomers, or more particularly, oligonucleotides) to target specific genetic code sequences (i.e., gene therapy).[4] Because of the expected healing potential of such research, Oligogen soon changed its name to Gilead Sciences, after the reputed healing properties of the ancient Balm of Gilead, and moved its headquarters to Foster City's Vintage Park neighborhood, where it has been based ever since.[4] The company's development of small molecule antiviral therapeutics began in 1991 when CEO Riordan and R&D head John C. Martin in-licensed a group of nucleotide compounds discovered in two European academic labs; one of the compounds was tenofovir, a prodrug which under the trade name Viread became one of the most widely used antiretroviral drugs.[*citation needed*]

1990-1999: IPO[edit]

In 1990, Gilead entered into a collaborative research agreement with Glaxo for the research and development of genetic code blockers, also known as antisense. This collaboration was terminated in 1998, and Gilead's antisense intellectual property portfolio was sold to Ionis Pharmaceuticals. Gilead debuted on the NASDAQ in January 1992. Its initial public offering raised $86.25 million in proceeds.

In June 1996, Gilead launched Vistide (cidofovir injection) for the treatment of cytomegalovirus (CMV) retinitis in patients with AIDS. The company cooperated with Pharmacia & Upjohn to market the product outside the United States.

In January 1997, Donald Rumsfeld, a board member since 1988, was appointed Chairman,[13] but left the Board in January 2001 when appointed United States Secretary of Defense at the start of George W. Bush's first term as President.

In March 1999, Gilead acquired NeXstar Pharmaceuticals of Boulder, Colorado following two years of negotiations with the company. At the time, NeXstar's annual sales of $130 million was three times Gilead's sales. NeXstar's two revenue-generating drugs were AmBisome, an injectable fungal treatment, and DaunoXome, an oncology drug taken by HIV patients. Also in 1999, Roche announced first approval of Tamiflu (oseltamivir) for the treatment of influenza. Tamiflu was originally discovered by Gilead and licensed to Roche for late-phase development and marketing.

One reason for entering into the Tamiflu licensing agreement was that with only 350 employees, Gilead still did not yet have the capability to sell its drugs directly to overseas buyers.[14] To avoid having to license future drugs in order to access international markets, Gilead simply acquired the 480-employee NeXstar, which had already built its own sales force in Europe to market AmBisome there.[14]

2000 to 2009[edit]

2000 to 2009[edit]

Viread (tenofovir) achieved first approval in 2001 for the treatment of HIV.

In 2002 Gilead changed its corporate strategy to focus exclusively on antivirals, and sold its cancer assets to OSI Pharmaceuticals for $200 million.[15]

In December 2002, Gilead and Triangle Pharmaceuticals announced that Gilead would acquire Triangle for around $464 million; Triangle's lead drug was emtricitabine that was near FDA approval, and it had two other antivirals in its pipeline.[15][16] The company also announced its first full year of profitability. Later that year Hepsera (adefovir) was approved for the treatment of chronic hepatitis B, and Emtriva (emtricitabine) for the treatment of HIV.

During this era, Gilead completed its gradual evolution from a biotech startup into a pharmaceutical company.[4][12]The *San Francisco Chronicle* noted that by 2003, the Gilead corporate campus in Foster City had expanded to "seven low-slung sand-colored buildings around a tiny lake on which ducks happily paddle."[4] Like many startups, Gilead originally leased its space, but in 2004, the company paid $123 million to buy all its headquarters buildings from its landlords.[12] However, even as Gilead developed its ability to distribute and sell its own drugs, it remained distinct from most pharmaceutical companies in terms of its strong reliance on subcontracting most of its manufacturing to contract manufacturing organizations.[17]

In 2004, Gilead launched Truvada. Years later, though efforts of activists and other groups, Gilead was convinced that a fixed-dose combination of tenofovir and emtricitabine could be used as a pre-exposure prophylactic against the transmission of HIV. [18]

In 2006, Gilead completed two acquisitions that allowed the company to branch out from its historical antiviral franchise into the cardiovascular and respiratory therapeutic arenas. Under an agreement with GlaxoSmithKline, Myogen marketed Flolan (epoprostenol sodium) in the United States for the treatment of primary pulmonary hypertension. Additionally, Myogen was developing (in Phase 3 studies) darusentan,[19] also an endothelin receptor antagonist, for the potential treatment of resistant hypertension.

In 2006, the company acquired Corus Pharma, Inc. for $365 million. The acquisition of Corus signaled Gilead's entry into the respiratory arena. Corus was developing aztreonam lysine for the treatment of patients with cystic fibrosiswho are infected with *Pseudomonas aeruginosa*.

In July 2006, the U.S. Food and Drug Administration (FDA) approved Atripla, a once a day single tablet regimen for HIV, combining Sustiva (efavirenz), a Bristol-Myers Squibb product, and Truvada (emtricitabine and tenofovir disoproxil), a Gilead product.[20][21]

Gilead purchased Raylo Chemicals, Inc. in November 2006 for a price of $133.3 million.[22] Raylo Chemical, based in Edmonton, Alberta, was a wholly owned subsidiary of Degussa AG, a German company. Raylo Chemical was a custom manufacturer of active pharmaceutical ingredients and advanced intermediates for the pharmaceutical and biopharmaceutical industries. Later in the same year Gilead acquired Myogen, Inc. for $2.5 billion (then its largest acquisition). With two drugs in development (ambrisentan and darusentan), and one marketed product (Flolan) for pulmonary diseases, the acquisition of Myogen has solidified Gilead's position in this therapeutic arena.

Gilead expanded its move into respiratory therapeutics in 2007 by entering into a licensing agreement with Parion for an epithelial sodium channel inhibitor for the treatment of pulmonary diseases, including cystic fibrosis, chronic obstructive pulmonary disease and bronchiectasis.[23]

In 2009, the company acquired CV Therapeutics, Inc. for $1.4 billion, bringing Ranexa and Lexiscan into Gilead. Ranexa is a cardiovascular drug used to treat chest pain related to coronary artery disease, with both of these products and pipeline building out Gilead's cardiovascular franchise.[24] Later, in the same year the company received the award for one of the Fastest Growing Companies by *Fortune*. In the same year they were also named as one America's Top Companies to work for by *Forbes*.

2010 to 2019[edit]

In 2010, the company acquired CGI Pharmaceuticals for $120 million, expanding Gilead's research expertise into kinase biology and chemistry. Later that year, the company acquired Arresto Biosciences, Inc. for $225 million, obtaining developmental-stage research for treating fibrotic diseases and cancer.[25]

In February 2011, the company acquired Calistoga Pharmaceuticals for $375 million ($225 million plus milestone payments). The acquisition boosted Gilead's oncology and inflammation areas.[26] Later that year, Gilead made its most important acquisition — and most expensive to date — with the $10.4 billion purchase of Pharmasset, Inc. This transaction helped cement Gilead as the leader in treatment of the hepatitis C virus by giving it control of sofosbuvir(see below).

In October 2011, Gilead broke ground on a massive multi-year expansion of its 17-building headquarters campus in Foster City.[27] By replacing eight one or two-story buildings with seven new structures ranging as tall as 10 stories, Gilead nearly doubled its headquarters real estate footprint from about 620,000 square feet to about 1.2 million square feet.[27]

On July 16, 2012, the FDA approved Gilead's Truvada for prevention of HIV infection (it was already approved for treating HIV). The pill was a preventive measure (PrEP) for people at high risk of getting HIV through sexual activity.[28]

In 2013, the company acquired YM Biosciences, Inc. for $510 million. The acquisition brings drug candidate CYT387, an orally-administered, once-daily, selective inhibitor of the Janus kinase (JAK) family, specifically JAK1 and JAK2, into Gilead's oncology pipeline. The JAK enzymes have been implicated in myeloproliferative diseases, inflammatory disorders, and certain cancers.

In 2015, the company made a trio of acquisitions:

- It bought Phenex Pharmaceuticals for $470 million. Its Farnesoid X Receptor (FXR) program used small-molecule FXR agonists in the treatment of liver diseases such as nonalcoholic steatohepatitis.[29]
- It bought EpiTherapeutics for $65 million. This acquisition gave Gilead first-in-class small molecule inhibitors of histone demethylases involved in regulating gene transcription in cancer.[30]
- It paid $425 million for a 15% equity stake in Galapagos NV, with additional payments for Gilead to license the experimental anti-inflammatory drug filgotinib, which may treat rheumatoid arthritis, ulcerative colitis, and Crohn's disease.[31]

In 2016, the company acquired Nimbus Apollo, Inc. for $400 million, giving Gilead control of the compound NDI-010976 (an ACC inhibitor) and other preclinical ACC inhibitors for the treatment of non-alcoholic steatohepatitis and for the potential treatment of hepatocellular carcinoma.[32][33] Also in 2016, the company was named the most generous company on the 2016 Fortune list of The Most Generous Companies of the Fortune 500. Charitable donations to HIV/AIDS and liver disease organizations totaled over 440 million in 2015.[34]

In August 2017, the company announced it would acquire Kite Pharma for $11.9 billion,[35] equating to $180 cash per share, a 29% premium over the closing

In August 2017, the company announced it would acquire Kite Pharma for $11.9 billion, — equating to $180 cash per share, a 29% premium over the closing price of the shares. The deal will add the promising CAR-T candidate to the companys existing portfolio.[36] In November, the company announced it will acquire Cell Design Labs for up to $567 million, after it indirectly acquired a stake of 12.2% via the Kite Pharma deal.[37]

On May 9, 2019, the U.S. Department of Health and Human Services announced that Gilead Sciences will donate Truvada, the only drug approved to prevent infection with H.I.V., for free to 200,000 patients annually for 11 years. [38] On December 3, 2019, HHS explained how the government would distribute the donated drugs. The new program called Ready, Set, PrEP is accepting applications from any patient who doesn't have health insurance, has a valid prescription for PrEP and has had a recent negative H.I.V. test. To apply, patients can call 855-477-8410, online at www.getyourprep.com or in person at participating health care provider. HHS Secretary Alex Azar explained that the U.S. government will pay Gilead $200 per bottle for 30 pills for costs associated with getting the drug from factories into the eventual hands of patients.[39]

In March 2020, the company announced it would acquire Forty Seven Inc. for $95.50 a share ($4.9 billion in total).[40][41][42]

Sovaldi and Harvoni[edit]

The drug sofosbuvir had been part of the 2011 acquisition of Pharmasset. In 2013, the FDA approved this drug, under the trade name Sovaldi, as a treatment for the hepatitis C virus. *Forbes* magazine ranked Gilead its number 4 drug company, citing a market capitalization of US$113 billion and stock appreciation of 100%, and describing their 2011 purchase of Pharmasset for $11 billion as "one of the best pharma acquisitions ever".[43] Deutsche Bankestimated Sovaldi sales in the year's final quarter would be $53 million,[44] and *Barron's* noted the FDA approval and subsequent strong sales of the "potentially revolutionary" drug as a positive indicator for the stock.[45]

On July 11, 2014, the United States Senate Committee on Finance investigated Sovaldi's high price ($1,000 per pill; $84,000 for the full 12-week regimen). Senators questioned the extent to which the market was operating "efficiently and rationally", and committee chairman Ron Wyden (D-Oregon) and ranking minority member Chuck Grassley (R-Iowa) wrote to CEO John C. Martin asking Gilead to justify the price for this drug.[46] The committee hearings did not result in new law, but in 2014 and 2015, due to negotiated and mandated discounts, Sovaldi was sold well below the list price.[47] For poorer countries, Gilead licensed multiple companies to produce generic versions of Sovaldi; in India, a pill's price was as low as $4.29.[48]

Gilead later combined Sovaldi with other antivirals in single-pill combinations. First, Sovaldi was combined with ledipasvir and marketed as Harvoni. This treatment for hepatitis C cures the patient in 94% to 99% of cases (HCV genotype 1).[49] By 2017, Gilead was reporting drastic drops in Sovaldi revenue from year to year, not only because of pricing pressure but because the number of suitable patients decreased.[50] Later single-pill combinations were Epclusa (with velpatasvir) and Vosevi (with velpatasvir and voxilaprevir).

Finances[edit]

For the fiscal year 2017, Gilead Sciences Insurance reported earnings of US$4.628 billion, with an annual revenue of US$26.107 billion, a decline of 14.1% over the previous fiscal cycle. Gilead Sciences's shares traded at over $70 per share, and its market capitalization was valued at US$93.4 billion in October 2018.

Prospects for the future[edit]

As of 2017, Gilead's challenge is to develop or acquire new blockbuster drugs before its current revenue-producers wane or their patent protection expires. Gilead benefited from the expansion of Medicaid in the ACA; Leerink analyst Geoffrey Porges wrote that Gilead's HIV drugs could face funding pressure under reform proposals.[53] Gilead has $32 billion in cash, but $27.4 billion is outside the U.S. and is unavailable for acquisitions unless Gilead pays U.S. tax on it, though it could borrow against it.[54] Gilead would benefit from proposals to let companies repatriate offshore capital with minimal further taxation.[55]

Gilead's Entospletinib has shown a 90% complete response rate for MLL type AML.[56]

Tax structures[edit]

On December 26, 2018, *The Times* reported that Gilead had used the Double Irish arrangement to avoid U.S. corporate taxes on non–U.S. profits, reporting that "A US pharmaceutical firm used a controversial tax loophole arrangement to shift almost €20 billion in profits through an Irish entity in just two years".[57]

Acquisition history[edit]

show

Illustration of the company's mergers, acquisitions and historical predecessors

Criticism[edit]

Several class-action lawsuits have been filed against Gilead over allegations that the company deliberately delayed development of antiretroviral drugs based on tenofovir alafenamide fumarate (TAF) in order to maximize profits from previous-generation medications containing tenofovir disoproxil fumarate (TDF).[58] Plaintiffs allege that Gilead suspended TAF in 2004 despite clear evidence indicating that TAF-based medications were safer than TDF, a compound whose long-term use was associated with adverse side effects such as nephrotoxicity and bone densityloss.[59][60] Gilead intentionally withheld results of clinical trials demonstrating TAF's relative safety and efficacy and shelved TAF-based therapies until 2010, when the Food and Drug Administration approved Gilead's application to patent TAF.[61] Gilead's first TAF medication, marketed under the trade name Genvoya, came out in 2015. In the interim period, many HIV patients who continuously took Gilead's older TDF-based drugs suffered permanent, debilitating kidney and bone damage, often developing conditions such as Fanconi syndrome and osteomalacia.[62]

Gilead has come under intense criticism for its high pricing of its patented drug sofosbuvir. In the US, for instance, it was launched at $1,000 per pill or $84,000 for the standard 84-day course.[*citation needed*]

Gilead has also tried to eliminate competition in lucrative markets by entering voluntary licensing agreements (VLA) with companies from developing countries such as India, which mandated the limitation of the latter's operations to less lucrative markets. The company has also been criticized for creating harsh restrictions within countries where they have been denied rights, or are engaged in VLAs. For example, in India, they tried to create an 'anti-diversion' program to determine who could buy the drug, which was considered a coercive and policing move by Médecins Sans Frontières since it could lead to the exclusion of vulnerable groups like refugees and migrants from accessing the medicines.[63]

In March 2020, Gilead fought to maintain its patent on remdesivir as a treatment for several coronavirus, initiating legal conflicts with the Wuhan Institute of Virology.[64] Gilead later secured orphan drug status for remdesivir, allowing the company to exclusively obtain marketing revenues for up to 7 years.[65]

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Housatonic

Robert Gordon Gillespie (born 1933)

[HL005G][GDrive]

Associated with :

- Marvin Leonard Stein (born 1924) (We believe that the *ERA 1103 used by Convair Aeronautics, used by Marvin Stein, was the same* ***UNIVAC 1103 Gillespie used on his first job at Convair. Stein went on to*** University of Minnesota , and developed a further connection with Seymour Cray and the early systems from Control Data Corproation. Years late, Robert Gillespie left Boeing , and then was director of advanced development at Control Data Corportion, 1965 t
- Monique R Rona (born 1928) (While he was Director of the U Washington Computer Center in 1972, Monique Rona was an Assistant Director)
- Hellmut Paul Oscar Golde (born 1930) (long-time peer at the computer at University of Washington)

Legacy.com - Oct. 11, 2014

[HL005F][GDrive]

Gillespie, Robert G. 81 May 18, 1933 Oct. 11, 2014 Robert "Bob" Gillespie, 81, died Oct. 11, 2014, after a struggle with Lewy body disease. His last days in hospice care were peaceful and he was surrounded by loved ones during his final hours. Bob was born May 18, 1933, in Tacoma. He graduated from Grant High School in Portland, and then attended Reed College. Bob graduated with a B.A. in Mathematics and formed a lifelong connection with Reed, serving on the board of trustees from 1996 to 2000. Following graduation in 1955, Bob entered the new field of digital computing. He first worked at **Convair Astronautics**, where he developed simulations for rocket guidance. **Next, he was responsible for software research and architecture at Boeing,** and then worked at Control Data doing advanced software development. Bob spent the following 15 or so years at the University of Washington, first as director of the computer center, then as vice provost for computing and as a member of the computer science department. In 1984, he co-founded the consulting firm of Gillespie, Folkner and Associates, which assisted in information technology planning for institutions of higher education, Federal and State agencies and the computing industry. In 1992, he founded Robert Gillespie Associates, which provided counsel on national issues of networks for universities and other partners. He was also an adviser on national computing and network policy issues for the Higher Education and Library Coalition on Information Policy, a coalition of national higher education and library associations. Bob was a visionary, long anticipating the growth of technology and the internet; because of his early advocacy, he had a profound influence on federal policies that shaped technology in higher education. He played a seminal role in the founding of computing organizations such as Northwest Academic Computing Consortium (NWACC), EDUCOM (now EDUCAUSE) and the Seminars on Academic Computing. As one of the earliest figures to rightfully be considered a university chief information officer, Bob was a model for subsequent generations of higher education IT leaders. In 1996, he was the recipient of the Kaul Foundation Award of Excellence for achievements as an educator, author and expert in the field of computing the 2009 EDUCAUSE Leadership Award in recognition of contributions to the computing profession and in 2011, the Lifetime Achievement Award from the NWACC for his role in creating that organization. Bob also had a rich and rewarding family life. He married Mary Jo Mickelson in 1953, and they enjoyed 61 years of marriage. Together, they raised two sons, Peter and Scott. Time every summer was devoted to camping, hiking, vacationing in the San Juan Islands and traveling the Pacific Northwest and beyond to visit wineries and friends. They also loved to hunt for edible mushrooms, particularly morels in the spring and chanterelles in the fall. Wine and food were two of Bob's main passions. In addition to wine tasting, he made wine for many years and never stopped researching and collecting favorite wines. He was an outstanding cook. He cooked for the family beginning in the '70s, inspiring his sons to also become happy denizens of the kitchen. Two of his other passions were fishing, particularly for ling cod and salmon in the San Juan Islands, and mountain climbing, both in the Cascades and in the Olympics. Bob is survived by his wife, Mary Jo; sons, Peter Barr-Gill- espie and Scott Gillespie; daughters-in-law, Ann Barr-Gill- espie and Nancy Gillespie; and grandchildren, Katie and Aidan Gillespie. For those who wish, donations may be made in his name to Reed College.

Reed Collge Memorial - Robert Gordon Gillespie ’55

See [HE003E][GDrive]

Robert Gordon Gillespie ’55, October 11, 2014, in Portland, after a struggle with Lewy body disease. A pioneer in the field of IT in higher education, and one of the first people to be considered a chief information officer in a university setting, Bob graduated from Grant High School in Portland and earned a BA from Reed in mathematics. “The process, the challenge, the demands prepared me to be creative, confident, and a risk taker.” He maintained a lifelong connection to the college and served as an alumni trustee in 1996–2000. After Reed, Bob entered the new field of digital computing. **He first worked at Convair Astronautics, where he developed simulations for rocket guidance.** Next, he was responsible for software research and architecture at Boeing, and then worked at Control Data doing software development. But it was at the University of Washington, where he served as director of the computer center and vice provost for computing, that he found his true calling.

Bob was a visionary, long anticipating the growth of technology and the internet; because of his early advocacy, he had a profound influence on federal policies that shaped technology in higher education. **He assisted in the founding of computing organizations such as the Northwest Academic Computing Consortium, EDUCOM (now EDUCAUSE), and the Seminars on Academic Computing, and was a model for subsequent generations of higher education IT leaders.** His work was recognized with the Kaul Foundation Award of Excellence for achievements as an educator, author, and expert in the field of computing in 1996; the 2009 EDUCAUSE Leadership Award in recognition of contributions to the computing profession; and the Lifetime Achievement Award from the NWACC in 2011 for his role in creating that organization.

In 1984, he cofounded the consulting firm of Gillespie, Folkner and Associates, which assisted in information technology planning for institutions of higher education, federal and state agencies, and the computing industry. In 1992, he founded Robert Gillespie Associates, which provided counsel on national issues of networks for universities and other partners. He was also an adviser on national computing and network policy issues for the Higher Education and Library Coalition on Information Policy, a coalition of national higher education and library associations.

Bob also had a rich and rewarding family life. He and **Mary Jo Mickelson ’55** married in 1953 and raised two sons, **Peter Barr-Gillespie ’81** and **Scott Gillespie ’84.** The family enjoyed summertime camping, hiking, vacationing in the San Juan Islands, and traveling the Pacific Northwest and beyond to visit wineries and friends. They also enjoyed hunting for edible mushrooms, particularly morels in the spring and chanterelles in the fall. Wine and food were two of Bob’s main passions. In addition to wine tasting, he made wine for many years and never stopped researching and collecting favorite wines. He was an outstanding cook and inspired his sons to also become happy denizens of the kitchen. Two of his other passions were fishing, particularly for ling cod and salmon in the San Juan Islands, and mountain climbing, both in the Cascades and in the Olympics.

“Owing to the fact that Bob outlived so many of his peers, there are relatively few people in the profession today who know Bob or his work,” writes **Marty Ringle**, Reed’s chief information officer. “Being modest by nature, he spent no time engraving his name on the initiatives he championed; hence, his legacy may be obscure to all but those closest to him. But to those of us who knew him he is, and always will be, the mentor who showed us not only how to be IT leaders, but also why. Rest well, Bob, you’ve earned it.” Survivors include Mary Jo; Peter, and Scott; daughters-in-law **Ann Barr-Gillespie ’82** and Nancy Gillespie; grandchildren Katie and Aidan Gillespie; and his brother Bruce. The family suggests donations in his name to Reed College.

Appeared in *Reed* magazine: March 2015

Evidence Timeline

1955 - Graduate from Reed College ; Starts job at Convair **Astronautics**

Source : Biography data (from 1979, Oct 09) - usa-congress-committee-on-science-and-tech-appropriate-in-education-incl-hr-4326 [HG0083][GDrive]

- **Convair Astronautics 1955-1957 :** Programming and engineering assignments including the development of the first digital/analog simulation with an early (ERA 1103) digital computer."

NOTES on the "ERA 1103"

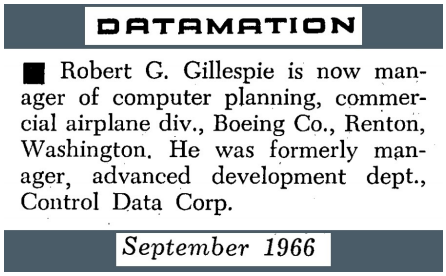
- *NOTE - The "ERA 1103" is also known as the UNIVAC 1103 (see https://en.wikipedia.org/wiki/UNIVAC_1103) ; This was the predecessor to the 1101*
- *wow - "Even before the completion of the Atlas (UNIVAC 1101), the Navy asked Engineering Research Associates to design a more powerful machine. This project became Task 29, and the computer was designated Atlas II.*
- *In 1952, Engineering Research Associates asked the Armed Forces Security Agency (the predecessor of the NSA) for approval to sell the Atlas II commercially. Permission was given, on the condition that several specialized instructions would be removed. The commercial version then became the UNIVAC 1103. Because of security classification, Remington Rand management was unaware of this machine before this.* ***The first commercially sold UNIVAC 1103 was sold to the aircraft manufacturer Convair, where Marvin Stein worked with it****."*
- [**https://en.wikipedia.org/wiki/Engineering_Research_Associates**]**Engineering Research Associates**, commonly known as **ERA**, was a pioneering computer firm from the 1950s. ERA became famous for their numerical computers, but as the market expanded they became better known for their drum memory systems. They were eventually purchased by Remington Rand and merged into their UNIVAC department. Many of the company founders later left to form Control Data Corporation.

Marvin Stein

1966 - Sep issue of Datamation

PDF of full issue : [HP0048][GDrive]

[HP0049][GDrive]


DATAMATION

■ Robert G. Gillespie is now manager of computer planning, commercial airplane div., Boeing Co., Renton, Washington. He was formerly manager, advanced development dept., Control Data Corp.

September 1966

[HP004A][GDrive]

1969 - Boeing

PDF : [HP0042][GDrive]

[HP0043][GDrive]

PURCHASING PACKAGED SOFTWARE— A CUSTOMER'S POINT OF VIEW

Duane Burke, Research Engineer and
Robert Gillespie, Chief, Research and Development
Computing Department
The Boeing Company
P.O. Box 3707
Seattle, Wash. 98124

"It is reasonable to expect that the additional tasks that the customer must perform to get a software package successfully implemented after the vendor considers it to be 'installed' will cost many times more, in terms of manhours and computer time, than what it cost to get the package in the door."

Companies can save both time and money through the use of purchased or leased "packaged programs." And from a customer's point of view, the opportunities for such savings are growing rapidly, as established software companies bring packaged programs of good quality onto the market. These savings occur since a software house is able to distribute the development cost for a package over many customers, and so the package *can* be sold or leased for less than a potential customer would pay for a similar in-house development. In addition, benefits which would accrue from having the package are lost during the time that the package is being developed in-house.

In this article the term "packaged programs" refers to such programs as generalized file handlers, decision table processors, flowcharting software, and computer evaluation software, which are being marketed separate from computers and, in most cases, by companies which specialize in software development and/or marketing.

As with any new area of business, no common body of knowledge yet exists to aid a potential customer in the acquisition of packaged programs. It is, therefore, the object of this article to pass on some useful points and experience formulated from the point of view of one customer of packaged programs. Figure 1 illustrates the phases of acquisition that will be discussed and their relative timing.

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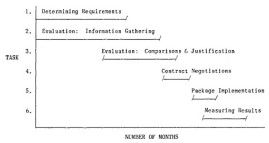
Figure 1. Phases of Acquisition



Determining Requirements

The requirement for a particular software package may not appear to exist until the package is available on the market. This phenomenon is not a myopic condition suffered by computer people, but is simply a matter of economics and priorities. Companies whose primary business is other than computing products or services will often find it difficult to seriously consider internal development of the kinds of generalized software which are currently being marketed. Hence, the requirement often does not get much attention if any.

[HP0044][GDrive]

Once the potential need for an existing package is identified, however, then other requirements associated with its use, if acquired, should be examined. Will the package become an integral part of an application system? or a key tool, which once adopted is almost indispensable in the development and maintenance of application systems? Packages for processing decision tables, for handling files, or for providing shorthand coding capabilities will commonly be in this category. Such packages may be termed "critical" to the functioning of the systems on which they are used.

On the other hand, a software package for producing flowcharts, although desirable from a customer's point of view, may not be critical to the functioning of any application systems, since it is used essentially for documentation and program debugging.

Some other important factors to be considered are:

(1) Hardware
(2) Operating System
(3) Other software which must co-exist and interface with the packaged program
(4) Probable use.

Evaluation: Information Gathering

The information needed for the evaluation will come from three main sources:

(1) The software vendor
(2) Other users of the software being evaluated
(3) Tests of the software especially formulated for evaluating it.

The Software Vendor

The vendor for a package is, of course, the source of most of the information needed in the evaluation. He will usually be able to give a written explanation of the following items for the package being marketed, especially if he is threatened with loss of a sale:

a. Its capabilities and features.
b. Its intended uses.
c. How to use it.
d. Its known limitations. (Usually the vendor treats this very lightly.)
e. The names of other users.
f. The date it could be installed.
g. The steps and time necessary to get it installed.
h. The results of previous tests.
i. The initial and follow-on costs.
j. The maintenance support available.

This information must be supplied in written form to facilitate its review, and to help insure mutual understanding between the customer and vendor on these details, and to express the commitment on the part of the vendor.

The "users manual" which a customer would be expected to rely on, if the package were acquired, must also be obtained. Besides giving the details necessary to prepare tests of the package, the manual may also provide a rough measure of the quality of the software.

The known limitations and errors in a package will commonly be omitted. Detailed (and emotional) discussions with the vendor will bring some of these to light. Other users, however, will provide the best source of information on limitations, errors, and other problems associated with using a package.

The availability date may be a key limiting factor in the choice of packages which can be considered for use.

Typically, the maintenance support provided by the vendor will consist of sending corrections or corrected versions, as necessary, and responding to questions regarding the package.

With regard to maintenance of a software package, this might be a good place to suggest that customers keep their software packages as near the vendor's 'off-the-shelf' version as possible in order to take advantage of the maintenance that the vendor provides and also to improve the chances of getting prompt assistance when problems with the package arise.

Other Users

The experience of other users of a package is a valuable source of information on the limitations, errors, and problems associated with a software package. Although the probability of a customer admitting he made a mistake in acquiring a package is rather remote, most customers will frankly discuss problems they may be having in the use of one. Beside the obvious advantage of helping to insure a correct choice of software, information thus obtained may help insure that the new customer's software package is more trouble-free than earlier editions.

Tests of the Software

There is no substitute for preparing and running your own tests of a software package. And the most satisfactory test site is your own. However, due to the vendor's costs and other considerations, the likelihood of getting much on-site testing during the evaluation phase is not high. This is always a serious limitation since often usage problems, program errors, and shortcomings in documentation, will come to light as a result of running only a few practical cases.

The degree and thoroughness of testing required by the customer depends on how much the package has been used by other customers and on the vendor's responsiveness in correcting errors in his package. The first half-dozen customers for a package should expect to do much more testing, than say, the twentieth customer.

It is relatively easy to identify the features and situations for which tests are desired. Somewhat more difficult and expensive is the job of preparing test data. In some cases the vendor will have a test deck which can be used to test the basic capabilities of a package. In any event tests should be prepared by customer personnel having a variety of backgrounds in order to call forth various points of view on the ease of use, usefulness, and applications for the package.

Evaluation: Comparisons Package vs. Requirements

The process of comparing software packages is an iterative one, with each iteration taking in some different facet of the software or its use. In comparing packages to requirements, the basic questions to be answered are:

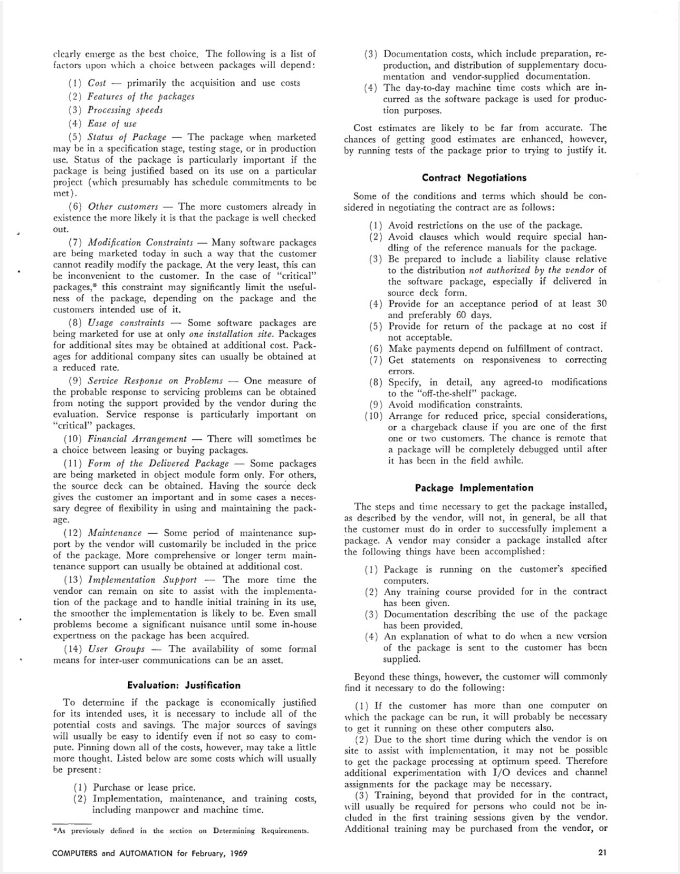
(1) Will it satisfactorily accomplish the jobs for which it is being considered?
(2) Will it be available when needed?
(3) Is it cheap enough to justify acquiring it for the jobs for which it is being considered?

One of the best ways to determine if the package will be satisfactory is to arrange that the expected users prepare the tests. Thus realistic tests can be prepared which test the "use procedures" as well as the software package.

Package vs. Package

Comparing packages with each other may be fairly easy if sufficient information has been gathered and sufficient comparisons made with the requirements. When comparing packages on the basis of a list of factors, often one package will

[HP0045][GDrive]



clearly emerge as the best choice. The following is a list of factors upon which a choice between packages will depend:

(1) *Cost* — primarily the acquisition and use costs
(2) *Features of the packages*
(3) *Processing speeds*
(4) *Ease of use*
(5) *Status of Package* — The package when marketed may be in a specification stage, testing stage, or in production use. Status of the package is particularly important if the package is being justified based on its use on a particular project (which presumably has schedule commitments to be met).
(6) *Other customers* — The more customers already in existence the more likely it is that the package is well checked out.
(7) *Modification Constraints* — Many software packages are being marketed today in such a way that the customer cannot readily modify the package. At the very least, this can be inconvenient to the customer. In the case of "critical" packages,* this constraint may significantly limit the usefulness of the package, depending on the package and the customers intended use of it.
(8) *Usage constraints* — Some software packages are being marketed for use at only *one installation site*. Packages for additional sites may be obtained at additional cost. Packages for additional company sites can usually be obtained at a reduced rate.
(9) *Service Response on Problems* — One measure of the probable response to servicing problems can be obtained from noting the support provided by the vendor during the evaluation. Service response is particularly important on "critical" packages.
(10) *Financial Arrangement* — There will sometimes be a choice between leasing or buying packages.
(11) *Form of the Delivered Package* — Some packages are being marketed in object module form only. For others, the source deck can be obtained. Having the source deck gives the customer an important and in some cases a necessary degree of flexibility in using and maintaining the package.
(12) *Maintenance* — Some period of maintenance support by the vendor will customarily be included in the price of the package. More comprehensive or longer term maintenance support can usually be obtained at additional cost.
(13) *Implementation Support* — The more time the vendor can remain on site to assist with the implementation of the package and to handle initial training in its use, the smoother the implementation is likely to be. Even small problems become a significant nuisance until some in-house expertness on the package has been acquired.
(14) *User Groups* — The availability of some formal means for inter-user communications can be an asset.

*As previously defined in the section on Determining Requirements.

Evaluation: Justification

To determine if the package is economically justified for its intended uses, it is necessary to include all of the potential costs and savings. The major sources of savings will usually be easy to identify even if not so easy to compute. Pinning down all of the costs, however, may take a little more thought. Listed below are some costs which will usually be present:

(1) Purchase or lease price.
(2) Implementation, maintenance, and training costs, including manpower and machine time.
(3) Documentation costs, which include preparation, reproduction, and distribution of supplementary documentation and vendor-supplied documentation.
(4) The day-to-day machine time costs which are incurred as the software package is used for production purposes.

Cost estimates are likely to be far from accurate. The chances of getting good estimates are enhanced, however, by running tests of the package prior to trying to justify it.

Contract Negotiations

Some of the conditions and terms which should be considered in negotiating the contract are as follows:

(1) Avoid restrictions on the use of the package.
(2) Avoid clauses which would require special handling of the reference manuals for the package.
(3) Be prepared to include a liability clause relative to the distribution *not authorized by the vendor* of the software package, especially if delivered in source deck form.
(4) Provide for an acceptance period of at least 30 and preferably 60 days.
(5) Provide for return of the package at no cost if not acceptable.
(6) Make payments depend on fulfillment of contract.
(7) Get statements on responsiveness to correcting errors.
(8) Specify, in detail, any agreed-to modifications to the "off-the-shelf" package.
(9) Avoid modification constraints.
(10) Arrange for reduced price, special considerations, or a chargeback clause if you are one of the first one or two customers. The chance is remote that a package will be completely debugged until after it has been in the field awhile.

Package Implementation

The steps and time necessary to get the package installed, as described by the vendor, will not, in general, be all that the customer must do in order to successfully implement a package. A vendor may consider a package installed after the following things have been accomplished:

(1) Package is running on the customer's specified computers.
(2) Any training course provided for in the contract has been given.
(3) Documentation describing the use of the package has been provided.
(4) An explanation of what to do when a new version of the package is sent to the customer has been supplied.

Beyond these things, however, the customer will commonly find it necessary to do the following:

(1) If the customer has more than one computer on which the package can be run, it will probably be necessary to get it running on these other computers also.
(2) Due to the short time during which the vendor is on site to assist with implementation, it may not be possible to get the package processing at optimum speed. Therefore additional experimentation with I/O devices and channel assignments for the package may be necessary.
(3) Training, beyond that provided for in the contract, will usually be required for persons who could not be included in the first training sessions given by the vendor. Additional training may be purchased from the vendor, or else provision must be made for an in-house training course.
(4) The user's documentation, as provided by the vendor, may adequately describe the details of how to use the product. But it will not usually contain all of the information needed by the customer for its effective use. For example, the job control statements will commonly not be complete, due to variations in equipment configurations that the package can run on.

Some additional points regarding implementation are worth mentioning.

(1) The vendor should remain on-site or near at hand during as much of the test period as possible, in order to speed correction and explanation of problems and results.
(2) It is best to start in a small way the usage of the package, especially if it has not been previously field tested.
(3) Provide adequate local documentation and consultation support for the package, so that those for whom the package is intended will be able to make effective use of it.
(4) Establish a "consultation log" on the use of the package so that data on problems and uses can be accumulated for measuring the results of implementing the package.
(5) Maintenance support must be provided in order to insert revisions which the vendor sends out or which the customer may originate (if he has a source deck).

It is reasonable to expect that these additional tasks which the customer must do, to get the package successfully implemented, will cost many times more, in terms of manhours and computer time, than what it took to get the package in the door.

Measuring Results

Measuring the results is an important, though imprecise, aspect of implementing a packaged program. *Tangible* results, based on "before and after" information of the type listed below, can usually be obtained, but not without some cost and difficulty:

(1) Manhours, machine time, and flow time expenditures.
(2) Characteristics of applications of the packaged program.
(3) Training and documentation requirements.

Ideally, this information will be obtained with little effort from those (programmers or others) who are expected to use the new program.

Some of the required information can be obtained (at some cost in machine time) by executing routines for gathering statistics each time the software package is executed. The statistics may be printed as part of the results which are returned to the programmer, or better, may be accumulated on a file for later analysis by another program.

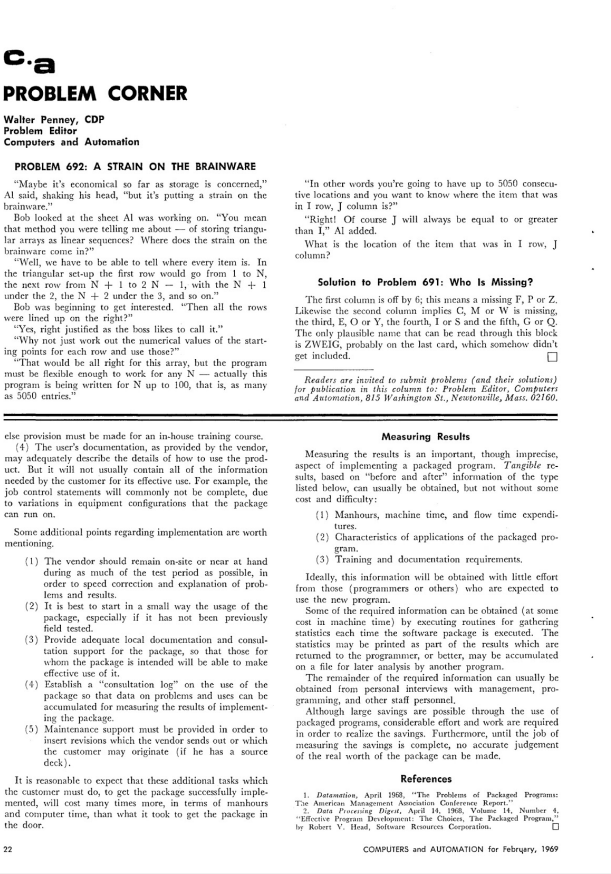
The remainder of the required information can usually be obtained from personal interviews with management, programming, and other staff personnel.

Although large savings are possible through the use of packaged programs, considerable effort and work are required in order to realize the savings. Furthermore, until the job of measuring the savings is complete, no accurate judgement of the real worth of the package can be made.

References

1. *Datamation*, April 1968, "The Problems of Packaged Programs: The American Management Association Conference Report."
2. *Data Processing Digest*, April 14, 1968, Volume 14, Number 4, "Effective Program Development: The Choices, The Packaged Program," by Robert V. Head, Software Resources Corporation. □

[HP0046][GDrive]



C·a

PROBLEM CORNER

Walter Penney, CDP
Problem Editor
Computers and Automation

PROBLEM 692: A STRAIN ON THE BRAINWARE

"Maybe it's economical so far as storage is concerned," Al said, shaking his head, "but it's putting a strain on the brainware."

Bob looked at the sheet Al was working on. "You mean that method you were telling me about — of storing triangular arrays as linear sequences? Where does the strain on the brainware come in?"

"Well, we have to be able to tell where every item is. In the triangular set-up the first row would go from 1 to N, the next row from N + 1 to 2 N − 1, with the N + 1 under the 2, the N + 2 under the 3, and so on."

Bob was beginning to get interested. "Then all the rows were lined up on the right?"

"Yes, right justified as the boss likes to call it."

"Why not just work out the numerical values of the starting points for each row and use those?"

"That would be all right for this array, but the program must be flexible enough to work for any N — actually this program is being written for N up to 100, that is, as many as 5050 entries."

"In other words you're going to have up to 5050 consecutive locations and you want to know where the item that was in I row, J column is?"

"Right! Of course J will always be equal to or greater than I," Al added.

What is the location of the item that was in I row, J column?

Solution to Problem 691: Who Is Missing?

The first column is off by 6; this means a missing F, P or Z. Likewise the second column implies C, M or W is missing, the third, E, O or Y, the fourth, I or S and the fifth, G or Q. The only plausible name that can be read through this block is ZWEIG, probably on the last card, which somehow didn't get included. □

Readers are invited to submit problems (and their solutions) for publication in this column to: Problem Editor, Computers and Automation, 815 Washington St., Newtonville, Mass. 02160.

[HP0047][GDrive]

1970 - Univ Washington (Datamation article)

http://bitsavers.org/magazines/Datamation/19701015.pdf

1970 at U Washington (see general catalog, 1970 - 1971)

[HE0030][GDrive]

Computer Center

- **Robert G. Gillespie, B.A.,** ***Director***
- William L. Clark, M.S.E., *Assistant Director*
- **Hellmut Golde**, Ph.D., *Assistant Director* Roberts Hall Addition *[See **Hellmut Paul Oscar Golde (born 1930)**]*

The Computer Center, established in 1956, provides computer services for the University of Washington and the community for education, research, and administrative uses. **The principal computers now installed include a Burroughs 5500 and a Control Data Corporation- 6400.** Also available are key-punch/EAM, auxiliary card-handling equipment with service provided for self-service use; graphics equipment, including mechan- ical plotting equipment allowing automatic plotting of information and a digital recording system capable of reading coordinates from maps, graphs, film, etc., and recording them on magnetic tape; and terminals which make possible text editing from teletypes directly connected to the B5500.

The Center offers specialized training through non- credit classes in programming languages and operating systems needed to use the computer systems in the Computer Center. Other services available are consultation; an information center that includes reference materials, computer manuals, and special program libraries; and professional programming.

1972 - University of Washington Computer Center, (per Univ Washington general catalog)

PFD - [HE002V][GDrive]

Computer Center

- **Robert G. Gillespie , B.A., Director Computer Center SC-10**
- Charles W. Dickens, Assistant.Director
- Scott A. Eyler, Assistant Director
- **Monique Rona, Assistant Director** *[See **Monique R Rona (born 1928)**]*

The Computer Center, established in 1956, provides computer services for the University of Washington and the community for education, research, and administrative uses. The principal. computers now installed include a Burroughs 5500 and .3. Control Data Corporation-6400. Also available are key-punch/EAM, auxiliary card-handling equipment with service provided for self-servi~ use; graphics equipment, including mechanical · plotting equipment allowing automatic plotting of information and a digital. recording system capable of reading coor:dinates from maps, graphs, film, etc., and recording them on magnetic tape; and terminals which make possible text editing and remote job entry from teletypes directly connected to the B5500 and the CDC 6400.

[...]

The University of Washington Computer Center is equipped with a CDC 6400 computer system, a ,Burroughs-B5500, and miscellaneous supporting equipment.

Ii! provides compu~g services to all areas of the University and is also available. to all students. Robert G. Gillespie is the Director, Charles W. Dickens, Monique Rona, arid Scott Eyler are Assistant Directors of the Computer Center.

1972, Educom Spring Conference

See [HE003I][GDrive], Robert Gillespie in attendance. Note in 1973 (and in 1974), **Monique R Rona (born 1928)** was in attendance for Univ Washington ..

1979 - Biography data (from 1979, Oct 09) - usa-congress-committee-on-science-and-tech-appropriate-in-education-incl-hr-4326

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Information and Communications Technologies

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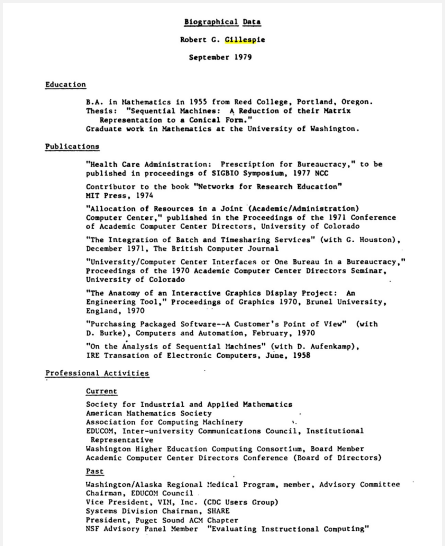

Biographical Data

Robert G. Gillespie

September 1979

Education

B.A. in Mathematics in 1955 from Reed College, Portland, Oregon.
Thesis: "Sequential Machines: A Reduction of their Matrix Representation to a Conical Form."
Graduate work in Mathematics at the University of Washington.

Publications

"Health Care Administration: Prescription for Bureaucracy," to be published in proceedings of SIGBIO Symposium, 1977 NCC

Contributor to the book "Networks for Research Education" MIT Press, 1974

"Allocation of Resources in a Joint (Academic/Administration) Computer Center," published in the Proceedings of the 1971 Conference of Academic Computer Center Directors, University of Colorado

"The Integration of Batch and Timesharing Services" (with G. Houston), December 1971, The British Computer Journal

"University/Computer Center Interfaces or One Bureau in a Bureaucracy," Proceedings of the 1970 Academic Computer Center Directors Seminar, University of Colorado

"The Anatomy of an Interactive Graphics Display Project: An Engineering Tool," Proceedings of Graphics 1970, Brunel University, England, 1970

"Purchasing Packaged Software--A Customer's Point of View" (with D. Burke), Computers and Automation, February, 1970

"On the Analysis of Sequential Machines" (with D. Aufenkamp), IRE Transaction of Electronic Computers, June, 1958

Professional Activities

Current

Society for Industrial and Applied Mathematics
American Mathematics Society
Association for Computing Machinery
EDUCOM, Inter-university Communications Council, Institutional Representative
Washington Higher Education Computing Consortium, Board Member
Academic Computer Center Directors Conference (Board of Directors)

Past

Washington/Alaska Regional Medical Program, member, Advisory Committee
Chairman, EDUCOM Council
Vice President, VIN, Inc. (CDC Users Group)
Systems Division Chairman, SHARE
President, Puget Sound ACM Chapter
NSF Advisory Panel Member "Evaluating Instructional Computing"

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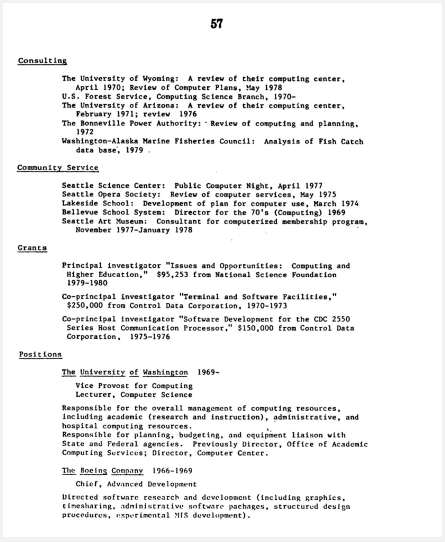


57

Consulting

The University of Wyoming: A review of their computing center, April 1970; Review of Computer Plans, May 1978
U.S. Forest Service, Computing Science Branch, 1970-
The University of Arizona: A review of their computing center, February 1971; review 1976
The Bonneville Power Authority: Review of computing and planning, 1972
Washington-Alaska Marine Fisheries Council: Analysis of Fish Catch data base, 1979

Community Service

Seattle Science Center: Public Computer Night, April 1977
Seattle Opera Society: Review of computer services, May 1975
Lakeside School: Development of plan for computer use, March 1974
Bellevue School System: Director for the 70's (Computing) 1969
Seattle Art Museum: Consultant for computerized membership program, November 1977-January 1978

Grants

Principal investigator "Issues and Opportunities: Computing and Higher Education," $95,253 from National Science Foundation 1979-1980

Co-principal investigator "Terminal and Software Facilities," $250,000 from Control Data Corporation, 1970-1973

Co-principal investigator "Software Development for the CDC 2550 Series Host Communication Processor," $150,000 from Control Data Corporation, 1975-1976

Positions

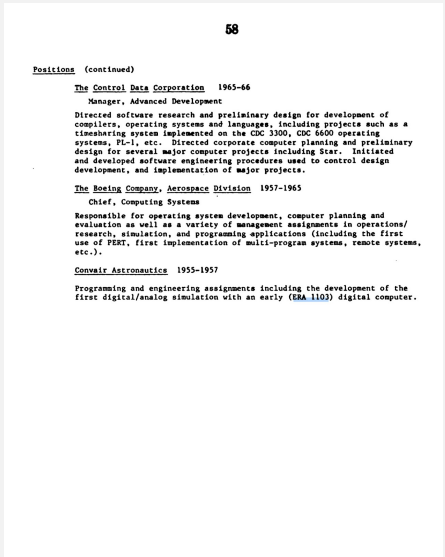
The University of Washington 1969-
Vice Provost for Computing
Lecturer, Computer Science

Responsible for the overall management of computing resources, including academic (research and instruction), administrative, and hospital computing resources.
Responsible for planning, budgeting, and equipment liaison with State and Federal agencies. Previously Director, Office of Academic Computing Services; Director, Computer Center.

The Boeing Company 1966-1969
Chief, Advanced Development

Directed software research and development (including graphics, timesharing, administrative software packages, structured design procedures, experimental MIS development).

page 57
[HG0085][GDrive]



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Positions (continued)

The Control Data Corporation 1965-66
Manager, Advanced Development

Directed software research and preliminary design for development of compilers, operating systems and languages, including projects such as a timesharing system implemented on the CDC 3300, CDC 6600 operating systems, PL-1, etc. Directed corporate computer planning and preliminary design for several major computer projects including Star. Initiated and developed software engineering procedures used to control design development, and implementation of major projects.

The Boeing Company, Aerospace Division 1957-1965
Chief, Computing Systems

Responsible for operating system development, computer planning and evaluation as well as a variety of management assignments in operations/research, simulation, and programming applications (including the first use of PERT, first implementation of multi-program systems, remote systems, etc.).

Convair Astronautics 1955-1957

Programming and engineering assignments including the development of the first digital/analog simulation with an early (ERA 1103) digital computer.

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[HG0086][GDrive]

Information and Communications Technologies Appropriate in Education (including H.R. 4326)

Biographical Data Robert G. Gillespie September 1979

- **Education**
  - B.A. in Mathematics in 1955 from Reed College, Portland, Oregon.
  - Thesis: "Sequential Machines: A Reduction of their Matrix Representation to a Conical Form."
  - Graduate work in Mathematics at the University of Washington.

- **Publications**
  - "Health Care Administration: Prescription for Bureaucracy," to be published in proceedings of SIGBIO Symposium, 1977 NCC
  - Contributor to the book "Networks for Research Education" MIT Press, 1974
  - "Allocation of Resources in a Joint (Academic/Administration) Computer Center," published in the Proceedings of the 1971 Conference of Academic Computer Center Directors, University of Colorado
  - "The Integration of Batch and Timesharing Services" (with G. Houston), December 1971, The British Computer Journal
  - "University/Computer Center Interfaces or One Bureau in a Bureaucracy," Proceedings of the 1970 Academic Computer Center Directors Seminar, University of Colorado
  - "The Anatomy of an Interactive Graphics Display Project: An Engineering Tool," Proceedings of Graphics 1970, Brunel University, England, 1970 -
  - "Purchasing Packaged Software--A Customer's Point of View" (with D. Burke), Computers and Automation, February, 1970
  - "On the Analysis of Sequential Machines" (with D. Aufenkamp), IRE Transation of Electronic Computers, June, 1958
- **Professional Activities**
  - **Current**
    - Society for Industrial and Applied Mathematics
    - American Mathematics Society
    - **Association for Computing Machinery *.**
    - EDUCOM, Inter-university Communications Council, Institutional Representative
    - Washington Higher Education Computing Consortium, Board Member
    - Academic Computer Center Directors Conference (Board of Directors)
  - **Past**
    - Washington/Alaska Regional Medical Program, member, Advisory Committee
    - Chairman, EDUCOM Council
    - Vice President, VIM, Inc. (CDC Users Group)
    - Systems Division Chairman, SHARE
    - **President, Puget Sound ACM Chapter**
    - NSF Advisory Panel Member "Evaluating Instructional Computing"
- **Consulting**
  - The University of Wyoming: A review of their computing center, April 1970; Review of Computer Plans, May 1978
  - U.S. Forest Service, Computing Science Branch, 1970–
  - The University of Arizona: A review of their computing center, February 1971; review 1976
  - **The Bonneville Power Authority: -Review of computing and planning, 1972**
  - Washington-Alaska Marine Fisheries Council: Analysis of Fish Catch data base, 1979 .
- **Community Service**
  - Seattle Science Center: Public Computer Night, April 1977
  - Seattle Opera Society: Review of computer services, May 1975
  - **Lakeside School: Development of plan for computer use, March 1974**
  - Bellevue School System: Director for the 70's (Computing) 1969
  - Seattle Art Museum: Consultant for computerized membership program, November 1977–January 1978
- **Grants**
  - Principal investigator "Issues and Opportunities: Computing and Higher Education," $95,253 from National Science Foundation 1979–1980
  - Co-principal investigator "Terminal and Software Facilities," $250,000 from Control Data Corporation, 1970–1973
  - Co-principal investigator "Software Development for the CDC 2550 Series Host Communication Processor," $150,000 from Control Data Corporation, 1975–1976
- **Positions**
  - **The University of Washington 1969–**
    - Vice Provost for Computing Lecturer, Computer Science
    - Responsible for the overall management of computing resources, including academic (research and instruction), administrative, and hospital computing resources.
    - Responsible for planning, budgeting, and equipment liaison with State and Federal agencies. Previously Director, Office of Academic Computing Services; Director, Computer Center.
  - **The Boeing Company 1966–1969**
    - Chief, Advanced Development
    - Directed software research and development (including graphics, timesharing, administrative software packages, structured design procedures, experimental MIS development).
  - **The Control Data Corporation 1965-66**
    - Manager, Advanced Development
    - Directed software research and development for [illegible] computer systems and [illegible] including [illegible]

- Directed software research and preliminary design for development of compilers, operating systems and languages, including projects such as a timesharing system implemented on the CDC 3300, CDC 6600 operating systems, PL-1, etc. Directed corporate computer planning and preliminary design for several major computer projects including Star. Initiated and developed software engineering procedures used to control design development, and implementation of major projects.

- **The Boeing Company, Aerospace Division 1957-1965**
  - Chief, Computing Systems
  - Responsible for operating system development, computer planning and evaluation as well as a variety of management assignments in operations/ research, simulation, and programming applications (including the first use of PERT, first implementation of multi-program systems, remote systems, etc.).
- **Convair Astronautics 1955-1957**
  - Programming and engineering assignments including the development of the first digital/analog simulation with an early (ERA 1103) digital computer.
    - *NOTE - The "ERA 1103" is also known as the UNIVAC 1103 (see https://en.wikipedia.org/wiki/UNIVAC_1103) ; This was the predecessor to the 1101*
    - *wow - "Even before the completion of the Atlas (UNIVAC 1101), the Navy asked Engineering Research Associates to design a more powerful machine. This project became Task 29, and the computer was designated Atlas II.*
    - *In 1952, Engineering Research Associates asked the Armed Forces Security Agency (the predecessor of the NSA) for approval to sell the Atlas II commercially. Permission was given, on the condition that several specialized instructions would be removed. The commercial version then became the UNIVAC 1103. Because of security classification, Remington Rand management was unaware of this machine before this.* ***The first commercially sold UNIVAC 1103 was sold to the aircraft manufacturer Convair, where Marvin Stein worked with it.****"*
    - **[https://en.wikipedia.org/wiki/Engineering_Research_Associates]Engineering Research Associates**, commonly known as **ERA**, was a pioneering computer firm from the 1950s. ERA became famous for their numerical computers, but as the market expanded they became better known for their drum memory systems. They were eventually purchased by Remington Rand and merged into their UNIVAC department. Many of the company founders later left to form Control Data Corporation.

1981 - computer science at Univ Washington Faculty

https://s3-us-west-2.amazonaws.com/www-cse-public/ugrad/handbook/CS_Winter_81.pdf

1980

https://s3-us-west-2.amazonaws.com/www-cse-public/ugrad/handbook/CS_Autumn_80.pdf

https://onlinelibrary.wiley.com/doi/abs/10.1002/he.36919834406

At congress , 1981 - https://files.eric.ed.gov/fulltext/ED251296.pdf

1982 report - https://www.pnnl.gov/scales/docs/lax_report1982.pdf

1982 - includes a position report (most owbed by fed gov)

https://ia803107.us.archive.org/2/items/LaxLargeScaleComputing/lax%20large%20scale%20computing.pdf

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1986 : UNITED STATES OFFICE OF TECHNOLOGY ASSESSMENT : SUPERCOMPUTERS: GOVERNMENT PLANS & POLICIES BACKGROUND PAPER

PDF : [HG008A][GDrive]

Y3.T22/2:2 Su 7/2

SUPERCOMPUTERS:
GOVERNMENT PLANS & POLICIES

BACKGROUND PAPER

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The views expressed in this background paper are not necessarily those of the Board, OTA Advisory Council, or individual members thereof.

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Foreword

Supercomputers: Government Plans and Policies, presents a review of the Federal Government's large-scale computing programs and examines the networking and software programs within selected agencies. Certain management and institutional questions pertinent to the Federal efforts are also raised and discussed.

This background paper was requested by the House Committee on Science and Technology. Within the past 2 years, there has been a notable expansion in the Federal supercomputer programs and this increase prompted the committee's request for a review of issues of resource management, networking, and the role of supercomputers in basic research.

OTA gratefully acknowledges the contributions of the many experts, within and outside the government, who served as workshop participants, contractors, and reviewers of this document. As with all OTA reports, however, the content is the responsibility of OTA and does not necessarily constitute the consensus or endorsement of the workshop participants or the Technology Assessment Board.

John H. Gibbons

JOHN H. GIBBONS
Director

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Program Director for Networking
National Science Foundation

[HG008B][GDrive]

Housatonic

David B. Gise (born 1812)

Born : *April 16, 1812* ([HP000L][GDrive])

Died :

Father is **George Adam Geise Jr.** (born 1772)

Children include :

- **William Franklin Gise** (born 1835)
  - **Children include :**
    - William Kern Gise (born 1871)
    - <others>
- **Daniel Kerlin Gise** (born 1843)
  - **Children include :**
    - **Lloyd Preston Gise** (born 1873) (Father of Lawrence Preston Gise (born 1915) , and Great grandfather of **Jeff Preston Bezos**)
    - <others>
- **Jacob Kerlin Gise** (born 1849)
  - Children include :
    - Grace S Gise (born 1886)
    - William John Gise (born 1888)
      - Father of Lt .Colonel William John Gise (June 23 1920 to March 23 2015)
    - <others>
- David K Gise (1838)

David B. Gise (or "Geiss") : Born April 16 1812, passed June 29 1899

Source : "Will-Grundy Counties, Illinois, Genealogical Society Quarterly : 1988-1989 Volume VII, Number 1" [HP000L][GDrive]

- His parents were **George Adam Geiss** and **Susannah Geiss**. Before her marriage, his mother was a **Miss Bright**.
- On August 18, 1834 he was married to Miss Sarah Kerlin.
- Sarah passed in 1959 - And he remarried his wife's sister Catherine Runkle

Thirty Years in Will County

***David B. Gise**, for over thirty years a resident of Will county, died at his home in Manhattan township, June 29, 1899. He was born in Berks county, Penn., April 16, 1812 and came to Illinois in 1868. He leaves four boys and two girls, W.F., of Chicago; David K., of Center Hall, Pa.; Jacob K., of Beloit, Kan.; Daniel K., of Joliet; Mary J. Brisbin, of Girard, Kan.; and Annie Klingler, of Manhattan. Mr. Gise was one of the best known residents of Manhattan, and liked equally for his nobility of character and his generous nature. The funeral occurred from the late residence three and one-half miles southwest of Manhattan village at 10 a.m. [From The Joliet News of July 6, 1899.]*

David B. Geiss

David B. Geiss, who died June 29 last, was born in Lebanon county, Pa., April 16, 1812. His parents were George Adam Geiss and Susannah Geiss. Before her marriage, his mother was a Miss Bright. On August 18, 1834 he was married to Miss Sarah Kerlin. This union was blessed with twelve children, of which six are still living. In 1859 his companion departed this life, and in 1860 he was again married to Mrs. Catherine Runkle, a sister of his first wife, who preceded him thro' death in 1890. The six children still living are: William F., in Chicago; David K., Center Hall, Pa.; Daniel K., Joliet, Ill.; J.K., Beloit, Kan.;Mary J., Girard, Kan., and Anna C., Manhattan, Ill. The only married daughter preceding the deceased, Mrs. Susan Wagner, was the mother of Mrs. Mary Flink, Mrs. Ida Kerlin, Geiss Wagner and Rev. W.J. Wagner.

"Father" Geiss as he was often called, lived in Pennsylvania until 1867, when he came to Illinois, where he reside until his death, on Thursday, June 29, at 11:30 a.m., in Manhattan township, where he peacefully passed into his rest. The cause of his death was old age with its weaknesses ending in dropsy. The departed arrived at the age of 87 years, 2 months and 13 days. He leaves to mourn his departure six children and two step-children, Mrs. John Cronmiller, of Joliet, and J.K. Runkle, who has been residing with him. Also a niece, Mrs. John Johnson, whom he raised from her infancy, and who now resides in Iowa...

The funeral service took place on Saturday, July 1, at 10 a.m. at the old home, Rev,. F.W. Landwer officiating, and who chose for his text Phil. 1:21... the interment took place at the Klingler cemetery by the side of his departed companion.

From The Joliet News of July 13, 1899

1875 - Investing in land in Joliet and other states with his brother

Full page - 1875-07-01-the-centre-reporter-centre-hall-pennsylvania-pg-3.jpg / https://drive.google.com/open?id=1BTNX2K2azZHJ4chVRyBSa6Tvxb7miQVY

The Centre Reporter (Centre Hall, Pennsylvania) · 01 Jul 1875, Thu · Page 3

From Illinois.

JOLIET, Will co., Ill. }
June 21st. '75. }

Dear Reporter :—Once again through the silent medium of the pen will I endeavor to converse with your many readers. The spring has been very cold and late. Have not had as much rain as some others fearful we would not get enough for the small grain which is doing well. It has been too cold for corn, and the "Wire Worm" has been damaging the corn on high ground. Chinch bugs are not to be found and potato bugs are very scarce.

Land is changing hands rapidly and at pretty good figures—all the way from $40 to $55 dollars per acre. There has been and is yet considerable of a "southern fever" raging among Pennsvalley folks since D. B. Gise and brother have returned from their visit to the "Sunny South" and letters from relatives there give it a fast impetus. Gise, Lingle, Seltzer and others speak of purchasing a twelve hundred acre tract in Alabama. Some of them intend going to see it after harvest. I shall then give you particulars. Henry Lingle and Peter Vonada have been on a trip to Farmville, Va. Lingle had bought four hundred acres but the man backed out again and therefore neither of them bought. The only reason any of them can give for leaving here is on account of the long cold winters we have in this latitude—for they all know we have a rich and productive soil, and after raising our crops we have Joliet for our market, which with its rolling mills, steel works, foundries, state's prison and direct eastern communication is second to none as a market west of Chicago. It can also boast of having street cars something no other city of its population can boast. Last summer the finest hotel in the city was reduced to ruins by that dread fiend, fire—but Pheonix like it now is almost ready to take the place it occupied before the fire, at the head of the list.

But enough of this, yet allow one word to "Colorado," "Tussey Mountain boy" and "Michiganders." I would like to hear from you all. More anon.

WILL COUNTY BOY.

1875-07-01-the-centre-reporter-centre-hall-pennsylvania-pg-3-clip-from-illinois.jpg / https://drive.google.com/open?id=1BTd44FX-3DW83OUuhSi4oqcGx4vikJB0

1879 - Farming in Joliet

https://www.newspapers.com/image/329775196/?terms=gise%2Bhinges

Passed 1899

Also see : 2019-09-findagrave-com-46644534-david-b-gise-1812-1899.pdf / https://drive.google.com/open?id=10ury3OtvDCMHQSgP51XbqX2X1u4_uqYN

COnfirmation : "David B. Gise" born 16 Apr 1812 / died 29 Jun 1899 (aged 87)

Source - https://worldconnect.rootsweb.ancestry.com/cgi-bin/igm.cgi?op=GET&db=lockwd&id=I307244

- *ID:* I307244
- *Name:* **David B Gise**
- *Given Name:* David B
- *Surname:* Gise
- *Sex:* M
- *Birth:* 16 Apr 1812 in Newmanstown (Lebanon) Peensylvania
- *Death:* 29 Jun 1899 in <Will County Illinois>
- *Burial:* Klingler Cemetery in Manhattan (Will) Illinois
- *_UID:* EEBC5AF3B82E49ECAFDBE65ED72C4F3E7052
- *Change Date:* 29 Jun 2012 at 23:11
- *Marriage* 1 Sarah Kerlin b: Abt 1814 in Pennsylvania
- *Married:*
- *Change Date:* 29 Jun 2012
- Children

1. William Franklin Gise b: 4 Dec 1835 in Pennsylvania
2. David Gise b: Abt 1840 in Pennsylvania
3. Susannah Gise b: Abt 1841 in <Potter Towsnhip (Centre)> Pennsylvania
4. Daniel Kerlin Gise b: 3 Mar 1843 in Lebanon County Pennsylvania
5. Sarah Gise b: Abt 1846 in <Potter Towsnhip (Centre)> Pennsylvania
6. Jacob Gise b: Abt 1849 in <Potter Towsnhip (Centre)> Pennsylvania
7. Mary Gise b: Abt 1852 in <Potter Towsnhip (Centre)> Pennsylvania
8. Anna Catherine Gise b: 1855 in <Potter Towsnhip (Centre)> Pennsylvania

- *Marriage* 2 Catharine ??? b: 27 Jan 1810
- *Married:* in ???
- *Change Date:* 29 Jun 2012

BITCHUTE @Housatonic YOUTUBE @HousatonicLive ODYSEE @Housatonic BRIGHTEON @Housatonic

Housatonic

William Franklin Gise (born 1835)

BIRTH 4 Dec 1835 (Pennsylvania, USA) (https://www.findagrave.com/memorial/46585838/william-franklin-gise)

DEATH 24 Mar 1900 (aged 64) (Cook County, Illinois, USA) (https://www.findagrave.com/memorial/46585838/william-franklin-gise)

Father is **David B. Gise** (born 1812)

Siblings :

- Jacob Kerlin Gise (born 1849)
  - **Children include :**
    - Grace S Gise (born 1886)
    - William John Gise (born 1888)
      - Father of Lt .Colonel William John Gise (June 23 1920 to March 23 2015)
    - <others>
- Daniel Kerlin Gise (born 1843)
  - **Children include :**
    - **Lloyd Preston Gise** (born 1873) (Father of Lawrence Preston Gise (born 1915) , and Great grandfather of **Jeff Preston Bezos**)
    - <others>
- David K Gise (1838)
- <others>

Children include :

- William Kern Gise (born 1871)
- <others>

1877 - real estate transaction in Chicago ?

https://www.newspapers.com/image/349841001/?terms=gise

1878 (Sep) -purchased store goods in st. josephs, michigan

https://www.newspapers.com/image/36948732/?terms=gise%2Bjoliet

william f gise - purchased store goods in st. josephs, michigan

1880 census - William F Gise family in Chicago

William F Gise is described as a"Dry Goods Merchant"

With son William Kern Gise (born 1871) .

Full Transcript : [HS0004][GDrive] / Image of census form : [HS0006][GDrive]

Record Transcription:
Us Census 1880

Household Members

First name(s)	Last name	Relationship	Marital status	Gender	Age	Birth year	Birth place
William F.	**Gise**	**Self**	**Married**	**Male**	**44**	**1836**	**Pennsylvania**
Millie K.	Gise	Wife	Married	Female	39	1841	Pennsylvania
Virna	Gise	Daughter	Single	Female	13	1867	Pennsylvania
William K.	Gise	Son	Single	Male	8	1872	Illinois
Edgar	Gise	Son	Single	Male	7	1873	Illinois

[HS0005][GDrive]

1883 - mortage

https://www.newspapers.com/image/349267561/?terms=gise

1885 - mortgage

https://www.newspapers.com/image/349813147/?terms=gise

1887 (Oct 3) - bank - 5 million dollars

Full page : [HN00CD][1887-10-03-chicago-tribune-pg-5]

Chicago Tribune (Chicago, Illinois) • 03 Oct 1887, Mon • Page 5

New Corporations.

SPRINGFIELD, Ill., Oct. 2.—[Special.]—The Secretary of State issued licenses of incorporation to the following companies Saturday:

Chicago Stencil Works of Chicago; capital stock, $1,000; object manufacturing stencils, etc.; incorporators, O. G. Bryant, A. G. Bryant, J. Langthere.

Cook, Lyman, Smith & Co. of Chicago; capital, $100,000; incorporators, Cyrus F. Cook, N. W. Lyman, H. L. Siexas, Samuel R. Smith, and Louis E. Thorn.

The Von der Heydt Self-Winding Watch Company of Chicago; capital, $5,000; incorporators, H. Von der Heydt, F. L. Crandall, and Thomas Cratty.

The Chicago Retort & Fire Brick Company of the Town of Lake; capital, $50,000; incorporators, George C. Hicks, Edward W. Bailey, and Charles A. Reed.

The Silver Hill Mining Company of Lanark, Ill.; capital, $50,000; incorporators, W. A. Hammond, C. L. Shirk, and Thomas J. Seizer.

The Burton-Harris Company of Chicago; capital, $50,000; to manufacture burglar-proof safes and vault doors; incorporators, Augustus G. Burton, J. C. Harris, and Oren Dunham.

The Savings Bank Building & Loan Association of Chicago; capital, $5,000,000; incorporators, John B. Skinner, B. F. Huber, W. F. Netling, Gwynne Dennis, and W. F. Gise.

A certificate of increase of the capital stock of the R. B. Stone Lumber Company of Chicago from $5,000 to $25,000 was filed yesterday.

[HN00CE][1887-10-03-chicago-tribune-pg-5-clip-new-corporations]

death record - 1900 ? 8-(

https://www.newspapers.com/image/349150933/?terms=William%2BGise

https://www.newspapers.com/image/483955464/?terms=Gise

https://www.newspapers.com/image/483955421/?terms=Gise

March 1900

https://www.newspapers.com/image/349150933/?terms=gise

3600 rhodes ave

william franklin gise

1900 - death pneumonia

https://www.newspapers.com/image/349150933/?terms=william%2Bfranklin%2Bgise

Often "W. F. Gise"

https://www.newspapers.com/image/483955421/?terms=W.%2BF.%2Bgise

William W Frnaklin - have passed by 1900

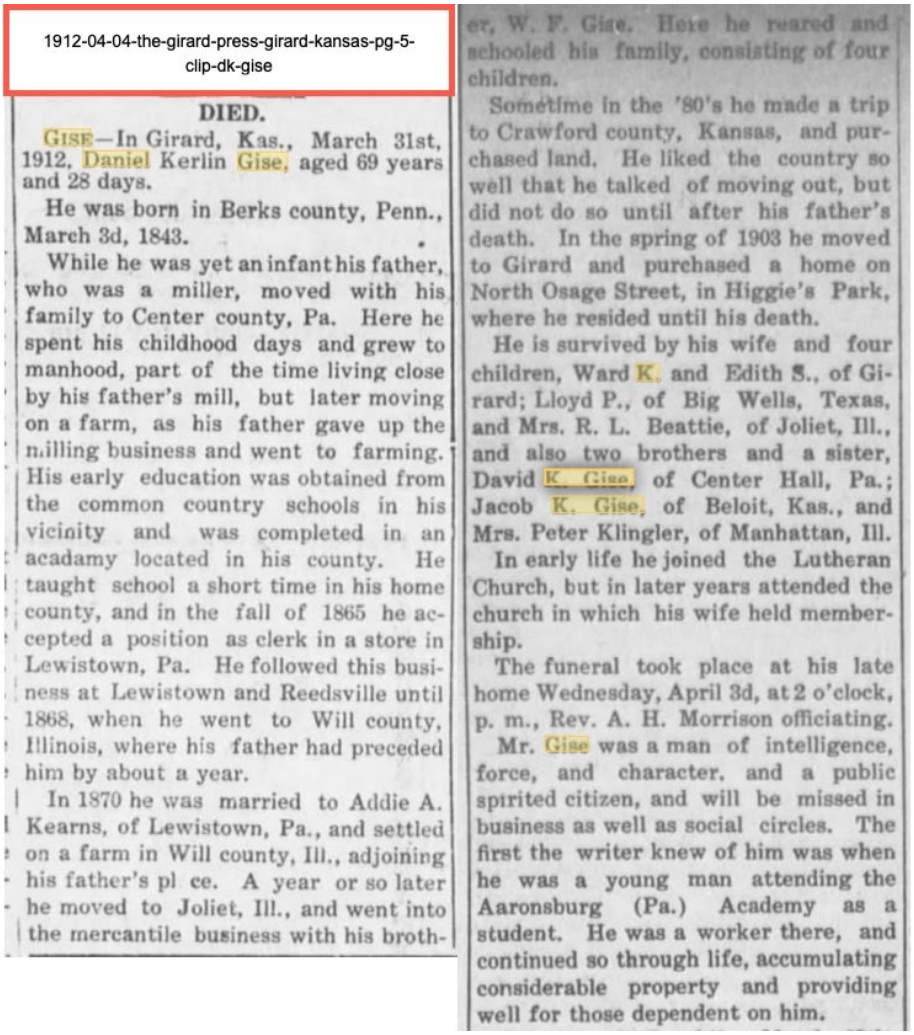
Census with his surviivng wife, daughter, and son

https://www.findmypast.com/transcript?id=USC%2F1900%2F004113704%2F00043%2F033

Other family

April 04 1912 - Passing of brother Daniel Kerlin Gise obituary (grandfather of LP Gise)

1912-04-04-the-girard-press-girard-kansas-pg-5 https://drive.google.com/open?id=1W4-gg414MOqSfkeiMQ6KEVfG87-jjCFZ



1912-04-04-the-girard-press-girard-kansas-pg-5-clip-dk-gise

DIED.

GISE—In Girard, Kas., March 31st, 1912, Daniel Kerlin Gise, aged 69 years and 28 days.

He was born in Berks county, Penn., March 3d, 1843.

While he was yet an infant his father, who was a miller, moved with his family to Center county, Pa. Here he spent his childhood days and grew to manhood, part of the time living close by his father's mill, but later moving on a farm, as his father gave up the milling business and went to farming. His early education was obtained from the common country schools in his vicinity and was completed in an acadamy located in his county. He taught school a short time in his home county, and in the fall of 1865 he accepted a position as clerk in a store in Lewistown, Pa. He followed this business at Lewistown and Reedsville until 1868, when he went to Will county, Illinois, where his father had preceded him by about a year.

In 1870 he was married to Addie A. Kearns, of Lewistown, Pa., and settled on a farm in Will county, Ill., adjoining his father's pl ce. A year or so later he moved to Joliet, Ill., and went into the mercantile business with his brother, W. F. Gise. Here he reared and schooled his family, consisting of four children.

Sometime in the '80's he made a trip to Crawford county, Kansas, and purchased land. He liked the country so well that he talked of moving out, but did not do so until after his father's death. In the spring of 1903 he moved to Girard and purchased a home on North Osage Street, in Higgie's Park, where he resided until his death.

He is survived by his wife and four children, Ward K. and Edith S., of Girard; Lloyd P., of Big Wells, Texas, and Mrs. R. L. Beattie, of Joliet, Ill., and also two brothers and a sister, David K. Gise, of Center Hall, Pa.; Jacob K. Gise, of Beloit, Kas., and Mrs. Peter Klingler, of Manhattan, Ill.

In early life he joined the Lutheran Church, but in later years attended the church in which his wife held membership.

The funeral took place at his late home Wednesday, April 3d, at 2 o'clock, p. m., Rev. A. H. Morrison officiating.

Mr. Gise was a man of intelligence, force, and character, and a public spirited citizen, and will be missed in business as well as social circles. The first the writer knew of him was when he was a young man attending the Aaronsburg (Pa.) Academy as a student. He was a worker there, and continued so through life, accumulating considerable property and providing well for those dependent on him.

1912-04-04-the-girard-press-girard-kansas-pg-5-clip-dk-gise https://drive.google.com/open?id=1W47mzZwWoBDjSmIbrmtHqGu5VkckGmq6

1920 - wife passing

Millie K Gise

https://www.newspapers.com/image/369904941/?article=27c4a9cc-e5ae-4d9c-8142-2481081f3d7d&focus=0.84543055,0.11822626,0.97218794,0.13765661&xid=2378&_ga=2.96356444.1364807999.1570582694-2017998303.1551994226

millier Kern Gise -

https://www.findmypast.com/transcript?id=US/BMD/BILLION/025732969

Sunday 07 1952

"Ida B Wells" build 455 units on the land of 3600 Rhodes that William F Gise once owned ..

https://www.newspapers.com/image/371890558/?terms=%223600%2Brhodes%22

https://www.findagrave.com/memorial/95256690/daniel-k_-gise

DANIEL K. GISE, senior member of the firm of D. K. Gise & Co., stands at the head of one of the important manufacturing interests of Joliet, operating a factory which turns out door hinges and other articles in this line. The office occupies No. 111, St. Louis Street, while the residence of Mr. Gise is located at No. 201, Sherman Street. Mr. Gise has been a resident of this county since 1868, and for the space of a dozen years has been associated with its leading interests. A native of Lebanon County, Pa., Mr. Gise was born March 3, 1843, and is the son of David B. Gise, a native of Newmanstown, that State. The latter was reared to manhood in his native State, and was there married to Miss Sarah Kerlin. The wife was of English descent, her progenitors settling in Pennsylvania at an early day. Both families were of eminent respectability and the male members largely millers by trade. The parents of our subject, when he was an infant of three months, removed to Center County, Pa., where the father followed milling and farming and where the mother died.

In 1867, after the death of his wife, David Gise emigrated to Illinois with his family, settling south of Manhattan, in Wilson Township, this county, where he now lives. Daniel K. was reared to mature years in Center County, Pa., and after reaching manhood engaged in mercantile pursuits until coming to this county. He then purchased land in Manhattan Township, which he brought to a good state of cultivation, erecting thereon suitable farm buildings and where he resided until about 1872; then removing to Joliet he purchased a stock of goods and established himself on Washington Street, where he continued to do business until 1882. That year he sold out and, after an interval of rest, became interested in live stock in the West, which engaged his attention for a time, and he then established his present business which he has conducted about five years. He still retains possession of his farm property in Manhattan Township. Gise & Co. sell the product of their manufactory principally to the jobbing and retail trade, having men on the road at all times.

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- Portrait and Biographical Album of Will County, Illinois,

BURIAL

Klingler Cemetery

Manhattan, Will County, Illinois, USA

MEMORIAL ID 46585838 · View Source

Wrong leads

1890 - A developer in Port Townsend, WA ?

NO - I think this is Jonas Gise - See " https://www.newspapers.com/image/333657492/?terms=gise

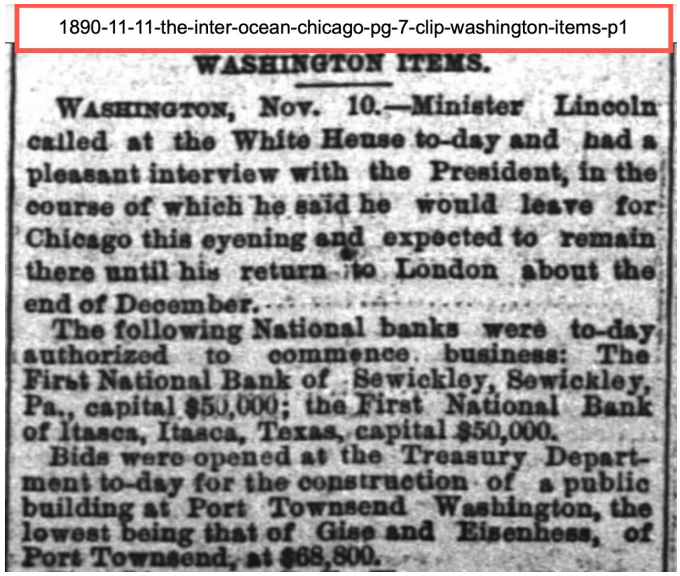
Full newspaper page : [HN00CF][1890-11-11-the-inter-ocean-chicago-pg-7]

These would probably be military installations -

https://en.wikipedia.org/wiki/Fort_Worden

https://en.wikipedia.org/wiki/Port_Townsend,_Washington

1890-11-11-the-inter-ocean-chicago-pg-7-clip-washington-items-p1



WASHINGTON ITEMS.

WASHINGTON, Nov. 10.—Minister Lincoln called at the White House to-day and had a pleasant interview with the President, in the course of which he said he would leave for Chicago this evening and expected to remain there until his return to London about the end of December.

The following National banks were to-day authorized to commence business: The First National Bank of Sewickley, Sewickley, Pa., capital $50,000; the First National Bank of Itasca, Itasca, Texas, capital $50,000.

Bids were opened at the Treasury Department to-day for the construction of a public building at Port Townsend Washington, the lowest being that of Gise and Eisenhess, of Port Townsend, at $68,800.

[HN00CG][1890-11-11-the-inter-ocean-chicago-pg-7-clip-washington-items-p1]

BITCHUTE @Housatonic YOUTUBE @HousatonicLive ODYSEE @Housatonic BRIGHTEON @Housatonic

Housatonic

Daniel Kerlin Gise (born 1843)

Born - March 3, 1843 (Book source : [HB000N][GDrive] / [HB000O][GDrive])

Died -

Father is **David B. Gise** (born 1812)

Siblings :

- Jacob Kerlin Gise (born 1849)
  - Children include :
    - Grace S Gise (born 1886)
    - William John Gise (born 1888)
      - Father of Lt .Colonel William John Gise (June 23 1920 to March 23 2015)
    - <others>
- William Franklin Gise (born 1835)
  - Children include William Kern Gise (born 1871)
- David K Gise (1838)
- <others>

Children include :

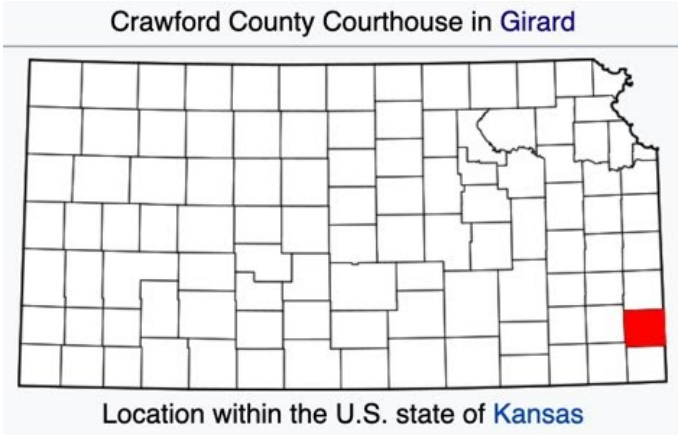
- **Lloyd Preston Gise** (born 1873) (Father of Lawrence Preston Gise (born 1915) , and Great grandfather of **Jeff Preston Bezos**)
- <others>
-

1872 (est) - Moves to Joliet, Illinois

See [HN00CI][GDrive] :

*"In 1871, [**Daniel Kerlin Gise** moved to and] settled on a farm in Will Country, Illinois, adjoining his father's place. A year or so later, he moved to Joliet, Illinois, and went into the mercantile business with his brother [William Franklin Gise (born 1835)]. Here he reared and schooled his family, consisting of four children. "*

1880s - Made a trip to Crawford County, Kansas, and purchased land



Source : [HN00CI][GDrive]

"[D.K. Gise] liked the country so well that he talked of moving out, but did not do until after his father's [David B. Gise (born 1812)] death. [His father died in 1899]."

1890 - D. K. Gise & Co. in Joliet, Illinois

Book source : [HB000N][GDrive]

America about 1846. They first-settled in Peoria, but the following year took up their residence in Manhattan, where they still live. Of this union there have been born five children, viz.: John F., Daniel, William, Martin G. and Anna, all of whom are living and form an exceedingly bright and interesting group, receiving careful parental training and the older ones pursuing their studies in the common schools.

DANIEL K. GISE, senior member of the firm of D. K. Gise & Co., stands at the head of one of the important manufacturing interests of Joliet, operating a factory which turns out door hinges and other articles in this line. The office occupies No. 111, St. Louis Street, while the residence of Mr. Gise is located at No. 201, Sherman Street. Mr. Gise has been a resident of this county since 1868, and for the space of a dozen years has been associated with its leading interests.

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The parents of our subject, when he was an infant of three months, removed to Center County, Pa., where the father followed milling and farming and where the mother died. In 1867, after the death of his wife, David Gise emigrated to Illinois with his family, settling south of Manhattan, in Wilson Township, this county, where he now lives. Daniel K. was reared to mature years in Center County, Pa., and after reaching manhood engaged in mercantile pursuits until coming to this county. He then purchased land in Manhattan Township, which he brought to a good state of cultivation, erecting thereon suitable farm buildings and where he resided until about 1872; then removing to Joliet he purchased a stock of goods and established himself on Washington Street, where he continued to do business until 1882. That year he sold out and, after an interval of rest, became interested in live stock in the West, which engaged his attention for a time, and he then established his present business which he has conducted about five years. He still retains possession of his farm property in Manhattan Township. Gise & Co. sell the product of their manufactory principally to the jobbing and retail trade, having men on the road at all times.

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CORNELIUS J. McCLURE. In traveling about Will County one is struck by the appearance of neatness and order which many of its homes bear and the evidences of thrift and enterprise which are to be seen on every hand. These features are noticeable in contemplating the estate occupied by the above-named gentleman, which comprises one hundred and sixty acres, on section 19, Manhattan Township. It is evident that the manager of this place is successfully pursuing his avocation, which is plainly seen to be that of grain and stock-raising. Holstein cattle and Poland-China swine of good grades graze over the broad acres, and some twenty head of high-grade draft horses are also visible. Investigation reveals the fact that Mr. McClure has recently suffered the loss by fire of a large barn, 10x70 feet, and other buildings, but that substantial structures will soon replace the temporary shelter which he

[HB000O][GDrive]

Source : 2019-09-findagrave-com-95256690-daniel-k-gise-1843-1912.pdf / https://drive.google.com/open?id=1AM2SNRXHwDGjSLJwQvCV7mcbrGhQAYPI - And OCR of the above article ..

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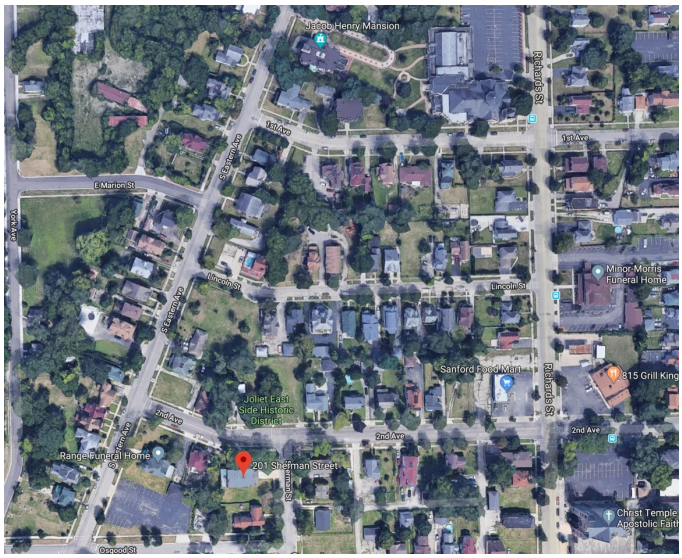
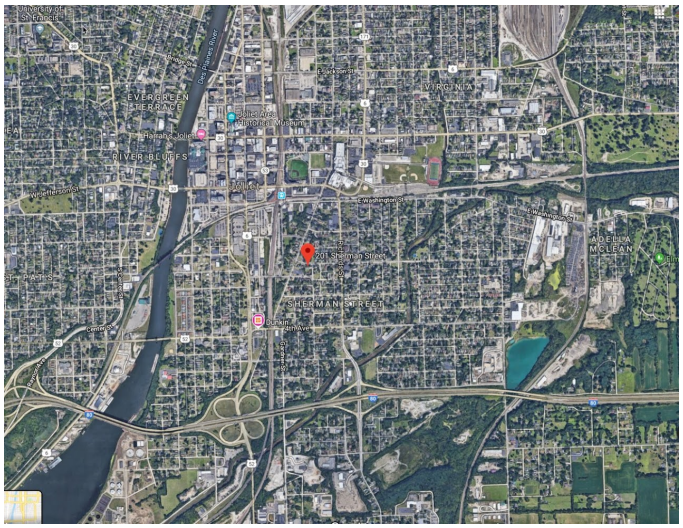
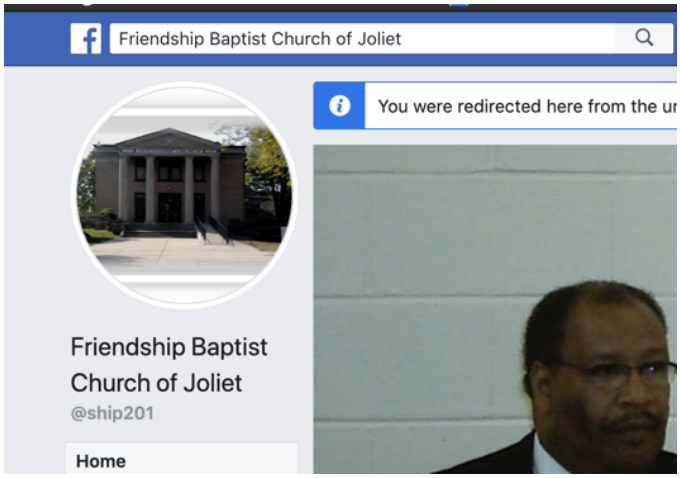
201 Sherman Street, Joliet, Illinois

201 Sherman Street looks like a large home, but is currently serving as the Friendship Baptist Church in Joliet, Illinois.







1903 - Moves to Girard, Kansas (in county where he purchased land)

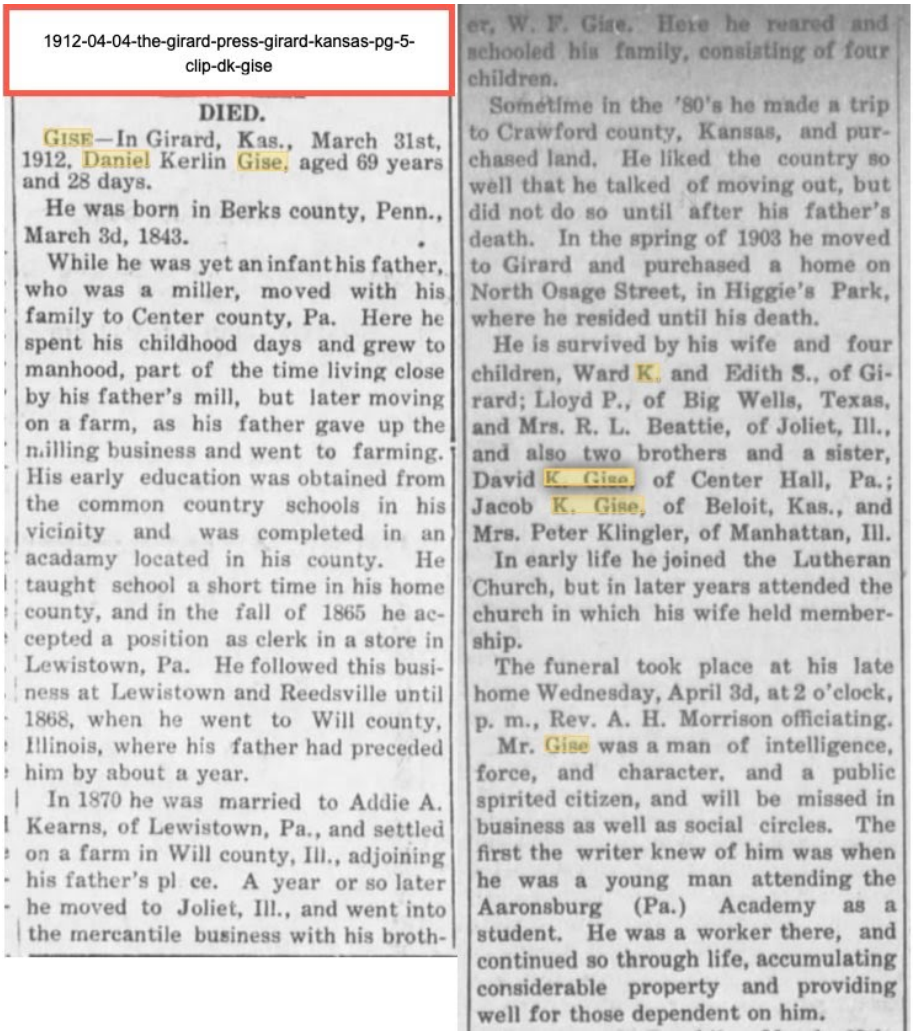
1907 - Daniel K Gise - Drilling

https://www.newspapers.com/image/183967980/?terms=daniel%2Bk%2Bgise

April 04 1912 - Passing of Daniel Kerlin Gise

Full newspaper page : [HN00CH][GDrive]

"In 1871, [Daniel Kerlin Gise moved to and] settled on a farm in Will Country, Illinois, adjoining his father's place. A year or so later, he moved to Joliet, Illinois, and went into the mercantile business with his brother [William Franklin Gise (born 1835)]. Here he reared and schooled his family, consisting of four children. "



1912-04-04-the-girard-press-girard-kansas-pg-5-clip-dk-gise

DIED.

GISE—In Girard, Kas., March 31st, 1912, Daniel Kerlin Gise, aged 69 years and 28 days.

He was born in Berks county, Penn., March 3d, 1843.

While he was yet an infant his father, who was a miller, moved with his family to Center county, Pa. Here he spent his childhood days and grew to manhood, part of the time living close by his father's mill, but later moving on a farm, as his father gave up the milling business and went to farming. His early education was obtained from the common country schools in his vicinity and was completed in an acadamy located in his county. He taught school a short time in his home county, and in the fall of 1865 he accepted a position as clerk in a store in Lewistown, Pa. He followed this business at Lewistown and Reedsville until 1868, when he went to Will county, Illinois, where his father had preceded him by about a year.

In 1870 he was married to Addie A. Kearns, of Lewistown, Pa., and settled on a farm in Will county, Ill., adjoining his father's pl ce. A year or so later he moved to Joliet, Ill., and went into the mercantile business with his brother, W. F. Gise. Here he reared and schooled his family, consisting of four children.

Sometime in the '80's he made a trip to Crawford county, Kansas, and purchased land. He liked the country so well that he talked of moving out, but did not do so until after his father's death. In the spring of 1903 he moved to Girard and purchased a home on North Osage Street, in Higgie's Park, where he resided until his death.

He is survived by his wife and four children, Ward K. and Edith S., of Girard; Lloyd P., of Big Wells, Texas, and Mrs. R. L. Beattie, of Joliet, Ill., and also two brothers and a sister, David K. Gise, of Center Hall, Pa.; Jacob K. Gise, of Beloit, Kas., and Mrs. Peter Klingler, of Manhattan, Ill.

In early life he joined the Lutheran Church, but in later years attended the church in which his wife held membership.

The funeral took place at his late home Wednesday, April 3d, at 2 o'clock, p. m., Rev. A. H. Morrison officiating.

Mr. Gise was a man of intelligence, force, and character, and a public spirited citizen, and will be missed in business as well as social circles. The first the writer knew of him was when he was a young man attending the Aaronsburg (Pa.) Academy as a student. He was a worker there, and continued so through life, accumulating considerable property and providing well for those dependent on him.

[HN00CI][GDrive]

Daniel Kerlin Gise married Amanda Kearns / "Preston" family name is from Amanda Kearns

Adeline Kearns - liing with a Preston
1860
https://www.findmypast.com/transcript?id=USC%2F1860%2F0000674155725

1865 - her dad (THomas G Kearns), of decatur township, passed ?
https://www.newspapers.com/image/329789728/?terms=kearns%2Bpreston
https://search.findmypast.com/record?id=USC%2F1860%2F005171141%2F00122&parentid=USC%2F1860%2F0000674155725
John Preston - Age 52 - (born 1808ish)

John Presotn - no kids in 1850
https://www.findmypast.com/transcript?id=USC%2F1850%2F004205101%2F00289%2F019

Decatur Township, Clearfield County, Pennsylvania
From Wikipedia, the free encyclopedia
Jump to navigationJump to search
For other Pennsylvania townships with similar names, see Decatur Township, Pennsylvania (disambiguation).
Decatur Township,
Clearfield County,
Pennsylvania
Township
Map of Clearfield County, Pennsylvania highlighting Decatur Township
Map of Clearfield County, Pennsylvania highlighting Decatur Township
Map of Clearfield County, Pennsylvania
Map of Clearfield County, Pennsylvania
Country United States
State Pennsylvania
County Clearfield
Settled 1797
Incorporated 1828
Area[1]
• Total 37.64 sq mi (97.49 km2)
• Land 37.39 sq mi (96.85 km2)
• Water 0.25 sq mi (0.64 km2)
Population (2010)
• Total 4,548
• Estimate (2016)[2] 4,765
• Density 127.43/sq mi (49.20/km2)
Time zone UTC-5 (Eastern (EST))
• Summer (DST) UTC-4 (EDT)
Area code(s) 814
FIPS code 42-033-18456
Historical population
Census Pop. %±
1970 2,763 —
1980 3,395 22.9%
1990 3,004 −11.5%
2000 2,974 −1.0%
2010 4,548 52.9%
Est. 2016 4,765 [2] 4.8%
U.S. Decennial Census[3]
Decatur Township is a township in Clearfield County, Pennsylvania, United States. The population was 4,548 at the 2010 census,[4] an increase of over 52% from the 2000 census in which the population at that time was 2,974. The township is named after war hero Stephen Decatur, Jr.

1880
https://search.ancestry.com/cgi-bin/sse.dll?indiv=1&dbid=6742&h=37563671&tid=&pid=&usePUB=true&_phsrc=Pnl101&_phstart=successSource

Davis A Kearns - nephew
that means that Sophia Present may have been born Sophia Kearns

john preston -
1880
https://search.ancestry.com/cgi-bin/sse.dll?db=1880usfedcen&indiv=try&h=37563671
John Preston 72
Sophia Preston 69
Davis A. Kearns 16

https://search.findmypast.com/record?id=S2%2FUS%2FHSP%2F102275206%2F00229&parentid=US%2FBMD%2FPENN-BAP%2F00793080
James Preston - born Nov 13 1783 - of william and mary prston

1810
https://www.findmypast.com/transcript?id=USC%2F1810%2F005157100%2F00094%2F018
james Peston in Mifflin / Pennsylvania

1820 James Preston
https://www.findmypast.com/transcript?id=USC%2F1820%2F005156923%2F00220%2F014

Name: Sophia Preston
Birth Date: 5 out 1810 (5 Oct 1810)
Birth Place: Mifflin County (Mifflin), Pennsylvania, United States of America
Death Date: 3 fev 1884 (3 Feb 1884)
Cemetery: Little Valley Presbyterian Church Cemetery
Burial or Cremation Place: Vira, Mifflin County (Mifflin), Pennsylvania, United States of America
Has Bio?: N
Father: John Kearns
Mother: Elizabeth Kearns

https://search.ancestry.com/cgi-bin/sse.dll?indiv=1&dbid=60525&h=11152961&tid=&pid=&usePUB=true&_phsrc=Pnl103&_phstart=successSource

Name: John Kearns
Birth Date: 22 mai 1782 (22 May 1782)
Birth Place: Lancaster, Lancaster County (Lancaster), Pennsylvania, United States of America
Death Date: 25 mai 1851 (25 May 1851)
Death Place: Derry Township, Mifflin County (Mifflin), Pennsylvania, United States of America
Cemetery: Little Valley Presbyterian Church Cemetery
Burial or Cremation Place: Vira, Mifflin County (Mifflin), Pennsylvania, United States of America
Has Bio?: Y
Spouse: Elizabeth Kearns
Children: Margaret Hoover
John William Kearns
Mary Kearns
Philip Stroup Kearns
Thomas Gardner Kearns
Sophia Preston
Sarah Elizabeth Townsend
Joseph S Kearns
Elias Calvin Kearns
URL: https://www.findagrave.com/mem...

Thomas Gardner Kearns
marry Settle
http://dgmweb.net/FGS/K/KearnsThomasGardner-MarySettle.html
daugher adeline Kearns - born 1846/7
john Preston / Sophia Kearns
http://dgmweb.net/FGS/P/PrestonJohn-SophiaKearns.html

died 1990 0
https://www.washingtonpost.com/archive/local/1990/03/18/walter-ridder-news-group-architect-dies-in-mclean/10c05afa-bc5c-4378-9ea9-2d7ae3ec0a7a/

DAVIS KEARNS-PRESTON

Commerce Department Official

Davis Alvin Kearns-Preston, 79, a retired Commerce Department economist and founder of the Silver Spring Presbyterian Church, died March 14 at Suburban Hospital. He had a heart ailment.

A supervisory international economist, he spent 30 years with Commerce before retiring in 1973. His last post was as Near East and South Asian division director in Commerce's international trade office.

Mr. Kearns-Preston, who lived in Silver Spring, was a native of Ohio and moved here in 1943. He was a 1933 graduate of the University of Illinois, where he received a bachelor's degree in education.

https://lists.rootsweb.com/hyperkitty/list/gen-mat@rootsweb.com/thread/8206005/

https://ancestors.familysearch.org/en/LZ51-N35/davis-alvin-preston-1864-1953

Froegn commerce weekly (download)
https://books.googleusercontent.com/books/content?req=AKW5QafTGR95qXd_dM-KX4Y8QAqZ_Eu7leHopIpcXxbc60jUBK92ZRAwAyjYo6RXJDWo-_LPXwC6sKm2_PddR7zwmvCPcZ1ITpCrThFPIcyIVsH7axAS2Kq06aWuLNMpZ_qTaTKwRk0ZpmtVcrchPqedRK5rSurIRFojFxGJY1QSo0LthhW1gvLyFalob1cK5mfrTlOXdG_wljBHR79FnwiAwdw-pRbJ1S2Jb-KPJUKkXm7SOFFaFjKYCHM2jXMRnODlTjW3b7bV
davis kearns-preston commerce

Thomas Gardern Kearns
Name: Thomas Gardner Kearns
Birth Date: 5 ago 1813 (5 Aug 1813)
Death Date: 26 fev 1851 (26 Feb 1851)
Cemetery: Little Valley Presbyterian Church Cemetery
Burial or Cremation Place: Vira, Mifflin County (Mifflin), Pennsylvania, United States of America
Has Bio?: Y
Father: John Kearns
Mother: Elizabeth Kearns
Spouse: Mary Catherine Kearns

Sophia Kearns was the aunt - She took the kids, and married a John Preston

Davis A Kearns-Preston

BITCHUTE @Housatonic YOUTUBE @HousatonicLive ODYSEE @Housatonic BRIGHTEON @Housatonic

Housatonic

Jacob Kerlin Gise (born 1849)

Born - June 25 1949 (see https://www.myheritage.com/research/record-1-326475201-1-504840/jacob-kerlin-jk-gise-in-myheritage-family-trees below)

Died -

Parents -

Father is David B. Gise (born 1812) .

Siblings include :

1. Daniel Kerlin Gise (born 1843)
   - **Children include :**
     - **Lloyd Preston Gise** (born 1873) (Father of Lawrence Preston Gise (born 1915) , and Great grandfather of **Jeff Preston Bezos**)
     - <others>
2. William Franklin Gise (born 1835)
   - **Children include :**
     - William Kern Gise (born 1871)
     - <others>
3. David K Gise (1838)
4. <others>

Children include :

1. Grace S Gise (born 1886)
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   1. Father of Lt .Colonel William John Gise (June 23 1920 to March 23 2015)
3. <others>

https://www.myheritage.com/research/record-1-326475201-1-504840/jacob-kerlin-jk-gise-in-myheritage-family-trees

Jacob Kerlin (JK) Gise, 1849 - 1938

Jacob Kerlin (JK) Gise was born on June 25 1849, in Centre County, Pennsylvania, to David B Geiss and Sarah Gise (Geise or Geiss) (born Kerlin).

David was born in 1821, in Hooblersburg, Center Hall, Pennsylvania.

Sarah was born in 1814, in Pennsylvania.

Jacob had 8 siblings: William Geiss, David Gise (Geise or Geiss), Susannah K. Wagner (born Geiss), Alesia K. Geiss, Sarah Geiss, Daniel Geiss, Mary Geiss and Catherine A. Geiss.

Jacob married Sarah Ellen Gise (born Search) on May 7 1871, at age 21 in Manhattan, Illinois.

Sarah was born in 1853.

They had 9 children: Daniel F. Gise, A. D. (Allie) Gise, Elsie L. Gise, Sadie E. White (born Gise), Edna Kirgis (born Gise), Grace S. Gise, Will J. Gise, Charle Gise and Ardie B. James (born Gise).

His occupations were Owned and operated a grain Elevator in Beloit, KS . He sold it to the newly formed Farmway COOP and Moved to Kansas from Illinois.

1880

JK Gise - WS Search

https://www.newspapers.com/image/483939967/?terms=gise%2Bjoliet

1898

https://www.newspapers.com/image/483954241/?terms=gise%2Bbank%2Bchicago

1900 (March)

https://www.newspapers.com/image/483955338/?terms=%22JK%2BGise%22

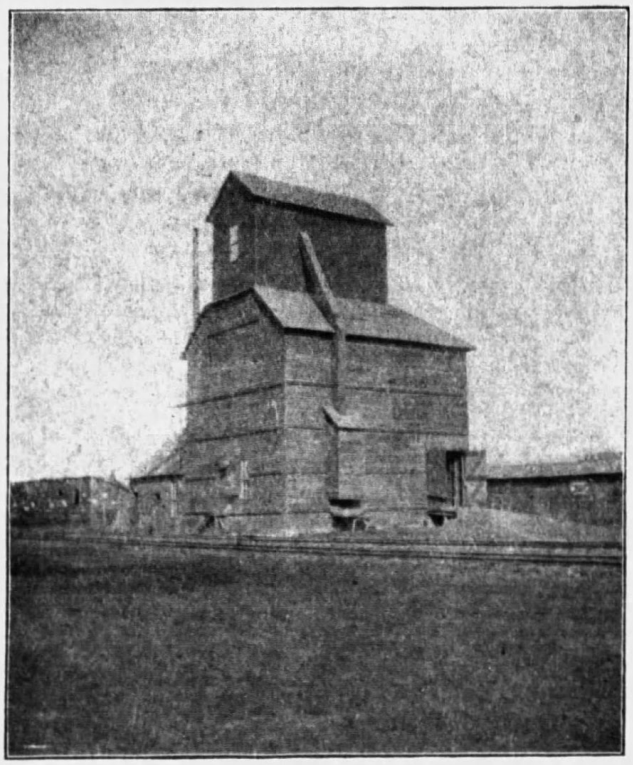
1902 (April 11)

https://www.newspapers.com/image/483266267/?terms=Gise

1902-04-11-the-western-call-beloit-kansas-pg-6

1902-04-11-the-western-call-beloit-kansas-pg-6-clip-jk-gise

1902-04-11-the-western-call-beloit-kansas-pg-6-clip-jk-gise



J. K. Gise,

GRAIN DEALER.

Mr. Gise has been a resident of Mitchell counnty for 22 years, which is about as far back as its history dates. Like nearly all of the influential business men of this state he commenced his career as a tiller of the soil. There is scarcely a business man which would not be benefitted by a man's farming experience and this is especially so with buying grain. Mr. Gise came to Belot three years ago and purchased what has been known for years as the Alliance elevator. With a keen foresight into the grain situation hehas built up a large trade and by dealing squarely with his patrons he intends to increase it. His elevator is one of the best equipped and largest in this vicinity, having a capacity of 16,000 bushels. A good grain market makes a good city, and in no indirect way is Mr. Gise is helping make Beloit one of the best cities of its class in the state.

1903 - Son Dan Gise wedding

https://www.newspapers.com/image/485585863/?terms=%22JK%2BGise%22

1909 (Feb)

https://www.newspapers.com/image/420622043/?terms=%22JK%2BGise%22

1921 - Daughter Ardie B (Gise) James passes

Page : 1921-05-18-the-beloit-gazette-beloit-kansas-pg-1 https://drive.google.com/open?id=1WDtQ47w5sf_SwSABvKAWYjL8m2W9oAXE

The Beloit Gazette (Beloit, Kansas) · 18 May 1921, V

James—Mrs. Alfred James died at her home in this city Sunday noon, May 14, following an illness of only a few days. Ardie B. Gise was born near Joliet, Ill., Will county, Ill., January 15, 1873, and died May 14, 1921, at the age of 48 years and 4 months. She came to Kansas with her parents in February 1889 and settled near Plum Creek and at their home was married twelve years later to Alfred W. James who survives her. Three children survive: Lloyd A. James of Topeka; Ralph W. James and Edith Luella James, both of Beloit. She is also survived by her father, J. K. Gise four sisters, Elsie L. Gise and Mrs. Fred White of Beloit, Mrs. Chas. Kirgis of Cawker City and Miss Grace Gise of Washington, D C., and three brothers, A. D. Gise of Coffeyville, Kans., Dan F. Gise of Beloit and Will J Gise of Sacremento, Calif

Mrs. James was a valued member of the Baptist church. She was a woman admired and highly erspected not only by members of her family but by a large circle of friends. The relatives have the heartfelt sympathy of the entire community in the loss of one whose place can never be filled.

The funeral services were held yesterday afternoon at 2:30 o'clock at the Baptist church conducted by the Rev. L. B. Parker. Interment was made in Elmwood cemetery

1921-05-18-the-beloit-gazette-beloit-kansas-pg-1-clip-mrs-alfred-james
https://drive.google.com/open?id=1WEEqOsHfX8kJWe2LeBI_G3OoBLNCjGgb

BITCHUTE @Housatonic YOUTUBE @HousatonicLive ODYSEE @Housatonic BRIGHTEON @Housatonic

Housatonic

William C Gise (born 1861)

Father - Jacob Gise (born 1819ish)

Sons :

- Grover Daniel Gise (born 1886)
- Luther Russell Gise (born 1895)

Grandchildren include :

- ....
- **Alan Ambrose Gise (born 1929)**

1860 US Census - Jacob Gise (b 1820) Family - Fayette Indiana

PFD Transcript : 1860-www-findmypast-com-transcript-i-usc-fayette-indiana-005165826-00609.pdf / https://drive.google.com/open?id=109OuKh9n-B2DUayolq3vOxV44FY8IAOI

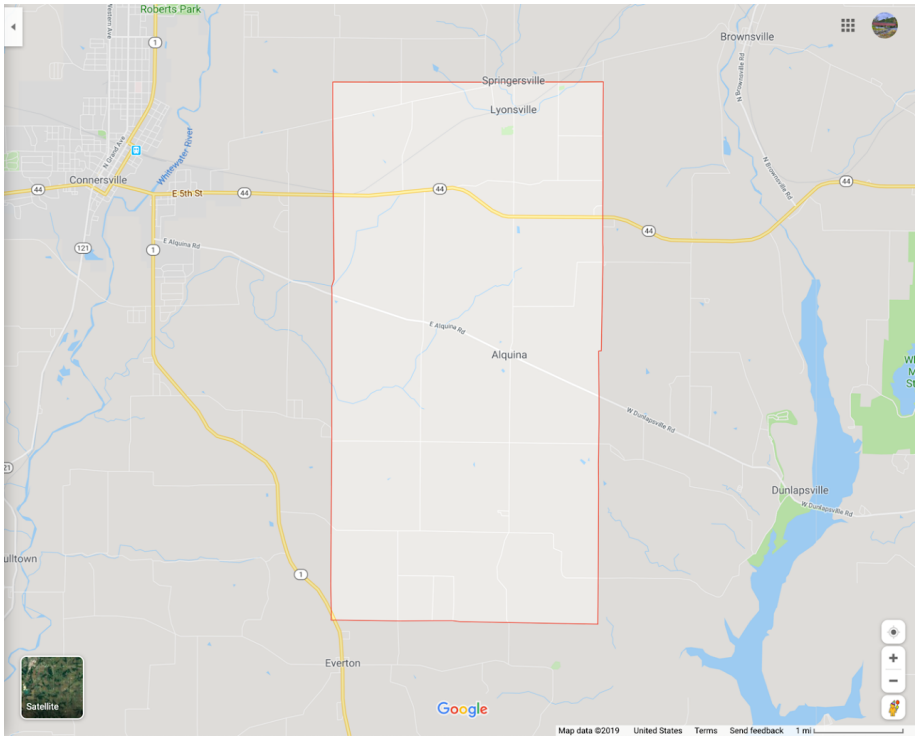
JPG : 1860-usa-census-fayette-indiana-005165826-00609.jpg / https://drive.google.com/open?id=10AqeETzGf1gM1SnY65JgOVBB2btMQCMy

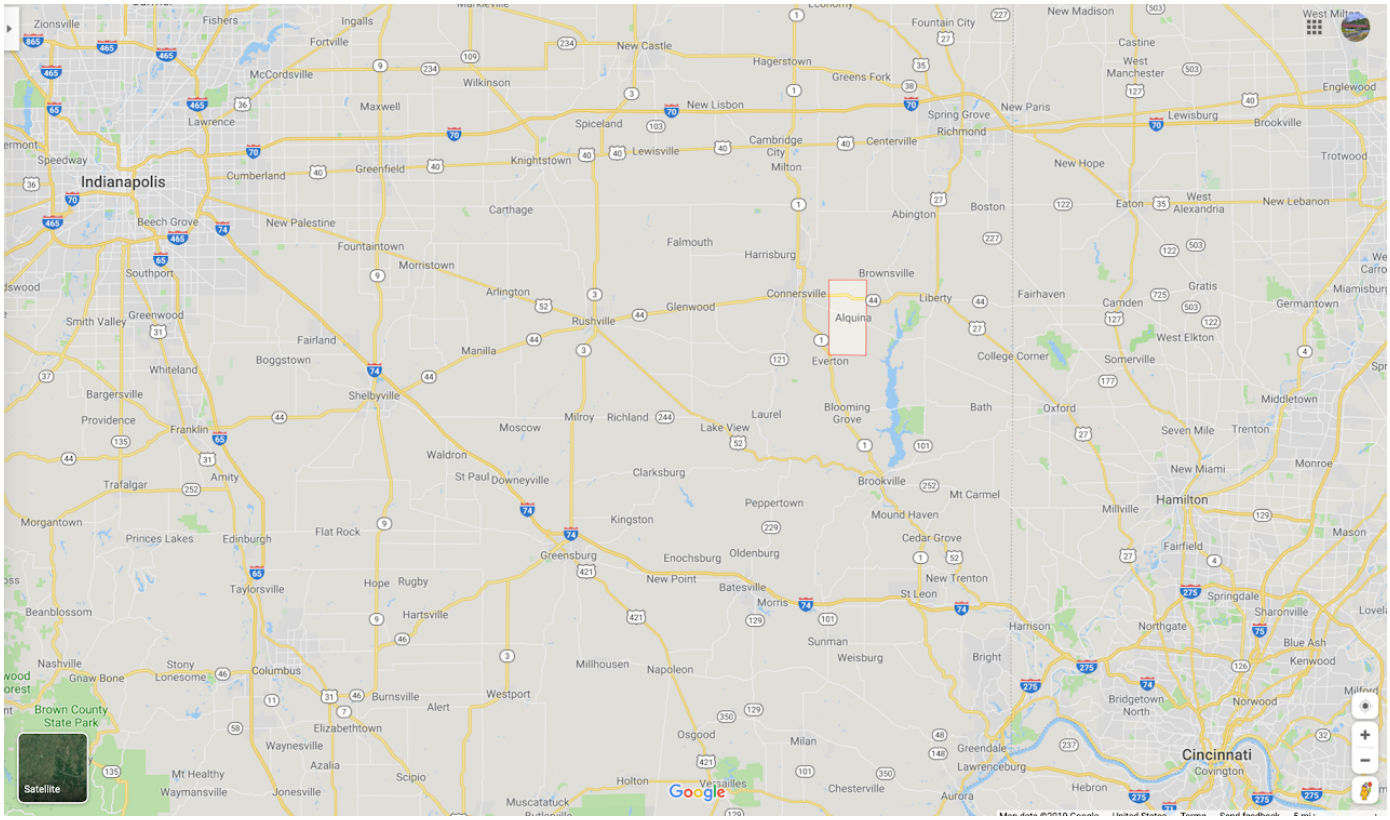
Last name	Gender	Age	First name(s)	Birth year	Birth place
Gise	**Male**	**40**	**Jacob**	**1820**	**Pemsylvania**
Gise	Female	35	Mary	1825	Pemsylvania
Gise	Female	13	Malinda	1847	Pemsylvania
Gise	Male	11	Heny	1849	Pemsylvania
Gise	Male	9	Jacob	1851	Pemsylvania
Gise	Male	7	David	1853	Pemsylvania
Gise	Female	5	Elizabeth	1855	Pemsylvania
Gise	Male	3	Bejain F	1857	Pemsylvania
Gise	Male	1	John	1859	Pemsylvania

1860-www-findmypast-com-transcript-i-usc-fayette-indiana-005165826-00609-clip1.jpg / https://drive.google.com/open?id=10BdSqsezK_pv2TFj46iqB8dlJT26dFvU

Jennings Township, Fayette County - Indiana

The family of Jacob and Mary Gise moved from Pennsylvania to Indiana between 1858 and 1860; All of their children up until 1860 were born in Pennsylvania.

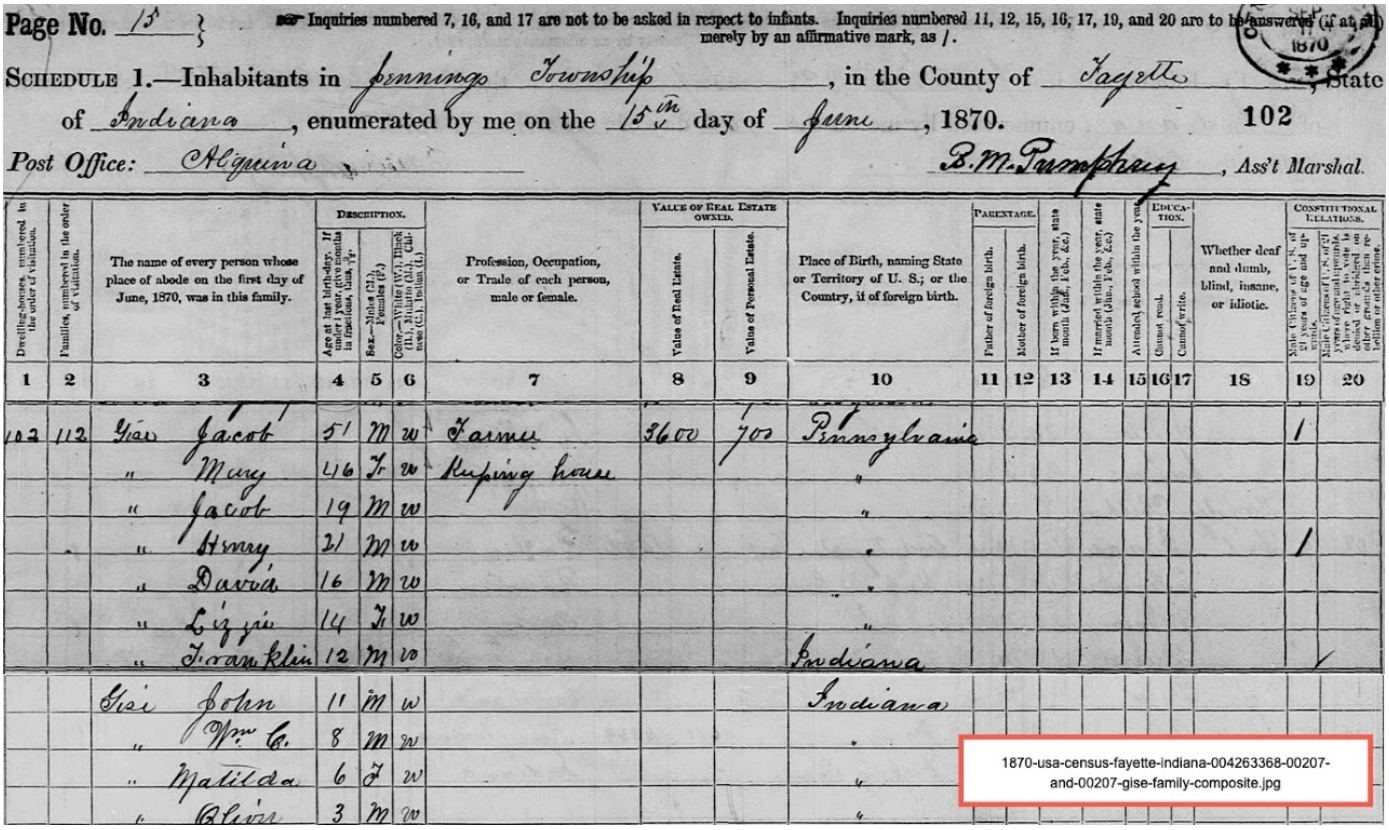




1870 US Census - Gise Family - Fayette Indiana

Sheet one of census - 1870-usa-census-fayette-indiana-004263368-00207.jpg / https://drive.google.com/open?id=10QID8HDJcxWcJQB8G2wP4ihb0gnvLr_3

Sheet two of census - 1870-usa-census-fayette-indiana-004263368-00208.jpg / https://drive.google.com/open?id=10Jt9b3ZE_ZIiIcO9EZFBIKNLVPFgIydC



Page No. 15

☞ Inquiries numbered 7, 16, and 17 are not to be asked in respect to infants. Inquiries numbered 11, 12, 15, 16, 17, 19, and 20 are to be answered (if at all) merely by an affirmative mark, as /.

SCHEDULE 1.—Inhabitants in Jennings Township, in the County of Fayette, State of Indiana, enumerated by me on the 15th day of June, 1870. 102

Post Office: Alquina, B. M. Pumphrey, Ass't Marshal.

Dwelling-houses, numbered in the order of visitation.	Families, numbered in the order of visitation.	The name of every person whose place of abode on the first day of June, 1870, was in this family.	Description: Age at last birthday. If under 1 year, give months in fraction, thus, 7/12.	Description: Sex—Males (M.) Females (F.)	Description: Color—White (W.), Black (B.), Mulatto (Mu.), Chinese (C.), Indian (I.)	Profession, Occupation, or Trade of each person, male or female.	Value of Real Estate owned.	Value of Personal Estate.	Place of Birth, naming State or Territory of U. S.; or the Country, if of foreign birth.	Parentage: Father of foreign birth.	Parentage: Mother of foreign birth.	If born within the year, state month (Jan., Feb., &c.)	If married within the year, state month (Jan., Feb., &c.)	Attended school within the year.	Education: Cannot read.	Education: Cannot write.	Whether deaf and dumb, blind, insane, or idiotic.	Constitutional Relations: Male Citizens of U. S., of 21 years of age and upwards.	Constitutional Relations: Male Citizens of U. S., of 21 years of age and upwards, whose right to vote is denied or abridged on other grounds than rebellion or other crime.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
102	112	Gise Jacob	51	M	W	Farmer	3600	702	Pennsylvania									1	
		" Mary	46	F	W	Keeping house			"										
		" Jacob	19	M	W				"										
		" Henry	21	M	W				"									1	
		" David	16	M	W				"										
		" Lizzie	14	F	W				"										
		" Franklin	12	M	W				Indiana										
		Gise John	11	M	W				Indiana										
		" Wm. C.	8	M	W				"										
		" Matilda	6	F	W				"										
		" Oliver	3	M	W				"										

1870-usa-census-fayette-indiana-004263368-00207-and-00207-gise-family-composite.jpg

1870-usa-census-fayette-indiana-004263368-00207-and-00207-gise-family-composite.jpg / https://drive.google.com/open?id=10Vq689WjydcwPitg2FlLH4lQGutIua9u

Jacob Gise - born 1819-1820

Mary Gise - born 1824-1825

Children - (In order)

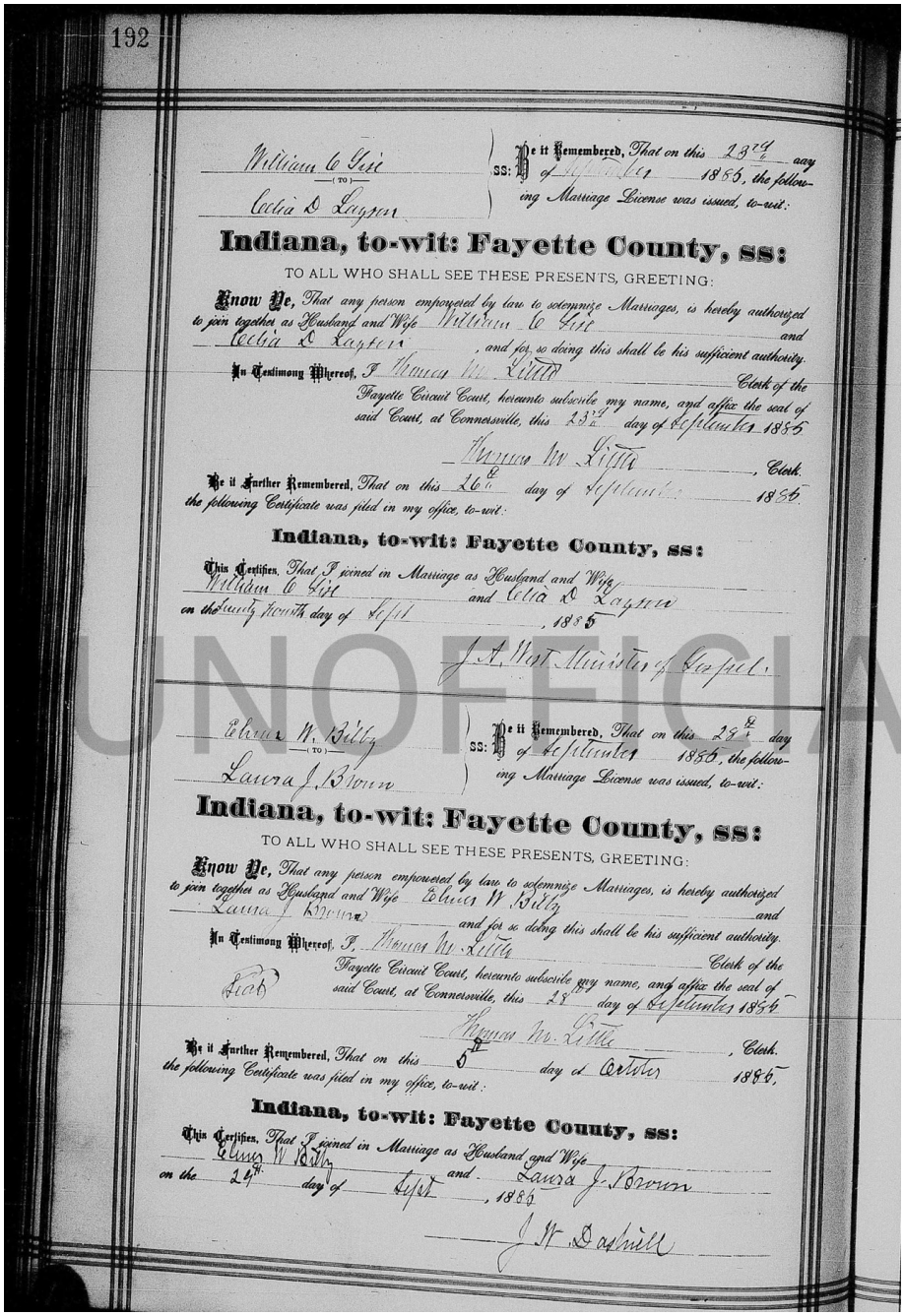
1. **Malinda Gise** - Born 1846-1847
2. **Henry Gise** - Born 1848-1849
3. **Jacob Gise** - Born 1850-1851
4. **David Gise** - Born 1852-1853
5. **Elizabeth ("Lizzie") Gise** - Born 1854-1855
6. **Franklin ("Benjamin Franklin") Gise** - Born 1858-1859
7. **John Gise** - Born 1959(est)
8. **William "C" Gise** - 1862(est)
9. **Matilda Gise** - 1864(est)
10. **Oliver Gise** - 1867(est)

1885 - Marriage of William C Gise to Celia D Layson

Transcript - 1885-09-www-findmypast-com-usa-indiana-fayette-country-marriage-certificate-pg-192-transcript.pdf / https://drive.google.com/open?id=11q6KiZWJBwHRosAyMYTN8N-9rILH4KEg

Marriage 24 Sep 1885

Married Celia D Layson (we also see Celia D. Lawson)



192

William C Gise
(TO)
Celia D Lawson

SS: Be it Remembered, That on this 23rd day of September 1885, the following Marriage License was issued, to-wit:

Indiana, to-wit: Fayette County, ss:

TO ALL WHO SHALL SEE THESE PRESENTS, GREETING:

Know Ye, That any person empowered by law to solemnize Marriages, is hereby authorized to join together as Husband and Wife William C Gise and Celia D Lawson, and for so doing this shall be his sufficient authority.

In Testimony Whereof, I Thomas M Zella Clerk of the Fayette Circuit Court, hereunto subscribe my name, and affix the seal of said Court, at Connersville, this 23rd day of September 1885

Thomas M Zella, Clerk.

Be it Further Remembered, That on this 26th day of September 1885 the following Certificate was filed in my office, to-wit:

Indiana, to-wit: Fayette County, ss:

This Certifies, That I joined in Marriage as Husband and Wife William C Gise and Celia D Lawson on the twenty fourth day of Sept, 1885

J. A. Hart Minister of Gospel.

Edwin W. Bibb
(TO)
Laura J. Brown

SS: Be it Remembered, That on this 23rd day of September 1885, the following Marriage License was issued, to-wit:

Indiana, to-wit: Fayette County, ss:

TO ALL WHO SHALL SEE THESE PRESENTS, GREETING:

Know Ye, That any person empowered by law to solemnize Marriages, is hereby authorized to join together as Husband and Wife Edwin W Bibb and Laura J Brown and for so doing this shall be his sufficient authority.

In Testimony Whereof, I Thomas M Zella Clerk of the Fayette Circuit Court, hereunto subscribe my name, and affix the seal of said Court, at Connersville, this 23 day of September 1885

Thomas M Zella, Clerk.

Be it Further Remembered, That on this 5th day of October 1885, the following Certificate was filed in my office, to-wit:

Indiana, to-wit: Fayette County, ss:

This Certifies, That I joined in Marriage as Husband and Wife Edwin W Bibb and Laura J Brown on the 24th day of Sept, 1885

J. M. Dashiell

UNOFFICIAL

1885-09-usa-indiana-fayette-country-marriage-certificate-pg-192.jpg / https://drive.google.com/open?id=123E-pLusYBYisi18sfdQTDhHcIXSUrgK

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william c gise - Many spellings of wife's last name ("Lawton" , "Lawson", "Layson", etc...)

1895 - https://newspaperarchive.com/connersville-daily-examiner-feb-05-1895-p-2/ <---land purchase

1885 - married - https://newspaperarchive.com/connersville-times-sep-30-1885-p-7/ (here it is "Celia D. Lawson")

1895 - William C Gise was a Navy officer

We are not 100% sure this is the same "William C. Gise". There is very little information to work with here.

1895-07-02-the-los-angeles-times-pg-3.jpg / https://drive.google.com/open?id=125YhfQQxRTRJp6uVkTKwlL-nZa2AesWl

The Los Angeles Times (Los Angeles, California) · 02 Jul 1895, Tue ·

ANNAPOLIS CADETS.

A Batch of Newly-fledged Officers Given Assignments.

(REGULAR ASSOCIATED PRESS REPORT.)

WASHINGTON, July 1.—Secretary Herbert today made the assignment of the Annapolis cadets to the different corps in the navy. These are the six-year cadets. They have recently passed an examination and now become full-fledged officers. They are as follows:

To be ensigns—Wilfred F. Poulson, William S. Montgomery, Frank H. Clark, Jr., Henry H. Ward, Eugene L. Bissell, Edward H. Campbell, Charles J. Lang, Walter C. Crossley, William C. Gise, Thomas Wilson, Henry A. Pearson, Orton P. Jackson, Frank L. Chadwick, John S. Dodridge, Percy N. Olmstead, Christopher C. Ewell, Frank B. Upman, John L. Stecht, Richard S. Douglas, Alfred A. McKethan, Alfred A. Pratt.

To be assistant engineers—Maurice B. Peugnel, Henry B. Price, Martin E. Trench, Frank D. Read, Frank R. Brady, Allen M. Cook, Emmett R. Pollock, Andrew M. Porter.

To be assistant naval constructor, Daniel S. Nutting, Jr.

To be second lieutenant, Louis J. Magill.

An effort is being made to secure places for the three young men who were not recommended by the academic board in the revenue marine service, where they would enter as third lieutenants.

1895-07-02-the-los-angeles-times-pg-3-clip-annapolis-cadets.jpg / https://drive.google.com/open?id=125FYjHwkUSe6rOcFHE9GYONmkRiY1L7F

1870 - Wm. C. Gise on census, with parents (age 8)

1880 - ????? (age 18)

1885 - Wm. C Gise (age 23) marriage to Celia D. Gise (9Marriage to Celia D Layson)

1887 - Gover Gise born (per 1908 marriage certificate - https://www.findmypast.com/transcript?id=FS%2FMAR%2F38140048%2F1

1890 - ???

1895 - Luther Gise born (per 1920 census)

1900 - ????

1908 - grover gise marriage june 20 1908 (https://www.findmypast.com/transcript?id=FS%2FMAR%2F38140048%2F1)

1910 census - Grover D Gise living with wife Emma in Indiana

https://www.findmypast.com/transcript?id=USC%2F1910%2F004971277%2F00430%2F022

1910 - Luther R Gise living with his mOm's parents (Layson) in Indiana - https://www.findmypast.com/transcript?id=USC%2F1910%2F004971206%2F00936%2F012

1916 - Celia D Gise still in Indianapolis

Per phone directory

https://search.findmypast.com/record?id=US%2FDIRECTORIES%2FARCH%2FCITYDIR1916CDAP%2F0567&parentid=US%2FDIRECTORIES%2FARCH%2FCITYDIR1916CDAP%2F0567

1916-findmypast-com-transcript-indianapolis-phone-directory-r-l-polk-and-co-pg-579

https://drive.google.com/open?id=12a5dbzyzmi-3ynQXPSOzdSJMbm17B-55

https://search.findmypast.com/record/pdf?id=us%2fdirectories%2farch%2fcitydir1916cdap%2f0567&parentid=us%2fdirectories%2farch%2fcitydir1916cdap%2f0567

1916-indianapolis-phone-directory-r-l-polk-and-co-pg-579.jpg

https://drive.google.com/open?id=12N5vpbjzMXFjULpk3EI4IDxrSzplddlW

Celia D Gise - Was living in Oklahoma - as of 1920 - born 1867 in Indiana

Sons Luther and Ida May

https://www.findmypast.com/transcript?id=USC%2F1920%2F004967598%2F00900%2F028

she is listed on 1920 census as "Widowed"

Luther is 25 (born in 1895), and Ida May is 19 (born in 1901) - in Indiana

So was William C alive after 1900, but passed before 1919 ? - in Indiana

Luther Gise - WW1 registration - https://www.findmypast.com/transcript?id=USM%2FWWIDR%2F1640035060

1903 - william c gise sells land to celia gise - death? https://newspaperarchive.com/connersville-times-apr-08-1903-p-7/

1910 - Luther Gise - grandson - https://www.findmypast.com/transcript?id=USC%2F1910%2F004971206%2F00936%2F012

Living with Layson family (that would be his Mom's family)

1929 - Alan Ambrose Gise born (https://newspaperarchive.com/rushville-daily-republican-mar-11-1929-p-12/)

https://www.ancestry.co.uk/boards/surnames.wygant/49.27/mb.ashx

Ida Mae Wygnant - Born 1900

1930

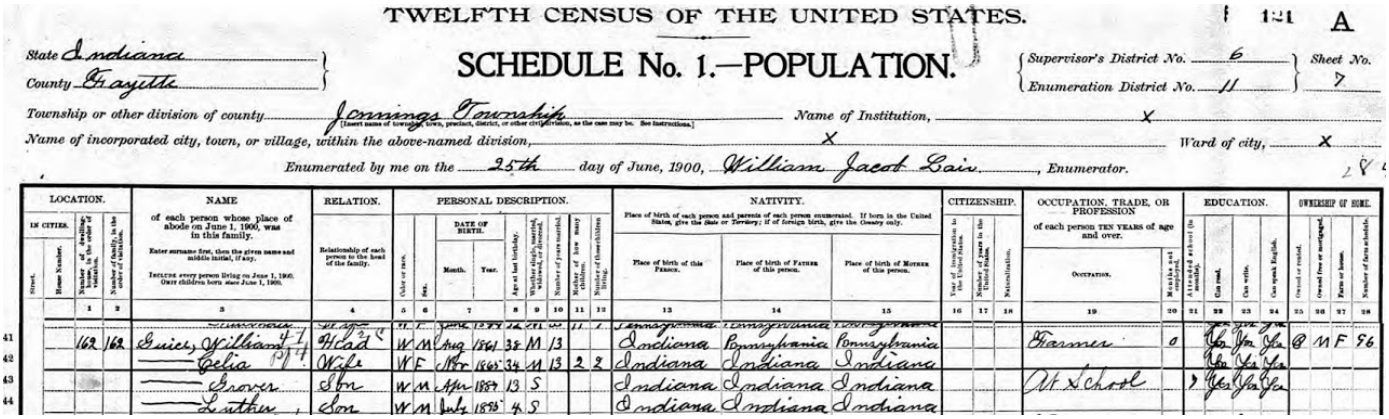
Celia Gise

https://www.findmypast.com/transcript?id=USC%2F1930%2F004950599%2F00108%2F046

Living in Indiana with the Lyon family

1900 - William Guice (aka William C Gise) in Fayette, Indiana

Full census sheet - 1900-usa-census-fayette-indiana-4118598-00246.jpg / https://drive.google.com/open?id=12kkqpRywle5wwVH1XHMgt-8meeUvh2Mv



TWELFTH CENSUS OF THE UNITED STATES. 121 A

State Indiana
County Fayette

SCHEDULE No. 1.—POPULATION.

Supervisor's District No. 6 Sheet No. 7
Enumeration District No. 11

Township or other division of county Jennings Township [Insert name of township, town, precinct, district, or other civil division, as the case may be. See instructions.] Name of Institution, X

Name of incorporated city, town, or village, within the above-named division, X Ward of city, X

Enumerated by me on the 25th day of June, 1900, William Jacob Gain, Enumerator.

	LOCATION. Street	House Number.	Number of dwelling house, in the order of visitation	Number of family, in the order of visitation	NAME of each person whose place of abode on June 1, 1900, was in this family. Enter surname first, then the given name and middle initial, if any. Include every person living on June 1, 1900. Omit children born since June 1, 1900.	RELATION. Relationship of each person to the head of the family.	PERSONAL DESCRIPTION. Color or race.	Sex.	DATE OF BIRTH. Month.	Year.	Age at last birthday.	Whether single, married, widowed, or divorced.	Number of years married.	Mother of how many children.	Number of these children living.	NATIVITY. Place of birth of this Person.	Place of birth of Father of this person.	Place of birth of Mother of this person.	CITIZENSHIP. Year of immigration to the United States.	Number of years in the United States.	Naturalization.	OCCUPATION, TRADE, OR PROFESSION of each person TEN YEARS of age and over. Occupation.	Months not employed.	EDUCATION. Attended school (in months).	Can read.	Can write.	Can speak English.	OWNERSHIP OF HOME. Owned or rented.	Owned free or mortgaged.	Farm or home.	Number of farm schedule.
	1	2			3	4	5	6	7		8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28
41		162	162		Guice, William C	Head	W	M	Aug	1861	38	M	13			Indiana	Pennsylvania	Pennsylvania				Farmer	0		Yes	Yes	Yes	O	M	F	86
42					Celia	Wife	W	F	Nov	1865	34	M	13	2	2	Indiana	Indiana	Indiana							Yes	Yes	Yes				
43					Grover	Son	W	M	Apr	1889	13	S				Indiana	Indiana	Indiana				At School			Yes	Yes	Yes				
44					Luther	Son	W	M	July	1895	4	S				Indiana	Indiana	Indiana													

1900-usa-census-fayette-indiana-4118598-00246-clip-william-guice-gise.jpg / https://drive.google.com/open?id=12h4Ha_2VGQ-jwE71dwX2QKBB4QKFtLr5

1905 - William C Gise Dies

See grave (located in Fayette, Indiana) - 2019-09-findagrive-com-792605081-william-c-gise-1861-1905.pdf / https://drive.google.com/open?id=12wvSWyRgrc4G1gH5FZp8SRV4-WbgrZY-

2019-09-findagrive-com-792605081-william-c-gise-1861-1905-131952236072.jpg / https://drive.google.com/open?id=133gqYE9nPVD5aki98RCE11j_hQSRNCii

July 1930 : Mrs. Celia Dell Gise passes (was married to "WIlliam C. Gise"), and mother of "Grover D. Gise"

1920-07-30-the-muncie-evening-press-pg-12.jpg / https://drive.google.com/open?id=10xhqXTnTqhLvF0IEjJT7XC1fwHrk_y4b

BITCHUTE @Housatonic YOUTUBE @HousatonicLive ODYSEE @Housatonic BRIGHTEON @Housatonic

Housatonic

William Kern Gise (born 1871)

"Lieutenant Commander William Kern Gise"

Date of birth: June 22, 1871 ([HI0002][GDrive])

Date of death: June 28, 1909 (Age: 38) ([HI0002][GDrive])

Parents: Father is **William Franklin Gise** (born 1835)

Other relationships :

- **Uncles**
  - Jacob Kerlin Gise (born 1849)
    - **Children include : (these are cousins of William Kern Gise)**
      - Grace S Gise (born 1886)
      - William John Gise (born 1888)
        - Father of **Lt .Colonel William John Gise Jr (born 1920)** (June 23 1920 to March 23 2015)
      - <others>
  - Daniel Kerlin Gise (born 1843)
    - **Children include : (these are cousins of William Kern Gise)**
      - **Lloyd Preston Gise** (born 1873) (Father of Lawrence Preston Gise (born 1915) / Great grandfather of **Jeff Preston Bezos**)
      - <others>
  - David K Gise (1838)

Notes:

1900 to 1901 : Captain of USS Sylph (PY-5) (US Presidential Yacht) for President McKinley

US Naval Academy Information

US Naval Academy Virtual Memorial Hall Entry : [HI0002][GDrive]

WILLIAM K. GISE, LCDR, USN : William Gise '93

William Kern Gise was admitted to the Naval Academy from Illinois on June 14, 1889.

William Kern Gise "died while on duty" on June 28, 1909 as the executive officer of the naval station at Tutuila, Samoa. **Unable to determine the circumstances of his death, but there is nothing to suggest it was operational in nature.**

Register of Alumni gives date of death as June 29 but no other information.

He was survived by his mother and two siblings; he is buried in Arlington National Cemetery. (William's body was originally buried in Samoa, but re-interred in September 1910.)

In 1906 he was stationed in the Washington, D.C. area; as a Lieutenant he was in charge of "a battalion of marines and bluejackets" during a funeral at Arlington National Cemetery.

He was a veteran of the Spanish-American War, having served in Texas during the Battle of Santiago. He at one time commanded the presidential yacht Sylph.

William K Gise was born on month day 1871, at birth place, Illinois, to William Franklin Gise and Millie Gise.

William had 2 siblings: Edgar Kern Gise and one other sibling.

William lived in 1880, at address, Illinois.

William passed away on month day 1909, at age 38 at death place, American Samoa.

He was buried at burial place, Virginia.

Lt. Cmdr William Kern Gise assignments

See US Naval Academy Virtual Memorial Hall Entry : [HI0002][GDrive]

- July 1894 : Naval Cadet, Newark
- January 1895 : Naval Cadet, Newark
- January 1896 : Ensign, Texas
  - Others at this command: LTjg Albert Beecher '84, Naval Cadet Worth Bagley '95, and Naval Cadet Joseph Breckinridge '95.
- January 1897 : Ensign, Amphitrite
- January 1898 : Ensign, Texas
  - Others at this command: Naval Cadet Frederic Holman '97.
- January 1899 : Ensign, Topeka
- January 1900 : Lieutenant (j.g.), Navy Yard, Washington, D.C.
- January 1901 : Lieutenant (j.g.), commanding officer, Sylph
- January 1902 : Lieutenant, Kentucky
- January 1903 : Lieutenant, Kentucky
- January 1904 : Lieutenant, Kentucky
  - Others at this command: MIDN Ralph Griswold '02 and MIDN John Rodgers '03.
- January 1905 : Lieutenant, Navy Yard, Washington, D.C.
  - Others at this command: LT Joseph Graeme '97.
- July 1906 : Lieutenant, Dolphin
- July 1907 : Lieutenant Commander, Dolphin
- January 1908 : Lieutenant Commander, Ohio
  - Others at this command: MIDN Charles Hovey '07.
- January 1909 : Lieutenant Commander, Annapolis

TIMELINE

1880 census - William K Gise with parents

WK Gise is 8 years old

Father William Franklin Gise (born 1835) is described as a"Dry Goods Merchant"

Full Transcript : [HS0004][GDrive] / Image of census form : [HS0006][GDrive]

Record Transcription:
Us Census 1880

Household Members

First name(s)	Last name	Relationship	Marital status	Gender	Age	Birth year	Birth place
William F.	**Gise**	**Self**	**Married**	**Male**	**44**	**1836**	**Pennsylvania**
Millie K.	Gise	Wife	Married	Female	39	1841	Pennsylvania
Virna	Gise	Daughter	Single	Female	13	1867	Pennsylvania
William K.	Gise	Son	Single	Male	8	1872	Illinois
Edgar	Gise	Son	Single	Male	7	1873	Illinois

[HS0005][GDrive]

1889 (Jan 20) - William K Gise is a US Navy cadet

Full newspaper page : [HN00B1][GDrive]

Chicago Tribune (Chicago, Illinois) · 20 Jan 1889, Sun · Page 11

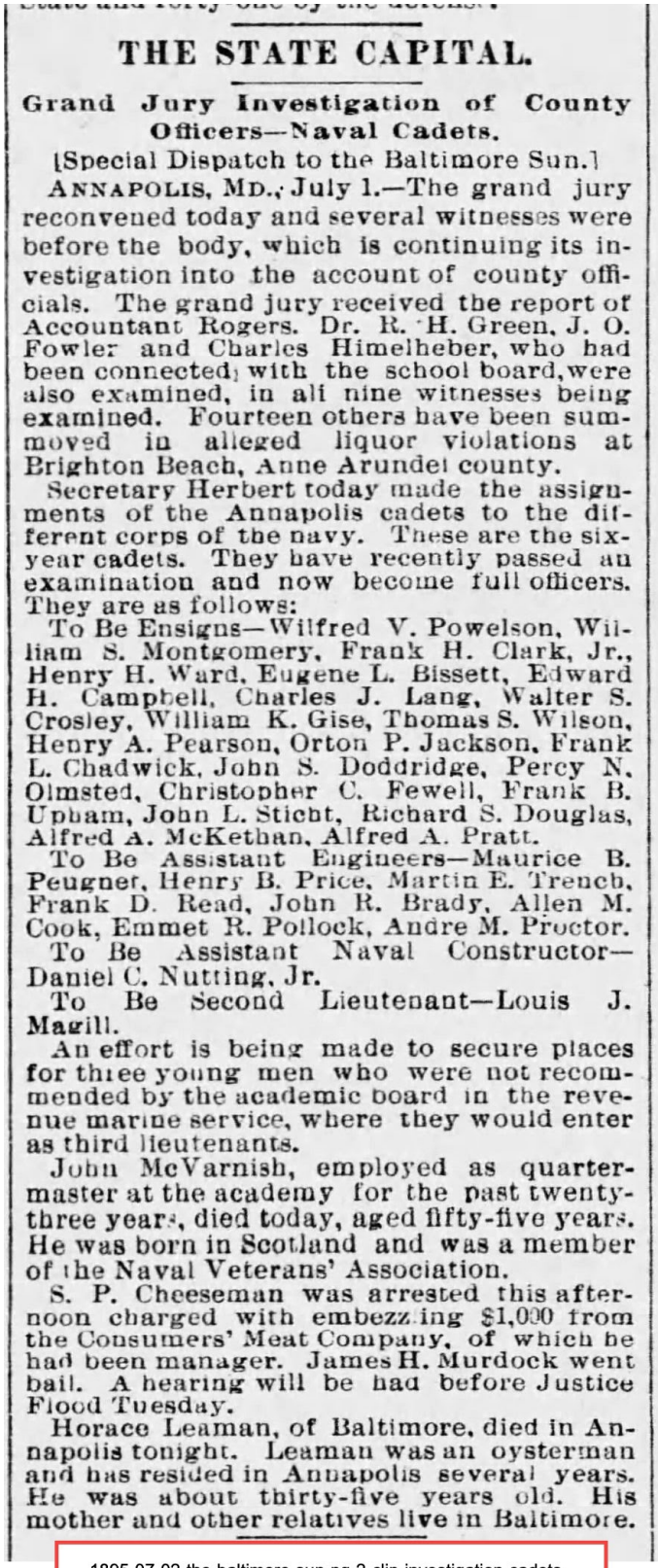
Candidates for Mason's Cadetship.

WASHINGTON, D. C., Jan. 19.—Congressman Mason has completed the examination of the papers of those examined for the cadetship at West Point. The two having the highest general average were Louis H. Bash, residing at No. 359 Washington boulevard, and William K. Gise of No. 1045 Monroe street. The average of Bash was 97 1-5 and Gise 92. None of the others had a general average above 90, and most of them below 85. Mr. Mason left for Chicago this morning, ostensibly for the purpose of attending to several law cases he is interested in.

[HN00B2][GDrive]

1895 (July 2) - WK Gise to be US Navy Ensign

Full newspaper page : [HN00BB][GDrive]



THE STATE CAPITAL.

Grand Jury Investigation of County Officers—Naval Cadets.

[Special Dispatch to the Baltimore Sun.]

ANNAPOLIS, MD., July 1.—The grand jury reconvened today and several witnesses were before the body, which is continuing its investigation into the account of county officials. The grand jury received the report of Accountant Rogers. Dr. R. H. Green, J. O. Fowler and Charles Himelheber, who had been connected with the school board, were also examined, in all nine witnesses being examined. Fourteen others have been summoved in alleged liquor violations at Brighton Beach, Anne Arundel county.

Secretary Herbert today made the assignments of the Annapolis cadets to the different corps of the navy. These are the six-year cadets. They have recently passed an examination and now become full officers. They are as follows:

To Be Ensigns—Wilfred V. Powelson, William S. Montgomery, Frank H. Clark, Jr., Henry H. Ward, Eugene L. Bissett, Edward H. Campbell, Charles J. Lang, Walter S. Crosley, William K. Gise, Thomas S. Wilson, Henry A. Pearson, Orton P. Jackson, Frank L. Chadwick, John S. Doddridge, Percy N. Olmsted, Christopher C. Fewell, Frank B. Upham, John L. Sticht, Richard S. Douglas, Alfred A. McKethan, Alfred A. Pratt.

To Be Assistant Engineers—Maurice B. Peugnet, Henry B. Price, Martin E. Trench, Frank D. Read, John R. Brady, Allen M. Cook, Emmet R. Pollock, Andre M. Proctor.

To Be Assistant Naval Constructor—Daniel C. Nutting, Jr.

To Be Second Lieutenant—Louis J. Magill.

An effort is being made to secure places for three young men who were not recommended by the academic board in the revenue marine service, where they would enter as third lieutenants.

John McVarnish, employed as quartermaster at the academy for the past twenty-three years, died today, aged fifty-five years. He was born in Scotland and was a member of the Naval Veterans' Association.

S. P. Cheeseman was arrested this afternoon charged with embezzling $1,000 from the Consumers' Meat Company, of which he had been manager. James H. Murdock went bail. A hearing will be had before Justice Flood Tuesday.

Horace Leaman, of Baltimore, died in Annapolis tonight. Leaman was an oysterman and has resided in Annapolis several years. He was about thirty-five years old. His mother and other relatives live in Baltimore.

1895-07-02-the-baltimore-sun-pg-2-clip-investigation-cadets

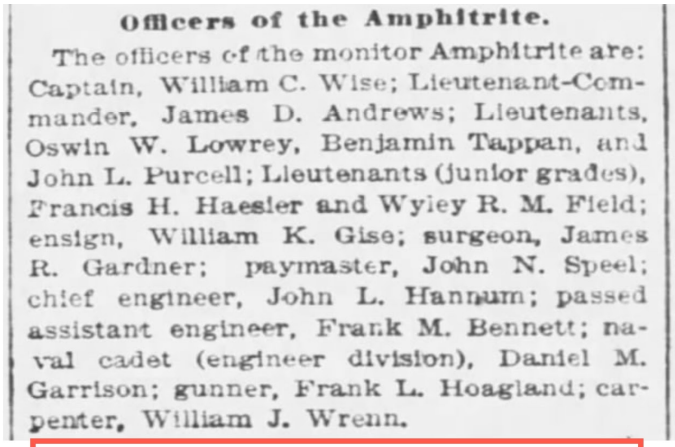
[HN00BC][GDrive]

1897 (Feb 08) - Assigned to the Amphitrite

https://www.newspapers.com/image/349870593/?terms=%22William%2Bk%2BGise%22

1897-02-08-chicago-tribune-pg-1-amphitrite

1897-02-08-chicago-tribune-pg-1-amphitrite



Officers of the Amphitrite.

The officers of the monitor Amphitrite are: Captain, William C. Wise; Lieutenant-Commander, James D. Andrews; Lieutenants, Oswin W. Lowrey, Benjamin Tappan, and John L. Purcell; Lieutenants (junior grades), Francis H. Haesler and Wyley R. M. Field; ensign, William K. Gise; surgeon, James R. Gardner; paymaster, John N. Speel; chief engineer, John L. Hannum; passed assistant engineer, Frank M. Bennett; naval cadet (engineer division), Daniel M. Garrison; gunner, Frank L. Hoagland; carpenter, William J. Wrenn.

1897-02-08-chicago-tribune-pg-1-amphitrite

1899

Gise and Powers Symington (born 1872) both junior lieutenants - https://www.newspapers.com/image/72207191/?terms=gise%2Bsymington

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1900 (Jan 30) - Ordered to command the USS Sylph

https://www.newspapers.com/image/214857661/?terms=gise%2Bsylph

Captain of USS Sylph (PY-5) (US Presidential Yacht)

1900 (Feb) - WK Gise on the Sylph - tribute to Henry W Lawton

Full newspaper pages:

- Page 1 : [HN00B9][GDrive]
- Page 10 : [HN00B7][GDrive]

The Evening Star

WASHINGTON, D. C., FRIDAY, FEBRUARY 9, 1900—SIXTEEN PAGES.

A NATION'S TRIBUTE

Funeral of the Late Major General Henry W. Lawton.

TRIBUTES TO THE DEAD HERO

Sermon Delivered by Rev. Dr. H. M. W. Stryker.

MEMORABLE OCCASION

He who dies for home and country
Cannot die in vain;
Memory of his deeds shall linger—
Deathless is his fame.

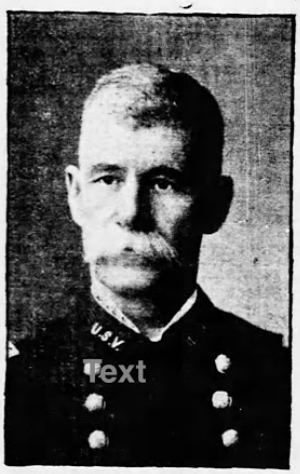
Battle fame is still eternal;
Suns and stars illume;
Love and Truth can never perish—
Triumphs o'er the tomb.

Lawton's fame shall live forever;
Sound his praises high;
Grave upon the sculptured marble—
Worth can never die!

JOHN A. JOYCE.

The nation today paid its last mournful tribute to all that was mortal of Henry Ware Lawton, a peerless patriot, a heroic soldier, a noble and modest gentleman, and around his bier there were gathered all the most distinguished representatives of the Union he had loved so well and served so faithfully, and in whose behalf he had gone unto death, a sacrifice to the duty which was his ideal.

The President of the United States and his cabinet, the members of the Supreme Court, the officers of the army and navy were present in the Church of the Covenant, while elsewhere were thronged the great crowds who represented the people who are the nation. Nearly all the available troops remaining in the country were called out, and 3,000 soldiers gathered to follow the flag-draped caisson to the grave, but in the crowds that surrounded the church and lined the streets and avenues along which the cortege is to pass and have assembled at Arlington the greater significance of tribute was exemplified.



Lawton was to the people the ideal American soldier, whose exploits in three wars made his name a household word, and who, being a soldier first and only, died in the line of duty, leaving nothing to his children but the heritage of an honorable name. It was in tribute to this soldierly ideal that American generosity for weeks past had swelled "the Lawton fund" beyond all expectation of its originators, and in further tribute today that the great outpouring of citizens filled the streets long before the hour when the services at the Church of the Covenant were to commence over the hero whose remains had lain in state under military guard through the silent watches of the night.

The guard, cavalrymen from Lawton's old command, stood at each end of the catafalque, silent and motionless as uniformed statues, and the hush of the silent church was broken only by the soft tread of those who with bowed heads came to pay their last, silent tribute to the brave.

A Distinguished Gathering.

Mrs. Lawton and the members of her family occupied a front pew, and among the early arrivals was President McKinley, who was accompanied by the Secretary of War. The Secretary of the Interior, the Secretary of the Navy, the Secretary of Agriculture, the Attorney General and the Postmaster General were also present. The United States Supreme Court was represetned by Chief Justice Fuller and several of the associate justices.

Admiral Dewey is absent from Washington, but was represented by Captain A. S. Barker. Ex-Secretary Alger was also present by proxy, having sent from Michigan Mr. Victor Mason, his secretary while in the War Department. The military committees of both House and Senate were present, as well as all the senators and members who could gain access to the church. Army and navy officers in uniform filled most of the forward pews and a press of citizens stood up at the rear and in the wide vestibule beyond the doors.

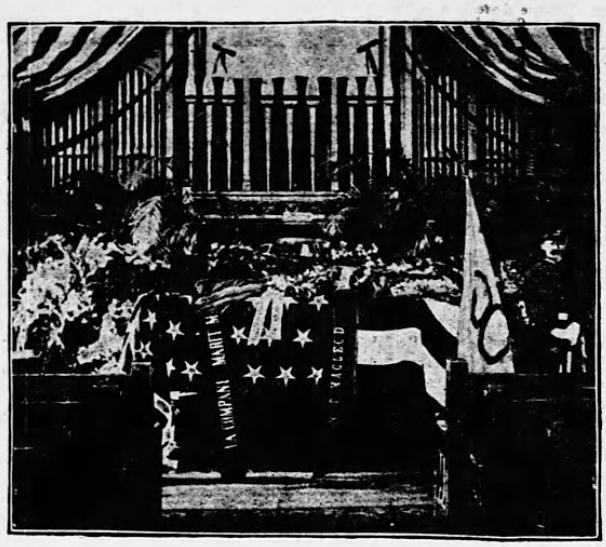
The Pallbearers.

The honorary pallbearers were Rear Admiral A. S. Barker, representing the navy; Maj. Gens. Miles, Brooke and Shafter, representing the army; Brig. Gen. Breckinridge, representing the corps to which Gen. Lawton belonged; Senators Hawley and Sewell, representing the Senate; ex-Gov. Hull of Ohio; Col. Steele and Mr. J. M. Robinson of Indiana, representing the House of Representatives; Gen. J. M. Wilson, representing the Loyal Legion; Col. Farnsworth, representing the Grand Army of the Republic; Col. Greighton Webb, U. S. V., representing the officers on Gen. Lawton's staff during the Santiago campaign; Col. M. E. Urell, representing the veterans of the Spanish war.

There were delegations present from the Military Order of the Loyal Legion and the Grand Army of the Republic. The first was composed of senior vice commander, Rear Admiral Edwin Stewart, United States navy; junior vice commander, Brevet Brig. Gen. Ellis Spear, United States volunteers; chaplain, James H. Bradford, United States volunteers; Gen. Royal T. Frank, United States army; Gen. Henry V. Boynton, United States volunteers; Col. George A. Woodward, United States army; Col. Addison A. Hosmer, United States volunteers; Capt. Benjamin P. Lamberton,

(Continued on Tenth Page.)

[HN00BA][GDrive]



LYING IN STATE.

light battery, moving to the rear of officers' quarters on direct road to cemetery, will form line on the open ground between the last set of quarters and the hospital facing the cavalry.

The infantry will form line along the right curb; the foot artillery along the left curb, facing the infantry. The battalion of marines will form line along both curbs in such manner as to equalize the length of line. Arms will be presented by battalion commanders as the remains approach the lines.

The remains will be conducted to the grave by the commanding general and staff, followed by Troop G, 3d United States Cavalry, dismounted, Capt. Hardie commanding, and preceded by the 3d United States Cavalry Band. Troops will remain in above position until after conclusion of the ceremonies, when they will follow the commanding general and staff to the city, to be dismissed and marched directly to their quarters.

The siege battery left the column at the Aqueduct bridge and returned to the barracks.

Gen. Lawton's Horse.

An affecting part of the procession was a dumb mourner. He marched in the rear of the caisson which bore his master's body. He was General Lawton's horse. He wore a black hood over his head, and in the stirrups were the boots that his heroic rider had worn in many a charge. He was led by Private McGarigle. The intelligent animal seemed to realize that he had lost something dear to him.

Early Incidents.

The unauthorized announcement that the Church of the Covenant would be open to the public this morning caused a very large crowd, mostly ladies, to visit the edifice, and Sergeant Lyda of the third precinct,

A NATION'S TRIBUTE

ister, as the missionaries of the perfect

A NATION'S TRIBUTE

(Continued from First Page.)

United States navy; Col. Green Clay Goodloe, United States marine corps; Maj. John S. Loud, United States army, and Capt. Horace Noble, United States volunteers.

The G. A. R. was represented by Calvin Farnsworth, George H. Slabaugh, B. F. Chase, J. H. Dawes, T. S. Hopkins, S. E. Faunce, Nathan Bickford and John McElroy.

Rev. Dr. Stryker's Sermon.

The Presbyterian burial service was read by Rev. Teunis Hamlin, pastor of the church, and President H. M. W. Stryker of Hamilton College then arose to deliver the oration.

Dr. Stryker said in part:

"Over the width of the earth a soldier's household has brought its warrior home. The dust that the nation gathers to its guarding is that of no common man. We are met to celebrate and to mourn him. But while we recall the record so compact with manliness, and which the white blossom of modesty crowns withal, while we recite the story of one who personified the best American traditions, first this day do we regard her sorrow who treads that 'solemn aisle of pain' the sanctity of whose shadows are accessible only to her God. And with her, we remember, too, for his true sake who begat them, these four dear children—daughters of the army, wards of the people, and son whose best possession shall ever be his father's sword. Orphaned of him indeed his children are, but endowed too with the immutable heritage of a gallant name. It is an estate which with all that appropriately pertains to it this land of pure domestic love will thoughtfully and thankfully administer.

"'Blessed be the God and Father of our Lord Jesus Christ, the Father of mercies and God of all comfort; who comforteth us in all our affliction, that we may be able to comfort them that are in any affliction, through the comfort wherewith we ourselves are comforted of God.'

"Hither we have come—the people's chosen head, and all authorities else from their high several sessions—to pay our poor but tender alms of love to an unblemished memory, to thank Him who is our dwelling place in all generations, that the stout tree of liberty still yields such manner of fruitage, and to pledge ourselves, considering the issue of the lives of our renowned dead, to imitate their unblenching and unblighted faith.

"Station is secondary, humanity is primary. And, whatever else any is, today we all are only men and women, brothers and sisters, lifting as children our wet faces toward the consolations of God. The stars of the spangled flag, covering now this shape of its noble warden, shine multiplied upon the dews of grief. But with a solemn joy, it beseems you, his comrades of the army, to give thanks for the life whose end must (after this parenthesis of difficult farewells) be viewed, not as a calamity, but as a conquest. 'Men unapt to weep' are smitten by the pathos of that courage we commemorate—courage, most touching of all human graces; but let them also smile with exalted hope as they lay upon this soldier's sepulchre the chaplets of their homage."

Without Fear, Without Reproach.

Dr. Stryker eulogized Gen. Lawton's military career, and went on to say:

"This better Plantaganet, this latest Bayard 'without fear and without reproach,' this modern Philippe Sydney, whose life also was 'poetry put into action,' has shown once more of what a stuff is incorrigible manhood—in what substance root the memories that last.

"For a true poet (and so proven) is one who has written at least some things of which no poet that ever lived could have been ashamed, would gladly have owned; and a true man is admitted to the fellowship of heroes by the equality and peerage of his supreme deeds. Here was one whom Raleigh, Gustavus Adolphus, William of Orange, Winkiereid, Cambronne, Garibaldi, would know at sight. He was of that time-enduring breed which has made Agincourt and Naseby and Quebec and Lucknow of immortal story. He was comrade to the Marylanders who guarded the retreat at Long Island, to the men who passed the Delaware, who served the guns of Pleasanton, who soaked the sod of the Peach Orchard, who ran singing through the tide at Manila, who held Guantanamo. The soul was in him of those who did business in great waters with Paul Jones and Lawrence and Truxton and Worden and Bagley—of all the line who yet are with us and which shall not be diminished though all the seas run red. He was in the spiritual loins of Joseph Warren and of Herkimer. He knew the secret and has saluted the souls of Mansfield and Sedgwick and Reynolds and McPherson and Phil Kearney and Custer!

"Let it be said, and let it be said here, that none of us is of those who walk backward into the future and translate the present upside down! A tumid and carping pessimism lives only in the pluperfect, but good faith lives in the future-perfect. The one is subjunctive, the other is indicative. Nay, duty is in the imperative and unconditional mood!

"When, in the name of mankind, and that peace might be real, we undertook in 1898 to cleanse the seas, we affirmed a principle and made a precedent that I, for one, hold to have written the most honorable leaf in all our history. But all that has been since was corrolary to that. No special pleading of professional malcontents with whom wisdom will not dine, no a priori abstraction, can unsay what this dead soldier's zeal said for America. Rather does such a death enjoin upon our purpose and performance such ends as shall vindicate us from cowardly indifferentism and evasion in the face of whatever duty and however unexpected or complex—enjoin us to regard and to teach liberty's authority.

"We do not welcome war, we deplore it; but more deplorable were a craven vacillation toward a riddle which must have room for its solution. For that room's sake, and for the peace it shall secure at last, we reverently invoke upon our arms the favor of the Lord of Hosts' and law of liberty, toward the pacification of the globe, and unto the coronation of that Blessed and Only Potentate, 'having neither beginning of days nor end of years,' who in righteousness judges and makes war, and who is the Prince of Life.

"New meridians of relation, new zones of authority, new horizons of duty—these, with all their concomitant responsibilities; but also with the assurance that He who lades the burden will strengthen the back—that

"'Only the Master shall praise us,
And only the Master shall blame.'

"Our faith, too, must needs be militant, dauntless, ready to die if need were, or else we are unworthy to touch the hem of this pall, which rather let us, in remembrance of one who fought our fight, press to our lips with kisses that are covenants—covenants that we henceforth will stand, as those that are 'baptized for the dead,' to advance our country's true cause, to purify and to exalt it.

"In some good day—not far away, please God—when those islands, foundlings no longer, shall have been rendered as a majestic dedand to civilization, to regulated freedom, and to the God of these, there in fair Luzon, right where he fell, front to his duty, let the valiant frame of this true liberator rise in immutable bronze, while, understanding us at last, our brown brothers, gazing upon that statue, stature, statute, all in one, shall say: 'He was America's; but he is ours, too—Lawton! He was slain by us ignorantly in unbelief; but he has forgiven.'"

As the casket was borne from the church Lieut. Santlemann of the Marine Band raised his baton, and there was a low double ruffle of the drums, and then the band softly began the impressive music of "Safe in the Arms of Jesus."

The Start for Arlington.

The casket, lightened of part of its burden of flowers, was lifted to the shoulders of the troopers and borne down the aisle to the street, past the great crowd outside, where it was raised to the caisson waiting at the door. The waiting ranks of cavalry moved forward and closed about it as a guard of honor. Orders, flung from rank to rank down the crowded avenue, brought troop after troop and platoon after platoon wheeling into line. Then, with a rumble of wheels and clash of trace-chains, field and siege batteries joined the procession, and the hero of three wars moved on his last march to his final resting place on the Virginia hillside beyond the Potomac.

The Route of March.

Thousands of citizens stood with uncovered heads as the caisson passed over the route to the cemetery. The line of march and the order of the procession was as follows:

Connecticut avenue and K street west to Pennsylvania avenue; thence through 24th street to M street; thence west on M street to Aqueduct bridge and Fort Myer, Va.

Platoon of mounted police, Captain M. A. Austin commanding.

Third United States Cavalry Band.

Major General Wesley Merritt and staff.

Squadron 3d United States Cavalry, Major Henry Jackson commanding.

Light Battery M, 7th United States Artillery, Captain M. M. Macomb commanding.

Siege Battery O, 7th United States Artillery, Captain John R. Williams commanding.

Brigade of foot troops, Colonel Francis L. Guenther commanding, and staff.

Regiment United States Infantry, Colonel Edward Moale commanding.

First Battalion, Companies C, D, E and F, 15th United States Infantry, Lieutenant Colonel Constant Williams commanding.

Second Battalion, Companies G, K, L and M, 15th United States Infantry, Major George A. Cornish commanding.

Third Battalion, Companies E, F, G and H, 2d United States Infantry, Captain Edmund K. Webster commanding.

Regiment United States Artillery, Colonel John I. Rodgers commanding.

First Battalion, Batteries E, G, K and N, 4th United States Artillery, Major James M. Lancaster commanding.

Second Battalion, Batteries A, B, L and M, 5th United States Artillery, Major John B. Burbank commanding.

Third Battalion, Batteries C, H and N, 5th United States Artillery, O, 4th United States Artillery, Major Frederick Fuger commanding.

Battalion United States Marines, Major Randolph Dickins commanding.

Salutes by Navy and Army.

The U. S. S. Sylphe, U. S. N., Lieut. W. K. Gise commanding, will fire minute guns as the funeral cortege crosses the Aqueduct bridge, and the guns at Fort Myer will continue the salute until the cortege reaches the cemetery.

On approaching the entrance to the cemetery the column will be formed in two lines, facing each other on opposite sides of the road; the cavalry along the left curb. The

who was in charge, was kept busy courteously announcing to the anxious throngs that they had been victims of an error. A number of fakirs supplied with photographs of Gen. Lawton did a thriving business selling them at a dime each. Within the church photographers occupied every point of vantage with their cameras. About 10:30 o'clock Mrs. Lawton visited the church and remained for some time, and was evidently deeply moved by the many evidences of national and personal esteem for her gallant husband.

Formation of the Escort.

The concentration of the troops forming the escort at the assembling point attracted large crowds, and the scenes were at once impressive and animated. The army has never been so fully represented at the national capital since the Spanish-American war, and as the various commanders moved from their formation points through the streets and avenues they were followed by throngs, braving the increasing discomforts of the chilling breezes, to act as escort to the valorous boys of Uncle Sam.

The squadron of the 3d United States Cavalry, under command of Maj. Henry Jackson, formed on K street, facing south, with its left at Connecticut avenue. The artillery, consisting of Light Battery M, 7th Regiment, under Capt. M. M. Macomb, and Siege Battery O, 7th Artillery, under Capt. John R. Williams, formed in columns of full platoons facing west on K street with the head at Connecticut avenue. Facing east on the latter thoroughfare was the regiment of United States Infantry, under command of Col. Edward Moale. The first battalion comprised Companies C, D, E and F of the 15th Infantry; the second Companies G, K, L and M of the same regiment and the third Companies E, F, G and H of the 2d Infantry. The battalions were commanded, respectively, by Lieut. Cols. Constant, Williams, Maj. George A. Cornish and Capt. Edmund K. Webster. At the left of the infantry, also facing east on Connecticut avenue, was the regiment of artillery under command of Col. John I. Rodgers. It was composed as follows:

First Battalion, Batteries E, G, K and N, 4th United States Artillery, Maj. James M. Lancaster, commanding.

Second Battalion, Batteries A, B, L and M, 5th United States Artillery, Maj. John B. Burbank, commanding.

Third Battalion, Batteries C, H and N, 5th United States Artillery; O, 4th United States Artillery, Maj. Frederick Fuger, commanding.

The United States Marines, forming a battalion under command of Maj. Randolph Dickens, formed on Connecticut avenue, facing east, with the right at N street, the band taking up its position in the small triangular reservation in front of the Church of the Covenant.

Gen. Merritt and Staff.

The commanding general, Maj. Gen. Wesley A. Merritt, and his staff assembled at the Shoreham Hotel at 1 o'clock, and moved thence to the church, taking positions on N street between Connecticut avenue and 18th street, facing south. The brilliant group was composed of the following officers:

Maj. John A. Johnston, assistant adjutant general.

Special aids—Brig. Gen. Alfred E. Bates, U. S. A.; Col. John F. Weston, U. S. A.; Col. Theodore A. Bingham, U. S. A.; Lieut. Col. Henry G. Sharpe, U. S. A.; Capt. Joseph E. Kuhn, U. S. A.; Lieut. T. Bently Mott, U. S. A.

Aids—Lieut. Col. William H. Carter, U. S. A.; Lieut. Col. Culver C. Sniffen, U. S. A.; Maj. William A. Simpson, U. S. A.; Maj. Charles L. McCawley, U. S. M. C.; Maj. Harvey C. Carbaugh, U. S. V.; Capt. Charles G. Treat, U. S. A.; Capt. George O. Squire, U. S. V.

Beautiful Floral Tributes.

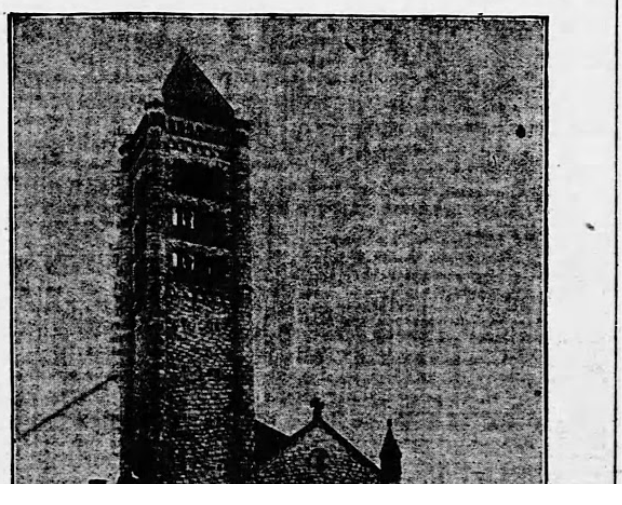
By 1:30 o'clock the escort was in readiness, and meantime the possessors of tickets of admission to the church were already arriving. The distribution of tickets had been made by Col. Theodore A. Bingham and the holders represented the national capital in its most superior sense.

The beauty of the decorations of the church was the theme of whispered admiration, and the effectiveness of the scene was heightened by the magnificence and profuseness of the exquisite floral offerings. The officers of Gen. Lawton's staff were represented by a floral reproduction of the flag of the 8th Army Corps, in white carnations, the emblem in the center being of red. It was sprayed with white orchids and lilies of the valley and bordered by laurel leaves.

Ex-Secretary of War Alger and Mrs. Alger sent a magnificent wreath of galax leaves, white roses, lilies of the valley and orchids, tied with a broad purple satin ribbon. The Loyal Legion sent a magnificent emblem. The Indiana delegation in Congress sent a large shield in red and white carnations and blue cape flowers, crossed with a white bar, bearing the word "Indiana." The tribute of the members of the Philippine commission—Admiral Dewey, Jacob G. Schurman, Dean C. Worcester, Charles Denby and John R. MacArthur—

was a large wreath of galax leaves, green orchids and mignonette. Mr. and Mrs. John Addison Porter's offering was a large wreath of cape flowers resting on an easel, inscribed in blue with the words: "Duty done; rest won." Magnificent wreaths were sent by William Cooke Daniels of Denver, Col., "From Hawaii," Mrs. C. R. Edwards, and a superb cross in white exotics was the tribute of Capt. and Mrs. Irwin. The inspectors' corps of the army sent a beautiful reproduction of the corps badge, a large laurel wreath resting on a crossed floral sword and fasces, and bearing the motto, "Droit et Avant."

Upon the casket rested a superb wreath of white roses, calla lilies, lilies of the valley, orchids and palms, which was sent by the President and Mrs. McKinley.



though we walk through the valley of the shadow of death, we will fear no evil. 'In the name of our God will we set up our banners.'

Summons Comes.

"The Arch-Leader of the migrations of men, the Counsellor 'whose ways are higher than our ways' summons us to an imperial participation in the affairs of the round world—not for conquest and commerce sake, but for Christ's, who is 'the resurrection and the life' for peoples too. He summons us from an isolated even though a continental selfishness, like that in which the palaces of self-contented Babylon became the abode of owls and satyrs—summons us, though we may not yet know the half of it, and though our thoughts are not His thoughts, to min-

CHURCH OF THE COVENANT.

[HN00B8][GDrive]

1900 (Feb 12) - Wedding / Best Man for Robert Whitehead McNeely

Full newspaper page : [HN00BF][GDrive]

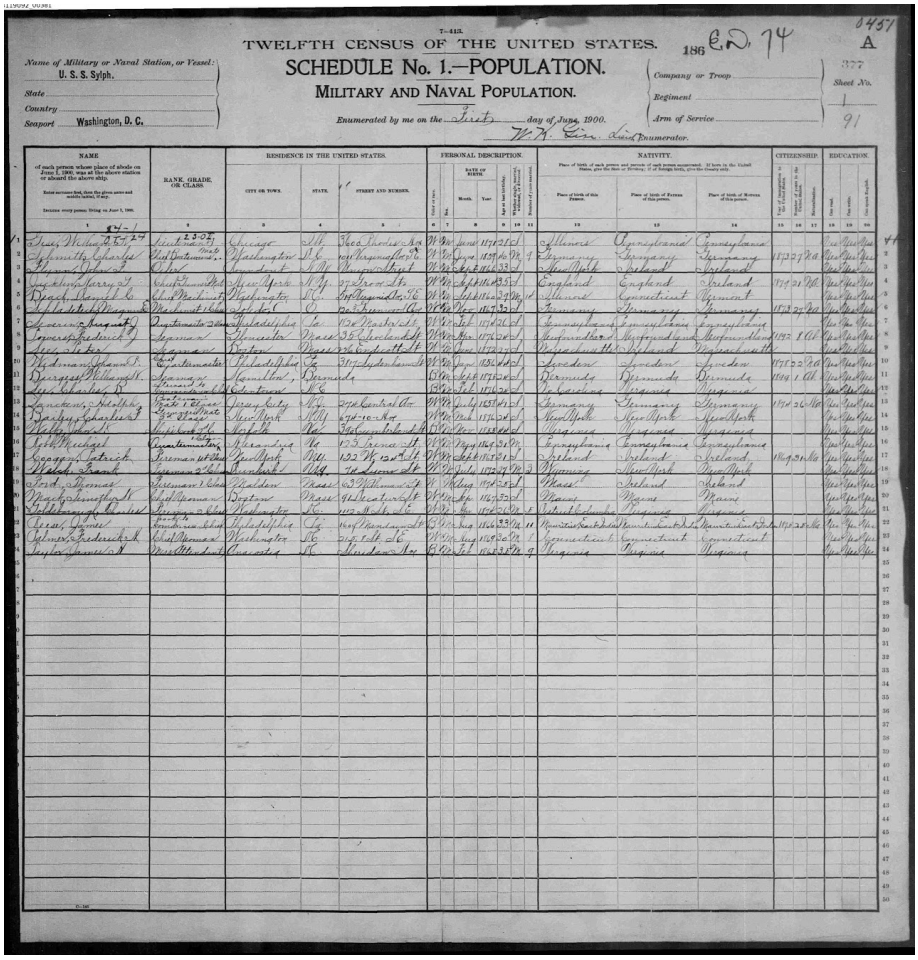
Wedding completed - See (https://www.newspapers.com/image/371681621/?terms=gise)

Evening Star (Washington, District of Columbia) • 12 Feb 1900, Mon • Page 7

The marriage of Miss Marie Calhoun Butler, daughter of General and Mrs. M. C. Butler of 1434 N street, to Lieutenant Robert Whitehead McNeely, United States navy, will take place Thursday, February 15, at noon at St. John's Church, this city. Miss Butler's only attendant will be Miss Caroline Thompson of New York. The best man will be Lieutenant W. K. Gise, United States navy, commanding the U. S. S. Sylph. There will be four ushers—Lieutenant M. C. Butler, jr., United States army, brother of the bride-elect, who comes from his regiment, near Havana, to attend the wedding; Lieutenants Mark Bristol and Louis Burton Jones, United States navy, and Lieutenant Savage Bates, United States marine corps. Immediately after the ceremony there will be a breakfast at the bride's residence, to which a few friends have been invited.

[HN00BG][GDrive]

June 1900 Census - Lt. Col Gise living ON the Sylph !!!



TWELFTH CENSUS OF THE UNITED STATES. 1900 E.D. 74

SCHEDULE No. 1.—POPULATION.

MILITARY AND NAVAL POPULATION.

Name of Military or Naval Station, or Vessel: U. S. S. Sylph.

State

Country

Seaport Washington, D. C.

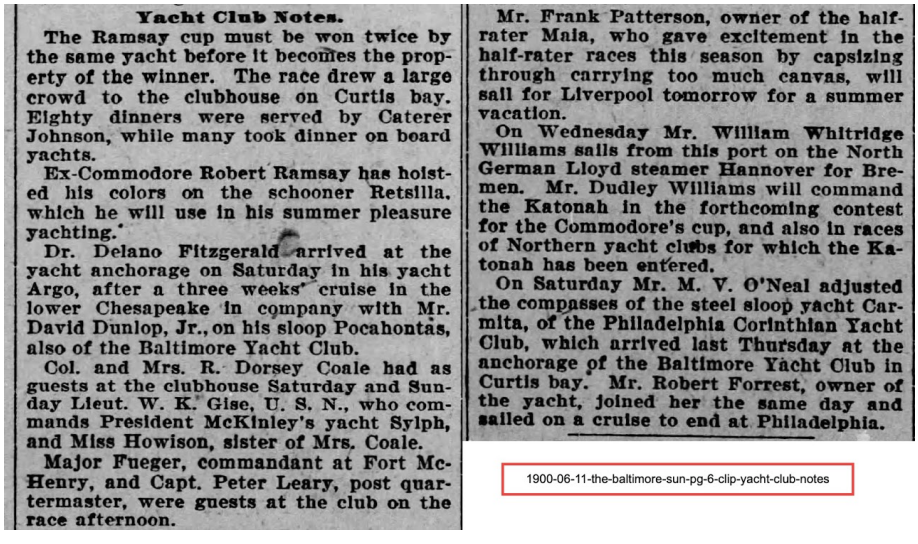
Enumerated by me on the First day of June, 1900.

W. K. Gise, Lieut. Enumerator.

[HS0007][GDrive]

1900 (June 11) - Guests at party - Yacht club ?

Full newspaper page : [HN00BH][GDrive]



Yacht Club Notes.

The Ramsay cup must be won twice by the same yacht before it becomes the property of the winner. The race drew a large crowd to the clubhouse on Curtis bay. Eighty dinners were served by Caterer Johnson, while many took dinner on board yachts.

Ex-Commodore Robert Ramsay has hoisted his colors on the schooner Retsilla, which he will use in his summer pleasure yachting.

Dr. Delano Fitzgerald arrived at the yacht anchorage on Saturday in his yacht Argo, after a three weeks' cruise in the lower Chesapeake in company with Mr. David Dunlop, Jr., on his sloop Pocahontas, also of the Baltimore Yacht Club.

Col. and Mrs. R. Dorsey Coale had as guests at the clubhouse Saturday and Sunday Lieut. W. K. Gise, U. S. N., who commands President McKinley's yacht Sylph, and Miss Howison, sister of Mrs. Coale.

Major Fueger, commandant at Fort McHenry, and Capt. Peter Leary, post quartermaster, were guests at the club on the race afternoon.

Mr. Frank Patterson, owner of the half-rater Maia, who gave excitement in the half-rater races this season by capsizing through carrying too much canvas, will sail for Liverpool tomorrow for a summer vacation.

On Wednesday Mr. William Whitridge Williams sails from this port on the North German Lloyd steamer Hannover for Bremen. Mr. Dudley Williams will command the Katonah in the forthcoming contest for the Commodore's cup, and also in races of Northern yacht clubs for which the Katonah has been entered.

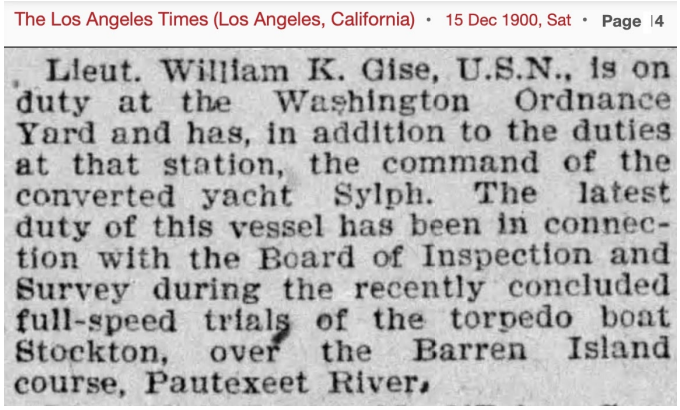
On Saturday Mr. M. V. O'Neal adjusted the compasses of the steel sloop yacht Carmita, of the Philadelphia Corinthian Yacht Club, which arrived last Thursday at the anchorage of the Baltimore Yacht Club in Curtis bay. Mr. Robert Forrest, owner of the yacht, joined her the same day and sailed on a cruise to end at Philadelphia.

1900-06-11-the-baltimore-sun-pg-6-clip-yacht-club-notes

[HN00BI][GDrive]

1900 (Dec 15)

Full newspaper page : [HN00BD][GDrive]

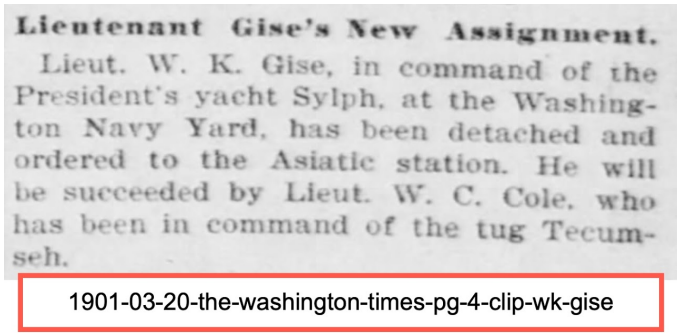

The Los Angeles Times (Los Angeles, California) • 15 Dec 1900, Sat • Page 4

Lieut. William K. Gise, U.S.N., is on duty at the Washington Ordnance Yard and has, in addition to the duties at that station, the command of the converted yacht Sylph. The latest duty of this vessel has been in connection with the Board of Inspection and Survey during the recently concluded full-speed trials of the torpedo boat Stockton, over the Barren Island course, Pautexeet River.

[HN00BE][GDrive]

1901 (March 20) - Removed from the Sylph - Reassigned to Asiatic station

Full newspaper page : [HN00BN][GDrive]


Lieutenant Gise's New Assignment.

Lieut. W. K. Gise, in command of the President's yacht Sylph, at the Washington Navy Yard, has been detached and ordered to the Asiatic station. He will be succeeded by Lieut. W. C. Cole, who has been in command of the tug Tecumseh.

1901-03-20-the-washington-times-pg-4-clip-wk-gise

[HN00BO][GDrive]

1901 (March 25) - President promotes WK Gise to Lieutenant

Also promoted - "Edward S. Kellogg" ??

Full page : [HN00BV][GDrive]

Presidential Appointments.

The following presidential appointments were announced at the White House today:

War—Thirtieth Regiment of Infantry, U. S. V., Frederick J. Barrows, to be captain.

To be first lieutenants—Francis J. Ellison, Francis W. Ralston, jr., and Charles U. Bear.

To be second lieutenants—Ernest L. Hamilton, William H. Wilder.

Thirty-eighth Regiment of Infantry, U. S. V.—John E. Morris, to be captain; Elisha G. Abbott, to be first lieutenant; Alexander C. Davis, to be second lieutenant; John W. Hunter, to be second lieutenant.

Forty-eighth Regiment of Infantry, U. S. V.—Jerry M. White, to be captain; Wilson Ballard, to be first lieutenant.

To be assistant surgeons of volunteers, with the rank of captain—George L. Hicks, jr., Ernest K. Johnstone, Julius A. Escobar.

Militia of the District of Columbia—Garfield Arthur Street, to be second lieutenant, Company B, 4th Battalion; Harry Elliott Burton, to be second lieutenant, Company C, 5th Battalion; Ferdinand Kimmell, to be second lieutenant, Company C, 6th Battalion.

Navy—To be captain, Samuel W. Very.

To be commanders—Dennis H. Mahan, Warner B. Bayley, James H. Perry.

To be a lieutenant commander—Albert N. Wood.

To be lieutenants—William K. Gise, Orton P. Jackson, Thomas S. Wilson, Davis Van H. Allen, Edward S. Kellogg.

To be a pay inspector, with the rank of commander—John N. Speel.

To be a paymaster, with the rank of lieutenant—George G. Seibels.

To be a passed assistant paymaster, with the rank of lieutenant, junior grade—Geo. C. Schafer and Frederick G. Perkins.

To be a boatswain—John F. Dunn.

State—George E. Baldwin of Ohio, to be consul of the United States at Nuremberg, Bavaria; Henry B. Miller of Oregon, to be consul of the United States at Niuchwang, China.

Treasury—Henry L. Hertz, to be collector of internal revenue for the first district of Illinois.

Justice—Marion Erwin of Georgia, to be attorney of the United States for the southern district of Georgia.

Frederick I. Allen of New York, to be commissioner of patents.

William A. Rodenberg of Illinois, to be a member of the civil service commission.

1901-03-25-the-evening-star-washington-dc-pg-1-clip-prez-appts

[HN00BW][GDrive]

1901 (April 26) - Friends with President McKinley, but now off to China

June 1 1901 - Assgnment to Kentucky : https://www.newspapers.com/image/365317670/?terms=Kentucky%2Bnavy%2Bgise

Since WK Gise is going to China, and we know that he was assigned to the USS Kentrucky (BB-6) (see https://en.wikipedia.org/wiki/USS_Kentucky_(BB-6)) as of January 1902, we will propose that WK Gise was on board the USS Kentucky during its trip to China.

Full newspaper page : [HN00BL][GDrive]

The Western Call (Beloit, Kansas) · 26 Apr 1901, Fri · Page 5

HIS NEPHEW PROMOTED.

Will K. Gise, a Prominent Veteran in the Late War, Promoted.

J. K. Gise, of this city, is in receipt of a letter from his brother informing him that his son, Will, who had taken active part in the battle of Santiago on the ship "Texas," as head gunner has been enjoying himself of late on the Potomac with President McKinley and wife on their private yacht, the Sylph. Will has been promoted to a lieutenant and is now on his way to San Francisco, from which place he leaves for China to take part in the trouble at that place. Will has made for himself an enviable record in the late war and we'll wager there will be a few Chinamen's pig tails missing if he gets his clutches on them.

[HN00BM][GDrive]

USS Kentucky : Service during 1900 to 1904

See (https://en.wikipedia.org/wiki/USS_Kentucky_(BB-6))

During the summer of 1900, *Kentucky* was fitted out in the New York Navy Yard.[14] On 26 October [1900], during the Boxer Rebellion, she left Tompkinsville, Staten Island for China,[15] passing through Gibraltar[16] and the Suez Canal.[17] On 5 February 1901 she arrived at Manila,[18] and on 23 March she replaced the protected cruiser *Newark* as the flagship of Rear Admiral Louis Kempff.[19] **Between 1901 and 1904, *Kentucky* visited numerous ports in China and Japan, including Chefoo,[20] Wusong,[20][21][22] Nanking,[21] Taku Forts,[23] Hong Kong,[24] Xiamen,[22]Nagasaki,[25] Kobe,[14] and Yokohama.[26] In 1902, *Kentucky* became the flagship of Rear Admiral Frank Wildes, although he moved his flag to the distilling ship *Rainbow* on 12 April 1902.[26] In November 1902, she became the flagship of Rear Admiral Robley D. Evans.[27]**

On 13 March 1904 she sailed from Manila, passing through the Suez Canal and the Strait of Gibraltar, and arriving at New York City on 21 May.[28] After receiving upgrades at the New York Navy Yard, including the addition of smoke ejectors,[29] *Kentucky* joined the North Atlantic Squadron.[30] The battleship participated in the welcome of the British North Atlantic Squadron at Annapolis, Maryland, in October 1905.[30] During the 1906 Cuban Insurrection, she carried Marines to Cuba, embarking them from Provincetown on 23 September, and landing them at Havana, Cuba, on 1 October.[31] She remained there until 9 October, and then returned to New England.[32] *Kentucky* attended the Jamestown Exposition at Norfolk, Virginia, on 15 April 1907,[4] and then participated in exercises off the New England coast.[14]

1902 - WK Gise with USS Kentucky in China

USS Kentucky

1902 (Sep 12) https://www.newspapers.com/image/430806055/?terms=%22USS%2BKentucky%22

1903 - WK Gise with USS Kentucky in China

1903 (Dec 24) -

Full page : [HN00C7][1903-12-23-the-honolulu-advertiser-pg-2-clip-war-fleet]

THE DAY'S DOINGS AMONG UNCLE SAM'S WAR FLEET

Another payday is being urged by the men of the fleet before the war vessels leave Honolulu for Cavite. The pay this week was the wages due the men for November, and their December pay is not due to be turned over to them until the middle of the first week of January.

There are about 3500 men in the fleet and it is estimated that a naval seaman averages about $30 per month. On this basis the men received about $100,000 on last payday, and another payday would fill their pockets with another $100,000. The matter has not reached those in authority.

COLLIERS LEAVE TODAY.

The naval collier Pompey has been coaled and will leave for Cavite via Midway and Guam, at noon today.

The Nan Shang will leave later. It is probable she will get away this afternoon about 5 o'clock. She goes to Guam and Manila. The fleet may not leave Honolulu until December 30 or 31.

EVANS ENTERTAINED AT THE TENNEY'S.

Admiral Robley D. Evans and staff were entertained at dinner last evening at the residence of Mr. and Mrs. E. D. Tenny, Pensacola and Lunalilo strects.

SEBREE COMMENDS STATION.

The Naval Station feels proud of the record it has made in coaling the fleet. The coaling was done under difficulties, considerable time being lost in transporting coal on barges from the docks to the vessels in the stream. First the coal had to be loaded by hand into the carts from the sheds in the Naval Station premises. It then had to be carted across to the weighing scales close to the entrance to dock No. 1, and then carted on to the dock for the Kentucky and to the Pacific mail dock for the Oregon and New Orleans. That for the Wisconsin had to be carted to dock No. 2, quite a distance away. Other coal was also taken from the big pile at the corner of Alakea and Allen streets, which has completely vanished.

In four and a half days Captain Niblack sent 6400 tons of coal to the fleet, and before the vessels leave port 7300 tons will have passed into the warship bunkers. Captain Sebree of the Wisconsin commended the station for the excellent manner in which it had handled the coal proposition.

EVANS VIEWS PEARL HARBOR.

Admiral Evans and staff, commanders of various warships of the fleet and a large number of ladies of Honolulu, were guests yesterday aboard the U. S. S. Iroquois on a cruise to Pearl Harbor and back, all being hospitably entertained at the Peninsula by Mr. and Mrs. Clarence Macfarlane. Captain Hugh Rodman commanded the Iroquois and gave Admiral Evans an excellent idea of the channels in the lochs by steaming through them at a rapid gait.

The Iroquois left Honolulu at 10:30 a. m. Upon reaching the channel the tug was sent swiftly through it to the lochs, the newly placed buoys proving a great advantage to the commander. The Admiral was shown the site for the navy yard. After cruising all through all the lochs the vessel was moored off the Macfarlane premises where the large party disembarked at 12:30. The guests discussed one of the finest luncheons ever served on the Peninsula and were most hospitably entertained during the afternoon. Dancing was enjoyed in the house and Mrs. George Macfarlane and others entertained the party with several vocal selections. Admiral Evans, in particular, said the outing was one of the best times he had enjoyed in many seasons.

When the Iroquois entered the harbor and swept by the sterns of the Kentucky and Wisconsin the entire party aboard sang "My Old Kentucky Home" to the delight of the Kentucky's men.

Among those who enjoyed the cruise were Admiral Evans, Mr. and Mrs. Clarence Macfarlane, Mrs. George Herbert, Mrs. Helen Noonan, Mrs. Percy Benson, Mrs. Ned Macfarlane, Mrs. F. E. Thompson, Lieut. and Mrs. Washington, Mrs. Clifford Kimball, Miss Rosie Cunha, Miss Macfarlane, Miss Jennie Giffard, Miss Scott, Mrs. Bush, Miss Beckley, Miss Wilhelmina Tenney, Captain Berry of the Kentucky, Captain Sebree of the Wisconsin, Captain Rogers of the Albany, Lieut. Chapin, Lieut. Gise, Captain Davis, U. S. M. C., Medical Director Greene and Surgeon Asserson.

SAILORS WANT INFORMATION.

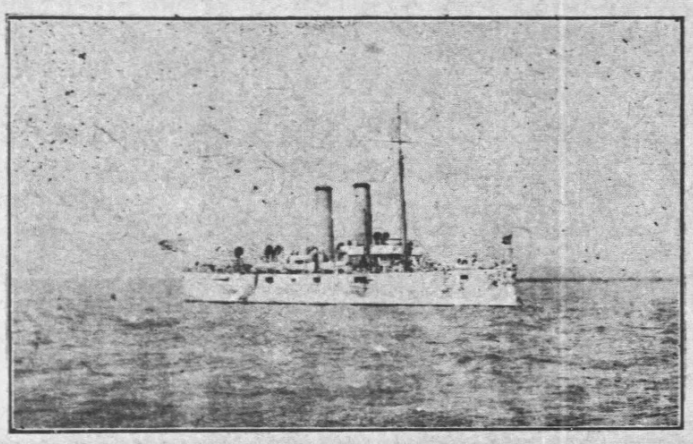
Men from the fleet are getting lots of information about Hawaii from the Hawaii Promotion Committee. Secretary Boyd receives dozens of applications every day and has given away several thousand pieces of literature since the fleet has been in port.

OREGONS WANT TO KICK.

The Oregon football eleven is trying its best to get a game with the Kentucky while the fleet is in port, but say that the men from the flagship are unwilling to meet them. The two teams have tried conclusions twice before this in the Orient, both games resulting in a tie. On the last occasion the Oregon men claim that the Kentucky team made its goal by a fluke, and they are anxious now to demonstrate that they can beat them.

INVITATION FUNCTION SATURDAY.

The reception and entertainment to be given on board the flagship Kentucky and the battleship Wisconsin on Saturday evening is strictly an invitational affair. The invitations are now being issued. It is proposed to make use of both battleships, as they lie on each side of naval dock No. 1, entrance to the vessels being the gate to this dock. The dock will also be made use of on Saturday for the entertainment of the guests.



(Rice & Perkins, Photo.)

SOLACE TOMORROW.

It is expected that the naval transport Solace will arrive here from San Francisco tomorrow morning, having left the latter port on December 18. The Solace brings supplies for the fleet and may have officers for assignment to various vessels.

MAY HOLD FLEET.

It is reported that Governor Carter has been considering the feasibility of cabling to Washington to extend the time of the fleet's stay in this port.

SETTING UP DRILL.

At evening quarters there is no more fascinating scene than the setting up drill which is indulged in by the seamen and marines. The two battleships at the docks give a splendid opportunity to show every man in the vessels going through the movements of the gymnastic drill, consisting of motions with the arms, hands and body. Then the band strikes up and every man fills an individual part of a big circle of men who run at a dog trot about the decks, keeping step to the music. The whole drill is intended as a means of straightening out the muscles and giving the men the fine chests which are the admiration of the American navy.

CHRISTMAS EVE FOR FLEET OFFICERS.

The Alexander Young hotel will be the scene this evening of one of the most elaborate functions yet given for Admiral Evans and the officers of his fleet. The function is in the nature of a public reception to the distinguished visitors and the gathering will undoubtedly be one of large proportions. The formal reception to Admiral Evans and staff, Admiral Cooper and staff, Admiral Terry and staff, and the officers of the warships, will take place in the drawing room of the hotel about 8:30. The officers will be received by Mrs. H. Wingate Lake, Mrs. A. A. Young, Mrs. R. W. Anderson and Mrs. C. C. von Hamm, for the hotel, following which they will be conducted to the roof garden by Manager H. Wingate Lake, where informality will be the watchword. Honolulu society folk, it is believed, will turn out en masse to greet the officers, and the event on the spacious roof will be further enlivened by a concert by the Hawaiian Territorial band, followed by a concert by the band of the flagship Kentucky. Dancing in the two pavilions will commence at an early hour and continue until after midnight. Light refreshments will also be served between 10:30 and eleven o'clock.

The reception and entertainment is for the Honolulu public and as many ladies as can attend are cordially invited by Mr. Lake to be present. It is also hoped that those who have planned Christmas eve entertainments at their homes, will find opportunity later in the evening to attend the function.

Mr. Lake wishes it understood that no special invitations have been sent out save to those in whose honor the reception is to be given; but society may regard itself as hospitably bidden.

EVANS AND STACKABLE.

Collector of Customs Stackable has only praise for Admiral Evans for the manner in which the latter has safeguarded the customs regulations. The customs men have not been on guard near the war vessels, Admiral Evans using his marines as sentries, and orders were issued by him against smuggling. The Collector states that the officers have co-operated with him in this matter in a most creditable manner. Whatever has been brought off from the vessels has been appraised by the Customs officers. Admiral Evans has insisted that all dutiable articles to be brought ashore, be sent to the Customs House to be appraised. A petty officer was awlays sent to the Custom House with sailors who had dutiable stuff to land, to see that the law was not evaded in any way.

1903-12-23-the-honolulu-advertiser-pg-2-clip-war-fleet

[HN00C8][1903-12-23-the-honolulu-advertiser-pg-2-clip-war-fleet]

1904 (Jan) to 1904 (May)- USS Kentucky leaved Manila, sails to New York City - Lt. WK Gise still assigned to the USS Kentucky

See Wikipedia page on Admiral Evans (https://en.wikipedia.org/wiki/Robley_D._Evans) assigned to the Kentucky, to get insignt on where the Kentucky was ..

Commander-in-Chief – Asiatic Fleet[edit]

Admiral Evans transferred his flag from armored cruiser, USS *New York* (ACR-2) on **4 November 1902 to battleship, USS *Kentucky* (BB-6)at Yokohama, Japan**. On 5 December 1903, the *Kentucky* left Japanese waters for Hawaii; **on 17 December 1903, the *Kentucky* arrived at Pearl Harbor Naval Station, Hawaii**. Admiral Evans hosted a Christmas dinner for the officers of *Kentucky* at the Moana Hotel in Waikiki. 31 December 1903 Evans' flagship departed Honolulu for Guam. *Kentucky* arrived in Cavite, the Philippines, on 18 January 1904. Admiral Evans called on the new Governor-General of the Philippines, Luke Edward Wright, at the Malacanang Palace. Evans' flagship departed Manila on 13 March 1904. The *Kentucky* coaled at Hong Kong and Colombo. Sailing through the Suez Canal into the Mediterranean Sea to the port of Naples, Italy, the voyage continued to Gibraltar, coaling at Madeira; the flagship *Kentucky* arrived at the New York Navy Yard, 23 May 1904. Admiral Evans hauled down his flag, 27 May 1904 from battleship *Kentucky*.

Commander-in-Chief – North Atlantic Fleet[edit]

Evans (left) and President Theodore Roosevelt aboard Roosevelt's yacht, *The Mayflower*

On 31 March 1905, a 13-gun salute was fired by the battleship USS *Maine* at Pensacola, Florida, as the flag of Rear Admiral Robley D. Evans, Commander-in-Chief of the North Atlantic Fleet, was broken at the main mast. The fleet sailed on 7 May 1905 for Hampton Roads, Virginia. Admiral Evans returned to his alma mater the United States Naval Academy at Annapolis, Maryland, on 30 October 1905.

The British Fleet under command of Prince Louis of Battenberg arrived at Annapolis. On 1 November 1905, the Prince visited Evans on *Maine*. Admiral Evans gave Prince Louis a tour of the Naval Academy and battleship *Maine*. A reception by Evans was held later in the week on the *Maine* for Governor Edwin Warfield of Maryland.

Admiral Evans on the flagship *Maine* sailed on 7 November 1905 from Annapolis to New York. Admiral Evans stayed on board *Maine* during repairs from 20 November 1905 to January 1906. After winter quarters in Guantanamo Bay, Cuba, on 3 May 1906, Evans returned the fleet to New York. On 2 September 1906, the *Maine* anchored next to the presidential yacht *Mayflower* off Oyster Bay, Long Island. President Theodore Roosevelt came on board *Maine* to confer with Evans. Admiral Evans o the *Maine* departed New York on 28 December for winter quarters in Cuban waters. On 15 April 1907, Evans' flagship *Maine* returned to Hampton Roads. On 16 April 1907, Evans hauled down his flag on the *Maine* and then hoisted it on the battleship *Connecticut*, flagship for the world cruise.

1904 (june 21)

https://www.newspapers.com/image/145335144/?terms=Gise%2BKentucky / https://www.newspapers.com/image/372213594/?terms=Gise%2BKentucky

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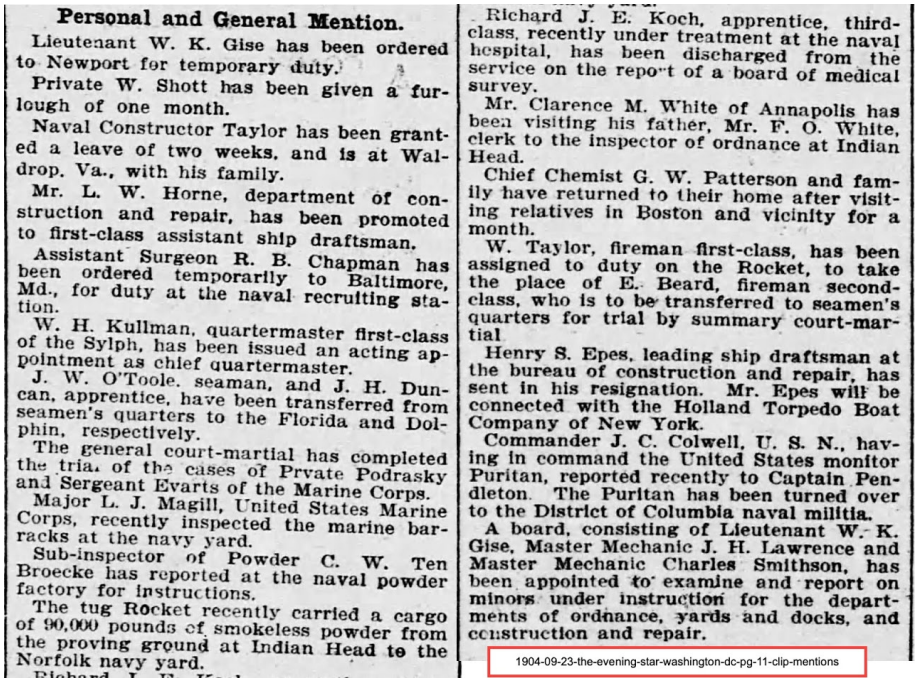
1904 (Sep 23) - off to newport

Full newspaper page : [HN00BJ][GDrive]



Personal and General Mention.

Lieutenant W. K. Gise has been ordered to Newport for temporary duty.

Private W. Shott has been given a furlough of one month.

Naval Constructor Taylor has been granted a leave of two weeks, and is at Waldrop, Va., with his family.

Mr. L. W. Horne, department of construction and repair, has been promoted to first-class assistant ship draftsman.

Assistant Surgeon R. B. Chapman has been ordered temporarily to Baltimore, Md., for duty at the naval recruiting station.

W. H. Kullman, quartermaster first-class of the Sylph, has been issued an acting appointment as chief quartermaster.

J. W. O'Toole, seaman, and J. H. Duncan, apprentice, have been transferred from seamen's quarters to the Florida and Dolphin, respectively.

The general court-martial has completed the trial of the cases of Prvate Podrasky and Sergeant Evarts of the Marine Corps.

Major L. J. Magill, United States Marine Corps, recently inspected the marine barracks at the navy yard.

Sub-inspector of Powder C. W. Ten Broecke has reported at the naval powder factory for instructions.

The tug Rocket recently carried a cargo of 90,000 pounds of smokeless powder from the proving ground at Indian Head to the Norfolk navy yard.

Richard J. E. Koch, apprentice, third-class, recently under treatment at the naval hospital, has been discharged from the service on the report of a board of medical survey.

Mr. Clarence M. White of Annapolis has been visiting his father, Mr. F. O. White, clerk to the inspector of ordnance at Indian Head.

Chief Chemist G. W. Patterson and family have returned to their home after visiting relatives in Boston and vicinity for a month.

W. Taylor, fireman first-class, has been assigned to duty on the Rocket, to take the place of E. Beard, fireman second-class, who is to be transferred to seamen's quarters for trial by summary court-martial

Henry S. Epes, leading ship draftsman at the bureau of construction and repair, has sent in his resignation. Mr. Epes will be connected with the Holland Torpedo Boat Company of New York.

Commander J. C. Colwell, U. S. N., having in command the United States monitor Puritan, reported recently to Captain Pendleton. The Puritan has been turned over to the District of Columbia naval militia.

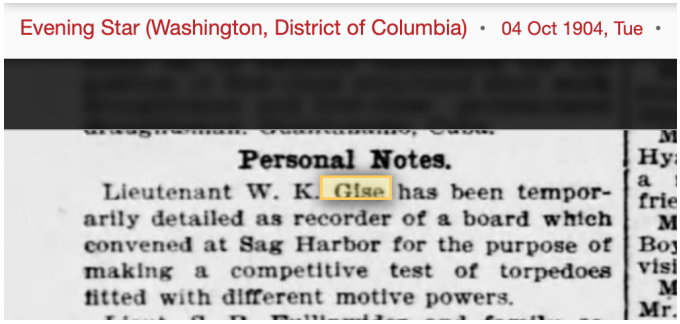
A board, consisting of Lieutenant W. K. Gise, Master Mechanic J. H. Lawrence and Master Mechanic Charles Smithson, has been appointed to examine and report on minors under instruction for the departments of ordnance, yards and docks, and construction and repair.

1904-09-23-the-evening-star-washington-dc-pg-11-clip-mentions

[HN00BK][GDrive]

1904 (Oct 4)

- https://www.newspapers.com/image/145381906/?terms=Gise%2BKentucky



Evening Star (Washington, District of Columbia) • 04 Oct 1904, Tue •

Personal Notes.

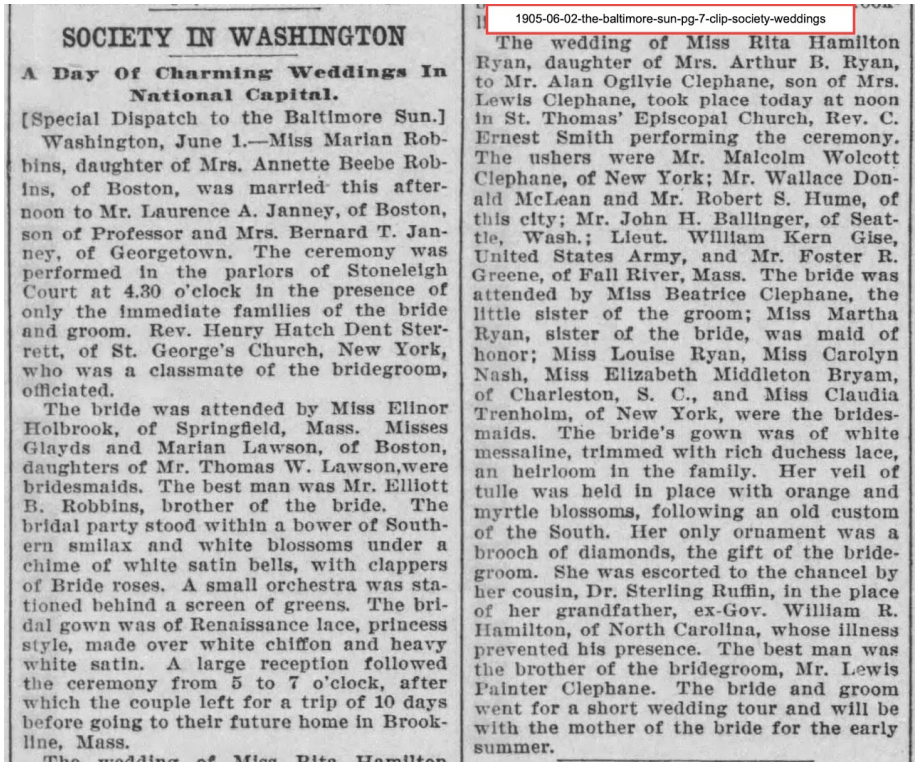
Lieutenant W. K. Gise has been temporarily detailed as recorder of a board which convened at Sag Harbor for the purpose of making a competitive test of torpedoes fitted with different motive powers.

1905 (May 23) wedding - Miss Rita Hamilton Ryan to Mr. Alan Ogilvie Clephane

https://www.newspapers.com/image/145528862/?terms=%22William%2BKern%2BGise%22)

1905 (June 02) - wedding

Full Newspaper Page : [HN00BX][GDrive]



1905-06-02-the-baltimore-sun-pg-7-clip-society-weddings

SOCIETY IN WASHINGTON

A Day Of Charming Weddings In National Capital.

[Special Dispatch to the Baltimore Sun.]

Washington, June 1.—Miss Marian Robbins, daughter of Mrs. Annette Beebe Robbins, of Boston, was married this afternoon to Mr. Laurence A. Janney, of Boston, son of Professor and Mrs. Bernard T. Janney, of Georgetown. The ceremony was performed in the parlors of Stoneleigh Court at 4.30 o'clock in the presence of only the immediate families of the bride and groom. Rev. Henry Hatch Dent Sterrett, of St. George's Church, New York, who was a classmate of the bridegroom, officiated.

The bride was attended by Miss Elinor Holbrook, of Springfield, Mass. Misses Glayds and Marian Lawson, of Boston, daughters of Mr. Thomas W. Lawson, were bridesmaids. The best man was Mr. Elliott B. Robbins, brother of the bride. The bridal party stood within a bower of Southern smilax and white blossoms under a chime of white satin bells, with clappers of Bride roses. A small orchestra was stationed behind a screen of greens. The bridal gown was of Renaissance lace, princess style, made over white chiffon and heavy white satin. A large reception followed the ceremony from 5 to 7 o'clock, after which the couple left for a trip of 10 days before going to their future home in Brookline, Mass.

The wedding of Miss Rita Hamilton Ryan, daughter of Mrs. Arthur B. Ryan, to Mr. Alan Ogilvie Clephane, son of Mrs. Lewis Clephane, took place today at noon in St. Thomas' Episcopal Church, Rev. C. Ernest Smith performing the ceremony. The ushers were Mr. Malcolm Wolcott Clephane, of New York; Mr. Wallace Donald McLean and Mr. Robert S. Hume, of this city; Mr. John H. Ballinger, of Seattle, Wash.; Lieut. William Kern Gise, United States Army, and Mr. Foster R. Greene, of Fall River, Mass. The bride was attended by Miss Beatrice Clephane, the little sister of the groom; Miss Martha Ryan, sister of the bride, was maid of honor; Miss Louise Ryan, Miss Carolyn Nash, Miss Elizabeth Middleton Bryam, of Charleston, S. C., and Miss Claudia Trenholm, of New York, were the bridesmaids. The bride's gown was of white messaline, trimmed with rich duchess lace, an heirloom in the family. Her veil of tulle was held in place with orange and myrtle blossoms, following an old custom of the South. Her only ornament was a brooch of diamonds, the gift of the bridegroom. She was escorted to the chancel by her cousin, Dr. Sterling Ruffin, in the place of her grandfather, ex-Gov. William R. Hamilton, of North Carolina, whose illness prevented his presence. The best man was the brother of the bridegroom, Mr. Lewis Painter Clephane. The bride and groom went for a short wedding tour and will be with the mother of the bride for the early summer.

[HN00BY][GDrive]

1905 (Oct 29) - At wedding with Powers Symington (Misspelled a "Powell Symington")

Also in attendance - Powers Symington (born 1872)

Full page : [HN004T][GDrive]

The Washington Post (Washington, District of Columbia) · 29 Oct 1905, Sun · Page 166

Miss Anita Evans, daughter of the former consul general to London, will be married at noon on Wednesday to Lieut. David Foote Sellers, U. S. N. The ceremony will take place in St. Thomas' Episcopal Church and will be followed by breakfast for the bridal party only in the home of the bride's parents, on Massachusetts avenue. The family is in mourning for the bride's brother, Lieut. Evans, otherwise there would have been more festivity on this occasion. The bride's sister, Miss Evans, will be her only attendant. The best man will be Lieut. Powell Symington and the ushers will be Lieut. Commander Gibbons, of the Dolphin; Capt. Archibald Butt, Paymaster Izard, Lieut. Roscoe Spear, Capt. Harry Lay, and Lieut. William K. Gise. The wedding will be a brilliant one, as all navy weddings are sure to be The officers will wear full-dress uniform and the guests will be from among the most distinguished official and army and navy families in the city.

[HN004U][GDrive]

Other wedding review - (Nov 1 2015)

Full page : [HN00C9][GDrive]

MISS ANITA EVANS.

THE WORLD OF SOCIETY

MISS ANITA EVANS AND LIEUT. SELLERS MARRIED.

Noon Ceremony at St. Thomas' Unites the Couple—A Morning Wedding —Other Events—Notes.

The marriage today at noon at St. Thomas' Church of Miss Anita Evans, daughter of the former consul general to London and Mrs. Henry Clay Evans, to Lieut. David Foote Sellers, United States navy, was witnessed by a large and fashionable assemblage, but is likewise today a topic of great interest to hundreds of their friends in Europe as well as in this country. The chancel of the church was abloom with chrysanthemums set amid palms and foliage plants, which decoration extended down the aisle to mark off the family pews. The ushers, all of whom were in the full dress uniform, as were the bridegroom and best man, were Lieutenant Commander Gibbons, Lieut. Roscoe Spear, Lieut. Wm. K. Gise, Lieut. Clarence England, Paymaster W. B. Izard, all of the navy; Capt. Harry R. Lay, United States Marine Corps, and Capt. Archibald Butt, United States army. A very beautiful musical program filled the interval of the assembling of the guests and the arrival of the bridal party. The bride's mother, handsomely gowned in white lace and wearing a stylish and becoming bonnet, in which white lace and jet were combined, was in the front pew on one side of the aisle, while the bridegroom's parents and his brothers sat opposite. The bride was escorted to the chancel by her father, and was preceded by her sister, Miss Nell Evans, as maid of honor. At the chancel railing the bridegroom and his best man, Lieut. Powers Symington, United States navy, awaited. Rev. C. Ernest Smith, D.D., performed the marriage ceremony.

The bride's dress was exceedingly elegant and becoming, its soft, fluffy folds being of white chiffon cloth, but half concealed by deep flounces of Burano lace. This lace formed a bertha on the bodice, edged the elbow sleeves and was festooned up the sides of the skirt. The guimpe was of Valenciennes lace and around the collar gleamed a string of exquisite pearls—a bridal gift. To this beautiful dress was added the train of the costume worn when the bride was presented at the first court held by Queen Alexandra. It is made of brocaded white satin, lined with white satin, fell from the shoulders and is the regulation length—four yards—required for the formal occasion of its first use. Her tulle veil was held by a wreath of orange blossoms and her bouquet, about which a bit of sentiment lingered also, in the choice of blossoms, was a shower bunch of white carnations and lilies of the valley. Altogether a beautiful toilet and worn by a bride whose personal popularity is a matter of general knowledge. Miss Nell Evans, as maid of honor, wore a very smart toilet of white chiffon cloth and lace and a tilted hat of Irish lace and tulle. Her bouquet was of pale pink carnations.

The drawing rooms and dining room at Mr. and Mrs. Evans' home on Massachusetts avenue were profusely adorned with American beauty roses, chrysanthemums, trailing vines and foliage plants, the effect culminating in the arrangement of the floral bower in the drawing room, where the couple stood to receive the congratulations of their relatives, and in the dining room where the party of forty sat at breakfast at eight round tables. Each table had a centerpiece of roses. Owing to the death last summer of Lieut. Evans, only son of the family, no reception was held and all the arrangements for the wedding were greatly simplified.

The bride's presents to be numbered by the hundreds were shown in an upper room. They comprise most valuable and artistic pieces of jewelry, silver, cut glass, pictures, furniture, linen and everything else enviable in the way of personal or household belongings, and were sent by friends in England and all parts of this country.

Lieut. and Mrs. Sellers left this afternoon for their honeymoon journey.

The bride's going-away gown was a Paris make of purple cloth, the bodice trimmed in Irish lace. Her wrap was a deep stole of Russian sable and a large muff of the same splendid fur was carried.

While awaiting Lieut. Sellers' orders, which are to carry him to sea for a couple of years, they will travel or be here with the bride's family or at the old home in Chattanooga, Tenn., where Mr. and Mrs. Evans and Miss Evans expect to spend the winter.

Among the guests from out of town for the wedding were the bridegroom's parents and his brothers, Walter Foote Sellers, Spaulding Foote Sellers and Ned Foote Sellers; Miss Foote of Chicago, Mr. and Mrs. H. H. Benedict of New York, Mr. and Mrs. Archibald Forrest of New York, Miss Margaret Cloud of Pittsburg, Miss Clubb of Baltimore, the Misses McNeely of Philadelphia and Mr. and Mrs. George W. Boyd of Philadelphia.

Among those at the church were Mrs. Fairbanks and Mrs. Timmons, wife and daughter of the Vice President, the former in white cloth, with ermine furs, and the latter in a light gray check; Mrs. Hitchcock, wife of the Secretary of the Interior; Miss Louise Kauffmann, Mrs. Rudolph Kauffmann, Miss Kennedy, Mrs. T. W. Noyes, Mrs. T. C. Noyes, Mrs. Victor Kauffmann, Dr. John C. Simpson, Miss Hagner, Mrs. Mearns, Mrs. George B. Williams and the Misses Colton.

Lieut. David Foote Sellers, U. S. N.

(Copyright, 1904, Clinedinst.)

[HN00CA][GDrive]

1906 (Feb 11)

Full Newspaper page : [HN00B3][GDrive]

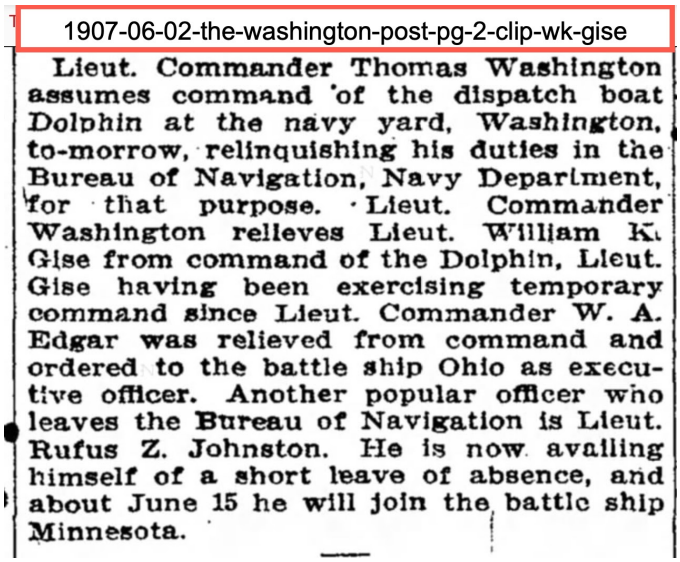
1906-02-11-the-washington-post-pg-5-clip-wk-gise

Lieut William K Gise, U S N, has been ordered to the Dolphin as executive officer, and is thus relieved from duty at the navy yard. His detachment will leave a void in the social life of the navy yard which will be difficult to fill.

[HN00B4][GDrive]

1907 (June 2)

Full newspaper page : [HN00BP][GDrive]


1907-06-02-the-washington-post-pg-2-clip-wk-gise

Lieut. Commander Thomas Washington assumes command of the dispatch boat Dolphin at the navy yard, Washington, to-morrow, relinquishing his duties in the Bureau of Navigation, Navy Department, for that purpose. Lieut. Commander Washington relieves Lieut. William K. Gise from command of the Dolphin, Lieut. Gise having been exercising temporary command since Lieut. Commander W. A. Edgar was relieved from command and ordered to the battle ship Ohio as executive officer. Another popular officer who leaves the Bureau of Navigation is Lieut. Rufus Z. Johnston. He is now availing himself of a short leave of absence, and about June 15 he will join the battle ship Minnesota.

[HN00BQ][GDrive]

June 21 1907 - https://www.newspapers.com/image/80021874/?terms=gise%2Bsymington

1907 (Oct 29)

Full newspaper page : [HN00BR][GDrive]

Lieut. Commander W. K. Gise, Lieut. Commander Caldwell, Lieut. Arthur B. Keating, Lieut. L. C. Palmer, Lieut. R. K. Crank, Lieut. Ames Bronson, Lieut. Edward McCauley and Paymaster J. H. Merriam, all of the United States Navy, were ushers today in Baltimore at the marriage of Miss Corinne de Forest Montague and Lieut. Henry C. Muston, U. S. N. The bride was attended by her sister, Mrs. Basil Gordon, at whose home the wedding breakfast took place. The other attendants to the bride were Miss Harriet Shields of Philadelphia, Miss Clare Blakestone, Miss Anne Thom and Miss Kitty Robertson.

The two flower girls were the little daughters of Mrs. Gordon, Miss Leilla Sinclair Gordon and Miss Anne Hamilton Gordon. The bridegroom, ushers and best man, Lieut. Col. George Barnette, were entertained at dinner last night by Mr. William S. Lloyd of Philadelphia, stepfather of the bridegroom.

1907-10-29-the-evening-star-washington-dc-pg-5-clip-gise-wedding

[HN00BS][GDrive]

1908 (July 7)

Full newspaper page : [HN00BT][GDrive]

METCALF DISCUSSED PLAN OF VOYAGE

SAN FRANCISCO, June 28.—A conference between Secretary of the Navy Metcalf, Rear Admiral C. S. Sperry, commander in chief of the Atlantic fleet, and Admirals Emory and Wainwright of the third and fourth divisions, concerning matters pertaining to fleet administration and plans for the cruise around the world, was held yesterday on board the flagship Connecticut.

Full naval honors were accorded Secretary Metcalf, with the exception of the secretary's salute, which was omitted at his special request. All officers appeared in special full dress uniform, and Rear Admiral Sperry signaled for Rear Admirals Emory and Wainwright to board the flagship. They responded and joined the secretary and Sperry and his staff at luncheon.

The secretary left the flagship at ' o'clock, going in the admiral's barge to the Oakland mole. The secretary expressed his pleasure at the condition of the ships of the fleet and at the manner in which plans for the world trip are being carried out.

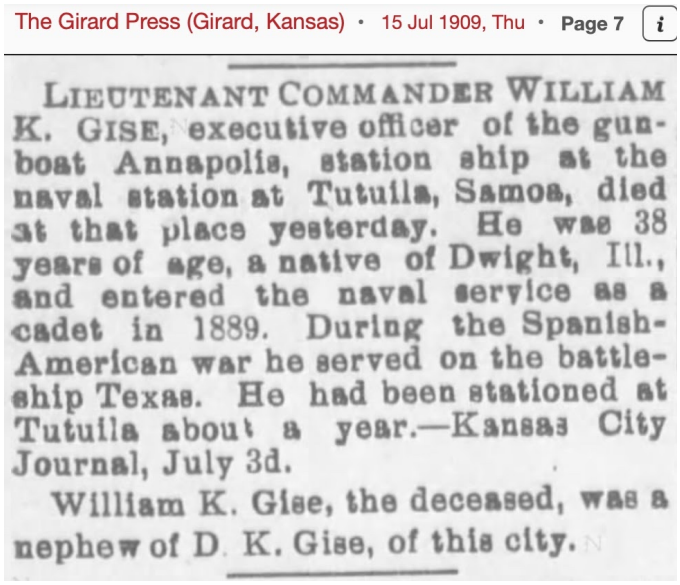
The repair ship Panther will not remain at Honolulu during the entire stay of the fleet, but will leave ahead of he other vessels and carry Lieutenant Commander William Gise to Tutuila, Samoa. Gise has just been detached from the Ohio and ordered to Samoa as commander of the station ship Annapolis. The Glacier will also leave Honolulu in advance of the fleet for Fiji, and through it the fleet will be able to communicate by wireless with the Fiji cable station.

1908-07-07-the-honolulu-advertiser-pg-1-clip-gise

[HN00BU][GDrive]

1909 (July 15)

Full newspaper page : [HN00B5][GDrive]



The Girard Press (Girard, Kansas) • 15 Jul 1909, Thu • Page 7

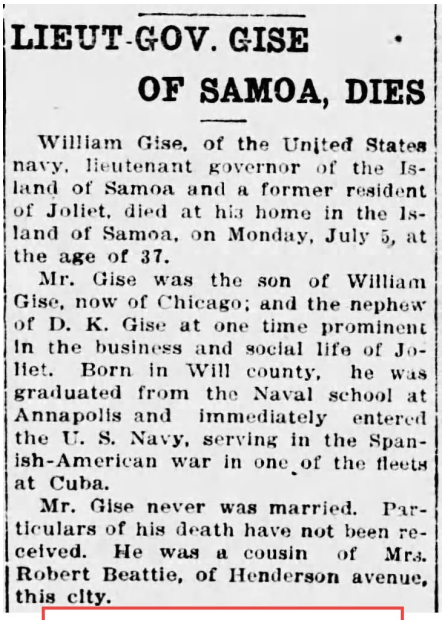
LIEUTENANT COMMANDER WILLIAM K. GISE, executive officer of the gunboat Annapolis, station ship at the naval station at Tutuila, Samoa, died at that place yesterday. He was 38 years of age, a native of Dwight, Ill., and entered the naval service as a cadet in 1889. During the Spanish-American war he served on the battleship Texas. He had been stationed at Tutuila about a year.—Kansas City Journal, July 3d.

William K. Gise, the deceased, was a nephew of D. K. Gise, of this city.

[HN00B6][GDrive]

1909 (July) - death - Lieutenant Governor of Samoa

Full page : [HN00BZ][GDrive]



LIEUT-GOV. GISE OF SAMOA, DIES

William Gise, of the United States navy, lieutenant governor of the Island of Samoa and a former resident of Joliet, died at his home in the Island of Samoa, on Monday, July 5, at the age of 37.

Mr. Gise was the son of William Gise, now of Chicago; and the nephew of D. K. Gise at one time prominent in the business and social life of Joliet. Born in Will county, he was graduated from the Naval school at Annapolis and immediately entered the U. S. Navy, serving in the Spanish-American war in one of the fleets at Cuba.

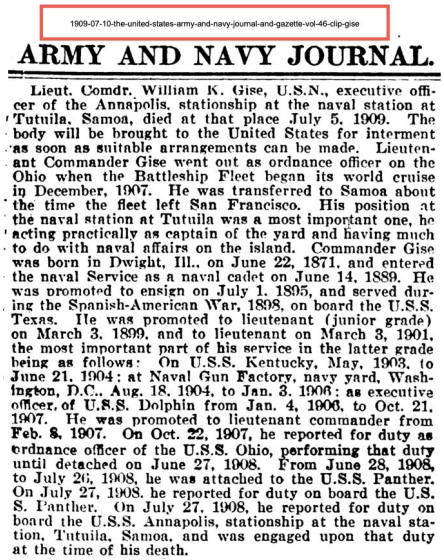
Mr. Gise never was married. Particulars of his death have not been received. He was a cousin of Mrs. Robert Beattie, of Henderson avenue, this city.

1909-07-10-the-joliet-news-pg-2-clip-gise-samoa

[HN00C0][GDrive]

Passong / Death note (July 10 1909)

See PDF of "The United States Army and Navy Journal and Gazette of the Regular and Volunteer Forces, Volume 46 : Army and Navy Journal Incorporated, 1909" ([HP000J][GDrive])



1909-07-10-the-united-states-army-and-navy-journal-and-gazette-vol-46-clip-gise

ARMY AND NAVY JOURNAL.

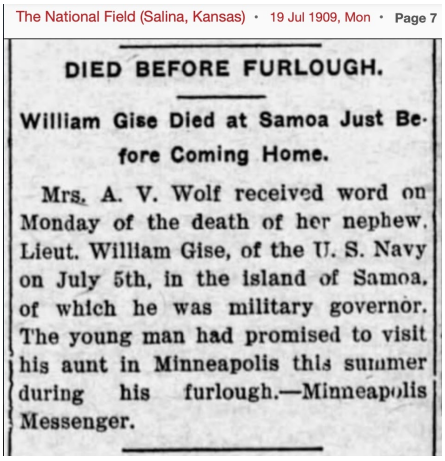
Lieut. Comdr. William K. Gise, U.S.N., executive officer of the Annapolis, stationship at the naval station at Tutuila, Samoa, died at that place July 5, 1909. The body will be brought to the United States for interment as soon as suitable arrangements can be made. Lieutenant Commander Gise went out as ordnance officer on the Ohio when the Battleship Fleet began its world cruise in December, 1907. He was transferred to Samoa about the time the fleet left San Francisco. His position at the naval station at Tutuila was a most important one, he acting practically as captain of the yard and having much to do with naval affairs on the island. Commander Gise was born in Dwight, Ill., on June 22, 1871, and entered the naval Service as a naval cadet on June 14, 1889. He was promoted to ensign on July 1, 1895, and served during the Spanish-American War, 1898, on board the U.S.S. Texas. He was promoted to lieutenant (junior grade) on March 3, 1899, and to lieutenant on March 3, 1901, the most important part of his service in the latter grade being as follows: On U.S.S. Kentucky, May, 1903, to June 21, 1904; at Naval Gun Factory, navy yard, Washington, D.C., Aug. 18, 1904, to Jan. 3, 1906; as executive officer, of U.S.S. Dolphin from Jan. 4, 1906, to Oct. 21, 1907. He was promoted to lieutenant commander from Feb. 8, 1907. On Oct. 22, 1907, he reported for duty as ordnance officer of the U.S.S. Ohio, performing that duty until detached on June 27, 1908. From June 28, 1908, to July 26, 1908, he was attached to the U.S.S. Panther. On July 27, 1908, he reported for duty on board the U.S. S. Panther. On July 27, 1908, he reported for duty on board the U.S.S. Annapolis, stationship at the naval station, Tutuila, Samoa, and was engaged upon that duty at the time of his death.

[HP000K][GDrive]

Lieut. Comdr. William K. Gise, U.S.N., executive officer of the Annapolis, stationship at the naval station at Tutuila, Samoa, died at that place July 5, 1909. The body will be brought to the United States for interment as soon as suitable arrangements can be made. Lieutenant Commander Gise went out as ordnance officer on the Ohio when the Battleship Fleet began its world cruise in December, 1907. He was transferred to Samoa about the time the fleet left San Francisco. His position at Navy was a most important one, he acting practically as captain of the yard and having much to do with naval affairs on the island. Commander Gise was born in Dwight, Ill... on June 22, 1871, and entered the naval Service as a naval cadet on June 14, 1889. He was promoted to ensign on July 1, 1895, and served during the Spanish-American War, 1898, on board the U.S.S. Texas. He was promoted to lieutenant (junior grade) on March 3, 1899, and to lieutenant on March 3, 1901, the most important part of his service in the latter grade being as follows: On U.S.S. Kentucky, May, 1903, to June 21, 1904: at Naval Gun Factory, navy yard, Washington,D.C.. Aug. 18, 1904, to Jan. 3. 1906: as executive officer, of U.S.S. Dolphin from Jan. 4, 1906, to Oct. 21, 1907. He was promoted to lieutenant commander from Feb.8,1907. On Oct. 22, 1907, he reported for duty as ordinance officer of the U.S.S. Ohio, performing that duty until detached on June 27, 1908. Form June 28, 1908, to July 26, 1908, he was attached to the U.S.S. Panther. On July 27, 1908, he reported for duty on board the U.S.S. Panther. On July 27, 1908, he reported for duty on board the U.S.S. Annapolis, stationship at the naval station, Tutuila, Samoa, and was engaged upon that duty at the time of his death.

1909 (July 19)

Full page : [HN00C1][GDrive]



The National Field (Salina, Kansas) • 19 Jul 1909, Mon • Page 7

DIED BEFORE FURLOUGH.

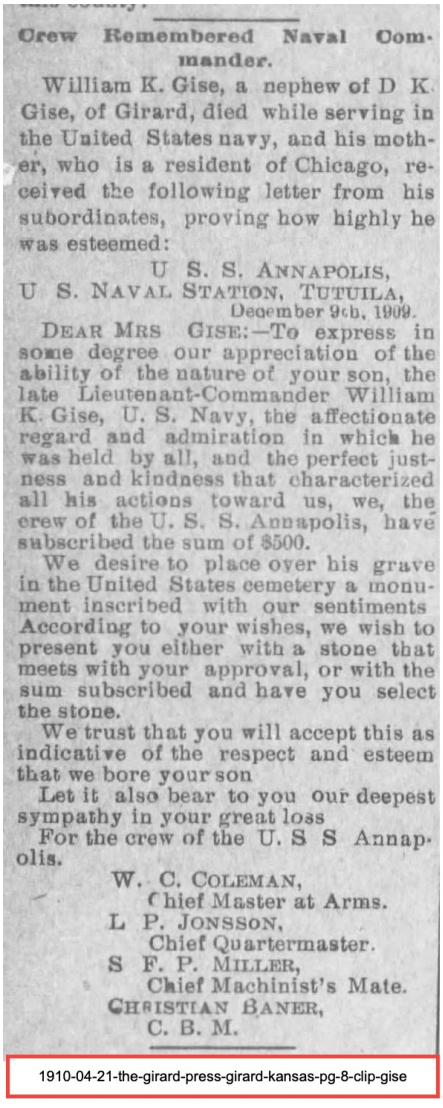
William Gise Died at Samoa Just Before Coming Home.

Mrs. A. V. Wolf received word on Monday of the death of her nephew, Lieut. William Gise, of the U. S. Navy on July 5th, in the island of Samoa, of which he was military governor. The young man had promised to visit his aunt in Minneapolis this summer during his furlough.—Minneapolis Messenger.

[HN00C2][GDrive]

1910 (April 21)

Full newspaper page : [HN00C5][GDrive]



Crew Remembered Naval Commander.

William K. Gise, a nephew of D K Gise, of Girard, died while serving in the United States navy, and his mother, who is a resident of Chicago, received the following letter from his subordinates, proving how highly he was esteemed:

U S. S. ANNAPOLIS,
U S. NAVAL STATION, TUTUILA,
December 9th, 1909.

DEAR MRS GISE:—To express in some degree our appreciation of the ability of the nature of your son, the late Lieutenant-Commander William K. Gise, U. S. Navy, the affectionate regard and admiration in which he was held by all, and the perfect justness and kindness that characterized all his actions toward us, we, the crew of the U. S. S. Annapolis, have subscribed the sum of $500.

We desire to place over his grave in the United States cemetery a monument inscribed with our sentiments According to your wishes, we wish to present you either with a stone that meets with your approval, or with the sum subscribed and have you select the stone.

We trust that you will accept this as indicative of the respect and esteem that we bore your son

Let it also bear to you our deepest sympathy in your great loss

For the crew of the U. S S Annapolis.

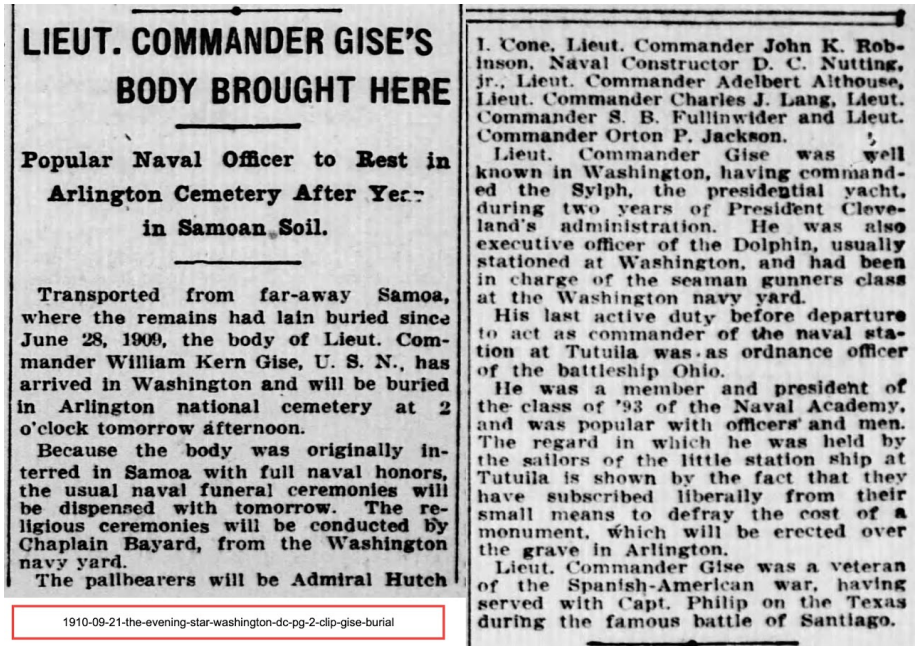
W. C. COLEMAN,
Chief Master at Arms.
L P. JONSSON,
Chief Quartermaster.
S F. P. MILLER,
Chief Machinist's Mate.
CHRISTIAN BANER,
C. B. M.

1910-04-21-the-girard-press-girard-kansas-pg-8-clip-gise

[HN00C6][GDrive]

1910 (Sep 21) - Burial - pallbearers

Full newspaper page : [HN00C3][GDrive]



LIEUT. COMMANDER GISE'S BODY BROUGHT HERE

Popular Naval Officer to Rest in Arlington Cemetery After Year in Samoan Soil.

Transported from far-away Samoa, where the remains had lain buried since June 28, 1909, the body of Lieut. Commander William Kern Gise, U. S. N., has arrived in Washington and will be buried in Arlington national cemetery at 2 o'clock tomorrow afternoon.

Because the body was originally interred in Samoa with full naval honors, the usual naval funeral ceremonies will be dispensed with tomorrow. The religious ceremonies will be conducted by Chaplain Bayard, from the Washington navy yard.

The pallbearers will be Admiral Hutch I. Cone, Lieut. Commander John K. Robinson, Naval Constructor D. C. Nutting, jr., Lieut. Commander Adelbert Althouse, Lieut. Commander Charles J. Lang, Lieut. Commander S. B. Fullinwider and Lieut. Commander Orton P. Jackson.

Lieut. Commander Gise was well known in Washington, having commanded the Sylph, the presidential yacht, during two years of President Cleveland's administration. He was also executive officer of the Dolphin, usually stationed at Washington, and had been in charge of the seaman gunners class at the Washington navy yard.

His last active duty before departure to act as commander of the naval station at Tutuila was as ordnance officer of the battleship Ohio.

He was a member and president of the class of '93 of the Naval Academy, and was popular with officers and men. The regard in which he was held by the sailors of the little station ship at Tutuila is shown by the fact that they have subscribed liberally from their small means to defray the cost of a monument, which will be erected over the grave in Arlington.

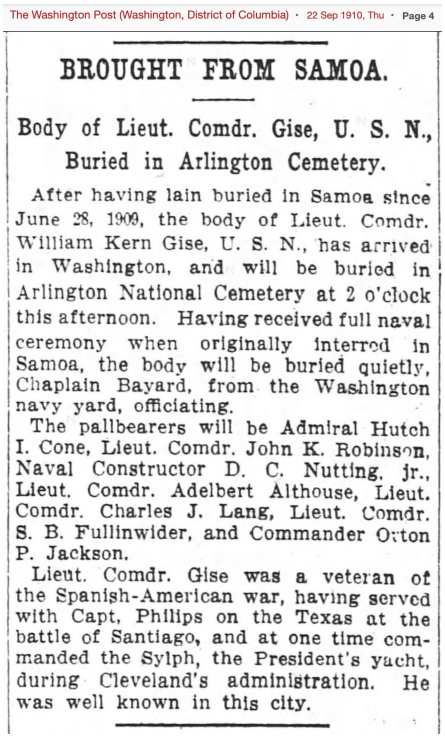
Lieut. Commander Gise was a veteran of the Spanish-American war, having served with Capt. Philip on the Texas during the famous battle of Santiago.

1910-09-21-the-evening-star-washington-dc-pg-2-clip-gise-burial

[HN00C4][GDrive]

1910 (Sep 22)

Full page : [HN00AZ][GDrive]



The Washington Post (Washington, District of Columbia) · 22 Sep 1910, Thu · Page 4

BROUGHT FROM SAMOA.

Body of Lieut. Comdr. Gise, U. S. N., Buried in Arlington Cemetery.

After having lain buried in Samoa since June 28, 1909, the body of Lieut. Comdr. William Kern Gise, U. S. N., has arrived in Washington, and will be buried in Arlington National Cemetery at 2 o'clock this afternoon. Having received full naval ceremony when originally interred in Samoa, the body will be buried quietly, Chaplain Bayard, from the Washington navy yard, officiating.

The pallbearers will be Admiral Hutch I. Cone, Lieut. Comdr. John K. Robinson, Naval Constructor D. C. Nutting, jr., Lieut. Comdr. Adelbert Althouse, Lieut. Comdr. Charles J. Lang, Lieut. Comdr. S. B. Fullinwider, and Commander Orton P. Jackson.

Lieut. Comdr. Gise was a veteran of the Spanish-American war, having served with Capt. Philips on the Texas at the battle of Santiago, and at one time commanded the Sylph, the President's yacht, during Cleveland's administration. He was well known in this city.

[HN00B0][GDrive]

(NOTE: the other governor died in 1911... of 'Bright disease'

https://en.wikipedia.org/wiki/Bright%27s_disease

https://en.wikipedia.org/wiki/John_Frederick_Parker_(United_States_Navy)

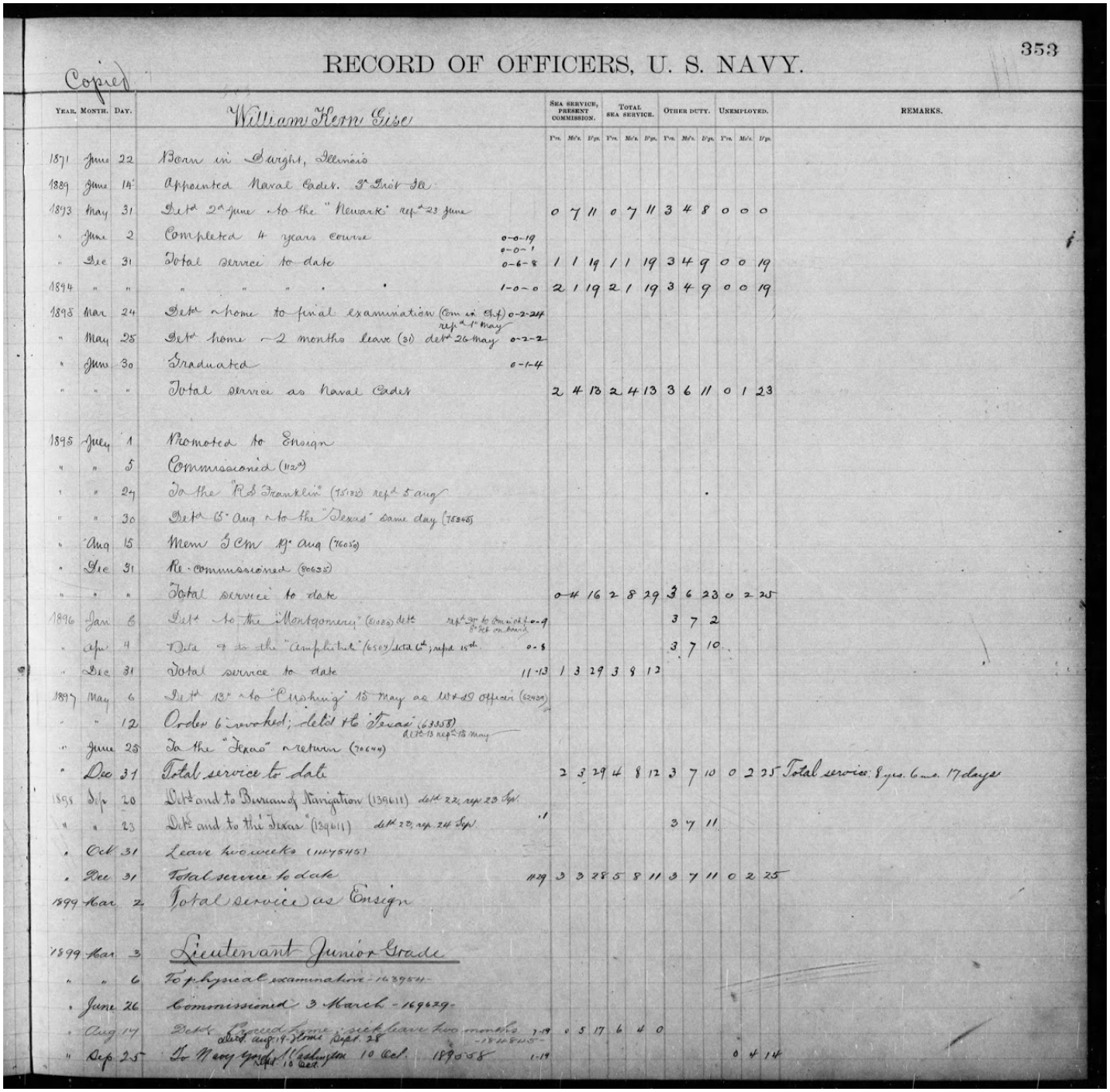
Source :

https://www.fold3.com/image/581046790

2020-03-fold3-page-353-gise-william-kern.jpg

https://www.fold3.com/image/581046791

2020-03-fold3-page-354-gise-william-kern.jpg



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Copied

RECORD OF OFFICERS, U. S. NAVY.

William Kern Gise

Year.	Month.	Day.		Sea service, present commission. Y'rs.	Mo's.	D'ys.	Total sea service. Y'rs.	Mo's.	D'ys.	Other duty. Y'rs.	Mo's.	D'ys.	Unemployed. Y'rs.	Mo's.	D'ys.	Remarks.
1871	June	22	Born in Dwight, Illinois													
1889	June	14	Appointed Naval Cadet. 3rd Dist Ill.													
1893	May	31	Det'd 2nd June to the "Newark" rep'd 23 June	0	7	11	0	7	11	3	4	8	0	0	0	
"	June	2	Completed 4 years course 0-0-19 0-0-1													
"	Dec	31	Total service to date 0-6-8	1	1	19	1	1	19	3	4	9	0	0	19	
1894	"	"	" " " " 1-0-0	2	1	19	2	1	19	3	4	9	0	0	19	
1895	Mar	24	Det'd home to final examination (Com in Ord) 0-2-24													
"	May	25	Det'd home 2 months leave (31) det'd 26 May rep'd 1st May 0-2-2													
"	June	30	Graduated 0-1-4													
"	"	"	Total service as Naval Cadet	2	4	13	2	4	13	3	6	11	0	1	23	
1895	July	1	Promoted to Ensign													
"	"	5	Commissioned (112[illegible])													
"	"	24	To the "Ben Franklin" (75130) rep'd 5 Aug													
"	"	30	Det'd 6th Aug to the "Texas" same day (75245)													
"	Aug	15	Mem G.C.M. 19th Aug (76059)													
"	Dec	31	Re-commissioned (80635)													
"	"	"	Total service to date	0	4	16	2	8	29	3	6	23	0	2	25	
1896	Jan	6	Det'd to the "Montgomery" (81020) det'd 24th Jan to Com in Ord 0-0-9 6th Feb on board							3	7	2				
"	Apl	4	Det'd to the "Amphitrite" (85097) det'd 6th; rep'd 15th 0-0-8							3	7	10				
"	Dec	31	Total service to date 11-13	1	3	29	3	8	12							
1897	May	6	Det'd 13th to "Cushing" 15 May as W't 29 Officer (92430)													
"	"	12	Order 6 inv'd; det'd to "Texas" (93558) det'd 13 rep'd 15 May													
"	June	25	To the "Texas" return (70644)													
"	Dec	31	Total service to date	2	3	29	4	8	12	3	7	10	0	2	25	Total service: 8 yrs. 6 mo. 17 days
1898	Sep	20	Det'd and to Bureau of Navigation (139611) det'd 22, rep'd 23 Sept													
"	"	23	Det'd and to the "Texas" (139611) det'd 23, rep'd 24 Sept							3	7	11				
"	Oct	31	Leave two weeks (114545)													
"	Dec	31	Total service to date 1129	3	3	28	5	8	11	3	7	11	0	2	25	
1899	Mar	2	Total service as Ensign													
1899	Mar	3	Lieutenant Junior Grade													
"	"	6	To physical examination - 143954													
"	June	26	Commissioned 3 March - 169629													
"	Aug	17	Det'd Ground Leave sick leave two months 1-19 det'd Aug 19 Time Exp't 28	0	5	17	6	4	0							
"	Sep	25	To Navy Yard Washington 10 Col. 189058 rep'd 10 Oct. 1-14										0	4	14	

RECORD OF OFFICERS, U. S. NAVY.

William Kerr Gise

Year.	Month.	Day.		Sea service, present commission. Yrs.	Mo's.	Day's.	Total sea service. Yrs.	Mo's.	Day's.	Other duty. Yrs.	Mo's.	Day's.	Unemployed. Yrs.	Mo's.	Day's.	Remarks.
1899	Dec	31	Total service to date	7-22	0	5	17	6	4	0	3	10	3	0	1	14
1900	Jan	17	Addl. duty in command of the "Sylph" 202911 Rep 30 Jan	0-34						1	3	11	3			
"	Mar	24	Leave 1 week from date. (211106 Cmdt)													
"	"	30	" Extended 1 week. (211574)													
"	May	25	Judge Advt. G.C.M. Wash. 28 inst. 215416.													
"	June	11	" " Court of Inquiry. Wash. 14 inst. 219110.													
"	June	13	Det. and continues in command of the "Sylph" Det. resp. 15 June 1900 221481													
"	"	14	Addl. duty at Navy Yard Wash. 221482.													
"	July	31	Judge Advt. G.C.M. Wash, Aug. 3d, 227565													
"	Aug	8	Addl. duty with class of Seaman Gunners. Wash. Yard. 228570													
"	Sep	19	Relieved duty as Recruiting Officer 233805													
"	Dec	7	Mem. of a Board on Grades. 244217													
"	"	31	Total service to date	11-1	1	4	18	7	3	1	3	11	2	0	4	14
1901	Jan	5	Mem. G.C.M. Wash. 9th inst. 247755													
"	Feb	14	To wait orders for promo. Wash. 18th inst. 252918.													
"	Mar	3	Lieutenant.													
"	"	18	Det. Mar. 20. and to temp. duty on the "Solace". Det. resp. 15 Apr. 1901	0	0	18	7	5	21	3	11	7				5 days
			on arrival Sta. report to Senior for duty 258440	2-20 0-3 0-19									0	5	3	
"	"	26	Recommissioned from Mar. 3. 1901. 258920													
"	Apr	5	Authorized to delay reporting on "Solace" until 15th inst. 260491.													
"	May	27	Det. and to the "Kentucky" 282760 ainc.													
"	Dec	31	Total service to date	8-16	0	9	4	8	2	7	3	11	7	0	5	3
1902	Jan	30	Recommissioned from March 3d. 1901. 299951	1	9	4	9	2	7	3	11	7	0	5	3	
"	Dec.	31	Total service to date	1	9	4	9	2	7	3	11	7	0	5	3	
1903	Jan	31	Assigned Engr duty from Jan 30. 1903. 1750. H 80.													
"	Aug.	22	Relieved Eng. duty 255760	2	9	4	10	2	7	3	11	7	0	5	3	
"	Dec	31	Total service to date	2	9	4	10	2	7	3	11	7	0	5	3	
1904	Apr	29	Record transferred to Cmdr.													

BITCHUTE @Housatonic YOUTUBE @HousatonicLive ODYSEE @Housatonic BRIGHTEON @Housatonic

Housatonic

Lloyd Preston Gise (born 1873)

Born November 6 1873 [HG002S][GDrive]

Son of **Daniel Kerlin Gise (born 1843)**

Paternal Grandparents - David B. Gise (born 1812) and Sarah (Kerlin) Gize

Maternal Grandparents -

Children include :

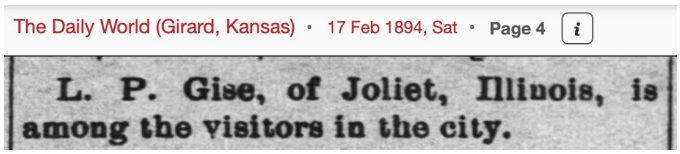
1. **S**econd son is **Lawrence Preston Gise (born 1915)**

Other relationships:

- Uncle : William Franklin Gise (born 1835)
  - (Cousin - William Kern Gise (born 1871))
- Lloyd Preston Gise is a great grandfather of Jeff Preston Bezos .

1894 - As of 1894, Lloyd P Gise was still in Joliet

Full page : [HN00MX][GDrive]

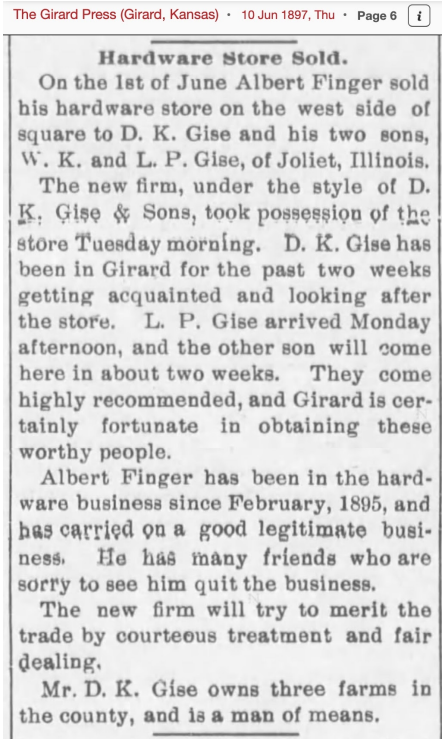

The Daily World (Girard, Kansas) • 17 Feb 1894, Sat • Page 4

L. P. Gise, of Joliet, Illinois, is among the visitors in the city.

[HN00MY][GDrive]

1897 (June 10) - hardware store - Loyd Gise and brothers take ownership

Full page : [HN00MZ][GDrive]



The Girard Press (Girard, Kansas) · 10 Jun 1897, Thu · Page 6

Hardware Store Sold.

On the 1st of June Albert Finger sold his hardware store on the west side of square to D. K. Gise and his two sons, W. K. and L. P. Gise, of Joliet, Illinois.

The new firm, under the style of D. K. Gise & Sons, took possession of the store Tuesday morning. D. K. Gise has been in Girard for the past two weeks getting acquainted and looking after the store. L. P. Gise arrived Monday afternoon, and the other son will come here in about two weeks. They come highly recommended, and Girard is certainly fortunate in obtaining these worthy people.

Albert Finger has been in the hardware business since February, 1895, and has carried on a good legitimate business. He has many friends who are sorry to see him quit the business.

The new firm will try to merit the trade by courteous treatment and fair dealing.

Mr. D. K. Gise owns three farms in the county, and is a man of means.

[HN00N0][GDrive]

1897 (Nov 25) - Llyod Gise goes hunting

https://www.newspapers.com/image/484677940/?terms=Loyd%2Bgise

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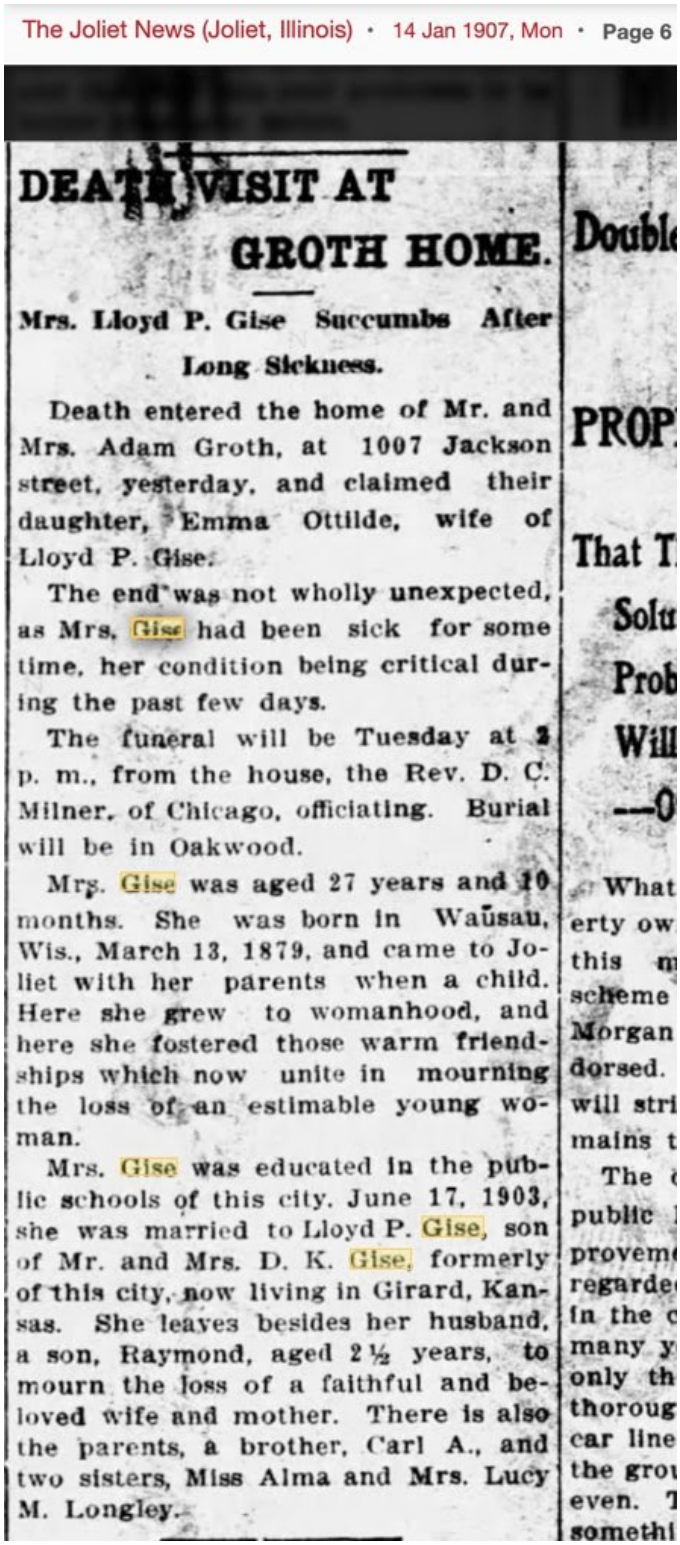
1907 (Jan) - Mrs. Lloyd P Gise dies after long illness

Jan 14 1907 - Mrs. Lloyd P Gise dies after long illness. Son was 2.5 years old (Raymond) . See [HN00MV][GDrive]



The Joliet News (Joliet, Illinois) · 14 Jan 1907, Mon · Page 6

DEATH VISIT AT GROTH HOME.

Mrs. Lloyd P. Gise Succumbs After Long Sickness.

Death entered the home of Mr. and Mrs. Adam Groth, at 1007 Jackson street, yesterday, and claimed their daughter, Emma Ottilde, wife of Lloyd P. Gise.

The end was not wholly unexpected, as Mrs. Gise had been sick for some time, her condition being critical during the past few days.

The funeral will be Tuesday at 2 p. m., from the house, the Rev. D. C. Milner, of Chicago, officiating. Burial will be in Oakwood.

Mrs. Gise was aged 27 years and 10 months. She was born in Wausau, Wis., March 13, 1879, and came to Joliet with her parents when a child. Here she grew to womanhood, and here she fostered those warm friendships which now unite in mourning the loss of an estimable young woman.

Mrs. Gise was educated in the public schools of this city. June 17, 1903, she was married to Lloyd P. Gise, son of Mr. and Mrs. D. K. Gise, formerly of this city, now living in Girard, Kansas. She leaves besides her husband, a son, Raymond, aged 2½ years, to mourn the loss of a faithful and beloved wife and mother. There is also the parents, a brother, Carl A., and two sisters, Miss Alma and Mrs. Lucy M. Longley.

[HN00MW][GDrive]

1907 - Lloyd Gise - Mount delegate

https://www.newspapers.com/image/548600455/?terms=william%2Bk%2Bgise

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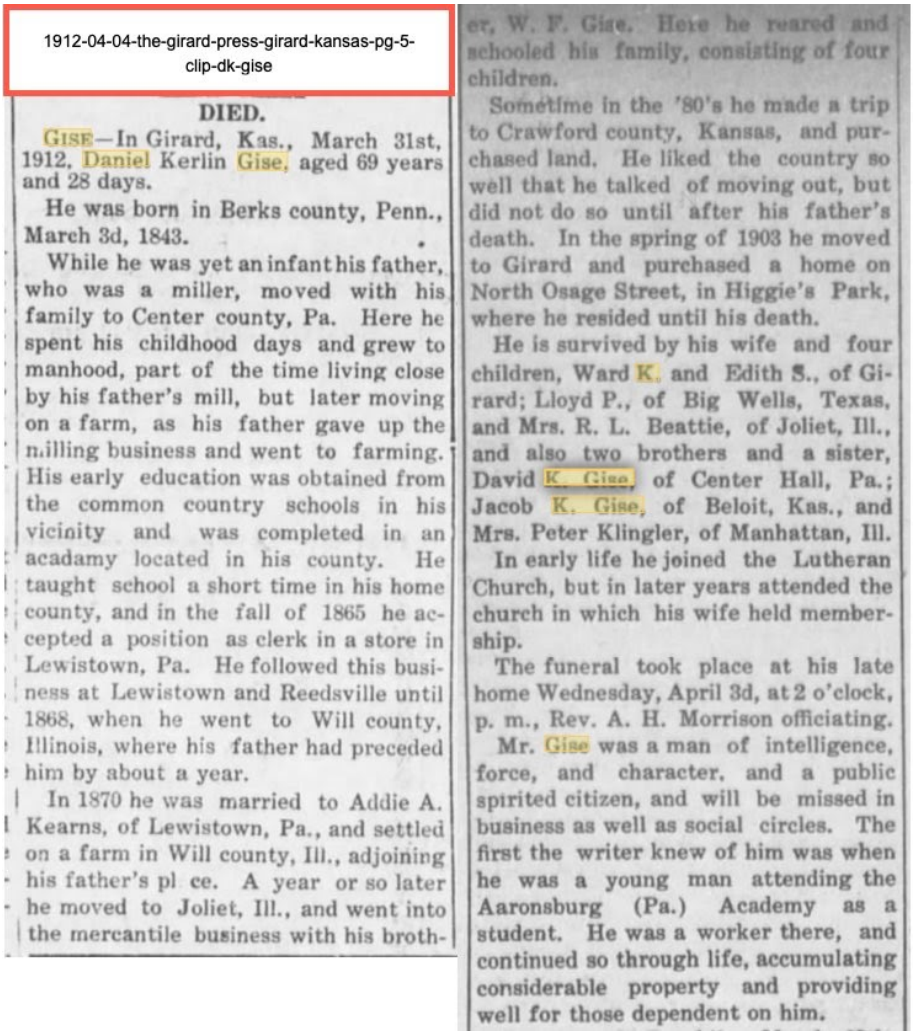
1911 (Sep 28)

https://www.newspapers.com/image/186432220/?terms=gise%2Bbig%2Bwells

"Mrs. Beulah Beattie of Joliet, Ill and Lloyd Gise, of Big Wells Texas, arrived in Girard last week to visit their parents, Mr. and Mr.s Dr. K. Gise, and they have had a regular family reuunion"

April 04 1912 - Passing of Daniel Kerlin Gise obituary (grandfather of LP Gise)

Full page : [HN00CH][GDrive]



1912-04-04-the-girard-press-girard-kansas-pg-5-clip-dk-gise

DIED.

GISE—In Girard, Kas., March 31st, 1912, Daniel Kerlin Gise, aged 69 years and 28 days.

He was born in Berks county, Penn., March 3d, 1843.

While he was yet an infant his father, who was a miller, moved with his family to Center county, Pa. Here he spent his childhood days and grew to manhood, part of the time living close by his father's mill, but later moving on a farm, as his father gave up the milling business and went to farming. His early education was obtained from the common country schools in his vicinity and was completed in an acadamy located in his county. He taught school a short time in his home county, and in the fall of 1865 he accepted a position as clerk in a store in Lewistown, Pa. He followed this business at Lewistown and Reedsville until 1868, when he went to Will county, Illinois, where his father had preceded him by about a year.

In 1870 he was married to Addie A. Kearns, of Lewistown, Pa., and settled on a farm in Will county, Ill., adjoining his father's pl ce. A year or so later he moved to Joliet, Ill., and went into the mercantile business with his brother, W. F. Gise. Here he reared and schooled his family, consisting of four children.

Sometime in the '80's he made a trip to Crawford county, Kansas, and purchased land. He liked the country so well that he talked of moving out, but did not do so until after his father's death. In the spring of 1903 he moved to Girard and purchased a home on North Osage Street, in Higgie's Park, where he resided until his death.

He is survived by his wife and four children, Ward K. and Edith S., of Girard; Lloyd P., of Big Wells, Texas, and Mrs. R. L. Beattie, of Joliet, Ill., and also two brothers and a sister, David K. Gise, of Center Hall, Pa.; Jacob K. Gise, of Beloit, Kas., and Mrs. Peter Klingler, of Manhattan, Ill.

In early life he joined the Lutheran Church, but in later years attended the church in which his wife held membership.

The funeral took place at his late home Wednesday, April 3d, at 2 o'clock, p. m., Rev. A. H. Morrison officiating.

Mr. Gise was a man of intelligence, force, and character, and a public spirited citizen, and will be missed in business as well as social circles. The first the writer knew of him was when he was a young man attending the Aaronsburg (Pa.) Academy as a student. He was a worker there, and continued so through life, accumulating considerable property and providing well for those dependent on him.

[HN00CI][GDrive]

1912 - Lloyd Gise remarries

LLoyd P Gise married **Mabel Hall** on Aug 15, 1912 . Transcript : [HL002T][GDrive]

1913 (March) - Family wedding attendance

Master Gise" - son of Lloyd Gise ?

https://www.newspapers.com/image/186449824/?terms=daniel%2Bk%2Bgise

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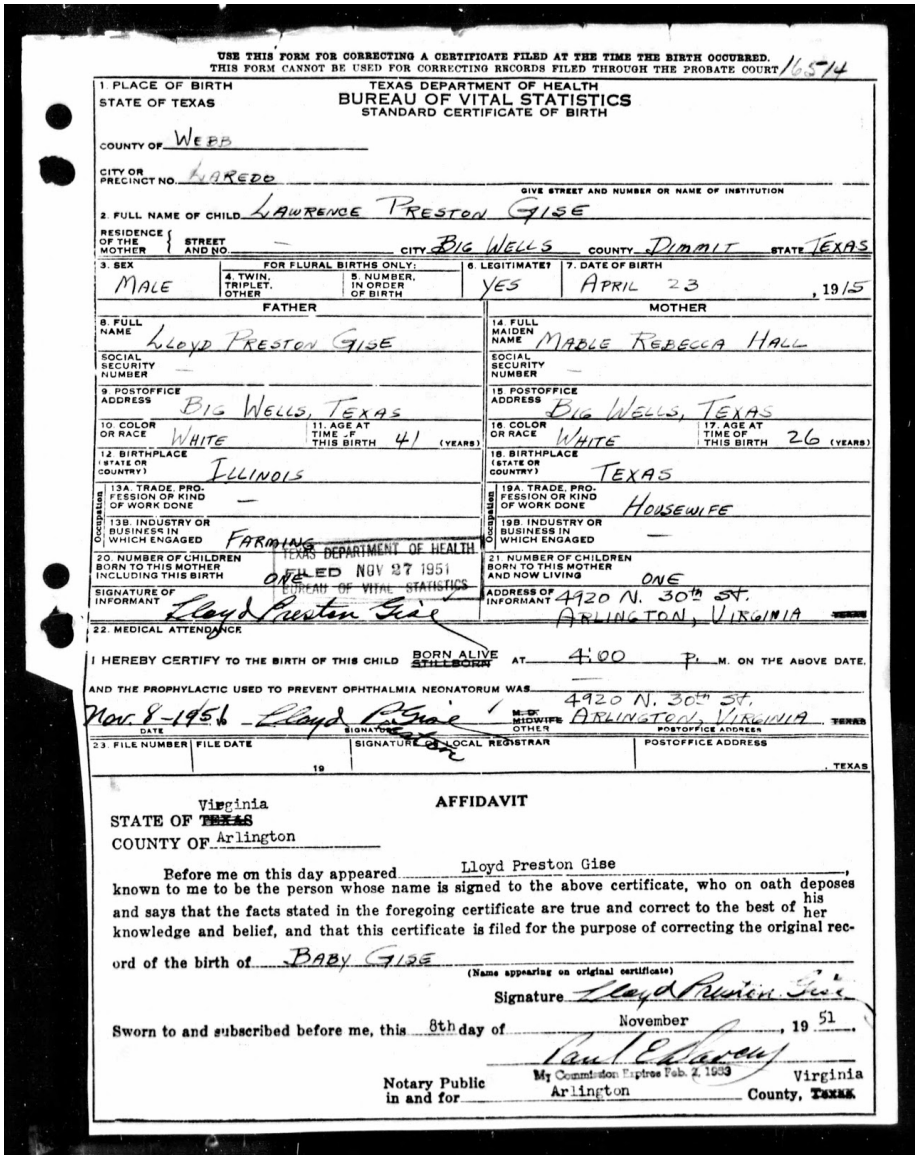
1915 (April 23) - Birth certificate for Lawrence Preston Gise (Sr.) - corrected in 1951 ...

(born april 23 1915) / 4920 north 30th street Arlington virginia



USE THIS FORM FOR CORRECTING A CERTIFICATE FILED AT THE TIME THE BIRTH OCCURRED.
THIS FORM CANNOT BE USED FOR CORRECTING RECORDS FILED THROUGH THE PROBATE COURT 16574

1. PLACE OF BIRTH — STATE OF TEXAS

TEXAS DEPARTMENT OF HEALTH
BUREAU OF VITAL STATISTICS
STANDARD CERTIFICATE OF BIRTH

COUNTY OF WEBB
CITY OR PRECINCT NO. LAREDO
GIVE STREET AND NUMBER OR NAME OF INSTITUTION
2. FULL NAME OF CHILD LAWRENCE PRESTON GISE
RESIDENCE OF THE MOTHER { STREET AND NO. — CITY BIG WELLS COUNTY DIMMIT STATE TEXAS

3. SEX	FOR PLURAL BIRTHS ONLY: 4. TWIN, TRIPLET, OTHER	5. NUMBER, IN ORDER OF BIRTH	6. LEGITIMATE?	7. DATE OF BIRTH
MALE			YES	APRIL 23, 1915

FATHER	MOTHER
8. FULL NAME: Lloyd Preston Gise	14. FULL MAIDEN NAME: Mable Rebecca Hall
SOCIAL SECURITY NUMBER: —	SOCIAL SECURITY NUMBER: —
9. POSTOFFICE ADDRESS: Big Wells, Texas	15. POSTOFFICE ADDRESS: Big Wells, Texas
10. COLOR OR RACE: White; 11. AGE AT TIME OF THIS BIRTH: 41 (YEARS)	16. COLOR OR RACE: White; 17. AGE AT TIME OF THIS BIRTH: 26 (YEARS)
12. BIRTHPLACE (STATE OR COUNTRY): Illinois	18. BIRTHPLACE (STATE OR COUNTRY): Texas
Occupation 13A. TRADE, PROFESSION OR KIND OF WORK DONE: —	Occupation 19A. TRADE, PROFESSION OR KIND OF WORK DONE: Housewife
Occupation 13B. INDUSTRY OR BUSINESS IN WHICH ENGAGED: Farming	Occupation 19B. INDUSTRY OR BUSINESS IN WHICH ENGAGED: —
20. NUMBER OF CHILDREN BORN TO THIS MOTHER INCLUDING THIS BIRTH: ONE	21. NUMBER OF CHILDREN BORN TO THIS MOTHER AND NOW LIVING: ONE
SIGNATURE OF INFORMANT: Lloyd Preston Gise	ADDRESS OF INFORMANT: 4920 N. 30th St. Arlington, Virginia

TEXAS DEPARTMENT OF HEALTH FILED NOV 27 1951 BUREAU OF VITAL STATISTICS

22. MEDICAL ATTENDANCE

I HEREBY CERTIFY TO THE BIRTH OF THIS CHILD BORN ALIVE / STILLBORN AT 4:00 P. M. ON THE ABOVE DATE.

AND THE PROPHYLACTIC USED TO PREVENT OPHTHALMIA NEONATORUM WAS —

Nov. 8-1951 (DATE) — Lloyd Preston Gise (SIGNATURE) — M.D. / MIDWIFE / OTHER — 4920 N. 30th St. Arlington, Virginia (POSTOFFICE ADDRESS) TEXAS

23. FILE NUMBER | FILE DATE 19 | SIGNATURE OF LOCAL REGISTRAR | POSTOFFICE ADDRESS TEXAS

AFFIDAVIT

STATE OF ~~TEXAS~~ Virginia
COUNTY OF Arlington

Before me on this day appeared Lloyd Preston Gise, known to me to be the person whose name is signed to the above certificate, who on oath deposes and says that the facts stated in the foregoing certificate are true and correct to the best of his / her knowledge and belief, and that this certificate is filed for the purpose of correcting the original record of the birth of BABY GISE (Name appearing on original certificate)

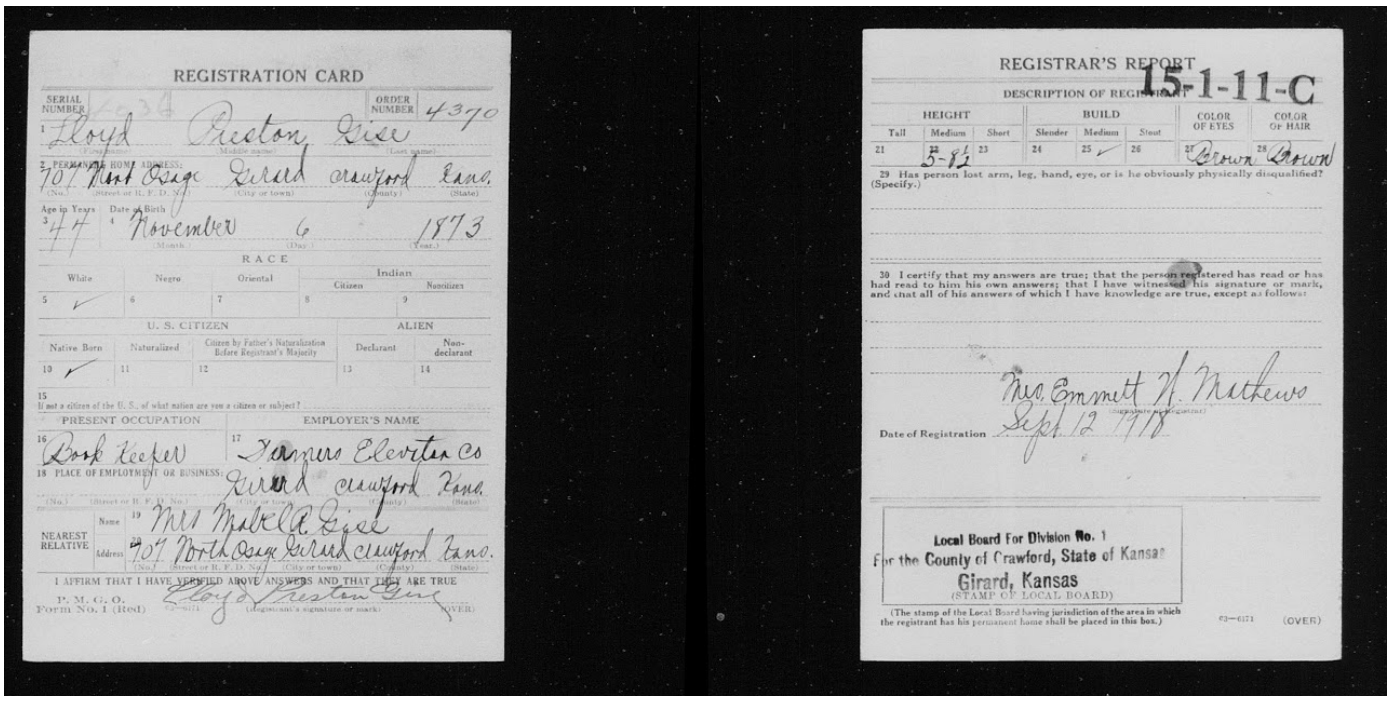
Signature Lloyd Preston Gise

Sworn to and subscribed before me, this 8th day of November, 19 51.

Paul C. Clarey
Notary Public in and for Arlington County, Virginia
My Commission Expires Feb. 2, 1953

[HL002S][GDrive]

1918 - Lloyd Preston Gise WW1 Record / Enrollment



REGISTRATION CARD

SERIAL NUMBER — ORDER NUMBER 4370

1 Lloyd (First name) Preston (Middle name) Gise (Last name)

2 PERMANENT HOME ADDRESS: 707 (No.) North Osage (Street or R. F. D. No.) Girard (City or town) Crawford (County) Kans. (State)

3 Age in Years 44 4 Date of Birth: November (Month) 6 (Day) 1873 (Year)

RACE

White	Negro	Oriental	Indian: Citizen	Indian: Noncitizen
5 ✓	6	7	8	9

U. S. CITIZEN

Native Born	Naturalized	Citizen by Father's Naturalization Before Registrant's Majority	ALIEN: Declarant	ALIEN: Non-declarant
10 ✓	11	12	13	14

15 If not a citizen of the U. S., of what nation are you a citizen or subject? —

PRESENT OCCUPATION: 16 Book keeper — EMPLOYER'S NAME: 17 Farmers Elevator Co

18 PLACE OF EMPLOYMENT OR BUSINESS: Girard (No.) (Street or R. F. D. No.) Crawford (City or town) Kans. (County) (State)

NEAREST RELATIVE: 19 Name Mrs Mabel A Gise; 20 Address 707 North Osage Girard (No.) (Street or R. F. D. No.) (City or town) Crawford (County) Kans. (State)

I AFFIRM THAT I HAVE VERIFIED ABOVE ANSWERS AND THAT THEY ARE TRUE

Lloyd Preston Gise (Registrant's signature or mark)

P. M. G. O. Form No. 1 (Red) (OVER)

REGISTRAR'S REPORT

15-1-11-C

DESCRIPTION OF REGISTRANT

HEIGHT: Tall	HEIGHT: Medium	HEIGHT: Short	BUILD: Slender	BUILD: Medium	BUILD: Stout	COLOR OF EYES	COLOR OF HAIR
21	22 5-8½	23	24	25 ✓	26	27 Brown	28 Brown

29 Has person lost arm, leg, hand, eye, or is he obviously physically disqualified? (Specify.)

30 I certify that my answers are true; that the person registered has read or has had read to him his own answers; that I have witnessed his signature or mark, and that all of his answers of which I have knowledge are true, except as follows:

Mrs. Emmett N. Mathews (Signature or mark of witness)

Date of Registration Sept 12 1918

Local Board For Division No. 1
For the County of Crawford, State of Kansas
Girard, Kansas
(STAMP OF LOCAL BOARD)

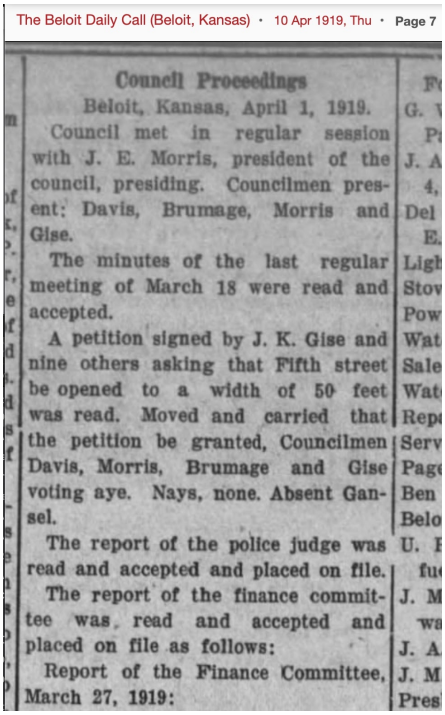
(The stamp of the Local Board having jurisdiction of the area in which the registrant has his permanent home shall be placed in this box.)

63—6171 (OVER)

[HG002S][GDrive]

1919 (April 10)

Full page : [HN00MT][GDrive]



The Beloit Daily Call (Beloit, Kansas) • 10 Apr 1919, Thu • Page 7

Council Proceedings

Beloit, Kansas, April 1, 1919.

Council met in regular session with J. E. Morris, president of the council, presiding. Councilmen present: Davis, Brumage, Morris and Gise.

The minutes of the last regular meeting of March 18 were read and accepted.

A petition signed by J. K. Gise and nine others asking that Fifth street be opened to a width of 50 feet was read. Moved and carried that the petition be granted, Councilmen Davis, Morris, Brumage and Gise voting aye. Nays, none. Absent Gansel.

The report of the police judge was read and accepted and placed on file.

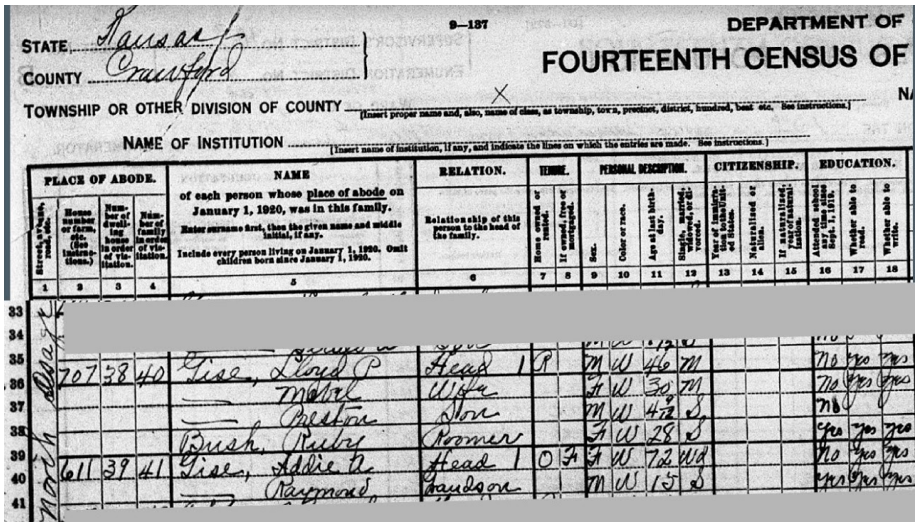
The report of the finance committee was read and accepted and placed on file as follows:

Report of the Finance Committee, March 27, 1919:

[HN00MU][GDrive]

1920 Census - Kansas

Full census form : [HS001V][GDrive]

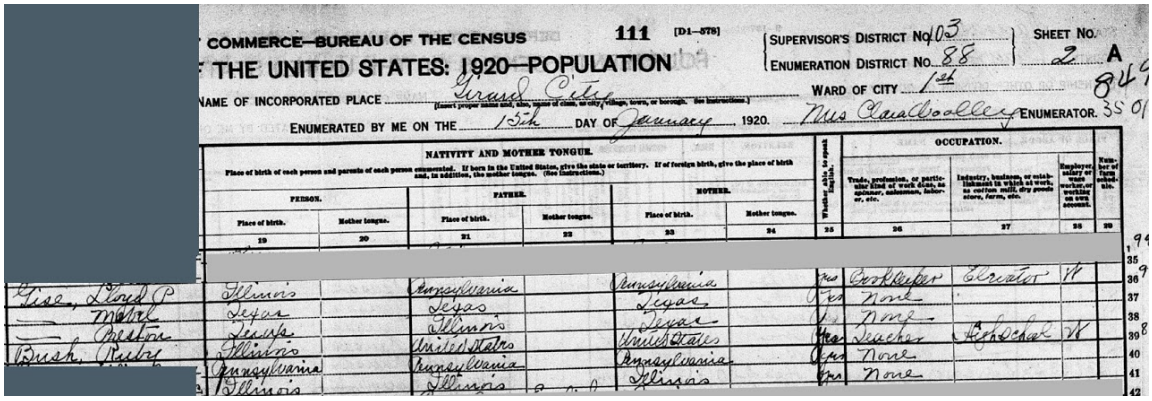


STATE Kansas
COUNTY Crawford
TOWNSHIP OR OTHER DIVISION OF COUNTY
NAME OF INSTITUTION

DEPARTMENT OF
FOURTEENTH CENSUS OF

PLACE OF ABODE.			NAME of each person whose place of abode on January 1, 1920, was in this family.	RELATION.	HOME.	PERSONAL DESCRIPTION.				CITIZENSHIP.			EDUCATION.		
Street, avenue, road, etc.	House number or farm, etc.	Number of dwelling house in order of visitation.	Number of family in order of visitation.	Relation of this person to the head of the family.	Home owned or rented	If owned, free or mortgaged	Sex.	Color or race.	Age at last birthday.	Single, married, widowed, or divorced.	Year of immigration to the United States.	Naturalized or alien.	If naturalized, year of naturalization.	Attended school Sept. 1, 1919.	Whether able to read.	Whether able to write.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
33																	
34																	
35	707	38	40	Tise, Lloyd P	Head	R		M	W	46	M				No	Yes	Yes
36				— Mabel	Wife			F	W	30	M				No	Yes	Yes
37				— Preston	Son			M	W	4 12	S				No		
38				Bush, Ruby	Roomer			F	W	28	S				Yes	Yes	Yes
39	611	39	41	Tise, Addie D.	Head	R	O	F	W	72	Wd				No	Yes	Yes
40				— Raymond	Grandson			M	W	15	S				Yes	Yes	Yes
41																	

[HS001W][GDrive]



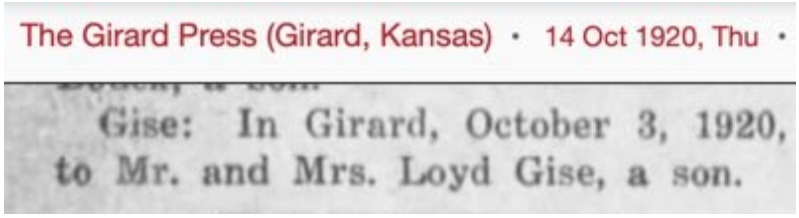
COMMERCE—BUREAU OF THE CENSUS 111 [D1—578]
THE UNITED STATES: 1920—POPULATION
SUPERVISOR'S DISTRICT No. 03 SHEET No. 2 A
ENUMERATION DISTRICT No. 88
NAME OF INCORPORATED PLACE Girard City WARD OF CITY 1st
ENUMERATED BY ME ON THE 15th DAY OF January 1920. Mrs Claud Coalley ENUMERATOR.

	NATIVITY AND MOTHER TONGUE. PERSON: Place of birth	Mother tongue	FATHER: Place of birth	Mother tongue	MOTHER: Place of birth	Mother tongue	OCCUPATION. Trade, profession, or particular kind of work done, as spinner, salesman, laborer, etc.	Industry, business, or establishment in which at work, as cotton mill, dry goods store, farm, etc.	Employer, salary or wage worker, or working on own account.
Gise, Lloyd P	Illinois	Pennsylvania		Pennsylvania		Yes	Bookkeeper	Elevator	W
— Mabel	Texas	Texas		Texas		Yes	None		
— Preston	Texas	Illinois		Texas		Yes	Teacher	High School	W
Bush, Ruby	Illinois	United States		United States		Yes	None		
	Pennsylvania	Pennsylvania		Pennsylvania		Yes	None		
	Illinois	Illinois		Illinois		Yes	None		

[HS001X][GDrive]

1920 (Oct) - Birth of Loyd Gise's second son with Mabel

Full page : [HN00MR][GDrive]



The Girard Press (Girard, Kansas) · 14 Oct 1920, Thu ·

Gise: In Girard, October 3, 1920, to Mr. and Mrs. Loyd Gise, a son.

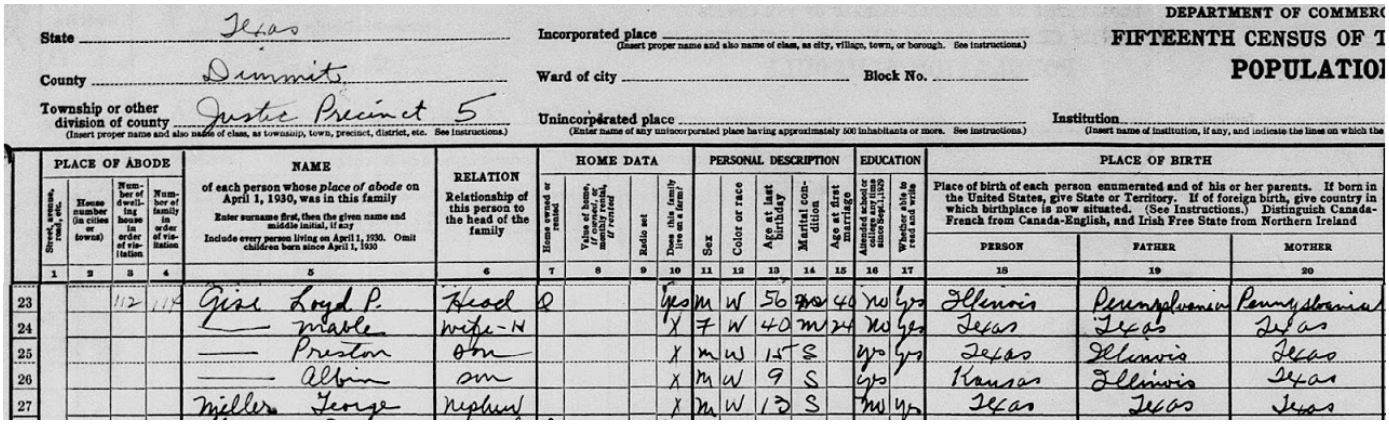
[HN00MS][GDrive]

July 19 1923 (July 19) - Mrs Loyd Gise

https://www.newspapers.com/image/186435254/?terms=Loyd%2Bgise

1930 - US Census - Dimmit County , Texas

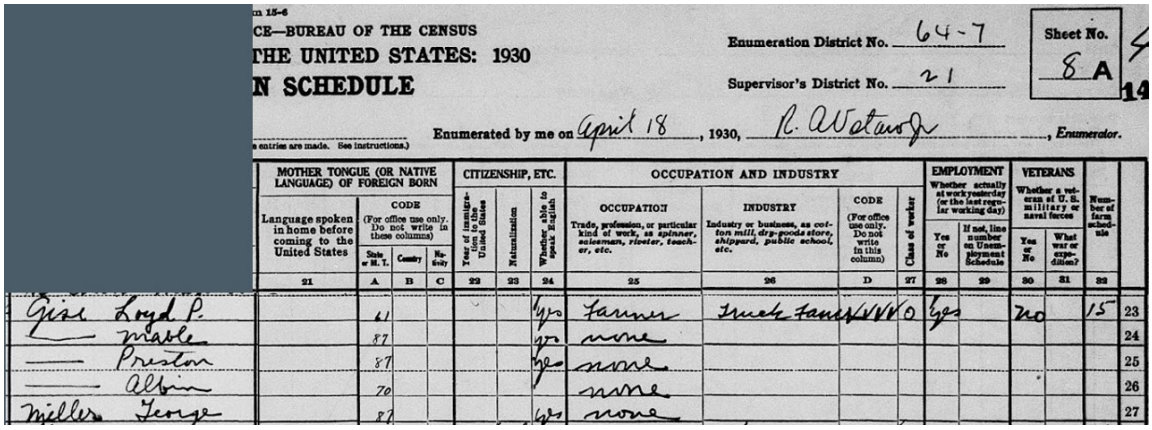
Full Census Form - [HS001S][GDrive]



State Texas
County Dimmit
Township or other division of county Justice Precinct 5
Incorporated place
Ward of city Block No.
Unincorporated place
DEPARTMENT OF COMMERC
FIFTEENTH CENSUS OF T
POPULATIO
Institution

	PLACE OF ABODE: Street, avenue, road, etc.	House number (in cities or towns)	Number of dwelling house in order of visitation	Number of family in order of visitation	NAME of each person whose place of abode on April 1, 1930, was in this family. Enter surname first, then the given name and middle initial, if any. Include every person living on April 1, 1930. Omit children born since April 1, 1930	RELATION: Relationship of this person to the head of the family	HOME DATA: Home owned or rented	Value of home, if owned, or monthly rental, if rented	Radio set	Does this family live on a farm?	PERSONAL DESCRIPTION: Sex	Color or race	Age at last birthday	Marital condition	Age at first marriage	EDUCATION: Attended school or college any time since Sept. 1, 1929	Whether able to read and write	PLACE OF BIRTH. Place of birth of each person enumerated and of his or her parents. If born in the United States, give State or Territory. If of foreign birth, give country in which birthplace is now situated. (See Instructions.) Distinguish Canada-French from Canada-English, and Irish Free State from Northern Ireland. PERSON	FATHER	MOTHER
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
23			112	114	Gise Loyd P.	Head	O			Yes	M	W	56	M	40	No	Yes	Illinois	Pennsylvania	Pennsylvania
24					— Mable	wife-W				X	F	W	40	M	24	No	Yes	Texas	Texas	Texas
25					— Preston	son				X	M	W	14	S		Yes	Yes	Texas	Illinois	Texas
26					— Albin	son				X	M	W	9	S		Yes		Kansas	Illinois	Texas
27					Miller George	nephew				X	M	W	13	S		No	Yes	Texas	Texas	Texas

[HS001T][GDrive]



CE—BUREAU OF THE CENSUS
THE UNITED STATES: 1930
N SCHEDULE
Enumeration District No. 64-7
Supervisor's District No. 21
Sheet No. 8 A
Enumerated by me on April 18, 1930, R. A Watson Jr., Enumerator.

	Language spoken in home before coming to the United States	State or N. T.	Country	No. Gvty	Year of immigration to the United States	Naturalization	Whether able to speak English	Occupation	Industry	Code	Class of worker	Yes or No	If not, line number on Unemployment Schedule	Yes or No	What war or expedition?	Number of farm schedule	
	21	A	B	C	22	23	24	25	26	D	27	28	29	30	31	32	
Gise Loyd P.		41					Yes	Farmer	Truck Farm		O	Yes		No		15	23
— Mable		37					Yes	none									24
— Preston		87					Yes	none									25
— Albin		70						none									26
Miller George		87					Yes	none									27

[HS001U][GDrive]

1931 - Lloyd Gise mention

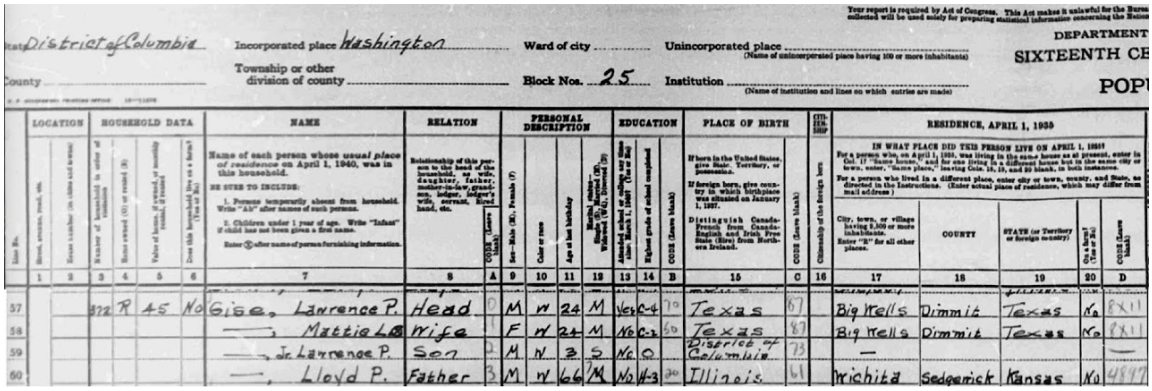
https://newspaperarchive.com/san-antonio-express-jul-19-1931-p-56/

1933

https://newspaperarchive.com/san-antonio-express-may-28-1933-p-46/

1940 - US Census - Washington DC

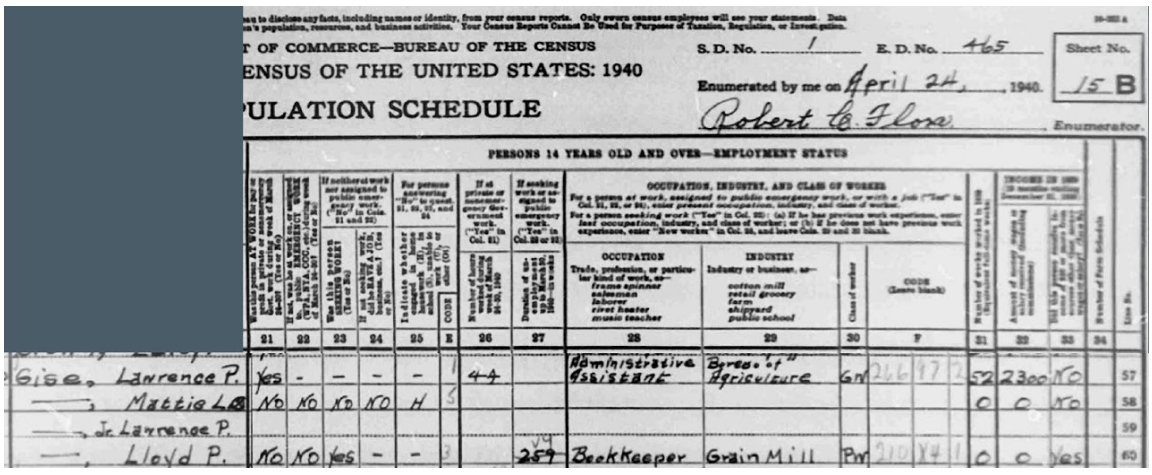
Full Census form: [HS001P][GDrive]



State District of Columbia — Incorporated place Washington — Ward of city — Unincorporated place — Township or other division of county — Block No. 25 — Institution

	LOCATION	HOUSEHOLD DATA				NAME	RELATION	PERSONAL DESCRIPTION				EDUCATION			PLACE OF BIRTH		RESIDENCE, APRIL 1, 1935				
																	IN WHAT PLACE DID THIS PERSON LIVE ON APRIL 1, 1935?				
						Name of each person whose usual place of residence on April 1, 1940, was in this household.									If born in the United States, give State, Territory, or possession. If foreign born, give country in which birthplace was situated on January 1, 1937. Distinguish Canada-French from Canada-English and Irish Free State (Eire) from Northern Ireland.			City, town, or village having 2,500 or more inhabitants. Enter "R" for all other places.	COUNTY	STATE (or Territory or foreign country)		
	1	2	3	4	5	6	7	8	A	9	10	11	12	13	14	B	15	C	16	17	18	19	20	D
57			372	R	45	No	Gise, Lawrence P.	Head		M	W	24	M	Yes	C-4		Texas			Big Wells	Dimmit	Texas	No	
58							—, Mattie L.	Wife		F	W	24	M	No	C-2		Texas			Big Wells	Dimmit	Texas	No	
59							—, Jr. Lawrence P.	Son		M	W	3	S	No	0		District of Columbia			—				
60							—, Lloyd P.	Father		M	W	66	M	No	4-3		Illinois			Wichita	Sedgewick	Kansas	No	

[HS001Q][GDrive]



T OF COMMERCE—BUREAU OF THE CENSUS
ENSUS OF THE UNITED STATES: 1940
ULATION SCHEDULE
S. D. No. 1 E. D. No. 465
Sheet No. 15 B
Enumerated by me on April 24, 1940. Robert C. Flora, Enumerator.

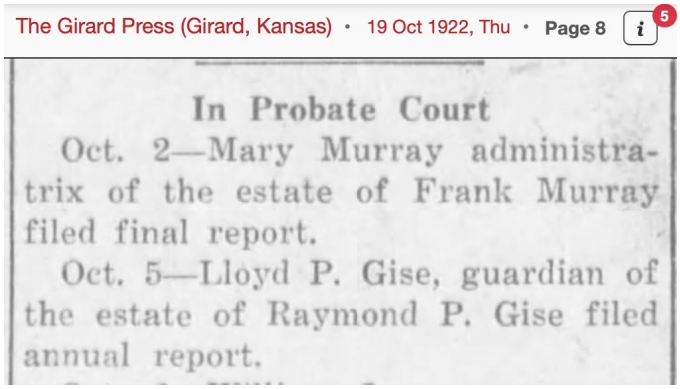
PERSONS 14 YEARS OLD AND OVER—EMPLOYMENT STATUS

	If neither at work nor assigned to public emergency work ("No" in Col. 21)				If at private or nonemergency Government work ("Yes" in Col. 21)	If seeking work or assigned to public emergency work ("Yes" in Col. 22 or 23)	OCCUPATION, INDUSTRY, AND CLASS OF WORKER							
							OCCUPATION	INDUSTRY	Class of worker	CODE				
	21	22	23	24	25	E	26	27	28	29	30	7	31	32	33	34	
Gise, Lawrence P.	Yes	-	—	-	-	1	44		Administrative Assistant	Bureau of Agriculture	Gov	266	47	52	2300	No	57
—, Mattie L.	No	No	No	No	H	3								0	0	No	58
—, Jr. Lawrence P.																	59
—, Lloyd P.	No	No	Yes	-	-	3		259	Bookkeeper	Grain Mill	Pvt	210	X4	0	0	Yes	60

[HS001R][GDrive]

1922 - Raymond P Gise (first son) news

Full page : [HN00MP][GDrive]



The Girard Press (Girard, Kansas) • 19 Oct 1922, Thu • Page 8

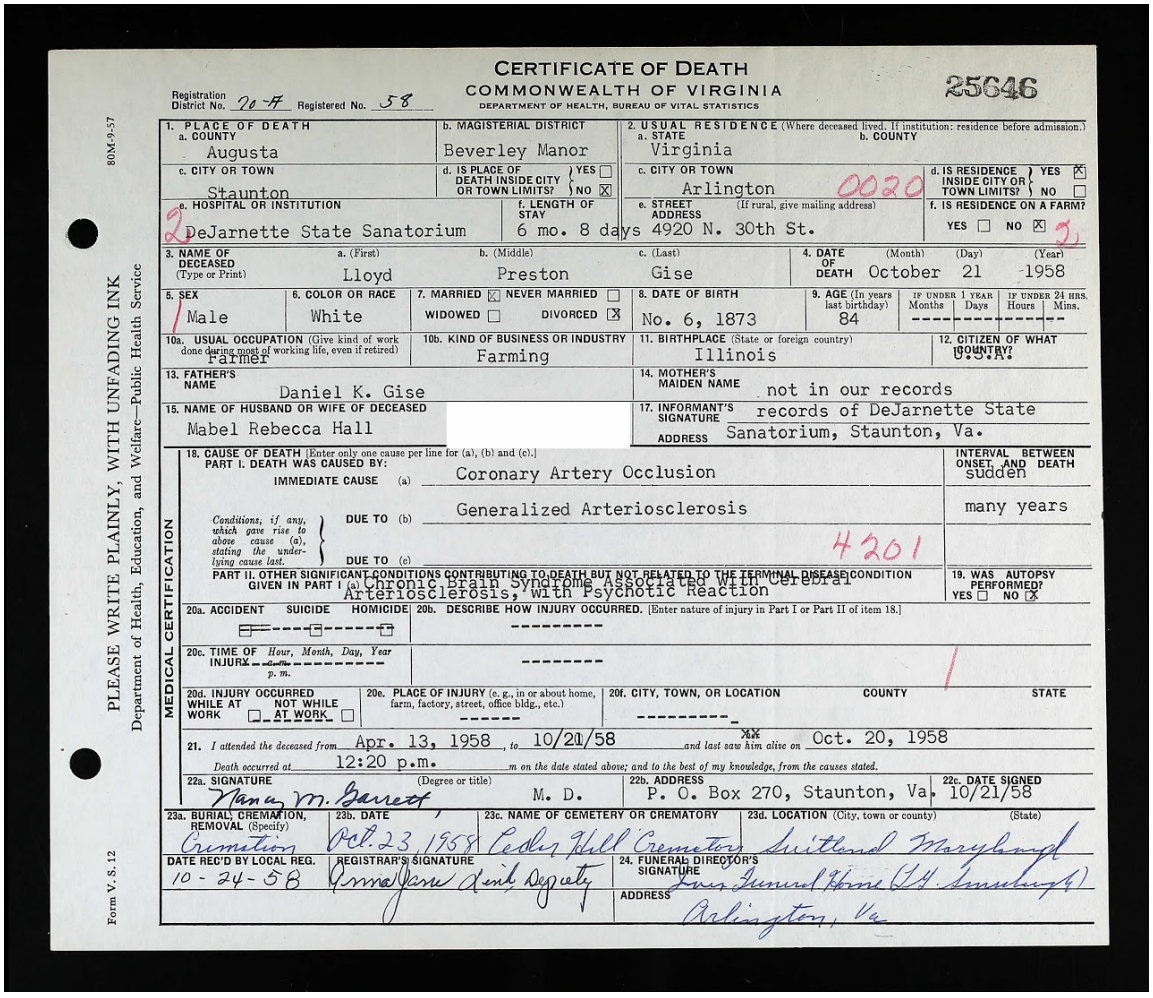
In Probate Court

Oct. 2—Mary Murray administratrix of the estate of Frank Murray filed final report.

Oct. 5—Lloyd P. Gise, guardian of the estate of Raymond P. Gise filed annual report.

[HN00MQ][GDrive]

1958 - Lloyd P Gise passes



CERTIFICATE OF DEATH

COMMONWEALTH OF VIRGINIA

DEPARTMENT OF HEALTH, BUREAU OF VITAL STATISTICS

25646

Registration District No. 70-F Registered No. 58

PLEASE WRITE PLAINLY, WITH UNFADING INK — Department of Health, Education, and Welfare—Public Health Service

80M-9-57 Form V. S. 12

1. PLACE OF DEATH: a. COUNTY: Augusta; b. MAGISTERIAL DISTRICT: Beverley Manor; c. CITY OR TOWN: Staunton; d. IS PLACE OF DEATH INSIDE CITY OR TOWN LIMITS? YES ☐ NO ☒; e. HOSPITAL OR INSTITUTION: DeJarnette State Sanatorium; f. LENGTH OF STAY: 6 mo. 8 days

2. USUAL RESIDENCE (Where deceased lived. If institution: residence before admission.): a. STATE: Virginia; b. COUNTY: 0020; c. CITY OR TOWN: Arlington; d. IS RESIDENCE INSIDE CITY OR TOWN LIMITS? YES ☒ NO ☐; e. STREET ADDRESS (If rural, give mailing address): 4920 N. 30th St.; f. IS RESIDENCE ON A FARM? YES ☐ NO ☒

3. NAME OF DECEASED (Type or Print): a. (First) Lloyd; b. (Middle) Preston; c. (Last) Gise

4. DATE OF DEATH: (Month) October (Day) 21 (Year) 1958

5. SEX: Male; 6. COLOR OR RACE: White; 7. MARRIED ☒ NEVER MARRIED ☐ WIDOWED ☐ DIVORCED ☒; 8. DATE OF BIRTH: No. 6, 1873; 9. AGE (In years last birthday): 84; IF UNDER 1 YEAR Months / Days; IF UNDER 24 HRS. Hours / Mins.

10a. USUAL OCCUPATION (Give kind of work done during most of working life, even if retired): Farmer; 10b. KIND OF BUSINESS OR INDUSTRY: Farming; 11. BIRTHPLACE (State or foreign country): Illinois; 12. CITIZEN OF WHAT COUNTRY? U.S.A.

13. FATHER'S NAME: Daniel K. Gise; 14. MOTHER'S MAIDEN NAME: not in our records

15. NAME OF HUSBAND OR WIFE OF DECEASED: Mabel Rebecca Hall; 17. INFORMANT'S SIGNATURE: records of DeJarnette State; ADDRESS: Sanatorium, Staunton, Va.

MEDICAL CERTIFICATION

18. CAUSE OF DEATH [Enter only one cause per line for (a), (b) and (c).] PART I. DEATH WAS CAUSED BY:

IMMEDIATE CAUSE (a) Coronary Artery Occlusion — INTERVAL BETWEEN ONSET AND DEATH: sudden

Conditions, if any, which gave rise to above cause (a), stating the underlying cause last. DUE TO (b) Generalized Arteriosclerosis — many years

DUE TO (c) 4201

PART II. OTHER SIGNIFICANT CONDITIONS CONTRIBUTING TO DEATH BUT NOT RELATED TO THE TERMINAL DISEASE CONDITION GIVEN IN PART I (a) Chronic Brain Syndrome Associated with Cerebral Arteriosclerosis, with Psychotic Reaction — 19. WAS AUTOPSY PERFORMED? YES ☐ NO ☒

20a. ACCIDENT SUICIDE HOMICIDE ☐ ☐ ☐; 20b. DESCRIBE HOW INJURY OCCURRED. [Enter nature of injury in Part I or Part II of item 18.]

20c. TIME OF INJURY Hour, Month, Day, Year; a. m. / p. m.

20d. INJURY OCCURRED WHILE AT WORK ☐ NOT WHILE AT WORK ☐; 20e. PLACE OF INJURY (e.g., in or about home, farm, factory, street, office bldg., etc.); 20f. CITY, TOWN, OR LOCATION COUNTY STATE

21. I attended the deceased from Apr. 13, 1958, to 10/21/58 and last saw him alive on Oct. 20, 1958

Death occurred at 12:20 p.m. m. on the date stated above; and to the best of my knowledge, from the causes stated.

22a. SIGNATURE (Degree or title): Nancy M. Barrett M. D.; 22b. ADDRESS: P. O. Box 270, Staunton, Va.; 22c. DATE SIGNED: 10/21/58

23a. BURIAL, CREMATION, REMOVAL (Specify): Cremation; 23b. DATE: Oct. 23, 1958; 23c. NAME OF CEMETERY OR CREMATORY: Cedar Hill Cemetery; 23d. LOCATION (City, town or county) (State): Suitland Maryland

DATE REC'D BY LOCAL REG.: 10-24-58; REGISTRAR'S SIGNATURE: Emma Jane Smith Deputy; 24. FUNERAL DIRECTOR'S SIGNATURE: Lacy Funeral Home (H. Smith); ADDRESS: Arlington, Va.

[HL002R][GDrive]

1977 (July)- Mabel Gise (Wife of Lloyd Preston Gise) dies in California

Full page : [HN00MN][GDrive]

Mrs R. T. Hall had as her guests for the week-end Mr. and Mr.s Larcy Hall of Eagle Pass and Mr. and Mr.s Lloyd Gise of Big Wells

Independent Press-Telegram (Long Beach, California) · 27 Feb 1977, Sun · Page 67

Graveside services Monday for Mabel Gise

Graveside services for Mabel Gise, member of a pioneer Texas family, will be held Monday, 11 a.m., at Westminster Memorial Park. Mrs. Gise died Thursday at the age of 89.

Her son, Ray Gise, retired I.P-T accountant, said Mrs. Gise and her family migrated to Texas from a French Huguenot colony in the Carolinas. Her father became a rancher.

She moved to Long Beach in 1936 and belonged to several state society groups, including the Emera Chapter 561, Order of Eastern Star.

She is survived by three sons, Ray, Seal Beach; Al, Corona; Reston, Cotulla, Tex.; a sister and brother in Texas, and grandchildren and great grandchildren.

[HN00MO][GDrive]

MABEL HALL (Also goes by Rebecca Mabel Hall)

https://www.geni.com/people/Rebecca/6000000041129419897

Born Jan 17, 1889

https://ethnicelebs.com/jeff-bezos/comment-page-2

"Jeff's maternal grandfather was Lawrence Preston Gise (the son of Lloyd Preston Gise and Rebecca Mabel/Mable Hall). Lawrence was born in Texas. Lloyd was the son of Daniel Kerlin Gise and Adeline/Adaline A. “Addie” Kearns. Rebecca was the daughter of Thomas King Hall and Henrietta Trammell."

1900 census - Rebecca M Hall (Dimmit Texas)

https://www.findmypast.com/transcript?id=USC%2F1900%2F004118457%2F00527%2F007

1912

https://www.newspapers.com/image/63324894/?terms=%22Mabel%2BHall%22

Mabel Hall - 1900 census (not sure if this is right onw)

https://www.findmypast.com/transcript?id=USC%2F1900%2F004112018%2F00782%2F046

Grace S Gise (born 1886)

Born : April 10 1886 [HL0015][GDrive]

Died : Feb 10 1966 [HL0015][GDrive]

Father is **Jacob Kerlin Gise** (born 1849)

(Paternal) grandFather is David B. Gise (born 1812)

Siblings include :

- William John Gise (born 1888)
  - Father of William John Gise Jr (born 1920)
- <others>

Other relationships :

- **Uncles**
  - **William Franklin Gise** (born 1835)
    - **Children include : (these are cousins of Grace Gise)**
      - William Kern Gise (born 1871)
      - <others>
  - Daniel Kerlin Gise (born 1843)
    - **Children include : (these are cousins of Grace Gise)**
      - **Lloyd Preston Gise** (born 1873) (Father of Lawrence Preston Gise (born 1915) / Great grandfather of **Jeff Preston Bezos**)
      - <others>
  - David K Gise (1838)
  - <others>

---

https://www.myheritage.com/research/record-1-326475201-1-518135/grace-s-gise-in-myheritage-family-trees

1895

they say "S G Gise" ... is the Grace and "S" reversed ?

https://search.ancestry.com/cgi-bin/sse.dll?dbid=1088&h=6515084&indiv=try&o_vc=Record:OtherRecord&rhSource=1088

1903 - with "Willie gise"

I bet this is her brother - William John Gise Sr.

https://www.newspapers.com/image/483267238/?terms=%22grace%2Bgise%22%2Bwashington%2BDC

1906 - visiting in Nebraska again

https://www.newspapers.com/image/420256031/?terms=%22grace%2Bgise%22

1906 - Grace on the girls basketball team

https://www.newspapers.com/image/420266218/?terms=%22grace%2Bgise%22

1907 - Kansas HS class - Grace Gise

https://www.old-yearbooks.com/kansas/6724/beloit-ks-high-school-class-1907

1907 - pic of grace gise

Full newspaper page : [HN00CJ][1907-05-23-the-beloit-gazette-pg-2-clip-grace-gise-hs-portrait]

[HN00CK][1907-05-23-the-beloit-gazette-pg-2-clip-grace-gise-hs-portrait]

1910 - Grace Gise went to Colorado University !

https://www.newspapers.com/image/153074047/?terms=%22grace%2Bgise%22

1910 Census

https://www.findmypast.com/transcript?id=USC/1910/004971561/00076/015

1910- Grace starts to work in a local school

https://www.newspapers.com/image/153074285/?terms=%22grace%2Bgise%22

1911

https://www.newspapers.com/image/153203603/?terms=%22grace%2Bgise%22

July 13 1911 Grace Gise - In San Francisco

https://www.newspapers.com/image/424192864/?terms=%22grace%2Bgise%22

1911

https://www.newspapers.com/image/153203603/?terms=%22grace%2Bgise%22

Census date 1915 - Grace S Gise - Age 27 , still at home in Kansas

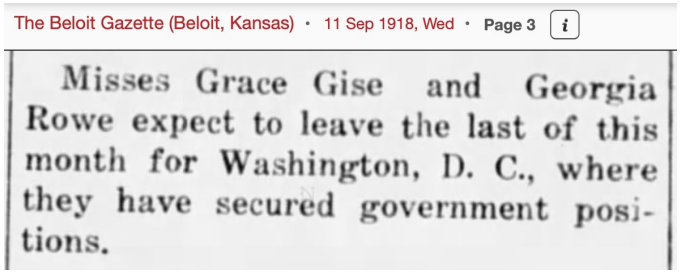
https://www.ancestry.com/interactive/1088/ks1915_152-0143?pid=5203366&backurl=https://search.ancestry.com/cgi-bin/sse.dll?indiv%3D1%26dbid%3D1088%26h%3D5203366%26tid%3D%26pid%3D%26usePUB%3Dtrue%26_phsrc%3DPnl91%26_phstart%3DsuccessSource&treeid=&personid=&hintid=&usePUB=true&_phsrc=Pnl91&_phstart=successSource&usePUBJs=true&_ga=2.211033621.1691365357.1569621424-2017998303.1551994226

July 3 1918

https://www.newspapers.com/image/419705421/?terms=%22grace%2Bgise%22

Sep 1919 - Grace Gise gets DC job

Full newspaper page : [HN00CL][1918-09-11-the-beloit-gazette-pg-3-clip-gise-rowe-dc]

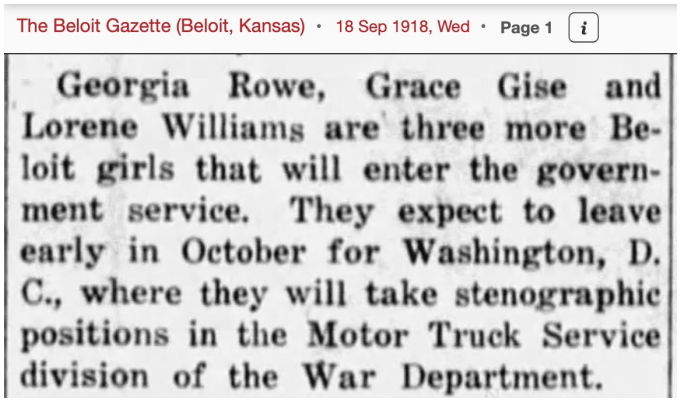

The Beloit Gazette (Beloit, Kansas) · 11 Sep 1918, Wed · Page 3

Misses Grace Gise and Georgia Rowe expect to leave the last of this month for Washington, D. C., where they have secured government positions.

[HN00CM][1918-09-11-the-beloit-gazette-pg-3-clip-gise-rowe-dc]

1918 (Sep 18) - stenographic positions in motor tucks division of war department

Full page : [HN00CN][1918-09-18-the-beloit-gazette-pg-1-clip-war-dept]

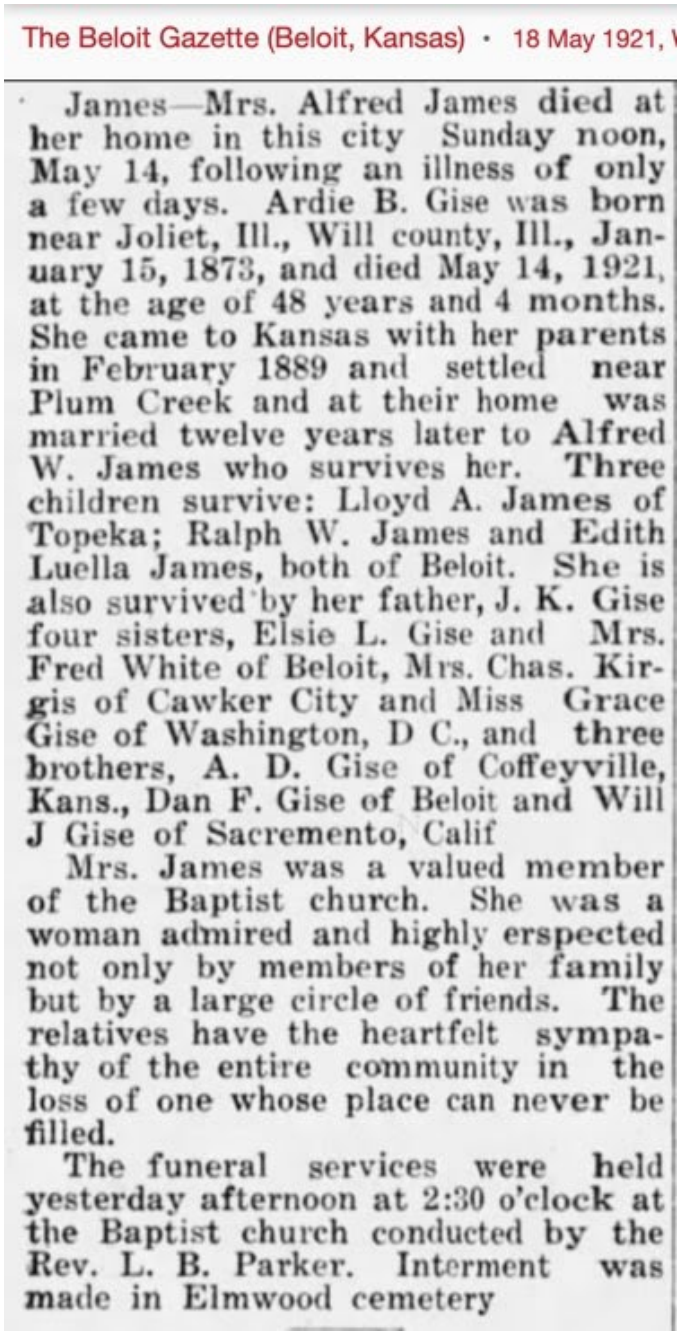

The Beloit Gazette (Beloit, Kansas) · 18 Sep 1918, Wed · Page 1

Georgia Rowe, Grace Gise and Lorene Williams are three more Beloit girls that will enter the government service. They expect to leave early in October for Washington, D. C., where they will take stenographic positions in the Motor Truck Service division of the War Department.

[HN00CN][1918-09-18-the-beloit-gazette-pg-1-clip-war-dept]

1921 - Travels from Washington DC to Beloit, KS for funeral of sister Ardie B (Gise) James

Full Page : [HN00CP][GDrive]


The Beloit Gazette (Beloit, Kansas) · 18 May 1921,

James—Mrs. Alfred James died at her home in this city Sunday noon, May 14, following an illness of only a few days. Ardie B. Gise was born near Joliet, Ill., Will county, Ill., January 15, 1873, and died May 14, 1921, at the age of 48 years and 4 months. She came to Kansas with her parents in February 1889 and settled near Plum Creek and at their home was married twelve years later to Alfred W. James who survives her. Three children survive: Lloyd A. James of Topeka; Ralph W. James and Edith Luella James, both of Beloit. She is also survived by her father, J. K. Gise four sisters, Elsie L. Gise and Mrs. Fred White of Beloit, Mrs. Chas. Kirgis of Cawker City and Miss Grace Gise of Washington, D C., and three brothers, A. D. Gise of Coffeyville, Kans., Dan F. Gise of Beloit and Will J Gise of Sacremento, Calif

Mrs. James was a valued member of the Baptist church. She was a woman admired and highly erspected not only by members of her family but by a large circle of friends. The relatives have the heartfelt sympathy of the entire community in the loss of one whose place can never be filled.

The funeral services were held yesterday afternoon at 2:30 o'clock at the Baptist church conducted by the Rev. L. B. Parker. Interment was made in Elmwood cemetery

[HN00CP][GDrive]

1923 - Grace Gise - Clerk , war

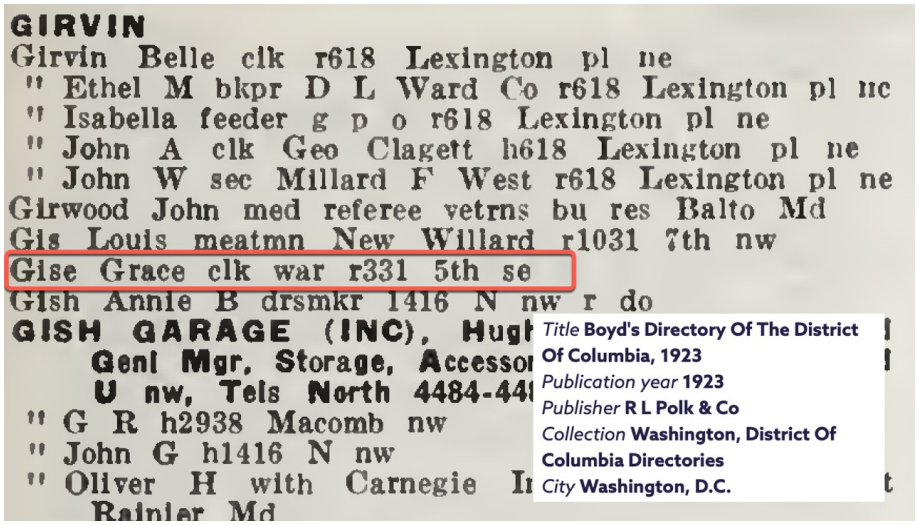
https://search.findmypast.com/record?id=US%2FDIRECTORIES%2FARCH%2FBOYDSDIRECTORYOF1923WASH%2F0693&parentid=US%2FDIRECTORIES%2FARCH%2FBOYDSDIRECTORYOF1923WASH%2F0693

Full page : 1923-boyds-directory-washington-dc-pg-727.jpg

clip : 1923-boyds-directory-washington-dc-pg-727-grace-gise.jpg

United States Directories & Almanacs Image

- *Title*: **Boyd's Directory Of The District Of Columbia, 1923**
- *Publication year*: **1923**
- *Publisher*: **R L Polk & Co**
- *Collection*: **Washington, District Of Columbia Directories**
- *City*: **Washington, D.C.**


GIRVIN
Girvin Belle clk r618 Lexington pl ne
" Ethel M bkpr D L Ward Co r618 Lexington pl ne
" Isabella feeder g p o r618 Lexington pl ne
" John A clk Geo Clagett h618 Lexington pl ne
" John W sec Millard F West r618 Lexington pl ne
Girwood John med referee vetrns bu res Balto Md
Gis Louis meatmn New Willard r1031 7th nw
Gise Grace clk war r331 5th se
Gish Annie B drsmkr 1416 N nw r do
GISH GARAGE (INC), Hugh
Genl Mgr, Storage, Accesso
U nw, Tels North 4484-44
" G R h2938 Macomb nw
" John G h1416 N nw
" Oliver H with Carnegie I
Rainier Md

Title **Boyd's Directory Of The District Of Columbia, 1923**
Publication year **1923**
Publisher **R L Polk & Co**
Collection **Washington, District Of Columbia Directories**
City **Washington, D.C.**

Mar 14 1923 - in kansas

https://www.newspapers.com/image/419651052/?terms=grace%2Bgise%2Bmarriage

---

Sep 12 1923

https://www.newspapers.com/image/419656845/?terms=grace%2Bgise%2Bwashington

---

1966 (Feb 10) Death

Record Transcription:
Social Security Death Index

Learn about this record set

First name(s)	Grace
Last name	Gise
Birth year	1886
Birth month	Apr
Birth day	10
Death year	1966
Death month	Feb
Death day	-
Social Security number	578-32-6317
Place of issue	Washington, DC
State	District of Columbia
Country	United States
Record set	Social Security Death Index
Category	Birth, Marriage & Death (Parish Registers)
Subcategory	Civil Deaths & Burials
Collections from	Americas, United States

[HL0015][GDrive]

1927 - On a US military transport boat

https://www.fold3.com/image/604085588

https://www.fold3.com/image/604085589

pg 251 https://www.fold3.com/image/604085590

pg 252 https://www.fold3.com/image/604085591

https://www.fold3.com/image/604085592

https://www.fold3.com/image/604085593

https://www.fold3.com/image/604085594?rec=622493918

Daniel Garber is the father of the Joseph A D Garber whom Grace was lodging with in 1930 ..

https://www.findagrave.com/memorial/66288984/daniel-garber

1930 US Census - DC - Her name is mis-pelled ? With "Joseph A D Garber"

https://www.ancestry.com/interactive/6224/4531899_00806?pid=121294868&backurl=https://search.ancestry.com/cgi-bin/sse.dll?db%3D1930usfedcen%26indiv%3Dtry%26h%3D121294868&treeid=&personid=&hintid=&usePUB=true&usePUBJs=true&_ga=2.146412980.1691365357.1569621424-2017998303.1551994226

TRANSCRIPT - https://search.ancestry.com/cgi-bin/sse.dll?db=1930usfedcen&indiv=try&h=121294868

Grace S Gise is a "lodger"

A Sarah "E" lives there

331 5th street

Name: Grace S Gisy

[Grace S Gise]

Birth Year: abt 1889

Aug 1935 - Visits Kansas

https://www.newspapers.com/image/487803842/?terms=grace%2Bgise%2Bwashington

Grave

https://search.ancestry.com/cgi-bin/sse.dll?indiv=1&dbid=60525&h=44724664&tid=&pid=&usePUB=true&_phsrc=Pnl89&_phstart=successSource

Grover Daniel Gise (born 1886)

Father is William C Gise (born 1861)

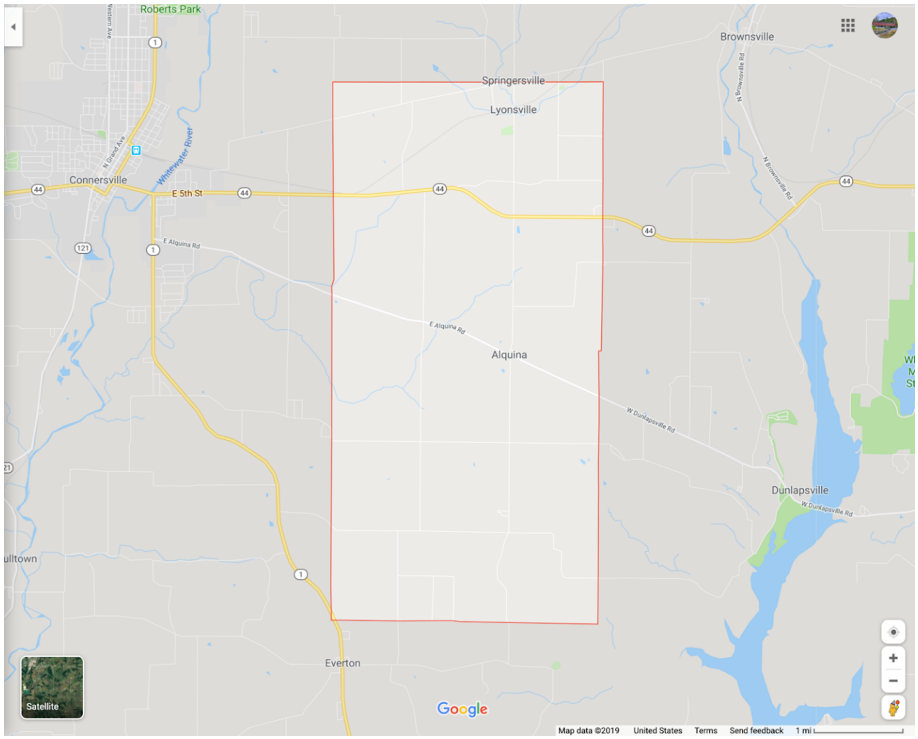
Brother is Luther Russell Gise (born 1895)

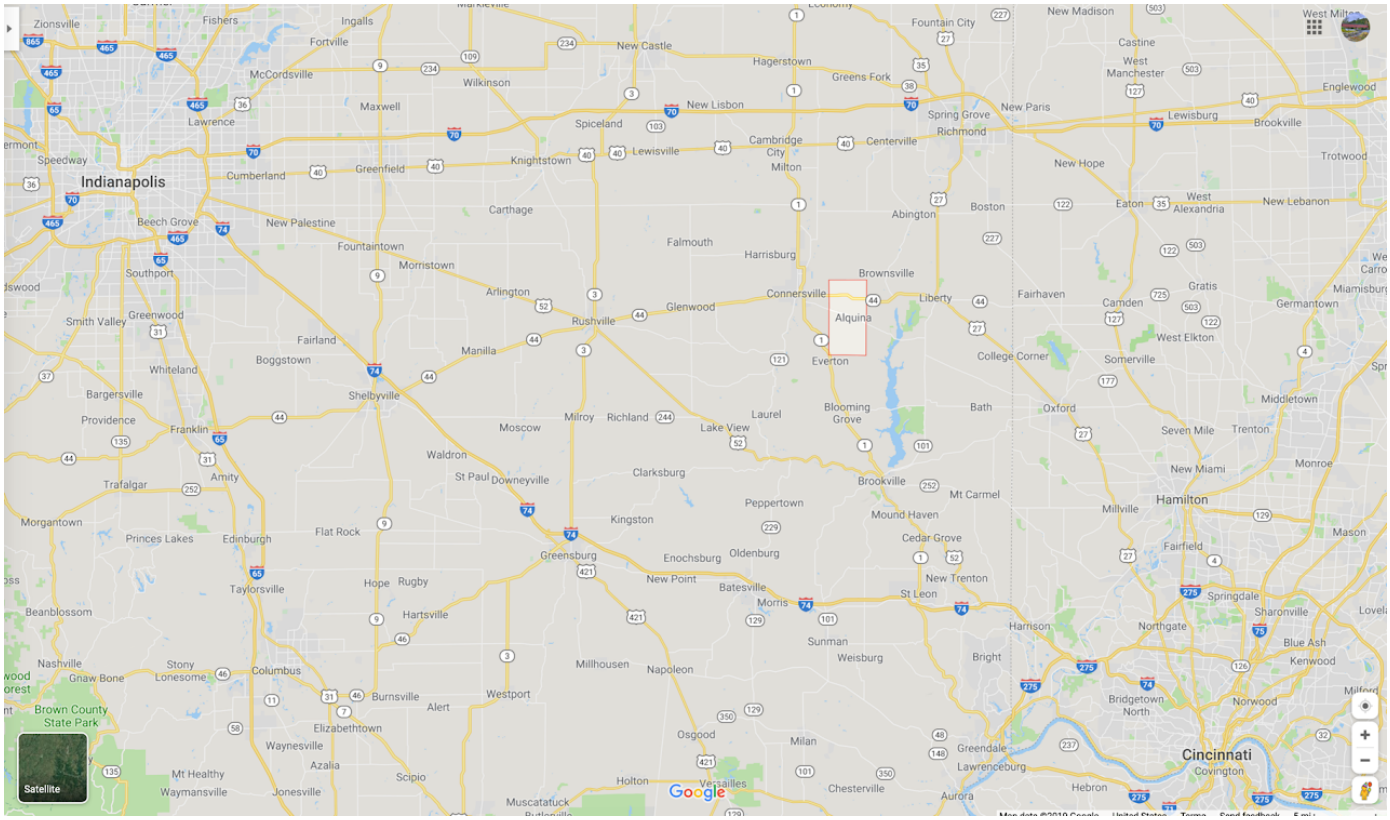
Children include :

- ....
- Alan Ambrose Gise (born 1929)

Jennings Township, Fayette County - Indiana

The family of Jacob and Mary Gise moved from Pennsylvania to Indiana between 1858 and 1860; All of their children up until 1860 were born in Pennsylvania.





1895 - Brother (Luther Gise) born

1910 census - Grover D Gise living with wife Emma in Indiana

https://www.findmypast.com/transcript?id=USC%2F1910%2F004971277%2F00430%2F022

1910 - Luther R Gise living with his mOm's parents (Layson) in Indiana - https://www.findmypast.com/transcript?id=USC%2F1910%2F004971206%2F00936%2F012

1908 (June) - Marriage

1908 - grover gise marriage june 20 1908 (https://www.findmypast.com/transcript?id=FS%2FMAR%2F38140048%2F1)

Celia D Gise - Was living in Oklahoma - as of 1920 - born 1867 in Indiana

Sons Luther and Ida May

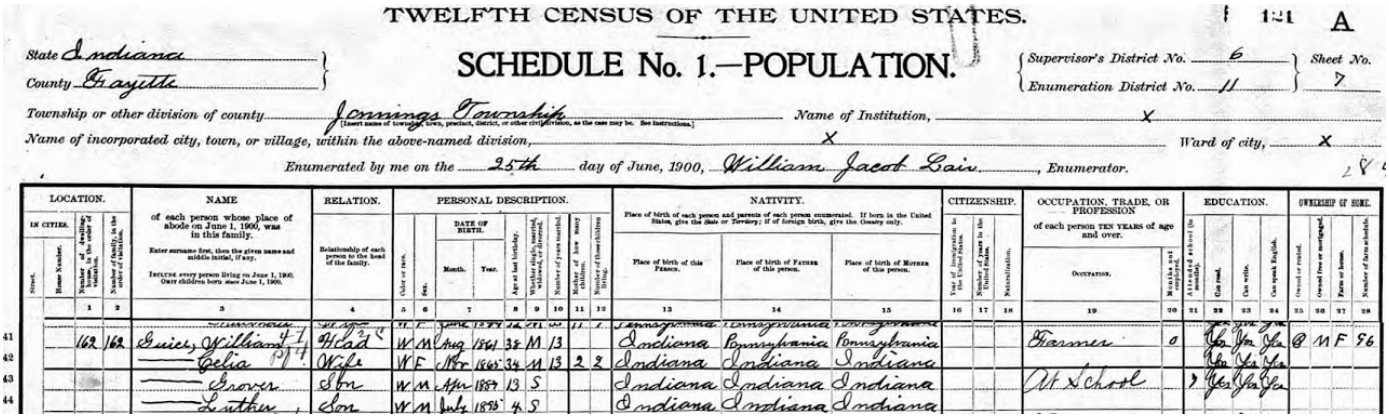
https://www.findmypast.com/transcript?id=USC%2F1920%2F004967598%2F00900%2F028

1910 - Luther Gise - Living with his mother's family - https://www.findmypast.com/transcript?id=USC%2F1910%2F004971206%2F00936%2F012

Living with Layson family (that would be his Mom's family)

1900 - William Guice (aka William C Gise) in Fayette, Indiana

Full census sheet - [HS003C][GDrive]



TWELFTH CENSUS OF THE UNITED STATES. 121 A

State Indiana
County Fayette

SCHEDULE No. 1.—POPULATION.

Supervisor's District No. 6
Enumeration District No. 11
Sheet No. 7

Township or other division of county Jennings Township
Name of Institution, X
Name of incorporated city, town, or village, within the above-named division, X
Ward of city, X

Enumerated by me on the 25th day of June, 1900, William Jacob Lair, Enumerator.

	LOCATION. In Cities. Street.	House Number.	Number of dwelling house, in the order of visitation.	Number of family, in the order of visitation.	NAME of each person whose place of abode on June 1, 1900, was in this family. Enter surname first, then the given name and middle initial, if any. Include every person living on June 1, 1900. Omit children born since June 1, 1900.	RELATION. Relationship of each person to the head of the family.	PERSONAL DESCRIPTION. Color or race.	Sex.	DATE OF BIRTH. Month.	Year.	Age at last birthday.	Whether single, married, widowed, or divorced.	Number of years married.	Mother of how many children. Number of these children living.	NATIVITY. Place of birth of this Person.	Place of birth of Father of this person.	Place of birth of Mother of this person.	CITIZENSHIP. Year of immigration to the United States.	Number of years in the United States.	Naturalization.	OCCUPATION, TRADE, OR PROFESSION of each person TEN YEARS of age and over. Occupation.	Months not employed.	EDUCATION. Attended School (in months).	Can read.	Can write.	Can speak English.	OWNERSHIP OF HOME. Owned or rented.	Owned free or mortgaged.	Farm or home.	Number of farm schedule.
			1	2	3	4	5	6	7		8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28
41		162	162		Guice, William H.	Head	W	M	Aug	1861	38	M	13			Indiana	Pennsylvania	Pennsylvania				Farmer	0		Yes	Yes	Yes	O		M	96
42					Celia	Wife	W	F	Nov	1865	34	M	13	2	2	Indiana	Indiana	Indiana							Yes	Yes	Yes				
43					Grover	Son	W	M	Apr	1887	13	S				Indiana	Indiana	Indiana				At School			Yes	Yes	Yes				
44					Luther	Son	W	M	July	1895	4	S				Indiana	Indiana	Indiana													

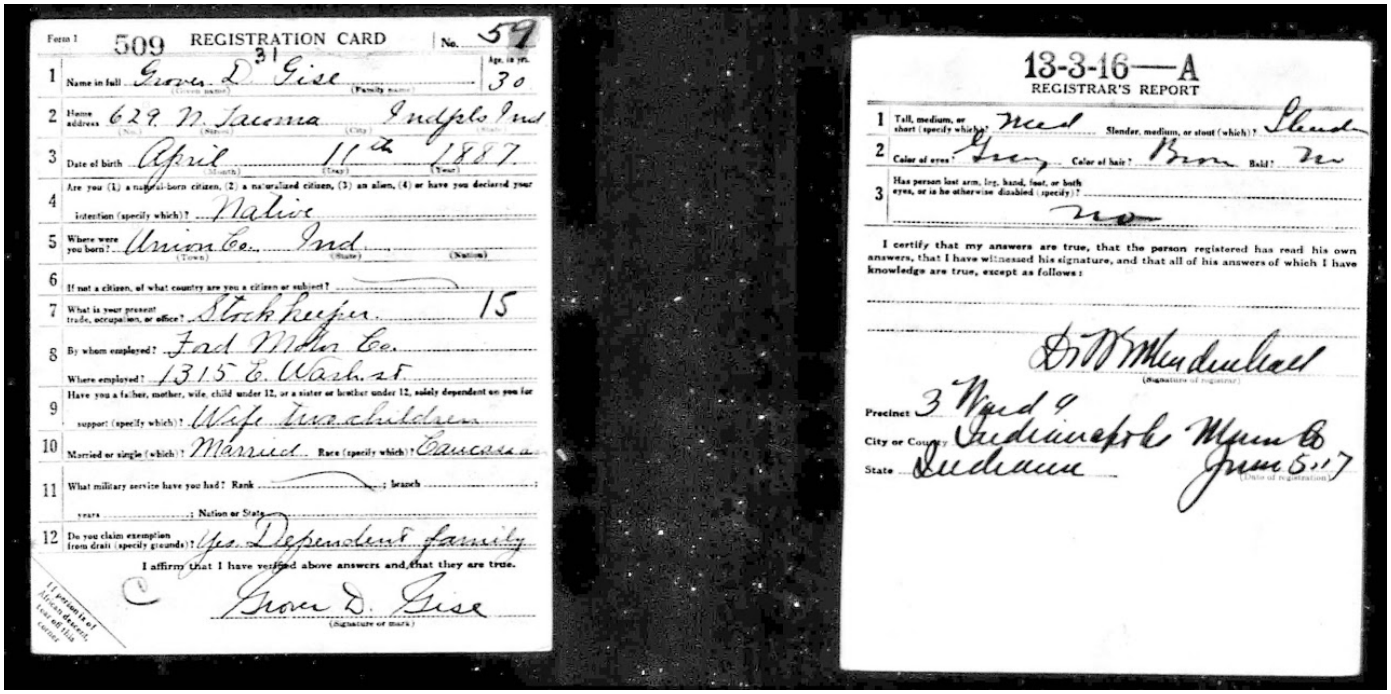
[HS003D][GDrive]

1905 - Father (William C Gise) Dies

See William C Gise (born 1861) .

See grave (located in Fayette, Indiana) - 2019-09-findagrive-com-792605081-william-c-gise-1861-1905.pdf / https://drive.google.com/open?id=12wvSWyRgrc4G1gH5FZp8SRV4-WbgrZY-

1917 - WW1 Draft enrollment



Form 1 509 REGISTRATION CARD No. 57

1 Name in full Grover D. Gise Age in yrs. 31 30
2 Home address 629 N. Sanora Indpls Ind
3 Date of birth April 11th 1887
4 Are you (1) a natural-born citizen, (2) a naturalized citizen, (3) an alien, (4) or have you declared your intention (specify which)? Native
5 Where were you born? Union Co. Ind
6 If not a citizen, of what country are you a citizen or subject?
7 What is your present trade, occupation, or office? Stock keeper 15
8 By whom employed? Ind Motor Co. Where employed? 1315 E. Wash St.
9 Have you a father, mother, wife, child under 12, or a sister or brother under 12, solely dependent on you for support (specify which)? Wife Two children
10 Married or single (which)? Married Race (specify which)? Caucasian
11 What military service have you had? Rank ; branch ; years ; Nation or State
12 Do you claim exemption from draft (specify grounds)? Yes Dependent family

I affirm that I have verified above answers and that they are true.

Grover D. Gise
(Signature or mark)

13-3-16—A
REGISTRAR'S REPORT

1 Tall, medium, or short (specify which)? Med Slender, medium, or stout (which)? Slend
2 Color of eyes? Gray Color of hair? Brn Bald? No
3 Has person lost arm, leg, hand, foot, or both eyes, or is he otherwise disabled (specify)? No

I certify that my answers are true, that the person registered has read his own answers, that I have witnessed his signature, and that all of his answers of which I have knowledge are true, except as follows:

D W Mendenhall
(Signature of registrar)

Precinct 3 Ward 9 Indianapolis Marion Co
City or County
State Indiana June 5 17
(Date of registration)

1917-06-us-ww1-draft-registration-card-grover-d-gise.jpg / https://drive.google.com/open?id=14KFW6tDpoQazPIH7ax42qjASqFuB3AHo

1929 - Son Alan Ambrose Gise is born

Son **Alan Ambrose Gise (born 1929)** is born.

1929 - Alan Ambrose Gise born (https://newspaperarchive.com/rushville-daily-republican-mar-11-1929-p-12/)

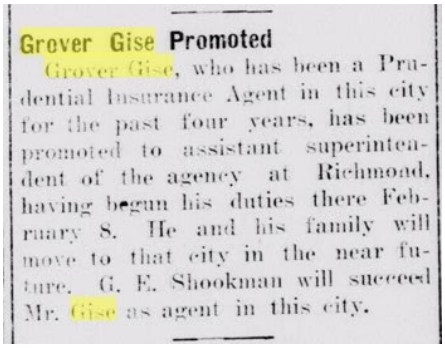
1930 - Mother (Celia Gise) living with the Lyons family

https://www.findmypast.com/transcript?id=USC%2F1930%2F004950599%2F00108%2F046

Was Living in Indiana with the Lyon family

1926 - Work Promotion

Full page : 1926-02-13-the-daily-republican-rushville-indiana-pg-3.png / https://drive.google.com/open?id=143-LYzgKmoPNiy69S-iO_b7qij0Q6_xh



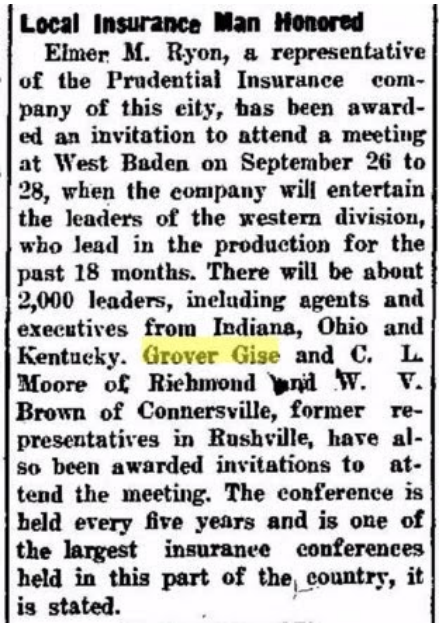
Grover Gise Promoted

Grover Gise, who has been a Prudential Insurance Agent in this city for the past four years, has been promoted to assistant superintendent of the agency at Richmoad, having begun his duties there February 8. He and his family will move to that city in the near future. G. E. Shookman will succeed Mr. Gise as agent in this city.

1926-02-13-the-daily-republican-rushville-indiana-pg-3-clip-grover-gise.jpg / https://drive.google.com/open?id=145G825rV9j5HJe-OoepFsu9N37ZtWWZg

1927 - Conference

Full page : 1927-08-27-the-daily-republican-rushville-indiana-pg-9.png / https://drive.google.com/open?id=147ViYBIpHp1OLn5Jc4Hqi7lyZk2X4_sE



Local Insurance Man Honored

Elmer M. Ryon, a representative of the Prudential Insurance company of this city, has been awarded an invitation to attend a meeting at West Baden on September 26 to 28, when the company will entertain the leaders of the western division, who lead in the production for the past 18 months. There will be about 2,000 leaders, including agents and executives from Indiana, Ohio and Kentucky. Grover Gise and C. L. Moore of Richmond and W. V. Brown of Connersville, former representatives in Rushville, have also been awarded invitations to attend the meeting. The conference is held every five years and is one of the largest insurance conferences held in this part of the country, it is stated.

1927-08-27-the-daily-republican-rushville-indiana-pg-9-clip-grover-gise.jpg / https://drive.google.com/open?id=14Cka4kOWCp5-m9OW5-jBvplo2W5ayy7H

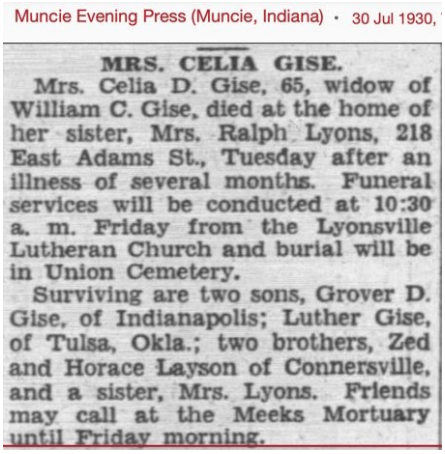
1930 - Census (Richmond Indiana)- Grover Gise

See census sheet at : [HS003B][GDrive]

1930 (July) - Mother passes

July 1930 : Mrs. Celia Dell Gise passes (was married to "WIlliam C. Gise"), and mother of "Grover D. Gise"

1930-07-30-the-muncie-evening-press-pg-12.jpg / https://drive.google.com/open?id=10xhqXTnTqhLvF0IEjJT7XC1fwHrk_y4b



Muncie Evening Press (Muncie, Indiana) · 30 Jul 1930,

MRS. CELIA GISE.

Mrs. Celia D. Gise, 65, widow of William C. Gise, died at the home of her sister, Mrs. Ralph Lyons, 218 East Adams St., Tuesday after an illness of several months. Funeral services will be conducted at 10:30 a. m. Friday from the Lyonsville Lutheran Church and burial will be in Union Cemetery.

Surviving are two sons, Grover D. Gise, of Indianapolis; Luther Gise, of Tulsa, Okla.; two brothers, Zed and Horace Layson of Connersville, and a sister, Mrs. Lyons. Friends may call at the Meeks Mortuary until Friday morning.

1930-07-30-the-muncie-evening-press-pg-12-clip-celia-gise.jpg / https://drive.google.com/open?id=10yS3ZIqf2NyaGYs-sQWcIa-bVAgm_b-L

1930 Census

1930-04-03-usa-census-richmond-city-indiana-sheet-3b.jpg / https://drive.google.com/open?id=106R3YNV1p1nYNOU0VT75OCDi2dB-QXsS

1942 - Daughter in news

1942-09-26-the-indianapolis-star-pg-3-sunday.jpg / https://drive.google.com/open?id=119gw0USrrQuCS1dsyTG2MejvHK-itFDx

The Indianapolis Star (Indianapolis, Indiana) • 26 Sep 1943, Sun • Page 43

HOME ON LEAVE—At home on a 10-day leave from the United States Naval Base Hospital in Philadelphia, Pa., are Ensign Ruth M. Gise (left) and Ensign Marjorie E. Engle (rdight).

Both young women are graduates of St. Vincent's Hospital school of nursing and both entered the service March 23, 1943. Ensign Gise is visiting her parents, Mr. and Mrs. Grover D. Gise, 116 South Randolph street, and Ensign Engle is visiting her mother, Mrs. Nell Engle, 3315 Central avenue. Ensign Gise was graduated from Arsenal Technical High School and Ensign Engle was graduated from St. Agnes Academy. (Mauri Bank.)

1942-09-26-the-indianapolis-star-pg-3-sunday-clip-home-on-leave.jpg / https://drive.google.com/open?id=11JubDsLSgtEEWNLIdyIidc6wAgGK5IrC

1942 - Draft Registration

https://www.fold3.com/image/284530809?terms=grover,gise

1942-04-27-us-ww2-draft-registration-card-grover-d-gise-pg-1a.jpg / https://drive.google.com/open?id=13KvA_DRFuelNQIas5pKjtQjLbD72UnEz

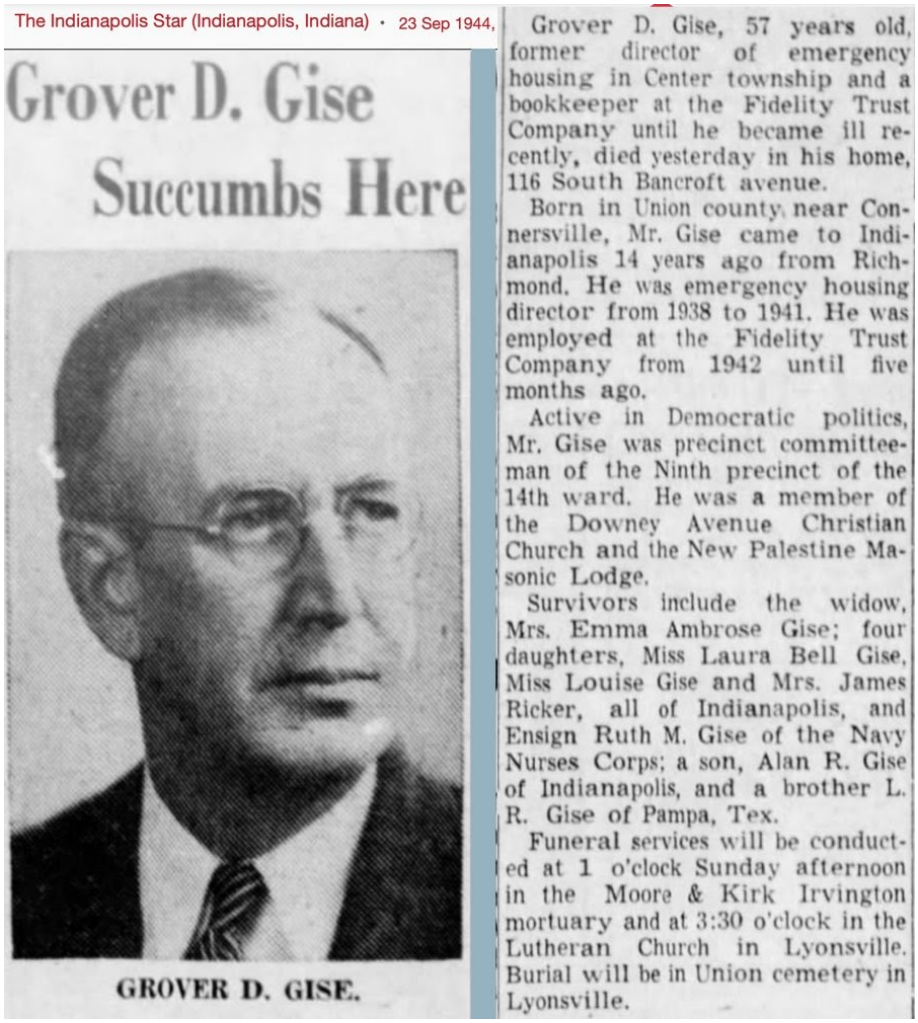
1942-04-27-us-ww2-draft-registration-card-grover-d-gise-pg-2.jpg / https://drive.google.com/open?id=13HaTmJ8dHY2c8hL-UNZg6RgudoWR63Bv

1945 (April) - More news of Lt. (jg) Ruth M Gise in the news

1945 - https://www.newspapers.com/image/314091875/?terms=grover%2Bd%2Bgise

Grover D Gise - Passed Sep 22 1944

1944-09-23-the-indianapolis-star-pg-9.jpg / https://drive.google.com/open?id=117TiAIHaum2_qtBK9EsgY5xSrwMv8Yqz



The Indianapolis Star (Indianapolis, Indiana) • 23 Sep 1944,

Grover D. Gise Succumbs Here

GROVER D. GISE.

Grover D. Gise, 57 years old, former director of emergency housing in Center township and a bookkeeper at the Fidelity Trust Company until he became ill recently, died yesterday in his home, 116 South Bancroft avenue.

Born in Union county, near Connersville, Mr. Gise came to Indianapolis 14 years ago from Richmond. He was emergency housing director from 1938 to 1941. He was employed at the Fidelity Trust Company from 1942 until five months ago.

Active in Democratic politics, Mr. Gise was precinct committeeman of the Ninth precinct of the 14th ward. He was a member of the Downey Avenue Christian Church and the New Palestine Masonic Lodge.

Survivors include the widow, Mrs. Emma Ambrose Gise; four daughters, Miss Laura Bell Gise, Miss Louise Gise and Mrs. James Ricker, all of Indianapolis, and Ensign Ruth M. Gise of the Navy Nurses Corps; a son, Alan R. Gise of Indianapolis, and a brother L. R. Gise of Pampa, Tex.

Funeral services will be conducted at 1 o'clock Sunday afternoon in the Moore & Kirk Irvington mortuary and at 3:30 o'clock in the Lutheran Church in Lyonsville. Burial will be in Union cemetery in Lyonsville.

1944-09-23-the-indianapolis-star-pg-9-clip-grover-d-gise.jpg / https://drive.google.com/open?id=118Ln-fCKY7cgTwRSIvdRKMn7wEx8c2Xc

Death certificate for Grover Gise

death certificate grover gise

https://www.ancestry.com/interactive/60716/45232_355674-00896?pid=602728941&backurl=https://search.ancestry.com/cgi-bin/sse.dll?dbid%3D60716%26h%3D602728941%26indiv%3Dtry%26o_vc%3DRecord:OtherRecord%26rhSource%3D60525&treeid=&personid=&hintid=&usePUB=true&usePUBJs=true&_ga=2.27604604.1952408224.1568989517-2017998303.1551994226

William John Gise (born 1888)

Born :

Died :

Father is **Jacob Kerlin Gise** (born 1849)

(Paternal) grandFather is David B. Gise (born 1812)

Siblings include :

- Grace S Gise (born 1886)
- <others>

Children :

- Father of William John Gise Jr (born 1920)

Other relationships :

- **Uncles**
  - **William Franklin Gise** (born 1835)
    - **Children include : (these are cousins of Grace Gise)**
      - William Kern Gise (born 1871)
      - <others>
  - Daniel Kerlin Gise (born 1843)
    - **Children include : (these are cousins of Grace Gise)**
      - **Lloyd Preston Gise** (born 1873) (Father of Lawrence Preston Gise (born 1915) / Great grandfather of **Jeff Preston Bezos**)
      - <others>
  - David K Gise (1838)
  - <others>

https://www.myheritage.com/research/record-1-326475201-1-504840/jacob-kerlin-jk-gise-in-myheritage-family-trees

1909

https://www.newspapers.com/image/483299193/?terms=%22will%2Bgise%22

1913 - takes job in shoe Dept.

https://www.newspapers.com/image/419927097/?terms=%22will%2Bj%2Bgise%22

1917

https://www.newspapers.com/image/419692146/?terms=%22will%2Bgise%22

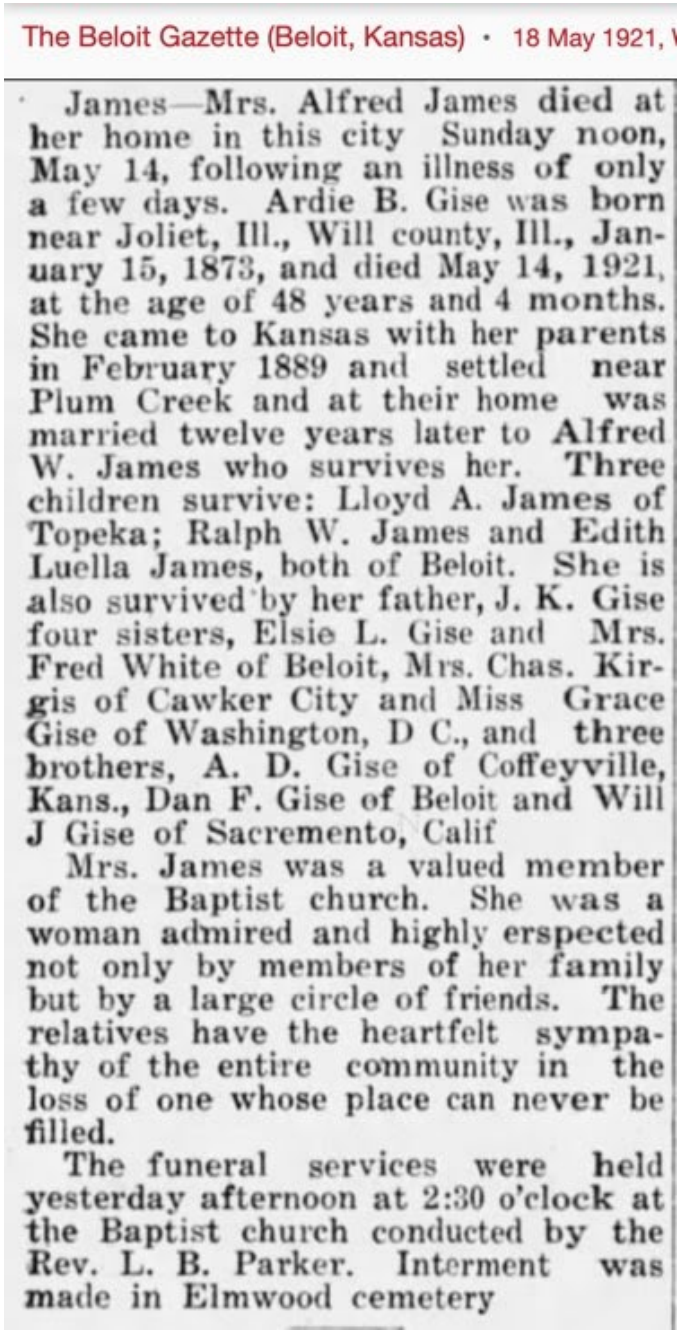
1919 - Camp Funston (US Army training camp?

https://www.newspapers.com/image/419542173/?terms=%22will%2Bgise%22

https://www.newspapers.com/image/80087220/?terms=%22will%2Bgise%22

1921 - Sister Ardie B (Gise) James passes (William John Gise living in Sacramento at this time)

Full Page : [HN00CP][GDrive]



The Beloit Gazette (Beloit, Kansas) · 18 May 1921,

James—Mrs. Alfred James died at her home in this city Sunday noon, May 14, following an illness of only a few days. Ardie B. Gise was born near Joliet, Ill., Will county, Ill., January 15, 1873, and died May 14, 1921, at the age of 48 years and 4 months. She came to Kansas with her parents in February 1889 and settled near Plum Creek and at their home was married twelve years later to Alfred W. James who survives her. Three children survive: Lloyd A. James of Topeka; Ralph W. James and Edith Luella James, both of Beloit. She is also survived by her father, J. K. Gise four sisters, Elsie L. Gise and Mrs. Fred White of Beloit, Mrs. Chas. Kirgis of Cawker City and Miss Grace Gise of Washington, D C., and three brothers, A. D. Gise of Coffeyville, Kans., Dan F. Gise of Beloit and Will J Gise of Sacremento, Calif

Mrs. James was a valued member of the Baptist church. She was a woman admired and highly erspected not only by members of her family but by a large circle of friends. The relatives have the heartfelt sympathy of the entire community in the loss of one whose place can never be filled.

The funeral services were held yesterday afternoon at 2:30 o'clock at the Baptist church conducted by the Rev. L. B. Parker. Interment was made in Elmwood cemetery

[HN00CP][GDrive]

1921 -

son born while in Sacrramento!

https://www.newspapers.com/image/79638389/?terms=%22will%2Bgise%22

1940 Living with different people !
https://www.findmypast.com/transcript?id=USC%2F1940%2F1572245596

WJ- 1944 marrying a cecelia Hough

https://www.findmypast.com/transcript?id=USBMD%2FSSDI%2F450031459
William Gise born August 1888

WW1 draft - Wm j Gise
https://www.findmypast.com/transcript?id=USM/WWIDR/1651363976

William J Gise -
Father is Jacob K
children - Elsi, Grace, William K

https://www.findmypast.com/transcript?id=USC/1910/004971561/00076/016

So in 1940, WK Gise (1920) and Bettie Gise (1923- are living with WG Gise and "Dore"
WG Gise - Store manager

http://seguingazette.com/ouncements/obituaries/article_09ba92c2-a5b5-11e4-9417-f7782b5cbdf0.html

Mary Cecilia Hough Gise, age 90, of Seguin, passed away on Jan. 23, 2015. Funeral Service will be held Friday, Jan. 30, 2015 at 1 p.m. at Tres Hewell Mortuary Chapel. Interment will follow at later date. She is preceded in death by two sisters and one brother.

Survivors include her husband of 71 years, Col. William J. Gise, Jr. USAF Ret; son, James Gise and wife Linda; eight grandchildren and five great grandchildren. Memorial contributions may be made to the charity of your choice in her name.

Baby Shower -
https://newspaperarchive.com/san-antonio-express-jul-18-1943-p-28/
1943-07-18-san-antonio-express-page-4-b.png
https://drive.google.com/file/d/14_LKHLNtOrYpxkIGYqMaKc8hgGuSmBx2/view?usp=sharing
[HE0026]

Mrs. W.J. Gise
Misses Betty Gise ?

Mrs Pauling Miller passes
https://newspaperarchive.com/san-antonio-express-jun-06-1977-p-36/

1936
Betty Gise unclde - W H Stratton
https://newspaperarchive.com/san-antonio-express-aug-09-1936-p-36/

https://nara-media-001.s3.amazonaws.com/arcmedia/nw/305270/EE-11.pdf
Erwin Derold Wissenback -]Mission target Lille France
From Oregon
Wm. j Gise - survived ? 0-66084

https://www.fold3.com/record/84765024-william-j-gise-jr

https://www.fold3.com/image/29103288?terms=william%20j%20gise

surveying group
https://www.fold3.com/image/626400087

He is missing ?
https://www.fold3.com/image/29103283?terms=william%20j%20gise

http://www.americanairmuseum.com/person/232171

Wow - Escaped , made way through Gibraltar ...
http://www.americanairmuseum.com/person/60402

1952 - W J Gise in a photo
https://www.newspapers.com/image/436093507/?terms=william%2Bgise

1971 - W J Gise Sr. dies
https://www.newspapers.com/image/439370053/?terms=%22W%2BJ%2Bgise%22
maager of store

W J Gise jr

1930 census - Age 10
Sister - bettie jane Gise age 5
Father - W J Gise - born 1889 in Kansas

1930-www-findmypast-com-transcript-i-usc-004955225-01035-gise.pdf / https://drive.google.com/open?id=18szvMIZQhfQYX9jSrD30PM4wj5huLsgY
image :
1930-usa-census-yoakum-texas-004955225-01035.jpg / https://drive.google.com/open?id=194OACBYcGpUGoBoudErRMrLql5x-AfQ2

Yoakum Texas

Housatonic

Luther Russell Gise (born 1895)

Father is William C Gise (born 1861) .

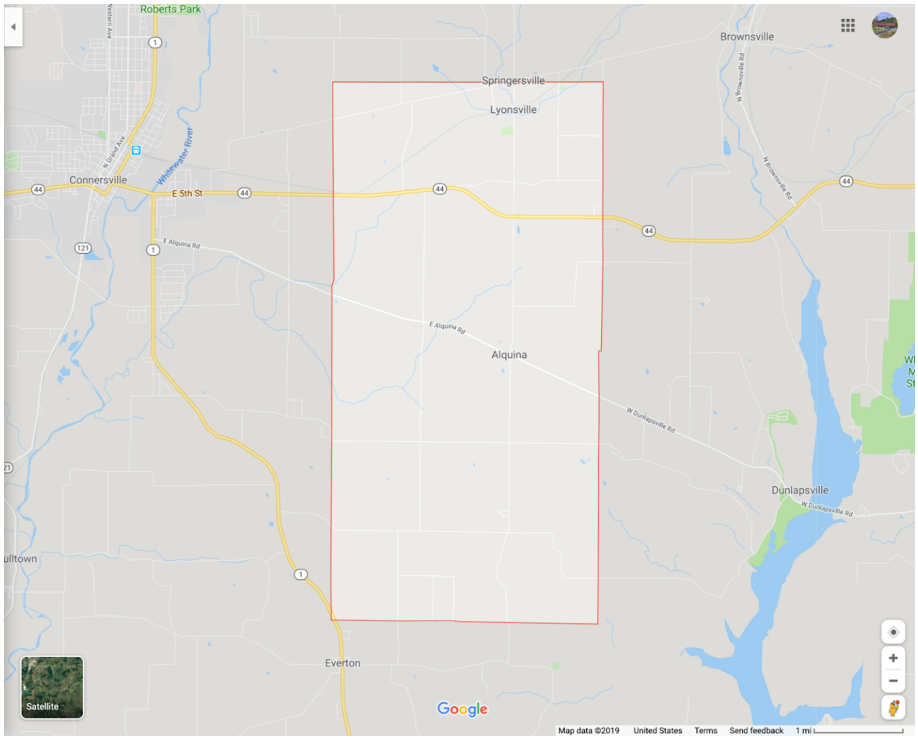
Older brother : Grover Daniel Gise (born 1886)

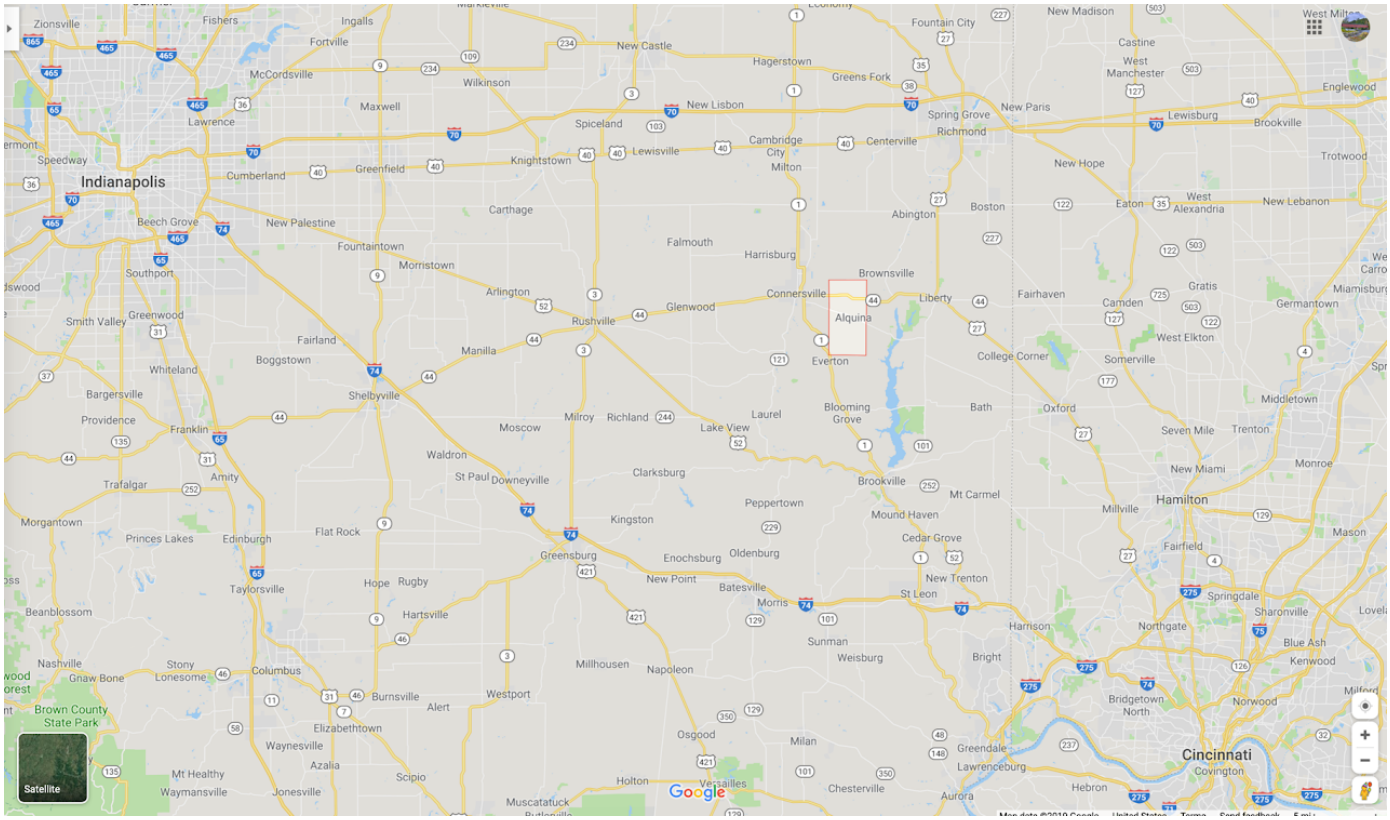
Nephews include :

- Alan Ambrose Gise (born 1929) (son of Grover Daniel Gise (born 1886))

Jennings Township, Fayette County - Indiana

The family of Jacob and Mary Gise moved from Pennsylvania to Indiana between 1858 and 1860; All of their children up until 1860 were born in Pennsylvania.





1895 - Luther Gise born (per 1920 census)

1900 - ????

1908 - grover gise marriage june 20 1908 (https://www.findmypast.com/transcript?id=FS%2FMAR%2F38140048%2F1)

1910 census - Grover D Gise living with wife Emma in Indiana

https://www.findmypast.com/transcript?id=USC%2F1910%2F004971277%2F00430%2F022

1910 - Luther R Gise living with his mOm's parents (Layson) in Indiana - https://www.findmypast.com/transcript?id=USC%2F1910%2F004971206%2F00936%2F012

1916 - Celia D Gise still in Indianapolis

Per phone directory

https://search.findmypast.com/record?id=US%2FDIRECTORIES%2FARCH%2FCITYDIR1916CDAP%2F0567&parentid=US%2FDIRECTORIES%2FARCH%2FCITYDIR1916CDAP%2F0567

1916-findmypast-com-transcript-indianapolis-phone-directory-r-l-polk-and-co-pg-579

https://drive.google.com/open?id=12a5dbzyzmi-3ynQXPSOzdSJMbm17B-55

https://search.findmypast.com/record/pdf?id=us%2fdirectories%2farch%2fcitydir1916cdap%2f0567&parentid=us%2fdirectories%2farch%2fcitydir1916cdap%2f0567

1916-indianapolis-phone-directory-r-l-polk-and-co-pg-579.jpg

https://drive.google.com/open?id=12N5vpbjzMXFjULpk3EI4IDxrSzplddlW

Celia D Gise - Was living in Oklahoma - as of 1920 - born 1867 in Indiana

Sons Luther and Ida May

https://www.findmypast.com/transcript?id=USC%2F1920%2F004967598%2F00900%2F028

she is listed on 1920 census as "Widowed"

Luther is 25 (born in 1895), and Ida May is 19 (born in 1901) - in Indiana

So was William C alive after 1900, but passed before 1919 ? - in Indiana

Luther Gise - WW1 registration - https://www.findmypast.com/transcript?id=USM%2FWWIDR%2F1640035060

1903 - william c gise sells land to celia gise - death? https://newspaperarchive.com/connersville-times-apr-08-1903-p-7/

1910 - Luther Gise - grandson - https://www.findmypast.com/transcript?id=USC%2F1910%2F004971206%2F00936%2F012

Living with Layson family (that would be his Mom's family)

1929 - Alan Ambrose Gise born (https://newspaperarchive.com/rushville-daily-republican-mar-11-1929-p-12/)

https://www.ancestry.co.uk/boards/surnames.wygant/49.27/mb.ashx

Ida Mae Wygnant - Born 1900

1936 - shower gifts (https://www.newspapers.com/image/8480729/?terms=%22Luther%2Bgise%22)

1941 - Mrs. Luther Gise (https://www.newspapers.com/image/16681168/?terms=%22Luther%2Bgise%22)

1950 - Lutehr Gise is a pallbearer for oilman Sam Bonner (https://www.newspapers.com/image/14817959/?terms=%22Luther%2Bgise%22)

1956 - Mrs. Luther Gise at the Amarillo club in texas (https://www.newspapers.com/image/23452692/?terms=%22Luther%2Bgise%22)

1972 - Luther Gise dies https://newspaperarchive.com/amarillo-globe-times-feb-22-1972-p-29/

- He had become manager of Western Oil Well Suppoly Co, before going into real estate business

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1930

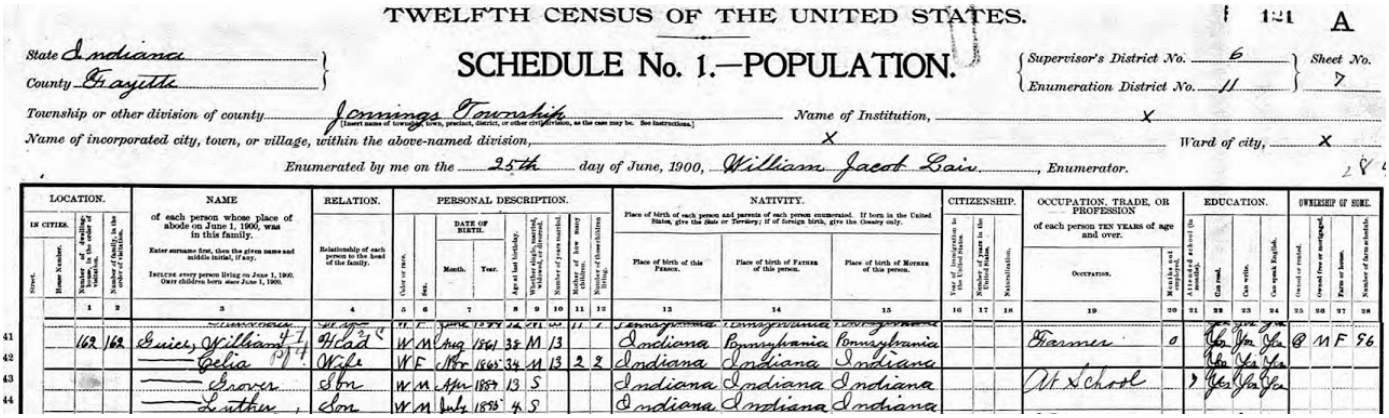
Celia Gise

https://www.findmypast.com/transcript?id=USC%2F1930%2F004950599%2F00108%2F046

Living in Indiana with the Lyon family

1900 - William Guice (aka William C Gise) in Fayette, Indiana

Full census sheet - 1900-usa-census-fayette-indiana-4118598-00246.jpg / https://drive.google.com/open?id=12kkqpRywle5wwVH1XHMgt-8meeUvh2Mv



TWELFTH CENSUS OF THE UNITED STATES. 121 A

State Indiana County Fayette — SCHEDULE No. 1.—POPULATION. — Supervisor's District No. 6 — Enumeration District No. 11 — Sheet No. 7

Township or other division of county Jennings Township — Name of Institution, X

Name of incorporated city, town, or village, within the above-named division, X — Ward of city, X

Enumerated by me on the 25th day of June, 1900, William Jacob Gain, Enumerator.

LOCATION. IN CITIES. Street.	House Number.	Number of dwelling house, in the order of visitation.	Number of family, in the order of visitation.	NAME of each person whose place of abode on June 1, 1900, was in this family. Enter surname first, then the given name and middle initial, if any. Include every person living on June 1, 1900. Omit children born since June 1, 1900.	RELATION. Relationship of each person to the head of the family.	PERSONAL DESCRIPTION. Color or race.	Sex.	DATE OF BIRTH. Month.	Year.	Age at last birthday.	Whether single, married, widowed, or divorced.	Number of years married.	Mother of how many children.	Number of these living.	NATIVITY. Place of birth of this Person.	Place of birth of Father of this person.	Place of birth of Mother of this person.	CITIZENSHIP. Year of immigration to the United States.	Number of years in the United States.	Naturalization.	OCCUPATION, TRADE, OR PROFESSION of each person TEN YEARS of age and over. Occupation.	Months not employed.	EDUCATION. Months at school in the year.	Can read.	Can write.	Can speak English.	OWNERSHIP OF HOME. Owned or rented.	Owned free or mortgaged.	Farm or home.	Number of farm schedule.
		1	2	3	4	5	6	7		8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28
41		162	162	Guice, William J.	Head	W	M	Aug	1861	38	M	13			Indiana	Pennsylvania	Pennsylvania				Farmer	0		Yes	Yes	Yes	O	M	F	86
42				Celia	Wife	W	F	Nov	1865	34	M	13	2	2	Indiana	Indiana	Indiana							Yes	Yes	Yes				
43				Grover	Son	W	M	Apr	1887	13	S				Indiana	Indiana	Indiana				At School			Yes	Yes	Yes				
44				Luther	Son	W	M	July	1888	4	S				Indiana	Indiana	Indiana													

1900-usa-census-fayette-indiana-4118598-00246-clip-william-guice-gise.jpg / https://drive.google.com/open?id=12h4Ha_2VGQ-jwE71dwX2QKBB4QKFtLr5

1905 - Father (William C Gise) Dies

See William C Gise (born 1861) .

See grave (located in Fayette, Indiana) - 2019-09-findagrive-com-792605081-william-c-gise-1861-1905.pdf / https://drive.google.com/open?id=12wvSWyRgrc4G1gH5FZp8SRV4-WbgrZY-

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Death certificate

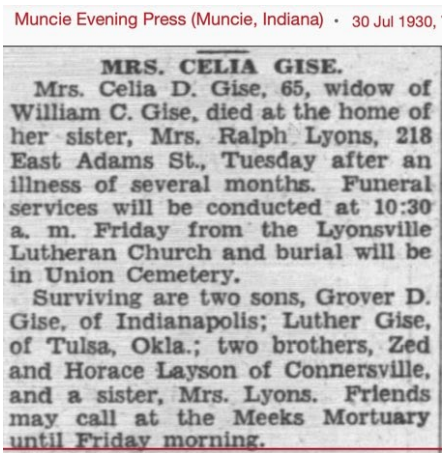
luther russell gise

https://www.ancestry.com/interactive/2272/33154_b062851-02799?pid=61222497&backurl=https://search.ancestry.com/cgi-bin/sse.dll?dbid%3D2272%26h%3D61222497%26indiv%3Dtry%26o_vc%3DRecord:OtherRecord%26rhSource%3D60716&treeid=&personid=&hintid=&usePUB=true&usePUBJs=true&_ga=2.1391089.1952408224.1568989517-2017998303.1551994226

1930 (July) - Mother passes

July 1930 : Mrs. Celia Dell Gise passes (was married to "WIlliam C. Gise"), and mother of "Grover D. Gise"

1930-07-30-the-muncie-evening-press-pg-12.jpg / https://drive.google.com/open?id=10xhqXTnTqhLvF0IEjJT7XC1fwHrk_y4b



Muncie Evening Press (Muncie, Indiana) · 30 Jul 1930,

MRS. CELIA GISE.

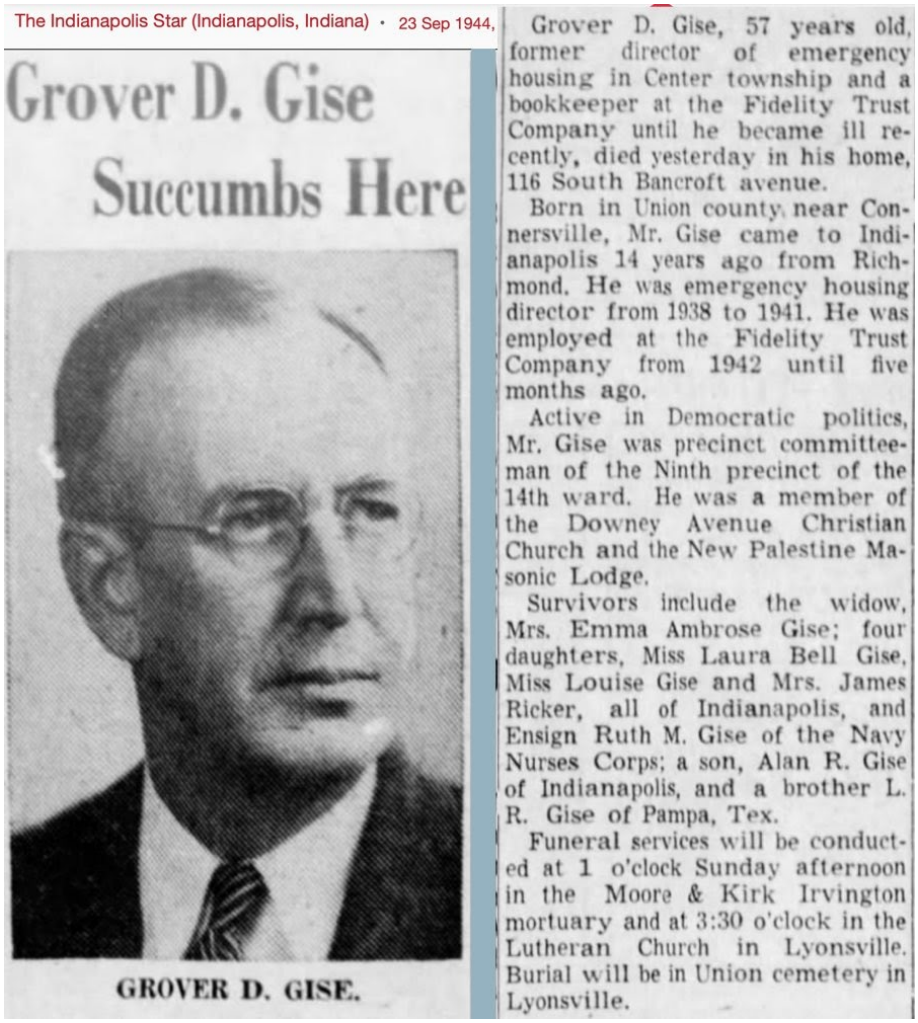
Mrs. Celia D. Gise, 65, widow of William C. Gise, died at the home of her sister, Mrs. Ralph Lyons, 218 East Adams St., Tuesday after an illness of several months. Funeral services will be conducted at 10:30 a. m. Friday from the Lyonsville Lutheran Church and burial will be in Union Cemetery.

Surviving are two sons, Grover D. Gise, of Indianapolis; Luther Gise, of Tulsa, Okla.; two brothers, Zed and Horace Layson of Connersville, and a sister, Mrs. Lyons. Friends may call at the Meeks Mortuary until Friday morning.

1930-07-30-the-muncie-evening-press-pg-12-clip-celia-gise.jpg / https://drive.google.com/open?id=10yS3ZIqf2NyaGYs-sQWcIa-bVAgm_b-L

Older brother Grover D Gise - Passed Sep 22 1944

1944-09-23-the-indianapolis-star-pg-9.jpg / https://drive.google.com/open?id=117TiAIHaum2_qtBK9EsgY5xSrwMv8Yqz



The Indianapolis Star (Indianapolis, Indiana) · 23 Sep 1944,

Grover D. Gise Succumbs Here

GROVER D. GISE.

Grover D. Gise, 57 years old, former director of emergency housing in Center township and a bookkeeper at the Fidelity Trust Company until he became ill recently, died yesterday in his home, 116 South Bancroft avenue.

Born in Union county, near Connersville, Mr. Gise came to Indianapolis 14 years ago from Richmond. He was emergency housing director from 1938 to 1941. He was employed at the Fidelity Trust Company from 1942 until five months ago.

Active in Democratic politics, Mr. Gise was precinct committeeman of the Ninth precinct of the 14th ward. He was a member of the Downey Avenue Christian Church and the New Palestine Masonic Lodge.

Survivors include the widow, Mrs. Emma Ambrose Gise; four daughters, Miss Laura Bell Gise, Miss Louise Gise and Mrs. James Ricker, all of Indianapolis, and Ensign Ruth M. Gise of the Navy Nurses Corps; a son, Alan R. Gise of Indianapolis, and a brother L. R. Gise of Pampa, Tex.

Funeral services will be conducted at 1 o'clock Sunday afternoon in the Moore & Kirk Irvington mortuary and at 3:30 o'clock in the Lutheran Church in Lyonsville. Burial will be in Union cemetery in Lyonsville.

1944-09-23-the-indianapolis-star-pg-9-clip-grover-d-gise.jpg / https://drive.google.com/open?id=118Ln-fCKY7cgTwRSIvdRKMn7wEx8c2Xc

BITCHUTE @Housatonic YOUTUBE @HousatonicLive ODYSEE @Housatonic BRIGHTEON @Housatonic

Housatonic

Lawrence Preston Gise (born 1915)

Born - April 23, 1915 [HL002S][GDrive]

Lawrence Preston Gise (grandfather of **Jeff Bezos**) lived in Washington DC as of the 1940 census (age 24). He was an admin assistant in the **US Dept of Agriculture**, before joining the Navy (served in north Atlantic) in WW2 (on the USS Neunzer (DE-150)). (and later on - AEC and DARPA / ARPA)

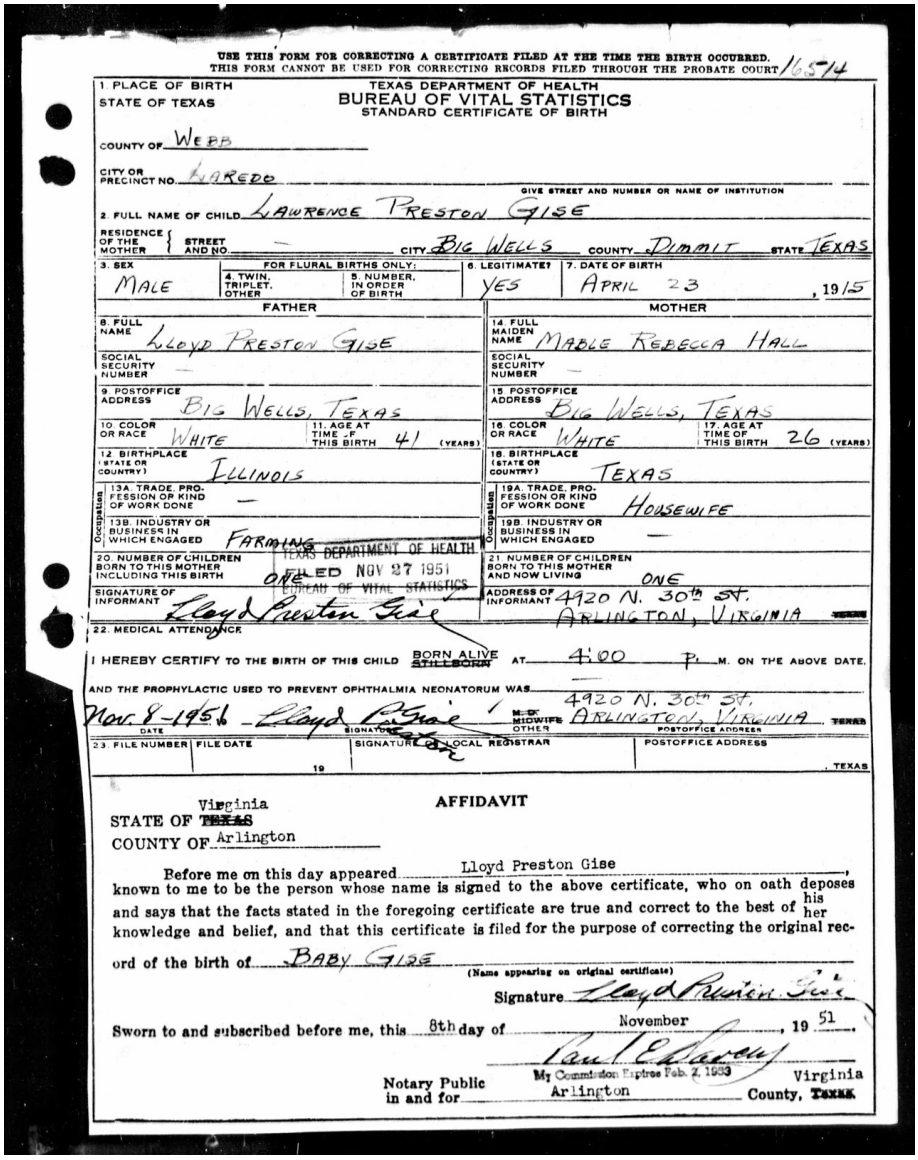
His father is **Lloyd Preston Gise** (born 1873) , and (paternal) grandfather is **Daniel Kerlin Gise** (born 1843) .

Children include :

- **Lawrence Preston Gise Jr** (born 1936)
- Jacklyn (Gise) Bezos

1915 (April 23) - Birth certificate for Lawrence Preston Gise (Sr.) - corrected in 1951 ...

(born april 23 1915) / 4920 north 30th street Arlington virginia



USE THIS FORM FOR CORRECTING A CERTIFICATE FILED AT THE TIME THE BIRTH OCCURRED.
THIS FORM CANNOT BE USED FOR CORRECTING RECORDS FILED THROUGH THE PROBATE COURT 16574

1. PLACE OF BIRTH — STATE OF TEXAS
TEXAS DEPARTMENT OF HEALTH
BUREAU OF VITAL STATISTICS
STANDARD CERTIFICATE OF BIRTH

COUNTY OF WEBB
CITY OR PRECINCT NO. LAREDO
GIVE STREET AND NUMBER OR NAME OF INSTITUTION
2. FULL NAME OF CHILD LAWRENCE PRESTON GISE
RESIDENCE OF THE MOTHER — STREET AND NO. — CITY BIG WELLS COUNTY DIMMIT STATE TEXAS
3. SEX: MALE | FOR PLURAL BIRTHS ONLY: 4. TWIN, TRIPLET, OTHER; 5. NUMBER, IN ORDER OF BIRTH | 6. LEGITIMATE? YES | 7. DATE OF BIRTH: APRIL 23, 1915

FATHER	MOTHER
8. FULL NAME: Lloyd Preston Gise	14. FULL MAIDEN NAME: Mable Rebecca Hall
SOCIAL SECURITY NUMBER: —	SOCIAL SECURITY NUMBER: —
9. POSTOFFICE ADDRESS: Big Wells, Texas	15. POSTOFFICE ADDRESS: Big Wells, Texas
10. COLOR OR RACE: White	16. COLOR OR RACE: White
11. AGE AT TIME OF THIS BIRTH: 41 (YEARS)	17. AGE AT TIME OF THIS BIRTH: 26 (YEARS)
12. BIRTHPLACE (STATE OR COUNTRY): Illinois	18. BIRTHPLACE (STATE OR COUNTRY): Texas
Occupation 13A. TRADE, PROFESSION OR KIND OF WORK DONE: —	Occupation 19A. TRADE, PROFESSION OR KIND OF WORK DONE: Housewife
13B. INDUSTRY OR BUSINESS IN WHICH ENGAGED: Farming	19B. INDUSTRY OR BUSINESS IN WHICH ENGAGED: —
20. NUMBER OF CHILDREN BORN TO THIS MOTHER INCLUDING THIS BIRTH: ONE	21. NUMBER OF CHILDREN BORN TO THIS MOTHER AND NOW LIVING: ONE
SIGNATURE OF INFORMANT: Lloyd Preston Gise	ADDRESS OF INFORMANT: 4920 N. 30th St. Arlington, Virginia

TEXAS DEPARTMENT OF HEALTH
FILED NOV 27 1951
BUREAU OF VITAL STATISTICS

22. MEDICAL ATTENDANCE
I HEREBY CERTIFY TO THE BIRTH OF THIS CHILD BORN ALIVE / STILLBORN AT 4:00 P. M. ON THE ABOVE DATE.
AND THE PROPHYLACTIC USED TO PREVENT OPHTHALMIA NEONATORUM WAS
Nov. 8-1951 (DATE) — Lloyd Preston Gise (SIGNATURE) — M.D. / MIDWIFE / OTHER — 4920 N. 30th St. Arlington, Virginia (POSTOFFICE ADDRESS) TEXAS

23. FILE NUMBER | FILE DATE 19 | SIGNATURE OF LOCAL REGISTRAR | POSTOFFICE ADDRESS TEXAS

AFFIDAVIT

STATE OF ~~TEXAS~~ Virginia
COUNTY OF Arlington

Before me on this day appeared Lloyd Preston Gise, known to me to be the person whose name is signed to the above certificate, who on oath deposes and says that the facts stated in the foregoing certificate are true and correct to the best of his/her knowledge and belief, and that this certificate is filed for the purpose of correcting the original record of the birth of BABY GISE (Name appearing on original certificate)

Signature Lloyd Preston Gise

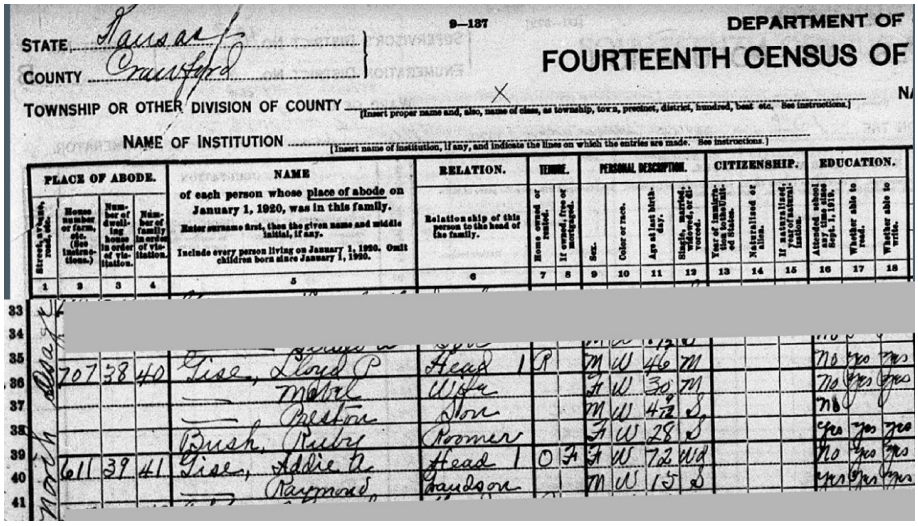
Sworn to and subscribed before me, this 8th day of November, 19 51.

Paul E. Garvey
Notary Public in and for Arlington County, Virginia
My Commission Expires Feb. 2, 1953

[HL002S][GDrive]

1920 US Census - Kansas

Full census form : [HS001V][GDrive]

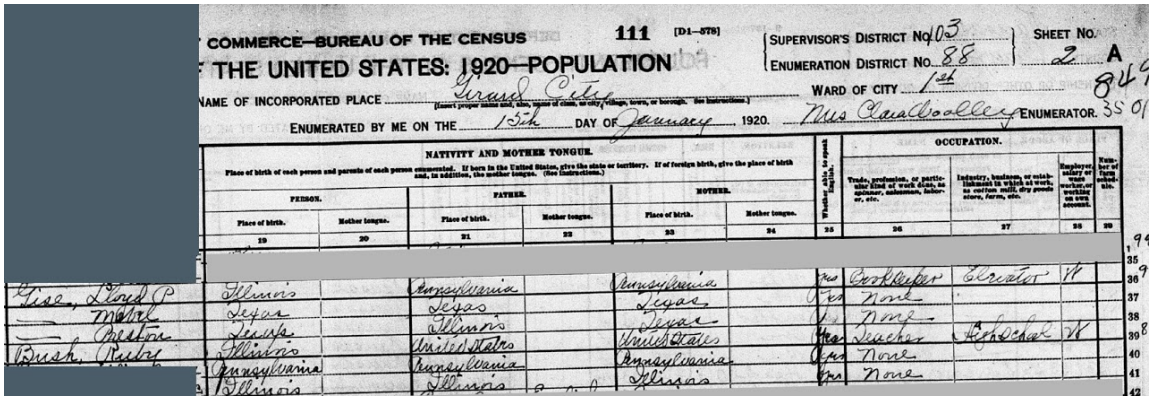


STATE Kansas
COUNTY Crawford
TOWNSHIP OR OTHER DIVISION OF COUNTY
NAME OF INSTITUTION

DEPARTMENT OF
FOURTEENTH CENSUS OF

PLACE OF ABODE. Street, avenue, road, etc.	House number or farm, etc. (See instructions.)	Number of dwelling house in order of visitation.	Number of family in order of visitation.	NAME of each person whose place of abode on January 1, 1920, was in this family. Enter surname first, then the given name and middle initial, if any. Include every person living on January 1, 1920. Omit children born since January 1, 1920.	RELATION. Relationship of this person to the head of the family.	HOME. Home owned (O) or rented (R)	HOME. If owned, free (F) or mortgaged (M)	PERSONAL DESCRIPTION. Sex.	Color or race.	Age at last birthday.	Single, married, widowed, or divorced.	CITIZENSHIP. Year of immigration to the United States.	Naturalized or alien.	If naturalized, year of naturalization.	EDUCATION. Attended school any time since Sept. 1, 1919.	Whether able to read.	Whether able to write.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
33																	
34																	
35	707	38	40	Gise, Lloyd P	Head	R		M	W	46	M				No	Yes	Yes
36				Mabel	Wife			F	W	30	M				No	Yes	Yes
37				Preston	Son			M	W	4 12	S				No		
38				Bush, Ruby	Roomer			F	W	28	S				Yes	Yes	Yes
39	611	39	41	Gise, Addie M.	Head	I	O	F	W	72	Wd				No	Yes	Yes
40				Raymond	Grandson			M	W	15	S				Yes	Yes	Yes
41																	

[HS001W][GDrive]



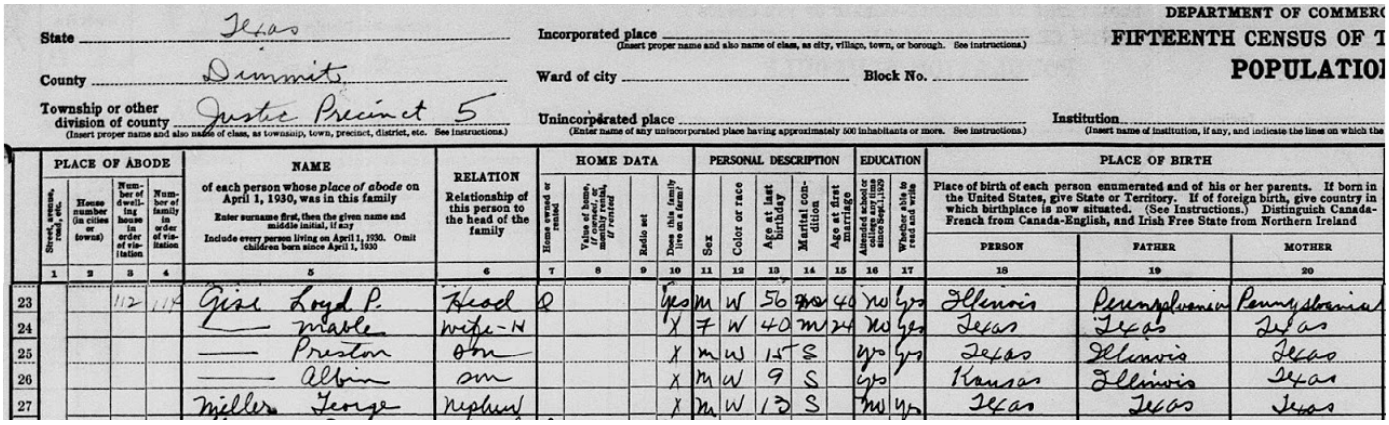
COMMERCE—BUREAU OF THE CENSUS 111 [D1—578]
THE UNITED STATES: 1920—POPULATION
SUPERVISOR'S DISTRICT No. 103 SHEET No. 2 A
ENUMERATION DISTRICT No. 88
NAME OF INCORPORATED PLACE Grand Cities WARD OF CITY 1st
ENUMERATED BY ME ON THE 15th DAY OF January 1920. Mrs Claude Bradley ENUMERATOR.

	NATIVITY AND MOTHER TONGUE. PERSON. Place of birth.	Mother tongue.	FATHER. Place of birth.	Mother tongue.	MOTHER. Place of birth.	Mother tongue.	OCCUPATION. Trade, profession, or particular kind of work done, as spinner, salesman, laborer, etc.	Industry, business, or establishment in which at work, as cotton mill, dry goods store, farm, etc.
Gise, Lloyd P	Illinois	Texas	Pennsylvania		Pennsylvania		Bookkeeper	Elevator
— Mabel	Texas	Texas	Illinois		Texas		None	
— Preston	Texas	Illinois	United States		United States		Teacher	High School
Bush, Ruby	Illinois	Pennsylvania	Pennsylvania		Pennsylvania		None	
	Illinois	Illinois	Illinois		Illinois		None	

[HS001X][GDrive]

1930 - US Census - Dimmit County , Texas

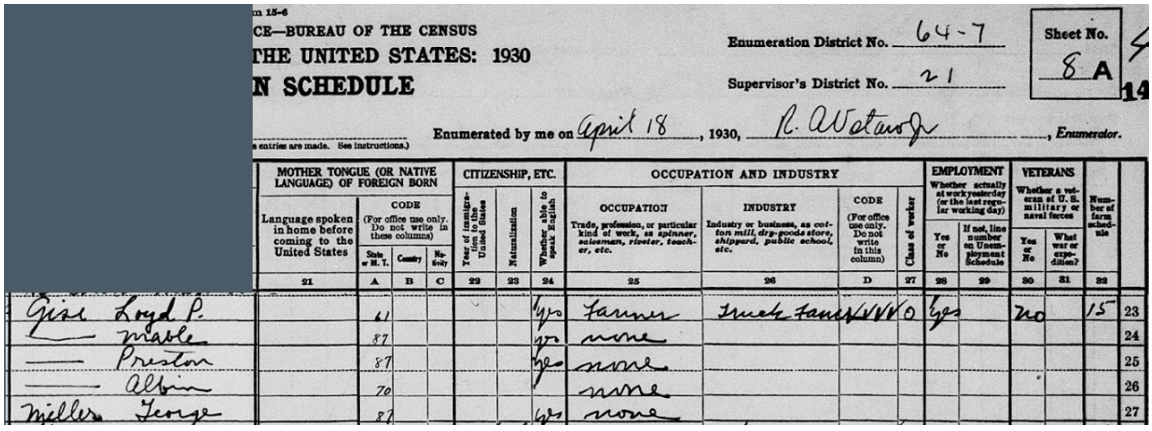
Full Census Form - [HS001S][GDrive]



State Texas
County Dimmit
Township or other division of county Justice Precinct 5
Incorporated place
Ward of city Block No.
Unincorporated place
Institution
DEPARTMENT OF COMMERC
FIFTEENTH CENSUS OF T
POPULATIO

	PLACE OF ABODE. Street, avenue, road, etc.	House number (in cities or towns)	Number of dwelling house in order of visitation	Number of family in order of visitation	NAME of each person whose place of abode on April 1, 1930, was in this family. Enter surname first, then the given name and middle initial, if any. Include every person living on April 1, 1930. Omit children born since April 1, 1930	RELATION. Relationship of this person to the head of the family	HOME DATA. Home owned or rented	Value of home, if owned, or monthly rental, if rented	Radio set	Does this family live on a farm?	PERSONAL DESCRIPTION. Sex	Color or race	Age at last birthday	Marital condition	Age at first marriage	EDUCATION. Attended school or college any time since Sept. 1, 1929	Whether able to read and write	PLACE OF BIRTH. Person	Father	Mother
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
23			112	114	Gise Loyd P.	Head	O			Yes	M	W	50	M	40	No	Yes	Illinois	Pennsylvania	Pennsylvania
24					— Mable	wife-H				X	F	W	40	M	24	No	Yes	Texas	Texas	Texas
25					— Preston	son				X	M	W	15	S		Yes	Yes	Texas	Illinois	Texas
26					— Albin	son				X	M	W	9	S		Yes		Kansas	Illinois	Texas
27					Miller George	nephew				X	M	W	13	S		No	Yes	Texas	Texas	Texas

[HS001T][GDrive]



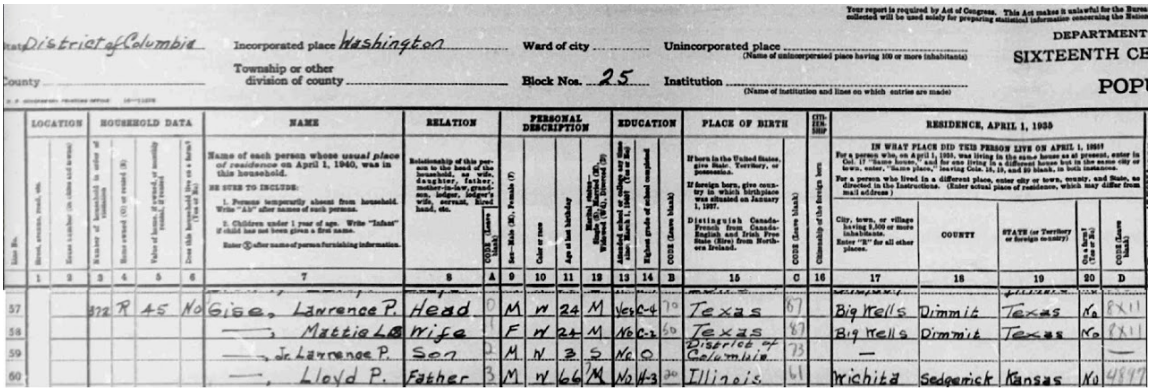
CE—BUREAU OF THE CENSUS
THE UNITED STATES: 1930
N SCHEDULE
Enumeration District No. 64-7
Supervisor's District No. 21
Sheet No. 8 A
Enumerated by me on April 18, 1930, R. A Watson, Enumerator.

	MOTHER TONGUE (OR NATIVE LANGUAGE) OF FOREIGN BORN. Language spoken in home before coming to the United States	CODE (For office use only. Do not write in these columns) State or N. T.	Country	No. only	CITIZENSHIP, ETC. Year of immigration to the United States	Naturalization	Whether able to speak English	OCCUPATION AND INDUSTRY. OCCUPATION Trade, profession, or particular kind of work, as spinner, salesman, riveter, teacher, etc.	INDUSTRY Industry or business, as cotton mill, dry-goods store, shipyard, public school, etc.	CODE (For office use only. Do not write in this column)	Class of worker	EMPLOYMENT. Whether actually at work yesterday (or the last regular working day)	If not, line number on Unemployment Schedule	VETERANS. Whether a veteran of U. S. military or naval forces	What war or expedition?	Number of farm schedule	
	21	A	B	C	22	23	24	25	26	D	27	28	29	30	31	32	
	Gise Loyd P.	41					Yes	Farmer	Truck Farm		O	Yes		No		15	23
	— Mable	87					Yes	none									24
	— Preston	87					Yes	none									25
	— Albin	70						none									26
	Miller George	87					Yes	none									27

[HS001U][GDrive]

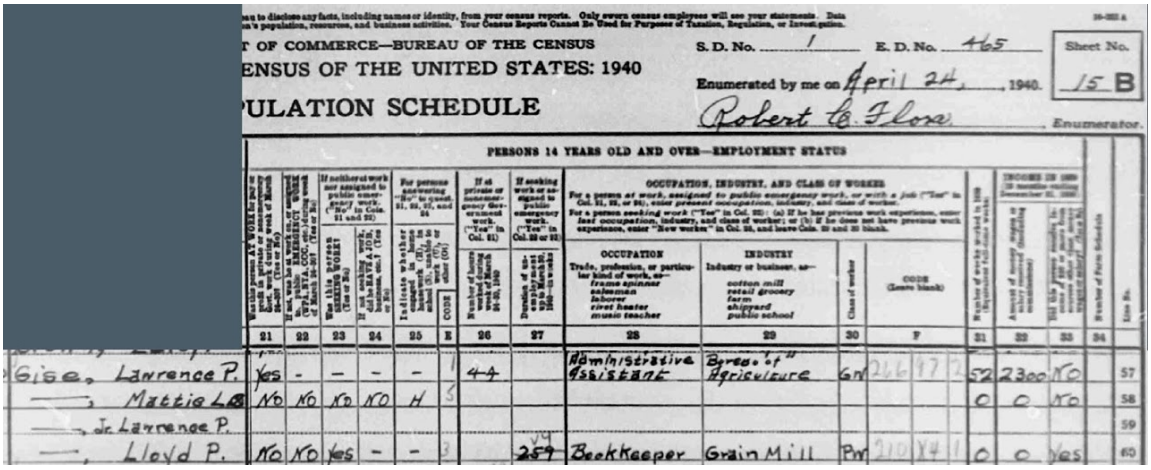
1940

Full Census form: [HS001P][GDrive]



57			372	R	45	No	Gise, Lawrence P.	Head		M	W	24	M	Yes	C-4		Texas		Big Wells	Dimmit	Texas	No	8X11	
58							—, Mattie L.	Wife		F	W	24	M	No	C-2		Texas		Big Wells	Dimmit	Texas	No	8X11	
59							—, Jr. Lawrence P.	Son		M	W	2	S	No			District of Columbia		—					
60							—, Lloyd P.	Father		M	W	66	M	No	4-3		Illinois		Wichita	Sedgewick	Kansas	No	4847	

[HS001Q][GDrive]

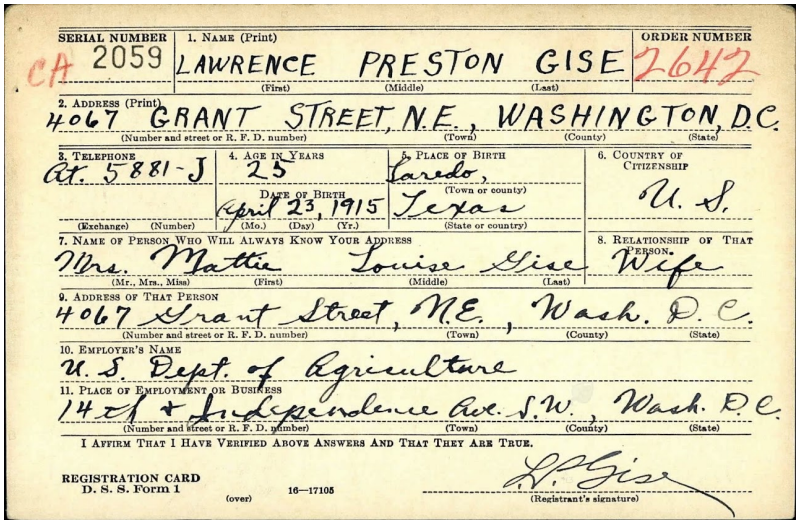


Gise, Lawrence P.	Yes	-	-	-	-		44			Administrative Assistant	Bureau of Agriculture	Gov	2666			52	2300	No		57
—, Mattie L.	No	No	No	No	H											0	0	No		58
—, Jr. Lawrence P.																				59
—, Lloyd P.	No	No	Yes	-	-			259		Bookkeeper	Grain Mill	Pvt	210	X4	1	0	0	Yes		60

[HS001R][GDrive]

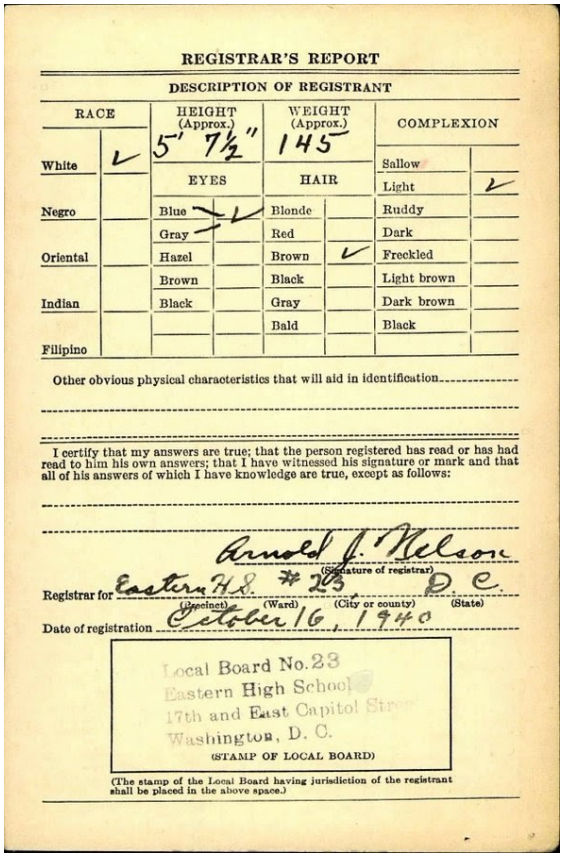
Oct 16 1940 1940 military enlistment

From Tweet : [HT004E][GDrive]



SERIAL NUMBER: CA 2059
1. NAME (Print): LAWRENCE (First) PRESTON (Middle) GISE (Last)
ORDER NUMBER: 2642
2. ADDRESS (Print): 4067 GRANT STREET, N.E., WASHINGTON, D.C.
(Number and street or R. F. D. number) (Town) (County) (State)
3. TELEPHONE: At. 5881-J (Exchange) (Number)
4. AGE IN YEARS: 25
DATE OF BIRTH: April 23, 1915 (Mo.) (Day) (Yr.)
5. PLACE OF BIRTH: Laredo, (Town or county) Texas (State or country)
6. COUNTRY OF CITIZENSHIP: U. S.
7. NAME OF PERSON WHO WILL ALWAYS KNOW YOUR ADDRESS: Mrs. Mattie (Mr., Mrs., Miss) (First) Louise (Middle) Gise (Last)
8. RELATIONSHIP OF THAT PERSON: Wife
9. ADDRESS OF THAT PERSON: 4067 Grant Street, N.E., Wash. D. C.
(Number and street or R. F. D. number) (Town) (County) (State)
10. EMPLOYER'S NAME: U. S. Dept. of Agriculture
11. PLACE OF EMPLOYMENT OR BUSINESS: 14th & Independence Ave. S.W., Wash. D.C.
(Number and street or R. F. D. number) (Town) (County) (State)
I AFFIRM THAT I HAVE VERIFIED ABOVE ANSWERS AND THAT THEY ARE TRUE.
REGISTRATION CARD D. S. S. Form 1 (over) 16—17105
(Registrant's signature) L. P. Gise

[HT004F][GDrive]



REGISTRAR'S REPORT

DESCRIPTION OF REGISTRANT

RACE		HEIGHT (Approx.)		WEIGHT (Approx.)		COMPLEXION	
White	✓	5' 7½"		145		Sallow	
		EYES		HAIR		Light	✓
Negro		Blue	✓	Blonde		Ruddy	
		Gray		Red		Dark	
Oriental		Hazel		Brown	✓	Freckled	
		Brown		Black		Light brown	
Indian		Black		Gray		Dark brown	
				Bald		Black	
Filipino							

Other obvious physical characteristics that will aid in identification

I certify that my answers are true; that the person registered has read or has had read to him his own answers; that I have witnessed his signature or mark and that all of his answers of which I have knowledge are true, except as follows:

Arnold J. Nelson (Signature of registrar)

Registrar for Eastern H.S. # 23, D. C. (Precinct) (Ward) (City or county) (State)

Date of registration October 16, 1940

Local Board No. 23
Eastern High School
17th and East Capitol Street
Washington, D. C.
(STAMP OF LOCAL BOARD)

(The stamp of the Local Board having jurisdiction of the registrant shall be placed in the above space.)

[HT004G][GDrive]

Sep 1943 to July 1944 - Lt. Lawrence Preston Gise served on the USS Neunzer (DE-150)

- See USS Neunzer (DE-150)

1949

Official Register of the Untied States, 1949 .... PDF at [HG0034][GDrive]

NATIONAL MILITARY ESTABLISHMENT
Continued

NAME	OFFICIAL TITLE AND STATION (Station is Washington, D. C., unless otherwise indicated)	Legal residence		Compensation
		State	Cong. Dist.	
Executive Office of the Secretary—Continued				
GENERAL BOARD—Con.				
Col. N. H. Nelson, U. S. M. C.	Member	S. Dak.	1st	(3)
Capt. C. C. Smith, U. S. N.	do	Idaho	2d	(1)
Capt. N. J. Frank, Jr., U. S. N.	Secretary	Mich.	1st	(1)
NAVAL EXAMINING BOARD (FLAG) AND NAVAL RETIRING BOARD				
Rear Adm. Robert M. Griffin, U. S. N.	President	D. C.		(1)
Addie Brown	Secretary	Miss.	1st	(2)
NAVAL EXAMINING BOARD (LINE)				
Rear Adm. Robert M. Griffin, U. S. N.	President	D. C.		(1)
Lt. Comdr. Carl W. Adams, U. S. N.	Secretary	Ind.	8th	(1)
NAVAL MEDICAL SURVEY REVIEW BOARD				
Capt. W. F. E. Loftin (MC), U. S. N.	President	N. C.	3d	(1)
Lt. (jg) Charles A. Carroll (MSC), U. S. N.	Recorder	Md.	2d	(1)
NAVAL RETIRING REVIEW BOARD				
Rear Adm. George H. Fort, U. S. N.	President	Wash.	1st	(1)
Lt. Comdr. Mack K. Greenberg.	Recorder	Mass.	10th	(1)
NAVAL SENTENCE REVIEW AND CLEMENCY BOARD				
Rear Adm. George H. Fort, U. S. N.	Senior Member	Wash.	1st	(1)
Lt. Comdr. Evan L. Krogue, U. S. N. R.	Recorder	Idaho	2d	(1)
OFFICE OF BUDGET AND REPORTS				
Rear Adm. H. G. Hopwood, U. S. N.	Director	Pa.	12th	(1)
Capt. Edward W. Clexton, U. S. N.	Assistant Director	Va.	8th	(1)
Capt. John W. Ailes, III, U. S. N.	Staff Officer	Calif.	18th	(1)
Comdr. Robert C. Leonard, U. S. N.	do	Md.	6th	(1)
Comdr. Charles A. Blick, U. S. N.	do	N. J.	1st	(1)
Comdr. Charles L. Werts, U. S. N.	do	D. C.		(1)
Clarence A. Glover	Director, Budget Services Division	S. C.	2d	$8,150
Glenn V. Gibson	Estimates and Analysis Division	Ill.	2d	10,305
Lawrence P. Gise	Assistant Director, Estimates and Analysis Division.	Tex.	15th	8,509
Walker A. Hale	Head, Personnel Branch	Calif.	8th	8,509

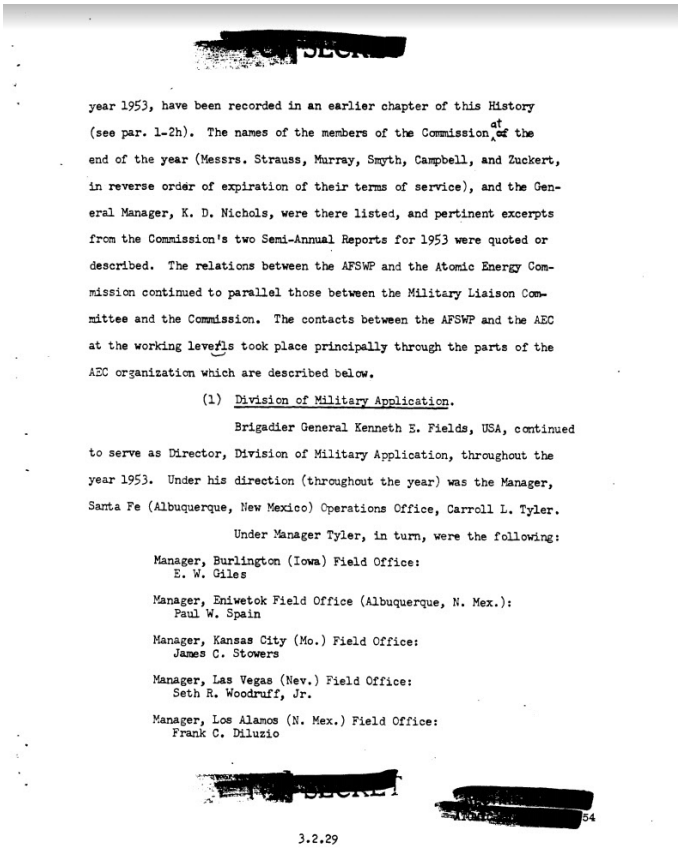
[1] See Navy pay table in appendix.
[2] No additional compensation.
[3] See Marine Corps pay table in appendix.

[HG0035][GDrive]

1953 - Deputy Chief, Plans and Programs Branch - Division of Military Application

PDF - "1994 Declassified First History of AFSWP 1947-1954 Vol 6 1953 Chapter 3" - [HG0030][GDrive]

His boss, "Captain F. L. Ashworth", is the guy who bombed Nagasaki - https://www.nytimes.com/2005/12/08/us/frederick-l-ashworth-93-atomic-bomb-handler-dies.html



year 1953, have been recorded in an earlier chapter of this History (see par. 1-2h). The names of the members of the Commission at the end of the year (Messrs. Strauss, Murray, Smyth, Campbell, and Zuckert, in reverse order of expiration of their terms of service), and the General Manager, K. D. Nichols, were there listed, and pertinent excerpts from the Commission's two Semi-Annual Reports for 1953 were quoted or described. The relations between the AFSWP and the Atomic Energy Commission continued to parallel those between the Military Liaison Committee and the Commission. The contacts between the AFSWP and the AEC at the working levels took place principally through the parts of the AEC organization which are described below.

(1) Division of Military Application.

Brigadier General Kenneth E. Fields, USA, continued to serve as Director, Division of Military Application, throughout the year 1953. Under his direction (throughout the year) was the Manager, Santa Fe (Albuquerque, New Mexico) Operations Office, Carroll L. Tyler.

Under Manager Tyler, in turn, were the following:

Manager, Burlington (Iowa) Field Office:
E. W. Giles

Manager, Eniwetok Field Office (Albuquerque, N. Mex.):
Paul W. Spain

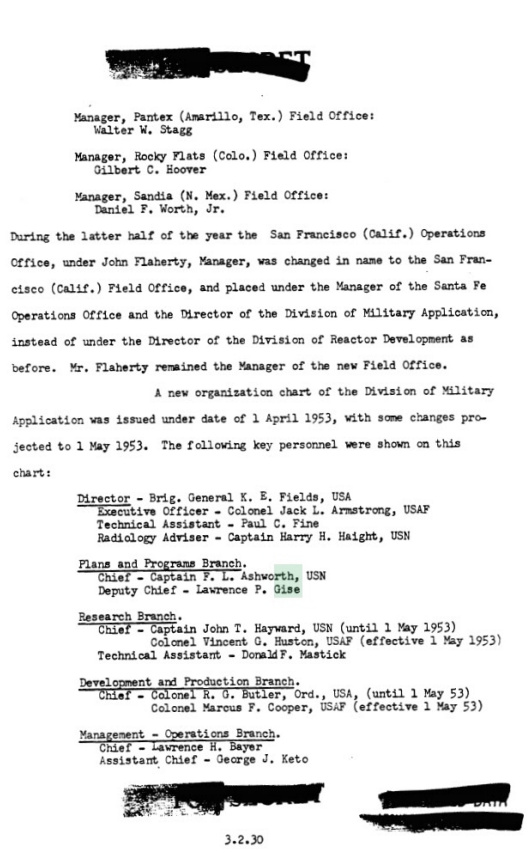
Manager, Kansas City (Mo.) Field Office:
James C. Stowers

Manager, Las Vegas (Nev.) Field Office:
Seth R. Woodruff, Jr.

Manager, Los Alamos (N. Mex.) Field Office:
Frank C. Diluzio

3.2.29

[HG0031][GDrive]



Manager, Pantex (Amarillo, Tex.) Field Office:
Walter W. Stagg

Manager, Rocky Flats (Colo.) Field Office:
Gilbert C. Hoover

Manager, Sandia (N. Mex.) Field Office:
Daniel F. Worth, Jr.

During the latter half of the year the San Francisco (Calif.) Operations Office, under John Flaherty, Manager, was changed in name to the San Francisco (Calif.) Field Office, and placed under the Manager of the Santa Fe Operations Office and the Director of the Division of Military Application, instead of under the Director of the Division of Reactor Development as before. Mr. Flaherty remained the Manager of the new Field Office.

A new organization chart of the Division of Military Application was issued under date of 1 April 1953, with some changes projected to 1 May 1953. The following key personnel were shown on this chart:

Director - Brig. General K. E. Fields, USA
Executive Officer - Colonel Jack L. Armstrong, USAF
Technical Assistant - Paul C. Fine
Radiology Adviser - Captain Harry H. Haight, USN

Plans and Programs Branch.
Chief - Captain F. L. Ashworth, USN
Deputy Chief - Lawrence P. Gise

Research Branch.
Chief - Captain John T. Hayward, USN (until 1 May 1953)
Colonel Vincent G. Huston, USAF (effective 1 May 1953)
Technical Assistant - Donald F. Mastick

Development and Production Branch.
Chief - Colonel R. G. Butler, Ord., USA, (until 1 May 53)
Colonel Marcus F. Cooper, USAF (effective 1 May 53)

Management - Operations Branch.
Chief - Lawrence H. Bayer
Assistant Chief - George J. Keto

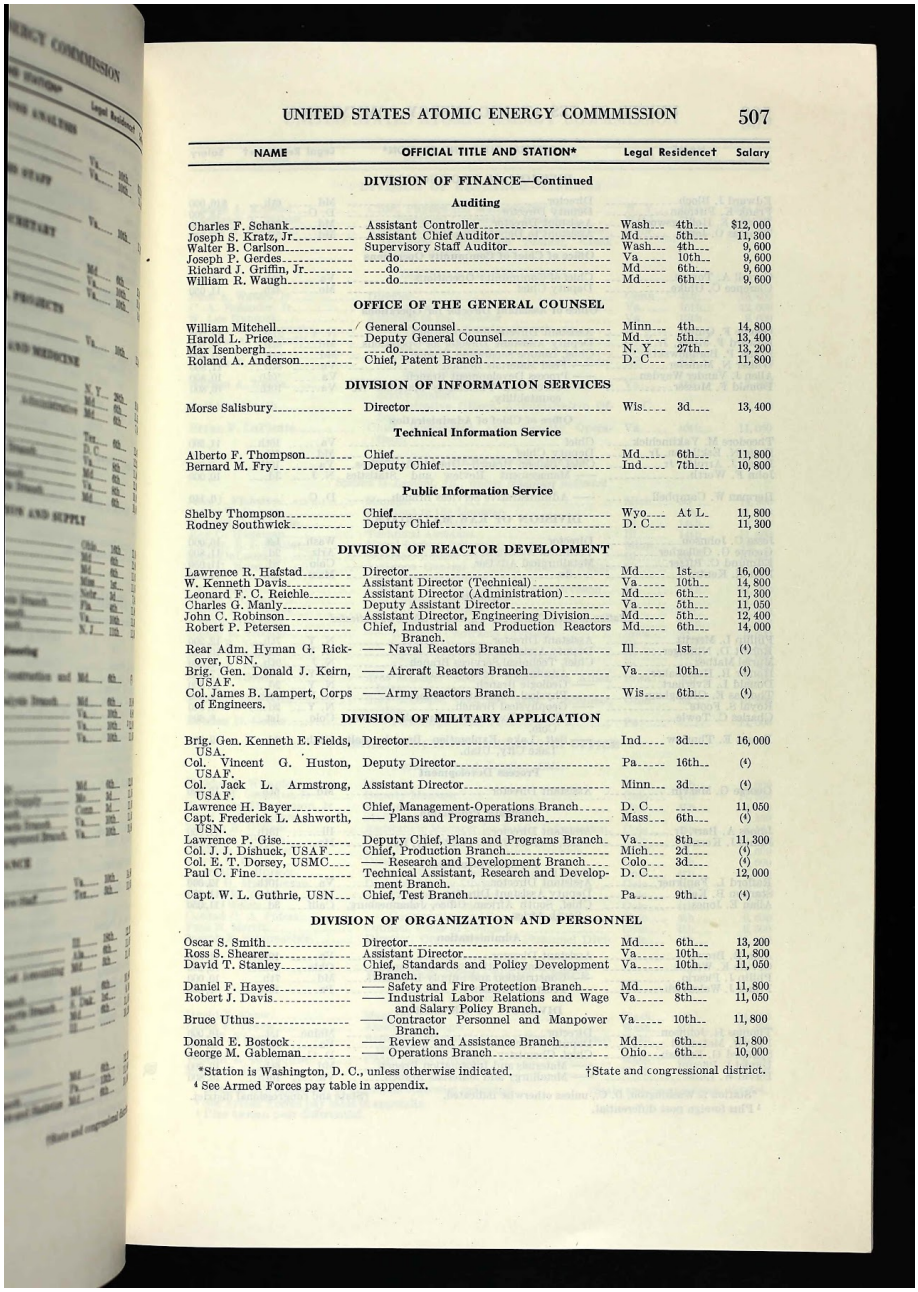
3.2.30

[HG0032][GDrive]

1954 (May) - LP Gise is living in Virginia, and with the Atomic Energy Commission

Lawrence P. Gise lived in Virginia, USA, on May 1, 1954.

Discovered by Greg Lynch in U.S., Register of Civil, Military, and Naval Service, 1863-1959



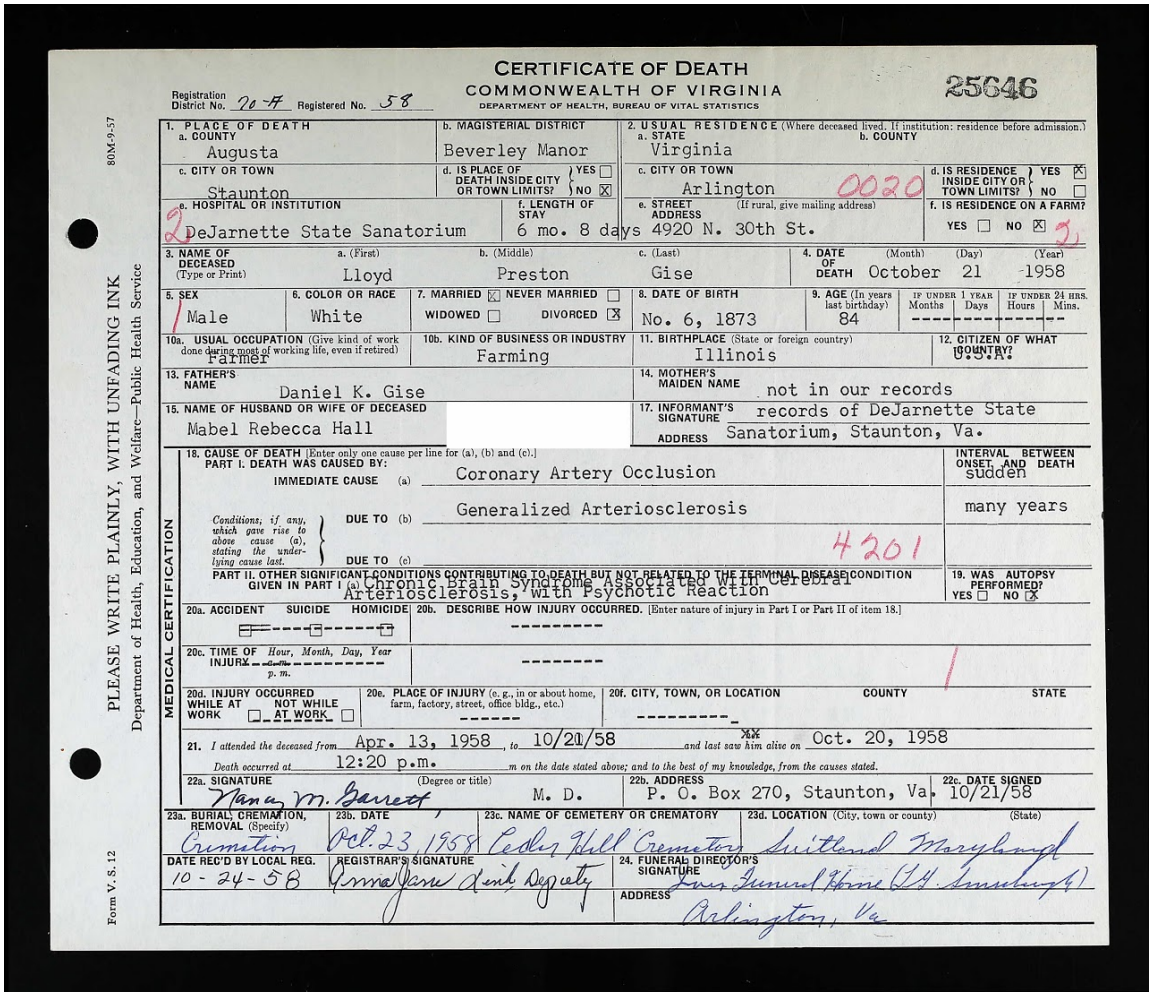
NAME	OFFICIAL TITLE AND STATION*	Legal Residence†		Salary
	DIVISION OF FINANCE—Continued			
	Auditing			
Charles F. Schank	Assistant Controller	Wash.	4th	$12,000
Joseph S. Kratz, Jr.	Assistant Chief Auditor	Md.	5th	11,300
Walter B. Carlson	Supervisory Staff Auditor	Wash.	4th	9,600
Joseph P. Gerdes	——do	Va.	10th	9,600
Richard J. Griffin, Jr.	——do	Md.	6th	9,600
William R. Waugh	——do	Md.	6th	9,600
	OFFICE OF THE GENERAL COUNSEL			
William Mitchell	General Counsel	Minn.	4th	14,800
Harold L. Price	Deputy General Counsel	Md.	5th	13,400
Max Isenbergh	——do	N. Y.	27th	13,200
Roland A. Anderson	Chief, Patent Branch	D. C.	------	11,800
	DIVISION OF INFORMATION SERVICES			
Morse Salisbury	Director	Wis.	3d	13,400
	Technical Information Service			
Alberto F. Thompson	Chief	Md.	6th	11,800
Bernard M. Fry	Deputy Chief	Ind.	7th	10,800
	Public Information Service			
Shelby Thompson	Chief	Wyo.	At L.	11,800
Rodney Southwick	Deputy Chief	D. C.	------	11,300
	DIVISION OF REACTOR DEVELOPMENT			
Lawrence R. Hafstad	Director	Md.	1st	16,000
W. Kenneth Davis	Assistant Director (Technical)	Va.	10th	14,800
Leonard F. C. Reichle	Assistant Director (Administration)	Md.	6th	11,300
Charles G. Manly	Deputy Assistant Director	Va.	5th	11,050
John C. Robinson	Assistant Director, Engineering Division	Md.	5th	12,400
Robert P. Petersen	Chief, Industrial and Production Reactors Branch.	Md.	6th	14,000
Rear Adm. Hyman G. Rickover, USN.	—— Naval Reactors Branch	Ill.	1st	(4)
Brig. Gen. Donald J. Keirn, USAF.	—— Aircraft Reactors Branch	Va.	10th	(4)
Col. James B. Lampert, Corps of Engineers.	——Army Reactors Branch	Wis.	6th	(4)
	DIVISION OF MILITARY APPLICATION			
Brig. Gen. Kenneth E. Fields, USA.	Director	Ind.	3d	16,000
Col. Vincent G. Huston, USAF.	Deputy Director	Pa.	16th	(4)
Col. Jack L. Armstrong, USAF.	Assistant Director	Minn.	3d	(4)
Lawrence H. Bayer	Chief, Management-Operations Branch	D. C.	------	11,050
Capt. Frederick L. Ashworth, USN.	—— Plans and Programs Branch	Mass.	6th	(4)
Lawrence P. Gise	Deputy Chief, Plans and Programs Branch	Va.	8th	11,300
Col. J. J. Dishuck, USAF	Chief, Production Branch	Mich.	2d	(4)
Col. E. T. Dorsey, USMC	—— Research and Development Branch	Colo.	3d	(4)
Paul C. Fine	Technical Assistant, Research and Development Branch.	D. C.	------	12,000
Capt. W. L. Guthrie, USN	Chief, Test Branch	Pa.	9th	(4)
	DIVISION OF ORGANIZATION AND PERSONNEL			
Oscar S. Smith	Director	Md.	6th	13,200
Ross S. Shearer	Assistant Director	Va.	10th	11,800
David T. Stanley	Chief, Standards and Policy Development Branch.	Va.	10th	11,050
Daniel F. Hayes	—— Safety and Fire Protection Branch	Md.	6th	11,800
Robert J. Davis	—— Industrial Labor Relations and Wage and Salary Policy Branch.	Va.	8th	11,050
Bruce Uthus	—— Contractor Personnel and Manpower Branch.	Va.	10th	11,800
Donald E. Bostock	—— Review and Assistance Branch	Md.	6th	11,800
George M. Gableman	—— Operations Branch	Ohio	6th	10,000

*Station is Washington, D. C., unless otherwise indicated. †State and congressional district.

4 See Armed Forces pay table in appendix.

[HG002Z][GDrive]

1958 - Oct 21 - Father (Lloyd P Gise passes)



CERTIFICATE OF DEATH
COMMONWEALTH OF VIRGINIA
DEPARTMENT OF HEALTH, BUREAU OF VITAL STATISTICS

25646

Registration District No. 20-17 Registered No. 58

80M-9-57

PLEASE WRITE PLAINLY, WITH UNFADING INK
Department of Health, Education, and Welfare—Public Health Service

1. PLACE OF DEATH
a. COUNTY: Augusta
b. MAGISTERIAL DISTRICT: Beverley Manor
c. CITY OR TOWN: Staunton
d. IS PLACE OF DEATH INSIDE CITY OR TOWN LIMITS? YES ☐ NO ☒
e. HOSPITAL OR INSTITUTION: 2 DeJarnette State Sanatorium
f. LENGTH OF STAY: 6 mo. 8 days

2. USUAL RESIDENCE (Where deceased lived. If institution: residence before admission.)
a. STATE: Virginia
b. COUNTY
c. CITY OR TOWN: Arlington 0020
d. IS RESIDENCE INSIDE CITY OR TOWN LIMITS? YES ☒ NO ☐
e. STREET ADDRESS (If rural, give mailing address): 4920 N. 30th St.
f. IS RESIDENCE ON A FARM? YES ☐ NO ☒ 2

3. NAME OF DECEASED (Type or Print): a. (First) Lloyd b. (Middle) Preston c. (Last) Gise
4. DATE OF DEATH: (Month) October (Day) 21 (Year) 1958
5. SEX: Male
6. COLOR OR RACE: White
7. MARRIED ☒ NEVER MARRIED ☐ WIDOWED ☐ DIVORCED ☒
8. DATE OF BIRTH: No. 6, 1873
9. AGE (In years last birthday): 84 IF UNDER 1 YEAR Months Days IF UNDER 24 HRS. Hours Mins.
10a. USUAL OCCUPATION (Give kind of work done during most of working life, even if retired): Farmer
10b. KIND OF BUSINESS OR INDUSTRY: Farming
11. BIRTHPLACE (State or foreign country): Illinois
12. CITIZEN OF WHAT COUNTRY? U.S.A.
13. FATHER'S NAME: Daniel K. Gise
14. MOTHER'S MAIDEN NAME: not in our records
15. NAME OF HUSBAND OR WIFE OF DECEASED: Mabel Rebecca Hall
17. INFORMANT'S SIGNATURE: records of DeJarnette State
ADDRESS: Sanatorium, Staunton, Va.

MEDICAL CERTIFICATION

18. CAUSE OF DEATH [Enter only one cause per line for (a), (b) and (c).]
PART I. DEATH WAS CAUSED BY:
IMMEDIATE CAUSE (a): Coronary Artery Occlusion — INTERVAL BETWEEN ONSET AND DEATH: sudden
Conditions, if any, which gave rise to above cause (a), stating the underlying cause last.
DUE TO (b): Generalized Arteriosclerosis — many years
DUE TO (c): 4201
PART II. OTHER SIGNIFICANT CONDITIONS CONTRIBUTING TO DEATH BUT NOT RELATED TO THE TERMINAL DISEASE CONDITION GIVEN IN PART I (a): Chronic Brain Syndrome Associated With Cerebral Arteriosclerosis, With Psychotic Reaction
19. WAS AUTOPSY PERFORMED? YES ☐ NO ☒

20a. ACCIDENT SUICIDE HOMICIDE
20b. DESCRIBE HOW INJURY OCCURRED. [Enter nature of injury in Part I or Part II of item 18.]
20c. TIME OF INJURY Hour, Month, Day, Year
20d. INJURY OCCURRED WHILE AT WORK ☐ NOT WHILE AT WORK ☐
20e. PLACE OF INJURY (e. g., in or about home, farm, factory, street, office bldg., etc.)
20f. CITY, TOWN, OR LOCATION COUNTY STATE

21. I attended the deceased from Apr. 13, 1958 to 10/21/58 and last saw him alive on Oct. 20, 1958
Death occurred at 12:20 p.m. on the date stated above; and to the best of my knowledge, from the causes stated.

22a. SIGNATURE (Degree or title): Nana M. Barrett M. D.
22b. ADDRESS: P. O. Box 270, Staunton, Va.
22c. DATE SIGNED: 10/21/58

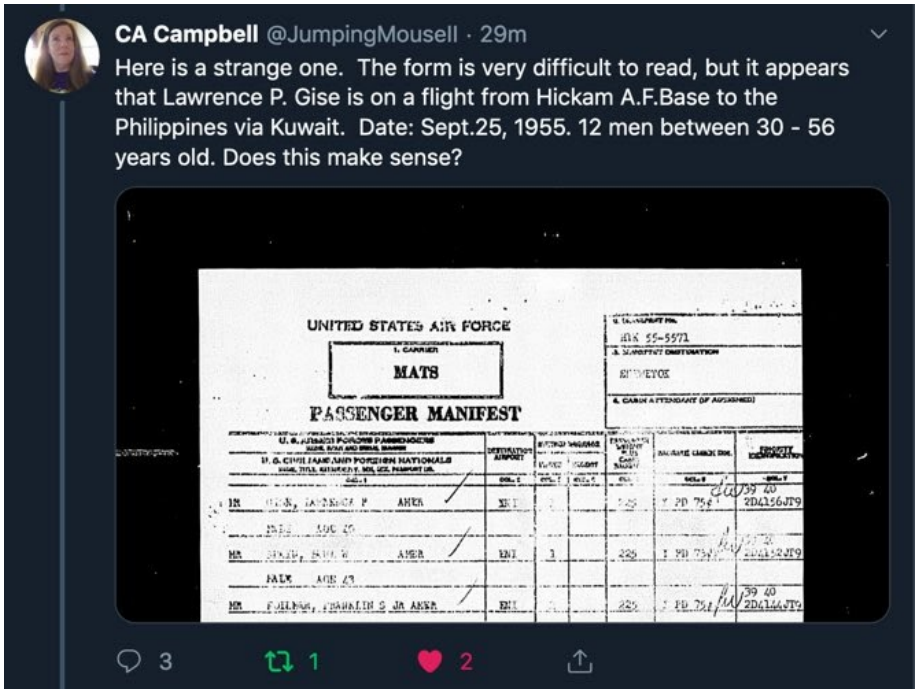
23a. BURIAL, CREMATION, REMOVAL (Specify): Cremation
23b. DATE: Oct. 23, 1958
23c. NAME OF CEMETERY OR CREMATORY: Cedar Hill Cemetery
23d. LOCATION (City, town or county) (State): Suitland Maryland
DATE REC'D BY LOCAL REG.: 10-24-58
REGISTRAR'S SIGNATURE: Emma Jane Link Deputy
24. FUNERAL DIRECTOR'S SIGNATURE: Lee Funeral Home (J.H. Smethurst)
ADDRESS: Arlington, Va.

Form V. S. 12

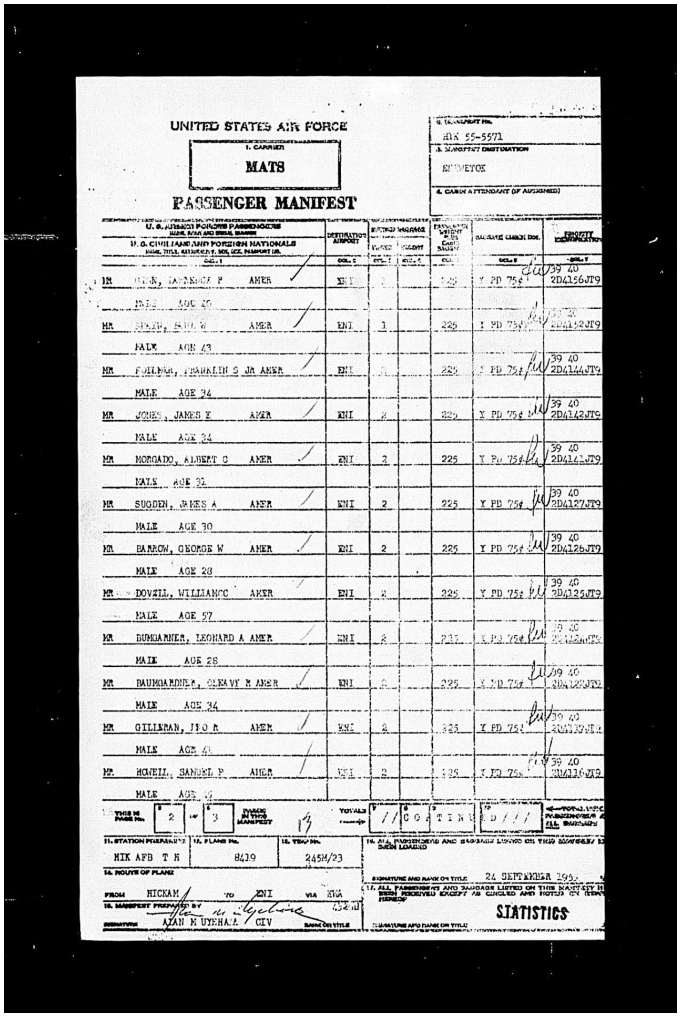
[HL002R][GDrive]

1955 - September - Flight from Hickam AFB to Philippines via Kuwait

"Here is a strange one. The form is very difficult to read, but it appears that Lawrence P. Gise is on a flight from Hickam A.F.Base to the Philippines via Kuwait. Date: Sept.25, 1955. 12 men between 30 - 56 years old. Does this make sense?" (Source of Tweet -)



[HT004C][GDrive]



UNITED STATES AIR FORCE

MATS

PASSENGER MANIFEST

[HT004D][GDrive]

1956 (Dec 28) - AEC Award for LP GIse

Full page : [HN00OO][GDrive]

LAWRENCE P. GISE
. . . given A.E.C. award

Preston Gise Gets A. E. C. Award

Lawrence P. Gise, formerly of Big Wells, was presented an Outstanding Service Award by the U. S. Atomic Energy Commission at its annual Honor Awards Ceremony in Washington, D. C., Nov. 14.

Mr. Gise, known to his Dimmit County friends as Preston Gise, is a 1933 graduate of Big Wells High School. He is a nephew of the late Robert T. Hall and is a son-in-law of Mr. and Mrs. Yancy C. Strait of Big Wells. His wife is the former Miss Mattie Louise Strait.

The citation accompanying the award states: "Mr. Lawrence F. Gise has served in progressively more responsible positions in the Division of Military Application (of the A.E.C.) for the past six years. He led a successful effort to attain coordination and integration of Department of Defense Weapon requirements with the production, research, and development capabilities of the Atomic Energy Commission. He also carried ably the responsibility for budget and financial management during crucial years of operational growth in the weapons program characterized by frequent and radical changes in scope and direction.

In these tasks and as Assistant Director of the Division of Military tasks of complexity and difficulty. The results of the work he has guided have significantly contributed to the national defense and security."

Mr and Mrs. Gise left Big Wells in 1935 soon after they were married for Washington, D. C., where Mr. Gise entered government service. They have a son, Preston Jr., 20, and a daughter, Jacklyn Marie, 10.

[HN00OP][GDrive]

1958 (March 06) - Pentagon Space Deputy

Full page : [HN00N1][GDrive]

The Morning News (Wilmington, Delaware) · 06 Mar 1958, Thu · Page 6

Pentagon Picks Space Deputy

WASHINGTON, March 5 (AP)—The Pentagon's new space agency today got its deputy director, Rear Admiral John E. Clark, who has been serving as director of the Navy's guided missiles division.

The appointment was announced by Roy W. Johnson, who was named director at the Advanced Research Projects Agency on Feb. 7.

Johnson also named a director of program control and administration for the space agency. He is Lawrence P. Gise, former assistant director of the division of military applications of the Atomic Energy Commission.

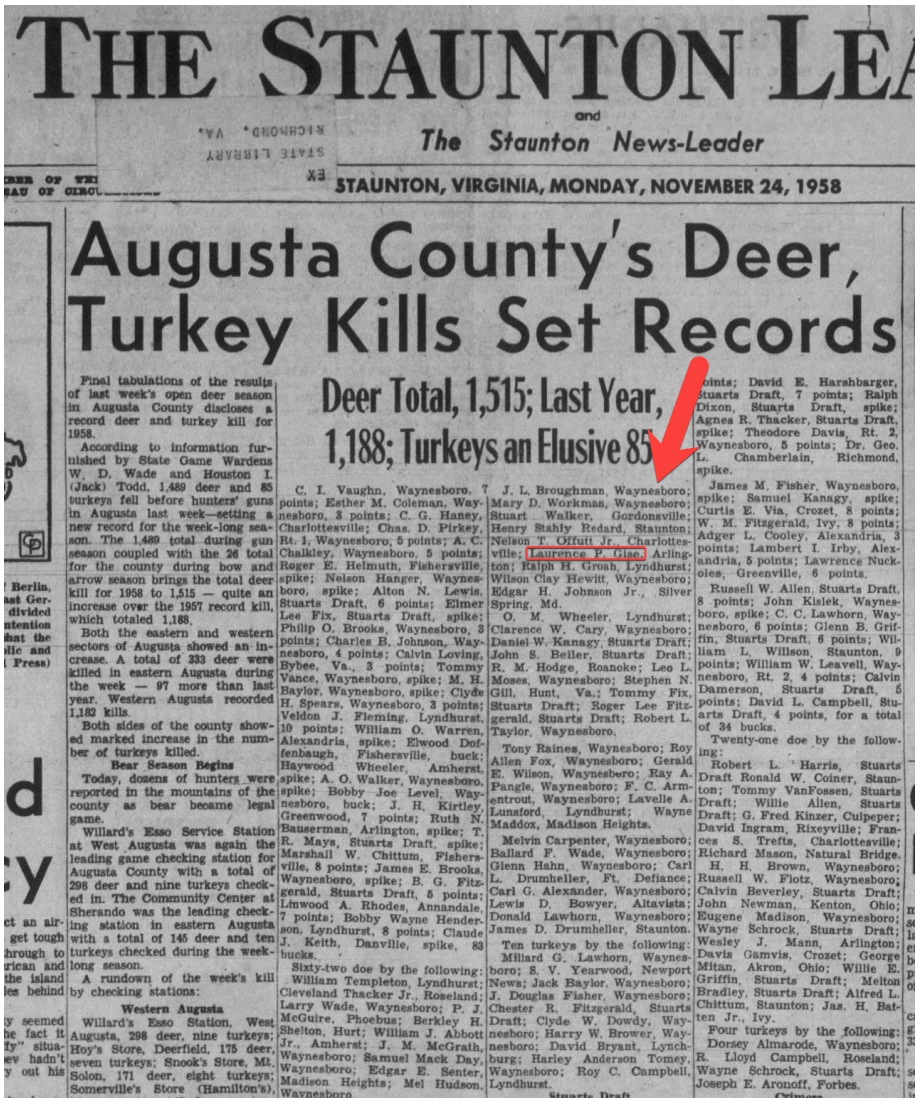
Johnson chose as his special assistant Lambert L. Lind, an executive of Ebasco Services, New York, a large industrial construction firm. Lind will take over his duties at the Pentagon on March 21.

Johnson is still looking for a top level scientist to be his principal assistant in the unified effort to research, develop and perfect new military weapons and concepts relating to the newly explored field of outer space.

[HN00N2][GDrive]

1958 (Nov) - Still in Virginia in

Full page - [HN00OM][GDrive]



THE STAUNTON LEA

and

The Staunton News-Leader

STAUNTON, VIRGINIA, MONDAY, NOVEMBER 24, 1958

Augusta County's Deer, Turkey Kills Set Records

Deer Total, 1,515; Last Year, 1,188; Turkeys an Elusive 85

Final tabulations of the results of last week's open deer season in Augusta County discloses a record deer and turkey kill for 1958.

According to information furnished by State Game Wardens W. D. Wade and Houston I. (Jack) Todd, 1,489 deer and 85 turkeys fell before hunters' guns in Augusta last week—setting a new record for the week-long season. The 1,489 total during gun season coupled with the 26 total for the county during bow and arrow season brings the total deer kill for 1958 to 1,515 — quite an increase over the 1957 record kill, which totaled 1,188.

Both the eastern and western sectors of Augusta showed an increase. A total of 333 deer were killed in eastern Augusta during the week — 97 more than last year. Western Augusta recorded 1,182 kills.

Both sides of the county showed marked increase in the number of turkeys killed.

Bear Season Begins

Today, dozens of hunters were reported in the mountains of the county as bear became legal game.

Willard's Esso Service Station at West Augusta was again the leading game checking station for Augusta County with a total of 298 deer and nine turkeys checked in. The Community Center at Sherando was the leading checking station in eastern Augusta with a total of 145 deer and ten turkeys checked during the week-long season.

A rundown of the week's kill by checking stations:

Western Augusta

Willard's Esso Station, West Augusta, 298 deer, nine turkeys; Hoy's Store, Deerfield, 175 deer, seven turkeys; Snook's Store, Mt. Solon, 171 deer, eight turkeys; Somerville's Store (Hamilton's), C. I. Vaughn, Waynesboro, 7 points; Esther M. Coleman, Waynesboro, 3 points; C. G. Haney, Charlottesville; Chas. D. Pirkey, Rt. 1, Waynesboro, 5 points; A. C. Chalkley, Waynesboro, 5 points; Roger E. Helmuth, Fishersville, spike; Nelson Hanger, Waynesboro, spike; Alton N. Lewis, Stuarts Draft, 6 points; Elmer Lee Fix, Stuarts Draft, spike; Philip O. Brooks, Waynesboro, 3 points; Charles B. Johnson, Waynesboro, 4 points; Calvin Loving, Bybee, Va., 3 points; Tommy Vance, Waynesboro, spike; M. H. Baylor, Waynesboro, spike; Clyde H. Spears, Waynesboro, 3 points; Veldon J. Fleming, Lyndhurst, 10 points; William O. Warren, Alexandria, spike; Elwood Doffenbaugh, Fishersville, buck; Haywood Wheeler, Amherst, spike; A. O. Walker, Waynesboro, spike; Bobby Joe Level, Waynesboro, buck; J. H. Kirtley, Greenwood, 7 points; Ruth N. Bauserman, Arlington, spike; 7. R. Mays, Stuarts Draft, spike; Marshall W. Chittum, Fishersville, 8 points; James E. Brooks, Waynesboro, spike; B. G. Fitzgerald, Stuarts Draft, 5 points; Linwood A. Rhodes, Annandale, 7 points; Bobby Wayne Henderson, Lyndhurst, 8 points; Claude J. Keith, Danville, spike, 83 bucks.

Sixty-two doe by the following: William Templeton, Lyndhurst; Cleveland Thacker Jr., Roseland; Larry Wade, Waynesboro; P. J. McGuire, Phoebus; Berkley H. Shelton, Hurt; William J. Abbott Jr., Amherst; J. M. McGrath, Waynesboro; Samuel Mack Day, Waynesboro; Edgar E. Senter, Madison Heights; Mel Hudson, Waynesboro; J. L. Broughman, Waynesboro; Mary D. Workman, Waynesboro; Stuart Walker, Gordonsville; Henry Stahly Redard, Staunton; Nelson T. Offutt Jr., Charlottesville; Laurence P. Gise, Arlington; Ralph H. Groah, Lyndhurst; Wilson Clay Hewitt, Waynesboro; Edgar H. Johnson Jr., Silver Spring, Md.

O. M. Wheeler, Lyndhurst; Clarence W. Cary, Waynesboro; Daniel W. Kanagy, Stuarts Draft; John S. Beiler, Stuarts Draft; R. M. Hodge, Roanoke; Leo L. Moses, Waynesboro; Stephen N Gill, Hunt, Va.; Tommy Fix, Stuarts Draft; Roger Lee Fitzgerald, Stuarts Draft; Robert L. Taylor, Waynesboro.

Tony Raines, Waynesboro; Roy Allen Fox, Waynesboro; Gerald E. Wilson, Waynesboro; Ray A. Pangle, Waynesboro; F. C. Armentrout, Waynesboro; Lavelle A. Lunsford, Lyndhurst; Wayne Maddox, Madison Heights.

Melvin Carpenter, Waynesboro; Ballard F. Wade, Waynesboro; Glenn Hahn, Waynesboro; Carl L. Drumheller, Ft. Defiance; Carl G. Alexander, Waynesboro; Lewis D. Bowyer, Altavista; Donald Lawhorn, Waynesboro; James D. Drumheller, Staunton.

Ten turkeys by the following: Millard G. Lawhorn, Waynesboro; S. V. Yearwood, Newport News; Jack Baylor, Waynesboro; J. Douglas Fisher, Waynesboro; Chester R. Fitzgerald, Stuarts Draft; Clyde W. Dowdy, Waynesboro; Harry W. Brower, Waynesboro; David Bryant, Lynchburg; Harley Anderson Tomey, Waynesboro; Roy C. Campbell, Lyndhurst.

points; David E. Harshbarger, Stuarts Draft, 7 points; Ralph Dixon, Stuarts Draft, spike; Agnes R. Thacker, Stuarts Draft, spike; Theodore Davis, Rt. 2, Waynesboro, 5 points; Dr. Geo. L. Chamberlain, Richmond, spike.

James M. Fisher, Waynesboro, spike; Samuel Kanagy, spike; Curtis E. Via, Crozet, 8 points; W. M. Fitzgerald, Ivy, 8 points; Adger L. Cooley, Alexandria, 3 points; Lambert I. Irby, Alexandria, 5 points; Lawrence Nuckoles, Greenville, 6 points.

Russell W. Allen, Stuarts Draft, 8 points; John Kislek, Waynesboro, spike; C. C. Lawhorn, Waynesboro, 6 points; Glenn B. Griffin, Stuarts Draft, 6 points; William L. Willson, Staunton, 9 points; William W. Leavell, Waynesboro, Rt. 2, 4 points; Calvin Damerson, Stuarts Draft, 6 points; David L. Campbell, Stuarts Draft, 4 points, for a total of 34 bucks.

Twenty-one doe by the following:

Robert L. Harris, Stuarts Draft Ronald W. Coiner, Staunton; Tommy VanFossen, Stuarts Draft; Willie Allen, Stuarts Draft; G. Fred Kinzer, Culpeper; David Ingram, Rixeyville; Frances S. Trefts, Charlottesville; Richard Mason, Natural Bridge.

H. H. Brown, Waynesboro; Russell W. Flotz, Waynesboro; Calvin Beverley, Stuarts Draft; John Newman, Kenton, Ohio; Eugene Madison, Waynesboro; Wayne Schrock, Stuarts Draft; Wesley J. Mann, Arlington; Davis Gamvis, Crozet; George Mitan, Akron, Ohio; Willie E. Griffin, Stuarts Draft; Melton Bradley, Stuarts Draft; Alfred L. Chittum, Staunton; Jas. H. Batten Jr., Ivy.

Four turkeys by the following: Dorsey Almarode, Waynesboro; R. Lloyd Campbell, Roseland; Wayne Schrock, Stuarts Draft; Joseph E. Aronoff, Forbes.

West Augusta, 147 deer, no turkeys; Armstrong Hardware, Churchville, 146 deer, eight turkeys; Burns' Store, Buffalo Gap, 72 deer, twelve turkeys; Kincaid's Store, Goshen, 54 deer, three turkeys; Tommy Smith's Service Station, Craigsville, 50 deer, eight turkeys; Strange's Store, Augusta Springs, 25 deer, three turkeys; Rosen's Store, Middlebrook, 22 deer, eleven turkeys; Wade's Store, Fordwick, six deer, no turkeys. Total deer, 1166. Total turkeys, 69.

Eastern Augusta

The Community Center, Sherando, 145 deer, ten turkeys; Eavers Supply, Stuarts Draft, 55 deer, four turkeys; Estes Store, Crimora, 50 deer, no turkeys; Dooms Store, Dooms, seven deer, one turkey; Verona Hardware, Verona, nine deer, no turkeys; Harris Service Station, Steeles Tavern, twelve deer, no turkeys; The Country Store, Lyndhurst, 23 deer, no turkeys; Supple Hardware, Greenville, 22 deer, one turkey. Total 333 deer, 16 turkeys.

A complete listing of the lucky hunters who brought home game during the past week, furnished by Warden Wade in western Augusta and Warden Todd in eastern Augusta:

In eastern Augusta, the report by checking stations show:

Sherando

J. Edw. Wilson, Ridgeway, spike; Frank Barnett, Crozet, 8 points; Paul H. Johnstone, Fairfax, spike; G. N. Patterson, Madison Heights, 4 points; W. F. Thornton, Stuarts Draft, 3 points; Darrell Drumheller, Lovingston, spike; Donald B. Snyder, Waynesboro, spike; Boyd Batman, Lyndhurst, 4 points; Delmer D. Pugh, Waynesboro, spike; Arnold Norvell, North Garden, spike; Billy Balsley, Waynesboro, 5 points; Robert T. Evans, Waynesboro, spike; Freddie Zeh, Waynesboro, 8 points; Corbin Dixon, Waynesboro, spike; Major Lee Graybill, Troutville, 5 points; D. W. Smallwood, Roanoke, buck; Paul D. Painter, Waynesboro, 3 points.

Frank M. Graybill, North Garden, spike; James O. Smith, Roanoke, 4 points; E. L. Carwile, Norfolk, 5 points; Michael Lilley, Waynesboro, buck; James H. Patterson, Lyndhurst, buck; Ronald E. Hunt, Lyndhurst, 2 points;; James W. Butter, Faber, buck.

Herman M. Kinsinger, Stuarts Draft, spike; Steve Yoder, Stuarts Draft, spike; Collie Branch Jr., Waynesboro, spike; Harvey Smith, Waterford, spike; James Lee May, Stuarts Draft, 8 points; Fred G. Miller, Richmond, spike; R. C. G. Speedy, Norfolk, spike; Maynard Cash, Fishersville, spike; H. D. Truslow, 4 points; Paul Deitz, Waynesboro, 4 points; Wayne E. Hiskanen, Falls Church, spike; Page Grove, Waynesboro, 7 points; Maynard L. Patterson, Lyndhurst, 5 points.

Grafton Truslow, Greenfield, 8 points; R. L. Broughman, Stuarts Draft, spike; Leslie B. Derby Jr., Charlottesville, spike; C. B. Fitzgerald, Lyndhurst, spike; Lester Milburn, Indian Springs, Md., spike; G. J. Balsley Jr., Lyndhurst, spike; H. L. Massie, Lowsville, Va., 8 points; H. D. Delano, Holland Springs, Va., spike; Harold Snow, Waynesboro, 6 points.

Rufus A. Robertson, Waynesboro, 6 points; L. W. Mays, Stuarts Draft, 8 points; Tyrone DeMasters, Waynesboro, 8 points; Robert C. Hodge, Waynesboro, 8 points; A. S. Bear, Waynesboro, 5 points; H. B. G. Wallace, Waynesboro, spike; S. E. Quillen, Waynesboro, 9 points.

Larry A. Brown, Fairfax; Ernest C. Irvine, Norfolk; Lewis D. Jessie, Alexandria; H. Webster Babcock Jr., Amherst; R. B. Godwin, Charlottesville; J. H. Dudley, Greenwood; George C. Cester, Norfolk; Roger Lee Gibson, Stuarts Draft; Ronald Wayne Harris, Waynesboro; Floyd Huffman, Buena Vista; Marvin Henderson; Lyndhurst.

Clarence Carpenter, Waynesboro; Roy M. Perkins, Triangle, Va.; R. A. Oliva, North Garden; Ellis L. Jackson, Norfolk; John W. Wilkes, Waynesboro; Lacy Belew Jr., Charlottesville; W. C. Sutphen, Radford.

Barbara A. Hunter, Stuarts Draft, 7 points; David A. Harris, Greenfield, spike; R. E. Sweet, Parthmount, spike; John Wesley Childress, Stuarts Draft, spike; Thomas G. Crouch, Arlington, 4 points; Rudolph C. Omber, Arlington, 10 points; David C. Yoder, Staunton, Rt. 2, 7 points; W. R. Allen, Stuarts Draft, 8 points; Shirley Massie, Staunton, spike; Harold D. Allen, Stuarts Draft, 4 points; Harry Waybright, 12 N. Madison St., Staunton, spike.

William J. Forrer, Staunton, spike; Marvin G. Humphries, Stuarts Draft, 6 points; James DeMastus, Stuarts Draft, 9 points; W. B. Wonderley, Grottoes, 10 points; John Benny Cook, Rt. 1, Staunton, spike; Michael Howard Cook, Rt. 3, Staunton, spike; Floyd Carter, Rt. 1, Waynesboro, spike; Gary Hostetter, Crimora, 7 points; Gay Scrogham, Crimora, 4 points.

C. D. Andes, Grottoes, spike; Clinton D. Brown, Waynesboro, spike; Douglas R. Brown, Waynesboro, Rt. 1, spike; L. M. Boserman, Grottoes, 5 points; Gene W. Childress, Waynesboro, 8 points; Maxie Coffey, Waynesboro, 8 points; Harry J. Johnson

(See RECORD DEER, Page 6)

All That Remains

AFTERMATH of the deer hunting season is shown here at the Blue Ridge Storage Company where more than 160 deer carcasses are being kept for lucky hunters. The deer are being stored until they are butchered. (Staff Photo by Topping)

Youngsters Do The Honors

LOUISVILLE, Ky. (AP)—It was a different kind of ground breaking at the new $47,000 education building of Newburg Christian Church.

The rite was performed by children.

Instead of shovels, they used spoons.

Adults decided that since the children eventually will use the structure, they should be the ones dedicating it.

Missing Portraits Returned to Museum

AIX EN PROVENCE, France (AP)—Two missing portraits by Van Dyck showed up neatly wrapped at the Beaux Arts Museum today with a little note saying they had been taken to win a bet.

The two postcard-size old masters, worth $14,000, disappeared Saturday. They were of Dutch painters Van Diepnbeeck and Rickaert. The janitor of the museum found them on the outside ledge of one of the building's windows.

Forest Fire Fought At North River

U. S. Forest Service firefighting crews are still battling a 40-acre forest fire in the North River Dam area of the George Washington National Forest near what is known as Skidmore Branch.

The fire, of undetermined cause, was first detected by the Reddish Knob lookout tower about one p m. Saturday. Three warden crews and hunters whose help was enlisted, a total of 36 men, brought the fire under control at four p. m. Saturday, but it flared up again Sunday night and although it is now under control, 25 men under the leadership of Wilbur Eavers and A. W. Clinedinst, chief wardens, still were on the scene this morning.

According to Glenn Harmon, forestry aid, who mans the Reddish Knob lookout tower, the fire has burned over about 40 acres of woodland.

Other Blazes

Three other fires were reported in forested areas of Augusta and Highland Counties during hunting season.

Last Monday, quick action averted the spread of a small fire near Deerfield, R. L. Rowland, ranger, Deerfield District, reports. The fire was believed started by a careless hunter.

Two other similar fires were reported Friday in Highland. A stump fire Friday night was extinguished by one Forest Service man on Shaw's Ridge in the Headwaters section.

About five one-hundreds of an acre of woods was burned over Friday night in Salt House Hollow also near Headwaters, Mr. Rowland said. That fire was believed to have been started by a hunter who emptied his pipe on a dead log.

"We are thankful that none of the fires was more serious and also for the help of hunters who helped in putting out the fires," Mr Rowland said.

Five Day Weather

RICHMOND (AP)—Extended five-day forecast for Virginia, Tuesday through Saturday, Nov. 25-29: Temperatures will average two to five degrees below normal, colder Tuesday and Wednesday, somewhat warmer Thursday, then colder Friday and Saturday. Rain late Wednesday or Thursday and again about Saturday with snow flurries in mountains.

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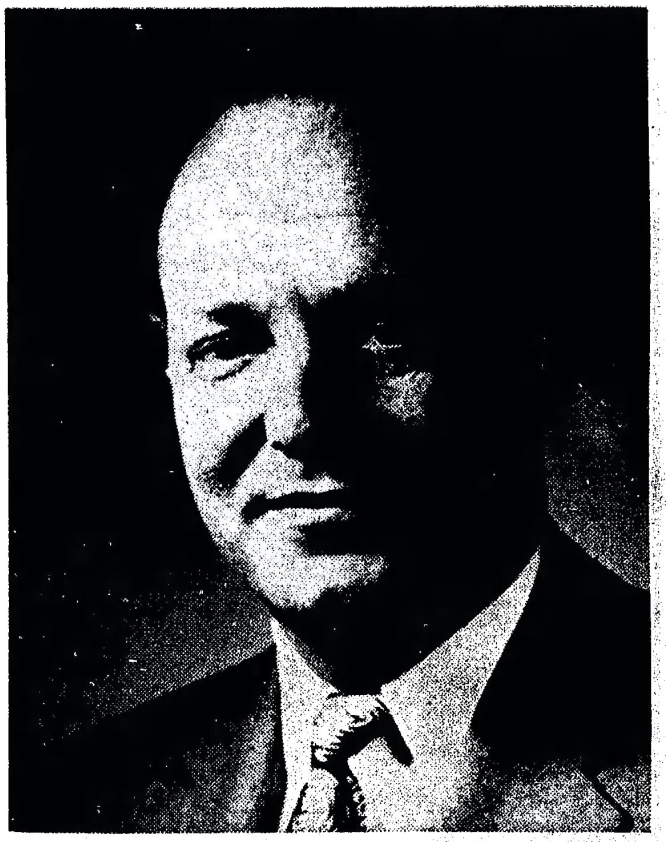
1961 (Feb 09) -

Full page : [HN00O9][GDrive]



APPOINTED — Lawrence P. Gise has been appointed deputy manager of the Atomic Energy Commission's Albuquerque operations office, succeeding Frank C. Di Luzio, who resigned last month to enter private industry. Gise has been deputy director of the advanced research projects agency of the Department of Defense in Washington, D. C. He formerly was assistant director of the AEC's division of military application in Washington.

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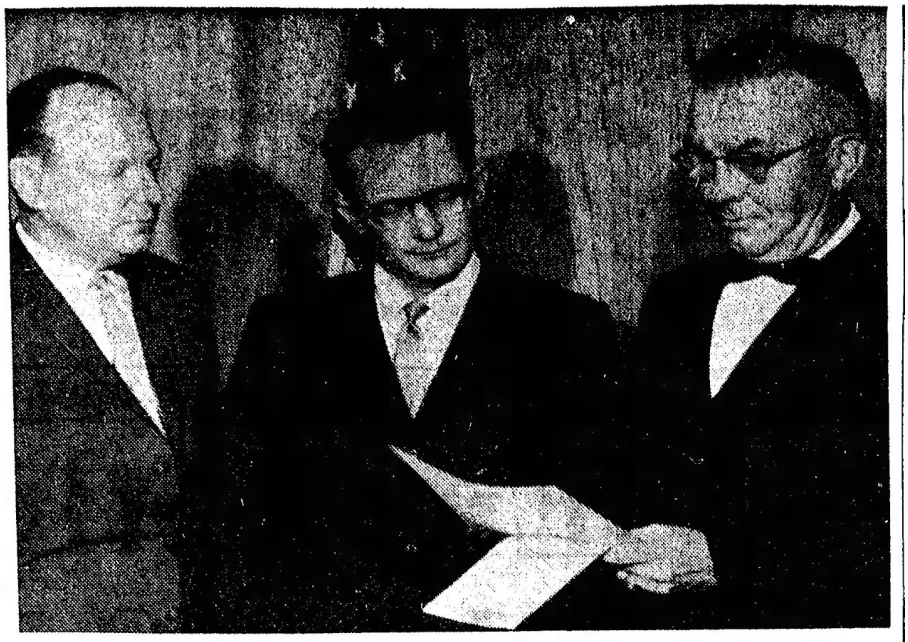
1962 (July 20)

Full page : [HN00OB][GDrive]

UP ON THE HILL

Peggy Corbett—Los Alamos Bureau—Ph. 2-0421



RECOGNITION—Albuquerque and Los Alamos Atomic Energy Commission officials join T. A. Weisgerber, Jr. (center), president of the Los Alamos lodge of the American Federation of Government Employes, AFL-CIO affiliate, in looking over a letter which conveys formal AEC recognition of the Los Alamos union. Lawrence P. Gise, Deputy Manager of the AEC's Albuquerque Operations, is at left. Holding the letter is Charles C. Campbell, AEC Area Manager at Los Alamos, with whom the union will deal. The AFGE's Los Alamos lodge is the first labor organization recognized by the Atomic Energy Commission under President Kennedy's recent Executive Order on Federal service employe-management cooperation.

[HN00OC][GDrive]

1963 (April 28)

ALBUQUERQUE JOURNAL

Woman's World— Social Activities, Clubs Art, Theater, Music

April 28, 1963 B-1

Board To Be Introduced in Moonlit Taj Mahal Setting

Club Debs Will 'Bow'

Mrs. George Dennis, new president of the Sanado Woman's Club, and her executive board will be introduced at a formal ball Saturday night in the Coronado Club, Sandia Base.

Lawrence P. Gise, deputy manager, Albuquerque Operations, Atomic Energy Commission, is to present Mrs. Dennis and Mrs. O. B. Tjeltweed, first vice president; Mrs. H. A. Romme, second vice president; Mrs. R. W. Mottern, third vice president; Mrs. D. H. Hosterman, fourth vice president; Mrs. F. C. Cheston, fifth vice president; Mrs. R. G. Luckey, secretary, and Mrs. H. C. Olson, treasurer.

Mrs. Dennis was formerly first vice president and program chairman. She also was the 1961-62 winner of the Matrix award for her work as publicity chairman.

Mrs. Tjeltweed is active in the Sanado art group and has charge of the Art Show being presented at Winrock during the Science Fair.

A native of New Mexico, Mrs. Romme was chosen Mrs. Sanado of 1962 at the club's spring fashion show. Mrs. Mottern has been active in the club since its beginning. Before moving to Albuquerque, she worked in the laboratory at Oak Ridge, Tenn.

Mrs. Hosterman, an accomplished horsewoman, has been chairman of the horseback riding interest group the past year. Since moving here last July, Mrs. Cheston has been an active Sanado Club member and has affiliated with several other local groups.

During 1959-60 Mrs. Luckey was treasurer of the investment interest group. This year she is a member of the bridge group. Mrs. Olson, a charter member, is active in the bowling and golf groups.

The decor for the ball will be keyed to the theme of the Taj Mahal by moonlight. Entering the lobby, guests will find themselves on a path leading to the Taj Mahal, painted on a large mirror at the end of the walk. A profusion of green shrubs with brightly colored birds perched on the branches will edge the walk and pool. Mrs. N. L. Vinson is painting the Taj Mahal.

A gold swag, large hanging brass fixtures and a scroll-trimmed candle will grace the stage in the ballroom. The walls will be draped in blue gauze, through which will be seen a golden skyline of mosques and minarets against twinkling blue lights. A mass of shiny stars will accent the deep blue ceiling.

As a dramatic touch, the large fireplace, featuring Persian drapes at the top, will have a jewel-studded gold mantel. In the opening of the fireplace, against a background of jungle greens, will be a jeweled elephant.

Mrs. E. R. Frye is chairman of decorations and is being assisted by club members.

In addition to introducing the new officers, this year's ball will inaugurate the presentation of 11 young women, daughters of Sanado Club members, who will make their formal bows to society.

S. P. Schwartz, president of Sandia Corp., will introduce the Sanado Debs, Misses Anne Elizabeth Viney, June Lois Smith, Mary Sue Herrity, Nancy Elizabeth Baker, Karen Louise Fesler, Margie Katherine Carroll, Susan Loueise Lannon, Sherry Lynn Young, Nancy Jane Carpenter, Barbara Alice Lamkin and Pamela Jane Hepplewhite.

Greeting guests at the door will be Mr. and Mrs. James E. Baylor and Mr. and Mrs. K. Dan Hardin. Receiving in the ballroom will be Mr. and Mrs. Charles O'Keefe, Mr. and Mrs. R. H. Schultz and Mr. and Mrs. James B. Ayers. Other retiring board members will be hosts and hostesses.

The cocktail hour is set for 6-7 p.m., with dinner and dancing following. The Lads of Note are to play. Reservations must be made at the Coronado Club by Wednesday.

FOLLOWING THE PATH to the Taj Mahal, the decorative theme for the Sanado Club ball, will be, Mrs. H. C. Olson, seated, treasurer; standing, left to right, Mrs. R. W. Mottern, third vice president, and Mrs. Howard A. Rommo, second vice president. Mrs. Olson is to wear a blue cocktail dress, an all-over eyelet embroidery bodice topping a full chiffon skirt. Her accents will be in pink. Mrs. Mottern's selection for the event is a gown with black lace top and white satin skirt. Mrs. Romme will be wearing a cocktail length frock of yellow with lace bodice and flowing chiffon skirt.

ABOVE: Top officials of Sanado Woman's Club, who will be introduced at the formal ball Saturday night, are Mrs. O. B. Tjeltweed, seated, vice president, and Mrs. George Dennis, standing, president. In the back, left and right, are their husbands, O. B. Tjeltweed and George Dennis. For the occasion, Mrs. Dennis will wear a regal floor-length dinner gown of white silk matte jersey, designed with a flowing panel on the Empire body. Crystal chandelier earrings and evening length kid gloves complete her costume. Mrs. Tjeltweed is wearing a floral gown in shades of pink, styled with a draped bodice and full skirt. For accent, she'll use rhinestone accessories. The annual club event, to be held at the Coronado Club, Sandia Base, will open with a cocktail hour from 6-7, dinner and dancing following.

BELOW: Honorees at the Sanado Club ball also will include, left to right, Mrs. D. J. Hosterman, fourth vice president; Mrs. F. C. Cheston, fifth vice president; Mrs. Terry M. Cowles, retiring president, and Mrs. R. G. Luckey, secretary. Mrs. Hosterman will be wearing a cocktail length dress of white nylon tulle over satin, fashioned with a scoop neckline and full skirt trimmed with appliqued lace. Mrs. Cheston has selected a gray ball gown with an all-over floral print in black for the dinner-dance. Mrs. Cowles' floor-length gown of red satin, trimmed with rhinestones, has a fitted bodice and bouffant skirt. With it she wears rhinestone jewelry and evening length gloves. Mrs. R. G. Luckey will be seen in a pink chiffon dress, complemented with pink jewels and short white gloves. Music for dancing is to be played by the Lads of Note.

(Journal photos by Del Sanchez)

People, Parties

Country Club Lists May Social Events

Mrs. J. L. Hendren and Mrs. Bernard Spivey will be hostesses for a Ladies Day luncheon May 15 at Albuquerque Country Club.

Luncheon will be served at 1230 p.m., and will be followed by a travelogue. Mrs. T. R. Sadock will speak and show slides of Iron Curtain countries she and her husband visited on an extended tour. Many of the slides were taken on the spot, while others are reproduced from her paintings of areas where photography was not permitted. Luncheon reservations for members and their guests are limited to 200.

Informal dinner dances are planned for three Saturday nights in May. The Tommy Morgan Trio will play for dancing Saturday night from 8:30-midnight; Bud Fisher's Orchestra will play May 11 for dinner dancing; and May 25 the Cosmo Combo Orchestra will play for the informal dinner-dance.

The pool will be opened for members May 30 at the Albuquerque Country Club. Hours are from 10:30 a.m.-6 p.m. Davey Barney is the new aquatic coach for the club, and the new summer teaching golf professional is Terry Langohr.

Mrs. Caroline O. Hawn is announced as a new junior member of the Country Club this month.

Mrs. Jethro S. Vaught is chairman of the Friday play of the Woman's Golf Assn. during May, and Mrs. W. E. Dennard is chairman of the President's Tournament.

Qualifying rounds of the tournament will be played May 10, handicap match play; followed by tournament play May 14, 15, 16. Trophies will be presented at a luncheon meeting of the Women's Golf Assn. at 1 p.m. May 24. There will be no play May 30, Memorial Day.

Mother's Day luncheon will be served from noon-2:30 p.m., dinner service from 5:30-8 p.m. Reservations are asked.

Mr., Mrs. Livingston On Vacation Cruise

Mr. and Mrs. Howard E. Livingston, 1518 Los Arboles NW, are leaving this week for a cruise of islands in the South Pacific, New Zealand and Australia.

The Livingstons will board the SS Monterey Thursday, leaving from San Francisco, by way of Los Angeles, and on to major ports of call in the South Pacific.

Dr. Kirtley Mather Visits Daughter Here

Dr. Kirtley Mather, geology professor emeritus of Harvard University, will arrive today for a weekend visit in the home of his daughter and son - in - law, Prof. and Mrs. Sherman Wengerd, 1044 Stanford NE.

Dr. Mather is in Albuquerque to speak on "The Earth Sciences in the 60's" at 8:30 Monday night in the anthropology building on the University of New Mexico campus. His talk is a John Wesley Powell Memorial lecture, given for the 39th annual meeting of the National Assn. for the Advancement of Science.

Prof. Wengerd will have his father-in-law as a special guest for a dinner meeting of the "21 Club" Monday night prior to the lecture. Dr. Mather's grandson, Tim Wengerd, choreographed two of the numbers for the performance of the University Dance Workshop concert tonight, when Dr. Mather will attend with Prof. and Mrs. Wengerd.

'Polaris' Officer and Family Visit His Mother Here

Lt. and Mrs. Herbert P. Woods and two children left Friday after a visit in Albuquerque with his mother, Mrs. Wanda M. Woods, 2712 San Pablo NE. They also visited with his brother and family, Mr. and Mrs. James Woods; a sister and brother-in-law, Mr. and Mrs. Richard Gosso; and a niece, Mrs. Karen Lewis.

Lt. Woods, formerly of the U. S submarine "Polaris," is en route to Glen Cove, N. Y., where he has a three year appointment for post graduate work in naval construction and engineering at Webb Institute of Naval Architecture.

Lt. Woods was raised in Albuquerque, was graduated from Albuquerque High School and attended the University of New Mexico. He was graduated with the class of 1956 from the United States Naval Academy at Annapolis.

Miss Anderson to Direct Chorus in 'Spring Sing

Miss Nancy Anderson, daughter of Mr. and Mrs. Theodore B. Anderson, 5926 Second NW, has been elected treasurer of Sigma Alpha Iota, national music honorary, at Oklahoma College for Women, Chickasha, Okla.

She will be director of the Nellie Sparks Hall Chorus, competing in the annual Oklahoma College for Women's "Spring Sing," today in the OCW auditorium. The sing is a feature of parents day, and will be followed by a punch party in the Student Union.

Among her other music activities, Miss Anderson will play a piano duet with Miss Patricia Gambel of Amarillo as a feature of the program for a recital to be presented Tuesday by the OCW fine arts department in recital hall of the fine arts building. She will also be piano accompanist for the junior voice recital of Miss Marilyn Lacy Douglas of Minco, Okla., Tuesday night at OCW.

Miss Anderson and her sister, Mary, have been elected song leader and vice president, respectively, of Be Si Ta social club at OCW. The club entertained at a tea Saturday in the reading room of Nash Library on the college campus, honoring returning members for alumnae and former students day.

Mr. and Mrs. Schaab Return from New York

Mr. and Mrs. William C. Schaab, 6436 Rio Grande NW,

Continued on B-8

Ralph Berkowitz Guest Pianist

From the Journal's Santa Fe Bureau

SANTA FE — Eighty performers will be on the stage of St. Francis Auditorium tonight to present Beethoven's "Fantasie for Orchestra, Chorus and Solo-Piano."

The work will be performed by the Santa Fe Symphony, Ralph Berkowitz of Albuquerque, pianist, and the Bel Canto Singers of Albuquerque, directed by Norman Russell Bell.

The symphony, conducted by Bernard Rubenstein, also will play Mozart's "Seraglio" overture and Beethoven's "Eighth Symphony in F Major." The concert will begin at 8:30.

A new translation of the old German version of Teethoven's "Fantasie" was commissioned especially for the concert. It was prepared by two Santa Feans, Winfield Scott, the poet, and Dr. Richard Landman.

[HN00OH][GDrive]

1963 (July 20)

Full age - [HN00OI][GDrive]

1963-07-20-albuquerque-journal-pg-b-3-clip-marriage-licenses

Marriage Licenses

Martha M. Woods, 22, and Dave A. Tuley, 30, both of Albuquerque.

Allene Rae McCary, 16, and Ruben Barreras, 17, both of Albuquerque.

Conrada Macias, 44, and Arthur C. Garcia, 63, both of Albuquerque.

Jacklyn M. Gise, 16, and Theodore J. Jorgensen, 18, both of Albuquerque.

Barbara J. Mhoon, 25, and Jack B. Watland, 33, both of Albuquerque.

Carol F. Schultz, 17, and Jerry L. Whitney, 19, both of Albuquerque.

Joan Elena Keeler, 19, Albuquerque, and Tasi Thomas Zavakos, 23, Dayton, Ohio.

Nancy Perea, 17, and Gene Lopez, 18, both of Albuquerque.

Donna Jarman, 26, Albuquerque, and Jerry D. Jarman, 25, Fort Smith, Ark.

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1964 (Sep 30)

Full page = [HN00OF][GDrive]

C-4 1964-09-30-albuquerque-journal-pg-c-4-clip-aec-pins ALBUQUERQUE JOURNAL

Three Are Killed In Mine Explosion

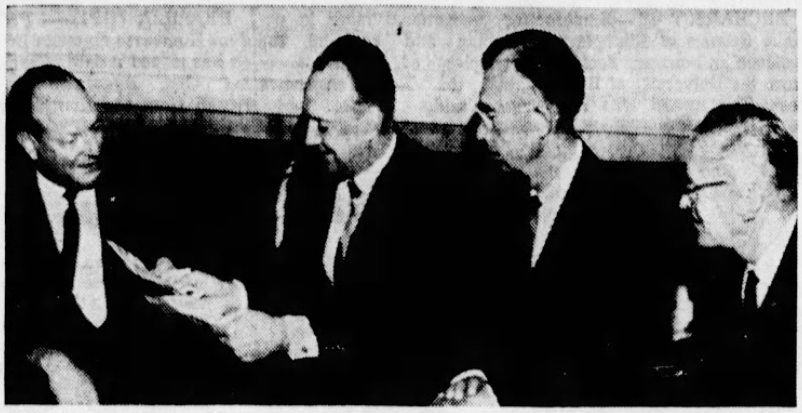
WELCH, W.Va. (AP) — Three men were killed in a southern West Virginia coal mine Monday, apparently by a gas explosion.

They were working in the Island Creek Coal Co.'s No. 6 mine, about 25 miles southwest of Welch.

The three, Pete Hagerman, 38, Harry Hillyer, 48, and Nash Riffe, 53. They had been assigned on an overnight shift to recover some track in an idle section of the mine.

OLD CAPITAL

RANGOON — Mandalay, the cultural capital of Burma, was the seat of government for Burma's last kings.



PRESENTS PINS: Ed Black, second from left, gives "one per cent" pins to Lawrence P. Gise, left, manager of the Atomic Energy Commission's Albuquerque operations office, for United Community Fund contributions. The other recipients are James L. McCraw, deputy manager of the Albuquerque operations; and Robert M. Fegan, committee chairman for AEC employes.

Four-Four: Even Score

Journal Special

LOS ALAMOS—Four girls and four boys were born recently at the Los Alamos Medical Center: Girl, Sept. 22, to Mr. and Mrs. Marvin Tinkle, 420 Camino Encantado! girl, Sept. 21, to Mr. and Mrs. George J. Littlejohn, 515 Rim Road; girl, Sept. 18, to Mr. and Mrs. Silvio Balestrini, 113 Grande Canyon, White Rock; boy, Sept. 18, to Mr. and Mrs. Larry Knecht, Espanola; girl, Sept. 15, to Mr. and Mrs. Joe A. Montoya, Ojo Sarco, N. M.; boy, Sept. 15, to Mr. and Mrs. Leo E. Martinez, Chimayo, N. M.; boy, Sept. 14, to Mr. and Mrs. Wayne Lyngen, 108 Royal Crest Trailer Lodge; boy, Sept. 13, to Mr. and Mrs. William J. Sample, 299 6th St.

[HN00OG][GDrive]

1964 (Nov 3)

[HN00OD][GDrive]

AWARD — Lawrence P. Gise (left), manager of AEC's Albuquerque Operations Office, presents a certificate of appreciation to the employes of the Los Alamos area office for their achievements in economy and efficiency of operations during the period of December 1963 through November 1964. Charles C. Campbell (right), manager of the Area Office, accepts the award on behalf of LAAO employes.

Agreement Reached

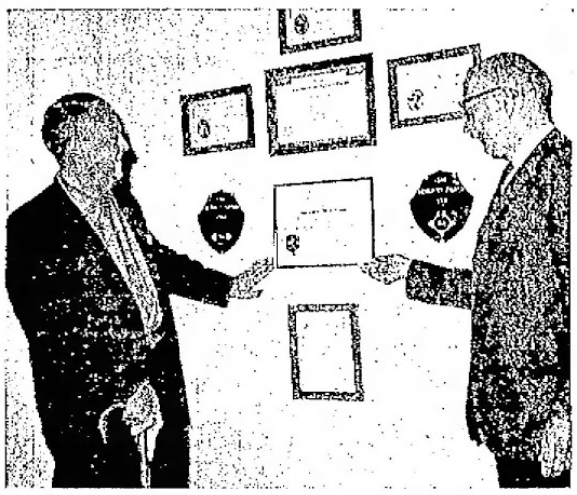
LOS ALAMOS — An employe-management agreement has been signed between representatives of the Atomic Energy Commission and the Inspectors Unit of the Protective Force, Charles C. Campbell, AEC area manager, announced Tuesday.

The agreement was negotiated by the Los Alamos area office and the Inspector's Unit and implements an executive order issued by President Kennedy January 17, 1962.

Members of the AEC negotiating team were Edwin A. Eisenhart, chairman, Leonard F. O'Connor, Eugene Pride and Thomas Roche. Representing the Inspector's Unit were Theodore A. Weisgerber, Jr., chairman, Bernard Belsheim, Jack Donahye, Allen Herring, Fred Selarge and Paul Robyn.

Signing the agreement for the AEC were Charles C. Campbell, area manager, and Edwin A. Eisenhart, chief of the Security Branch. Signing the agreement for the Inspector's Unit were Theodore A. Weisgerber, Jr., president, and Paul Robyn, vice president.

The Agreement was also signed by John F. Griner, national president, AFGE, and Lawrence P. Gise, AEC Manager of the Albuquerque Operations Office.



EMPLOYER OF YEAR — Zia Company Manager at Los Alamos, Wendell L. Miller, right, and personnel director H. Clifford Goodson add the Employer's Merit Award to the company's collection. Zia was named as the state's Employer of the Year.

Zia Company Employer Of The Year

LOS ALAMOS — Employer of the Year selected by the New Mexico Governor's Committee on Employment of the Handicapped is The Zia Company which has received the Employer's Merit Award from the President's Committee.

Presentation of the award was made by Committee Chairman Richard W. Helm of Albuquerque to H. Clifford Goodson, Zia personnel director, at the annual fall meeting of the committee at Clovis.

The Merit Award was presented to Zia for "exceptional accomplishments in extending more opportunities through selective placement in useful employment of handicapped employes, and assisting in every feasible way to acquaint the public and employes with these principles."

In other actions at the Clovis meeting, Goodson, a longtime member of the Governor's Committee, was elected vice-president. H. J. Hebbeln, supervisor of the State Department of Public Welfare Division of Services for the Blind, was elected chairman. Paul T. Davidson, Employment Security Commission, Albuquerque, was re-elected executive secretary.

1964-11-03-the-santa-fe-new-mexican-pg-2-clip-1

[HN00OE][GDrive]

1966 (Jan 14)

[HN00O7][GDrive]

AEC May Scrap Reactor

BY THE ASSOCIATED PRESS

WASHINGTON — The Atomic Energy Commission may scrap its plan to build a $348-million atom smasher.

A source outside the commission said Thursday that three alternative proposals are under consideration.

He said each would be cheaper, and each would be for a machine of lesser intensity than the proposed 200-billion electron volt (BEV) accelerator which would be used for basic research.

Some 85 communities in 43 states have been scrambling to win the project for their area.

Rep. Craig Hosmer, R-Calif., a member of the joint Senate House Atomic Committee, was told of the report.

"To me, it looks like possibly the beginning of the end for the 200-BEV, $348-million machine," he said. "When you start talking about alternatives it adds up to that."

"To me, it looks like possibly the beginning of the end for the 200-BEV, $348-million machine," he said. "When you start talking about alternatives it adds up to that."

The source said the AEC has scheduled a late January meeting to get the views of some of the nation's leading high-energy physicists.

He described the alternatives as:

— A suggestion by Prof. S. Devons, chairman of Columbia University's Department of Physics, that the AEC's existing 33-billion electron volt atom smashers at Brookhaven National Laboratory, Long Island, N.Y., be scaled up to the 120-150 BEV range. This could cost about $150 million.

—A suggestion from the Lawrence Radiation Laboratory of the University of California that the existing 200 BEV plan be scaled down to a lower intensity. This would cost about $260 million.

—A suggestion by Prof. R. R. Wilson of Cornell that a $150-million machine of lower intensity be built with provisions to increase its intensity over a period of years.

Selection of either of the latter two proposals still would require the AEC to choose a site.

1966-01-14-the-santa-fe-new-mexican-pg-1-clip-aec-reactor

[HN00O8][GDrive]

1967 (Jan 13)

Full page : [HN00OK][GDrive]

January 13, 1967 ALBUQUERQUE JOURNAL

Prospects Aired at Meeting

Optimism Keynotes ACF Plant Talks

By W. WILSON CLIFF

Optimism prevailed Thursday as high officials of two federal agencies met with Albuquerque's civic and governmental leaders to consider the future role of the Atomic Energy Commission's South Albuquerque Works, now being operated under AEC contract by ACF Industries, Inc.

Yet officials of the AEC and the General Services Administration (GSA) acknowledged a conscious effort to avoid generating an unfounded optimism which would lead present employes of ACF Industries to make disadvantageous economic decisions.

"The best we can do is give an honest appraisal of the situation," said Wilfred E. Johnson, member of the Atomic Energy Commission, who conducted the informal discussion with leaders of city, county and state governments and Albuquerque's

able us to meet our responsibilities."

These qustions also were asked:

—What if you don't get a bid in June?

— Suppose the high bidder should plan to dismantle the plant and move the equipment elsewhere? Would you sell it to him?

—What is your timetable for closing out the plant and moving the equipment if it is not sold?

In each instance, members of the AEC-GSA panel expressed their greatest optimism with the statement that any such possibility is extremely remote.

In his opening remarks, Johnson emphasized that it would be the community's responsibility to fill the voids if no satisfactory disposal were achieved.

On Declining Path

"The work of ACF Indus

commercial - industrial leaders.

Need Stressed

But the most optimistic note was sounded by City Commissioner Harry Kinney, who also is on the staff of Sandia Corp., one of the AECs prime contractors:

"There is a crying need for a going operation such as this all over the country," said Kinney. "Machine operations all over — in Ohio, Illinois, Indiana and other areas —are having difficulty meeting their production schedules. They are unable to fill their need for machine tools and qualified operators."

The AEC commissioner acknowledged the accuracy of Kinney's analysis.

Both Johnson and Walter C. Moreland, deputy commissioner of the GSA, said there is a "very good chance" that the South Albuquerque Works will be taken over at an early date by the Dept. of Defense or the National Aeronautics and Space Administration (NASA) for operation by one of their contractors—long before the scheduled phase-out of ACF Industries' prime contract.

Bid Call Possible

If the plant should not be transferred to another federal agency—a transfer that could be achieved with no exchange of funds—the GSA will be prepared to open bids from prospective non-governmental purchasers no later than June of this year, said Moreland. Bids would be sought for the purchase of the plant and equipment as a single unit.

Meanwhile, Moreland said, in answer to a question from City Commission Chairman Ralph Trigg, another governmental subdivision, such as the city, could negotiate for the purchase of the plant at full appraised value.

Any purchaser could buy the plant for 20 per cent of the purchase price down with 10 years to pay the deferred balance. Interest rates would be 6 per cent to a non-governmental buyer, 5¾ per cent to a governmental unit.

Both GSA and AEC officials emphasized that the compressed timetable for the possible sale of South Albuquerque Works "is the exception rather than the rule."

"We are especially concerned when the payroll of a plant is a substantial portion of the total manufacturing payroll of its community. In this case it is about 25 per cent," said Johnson.

As soon as the decision to phase out the work load at the South Albuquerque Works was announced, the AEC "flashed the signal around the country" through the Defense Dept. and NASA letting them and their contractors know the plant would be available, Johnson said. "We have high hope that some suitable applications can be found and that it can be done fast enough that the present work force will stay here."

Johnson said special inquiry is being made to determine the source of slow deliveries on Defense Dept. and NASA contracts. Then, in the search for a suitable operator, it will be determined if slow deliveries any place can be traced to inadequate plant facilities or equipment.

"The assets of the South Albuquerque Works are quite unique," said Johnson. "Not only do we have excellent precision machine tools, but we have automatic controls."

Being Advertised

Moreland reported the availability of the plant is being advertised to other federal agencies for a 30-day period ending Jan. 27.

"We won't take two years phasing out the ACF contract unless we have to," Johnson told the civic leaders.

L. P. Gise, manager of the AEC's Albuquerque operations, said a new buyer could take over the unfinished work in the ACF contract. However, he noted, there is one operation that would take longer to phase out, and this work would have to be performed in one of the AEC's "captive plants."

Gise also reaffirmed his office's intention to place a "base load" of AEC contracts with any new operator of the South Albuquerque Works. He declined to say what a base load would entail, explaining that such a load would be flexible and negotiable, and neither the amount nor the duration of such a load could be determined in advance.

Notes City Position

In presenting a series of questions, Commissioner Trigg said, "I don't want to hold out any hope the city could take over the plant, and it would be completely impossible unless there were a contractor available to take it over from us. But we don't want to overlook our responsibility to the community. If we know the possibilities, we can go to the legislature and seek legislation that might enable us to do something."

PANELISTS: Leaders of a high-level panel which met Thursday with a cross-section of Albuquerque's leadership to consider the future role of the ACF Industries plant here are, left to right, Atomic Energy Commissioner Wilfred E. Johnson; Hugh D. Leenhouts, chariman of a seven-member task force composed of AEC officials, and L. P. Gise, manager of the AEC's Albuquerque operations. (Journal photo)

tries has been on a declining path. Its work force was up to 2700 in 1963. It is slightly over 2100 now, and it will be down to 1500 by the middle of this year.

"ACF's work adds up to about $30 million, $10 million of which is spent outside the state. Its work can be split up into two types: production and support (of other AEC contractors), the latter type accounting for about one-third but on a diminishing pattern.

"We will try to keep as much of this work in Albuquerque as we possibly can . . .

"When you lose a manufacturing job in a community, you stand to lose about three other jobs in service-type occupations, but you don't lose them all at once. It usually takes about three years for this to happen.

Can Be Alleviated

"Keeping them (the three service employes) is the job of the community itself. The problem could be alleviated if the community will pitch in and try to bring in other work.

"You have about 8200 manufacturing jobs in this community. If you lose 1500 to 2000 manufacturing jobs, you stand to lose three times as many other jobs.

"But you do have time to act. Try to get other kinds of activity in the community if you possibly can."

Both AEC and GSA officials, following the conference, commended the community representatives attending for their "constructive, positive attitude."

[HN00OL][GDrive]

1967 (Jan 17)

Full source pages :

- Page 1 - [HN00N3][GDrive]
- Page 2 - [HN00N4][GDrive]

ue Albuquerque Journal (Albuquerque, New Mexico) · 17 Jan 1967, Tue FIND CLIP PRINT/SAVE SHARE Save to Ancestry

AEC Will Retain About One-Fifth Of ACF Force

About 20 per cent of the 2100 employes at ACF Industries will be retained here by the Atomic Energy Commission for an indefinite time, it was announced in Washington Monday.

Of that number, about 200 will be offered employment soon with the Rocky Flats Division of Dow Chemical Co., another prime AEC contractor, it was announced by L. P. Gise, manager of AEC's Albuquerque operations.

Gise also said an additional 150 to 200 ACF employes will be retained for an undetermined period of time. They will be support workers in three categories — ACF employes working in support o

Continued on A-2

AEC Will Retain Portion of Force

Continued From A-1

Sandia Laboratory test activities, ACF employes working in support of Los Alamos Scientific Laboratory's Project Rover (nuclear rocket propulsion program), and ACF employes in common support areas for the plant, such as guard and custodial forces.

Informs GSA

Sen. Clinton P. Anderson (D-NM) said the AEC has informed the General Services Administration that about 12 per cent of the plant area here must be retained for a maximum of two years. AEC officials here said this area is a special purpose area and can be isolated from other plant operations. This area would be used by Dow Chemical Co., according to the AEC, in "operations which constitute a permanent program of extreme importance to the nation's atomic weapons program."

Last month the AEC announced that it would have to sell, lease or close the plant here in a phase-out of the operation.

GSA said the plant probably will be advertised for public sale in early February. Federal agencies which may be interested in it are being contacted.

Contacts Made

Meanwhile, James O. Roberson, executive director of Albuquerque Industrial Development Service, said Monday that preliminary contacts have been made with several large industrial concerns who could use the plant and its highly-specialized facilities.

"Our negotiations, of necessity, have to be preliminary," Roberson said. "The GSA appraisal isn't complete and until we get this we can only talk in generalities.

"It is an encouraging thing that Dow is interested. The job now is to find someone to take the other 90 per cent."

Michael J. Sunderland, assistant manager of the AEC office in Denver, said Dow will move into the ACF plant as soon as possible. Dow's Rocky Flats Division is located near Denver.

See No Detraction

GSA officials, who visited the plant here last week, said retention of the approximately 60,000 square feet for Dow Chemical's operations should not detract from the sale of the plant as a going operation.

Work phaseout of ACF operations at the AEC-owned plant is scheduled to begin this spring, it was announced last month.

Walter C. Moreland, GSA deputy commissioner, said the availability of the plant is being advertised to other federal agencies for a 30-day period ending Jan. 27. Public advertising will follow if no federal agency is interested. Bids from non-government sources would be opened no later than June, Moreland said.

[HN00N5][GDrive]

1968 (March 25) - Daughter Jacklyn remarries

Jacklyn Marie Gise to marry Miguel Besos - Albuquerque 1968 (See full page at [HN00N6][GDrive]

Sherry Tea Honors

Miss Jacklyn Gise

Mrs. Charles M. Justice, 2532 Wisconsin NE, entertained with a pre-nuptial sherry tea Saturday from 2:30 to 4:30 p.m. honoring Miss Jacklyn Marie Gise, bride-elect of Miguel Besos. The couple will be married April 5 at 7:30 p.m. in First Congregational Church, with a reception planned at Coronado Club, Sandia Base.

Mrs. Lawrence P. Gise, mother of the honoree, presided at the refreshment table, decorated in a spring-time theme of pink and yellow. The honoree's brother and sister-in-law, Mr. and Mr. L. P. Gise Jr. are coming from Salem, Mass., for the wedding.

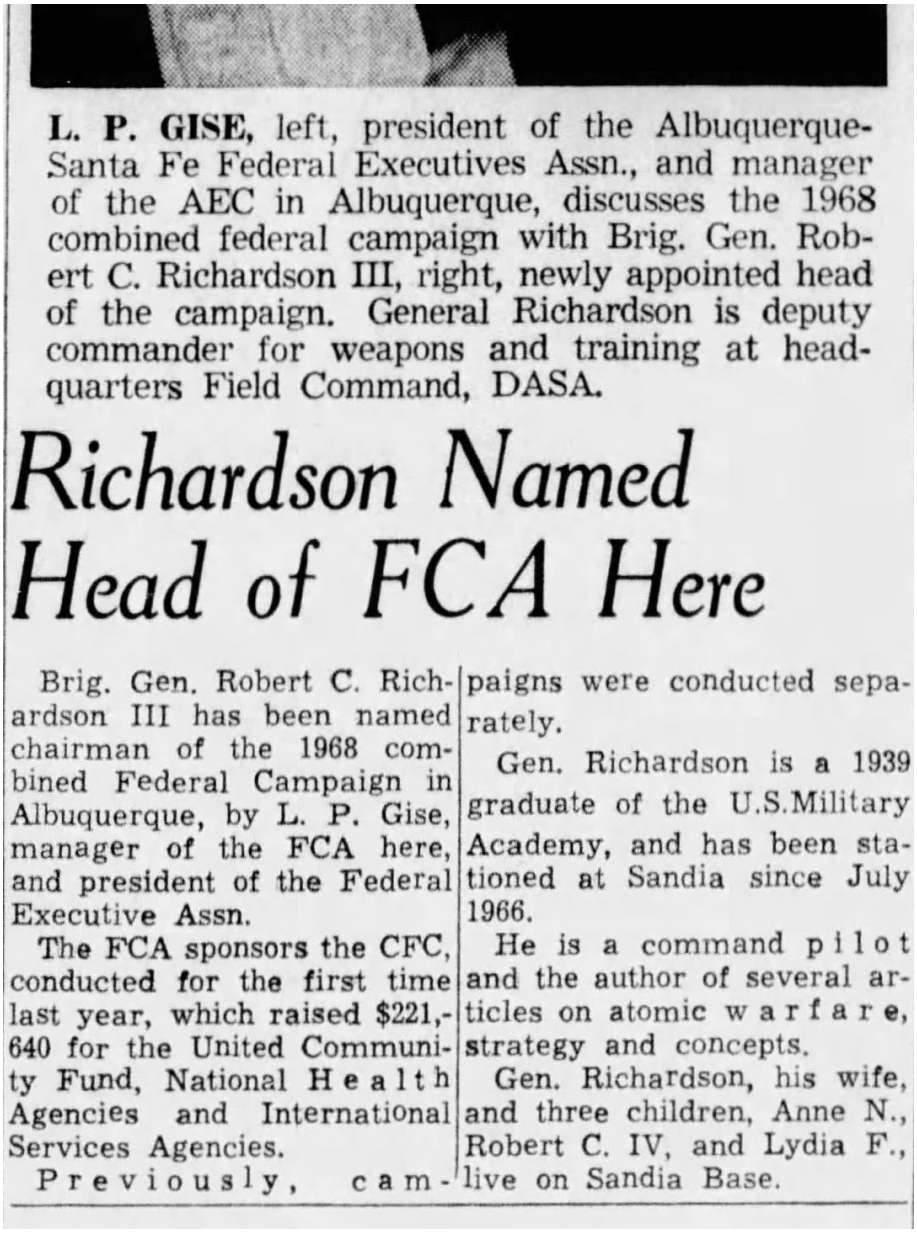
1968-03-24-the-albuquerque-journal-pg-24-clip-gise-besos

[HN00N7][GDrive]

1967 (March 27)

Full page : [HN00OQ][GDrive]

1967-03-27-the-albuquerque-journal-pg-a5-clip-gise-richardson



L. P. GISE, left, president of the Albuquerque-Santa Fe Federal Executives Assn., and manager of the AEC in Albuquerque, discusses the 1968 combined federal campaign with Brig. Gen. Robert C. Richardson III, right, newly appointed head of the campaign. General Richardson is deputy commander for weapons and training at headquarters Field Command, DASA.

Richardson Named Head of FCA Here

Brig. Gen. Robert C. Richardson III has been named chairman of the 1968 combined Federal Campaign in Albuquerque, by L. P. Gise, manager of the FCA here, and president of the Federal Executive Assn.

The FCA sponsors the CFC, conducted for the first time last year, which raised $221,640 for the United Community Fund, National Health Agencies and International Services Agencies.

Previously, campaigns were conducted separately.

Gen. Richardson is a 1939 graduate of the U.S.Military Academy, and has been stationed at Sandia since July 1966.

He is a command pilot and the author of several articles on atomic warfare, strategy and concepts.

Gen. Richardson, his wife, and three children, Anne N., Robert C. IV, and Lydia F., live on Sandia Base.

[HN00OR][GDrive]

1967 (Dec 30) - Reference in 1967 Dec 30 guide from NASA

"Solar Thermoelectric Generator Design and Panel Development Program (U) (Task II) by V. RAGG, R. E. BERLIN, and L. H. GNAU / Prepared by national aeronautics and space administration / Contract NAS 3-10600"

See PDF at : [HG0033][GDrive]

" U.S. Atomic Energy Commission Albuquerque Operations Office P. 0. Box *5400*

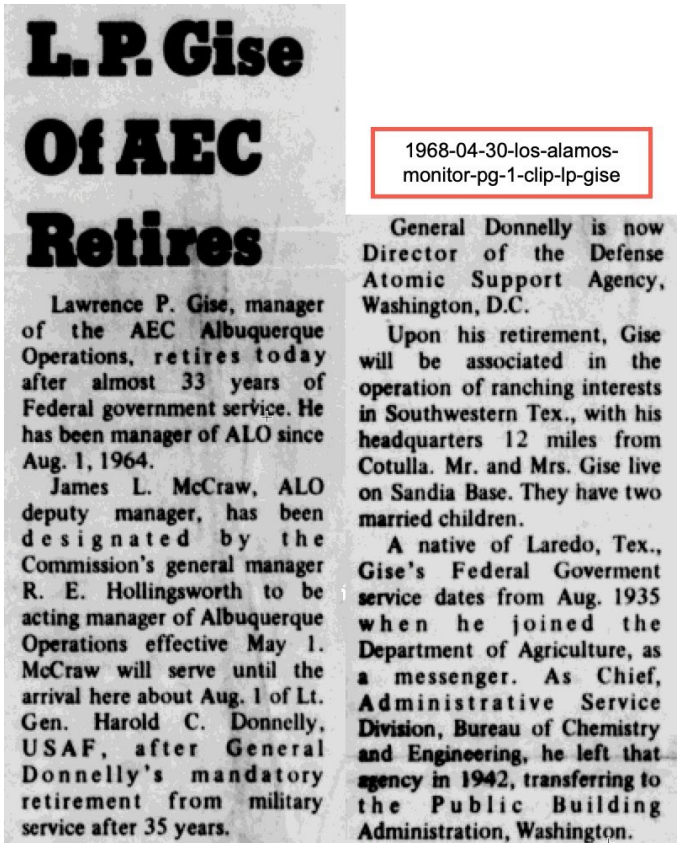
Albuquerque, New Mexico *87115* Attn: L. P. Gise""

E.I. duPont de Nemours and Company Savannah River Laboratory

Document Transfer Station 703-A Aiken, South Carolina 29801

1968 (April) - LP Gise retires- And a hint of where his ranch is

"Ranch is 12 miles from Cotulla" . Full page : [HN00NZ][GDrive]



L. P. Gise Of AEC Retires

1968-04-30-los-alamos-monitor-pg-1-clip-lp-gise

Lawrence P. Gise, manager of the AEC Albuquerque Operations, retires today after almost 33 years of Federal government service. He has been manager of ALO since Aug. 1, 1964.

James L. McCraw, ALO deputy manager, has been designated by the Commission's general manager R. E. Hollingsworth to be acting manager of Albuquerque Operations effective May 1. McCraw will serve until the arrival here about Aug. 1 of Lt. Gen. Harold C. Donnelly, USAF, after General Donnelly's mandatory retirement from military service after 35 years.

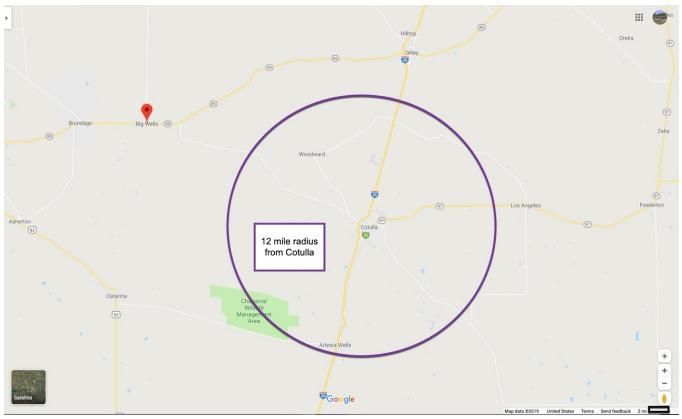
General Donnelly is now Director of the Defense Atomic Support Agency, Washington, D.C.

Upon his retirement, Gise will be associated in the operation of ranching interests in Southwestern Tex., with his headquarters 12 miles from Cotulla. Mr. and Mrs. Gise live on Sandia Base. They have two married children.

A native of Laredo, Tex., Gise's Federal Goverment service dates from Aug. 1935 when he joined the Department of Agriculture, as a messenger. As Chief, Administrative Service Division, Bureau of Chemistry and Engineering, he left that agency in 1942, transferring to the Public Building Administration, Washington.

[HN00O0][GDrive]

2019-09-26-housatonic-research-drawing-12mi-from-cotulla-sat-map.jpg



2019-09-26-housatonic-research-drawing-12mi-from-cotulla-map.jpg

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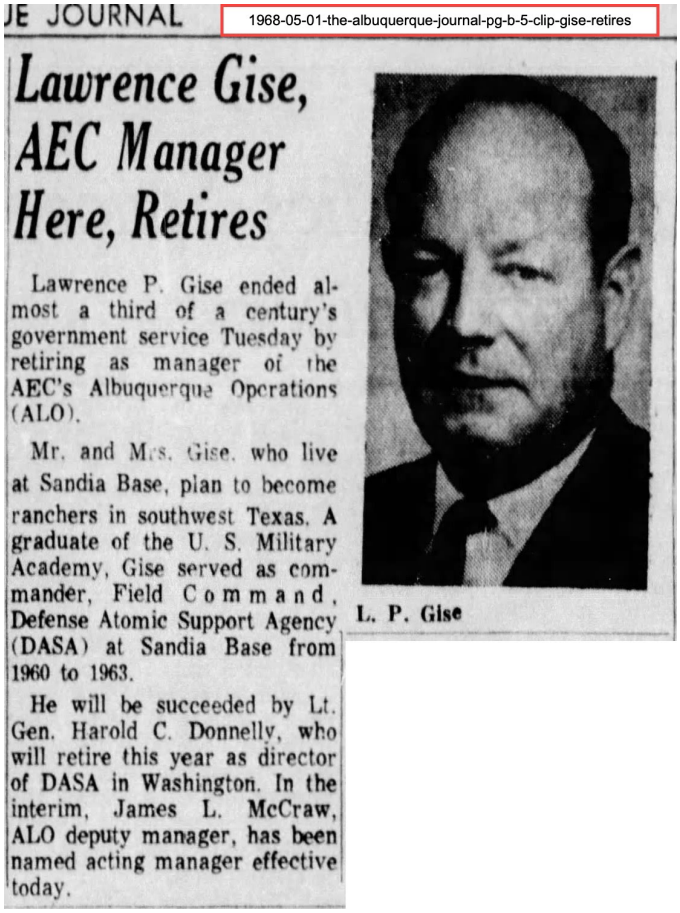
1968 (May 1) Gise retires -

Full page : [HN00OS][GDrive]



JE JOURNAL 1968-05-01-the-albuquerque-journal-pg-b-5-clip-gise-retires

Lawrence Gise, AEC Manager Here, Retires

Lawrence P. Gise ended almost a third of a century's government service Tuesday by retiring as manager of the AEC's Albuquerque Operations (ALO).

Mr. and Mrs. Gise, who live at Sandia Base, plan to become ranchers in southwest Texas. A graduate of the U. S. Military Academy, Gise served as commander, Field Command, Defense Atomic Support Agency (DASA) at Sandia Base from 1960 to 1963.

He will be succeeded by Lt. Gen. Harold C. Donnelly, who will retire this year as director of DASA in Washington. In the interim, James L. McCraw, ALO deputy manager, has been named acting manager effective today.

L. P. Gise

[HN00OT][GDrive]

1968 (Aug 11)

[HN00N8][GDrive]

The Santa Fe New Mexican (Santa Fe, New Mexico) · 11 Aug 1968, Sun

AEC Names Donnelly

H. C. Donnelly will become manager of the Albuquerque operations office of the Atomic Energy Commission, which includes Los Alamos Scientific Laboratory of the University of California.

Mr. and Mrs. Donnelly recently returned to Albuquerque from Washington, following his retirement from the U.S. Air Force as a lieutenant general.

He will succeed L. P. Gise, who retired April 30 after 33 years of government service.

The AEC organization he will manage directly employs 1,285, of whom 1,000 are in New Mexico. Its major, integrated contractors employ about 30,000 of whom almost 14,000 are in New Mexico. The Los Alamos support contractor is The Zia Co.

Albuquerque Operations Headquarters are at Sandia Base, Albuquerque. The office grew out of the Los Alamos project of World War II in which scientists on the Hill developed the first atomic bomb.

[HN00N9][GDrive]

Nov 16 1995 - Death of LP Gise

As a Thursday newspaper (Nov 16), if he passed on Sunday, that would have been Nov 12 1995)

Remarried Nona Louise Martin Pickett in 1994

Full page : [HN00NE][GDrive]

U.S. Atomic Agency Ex-Official, 80, Dies

Journal Staff Report

Lawrence Preston Gise, who headed the former Atomic Energy Commission's Albuquerque Operations Office in the 1960s, died Sunday at a San Antonio, Texas, hospital. He was 80.

Born April 23, 1915, in Laredo, Texas, Gise retired from the AEC post in Albuquerque in 1968 after 33 years of government service.

He was raised in Big Wells, Texas, and was the salutatorian of the local high school graduating class of 1932. Three years later, he married Mattie Louise Strait, who had been his class valedictorian.

In the midst of the Great Depression they moved to Washington, D.C., where he began his government service as a messenger with the Department of Agriculture.

While working his way up to management positions in several federal agencies, he attended night school in Washington, D.C., earning a bachelor's degree in commercial science from Columbus University in 1938 and a master's in the same field from Strayer College in 1940.

He served in the U.S. Navy from 1942 to 1946, and was a lieutenant commander aboard the destroyer USS Neunzer during World War II.

After the war, he worked briefly for the Veterans Administration, then worked as deputy chief of the estimates and analysis division of the U.S. Navy Department's budget office.

In 1949, he went to the AEC's finance division, then transferred to AEC's division of military applications, becoming assistant director in 1955.

From 1958 to 1961, he was with the Department of Defense's Advanced Research Projects Agency, working on space technology and ballistic missile defense.

He came to AEC's Albuquerque Operations Office as deputy manager in 1961, and in 1964 was appointed by Congress to head AEC's seven-state, 26,000-employee operations, including Sandia, Los Alamos and Lawrence Livermore national laboratories.

Among awards Gise received were the AEC's outstanding service award in 1956, a federal 30-year service award in 1965, and the U.S. Navy's distinguished service award in 1967 for the Albuquerque Operations Office's contributions to the Polaris missile program.

After retiring in 1968, the Gises moved to Mrs. Gise's family ranch in South Texas.

Mrs. Gise died in 1977. Last year, he married Nona Louise Martin Pickett of Cotulla, Texas, who survives.

He was recently preceded in death by his son, Lawrence P. Gise Jr., and is survived by his daughter, Jackie Bezos of New Jersey; stepchildren Maureen Bell and C.W. Pickett, and five grandchildren.

[HN00NF][GDrive]

Full page : [HN00O1][GDrive]

Victoria Advocate (Victoria, Texas) · 16 Nov 1995

LAWRENCE P. GISE

COTULA – Lawrence Preston Gise, 80, of Cotulla died Sunday, Nov. 12, 1995.

He was born April 23, 1915, in Laredo to the late Lloyd Preston and Mabel Rebecca Hall Gise. He married to Nona Louise Martin Pickett in 1994.

Survivors include: wife; one daughter; two stepchildren including C.W. Pickett of Victoria and five grandchildren.

Memorial services will be held at 10 a.m. Thursday at United Methodist Church in Cotulla, the Rev. Scott Bradford and Bill Sluder officiating.

Burial will be at Big Wells Cemetery in Big Wells, Peters Funeral Home, Cotulla, (210) 879-2615.

[HN00O2][GDrive]

Unprocessed notes :

https://www.businessinsider.com/jeff-bezos-biological-father-2013-10

His biological father, whose name is Ted Jorgensen, was 18 when he impregnated Bezos' mother, Jacklyn Gise, who herself was 17. They were both still in high school at the time. They got married before their son was born.

The marriage lasted only 17 months, reports Brad Stone at Bloomberg Businessweek, who has unearthed astonishing new details about Bezos' family's early years.

Gise moved in with her parents because Jorgensen stayed out late, and drank too much, and was generally an inattentive father and husband says Stone. He agreed to a divorce, and paid a small amount of child support to Gise when he had money. Other times he missed the payments.

https://www.legacy.com/obituaries/name/ted-jorgensen-obituary?pid=174440155

Jorgensen, Ted, J.

Born in Chicago October 10th, 1944. Age 70, Ted relocated from Albuquerque to Glendale, Arizona in 1974; Ted passed away on March 16th, 2015. Ted owned and operated Road Runner Bike Center, a bicycle shop in Glendale, Arizona for over 35 years. Ted is survived by his wife Linda who he was married to for 27 years, his son Jeff, four step children; Mike, Todd, Lee and Darin, 10 grandchildren also brother Gordon Jorgensen, brother-in-law Ron Fischer. Services will be held at 3:00 PM Saturday March 21st at Phoenix Memorial Park 200 W. Beardsley Rd. Phoenix, Arizona 85027.

--> Born 1944, that would make him nearly 20 in 1964 when Jeff was born.

Jeffrey Preston Jorgensen

January 12, 1964 (age 55)

Albuquerque, New Mexico, U.S.

Bezos was born Jeffrey Preston Jorgensen on January 12, 1964, in Albuquerque, New Mexico, the son of Jacklyn Gise Jorgensen and Chicago, Illinois native Ted Jorgensen.[4] At the time of his birth, his mother was a 17-year-old high school student, and his father was a bike shop owner.[5]

--> Jeff has4 children.. Children 4

https://bambooinnovator.com/2013/10/11/the-secrets-of-bezos-how-amazon-became-the-everything-store/

Jeff Bezos grew up in a tight-knit family, with two deeply involved and caring parents, Jackie and Mike, and two close younger siblings, Christina and Mark. Jackie, who gave birth to Bezos just two weeks after she turned 17, was a towering figure of authority to Bezos and his friends. Mike, also known as Miguel, was a Cuban immigrant who arrived in America at age 18, alone and penniless, knowing only one English word: hamburger. Through grit and determination, he got a college education and climbed through the ranks of Exxon (XOM) as a petroleum engineer and manager, in a career that took the Bezos family to Houston, Pensacola, Fla., Miami, and, after Bezos left for college, cities in Europe and South America.

Yet for a brief period early in his life, before this ordinary if peripatetic childhood, Bezos lived alone with his mother and grandparents. And before that, he lived with his mother and his biological father, a man named Ted Jorgensen. Bezos has said the only time he thinks about Jorgensen is when he's filling out a medical form that asks for his family history. He told Wired in 1999 that he'd never met the man. Strictly speaking, that's not true: Bezos last saw him when he was 3 years old. And while Bezos's professional life has been closely studied and celebrated over the last two decades, this story has never been told.

Jorgensen was a circus performer and one of Albuquerque's best unicyclists in the 1960s. A newspaper photograph taken in 1961, when he was 16, shows him standing on the pedals of his unicycle facing backward, one hand on the seat, the other splayed theatrically to the side, his expression tense with concentration. The caption says he was awarded "most versatile rider" in the local unicycle club.

That year, Jorgensen and a half-dozen other riders traveled the country playing unicycle polo in a team managed by Lloyd Smith, the owner of a local bike shop. Jorgensen's team was victorious in places such as Newport Beach, Calif., and Boulder, Colo. The Albuquerque Tribune has an account of the event: Four hundred people showed up at a shopping center parking lot in freezing weather to watch the teams swivel around in four inches of snow wielding three-foot-long plastic mallets in pursuit of a six-inch rubber ball. Jorgensen's team swept a doubleheader, 3 to 2 and 6 to 5.

In 1963, Jorgensen's troupe resurfaced as the Unicycle Wranglers, touring county fairs, sporting events, and circuses. They square-danced, did the jitterbug and the twist, skipped rope, and rode on a high wire. The group practiced constantly, rehearsing three times a week at Smith's shop and taking dance classes twice a week. "It's like balancing on greased lightning and dancing all at the same time," one member told the Tribune. When the Ringling Brothers and Barnum & Bailey Circus came to town, the Wranglers performed under the big top, and in the spring of 1965 they performed in eight local shows of the Rude Brothers Circus.

Jorgensen was born in 1944 in Chicago to a family of Baptists. His father moved the family to Albuquerque when Jorgensen and his younger brother, Gordon, were in elementary school. Ted's father took a job as a purchase agent at Sandia Base (today's Sandia National Laboratories), then the largest nuclear weapons installation in the country, handling the procurement of supplies at the base.

In high school, Jorgensen started dating Jacklyn Gise, a girl two years his junior whose father also worked at Sandia Base. Their dads knew each other. Her father, Lawrence Preston Gise, known to friends as Preston and to his family as Pop, ran the local office of the U.S. Atomic Energy Commission, the federal agency that managed the nuclear weapons program after Harry S Truman took it from the military following World War II.

Jorgensen was 18 and finishing his senior year in high school when Gise became pregnant. She was a sophomore. They were in love and decided to get married. Her parents gave them money to fly to Juárez, Mexico, for a ceremony. A few months later, on July 19, 1963, they repeated their vows at the Gises' house. Because she was underage, both of their mothers signed the application for a marriage license. The baby was born on Jan. 12, 1964. They named him Jeffrey Preston Jorgensen.

The new parents rented an apartment in Albuquerque's Southeast Heights neighborhood. Jackie finished high school, and during the day, her mother, Mattie,

took care of the baby. Life was difficult. Jorgensen was perpetually broke, and they had only one car, his cream-colored '55 Chevy. Belonging to a unicycle troupe didn't pay much. The Wranglers divided their fees among all members, with Smith taking a generous cut off the top. Eventually, Jorgensen got a $1.25-an-hour job at the Globe Department Store, part of Walgreen's (WAG) short-lived foray into the promising discount retail market being pioneered at the time by Kmart (SHLD) and Wal-Mart. Occasionally Jackie brought the baby to the store to visit.

Their marriage was probably doomed from the start. Jorgensen had a habit of drinking too much and staying out too late. He was an inattentive dad and husband. Jackie's father tried to help him; he paid his son-in-law's tuition at the University of New Mexico, but Jorgensen dropped out after a few semesters. Preston Gise then tried to get Jorgensen a job with the New Mexico State Police, but Jorgensen wasn't interested.

Eventually, Jackie took the child and moved back in with her parents at Sandia. In June 1965, when the baby was 17 months old, she filed for divorce. The court ordered Ted to pay $40 a month in child support. Court records indicate that his income at the time was $180 a month. Over the next few years, he visited his son occasionally but missed many support payments.

Then Jackie took a job working in the bookkeeping department of the Bank of New Mexico and met Miguel Bezos, who was working the overnight shift while he attended the University of Albuquerque. On several occasions when Ted was visiting his son, Bezos would be there, and they avoided each other. But Ted asked around and heard he was a good man.

In 1968, Jackie called Ted and told him she was marrying Miguel and moving to Houston. She told him he could stop paying child support and asked him not to interfere in their lives. Her father confronted him and made him promise to stay away. Jackie also wanted to give Jeffrey her new husband's surname and let Miguel adopt him. Ted's permission was needed for the adoption. After thinking it over and reasoning that the boy would probably have a better life as the son of Jackie and her new husband, Ted obliged. After a few years, he lost track of the family and then forgot their last name.

BITCHUTE @Housatonic **YOUTUBE** @HousatonicLive **ODYSEE** @Housatonic **BRIGHTEON** @Housatonic

Housatonic

William John Gise Jr (born 1920)

Born :June 23 1920 to March 23 2015)

Died :

Father is William John Gise (born 1888)

(Paternal) grandFather is Jacob Kerlin Gise (born 1849)

Children :

- "James P Gise Jr."

Other relationships :

- **Aunts**
  - Grace S Gise (born 1886)
- **Great Uncles**
  - **William Franklin Gise** (born 1835)
    - **Children include : (these are cousins of Grace Gise)**
      - William Kern Gise (born 1871)
      - <others>
  - Daniel Kerlin Gise (born 1843)
    - **Children include : (these are cousins of Grace Gise)**
      - **Lloyd Preston Gise** (born 1873) (Father of Lawrence Preston Gise (born 1915) / Great grandfather of **Jeff Preston Bezos**)
      - <others>
  - David K Gise (1838)
  - <others>

1915

http://seguingazette.com/ouncements/obituaries/article_09ba92c2-a5b5-11e4-9417-f7782b5cbdf0.html

Mary Cecilia Hough Gise, age 90, of Seguin, passed away on Jan. 23, 2015. Funeral Service will be held Friday, Jan. 30, 2015 at 1 p.m. at Tres Hewell Mortuary Chapel. Interment will follow at later date. She is preceded in death by two sisters and one brother.

Survivors include her husband of 71 years, Col. William J. Gise, Jr. USAF Ret; son, James Gise and wife Linda; eight grandchildren and five great grandchildren. Memorial contributions may be made to the charity of your choice in her name.

1940 Living with different people !
https://www.findmypast.com/transcript?id=USC%2F1940%2F1572245596

WJ- 1944 marrying a cecelia Hough

https://www.findmypast.com/transcript?id=USBMD%2FSSDI%2F450031459
William Gise born August 1888

WW1 draft - Wm j Gise
https://www.findmypast.com/transcript?id=USM/WWIDR/1651363976

William J Gise -
Father is Jacob K
children - Elsi, Grace, William K

https://www.findmypast.com/transcript?id=USC/1910/004971561/00076/016

So in 1940, WK Gise (1920) and Bettie Gise (1923- are living with WG Gise and "Dore"
WG Gise - Store manager

Baby Shower -
https://newspaperarchive.com/san-antonio-express-jul-18-1943-p-28/
1943-07-18-san-antonio-express-page-4-b.png
https://drive.google.com/file/d/14_LKHLNtOrYpxkIGYqMaKc8hgGuSmBx2/view?usp=sharing
[HE0026]

Mrs. W.J. Gise
Misses Betty Gise ?

Mrs Pauling Miller passes
https://newspaperarchive.com/san-antonio-express-jun-06-1977-p-36/

1936
Betty Gise unclde - W H Stratton
https://newspaperarchive.com/san-antonio-express-aug-09-1936-p-36/

https://nara-media-001.s3.amazonaws.com/arcmedia/nw/305270/EE-11.pdf
Erwin Derold Wissenback -]Mission target Lille France
From Oregon
Wm. j Gise - survived ? 0-66084

https://www.fold3.com/record/84765024-william-j-gise-jr

https://www.fold3.com/image/29103288?terms=william%20j%20gise

surveying group
https://www.fold3.com/image/626400087

He is missing ?
https://www.fold3.com/image/29103283?terms=william%20j%20gise

http://www.americanairmuseum.com/person/232171

Wow - Escaped , made way through Gibraltar ...
http://www.americanairmuseum.com/person/60402

1952 - W J Gise in a photo
https://www.newspapers.com/image/436093507/?terms=william%2Bgise

1971 - W J Gise Sr. dies
https://www.newspapers.com/image/439370053/?terms=%22W%2BJ%2Bgise%22
maager of store

W J Gise jr

1930 census - Age 10
Sister - bettie jane Gise age 5
Father - W J Gise - born 1889 in Kansas

1930-www-findmypast-com-transcript-i-usc-004955225-01035-gise.pdf / https://drive.google.com/open?id=18szvMIZQhfQYX9jSrD30PM4wj5huLsgY
image :
1930-usa-census-yoakum-texas-004955225-01035.jpg / https://drive.google.com/open?id=194OACBYcGpUGoBoudErRMrLql5x-AfQ2

Yoakum Texas

1951 - Major W J Gise in Hawaii ?
1951-09-04-honolulu-star-bulletin-pg-16 / https://drive.google.com/open?id=18jibl_oNpxZY75l6SvjeQ4FIMgCCKiwQ
1951-09-04-honolulu-star-bulletin-pg-16-clip-typhoon-tracked-gise-bechtel / https://drive.google.com/open?id=18pLjjdT3BiBMiBSLsoTQwAANOYItncGg

1958 - W J Gise jr serving in newfoundland
1958-07-20-the-victoria-advocate-victoria-texas-pg-6a / https://drive.google.com/open?id=18XItCftEHYK4bdhGV9Pk4j2WkATGYNhA
1958-07-20-the-victoria-advocate-victoria-texas-pg-6a-clip-gise-jr / https://drive.google.com/open?id=18iXR2ZyoeCWJtmo7uXkYxChYqHo3o1eZ

1964 - col william gise retirement
1964-08-19-austin-american-statesman-pg-7-sears-special.jpg https://drive.google.com/open?id=18IPieQf8nWErQTtrCWgJfgJyWovPvY9u
1964-08-19-austin-american-statesman-pg-7-sears-special-clip-gise-retirement https://drive.google.com/open?id=18JvvGpLEcRUMTfwZruToCvBcHv5bU0lZ

Note about his son James
1964 - James P Gise Jr.
https://www.newspapers.com/image/386507921/?terms=%22gise%22

Col. William J. Gise, Jr. USAF (ret.) of Seguin, Texas | 1920 - 2015 | Obituary
ol. Gise served in the Army Air Corps and the Air Force during WW II and the Korean War.

2015-03-25-seguin-gazette-pg-13.png https://drive.google.com/open?id=17E7NE-jlAhWxXUUY92N2V-3Ux8LiDejJ
2015-03-25-seguin-gazette-pg-13-clip-william-j-gise.jpg https://drive.google.com/open?id=17Ea1QtWFJgB6fcdrtGQcXQdh0WFw63rV
2015-03-25-seguin-gazette-pg-13-clip-william-j-gise-portrait.jpg https://drive.google.com/open?id=17IY52-OD7iM8F7h-57rKTjAMHml5FtzB

Housatonic

Alan Ambrose Gise (born 1929)

Grandfather (paternal) is **William C Gise (born 1861)**

Father is **Grover Daniel Gise (born 1886)**

Uncle is **Luther Russell Gise (born 1895)**

1929 - Alan Ambrose Gise is born

1929 - Alan Ambrose Gise born (https://newspaperarchive.com/rushville-daily-republican-mar-11-1929-p-12/)

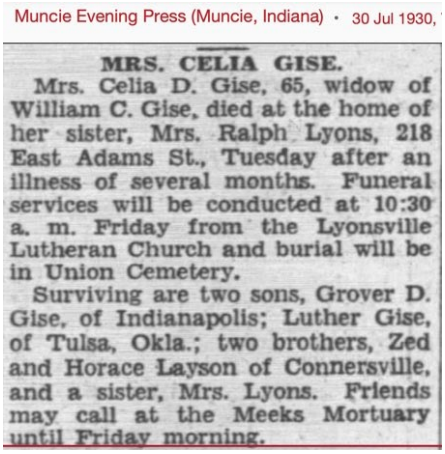
1930 Census

1930-04-03-usa-census-richmond-city-indiana-sheet-3b.jpg / https://drive.google.com/open?id=106R3YNV1p1nYNOU0VT75OCDi2dB-QXsS

1930 (July) - Mother passes

Was Living in Indiana with the Lyon family

1930-07-30-the-muncie-evening-press-pg-12.jpg / https://drive.google.com/open?id=10xhqXTnTqhLvF0IEjJT7XC1fwHrk_y4b


Muncie Evening Press (Muncie, Indiana) · 30 Jul 1930,

MRS. CELIA GISE.

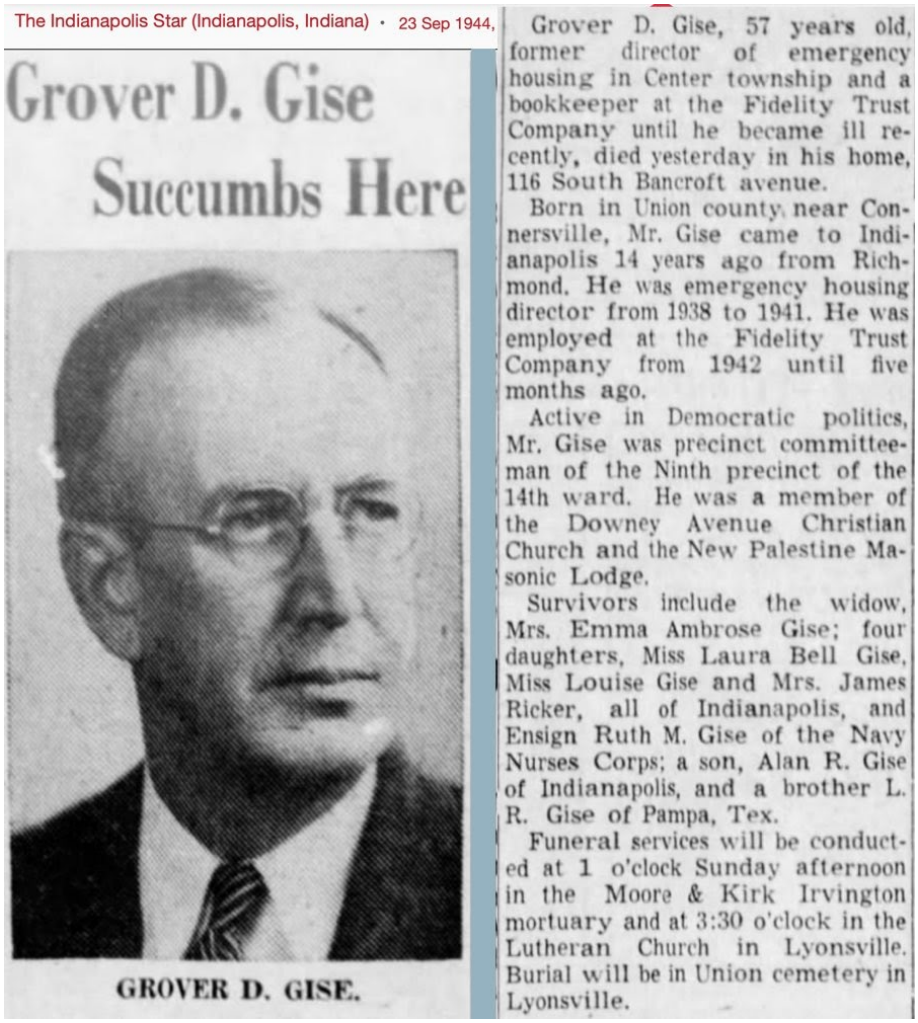
Mrs. Celia D. Gise, 65, widow of William C. Gise, died at the home of her sister, Mrs. Ralph Lyons, 218 East Adams St., Tuesday after an illness of several months. Funeral services will be conducted at 10:30 a. m. Friday from the Lyonsville Lutheran Church and burial will be in Union Cemetery.

Surviving are two sons, Grover D. Gise, of Indianapolis; Luther Gise, of Tulsa, Okla.; two brothers, Zed and Horace Layson of Connersville, and a sister, Mrs. Lyons. Friends may call at the Meeks Mortuary until Friday morning.

1930-07-30-the-muncie-evening-press-pg-12-clip-celia-gise.jpg / https://drive.google.com/open?id=10yS3ZIqf2NyaGYs-sQWcIa-bVAgm_b-L

1944 (Sep) - Father Grover D Gise passes

1944-09-23-the-indianapolis-star-pg-9.jpg / https://drive.google.com/open?id=117TiAIHaum2_qtBK9EsgY5xSrwMv8Yqz



The Indianapolis Star (Indianapolis, Indiana) • 23 Sep 1944,

Grover D. Gise Succumbs Here

GROVER D. GISE.

Grover D. Gise, 57 years old, former director of emergency housing in Center township and a bookkeeper at the Fidelity Trust Company until he became ill recently, died yesterday in his home, 116 South Bancroft avenue.

Born in Union county, near Connersville, Mr. Gise came to Indianapolis 14 years ago from Richmond. He was emergency housing director from 1938 to 1941. He was employed at the Fidelity Trust Company from 1942 until five months ago.

Active in Democratic politics, Mr. Gise was precinct committeeman of the Ninth precinct of the 14th ward. He was a member of the Downey Avenue Christian Church and the New Palestine Masonic Lodge.

Survivors include the widow, Mrs. Emma Ambrose Gise; four daughters, Miss Laura Bell Gise, Miss Louise Gise and Mrs. James Ricker, all of Indianapolis, and Ensign Ruth M. Gise of the Navy Nurses Corps; a son, Alan R. Gise of Indianapolis, and a brother L. R. Gise of Pampa, Tex.

Funeral services will be conducted at 1 o'clock Sunday afternoon in the Moore & Kirk Irvington mortuary and at 3:30 o'clock in the Lutheran Church in Lyonsville. Burial will be in Union cemetery in Lyonsville.

1944-09-23-the-indianapolis-star-pg-9-clip-grover-d-gise.jpg / https://drive.google.com/open?id=118Ln-fCKY7cgTwRSIvdRKMn7wEx8c2Xc

1947 - Draft Enrollment

Alan Ambrose Gise - as of 1947 living at 351 Lesley Ave, Indianapolis, Marion county Indiana - Born in RIchmond Indiana on **March 5 1929**

Draft enrollment card : Pg1 = 1947-03-05-us-selective-service-registration-cards-ww2-alan-ambros-gise-pg1.jpg / https://drive.google.com/open?id=104y4k1-RIYM1XdOEXZ0QzHVMXN66ZN4f Pg2 = 1947-03-05-us-selective-service-registration-cards-ww2-alan-ambros-gise-pg2.jpg / https://drive.google.com/open?id=103pMpwFzxy2aBxr1rMtM2-S-w2L1hKlU

1965 - Alan Gise gets post in Bonn

https://www.newspapers.com/image/105408065/?terms=%22grover%2Bd%2Bgise%22

https://www.newspapers.com/image/312107214/?terms=%22grover%2Bd%2Bgise%22

1972 - Alan Gise - US Foreign Service, London

Foreign Service List (State Dept) - See Page 39 - "Consular Section" for United Kingon

1972-02-us-state-dept-foreign-service-list.pdf / https://drive.google.com/open?id=1gD80nG9OraSZC_s7H5Xl0Iwup1JzYt-u

1976 - alan gise in papers

https://www.newspapers.com/image/10525668/?terms=%22gise%22

1981

https://www.newspapers.com/image/588757268/?terms=%22gise%22

2012 - Wife passes

"MOIRA "MO" GISE 82, a resident of Santa Fe, passed away December 23, 2012. She was born August 30, 1930 in **Iola Kansas** to **Mary Helen MacDonald** and **Maro Burke Brownfield**. She was married to **Alan Gise** on **May 3, 1958** in **Washington DC**. Mo is survived by her husband; her sister, Kathleen Madesen; brother, Patrick Brownfield and several nieces and nephews. Moira worked as an X-ray Technician in California before joining the **US Foreign Service as staff in Washington, DC** where she met and married **Foreign Service Officer Alan Gise**. Mo's service ended upon her marriage and she traveled with her husband Alan to his posts in Germany, England and the West Indies. Upon Alan's retirement in 1981 they settled in Santa Fe, NM. In lieu of flowers contributions can be made to St. John the Baptist Church Lunch Kitchen, "

2012-12-23-moira-gise-obituary-santa-fe-nm.pdf / https://drive.google.com/open?id=101ALTuPwNLenYYEw5AoC04GLS2r-sVv1

BITCHUTE @Housatonic **YOUTUBE** @HousatonicLive **ODYSEE** @Housatonic **BRIGHTEON** @Housatonic

Housatonic

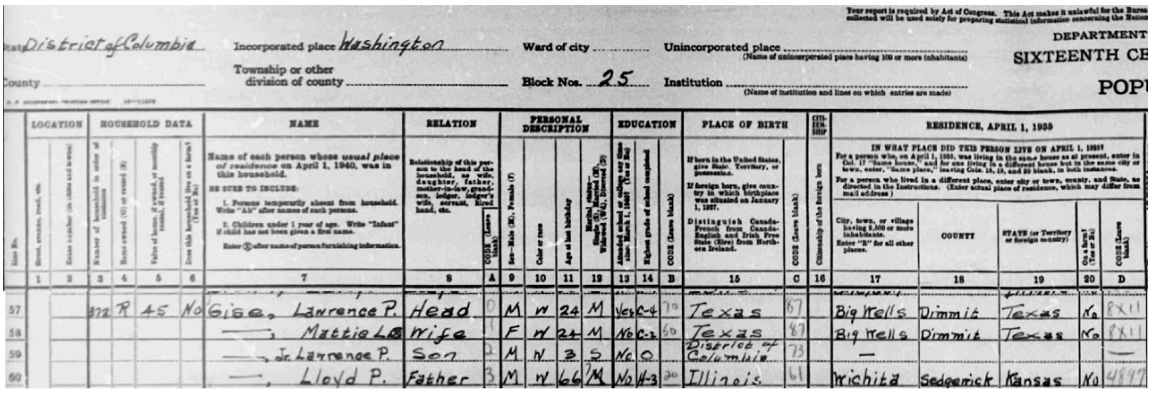
Lawrence Preston Gise Jr (born 1936)

Father is **Lawrence Preston Gise** (born 1915) .

(Paternal) grandfather is **Lloyd Preston Gise** (born 1873) .

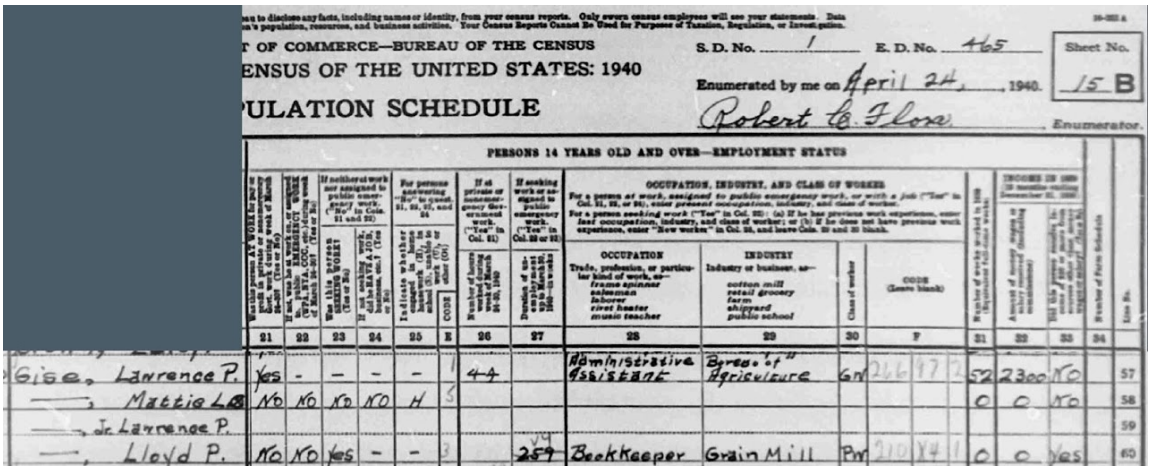
1940 - US Census - Washington DC

Full Census form: [HS001P][GDrive]



57		372	R	45	No	Gise, Lawrence P.	Head	0	M	W	24	M	Yes	8-4	70	Texas	67	Big Wells	Dimmit	Texas	No	8X11
58						—, Mattie L.	Wife	1	F	W	24	M	No	8-3	60	Texas	87	Big Wells	Dimmit	Texas	No	8X11
59						—, Jr. Lawrence P.	Son	0	M	W	2	S	No	0		District of Columbia	73	—				—
60						—, Lloyd P.	Father	3	M	W	66	M	No	4-3	20	Illinois	61	Wichita	Sedgewick	Kansas	No	6847

[HS001Q][GDrive]



Gise, Lawrence P.	Yes	-	-	-	-	1	44			Administrative Assistant	Bureau of Agriculture	Gov	2166	1772	52	2300	No					57
—, Mattie L.	No	No	No	No	H	5									0	0	No					58
—, Jr. Lawrence P.																						59
—, Lloyd P.	No	No	Yes	-	-	3		259		Bookkeeper	Grain Mill	Pvt	2100	1741	0	0	Yes					60

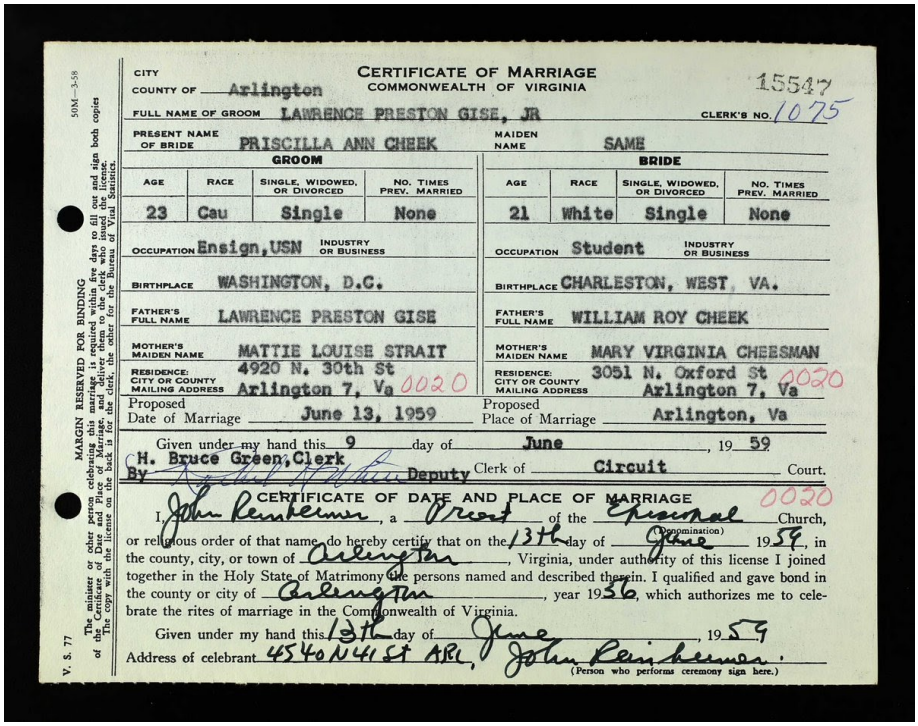
[HS001R][GDrive]

1959 (June) - Wedding (LP Gise Jr wedding certificate ... June 13 1959 ...)

Source Tweet : [HT004A][GDrive]

(age 23 - birth date would be 1936?)

LP Gise Jr (Uncle of Jeff Bezos) married Priscilla Ann Cheek



CERTIFICATE OF MARRIAGE
COMMONWEALTH OF VIRGINIA

CITY
COUNTY OF Arlington

15547
CLERK'S NO. 1075

FULL NAME OF GROOM LAWRENCE PRESTON GISE, JR
PRESENT NAME OF BRIDE PRISCILLA ANN CHEEK
MAIDEN NAME SAME

GROOM				BRIDE			
AGE	RACE	SINGLE, WIDOWED, OR DIVORCED	NO. TIMES PREV. MARRIED	AGE	RACE	SINGLE, WIDOWED, OR DIVORCED	NO. TIMES PREV. MARRIED
23	Cau	Single	None	21	White	Single	None

OCCUPATION Ensign, USN — INDUSTRY OR BUSINESS
OCCUPATION Student — INDUSTRY OR BUSINESS

BIRTHPLACE WASHINGTON, D.C.
BIRTHPLACE CHARLESTON, WEST VA.

FATHER'S FULL NAME LAWRENCE PRESTON GISE
FATHER'S FULL NAME WILLIAM ROY CHEEK

MOTHER'S MAIDEN NAME MATTIE LOUISE STRAIT
MOTHER'S MAIDEN NAME MARY VIRGINIA CHEESMAN

RESIDENCE: CITY OR COUNTY MAILING ADDRESS 4920 N. 30th St Arlington 7, Va 0020
RESIDENCE: CITY OR COUNTY MAILING ADDRESS 3051 N. Oxford St Arlington 7, Va 0020

Proposed Date of Marriage June 13, 1959
Proposed Place of Marriage Arlington, Va

Given under my hand this 9 day of June, 19 59
H. Bruce Green, Clerk
By Deputy Clerk of Circuit Court.

MARGIN RESERVED FOR BINDING

50M—3-58

The minister or other person celebrating this marriage is required within five days to fill out and sign both copies of the Certificate of Record. He must deliver one copy to the clerk who issued the license. The copy with the license on the back is for the clerk; he must file it with the records of this office.

V. S. 77

CERTIFICATE OF DATE AND PLACE OF MARRIAGE

I, John Reinheimer, a Priest of the Episcopal (Denomination) Church, or religious order of that name, do hereby certify that on the 13th day of June, 1959, in the county, city, or town of Arlington, Virginia, under authority of this license I joined together in the Holy State of Matrimony the persons named and described therein. I qualified and gave bond in the county or city of Arlington, year 1956, which authorizes me to celebrate the rites of marriage in the Commonwealth of Virginia.

0020

Given under my hand this 13th day of June, 1959

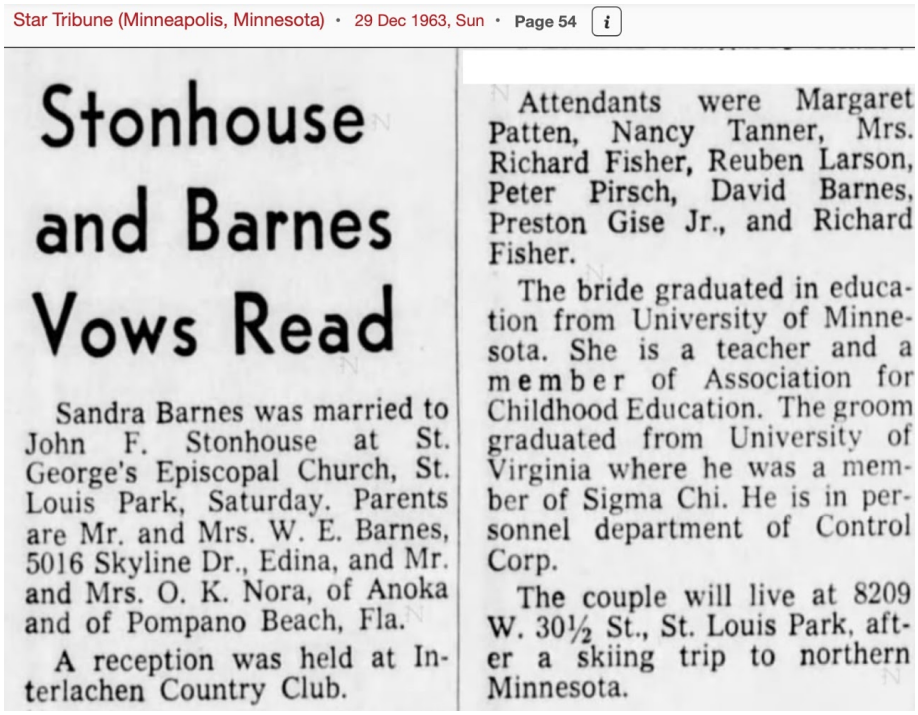
Address of celebrant 4540 N 41st Apt, John Reinheimer.
(Person who performs ceremony sign here.)

[HT004B][GDrive]

1963 (Dec 29) - Attends wedding in Minnesota (does he live there?); Groom with Control Data Corporation

Groom is in "personnel department of Control Corp." Control Corp. is purchased by Control Data (see next advertisement) in 1960, so this is basically Control Data Corp.

Full page : [HN00NP][GDrive]



Star Tribune (Minneapolis, Minnesota) • 29 Dec 1963, Sun • Page 54

Stonhouse and Barnes Vows Read

Sandra Barnes was married to John F. Stonhouse at St. George's Episcopal Church, St. Louis Park, Saturday. Parents are Mr. and Mrs. W. E. Barnes, 5016 Skyline Dr., Edina, and Mr. and Mrs. O. K. Nora, of Anoka and of Pompano Beach, Fla.

A reception was held at Interlachen Country Club.

Attendants were Margaret Patten, Nancy Tanner, Mrs. Richard Fisher, Reuben Larson, Peter Pirsch, David Barnes, Preston Gise Jr., and Richard Fisher.

The bride graduated in education from University of Minnesota. She is a teacher and a member of Association for Childhood Education. The groom graduated from University of Virginia where he was a member of Sigma Chi. He is in personnel department of Control Corp.

The couple will live at 8209 W. 30½ St., St. Louis Park, after a skiing trip to northern Minnesota.

[HN00NQ][GDrive]

Control Data had purchased Control Corp. - (1960 news)

Full page : [HN00NN][GDrive]

Control Data Buys Control Corp.; Price Put at Two Millions

Control Data Corp., 2½-year-old electronic computer manufacturer, is buying a 24-year-old Minneapolis control systems firm for an estimated two million dollars.

Directors of CDC and Control Corp. have agreed to an exchange of common stock in which Control Corp. will become a subsidiary of the computer maker.

★ ★ ★ ★

Sandberg

Norris

William C. Norris, president of Control Data, and Mrs. Perry Peterson, widow of the founder of Control Corp., announced today that the proposal will be submitted to a vote of stockholders of both companies on March 18.

Mrs. Peterson

The exchange would be on a basis of all of the 113,581 outstanding common shares of Control Corp. for 68,149 common shares of Control Data, or at a rate of five shares of Control Corp. for three shares of Control Data.

This would indicate a price of slightly more than two million dollars for the acquisition, valuing Control Data stock at $30 per share, the approximate market value it claimed at the time the deal was negotiated.

Letters explaining the proposal were being mailed to stockholders today.

Mrs. Peterson, who is a director, assistant treasurer and a principal stockholder of Control Corp., will become chairman of the board when the company becomes a subsidiary corporation of Control Data.

Mahlon Sandberg, who has been Control Corp. president since 1958, will continue as president.

"This acquisition will combine Control Data's high performance digital computers with the electronic industrial and public utility control systems which are the specially of Control Corp.," Norris said.

"Thus the combined companies can offer much more comprehensive electronic systems for larger and more varied applications."

Norris said the two companies have been collaborating on proposals and engineering for more than a year.

Control corporation's sales for the year ended Dec. 31 were about two million dollars. It has 180 employes. Control Data's sales for the same period were about seven million dollars. It has 525 employes.

Norris also pointed out that while SDC's business has been primarily with the federal government, Control Corp. has been primarily in commercial business.

Control Corp. makes electronic supervisory control systems under the trade name Super-Trol, used chiefly by utilities to control the transmission and distribution of electric power, water, oil and natural gas. It also makes telephone type plug-in relays, automatic battery chargers, transformers, motor controls and generator synchronizers.

[HN00NO][GDrive]

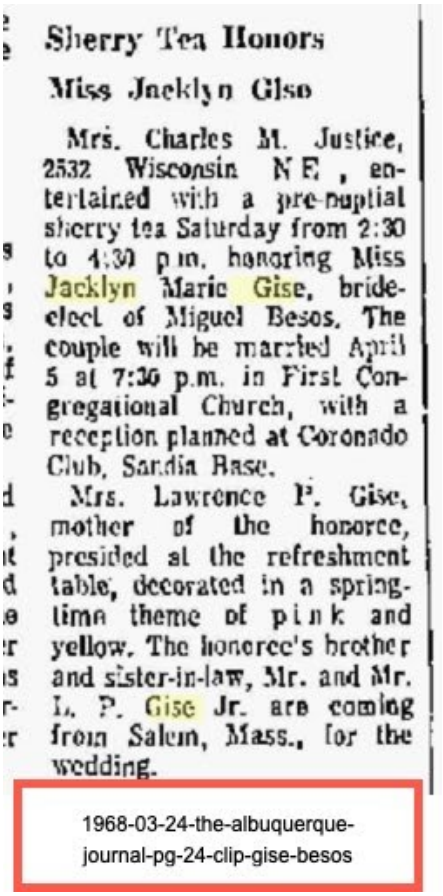
1967

1967 - https://www.newspapers.com/image/184846149/?terms=Preston%2Bgise%2BJr.

1967 (Nov 30) - https://www.newspapers.com/clip/35983528/gise-jr/

1968 (March) - Sister Jacklyn remarries - Currently living in Salem, Mass

Jacklyn Marie Gise to marry Miguel Besos - Albuquerque 1968 (See full page at [HN00N6][GDrive]



Sherry Tea Honors

Miss Jacklyn Gise

Mrs. Charles M. Justice, 2532 Wisconsin N E , entertained with a pre-nuptial sherry tea Saturday from 2:30 to 4:30 p.m. honoring Miss Jacklyn Marie Gise, bride-elect of Miguel Besos. The couple will be married April 5 at 7:30 p.m. in First Congregational Church, with a reception planned at Coronado Club, Sandia Base.

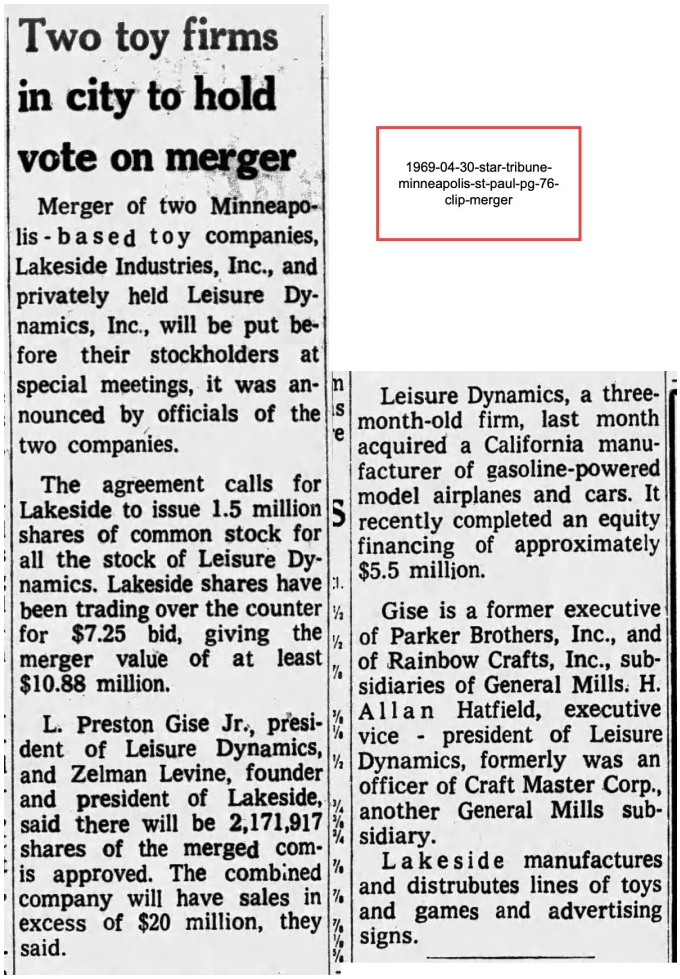
Mrs. Lawrence P. Gise, mother of the honoree, presided at the refreshment table, decorated in a spring-time theme of pink and yellow. The honoree's brother and sister-in-law, Mr. and Mr. L. P. Gise Jr. are coming from Salem, Mass., for the wedding.

1968-03-24-the-albuquerque-journal-pg-24-clip-gise-besos

[HN00N7][GDrive]

1969 (April 30)

Full page : [HN00NK][GDrive]



Two toy firms in city to hold vote on merger

Merger of two Minneapolis-based toy companies, Lakeside Industries, Inc., and privately held Leisure Dynamics, Inc., will be put before their stockholders at special meetings, it was announced by officials of the two companies.

The agreement calls for Lakeside to issue 1.5 million shares of common stock for all the stock of Leisure Dynamics. Lakeside shares have been trading over the counter for $7.25 bid, giving the merger value of at least $10.88 million.

L. Preston Gise Jr., president of Leisure Dynamics, and Zelman Levine, founder and president of Lakeside, said there will be 2,171,917 shares of the merged com- is approved. The combined company will have sales in excess of $20 million, they said.

Leisure Dynamics, a three-month-old firm, last month acquired a California manufacturer of gasoline-powered model airplanes and cars. It recently completed an equity financing of approximately $5.5 million.

Gise is a former executive of Parker Brothers, Inc., and of Rainbow Crafts, Inc., subsidiaries of General Mills. H. Allan Hatfield, executive vice - president of Leisure Dynamics, formerly was an officer of Craft Master Corp., another General Mills subsidiary.

Lakeside manufactures and distrubutes lines of toys and games and advertising signs.

1969-04-30-star-tribune-minneapolis-st-paul-pg-76-clip-merger

[HN00NL][GDrive]

1969 (August) - Bronfman ? Gise ?

Full page : [HN00NA][GDrive]

- Bronfman - Gise ?
- Lakeside industries
- Leiser dynamics

Investment 'names' in merger

Some rather substantial names in the investment world were linked in a merger announced Monday between Lakeside Industries, Inc., and Leisure Dynamics, Inc.

Lakeside is a Minneapolis-based maufacturer of games, toys and indoor advertising displays. Leisure, a closely-held company formed in January to acquire businesses in the leisure, game and toy field, already operates a Califorina model-making firm.

Leisure shareholders include Sherman M. Fairchild, chairman of the board of Fairchild Hiller Corp.; Louis F. Polk Jr., president of Metro-Goldwyn-Mayer, Inc.; Samuel Bronfman, president of Distillers Corp. - Seagram, Ltd.; Arthur K. Watson, vice-chairman of the board of IBM; Investors Diversified Services, Inc., and Wheelock Whitney, chief executive officer of Dain, Kalman Quail & Co.

Lakeside to survive

Lakeside will be the surviving company, but its name will be changed to Leisure Dynamics. Combined sales for the two companies, based on the year ended March 31, 1969, will be $19.8 million annually.

L. Preston Gise Jr. will become president of the new company when the merger becomes effective Sept. 2. M. Allen Hatfield, executive vice - president of Leisure, will become executive vice-president and treasurer of the merged company.

Lakeside president Zelman Levine will continue to head Lakeside as a division of Leisure.

Directors of the merged company include Louis F. Polk Sr., member of the executive committee and director of the Bendix Corp.; Louis F. Polk Jr., the former General Mills vice - president who moved into the presidency of MGM recently, and Russell Bennett, Minneapolis attorney.

Other directors include Walter Burke, financial advisor to Sherman Fairchild; Warren S. Farrell, of Fairchild's investment staff; Richard N. Flint, partner in Cant, Haverstock, Gray,

Polk

Whitney

Bennett

Flint

Plant and Mooty (as is Bennett); Daniel R. Kaplan, New York; Donald R. Stroben, executive vice - president of Hayden, Stone, Inc., investment bankers, plus Gise, Hatfield and Levine.

Lakeside reported sales of $2.5 million for the three months ending March 31, down 19 percent from the comparable quarter in 1968. Its loss for the period was $830,182, or $1.24 a share. In 1968 the comparable loss was $118,219, or 18 cents a share.

An inventory writedown resulting from a change operating policy resulted a large part of the loss, vine said. Future perf mance should be streng ened by streamlined ope tions, he said.

Lakeside will issue 1.5 n lion shares of its comm stock in exchange for all o standing capital stock Leisure. Its shareholders a voted to approve an incre in its common stock fr 1,250 million shares to 4 n lion, and creation of 1 n lion new shares of prefer stock to be issued at discretion of the directors.

1969-08-26-the-minneapolis-star-pg-28-clip-merger

[HN00NB][GDrive]

1969 (Oct 31) - https://www.newspapers.com/image/364944471/?terms=%22leisure%2Bdynamics%22

1969 (Dec 4) - https://www.newspapers.com/image/189535924/?terms=%22leisure%2Bdynamics%22

1970 (March) - https://www.newspapers.com/image/185113738/?terms=%22leisure%2Bdynamics%22

1970 (April) - https://www.newspapers.com/image/184187289/?terms=%22leisure%2Bdynamics%22

https://www.newspapers.com/image/184498013/?terms=%22leisure%2Bdynamics%22 - Polk was a former MGM president ~~~

Sep 28 1970 - https://www.newspapers.com/image/384756974/?terms=%22leisure%2Bdynamics%22 (party in manhattan)

https://www.newspapers.com/image/190051817/?terms=%22leisure%2Bdynamics%22

advertisement - Cox - https://www.newspapers.com/image/605939024/?terms=%22leisure%2Bdynamics%22

https://www.newspapers.com/image/483382620/?terms=leisure%2Bdynamics%2Bvideo%2Bgames

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1971 L Preston Gise Jr - Leisure Dynamics

Full page : [HN00NC][GDrive]

Artex, Leisure Dynamics Merging

A preliminary agreement has been signed for acquisition of the Lima-based Artex Hobby Products Inc. by Leisure Dynamics Inc., a growing, three-year-old "leisure concept" craft, game and toy company with headquarters in Minneapolis.

Artex will become a wholly owned subsidiary of Leisure Dynamics, according to Saturday's announcement from Charles H. Crockett III, Artex president and board chairman, and from L. Preston Gise Jr., Leisure Dynamics president.

Current value of the transaction is estimated at $13 million.

Completion of the merger is subject to acceptance of a definitive agreement by the boards of both companies and the shareholders of Artex.

Preliminary terms are for Leisure Dynamics to exchange seven-tenths of a share of its common stock for each share of Artex stock. The actual exchange rate will be determined after Artex earnings are known for the period ending Dec. 31.

Artex currently has 1,416,199 shares of common stock outstanding. Both Artex and Leisure Dynamics stock is traded on the national over-the-counter market.

Although no definite closing date has been set, it is anticipated the merger will be completed during the first quarter of 1972.

Crockett will continue as Artex president and board chairman, but also will become a Leisure Dynamics vice president and board member. He also will become the largest single stockholder in Leisure Dynamics.

Artex Hobby Products will continue to maintain its headquarters and manufacturing facilities in Lima.

Leisure Dynamics was established by three former General Mills executives — Gise, Allen Hatfield and Louis F. Polk Jr., who for a time also was president of Metro-Goldwyn-Mayer. While at General Mills, the three spearheaded that Minneapolis giant's diversification into the toy and game business.

Leaving General Mills, they created Leisure Dynamics to build a new toy, game and hobby company through acquisitions. Major financing came from Polk; his father, Louis F. Polk Sr.; Sherman M. Fairchild of Fairchild Camera; Arthur K. Watson of IBM; and Samuel Bronfman of Distillers Corp.-Seagrams Ltd.

Leisure Dynamics acquired a Santa Ana, Calif., firm, L. M. Cox Manufacturing Co., the world's largest maker of gasoline engine-powered model planes, cars and racers, plus solid fuel rockets. A second acquisition was Lakeside Industries Inc. of Minneapolis, a toy and game manufacturer and the largest producer of point-of-purchase sales displays for the brewing industry. Another purchase was Merry Manufacturing Co., Cincinnati, which has been absorbed into Lakeside.

Among popularly known game and toy products marketed by Leisure Dynamics are Barrel of Monkeys, which has sold 12 million; Aggravation, with 1.3 million annual sales; Kismet; Pick Up Sticks; Score Four, with half-million annual sales; and the Miss Merry play makeup line for girls.

Leisure Dynamics sales for the fiscal year ending March 31, 1971, exceeded $30 million, with earnings of $1,380,797 or 63 cents per share. For its six-month period ending Oct. 31, the company's sales were $16 million, producing earnings of $863,000 or 38 cents per share.

Earlier this week, on Thursday, an agreement was signed for Leisure Dynamics to acquire Eldon Industries Inc. of Hawthorne, Calif. That company produces model road racing sets, woodburning and electrical craft sets, model boats and battery-operated children's riding vehicles.

With the acquisition of Artex and Eldon, Leisure Dynamics expects annual sales to top $43 million.

Artex sales showed an average annual growth rate of 23 per cent for the last five years. For the most recent fiscal year, ending June 30, 1971, Artex sales of $7.5 million produced earnings of $463,877 or 32 cents per share. For the quarter ending Sept. 30, sales were $1,767,503, with earnings at $131,161 or nine cents a share.

Using direct - selling, home party plan distribution, Artex designs, produces and markets a line of 60 indelible, free-flowing paints in ballpoint tubes, used as a home craft for creating colorful designs on fabrics, paper, wood, leather, metal, glass and plastic. The company also offers hundreds of fabric items for decorative use of its paints.

Some 9,000 Artex instructors conduct more than 200,000 home parties in the U.S. and Canada annually to demonstrate and sell the company's craft products.

Artex was founded here by Crockett and his wife, Shirley, and was incorporated in 1963.

1971-12-12-the-lima-news-pg-2-clip-artex-merging

[HN00ND][GDrive]

1971 (May 31)

https://www.newspapers.com/clip/4123292/leisure-dynamics-earnings/

1972 (Sep)

[HN00NI][GDrive]

Star Tribune (Minneapolis, Minnesota) · 09 Dec 1972, Sat · Page 12

Leisure Dynamics acquires game unit

Leisure Dynamics, Inc. Friday said it acquired the game division of Reed Toys, Inc., West Conshohoken, Pa., for an undisclosed amount of cash and notes.

L. Preston Gise Jr., president of Leisure Dynamics, said the company will integrate the operations of the Reed Toys game division into its Minneapolis production facility.

Gise also said Leisure Dynamics has stopped taking new orders for its point-of-sale advertising division and will be completely out of that business by March 31. The division manufactures advertising displays that are used to promote products in places where the products are sold.

He said the move will provide additional plant capacity at the Minneapolis facility to accommodate increasing sales of its hobby, game and toy product lines. Negotiations for sale of the point-of-sale division are continuing.

He said the division had a backlog of orders totaling $2.6 million and that all will be produced in the next several months.

In the six months ended Sept. 30, Leisure Dynamics said sales of its hobby, game and toy lines reached $17,585,664, up 30 percent over $13,555,748 in the comparable period a year ago.

The point-of-sales division, which accounts for approximately 5 percent of total company sales, lost money during the period.

[HN00NJ][GDrive]

1973 (Mar 17) - https://www.newspapers.com/image/185158256/?terms=Preston%2Bgise%2BJr.

1974 (jan 31) - https://www.newspapers.com/image/186139539/?terms=Preston%2Bgise%2BJr.

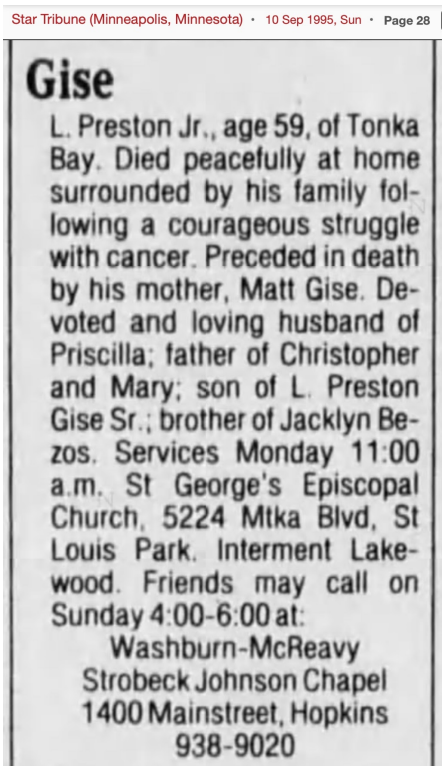
- Page 8A - https://www.newspapers.com/image/186139539/?terms=Preston%2Bgise%2BJr
- Page 10A - https://www.newspapers.com/image/186139543

1974 (Feb 25) - https://www.newspapers.com/image/190553722/?terms=Preston%2Bgise%2BJr.

(march 28) - https://www.newspapers.com/image/190336102/?terms=Preston%2Bgise%2BJr.

1995 (Sep) - Passing

Full page : [HN00NG][GDrive]



Star Tribune (Minneapolis, Minnesota) · 10 Sep 1995, Sun · Page 28

Gise

L. Preston Jr., age 59, of Tonka Bay. Died peacefully at home surrounded by his family following a courageous struggle with cancer. Preceded in death by his mother, Matt Gise. Devoted and loving husband of Priscilla; father of Christopher and Mary; son of L. Preston Gise Sr.; brother of Jacklyn Bezos. Services Monday 11:00 a.m. St George's Episcopal Church, 5224 Mtka Blvd, St Louis Park. Interment Lakewood. Friends may call on Sunday 4:00-6:00 at:
Washburn-McReavy
Strobeck Johnson Chapel
1400 Mainstreet, Hopkins
938-9020

[HN00NH][GDrive]

Nov 16 1995 - Father LP Gise Sr. Passes

As a Thursday newspaper (Nov 16), if he passed on Sunday, that would have been Nov 12 1995)

Remarried Nona Louise Martin Pickett in 1994

Full page : [HN00NE][GDrive]

THURSDAY, NOVEMBER 16, 1995 C15

U.S. Atomic Agency Ex-Official, 80, Dies

Journal Staff Report

Lawrence Preston Gise, who headed the former Atomic Energy Commission's Albuquerque Operations Office in the 1960s, died Sunday at a San Antonio, Texas, hospital. He was 80.

Born April 23, 1915, in Laredo, Texas, Gise retired from the AEC post in Albuquerque in 1968 after 33 years of government service.

He was raised in Big Wells, Texas, and was the salutatorian of the local high school graduating class of 1932. Three years later, he married Mattie Louise Strait, who had been his class valedictorian.

In the midst of the Great Depression they moved to Washington, D.C., where he began his government service as a messenger with the Department of Agriculture.

While working his way up to management positions in several federal agencies, he attended night school in Washington, D.C., earning a bachelor's degree in commercial science from Columbus University in 1938 and a master's in the same field from Strayer College in 1940.

He served in the U.S. Navy from 1942 to 1946, and was a lieutenant commander aboard the destroyer USS Neunzer during World War II.

After the war, he worked briefly for the Veterans Administration, then worked as deputy chief of the estimates and analysis division of the U.S. Navy Department's budget office.

In 1949, he went to the AEC's finance division, then transferred to AEC's division of military applications, becoming assistant director in 1955.

From 1958 to 1961, he was with the Department of Defense's Advanced Research Projects Agency, working on space technology and ballistic missile defense.

He came to AEC's Albuquerque Operations Office as deputy manager in 1961, and in 1964 was appointed by Congress to head AEC's seven-state, 26,000-employee operations, including Sandia, Los Alamos and Lawrence Livermore national laboratories.

Among awards Gise received were the AEC's outstanding service award in 1956, a federal 30-year service award in 1965, and the U.S. Navy's distinguished service award in 1967 for the Albuquerque Operations Office's contributions to the Polaris missile program.

After retiring in 1968, the Gises moved to Mrs. Gise's family ranch in South Texas.

Mrs. Gise died in 1977. Last year, he married Nona Louise Martin Pickett of Cotulla, Texas, who survives.

He was recently preceded in death by his son, Lawrence P. Gise Jr., and is survived by his daughter, Jackie Bezos of New Jersey; stepchildren Maureen Bell and C.W. Pickett, and five grandchildren.

[HN00NF][GDrive]

2004 (July)

Source : [HP0022][GDrive]

Jul 4, 2004, 11:00pm EDT

Informer

This article is more than 15 years old.

Maybe Her Favorite Nephew

A trust benefiting an aunt of Amazon.com founder and Forbes 400 member Jeffrey P. Bezos reaped $45 million in gains largely from selling off Amazon shares in the two years after the Internet bookseller's 1997 initial public offering. U.S. Tax Court lawsuits say financial advisers to Priscilla C. Gise of Tonka Bay, Minn. pushed for the sales to diversify the portfolio. Whatever the reason, their timing was excellent; Amazon's stock price, which peaked at $107 in late 1999, fell 90% over the next two years and only recently has climbed above $50. The two lawsuits challenge the Internal Revenue Service's demand for $180,000 in additional 1998 and 1999 taxes. The fed had alleged that income was omitted and improper deductions were taken.
--Janet Novack and William P. Barrett

[HP0023][GDrive]

BITCHUTE @Housatonic YOUTUBE @HousatonicLive ODYSEE @Housatonic BRIGHTEON @Housatonic

Housatonic

Hellmut Paul Oscar Golde (born 1930)

Associations :

- Gary Arlen Kildall (born 1942) (Gary received his computer science doctorate at UW under Hellmut Golde)
- Robert Gordon Gillespie (born 1933) (long-time peer at the computer at University of Washington)
- Paul Gardner Allen (born 1953) (Famously kicked little Allen out of the lab at the University of Washington)

2019 **Tribute to CSE leader and professor Hellmut Golde (University of Washington)**

[HE0031][GDrive]

The Allen School family is mourning the loss of our friend and colleague Hellmut Golde, who passed away earlier this month after a brave battle against cancer. As one of the founding members of the Computer Science Group at the University of Washington and leader of the team that developed the wildly successful VAX Pascal compiler, Golde's legacy includes the emergence of the Paul G. Allen School of Computer Science & Engineering as an education and research powerhouse and the emergence of the Seattle region as a hub of computing innovation.

Golde, who grew up in Germany, joined the UW faculty in 1959 as a professor in the Department of Electrical Engineering after earning his Ph.D. from Stanford University. He was one of the founders of the Computer Science Group in 1967, the precursor to the Department of Computer Science, formed in 1974, which evolved into the Department of Computer Science & Engineering in 1989 and eventually into the Paul G. Allen School in 2017. In those early days, Golde played a crucial role in establishing the culture for which the Allen School is widely known — one of friendship, support, and community.

A few years after he helped lead the creation of the Computer Science Group, Golde became director of the Computer Science Laboratory, the research and educational facility that hosted a couple of aspiring computer scientists, Paul Allen and Bill Gates, in the days before they set out to put a computer on every desktop. Back then, the pair would sneak into the lab and "borrow" computer time, as Gates would later describe it. Golde would cement his place in campus lore by famously expelling Allen and Gates from the lab.

"Dear Mr. Allen…."

Delivering his rebuke via a polite yet sternly worded letter, Golde directed Allen to "turn in your keys and terminate your activities" owing to offenses such as "you removed the acoustic coupler from Dr. Hunt's office without authorization and without leaving at least a note." At the celebration of the naming of the Allen School more than 40 years later, Allen astonished Golde and the rest of the audience by pulling out the letter and reading it in its entirety as he reminisced about his long-standing affection for UW. Allen subsequently framed two copies of Golde's letter as mementos for the school and for Golde, while we attempted to make amends for the decades-old rebuke by gifting Allen an acoustic coupler purchased on eBay.

Professor emeritus Richard Ladner, who joined the department in 1971, fondly recounted the ease with which Golde bridged the divide in their academic interests and became not only a colleague but lifelong friend. "Hellmut was one of the first people I met when I interviewed for a faculty position at the University of Washington. We were miles apart in terms our academic interests, me a mathematician and he an electrical engineer," Ladner recalled. "Nonetheless, we hit it off because of his infectious sense of humor and overall kindness. Some of my fondest memories of days with Hellmut are skiing with him and his family at Alpental, Mount Baker, Stevens Pass, and Big Sky. It was always hard for me to keep up with him on the slopes."

Golde later stepped in to serve as acting chair of the department from 1976 to 1977. It was a period of transition for our program, and Golde wasn't given much of a choice in the matter — the first department chair, his dear friend Jerre Noe, had declared himself a sabbatical after coming to the realization that if he didn't leave town, he might wind up being chair for life. At the time, the department had a grand total of 11 faculty and had graduated 25 students.

Hellmut Golde served as acting chair of UW CSE from 1976 to 1977

As Golde was completing his time as chair, Ed Lazowska arrived to join the UW faculty one week after completing his Ph.D. — and just one week before the start of the school year. His new colleagues tried to reassure him that he didn't need to worry, because "the course you've been assigned has been taught for many years by Hellmut Golde. He's the best teacher in the department. Ask him for his notes." Unfortunately for Lazowska, "Hellmut was such a good teacher that those 'notes' consisted of a single page, with a single line for each day of the course specifying the topic to be covered that day," Lazowska laughed. "Let's just say that my course evaluations were not as good as Hellmut's had been."

Although Golde's time at the helm was short-lived, he had an outsize impact on the program beyond the recruitment of Lazowska and Ladner — each of whom went on to have an outsize impact of their own on the growth of our program and on our emergence as a leader in accessible computing, respectively. In October 1977, Digital Equipment Corporation (DEC) introduced the VAX-11/780 computer, which became the mainstay of many computer science departments and companies nationwide. UW managed to acquire an early VAX on the understanding that Golde and a group of graduate students would write a VAX compiler for the Pascal programming language, which was widely used for introductory programming.

"DEC was willing to give Hellmut a portion of sales for the VAX Pascal compiler because they greatly underestimated the demand for Pascal and the market for the VAX computer in education," explained Allen School Director Hank Levy, who was a member of DEC's VAX design and development team at the time. "Partly as a result of the compiler that Hellmut and his team built, the VAX become highly successful in educational institutions, resulting in more than $1 million in royalties flowing from DEC to the department — a not insignificant sum in those days. These funds were crucial in allowing the department to grow during difficult financial times on campus. It was Hellmut's foresight, technical acumen, and generosity which allowed the department to preserve its momentum — and later, to climb into the ranks of the top 10 computer-science programs in the nation."

It appears that Hellmut neglected to return a Selectric typewriter that he borrowed in 1976. We trust that UW's Equipment Inventory Office is on the case!

The VAX-11/780 computer on display in the Allen Center atrium stands as a monument to those days, when this single computer could support the entire department's computing needs.

As Ladner noted, Golde enjoyed a good joke — even if it came at his own expense. He was particularly amused at people's inability to reckon with the pronunciation of his German name. "Hellmut used to display on his office door a montage of address labels from letters people sent him on which his name had been butchered," recalled Lazowska. "He would say 'Hellmut Golde' on the phone, and often the person on the other end wouldn't get it *quite* right. My personal favorite was the time someone addressed a letter to 'Hal McGoldy.'"

Always a leader and forever a friend, Hellmut retired from UW as emeritus professor in 1992 but remained actively engaged with his Allen School family. We miss him greatly.

A celebration of Hellmut's life will be held on Sunday, June 2, 2019 at 2 pm at the Bill & Melinda Gates Center for Computer Science & Engineering at the University of Washington. Please contact Beth Golde (beth at golde.org) for details if needed. Remembrances, in lieu of flowers, may be made to the Hellmut Golde Endowed Scholarship in Computer Science & Engineering at the University of Washington, or the Golde Family Scholarship Fund at Heritage University.

An official obituary may be found here. Photographs of Hellmut through the years may be found here.

https://www.legacy.com/obituaries/seattletimes/obituary.aspx?n=hellmut-golde&pid=192731410&fhid=10154

Hellmut Golde

Hellmut Paul Oscar Golde was born in Berlin, Germany on February 6, 1930. He passed away in his home surrounded by his family on April 17, 2019. He came to the United States in 1952 as one of the first German Fulbright Scholars at Stanford University. After receiving his PhD, he and his wife Marcy moved to Seattle, where he took a faculty position at the University of Washington. In the 1960s, Hellmut helped found the UW Department of Computer Science and Engineering. He also headed the Computer Laboratory, and famously revoked access privileges from then high-school students Bill Gates and Paul Allen. Teaching was his real love, and he is remembered with deep affection by many former students.

2017

2017-geekwire-com-years-before-giving-uw-millions-paul-allen-booted-from-lab.pdf

Source : Geekwire : [HM000Y][GDrive]

Paul Allen's historic gift to the University of Washington's computer science and engineering program came with another bit of history on Thursday.

The letter to Paul Allen. (LinkedIn Photo)

In a post on LinkedIn, the Microsoft co-founder shared a 1971 letter that he received as a high school senior, informing him that he would no longer have access to the UW's graduate computer lab.

Allen said that it is "truly an honor" that his name will be attached to a new computer science school thanks to his $40 million gift. But the letter, which Allen held onto for 46 years, shows a less-welcoming attitude toward the future billionaire philanthropist.

While his father was associate director of libraries, Allen and his friends from Seattle's Lakeside School spent a good amount of time in the Computer Science Laboratory. The letter from the lab director, Dr. Hellmut Golde, informed Allen that that privilege was being revoked and why.

We squinted and attempted to re-type it here for easier reading:

> March 17, 1971
>
> Dear Mr. Allen,
>
> I regret to have to write this letter to you and your friends from the Lakeside School, but the needs of the Computer Science Program leave me with no other alternative.
>
> During the past months, you and your friends have been using the facilities of the Computer Science Laboratory to develop a software product for a commercial timesharing system in Portland. While I am basically in sympathy with such activities, your use of the laboratory facilities has caused a number of complaints and tends to disrupt the intended use of the laboratory. To be more specific, let me cite a number of specifics:
>
> 1. You have used the teletypes (at times all of them simultaneously) for prolonged periods of time and occasionally unattended, to produce endless listings. This creates a noise level in the laboratory which is detrimental to the normal activities and also is not the intended mode of operation for a remote console.
>
> 2. You have used the EMIAC system to connect to the Portland system without prior checkout on that device. While you and some of your friends subsequently obtained a drivers license for the EMIAC, I have just discovered that your friends did not get a drivers license for the Sigma 5, which was clearly announced to be a prerequisite.
>
> 3. Earlier this week you removed the acoustic coupler from Dr. Hunt's office without authorization without leaving at least a note. Such behavior is intolerable in any environment.
>
> In view of these and other occurrences which caused a number of complaints from the regular users of the laboratory, I must ask you to turn in your keys and terminate your activities in the laboratory immediately. Please inform you friends of this letter.
>
> Sincerely,
>
> Hellmut Golde
>
> Director, Computer Science Laboratory

Allen goes on to explain in his LinkedIn post that the UW is a special place for him because it's where he and fellow Microsoft co-founder Bill Gates built their Traf-O-Data machine. That effort, to automate the traffic-measuring process, ultimately ended up being a failure, but Allen said "the understanding of microprocessors we absorbed was crucial to our *future* success."

"If it hadn't been for our Traf-O-Data venture, and if it hadn't been for all that time spent on UW computers, you could argue that Microsoft might not have happened," Allen said.

NYTimes - [HN01B8][GDrive]

Sharing the Supercomputers

By John Markoff

- Dec. 29, 1988

Computer scientists and Government officials are urging the creation of a nationwide "data superhighway" that they believe would have a dramatic economic impact, rivaling that of the nation's interstate highway system.

This highway would consist of a high-speed fiber-optic data network joining dozens of supercomputers at national laboratories and making them available to thousands of academic and industry researchers around the country. Vital Competitive Tool

A national research network is vital, backers of the concept say, because it will help protect an important area where the United States now has a clear technological advantage over Japan and Europe.

America's lead in computer networking is largely a result of Pentagon financing in the mid-1970's for Arpanet, a system that linked universities, corporate research centers and military laboratories.

The new network would cost about $400 million and could be in place by the mid-1990's, its proponents say. Many existing high-speed networks can send 1.5 million bits of data a second, equivalent to one good-sized novel every five seconds. Each second the new network could carry 3 billion bits of data, or 3 gigabits -about 500 copies of that hefty novel. New Kind of Research

Legislation introduced in October by Senator Albert Gore, Democrat of Tennessee, included initial financing for development and construction of a National Research Network. Backers of the measure say that Federal financing for the project is necessary to develop the technology and convince industry that vastly speedier computer networks are commercially viable.

The network would pave the way for a new kind of scientific research in which thousands of scientists around the country could use the most complex and expensive equipment as if they were seated right in front of it.

Officials at the National Science Foundation envision computerized "collabatories" in which scientists using computer work stations could directly view and control the output of complex machines, such as particle accelerators, wind tunnels, telescopes and nuclear reactors, even though they were thousands of miles from the actual apparatus.

"I believe we can make an electronic laboratory in which people can collaborate and access information, effectively independent of location," said William Wulf, an assistant director of the National Science Foundation. "You'll never replace eyeball-to-eyeball communication, but you can substitute a lot." Remote Control

For example, a fiber-optic computer network would permit astronomers using a radiotelescope array in California to process the images on a Cray supercomputer in Illinois and then view pictures instantly, while at the same time controlling the telescope remotely from locations in both California and Maryland.

However, proponents of the idea note that putting it in place requires development of new fiber-optic communication links that are thousands of times faster than today's commercially available networks. All this could take as long as five years.

Fiber-optic networks, based on glass strands roughly the size of a human hair, use pulses of laser light instead of electricity to send computer data. They permit hundreds or thousands of simultaneous computer conversations by packaging each message into small packets consisting of 1's and 0's.

Because messages are broken up into packets, many of them can be simultaneously interwoven onto a single fiber cable and then recombined as separate messages at the other end. High-speed fiber-optic cable is already used widely for voice and video applications, but data applications have lagged until now because further technological developments are still necessary. Electronic 'Handshakes'

Researchers say they still need to develop special computer switches capable of handling the high rates of data and perfect the necessary high-speed electronic "handshakes" that one computer must make with another when data are exchanged. But the experts believe these tasks will not be difficult to accomplish within five years.

When the Pentagon's Defense Advanced Research Projects Agency built the Arpanet network, it paved the way for the industry that links commercial computers.

However, many researchers point to big government-financed high-speed computer networking projects now under way in both Japan and Europe. They are concerned that without a coordinated response United States industry will be in danger of losing its lead in developing the next generation of technology.

"It's possible that if we simply let a completely self-motivated marketplace develop our data communications infrastructure for the future it will be either inferior to what is being developed in Japan or Europe or owned by companies in Japan and Europe," said Russell Neuman, a political scientist at the Massachusetts Institute of Technology Media Lab. Difficult to Put to Use

One continuing problem that worries researchers is that in the past it has proved difficult to put the technology to use.

"Many times the technology has been there but there doesn't seem to be a path for transferring it from the research laboratories to the commercial market," said David Farber, a computer scientist at the University of Pennsylvania. "We want to show the commercial side that there is a use for this technology."

The proposed network would serve as a demonstration project to encourage private industry to develop similar super-fast commercial data links.

"The infrastructure we will need in the 21st century goes beyond traditional public works projects," Senator Gore said. "I envision a national computer network linking academic researchers and industry, using the nation's vast data banks as the raw material for increasing industrial productivity and creating new products."

Until now, supercomputers -which are increasingly essential for scientific and technical progress -have largely functioned as computing oases, isolated from thousands of potential users. The idea underlying the construction of a high-speed network is based on what economists refer to as the "turnpike factor." Modern highway interchanges have been found to attract traffic simply by their existence. Distance Is No Object

"We want to eliminate distance as a factor," said Robert Haber, a mechanical engineer who directs a high-speed networking project at the National Center

for Supercomputer Applications at the University of Illinois at Urbana-Champaign. "You can compare this to the kind of things that happened in the 50's in the United States. We need a project of the scale of a National Highway Project for computer information."

Researchers also believe that an initiative to build a national system is essential because existing networks are badly overloaded, causing the equivalent of computer traffic jams.

"We have 2,000 users who need to transfer huge amounts of data, and the current networks aren't set up for that," said Steven Christensen, an astrophysicist at the National Center for Supercomputing Applications. "There is already a large bottleneck for many of those who want to use our machines from remote cities."

During the last two years the National Science Foundation has attempted to alleviate some of the worst overcrowding by establishing a new research network known as Nsfnet. In July, a 1.5-megabit-per-second expansion of that network, which links the five national supercomputing centers with about 200 universities, was installed. Stopgap Measures

However, such incremental increases in speed are viewed as only stopgap measures. Senator Gore's bill provided for a network that sat at the top of a hierarchy of existing networks now operated by different Government agencies, like the Energy Department, the Defense Department and the National Aeronautics and Space Administration. The smaller branches would feed into the faster N.S.F. network just as smaller streams feed into a large river.

Once the gigabit network is in place, researchers will be able to begin developing new applications.

For example, Hellmut Golde, a computer scientist at the University of Washington, is beginning to work out a way to control complex instruments over a high-speed network. He is working with a nuclear physicist at the University of Washington who is interested in permitting students at different campuses to share a training reactor. These training systems are scarce, and Mr. Golde's idea is to re-create the control room for such a system at several locations.

He acknowledged that advances in computer security would have to be made before a nuclear reactor would be accessible on a computer network.

Researchers at campuses around the country have already begun planning regional high-speed networks that will offer a preview of some of the services of the future gigabit network. Scientists at the University of Pennsylvania and Princeton and researchers at I.B.M.'s Watson Research Laboratories have proposed a fiber-optic network to link the three research centers. Named the Hourglass Project, the network would permit medical specialists at Princeton and Penn to share high-resolution X-rays or other radiological images. 'Video Wall'

The network would also make possible a "video wall," a video conference system with extraordinary resolution. Such a system would in many ways permit researchers to interact as if they were seated in the same room even though they were actually separated by hundreds of miles.

Another proposal by the Corporation for National Research Initiatives in Reston, Va., calls for the creation of a digital library, a computer data base that would permit vastly improved access to information for researchers and students. "From any work station you should be able to specify a document if it exists anywhere in the country and then view it directly," said Robert Kahn, president of the corporation. Mr. Kahn, a former director of the Defense Advanced Research Projects Agency, has been a key sponsor of the idea of creating a gigabit network to link research centers and universities.

Herman Khan ??

Technology for creating such a national library is one area where Japan may be ahead of the United States. Researchers at Japan's National Center for Science Information Systems are well on their way toward putting the entire scientific literature of the country on-line.

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Housatonic

Neil Elbridge Gordon (born 1886)

https://en.wikipedia.org/wiki/Neil_Gordon

2020-01-wikipedia-org-neil-gordon.pdf /

Neil Elbridge Gordon (October 7, 1886 – May 30, 1949)[2] was an American chemist and educator. He is known for founding the Journal of Chemical Education (c. 1924) and establishing the Gordon Research Conferences (c. 1931).[2] He held several Chair positions spanning his time at the University of Maryland, Johns Hopkins University, Central College in Missouri, and Wayne State University.

https://www.newspapers.com/image/97584486/

Gottleib

MacArthur - MacArthur

Gibson Island - Gibson Island, Maryland

From Wikipedia, the free encyclopedia

Sidney Gottlieb (August 3, 1918 – March 7, 1999) was an American chemist and spymaster best known for his involvement with the Central Intelligence Agency's 1950s and 1960s assassination attempts and mind-control program, known as Project MKUltra.[1]

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Gould Storage Battery Corporation

The History of Exide Technologies

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The History of Exide Technologies

The rich corporate history of Exide Technologies demonstrates its position as a forerunner of industrial advancement around the world. With countless contributions to the growth of technology, the company's story reflects the spirit of innovation at its best.

The Electric Storage Battery Company

The evolution of what is now Exide Technologies began with creation of The Electric Storage Battery Company, founded in 1888 by W.W. Gibbs. As vice president of the United Gas Improvement Company, a Philadelphia gas lighting firm, Gibbs recognized that electricity had great potential as a source for lighting, and as such, posed a threat to gas. Gibbs formed the Electric Storage Battery Company to create a dependable mechanism for storing power so electric lighting companies could provide services to their customers if and when it was necessary.

Realizing that a better storage battery was a necessary first step, Gibbs purchased the ideas and patents of French inventor, Clement Payen, to transform good ideas about storage batteries (then widely referred to as "Pickled Amperes") into thoroughly reliable commercial products. With the development of the storage battery, or the "Chloride Accumulator," the Electric Storage Battery Company brought the electric lighting industry to a new level.

The "Chloride Accumulator"

In 1890, the Electric Storage Battery Company installed the first practical storage battery at the Germantown Electric Lighting Company in Philadelphia. The battery furnished the lighting current, while a dynamo charged the battery. Soon after, the battery company received a request for 13,000 cells to power six new electric streetcars for the Lehigh Avenue Railway Company in Philadelphia. These streetcars became the first self-propelled vehicles to challenge the supremacy of the horse. Throughout the 1890s, the demand for storage batteries increased, forcing the Electric Storage Battery Company to move to larger facilities.

The possibilities for storage batteries continued to grow. The Pullman Company used Chloride Accumulators to light a few of its luxury railroad cars, and small batteries were sold to operate electric fans, sewing machines and phonographs. In 1898, batteries powered the first submarine in the U.S. Just before the turn of the century, Electric Storage Battery

Company batteries were used as power sources in electric locomotives, streetcars, passenger cars, surface boats and telephone exchanges, and for the nation's first automatic switching and signaling systems for railroads.

As the new century dawned, electric taxicabs first appeared in many large cities. They became so popular that The Electric Storage Battery Company developed a product of greater capacity and less weight especially for the "Ply-for-hire" trade. This new battery, introduced in 1900, was the first to bear the trade name "Exide," short for "Excellent Oxide."

Exide in Peace and War

For more than 35 years, Chloride Accumulators enabled electric light and power companies to provide continuous service, while the alternating current systems that serve the public today were being developed and slowly extended. In 1901, the first successful transcontinental telephone service and the first transatlantic "wireless" telegraph transmission used Exide batteries. In the automotive industry, Exide pioneered two major developments concerning two entirely different uses of batteries.

The introduction of the electric carriage as a private passenger vehicle, primarily for town travel, heralded batteries as a means of replacing horsepower. The second development stemmed from a common health problem caused by cars at the time: motorists' broken arms. As a driver hand cranked his engine, the crank often swung back violently, injuring the driver's arm. Efforts to eliminate dangerous engine cranking led to the development of battery-started vehicles. The 1912, Cadillac became the first battery-started car with an internal combustion engine, produced under cooperative development between The Electric Storage Battery Company and Charles F. Kettering. The Exide battery also supplied power for lighting and ignition in this model. The functions of starting, lighting and ignition are the origin of today's battery industry term SLI, referring to automotive batteries.] In 1913, the U.S. Navy began experiments using Exide batteries to start the engines of hydroplanes and, in 1915, Exide batteries were used with the first starters installed on gasoline trucks. Use of the electric passenger car began to decline with invention of the electric starter. With the development of a radically different, heavy-duty battery, the Exide Ironclad, Exide opened up an entirely new field as a source of power. Exide batteries began to be used for the short- haul, frequent "stop and go" operations of electric handling trucks used throughout all of industry. These vehicles were the predecessors of today's delivery vans that might serve only a neighborhood or zip code. Exide Ironclad batteries also were used in electric fork trucks and for the underwater operations of submarines. Over the years, Exide was a part of many major developments in exploration, communications and warfare. In 1934, an Exide deep-cycle battery was the sole source of electrical power when Commander Byrd established a military base on Antarctica. Exide batteries also provided power for Piccard's balloon flight and diesel locomotives that same year.

When the United States entered World War I, Exide engineers developed a lightweight, non- spillable battery to operate thousands of airplane radio sets. The company's batteries also powered many radio stations. In 1938, Exide acquired Grant Storage Battery Company, a move that expanded its product line into battery chargers and testers. Exide also contributed to the war effort of World War II when engineers developed a battery-powered wakeless torpedo.

New Dimensions, New Products

In 1954, the company's lead-acid battery operations were split into two separate divisions - automotive and industrial, so the company could adequately service these different markets. Exide entered the dry-cell battery industry in 1957 when it acquired the Ray-O-Vac Company, then the country's second largest producer of dry-cell batteries.

The following year, Exide opened its Engineering and Development Center in Yardley, PA., as a corporate R&D facility. Exide went on to acquire the Wisconsin Battery Company of Racine, Wis. The renamed Wisco Company added motorcycle and specialty batteries to the growing Exide product line. In 1969, NASA's first lunar landing module used the stored energy of Exide's solar-recharged batteries. NASA took nickel-zinc Exide batteries to the moon on all of the Apollo space missions. During the gasoline crunch of the 1970s, Exide provided batteries for the small, fuel-efficient vehicles that were popular at the time. By 1987, with Exide's acquisition of General Battery Corporation, the company's product line became broad enough to fit nearly every vehicle on U.S. roads.

Modern Innovation and Expansion

The 1980s and 1990s led to increased growth and development for Exide. In 1991 during Operation Desert Storm, Exide supplied starter and tank batteries for the U.S. Army. Exide continues to provide ordnance batteries for the Army today. In 1992, Exide once again demonstrated its powers of innovation with introduction of free electrolyte and gel marine batteries, climate-tailored batteries and maintenance-free technology.

In 1993, Exide initiated European expansion with development of an overseas battery division. In the United Kingdom, Euro-Exide began by acquiring BIG batteries and Gemala Ltd. In Spain, Exide purchased Tudor, and in France CEAC. By 1995, Exide achieved global reach and became the first battery manufacturer to launch a site on the World Wide Web. Robert A. Lutz, former president and vice chairman at Chrysler Corporation, was appointed Exide's Chairman of the Board in 1998. Lutz reorganized the worldwide management structure into Global Business Units and sold off non-battery units to allow the company to concentrate on its primary business. In 1999, Lutz heralded Exide as a high tech, innovative battery company with the introduction of the cylindrically-wound Exide Orbital technology, the most significant technology advancement in lead-acid batteries in 30 years. Exide launched the Orbital into the automotive and specialty markets with the Select Orbital auto battery, and the Orbital marine-starting and deep-cycle batteries.

The Acquisition of GNB Technologies

In 2000, Exide acquired GNB Technologies, the global battery business of Australian-based Pacific Dunlop Limited. The acquisition allowed Exide to reenter the North American industrial battery business, broaden its geographic reach and attain significant efficiencies in its North American transportation business. GNB, a leader in the U.S. and Pacific Rim in manufacturing industrial and transportation batteries, supplied approximately 20 percent of the industrial batteries sold in North America for both motive and network power applications. GNB also was a leading North American supplier of automotive batteries for original equipment manufacturers and aftermarket retailers.

Like Exide, GNB had a rich and colorful history. Three partners – Bertram B. Down, Neil R. McLeod and Edgar A. Reed - founded a company April 9, 1906 in St. Paul, Minn. It was known as the Electric Manufacturing Company.

In that first year, twenty-three-year-old Lytton J. Shields joined the Electric Manufacturing Company and built an extensive regional network of dealers through which he sold Exide batteries, the leading name in batteries at the time. He was so successful that Exide decided to bypass him as distributor and open its own Twin Cities branch. Undaunted, Shields took on the Willard battery line and, through his network of dealers, firmly established the brand regionally. When Willard, too, decided to cut out the middleman, Shields once again was forced to change suppliers. This time, he took on the Philco product line; but again suffered from too much success. In 1916, when Philco notified him that it planned to begin selling direct, it became clear to Shields that if he was to have a future in the battery business, he would have to manufacture his own batteries. Shields initiated action to begin casting grids and making plates, a production process that manufacturers guarded jealously. Thanks to the imagination and ingenuity of Carl Albrecht (who later became chief engineer), the team mastered the art of casting battery grids from molten lead. This gave them a foundation for their own company, called National Battery Company. The company sold its first glass container farm light battery in 1916 and its first automotive starting battery in 1918, under the National Battery brand name. By 1921, Shields realized he needed a national account - a company that would put its own name on his battery and sell it through established, well- accepted outlets. With this business strategy, Shields pioneered the marketing concept of private branding. His first customer was Montgomery Ward. On July 8, 1930, Shields purchased Gould Storage Battery Corporation of Depew, N.Y. With this acquisition, National Battery Company expanded its product line from just smaller, low-capacity automobile, farm lighting and radio batteries to include larger, high-capacity industrial batteries.

Gould supplied standby batteries for electric trolley lines, ocean liner lighting, electric elevators and even the communications wonder known as the "wireless". With much in common, Gould and National came together, pooling technologies, resources -- and names, inspiring the name Gould National Battery. In 1931, National acquired the Champion trademark with the purchase of Englert Manufacturing of Pittsburgh, PA. (Exide Technologies no longer uses the Champion brand).

With battery sales and demands running high, Gould-National diversified by acquiring companies that produced related products to strengthen its position in the automotive industry. During the next 20 years, Gould acquired more than 10 companies. By 1976, when Gould merged with I-T-E Imperial Corporation, it had its first billion-dollar year. In 1989, Gould-National Battery began export of Absolyte II batteries to Nippon Telegraph and Telephone (NTT) of Japan, becoming the first and only U.S. or European company to do so. A year later, the company opened GNB Japan, and in 1994, established GNB China in Hong Kong. GNB scored an award-winning accomplishment in 1996 when the company installed a Battery Energy Storage System (BESS) in the island community of Metlakatla, Alaska, in a partnership with General Electric. The BESS is an installation of lead-acid batteries that smoothes out the uneven hydroelectric current, saves money in energy costs and keeps the community from having to haul fuel oil in a precarious journey from the mainland over rough seas. In its first three years of operation, the BESS saved the local power company more than $1 million. GNB Industrial Power received a prestigious national award for its work on the BESS project.

Exide Technologies Today

Today, Exide Technologies (NASDAQ: XIDE) serves the complex stored energy needs of customers around the globe, providing services and systems that enhance vehicle performance and fleet utilization as well as those that reduce risk of temporary interruptions of power supplies. Key strengths of the Company are that its products and services span global markets and geographic borders, melding two significant bases of experience and technology

Company are that its products and services span global markets and geographic borders, melding two significant bases of experience and technology expertise across its operations. This global footprint promotes better and faster means of introducing innovations in products and services, changing the way the world uses and stores electrical energy.

As a global leader, Exide has operations in more than 80 countries and has 33 manufacturing plants in 11 countries worldwide. Renowned brands including EXIDE®, GNB®, Sonnenschein®, and Absolyte® work to ensure the Company's leading position in global markets.

The Company's four global business groups – Transportation Americas, Transportation Europe and Rest of World, Industrial Energy Americas and Industrial Energy Europe and Rest of World – provide a comprehensive range of stored electrical energy products and services for motive power, network power and transportation applications. The Company's fiscal year 2010 net sales were approximately $2.7 billion.

In November of 2009, Exide introduced ReStore Energy Systems, a new Company division dedicated to the development and pursuit of new markets for renewable energy storage and lithium ion energy systems. ReStore Energy Systems is a global division that utilizes proven technologies in lead-acid energy storage, along with recently acquired lithium ion technology, to develop new application-specific solutions for high-growth, global markets such as renewable energy. Technology- and application-specific collaboration with customers will be a focus of the new division.

The Global Research, Development and Engineering organization at Exide Technologies also is making critical strides and exploring some exciting new dimensions — developing new materials, products and processes to build a solid technology foundation and infrastructure for the future. The team is working on the advancement of multiple technologies — those that may enable breakthrough products or significant new product platforms — for implementation during the next two to five years.

The Company is making a significant investment in upgrading its laboratory and R&D equipment capabilities and continues to build its professional core of qualified engineers and scientists to join its new Product Development centers in Milton, Georgia; Büdingen, Germany; and Aurora, Illinois.

Exide Global RD&E efforts are directed at the utilization of technologies (inclusive of lead- acid) across applications, thereby seeking to maximize efficiencies and accelerate the global growth of new products across multiple product lines and businesses. Overall, the global organization has a strong focus on engineering and product development including those in emerging renewable energy (solar and wind turbines) with large storage applications, coupled with a strategic business fit concerning hybrid electric vehicles (HEVs).

Updated June 2010

1988 (Aug 31) - LA Times article "Gould Was Too Star-Struck for Its Own Good"

See [HN00NM][GDrive]

Looks unsettling. A U.S. electronics and computer company is being purchased by a Japanese giant, Nippon Mining Co., which at $6.5 billion in sales ranks No. 162 on Fortune's list of the world's biggest firms outside the United States.

The last time something like this happened--when Fujitsu Ltd. tried to buy Fairchild Semiconductor in 1987--the U.S. government stepped in to block the deal and prevent the sale of U.S. technology.

But that's not likely to happen in the case of Gould and Nippon Mining. The story on the $1.1-billion deal announced Tuesday is that of a Japanese partner buying out a crippled company that was already liquidating itself piecemeal.

Gould's technology has long been shared with Nippon, an oil refining and minerals company that has been partner to the Chicago-based firm in several ventures. Also, there are signs that Gould's investment bankers have shopped the company around in recent months, with no U.S. takers.

So Nippon gets to pick up the remaining pieces of a company that in the last 20 years has demonstrated both the creativity of a strong and vaulting ego, and also its destructiveness; both a strength and a weakness of U.S. business.

The story of Gould, once Gould National Battery Co., is the story of William Ylvisaker, now retired at 64, a one-time securities analyst who rose through a series of jobs in manufacturing to become the chief executive of Gould in 1969.

Gould then made car batteries, other engine parts and ball bearings. It had less than $500 million in sales, but it made good products and a tidy profit that it rigorously reinvested in its business.

Profits Didn't Come

But Ylvisaker was impatient with mundane products like batteries and ball bearings. He was determined to put Gould into high tech, to make the old company future-oriented and to catch the eye of Wall Street and get the stock price flying. So in the 1970s, he sold many of the older industrial businesses and bought electronics companies. "You've either got to believe or not believe," he declared and drove older hands from the company.

By 1980 he had built Gould into a $2.2-billion sales company and to his credit had added several promising product lines to Gould's traditional electrical lines. But greater profitability failed to follow the buildup in sales. One reason was that Ylvisaker, for all his talk about building for the future, didn't reinvest in the business the way his predecessors had.

And he made mistakes. When Gould came up with an advanced car battery in 1983, Ylvisaker used the development as an opportunity to sell the battery business. Batteries may have been a decent business, but it didn't fit with the image Ylvisaker wished to impart to Wall Street and the public--of a high-tech, glamorous company. As part of the glamour he even made Florida's Palm Beach Polo Club a subsidiary of Gould.

The company became a case study in American industry's bad habits. "American companies look at their businesses as stars and dogs," says Kenichi Ohmae, the management consultant and author who heads the Tokyo office of McKinsey & Co. "And they always want to sell the dogs and keep only the stars. That may be logical, but it lacks a time horizon.

"It doesn't recognize that times and businesses change," says Ohmae. He might have been describing Gould, which failed to recognize new opportunities in batteries and which in the 1980s became a company furiously buying and selling one business after another and talking about restructuring. It declined in sales and suffered losses--$175.7 million in 1985, $95.6 million last year.

But, surprisingly, despite the chaos Gould came up with a few hotshot products. Its copper foil is one of the standard materials for electronic circuit boards, and it has good products in fiber optics and a powerful super-minicomputer.

Nippon Mining has been marketing those products in Japan. Now it will inherit the good businesses worldwide.

Nippon is no slouch technology-wise. Nippon President Yukio Kasahara, like Ylvisaker, saw that his company had to get into future-oriented business. So Nippon invested in advanced metals, and in optics, biotechnology and electronics. It already owns a titanium company in Michigan and a couple of small high-tech companies in California.

But Nippon didn't forsake its base in metals or petroleum refining. Kasahara hasn't sold old businesses to buy new ones. Rather, he has added businesses and invested in them. Thus, Nippon has grown as Gould has withered. Kasahara hasn't let ego stand in the way of common sense.

https://en.wikipedia.org/wiki/Gould_Electronics

https://en.wikipedia.org/wiki/Systems_Engineering_Laboratories

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Internet Scripophily Museum of Computing : Gould Inc -> Computers

Source : [HW001S][GDrive]

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Gould Inc.

The **National Battery Company** (NBC), incorporated in 1928, acquires control of the **Gould Storage Battery Company** in 1930. After that, the latter operates as a subsidiary under the name **Gould Storage Battery Corporation**. NBC purchases **the storage battery division of the Philco Corporation** in 1947. Three jaars later, NBC changes its name into **Gould-National Batteries, Inc**. (GNB).

In 1969, GNB merges with the **Clevite Corporation**, a manufacturer of precision automotive parts, marine electronics and batteries. The new entity results in **Gould, Inc.,** and engages more in digital electronics and computer peripherals. After the acquisition of **Systems Engineering Laboratories**, a manufacturer of minicomputers, Gould becomes a supplier of mini- and superminicomputers including CAD/CAM turnkey computer systems.

1970s

- 1971 Gould wins a $1.5 billion U.S. Navy procurement contract for the computerized Mark 48 torpedo.
- 1973 Introduces the **Gould 700 line of computer-output microfilm (COM) recorders**. In 1975 compatible **Gould Beta COM** systems include a disk file, a stroke character generator, modular software, and an operator console.
- 1974 The Gould Plotmaster System, an off- and online electrostatic printer/plotter system, is introduced.
- 1975 3M Company acquires Gould's Graphic Systems Division which produced the computer-output microfilm (COM) recorders.
- 1975 The company announces the Gould 6000 analog to digital data logger-reader and one year later the Gould 6100 data logger-reader. These systems collects, digitizes and stores low-frequency data on magnetic tape for subsequent processing e.g. by one of Gould's printer/plotter systems.
- 1977 Gould introduces a **remote graphics processor (RGP)** that gives remote terminals the capability of generating hard copy when coupled with a Gould 5000 Series electrostatic printer/plotter.
- 1977 Gould acquires **Modicon Corporation**, a pioneer in PLC's (programmable logic controllers)
- 1979 Gould does not succeed in acquiring the Fairchild Camera and Instrument Corporation and the Mostek Corporation. As a result Fairchild was acquired by Schlumberger Ltd and Mostek by the United Technologies Corporation.

1980s

- 1981 Gould acquires Systems Engineering Laboratories which continues to operate as the Gould Computer Systems Division.
- 1981 Gould acquires American Microsystems, Inc., a maker of custom semiconductors.
- 1983 A pair of **Gould SEL 32/8780** digital minicomputers are used in **SAIL (Shuttle Avionics Integration Laboratory** simulator environment). Other SEL computers are used for digital autopilot simulation, solving equations of motion, radar altimeter, and other nonavionics functions.
- 1984 Gould's Computer Systems Division launches the **PN9000 series of super-minicomputers** running on UNIX
- 1984 Gould introduces the **CONCEPT/32 family of real-time 32-bit minicomputers**. The systems run on Gould's Process Automation and Control Executive, PACE/32, a menu-driven software system which allows engineers to implement process automation strategies without programming.
- 1984 The 32-bit **PowerNode 6000 runs on Gould's UTX/32** (Universal Time-sharing Executive) operating system, a compatible multiprocessor extension of the Unix operating system consisting of AT&T System V and Berkeley BSD environments. The system comes with the Gould Selbus, which offers a data transfer rate of 26.7 Mb/sec.
- 1984 Gould enters the **CAD/CAM** marketplace as a turnkey supplier with the introduction of the **PowerStation 3100 and 5100**. These two standalone workstations for mechanical CAD/CAM applications are UNIX-based and use a software package from Vulcan Software under a software license agreement.
- 1985 One of Gould's primary contributions to the real-time computing world was its "**Reflective Memory**" technology which allowed up to eight computers to share distributed memory at a high speed.
- 1986 Introduces the **PowerNode 9000 32-bit computer systems**. An optional 32-bit Internal Processing Unit, a duplicate of the CPU, can be added to the system to improve computational throughput. Up to 16MB of main memory can be optimized with up to 64KB of cache memory per processor.
- 1987 Introduces the **NPL family of mini-supercomputers** for computationally intensive engineering applications. The NP1, the first series of the new family, has an open systems architecture, including parallel and high-speed vector processing, and massive memory. The NP1 models range in price from $395,000 to $2.9 million. The largest system, the Model 480, has up to four billion bytes of physical memory.
- 1987 Acquired by **Nippon Mining and Metals**
- 1989 Sells its computer division to **Encore Computer Corporation** and its **Modicon** division to AEG.

2003 book - "Stuart Symington : A Life " by James Olson - Pages 17 and 18

See [HB000H][GDrive]

NOTE - "Uncle Charlie" is Charles Julian Symington (born 1883) .

As might be expected, his family came to the rescue. Uncle Tom, who had given Stuart his first job in Rochester, was at work in Baltimore developing new products for the railroad industry and thought Stuart might be of some help in the business. So Stuart and Eve sold their house in Rochester, packed up Baby Ttm, and moved into "a weird little apartment in Baltimore," part of the Garden Apartments on University Avenue, bordering on the exclusive Roland Park neighborhood where Stuart lived for a time while growing up. 3 "Eve was completely understanding and loyal, which bolstered me plenty," Symington later wrote.

The young couple did not remain long in Baltimore. Through the works manager at the Rochester plant, who was more of a friend than the vice president had been, Stuart got word of a company in Rochester that made sewer pipe and clay conduit for telephone lines which was about to go into receivership.

The company owned a bed of clay in Pennsylvania that the works manager said would be excellent for producing the molding sand used in the manufacture of iron and steel castings. Stuart, who apparently had ready access through his uncles to large sums of money, persuaded Uncle Tom that the clay bed would be a good investment, and early in 1926 he went to Rochester with a certified check for three hundred thousand dollars to bid on the property. While in Rochester he met an oil man from Pennsylvania, Vernon Taylor, who also was interested in the property. Taylor suggested that they form a partnership and buy the land together.

This was satisfactory with Tom, who joined in the establishment of the Eastern Clay Products Company, with Stuart as president. The company sold clay products to large foundries all over the country, and during the first year made a profit of 40 percent. Clearly, young Stuart knew how to run a company.

Uncle Charlie asked him to return to Rochester as his executive assistant (His uncles for some years had assumed a familial responsibility for his well-being, and with the rather sudden death of his father on February 19 1926, that sense of responsibility increased. They were learmng, however, that in young Stuart they had a man who could run a _busmes~ and make money on his own. He would come to them for help from time to time, but he surely did not need to be taken care of.) Charlie's company had expanded rapidly, purchasing the ***Gould Coupler Company*** *in Buffalo and its subsidiaries, the* ***Gould Storage Battery Company*** *and the* ***Gould Car Lighting Corporation****. The entire operation they renamed* ***Symington-Gould****.*

So it was back to Rochester. Stuart kept his interests in the Eastern Clay Products Company, arranging with Taylor for someone else to serve as president. The young family moved into a house on fashionable East Avenue in the Brighton section of Rochester, "one of Rochester's proudest addresses. "5 While living there, a second son, James Wadsworth Symington, was born.

The family didn't stay long in Rochester. Stuart's uncles offered him the presidency of the battery company in Buffalo. After thinking about it for a while, he turned them down, saying that he knew nothing about selling batteries, but was confident he could manufacture them. He suggested that they make him operating vice president. They agreed, and the family moved to Buffalo, taking up residency in a new high-rise apartment on Park Circle.6

In a short time, however, Stuart found himself at odds with the newly appointed president of the company, a likable person who apparently found it difficult to make tough decisions. Stuart's efforts to clean up the operation ran afoul of some of the senior executives, who understandably took umbrage at having a twenty-six-year-old boy tell them how to run their business. Two of them threatened to quit unless Stuart resigned, and the president told Stuart that he had no choice but to support chem. ***Stuart went down to Baltimore to talk to his Uncle Donald, president of the Baltimore Trust Company and a major investor in Symington-Gould. He suggested chat the brothers get rid of the battery company's management and make him president, assuring his uncle that he had become convinced he could handle selling as well as manufacturing.***

Uncle Donald replied that they couldn't do chat, but told Stuart he could have a position in a company in Baltimore in which the uncle had an interest. Stuart countered by suggesting that the uncles let him use a building in Rochester, which was being vacated because they were selling the car lighting business, to manufacture radio parts. They agreed, and set up a new company called Valley Appliances, Inc., with Stuart as president.?

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Housatonic

Joseph Peter Grace (born 1913)

Wikipedia J. Peter Grace

[HK0019][GDrive]

Joseph Peter Grace (**May 25, 1913** – April 19, 1995) was an American industrialist. He was president of the diversified chemical company **W. R. Grace and Company** for 48 years.

1913 (May) - Born Manhasset, New York

Joseph Peter Grace was born in Manhasset on May 25, 1913. When he was born, his family was already very wealthy.

His father was **Joseph Peter Grace, Sr. (1872–1950)** (see wikipedia - https://en.wikipedia.org/wiki/Joseph_Peter_Grace,_Sr.).

*"[Even though Peter was born into a wealthy family], after being educated at St. Paul's School in Concord, N.H., and at **Yale**, where he lettered in three sports, in 1936 the 23-year-old took a job in the W. R. Grace mailroom.*

During his early years with the company, Mr. Grace had the chance to indulge his passion for athletics.

A world-class polo player, in the winters he played goalie at night for the St. Nick's semiprofessional hockey team in New York." [aa2]

1941 - Married Margaret Fennelly

He married Margaret Fennelly in 1941, and the couple remained together until his death.

1945 - President and CEO of W. R. Grace and Company

[He] succeeded his father, **Joseph Peter Grace, Sr. (1872–1950)** (see wikipedia - https://en.wikipedia.org/wiki/Joseph_Peter_Grace,_Sr.) as President and CEO of **W. R. Grace and Company** in 1945 when his father suffered a stroke. **W. R. Grace and Company** in was founded by his grandfather William R. Grace, the first Roman Catholic to be elected Mayor of New York City. "His maternal grandfather was Charles B. Macdonald, a major figure in early American golf who built the first 18-hole course in the United States."

Saved Wikipedia article

See : [HK0018][GDrive]

Personal life

Grace was the kind of man who, at age seventy, Indian-wrestled fellow chairmen of the board at his desk, showered in the evening to save time getting to work in the morning, wore a Beretta pistol (for terrorists), and, as a conservative Democrat, took out a full-page ad in *The New York Times* to support President Ronald Reagan's tax cuts.

[...]

Politics

In the Oval Office in 1984

In the Kennedy administration, J. Peter Grace was head of the Commerce Department Committee on the Alliance for Progress. President Reagan, in announcing the selection of J. Peter Grace to lead The Grace Commission on waste and inefficiency in the Federal government, said:

> We have a problem that's been 40 years in the making, and we have to find ways to solve it. And I didn't want to ruin your appetites, so I waited till now to tell you this, but during the hour we're together here eating and talking, the Government has spent $83 million. And by the way, that includes the price of your lunch. [Laughter] Milton Friedman is right. There really is no such thing as a free lunch. The interest on our debt for the last hour was about $10 million of that.
>
> In selecting your Committee, we didn't care whether you were Democrats or Republicans. Starting with Peter Grace, we just wanted to get the very best people we could find, and I think we were successful.
>
> I'll repeat to you today what I said a week ago when I announced Peter's appointment: Be bold. We want your team to work like tireless bloodhounds. Don't leave any stone unturned in your search to root out inefficiency.

Mr. Grace, a Democrat, was asked what he would say to the campaign theme of Walter Mondale, the 1984 Democratic Presidential candidate, that higher taxes would be required to ease the deficit regardless of who wins the November election.

"I'd tell him he's nuts," Grace said. "He's wrong. He's wrong."

Awards and memberships

In 1967, he was awarded the Laetare Medal by the University of Notre Dame. In 1984, Mr. Grace received The Hundred Year Association of New York's Gold Medal Award "in recognition of outstanding contributions to the City of New York." That year he also received the S. Roger Horchow Award for Greatest Public Service by a Private Citizen, an award given out annually by Jefferson Awards. Grace was a leader in the American Association of the Sovereign Military Order of Malta. Grace was a member of the conservative American organization the Council for National Policy. He was responsible for the, and co-founded "Citizens Against Government Waste" with Jack Anderson in 1984.

1995 (April 21) - Passing

ARTICLE : [HN00MK][GDrive]

OBITUARIES

J. Peter Grace

William Scott, 46; Led AIDS Groups

William Arnold Scott, who founded organizations aimed at increasing awareness of gay and lesbian concerns in Houston and became a nationalfigure on AIDS issues, died on April 4 at Park Plaza Hospital in Houston. He was 46 and lived in Houstn.

The cause was complications from AIDS, said a spokesman for the Texas Board of Health, which oversees programs and policies of the Texas Department of Health. Mr. Scott had been a member of the board since 1988.

Mr. Scott was a past president of the National Lesbian and Gay Health Foundation. In Houston, he founded counseling services and support groups that aided men with the AIDS virus and was a co-founder of the AIDS Foundation of Houston.

Mr. Scott was born in Bay Shore, L.I., and received an undergraduate degree from Mercy College and a master's degree in social work from the State University of New York at Albany. He had a private practice as a social worker and psychotherapist in Houston.

He is survived by his companion, Jose Rodriguez of Houston; his mother, Stella Martha Scott of Haverstraw, N.Y., and three brothers, Almos, of Wilmington, N.Y., Joseph, of Stny Point, N.Y., and Lawrence, of Charlotte, N.C.

Books of The Times

J. Peter Grace, Ex-Company Chief, Dies at 81

By KENNETH N. GILPIN

J. Peter Grace, the outspoken and at times controversial industrialist who headed a major American company longer than any other chief executive, died of cancer on Wednesday at St. Vincent's Hospital in Manhattan after a long illness. He was 81 and lived in Manhasset, L.I.

Although his company, W. R. Grace, always came first, Mr. Grace was extraordinarily active in public and religious circles, and in his younger days was a star athlete.

A leading layman of the Roman Catholic Church, Mr. Grace became widely known to the public from 1982 to 1984 for his service as head of President Ronald Reagan's Private Sector Study on Cost Control in the Federal Government, which came to be known as the Grace Commission.

In that role, Mr. Grace, a longtime critic of what he regarded as profligate Government spending, directed a group of about 2,000 business executives to come up with ways to root out waste and inefficiency in the Federal Government.

"I have 9 children, 12 grandchildren, and I'm concerned about their freedom," Mr. Grace said in a 1983 interview. "We've got to get this growth rate and the outlays down. It can't go on this way. If this deficit goes to $1 trillion a year, our freedoms are gone."

While his views on the evils of the Federal deficit have gained currency over time, from time to time Mr. Grace's actions and opinions on other matters generated a furor.

There was a severe public reaction, for instance, when W. R. Grace admitted that in the early 1950's that it employed as a consultant a German chemist who was convicted in the Nuremburg war-crimes tribunal. And Mr. Grace unleashed a firestorm of protest after a 1982 speech in Dallas when he commented that the Federal food stamp program was basically a subsidy for Puerto Ricans. He subsequently apologized.

Despite his widespread interests, the company that bore his family name was Mr. Grace's enduring passion. For 47 years, Mr. Grace ran W. R. Grace & Company, a $5 billion specialty chemicals and specialized health-care company that his grandfather, William R. Grace, founded in Peru in 1854 as a shipping and trading company. And even when he agreed, reluctantly, to step aside in 1992, he remained an active force as chairman of the company's board.

"I have none," he said.

Even as his health deteriorated this spring, Mr. Grace fought tenaciously but unsuccessfully to retain control of the company that for more than 140 years always had a member of his family at the top.

Following the sudden resignation on March 2 of J. P. Bolduc, the man who succeeded him, Mr. Grace and his company were confronted by a group of disgruntled shareholders demanding sweeping changes in the structure and composition of W. R. Grace's board of directors.

Included in those demands was a requirement that Mr. Grace and a group of longstanding friends and business associates not stand for reelection to the board at the company's annual meeting on May 11.

In late March, the company said it would comply with the shareholder

The man who ran W. R. Grace for 47 years stepped aside reluctantly in 1992.

demands, but the board did not formally meet to consider the changes until April 6.

At that meeting, in the W. R. Grace Building in midtown Manhattan, a gravely ill Mr. Grace spoke against the changes, which he called "offensive," and urged the board to resist their being put into effect.

His stand was completely in character. A short man who spoke with a slight lisp, Mr. Grace once told a reporter: "I am never discouraged. When you get discouraged you ought to pack it in."

The board did not agree, and the measures were approved. Although he would have stayed on as honorary chairman, Peter Grace's 59-year career at W. R. Grace was over.

It was a career circumstances did not require he pursue.

When Joseph Peter Grace was born in Manhasset on May 25, 1913, the family was already wealthy. Young Peter grew up with all the creature comforts and the virtual certainty they would be his for life.

Yet, after being educated at St. Paul's School in Concord, N.H., and at Yale, where he lettered in three sports, in 1936 the 23-year-old took a

to indulge his passion for athletics.

A world-class polo player, in the winters he played goalie at night for the St. Nick's semiprofessional hockey team in New York.

When his father, Joseph P. Grace, suffered a stroke in 1945, Mr. Grace took over as president and chief executive. During his tenure, Peter Grace engineered and oversaw two separate transformations of the company he inherited.

From what was originally a Latin American trading, shipping and banking company, he remade the company in the 1950's and 60's into a conglomerate with interests from chemicals to consumer goods.

But by the mid-1980's, it was clear that W. R. Grace was in too many businesses. And Mr. Grace recruited Mr. Bolduc, his top aide on the Grace Commission, to revamp the company again. Today, W. R. Grace is the world's largest specialty chemical company and a leader in specialized health care.

Deeply religious throughout his life, Mr. Grace was a founding member of Legatus, an international organization of Catholic chief executives whose mission is to study, live and spread the faith in their professional and personal lives.

He was also president of the Catholic Youth Organization of the Archdiocese of New York. In 1967, the University of Notre Dame awarded him the Laetare Medal, the highest Catholic honor in the United States.

Over his life, he served on eight different corporate boards, including Citicorp and Citibank, N.A.

He was also active in a number of charitable interests, especially those whose activities focused on New York City's disadvantaged youths, a group that includes the Grace Institute, Covenant House and the Inner City Scholarship Fund.

Mr. Grace is survived by his wife, the former Margaret Fennelly, whom he married in 1941; nine children, J. Peter Grace 3d of Locust Valley, L.I., Dr. William R. Grace of Plandome, N.Y., Michael S. Grace of Far Hills, N.J., Margaret Mary Grace-Shethar of Colorado Springs, Colo., Mary J. Grace of Manhattan, Nora M. O'Donnell of Delray Beach, Fla., Patrick P. Grace of Greenville, S.C., Theresa M. Sears of Manhasset, and Christopher G. Grace of Boca Raton, Fla.; one brother, Charles M. Grace of Santa Monica, Calif.; a sister, Janet M. Grace of Old Westbury, L.I., and 20 grandchildren.

A funeral mass for Mr. Grace will

[HN00ML][GDrive]

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In an interview in 1990, when he was 77, Mr. Grace [said he has no] asked about his retirement plans.

Even as his health deteriorated [in spring of 1995], Mr. Grace fought tenaciously but unsuccessfully to retain control of the company that for more than 140 years always had a member of his family at the top.

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W. R. Grace and Company

Wikipedia W. R. Grace and Company

"W. R. Grace and Company is an American chemical conglomerate based in Columbia, Maryland. Grace is divided into two business segments: Grace Catalysts Technologies and Grace Materials Technologies. [For most of its history, Grace's main business was cargo shipping.] Grace is a specialty chemicals and specialty materials company. As of December 31, 2017, it has approximately 3,700 employees, with about 1,900 in the United States and 1,000 in Germany. In 2017, the annual sales is US $ 1.72 billion." [HK0007][GDrive]

"The company has its headquarters in Columbia, an unincorporated census-designated place in Howard County, Maryland." [HK0007][GDrive]

History [1854-1900]

William Russell Grace

"W. R. Grace and Company was founded in 1854, in Peru, by William Russell Grace [HK0008], who left Ireland due to the potato famine, and traveled to South America with his father and family. He went first to Peru to work as a ship's chandler for the firm of Bryce and Company to the merchantmen harvesting guano (bird droppings), used as a fertilizer and gunpowder ingredient due to its high levels of phosphorus and nitrogen" [HK0007][GDrive]

"His brother Michael Paul Grace [HK0009] joined the business and in 1865 the company name was changed to Grace Brothers & Co. The company set up head office operations in New York in 1865. Working in fertilizer and machinery, the company was formally chartered in 1872, and incorporated in 1895." [HK0007][GDrive]

Early shipping business / "Grace Line" / "New York & Pacific Steamship Co." [Pre-1900]

"For most of its history, Grace's main business was cargo shipping. To get cargo from Peru to North America and Europe, including guano and sugar, and noticing the need for other goods to be traded, William Grace founded a shipping division. Grace Line began service in 1882, with ports of call between Peru and New York. Regular steamship service was established in 1893, with a subsidiary called the New York & Pacific Steamship Co., that operated under the British flag." [HK0007][GDrive]

Incorporation

"There are two accounts of the incorporation date of W. R. Grace & Co. According to a New York Times account the company was incorporated, as part of estate and successor planning, in 1895. The three brothers consolidated most of their holdings into a new private company, incorporated in West Virginia, called W. R. Grace & Company. The consolidation involved W. R. Grace & Co. of New York, Grace Brothers & Co. of Lima, Peru, Grace & Co. of Valparaiso Chile, William R. Grace & Co. of London, and J. W. Grace & Co of San Francisco." [HK0007][GDrive]

"According to its website, W. R. Grace & Co. was incorporated in Connecticut in 1899. The listed capital of $6 million did not include Grace Brothers & Co. Limited in London or its branches in San Francisco, Lima and Callao, Peru, nor in Valparaiso, Santiago, and Concepción, Chile." [HK0007][GDrive]

"J. Louis Schaefer, who joined the company as a boy, would play a key role in not only W. R. Grace & Company, in which he became a vice president, but also as president of Grace National Bank [HK000A]. Schaefer would be a co-executor of the estate of Michael Grace with William's son and corporate successor, Joseph Peter Grace, Sr. [HK000B]. J. Louis Schaefer died in 1927." [HK0007][GDrive]

History [1900 - 1949]

1945 - J. Peter Grace Jr. assumes management

2019-04-28-wikipedia-j-peter-grace-img1.jpg /
https://drive.google.com/open?
id=12BV4uYF8xcQMv2NtbvOl8s3pWKdYzmvx

Joseph Peter Grace, Jr. (born 1913), took over management of the company after his father *Joseph Peter Grace, Sr. [HK000B]* suffered a stroke in 1945.

Shipping

"US-flag service began in 1912 with the Atlantic and Pacific Steamship Company. The activities of both companies and the parent firm were consolidated into the Grace Steamship Company beginning in 1916. The firm originally specialized in traffic to the west coast of South America; then later expanded into the Caribbean" [HK0007][GDrive]

"In 1916, Grace acquired a controlling interest in the Pacific Mail Steamship Company. In 1921, Pacific received five 535 ft. President class ships from the United States Shipping Board [United States Shipping Board] for transpacific operation. In 1923, the US Shipping board decided to place the five ships up for bid and Dollar Shipping Company [American President Lines#Dollar Shipping Company] won the bid. With no large ships for the transpacific operations Grace sold the Pacific Mail, its registered name, and goodwill to Dollar. Now without a transpacific service, Grace did not need the six intercoastal freighters and sold them off to the American-Hawaiian Steamship Company [HK000D]. At this time Grace formed a new entity, the Panama Mail Steamship Company, to operate the smaller ships that were formerly owned and used by the Pacific Mail in the Central American trade. These ships were not involved in the sale to Dollar." [HK0007][GDrive]

"On the death of William R. Grace in 1904, he was succeeded by William L. Sauders as company President followed by Joseph Peter Grace, Sr. [HK000B] who became president in 1907. In 1938 the Colombian Line merged with Grace Line bringing an end to the Colombian Line. During World War II, Grace Lines operated numerous transports for the U.S. War Shipping Administration." [HK0007][GDrive]

"J. Peter Grace, Jr. took over management of the company after his father suffered a stroke in 1945. After [World War 2] war the Grace line operated 23 ships totaling 188,000 gross tons, and an additional 14 more on bareboat charters." [HK0007][GDrive]

source - https://en.wikipedia.org/wiki/File:%22Grace_Line%22_-_NARA_-_514418.jpg
Grace Line WWII poster

Airline - Panagra

*"In 1928, Grace and Pan American Airways jointly formed Pan American-Grace Airways [HK000C] known as **Panagra**, establishing the first air link between the North and South America, that began operation in 1929."* [HK0007][GDrive]

History [1950-1999]

1953- Going public on NY Stock Exchange

"Grace listed on New York Stock Exchange with ticker GRA in 1953." [HK0007][GDrive]

1950s (early) - W. R. Grace Company employs Otto Ambros (German chemist convicted in Nuremburg Trials) as a Consultant

"W. R. Grace admitted that in the early 1950's that it employed as a consultant a German chemist who was convicted in the Nuremburg war-crimes tribunal". [nytimes article]

The scientist was **Otto Ambros** (born 1901) .

See **Joseph Peter Grace, Jr.** (born 1913) .

1954- Acquisition of Davision and Dewey & Almy

"In 1954, Grace acquired **Davison Chemical Company** and Dewey & Almy Chemical Company, establishing the basis for a few key product lines." [HK0007][GDrive]

1966-1969 - Purchase/Sale of stake in Miller Brewing Company

"The company bought a 53% stake in Miller Brewing in 1966, for $36 million; Lorraine Mulberger sold the stake for religious reasons. It sold the Miller stake in 1969 to Philip Morris for $130 million, topping a deal with PepsiCo for $120 million." [HK0007][GDrive]

1965 - Hired Dora K Crawford - Who deciphered messages in WW2 that had been encoded by Germany's Enigma machine

See [HN017X][GDrive]

The daughter of Matthew Pyne, a former Baltimore Sun Linotype operator, and Frances Corderoy Pyne, a homemaker, the former Dora Kathleen Pyne was born and raised in Ilford, Essex, a municipal borough of London.

She attended Mulley's Commercial College and with the outbreak of World War II, volunteered with the Women's Royal Naval Service.

"Then only in her teens, she was based at one of the Bletchley Park outstations, where she joined the band of women who, sworn to secrecy, used Colossus, also known as Eniac, the world's first electronic computer, to decipher messages encoded by the Enigma encryption technology used by the Nazi military," said a son, Brian D. Crawford of Arlington, Va

Mrs. Crawford, who was one of a handful of surviving code breakers, received a commendation in 2009 from Queen Elizabeth II on the 70th anniversary of when Alan Turing and his colleagues first arrived at Bletchley Park in 1939. Mr. Turing was the subject of the Hollywood movie "The Imitation Game" last year.

While Mrs. Crawford knew of Mr. Turning, she was much closer to Thomas Harold "Tommy" Flowers, an electrical engineer who designed the computer, which he named Colossus, that was used to break the German code.

In 1965, after her children reached school age, Mrs. Crawford took a job with W.R. Grace Inc. at its chemical research facility in Clarksville, and subsequently became an executive administrative assistant in the office of the president of the company's Davison Chemical Co. in downtown Baltimore.

1971 - Commissions W R Grace Building in Manhattan (NYC)

"Although W. R. Grace commissioned the Grace Building in New York City, built in 1971, the company no longer has any offices at that location."

See WIKIPEDIA - https://en.wikipedia.org/wiki/W._R._Grace_Building

1980s - Operations in China

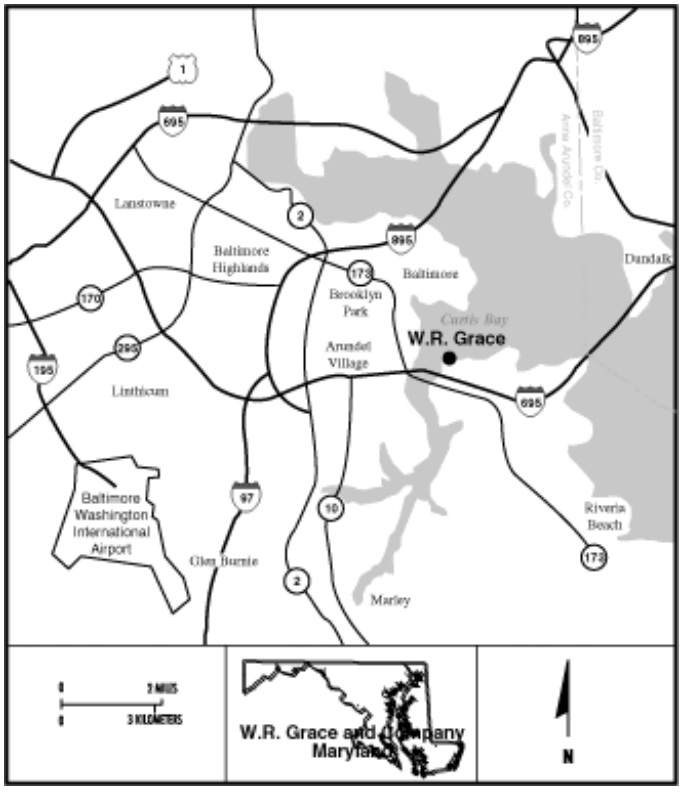
"In 1987, by buying a can sealing plant in Shanghai, Grace became the first wholly foreign-owned company to do business in The People's Republic of China." [HK0007][GDrive]

1999 - Headquarters moved from Florida to Columbia, Maryland

"Previously the company had its headquarters in Boca Raton, Florida. Prior to its closing, the Boca Raton headquarters had about 130 employees. On January 27, 1999 it announced it was moving its administrative staff to the Columbia office and closing the Boca Raton headquarters. About 40 of the employees went to Columbia, and some employees went to Cambridge, Massachusetts.] In 2014, the company emerged from a 13-year bankruptcy case stemming from asbestos claims, and immediately built a new 90,000 sq ft headquarters building on its 160-acre Columbia campus." [HK0007][GDrive]

1958-1980s Curtis Bay and Thorium extraction / Curtis Bay, Maryland

"The W.R. Grace and Company is located on an industrialized peninsula in south Baltimore, Maryland. In the 1950's the W.R. Grace and Company milled thorium for the Atomic Energy Commission (AEC), a predecessor agency for the US Department of Energy. W.R. Grace began processing radioactive materials at the site in the 1950s, when Rare Earths, Inc. (W.R. Grace's predecessor) entered into a contract with AEC to extract thorium and rare earths from naturally-occurring monazite sands. Rare Earths' contract with AEC and its license to possess, transfer and use radioactive thorium were transferred to W.R. Grace and Company. Building 23, where the thorium processing took place, was open until the late 1950s when the contract was terminated. The wastes were buried in a landfill area. Thorium processing resulted in low-level waste that was buried on the property. Radiation surveys have shown that radioactive contamination still persists in the waste burial area, the waste management area which surrounds the waste burial plot, surfaces surrounding vats and hoppers in Building 23 and alpha-radiation surface contamination in the whole of Building 23. The site was designated by DOE for remedial action under the Formerly Utilized Sites Remedial Action Program (FUSRAP) in 1984. This site was one of the 21 FUSRAP sites where cleanup responsibility was transferred to the US Army Corps of Engineers in 1997 in accordance with the Energy and Water Development Appropriations Act for FY 1998. Cleanup responsibilities transferred at that time from DOE-EM to the USACE." [HW000C][GDrive]



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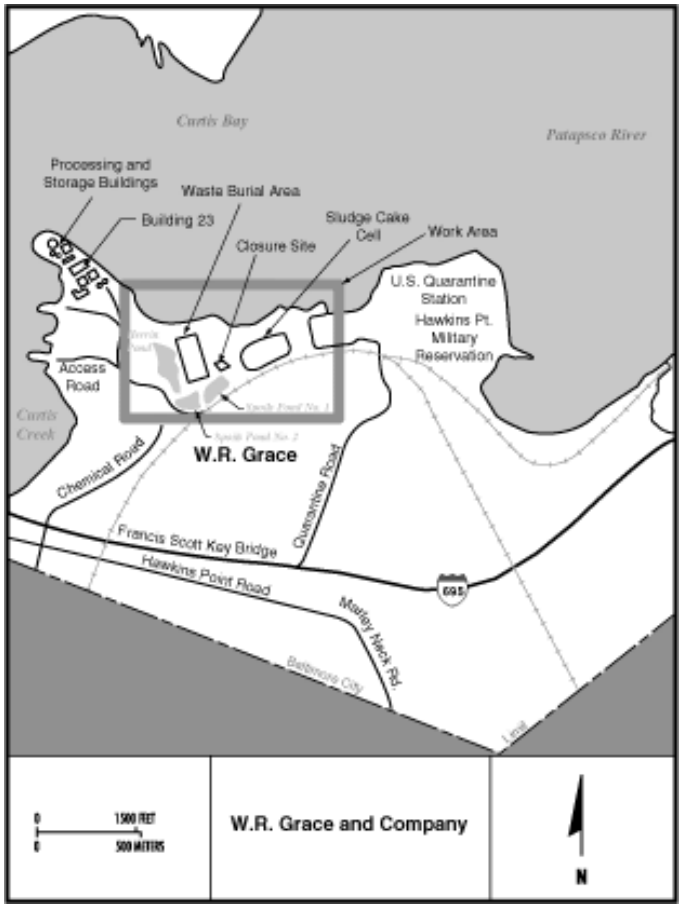


[HW000G][GDrive]

Source for below : *2015-01-maryland-dept-env-wr-grace-davison-chem.pdf / https://drive.google.com/open?id=10E_igra6YUbkBYI4rUPekHT7DWkFj13k*

This site is located at 5500 Chemical Road in Baltimore City, on a peninsula between Curtis Creek and Curtis Bay. The site has been involved in the production of agricultural and industrial chemicals since 1910. During WWII, the site was involved in the Manhattan Project.

The W.R. Grace / Grace Davison Chemical Division, Curtis Bay Facility is located on an industrialized peninsula in South Baltimore, and consists of 260 acres owned by W.R. Grace. The property is bordered on the north by Curtis Bay, on the west by Curtis Creek, on the east by the Patapsco River, and on the south by the Baltimore City Municipal Landfill.

Site History

There were both active and inactive waste disposal areas on-site. There is an inactive waste disposal area that was used to dispose of industrial, process and construction waste. There is also an inactive radiation disposal area. This area was used to dispose of waste from a pilot plant process in the 1960s. Currently in use is the wastewater plant sludge cell. Wastewater from the Waste Water Treatment Plant is directed to Herring Pond and the sludge is sent to a wastewater plant sludge cell. There is an NPDES outfall which extends from Herring Pond to Curtis Bay.

At one point, there was approximately 704,000 cubic feet of radioactive waste that had been disposed of in the radioactive waste disposal area. In 1992, an official from MDE's Division of Radiological Health stated the site had been remediated to an acceptable point for any type of use.

Chemical processing has been performed at the Grace site since 1909. In the early 1940's, Grace produced agricultural fertilizers and industrial chemicals. During World War II, the facility manufactured explosives and participated in Manhattan Engineer District activities. In 1955, Rare Earths, Inc., the predecessor of Grace, entered into a contract with the Atomic Energy Commission to extract radioactive thorium and other rare earth elements from monazite sand that was shipped to the Curtis Bay plant; the thorium processing was terminated at the Grace site in 1956. From 1912 until 1979, all waste material generated at the plant was disposed of in areas to the east of the plant proper.

1957 - New company called Nuclear Fuel Services Inc. (NFS) is created and Baltimore with financial backing from W. R. Grace / Davison Chemical

Nuclear Fuel Services Inc. was born in 1957 in Baltimore when **T.C. Runion**, **Charlie Taylor**, **Stan Reese** and **Ed Johnson**. "[The] the four men were working for National Lead Co. in Fernald, Ohio, when their lives intersected." [HN002C][GDrive]

In the 1950s, there was a "desire by Congress to have commercial nuclear power plants". [HN002C][GDrive]

""We knew that W.R. Grace [and Company] was wanting to grow into the nuclear business and that Davison Chemical Company made a lot of specialty chemicals, so we went to them for financial backing," [NFS Inc. founder Ed Johnson] said." [HN002C][GDrive]

"The Davison Chemical Company, a division of W.R. Grace, began processing radioactive materials in the late 1950s at the site of the current Nuclear Fuel Services (NFS) facility near Erwin, Tennessee (NFS 2005)." [HX0001][GDrive]

"The Report to Joint Committee on Atomic Energy Congress of the United States by the United States General Accounting Office (GAO 1967, p.5-6) from September 14, 1967, states: "AEC authorized the Davison Chemical Division of W.R. Grace & Company (Grace) to receive and process special nuclear material under license number SNM-124. Grace received its first material as an AEC licensee by lease agreement in March 1958 and its first nuclear material as an AEC contractor in May 1959." " [HX0001][GDrive]

"The Davison Chemical Co. was sufficiently encouraged by the developments in the late 1950's to consider the feasibility of constructing a reprocessing facility. In 1961, Davison expressed interest in operating the WNYNSC. January 1962, Davison outlined its plans to the AEC for constructing a In private reprocessing plant. To pursue the reprocessing venture, Davison set up Nuclear Fuel Services, Inc. (NFS), whose stock was owned by the W. R. Grace Co. (78%) and American Machine and Foundry (22%)." [HG0003][GDrive] This merger was formed in 1964. [HX0001][GDrive]

" In 1965, the UO 2 /PuO 2 MOX facility was completed, and in 1968, the light-water breeder reactor thorium, thoria, and 233 U oxide program was initiated (NFS 2005). Ownership of NFS transitioned from Getty Oil to Texaco as part of a stock buyout of Getty Oil in 1969. In 1987, NFS Services, a private Atlanta-based limited partnership, purchased NFS from Texaco. Figure 2-1 shows the location of Erwin, Tennessee. Figure 2-2 shows the principal site infrastructure for the NFS facility in 1986 (Congress 1986, p.108)." [HX0002][GDrive]

"Regulatory authority over operations was originally under the AEC (1954 to 1974) and changed to the U.S. Nuclear Regulatory Commission (NRC) (1975 to present) under Special Nuclear Material License SNM-124, as amended." [HX0002][GDrive]

See [HN002C][GDrive]

*The choice of building NFS in Erwin was a matter of logic and personal feelings. [**T.C. Runion**] said the town was close to Oak Ridge and Savannah River, a Department of Energy site close to Aiken, S.C., and a railroad siding could be obtained for the Erwin property. Plus, Erwin was his hometown.*

Taylor said the early years consisted of processing highly enriched uranium, low-enriched uranium and thorium metal. During down times, NFS made specialty chemicals. Later, NFS manufactured material for Consolidated Edison's first commercial nuclear reactor.

The company's most well-known role with the military evolved from the Navy's wishes to have a fleet of nuclear powered ships. NFS has been the sole provider of Navy fuel since 1966, and the first batch arrived at an aircraft carrier in 1969.

*"We wanted to penetrate the Navy business, so NFS and **W.R. Grace** went to work on a better type of fuel completely on our own and without government support," Johnson said. "It was a really gutsy thing to do." [...]*

He said NFS was one of the first plants to produce uranium oxide as part of the fuel that nuclear power electric generating plants needed. The material used in Erwin was manufactured at a government plant in Oak Ridge, Runion said.

Shipping

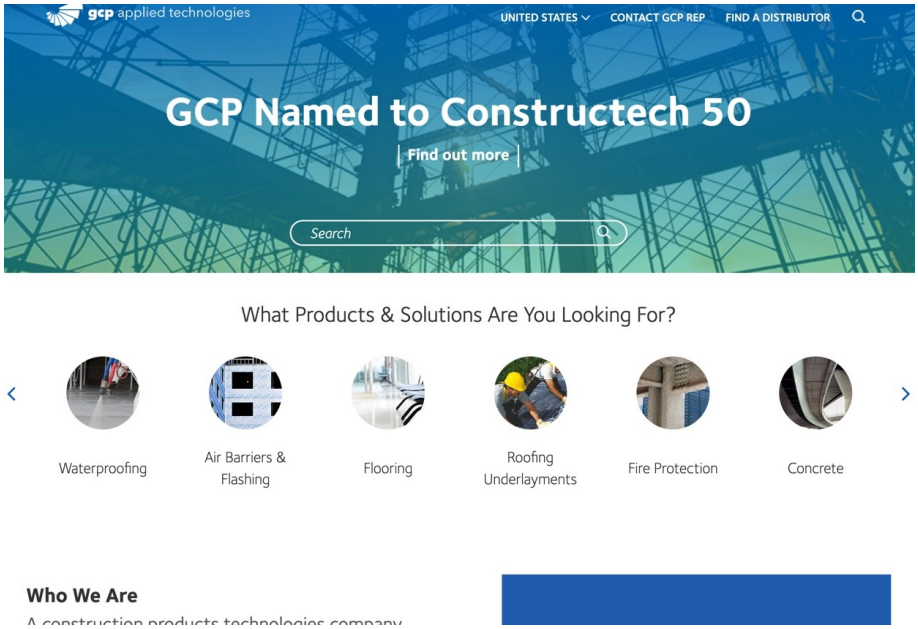
"In 1960 Grace Line, inspired by the pioneering efforts of Sea-Land Service, Matson Navigation, and Seatrain Lines, sought to begin containerizing its South American cargo operations by converting the conventional freighters Santa Eliana and Santa Leonor into fully cellular container ships. However, the effort was stymied by the opposition of longshoremen in New York and Venezuela and the ships were repeatedly laid up idle and were ultimately sold to the domestic container line Sea-Land Service in 1964. In 1963 Grace made a second attempt to containerize its South American trade when it ordered the four M-class combination passenger-cargo ships Santa Magdalaena, Santa Maria, Santa Mariana and Santa Mercedes with partial cellular holds, but they were no more successful as mixing conventional break-bulk cargo and containers in the same ship negated the operating economies that full containerization promised." [HK0007][GDrive]

"In 1969 Grace decided to exit the shipping business to concentrate on its chemical and diversification ventures. Grace Line was sold and merged into Prudential Line in 1970, which was renamed Prudential Grace Line, and was itself in turn taken over by Delta Steamship Lines in 1978, thereby extinguishing the name Grace in ocean shipping. Subsequently, Delta Steamship Lines was itself acquired and consolidated by Crowley Maritime in 1982." [HK0007][GDrive]

History [2000s]

2016 - GCP Applied Technologies created

"On February 3, 2016, Grace spin off its Grace Construction Products operating segment and the packaging technologies business into an independent company GCP Applied Technologies Inc." [HK0007][GDrive]



WIKIPEDIA

Wikipedia capture : [HK0007][GDrive]

Leadership

On the death of William R. Grace in 1904, he was succeeded by William L. Sauders as company President followed by Joseph Peter Grace, Sr. (1872–1950) who became president in 1907.

In 1974 The Peruvian Government announced that it assumed ownership of the properties of W. R. Grace & Co., Harold Logan, Grace executive vice president, stated the company would join the in governmental level talks over compensation of expropriated American concerns. The loss of Grace's properties in Peru began in 1969, when 25,000 acres of sugarcane plantations were taken over in an agrarian reform. The sugar lands were at Paramonga, 110 miles north of Lima, and at Cartavio, near Trujillo, 200 miles farther up coast. Grace still retained small mining properties producing copper, tin and silver, in southern Peru, about 100 miles north of Juliaca. Jose E. Flores, Head of W. R. Grace S.A. Peru, closed the mining operations for Grace in Latin America when the government of Peru nationalized the remaining interests.

Subsidiaries and products

Subsidiaries and some of their products include:

- Grace Catalysts Technologies
  - industrial catalysts, such as Raney nickel.
- Grace Materials Technologies
  - silica products
- Grace Construction Products
  - concrete admixtures, fibers, and grinding aids
  - concrete pigments
  - air and vapor barriers
  - fireproofing materials
  - bituminous, structural, waterproofing membranes (such as Roofing Underlayments and waterproofing materials)
- Darex
  - coatings, closures and sealants for soft drink cans and canned foods
- Residential Building Materials
  - roofing membranes and flashings for windows, doors, decks and roof detail areas

Contamination incidents

W. R. Grace and Company has been involved in a number of controversial incidents of proven and alleged corporate crimes, including exposing workers and residents of an entire town to asbestos contamination in Libby and Troy, Montana, water contamination in Woburn, Massachusetts, and an Acton, Massachusetts, Superfund site.

Asbestos

While Grace no longer makes asbestos-related products, W. R. Grace and Company has faced more than 270,000 asbestos-related lawsuits, of which 150,000 have been settled or dismissed and 120,000 remain.

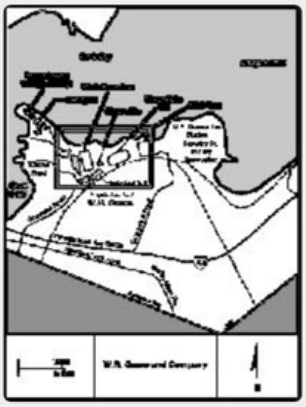
On April 2, 2001, Grace and its subsidiaries in United States filed voluntary petitions for Chapter 11 Bankruptcy reorganization in Bankruptcy Court for the District of Delaware. The company was trying to find the resolution through federal court-supervised reorganization in response to the quickly growing number of asbestos-related bodily injury claims.

On September 19, 2008, Grace filed a revised plan of reorganization to the same Court, jointly by the asbestos injury claimants. In January 2011, the Court issued an order in favor of the new plan and in January 2012, the Court denied all appeals and affirmed the plan. After a motion for reconsideration, the plan was reaffirmed on June 11, 2012.

On February 3, 2014, Grace emerged from this asbestos-related Chapter 11 bankruptcy which took more than 12 years. Under the plan of reorganization approved by the Court, all parties filings the asbestos-related claims should direct their inquiry to either an asbestos personal injury trust or a separate asbestos property damage trust.

W. R. Grace and Company (FUSRAP Site) in Curtis Bay, Maryland

W. R. Grace & Co.



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2 files, last one added on Mar 22, 2009
Album viewed 241 times

[HW000D][GDrive]

West Valley

1961 While industrial interests explore the viability of commercial reprocessing, the state of New York moves to acquire land in the town of Ashford, near West Valley, for an atomic industrial area. The state Office of Atomic Development establishes the Western New York Nuclear Service Center (WNYNSC) on the 3,345 acres of land it has taken title to.

1962 Davison Chemical Company establishes Nuclear Fuels Services, Inc. (NFS) as a reprocessing company. It reaches an agreement with the state to lease the WNYNSC.

1966 Nuclear Fuels Services develops and operates 200 acres of the WNYNSC. It operates the site as a nuclear fuel reprocessing center from 1966 to 1972, and accepts radioactive waste for disposal until 1975. During the operation of the plant, 640 metric tons of spent reactor fuel are processed, resulting in 660,000 gallons of highly radioactive liquid waste. The liquid waste is stored in an underground waste tank. NFS also utilizes a 15-acre area for the disposal of radioactive waste from commercial waste generators, and another seven-acre landfill is used to dispose of radioactive waste generated from reprocessing.

1976 Following four years of pursuing modifications to the plant, NFS decides the costs and regulatory requirements of reprocessing make the venture impractical. The company decides to exercise its right to leave the site after its lease expires on December 31, 1980, transferring ownership and responsibility for the waste and facility to the state of New York. The state initiates talks with the Federal Energy Research and Development Administration to sort out ownership of the waste and environmental remediation responsibility.

1980 Congress passes the West Valley Demonstration Project Act, Public Law 96-368, directing the U.S. Department of Energy (DOE) to take the lead role in solidifying the liquid high-level waste and decontaminating and decommissioning the facilities at West Valley.

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Album viewed 449 times

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Source : [HG0003][GDrive]

In 1959, New York State's interest in attracting atomic development culminated in the formation of the Office of Atomic Development (OAD) as an independent agency responsible for coordination of atomic regulatory and development functions within the State. To encourage nuclear development, the OAD acquired the West Valley site in 1961, which became designated the Western New York Nuclear Service Center (WNYNSC). The purpose of the Center was to store nuclear fuels and radioactive wastes and to be available for related industrial development.

The **Davison Chemical Co.** was sufficiently encouraged by the developments in the late 1950's to consider the feasibility of constructing a reprocessing facility. In 1961, Davison expressed interest in operating the WNYNSC. January 1962, Davison outlined its plans to the AEC for constructing a In private reprocessing plant. To pursue the reprocessing venture, Davison set up Nuclear Fuel Services, Inc. (NFS), whose stock was owned by the W. R. Grace Co. (78%) and American Machine and Foundry (22%). NFS, in its proposal, indicated its willingness to provide and maintain storage for a limited period of time for the high-level liquid wastes (HLLW) resulting from the reprocessing operations. Subsequently, the wastes would become the responsibility of the AEC. NFS also said it was willing to collect and return to the AEC an amount calculated to provide the estimated full costs for perpetual storage at the point of turnover. NFS was simultaneously negotiating to make New York State responsible for perpetual care of the wastes. The proposed, and eventually approved, method of waste disposition was to store them in liquid form in underground storage tanks, similar to the method being used at AEC production facilities.

Source : [HG0004][GDrive]

A stated purpose of the **Atomic Energy Act of 1954** was to promote "wide-spread participation in the development and utilization of atomic energy for peaceful purposes." The Atomic Energy Commission (AEC) actively encouraged private industry to enter the field of nuclear power. By the end of 1955, the AEC concluded agreements for the first few demonstration nuclear power reactors.

In 1954, the AEC began a program to encourage private reprocessing of irradiated nuclear fuel as part of its program to commercialize the entire nuclear fuel cycle. By January 1956 this program resulted in an announcement by the AEC that:

• The AEC would make available to industry AEC technology on reprocessing and the description of fuels available for reprocessing

• The AEC invited proposals by industry to design, reprocessing plants construct, and operate

• The AEC would provide assistance in the form of a baseload and allow the use of AEC facilities for development work and training.

During discussions of this program with industry, three predominant issues were raised. The first was the lack of adequate demand to make a commercial reprocessing plant economically viable. The AEC offered to provide a baseload of fuel from its production reactors to support the plant until adequate demand developed.

The second predominant issue was the lack of a basis for establishing reasonable charges for services. In 1957, the AEC announced a policy to assure that reprocessing services would be available for the first commercial irradiated fuel in 1961. Under this policy, the AEC would provide fuel reprocessing services in AEC facilities until services were available commercially at reasonable prices or until June 30, 1976. To establish charges for those services, the AEC designed a hypothetical reprocessing plant. The reasonableness of commercial charges was to be based on comparison with these hypothetical plant charges.

The third predominant issue was responsibility for the high-level radioactive wastes resulting from commercial reprocessing. The AEC policy was to encourage the maximum participation of industry in the management of these wastes. It was recognized that industrial longevity was insufficient to assume ultimate responsibility for these wastes. For West Valley, this factor was overcome by having ownership of the land reside with the State.

Perceiving an opportunity to promote industrial development within the State, New York, in 1956, had created a State Council on the Development of Atomic Energy, followed by the formation of the Office of Atomic Development (OAD) in 1959. In 1961, OAD acquired a 1350-hectare (ha) (3345-acre) site near the hamlet of West Valley in the Town of Ashford, Cattaraugus County, about 48 km (30 miles) south of Buffalo. The site was judged to be favorable for a nuclear fuel reprocessing plant and attendant waste facilities. It was favorably located with respect to projected nuclear reactor development in the north eastern and mid-Atlantic United States. In addition, the silty till in the West Valley area was relatively impermeable to water and would, therefore, provide protection against migration of waterborne radioactivity through the ground. Further advantages of the site were a low population density in the area and meteorological conditions favorable for atmospheric dilution of any radioactivity released. The site was named the Western New York Nuclear Service Center (WNYNSC); it is also referred to as West Valley or the Center.

The developments of the late 1950s were sufficiently encouraging for utility and industrial concerns to form the Industrial Reprocessing Group (IRG). The IRG, composed of Davison Chemical, Consolidated Edison, Commonwealth Electric, and Northern States Power, in 1ate 1959 initiated a technical and economic feasibility study of reprocessing. As a result of IRG's interest, the AEC delayed indefinitely the modification of facilities planned for processing commercial fuel, but would continue to receive fuels for which reprocessing capability did not exist or charges were not reasonable.

In 1961, the Davison Chemical Company expressed interest in the West Valley site. In January 1962, Davison outlined its plans to the AEC for constructing a private reprocessing plant. To pursue the reprocessing venture, Davison (which was acquired by W. R. Grace and Company) set up Nuclear Fuel Services, Inc. (NFS). W. R. Grace owned 78% of the NFS stock and American Machine and Foundry owned the rest.

NFS indicated its willingness to provide and maintain storage for a limited period of time for the high-level liquid wastes resulting from the reprocessing operations. Subsequently, the wastes would become the responsibility of the AEC. NFS also said it was willing to collect and return to the AEC an amount of money calculated to provide the estimated full costs for perpetual storage at the point of turnover. NFS was simultaneously negotiating to make New York State responsible for perpetual care of the wastes. The proposed, and eventu ally approved, method of waste disposition was to store the wastes in liquid form in underground storage tanks, similar to the method being used at AEC production facilities

W. R. Grace and Co. - Hiring of Otto Ambros

"PRINCIPAL CHARACTERS" ....

Otto Ambros: IG Farben chemist, codiscover of sarin gas and Buna synthetic rubber, he was awarded one million reichsmarks by Hitler as a scientific achievement award. Served the Reich as chief of the Committee-C for chemical warfare, manager of IG Farben's slave labor factory at Auschwitz and manager of the Dyhernfurth poison gas facility. He was tried and convicted at Nuremberg, and after an early release he worked for the U.S. chemical corporation W. R. Grace, the U.S. Department of Energy, and other European government and private sector business concerns.

Chapter 22 - 2014-operation-paperclip-annie-jacobsen-full-pdf.pdf / https://drive.google.com/open?id=11H814WZdxYyOKpQLM57z6wffU6EKsrvH

More important to the Operation Paperclip legacy is that when Rögner filed his civil suit, he named another name: Dr. Otto Ambros. Ambros was listed as a criminal in Rögner's complaint because he had been general manager of IG Farben's Buna factory at Auschwitz. German prosecutors looked into the Ambros case and saw that Ambros had already been tried and convicted of war crimes at Nuremberg and that he had served two years and five and a half months in Landsberg Prison. They decided not to press charges against him a second time. In December 1963, however, Ambros was called to testify at the trial, which was held in the Römer, Frankfurt's town hall. This brought Ambros into the limelight once again.

By 1964, Ambros had been a free man for thirteen years. He was an extremely wealthy, successful businessman. He socialized in Berlin among captains of industry and the professional elite. When the Frankfurt Auschwitz trial started, he was a board member of numerous major corporations in Germany, including AEG (Allgemeine Elekrizitats Gesellschaft), Germany's General Electric; Hibernia Mining Company; and SKW (Süddeutsche Kalkstickstoff-Werke AG), a chemical company. On the witness stand at the Frankfurt Auschwitz trial, Ambros gave testimony that contradicted statements he had made during his own trial at Nuremberg in 1947. He also said that the conditions at the Auschwitz Buna factory had been "cozy," and that the workers had enjoyed "good hospitality," which many Auschwitz survivors found appalling in its offensiveness. While contradictory statements might have gone unnoticed by Frankfurt's judges and jurors, there were a number of high-profile Israeli journalists in the courtroom who had become experts on the subject and caught Ambros's lies. These journalists began at once to investigate Otto Ambros's post-Nuremberg life. Here was a man who had been convicted of slavery and mass murder and had served very little time, considering the crimes. The Farben slaves at Auschwitz numbered sixty thousand, approximately thirty thousand of whom had been worked to death.

The journalists covering the trial were outraged by what they discovered. Otto Ambros now sat on the board of directors of numerous private corporations, but he was also on the board of directors of five companies that were owned by the Federal Republic of Germany. The exorbitant fees Ambros commanded in these positions were being paid by the German taxpayer. An Israeli female journalist, identified in Bundesarchiv documents only as "Frau Deutschkren," became so incensed by the arrogance and hubris she saw in Otto Ambros's postwar life that she wrote a letter to the state minister of finance, Ludger Westrick. That the Federal Republic of Germany was paying a "consulting fee" of 12,000 deutschmarks—about $120,000 in today's dollars—to a convicted war criminal was shameful, Frau Deutschkren said. She demanded that Finance Minister Ludger Westrick meet with her. He agreed.

Frau Deutschkren could not have known that Otto Ambros and Finance Minister Ludger Westrick were business colleagues and apparently on very friendly terms, as state archive correspondence reveals. After the meeting, Westrick promised to look into the matter. Instead, he told Ambros what was going on. In an effort to hold on to his lucrative and prestigious positions on company boards, Ambros produced a summary of the allegations against himself and his Nuremberg codefendants, written by his attorney, a Mr. Duvall. Ambros asked Finance Minister Westrick to circulate this apologia around the various boards on his behalf. "As a short summary of our case [shows] you will clearly find out we are innocent," Ambros explained, referring to charges of slavery and genocide that he and his Farben colleagues were convicted of at Nuremberg. "I and my colleagues are the victims of the Third Reich," Ambros insisted. "The former government utilized the success of synthetic rubber which they used to make a profit. If there had been anything against me, then I would have never been released by the American military." U.S. High Commissioner John J. McCloy had granted Ambros clemency under intense political pressure, a fact now being used by Ambros to suggest that he had been wrongly convicted at Nuremberg.

In a letter dated April 25, 1964, Ambros reminded Finance Minister Westrick that after he had been released from Landsberg Prison in 1951, "You helped me get back on the boards." For this, Ambros said he was grateful. "I see it as an honor and a duty to [remain] there. I do this for pure altruistic reasons. I appreciate anything you can do." In turn, Finance Minister Westrick wrote letters to the various boards on Ambros's behalf. "Ambros was chosen for the board because of exceptional talent," Westrick said. "In his field he is as wanted as Wernher von Braun. Everyone wants him. He can get a job anywhere he wants, anywhere in the world."

The Israeli journalists refused to let up on Otto Ambros. They continued to write news stories about him, making it increasingly difficult for both the Federal Republic of Germany and the publicly traded companies on whose boards Ambros sat to maintain business associations with him. "Former War Criminal Found Refuge in Switzerland," read a headline on June 6, 1964. The story detailed time that Ambros spent in the Swiss village of Pura. Ambros, furious, submitted a "statement of facts" to Labor Ministry state secretary, Ludwig Kattenstroth, in response. "I did not hide myself in Pura," Ambros wrote. "It is my holiday home. And I have to say that when I bought the parcel there [in 1956] I informed the Swiss government by handing over the judgment at Nuremberg. I am only there for holidays… my children go there, and my friends. After consulting with my lawyer, I will never go back." Then came the blaming. "The whole affair," wrote Ambros, "has to be seen in the shadow of the Frankfurt trial. A certain faction of the press is trying to blame me." The subtext was that "the Jews" were trying to blame him.

In late summer of 1964, AEG's board members met and decided that they could no longer retain convicted war criminal Otto Ambros. Ambros then also quietly left at least two of the five taxpayerfunded consulting positions he held on Federal Republic of Germany boards.

In separate letters to Finance Minister Ludger Westrick and Deputy Finance Minister Dr. Dollinger, a new secret was revealed, though Ambros promised not to make public a piece of the information they shared. "Concerning the firms abroad where I am a permanent co-worker advisor," Ambros wrote, "I won't name them [publicly] because I don't want to tip off any journalists who might cause trouble with my friends. You know about W. R. Grace in New York… and I hope I can stay with Hibernia Company. Concerning the firms in Israel," Ambros wrote, "stating their names publicly would be very embarrassing because they are [run by] very public, well-respected persons in public positions that have actually been at my home and are aware of my position, how I behaved during the Reich, and they accept this."

The "well-respected" public figures in Israel to whom Ambros referred have never been revealed. That Ambros also had worked for the American company W. R. Grace would take decades to come to light. When it did, in the early 1980s, the public would also learn that Otto Ambros worked as a consultant for the U.S. Department of

Energy, formerly the Atomic Energy Commission, "to develop and operate a plant for the hydrogenation of coal in a scale of 4 million tons/year at the former IG Farben industrie." That a convicted war criminal had been hired by the Department of Energy sparked indignation, and congressmen and journalists sought further details about Ambros's U.S. government contract. In a statement to the press, the Department of Energy insisted that the paperwork had been lost.

The scandal was brought to the attention of President Ronald Reagan. Letters on White House stationery reveal that Deputy National Security Adviser James W. Nance briefed Reagan about how it was that the U.S. government could have hired Otto Ambros. Nance's argument to the president was that many others hired him. "Dr. Ambros had contacts with numerous officials from Allied countries," wrote Nance. "Dr. Ambros was a consultant to companies such as Distillers Limited of England; Pechiney, the French chemical giant; and Dow Europe of Switzerland. He was also the chairman of Knoll, a pharmaceutical subsidiary of the well known chemical corporation BASF." President Reagan requested further information from the Department of Energy on its Ambros contract. Nance told the president, "The DOE and/or ERDA [The Energy Research and Development Administration] do not have records that would answer the questions you asked in the detail you requested. However, with Dr. Ambros' involvement in the company shown and his special knowledge in hydrogenation of coal, we know there were productive contacts between Dr. Ambros and U.S. energy officials." Even the president of the United States could not get complete information about an Operation Paperclip legacy.

In the midst of the scandal, a reporter for the San Francisco Chronicle telephoned Ambros at his home in Mannheim, Germany, and asked Ambros about his 1948 conviction at Nuremberg for mass murder and slavery.

"This happened a very long time ago," Ambros told the reporter. "It involved Jews. We do not think about it anymore.

[....]

1999-critical-mass-how-nazi-germany-surrendered-enriched-uranium-hydrick-prologue.pdf / https://drive.google.com/open?id=10bfHX6XHZ0I-cL7T9pdZ3hbY4yW2Iy4z

Prologue

[...]On 19 May 1945, eleven days after the surrender of Nazi Germany to Allied forces in Europe, a German U-boat was escorted into Portsmouth Naval Yard, New Hampshire. Underseacraft U-234 (as the Germans designated their submarines) was not the first U-boat to surrender at Portsmouth Naval Yard,2 but it was by far the most enigmatic.

The massive size of the U-boat alone - the submarine was three times larger than the standard German submersible - was quite enough to draw attention to the vessel. But there were other hints that spoke of the craft's singular status: News reporters covering the surrender of U-234 had been ordered, contrary to all U-boat surrender procedures before and after its capture, to keep their distance from crew members or passengers of U234 on threat of being shot by the attending Marine guards.3 Strict orders had been given that the press and all other observers must stay at least eight feet away from the disembarking POWs, and ropes were used to cordon off a corridor so the prisoners coming off the boat could march unhindered through the crowd.

The first group of sequestered POWs that marched down the gangway revealed another clue to the mysterious vessel's mission. ***At the lead was Luftwaffe Lieutenant General Ulrich Kessler, former commander-inchief of the German Air Force in Norway and the North Atlantic and newly-assigned air attaché to Japan****. The stem and monocled Prussian general was followed by an entourage; including Dr. Heinz Schlicke, a high-frequency electronics expert; seven other military officers, all scientists, engineers or military staff members; and two mysterious civilians. Neither the reporters nor indeed any members of the United States armed services at Portsmouth would ever see or know about the passenger who it now appears had been on board but who was not among the prisoners taken off the boat. Nor would the reporters soon find out about the cargo still deep inside U-234's hull.*

Reports did circulate of two Japanese officers on board who took their own lives in hara kari rather than submit to capture and the failure of their top-secret mission, which was to guarantee the safe arrival of cargo and passengers to Japan. According to rumors later proved to be true, they were buried at sea. But it seems another, more foreboding guest also had been on board. He probably now was somewhere in Spain.

As the most important prisoners were whisked away by airplane to Washington D.C., and the reporters were complaining among themselves of their lack of opportunity to interview the cabalistic captives, the ultimate secret of U-234 still lay quietly in its sleeping hull. For jam-packed throughout the monstrous boat was the elite of Nazi Germany's newest weapons development; including a completely disassembled Messerschmidt 262 jet fighter8 - the first jet aircraft to be used in combat -- and the plans and material to build Germany's ultrasecret V-4 rocket, the long-distance version of the feared V-2; as well as a mysterious "stratosphere plane," apparently an aircraft that could reach and cruise in the rarefied atmosphere of near space- ***But most important, buried in the nose of the mammoth boat, sealed in cylinders "lined with gold," was 560 kilograms, 1,120 pounds, of uranium oxide labeled "U235" - the fissile material from which atom bombs are made.***

Despite the cutting-edge technology, all of the other goods were dwarfed in significance by the uranium portion of U-234's cargo. The United States, dangerously short of its nuclear objectives, would spirit away the uranium, and other captured materials, for use in its own atomic bombs. Orders from the Commander Naval Operations in Washington DC. to the Naval Yard at Portsmouth commanded:

- *Desire following accomplished cargo U-234.... All material after rendering safe by mine disposal personnel placed safe stowage and inventory list sent CNO who will give shipping instructions and will control access to and disposition of all cargo due to vital importance to Pacific War.*

History seems to suggest U-234's killer cargo would soon be dropped on the U-boat's original destination - Japan.

How the uranium came to be in the U-boat, and the impact it would have on the outcome of the war against Japan and the future of the world, is a story of international intrigue to rival the most thrilling of espionage accounts. It is a story of unequaled scientific endeavor that toyed with the elementary building blocks of nature and of the universe and the staggering power with which it is held together; all being performed by the most brilliant minds of the age, under super-secret conditions, their projects swallowing staggering sums of money. It is the story of the struggle to control that power. It is a story of subterranean machinations unequaled in man's history, driven by selfish and evil men who were opposed by both honorable and suspect adversaries. And this chess-like struggle is counterpointed by raw power grabbing, achieved through such voluminous death and destruction as had never before been seen. To this day, it is the culminating story of power politics on earth.

The traditional history of the race for the atomic bomb - written by the victorious Allies - has taught us to believe the United States' atomic bomb program, the Manhattan Project, with help from Britain and mistakenly believing that Germany's nuclear program was striving to attain a bomb, had forged ahead and beaten the

Germans to the development of a nuclear weapon. The authors of that history would have us believe that only later was it discovered the Germans never were successful in progressing beyond a very elementary level of the bomb's development.

Nothing could be further from the truth.

The arrival in the United States of U-234 and its stockpile of nuclear materials saved the United States' atomic bomb program. Because of shortages of time and materials within the American bomb project, unreported until now, the United States needed the German goods and technology not only to gain victory over Japan, the only surviving member of the German-Italian-Japanese triumvirate, and win the war, but to establish its objective, as well, of making its place once and for all among the top world powers.

Prior to World War Two, America, while considered an ambitious contender for a place in the upper echelon of Earth's geopolitical elite, was still relegated to the status of "also ran" among the countries of the world. The British Empire, though slowly being dismantled, could still brag the sun never set upon its holdings and still acted as the reigning world power. Germany, in the few short years before and during the early part of the war, was making an aggressive effort to unseat Britain's shaky imperialism. Japan hoped to do the same in the East. The Soviet Union, like the United States, saw the war asan opportunity to make up distance in the international arena and fought for its place on the geopolitical globe. The potential introduction of an atomic weapon added a singular and determining dynamic to the equation. The bomb was the international equivalent of a sandlot free-for-all where one of the youngsters shows up with a machine gun: whoever had the weapon had control of the playground - if he could prove it was real and that he would use it.

Up to the time of the U-boat's surrender, America still had not been successful producing the weapon. True, the arrival of U-234's uranium on America's shore did not exactly replace the United States' atomic bomb program. ***To be sure, the Manhattan Project was enjoying levels of success on all fronts of the newly developing technology. Bomb-grade uranium was being enriched in Oak Ridge, Tennessee. Plutonium for nuclear weapons was being bred in huge reactors in central Washington State.*** *Advances in the understanding of nuclear technology and how to utilize it were being achieved at the national laboratory in Los Alamos, New Mexico and elsewhere.* ***The major problem was that the desired result - a usable bomb - was not going to be completed in time. While development of the bomb components were moving forward, a date had been set after which use of the bomb would be difficult to impossible; and even if it was used after that date, significant political potential would be lost.***

To optimize atomic bomb technology politically required it be used to foreshorten the war in the Pacific by the time Russia declared war on Japan, which the Soviets planned to do in mid-August 1945*. Any action significantly later would result in the parceling out of the Asia/Pacific region in the same way Europe was to bepartitioned, leaving Russia with more than its fair share of the globe. Worse, once the Soviet Union was in the war in the Pacific, in order for the United States to use the bomb details of its existence and development would have to be shared with the Soviet Bear - an intimidating proposition indeed, giving nuclear war capabilities to Joseph Stalin. Russia's helping to foreshorten the fall of Japan through conventional warfare before the bomb could be used would also eliminate America's powerful (and arguably justifiable) rationalizations for use of the bomb against the Island Nation. The United States would not only lose the opportunity to save countless Allied and Japanese lives, but it would also lose powerful political advantage it hoped to gain psychologically and in real terms if it could demonstrate it had an atomic weapon and the resolve to use it.*

Lacking enough enriched uranium to produce a uranium bomb (the type dropped on Hiroshima) at the time U-234 landed, and unable to complete the development of a reliable triggering device for a plutonium bomb (the type dropped on Nagasaki), the Manhattan Project greedily gobbled up the enriched uranium and detonation components available from the surrendered submarine. Three months later, the bomb materials finally reached Japan.

Why did Hitler fail to use the atomic bomb components before they fell into American hands? And how did Germany come to have the makings of an atomic bomb in the first place?

Substantial evidence exists that Germany led the race for an atomic bomb throughout the war. The Germans were unable, however, to use the weapon against their enemies in Europe because the weapon components were not completed until after the Luftwaffe (the German Air Force) had lost air supremacy in Europe. Germany then had no means to deliver the weapon on an enemy target. Following D-day, in June 1944, the Allies' close proximity to German troops on the European continent and in the Fatherland itself eliminated any potential attempt to use the weapon by Germany because of the improbability of successfully surreptitiously spiriting a nuclear weapon weighing several tons many miles behind enemy lines for detonation. ***There was no guarantee the weapon might not be captured and turned against them in one treacherous moment. As a result, arrangements were made at the highest level to export the technology and bomb components to Germany's ally, Japan.*** *Germany presumably hoped a Japanese victory in the Pacific would mean a victory for the Triumvirate, which would still ultimately result in Aryan domination of Europe.*

The masterminds behind development of the German nuclear weapon were not those men so often cited as the reigning scientific minds of the Third Reich - Heisenberg, Hahn, Weizsacker, Bothe and others. *Heisenberg and his cronies are correctly characterized in the traditional history as having been so full of petty professional jealousies and pompous pride they could not productively work together to reach a common goal. The true masterminds of the German atomic bomb did not struggle under these conditions and the paltry budgets the traditional history suggests were provided the German scientists. The real masterminds of the German atomic bomb were not restricted by a lack of highly technical production capacity either, as the traditional history suggests was the German program. Nor was that production program under constant scrutiny by Allied nuclear reconnaissance efforts, as the traditional history asserts would have been the case had the Germans actually been more successful with their bomb project.*

The true masterminds of the German atomic bomb program were ***experimental physicist Baron Manfred von Ardenne****, his* ***theoretical/experimental physicist colleague Fritz Houtermans****, and an army of scientists and technicians. This intellectual armada was provided, as was the extravagant funding for the program, by one of the Third Reich's richest and most successful sources of research and development sustenance - the German postal service. As bizarre as this may seem, it is a documented fact the postal ministry supported with hundreds of millions of reichsmarks, possibly billions, an excellent technical branch that, among other remarkable achievements, successfully tapped and decrypted the complex technology of a dedicated transatlantic hot-line established early in the war between Franklin Roosevelt and Winston Churchill. All students of the race for the atomic bomb know Adolf Hitler himself once joked (as they, probably wrongly, characterized the comment) following a report by his Minister of Posts on the progress of the ministry's nuclear research and development program, that it would be his postal service, not his military, that would win the war for him with the secret weapon it was developing.*

Significant and substantial documentation exists that proves Ardenne and Houtennans worked on far-reaching nuclear weapons programs well advanced over Heisenberg's work, and funded and supported by the Ministry of Posts; and that Hitler on multiple occasions personally visited Ardenne's laboratories in Berlin Lichterfelde. No record could be found by this author of Hitler ever having shown such support for Heisenberg's supposed atomic technology-leading nuclear reactor site, or that of any other nuclear scientist. Hitler insisted, nonetheless, that Germany would win the worldwide struggle using a secret weapon with destructive powers far superior to any previously known instrument of war.

Once Ardenne and Houtennans developed the technology, the massive and sophisticated mechanisms required for producing the fissile material had to be built and

Once Ardenne and Houtermans developed the technology, the massive and sophisticated mechanisms required for producing the fissile material had to be built and operated in a safe location, free from Allied detection and bombing. ***With United States aircraft screening German skies daily for emissions laced in xenon-13315 and monitoring the Fatherland's electrical power usage for indications of inordinately high consumption of electricity and other characteristics that would signify existence of uranium enriching facilities, the Germans needed to find a location that would allow the work to go forward undisturbed. And big business needed to be brought in and tasked with building the secret, gargantuan industrial complex to enrich uranium. This business would be the German counterpart to DuPont, General Electric, Westinghouse, and Tennessee Eastman working on the Manhattan Project in the United States.***

The safe location required for building this complex and the company retained to do the work were both found in I.G. Farben. During the war, this German conglomerate constituted the largest single chemical concern in the world, outsizing the top four United States chemical companies combined (all of which were working on the Manhattan Project). Farben had pioneered and owned the worldwide rights to the development and production of synthetic gasolines and rubbers including those in the United States- Synthetic product technology required high-pressure, very demanding capabilities that were a good jumping-off point for the science needed to n n or build and operate a nuclear plutonium-breeding reactor.

In the early 1940s, the company had in fact started constructing a buna plant, a synthetic rubber product, at a location outside of Germany *- perfect for the requirements of freedom from scrutiny by Allied reconnaissance.* ***The buna plant construction would allegedly last twice as long as planned, eventually cost LG. Farben 900 million reichsmarksl 6 (approximately $2 billion), utilize over 25,000 laborers,l 7 and devour more electricity than the entire city of Berlin, but it would never produce a pound of buna.*** *All of these characteristics run counter to those one would expect to observe from an actual buna manufacturing plant.* ***But they would have been perfectly expected of an electromagnetic isotope separation facility - the technology Ardenne and Houtermans had successfully pioneered - required to enrich uranium for nuclear bombs.***

---> The location was picked by Otto Ambros. Otto Ambros was the factory manager. This location is the Mn

Monowitz concentration camp - Wikipedia

(**see** https://en.wikipedia.org/wiki/Monowitz_concentration_camp)

Saileaie. Ambros was IG Farben's expert on buna AND on poison gas.

By 1942 he conceived the technology used by modern magnetic tapes.

Are he chose - 3 rivers (vital source of water) and a coal plant.

And access to SLAVE LABORE (not abailable at other sites.)

See - https://en.wikipedia.org/wiki/Monowitz_concentration_camp

"The creation of the camp was a result of an initiative by the German chemical company IG Farben to build the third largest plant to produce synthetic rubber and liquid fuels. The camp was supposed to be located in **Silesia**, out of range of Allied bombers. Among the sites proposed between December 1940 and January 1942 the chosen location was the flat land between the eastern part of Oświęcim and the villages of Dwory and Monowice, justified by good geological conditions, access to transport routes, water supply, and the availability of raw materials such as: coal from mines in Libiąż, Jawiszowice, and Jaworzno, limestone from Krzeszowice, and salt from Wieliczka. However, the primary reason for building the industrial complex in that location was the immediate access to the slave work-force from the nearby Auschwitz camps. "

While the deadly purpose of the work done at the alleged buna facility has been virtually unknown to the world until now, the name of the place it was located carries an aura of condemnation nonetheless, earned for its other malignant purpose. The place is Auschwitz.

Located on the banks of the Vistula River in Poland, the concentration camp was the perfect site for Farben's facility. Vast coal reserves to provide the fuel necessary for allegedly heating buna and for use as buna feed stocks, but, in fact, for generating electricity, were mined nearby. The river provided additional energy and cooling for the plant's high-temperature processes. The major railroad spur located there provided easy transportation of equipment to, and product from, the plant. The vast pool of cheap labor available from the camp, which Farben infamously exploited throughout the war and for which the company paid the price dearly afterward when the Nuremberg Trials found it guilty of crimes against humanity and other human rights violations and ordered the dismantling of the conglomerate, were all components in selecting the location. But the best reason of all for selecting the site was the fact the proposed buna plant would provide the needed technological base and an excellent cover for what would actually be produced - enriched uranium.

Synthetic rubber technology was still so new few people would know what to look for in a buna plant - or a uranium enrichment plant. And even better, much of the high-end technologies, materials, skills and services required to deal with the high pressures, high temperatures and demanding performance of reactor vessels in a buna plant were also needed to construct and operate an electromagnetic separation facility.

Qualified Farben personnel performed the demanding aspects of construction, while almost all of the non-technical facilities at the "buna" plant at Auschwitz, requiring a veritable army to erect and maintain the buildings and simple structures that supported the sophisticated technology, were built and manned largely by the ill-fated inmates. The last of their physical energy - their very beings - was drained from them by the work and they were driven to the gas chambers while enriched uranium was being collected and stockpiled for its future, sinister purpose.

Standing silently at the center of this immense German atomic bomb program was one man. He had deep and powerful personal connections to each key player in the project. One of these relationships was old and sealed with blood - that he had with Rudolf Hoess, the Commandant of Auschwitz, with whom he helped murder a man, an enemy to the cause, when they were both young and unknown.

Another of these relationships was bound together by tremendous wealth. Billions, probably tens of billions of reichsmarks, were amassed when he colluded with Hermann Schmitz, the chairman of 1.0. Farben. He and Schmitz camouflaged a huge fortune in securities and other portable properties and, with the war winding to a close, they removed the funds from Nazi Germany and carefully disseminated them into the markets of the free-world economy for their later use.

Still another of these relationships was bound together by power derived from the position he held as the most highly regarded lieutenant of arguably the most powerful man on Earth. His advocacy with the Fuehrer on behalf of Minister of Posts Wilhelm Ohnesorge fed the enormous research and development program Ohnesorge - formerly a mathematician and physicist - operated within the postal ministry.

The final, fateful, least secure but most important relationship was forged in the final days of his, and - Germany's, power - with Grand Admiral Karl Doenitz. Doenitz was commander of the German U-boat navy, and was the man with whom he would trade the supreme leadership of all Gennany for a place on one of the Adm iral's fleeing Uboats, apparently having previously secretly agreed to pay to the United States the price of his own ransom - in the currency of atomic weaponry.

This man was Martin Bormann.

In the dismal days at war's end, buried in the bunker in Berlin that constituted the final seat of Hitler's government; with the world crashing in around them; with Hitler high on drugs and low on mental and emotional reserves; with the - leadership panicked and breaking for cover; the mysterious Martin Bormann, true to his Machiavellian nature, weaved one of his most deadly, intricate and yet enduring webs. These machinations succeeded in deft strokes to dismember from the Party leadership both Hermann Goering, political heir apparent to Hitler's throne, and Heinrich Himmler, purportedly next in line of ascension. In their stead a seeming anomaly, and long misunderstood historical event, occurred, in which Admiral Doenitz, with no apparent political leanings and no political following, mysteriously took over the reins of German government from Adolf Hitler. Bormann had shrewdly negotiated with Doenitz the now hollow leadership of all Germany in exchange for a place on the U-boat he knew was leaving for Japan with its belly full of the power of the future, which to a large extent Bormann had made possible. From the bunker Bormann made his final arrangements to reach Doenitz at his U-boat headquarters. The web was being woven.

The fortune from LG. Farben and additional funds that Bormann had camouflaged through a variety of financial instruments and then had surreptitiously exported into banks and businesses around the world silently awaited him once he was free of Germany. Agreement by the United States to allow his escape and to protect him from the justice sure to be demanded by - victims following the war appears to have already been achieved. The arrangement would ensure his life-long freedom in the post-war world, paid for with the atomic bomb.

History Article from "ReferenceForBusiness.com" : "W.R. Grace & Company - Company Profile, Information, Business Description, History, Background Information on W.R. Grace & Company"

See [HW000B][GDrive]

7500 Grace Drive , Columbia, Maryland 21044 U.S.A.

Company Perspectives:

Grace is a leader in catalysts and silica products, construction products and container products. Our products enhance the performance of your petroleum products, ensure the integrity of some of the world's major buildings and bridges, increase the quality of images on ink jet paper, improve the appearance of your fine wood furniture and preserve the safety of your foods.

History of W.R. Grace & Company

W.R. Grace & Compamy is one of the oldest and most adaptable U.S. corporations. Over the course of its 150-year existence, it has been involved in areas of business ranging from fertilizer to shipping to consumer goods to specialty chemicals. At one time or another, the company, in addition to its current role as one of the most comprehensive, specialty chemical and packing companies in the world, has been the world's largest distributor of spaghetti, a cowboy apparel retailer, and owner of an airline. Despite a tumultuous history--most recently involving extensive asbestos litigation and a resulting Chapter 11 filing--W.R. Grace has survived, with an adaptability and flexibility unusual in large companies. It may be hard to believe that W.R. Grace & Company started out shipping guano, or bird droppings, from South America.

In the Beginning

In 1854, William Russell Grace and his father, James Grace, traveled to Callao, Peru. James, a prosperous Irish landowner, wanted to establish an Irish agricultural community. He hoped to rebuild the family fortune which had been depleted during the Irish famine of 1847-48 when he provided employment to a large number of people from the countryside around his estate. Not finding the prospects he had hoped for in Peru, James soon returned to Ireland.

William, however, remained in Peru and became a clerk in the trading firm of Bryce & Company. His value to the company was recognized after a few years when he was made a partner in the firm, which was then renamed Bryce, Grace & Company. Under William's direction, the commercial house soon became the largest in the country.

Poor health forced William to retire from the Peruvian business in 1865. He returned to New York City where he had spent a year during his youth. His brother, Michael P. Grace, who had joined him earlier in South America, remained behind to manage the growing family business in Peru which was soon named Grace Brothers & Company.

With his health fully recovered, William established W.R. Grace & Company in New York. William had long been a confidant of the Peruvian president, and through this connection the company became the Peruvian government's agent for the sale of nitrate of soda.

The Chile-Peruvian war of 1887-81 severely weakened Peru's economy, and the government had difficulty repaying its foreign debt. In 1887, a group of foreign bondholders in the Peruvian government, mostly British, called on Grace Brothers & Co. to attempt a settlement of the debt. Michael accepted the offer and in the settlement he negotiated, known as the Grace-Donoughmore Contract, two Peruvian bond issues amounting to $250 million were cancelled in exchange for equally valuable concessions to the bondholders. Bondholders received shares in a newly-established company, The Peruvian Corporation, which received the rights to two state-owned railroads for 66 years, all Peruvian guano output up to 3 million tons (except for that on Chincha Island), a government promise to pay shareholders 80,000 pounds sterling annually for 30 years, and ownership of the lucrative Cerro de Pasco silver mines. In return, the shareholders agreed to finish uncompleted railroads and repair existing ones within certain time limits. (Most of the contracts for supplying the railroad building program went to the Grace company.)

At the time of the company's incorporation in Connecticut in 1899, Grace listed capital of $6 million. The amount, however, undervalued the company's worth. since it did not include Grace Brothers & Co. Limited in London and its branches in San Francisco, Lima, and Callo, Peru as well as Valparaiso, Santiago, and Concepcion Chile.

The Next Generation

When William Grace died in 1904, control of the company passed to his brother Michael, who became chairman. In 1907, he negotiated a new agreement with the Peruvian government annulling the terms of the previous agreements and extending the Peruvian corporation's lease for 17 years. The government agreed to continue paying £80,000 annually to shareholders for 30 years, but made claims to one half of the company's net proceeds.

William's son, Joseph, who started working for the company's corporate offices in New York in 1894 when he graduated from Columbia University, became President in 1909. The company underwent a period of rapid growth during Joseph's presidency, and, in the process, greatly expanded South American production and trade.

In 1929, the year Joseph became chairman of the board, W.R. Grace and Pan American-Grace Airways [HK000C] together established the first international air service down the west coast of South America, Pan American Grace Airways otherwise known as Panagra.

After suffering from a stroke in 1946, Joseph retired. A feud subsequently broke out among family members over who should run the company. Eventually, Joseph prevailed, and his son, J. Peter, after some misgivings of his own, became president.

Expansion and Diversification

At the age of 32, Peter inherited a company with $93 million in assets and whose primary interests were in Grace Steamship Lines, Grace National Bank, Panagra, sugar plantations and cotton mills in Peru and Chile. The company also produced paper and biscuits, mined tin, and grew coffee.

From the very beginning, Peter was concerned about the political and economic instability of South American nations that he believed threatened Grace's operations. In particular, many companies had shown resistance to U.S. domination of their economies. With what proved to be remarkable foresight, Peter embarked on a plan of diversifying into U.S. and European investments, seeking to reduce South American investments from 100 percent to 5 percent. To raise the capital necessary for his expansion the company went public in 1953. The board of directors resisted his plan of broadening investment and, though the Grace family owned more than one-half of the company's stock, he nearly lost his position as chief executive officer.

Attracted by profits achieved by Dupont, Peter began searching for investments in the chemical industry. He purchased two major chemical companies which made Grace the nation's fifth largest chemical producer. In 1954 Grace completed a merger with Davison Chemical Corporation, a manufacturer of agricultural and industrial chemicals. Later that year, Grace purchased Dewey & Almy Chemical Company, an investment one industry analyst later called "among the greatest acquisitions of all time." A producer of sealing compounds and batteries, Dewey and Almy grew rapidly and earnings quickly surpassed the $35 million purchase price. This became the foundation for one of the world's largest specialty chemical operations. Over the next 11 years, Grace acquired 23 more chemical companies for four million shares of stock.

Seeking to enter markets that could compensate for the cyclic nature of the fertilizer industry, Grace set out to build the "General Foods of Europe." Over the decade, Peter Grace purchased a chocolate producer in the Netherlands, a Danish ice cream maker, and an Italian pasta company. Critics charge that he was searching for companies he could shape and manage himself, attempting to prove he was his ancestors' equal as an entrepreneur.

Peter continued selling the company's old businesses and using the money to acquire new ones. In August 1965, he sold Grace National Bank to what is now Marine Midland Bank. The next year, he acquired a 53 percent interest in Miller Brewing Company. And in 1967 Peter sold the company's 50 percent interest in Pan American Grace Airways to Braniff Airways for $15 million.

The late 1960s proved a difficult time for Grace. The fertilizer market became severely depressed, where it had once been a source of substantial profit. Facing falling profits, Grace attempted to boost efficiency by closing marginal plants, but in the process the company incurred huge losses.

In the meantime, relations between Grace and Miller Brewery's minority stockholder, an heir to the company's founder, had turned for the worse. Peter realized he would never be able to buy the rest of the company. Thus, in 1969, Grace sold its holdings in Miller for $130 million, resulting in a net profit of $53.9 million.

In the early 1960s, the company management had reversed its previous policy in regard to South American investment and began pouring funds into paper, food and chemical companies. Later that year, however, Grace's fears about these investments came true when the Peruvian government seized the company's sugar mills and a 25,000 acre sugar plantation. Earnings on South American operations tumbled from $12 million the previous year to zero on sales of $256 million. Peter, not discounting the possibility of pulling completely out of the region, said that company investments in future would be made on the attitude of each individual country.

In the early 1970s, W.R. Grace made a move into consumer goods. In 1970, the company purchased Baker & Taylor, a supplier of books to libraries, as well as FAO Schwarz, the New York toy store. Hoping to cash in on the U.S.'s love affair with leisure-time activities, the company acquired Herman's World of Sporting, a landmark in New York's financial district.

Grace saw a chance for substantial returns in the sporting goods business. Involvement in the market was especially attractive since there were no national sporting goods chain stores. Department stores, preferring the profits and turnover of apparel and other "soft" product lines, had shunned sporting goods. The company sought to expand Herman's from three stores with $10 million in sales into the first national chain. As part of the plan, Grace bought Mooney's of Boston, Atlas of Washington, and Klein's of Chicago and converted them to Herman's sporting goods stores.

In 1971, the year that Peter became chairman, the company's profit was at its lowest point in years, after hitting a high of $82 million in 1966, and its return on equity was well below that of other conglomerates. Extraordinary (or, one time only) write-offs, became such a regular part of the company's financial statements (just that year the company wrote off $7.8 million from closing fertilizer plants) that some security analysts had come to consider them a regular part of Grace's operations. Consequently it was not surprising that in 1972, company executives produced a 700-page memo, establishing 20 criteria for acquiring a new business. Most importantly, these executives decided that in order to be purchased a company must have $20 million in sales and $1 million in profits.

In 1974, Peter began to reduce the company's holdings by selling a grocery products venture, and began to concentrate company investments in three areas: consumer goods, chemicals, and natural resources. Fertilizer profits had rebounded because of low supply and high worldwide demand, but the consumer groups showed lackluster profits even with large sales in sporting goods. In addition, Grace's final investment in Peru was severed later in the year. The Peruvian government nationalized its paper and chemical operations, leading to a loss of $11.5 million for the company, despite $23.6 million in compensation from the government.

By 1976, the company was ready to continue its move into consumer goods and services. Later in the year, when the company was about to make a public stock offering to raise capital for further expansion, it received an offer from Peter's old friend Friedrich Karl Flick, who during the 1950's had worked for Grace National Bank for three years. Flick, head of Friedrich Flick Industrial Corporation, Germany's largest family-owned company, was looking for somewhere to invest the $900 million it had recently made from the sale of its 29 percent interest in Daimler-Benz to Deutsche Bank. Wanting to take advantage of German laws that granted tax free capital gains and dividends earned on investments of more than 25 percent ownership in foreign companies, Flick eventually bought a 30 percent stake in Grace.

Although Grace family interest in the company had dwindled to 3 percent, Peter made it clear that Flick would not run the company. Receiving seats for only three of the company's 35 directors, Flick nonetheless obliged, since he was concerned with his own business ventures in Europe.

The consumer divisions' growth accompanied increasing internal strife at the company. In 1979, after years of watching the company's stock trading at low earnings multiples, management proposed splitting up the company into seven or eight separate companies which would command higher stock prices. Worried about the company's increasing reliance on consumer products, they also suggested selling the energy division whose market value could have been as much as $1 billion over book value. Peter, unwilling to give up his control of the company which might also have resulted from these proposals, rejected both ideas.

1980s: The Beginning of Specialization

At the beginning of the 1980s, Grace's move into natural resources appeared as if it was going to be as profitable as its venture into chemicals. The

company's energy reserves had grown to 73 million barrels of oil, 300 billion cubic feet of natural gas, and 239 million tons of coal. Specialty chemicals sales and earnings, meanwhile, rose an average of 15 percent annually over the last decade. The company had 85 product lines, ranging from plastic packaging materials to petroleum cracking catalysts, many of which were market leaders.

However, the company suffered with falling energy prices in 1981. Moreover, in 1982, the combination of a poor natural resources profit and a further decline in the fertilizer business led to a 50 percent decrease in the company's profitability. As a result, Grace petroleum was put up for sale in 1984. The retail and consumer goods divisions, which were returning just 14 percent of profits on 36 percent of sales, looked like they might be next.

At the same time, however, Grace began to pursue business interests that would eventually become the main focus of the company: specialty chemicals and materials. Particularly significant was the 1985 acquisition of Chomerics, Inc., a packaging and coating manufacturer. The company, which had been losing money, was acquired through a $99 million stock swap.

The company's problems were compounded in 1984, when Flick became the target of a government bribery scandal and was forced to confront a $260 million dollar tax bill. Rumors abounded in West Germany that Flick was looking for someone to buy the family business, putting Grace at risk of a hostile takeover.

The rumors about Flick proved true, when Deutsche Bank acquired the company and put its holdings in Grace on the market. The company immediately seized the attention of takeover specialists, since Grace's assets could be sold at a profit of $20 to $25 more than the market price. GAF Corporation Chairman J. Heyman approached Grace about a friendly takeover, causing Grace's stock to rise 30 percent.

Although already strapped for cash, Peter, fearing a takeover, was forced to buy Flick's holdings for $598 million. The acquisition put Grace's debt at $2.6 billion and caused a downgrade of Grace's credit rating.

Critics, both inside and outside the company, regarded this as an unthinking decision. Complaints about Peter's domination of the company and an incoherent business strategy put mounting pressure on him to sell the consumer division. Since Grace was desperate for cash, this forced Peter to comply. Energy and fertilizer investments were reduced. Herman's was sold to Dee Corporation for $227 million, realizing a profit of $144 million. The remaining consumer goods businesses were sold for $500 million, but because of high expansion costs at the 317-store home center operations, Grace barely broke even on the sale. In addition, in 1986, Peter agreed to selling 51 percent of the restaurant division to its management in a leveraged buyout, although Grace did not bail out of the newly created Restaurant Enterprises Group until 1993. In 1986, William Baldwin wrote in Forbes that a $1 investment in W.R. Grace in 1945 would be worth $23 23 years later; but, the same investment in the S&P 500 would be worth a corresponding $77. Some speculated that Peter wished to live up to his grandfather's entrepreneurial spirit by remaking the company his own way, and Peter himself said that "My grandfather didn't found any of the things we have now. He didn't found this company. I did." While Peter Grace was definitely onto something, Forbes' Thomas Jaffe considered the company severely undervalued in 1989. Speculation arose that Peter might resign.

The 1990s: A Leaner, Meaner Company

In January 1993, J. Peter Grace did stepped down as CEO, ending the longest term of any CEO in history. His successor, J.P. Balduc, had been groomed for the position since joining Grace in 1983, eventually becoming COO and president in 1990. In contrast to Peter Grace, of whom Smith Barney analyst James Wilbur said, "You never knew what business he'd be in next," Balduc took the reins of an ambitious restructuring plan, stating, "There is no backing up. The days of Grace buying companies that are not strategic are gone." First announced in 1991, this plan was to cut back Grace's operations to two lines of business, specialty chemicals and health care, and called for a divestment of 25 percent of the company's assets. Although Peter Grace retained his position as chairman, it was clear that Balduc was in charge as the company began to lose all resemblance to a family-run operation, becoming more like a standard corporation.

This transformation, it seemed, was long overdue. Although Grace topped $6 billion a year in sales in 1993, its profit on those sales was only $26 million, and the sprawling company was so heavily diversified that it owned over 100 subsidiaries. When Balduc trimmed it to six core businesses, the sold-off assets, which included divisions ranging from organic chemicals to restaurants to book distribution, were worth nearly $1.5 billion. Some argued, reflecting the emphasis on specialization in business that had become a 1990s trend, that even six was too much, particularly when the six ranged from specialty chemicals to health care to food packaging. Under Balduc's leadership, health care emerged as the most prominent part of Grace's business, in the form of the National Medical Care division, and the company's goal of $10 billion by 2000 seemed possible.

However, Balduc's term had barely begun when the company--and, Balduc himself--was once again embroiled in controversy. On March 2, 1995, Balduc abruptly resigned from Grace, citing philosophical differences with the board of directors. Inevitably, further--and, less abstract--details surfaced, among them allegations that Balduc had threatened to disclose details of previously unreported financial compensations to J. Peter Grace and to his son, J. Peter Grace III. Additional allegations of sexual harassment on Balduc's part toward five female Grace employees surfaced as well, although the harassment allegations came not via Grace's official procedure on sexual harassment, but via the company's board of directors, with no formal complaint being filed. This gave rise to suspicions that the company wished to avoid placing Balduc in the chairman's seat. The chairman's seat had recently been vacated by Peter Grace due to pressure from major shareholders, who also influenced the company's decision to reduce its board of directors from 22 members to 12. Whatever the truth may have been, both Balduc and Peter Grace departed; the latter, already ill from lung cancer, died a few weeks later, and Albert J. Costello was named CEO.

If anything, Costello was more aggressive about streamlining the company than his predecessor. This included spinning off Grace's medical care division, National Medical Care, in a sale to German-based medical company Fresenius AG, despite a federal investigation into the division's handling of Medicare charges and an FDA citation regarding importation of dialysis equipment from its Dublin plant. In addition, Grace sold its Dearborn water treatment business--then the third largest in the United States--to Betz Laboratories; its transgenic plant business to Monsanto; its TEC systems division to Sequa Corporation; its specialty polymers business to National Starch and Chemical Co.; its cocoa business to Archer Daniels Midland; and more. Other actions included a buyback of 10 million shares of common stock, amounting to approximately 10 percent of the total, as well as a new two-year corporate reorganization, inaugurated late in 1995. This move, designed to cut costs by $100 million, reduced the company's staff by 800. Over 50 percent of the cost reduction was due to decreased staff as Grace sought to reduce its number of core businesses from six to three. Those businesses were streamlined also; for instance, in June 1997, Grace set out to restructure its packaging business on a global basis, saving an estimated $25 million a year.

Costello was not only focused on selling, however. At the annual shareholders' meeting in 1996, he said, "We are a much more focused and financially disciplined company, targeting performance levels that will put us in the top quartile of our peer companies." While Grace's divestments had increased its value and decreased its liability, its CEO sought acquisitions and joint ventures in keeping with the company's newer, narrower focus. In April 1998, Grace's remaining divisions essentially split: the specialty chemicals divisions, consisting of Grace Davison, Grace Construction Products, and Darex Container

Products, kept the W.R. Grace name, while the Cryovac packaging business merged with Sealed Air Corporation. Now in essence a chemicals company, W.R. Grace & Co. bore no remaining resemblance to its namesake's initial venture.

On November 2, 1998, the top chair at the new Grace changed hands again. This time the new name was former Allied-Signal executive Paul Norris, who was named president and CEO, and was slated to take the chairman position as well. Norris immediately announced a plan of divestiture, streamlining, and job cutting, and was quoted in trade publication Chemical Week that "We can't just offer products to our customers anymore. We have to control our costs as well as help control our customers' costs by providing services to them." The following year, Grace moved its corporate headquarters from Boca Raton, Florida, where it had been quartered since 1991, to Columbia, Maryland, the location of its specialty chemicals division. The move cut costs both by reducing staff and by moving the headquarters closer to its business divisions. Also in 1999, Grace cut 370 jobs, or approximately 8 percent of its workforce, as part of a restructuring designed to streamline the company still further. Grace was not alone; in 1999, the trade publication Chemical Week noted an industry-wide trend toward reducing spending, as a slowing economy cut into profits. Chemical Week noted that Grace's capital spending in 1998 was $95 million, as opposed to $137 million in 1997, a 30 percent reduction. In addition, Chemical Week reported that in 1999, of the 40 top publicly traded chemical companies, 11 had new CEOs.

By 2000, it appeared that Norris had succeeded in his aim. W.R. Grace had slimmed down from a $5.7 billion conglomerate to a $1.5 billion company specializing in chemicals. Instead of 30 business divisions, it had only two: Grace Davison, and its performance chemicals division. In 1999, the company had $1.47 billion in sales, with a goal of 15 percent earnings growth for 2000. By 2001, Norris intended to reach the $2 billion sales mark, partly through acquisitions, partly through the introduction of new products, and to boost the company's sagging stock price. This reflected the two-fold strategy he described to Chemical Specialties in July 2000: "We have a number of initiatives. The majority involve bringing new products to existing markets. But in some cases we want to enter new markets with new applications for existing products." He added that "Growth is the most difficult of all strategic agenda items, but I think it's the most important." Although Grace continued to acquire new companies, the deals involved were relatively small, and in keeping with the company's new goals: purchases of coating and sealant manufacturer Bayem SA in 1996, food packaging manufacturer Schurpack in 1997, the construction chemicals division of Sociedad Petreos in 2000 (incidentally, returning Grace to its original region of business in South America), Crosfield Group's hydroprocessing catalyst business in 2000, International Protective Coatings Corporation in 2000, and similar acquisitions were examples of the company's more focused acquisitions approach. Acquisitions continued into 2001, even as Grace faced redoubled legal problems.

With the new millennium, Grace faced a new obstacle: asbestos litigation. And, while Norris claimed that publicity from the asbestos suits against the company--numbering in the hundreds of thousands by 2001--had little to do with the stock price, it is a fair bet that Grace's bankruptcy filing did.

The 1990s also saw the long-overdue publication of William Russell Grace's biography, Merchant Adventurer, by the Pulitzer Prize-winning author Marquis James. The book, commissioned by William Grace's son Joseph, and originally scheduled for publication by Viking Press in 1948, was suppressed by the Grace company, for reasons that remain unclear. Discovered in a disused storage room in 1978 by historian Lawrence Clayton, himself the author of Grace: W.R. Grace & Co., the Formative Years, 1850-1930, the book was finally published by Scholastic Resources in 1993.

2001: The Final Chapter?

Legal action, of course, is a way of corporate life, and a company the size and breadth of W.R. Grace was certainly no exception. A high-profile pollution case in 1986 pitted Grace against eight families in Woburn, Massachusetts over the question of drinking-water contamination; Grace settled for a reported $8 million, and the case was a subject of the book and film "A Civil Action." In 1995, Grace's patent on the extraction of the natural pesticide, azadirachtin, from Indian neem trees was challenged, as the substance had been used for that purpose in India for hundreds of years. In 1998, the company agreed in a settlement to pay $32 million for remediation of a radioactive waste site, and the SEC sued Grace that same year over reserves pertaining to former subsidiary National Medical Care (the suit was settled out of court). 1999 brought an emergency order from the Environmental Protection Agency to clean up ammonia near Lansing, Michigan, which threatened the local water supply. The ammonia was a byproduct of Grace fertilizer production from the 1960s. In 2000, Grace agreed to pay the major portion of a $15.5 million settlement against book distributor and former subsidiary Baker & Taylor.

The asbestos suits, however, were a different kind of legal action. For one thing, there were more of them; for another, they dealt not only with damage done, but with potential injury as well. The trouble had been brewing for a while. As far back as 1985, Matthew Schifrin reported in Forbes that gypsum suppliers, including W.R. Grace as well juggernaut USG, could expect a flood of litigation in the wake of a high-profile personal injury suit related to asbestos, and in fact the first asbestos-related suit had been filed against Grace in 1982. In 1994, Grace settled charges of violating asbestos standards at its Libby, Montana tremolite mine, for over half a million dollars; in 2000, the EPA ordered Grace to spend an additional $5 million to clean up the site. Then, in 1999, Grace was party to a $200 million settlement to residents of Cook County, Illinois, who were exposed to asbestos in the 1960s and 1970s.

On October 5, 2000, Owens Corning, the United States' largest building materials manufacturer, filed for bankruptcy. While this did not affect Grace's fortunes directly, it did cause a general fall in stock prices among companies with asbestos liability--including Grace. More serious, however, was how removal of players from the field affected those remaining; as Merrill Lynch analyst Karen Gilsenan put it in Chemical Market Reporter, "Grace and the other remaining players could face increased liability ... co-defendants in many of these cases could end up shouldering a larger part of the financial burden." As of June 30 that year, Grace was named in over 53,000 asbestos lawsuits and had paid out a total of $1.15 billion in judgments and settlements. By April of the following year, that amount had risen to $1.9 billion, and the number of personal injury claims against the company topped 325,000.

By early 2001, Grace's stock price had fallen to under $2 a share, and President and CEO Norris admitted in the company's fourth-quarter conference call that Grace was reviewing the choice of actions available, and that "these include ... resolving our asbestos liability through a reorganization under Chapter 11." The decision was not long in coming; Grace filed for Chapter 11 on April 2, 2001. The filing included 61 of Graces 70 domestic subsidiaries, but none of its foreign subsidiaries.

Grace's troubles did not end there. An investigation related to the filing looked into whether Grace's massive divestitures in the 1990s, particularly National Medical Care and Cryovac, were meant to shield the assets tied up in these companies from asbestos liabilities. Atlanta attorney Sally Weaver noted in an affidavit related to the Libby case, "the asbestos liability faced by W.R. Grace & Co. was sufficiently large to constitute a strong inducement to insulate the company's assets."

Grace acted immediately to keep the company afloat, acquiring $250 million in financing to maintain day-to-day operations. The company also created the position of chief restructuring officer, naming Senior Vice-President and General Counsel David Siegel to the post. In fact, the outlook for Grace was generally considered good; Norris was quoted in Chemical Week as saying that "We are confident that once we can finally resolve this difficult issue, the company can emerge from reorganization as a strong, financially sound enterprise." And analyst Fred Siemer told Adhesives Age that "Grace is a really strong company ... the lawsuits simply got out of hand. The courts will set up a payment schedule, and Grace will meet it." Some saw the situation as

illustrative of a fundamental imbalance between business and law; consultant Stephen Einhorn told the same publication that "W.R. Grace is another example of how the legal profession is in a battle with the business world for survival." Lehman Brothers analyst Timothy Gerdeman agreed, saying that "Grace is an excellent company, possessing an attractive portfolio, solid management, and solid cash flow, but it is a victim of the U.S. legal system." There seemed little doubt, despite the overwhelming volume of lawsuits and the bankruptcy filing, that the company that had persisted for 150 years would continue, and perhaps even thrive.

Principal Subsidiaries:Grace Performance Chemicals; Grace Davison Chemicals; Gloucester New Communities; Grace Logistics Services.

Principal Competitors:BASF AG; DuPont; Engelhard; Cytec Industries; GenTek Incorporated; Great Lakes Chemical Corporation.

Chronology

Key Dates:

- 1854: William Russell Grace becomes a partner in Bryce, Grace & Co., in Peru.
- 1865: The company, now called W.R. Grace & Co., moves to New York.
- 1899: W.R. Grace & Co. incorporates.
- 1904: Death of William Grace. His brother, Michael, succeeds as chairman.
- 1914: Grace National Bank established. Grace sends first commercial ship through Panama Canal.
- 1945: J. Peter Grace, grandson of William, becomes president of W.R. Grace & Co.
- 1953: W.R. Grace & Co. lists on New York Stock Exchange.
- 1954: Grace acquires Davison Chemical Company and Dewey & Almy Chemical Company. Cryovac spins off from Dewey & Almy as a separate subsidiary.
- 1958: Grace constructs Washington Research Center, a chemicals research facility in Maryland.
- 1960: Grace introduces Cryovac Type L shrinkwrap for meat and poultry.
- 1963: Grace introduces pellet silica gel for use as a packaging desicant.
- 1964: Grace Davison introduces XZ-15, a catalyst that increases gasoline efficiency.
- 1965: Grace introduces Bituthene waterproofing membrane, replacing paint-on waterproofing.
- 1968: Grace introduces Cryovac Market-Ready packaging for beef and Monokote spray-on fireproofing.
- 1972: Grace Davison introduces CO Combustion Promoter Additive.
- 1978: Grace introduces Ice & Water Shield for roofing.
- 1979: Grace introduces Darex Corrosion Inhibitor for concrete.
- 1984: Grace introduces Cryovac cook-in bags for institutional cooking.
- 1985: Grace acquires Chomerics, Inc., a packaging and coating manufacturer.
- 1986: Grace settles with eight Woburn, Massachusetts families in a water pollution case.
- 1987: Grace becomes first wholly foreign-owned company to do business in the People's Republic of China.
- 1991: Grace announces major restructuring plan, to culminate in a company with two lines of business, instead of dozens.
- 1992: First asbestos-related lawsuit is filed against W.R. Grace.
- 1993: J. Peter Grace retires as CEO of W.R. Grace & Co. and is succeeded by J.P. Bolduc. Grace introduces beer bottle seals that help retain freshness without preservatives.
- 1994: Grace settles out of court regarding the violation of Clean Air Act asbestos standards near Libby, Montana.
- 1995: J. Peter Grace dies at age 82; Balduc resigns. Albert J. Costello is named president, chairman, and CEO. Grace is challenged on its patent of its extraction of natural pesticide from Indian neem trees.
- 1996: Grace divests extensively, streamlining the company to six core businesses. Merchant Adventurer, a long-suppressed biography of William Grace, is published by S.R.
- 1998: Cryovac merges with Sealed Air Corporation. Grace streamlines further, to two essential businesses: specialty chemicals and container products.
- 1999: Paul Norris becomes chairman. Grace relocates headquarters from Boca Raton, Florida, to Columbia, Maryland.
- 2000: Grace makes acquisitions in keeping with its new focus, including Crosfield Groups, International Protective Coatings, Hampshire Polymers, and more.
- 2001: Grace files for Chapter 11 on April 2. The company acquires $250 million in financing to continue day-to0day operations, and names senior executive David Siegel to the newly-created position of chief restructuring officer.

[...]

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William Robert Graham (born 1937)

Wikipedia William Robert Graham

Saved wikipedia (Dec 02, 2020) - William Robert Graham

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4th Director of the Office of Science and Technology Policy

In office

1986–1989

President

Ronald Reagan

Preceded by

George A. Keyworth II

Succeeded by

D. Allan Bromley

Acting Administrator of NASA

In office

November 25, 1985 – October 1, 1986

President

Ronald Reagan

Preceded by

James M. Beggs

Succeeded by

James C. Fletcher

Personal details

Born June 15, 1937 (age 83) in San Antonio, Texas, United States

Alma mater California Institute of Technology / Stanford University

Scientific career

- **Fields** Physics
- **Institutions**
  - Air Force Weapons Laboratory
  - Rand Corporation
  - NASA
- **Thesis**

- *Electro-optical generation of electromagnetic radiation* (1963)

William Robert Graham (born June 15, 1937) is an American physicist who was chairman of President Reagan's General Advisory Committee on Arms Control from 1982 to 1985, a deputy administrator and acting administrator of NASA during 1985 and 1986, and director of the White House Office of Science and Technology Policy and concurrently science adviser to President Reagan from 1986 to 1989. He then served as an executive in national security-related companies.

Born in San Antonio, Texas, Graham received a B.S. degree in physics from the California Institute of Technology with Honors in 1959. In addition, he earned an M.S. degree in engineering science in 1961, and a PhD in electrical engineering in 1963, both from Stanford University.

Graham served three years active duty as a project officer with the Air Force Weapons Laboratory at Kirtland Air Force Base, Albuquerque, New Mexico, directing a group conducting experimental and theoretical research on strategic system survivability. Graham later spent six years with the Rand Corporation in Santa Monica, California, and jointly founded R&D Associates in 1971.

In 1980, Graham served as an adviser to presidential candidate Ronald Reagan and was a member of the President-elect's transition team. From 1982 to 1985, he served as chairman of the General Advisory Committee on Arms Control and Disarmament, having been nominated by the President and confirmed by the Senate in 1982. While chairing the General Advisory Committee, he led the preparation of the report "A Quarter Century of Soviet Compliance Practices Under Arms Control Commitments: 1958-1983", which was submitted to the President and to Congress in 1984.

On September 12, 1985, Graham was nominated by President Reagan for the position of Deputy Administrator of NASA. He was confirmed by the United States Senate on November 18, and sworn in on November 25, 1985. For a period from December 4, 1985, to May 11, 1986, Graham served as acting Administrator of NASA following the resignation of James M. Beggs. It was on his watch as acting administrator that the Space Shuttle *Challenger* was launched in frigid weather, causing o-rings to fail and destroy the ship. Graham left NASA on October 1, 1986, to become director of the White House Office of Science and Technology Policy (OSTP). On October 16, 1986, he was sworn in as director of OSTP and concurrently as science adviser to President Reagan, positions he held until June 1989, when he left government service to join Jaycor, a high-technology company headquartered in San Diego, California. He later served as the chairman and CEO of National Security Research, Inc. from 1997 to 2005.

Graham has also been a consultant to the Office of the Secretary of Defense and served on many international and national boards and advisory groups, including the National Academy of Science/National Research Council Committee on Undersea Warfare and Board on Army Science and Technology, the Air Force Science Advisory Board Task Force on Manned Strategic System Vulnerability, the U.S.-U.K. Joint Working Group on Atomic Weapons, the Defense Nuclear Agency Scientific Advisory Group on Effects, and the Defense Science Board System Vulnerability Task Force and Associated Task Forces. He was a member of the Defense Science Board from 2001 through 2008 where he led several studies, and was also a member of the State Department's International Security Advisory Board from 2006 through 2008.

In 1998 Graham served on the Rumsfeld Commission, which investigated the ballistic missile threat to the United States for the Congress, and in 2000 served on the Commission to Assess United States National Security Space Management and Organization, also mandated by Congress. He chaired the statutory Commission to Assess the Threat to the United States from Electromagnetic Pulse (EMP) Attack from 2001 through 2008, which issued several reports, including a report entitled "Critical National Infrastructures" in 2008.

EMP Warnings

Graham warned several times about the dangers of a nuclear electromagnetic pulse attack (EMP).

In a Congress hearing in 2008 he affirmed that about 90 percent of the US population could perish during such an attack: "We think that is in the correct range. We don't have experience with losing the infrastructure in a country with 300 million people, most of whom don't live in a way that provides for their own food and other needs. We can go back to an era when people did live like that. That would be - 10 percent would be 30 million people, and that is probably the range where we could survive as a basically rural economy."[1]

In a 2017 article he warned about the strategic significance of North Korean satellites' ability to generate an EMP attack, as well as widespread ignorance about an EMP.[2]

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Housatonic

GSE Systems, Inc.

Wikipedia GSE Systems, Inc.

GSE Systems, Wikipedia capture - [HK0003][GDrive]

Traded as NASDAQ: GVP

Russell Microcap Index component

Industry Process Controls Operator Training Simulator Educational Software

Founded 1994

Headquarters Sykesville, Maryland

Key people Kyle Loudermilk, CEO

Chris Sorrells, COO

Emmett Pepe, CFO

Revenue $56.8 Million USD (2015)

Number of employees 450

Website www.gses.com

GSE Systems, Inc. develops and markets software-based simulation and training products to nuclear, oil, and gas electricity generators, and the chemical process industries. It also sells software for monitoring and optimizing plant and signal analysis to the power industry.

GSE Systems was established in 1994 from three simulation companies that came together. They were part of an original heritage from Singer-Link where they were involved in high-intensity simulation applications such as flight simulators. Since 1994 the company has grown through acquisitions. The primary businesses continue to be process control focused in the chemical, pharmaceutical and food industry, and simulation, which is also focused on fossil and nuclear simulation.

GSE Systems is headquartered in suburban Baltimore, Maryland. Global operations are conducted from offices in Sykesville (Maryland), Nyköping (Sweden), Beijing (China), Stockton-on-Tees (UK), and Chennai (India).

Timeline:

1929 Edwin Albert Link invents and patents the first Link Trainer, forms Link Aeronautical Corporation in Binghamton, NY.

1930 Link Flying School organized in Binghamton.

1933 Link Aeronautical Corporation moves to Endicott, NY to maintain the flight school, repair airplanes, and operate charter flights.

1934 Link Aeronautical Corporation returns to Binghamton.

1935 Link Aviation Devices, Inc. is formed in Binghamton, NY to manufacture trainers etc. Link Aviation Devices, Inc. renamed Link Aviation, Inc.

1937 Link Manufacturing Company Limited is formed in Gananoque, Ontario to build trainers for Canadian and UK customers.

1953 Ed Link steps down as president of Link Aviation.

1954 Ed and George Link sell Link Aviation to General Precision Equipment Corporation.

1956 Link Aviation acquires a controlling interest in Air Trainers Limited of England and changes its name to Air Trainers Link Limited.

1959 Ownership of Air Trainers Link Limited is transferred to the parent company, GPE, and the name changes to General Precision Systems Ltd.

1965 GPE buys the operations of the Riverdale, MD plant of Electronics Division of ACF Industries (previously ERCO) and moves it to Silver Spring, MD.

1967 Redifon, a member of Rediffusion, buys Air Trainers Link Ltd. and renames it Redifon Air Trainers Ltd.

1968 Singer Corporation acquires GPE. Edwin Link remains as consultant until 1972.

1984 Simuflite Training International Inc. is founded by Singer.

1987 Singer's Link Division is incorporated as Link Corporation.

1988 Paul A. Bilzerian buys Singer Corporation

1988 Paul A. Bilzerian buys Singer Corporation.

1988 CAE Industries, Ltd. buys Link Corporation of Silver Spring, MD.

1988 Singer's simulation manufacturing business is reorganized under the name of LinkMiles with two companies: Link-Miles Limited located in Lancing, England and LinkMiles International Simulation Corporation based in Binghamton, NY.

1989 Singer is renamed Bicoastal Corporation.

1989 Bicoastal Corporation files Chapter 11 bankruptcy.

1990 Link-Miles Simulation Corporation of Columbia, MD is renamed S3 Technologies.

1990 Thomson-CSF of France buys Link-Miles Limited, merges it with Redifussion Simulation, and renames it Thomson Training & Simulation.

1992 Bicoastal Corporation is dissolved.

1993 ManTech International buys S3 Technologies.

1995 Hughes Electronics Corporation buys CAE-Link.

1994 GSE Systems (Global Simulation & Engineering Systems) absorbs S3 Technologies.

Major Milestones:

In 2011, Construction of Westinghouse AP1000 nuclear power plant simulator, a first-of-a-kind project

In 1977, GSE was a pioneer provider of high-fidelity refinery and fossil power plant simulators. Since then, GSE has built more full-scope simulators than all of its competitors combined.

In 1971, GSE Systems, then Link Simulation, built the first commercial full-scope nuclear power plant simulator.

Major Acquisitions:

GSE Systems Acquires EnVision Systems, Inc in the year 2011. EnVision Systems, Inc. ("EnVision"), which provides interactive multi-media tutorials and simulation models, primarily to the petrochemical and oil & gas refining industries. EnVision, with headquarters in Madison, NJ and an office in Chennai, India, was founded in 1991. EnVision's tutorials and simulation models serve the rapidly growing entry-level training market for the oil & gas refining and specialty chemicals industries. EnVision's products provide a foundation in process fundamentals and plant operations and interaction. With this knowledge base, users may then graduate to the full-scope, high-fidelity, real-time simulators provided by GSE. EnVision has completed more than 750 installations in over 28 countries and its approximately 130 clients include Shell Oil Company, BP, Total and Chevron.

Source document : [HW0008][GDrive]

Link Aviation Beginnings

In 1929 Edwin Albert Link, Jr. (1904–1981) invented the Link Trainer, a flight simulator that taught pilots how to fly by instruments (as opposed to watching the ground)1; his brother George Theron Link (1897–1979) is sometimes cited as a co-inventor. The initial patent application was submitted April 14, 1929 for the "pilot maker" flight trainer. Patent 1,825,462 was filed March 12, 1930 by E. A. Link, Jr. and granted September 29, 1931. Shortly thereafter he formed the Link Aeronautical Corporation in Binghamton, NY to market the trainer. In 1934 he demonstrated the value of instrument flying to a group of Army officers, after which the Army Air Corps ordered six of his trainers. By the time the order was completed other orders started coming in.

The rapid acceptance of Link Trainers and their continued development, due chiefly to the threat of war in Europe and Asia, made it necessary for Link to reorganize and expand his enterprises. In 1935 Link Aviation Devices, Inc., later renamed Link Aviation, Inc., was established to manufacture trainers and other aviation instruments. Link Aeronautical Corp., situated at the Tri-Cities Airport in Endicott, NY by 1933, maintained the flight school, an airplane repair service, and operated charter flights, but returned to Binghamton in December 1934. And Link Manufacturing Company, Ltd. was established in 1937 in Gananoque, Ontario to build trainers for Canadian and UK customers (British contracts required that their trainers be manufactured within the British Commonwealth).

By 1940 trainers had been shipped to over thirty-five countries around the world. In the early 1950s, **Link Aviation was buoyed by the acceptance of simulators by commercial airlines and an increase in military expenditures caused by the Korean War. The company continued to develop aviation simulators and trainers, including all of NASA's manned spaceflight simulators**, and came to dominate the military training and simulation industry.

By the mid-1950s Link Aviation was enjoying financial and managerial stability. While others took up the innovations begun by Ed Link leaving him with less involvement and while the business aspects became increasingly complicated, Ed's interests began to shift. In 1953 he stepped down as president of the company, and took the less active position of Chairman of the Board. Ed believed that to ensure the survival of Link Aviation in an increasingly competitive market, he should merge the company with a larger, more diverse corporation. **In 1954 he and his older brother George Link sold Link Aviation to General Precision Equipment Corporation (GPE), a large holding company.**

That sale marked the beginning of a long period of changes in ownership, during which the Link name would be applied to other organizations, both officially and casually. **In 1968 Singer Corporation acquired GPE. Twenty years later Singer was subject to a hostile takeover and dismantled.**

Edwin Link was president of Link Aviation until 1953 and board chairman until its merger with the General Precision Corporation in 1954. He was president and a director of General Precision until its merger with the Singer Company of Stamford, CT in 1968; he retained chairmanship of Link Aviation while Hermann Place retained chairmanship of GPE. Thereafter, he became a consultant to Singer (1968–1972). After selling Link Aviation, Ed's interests shifted from above ground to underwater. He was fascinated by diving and underwater archaeology and invented a number of diving chambers for sea exploration.

The General Precision Equipment Era (1954–1968)

General Precision Equipment Corporation was headquartered in New York City, New York. GPE was founded June 1936 by Hermann Gauntlett Place as a holding company for a group of theater equipment firms. In addition GPE had a substantial stock interest in 20th Century Fox Film Corp. WWII "with its

holding company for a group of theater equipment firms. In addition GPE had a substantial stock interest in 20th Century Fox Film Corp. WWII "with its insatiable demands for the products of American industry" encouraged GPE, with capital to invest, to expand and diversify. Accordingly GPE acquired a number of other businesses beginning in 1941 including Librascope Development Company of Burbank, CA (later of Glendale, CA) in 1941, The Kearfott Company Inc. of Little Falls, NJ and Kearfott Manufacturing Corp. of Wayne, NJ in 1952, and Link Aviation of Binghamton, NY in 1954. In 1955 GPE was ranked 255 in Fortune's list of America's largest corporations. By 1956 the 21 member companies employed 12,000 people in 36 plants in 23 cities. Mr. Place was president and board chairman.

In January 1960 Librascope, Kearfott, General Precision Laboratory (GPL), and Link Aviation combined to form a new electronics firm known as General Precision, Inc. to position itself as a prime contractor on systems contracts. GPI's headquarters were in NYC as was GPE's. Each of the founding firms became a division of GPI. GPL was still a subsidiary of GPI in 1967 but had moved to GPS by 1968.

There was another subsidiary, General Precision Systems, which had a facility in Little Falls, NJ. By 1966 it held the Kearfott Group with its Kearfott Products Division. By 1967 it also held a Link Division.

After 1954 Link acquired controlling interests in two British firms, Air Trainers Limited in 1956 and Miles in 1969 (under Singer).

Air Trainers Ltd was formed in 1946 in Leighton Buzzard, Bedfordshire, apparently as successors to J.V.W. Corporation Ltd which, since 1936, had been importing and servicing the American-made Link trainers for the RAF. It moved to Aylesbury in 1946. **As well as manufacturing the Link trainer under license, the company pioneered the development of DC analog co**mputing techniques for flight simulators, the first of which was delivered to the RAF in 1953. By 1954 the workforce had grown to 500. In 1956 Link Aviation of New York acquired a controlling interest, Link president Allan Williford joined the Board of Air Trainers, and the name changed to Air Trainers Link Ltd. In 1959 the Link interest was transferred to the parent company, General Precision Equipment Corporation, and the name of the company changed to General Precision Systems Ltd. By 1963 there were 950 employees in Aylesbury occupying 120 000 square feet. In 1967 the firm was sold and became a subsidiary of Redifon Ltd, a member of the Rediffusion organization, and was renamed Redifon Air Trainers Ltd. In 1972 production was transferred to the Redifon Flight Simulator Division, Crawley, West Sussex.

In 1965 GPE purchased the operations of ACF's Electronics Division (previously ERCO) at the Riverdale plant and moved it to Silver Spring, MD. (There was more to the Electronics Division than the Riverdale plant.)

Link, as Link Group of General Precision Systems (GPS), had a facility in the defense and aerospace industry of Sunnyvale, CA from as early as 1967, if not before. Link Ordnance Div., General Precision, Inc. of Sunnyvale was cited by NASA as a major subcontractor of Boeing, one who played a major role in the development and production of the Saturn V launch vehicle; Link worked on the propellant dispersion systems.

The Singer Era (1968–1988)

In April 1968 Singer Corporation acquired GPE. Singer originally dropped the Link name, but after three years restored it as Singer-Link, or the Link Flight Simulation Division. During the Singer era Link reclaimed the type of dominance it enjoyed in the WW II period. At its peak, there were about 5000 employees of the Link Division worldwide including Binghamton, NY, Silver Spring, MD, Sunnyvale, CA, and Lancing, England.

ACF's Electronics Division in Silver Spring, MD, bought by GPE in 1965, was renamed Simulation Products Division in 1968. It was renamed Link Division in 1976.

In September 1969 Link bought Miles Electronics Limited of Lancing, Sussex, England and renamed it Link-Miles. Miles Electronics was a subsidiary of F. G. Miles Limited founded in 1948 by Frederick George Miles to produce aircraft. Miles Electronics was involved in the manufacture of flight simulators. US patent 3584429 dated 1971 was held by Link-Miles Limited.

In January 1981, the Singer company announced a split in the Link division:

- **Link Simulation Systems Division in Silver Spring, MD was chartered to promote growth in the fields of nuclear and fossil fuel, power plant simulation, industrial process plant simulation, tactical simulation, and for finding new opportunities in other simulation areas.**
- Link Flight Simulation Division with operations in Sunnyvale, CA, Houston, TX, Lancing, England, and Binghamton, NY was chartered to expand the company's business in the aircraft and spacecraft industries.

As early as 1982 the Link Simulation Systems Division had a facility in Columbia, MD. They built nuclear power plant simulators there. The headquarters remained in Silver Spring.

In 1984 Singer formed a new enterprise, Simuflite Training International Inc., to compete with Flight Safety International in the business aircraft pilot training market. Simuflite2 was located in Dallas, TX. It used simulators built by Singer-Link.

In January 1987 Singer split the Kearfott Division into Kearfott Guidance & Navigation Division located in Little Falls, NJ, which was sold to the Astronautics Corporation of America in 1988, and the Electronic Systems Division located in Wayne, NJ (originally Kearfott Manufacturing Corporation), which was sold to GEC-Marconi in 1990 and renamed GEC-Marconi Electronic Systems.

In December 1987, the Link Division was incorporated in Delaware as Link Military Simulation Corporation ("Link Corporation"), a wholly owned subsidiary of Singer. In that same month Singer converted the Kearfott Guidance & Navigation Division into a wholly owned subsidiary, which it named Kearfott Guidance & Navigation Corporation.

After Singer, Unstitched (1988 and later)

By 1987 Singer had gotten in financial trouble. It had enormous debt, a $20 million dollar loss, and its chairman died unexpectedly. In February 1988 it was purchased by Paul A. Bilzerian, a Florida financier known as a corporate raider, for $1.06 billion. He quickly began to sell off the pieces to pay his debt. He also moved the headquarters from Stamford, CT to Tampa, FL.

In April 1988 the Singer Link-Miles Simulation Corporation surrendered its incorporation in Delaware.

On August 5, 1988 Bilzerian sold Link Corporation in Silver Spring, MD (the old Link Aviation and ERCO groups) to the Canadian firm CAE Industries, Ltd. (previously known as Canadian Aviation Electronics Ltd.) who renamed it CAE-Link Corporation or Link Domestic Simulation and Training Systems Division. In 1995 CAE sold Link to Hughes Electronics Corporation for $155 million. Two more sales saw Link with L-3 Communications in 2000 (bought for $160 million), who restored the Link name; it now known as L-3 Link Simulation & Training and is located in Arlington, TX.

In September 1988 the Kearfott Guidance & Navigation Corporation was sold to Astronautics Corporation of America for $285 million.

On October 12, 1988 Bilzerian, Chairman and CEO of Singer, announced a reorganization of its simulator manufacturing businesses under the name Link-Miles, to consist of two autonomous operating companies, one in the United States and the other in the United Kingdom. The UK company, Link-Miles Limited, located in Lancing, England, was involved in the military flight, airline visual, naval, and ground simulation businesses worldwide. The US company combined the airline simulation activities of the Link-Miles International Simulation Corporation based in Binghamton, NY and the industrial process and power plant business of the Industrial Simulation Corporation3 located in Columbia, MD. [I have found references to Singer Link-Miles Simulation Corporation dated July 1989, so it is not clear how long the Singer name persisted.]

> "Link-Miles : 3 businesss units Link-Miles limited, Link-Miles International Similation Corporation, and Lin-Miles **Industrial Simulation Corporation located in Columbia, MD"**

In March 1989 the Singer Sewing Machine Division was sold to Semi-Tech Microelectronics of Canada for $289 million. This company was owned by James Henry Ting, whose business empire rose and fell meteorically. His Akai Holdings suffered greatly in the 1999 Asian financial crisis. By early 2000, most of his companies had stopped doing business, slid into bankruptcy, or been absorbed by other companies. Semi-Tech bondholders sued Ting in November 2001 for $578 million. Ting was arrested in 2003 in Hong Kong for falsifying the accounts of Akai to the tune of more than $38 million. The Singer sewing machine business and trademark were sold in 2004 to Kohlberg & Company.

In June 1989 Bilzerian resigned as chairman and CEO of Singer, hours after the Securities and Exchange Commission filed civil securities fraud charges against him for his takeover of Singer. Joseph J. Campanella continued as president and chief operating officer. (Bilzerian evenutally agreed to pay $55 million in fines, but had not done so by 2001 and was jailed.)

By August 1989 all that remained of Singer was Librascope in Glendale, CA, Simuflite in Dallas, TX, **Singer Link-Miles (U.S.) in Columbia, MD, and Singer Link-Miles Limited (U.K.) in Lancing, England. The domestic Link-Miles comprised Link-Miles Simulation Corporation in Columbia, MD and Singer Link-Miles Corporation in Binghamton, NY.**

On October 16, 1989 Bilzerian adopted the business name of Bicoastal Corporation. Later that year, in November, Bicoastal filed Chapter 11 bankruptcy in Tampa, FL. The company dissolved in 1992.

In May 1990 Link-Miles Simulation Corporation, the domestic simulator business in Columbia, MD, announced a joint venture named **General Energy Technologies** with **NPO Energia** of the Soviet Union. General Energy Technologies would be **a Soviet enterprise centered in Moscow and would provide Soviet and Eastern European simulation, training**, and engineering services in energy related fields including nuclear and fossil fuel power plants, and chemical processing.

In April 1990 Link-Miles Simulation Corporation of Columbia signed a contract to provide nuclear plant simulators to SYPRO of Sweden and Pennsylvania Power & Light Co. Link-Miles also won a contract for an ethylene plant simulator.

In August 1990 Link-Miles Simulation Corporation of Columbia, MD, a manufacturer of nuclear power-plant control room simulators, was renamed S3 Technologies. Before that it was Industrial Simulation Corporation, and even earlier, the Link Simulation Systems Division of Singer. In September 1993 ManTech International bought S3 Technologies.

GSE Systems (Global Simulation & Engineering Systems) was formed on March 30, 1994 to consolidate the simulation and related businesses of S3 Technologies, General Physics International Engineering & Simulation, and EuroSim (Sweden), each separately owned and operated by ManTech International Corporation, GP Strategies Corporation, and Vattenfall AB, respectively. GSE, originally headquartered in Columbia, MD in the offices of the old Link-Miles Simulation Corporation, was subsequently headquarted in Sykesville, MD. In October 2003 controlling interest was acquired by GP Strategies Corporation, whose principal operating subsidiary is General Physics Corporation (founded in 1966 by Robert W. Deutsch). In 2007 GSE Systems developed training solutions for the power, process, manufacturing, and government sectors worldwide. GSE Systems has subsidiaries.

In September 1990 Bicoastal sold Link-Miles Limited, the UK simulator manufacturer, to Thomson-CSF of France for $100 million. In 1994 Thomson bought Redifussion Simulation from Hughes Aircraft, merged it with Link-Miles, and renamed the company Thomson Training & Simulation; it was located at Crawley, West Sussex. In December 2000 Thomson-CSF changed its name to Thales and the Link-Miles-Rediffusion company was rebranded Thales Training & Simulation.

In September 1991 Simuflite was sold to Southern Air Transport, Inc. of Miami, FL. In January 1998 Simuflite was sold to General Electric Capital Services when SAT sold itself to Kitty Hawk Inc. In December 2001 CAE bought Simuflite for $247 million.

In December 1991 Librascope was sold to Loral Corp. for $9 million, the last piece of Singer to be sold. It was renamed Loral Librascope. In January 1996 Lockheed Martin acquired Loral including Librascope. On June 30, 2000 Librascope's Glendale, CA facility was closed, and its remaining business was moved to its parent Lockheed Martin division in Manassas, VA.

All the pieces of Link claim all of its history

ERCO

In 1930 Henry Berliner founded the **Engineering and Research Corporation (ERCO) in Washington, DC** to produce tools for the manufacture of metal aircraft and propellers. It was incorporated in MD in 1936. In 1937 it designed and produced the famous Ercoupe airplane. A plant was built in Riverdale, MD in 1938. An adjacent airfield named ERCO Field was built 1942–1943. A total of 112 Ercoupes were produced in Riverdale before the war forced the company to suspend production, thousands of Ercoupes were produced after the war until 1952. In 1949 ERCO built a flight simulator and entered the electronics field.

In November 1954 the Berliner family sold ERCO to American Car & Foundry Corporation (later known as ACF Industries, Inc.) for $3 million. ACF was a diversified manufacturing company whose products ranged from railroad equipment to nuclear power equipment. The ERCO operation was renamed as the ERCO Division, ACF Industries Inc. It remained in Riverdale, MD. In **1957 ERCO Division merged with ACF's Nuclear Energy Products Division (previously known as Albuquerque Division) and became known as Nuclear Products, ERCO Division.** The Riverdale plant served as the Nuclear Products Division Headquarters. The Nuclear Products group built a number of a nuclear power plants.

ACF's Electronics Division was in existence by 1962. I suspect that it encompassed the old ERCO Division without the nuclear group.

In 1965 GPE purchased the operations of ACF's Electronics Division at the Riverdale plant and moved it to Silver Spring, MD. After Singer's purchase of

GPE, the division was named Simulation Products Division. It had offices in Sunnyvale, CA until 1972 at the earliest that were used to design nuclear power plant simulators and flight simulators. It also had offices in Houston, TX and Binghamton, NY. In 1976 Singer Simulation Products Division was renamed Link Division.

[...]

General Engineering Technologies ...

https://www.linkedin.com/company/get-jsc/

April 6 1994

Full page : [HN0013][GDrive]

- S3 is "owned" by by Mantech, but merged into GSE .... very confusing !

MARKET SUMMARY, 20D

THE SUN

Business

PAGE 11D
WEDNESDAY
APRIL 6, 1994

Computer simulation firms announce merger

By Michael Dresser
Sun Staff Writer

Three Columbia-based companies and a Swedish firm are joining forces to create an international computer simulation company based in Columbia.

Simulation, Systems and Services Technologies Co., known as S3, agreed Friday to merge with EuroSim AB of Sweden and two Columbia-based units of National Patent Development Corp. to form a new company to be known as Global Simulation and Engineering Systems Inc. (GSE).

The new company, which will be housed in S3's Columbia headquarters, will be headed by S3 Chief Executive William E. Kuhlmann, a former General Physics Corp. president. Mr. Kuhlmann said yesterday that the merging companies now account for annual sales of about $55 million.

"We hope to do a public financing in the fall of this year, probably at the earliest," he said. The merger would help the companies make the transition from a hardware orientation to an emphasis on software, he said.

The existing companies are active in the creation of computer simulations of power generation operations, both for nuclear and fossil fuel plants, and chemical processing. The simulations are used both for training and the development of new procedures in those industries.

The merger of the three companies is not expected to result in any significant job losses, said S3 Vice President Michael Allocco.

S3's Columbia operation will continue to employ about 275 workers, and they will be joined by an estimated 50 to 60 workers from General Physics International Simulation and Engineering Inc. and GPC Simulation Services Division. For the short term, he said, the merging companies will be operated with their current management structure intact.

General Physics International is owned by General Physics Corp. of Columbia, which is itself owned by National Patent Development Corp. of New York. GPC Simulation Services is a General Physics spinoff that is now directly owned by National Patent, which will control three of the seven board seats in GSE.

ManTech International Corp. of Fairfax, Va., which owns S3, will control another three seats, while the Swedish firm will control one.

[HN0014][GDrive]

Jan 4 1995

Full page : [HN0015][GDrive]

MARKET SUMMARY, 16C

PAGE 8C WEDNESDAY JANUARY 4, 1995

THE SUN

Business

GSE Systems acquires Texas Instruments unit

Companies don't reveal deal's price tag

By Michael Dresser
Sun Staff Writer

GSE Systems Inc., a Columbia-based supplier of systems that simulate industrial processes, said yesterday that it has acquired a Hunt Valley business that could extend GSE's reach far beyond its stronghold in the power generation industry.

Under an agreement with Texas Instruments Corp. of Dallas, GSE will offer jobs to the 235 managers and other employees of TI's Process Systems business and continue doing business at its current location. GSE Systems will change the name of the business to GSE Process Solutions Inc.

The companies declined to reveal the price of the acquisition.

GSE Systems is the holding company for Columbia-based S3 Technologies, formerly the Link Simulation Systems division of the Singer Co. S3 Technologies is a leading provider of computer systems that simulate power generation processes, both for system design and employee training purposes.

The business that GSE is acquiring creates systems that do the actual work of controlling manufacturing and power generation process — running the automated machinery that formulates a medicine, for instance.

William Kuhlmann, GSE's chairman and chief executive, said the acquisition was part of a long-term strategy to expand the company's role in such industries as pharmaceuticals, foods and beverages, wastewater treatment and chemicals.

Michael Allocco, GSE's vice president for sales and marketing, said the two companies are "an absolutely very positive fit."

Mr. Allocco said about 80 percent of S3 Technologies' business comes from the power generation industry while 90 percent of the Process Systems' group's work comes from manufacturing processes.

And whereas S3 Technologies' business is 90 percent international, the Texas Instruments subsidiary's sales were 80 percent domestic, he said.

Mr. Allocco said the combined businesses will have an estimated $90 million in sales during the current fiscal year. He declined to provide any further breakdown.

Process Systems has been active in Hunt Valley under several owners since the late 1960s, he said. Originally named EMC Controls, it was owned by Rexnord Inc. until 1987, when it was sold to TI, he said.

With the addition of the Process Systems, GSE Systems will employ about 560 people worldwide, Mr. Allocco said. Besides S3 Technologies and GSE Process Solutions, the company also operates a Swedish subsidiary called EuroSim AB.

Privately held GSE Systems is 45 percent owned by ManTech International Corp. of Fairfax, Va., and 35 percent owned by National Patent Development Corp. of New York. Columbia-based General Physics Corp. and Vattenfall AB of Sweden each hold 10 percent stakes.

[HN0016][GDrive]

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1995 (Aug 8) - GSE Systems' earnings boosted by acquisition

Source : [HN00QC][GDrive]

Boosted by the acquisition of a Hunt Valley software company, GSE Systems Inc. of Columbia yesterday reported that second-quarter earnings more than doubled as sales went up 91.6 percent.

The company, which makes computer programs to control industrial processes and simulate power plant controls and factory operations, reported quarterly earnings rose to $826,000, or 33 cents per share, compared with $375,000, or 15 cents per share, for the same period a year ago. Sales jumped to $22.8 million from $11.9 million.

The company's stock yesterday rose 25 cents a share to close at $15.50.

GSE Systems, which has 515 workers in Columbia and Hunt Valley, went public July 27 with the sale of 1.5 million shares of stock at $14 a share that raised $21 million.

Even though there has been some recent slowdown in manufacturing, GSE sees growth in its international business and among companies trying to modernize. "We still see the industry continuing to grow," said William E. Kuhlmann, GSE's chairman and chief executive officer.

Of the quarterly sales increase, $9.3 million came from the Process Solutions operation, which was bought by GSE from Texas Instruments Corp. in December for $8.8 million. The Baltimore County business produces computer software to control industrial processes.

The addition of the business also boosted revenues for the first six months by $16.8 million to $41.8 million -- 81.7 percent higher than the same period a year ago when sales were $23 million.

Net income for the first six months was $1.4 million, or 56 cents per share, compared to $854,000, or 34 cents a share, for the first six months of 1994.

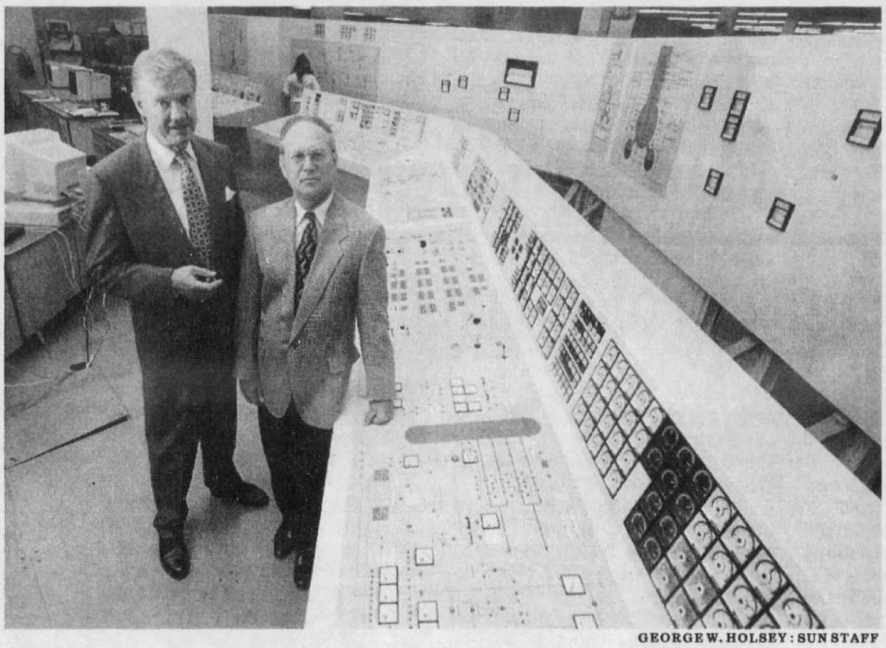
Oct 13 1995

Source pages :

- [HN0017][GDrive]
- [HN0019][GDrive]

The Baltimore Sun (Baltimore, Maryland) • 04 Jan 1995, Wed

THE SUN



GEORGE W. HOLSEY : SUN STAFF

Simulator: *GSE Systems President Rolf M. G. Falkenberg (left) and Chairman William E. Kuhlmann stand next to a nuclear plant simulator that uses their firm's software.*

GSE Systems targets $4.5 billion market

■ **Expansion:** *The Columbia-based successor of troubled S3 Technologies looks*

scattered among locations in Sweden, the United States and the rest of the world.

"It was truly an effort of a number of others who believed in our vision," said William E. Kuhlmann, GSE's

Unhappy with developments, some of S3's key employees bailed out to set up a competitor, GP International Engineering & Simulation at General Physics Corp., another Columbia company

beyond its nuclear niche toward a larger market for industrial control systems.

By Ross Hetrick
SUN STAFF

In 1993, S3 Technologies was a mess.

Its parent company was in Chapter 11 bankruptcy proceedings. Many of its best and brightest had jumped ship to a new firm. S3's own business — making software for nuclear power plant simulators — was bleeding red ink and the company itself was ripe for a foreign takeover.

What a difference two years makes.

Now, S3's successor, GSE Systems Inc., based in Columbia, is mapping out a strategy for expansion.

Shored up by an initial public offering in July that raised about $20 million, GSE is nearly debt-free, is making a profit and is moving into what it sees as a potential $4.5 billion market. It has a work force of about 545, with 220 in Columbia, 180 in Hunt Valley and the rest

chairman and chief executive officer, sitting in the company's imposing 155,000-square-foot brick and glass building in a Columbia business park. "One reason I'm here is to fulfill that vision."

The saga of GSE started in 1988 when S3's parent, the 140-year-old Singer Co., a defense contractor that had sold off its famous sewing machine operation in 1986, succumbed to a hostile takeover by Paul A. Bilzerian, a 37-year-old Tampa, Fla., corporate raider who planned to make a profit by selling off the company piecemeal.

S3, part of Singer's Link simulator division, specialized in making the software for multimillion-dollar replicas of nuclear power plant control rooms. These control systems, which stretch for 60 to 90 feet and cost from $6 million to $19 million, are not connected to reactors but to computers that simulate them.

But Mr. Bilzerian's plans went awry, and the company, renamed Bicoastal Corp., filed for Chapter 11 bankruptcy in 1989. Mr. Bilzerian was convicted of securities fraud in other deals not connected to Singer.

that provides professional services to utilities and government agencies.

And S3, now contending in a tougher international market, started cutting its bids — to the detriment of its bottom line. [*See GSE, 10C*]

Bank earnings

1st Union, 1st Fidelity hit records

Profits also surge at Crestar, Citizens, Columbia Bancorp

By Bill Atkinson
SUN STAFF

Higher loan demand coupled with reduced deposit premiums, and increased

[HN0018][GDrive]

GSE Systems targets $4.5 billion market

[GSE, from Page 1c]

At the same time, potential customers shied away because of the financial problems of its parent company. By 1993, S3 was ripe for picking by a foreign competitor.

Then ManTech International Corp. and Mr. Kuhlmann stepped into the picture.

ManTech, a privately held consulting and technical company in Fairfax, Va., with annual sales of about $300 million, was looking to expand its simulator business, then limited to desktop models. It retained Mr. Kuhlmann, 52, to give S3 the once-over, and he came away impressed.

ManTech went ahead with the deal, buying S3 for $5 million and installing Mr. Kuhlmann, a former consultant and chief executive of General Physics, as chairman and chief executive.

Critical to the deal was a state guarantee of $2 million worth of loans and its help getting financing from the Export-Import Bank of the United States.

"We probably couldn't have done it without the help of the state," Mr. Kuhlmann said.

ManTech then brought in the parent of General Physics, National Patent Development Corp., and EuroSim AB, a subsidiary of the Swedish government-owned utility Vattenfall AB, as partners in the newly named GSE Systems, with ManTech and National Patent each holding 45 percent and EuroSim 10 percent of the company's stock.

Rolf M. G. Falkenberg, the former president of engineering and executive vice president of Vattenfall AB, was installed as president and chief operating officer.

Strategic acquisition

Secure in its new ownership, GSE, mindful of the nuclear power industry's cloudy prospects, set its sights on building simulators for other industrial operations, ranging from oil pipelines to steel making.

To crack these markets, GSE acquired the process solutions division of Texas Instruments Corp. in December for $8.8 million.

Based in Hunt Valley, this division makes software for the control panels of industrial operations — known as process controls. Now, the division will be able to offer software for both real and simulated operations — something that is offered by few of its competitors, Mr. Kuhlmann said.

The acquisition also nearly doubled GSE's revenues to $41.8 million for the first six months of the year, compared with sales of $23 million for the same period a year ago.

With cost cutting — including laying off 30 to 40 workers — and the completion of money-losing contracts, the combined operations went from a pro forma loss of $7 million in 1993 to a profit of $1.6 million last year.

The company's balance sheet, however, still showed the effects of years of losses, with a corporate net worth, or stockholders' equity, of minus $3.5 million.

But the company's prospects of expanding its process control business while selling more simulators to industrial customers — a market it estimates at a potential $4.5 billion — enabled GSE to issue 1.5 million shares at the relatively high price of $14 a share.

The July 27 initial public offering of the GSE stock raised about $20 million and pushed the company's net worth up to $14.8 million, though it reduced ManTech's and National Patent's stakes to 28 percent each and EuroSim's to 6.3 percent. The stock closed yesterday at $14.

The investment banking firm that took GSE public, Prime Charter Ltd. in New York, expects the company to dominate the nuclear simulator business now that the main players are combined.

"They were knocking each other's heads off bidding on the same contracts in the utility industry," said Sylvan Schefler, chairman of Prime Charter. "And they were bidding it stupidly."

Alan H. Dorsey, director for research at Value Investing Partners Inc. in Westport, Conn., noted that GSE's predecessor firms built 114 of the 170 nuclear simulators in service. And he added that there are another 255 nuclear plants in the world still without simulators.

"Even though it sounds like an ugly business, it's a great business," said Mr. Dorsey, whose firm participated in the selling group that handled the stock offering.

"The core business has done well and should do well in the next couple of years," he said.

Eastern European prospects

Indeed, GSE is looking to Russia and the former Soviet bloc countries as new markets for nuclear simulators. And both Mr. Kuhlmann and Mr. Falkenberg believe the nuclear industry will be revived as power plants turn away from fossil-fuel plants that generate carbon dioxide.

Nuclear simulators are "our cash cow," Mr. Falkenberg said.

GSE also is banking on its process solutions division to break into the industrial market — something S3 tried unsuccessfully a few years ago.

"It gives us instant access to a customer base," Mr. Kuhlmann said. "Our customers are very excited about it."

The need for more industrial simulators is being fueled by the increasing complexity of the controls and the enormous expense of shutdowns caused by inexperienced operators. The $200,000 to $5 million it costs for an industrial simulator can be made up by fewer breakdowns, Mr. Kuhlmann said.

Mr. Dorsey said outside forces ranging from the Environmental Protection Agency to insurance companies also are adding to the pressures on companies to use simulators.

Yet while the markets seem right and the company is poised to cash in, it still is up to management to make it work, Mr. Dorsey said. "They've got to put up the numbers in the next 18 months."

1996 (Aug)

Full page : [HN001D][GDrive]

D6 R FRIDAY, AUGUST 9, 1996

ORANGE COUNTY BUSINESS

ORANGE COUNTY BRIEFLY

Comarco Joint Venture Wins Military Contract

YORBA LINDA—A Comarco Inc. joint venture has won a contract to provide testing and system verification support to a military weapons system testing center at Ft. Huachuca, Ariz.

Comarco, which designs and markets wireless communications products, estimates that it will receive $30 million to $50 million over the life of the contract. The contract has a one-year base period with options for four additional years.

The company said the joint venture, called Interop, is owned by Comarco and ManTech International Corp., a Georgia-based provider of professional and technical services.

[HN001E][GDrive]

March 1997

Full page at [HN001F][GDrive]

➤ **Apertus Technologies Inc.,** Eden Prairie, and ManTech International Corp. said that they have reached an agreement for ManTech Design and Development to resell Apertus' Enterprise/Access, comprehensive server solution that enables legacy applications and data to interact with the Web, messaging networks, and client/server environments.

Star Tribune (Minneapolis, Minnesota) • 28 Mar 1997, Fri • Page 37

[HN001G][GDrive]

Aug 1997

Full page at [HN001H][GDrive]

Daily Press (Newport News, Virginia) • 22 Aug 1997, Fri • Page 29

MANTECH CONTRACT. ManTech Systems Engineering Corp., a wholly-owned subsidiary of ManTech International Corp., has been awarded an $85 million contract from the Marine Corps Systems Command for Third Echelon Test Sets. Fairfax-based ManTech is a worldwide provider of information technology, communications, software, engineering, training, logistics, environmental research and development, and simulations and flight hardware to the U.S. government and commercial industries. Third Echelon Test Sets provide a portable test system foR battlefield weapons and communications systems.

- [HN001I][GDrive]

2000 (July 25) : FBI - Criminal database ?

- page 1 : [HN001J][GDrive]
- Page 4 : [HN001L][GDrive]

The Clarion-Ledger

edger.com Mississippi's News Source Tuesday, July 25, 2000 ■ Jackson, Miss. ■ 50¢

'They pirated positions,' PEER director says

Report rips drug agency

■ Money intended to add agents misspent, watchdog panel says

By Beverly Pettigrew Kraft
Clarion-Ledger Staff Writer

Plans to intensify drug enforcement faltered when funding for more narcotics agents was spent for a new training academy and more bureaucracy, says a government watchdog report released Monday.

The Legislature allocated $25.3 million to pay for 112 new Mississippi Bureau of Narcotics positions over three years. But hiring for the new positions lagged and resignations increased.

In January, the agency had gained only 34 more officers and civilians, according to the report by the Joint Legislative Committee on Performance Evaluation and Expenditure Review.

The agency's arrest rate dropped during that time.

"It was an opportunity squandered," PEER Director Max Arinder said.

The report noted:

■ Recruiting was inadequate. Management decisions led to resignations.

■ The original proposal that called for more agents projected an increase of 502 arrests, but 275 fewer were recorded. The projection for an increase of 866 new cases turned into 446 cases.

■ The new training school cost the state nearly $21 more per student per day than the state academy.

Leadership of the Bureau of Narcotics convinced the Legislature in 1996 to increase agents. Funding was spread over the 1998-2000 fiscal years. Of the 112 new positions authorized, 87 were to be for agents and 25 for support staff.

Part of the money went for promotions and raises.

"They pirated positions from both enforcement support and field agents and used these to build up middle management," Arinder said.

The report covers the three-year term of Tom Blain. Blain resigned in January. Don Strange was appointed March 1.

Blain, who inherited the expansion proposal when he became director in February 1997, made 30 promotions and created 15 field agent supervisor positions from 13 agent and two staff positions. Blain went from 13 supervisors to 28.

Blain "increased the number of management personnel at the expense of field operations," the report said.

MBN "misled the Legislature in its FY 1999 and 2000 budget requests concerning the use of the requested

See BUREAU, 4A

J.D. Schwalm/The Clarion-Ledger

Don Strange, head of the Mississippi Bureau of Narcotics, addresses a PEER report on the bureau Monday.

[HN001K][GDrive]

Clarion-Ledger (Jackson, Mississippi) • 25 Jul 2000, Tue • Page 4

Bureau: Mismanagement 'fairly serious,' Sen. Bryan says

From 1A

funds" by saying in budget requests that money was being used to continue the three-year expansion plan," the report said.

House Appropriations Committee Chairman Charlie Capps, D-Cleveland, said, "I'm really disappointed that the Bureau of Narcotics has put this money into administration instead of put it out into agents in the field. That's what we appropriated it for."

The PEER report was sharply critical of Blain's actions. It says Blain's management changes "created a work environment that may have influenced 50 voluntary or forced resignations ... including 29 field agents and six field agent supervisors."

Arinder said Blain "created some absolutely terrible morale problems in the department the way he managed things. ...They had a turnover rate that just skyrocketed."

Blain said Monday that he had not read the report. He said he would comment until after he had time to study it, probably today.

Blain works as a law enforcement consultant for ManTech International Corp. in Gainesville, Va. The management technology company helped build the state's automated criminal records network. Blain worked on that project at the Department of Public Safety before he became MBN director.

PEER Committee member Sen. Hob Bryan, D-Amory, said, "I think the solution would be a new agency head, and that's already taken place.

"The overall picture was there was fairly serious mismanagement out there during the previous administration," Bryan said.

"I have confidence that the new director will do better, not merely in the particular areas PEER talked about, but in general management of the agency," Bryan said.

Strange said people with supervisory titles and pay weren't supervising agents.

"There was no first-level supervision short of being the captain in charge of the office," Strange said. "They used the rank provisions for pay enhancements.

"I didn't think it was a very good structure. I didn't think it was conducive to drug law enforcement," Strange said.

Strange got Personnel Board approval for his reorganization plans in late April, changing duties and salaries of 19 positions.

PEER called for MBN to conduct a needs analysis of personnel requirements by Sept. 1, 2001, and to design a comprehensive recruitment plan. Positions should be based on things such as population, drug patterns and complaints from law enforcement and citizens.

The report said the State Personnel Board should work with MBN to revise qualifications for all officer positions.

The Personnel Board approved some of Blain's personnel actions.

The PEER report said personnel actions not related to the legislatively approved expansion cost $161,607 in fiscal year 1998, $82,109 in 1999 and $90,677 in 1999.

MBN did not fill new positions in a timely manner, PEER said. "As of Jan. 31, the bureau had filled 125 of 180 sworn officer positions. This lack of sworn officers, especially the field agents, has significantly impacted the enforcement of drug laws statewide."

Money for positions that remained vacant was returned to the state general fund. MBN returned $2.5 million for the 1998 and 1999 fiscal years. It is projected to return $4.5 million for the 2000 fiscal year.

With 83 vacancies last fall, the Joint Legislative Budget Committee called for cutting $2.6 million . The Legislature this spring reallocated $1 million after Strange begged to hire more agents.

Strange said he now has about 133 agents, with plans to hire about 25 more within a month. His goal is 188 agents. About 10 of the agents who resigned during Blain's tenure have been rehired.

Richard Brooks, who was was forced to resign for communicating with legislators and news reporters about problems he saw at MBN, was reinstated July 1. Brooks would not comment.

Hinds County Sheriff Malcolm McMillin said he wasn't surprised at the report's criticisms.

"Every two or three weeks I'd have somebody coming in here telling me they were the new captain or the new major and they wanted to have a wonderful working relationship," McMillin said. "They didn't help me."

PEER told MBN to be cost effective in training. The school that Blain set up at Camp Shelby in Hattiesburg cost the state at least $70,059 more than the state academy. Three 50-day sessions cost $220,808, compared to $150,750 that it would have cost at the Mississippi Law Enforcement Officer Training Academy in Rankin County, the report said.

The report recommended using the Rankin County academy for general law enforcement training and limiting the MBN academy to specialized training .

The report also said allowing two civilians to carry firearms created potential liability because they did not have the training or job responsibilities to carry weapons.

PEER called for legislation to prevent civilians from carrying firearms. Strange said he prohibits anyone except sworn officers from carrying a weapon.

■

Staff Writer Theresa Kiely contributed to this report.

GIANT

[HN001M][GDrive]

2002 (March 14)

Pages : [HN001N][GDrive] / [HN001P][GDrive] 20

Charles River insists it's not simply trying to slash the head count.

VENTURE FIRMS, Page E7

the deal among Compaq stockholders is widely assumed.

In contrast, HP director Walter Hew-

COMPAQ, Page E13

Defense spending boosts information technology sector

By Ross Kerber
GLOBE STAFF

Suddenly, it's flush times for the cluster of companies that build and run military computer networks and provide information technology to the Pentagon.

Traditionally, makers of weapons like jet fighters and missiles have been the big recipients of defense spending. But now, rising spending on information systems is boosting the fortunes of a sector better known for keeping track of corporate data like spare parts and payrolls.

Underway in recent years, the trend was accelerated by the government's response to Sept. 11.

Standing to gain are both traditional technology companies and those that specialize in defense logistics. They range from giants like Lockheed Martin Corp. and EDS to smaller companies like Dynamics Research Corp. of Andover. Northrop Grumman Corp.'s hostile bid for TRW Inc. aims to integrate the technology-services groups both have built in recent years, including 400 people at Northrop's TASC unit in Reading.

GLOBE PHOTO/AMY NEWMAN

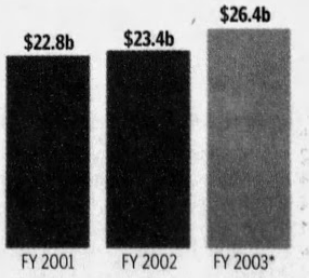
Michelle Christian-Michel is a software engineer at Dynamics Research in Andover. Shares in the firm have roughly doubled since Sept. 10.

Some players have already cashed in on the sector's improving fortunes. ManTech International Corp., which supports spy agency and military communication systems, raised $115 million in an initial public offering last month. Last week, Virginia-based SRA International registered to sell stock

DEFENSE SPENDING, Page E4

Information age

Total Department of Defense spending on information technology



*Estimate
SOURCES: Department of Defense, Federal Sources Inc.

GLOBE STAFF CHART

[HN001O][GDrive]

would separate the parts unit undermines their argument.

The Boston Globe (Boston, Massachusetts) • 14 Mar 2002, Thu •

Defense spending boosts tech sector

▶ DEFENSE SPENDING
Continued from Page E1

worth $86 million. On Tuesday Anteon International Corp., which has about 500 New England employees, raised $270 million in an initial public offering; another provider of classified computer networks, CACI International Inc., plans to sell more of its own shares soon.

More offerings may follow, on the theory that defense work offers computer companies a hedge against reduced technology spending by corporations and other organizations.

"These companies weren't of much interest to the public markets before, because they didn't have much growth," said CIBC analyst Stephen Murphy.

On average, the sector's revenue rose around 7 percent annually since 1997, Murphy said. But he expects it to grow at 10 percent annually through 2007, at a time when sales at other technology companies will lag

agreements about whether even the smallest components needed to be tested with the same scrutiny that weapons must meet. Ultimately, the Navy and contractor EDS persuaded Pentagon overseers to use commercial methods.

"You don't need to test every Cisco router and Dell computer," said a Navy spokesman. "If we'd done it in the typical way of Navy weapons-testing, it would have taken an inordinate amount of time."

Ultimately the system will replace 200 different legacy e-mail systems used by 400,000 service personnel.

Investors see the Pentagon's new information technology push as a boon for defense stocks. Shares in Dynamics Research of Andover, for instance, have roughly doubled since Sept. 10 on expectations of more work.

James Regan, chief executive of Dynamics Research, said the company's goal is to grow 15 percent a year for the next five

companies will lag.

"The Pentagon is going to be a relatively more important customer" for technology companies, said David Colton, a vice president at the Information Technology Association of America, whose members contract with both civilian and military agencies.

Standing to gain are traditional tech companies and those specializing in defense logistics.

The military's information technology budget includes both administrative work and systems used for intelligence gathering or targeting guided weapons. For fiscal year 2003, the Bush administration has requested $52 billion in federal information-technology spending, a $4 billion increase over 2002. The military is the single biggest technology customer in the federal government, accounting for half the federal technology budget.

The extra money would be split between the military and, on the civilian side, the broad area known as "homeland security." That includes linking databases, perhaps between civilian and intelligence agencies, and more spending on information-storage networks and cyber-security, said Mark Forman, an official at the Office of Management of Budget who oversees federal e-government efforts. In all, the administration seeks $379 billion for the military next year, a $48 billion increase, justified by the war on terrorism.

That doesn't include spending on secret networks used by intelligence agencies, a figure the government doesn't disclose.

These increases will mean more work for services firms, Forman said. In the past, federal agencies often designed their own computer networks, but lately the government has pressed managers to act like business executives and outsource these tasks by hiring contractors.

"We want to get agencies to act like buyers rather than [computer-system] integrators," Forman said.

Some critics say that, without new regulations, outsourcing could lead to overcharging. At congressional hearings on March 7, the Washington-based Project on Government Oversight blasted "taxpayer ripoffs" stemming from lax procurement rules.

Bureaucratic problems have also cropped up. Last summer, payments for the largest systems

percent a year for the next five years, both through acquisitions and by adding to the security-software and logistics contracts it has already won.

For instance, Dynamics Research built and supports an Air Force system that keeps track of the movement of spare parts, and another one that helps determine when to repair jet engines. The company employs 1,500 people, including 800 in Andover and elsewhere in Massachusetts.

Regan, who began a restructuring of the company when he joined in late 1999, said the company expects revenue to rise as high as $217 million this year, from $201 million in 2001, and for profit to increase as well. It still works on systems for the Internal Revenue Service and other civilian branches of government, but military technology will drive most of the growth, he said.

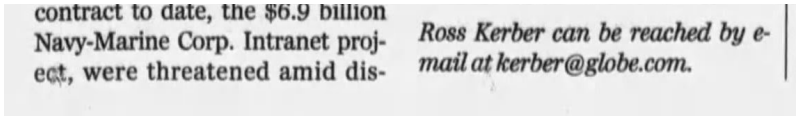
"We see more opportunity for us to make a contribution in that area," he said.

In Lexington, Raytheon Co. has been seeking to win more computer contracts as part of a broader push into homeland security, a move referred to internally as "Project Yankee." Company spokeswoman Kristen Giddens said it will emphasize integrating databases and software to protect networks and data. The company declined to project how much revenue such activities will generate.

Lockheed Martin, the largest government computer contractor, has organized its defense technology services business under a retired Army general, Emmett Paige, a vice president of operations at the company's Information Technology division in Seabrook, Md. Paige was previously chief executive of OAO Corp., a closely held company with sales of more than $200 million that Lockheed bought in December.

Lockheed Martin doesn't forecast technology services revenue either, said Paige, who added he expects technology spending within federal civilian agencies to grow just as quickly as on the military side. And when it comes to protecting information networks, there will be plenty more public spending to go around.

"Anything dealing with security, I expect to grow," he said.


contract to date, the $6.9 billion Navy-Marine Corp. Intranet project, were threatened amid dis-

Ross Kerber can be reached by e-mail at kerber@globe.com.

[HN001Q][GDrive]

July 2 2002 - Buys Aegis Research Corp.

Source : [HN001B][GDrive]

"The ManTech International Corporation, a military contractor that first sold shares to the public in February, has agreed to buy the closely held Aegis Research Corporation for $70 million in cash. Aegis Research provides technical support services for the Defense Department and the national intelligence community, ManTech said yesterday. The company is expected to have about $60 million in revenue this year. The acquisition will add about 2 cents a share to ManTech's 2002 earnings and about 13 cents next year, the company said. The acquisition is expected to close this month and will be paid for using the proceeds of ManTech's initial public offering, the company said."

2011 (Aug 4) - "Guardians of Internet Security Are Targts"

Source : [HN001C][GDrive]

By Somini Sengupta

LAS VEGAS — The Web site of ManTech International, a $2.6 billion computer security company that won a major F.B.I. contract, sells its services this way:

"Whether an intrusion is conducted by a skilled outsider with criminal intent, an adolescent hacker seeking a thrill or a disgruntled employee bent on revenge or espionage, the potential risks to the organization are enormous."

Last Friday, ManTech was that organization.

A band of Internet vigilantes calling itself Anonymous said it had sneaked into ManTech's computers to demonstrate the company's insecurity. The group released what it said were internal company documents and, in language that suggested the handiwork of an adolescent hacker seeking a thrill, taunted the company online: "It's really good to know that you guys are taking care of protecting the United States from so-called cyber threats."

ManTech is in good company. In recent months, several security firms and consultants have been hit by the very intruders they are hired to keep at bay.

Think of these companies as the new Pinkertons: Instead of taking on 19th-century outlaws in the Wild West, they are hired today to protect corporate and government data, including the most confidential intelligence information, across a vast virtual frontier. The string of embarrassing attacks on them demonstrates how vulnerable everyone is online, including those who are paid to be the protectors.

Many technology professionals who have long warned about such security risks say so-called hacktivist groups like Anonymous, which publicize their attacks to make a point, are the least worrisome of the many potential intruders out there.

"With the rise of hacktivism, now the people who break into you tell you they break into you," said Jeff Moss, founder of the Black Hat conference, which drew nearly 6,500 technologists, largely security professionals, to Las Vegas this week. "A little bit of public humiliation is going to go a long way in helping the security industry clean up."

Other times, the attackers are mysterious and more worrying entities, as in the case of the still unknown organization that in March breached the systems of RSA, whose electronic security tokens are used across many industries.

RSA's parent company, EMC, has said that replacing tokens and cleaning up the mess has cost it roughly $90 million so far this year. Hackers used information obtained in the RSA attack to break into Lockheed Martin, the largest military contractor in the country.

On Wednesday the security company McAfee said it had uncovered a campaign of computer break-ins at 72 organizations and companies worldwide. McAfee called it the handiwork of a nation-state intent on acquiring, among other things, American military designs. Military contractors in the United States made up a disproportionately large share of the companies selected — 12 in all.

Anonymous, for its part, has made it plain that it goes after defense and intelligence contractors to expose their security vulnerabilities, not for financial or strategic gain. Booz Allen Hamilton, a $5.6 billion company based in McLean, Va., that does computer security work for the Defense Department, was hit by the group in early July; the hackers released the e-mail addresses of 90,000 military personnel.

The most notorious breach of a security company came early this year after an executive at HBGary Federal, a relatively small consultant eyeing a government contract, boasted publicly of his ability to unmask the members of Anonymous. In response, hackers made off with a large trove of the company's e-mail messages and dumped them online, exposing details of its business transactions.

Greg Hoglund, who is the chief executive of HBGary, the parent company that owns a minority stake in HBGary Federal, said that the breach was the result of "a human mistake" and that his firm, along with other security companies, had fortified their systems since then.

"It was a wake-up call for the entire security industry," Mr. Hoglund said. "It probably needed to happen. I wish I didn't have to be the sacrificial lamb."

As unlikely as it may seem, HBGary Federal still has a contract to help an unnamed federal agency sniff out spies inside its organization. And HBGary continues to sell its software, intended to ferret out the circumstances of a network intrusion.

For its part, ManTech posted a vague statement on its site last Friday after the Anonymous attack, saying that it addresses threats to its information systems and pointing out the obvious: "All organizations attract cyber threats in our highly networked world."

An academic who studies computer security, who declined to be named because he consults for the government, described the Anonymous attacks on security companies in blunt terms: "They're pulling their pants down publicly."

The spate of attacks — and the fear of more — could actually end up buoying the fortunes of the global security industry. A nationwide survey of company technology managers, conducted by Forrester Research, found that computer security had increased as a share of the total information technology budget of companies, to 14 percent this year from 8.2 percent in 2007. Of those surveyed this year, 56 percent said it was a high priority to "significantly upgrade."

"The landscape is more menacing now," said Eve Maler, principal analyst for security and risk at Forrester. "Even the most experienced practitioners are in the process of upping their game."

All of the major defense and intelligence contractors have expanded their digital security wings in recent years. They are simply following the money. The business of security for government agencies is growing by an enviable 9 percent a year, according to the research firm Input/Deltek. Federal government contracts alone amount to over $9 billion today and are projected to grow to $13.3 billion by 2015. "Cybersecurity," Deltek concluded in a recent report, "is somewhat immune to spending and budget cuts."

For better or worse, said Jonathan L. Zittrain, a Harvard Law School professor, securing the Internet has been largely left to private players — and even government information is increasingly guarded by private companies, whose actions can be difficult to monitor and hold accountable.

"In the absence of larger public order, we've seen do-it-yourself approaches: the technologically savvy can configure their own firewalls, and corporations can try to buy security," he said. "But this can be as figuratively dicey as trying to get and maintain security contractors in Baghdad immediately following the fall of Saddam Hussein."

2010 (July 30) - First US AP1000 simulator contract for GSE

Source : [HI000G][GDrive]

GSE Systems announced that it had been awarded contracts worth over $7 million for nuclear power plant simulator work, including the construction of the first plant-specific Westinghouse AP1000 plant simulator in the USA.

The company announced a year ago that it had signed a contract with Westinghouse to model the central nuclear systems of the AP1000 pressurized water reactor for use by US customers. These code modules, it said, would be common to all American AP1000s and would help Westinghouse to demonstrate plant design and control room factors to regulators and potential buyers.

The rest of the systems to make finished simulators will vary in detail from plant to plant. The company noted that a simulator at each new build site is included in the scope of work between Westinghouse and its US customers.

Huge areas at Vogtle are already prepared for the reactors and necessary construction offices and material stocks (Image: Southern)

GSE has now announced the first plant-specific contract to construct an AP1000 simulator in the USA. This is to be for Southern Company's Vogtle site in Georgia, where preliminary site work has already started for the two AP1000 units, slated to begin operation in 2016 and 2017, subject to regulatory processes already underway. In February of this year, Vogtle units 3 and 4 became the first new nuclear power plant construction projects to be offered conditional loan guarantees by the US Department of Energy (DoE).

John Moran, CEO of GSE, commented: "For GSE, the contract for the first domestic AP1000 plant simulator marks the true start of the nuclear renaissance in America. Of the 25 applications formally filed with the NRC to build new reactor plants in the United States, 13 have selected the AP1000 design."

In September 2007, Westinghouse and its partners the Shaw Group received authorization to construct four AP1000 units China: two at Sanmen in Zhejian province and two more at Haiyang in Shandong province. Around that time, GSE was awarded a contract to construct a simulator at the Sanmen plant. In April 2008, GSE said that it had been awarded a multimillion dollar contract to initiate work on a simulator for the Haiyang plant.

That contract was based upon the Haiyang and Sanmen plants being almost identical designs. However, GSE said that as the Haiyang design progressed it deviated from Sanmen. The company said that it has now been awarded a contract to implement the "uncommon" design features of Haiyang in the simulator.

In April 2005, GSE agreed with Westinghouse GSE to cooperate on the development of AP1000 simulators as well as the "verification and validation" of the AP1000 human-machine interface, on which several phases of regulatory tests have been completed.

In addition to the Vogtle and Haiyang contracts, GSE said that it had been awarded a contract by the US Nuclear Regulatory Commission (NRC) to upgrade one of the simulators operated by the NRC at its Chattanooga Training Centre in Tennessee.

BITCHUTE @Housatonic YOUTUBE @HousatonicLive ODYSEE @Housatonic BRIGHTEON @Housatonic

Housatonic

GTE Corporation

Wikipedia GTE

Notes :

GTE Corporation becomes **Verizon Communications Incorporated** (in 2000)

- The history of GTE after year 2000 are covered in the **Verizon Communications Incorporated** page. For example, it goes on to merge with **MCI WorldCom Corporation** in 2006 (negotiations which started in 2005).

GTE Corporation acquired **BBN Planet**, one of the earliest Internet service providers, in 1997. See BBN Technologies, Incorporated .

1991 - Purchased **Contel Corporation**

Saved Wikipedia (Dec 4, 2020) - GTE

[HK003Z][GDrive]

Former type Public

Industry Telecommunications

Fate Acquired by Bell Atlantic

Successor [Verizon Communications Incorporated]

Founded 1934; 86 years ago

Defunct 2000; 20 years ago

Headquarters Stamford, Connecticut, U.S.

Products Telephone, internet, television

Subsidiaries GTE Southwest / CODETEL / Verizon California / Verizon Florida / Verizon North / Verizon South / Hawaiian Telephone / Puerto Rico Telephone

GTE Corporation, formerly **General Telephone & Electronics Corporation** (1955–1982), was the largest independent telephone company in the United States during the days of the Bell System. The company operated from 1926, with roots tracing further back than that, until 2000, when it was acquired by Bell Atlantic; the combined company took the name Verizon.

The Wisconsin-based Associated Telephone Utilities Company was founded in 1926; it went bankrupt in 1933 during the Great Depression, and was reorganized as General Telephone in 1934.[2]In 1991, it acquired the third largest independent, Continental Telephone ([Contel Corporation]). It owned Automatic Electric, a telephone equipment supplier similar in many ways to Western Electric, and Sylvania Lighting, the only non-communications-oriented company under GTE ownership. GTE provided local telephone service to many areas of the U.S. through operating companies, much as American Telephone & Telegraph provided local telephone service through its 22 Bell Operating Companies.

The company acquired BBN Planet, one of the earliest Internet service providers, in 1997. *[**Note** - **"BBN Planet"** was an internet service provider created by **BBN Technologies, Incorporated**. However, the "BBN Planet" acquisition is actually for the entirety of **BBN Technologies, Incorporated**.]* That division became known as GTE Internetworking, and was later spun off into the independent company **Genuity [(See Genuity Incorporated (2000) - Note that the name "Genuity" is recycled from another Internet company GTE acquired in 1997 - See Genuity Incorporated)]** to satisfy Federal Communications Commission (FCC) requirements regarding the GTE–Bell Atlantic merger that created Verizon.[4]

requirements regarding the GTE-Bell Atlantic merger that created Verizon.[4]

GTE operated in Canada via large interests in subsidiary companies such as BC Tel and Quebec-Téléphone. When foreign ownership restrictions on telecommunications companies were introduced, GTE's ownership was grandfathered. When BC Tel merged with Telus (the name given the privatized Alberta Government Telephones (AGT)) to create BCT.Telus, GTE's Canadian subsidiaries were merged into the new parent, making it the second-largest telecommunications carrier in Canada. As such, GTE's successor, Verizon Communications, was the only foreign telecommunications company with a greater than 20% interest in a Canadian carrier, until Verizon completely divested itself of its shares in 2004.[5]

In the Caribbean, CONTEL purchased several major stakes in the newly independent countries of the British West Indies (namely in Barbados, Jamaica, and Trinidad and Tobago).[6][7][8]

Prior to GTE's merger with Bell Atlantic, GTE also maintained an interactive television service joint-venture called GTE mainStreet (sometimes also called mainStreet USA) as well as an interactive entertainment and video game publishing operation, GTE Interactive Media.[9][10][11]

History

In 1918, Wisconsin public utility accountants Sigurd L. Odegard, John A. Pratt, John F. O'Connell bought the Richland Center Telephone Company for over $30,000 in Wisconsin. In 1920, the three accountants formed Commonwealth Telephone Company as the parent of Richland Center Telephone. Odegard was named president, Pratt vice-president, and O'Connell secretary. In 1922, Clarence R. Brown took over as vice-president when Pratt left the company that year.[12]

Commonwealth Telephone expanded across southern Wisconsin, and made its first purchase outside the state later in the decade when it bought Belvidere Telephone Company in Illinois. It also acquired two electric utilities in Wisconsin. In 1926, the company bought Associated Telephone Company in Long Beach, California. Later that year, Commonwealth Telephone and Associated Telephone merged as Associated Telephone Utilities.

From 1926 to 1923, Associated Telephone Utilities bought over 300 telephone companies across the United States. During this time period, Associated Telephone Investment Company was created in 1930 as a branch of Associated Telephone Utilities. By 1933, both Associated Telephone Utilities and its branch went out of business due to financial losses.

General Telephone

In 1935, General Telephone Corporation was established with John Winn as president. The following year, the company created General Telephone Directory Company as a division. In World War II, General Telephone helped install phone service for military facilities. From 1946 to 1950, General Telephone obtained over 100,000 telephone lines and bought out Leich Electric Company.

General Telephone's holdings included 15 telephone companies across 20 states by 1951, when Donald C. Power was named president of the company under chairman and long-time GT executive Morris F. LaCroix, replacing the retiring Harold Bozell (president 1940 - 1951). Power proceeded to expand the company through the 1950s principally through two acquisitions.

In 1955, Theodore Gary & Company became a part of General Telephone and allowed the company to hold over 2 million telephone lines after the company merge. It also had a subsidiary, named the General Telephone and Electric Corporation, formed in 1930 with the Transamerica Corporation and British investors to compete against ITT.[13]

In 1959, Sylvania Electric Products merged into General Telephone and was renamed to General Telephone & Electronics Corporation (GT&E). Power also obtained the purchases of multiple companies. such as Lenkurt Electric Company, Inc and Peninsular Telephone Company. In 1960, GT&E International Incorporated was created as a branch company. Power was named C.E.O. and chairman in 1961, making way for Leslie H. Warner, formerly of Theodore Gary, to become president. Simultaneously, GT&E went on to buy Community Antenna Television providers.

In 1964, Western Utilities Corporation became part of GT&E. Additional purchases during the 1960s included Hawaiian Telephone Company and Northern Ohio Telephone Company. At the end of the decade, ten million GT&E phones were active.

In the late 1960s, GT&E joined in the search for a railroad car Automatic Car Identification system. It designed the KarTrak optical system, which won over other manufacturer's systems in field trials, but ultimately proved to need too much maintenance. In the late 1970s the system was abandoned.

After a 1970 bomb attack to the company's headquarters in New York City, the company relocated to Stamford, Connecticut for their new headquarters. In 1971 GT&E undertook an identity change and became simply GTE, while Sylvania Electric Products became GTE Sylvania.[14] The same year, Donald C. Power retired and Leslie H. Warner became chairman of the Board. Theodore F. Brophy was brought in as president.

In 1974, GTE joined American Telephone & Telegraph in a project to create satellite stations. A few years later, the company's international branch was replaced by a GTE products company in 1976. Their products company remained until 1979. In 1979, GTE purchased Telenet to establish a presence in the growing packet switching data communications business. GTE Telenet was later included in the US Telecom joint venture.

1980s

In December 1983 Vanderslice stepped down as the company's president and chief operating officer.

In April 1988, after the retirement of Theodore F. Brophy, James L. "Rocky" Johnson was promoted from his position as president and chief operating officer to CEO of GTE, he was appointed chairman in 1991.[15]

1990s

In April 1992, James L. "Rocky" Johnson retired after 43 years at GTE, remaining on the GTE board of directors as Chairman Emeritus. Charles "Chuck" Lee was named to succeed Johnson. In 1994, Lee sold the company's satellite provider, Spacenet, to General Electrics and Contel of Maine to Oxford Networks, which placed the company into a newly created subsidiary, Oxford West Telephone

Acquisition by Bell Atlantic

Bell Atlantic acquired GTE on June 30, 2000, and named the new entity [Verizon Communications Incorporated]. The GTE operating companies retained by Verizon are now collectively known as **Verizon West** division of Verizon (including east coast service territories). The remaining smaller operating companies were sold off or transferred into the remaining ones. Additional properties were sold off within a few years after the merger to

Century Tel, Alltel, and Hawaiian Telcom. On July 1, 2010, Verizon sold many former GTE properties to Frontier Communications.[16] Other GTE territories in California, Florida, and Texas were sold to Frontier in 2015 and transferred in 2016, thus ending Verizon's landline operations outside of the historic Bell Atlantic footprint.[17] Verizon still operates phone service in non-Bell System areas in Pennsylvania under Verizon North, and in non-Bell System areas in Virginia and Knotts Island, North Carolina under Verizon South.

Operating companies

Prior to the acquisition with Bell Atlantic, GTE owned the following operating companies in the US:[18]

- Contel of Minnesota, Inc.
- Contel of the South, Inc. (Alabama, Indiana, Michigan)
- GTE Alaska Incorporated
- GTE Arkansas Incorporated
- GTE California Incorporated (Arizona, California, Nevada)
- GTE Florida Incorporated
- GTE Hawaiian Telephone Company, Inc.
- GTE Midwest Incorporated (Iowa, Missouri, Nebraska)
- GTE North Incorporated (Illinois, Indiana, Michigan, Ohio, Pennsylvania, Wisconsin)
- GTE Northwest Incorporated (Idaho, Oregon, Washington)
- GTE South Incorporated (Illinois, Kentucky, North Carolina, South Carolina, Wisconsin)
- GTE Southwest Incorporated (Arkansas, New Mexico, Oklahoma, Texas)
- GTE West Coast Incorporated (California)

Following the acquisition with Bell Atlantic, some of these companies and/or access lines have been sold off to other companies, such as Alltel, ATEAC,[19] The Carlyle Group, CenturyTel, Citizens/Frontier Communications, and Valor Telecom.

Funding Universe (1996) - GTE Corporation History

Source - [HW005G][GDrive]

Also see : GTE Company Profile, from Company-Histories.com (saved Dec 2020) (source - [HW005B][GDrive])

Address: One Stamford Forum , Stamford, Connecticut 06904 U.S.A. [...]

Incorporated: 1920 as Commonwealth Telephone Company

Employees: 111,000 (1996) / **Sales:** $19.9 billion (1994) [...]

Company History

[...]

In 1920 that principle was put into action, and the three accountants formed a corporation, Commonwealth Telephone Company, with Odegard as president, Pratt as vice-president, and O'Connell as secretary. Richland Center Telephone became part of Commonwealth Telephone, which quickly purchased telephone companies in three nearby communities. In 1922 Pratt resigned as vice-president and was replaced by Clarence R. Brown, a former Bell System employee.

By the mid-1920s Commonwealth had extended beyond Wisconsin borders and purchased the Belvidere Telephone Company in Illinois. It also diversified into other utilities by acquiring two small Wisconsin electrical companies. Expansion was stepped up in 1926, when Odegard secured an option to purchase Associated Telephone Company of Long Beach, California. **Odegard, with the assistance of Marshall E. Sampsell, president of Wisconsin Power and Light Company, and Morris F. LaCroix, a partner in Paine, Webber & Company in Boston, proceeded to devise a plan for a holding company, to be named Associated Telephone Utilities Company.**

That company was formed in 1926 to acquire Associated Telephone Company and assume the assets of Commonwealth Telephone. Sampsell was elected president of the new company, and Odegard and LaCroix were named vice-presidents. An aggressive acquisition program was quickly launched in eastern, midwestern, and western states, with the company using its own common stock to complete transactions.

During its first six years, Associated Telephone Utilities acquired 340 telephone companies, which were consolidated into 45 companies operating more than 437,000 telephones in 25 states. By the time the stock market bottomed out in October 1929, Associated Telephone Utilities was operating about 500,000 telephones with revenues approaching $17 million.

In January 1930 a new subsidiary, Associated Telephone Investment Company, was established. Designed to support its parent's acquisition program, the new company's primary business was buying company stock in order to bolster its market value. Within two years the investment company had incurred major losses, and a $1 million loan had to be negotiated. Associated Telephone Investment was dissolved but not before its parent's financial plight had become irreversible, and in 1933 Associated Telephone Utilities went into receivership.

The company was reorganized that same year and resurfaced in 1935 as General Telephone Corporation, operating 12 newly consolidated companies. John Winn, a 26-year veteran of the Bell System, was named president. In 1936 General Telephone created a new subsidiary, General Telephone Directory Company, to publish directories for the parent's entire service area.

In 1940 LaCroix was elected General Telephone's first chairman, and Harold Bozell, a former banker for Associated Telephone Utilities, was named president. Like other businesses, the telephone industry was under government restrictions during World War II, and General Telephone was called upon to increase services at military bases and war-production factories.

Following the war, General Telephone reactivated an acquisitions program that had been dormant for more than a decade and purchased 118,000 telephone lines between 1946 and 1950. In 1950 General Telephone purchased its first telephone-equipment manufacturing subsidiary, Leich Electric Company, along with the related Leich Sales Corporation.

Bozell retired in 1951 and Donald Power, a former executive secretary for Ohio Governor John Bricker, was named president. By the time Power took over, General Telephone's assets included 15 telephone companies operating in 20 states. During the 1950s Power guided the company in a steady, aggressive acquisition campaign punctuated by two major mergers.

In 1955 Theodore Gary & Company, the second-largest independent telephone company, which had 600,000 telephone lines, was merged into General Telephone, which had grown into the largest independent outside the Bell System. The merger gave the company 2.5 million lines. Theodore Gary's assets included telephone operations in the Dominican Republic, British Columbia, and the Philippines, as well as Automatic Electric, the second-largest telephone equipment manufacturer in the U.S. LaCroix and Power were to retain their positions in the merged company, but a month before the deal was closed, LaCroix died, and Power assumed the additional title of chairman.

In 1959 General Telephone and Sylvania Electric Products merged, and the parent's name was changed to General Telephone & Electronics Corporation (GT&E). The merger gave Sylvania--a leader in such industries as lighting, television and radio, and chemistry and metallurgy--the needed capital to expand. For General Telephone, the merger meant the added benefit of Sylvania's extensive research and development capabilities in the field of electronics. Power also orchestrated other acquisitions in the late 1950s, including Peninsular Telephone Company in Florida, with 300,000 lines, and Lenkurt Electric Company, Inc., a leading producer of microwave and data transmissions system.

In 1960 the subsidiary GT&E International Incorporated was formed to consolidate manufacturing and marketing activities of Sylvania, Automatic Electric, and Lenkurt, outside the United States. The following year, Leslie H. Warner, a former Theodore Gary executive, was named president. Another former Theodore Gary executive, Don Mitchell, was named to the new position of vice-chairman, while Power remained chief executive officer and chairman.

During the early 1960s the scope of GT&E's research, development, and marketing activities was broadened. In 1963 Sylvania began full-scale production of color television picture tubes, and within two years it was supplying color tubes for 18 of the 23 domestic U.S. television manufacturers. About the same time, Automatic Electric began supplying electronic switching equipment for the U.S. defense department's global communications systems, and GT&E International began producing earth-based stations for both foreign and domestic markets. GT&E's telephone subsidiaries, meanwhile, began acquiring community-antenna television systems (CATV) franchises in their operating areas.

In 1964 Warner orchestrated a deal that merged Western Utilities Corporation, the nation's second-largest independent telephone company, with 635,000 telephones, into GT&E. The following year Sylvania introduced the revolutionary four-sided flashcube, enhancing its position as the world's largest flashbulb producer.

Warner assumed the additional title of chief executive officer in 1966, while Power remained chairman. Acquisitions in telephone service continued under Warner during the mid-1960s. Purchases included Quebec Telephone in Canada, Hawaiian Telephone Company, and Northern Ohio Telephone Company and added a total of 622,000 telephone lines to GT&E operations. By 1969 GT&E was serving ten million telephones.

In March 1970 GT&E's New York City headquarters was bombed by a radical antiwar group in protest of the company's participation in defense work. In December of that year the GT&E board agreed to move the company's headquarters to Stamford, Connecticut. Power retired in 1971, and Warner was named chairman and chief executive officer. The following year Theodore F. Brophy was named president.

After initially proposing to build separate satellite systems, GT&E and its telecommunications rival, American Telephone & Telegraph Co., announced in 1974 joint venture plans for the construction and operation of seven earth-based stations interconnected by two satellites. That same year Sylvania acquired name and distribution rights for Philco television and stereo products. GTE International expanded its activities during the same period, acquiring television manufacturers in Canada and Israel and a telephone manufacturer in Germany.

Warner retired in 1976 and Brophy was named to the additional post of chairman. Brophy, soon after assuming his new position, reorganized the company along five global product lines: communications, lighting, consumer electronics, precision materials, and electrical equipment. GTE International was phased out during the reorganization, and GTE Products Corporation was formed to encompass both domestic and foreign manufacturing and marketing operations. At the same time, GTE Communications Products was formed to oversee operations of Automatic Electric, Lenkurt, Sylvania, and GTE Information Systems.

Thomas A. Vanderslice was elected president and chief operating officer in 1979, and another reorganization soon followed. GTE Products Group was eliminated as an organizational unit and GTE Electrical Products, consisting of lighting, precision materials, and electrical equipment, was formed. Vanderslice also revitalized the GT&E Telephone Operating Group in order to develop competitive strategies for anticipated regulatory changes in the telecommunications industry.

GT&E sold its consumer electronics businesses, including the accompanying brand names of Philco and Sylvania in 1980, after watching revenues from television and radio operations decrease precipitously with the success of foreign manufacturers. Following AT&T's 1982 announcement that it would divest 22 telephone operating companies, GT&E made a number of reorganizational and consolidation moves.

In 1982 the company adopted the name GTE Corporation and formed GTE Mobilnet Incorporated, to handle the company's entrance into the new cellular telephone business. In 1983 GTE sold its electrical equipment, brokerage information services, and cable television equipment businesses. That same year, Automatic Electric and Lenkurt were combined as GTE Network Systems.

GTE became the third-largest long-distance telephone company in 1983 through the acquisition of Southern Pacific Communications Company. At the same time, Southern Pacific Satellite Company was acquired, and the two firms were renamed GTE Sprint Communications Corporation and GTE Spacenet Corporation, respectively. Through an agreement with the Department of Justice, GTE conceded to keep Sprint Communications separate from its other telephone companies and limit other GTE telephone subsidiaries in certain markets. In December 1983 Vanderslice resigned as president and chief operating officer.

In 1984 GTE formalized its decision to concentrate on three core businesses: telecommunications, lighting, and precision metals. That same year, the company's first satellite was launched, and GTE's cellular telephone service went into operation; GTE's earnings exceeded $1 billion for the first time.

James (Rocky) L. Johnson, a former senior vice-president, was named president and chief operating officer in 1986. That same year, GTE acquired Airfone Inc., a telephone service provider for commercial aircraft and railroads, and Rotaflex plc, a United Kingdom-based manufacturer of lighting fixtures.

Beginning in 1986 GTE spun off several operations to form joint ventures. In 1986 GTE Sprint and United Telecommunication's long-distance subsidiary, U.S. Telecom, agreed to merge and form US Sprint Communications Company, with each parent retaining a 50 percent interest in the new firm. That same year, GTE transferred its international transmission, overseas central office switching, and business systems operations to a joint venture with Siemens AG of Germany, which took 80 percent ownership of the new firm. The following year, GTE transferred its business systems operations in the United States to a new joint venture, Fujitsu GTE Business Systems, Inc., formed with Fujitsu Limited, which retained 80 percent ownership.

Johnson succeeded Brophy as chairman and chief executive officer in 1987 and then relinquished his president's title the following year to Charles R. Lee, a former senior vice-president. Johnson continued to streamline and consolidate operations, organizing telephone companies around a single national organization headquartered in the Dallas, Texas, area.

In 1988 GTE divested its consumer communications products unit as part of a telecommunications strategy to place increasing emphasis on the services sector. The following year GTE sold the majority of its interest in US Sprint to United Telecommunications and its interest in Fujitsu GTE Business Systems to Fujitsu.

In 1989 GTE and AT&T formed the joint venture company AG Communication Systems Corporation, designed to bring advanced digital technology to GTE's switching systems. GTE retained 51 percent control over the joint venture, with AT&T pledging to take complete control of the new firm in 15 years.

With an increasing emphasis on telecommunications, in 1989 GTE launched a program to become the first cellular provider offering nationwide service and introduced the nation's first rural service area, providing cellular service on the Hawaiian island of Kauai. The following year GTE acquired the Providence Journal Company's cellular properties in five southern states for $710 million and became the second largest cellular-service provider in the United States.

In 1990 GTE reorganized its activities around three business groups: telecommunications products and services, telephone operations, and electrical products. That same year, GTE and Contel Corporation announced merger plans that would strengthen GTE's telecommunications and telephone sectors.

Following action or review by more than 20 governmental bodies, in March 1991 the merger of GTE and Contel was approved. Johnson and Lee maintained their positions as chairman and president, respectively, while Contel's Chairman [Charles Wohlstetter (born 1910)] became vice-chairman of GTE. Contel's former president, Donald Weber, agreed to remain with the company during a six-month transition period, before leaving the merged company.

Contel Corporation's earliest predecessor, Telephone Communications Corporation, was founded by [Charles Wohlstetter (born 1910)]. After working as a Wall Street runner in the 1920s and as a Hollywood screenwriter in the 1930s, Wohlstetter returned to Wall Street in the 1940s and became a financier. In 1960 he made what he would later call a bad investment in an Alaskan oil company that would become the impetus for Contel.

To help turn that investment around, [Charles Wohlstetter (born 1910)] recruited the services of Jack Maguire and Phillip Lucier from a telephone supply company and then raised $1.5 million to form a holding company, Telephone Communications Corporation. Wohlstetter was named chairman of the new corporation, Lucier was named president, and Maguire was named vice-president. Some 30 years later, Wohlstetter's $1.5 million investment had grown into a company that had acquired and consolidated more than 750 smaller companies with total corporate assets hovering around $6 billion.

One of the company's first acquisitions was Central Western Company, which merged with Telephone Communications in 1961 to form the new parent Continental Telephone Company. The acquisition of Central Western, along with Harfil, Inc., provided the company with customer billing, general accounting, and toll separation services.

Continental based its early acquisition strategy on Kreigspiel, a historical war game German generals played at Prussian war colleges. [Charles Wohlstetter (born 1910)] applied the tenets of the game to telephone company operations and amassed detailed information on each independent telephone company in the United States. **When those companies came up for sale, Wohlstetter and Maguire, who were pilots, and Lucier, whose wife was a pilot, would promptly fly off to meet the owners and negotiate purchase agreements.**

Many of the early acquisitions were made through exchanges of stock, including the 1964 merger with Independent Telephone Company that doubled the company's size and changed its name in the process to Continental Independent Telephone Corporation. By the close of 1964, Continental had acquired more than 100 companies operating in 30 states.

The company adopted another new name, Continental Telephone Corporation, in 1965. Also during 1965 Continental acquired 65 more telephone companies and again doubled its size. By 1966 Continental had acquired more than 500 independent companies, had become the third-largest independent telephone company in the United States, and was one of the youngest companies ever listed on the New York Stock Exchange.

By 1970 Continental's assets had topped $1 billion, and sales volume had risen to $120 million. Lucier died that year and was succeeded as president by Maguire, who moved up from a vice-presidency. Aside from its dominating telephone business, the company's activities by that time had grown to include cable television systems, directory publishing, equipment leasing, and data services.

With the number of small independents having diminished considerably by 1970, Continental's pace in acquiring telephone operating companies was reduced. Continental sold its cable television business in 1971, and after a sluggish economy had taken its toll on Continental's manufacturing and supply subsidiaries, those, too, were sold in 1976. Maguire resigned in 1976 because of health problems and was succeeded as president by James V. Napier, a former executive vice-president. That same year, Continental became the first telephone company outside the Bell system to install a digital telephone switching system, a move that provided improved network operating efficiency, allowed the introduction of new calling features, and started the transition away from operations dominated by rural service areas.

In response to the changing regulatory climate of the telephone industry, in 1978 Continental mapped out a diversification strategy into nonregulated businesses. Continental's first diversification move came in 1979, with the acquisition of Executone, Inc., a New York-based communications equipment maker.

By 1980 Continental had two million telephone access lines in service and had established its first fiber-optic cable, a high-speed, high-capacity telecommunications transmission mode. While Continental continued the process of upgrading its telephone operations, during the early 1980s the

telecommunications transmission model. While Continental continued the process of upgrading its telephone operations, during the early 1980s the company's focus turned to greater diversification.

In July 1980 Continental entered the satellite business through a joint venture with Fairchild Industries, and a communications partnership firm, American Satellite Company, was formed to operate a network of earth-based stations that provided voice and data services. To provide technology services to accommodate its expanding needs, Continental then acquired two consulting and research firms, Network Analysis Corporation and International Computing Company.

In 1981 Continental acquired Page Communications Engineers Inc., later renamed Contel Page, which gave Continental expertise in the engineering, installation, and maintenance of satellite-to-earth stations. One year later, Continental hooked up with Fairchild Industries in a second joint venture called Space Communications Company, a provider of tracking and relay data services for such clients as the National Aeronautics and Space Administration.

After the Federal Communications Commission opened the door to licenses for 30 cellular phone markets in 1981, Continental plunged into that field as well, acquiring sizable shares of cellular markets in Los Angeles, California; Washington, D.C.; and Minneapolis, Minnesota. Continental also entered the credit card authorization business in 1981, with the purchase of National Bancard Corporation. Two years later, Continental bolstered its interest in that business segment with the purchase of the Chase Merchants Services division of Chase Manhattan Bank.

In 1982 the corporation changed its name to Continental Telecom Incorporated, adopted a new corporate logo, and inaugurated an advertising campaign around the theme "architects of telecommunications." Continental's expansion into the information services sector continued in 1982 with the purchase of STSC Inc., a computer services supplier; and Cado Systems Corporation, a maker of small business computers. That same year company revenues surpassed the $2 billion mark for the first time.

In 1984 Continental formed the subsidiary Contel Cellular Inc. to handle the corporation's growing cellular operations. A year later, Continental culminated its diversification moves and reorganized into four business sectors: telephone and cellular operations; business systems, offering voice and data processing products and services; federal systems, handling various facets of communication and information systems for government agencies; and information systems, offering telecommunications systems and services to large corporations, institutions, and government entities.

As a result of the company's growing interest in the information services marketplace, in 1985 Continental acquired several computer system and software companies, including Northern Data Systems, Data Equipment Systems Corporation, and Sooner Enterprises, Inc. Continental also purchased Fairchild Industries's interests in American Satellite Co., later renamed Contel ASC, and Space Communications Company.

That same year, Continental sold its directory publishing division, its time-share services business, and its credit card authorization business. In the midst of reorganization in 1985, Napier resigned, and John N. Lemasters, former American Satellite Company president, was named president and chief executive officer.

Continental's telephone operations were repositioned during the mid-1980s through numerous sales and exchanges. Subsidiaries in Nebraska, Colorado, Alaska, the Bahamas, and Barbados were sold, and operations in Michigan were exchanged for similar operations in Indiana and three southern states.

The name Contel Corporation was adopted in 1986. That same year, Contel's new tenant services division set the stage for future growth by acquiring tenant service operations in Atlanta and Seattle. The tenant services division installed and managed customized communications systems in commercial buildings and marketed those systems to the buildings' tenants. Contel also enhanced its information services division with the acquisition of IPC Communications, Inc., a supplier of a special-purpose telephone system used by financial traders, and expanded its federal systems operations with the purchase of Western Union Corporation's government systems division, a provider of information handling systems.

In September 1986 Contel announced it had agreed to merge with Communications Satellite Corporation (Comsat), but by mid-1987 Contel had called off the deal, citing Comsat's unstable financial picture. The failed merger sparked the resignation of Lemasters. Donald W. Weber, former executive vice-president and head of telephone operations, was named Lemasters's successor as president and chief executive officer.

Contel acquired Comsat's international private-line business and its very-small-aperture terminal (VSAT) satellite business in 1987, as well as Equatorial Communications Company, a provider of private satellite data networks. That same year, Contel agreed to sell Executone, its troubled telephone interconnect business, and Texocom, Contel's equipment supply business.

In the late 1980s Contel continued to narrow its focus in the information systems sectors. In 1988 it sold its computer-based business, Contel Business Systems, and a year later disposed of Contel Credit Corporation. Contel Federal Systems continued to grow during that same period, and in 1988 it acquired two Eaton Corporation subsidiaries: Information Management Systems and Data Systems Services. Two years later Contel purchased Telos Corporation, with expertise in government-preferred computer software. Contel's tenant services and cellular businesses also got a boost in 1988 with the acquisition of RealCom Communications Corporation, an IBM tenant services subsidiary, and Southland Mobilcom Inc.'s interests in the Mobile, Alabama, and the Pensacola, Florida, cellular markets.

In 1990 Contel completed the biggest acquisition in its history, a $1.3 billion purchase of McCaw Cellular Communications, Inc.'s controlling interests in 13 cellular markets, which added more than six million potential customers and doubled Contel's cellular potential population market (known in the industry as POPs). While important, that move was eclipsed by the merger with GTE announced later that same year. Through that transition, the two former competitors were expected to integrate telephone and mobile-cellular operations and capitalize on business unit similarities in the field of satellite-communications as well as in communications systems and services targeting government entities.

Over half of Contel's $6.6 billion purchase price, $3.9 billion, was assumed debt. When Charles Lee succeeded James (Rocky) L. Johnson to become CEO in 1992, his first order of business was reduction of that obligation. He sold GTE's North American Lighting business to a Siemens affiliate for over $1 billion, shaved off local exchange properties in Idaho, Tennessee, Utah, and West Virginia to generate another $1 billion, divested its interest in Sprint in 1992, **and sold its GTE Spacenet satellite operations to General Electric in 1994.**

The long-heralded telecommunications bill, expected to go into effect in 1996, promised to encourage competition among local phone providers, long distance services, and cable television companies. Many leading telecoms prepared for the new competitive realities by aligning themselves with entertainment and information providers. GTE, on the other hand, continued to focus on its core operations, seeking to make them as efficient as possible. In 1992, Lee launched a sweeping reorganization that was characterized by Telephony magazine as "easily one of the nation's largest re-engineering processes."

Among other goals, his plan sought to double revenues and slash costs by $1 billion per year by focusing on five key areas of operation: technological enhancement of wireline and wireless systems, expansion of data services, global expansion, and diversification into video services. GTE hoped to cross-sell

enhancement of wireline and wireless systems, expansion of data services, global expansion, and diversification into video services. GTE hoped to cross-sell its large base of wireline customers on wireless, data and video services, launching Tele-Go, a user-friendly service that combined cordless and cellular phone features. The company bought broadband spectrum cellular licenses in Atlanta, Seattle, Cincinnati and Denver, and formed a joint venture with SBC Communications to enhance its cellular capabilities in Texas. In 1995, the company undertook a 15-state test of video conferencing services, as well as a video dialtone (VDT) experiment that proposed to offer cable television programming to 900,000 homes by 1997. GTE also formed a video programming and interservices joint venture with Ameritech Corporation, BellSouth Corporation, SBC, and The Walt Disney Company in the fall of 1995. Foreign efforts included affiliations with phone companies in Argentina, Mexico, Germany, Japan, Canada, the Dominican Republic, Venezuela and China. The early 1990s reorganization included a 37.5 percent workforce reduction, from 177,500 in 1991 to 111,000 by 1994. Lee's five-fold strategy had begun to bear fruit by the mid-1990s. While the communication conglomerate's sales remained rather flat, at about $19.8 billion, from 1992 through 1994, its net income increased by 43.7 percent, from $1.74 billion to a record $2.5 billion, during the same period.

Principal Subsidiaries: Contel Corporation; GTE Products of Connecticut Corporation; GTE Leasing Corporation; Anglo-Canadian Telephone Company; GTE Holdings (Canada) Limited; GTE International Telecommunications Incorporated; GTE California Incorporated; GTE Florida Incorporated; GTE Midwest Incorporated; GTE North Incorporated; GTE Northwest Incorporated; GTE South Incorporated; GTE Southwest Incorporated; GTE Hawaiian Telephone Company Incorporated; GTE Data Services Incorporated; GTE Finance Corporation; GTE Information Services Incorporated; GTE Intelligent Network Services Incorporated; GTE Investment Management Corporation; GTE main Street Incorporated; GTE Mobile Communications Incorporated; GTE Mobilnet Incorporated; GTE Realty Corporation; GTE REinsurance Company Limited (Bermuda); GTE Service Corporation; GTE Telecom Marketing Corporation; GTE Vantage Incorporated.

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GTE "Telenet" ad from 1986

346 views • Jan 24, 2016

VintageCommercials

1988 commercial - Gee. no GTE

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GTE Commercial 1988

Evidence timeline

1935 (Feb 28) -

Full newspaper page : [HN01GW][GDrive]

three names : charles D Kyle / W. Rice Brewster / Albert E Nuelsen

The Morning News (Wilmington, Delaware) · 28 Feb 1935, Thu · Page 15

CHARTERS FILED AT STATE HOUSE

10 Companies Granted Articles of Incorporation; One Increases Capital

DOVER, Feb. 27—Delaware Charters filed here today:

General Telephone Allied Corporation. Deal in stocks, bonds. 38,680 shares, no par value. Charles D. Kyle, W. Rice Brewster, Albert E. Nuelsen, New York, N. Y. (The Corporation Trust Company.)

[HN01GX][GDrive]

1935 (Mar 21)

Full newspaper page : [HN01GY][GDrive]

The Capital Times (Madison, Wisconsin) · 21 Mar 1935, Thu · Page 4

Hearing on A. T. U. Reorganizing Set

Plan for Parent of Commonwealth Telephone Co. is Revealed

A federal court hearing will be held in New York city May 9 to consider confirmation of a reorganization plan for Associated Telephone Utilities, parent company of the Commonwealth Telephone Co., which operates 105 exchanges in Wisconsin.

Considerable A. T. U. stock is owned in Madison and Wisconsin.

Under the reorganization plan which is to be presented to the court, General Telephone Corp. a new firm, will acquire all assets of Associated Telephone Utilities except certain preferred stocks which secure the 6 per cent secured notes, and which, with a block of common stock of the new company, will be acquired by a new subsidiary, General Telephone Allied Corp.

Debenture holders and other general creditors of A. T. U. will get common stock of the new company, while holders of the 6 per cent secured notes will get $6 shares of preferred stock of General Telephone Allied Corp. Each $6 share will be convertible into 2.13 shares of common stock of General Telephone Corp.

The plan provides that the General Telephone Corp. shall have no funded debt, and will be restricted in creating such debts.

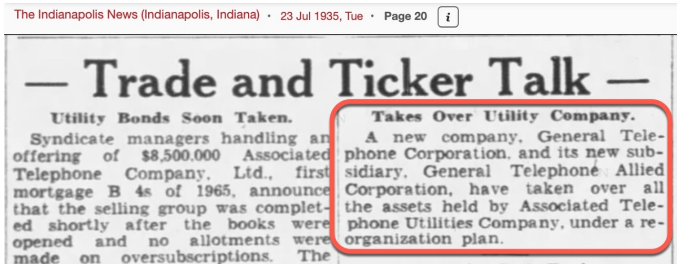
[HN01GZ][GDrive]

1935 (july 23)

https://www.newspapers.com/image/314210103/?terms=%22General%20Telephone%22&match=1

1935-07-23-the-indianapolis-news-pg-8

1935-07-23-the-indianapolis-news-pg-8-clip-ticker-general-telephone



The Indianapolis News (Indianapolis, Indiana) · 23 Jul 1935, Tue · Page 20

— Trade and Ticker Talk —

Utility Bonds Soon Taken.

Syndicate managers handling an offering of $8,500,000 Associated Telephone Company, Ltd., first mortgage B 4s of 1965, announce that the selling group was completed shortly after the books were opened and no allotments were made on oversubscriptions. The

Takes Over Utility Company.

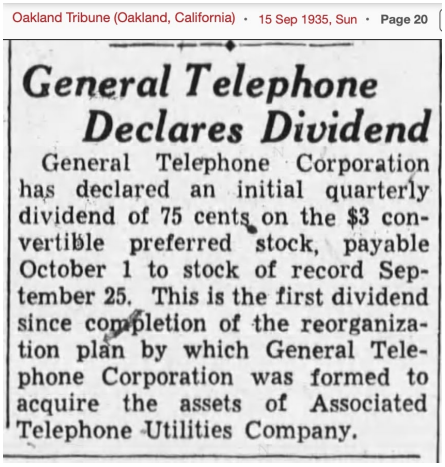
A new company, General Telephone Corporation, and its new subsidiary, General Telephone Allied Corporation, have taken over all the assets held by Associated Telephone Utilities Company, under a reorganization plan.

1935 (sep 15)

https://www.newspapers.com/image/128802052/?terms=%22General%20Telephone%22&match=1

1935-09-15-the-oakland-tribune-pg-20

1935-09-15-the-oakland-tribune-pg-20-clip-general-telephone



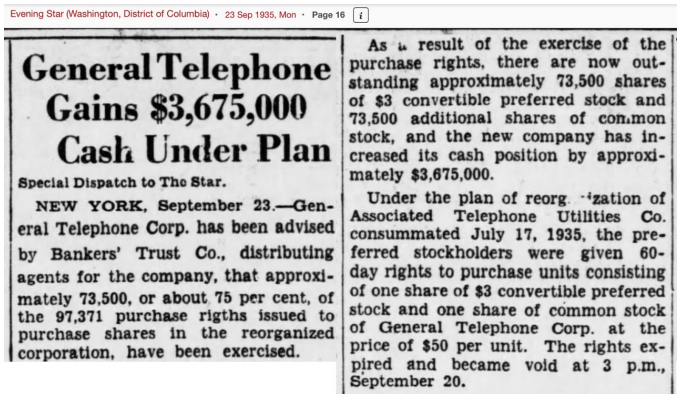
Oakland Tribune (Oakland, California) · 15 Sep 1935, Sun · Page 20

General Telephone Declares Dividend

General Telephone Corporation has declared an initial quarterly dividend of 75 cents on the $3 convertible preferred stock, payable October 1 to stock of record September 25. This is the first dividend since completion of the reorganization plan by which General Telephone Corporation was formed to acquire the assets of Associated Telephone Utilities Company.

1935-09-23-the-evening-star-washington-dc-pg-a-16

1935-09-23-the-evening-star-washington-dc-pg-a-16-clip-general-telephone



Evening Star (Washington, District of Columbia) · 23 Sep 1935, Mon · Page 16

General Telephone Gains $3,675,000 Cash Under Plan

Special Dispatch to The Star.

NEW YORK, September 23.—General Telephone Corp. has been advised by Bankers' Trust Co., distributing agents for the company, that approximately 73,500, or about 75 per cent, of the 97,371 purchase rigths issued to purchase shares in the reorganized corporation, have been exercised.

As a result of the exercise of the purchase rights, there are now outstanding approximately 73,500 shares of $3 convertible preferred stock and 73,500 additional shares of common stock, and the new company has increased its cash position by approximately $3,675,000.

Under the plan of reorganization of Associated Telephone Utilities Co. consummated July 17, 1935, the preferred stockholders were given 60-day rights to purchase units consisting of one share of $3 convertible preferred stock and one share of common stock of General Telephone Corp. at the price of $50 per unit. The rights expired and became void at 3 p.m., September 20.

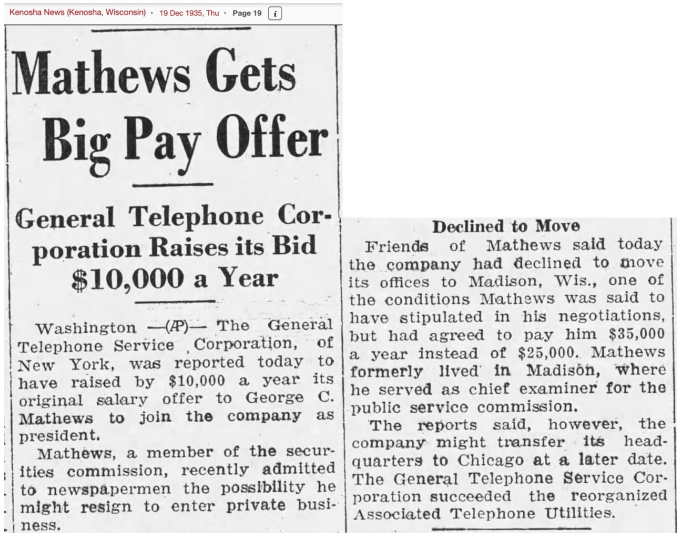
1935 (Dec 19)

https://www.newspapers.com/image/596191135/?terms=%22General%20Telephone%22&match=1

1935-12-19-kenosha-evening-news-pg-19

1935-12-19-kenosha-evening-news-pg-19-clip-general-telephone

https://en.wikipedia.org/wiki/George_C._Mathews



Kenosha News (Kenosha, Wisconsin) · 19 Dec 1935, Thu · Page 19

Mathews Gets Big Pay Offer

General Telephone Corporation Raises its Bid $10,000 a Year

Washington —(AP)— The General Telephone Service Corporation, of New York, was reported today to have raised by $10,000 a year its original salary offer to George C. Mathews to join the company as president.

Mathews, a member of the securities commission, recently admitted to newspapermen the possibility he might resign to enter private business.

Declined to Move

Friends of Mathews said today the company had declined to move its offices to Madison, Wis., one of the conditions Mathews was said to have stipulated in his negotiations, but had agreed to pay him $35,000 a year instead of $25,000. Mathews formerly lived in Madison, where he served as chief examiner for the public service commission.

The reports said, however, the company might transfer its headquarters to Chicago at a later date. The General Telephone Service Corporation succeeded the reorganized Associated Telephone Utilities.

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https://www.beatriceco.com/bti/porticus/bell/pdf/annual_1997_gte.pdf

https://www.potaroo.net/papers/FCC-Internet.html

1972 (Nov 28) - NYTimes - "Harold V. Bozell Dead at 86; Ex - Head of General Telephone"

PDF : [HN01F8][GDrive]

The New York Times

TUESDAY, NOVEMBER 28, 1972

Harold V. Bozell Dead at 86; Ex-Head of General Telephone

Special to The New York Times

LARCHMONT, N.Y., Nov. 27 — Harold V. Bozell, retired president of General Telephone Corporation, which became the General Telephone & Electronics Corporation, the second largest telephone company in the world, died today at New Rochelle Medical Center. His age was 86 and he lived at 37 Lincoln Street here.

Mr. Bozell was president of the telephone concern from 1940 to 1951. It changed its name in 1959, following its merger with Sylvania Electric Products, Inc. The company provides telephone service in 34 states, British Columbia, Quebec and the Dominican Republic.

He was born in Beloit, Kan., May 31, 1886, graduated from the University of Kansas in 1908 and earned a master's degree there in 1915.

Joined Yale Faculty in '16

Meanwhile, he served as a professor of electrical engineering at the University of Oklahoma and headed its electrical engineering department. He transferred to Yale University in 1916 and became assistant professor of electrical engineering.

While at Yale, he edited Electrical Railway Journal and in 1922 he was made the first editor of Bus Transportation. The following year he was named editor of Electrical World, a McGraw-Hill publication.

During World War I, Mr. Bozell headed various investigations for a special committee of the Naval Consulting Board and was a consulting engineer for the United States Bureau of Standards.

He joined the engineering firm of Bonbright & Co. in 1925. Then, in 1932, as part of a reorganization of management of Associated Telephone Utility Company, Mr. Bozell became vice president of that concern. In 1935 he was elected vice president of General Telephone Corporation, which grew out of Associated, and he became its president in 1940.

He retired as president in 1951 but continued for the next 10 years as a director and consultant.

Harold V. Bozell as he looked some years ago.

Mr. Bozell was vice president of the Independent Telephone Association from 1947 to 1949 and its president from 1949 to 1950.

In 1970 he was elected to the Independent Telephone Hall of Fame, which was organized in 1965 by the Independent Telephone Pioneers Association to recognize leaders of the independent (non-Bell) telephone industry who have made exceptional contributions to the industry's growth and development.

Mr. Bozell was a director of the Beekman-Downtown Hospital, the Larchmont Federal Savings and Loan Association, the Northeast Electronics Corporation and the Roanwell Corporation.

He leaves his wife, the former Isadel Read Heath, a daughter, Mrs. John B. Forrest, three grandchildren and three great-grandchildren.

A funeral service will be held at 8 P.M. Wednesday in the Larchmont Avenue Presbyterian Church. Interment will be private.

[HN01F9][GDrive]

LARCHMONT, N.Y., Nov. 27 — Harold V. Bozell, retired president of General Telephone Corporation, which became the General Telephone & Elec tronics Corporation, the second largest telephone company in the world, died today at New Rochelle Medical Center. His age was 86 and he lived at 37 Lincoln Street here.

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A funeral service will be held at 8 P.M. Wednesday in the Larchmont Avenue Presbyterian Church. Interment will be private.

1985 (Sep 11) - NYTimes - UNIT OF GTE ADMITS PLOT TO GET DATA

Sept. 11, 1985 / **By Stephen Engelberg, Special To the New York Times / Source -** [HN01FA][GDrive]

The Justice Department today accused the GTE Government Systems Corporation of conspiring to illegally obtain internal Pentagon planning documents, and the company said it would plead guilty.

The company, a leading manufacturer of electronic warfare devices, also said in a statement that it would pay the Department of Defense $580,000 for the costs of the investigation. The Government brought the charge in Federal District Court in Alexandria, Va., The Justice Department said the company had also agreed to develop and enforce a company policy against misuse of classified documents. #3 Individuals Are Charged Officials said the company, of Waltham, Mass., agreed to those conditions to avoid the possibility that it could be barred from bidding on further military contracts. The Department of Defense said, "The company has terminated the improper conduct and fully understands that any recurrence will subject it to criminal prosecution and debarment."

In addition, a Federal grand jury in Alexandria today returned indictments against a GTE official, a former company official and the consultant charged with supplying the documents.

The indictment said the documents included the five-year military plan used by the Pentagon in preparing its annual budget request to Congress and "program objective memoranda," in which the military services lay out plans for specific weapon programs. The Justice Department said the company used the documents to make its own plans for marketing electronic warfare equipment to the services.

A Vice President Named

Those indicted were Robert R. Carter of Mountain View, Calif., a former GTE employee who the Justice Department said was marketing manager of the Electronic Warfare Organization of GTE's Western Division; Walter R. Edgington of Annandale, Va., a GTE vice president for marketing who worked in the company's Rosslyn, Va., office, and Bernie E. Zettl, of McClean, Va., a consultant who operated a Northern Virginia company called Zettl Associates.

The company faces a fine of up to $10,000. If convicted, Mr. Zettl could face a maximum sentence of up to 25 years in prison and a $30,000 fine; Mr. Edgington a sentence of 25 years in prison and a $30,000 fine, and Mr. Carter a sentence of five years and a $10,000 fine.

Harvey Greisman, a GTE spokesman, acknowledged that some of the documents involved were classified. But he said, "The use of such documents was a common industry practice and at GTE Government Systems, they were handled only by persons with appropriate security clearances."

Method of Removal Sought

Mr. Greisman said the company did not "condone such activities."

David Hopkins, the Assistant United Attorney who handled the case, declined to comment when asked whether other companies were under investigation for similar offenses. He said Federal investigators were trying to determine how the documents were removed from the Department of Defense.

The department said the company had agreed to a program to prevent a recurrance of such incidents. Company officers and manager will be required to certify that they have not improperly used or acquired Department of Defense internal documents, the department said.

Mr. Hopkins said the case began when a GTE official was preparing for a routine polygraph, or lie-detector, examination while applying for a higher security clearance. Before being attached to the machine, the employee was asked a series of questions. He admitted mishandling classified documents, according to Mr. Hopkins.

In the indictment, the Department of Justice charged that the documents were used by the company to identify and "make business preparations for potential contracts in the electronic warfare field and for preparing bids and proposals for contracts with the Department of Defense."

The indictment said that beginning at least as early as 1978, Mr. Zettl supplied the documents to GTE. They were mailed to a post office box in California, the indictment said, to avoid using the company's interdepartmental mailing system.

The indictment quotes a 1979 memorandum in GTE files that says of its consulting contract with Mr. Zettl, "We do not want to list on paper the work he is doing."

The contacts with Mr. Zettl continued at least through 1983, the indictment said.

Mr. Zettl was paid $23,967 in 1979, $18,283 in 1980, $29,236 in 1981, $24,022 in 1982 and $24,000 in 1983 by GTE, the indictment charged. In October 1983 the contract between Mr. Zettl and the company was extended for 13 more months at a rate of $2,000 a month.

1985 (Sep 12) - NYTimes - U.S. AIDE SAYS G.T.E. CASE IS PART OF CRACKDOWN

Sept. 12, 1985 / **By Stephen Engelberg, Special To the New York Times** / Source - [HN01FB][GDrive]

A senior Justice Department official said today that the prosecution of a major defense contractor on charges of illegally conspiring to obtain internal Pentagon documents is part of the Reagan Administration's broader, continuing effort to restrict unauthorized use of secret information.

Stephen S. Trott, head of the Department's Criminal Division, said the prosecution of the GTE Government Systems Corporation "represents a concern on the part of the Administration for protecting closely held information."

GTE, a major manufacturer of electronic warfare devices in Waltham, Mass., said Tuesday that it would plead guilty to a one-count criminal information filed in Federal District Court in Alexandria, Va., charging it with conspiring to illegally obtain Government documents. A grand jury also charged a consultant hired by the company and a current employee with both theft and espionage. And a former employee was charged with conspiracy.

But GTE argued that the practice of using internal budget documents was commonplace in the defense industry. Justice Department officials agreed that the practice was probably not limited to GTE, which is a unit of the GTE Corporation, based in Stamford, Conn. They said, however, that indictments of other contractors were not imminent and that the purpose of the continuing investigation was to discern who in the Pentagon had released the documents.

Morton H. Halperin, director of the Washington office of the American Civil Liberties Union, said the case marked the first time sections of the United States Criminal Code on either espionage or theft of Government property had been applied to misuse of classified information by a company's officials. In his view, the legal principles the Government seeks to establish could be used to muzzle public debate in newspapers and elsewhere.

Mr. Trott called Mr. Halperin's arguments "nonsense." "

He said the use of the espionage statute, which has been typically applied to cases in which there is intent to harm the United States, was decided upon in the GTE case only after a long internal debate.

Mr. Trott and others associated with the GTE case said the charges against two of the individuals were brought under both the espionage and theft-of-property sections of the Code because Judge Harrison Winter of the United States Court of Appeals for the Fourth Circuit previously had questioned whether a case involving stolen Government information could be brought under the theft statute.

Prosecutors said they wanted to assure a conviction would not be overturned on appeal.

"I'm really sad we had to do that," Mr. Trott said. "It over-describes the case. This isn't espionage." He added: "We debated this long and hard, and, because of that court decision, we really felt we had no option."

The espionage section of the Code cited in the two indictments had been applied previously to cases strictly involving spying activities against the United States. Earlier this year, however, the section also was invoked in the indictment of Samuel Loring Morrison, a Defense Department employee accused of taking classified photographs and providing them to a British defense publication.

"The GTE case, coupled with the Morrison case, constitutes an effort to establish an Official Secrets Act, which would make it a crime to publish or report any information which the Goverment says is classified," Mr. Halperin of the A.C.L.U. said. Army officials said today that the guilty plea by GTE would not have any effect on the company's effort to win part of a $4 billion Army contract to replace the service's vast networks of battlefield telephones.

Specifically, GTE was charged with conspiring to violate Title 18, Section 641, of the Criminal Code, a statute aimed at those who "embezzle, steal, purloin or knowingly convert to his own use or the use of another" any Government property.

Walter R. Edgington of Annandale, Va., a marketing vice president who worked in GTE's Rosslyn, Va., office, and Bernie Zettl, a former consultant to the company, were charged with violating that statute, as well as Section 793, which makes it a crime to misuse information related to the national defense.

Robert R. Carter of Mountain View, Calif., a former GTE employee who the Justice Department has said was marketing manager of the Electronic Warfare Organization of GTE's Western division, was indicted on a single conspiracy count under Section 373 of Title 18 of the Code.

1988 (June 26) - Los Angeles Times - 1984 Incident a Chilling Omen of Fraud Probe - By JOHN M. BRODER

Source - [HN01EG][GDrive]

WASHINGTON — In February, 1984, an agent of the Defense Criminal Investigative Service paid a call on [**Walter Roy Edgington (born 1925)**], a marketing executive at GTE Government Systems just down the road from the Pentagon. The agent said he was looking into the theft of secret military documents by defense contractors and free-lance consultants.

“You don’t have to explain. I know why you’re here,” Edgington reportedly responded, volunteering that he first saw classified Pentagon documents at GTE shortly after joining the firm in 1966 and had received a steady flow of secret data ever since.

“Every major corporation gets the same material,” the investigator said he was blandly told.

Massive Bribery Inquiry

The GTE case, it now appears, was a chilling portent of the massive Pentagon bribery investigation now unfolding across the country. As the GTE affair demonstrated, the $150-billion-a-year defense acquisition business is so vast, so complicated and so little understood that it offers opportunities for corruption and questionable business practices on a staggering scale.

To understand the dimensions of the Pentagon’s system for acquiring the weapons, trucks, ships, helmets, boots and the thousands of other things needed to project U.S. military power around the world, consider this: Not counting the legions of military and civilian personnel involved in secondary roles, the Defense Department has 50,000 designated contract officers, dealing with 300,000 military suppliers. It grants an average of 62,000 contracts every day.

By themselves, the rules spelling out the way defense contracts are to be sought and awarded are bound into books that occupy--literally--almost a quarter

of a mile of shelf space, Pentagon officials say.

And, for the business corporations large and small that seek government contracts, one of the critical elements at every stage of the long procurement process is information, especially advance information that competitors may not have.

What weapons and equipment are the armed forces thinking of obtaining--or cutting back on--in the future? How much money is being budgeted for current procurement of particular items and which programs are winning and which losing in the internal jockeying over funds and policy support?

Most important of all, once competition begins for a particular contract, what exactly does the Navy, or the Army or Air Force, want? What is the nature of the competition? Where is a rival's bid strong or weak? What clues can be gleaned about its product, its cost structure, manufacturing techniques and other proprietary matters? And what political forces are influencing--or might be brought to bear on--Pentagon decision-makers behind the scenes?

A Tight-Knit Fraternity

The quest for such information, as competitive in its own way as the struggle for contracts, has given rise to a tight-knit fraternity of consultants who know their way around the Pentagon jungle. Many labor diligently within the bounds of established procedures, but federal investigators say that some use payoffs, job promises or other gratuities to get such data improperly from contacts in the military bureaucracy.

The GTE episode offers an instructive primer or case study on how the defense acquisition business works in practice, how that practice sometimes diverges from theory and how easily it can all be corrupted.

It's a world of Beltway Bandits, Old Crows, rent-a-generals and let-the-buyer-beware--in this case, the buyer being the American taxpayer.

In September, 1985, the Department of Justice indicted GTE, [Walter Roy Edgington (born 1925)], a second GTE executive and [Bernie Edward Zettl (born 1922)], a colorful consultant who allegedly was funneling secret Pentagon papers to the company. GTE pleaded guilty to possession of classified material regarding electronic warfare programs and paid a $590,000 fine. Charges against the two GTE executives were dropped, but the Zettl case is unresolved.

Investigators involved in the case were furious that their superiors stopped the inquiry at GTE and did not allow them to pursue leads implicating at least 25 other major defense contractors and dozens of consultants. One investigator called the GTE case the "tip of the proverbial iceberg" and said the Defense Department and the Justice Department set the current probe back by two years by prematurely ending the earlier inquiry.

The Zettl case also opened a window on a little-known network of electronic warfare specialists known as the Assn. of Old Crows, a 25,000-member organization linking professionals in industry and the military. Zettl was one of the founders of the group, named for a World War II operation that jammed German radar signals.

Retired Military Officers

The Crows, scattered throughout the defense electronics industry worldwide, consist mainly of retired military officers who have moved into high-ranking positions in the major companies that supply sophisticated military jamming, surveillance and communications gear.

The association, based in Alexandria, Va., provides a remarkably efficient system for moving valuable information, officials familiar with the group said. Members, who maintain their contacts in the military and seek to provide their clients or companies with such things as early tip-offs on future Pentagon plans, meet formally and informally throughout the United States, Europe and Asia to swap war stories and industry gossip.

Gus Slayton, the group's executive director, asserted in an interview that the Old Crows are in no way linked to the present scandal. Only one of the 16 Pentagon officials and private consultants served with search warrants last week is a member, Slayton said, refusing to name him. Numerous executives of the defense firms searched belong to the group.

Secret Documents

According to charges filed in the GTE case, the company went to extraordinary lengths to conceal its possession of classified military documents and their sources. An official of a subsidiary of the firm rented a post office box in California to receive the secret documents obtained by Zettl to keep them out of the regular GTE internal mail system, the indictment said.

The government said GTE paid Zettl, a retired Air Force major, more than $120,000 in consulting fees from 1979 to 1983. A GTE internal memo said Zettl's connection to the company and his activities were to be kept confidential. "We do not want to list on paper the work that he is doing," the memo said.

To conceal the true nature of his work, prosecutors charged, Zettl submitted monthly reports "which made only veiled or no reference at all to the documents being provided."

Zettl Ruined Financially

According to an associate, the publicity surrounding the GTE case ruined Zettl professionally and financially. He is no longer in the defense consulting business, has moved from the Washington area and could not be reached for comment.

Among the documents GTE admitted illegally possessing were sensitive Defense Department budget reports, including program objective memoranda known in Pentagon jargon as POMs (to rhyme with "Moms") and 5-year defense plans, or FYDPs (pronounced "Fid-ips").

Access to such internal Pentagon planning documents can prove invaluable to a defense contractor, because they offer a preview of what weapons the military is planning to build, how many of them are likely to be bought and how much money the Pentagon plans to set aside for them.

A former mid-level military purchasing official said that "POM drills"--early reviews of spending priorities in which military officers hammer out internal agreements and compromises on future spending--begin about a year before the Pentagon budget is submitted to Congress. Program officers are literally locked in small rooms, sometimes for days at a time, until agreement is reached on what kind of new amphibious vehicle the Marine Corps needs, for example, or how many new aircraft the Navy wants to buy in the coming year.

All POM discussions and documents are supposed to be confidential, the former official said. But as soon as the meeting breaks up, contractor sales representatives and consultants begin calling the Pentagon, asking whether their favored system made it into the POM and trying to find out how much money was set aside.

It is a time for former military officers who have gone to work for contractors to hit up their buddies for favors, for current military officers to think about their post-retirement plans and for freewheeling consultants to try to make or buy friends who can open the Pentagon's vaults, the former official said.

"A retired lieutenant colonel, now working for one of the Beltway Bandits, calls a lieutenant colonel still in the service, a guy he's known for 20 years, and says: 'What's going on with this program?' It's a daily occurrence during POM drills," according to the former official, now an industry consultant himself.

Beltway Bandits are Washington-area firms that provide consulting services to government and industry, usually highly specialized. While some do detailed technical and analytical studies, others exist primarily as conduits to the government bureaucracy. They are scattered around the Capital Beltway, a freeway encircling Washington and running through newer Virginia and Maryland suburbs where many of these firms built their offices.

Intelligence Gathering

Within prescribed limits, such intelligence gathering is legitimate--even vital to the government and the defense industry. Companies need good information to make intelligent planning decisions and the Pentagon, for its part, needs strong suppliers well equipped to meet its special needs.

An official of one of the most prominent Beltway Bandits, a firm that does more than $300 million a year worth of studies for the U.S. government and private firms, said that in the last few years a new breed of bandit has sprung up, catering to defense contractors and sometimes operating at the edge of the law.

"I call them boutiques, four-man or five-man outfits, calling themselves 'marketing representatives.' I say they're sleazeballs," said the official, who asked that his name not be used. "These are usually very small offices. They don't do anything. They don't do studies. They don't sell anything, except information.

"They're connectors, fixers, who concentrate on the beginning of the process, who can go to their clients and say: 'The government is interested in buying such and such.' "

Among other things, such early notice helps a company decide whether or not to bid on a Pentagon job, in itself often a multimillion-dollar decision. Preparing a bid for a complex weapons system can cost as much as $5 million and involve a project team of as many as 100 company employees, one military procurement specialist said.

'Rent-a-General' Firms

A subgroup of these "boutique" consulting houses are the so-called "rent-a-general" firms composed solely of former generals and admirals. Industry will turn to one of these outfits for help on a specific project, knowing that the former officer can pinpoint a colleague still in uniform who is in a position to help the company.

In the current inquiry, for example, prosecutors allege that former Assistant Navy Secretary [Melvyn Robert Paisley (born 1924)] recommended last year that one of his clients, McDonnell Douglas Corp., retain retired Adm. James A. (Ace) Lyons, as a consultant on foreign aircraft sales. Lyons had just left his post as commander of the vast Pacific Command, which gave him access to top Korean military officers who were considering a major purchase of McDonnell Douglas F-18 jets.

Because military assignments rotate on a 2-year or 3-year cycle, a retired flag-rank officer has an incentive to cash in quickly on his connections because his friends will soon be moving on to new duties in the service, one retired officer said.

Once an item survives the Pentagon budget process, it then moves over to Congress, where it passes a number of pressure points that potential contractors or their agents can exploit. The budget first is reviewed by the Senate and House Armed Services committees and their influential staffs. Programs must survive scrutiny in these committees, and friends there can be critical.

Adding and Subtracting

Congress can add as well as subtract weapons from the Pentagon's recommendations. The Pentagon has tried several times to kill the Midgetman missile, for example, but the House keeps funding it. Individual lawmakers routinely lobby their colleagues to vote for weapons that would be built in their home districts, even those the military does not want.

Many defense sales representatives and independent consultants are former committee staff members who maintain close ties to the staffs and members of the committees. A plea to a congressman for information on a particular project, sweetened with speech fees, campaign contributions and promises of new manufacturing jobs in the district, often yields the desired effect, according to the defense aide of a Senate Armed Services Committee member.

Rep. Roy Dyson, for instance, who prosecutors say is under scrutiny in the current corruption investigation, accepted thousands of dollars in campaign contributions and honoraria for speeches from officials linked to Unisys Corp., a computer and defense electronics firm also under investigation. Dyson, a Maryland Democrat, sits on the House Armed Services Committee and its procurement subcommittee.

The appropriating committees of the House and Senate represent a final step before final votes on funding government projects and are the next access point for contractors. The name of the chairman of the defense panel of the House Appropriations Committee, Rep. Bill Chappell Jr. (D-Fla.), is said by federal law enforcement sources to have come up in the current fraud inquiry, although sources caution that the investigation is in its preliminary phase.

Chappell said last week that he sees as many as 100 defense industry representatives a day.

Basis for Company Bids

If a weapon survives Congress, it goes back to the Pentagon, where procurement officers prepare a Request for Proposals (RFP), a thick document containing the weapon's specifications and performance requirements that form the basis for company bids. Industry representatives lobby military officials at this stage to get more detailed information on the specs--and sometimes to get them tailored in ways that favor their firm.

Investigators are studying evidence that industry representatives have offered bribes for favorable treatment at this stage too.

The real effort, however, and the key to the current fraud and bribery case that prosecutors are building, comes near the end of the contracting process, the "best and final offer" stage.

After bids are received, Pentagon purchasing officials reject those firms that are not technically capable of carrying out a job and reduce the competition to

at most three or four companies. Those firms are asked to submit their final offers, which are evaluated solely on price.

“Now information on what the other guy’s price structure looks like, or what particular hardware piece he’s bidding, any information from his bid can be absolutely decisive,” said an industry consultant familiar with the process.

“The sleazeball gets this key data and might sell the information to one or more of the bidders. He can start a bidding war. Once you’ve lost two or three (competitions) because you played clean, you’re in trouble in your company. The incentive to participate and just not ask questions is very high.

“Once it starts, it spreads like a cancer; it contaminates everybody,” he said

Federal prosecutors are investigating whether top Navy officials sold “best and final offer” data relating to aircraft and jet engine sales to consultants, who passed the information to McDonnell Douglas and United Technologies Corp. These sensitive bidding documents are clearly marked “proprietary” and every industry executive knows he is not supposed to have such data from rival firms, an official familiar with the process said

Investigators are looking at 75 to 100 contracts, 15 major defense firms and about 50 consultants, according to U.S. Atty. Henry E. Hudson

The investigators who interviewed Edgington, the GTE executive, asked him why, knowing that he had unauthorized Pentagon documents and was continuing to receive them, he did not shut off the supply.

According to the agent’s memorandum, Edgington replied: “If you already have your feet in the mud, why take a shower?”

1988 (Dec 21) - Black Market in Classified DOD Documents (CSPAN recording)

Witnesses testified on the investigation report on stolen classified documents and the black market.

https://www.c-span.org/video/?5493-1/black-market-classified-dod-documents&start=1745&transcriptQuery=zettl

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1990 (July 13)- NYTimes - "Contel Agrees to Takeover Offer by GTE"

By Barnaby J. Feder ; Source - [HN01D4][GDrive]

In a move that would sharply expand both its local telephone operations and its fast-growing cellular telephone business, the **GTE Corporation** said yesterday that it had reached a preliminary agreement with the [**Contel Corporation**] to acquire the Atlanta-based company in a stock swap. The deal would be worth about $6 billion, based on yesterday's closing stock prices.

If the deal is completed and approved by regulatory authorities, GTE, based in Stamford, Conn., would become the fifth-largest local telephone company in the nation, based on number of telephone lines - after the Bell Atlantic Corporation, the BellSouth Corporation, Ameritech and the Nynex Corporation - and its second-largest mobile phone operator, after McCaw Cellular Communications.

"Aside from the obvious synergy of our telephone and cellular operations, both companies have other areas of interest that are remarkably parallel," James L. Johnson, GTE's chairman and chief executive, said in a statement. He cited businesses that supply communications systems to governments, satellite communications operations and aggressive programs by both companies to gain a foothold in cable television services.

"It's a great strategic move and very gutsy," said Jack Grubman, who follows the telecommunications industry for Paine Webber. "The bigger you are in this industry, the better off you are. They got the best of the independent companies at a price that will look good in three or four years."

Investors took a shorter-term view, however. GTE's stock price fell $1.25 a share, to $29.75, in trading yesterday on the New York Stock Exchange. The more than 200 million shares GTE will issue to complete the transaction at an exchange rate of 1.27 GTE shares for each Contel share could dilute GTE's share earnings this year by about 10 percent, analysts said.

Contel shares rose $7.125 to finish at $35.125 a share on the New York Stock Exchange. Charles Wohlsetter, the entrepreneurial 80-year-old chairman of Contel, said that because of GTE's higher stock dividend, Contel shareholders will receive the equivalent of $1.85 a share in dividends for their stock after the deal, a sharp increase from Contel's $1.10-a-share payout.

The proposed deal is one of the largest to date in the telecommunications industry, which has been undergoing a period of consolidation. The MCI Communications Corporation recently bought Telecom USA Inc. for $1.25 billion. In April, GTE agreed to acquire the cellular phone operations of the Providence Journal Company for $710 million, and United Telecommunications Inc. said it would pay $500 million to complete its buyout of GTE's interest in the U S Sprint Communications Company. U S Sprint is the nation's third-largest long-distance enterprise, after the American Telephone and Telegraph Company and MCI.

Earlier this year, McCaw secured its place as the nation's largest cellular concern, based on number of potential customers in its service areas, by paying $3.4 billion for control of the Lin Broadcasting Corporation.

Mr. Wohlsetter and John L. Segall, Contel's vice chairman, will become vice chairmen of GTE and members of its board if the deal is completed. Mr. Wohlsetter would also become chairman of GTE's strategic issues, planning and technology committee. However, the actual roles of both men and of Donald M. Weber, Contel's president and chief executive, at GTE remain to be worked out, said Harvey W. Greisman, a GTE spokesman.

$3.1 Billion is Sales

Contel's attractions for GTE include 2.6 million telephone lines in 30 states, with a far-higher-than-average percentage of its exchanges employing modern digital switches. And Contel has completed a reorganization in which it shed a number of money-losing businesses accumulated during an ill-fated period of diversification. It netted $277 million on revenues of $3.1 billion last year.

Contel Cellular Inc., which is 90 percent owned by the Contel Corporation and 10 percent publicly owned, has franchises in 36 metropolitan areas. The franchises include valuable regions in the Southeast acquired last fall from McCaw for $1.3 billion, making Contel Cellular the seventh-largest cellular business in the nation.

GTE has undergone a wave of restructuring since Mr. Johnson became chief executive in 1988. In addition to phasing out GTE's ownership interest in U S Sprint, Mr. Johnson has shifted headquarters for the local telephone operations to Dallas, begun a drive to reduce employment by 14,000 and reduced GTE's involvement in the development and manufacturing of telephone switches by setting up a joint venture with A.T. &T.

GTE employs 158,000 people and has businesses in 46 states and 41 countries, including local phone companies in Canada and the Dominican Republic that serve 2.3 million customers. In addition to telecommunications, it has a large lighting business. It had net earnings of $1.4 billion on sales of $17.42 billion last year.

1991 (Dec 13) - NYTimes : "BUSINESS PEOPLE; President of GTE Is Named Chairman"

By Anthony Ramirez / Source = [HN01EH][GDrive]

The **GTE Corporation** yesterday named Charles R. Lee, its longtime president, as its new chairman and chief executive, effective May 1. Mr. Lee has also been a senior officer in the steel, real estate and motion picture businesses.

Mr. Lee, 51 years old, will replace James L. (Rocky) Johnson, GTE's chairman, who retires in May, when he turns 65, the company's mandatory retirement age. Mr. Johnson, who has served with GTE for 43 years, will remain on the board as chairman emeritus.

Based on 1990 revenue of $21.4 billion, GTE is the fourth-largest telecommunications company in the world after British Telecom, Nippon Telegraph and Telephone and the American Telephone and Telegraph Company. GTE earned $1.67 billion, or $1.93 a share, in 1990, up 4 percent from 1989.

Based in Stamford, Conn., GTE had 18.4 million telephone access lines worldwide in 1990, more than 86 percent of which are in the United States. It operates in 40 states, as well as Canada and the Dominican Republic. Earlier this year it announced a new venture in Venezuela.

Mr. Lee, under Mr. Johnson's leadership, was instrumental in GTE's $6.6 billion acquisition earlier this year of the Contel Corporation, a deal that expanded GTE's already large base of local telephone service, as well as service for cellular telephones. GTE is the second-largest carrier of cellular telephones behind McCaw Cellular.

In an interview, Mr. Lee said he planned "as seamless a transition as possible" between Mr. Johnson and himself. He noted that many of the policies of the last few years had been a result of teamwork by Mr. Lee, Mr. Johnson and other senior GTE officials and that he anticipated no major changes in corporate direction.

"We are well on our way to becoming one of the world's great telecommunications companies," Mr. Lee said.

Born in Pittsburgh, Mr. Lee seemed destined to become a steel executive, having come from "the steel capital of the world and proud of it," he said. After majoring in metallurgical engineering, or the shaping and application of metals, at Cornell University and getting his M.B.A. from Harvard University, Mr. Lee joined United States Steel as a manager of business research in 1964.

After six years in that job, he helped in the huge bankruptcy reorganization of the Penn Central Corporation as a vice president.

An executive search firm recruited him as senior vice president-finance, for Columbia Pictures, where he worked for nearly four years. In 1983, shortly after the Coca-Cola Company bought the movie studio, Mr. Lee went to GTE as chief financial officer, where he found a teammate in Mr. Johnson, the chairman.

"He's been the coach and I've been the quarterback," Mr. Lee said.

1994 (June 28) - Barr appointment

https://www.newspapers.com/image/175927922/?terms=bill%20barr%20GTE&match=1

1996

https://www.newspapers.com/image/176929089/?terms=bill%20barr%20GTE&match=1

1997 (May 06) - Wired magazine - "GTE Takes Net Plunge with BBN Buyout"

See [HP004E][GDrive]

The nation's largest local phone company aims to expand its reach by purchasing one of the "backbone" Internet providers.

LEAPING HEADFIRST INTO the deep end of the Internet, **GTE said Tuesday that it will purchase Net pioneer BBN for US$616 million, and is partnering with Cisco Systems to develop new data services.**

The move helps position GTE, the nation's largest local phone company, as a full-service telecom outlet for corporate clients seeking Internet access and Web-site hosting, as part of its networking strategy. Such all-in-one packaging is seen as crucial to compete in today's increasingly complex and fast-changing telecom industry.

BBN spokesman Vaughn Harring said Tuesday that because his company's network helps account for nearly 80 percent of all traffic on the Internet, the increased capacity resulting from GTE's investment should result in faster service for the typical user. "The resources of a major telecom company were necessary to expand our service," he noted.

BBN has been around since the beginnings of the Net, when the system was still known as the Arpanet. It is considered one of the "backbone" Internet providers, along with MCI, Sprint, and WorldCom's UUNET Technologies.

Besides expanding its range of services offered, GTE is standing firm against AT&T as the leading long-distance carrier makes inroads to local phone customers. For the past two years, BBN has been the provider of networking systems for most of AT&T's Internet service. It is not yet known how the GTE buyout will affect AT&T's WorldNet operation.

AT&T holds a minority stake in BBN, and was believed to be interested in acquiring full control of the company. "Our relationship with AT&T is still being sorted out as a result of this news," Harring said.

GTE already claims some 100,000 subscribers to its Intelligent Network Services ISP. The alliance with Cisco aims to give more substance to this network, and to create new applications and services intended to meet the needs of major clients. GTE said its purchases of Cisco networking equipment for resale could reach more than $1 billion.

This has been an expensive week so far for GTE. On Monday, the company said it will buy a stake in Qwest Communications' coast-to-coast fiber-optic network for $485 million. Because of the acquisitions, GTE said it doesn't expect to meet projected 10 percent earnings increases for this year and next. Beyond 1999, though, the company is hoping that earnings will soar by as much as 15 percent a year.

"We think all this will mean a lot to Internet users across the country," said GTE spokesman Bob Brand. "Clearly we think this is a growth area for us."

GTE will soon commence a cash offer to acquire all outstanding shares in BBN for $29 a share. BBN reported an operating loss of $12.1 million for the quarter that ended on 31 March, compared with an operating loss of almost $30 million a year earlier.

1997 May 07 - GTE / BBN

Full newspaper pages : Page D1 at [HN01EJ][GDrive] , Page D2 at [HN01EL][GDrive]

AP PHOTO

GTE's Charles Lee gestures as he announces purchase of BBN Corp., whose chairman George Conrades, right, flanks two other GTE executives.

GTE buys BBN for $616m

Deal for Internet pioneer puts firm ahead of AT&T, MCI

By Joann Muller
GLOBE STAFF

Stepping up an aggressive strategy to challenge nationwide telephone carriers, GTE Corp., the nation's largest local phone company, yesterday agreed to buy Internet pioneer BBN Corp. of Cambridge for $616 million in cash, or $29 per share.

The announcement came one day after GTE said it would pay $485 million for part of Qwest Communications Corp.'s nationwide fiber-optic network. The back-to-back moves enable GTE to offer a broad array of telecommunications services to consumers and businesses throughout the United States.

"Our goal is to be the first player to truly deliver local, long distance, Internet access and enhanced data services, all on a nationwide basis, all from one company, all on one bill, and all with a single point of contact for customer service," GTE chief executive Charles R. Lee told analysts.

The company, which is moving its headquarters from Stamford, Conn., to Dallas, also said it was teaming up with Cisco Systems Inc., a San Jose, Calif. networking company, to help manage its network and could buy more than $1 billion of Cisco products over five years.

Lee said the moves would pay off long-term for GTE shareholders, but cautioned that the heavy up-front investments would hurt short-term profits. He estimated that 1997 per-share earnings growth would be "flat to slightly positive," instead of the 10 percent earnings growth that had been expected before the moves were announced. The company said earnings could increase 13 percent to 15 percent a year starting in 1999.

GTE shares fell 1⅛, to 45, while BBN leaped 6¼, to 28⅞, on the New York Stock Exchange.

Under terms of the deal, which has been approved by directors of both companies, GTE will begin a cash tender offer for all

BBN, Page D2

GTE Corp.

Headquarters: Stamford, Conn.
Chairman/CEO: Charles R. Lee
Founded: 1918
Employees: 102,000
Stock: Down 1 1/8 to 45 on NYSE
Core business: Provides local telephone and mobile-cellular services to customers in 29 states, Canada, the Dominican Republic, and Venezuela. Also publishes telephone directories and supplies command, control, communications, and intelligence systems to US Department of Defense.

BBN Corp.

Headquarters: Cambridge
Chairman/CEO: George H. Conrades
Founded: 1948
Employees: 2,000
Stock: Up 6 1/4 to 28 7/8 on NYSE
Core business: Builds wide-area communications network systems. Also develops and markets packaged data analysis software products and performs contract research and development in computer, communications and acoustics.

[HN01EK][GDrive]
NOTE : George Henry Conrades (born 1939) in the photo

From sound of things, BBN helped pioneer 'Net

By Hiawatha Bray
GLOBE STAFF

GTE Corp.'s $616 million investment in BBN Corp. will buy it a lot more than a major Internet service provider. In a sense, BBN is *the* Internet service provider, the company that constructed the ARPANET, the first primitive computer network that has grown into today's global web of data. Many companies, universities and government agencies collaborated to build the Internet, but no one participant is more closely identified with the project than BBN.

Yet when the company was founded as Bolt, Beranek and Newman in 1948, it wasn't involved with computers. Instead the company's specialty was acoustics – the study of sound. BBN designed the acoustics for the great hall where the United Nations General Assembly meets. And the company still does a great deal of sensitive work for the US Navy on ways to make surface ships and submarines quieter and harder to detect.

Given BBN's relationship to the Pentagon, it's easy to believe the popular story that the Internet was developed to ensure that military computer networks could survive a nuclear attack. But Frank Heart, who worked on the ARPANET for BBN, says the story is bogus.

Instead, the Internet grew out of an effort in the 1960s to allow computers at universities and research institutions to communicate with each other. BBN's involvement with the project began in the late 1950s, when the company hired a brilliant psychologist named J.C.R. Licklider.

"He was with the company only a matter of months, and he said, 'I want a computer,' " recalled Leo Beranek, cofounder of BBN.

"I asked what is it going to cost. He said $30,000. I said: 'My God, man, we've never bought anything more expensive than a water cooler. What are you going to do with it?' He said he didn't know but he knew that computers were the wave of the future."

Beranek got Licklider his computer, one of the first minicomputers from Digital Equipment Corp., and Licklider began hiring smart, ambitious students fresh from Harvard and MIT, and turned BBN into a center for computer research.

"BBN was thought of as sort of the third university. People would go from Harvard to MIT to BBN," said Katie Hafner, author of "Where Wizards Stay Up Late," a history of the Internet.

In 1962, Licklider left BBN to take a job at the Pentagon's Advanced Research Projects Agency. There he established the program that would eventually lead to the creation of ARPANET.

But it wasn't until 1969 that construction of ARPANET began. The goal was to connect computers at four major universities. BBN won the contract to attempt it – and they succeeded.

Even though the computers were connected, there wasn't a simple way to send messages. A BBN engineer named Ray Tomlinson solved the problem in 1972 by inventing electronic mail.

Now BBN is one of a handful of major firms that run the Internet's "backbone," the major communication lines that carry Internet traffic.

GTE buys Cambridge's BBN Corp. for $616m

■ BBN
Continued from Page D1

outstanding shares of BBN for $29 a share.

In acquiring BBN, GTE instantly acquires an Internet network that would have taken two years to build, said David Goodtree, an analyst with Forrester Research.

"That gives them a two-year jump" on competitors such as AT&T Corp. and MCI Corp., which are also scrambling to provide customers with Internet service.

And BBN, which created a forerunner of the Internet 28 years ago, is attractive to GTE because it has established customers and "a golden name," Goodtree said.

Building off of BBN's Internet base, GTE, with 1996 sales of $21 billion, expects to add $5 billion to $8 billion in revenues over the next few years, officials said.

GTE's purchase of BBN is a blow to AT&T, because BBN has been providing Internet access to AT&T's business customers since June 1995.

AT&T spokesman Mike Miller said the deal with BBN was a short-term solution and that AT&T has always intended to move its customers to its own Internet backbone, which is now in place.

The two companies are negotiating an end to the contract, but neither Miller nor BBN chief executive George Conrades would comment on the talks.

It had been widely rumored for more than a week that AT&T was about to buy BBN. Those rumors helped lift BBN stock from 15¾ on April 21, to 22⅝ on Monday, the day before the GTE deal was announced.

Yesterday's deal with GTE overshadowed the release of BBN's third-quarter results, which showed revenues of $95.9 million, about 58 percent higher than a year ago, and an operating loss of $12.1 million.

Much of the revenue growth was due to growth in BBN Planet, BBN's Internet services division, which had revenue of $48.2 million, up 134 percent from a year ago. Nearly half that revenue came from helping America Online Inc. expand its network to meet rising demand.

[HN01EM][GDrive]

1997 (Sep 02) - GTE Press Release (archived with Verizon) - "GTE announces the launch of its new operating unit, GTE Internetworking; Internet pioneer BBN Corp. and GTE Intelligent Network Services combine to offer complete Internet Protocol networking services."

Source - [HC004N][GDrive]

IRVING, Texas -- **GTE Corp.** today announced the launch of GTE Internetworking, its new operating unit. **GTE Internetworking** includes the recently acquired [**BBN Technologies, Incorporated**], which 28 years ago developed the ARPANET, the forerunner to today's Internet, and GTE Intelligent Network Services, which provides Internet services to residential and small business customers. The new operating unit will offer Internet services to residential and small business customers and Fortune 500 companies.

The acquisition of [**BBN Technologies, Incorporated**], and launch of GTE Internetworking are key components of GTE's data strategy, one of a series of steps the company is taking to be a market-leading provider of voice, video and data services.

"GTE Internetworking is uniquely positioned to offer our customers the only complete, integrated Internet services using Internet Protocol (IP) networking technologies," said [**George Henry Conrades (born 1939)**], corporate executive vice president and president of GTE Internetworking. "We're building upon BBN's technological heritage and capabilities plus GTE's customer base, expanding national footprint and diversified distribution channels. Our mission is to help customers improve their business processes through the integration of IP technologies and telecommunications."

GTE Internetworking will work closely with other GTE units, including GTE Communications Corp., the company's new national sales, service and marketing unit, and GTE Network services, its regulated local exchange carrier.

GTE Internetworking will offer a full spectrum of internetworking services including dial-up and dedicated Internet access, high-performance Web hosting, managed security, network management, systems integration and Web-based application and integration services.

The new division will have responsibility for engineering and combining facilities such as data centers and network infrastructure as well as integrating new capacity on the company's high-speed, fiber-optic network being constructed by Qwest Communications Corp. Additionally, through BBN Technologies, its research and development arm, GTE Internetworking will continue to provide funded research and development services in the area of Internet Protocol networking, security, speech recognition and other advanced technologies.

With revenues of more than $21 billion in 1996, GTE is one of the largest publicly held telecommunications companies in the world. In the United States, GTE offers local and wireless service in 29 states and long-distance service in all 50 states. GTE was the first among its peers to offer "one-stop shopping" for local, long-distance and Internet access services. Outside the United States, where GTE has operated for more than 40 years, the company serves approximately 7 million customers. GTE is also a leader in government and defense communications systems and equipment, directories and telecommunications-based information services, and aircraft-passenger telecommunications.

1997 (Oct 16) - GTE in Fight for MCI; Offers $28 Billion

By JUBE SHIVER JR / Source - [HN01FC][GDrive]

WASHINGTON — Muscling into the biggest takeover battle in history, GTE Corp. offered $28 billion in cash Wednesday for ownership of long-distance giant MCI Communications Corp.

The combination of GTE and MCI would create a telecommunications behemoth with $40 billion in annual revenue and a network that would reach 24 million long-distance and 21 million local customers.

The deal would give GTE the broadest geographic base in the industry, positioning it at the forefront of the booming telecommunications industry, at the same time it has moved aggressively to grab a share of rapidly expanding Internet business.

GTE's bid comes two weeks after little known Jackson, Miss.-based WorldCom Inc. offered a $29.4-billion stock swap for MCI and an even earlier bid of $20.3 billion in stock and cash from London-based British Telecom.

After saying little about the bidding war around it in recent days, MCI issued a terse statement late Thursday that it would "review all issues and options" involving the competing offers. Some analysts, however, believe the firm may prefer the GTE cash offer, worth $40 per share, to WorldCom's stock.

GTE would have to borrow massively to afford the deal, though executives denied that the purchase would leave the firm overburdened with debt. As word of the deal leaked out Wednesday, GTE stock fell $2.18 to $48, while MCI shares rose $1.56 to $36.87.

If GTE, headquartered in Stamford, Conn., succeeds in acquiring MCI, the deal would rank as the largest cash deal in history, eclipsing RJR Nabisco Inc.'s $25-billion sale in 1989.

GTE Chairman Charles R. Lee confirmed that his firm was making the offer after stock markets closed Wednesday, saying in a letter to MCI Chairman Bert C. Roberts that it would "bring the benefits of competition to all markets and all customers, both nationally and globally."

Until recently, GTE, an old-line phone company founded 79 years ago in Wisconsin, had been widely regarded as a slow-moving and lackluster performer in an industry full of mavericks, such as WorldCom. A merger would force GTE to accommodate the flashier, more entrepreneurial style of MCI, whose in-your-face marketing campaigns have provoked scores of industry rivals.

"GTE is not the quickest company to the draw," said Mark Warner, a telecommunications venture capitalist who ran unsuccessfully for the U.S. Senate in 1996. "If there wasn't the WorldCom offer blazing the trail, I doubt if they would have made a bid for MCI. . . . They usually operate in a more cautious mode."

But Lee has been on a campaign to position GTE for a boom in use of the Internet and wireless telephones. During the last year, the company has added about 200,000 Internet subscribers through its $616-million acquisition of Cambridge, Mass.-based BBN Corp., whose computer network forms part of the Internet's electronic foundation. GTE has also signed up 1.5 million subscribers for its long-distance telephone service.

GTE, the nation's third-largest local telephone company, offers local phone service in California, Florida, Texas and 24 other states in the Midwest and West.

Unlike the regional Bell operating companies, GTE is in an enviable position of being exempt from regulatory restrictions requiring proof that its local markets are open to competition before entering the long-distance business.

But financial experts, noting that GTE had just $949 million in cash on hand as of June 30, question whether the company can deliver inexpensive, innovative phone service if it has to raise tens of billions of dollars to consummate its offer for MCI.

“The structure of the transaction is likely to debt-laden GTE, which will make it a little bit tougher to compete,” said Thomas H. Sullivan, a partner in the Washington telecommunications law firm of McDermott, Will & Emery.

GTE President Kent Foster rejected such claims, saying the combined GTE and MCI would have huge cash flow--more than enough to price telephone services competitively.

He said the deal would be accomplished “through bank financing and issuing public debt. This is simply another way to structure your debt equity. We will not have any problems generating income.”

GTE is not likely to face insurmountable antitrust objections from federal officials, according to experts. But the company has spearheaded challenges of telephone industry regulation in federal and state courts and could face a potentially hostile review by the Federal Communications Commission.

“From an antitrust point of view, GTE and MCI overall present a fairly favorable competitive picture,” said Leonard J. Kennedy, a veteran Washington communications lawyer, who represents several phone companies. “But they face potentially huge regulatory and political problems since they have been the principal litigant against the FCC and its policies.”

Foster does not believe GTE faces an uphill regulatory battle.

“But I think the regulators will analyze this deal and approve it on its merits because it creates a very powerful competitive situation,” Foster said.

MCI publicly has been supporting British Telecom’s $20.3-billion offer over WorldCom’s competing bid, despite the prospects that its shareholders may vote down the deal. MCI would face financial penalties if it fails to support the BT offer.

“The folks over at MCI have got to be smiling--folks are telling me they are impressed with the GTE offer,” said Jeffery Kagan, who heads his own Atlanta telecommunications consulting firm. “GTE is a very big, strong, profitable local telephone company that could use MCI’s marketing expertise to steamroll into the local telephone markets across the country.”

But consumer advocates cautioned that a GTE-MCI combination could reduce competition, since those companies are battling each other in the local and long-distance markets in California and elsewhere. That could delay the day when consumers see lower prices as competitors offer better deals in order to win customers.

“These companies have been going at each other’s throats trying to get into each other’s markets, and if they merge, that stops,” said Regina Costa, telecommunications research director for TURN, the Utility Reform Network in San Francisco.

The continued upheaval in the $600-billion telecommunications industry has compelled more communications companies to seek out partners that can help erect vast global networks with the capacity to cope with the burgeoning voice, video and data demands of the global Information Age.

Since Congress passed a sweeping reform law in 1996 aimed at spurring phone competition and lowering prices, the industry has been gripped by a wave of consolidation.

The megadeals include the $22-billion merger of Bell Atlantic Corp. and Nynex Corp. and the $15.7-billion combination of SBC Communications Inc. and Pacific Telesis Group. Even GTE was briefly targeted as a takeover candidate by long-distance giant AT&T; Corp.

As a result of GTE’s acquisition earlier this year of BBN Corp., a rival of WorldCom’s UUNet Technologies subsidiary, the combination of MCI and GTE would create a major force on the Internet, with control over a huge portion of the global computer network’s “backbone,” the electronic trunk lines linking Web users from coast to coast in the U.S.

GTE is the second-largest local phone service provider in California.

1997 (Nov 13) - GTE Press Release (archived with Verizon) - "GTE Corp. to acquire Genuity, Inc."

Source - [HC004M][GDrive]

IRVING, Texas - **GTE Internetworking**, a subsidiary of **GTE Corp.**, today announced that it will acquire [Genuity Incorporated], a **subsidiary of Bechtel Enterprises**. The terms of the transaction were not disclosed. The acquisition is subject to customary closing conditions, including the expiration of applicable waiting periods under the Hart-Scott-Rodino Act. **The acquisition will be completed through GTE Internetworking's affiliate, [BBN Technologies, Incorporated].** It is anticipated that the transaction will be completed by the end of the year.

GTE Internetworking, already a leading provider of Web hosting, is pursuing its strategy of enabling customers to transfer their business applications to the Internet. Moving mission-critical business processes to the Web allows customers to broaden market reach, lower the cost of sales, distribution, and support, and transform the relationships between companies and their customers.

GTE Internetworking has more than a thousand Web hosting customers, including some of the busiest sites on the Web--ZD.Net, Four11, LA Times, Boston Globe, Tribune Corporation, and NBC Interactive. The combination of GTE Internetworking with Genuity will provide an expanded global footprint with 12 fully networked data centers, creating an organization with an unprecedented ability to provide distributed Web hosting services.

Genuity is a value-added provider of distributed application hosting solutions. Genuity has strategically located data centers and a sophisticated load-balancing technology, Hopscotch, which together ensure efficient delivery of data across the Internet. **Genuity's unique Hopscotch technology helps solve busy server problems, network congestion, and Internet latency to deliver the highest levels of performance.** Its customers include cnet, CMP Publications, Inc., Excite, InterTel, and MCA/Universal.

"With this acquisition we continue to build the critical set of assets necessary to advance our position as a trusted provider of the enabling infrastructure for Internet commerce. We are combining our high-speed national backbone with global reach, robust public and private peering relationships, advanced hosting and distributed application management with our security and systems integration expertise to enable customers to migrate mission critical applications and business processes to the network," said [George Henry Conrades (born 1939)], president of GTE Internetworking.

"Genuity's network technology, and most importantly, its people, are what give us the competitive advantage," said T. Geir Ramleth, president and CEO of Genuity. "The integration of our robust hosting infrastructure and powerful Hopscotch technology with GTE Internetworking's extensive resources will create a synergistic union. And our similar cultures and vision for the future provide a unique opportunity for customers looking to transform their businesses using Internet technology."

"Genuity's robust distributed application hosting architecture will be instrumental to GTE Internetworking as we continue to focus on delivery of the most advanced distributed network-centric solutions," said Mark Shull, vice president and general manager of GTE Internetworking's Network Centric Solutions group. "This combination allows us to build on our existing base of technology and expertise to provide Internet infrastructure services for electronic commerce."

About Genuity

Genuity is a subsidiary of Bechtel Enterprises, the development, financing and ownership affiliate of the Bechtel organization. Genuity is a value-added provider of distributed application hosting, access and security technologies that provide cost-effective, scaleable and highly reliable Internet infrastructure for commercial applications. With headquarters in San Francisco, Genuity also has data centers established in Chicago, Los Angeles, New York, Phoenix, San Jose, Washington, D.C. and London. Genuity is the creator of Hopscotch, a service allowing organizations to ensure the accessibility and performance of their mission-critical Internet sites by eliminating DNS look-up failures and solving Internet latency problems. For more information, please call 1-888-Genuity, or visit the company's World Wide Web site located at Genuity

About Bechtel Enterprises

Bechtel Enterprises, Inc. is the development, financing and ownership affiliate of the Bechtel organization, a premier global engineer - constructor. It is a leader in the privatized infrastructure market, with ownership interests in 9 companies and 29 projects in the power, water, transportation, telecommunications, and technology sectors. Since 1990 alone, Bechtel Enterprises has participated in arranging nearly $12 billion in project financing. For more information about Bechtel please visit the company's World Wide Web site at Bechtel

About GTE Internetworking

GTE Internetworking, a unit of GTE Corporation (NYSE:GTE), includes the recently acquired BBN Corporation, which 28 years ago developed the ARPANET, the forerunner to today's Internet, and GTE Intelligent Network Services, which provides Internet services to consumers and small businesses.

GTE Internetworking offers customers, from consumers to Fortune 500 companies, a full spectrum of Internet services and solutions including dial-up and dedicated Internet access, end-to-end network management, high-performance distributed hosting and applications solutions, managed security, and systems integration, for customers migrating their mission-critical business applications to the Internet. GTE Internetworking draws upon BBN's expertise in funded research and development of advanced technologies, including satellites, digital radio, multi-gigabit routers, security, and speech, and GTE's strong existing telecommunications services, including local and long distance, wireless, paging, video, research, and Internet. The address for the GTE Internetworking's home page is www.bbn.com.

1998 (Feb 12)

Full newspaper page - [HN01EP][GDrive]

MCI, WorldCom merger would become nation's largest

(Editor's Note: The following article concerning the proposed acquisition of MCI by WorldCom Inc., and its possible effect on the Internet, is condensed from two articles which were published in the January, 1998, edition of Boardwatch Magazine. Information from the articles by Editor/Publisher Jack Rickard and Copy Editor Bill McCarthy is reprinted with permission.)

The concept of an Internet monopoly was originally an oxymoron. There were a large number of networks, most notably universities and DOD contractors. If you interconnected them in cooperative fashion, for the exchange of data, you had an internet. And if it somehow connected to the NSFNet backbone after about 1986, it was on the capital "I" Internet.

Since the commercialization and privatization of the Internet - intended to end the government "monopoly" of the Internet - there has been approximately 1,400 Teramanhours spent by nearly everyone, but particularly telco types, in trying to devise a method to control or "own" the Internet. This can be terribly difficult with over 4,000 vendors in a competitive environment.

But the Internet is quite hierarchical. Almost all of the 4,470 ISPs we count in operation in the U.S. and Canada as of Dec. 1 get THEIR connection to the Internet from a relative handful of top-level backbone operators. And the distribution there is not very symmetrical either. These 4,470 ISPs, many of which sport more than one connection, have a total of 5,458 connections between them to backbones that we have some data on. MCI, Sprint and UUNET, together, provide 74 percent of those connections with about 30 backbones splitting up the rest.

And while the number of Internet service providers continues to grow, the number of national backbones they can connect to is beginning to shrink. GTE has purchased BBN and now Genuity. Even PSINet, which has struggled financially in the past two years despite continued growth, has now acquired Canadian backbone operator iSTAR.

But nothing in the history of business mergers in North America matches WorldCom's 12-year buying spree with its most significant deals, at least in terms of the Internet, coming in the past two years. In 1996, the company bought MFS Communications and UUNET Technologies, two of the biggest players in Internet traffic. In September, it bought CompuServe Network Services and ANS Communications, two of the largest and fastest backbones in the United States. And none of this includes what the company has been doing overseas, such as the recent purchase of the largest ISP in the Netherlands.

In a frenzied season of telcos shopping for each other, MCI Communications Corp. agreed Nov. 10 to be acquired by WorldCom Inc., after the telco that appears determined to buy the Internet sweetened its bid for MCI to $37 billion in stock and cash.

The new offer, raised to $51 a share from $41.50, will be paid in WorldCom stock to all shareholders other than British Telecommunications. BT, which holds a 20 percent stake in MCI, will receive $7.4 billion in cash. WorldCom, the number four long-distance phone company, also picks up $5 billion in MCI debt. With British Telecommunications cashing out, MCI shareholders will own about 45 percent of the new company, while WorldCom will have a 55 percent stake.

The actual number of shares of WorldCom common stock to be exchanged for each MCI share owned by investors other than BT will be determined by dividing $51 by the 20-day average of the high and low sales prices for WorldCom common stock prior to the closing, but will not be less than 1.2439 shares (if WorldCom's average stock price exceeds $41) or more than 1.7586 shares (if WorldCom's average stock price is less than $29).

Although the merger will take six to nine months to garner regulator approvals, Bernard J. Ebbers, president and chief executive officer of WorldCom, said there are "no issues that we can anticipate in even the worst circumstances that will derail this transaction."

The MCI WorldCom deal would surpass the largest U.S. merger so far, a $25.6 billion union of Bell Atlantic Corp. and Nynex Corp. that was completed in August.

Since its founding in 1968 and its revolutionary leadership in the breakup of Ma Bell, MCI has been reminiscent of the rebellious teenager who wakes up in his thirties to realize he has become his parent. Meanwhile, WorldCom seems to be busting out like a 16-year-old with the keys to the family car and high hopes of picking up some girls and beer.

MCI WorldCom will provide an interesting mesh of the executive staffs, starting at the top. During a news conference, Ebbers referred to Bert C. Roberts Jr., chairman of MCI, as "bossman," but few people in the business believe that Ebbers will actually take a back seat to Roberts. Upon completion of the merger, Roberts, currently chairman of MCI, will become chairman of MCI WorldCom. Ebbers will serve as president and chief executive officer of MCI WorldCom.

The merger agreement is subject to the approvals of MCI and WorldCom stockholders as well as approvals from the Federal Communications Commission, the Justice Department, which is preoccupied with desktop icons, and numerous state government bodies. In addition, the merger is subject to review by the European Commission.

What is next on WorldCom's shopping list? Ebbers said that executives will "focus our time" on the merger. But he added: "Entrepreneurs look for opportunities. If there are opportunities out there that make sense, we certainly will not shy away from them."

(Boardwatch Magazine can be written to at 8500 W. Bowles Ave., Suite 210, Littleton, Colo., 80123, or called, toll-free, at 1-800-933-6038. It is available on the World Wide Web at www.boardwatch.com)

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[HN01EQ][GDrive]

1998 - (May 10)

Full newspaper page - [HN01EU][GDrive]

wow - MCi-Worldcom eventually failed due to a scandal, and were bought by Verizon anyways! Mentioned - **William Pelham Barr (born 1950)**

See **MCI WorldCom Corporation** .

The Daily Spectrum (Saint George, Utah) • 10 May 1998, Sun • Page 32

GTE seeks to block WorldCom-MCI merger

■ Company says deal would crimp competition

By JEANNINE AVERSA
The Associated Press

WASHINGTON — GTE Corp. is suing in an effort to stop the big WorldCom-MCI merger, contending it would crimp competition and possibly raise prices in the Internet and long-distance businesses.

GTE, which itself made an unsuccessful bid for MCI last November, says the merger would violate antitrust laws. MCI says GTE is just worried about competition.

The lawsuit, filed late Thursday in federal court, raises the same points GTE has made to the Justice Department and other regulatory bodies that are investigating the $37 billion deal.

GTE general counsel William Barr said Friday the lawsuit was "a firewall," filed in case regulators do not stop the merger.

"While we believe that the enforcement agencies are going to do the right thing ... at the end of the day GTE has to be in the position to defend its interests if our concerns are not fully addressed," he said.

Under the merger, MCI-WorldCom would control between 40 percent and 60 percent of Internet traffic flowing on "backbones" in the United States, Barr said. GTE accounts for between 8 percent and 10 percent of such Internet backbone traffic, Barr said.

Internet backbones are high capacity networks that carry Internet and other data traffic.

"The merger will give MCI-WorldCom a stranglehold over the burgeoning Internet and the incentive and ability to stifle competition from all other rival Internet backbone operators, including GTE," the company said in its suit.

WorldCom and MCI reject rivals' allegations that the merger would lead to higher pricing in the Internet and long-distance businesses, MCI spokesman Frank Walter said.

"We think GTE's motive is clearly to keep us from competing more aggressively in the local phone market where GTE has a virtual monopoly," said Walter. "It is disingenuous for them to take the mantle of pro-competition when they preside over one of the largest telephone monopolies in the country."

Walter also said there are 40 major companies, including AT&T, Sprint and IBM, that provide Internet backbone services.

GTE's lawsuit also alleges that the merger will "substantially lessen competition in the highly concentrated wholesale and retail markets for long-distance services."

MCI is the nation's second-largest long-distance company and WorldCom is the fourth largest. WorldCom accounts for 40 percent of long-distance service sold to other companies at wholesale rates, GTE's lawsuit says.

[HN01EV][GDrive]

1998 (July 28) - CNN - "Bell Atlantic buying GTE : Companies to combine in $52.8 billion stock swap; deal likely to face gov't hurdles"

Source - [HM001D][GDrive]

NEW YORK (CNNfn) - Bell Atlantic Corp. said Tuesday it is buying GTE Corp. in an all-stock deal valued at $52.8 billion, bringing together Bell Atlantic's local and wireless phone service with GTE's local, long-distance, wireless and Internet businesses.

Both companies' boards have approved the acquisition, under which GTE shareholders will receive 1.22 Bell Atlantic shares for each GTE share. Bell Atlantic's Monday closing price of $45 puts the value of the deal at $52.8 billion.

Charles Lee, GTE's chief executive officer, said the transaction reflects GTE's "fierce determination to be a growth company," adding that the newly merged company will build upon GTE's and Bell Atlantic's "complementary strengths."

Investors, however, reacted coolly to the deal, sending GTE (GTE) shares down 3-7/8 to 51-7/8 in mid-afternoon trading. Bell Atlantic (BEL) shares fell 1-3/8 to 43-5/8.

"The deal makes sense from Bell Atlantic's perspective," said Anthony Ferrugia, an analyst at A.G. Edwards. "They're picking up data assets, they're picking up long-distance business - two very strategic assets."

Analysts were not so sure, however, that the deal was quite as positive for GTE because the acquisition values GTE at $55 a share, slightly less than its Monday closing price.

Eric Melloul, telecommunications analyst at Argus Research, told CNNfn the deal represents a bargain for Bell Atlantic, which could open the door for another bidder.

"There is no premium being offered for GTE," Melloul said. "I think someone may come in another month or two [with a higher bid]. I think GTE is worth about $60 to $65 a share."

Both Melloul and Ferrugia cited BellSouth as the leading candidate to step in and make a competing bid for GTE.

A GTE spokeswoman said the deal comes with a breakup fee of up to $2 billion if either company decides to pursue another merger opportunity, which could be another factor involved in Wall Street's negative reaction to the acquisition.

Lee, however, defended the purchase price as a "merger of equals in every way," adding that the newly combined company expects to increase its earnings per share in its first full year following completion of the merger.

"This transaction gets us both where we want to be, but it gets us there faster," Lee said.

Another merger, another FCC inquiry

The companies said they will offer bundled telecommunications services to customers, meaning local, long-distance, cellular and Internet services could be combined on one bill.

"Bundling of telecom services is one of the biggest trends today," said GTE's Lee. "We have an unmatched capability of providing those services to customers ... and we can do it at a better cost."

But the deal most likely will come under intense regulatory scrutiny. The Telecommunications Act of 1996 prohibits the Baby Bells from selling long-distance service until they can demonstrate that they have opened their local networks to potential competitors.

"I look forward to reviewing this merger when it comes before us," FCC Chairman William Kennard said in a statement. "I hope the parties will demonstrate how this merger advances the pro-competitive thrust of the Telecommunications Act."

Bell Atlantic has yet to pass this litmus test on its own, although GTE already offers long-distance service outside Bell Atlantic's region.

"Both companies are working on rolling out high-speed access to homes," said Ivan Seidenberg, Bell Atlantic CEO. "By combining our resources, we can drive prices down."

Nonetheless, Melloul said federal regulators likely will seek some kind of concession from the companies.

"If this deal is allowed, they will probably have to operate the long-distance company independently," he said.

Ferrugia, however, said this type of deal typically results in lower rates for consumers in the long run. He told CNNfn that while the telecommunications industry is narrowing to a few big players, the days of a single company controlling the industry are over. [154K WAV] or [154K AIFF]

1998 (Aug 08) - GTE wins Pentagon telecom overhaul pact

BRIAN FRIEL - Source - [HW005L][GDrive]

The Defense Department this week awarded telecommunications giant GTE a 10-year, $110 million contract to overhaul the Pentagon's above-ground telecommunications system.

GTE will be the lead contractor for the Above-Ground Telecommunications Backbone program at the Pentagon, part of DoD's 14-year renovation of the department's 55-year old headquarters. Construction crews are renovating the Pentagon structure in five sections. The first section is expected to be finished in two years. GTE and its 11 subcontractors will design, engineer, test, install and maintain the telecommunications backbone that will wire the Pentagon's five above-ground floors.

The backbone will carry telephone, computer, fax, video and data communications to 135,000 jacks throughout the building, replacing more than 100,000 miles of cables that run through the Pentagon. The backbone will handle both classified and unclassified communications for 24,000 Defense Department employees.

GTE will install the telecommunications system in two five-year phases. DoD expects the Pentagon renovation, which began in 1993, to be complete in 2007. Thousands of Pentagon employees are being relocated to temporary offices at other Northern Virginia sites during the reconstruction.

1998 Aug 09 ... some BBN and Genuity in there too

Full newspaper page : [HN01EN][GDrive]

SUNDAY, AUGUST 9 • 1998 Sunday Business STAR TRIBUNE • PAGE D5

Technology

Host of companies compete for business data storage

Hosts rent space on servers to hold programs, data or Web pages

By Jerry Ackerman
Boston Globe

It was only a matter of time, once interstate highways were built, before roadside diners gave way to fast-food chains and mom-and-pop motels were replaced by Holiday Inns, Radissons, and EconoLodges.

And so it is today along the Internet information highway, where a battle is being waged for market share in a roadside service called hosting — storage of Web page text and other content for retrieval by computer users at the click of a mouse.

Along with storage, some hosting companies see the field evolving to include rental of specialized business software, on a per-use basis, to customers who need these sophisticated programs but can't afford their upkeep.

The players range from giants — such as IBM Corp. and GTE Corp., which got into the game last year by buying BBN Corp. of Cambridge, Mass. — to Sage Networks Inc., a Cambridge start-up intent on building a national hosting company by buying smaller operators, and tiny Taylor Group of Bedford, N.H., which is starting from scratch.

The prize is a position in an industry that now has 4,000 to 5,000 hosting companies, which maintain the computers, called servers, that store Internet data. While no hosting company is believed to hold more than 2 percent of the market, these companies had combined sales of $400 million in 1997, according to Forrester Research Inc. of Cambridge. That number is expected to reach $1.9 billion in 1999 and $10.5 billion by 2002.

Tied to online shopping

Underlying this rapid growth is the surging interest in online shopping.

Electronic commerce last year chalked up more than $20 billion in sales, two-thirds of that in business-to-business transactions. Forrester figures that by 2002, this number could reach $350 billion, as existing on-line companies — ranging from home-based enterprises to pioneering bookseller Amazon.com — are joined by retailers such as L.L. Bean, Macy's, and Sears, Roebuck & Co.

Many of the largest of these "e-commerce" companies manage their own servers and networks. But some big players, and most of the small ones, contract this work to hosting companies.

These often are Internet service providers, many of them local companies whose primary business is providing dial-up phone connections to the Internet.

But along with providing connections, they sell service packages that — for an average fee of $300 to $400 a year and frequently much higher for large users — store Web pages, execute orders, and provide software to post purchases to buyers' credit cards while transmitting deposits to sellers' bank accounts.

Still waiting to be tapped, however, are thousands of firms that could sell their products or services over the Internet but haven't tried, and others that have yet to exploit the World Wide Web's full potential.

Software products are coming out almost daily to ease the way, says Joseph Barlett, an analyst with Yankee Group in Boston. "Most companies going with a hosting provider today are not very sophisticated," he observes.

But many that are very savvy are still hiring hosting companies to help guarantee service quality for both external Internet pages and intranet content meant only for employees' eyes.

Forrester says there were 12,000 such "complex sites" last year, and predicts this number will grow to 20,000 by 2002. Many will be managed in-house, but many more firms will be paying thousands of dollars a year to hosting companies.

Looking further ahead, the Internet is on the brink of opening up new ways for companies to conduct their own internal financial and production affairs, using software that until now only large Fortune 500 companies could afford.

Testing the market

Seeing this opportunity, major business software developers such as Lotus Development Corp. (an IBM subsidiary), Microsoft Corp., and Great Plains Software Inc. are market-testing versions of their brand-name products for small companies — firms with 500 or fewer employees — to use via the Internet.

The concept calls for hosting companies to install master copies of such specialized software, and then rent access to users. International Data Corp. of Framingham, Mass. says 25 percent of 900 companies in a recent survey said they liked the idea for payroll processing; others saw a need for such services for economic forecasting or supply-chain management capabilities that they now lack.

"The capabilities in this field are just emerging," said Steven Brand, Lotus' manager for small business applications.

Hosting as a growth business is sharply defined in the "roll-up" strategy being pursued by Sage Networks, which since March has spent more than $20 million to buy eight hosting companies from coast to coast.

These acquisitions — in Atlanta, New York, Washington, D.C., Los Angeles and San Jose, Calif., — form the backbone of what Sage intends to be a national company that can establish brand identity in a now-fragmented market.

"We actually think that through consolidation you can build a large international company," said Bradley Feld, cochairman and one of Sage's founders.

Could become No. 2

By January, he said, Sage hopes to have between 15 and 25 acquisitions under its wing, with more planned for 1999. "We are now one of the top 10 hosting companies in the country and by the end of this year should be one of the top two."

Not that this represents a big market share.

Sage says it has tens of thousands of clients at its companies; some estimate that number is less than 40,000. The firm believed to be the nation's largest hosting operator, Hiway Technologies Inc. of Boca Raton, Fla., claims 87,000 customers.

And the runner-up, Verio Inc., which has 125,000 customers buying connections to the Internet, may be able to claim about 65,000 as hosting customers, based on rules of thumb that industry veterans say are commonly accepted.

Both Hiway and Verio also are pursuing roll-up strategies. Verio, based in Englewood, Colo., is publicly traded. Hiway has an initial public stock offering planned for this year.

Sage's buying spree has included a large, high-speed computer center near Washington, D.C., purchased from IBM Corp., to be the linchpin in the company's operations. A second center is being built in Atlanta, where two of its operating units are also based, at a projected cost of $1 million.

Sage's money comes mostly from a venture fund managed by a New York investment bank, Charterhouse Group International Inc. Patricia Riley, managing director, says Charterhouse has "well over $40 million in pure equity" committed to Sage.

"The way I look at this, you have a market that is growing exponentially and a business that creates profits quickly," she said. An IPO is planned, but no timetable has been set.

GTE, an international telecommunications giant with $23 billion in revenues in 1997, paid $616 million last year to buy BBN, which in 1969, as Bolt, Beranek & Newman, launched the forerunner of the Internet for the U.S. Defense Department.

Today, BBN operates under the name GTE Internetworking, still running key portions of the Internet and selling services to support its parent company's drive to compete against AT&T Corp. and MCI Communications Corp.

"We're shooting to be a leader in the hosting market," says John Vincenzo, a company spokesman.

Still under the BBN flag at the time, the company began commercializing hosting operations at its 11 U.S. locations in 1995, according to senior product manager Christine Silva.

Noticing smaller firms

Going first after large corporations that needed backup storage capacity, the company last year expanded sales efforts to include small and mid-size firms — companies with fewer than 500 employees or sales less than $100 million. Analysts say this sector is where electronic commerce is growing the fastest.

Vincenzo said GTE now has more than 1,000 hosting customers. It acquired one smaller hosting company, Genuity Inc., of San Francisco, late last year primarily because it had a data center that could be a GTE West Coast operations center. More acquisitions are possible.

Coming from a different direction, Dan Taylor, a Bedford, N.H., software consultant, sees new computer hardware technology paving the way for hosting centers to provide small businesses with payroll, engineering, manufacturing control, sales systems, and other software that they previously couldn't afford.

Taylor says the licensing fees for these high-end products, which big companies take for granted, weren't the problem.

It was the cost of hiring someone to install the software, manage its use, and install upgrades, in as many as 200 desktop computers in a medium-sized firm. These information systems managers, who can earn $80,000 to $90,000 a year, also must be available around the clock to solve problems.

The new hardware that is altering this picture is called "thin client" technology, a name that refers to the fact that those desktop terminals are stripped of their software storage capabilities — thinned down — to become terminals that connect to servers that function as a central computer.

May sound familiar

This may sound familiar to anyone who used a computer before the PC revolution , when computer terminals were wired to IBM, Digital Equipment, or similar mainframe computers that were tended behind closed doors by technicians. "The industry is calling it recentralization," says Taylor of this return to the past.

But by requiring that software be installed and maintained only at the servers, operating costs plummet and fancy software becomes more affordable.

Taylor this fall will launch his first application of this approach, installing accounting software in host servers at his company's offices that nearby New Hampshire College will be able to tap, via the Internet, for teaching its business courses.

Simultaneously, his company, The Taylor Group, is discussing the hosting of specialized business applications with New Hampshire's largest private manufacturing company, Cabletron Corp. of Rochester, and with a Massachusetts health care firm, Physicians Quality Care Inc. of Waltham, Mass.

Anticipating success in these pilot installations, Taylor recently bought a 9.5 acres of land in Bedford where he plans to build new offices for his 75-employee company — with 10,000 square feet of space set aside for a hosting center.

[HN01EO][GDrive]

1999 (June 30) - US Congress (CSPAN) - "Internet and Broadband Issues"

older video of GTE/Verizon with Barr - https://www.c-span.org/video/?125922-1/internet-broadband-issues

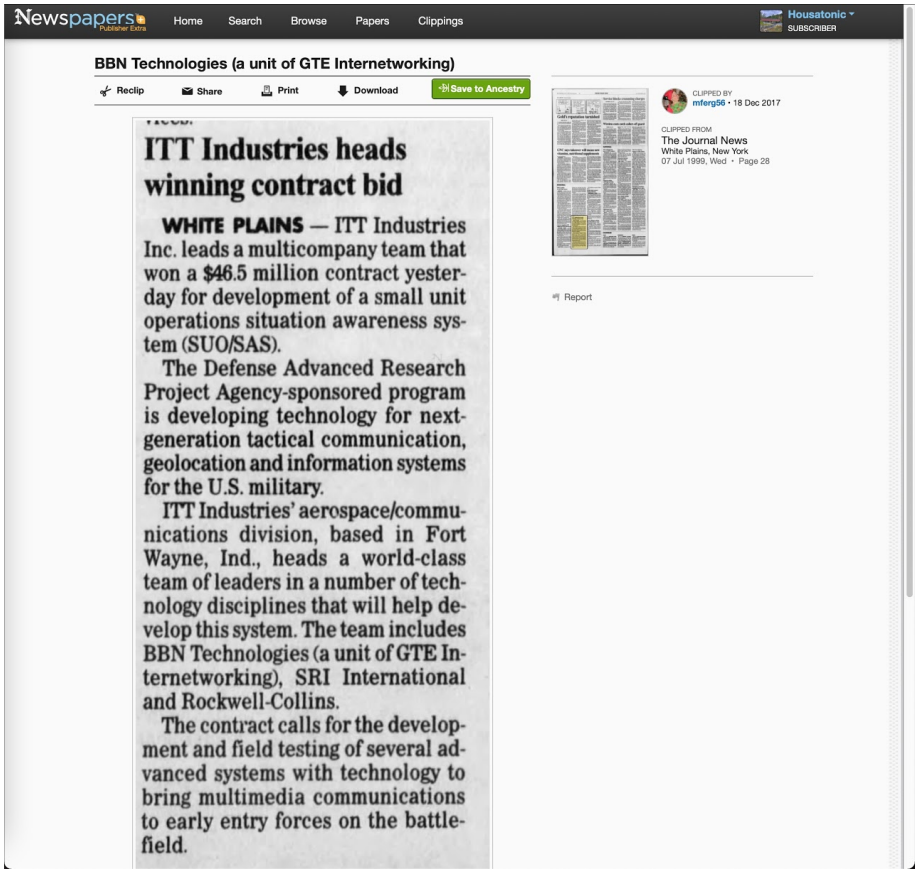
"Committee members heard testimony from information industry officials about proposed legislation to regulate the Internet. The legislation would assess the impact of regulation that would impose open access requirements on high speed cable to the Internet and would relax the statutory restrictions on long distance services to allow them to compete for data transmission."

Housatonic.Live2 upload (note this may not remain available, as it is copyrighted on CSPAN) - https://youtu.be/G0TjYsP7Rrk

1999-06-30-cspan-internet-and-broadband-issues-committee-recording-3hrs.mp4 / .pdf

1999-06-30-cspan-internet-and-broadband-issues-committee-recording-3hrs-img-1

1999 (July 07) - GTE - BBN - Military contracts - 1999



[HN01EI][GDrive]

2000 (April 06) - The Boston Globe

Full newspaper page : [HN01F0][GDrive]

See : **Genuity Incorporated (2000)** , **GTE Corporation** , **Verizon Communications Incorporated**

GTE Net division to hire 500 in state, change its name

By Ross Kerber
GLOBE STAFF

GTE Internetworking plans to hire 500 e-commerce consultants and engineers in Massachusetts this year to help develop its high-speed data network and offer services as part of a proposed spinout from GTE Corp.

The division, with headquarters in Burlington, also plans to announce today that it will change its name to Genuity Inc. as it becomes a publicly traded company.

The plan is part of a controversial bid by GTE and Bell Atlantic to gain government approvals for their $84 billion merger plan, which would create the country's biggest local phone company.

Currently, the GTE unit employs about 2,000 people in Massachusetts and 3,500 in all. It includes most of the assets of the former Bolt Beranek & Newman in Cambridge, which GTE bought in 1997 for $616 million. GTE says the unit had revenue of about $1 billion last year but wasn't profitable.

In 1969, Bolt Beranek was one of the Pentagon's first contractors for the computer system that became the Internet. More recently, the company has operated high-speed data connections for big corporations and Internet service providers. In February, it won a contract from America Online Inc., estimated to be worth more than $2.5 billion, to install new connections for the service provider.

If the Genuity spinout is approved, said GTE Internetworking's president, Paul R. Gudonis, the company would become one of the top four providers of Internet connectivity services, along with Sprint, WorldCom, and UUNet. To compete, Gudonis said, Genuity will offer more consulting services to help companies create corporate Internets and business-to-business services for e-commerce. Gudonis would be head of the new company.

The future of the division remains a touchy issue before regulators, however. In filings with the Federal Communications Commission, GTE and Bell Atlantic had proposed to spin off the unit as a public company and keep a 10 percent ownership interest, with an option to increase that to 80 percent within five years.

But competitor AT&T says that would leave those companies effectively in control of the unit. AT&T wants the FCC to insist that Bell Atlantic make more commitments to open local phone service to competition. The FCC is considering the arguments and hopes to rule on the merger by July.

Matthew Kovar, a manager at the Yankee Group consulting firm who follows the networking industry, said Genuity would be free as a stand-alone company to pursue a more aggressive strategy than it would be as a local phone company unit. "It's not a change to the entire business model," he said of Genuity's plans. "But maybe these are things they felt they weren't free to do, or weren't able to do, because of the lethargic Bell operating company mentality."

Gudonis said he couldn't discuss financial specifics, including the total amount of networking investment Genuity would make, until the company files registration statements with the Securities and Exchange Commission to sell public shares. No filings are expected until the FCC clears the merger of the parent companies, he said.

Gudonis's tenure with the GTE unit dates back to 1994, when he joined Bolt Beranak as president of what then was known as its "BBN Planet" division, providing high-speed data services to individual companies. The business totalled about $5 million that year, he said; now it will generate the majority of Genuity's revenue. In addition to Internet companies, customers include Honeywell and FleetBoston Financial Corp.

Genuity also will invest heavily to upgrade its Internet backbone services so it can eventually handle the heavy demands needed to send video signals to homes via cable modems and high-speed phone lines. Clients for these services include Yahoo Inc. and General Electric's NBC Interactive, he said.

The unit is also constructing a new office park in Woburn. Gudonis said it will house 1,400 people by next year, some of whom transferred from other offices in the state.

[HN01F1][GDrive]

2000 (April 10) - Network World article / Vol. 17, No. 15 - "GTE, others play the game"

For more than 20 years, Network World has been the premier provider of information, intelligence and insight for network and IT executives responsible for the digital nervous systems of large organizations. Readers are responsible for designing, implementing and managing the voice, data and video systems their companies use to support everything from business critical applications to employee collaboration and electronic commerce

Full pages : Page 01 (cover) : [HP004Q][GDrive] / Page 15 : [HP004R][GDrive]

[HP004Q][GDrive]

GTE, others play the name game

BY DENISE PAPPALARDO

LOS ANGELES — GTE Internetworking announced at Internet World 2000 last week it is changing its name to Genuity.

This development keeps the ISP in step with its parent company, GTE, which also announced that once its pending merger with Bell Atlantic is final, the joint company will be called Verizon.

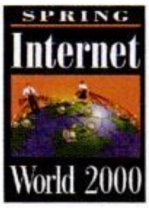
And to complete the name-game circle, Bell Atlantic Mobile and Vodafone AirTouch said last week they will call their joint wireless entity Verizon Wireless (see story, page 91).

GTE Internetworking, now Genuity, is changing its name as it prepares to become an independent company. In February, GTE and Bell Atlantic told the Federal Communications Commission they were willing to spin off GTE's ISP in order to see GTE and Bell Atlantic's merger through.

It is not known if the FCC will take them up on the offer, but the ISP is moving ahead with its plans. Paul Gudonis, president of Genuity, says the change is not dependent on the FCC's decision but is instead prompted by market shifts.

"The name change is part of an evolving strategy to take advantage of the next Internet revolution," Gudonis says. The company likes the fact that the name Genuity is a derivative of ingenuity, he says. He added some at the ISP wanted to go back to the ISP's roots and rename GTE Internetworking BBN Planet. Those folks lost out. GTE acquired BBN Planet in May 1997 and renamed the ISP GTE Internetworking four months later.

But the name Genuity is not new either. In November 1997, GTE Internetworking acquired the San Francisco Web-hosting company Genuity. By choosing a name the ISP already owned and hasn't used since the acquisition, they were able to avoid the exhaustive trademark and URL searches typically done when naming or renaming a company.



At the press conference, Gudonis also said Genuity signed a deal with Akamai to deploy Akamai's FreeFlow content-distribution servers throughout its network. Genuity will offer FreeFlow services in addition to its current content-distribution services, which are based on Inktomi servers and Genuity's Hopscotch load-balancing technology.

In other Internet World news:

- Akamai introduced its Traffic Analyzer and Reporter tools that offer FreeFlow content-distribution customers real-time and historical information on Web site performance.
- Sprint announced it is offering Microsoft Windows 2000 Advanced Server and Site-Server Commerce Edition Web hosting services to business customers. Win 2000 Advanced Server includes Microsoft SQL Server 7.0, which is used for advanced cataloging and database storage.

2000-04-10-network-world-vol-17-no-15-pg-12-clip-genuity

[HP004S][GDrive]

[HP004R][GDrive]

2000 (May 25)

Full newspaper page - [HN01F5][GDrive]

See : **Genuity Incorporated (2000)** , **GTE Corporation** , **Verizon Communications Incorporated**

C4 THE BOSTON GLOBE • THURSDAY, MAY 25, 2000

TECHNOLOGY & INNOVATION

Genuity's plan to raise $2.6b in IPO would be largest by ISP

BLOOMBERG NEWS

WASHINGTON – Genuity Inc., the pioneering Internet unit of GTE Corp., said its planned initial public offering could raise as much as $2.6 billion, making it the largest ever for a US Internet service provider.

GTE, a local phone service provider based in Irving, Texas, is selling 90.5 percent of Genuity, whose Internet roots date back to the sending of the first e-mail.

GTE is making the sale so regulators will allow it to be bought by Bell Atlantic Corp. and form the biggest US local phone company under the name Verizon Communications. Bell Atlantic said yesterday it expects to complete the purchase next month.

Burlington, Mass.-based Genuity first filed for the IPO last month without specifying the number of shares being sold or the price being sought.

"It's obviously a very large deal, and it's unclear in this type of environment how willing the market will be to swallow something of this size," said Darren Chervitz, a money manager at Jacob Asset Management in New York.

Genuity said it plans to sell 173.9 million Class A common shares for between $12 and $15 each, raising between $2.1 billion and $2.6 billion before expenses. At the $13.50 midpoint of the expected price range, the stock sale would be worth $2.3 billion, according to Genuity's amended IPO filing to the Securities and Exchange Commission.

At the top of the expected price range, Genuity would rank as the ninth-biggest IPO in US history and the largest ever for a US Internet service provider. Among worldwide Internet IPOs, Genuity would likely rank behind Germany's T-Online International AG, which raised $2.8 billion last month, Chervitz said.

The value of Internet stocks and IPOs have fallen in recent months. Since March 10, the Bloomberg US Internet index has dropped by more than half, from 301.78 to 137.64, while the Bloomberg IPO Index has sunk from 2415.11 to 1007.47.

Genuity said it plans to use $1.8 billion of the funds being raised to expand its network, which makes up part of the mesh of wires that connect computers around the world and are referred to as the backbone of the Internet. The rest of the IPO proceeds would be available for other general purposes, which could include acquisitions, although none are in the works now, the filing said.

The IPO funds would represent only a part of the company's capital spending plan to expand its network infrastructure at the cost of $11 billion to $13 billion between 1999 and 2004. Genuity plans to spend $1.8 billion to $2 billion on the project this year, according to the filing.

The entire company, with 192.2 million shares to be outstanding immediately after the IPO, would have a market value of between $2.3 billion and $2.9 billion at the IPO price range. At the midpoint, Genuity would be valued at $2.6 billion.

The combined GTE and Bell Atlantic hold about 18.3 million Class B common shares, giving them 9.5 percent in Genuity following the IPO. Those shares would be worth between $219.1 million and $273.8 million, at the $12-15 per share price range. At the $13.50 midpoint, the stake would be worth about $246.5 million.

Under their proposal to regulators, the companies could convert their Class B shares – which are largely identical to the publicly traded Class A – into 800 million Class C common shares, which get five votes each versus one apiece for the other classes. The conversion would give Bell Atlantic and GTE an 82 percent equity stake and 96 percent voting control over Genuity, the filing said.

The companies could make the swap if they permit competition from other companies within Bell Atlantic's local phone markets in 12 states, by an unspecified date in 2005. Bell Atlantic's 13th state, New York, already is open. US law forbids a local carrier from providing long-distance service – including Internet access – in states where it hasn't completed steps to allow local competition, according to the filing.

Bell Atlantic plans an IPO this year for another of its businesses, Verizon Wireless, which is a joint venture with Vodafone AirTouch PLC.

GTE shares rose 37.5 cents to close at $60.625, after reaching as high as $61.50 in late afternoon trading.

[HN01F6][GDrive]

2000 (June 19) - RCRWireless article - Verizon gets green light ; The FTC approves transfer of GTE Corp.'s communications licenses to Bell Atlantic Corp

See [HW005C][GDrive] - By Reily Gregson on JUNE 19, 2000Archived Articles

WASHINGTON-The Federal Communications Commission late Friday approved the transfer of **GTE Corp.'s** communications licenses to Bell Atlantic Corp. contingent on 25 conditions, including putting some wireless properties into a trust until they can be sold so as to not violate cellular cross-ownership rules.

"There will be those that will claim this merger brings us closer to a re-emergence of Ma Bell, however, my support is predicated on the applicants' enforceable commitments to open its traditional local markets to competitors, invest in new markets and accelerate deployment of broadband technologies. The end result should produce more competition, not less," said FCC Chairman William Kennard.

"This is a great day for Bell Atlantic and **GTE**, for our customers, our investors and our employees … This final approval contains reasonable conditions that clear the way to unite these two great companies into Verizon Communications," said Charles R. Lee, chairman and chief executive officer of GTE and designated chairman and co-CEO of the new company. The merger is expected to close by June 30.

Bringing GTE's wireless holdings into Verizon Wireless-the mobile-phone company consisting of Bell Atlantic Mobile, PrimeCo and Vodafone AirTouch plc-would create the nation's largest wireless company, with more than 24 million customers and a footprint covering 90 percent of the United States.

"Our ability to deliver a full plate of voice, data, Internet and wireless services to all our customers will make Verizon the next great brand in communications," said Ivan Seidenberg, chairman and CEO of Bell Atlantic and designated president and co-CEO of Verizon.

Bell Atlantic and GTE obtained Department of Justice approval after selling off overlapping wireless properties. [Note - US attorney general as of 2000 is Janet Reno, https://en.wikipedia.org/wiki/Janet_Reno]. Some of the sales were made in a multiproperty deal with Alltel Corp., which was approved by the FCC's Wireless Telecommunications Bureau last week.

One of the major conditions on the transfer involves GTE's Internet backbone, operation of which would violate the Telecommunications Act of 1996.

To get around the telecom act's prohibition against regional Bell operating companies offering long-distance services, Bell Atlantic and GTE proposed, and the FCC accepted, spinning off the Internet backbone into a new entity called **Genuity [(Genuity Incorporated (2000))]**.

Verizon would have a 9.5 percent interest in **Genuity [(Genuity Incorporated (2000))]** until Verizon is granted long-distance authority in the former Bell Atlantic states. Bell Atlantic has received such authority in New York but still has 12 states and the District of Columbia to go. Once approval has been obtained, Verizon would then be permitted to control up to 80 percent of Genuity. If approval is not granted for at least 50 percent of the old Bell Atlantic territory within five years, the conversion to 80-percent stock would evaporate.

Seidenberg said he expects long-distance approval within two years from the close of the merger.

This arrangement satisfied FCC Commissioner Susan Ness, who said approving the merger was "a close call."

Both Republican members of the commission partially dissented in the approval because of the conditions placed on it.

"None of the shortcomings I address here or in my previous statement on these issues will ever be addressed unless the commission begins to reform the majority's `balancing approach' to merger review that we apply again here, or seriously question the aforementioned specious theories of potential harm," said FCC Commissioner Michael Powell.

FCC Commissioner Harold Furchtgott-Roth also dissented because he does not believe the commission should be involved in regulating undersea cable licenses. This is one of the approvals the FCC granted.

Amid concerns that someone might challenge the license transfers, the companies said they believe the approval with conditions can withstand any court challenge.

"We think this arrangement is bullet proof. We believe we have the best lawyers and best consultants that one could have … We don't think there is a minuscule chance that this would be overturned," said Lee.

Fate of WorldCom/Sprint

Internet issues also may derail WorldCom Inc.'s hopes of marrying Sprint Corp. and gaining control of Sprint PCS.

Sprint Chairman William Esrey told shareholders last week at the company's annual meeting in Westwood, Kan., that some Justice Department staff do not support the merger.

"We have had a number of high-level meetings with [DOJ] officials in recent weeks, but it remains unclear if we will or will not get the necessary government clearances to implement the merger," Esrey said.

WorldCom needs the merger to fill in the large wireless gap in its offerings. Sprint needs to expand its international reach. Both companies would benefit from combining their fixed-wireless assets.

While DOJ seems concerned with the antitrust implications of a merger between the nation's No. 2 and No. 3 long-distance companies, the European Commission is concerned about WorldCom's dominance of the Internet. Experts believe WorldCom is willing to sell off Sprint's Internet backbone but not its stake in UUNet.

Similar concerns when WorldCom bought MCI Communications Corp. led to the sale of some of WorldCom's assets to Cable and Wireless plc. This sale was not successful and experts believe the EC does not want to create a repeat situation.

The EC is scheduled to make a decision by July 12

Should WorldCom/Sprint convince DOJ and EC officials that the merger would create an all-distance company in an all-distance telecommunications market, the company still must receive FCC approval to transfer its licenses.

Events after GTE becomes Verizon

- **2002 (July 26) - NYTimes - "Genuity Faces Bankruptcy As Verizon Ignores an Option"**
  - By Seth Schiesel With Simon Romero ; Source : [HN01C4][GDrive] ;
  - See [**Verizon Communications Incorporated**] or [**Genuity Incorporated (2000)**]
- **2002 (Jul 26) - Forbes - "Genuity Is Left On The Launching Pad"**
  - Source : [HP004D][GDrive]
  - See [**Verizon Communications Incorporated**] or [**Genuity Incorporated (2000)**]
- **2002 (Nov 27) - NetworkWorld - Level 3 to buy bankrupt Genuity's assets**
  - Stephen LawsonBy Stephen Lawson ; Source : [HP004I][GDrive]
  - See [**Verizon Communications Incorporated**] or [**Genuity Incorporated (2000)**]
- **2002 (Nov 27) - "Level 3 to acquire Genuity assets and operations for $242 million"**
  - Source - LightWaveOnline - [HW005H][GDrive]
  - See [**Verizon Communications Incorporated**] or [**Genuity Incorporated (2000)**]
- **2003 (Aug 19) - CenturyLink corporate news - Level 3 to Sell Midwest Fiber Optic Network Acquired in Genuity Transaction**
  - Source [HC004L][GDrive]
  - See [**Verizon Communications Incorporated**] or [**Genuity Incorporated (2000)**]
- **2004 (Feb 05) - Network World : "Verizon selling off net innovator BBN"**
  - Source [HP004H][GDrive]
  - This article has been relocated to [**Verizon Communications Incorporated**]
- **2005 (May 12) - BusinessWire - BBN Technologies Appoints George Conrades, Executive Chairman of Akamai Technologies, to Board of Directors**
  - Source - [HW005I][GDrive]
  - This article has been relocated to [**Verizon Communications Incorporated**]
- (cont)

GTE Sylvania Products

Wikipedia Sylvania Electric Products

"GTE Sylvania" is a brand name for some Sylvania products manufactured by **GTE Corporation** after the 1959 Sylvania Electronics [corporation] merged with General Telephone to form General Telephone and Electronics (GTE) (or **GTE Corporation**).

Not sure if this page should cover all of Sylvania history , or just "GTE Sylvania

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Saved Wikipedia (Dec 24 2020) - "Sylvania Electric Products"

Source - [HK004E][GDrive]

Sylvania Electric Products was an American manufacturer of diverse electrical equipment, including at various times radio transceivers, vacuum tubes, semiconductors, and mainframe computers such as MOBIDIC. They were one of the companies involved in the development of the COBOL programming language.

History

[...]

The *Hygrade Sylvania Corporation* was formed when *NILCO*, *Sylvania* and *Hygrade Lamp Company* merged into one company in 1931.

In 1939, Hygrade Sylvania started preliminary research on fluorescent technology, and later that year, demonstrated the first linear, or tubular, fluorescent lamp. It was featured at the 1939 New York World's Fair.[1] Sylvania was also a manufacturer of both vacuum tubes and transistors. In 1942, the company changed its name to Sylvania Electric Products Inc.

During World War II, Sylvania was chosen from among several competing companies to manufacture the miniature vacuum tubes used in proximity fuze shells due to its quality standards and mass production capabilities.[2]

In 1959, Sylvania Electronics merged with General Telephone to form General Telephone and Electronics (GTE) [aka **GTE Corporation**].

Sylvania developed the earliest flash cubes for still cameras, later selling the technology to Eastman Kodak Company, and later a 10-flash unit called FlipFlash, as well as a line of household electric light bulbs, which continued during GTE's ownership and today is sold by Osram Sylvania.

In June 1964, Sylvania unveiled a color TV picture tube in which europium-bearing phosphor was used for a much brighter, truer red than was possible before.[3]

Through merger and acquisitions, the company became a significant, but never dominating supplier of electrical distribution equipment, including transformers and switchgear, residential and commercial load centers and breakers, pushbuttons, indicator lights, and other hard-wired devices. All were manufactured and distributed under the brand name GTE Sylvania, with the name Challenger used for its light commercial and residential product lines. GTE Sylvania contributed to the technological advancement of electrical distribution products in the late 1970s with several interesting product features. At the time, they were the leading supplier of vacuum cast coil transformers,

manufactured in their Hampton, Virginia plant. Their transformers featured aluminum primary winding and were cast using relatively inexpensive molds, allowing them to produce cast coil transformers in a variety of KVA capacities, primary and secondary voltages and physical coil sizes, including low profile coils for mining and other specialty applications. They also developed the first medium voltage 3 phase panel that could survive a dead short across two phases. Their patented design used bus bar encapsulated in a thin coating of epoxy and then bolted together across all three phases, using special non-conductive fittings.

By 1981 GTE had made the decision to exit the electrical distribution equipment market and began selling off its product lines and manufacturing facilities. The Challenger line, mostly manufactured at the time in Jackson, Mississippi, was sold to a former officer of GTE, who used the Challenger name as the name of his new company. Challenger flourished, and was eventually sold to Westinghouse, and later Eaton Corporation. By the mid-1980s, the GTE Sylvania electrical equipment product line and name was no more.

In 1993 GTE exited the lighting business to concentrate on its core telecomms operations. The European, Asian and Latin American operations are now under the ownership of Havells Sylvania. With the acquisition of the North American division by Osram GmbH in January 1993 Osram Sylvania Inc. was established.[4]

Brand name

In the early 1980s, GTE Sylvania sold the rights to the name Sylvania and Philco for use on consumer electronics equipment only, to the Netherlands' NV Philips. This marked the end of Sylvania's TV production in Batavia, New York, USA, and Smithfield, North Carolina, USA. The Sylvania Smithfield plant later became Channel Master. The rights to the Sylvania name in many countries are held by the U.S. subsidiary of the German company Osram. The Sylvania brand name is owned worldwide, apart from Australia, Canada, Mexico, Thailand, New Zealand, Puerto Rico and the USA, by Havells Sylvania, headquartered in London.

Osram Sylvania

Osram Sylvania manufactures and markets a wide range of lighting products for homes, business, and vehicles and holds a leading share of the North American lighting market [2]. In fiscal year 2008, the company achieved sales of about 1.75 billion euros, which comprised about 38% of Osram's total sales at the time. [5] Osram's worldwide lighting businesses employed about 9,000 people at the time. In 2016, Osram spun off the general lighting business which included the North American Osram Sylvania unit into an independent company called LEDVANCE headquartered in Garching, Germany. In 2017, LEDVANCE was merged into a consortium of Chinese investment companies and the Chinese lighting manufacturer MLS under the LEDVANCE name. The North American headquarters of LEDVANCE, previously referred to as Osram Sylvania, and located in Danvers, Massachusetts, was relocated to Wilmington, Massachusetts in 2015, a town north of Boston, MA. LEDVANCE continues to use the well known Osram and Sylvania brand names in their corresponding and representative markets throughout the world.

Advertising

Sylvania Skylark portable radio seen in a television commercial from the 1950s.

- From 1951 until 1956, Sylvania sponsored the game show *Beat the Clock*. The grand prizes on the show would be Sylvania television sets, and some consolation prizes would be Sylvania radios. Sylvania "Blue Dot (tm) for sure shot" flashbulbs would be used to take a photograph of the contestants in awkward outfits or messy stunts.
- One of Sylvania's heavily advertised TV features was a lighted perimeter mask of adjustable brightness called "HALOLIGHT", which was purported to ease the optical transition if a viewer glanced from a dark background to the bright TV screen. Today Philips markets an Ambilight feature, lighting the wall behind a flat display to soften the viewing experience. HALOLIGHT could not be adapted for color TV, because color TV white balance (aka tracking from low to high brightness) was unpredictable. Since the white color temperature of the HALOLIGHT and the illuminated color screen could not be made equivalent, HALOLIGHT was withdrawn.
- Osram Sylvania sponsored the It's a Small World ride at Disneyland in California with a twelve-year agreement starting in 2009[6]. In 2014, the sponsor logo at the attraction's entrance changed to that of Siemens, the parent company of Sylvania.

Accidents

The Sylvania Electric Products explosion, which involved scrap thorium, occurred on July 2, 1956, at their facility in Bayside, Queens, New York City.[7][8] The incident injured nine people;[7] one employee subsequently died of his injuries.[

BITCHUTE @Housatonic **YOUTUBE** @HousatonicLive **ODYSEE** @Housatonic **BRIGHTEON** @Housatonic

Dr. Duane J. Gubler (born 1939)

MOVED TO HOME0002 : Dr. Duane J. Gubler (born 1939)

Dr. Duane J. Gubler (born 1939)

Profile pic from 2001 interview in "Vector Borne and Zoonotic Diseases", Vol1
[HP006D][GDrive]

Wikipedia NONE

Associations :

- **Dr. Lin-Fa Wang (born 1960)** - **Infectious diseases research program at Duke-NUS** (https://gvn.org/gvn-centers-of-excellence/asia-australia/singapore/)
  - *"The GVN Singapore Center of Excellence is led by Duke-NUS and is a composite of university, city, and country-wide researchers committed to monitoring, containing and treating major infectious diseases.* ***Prof. Linfa Wang, Director of the GVN Singapore Center, continues the work of his predecessor, Professor Duane Gubler, who initiated the infectious diseases research program at Duke-NUS. "***
- **Dr. Clarence James Peters (born 1940)** (Nipah virus outbreak, 1999 - See [HN01LD][GDrive])
- **Dr. Walter Ian Lipkin (born 1952)** (Worked together to identify West Nile in 1999 - See [HN01I9][GDrive])
-

https://www.jhsph.edu/alumni/attend-an-event/spotlight-series/spotlight-series-with-Duane-Gubler

The globalized world of the new millennium has become highly vulnerable to epidemics of infectious diseases. It is a vulnerability that has been underscored by several recent pandemics, including Covid-19. Driven by global demographic and societal trends, these events have become more frequent, larger, and - depending on the pathogen - more deadly.

Unfortunately, the 'out of sight, out of mind' mentality often results in lessons being forgotten during interepidemic periods. Epidemics will continue to wreak havoc on human and economic health unless we develop more effective and sustainable early warning surveillance, prevention and control programs. Join Duane J. Gubler, ScD, FAAAS, FIDSA, FASTMH, as he shares lessons learned and suggestions for mitigating the impact of future pandemics.

Gubler is Emeritus Professor and founding director, Signature Research Program in Emerging Infectious Diseases at the Duke-NUS Medical School, Singapore. He is Adjunct Professor in his alma mater, Johns Hopkins Bloomberg School of Public Health, the Duke University School of Medicine and Duke Global Health Institute. He has spent his entire career working on tropical infectious diseases with an emphasis on dengue, Aedes-transmitted and other vector-borne diseases. He worked for the Centers for Disease Control and Prevention for 25 years and has extensive field experience in Asia, the Pacific, tropical America and Africa, and has published extensively on all aspects of dengue and other vector-borne infectious diseases, with over 350 publications and 2 books to his credit. Gubler is a Fellow, Infectious Disease Society of America, Fellow, American Association for the Advancement of Science, and Fellow and Past President of the American Society of Tropical Medicine and Hygiene.

https://www.duke-nus.edu.sg/directory/detail/duane-gubler

Dr. Duane Gubler is an Emeritus Professor and Founding Director of the Emerging Infectious Diseases (EID) Signature Research Programme at Duke-NUS Medical School, Singapore. As founding director, Prof Gubler led the establishment of the EID Programme in 2007 and to institutionalise and advance on the lessons learned from Singapore's experience with SARS in 2003 and H1N1 influenza in 2009.Thanks to this effort, Singapore's response to COVID-19 has been lauded by many around the world for the country's high level of readiness and efficiency.

Prof Gubler has spent his career working on insect-borne infectious diseases, in particular dengue and dengue hemorrhagic fever. He has lived in tropical countries for 26 years and has extensive field experience in Asia, the Pacific and Caribbean islands, Central and South America and Africa. Gubler has published more than 350 papers on every aspect of dengue and other vector-borne diseases and has served as a consultant to the World Health Organization and countless other agencies. He was instrumental in developing the Pediatric Dengue Vaccine Initiative.

A graduate of The Johns Hopkins University School of Hygiene and Public Health, Prof Gubler founded the Dengue Branch of the National Center for Infectious Diseases, at the US Centers for Disease Control and Prevention (CDC) and served as Chief for nine years, and as Director of the Division of Vector-Borne Infectious Diseases, CDC for 15 years, during which time he led the development of the US national Lyme disease program, the global response to the 1994 Indian plague epidemic, the1999-2004 western Hemisphere epidemic of West Nile encephalitis, and was directly involved in responding to the 1999 Malaysia Nipah encephalitis epidemic. He was previously Director of the Asia-Pacific Institute of Tropical Medicine and Infectious Diseases at the University of Hawaii. He has served on numerous WHO committees and study groups, and scientific advisory boards of a number of institutes and companies. He is a Fellow of the Infectious Disease Society of America, Fellow of the American Association for the Advancement of Science (AAAS), and is past President and Fellow of the American Society of Tropical Medicine and Hygiene.

https://www.jhsph.edu/alumni/share-your-story/nominate-someone-for-an-alumni-award/2020-winners/duane-gubler.html

Duane Gubler, ScD '69

DISTINGUISHED ALUMNUS AWARD

Emeritus Professor and Founding Director,

Emerging Infections Diseases (EID)

Signature Research Programme at Duke NUS Medical School, Singapore

Duane J. Gubler, ScD, is Emeritus Professor and founding Director of the Program in Emerging Infectious Diseases which is affiliated with the Duke University-Graduate Medical School in Singapore. He earned his ScD degree at the Johns Hopkins School of Public Health in 1969 under the guidance of acclaimed professor Lloyd E. Rozeboom. Gubler spent his entire research career investigating mosquito-transmitted diseases, especially dengue/dengue hemorrhagic fever. He has extensive research experience in Southeast Asia, the Pacific, tropical America, and elsewhere in the world with over 350 publications on both dengue and other vector-borne tropical diseases. Gubler served as Director of the Division of Vector-Borne Infectious Diseases, National Infectious Diseases Center for the CDC in Colorado for 15 years, and was founding Chief of the CDC's Dengue Branch for nine years. He has served as a consultant/advisor on numerous WHO committees. He is Past President and Fellow of the American Society of Tropical Medicine and Hygiene, Fellow of the American Association for the Advancement of Science and Fellow of the Infectious Diseases Society of America.

1939

https://www.ancestry.com/imageviewer/collections/2345/images/40014_1821100517_0594-00162?treeid=&personid=&hintid=&usePUB=true&usePUBJs=true&_ga=2.99177118.1293277267.1613443195-1494574405.1609728327&pId=3942390

june 1961

https://www.newspapers.com/image/545066027/?terms=%22duane%20j%20gubler%22&match=1

april 1962

https://www.newspapers.com/image/545068795/?terms=%22duane%20j%20gubler%22&match=1

april 1969

https://www.newspapers.com/image/544942926/?terms=%22duane%20j%20gubler%22&match=1

oct 1978

https://www.newspapers.com/image/545219081/?terms=%22duane%20j%20gubler%22&match=1

jan 1979

https://www.newspapers.com/image/544913697/?terms=%22duane%20j%20gubler%22&match=1

sep 1984

https://www.newspapers.com/image/285124675/?terms=%22duane%20j%20gubler%22&match=1

1987 - living in puerto rico

https://www.newspapers.com/image/545551201/?terms=%22duane%20j%20gubler%22&match=1

may 1988

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sep 1989

https://www.newspapers.com/image/216986340/?terms=%22duane%20j%20gubler%22&match=1

1995 (Jan)

https://www.newspapers.com/image/106933122/?terms=%22duane%20gubler%22&match=1

1995 (May)

https://www.newspapers.com/image/155259226/?terms=%22duane%20gubler%22&match=1

1995 (June)

pg 25 https://www.newspapers.com/image/440838723/

pg 29 https://www.newspapers.com/image/440838738/?terms=%22duane%20gubler%22&match=1

1995 (Sep)

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1996 (Mar)

https://www.newspapers.com/image/122978840/?terms=%22duane%20gubler%22&match=1

1996 (Sep)

https://www.newspapers.com/image/628054709/?terms=%22duane%20gubler%22&match=1

1997 (Aug) - On Lyme disease ...

https://www.newspapers.com/image/168340468/?terms=%22duane%20gubler%22&match=1

1997 (Dec

https://www.newspapers.com/image/612182202/?terms=%22duane%20gubler%22&match=1

1998 (Aug 11)

https://www.newspapers.com/image/403146209/?terms=%22duane%20gubler%22&match=1

1998-08-11-the-atlanta-constitution-pg-a3.jpg

https://drive.google.com/file/d/1IIVxGlpaJaNx8tq84qNosCLgqnqm9MZN/view?usp=sharing

1998-08-11-the-atlanta-constitution-pg-a3-clip-warmer-weather.jpg

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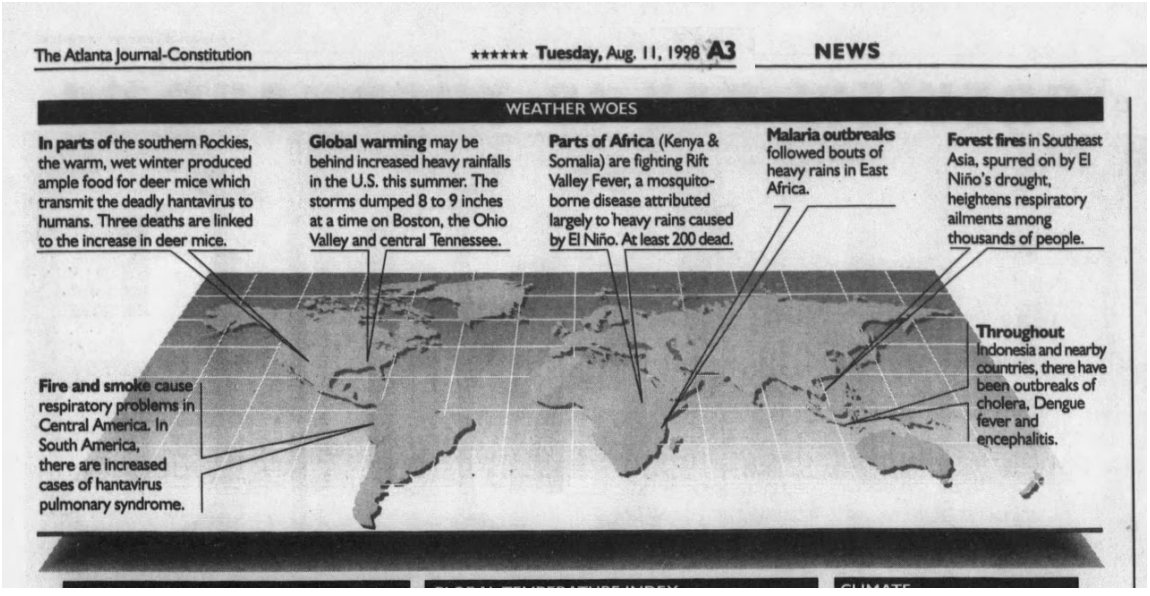
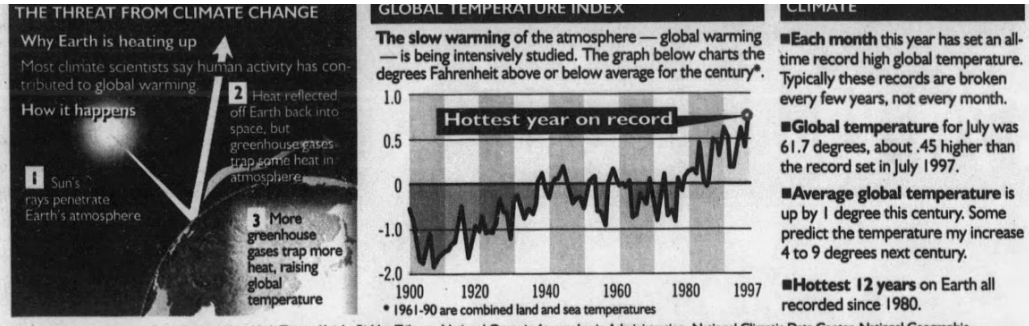




Warmer world could be a sicker place

The first evidence linking global warming to the spread of diseases is being evaluated.

By William K. Stevens
NEW YORK TIMES

Scientists have long theorized that climatic changes related to global warming could unleash outbreaks of diseases such as malaria, dengue fever, cholera and heat stroke. But with the modest amount of warming experienced so far, they have been unable to produce much hard evidence.

Now the experts have a research gift from an unlikely benefactor: El Niño. Combined with an underlying global warming trend, say scientists, El Niño will probably make 1998 the warmest year in several centuries.

And the heavy rains, droughts and other extreme weather fostered by El Niño over the last year are precisely what many scientists expect will also result from a predicted warming of the globe in the decades ahead.

So in the belief that 1997 and 1998 may provide a taste of what is to come, those who pay attention to the health effects of climate are now pulling together data about recent weather-related illness and death.

While most of the evidence they have found is circumstantial, it suggests that amid all the scientific smoke there is some fire.

These are some of the clues: The World Health Organization reports "quantitative leaps" in the incidence of malaria around the world; the incidence of cholera increased markedly over the last year in Latin America; warm, wet weather in the southern Rockies provided more food for deer mice, carriers of the hantavirus.

LIONEL CIRONNEAU / Associated Press

The beach is packed in Nice, France, on Monday. A heat wave gripping much of Europe caught people off guard in France, which has had a rainy summer with moderate temperatures.

While this and similar evidence is sifted and tested, scientists are also beginning to focus more closely on the health impact of extreme weather events quite apart from El Niño, especially in the United States.

One thing they are finding is that there is a statistically significant association in the United States between heavy rainstorms and outbreaks of waterborne diseases. These include hepatitis, E. coli infections and the cryptosporidium parasite that infected 400,000 people and killed 100 in Milwaukee in 1993.

If the relationship between heavy rain and disease is a solid one, the United States may be in for a surge of climatically induced waterborne illness. Analyses of the last century's weather records have found that extremely heavy rainstorms have become more common.

Climatologists say that this is what would be expected in a warming atmosphere, which holds more moisture and causes more water to evaporate from the oceans. The heavier rain that results is more likely to cause floods that not only kill people but also overwhelm drinking-water purification systems.

In the always contentious debate over climate change and the uncertainties that attend it, it has been especially difficult to get a handle on the question of health and disease. The Intergovernmental Panel on Climate Change, an international group of scientists advising the United Nations, recognized this in its 1995 report.

Some recent events, the intergovernmental panel said in 1995, might plausibly be early signals of climate-induced changes in human health. The panel cited a surge in heat-related deaths in India in 1995 (there was a similar surge this year), changes in the ranges of some insect-borne diseases and the spread of cholera along coastal areas in some developing countries.

But the group also said it was "not possible to attribute particular, isolated events to a change in climate or weather pattern."

The problem, said Dr. Duane Gubler, director of the division of vector-borne infectious diseases at the Centers for Disease Control and Prevention, "is that we may see some correlations" between climate and disease outbreaks, "but we don't know whether it's cause and effect." So, he said, "we're kind of cautious" in tying climatic change to changes in health.

Not a few experts point out, for instance, that while a warming atmosphere would theoretically be expected to expand the range of mosquito-borne tropical diseases such as malaria and dengue fever, reality is not so simple.

Temperature, humidity, rainfall and other weather factors are indeed some of the main things that influence transmission of the diseases. In some instances, temperature increases the virulence of the disease itself, by prompting viruses to multiply more. Heavier rainfall creates more standing water for some kinds of mosquitoes to breed in, and populations soar. Drought encourages people to store water in open containers, with the same result.

But in the developed countries, experts like Gubler say, public health pluses such as pest control and better living conditions (more tightly built houses, for example) have pretty much slammed the door on epidemics of mosquito-borne illness.

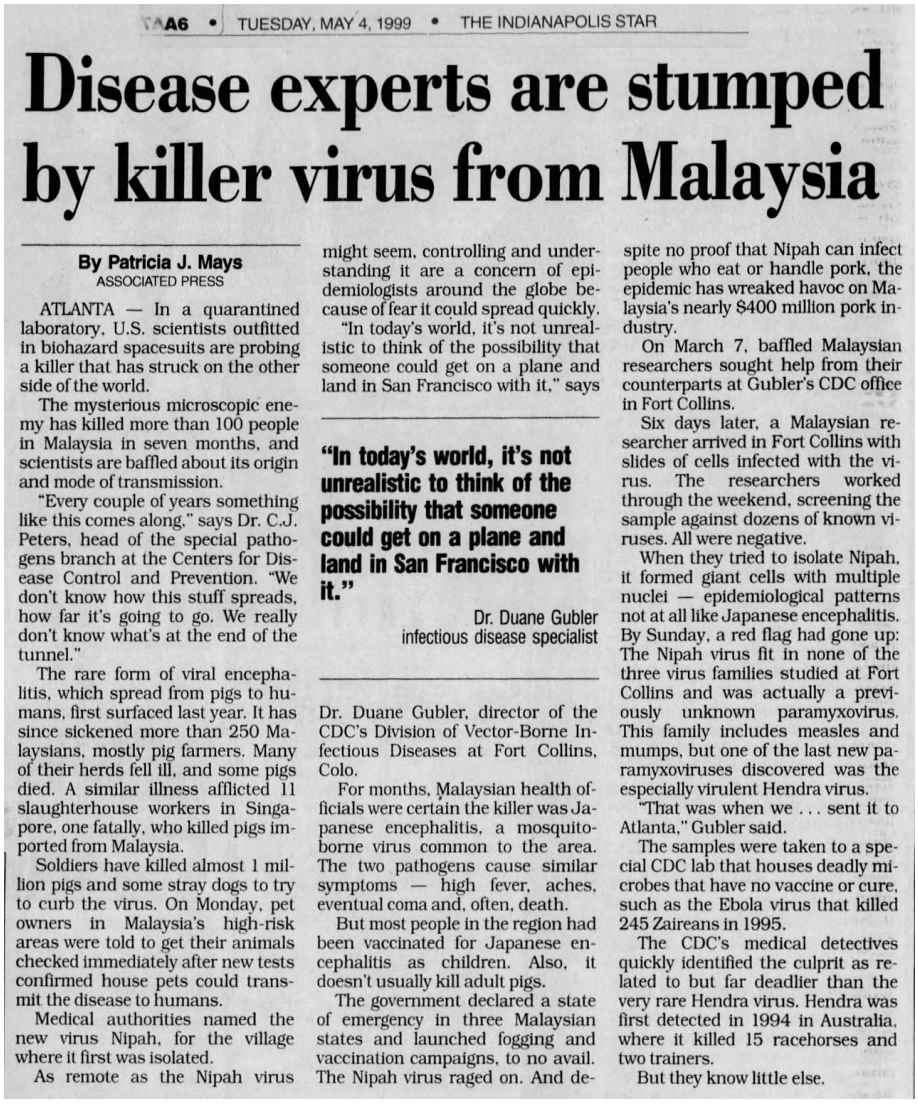
But the richer countries, including the United States, may not be immune to other climate-sensitive health problems, such as heat waves.

Many climate experts say that heat waves are likely to become more intense and more deadly. If they are right, what has happened in Texas this summer may be a foretaste. More than 100 people have died there in a heat wave that saw temperatures in Dallas rise above 100 degrees Fahrenheit for weeks on end.

1999 (May 04) - CJ Peters, Gubler assigned to what is called "Nipah" (Wasnt Peter Daszak working on this too ?)

See : Dr. Clarence James Peters (born 1940) / Dr. Peter Daszak (born 1965)

Full newspaper page : [HN01LC][GDrive]



A6 • TUESDAY, MAY 4, 1999 • THE INDIANAPOLIS STAR

Disease experts are stumped by killer virus from Malaysia

By Patricia J. Mays
ASSOCIATED PRESS

ATLANTA — In a quarantined laboratory, U.S. scientists outfitted in biohazard spacesuits are probing a killer that has struck on the other side of the world.

The mysterious microscopic enemy has killed more than 100 people in Malaysia in seven months, and scientists are baffled about its origin and mode of transmission.

"Every couple of years something like this comes along," says Dr. C.J. Peters, head of the special pathogens branch at the Centers for Disease Control and Prevention. "We don't know how this stuff spreads, how far it's going to go. We really don't know what's at the end of the tunnel."

The rare form of viral encephalitis, which spread from pigs to humans, first surfaced last year. It has since sickened more than 250 Malaysians, mostly pig farmers. Many of their herds fell ill, and some pigs died. A similar illness afflicted 11 slaughterhouse workers in Singapore, one fatally, who killed pigs imported from Malaysia.

Soldiers have killed almost 1 million pigs and some stray dogs to try to curb the virus. On Monday, pet owners in Malaysia's high-risk areas were told to get their animals checked immediately after new tests confirmed house pets could transmit the disease to humans.

Medical authorities named the new virus Nipah, for the village where it first was isolated.

As remote as the Nipah virus might seem, controlling and understanding it are a concern of epidemiologists around the globe because of fear it could spread quickly.

"In today's world, it's not unrealistic to think of the possibility that someone could get on a plane and land in San Francisco with it," says Dr. Duane Gubler, director of the CDC's Division of Vector-Borne Infectious Diseases at Fort Collins, Colo.

"In today's world, it's not unrealistic to think of the possibility that someone could get on a plane and land in San Francisco with it."

Dr. Duane Gubler
infectious disease specialist

For months, Malaysian health officials were certain the killer was Japanese encephalitis, a mosquito-borne virus common to the area. The two pathogens cause similar symptoms — high fever, aches, eventual coma and, often, death.

But most people in the region had been vaccinated for Japanese encephalitis as children. Also, it doesn't usually kill adult pigs.

The government declared a state of emergency in three Malaysian states and launched fogging and vaccination campaigns, to no avail. The Nipah virus raged on. And despite no proof that Nipah can infect people who eat or handle pork, the epidemic has wreaked havoc on Malaysia's nearly $400 million pork industry.

On March 7, baffled Malaysian researchers sought help from their counterparts at Gubler's CDC office in Fort Collins.

Six days later, a Malaysian researcher arrived in Fort Collins with slides of cells infected with the virus. The researchers worked through the weekend, screening the sample against dozens of known viruses. All were negative.

When they tried to isolate Nipah, it formed giant cells with multiple nuclei — epidemiological patterns not at all like Japanese encephalitis. By Sunday, a red flag had gone up: The Nipah virus fit in none of the three virus families studied at Fort Collins and was actually a previously unknown paramyxovirus. This family includes measles and mumps, but one of the last new paramyxoviruses discovered was the especially virulent Hendra virus.

"That was when we . . . sent it to Atlanta," Gubler said.

The samples were taken to a special CDC lab that houses deadly microbes that have no vaccine or cure, such as the Ebola virus that killed 245 Zaireans in 1995.

The CDC's medical detectives quickly identified the culprit as related to but far deadlier than the very rare Hendra virus. Hendra was first detected in 1994 in Australia, where it killed 15 racehorses and two trainers.

But they know little else.

[HN01LD][GDrive]

1999 (Aug 09)

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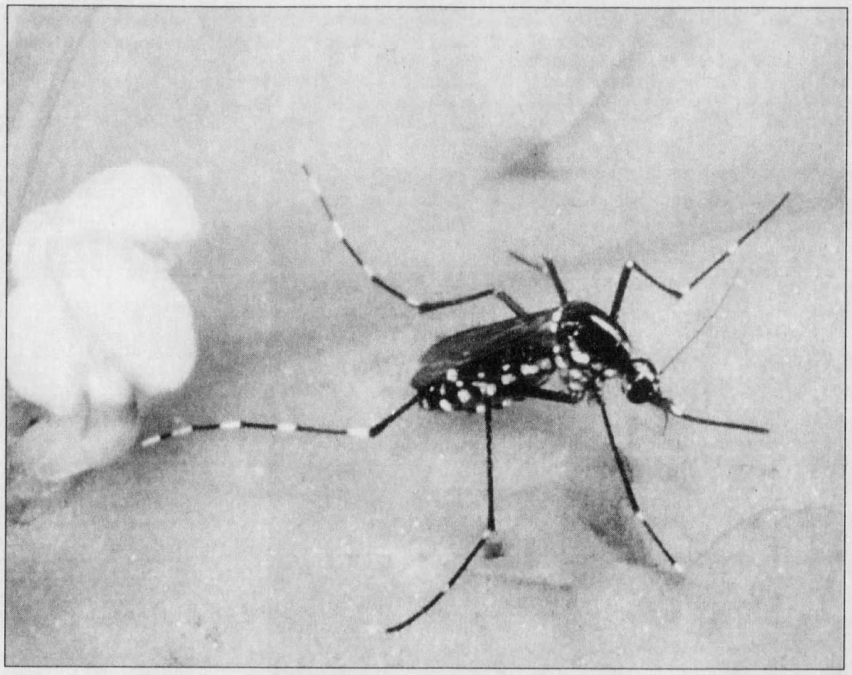


Photo courtesy of Louisiana Mosquito Control/C.J. LEONARD

The Asian tiger mosquito— which has white stripes on its legs and thorax — is believed to have arrived in Houston around 1985 via a shipment of tires from Japan. The species quickly spread, transported mostly in scrap tires.

Asian tiger mosquito thrives despite devastating drought

Associated Press

UPPER MARLBORO, Md. — The lack of rain might have curbed the population of garden-variety mosquitoes this summer, but experts say a particularly stringent variety — the Asian tiger mosquito — is spreading.

It defies most mosquito stereotypes. It will breed in anything that holds water, even tiny amounts, such as flowerpots, tires, old soda cans and clogged rain gutters. It bites more often than standard mosquitoes.

It is especially prevalent in inner-Beltway communities in Prince Georges County. But researchers say they are sure Asian tigers are all over the metropolitan area.

"They're spreading and worsening," said Jeannine M. Dorothy, an entomologist in the Maryland Department of Agriculture's Mosquito Control division. "There's really no way we can control it."

The Asian tiger — which has white stripes on its legs and thorax — is believed to have arrived in Houston around 1985 via a shipment of tires from Japan. They quickly swept up the coast of the southeastern United States, transported mostly in scrap tires.

Asian tiger mosquitoes were found around a tire recycling plant in Baltimore in the late 1980s and showed up around the same time in Prince Georges.

Scientists say the Asian Tiger is hard to slap dead.

"There are some mosquitoes that will just sit on you, but the Asian tiger is hard to kill because it's very flighty," said Stephen Sackett, field operation supervisor for the New Orleans Mosquito Control Board. "The Asian tiger will come in quick, bite and fly off."

Scientists say that in laboratory settings, the Asian tiger has been found to be a successful disease bearer, or "vector," able to transmit maladies such as encephalitis, Dengue fever, yellow fever, and dog heartworm. Outside the laboratory, there have been no reported fatalities connected to the Asian tiger.

"We keep watching it. We monitor it," said Duane J. Gubler, director of vector-borne infectious diseases at the Centers for Disease Control in Fort Collins, Colo. "So far, there is no evidence that it is involved in human disease transmission."

Insect repellent body creams and sprays do work, Dorothy said.

Their numbers can be cut down by getting rid of standing water, no matter how little. Other tips include changing birdbath and wading pool water once a week and keeping ornamental pools stocked with minnows.

Dorothy is investigating the unproven idea that copper might kill Asian tiger larvae. She said cemetery workers in Louisiana noticed that bronze flower vases don't incubate mosquito eggs the way ceramic and cement vases do.

To test it, Dorothy has set up little experiments in Cheverly, Bladensburg and other small Prince Georges towns. Her control tires have stagnant water in them; others hold copper tubing, old pennies and water.

"I hope it works," she said. "If it does, we will be able to say, 'You can control Asian tigers and it only costs pennies a year.' "

ALL OUT ATTACK

Virus surprised pros

Rarity of disease caught city health officials off guard

By MICHAEL R. BLOOD
DAILY NEWS CITY HALL BUREAU CHIEF

On Aug. 23, the city Health Department was alerted by a Queens hospital that several elderly patients had an unknown illness that attacked with alarming ferocity — high fever, nausea, paralysis.

It wasn't until last Friday — nearly two weeks later — that the city announced it was facing its first outbreak of potentially deadly St. Louis encephalitis.

By then, two patients had died and scores of others were potentially infected by the mosquitoes that carry the virus.

"I think it's one of these deals when officials looked at it and just didn't believe it," said Jonathan Day, a University of Florida professor who has studied the disease since 1983. "I think that if there had been a history of the epidemic in New York City — such as Chicago, Houston or Dallas — I think it would have been recognized much more quickly."

What city officials knew and when they knew it is being asked as helicopters blanket neighborhoods with insecticide and frightened residents stay indoors or coat themselves with bug repellent to ward off mosquito bites.

Could New Yorkers have known sooner that danger was buzzing at their ears?

"St. Louis encephalitis is a virus that is normally in the southern part of the United States," said Bill Reisen, an expert on mosquito-borne viruses at the University of California at Davis.

For doctors in New York City, "It certainly isn't something you would look for," he said.

It was one month ago — Aug. 10 — when a 60-year-old Whitestone, Queens, man walked into his doctor's office complaining of high fever, weakness and nausea. He would become the earliest known case of symptoms that would be identified as St. Louis encephalitis, which is now blamed for three deaths in the city.

Doctors at Flushing Hospital Medical Center, where the man was admitted Aug. 12, thought they had a case of pneumonia on their hands. But the man's condition worsened, and it wasn't until several other patients with similar symptoms were admitted that doctors began to suspect something more serious and widespread.

"We weren't quite sure what it was," said Rick Conetta, director of critical care and medicine at the hospital.

Hospital officials alerted city health officials of the mysterious cases Aug. 23 — but it wasn't until Aug. 29 that the federal Centers for Disease Control and Prevention was notified, said CDC spokesman Tom Skinner. The state was not notified until Sept. 2.

The city shipped the CDC blood and spinal fluid samples Sept. 2, and the first cases were confirmed last Friday.

It's at that point, after two elderly patients had died of the virus, that the public was made aware of the outbreak — on the Friday afternoon before Labor Day.

"It was unclear what was going on with the initial patients," said Marcelle Layton, who heads the city Health Department's Bureau of Communicable Diseases.

Before the CDC confirmed the cases, "it was unclear whether this was due to a mosquito-borne virus. It never happened here before," she said.

"No one was sitting on these samples, as far as we know," said Duane Gubler, the CDC's director of the Division of Vector-borne Diseases.

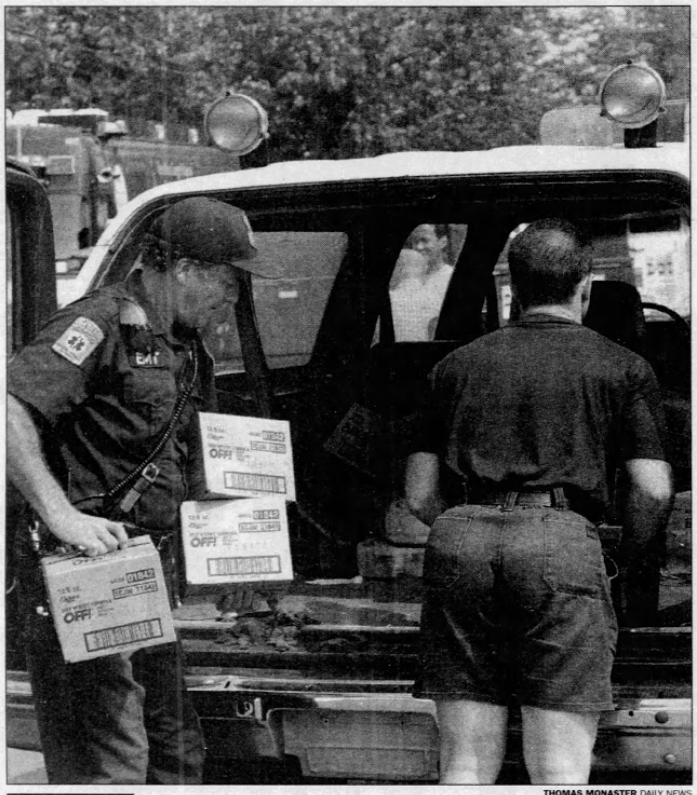
Mosquitoes become carriers of the virus after feeding on infected birds. Most people bitten by infected mosquitoes will never realize it or will develop only mild symptoms. But the virus can be deadly for a small percentage of the population, particularly the elderly.

Scientists are still puzzling over how the outbreak came to Queens. No other outbreaks have been reported nearby, they said.

"I don't think that they have as much control over the situation as they'd like us to believe," Bayside resident Mitchell Mayer said of health authorities. "I'm a little frustrated and a little scared."

"I don't think that they have as much control over the situation as they'd like us to believe."

MITCHELL MAYER



THOMAS MONASTER DAILY NEWS

ON THE ATTACK Fire officials load cans of insect spray into a van yesterday at Queens post.

Steps in the virus scare

Aug. 10: A 60-year-old Whitestone, Queens, man goes to his doctor complaining of fever, nausea and weakness. He is admitted two days later to Flushing Hospital Medical Center, exhibiting the first known symptoms of what will be identified as St. Louis encephalitis.

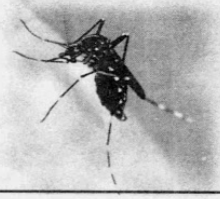
Aug. 15: An 80-year-old man is admitted to the hospital's intensive-care unit suffering from a heart attack and a fever of 104 degrees.

Aug. 18: A 75-year-old man is admitted to the intensive-care unit with a high fever and deteriorated mental state.

Aug. 23: Doctors alert Dr. Marcelle Layton at the city Health Department. She tells them to send blood and spinal fluid samples to the Centers for Disease Control and Prevention's lab.

Aug. 27: Health Department reviews medical charts.

Aug. 29: Department calls CDC to report cases of unexplained encephalitis-like illness.



Aug. 31: CDC dispatches its first team of investigators to New York.

Sept. 2: CDC receives blood and spinal fluid samples from four patients suffering from similar symptoms of nausea, fever and paralysis.

Sept. 3: CDC confirms three cases of St. Louis encephalitis, and announces one death, the 80-year-old man. City begins spraying insecticide.

Sept. 4: Two more cases are confirmed, as well as the death of an 87-year-old woman.

Sept. 8: CDC confirms first case with no known Queens connection — in Sunset Park, Brooklyn — bringing the number of confirmed cases to nine, with three deaths.

Yesterday: City begins spraying citywide.

DAILY NEWS Friday, September 10, 1999

[HN01LB][GDrive]

1999 (Sep 25) - NYTimes : "African Virus May Be Culprit In Mosquito-Borne Illnesses"

Duane Gubler tests and FINDs "west nile" in those birds....

By Jennifer Steinhauer / Sept. 25, 1999 / [HN01I8][GDrive]

African virus may be cause of N.Y.C. 'encephalitis' cases

The New York Times

NEW YORK — The mosquito-borne illness that has killed three people in New York City may not have been St. Louis encephalitis, as experts thought, but may have been a similar disease that has never been diagnosed in the Western Hemisphere, government scientists said Friday.

The disease, West Nile virus, was discovered this week in dozens of birds that died in and around the Bronx Zoo this summer. The virus is indigenous to north and east Africa and Asia, and occasionally makes its way to Europe, but it has never been found in birds or humans in the Americas, said Duane Gubler, the director of the division of vector-borne infectious disease for the federal Centers for Disease Control and Prevention.

Before Friday, the illness that has infected at least 14 people in New York City and four in Westchester County was believed to be St. Louis encephalitis, which was surprising enough, because that disease is rarely found outside the southeastern United States.

Scores of tests will be needed before health officials are sure whether the people stricken were infected by some type of West Nile virus-like illness or St. Louis encephalitis. Officials at the CDC said they hope to complete the tests next week.

But the discovery of the West Nile strain in the birds has cast doubt on the original diagnosis, officials said. "West Nile virus is closely related to St. Louis encephalitis, the virus we thought was causing the outbreak," Gubler said. The discovery of the dead birds, he added, "has caused some confusion as to whether that is true now."

If officials confirm that the disease that sickened New Yorkers was the West Nile virus, it would have no practical effect on those who have become ill, or on the efforts to prevent the disease from spreading. Both illnesses are transmitted from birds to mosquitoes to people, via the same type of mosquito. The insecticide used to kill those mosquitoes is exactly the same.

The symptoms of both illnesses are virtually the same and are usually mild, though in rare cases they can cause neurological disorders and even death. Experts said those severe cases — which generally involve the elderly, children under 5 and those with compromised immune systems — are even less frequent with West Nile virus. With both illnesses, there is no cure.

"The important message to get across is that all the public health and responsive measures implemented are the same," said Tom Skinner, a spokesman at the CDC.

But from an epidemiological standpoint, the discovery of West Nile virus in New York is stunning. "This is exciting," Gubler said. "We prefer it didn't occur, but it is interesting.

"What we are seeing in the waning years of the late 20th century is the transport and movement of these viruses in new areas," he added. "And you get a virus moving into a new area, the entire mosquito population is susceptible."

Image from Palm Beach Post - [HN01L8][GDrive]

The mosquito-borne illness that has killed three people in New York City may not be St. Louis encephalitis, as experts have thought, but rather a similar disease that has never been diagnosed in the Western Hemisphere, Government scientists said yesterday.

The disease, West Nile virus, was discovered this week in dozens of birds that died in and around the Bronx Zoo this summer. The virus is indigenous to Asia and northern and eastern Africa and occasionally makes its way to Europe, but has never been found in birds or people in this hemisphere, said **[Dr. Duane J. Gubler (born 1939)]**, the director of the division of vector-borne infectious disease at the Federal Centers for Disease Control and Prevention.

Before yesterday, the illness that has infected at least 14 people in New York City and 4 in Westchester County was believed to be St. Louis encephalitis, which was surprising enough because that disease is rarely found outside the Southeastern United States.

Scores of tests will need to be completed before health officials will be able to say for sure whether the infections were caused by some type of West Nile virus or St. Louis encephalitis. Officials at the C.D.C. said they hope to have the tests completed sometime next week.

But the discovery of the West Nile strain in the birds has cast some doubt on the original diagnosis, officials said. **''West Nile virus is closely related to St. Louis encephalitis, the virus we thought was causing the outbreak,'' [Dr. Duane J. Gubler (born 1939)] said. The discovery of the dead birds, he said, ''has caused some confusion as to whether that is true now.''**

The finding of the West Nile virus in New York stunned experts, who have no theory so far on how the strain found its way here.

If officials confirm that the disease that sickened New Yorkers was the West Nile virus, it would have no practical effect on those who have fallen sick, or on the efforts to control the disease from spreading. Both illnesses are transmitted from birds to mosquitoes to people by the same type of mosquitoes, and the same insecticide would be used.

The symptoms of both illnesses are virtually the same and are usually mild, though in rare cases they can cause neurological disorders and even death.

Experts said those severe cases -- which generally involve the elderly, children under 5 and those with compromised immune systems -- are even less frequent with West Nile virus.

"The important message to get across is that all the public health and responsive measures implemented are the same," said Tom Skinner, a spokesman at the C.D.C.

But from an epidemiological standpoint, the discovery of West Nile virus in New York is remarkable. "This is exciting," Dr. Gubler said. "We prefer it didn't occur, but it is interesting."

"What we are seeing in the waning years of the late 20th century is the transport and movement of these viruses in new areas," he added. "And you get a virus moving into a new area, the entire mosquito population is susceptible."

Yesterday, two elderly women were added to the list of confirmed cases of the mosquito-borne illness. One of the women, who is 90 years old and in critical condition, was the first case to be confirmed in Manhattan since the outbreak began in August. Officials said the woman, who lived near Central Park, apparently contracted the virus in Manhattan, but it was not clear where.

Now, old and new blood samples from people with symptoms, trapped mosquitoes, as well as roughly 450 birds will be examined to see whether the West Nile virus found in the birds was what has caused the New Yorkers to become ill.

It is not surprising that the diagnosis of those who have taken ill could have been mistaken, experts said -- the illnesses appear very similar, and few would have thought to look for an illness whose closest brush with this country was in France in the 1960's. The worst modern outbreak of the West Nile virus was in Romania in 1996, when 90,000 cases were confirmed and 17 people died.

The discovery of the West Nile virus came about in large part by some dogged sleuthing by a head of the department of pathology at the Bronx Zoo, Federal officials said. That pathologist, **[Dr. Tracey S. McNamara (born 1954)], said she became concerned in late July when she heard that a large number of crows had been dying around the zoo. Then, birds at the zoo began to go. Over Labor Day weekend, the zoo lost a Guanay Cormorant, three Chilean flamingos, a pheasant and a bald eagle. Because these deaths followed those of some crows, experts strongly doubt that the disease originated in the zoo.**

Autopsies of the birds revealed streaking in the heart and brain hemorrhages. An equine encephalitis was suspected, but Dr. McNamara was skeptical, because the emus in her care, which are very susceptible to that illness, were thriving.

When two more flamingos died on Sept. 9, she sent samples to laboratories of the United States Department of Agriculture, which ruled out all the common bird viruses. Stymied, they called in an equine virologist to do further testing. The C.D.C. and doctors at an Army lab in Maryland were also sent samples.

Yesterday, the C.D.C. discovered the West Nile virus link.''Everyone was shocked,'' Dr. McNamara said. ''It's possible it came in with a human being or a smuggled bird, and I am not at all certain it will ever be established how it got here.''

The Mayor's Office of Emergency Management, which has been in charge of the spraying, would not comment on the C.D.C. news.

As Westchester County prepared to continue its spraying last night, many Jewish residents voiced concern that such efforts would interfere with the start of the Succoth holiday, which requires observants to sit in an open air tent or hut to take their evening meal.

Victoria Hochman, a spokeswoman for the Westchester County Executive's office, said the agency was aware of the holiday and had contacted regional Jewish centers, "but we have decided it is a health emergency and we have to go with the spraying for the good of everyone." [...]

1999 (Sep 26) - NYTimes : "Exotic Virus Is Identified In 3 Deaths"

By Andrew Jacobs / Sept. 26, 1999 / [HN01I9][GDrive]

The mosquito-borne illness that has killed three people in New York City is not St. Louis encephalitis, but a similar disease that has never before been found in the Western Hemisphere, health officials said early this morning.

Scientists in two states who have been examining brain tissue from the people killed by the outbreak of encephalitis confirmed that it was caused either by West Nile virus, from Africa, or Kunjin virus, a variant that is found only in Australia.

Since last month, 14 people in New York City and Westchester County have been diagnosed with encephalitis, although it was unclear whether the two strains identified today are responsible for all the cases.

An official with the Centers for Disease Control and Prevention in Atlanta, and a researcher at the University of California at Irvine said this morning that the closely related strains had been positively identified in the brain matter of New York City residents killed by encephalitis. Until now, neither strain had been found in birds or people in this hemisphere.

[Dr. Duane J. Gubler (born 1939)], director of the C.D.C.'s division of vector-borne infectious diseases, said that the agency's lab found the West Nile virus in the brain of one of the victims early last week. "It was a total surprise to us," he said. "There was no reason to suspect that we'd find West Nile here."

[Dr. Walter Ian Lipkin (born 1952)], the director of the Emerging Diseases Laboratory at the University of California at Irvine, said his colleagues had identified the virus in the brains of three victims from Queens that had been sent to his lab last week. "It's very odd that they've been found here," he said. "On the other hand, viruses evolve and they have the capacity to adapt themselves." **Dr. Lipkin emphasized that the genetic difference between West Nile virus and Kunjin virus is so slight that the two are practically the same strain.**

Until yesterday, New York health officials said they had found the West Nile virus only in birds that had died in and around the Bronx Zoo. But this morning, after the C.D.C confirmed the discovery of the virus in humans, a state official acknowledged that officials had known about the findings of [Dr. Walter Ian Lipkin (born 1952)] and Dr. Gubler for several days, but wanted to conduct more tests.

John Signor, a State Health Department spokesman, said the ageny was planning to release the information tomorrow after more testing confirmed the earlier findings. "The identification of a virus is a complex process," he said. "We felt more testing needed to be done."

Despite the discovery that the encephalitis outbreak had been caused by a different virus, officials said that the public health measures undertaken to date would not change: the spraying of mosquitos and warnings to reduce exposure to the insects remains. Mr. Signor said that the treatment for those already infected with the disease would remain the same.

The Federal Centers for Disease Control and Prevention said Friday night that its scientists had identified a West Nile-like virus in four birds from New York that they had tested in their laboratory in Fort Collins, Colo.

The birds included two flamingos and an Asian pheasant from the Bronx Zoo, and a crow reported to be from Scarsdale, said Kristine Smith, a spokeswoman for the New York State Health Department.

Yesterday, city health officials continued collecting dead birds, which they had started to do on Friday. Special telephone lines and asked residents to call in sightings of dead birds. By 4 P.M. yesterday, the City Health Department had received two dozen reports of dead birds in all five boroughs, and sent out staff members from its pest control division to retrieve specimens, said a spokeswoman, Sandra Mullen.

"The birds will be kept on dry ice and brought to our Bureau of Laboratories," she said, adding that most of the dead birds reported were crows, which have been dying in large numbers since the beginning of the outbreak. Health officials in Suffolk County collected five dead crows on Friday, and sent them for analysis to the State Department of Environmental Conservation yesterday, said the director of public health, Mahfouz Zaki.

And after receiving reports at 5:30 P.M. on Friday that earlier samples from dead crows tested positive for an encephalitis-like disease, they sprayed South Huntington and Huntington Station with pesticides.

In Manhattan, a team from the Parks Department swept through Central Park on Friday night searching for dead birds but found none, said Parks Commissioner Henry J. Stern. He said that more teams would be dispatched, but that all park staff members had been notified and were on the lookout.

News that the infection was either West Nile virus or an Australian variant has deepened an epidemiological mystery that began in July with the deaths of numerous crows around the Bronx Zoo.

A pathologist at the zoo, [Dr. Tracey S. McNamara (born 1954)], first noticed that large numbers of crows were dying, reaching 40 by August. Then, birds at the zoo, including a guanay cormorant, three Chilean flamingos, a pheasant and a bald eagle, died.

Though the symptoms of both diseases are similar, and the steps to combat them are the same, the mosquitoes that carry them can differ, health officials said.

Ms. Smith of the State Health Department said the mosquitoes that carry St. Louis encephalitis and West Nile viruses, the Culex pipiens, are generally active from dusk to dawn. But another type of mosquito known to carry the West Nile virus, the Aedes vexans, is also active during the day, she said. [...]

1999 (Oct 03) : Ian Lipkin vs Gubler

ANCIENT DISEASE

More questions than answers as scientists battle encephalitis

By SUSAN FERRARO
SUNDAY NEWS STAFF WRITER

Brilliant medical sleuths tracked down the surprise virus that's killing New Yorkers, but larger mysteries of how an exotic illness never before seen in the United States got here — and what to do about it — remain unsolved.

The outbreak in New York of West Nile virus, which causes deadly encephalitis, an inflammation of the brain, is the first of what may be an unending march of tropical killers on Western shores.

Scientists can't say how long the current siege of West Nile virus will last, exactly which insects are transmitting it from birds to humans, how virulent it is or even if global warming plays a role.

"As a virus, it is extremely promiscuous, which means it has multiple hosts: people, different birds, different mosquitoes and ticks," said Dr. Dickson Despommier, a microbiologist at Columbia University. "That makes it very complex biology. No one knows what will happen next."

CRACKING THE CASE

Scientists suspect the West Nile virus caught a ride on a jet plane from foreign climes — most likely Africa or Asia — a stowaway pathogen coursing through the blood of imported exotic birds or human travelers.

The West Nile strain comes from Africa and Asia, where it lives harmlessly in birds. It is a vector-borne disease: To be transmitted to a human, it needs a go-between — probably the common house mosquito.

In late July and August, some Queens residents began exhibiting encephalitis-like symptoms. Officials suspected the St. Louis strain, one of four flaviviruses spread by mosquitoes in the United States.

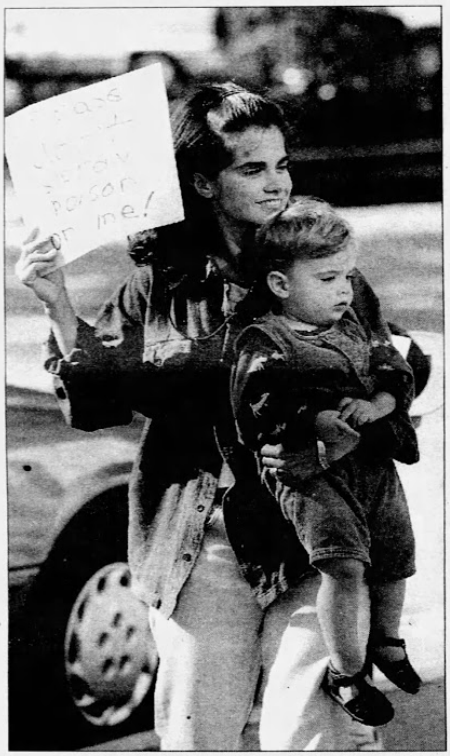
It was big news: St. Louis virus had never been found in the city. Officials at the federal Centers for Disease Control and Prevention in Atlanta confirmed the diagnosis when enough cases showed the antibody reaction characteristic of the virus.

The CDC did not look for West Nile — which has the same symptoms, produces similar antibodies and triggers identical results in standard lab tests — because it is unknown here, and generally viruses stick to their own geographical areas.

Still, puzzles lingered: Not everyone who got sick tested positive for St. Louis virus. And birds were dying, among them black crows — known to be susceptible to West Nile — and, at the Bronx Zoo, flamingos, a snowy owl and other exotic birds.

Zoo pathologist Dr. Tracey McNamara wondered why and packed samples off to a federal agricultural lab in Iowa. Scientists there found signs of a flavivirus, which birds can carry. McNamara suspected something new because the birds were dying. She had the specimens sent to the CDC for more testing.

Meanwhile, on Sept. 13 in Albany, the New York State Department of Health convened experts in encephalitis — not because of the Queens outbreak, but to discuss unrelated New York encephalitis cases.



KEVIN P. COUGHLIN

One participant was Dr. Ian Lipkin of the University of California at Irvine, an expert in emerging diseases. He has invented a molecular diagnostic tool that he will not patent but will make available to all ("This is my last attempt to get into heaven," he says).

State Health Department researchers Dr. Cinnia Huang and Dr. Leo Grady were intrigued by Lipkin's work, and when talking about the Queens outbreak later, the group wondered if it might be something other than the St. Louis virus.

Lipkin took human tissue samples from the Queens outbreak back to Irvine and nailed the culprit two days later: West Nile virus. Called an unsung hero by one New Yorker who was privy to the discovery, Lipkin stepped back while state officials coordinated with the CDC to announce the news.

BREAKING THE NEWS

Dr. Duane Gubler, the CDC's top expert in vector-borne infectious diseases, broke the news and credited McNamara too. Almost simultaneously, other CDC scientists had found the West Nile virus in her birds.

Lipkin's discovery completely changed the scope and implication of the New York epidemic. Overnight, the number of deaths went from three to four, all of them age 60 or older, and the total who were affected more than doubled.

By the weekend, there were five deaths, a sixth suspected death and 48 "laboratory-positive" cases — most in Queens but also in the Bronx, Brooklyn, Manhattan and Nassau and Westchester counties.

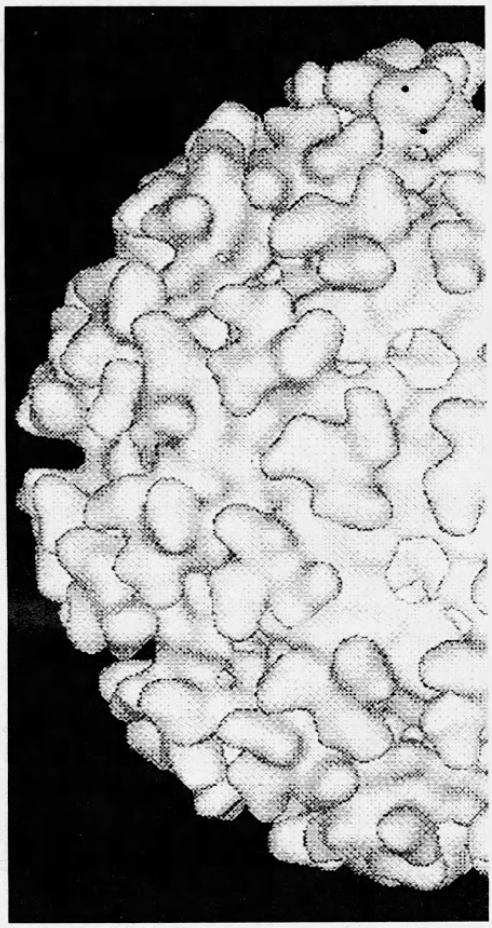
When St. Louis virus strikes, the death toll is about 5% of the total number of confirmed cases, said Dr. Jonathan Day, an expert in medical entomology at the University of Florida and a leading encephalitis expert.

If West Nile is the same and the deaths hold at six, the number of confirmed cases would top out at 120.

As for how long the epidemic will last, Day said knowing when the most recent victim fell ill is a clue. "From the date of onset, go back 10 days. Say it was Sept. 22; go back to Sept. 12, so you will know it was still going then."

Cooler nights slow mosquitoes, and the first frost — usually by mid-November — will send them packing for the season. But no one knows if the virus will return in the spring.

To find out, scientists and



PUBLIC ENEMY **Alphavirus (above) borne by mosquitoes has sparked fear. At a demonstration Friday in Mineola, Carrie Jaskowski of Bayside, Queens, totes her 18-month-old son, Oliver, and a sign protesting spraying of pesticides on Long Island.**

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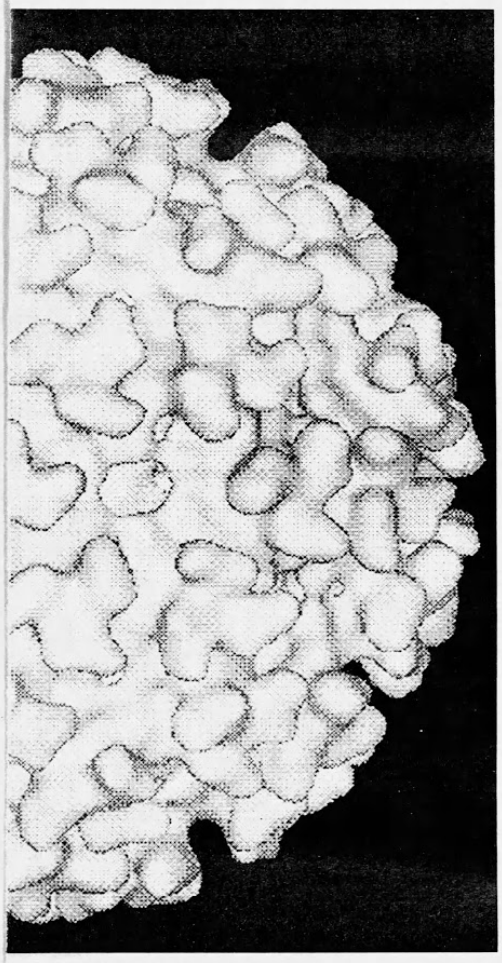
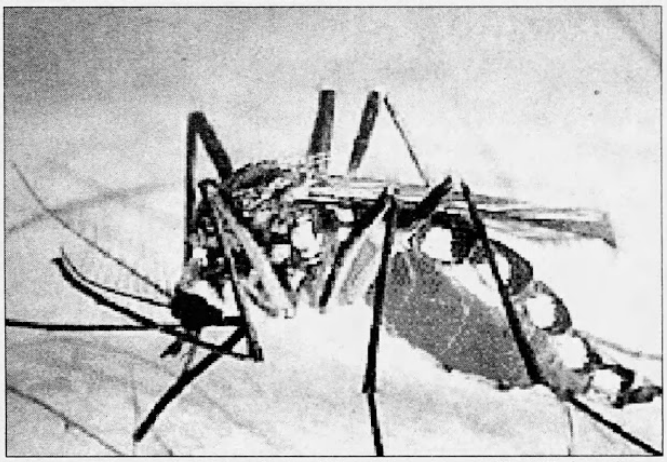
IS ON THE MOVE





Aedes mosquito — marsh variety or its tree-hole cousin — may carry West Nile fever virus.

Danger signs of West Nile fever

Most mosquito bites do not cause disease. And many people who get sick recover quickly from what seems like mild flu. But St. Louis encephalitis and its close cousin West Nile fever can worsen and kill the young, old or those with weakened immune systems.

Symptoms include:

Fever, lethargy and headache.

Rarely, inflammation of the brain, delirium, memory loss, seizures, death; in some cases, a stiff neck.

If you have mosquito bites and worrisome symptoms, consult a doctor. Diagnostic tests include blood tests, MRI (magnetic resonance imaging) and analysis of spinal fluid. In the rare cases of brain swelling, corticosteroids can help.

health officials have six months to study the virus, watch its progress as birds fly south and plan an attack if it returns. A key piece of the puzzle is the role played by the birds — living and dead.

BIRD BRAINS

Since August, birds have been dying in unusual numbers. If West Nile virus, supposedly milder than St. Louis virus, is responsible, that could indicate an especially virulent strain, since it does not kill birds in Africa and Asia.

So far, there are reports of 732 dead birds, 180 in the city. Pathologists have found West Nile in birds from Connecticut, Rockland, Suffolk, Nassau and Westchester counties and McNamara's zoo specimens.

Infected birds die the way people do, of brain inflammation, said Dr. Barry Hartup at Cornell University in Ithaca. But the rising bird body count may not be linked to the West Nile epidemic alone.

"In fact, 732 dead birds is not a lot in this area," said John Bianchi of the Audubon Society. Some 1,000 birds die in New York City every day after slamming into buildings, he said, especially on overcast autumn days when they can't see the stars and building lights dazzle them.

Migration causes birds stress, and autumn is peak migration season. The summer drought together with a five-year population increase among crows threatens that species in particular, said Ward Stone, New York State wildlife pathologist.

Finally, malathion — the chemical liberally sprayed over the city since September to kill mosquitoes — probably doesn't hurt birds directly, Hartup said, but acute poisoning by it is possible if birds eat contaminated insects.

From birds, West Nile virus is probably transmitted by *Culex pipiens*, the house mosquito — the same bug that carries St. Louis virus, which means that spraying can be equally effective for both viruses.

But like everything else in this epidemic, that, too, may change. "There are two good other possibilities," said Despommier: the salt marsh mosquito (*Aedes solicitans*) and the treehole mosquito (*Aedes tarsalis*).

Identifying the go-between agent is essential: Spraying deters salt marsh mosquitoes, which can travel about 40 miles — much farther than the one-mile lifetime limit of the house mosquito — but won't touch the treehole variety.

BUG GO-BETWEEN

In Africa, ticks are a nasty, persistent vector of West Nile virus. Most experts do not implicate them here. But it is possible, and ticks can live several years, said Dr. Mahfouz Zaki, an expert in West Nile virus who heads the Public Health Department in Suffolk County.

A final West Nile vector may be humans. Unlike St. Louis virus, West Nile has a higher viremia — concentration of virus in the blood — which means mosquitoes could pick it up directly from one person and pass it to another.

The virus has been found in humans in Israel, Romania and Uganda. "A person in those places who was bitten just before they went to New York, and five to seven days later felt sick, that's where it could have begun," said the University of Florida's Day.

"Could it have been one person?" Hartup asked. "It seems unlikely, but anything is possible."

WHY AND WHERE

Discovered in Uganda 62 years ago, West Nile virus broke free of its usual haunts in 1996 when it erupted in Romania, making 393 sick and killing 17, all over age 50. There's a Russian outbreak going on now, though little news of it has filtered out to the West.

Environmentalists think global warming could be a factor in this sudden spread. Mosquitoes thrive in warm, wet winters and hot, dry summers, said Dr. David Rind, a climate researcher at the National Aeronautics and Space Administration and Columbia University's Goddard Institute for Space Studies in Manhattan.

But there may be no connection with this outbreak, he said. North America has been cooler than the rest of the world during most of this century, said Dr. Gavin Schmidt, also at the Institute, and is only now catching up with Europe.

What scientists do know is that jet travel transports germs around the globe in hours, and a major port city such as New York — also home to many immigrant populations and frequent world travelers — is an obvious landing spot.

Tropical diseases already showing up in American emergency rooms include dengue from Mexico, bubonic plague found in ground squirrels and drug resistant tuberculosis, said Amherst College biologist Dr. Paul Ewald.

Mosquito-borne diseases are fairly easily controlled here because of good housing — bugs can't bite what they can't touch. But as New York wrestles with its epidemic, the 1999 West Nile virus is teaching hard lessons.

"Everything is here," said Zaki of Suffolk County, and the "luxury" of living in a country free of tropical diseases is past. "Now we have to take a different look and be aggressive in management and control."

That means surveillance of birds, bugs and humans — noting when and where mosquitoes flourish, checking bird health, watching for signs of human encephalitis along the bird migratory paths — and constant cleanup, Despommier said.

It's hard work — what researchers call "shoe leather epidemiology," he said. Those who graduate from the CDC's elite Epidemiology and Intelligence Service are given a yellow tie with blue shoes on it — "and one shoe has a hole in it."

DAILY NEWS Sunday, October 3, 1999

[HN01L6][GDrive]

1999 (Oct 11) - NYTimes : "In New York Outbreak, Glimpse Of Gaps in Biological Defenses"

By Jennifer Steinhauer and Judith Miller / Oct. 11, 1999 / [HN01IB][GDrive]

On Sept. 23, nearly three weeks after **Mayor Rudolph W. Giuliani** announced that New York was being attacked by a mosquito-borne virus often found in the Southern United States, senior Federal health officials convened a conference call to hear some startling news.

The scientist who initially identified the virus as St. Louis encephalitis said he had changed his mind, an official who was present said. It was probably a form of West Nile virus, a disease never before seen in the Western hemisphere.

Stunned by the sudden turn, senior officials at the Federal Centers for Disease Control and Prevention peppered their colleague with questions. Was he sure? What testing was done? Was it repeated?

The officials decided not to inform New York of the new finding immediately. They sent the scientist, **[Dr. Duane J. Gubler (born 1939)],** back to his laboratory in Fort Collins, Colo., to do more tests. He reconfirmed the conclusion, and the next morning, calls went out to New York City.

Federal public health officials were chagrined but not overly worried by the sudden switch in diagnosis. West Nile virus is slightly less virulent than St. Louis encephalitis, and the city was already eradicating the mosquitoes that transmitted the disease, whatever it was.

But the announcement caused concern among many of the scientists and Government officials who are working to strengthen the nation's defenses against biological warfare. They saw the New York outbreak as a dress rehearsal, a test of how public health officials could detect and deal with the sudden spread of a disease not typically found in the United States. To them, the missed diagnosis was unnerving.

''The encephalitis outbreak in New York is a powerful lesson for public health authorities,'' said Alan P. Zelicoff, a senior scientist at the Federal Center for National Security and Arms Control at Sandia National Laboratories in New Mexico. ''It is a sobering, not so reassuring, demonstration of the inadequacies of the U.S. detection network for emerging diseases.''

Local and Federal officials agree there is much to be learned from New York's experience that can be applied equally to defense against biological warfare and the emerging need to deal with the global spread of virulent disease.

While the public health system performed well in many regards, officials point to several key missteps. For instance, in testing samples from the initial victims, the C.D.C. screened only for six viruses common in this country. The scientists did not test for several that have been linked to foreign epidemics or germ warfare.

In addition, the scientist holding a key clue to the true identity of the virus, a bird specialist who had noticed the unexplained deaths of crows near the Bronx Zoo, could not get anyone at the C.D.C. to return her calls for a week. In the end, she turned to several other Government laboratories, including a military research center, to confirm her suspicions that the C.D.C. had the wrong virus.

Finally, the myriad state, local and Federal agencies involved in the investigation did not always communicate well with one another.

''We've learned about the need for, and benefits of, improvements in laboratory coordination,'' said Scott Lillibridge, who leads the C.D.C.'s Bioterrorism Preparedness and Response Program. ''We've also learned how helpful surveillance can be, particularly in beginning to track the beginning, extent or progress of an infectious disease outbreak.''

Over the past several years, the Federal Government has invested hundreds of millions of dollars on a national program to defend against biological terrorism. Several officials said that in light of New York's experiences, much more money should be invested in the public health systems detecting epidemics.

The Discovery : 2 Elderly Patients Sound an Alarm

On Aug. 23, **Dr. Deborah S. Asnis,** an infectious disease specialist at Flushing Hospital Medical Center in Queens, called the city's Health Department with some distressing news -- two elderly patients had come in with symptoms that looked like a neurological illness -- fever, muscle weakness and confusion.

[Dr. Marcelle C. Layton (born 1958)], who heads the Health Department's Bureau of Communicable Diseases, told **Dr. Asnis to send samples to the State Department of Health**, and then called the C.D.C. to warn them that something -- maybe botulism -- was happening in New York City. As the week went on, the number of sick people was starting to mount.

The case was assigned to Dr. Gubler, one of the C.D.C.'s experts on diseases spread by insects. His suspicions focused on St. Louis encephalitis, which is often found in the Southeastern United States.

To confirm his theory, **[Dr. Duane J. Gubler (born 1939)],** tested the samples for antibodies against six viruses transmitted by insects and commonly found in the United States. The tests came back positive for St. Louis encephalitis, a close relative of West Nile fever.

The C.D.C. announced on Sept. 3 that tests of blood and spinal fluid had confirmed Dr. Gubler's suspicion. The Mayor called a hasty news conference in Queens. His office of emergency management took the helm and began a $6 million campaign to wipe out New York's mosquitoes.

Within days, New York City had practically cornered the nation's supply of insect repellent, and 250,000 brochures about the disease were printed and distributed, along with the free repellent, by 500 city employees.

And New Yorkers quickly began to debate which thing unknown to their region they feared the most -- St. Louis encephalitis, or malathion, the insecticide that began to rain down from clacking helicopters.

At the Bronx Zoo, officials were worrying about what seemed to be a serious, but separate biological event. Since July, zoo officials had been receiving calls from people in the Bronx and Queens about dead birds. Four days after the city's St. Louis encephalitis announcement, several exotic birds at the zoo were dead. But not emus. And that made **Tracey S. McNamara** nervous.

Dr. McNamara, who is the head of the department of pathology at the zoo, knew that St. Louis encephalitis, which is carried by birds and transmitted through mosquitoes, does not normally kill the birds.

She considered the possibility that the birds were being killed by another common form of encephalitis. But that disease is deadly to emus, which were thriving. Something much more complicated was afoot, she reasoned.

The pathologist took to her lab, spending 12 hours a day analyzing bird samples. What she found was so disturbing, she said, that she called the C.D.C to alert them. The dead birds were bleeding from the brain and had badly damaged hearts. Was a similar virus infecting people?

"We had dead people and dead birds and I thought we needed to pursue this," she said.

She also contacted the National Veterinary Services Lab in Ames, Iowa, part of the United States Department of Agriculture, to study the samples. Around the same time, Ward Stone, the chief wildlife pathologist for the State Department of Environmental Conservation, began noticing large numbers of dead crows, and alerted his counterparts in New Jersey and Connecticut that something strange was happening to the local bird

population.

While the C.D.C. agreed to take some of Dr. McNamara's samples, agency workers then did not return her daily calls for a week. "I got voice mail," she said. In fairness, she acknowledged, dead people were taking precedence.

But the agency seemed slow to grasp the possible link to the birds' illness. Dr. McNamara is circumspect about criticizing her colleagues at the C.D.C., but she said, "I would say a lesson to be learned was that there was some tunnel vision."

In the Federal Government's dress rehearsals of how a city might detect and handle a sudden outbreak of disease, officials had foreseen many different scenarios. But no one had anticipated an outbreak in which crucial evidence would be uncovered by a wildlife specialist.

"How we respond to introduced diseases in the wildlife perspective is not very well resolved," said Michael Samuel, a research project leader at the National Wildlife Health Center, a unit of the Department of Interior, which is also researching New York's outbreak. "I don't know that we as a nation have a contingency plan in place."

Dr. Stephen Ostroff, the acting deputy director for science and public health at the C.D.C., said that confusion is a normal part of an emerging diseases investigation.

"Anyone who continues to maintain that there was some mistake here doesn't understand the way science proceeds in outbreak investigations," Dr. Ostroff said. "You won't hear any apologies from me." He said he was not aware of Dr. McNamara's repeated attempts to reach C.D.C. officials.

The Breakthrough : Military Minds Turn to Outbreak

Back in the Bronx, Dr. McNamara was getting impatient. The veterinary lab in Ames had already exhausted its capabilities, but could not specifically identify the strange virus that was killing the birds.

Dr. McNamara sent more samples to the C.D.C., but she also put in a call to the United States Army Medical Research Institute of Infectious Diseases, looking for a favor.

Could the laboratory, which does not usually get involved with civilian requests, take a peek at her samples? Dr. McNamara, it turned out, had some chits to call in. She had recently attended the wedding of the pathologist who performs such tests. The lab agreed to take a look.

The system was working, after a fashion. The military's finest minds on bioterrorism had turned to New York's outbreak.

On Sept. 21, Dr. McNamara sent the samples to the lab by overnight mail. Within a day, the Army's unit, which is based in Fort Detrick, Md., confirmed that a virus of a very different sort was killing birds.

Meanwhile, the C.D.C. was beginning to make the connections. On the same day, officials at the agency called Dr. McNamara and said they wanted more material. She sent it out that evening.

On Sept. 24, scientists at the Army lab told her that the tests of bird samples for West Nile virus "really lit up," Dr. McNamara said.

The C.D.C., with help from each of the labs involved, had come to the same conclusion. That day, the agency announced that birds were dying in New York City, and a West Nile-like virus was the reason. The scientists strongly suspected that the humans had been killed by the same virus, but had yet to confirm it.

The answer came, strangely enough, from California. The New York State Department of Health, without telling the C.D.C., sent some of the brain tissue from people believed to have died of St. Louis encephalitis to a lab run by [Dr. Walter Ian Lipkin (born 1952)], a scientist at the University of California in Irvine who had bumped into state scientists at a conference in Albany.

On Sept. 24, [Dr. Walter Ian Lipkin (born 1952)] found that a form of West Nile virus -- which the C.D.C. now believes is similar to a strain previously found in Europe -- had sickened the New York patients. Soon after, the C.D.C. reached the same conclusion.

The words "West Nile virus" had little significance in New York. But in Washington, they raised red flags among American intelligence officials who follow bioterrorism, an incident reported by this week's New Yorker magazine.

In April, a supposed associate of Saddam Hussein published a book in Britain in which he claimed that the Iraqi leader had threatened in 1997 to unleash a form of West Nile virus against his enemies.

A closer look at the Iraqi biological weapons program found no evidence that Baghdad had ever experimented with the virus and intelligence officials, along with arms inspectors who had visited Iraq's laboratories, concluded the report was baseless.

Last night, the C.D.C. issued a statement saying it believed the West Nile outbreak was the work of "Mother Nature."

The eerie coincidence underscored what officials said was a new reality.

"Sadly the world has changed. The threat of bioterrorism is real and growing," said Dr. Margaret Hamburg, an assistant secretary at the Department of Health and Human Services who was previously head of the New York City Health Department. "Whenever a new or unexpected disease emerges in an outbreak such as this, it would be irresponsible not to at least consider the possibility of bioterrorism."

Congress, the officials said, has been slow to spend money on detecting outbreaks, even as they invest hundreds of millions in other bio-defense efforts and vaccines.

This year, lawmakers for the first time approved $120 million to strengthen the C.D.C.'s programs for education and monitoring disease. However, the $40 million set aside for improving state and local health detection was only disbursed late last month, as a West Nile-like virus was spreading through New York.

"We're spending hundreds of millions on questionable stockpiles of vaccines and antibiotics," said Dr. Zelicoff, the scientist at the Sandia Laboratory. "We should be improving the ability of local public health officials to recognize and report strange illnesses to a central authority that can quickly tell them what to do about it."

nov 06 1999

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2001 (Nov 11) - Gubler working potential lab leaks at Ft. Collins ?

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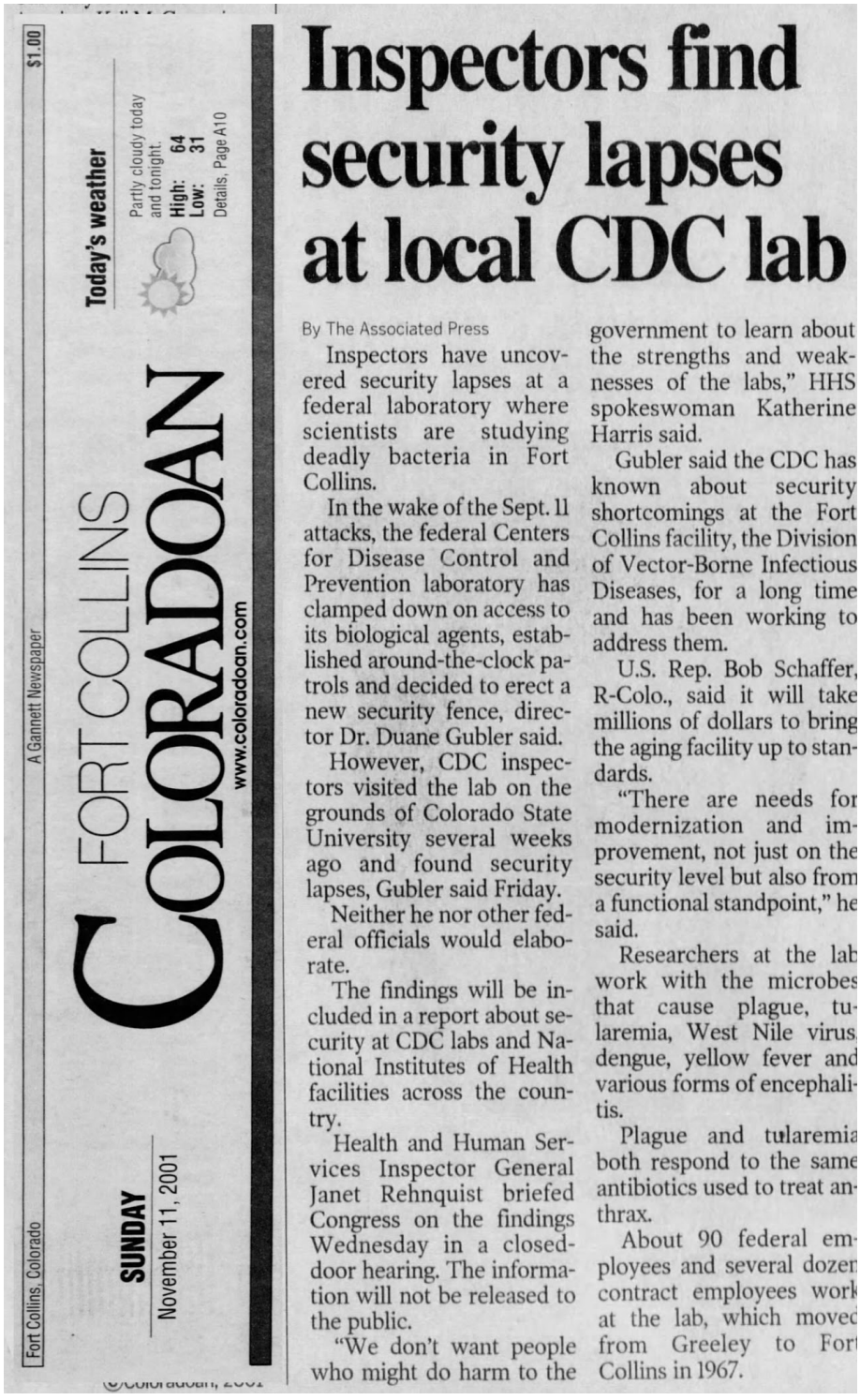

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Today's weather
Partly cloudy today and tonight.
High: 64
Low: 31
Details, Page A10

Inspectors find security lapses at local CDC lab

By The Associated Press

Inspectors have uncovered security lapses at a federal laboratory where scientists are studying deadly bacteria in Fort Collins.

In the wake of the Sept. 11 attacks, the federal Centers for Disease Control and Prevention laboratory has clamped down on access to its biological agents, established around-the-clock patrols and decided to erect a new security fence, director Dr. Duane Gubler said.

However, CDC inspectors visited the lab on the grounds of Colorado State University several weeks ago and found security lapses, Gubler said Friday.

Neither he nor other federal officials would elaborate.

The findings will be included in a report about security at CDC labs and National Institutes of Health facilities across the country.

Health and Human Services Inspector General Janet Rehnquist briefed Congress on the findings Wednesday in a closed-door hearing. The information will not be released to the public.

"We don't want people who might do harm to the government to learn about the strengths and weaknesses of the labs," HHS spokeswoman Katherine Harris said.

Gubler said the CDC has known about security shortcomings at the Fort Collins facility, the Division of Vector-Borne Infectious Diseases, for a long time and has been working to address them.

U.S. Rep. Bob Schaffer, R-Colo., said it will take millions of dollars to bring the aging facility up to standards.

"There are needs for modernization and improvement, not just on the security level but also from a functional standpoint," he said.

Researchers at the lab work with the microbes that cause plague, tularemia, West Nile virus, dengue, yellow fever and various forms of encephalitis.

Plague and tularemia both respond to the same antibiotics used to treat anthrax.

About 90 federal employees and several dozen contract employees work at the lab, which moved from Greeley to Fort Collins in 1967.

2001 - Dengue and West Nile Virus—An Interview with Duane Gubler, Sc.D.

VECTOR BORNE AND ZOONOTIC DISEASES, Volume 1, Number 1, 2001 (PDF : [HP006B][GDrive])

Dr. Gubler is the Director of the Division of Vector-Borne Infectious Diseases of the National Center for Infectious Diseases, the Center for Disease Control and Prevention in Fort Collins, CO. He has academic degrees in entomology and zoology (B.S.) from Utah State University, parasitology (M.S.) from the University of Hawaii, and pathobiology and tropical disease ecology (Sc.D.) from the Johns Hopkins University. Dr. Gubler has spent his career studying vector-borne diseases and has extensive field experience in Asia, the Pacific and Caribbean islands, Central and South America, and Africa. He has worked on dengue and dengue hemorrhagic fever for 29 years, and he co-developed the mosquito inoculation and immunofluorescent techniques that allowed for routine virologic confirmation of clinically diagnosed dengue cases. He used these methods in Southeast Asia to develop the first virologic surveillance for dengue hemorrhagic fever and to help to clarify the clinical spectrum of illness associated with dengue virus infection. Dr. Gubler also pioneered the field of mosquito vector competence and was the first to show that geographic variation in susceptibility to dengue viruses occurred among strains of both Aedes aegypti and Aedes albopictus. In the Caribbean, he directed the development of the CDC dengue laboratory, which now serves as a world reference laboratory for diagnosis, surveillance, prevention, and control of epidemic dengue. During this period, Dr. Gubler pioneered the concept of active disease surveillance and community-based, integrated mosquito control as the most effective approach to preventing epidemic dengue/dengue hemorrhagic fever. Dr. Gubler has coordinated major emergency responses to epidemics of vector-borne diseases, including the 1994 plague epidemic in India and the 1999 West Nile virus epidemic in the northeastern United States. He holds adjunct academic appointments as professor of microbiology at Colorado State University and professor of international health at the Johns Hopkins University School of Public Health and Hygiene. He is a Past President of the American Society of Tropical Medicine and Hygiene.

Please describe the mission of your laboratory in terms of mosquito-borne viruses.

We are responsible for all vector-borne infectious diseases, which include viruses and bacteria. In our division, we have four World Health Organization Collaborating Centers for Reference and Research: one each on arboviruses, plague, Lyme disease, and dengue hemorrhagic fever. Our mission is to monitor these vectorborne infectious diseases around the world, to provide consultation and advice to agencies from the local level to the international level, to conduct surveillance on a global basis, and to provide reference and reagent services for laboratories around the world. We also carry out research on ways to improve surveillance and to develop more effective strategies for prevention and control of these diseases, although we don't actually implement the control ourselves. Our laboratory-based research, which is primarily applied research, focuses on the development of improved diagnostics and immunogens.

How would you describe the global threat from mosquito-borne viruses in particular?

In terms of vector-borne diseases, you have to look at the current status from the perspective of what has happened over the past 50 years. By about 1970, we had effectively controlled many of the important vector-borne diseases. We went into the 1970s and 1980s in a rather complacent mode, with this effective control behind us. The policy- and decision-makers essentially redirected the resources that had been used for vector-borne diseases to other, higher-priority and competing areas. We saw the support for research on vector-borne diseases dry up during the 1970s, 1980s, and 1990s. Concurrently, during that 30-year period, we also saw many global demographic and societal changes that were conducive to the spread of infectious diseases in general, and vector-borne diseases in particular. In the past 20 years of the 20th century, from about 1980 to the present time, we have seen a dramatic resurgence of infectious diseases. The vector-borne viral diseases are among the most important of those. An example is dengue hemorrhagic fever, which is, without question, the most important vector-borne viral disease of humans. It was effectively controlled 30 years ago, but recently it has spread globally throughout the tropics. In 2001, more than half of the world's population, between 2.5 and 3 billion people, live in areas of risk for dengue. We estimate that every year there are between 50 and 100 million cases of dengue fever and several hundred thousand cases of dengue hemorrhagic fever, the more severe form of the disease, depending on epidemic activity. Other vector-borne viral diseases provide similar examples; Japanese encephalitis, which has also been resurgent in the past 20 years, is one. It is primarily a Southeast Asian disease, but we have seen it move into West India and Nepal, south into Papua New Guinea and northern Australia, and east into the Pacific. In addition, diseases such as West Nile, which have never been major public health problems, all of a sudden show up in places like New York and the northeastern United States to cause major outbreaks. It is a sign of the times, with the changing demographics and societal behavior, and the increased movement of people, animals, and commodities via modern transportation into areas that do not have the public health infrastructure to deal with vector- borne diseases. We have seen a major increase in epidemic activity associated with many of these viral diseases. For yellow fever, we have the most economical, effective, and safe live virus vaccine available. Yet yellow fever is potentially one of the most important emergent diseases in the next 10 years, primarily because large areas of the American tropics have become reinfested with Ae. aegypti, the principal urban vector. Once urban yellow fever transmission starts in Latin America, we expect this virus to move very rapidly into the Pacific and Asia via modern transportation. Yellow fever could become the next global public health emergency if we don't do something to reverse that trend. The unfortunate thing is that like dengue hemorrhagic fever in the Americas, we can see it coming and have the ability to prevent its occurrence, but we are sitting by and doing nothing. Arboviral diseases, in general, are among the most important emergent/resurgent infectious diseases that we will have to deal with over the next 10–20 years.

What are the priorities for the CDC?

The National Center for Infectious Diseases, of which we are one division, has developed a plan to deal with emergent infectious diseases. We have four primary areas of focus: surveillance and response, applied research, infrastructure and training, and prevention and control. We have identified a number of priority areas, including vector-borne and zoonotic diseases. Our priority over the next 10 years is to try and develop more effective surveillance, prevention, and control in the United States at the local, state, and federal levels to deal with vector-borne diseases. We are also working closely with international partners to develop more effective surveillance, prevention, and control programs in endemic and enzootic areas outside of the United States. The rationale is that if we can develop better partnerships in endemic areas, we can develop more effective global surveillance, and it would be less likely that diseases would be introduced into the United States and cause major epidemics here. We are focusing on prevention, rather than waiting for the epidemics to occur and then trying to respond to them.

What do you see as the major threats to the United States in terms of vector-borne viral diseases in the next decade?

Right now, the biggest threat would be the geographic spread of West Nile virus. It appears to have become established in this country, and because it is maintained in a mosquito–bird cycle, and a lot of the birds that are infected are migratory, it is possible, if not likely, that this virus will move south, then

move back north, and ultimately become established in most of the United States. It has important health implications in terms of human disease, of course, but it also has very important animal implications for the veterinary community. It has a very high fatality rate in horses, for example. The unique thing about this virus is that it has a very broad host range. It infects not only a large number of birds, but also a number of mammals; we don't yet understand the full implications of the introduction of this virus. The emergence of West Nile virus in the Western Hemisphere also represents an opportunity, a wake-up call, to warn us that we are not prepared for these kinds of introductions and that we must get on with the job of rebuilding the public health infrastructure and the research capacity to deal with vector-borne diseases that were controlled in this country 30 years ago. Other threats include several local viruses that have been here for many years. In dealing with the West Nile virus, we will also deal with them, but I don't see them as major threats in the future. Of the introduced viruses, we have dengue, which is introduced into this country repeatedly every year, with the numbers of cases introduced dependent on the amount of epidemic activity occurring in tropical areas. In recent years, we have seen increased transmission of dengue in the United States. We have two good vectors for the virus here, Ae. aegypti and Ae. albopictus, so the potential is always there for an outbreak of dengue fever in this country, especially in the southern tier of Gulf Coast states. Another potential problem for the United States is yellow fever. We used to have major outbreaks of both dengue and yellow fever in this country—they are both transmitted by the same mosquitoes in urban areas—so yellow fever is also a potential threat even though we have an effective vaccine for this virus. The key to eliminating the yellow fever threat is to use that vaccine effectively. Ideally, we would like to see the control of the mosquito vectors, but that will probably not happen any time soon. There are other arboviruses that could be introduced into this country. As I said, West Nile virus was a wake-up call, because other closely related viruses could cause similar types of problems— Japanese encephalitis is one of them. We have the mosquito vectors here that can transmit this virus. In addition, three very good mosquito vectors have been introduced into the U.S. since 1980: Ae. albopictus, which came sometime in the early 1980s; Ochlerotatus (Aedes) togoi, which was introduced into the northwest part of the country in the 1990s; and most recently, Ochlerotatus (Aedes) japonicus, which was first detected in 1998. We cannot predict what the next major introduction of an exotic agent might be. West Nile virus was the last virus we expected to be introduced into the United States. The takehome message is that we need to be prepared for the unexpected.

Are vaccines a realistic and reasonable strategy, or should surveillance and mosquito control be the primary approach to prevention?

Let's take vaccines first. Yes, vaccines are a realistic way to prevent disease, provided they are used properly. The yellow fever vaccine is a good example of a very economical and effective vaccine that is not effectively used. If we have vaccines, and they are not used, they are worthless. If we are going to put money into the development of vaccines, we have to be sure they are going to be used effectively.

What has prevented the yellow fever vaccine from being used effectively?

The main obstacle is competing priorities for limited resources. If you don't have an endemic disease, then the decision-makers usually take the limited resources and put them into areas where they are needed the most. While that may seem logical, with diseases such as the mosquito-borne diseases, which can resurge so quickly, it doesn't make sense. This is what happened with malaria as well. It is unlikely that we will ever eradicate the mosquito vectors, so we are always at risk for epidemics of these diseases. We need to educate the policy-makers about this ongoing risk and convince them to maintain the prevention methods indefinitely. If a vaccine is available, we need to maintain a high level of herd immunity in the population to prevent potential future epidemics. If mosquito control is the primary method of prevention, then we need to maintain that infrastructure to prevent transmission. The problem is that in the past 30 years, we have relied too much on surveillance and emergency response, as opposed to disease prevention. Surveillance is a critical component of any prevention strategy, but you must have a follow- up with sustainable programs in place to implement control to prevent subsequent human disease. Once you have an epidemic on your hands, it's generally too late. We need renewed emphasis on rebuilding capacity for vector-borne diseases, and that requires vector surveillance and understanding which species are present, where they breed, the seasonal distribution, and how these species' population densities respond to seasonal and other environmental conditions. It also requires surveillance to identify viral activity in the community. It has to be an ongoing program at the local level, and it has to be supported indefinitely. We are not going to eradicate mosquitoes or ticks, but that is not what people want to hear. These days many people want a "quick fix," a magic bullet. That's why vaccines are so popular, because they don't require any responsibility on the part of the individual. We have to go back to the thinking of 50 years ago, when people accepted some responsibility for disease prevention and helped public health authorities. We need the help of the people in the community if we're going to be successful in developing sustainable prevention programs for vector-borne diseases.

What hope is there for genetic modification of any of these mosquito species to make it more difficult or impossible for them to be vectors for infectious organisms?

There is always that hope. The manipulation of vector species to make them resistant to infection or less effective vectors can take a lot of forms: You can change their blood-feeding habits, for example, or genetically manipulate them so that the virus cannot replicate efficiently if they do become exposed. I certainly don't discourage research in this area, but having said that, I have to caution people that this gets into the "quick fix" area. This is the type of research that everyone likes to fund, from NIH on down. Millions of dollars have been put into this type of research over the past 30 years, and I would dare anyone to give me one example of where it has had any lasting impact on vector-borne disease transmission. These are very difficult manipulations to achieve, and even though you may be successful in the laboratory, when you put them into the field, it becomes more difficult to get that genetic change into the natural populations. I would strongly urge that there be more of a balance between funding for these kinds of projects and those to develop the basic programs in biology, behavior, prevention, and control that we know will actually work in preventing disease transmission.

I would like to focus more specifically on dengue and West Nile viruses. Beginning with dengue, please describe the current situation in the Americas.

It is depressing. We predicted, as early as 1980, that epidemic dengue would recur and become widespread in the American tropics and that dengue hemorrhagic fever would emerge in the region. Everything that we predicted has come true. Very few countries in the region, with the exception of Cuba, have taken seriously the challenge of developing prevention programs. Even Cuba has had some setbacks in recent years because of economic problems, but they are the only country in the region that effectively prevented and controlled epidemic dengue during the 1980s and most of the 1990s. In the past 30 years, the whole region has become reinfested by the principal urban vector, Ae. aegypti. Compared with the 1920s and 1930s, when there were major epidemics of both dengue and yellow fever in the region, the vector species now occurs in much higher densities in urban areas. There are more automobiles and therefore more tires; we have poor water systems, so people have to store water; and most consumer goods are packaged in nonbiodegradable plastics and tins. All of these make ideal larval habitats and breeding sites. Finally, the human populations are much larger in these urban areas, and the waste management systems in many cities are poor. The end result is a much denser human population living in intimate contact with much higher mosquito populations and, thus, much higher transmission potential for viral diseases like dengue. You add to that the increased movement of people between population centers around the world, who introduce new viruses on a regular basis, and the result is increased epidemic activity caused by all four dengue virus serotypes. This has created what I call hyperendemicity, or the co-circulation of multiple virus serotypes in communities, and that is generally associated with the emergency of dengue hemorrhagic fever. The situation in the Americas in 2001 is not good. We are going to see continued epidemics of dengue and continued dengue hemorrhagic fever, and we're going to see a lot of people dying of dengue hemorrhagic fever if we do not do something to

reverse the trend.

What is being done to control dengue virus?

Very little in the past 30 years. Since about 1970, the emphasis has been on spraying insecticides to control the adult mosquito population. Realizing that this approach does not work and that adulticides have little or no impact on disease transmission, we developed a community-based program in Puerto Rico in the 1980s that focused on larval control. We know that that approach works, because it was used to eradicate Ae. aegypti in the 1940s, 1950s, and 1960s from many countries of the region. The difference in 2001 is that we have large populations of people living in urban centers, and there is no way that any government in the region has the resources to go into every house every 7 days to control the larvae. If we're going to have sustainable larval control, we will need the help of the people who live in those houses. That is the rationale we used to develop the community-based program that has now become the basis for the global strategy of the World Health Organization. The Pan American Health Organization was among the first to embrace this approach. They developed guidelines for prevention and control of dengue hemorrhagic fever in 1994, held regional meetings with various governments, sent consultants to the countries to help them develop local programs, and followed up by sending review teams out to evaluate the progress. Unfortunately, with all of this work and support, most of the governments still do not have effective prevention and control programs in place. They still essentially wait until epidemics occur and then try to respond to them; the response is always too little and too late.

Has there been any demonstration of a decline of dengue virus due to control methods?

Probably the best example in this region is Cuba, which had a major epidemic of dengue hemorrhagic fever in 1981; they then implemented a mosquito control program. Initially, they used a lot of insecticides, but that really wasn't necessary. They developed a very effective larval control program that prevented epidemic dengue in Cuba for 16 years, from 1981 to 1997, using the people of the community and a lot of inspectors to follow up and evaluate. Essentially it was a top-down form of mosquito control, which requires central government control; this approach doesn't work in most democratic countries. But the take-home message is there: if you control the larval mosquitoes, you are going to control adult mosquitoes and prevent transmission; we know that it works. During this period, every country around Cuba had repeated, large epidemics of dengue. We have not effectively demonstrated that the community-based approach works in any other country. The closest to success would be in Puerto Rico, where in 1998 our surveillance system predicted an epidemic of dengue. The epidemic occurred as predicted, and a community- based response was implemented. It appeared that the epidemic was being controlled, when Hurricane Georges hit in the middle of all this. The hurricane terminated the surveillance program and probably also stopped transmission, so we don't have good data on the results of the program. The other country that has effectively controlled dengue using this approach is Singapore. Singapore put a program in place in 1968, and they went 20 years without any epidemics of dengue. In the mid-1980s, the director of the program retired, and they had a few years when it didn't function as well as it should have. Even so, they were able to keep the mosquito densities at a low level. The problem with Singapore is that it is surrounded by countries that repeatedly have major epidemics of dengue fever and dengue hemorrhagic fever, with hundreds of thousands of cases. Many immigrant workers go into Singapore on a daily basis, so they have a lot of introduced dengue, resulting in outbreaks during the 1990s.

What is the potential for dengue reaching epidemic levels in the United States?

Dengue is repeatedly introduced into this country every year. Millions of people travel from the United States to dengue-endemic countries in Latin America, Asia, the Pacific, and Africa, and they bring dengue back with them; in recent years, we have seen increased imported dengue. The mosquito vectors that transmit dengue occur in the United States, thus increasing the potential for epidemic transmission. Yet we have not had any major epidemics in this country for over 60 years. I think the reason for that is our lifestyle. We eliminated epidemic dengue and yellow fever in this country, but we did not eliminate the mosquitoes. Although there is reasonably good mosquito control—the mosquito abatement districts do a good job of controlling the mosquito populations—other factors probably played a more important role. These include reliable piped water systems, good waste management, and good housing with air conditioning and screening. We have relegated Ae. aegypti mosquitoes to outdoor peri-domestic habitats, where they do not have as much contact with humans. Human behavior in the United States is also not conducive to transmission. During the peak biting time, when Ae. aegypti feeds, humans are indoors, either eating breakfast in the morning or watching television in the late afternoons and evenings. My feeling is that while we are at risk and there is the potential for an epidemic, I don't think we are going to see any major epidemics of dengue in this country, as long as we maintain our public health infrastructure and our standard of living.

What are the similarities and differences between dengue and West Nile viruses?

They are similar in the sense that they are both flaviviruses, and they both cause a similar type of illness—a nonspecific viral syndrome— in the majority of infected patients. But there are a lot more differences between these viruses than there are similarities. West Nile is generally a rural disease, whereas dengue is an urban disease. West Nile is maintained in a Culex mosquito–bird cycle, and dengue is maintained in an Aedes–human cycle. There is no good evidence yet, although we don't discount it, that humans play a role in the transmission cycle of West Nile virus; whether the viremia is high enough for a human to infect mosquito vectors has not been determined. While West Nile is primarily a rural virus, recent epidemics have occurred in urban areas (Bucharest, New York City, Volgograd, and Tel Aviv), so it is adaptable to urban areas. Whether it will persist in urban areas is another question. Our guess is that it will ultimately become enzootic in the United States, primarily in rural areas.

What is the threat of West Nile—the worst-case and best-case scenarios?

Of course, the worst-case scenario would be that it has become established in the United States and will move with the migratory bird population south into the southern coastal states, as well as into the Caribbean and Latin America, and then with spring migrations will be reintroduced back into the United States, into the Midwest and western regions, and ultimately become widespread in the United States. The best-case scenario is that it will act like St. Louis encephalitis virus, which is closely related and has appeared in the northern latitudes. St. Louis encephalitis virus has occurred as far north as Canada, but generally, after outbreaks, the virus persists for a year or two and then disappears. These viruses, St. Louis encephalitis and West Nile, are basically tropical viruses, and their natural cycles are in tropical or subtropical regions. We won't know what the outcome will be until we have several years of surveillance data behind us.

What is most responsible for new mosquito vectors coming into the United States?

The most likely way these exotic mosquito species are brought into the country is in commodities, through container shipping. We are quite sure that Ae. albopictus and probably Oc. japonicus were introduced by this mechanism, probably in the used automobile or truck tire trade. These mosquitoes love to lay their eggs in used tires. When used tires arrive in the United States, they are often stored in an uncovered area; when it rains, the eggs are flooded, they hatch, and the larvae develop to pupae and adults. I don't know of a single case in which an exotic mosquito species has been established by the introduction of an adult, but I suppose it is possible.

of an adult, but I suppose it is possible.

What are the prospects and strategies for preventing further introductions of mosquitoes?

There are several possibilities. We tried to prevent the introduction of new species after Ae. albopictus was introduced in the 1980s by implementing strict quarantine regulations that required the people who brought in used tires to inspect and fumigate them to kill the eggs. Because there is such a huge trade and so many containers had to be checked, it became unreasonable to enforce that regulation, and it was taken off the books. I think the best way to prevent the establishment of exotic species in the United States is to rebuild the infrastructure in this country at the local level to deal with both pest and vector mosquito species. Any time a new species is introduced, effective surveillance by trained people will detect it immediately, and targeted control can be initiated to eliminate it. That is probably the most cost-effective way of preventing future introductions. It has the side benefit of having professional entomologists who are doing the mosquito surveillance and can implement controls to prevent disease. It also controls pest mosquitos and improves the quality of life for the people in the community.

What specifically is being done to control West Nile virus?

After the 1999 epidemic, we developed guidelines for the surveillance, prevention, and control of West Nile virus in the United States. We implemented those guidelines in the spring of 2000 with supplemental funding from Congress. Unfortunately, it was not enough money to initiate mosquito control, but it was enough to implement surveillance to monitor what was happening. We didn't even know if West Nile would survive throughout the winter. This winter, we will review the surveillance data from the 2000 transmission season, make further recommendations on the prevention and control of this disease, and help state and local health departments initiate their programs. If we are ever going to prevent human infection with West Nile virus, we have to get on with the business of developing locally based mosquito abatement programs. We need to focus on larval control and not wait until we have activity in an area and then depend on adulticides. There has to be a change in the mentality of the public health officials who are making decisions about vector-based disease control. We have a good model of mosquito abatement districts, especially along the Gulf Coast from Texas to Florida. They are highly professional, are funded through local mill levy tax systems, and are quite effective at doing mosquito surveillance and control.

Is it fair to say that at present there is insufficient trained manpower in the United States to address a threat such as West Nile?

Yes, it is safe to say that. To put this into a historical perspective, you must look back at the types of programs that were in place at the local and state levels and in our universities 30 years ago. In 1970, there were many local mosquito control programs in place, routinely doing mosquito surveillance and control, and there were numerous university-based arbovirus programs that provided the necessary technical expertise and diagnostic support for arboviruses. In 2001, however, you will find that not many states have mosquito surveillance and control programs in place and that either most of the arbovirus programs in the universities have deteriorated to the point where they are small, ineffective programs, or they have been completely eliminated. The first thing we need is for the public and public health officials to realize that if we are going to prevent epidemics of exotic diseases like West Nile, we need to rebuild the infrastructure to deal with mosquito-borne diseases. We are very ill prepared to deal with these kinds of introductions at the beginning of the 21st century.

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oct 2005

https://www.newspapers.com/image/266682150/?terms=%22duane%20j%20gubler%22&match=1

2013

https://www.youtube.com/watch?v=uqUvtisxg9o

VoicesTODAY: Dengue - Who are the culprits? Interview with Dr Duane Gubler

545 views•May 1, 2013
TODAYonline

Why, after so many years of campaigns, is mosquito breeding still rampant?

Should the authorities raise fines or engage the community better?

Summary is very "one-health-ish" ... Too many people - Too close to nature = health problems !

Interview - https://www.youtube.com/watch?v=eqabpO82YZo

Update on the Spread of Covid (Community Matters)

20 views•Nov 3, 2020
ThinkTech Hawaii

It's not going to go away anytime soon. The host for this episode is Jay Fidell. The guest for this episode is Duane Gubler.

2020-11-03-youtube-thinktech-hawaii-update-on-spread-of-covid-with-duane-gubler / -img-1

FAUCI + GUBLER

https://www.vox.com/2016/5/13/11667398/zika-congress-funding

Outbreaks that are still only just a possibility "go low on the priority list," Fauci added.

Duane Gubler, a researcher in mosquito-borne diseases at Duke-NUS Medical School in Singapore who worked for the Centers for Disease Control and Prevention for nearly 30 years, also attributed the lack of preparedness to our "crisis-oriented society."

https://www.nytimes.com/2017/12/17/health/sanofi-dengue-vaccine-philippines.html

https://en.wikipedia.org/wiki/West_Nile_virus_in_the_United_States

The U.S. federal government revised its diagnosis from St. Louis encephalitis to West Nile virus on September 27, 1999, citing research by Dr. Duane J. Gubler, a C.D.C. expert on arborviruses, as well as several bird deaths in the Bronx, located to the north of Queens.[6]

https://www.liebertpub.com/doi/abs/10.1089/153036601750137741?journalCode=vbz

https://academic.oup.com/DocumentLibrary/ofid/Podcasts/gubler_zika_interview_by_sax.pdf

family

father - june gubler

https://www.findagrave.com/memorial/40992/june-gubler

brother - Walter Douglas Gubler

https://www.findagrave.com/memorial/191741726/walter-douglas-gubler

Walter Douglas Gubler

Santa Clara - Walter Douglas Gubler, Ph.D. Emeritus, 72, passed away July 19, 2018.

He was born January 28, 1946, in St. George, Utah, to June Gubler and Thelma Whipple Gubler of Santa Clara.

He was raised in Santa Clara UT, and he graduated from Dixie High School in 1964.

Doug earned a Bachelor's of Science degree in Botany from Southern Utah University, a Master's of Science in Plant Pathology from the University of Arkansas at Fayetteville, and a PhD in Plant Pathology from the University of California, Davis

Doug worked one year as a research scientist with Campbell Soup Company, and then moved to U.C. Davis as an extension plant pathologist.

Called an "academic legend" by his colleagues, he was a co-author on over 120 refereed journal publications, 165 book chapters, 1 authored book, 6 books edited, and 168 abstracts.

His research in powdery mildew and Botrytis bunch rot were game-changers for the grape industry.

He also completed valuable research for the tree fruit, strawberry, and melon industries.

He gave over 40 talks a year and consulted in over 63 countries.

He was recognized globally as a leading expert in his field and received accolades from many groups, organizations, and associations for his contributions.

Doug mentored many graduate students, post-docs, and researchers during his career, and his legacy will live on through their continued efforts.

Doug married his high school sweetheart, Carol Leavitt Gubler, in August 1964, and they had five children.

While Doug loved his career, nothing came close to how much he loved and cherished his family.

He was proud of each of their achievements, and he was quick to let them know.

He generously shared his love and his sense of humor with his family, which made for many happy family gatherings.

Doug enjoyed teaching and learning, golfing, listening to talk radio, researching, telling jokes, playing cards and games with his grandchildren, and spending quality time with his friends and family.

Doug was an active member of The Church of Jesus Christ of Latter-day Saints, and served in various callings, including Bishop.

He loved the Lord and the blessings of serving in the church, and he regularly blessed the lives of others through his generosity and service.

He was a humble and kind religious leader, and beloved by all those he served and worked with in that capacity.

Once, when asked about the sacrifice of serving, he said, "Despite the demands, it is such an honor to serve in a capacity where I can hopefully be an instrument for good, in helping to serve God and my fellow men."

He is survived by his wife, Carol; son, Curtis; daughters: Kirsten Stevens (Lance), Sherie Linford (Fred), Andrea Carter (Brent), Natalie Jeffs (Randy); and grandchildren: J.D., Kaylee, Morgan, Chelsea, Ryan, Blake, Brandon, Lauren, Garrett, Ashley, Tyler, Julia, Andrew, Whitney, Spencer, Dax, Lexi, Brynn, and Grant.

His surviving siblings include: Ward Gubler (Judy), Pat Clove (Sheldon), Duane Gubler (Bobbie), Muriel Blake, Murray Gubler (Jane), and Jeff Gubler (Angela).

He was preceded in death by his parents, June and Thelma Gubler and his sister, Doris Daugherty.

Funeral services will be held Monday, July 30, 2018 at 11:00 a.m. at the Santa Clara LDS 14th Ward Chapel, 630 Riesling Avenue, Santa Clara, Utah.

Visitations will be held Sunday evening from 6:00 p.m. to 8:00 p.m. at Metcalf Mortuary, 288 West St. George Blvd. and on Monday, prior to services, from 9:30 a.m. to 10:30 a.m. at the church.

Interment will be in the Santa Clara City Cemetery.

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Gulf War syndrome

Wikipedia Gulf War syndrome

Here are a few links to webpages that yet exist on the subject. [...]

This first link discusses the use of an adjutant that caused autoimmune disease , found in 95% of those military personnel that were given the vaccine. If one gives multiple vacciens at the same time, each with its adjutant, then overwhelming the immune system can occur, with infants being given multiple vaccines at the same time.

https://www.newscientist.com/article/mg16221810-300-victims-of-vaccines/

1999-04-10-newscientist-com-victims-of-vaccines.pdf

Victims of vaccines

10 April 1999

By Debora Mackenzie

A FATTY substance originally isolated from sharks could explain Gulf War syndrome. Blood tests on sick veterans in the US show that nearly all produce antibodies to squalene, a component of some experimental vaccines. Congress's General Accounting Office (GAO), which was asked to investigate, can't say for sure whether squalene was used on Gulf War troops. But it is now demanding further tests for squalene antibodies in military personnel. The Department of Defense is opposed to this.

Around 100 000 troops who served in the 1991 Gulf conflict with Iraq developed a mysterious illness involving memory loss, thyroid disorders, allergies, fatigue, rashes and persistent pain. Military authorities and sufferers have long argued over the cause of the symptoms and whether a distinct syndrome even exists.

Bob Garry, a virologist at Tulane University in New Orleans, has now tested 400 Gulf War veterans for antibodies to squalene, a polymer of fatty acids found in small quantities in human cell membranes. Ninety-five per cent of the veterans suffering from Gulf War syndrome (GWS) had high levels of squalene antibodies. People don't usually have enough squalene in their blood to prompt the production of detectable levels of antibodies, and none of the veterans without symptoms had antibodies. Garry's results have been peer reviewed, he says, and await publication.

Squalene can be released into the blood by physical injuries, where it boosts

the immune system's response to foreign antigens. This "adjuvant" effect means it is widely used in animal vaccines. Squalene is not licensed for use as an adjuvant in people, although it has been used experimentally on about 12 000 people.

Garry also tested two volunteers who had received experimental herpes vaccines containing squalene in trials run by the US National Institutes of Health. Both have high levels of squalene antibodies and symptoms similar to GWS. This suggests that GWS could be caused by the body turning against its own, natural squalene.

Jim Turner, a spokesman for the Department of Defense, says: "During the Gulf War, we never used squalene in vaccines." But many soldiers' vaccination records have been lost, which makes this difficult to verify. Jack Metcalf, a Republican member of Congress from Washington state, who asked the GAO to investigate, says: "In light of the number of misstatements DoD made to the GAO during this investigation, we cannot be expected to simply accept their denial of squalene use."

Vaccines have often come under suspicion as a cause of GWS. Gulf War soldiers were the first to be systematically vaccinated against anthrax and plague because Iraq was thought to have biological weapons. France was the only country not to vaccinate its troops, and only French veterans are free of GWS. In January, researchers at King's College Hospital in London reported that exposure to plague and anthrax vaccines was the factor that correlated most strongly with GWS in British veterans. GWS activists claim that some British soldiers received American vaccines.

GWS has also been blamed on exposure to chemicals in Iraq. But Garry found squalene antibodies in six soldiers who were vaccinated but never went to the Gulf.

The Gulf War Veterans Association, based in Versailles, Missouri, suspects that most cases of GWS were caused by experimental vaccines. If so, says the association's Dave vonKleist, this would violate the Nuremberg Convention. "Military personnel are not subjects for experimentation," he says.

TRENDINGLATESTVIDEOFREE

1. First real world covid-19 vaccine studies show 'spectacular' results
2. Why hasn't India had a second wave of the coronavirus?
3. Two coronavirus variants have merged – here's what you need to know
4. Exclusive: Two variants have merged into heavily mutated coronavirus
5. Humans have severely affected fish biodiversity in half of all rivers

Magazine issue 2181 , published 10 April 1999

Read more: https://www.newscientist.com/article/mg16221810-300-victims-of-vaccines/#ixzz6nGdoDtKU

and this re: mycoplasma contamination , the mycoplasma had HIV protein stitched into its genetic structure, similar to the covid 19 issue. Garth Nicholson, his wife nancy, and the other wise famous dr cantwell are in this link.

http://www.paranoiamagazine.com/2016/05/gulf-bio-war-new-aids-like-plague-threatens-armed-forces/

THE GULF BIO WAR: HOW A NEW AIDS-LIKE PLAGUE THREATENS OUR ARMED FORCES

- May 1, 2016
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by Alan R. Cantwell, Jr., M.D.

What is the common thread which weaves through the occurrence of the highly contagious disease known as the Gulf War Syndrome, which has struck as many as 60,000 veterans? Dr. Cantwell has found a biowarfare connection. Since the Nuremberg trials, it has been against international law to use people as guinea pigs in experiments without their informed consent. In an unprecedented legal decision, the FDA allowed the Pentagon to give un-approved drugs and vaccines to soldiers without their consent. The Pentagon also refused to identify the types of drugs and injections the troops were given forcibly, rendering them powerless against genetically altered "supergerms."

As many as 60,000 of the 700,000 Gulf War vets who served in Desert Storm in 1991 are ill with a variety of symptoms lumped together as Persian Gulf War Syndrome (GWS). Symptoms include chronic fatigue, severe neurological disorders, muscle and joint pain, shortness of breath, gastrointestinal problems, memory loss, insomnia, rashes, depression, headaches, and other complaints. GWS is a sexually transmitted disease, and is contagious via the airborne route. Soldiers are passing the illness on to wives and family members; and their children appear to have an increased incidence of birth defects.

The government and the Pentagon stand accused of ignoring the vets by denying they were exposed to chemical or biological agents in the Gulf. Originally many vets were told by military doctors that their symptoms were caused by stress. The large number of sick vets led to an official inquiry.

In August 1995, a massive government study of GWS indicated no evidence of so-called Gulf War disease. Dr. Stephen Joseph, assistant secretary of defense for health affairs, claimed the soldiers were suffering from "multiple" diseases not stemming from any one cause, and that their collective health was no worse than their counterparts in civilian life. The report denied that vets were exposed to chemical agents in the Gulf.

Reynaldo Negrete, in a letter of protest to the Los Angeles Times (8/20/95), wrote:

When my son Ruben, a career Navy Seebee of 14 years, was sent to the Gulf he was a healthy young man weighing 185 pounds. When he came back four months later he had lost 20 pounds and his health. He continued to lose weight for more than a year, but the doctors at Port Hueneme and his command did nothing. Not until I had my congressman, Matthew G. Martinez, intervene on his behalf was our son admitted to the Naval Hospital in San Diego a year after arriving from the Gulf War a very sick young man. He then spent a year in the hospital, until he was medically discharged from the Navy no better off than the day he was admitted. Yet, my son continues to suffer, as does his family. My son has served his country very well, for more than 14 years. He has been deployed all over the world, and in just four short months in the Persian Gulf he comes home an invalid."

A year later, in 1996, the Department of Defense finally admitted that 400 soldiers (later changed to 5,000; still later to 20,000) may have been exposed to toxic agents when, after the war had officially ended, the military blew up an ammunition storage depot in Kamisiyah in southern Iraq on March 4 and again on March 10, 1991. After the bombings, a U.N. inspection team informed Pentagon officials that the buildings contained chemical weapons. However, the Pentagon immediately classified the U.N. report and the troops were never alerted about possible exposure to toxic chemicals.

Despite the cover-up, exposure to chemicals cannot account for so many sick soldiers. Not all sick vets were stationed in the Kamisiyah area. Many left the Iraqi war zone before the war actually started, or arrived after the fighting stopped. In addition, exposure to chemicals cannot explain why some cases of GWS are contagious.

The first media reports of a Gulf illness surfaced in the spring of 1992, a year after the war ended. As time passed, the transmissibility of the disease was downplayed, as well as the fact that wives complained about miscarriages and "burning semen" after sex with their husbands. Veteran's groups now claim that a third of Gulf War babies are born with birth abnormalities. LIFE magazine (November 1996) featured a story on these Gulf babies entitled "The tiny victims of Desert Storm: Has our country abandoned them?" Pictured on the cover was U.S. Army Sgt. Paul Hansen holding his three-year-old son, born with hands and feet attached to twisted stumps.

In the search for a cause of GWS, epidemiologists have been looking for a common factor that could have exposed so many Gulf War vets. Some sick vets were in the war zone for months, while others were stationed there for as little as nine days. And the illness has affected troops stationed in widely scattered geographic areas in the region.

One factor common to all the troops is that they were given experimental and potentially dangerous drugs and vaccines employed to protect them against Iraqi chemical and biowarfare agents. As early as December 1990, there were warnings about using our servicemen as medical guinea pigs. In an unprecedented legal decision, the FDA allowed the Pentagon to give unapproved drugs and vaccines without requiring consent of the soldiers. Claiming security reasons, the Pentagon also refused to identify the types or the number of drugs and injections they forced the troops to take.

An angry serviceman stationed in Saudi Arabia maintained his civil rights were violated, and sued the government in January 1991. Ever since the post World War II Nuremberg trials, which convicted many top-ranking Nazis for crimes against human nature, it has been unethical and unlawful to use people as guinea pigs in experiments without their informed consent. This legal requirement was waived when the lawsuit was dismissed by U.S. District Judge Stanley S. Harris, who cited the necessity of the military to protect the health of its troops.

Soldiers who rejected the injections were given them forcibly. Physicians who refused to cooperate with the military's experimental vaccine program were treated harshly. Army reservist Dr. Yolanda Huet-Vaughn protested it was her duty under the Nuremberg Code of Justice not to vaccinate personnel with experimental vaccines without their consent. At Huet-Vaughn's court-martial trial, a military judge ignored these considerations of international law and medical ethics, and sentenced the mother of three children to 30 months in prison. Under pressure from activist groups, the doctor was released from military prison after serving eight months.

Allegations that experimental drugs and vaccines are a cause of GWS have been downplayed for obvious reasons. The Pentagon does not want to publicize the idea that PGS could be a man-made disease due to unethical experiments with dangerous and possibly contaminated vaccines. Furthermore, the military has a long history of conducting covert medical experiments on its own personnel, as well as civilians; and the Agent Orange cover-up is still fresh in the minds of Vietnam war vets.

GWS is not limited to American soldiers. More than 1,100 British vets are ill. Many blame the injections they received against anthrax and plague. Englishman Tony Flint, associated with the Gulf War Veterans and Families Association, claims more than 100 vets have died of ailments ascribed to the inoculations. He says he was forced to take 13 inoculations in one week, and states there is no evidence of GWS among French troops who did not receive these vaccines.

The HIV Connection

Garth Nicholson and his wife Nancy, both respected microbiologists, have recently discovered a bacterium, a so-called "mycoplasma" in the blood of half the vets ill with GWS. The microbe associated with GWS has been identified as Mycoplasma fermentans (incognitus strain). Discovered a century ago in plants, mycoplasmas are the smallest known self-replicating microbes. Larger than viruses and much smaller than common bacteria, mycoplasmas have been implicated in a variety of diseases.

The mycoplasma in GWS could not be identified using standard lab tests. Through special genetic testing Garth Nicolson was able to discover the mycoplasma. Incredibly, the microbe had a piece of the envelope gene of the AIDS virus (HIV-1) attached to it! The HIV gene makes the mycoplasma even more aggressive, allowing it to attach to cells, which it then penetrates and poisons. According to Nicolson, a mycoplasma combined with the envelope gene of the AIDS retrovirus could never have originated in nature, but only through gene splicing in a laboratory.

Both Nicolsons contracted GWD from their daughter when she returned home from Desert Storm. Because of the contagious nature of the disease, the microbiologists suspected an infectious agent, rather than a chemical weapon. When the mycoplasma was identified, the research team discovered that treatment with antibiotics, particularly doxicycline, was helpful in some cases.

In an interview on the Dave Emory radio show (10/20/96), Garth Nicolson theorizes that the microbe could have been deployed through contaminated vaccines, through the deliberate release of Iraqi bioweapons, from blowback from destroyed Iraqi bioweapon factories, or possibly from scud missile attacks. He says there has been a Mycoplasma Unit at the University of Baghdad for 22 years, manned by Iraqi scientists who were trained in the U.S. Before the war, the U.S. government exported to Iraq various biological agents, both classified and unclassified, that could be used or developed as biological warfare agents.

Did this mycoplasma + HIV bioweapon originate in the U.S. or in the Gulf? It would be extremely helpful to know if there are cases of GWS in Iraq, Kuwait, Saudi Arabia, Jordan, and elsewhere in the Middle East. Surprisingly, the government and the media are silent on this question, although Nicolson claims 300,000 Iraqis have died and one million are sick since the war. It is rumored that 15-20% of the population of the countries surrounding Iraq are ill with GWS.

In a 40-page report entitled "Germ Warfare against America: The Desert Storm Plague and Cover-Up, Nicolson reports:

Mycoplasma fermentans (incognitus) has been tested on the Texas Department of Corrections prisoners in the late 1980s prior to the Gulf War. It was tested on death row inmates as well as other inmates in Huntsville, Texas. The guards then contracted it from the inmates, and the guards then gave it to their families and community. This mycoplasma vaccine testing was funded by the U.S. Army, and today there is an outbreak of 350 people in the Huntsville area with a strange disease resembling GWS.

Garth Nicolson's important research has appeared in the underground press, but until recently his research has been ignored by the mainstream, corporate-controlled media. On the Emory show Nicolson was asked how many soldiers have died of GWS. Although there are no official figures, he estimates that 12-15,000 vets have died of "unusual" diseases, and several thousand have died of cancer. If true, these death rates are very high considering the young age (under 25) of many of our soldiers. Apparently doctors, nurses, and medical personnel are contracting GWS from sick patients, indicating another AIDS-like epidemic in the making.

Further complicating the epidemiology of GWS is that soldiers' shot records and even medical records have disappeared or are unavailable. In addition, the Los Angeles Times (12/5/96) reports that military logs "crucial to Gulf War veterans who believe their health problems are linked to chemical weapons" are also missing and can't be found. These important logs cover the period March 4-10, during the bombings at Kamisiyah. The Senate Veterans Affairs Committee has recently won permission to examine General Norman Schwartzkopf's personal logs.

At the request of Rep. Norm Dicks of Washington state, a group of military and civilian scientists and Pentagon experts met on December 23, 1996, at Walter Reed Army Hospital in Washington, to discuss Nicolson's research. Walter Reed spokesman Ben Smith said the Army would agree to study his mycoplasma research as part of its investigation into the cause of GWS.

On December 27, 1996, a story about Garth Nicolson's research appeared on the front-page of the Los Angeles Times. However, the most significant part of Nicholson's research, namely that the mycoplasma had a piece of HIV attached to it, was not mentioned. The origin of the microbe was left in doubt, the writer simply stating that Nicolson's research suggests "the primitive bacterium, called mycoplasma, was deliberately altered for Iraqi use as a biological weapon."

Also not mentioned in the media was previous mycoplasma research conducted by the military a decade earlier. In 1986 Dr. Shyh-Ching Lo, a molecular biologist at the Armed Forces Institute of Pathology in Washington, D.C., reported a "virus-like agent" derived from Kaposi's sarcoma, the "gay cancer" associated with AIDS. Using highly technical methods of molecular biology, Lo's "virus" was subsequently identified as the bacterium Mycoplasma fermentans (also known as M. incognitus). In 1989, Lo also reported similar mycoplasma infection as the cause of death in six young, previously healthy military personnel from New Jersey, Virginia, Guam, and Turkey, all of whom died within one to seven weeks from a progressive and mysterious "flu-like disease." In 1991 Lo found yet another mycoplasma, Mycoplasma penetrans, in the urine of gays with AIDS. Luc Montagnier, the co-discoverer of the AIDS virus, has confirmed Lo's mycoplasma research. The Pasteur Institute virologist believes mycoplasmas are a necessary "co-factor" that allows HIV infection to progress to full-blown AIDS.

Are mycoplasmas being developed as biological warfare weapons? Certainly all known infectious agents are screened for possible military use by biowarfare scientists around the world. As stated, there was a Mycoplasma lab in Iraq. Before the Gulf War the Iraqis freely used nerve gas against the Kurds in Northern Iraq; and after the war they used mustard gas against Shiite Muslim nomads in southern Iraq. And the U.S. Army conducted mycoplasma research

in Huntsville, Texas.

Before the Gulf War the mixing of the AIDS virus (HIV) with mycoplasmas in the laboratory by Lo and Montagnier was recorded in the scientific literature. When mycoplasma was added to HIV-infected blood cells in test tubes, it made the AIDS virus more pathogenic. Silver-leaf monkeys experimentally infected with Lo's mycoplasma all developed infections, immunosuppression, and died within 7 to 9 months with an AIDS-like "wasting syndrome."

A "Mycoplasma Workshop," sponsored by The National Institutes of Allergy and Infectious Diseases, was held in San Antonio, Texas, in December 1989. Lo's research was featured. When asked if his fatal mycoplasma "flu cases" were contagious, Lo replied, "We don't know." Interestingly, some of Lo's patients improved with the antibiotic doxycycline, the same drug Nicolson has found effective in some cases of GWS.

Most physicians know little about mycoplasma infection, and even less about testing for these microbes. For many years this writer has reported mycoplasma-like organisms discovered in the damaged tissue of cancer, AIDS, and in auto-immune disease. This research has been published in medical journals and summarized in two books by this author: AIDS: The Mystery and the Solution (1984) and The Cancer Microbe (1990). Unfortunately, this research has been largely ignored by the AIDS and cancer establishments, as well as by so-called mycoplasma experts. These bacteria can be easily seen microscopically in the diseased tissue of AIDS (including Kaposi's sarcoma), cancer, and certain other diseases of unknown cause.

As some people in medical science are aware, important and valid scientific discoveries are ignored because they are "politically incorrect." Lo's mycoplasma research has been largely ignored by the leading virologists who direct AIDS research. Similarly, Lo has ignored the published research of hundreds of other researchers who have shown mycoplasma-like microbes in cancer, AIDS, and immune diseases. The inability of scientists to consider "politically incorrect" scientific findings may explain why physicians currently have such difficulty understanding and treating new epidemics like AIDS and GWS, in which these microbes are operative.

Why does the military ignore GWS and deny its existence? Undoubtedly, chemical and biological weapons were employed in the Gulf War. Was the military fully capable of detecting these bioweapons? Or was the detection of chemical agents and bioweapons ignored or covered up? Is the military capable of protecting its troops from modern day biowarfare? Are soldiers now powerless against genetically engineered "supergerms" deployed by biowarfare scientists?

In the future, will soldiers willingly go into battle knowing that exposure to bioweapons will be ignored by their government, and knowing that no one is immune from the effects of these man-made microbes of death?•

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[HK0055][GDrive]

Persian Gulf War Illness

Other names

Persian Gulf War illnesses, and chronic multisymptom illness[1][2]

Summary of the Operation Desert Storm offensive ground campaign, February 24–28, 1991, by nationality

Symptoms

Vary somewhat among individuals and include fatigue, headaches, cognitive dysfunction, musculoskeletal pain, insomnia,[3] and respiratory, gastrointestinal, and dermatologic complaints

Causes

Toxic exposures during the 1990–91 Gulf War

Differential diagnosis

Chronic fatigue syndrome / myalgic encephalitis (CFS/ME); fibromyalgia; multiple sclerosis (MS)

Frequency

25% to 34% of the 697,000 U.S. troops of the 1990–91 Gulf War

Gulf War syndrome or **Gulf War illness** is a chronic and multi-symptomatic disorder affecting returning military veterans of the 1990–1991 Persian Gulf War.[4][5][6] A wide range of acute and chronic symptoms have been linked to it, including fatigue, muscle pain, cognitive problems, insomnia,[3] rashes and diarrhea.[7] Approximately 250,000[8] of the 697,000 U.S. veterans who served in the 1991 Gulf War are afflicted with enduring chronic multi-symptom illness, a condition with serious consequences.[9]

From 1995 to 2005, the health of combat veterans worsened in comparison with nondeployed veterans, with the onset of more new chronic diseases, functional impairment, repeated clinic visits and hospitalizations, chronic fatigue syndrome-like illness, posttraumatic stress disorder, and greater persistence of adverse health incidents.[10]

Exposure to pesticides and pills containing pyridostigmine bromide (used as a pretreatment to protect against nerve agent effects) has been found to be associated with the neurological effects seen in Gulf war syndrome.[11][12] Other causes that have been investigated are sarin, cyclosarin, and emissions from oil well fires, but their relationship to the illness is not as clear.[11][12]

Studies have consistently indicated that Gulf War syndrome is not the result of combat or other stressors and that Gulf War veterans have lower rates of posttraumatic stress disorder (PTSD) than veterans of other wars.[9][11]

According to a 2013 report by the Iraq and Afghanistan Veterans of America, veterans of the U.S. wars in Iraq and Afghanistan may also suffer from Gulf War syndrome,[13] though later findings identified causes that would not have been present in those wars.[11][12]

[...]

Signs and symptoms[edit]

According to an April 2010 U.S. Department of Veterans Affairs (VA) sponsored study conducted by the Institute of Medicine (IOM), part of the U.S. National Academy of Sciences, 250,000[8] of the 696,842 U.S. servicemen and women in the 1991 Gulf War continue to suffer from chronic multi-symptom illness, which the IOM now refers to as *Gulf War illness*. The IOM found that it continued to affect these veterans nearly 20 years after the war.[*citation needed*]

According to the IOM, "It is clear that a significant portion of the soldiers deployed to the Gulf War have experienced troubling constellations of symptoms that are difficult to categorize," said committee chair Stephen L. Hauser, professor and chair, department of neurology, University of California, San Francisco (UCSF). "Unfortunately, symptoms that cannot be easily quantified are sometimes incorrectly dismissed as insignificant and receive inadequate attention and funding by the medical and scientific establishment. Veterans who continue to suffer from these symptoms deserve the very best that modern science and medicine can offer to speed the development of effective treatments, cures, and—we hope—prevention. Our report suggests a path forward to accomplish this goal, and we believe that through a concerted national effort and rigorous scientific input, answers can be found."[8]

Questions still exist regarding why certain veterans showed, and still show, medically unexplained symptoms while others did not, why symptoms are diverse in some and specific in others, and why combat exposure is not consistently linked to having or not having symptoms. The lack of data on veterans' pre-deployment and immediate post-deployment health status and lack of measurement and monitoring of the various substances to which veterans may have been exposed make it difficult — and in many cases impossible — to reconstruct what happened to service members during their deployments nearly 20 years after the fact, the committee noted.[8] The report called for a substantial commitment to improving identification and treatment of multisymptom illness in Gulf War veterans focussing on continued monitoring of Gulf War veterans, improved medical care, examination of genetic differences between symptomatic and asymptomatic groups and studies of environment-gene interactions.[8]

A variety of signs and symptoms have been associated with GWI:

Symptom	U.S.	UK	Australia	Denmark
Fatigue	23%	23%		

10%

16%

Headache

17%

18%

7%

13%

Memory problems

32%

28%

12%

23%

Muscle/joint pain

18%

17%

5%

2% (<2%)

Diarrhea

16%

9%

13%

Dyspepsia/indigestion

12%

5%

9%

Neurological problems

16%

8%

12%

Terminal tumors

33%

9%

11%

** This table applies only to coalition forces involved in combat.*

Condition

U.S.

UK

Canada

Australia

Skin conditions

20–21%

21%

4–7%

4%

Arthritis/joint problems

6–11%

10%

(-1)–3%

2%

Gastro-intestinal (GI) problems

15%

5–7%

1%

Respiratory problem

4–7%

2%

2–5%

1%

Chronic fatigue syndrome

1–4%

3%

0%

Post-traumatic stress disorder

2–6%

9%

6%

3%

Chronic multi-symptom illness

13–25%

26%

Birth defects have been suggested as a consequence of Gulf War deployment. However, a 2006 review of several studies of international coalition veterans' children found no strong or consistent evidence of an increase in birth defects, finding a modest increase in birth defects that was within the range of the general population, in addition to being unable to exclude recall bias as an explanation for the results.[15] A 2008 report stated that "it is difficult to draw firm conclusions related to birth defects and pregnancy outcomes in Gulf War veterans", observing that while there have been "significant, but modest, excess rates of birth defects in children of Gulf War veterans", the "overall rates are still within the normal range found in the general population".[16] The same report called for more research on the issue.

Comorbid illnesses[edit]

Gulf War veterans have been identified to have an increased risk of multiple sclerosis.[17]

A 2017 study by the U.S. Department of Veterans Affairs found that veterans possibly exposed to chemical warfare agents at Khamisiyah experienced different patterns of brain cancer mortality risk compared to the other groups, with veterans possibly exposed having a higher risk of brain cancer in the time period immediately following the Gulf War.[18]

Causes[edit]

The United States Congress mandated the U.S. Department of Veterans Affairs' contract with the National Academy of Sciences (NAS) to provide reports on Gulf War illnesses. Since 1998, the NAS's Institute of Medicine (IOM) has authored ten such reports.[19] In addition to the many physical and psychological issues involved in any war zone deployment, Gulf War veterans were exposed to a unique mix of hazards not previously experienced during wartime. These included pyridostigmine bromide pills (given to protect troops from the effects of nerve agents), depleted uranium munitions, and multiple simultaneous vaccinations including anthrax and botulinum toxin vaccines. The oil and smoke that spewed for months from hundreds of burning oil wells presented another exposure hazard not previously encountered in a war zone. Military personnel also had to cope with swarms of insects, requiring the widespread use of pesticides. High-powered microwaves were used to disrupt Iraqi communications, and though it is unknown whether this might have contributed to the syndrome, research has suggested that safety limits for electromagnetic radiation are too lenient.[20]

The Research Advisory Committee on Gulf War Veterans' Illnesses (RAC), a VA federal advisory committee mandated by Congress in legislation enacted in

The Research Advisory Committee on Gulf War Veterans' Illnesses (RAC), a VA federal advisory committee mandated by Congress in legislation enacted in 1998,[21][22] found that pre-2005 studies suggested the veterans' illnesses are neurological and apparently are linked to exposure to neurotoxins, such as the nerve gas sarin, the anti-nerve gas drug pyridostigmine bromide, and pesticides that affect the nervous system. The RAC concluded in 2004 that, "research studies conducted since the war have consistently indicated that psychiatric illness, combat experience or other deployment-related stressors do not explain Gulf War veterans illnesses in the large majority of ill veterans."[23]

The RAC concluded[11] that "exposure to pesticides and/or to PB [pyridostigmine bromide nerve agent protective pills] are causally associated with GWI and the neurological dysfunction in GW veterans. Exposure to sarin and cyclosarin and to oil well fire emissions are also associated with neurologically based health effects, though their contribution to development of the disorder known as GWI is less clear. Gene-environment interactions are likely to have contributed to development of GWI in deployed veterans. The health consequences of chemical exposures in the GW and other conflicts have been called “toxic wounds” by veterans. This type of injury requires further study and concentrated treatment research efforts that may also benefit other occupational groups with similar exposure-related illnesses."[12]

Earlier considered potential causes[edit]

Depleted uranium[edit]

Major Gulf War engagements in which DU rounds were used

Depleted uranium (DU) was widely used in tank kinetic energy penetrator and autocannon rounds for the first time ever during the Gulf War[24] and has been suggested as a possible cause of Gulf War syndrome.[25] A 2008 review by the U.S. Department of Veterans Affairs found no association between DU exposure and multisymptom illness, concluding that "exposure to DU munitions is not likely a primary cause of Gulf War illness". However, there are suggestions that long-term exposure to high doses of DU may cause other health problems unrelated to GWI.[9]

More recent medical literature reviews disagree, stating for example that, "the number of Gulf War veterans who developed the Gulf War syndrome following exposure to high quantities of DU has risen to about one-third of the 800,000 U.S. forces deployed," with 25,000 of those having suffered premature death.[26] Since 2011, US combat veterans may claim disability compensation for health problems related to exposure to depleted uranium.[27] The Veterans Administration decides these claims on a case-by-case basis.

A team at the University of Portsmouth lead by Professor Randall Parrish tested urine samples of 154 US veterans in 2021, reporting that no soldiers with the syndrome were exposed to significant amounts of depleted uranium and that it "is not and never was in the bodies of those who are ill at sufficient quantities to cause disease".[28][29]

Pyridostigmine bromide nerve gas antidote[edit]

The US military issued pyridostigmine bromide (PB) pills to protect against exposure to nerve gas agents such as sarin and soman. PB was used as a prophylactic against nerve agents; it is not a vaccine. Taken before exposure to nerve agents, PB was thought to increase the efficiency of nerve agent antidotes. PB had been used since 1955 for patients suffering from myasthenia gravis with doses up to 1,500 mg a day, far in excess of the 90 mg given to soldiers, and was considered safe by the FDA at either level for indefinite use and its use to pre-treat nerve agent exposure had recently been approved.[30]

Given both the large body of epidemiological data on myasthenia gravis patients and follow-up studies done on veterans it was concluded that while it was unlikely that health effects reported today by Gulf War veterans are the result of exposure solely to PB, use of PB was causally associated with illness.[9] However, a later review by the Institute of Medicine concluded that the evidence was not strong enough to establish a causal relationship.[31]

Organophosphates[edit]

Organophosphate-induced delayed neuropathy (OPIDN, aka organophosphate-induced delayed polyneuropathy) may contribute to the unexplained illnesses of the Gulf War veterans.[32][33]

Organophosphate pesticides[edit]

The use of organophosphate pesticides and insect repellents during the first Gulf War is credited with keeping rates of pest-borne diseases low. Pesticide use is one of only two exposures consistently identified by Gulf War epidemiologic studies to be significantly associated with Gulf War illness.[34] Multisymptom illness profiles similar to Gulf War illness have been associated with low-level pesticide exposures in other human populations. In addition, Gulf War studies have identified dose-response effects, indicating that greater pesticide use is more strongly associated with Gulf War illness than more limited use.[35] Pesticide use during the Gulf War has also been associated with neurocognitive deficits and neuroendocrine alterations in Gulf War veterans in clinical studies conducted following the end of the war. The 2008 report concluded that "all available sources of evidence combine to support a consistent and compelling case that pesticide use during the Gulf War is causally associated with Gulf War illness."[9]

Sarin nerve agent[edit]

See also: Iraqi chemical weapons program

Many of the symptoms of Gulf War illness are similar to the symptoms of organophosphate, mustard gas, and nerve gas poisoning.[36][37] Gulf War veterans were exposed to a number of sources of these compounds, including nerve gas and pesticides.[38]

Chemical detection units from Czechoslovakia, France, and Britain confirmed chemical agents. French detection units detected chemical agents. Both Czech and French forces reported detections immediately to U.S. forces. U.S. forces detected, confirmed, and reported chemical agents; and U.S. soldiers were awarded medals for detecting chemical agents. The Riegle Report said that chemical alarms went off 18,000 times during the Gulf War. After the air war started on January 16, 1991, coalition forces were chronically exposed to low but nonlethal levels of chemical and biological agents released primarily by direct Iraqi attack via missiles, rockets, artillery, or aircraft munitions and by fallout from allied bombings of Iraqi chemical warfare munitions facilities.[39]

In 1997, the US Government released an unclassified report that stated:

> "The US Intelligence Community (IC) has assessed that Iraq did not use chemical weapons during the Gulf war. However, based on a comprehensive review of intelligence information and relevant information made available by the United Nations Special Commission (UNSCOM), we conclude that chemical warfare (CW) agent was released as a result of US postwar demolition of rockets with chemical warheads in a bunker (called Bunker 73 by Iraq) and a pit in an area known as Khamisiyah."[40]

Over 125,000 U.S. troops and 9,000 U.K. troops were exposed to nerve gas and mustard gas when the Iraqi depot in Khamisiyah was destroyed.[*citation needed*]

Recent studies have confirmed earlier suspicions that exposure to sarin, in combination with other contaminants such as pesticides and PB were related to reports of veteran illness. Estimates range from 100,000 to 300,000 individuals exposed to nerve agents.[41]

While low-level exposure to nerve agents has been suggested as the cause of GWI, the 2008 report by the U.S. Department of Veterans Affairs (VA) Research Advisory Committee on Gulf War illnesses (RAC) stated that "evidence is inconsistent or limited in important ways."[42] The VA's 2014 RAC report concluded that, "exposure to the nerve gas agents sarin/cyclosarin has been linked in two more studies to changes in structural magnetic resonance imaging findings that are associated with cognitive decrements, further supporting the conclusion from evidence reviewed in the 2008 report that exposure to these agents is etiologically important to the central nervous system dysfunction that occurs in some subsets of Gulf War veterans."[11]

Less likely causes[edit]

According to the VA's 2008 RAC report, "For several Gulf War exposures, an association with Gulf War illness cannot be ruled out. These include low-level exposure to nerve agents, close proximity to oil well fires, receipt of multiple vaccines, and effects of combinations of Gulf War exposures." However, several potential causes of GWI were deemed, "not likely to have caused Gulf War illness for the majority of ill veterans," including "depleted uranium, anthrax vaccine, fuels, solvents, sand and particulates, infectious diseases, and chemical agent resistant coating (CARC)," for which "there is little evidence supporting an association with Gulf War illness or a major role is unlikely based on what is known about exposure patterns during the Gulf War and more recent deployments."[42]

The VA's 2014 RAC report reinforced its 2008 report findings: "The research reviewed in this report supports and reinforces the conclusion in the 2008 RACGWVI report that exposures to pesticides and pyridostigmine bromide are causally associated with Gulf War illness. Evidence also continues to demonstrate that Gulf War illness is not the result of psychological stressors during the war." It also found additional evidence since the 2008 report for the role of sarin in GWI, but inadequate evidence regarding exposures to oil well fires, vaccines, and depleted uranium to make new conclusions about them.[11]

Oil well fires[edit]

During the war, many oil wells were set on fire in Kuwait by the retreating Iraqi army, and the smoke from those fires was inhaled by large numbers of soldiers, many of whom suffered acute pulmonary and other chronic effects, including asthma and bronchitis. However, firefighters who were assigned to the oil well fires and encountered the smoke, but who did not take part in combat, have not had GWI symptoms.[14](pp148, 154, 156) The 2008 RAC report states that "evidence [linking oil well fires to GWI] is inconsistent or limited in important ways."[42]

Anthrax vaccine[edit]

Iraq had loaded anthrax, botulinum toxin, and aflatoxin into missiles and artillery shells in preparing for the Gulf War and these munitions were deployed to four locations in Iraq.[43] During Operation Desert Storm, 41% of U.S. combat soldiers and 75% of UK combat soldiers were vaccinated against anthrax.[14](p73) Reactions included local skin irritation, some lasting for weeks or months.[44] While the Food and Drug Administration (FDA) approved the vaccine, it never went through large-scale clinical trials.[45]

While recent studies have demonstrated the vaccine is highly reactogenic,[46] and causes motor neuron death in mice,[47] there is no clear evidence or epidemiological studies on Gulf War veterans linking the vaccine to Gulf War illness. Combining this with the lack of symptoms from current deployments of individuals who have received the vaccine led the Committee on Gulf War Veterans' Illnesses to conclude that the vaccine is not a likely cause of Gulf War illness for most ill veterans.[9] However, the committee report does point out that veterans who received a larger number of various vaccines in advance of deployment have shown higher rates of persistent symptoms since the war.[48][9]

Combat stress[edit]

Research studies conducted since the war have consistently indicated that psychiatric illness, combat experience or other deployment-related stressors do not explain Gulf War veterans illnesses in the large majority of ill veterans, according to a U.S. Department of Veterans Affairs (VA) review committee.[*citation needed*]

An April 2010 Institute of Medicine review found, "the excess of unexplained medical symptoms reported by deployed [1991] Gulf war veterans cannot be reliably ascribed to any known psychiatric disorder",[49] although they also concluded that "the constellation of unexplained symptoms associated with the Gulf War illness complex could result from interplay between both biological and psychological factors."[50]

Pathobiology[edit]

Chronic inflammation[edit]

The 2008 VA report on *Gulf War illness and the Health of Gulf War Veterans* suggested a possible link between GWI and chronic, nonspecific inflammation of the central nervous system that cause pain, fatigue and memory issues, possibly due to pathologically persistent increases in cytokines and suggested further research be conducted on this issue.[51]

Diagnosis[edit]

Clinical diagnosis of Gulf War illness has been complicated by multiple case definitions. In 2014, the National Academy of Sciences Institute of Medicine (IOM)—contracted by the U.S. Department of Veterans Affairs for the task—released a report concluding that the creation of a new case definition for chronic multisymptom illness in Gulf War veterans was not possible because of insufficient evidence in published studies regarding its onset, duration, severity, frequency of symptoms, exclusionary criteria, and laboratory findings. Instead, the report recommended the use of two case definitions, the "Kansas" definition and the "Centers for Disease Control and Prevention (CDC)" definition, noting: "There is a set of symptoms (fatigue, pain, neurocognitive) that are reported in all the studies that have been reviewed. The CDC definition captures those three symptoms; the Kansas definition also captures them, but it also includes the symptoms reported most frequently by Gulf War veterans."[52]

The Kansas case definition is more specific and may be more applicable for research settings, while the CDC case definition is more broad and may be more applicable for clinical settings.[52]

Classification[edit]

Medical ailments associated with service in the 1990–1991 Gulf War have been recognized by both the U.S. Department of Defense and the U.S. Department of Veterans Affairs.[4]

Before 1998, the terms *Gulf War syndrome, Gulf War veterans' illness, unexplained illness*, and *undiagnosed illness* were used interchangeably to describe chronic unexplained symptoms in veterans of the 1991 Gulf War. The term *chronic multisymptom illness* (CMI) was first used following publication of a 1998 study[35] describing chronic unexplained symptoms in Air Force veterans of the 1991 Gulf War.[31]

In a 2014 report contracted by the U.S. Department of Veterans Affairs, the National Academy of Sciences Institute of Medicine recommended the use the term *Gulf War illness* rather than *chronic multisymptom illness*.[52] Since that time, relevant publications by the National Academy of Science and the U.S. Department of Defense have used only the term *Gulf War illness* (GWI).

The U.S. Department of Veterans Affairs (VA) confusingly still uses an array of both old and new terminology for *Gulf War illness*. VA's specialty clinical evaluation War Related Illness and Injury Study Centers (WRIISCs) use the recommended term *Gulf War illness*,[53] as do VA's Office of Research and Development (VA-ORD) and many recent VA research publications.[54] However, VA's Public Health website still uses *Gulf War veterans' medically unexplained illnesses*, *chronic multi-symptom illness* (CMI), and *undiagnosed illnesses*, but explains that VA doesn't use the term *Gulf War syndrome* because of varying symptoms.[55]

The Veterans Health Administration (VHA) originally classified individuals with related ailments believed to be connected to their service in the Persian Gulf a special non-ICD-9 code DX111, as well as ICD-9 code V65.5.[56]

Kansas definition[edit]

In 1998, the State of Kansas Persian Gulf Veterans Health Initiative sponsored an epidemiological survey led by Dr. Lea Steele of deployment-related symptoms in 2,030 Gulf War veterans. The result was a "clinically based descriptive definition using correlated symptoms" in six symptom groups: fatigue and sleep problems, pain, neurologic and mood, gastrointestinal, respiratory symptoms, and skin (dermatologic) symptoms.[52]

To meet the "Kansas" case definition, a veteran of the 1990–91 Gulf War must have symptoms in at least three of the six symptom domains, which during the survey were scored based on severity ("severity"). Symptom onset must have developed during or after deploying to the 1990–91 Gulf War theatre of operations ("onset") and must have been present in the year before interview ("duration"). Participants were excluded if they had a diagnosis of or were being treated for any of several conditions that might otherwise explain their symptoms ("exclusionary criteria"), including cancer, diabetes, heart disease, chronic infectious disease, lupus, multiple sclerosis, stroke, or any serious psychiatric condition.[52]

Applying the Kansas case definition to the original Kansas study cohort resulted in a prevalence of Gulf War illness of 34.2% in Gulf War veterans and 8.3% in nondeployed Gulf War era veterans, or an excess rate of GWI of 26.3% in Gulf War veterans.[52]

CDC definition[edit]

Also in 1998, a study published by Dr. Keiji Fukuda under the auspices of the U.S. Centers for Disease Control and Prevention (CDC) examined chronic multisymptom illness through a cross-sectional survey of 3,675 ill and healthy U.S. Air Force veterans of the 1990–91 Gulf War, including from a Pennsylvania-based Air National Guard unit and three comparison Air Force units. The CDC case definition was derived from clinical data and statistical analyses.[52]

The result was a symptom-category approach to a case definition, with three symptom categories: fatigue, mood–cognition, and musculoskeletal. To meet the case definition, the veteran of the 1990–91 Gulf War must have symptoms in two of the three categories and have experienced the illness for six months or longer ("duration").[52]

The original study also including a determination of severity of symptoms ("severity"). "Severe cases were identified if at least one symptom in each of the required categories was rated as severe. Of 1,155 participating Gulf War veterans, 6% had severe CMI, and 39% had mild to moderate CMI; of the 2,520 nondeployed era veterans Of 1,155 participating Gulf War veterans, 6% had severe CMI, and 39% had mild to moderate CMI; of the 2,520 nondeployed era veterans, 0.7% had severe and 14% had mild to moderate CMI."[52]

Treatment[edit]

A 2013 report by the Institute of Medicine reviewed the peer-reviewed published medical literature for evidence regarding treatments for symptoms

associated with *chronic multisymptom illness* (CMI) in 1990–91 Gulf War veterans, and in other chronic multisymptom conditions. For the studies the report reviewed that were specifically regarding CMI in 1990–91 Gulf War veterans (*Gulf War illness*), the report made the following conclusions:[31]

- Doxycycline: "Although the study of doxycycline was found to have high strength of evidence and was conducted in a group of 1991 Gulf War veterans who had CMI, it did not demonstrate efficacy; that is, doxycycline did not reduce or eliminate the symptoms of CMI in the study population."
- Cognitive Behavioral Therapy (CBT) and Exercise: "These studies evaluated the effects of exercise and CBT in combination and individually. The therapeutic benefit of exercise was unclear in those studies. Group CBT rather than exercise may confer the main therapeutic benefit with respect to physical symptoms."

The report concluded: "On the basis of the evidence reviewed, the committee cannot recommend any specific therapy as a set treatment for [Gulf War] veterans who have CMI. The committee believes that a 'one-size-fits-all' approach is not effective for managing [Gulf War] veterans who have CMI and that individualized health care management plans are necessary."[31]

By contrast, the U.S. Department of Defense (DoD) noted in a May 2018 publication that the primary focus of its Gulf War illness Research Program (GWIRP) "has been to fund research studies to identify treatment targets and test interventional approaches to alleviate symptoms. While most of these studies remain in progress, several have already shown varying levels of promise as GWI treatments."

According to the May 2018 DoD publication:[57][*excessive quote*]

> ***Published Results on Treatments***
>
> *The earliest federally funded multi-center clinical trials were VA- and DoD-funded trials that focused on antibiotic treatment (doxycycline) (Donta, 2004) and cognitive behavioral therapy with exercise (Donta, 2003). Neither intervention provided long-lasting improvement for a substantial number of Veterans.*
>
> *Preliminary analysis from a placebo-controlled trial showed that 100 mg of Coenzyme Q10 (known as CoQ10 or Ubiquinone) significantly improved general self-reported health and physical functioning, including among 20 symptoms, each of which was present in at least half of the study participants, with the exception of sleep. These improvements included reducing commonly reported symptoms of fatigue, dysphoric mood, and pain (Golomb, 2014). These results are currently being expanded in a GWIRP-funded trial of a "mitochondrial cocktail" for GWI of CoQ10 plus a number of nutrients chosen to support cellular energy production and defend against oxidative stress. The treatment is also being investigated in a larger, VA- sponsored Phase III trial of Ubiquinol, the reduced form of CoQ10.*
>
> *In a randomized, sham-controlled VA-funded trial of a nasal CPAP mask (Amin, 2011-b), symptomatic GW Veterans with sleep-disordered breathing receiving the CPAP therapy showed significant improvements in fatigue scores, cognitive function, sleep quality, and measures of physical and mental health (Amin, 2011a).*
>
> *Preliminary data from a GWIRP-funded acupuncture treatment study showed that Veterans reported significant reductions in pain and both primary and secondary health complaints, with results being more positive in the bi-weekly versus weekly treatment group (Conboy, 2012). Current studies funded by the GWIRP and the VA are also investigating yoga as a treatment for GWI.*
>
> *An amino acid supplement containing L-carnosine was found to reduce irritable bowel syndrome-associated diarrhea in a randomized, controlled GWIRP-funded trial in GW Veterans (Baraniuk, 2013). Veterans receiving L-carnosine showed a significant improvement in performance in a cognitive task, but no improvement in fatigue, pain, hyperalgesia, or activity levels.*
>
> *Results from a 26 week GWIRP-funded trial comparing standard care to nasal irrigation with either saline or a xylitol solution revealed that both irrigation protocols reduced GWI respiratory (chronic rhinosinusitis) and fatigue symptoms (Hayer, 2015).*
>
> *Administration of the glucocorticoid receptor antagonist mifepristone to GW Veterans in a GWIRP-funded randomized trial resulted in an improvement in verbal learning, but no improvement in self-reported physical health or other self-reported measures of mental health (Golier, 2016).*
>
> ***Ongoing Intervention Studies***
>
> *The GWIRP is currently funding many early-phase clinical trials aimed at GWI. Interventions include direct electrical nerve stimulation, repurposing FDA-approved pharmaceuticals, and dietary protocols and/or nutraceuticals. Both ongoing and closed GWIRP-supported clinical treatment trials and pilot studies can be found at http://cdmrp.army.mil/gwirp/resources/cinterventions.shtml.*
>
> *A Clinical Consortium Award was offered [in FY2017] to support a group of institutions, coordinated through an Operations Center that will conceive, design, develop, and conduct collaborative Phase I and II clinical evaluations of promising therapeutic agents for the management or treatment of GWI. These mechanisms were designed to build on the achievements of the previously established consortia and to further promote collaboration and resource sharing.*

The U.S Congress has made significant and continuing investment in DoD's Gulf War illness treatment research, with $129 million appropriated for the GWIRP between federal fiscal years (FY) 2006 and 2016.[58] The funding has risen from $5 million in FY2006, to $20 million each year from FY2013 through FY2017,[59] and to $21 million for FY2018.[60]

Prognosis[edit]

According to the May 2018 DoD publication cited above, "Research suggests that the GWI symptomology experienced by Veterans has not improved over the last 25 years, with few experiencing improvement or recovery ... . Many [Gulf War] Veterans will soon begin to experience the common co-morbidities associated with aging. The effect that aging will have on this unique and vulnerable population remains a matter of significant concern, and population-based research to obtain a better understanding of mortality, morbidity, and symptomology over time is needed."[57]

Prevalence[edit]

The 2008 and 2014 VA (RAC) reports and the 2010 IOM report found that the chronic multisymptom illness in Gulf War veterans—Gulf War illness—is more prevalent in Gulf War veterans than their non-deployed counterparts or veterans of previous conflicts.[9][11][49] While a 2009 study found the pattern of comorbidities similar for actively deployed and nondeployed Australian military personnel, the large body of U.S. research reviewed in the VA and IOM reports showed the opposite in U.S. troops.[61] The VA's 2014 RAC report found Gulf War illness in "an excess of 26–32 percent of Gulf War veterans compared to nondeployed era veterans" in pre-2008 studies, and "an overall multisymptom illness prevalence of 37 percent in Gulf War veterans and an excess prevalence of 25 percent" in a later, larger VA study.[11]

According to a May 2018 report by the U.S. Department of Defense, "GWI is estimated to have affected 175,000 to 250,000 of the nearly 700,000 troops deployed to the 1990–1991 GW theater of operations. Twenty-seven of the 28 Coalition members participating in the GW conflict have reported GWI in their troops. Epidemiologic studies indicate that rates of GWI vary in different subgroups of GW Veterans. GWI affects Veterans who served in the U.S. Army and Marines Corps at higher rates than those who served in the Navy and Air Force, and U.S. enlisted personnel are affected more than officers. Studies also indicate that GWI rates differ according to where Veterans were located during deployment, with the highest rates among troops who served in forward areas."[57]

Research[edit]

Epidemiologic studies have looked at many suspected causal factors for Gulf War illness as seen in veteran populations. Below is a summary of epidemiologic studies of veterans displaying multisymptom illness and their exposure to suspect conditions from the 2008 U.S. Department of Veterans Affairs report.[62]

A fuller understanding of immune function in ill Gulf War veterans is needed, particularly in veteran subgroups with different clinical characteristics and exposure histories. It is also important to determine the extent to which identified immune perturbations may be associated with altered neurological and endocrine processes that are associated with immune regulation.[63] Very limited cancer data have been reported for U.S. Gulf War veterans in general, and no published research on cases occurring after 1999. Because of the extended latency periods associated with most cancers, it is important that cancer information is brought up to date and that cancer rates be assessed in Gulf War veterans on an ongoing basis. In addition, cancer rates should be evaluated in relation to identifiable exposure and location subgroups.[64]

[...]

Controversies[edit]

An early argument in the years following the Gulf War was that similar syndromes have been seen as an after effect of other conflicts — for example, "shell shock" after World War I, and post-traumatic stress disorder (PTSD) after the Vietnam War.[66] Cited as evidence for this argument was a review of the medical records of 15,000 American Civil War soldiers showing that "those who lost at least 5% of their company had a 51% increased risk of later development of cardiac, gastrointestinal, or nervous disease."[67]

Early Gulf War research also failed to accurately account for the prevalence, duration, and health impact of Gulf War illness. For example, a November 1996 article in the *New England Journal of Medicine* found no difference in death rates, hospitalization rates, or self-reported symptoms between Persian Gulf veterans and non-Persian Gulf veterans. This article was a compilation of dozens of individual studies involving tens of thousands of veterans. The study did find a statistically significant elevation in the number of traffic accidents suffered by Gulf War veterans.[68] An April 1998 article in *Emerging Infectious Diseases* similarly found no increased rate of hospitalization and better health on average for veterans of the Persian Gulf War in comparison to those who stayed home.[69]

In contrast to those early studies, in January 2006, a study led by Melvin Blanchard published in the *Journal of Epidemiology*, part of the "National Health Survey of Gulf War-Era Veterans and Their Families", found that veterans deployed in the Persian Gulf War had nearly twice the prevalence of chronic multisymptom illness, a cluster of symptoms similar to a set of conditions often at that time called Gulf War Syndrome.[70]

> Louis Jones Jr. claimed Gulf War syndrome as a defense in his murder trial

On November 17, 2008, the Department of Veterans Affairs (VA) Research Advisory Committee on Gulf War Veterans' Illnesses (RAC), a Congressionally mandated federal advisory committee composed of VA-appointed clinicians, researchers, and representative Gulf War veterans,[71] issued a major report announcing scientific findings, in part, that "*Gulf War illness is real*", that GWI is a distinct physical condition, and that it is not psychological in nature. The 454 page report reviewed 1,840 published studies to form its conclusions identifying the high prevalence of Gulf War illness, suggesting likely causes rooted in toxic exposures while ruling out combat stress as a cause, and opining that treatments likely could be found. It recommended that Congress increase funding for treatment-focused Gulf War illness research to at least $60 million per year.[72][42]

In March 2013, a hearing was held before the Subcommittee on Oversight and Investigations of the Committee on Veterans' Affairs, U.S. House of Representatives, to determine not whether Gulf War illness exists, but rather how it is identified, diagnosed and treated, and how the tools put in place to aid these efforts have been used.[73]

By 2016, the National Academy of Sciences, Engineering, and Medicine (NASEM) concluded there was sufficient evidence of a positive association between deployment to the 1990–1991 Gulf War and Gulf War illness.[74]

Jones controversy[edit]

Louis Jones Jr., the perpetrator of the 1995 murder of Tracie McBride, stated that the Gulf War syndrome caused him to commit the crime and he sought clemency, hoping to avoid the death penalty given to him by a federal court.[75] Jones was executed in 2003.[76]

Related legislation[edit]

On March 14, 2014, Representative Mike Coffman introduced the Gulf War Health Research Reform Act of 2014 (H.R. 4261; 113th Congress) into the United States House of Representatives, where it passed the House by unanimous consent but then died in Congress when the Senate failed to take action on it.[77] The bill would have altered the relationship between the Research Advisory Committee on Gulf War Veterans' Illnesses (RAC) and the United States Department of Veterans Affairs (VA) under which the RAC is constituted. The bill would have made the RAC an independent organization within the VA, require that a majority of the RAC's members be appointed by Congress instead of the VA, and authorized the RAC to release its reports without needing prior approval from the VA Secretary.[78][79] The RAC is responsible for investigating Gulf War illness, a chronic multisymptom disorder affecting returning military veterans of the 1990–91 Gulf War.[4]

In the year prior to the consideration of this bill, the VA and the RAC were at odds with one another.[79] The VA replaced all but one of the members of the RAC, removed some of their supervisory tasks, tried to influence the board to decide that stress, rather than biology was the cause of Gulf War illness, and told the RAC that it could not publish reports without permission.[79] The RAC was created after Congress decided that the VA's research into the issue was flawed, and focused on psychological causes, while mostly ignoring biological ones.[79]

The RAC was first authorized under the Veterans Programs Enhancement Act of 1998 (Section 104 of Public Law 105-368, enacted November 11, 1998, and now codified as 38 U.S.C. § 527 note).[21][22] While the law directing its creation mandated that it be established not later than January 1, 1999,[22] the RAC's first charter was not issued until January 23, 2002, by VA Secretary Anthony Principi.[80] The RAC convened for its first meetings on April 11–12, 2002.[14]

See also[edit]

- Organophosphate-induced delayed neuropathy
- Environmental issues with war
- Michael Donnelly, an activist for sufferers of Gulf War illness
- Posttraumatic stress disorder
- Burn pits

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A B C D E F G H I J K L M N O P Q R S T U V W X Y Z

PEOPLE (by last name / then D.o.B.)

- Dr. William Arthur Hagan (born 1893)
- Stefan Alan **Halper** (born 1944)
- Lewis Bradley **Harder** (born 1918)
- Robert Lewis **Harris** (born 1937)
- Sally Swisher **Heet** (born 1950)
- Richard McGarrah **Helms** (born 1913)
- William W **Herrmann** (born 1936)
- Dr. David Lowell **Heymann** (born 1946)
- Melissa Ripton **Hodgman** (born 1968)
- Steve Michael **Hotz** (born 1963)
- Fred **Hutchinson** Cancer Research Center

PLACES / COMPANIES / OTHER

- "The **Hot Zone**" (book, 1994)
- **Housatonic.Live**
- **Humanized mice**
- **Humanized mouse**

Dr. William Arthur Hagan (born 1893)

Bio from Cornell -

See [HE001W][GDrive]

William Arthur Hagan October 14, 1893 — February 1, 1963 Professor Emeritus William Arthur Hagan died at the age of sixty-nine while on a plane traveling from New York to London. He was associated with Cornell University for over forty-six years as a graduate student, teacher, Dean, and Professor Emeritus. He retired from active service as Dean of the Veterinary College June 30, 1959, and became director of the National Animal Disease Laboratory at Ames, Iowa, a position that he held at the time of his death. His name is inextricably linked with the marked advancement of veterinary medicine during the past half-century.Born at Fort Scott, Kansas on October 14, 1893, **William Arthur Hagan received his preparatory education in Kansas schools and studied at Kansas State College, Manhattan, where he received the degree of Doctor of Veterinary Medicine in 1915**. He remained there for one year as an assistant in pathology and then came to Cornell in 1916 as an instructor in obstetrics. In 1917, he received the M.S. and was appointed instructor in pathology and bacteriology. He became Assistant Professor of Bacteriology in 1918 and Professor in 1919. In 1926, he was selected to head the Department of Pathology and Bacteriology. **Then in 1932, at the age of thirty-eight he was made Dean of the Veterinary College just sixteen years after he arrived at Cornell**.In addition to his exceptional mental endowment, Dr. Hagan possessed abundant energy and a great capacity for work. Not only were his regular duties more than adequately performed, but he successfully dealt with many other commitments. He was an assistant in the Department of Animal Pathology of the Rockefeller Institute in 1921-1922. He was a member of the American Veterinary Medical Association Committee and Council on Education 1938-1950. During the year 1943-1944 he was special assistant to Dr. A. W. Miller, United States Department of Agriculture. He served on the executive board of the American Veterinary Medical Association for five years and was chairman in 1944-1945. Following World War II, in 1945, he was appointed to membership on the United States Control Council in Germany, to aid in the rehabilitation of German veterinary colleges. I**n 1946-47, he was a member of the Secretary of Agriculture's Advisory Committee on Foot-and-Mouth Disease and contributed to the establishment of a United State Department of Agriculture center for research on this disease at Plum Island, New York**. He was elected president of the American Veterinary Medical Association for 1947-1948. In 1947, Governor Dewey appointed him to the New York Food Commission to recommend measures "to meet the present critical situation with respect to food and proper nutrition." In 1949, he became a member of the executive committee of

the Association of Land Grant Colleges and Universities. He served for many years as the United States member of the Permanent Committee of the International Veterinary Congresses. He was a delegate to the fifteenth International Veterinary Congress held at Stockholm in 1953 and Chairman of the United States Committee to the sixteenth International Veterinary Congress held in Madrid in 1959. In 1954, he was made Civilian National Veterinary Consultant to the Surgeon General of the United States. Two years later he was selected by the Secretary of Agriculture as Chairman of the Advisory Committee to Eradicate Brucellosis. In 1958 he headed a delegation of six veterinarians who visited the Soviet Union to study its livestock industry. During the following year he served as trustee of the Morris Animal Foundation, represented the American Veterinary Medical Association on the Ralston Purina Research Fellowship Awards Committee, and was elected vice president of the World Veterinary Association. He was also a member of many professional organizations.His many activities, in addition to the administration of the New York State Veterinary College, did not occupy all of Dr. Hagan's time, for he achieved a notable record in research and writing. He published more than 126 scientific articles. He was a contributor to Stedman's Medical Dictionary and to numerous other professional books. He was author of the textbook, The Infectious Diseases of Domestic Animals, which appeared in 1943 and is now in its fourth edition. A co-author, D. W. Bruner, was enlisted beginning with the second edition.The many accomplishments of Dr. Hagan did not go unrecognized, and numerous honors were awarded him. **As early as 1925 the International Education Board designated him a European Fellow with the privilege of attending the Robert Koch Institute for Infectious Diseases in Berlin for one year.** In 1938, he was granted the honorary degree, D.Sc., by Kansas State University. In 1941, he was presented with the Silver Beaver award, the highest mark of recognition in the scout movement, by the Louis Agassiz Fuertes Scout Council. In 1948 he was made Veterinarian of the Year on the basis of a nationwide poll conducted by Gaines Dog Research Center. Ten years later the New York State Veterinary Medical Association chose him as their Veterinarian of the Year. Honorary memberships were conferred upon him by the Royal College of Veterinary Surgeons, Great Britain; the Royal Veterinary Society, Sweden; the Hellenic National Veterinary Society, Greece; and the Veterinary Academy, France. In 1959, he was cited by the New York State Conference Board of Farm Organizations for outstanding services to agriculture. He was the winner of the Twelfth International Veterinary Congress prize in 1960 and of the American Veterinary Medical Association annual award in 1962. The honorary degree, LL.D., was conferred on him by the University of Toronto in 1962. His name appears in Who's Who in America.

The modern veterinary buildings at Cornell are a testimonial to his foresight, planning, and efforts. As memorials to Dr. Hagan, the New York State Veterinary Alumni Association in 1960 established the Hagan Student Loan Fund at Cornell, and in 1962 the faculty meeting room in the Veterinary College was designated "The Hagan Room."Dr. Hagan's reputation as an international figure in the field of veterinary education was based on solid ground. In the area of research he made important contributions to our knowledge of brucellosis and paratuberculosis. He was an excellent lecturer, writer, and teacher. He continued to teach a course in infectious diseases in the New York State Veterinary College until he retired. He was in constant demand everywhere as a lecturer and as an authority on all matters pertaining to veterinary medicine.The interests of this truly educated man were not limited to veterinary medicine. He was amazingly well informed in many fields. Regardless of the demands on his time, he was never too busy to discuss any problem with a student, staff member, or with anyone else who wished his counsel. He possessed an engaging personality, a great love of life, a keen sense of humor, and an interest in everything. He had a large circle of friends who will forever miss him.He married Esther Grace Lyon August 29, 1917, in Nickerson, Kansas. Their children are a son, William L. Hagan of Norwalk, Connecticut, and two daughters, Miss Janet Ann Hagan of New York City and Mrs. John L. Hyde of Southold, Long Island. Other survivors are five grandchildren; a brother, James S. Hagan of Los Altos, California; two nieces; and a nephew.Donald W. Baker, Myron G. Fincher, Dorsey W. Brun

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Housatonic

Stefan Alan Halper (born 1944)

[HX000Y][GDrive]

Wikipedia Stefan Halper

Note - Middle Name - On the 1990 marriage certificate is is "Alan". [HL005Q][GDrive]

Associations

- Ray Steiner Cline (born 1918) (Father of Stefan Halper's second wife)
- Andrew Walter Marshall (born 1921) (In 2013, **Stefan Halper** prepared a report known as "China: The Three Warfares" for **Andrew Marshall**, the Director of the Office of Net)
- David Friedman Epstein (born 1951) (Office of Net Assessment contracts, where Stefan Halper had contacts with)
-

Saved Wikipedia (Nov 19, 2020) - Stefan Halper

See [HK003H][GDrive]

Born June 4, 1944 (age 76)

Nationality American

Education

- Stanford University (BA)
- University of Oxford (PhD)
- University of Cambridge (PhD)

Occupation Professor

Stefan A. Halper (born June 4, 1944) is an American foreign policy scholar and retired Senior Fellow at the University of Cambridge where he is a Life Fellow at Magdalene College.[1] He served as a White House official in the Nixon, Ford, and Reagan administrations, and was reportedly in charge of the spying operation by the 1980 Ronald Reagan presidential campaign that became known as "Debategate". Through his decades of work for the CIA, Halper has had extensive ties to the Bush family.[2] Through his work with Sir Richard Billing Dearlove, he had ties to the British Secret Intelligence Service MI6.

Halper acted as an FBI informant during the bureau's investigation into Russian interference in the 2016 United States elections. A subsequent Inspector General report later named Halper as a "confidential human source", reporting on the conversations of officials within the Donald Trump campaign. [3][4]

Education

Halper[5] graduated from Stanford University in 1967.[6] *[NOTE - This means he would have started there for the 1963-1964 school year.* ***Donald Barr (born 1921)*** *became headmaster at Dalton in 1964. It is not clear if they met. [HN00JU][GDrive]]* Halper received a Ph.D. from the University of Oxford in 1971.[6] He was appointed Director of American Studies at the University of Cambridge's longstanding Department of Politics and International Studies in 2001.[1][6] He received a second Ph.D. from the University of Cambridge in 2004.[6]

Career

United States government (1971–1984)

Halper began his United States government career in 1971 in the United States Domestic Policy Council, part of the executive office of the president, serving until 1973.[6] He then served in the office of management and budget until 1974, when he moved to the office of the White House chief of staff as assistant to the chief of staff where he had responsibility for a range of domestic and international issues. During this time, **Halper worked as an assistant for three chiefs of staff, Alexander Haig, Donald Rumsfeld, and Dick Cheney. He held this position until January 20, 1977**.[6]

In 1977, Halper became Special Counsel to the Congressional Joint Economic Committee and Legislative Assistant to Senator William Roth (R-Del.).[6] In 1979 he became National Policy Director for George H. W. Bush's Presidential campaign and then in 1980 he became Director of Policy Coordination for the Reagan- Bush Presidential campaign.[6]

Halper played a central role in a scandal in the 1980 election. But it was not until several years after Reagan's victory over Carter that this scandal emerged. In connection with his position Halper's name came up in the 1983/4 investigations into the Debategate affair, which was a spying scandal in which Central Intelligence Agency (CIA) officials passed classified information about Carter administration's foreign policy to Reagan campaign officials in order to ensure the Reagan campaign knew of any foreign policy decisions that Carter was considering (Iran hostage crisis). Reagan Administration officials cited by *The New York Times* described Halper as "the person in charge" of the operation.[7][8] Halper called the report "just absolutely untrue".[9]

In 1983, United Press International (UPI) suggested that Halper's handler for this operation was Reagan's Vice Presidential candidate, ex-CIA-Director George H. W. Bush, who worked with Halper's father-in-law, ex-CIA-Deputy-Director [**Ray Steiner Cline (born 1918)**] .[9] After Reagan entered the White House, Halper became Deputy Assistant Secretary of State for Political-Military Affairs.[6] Upon leaving the Department in 1984, he remained a Senior Advisor to the Department of Defense and a Senior Advisor to the Department of Justice until 2001.[6][2][10]

Business (1984–1990)

From 1984 to 1990 Halper was chairman and majority shareholder of the Palmer National Bank of Washington, D.C., the National Bank of Northern Virginia and the George Washington National Bank.[6] Palmer National Bank was used to transfer money to Swiss Bank Accounts controlled by White House aid Oliver North.[11]

According to Peter Dale Scott's book *The Iran-Contra Connection: Secret Teams and Covert Operations in Reagan Era* on the Iran–Contra affair, Ray Cline's son-in-law Roger Fontaine "made at least two visits to Guatemala in 1980 ... (with General Sumner) drafting the May 1980 Santa Fe Statement, which said that World War III was already underway in Central America against the Soviets and that Nicaragua was the enemy. And some Reagan aides felt that Halper "was receiving information from the CIA."[12]

The Palmer National Bank, where Halper worked, was described as "the D.C. hub by which Lt. Col. Oliver North sent arms and money to the anti-Sandinista guerrilla Contras in Nicaragua. One of Palmer's founders, Stefan Halper, had no previous banking experience, but was George H.W. Bush's foreign policy director during Bush's unsuccessful 1980 presidential campaign." [13]

Academic and media (1986–2000)

From 1986 to 2000 Halper wrote a national security and foreign policy-focused weekly newspaper column, syndicated to 30 newspapers.[6]

Halper has worked as a senior foreign policy advisor to various think-tanks and research institutions, including the Center for Strategic and International Studies, and The Center for the National Interest, where he is a Distinguished Fellow. He has served on the Advisory Board of Directors of the Paul H. Nitze School of Advanced International Studies and contributed to various magazines, journals, newspapers and media outlets. These include: *The Washington Post*, *Los Angeles Times*, *The Wall Street Journal*, the BBC, CNN, SKY NEWS, ABC, CBS, NBC, C-Span, and a range of radio outlets.

Professor Halper is a member of the Cosmos Club in Washington D.C., and the Travellers Club in London.

United States government research (2012–2016)

From 2012 to 2016 Halper received $1 million in contracts for "social sciences and humanities" research from the Defense department's Office of Net Assessment, some of which Halper subcontracted to other researchers. Forty percent of the money had been awarded before Trump announced his candidacy in 2015.[14]

Secretive opposition research for the 1980 Reagan Campaign

The New York Times reported that for Ronald Reagan's 1980 campaign, Halper was the "person in charge" of running a "highly secretive" operation to get "inside information" about the Carter Administration's foreign policy and pass it to the Reagan campaign. Halper was running the operation out of Reagan's campaign headquarters according to Reagan Administrative officials. Those sources also said that several other retired Central Intelligence Agency officials were involved in the operation. Halper had been the deputy director of the State Department's Bureau of Political-Military Affairs shortly before

taking on the operation research assignment. Halper was officially a campaign aide responsible for providing 24 hour news updates and policy ideas. Halper, worked under Robert Garrick, the director of campaign operations, who in a telephone interview said that Halper was *supposed to help with communications, but I kind of thought he had another agenda going -he was always on the phone with the door closed, and he never called me in and discussed it with me.* David Prosperi, another Reagan campaign aide, said, *He provided us with wire stories and Carter speeches, but people talked about his having a network that was keeping track of things inside the Government, mostly in relation to the October Surprise.* Ray S. Cline, Halper's father-in-law and a former senior Central Intelligence official, dismissed the Reagan aides' disclosures as a *romantic fallacy.*[15]

FBI Operation 'Crossfire Hurricane'

Halper acted as an FBI informant for Crossfire Hurricane, the FBI's investigation into Russian interference in the 2016 United States elections, and was a subject of the Spygate conspiracy theory initiated by President Donald Trump in May 2018. His FBI handler, initially identified only as "Case Agent 1", was later identified as Stephen M. Somma, a counterintelligence investigator.[16] Trump's theory falsely alleges that the Obama administration implanted a paid spy in the 2016 Trump campaign "for political purposes" to gather information in support of Hillary Clinton's candidacy.[17][18] Beginning in summer 2016, Halper spoke separately to three Trump campaign advisers – Carter Page, Sam Clovis and George Papadopoulos – but there is no evidence that Halper had actually joined Trump's campaign. Halper first met Carter Page at a symposium at the University of Cambridge organized by Steven Schrage.[19]

Page said that he "had extensive discussions" with Halper on "a bunch of different foreign-policy-related topics", ending in September 2017.[20] A former federal law enforcement official told *The New York Times* that their initial encounter at a London symposium on July 11–12, 2016 was a coincidence, rather than at the direction of the FBI.[21][20] Clovis's attorney said that Clovis and Halper had discussed China during their sole meeting on August 31 or September 1, 2016.[20] On September 2, 2016, Halper contacted Papadopoulos, inviting him to London and to write a paper on Mediterranean oil fields, which he did.[20] On September 15, 2016, Halper asked Papadopoulos if he knew of any Russian efforts to disrupt the election campaign; Papadopoulos twice denied he did, despite Joseph Mifsud telling him the previous April that Russians had embarrassing Hillary Clinton emails, and Papadopoulos bragging about it to Alexander Downer in May. *The New York Times* reported in April 2019 that the FBI had asked Halper to approach Page and Papadopoulos, although it was not clear if he had been asked to contact Clovis.[22] In May 2019, the *Times* reported that Page had urged Halper to meet with Clovis and that the FBI was aware of the meeting but had not instructed Halper to ask Clovis about Russia matters. The *Times* also reported that the FBI also sent an investigator using the name Azra Turk to meet with Papadopoulos, while posing as Halper's assistant. The *Times* stated that the FBI considered it essential to add a trained and trusted investigator like Turk as a "layer of oversight", in the event the investigation was ultimately prosecuted and the government needed the credible testimony of such an individual, without exposing Halper as a longtime confidential informant.[23]

Trump's Spygate allegations were rebutted,[23][24][25] despite renewed interest in April 2019 after attorney general William Barr testified to Congress that "spying did occur" on the Trump campaign, although his characterization of "spying" was unambiguous and he was specific. He stated he was assembling a team to examine the matter. His statement was based upon the Justice Department inspector general report and who had been looking into it and related matters for some time. Prior to his 2016 activities, Halper had a February 2014 encounter at a London intelligence conference with Michael Flynn, then the head of the Defense Intelligence Agency (DIA) and later a Trump supporter and first national security advisor. Halper became so alarmed by Flynn's close association with a Russian woman that a Halper associate expressed concerns to American authorities that Flynn may have been compromised by Russian intelligence. Flynn was forced out of the DIA six months later, although public accounts at the time cited other reasons for his removal, including his management style and views on Islam.[26]

Lawsuit

The "Russian" woman, former Cambridge academic Svetlana Lokhova sued Halper in 2019 for $25 million,[27] alleging he had conspired with multiple news outlets to spread the false and salacious narrative that she had seduced Flynn on orders from the Russian government. [28] Halper filed a response to the lawsuit in which he declared that he is entitled to the legal immunity ordinarily afforded to federal agents, "even if the lawsuit's allegations are true". Halper's motion to dismiss stated in part:"Private individuals who participate in FBI investigations are subject to the federal common law qualified immunity applicable to government agents." [29]

Department of Justice Report

A 2019 Department of Justice report, according to the New Your Times, reports that an undercover F.B.I. agent posed as Mr. Halper's assistant during a 2016 London meeting with George Papadopoulos. However, the report's author, Michael Horowitz, did not find any evidence that Mr. Halper tried to infiltrate the Trump campaign. [1]

Consideration for Trump administration role

Axios reported in May 2018 that during the transition Trump top trade advisor Peter Navarro had recommended Halper for an ambassadorship.[30]

Personal life

Halper's former wife, Sibyl Cline, is the daughter of the former CIA deputy director for intelligence, Ray S. Cline.[8]

He retired from Cambridge University in 2015, and now lives in Virginia in the U.S. He consults for Crossword Cybersecurity chaired by Sir Richard Dearlove, the former head of MI6.[31]

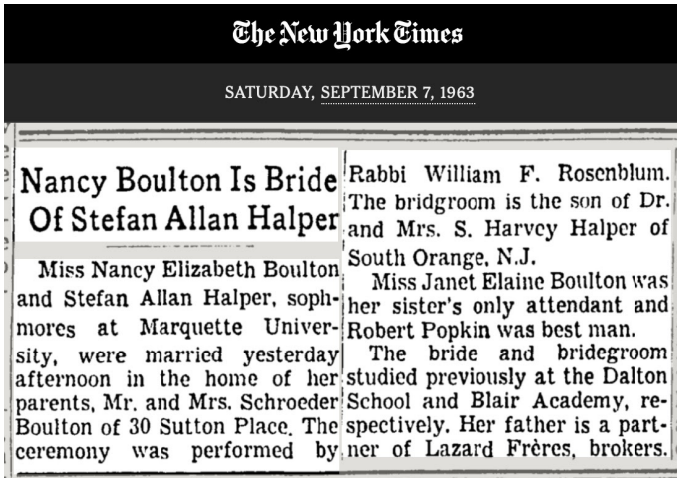
Books

He is the co-author of the bestselling book *America Alone: The Neo-Conservatives and the Global Order*, published by the Cambridge University Press in 2004, and also co-author of *The Silence of the Rational Center: Why American Foreign Policy is Failing* (2007). In April 2010, his book *The Beijing Consensus: Legitimizing Authoritarianism in Our Time* was published by Basic Books. Also a bestseller, it has been published in Japan, Taiwan, China, South Korea, and France.[*citation needed*]

Awards

Halper is a recipient of the State Department's Superior Honor Award, the Justice Department's Director's Award, and the Defense Department's Superior Honor Award.

1963 (Sep 07) - First wedding



The New York Times

SATURDAY, SEPTEMBER 7, 1963

Nancy Boulton Is Bride Of Stefan Allan Halper

Miss Nancy Elizabeth Boulton and Stefan Allan Halper, sophmores at Marquette University, were married yesterday afternoon in the home of her parents, Mr. and Mrs. Schroeder Boulton of 30 Sutton Place. The ceremony was performed by Rabbi William F. Rosenblum. The bridgroom is the son of Dr. and Mrs. S. Harvey Halper of South Orange, N.J.

Miss Janet Elaine Boulton was her sister's only attendant and Robert Popkin was best man.

The bride and bridegroom studied previously at the Dalton School and Blair Academy, respectively. Her father is a partner of Lazard Frères, brokers.

[HN01BJ][GDrive]

Notes on Father-in-law : Schroeder Boulton

Father in law - https://www.nytimes.com/2000/02/23/business/schroeder-boulton-91-wall-st-executive.html

Schroeder Boulton, 91, Wall St. Executive

Feb. 23, 2000

Schroeder Boulton, a 67-year veteran of Wall Street, died on Feb. 13 at his home in Greenwich Village. He was 91 years old.

Mr. Boulton was fond of saying that he was one of just four people who began their careers on Wall Street in the depth of the Depression. He was hired in 1931 to be a research trainee at Baker, Weeks & Harden. In 1936, he graduated from Columbia University, receiving a degree in business.

He went on to work at Lazard Freres & Company and Jesup & Lamont. He retired two years ago as first vice president of Tucker Anthony Inc.

Mr. Boulton was born in Brooklyn in 1909. He was a grandson of Frederick Schroeder, mayor of the City of Brooklyn and founder of the Germania Bank.

In 1935 he married Marjorie Clayton; she died in 1964.

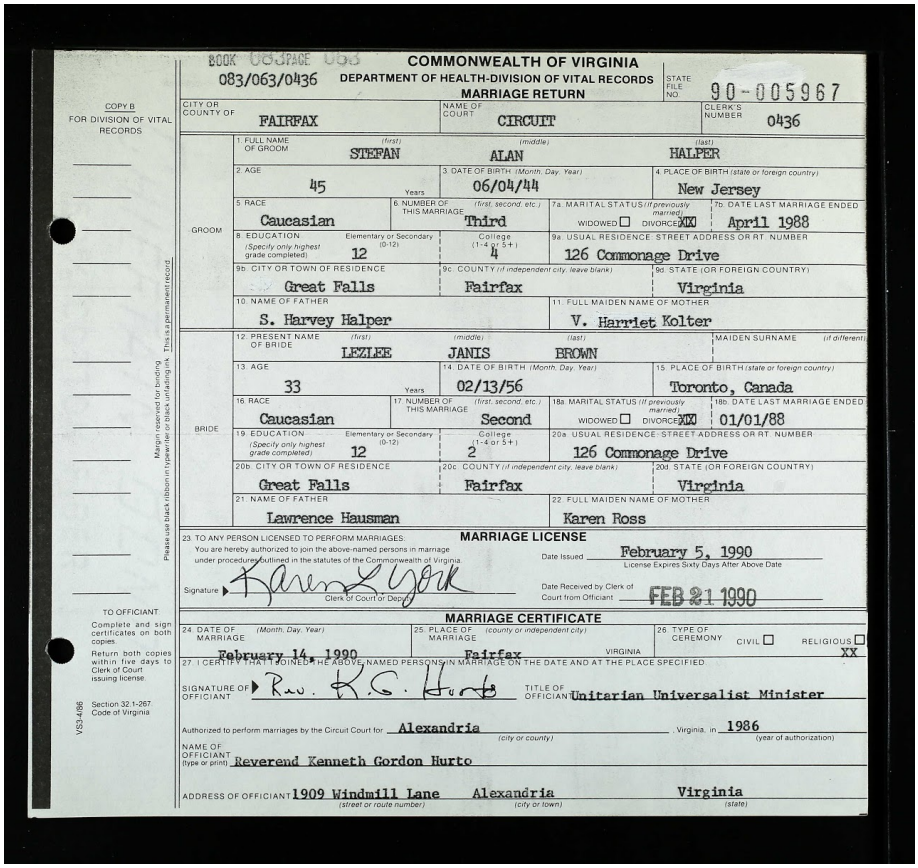
A year later he married Dr. Mary Holzman Bancroft, a psychotherapist who died in 1998.

Mr. and Dr. Boulton were outspoken supporters of the civil rights movement and their Greenwich Village apartment was known as a meeting place for civil rights workers.

His daughter, Nancy Boulton-LeGates, remembers driving through a neighborhood when she was 5 years old and asking her father why anyone would want to live there. She said he answered: "Some people don't have a choice. They need to be helped, and it's our role in life to help them."

Mr. Boulton is survived by two daughters, Janet Boulton, of New York, and **Nancy Boulton-LeGates**, of Lincoln, Mass.; and three stepsons, Carter Bancroft, of Huntington, N.Y., and Michael and John Bancroft, both of Seattle.

1992 - Wedding (3rd) - to Lezlee Janis Brown



BOOK 083 PAGE 063
083/063/0436

COMMONWEALTH OF VIRGINIA
DEPARTMENT OF HEALTH-DIVISION OF VITAL RECORDS
MARRIAGE RETURN

STATE FILE NO. 90-005967

COPY B
FOR DIVISION OF VITAL RECORDS

CITY OR COUNTY OF: FAIRFAX
NAME OF COURT: CIRCUIT
CLERK'S NUMBER: 0436

Please use black ribbon in typewriter or check printing. This is a permanent record.
Misuse covered by penalty of law.

GROOM

1. FULL NAME OF GROOM (first)	STEFAN	(middle) ALAN	(last) HALPER
2. AGE	45 Years	3. DATE OF BIRTH (Month. Day. Year)	06/04/44
4. PLACE OF BIRTH (state or foreign country)	New Jersey		
5. RACE	Caucasian	6. NUMBER OF THIS MARRIAGE (first, second, etc.)	Third
7a. MARITAL STATUS (If previously married)	WIDOWED ☐ DIVORCED XX	7b. DATE LAST MARRIAGE ENDED	April 1988
8. EDUCATION (Specify only highest grade completed)	Elementary or Secondary (0-12): 12	College (1-4 or 5+): 4	
9a. USUAL RESIDENCE: STREET ADDRESS OR RT. NUMBER	126 Commonage Drive		
9b. CITY OR TOWN OF RESIDENCE	Great Falls	9c. COUNTY (If independent city, leave blank)	Fairfax
9d. STATE (OR FOREIGN COUNTRY)	Virginia		
10. NAME OF FATHER	S. Harvey Halper	11. FULL MAIDEN NAME OF MOTHER	V. Harriet Kolter

BRIDE

12. PRESENT NAME OF BRIDE (first)	LEZLEE	(middle) JANIS	(last) BROWN
MAIDEN SURNAME (if different)			
13. AGE	33 Years	14. DATE OF BIRTH (Month. Day. Year)	02/13/56
15. PLACE OF BIRTH (state or foreign country)	Toronto, Canada		
16. RACE	Caucasian	17. NUMBER OF THIS MARRIAGE (first, second, etc.)	Second
18a. MARITAL STATUS (If previously married)	WIDOWED ☐ DIVORCED XX	18b. DATE LAST MARRIAGE ENDED	01/01/88
19. EDUCATION (Specify only highest grade completed)	Elementary or Secondary (0-12): 12	College (1-4 or 5+): 2	
20a. USUAL RESIDENCE: STREET ADDRESS OR RT. NUMBER	126 Commonage Drive		
20b. CITY OR TOWN OF RESIDENCE	Great Falls	20c. COUNTY (If independent city, leave blank)	Fairfax
20d. STATE (OR FOREIGN COUNTRY)	Virginia		
21. NAME OF FATHER	Lawrence Hausman	22. FULL MAIDEN NAME OF MOTHER	Karen Ross

MARRIAGE LICENSE

23. TO ANY PERSON LICENSED TO PERFORM MARRIAGES:
You are hereby authorized to join the above-named persons in marriage under procedures outlined in the statutes of the Commonwealth of Virginia.

Signature: Karen L York
Clerk of Court or Deputy

Date Issued: February 5, 1990
License Expires Sixty Days After Above Date

Date Received by Clerk of Court from Officiant: FEB 21 1990

MARRIAGE CERTIFICATE

24. DATE OF MARRIAGE (Month. Day. Year)	25. PLACE OF MARRIAGE (county or independent city) VIRGINIA	26. TYPE OF CEREMONY CIVIL ☐ RELIGIOUS XX
February 14, 1990	Fairfax	

27. I CERTIFY THAT I JOINED THE ABOVE-NAMED PERSONS IN MARRIAGE ON THE DATE AND AT THE PLACE SPECIFIED.

SIGNATURE OF OFFICIANT: Rev. K.G. Hurto
TITLE OF OFFICIANT: Unitarian Universalist Minister

Authorized to perform marriages by the Circuit Court for Alexandria (city or county), Virginia, in 1986 (year of authorization)

NAME OF OFFICIANT (type or print): Reverend Kenneth Gordon Hurto

ADDRESS OF OFFICIANT: 1909 Windmill Lane (street or route number) Alexandria (city or town) Virginia (state)

TO OFFICIANT:
Complete and sign certificates on both copies.
Return both copies within five days to Clerk of Court issuing license.

VS3-486 Section 32.1-267, Code of Virginia

[HL005Q][GDrive]

https://meaninginhistory.blogspot.com/2019/11/looks-like-durhams-doing-deep-dive-on.html

Stefan Halper...Stephen Halper...what good spook doesn't have at least a couple of names...

At one time -- in 1963 -- he was Stefan Allan Halper, when he married his first first wife, and his father was Dr. S. Harvey Halper See: https://timesmachine.nytimes.com/timesmachine/1963/09/07/82147616.html?pageNumber=17

Later on he was Stefan Alan Halper (and sometimes Stefan A. Halper) when he married his second first wife, Sibyl Cline, whose father was a senior CIA operative, and his father had become Saul Harvey Halper.

In 1990 he married his first second wife (actually his third wife), Lezlee Brown (who is sometimes known as Lezlee Brown Halper).

I think he has also gone by Steven Halper from time to time...and possibly Mr. Azra Turk. :)

https://gw.geneanet.org/tdowling?lang=en&n=halper&oc=0&p=saul+harvey

Saul Harvey Halper

Print Family Tree

- Born 9 January 1913 - New York
- Deceased 12 August 2004 - Palm Beach Co., FL, aged 91 years old **(obut - https://www.newspapers.com/image/284939572/?terms=Harvey%20Halper&match=1)**

Parents

- Samuel Halper 1888
- Annie x 1891

Spouses and children

- Married to Violet Harriet Kelter, born 27 August 1911 - New York, deceased 26 September 2005 - Palm Beach Co., FL aged 94 years old with
  - Stefan Alan Halper 1944 *Married to* Nancy Elizabeth Boulton
    Stefan Alan Halper 1944 Married 9 November 1976, St. Thomas, U.S. Virgin Islands, to Sibyl W. Cline 1948
    Stefan Alan Halper 1944 Married to Lezlee Janis Brown

ww2 service - https://www.ancestry.com/imageviewer/collections/2238/images/44025_01_00016-01815?treeid=&personid=&hintid=&queryId=1c0b19e883741916b3caafde2cba33e4&usePUB=true&_phsrc=fEm12&_phstart=successSource&usePUBJs=true&_ga=2.79454356.1282708758.1605906269-748454195.1605426147&pId=302000021 - Says born in NEW YORK CITY on Jan 9, 1913 ..

1940 - https://www.ancestry.com/imageviewer/collections/2442/images/m-t0627-02329-00025?usePUB=true&_phsrc=fEm14&_phstart=successSource&usePUBJs=true&pId=134745690 (no children - married - living w/ mom)

Ancestry tree timneline - https://www.ancestry.com/family-tree/person/tree/101170645/person/170007455933/facts?_phsrc=fEm20&_phstart=successSource

The half-brother ... Samuel G Halper ...

OMG

https://www.fordlibrarymuseum.gov/library/document/0039/16988274.pdf

did he help write this ?

https://www.worldhistory.biz/download567/GreatAgesofMan-AgeofEnlightenment_worldhistory.biz.pdf

https://www.lindenwood.edu/files/resources/1965-09-30.pdf

https://www.cia.gov/library/abbottabad-compound/13/130AEF1531746AAD6AC03EF59F91E1A1_Killing_Hope_Blum_William.pdf

https://westvirginia.forums.rivals.com/threads/who-hired-stefan-halper.202176/

Stefan Halper, the Cambridge University con man that the Obama administration hired to brush up against the Trump campaign, is not a household name, thanks to the Fake News media, which refuses to cover Spygate honestly. Had this fraud, who enriched himself for years at taxpayer expense (during the Obama administration he pulled down hundreds of thousands of dollars for phony-as-hell research projects at the Department of Defense), spied on a Democratic presidential candidate at the direction of a Republican administration, he would have reporters staked out in front of his house 24/7. As it is, the "Walrus," as the Brits nicknamed him, can probably waddle around his "Virginia farm" (which was one of the places where he tried to entrap Carter Page) without any trouble from pesky journalists.

A few weeks ago, the media reported that the White House had ordered the FBI to disclose more information about Halper. Naturally, Justice Department officials are dragging their feet. So we still don't know who hired Halper: Did John Brennan hire him? Or Peter Strzok? Did Brennan's "working Langley group," which had been meeting before the FBI investigation officially began in July 2016, discuss hiring Halper? Did Brennan's gang get a recommendation from British intelligence to use Halper?

We know from existing press accounts that Halper, who ran a forum for British spies at Cambridge University, had ties to many, if not all, of the sorry players in this London-to-Langley farce. We also know from those accounts that Halper had been spying on Michael Flynn since 2014, around the time Flynn had left defense intelligence in the Obama administration and become persona non grata in the eyes of John Brennan for opposing his feeble approach to Islamic terrorism.

***TAS* has spoken to old colleagues of Halper and they describe him as "bumptious," a "blowhard," and an avaricious fraud who entered the Deep State through a door opened by his father-in-law at the CIA, Ray Cline. After Halper behaved foolishly during the 1980 Reagan campaign, he tried to get a job in the new administration. But initially he couldn't; Reagan aides had sized him up as a jackass.** Halper persisted and eventually nabbed a phony-baloney position in the State Department.

But say this for Halper: he knows how to wedge his finger into DC's pies. The Walrus scented a final meal in the 2016 campaign. He assumed Hillary (whom he endorsed in press reports while simultaneously spying for the Obama administration against her opponent!) would win and reward him with a new gusher of Deep State cash.

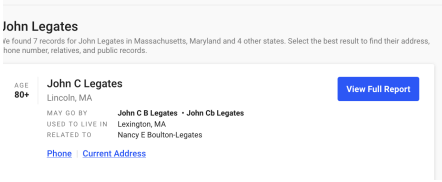
Little did the Walrus realize that he would find himself exposed at the swamp's bottom as Trump began to drain it. Less James Bond than a balloonish Johnny English, Halper has now outlived his usefulness, both to Langley and British intelligence.

It is depressing how DC operates, but it is also very funny. The CIA has long been a magnet for gossipy, pseudo-scholarly hacks like Halper. The question Nixon once asked about the CIA remains relevant: "What the hell do those clowns do out there in Langley?" Under Obama, the answer was that they sat around a table with Brennan and Strzok and cooked up schemes to spy on Donald Trump.

British intelligence, which had been keeping a close eye on Trumpworld since the summer of 2015, likely encouraged Brennan and Strzok to use Halper in order to entrap Page and George Papadopoulos. After all, Halper was over there anyways and could use his Cambridge gig as a cover. Moreover, by encouraging the CIA and FBI to use Halper, who was already in their orbit, the Brits could participate in the outcome of the election more directly. It is obvious that the same Trump Derangement Syndrome gripping Brennan and Strzok also infected the British government. It didn't want Trump to win and thereby deepen what it saw as a post-Brexit pit. Christopher Steele, the former British spy whom Hillary hired to defame Trump, was running around with his hair on fire about Brexit's passage and the prospect of a Trump presidency, according to the *New Yorker*'s Jane Mayer.

Out of this hysteria came a Brennan-Brit spy campaign desperate to catch the Trump campaign out in collusion. According to Chuck Ross's reporting in the *Daily Caller*, Halper grew more and more exasperated as his efforts to pump Papadopoulos for information failed. Halper even had his secretary, Azra Turk, try to use her feminine wiles on the minor campaign volunteer in the hopes of coaxing him into a damning admission.

Even China's spies look less ham-handed than Halper. At least its version of Johnny English drove Dianne Feinstein around the Bay Area for a few years. And let's not forget another great moment in Chinese espionage: its attempt to obtain Jorge Bergoglio's medical records from a crooked Spanish monsignor on Beijing's payroll. The monsignor gave the Chinese spies a bogus report, but it didn't matter. They got the commie-leaning pope they wanted anyways, who is now on the cusp of letting atheistic Marxists propose the names of candidates for ecclesiastical vacancies in China. What a world.



http://www.pirp.harvard.edu/pubs_pdf/oetting/oetting-i78-1.pdf

LeGates - late 70s congressional testimony - EDUCOM ??

https://onlinelibrary.wiley.com/doi/abs/10.1002/bs.3830160509

Networks in higher education: Proceedings of the

Networks in higher education: Proceedings of the EDUCOM council meeting seminar introduction

John Legates

First published: September 1971 https://doi.org/10.1002/bs.3830160509

PDF

TOOLS SHARE

Abstract

The 1970 foil meeting at Atlanta, Georgia, of the Interuniversity Communications Council, Inc. (EDUCOM) devoted one day (October 15, 1970 to a consideration of the theoretical and practical aspects of national, regional and local computer networks. The papers which were presented by the morning panel members are reproduced here. In the afternoon concurrent seminars, each exploring a specific type of network in greater depth, gave the participants further opportunity to exchange their views on and experience with the subject.

The meeting came at a time when many universities were beginning to feel severe financial restrictions and a consequent reawakening of interest in resource sharing. The presentations and discussions made it clear that the technology for a nationwide, message - switched, high speed computer link had been developed and that a network which is larger and more powerful might be cheaper as well. The confluence of needs, trends, thoughts and technology which took place at this meeting make it highly significant and perhaps even a watershed, in the development of networks for academic computing.

EDUCOM is a nonprofit consortium of more than one hundred universities and colleges working cooperatively to advance the use of computers and communications technology in higher education. Under the presidency of Henry Chauncey, the six - year - old organization also conducts joint research and development projects involving computer technology, provides special services to members, publishes a quarterly Bulletin, and acts as a spokesman for its members in Washington, as well as in academic circles. EDUCOM's main office is in Princeton, New Jersey.

http://www.pirp.harvard.edu/pubs_pdf/jensen/jensen-p97-2.pdf

http://www.pirp.harvard.edu/pubs_pdf/legates/legates-i11-3.pdf

https://www.ietf.org/rfc/rfc211.html

RFC 211 ARPA Network Mailing Lists August 1971

CCCTF

C.D. Shepard

Canadian Computer Communications Task Force

100 Metcalfe Street

4th Floor

Ottawa 2, Canada

DART

Prof. Robert F. Hargraves

Klewit Computation Center

Dartmouth University

Hanover, New Hampshire 03755

EDUCOM

John LeGates

EDUCOM

100 Charles River Plaza

Boston, Mass. 02114

https://gw.geneanet.org/tdowling?lang=en&n=cline&oc=0&p=sibyl+w.

Sibyl W. Cline

Print Family Tree

- Born 8 March 1948 - Alexandria, VA
- Age: 72 years old

1 file available

-

Ray Steiner Cline 1918-1996

CIA agent

- Marjorie Elizabeth Wilson 1913-2001

Spouses

- Married *9 November 1976*, *St. Thomas*, *U.S. Virgin Islands*, to Stefan Alan Halper, born 4 June 1944 - Glen Ridge, Essex Co., NJ, age : 76 years old , Professor, author *(Parents : Saul Harvey Halper 1913-2004 & Violet Harriet Kelter1911-2005)* , divorced *6 January 1989*

https://apps.dtic.mil/dtic/tr/fulltext/u2/a421917.pdf

http://wrap.warwick.ac.uk/87325/7/WRAP-Nixon-axe-man-Moran-2017.pdf

BITCHUTE @Housatonic **YOUTUBE** @HousatonicLive **ODYSEE** @Housatonic **BRIGHTEON** @Housatonic

Housatonic

Lewis Bradley Harder (born 1918)

Buisnessman Lewis B. Harder speaking at the Inter-American Investman Conference. (Photo by Joseph Scherschel/The LIFE Picture Collection via Getty Images/Getty Images) - https://www.gettyimages.com/detail/news-photo/buisnessman-lewis-b-harder-speaking-at-the-inter-american-news-photo/50391107

1999 - https://www.findagrave.com/memorial/195516564/lewis-bradley-harder （ 2019-07-findagrave-com-195516564-lewis-bradley-harder-1918-1999.jpg ）

DEATH 11 Nov 1999 (aged 81) Katonah, Westchester County, New York, USA

BURIAL : Union Cemetery / Bedford, Westchester County, New York, USA

Spouse Dorothy Butler Harder 1930–2012

https://books.google.com/books?id=daZEAQAAMAAJ&pg=PA1775&lpg=PA1775&dq=Lewis+B+harder&source=bl&ots=q5TNVXZvX3&sig=ACfU3U0eFHVwwxfIx0fxreIfy01XCSuc2w&hl=en&sa=X&ved=2ahUKEwjv-KOewp7jAhXoRd8KHc3mBRk4ChDoATAGegQIBhAB#v=onepage&q=Lewis%20B%20harder&f=false

http://www.genealogybuff.com/ma/harvard/webbbs_config.pl/noframes/read/23

LEWIS BRADLEY HARDER '41, of Katonah, N.Y., died on November 11. He was retired director and board chairman of International Mining Corp. A former naval aviator, he continued to fly his own plane for many years; he also enjoyed salmon fishing in New Brunswick. He leaves his wife, Dorothy (Butler), two daughters, Deirdre Laveran and Diana Terrell, three sisters, and two brothers

Read more: http://www.genealogybuff.com/ma/harvard/webbbs_config.pl/noframes/read/23#ixzz5srafWzZT

1918 (July 23) - Born

https://www.findagrave.com/memorial/195516564/lewis-bradley-harder (2019-07-findagrave-com-195516564-lewis-bradley-harder-1918-1999.jpg)

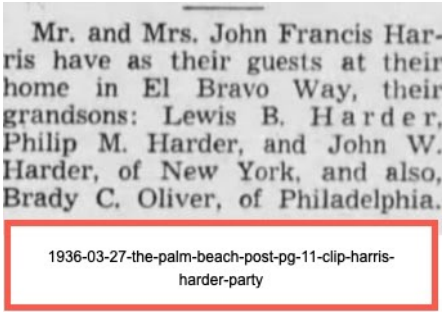
BIRTH 23 Jul 1918 Manhattan, New York County (Manhattan), New York, USA

1936 (March)

1936 - https://www.newspapers.com/image/133410620/?terms=%22LEWIS%2BB%2BHarder%22 (3 harder brothers)

1936-03-27-the-palm-beach-post-pg-11

1936-03-27-the-palm-beach-post-pg-11-clip-harris-harder-party


Mr. and Mrs. John Francis Harris have as their guests at their home in El Bravo Way, their grandsons: Lewis B. Harder, Philip M. Harder, and John W. Harder, of New York, and also, Brady C. Oliver, of Philadelphia.

1936-03-27-the-palm-beach-post-pg-11-clip-harris-harder-party

1941 (Aug) - Engagement

marriage - https://timesmachine.nytimes.com/timesmachine/1941/08/16/105160735.pdf

(Also see : 1941-08-16-the-evening-news-harrisburg-pennsylvania-pg-3.jpg / 1941-08-16-the-evening-news-harrisburg-pennsylvania-pg-3-clip-earle-engage.jpg)

1941-08-16-nytimes-pg-16-105160735

https://timesmachine.nytimes.com/timesmachine/1941/08/16/105160735.html?action=click&contentCollection=Archives&module=LedeAsset&region=ArchiveBody&pgtype=article&pageNumber=16

1941-08-16-nytimes-pg-16-clip-butler-harder-engagement

MISS DOROTHY BUTLER WILL BE WED SEPT. 6

Marriage to Lewis B. Harder to Take Place in Bedford, N. Y.

Miss Dorothy Dyer Butler, daughter of Mrs. James Butler of this city and Bedford Hills, N. Y., and the late Mr. Butler, has completed plans for her marirage to Lewis Bradley Harder, son of Mrs. Crawford Burton of this city and East Hampton, L. I., and Lewis Francis Harder of Philmont, N. Y. The wedding will take place on Sept. 6 in St. Patrick's Roman Catholic Church, Bedford, N. Y., and will be followed by a reception at the country home of the prospective bride's mother.

Miss Butler will have her sister-in-law, Mrs. James Butler, the former Miss Jessie Ewing, as her matron of honor. The other attendants will be Mrs. Samuel B. Moore Jr., the former Miss Genevieve Butler Travers, cousin of the bride-elect; Mrs. Peter H. Dominick, Mrs. Richard A. Springs Jr., the Misses Avery Harder, sister of the prospective bridegroom; Zoe C. Thorne and Reid Handy, all of New York; Mrs. Brooks McCormick of Chicago and Miss Faith Thoron of Boston.

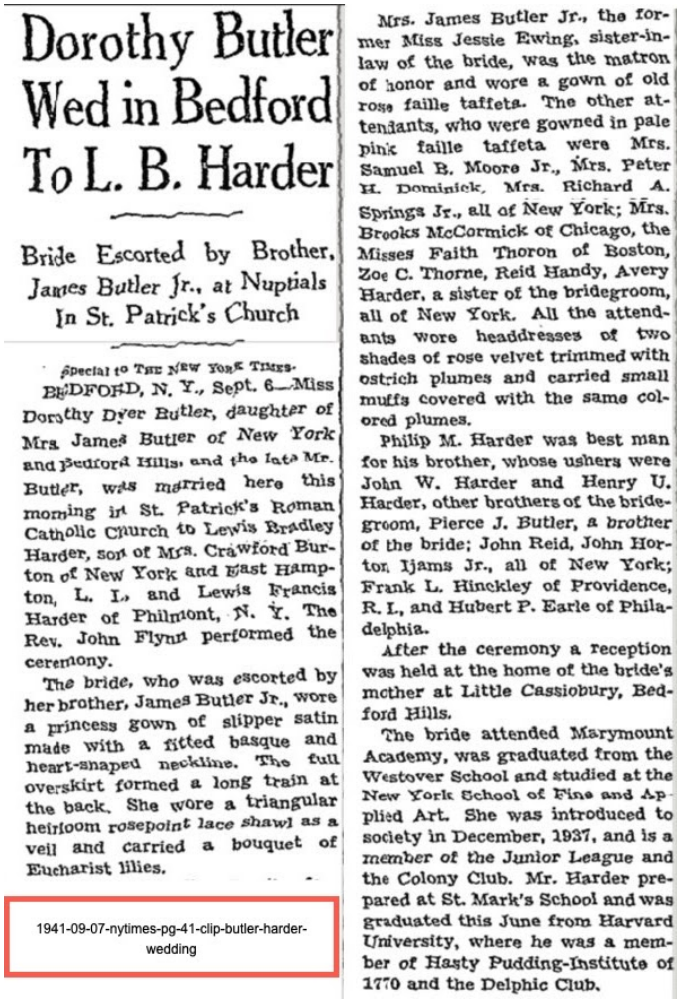
Philip M. Harder will be his brother's best man. The ushers will be John W. Harder, another brother; Pierce J. Butler, brother of the bride-elect; John Reid, John Horton Ijams Jr., Edward Allis 4th of Milwaukee, Frank L. Hinckley of Providence, R. I.; Hubert P. Earle of Philadelphia, Sherman Gray of Salt Lake City, William H. Claflin 3d of Boston and Jackson Porter Dick of Atlanta.

1941-08-16-nytimes-pg-16-clip-butler-harder-engagement

1941 (Sep) - Wedding

https://timesmachine.nytimes.com/timesmachine/1941/09/07/104300309.html?action=click&contentCollection=Archives&module=LedeAsset&region=ArchiveBody&pgtype=article&pageNumber=53

1941-09-07-nytimes-pg-41-clip-butler-harder-wedding



Dorothy Butler Wed in Bedford To L. B. Harder

Bride Escorted by Brother, James Butler Jr., at Nuptials In St. Patrick's Church

Special to THE NEW YORK TIMES.

BEDFORD, N. Y., Sept. 6—Miss Dorothy Dyer Butler, daughter of Mrs. James Butler of New York and Bedford Hills, and the late Mr. Butler, was married here this morning in St. Patrick's Roman Catholic Church to Lewis Bradley Harder, son of Mrs. Crawford Burton of New York and East Hampton, L. I., and Lewis Francis Harder of Philmont, N. Y. The Rev. John Flynn performed the ceremony.

The bride, who was escorted by her brother, James Butler Jr., wore a princess gown of slipper satin made with a fitted basque and heart-shaped neckline. The full overskirt formed a long train at the back. She wore a triangular heirloom rosepoint lace shawl as a veil and carried a bouquet of Eucharist lilies.

1941-09-07-nytimes-pg-41-clip-butler-harder-wedding

Mrs. James Butler Jr., the former Miss Jessie Ewing, sister-in-law of the bride, was the matron of honor and wore a gown of old rose faille taffeta. The other attendants, who were gowned in pale pink faille taffeta were Mrs. Samuel B. Moore Jr., Mrs. Peter H. Dominick, Mrs. Richard A. Springs Jr., all of New York; Mrs. Brooks McCormick of Chicago, the Misses Faith Thoron of Boston, Zoe C. Thorne, Reid Handy, Avery Harder, a sister of the bridegroom, all of New York. All the attendants wore headdresses of two shades of rose velvet trimmed with ostrich plumes and carried small muffs covered with the same colored plumes.

Philip M. Harder was best man for his brother, whose ushers were John W. Harder and Henry U. Harder, other brothers of the bridegroom, Pierce J. Butler, a brother of the bride; John Reid, John Horton Ijams Jr., all of New York; Frank L. Hinckley of Providence, R. I., and Hubert P. Earle of Philadelphia.

After the ceremony a reception was held at the home of the bride's mother at Little Cassiobury, Bedford Hills.

The bride attended Marymount Academy, was graduated from the Westover School and studied at the New York School of Fine and Applied Art. She was introduced to society in December, 1937, and is a member of the Junior League and the Colony Club. Mr. Harder prepared at St. Mark's School and was graduated this June from Harvard University, where he was a member of Hasty Pudding-Institute of 1770 and the Delphic Club.

1942 (Jan)

1942 - https://www.newspapers.com/image/59619857/?terms=LEWIS%2BB%2BHarder

1942-01-30-the-evening-news-harrisburg-pennsylvania-pg-4

1942-01-30-the-evening-news-harrisburg-pennsylvania-pg-4-clip-earle-best-man

ENSIGN GEORGE H. EARLE, IV, who is stationed at the Naval Base at Jacksonville, Fla., will serve as best man at the marriage of Miss Elizabeth Macaulay Wright, daughter of Mr. and Mrs. Witney Wright, of Haverford, to his brother, Hubert Potter Earle, on Saturday afternoon, February 14.

Lawrence W. Earle and Ralph Earle, younger brothers of the bridegroom-elect, will be among the ushers, as will Thomas R. Wickersham, of this city, an uncle of young Earle. Other ushers will be Lewis B. Harder, of New York; Roger I. Lee, Jr., of Brookline, Mass.; Frank L. Hinckley, of Providence, R. I.; Augustus Thorndike, III, of Chestnut Hill, Mass.; Alfred W. Putman, Jr., Peter Hagen and Howard W. Taylor, Jr., of Philadelphia.

1942-01-30-the-evening-news-harrisburg-pennsylvania-pg-4-clip-earle-best-man

1945 (June)

1945 - wedding https://www.newspapers.com/image/152836171/?terms=LEWIS%2BBradley%2BHarder

1945-06-02-wilkes-barre-times-leader-pg-9.jpg

1945-06-02-wilkes-barre-times-leader-pg-9-clip-gaughan-wed.jpg

MRS. PIERCE J. BUTLER

Miss Anne Gaughan, daughter of Mrs. Frank J. Gaughan and the late Attorney Gaughan of Hazleton, and Pierce J. Butler, son of Mrs. Albert Hunt Marckwald of New York City and Bedford Hills, N. Y., and the late James Butler, were married this morning at 11 oclock at St. Gabriel's Church, Hazleton. The Very Rev. Monsignor D. J. Kane officiated. At the conclusion of the ceremony the papal blessing was given the young couple.

The bride, who was given in marriage by her uncle, Dr. R. A. Gaughan, wore a Renaissance period gown of heavy antique satin, made on princess lines, with an heirloom rosepoint veil, and a long train. Her bouquet was of white orchids and stephanotis.

Miss Frances Smith, cousin of the bride, was maid of honor, and the bridesmaids were Mrs. Lewis Bradley Harder, sister of the bridegroom, Misses Anne Murray of New York, Joan Hurley of Boston, Mrs. George Hoffman of Albany, and Miss Cornelia Krause of Hazleton. They wore gowns of cafe au lait marquisette, with full skirts, and bodices of Chantilly lace. Their headdresses were halos of hair lace, the same color as the gowns, with bows of soft grosgrain, and they carried bouquets of African daisies.

Lt. James Butler, A. A. F. of New York City, was best man, and the ushers were Lt. Lewis Bradley Harder, U. S. N. R., brother-in-law of the bridegroom, Albert H. Marckwald, Jr., Raymond Dyer Connor, Stuart A. MacGuire, and Robert MacGowan Smith, cousin of the bride.

Sergeant Robert Molino of the Navy Air Corps, presented an organ recital before the ceremony. Visiting priests seated in the sanctuary were Rev. Edward J. Dalton, chaplain at Mt. St. Mary's Rev. Cornelius McHugh of Mt. Pocono; Rev. J. J. Curran, of Bedford Hills, N. Y., and Rev. T. C. Monahan of Montrose.

The church was decorated with cybotium fern, palms, Easter lilies and white snapdragons.

Following the ceremony, a reception was held at the Hotel Altamont, where the bridal tables were decorated with ivy, bouvardia and gardenias. The couple left to spend a honeymoon at Sea Island, Georgia, and will be at home in Bedford Hills, N. Y., after July 1st. For traveling, Mrs. Butler wore a poudre blue ensemble.

The bride was graduated from Mt. St. Mary's Academy and attended Manhattanville College of the Sacred Heart and Duchesne Residence School, New York.

The bridegroom was graduated from the Canterbury School and attended Leicester Junior College before enlisting in the U. S. Naval Reserve, from which he received an honorable discharge. He is a member of the editorial staff of Westchester Co. Publishers, Inc., at White Plains, N. Y.

Wilkes-Barre guests at the wedding included Dr. and Mrs. Lawrence Sheridan and daughter, Mayor and Mrs. Con McCole, Dr. and Mrs. Walter McGuigan, Misses Jule, Gertrude and Alice Conlon, Judge M. F. McDonald, Mr. and Mrs. M. F. Reilly, Mrs. Lawrence Finn, Mrs. Charles Gallagher, Dr. and Mrs. Peter Mayock and daughter. The Scranton guests were Mr. and Mrs. John Bonner, Mrs. J. Ward.

1955 (July)

1955-07-08-pittsburgh-sun-telegraph-pg-13.jpg / https://drive.google.com/open?id=1rO0IfuCF3VPr6RKI5QtYZtdgLq1dd_XI

National Aims For Volume

NEW YORK, July 8.—(AP.)—Frank L. Kellogg, recently elected chairman of National Department Stores, painted a grim picture today of the chain's operations before the new management that he heads took over.

Kellogg became chairman May 15 and presided at the annual stockholders' meeting yesterday. In the first four months of the chain's fiscal year beginning Feb. 1, he said, losses were running 15 per cent greater than in the same period of 1954, although sales were slightly higher.

Of the 17 stores in the National chain, said Kellogg, only seven showed sales increases between Feb. 1 and May 31, and the other ten failed to match their year-ago performance. Only three finished out of the red, he added.

May Sell Stores

Kellogg told stockholders that National must "secure for ourselves a greater share of the retail business in each city or community where we operate . . . your new management intends to strengthen our organization . . . (and) train our buyers to do a better job." Stores that fail to show definite promise may be sold, he said.

At a directors' meeting after the stockholders' session, Kellogg was elected to the additional post of president, succeeding Harry H. Schwartz. Lewis B. Harder, president of South American Gold & Platinum Co., was elected to the newly created post of financial vice president and George Lehrman was named secretary and treasurer.

Pass Dividend

South American Gold & Platinum recently acquired control of National.

Directors took no action on the common stock dividend usually declared at this time. The company had previously paid 25 cents at quarterly intervals. Kellogg said the company had not earned its dividends in 1953 and operated at a loss last year.

National Department Stores units here include Frank & Seder of Pittsburgh Inc., and Rosenbaum Co here

1955-07-08-pittsburgh-sun-telegraph-pg-13-clip-nat-aims-volume

1955-07-08-pittsburgh-sun-telegraph-pg-13-clip-nat-aims-volume.jpg / https://drive.google.com/open?id=1rLrDBsUe9FHSscQA5JIOYp_P5kg-zrNQ

1955 (Sep)

https://www.newspapers.com/image/252150694/?terms=lewis%2Bharder%2B%22peter%2Bgrace%22

1955-09-18-the-muncie0star-press-pg-a-17

MUNCIE STAR, SUNDAY, SEPTEMBER 18, 1955

West Hemisphere Business Leaders Meeting Monday

By HARRY W. FRANTZ

Washington (U.P.)—Business leaders from North and South America will meet here Monday to decide whether to set up a permanent organization to encourage investment in Latin American economic development.

They were invited to participate in a meeting of the policy committee of the Interamerican Investment Conference which met at New Orleans last spring to promote progress in Latin America through increased investment of private capital. More than 800 businessmen from all parts of the western hemisphere attended that session and agreed that a permanent organization was feasible.

Primary labor of the New Orleans meeting was to publicize investment opportunities in nations to the south. Three hundred specific projects—and several hundred less definite—were suggested.

Committee Members

The policy committee is headed by Rudolph S. Hecht, chairman of the board of International House in New Orleans. Its other members are Edgar G. Baker, managing director of Time-Life International, New York, and Eric Johnston, chairman of the International Development Advisory Board.

The meeting will be non-controversial. The general purpose will be to further the objectives discussed at New Orleans. These included establishment of an investment opportunities clearing house in New Orleans, sources of possible financing, co-operation of other business organizations, and means of improving the investment climate in countries which need and want foreign capital.

Administration officials will not be on hand except by special invitation. Sessions will be held at headquarters of the Chamber of Commerce of the United States.

Accept Invitations

Among those who have accepted invitations are:

A. Boyd Campbell, president of the United States Chamber of Commerce.

Robert H. Craft, vice president, Investment Bankers Association of America, New York.

Hugh A. Davies, general director, Latin American operations, International Harvester Export Co., Chicago.

Henry W. Drath, vice president, Bank of America, San Francisco.

Harvey S. Firestone Jr., chairman, the Firestone Tire and Rubber Co., Akron.

J. Peter Grace Jr., president, W. R. Grace & Co., New York.

Lewis B. Harder, president and director, South American Gold & Platinum Co., New York.

Henry R. Luce, editor-in-chief, Time, Inc., New York.

H. C. McClellan, chairman of the board, National Association of Manufacturers, New York.

Jose B. Gelbard, president Confederacion General Economica De La Republica Argentina, Buenos Aires.

Manuel Granier, vice president, Camara Nacional De Industrias, La Paz, Bolivia.

Dr. Herbert Levy, president, Banco De America, Sao Paulo, Brazil.

Luis Roberto Vidigal, President Federacao Do Comercio Estado De Sao Paulo, Sao Paulo.

Dr. Genero Payan, Genero Payan Y Cia, Bogota, Colombia.

Jose M. Bosch, president, Cia Ron Bacardi S.A., Santiago De Cuba.

Burke O. Hedges, Asociacion Nacional De Industriales De Cuba, Havana.

Luis Legorreta, Banco Nacional De Mexico, Mexico City.

Eugenio Mendoza, Eugenion Mendoza Y Cia, Caracas, Venezuela.

Eduardo Montealegre, Manager, Banco Nicaraguense, Managua, Nicaragua.

Dr. Martin Del Corrall, president Banco De Bogota, Bogota.

Manuel Da Costa Sousa, president of Conference of Industries, Sao Paulo.

Potato chips account for about 12 per cent of the potato crop sold for food.

1955-09-18-the-muncie-star-press-pg-a-17-clip-west-biz-meeting

1955-09-18-the-muncie0star-press-pg-a-17-clip-west-biz-meeting.jpg

1957 (Sep 03)

https://www.newspapers.com/image/433226356/?terms=%22lewis%2Bharder%22%2Bpeter%2Bgrace

1957-09-11-the-boston-globe-pg-37

1957-09-11-the-boston-globe-pg-37-clip-colombia

COLOMBIA

Foreign Investment Need Told by Bogota Lawyer

A top Colombian business leader called United States' assistance to Latin America since World War II "short and much talked about."

Genaro Payan, corporation lawyear for Colombian and American firms, opened yesterday afternoon's panel on "The Role of U.S. Industry" with a plea for more foreign investment in his nation.

Payan stated that "the very fact that Colombia has not received more gifts is a source of pride and, of course, all to the good."

But, he added, "of United States' government credits granted abroad, though these have increased considerably in the past three years, Colombia has not known how to request nor has it been granted a large share."

No Unusual Problems

The Bogota attorney praised the overall conduct of American business operations in his country thus far, but declared that great new private funds must flow into Colombia if its full potential as a Western Hemisphere partner is to be fulfilled.

Payan noted that "outside of monetary exchange difficulties with which he (the American businessman) must cope . . . there are no outstandingly unusual problems for U.S. businessmen in Colombia.

"Adverse nationalism is practically nonexistent.

"In a way, Colombia has been fortunate in coming tardily into the picture of international industry and in having had its first experiences with the best of United States' firms without the concept of colonialism," he said.

The speaker observed that Colombia's traditional leading class "in general . . . do not know how the United States businessman well enough and he, in turn, has not had time to meet them yet."

"The fact that Colombia is economically part of the hemisphere and that its problems and projections are to be tackled hemispherically is barely dawning to all except a few," Payan said.

The Colombian leader stated his nation's leadership group, politically and economically, "are broadening their base on a rapidly growing urban middle class."

"They have made the country what it is today without foreign business partners or assistance such as the United States once received from Europe," Payan said.

Rape Tax Policy

Lewis Harder, president of the South American Gold & Platinum Co., launched an attack upon American corporation taxes on earnings made in Colombia and other foreign nations.

"If we continue to tax this way," charged Harder, "we won't be the financial leader in the Western Hemisphere, which is necessary to keep Latin America strong and save our own world position."

Harder joined Payan and other members of the panel in a plea for more capital investment by U.S. firms and individuals in the future potential of Colombia.

Harder declared "we (the United States) must drop these taxes. There's going to be a big fight in Congress during the next two years, but I believe the issue will be won."

If that occurs, the executive predicted that "both private and corporate money will flow down to South America."

Harder foresaw a flight of foreign-based American firms, including his own, to reincorporate in Canada if United States corporate taxes upon them were not liquidated.

"We may shift our entire corporate structure to Canada, which has no similar taxation," he said. "We don't want to do it, because it would be bad for the United States."

Prof. Surrey Counters

Harder's criticism was countered by Stanley Surrey, professor of taxation at Harvard Law School, who stated that foreign-based firms already are favored by the Federal revenue system.

"While corporations here in the United States are taxed 52 percent on earnings," said Surrey, "companies abroad were only taxed 40 to 45 percent. In addition, other concessions have been made."

Prof. Surrey called the "talk of double-taxation simply a roadblock to intelligent thinking about the other obstacles to foreign investment."

Harder's thesis was backed up by C. Boice Nourse, chairman of the Colombian panel and vice president of the First National City Bank of New York in charge of the western group of the Caribbean District.

"We don't believe that such taxation is the dominating factor in slowing down investment flow to Colombia. But liquidating these taxes would be a contribution similiar to what we've been asking of the Colombians," said Nourse.

1957-09-11-the-boston-globe-pg-37-clip-colombia.jpg /

1957 (Sep 08)

https://www.newspapers.com/image/433222986/?terms=lewis%2Bharder%2B%22peter%2Bgrace%22

1957-09-08-the-boston-globe-latin-american-conf-ediition-pg-2

Latin American Conference Opens at Harvard Tomorrow

Prominent businessmen from all parts of the country will assemble tomorrow at the Harvard Graduate School of Business Administration for a significant three-day conference on "Latin-American Development and United States Industry." The meeting is sponsored by the Business School in cooperation with the Boston Globe.

The purpose of the conference is "to identify and evaluate major trends which will influence the economies of certain Latin-American countries during the next five to ten years, and their implications for the United States business community."

Five countries have been selected for special study at conference sessions: Argentina, Brazil, Colombia, Mexico and Venezuela. These five were chosen as the result of a survey conducted several months ago among American business leaders to determine which Latin-American countries they considered of the greatest current interest.

★ ★ ★

While discussions will center around these five republics, the conference will deal with problems that are common to all Latin-American nations.

Keynote speakers at general sessions of the conference will be Roy R. Rubottom Jr., Assistant Secretary of State for Inter-American Affairs; J. Peter Grace, president of W. R. Grace & Co., and Galo Plaza, former President of Ecuador.

Each day of the conference five panel discussion meetings will be held simultaneously, each dealing with the development of one of the five countries selected for special study. A distinguished group of panelists at these sessions will analyze economic trends and discuss possibilities for investment and trade.

Chairmen of Panels

Chairmen of the panels will be the following:

Argentina—R. de F. Boomer, director of South American Subsidiaries and of Lone Star Cement Corp.

Brazil—H. W. Balgooyen, executive vice-president of American & Foreign Power Co.

Colombia — C. Boice Nourse, vice-president of First National City Bank of New York.

Mexico—Dr. John Fayerweather, assistant professor of business administration, Harvard Business School.

Venezuela—Walter J. Donnelly, special representative of the United States Steel Corp. to the American Republics.

Participating as panelists will be leading businessmen, financiers, educators, and government officials from Latin American nations and the United States.

Gordon Heads Conference

Opening session of the conference will take place at the Business School at 1:30 tomorrow afternoon, when President Nathan M. Pusey of Harvard and Dean Stanley F. Teele of the Business School will welcome the gathering of businessmen. Lincoln Gordon, William Ziegler, professor of international economic relations at the Business School, who is the director of the conference, will also speak.

The first panel discussion session will be held from 2:30 to 5 p.m. tomorrow. This will be followed at 7 p.m. by a banquet in the Hotel Sheraton-Plaza, at which J. Peter Grace and Ex-President Galo Plaza will be the speakers.

On Tuesday there will be panel discussion sessions at 9:30 a.m.

PROF. LINCOLN GORDON
Conference Director

and 2 p.m. A luncheon meeting will be held at 12:30 in Kresge Dining Hall at the Business School.

The final panel discussion will take place Wednesday morning at 9:30 and the conference will conclude with a luncheon at the Sheraton-Plaza at 1:30. Assistant Secretary of State Rubottom will be the principal speaker.

Welcome Businessmen to Harvard

PRES. NATHAN M. PUSEY

DEAN STANLEY F. TEELE

Conference Program

MONDAY, SEPT. 9

A. M.—Registration: Hotel Statler and Hotel Sheraton-Plaza, main lobby.

1:30—Plenary Session. Welcome by President Pusey and Dean Teele. Introduction to conference by Prof. Gordon.

2:30-5:30—First Panel Sessions. "The Challenge of Balanced Growth." (The agenda for each of the five countries to be discussed will be the same, except for minor variations).

Analysis of the basic developmental problems facing the country, including: the broad lines of development since World War II; the probable direction of growth over the next 5-10 years; and the major bottlenecks which may be encountered. Problems to be considered include: agricultural vs. industrial expansion; production for export vs internal consumption; regional imbalance; fuel, power and transportation availabilities; human resources; and the needs for social and economic overhead.

7:00—Banquet, Hotel Sheraton-Plaza. Speakers: J. Peter Grace and Galo Plaza.

TUESDAY, SEPT. 10

9:30-12:30—Second Panel Sessions —"Financing Economic Development"

Analysis of the local currency and foreign exchange required to finance economic development. Problems to be considered include: mobilization of domestic savings and their most effective allocations; control of domestic inflation; foreign exchange needed for capital goods and raw materials; and monetary, fiscal and exchange policies.

12:30—Lunch, Kresge Dining Hall, Harvard Business School

2:00-5:00—Third Panel Sessions— "The Role of U.S. Industry"

Appraisal of the experience of and the opportunities for United States trade and investment, including the trends in the country's trade with the U.S. and the limitations imposed by the balance of payments position; the tendency to replace imports with domestic manufactures, and opportunities created thereby; the investment climate; and some of the principal operating problems in the country.

WEDNESDAY, SEPT. 11

9:30-12:30—Fourth Panel Sessions —"Future Prospects"

Continuation of discussion from the Third Sessions; evaluation of future prospects; summary and recapitulation.

1:15—Luncheon, Hotel Sheraton-Plaza. Speaker, Roy R. Rubottom Jr.

45 Experts to Take Part in Panel Meetings

Forty-five noted authorities on Latin America will take part in panel discussions planned for the Harvard conference. Among them are leading industrialists, financiers and educators from Latin American republics and from the United States. The complete list of participants in the five discussion groups, each dealing with a particular Latin American nation, follows:

★ ★ ★

Argentina

CHAIRMAN

Robert de Forest Boomer, a founding director of Vision and its Portuguese-language affiliate Visao, published in Brazil, and a co-founder of the Inter-American Council of Commerce and Production. Currently he is a member of the board of directors of the Argentine American Chamber of Commerce and the Pan American Society of the United States; chairman for the United States of the Bilateral Investment Commission of Brazil and a member of a similar commission for the Argentine; and a director of the foreign subsidiary companies of the Lone Star Cement Corp.

PANELISTS

Rodolfo Kats, economist; publisher of "Economic Review".

Raul Lamuraglia, industrialist; director, Central Bank.

Arnaldo Massone, president, Instituto Massone S.A., honorary president the Argentine Chamber of Commerce.

Eustaquio Mendez Delfino, president of Buenos Aires Stock Exchange.

H. A. Arnold, president, Olin-Mathieson International Corp.

Latimer Gray, senior vice president, First National Bank of Boston.

A. O. Stanley, editor, "International Markets", Dun's Review and Modern Industry.

Leo Welch, vice president, Standard Oil Company (New Jersey).

Brazil

CHAIRMAN

Henry W. Balgooyen, executive vice president of American & Foreign Power Co. He is a director of the Pernambuco Tramways & Power Co., Ltd., North Mexico Power & Development Co., Ltd., the Telephone Co. of Pernambuco Ltd., the South Brazil Electric Co., Ltd., and the Brazilian Power Co. He is also a director of the United States Interamerican Council and the National Foreign Trade Council.

PANELISTS

Jose Garrido Torres, editor, Conjuntura Economica.

Trajano Pupo Netto, manager, Sao Paulo branch, First National City Bank of New York.

Luis Roberto Vidigal, industrialist.

Cladence Dauphinot, director-president, Deltec S. A.; chairman of the board, the Deltec Corp.

Stacy May, executive, International Basic Economy Corp.

Jacob Viner, professor of economics, Princeton University.

Colombia

CHAIRMAN

C. BOICE NOURSE, vice president of the First National City Bank of New York in charge of the Western Group of the Caribbean District. He began his career with the National City Bank in 1920. Until April 1954 he had extensive experience in Latin America, in Argentina and Uruguay, and as manager of the Mexico City Branch, and resident vice president in charge of Colombian and Cuban branches. In 1954 he was transferred to Head Office as assistant to the Manager of the Overseas Division.

PANELISTS

Carlos Echavarria, president, Compagnia Colombiana de Tijidos S.A.

Guillermo Herrera, director, Caja Agraria, Andes Bank, Andina Brewery, and other companies.

Genaro Payan, attorney.

Guillermo Restrepo, executive, Gaseosas Colombianas.

Lewis Harder, president, South American Gold & Platinum Co.

Francis Kurtz, consultant; formerly chairman of the board of American Coffee Corporation.

Robert Merrill, vice president, American Cable & Radio Corporation.

Myron Reed, executive vice president, American & Foreign Power Company.

Mexico

CHAIRMAN

John F. Fayerweather, assistant professor at the Harvard Business School, where he is responsible for courses in international business administration, including development of a new course in management of foreign operations. He has been involved in two major research projects; a study of mine management in Mexico and Canada; and currently, a study of management relationships between United States and Mexican executives. He is chairman of the American Marketing Association Committee for Teaching Foreign Marketing.

PANELISTS

Raul Martinez Ostos, subdirector, Nacional Financiera.

Edgardo Reyes Salcido, director, Department of Industrial Relations, Monterrey Technical Institute.

Gustavo Romero Kolbeck, deputy director, Investments Commission, executive office of the president.

Eduardo Prieto Lopez, vice president, Cananea Consolidated Copper Co.

Gen William H. Draper Jr., chairman of the board, Mexican Power & Light Co., Ltd.

James Maddox, American Universities field staff.

Charles Meyers, vice president for Latin America, Sears, Roebuck & Co.

Alexander Nimick, research director, Vision, Inc.

Venezuela

CHAIRMAN

Walter J. Donnelly, special representative of the United States Steel Corp. to the American Republics since 1953. He joined the Bureau of Foreign and Domestic Commerce in 1923 and held posts in Colombia, Cuba, Brazil, Panama and Peru. In 1947 he was U.S. Ambassador to Costa Rica, and from 1947 until 1950 was U.S. Ambassador to Venezuela. He was U.S. High Commissioner and Ambassador to the Republic of Austria from 1950 to 1952, and U.S. High Commissioner to the Republic of Germany during 1952.

PANELISTS

William Coles, businessman and lawyer.

Alfredo Machado, director, Banco Nacional de Descuento, General Tire of Venezuela, and other companies.

Carlos Mendoza, lawyer, economist, former president of Banco Central de Venezuela.

William H. Phelps Jr., vice president C. A. Sindicato Phelps.

John Rivera, resident vice president in Venezuela, First National City Bank of New York.

Robert Dolph, manager, Petroleum Economics Department, Creole Petroleum Corp.

Joseph Foss, businessman and financier.

Arrigo Righi, managing director for Venezuelan Pan American World Airways.

(AP Photo)
ROY R. RUBOTTOM JR.

(AP Photo)
J. PETER GRACE

(AP Photo)
GALO PLAZA

KEYNOTE SPEAKERS AT CONFERENCE

1957-09-08-the-boston-globe-latin-american-conf-ediition-pg-2-clip-top.jpg /

https://www.newspapers.com/image/433225362/?terms=lewis%2Bharder%2B%22peter%2Bgrace%22

1957-09-10-the-boston-globe-pg-sports-13

1962 (June)

1962- https://www.newspapers.com/image/370998324/?terms=LEWIS%2BHarder%2Bmolybdenum

1962-06-14-the-baltimore-sun-pg-35

Gold—Where Are The Dividends?

A financier who has a big stake in Baltimore enterprise had chance to yesterday answer for the bright future of a gold mining company which he also heads. Gold stocks have been moving up as the rest of the market has floundered lately, gold companies see a chance to make more money in coming months and benefit hugely by dollar devaluation, should it ever come.

Lewis B. Harder is president of the South American Gold and Platinum Company. He also is chairman of the International Mining Corporation, the parent concern, which in turn controls the Canton Company of Baltimore, real estate and railroading.

These companies also are deeply interested in the Pittsburg and West Virginia Railroad, an important link in some of the maneuvering which will enable the Norfolk and Western to accomplish its proposed merger plan and form a vaster system to the West.

At South American's annual meeting, Mr. Harder told stockholders earnings may exceed $1.50 per share this year from mining operations. Last year's profit was $2.05, but mostly from capital gains.

The company benefited by Canada's devaluation of its dollar, and now gets $39 per ounce for gold there in contrast to the fixed $35 from the United States.

Mr. Harder estimated 50 cents earnings from South American, $1 from International and something extra from Pato Consolidater Gold Dredging, Ltd.

Shareholders were restive about the current 25-cent dividend. They want more, they said.

"We'll take a look," said Mr. Harder. "I'm as interested as you are. We'll treat you well."

1962-06-14-the-baltimore-sun-pg-35-clip-gold-dividends

1962-06-14-the-baltimore-sun-pg-35-clip-gold-dividends.jpg /

1963 (Feb)

1963 - https://www.newspapers.com/image/330468651/?terms=LEWIS%2BHarder%2Bmolybdenum

1963-02-17-the-tampa-tribune-pg-33

Ejected

Winslow W. Bennett, 37, was elected president of **Molybdenum Corp. of America**, succeeding Marx Hirsch. Hirsch, 75, will continue as a director, chairman of the executive committee and as a consultant. Lewis B. Harder, chairman of Molybdenum, said conduct of company affairs will be shared by a new and younger management team, headed by Bennett and William R. Kuntz, 41, who was elected executive vice president last September.

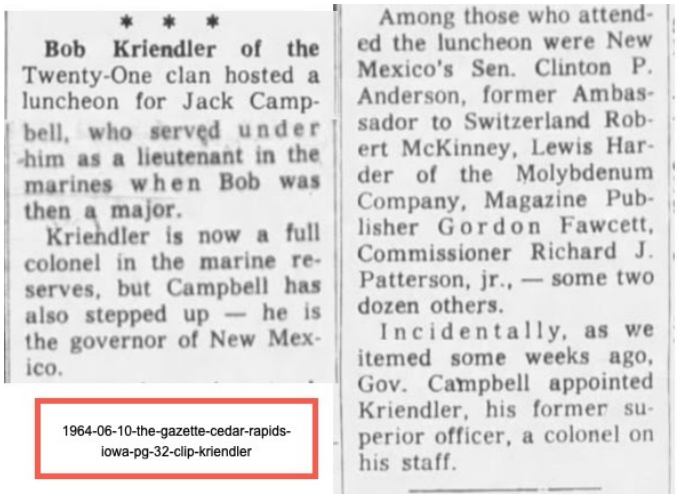
1963-02-17-the-tampa-tribune-pg-33-clip-molybdenum

1963-02-17-the-tampa-tribune-pg-33-clip-molybdenum.jpg /

1964 (June)

1964- https://www.newspapers.com/image/551132602/?terms=LEWIS%2BHarder%2Bmolybdenum

1964-06-10-the-gazette-cedar-rapids-iowa-pg-32



* * *

Bob Kriendler of the Twenty-One clan hosted a luncheon for Jack Campbell, who served under him as a lieutenant in the marines when Bob was then a major.

Kriendler is now a full colonel in the marine reserves, but Campbell has also stepped up — he is the governor of New Mexico.

Among those who attended the luncheon were New Mexico's Sen. Clinton P. Anderson, former Ambassador to Switzerland Robert McKinney, Lewis Harder of the Molybdenum Company, Magazine Publisher Gordon Fawcett, Commissioner Richard J. Patterson, jr., — some two dozen others.

Incidentally, as we itemed some weeks ago, Gov. Campbell appointed Kriendler, his former superior officer, a colonel on his staff.

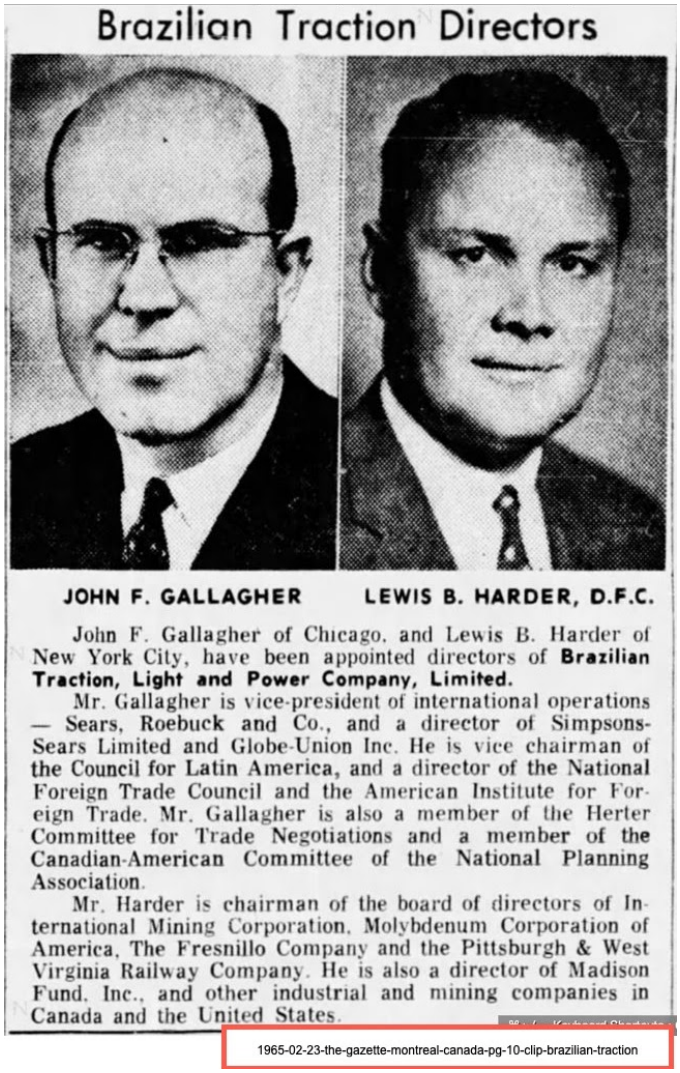
1964-06-10-the-gazette-cedar-rapids-iowa-pg-32-clip-kriendler

1964-06-10-the-gazette-cedar-rapids-iowa-pg-32-clip-kriendler.jpg /

1965 (Feb)

1965 - https://www.newspapers.com/image/423617406/?terms=LEWIS%2BHarder%2Bmolybdenum - IMC /

1965-02-23-the-gazette-montreal-canada-pg-10



Brazilian Traction Directors

JOHN F. GALLAGHER LEWIS B. HARDER, D.F.C.

John F. Gallagher of Chicago, and Lewis B. Harder of New York City, have been appointed directors of **Brazilian Traction, Light and Power Company, Limited.**

Mr. Gallagher is vice-president of international operations — Sears, Roebuck and Co., and a director of Simpsons-Sears Limited and Globe-Union Inc. He is vice chairman of the Council for Latin America, and a director of the National Foreign Trade Council and the American Institute for Foreign Trade. Mr. Gallagher is also a member of the Herter Committee for Trade Negotiations and a member of the Canadian-American Committee of the National Planning Association.

Mr. Harder is chairman of the board of directors of International Mining Corporation, Molybdenum Corporation of America, The Fresnillo Company and the Pittsburgh & West Virginia Railway Company. He is also a director of Madison Fund, Inc., and other industrial and mining companies in Canada and the United States.

1965-02-23-the-gazette-montreal-canada-pg-10-clip-brazilian-traction

1965-02-23-the-gazette-montreal-canada-pg-10-clip-brazilian-traction.jpg /

1966 (April)

1966- https://www.newspapers.com/image/25482823/?terms=LEWIS%2BHarder%2Bmolybdenum Harder / now Molycorp

1966-04-01-las-vegas-daily-optic-pg-1

Questa Molybdenum Mine, Mill Dedication Program Conducted

QUESTA (UPI)— Dignitaries and newsmen attended dedication ceremonies of the Molybdenum Corp. of America's expanded mine and mill at Questa today and then toured the $40 million property.

Some 400 guests were invited to the ceremony, with over half of them being from outside of New Mexico. Gov. Jack M. Campbell was to deliver a dedicatory address at 1:30 p.m.

Others speaking included Jack M. Brandenburg, president of the First State Bank of Taos; master of ceremonies George Morrison, news director at station KOAT-TV in Albuquerque; William Kuntz, of New York, president of Molycorp; and Lewis B. Harder of New York, chairman of the board of Molycorp.

Mining Men Attend

The ceremonies attracted a large group of mining officials from throughout the United States and Canada in addition to state officials, political candidates and newsmen.

The Questa mine is located about 5½ miles from the town of Questa on the western slope of the Taos Range of the Sangre de Cristo Mountains. Molycorp acquired claims to the property in 1921 and began production in 1922, building a 50-ton capacity mill in 1923.

After years of underground mining, surface drilling began in 1960. By 1964 sufficient reserves were blocked out to make the new plant and expanded operation feasible.

To Relieve Shortage

The mine-mill complex to be dedicated today represents a total investment of more than $40 million, is the site of the first large new primary source of molybdenum developed in the United States in 40 years, and will account for about 10 per cent of total free world molybdenum output and 20 per cent of the molybdenum consumed in the United States.

John Petty, vice president and general manager of Molycorp at Questa, said: "Production from the Questa mine is expected to play a significant role in relieving the shortage of molybdenum which had persisted for several years."

The Molycorp holdings near Questa consist of 14,300 acres with an additional 2,000 acres under option, and the concentrating mill has a rated capacity of 10,000 tons of ore per day. The mill was built at a cost of $20 million.

1966-04-01-las-vegas-daily-optic-pg-1-clip-questa-molybdenum

1966-04-01-las-vegas-daily-optic-pg-1-clip-questa-molybdenum.jpg /

April 1966

https://www.newspapers.com/image/156973419/?terms=LEWIS%2BHarder%2Bmolybdenum

1966-04-02-the-albuquerque-journal-albuquerque-new-mexico-pg-1

https://www.newspapers.com/image/156973889/

1966-04-02-the-albuquerque-journal-albuquerque-new-mexico-pg-10

MOLYCORP OFFICERS, from left, William R. Kuntz, president; John M. Petty, vice president and general manager, and Lewis B. Harder, chairman of the board were on hand for the dedication of the company's molybdenum mine near Questa Friday. The company's fine ore crushing plant, on which the company's name is printed, is shown in the background. Related photo on Page C-8.

(Journal photo)

1966-04-02-the-albuquerque-journal-albuquerque-new-mexico-pg-1-and-10-clip-molycorp

Economic Boost Seen

Molycorp Mine-Mill Dedicated at Questa

By WAYNE S. SCOTT
Of the Journal Staff

QUESTA — The new installation of Molybdenum Corporation of America is one of the things which will improve the economic conditions of northern New Mexico, Gov. Jack M. Campbell declared Friday at the formal dedication of the mine and mill seven miles east of Questa.

"Northern New Mexico has not kept pace with the economic development of the rest of the state," the governor said. "But it is a land of tremendous potential. We are participating in the culmination of one of them today."

More than 200 persons attended the open air dedication program, highlighted by a flyover of four New Mexico Air National Guard jet planes at low altitude.

Many of those attending toured the $40 million installation which will furnish 15 per cent of this country's molybdenum. The rare metal is an important ingredient of high quality steel.

Gov. Campbell and high Molycorp officials were high in praising each other for cooperation enabling construction of the plant.

Among the company officials who spoke were William R. Kuntz, president, Lewis B. Harder, chairman of the board, and John M. Petty, vice president and general manager of the Questa mine and mill. The three singled out by names more than 50 individuals, company officials and officials of state and federal agencies whom they praised for their contributions toward establishment of the plant.

Gov. Campbell pointed out northern New Mexico as one of the oldest settled areas of what is now the United States. Indian pueblos occupied the

Continued on A-10

Dedication Held Of Molybdenum Corp. Installation

Continued From A-1

area for centuries before the coming of the first Spanish conquistadores. The Spanish settlers, he said were followed by trappers, ranchers and in late years nuclear physicists.

Notes New Projects

He said a number of projects already have been completed or are in progress which will aid in further development of the area. He said the Rio Grande Gorge Bridge and the connecting US-64, which he said would be completed by early 1969, would provide a route for tourists across northern New Mexico.

He said the San Juan-Chama water project and the Navajo Dam and Navajo irrigation project would provide the area with plenty of water and further aid its development. Kaiser Corp. is now opening a new mine to produce more than one million tons of coal annually, which will aid in rehabilitating the formerly prosperous coal mining areas of northern New Mexico, Campbell said.

He predicted 1966 would be "a banner year" for mining in New Mexico. In addition to the Kaiser coal mine, he said there has been an upsurge in copper, lead and zinc mining. There are 463 mining operations in New Mexico he said, with investments totaling $44 million, in addition to the Molycorp investment.

In Public Interest

"I am pleased to report this installation will operate in complete compatibility with the public interest as affecting public health, recreation, and water supplies" Campbell said.

He referred to the report of a special committee which had studied the problem of a recent incident which caused pollution of the Red River. The report stated that steps had been taken to prevent similar incidents in the future and a system had been set up to warn everyone concerned should another incident occur.

"We are going to make it entirely possible for fishermen to fish without any fear of danger to themselves or danger to the fishing habitat," Campbell said.

He expressed appreciation to company officials for their cooperation in this respect.

Has 316 Employes

The governor said the operation, with its 316 employees and its $2.4 million annual payroll is a "magnificent addition to the economy not only of Taos County but the economy of the entire state."

"New Mexico is on the move and we are proud Molycorp is on the move with it," the governor said.

The flyover of Air National Guard jets had been scheduled to occur at the end of the governor's speech. But the program had dragged slightly and the roar of the planes interrupted the governor. But the crowd had been forewarned and the governor made frequent jokes concerning the interruption during his speech.

Extends Praise

High praise for Campbell's interest in the tourist industry was expressed by Jack P. Brandenburg, president of the first state bank of Taos. He particularly praised the governor for the construction of the Rio Grande Gorge Bridge which he called "one of the major accomplishments of Gov. Campbell during his term in office."

Brandenburg also recounted the history of Taos County. He noted that sheep raising had been its principal industry in early days, "but today it is of very little economic importance to our people."

Tourism is the county's biggest industry today, Brandenburg said.

"Red River has developed into one of the outstanding summer resorts of the Rocky Mountain area and is now becoming known as a winter resort, Brandenburg said.

Seeks New Ore

The Molycorp installation is about seven miles east of Questa on the road to Red River. The firm has been operating in a small way since 1922. It almost closed down in the early 1950's after the high grade ore veins played out. But it decided instead to seek new ores and found a large quantity of lower grade mineral which it is now mining by the open pit method. Ten thousand tons of ore are being extracted each day from the open pit. Shovels with 10 cubic yard buckets scoop up the ore and place them in 100 ton dump trucks for transportation to the mill.

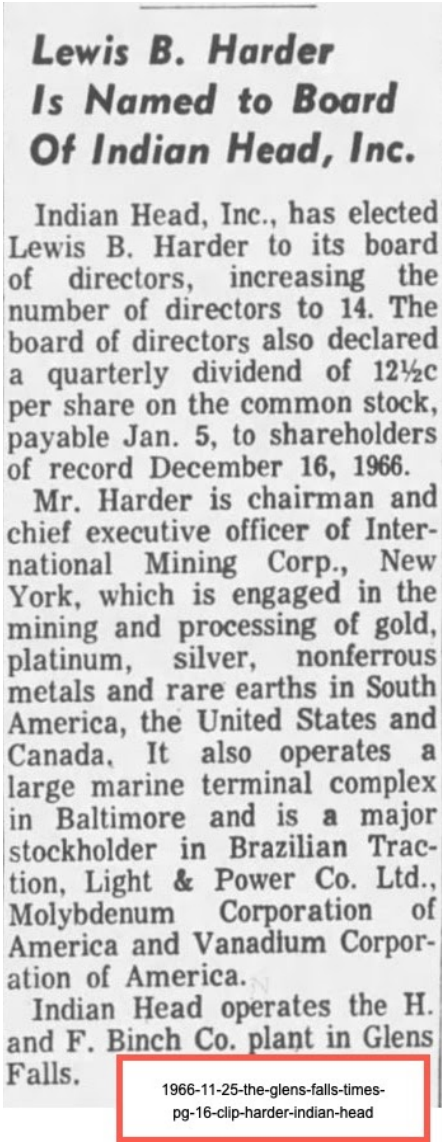
Here the ore goes through several crushers and then is concentrated by a flotation process. The concentrated ore is trucked to Alamosa, Colo. and from there goes by rail to the company's refining plant in

1966-04-02-the-albuquerque-journal-albuquerque-new-mexico-pg-1-and-10-clip-molycorp.jpg /

1966 (Nov)

https://www.newspapers.com/image/346882745/?terms=LEWIS%2BHarder%2Bmolybdenum

1966-11-25-the-glens-falls-times-pg-16



Lewis B. Harder Is Named to Board Of Indian Head, Inc.

Indian Head, Inc., has elected Lewis B. Harder to its board of directors, increasing the number of directors to 14. The board of directors also declared a quarterly dividend of 12½c per share on the common stock, payable Jan. 5, to shareholders of record December 16, 1966.

Mr. Harder is chairman and chief executive officer of International Mining Corp., New York, which is engaged in the mining and processing of gold, platinum, silver, nonferrous metals and rare earths in South America, the United States and Canada. It also operates a large marine terminal complex in Baltimore and is a major stockholder in Brazilian Traction, Light & Power Co. Ltd., Molybdenum Corporation of America and Vanadium Corporation of America.

Indian Head operates the H. and F. Binch Co. plant in Glens Falls.

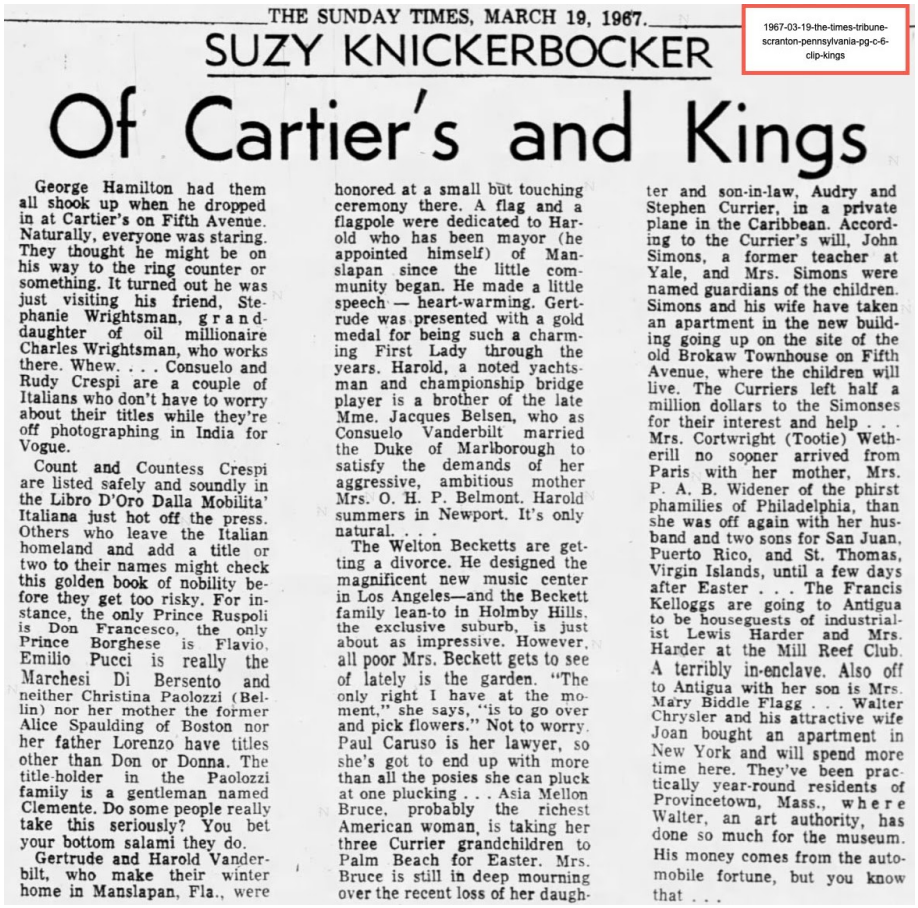
1966-11-25-the-glens-falls-times-pg-16-clip-harder-indian-head

1966-11-25-the-glens-falls-times-pg-16-clip-harder-indian-head.jpg /

1967 (March)

https://www.newspapers.com/image/534127399/?terms=%22lewis%2Bharder%22%2Bpeter%2Bgrace

1967-03-19-the-times-tribune-scranton-pennsylvania-pg-c-6



THE SUNDAY TIMES, MARCH 19, 1967.

1967-03-19-the-times-tribune-scranton-pennsylvania-pg-c-6-clip-kings

SUZY KNICKERBOCKER

Of Cartier's and Kings

George Hamilton had them all shook up when he dropped in at Cartier's on Fifth Avenue. Naturally, everyone was staring. They thought he might be on his way to the ring counter or something. It turned out he was just visiting his friend, Stephanie Wrightsman, granddaughter of oil millionaire Charles Wrightsman, who works there. Whew. . . . Consuelo and Rudy Crespi are a couple of Italians who don't have to worry about their titles while they're off photographing in India for Vogue.

Count and Countess Crespi are listed safely and soundly in the Libro D'Oro Dalla Mobilita' Italiana just hot off the press. Others who leave the Italian homeland and add a title or two to their names might check this golden book of nobility before they get too risky. For instance, the only Prince Ruspoli is Don Francesco, the only Prince Borghese is Flavio, Emilio Pucci is really the Marchesi Di Bersento and neither Christina Paolozzi (Bellin) nor her mother the former Alice Spaulding of Boston nor her father Lorenzo have titles other than Don or Donna. The title-holder in the Paolozzi family is a gentleman named Clemente. Do some people really take this seriously? You bet your bottom salami they do.

Gertrude and Harold Vanderbilt, who make their winter home in Manslapan, Fla., were honored at a small but touching ceremony there. A flag and a flagpole were dedicated to Harold who has been mayor (he appointed himself) of Manslapan since the little community began. He made a little speech — heart-warming. Gertrude was presented with a gold medal for being such a charming First Lady through the years. Harold, a noted yachtsman and championship bridge player is a brother of the late Mme. Jacques Belsen, who as Consuelo Vanderbilt married the Duke of Marlborough to satisfy the demands of her aggressive, ambitious mother Mrs. O. H. P. Belmont. Harold summers in Newport. It's only natural. . . .

The Welton Becketts are getting a divorce. He designed the magnificent new music center in Los Angeles—and the Beckett family lean-to in Holmby Hills, the exclusive suburb, is just about as impressive. However, all poor Mrs. Beckett gets to see of lately is the garden. "The only right I have at the moment," she says, "is to go over and pick flowers." Not to worry. Paul Caruso is her lawyer, so she's got to end up with more than all the posies she can pluck at one plucking . . . Asia Mellon Bruce, probably the richest American woman, is taking her three Currier grandchildren to Palm Beach for Easter. Mrs. Bruce is still in deep mourning over the recent loss of her daughter and son-in-law, Audry and Stephen Currier, in a private plane in the Caribbean. According to the Currier's will, John Simons, a former teacher at Yale, and Mrs. Simons were named guardians of the children. Simons and his wife have taken an apartment in the new building going up on the site of the old Brokaw Townhouse on Fifth Avenue, where the children will live. The Curriers left half a million dollars to the Simonses for their interest and help . . . Mrs. Cortwright (Tootie) Wetherill no sooner arrived from Paris with her mother, Mrs. P. A. B. Widener of the phirst phamilies of Philadelphia, than she was off again with her husband and two sons for San Juan, Puerto Rico, and St. Thomas, Virgin Islands, until a few days after Easter . . . The Francis Kelloggs are going to Antigua to be houseguests of industrialist Lewis Harder and Mrs. Harder at the Mill Reef Club. A terribly in-enclave. Also off to Antigua with her son is Mrs. Mary Biddle Flagg . . . Walter Chrysler and his attractive wife Joan bought an apartment in New York and will spend more time here. They've been practically year-round residents of Provincetown, Mass., where Walter, an art authority, has done so much for the museum. His money comes from the automobile fortune, but you know that . . .

1967-03-19-the-times-tribune-scranton-pennsylvania-pg-c-6-clip-kings.jpg /

1968

https://www.newspapers.com/image/60167528/?terms=LEWIS%2BBradley%2BHarder

1968-02-05-the-bridgeport-post-pg-12.jpg

1968-02-05-the-bridgeport-post-pg-12-clip-harder-board

MINING FIRM HEAD ON FEDERATION BOARD

NORWALK — Lewis Bradley Harder, chairman and chief executive officer of the International Mining corporation, has joined the board of directors of Save the Children Federation and its cooperating agency, the Community Development foundation, both headquartered here.

Both SCF and CDF are voluntary agencies that are nonprofit, non-secretarian and nongovernmental.

Mr. Harder of Bedford Hills, N.Y., also holds chairmanships in the Beryllium corporation, Molybdenum corporation of America, Fresnillo company, and the Pittsburgh and West Virginia company. He was president of South American Gold and Platium company and Panamerican Capital corporation until 1963.

1968-02-05-the-bridgeport-post-pg-12-clip-harder-board

1968 (March)

https://www.newspapers.com/image/513167618/?terms=lewis%2Bharder%2B%22peter%2Bgrace%22

1968-03-01-national-post-toronto-ontario-canada-pg-10

BRAZILIAN LIGHT AND POWER COMPANY LIMITED

Incorporated in Canada

BOARD OF DIRECTORS

Hermann J. Abs	Frankfurt	G. Blair Gordon	Montreal
J. H. A'Court	Toronto	J. Peter Grace	New York
Pierre Ansiaux	Brussels	Lewis B. Harder	New York
Thierry Barbey	Geneva	W. C. Harris	Toronto
Henry Borden	Toronto	R. L. Hearn	Toronto
The Rt. Hon. the Lord Bridges	London	Paul E. Manheim	New York
E. G. Burton (Vice-President)	Toronto	Beverley Matthews	Toronto
Walker L. Cisler	Detroit	K. H. McCrimmon	Rio de Janeiro
John F. Gallagher	Chicago	Neil J. McKinnon	Toronto
Antonio Gallotti (Vice-President)	Rio de Janeiro	John G. Phillimore	London
J. Grant Glassco (President)	Toronto	Lazarus Phillips	Montreal

Head Office — 25 King Street West, Toronto 1, Canada

Brazilian Light has supplied public utility services in Brazil since the beginning of the century. The Company's electric plants have a capacity of more than two million kilowatts and their sales account for nearly 50 per cent of all electric energy sold in Brazil. In addition, the Company has invested in a number of non-utility enterprises in Brazil and Canada.

1968-03-01-national-post-toronto-ontario-canada-pg-10-clip-brazilian-light

1968-03-01-national-post-toronto-ontario-canada-pg-10-clip-brazilian-light.jpg /

1969

https://www.newspapers.com/image/513166543/?terms=Lewis%2BHarder%2Bfresnillo

1969-02-22-national-post-ontario-canada-pg-11

ROMAN CORPORATION LIMITED

LEWIS B. HARDER JOSEPH A. PATRICK

Stephen B. Roman, chairman and president of Roman Corporation Limited, announces the election to the board of directors of Lewis B. Harder and Joseph A. Patrick.

Mr. Harder, chairman and chief executive officer of International Mining Corporation, holds amongst his other chairmanships those of the Molybdenum Corporation of America, The Fresnillo Company and The Pittsburgh & West Virginia Railway Company. In addition, he is a director of several well-known Canadian and U.S. companies.

Mr. Patrick, senior partner, Baird, Patrick & Co., members of the New York Stock Exchange, is a distinguished American attorney and a graduate of the Harvard Law School. He is a vice-president and director of New Idria Mining and Chemical Co., a director of Kroehler Manufacturing Company, Black Hawk Mining and Consolidated Rexspar Minerals & Chemicals Limited.

1969-02-22-national-post-ontario-canada-pg-11-clip-roman-corp-limited

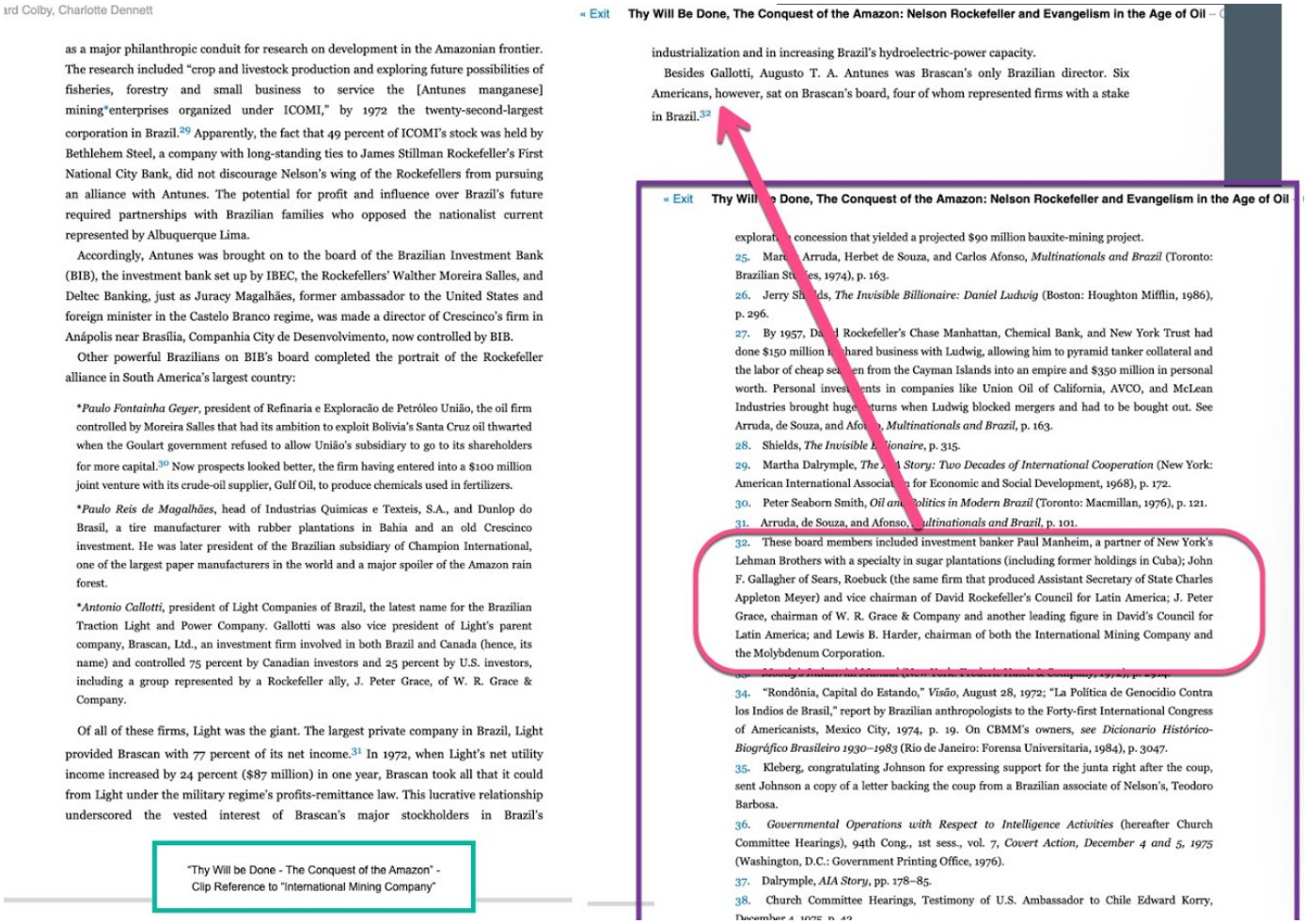
1969-02-22-national-post-ontario-canada-pg-11-clip-roman-corp-limited.jpg /

1972 note in book = "Thy Will be Done : The Conquest of the Amazon"

Lewis Bradley Harder was chairman of ***"International Mining Company".*** This helps us verify that in media sources in the 1900s, ***"International Mining Corporation"*** is sometimes referred to as ***"International Mining Company"***.

The chairman **Lewis Bradley Harder (born 1918)** of **International Mining Corporation** was also the chairman of the **Molybdenum Corporation** .

https://books.google.com/books?id=t9U3DwAAQBAJ&dq=new+york+%22The+International+Mining+Company%22&source=gbs_navlinks_s



1995-thy-will-be-done-the-conquest-of-the-amazon-rockefeller-and-evangelism-in-the-age-of-oil-colby.jpg / https://drive.google.com/open?id=1qw9Yzp2hUHuOBnOcAGLIqmyWOv8tXEwS

1973 (March)

https://www.newspapers.com/image/493465867/?terms=lewis%2Bharder%2B%22peter%2Bgrace%22

1973-03-06-the-vancouver-sun-pg-13

B.C.'s intended partner is giant billion-dollar corporation

The company with which the provincial government plans to go into partnership in developing the Sukunka coal field is an international corporation with assets in the billion-dollar range.

Brascan Ltd., a holding company, is the direct owner of shares in a string of Brazilian companies and is also associated with the largest private firm in Brazil, which supplies electricity to the two largest cities in the country.

In Canada, Brascan's chief investment is in John Labatt Ltd., a producer of beer, food and other products. It also holds a 6.7-per-cent interest in the Hudson's Bay Co., the department store chain.

Brascan had 1971 assets of $1.1 billion and net income of $83.7 million or $3.60 a share. It trades on the Toronto Stock Exchange at $19.75 to $20⅛.

Premier Dave Barrett announced Monday that the provincial government has agreed to purchase a 40-per-cent interest in the Sukunka coal project from Brameda Resources Ltd.

The deal is subject to Brascan exercising options to acquire the other 60 per cent and putting the coalfield into production by mid-1975.

Vancouver-based Brameda Resources Ltd. discovered the Sukunka coal deposit in 1970 and owns the 41 coal licences that form the deposit.

Brameda was formed in 1969 through the consolidation of the "Brynelsen" group of companies and was converted from a private to a public company that year.

The name Brameda was taken from letters in the last names of the four founders, B. O. Brynelsen, Jacob Austin, Morris Menzies and Merv Davis.

Brameda essentially was a holding company, controlling a group of other mining companies.

In 1969 Brameda acquired a 50.03-per-cent interest in Vancouver-based Churchill Copper Corporation Ltd., a company which had a small copper mine near Fort Nelson, B.C.

In October 1971, Churchill Copper closed down in view of depressed prices for copper.

In 1972 Churchill shares were suspended from trading on the Vancouver Stock Exchange and last January the company was delisted for failure to maintain listing requirements.

Brameda can also acquire a 70-per-cent interest in Silver Mines Ltd., a copper-molybdenum prospect in the Yukon.

In 1971 Brameda had a net loss, including extraordinary items, of $15.5 million. Its assets were listed as $10.5 million.

In June 1970, Teck Corporation Ltd. poured $3 million into Brameda's treasury to provide it with working capital.

In November of that year Teck and Brameda entered into an agreement in which Teck purchased a five-per-cent interest in Sukunka for $1 million.

By mid-1971, Brameda was still considering placing the Sukunka project into production on its own. Brameda chairman Brynelsen said that Sukunka could be operational by late 1973.

A few weeks later Brameda and Teck announced they had worked out a development agreement with a wholly-owned subsidiary of Toronto-based Brascan Ltd., Mikas Oil Co. Ltd. of Calgary.

Under the agreement, Mikas was able to earn a 7.5 per-cent interest in the Sukunka property for an outlay of $1.5 million to be spent on drilling, underground work and feasibility study. Mikas also had the option to earn an additional 37.5-per-cent interest for spending $7.5 million.

Under this agreement, Brameda would have retained a 50-per-cent interest in Sukunka, with Mikas holding 42.5-per-cent interest and Coalition Mining Ltd. a 7.5-per-cent interest.

Coalition is a private company whose shareholders are Mikas, Austen & Butta Ltd. (Australian coal operators) and Intercontinental Fuels Ltd. (British coal company with worldwide experience in the marketing of coal).

A vice-president of Coalition is Cliff Sawyer, who joined Brascan in 1969.

Before joining Brascan, Sawyer was for many years associated with the Ford Motor Comapny and had a variety of management assignments in Canada, the U.S., Europe and Latin America.

Last October Brameda announced it had granted the Brascan group the option to purchase an additional 10 per cent in Sukunka, thereby reducing its holdings to 40 per cent and increasing those of the Brascan group to 60 per cent. This extra 10-per-cent interest was to cost an additional $2.15 million.

It is Brameda's 40 per cent the government intends to purchase.

The option agreement, the date of which Brascan was to have made a production decision on Sukunka, expired Jan. 31 but was extended to June 1975.

Brameda cited a variety of reasons, including the location of the loading port, development mining and market research, for the extension on the option agreement.

The 1971 Brascan annual report lists the following as directors of the company:

J. Abs Hermann, chairman, Deutsche Bank AG, Germany; J. H. A'Court, vice-president, finance, Toronto; Pierre Ansiaux, member of the Supreme Court of Belgium, Brussels; A. T. A. Antunes, president, Industria e Comercio de Minerios S.A., Rio de Janeiro; Thierry Barbey, managing partner, Lombard, Odier & Cie, Geneva; Henry Borden, director and member of the executive committee, Bell Canada, Toronto; Paul Desmarais, chairman, Power Corporation of Canada, Ltd., Montreal;

John F. Gallagher, vice-president, international operations, Sears, Roebuck and Co., Chicago; Antonio Gallotti, vice-president, a president of Servicos de Eletricdade S.A., Rio de Janeiro; J. Peter Grace, chairman, W. R. Grace & Co., New York; Lewis Harder, chairman, International Mining Corporation, New York; N. E. Hardy, president, John Labatt Ltd., London, Ont.; W. C. Harris, chairman, Harris & Partners Ltd., Toronto; Louis Lapointe, chairman and president, Miron Company Ltd., Montreal.

A. J. MacIntosh, partner, Blake, Cassels & Graydon, Toronto; Paul Manheim, limited partner, Lehman Brothers, New York; William Manning, partner, Simpson Thacher & Bartlett, New York; Beverley Matthews, partner, McCarthy & McCarthy, Toronto; Neil McKinnon, chairman, Canadian Imperial Bank of Commerce, Toronto; William Meese, president and chief executive officer, the Detroit Edison Company; Detroit; J. H. Moore, president, London, Ont.; John Phillimore, managing director, Baring Brothers & Co. Ltd., London.

Directors of Teck Corporation Limited are: B. O. Brynelsen, president, Brenda Mines Limited, Vancouver; Sir Michael Butler, Barrister, Farris, Baughan, Wills & Murphy, Vancouver; R. E. Hallbauer, president, Brameda Resources Ltd., Vancouver; William James, director, Canada Permanent Mortage Corporation, Toronto; A. R. Keevil, vice-president, Teck, Calgary; N. B. Keevil, president, Copperfields Mining Corporation Ltd., Mississauga, Ont.; N. B. Keevil Jr., president, Tribag Mining Limited, Vancouver. J. D. Leishman, director, Mutual Life Assurance Company of Canada, Vanouver; C. E. Michener, consulting geologist, Toronto; H. H. Westell, executive vice-president, Teck, Islington, Ont.; R. J. Wright, partner, Lang, Michener, Cranston, Farquharson & Wright, Toronto.

The 1971 annual report of Brameda lists the following as directors:

William Bergey, exploration manager, Keevil Mining Group, Vanououver; Bernard O. Brynelsen, president, Brenda Mines Ltd., Vancouver; Sir Michael Butler, barrister, Vancouver; Mervin E. Davis, vice-president, Brenda Mines, Vancouver; Robert W. Falkins, president, Highmont Mining Corp. Ltd., Vancouver; Robert Hallbauer, vice-president, Teck; Norman Keevil Jr., executive vice-president, Teck; John Leishman, director, Teck, Vancouver; Morris Menzies, director, Brenda Mines, Vancouver; Joseph Murphy, general manager, Burns Bros. & Denton Ltd., Toronto; Ridgeway Wilson, president, Silver Standard Mines Ltd., Vancouver.

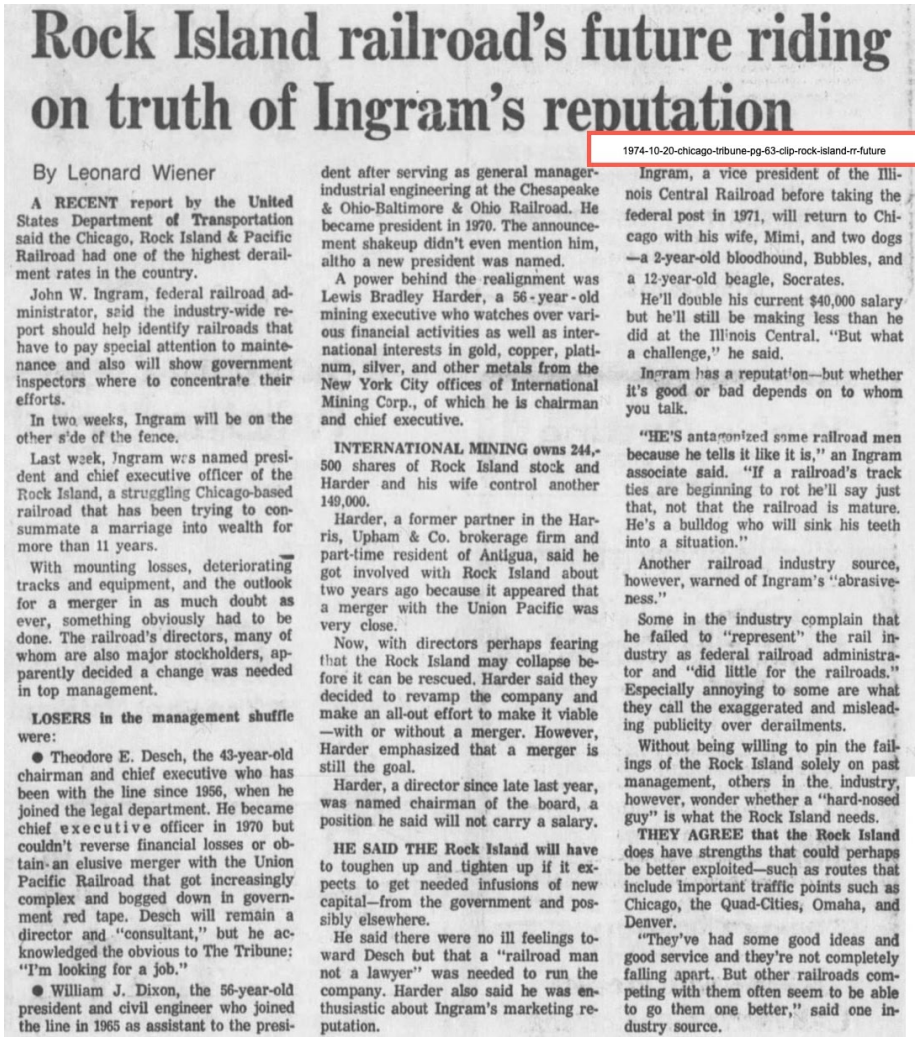
1973-03-06-the-vancouver-sun-pg-13-clip-billion-dollar-corp

1973-03-06-the-vancouver-sun-pg-13-clip-billion-dollar-corp.jpg /

1974

https://www.newspapers.com/image/383781006/?terms=LEWIS%2BBradley%2BHarder

1974-10-20-chicago-tribune-pg-63.jpg



Rock Island railroad's future riding on truth of Ingram's reputation

1974-10-20-chicago-tribune-pg-63-clip-rock-island-rr-future

By Leonard Wiener

A RECENT report by the United States Department of Transportation said the Chicago, Rock Island & Pacific Railroad had one of the highest derailment rates in the country.

John W. Ingram, federal railroad administrator, said the industry-wide report should help identify railroads that have to pay special attention to maintenance and also will show government inspectors where to concentrate their efforts.

In two weeks, Ingram will be on the other side of the fence.

Last week, Ingram was named president and chief executive officer of the Rock Island, a struggling Chicago-based railroad that has been trying to consummate a marriage into wealth for more than 11 years.

With mounting losses, deteriorating tracks and equipment, and the outlook for a merger in as much doubt as ever, something obviously had to be done. The railroad's directors, many of whom are also major stockholders, apparently decided a change was needed in top management.

LOSERS in the management shuffle were:

● Theodore E. Desch, the 43-year-old chairman and chief executive who has been with the line since 1956, when he joined the legal department. He became chief executive officer in 1970 but couldn't reverse financial losses or obtain an elusive merger with the Union Pacific Railroad that got increasingly complex and bogged down in government red tape. Desch will remain a director and "consultant," but he acknowledged the obvious to The Tribune: "I'm looking for a job."

● William J. Dixon, the 56-year-old president and civil engineer who joined the line in 1965 as assistant to the president after serving as general manager-industrial engineering at the Chesapeake & Ohio-Baltimore & Ohio Railroad. He became president in 1970. The announcement shakeup didn't even mention him, altho a new president was named.

A power behind the realignment was Lewis Bradley Harder, a 56-year-old mining executive who watches over various financial activities as well as international interests in gold, copper, platinum, silver, and other metals from the New York City offices of International Mining Corp., of which he is chairman and chief executive.

INTERNATIONAL MINING owns 244,500 shares of Rock Island stock and Harder and his wife control another 149,000.

Harder, a former partner in the Harris, Upham & Co. brokerage firm and part-time resident of Antigua, said he got involved with Rock Island about two years ago because it appeared that a merger with the Union Pacific was very close.

Now, with directors perhaps fearing that the Rock Island may collapse before it can be rescued, Harder said they decided to revamp the company and make an all-out effort to make it viable —with or without a merger. However, Harder emphasized that a merger is still the goal.

Harder, a director since late last year, was named chairman of the board, a position he said will not carry a salary.

HE SAID THE Rock Island will have to toughen up and tighten up if it expects to get needed infusions of new capital—from the government and possibly elsewhere.

He said there were no ill feelings toward Desch but that a "railroad man not a lawyer" was needed to run the company. Harder also said he was enthusiastic about Ingram's marketing reputation.

Ingram, a vice president of the Illinois Central Railroad before taking the federal post in 1971, will return to Chicago with his wife, Mimi, and two dogs —a 2-year-old bloodhound, Bubbles, and a 12-year-old beagle, Socrates.

He'll double his current $40,000 salary but he'll still be making less than he did at the Illinois Central. "But what a challenge," he said.

Ingram has a reputation—but whether it's good or bad depends on to whom you talk.

"HE'S antagonized some railroad men because he tells it like it is," an Ingram associate said. "If a railroad's track ties are beginning to rot he'll say just that, not that the railroad is mature. He's a bulldog who will sink his teeth into a situation."

Another railroad industry source, however, warned of Ingram's "abrasiveness."

Some in the industry complain that he failed to "represent" the rail industry as federal railroad administrator and "did little for the railroads." Especially annoying to some are what they call the exaggerated and misleading publicity over derailments.

Without being willing to pin the failings of the Rock Island solely on past management, others in the industry, however, wonder whether a "hard-nosed guy" is what the Rock Island needs.

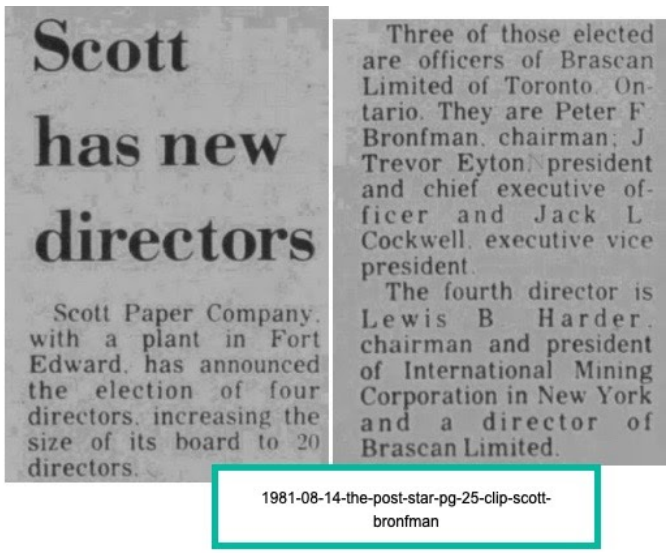
THEY AGREE that the Rock Island does have strengths that could perhaps be better exploited—such as routes that include important traffic points such as Chicago, the Quad-Cities, Omaha, and Denver.

"They've had some good ideas and good service and they're not completely falling apart. But other railroads competing with them often seem to be able to go them one better," said one industry source.

1974-10-20-chicago-tribune-pg-63-clip-rock-island-rr-future.jpg /

1981 (Aug)

1981-08-14-the-post-star-glens-falls-ny-pg-25.jpg / https://drive.google.com/open?id=1nKZKQsNB43wkGJoe8RrzLXJE7LCzgO1H



Scott has new directors

Scott Paper Company, with a plant in Fort Edward, has announced the election of four directors, increasing the size of its board to 20 directors.

Three of those elected are officers of Brascan Limited of Toronto, Ontario. They are Peter F Bronfman, chairman; J Trevor Eyton, president and chief executive officer and Jack L Cockwell, executive vice president.

The fourth director is Lewis B Harder, chairman and president of International Mining Corporation in New York and a director of Brascan Limited.

1981-08-14-the-post-star-pg-25-clip-scott-bronfman

1981-08-14-the-post-star-glens-falls-ny-pg-25-clip-scott-bronfman.jpg /
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1991 (June)

https://www.newspapers.com/image/273663842/?terms=%22lewis%2Bharder%22%2Bmueller

1991-06-24-honolulu-star-bulletin-pg-c-1

C&C plans new name

☐ It's asking stockholders to rename it Dole Food Co. Inc.

By Russ Lynch
Star-Bulletin

Castle & Cooke Inc., named after pioneer Hawaii settlers, will change its 140-year-old name to Dole Food Co. Inc., if stockholders give their expected approval at the company's July 30 annual meeting.

David H. Murdock, chairman and chief executive officer, said today that a resolution to change the name will go before stockholders when they meet at the Halekulani Hotel.

Last July, Murdock announced that the company was prepared to sell its giant Dole Food subsidiary, which was responsbile for about $2.8 billion of Castle & Cooke's 1990 revenues of slightly more than $3 billion.

His reasoning was that the food business and Castle & Cooke's much smaller real estate business would do better in the stock market as separate companies, while proceeds from the Dole sale could go into developing and marketing the company's huge land holdings.

1991-06-24-honolulu-star-bulletin-pg-c-1-clip-c-and-c

By December, however, he had taken it off the market. Changing financial market conditions had apparently resulted in no firm offers in line with what analysts said Dole was worth, about $3 billion. Three months ago, the Wall Street Journal quoted Murdock as saying that Dole would never be sold.

Since becoming chairman after leading a 1985 financial bailout of what was nearly a bankrupt company, Murdock has driven the Dole name into international prominence.

"The Dole name is known worldwide and is synonymous with the highest standards of quality and freshness. The proposed name change also reflects the widespread use of Dole as the primary identification of the company and the name used by its customers, employees and the general public," Murdock said today.

The company will continue to use the Castle & Cooke name in its California, Hawaii and Arizona real estate businesses.

Castle & Cooke management also nominated two new directors for election at next month's meeting. One is a Hawaii businessman, Frank J. Hata, chairman and chief executive officer of amajor wholesale food business, Y. Hata & Co.

The other is Richard M. Ferry, president of Korn/Ferry International Inc., an international executive search firm. They would replace two board members who are retiring, Milton R. Abrahams and Lewis B. Harder.

1991-06-24-honolulu-star-bulletin-pg-c-1-clip-c-and-c.jpg /

1999 (Nov 11) - Passing

http://www.genealogybuff.com/ma/harvard/webbbs_config.pl/noframes/read/23

"LEWIS BRADLEY HARDER '41, of Katonah, N.Y., died on November 11. He was retired director and board chairman of ***International Mining Corp*** *. A former naval aviator, he continued to fly his own plane for many years; he also enjoyed salmon fishing in New Brunswick. He leaves his wife, Dorothy (Butler), two daughters, Deirdre Laveran and Diana Terrell, three sisters, and two brothers."*

Read more: http://www.genealogybuff.com/ma/harvard/webbbs_config.pl/noframes/read/23#ixzz5srafWzZT

BITCHUTE @Housatonic YOUTUBE @HousatonicLive ODYSEE @Housatonic BRIGHTEON @Housatonic

Housatonic

Robert Lewis Harris (born 1937)

2015 (Aug) - Passing

See [HN008A][GDrive]

At 6 feet, 7 inches, Bob Harris was easy to notice.

He always cut a dashing figure — with his signature tasseled loafers, a brocaded silk vest in summer, a crimson plaid Christmas jacket or some other elegant, attention-getting attire whenever the occasion called for it. Unless his work as an attorney for the **Landegger family's pulp and paper** concerns required his presence in Europe or another far-flung part of the globe, Bob rarely missed a weekend on Shelter Island, where he bought his house on Cartwright Road in 1976.

Robert Lewis Harris' journey ended peacefully there on June 20, 2015. He was 77. He had battled hard against leukemia for eight months.

Though he kept an apartment in the city, Bob regarded Shelter Island as home. His love of the Island manifested itself in many ways. He was a generous contributor to numerous Island institutions. Each summer, at the Mashomack dinner dance, he bid vigorously on such auction items as the lobster bake and the Christmas cocktail party. As the bids grew higher and most dropped out, Harris raised his bidding paddle again and again.

On several occasions, Bob and one other bidder dueled it out until Mike Laspia offered to do two cocktail parties or two lobster bakes. The results for both Bob's friends and Mashomack's budget were most felicitous.

Bob also frequently served at Historical Society events. He'd pour punch or make brownies or do whatever was needed to make a success of whatever event. He underwrote the production of a book about the collection of Delftware donated to theHistorical Society by the late Gill Patterson. Then, in the last weeks of his life, he also provided the funds to build cabinets in which the centuries-old pieces could be safely displayed.

Bob's generosity was not limited to public giving. When a friend was throwing a bash or had a birthday or needed cheering for whatever reason, Bob sent flowers — always via Becky Smith at Shelter Island Florist. He also frequently turned up with a platter of lemon squares or a casserole he'd spotted in a cooking magazine — all ingredients purchased at the IGA.

A few years ago, when the husband of an East End friend was going through the rigors of cancer treatment at Columbia-Presbyterian Hospital, Bob took the subway uptown one evening each week to take the woman out to dinner, thereby giving her a brief respite from the wear and tear of being at her husband's bedside.

He also quietly participated in clean-up events at Mashomack and took on the role of conservator for a friend who was being swirled into the mists of dementia.

For fun, he kayaked the waters of Coecles Harbor, cooked elaborate and delicious meals to serve at his kitchen table and sailed the Island's roads in a 1995 Buick Park Avenue, nicknamed "The Galleon" that was carefully restored by a skilled Island craftsman.

His city pleasures included ballet — he was a devoted balletomane and a donor to the American Ballet Theater — the Metropolitan Museum of Art and the Metropolitan Opera. At the opera, he always insisted his guests sip champagne during the intervals.

There were moments, when displeased, Bob could show flashes of asperity, scathing wit or hauteur. But he far more often displayed the playful, curious, loyal and charitable sides of his nature. **He particularly delighted in taking special guests out onto the head of one of the Chrysler building's gargoyles, to view from vertiginous height the marvels of Manhattan below and feel what it must be to be one of the flying gargoyles. Access was via his office door.**

Bob was born in the Holly Hills neighborhood of St. Louis in 1937 to **Robert Lewis and Faryl Johnson Harris**. He earned his bachelor's degree at DePauw University in 1959 and an M.A. at the University of Missouri in 1964.

After three years on Okinawa with American Express' banking division, he decided he wasn't cut out for the financial world and headed to New York. There, for several years, he joined J. Walter Thompson and the "mad men" of the advertising world as assistant treasurer. But that interest too proved fleeting. When he finally finished law school at NYU in 1970, he'd found his calling.

He joined **Black Clawson, the Landegger family worldwide pulp and paper machinery enterprise**, a few years after completing law school and remained with them until his death. He prided himself on the Rolex watch given him by Carl Landegger, the head of the firm. The watch is engraved on the back, "Thank you. Carl."

[See below ...]

He discovered Shelter Island when the late Robert Braunschweig, also an attorney and a weekend Islander, invited him here to work on a case that concerned them both. Bob looked around, liked what he saw and, a few months later, became an Islander. His parents joined him here after his father's retirement and remained Islanders themselves until their deaths.

Bob is survived by his wife, **Svetlana Kluge Harris** of New York, and his **brother, Stuart J. Harris** of Virginia Beach, Virginia.

Plans for a gathering honoring Bob's memory are incomplete.

— Janet Roach

1968 (July 21)

Full newspaper page : [HN0179][GDrive]

1968-07-21-st-louis-post-dispatch-pg-3-i-clip-kluge-harris

Harris-Kluge

MISS SVETLANA KLUGE of New York will be married Sept. 1 to Robert Lewis Harris, son of Mr. and Mrs. Lewis S. Harris, 1942 South Signal Hills drive, Kirkwood. Their engagement has been announced by her parents, Mr. and Mrs. Michael C. Kluge of New York.

Miss Kluge was graduated magna cum laude from Barnard College, New York, where she was elected to Phi Beta Kappa honorary society. A doctoral candidate at Columbia University, New York, she has held a Woodrow Wilson fellowship, a University fellowship, a Burgess fellowship and a Fulbright fellowship for research in France.

Mr. Harris attended Cornell University, Ithaca, N.Y., and received a B.A. degree from DePauw University, Greencastle, Ind. He holds an M.A. from the University of Missouri at Columbia and is studying law at New York University.

Miss Svetlana Kluge

[HN017A][GDrive]

1968 - Wedding - NY Times announcement - 'Miss Svetlana Kluge of Columbia betrothed to Robert Lewis Harris'

PDF - [HN008B][GDrive]

THE NEW YORK TIMES, WEDNESDAY, JULY 10, 1968

Girl' Benefit

Miss Svetlana Kluge of Columbia Betrothed to Robert Lewis Harris

Miss Svetlana Kluge, a doctoral candidate at Columbia University, and Robert Lewis Harris are planning to be married Sept. 1 in Nyack.

Mr. and Mrs. Michael C. Kluge of 50 Central Park West have announced their daughter's engagement to the son of Mr. and Mrs. Lewis S. Harris of St. Louis.

The prospective bride, a magna cum laude graduate of Barnard College, where she was elected to Phi Beta Kappa, expects to receive a Ph.D. degree in European history in January. She was a Fulbright scholar in Paris and a Woodrow Wilson, Columbia University and Burgess Fellow.

Her father is president of the Integrated Container Service in New York.

Mr. Harris, administrative assistant to the Latin-American vice president of the J. Walter Thompson Company, attends the New York University School of Law.

After studying at Cornell University, he received a bachelor's degree from DePauw University and a master's degree in economics from the University of Missouri.

His father owns the Harris Audio Craft Company, stereophonic components, in St. Louis.

Miss Higdon Is Affianced

Special to The New York Times

DARIEN, Conn., July 9—Miss Harriet Jane Higdon and Peter Lawrence Holstein plan to be married on Sept. 7 at the First Congregational

[HN008C][GDrive]

Miss Svetlana Kluge, a doctoral candidate at Columbia University, and Robert Lewis Harris are planning to be married Sept. 1 in Nyack,

Mr. and Mrs. Michael C. Kluge of 50 Central Park W e s t have announced their daughter's engagement to the son of Mr. and Mrs. Lewis S. Harris of St. Louis.

The prospective bride, a magna cum laude graduate of Barnard College, where she was elected to Phi Beta Kap - pa. expects to receive a Ph.D. degree in European history in January. She was a Fulbright scholar in Paris and a Woodrow Wilson, Columbia Uni - versity and Burgess Fellow.

Her father Is president of the Integrated Container Service in New York.

Mr. Harris. administrative assistant to the Latin-American vice president of the J. Walter Thompson Company, attends the New York University School of Law.

After studying at Cornell University, he received a bachelor's degree from De - Pauw University and a master's degree in economics from the University of Missouri.

His father owns the Harris Audio Craft Company. stereo - phonic components, in St. Louis.

1968 (Sep 08)

Note who is there - Thomas L Neff (born 1943) .

Full page - [HN007M][GDrive]

Harris-Kluge Recent Wedding

OF INTEREST TO St. Louisans is the wedding last Sunday in Nyack, N.Y., of Miss Svetlana Kluge and Robert Lewis Harris. The ceremony took place at the Russian Orthodox Church of the Holy Virgin Protection. The bride's parents are Mr. and Mrs. Michael C. Kluge, New York.

The bridegroom's parents are Mr. and Mrs. Lewis S. Harris, 1942 South Signal Hills drive, Kirkwood.

Maid of honor was Miss Catherine Giritsky. Other bridal attendants were Miss Natalie Giritsky, Miss Irina Troubetzkoy and Miss Natalia Troubetzkoy.

Thomas Neff was best man. Ushers were Victor Brunst, Steven Darland, Robert Druckenmiller, Alexander Giritsky, Frederick Hornbruch, Andre Kotchoubey and Serge Troubetzkoy.

After a wedding trip to the Caribbean, the couple will live in New York. Mrs. Harris is a doctoral candidate at Columbia University.

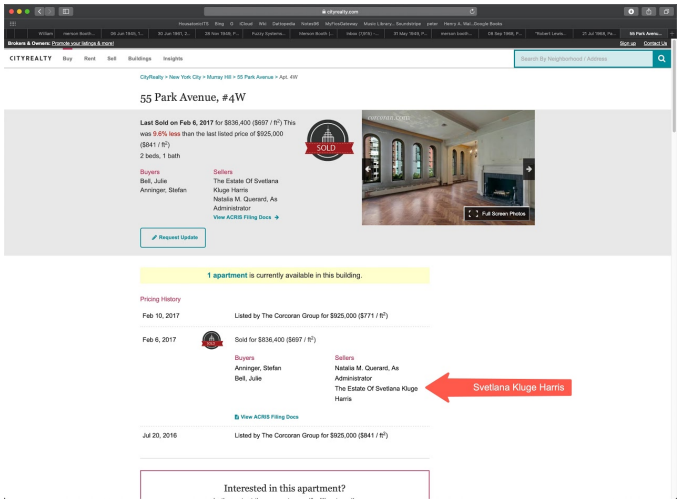
Sun., Sept. 8, 1968 7K
ST. LOUIS POST-DISPATCH

Unwanted Hair
REMOVED FOREVER
OVER 30 YEARS EXPERIENCE
Theresa A. Heick
ELECTROLOGIST

[HN007N][GDrive]

Wife Svetlana - Resided at Park Avenue in NYC

See [HW000Q][GDrive]



[HW000R][GDrive]

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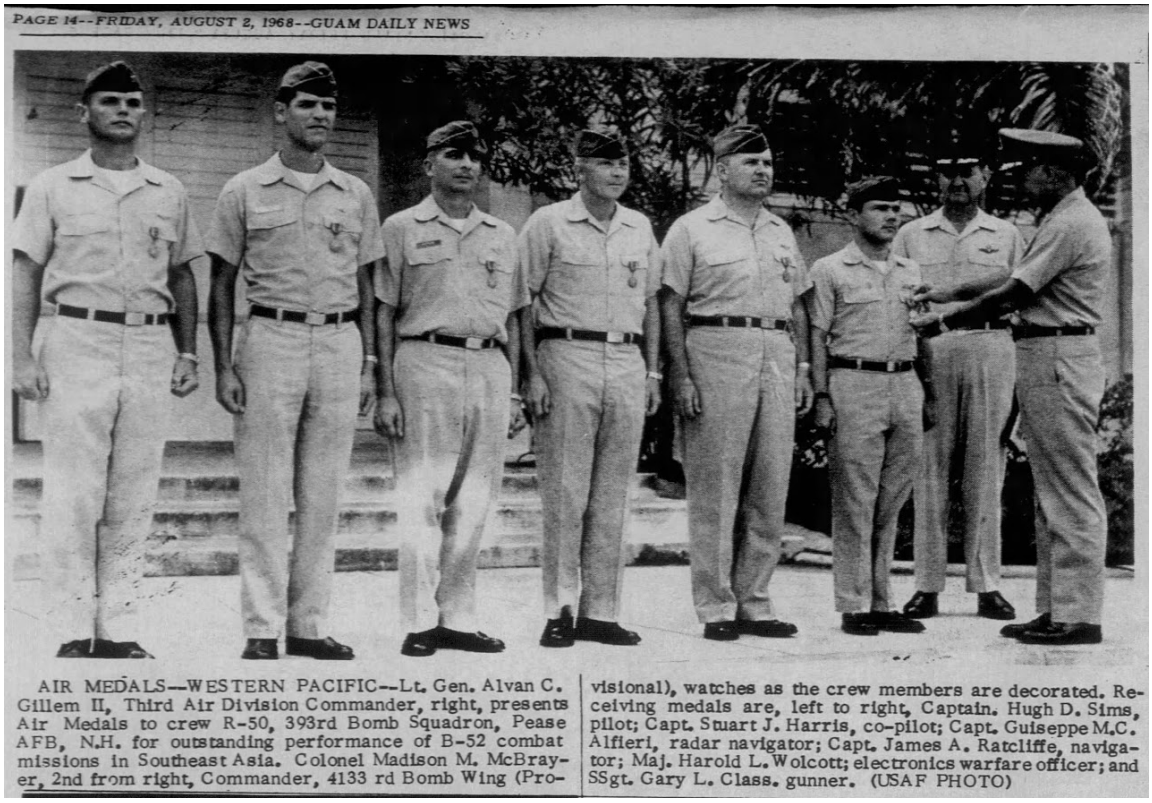
https://books.google.com/books?id=6q3dW91a0fgC&pg=PA366&lpg=PA366&dq=chrysler+building+Black+Clawson&source=bl&ots=WHx5UCgbhF&sig=ACfU3U0oYjbaTtE064luF32NU3q791C6Og&hl=en&sa=X&ved=2ahUKEwj2i-7ag7HnAhUsT98KHdzsByAQ6AEwEnoECBoQAQ#v=onepage&q=chrysler%20building%20Black%20Clawson&f=false

STUART J HARRIS

1968 (Aug 02) - Guam

Full newspaper page : [HN0177][GDrive]



PAGE 14--FRIDAY, AUGUST 2, 1968--GUAM DAILY NEWS

AIR MEDALS--WESTERN PACIFIC--Lt. Gen. Alvan C. Gillem II, Third Air Division Commander, right, presents Air Medals to crew R-50, 393rd Bomb Squadron, Pease AFB, N.H. for outstanding performance of B-52 combat missions in Southeast Asia. Colonel Madison M. McBrayer, 2nd from right, Commander, 4133 rd Bomb Wing (Provisional), watches as the crew members are decorated. Receiving medals are, left to right, Captain. Hugh D. Sims, pilot; Capt. Stuart J. Harris, co-pilot; Capt. Guiseppe M.C. Alfieri, radar navigator; Capt. James A. Ratcliffe, navigator; Maj. Harold L. Wolcott; electronics warfare officer; and SSgt. Gary L. Class. gunner. (USAF PHOTO)

[HN0178][GDrive]

1972 (May 18) -- stuart j harris , air force

Full newspaper page : [HN0175][GDrive]

St. Louis Post-Dispatch (St. Louis, Missouri) • 18 May 1972,

Capt. **STUART J. HARRIS**, son of Mr. and Mrs. Lewis S. Harris, 1942 South Signal Hill Drive, Kirkwood, has graduated from the Air University's Squadron Officer School at Maxwell AFB, Ala. The captain, having completed 20 months of combat duty in Southeast Asia, is now assigned to Robins AFB, Ga. He is a graduate of Kirkwood High School and DePauw University.

[HN0176][GDrive]

2000 (Nov) - MILCOM

Full newspaper page : [HN0173][GDrive]

2000-11-26-the-daily-press-newport-news-virginia-pg-g-2-navy-contract

Navy awards Va. Beach firm contract for electronic devices

The Virginian-Pilot

VIRGINIA BEACH The Navy's Space and Naval Warfare Systems Command has awarded Milcom Systems Corp. a $79 million contract for intelligence, cryptologic and electronic warfare systems.

The contract includes options that could bring the value of the contract to $456 million over the next five years.

It could also create as many as 341 new jobs in Hampton Roads, said Stuart J. Harris, Milcom's vice president for business development and marketing.

Milcom, a 30-year-old private firm, employs 1,000 people, 350 of them in its Virginia Beach headquarters. The company employs mostly electronics technicians as well as some electrical mechanical engineers. The company has annual revenues of about $90 million, 98 percent of which comes from government contracts, Harris said.

The Navy contract award is an extension of sorts of four previous contracts, although this time the Navy bundled the contracts together for competitive bidding. Milcom's bid beat two other contenders.

The job entails installing and integrating electronics and communications systems on carrier battlegroups and shore stations, Harris said.

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1988 (Sep 04)

https://www.newspapers.com/image/235698731/

1988-09-04-the-daily-press-newport-news-virginia-pg-1

https://www.newspapers.com/image/235698813/?terms=Stuart%2BHarris%2Bmilcom

1988-09-04-the-daily-press-newport-news-virginia-pg-10

BLACK CLAWSON

https://www.ny.gov/sites/ny.gov/files/atoms/files/Fulton_2019_DRI_Four.pdf

Davis-Standard (Black Clawson converting Machinery) which makes equipment for the paper converting industry and Interface Performance Materials which manufactures and markets advanced materials, sealing solutions, thermal and acoustic management systems, and specialty products for applications in light- and heavy-duty diesel, automotive, small engines/lawn and garden, industrial and consumer, and related industries worldwide

https://www.nrc.gov/docs/ML1924/ML19249D718.pdf

https://www.etde.org/edb/JRS2r5.pdf

black clawson system INIS: 2000-04-12; ETDE: 1976-03-22 Waste processing system for materials and energy recovery by wet processing of municipal wastes. (Prior to September1994, this was a valid ETDE descriptor.) USE waste processing

Landegger family

https://www.nytimes.com/1976/01/05/archives/karl-f-landegger-dead-at-70-builder-of-pulp-and-paper-mills.html / 1976-01-05-nytimes-karl-f-landegger-dead-at-70.pdf

Karl F. Landagger, a leading builder of pulp and paper mills throughout the world, died of a heart attack Friday in Eleuthera, the Bahamas. He was 70 years old and lived here and in Ridgefield, Conn.

Mr. Landegger was chairman of Parsons & Whittemore Inc., 200 Park Avenue. In 1944 Pe. acquired control of the concern, then a pulp and paper exporter, and diversified it.

Today the company produces pulp and paper in its own mills, engineers and constructs pulp, paper and Saw mills, and through a subsidiary, the Black Clawson Company, manufactures paper rnachirery, machnes for plastic processing, cementpipe making and solid waste reclamatirm systems.

In 1931 Mr. Landegger bought his first paper mill at Wets in his native Austria, for $5.000 cash and a $200.000 note. Foreseeing difficulties with Hitler, he left Austria in 1938 and went to London to work for Lyddon and Company, a pulpmerchandising conceal.

He moved here in 1940 to set up a branch for Lyddon and later gained control of Parsons 8: Whittemore, Black Clawson and Lyddon, his former employer.

In partnership with Lyddon he began to build. a mill in Portugal in 11954. From then urtil the late 1960's he specialized in building mills in underdeveloped couatries and in Europe, before turning to this continent.

Surviving are his wife, Lena; twc sons, Carl and George, and a daughter, Mon Ling Helena.

A funeral mass will be offered at 11 A.M. tomorrow in St. Ignatius Loyola Roman, Catholic Church, 980 Park Avenue.

[Carl Landegger, = https://www.paperdiscoverycenter.org/halloffame/2018/12/28/carl-c-landegger]

BITCHUTE @Housatonic YOUTUBE @HousatonicLive ODYSEE @Housatonic BRIGHTEON @Housatonic

Housatonic

Sally Swisher Heet (born 1950)

1986 (April 18) - Aide to Washington Senator Is Found Stabbed to Death

https://www.nytimes.com/1986/04/18/us/aide-to-washington-senator-is-found-stabbed-to-death.html

1986-04-18-nytimes-aide-to-washington-senator-found-stabbed-to-death.pdf

https://drive.google.com/file/d/1hvdfDIPwfrFWj_RG-ZSLu7NSc2nVl4GV/view?usp=sharing

AP, April 18, 1986, Section D, Page 19

Senator Daniel J. Evans, Republican of Washington, said his press secretary, Sally S. Heet, was found stabbed to death in her Capitol Hill apartment today.

Mr. Evans said Miss Heet, 35 years old, formerly a resident of Seattle, was "killed apparently last night in her apartment."

The Senator said he had become concerned when Miss Heet failed to meet him and a reporter for breakfast.

Miss Heet's stepbrother and a member of Mr. Evans's staff went to her apartment, where they found the body about 10:30 A.M., Mr. Evans said.

He described Miss Heet as "a close friend, lively and vivacious."

"I'll miss her forever," he said. "She had been a part of a very, very close team. The whole office is in shock."

Police officials said they had no suspects in the death.

Miss Heet joined Mr. Evans's staff as press secretary in 1983 after he took office on the death of Senator Henry Jackson. Before that, she worked as a vice president and manager of corporate communications for the Rainier National Bank. She worked earlier as an account executive for a Seattle public relations concern.

[97]

Aide to Sen. Evans of Washington murdered

Press secretary found stabbed in Capitol Hill apartment

PORTLAND OREGONIAN 4-18-86

By JAMES C. FLANIGAN
of The Oregonian staff

WASHINGTON — The press secretary to Washington Sen. Daniel J. Evans was found murdered Thursday in her Capitol Hill apartment about six blocks from her office in the Senate Hart Office Building.

Evans said at a somber press conference in his Senate office at midafternoon that Sally S. Heet, 35, was stabbed to death sometime Wednesday night after she returned home.

"We all feel very much like a family," Evans said in a trembling voice. "We will miss her forever."

Heet's body was found in the apartment by her brother, Jim Hudson, an employee of the U.S. Labor Department, and a member of Evans' staff, whom Evans did not identify, after she failed to show up for work.

"There are many joyous moments and there are sad moments, but this is one of the saddest," Evans said in recalling his meetings with the press over the years as a governor and then a senator.

The District of Columbia police are investigating the death as a homicide but have released few details. Police spokesmen indicated Heet died of multiple stab wounds.

Bill Jacobs, the senator's chief of staff and one of Heet's closest friends, went to the apartment when he was notified that her body had been found and assisted police with the investigation.

Evans was attending a Senate Foreign Relations Committee session on a proposed sale of arms to Saudi Arabia when he was notified.

Evans said that Heet was last seen when she left her office about 8:30 p.m. Wednesday. Her body was discovered about 9:30 a.m. Thursday.

"Her mailbox was open and the mail was still there; so it looks like someone met up with her at that point, but I don't want to presume," Evans said.

Evans said he had expected Heet to join him Thursday morning for a breakfast interview in the U.S. Capitol with Helen Dewar of the Washington Post.

"I was surprised when she didn't show up," he said. "She is so very prompt and probably it raised some warning signal that something was wrong."

SALLY S. HEET
Failed to show up for work

Heet was single and lived alone.

Mark Murray, press secretary to Rep. Don Bonker, a Democratic congressman from Vancouver, Wash., said he lived in an apartment on the floor below Heet's apartment.

Murray said he returned to the building about 10:30 p.m. Wednesday. "I remember when I came home that her mailbox was open." He said Heet normally drove to work even though she lived a short distance away and had a parking space in the Senate building because of her concern over crime.

Heet had been vice president and manager of corporate communications for the Rainier National Bank in Seattle before becoming Evans' press aide in December 1983.

She helped organize the Republican senator's office after he was appointed to succeed the late Sen. Henry M. Jackson after the Democratic senator's death and remained as a key member of Evans' staff after he was elected in a special election.

Heet's mother lives in Indiana. She has a sister in Seattle and another brother in Los Angeles.

Senator's press aide stabbed to death

CHICAGO SUN TIMES 4-18-86

From Sun-Times Wires

WASHINGTON—The press secretary to Sen. Daniel J. Evans (R-Wash.) was found stabbed to death yesterday in her Capitol Hill condominium several blocks from her office.

The body of Sally S. Heet, 35, was discovered by her brother, Jim Hudson, a Labor Department employee, and a member of Evans' staff. They went looking for her after she did not show up for work in the morning.

Sally S. Heet

District of Columbia police said Heet had multiple stab wounds. An autopsy will be conducted today to determine the time and exact cause of death.

Police said they were not sure when Heet, who lived on the third floor, was attacked and had no motive or suspect. The door of her first-floor mailbox was open when officers arrived at the building yesterday morning and the mail still was inside.

"It looks as if someone met up with her at that point," said Evans' administrative assistant, Bill Jacobs.

"This is one of the saddest times in my 25 years of public life," Evans, his voice cracking with emotion, told a press conference. "I'll miss her forever.

"She had been a part of a very, very close team. The whole office is in shock. We all feel we have lost a close member of the family."

Evans said police found no sign of a struggle in Heet's condominium even though there was a great deal of blood.

The senator said his press secretary last was seen by her co-workers when she left her Senate office at 8:30 p.m. Wednesday. Her car was parked on the street outside her five-story building, indicating that she drove home after work.

He said Heet's failure to meet him and a reporter for a breakfast at the Capitol "raised some warnings" because she was always "so very prompt."

Senate Aide Slain In Hill Apartment

WASHINGTON ROLL CALL 4-24-86

By Peter Durantine

"It is a sad day for this office," remarked a staffer quietly as friends and staff members from adjoining offices filtered through the office of Sen. Daniel Evans (R-Wash) last Friday. They were there to offer condolences and support to the staff in their period of grief. Sally Heet, the Senator's popular press secretary, was brutally murdered last week in her Northeast apartment a few blocks from the Senator's office.

According to police reports, the 35 year old aide was stabbed to death sometime Wednesday evening. The police suspect that someone had met Miss Heet at the door to her apartment building, the Dorset, and either followed her in or came in with her. The door to the building is always locked for security measures with only the tenants and building maintenance holding keys for it. The case is still under investigation.

The Hill community was shocked and saddened at the latest of violent crimes on the Hill in recent years. There have been many reports in the last few years of assaults and violent muggings of staffers who have left their offices for the evening or, in one case, for lunch.

Although no one on The Hill is panicking over the incident, caution is becoming the watchword.

"When anything like this happens, it causes concern," says Jack DeVore, press secretary for Sen. Lloyd Bentsen (D-Tex) whose office is down the hall from Sen. Evans' office. "And," adds DeVore, "when it happens to someone right next door to you, that makes the concern all that more intense."

SALLY HEET

DeVore says that other offices have staffers who have been victims of violent crimes and that "tragedies like this add to the anxieties already there."

Sally Heet, 35, began working for Senator Evans in the fall of 1983 when he was appointed to the seat of the late Sen. Henry (Scoop) Jackson (D-Wash).

Senator's aide found stabbed

WILMINGTON, N.C. 9-18-86

WASHINGTON — Sen. Daniel J. Evans' press secretary, Sally S. Heet, was killed in her Capitol Hill apartment, the senator and police said Thursday.

District of Columbia police said in a statement that Ms. Heet, 35, apparently died of multiple stab wounds, but gave few details of the killing. An autopsy will be conducted today to determine the time and exact cause of death, police said.

Her body was found about 10:30 a.m. by her stepbrother, Jim Hudson, and a member of Evans' staff, the senator said.

"This is one of the saddest times in my 25 years of public life," said Evans, R-Wash., his voice cracking with emotion. "I'll miss her forever."

There was no sign of a struggle in Ms. Heet's third-floor apartment though there was a great deal of blood, Evans said.

Aide to Washington Senator Is Found Stabbed to Death

N.Y. TIMES 4-18-86

WASHINGTON, April 17 (AP) — Senator Daniel J. Evans, Republican of Washington, said his press secretary, Sally S. Heet, was found stabbed to death in her Capitol Hill apartment today.

Mr. Evans said Miss Heet, 35 years old, formerly a resident of Seattle, was "killed apparently last night in her apartment."

The Senator said he had become concerned when Miss Heet failed to meet him and a reporter for breakfast.

Miss Heet's stepbrother and a member of Mr. Evans's staff went to her apartment, where they found the body about 10:30 A.M., Mr. Evans said.

He described Miss Heet as "a close friend, lively and vivacious."

"I'll miss her forever," he said. "She had been a part of a very, very close team. The whole office is in shock."

Police officials said they had no suspects in the death.

Miss Heet joined Mr. Evans's staff as press secretary in 1982 after he took office on the death of Senator Henry Jackson. Before that, she worked as a vice president and manager of corporate communications for the Rainier National Bank. She worked earlier as an account executive for a Seattle public relations concern.

Senator's aide stabbed, dies

FLORIDA STAR 4-25-86

By DOROTHY FULTON
STAR Staff Writer

WASHINGTON — Police today were hunting clues in the fatal stabbing of a U.S. senator's press aide whose blood-stained body was found in her Capitol Hill apartment.

The remains of 35-year-old Sally Heet were discovered by her stepbrother, Jim Hudson, and a member of Sen. Daniel Evans' staff. Evans is a Washington State Republican.

There was no sign of a struggle in the third floor apartment.

Senator Evans said his entire office was in shock.

Hudson, a Labor Dept. employe, and the senator's aide went to Miss Heet's apartment because she failed to report for work. She was last seen leaving the senator's office in the early evening. Her car was parked outside the apartment building.

She joined Evans' staff in 1983 after he took over the job left vacant by Sen. Henry Jackson's death. Before that she was vice president-manager of corporate communications of Rainier National Bank in Seattle.

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Sen. Evans' press secretary is found stabbed

Associated Press
NEWS AMERICAN (MD.) 4-18-86

WASHINGTON — Sen. Daniel J. Evans' press secretary, Sally S. Heet, was killed in her Capitol Hill apartment several blocks from her Senate office, the senator and police said Thursday.

District of Columbia police said in a statement that Heet, 35, apparently died of multiple stab wounds but gave few details of the killing. An autopsy will be conducted today to determine the time and exact cause of death, police said.

Her body was found about 10:30 a.m. by her stepbrother Jim Hudson and a member of Evans' staff, the senator said.

"This is one of the saddest times in my 25 years of public life," said Evans, R-Wash., his voice cracking with emotion. "I'll miss her forever."

"She had been a part of a very, very close team. The whole office is in shock," Evans told a news conference. "We all feel we have lost a close member of the family."

Hudson, a Labor Department employee, and the Senate aide went to Heet's apartment because the staff became concerned when she did not come to work by 9:30 a.m., Evans said. The senator declined to identify the aide who accompanied Hudson to the apartment.

There was no sign of a struggle in Heet's third-floor apartment though there was a great deal of blood, Evans said.

Evans said Heet was last seen by her co-workers when she left her Senate office at 8:30 p.m. Wednesday. Her car was parked on the street outside the five-story apartment building, indicating she drove home after work, Evans said.

Mail was found in Heet's mailbox, located just inside the locked front door to the building, the senator said. Visitors must use a telephone to call occupants to gain entry to the building.

"Most of the people here work on Capitol Hill. It's an OK building," said Marian Friedman, who lives in the condominium unit directly above Heet's unit.

Evans said Heet's failure to meet him and *Washington Post* reporter Helen Dewar for an 8 a.m. breakfast at the Capitol had "raised some warnings" because "she is so very prompt and competent and professional in all that she did."

The senator said an aide informed him of Heet's death several hours later while he was attending a hearing of the Senate Foreign Relations Committee.

Richmond native slain in Washington

RICHMOND PALLADIUM-ITEM 4-18-86
By TERRY MIKESELL
Palladium-Item Staff Writer
FRONT PAGE

Washington, D.C. police have no suspects in the slaying of Richmond native Sally Heet, a Senate press secretary found stabbed in her Capitol Hill apartment.

Heet, 35, press secretary for Sen. Daniel J. Evans, R-Wash., was found dead Thursday on the living room floor of her third-floor apartment, the victim of stab wounds, police said.

"This is one of the saddest times in my 25 years of public life," Evans said. "I'll miss her forever," the senator added, his voice cracking with emotion.

Sally Heet

Heet graduated from Richmond High School in 1968 and attended Earlham College for two years before transferring to the University of Washington.

"She had been a part of a very, very close team. The whole office is in shock," Evans said. "We all feel we have lost a close member of the family."

Police said in a statement that Heet died of multiple stab wounds, but they declined to give further details. Police said they had no suspects or motive for the slaying, which occurred several blocks from the U.S. Capitol.

Her body was found by another Evans aide and Heet's stepbrother, Jim Hudson, an employee of the Labor Department. Evans said Heet's car was parked outside the building and Wednesday's mail was still in the mailbox, just inside the locked entrance to the five-story building.

Evans said Heet's failure to meet him and a Washington Post reporter for an 8 a.m. breakfast at the Capitol had "raised some warnings" because "she is so very prompt and competent and professional."

An autopsy was scheduled for today to determine the exact cause and time of death. Evans told reporters it appeared she had been killed Wednesday night after returning to the apartment from her office, which she left at 8:30 p.m.

Visitors must use a telephone to call occupants to gain entry to the building.

"Most of the people here work on Capitol Hill. It's an OK building," one resident, Marian Friedman, said.

The apparent murder shocked Richmond residents who knew Heet.

Evans press aide stabbed to death

By Joel Connelly
P-I Washington Correspondent
SEATTLE P-I 4-18-86

WASHINGTON — Sally Heet, the press secretary of Sen. Dan Evans, R-Wash., was found stabbed to death yesterday in her apartment a few blocks from the U.S. Capitol.

Heet's body was discovered by her brother and a co-worker about 10:30 a.m. after she failed to show up for a breakfast with Evans.

The senator was so shaken he would not permit cameras into a briefing on Heet's slaying.

"We all feel very much like a family here," he said. "She was known for her happiness and vivaciousness."

The Washington, D.C., police department issued a statement saying Heet had apparently died of multiple stab wounds. They gave no details of the killing.

Police launched an intensive investigation, interviewing other residents of the apartment as well as the 35-year-old Heet's co-workers. They carefully went over the press secretary's cluttered office. An autopsy will be conducted today to determine the time and exact cause of death, police said.

Heet's car was found parked across from The Dorset, her apartment house, and her ground floor mailbox was open but mail had not been removed.

"I would presume someone caught up with her there," said Evans. There reportedly was considerable blood in the apartment.

Evans discounted any connection between Heet's death and the terrorism scare that has shaken Capitol Hill in the wake of American bombings in Libya.

"The circumstances of death indicate this is a typical urban homicide," he said.

Mark Murray, an aide to Rep. Don Bonker, D-Olympia, who lives in the same building, said he noticed Heet's open mailbox when he returned to the building about 10:45 p.m. Wednesday. Heet was last seen at Evans' office two hours earlier.

Mugging and break-ins

Murray said residents of The Dorset, which is about eight blocks from the Capitol, had been troubled by burglaries as well as a prowler who had gotten in the front door.

"Somebody had been hanging out inside the front door," he said. "There was a mugging inside the building. We have also had break-ins inside the storeroom."

Ruth Bodner of GLM Companies, which manages most units in The Dorset, said the building's security system is arranged to require guests to call apartment residents in order to gain entry.

Heet was single and lived alone.

Sally Heet was found dead by her brother and a co-worker yesterday morning.

Tearful Evans mourns death of press aide

SEATTLE TIMES 4-19-86

WASHINGTON (AP) — Sen. Dan Evans rose on the floor of the U.S. Senate yesterday to mourn the death of his press secretary, Sally Heet, saying the tribute was "not a farewell, but a celebration of a short and rich life."

Heet, 35, was found dead Thursday on the living room floor of her third-floor Washington apartment.

An autopsy performed yesterday determined that Heet died of multiple stab wounds, said Dr. James Dibdin, deputy medical examiner. He declined to give any further information.

Police investigating the slaying say they have no suspects. They have refused to provide details of the killing.

"Our Senate office deeply mourns this mindless act of violence," Evans said during a tearful Senate speech. "We all feel someone precious has been stolen from our lives."

"She was a self-possessed, confident professional" who was "an integral part of a closely knit family of our senatorial staff," he said.

"Someone has taken Sally's physical presence from us, but no one can steal our memories of her," said Evans, his voice cracking with emotion as tears welled in his eyes.

Aide to US senator killed in stabbing

BOSTON GLOBE 4-18-86

WASHINGTON — Sen. Daniel J. Evans' press secretary, Sally S. Heet, was found dead yesterday in her Capitol Hill apartment several blocks from her Senate office, the apparent victim of a stabbing, police said. "This is one of the saddest times in my 25 years of public life," said Evans (R-Wash.). City police said Heet, 35, apparently died of multiple stab wounds, but gave few details of the killing.

Senator's press secretary killed

MIAMI NEWS 4-18-86

Sally Heet, press secretary to Sen. Daniel Evans of Washington, was killed in her Capitol Hill apartment several blocks from her Senate office, the senator and police said yesterday. District of Columbia police said that Heet, 35, apparently died of multiple stab wounds, but they gave few details of the killing. An autopsy will be conducted today to determine the time and cause of death, police said. Heet joined Evans' staff in 1983 after he took over the seat vacated by the death of Sen. Henry Jackson, D-Wash.

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'Stolen from us'

913

Evans eulogizes press secretary in emotional Capitol Hill service

DAILY RECORD CHRONICLE 4-24-86

WASHINGTON — Slain press secretary Sally Heet was mourned and eulogized at a Capitol Hill memorial service Wednesday by 250 colleagues and friends, including Sen. Dan Evans who told the crowd, "Something very special has been stolen from us."

Heet, 35, was found dead in her apartment near the U.S. Capitol April 17. She had been stabbed, but police have given few other details, while detectives are investigating the slaying.

Evans, R-Wash., who hired her as his press secretary in 1983 when he was appointed to the Senate, said Heet brought, "a comradeship and love that made each day just a little brighter."

Tears flowed from many eyes during the half-hour service in the Senate Caucus Room, a large chamber in the Russell Senate Office Building.

Speaking from a podium bedecked with pots of bright yellow flowers, Evans tried to console the crowd, as many wept.

"Use those memories to help us be more professional," he said. "Be inspired by her loveliness, her good cheer, her wisdom. In this way, Sally cannot die, but will live on in the memory of each of us."

Bill Jacobs, Evans' administrative assistant, fought back sobs while reading a eulogy that began, "Sally was our friend. A true friend is more to be esteemed than kinsfolk, and so it was with Sally."

Jacobs, recalling daily office telephone conversations with Heet as they conducted the senator's business, coping with problems and trouble-shooting, said, "The line doesn't ring anymore, but the voice and the greeting rings in my memory. She was an antidote to despair and a tonic to depression."

Tim Hillard, a reporter for KOMO-TV of Seattle, described Heet as a woman of "honesty, intellect and integrity," who won from the news media "respect, trust and friendship."

Citing her "non-stop optimistic energy," Hillard said, "You couldn't help but love her. She instinctively knew our needs and our frustration. Dan Evans never had a better press secretary."

The Sally Heet Memorial Scholarship Fund, created in her memory by the Puget Sound chapter of the Public Relations Society of America in Seattle, is "appropriate," Hillard said.

"She had a commitment to the belief that through better communication there would be better understanding," he said.

Contributions to the scholarship fund can be made at any Rainier National Bank branch in Washington state, or sent to Bruce Emry, Rainier Corporate Communications, NO8-3, P.O. Box 3966, Seattle, Wash., 98124.

Heet, a native of Indiana, lived in Seattle as an adult and was head of corporate public relations for Rainier National Bank.

Her body was discovered by her brother and a co-worker who went to investigate after she failed to show up for work in the morning. There was no sign of forced entry into the apartment and Evans said police initially suspected she was accosted by her killer while attempting to pick up her mail in the lobby.

Slain press secretary Sally Heet UPI photo

Evans pays tribute to slain aide

SEATTLE P-I 4-19-86

P-I News Services

WASHINGTON — Sen. Dan Evans rose on the floor of the U.S. Senate yesterday to mourn the death of his press secretary, Sally Heet, saying the tribute was "not a farewell, but a celebration of a short and rich life."

Heet, 35, was found slain Thursday on the living room floor of her third-floor Washington apartment.

Monica Thompson, an assistant to Heet, said yesterday the woman's bloodied body was nude when found in the living room of her apartment.

Thompson was with Heet's stepbrother, Jim Hudson, when they found the body around 10:30 a.m. Thursday. They had gone to Heet's apartment when she failed to show up for work.

"She was in the living room," Thompson said, adding that she immediately left the apartment once she saw Heet's body on the floor.

No suspects

An autopsy performed yesterday determined Heet died of multiple stab wounds, said Dr. James Dibdin, deputy medical examiner.

Police investigating the slaying say they have no suspects. They have refused to provide details of the killing.

"Our Senate office deeply mourns this mindless act of violence," Evans said during a tearful Senate speech. "We all feel someone precious has been stolen from our lives."

"She was a self-possessed, confident professional" who was "an integral part of a closely knit family of our senatorial staff."

"Someone has taken Sally's physical presence from us, but no one can steal our memories of her," said Evans, his voice cracking as tears welled in his eyes.

Friends & family eulogize Sally Heet

913

By Mary Rothschild

P-I Reporter

SEATTLE P-I 4-25-86

Friends and family of Sally Heet gathered yesterday to express "gratitude for her life and sorrow for her death" in an afternoon memorial service at Seattle's Plymouth Congregational Church.

Heet, 35, press secretary to Sen. Dan Evans, was found slain in her apartment near the U.S. Capitol April 17.

Evans hired Heet in 1983 when he was appointed to the Senate. He delivered one of several eulogies yesterday from family members, friends and professional colleagues whom the Rev. Carla Berkedal described as "from different chapters of her life" joined in a "circle of prayer" for the service.

In a quiet, carefully modulated voice, Evans spoke of being "blessed" with an extended family of close-knit staff members. Heet, he said, brought to their lives "a comradeship and love that made each day a little brighter."

As he had in an earlier service in Washington, D.C., Evans said "something very special has been taken from all of us . . . in fact, stolen from us."

Jay Rockey, chairman of The Rockey Co., a local advertising and public relations agency, recalled hiring Heet as an eager graduate of the University of Washington in 1972.

John Mangels, president of Rainier Bank and Heet's supervisor before she was recruited by Evans, remembered the young bank vice president's "unequaled" sense of humor as well as her competence, intelligence, wisdom and "candor that made her an insightful critic."

Two dogwood trees will be planted in Heet's memory in a grove in the University of Washington Arboretum. A scholarship fund to benefit public relations students has been established in her name. Contributions should be sent to The Sally Heet Memorial Scholarship, c/o C. Bruce Emry, Rainier National Bank, Corporate Communications, P.O. Box 3966, NO8-3, Seattle, WA 98134.

Evans offers tearful farewell to aide

THE OLYMPIAN 4-19-86

WASHINGTON (AP) — Sen. Dan Evans rose on the floor of the U.S. Senate on Friday to mourn the death of his press secretary, Sally Heet, saying the tribute was "not a farewell, but a celebration of a short and rich life."

Heet, 35, was found dead Thursday on the living room floor of her third-floor Washington apartment.

An autopsy performed Friday determined that Heet died of multiple stab wounds, said Dr. James Dibdin, deputy medical examiner. Police investigating the slaying say they have no suspects and offered no details of the killing.

"Our Senate office deeply mourns this mindless act of violence," Evans said during a tearful Senate speech. "We all feel someone precious has been stolen from our lives."

"She was a self-possessed, confident professional" who was "an integral part of a closely knit family of our senatorial staff."

"Someone has taken Sally's physical presence from us, but no one can steal our memories of her," said Evans, his voice cracking with emotion as tears welled in his eyes.

He said Heet's first-floor mailbox was open and contained mail, indicating she may have been surprised by her attacker. The mailbox is located in a hallway several steps up from the locked front door to the building.

Visitors must use a telephone to call occupants in order to gain entry to the building.

"Most of the people here work on Capitol Hill. It's an OK building," one resident, Marian Friedman, said.

Heet is survived by her mother, one sister and two brothers.

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Sen. Evans mourns aide's death

Police have no suspects, motives in slaying

9/8 BREMERTON SUN 4-18-86

WASHINGTON (AP) — Police have no suspects in the slaying of a Senate press secretary who was found stabbed in her Capitol Hill apartment.

Sally S. Heet, 35, press secretary for Sen. Daniel J. Evans, R-Wash., was found dead yesterday on the living room floor of her third-floor apartment, the victim of stab wounds, police said.

"This is one of the saddest times in my 25 years of public life," Evans said. "I'll miss her forever," the senator added, his voice cracking with emotion as he discussed the killing with reporters.

"She had been a part of a very, very close team. The whole office is in shock," Evans said. "We all feel we have lost a close member of the family."

Police said in a statement that Ms. Heet died of multiple stab wounds, but they declined to give further details of the killing. Police said they had no suspects or motive for the slaying, which occurred several blocks from the U.S. Capitol.

An autopsy was scheduled for today to determine the exact cause and time of death. Evans told reporters it appeared she had been killed Wednesday night after returning to the apartment from her office, which she left at 8:30 p.m.

Ms. Heet's car was parked outside the building.

Her body was found about 10:30 a.m. yesterday after members of Evans' staff became concerned that she had not shown up for work, the senator said.

Sally Heet

Ms. Heet's stepbrother, Jim Hudson, went to the apartment with a member of the senator's staff. Although there was blood found in the apartment, there was no evidence of a struggle or of a break-in, Evans said.

Evans said Ms. Heet's first-floor mailbox was open and contained mail, indicating she may have been surprised by her attacker. The mailbox is located in a hallway several steps up from the locked front door to the building.

Visitors must use a telephone to call occupants in order to gain entry to the building.

"Most of the people here work on Capitol Hill. It's an OK building," one resident, Marian Friedman, said.

Evans said Ms. Heet's failure to meet him and Washington Post reporter Helen Dewar for an 8 a.m. breakfast at the Capitol had "raised some warnings" because "she is so very prompt and competent and professional in all that she did."

The senator said an aide informed him of Ms. Heet's death several hours later while he was attending a hearing of the Senate Foreign Relations Committee.

Evans described Ms. Heet as "a close friend ... lively and vivacious."

Ms. Heet, 35, joined Evans' staff in 1983 after he took over the seat vacated by the death of Sen. Henry L. Jackson, D-Wash. Before that she was vice president and manager of corporate communications of the Rainier National Bank in Seattle. She had previously worked for a Seattle public relations firm, Jay Rockey Public Relations Inc.

A native of Richmond, Ind., she attended Earlham College in that state from 1968 to 1970 before attending the University of Washington, from which she received a bachelor's degree in communications in 1972.

Ms. Heet had been looking for a Seattle-area job in the private sector for about six months to a year but had not found a position she wanted, said Bruce Emry, her successor at Rainier Bank in Seattle.

"She was a pro in every sense of the word," he said. "I can't think of too many people who had more going for herself than Sally.

"I know she had a desire to return here (to Seattle). It was really her first love," he said. "She set out to acquire a certain type of experience in Washington, D.C., and she felt she had gotten that experience."

The apartment building in which Ms. Heet lived is at the end of a tree-lined block of rowhouses in a middle-class section of Capitol Hill.

About six blocks from the U.S. Capitol, the neighborhood is racially mixed and populated by longtime residents and newly arrived young professionals.

"I've never had any problems in this neighborhood and I've never heard of any," said Lisa Zimmerman, an unemployed fiction writer, who lives two doors away from Ms. Heet's building.

Homicide investigators combed the building yesterday, but would not discuss the case with reporters.

John Pazartzis, a graduate student who lives in the building, said "Everyone keeps pretty much to themselves. A couple of months ago there was a note on the front door saying there was a mugging in the lobby, but I've never had any trouble here."

The Washington, D.C., apartment building where Sally Heet, Sen. Dan Evans' press aide, was killed.

A reward fund in Heet slaying

SEATTLE P-I 4-30-86

A reward fund has been set up on Capitol Hill in Washington, D.C., for information that would help solve the slaying of Sally Heet, who was Sen. Dan Evans' press secretary.

Heet, a former vice president at Rainier Bank and account executive with the Jay Rockey public relations firm, was stabbed to death in her Capitol Hill apartment April 17. D.C. police have several possible suspects but have made no arrests.

Contributions to the fund may be sent to the office of Sen. Dan Evans, Attention Monica Thompson, 702 Hart Senate Office Building, Washington, D.C., 20510.

Thompson said $1,000 of the $5,000 goal has been raised.

'She was there when we needed friends'

9/3

SEATTLE P-I 4-24-86

By Joel Connelly
P-I Washington Correspondent

WASHINGTON — The Senate Caucus Room, long a favorite spot on Capitol Hill for happy announcements of presidential candidacies, yesterday was the scene of a somber memorial service for Sally Heet, Sen. Dan Evans' slain press secretary.

Sally Heet

"Something very special has been stolen from us," Evans, R-Wash., told a gathering of more than 200 congressional staff members, reporters and friends of the 35-year-old Heet.

Washington, D.C., police have refused to disclose any details on the stabbing a week ago, aside from leaking news that Heet's personal diary was being examined for clues.

The memorial yesterday included commentaries on the hectic lives of Senate aides, as well as the crucial role played by press secretaries as intermediaries between reporters and lawmakers.

"A press secretary's relations with a politician are perilous at best," said Evans. "He or she is the eyes, ears and voice, the slender thread which links a politician with the people he serves.

"It takes enormous strength to occasionally wrench a senator's foot from his mouth," added the senator.

Bill Jacobs, Evans' administrative assistant, spoke of Heet's skills at releasing tensions and of problems solved after work over lasagna and beer at the Capitol Hill apartment where Heet was slain. And he recalled Heet asking of her meticulous boss: "Was Dan this stubborn when he was governor?"

"When things were not going well, she was the one to say, 'You look troubled. Need a friend?' " said Jacobs. "She was there when we needed friends, someone to whom you could speak your heart with all its badness and goodness."

Tim Hillard, KOMO-TV reporter, said Heet "was den mother to all of us."

Evans and senior aides were to fly to Seattle for a second memorial service, scheduled for 3 p.m. today at Plymouth Congregational Church.

Friends pay tribute to slain Evans aide

9/3

SEATTLE TIMES 4-25-86

The slaying of Sally Heet, press secretary to Sen. Dan Evans, has affected friends and family from coast to coast.

"Something very special has been stolen from us," said Evans, who was one of eight people who talked about their friendship with Heet during a memorial service yesterday. "It is hard to know why something so tragic happened."

She was a good listener as well as a communicator, said several friends, who had known her as a communications student at the University of Washington, a public relations executive with Jay Rockey and a vice president with Rainier Bank.

Many recalled her empathy, as one who would hear and then often respond with the preface: "But what you gotta understand . . ."

Heet, a native of Richmond, Ind., was found stabbed to death April 17 in her Washington, D.C. apartment.

Services had been held for Heet in Washington, D.C., and near her hometown. Her mother, unable to attend services in Seattle yesterday, sent her sentiments via KOMO-TV's Connie Thompson, a friend of Heet.

"She wishes to express that this special tribute is helping to sustain her family in a time of unbearable pain," Thompson said.

Bob Hawkins, president of the Puget Sound Chapter of the Public Relations Society of America announced the creation of the Sally Heet Memorial Scholarship. Two dogwood trees will be planted in the Seattle Arboretum in her memory.

Contributions may be sent to The Sally Heet Memorial Scholarship, Rainier National Bank, Corporate Communications, PO Box 3966, NO8-3, Seattle, 98124.

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No clues found in murder of Evans' press aide

Neighbors failed to heed signs something was amiss at apartment

913

SEATTLE TIMES 4-18-86

by Eric Pryne
and Pam Woodroffe
Times staff reporters

WASHINGTON — When you work for the U.S. Congress, late nights come with the job. On Wednesday, Mark Murray, Rep. Don Bonker's administrative assistant, didn't get home until about 10:45 p.m.

He unlocked the front door to his apartment building, The Dorset, a four-story brick structure about five blocks north and six blocks east of the U.S. Capitol.

Murray walked up a short flight of stairs, through a second door and stopped in the dimly lit hall to check for mail before heading for the elevator.

There are 25 locked mailboxes on the left-hand wall in the first-floor corridor at The Dorset. Murray noticed one of them was ajar, but the mail was still inside.

Apartment 301. Sally Heet's apartment.

Murray knew Heet. She also worked on Capitol Hill, as Sen. Dan Evans' press secretary. They bumped into each other regularly, professionally and at home, entering or leaving The Dorset. She came from Seattle. He grew up in Olympia.

"We had been meaning to have dinner for about six months," Murray said.

Murray wondered why Heet's mailbox was open. He wondered if something was wrong, and thought he would ask Heet about it the next time their paths crossed.

By midday yesterday, Murray had heard the news. "I feel like an idiot," he said. "I feel awful."

Sally Heet — University of Washington graduate, former Seattle public-relations executive, vice president of Rainier Bank at 30 — had been found dead on her living-room floor, murdered.

She, like Murray, had worked late Wednesday, leaving Evans' Capitol Hill office for home about 8:30 p.m., co-workers said. When Heet didn't show up for work yesterday, her brother and another Evans employee went over to check and discovered her body.

The police report was cryptic. White female, 35. Body found about 10:30 a.m. yesterday. Pronounced dead at the scene by the medical examiner's office. An autopsy today showed she died of multiple

Please see **HEET** on B 2

Sally Heet
Found murdered

[101]

HEET

continued from B 1

stab wounds.

No apparent motive. No suspects. No further details. Investigation continuing.

Last night, D.C. police posted a guard and sealed the door to Apartment 301, where Heet lived alone. "Do not enter," it said. "Crime scene.'

But the lock showed no signs of having been tampered with. And speculation in the building and among Heet's colleagues was that the murderer had accosted her as she entered the building, perhaps as she was picking up her mail. Then the assailant forced her into her apartment and killed her.

Heet was a vivacious woman, highly regarded by the Northwest press corps here because she ran a fairly open shop, didn't deify her boss and kept a healthy, irreverent perspective on the weighty doings of the Senate.

When Evans offered her the press secretary's post shortly after his appointment to the Senate in 1983, Heet seized the opportunity, leaving a good job at Rainier Bank and a condominium near Lake Sammamish because, she said, she had always wanted to give politics and D.C. a try.

At lunch Wednesday, she chatted idly about what she might like to do when she left D.C. someday — return to the Northwest to take over the communications arm of a good-sized corporation. Over bratwurst and a beer, she talked about how she had been following proposals to build a jail in her neighborhood here.

In the office, she spoke of her plans to show an old friend from Indiana the town over the weekend.

Many congressional staff members live on Capitol Hill. It's a neighborhood of classic 19th-century townhouses and small apartment buildings, close to work, shops and restaurants.

But signs of urban decay and desperation multiply as you drive a few blocks north, east or south. The H Street corridor, just eight blocks north of the Capitol dome, is one of D.C.'s crime hotbeds.

Bill Jacobs, Evans' adminstrative assistant, arrived at work around 9:30 a.m. yesterday. He says he noticed immediately that Heet's car, usually parked near his, wasn't there.

Inside Evans' office in the Hart Senate Office Building, he learned Heet hadn't shown up for an 8 a.m. breakfast with Evans and a Washington Post reporter.

So, around 10 a.m., Monica Thompson, who works in the press office, and Jim Hudson, Heet's brother, who has keys to both The Dorset and Heet's apartment, went over to investigate.

Jacobs said he got a call a few minutes later from Thompson. "Come over and get me," he remembers her saying. "I think Sally's dead."

The police were there when Jacobs arrived. He says they wouldn't let him in, but one local reporter, who glanced in the door before police closed it, counted three bloody fingerprints on the inside jamb about 5 feet off the ground.

A shaken Evans called reporters into his office at 2 p.m., asking that cameras and tape recorders be left outside.

"We'll miss her forever," Evans said, his voice breaking. "We all feel like we've lost a member of our personal family."

Heet, single and with no children, leaves a mother in Indiana, a sister in Seattle, and brothers in Florida, Los Angeles and D.C. But Evans' close-knit staff here is like an extended family as well, and it seemed in shock.

A detective rummaged through Heet's desk. Sen. Mark Hatfield, R-Ore., dropped by with a plant. Other Senate offices called with their condolences.

Shirley Harrod, the receptionist who worked here for Warren Magnuson, then Henry M. Jackson, now Evans, fielded many of the calls. "Pray for us . . ." she told caller after caller.

Back at The Dorset last night, Steven Taub and Andrew Bennett, law students who share the apartment directly under Heet's, said they think they heard a voice cry out around 8:30 p.m. Wednesday. But they thought someone was arguing, they said.

Bill Asbury, Gov. Booth Gardner's chief of protocol, worked with Heet while she was with Evans' office.

"The thing that strikes you — we get uptight about violence in and from Libya," he said. "Yet here is an intimate friend whom we knew well who died violently in our own nation's capital. Would that we could stop that."

Sally Heet

SEATTLE TIMES 4-20-86

When Sally Heet, Washington Sen. Dan Evans' press secretary, was found slain last week in her Washington, D.C., apartment, the first question on many minds was whether the shocking crime was in any way connected with terrorism. Such is the temper of the times.

The fact that Heet's death evidently fits into the category of urban crime rather than terrorism is no source of consolation, and it is a reminder that ordinary violent crime remains more of a threat to American society than terrorist acts which, though alarming, are comparatively infrequent. Senseless, random murders occur in many U.S. cities every day of the year.

Those of us in the news media who knew Sally Heet personally, and were assisted by her on many occasions, can attest to her professionalism, competency and warm and friendly personality. She will be missed. Our deep regrets go to her family, her co-workers and her many friends.

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Senator's press secretary is slain in Capitol Hill condo

WA. TIMES 4-18-86

By Matt Neufeld and Jim Clardy
THE WASHINGTON TIMES

The press secretary for a Republican senator from Washington was found dead, apparently of stab wounds, yesterday morning in her Capitol Hill apartment.

Members of congressional staffs yesterday mourned the apparent slaying of Sally S. Heet, 35, who had worked three years for Sen. Daniel Evans.

The body of Miss Heet, who lived alone, was found by her step-brother and a co-worker in her third-floor condominium in the 500 block of E Street NE about 10:30 a.m. after she failed to show up for work, said Metropolitan Police Sgt. Joe C. Gentile.

Sgt. Gentile said police had no motives or suspects. Miss Heet was stabbed several times and was pronounced dead at the scene by a doctor with the D.C. Medical Examiner's Office, he said.

There was no sign of forced entry to the apartment and no signs of a struggle, police said.

Miss Heet was found by her step-brother, Labor Department employee Jim Hudson, and an unidentified co-worker after members of Mr. Evans' staff became concerned when she didn't show up for work about 8:30 a.m. yesterday, staff members said.

Police said that an autopsy scheduled to be performed today by the medical examiner's office will determine the time of Miss Heet's death and whether she was sexually assaulted.

Mr. Evans said at a press conference yesterday afternoon that Miss Heet was "a close friend and confidante ... an outstanding press secretary. We'll miss her forever."

"He felt deep personal regrets," said Lee Keller Reis, Mr. Evans' deputy secretary and a close friend and co-worker of Miss Heet. "There's going to be a void that will be difficult to fill."

"She was one of the best press secretaries on the Hill and respected by everybody," said Richard Moore, press secretary to Sen. Mack Mattingly, Georgia Republican. "She was a warm, wonderful person, funny and vivacious, talkative and easy to get to know."

Several residents of E Street and residents of Miss Heet's building, a four-story white brick building called the Dorset, said their neighborhood usually was quiet and crime-free. Connie Tucker, who lives two doors away from Miss Heet's condominium, said storage rooms in the Dorset's basement were broken into a year ago and again "a few weeks ago."

Mrs. Tucker said the front and back doors of the Dorset "take a long time to close" and speculated that someone could enter the building while the doors slowly closed. The front and back doors remain locked, and visitors can enter the building only after contacting the host through an intercom, she said.

Mrs. Tucker and a man who lives next to Miss Heet's condominium said they did not see or hear anything unusual yesterday morning or Wednesday night. Both residents said they did not know Miss Heet.

Sen. Evan's wife, Nancy, said Miss Heet joined her husband's Senate campaign in 1983 as a volunteer in the press office. She described Miss Heet as "very nice, easy going. We all enjoyed her tremendously."

The senator's office was inundated yesterday by calls from the Washington press corps and friends both on Capitol Hill and in Seattle. Miss Heet's hometown, where she developed a reputation as a public relations corporate executive. She worked from 1973 to 1978 as an account executive with a public relations firm and from 1978 to 1983 she was a public relations executive with the Rainier National Bank in Seattle, according to her resume.

Miss Heet told Mr. Moore six months ago that she would probably move back to the Northwest within the year, he said.

"She loved Sen. Evans and wouldn't have come to D.C. to work for anybody else. She enjoyed her job but her real heart was in the Pacific Northwest, where she had so many old friends and loved the country. She wanted to get back into the real world and the private sector," he said.

Mr. Moore said that news of her death left him "absolutely devastated."

"She wasn't a large person. Under no circumstance can I imagine her putting up any struggle. She was also a cool-witted person who was unlikely to ever lose her cool."

Miss Heet was elected in January to the board of directors of the U.S. Senate Press Secretary's Organization. A member said she was an "extremely energetic person, the first to pitch in to help and extremely well thought of."

Mary Lou Edelson, press secretary to Sen. Robert Packwood, Oregon Republican, was elected to the press secretary's organization with Miss Heet in January and remembered her yesterday as a "very hard worker and very practical. You couldn't ask to work with anybody better."

Janet McElligott, who now works for the National Republican Senatorial Committee, was interviewed for her first Washington job by Miss Heet 2½ years ago. "She was a wonderful person who was extremely kind, very dedicated and hardworking," she said.

Sally S. Heet

SALLY
SWISHER
HEET

1950-1986

Thursday, twenty-fourth of April
Plymouth Congregational Church
Seattle, Washington

https://www.digitalarchives.wa.gov/Scrapbook/Index/2362/160

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Capitol Hill condo

Sally S. Heet

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He who plants a tree,—
He plants love,
Tents of coolness spreading out above
Wayfarers he may not live to see.
Gifts that grow are best;
Hands that bless are blest;
Plant! life does the rest!
Heaven and earth help him who plants a tree,
And his work its own reward shall be.

— From "*Plant a Tree*" by Lucy Larcom

Sally Heet was born August 16, 1950, in Gary, Indiana, and grew up in Michigan. She attended Earlham College in Indiana and was graduated with honors with a B.A. degree in communications from the University of Washington in 1972.

Following graduation, she worked as an account executive at the Dorothy Matin Agency and later at Jay Rockey Public Relations. She joined Rainier National Bank in Seattle as public relations manager, and in 1981 was appointed vice president and manager of the Corporate Communications Division.

When Senator Dan Evans was first appointed to the Senate in 1983, he recruited Sally to be his press secretary.

Sally was a giving person and enjoyed helping others. She was a frequent and popular speaker before university classes across the state and was a mentor to many fledging public relations students.

Sally is survived by her mother, Mrs. Berdyne Hudson, and her grandmother, Alice Swisher, both of Richmond, Indiana. Other family members include a sister, Holly Hudson, who lives in Kirkland; brothers: Jim Hudson of Washington, D.C.; Bill Hudson, of Orlando, Florida; Gary Heet of Santa Barbara, California; and her Redmond cousins Jim and Marilyn Hogan and their sons: Rick, Mike and Bill.

Guitar Prelude
"Stillpoint" by Klaus Lendzian

Greetings and Opening Prayers

Reflections on the Life of Sally Heet:

Jay Rockey	*Chairman, The Rockey Company*
James Hogan	*Cousin and surrogate father*
Nancy McDonald Craig	*Long-time friend*
Bob Hawkins	*President, Puget Sound Chapter, Public Relations Society of America*
Connie Thompson	*Consumer editor, KOMO-TV*
John D. Mangels	*President, Rainier*
Daniel J. Evans	*United States Senator*
Vicki O'Briant	*Former roommate and long-time friend*

"Both Sides Now" by Joni Mitchell
Bob Nein, pianist, and Klaus Lendzian, guitarist

Readings
"She Is Not Dead", by James Whitcomb Riley ..... Phil Bond, *Public Affairs Department, Rainier National Bank*
Psalm 23 ..... Phil Bond
2 Corinthians 4:16-5:9 ..... Ruth McCray, *Circulation Promotion Manager, Seattle Times*

Homily
The Reverend Canon Carla V. Berkedal, *Canon Associate, St. Marks Cathedral*

The Lord's Prayer

Closing Prayers

Blessing

Hymn: "Abide With Me," #209

Special thanks to Plymouth Congregational Church

Reception following at the Washington Athletic Club

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In Memory of
Sally S. Heet

"We will miss
her forever"
Senator Daniel J. Evans

SALLY S. HEET
. . . died of multiple stab wounds

Press Secretary of Senator Found Slain in Hill Apartment

WA. POST 4-18-86

By Linda Wheeler
Washington Post Staff Writer

The press secretary to U.S. Sen. Daniel J. Evans (R-Wash.) was found stabbed to death yesterday in her condominium six blocks from Evans' Capitol Hill office, D.C. police said.

The body of Sally S. Heet, 35, was found about 10:30 a.m. in her blood-stained apartment at 520 E St. NE by her stepbrother and a colleague, who went looking for her after she failed to join Evans and a reporter for an 8 a.m. breakfast interview, according to the senator.

D.C. police said Heet apparently died of multiple stab wounds, but refused to say exactly where the body was found or whether a weapon had been located. Police said they have no suspects or motive. An autopsy will be conducted today to determine the time and exact cause of death.

Yesterday afternoon, the door to Heet's apartment stood open as District police searched the apartment for clues. The door jamb, about five feet above the floor, was streaked with bloody finger marks.

According to Evans, Heet, who was single and lived alone, left his

See SLAY, B5, Col. 1

Senator's Press Aide Found Slain

SLAY, From B1

office about 8:30 p.m. Wednesday. "We know she arrived at the building because her car is still parked out front," Evans said. "But her mailbox was found open with the mail still inside. It looks like someone met up with her at that point."

Evans said Heet came to work for him as part of his transition team in September 1983 when he was appointed after the death of Sen. Henry M. (Scoop) Jackson (D-Wash.). He said Heet moved to the E Street address at that time.

The condominium, known as the Dorset, was renovated about five years ago. The front door is kept locked and visitors must telephone from the door for admittance.

Marian Friedman, who lives above Heet's apartment, said she heard no unusual noises Wednesday night.

"We haven't had many problems here," she said. "Someone was mugged in the lobby a couple of months ago."

Friedman, who works as an information guide at the Smithsonian Institution, said the four-story building has neither a superintendent nor an elevator operator. She also said that most of the residents of the Dorset work on Capitol Hill.

Lisa Riggles, a 29-year-old artist who lives a half-block away from the Dorset on the 600 block of Acker Street NE, said her street had been plagued by crime, including a slaying, burglary and a stabbing since February.

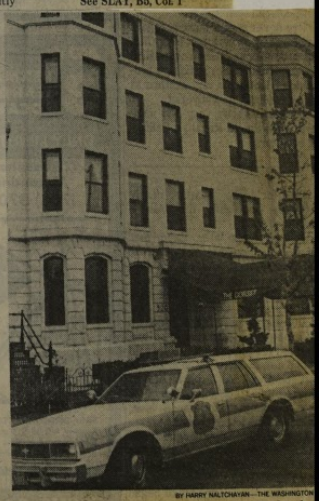
"We've decided to move to a nicer neighborhood on the other side of the Hill," she said as she walked her two large dogs near Heet's building.

Heet, a native of Indiana, moved to Seattle in 1970 to attend the University of Washington, where she received a bachelor's degree in communications. Before joining Evans' staff, Heet was vice president and manager of corporate communications of the Rainier National Bank in Seattle.

"She was a close friend and a confidant," Evans told reporters, who gathered in his office several hours after Heet's body was found. "She was a very self-possessed, independent and competent woman. We will miss her forever."

One of the reporters attending Evans' news conference was Eric Payne of The Seattle Times, who said he knew Heet well.

"We had lunch just yesterday," he said. "She was very good at what she did. She did not have a background in journalism, but she knew how to handle reporters. Sally was very popular with all the press corps from the Northwest papers."



BY HARRY NALTCHAYAN—THE WASHINGTON

Building in NE where Sally Heet was found stabbed to dea

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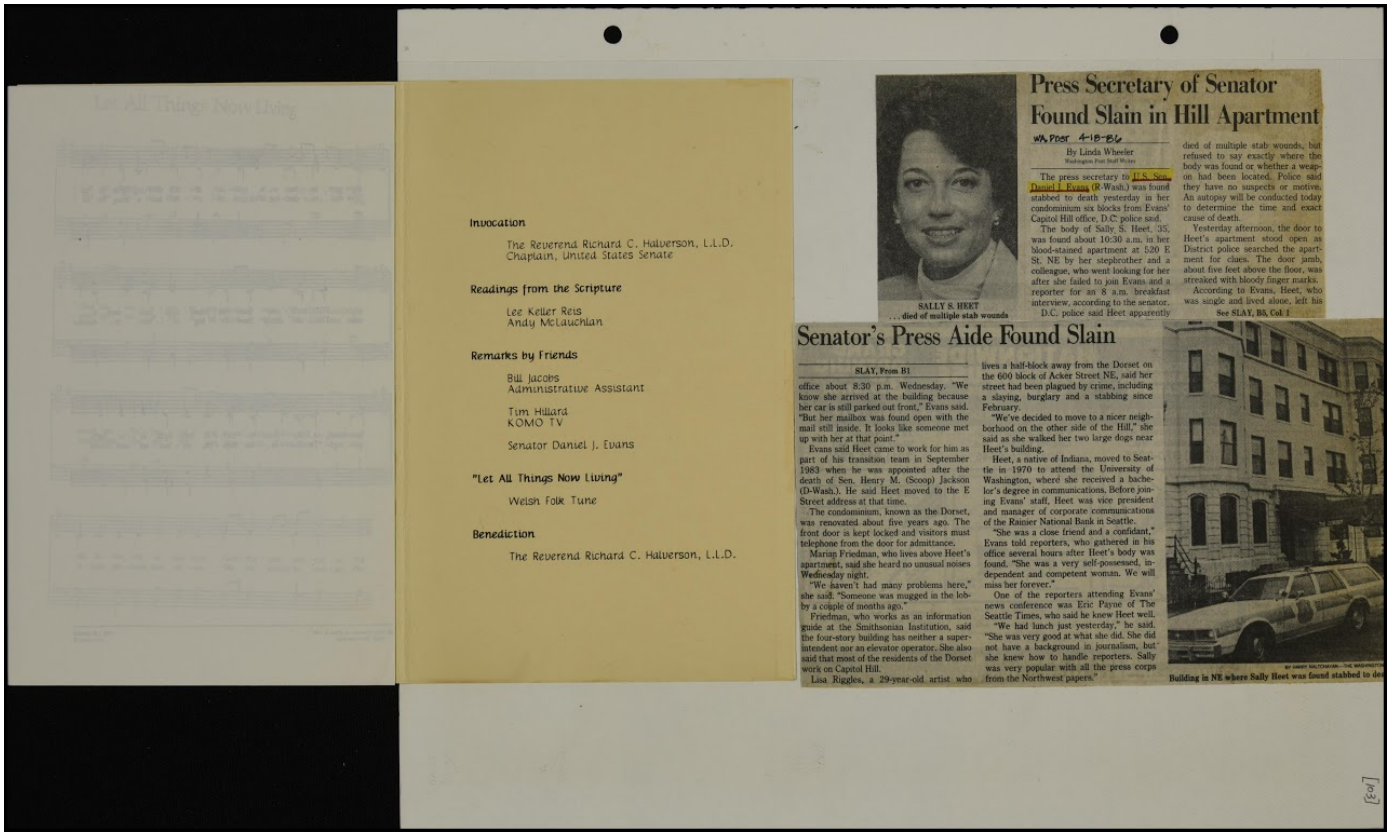

Invocation

The Reverend Richard C. Halverson, L.L.D.
Chaplain, United States Senate

Readings from the Scripture

Lee Keller Reis
Andy McLauchlan

Remarks by Friends

Bill Jacobs
Administrative Assistant

Tim Hillard
KOMO TV

Senator Daniel J. Evans

"Let All Things Now Living"

Welsh Folk Tune

Benediction

The Reverend Richard C. Halverson, L.L.D.

SALLY S. HEET
. . . died of multiple stab wounds

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WA Post 4-18-86

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Yesterday afternoon, the door to Heet's apartment stood open as District police searched the apartment for clues. The door jamb, about five feet above the floor, was streaked with bloody finger marks.

According to Evans, Heet, who was single and lived alone, left his

See SLAY, B8, Col. 1

Senator's Press Aide Found Slain

SLAY, From B1

office about 8:30 p.m. Wednesday. "We know she arrived at the building because her car is still parked out front," Evans said. "But her mailbox was found open with the mail still inside. It looks like someone met up with her at that point."

Evans said Heet came to work for him as part of his transition team in September 1983 when he was appointed after the death of Sen. Henry M. (Scoop) Jackson (D-Wash.). He said Heet moved to the E Street address at that time.

The condominium, known as the Dorset, was renovated about five years ago. The front door is kept locked and visitors must telephone from the door for admittance.

Mariap Friedman, who lives above Heet's apartment, said she heard no unusual noises Wednesday night.

"We haven't had many problems here," she said. "Someone was mugged in the lobby a couple of months ago."

Friedman, who works as an information guide at the Smithsonian Institution, said the four-story building has neither a superintendent nor an elevator operator. She also said that most of the residents of the Dorset work on Capitol Hill.

Lisa Riggles, a 29-year-old artist who lives a half-block away from the Dorset on the 600 block of Acker Street NE, said her street had been plagued by crime, including a slaying, burglary and a stabbing since February.

"We've decided to move to a nicer neighborhood on the other side of the Hill," she said as she walked her two large dogs near Heet's building.

Heet, a native of Indiana, moved to Seattle in 1970 to attend the University of Washington, where she received a bachelor's degree in communications. Before joining Evans' staff, Heet was vice president and manager of corporate communications of the Rainier National Bank in Seattle.

"She was a close friend and a confidant," Evans told reporters, who gathered in his office several hours after Heet's body was found. "She was a very self-possessed, independent and competent woman. We will miss her forever."

One of the reporters attending Evans' news conference was Eric Payne of The Seattle Times, who said he knew Heet well.

"We had lunch just yesterday," he said. "She was very good at what she did. She did not have a background in journalism, but she knew how to handle reporters. Sally was very popular with all the press corps from the Northwest papers."

Building in NE where Sally Heet was found stabbed to de

[sic]

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Capital will miss Sally's sense of perspective

SEATTLE P-I 4-21-86

JOEL CONNELLY

WASHINGTON — In this socially stratified, power-preoccupied capital, one voice on the telephone always announced that it genuinely wanted to talk with you: "Hi, this is Sally."

The voice belonged to Sally Heet, press secretary to Sen. Dan Evans. Heet was stabbed to death in her Capitol Hill apartment last Wednesday night. She will be buried in Seattle Thursday. D.C. police, sensibly and mercifully, have disclosed few details of the murder.

One paradoxical, dreadful consequence of this slaying is Northwesterners in the capital will no longer have Sally Heet around to help deal with irrational happenings here. She was a counted-on confidante, as well as an imaginative social organizer whose sense of the occasion would always dispel tension.

At lunch a week ago, this reporter joked with Heet about the pace and pressures of Senate work. Heet, who left a vice presidency at Rainier Bank for the gypsy world of politics, responded with tales about Dan Evans' first frantic days in 1983 after being appointed to succeed the late Sen. Henry Jackson.

Later last week, in the soft voice that defines terrible loss, Evans' top aide, Bill Jacobs, recalled one such tale.

"The senator, myself and Sally stumbled over to the American Cafe about 1:30 in the morning," said Jacobs. "We were totally exhausted, but we still had to answer a newspaper questionnaire. Sally raised a glass and said, 'I would propose a toast to the person who brought us all together.' It broke the ice, and we got down to work."

Although raised in Michigan, Heet adopted the Northwest's informality during a decade in Seattle, and took back to the capital a regional habit of valuing person rather than position.

One result was a healthy irreverence toward her boss's exalted status. Evans is notoriously tardy for meetings, because of his intellectual curiosity and attention to legislative detail. Instead of solemn excuses, Heet kept a running wager with reporters on how many minutes late "Dan" would be at briefings.

Heet inspired Evans' "News Splash," a summer press conference held at poolside in Virginia. She even managed to turn up monogrammed towels for last year's event.

During last November's Thanksgiving holiday, it was Heet who thought to put on a dinner party for those who found themselves far from home. At another such gathering, former "60 Minutes" commentator Nicholas Von Hoffman, jaded and cynical, received a much-needed dose of ant-iwar idealism from Rick Rolf, Sen. Mark Hatfield's press secretary.

Such gatherings helped meld Evans' staff into an extended family. What other staff would go Christmas caroling at Wolf Trap? Heet prodded one legislative aide to organize a raft trip down the Shenandoah River. Another was chided to abandon workaholic tendencies long enough to do a bit of dating.

Beyond her office, however, Heet helped others on "the Hill" resist temptations to adopt Washington, D.C., social values.

The capital is an environment that encourages self-importance. The "power lunch" is an institution. President Nixon's press secretary Ron Ziegler once kept an aide busy setting up tennis matches with the requirement that his partners be of at least equal White House rank.

A female Reagan aide recently groused to the Wall Street Journal that she couldn't be caught "dating down" at White House functions. Another friend of this writer has proudly related, three times, how his question at a dinner party prompted a gruff and boorish response from President Reagan's communications director, Patrick Buchanan.

Sadly, some Northwesterners have gone native, adapting a cushy life of corporate directorships, cushy consulting contracts and a caste system more rigid than pre-Gandhi India. They have trouble going home.

Sally Heet was about ready to go home. She could still laugh at the end of 13-hour workdays but envied the hours at which friends in Seattle were able to knock off work. She had begun to sound out job opportunities.

The pending departure was being handled with characteristic grace and humor.

"I recently received a prospectus for director of a botanical garden in New York at an annual salary of $100,000," said Jacobs. "I called her over and said, 'Hey, Sally, I have something for you.' She laughed uproariously."

We will miss, and for a long time, Sally Heet's laugh, her competence and above all her sense of perspective.

☐ *Joel Connelly is the P-I correspondent in Washington, D.C.*

Suspect questioned in Heet's killing

By Joel Connelly
P-I Washington Correspondent

WASHINGTON — A prime suspect in the April slaying of Sally Heet, Sen. Dan Evans' press secretary, was questioned at length last week and flunked a polygraph test, sources close to the Washington, D.C., police investigation said yesterday.

The suspect, known to Heet and familiar with the Capitol Hill building where her body was found, has not been charged and his identity has not been officially disclosed by police.

Heet, 35, was found stabbed to death in her Capitol Hill apartment on the morning of April 17 after she failed to show up for a press breakfast with Sen. Evans and a reporter from The Washington Post.

The suspect was reportedly questioned by police over a 12-hour period last week and was informed by police that they believe he killed Heet. He had previously been questioned several times during the three-month investigation.

The suspect has since retained an attorney, to assess evidence and advise him, sources said.

The Washington, D.C., police department declined comment on the case other than to repeat that "substantial progress" has been made in the cross-country investigation.

A source close to the investigation said charges may be brought within the next week.

In recent weeks, police have reportedly focused on several pieces of evidence. Fingerprints were found in Heet's apartment. The killer left a blood trail out a hard-to-find exit, known mainly to those who had lived in the building. No signs of struggle were found in the apartment. Heet's mailbox had been opened on the night of the crime. However, the slaying weapon has not been found.

Heet was a vice president at Rainier Bank in Seattle before joining Evans' staff shortly after his appointment to the Senate in 1983 to fill the seat of the late Sen. Henry Jackson. She was also a former executive at The Rockey Co. Inc., a Seattle public relations firm.

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3/86

U.S. Senate
Press Secretaries Association

**********SALLY HEET MEMORIAL SERVICE**********

There will be a memorial service for Sally Heet, press secretary for Senator Evans, on Wednesday April 23rd at Noon in the Russell Caucus Room (325 Russell).

A memorial scholarship fund is being set up through her former employer, the Rainier National Bank in Washington state. We will provide specific information on the fund and where to send contributions in a later mailing. The family has requested that in lieu of flowers contributions be made to the scholarship fund.

My apologies if this note comes too late for you to attend the memorial service. Notice was short and we attempted to telephone as many people as possible.

Sally was a highly respected press secretary and had many friends on the Hill. She joined the Senate Press Secretaries Association soon after coming to Washington and was recently elected to the Board of Directors. She was playing a big role in helping to plan our upcoming trip to New York.

There are no adequate words to express our sadness and our grief over the loss of such a good friend. She will be missed by all of us.

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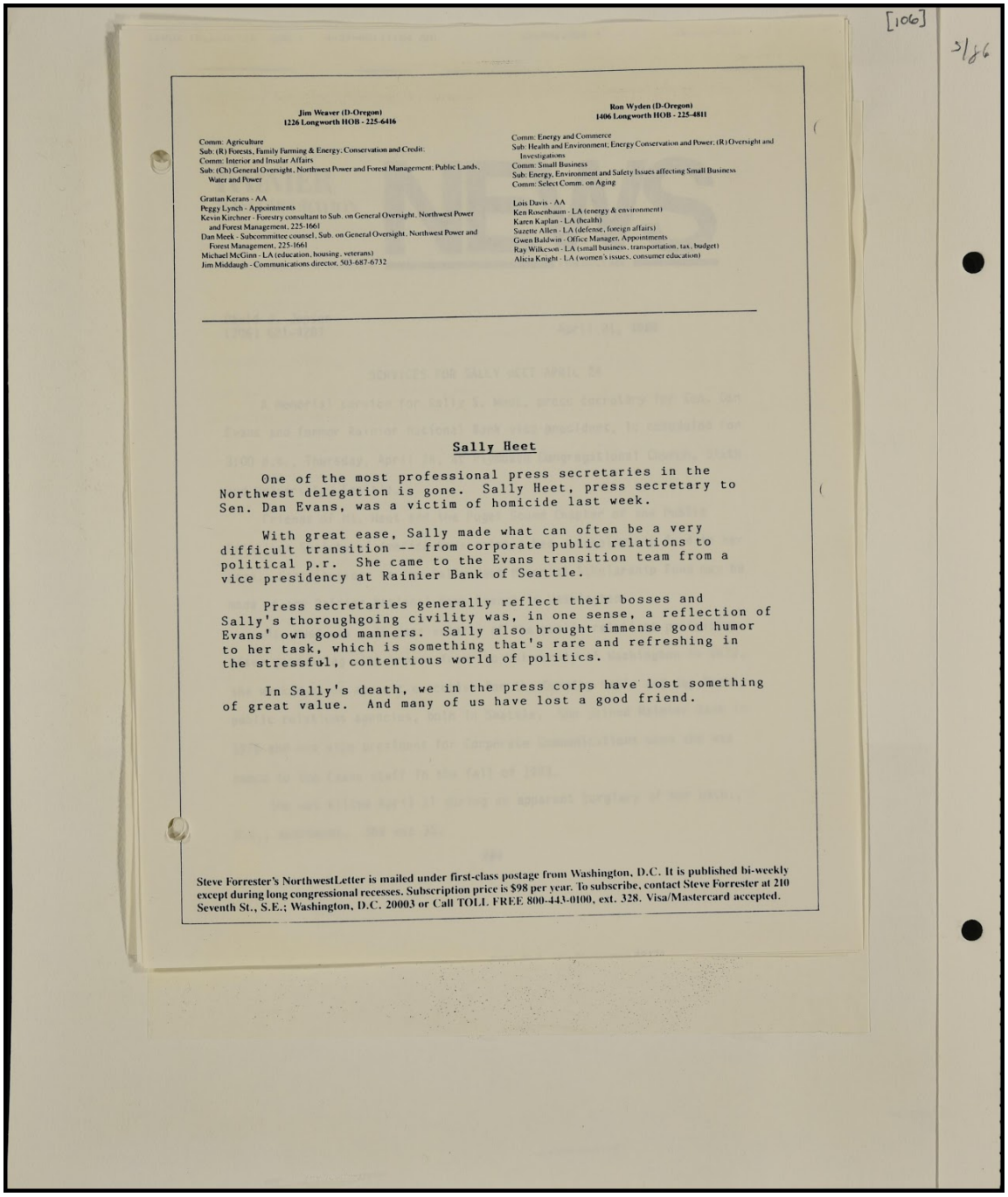

[106]

3/86

Jim Weaver (D-Oregon)
1226 Longworth HOB - 225-6416

Comm: Agriculture
Sub: (R) Forests, Family Farming & Energy; Conservation and Credit;
Comm: Interior and Insular Affairs
Sub: (Ch) General Oversight, Northwest Power and Forest Management; Public Lands, Water and Power

Grattan Kerans - AA
Peggy Lynch - Appointments
Kevin Kirchner - Forestry consultant to Sub. on General Oversight, Northwest Power and Forest Management, 225-1661
Dan Meek - Subcommittee counsel, Sub. on General Oversight, Northwest Power and Forest Management, 225-1661
Michael McGinn - LA (education, housing, veterans)
Jim Middaugh - Communications director, 503-687-6732

Ron Wyden (D-Oregon)
1406 Longworth HOB - 225-4811

Comm: Energy and Commerce
Sub: Health and Environment; Energy Conservation and Power; (R) Oversight and Investigations
Comm: Small Business
Sub: Energy, Environment and Safety Issues affecting Small Business
Comm: Select Comm. on Aging

Lois Davis - AA
Ken Rosenbaum - LA (energy & environment)
Karen Kaplan - LA (health)
Suzette Allen - LA (defense, foreign affairs)
Gwen Baldwin - Office Manager, Appointments
Ray Wilkeson - LA (small business, transportation, tax, budget)
Alicia Knight - LA (women's issues, consumer education)

Sally Heet

One of the most professional press secretaries in the Northwest delegation is gone. Sally Heet, press secretary to Sen. Dan Evans, was a victim of homicide last week.

With great ease, Sally made what can often be a very difficult transition -- from corporate public relations to political p.r. She came to the Evans transition team from a vice presidency at Rainier Bank of Seattle.

Press secretaries generally reflect their bosses and Sally's thoroughgoing civility was, in one sense, a reflection of Evans' own good manners. Sally also brought immense good humor to her task, which is something that's rare and refreshing in the stressful, contentious world of politics.

In Sally's death, we in the press corps have lost something of great value. And many of us have lost a good friend.

Steve Forrester's NorthwestLetter is mailed under first-class postage from Washington, D.C. It is published bi-weekly except during long congressional recesses. Subscription price is $98 per year. To subscribe, contact Steve Forrester at 210 Seventh St., S.E.; Washington, D.C. 20003 or Call TOLL FREE 800-443-0100, ext. 328. Visa/Mastercard accepted.

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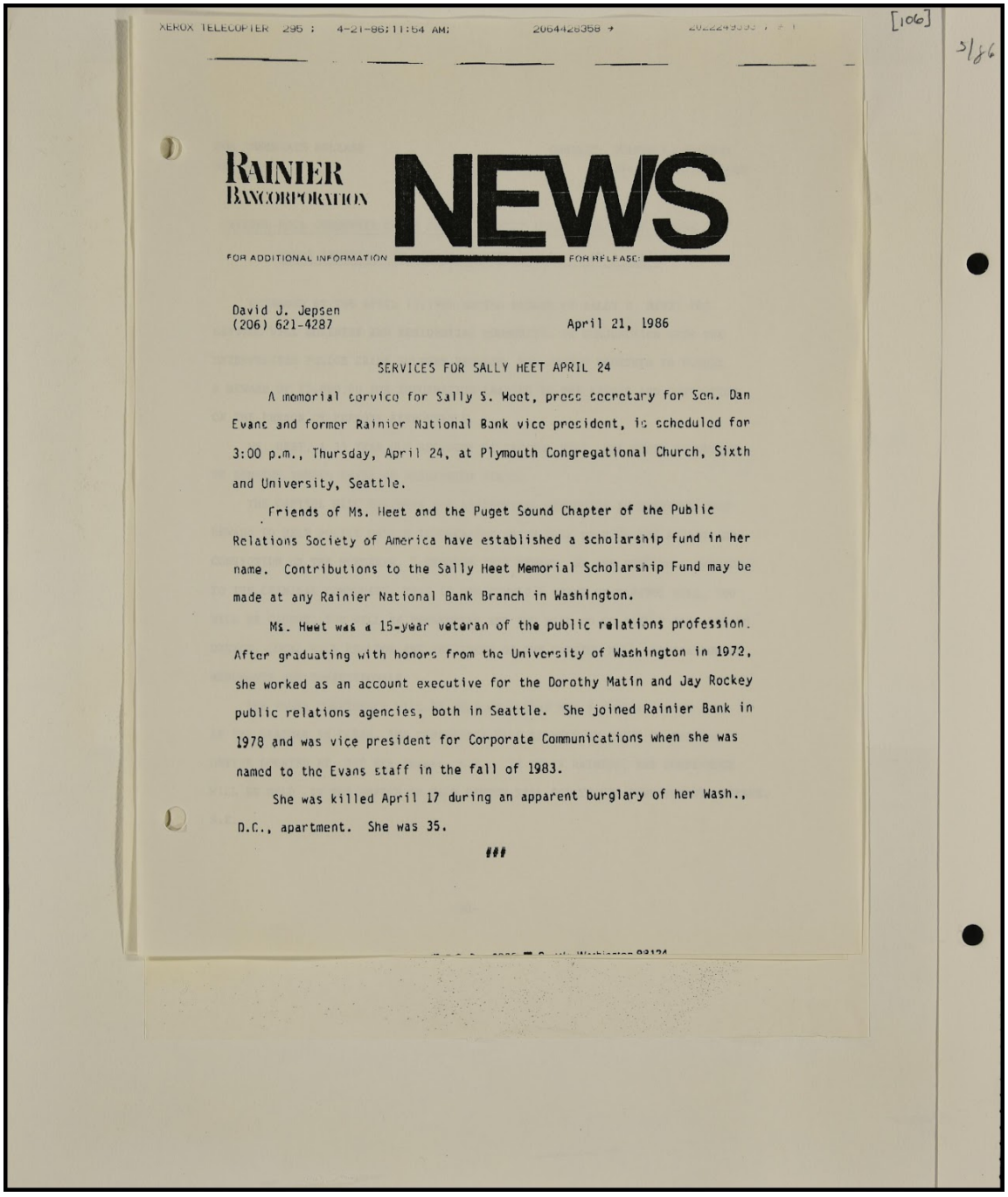

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3/86

RAINIER BANCORPORATION **NEWS**

FOR ADDITIONAL INFORMATION FOR RELEASE:

David J. Jepsen
(206) 621-4287

April 21, 1986

SERVICES FOR SALLY HEET APRIL 24

A memorial service for Sally S. Heet, press secretary for Sen. Dan Evans and former Rainier National Bank vice president, is scheduled for 3:00 p.m., Thursday, April 24, at Plymouth Congregational Church, Sixth and University, Seattle.

Friends of Ms. Heet and the Puget Sound Chapter of the Public Relations Society of America have established a scholarship fund in her name. Contributions to the Sally Heet Memorial Scholarship Fund may be made at any Rainier National Bank Branch in Washington.

Ms. Heet was a 15-year veteran of the public relations profession. After graduating with honors from the University of Washington in 1972, she worked as an account executive for the Dorothy Matin and Jay Rockey public relations agencies, both in Seattle. She joined Rainier Bank in 1978 and was vice president for Corporate Communications when she was named to the Evans staff in the fall of 1983.

She was killed April 17 during an apparent burglary of her Wash., D.C., apartment. She was 35.

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5/86

FOR IMMEDIATE RELEASE
MAY 9,1986

CONTACT: JEANNE E. MAHONEY
0-547-3525 H-547-0008

CAPITOL HILL COMMUNITY JOINS FORCES TO HELP POLICE SOLVE THE MURDER OF PRESS SECRETARY TO SENATOR DANIEL EVANS, SALLY S. HEET

OUTRAGED BY THE APRIL 17,1986 BRUTAL MURDER OF SALLY S. HEET, THE CAPITOL HILL BUSINESS AND RESIDENTIAL COMMUNITY, IN CONJUNCTION WITH THE METROPOLITAN POLICE CRIME SOLVERS PROGRAM, HAS JOINED TOGETHER TO PLEDGE A REWARD OF $5,000.00 FOR INFORMATION LEADING TO THE ARREST AND CONVICTION OF THE PERSON OR PERSONS RESPONSIBLE.

MS. HEET, A 35 YEAR OLD RESIDENT OF CAPITOL HILL, WAS PRESS SECRETARY TO SENATOR DANIEL EVANS OF WASHINGTON STATE.

THE CAPITOL HILL BUSINESS AND RESIDENTIAL COMMUNITY IS OFFERING THIS REWARD TO HELP POLICE OBTAIN INFORMATION WHICH WILL LEAD TO THE ARREST AND CONVICTION OF THE MURDERER. " THROUGH THIS REWARD, WE ARE SENDING A MESSAGE TO THE CRIMINAL COMMUNITY, THAT IF YOU COMMIT A CRIME ON CAPITOL HILL, YOU WILL BE CAUGHT, YOU WILL BE PROSECUTED AND YOU WILL GO TO JAIL," SAID DONALD DENTON, LOCAL HILL REALTOR AND PRESIDENT OF THE CAPITOL HILL ASSOCIATION OF MERCHANTS AND PROFESSIONALS.

THE PRESS CONFERENCE WILL BE HELD ON FRIDAY MAY 9,1986 AT 10:00 A.M. IF THE WEATHER IS CLEAR, THE CONFERENCE WILL BE HELD IN FRONT OF THE LAW OFFICE LOCATED AT 310 6th Street, S.E.. IF IT IS RAINING, THE CONFERENCE WILL BE HELD IN THE OFFICE OF DALE DENTON REAL ESTATE 605 PENNSYLVANIA AVENUE, S.E.

-30-

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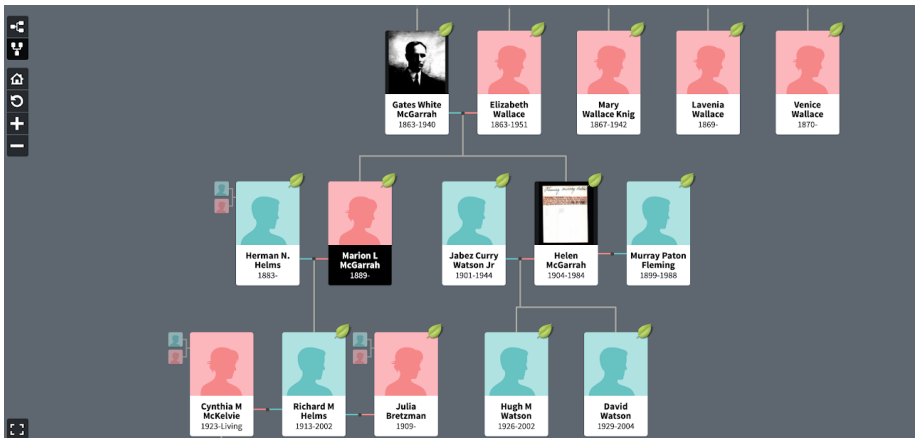
BITCHUTE @Housatonic YOUTUBE @HousatonicLive ODYSEE @Housatonic BRIGHTEON @Housatonic

Richard McGarrah Helms (born 1913)

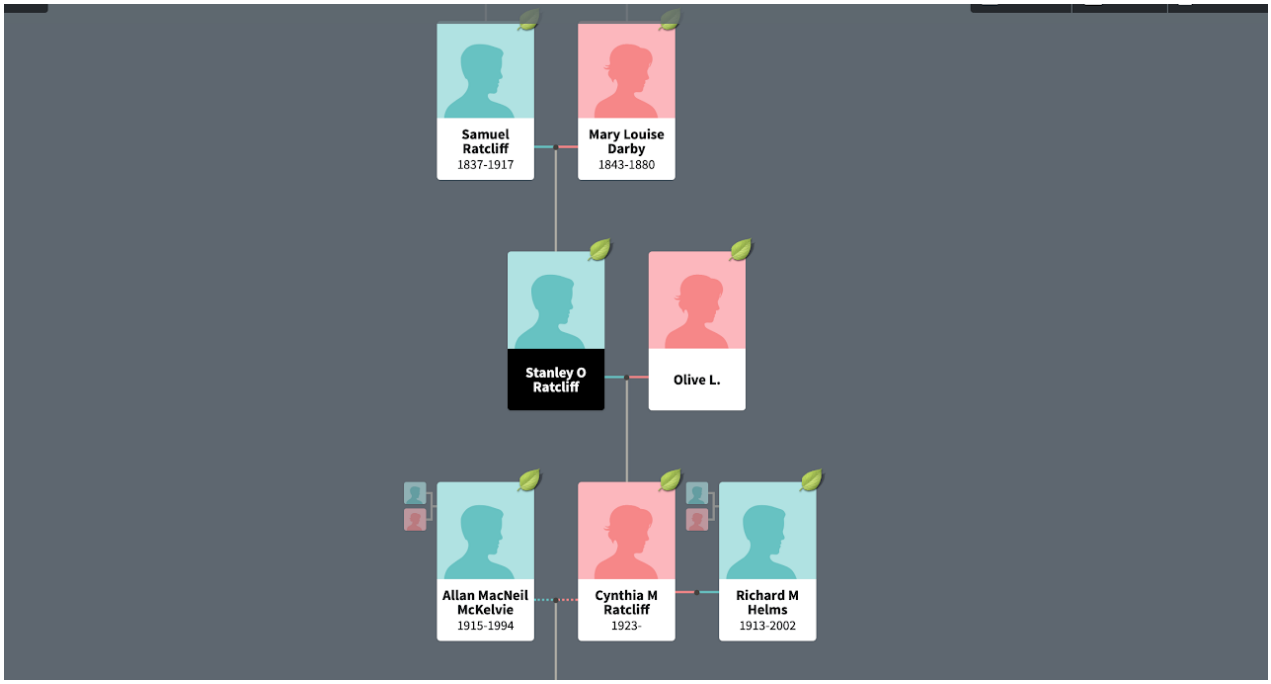
Wikipedia - https://en.wikipedia.org/wiki/Richard_Helms

Richard McGarrah Helms (March 30, 1913 – October 23, 2002)

Richard Helms was director of the Central Intelligence Agency from 1966-1973. He. replaced John McCone. Helms had an intelligence background as a member of the OSS during World War II.



Richard Helms background gets a little disturbing when looking at his second wife. **Cynthia Ratcliff** was born in 1923 in London. the daughter of a British diplomat or spy who was stationed in Shanghai, China no later than 1924. Cynthia first married a Scot, Allan McNeil McKelvie. He was a medical doctor. The couple moved to Vancouver, Canada, and looked to have been living there for around 7 years. He obtained a position at the Mayo Clinic in Minnesota and they applied for naturalization. Or, perhaps, she was living in Vancouver and he was working at Mayo, because he was working for the US Navy in 1942. They had four children, but at this time, we're not sure where they were born. The McKelvie's were married in London in 1943 and were living in Vancouver by 1948. Their U.S. naturalization papers were filed in 1956.



This gets more disturbing when you realize the current DNI recently appointed by President Trump is **John Lee Ratcliff**. When you check the London births of John Lee Ratcliff's, you stop looking because there are so many. Aside from the obvious question, it is a legitimate question to ask if Richard Helms was set up to be placed in the position very early on.

Source: Obituary from The Washington Times Newspaper, Washington, D.C., USA
Monday, May 30, 1994

Allan M. McKelvie, 78, orthopedic surgeon: Newspaper Obituary and Death Notice
Washington Times, The (DC) - Monday, May 30, 1994

Deceased Name: Allan M. McKelvie, 78, orthopedic surgeon

Allan McNeill McKelvie, a newly retired surgeon and scholar, died of cancer at his home in the District May 27. He was 78.

In 1959, Dr. McKelvie began what became a life-long effort to bring orthopedic surgery to the poor and polio-ravaged children of the developing world.

At his own expense and accepting no payment, he typically spent six weeks each year setting up a program and operating on children. His crusade took him to 13 countries including Nigeria, Afghanistan, Kurdestan and, most recently, the former Soviet Union.

His research on scoliosis, thalidomide, polio and war wounds led to many honors, including the Vicennial Medal and the membre d'honneur Sicot.

Dr. McKelvie's local patients included students and faculty of the Cathedral Schools and Episcopal High School as well as Washington leaders, professional athletes and movie stars.

His primary affiliation was with Georgetown University Hospital and Medical School, where he was associate clinical professor of surgery from 1952 to 1987. He was appointed professor emeritus in 1989.

Dr. McKelvie, who retired three weeks ago, was born in Greenock, Scotland, in 1915. He emigrated to the United States in 1946 after training at Glasgow University and service as a Royal Navy doctor in World War II. He won the Commonwealth Fellowship to study for three years at the Mayo Clinic in Rochester, Minn.

Dr. McKelvie headed the Scoliosis Clinic at Children's Hospital from 1953 to 1969, served as consultant to the National Institutes of Health from 1968 to 1986, and was chief of orthopedics at both Children's Hospital and Arlington Hospital in the mid-1960s. He was a member of the governing board of the National Cathedral School from 1966 to 1969.

He was chairman of Orthopedics Overseas from 1973 to 1979 and in 1977 was elected president of World Orthopedic Concern.

His 1943 marriage to Cynthia Ratcliff ended in divorce in 1968.

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Housatonic

Dr. William W Herrmann (born 1936)

NOTE - We are unsure if two different "william Herrmann" individuals have been combined into one person accidentally by history. Still researching. This page may be a little misleading until we can sort this out!

Born 1936 (see [HG000Y][GDrive])

1956 - HS graduation ? (Michigan)

https://www.newspapers.com/image/209601876/?terms=%22william%2Bherrmann%22

1956-06-10-the-port-huron-times-herald-pg-10

1956-06-10-the-port-huron-times-herald-pg-10-clip-herrmann

1958 - going toMichigan st.

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1965

https://www.newspapers.com/image/37645508/?terms=%22William%2BHerrmann%22

1957

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1962

Dr. william w herrmann

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1965 - first mention

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william T Herrmann

https://www.newspapers.com/image/382334668/?terms=%22William%2BHerrmann%22

1969 - william W Herrmann

https://www.newspapers.com/image/64976008/?terms=%22William%2BHerrmann%22

https://www.newspapers.com/image/382567692/?terms=%22William%2BHerrmann%22

1970 - retired ?

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1971

https://www.newspapers.com/image/164223477/?terms=%22William%2BHerrmann%22

https://www.newspapers.com/image/30356116/?terms=%22William%2BHerrmann%22

1975

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1985

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1970

https://www.newspapers.com/image/619737847/

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1970-08-03-the-sacramento-bee-pg-e1-clip-computers-herrmann

https://www.newspapers.com/image/619737884

1970-08-03-the-sacramento-bee-pg-e4

1970-08-03-the-sacramento-bee-pg-e4-clip-computers-herrmann

45 years old- 1970 article - suggests he was born around 1925 ?

1970 -08-03-the-sacramento-bee-pg-e4-clip-computers-herrmann

Computer Replaces Spy-In-Street For Antiriot Sleuthing

By James Wrightson
McClatchy newspapers staff writer

SANTA MONICA — When a man has a title "counterinsurgency specialist" people are sure he is in the cloak-and-dagger business.

Speak of an "intelligence operation" and one envisions an agent in a trench coat standing on a bridge in the fog with one half a dollar bill to match the other half held by another fog-shrouded agent.

Dr. William W. Herrmann, counterinsurgency specialist, computer expert, systems analyst and nonsalaried head of the task force on riots and disorders for the California Council on Criminal Justice, often speaks of "collecting intelligence" and "coordinating intelligence."

But he does not like the sinister image it evokes.

He says it is mean and misleading.

He resents the use of the terms "doomsday machine" and "Big Brother Operation" which writers have applied to one recommendation of his task force.

The recommendation, approved by the council, calls for "a coordinated intelligence system for the collection, analysis, interpretation and dissemination of information relative to the prediction, detection, prevention, suppression and control of civil commotion, riots and disorders."

Limited Role

Herrmann bridles at an article in the London Observer, widely distributed in the United States, which says his task force is hatching a grandiose plan "to forestall revolution in America drawing partly on ideas developed by the British for crushing Communist subversives in Malaya."

The Observer calls it "Ronald Reagan's secret game plan for saving America."

"The council could not set up a plan like that," Herrmann said in an interview in his office in the System Development Corp., where he holds the title of "senior operations scientist and counterinsurgency specialist."

"We have a nonoperational role," Herrmann says. "All we can do is review and fund projects suggested by local authorities.

Dr. William W. Herrmann

"It never was our intent to set up a centralized intelligence capacity.

"The control of riots and disorders is a local responsibility. Two presidents of the United States and Gov. Reagan have said that.

"That is one reason we were careful in our recommendation to use the word 'coordinated' rather than 'centralized' when describing a system."

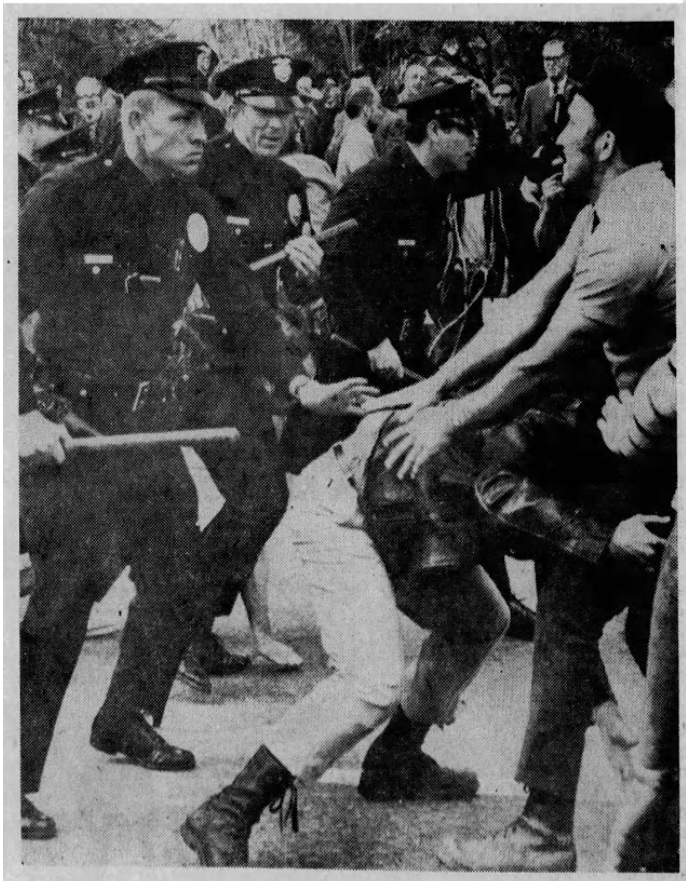
Herrmann is a friendly, unassuming man, 45 years old, who served in the Los Angeles Police Department (LAPD) for 21 years.

He sits in his Santa Monica office surrounded by books on psychology and social psychology, technology and development not solely related to computers, books on political science and political theory, police communication, and the theory of warfare from Karl von Clausewitz to Mao Tse-tung.

A week after he joined the LAPD in 1946 he enrolled in the University of Southern California. Going to school while working full-time as a

See Page E4, Col. 5

Computers Can Help Prevent Civil Strife



Could Computers Prevent This?

William W. Herrmann, counterinsurgency expert and systems analyst, proposes a state intelligence system utilizing computers to prevent riots and other civil disorders. A systematic, computer-aided study of economic, political and social conditions could, he believes, prevent confrontations such as this one between demonstrators and Los Angeles police.

AP Wirephoto

1970 -08-03-the-sacramento-bee-pg-e4-clip-computers-herrmann

Continued From Page E1

police officer, he earned his degree in public administration in 1952. He got his master's degree in political science and public administration in 1956 and his doctorate in public administration and psychology from USC in 1960.

He worked from 1966 to 1968 as a consultant on counterinsurgency for the Institute of Defense Analysis at the RAND Corp., a Santa Monica think tank and onetime parent company to System Development Corp.

He went to Thailand for the Agency for International Development (AID) in 1967 and again this year for the Department of Defense.

Insurgents Studied

Herrmann studied insurgent movements in Algeria, Malaya, Greece, Cyprus and Crete while he was at RAND. His publications at RAND are classified documents.

But he says he was appointed to the California Council on Criminal Justice by Gov. Ronald Reagan, not because he is an expert in counterinsurgency, but because of his work on systems analysis, which consists of finding out what the problem is, setting goals, looking at alternatives, then laying out a program.

Charles O'Brien, deputy attorney general, and liberal Democratic candidate for attorney general, says of Herrmann:

"He knows as much about computers and law enforcement as any man in the state. We seriously considered hiring him to set up the California Department of Justice Information System (a computer-based network for storing information on criminals, their methods and operation).

Herrmann is especially impatient with persons who see the use of computers in law enforcement as sinister.

"Those people are the same kinds of people who would believe that using magnetized rods will cure cancer," he says.

"A computer doesn't collect information. Law enforcement agencies, insurance companies, county asssessors, credit card companies do that. A computer stores information and retrieves it. With a computer you can analyze data and establish patterns.

"The history of man has shown many repressive regimes before there was any knowledge of computers."

The intelligence system Herrmann proposes for the state would, he believes, help prevent riots and civil disorders by using computers as an aid in a systematic study of economic, political and social conditions in communities.

Preventive Action

Authorities could tell when a blow-up is coming and head it off, not necessarily by massive force, but, it is hoped, by moving to correct the conditions which are causing the unrest.

The task force program for handling riots would first attempt to predict riot situations; second, attempt to prevent them; third, slow them down and quell them if they occur, and finally, "alleviate the effects" — that is clean up and repair the damage in the riot-torn area and rebuild the relationship between the authorities and the citizens.

His personal view, which he says does not necessarily reflect the attitude of the task force of the California Council on Criminal Justice, is that there are "hard-core dedicated revolutionaries who manufacture and plant bombs in this country.

"The solution to handling those people is different from that of handling a person who may occasionally throw a rock or even a Molotov cocktail," he says.

"You don't glorify the bomb makers and throwers by referring to them as revolutionaries or national liberation leaders.

"You call them arsonists, or murderers, or whatever, according to the crime they commit.

"One problem is to keep the neutrals from siding with the bomb-throwers.

"To do this requires more than tough police tactics. The government must find a program to win the minds and hearts of the people."

Who's Who?

Herrmann thinks this requires not only separating the hard-core activists from the reformers, but also requires determining which of the grievances are legitimate and which are merely contrived.

As for the threat of a centralized intelligence agency of government reaching into people's private lives, Herrmann just does not see it happening here.

"There is probably more information on people's personal lives in the hands of private enterprise than there is in the hands of the government," he says.

He gives as examples the computers of credit rating systems, insurance company files and the like. In such privately owned computers is stored information on a person's income, his ownership of property, his assets and his buying habits.

As for the task force recommendation, Herrmann says it is in no way intended to build a "centralized" agency. He says under the federal Omnibus Crime Control and Safe Streets Act of 1968, 75 per cent of the federal money for California, anticipated at $34 million for 1970-71, must go to local projects.

Dual Function

The 29-member Council on Criminal Justice functions to approve the local projects and allocate these federal funds.

It has turned down two projects which would set up what might be termed a "central intelligence agency."

One was by the California Department of the Military for a "central repository" for collecting, evaluating and disseminating information to all law enfofcement agencies and public officials and state military force commanders on "unlawful antigovernment activities."

The other was a proposal by the California Disaster Office calling for $898,000 in expenditures over a three-year period to establish a "central clearing house and information storage unit" for intelligence relating to civil disorders, riots and related incidents in the state.

A proposal by the LAPD for an 18-month project costing $681,000 to use a computer to put social, political and economic information into a mathematical probability model has been deferred.

William Herrmann bio - See " 1993 (Jan) - JOINT REPORT OFTItti 1/ H. Rept. No. 102-1102 TASK FORCE TO INVESTIGATE CERTAIN ALLEGATIONS CONCERNING THE HOLDING OF AMERICAN HOSTAGES BYIRANIN1980 ("October Surprise Task Force"

PDF at [HG000Y][GDrive]

Page 159 :

III. Alleged Attempts To Delay the Release of the American Hostages

[....]

3. Persons Claiming or Alleged To Have Second-Hand Knowledge

[...]

C. William Herrmann

William Herrmann was born in Danzig, Germany in 1936. **He arrived in the United States in 1950 and settled in Michigan**. **After graduating high school he joined the United States Army, specializing in ordnance and transportation. He was honorably discharged in 1959.** From 1962 to 1964 he worked for an air freight company, Worldwide Services, at Kennedy Air port in New York. In 1964 he started his own air freight forwarding company at Kennedy Air port, Continental Air Transport. Continental had offices throughout Europe and the Middle East.154 Continental operated until 1964, when "complications at Kennedy Airport" 155 forced him to close down. In 1970, Herrmann established International Resources Development Company (IRDC).156 IRDC was engaged in the arms business, specializing in small arms: pistols, submachine guns and revolvers.157 IRDC shipped directly out of Brazil to its clients worldwide.158 Herrmann operated IRDC in New Jersey and Frankfurt, Germany between 1970 and 1985, when it closed.159 Herrmann unconvincingly claims that no records of IRDC's business dealings exist because they were destroyed by the warehouse people that housed them for non-payment of bills. (160)

Herrmann first started selling military arms to Iran 161 in 1980, following a meeting with Hamid Nagashian who was, at the time, the authorized arms procurement official for the Revolutionary Guard in Iran.162 Herrmann was introduced to Nagashian in the fall of 1980 by Otto Schaller, another arms dealer and friend of Manuchehr Ghorbanifar. 163 During the meeting, Herrmann testified, Nagashian told him that he was interested in purchasing arms for the Revolutionary Guard. Herrmann showed Nagashian brochures from Taurus International, a Brazilian manufacturer licensed by Baretta.

Nagashan placed orders for three models of guns.164 The guns were then shipped to Iran by Taurus, and Herrmann collected a commission.165

Nahshan and Herrmann thereafter established an ongoing business relationship. According to Herrmann, whenever nagashian needed additional guns he would conact Herrmann, who would plae an order with Taurus (166). This arrangement lasted from 1981 to 1985 (167), when Herrmann got out of the business (168).

Herrmann stated that in January, 1981 he was invited to Tehran by Deputy Minister of Defense, Ahmed Azzizi.169 The purpose of the trip was to negotiate arm purchases for the Iranian Army. According to Herrmann, Nagashian had arranged the Azzizi invitation.170 Herrmann stated that he arrived in Tehran on approximately January 18, 1981 171 and was provided accommodations at the Hilton Hotel.172 Herrmann said that Nagashian came to the Hilton on January 21, 1981, to discuss the release of the hostages. Herrmann stated that Nagashian told him that the timing of the hostage release was the result of a deal with Reagan campaign people; some of his testimony follows:

- Q : And tell us, if you would, what Nagashaian told you, if anything, about the release of the hostages ?
- A : Well, he told me that a deal had been negotiated by some people in the Reagan administration and that the hostages would be released at the time Reafan was sworn in
- Q: Did you ask Nagashian how he came to know this?
- Joint Report of the Task Force to Investigate Certain Allegations Concerning the Holding of American Hostages by Iran in 1980 ("October Surprise Task Force")

160

A: Yes. Well, I didn't ask him, he told me.

OjAndwhatdidhetellyou?

A: That he was aware and he had been in Europe at the time when the negotiations took place.

Oj He, Nagashian, was personally in Europe at the time?

A: He was in Europe at the time, yes.

Qj And tell me specifically what he said with respect to how that agree ment came to take place?

A: He said for some time the Irani ans had been negotiating with senior officials in the Reagan administration on the release of the hostages and also the delay in releasing them earlier.

Oj Did he indicate to you at this time who, on behalf of Iran, was in volved in these discussions?

A: Mohammed Beheshti, Hakim, Rafsanjani, Mohsen Rafiqdust. Meet ings with Casey, Allen and McFarlane. These were the three people that were involved.

Qj So from Iran's standpoint, Naga shian says the three individuals in volved in the negotiations concerning the hostages for the [Iranians] were Beheshti, Hakim, Rafsanjani and Mohsen Rafiqdust, and the people working or negotiating with them on behalf of the United States were Wil liam Casey, Richard Allen and Robert McFarlane. Where did he say the ne gotiation took place?

A: He said the negotiations took place in Paris.

Oj Where in Paris, do you recall? A: He didn't say.

Qj When in Paris?

A: October, September, October, 1980.

Oj Did he indicate that he, himself, had attended these meetings?

A: No, he didn't say that, but he was in Europe at the time and he knew that these people were in Europe at the time, also.

Oj Did he indicate to you how he knew that they were in Europe?

A: He didn't give me any indication how he found out, but, apparently, he knew what was happening at the time due to his position ..,173

Thus, Herrman said Nagashian told him that the deal was negotiated in Paris in the Fall of

1980 (probably September or October), and that the participants in the negotiations were Mohammed Beheshti, Albert Hakim, Rafsanjani and Mohsen Rafiqdust for the Iranians and William Casey, Richard Allen and Bud McFar lane for the Reagan Campaign. 174

Task Force counsel asked Herrmann whether he told anyone about the Nagashian conversa tion contemporaneously. Herrmann said that he confidentially advised the CIA of the infor mation obtained from Nagashian. Having told the government his tale, Herrmann said that he felt no other responsibility to raise the subject elsewhere. 175

The Task Force was concerned about Herr mann's connection to Richard Brenneke who had been shown to be untruthful. The Task Force questioned Herrmann about how he had surfaced as an October Surprise witness. Herrmann was evasive about his contacts with Richard Brenneke and Barbara Honneger.176 This evasiveness led the Task Force to question Herrmann's veracity:

Oj During this time period did you have contact with Barbara Honegger herself?

A: Yes, she contacted me before her book was published. That is how I got in there. How she got my name was through London, I believe, if I recall correctly.

Oj You see, that strikes me as odd. How would she get your name through London? What happened in

Joint Report of the Task Force to Investigate Certain Allegations Concerning the Holding of American Hostages by Iran in 1980 ("October Surprise Task Force")

London that she could possibly get your name?

A: Because of the publicity I re ceived.

Qj What publicity did you receive with respect to October Surprise-relat ed activities?

A: None. None.

Oj So how did she get your name?

A: I don't know. It could have been through Brenneke. I don't know.

Oj Well, how did Brenneke get your name? You say maybe through Bren neke. How would Brenneke have gotten your name to tie you into the October Surprise to get you to Bar bara Honegger if you have not gone public with any statements about Oc tober Surprise-related activities?

A: I don't know. I don't know. Oj Did you ask Brenneke that? A: No Ididn't.

OjImean

A: As I said, I don't want to know. I don't want to get involved.

Oj But it is quite a puzzle. I mean, here you have remained silent about this October Surprise matter, and then all of a sudden two people, Brenneke and Honegger, are calling you up and saying, I hear you have information relevant to October Surprise. It would strike me the first question out of my mouthiswhatareyoutalkingabout.

And if it wasn't, why would you choose to go public with them for the first time; Brenneke, a person about whom you felt was less than honest; and Honegger, a person you didn't know? Why would you do that?

A: Well, as I said, I didn't know Brenneke either. I had never met the man personally, and, you know, Bren nekeisverygoodwithcollectinginfor mation, whether it is through newspa pers, news media or whatever, and

maybe he picked up my name through the news media. I don't know.

Oj But your name isn't in the news media relating to October Surprise.

A: I know that. I know that. OjSohowcouldhepickitup? A:Idon'tknow ...177

Herrmann's answers were disingenuous, at best. At worst he completely fabricated his knowledge of and participation in the October Surprise allegations. It is difficult to believe that Herrmann was contacted out of the blue by Honegger or Brenneke. It seems more likely that he affirmatively sought them out from his prison cell in an effort to insinuate himself into the October Surprise theory in much the same way as did Oswald LeWinter and others. Herr mann might also have been motivated by a desire for revenge against the United States Government or for a shorter prison sentence. In any case, Herrmann's story is factually flawed, especially in light of the CIA contact report and the testimony of Nagashan, dis cussed below.

The Task Force spoke with the CIA agent who Herrmann contacted. The agent indicated that during late 1981 or early 1982, FBI's Newark office advised the CIA that William Herrmann with various offenses, including smuggling and theft of motor vehicles. As a result of these charges, Herrmann determined that it was in his best interests to cooperate with the U.S. Government. Among other things, he made statements concerning Iraq. The FBI notified the CIA of Herrmann's coop eration and suggested that an interview con cerning the international matters he had raised should be arranged.178

A CIA agent was assigned to contact Herr mann and evaluate his utility as an intelligence source. Background checks revealed that Herr mann had been arrested on several other occa sions, in addition to his current charges. As a result, the CIA concluded that Herrmann would not be a useful source.179 During the ini tial screening process, however, Herrmann fre quently telephoned the agent to volunteer in formation. Most of the information was vague and unusable. The agent characterized Herr mann as elusive and hard to pin down. He indi

Joint Report of the Task Force to Investigate Certain Allegations Concerning the Holding of American Hostages by Iran in 1980 ("October Surprise Task Force")

cated that Herrmann only provided information on Iraq, and was only able to produce a list of arms requirements from the Iraqi Ministry of Defense. According to the agent, Herrmann never discussed Iran or the October Surprise allegations.180

The agent's last conversation with Herrmann occurred just before the holidays, when Herr mann was to report to Leavenworth Penitentia ry. Herrmann was desperate to avoid incarcer ation. He said he would do anything for the United States Government, including being air dropped into the Soviet Union. The agent con sidered Herrmann to be an unreliable source and the Agency did not rely on him.

Finally, without success, the Task Force in vestigated the relationship among Herrmann, Brenneke and Honegger.

Given Herrmann's implausible statements re garding his contacts with the CIA, his failure to bring these allegations to the attention of law enforcement authorities and the CIA at the time he faced incarceration, and his contacts with Brenneke and Honegger, the Task Force considered his testimony to be untruthful. In addition, as demonstrated below, testimony of Hamid Nagashan further undercuts Herrmann's testimony.

Father (Sr)

Dura - yes - military

https://www.crainsdetroit.com/article/20081114/FREE/811149964/read-the-entire-letter-from-dura-president-and-ceo-timothy

1957 - william j herrmann / factory operator - Vickers?

https://www.newspapers.com/image/98289895/?terms=%22william%2Bherrmann%22

1957-10-09-detroit-free-press-pg-31

1957-10-09-detroit-free-press-pg-31-clip-herrmann

Detroit Free Press (Detroit, Michigan) • 09 Oct 1957, Wed • Page 31

William J. Herrmann, Detroit factory manager for Aero Hydraulics Division, Vickers, Inc., has been promoted to division manufacturing manager. He will direct four Vickers plants, in Detroit; Joplin, Mo.; Jackson, Miss., and Torrance, Calif.

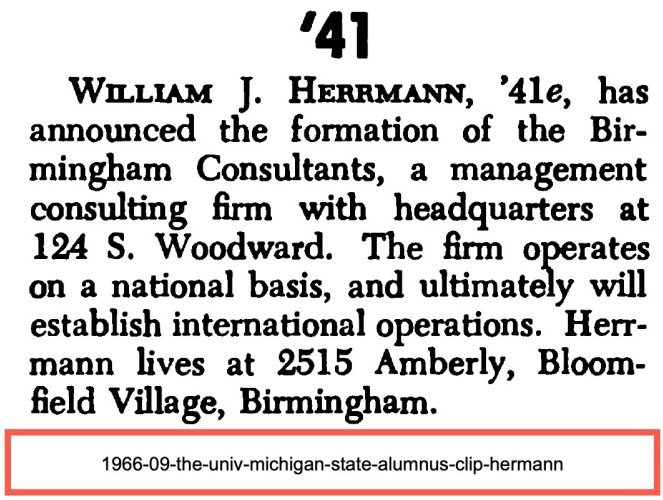
Herrmann Ervin

1966 (Sep)

https://books.google.com/books?id=KfPhAAAAMAAJ&pg=RA1-PA50&lpg=RA1-PA50&dq=%22Birmingham+consultants%22+and+%22herrmann%22&source=bl&ots=4r7cUPMAwH&sig=ACfU3U38iKguiVfhm6quaqVTml4nqIT94g&hl=en&sa=X&ved=2ahUKEwjH58uTk4zoAhXLmXIEHedEAzYQ6AEwBnoECAYQAQ#v=onepage&q=%22Birmingham%20consultants%22%20and%20%22herrmann%22&f=false

1966-09-the-univ-michigan-state-alumnus.pdf

1966-09-the-univ-michigan-state-alumnus-clip-hermann



'41

William J. Herrmann, '41*e*, has announced the formation of the Birmingham Consultants, a management consulting firm with headquarters at 124 S. Woodward. The firm operates on a national basis, and ultimately will establish international operations. Herrmann lives at 2515 Amberly, Bloomfield Village, Birmingham.

1966-09-the-univ-michigan-state-alumnus-clip-hermann

1996 (July) Father passing ? - Moved to Beverley Hills, close to Jr

https://www.newspapers.com/image/99331255/?terms=%22william%2Bherrmann%22%2B%22vickers%22

1996-07-04-detroit-free-press-pg-20

1996-07-04-detroit-free-press-pg-20-clip-herrmann

If he was 77, that means he was born in 1919-ish

Was in Navy in WW2 ? How ?

Detroit Free Press (Detroit, Michigan) • 04 Jul 1996, Thu • Page 20

WILLIAM J. HERRMANN

Ran management consulting firm

William J. Herrmann, 77, of Beverly Hills, a management consultant, died of cancer Tuesday, July 2, 1996, in Windmere Nursing Home in West Bloomfield.

Mr. Herrmann, a University of Michigan graduate, was in the Navy in World War II.

After his discharge, he worked for Dura Corp. and Vickers Corp. In 1966, he founded Birmingham Consultants.

Survivors include a daughter, Nancy H. Wind; a son, William; and three grandchildren.

Visitation will be from 2-4 p.m. and 6-8:30 p.m. Friday in the A.J. Desmond and Sons Funeral Home, 4375 N. Woodward, Royal Oak.

A memorial service will be held at 11 a.m. Saturday in the chapel of First Presbyterian Church, 1669 W. Maple, Birmingham. Burial will be in Acacia Park Cemetery in Birmingham.

Memorials may be sent to the Michigan Cancer Foundation, 110 E. Warren, Detroit, Mich. 48002.

death certificate

https://www.findmypast.com/transcript?id=USBMD%2FSSDI%2F384053802

borgn may 17 1919

Housatonic

Dr. David Lowell Heymann (born 1946)

Wikipedia David L. Heymann

Associations

- Dr. Peter Daszak (born 1965)
- Dr. Walter Ian Lipkin (born 1952)
- Research0002

2021-03-04-wikipedia-org-david-l-heymann.pdf

David Heymann,

https://en.wikipedia.org/wiki/David_L._Heymann

https://drive.google.com/file/d/17Kw41JdyixOJ-R_LmhrACt8t5mP4KfkN/view?usp=sharing

"David L. Heymann (born 1946) is an American infectious disease epidemiologist and public health expert, based in London."

Whilst an EIS officer, he was part of the international team that investigated the first outbreak of Ebola in Zaire (with Peter Piot, Karl Johnson, Joel Breman, Joe McCormick amongst others) and the first outbreak of Legionnaire's Disease, in Philadelphia.

David L. Heymann

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This biography of a living person **needs additional citations for verification**. *(July 2018)*

This biographical article **is written like a résumé**. *(July 2018)*

David L. Heymann

Born

1946 (age 74–75)

Pennsylvania, USA

Nationality

American

Education

Pennsylvania State University, Wake Forest University

Medical career

Profession

Physician

Field

Epidemiologist

Institutions

UK Public Health England, Centre on Global Health Security at Chatham House, World Health Organization, US CDC

Sub-specialties

Public Health, Epidemiology

Awards

Commander of the Order of the British Empire, Commendador Encomienda de Sanidad Orden Civil de Sanidad, American Public Health Association Award for Excellence United States Institute of Medicine, United Kingdom Academy of Medical Sciences, Paul Harris Fellow, Rotary International, Welling Professorship at the George Washington University School of Public Health, Donald Mackay medal by the American Society of Tropical Medicine and Hygiene, The 13th Annual Heinz Award for the Human Condition

David L. Heymann (born 1946) is an American infectious disease epidemiologist and public health expert, based in London.

Early life and education[edit]

Heymann was born in Pennsylvania, USA. He received his Bachelor of Arts from Pennsylvania State University and later obtained an MD from Wake Forest University School of Medicine. He also received a Diploma in Tropical Medicine and Hygiene from the London School of Hygiene and Tropical Medicine. Heymann did two years of practical epidemiology training with the Epidemic Intelligence Service (EIS). Whilst an EIS officer, he was part of the international team that investigated the first outbreak of Ebola in Zaire (with Peter Piot, Karl Johnson, Joel Breman, Joe McCormick amongst others) and the first outbreak of Legionnaire's Disease, in Philadelphia.

Career[edit]

Heymann was appointed Chairman of the Board of the UK Health Protection Agency (HPA) in April 2009. He remained Chairman of the Board when HPA was merged into Public Health England (PHE) in 2013. At the same time, he started and became Head and Senior Fellow of the Centre on Global Health Security at Chatham House, London (the Royal Institute of International Affairs) and in 2010 joined the faculty at the London School of Hygiene and Tropical Medicine as Professor of Infectious Disease Epidemiology.[1]

Heymann was the World Health Organization's (WHO) Assistant Director-General for Health Security and Environment, and the representative of the Director-General for polio eradication. Previously, from 1998–2003, he was Executive Director of the WHO Communicable Diseases Cluster and from October 1995 to July 1998 he was Director of the WHO Programme on Emerging and other Communicable Diseases. Prior to this, he was the chief of research activities in the WHO Global Programme on AIDS.

Heymann was also chairman of the Strategic Advisory Group of Hilleman Laboratories.

Heymann is Visiting Professor in the Department of Medicine at the National University of Singapore, and an Associate Provost (Health Affairs).

Before joining WHO, Heymann worked for 13 years as a medical epidemiologist in sub-Saharan Africa on assignment from the US Centers for Disease Control and Prevention (CDC). He also worked in India for two years as a medical epidemiologist in the WHO Smallpox Eradication Programme, where smallpox was eradicated in 1978. Heymann also took an active role in the first Ebola outbreak in 1976, and led the response team during the 1995 Kikwit outbreak. In 2003, Heymann was at the forefront of the SARS epidemic, working with his team to mediate international effort to halt the pandemic.[2][3]

For his work in public health, Heymann is regarded as one of the "Disease Cowboys".[4]

Heymann has also served as editor of the 18th through 20th editions of the Control of Communicable Diseases Manual, a publication of the American Public Health Association.

On 5 August 2020, Heymann was deployed as part of a WHO "surge team" in South Africa to help strengthen the national and provincial responses to COVID-19.[5]

Awards[edit]

> This section of a biography of a living person **needs additional citations for verification**. Please help by adding reliable sources. Contentious material about living persons that is unsourced or poorly sourced **must be removed immediately**, especially if potentially libelous or harmful.
> *Find sources:* "David L. Heymann" – news · newspapers · books · scholar · JSTOR *(May 2020) (Learn how and when to remove this template message)*

- Named Commander of the Order of the British Empire (CBE) (2009)
- Named to the United States Institute of Medicine (2004)
- Named Commendador, Encomienda de Sanidad, Orden Civil de Sanidad (Spain) (2004)
- Named Paul Harris Fellow, Rotary International
- Named to the United Kingdom Academy of Medical Sciences (2010)
- Doctor of Science *honoris causa* from Sapienza-Università di Roma
- Doctor of Science *honoris causa* from City University London (2011)

- Doctor of Science *honoris causa* from City University London (2011)
- Doctor of Science *honoris causa* from University of York (2016)
- Donald Mackay Medal by the American Society of Tropical Medicine and Hygiene
- American Public Health Association Award for Excellence
- Welling Professorship at the George Washington University School of Public Health
- The 13th Annual Heinz Award for the Human Condition[6]

References[edit]

- ^ Chatham, House. "Professor David L Heymann, CBE Head and Senior Fellow, Centre on Global Health Security".
- ^ Heymann, David L. (2013-03-14). "Opinion | How SARS Was Contained". *The New York Times*. ISSN 0362-4331. Retrieved 2019-11-07.
- ^ "Why we might not get a coronavirus vaccine". *the Guardian*. 22 May 2020. Retrieved 2020-05-22.
- ^ "JAMA Network | JAMA: The Journal of the American Medical Association | Health Woes Grow in Shrinking World". Jama.ama-assn.org. Retrieved 2012-09-08.
- ^ "South Africa: UN health agency sends experts to help battle against COVID-19". *UN News*. 2020-08-05. Retrieved 2020-12-13.
- ^ The Heinz Awards, David Heymann profile

External links[edit]

- WHO Profile of Dr. Heymann
- Appearances on C-SPAN

(middle namesource) Wehitepages - 2021-03-04-whitepages-report-david-lowell-heymann-contactinfo.pdf

https://drive.google.com/file/d/1v7TnCkxSTmCmaqeQXhgA5P5no0Cfw021/view?usp=sharing

David Lowell Heymann ... age 74 ..

Mother? Marian H Heymann

2012 -

heymann , daszak .. ONE HEALTH

https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3415611/

https://scholar.google.com.au/citations?user=f6WQYmIAAAAJ&hl=en

west nile , NYC, with **lipkin**

https://www.sciencedirect.com/science/article/abs/pii/S0140673699053842

https://www.publish.csiro.au/ma/ma20013

COVID-19: a novel zoonotic disease caused by a coronavirus from China: what we know and what we don't

John S Mackenzie A and David W Smith B

Melissa Ripton Hodgman (born 1968)

Dec 2020

[HV00FG][GDrive]

Born on February 12, 1968

Married to **Peter Paul Strzok II (born 1970)**

Evidence Timeline

1990 : Bachelor of science degree from Georgetown University School of Foreign Service

Source : [HG00BG][GDrive]

1994 : Law degree with high honors from Georgetown University Law Center

Source : [HG00BG][GDrive]

2007 : Earned Masters of law with distinction in securities and financial regulation from Georgetown University Law Center

Source : [HG00BG][GDrive]

Up to 2008 (Before joining SEC) : Ms. Hodgman worked as an associate at Milbank, Tweed, Hadley & McCloy in Washington

Source : [HG00BG][GDrive]

https://www.securitiesenforcement.com/?p=2616 / 2014-01-30-securitiesencorcement-com-2616-melissa-hodgman.pdf

Melissa Hodgman is an Associate Director in the Division of Enforcement at the **U.S. Securities and Exchange Commission**. She joined the Commission in 2008, became Senior Counsel in 2009, joined the newly formed Market Abuse Unit in 2010, and was an Assistant Director from 2012 until 2016. She was an Associate at Milbank, Tweed, Hadley & McCloy. She obtained a BSFS in 1990, a JD in 1994, and an LLM in Securities in 2007 from Georgetown University.

2008 (What month?) : Ms. Hodgman joins SEC Enforcement Division as a staff attorney

Source : [HG00BG][GDrive]

It would be interesting to know when. If it was November of December of 2008, then it may have been a political appointment connected to the President Obama election victory in early November 2008.

2009 (June 22) - A member of Georgetown alumni, present at : The Supreme Court swearing-in ceremony is an annual event sponsored by the Law Center's Office of Alumni Affairs for alumni who become members of the Supreme Court Bar.

https://s3.amazonaws.com/pageturnpro2.com/Publications/201003/685/12958/PDF/129139129310127500_Georgetown.pdf

The Supreme Court swearing-in ceremony is an annual event sponsored by the Law Center's Office of Alumni Affairs for alumni who become members of the Supreme Court Bar.

The following alumni took part in this year's ceremony on June 22:

Steven Hall Atherton L'89	Jonah E. McCarthy L'04
Ashley Nicole Bailey C'96, L'99	Mary Helen Medina L'84
John E. Beck L'65	Suhail Afaq Mir LL.M.'94
Scott Russell Boalick L'99	Monica Nicklin L'99
Lynn A. Bowers L'94	Patrick James O'Connor L'99
Esteban Buljevich LL.M.'99	Jennifer Danella Oliva L'04
Janelle Marie Carter L'04	Mary Elizabeth Parr L'04
James C. Castle L'04	Jill Patrice Reber L'84
Aaron Michael Clemens L'04	Kenneth Jerome Rexford L'94
Emilie Beth Cooper L'04	Jennifer Maria Ryan L'04
Marcia Gerber Cotler L'89	Philip Andrew Sechler L'89
Sterling Adams Darling Jr. L'04	Jennifer Michelle Sepic L'04
Dionne Andrea Fraser L'04	Sarah Shullman L'04
Brian Xavier Gaul L'89	Eugene Sim L'04
Scott Alan Haenni L'99, G'99	Jonathan Yong-bi Suh L'04
Eddy Hayes LL.M.'04	James Michael Sullivan L'04
Scot A. Hinshaw L'99	Joshua Tzuker L'04
Melissa Hodgman L'94, LL.M.'07	James Turner Wakley L'04
William Knight Holbrook LL.M. '93	Shelley A. Williams L'94
Kendell Renee Kelly L'04	Lydia Rose Wilson L'89
Lara Chapman Kelley L'99	William E. Wolf L'04
Hilary Claudette Lane L'89	Christopher D. Wood LL.M.'04
Maren Kay (Minnaert) Lively L'04	Jim W. Yu L'99
L. Dan Loy LL.M.'04	Anthony J. Zarillo L'89
Col. Richard A. Magnan L'89	

2010 - SEC "Ellen B. Ross Award"

"In recognition of exemplary commitment, enthusiasm and performance in working to fulfill the Commission's responsibilities for the fair and effective enforcement of the federal securities laws." (1998)

Melissa received the award with less than two years at the SEC.

See http://3197d6d14b5f19f2f440-5e13d29c4c016cf96cbbfd197c579b45.r81.cf1.rackcdn.com/collection/papers/1990/1998_SEC_Award_Ross.pdf for other award winners

- ***2009:*** *Robert E. Leidenheimer* , *Janet E. Moser*
- ***2010:*** ***Mellissa Hodgman*** , *Erin Schneider*
- ***2011:*** *Steven Buchholz*

2012 (Nov) - U.S. SECURITIES AND EXCHANGE COMMISSION - Litigation Release No. 22552 / November 30, 2012 - Accounting and Auditing Enforcement Release No. 3481 / November 30, 2012 Securities and Exchange Commission v. China North East Petroleum Holdings Limited, et al., Civil Action No. 12-CV-8696 (U.S. District Court for the Southern District of New York)

[HG00BE][GDrive]

SEC FILES FRAUD CHARGES AGAINST CHINA NORTH EAST PETROLEUM HOLDINGS LIMITED; ITS CEO, PRESIDENT AND FORMER CHAIRMAN; ITS FOUNDER AND FORMER DIRECTOR; AND ITS VICE PRESIDENT AND SECRETARY

The Securities and Exchange Commission today announced that, on November 29, 2012, the Commission filed fraud and other related charges against **China North East Petroleum Holdings (CNEP)**; its CEO, President and former Chairman of the Board of Directors, Wang Hongjun (Wang); its founder, former director and Wang's mother, Ju Guizhi (Ju); and its Vice President of Corporate Finance and Secretary, Jiang Chao. The Commission also named Wang's wife, Sun Jishuang (Sun), and Jiang Chao's father, Jiang Mingfu, as Relief Defendants to recover company monies that they improperly received.

The Commission alleges that CNEP, Wang, Ju and Jiang Chao diverted offering proceeds to the personal accounts of corporate insiders and their immediate family members, and also engaged in fraudulent conduct in connection with at least 176 undisclosed transactions between the company and its insiders or their immediate family members, otherwise known as related-party transactions.

The Commission alleges that, in connection with its two public stock offerings in late 2009, CNEP falsely stated to investors in a registration statement and other public filings signed by Wang that the offering proceeds would be used to fund future business expansion and for general working capital purposes. Instead, consistent with a pre-existing pattern of engaging in undisclosed, related-party transactions, Jiang Chao then diverted over $900,000 of offering proceeds to his father, Jiang Mingfu, and at the direction of Ju, diverted at least $6 million dollars to her and Sun, who is her daughter-in-law and Wang's wife.

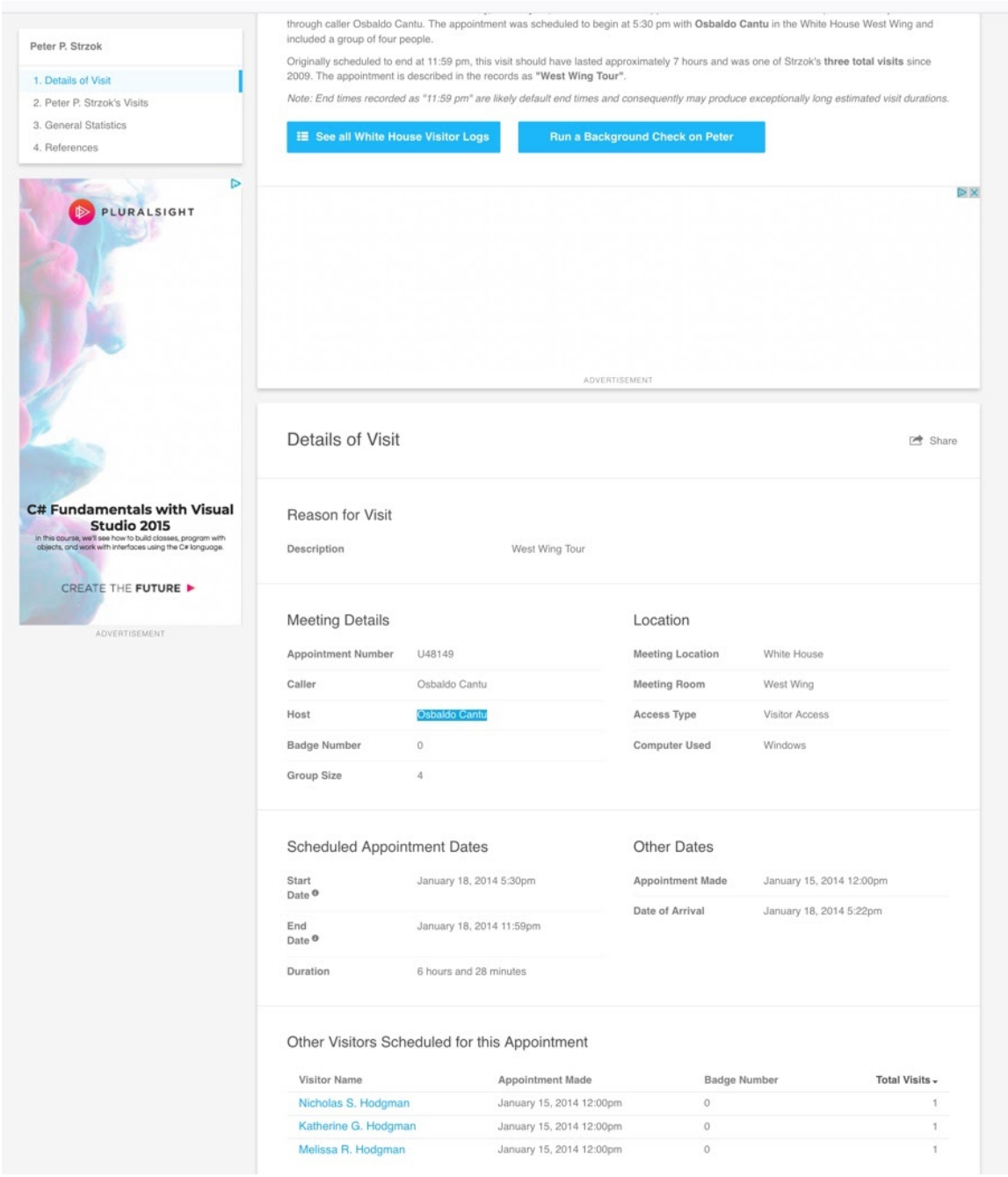
The Commission further alleges that during 2009, CNEP, Wang and Ju engaged in at least 176 undisclosed, related-party transactions. This fraudulent conduct involved approximately $28 million in transactions from CNEP to Wang or Ju; approximately $11 million purportedly loaned to CNEP or paid to third parties on behalf of CNEP by Wang or Ju; and $20 million of unusual post-year-end adjustments that purported to eliminate the remaining debts owed by Wang and Ju to CNEP. Together, these transactions totaled approximately $59 million of related-party activity during 2009. Neither the magnitude nor the volume of these related-party transactions has been fully disclosed to the investing public.

The Commission alleges that CNEP, Wang, Ju and Jiang Chao violated the antifraud provisions of the securities laws, Section 17(a) of the Securities Act of 1933 and Section 10(b) of the Exchange Act of 1934 (Exchange Act) and Rule 10b-5. The Commission further alleges violations of reporting, recordkeeping and internal controls provisions of the securities laws, Sections 13(a), 13(b)(2)(A) & (B), and 13(b)(5) of the Securities Exchange Act and Rules 13a-1, 13a-11, 13a-13 and 13b2-1. The Commission is seeking: (i) permanent injunctive relief to prevent future violations of the federal securities laws, disgorgement of ill-gotten gains with prejudgment interest, and civil penalties from each Defendant; (ii) officer and director bars against Wang, Ju and Jiang Chao; and (iii) disgorgement from the Relief Defendants, Sun and Jiang Mingfu, of improperly received funds.

The investigation is continuing.

2014 (Jan 18) - White House visit (with the kids), West Wing Tour. ? To see Osbaldo Cantu ?

2014-01-18-usa-white-house-visitor-log-hodgmans.jpg



2015 (Sep 10) - SEC Announces Fraud Charges in Cross-Border Scheme to Secretly Control and Manipulate Stock of Chinese Companies After Reverse Mergers

[HG00BF][GDrive] / Actual filing PDF here : https://www.sec.gov/litigation/complaints/2015/comp-pr2015-189.pdf (any connection to this from 2013 - https://www.sec.gov/litigation/opinions/2013/34-69968.pdf ?) 1983 .. Uchimoto worked at SEC - https://www.sec.gov/news/digest/1983/dig083083.pdf / (also see https://www.sec.gov/rules/proposed/2010/34-61414.pdf , uchimoto was proposing SEC legislation in 2003 ...)

Washington D.C., Sept. 10, 2015 — The Securities and Exchange Commission today announced fraud charges against a Wall Street CEO and his company, family members, and business associates accused of secretly obtaining control and manipulating the stock of Chinese companies they were purportedly guiding through the process of raising capital and becoming publicly-traded in the United States.

The SEC alleges that **Benjamin Wey and New York Global Group (NYGG)** typically structured reverse mergers between clients and publicly-traded shell companies in such a way that he and other family members secretly obtained ownership interests of more than five percent of the newly listed companies. To avoid detection and evade SEC reporting requirements as beneficial owners, they divided their shares among a vast network of foreign accounts and generated tens of millions of dollars in illegal profits as they sold the securities into artificially inflated markets. The illicit profits eventually circled back to Wey and his wife, who used the money to finance a lavish lifestyle.

Also charged in the case in addition to Benjamin Wey and NYGG are his wife Michaela Wey and sister Tianyi Wei, their Switzerland-based broker Seref Dogan Erbek, and two attorneys Robert Newman and William Uchimoto.

In a parallel action, the U.S. Attorney's Office for the Southern District of New York today announced criminal charges against Benjamin Wey and Dogan Erbek.

"We allege that when the Weys and NYGG were supposed to be helping Chinese companies go public in the U.S., they were secretly obtaining control of blocks of their clients' shares so they could manipulate the markets and derive illegal profits. The Weys and their attorneys went to extraordinary lengths to hide their scheme, but they underestimated our ability to piece it together," said Antonia Chion, Associate Director of the SEC's Division of Enforcement."

The SEC's complaint alleges violations or the aiding and abetting of violations of the antifraud provisions and the disclosure and reporting provisions of the federal securities laws.

The SEC's investigation was conducted by Patrick L. Feeney and Steven A. Susswein, and supervised by Melissa Hodgman. The litigation will be led by Cheryl L. Crumpton, Joshua Braunstein, and Derek Bentsen. The SEC appreciates the assistance of the Federal Bureau of Investigation, U.S. Attorney's Office for the Southern District of New York, Financial Industry Regulatory Authority, Securities and Futures Commission of Hong Kong, Monetary Authority of Singapore, Ontario Securities Commission, and British Columbia Securities Commission.

[NOTE - These charges were voluntarily dismissed on Sep 1, 2017 - https://www.sec.gov/litigation/litreleases/2018/lr24105.htm]

2016 (Oct 14) - SEC - Melissa Hodgman Named Associate Director in SEC Enforcement Division

[HG00BG][GDrive]

Washington D.C., Oct. 14, 2016 — The Securities and Exchange Commission today announced that Melissa Hodgman has been named Associate Director in the SEC's Enforcement Division. Ms. Hodgman succeeds Stephen L. Cohen, who left the SEC in June.

Ms. Hodgman began working in the Enforcement Division in 2008 as a staff attorney. She joined the Market Abuse Unit in 2010 and was promoted to Assistant Director in 2012.

Ms. Hodgman has investigated or supervised dozens of enforcement recommendations spanning a variety of misconduct, including:

- The SEC's first case against a brokerage firm for failing to file SARs when appropriate.
- Fraud charges against a Wall Street CEO and his company, family members, and business associates accused of secretly obtaining control and manipulating the stock of Chinese companies they were purportedly guiding through the process of raising capital and becoming publicly-traded in the United States.
- Fraud and other related charges against China North East Petroleum Holdings, its CEO, President and former Chairman of the Board of Directors, and others arising from their alleged diversion of offering proceeds to the personal accounts of corporate insiders and their immediate family members and fraudulent conduct in connection with at least 176 undisclosed related-party transactions.
- Charges against Charles Schwab Investment Management, Charles Schwab & Co., and two executives for making misleading statements regarding the Schwab YieldPlus Fund and failing to establish, maintain and enforce policies and procedures to prevent the misuse of material, nonpublic information.

Ms. Hodgman has led the Enforcement Division's Cross-Border Working Group, which provides expertise and assistance of matters with international actors and implications. Ms. Hodgman also co-founded and served as the enforcement representative on the Chair's Attorney Honors Program, and is a member of the Enforcement Division's hiring committee at its Washington D.C. headquarters.

"Melissa has supervised and investigated a broad range of noteworthy and first-of-their-kind cases across the spectrum of the securities industry and involving misconduct located around the world," said Andrew J. Ceresney, Director of the SEC's Enforcement Division. "She has distinguished herself with her excellent judgment and creativity, and I am pleased to have her join the senior ranks of the Enforcement Division."

Ms. Hodgman said, "I am honored by this appointment and look forward to continuing our tradition of pursuing tough but fair enforcement actions in complex and cutting-edge cases, especially matters involving cross-border issues and efforts to hold gatekeepers accountable for breaches of their professional standards." [...]

Possible motives speculated on Reddit

source : 2017-12-05-reddit-capture-18-01-37.jpg / http://209.157.64.200/focus/f-chat/3610885/posts

original:

During the 2016 US presidential election, this report notes, both Peter P. Strzok II and Melissa R. Hodgman played "key/central" roles as Hillary Clinton operatives within the American "Deep State"—with then FBI Director James Comey stating that his team, led by Peter P. Strzok II, "moved heaven and earth" to finish their review of Hillary Clinton's e-mails in time for him to reveal on Sunday, 7 November, less than 48 hours before the election, and that they had found nothing incriminating—while at the same time, Melissa R. Hodgman (who had been appointed by the Obama regime as an Associate Director in the SEC Enforcement Division on 14 October 2016) filed US Federal charges against a lawyer named William Uchimoto (the son of Dan Uchimoto who was one of the most decorated Japanese American soldiers in World War II).

The Hillary Clinton "Deep State" attack upon William Uchimoto, this report explains, was due to his investigating a Georgetown University law professor named Chris Bummer for his money laundering ties to the Clinton Foundation—but with all of the "fake charges" leveled against him by Melissa R. Hodgman being thrown out of court by US Federal Judge P. Kevin Castel this past March (2017).

http://operationdisclosure.blogspot.co.uk/2017/08/sorcha-faal-us-media-plunges-into-epic.html

http://heavy.com/news/2017/12/melissa-hodgman-peter-strzok-wife-facebook-spouse/

Discussion of this taken from here:

https://www.reddit.com/r/The_Donald/comments/7hsc71/huge_peter_strzoks_wife_removes_all_evidence_of/

TOPICS:
KEYWORDS: 20161014; belongsinchat; chrissbummer; georgetownu; melissahodgman; notnews; peterstrzok; sec; strzok; vanity

2016 (Nov 07-08) - President Trump wins election

2017 (March 10) - SEC Charges Firms Involved in Layering, Manipulation Schemes

Source - [HG00BI][GDrive]

Washington D.C., March 10, 2017 — The Securities and Exchange Commission today announced fraud charges against a Ukraine-based trading firm accused of manipulating the U.S. markets hundreds of thousands of times and the New York-based brokerage firm and CEO who allegedly helped make it possible.

The SEC's complaint alleges that Avalon FA Ltd touted itself to traders as a destination to engage in layering, a scheme in which orders are placed but later canceled after tricking others into buying or selling stocks at artificial prices, resulting in illicit profits. Avalon allegedly made more than $21 million in the layering scheme involving U.S. stocks during a five-year period. According to the SEC's complaint, Avalon also made more than $7 million in illicit profits through a cross-market manipulation scheme in which the firm bought and sold U.S. stocks at a loss in order to manipulate the prices of the stock and its corresponding options so that it could then profitably trade at artificial prices. Avalon allegedly used traders in Eastern Europe and Asia to conduct its trading, and the firm kept a portion of the profits and collected commissions from the traders.

The SEC's complaint also describes fraud charges against Avalon's named owner Nathan Fayyer and Sergey Pustelnik, who allegedly kept his controlling interest in Avalon undisclosed and embedded himself at Lek Securities as a registered representative, using his position to facilitate the schemes.

The SEC further alleges that Lek Securities and its owner Samuel Lek made the schemes possible by providing Avalon with access to the U.S. markets, approving the cross-market trading scheme, and improving its trading technology to assist Avalon's trading. According to the SEC's complaint, Lek Securities also relaxed its layering controls after Avalon complained. Avalon was the highest-producing customer for Lek Securities in terms of trading commissions, fees, and rebates generated.

"As alleged in our complaint, Avalon openly marketed itself as a destination for manipulative trading, and Lek Securities opened the gate to allow the schemes into the U.S. markets despite repeated warnings that its customer was manipulating the market," said Stephanie Avakian, Acting Director of the SEC's Division of Enforcement.

After filing its complaint in U.S. District Court for the Southern District of New York, the SEC obtained an emergency court order freezing Avalon's assets held in its account at Lek Securities as well as freezing and repatriating funds that Avalon has transferred overseas.

The SEC's investigation was conducted by Sarah S. Nilson along with Owen A. Granke and Carolyn Welshhans of the Market Abuse Unit. The case was supervised by Melissa Hodgman, Antonia Chion, and Robert A. Cohen. The litigation will be led by David J. Gottesman, Olivia S. Choe, and Ms. Nilson. The SEC appreciates the assistance of the Financial Industry Regulatory Authority.

2018 (April 05) - OANN video - Pa. Attorney: Wife of Peter Strzok was Unfair to Asian-American Businessmen

A Philadelphia attorney is speaking out against the wife of embattled FBI Agent Peter Strzok. The lawyer says Securities and Exchange Commission attorney Melissa Hodgman unfairly targeted a group of Asian-American businessmen and women. One America's Neil W. McCabe has more from Washington.

Source : https://youtu.be/Yidxjw7jpR4 Local copy : [HV00FC][GDrive] / Image of video on Youtube : [HV00FD][GDrive]

Also - https://theunhivedmind.com/news/2017/08/19/us-media-plunges-into-epic-meltdown-after-trump-downs-top-fbi-swamp-monster/ - "During the 2016 US presidential election, this report notes, both Peter P. Strzok II and Melissa R. Hodgman played "key/central" roles as Hillary Clinton operatives within the American "Deep State"—with then FBI Director James Comey stating that his team, led by Peter P. Strzok II, "moved heaven and earth" to finish their review of Hillary Clinton's e-mails in time for him to reveal on Sunday, 7 November, less than 48 hours before the election, and that they had found nothing incriminating—while at the same time, Melissa R. Hodgman (who had been appointed by the Obama regime as an Associate Director in the SEC Enforcement Division on 14 October 2016) filed US Federal charges against a lawyer named William Uchimoto (the son of **Dan Uchimoto** who was one of the most decorated Japanese American soldiers in World War II)."

2019 (Jan 29) - CytoDyn

PDF : [HG00BJ][GDrive]

2019 (Sep 23) - SEC Charges Nissan, Former CEO, and Former Director with Fraudulently Concealing from Investors More Than $140 Million of Compensation and Retirement Benefits

Source : [HG00BL][GDrive] / PDF of Judgement : [HG00BM][GDrive]

Litigation Release No. 24606 / September 23, 2019

Accounting and Auditing Release No. 4088 / September 23, 2019

Securities and Exchange Commission v. Carlos Ghosn and Gregory L. Kelly, No. 1:19-civ-08798 (S.D.N.Y. filed September 23, 2019)

Washington D.C., Sept. 23, 2019 - The SEC today filed settled fraud charges against Nissan, its former CEO Carlos Ghosn, and its former director Greg Kelly related to false financial disclosures that omitted more than $140 million to be paid to Ghosn in retirement.

According to the SEC's orders and complaint, beginning in 2004 Nissan's Board delegated to Ghosn the authority to set individual director and executive compensation levels, including his own. From 2009 until his arrest in Tokyo in November 2018, Ghosn, with substantial assistance from Kelly and subordinates at Nissan, engaged in a scheme to conceal more than $90 million of compensation from public disclosure, while also taking steps to increase Ghosn's retirement allowance by more than $50 million. Each year, Ghosn fixed a total amount of compensation for himself, with a certain amount paid and disclosed and an additional amount that was unpaid and undisclosed. Ghosn and his subordinates, including Kelly, crafted various ways to structure payment of the undisclosed compensation after Ghosn's retirement, such as entering into secret contracts, backdating letters to grant Ghosn interests in Nissan's Long Term Incentive Plan, and changing the calculation of Ghosn's pension allowance to provide more than $50 million in additional benefits. Kelly and Ghosn's Nissan subordinates misled Nissan's CFO, and Nissan issued a misleading disclosure in connection with the increased pension allowance. The $140 million in undisclosed compensation and retirement benefits was never paid out to Ghosn.

In an administrative proceeding, the Commission charged Nissan with violating the anti-fraud provisions of Section 10(b) of the Securities Exchange Act of 1934 and Rule 10b-5 thereunder. Nissan settled the charges, agreeing to pay a $15 million civil penalty and to cease and desist from committing or causing violations of the anti-fraud provisions. The SEC's complaint filed in district court charges Ghosn with violating the same anti-fraud provisions and Kelly with aiding and abetting Ghosn's and Nissan's violations. To settle the charges, Ghosn and Kelly agreed to be permanently enjoined from violating or aiding and abetting violations of the anti-fraud provisions. Ghosn also agreed to a $1 million civil penalty and a 10-year officer and director bar. Kelly agreed to a $100,000 penalty, a five-year officer and director bar and a five-year suspension from practicing or appearing before the Commission as an attorney. Nissan, Ghosn, and Kelly settled without admitting or denying the SEC's allegations and findings.

The SEC investigation was conducted by Brad Ney and Christian Schultz, with assistance from Jamie Wohlert, Richard Haynes and Sandhya Harris. The case was supervised by Tim England and Melissa Hodgman. The SEC would like to thank the Tokyo District Public Prosecutors Office for its assistance in connection with this investigation.

2019 (Oct 10) - SEC Obtains Sanctions Against Lek Securities and CEO, Including Bar Against CEO

Litigation Release No. 24639 / October 10, 2019 / Source : [HG00BK][GDrive] / PDF of court filings : [HG00BN][GDrive]

Also see :

- https://www.sec.gov/litigation/complaints/2017/comp-pr2017-63.pdf
- https://www.trlm.com/russians-also-sec-finally-freezes-long-running-market-manipulation-scheme/ (March 23, 2017)
- https://www.courthousenews.com/sec-busts-traders-ukraine-new-york/

Securities and Exchange Commission v. Lek Securities Corp., et al., No. 17-cv-1789 (S.D.N.Y. filed March 10, 2017)

On October 1, 2019, a federal court judge entered final judgments against New York-based brokerage firm Lek Securities Corp. and Chief Executive Officer Sam Lek, who were charged by the Securities and Exchange Commission with facilitating manipulative U.S. trading by a Ukraine-based firm over a three-year period.

The SEC's complaint, filed in March 2017, alleged that Lek Securities and Sam Lek helped facilitate manipulative trading schemes by its customer, Avalon FA Ltd., headquartered in Kiev. According to the complaint, Avalon illegally profited from layering, which involved placing and canceling orders to trick others into buying or selling stocks at artificial prices, and cross-market manipulation, which involved buying or selling stocks to artificially impact options prices. The SEC's complaint alleged that Lek Securities and Sam Lek made the schemes possible by giving Avalon access to the U.S. markets, relaxing the brokerage firm's layering controls after Avalon complained, allowing Avalon to conduct the trading activity, and improving Lek Securities' technology to assist Avalon's trading.

The Honorable Denise L. Cote for the U.S. District Court for the Southern District of New York entered the final judgments by consent. Lek Securities agreed to a three-year injunction requiring it to terminate business with foreign customers potentially engaged in market manipulation or manipulative trading and largely prohibiting it from providing intra-day trading to foreign customers. Lek Securities also agreed to retain an independent compliance monitor for a three-year period and, along with Sam Lek, agreed to permanent injunctions from violating the antifraud and manipulative trading provisions of Sections 9(a)(2) and 10(b) of the Securities Exchange Act of 1934 and Rule 10b-5 thereunder, and Section 17(a) of the Securities Act of 1933. Lek Securities will pay a $1 million penalty, plus $525,892 in disgorgement and prejudgment interest, and Sam Lek will pay a $420,000 penalty.

Lek Securities also agreed to a censure, and Sam Lek agreed to associational and penny stock bars with a right to reapply after ten years. In settling the SEC's charges, Lek Securities and Sam Lek admit that as alleged in the SEC's complaint, Avalon's trading activity through Lek Securities constituted violations of the federal securities laws.

The litigation, which is being handled by David J. Gottesman, Olivia S. Choe, and Sarah S. Nilson, is continuing against Avalon and individuals associated with it. The SEC's investigation was conducted by Ms. Nilson, Owen A. Granke, and Carolyn Welshhans, and supervised by Melissa R. Hodgman and Antonia Chion.

2020 (Dec 04) - Video - "Financial Disclosure and Accounting Fraud"

Captured video (MP4) - [HV00FE][GDrive] / Youtube image : [HV00FF][GDrive]

Dec 4, 2020 / Docket Media LLC

William Baker, Partner, Latham & Watkins | Melissa Hodgman, Associate Director, SEC | Dixie Johnson, Partner, King & Spalding | Claudius Modesti, Partner, Akin Gump Strauss Hauer & Feld | Steven Richards, Senior Managing Director, Ankura Consulting Group

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2021 (Jan 22) - SEC - Melissa Hodgman Named Acting Director of Division of Enforcement

[HG00BH][GDrive]

Washington D.C., Jan. 22, 2021 — The Securities and Exchange Commission today announced Melissa R. Hodgman, currently an Associate Director in the Commission's Division of Enforcement, has been named Acting Director of the Division of Enforcement.

"Melissa's dedication to investor protection, broad experience in the Division, and proven track record of collaboration and creative problem solving make her ideally suited to this role," said SEC Acting Chair Allison Herren Lee. "As Associate Director, Melissa has overseen a wide range of complex and programmatically important matters, and has been a leading voice in the Division on critical issues of diversity, hiring, and labor-management relations. She is highly respected by her colleagues in the Division and across the agency for her intellect and dedication."

"It has been my honor to serve with the incredibly talented staff across the Division of Enforcement for over a decade," said Ms. Hodgman. "I am constantly inspired by the dedication of my colleagues in the Division and across the Commission, especially with the challenges of the last year. I look forward to continuing my work with them in the role of Acting Director and supporting the Commission's mission of protecting investors and market integrity through the aggressive pursuit of all forms of fraud and misconduct in our markets."

Ms. Hodgman has been Associate Director in the Home Office since October 2016. She has investigated and led teams pursuing and litigating numerous enforcement actions covering the spectrum of securities law violations, including matters related to financial fraud and disclosure; broker-dealers, investment advisers, and gatekeepers; offering frauds, market structure, and manipulation; and cross-border and FCPA violations. The notable cases to which Ms. Hodgman has contributed include:

- Successful litigation against two Ukraine-based traders, Nathan Fayyek and Sergey Pustelnik, who, along with their trading firm, were found liable for a multi-pronged manipulative trading scheme, and against Lek Securities, the U.S. based broker-dealer the Commission alleged helped to facilitate their trading, and its principal, Samuel Lek, who settled just prior to trial.
- A $50 million settlement with Big 4 accounting firm KPMG to settle charges relating to the firm's receipt and use of PCAOB inspection information as well as misconduct related to internal training exams. In addition to the settlement with the firm, the Commission charged eight KPMG officials for their roles.
- Actions against Nissan Corporation and its former CEO Carlos Ghosn and director Greg Kelly in connection with a scheme to conceal from public disclosure tens of millions of dollars of expected compensation for Ghosn. Nissan agreed to pay a $15 million civil penalty, and Ghosn and Kelly were barred from acting as officers or directors of public companies, in addition to paying significant civil penalties.
- Enforcement actions against several individuals and entities responsible for the Fyre Festival including Fyre Festival CEO William Z. (Billy) McFarland, who admitted to his role in a fraudulent scheme that raised more than $27 million from over 100 investors.
- Investigation of the Schwab YieldPlus Fund for misconduct related to the 2008 financial crisis that resulted in a $118 million settlement with broker dealer Charles Schwab & Co, and related entities where the SEC found that the YieldPlus Fund misstated the risk associated with its portfolio. The Commission also brought litigated charges against two senior executives.

Ms. Hodgman has also played key roles in numerous Commission initiatives, including t**he creation and leadership of the Division's Covid-19 Steering Committee** and overseeing the Division's Financial Reporting and Audit Group. She has been a leader in the Division's diversity and inclusion work during her career, including as the head of the Division's Hiring Committee, Executive Sponsor of the agency's Women's Committee, and as a member of the Division's Labor and Management Forum at both the local and national levels.

Ms. Hodgman began working in the Enforcement Division in 2008 as a staff attorney. She joined the Market Abuse Unit in 2010 and was promoted to Assistant Director in 2012. She received the Ellen B. Ross Award, the 2010 SEC Chairman's Award, the 2017 Arthur F. Mathews Award, and the 2020 Chairman's Award for Excellence with the SEC's Employee Affinity Groups, as well as a number of Division Director Awards. [...]

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melissa ripton hodgman

https://www.ancestry.com/discoveryui-content/view/145726841:62209?tid=&pid=&queryId=06560438a13014084f5f380ce7157cba&_phsrc=bis47&_phstart=successSource

Name: Melissa Ripton Hodgman

Birth Date: Feb 1968

Residence Date: 2003-2004

Address: [...] Washington, District of Columbia, USA

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1966 - parents marriage - August

https://www.newspapers.com/image/97790487/?terms=%22daniel%20hodgman%22&match=1

Ann Marie Ripton (daughter of David Tully Ripton) to marry William Daniel Hodgman (son or Mr/Mrs Daniel hodgman)

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1988 - dec 29

https://www.newspapers.com/image/99873367/?terms=%22mary%20rose%20hodgman%22&match=1

Daniel hodgman, lawyer - passes

His Daugher-in-law is Mary Rose Hodgman

Daniel Hodgman - Graduated in 1938

he had 3 sons - Jeffrey, Philip, and Mark

Mark must be "Mark T Hodgman"

Not sure who William Daniel Hodgman's father is ....

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https://www.ancestry.com/family-tree/person/tree/3137656/person/24228086509/facts?_phsrc=bis40&_phstart=successSource

Daniel Hodgman

1909–1988

BIRTH 10 APR 1909 • Coldwater, Branch, Michigan, USA

DEATH 26 DEC 1988 • Grosse Pointe, Wayne, Michigan, USA

https://www.newspapers.com/image/361626709/?terms=%22daniel%20hodgman%22&match=1

age 16? if bogn in 1868

https://www.ancestry.com/discoveryui-content/view/610355247:1265?tid=&pid=&queryId=06560438a13014084f5f380ce7157cba&_phsrc=bis47&_phstart=successSource

now with kitch firm ?

https://www.newspapers.com/image/363378398/?terms=%22william%20d%20hodgman%22&match=1

https://www.newspapers.com/image/363432814/?terms=%22william%20d%20hodgman%22&match=1

http://millerfuneralandcremationservices.com/tribute-ajax/print-obituary.html?id=136
2010-11-millerfuneralandcremationservices-com-id-136.pdf
Ann McIntyre
A beautiful woman, loving mother, grandmother, writer and humanist passed away November 15, 2010 at age 67. She is survived by her children, Melissa (Peter Strzok) Hodgman, Laura (Thomas) Rollins, Christopher (Chelsea) Hodgman; grandchildren, Nicholas, Grace, Jack & Finn Tully; husband Paul Richards; mother, Vivian "JoJo" Ripton, eight siblings and many dear friends.

Link to https://nypost.com/2018/03/15/inside-the-shady-private-equity-firm-run-by-kerry-and-bidens-kids/

2018-03-15-nypost-inside-shady-pe-firm-run-by-kerry-and-bidens-kids.pdf

Inside the shady private equity firm run by Kerry and Biden's kids

Not sure if this has any connection to Hodgman ..

Major General Barbara R Holcomb

https://www.defensemedianetwork.com/stories/major-general-barbara-r-holcomb-commanding-general-us-army-medical-research-and-materiel-command-fort-detrick-md-chief-us-army-nurse-corps/

Interview: Major General Barbara R. Holcomb

Commanding General, U.S. Army Medical Research and Materiel Command and Fort Detrick, MD; Chief, U.S. Army Nurse Corps

BY RHONDA CARPENTER (EDITOR) - MAY 17, 2019

Major General Barbara R. Holcomb.

Series:Veterans Affairs & Military Medicine 2019 Spring Edition

- Part 1: Digital Edition: Veterans Affairs & Military Medicine Outlook 2019 Spring Edition
- Part 2: U.S. Military and Veterans Affairs Nursing History
- Part 3: DOD and VA Nursing Techniques and Technologies
- Part 4: Interview: Major General Barbara R. Holcomb
- Part 5: The Department of Veterans Affairs Brain Rehabilitation Research Center (BRRC)
- Part 6: VA Research: Depression
- Part 7: VHA Specialized Nursing Care
- Part 8: VA Research: Substance Use Disorders (SUD)
- Part 9: Educational Programs: Training Opportunities for VA & Military Nurses
- Part 10: Cancer Patients at South Texas Veterans Health Care System Receive Enhanced Treatments with Center's Advanced Linear Accelerator (Sponsored)

MAJOR GENERAL BARBARA R. HOLCOMB *is a 1987 Distinguished Military Graduate of Seattle University Army ROTC where she earned a Bachelor of Science degree in Nursing. She earned a Master's degree in Nursing Administration from the University of Kansas, a Master's level Certification in Emergency and Disaster Management from American Military University and a Master's in Military Strategic Studies from the U.S. Army War College, Carlisle, Pennsylvania.*

Major General Holcomb's military education includes the AMEDD Officer Basic Course, AMEDD Officer Advanced Course, Faculty Development Course, Combined Arms Services and Staff School, resident Command and General Staff College, AMEDD Executive Skills Course, Interagency Institute for Federal Health Care Executives, Medical Strategic Leadership Program, Army War College, Army Strategic Leader Basic, Intermediate, and Advanced Courses, and CAPSTONE.

Her previous assignments include Clinical Staff Nurse, Post Anesthesia Care Unit and Department of Emergency Medicine, Madigan Army Medical Center; EMT Section, 47th Combat Support Hospital, Fort Lewis, Washington and deployment to Desert Shield/Desert Storm; Staff Nurse and Clinical Head Nurse, Mixed Med/Surg Ward and Head Nurse, Troop Medical Clinic and 111th MI Brigade Family Clinic, Fort Huachuca, Arizona; Officer Basic Course Nurse Advisor, Department of Nursing Science and Commander, A/187th Medical Battalion, Fort Sam Houston, Texas; Chief Nurse, Department of Outlying Health Clinics, 67th CSH/ Wuerzburg MEDDAC, Germany; Medical Detachment Commander (Provisional), Camp Able Sentry, Macedonia; Chief Nurse/XO, 14th CSH, Fort Benning, Georgia; Commander, Special Troops Battalion; Chief, Base Transformation Office, U. S. Army Garrison, Fort Sam Houston, Texas; Chief, Ambulatory Nursing, Brooke Army Medical Center; Chief, Nursing Administration, Carl R. Darnall Army Medical Center and Commander, 21st CSH, Fort Hood, Texas; Commander, Medical Task Force 21, Operations Iraqi Freedom and New Dawn; Chief, Army Nurse Corps Branch at Human Resources Command, Fort Knox, Kentucky; Commander, Landstuhl Regional Medical Center, Landstuhl, Germany; Command Surgeon, FORSCOM HQs, Fort Bragg, North Carolina; Army Action Officer for the Military Health System Review; Commanding General, Regional Health Command – Central (Provisional), Fort Sam Houston, Texas and prior to becoming Commanding General, Medical Research Materiel Command and Fort Detrick, she served as the Deputy Commanding General for Operations, U.S. Army Medical Command. She was designated as Chief, Army Nurse Corps on 2 November 2015. Major General Holcomb's awards and decorations include the Distinguished Service Medal (1OLC), Legion of Merit (2OLC), Bronze Star, Meritorious Service Medal (5OLC), Army Commendation Medal (3OLC), Army Achievement Medal (1OLC), National Defense Service Ribbon, Iraq Campaign Medal (2 campaign stars), Kosovo Campaign Medal, NATO Service Ribbon (Kosovo), Southwest Asia Service Medal (3 campaign stars), Kuwait Liberation Medal (Saudi Arabia and Kuwait), the Meritorious Unit Commendation Ribbon (1OLC), and the Expert Field Medical Badge. She is a member of the Order of Military Medical Merit.

http://www.ncmbc.us/wp-content/uploads/MG_Holcomb-Bio_SEP2016.pdf

Microsoft Word - MG_Holcomb Bio_AUG2016

MAJOR GENERAL BARBARA R. HOLCOMB Commanding General, Medical Research and Materiel Command and Fort Detrick, MD; Chief, U.S. Army Nurse Corps

Major General Barbara R. Holcomb is a 1987 Distinguished Military Graduate of Seattle University Army ROTC where she earned a Bachelor of Science degree in Nursing. She earned a Master's degree in Nursing Administration from the University of Kansas, a Master's level Certification in Emergency and Disaster Management from American Military University and a Master's in Military Strategic Studies from the U.S. Army War College, Carlisle, Pennsylvania.

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Her previous assignments include Clinical Staff Nurse, Post Anesthesia Care Unit and Department of Emergency Medicine, Madigan Army Medical Center; EMT Section, 47th Combat Support Hospital, Fort Lewis, Washington and deployment to Desert Shield/Desert Storm; Staff Nurse and Clinical Head Nurse, Mixed Med/Surg Ward and Head Nurse, Troop Medical Clinic and 111th MI Brigade Family Clinic, Fort Huachuca, Arizona; Officer Basic Course Nurse Advisor, Department of Nursing Science and Commander, A/187th Medical Battalion, Fort Sam Houston, Texas; Chief Nurse, Department of Outlying Health Clinics, 67th CSH/Wuerzburg MEDDAC, Germany; Medical Detachment Commander (Provisional), Camp Able Sentry, Macedonia; Chief Nurse/XO, 14th CSH, Fort Benning, Georgia; Commander, Special Troops Battalion; Chief, Base Transformation Office, U. S. Army Garrison, Fort Sam Houston, Texas; Chief, Ambulatory Nursing, Brooke Army Medical Center; Chief, Nursing Administration, Carl R. Darnall Army Medical Center and Commander, 21st CSH, Fort Hood, Texas; Commander, Medical Task Force 21, Operations Iraqi Freedom and New Dawn; Chief, Army Nurse Corps Branch at Human Resources Command, Fort Knox, Kentucky; Commander, Landstuhl Regional Medical Center, Landstuhl, Germany; Command Surgeon, FORSCOM HQs, Fort Bragg, North Carolina; Army Action Officer for the Military Health System Review; Commanding General, Regional Health Command – Central (Provisional), Fort Sam Houston, Texas and prior to becoming Commanding General, Medical Research Materiel Command and Fort Detrick, she served as the Deputy Commanding General for Operations, U.S. Army Medical Command. She was designated as Chief, Army Nurse Corps on 2 November 2015.

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https://www.congress.gov/116/crec/2019/07/22/CREC-2019-07-22-pt1-PgS4963.pdf

TRIBUTE TO MAJOR GENERAL BARBARA R. HOLCOMB

Mr. DAINES. Mr. President, today I wish to honor MG Barbara R. Holcomb for her 32 years of service in our Armed

Forces, most notably, as the first fe- male commanding general at the U.S. Army Medical Research and Develop- ment Command at Fort Detrick and chief of the U.S. Army Nurse Corps. Major General Holcomb grew up in the small town of Miles City, MT, and joined the Army Reserve Officer Train- ing Corp, ROTC, following her first year of nursing school at Seattle Uni- versity. She completed her education as a distinguished military graduate with a bachelor of science in nursing. She continued her exceptional career with service to our country and contin- ued Montana's proud heritage of mili- tary service and firsts in female leader- ship.

Major General Holcomb goes above and beyond as a leader and, as such, was chosen to speak at the 2018 Women in Leadership Summit at the Aberdeen Proving Ground. She shared her experi- ence in finding balance as a leader and the importance of a leader getting to know themselves and their peers. Even though she was not allowed to serve in a battalion commander position as a cadet in ROTC, she became a com- mander as a captain and commanded at every rank thereafter. It is this com- mitment to strong leadership and per- sonal growth that has led her to a long and successful career in the Army and distinguishes her as an exceptional Montanan.

It is not without good reason that Major General Holcomb has received many awards, including a Distin- guished Service Medal, Bronze Star, and membership in the Order of Mili- tary Medical Merit. Between her focus on the personal, human aspect of healthcare, her commitment to contin- ued education, and the selfless passion with which she serves her country, Major General Holcomb embodies what it means to be an outstanding leader and individual.

Upon her retirement, the U.S. Army will be losing one of their most valu- able assets; however, the example of leadership that she has set for so many will leave a lasting impact on the qual- ity of this nation's Army Nurse Corps and, consequentlv, the quality of care that our Nation's soldiers will receive. Montana is proud to call her one of our own.

I would like to recognize Major Gen- eral Barbara R. Holcomb, her personal accomplishments, and contributions to this country.

https://www.stripes.com/news/europe/germany/first-nurse-takes-command-at-landstuhl-1.176269

First nurse takes command at Landstuhl

Col. Barbara R. Holcomb, the incoming commander of the Landstuhl Regional Medical Center, left, takes the LRMC colors from Brig. Gen. Nadja Y. West,

commander of the Europe Regional Medical Command, at a change of command ceremony in Landstuhl, Germany, Thursday. Holcomb took command from Col. Jeffrey B. Clark, who is slated to replace West at ERMC.

MICHAEL ABRAMS/STARS AND STRIPES

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By NANCY MONTGOMERY | STARS AND STRIPES Published: May 3, 2012

LANDSTUHL, Germany — Throughout Landstuhl Regional Medical Center's long, storied past, medical doctors have almost always been in charge.

But on Thursday, Col. Barbara Holcomb became the first registered nurse – and second woman – to take command of the hospital, considered a jewel in the crown of military medicine.

" 'Landstuhl is such an awesome place,' " Holcomb, in her change-of command ceremonial speech, recalled a friend telling her when she got the news of her assignment. " 'They saved several of my soldiers.' "

Such admiration for the hospital staff's expertise at saving the lives of wounded troops "runs deeply through many military leaders," Holcomb said. "This is indeed an honor."

ADVERTISING

Holcomb relieves Col. Jeffrey Clark, who served less than a year before being nominated for promotion to brigadier general and, next month, to take over as commander of the Europe Regional Medical Command. Clark will replace Brig. Gen. Nadja West, who is to become an assistant Army surgeon general.

Clark told those assembled for the ceremony – a group that included, as the hospital does in its 3,000-person staff, servicemembers from all four branches, civilians, Germans and a variety of other U.S. allies – that it had been an honor to be their commander.

"Landstuhl will change a person," he said. "There's something special about the place and the people who serve here."

The outgoing commander of the Landstuhl Regional Medical Center, Col. Jeffrey B. Clark, speaks at the change of command ceremony at Landstuhl, Germany, Thursday. He relinquished command to Col. Barbara R. Holcomb.
MICHAEL ABRAMS/STARS AND STRIPES

Clark said that although numerous, admiring luminaries have continuously passed through the hospital, the praise that meant most to him came from a Canadian warrant officer assigned there.

"I have two sons serving in the Canadian army," the warrant officer told Clark. "What Landstuhl does is provide comfort for mothers like me."

The hospital opened in 1953, part of the huge U.S. military presence after World War II and through the end of the Cold War. Today, it is the only U.S. military hospital remaining in Europe.

More than 62,000 wounded troops from Iraq and Afghanistan have been treated at Landstuhl over the past 11 years. More than 99 percent of them have survived.

The hospital is expected to stay busy with combat casualties for at least the next two years, when the U.S. withdraws most of its troops from Afghanistan.

The hospital, which also does clinical research and delivers about three babies a day, has received numerous awards, certifications and verifications, not only for its unparalleled trauma care. Landstuhl was also named best hospital in overall care throughout the military and veterans' hospital system by a military surgeons association.

"Landstuhl is a commander's dream," said Clark, a family practice doctor with 28 years in the Army, who hasn't practiced clinically for the past several years. "We think, wouldn't it be great if, one day, I could command Landstuhl?"

article continues below

related articles

Landstuhl is Level I trauma center, 1st outside U.S.

Every Landstuhl commander in the past decade has been subsequently selected to be a general officer.

Holcomb, a 1987 ROTC graduate of Seattle University, has previously made nursing history. She was also one of the first two nurses to command a Combat Support Hospital – the 21st CSH, out of Fort Hood, Texas, which deployed to Iraq in 2010.

Having a nurse in command of Landstuhl for the first time is a testament to "the increased responsibility given to the Nurse Corps," said Landstuhl spokeswoman Marie Shaw.

In fact, the Army surgeon general, Lt. Gen. Patricia Horoho, is also a registered nurse, the first nurse – and the first woman – ever selected for the job.

At the ceremony, West, Clark and Holcomb all lauded a non-medic who provided a highlight: Air Force Tech. Sgt. Craig Bowman, of the U.S. Air Forces in Europe Band, who sang both the German and U.S. national anthems, a cappella, and with a soulful flourish.

"That was truly remarkable," West said, before Bowman got a huge round of applause.

Source - ?

"2017-06-14-us-army-medical-research-and-materiel-command-biomedical-biodefense-symposium-mg-holcomb.pdf"

https://drive.google.com/file/d/1gnXQecVJny8xXHy8j6N4ghT_e4c5OzIN/view?usp=sharing

"(2017, June 14) **U.S. Army Medical Research and Materiel Command :** Medical, Biomedical & Biodefense: Support to the Warfighter Symposium "

[HG006V] <--- unknown source

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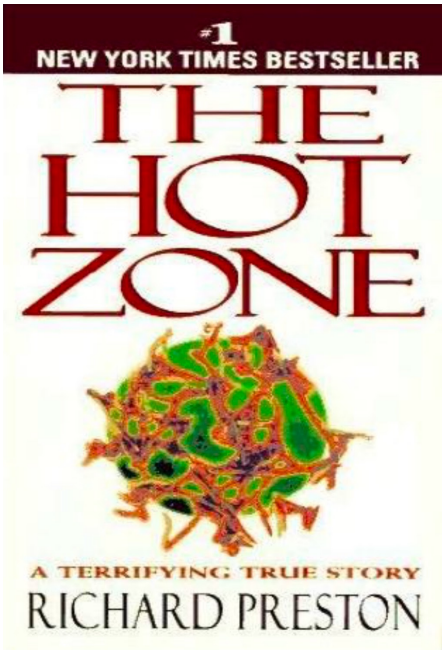
"The Hot Zone" (book, 1994)



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Wikipedia "The Hot Zone"

PDF of book here : [HB005Z][GDrive]

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2021-02-03-wikipedia-org-the-hot-zone-book-1994.pdf

https://en.wikipedia.org/wiki/The_Hot_Zone

https://drive.google.com/file/d/1Jj9aA-FHeczZ97XfTwDXwy6nuMbpx2hB/view?usp=sharing

- Author [Richard McCann Preston (born 1954)]
- Country South Africa, United States
- Language English
- Publisher Anchor
- Publication date 1994
- Media type Print (paperback and hardback) eBook and audiobook
- Pages 420
- ISBN 0-385-47956-5
- OCLC 32052009

- Dewey Decimal 614.5/7 20
- LC Class RC140.5 .P74 1994

The Hot Zone: A Terrifying True Story is a best-selling 1994 nonfiction thriller by [**Richard McCann Preston (born 1954)**] about the origins and incidents involving viral hemorrhagic fevers, particularly ebolaviruses and marburgviruses.[1][2] [See **1967 Marburg virus outbreak in West Germany**.] The basis of the book was Preston's 1992 New Yorker article "Crisis in the Hot Zone".[3]

The filoviruses—including Ebola virus, Sudan virus, Marburg virus, and Ravn virus—are Biosafety Level 4 agents, extremely dangerous to humans because they are very infectious, have a high fatality rate, and most have no known prophylactic measures, treatments, or cures. Along with describing the history of the devastation caused by two of these Central African diseases, Ebola virus disease and Marburg virus disease, [**Richard McCann Preston (born 1954)**] described a 1989 incident in which a relative of Ebola virus, Reston virus, was discovered at a primate quarantine facility in Reston, Virginia, less than 15 miles (24 km) away from Washington, D.C.

Synopsis

The book is in four sections:

- "The Shadow of Mount Elgon" delves into the history of filoviruses, as well as speculation about the origins of AIDS. [**Richard McCann Preston (born 1954)**] recounts the story of "Charles Monet" (a pseudonym), who might have caught Marburg virus from visiting Kitum Cave on Mount Elgon in Kenya. [Also see **1967 Marburg virus outbreak in West Germany**, regarding the leak where the virus was first seen/identified.] The author describes the progression of the disease, from the initial headache and backache, to the final stage in which Monet's internal organs fail and he hemorrhages extensively in a waiting room in a Nairobi hospital. This part also introduces a promising young physician who became infected with Marburg virus while treating Monet. Nancy Jaax's story is told. Viruses, biosafety levels and procedures were described. The Ebola virus disease outbreaks caused by Ebola virus and its cousin, Sudan virus, are mentioned. [**Richard McCann Preston (born 1954)**] talks to the man who named the Ebola virus.
- "The Monkey House" chronicles the discovery of Reston virus among imported monkeys in Reston, Virginia, and the following actions taken by the U.S. Army and Centers for Disease Control. It starts with the monkey house receiving a shipment of 100 wild monkeys. After four weeks, 29 of these monkeys have died. This is followed by the veterinarian for the facility, Dan Dalgard, examining the dead monkeys and sending the samples to Peter Jahrling, a virologist at United States Army Medical Research Institute of Infectious Diseases. After seeing a rope-like virus under the microscope, it is suspected that the monkeys were infected with a hot agent similar to the Marburg virus. Jahrling then conducts a blood test to find out that the hot agent is the Ebola Zaire virus. This conclusion leads to the Army Medical Research Institute deciding to euthanize all the monkeys in the same room as the infected monkeys. [Note: Also see **1967 Marburg virus outbreak in West Germany**, regarding the leak where the virus was first seen/identified.]
- "Smashdown" is more on the Reston epizootic, which involved a strain of the virus that does not affect humans but which easily spreads by air, and is very similar to its cousin the Ebola virus.
- "Kitum Cave" tells of the author's visit to the cave that is the suspected home of the natural host animal in which Ebola lives.

The book starts with "Charles Monet" visiting Kitum Cave during a camping trip to Mount Elgon in Central Africa. Not long after, he begins to suffer from a number of symptoms, including vomiting, diarrhea and red eye. He is taken to Nairobi Hospital for treatment, but his condition deteriorates further, and he goes into a coma while in the waiting room. This particular filovirus is called Marburg virus.

Dr. Nancy Jaax had been promoted to work in the Level 4 Biosafety containment area at the United States Army Medical Research Institute of Infectious Diseases, and is assigned to research Ebola virus. While preparing food for her family at home, she cuts her right hand. Later, while working on a dead monkey infected with Ebola virus, one of the gloves on the hand with the open wound tears, and she is almost exposed to contaminated blood, but does not get infected. Nurse Mayinga is also infected by a nun and goes to Nairobi Hospital for treatment, where she succumbs to the disease.

In Reston, Virginia, less than fifteen miles (24 km) away from Washington, D.C., a company called Hazelton Research once operated a quarantine center for monkeys that were destined for laboratories. In October 1989, when an unusually high number of their monkeys began to die, their veterinarian decided to send some samples to Fort Detrick (USAMRIID) for study. Early during the testing process in biosafety level 3, when one of the flasks appeared to be contaminated with harmless pseudomonas bacterium, two USAMRIID scientists exposed themselves to the virus by wafting the flask. The virus found at the facility was a mutated form of the original Ebola virus and was initially mistaken for simian hemorrhagic fever virus. They later determine that, while the virus is lethal to monkeys, humans can be infected with it without any health effects at all. This virus is now known as Reston virus.

Finally, the author goes to Africa to explore Kitum Cave. On the way, he discusses the role of AIDS in the present, as the Kinshasa Highway that he travels on was sometimes called the "AIDS Highway" after its early appearance in the region. Equipped with a hazmat suit, he enters the cave and finds a large number of animals, one of which might be the virus carrier. At the conclusion of the book, he travels to the quarantine facility in Reston. He finds the building abandoned and deteriorating. He concludes the book by claiming that Ebola will be back.

Reston virus outbreak

Further information: Reston virus § History

The discovery of the Reston virus was made in November 1989 by Thomas W. Geisbert, an intern at United States Army Medical Research Institute of Infectious Diseases. Dr. Peter B. Jahrling isolated the filovirus further. The Center for Disease Control and Prevention conducted blood tests of the 178 animal handlers. While six tested positive, they did not exhibit any symptoms. The Reston virus was found to have low pathogenicity in humans. This was further supported later when a handler infected himself during a necropsy of an infected monkey, as the handler did not show symptoms of the virus after the incubation period.[4]

Reception

The Hot Zone was listed as one of around 100 books that shaped a century of science by American Scientist.[5] Many reviews of The Hot Zone exemplify the impact the book had on the public's view of emerging viruses. A review in the British Medical Journal captures the paranoia and public panic described in this book. The reviewer was left "wondering when and where this enigmatic agent will appear next and what other disasters may await human primates".[6] This can also be seen in a review in the Public Health Reports which highlights the "seriousness of our current situation" and "our ability to respond to a major health threat".[7]

The Hot Zone is described as a "romantic account of environmental transgression". Reactions to this book could be seen not only in the public's view of

emerging viruses, but in the changes in the Centers for Disease Control and Prevention. In addition to the funding of public health infrastructure during the early 1970s, there were many public discussions of biodefense. This book continued to fuel the emerging diseases campaign. By connecting international health to national security, this campaign used The Hot Zone as a method of justifying increased intervention in the global phenomena of disease.[8]

The Hot Zone elicited a major response by the World Health Organization (WHO) by shedding light on the Ebola Zaire outbreak.[clarification needed] Teams of experts were immediately released.[clarification needed] Many countries tightened their borders, issued warnings to custom officials, quarantined travelers, and issued travel advisories.[9]

In his blurb, horror writer Stephen King called the first chapter "one of the most horrifying things I've read in my whole life".[10] When asked whether any book "scared the pants off you" writer Suzanne Collins answered "The Hot Zone, by Richard Preston. I just read it a few weeks ago. Still recovering."[11]

The Hot Zone has received criticism for sensationalizing the effects of Ebola virus. In their memoir Level 4: Virus Hunters of the CDC (1996),[12] former CDC scientists Joseph B. McCormick and Susan Fisher-Hoch lambasted [**Richard McCann Preston (born 1954)**] for claiming that Ebola dissolves organs, stating that although it causes great blood loss in tissues the organs remain structurally intact. McCormick and Fisher-Hoch also dispute Preston's version of the CDC's actions in the Reston virus incident.[citation needed] In an interview about his book Ebola: The Natural and Human History of a Deadly Virus (2014), David Quammen claimed that The Hot Zone had "vivid, gruesome details" that gave an "exaggerated idea of Ebola over the years" causing "people to view this disease as though it was some sort of preternatural phenomenon".[13]

Dramatizations

Failed film adaptation

In January 1993, 20th Century Fox producer Lynda Obst won a bidding war for the film rights to [**Richard McCann Preston (born 1954)**]'s 1992 New Yorker article, which was still being transitioned into book form.[14] In response to being outbid, Warner Bros. producer Arnold Kopelson immediately began working on a similarly themed production. This competing film, titled Outbreak (and released in March 1995), was only vaguely inspired by Preston's work, but would ultimately be a factor in the collapse of Fox's planned production, Crisis in The Hot Zone.[15]

Directors considered for Crisis in The Hot Zone included Wolfgang Petersen (who would later direct Outbreak), Michael Mann, and Ridley Scott. Scott eventually signed on to direct the film in February 1994.[16] Screenwriter James V. Hart was also signed to adapt the book. In late April 1994, Fox announced they had signed Robert Redford and Jodie Foster to star in the film.[17]

Crisis in The Hot Zone, however, was never made. Foster dropped out of the film just before filming was to begin and production was delayed, with Meryl Streep, Sharon Stone, and Robin Wright touted as possible replacements. In August 1994, Redford also dropped out of the film;[18] a few days after Redford left it was announced that pre-production had been shut down.[19]

Television series

Main article: The Hot Zone (American TV series)

On October 16, 2014, The Hollywood Reporter announced that Ridley Scott again planned to adapt the book, this time as a television miniseries for NatGeo. Kelly Souders, Brian Peterson, and Jeff Vintar wrote the pilot. Julianna Margulies starred as Nancy Jaax. Filming began in September 2018.[20] Lynda Obst again produced the series.[21] The series first aired from May 27 to May 29, 2019,[22] and was later renewed for a second season.

See also

- [**Dr. Clarence James Peters (born 1940)**]
- Hot zone (environment)
- The Demon in the Freezer
- United States Army Medical Research Institute of Infectious Diseases

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Steve Michael Hotz (born 1963)

born April 4 1963 - See [HL006E][GDrive]

Associations

- Thomas Johannes Obenhuber (born 1955) (Co-founder of Internet Media Network Incorporated / Genuity Incorporated , joined shortly after Joffe created the company)
- Rodney Lance Joffe (born 1954) (Steve was a leading technologist at Genuity Incorporated for Rodney Joffe)
- Jon Bruce Postel (born 1943) (Hotz says he worked extensively and directly with Jon Postel)

Companies / Employers:

- BBN Technologies, Incorporated
- Genuity Incorporated :
  -
- GTE Corporation :
  - "He remained as the Chief Technical Officer of **Genuity** until the end of 1997 when [Genuity Incorporated] was acquired by [GTE Corporation]. He was then appointed Vice-President, Strategic Technologies, and Chief Technology Officer of the Business Services division of **GTE Internetworking**." Source - [HC004O][GDrive]
- ...

From Centergate website : **Steve Hotz, Chief Scientist**

PDF at [HC005L][GDrive]

[HC005M][GDrive]

Steve Hotz serves CenterGate® as Chief Scientist, bringing a depth of expertise in networking, operating, and distributed systems, as well as broad skills in the areas of academic research, system evaluation, and project management. His experience in routing protocols, naming and directory services, large-scale and high-performance server systems, and transport protocol design and implementation provides a framework for CenterGate's system development projects. Steve brings eleven years of scientific experience with USC's Information Sciences Institute (ISI) to his leadership position at CenterGate.

Steve's long association with ISI, where he was mentored by [Jon Bruce Postel (born 1943)] and Paul Mockapetris, began in 1988 as a PhD student. He successfully defended his thesis dissertation on Route Computation and Information Organization for Heterogeneous Global Internetworks in 1994, and joined ISI as a research scientist. As a Computer Scientist at ISI, Steve was involved in a number of technical and funding proposals, and was a member of several key research teams.

His first efforts were in the emerging Domain Name System, where he developed tools to evaluate performance and diagnose system misconfigurations. He continued his work on DNS by serving as technical lead of the MINDEX Project, which produced the initial ideas for several DNS mechanisms that were developed within the IETF and are deployed in the 'bind' implementation today, i.e., the notify and the incremental transfer mechanisms. For the past five years, Steve has been the primary technical expert for DNS issues at ISI, including responsibility for technical oversight of the US Domain.

Steve contributed to a diverse set of projects during his tenure at ISI. These included the X-Bone project, an automated system for deploying private overlay networks, the Large Scale Active Middleware (LSAM) project, a system to automatically configure sets of interconnected proxy caches and algorithms to route HTML requests among caches, and the Netstation project, which focused on a system architecture where the system bus is replaced by gigabit LAN technology. As part of Netstation, Steve developed two high-performance transport protocol implementations: a custom Device Transport Protocol (DTP), and a port of TCP to the Netstation operating environment. As part of LSAM, Steve designed a mechanism based on IP multicast to automatically configure a hierarchical system of proxy caches.

Steve worked as a USC Research Assistant with Deborah Estrin from 1991-1994 on projects focusing on inter-domain routing. During this time he was a collaborator in the development of the Unified Routing Architecture, and designed a software simulation tool to generate very large internetwork models for use in research and commercial protocol development.

During his years at USC and ISI, Steve was selected for several visiting researcher and consulting positions. Most recently, he was a Network Systems Consultant to Genuity Inc. where he was the principle architect of their flagship "HopScotch" product and leader of the HopScotch development team. Steve was a Visiting Research Fellow at Bolt, Beranek and Newman, Inc. in the spring of 1994, and spent six months as a research intern with IBM T.J. Watson Research Center, where he designed, evaluated and published a configuration language for administrative policy for the ISO inter-domain routing protocol, IDRP.

Steve has eleven publications and over ten presentations to his credit, as well as several software distributions, including the widely used 'dig' tool for DNS queries. He has taught the senior operating systems class at USC, and has been a teaching assistant for various computer systems classes. He has served as a reviewer for National Science Foundation proposals, and for a number of professional conferences and publications including IEEE InfoCom, ACM SigComm, GlobeComm, Networld+Interop, Supercomputing, and IEEE Selected Areas in Communications.

LinkedIn profile

PDF - [HL006G][GDrive] / Image - [HL006H][GDrive]

- UltraDNS - Founding CTO（Oct 1999 – May 2001）
  - Chief technologist directly involved in founding the company; architected company product platform; worked with CEO and VP Marketing to shape initial product offering and business plan resulting in completion of an 8 million dollar series-A financing round.
  - Provided technology team oversight and management of system development and operational deployment of the company's first product: an outsourced Internet DNS service platform. Responsible for growing the initial engineering and operational team from three to eighteen employees; grew team to over forty employees as company scaled.
  - Played a significant role in representing the company externally; key contributor to company and product positioning collateral; lead analyst and press interviews, strategic partnership discussions and major customer engagements. Member of business development team that initiated major customer acquisitions including Microsoft Hotmail and Oracle.
  - Maintained ongoing responsibility for defining technical direction, development of intellectual assets, management of the Technical Advisory Board, interaction with external standards organizations, and evaluation of potential technology partnerships. Defined CTO Office mission, developed operating process for CTO activities, and hired team to analyze and develop strategic company initiatives.
- CenterGate Research Group LLC Chief Scientist and Technology Group Manager（May 1999 – Oct 1999）
  - Principal technologist and leader of Internet and systems infrastructure incubator; responsible for strategic direction, system design, technical oversight, and resource and project management.
  - Principal architect and project manager of UltraDNS software development and service deployment.
  - Co-designer and responsible for technical oversight of network performance monitoring project which eventually became Catbird Networks.
  - Technical lead and project manager for initial version of Whitehat Internet mail campaign system.
- Information Sciences Institute - Computer Scientist（Nov 1994 – May 1999）
  - Member of Xbone research group that developed an automated virtual network deployment system. Collaborated on initial project direction and architecture, responsible for initial resource management daemon, collaborated on initial application protocol definition, and represented Xbone at funding agency conferences and group meetings.
  - Member of Large Scale Active Middleware research group. Responsible for system to automatically configure set of interconnected proxy caches, and algorithms to route HTML requests among caches.
  - Member of Netstation research group that developed a system architecture in which the system bus is replaced by gigabit LAN technology. Designed and implemented high-performance TCP for Netstation display; designed and built display operating environment based on Texas Instrument's executive primitive library. Designed and prototyped Device Transport Protocol, a structured protocol designed to allow efficient implementation; achieved over 30,000 acknowledged pkts/sec.
  - Task leader of Mini-INDEX Project. Set direction and provided leadership for efforts to improve, and provide new, DNS tools and functionality. Recruited and managed graduate student assistants.
  - Technical lead for development of tools to assist automated administration of the .US Domain namespace; set project direction; recruited and managed graduate student assistants.
- Genuity Networks - Network Systems Consultant, Architect and Team Lead（Nov 1996 – Jun 1997）
  - Principal architect of first HopScotch system, Genuity's flagship web service product and one of the Internet's earliest CDN services.
  - Provided evaluations and recommendations about competing and complementary technologies. Architected product to achieve leveragable product differentiation.
  - Managed and mentored HopScotch software development team.
  - Assisted with acquisition of early adopter customers by explaining and positioning product solution.
  - Developed content and provided technical information to legal team for patent application.
- IBM - Research Intern, High Performance Networking Group（May 1992 – Nov 1992）in TJ Watson Research Center, NY
  - Designed configuration language for administrative policy for ISO inter-domain routing protocol (IDRP); specified language syntax and semantics, analyzed the interaction of policy semantics and the protocol's operational specification, and implemented the prototype version of policy language parser.
- University of Southern California - Research Assistant（Sep 1991 – May 1992）
  - Analyzed inter-domain routing systems; evaluated performance and scaling issues of algorithms and mechanisms for route computation in very large internetworks. Collaborated in the development of the Unified Routing Architecture with primary responsibility for route computation algorithms and information systems for the Source-Demand Routing Protocol.
  - Designed software simulation tool to generate very large internetwork models with configured topology and service characteristics; directed masters student's prototype implementation efforts.

In Omaha in 1997 to 2000ish ? - See [HL006F][GDrive]

"Netstation architecture"

UNIVERSITY OF SOUTHERN CALIFORNIA INFORMATION SCIENCES INSTITUTE 4676 Admiralty Way Marina Del Rey, CA 90292

NVD Research Issues & Preliminary Models

Gregory G. Finn, Steven Hotz, Rod Van Meter

USC/Information Sciences Institute

March 1995

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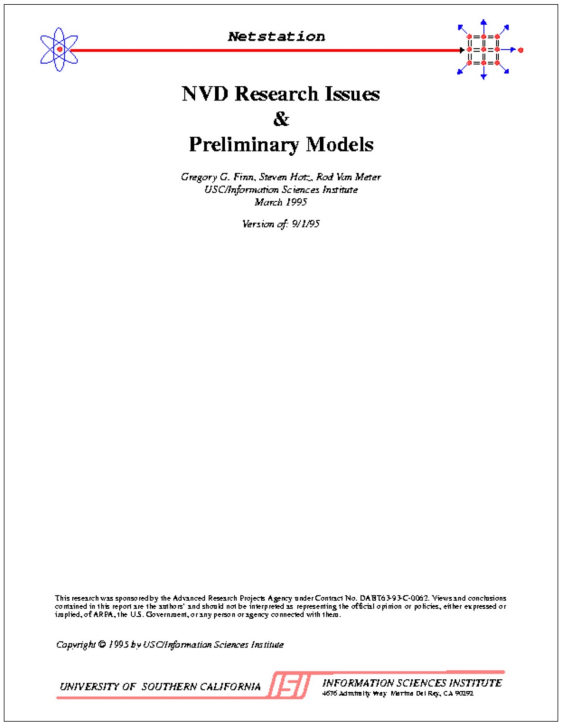

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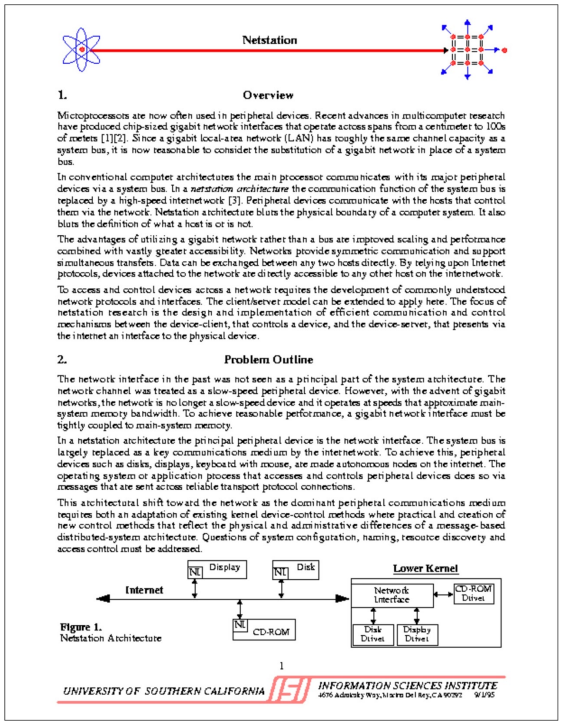

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Netstation

UNIVERSITY OF SOUTHERN CALIFORNIA INFORMATION SCIENCES INSTITUTE 9/1/954676 Admiralty Way, Marina Del Rey, CA 90292

1

1. Overview

Microprocessors are now often used in peripheral devices. Recent advances in multicomputer research have produced chip-sized gigabit network interfaces that operate across spans from a centimeter to 100s of meters [1][2]. Since a gigabit local-area network (LAN) has roughly the same channel capacity as a system bus, it is now reasonable to consider the substitution of a gigabit network in place of a system bus.

In conventional computer architectures the main processor communicates with its major peripheral devices via a system bus. In a netstation architecture the communication function of the system bus is replaced by a high-speed internetwork [3]. Peripheral devices communicate with the hosts that control them via the network. Netstation architecture blurs the physical boundary of a computer system. It also blurs the definition of what a host is or is not.

The advantages of utilizing a gigabit network rather than a bus are improved scaling and performance combined with vastly greater accessibility. Networks provide symmetric communication and support simultaneous transfers. Data can be exchanged between any two hosts directly. By relying upon Internet protocols, devices attached to the network are directly accessible to any other host on the internetwork.

To access and control devices across a network requires the development of commonly understood network protocols and interfaces. The client/server

model can be extended to apply here. The focus of netstation research is the design and implementation of efficient communication and control mechanisms between the device-client, that controls a device, and the device-server, that presents via the internet an interface to the physical device.

2. Problem Outline

The network interface in the past was not seen as a principal part of the system architecture. The network channel was treated as a slow-speed peripheral device. However, with the advent of gigabit networks, the network is no longer a slow-speed device and it operates at speeds that approximate mainsystem memory bandwidth. To achieve reasonable performance, a gigabit network interface must be tightly coupled to main-system memory.

In a netstation architecture the principal peripheral device is the network interface. The system bus is largely replaced as a key communications medium by the internetwork. To achieve this, peripheral devices such as disks, displays, keyboard with mouse, are made autonomous nodes on the internet. The operating system or application process that accesses and controls peripheral devices does so via messages that are sent across reliable transport protocol connections.

This architectural shift toward the network as the dominant peripheral communications medium requires both an adaptation of existing kernel device-control methods where practical and creation of new control methods that reflect the physical and administrative differences of a message-based distributed-system architecture. Questions of system configuration, naming, resource discovery and access control must be addressed.

Figure 1. Netstation Architecture

2

2.1 Unit of Transfer

The fundamental unit of data transfer across a bus is a word and the fundamental bus data-transfer operations are load and store. Transfer latency across a bus is a few nanoseconds and the transfer overhead a few tens of nanoseconds typically. The fundamental unit of data transfer across the internet is a packet. The packet is a grossly larger unit of communication than a word. Transfer latency across the internet varies from several microseconds to tens of milliseconds, and the typical transfer overhead at the source and destination is currently at least several microseconds.

It is possible to access and control devices that are non-resident with little or no change in devicecontrol software by using distributed memory. However, the performance obtained using distributed memory in an internet setting would be poor, since the vast majority of hosts provide little or no support for it. A message-passing model of distributed computation is better adapted to the internet operating environment.

Though message passing is better suited to the internet environment, differences in overhead and latency restrict the types of devices that are suitable for network distribution. Transfer latency across gigabit networks is limited by path length. Little can be done to significantly improve that. For some device types, that latency will limit the maximum practical separation between the client and device. Unlike transfer latency, reducing the per-packet overhead is not an intractable problem. In the context of high-speed networking it is being actively studied and remains a fruitful area of research.

2.2 Means of Transfer

In the context discussed here, we assume that data and commands that pass between a device and its controlling application occur via messages that are sent across the internet. The reliability and fidelity of the command transfer across the internet must closely approximate that obtained crossing a system bus. Commands sent to the device sub-system must exhibit execute once (and only once) semantics. A straightforward way to accomplish this is for the application to issue commands using remote procedure calls (RPCs) that are carried via a reliable transport-layer protocol.

The rate that commands can be issued is limited by that request/response time. Reducing the packetrelated overheads between the controlling application and the netstation node that it is using is particularly important. TCP is not well-adapted to the task of transferring RPCs to an application. It provides a byte-stream to the source and destination applications, rather than a sequence of objects framed by the source. The delay-bandwidth product across a high-speed LAN is also often less than even a small RPC packet. A specialized transport protocol that is designed to carry RPCs may reduce packet-related overhead by allowing RPCs to be individually framed.

The External Data Representation and Remote Procedure Call standards as documented by RFC1014 [4] and RFC1050 [5] are sufficient standards that allow creating the RPCs used to control devices. The RPC standard in RFC 1050 is not transport layer-specific. Implementations exist for more than one transport protocol.

Industry is moving towards device-command formats that are suitable to the networking domain. An example of this is the SCSI-3 standard for command of devices that is being developed by ANSI/ISO [6]. SCSI-3 defines the syntax framework of commands sent to target devices for execution, their semantics, certain aspects of error reporting and recovery, and the behavior of queueing at the target device for environments where multiple requests may be outstanding. Methods for access ordering are covered, but access control, ownership and authentication issues are not discussed.

The SCSI-3 committee has considered the transporting of commands over a variety of different media, including high-bandwidth point-to-point channels and networks. As a result, SCSI-3 commands adopt a

to previous section2 4to next section

BITCHUTE @Housatonic **YOUTUBE** @HousatonicLive **ODYSEE** @Housatonic **BRIGHTEON** @Housatonic

Housatonic

Housatonic.Live

Episode 39.F (#136)

- TCG Enough with the Navy intelkigence bs...brock was drafted and did a boring 2 year military stint like every 18yr old male at thd time
- JM JEFF APPLE / CAROL PETERS, DIVINCI EDUCATIONAL INTERACTIVE SOFTWARE
- KG Lucas was big Joseph Campbell fan I remember that
- Noname Excuse me. If ALL you have to offer is " I don't believe anything Mark is saying and my mind is already made up"....GOOD FOR YOU DUDE ride off into the sunset then cowbot
- KG @Housatonic Live; Did You Know Wikipedia Was First Funded By A Porn Site Started By Its Founder Jimmy Wales?

Episode 39.C and 39.E (#135) and (#135)

- Todd Marshall@Housatonic Live; Still not giving Benjamin Graham any credit for influence over Buffet???
- Todd Marshall@Housatonic Live; You're going to eat your Tesla comments.
- Noname NosloganDid you know...Elon Musks Grandfather was the head of Technocracy Inc Canada? The actual organization Technocracy and an actual Tecnocrat. Not what Zbignew and Alex Jones et al have mischaracterized
- KristianGerardCharles Munger seems like he runs Buffet AND California politics
- TCGGates Sr not involved in Fort Lawson issue....

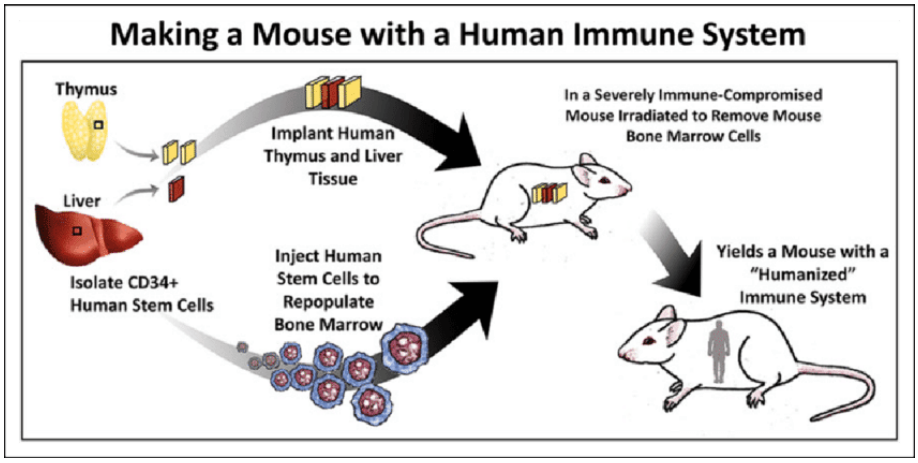
Episode 39.B (#130)

- Neighborhood News HourENRON was created out of a 1985 merger of InterNorth from Omaha and Houston Natural Gas Company
- Neighborhood News HourENRON was created out of a 1985 merger of InterNorth from Omaha and Houston Natural Gas Company
- davefitz 7501The PC boards were probably modeled on simailr boards used by the military to control guided missiles. I recall crossing a us navy desttoyer in July 72 that used solid state controls for missiles
- Themobsterful
- I believe Arnold was OSS. He came out of India
- Brian GrantRCAs Sarnoff hated Powel Crosley
- OrpheoTreshulaeric dollard has things to say about RCA
- Themobsterful
- E Howard Hunt was OSS India. His family was big in insurance
- tattered playlistsBritish became expert in ghost army deceptions.
- tattered playlistsIn North Africa British got Nazis, Italians to bomb desert by lighting it with blown up and cardboard tanks, buildings, etc.
- Michael Laurette@Housatonic Live; Chuck Feeney/Cornell University & Warren Buffett & The Giving Pledge & Berkshire Energy Group...I think that's
- Huffman Aviation@Housatonic live; please can you give me your opinion on Self Training Automated Neural Networks and their potential
- Themobsterful
- @Housatonic Live; Robert W Nordstrom of the retailer, Seattle, was also OSS

echeck out the stock portfolio of Bronfman Rothschild Wealth Management

"Research - possible source re: Washington computer scene in 1970s? Just learned some interesting coincidences about computer guy Clif High. Interview is here: oom2.com/t72647-clif-high-was-the-election-honest-what-about-computer-glitches . What caught my attention is that he says he was doing coding (including firmware) in Washington State in the pre-internet days. He worked for Microsoft, Boeing, & wrote a program used by the Washington State fisheries dept. (!) & used by them for almost 25 yrs BEFORE the internet! (His program was only discontinued after the internet was up and had stabilized a few years.) I wonder if he knew Kildall, M/T Rona, etc. He might have some interesting insights of that time period. His father was in the army (logistics) so he moved around a lot during his life. "

Humanized Mice



Source : https://www.researchgate.net/figure/DARS-utilizes-advanced-humanized-mouse-models-to-improve-drug-safety-assessment_fig2_318616312

Wikipedia 🌐 Humanized mouse

What launched this investigation ?

Trump comment : Trump says unproven coronavirus drugs could be 'gift from God'

March 24, 2020 - https://www.business-standard.com/article/pti-stories/trump-says-unproven-coronavirus-drugs-could-be-gift-from-god-120032400394_1.html

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Saved Wikipedia (April 15, 2021) : Humanized mouse

2021-04-15-wikipedia-org-humanized-mouse.pdf

https://drive.google.com/file/d/1NEbe86V2kJFAJR3bBmADH0ba2Q3y_jfi/view?usp=sharing

https://en.wikipedia.org/wiki/Humanized_mouse

A humanized mouse is a mouse carrying functioning human genes, cells, tissues, and/or organs. Humanized mice are commonly used as small animal models in biological and medical research for human therapeutics.

A humanized mouse or a humanized mouse model is one that has been xenotransplanted with human cells and/or engineered to express human gene products, so as to be utilized for gaining relevant insights in the in vivo context for understanding of human-specific physiology and pathologies.[1] A lot of our knowledge about several human biological processes has been obtained from studying animal models like [[rodent]s] and non-human primates. In particular, small animals such as mice are advantageous in such studies owing to their small size, brief reproductive cycle, easy handling and due to the genomic and physiological similarities with humans; moreover, these animals can also be genetically modified easily. Nevertheless, there are several incongruencies of these animal systems with those of the humans, especially with regard to the components of the immune system. To overcome these limitations and to realize the full potential of animal models to enable researchers to get a clear picture of the nature and pathogenesis of immune responses mounted against human-specific pathogens, humanized mouse models have been developed. Such mouse models have also become an integral aspect of preclinical biomedical research.[2]

History

The discovery of the athymic mouse, commonly known as the nude mouse, and that of the SCID mouse were major events that paved the way for humanized mice models. The first such mouse model was derived by backcrossingC57BL/Ka and BALB/c mice, featuring a loss of function mutation in the PRKDC gene. The PRKDC gene product is necessary for resolving breaks in DNA strands during the development of T cells and B cells. Dysfunctional PRKDCgene leads to impaired development of T and B lymphocytes which gives rise to severe combined immunodeficiency (SCID). In spite of the efforts in developing this mouse

model, poor engraftment of human hematopoietic stem cells (HSCs) was a major limitation that called for further advancement in the development humanized mouse models.[3] The next big step in the development of humanized mice models came with transfer of the scid mutation to a non-obese diabetic mouse. This resulted in the creation of the NOD-scid mice which lacked T cells, B cells, and NK cells. This mouse model permitted for a slightly higher level of human cell reconstitution. Nevertheless, a major breakthrough in this field came with the introduction of the mutant interleukin 2 receptor α (IL2rα) gene in the NOD-scid model. This accounted for the creation of the NOD-scid-γcnull mice (NSG or NOG) models which were portrayed to have defective interleukins IL-2, IL-4, IL-7, IL-9, and IL-15. Researchers evolved this NSG model by knocking out the RAG1 and RAG2 genes (recombination activation genes), resulting into the RAG^{null} version of the NSG model that was devoid of major cells of the immune system including the natural killer cells, B lymphocytes and T lymphocytes, macrophages and dendritic cells, causing the greatest immunodeficiency in mice models so far. The limitation with this model was that it lacked the human leukocyte antigen. In accordance to this limitation, the human T cells when engrafted in the mice, failed to recognize human antigen-presenting cells, which consequated in defective immunoglobulin class switching and improper organization of the secondary lymphoid tissue.[4]

To circumvent this limitation, the next development came with the introduction of transgenes encoding for HLA I and HLA II in the NSG RAG^{null} model that enabled buildout of human T-lymphocyte repertoires as well as the respective immune responses.[5]

Types

Engrafting an immunodeficient mouse with functional human cells can be achieved by intravenous injections of human cells and tissue into the mouse. This section highlights the various humanized mice models developed using the different methods.

Hu-PBL-scid model

This model is developed by intravenously injecting human PBMCs into immunodeficient mice. The peripheral blood mononuclear cells to be engrafted into the model are obtained from consented adult donors. The advantages associated with this method are that it is comparatively an easy technique, the model takes relatively less time to get established and that the model exhibits functional memory T cells.[6] It is particularly very effective for modelling graft vs. host disease.[5] The model lacks engraftment of B lymphocytes and myeloid cells. Other limitations with this model are that it is suitable for use only in short-term experiments (<3 months) and the possibility that the model itself might develop graft vs. host disease.[5]

Hu-SRC-scid model

Hu-SRC-scid mice are developed by engrafting CD34+ human hematopoietic stem cells into immunodeficient mice. The cells are obtained from human fetal liver, bone marrow or from blood derived from the umbilical cord,[7] and engrafted via intravenous injection. The advantages of this model are that it offers multilineage development of hematopoietic cells, generation of a naïve immune system, and if engraftment is carried out by intrahepatic injection of newborn mice within 72 hours of birth, it can lead to enhanced human cell reconstitution. Nevertheless, limitations associated with the model are that it takes a minimum of 10 weeks for cell differentiation to occur, it harbors low levels of human RBCs, polymorphonuclear leukocytes, and megakaryocytes.[5]

BLT (bone marrow/liver/thymus) model

The BLT model is constituted with human HSCs, bone marrow, liver, and thymus. The engraftment is carried out by implantation of liver and thymus under the kidney capsule and by transplantation of HSCs obtained from fetal liver. The BLT model has a complete and totally functional human immune system with HLA-restricted T lymphocytes. The model also comprises a mucosal system that is similar to that of humans. Moreover, among all models the BLT model has the highest level of human cell reconstitution.[8]

However, since it requires surgical implantation, this model is the most difficult and time-consuming to develop. Other drawbacks associated with the model are that it portrays weak immune responses to xenobiotics, sub-optimal class switching and may develop GvHD.[5]

Established models for human diseases

Several mechanisms underlying human maladies are not fully understood. Utilization of humanized mice models in this context allows researchers to determine and unravel important factors that bring about the development of several human diseases and disorders falling under the categories of infectious disease, cancer, autoimmunity, and GvHD.

Infectious diseases

Among the human-specific infectious pathogens studied on humanized mice models, the human immunodeficiency virus has been successfully studied.[5] Besides this, humanized models for studying Ebola virus,[9] Hepatitis B,[10]Hepatitis C,[11] Kaposi's sarcoma-associated herpesvirus,[12] Leishmania major,[13] malaria,[14] and tuberculosis [15] have been reported by various studies.

NOD/scid mice models for dengue virus [16] and varicella-zoster virus,[17] and a $Rag2^{null}\gamma c^{null}$ model for studying influenza virus [18] have also been developed.

Cancers

On the basis of the type of human cells/tissues that have been used for engraftment, humanized mouse models for cancer can be classified as patient-derived xenografts or cell line-derived xenografts.[19] PDX models are considered to retain the parental malignancy characteristics at a greater extent and hence these are regarded as the more powerful tool for evaluating the effect of anticancer drugs in pre-clinical studies.[19][20] Humanized mouse models for studying cancers of various organs have been designed. A mouse model for the study of breast cancer has been generated by the intrahepatic engraftment of SK-BR-3 cells in NSG mice.[21] Similarly, NSG mice intravenously engrafted with patient-derived AML cells,[22] and those engrafted (via subcutaneous, intravenous or intra-pancreatic injections) with patient-derived pancreatic cancer tumors[23] have also been developed for the study of leukemia and pancreatic cancer respectively. Several other humanized rodent models for the study of cancer and cancer immunotherapy have also been reported.[24]

Autoimmune diseases

Problems posed by the differences in the human and rodent immune systems have been overcome using a few strategies, so as to enable researchers to study autoimmune disorders using humanized models. NSG mice engrafted with PBMCs and administered with myelin antigens in Freund's adjuvant, and antigen-pulsed autologous dendritic cells have been used to study multiple sclerosis.[25] Similarly, NSG mice engrafted with hematopoietic stem cells and administered with pristane have been used for studying lupus erythematosus.[26] Furthermore, NOG mice engrafted with PBMCs has been used to study mechanisms of allografts rejection in vivo. [27]

See also

- Nude mouse
- SCID mouse
- NOG mouse
- NSG mouse
- Mouse model of colorectal and intestinal cancer
- Mouse models of breast cancer metastasis

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(DOI:10.1159/000130969)

Properties of human RNA sequences isolated from a human-mouse hybrid cell line

Balazs I. · Szabo P. · Siniscalco M.
Ivan Balazs : https://www.researchgate.net/profile/Ivan-Balazs/4

Author affiliations - Sloan-Kettering Institute for Cancer Research, New York, N.Y.

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PMCID: PMC2892284

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PMID: 20150806

Humanized Mouse Models to Study Human Diseases

Michael A. Brehm,[1] Leonard D. Shultz,[2] and Dale L. Greiner[1]

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NIHMSID: NIHMS87792

PMID: 19093778

Use of humanized severe combined immunodeficient mice for human vaccine development

Gloria C Koo, PhD,[†] Aisha Hasan, MD, and Richard J O'Reilly, MD, Chairman

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Newspaper Evidence timeline

1960 (March 29)

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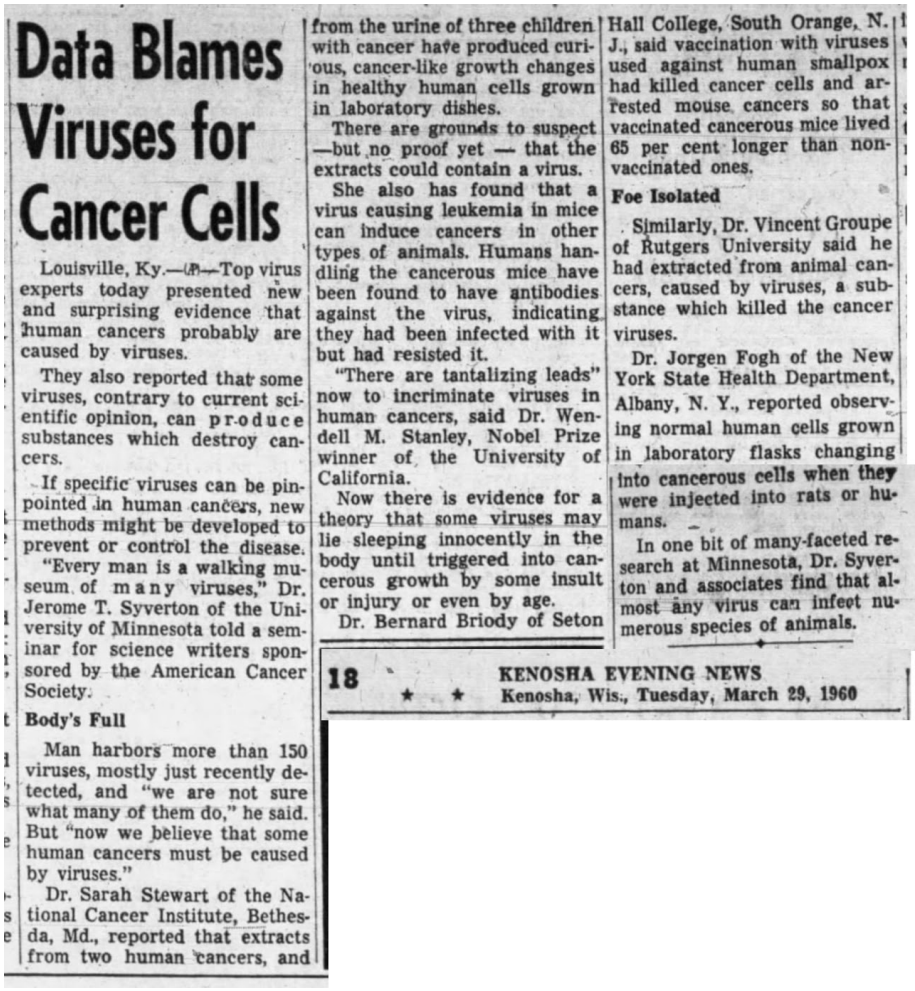

Data Blames Viruses for Cancer Cells

Louisville, Ky.—(AP)—Top virus experts today presented new and surprising evidence that human cancers probably are caused by viruses.

They also reported that some viruses, contrary to current scientific opinion, can produce substances which destroy cancers.

If specific viruses can be pinpointed in human cancers, new methods might be developed to prevent or control the disease.

"Every man is a walking museum of many viruses," Dr. Jerome T. Syverton of the University of Minnesota told a seminar for science writers sponsored by the American Cancer Society.

Body's Full

Man harbors more than 150 viruses, mostly just recently detected, and "we are not sure what many of them do," he said. But "now we believe that some human cancers must be caused by viruses."

Dr. Sarah Stewart of the National Cancer Institute, Bethesda, Md., reported that extracts from two human cancers, and from the urine of three children with cancer have produced curious, cancer-like growth changes in healthy human cells grown in laboratory dishes.

There are grounds to suspect —but no proof yet — that the extracts could contain a virus.

She also has found that a virus causing leukemia in mice can induce cancers in other types of animals. Humans handling the cancerous mice have been found to have antibodies against the virus, indicating they had been infected with it but had resisted it.

"There are tantalizing leads" now to incriminate viruses in human cancers, said Dr. Wendell M. Stanley, Nobel Prize winner of the University of California.

Now there is evidence for a theory that some viruses may lie sleeping innocently in the body until triggered into cancerous growth by some insult or injury or even by age.

Dr. Bernard Briody of Seton Hall College, South Orange, N. J., said vaccination with viruses used against human smallpox had killed cancer cells and arrested mouse cancers so that vaccinated cancerous mice lived 65 per cent longer than non-vaccinated ones.

Foe Isolated

Similarly, Dr. Vincent Groupe of Rutgers University said he had extracted from animal cancers, caused by viruses, a substance which killed the cancer viruses.

Dr. Jorgen Fogh of the New York State Health Department, Albany, N. Y., reported observing normal human cells grown in laboratory flasks changing into cancerous cells when they were injected into rats or humans.

In one bit of many-faceted research at Minnesota, Dr. Syverton and associates find that almost any virus can infect numerous species of animals.

18 ★ ★ KENOSHA EVENING NEWS Kenosha, Wis., Tuesday, March 29, 1960

1962 (Nov 08) - Mouse vs human cells

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1962-11-08-medford-mail-tribune-orgegon-pg-4-c

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1962-11-08-medford-mail-tribune-orgegon-pg-4-c-clip-difference-human-mouse-cells

https://drive.google.com/file/d/1BWc1WGGXGxho7OcE4vhFHfG2U4WqOW-I/view?usp=sharing

Medford Mail Tribune (Medford, Oregon) · 08 Nov 1962, Thu · Page 22

Technique Reveals Difference Between Human, Mouse Cells

By DELOS SMITH
UPI Science Editor

New York – (UPI) – In at least one circumstance it is very difficult to tell people from mice. That circumstance is when both man and mouse are down to their smallest working parts and those parts are living in dishes. This part is the cell. Human cells and mouse cells are cultivated in dishes of nutritional broth in the same laboratories around the world. Unhappily cell cultures get contaminated by cells from another dish which may be nearby or in another room.

Delos Smith

Contamination shouldn't happen but it does despite the most stringent precautions, and when it does the results of months of scientific experimentation with cultured cells become questionable.

That's why the science of cytology (which is the study of the cell,) is newly attuned to Dr. S. Fedoroff, cytologist of the University of Saskatchewan, Saskatoon, Canada. His better mouse-trap is an easy technique for telling the difference between man and mouse at the cellular level.

Tedious Work

Heretofore it took elaborate methods and tedious work. Now, by the Fedoroff technique, it can be done in a few minutes. It is based on the assumption that the serum of blood contains a chemical "system" which is poisonous to cells of any species other than the species from which the blood came.

This system, Fedoroff reasoned, is antibody, antibody's chemical adjuncts and antibody's positive electric charges. To test this idea, he put four different strains of mouse cells into the same culture with six strains of human cells.

When all one million of them were flouishing, indistinguishable human from the mouse, he added a little human blood serum. After only one hour of incubation all the cells of all the mouse strains were dead but the cells of all six human strains kept right on flourishing.

He experimented to find out what happened. He found what happened was that human serum containing the "cytotoxic system" adhered to mouse cells from where it did its poisonous work but could not stick to human cells.

Reason Unknown

He went on to discover that human serum was invariably poisonous to cells of a number of species other than mice. Confusingly, however, he found that human cells were not the only cells which were undisturbed by human serum. The reason why that is so he doesn't know yet.

But in tissue culture laboratories everywhere the cells under cultivation are almost all either human or mouse. This means the human cultures can be kept in an uncontaminated state by the routine addition of a little human serum now and then.

Federoff warned that freshly drawn human blood should be used because antibody's chemical adjuncts are quickly lost in storage. If one person's blood doesn't work, the cytologist should draw blood from another person. The blood of some people may be too low in cytotoxic antibody to be effective, he said.

1963 (March 20)

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1963-03-20-the-pittsburgh-press-pg-25-is-cancer-a-virus

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The Pittsburgh Press

PAGE 25 WEDNESDAY, MARCH 20, 1963 SECTION TWO

FEBRUARY 1963

MARCH

APRIL 1963

Is Cancer A Virus?

Triggering Roles Of Some Chemicals And Radiation

If some virus, or more than one, causes cancer —

and many scientists think this will prove to be the case
— then we could move toward its conquest through vaccines.

Developments are boiling up so rapidly, they're hard to keep track of and that's the challenge taken on in this series by a top science writer. This is the third chapter summing up the evidence.

By JOHN TROAN, Scripps-Howard Science Writer

The ever-expanding virus zoo is populated by strange creatures that behave like beastly biological beatniks.

This microscopic menagerie includes:

—Latent, or sleeping viruses. They lie dormant until something comes along to rouse them into action.

—Passenger, or hitchhiking, viruses. They may be harmless fellow travelers accompanying wicked partners, or they might ride piggyback on other viruses to sneak in and do their own dirty work.

—Masked viruses. They invade a cell, then go undercover to carry on their miserable mischief in secrecy.

—Hit-and-run viruses. They do their damage and run away, much like the motorist who flees the scene of an accident.

All these breeds, and more, are under the scrutiny of scientists studying how viruses cause cancers in animals and whether viruses do the same in humans.

Animal studies have shown a cancer virus can be acquired early in life, sometimes before birth, yet remain latent for years before it springs into action to produce a tumor. In many cases, it may lie dormant forever. So no cancer develops.

Just 'Passengers'

Some viruses found in cancer tissues may have nothing to do with the tumor. They're just innocent "passengers." On the other hand, some which do cause animal cancers may hitchhike their way into the victim's body aboard fairly harmless viruses.

In some instances, a virus can produce an animal cancer and then drop out of sight.

At times, it really remains behind in a "masked" state and can be passed to another animal to produce another cancer. Which is the only way to prove it's still there, working as an undercover agent. In other cases, it disappears completely. Like a hit-and-run culprit.

To complicate research, cancer viruses also are mighty choosey. As a rule, each such virus picks only on one species of animal. So it may be impossible to reproduce the disease in another. In fact, one virus which causes only kidney cancer ordinarily attacks only leopard frogs that live only in New England!

Prize Exemption

Prize exception to this rule is the so-called polyoma virus. Dr. Ludwik Gross first chanced onto it at the Bronx (N. Y.) Veterans Hospital when it fouled up some of his mouse-leukemia experiments. Dr. Sarah E. Stewart and Dr. Bernice E. Eddy, at the National Institutes of Health, then isolated this virus and found ways to grow it in the laboratory. Polyoma virus can cause more than 20 kinds of cancer in mice, hamsters, guinea pigs, Mastomys (African rodents) and rats, plus non-cancerous tumors in rabbits.

One thing is clear. A virus which produces cancer in animals needs an accomplice to commit its crime.

The accomplice may be, unwittingly, the actual victim. Some animals, for instance, are born more susceptible than others to a cancer virus. Or their acquired resistance to such a virus is lower.

Thus some breeds of mice are pushovers for virus-caused leukemia while others rarely get it. Some chickens don't get blood cancer even if inoculated with as many as 145 billion particles of the virus that causes this disease, yet others develop it after receiving a mere 6000. (Even 6000 may seem a whopping figure but not when dealing with viruses, which are so tiny two million billion could fit into a pingpong ball.)

Basically, people are built the same. Some folks, for example, are forever bothered by colds (which are caused by viruses). Others never get one. Or take polio. Of every 1000 or so persons infected by polio virus, only one is crippled. Most of the rest, even if unvaccinated, stay well.

Other built-in factors play a role in cancer. One involves hormones. In humans, certain hormones can fire up certain cancers. In mice, the same thing happens. But only if the cancer-causing virus is present. A mouse free of the virus which produces breast cancer won't develop such a tumor even if its hormonal balance is upset.

It's like pulling the trigger of a gun. Whether it goes off depends on whether it's loaded. And even if it's loaded it won't go off unless it's triggered.

Does a similar phenomenon occur in humans? Do people carry viruses which won't bother them unless triggered into action?

At least one human virus, more a nuisance than a threat, works like this. It causes cold sores, or fever blisters. A latent virus acquired early in life, it lies still until triggered by something—the sun, the wind, a fever, an emotional upset. Or a shift in the body's hormone production.

Other Cancer Triggers

There are cancer triggers other than hormones. Excess radiation can lead to cancer both in humans and in animals. So can certain chemicals (including, many researchers contend, some chemicals found in cigaret smoke and auto fumes.)

But are these rays and these chemicals the roots of such evil? Or do they just unleash hidden cancer viruses which would remain harmless if undisturbed?

According to the National Cancer Institute, animal experiments have established that "radiation, hormones and chemical agents may act through viruses" to bring on cancer.

From the animal studies, it's also clear many more factors are mixed up in the cancer jigsaw. Among them: age, sex, nutrition, injury, chronic irritation, bone marrow (where red blood cells are made), the spleen (a warehouse for blood), the thymus gland (a mysterious organ behind the breastbone).

The virulence of the cancer viruses themselves is involved. In animals, such viruses seem naturally weak. Basically, this is a blessing. But to researchers it's a curse. To facilitate testing, the viruses must be souped up.

Dramatic Change

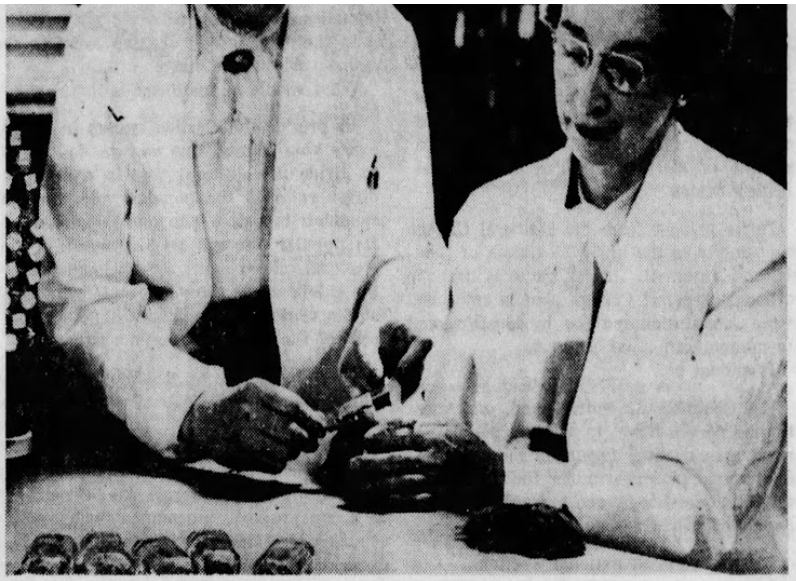
In the course of such studies, Dr. W. Ray Bryan at the National Cancer Institute discovered that the stronger the virus, the earlier the cancer crops up and the more vicious it is. Some animal viruses now can be so juiced up they produce cancer 100 per cent of the time.

"In no area of modern cancer investigation," says the Institute, "has there been a more dramatic change than in virus research.

"During the past decade scientific opinion has completely reversed itself, turning from the belief that viruses do not cause human cancer to the conviction that may be the direct cause or triggering agent for most, if not all, cancers.

"It appears almost certain that virus-caused cancer is a phenomenon that occurs in man as well as in animals and plants. Yet not one human cancer-causing virus has as yet been identified."

NEXT — The search for human-cancer viruses.



WOMEN RESEARCHERS at the National Institute of Health—Dr. Bernice E. Eddy (left) and Dr. Sarah E. Stewart—isolated the most versatile cancer virus yet found. It produces more than 20 kinds of cancer in five species of animals.

1964 (Dec 16)

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Arizona Daily Star (Tucson, Arizona) · 26 Dec 1964, Sat · Page 27

Molecules Yield Some Secrets

Scientists Say They're Near Knowledge Of Genetic Material's Structure, 'Life'

By JOHN A. OSMUNDSEN

© 1964 New York Times News Service

NEW YORK—Tremendous strides have been made in the last few years toward understanding the behavior of the molecules that bear the hereditary instructions for determining the form and function of all living things.

Scientists say, in fact, that they now are very near to a thorough knowledge of the structure of the genetic material, the mechanism by which it reproduces itself during cell division, how the hereditary messages are encoded in the structure of the genetic material and how those messages are translated into the chemical events within each cell.

Progress along those lines has been swift, largely because scientists have had almost perfect model systems to work with: Viruses, bacteria and other single-celled creatures. Those organisms are ideal because they multiply very rapidly, possess inheritable characteristics that are easily recognizable and they undergo changes (mutations) and exchanges (recombinations) by means that are analogous to mating in higher organisms.

Efforts to run higher cells through their reproductive paces and to record the details of their hereditary processes largely have failed for two main reasons.

First, it is difficult to grow stable lines of mammalian cells in test tubes and to have them retain their special properties, such as the synthesis of hormones, pigments and enzymes.

Second, mammalian cells do not normally "mate" or otherwise exchange hereditary parts, a prerequisite for the proper genetic study of an organism.

The possibility that both of those obstacles are about to be overcome was raised last weekend at a symposium on cell replication at the New York University School of Medicine.

Dr. Harry Eagle, of the Department of Cell Biology at Albert Einstein College of Medicine, reported that he has grown cultures of stable lines of human cells from a wide variety of tissues.

In a second report, Dr. Boris Ephrussi, professor of biology at Western Reserve University, said hybridization has been found to occur experimentally between mammalian cells in tissue culture. Hybrid cells were produced from "matings" of different cells from about 10 permanent cell lines, he said. Cells taken from inbred stocks of mice have been cultured together two types at a time, and have produced in each case a third kind of cell that was a combination of the two "mating" types of cells, the professor explained.

The hybrid cells are distinguished by their chromosomes, or heredity determining structures, Dr. Ephrussi said. But identifying hybrids by looking at their chromosomes is a tedious process and does not permit the sort of studies that could be carried out if there were some "automatic" way of selecting them while they still were alive in tissue culture.

A way to do this was found recently by Dr. John Littlefield, of Massachusetts General Hospital. He found two lines of mouse cells, each of which was identifiable by its inability to digest a particular substance.

The yield of hybrids was very low, but Dr. Ephrussi, working with those same lines of cells, has worked out ways of producing mammalian hybrid cells in large enough numbers to allow the study of how their special cell functions are controlled.

The studies of single cells, however, still are far from revealing how "governments" of cells — such as all the cells in a liver or a spleen — work in the whole organism.

1965 (Feb 17) - Cells merged

1965-02-17-calgary-herald-pg-42

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1965-02-17-calgary-herald-pg-42-clip-unrelated-cells

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https://www.newspapers.com/image/481219565/?terms=human%20mouse%20hybrid%20cells&match=1

Human Organism Joins With Mouse, Hen

Unrelated Cells Fused Into Unit

[The Sunday Times, copyright]

LONDON — Two Oxford scientists have produced the strangest hybrid forms of life ever seen in the laboratory—or out of it.

They have fused into single units, cells of species as different as humans, rats, mice, rabbits and chickens.

In many cases the hybrids lived for more than two weeks, and there are signs that they may actually reproduce.

In the latest issue of the scientific journal Nature, Professor Henry Harris and Dr. J. F. Watkins, of the Sir William Dunn School of Pathology, Oxford, report their first results, which involved fusing human and mouse cancer cells.

"We have now done the same thing with many other types of cell," Professor Harris said. "The most remarkable combination is hen and man because the hen, of course, is not even a mammal."

It has been known for some time that some viruses make cells of the same species fuse together. Now Professor Harris and Dr. Watkins have applied the same technique to cells of widely different species.

It seemed so improbable that it would work that nobody had ever tried it before. "I didn't think it was impossible or I would not have made the attempt," said Harris. "But I was very surprised when it worked."

Even closely - related animals like rats and mice cannot interbreed. In fact the inability to interbreed with other species is the main criterion of a biological species, so hybrid cells such as human-hen, rat-rabbit and rabbit-man produced by a kind of artificial sexuality are of extraordinary biological interest.

In most cases when two or more cells fuse, their nuclei (which contain the hereditary material of the chromosomes) remain separate. However, in some cases the nuclei fuse too, and there is evidence that these hybrids may be able to reproduce. "I'm only guessing, but I think, it's likely that we shall get reproduction," said Harris.

RESEARCH OPENS

Hybrid cells open up a number of important lines of research. One, in which the Oxford scientists are particularly interested, is that they are a new way of studying the interactions between the nucleus and the rest of the cell.

This is connected with how the genetic instructions in the chromosomes are put into effect. Another is the reproduction of the hybrids.

If they reproduce will they do so as hybrids or will they split up again into their original types of cell?

NEW LIGHT

A third possibility is that hybrid cells could throw new light on the question of immunity and how the body deals with foreign material.

If, say, a chicken or a mouse cell is introduced into the human body it is quickly destroyed by antibodies, but, at Oxford, cells involved in antibody production have already been fused with cells of other species.

Vanderbilt Dies

LOS ANGELES (AP)—Gloria M. Vanderbilt, 60, the mother of heiress Gloria Vanderbilt, died of cancer Saturday at Cedars of Lebanon Hospital. The widow of Reginald C. Vanderbilt, following his death she and other members of her family were involved in a custody battle over her daughter Gloria. The daughter's aunt, Mrs. Harry Payne Vanderbilt Whitney, was given custody. While married to conductor Leopold Stokowski, the daughter discontinued her mother's $21,000 annual allowance in 1946.

1966 (May 04)

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1966-05-04-calgary-herald-pg-50-clip-cancer-cure

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Experiments Spark Fresh Optimism

Hunt For Cancer Cure 'Frustrating'

The scientific assault on cancer has been long, intense and frustrating. A final breakthrough is not yet in sight. But several new research reports, taking a similar tack, are stirring lively interest. This is the second of two articles on the latest developments and their implications.

NEW YORK (AP)—The effort to enlist the body's own defences against an invading disease is perhaps the most active front today in the battle against cancer. A scattering of research reports has focussed fresh interest on this approach.

One expert calls it "the most promising area of cancer research today." Another, looking at recent experiments, finds there's "a ray of light in a dark room."

If there is some hope that researchers may be working on some promising leads, it must be set against the background of a thousand disappointments of the past.

In the last months there have been some interesting variations on the idea that in the immune processes of living creatures there is a way to defeat cancer, just as viruses and bacteria are defeated.

SOME DISAGREEMENT

There are a number of current reports—but researchers disagree on their ultimate value:

In Detroit, researchers claim to have created an experimental method linking human tumor cells to rabbit protein to prod a cancer patient's body into fighting his own cancer. But they say their work is strictly preliminary and needs more laboratory confirmation and refinement.

In Buffalo, N.Y., researchers have exchanged small transplants of tumor between cancer patients in hopes that each would develop usable defences against the tumor of the other. However, they have maintained silence on the final outcome of the experiment.

One patient, Harry T. Griffith of Philadelphia, involved in an experimental transplant died Monday. A spokesman in Buffalo said the transplant was of little or no value in Mr. Griffith's case.

His partner in the experiment, Robert F. Allen of Tucson, Ariz., and two other men who took part in a similar experiment were reported to be progressing, but the hospital said it would be some time before their condition would be evaluated.

HAVE USE DRABBITS

In Los Angeles some researchers have produced rabbits they believe to be tolerant of all human tissue—and have talked about using the rabbits to manufacture anti - cancer serum for human patients. But other scientists have questions to ask about the method.

Although these reports have ridden the crest of the recent news, there have been countless small advances in well-manned laboratories that have gradually accumulated the evidence that supports much of the hope.

All these lines of research converge on the same mechanism that helps you eventually recover from a cold, or permits vaccination against a virus, or prevents a patient from borrowing a bidney from other humans when his own goes bad.

Indeed, this area of cancer research is closely tied to the barrier that prevents individuals from exchanging organs in transplant operations. The body is able to recognize the strangeness of something introduced into it and to mobilize defences against the intruder—except for, perhaps, the cancer cell.

HARD TO PROVE

It has not been shown, in the eyes of most researchers, that the human tumor cells harbor foreign characteristics that will enable the body to recognize them as enemies. Most believe the tumor cell is strange—but proving it is another matter.

The cancer cell is a normal cell running wild. Perhaps it is enough like a normal cell that it doesn't awaken the body's defence mechanisms.

Or perhaps some cancer cells have a way of subduing the body's defence mechanisms. Often a cancer patient dies of pneumonia or other infection—his body's resistance so lowered that he can't fight back.

Still, there are a few cases where cancers in humans suddenly and mysteriously shrink and disappear.

And there are cases, when the main or primary tumor is removed by surgery or destroyed by radiation, in which seed cancers spread from the main tumor unaccountably.

Or there are situations where seed cancers suddenly appear at other places in the body, long after the primary tumor has been removed. That, in itself, might suggest that the body's defence mechanism held the seed cancers in check for some time.

HAS PLAYED SOME ROLE

In all these cases, researchers believe, the body's immune mechanism has played a role, recognizing and fighting the cancer as an intruder.

Using immunity against disease is hardly new. By the time most Canadian and United States children are 5, they have been immunized against smallpox, polio and diptheria.

The procedures are many. The human may be given a live, but weakened, polio virus. He responds by producing antibodies — disease - fighting agents—against the virus. Even when he encounters more virulent polio viruses, the antibodies are effective against it. Sometimes, instead of live viruses, killed viruses or live but related viruses can be used to produce immunity.

The body has a spectrum of disease-fighting agents. Antibodies flow freely in the blood stream, produced by certain cells. Then there are apparently other disease-fighters directly associated with cells. Lymphocytes—a type of white blood cell—carry disease-fighting equipment. The body even has some specialized cells that actually devour some foreign matter that invades.

ARE PROTEIN MATTER

Antibodies themselves are specially designed bits of protein which can fit onto foreign protein, neutralizing it.

Foreign material that stimulates antibody production is called an antigen.

In the case of viruses, for instance, the body's immune mechanism recognizes "virus particle by antigens in its protective protein coat—and forms antibodies to lock the virus in its coat and prevent it from infecting a cell.

Research has shown that viruses that cause cancer in animals produce certain characteristics on the animal tumor cell membrane that the body can recognize as antigens.

But the proof is difficult, and recent attempts to show the same holds true for human tumors are being anxiously followed.

A NEW TACT

The proof that antibodies can be stimulated by cancer cells is fairly new. In 1953, researchers found they could make a mouse immune to a chemically-induced tumor by first transplanting a tumor from a related mouse, then surgically removing it. The mouse exposed to the tumor transplant for a period was then resistant to further attempts to transplant that same kind of tumor.

Other researchers have learned to play tricks with antigens in animals—and stimulate antibodies against cancer.

For instance, one virus was known to cause leukemia in the newborn of a certain inbred family of white mice. A few months after inoculation the baby white mice developed leukemia. Adult white mice of the same family could then be given the leukemia by injecting them with leukemic cells from the new-born mice.

The same virus could be used to produce leukemia in a different mouse family—a black mouse. But when leukemic cells from the black mice were injected into adult white mice, the white mice rejected them because their immunity systems recognized the black mouse leukemic cells as foreign, coming from mice that were genetically different.

PRODUCED NOTHING

Weeks later, the researchers took the same white mice that had rejected the black mice leukemia cells and injected them with leukemia cells from white mice. Normally, these leukemia cells would have produced leukemia in the white mice—but they didn't.

Receiving the genetically different leukemia cells had stimulated the white mice to produce defences against such cells and those defences were effective against leukemic cells from their own family.

These experiments suggested that tumors might be dealt with by immunological techniques. But the question persists:

Can you demonstrate that human tumors also are identified by the body as foreign intruders? Do they also possess antigens that would stimulate the body to produce antibodies against cancer?

Is there something in common between various kinds of tumors that would awaken the body's defences? Or is each tumor different?

The search for the answers is under way.

1967 (July 13) - LEDERBERG article

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The Age (Melbourne, Victoria, Australia) • 13 Jul 1967, Thu • Page 10

SCIENCE AND MAN

Dr. Joshua Lederberg

Artificial evolution

SOMATIC hybridization of tissue cells has been the subject of previous comment in this column.

We turn now to some recent findings having great interest in theoretical biology.

They represent the work of several laboratories, notably that of Professors Henry Harris, of Oxford; Boris Ephrussi, of Paris, and Hilary Koprowski, of the Wistar Institute, Philadelphia, and have been reported in the Proceedings of the Royal Society of London and of the National Academy of Sciences here.

A better demonstration of the evolutionary continuum cannot be imagined than that cells of fish, birds, mice and men can be mixed in any combination and the chromosomes of each species will continue to function in the hybrid cells.

The fundamental cellular processes of DNA-replication, its transcription into RNA and the coding by RNA of essential proteins are therefore compatible among these species — in fact, must be very nearly identical.

This is not to say that a normal developmental process leading to a whole organism could be expected from such combinations.

Even within a species, this is too easily upset by minor quantitative changes in chromosome number.

We can, however, begin to think of experiments in artificial evolution on the grandest scale, at least on a cellular level.

It will be surprising if we fail to find cell hybrids between species as useful in medicine as animal and, especially, plant hybrids have been in agriculture.

Some of the most interesting experiments are preliminary but cogent attacks on problems of tissue differentiation, cancer and virus biology.

Cells of different tissue types can be fused, allowing rigorous questions to be asked concerning the mechanism whereby some cells behave as muscle, others as nerve and so on.

The most favorable experimental material has quantitatively measurable products specific to the tissue.

For example, melanoma is a tumor characterised by the formation of dense pigment, a property maintained in tissue cultures from single cells. Hamster melanoma cells were hybridised with various cell lines of the mouse.

The mouse hamster combination is a favorable one since the chromosomes of the parent species are very different in size and shape and each can be recognised in the hybrid.

The hybrid cells all failed to make pigment. This illustrates an active suppression of this biochemical capability of the hamster chromosomes. It corroborates an important theoretical principle of embryology and opens the way to further critical experiments on the mechanism of suppression — in particular, to explore the analogy with genetic repressors studied in microbes.

Similar results have been obtained with another highly differentiated tumor, the teratoma. This remarkable cell line has many of the potentialities for tissue organisation possessed by the primitive embryo.

It differs from the embryo mainly by its chaotic disorganisation and its unlimited growth. Hybrids of teratoma cells with other kinds of cells are still tumorous but have suppressed many of their tissue potentialities.

On the other hand, other qualities of tumor cells, and especially their quality as tumors, are often retained in cell hybrids. This shows that the cancerogenic quality itself is a positive attribute of the cell, not, as some have thought, merely the loss of certain restraining genes.

Some specific cell substances are also retained in amounts proportional to the proportion of corresponding chromosomes when hybrid cells are formed. These functions are therefore controlled from within the chromosome, not by some diffuse suppressor in the cytoplasm.

Since cell fusion can also occur within the intact animal, the possibility is raised that tumor spread and some more mysterious changes in tumors might result from it. The fact that certain viruses and chemicals can promote cell fusion also opens new routes for subtle effects of these agents in provoking tumors and other diseases.

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1967 (Oct 24)

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1968-07-21-the-sydney-morning-herald-pg-72-clip-viruses

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science today

When viruses cause cancer

THERE is growing evidence that when a living cell from the body of an animal is infected by a virus in such a way as to be transformed into a cancer cell, the genetic material of the virus, consisting of DNA, is incorporated into the chromosomes of the infected cell.

An ingenious experiment, which supports this suggestion but does not amount to conclusive proof, has been reported by three scientists.

They are Dr M. C. Weiss, of the Carnegie Institute, Washington, B. Ephrussi, of the Centre for Molecular Genetics near Paris, and L. J. Scaletta, of the Western Reserve University, Cleveland.

When human cells in tissue culture are transformed by a virus known as SV40, the genetic material of the virus induces the cells to produce a characteristic protein which behaves as an antigen.

Because cells transformed by the virus keep on producing antigen for several generations, it follows that the genetic material of the virus must somehow be maintained in the transgeneration to the next as the cells divide.

The two obvious possibilities are that DNA from the virus is integrated into the chromosomes of the transformed cell and that the DNA resides and replicates itself in the cytoplasm of the cell independently.

Dr Weiss and her colleagues have hit on a clever way of distinguishing between these alternatives. When human cells grown in test tubes are fused with cells from mice, both of which separately can support the growth of SV40 virus, the resulting hybrid cells normally lose the human chromosomes they are endowed with in about 100 generations, or a period of about several months.

The separate chromosomes from mice and human beings can be distinguished in the hybrid cells by their size and shape.

Dr Weiss and her colleagues have fused a mouse cell and a transformed human cell to see whether the resulting hybrid cells lose the ability to make antigen when they lose mammalian chromosomes in the usual way.

With luck, this experiment could show whether the loss of a particular human chromosome from the hybrid cell is followed by the loss of the power to make antigen, which would imply that the chromosome concerned is the one that carries the genetic material from the virus.

The result of the experiment, as it has been carried out, is that the loss of antigen occurs at the same time as the loss of human chromosomes from the hybrid cells.

This finding is compatible with the idea that genes from the virus are indeed integrated into the human chromosomes, but it has one puzzling feature. It seems that hybrid cells keep on making antigen until nearly all the human chromosomes are lost.

The question, therefore, is whether several copies of the genetic material from the virus are incorporated into several different human chromosomes, or whether the chromosomes that carry the extra genetic material tend to be the last.

Further experiments will be necessary to distinguish between these possibilities.

72 THE SUN-HERALD, JULY 21, 1968 72

1969 (Feb 16) - Human-Mouse cell hybrid

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1969-02-16-the-san-francisco-examiner-pg-2-chronicle-sunday-punch.jpg

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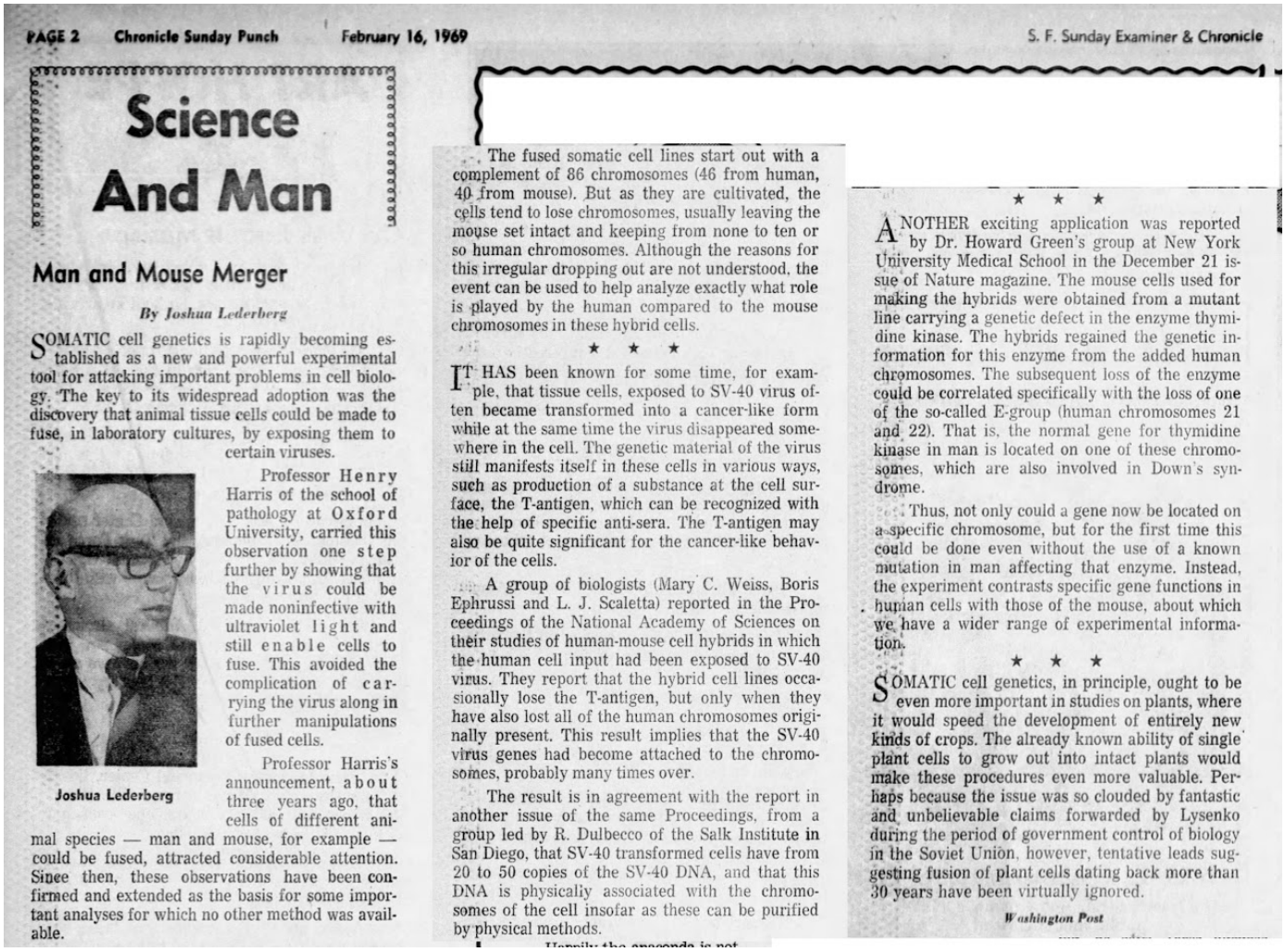

PAGE 2 Chronicle Sunday Punch February 16, 1969 S. F. Sunday Examiner & Chronicle

Science And Man

Man and Mouse Merger

By Joshua Lederberg

SOMATIC cell genetics is rapidly becoming established as a new and powerful experimental tool for attacking important problems in cell biology. The key to its widespread adoption was the discovery that animal tissue cells could be made to fuse, in laboratory cultures, by exposing them to certain viruses.

Joshua Lederberg

Professor Henry Harris of the school of pathology at Oxford University, carried this observation one step further by showing that the virus could be made noninfective with ultraviolet light and still enable cells to fuse. This avoided the complication of carrying the virus along in further manipulations of fused cells.

Professor Harris's announcement, about three years ago, that cells of different animal species — man and mouse, for example — could be fused, attracted considerable attention. Since then, these observations have been confirmed and extended as the basis for some important analyses for which no other method was available.

The fused somatic cell lines start out with a complement of 86 chromosomes (46 from human, 40 from mouse). But as they are cultivated, the cells tend to lose chromosomes, usually leaving the mouse set intact and keeping from none to ten or so human chromosomes. Although the reasons for this irregular dropping out are not understood, the event can be used to help analyze exactly what role is played by the human compared to the mouse chromosomes in these hybrid cells.

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IT HAS been known for some time, for example, that tissue cells, exposed to SV-40 virus often became transformed into a cancer-like form while at the same time the virus disappeared somewhere in the cell. The genetic material of the virus still manifests itself in these cells in various ways, such as production of a substance at the cell surface, the T-antigen, which can be recognized with the help of specific anti-sera. The T-antigen may also be quite significant for the cancer-like behavior of the cells.

A group of biologists (Mary C. Weiss, Boris Ephrussi and L. J. Scaletta) reported in the Proceedings of the National Academy of Sciences on their studies of human-mouse cell hybrids in which the human cell input had been exposed to SV-40 virus. They report that the hybrid cell lines occasionally lose the T-antigen, but only when they have also lost all of the human chromosomes originally present. This result implies that the SV-40 virus genes had become attached to the chromosomes, probably many times over.

The result is in agreement with the report in another issue of the same Proceedings, from a group led by R. Dulbecco of the Salk Institute in San Diego, that SV-40 transformed cells have from 20 to 50 copies of the SV-40 DNA, and that this DNA is physicaliy associated with the chromosomes of the cell insofar as these can be purified by physical methods.

Happily the anaconda is not

★ ★ ★

ANOTHER exciting application was reported by Dr. Howard Green's group at New York University Medical School in the December 21 issue of Nature magazine. The mouse cells used for making the hybrids were obtained from a mutant line carrying a genetic defect in the enzyme thymidine kinase. The hybrids regained the genetic information for this enzyme from the added human chromosomes. The subsequent loss of the enzyme could be correlated specifically with the loss of one of the so-called E-group (human chromosomes 21 and 22). That is, the normal gene for thymidine kinase in man is located on one of these chromosomes, which are also involved in Down's syndrome.

Thus, not only could a gene now be located on a specific chromosome, but for the first time this could be done even without the use of a known mutation in man affecting that enzyme. Instead, the experiment contrasts specific gene functions in human cells with those of the mouse, about which we have a wider range of experimental information.

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SOMATIC cell genetics, in principle, ought to be even more important in studies on plants, where it would speed the development of entirely new kinds of crops. The already known ability of single plant cells to grow out into intact plants would make these procedures even more valuable. Perhaps because the issue was so clouded by fantastic and unbelievable claims forwarded by Lysenko during the period of government control of biology in the Soviet Union, however, tentative leads suggesting fusion of plant cells dating back more than 30 years have been virtually ignored.

Washington Post

1969 (April)

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Los Angeles Times

★ THURSDAY MORNING, APRIL 3, 1969 Part II—7

Chromosomesmanship May Map Way to Understanding Cancer

BY IRVING S. BENGELSDORF, Ph.D.
Times Science Writer

Animals are made up of microscopically tiny units called cells. Each cell contains a centrally located nucleus inside of which are slender threads called chromosomes. Chromosomes consist of both proteins and deoxyribonucleic acid (DNA). Just as a strand of pearls is made up of individual pearls, one following another, the DNA of chromosomes are strands of individual genes—the units of heredity received from the previous generation.

So, the genes that determine whether a particular cell is that of a mouse, rat or human are strung together to form the DNA of that cell's chromosomes. The normal number of chromosomes within a cell depends upon the species of life—mouse cells have 40 chromosomes, rat cells have 42 chromosomes, human cells possess 46 chromosomes, etc.—with each chromosome being a string of several thousand individual genes.

Take some mouse cells and place them into a glass dish that contains food for them to grow and divide. Now take some rat cells and add them to the same dish. Every once in a while, a mouse cell and rat cell will combine or fuse together to form a new cell that has a single nucleus that contains both mouse and rat chromosomes. Such hybrid cells, with mouse-rat chromosomes in the nuclei, can grow and divide for many generations.

★

DNA-genes carry information that provide instructions to cells how to produce a large variety of materials called enzymes. An example of an enzyme is a substance known as lactose dehydrogenase. (L D H). Thus, there are genes in mouse chromosomes that carry information how to produce mouse-LDH. And there are genes in rat chromosomes that bear information how to produce rat-LDH.

Although mouse-LDH and rat-LDH perform the same functions in mouse and rat cells, respectively, the two differ enough from each other so that modern analytical techniques can detect one in the presence of the other. Since hybrid mouse-rat cells contain both mouse and rat chromosomes, one should detect both mouse-LDH and rat-LDH in such hybrid cells. Indeed, this is observed.

But this is not all. LDH, itself, is made up of four sub-units. And in hybrid mouse-rat cells one not only finds both pure mouse-LDH made up of four mouse LDH-subunits and pure rat-LDH made up of four rat LDH-subunits, but also "hybrid-LDH" made up of both mouse LDH-subunits and rat LDH-subunits! Not only is the cell a hybrid, but so can be its enzymes.

About a year ago, scientists at New York University reported that by growing mouse cells (40 chromosomes) and human cells (46 chromosomes) in the same dish they could isolate hybrid cells with mouse-human chromosomes in the nucleus.

As these mouse-human hybrid cells divide, they "spit out" human chromosomes. Thus, in cells 20 generations after the mouse and human cells originally had fused together, almost all the mouse chromosomes are present, but only 2 to 12 human chromosomes, of the original 46, remain. Eventually, all human chromosomes are ejected, from mouse-human hybrid cells as they continue to divide.

But, this human chromosome-ejecting behavior can be useful in pinpointing the location of specific human genes on specific human chromosomes. Thus, mouse-human hybrid cells can be prepared from normal human cells and from abnormal mouse cells that cannot produce an enzyme called thymidine kinase (TK). So, the only supply of TK in such hybrid cells would have to come from the TK-genes carried by human chromosomes.

One waits until all but one of the human chromosomes have been ejected from a mouse-human hybrid cell and then places this cell into a dish that contains a specific chemical that will not permit cells to grow unless TK is present. So, if the hybrid cell dies, then the single remaining human chromosome does not carry the TK-gene. But, if the hybrid cell survives, then TK must be present, derived from the TK-gene carried by the lone human chromosome.

In all cases where the hybrid cell survives, the human chromosome present is the same. So, we now know which human chromosome bears the specific information to produce TK-enzyme.

In the April issue of Scientific American, Drs. B. Ephrussi and M. C. Weiss of the National Center for Scientific Research in France, both pioneers in the study of hybrid cells, write, "It appears likely that within a few years, a number of human genes will have been assigned to specific chromosomes."

Knowledge of what a specific gene does, and on which chromosome it is located, can provide new insight into the study of inherited diseases, cancer, growth, etc. Like explorers of old, scientists now are making maps of previously unknown territory.

1969 (Oct 23)

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Combination cells provide maps of unmappable genes

By BARBARA J. CULLITON
Science Service Writer

SAN FRANCISCO — You can't cross a man and a mouse, can you?

Well, in a sense, yes, you can.

And when you've done it, you are on the way to solving such problems as whether a given couple will produce babies with inherited defects and, perhaps, how to reduce the size of cancerous tumors.

Further, you can begin to map the exact position of the heredity-carrying genes on their chromosomes. The work, just begun, should, in the next five years, provide an atlas of human genes, showing at least approximately where each one sits on the chromosome that carries it. Knowing the location is a necessary first step to dealing with them, and the genetic traits they control.

No one yet knows what other problems such an atlas would help solve, but, as with any new technique in science, it seems inevitable that such a tool can be applied to the solution of questions as yet unasked.

Dr. Frank H. Ruddle of Yale University, who predicts the assembling of the gene atlas by 1974, reports the finding of the location of one particular gene—the one that makes the body produce an enzyme called LDH. This substance helps in the digestion of milk. Enzymes are the catalysts that break down and make useful virtually all the chemicals the body needs to function. They are a key to most physiological operations.

To assign a gene a place in its micro-world, Dr. Ruddle and his colleagues had to go a long way around.

First, they crossed human cells with mouse cells, following a technique devised by Dr. Howard Green of New York University.

Both kinds of cells are brought together in a nutritious jelly, where they live about four days.

No one knows exactly how, but in the jelly, some of the mouse cells fuse with some of the human cells, becoming hybrid mouse-human cells.

The scientists can then kill off the parent cells, leaving only the combination cells.

These cells have all the mouse chromosomes, and only a portion of human ones — usually less than 12. But different cells may carry dfferent combinations of human genes.

Allowing these cells to reproduce themselves gives colonies of virtually identical man-mouse cells, with each colony slightly different in terms of the human genes involved.

Such cells should be able to produce any enzyme a mouse can, but only a few that appear in humans.

And, since the LDH in mice can be distinguished from human LDH, a researcher can find whether a given cell has the human gene that causes the enzyme to be made.

Further, since mouse and human chromosomes can be readily identified, a series of tests with different groupings of the human genes can, by a long and arduous process of elimination, pinpoint the one that is making the LHD — or, eventually, any other enzyme.

While chromosome mapping is the immediate aim of this type of research, Dr. James H. Conover of the Mount Sinai School of Medicine in New York suggests it may eventually be important in genetic counseling.

If scientists know which genes code for specific enzymes and where they are located, they could test for their presence or absence in the cells of would be parents and be able to tell them whether they are likely to bear a child with a genetic defect.

1969 (Dec 11) -

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1969-12-11-austin-american-statesman-pg-b-27-clip-atlas-human-genes

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Thursday, Dec. 11, 1969 The Austin Statesman Austin, Texas—Page B27

Work Begun on Atlas of Human Genes; Mapping of Their Position Is Forecast

By BARBARA J. CULLITON
Science Service Writer

SAN FRANCISCO — You can't cross a man and a mouse, can you?

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Further, you can begin to map the exact position of the heredity-carrying genes on their chromosomes. This work, just begun, should, in the next five years, provide an atlas of human genes, showing at least approximately where each one sits on the chromosome that carries it. Knowing the location is a necessary first step to dealing with them, and the genetic traits they control.

No one yet knows what other problems such an atlas would help solve, but, as with any new technique in science, it seems inevitable that such a tool can be applied to the solution of questions as yet unasked.

Dr. Frank H. Ruddle of Yale University, who predicts the assembling of the gene atlas by 1974, reports the finding of the location of one particular gene — the one that make the body produce an enzyme called LDH. This substance helps in the digestion of milk. Enzymes are the catalysts that break down and make useful virtually all the chemicals the body needs to function. They are a key to most physiological operations.

To assign a gene a place in its micro-world, Dr. Ruddle and his colleagues had to go a long way around.

First, they crossed human cells with mouse cells, following a technique devised by Dr. Howard Green of New York University. Both kinds of cells are brought together in a nutritious jelly, where they live about four days.

No one knows exactly how, but in the jelly, some of the mouse cells fuse with some of the human cells, becoming hybrid mouse-human cells.

The scientists can then kill off the parent cells, leaving only the combination cells.

These cells have all the mouse chromosomes, and only a portion of human ones — usually less than 12. But different cells may carry different combinations of human genes.

Allowing these cells to reproduce themselves gives colonies of virtually identical man-mouse cells, with each colony slightly different in terms of the human genes involved.

Such cells should be able to produce any enzyme a mouse can, but only a few that appear in humans.

And, since the LDH in mice can be distinguished from human LDH, a researcher can find whether a given cell has the human gene that causes that enzyme to be made.

Further, since mouse and human chromosomes can be readily identified, a series of tests with different groupings of the human genes can, by a long and arduous process of elimination, pinpoint the one that is making the LHD — or, eventually, any other enzyme.

While chromosome mapping is the immediate aim of this type of research, Dr. James H. Conover of the Mount Sinai School of Medicine in New York suggests it may eventually be important in genetic counseling.

If scientists know which genes code for specific enzymes and where they are located, they could test for their presence or absence in the cells of would-be parents and be able to tell them whether they are likely to bear a child with a genetic defect.

In another vein, two British researchers recently proposed that hybrid cells might be of use in fighting cancer. Drs. John Watkins and Louise Chen of Oxford University reported that when they hybridized mouse tumor cells with hamster cells and injected the hybrids back into the cancer-stricken mouse, its tumor regressed. Presumably, the hamster cells stimulated an attack by the mouse's natural defenses against foreign tissue that was strong enough to wipe out both the mouse tumor and the hamster cells. Participants at the San Francisco meeting of the American Society of Human Genetics termed this approach "fascinating," but cautioned that a large number of experiments will have to be completed before it is possible to judge whether it is really practical.

Dr. Conover is also working on mosquito-human hybrid cells which, he suggests, should induce an even stronger response because the species difference is so great.

DR. FRANCIS H. RUDDLE OF YALE
Professor of biology (Science Service Photo)

1972 (Sep 15)

https://www.newspapers.com/image/561648196/?terms=%22human%20mouse%20hybrid%22&match=1

1972-09-15-st-joseph-news-press-missouri-pg-7-a

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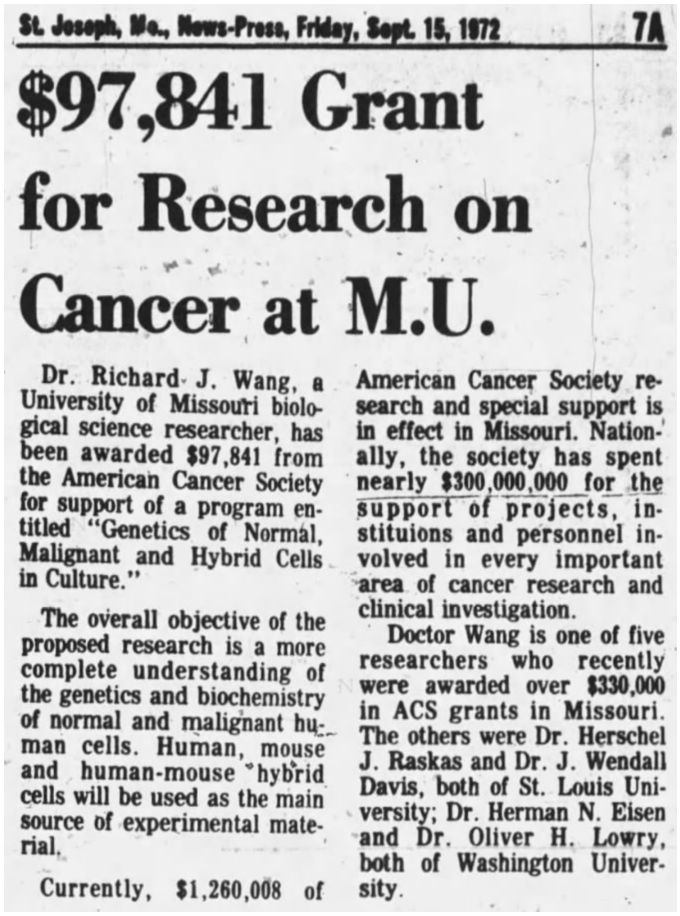

St. Joseph, Mo., News-Press, Friday, Sept. 15, 1972 7A

$97,841 Grant for Research on Cancer at M.U.

Dr. Richard J. Wang, a University of Missouri biological science researcher, has been awarded $97,841 from the American Cancer Society for support of a program entitled "Genetics of Normal, Malignant and Hybrid Cells in Culture."

The overall objective of the proposed research is a more complete understanding of the genetics and biochemistry of normal and malignant human cells. Human, mouse and human-mouse hybrid cells will be used as the main source of experimental material.

Currently, $1,260,008 of American Cancer Society research and special support is in effect in Missouri. Nationally, the society has spent nearly $300,000,000 for the support of projects, instituions and personnel involved in every important area of cancer research and clinical investigation.

Doctor Wang is one of five researchers who recently were awarded over $330,000 in ACS grants in Missouri. The others were Dr. Herschel J. Raskas and Dr. J. Wendall Davis, both of St. Louis University; Dr. Herman N. Eisen and Dr. Oliver H. Lowry, both of Washington University.

1973 (April 6) - NYTimes - "Human Blood and Marrow Cells Produced Inside a Living Mouse"

https://www.nytimes.com/1973/04/06/archives/human-blood-and-marrow-cells-produced-inside-a-living-mouse-human.html

1974-04-06-nytimes-human-blood-and-marrow-cells-produced-inside-living-mouse-human

April 6, 1973, By Harold M. Sch1vieck Jr. Special to The New York Times

WASHINGTON, April 5 — Scientists at Brookhaven National Laboratory have developed way of producing human blood and blood - forming cells inside a living mouse.

An announcement today from the laboratory at Upton, L.I., said the research makes it possible, for the first time, to duplicate the living, continuously functioning system of human blood cell reproduction outside the human body.

The method, is said to offer important possibilities for studying the complex process of blood formation in health and disease and for monitoring the effects of drugs. Since bone marrow is the main blood - forming tissue, the research might ultimately lead to a source of marrow for livesaving transplants. This is now only a theoretical possibility.

The blood cell formation takes place inside a small coinshaped chamber that is implanted inside the animal's abdominal cavity. The sides of the chamber are filters of extremely fine pore. This allows nutrient fluids from the animal to pass in and out, but prevents the cells inside from escaping and prevents the animal's cells from invading the chamber.

In the experiments, Dr. Eugene P. Cronkite, chairman of the laboratory's medical department explained by telephone today, only a small number of human bone marrow cells are put in the chamber. The number ranges between 1,000 and a million.

The chamber is then implanted in the mouse where the cells are allowed to grow for several weeks. At first, the total number of cells dwindles as the mature ones die, he said. Later the total grows to as many as 10 million and they differentiate into all the types found in normal marrow, the scientist said.

This includes not only the several different kinds of white blood cells, including scavenger cells and other immunologically active types, but also some red blood cells. Among the immunologically active cells are a type called plasma cells, which are normally responsible for generating protective antibodies.

Dr. Cronkite said they appear to be producing antibodies in the experiments at Brookhaven, but whether these are directed against something from the mouse or from the cell's original human environment is unknown.

The mouse is prevented from producing antibodies against the contents of the chamber by heavy doses of radiation given before the experiments begin. During the research, so far, mouse cells have been grown in chambers implanted in mice; rabbit cells in rabbits; goat cells in goats and human cells in mice.

Dr. Cronkit said other methods of growing bone marrow cells under artificial conditions were known, and used at many research centers, but that in general, these tended to produce only a few types of white cells and no red cells. Furthermore, unlike the system in use at Brookhaven, he said, the colonies of cells are not so easily studied during the process of growth and differentiation.

Several laboratories have also developed artificial substitutes for red blood cells, but research in this area is entirely distinct from the studies at Brookhaven on natural components of blood and the cells that form it.

Tool for Analysis

One of the advantages cited for the system is that the chamber can be removed at any time for study of its contents. Thus, the blood - formation process can be analyzed in some detail.

The scientists at Brookhaven have already used the system to grow cells from patients suffering from leukemia, a cancer of the blood - forming tissues, and hope that it may prove possible to test the effectiveness of drugs against such cells growing in the chambers.

Perhaps more important in the long run, they hope to study in detail the extremely complex process of blood formation itself as well as the derangements of the process that occur in leukemia and other diseases.

The research at Brookhaven is supported by the Atomic Energy Commission. It has been in progress since 1969, the announcement, said today, when Dr. Arne Boyum, a toxicologist from the Norwegian defense research establishment come to Brookhaven as a research collaborator in residence, bringing the basic idea with him.

Although Dr. Boyum returned to Norway more than two years ago, he is still an active participant in the studies, the announcement said. Other current collaborators with Dr. Cronkite in the research are Drs. Arland L. Carsten and Gundabhatktha Chikkapa. Two technical reports were published last year in an issue of Blood, a scientific journal, Dr. Cronkite said. Progress in the research has also been reported at scientific meetings.

A long - range goal of the studies is a system that would allow hone marrow to be readily produced for transplantation. This cannot be done with the present system.

1977 (June 26)

https://www.newspapers.com/image/394202769/?terms=%22human%20mouse%20hybrid%22&match=1

1977-06-26-the-independent-record-helena-montana-pg-32

https://drive.google.com/file/d/1iL3-L9WMINccabXcQSGp-M8WdtJBl1k9/view?usp=sharing

1977-06-26-the-independent-record-helena-montana-pg-32-clip-cancer-sleuths

https://drive.google.com/file/d/1zaBQUe4ccexrnad-kok2u7fxO7GHzfXp/view?usp=sharing

Discovery of cell links excites cancer sleuths

N.Y. Times News Service

NEW YORK — Scientists at the University of Miami have found evidence that certain types of cells grown in a laboratory become cancerous, multiplying uncontrollably, when they lose the ability to form tiny channels linking them to neighboring cells.

Normally, adjoining human and animal cells are interconnected by such channels, or membrane junctions, big enough to permit the exchanle of smaller molescules but not proteins and other larger cell constituents.

Several types of cancer cells, however, lack the ability to form such channels. The Miami researchers have speculated that this prevented the cells from sharing some regulator substance that would have kept their growth within normal limits.

ALTHOUGH no such substance is known and nothing has yet been found to pass through the channels under natural conditions, the finding of a link between cancerous growth and the inability to make channels has led the researchers to suggest that they have discovered the first correlation between an abnormality of cell structure and the growthof tumors.

Much additional research must be done to establish whether the abnormality is, in fact, a cause of cancer and not just coincidental. Even then, the finding would offer no immediate help in the prevention or treatment of cancer.

It would, however, be of great significance in revealing a fundamental mechanism of normal cell life that can go awry and lead to cancerous growth. Most cancer researchers agree that, although there are many causes of cancer, all have the effect of removing or overriding the cells' controls on their own ability to multiply.

The Miami finding is the latest development in a 14-year research effort led by Dr. Werner R. Loewenstein, chairman of the department of physiology and biophysics at the University of Miami School of Medicine.

LOEWENSTEIN is credited with the discovery that membrane junctions are capable of transmitting electrical currents from cell to cell and of passing small molecules, such as those of marker dyes injected into individual cells by scientists.

Although no function for the junctions has been established, it is theorized that they are channels by which cells exchange with one another the chemical or electrical information believed to be necessary for them to work in concert.

Loewenstein believes a better understanding of the membrane junctions may shed light on such questions as how cells in an embryonic liver, for example, know when to stop multiplying so that the liver does not fill up the entire abdomen. Somehow, the cells know when the organ has reached its proper size and stop multiplying.

When a portion of the liver or other organ is damaged, however, the surviving cells somehow learn that they are to resume multiplying to replace the lost cells. Once the damage is repaired, they stop again.

IN BACTERIA, it is known that the genes, the molecules bearing the coded instructions for cell activities, can be switched on and off by relatively small molecules within the cell. Similar regulator substances have not been found in higher organisms, but Loewenstein and others suspect they exist.

There is evidence from studies of developing embryos that the process by which undifferentiated cells take on specialized shapes and functions — as a liver cell or a muscle cell, for example — involves the apparent diffusion of substances from one cell to another.

The experiments linking the membrane junctions to cancer were done with cells from a common type of mouse tumor. These cells, like those of some forms of cancer, lack the ability to form membrane junctions, or channels.

According to the theory, such a cell would be unable to learn that there were any cells like it nearby. It would behave as if its neighboring cells had been destroyed, and would keep multiplying indefinitely.

Loewenstein and his colleague at Miami, R. Azarnia, took such tumor cells and fused them, one by one, with normal human cells that could form membrane junctions, producing human-mouse hybrid cells. Under laboratory conditions, such artificial hybrids can live and reproduce, making use of chromosomes from both species. Cell hybrids are used routinely in several areas of research.

In the Miami experiments, the hybrid cells inherited the normal cell's ability to form membrance junctions, and did so within minutes after contact with other cells. When the tumor cells were injected into mice, they produced cancerous tumors, but when the hybrid cells were similarly injected, they did not.

ALTHOUGH human-mouse hybrid cells reproduce themselves at normal intervals, they have a tendency to lose one or more human chromosomes every so often as successive generations of cells are produced. Eventually, the hybrid reverts to being a mouse cell.

Loewenstein tested successive generations, both for their ability to cause tumors and to form the channels to other cells. He found that, as soon as the hybrid lost the chromosome that enabled it to make the channels, the cell also became cancerous.

"In every case," the scientist wrote in the latest issue of The Journal of Membrane Biology, "reversion to the channel defect went hand in hand with reversion to the growth defect, just as, in the early-generation hybrids, correction of the channel defect went hand in hand with correction of the growth defect."

This finding is not proof that the loss of the membrane junctions was the actual cause of the cancerous growth. It may be that the chromosome containing the channel-forming instructions also contains other genes that keep cell multiplication at a normal rate. When the chromoso is lost, both results would appear simultaneously.

Even if the channel defect is eventually proved to be the fact or that makes some cells grow into tumors, Dr. Loewenstein notes that there will certainly remain other unknown mechanisms by which cancer can start. Some types of cancer cells, for example, are able to form perfectly good membrane junctions. In these cases, the defect could be in the ability to form the signal molecule or to receive it, or in the cell's ability to respond to the signal.

There may also be entirely different systems for regulating cell growth that can be disrupted by carcinogenic chemicals, viruses, radiation and other known causes of cancer.

1980s ????? No newspaper articles on "humanized mice" or "human mouse hybrid" ?

1981

https://www.nytimes.com/1981/07/03/us/rare-cancer-seen-in-41-homosexuals.html

1987 (Oct) "Integrated Genetics, Inc. "

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1988 (April 13) - NYTimes : "Harvard Gets Mouse Patent, A World First"

https://www.nytimes.com/1988/04/13/us/harvard-gets-mouse-patent-a-world-first.html

1988-04-13-nytimes-harvard-gets-mouse-patent.pdf

By Keith Schneider, Special To the New York Times / April 13, 1988

Calling it a "singularly historic event," the United States today issued to Harvard University the world's first patent for a higher form of life, a mouse specially developed by researchers at the Harvard Medical School through techniques of genetic manipulation.

The United States Patent and Trademark Office issued patent No. 4,736,866 for "transgenic nonhuman mammals" developed by Dr. Philip Leder, a 53-year-old geneticist at Harvard Medical School, and Dr. Timothy A. Stewart, 35, a former Harvard researcher who is a senior scientist at Genentech Inc., a leading biotechnology company in South San Francisco.

The two scientists isolated a gene that causes cancer in many mammals, including humans, injected it into fertilized mouse eggs and developed a new breed of genetically altered mice. An Effective Research Model

Because half the females develop cancer, the altered breed serves as a more effective model for studying how genes contribute to cancer, particularly breast cancer, Dr. Leder said.

Other experts said the invention presented scientists with a more efficient biological system for testing new drugs and therapies to treat cancer, and for determining whether chemicals and other toxic substances found in food or the environment are harmful.

The announcement elated researchers and biotechnology industry executives who said it would attract more investments for research and lead to safer and more effective biological inventions in medicine, agriculture, forestry and other industries.

But critics, including several powerful members of Congress, protested the decision, arguing that a handful of officials appointed by the Reagan Administration had in a single act determined a new and important public policy without a public debate and in defiance of a request from Congress to delay the action.

Donald J. Quigg, the Assistant Secretary of Commerce, who is also Commissioner of Patents, said approving the animal patent was a logical and lawful extension of previous decisions by the 198-year-old agency. In 1930 the first patent for a crop plant was approved. In 1980 the Supreme Court ruled that scientists could patent genetically altered microorganisms. A year ago the Patent Office announced that it would allow inventors to patent new forms of animal life created by gene-splicing and other biological technologies.

Mr. Quigg said today that the 13th Amendment prevented the patenting of human beings. Patent attorneys said, however, that portions of the human genetic code, including specific genes, will be patentable. 'Can Anyone Say This Is Wrong?'

Mr. Quigg said the potential of the altered mice to hasten the development of treatments for cancer was an important factor in granting Harvard the first animal patent, which allows the inventor the exclusive right to use a product for 17 years. "I know I'm not supposed to get on a soapbox," he said in an interview today, "but how can anybody say this kind of development is unethical or wrong?"

But some members of Congress protested, and in a letter to be sent later this week after more signatures are sought they called on the Patent and Trademark Office to refrain from issuing another animal patent. The office said 21 patent applications for genetically engineered animals are pending.

Both the House and Senate are considering legislation that would impose a moratorium on approving patents for genetically altered animals. It would be in force until Congress has more thoroughly considered a range of economic and moral issues raised in the last year by farm groups, religious leaders, animal welfare organizations and environmental groups. Quickening Pace in Field

The Patent Office decision recognizes the quickening pace of developments in biotechnology, particularly in creating and duplicating new forms of animals. Along with genetically engineered pigs, cattle and sheep that have been produced in laboratories across the country, scientists are also beginning to transform aquatic species.

Critics found today's action cause for concern. Jeremy Rifkin, president of the Foundation on Economic Trends in Washington, who is a leader of the coalition that seeks to halt animal patents, said: "For the first time, the Patent Office has formulated a public policy and taken the authority of Congress in their own hands."

Other experts saw dangers if Congress interferes in the Patent Office's procedures. Robert P. Merges, a patent specialist at Columbia University School of Law, said, "Is Congress now going to say, for the first time, that here's a new technology that we're going to delay because we're going to presume it's bad until it's proven good?"

1988 (Sep 15) - NYTimes : "Human Immune Defenses Are Transplanted in Mice"

https://www.nytimes.com/1988/09/15/us/human-immune-defenses-are-transplanted-in-mice.html

1988-09-15-nytimes-human-immune-defenses-are-transplanted-in-mice.pdf

By Harold M. Schmeck Jr. /= Sept. 15, 1988

Scientists have transplanted the major elements of the human immune defense system into living mice, a stunning achievement that should provide a powerful new tool for medical research.

Describing the new experiments as "exciting" and "incredible," leading researchers predicted that the technique will have many important uses, including the study of AIDS and leukemia and the testing of treatments and vaccines. The altered mice are also expected to give scientists, for the first time, a direct way of studying the development of the human immune system and its functions.

The mice lack natural immune defenses of their own, but circulating in their blood is the full spectrum of human white blood cells, which play key roles in warding off infection and produce human antibodies in response to infectious agents. Work of Separate Teams

These human attributes have been produced in mice by two research teams working independently of each other and using different methods. Although the research is considered highly promising, it is still in an early stage at both institutions involved.

Researchers at the Medical Biology Institute, an independent research center in La Jolla, Calif., reported today in the journal Nature that they had produced mice that had the major functional elements of the human immune defenses. They did this by injecting the animals with purified lymphocytes, immune defense cells, from normal human adults. The cells, injected into the abdominal cavity, reproduced and migrated throughout the blood and lymphatic systems.

Dr. Donald E. Mosier, leader of the research team, said the human immune defenses had persisted in some mice for as long as eight months so far. When such animals were injected with tetanus toxoid, used to produce immunity against tetanus bacteria, the animals developed human antibodies against the bacteria. The experiments also produced evidence of activity by the other fundamental arm of the human immune defenses, cell mediated immunity, which is mainly produced by two classes of cells: T cells and B cells. Surprisingly Simple Technique

The method of transplanting the immune defenses was relatively simple, but the scientists had hardly expected it to succeed. The normal expectation was that the transplanted human tissue would attack the mouse's body in a process, graft-versus-host disease, that is often fatal. Although there was some graft-versus-host disease, it was less destructive than expected.

The other research team, led by Dr. Joseph M. McCune and Dr. Irving Weissman of Stanford University, succeeded in a much more formidible task: transferring the entire human immune defense system into mice by transplanting human fetal tissues that are responsible for the development of the complete human blood-forming and immune system.

The team has developed a colony of more than 200 of the mice that have human immune defenses, according to a report that will be published in the journal Science. The scientists are not yet certain how complete the transplanted defenses are. But mice that would ordinarily die within three to four months because they lacked immune defenses, became healthy and have survived as long as 15 months to date. Among other things, they withstood pneumocystis carini infections, a major cause of death among AIDS patients.

The Stanford researchers will report on their experiments in next week's issue of Science, but the editors of that journal permitted the results of the study to be described in advance so that the two reports could be made public at the same time. Use of Fetal Tissue

The scientists at Stanford injected the mice with small amounts of fetal liver and lymphatic tissue as well as fetal thymus and spleen; all of them tissues vital to formation of blood and immune defenses. The tissues were obtained after abortion with the consent of the women involved. The use was approved by Stanford panels that regulate human and animal research. The work did not violate any Federal rules, Dr. Weissman said.

Only small amounts of tissue were needed and they were obtained before the current moratorium on Federal support for fetal research. The scientists at Stanford received support from the National Institutes of Health for the mouse research.

Crucial to both research teams was a breed of mice called SCID, for severe combined immune deficiency, that are almost totally lacking in immune defenses of their own. Because the animals lacked defenses, they did not reject the foreign human tissues. The breed of mice was discovered five years ago by Melvin J. Bosma and Gayle C. Bosma, a husband and wife research team at the Fox Chase Cancer Center in Philadelphia.

Dr. Anthony S. Fauci, director of the National Institute of Allergy and Infectious Diseases, in Bethesda, Md. said the research by both groups was important. Dr. Fauci, an expert on both immunology and AIDS, described the experiments as "very exciting work" that "has major potential for being able to establish a small-animal model of the human immune system." Possible Insight on AIDS

For example, he said, the mice may allow direct step-by-step studies of the manner in which the AIDS virus attacks cells of the human immune defense system. Such animals may also prove valuable for testing new drugs and new vaccines for AIDS and other important diseases.

At present there is no animal in which the acquired immune deficiency syndrome produces precisely the same effects that it does in humans. Chimpanzees, the closest animals to humans that can be infected with the HIV virus, are in short supply and do not develop an equivalent disease to AIDS. Whether the mice will do so is not yet known, but the scientists believe they will at least be able to follow the progression of the virus infection on cells of the human immune system in a direct manner that has not previously been possible. Research Termed Remarkable

In a commentary written for Science, Dr. George D. Yancopoulos and Dr. Frederick W. Alt, of Columbia University, described the research at Stanford as "remarkable." They said animals in which the immune defenses have been manipulated in various ways permit many important studies of the way in which the immune system functions.

"The Weissman group now report remarkable experiments that appear to push this system to its incredible but logical extreme," they said.

Authors of the report from Stanford with Dr. Weissman and Dr. McCune were Dr. Reiko Namikawa, Dr. Hideto Kaneshima, Dr. Miriam Lieberman of Stanford and Dr. Len Shultz of the Jackson Laboratory in Bar Harbor, Me.

Authors of the Nature article with Dr. Mosier are Dr. Richard J. Gulizia and Dr. Darcy B. Wilson of the Medical Biology Institute and Dr. Stephen M. Baird of the Veterans Administration Medical Center in La Jolla.

1990 (Oct 30)

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The Ottawa Citizen (Ottawa, Ontario, Canada) • 30 Oct 1990, Tue • Page 1

Scientists test drugs on 'humanized mice'

By Sandra Blakeslee
The New York Times

In a series of bold experiments, scientists have created laboratory mice with tiny human organ structures — lungs, intestines, pancreases, lymph nodes, thymuses, livers and immune systems. The purpose is to study the viruses of human diseases in living human tissues.

The animals, whose organ tissues are derived from those of human fetuses, provide a singular opportunity to gauge the effectiveness of various antiviral drugs. The mice have been successfully infected with the AIDS virus and with two cancer viruses that cause leukemia.

Researchers plan next to infect the mice with cytomegalovirus, which can damage the brains of unborn children. After that will come infections with the viruses of influenza, chronic infant diarrhea, genital warts and hepatitis. Because these viruses attack only humans, it has so far been impossible to study them in animals.

The organ structures are not miniature carbon copies of adult organs but contain complete structural subunits of each organ and carry out the organ's normal functions in duplicate with the mouse's own.

The novel mice were developed by Dr. Michael McCune, an immunologist who treats AIDS patients at San Francisco General Hospital.

A second kind of mouse, carrying adult human blood cells, has been developed by Dr. Donald Mosier, an immunologist from the Medical Research Institute, a private research laboratory in La Jolla, Calif.

Both scientists announced their inventions two years ago and have made strides since then in developing the mouse-human hybrids.

Because human fetal tissues are being implanted into animals and not humans, McCune and his colleagues are not subject to the U.S. federal ban on the use of such tissues in medical research.

The ban, imposed two years ago by the Department of Health and Human Services, was intended to prevent women from having abortions for the sake of donating fetal tissue to people, but the regulations make no mention of mice, said McCune, whose work has been financed largely by the National Institutes of Health.

1990 (Oct 30) - NYTimes - "New Medical Research Tool: Human Tissues in Lab Mice"

https://www.nytimes.com/1990/10/30/science/new-medical-research-tool-human-tissues-in-lab-mice.html

1990-10-30-nytimes-new-medical-research-tool-human-lab-mice.pdf

By Sandra Blakeslee / Oct. 30, 1990

In a series of bold experiments, scientists have created laboratory mice with tiny samples of human organs growing in them: lungs, intestines, pancreases, lymph nodes, thymuses, and livers. The purpose is to study the viruses of human diseases in living human tissues.

The mice provide a singular opportunity to gauge the effectiveness of various antiviral drugs. They have been successfully infected with the AIDS virus and with two cancer viruses that cause leukemia.

Researchers plan next to infect the mice with cytomegalovirus, which can damage the brains of unborn children. After that will come infections with the viruses of influenza, chronic infant diarrhea, genital warts and hepatitis. Because these viruses attack only humans, it has been impossible hitherto to study them in animals. Not Carbon Copies

The organ structures are not miniature copies of adult organs but contain complete sets of cells that make them able to function as well as the organs of a newborn baby.Thus, each organ, about the size of a pencil eraser, can carry out its normal function in tandem with the mouse's own organs.

The novel mice were developed by Dr. J. Michael McCune, an immunologist who treats AIDS patients at San Francisco General Hospital.

A second kind of mouse, carrying adult human blood cells, has been developed by Dr. Donald E. Mosier, an immunologist from the Medical Research Institute, a private research laboratory in La Jolla, Calif.

Both scientists announced two years ago that they had implanted human immune system tissues into immune deficient mice and reported the mice formed human white cells. Since then, they have learned how to grow other organs in mice and to infect the animals with human viruses. Many of those experiments are being carried out by companies recently formed by Dr. Mosier and and Dr. McCune. Researchers at Duke University, Stanford University and the University of California at Los Angeles have also replicated the work.

Because human fetal tissues are being implanted into animals and not humans, Dr. McCune and his colleagues are not subject to the Federal ban on the use of such tissues in medical research. The ban, imposed two years ago by the Department of Health and Human Services, was intended to prevent women from having abortions for the sake of donating fetal tissue to people, but the regulations make no mention of mice, said Dr. McCune, whose work has been financed largely by the National Institutes of Health. Important New Tool

The mouse "is potentially quite an important model" for studying AIDS and other viral diseases, said Dr. Anthony S. Fauci, director of the National Institute of Allergy and Infectious Diseases in Bethesda, Md. The mouse is "phenomenally important," said Dr. David Baltimore, president of the Rockefeller University in New York. "It offers you the opportunity to look at viruses without having to deal with human beings" and to conduct imaginative experiments. Dr. Baltimore helped form Dr. McCune's company, Systemix of Palo Alto, Calif., two years ago.

Dr. McCune said his notion for creating the mouse was born of frustration. In his work with AIDS patients, he developed concepts for therapies that needed to be tested in animals, yet the AIDS virus infects only human cells. His idea was to insert tissues from human fetal organs into mice with deficient immune systems that would not reject the implants. Such mice had been developed at the Fox Chase Cancer Center in Philadelphia.

To create mice with human immune systems, Dr. McCune takes the thymus, liver and lymph nodes from human fetuses less than 22 weeks old and divides them into hundreds of pieces, each about the size of a grain of rice.

Using a microscope, he implants a piece of each organ under the kidneys of young mice. Within days, the mouse's blood vessels move into the human tissue, nourishing it and encouraging it to grow. In a month or two, the human organs are the size of blueberries and are able to engender the cells of the immune system.

Though small, the organs are functionally complete, Dr. McCune said. Human immune T-cells circulate in the mouse's bloodstream, he said, while B-cells and other human immune system components reside in the liver and thymus.

Dr. Mosier's company, Lidak Pharmaceuticals in La Jolla, Calif., makes an immune deficient mouse that supports immune system cells taken from adult humans. Dr. Mosier injects white blood cells from adult donors into a mouse's abdominal cavity. The cells migrate to the mouse's spleen and lymph nodes and create a functioning human immune system. For reasons that are not understood, Dr. Mosier said, the human cells do not attack the mouse's tissues. Trials With AZT

Such mice are being studied under a wide range of experimental conditions, said Dr. McCune. In one experiment, which is to be published shortly, researchers treated mice with the drug AZT at different intervals after infection to test the advantages of early treatment. The answer may help guide the treatment of hospital workers who accidentally stick themselves with AIDS-contaminated needles, Dr. McCune said.

Hundreds of antiviral compounds are being screened in both versions of the mice. Because the AIDS virus mutates rapidly, the researchers plan to test combinations of the most promising drugs.

At Stanford University, Dr. Edwin Mocarsky plans to infect mice with cytomegalovirus, an organism that can cause blindness in AIDS patients. At U.C.L.A., Dr. Irvin Chen is studying two human leukemia viruses to find out how the virus transforms human cells into a cancerous state.

Scientists at Systemix are beginning to implant other human organs in the mice, including lungs, intestines, pancreases, pituitary glands, skin, brain cells and placenta. The work is in very early stages, but so far the tissues have correct structural elements and a healthy blood supply, said Dr. McCune. "The only thing holding us back is having enough hours in the week to do the experiments," he said.

Certain brain cells and pituitary gland cells grow well in the mice, Dr. McCune said, as do beta cells and islet cells of the pancreas. But a major goal of the research, he said, is to isolate the human blood stem cell -- a master cell that gives rise to all the various types of blood and immune cells.

Possible stem cells will be inserted into mice whose human blood-forming system has been destroyed by radiation. Real stem cells should then disclose their identity by regenerating blood and immune cells. "You just can't do this experiment in people," Dr. McCune noted.

Human stem cells will be invaluable for gene therapy, he said, and for isolating blood growth factors for treating cancer and other diseases.

Dr. McCune said the research has not encountered any opposition from anti-abortion or animal rights groups. A Mouse With Tissues Of a Human When a deficient immune system gets implants of fetal thymus, liver and lymph nodes cells, the tissue is not rejected. Instead, the mouse's blood vessels nourish it, and human organs the size of blueberries develop. They function along with the organs of the mouse and make cells of the human immune system, including T-cells that circulate in the mouse's bloodstream and B-cells and other immune cells that reside in the liver and thymus. The mice can be used to study viral activity in human tissue and anti-viral drugs.

1990 (Nov 04)

https://www.newspapers.com/image/464616045/?terms=%22humanized%20mice%22&match=1

1990-11-04-the-ottawa-citizen-pg-a-9

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1990-11-04-the-ottawa-citizen-pg-a-9-clip-fondue-sets

https://drive.google.com/file/d/1yP3DntquVu5E_95QTqF6XYXyhdkonbtl/view?usp=sharing

THE OTTAWA CITIZEN • SUNDAY, NOVEMBER 4, 1990 A9

CHARLES GORDON
Citizen staff

A sudden urge for tiny little fondue sets

We live in a world so dulled by television, so sated by science fiction that it takes a pretty sensational scientific development to make it onto the front page.

Space satellites, two-headed calves and the like — what *is* the like of a two-headed calf, come to think of it — don't even make the *back* pages any more, so blasé have we become about the march of human progress.

Still, when humanized mice appear, you have to sit up and take notice. "*U.S. scientists develop tiny human-like organs in mice*" said the headline and under it was a story about these humanized mice, from the *New York Times*.

Actually, the mice were not from the *New York Times*; only the story was.

"In a series of bold experiments," the story began, "scientists have created laboratory mice with tiny human organ structures."

The science-literate will recognize the formula — the mice, laboratory, the bold experiments — and read on. But newcomers to the field will have some questions. One is: What's so bold about experimenting with mice?

Little creatures, never hurt a flea. And when you come right down to it, don't the mice have to be a lot bolder than the scientists? After all, no one is creating scientists with mouse organs — perhaps to avoid having them chased by Harmonicats.

By way of clarification, the story goes on to say that the purpose is to study the viruses of human diseases in living human tissues in order to gauge the effectiveness of various antiviral drugs. Newspapers are usually more interested in the bizarre nature of scientific experimentation than the purposes of the experiments, but put in paragraphs of explanation at the request of scientists who don't want the public to think that they just like fooling around with mice.

Having got that out of the way, newspaper editors then begin seeking to satisfy what they perceive as the curiosity of their readers. Reporters are set to work answering the *really* important questions, such as:

- Can these mice, like, play the piano?
- Do they have souls?
- Would they be able, at some point, to read the newspapers.

There are also ethical questions. Newspapers dealing with advances in science are big on ethical questions and constantly bother university professors in the theology department for answers.

And it *is* an ethical matter, developing mice with human organs. It sheds an entirely new light on the question: Are you a man or a mouse?

So there are matters of right and wrong to be addressed, among them, can humanized church mice be ordained?

And another: Should the compound adjective "mickey-mouse" be taken from the language because of its derogatory, mousogynist connotations.

In the sense of medical ethics, should humanized mice be forced to carry the full set of human organs? In other words, would it be all right to skip some of the things, like appendixes and funny bones, that have never given humans anything but trouble.

These are difficult problems, filled with theological considerations and everything. But science doesn't stop to consider the trouble it creates. It just invents stuff and moves on. Heaven knows where we'd be if it weren't for the newspapers.

1991 (April 19) - NYTimes "Mice Are Altered to Help Humans Fight Disease"

https://www.nytimes.com/1991/04/19/us/mice-are-altered-to-help-humans-fight-disease.html

1991-04-19-nytimes-mice-are-altered-to-help-humans-fight-disease

By Gina Kolata

For the first time, scientists have created mice with fully functioning human immune systems by replacing the mice's bone marrow with human bone marrow. Researchers expect that the mice will be able to make human antibodies to order and could be testing grounds for vaccines and AIDS drugs.

The mice could be the missing link between test tube experiments, which often fail to reflect what happens in people, and studies in humans, which are expensive, difficult and often risky.

As far as their immune systems go, the mice are "humans with fur," Dr. Andrew Saxon, an immunologist at the University of California at Los Angeles, said in a telephone interview this week. Boon to AIDS Researchers

The mice could be particularly important to AIDS researchers because they produce the human immune system cells the AIDS virus attacks. Thus researchers could use them to speed the testing of vaccines and new drugs in experiments that would be too dangerous for humans. The mice could also be used as factories to make antibodies for transfer to humans to fight diseases.

Previous attempts to establish human immune systems in mice were of limited use because the methods were too complicated and because the immune systems did not function normally. But experts said they had high hopes for the new technique because it is simple and for the first time the mice produced a full array of circulating human immune cells.

The work, by Dr. Yair Reisner and his colleageus at the Weizmann Institute of Science in Rehovot, Israel, was reported today in the journal Science.

"This is really quite exciting," said Dr. Jerome Groopman, an AIDS researcher at the New England Deaconess Hospital in Boston. "It's a whole new field of biology."

Dr. George Santos, who directs the bone marrow transplant unit at Johns Hopkins University in Baltimore, agreed. "I really think it's an advance," he said.

The spongy red bone marrow makes red blood cells, which carry oxygen; platelets, which help blood clot, and the body's entire repertoire of disease-fighting white blood cells, the heart of the immune system.

Dr. Reisner and his colleagues began by destroying mice's own bone marrow cells with high doses of radiation. This erased the mice's immune systems so that the animals had no cells that could attack the foreign marrow, and also created a cavity in the marrow where new cells had room to grow.

Then, the scientists dripped human marrow cells into the slender veins of the mice. The human cells moved into the bones of the mice and took up residence there.

To help the mice survive until the human marrow began producing red blood cells, the mice were given transplants of mouse marrow from a strain whose marrow can make red blood cells and platelets but not white cells.

A past attempt to create mice with human immune systems was to transplant human fetal organs onto the kidneys of mice that are genetically incapable of making their own white blood cells. The fetal organs constituted an entire fetal immune system. But that approach proved tricky. It was hard to keep the mice alive, and even when the method worked, the human white blood cells remained in a puddle near the kidney.

A second method was to inject human white blood cells directly into the abdomens of mice that lack immune systems. But the transplanted cells lived for a just few months before petering out and never generated new cells.

The new method, said Dr. Saxon, has the advantage of being simple and easy for others to reproduce. The mice make circulating white blood cells, make antibodies and make new cells.

Dr. David Golde, an immunologist at the University of California at Los Angeles, said that it could even be possible to maintain immmune system cells in the mice and isolate those cells that are the best disease fighters. The idea, he said, would be to transplant your marrow into a mouse, train the white blood cells, take the cells out of the mice and put them back into yourself.

Dr. Groopman said he would like to see the mice used for two purposes. One, his own special interest, would be to study AIDS. Since the mice make white blood cells of the sort that the AIDS virus infects, it should be possible to study AIDS in the animals and to test AIDS drugs and vaccines in them. The virus that causes acquired immune deficiency syndrome only infects human cells.

A second possible boon would be to use the mice as factories to produce human antibodies to fight disease. Molecular biologists have found ways to isolate mouse cells that will churn out potent antibodies, but the use of these monoclonal antibodies that have one parent cell has been limited because people develop allergies to the mouse proteins

The next step, scientists said, is for others to repeat Dr. Reisner's experiments.

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https://www.newspapers.com/image/508165242/?terms=%22humanized%20mice%22&match=1

1994 (May 03) - NYTimes : "Pure Human Antibodies Reported From Mice"

By Warren E. Leary / May 3, 1994

https://www.nytimes.com/1994/05/03/science/pure-human-antibodies-reported-from-mice.html?searchResultPosition=17

1994-05-03-nytimes-pure-human-antibodies-reported-from-mice

TWO groups of scientists working separately say they have prepared genetically altered mice that can be used to produce human disease-fighting antibodies of unusual purity.

In a technically daunting technique, the mice's own antibody-making genes were knocked out and replaced with the equivalent genes from humans. When such a mouse is injected with a foreign substance like a virus or bacterium, its immune system generates antibodies against the invader in the usual way, except that these are human and not mouse antibodies.

The advantage is that the antibodies, after being mass-produced outside the mouse by another method, called the hybridoma technique, can be injected into humans in hope that it will cause far less of an immune reaction than the mouse's own antibodies, which the human immune system attacks as a foreign protein.

To produce the antibodies in bulk, the mouse cells that produce them are removed from the spleen and fused in the test tube with a special kind of cancerous cell that immortalizes them. Each clone of cells produces a single, pure antibody, known as a monoclonal antibody. The procedure, known as the hybridoma technique, was invented in 1975 but until now has proceded in mice that made conventional mouse antibodies.

If the mouse-made human monoclonal antibodies work as well against diseases in people as laboratory tests indicate, researchers said, the findings could revitalize interest in using these antibodies as "guided missiles" against cancer, arthritis and other maladies.

Two Different Approaches

Scientists at two competing California biotechnology companies report that they have produced mice equipped to make the human antibodies.

In a report in the current issue of the journal Nature, scientists from GenPharm International in Mountain View, Calif., said cell lines from these so-called transgenic mice made antibodies that appeared so human that the human body should ignore them long enough to be medically useful.

"We are now routinely using our transgenic mouse system to generate a range of novel, completely human monoclonal antibodies and expect that many of these will have significant therapeutic potential," said Dr. Robert M. Kay, GenPharm's vice president for research and development.

The GenPharm team, led by Dr. Nils Lonberg, used a form of genetic targeting to remove major mouse immune system genes. The researchers also injected pieces of DNA containing human immune genes into single-cell mouse embryos and produced animals that carried the human genetic information. The report said the researchers mated the two kinds of mice and produced offspring that constituted a new strain with human antibody genes replacing almost all of the mouse antibody genes.

When members of this new strain were injected with a target protein, the report said, most of their antibody-making cells produced human antibodies. These "humanized" cells were then removed and cloned with tumor cells to make a cell line that produced pure human monoclonal antibodies, the researchers said.

Researchers from Cell Genesys Inc. in Foster City, Calif., in an article in the current issue of Nature Genetics, also said they had produced human monoclonal antibodies from mice, using a different approach. The reports from both research groups were submitted for publication within a week of each other last December.

The Cell Genesys researchers, led by Dr. Aya Jakobovits, used a technique called "yeast artificial chromosomes," or YAC, to place human immune system genes into their mice. With this method, the genetic material of yeast is used as a carrier for large human genes. The group used YAC's to fuse the human DNA into mouse embryo cells, and subsequent generations of the animals incorporated the human genetic material. Breeding these animals with others that had had their mouse immune genes removed produced a strain that made human antibodies, and cells from these animals were used to produce test-tube cultures of monoclonal antibodies, the report said.

A major question remaining about both developments is whether these antibody products retain enough mouse characteristics for the human body to see them as foreign, experts said.

While neither company would say specifically what types of monoclonal antibodies it was focusing on as potential therapeutic products, Cell Genesys said that some of its mice made antibodies to a protein involved in a number of acute inflammatory disorders, including tissue injury from trauma, and that other antibodies might be directed against allergic reactions. GenPharm officials said they had formed a partnership with a major drug company to investigate antibodies associated with cancer.

1995 (July 4) - NYTimes : "Protein Labs' Stock Slides After Setback"

By Lawrence M. Fisher / July 4, 1995

https://www.nytimes.com/1995/07/04/business/protein-labs-stock-slides-after-setback.html?searchResultPosition=18

1995-07-04-nytimes-protein-labs-stock-slides.pdf

Shares in Protein Design Labs Inc. lost one-third of their value today following the company's announcement late Friday that its lead drug had failed in advanced clinical trials.

Protein Design shares tumbled $6.875, or 33 percent, to $13.875 in Nasdaq trading. The stock had reached a 52-week high of $26.75 earlier this year.

Protein Design, a biotechnology company based in Mountain View, Calif., and Hofmann-La Roche Inc., its corporate partner, announced after the market's close on Friday that their jointly developed monoclonal antibody, Zenapax, had not been effective in the prevention of graft-versus-host disease, a common complication involving the rejection of bone marrow transplants. Hofmann- La Roche, based in Nutley, N.J., is a unit of Roche Holdings Ltd. of Switzerland.

Roche said it planned to continue two Zenapax trials to evaluate the drug's efficacy in preventing acute rejection of kidney transplants.

Concerning the safety of the drug, the two companies said their preliminary analysis indicated that the safety profile for Zenapax associated with graft-versus-host disease was good, with only two reports of serious adverse effects.

Cary L. Queen, Protein Design's vice president for research, said in a telephone interview that it was difficult to extrapolate the prospects of the drug from a trial for one disease to another. "Graft-versus-host disease is a very difficult indication and has a very high mortality rate," he said. "We think kidney transplant is a less challenging indication." he said. Early trial data regarding kidney transplants was encouraging, the company said.

In the graft-versus-host trial, only one patient among 140 treated developed an immune response to the drug, Mr. Queen said. That indicated that Protein Design's technology for "humanizing" antibodies derived from mice was effective. The response to the so-called human anti-mouse antibody has limited the possible uses of traditional monoclonal antibodies.

The failure of Zenapax in graft-versus-host disease was "very surprising from the standpoint that Roche has been very bullish about this molecule in this indication and in kidney transplant," said Edmund Debler, an analyst with Mehta & Isaly. He noted that Roche had gone from a 24-patient study for the treatment of the disease to a 210-patient study for its prevention, an uncharacteristic jump for a large pharmaceutical company. "They went down the classic biotech path to a failed trial," he said.

Protein Design has two other monoclonal antibodies, both derived from humans, for the treatment of hepatitis B and cytomegalovirus, in a collaboration with Corange, the German pharmaceuticals conglomerate. Both of these molecules have been delayed by as much as one year in clinical trials because of difficulties in manufacturing.

Corange owns 15 percent of Protein Design Labs and Hofmann-La Roche 8 percent. Mr. Queen said the company has $110 million in cash.

1995 (Oct 16) - NYTimes : "Patents;In the struggle to alleviate the pain of rheumatoid arthritis, a doctor says he has taken a step forward."

https://www.nytimes.com/1995/10/16/business/patents-struggle-alleviate-pain-rheumatoid-arthritis-doctor-says-he-has-taken.html?searchResultPosition=19

1995-10-16-nytimes-struggle-to-alleviate-pain-of-rheumatoid-arthritis

By Teresa Riordan, Oct. 16, 1995

Occasionally the digitization process introduces transcription errors or other problems; we are continuing to work to improve these archived versions.

A NUMBER of drug companies are pressing to develop an inflammation-blocking drug that will alleviate, without side effects, the symptoms of rheumatoid arthritis, a chronic disease that afflicts two million Americans. Such a drug could be worth hundreds of millions of dollars annually and might be prescribed to treat other autoimmune diseases like multiple sclerosis.

The aim is to suppress the activities of a protein known as tumor necrosis factor, or T.N.F., which normally helps jump-start the immune system but sometimes goes haywire. In the case of rheumatoid arthritis, T.N.F. starts a series of events that can result in irreversible damage to the body's joints.

In 1985 Dr. Bruce A. Beutler, now an investigator at the Howard Hughes Medical Institute and an associate professor of internal medicine at the University of Texas Southwestern Medical Center in Dallas, was one of the first scientists to isolate and clone T.N.F. Dr. Beutler has now received a patent covering what he contends is the most effective way to thwart the wayward protein.

There are several possible ways to block T.N.F. One is to administer monoclonal antibodies, large Y-shaped proteins that originate from the immune cells of mice. These antibodies bind to the T.N.F. and neutralize it. Centocor Inc. is taking this approach, as are other companies.

The problem with this method, Dr. Beutler contends, is that even when these antibodies have been "humanized," the body will recognize them as being foreign in origin and eventually will produce its own antibodies that will nullify any therapeutic effect. "Rheumatoid arthritis is a lifelong illness, so you need a drug that will work for years and years," Dr. Beutler said.

Dr. Beutler's approach is to splice two genes together to produce a new gene that codes for a Y-shaped molecule that is essentially an artificial monoclonal antibody. The two arms of the Y are T.N.F. receptors; the stem of the Y is a fragment of a normal human antibody.

"It's a thousand times more potent in neutralizing T.N.F. than a typical monoclonal antibody would be," Dr. Beutler said. "Another important advantage is that it is made of pieces of two molecules that already exist in the human body, so it is invisible to the immune system. It's very probable that this could be given indefinitely, just as human insulin is given to diabetics.

Hoffmann-LaRoche, a unit of Roche Holding Ltd., and the [**Immunex Corporation**] are testing a similar concept clinically; patent attorneys at both companies said they were not aware of Dr. Beutler's patent.

"We actually own the molecule -- or at least we think we do," Dr. Beutler said.

Ray Wheatley, director of technology transfer at the Southwestern Medical Center in Dallas, said the university had not spoken yet with any companies about the patent. "We haven't tried to market it yet, but our patent could be seen as being very powerful," he said.

Dr. Beutler, Karsten Peppel and David F. Crawford received patent 5,447,851, which was assigned to the University of Texas.

[...]

1996 (July 07) - NYTimes : "ENCOUNTERS;In the Maelstrom of Animal Medical Studies"

https://www.nytimes.com/1996/07/07/nyregion/encounters-in-the-maelstrom-of-animal-medical-studies.html?searchResultPosition=20

1996-07-17-nytimes-in-the-maelstrom-of-animal-medical-studies.pdf

By Erika Duncan , July 7, 1996

ALREADY, when you make a first impression, you are preparing the groove for a memory. And so I will remember Dr. Jan Moor-Jankowski, world expert in the scientific use of chimpanzees, standing in a doorway, in a stiff rather military dress jacket with brass buttons, with a portable telephone in each hand, his tall body at peace somehow with the low ceilings and walls of this early 19th century whaler's cottage in Orient.

I did not know how I would feel about the moral issues involved in his kind of animal testing. He had done some of the ground-breaking work that allowed monkeys and apes to survive and to breed in a medical testing environment. He also was a central figure in a significant libel case, defending the right of letters to the editor to the protection of the First Amendment. And he was also a key person in a dispute with New York University, which gave his laboratory in Sterling Forest, N.Y., to his arch foe in the world of animal experimentation and dismissed him from his post as director.

Before the late 50s, when Jan came onto the scene, most work with monkeys had been behavioral. Monkeys were usually allowed to die once experimentation was done, and many died along the way from diseases.

Jan, who became the director of the World Health Organization's Collaborating Center for Hematology in Primate Animals, designed cages based on the wire-bottomed chicken coops then in use in America, so apes and monkeys could be kept away from their feces.

A medically trained physician, he was committed to creating conditions as humane as possible during the testing situations. He was, from the beginning, opposed to using primates in toxicology studies and for the testing of cosmetics, to any waste of animal life in an area of research he hopes will grow extinct as more and more tissue cultures can be substituted for live animals.

He himself, as a medical doctor in research, had made some important contributions in discovering that not only the red cells but the blood serums and white cells contain antigens that create immune responses in mice, monkeys and men.

Together with Alexander Wiener, the discoverer of the Rh factor, Jan's exploration of blood groupings in primates helped pave the way for the first successful test of a vaccine for Hepatitis B, conducted at his laboratory.

His work would continue to be in the area of blood diseases, where non-human primates, even when they are infected with AIDS or hepatitis, do not develop symptoms or die. So it is mostly the enforced isolation and distortion of their natural life that creates the hard choices for scientists.

But this was not all to Jan Moor-Jankowski. He had been one of those lesser known of the Polish Resistance rescuing Jews. He was given the French

But this was not all to Jan Moor-Jankowski. He had been one of those lesser known of the Polish Resistance rescuing Jews. He was given the French Government's Cross of Merit for this, as well as for his scientific discoveries.

As the editor of the Journal of Medical Primatology, he had stood up for his right to publish a letter by an animal rights activist, criticizing a multinational pharmaceutical corporation.

His victory in the seven-year Immuno A.G. Corporation libel suit that was leveled against him is considered a landmark in judicial interpretation of First Amendment rights as they apply to letters to the editor, and the case is often cited in libel defense litigation today.

In the weeks to follow I would talk to Suzanne Roy of the California-based In Defense of Animals, and would find out that many in the animal activist community considered him a kingpin in the battle between animal advocates and an often impenetrable medical research front. But right now I would have something far more complicated and confusing to try to unravel. "You will see that I am in the middle of a critical moment. I will explain," Jan said, as I entered his house, taking one of the two portable telephones momentarily away from his ear.

It would take a little while for Jan's side of the story to come, and still it seems as if there must be much more to it.

"The laboratory that I founded and directed for 30 years was taken away from me last August," Jan said when he got off the phone. It was a laboratory run under the administration of New York University, where Jan had enjoyed 30 years on their research staff.

The trouble began, Jan said, with a telephone call from an animal activist group, the California-based In Defense of Animals, accusing Jan's Sterling Forest Laboratory for Experimental Medicine and Surgery in Primates, known as Lemsip, of the deaths of three monkeys after improper surgery.

When Jan realized that the accusations referred to another New York University laboratory, adjacent to his, he began to investigate.

The experiments in question, conducted at the Institute of Environmental Medicine, involved giving monkeys crack, a practice Jan feels is exploitative and cruel to the animals, and even scientifically cannot yield any meaningful results.

Jan told the Department of Agriculture what he knew when their investigators came to him mistakenly because of the complainants' confusion as to where the experiments were taking place. When the medical school's oversight committee asked that the charges be handled internally, Jan said, he resigned because he felt the committee was trying to cover up the charges.

On Aug. 8, 1995, shortly after Jan was elected to the French Academy of Medicine, to take Linus Pauling's place, the Department of Agriculture faxed the president of New York University to say that a whistle blower investigation had begun. The next day, Jan's employment was terminated without notice or written explanation, he says.

What further complicates the case is that Lemsip -- well-liked even by many animal activists for the pains taken for the chimpanzees' quality of life -- is being given away. It will go to Dr. Frederick Coulston, a toxicologist who works a great deal with cosmetics and industrial chemicals, and who, during the libel suit against Moor-Jankowski, supported Immuno.

According to Dan Perkes of the public relations office of New York University's medical school: "In this changing era of medical care, with the decreases in income impacting all medical centers, they had thought it prudent to unload Lemsip. They couldn't afford to keep it. Moor-Jankowski went along with the facility, when the resposibility for running it was turned over to Coulston."

Officially the changeover will not occur until this August. Why then was Jan dismissed a year earlier?

"The Aaron Diamond AIDS Research Center, already affiliated with New York University, had wanted to take it over, and they would have retained me," Jan said. "I also had already formed a group of scientists who were willing and able to take it over."

Jan tells me that because of his whistle-blowing activity he is now deprived of invaluable laboratory notes that he and Alexander Wiener made together, of his own laboratory protocols, unpublished manuscripts and books, as well as the frozen biological reagents accumulated in the course of 30 years.

Recently the Department of Agriculture dismissed the whistle blowing charges as groundless. For New York University this is proof of the insubstantiality of Jan's case. For Jan it is further evidence of the way that power and money -- the industrial complex allegedly behind Dr. Coulston's kind of research -- obstruct academic freedom and justice.

As I sit in Jan's dining room a foot-fall away from the secret room, with only a few loose boards for an entry -- he suspects it had been used in a boat route by the Underground Railway to transport slaves through Orient to Canada -- I think about the complex issues in university-administered research situations, of who owns what in this sort of "over-seeing," especially when grant money is frequently raised by the scientists themselves.

As we move from his quarrels with New York University into issues of animal ethics, my eye rests on the dried bittersweet in the window, and dried leaves no one else would have thought to make beautiful, aglow in the late afternoon sun.

I am immediately upset when he tells me that although he would not use the heart of a chimpanzee for transplant, he would use the heart of a baboon.

This valuing of life according to its closeness to what is human will continue to trouble me as he tells me over a lunch -- that does include meat -- that ever since he was 5 years old, growing up in the town of Czestochowa in Poland, he had known that he would go into medical research.

Three of his uncles were doctors. But when his aunt was dying of cancer and he asked them why they couldn't help, they told him there were things that doctors didn't yet know.

A sadness comes over him when he talks of a childhood filled with music and art that was ruptured so suddenly when the Nazis took over, as he talks of his mother, who had trained as a concert pianist, bringing small chamber groups into their house. His father, an engineer, was the sort of man who used to ball out drivers for beating their horses, he says.

When the Germans invaded Poland, Jan immediately volunteered to fight in the resistance, and was injured trying to defend Warsaw's main railroad station.

The years that followed were ones of repeated injury and periodic interment, as he worked to create escape routes for Jews from the burned-out Warsaw Ghetto at a time when the Polish Underground was reluctant to allow people to hide in its units in the forest. He went from one set of false identity papers to another, even masquerading for a while as a German officer, helped by the knowledge of the language he had acquired in childhood.

"When the war came and nobody knew whether and how long one would survive," he says, "people cast aside formal religious and social taboos. There was a general feeling that if one should die there would be at least a child who would live on."

He became the father of a son he saw once, when the baby was two weeks old. He wasn't to see him again for 35 years.

I listen to the stories of how he eventually escaped to Switzerland, where he was able to pursue his medical studies. He had managed to get his matura or high school equivalency in the schools run secretly by the Underground, after all the official schools were closed.

It was a time when refugees were not well looked upon in Switzerland, and despite his good school record the only work that he could get was in the high mountains, studying the blood groups of the people "who clung to their fields, which were so steep there was no way to use a tractor, but they loved their freedom."

When he was working in Cambridge he began to experiment on himself. He was injecting himself with the red cells of some monkeys that a friend who had finished a behavioral research project had given to him.

Friends discovered this and told him that if he submitted a request to an appropriate agency in the United States, he would be given a group of prisoners to work with. He spent a sleepless night thinking about what it meant to be subjected to experimentation involuntarily. It was then that he decided to learn all that he could about monkeys and apes, the closest relatives to human beings.

I struggle with my feelings as I watch the Lemsip video Jan has given me.

I watch a chimpanzee with a toothbrush in one hand and a mirror in the other. I watch baby chimpanzees in diapers and humanized clothing being held lovingly and learning to do human things. I ponder Jan's telling me that it was when he saw this behavior he knew that he couldn't take a chimpanzee heart.

Then the video flashes to the separated cages with bars on all sides, so the animals can see one another at all times.

"It's not that I have a right to do this to you," James Mahoney, the veterinarian who is Lemsip's daily director says, large on the video screen. "Only that I need you. Therefore I owe it to you to make it up to you as best I can."

No matter how costly it is to care for chimpanzees in captivity, Jan feels it is his moral responsibility to provide them with as close as possible to a "normal" life within the isolation that being infected demands.

I think of the words of Suzanne Roy of In Defense of Animals who had said, when I called her: "We disagree on the most basic philosophical issues. But once we have agreed to disagree, we are able to work with each other on common ground."

There is a moment, only, when in the course of a seven-hour visit that Jan grows very tired and has to lie down. I too am very tired, I realize, for interwoven with the current legal situation is the case with Immuno -- the seven years of libel trials, the expenditure of $200,000 and much of his own research time.

In 1983, as the editor of the Journal of Medical Primatology, he had published a letter to the editor written by Dr. Shirley McGreal, the chairwoman of the International Primate Protection League, questioning a plan to do research with chimpanzees in Sierra Leone in a study of hepatitis proposed by Immuno A.G.

McGreal's letter had argued that Immuno's plan violated international accords for the protection of endangered species, while keeping the chimpanzees in Africa instead of importing them for study very cleverly circumvented international trade agreements.

She expressed her concern about the way baby chimpanzees are captured by killing their mothers and about whether the infected animals would be returned to the wild, with no proper plans made for them after their use

McGreal's insurance company, having spent more than $100,000, settled "for her, against her will," Jan says, The uninsured publishers also decided to settle. Jan continued to fight.

The case shuttled two times to the United States Supreme Court and back down, as well to courts in Sierra Leone and Vienna. In June of 1991 Justice Judith Kaye of the New York State Court of Appeals issued the final decision that opinion, as it was expressed in letters to the editor, could not be subjected to silencing.

Interestingly, among the 34 groups that backed Jan in court -- CBS, NBC, The New York Times and Time, as well as many major universities, environmental, civil rights, and animal welfare organizations among them -- there was not one big scientific organization or medical society.

On Nov. 9, 1994, Jan was given the William J. Brennan, Jr. Defense of Freedom Award by the Libel Resource Center.

Jan's eyes are steady, as we return to the issues of academic freedom and his disillusionment, as a European, with the way academic freedom is often taken away in America.

Even as I can feel the pressure of a battle with New York University beginning again, and he tells me of the real pain of his war injuries, ever with him -- why, I ask him, does he emanate such a centeredness and calm?

"It comes from the time I spent living under the Nazis, and the fact that I was lucky in that even though I was occasionally captured, I always had the opportunity to fight back," he says steadily, looking at me.

1997 (April 05)

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A closer look

Double trouble in the lab

DNA strand is God's astounding design tool

By SIGMUND BROUWER
Special to the Advocate

Local author Sigmund Brouwer

You need a new liver, the doctor tells you. The doctor pauses looks up from his clipboard, smiles and says: Just be glad this is 2010 AD.

You are indeed glad genetic engineering is so advanced. You are also glad you are rich. You can afford the procedure. The doctor will select a healthy cell from your testicle and fuse it into an immature egg cell from a donor woman. Implanted into a donor womb, the embryo will begin to grow into the baby you once were. Identical eyes. Identical hair. And, of course, identical liver. A liver your body will not reject. After seven months, the doctor will abort the fetus and place its healthy young liver in your aging body.

A far-fetched scenario? Perhaps. Not after 'Dolly', who proved cloning from an adult organism is possible. For that matter, humans have already been cloned at the embryo stage. Yes, it *is* technically feasible today for a couple to conceive, then split off a dozen clones to deep freeze for future use, thus ensuring their newborn child spare parts in his or her adulthood.

In fact, in the brave new world of gene splicing, what was considered science fiction a decade ago is reality now. Consider recent experiments at the University of Basel in Switzerland, where researchers inserted a specific gene into fly larvae regions normally destined to become wings, legs, antennae and other body parts. The fruit flies hatched to display fully formed eyes wherever the gene had been placed — up to 14 eyes per fly bulged from the middle of fly wings, protruded from hairy leg joints, burst from chests, and even dangled crablike at the tips of antennae.

In this brave new world, startlingly new experiments seem to be limited only by grant funds and a scientist's imagination — Dr. Frankenstein's infamous fictional efforts in comparison seem crudely and sadly unambitious.

Experimenting with the raw material furnished by homo sapiens, researchers have successfully transplanted human fetal organs into lab animals, creating "humanized" mice. And through genetic engineering, it is possible to insert changes into the human embryo which would recur in future generations.

Yet, far as scientists have surpassed Dr. Frankenstein in sophistication, there remains the danger of Frankenstein's tragic flaw — a willingness to manipulate life without thought to consequence. For one crucial question is often ignored in the race to expand the frontier of genetic technology: *Are we merely assembled bits of complicated protein strands, or a sum much more than the total of our DNA?*

* * *

Genetics technology is not in itself an evil to be feared. Instead, like most scientific advances, it is a two-edged sword, and promises help for many diseases. In the last year, scientists have discovered specific genes which cause Huntington's disease, Lou Gehrig's disease, and a common type of colon cancer; most recently, scientists located the first breast cancer gene. This is good news — once a disease gene is isolated, scientists can search for ways to cure the disease through gene therapy.

In the short term, genetic screening allows doctors to detect diseases long before the symptoms. Human genes have been spliced into the DNA of bacteria in order to mass produce insulin and other valuable human proteins.

Yet . . .

Less than three years ago, researchers finished a natural progression in experimentation. From simple to complex. Cloning frogs had been possible for decades; cloning cattle long routine for commercial purposes. Next, of course, humans.

At George Washington University, researchers Jerry Hall and Dr. Robert Stillman separated the first two cells of a human embryo. Using a new procedure which replaced a protective outer coating scraped off during the separation process, the two new embryos grew and developed to become identical clones. With 17 microscopic embryos, the scientist produced 48 clones. They were allowed to grow up to six days, then destroyed. Flushed away.

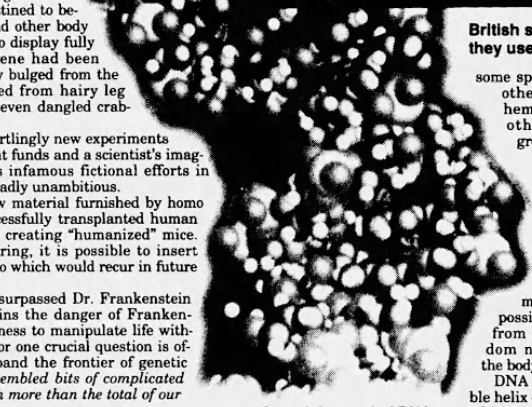
* * *

DNA. *Deoxyribonucleic acid*, life's building block.

When sperm joins egg to become the human embryo at the one-cell stage, the embryo consists of little more than a core of tufts of DNA — and the food to sustain that cell. This single cell must replicate without error to become the trillion cells which make an adult human. As the cell replicates again and again, some specialize to grow hair, others teeth, hormones, hemoglobin, and all the other cells of a full-grown adult. While the cell differentiation depends on which portions of DNA are triggered, each of the trillion cells contain the entire and exact same genetic code of the original cell, making it theoretically possible to clone someone from a cell taken at random nearly anywhere on the body.

Photo by CANADIAN PRESS

British scientists with the flock of sheep they used in the cloning of Dolly



A model strand of DNA

DNA is shaped like a double helix — like a ladder twisted into a spiral staircase. (The DNA ladder in a human cell contains three billion rungs.) Section after section of the ladder forms gene after gene. Each has a specific task. A gene for baldness, for hemoglobin manufacture, for eye color. On and on.

The incredible simplicity of its double helix shape allows the DNA to replicate itself unerringly — like a trillion photocopies, each without a trace of blurring. (As the cell divides, enzymes coax the DNA to progressively unzip itself down its entire length. As it unzips, the displaced DNA is replicated from the pattern of the existing strands, resulting in two new ladders identical to the original.)

Because it replicates itself so faithfully, the coils of the double helix make an essentially unbroken descent from the very first human. The instructions for human life — the history of the species — are preserved in every cell of every human. DNA is an almost immortal thread, winding from generation to generation.

The experimental scientist of the latest generation has the technology to cut and paste and manipulate this at will.

* * *

For part of the background I felt necessary for my novel, Double Helix, I read The Astonishing Hypothesis, by Dr. Francis Crick. He is considered one of the founding fathers of modern genetic science. He and James Watson received a Nobel prize with Maurice Wilkins for their combined discovery of the structure of DNA in the early 1950s.

Forty some years later, Dr. Crick wastes no time attempting to astound the reader with his new hypothesis, a theory outlined in the first sentence of his book, "The Astonishing Hypothesis is that 'You', your joys and your sorrows, your memories and your ambitions, your sense of personal identity and free will, are in fact no more than the behavior of a vast assembly of nerve cells and their associated molecules."

Later, in one of the conclusion chapters, titled Dr. Crick's Sunday Morning Service, he makes his point more clear, declaring, "If the scientific facts are sufficiently striking and well established, and if they support the Astonishing Hypothesis, then it will be possible to argue that the idea that man has a disembodied soul is as unnecessary as the old idea that there was a Life Force. This is a head-on contradiction tot the religious beliefs of billions of human beings alive today."

Dr. Crick, one of the eminent genetic scientists, is telling us the soul does not exist.

Aside from flaws in classical logic in the book (he argues because some Christians disagree with some science, it follows that they are also wrong in other areas of belief), and aside from the arrogance of claiming that his addition to an age-old debate is 'astonishing', Dr. Crick's hypothesis that humans do not have souls is disturbing in light of modern day genetics science.

Are we merely assembled bits of complicated protein strands, or a sum much more than the total of our DNA?

In a scientific world which disallows the existence of a soul or ignores the question, we, then are merely assembled bits of complicated protein. This humanistic approach removes sacredness of life and leads to a very slippery slope, where, for example, last year in the United States, the presidential medical advisory committee recommended the deliberate breeding of 'human tissue' for experimental purposes.

Yet in the scientific world, there are those who do understand we are a sum more than the total of our DNA. As scientists learn more about the intricate workings of the universe, a growing number are finding it scientifically unreasonable to accept that our universe was created and sustained at random, and are tuning to a theory of 'intelligent design'.

Dr. Jeff T. Hutchins, for example, a senior scientist for a company in the famed Research Triangle Park of Raleigh, North Carolina, says, "Every time I see the complexity of protein structure and function, I am reminded of God's hand in every aspect of our world."

As a lay person outside of the scientific world, and with only an elemental understanding of the complexity of DNA, I too, found increased faith through the new knowledge of how I was formed from conception; the incredible process of life and growth at the molecular level pointed me to the marvels of my Creator.

And as I learned more about the molecular process of life, I marvelled too, at the existence of love as a reason to further understand that the human body truly is a God-designed vehicle for a soul. After all, and I had the luxury of allowing my main character to echo this thought, "there is no biological explanation for love. No gland which dispenses it. Where in the fabric of all complex protein would come love if not from an invisible soul, given at conception with the miracle of life?"

Because of the contemplations that arose as I spent time researching Double Helix, I particularly enjoy what Stanton L. Jones offered in a recent Christianity Today review which pointed out flaws of evolutionary psychology theory. Jones says that our growing knowledge of the biological foundations of human life challenges people of faith to understand deeper why God designed us to be biological creatures, and that the challenge is to let the world understand we are not merely biological.

I'd like to offer my thoughts along with Jones'. God designed us with a body to support a mind; a mind to direct a body; and a soul which grows or diminishes according to the choices of the mind and body which nourish it.

If DNA, then, is the astounding tool God uses to mold protein as a way to carry life, DNA should not be used as a tool of convenience for our purposes.

* * *

Scientist have the power to re-engineer the human species.

In 1992 that I read the statement in an article in The Economist. As a novelist, I had the obvious next thought: What if a scientist really did attempt to re-engineer homo sapiens?

I dismissed the thought as ridiculous. Still, I kept mild passing interest in the growing number of articles on genetics I saw elsewhere. When I had a chance a few years later to spend an afternoon at the University of Calgary genetics lab with a scientist, I gladly took it. He invited me to watch through a microscope as he injected a strand of DNA into the one-celled embryo of a worm.

The single cell was round, like a two-dimensional balloon. In the centre was a smaller balloon, the cell nucleus, containing the embryo's DNA. As I watched, a hollow glass needle pushed against the cell wall. The needle burst through the cell wall, and then violated the inner nucleus. A regulated tiny puff of air pushed a foreign strand of DNA through the hollow needle into the embryo's original DNA. The worm would now mutate, enabling the scientist to map a segment of the gene code.

"Hey, this is a simple technical process," I said as I peered in the microscope. "Could you do this to a human embryo?"

"Certainly, but it would be unethical!" the scientist answered, as if all scientists in the genetics world shared his shock at my question. I decided the premise of Double Helix might not be as ridiculous as I had first considered.

Based on what is now technologically feasible in genetic engineering, Red Deer author Sigmund Brouwer's novel Double Helix is about contemporary science out of ethical control, and what can happen when man's lust for immortality breeds the ultimate immorality.

1997 (May 30)

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Mice given whole human chromosomes

Scientists laud discovery in Japan as key tool in fighting disease, developing research

By Rick Weiss
The Washington Post

For the first time, geneticists have made mice whose cells contain whole, functional human chromosomes along with their own mouse DNA, allowing the mice to make a range of human proteins potentially useful against cancer, autoimmune diseases and infections.

Scientists said they were shocked that such large chunks of human genetic material could be put into mice with no apparent ill effects to the animals, and equally surprised that the large human chromosomes functioned normally in the mice.

"It's stunning," said Howard Petrie, director of the monoclonal antibody core facility at Memorial Sloan-Kettering Cancer Center. "The sheer impact of transferring a piece of DNA that big is amazing. It opens up a whole array of things that can be done."

Petrie said the work, conducted in Japan, suggests that mice or other animals may someday be engineered to mass-produce various therapeutic products, such as human antibodies, that often are not made in sufficiently high quantities to cure diseases in people.

In high enough doses, antibodies can shrink tumors and can interfere with the reactions that cause autoimmune diseases such as rheumatoid arthritis. They also can kill bacteria and viruses.

Other scientists said the chromosome-transplant technique could help them study in mice the key genes involved in human embryo

SEE MICE, PAGE A-3

Human chromosomes in mice

MICE FROM PAGE A-1

development. Still others said the method could facilitate research on genes that cause inherited diseases.

The transferred chromosomes hold as many as 1,000 genes each — more than 50 times the amount of genetic material ever before transferred from a human to a mouse.

In the new work, led by Kazuma Tomizuka of the Kirin Brewery Technology Laboratory in Yokohama, researchers moved entire human chromosomes into mouse embryo cells by fusing human skin cells to mouse embryo cells. The researchers kept the embryo cells that captured human chromosomes 14 and 22, which together contain the genes necessary to make human antibodies, and implanted those cells into females.

The resulting newborns made human antibodies when the scientists gave them a shot of a foreign protein, showing that the transplanted genes were working normally, the researchers report in the June issue of Nature Genetics, released yesterday. In theory, a patient infused with a dose of such antibodies would not reject them since they are completely human.

In separate experiments, the Japanese team showed that human chromosome pieces can in some cases be passed on to the offspring of humanized mice — a surprising finding because extra chromosomes typically interfere with reproduction.

Mice normally have 40 chromosomes, but those given human chromosomes 14 and 22 had a total of 42 (with the exception of one case in which one of the mouse chromosomes got mysteriously lost in the process, resulting in 41).

"It's very elegant work," said John Harrington, a geneticist at Case Western Reserve University and a vice president at Cleveland-based Athersis, a biotechnology company that recently made news for its creation of the first artificial human chromosomes. "It suggests that human artificial chromosomes could also be transferred to mice and perhaps to other animals as well."

For example, artificial chromosomes could be designed to carry specific human genes, such as those that help make virus-fighting proteins. A colony of mice endowed with such chromosomes might make vast quantities of the therapeutic proteins in their blood, which could then be purified and given to people suffering from viral infections.

Scientists have made incremental progress over the years getting larger and larger pieces of human DNA into laboratory animals, especially mice.

TEXT from Washington Post : 1997 (May 30) - "HUMAN CHROMOSOMES TRANSPLANTED INTO MICE" by Rick Weiss

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Other scientists said the chromosome transplant technique could help them study in mice the key genes involved in human embryo development. Still others said the method could facilitate research on genes that cause inherited diseases. The transferred chromosomes hold as many as 1,000 genes each -- more than 50 times the amount of genetic material ever before transferred from a human to a mouse.

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Scientists have made incremental progress over the years getting larger and larger pieces of human DNA into laboratory animals, especially mice. The standard technique is to transfer the human DNA into mouse embryo cells, which are then implanted into the wombs of female mice. The resulting newborn mice bear the transferred human genes.

But only a limited amount of DNA can be transferred using standard techniques. Mice given some, but not all, of the genes needed to make human antibodies end up making hybrid antibodies that are part human and part mouse. These hybrids have mostly proved disappointing when injected into sick people, because the mouse portions are recognized as foreign by these patients' immune systems and are destroyed.

In the new work, led by Kazuma Tomizuka of the Kirin Brewery Technology Laboratory in Yokohama, researchers moved entire human chromosomes into mouse embryo cells by fusing human skin cells to mouse embryo cells. The researchers kept the embryo cells that captured human chromosomes 14 and 22, which together contain the genes necessary to make human antibodies, and implanted those cells into female mice.

The resulting newborns produced antibodies made of human components when the scientists gave them a shot of a foreign protein, showing that the transplanted genes were working normally, the researchers report in the June issue of Nature Genetics, released yesterday.

Using a different technique, a company called Cell Genesys in Foster City, Calif., recently made completely human antibodies in mice. Their method allows mice to make only a limited variety of human antibodies, however, and does not transfer the extra chromosomal portions that ensure the antibodies get made only in the spleen and thymus, as the Japanese method does. Those are the organs where antibodies are produced in people -- a detail that may be important to their proper function. In the Japanese experiments, several human genes worked only where they should. For example, genes that normally operate only in liver cells became active only in the liver cells of the mice. That indicates that the complex genetic machinery that regulates when and where a gene should work arrived in working order along with the genes themselves on the transferred human chromosomes.

But Stanford University immunologist Ronald Levy said the Japanese did not "knock out" the mouse's own antibody genes, which Cell Genesys did. That means the Japanese mice may be making both mouse and human antibodies, and the human ones may have to be purified from the mixture before being given to patients.

In separate experiments, the Japanese team showed that human chromosome pieces can in some cases be passed on to the offspring of humanized mice, a surprising finding because extra chromosomes typically interfere with reproduction.

Mice normally have 40 chromosomes, but those given human chromosomes had more. In one case, one of the mouse chromosomes mysteriously got lost in the process. That mouse was born with shrunken testicles because the mouse chromosome that got lost was the male-determining Y chromosome.

2002 (Oct 27)

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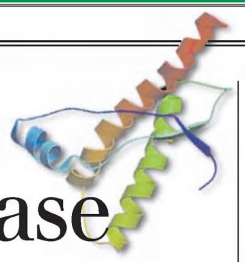


Secrets *of a* deadly disease

Scientists are looking at rogue proteins called prions to find out whether humans are at risk of chronic wasting disease.

By Maura Lerner
Star Tribune Staff Writer

CLEVELAND — Tim Hnath, the Fed Ex man, doesn't seem worried as he places the packages on the lab doorstep.

Sure, he knows his cargo could be toxic. How could he forget? The warning signs are everywhere: Biohazard. Caution. No food or drink.

But he's learned how to negotiate his way down this hall. "If you ever see a room like this," Hnath warns a colleague, "*never* walk across the red tape."

Most people don't want to be anywhere near the infectious agent that causes mad cow disease and its family of brain-wasting illnesses. But at the medical school at Case Western Reserve University, they can't get enough of it.

Thanks to Hnath and his daily deliveries, scientists here are amassing the world's largest collection of human tissue infected by prions (*pree-ons*) — the strangely misshapen proteins that are believed to be causing all the trouble.

As a result, they just may hold the key to a mystery that has cast a pall over this year's hunting season — whether humans are in any danger from deer and elk with chronic wasting disease.

DISEASE continues on A10:
— A list of prion diseases.

ASKING THE EXPERTS
Would you eat venison?

Phyllis Scalzo, technician in prion research lab, Case Western Reserve University, Cleveland:

"It's a concern after what we saw happen in England. I loved venison. Because I'm here, it's a

DISEASE from A1

Scientist has created a first-alert system in lab

If the animal disease ever does spread to humans, Dr. Pierluigi Gambetti and his team at Case Western may be the first to spot it.

Gambetti has created, in effect, a first-alert system for hu-

garbage will be steamed for hours in a device called an autoclave before it is incinerated.

Unusual obsession

Gambetti remembers when he would examine such tissue with his bare hands. It was in the early 1960s, when, as a young pathologist, he would stumble on a rare case of CJD. Back then, it was little more than a medical oddity.

But in 1984, a mentor from his old medical school in Bologna, Italy, sent him a curious brain sample. It came from a man who developed incurable

thing of the past."

Richard Danila, deputy state epidemiologist, Minnesota Department of Health, Minneapolis:

"I have, and I would, sure. I wouldn't have a problem in eating it."

Dr. Pierluigi Gambetti, director, National Prion Disease Pathology Surveillance Center, Case Western Reserve University, Cleveland:

"It's not a question I answer . . . If I really had to do it, I would try to go where there's no evidence of chronic wasting disease."

Byron Caughey, prion researcher, National Institutes of Health Rocky Mountain Laboratory, Hamilton, Mont.:

"Sure. If I were given any. I wouldn't eat it if it were from the CWD endemic areas . . . unless I were really hungry and I had no other option. But I don't think the risk is all that great."

Dr. Neena Singh, pathologist and prion researcher, Case Western Reserve University:

"I am worried now of eating beef. I try to avoid it if I can."

Dr. William Hueston, former mad cow disease investigator, professor of veterinary medicine, University of Minnesota, St. Paul:

"I'd have no problem myself. I love it."

"Everything that leaves here is incinerated — except us."

— A lab technician

man prion disease in labs where the words "be careful" take on a whole new meaning. Once inside these labs, explains one of Gambetti's technicians, "everything that leaves here is incinerated — except us."

Prion immersion

Gambetti, an Italian-born expert in brain disorders, has immersed himself for 18 years in prion diseases. So he has his own theory about the one in the news now: chronic wasting disease (CWD), which turned up in scattered deer and elk herds across the country (so far in Minnesota, in a single elk).

Like most scientists, he thinks it's unlikely to infect people. But the evidence that humans are safe from CWD is circumstantial, and no one is offering iron-clad guarantees, especially in the wake of Britain's mad cow debacle, where the experts turned out to be wrong.

So he and other scientists are trying to find out what makes prions dangerous. "In other words, we want to know the enemy," he says.

Long before mad cow and chronic wasting got their ghoulish names, these types of diseases roamed the earth in relative obscurity. In people, they would occur randomly at the rate of about one in a million; and in some unlucky families, prion diseases run in the bloodline. Invariably, these illnesses are gruesome and fatal, causing rapid dementia and death.

It was only in 1996, when British health officials noticed an unusual increase in people with one such illness — Creutzfeldt-Jakob disease (CJD) — that they realized they had an entirely new problem on their hands. Some people, they concluded, were getting sick from eating tainted beef.

Shortly after, Gambetti won a federal grant to set up the National Prion Disease Pathology Surveillance Center on the shores of Lake Erie. Now, he's asking doctors from all over the United States to send him samples of suspected CJD cases, on a strictly voluntary basis. This way, he hopes to be able to spot any suspicious trends — as well as study the rogue proteins that seem to be wreaking havoc in both animals and humans.

Lots of gloves

Phyllis Scalzo, a lab technician, figures she may have seen the deadly CJD infection once in 17 years before she went to work for Gambetti. Now, it's all around her. It's in the freezers lining the hall, and in a half-dozen metal cabinets where brain tissue is preserved in white buckets. It's on the slides she prepares for testing. It's on the equipment.

And it's in the packages that greet her each morning. Or so she must assume.

"I'm going to be going through a lot of gloves," she explains.

The danger is unspoken, and in many ways unknown. There's no known case of anyone getting sick from handling the diseased tissue. But then again, she's dealing with something that seems to defy the laws of science.

The prion is a protein that somehow gets twisted into a deadly form. Once it does, it's nearly indestructible. It can withstand temperatures of 1,100 degrees Fahrenheit, and disinfectants are useless against it.

It's the only known infectious agent that has no DNA or genetic material of its own — yet it can reproduce, in a sense. It apparently triggers a chain reaction in other proteins, turning normal ones astray. Eventually, they destroy cells in the brain, leaving it looking like a sponge, pocked with holes.

The whole thing once seemed so preposterous that Dr. Stanley Prusiner, the scientist who discovered and named prions, was ridiculed at first. In 1997, however, he won the Nobel Prize in medicine for his discovery.

The worst part is that the diseases have been uniformly fatal. No exceptions.

So Scalzo and her colleagues take no chances.

Photographs by Joey McLeister/Star Tribune

Lab technician Phyllis Scalzo was well-covered as she worked with potentially infected tissue.

Prion diseases

Prion diseases, also known as transmissible spongiform encephalopathies (TSEs), are thought to be caused by misfolded proteins. TSEs occur in different forms in humans and animals. The fatal diseases cause sponge-like holes in the infected brains and can take years to develop.

Known human prion diseases	Explanation	Discovered
Creutzfeldt-Jakob disease (CJD)	Named after the discoverers. Kills about 250 Americans a year. Strikes at an average age of 65 and results in rapidly progressing dementia. Arises spontaneously or is inherited, but it can be transmitted by tainted surgical tools, transplants and a growth hormone.	1920s
Inherited TSEs	Gerstmann-Straussler-Scheinker disease (GSS), the first hereditary TSE to be discovered, and fatal familial insomnia are extremely rare, found in just a few families.	1936 (GSS) 1986 (FFI)
Kuru	Occurred among New Guinea tribe members whose ritual handling or eating of dead people's brains probably spread the disease. The ritual was halted.	1957
Variant Creutzfeldt-Jakob disease (vCJD)	About 135 cases in England and Europe linked to eating beef products contaminated with mad cow disease. A U.S. woman raised in England also has been diagnosed. It strikes at an average age of 27, causing anxiety, depression or other neurological disorders before death.	1996

Prion diseases in animals	Host	Explanation	Discovered
Scrapie	Sheep, goats	Has long infected sheep,but there is no evidence that it is transmitted to humans by eating mutton or lamb. Scrapie-contaminated animal feed may have caused prion disease in cattle.	1700s
Transmissible mink encephalopathy	Mink	Reported in Minnesota and Wisconsin, most recently on a ranch in Stetsonville, Wis., in 1985. Contaminated feed may have been the source.	1947
Chronic wasting disease	Deer, elk	First found in Colorado captive mule deer. Now detected in elk or deer in nine states. Found in Wisconsin wild deer and in one farmed elk in Minnesota.	1967
Mad cow disease or bovine spongiform encephalopathy (BSE))	Cattle	Outbreak in England led to mass destruction of cattle in the 1990s. Can be spread to humans by eating contaminated meat products.	1986
Feline spongiform encephalopathy	Cats	First reported in England, thought to be caused by exposure to food contaminated with BSE.	1989

Source: U.S. Centers for Disease Control and Prevention, World Health Organization, Journal of Pathology, National Institutes of Health and U.S. Department of Agriculture.

Star Tribune

Federal Express courier Tim Hnath arrived at the Case Western Reserve University medical school. He said he treats the packages, containing possibly toxic tissue, "with kid gloves."

Before she opens the mail, she slips on a disposable lab coat, apron, booties and a splatter guard to cover her face. She'll add two more sets of gloves before she moves the tissue samples — which arrive in special styrofoam coolers, packed in dry ice or preservative — to the biohazard table for closer inspection.

She rips gloves on and off obsessively. No pair is worn for more than a few minutes. She doesn't want to contaminate anything accidentally. "That's the most important thing: Know where your hands are at all times," she says. Your feet, too. Nobody wears the same shoes home.

Gambetti's team is about to open an even more secure lab where everyone will be covered head to toe at all times, and the insomnia, went mad and died. Gambetti, an expert in Alzheimer's disease, started looking for answers in the patient's brain tissue. Then a second member of the family died in similar fashion; and a second sample was sent to Gambetti. Ultimately, he discovered it was a type of prion disease that ran in the unfortunate family. He named it fatal familial insomnia.

Thus began his obsession with collecting human prion diseases. It was, he figured, the only way to see enough of these rare cases to study them properly.

Prion diseases have long been a mystery.

The earliest known form is scrapie, found in sheep more than 200 years ago. The story goes that it got its name when infected sheep would start acting erratically and scrape themselves endlessly against trees, as if scratching an itch.

In the 1950s, a human disease called kuru turned up in a tribe of cannibals in New Guinea, after women and children ate the brains of relatives in a funeral ritual. They called it "the laughing death."

Mad cow disease appeared suddenly in English cattle in the 1980s, and it spread in epidemic proportions through animal herds. It's believed that the disease started when cows ate feed that contained ground-up, scrapie-infested sheep.

Experts hastened to assure the British people that they had no reason to worry — after all, people had been eating scrapie-infested sheep for hundreds of years and were none the worse for it. In an infamous publicity stunt, the agriculture minister, John Gummer, and his 4-year-old daughter chomped on burgers for the cameras in 1990. Six years later, the first human cases were tied to tainted beef.

So far, about 135 people have come down with the disease in England and several European countries. Its victims plunge into depression and dementia at an average age of 27, and die in about a year. The illness is distinct enough that doctors call it "variant CJD." Given the millions of people who ate beef, it's still exceptionally rare. Yet even though the animal epidemic has been stopped — by mass destruction of Britain's cattle — no one knows how many more human cases are incubating.

In more than 250 reported cases worldwide, doctors have inadvertently spread CJD from patient to patient through tainted surgical equipment, transplant tissue and human growth hormone. Health officials have warned brain surgeons and others to take extra precautions, but there is no widely available test to check equipment or tissue for prions.

The sobering experience in Britain prompted health officials in the United States to take a fresh look at chronic wasting disease, which first surfaced in Colorado deer 35 years ago. So far, animals in nine states and two Canadian provinces have tested positive, including wild deer in southwestern Wisconsin and a single captive elk in Minnesota. Yet CWD hasn't been linked to a single case of human illness.

Assessing risk

Dr. William Hueston, a University of Minnesota veterinarian, knows what a mad cow outbreak looks like. And this doesn't look like one to him.

As a scientist with the U.S. Department of Agriculture, he helped investigate the outbreak in England in the late 1980s and early 1990s.

By comparison, the threat of chronic wasting disease doesn't keep him up at night. "We put all [the] evidence together, and what it says is that there's no evidence that this is a disease that rapidly spreads

DISEASE continues on next page

DISEASE from A10

Mad cow situation was much different

to humans," he says.

Why not?

First, the differences. In England, he says, "there were tens of millions of people exposed" to tainted beef products; here, eating venison and elk meat is far less common. In England, people ate the most infected areas of sick cows, such as the brain and spinal cord. As the old joke goes, he says, they "used everything but the moo." U.S. hunters are being advised to take the prime cuts of venison — where prions are not thought to accumulate — and leave the rest behind.

Second, there's no sign that people get sick at higher rates if they hunt or live in areas where chronic wasting disease has been found for decades.

Government investigators have checked out about a dozen cases of CJD in hunters — including two men who shared a cabin in Wisconsin (Gambetti's lab ruled out a third suspected case). So far, no link to venison has been found.

"There are two errors we can make," Hueston says. "One is to say something's safe when it's not. The other is to say something's dangerous when it's not."

A species barrier?

Is there, as Hueston and others believe, a species barrier protecting us?

The answer may well be yes and no.

For obvious reasons, no one's going to expose someone intentionally to find out.

But Byron Caughey, a scientist at the National Institutes of Health's Rocky Mountain lab in Hamilton, Mont., tried to approximate those conditions in a test tube. He and his colleagues took prions from deer and elk with chronic wasting disease and exposed them to normal human proteins.

No one's sure how they work, but prions somehow "convert" ordinary proteins and cause them to fold abnormally. Caughey and his colleagues wanted to see whether deer prions did that to human proteins in test tubes.

They found that some of the human proteins converted to an "apparently toxic" state — but not many. It was, Caughey says, only about 1/10th to 1/20th the rate they see in deer-to-deer transmission. "It was barely detectable," he says.

To scientists, it was good news, suggesting a "molecular incompatibility" between the species. But skeptics saw it as proof of danger, and one mad cow Web site even posted the story with the headline: "Chronic Wasting Disease transmits to humans."

Says Caughey: "We got a borderline result. As such, people interpret it however they wish, I'm afraid."

To him, it's a mixed message. "We have to acknowledge that there is some risk of CWD going into humans. But it's likely to be relatively low."

Detecting unknowns

If it does transmit to humans, how will anyone know it when they see it?

"Very difficult, at this point, because you ask me to recognize an unknown," says Gambetti. But if it's anything like the mad cow experience, he says, a human form of CWD might look different under the microscope, and possibly act differently, than other human prion illnesses.

Those, he says, are the "kind of indirect clues" that they watch for. "So we will be ready to recognize these cases, even if we don't know what it's going to look like."

In the meantime, his lab and others are hoping animal studies will shed more light. In Gambetti's lab, a genetic specialist, Dr. Qingzhong Kong, has bred what he calls "humanized" lab mice that have human, rather than mouse, proteins. Researchers want to know whether these mice can acquire CWD.

But even those tests won't be the final word.

They may not know for sure unless they actually find a human case of chronic wasting disease. And that's where Gambetti's center, which reports to the U.S. Centers for Disease Control and Prevention, comes in.

If that day comes, he'll notify federal health officials "and then shut the door and run," he says with a laugh. "I'm the arm, but not the mouth, in this operation."

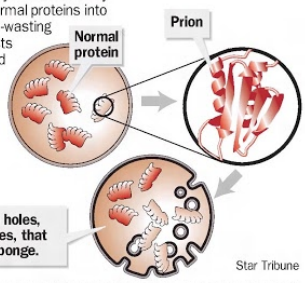
But he doesn't shy away from the possibility. "My loyalty is to the truth," he says. "The important thing is to be as well prepared as possible."

— Maura Lerner is at mlerner@startribune.com.

What is a prion?

Researchers believe that an abnormally shaped protein, called a prion, causes rare, fatal diseases known as transmissible spongiform encephalopathies (TSEs) in humans and animals.

Prions are chemically the same as normal proteins. But they wreak havoc by transforming normal proteins into misfolded, brain-wasting agents. Scientists don't understand all of the steps. As brain cells are destroyed, the result is neurological damage and death.



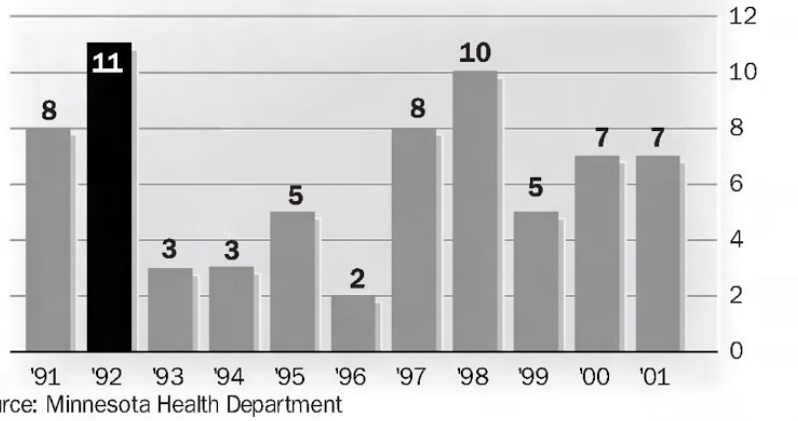
Star Tribune

Sources: Minnesota Department of Natural Resources; Minnesota Board of Animal Health and Dr. Beth Williams, veterinarian at University of Wyoming

Dr. Pierluigi Gambetti, an expert in brain disorders, has been studying prions and their effects on humans for 18 years. "We want to know the enemy," he said.

Creutzfeldt-Jakob disease deaths in Minnesota

Creutzfeldt-Jakob disease is a rare, fatal brain disorder believed to be caused by misfolded proteins called prions. Experts say the disease is not always correctly diagnosed and may be reported incorrectly on death certificates.



Source: Minnesota Health Department

Star Tribune

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MEDICINE

The eradication of Alzheimer's seemed near, then the vaccine started to destroy the subjects

The dangers of the cure

By Brad Evenson

Few people outside the Alzheimer's world know it, but in the autumn of 2001, the debilitating brain disease was on the brink of becoming a medical relic, like polio or the Black Death. Even veteran brain researchers were giddy about the potential of a vaccine called AN-1792.

"Get the Champagne ready," quipped a prominent Canadian expert.

The vaccine, made by Elan Pharmaceuticals, was considered a breakthrough in 1999 when it cleared Alzheimer's plaques from the brains of humanized mice. Its inventor, Dale Schenk, had won the highest prize given to neurologists, the Potamkin Prize, often seen as a precursor to the Nobel. AN-1792 was unlike the current crop of Alzheimer's pills, which improve symptoms of memory loss for a few months or years. It worked by triggering the immune system, just like the polio vaccine. It ate the problem alive.

Early safety tests found the vaccine safe in humans. So in late 2001, doctors in the United States and Europe injected 360 patients with the first of four planned inoculations. Then the unthinkable happened. Within two months, 15 patients developed inflammation of the brain and spinal cord. No one could say why. The trial was halted after two injections. The Champagne — and AN-1792 — were quietly shelved.

"We never saw a hint of this," said Ivan Lieberburg, head of research at Elan Pharmaceuticals. "It came as a total shock to Elan."

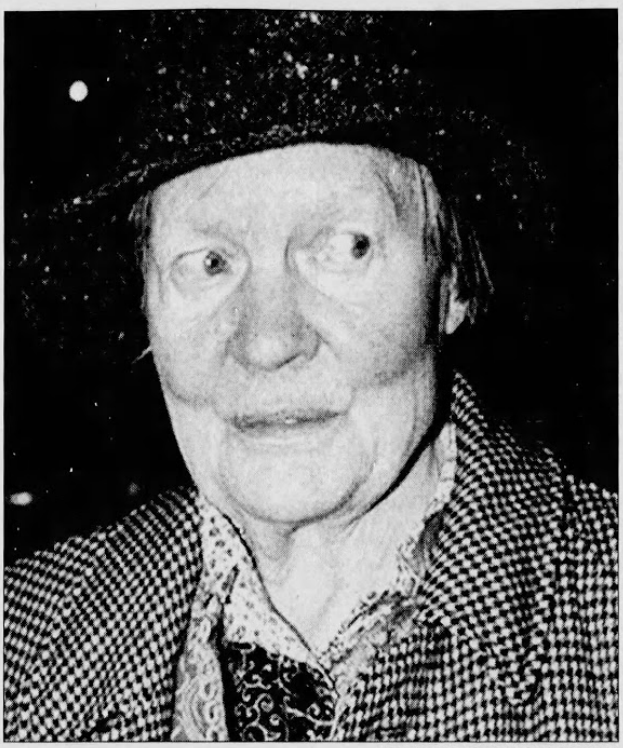
Now, a team of U.S. and German scientists has discovered the nature of the problem. Up to 80% of Alzheimer's patients have some weakening in the blood vessels in their brains. Not only could the vaccine cause inflammation, in experimental mice it caused bleeding in the brain. Although no patients treated with AN-1792 died, it is clear they could have. The study showing what went wrong is published today in the journal *Science*.

In retrospect, researchers say AN-1792 was rushed into human trials too quickly.

"The spectacular success in the mice, combined with the absolute desperation of nothing else out there — other than symptomatic treatments — I'm sure that had something to do with it," says Dr. Peter St. George-Hyslop, a professor of medicine at the University of Toronto and a world leading authority on Alzheimer's disease.

So Alzheimer's is not yet a relic. But as researchers pick up the broken pieces of AN-1792, they believe a cure may be closer than we think.

Nearly a century has passed since an emotional, disoriented 51-year-old woman, known to the world as Auguste D. came to visit physician Alois Alzheimer at his Munich clinic. She could not recall her own name, but she understood her plight. "I have lost myself," she told Alzheimer.



PETER J. JORDAN / THE ASSOCIATED PRESS

Author Iris Murdoch was one of the most celebrated Alzheimer's victims.

It was only after her death several years later that Alzheimer, then head of the anatomical laboratory at the Royal Psychiatric Hospital in Munich, glimpsed the wreckage in her brain under his microscope.

"At a magnification of several hundred times, he finally saw her disease," writes author David Shenk, in his new book *The Forgetting: Alzheimer's, Portrait of an Epidemic*.

It looked like measles of the brain

"It looked like measles, or chicken pox, of the brain. The cortex was speckled with crusty clumps ... too many to count. They varied in size, shape and texture and seemed to be a hodgepodge of granules and short, crooked threads, as if they were sticky magnets for microscopic trash."

Many of the neurons were also tangled like tiny ropes.

These are the infamous plaques and tangles of Alzheimer's disease, the two physical signs that — along with dementia — must be present for a clear diagnosis. Scientists have debated the root cause of the disease for decades, but in recent years many have narrowed their view to the amyloid peptides — bits of protein that accumulate in the brain to become plaques.

"I believe that the amyloid peptide comes first, provoking an injury mechanism in the neuron and then we get the neurofibrillary tangles," says Joanne McLaurin, a professor of pathobiology at the Centre for Research in Neurodegenerative Diseases at the University of Toronto.

"No one knows. But if you could limit the amount of peptide that was there, it would reduce the injury damage."

For some reason, the specialized immune cells in the brain, called microglial cells, do not recognize the build-up of plaques as harmful and destroy them. So Dale Schenk got a simple idea. Why not vaccinate patients against beta-amyloid, the principal component of the plaques?

The idea seems paradoxical. The main protein in Alzheimer's plaques is called amyloid beta, which is present throughout the human body. However, Schenk thought if a peptide — a small bit — of the amyloid beta protein was introduced by an inoculation, vast numbers of antibodies against it would be produced in the bloodstream. If enough of these antibodies got into the brain, maybe they would wake up the microglial cells.

When tested in humanized mice, a vaccine made of amyloid beta peptide worked like magic. It prevented the growth of amyloid plaques in their brains and cleared out the ones that had formed. The scientific world was astonished at the simplicity of the idea.

"I wouldn't have imagined it could ever work," said Sangram Sisodia, chair of neurobiology at the University of Chicago.

But the source of AN-1792's strength is also its fatal flaw. When the the immune system reacts to foreign invaders, it dispatches a fleet of lethal cells and toxic chemicals, which can cause inflammation. Making matters worse, no two people have precisely the same immune response. In an area as delicate as an Alzheimer's patient's brain, this could lead to unpredictable results, such as bleeding. Some patients could die.

Instead of abandoning the vaccine altogether, a group of Canadian scientists has isolated the best aspects of AN-1792, while discarding the parts that cause the immune system to create inflammation.

"We wanted to find out how the antibodies were working — what they were actually doing in the brain," McLaurin says.

The University of Toronto team found the smallest, purest bit of the beta amyloid peptide that would stimulate the creation of antibodies without causing inflammation or bleeding in humanized mice. Their findings were published last month in the journal *Nature Medicine*.

However, the Toronto team is not interested in making a modified vaccine. One lesson of AN-1792 is that immunological responses vary too much from person to person for an Alzheimer's vaccine to be truly safe. "Some people will develop a good immune response and a high amount of antibody while other people will develop a low amount of antibody," explains McLaurin, lead author of the study.

Instead, the Toronto researchers made a "molecular mimic" of the anti-Alzheimer's antibody.

"It's called molecular design," explains St. George-Hyslop. "Basically, the idea is that you take an enzyme or a receptor, discern its three-dimensional shape ... and then you make a drug that will exactly mimic that shape."

This molecular mimic could be made into a pill, he says. This would allow doctors to ensure patients got a reliable dosage, further reducing the chance of inflammation or bleeding. But such a pill would only help stop Alzheimer's in its early stages, before plaques and tangles have destroyed brain cells.

"The problem is that with Alzheimer's disease, once your neurons have died, you can't get them back," McLaurin says.

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2002 (Nov 27)

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Deer illness answers still years away for exposed people

By JOHN FAUBER
Knight-Ridder Newspapers

MILWAUKEE, Wis. — In a California laboratory, "humanized" brains of more than 100 mice that were injected with chronic wasting disease lie frozen, waiting for the second part of an experiment that could help answer a burning question.

Can people get sick by eating deer infected with chronic wasting disease?

With the start of the second deer-hunting season since chronic wasting disease was discovered in Wisconsin, the jury is still out.

"We probably are exactly in the same position we were a year ago," said G. Richard Olds, professor and chairman of medicine at the Medical College of Wisconsin.

A series of obstacles could cause that quest to go on for years, or even decades, researchers said.

"This will be an open issue for at least a decade," said Olds, an infectious disease expert. "In fact, if it is less than that, it will be really bad news."

As the result of an extensive testing program based on last year's hunt, hunters at least know that the disease appears to be restricted to the so-called eradication zone centered near Mount Horeb in the southwestern part of Wisconsin, and a smaller area in southern Rock County, as well as a few game farms.

At the moment, scientists don't know how deer get the disease, let alone whether people can.

For years, the study of so-called transmissible spongiform encephalopathies, or TSEs, had been a somewhat obscure branch of science that straddled the fields of veterinary and human medicine.

TSE diseases range from chronic wasting disease in deer to Creutzfeldt-Jakob disease, a rare, incurable neurological disorder, in people.

Both diseases, as well as all other TSEs, are believed to be caused by an unusual infectious agent known as a prion, a type of rogue protein that has no genetic material and is very difficult to destroy. The rogue prions attack normal prion proteins in the human brain.

Research into TSEs accelerated after the mad cow outbreak in Great Britain in the 1980s. Initially, British government officials offered assurances that people were not susceptible to the disease, only to discover later that humans could get a version of mad cow disease, called variant Creutzfeldt-Jakob disease.

At last count, 143 people have died of variant Creutzfeldt-Jakob in Great Britain and an additional 10 outside the country.

In February, the Royal Society, Britain's academy of scientists, estimated the number of new cases by 2080 — the disease has a long incubation period — could vary from as few as 10 cases to 7,000.

In the United States, a new sense of urgency was brought to TSE research after chronic wasting disease was found in Wisconsin, the first time it was seen in wild deer east of the Mississippi River.

Since that discovery in February 2002, there has been little new scientific research on the risk facing people.

Researchers and public health officials have only a couple of tools for unraveling that issue, and both could take years to provide real answers.

Since experiments can't be done on people, researchers have turned to genetically engineered mice.

These mice have been engineered so their brain cells produce the same prion protein that people do. This protein is a complex chain of amino acids that is found in nearly all mammals.

Scientists aren't sure what the actual function of prion protein is, but it is the protein that is attacked by prions, which are chemically identical but have a different shape.

It is believed that prions cause normal prion proteins to become misshapen, resulting in clumps of protein forming in the brain and the death of brain cells.

There are no cures for prion diseases.

Scientists can inject brain tissue from infected deer into the brains of humanized mice and watch for neurological symptoms. Since laboratory mice live about two years, such experiments can be time-consuming.

But even if the mice don't develop symptoms, it still would not answer the question of whether humans are at risk, because prion infections can incubate in people for years or decades before producing symptoms.

At least a couple of research groups, including scientists at the University of Wisconsin-Madison, say they are planning to do such experiments.

About three years ago, Patrick Bosque, now an assistant professor of neurology at the University of Colorado Denver Health Hospital, started such an experiment.

However, there were technical problems and the experiment was never completed, Bosque said.

The brains of the mice remain frozen at his former lab at the University of California, San Francisco.

To complete the experiment, brain tissue from the animals needs to tested for the presence of prions, a process that could be time-consuming and expensive, he said.

"It's something we should do," he said. "It's just a matter of coordinating it. Either way, negative or positive, it's at best a crude measure of human risk."

Bosque said it could take years to prove whether people are at risk.

Until then, he said, it's reasonable to assume that if enough people are exposed to the disease that, over time, at least a small number will get sick.

"It is clear more needs to be known about the risk of transmission of CWD to humans," Bosque said. "Statements to the effect, 'There is no evidence that CWD can be transmitted to humans,' are deceptive."

Bosque's experiment was started in the UCSF lab of Stanley Prusiner, the scientist who coined the term prion more than 20 years ago and later won a Nobel Prize for his research.

Giuseppe Legname, senior scientist at the UCSF lab, said that one of the problems with mice is their short life span.

To find out whether "humanized mice" are susceptible to chronic wasting disease, researchers might have to take brain tissue samples from the exposed mice and inject them into subsequent groups of humanized mice.

By doing these so-called passages, researchers can sometimes shorten the incubation period, he said.

"It takes a long time and you have to spend money," he said.

In the meantime, he said, it's reasonable to assume that chronic wasting disease can be as infectious to humans as mad cow disease.

Test tube research by scientists at the National Institutes of Health in 2000 showed that while there is a so-called species barrier between deer and people, chronic wasting disease prions were able to convert normal human prion protein to the abnormal, diseased form. And they did so at about the same rate as mad cow disease.

At the same time lab experiments are being planned in humanized mice, public health officials are increasing their surveillance of unusual neurological disease in people to look for any clusters or individual deaths in deer hunters or people who ate venison.

"You still need to find that human case," said Ermias Belay, a medical epidemiologist in the Creutzfeldt-Jakob surveillance program at the U.S. Centers for Disease Control and Prevention in Atlanta.

But that could take many years, he said. Such cases might show up as Creutzfeldt-Jakob disease, a disorder that is believed to occur in one in 1 million people per year.

"You will need millions and millions of people to be exposed before you see the human cases," he said.

The Wisconsin Division of Public Health began such a tracking program earlier this year.

Neurologists and other hospital personnel around the state have been asked to voluntarily report unusual dementia cases, said Jim Kazmierczak, state public health veterinarian.

Such cases include dementias in people younger than 55 or rapidly progressing dementias accompanied by other symptoms.

When those patients die, an autopsy will be requested of the family. They also will be asked about various risk factors such as wild game consumption, a family history of Creutzfeldt-Jakob disease and whether the person ever lived in Great Britain.

The state is also considering creating a registry of people who may have consumed venison from deer that later test positive for chronic wasting disease. Such a list could then be matched against any future deaths from unusual dementias, Kazmierczak said.

2004 (Jan 08)

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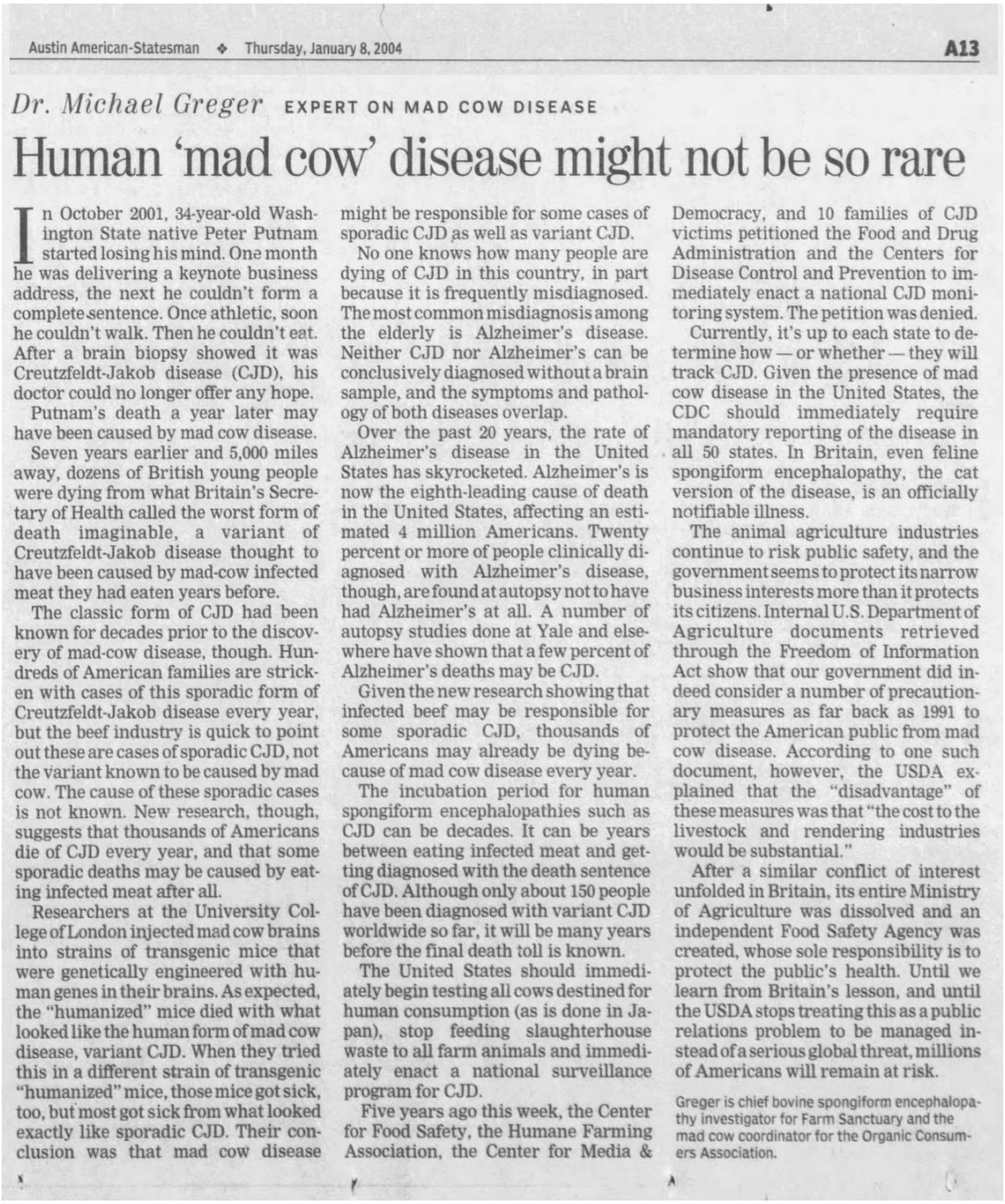

Austin American-Statesman ❖ Thursday, January 8, 2004 A13

Dr. Michael Greger EXPERT ON MAD COW DISEASE

Human 'mad cow' disease might not be so rare

In October 2001, 34-year-old Washington State native Peter Putnam started losing his mind. One month he was delivering a keynote business address, the next he couldn't form a complete sentence. Once athletic, soon he couldn't walk. Then he couldn't eat. After a brain biopsy showed it was Creutzfeldt-Jakob disease (CJD), his doctor could no longer offer any hope.

Putnam's death a year later may have been caused by mad cow disease.

Seven years earlier and 5,000 miles away, dozens of British young people were dying from what Britain's Secretary of Health called the worst form of death imaginable, a variant of Creutzfeldt-Jakob disease thought to have been caused by mad-cow infected meat they had eaten years before.

The classic form of CJD had been known for decades prior to the discovery of mad-cow disease, though. Hundreds of American families are stricken with cases of this sporadic form of Creutzfeldt-Jakob disease every year, but the beef industry is quick to point out these are cases of sporadic CJD, not the variant known to be caused by mad cow. The cause of these sporadic cases is not known. New research, though, suggests that thousands of Americans die of CJD every year, and that some sporadic deaths may be caused by eating infected meat after all.

Researchers at the University College of London injected mad cow brains into strains of transgenic mice that were genetically engineered with human genes in their brains. As expected, the "humanized" mice died with what looked like the human form of mad cow disease, variant CJD. When they tried this in a different strain of transgenic "humanized" mice, those mice got sick, too, but most got sick from what looked exactly like sporadic CJD. Their conclusion was that mad cow disease might be responsible for some cases of sporadic CJD as well as variant CJD.

No one knows how many people are dying of CJD in this country, in part because it is frequently misdiagnosed. The most common misdiagnosis among the elderly is Alzheimer's disease. Neither CJD nor Alzheimer's can be conclusively diagnosed without a brain sample, and the symptoms and pathology of both diseases overlap.

Over the past 20 years, the rate of Alzheimer's disease in the United States has skyrocketed. Alzheimer's is now the eighth-leading cause of death in the United States, affecting an estimated 4 million Americans. Twenty percent or more of people clinically diagnosed with Alzheimer's disease, though, are found at autopsy not to have had Alzheimer's at all. A number of autopsy studies done at Yale and elsewhere have shown that a few percent of Alzheimer's deaths may be CJD.

Given the new research showing that infected beef may be responsible for some sporadic CJD, thousands of Americans may already be dying because of mad cow disease every year.

The incubation period for human spongiform encephalopathies such as CJD can be decades. It can be years between eating infected meat and getting diagnosed with the death sentence of CJD. Although only about 150 people have been diagnosed with variant CJD worldwide so far, it will be many years before the final death toll is known.

The United States should immediately begin testing all cows destined for human consumption (as is done in Japan), stop feeding slaughterhouse waste to all farm animals and immediately enact a national surveillance program for CJD.

Five years ago this week, the Center for Food Safety, the Humane Farming Association, the Center for Media & Democracy, and 10 families of CJD victims petitioned the Food and Drug Administration and the Centers for Disease Control and Prevention to immediately enact a national CJD monitoring system. The petition was denied.

Currently, it's up to each state to determine how — or whether — they will track CJD. Given the presence of mad cow disease in the United States, the CDC should immediately require mandatory reporting of the disease in all 50 states. In Britain, even feline spongiform encephalopathy, the cat version of the disease, is an officially notifiable illness.

The animal agriculture industries continue to risk public safety, and the government seems to protect its narrow business interests more than it protects its citizens. Internal U.S. Department of Agriculture documents retrieved through the Freedom of Information Act show that our government did indeed consider a number of precautionary measures as far back as 1991 to protect the American public from mad cow disease. According to one such document, however, the USDA explained that the "disadvantage" of these measures was that "the cost to the livestock and rendering industries would be substantial."

After a similar conflict of interest unfolded in Britain, its entire Ministry of Agriculture was dissolved and an independent Food Safety Agency was created, whose sole responsibility is to protect the public's health. Until we learn from Britain's lesson, and until the USDA stops treating this as a public relations problem to be managed instead of a serious global threat, millions of Americans will remain at risk.

Greger is chief bovine spongiform encephalopathy investigator for Farm Sanctuary and the mad cow coordinator for the Organic Consumers Association.

2005 (Dec 13)

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2005-12-13-the-record-hackensack-new-jersey-pg-a-01

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Mice get touch of humanity

By PAUL ELIAS
THE ASSOCIATED PRESS

Stem cell injections help study disease

SAN FRANCISCO – Add another creation to the strange scientific menagerie where animal species are being mixed together in ever more exotic combinations.

Scientists announced Monday that they had created mice with small amounts of human brain cells in an effort to make realistic models of neurological disorders such as Parkinson's disease.

Led by Fred Gage of the Salk Institute in San Diego, the researchers created the mice by injecting about 100,000 human embryonic stem cells per mouse into the brains of 14-day-old rodent embryos.

Those mice were each born with about 0.1 percent of human cells in each of their heads, a trace amount that doesn't remotely come close to "humanizing" the rodents.

"This illustrates that injecting human stem cells into mouse brains doesn't restructure the brain," Gage said.

Still, the work adds to the growing ethical concerns of mixing human and animal cells when it comes to stem cell and cloning research. After all, mice are 97.5 percent genetically identical to humans.

"The worry is if you humanize them too much you cross certain boundaries," said David Magnus, director of the Stanford Medical Center for Biomedical Ethics. "But I don't think this research comes even close to that."

Researchers are nevertheless beginning to bump up against what bioethicists call the "yuck factor."

Three top cloning researchers, for instance, have applied for a patent that contemplates fusing a

See **MICE** Page **A-15**

Fast facts

- Researchers placed human embryonic stem cells into laboratory mice.
- The cells, about 100,000 each, were injected into the brains of 14-day-old rodent embryos.
- Each mouse was born with 0.1 percent human cells in its head, but scientists say the animals were not "humanized."
- Mice are 97.5 percent genetically identical to humans.

Mice: Given human cells

From Page **A-1**

complete set of human DNA into animal eggs to manufacturer human embryonic stem cells.

One of the patent applicants, Jose Cibelli, first attempted such an experiment in 1998 when he fused cells from his cheek into cow eggs.

"The idea is to hijack the machinery of the egg," said Cibelli, whose current work at Michigan State University does not involve human material because that would violate state law.

Researchers argue that co-mingling human and animal tissue is vital to ensuring that experimental drugs and new tissue replacement therapies are safe for people.

Others have performed similar experiments with rabbit and chicken eggs, while University of California-Irvine researchers have reported making paralyzed rodents walk after injecting them with human nerve cells.

Doctors have transplanted pig valves into human hearts for years, and scientists have injected human cells into lab animals for even longer. But the brain poses an additional level of concern because some envision nightmarish scenarios in which a human mind might be trapped in an animal head.

"Human diseases, such as Parkinson's disease, might be amenable to stem cell therapy, and it is conceivable, although unlikely, that an animal's cognitive abilities could also be affected by such therapy," said a report issued in April by the influential National Academies of Science, which sought to draw some ethical research boundaries.

The report recommended that such work be allowed, but with strict ethical guidelines established.

"Protocols should be reviewed to ensure that they take into account those sorts of possibilities and that they include ethically sensitive plans to manage them if they arise," the report concluded.

GAGE

At the same time, the report did endorse research that co-mingles human and animal tissue as vital to ensuring that experimental drugs and new tissue replacement therapies are safe for people.

Gage said the work published Monday in the journal Proceedings of the National Academy of Sciences is another step in overcoming one of the biggest technical hurdles confronting stem cell researchers: when exactly to inject the cells into patients.

The results suggest that human embryonic stem cells, once injected into people, will mature into the cells that surround them. No known human has ever received an injection of embryonic stem cells because so little is known about how those cells will mature once inside the body.

For now, Gage said his work is more geared toward understanding disease than to finding a cure.

"It's a way for us to begin to tease out the way these diseases develop," Gage said.

Human embryonic stem cells are created in the first days after conception and give rise to all the organs and tissues in the human body.

Scientists hope they can someday use stem cells to replace diseased tissue.

But many social conservatives, including President Bush, oppose the work because embryos are destroyed during research.

Stem cell researchers argue that mixing human and animal cells is the only way to advance the field because it's far too risky to experiment on people; so little is known about stem cells.

Gage lab:
www.salk.edu/faculty/faculty/details.php?id23
Stanford ethics center:
//scbe.stanford.edu/research/
NAS: **//national-academies.org/**

NY Times to-do

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Humanized mouse

See Humanized mice

Fred Hutchinson Cancer Research Center

2021-04-30-wikipedia-fred-hutchinson-cancer-research-center-img-1.jpg
https://en.wikipedia.org/wiki/Fred_Hutchinson_Cancer_Research_Center
"The center's South Lake Union campus as seen from the Space Needle"

Wikipedia Fred Hutchinson Cancer Research Center

Saved Wikipedia (April 30, 2021) : "Fred Hutchinson Cancer Research Center"

2021-04-30-wikipedia-fred-hutchinson-cancer-research-center.pdf

https://en.wikipedia.org/wiki/Fred_Hutchinson_Cancer_Research_Center

Formation

1975; 46 years ago

Type

Nonprofit organization

Headquarters

Seattle, Washington, U.S.

Leader

Thomas Lynch Jr., M.D.

Budget

$654.62 million (2020)[1]

Website

fredhutch.org

The center's South Lake Union campus as seen from the Space Needle

The center's steam plant building

The Fred Hutchinson Cancer Research Center, also known as Fred Hutch or The Hutch, is a cancer research institute established in 1975 in Seattle, Washington.[2][3]

History[edit]

The center grew out of the Pacific Northwest Research Foundation, founded in 1956 by Dr. William B. Hutchinson (1909–1997). The Foundation was dedicated to the study of heart surgery, cancer, and diseases of the endocrine system. Hutchinson's younger brother Fred (1919–1964), was a major league pitcher and manager who died of lung cancer at age 45. The next year, Dr. Hutchinson established the Fred Hutchinson Cancer Research Center as a division of the Pacific Northwest Research Foundation.[2]

In 1972, with the help of Senator Warren G. Magnuson, PNRF received federal funding under the National Cancer Act of 1971 to create in Seattle one of the 15 new NCI-designated Cancer Centers aimed at conducting basic research[4] called for under 1971 Act; the Fred Hutchinson Cancer Research Center became independent 1972 and its building opened three years later in 1975.[2][5][6][7][8]:3,5

The center was named an NCI-designated Comprehensive Cancer Center in 1976.[9]

In 1998, the center formed the Seattle Cancer Care Alliance (SCCA), a separate nonprofit corporation,[10] with UW Medicine, and Seattle Children's. This solidified the center's reach into clinical care and was essential for it retaining its NCI comprehensive center designation;[11] the designation was extended to the center's consortium including the SCCA in 2003.[9] SCCA's outpatient clinic first opened in January 2001.[11]

In 2001, The Seattle Times published a series of articles alleging that investigators at the center (including the Center's co-founder Dr. E. Donnall Thomas) were conducting unethical clinical studies on cancer patients. The paper alleged that in two cancer studies conducted in the 1980s and early 1990s, patients were not informed about all the risks of the study, nor about the study doctors' financial interest in study outcome. The paper also alleged that this financial interest may have contributed to the doctors' failure to halt the studies despite evidence that patients were dying sooner and more frequently than expected.[12] In response, the center formed a panel of independent experts to review its existing research practices, leading to adoption of "one of the nation's toughest conflict-of-interest rules."[13]

In 2014, the center announced that D. Gary Gilliland would become president and CEO in 2015;[14] he took over from Lawrence Corey who was appointed as the 4th President in 2010, following the retirement of Lee Hartwell.[15]

2014 also saw the organization adopt its longtime local nickname, "Fred Hutch", as its official name as part of a rebranding.[16]

In 2018, the center announced that it would expand into the former Lake Union steam plant, which previously housed ZymoGenetics.[17]

Notable faculty[edit]

The center has employed three recipients of the Nobel Prize in Physiology or Medicine:

- Linda Buck, Ph.D., who received the award in 2004 for solving many details of the olfactory system;[18] and
- E. Donnall Thomas, M.D., who received the award in 1990 for his pioneering work in bone-marrow transplantation and who died in 2012;[19][20] and
- Lee Hartwell, Ph.D., who received the honor in 2001 for his discoveries regarding the mechanisms that control cell division.[21] After retiring from leading the center in 2010, Hartwell left to join Arizona State University.[22]

Commercialization[edit]

The center is active in technology transfer. In 2013, it was one of the top ten biomedical research institutions in the field (excluding universities); it made 18 new deals with companies to develop inventions made at the center, and earned $10,684,882 in income from past deals it had signed.[23] Most notably, Juno Therapeutics, a company developing CAR-T immunotherapy for cancer and that raised $314 million in venture capital investments and had a $265 million initial public offering in 2014, was started based on inventions made at the center.[24] As of 2015, about twenty companies had been started based on center inventions since 1975, including Immunex and Icos.[24]

Campus[edit]

The institute's main campus consists of thirteen buildings on fifteen acres (6.1 ha) in the South Lake Union neighborhood of Seattle.[25]

In 1987, the center began exploring possible new homes to replace its 9-building campus on First Hill that it was set to outgrow.[26][27] A site in the South Lake Union neighborhood, envisioned by the city as a future high-tech and biotechnology hub,[28] was chosen in September 1988 after a deal to move to Fremont fell through earlier that year.[29][30] The first phase of the campus, designed by firm Zimmer Gunsul Frasca Partnership,[31] began construction in 1991 and opened on June 1, 1993 in a ceremony that included the burying of a time capsule set to open in 2093.[32][33]

The campus is accessible via the Mercer Street exit of Interstate 5 as well as several public transportation routes, including the South Lake Union Streetcar.[34]

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See Dr. Edward Donnall "Don" Thomas (born 1920)

2015 (Oct 03) - Seattle Times : "Fetal-tissue uproar affects 'under-the-radar' UW lab"

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Originally published October 3, 2015 at 7:34 pm

The Birth Defects Research Laboratory at the University of Washington has for decades been a source of donated fetal tissue important to medical research, but the lab reports donations have fallen dramatically since the Planned Parenthood video controversy began in July.

By JoNel Aleccia / Seattle Times health reporter

As undercover videos released by anti-abortion activists roiled the nation this summer, sparking outrage directed at Planned Parenthood and reigniting questions about the use of tissue from aborted fetuses, the Birth Defects Research Laboratory at the University of Washington quietly continued the work it has done for more than 50 years.

Since 1964, the Seattle lab has been a federally funded hub for the collection and distribution of tissues for research, obtained from miscarriages, stillbirths and abortions — including, recently, donations from a Planned Parenthood clinic in Washington state.

Few people outside of the scientific community realize that the lab exists, said Theresa Naluai-Cecchini, a research scientist at the site since 2011.

"We sort of fly under the radar," she said.

But the tissues — fetal brain, liver, heart, kidney and other cells — long have been used at Seattle's top science centers, as well as sites nationwide. Researchers at Fred Hutchinson Cancer Research Center, Seattle Children's and the Allen Institute for Brain Science, among others, say the tissue has been crucial for local study of diseases and disorders as diverse as genetic heart defects, kidney malformations and macular degeneration.

In past decades, fetal cells were used to develop vaccines for diseases including polio, rubella and chickenpox, and they're now being used in research of HIV, Alzheimer's disease, autism, spinal-cord injuries and other conditions.

"Our scientists learn so much from these fetuses," said Stacey DiNuzzo, a spokeswoman for Seattle Children's.

Local abortion foes say they've known for years about the UW lab and consistently have questioned the need to obtain the tissue.

"Obviously, we don't object to research, but we do object to research from sources that we see as unethical," said Dan Kennedy, chief executive at Human Life of Washington, the state affiliate of the group National Right to Life. "It is a gruesome, gruesome practice and we would urge all of those involved in it to get out of it."

Fetal cells are prized for some research because they replicate rapidly and can adapt quickly to new uses. Federal law prohibits exchanging the tissues for profit, allowing fees to be charged only for costs such as transportation, processing and storage.

The UW lab, founded by Dr. Thomas Shepard, a pediatrician commonly regarded as the "grandfather of teratology," or the study of birth defects, typically aims for a low profile. But controversy over covert videos released by the anti-abortion group The Center for Medical Progress, which prompted a Congressional hearing last week, is having a chilling effect on the lab's work, said Naluai-Cecchini, the research scientist.

Donations decline

In 2014, the lab collected 596 fetal samples from consenting women at two area hospitals and seven stand-alone clinics, and distributed 1,109 separate tissues to more than 60 researchers, Naluai-Cecchini said. The UW receives nearly $700,000 a year, including overhead costs, from the National Institutes of Health (NIH) to fund the lab, which has a repository of nearly 2,000 fetal samples from 370 individual donors.

Since July, when the videos surfaced purporting to show Planned Parenthood executives callously negotiating the sale of fetal parts, tissue donations have dropped dramatically, Naluai-Cecchini said.

"Most days, we have at least a single case to process," she said. "Recently, we've had weeks where we've no tissue samples at all."

The reason?

"I think that the women may hear that the clinics are profiting from the tissue," she said.

The allegation had traction. Republican political leaders in several states called for investigations of Planned Parenthood's practices. Cecile Richards, the organization's national president, was summoned to testify before a congressional committee, where critics such as Rep. Jim Jordan, a Republican from Ohio, called the videos "barbaric and repulsive" and accused the organization of seeking to make money from aborted babies.

Richards, however, said the videos were heavily edited to mischaracterize the organization and that Planned Parenthood facilitates donate a small amount of fetal tissue nationwide and recover only processing expenses, as allowed by law.

That defense is echoed by Naluai-Cecchini, who said the UW lab charges researchers a flat fee of $200 a day to process and ship tissue. Last year the lab received a little less than $50,000 for those services.

"We don't compensate the clinics for their tissue, and we don't compensate the donors," she said.

Fewer than 20 women agreed to donate tissue last year from among more than 3,000 who had abortions at centers run by Planned Parenthood of Greater Washington and Northern Idaho, according to spokeswoman Tanya Riordan. She declined to say which of the affiliate's nine sites participated in tissue donation, out of fear that activists would attack the facilities, endangering patients and staff. The organization's Pullman center was the target of arson last month.

Similarly, scientists at Seattle Children's and Fred Hutch who use or have used fetal tissue in research declined to be identified individually, saying they fear they could be the subject of harassment — or worse.

But, through representatives, the scientists emphasized that the tissue is donated by consenting patients, including many who suffer miscarriages or who must end pregnancies because the fetuses have genetic defects or other problems.

Ed Lein, an researcher with the Allen Institute for Brain Science, said tissue from the UW lab was used in the reference atlas for BrainSpan, a unique resource that details the complete set of genes involved in brain development across the human life span.

"We recognize the extraordinary value of this precious resource," he wrote in an email. "And our approach to creating high quality public data sets allows us to put important tools in the hand of thousands of researchers around the world."

Some question need

Naluai-Cecchini said she has personally worked with parents who find comfort in the idea of donating the tissue to help scientists find treatments or cures for the conditions that claimed their children.

"The couples desire something good to come out of their loss," she said.

NIH expects to spend about $76 million on fetal-tissue research this year, part of some $280 million allocated since 2011. But that's a small fraction of the $581 million spent on human embryonic stem-cell research, and about $1.94 billion for adult stem-cell research in the same time period.

Some scientists say the need for fetal-tissue research is waning, and that other techniques, such as using induced pluripotent stem cells or stem cells harvested from umbilical cords, offer more hope without the ethical problems of abortion.

Theresa Deisher, a Seattle molecular biologist who co-filed a 2010 lawsuit to shut down NIH support for embryonic stem-cell research, said the use of fetal tissue is "unnecessary — and it's not useful."

"Our research is dedicated to providing alternatives so that no one will feel compelled to work with that material," said Deisher, president of Sound Choice Pharmaceutical Institute. She said she has worked with The Center for Medical Progress, the group responsible for the Planned Parenthood videos.

Researchers at Fred Hutch, however, said that in some cases — the environment of the fetal bone marrow, for instance — the cells can't be replaced.

"In situations where other options are available, they are used, but fetal tissues have unique properties," spokeswoman Rhonda Curry said in a statement on behalf of the scientists.

At the UW, Naluai-Cecchini said staffers hope the controversy wanes so that they can continue to concentrate on providing basic tools for research that may save lives.

"Every sample that comes through our doors is precious and valuable," she said. "And they go to someone who wants to do something great."

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more abortions -> more ccancer -> moremresearch money for cancer -> need more abortions

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2016 (Oct 05) - Seattle Times : "Dr. Thomas Shepard, UW pioneer in study of birth defects, dies at 93"

2016-10-05-seattletimes-dr-thomas-shepard-uw-pioneer-in-study-of-birth-defects-dies.pdf

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Dr. Thomas H. Shepard, a University of Washington pediatrician and scientist whose work shaped the study of birth defects — including recent confirmation of the devastating effects of the Zika virus — died Monday. He was 93.

By JoNel Aleccia / Seattle Times health reporter

Dr. Thomas H. Shepard, a University of Washington pediatrician and scientist known as a pioneer in teratology, the study of birth defects, died Monday at a local hospital, family members said. He was 93.

His influence in his field loomed large. It ranged from the founding of the nation's oldest fetal-tissue laboratory, in 1964 at the UW, to the creation of "Shepard's criteria," the set of rules published in 1994 used to discern whether an outside agent could be a teratogen — something that would disrupt normal development in the womb.

The criteria were cited as recently as April, when the Centers for Disease Control and Prevention confirmed that there was no doubt the Zika virus exploding across Latin America and the Caribbean caused microcephaly and other serious birth defects.

Sonja Rasmussen, president of the Teratology Society, of which Dr. Shepard was a charter member and past president, cited the Zika decision as just one of his many contributions.

"Dr. Shepard has had a monumental and long-lasting impact on the field of teratology — as a scientist, mentor, teacher and colleague," she said. "He will be missed."

He spent his entire academic career at the UW and at Seattle Children's, though he was a visiting investigator at sites including the Carnegie Institution in Washington, D.C., and at the University of Copenhagen, according to a 2009 tribute by friend and colleague Dr. Alan G. Fantel, a pediatrician and geneticist at the UW.

Dr. Shepard's medical practice combined pediatrics, endocrinology, dysmorphology and teratology, and he treated many patients from infancy through adulthood, Fantel noted. He had a keen interest in achondroplasia, a form of short-limbed dwarfism, and in phenylketonuria, or PKU, for which nearly all newborns are now tested, as well as in many other disorders.

He authored 13 editions of the Catalog of Teratogenic Agents, a comprehensive compilation of chemical and environmental agents that can cause birth defects.

Dr. Godfrey Oakley, a student of Shepard's who went on to head the CDC's birth-defects division, called Shepard a "giant" in the field.

"His book that listed chemicals and their effects on causing birth defects has influenced the clinical care of millions of pregnant women around the world," Oakley said.

Dr. Shepard was born in Milwaukee, Wis., in 1923. He received an undergraduate degree from Amherst College in 1945 and his medical degree from the University of Rochester in 1948.

He married Alice Kelly in 1946 and had three daughters, Ann Uomoto, Betsy Hardin and Donna Richards. Kelly died in 2004 after a long illness. In 2006, when he was 83, he married Gretchen McCoy, who survives.

Dr. Shepard, who lived in Bellevue, was a fierce and dedicated sailor, recalled daughter Donna Richards, of Portland, Ore. The family built a cabin on Shaw Island in the late 1950s and visited frequently.

"As far as sailing goes, he could be very charming, telling us all we'd only be on the lake for an hour," Richards recalled with a laugh. "Then as soon as we got on the boat, he'd turn into Captain Bly and not let us go back for hours."

Dr. Shepard was also an avid artist who worked primarily in watercolor.

Despite his considerable accomplishments, he was always quite modest, friends and colleagues recalled.

"He was an understated guy," his nephew, Michael Shepard, recalled. "He didn't walk around telling people how important he was."

Funeral arrangements are pending.

In addition to his wife, Dr. Shepard is survived by his daughters, six grandchildren and five great-grandchildren.

In Memoriam: Thomas H. Shepard, M.D., Pioneer in Embryology and Teratology

Alan G. Fantel Janine E. Polifka Godfrey P. Oakley Jr

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Abstract : Dr. Thomas H. Shepard died on October 3, 2016 at the age of 93. He was a major figure in the fields of teratology, embryonic and fetal pathology, and pediatrics. He was beloved by his colleagues as he was by the many students and fellows whom he taught, mentored and befriended. His contributions to teratology are extraordinary and he is greatly missed.Birth Defects Research 109:533–534, 2017.© 2017 Wiley Periodicals, Inc.

In memoriam

Tom Shepard died on October 3, 2016 at the age of 93 (Fig. 1). He was a major figure in the fields of teratology, embryonic and fetal pathology, and pediatrics. Following medical school at the University of Rochester, Tom joined the faculty of the University of Washington in the Department of Pediatrics. There, he spent his entire career, starting out in pediatric endocrinology but moving to teratology and embryonic development following a fellowship first with the late Jim Wilson at the University of Florida and later, with James Ebert at the Carnegie Institute in Washington DC.

Tom founded the Division of Human Embryology and Teratology in 1964. The laboratory he developed and directed until he retired in 1993 remains funded by the oldest grant in the portfolio of the National Institute of Child Health and Human Development. This laboratory served as a magnet for students, fellows, and scholars worldwide who came to learn and collaborate with him and his colleague Dave Smith. Together, they trained much of a generation of teratologists and dysmorphologists whose students and fellows still represent a substantial portion of the scientists and physicians studying and practicing in those fields today. The scientists Tom attracted to his laboratory represented many diverse disciplines. They included geneticists, dysmorphologists, anatomists, pharmacologists, toxicologists, engineers, dentists, surgeons, epidemiologists, anthropologists, and pathologists among others. All came to learn from Tom but even more importantly, to share and apply their knowledge and skills to questions of normal and abnormal development. He truly respected these individuals and with them made significant contributions to the field of Teratology.

Tom pioneered the collection and study of fresh human embryos and fetuses in the United States, a process made possible by relatively liberal laws in the State of Washington. He was able to document both normal and abnormal development, constructing standards that remain in use today.

Tom's work was broad. It included normal embryology, embryonic and fetal pathology, developmental physiology and metabolism and effects of embryonic vitamin and nutrient deficiencies. After spending time studying with Denis New of Cambridge University, he adapted whole embryo culture to experimental teratology where it remains a major research tool.

In 1973 Tom published the first edition of the Catalog of Teratogenic Agents. It included information on 649 exposures in 211 pages. By contrast, the 12th edition, which he coauthored with the late Ron Lemire, included 3,261 agents in 545 pages. For decades, the Catalog has served as a basic tool in experimental teratology and used worldwide to counsel pregnant women.

Tom served on the TERIS (Teratogen Information System) Advisory Board from 1988 until his death. As a board member he helped Jan Friedman and others on the board formulate teratogenic risk assessments for more than 1,700 drugs and other environmental agents. Often he added agents that had been reviewed for TERIS to his own Catalog of Teratogenic Agents, particularly if they were “juicy” ones. Meaning a lot of teratology data was available for those agents. Like others on the Advisory Board, Tom served on the Board (mostly without compensation) because of his commitment to helping clinicians interpret the scientific evidence within the context of a patient's pregnancy. Although it is fair to describe all members of the TERIS Advisory Board as opinionated, Tom sometimes could be particularly stubborn when he strongly disagreed with the assessments of other board members. This often led to lengthy discussions as Tom calmly and steadfastly tried to convince the others that he was right.

In 2002, OTIS/MotherToBaby established a lectureship in his name to be presented every year at the annual meeting, and he richly deserved this honor. He attended every OTIS meeting until his declining health made it difficult for him to travel. For decades health care professionals called him for advice on the potential teratogenicity of a patient's exposure. Many of his patients were forever grateful to him for the compassion he showed and the advice he gave to them; and they never lost touch with him. Tom was an ardent supporter of teratogen information services and in 1994, with assistance from the Washington State Department of Health, Tom became co - director of CARE Northwest, a teratogen information service located at the University of Washington in Seattle. When state funding for CARE Northwest ended in 1996, he personally paid the salary of a teratogen information specialist for 10 years to keep the service going. Such was his commitment to ensuring that the science of teratology was made useful and easily accessible for clinicians and their patients.

Tom was driven in science and pediatrics. In addition to his laboratory studies and authorship he performed teaching and clinical duties in the Department of Pediatrics and Seattle Children's Hospital while serving on numerous scientific and governmental boards. He was in great demand and traveled extensively.

Tom was married to Alice Kelly in 1946. They had three daughters, Annie, Donna, and Betsy. Alice died in 2004 and in 2006 he married Gretchen McCoy. Tom had many interests outside the laboratory and clinic. He loved family and friends, he loved the San Juan Islands in Washington State and he was a truly demonic sailor. Tom grew up sailing in Massachusetts and raced on the waters of Lake Washington and Puget Sound. It can be said fairly confidently that he never lost a race even when it meant sailing in a direction opposite to every other boat around him. He had a vigorous and often ribald sense of humor that abruptly vanished when the starting gun sounded and the race began. Then his dedication and seriousness rivaled that in the laboratory and heaven help the crew member who messed up.

Tom was a charter member of the Teratology Society and an early president. He presided over an early annual Society meeting near Mt. Rainier that set a standard for meetings and that many of us will never forget. He was beloved by Society members as he was by the many students, fellows and colleagues whom he taught, mentored and befriended. His contributions to teratology are extraordinary and he is greatly missed.

From Bio of Edward Donnall Thomas (1920–2012) in Nature Magazine

See **Dr. Edward Donnall "Don" Thomas (born 1920)**

Source : [HP006I][GDrive]

[...] In 1955, Thomas was appointed physician-in-chief at the Mary Imogene Bassett Hospital in Cooperstown, New York. Here he became fascinated by the discovery that rodents given a lethal dose of radiation could be rescued by an intravenous infusion of marrow cells from a donor. **In 1957, Thomas treated a patient with leukaemia using high doses of total-body irradiation to wipe out the cancer, and then gave them an infusion of marrow cells from an identical twin. The transplant was at first successful, although the patient later died from a recurrence of the leukaemia.**

Meanwhile, the medical literature was charting numerous cases of patients with blood disorders who had been treated using marrow transplantation from healthy family members. All the patients died from infections or severe immune reactions that were not predicted from studies in inbred rodents. Many investigators left the field, pronouncing it a dead end.

Thomas did not give up. In 1957 he began experimenting in dogs. Like humans, dogs have unusual phenotypic diversity, a well-mixed gene pool and can develop haematological diseases, including non-Hodgkin lymphoma. In late 1963, Thomas set up his laboratory at the United States Public Health Service (USPHS) Hospital in Seattle, which was affiliated to the University of Washington's medical school.

When I joined his small band of scientists in 1965 as a research fellow, transplantation was not a widely known concept. Indeed, the university's print shop once produced letterhead stationery for us that read "Division of Hematology and Transportation". A remarkable thing about Thomas's leadership style was that he was happy to give people like me a free hand in innovating, as long as it helped the patients.

Under Thomas's guidance, we spent the 1960s developing high-intensity irradiation treatments to eradicate patients' cancer cells and establishing the importance of tissue matching for transplant outcome. To control and treat graft-versus-host disease, we developed drug combinations to suppress the immune system and produced antibodies against human lymphocytes — which once involved a 1.5-hour chase of an antibody-producing horse. Our total-body irradiation sources were set up in a Second World War underground bunker.

Work with patients began in 1969 at the USPHS hospital. Initial survival rates were low, and unexpected problems required going back and forth between bench and bedside — something that remained a hallmark of Thomas's work. By 1979, after performing a number of transplants, we were able to describe a phenomenon called graft-versus-tumour effects, in which donor lymphocytes help to eliminate residual malignant cells. There are patients who received transplants in 1971 still alive today.

Progress has been slow but steady. Early marrow donors were siblings. In 1979, the first patient with leukaemia was successfully treated with a transplant from an unrelated donor using new immunosuppressant drugs. This success sparked Thomas and others to set up international marrow-donor programmes. Transplant outcomes have improved, with survival rates for some diseases, such as aplastic anaemia, close to 95%.

In 1972, the US government closed the USPHS hospital. This prompted the founding of the private Fred Hutchinson Cancer Research Center (the Hutch), with close ties to the University of Washington's medical school. Thomas headed the medical oncology divisions at both.

Over the years, Thomas's team trained hundreds of young investigators. As one of them put it: "Virtually every major transplant centre in the world got its start by sending someone to train under Don Thomas." Owing to his influence, the Hutch's clinical focus has always been the patient, and its approach, one of teamwork. After retiring in 1989, Thomas continued writing manuscripts, lecturing and serving as an ambassador for the place. [...]

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PEOPLE (by last name / then D.o.B.)

- Dr. Bruce Edward Ivins (born 1946)

PLACES / COMPANIES / OTHER

- **ICANN**
- Operation **Ill Wind**
- **Immunex** Corporation
- **Inslaw**, Incorporated
- International Mining Corporation
- **Internet** Media Network Incorporated

ICANN

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ICANN

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Not to be confused with Independent Commission on Civil Aviation Noise.

Abbreviation

ICANN

Motto

One World. One Internet.

Founded

September 18, 1998; 22 years ago

Focus

Manage Internet Protocol numbers and Domain Name System root

Headquarters

Los Angeles, California,

United States

Key people

Göran Marby (CEO and President), Maarten Botterman (Chair of the Board)

Website

www.icann.org

Internet

An Opte Project visualization of routing paths through a portion of the Internet

General

[show]

Governance

[hide]

- IGF
- NRO
- IANA
- **ICANN**
- IETF
- ISOC

Information infrastructure

[show]

Services

[show]

History

[show]

Guides

[show]

Internet portal

- v
- t
- e

ICANN headquarters in the Playa Vista neighborhood of Los Angeles

The **Internet Corporation for Assigned Names and Numbers** (**ICANN** /ˈaɪkæn/ *EYE-kan*) is an American multistakeholder group and nonprofit organization responsible for coordinating the maintenance and procedures of several databases related to the namespaces and numerical spaces of the Internet, ensuring the network's stable and secure operation.[1] ICANN performs the actual technical maintenance work of the Central Internet Address pools and DNS root zone registries pursuant to the Internet Assigned Numbers Authority (IANA) function contract. The contract regarding the IANA stewardship functions between ICANN and the National Telecommunications and Information Administration (NTIA) of the United States Department of Commerce ended on October 1, 2016, formally transitioning the functions to the global multistakeholder community.[2][3][4][5]

Much of its work has concerned the Internet's global Domain Name System (DNS), including policy development for internationalization of the DNS system, introduction of new generic top-level domains (TLDs), and the operation of root name servers. The numbering facilities ICANN manages include the Internet Protocol address spaces for IPv4 and IPv6, and assignment of address blocks to regional Internet registries. ICANN also maintains registries of Internet Protocol identifiers.

ICANN's primary principles of operation have been described as helping preserve the operational stability of the Internet; to promote competition; to achieve broad representation of the global Internet community; and to develop policies appropriate to its mission through bottom-up, consensus-based processes.[6]

ICANN's creation was announced publicly on September 17, 1998,[7] and it formally came into being on September 30, 1998, incorporated in the U.S. state of California.[8] Originally headquartered in Marina del Rey in the same building as the University of Southern California's Information Sciences Institute (ISI), its offices are now in the Playa Vista neighborhood of Los Angeles in Facebook's old office.

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History[edit]

Before the establishment of ICANN, the IANA function of administering registries of Internet protocol identifiers (including the distributing top-level domains and IP addresses) was performed by Jon Postel, a Computer Science researcher who had been involved in the creation of ARPANET, first at UCLA and then at USC-ISI.[9][10] In 1997 Postel testified before Congress that this had come about as a "side task" to this research work.[11] The Information

Sciences Institute was funded by the U.S. Department of Defense, as was SRI International's Network Information Center, which also performed some assigned name functions.[12]

As the Internet grew and expanded globally, the U.S. Department of Commerce initiated a process to establish a new organization to perform the IANA functions. On January 30, 1998, the National Telecommunications and Information Administration (NTIA), an agency of the U.S. Department of Commerce, issued for comment, "A Proposal to Improve the Technical Management of Internet Names and Addresses." The proposed rule making, or "Green Paper",[13] was published in the Federal Register on February 20, 1998, providing opportunity for public comment. NTIA received more than 650 comments as of March 23, 1998, when the comment period closed.[14]

The Green Paper proposed certain actions designed to privatize the management of Internet names and addresses in a manner that allows for the development of competition and facilitates global participation in Internet management. The Green Paper proposed for discussion a variety of issues relating to DNS management including private sector creation of a new not-for-profit corporation (the "new corporation") managed by a globally and functionally representative board of directors.[15] ICANN was formed in response to this policy.[*citation needed*] ICANN managed the Internet Assigned Numbers Authority (IANA) under contract to the United States Department of Commerce (DOC) and pursuant to an agreement with the IETF.[16]

ICANN was incorporated in California on September 30, 1998, with entrepreneur and philanthropist Esther Dyson as founding chairwoman.[8] It is a nonprofit public benefit corporation "organized under the California Nonprofit Public Benefit Corporation Law for charitable and public purposes."[17] ICANN was established in California due to the presence of Jon Postel, who was a founder of ICANN and was set to be its first Chief Technology Officer prior to his unexpected death. ICANN formerly operated from the same Marina del Rey building where Postel formerly worked, which is home to an office of the Information Sciences Institute at the University of Southern California. However, ICANN's headquarters is now located in the nearby Playa Vista neighborhood of Los Angeles.

Per its original by-laws,[18] primary responsibility for policy formation in ICANN was to be delegated to three supporting organizations (Address Supporting Organization, Domain Name Supporting Organization, and Protocol Supporting Organization), each of which was to develop and recommend substantive policies and procedures for the management of the identifiers within their respective scope. They were also required to be financially independent from ICANN.[19] As expected, the regional Internet registries and the IETF agreed to serve as the Address Supporting Organization and Protocol Supporting Organization respectively,[20][21] and ICANN issued a call for interested parties to propose the structure and composition of the Domain Name Supporting Organization.[22] In March 1999, the ICANN Board, based in part on the DNSO proposals received, decided instead on an alternate construction for the DNSO which delineated specific constituencies bodies within ICANN itself,[23][24] thus adding primary responsibility for DNS policy development to ICANN's existing duties of oversight and coordination.

On July 26, 2006, the United States government renewed the contract with ICANN for performance of the IANA function for an additional one to five years.[25] The context of ICANN's relationship with the U.S. government was clarified on September 29, 2006 when ICANN signed a new memorandum of understanding with the United States Department of Commerce (DOC).[26] This document gave the DOC oversight over some of the ICANN operations.[26][27]

During July 2008, the DOC reiterated an earlier statement[28] that it has "no plans to transition management of the authoritative root zone file to ICANN". The letter also stresses the separate roles of the IANA and VeriSign.[29]

On September 30, 2009, ICANN signed an agreement with the DOC (known as the "Affirmation of Commitments") that confirmed ICANN's commitment to a multistakeholder governance model,[30] but did not remove it from DOC oversight and control.

On March 10, 2016, ICANN and the DOC signed a historic, culminating agreement to finally remove ICANN and IANA from the control and oversight of the DOC.[31] On October 1, 2016, ICANN was freed from U.S. government oversight.[32]

Notable events[edit]

On March 18, 2002, publicly elected At-Large Representative for North America board member Karl Auerbach sued ICANN in Superior Court in California to gain access to ICANN's accounting records without restriction. Auerbach won.[33]

During September and October 2003, ICANN played a crucial role in the conflict over VeriSign's "wild card" DNS service Site Finder. After an open letter from ICANN issuing an ultimatum to VeriSign, later endorsed by the Internet Architecture Board,[34] the company voluntarily ended the service on October 4, 2003. After this action, VeriSign filed a lawsuit against ICANN on February 27, 2004, claiming that ICANN had exceeded its authority. By this lawsuit, VeriSign sought to reduce ambiguity about ICANN's authority. The antitrust component of VeriSign's claim was dismissed during August 2004. VeriSign's challenge that ICANN overstepped its contractual rights is currently outstanding. A proposed settlement already approved by ICANN's board would resolve VeriSign's challenge to ICANN in exchange for the right to increase pricing on .com domains. At the meeting of ICANN in Rome, which took place from March 2 to 6, 2004, ICANN agreed to ask approval of the U.S. Department of Commerce for the Waiting List Service of VeriSign.[*citation needed*]

On May 17, 2004, ICANN published a proposed budget for the year 2004–05. It included proposals to increase the openness and professionalism of its operations, and greatly increased its proposed spending from US$8.27 million to $15.83 million. The increase was to be funded by the introduction of new top-level domains, charges to domain registries, and a fee for some domain name registrations, renewals and transfers (initially USD 0.20 for all domains within a country-code top-level domain, and USD 0.25 for all others).[*citation needed*] The Council of European National Top Level Domain Registries (CENTR), which represents the Internet registries of 39 countries, rejected the increase, accusing ICANN of a lack of financial prudence and criticizing what it describes as ICANN's "unrealistic political and operational targets". Despite the criticism, the registry agreement for the top-level domains jobs and travel includes a US$2 fee on every domain the licensed companies sell or renew.[35]

After a second round of negotiations during 2004, the TLDs eu, asia, travel, jobs, mobi, and cat were introduced during 2005.

> ICANN meeting, Los Angeles USA, 2007. The sign refers to Vint Cerf, then chairman of the board of directors, who is working on the so-called Interplanetary Internet.

On February 28, 2006, ICANN's board approved a settlement with VeriSign in the lawsuit resulting from SiteFinder that involved allowing VeriSign (the registry) to raise its registration fees by up to 7% a year.[36] This was criticised by a few members of the U.S. House of Representatives' Small Business Committee.[37]

During February 2007, ICANN began procedures to end accreditation of one of their registrars, RegisterFly amid charges and lawsuits involving fraud, and criticism of ICANN's management of the situation. ICANN has been the subject of criticism as a result of its handling of RegisterFly, and the harm caused to

thousands of clients as a result of what has been termed ICANN's "laissez faire attitude toward customer allegations of fraud".[38]

On May 23, 2008, ICANN issued enforcement notices against ten accredited registrars and announced this through a press release entitled "'Worst Spam Offenders' Notified by ICANN, Compliance system working to correct Whois and other issues."[39] This was largely in response to a report issued by KnujOn, called "The 10 Worst Registrars" in terms of spam advertised junk product sites and compliance failure.[40] The mention of the word "spam" in the title of the ICANN memo is somewhat misleading since ICANN does not address issues of spam or email abuse. Website content and usage are not within ICANN's mandate. However, the KnujOn report details how various registrars have not complied with their contractual obligations under the Registrar Accreditation Agreement (RAA).[41] The main point of the KnujOn research was to demonstrate the relationships between compliance failure, illicit product traffic, and spam. The report demonstrated that out of 900 ICANN accredited registrars, fewer than 20 held 90% of the web domains advertised in spam. These same registrars were also most frequently cited by KnujOn as failing to resolve complaints made through the Whois Data Problem Reporting System (WDPRS).

On June 26, 2008, the ICANN Board started a new process of TLD naming policy to take a "significant step forward on the introduction of new generic top-level domains." This program envisioned the availability of many new or already proposed domains, as well a new application and implementation process.[42]

On October 1, 2008, ICANN issued breach notices against Joker and Beijing Innovative Linkage Technology Ltd.[43] after further researching reports and complaints issued by KnujOn. These notices gave the registrars 15 days to fix their Whois investigation efforts.

In 2010, ICANN approved a major review of its policies with respect to accountability, transparency, and public participation by the Berkman Center for Internet and Society at Harvard University.[44] This external review was an assistance of the work of ICANN's Accountability and Transparency Review team.[45]

On February 3, 2011, ICANN announced that it had distributed the last batch of its remaining IPv4 addresses to the world's five regional Internet registries, the organizations that manage IP addresses in different regions. These registries began assigning the final IPv4 addresses within their regions until they ran out completely.[46]

On June 20, 2011, the ICANN board voted to end most restrictions on the names of generic top-level domains (gTLD).[47][48][49] Companies and organizations became able to choose essentially arbitrary top-level Internet domain names. The use of non-Latin characters (such as Cyrillic, Arabic, Chinese, etc.) is also allowed in gTLDs. ICANN began accepting applications for new gTLDS on January 12, 2012.[47] The initial price to apply for a new gTLD was set at $185,000[50] and the annual renewal fee is $25,000.[51][52]

Following the 2013 NSA spying scandal, ICANN endorsed the Montevideo Statement,[53] although no direct connection between these could be proven.[54]

On October 1, 2016, ICANN ended its contract with the United States Department of Commerce National Telecommunications and Information Administration (NTIA) and entered the private sector.[55]

The European Union's General Data Protection Regulation (active since May 25, 2018) impacted on ICANN operations, which the latter tried to fix through last-minute changes.[*clarification needed*][56] The deadline coincided with French President Macron's hosting of technology businesspeople such as Facebook CEO Mark Zuckerberg, Microsoft CEO Satya Nadella, Uber CEO Dara Khosrowshahi, IBM CEO Ginni Rometty, Intel CEO Brian Krzanich, Samsung President Young Sohn, and SAP CEO Bill McDermott.

Structure[edit]

From its founding to the present, ICANN has been formally organized as a nonprofit corporation "for charitable and public purposes" under the California Nonprofit Public Benefit Corporation Law. It is managed by a 16-member board of directors composed of eight members selected by a nominating committee on which all the constituencies of ICANN are represented; six representatives of its Supporting Organizations, sub-groups that deal with specific sections of the policies under ICANN's purview; an at-large seat filled by an at-large organization; and the President / CEO, appointed by the board.[57]

There are currently three supporting organizations: the Generic Names Supporting Organization (GNSO) deals with policy making on generic top-level domains (gTLDs);[58] the Country Code Names Supporting Organization (ccNSO) deals with policy making on country-code top-level domains (ccTLDs); the Address Supporting Organization (ASO) deals with policy making on IP addresses.[59]

ICANN also relies on some advisory committees and other advisory mechanisms to receive advice on the interests and needs of stakeholders that do not directly participate in the Supporting Organizations.[60] These include the Governmental Advisory Committee (GAC), which is composed of representatives of a large number of national governments from all over the world; the At-Large Advisory Committee (ALAC), which is composed of individual Internet users from around the world selected by each of the Regional At-Large Organizations (RALO)[61] and Nominating Committee; the Root Server System Advisory Committee, which provides advice on the operation of the DNS root server system; the Security and Stability Advisory Committee (SSAC), which is composed of Internet experts who study security issues pertaining to ICANN's mandate; and the Technical Liaison Group (TLG), which is composed of representatives of other international technical organizations that focus, at least in part, on the Internet.[62]

Governmental Advisory Committee[edit]

Governmental Advisory Committee representatives

Representatives[edit]

The Governmental Advisory Committee has representatives from 112 states (108 UN members, the Holy See, Cook Islands, Niue and Taiwan), Hong Kong, Bermuda, Montserrat, the European Commission and the African Union Commission.[63]

Observers[edit]

In addition the following organizations are GAC Observers:[64]

- African Telecommunications Union
- Asia-Pacific Telecommunity
- Caribbean Telecommunications Union (CTU)
- Commonwealth Telecommunications Organisation (CTO)
- Council of Europe

- Economic Commission for Africa (ECA)
- European Broadcasting Union
- European Organization for Nuclear Research (CERN)
- European Space Agency
- International Labour Office
- International Telecommunication Union (ITU)
- International Criminal Police Organization (INTERPOL)
- International Red Cross and Red Crescent Movement
- Latin American Association of Telecom Regulatory Agencies (REGULATEL)
- League of Arab States
- New Partnership for Africa's Development (NEPAD)
- Organisation for Economic Co-operation and Development
- The Organization for Islamic Cooperation
- Organization of American States
- Organisation internationale de la Francophonie (OIF)
- Pacific Islands Forum
- Secretariat of the Pacific Community (SPC)
- Inter-American Telecommunication Commission (CITEL)
- International Criminal Court
- United Nations Educational Scientific and Cultural Organization (UNESCO)
- Universal Postal Union
- World Bank
- World Health Organization (WHO)
- World Intellectual Property Organization (WIPO)
- World Meteorological Organization
- World Trade Organization

Trusted Community Representatives[edit]

As the operator of the IANA domain name functions, ICANN is responsible for the DNSSEC management of the root zone. While day to day operations are managed by ICANN and Verisign, the trust is rooted in a group of Trusted Community Representatives. The members of this group must not be affiliated with ICANN, but are instead members of the broader DNS community, volunteering to become a Trusted Community Representative. The role of the representatives are primarily to take part in regular key ceremonies at a physical location, organized by ICANN, and to safeguard the key materials in between.[65]

Democratic input[edit]

In the Memorandum of understanding that set up the relationship between ICANN and the U.S. government, ICANN was given a mandate requiring that it operate "in a bottom up, consensus driven, democratic manner." However, the attempts that ICANN have made to establish an organizational structure that would allow wide input from the global Internet community did not produce results amenable to the current Board. As a result, the At-Large constituency and direct election of board members by the global Internet community were soon abandoned.[66]

ICANN holds periodic public meetings rotated between continents for the purpose of encouraging global participation in its processes. Resolutions of the ICANN Board, preliminary reports, and minutes of the meetings, are published on the ICANN website, sometimes in real time. However, there are criticisms from ICANN constituencies including the Noncommercial Users Constituency (NCUC)[67] and the At-Large Advisory Committee (ALAC) that there is not enough public disclosure and that too many discussions and decisions take place out of sight of the public.[*citation needed*]

During the early 2000s, there had been speculation that the United Nations might assume control of ICANN,[68] followed by a negative reaction from the U.S. government[28] and worries about a division of the Internet.[69] The World Summit on the Information Society in Tunisia during November 2005 agreed not to get involved in the day-to-day and technical operations of ICANN. However it also agreed to establish an international Internet Governance Forum, with a consultative role on the future governance of the Internet. ICANN's Government Advisory Committee is currently established to provide advice to ICANN regarding public policy issues and has participation by many of the world's governments.[70]

Some have attempted to argue that ICANN was never given the authority to decide policy, e.g., choose new TLDs or exclude other interested parties who refuse to pay ICANN's US$185,000 fee, but was to be a technical caretaker. Critics[*who?*] suggest that ICANN should not be allowed to impose business rules on market participants, and that all TLDs should be added on a first-come, first-served basis and the market should be the arbiter of who succeeds and who does not.[*citation needed*]

Activities[edit]

Uniform Domain-Name Dispute Resolution Policy (UDRP)[edit]

One task that ICANN was asked to do was to address the issue of domain name ownership resolution for generic top-level domains (gTLDs). ICANN's attempt at such a policy was drafted in close cooperation with the World Intellectual Property Organization (WIPO), and the result has now become known as the Uniform Dispute Resolution Policy (UDRP). This policy essentially attempts to provide a mechanism for rapid, cheap and reasonable resolution of domain name conflicts, avoiding the traditional court system for disputes by allowing cases to be brought to one of a set of bodies that arbitrate domain

name disputes. According to ICANN policy, domain registrants must agree to be bound by the UDRP—they cannot get a domain name without agreeing to this.

Examination of the UDRP decision patterns has caused some[71] to conclude that compulsory domain name arbitration is less likely to give a fair hearing to domain name owners asserting defenses under the First Amendment and other laws, compared to the federal courts of appeal in particular.

Proposed elimination of public DNS whois[edit]

In 2013, the initial report of ICANN's Expert Working Group has recommended that the present form of Whois, a utility that allows anyone to know who has registered a domain name on the Internet, should be "abandoned". It recommends it be replaced with a system that keeps most registration information secret (or "gated") from most Internet users, and only discloses information for "permissible purposes".[72][73] ICANN's list of permissible purposes includes domain name research, domain name sale and purchase, regulatory enforcement, personal data protection, legal actions, and abuse mitigation.[74] Whois has been a key tool of investigative journalists interested in determining who was disseminating information on the Internet.[75] The use of whois by journalists is not included in the list of permissible purposes in the initial report.

Criticism[edit]

Since its creation, ICANN has been the subject of criticism and controversy.[76][77] In 2000, professor Michael Froomkin of the University of Miami School of Law argued that ICANN's relationship with the U.S. Department of Commerce is illegal, in violation of either the Constitution or federal statutes.[78] In 2009, the new *Affirmation of Commitments* agreement between ICANN and the U.S. Department of Commerce, that aimed to create international oversight, ran into criticism.[79]

During December 2011, the Federal Trade Commission stated ICANN had long failed to provide safeguards that protect consumers from online swindlers.[80]

TLD expansion[edit]

Also during 2011, seventy-nine companies, including The Coca-Cola Company, Hewlett-Packard, Samsung and others, signed a petition against ICANN's new TLD program (sometimes referred to as a "commercial landgrab"[81]), in a group organized by the Association of National Advertisers.[82] As of September 2014, this group, the Coalition for Responsible Internet Domain Oversight, that opposes the rollout of ICANN's TLD expansion program, has been joined by 102 associations and 79 major companies.[83] Partly as a response to this criticism, ICANN initiated an effort to protect trademarks in domain name registrations, which eventually culminated in the establishment of the Trademark Clearinghouse.

IBSA proposal (2011)[edit]

One controversial proposal, resulting from a September 2011 summit between India, Brazil, and South Africa (IBSA), would seek to move Internet governance into a "UN Committee on Internet-Related Policy" (UN-CIRP).[84] The action was a reaction to a perception that the principles of the 2005 Tunis Agenda for the Information Society have not been met.[84][85] The statement proposed the creation of a new political organization operating as a component of the United Nations to provide policy recommendations for the consideration of technical organizations such as ICANN and international bodies such as the ITU.[86] Subsequent to public criticisms, the Indian government backed away from the proposal.[87]

Montevideo Statement on the Future of Internet Cooperation (2013)[edit]

On October 7, 2013 the Montevideo Statement on the Future of Internet Cooperation was released by the managers of a number of organizations involved in coordinating the Internet's global technical infrastructure, loosely known as the "I*" (or "I-star") group. Among other things, the statement "expressed strong concern over the undermining of the trust and confidence of Internet users globally due to recent revelations of pervasive monitoring and surveillance" and "called for accelerating the globalization of ICANN and IANA functions, towards an environment in which all stakeholders, including all governments, participate on an equal footing". This desire to reduce United States association with the internet is considered a reaction to the ongoing NSA surveillance scandal. The statement was signed by the managers of the Internet Corporation for Assigned Names and Numbers (ICANN), the Internet Engineering Task Force, the Internet Architecture Board, the World Wide Web Consortium, the Internet Society, and the five regional Internet address registries (African Network Information Center, American Registry for Internet Numbers, Asia-Pacific Network Information Centre, Latin America and Caribbean Internet Addresses Registry, and Réseaux IP Européens Network Coordination Centre).[88][89][90]

Global Multistakeholder Meeting on the Future of Internet Governance (2013)[edit]

During October 2013, Fadi Chehadé, former President and CEO of ICANN, met with Brazilian President Dilma Rousseff in Brasilia. Upon Chehadé's invitation, the two announced that Brazil would host an international summit on Internet governance during April 2014.[91] The announcement came after the 2013 disclosures of mass surveillance by the U.S. government, and President Rousseff's speech at the opening session of the 2013 United Nations General Assembly, where she strongly criticized the American surveillance program as a "breach of international law". The "Global Multistakeholder Meeting on the Future of Internet Governance (NET mundial)" will include representatives of government, industry, civil society, and academia.[*citation needed*] At the IGF VIII meeting in Bali in October 2013 a commenter noted that Brazil intends the meeting to be a "summit" in the sense that it will be high level with decision-making authority.[92] The organizers of the "NET mundial" meeting have decided that an online forum called "/1net", set up by the I* group, will be a major conduit of non-governmental input into the three committees preparing for the meeting in April.[90][93][94]

The Obama administration that had joined critics of ICANN during 2011[95] announced in March 2014 that they intended to transition away from oversight of the IANA functions contract. The current contract that the United States Department of Commerce has with ICANN expired in 2015, in its place the NTIA will transition oversight of the IANA functions to the 'global multistakeholder community'.[96]

NetMundial Initiative (2014)[edit]

The NetMundial Initiative is a plan for international governance of the Internet that was first proposed at the Global Multistakeholder Meeting on the Future of Internet Governance (GMMFIG) conference (April 23–24, 2014)[97][98][99] and later developed into the NetMundial Initiative by ICANN CEO Fadi Chehadé along with representatives of the World Economic Forum (WEF)[100] and the Brazilian Internet Steering Committee (Comitê Gestor da Internet no Brasil), commonly referred to as "CGI.br".[101]

The meeting produced a nonbinding statement in favor of consensus-based decision-making. It represented a compromise and did not harshly condemn mass surveillance or support net neutrality, despite initial endorsement for that from Brazil. The final resolution says ICANN should be controlled internationally

by September 2015.[102] A minority of governments, including Russia, China, Iran and India, were unhappy with the final resolution and wanted multilateral management for the Internet, rather than broader multistakeholder management.[103]

A month later, the Panel on Global Internet Cooperation and Governance Mechanisms (convened by the Internet Corporation for Assigned Names and Numbers (ICANN) and the World Economic Forum (WEF) with assistance from The Annenberg Foundation), endorsed and included the NetMundial statement in its own report.[104]

During June 2014, France strongly attacked ICANN, saying ICANN is not a fit venue for Internet governance and that alternatives should be sought.[105]

.sucks domain[edit]

ICANN has received more than $60 million from gTLD auctions,[106] and has accepted the controversial domain name ".sucks" (referring to the primarily US slang for being inferior or objectionable).[107] sucks domains are owned and controlled by the Vox Populi Registry which won the rights for .sucks gTLD in November 2014.[108]

The .sucks domain registrar has been described as "predatory, exploitive and coercive" by the Intellectual Property Constituency that advises the ICANN board.[107] When the .sucks registry announced their pricing model, "most brand owners were upset and felt like they were being penalized by having to pay more to protect their brands."[109] Because of the low utility of the ".sucks" domain, most fees come from "Brand Protection" customers registering their trademarks to prevent domains being registered.[110]

Canadian brands had complained that they were being charged "exorbitant" prices to register their trademarks as premium names. FTC chair Edith Ramirez has written to ICANN to say the agency will take action against the .sucks owner if "we have reason to believe an entity has engaged in deceptive or unfair practices in violation of Section 5 of the FTC Act".[111] The Register reported that intellectual property lawyers are infuriated that "the dot-sucks registry was charging trademark holders $2,500 for .sucks domains and everyone else $10."[112]

U.S. Representative Bob Goodlatte has said that trademark holders are "being shaken down" by the registry's fees.[113] Jay Rockefeller says that .sucks is "a predatory shakedown scheme" and "Approving '.sucks', a gTLD with little or no public interest value, will have the effect of undermining the credibility ICANN has slowly been building with skeptical stakeholders."[107]

.islam, .halal top level domains[edit]

In a long-running dispute, ICANN has so far declined to allow a Turkish company to purchase the .islam and .halal gTLDs, after the Organisation of Islamic Cooperation objected that the gTLDs should be administered by an organization that represents all the world's 1.6 billion Muslims.[114] After a number of attempts to resolve the issue the domains are still held "on hold".[115]

.amazon gTLD dispute[edit]

In May 2019 ICANN decided in favor of granting exclusive administration rights to amazon.com for the .amazon gTLD after a 7 year long dispute with the Amazon Cooperation Treaty Organization (ACTO). [116][117]

See also[edit]

- Alternative DNS root
- Domain name scams
- Domain Name System
  - Domain name
  - Domain name registrar
  - Internationalized domain name
  - Top-level domain
    - Country code top-level domain
    - Generic top-level domain
    - Geographic top-level domain (GeoTLD)
- IEEE Registration Authority
- Internet Assigned Numbers Authority (IANA)
- InterNIC
- List of ICANN meetings
- List of United States quangos
- Montevideo Statement on the Future of Internet Cooperation
- NetMundial Initiative, a plan for governance of the Internet
- Network Solutions
- OneWebDay
- OpenNIC
- Trademark Clearinghouse
- Uniform Domain-Name Dispute-Resolution Policy
- WHOIS

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Housatonic

Operation Ill Wind

Wikipedia Operation Ill Wind

US AG in 1991 - **William Pelham Barr (born 1950)**

Saved Wikipedia (Dec 23, 2020) - Operation Ill Wind

Source : [HK004C][GDrive]

Operation Ill Wind was a three-year investigation launched in 1986 by the United States Federal Bureau of Investigation into corruption by U.S. government and military officials, and private defense contractors. Charles "Chuck" Duff was the sole Air Force Action Officer responsible for developing, coordinating and implementing Air Force actions relating to the Department of Justice's "Ill Wind" procurement fraud investigation. Government officials, private individuals and companies were eventually convicted of various crimes including nine government officials, 42 Washington consultants and 7 military contractors,[1] as well as executives at GE, Boeing and United Technologies.[2][3]

[**Melvyn Robert Paisley (born 1924)**], appointed Assistant Secretary of the Navy in 1981 by Republican President Ronald Reagan,[4] was found to have accepted hundreds of thousands of dollars in bribes. He pleaded guilty to bribery and served four years in prison.[5]

James E. Gaines, Deputy Assistant Secretary of the Navy, took over when **Paisley** resigned his office.[6] Gaines was convicted of accepting an illegal gratuity and theft and conversion of government property. He was sentenced to six months in prison.[7]

Victor D. Cohen, Deputy Assistant Secretary of the Air Force, was the 50th conviction obtained under the Ill Wind probe when he pleaded guilty to accepting bribes and conspiring to defraud the government.[8]

Most worked for Unisys, pleading guilty to eight felonies, including the use of fraud, bribery and illegal campaign contributions to obtain billions of dollars in defense contracts.[9] Other top officials worked for Lee Telecommunications and Teledyne.[10]

The scandal led the United States Congress to pass the 1988 Procurement Integrity Act,[11] which regulates the pay that procurement officials can receive from contractors during the first year after they leave government, and forbids them providing bid and proposal information to their new employers.[12]

September 6, 1991 - AP News - "Unisys Pleads Guilty in Defense Fraud Case"

S ource : [HM001B][GDrive] , by JAMES ROWLEY

ALEXANDRIA, Va. (AP) _ Unisys Corp. pleaded guilty today to criminal charges in the huge Pentagon procurement scandal and agreed to pay the United States up to $190 million to settle claims arising from the Operation Ill Wind investigation.

"This $190 million settlement, the largest ever of its type, should carry a simple but necessary message: where individuals or corporations systematically defraud a procurement program, we'll use the full extent of the law to punish them," said Acting Attorney General [**William Pelham Barr (born 1950)**]. "The integrity of these programs demands it and the taxpayers deserve no less."

Unisys Chairman James A. Unruh said in a statement his company "must accept responsibility for the past action of a few people" associated with Sperry Corp., which was taken over by Burroughs Corp. in 1986 to form Unisys.

"All of us at Unisys have been angered and frustrated that the actions of a few have cast a cloud over a dedicated, ethical work force," Unruh said, adding "this unfortunate chapter is behind us."

Bill Beckham, a spokesman for the financially troubled computer maker and defense contractor, said, "The agreement was structured in such a way to allow us to remain financially viable. Unisys will pay the $190 million over a six-year period with a large part of the payment contingent on future profits.

"It really will have no appreciable impact on our financial ability," he said. "We are absolutely pleased that it's over."

Unisys attorney Charles Ruff entered the guilty plea before U.S. District Judge Claude Hilton in the Washington suburb of Alexandria.

Barr said the $190 million includes $162 million in civil damages and penalties, $18 million in civil forfeitures which will go to a Justice Department fund for use in law enforcement, $5 million in criminal fines and $5 million for reimbursement of investigative costs.

Unisys will pay $54 million in cash over five years, starting with a payment of $6.3 million this year. It will pay an estimated $46 million from profits on a radar surveillance system contract that is scheduled to be completed in late 1994, and contingency payments of up to $90 million made through 1997 depending on the asset sales and net income reported by Unisys over that period.

Unisys pleaded guilty to eight counts, including conspiring to defraud the United States, bribery, conversion of government property and filing false statements. Among the counts were related charges of defense procurement fraud pending against Unisys in Brooklyn, N.Y., Albuquerque, N.M., and Corpus Christi, Texas.

It pleaded guilty to bribing former Assistant Secretary of the Navy [**Melvyn Robert Paisley (born 1924)**], former Deputy Assistant Secretary of the Air Force Victor D. Cohen and another Navy official, all of whom were previously convicted on related charges.

Barr said Unisys is the sixth corporation to plead guilty to charges stemming from the four-year-old Operation Ill Wind investigation, with total settlements in fines and penalties reaching $225 million. It was the 51st conviction, Barr said, in cases also against defense consultants, businessmen and government officials.

Five defense contractors have pleaded guilty to a variety of criminal charges stemming from their efforts to illegally obtain confidential bid information submitted to the Pentagon by competitors

Defense firms hired former Pentagon officials as consultants to use their contacts still in government to obtain the information that the companies hoped to use to tailor their own bids to obtain lucrative military contracts.

Defense subsidiaries of Unisys played a major part in the scandal.

More than a dozen former Unisys executives or consultants have pleaded guilty to various charges and are cooperating with the investigation.

Among those cooperating with the investigation are Charles F. Gardner, a former Unisys vice president who admitted creating a slush fund to bribe government officials and make illegal campaign contributions.

Among other things, Gardner admitted arranging for Unisys to purchase at an inflated price Paisley's resort condominium.

[**Melvyn Robert Paisley (born 1924)**] pleaded guilty to bribery charges in June, admitting that he helped manipulate one bidding competition to help Sperry obtain a share of a lucrative weapons contract.

When Paisley left the Pentagon in 1987, Unisys hired him as a consultant and within a month paid him $98,000, according to court papers.

Unisys, based in Blue Bell, Pa., is trying to reduce its debt of $3.8 billion by selling certain assets, including its defense division. Industry analysts say this sale has awaited the settlement of the charges.

Last year, Unisys lost $437 million on revenue of $10 billion, including $2 billion in revenue from its defense operations. [...]

1991 (Aug 23) - LA Times - "Ex-Official Enters 'Ill Wind' Guilty Plea : Defense: It marks the 50th conviction obtained under the probe of Pentagon procurement fraud. He faces 20 years in jail at sentencing Dec. 6."

https://www.latimes.com/archives/la-xpm-1991-08-23-mn-1071-story.html

By ROBERT L. JACKSON

WASHINGTON — A former high-ranking Air Force official pleaded guilty Thursday to accepting bribes and conspiring to defraud the government in the Operation Ill Wind investigation of Pentagon procurement fraud.

Acting Atty. Gen. William P. Barr said the guilty plea by Victor D. Cohen was the 50th conviction obtained under the Ill Wind probe, which has been handled by the Naval Investigative Service, the FBI and the U.S. attorney's office in Alexandria, Va.

Cohen, who was deputy assistant Air Force secretary, faces a maximum penalty of up to 20 years in prison and fines of up to $500,000. He will be sentenced on Dec. 6 by U.S. District Judge Claude M. Hilton. His plea agreement with the government requires Cohen to "cooperate fully" with authorities in prosecuting others.

Cohen, 55, is the second-highest former Pentagon official to plead guilty in the scandal. He was outranked only by Melvin R. Paisley, a former assistant secretary of the Navy, who pleaded guilty to similar charges in June.

Court papers stated that Cohen, in return for favors, payments and the promise of additional funds, "improperly influenced procurement decisions" and provided "sensitive information" to selected companies to help them obtain Pentagon contracts.

Assistant U.S. Atty. Joseph Aronica said he could not estimate the dollar value of Cohen's bribe-taking because it included all-expense-paid overseas trips financed by defense contractors and the promise of additional funds that never were received. At one point, Cohen opened a Swiss bank account to receive illicit payments, but no funds ever reached it, Aronica said.

Documents filed by Aronica showed that Cohen dealt mainly with William M. Galvin, a private consultant who pleaded guilty to bribery and corruption charges last year. Working on behalf of Loral Electronics Corp. of Yonkers, N.Y., one of Galvin's clients, the two men "agreed that Galvin would make a financial arrangement with Loral for Cohen's assistance from which they would both benefit," court papers said.

Loral has paid $5.7 million in fines and civil penalties for its role in the scandal

Cohen also received bribes from Charles F. Gardner, an employee of Sperry and its successor, Unisys Corp., the papers said. Unisys is expected to enter a guilty plea in the next few weeks and pay heavy fines, according to sources familiar with the case.

Describing one episode, court papers said, Gardner had called Galvin in May, 1987, and reported that Cohen "told him that Unisys had been awarded a $482,000 contract."

"Gardner joked that it had cost the company one and a half million dollars to win a half-million dollar contract, but he then stated that it was the start of $9 million," the papers said.

Among the favors received by Cohen were London theater tickets, payment of a $1,166 Paris hotel bill and the purchase of his 1979 Mercedes Benz for $17,800, a car that a Unisys executive later repaired and resold for only $4,225.

So far, 45 individuals and five corporations have been convicted in Ill Wind, an investigation that became public in June, 1988, when federal agents served four dozen search warrants at homes and offices across the nation. Officials said the probe actually had begun secretly in 1986 with a tip from a former Marine Corps official.

1993 (Jan 11) - Fortune Magazine - "INSIDE THE BIGGEST PENTAGON SCAM An extraordinary federal investigation called Operation Ill Wind reveals how secrets are sold, bids are rigged, and officials are bribed. Can Clinton stop the fraud?"

Source : [HP004J][GDrive]

By Irwin Ross REPORTER ASSOCIATE Wilton Woods IRWIN ROSS, a longtime contributor to FORTUNE, is author of Shady Business, a study of corporate corruption undertaken for the Twentieth Century Fund.

(FORTUNE Magazine) – Voters loved it when Ross Perot thundered against a government corrupted and betrayed by lobbyists and consultants sporting "alligator shoes and $1,000 suits." Now Bill Clinton vows to crack down on influence peddling by former bureaucrats and to impose the strictest ethics requirements ever on officials who serve in his Administration. Well, Mr. President-elect, good luck. You'll need it.

Now meet the reason. His name is [**Melvyn Robert Paisley (born 1924)**], and for more than five years during Ronald Reagan's presidency, he served as an Assistant Secretary of the Navy with major responsibility for procurement. No one more brazenly exploited Washington's infamous "revolving door" than Paisley. According to the government, in the first 15 months after he left the Pentagon in March 1987, Paisley collected more than $500,000 in consulting fees from companies he had earlier befriended. Even worse, while in office, he corrupted the bidding process on hundreds of millions of dollars of weapons systems in order to divert contracts to those who secretly bought his services.

The scams that swirled around Paisley were brought to light -- and eventually to justice -- as part of **Operation Ill Wind**, the biggest and most successful federal investigation ever of defense procurement fraud. Since it was launched in September 1986, Ill Wind has led to the conviction of nine government officials, 42 Washington consultants and corporate executives, and seven companies. The best known are United Technologies, the seventh-largest defense contractor; Unisys, the 15th largest; Loral Corp., No. 16; and Teledyne, No. 37. [...]

Unisys agreed to pay the biggest total penalty -- $163 million in fines, damages, and forfeitures, plus the cost of its investigation. Just recently, John O'Brien, former chairman of Grumman and the highest executive nailed so far, pleaded guilty to two counts of fraud in a case related to Ill Wind. Though two trials are still pending, the investigation is finally winding down, and the full story of what was uncovered can now be told.

WHY TELL IT?

Ill Wind provides an unparalleled worm's-eye view of exactly how secrets are sold, officials are bribed, bids are rigged, payoffs are hidden, and other favors

Ill Wind provides an unparalleled worm's-eye view of exactly how secrets are sold, officials are bribed, bids are rigged, payoffs are hidden, and other favors are delivered. Such shenanigans naturally tend to cluster where the money is.

During the 1980s, the Pentagon was Washington's biggest honey pot. It will remain so even as it shrinks, but in the 1990s, more honey may flow from a new civilian R&D agency, the Energy Department, or whoever handles the infrastructure buildup Bill Clinton plans. While eliminating such illegal activities is undoubtedly impossible, Ill Wind offers insights into how they may at least be discouraged.

Though this sorry saga features a huge cast of characters, its antihero is clearly [Melvyn Robert Paisley (born 1924)]. No other government official toppled by Ill Wind ranked so high, raked in so much, drew such a stiff sentence (four years in prison), or seemed a more unlikely candidate for corruption. Indeed, until its last chapter, Mel Paisley's life had largely been a classic American success story. He was born on October 9, 1924, in Portland, Oregon, and spent his preschool years in a logging camp on Oregon's Umpqua River. His father worked as a high climber -- the daring fellow who shinnied up the trunk to shear off the top 25 feet. His mother toiled in the cookhouse. When America entered World War II, young Mel enlisted in the Army Air Corps but had to wait a year, until he turned 18, before he could put on a uniform. Trained as a pilot, he flew scores of missions over Europe at the controls of a P-47 fighter, downed several enemy planes, and came home with a chestful of medals, including the Distinguished Service Cross. Mustered out as a captain at age 21, Paisley then earned a bachelor's degree in engineering. After a few months of graduate school at MIT, he was hired by Boeing as a junior engineer. There Paisley flourished for 28 years, rising to international sales manager for a division of Boeing Aerospace. In his last years at the company he found a great friend and admirer in John Lehman, a consultant to Boeing, who became Secretary of the Navy under Ronald Reagan. Less than a year after taking office, Lehman got Paisley named his Assistant Secretary for Research, Engineering, and Systems.

Young, aggressive, controversial, Lehman, then 38, blew into Washington determined to fulfill Reagan's pledge to restore America's military might by expanding the Navy's fleet to 600 ships. As Lehman's point man in that effort, Paisley quickly developed a reputation as a decisive administrator who rapped out orders in a strong, raspy voice and frequently dressed down underlings in the presence of others. His boss's trust in him enhanced Paisley's already significant power. Eighteen months before Ill Wind became public, Lehman declared that Paisley had been his first choice for the job and had turned out to be "the best Assistant Secretary for Research and Development the Navy has ever had." (Lehman, who was never implicated in any wrongdoing and is now a managing director at Paine Webber, refused to talk to FORTUNE about either Paisley or Ill Wind. Paisley, now serving time at a minimum security federal prison near Las Vegas, also refused to be interviewed.)

During all these years, the only hint of scandal to color Paisley's reputation was his turbulent domestic life. **The most bizarre incident was the death in 1968 of his second wife, Mary Lou. Paisley told Seattle police that he awoke in the middle of the night to find her body on a bathroom floor, her head facedown in a towel soaked with carbon tetrachloride, with which she had apparently cleaned brushes that she used for her oil paintings. Paisley also reported that she had imbibed some alcohol before retiring and taken two sleeping pills.** Her death was ruled an accident, a finding left unchanged when local authorities, prompted by the Ill Wind revelations, opened a new investigation 20 years later. Soon after Mary Lou's death, Paisley wed his secretary at Boeing. That union ended in divorce shortly before he married Vicki McKim, a Boeing computer analyst many years his junior, in 1980. When did Paisley cross the line from bullying bureaucrat to crook? And why? The many lengthy documents filed in court when Paisley and other defendants pleaded guilty (and which provided much of our chronology) offer no way to pinpoint the debut of his illegal activity. But money was clearly the motive. Paisley took a pay cut when he left Boeing, a loss he apparently felt was only partly assuaged by a $183,000 severance payment that his former employer granted him when he resigned. Defense consultant William M. Galvin was Paisley's partner in his felonious schemes. They met at Paisley's swearing-in festivities in December 1981. Galvin invited the Navy's Mr. Procurement to his home for a Christmas tree trimming party later that day. A large, barrel-chested man whose heartiness and gregariousness would typecast him as a salesman in any setting, Galvin had little technical competence in defense matters but a vast talent at parlaying friendships into business and bestowing favors large and small. He entertained lavishly at his 17-acre estate in Front Royal, Virginia. Unlike other consultants, Galvin had never worked at the Pentagon, but he had impressive clients, among them Unisys, Loral, Martin Marietta, and United Technologies. The first documented deal between Galvin and Paisley occurred in December 1985. On Christmas Eve, the two flew to St. Thomas in the Virgin Islands on vacation. There they hatched a complicated scheme to get the Navy to select Martin Marietta as prime contractor on a research program whose identity still remains classified. They also agreed to form a company, called Sapphire Systems, that would become a subcontractor on the program, though Paisley's financial interest in it would naturally remain concealed. Sapphire didn't take long to shine. On April 5, 1986, Paisley and Galvin met in New York City with an individual identified by the government only as "a high corporate official of Martin Marietta (now retired)" to discuss strategy for obtaining the prime contract. Paisley suggested that the company retain Galvin as a consultant, which it did. Seven months later Paisley formally named Martin Marietta the prime contractor, irately overriding a Navy official who questioned the arrangement. By the end of the month, initial funding for the project had been approved, with $900,000 to go to Marietta and $300,000 to Sapphire. Things were looking so bright that at one point Galvin proposed that Marietta buy Sapphire at some future date for $5 million. In the end, however, the whole scheme disintegrated. Once Paisley resigned from the Pentagon in 1987, the Navy dropped Marietta and signed up another prime contractor. Still, Paisley's Martin Marietta connection served him well. Several months after he swept through the revolving door, the company, at Galvin's urging, hired him as a consultant. By the time Ill Wind became public in June 1988, Martin Marietta had paid him some $200,000. (The company, which cooperated with the Ill Wind investigation, has not been charged with any wrongdoing.) Paisley was more successful in the illegal chores that he undertook in 1986 on behalf of Sperry Corp., which merged with Burroughs that November to form Unisys. Sperry was bidding to supply the Navy an airport surveillance radar system. When Sperry's "best and final offer" (known in the trade as a BAFO) proved too high, Paisley blocked the contract award to a competing company. He then went to extraordinary lengths to persuade his Pentagon colleagues to alter the terms of the competition in ways that would favor Sperry. He later passed to Galvin information on a rival's bid. With this illegal edge, Sperry ! easily came in as low bidder in the second round of BAFOs and won the contract for $45 million. AROUND THIS TIME Paisley learned that Sperry was also doing poorly in a competition to make the radar transmitter for the Aegis weapons system installed on some destroyers and small cruisers. Ever mindful of the company's interest, he arranged a meeting at his home on a Saturday in May, with Galvin, a Sperry engineer, and Charles F. Gardner, a Sperry vice president. After a long discussion of various strategies, Paisley came up with the solution: Sperry's best bet was to team up with Westinghouse and bid for the contract together. Back in the Pentagon, Paisley once again rearranged the playing field to favor his friends. RCA and its subcontractors, which originated the Aegis program, were already the primary source. That left open the role of additional suppliers. Rather than continuing to take rival bids for different components of the system, Paisley declared that two teams of two companies each would compete to be the second source for the entire system. To eliminate potential rivals, Paisley drastically shortened the period in which bids could be received. In June 1987, Sperry and Westinghouse (an innocent in the whole affair) were awarded the contract. Favors like these prompted Gardner to become one of Paisley's principal paymasters. An old Washington hand, Gardner was general manager of Sperry's surveillance and fire control systems division, headquartered in Great Neck, Long Island. That position gave him a convenient way to covertly finance -- apparently without the knowledge of his corporate superiors -- a steady stream of bribes, favors, and illegal political contributions. He did so by arranging for "technical services" contracts with outside parties, ostensibly for things like special reports. Though he had authority to spend up to $1 million per contract, Gardner avoided auditors' scrutiny by limiting them to $100,000 each. To provide conduits for the payments, Gardner arranged for James G. Neal, one of the many consultants he used, to set up shell corporations. Neal obliged with a dazzling display of letterheads -- James Neal

Associates Inc., Anchorage International of Northern Virginia Inc., Orion Tech Inc., Tech Plans Inc., Polaris Tech Inc., Jay Dee Tech Inc., and Dubhe Associates. All these entities received consulting contracts from Sperry. Neal also set up another corporation, Daltech Inc., which served as a channel to transmit funds received by Neal back to Gardner. In the end the bill for all these ill-gotten gains was normally picked up by the government, since Sperry added consultants' fees to either its direct or its overhead costs on military contracts. In August 1986, Gardner used Neal's network of companies to buy a condominium in Sun Valley, Idaho, from Paisley for $149,000, well above its market value. Indeed, 15 months later, Gardner and Neal resold the condo for only $100,000. Government investigators claimed that the difference between the two prices was a bribe, a charge to which Gardner later pleaded guilty. After Paisley left the Pentagon, Unisys fulfilled a promise that Gardner had previously made and employed him as a consultant, paying him $98,000 from May 1, 1987, to May 14, 1988. Though most of the favors Paisley delivered earned him relatively small change while he was in office, one scheme might have produced a major payoff -- if only it had worked. It involved an effort to get a lucrative Navy contract for an Israeli company called Mazlat, which was teamed with an American company, AAI. In 1985, Mazlat/AAI won a Navy contract for a system of short-range, unmanned planes used to gather combat intelligence and known as RPVs (remotely piloted vehicles). Subsequently, the Navy announced a competition for a medium-range RPV system. Mazlat/AAI sought to supply one component -- the equipment that monitors the pilotless craft -- and planned to offer the same ground control mechanism that it used on its short-range system. In March 1986, Galvin hosted a breakfast at his home for Paisley, Mazlat's president, and an Israeli consultant. They struck a deal. Paisley would try to influence the Navy to adopt the Mazlat system for the new RPVs, in return for which Mazlat would pay a 2% royalty into a Swiss bank account of Lorena Associates, a company owned by Galvin. The four would share the royalties. Mazlat made a down payment of $50,000 into the Lorena account, and other payments brought the total to around $200,000. Orders for the ground control stations were expected to reach $100 million eventually, which would mean $500,000 for each man. Though pleased with this arrangement, Paisley was unsure how to manage his overseas stash and asked Galvin for advice. "I don't understand how to do it best, to bring some of that money out of Switzerland," he told Galvin in a telephone call the government tapped. Galvin's reply: "Well, I leave it there . . . if you bring it here, you've got to pay the taxes." A good reason to leave it in Switzerland, Paisley concluded. In May he did what he was paid for, issuing a directive that mandated the adoption of the Mazlat ground control system. But over the next two years the scheme fell apart because the Mazlat component performed poorly. (The two Israelis who made the deal have not been indicted, nor has Mazlat.) After Paisley resigned from the Pentagon, he immediately teamed up with his friend Bill Galvin and set to work parlaying insider information into hard cash. At the time one of Galvin's clients, the Pratt & Whitney division of United Technologies, was having trouble getting the Navy to renew its contract to produce the F404 engine, which powered the Navy's Hornet fighter, formally known as the F/A-18. General Electric also manufactured the engine, and Navy procurement officials were making noises that they might give the entire job to GE because Pratt & Whitney's prices were too high. Enter Paisley, who informed Galvin that he had "stolen" some valuable price data involving GE's bid on the F404 engine on his way out the Pentagon door. Soon after Paisley mentioned his helpful theft, Galvin telephoned Eugene J. Tallia, the head of Pratt & Whitney's Washington office, and asked him to hasten over with his "pad and pencil" for some numbers. Galvin sent his car for Tallia, who soon appeared in Galvin's suite in the Watergate office building, where Paisley unburdened himself of the data. (Tallia was never charged with any wrongdoing.) In the weeks that followed, P&W revised its figures to match GE's proposed prices and was rewarded with a contract for 30% of the production needed in 1988, the same percentage it had before. That happy agreement occurred on June 4, 1987. Late that month Paisley was hired by United Technologies as a consultant, and he was paid $218,000 over the following year. Presumably, he could have looked forward to collecting years of such hefty fees from United Technologies, Martin Marietta, Sperry, and his other corporate clients had Operation Ill Wind not cut his consulting career short. WHAT LESSONS does this investigation offer policymakers? The Pentagon has tightened procurement regulations as a result of it. The major change has been to curb the use of multiple "best and final offers" -- an obvious oxymoron and an easy way to fiddle bids. Since August 1988 a contracting officer must get approval from a higher authority before authorizing a second BAFO, and records must be kept of these approvals. More significant has been a tightening of ethical compliance programs among corporations. Unisys has been particularly aggressive in this regard, establishing new channels such as telephone hotlines to encourage whistleblowers. Clinton's proposal to curb the rapidity with which influence can be legally peddled may also help. Currently, the law restrains -- or is supposed to restrain -- a former officeholder from lobbying his own agency for one year. Clinton wants to raise that to five years. But none of these changes do more than make things slightly harder for determined lawbreakers like Paisley and his friends. Can anything else discourage them? While in office, Paisley himself made one drastic, if unlikely, suggestion. Asked by a congressional committee what should be done about corrupt military officials and defense contractors, he replied that "you have to hang them from a tree where everyone can see them." Short of that, Ill Wind should, at least until memory fades, act as a powerful deterrent.

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Website: www.immunex.com; www.amgen.comWholly Owned Subsidiary of Amgen Inc.

Incorporated: 1981

Employees: 1,618

Sales: $986.8 million (2001)

NAIC: 325414 Biological Product (Except Diagnostic) Manufacturing; 325412 Pharmaceutical Preparation Manufacturing; 533110 Owners & Lessors of Other Non-financial Assets

Company Perspectives:

Immunex is a leading biopharmaceutical company dedicated to developing immune system science to protect human health. Applying our scientific expertise in the field of immunology, cytokine biology, vascular biology, antibody-based therapeutics and small molecule research, we work to discover new targets and new therapeutics for treating rheumatoid arthritis, or RA, asthma, and other inflammatory diseases, as well as cancer and cardiovascular diseases.

Key Dates:

1981:

Steven Gillis and Christopher Henney found Immunex in Seattle.

1987:

First clinical studies of Leukine are initiated.

1991:

Leukine is marketed for bone marrow transplant patients and receives FDA approval; ground is broken for a new pharmaceutical manufacturing facility in Bothell, Washington.

1993:

Shareholders approve merger with Lederle, a division of American Cyanamid; plans are announced for new research and development center.

1994:

American Home Products buys American Cyanamid; Edward Fritzky joins Immunex.

1996:

FDA approves Novantrone for use in hormone-refractory prostate cancer patients; scientists discover RANK, a molecule involved in the regulation of bone formation/degradation.

1997:

Immunex partners with Wyeth-Ayerst Pharmaceuticals to market Enbrel in North America.

1998:

Researchers clone TACE, a key immune system enzyme, and TRAIL, a gene critical to healthy immune systems; Enbrel receives FDA approval as first in a new class of drugs for treatment of moderate to severe rheumatoid arthritis.

1999:

Immunex stock splits two-for-one; Enbrel is approved for treatment of juvenile rheumatoid arthritis; total product sales reach $376 million and construction starts on new process development facility.

2000:

Immunex stock splits three-for-one; Novantrone is approved by FDA for treatment of worsening multiple sclerosis.

2001:

Enbrel is approved by the FDA for psoriatic arthritis and shows positive results in psoriasis trials; Immunex acquisition by Amgen is announced.

2002:

Immunex is acquired by Amgen Inc.

Company History:

Immunex Corporation is a biopharmaceutical company that develops, manufacturers, and markets therapeutic products for the treatment of cancer, infectious diseases, and autoimmune disorders. The company more than doubled its revenue base between 1992 and 1993 as a result of a merger with Lederle pharmaceutical units of American Cyanamid Company. However, in the mid-1990s, Immunex was still trying to achieve profitability after investing heavily in research and development since its inception in 1981. Immunex is best associated with the development of products such as Enbrel, used in the treatment of rheumatoid arthritis; Novantrone, used to treat acute nonlymphocytic leukemia and pain associated with prostate cancer; and Leukine, for use in bone marrow transplant patients. In July 2002, Immunex was bought by Amgen Inc., the world's largest biotechnology company.

Immunex Founded by Scientists Gillis and Henney

Immunex was formed during the start of the biotechnology craze of the early 1980s. Biotechnology, as it was known in the mid-1990s, was born in the early 1950s, when the structure of DNA was discovered; that revelation lead to the understanding of the process by which proteins are formed. Subsequent breakthroughs, particularly in the early 1970s, showed that it was possible to genetically alter microorganisms and, importantly, produce mass amounts of proteins that naturally occurred only in small quantities. A handful of companies pioneered the commercial biotechnology industry during the middle and late 1970s, but it was not until the early 1980s that a horde of competitors jumped into the game. The pivotal turning point came when the U.S. Supreme Court ruled that genetically engineered bacterium could be patented. For many, that ruling suggested the possibility of fantastic profits for biotech innovators.

Eager to make their mark in the burgeoning commercial biotechnology industry were scientists Steven Gillis and Christopher Henney. Henney, a Ph. D., was internationally recognized for his research in immunology. Gillis also had a doctorate--in biological sciences from Dartmouth College--and was recognized for his contributions related to immunology research. Gillis and Henney believed that they possessed the expertise to develop a method of producing large quantities of certain hormones that showed promise in fighting infection. At the urging of Seattle patent attorney Jim Uhlir, they formed Immunex as a means of developing and commercializing their techniques and drugs.

Joining the duo was Steve Duzan, an entrepreneur who owned an industrial ice-making machine business at the time. Duzan had become intrigued by the emerging biotechnology industry after being introduced to Gillis and Henney. Although prior to joining their startup effort, Duzan had virtually no experience in medical-related industries and did know how to raise investment capital. He was, however, known as a tenacious, hard-driving manager. At the age of 34, Duzan had arranged the leveraged buyout of the Washington-based Cello Bag Co. Inc. Then, in 1980, he engineered the sale of the company to ARCO Chemicals, Inc. He used cash from that deal to purchase North Star Ice Equipment Corp., a small manufacturer of ice-making machines that exported much of its output to the Middle East. Duzan overhauled that company's manufacturing operations and managed to improve its profitability.

Duzan was looking for another company to buy when he met Gillis and Henney. Instead, he helped them to form a completely new company called Immunex. Gillis and Henney, naturally, managed the scientific side of the business, while Duzan went to work finding capital to fund Immunex's cash-hungry research and development operations. As it turned out, many of the entrepreneurial skills that Duzan had learned in his previous business exploits were well suited to the seat-of-the-pants biotechnology sector. For the first six months, Duzan worked without a salary while he scrambled to secure investors. "Immunex was the penniless new kid on the block going up against these giants like Hoffman-LaRoche and Kodak," recalled Stephen Graham, an attorney at Immunex's law firm, in a July 21, 1991 Business Journal-Portland article. "But time and time again," he added, "when Steve looked at a transaction with those people, he would decide what a relatively little guy had a right to expect. And then he would double it. And then he would go out and get it."

While Duzan labored to find cash to fuel Immunex's product development engine, Gillis and Henney oversaw an ambitious research effort to generate various immune system stimulants and related technologies. Their goal was to develop a breakthrough drug, or drugs, that would allow Immunex to become

a full-fledged pharmaceutical company that developed and manufactured its own products. But, that pivotal product proved elusive for Immunex's research team. The company's pursuits did succeed, however, in producing a number of valuable technologies and products that earned the company respect in the biotechnology industry. Specifically, Immunex discovered and cloned a long list of genes producing substances that could work in the human body to stimulate various blood cells to fight cancer, heal wounds, and prevent auto-immune diseases like arthritis and diabetes.

Immunex Introduces Leukine

Among Immunex's most important products during the mid-1980s were its Interleukin drugs and GM-CSF (Granulocyte Macrophage Colony Stimulating Factor). Those products were essentially immune system proteins that acted as hormones in the body, with each hormone commanding only specific types of cells. Each class of cells could be stimulated to respond with antibodies, enzymes, and other substances that multiplied and attacked infection. For example, Immunex's centerpiece drug, GM-CSF (marketed as Leukine), was a blood-growth stimulator that enhanced the body's production of white blood cells. Leukine could fight infection in cancer patients whose white blood cells had been destroyed during bone marrow transplants. It also had potential applications related to chemotherapy.

Although Immunex was at the technological forefront in its niche, the company faced numerous roadblocks to success. Chief among its hurdles was the Food and Drug Administration (FDA) drug approval process. To shepherd a drug through the intimidating FDA gamut, a company typically had to invest millions of dollars completing its own tests and striving to comply with Federal regulations. The obvious risk was that the drug would fail to meet FDA approval and the company would be stuck with the loss. For a smaller company like Immunex, failure could be virtually devastating. To help bring their drugs and technologies to market, therefore, many biotech startups sought other avenues to profit. Common routes included selling or licensing proprietary technology to large pharmaceutical companies, or partnering with bigger competitors to develop and market new drugs.

Immunex managed to stay solvent and continued to fund its research and development arm during the 1980s, in essence by selling its technology to companies that had the financial backing to take it to market. Some analysts criticized the strategy because it effectively turned Immunex into a "research boutique" and represented a diversion from the company's goal of becoming a true pharmaceutical company that marketed its own drugs. But, the tactic was necessary to keep the company afloat given the volatile environment of the biotechnology industry. A critical juncture for the company came in 1983, shortly after the company had gone public to raise cash through an initial public stock offering. For no apparent reason related to Immunex's performance, the company's stock price plunged from $11 to $4. The price remained suppressed while biotech investors questioned the viability of the entire industry.

Unable to generate acceptable proceeds from the sale of more stock, Duzan arranged a number of deals that benefited Immunex. He negotiated with some large American and European drug companies, selling marketing and manufacturing rights to most of the major immune-system stimulants that it had cloned. Those agreements included high-profile products like GM-CSF and its Interleukin drugs. Although forfeiting company rights to some of that technology, Duzan was credited with swinging deals that, in the long term, worked in Immunex's favor. For example, in selling marketing rights for GM-CSF to German pharmaceutical manufacturer Behringwerke AG, Duzan won a concession to oversee clinical trials for Leukine. That move later made it possible for Immunex to become a true pharmaceutical company, rather than just a research lab that collected royalties from its inventions.

Throughout the 1980s, Immunex developed a number of promising technologies, most of which it sold or licensed to other companies. As fees and royalties income increased, revenues rose steadily to about $2.4 million in 1985, $11.3 million in 1987, and $23.3 million by 1989. Profits remained elusive, however, as the company continued to pour millions into research and development. Investors had generally been patient with Immunex because the company had been so successful at developing new products. Investor patience gradually wore thin, as they watched the company spend millions without ever successfully taking a drug to market. Immunex managed to post meager profits in 1988 and 1991, but those surpluses were insignificant compared to big losses in other years. Indeed, between 1985 and 1990 Immunex lost nearly $30 million.

Despite ongoing losses, it seemed as though Immunex had turned the corner toward profitability going into the early 1990s. In a series of bold and complex deals initiated in 1989, Duzan reacquired, sold, and swapped the rights to a number of its drugs. The end result was that Immunex, by 1990, was in a position to possibly begin marketing its own technology. "In this business you've got to become a marketing organization," Duzan said in a April 15, 1990, Seattle Times article. "Because that's the only way you can get enough cash flow to sustain your research." The most significant result of Duzan's wheeling and dealing was that Immunex managed to reacquire the U.S. comarketing rights to GM-CSF and certain Interleukin drugs from its German partner Behringwerke AG. The move was risky because GM-CSF had not been approved for use in the United States by the FDA.

Immunex Receives FDA Approval for Leukine

Investors finally had something to cheer about when, in March 1991, Immunex won FDA approval to market Leukine (GM-CSF) in the United States to treat bone marrow transplant patients. The company's shares rocketed to a record high of $59 following the announcement, and Immunex initiated an aggressive marketing program to sell the product. Shortly after the approval, Immunex was selling Leukine through a 50-member sales team organized to market the product to oncology specialists. At the same time, Immunex continued to invest millions of dollars into new drugs. Chief among its research projects in the early 1990s was Pixie 321, a synthetic molecule that was designed to incorporate the properties of Leukine and Immunex's Interleukin 3 (a cancer-fighting compound). Duzan hoped to sell that and other drugs through its own sales force.

Despite notable successes during the late 1980s and early 1990s, Immunex continued to disappoint some analysts and investors. The company chalked up heavy losses, largely related to research expenses, totaling $78 million in 1992. The company had hoped to offset that deficit with increased sales of Leukine, but its marketing effort failed to live up to some analysts' hopes. The problem was partially attributable to a product similar to Leukine that was introduced by competitor Amgen. Amgen received approval for its drug, Neupogen, in 1992. Whereas Leukine had been approved for the bone marrow transplant market, Neupogen was approved for use in the much larger chemotherapy market. The result was that shipments of Neupogen bolted to $290 million in 1993, while revenues from Leukine topped out at less than $23 million. "One company operates in an ocean, the other in a pond," surmised Deborah Wardwell, a Seattle stock analyst, in the August 8, 1994, Seattle Times.

Immunex Bought Out by American Cyanamid

Encountering a fate similar to that experienced by many other biotech companies, Immunex was bought out. In June 1993, American Cyanamid purchased the company and merged it with its Lederle Oncology unit to form a new, publicly traded company still known as Immunex, and headquartered in Seattle. Lederle Oncology was a leader in the immunology industry and had about a half dozen proprietary products in its drug portfolio. Lederle, with its more established marketing network, seemed like a natural complement to Immunex's powerful research operations. The merger initially failed to produce the desired results, however, because Lederle's products did not sell as well as expected. That problem, combined with less-than-stellar gains with Leukine, created investor disappointment with Immunex. The stock price slipped to $30 before dropping to less than $15 per share in 1994.

Frustrated, American Cyanamid brought in a new chief executive to replace Duzan, who had been accused of alienating Wall Street with his brusque nature and questionable management decisions regarding Leukine. Specifically, he had been criticized for allowing Amgen to steal more than 90 percent of the market for Leukine. Gillis, who was an Immunex co-founder and heading up Immunex's research operations at the time, stepped in as a temporary president and CEO for a few months until American Cyanamid appointed Edward Fritzky to the position. (Cofounder Henney had left Immunex in 1989 to start his own consulting company.) Fritzky came to Immunex from American Cyanmid's Lederle Laboratories division where had overseen the launch of six new products in that division and, at the age of 45, was considered a seasoned veteran in the pharmaceutical industry.

American Cyanamid Bought Out by American Home Products

Interestingly, American Cyanamid was bought out by American Home Products (AHP) in mid-1994, making the latter company the majority owner of Immunex. Fritzky remained president and CEO of the company, however, and sustained his efforts to turn Immunex into a development and marketing powerhouse in its pharmaceutical niche. Unfortunately, profits continued to evade Immunex going into the mid-1990s, amidst a string of setbacks. In September 1994, for example, cofounder Steve Gillis resigned his post to pursue other research goals. More importantly, the FDA refused to approve Leukine for use in the $500 million chemotherapy market that was dominated by Amgen. The stunning news sent Immunex's stock price tumbling 20 percent to less than $13 per share by May 1995. Nevertheless, management remained optimistic, given the company's proven research capabilities, pipeline of high-potential drugs, and ongoing efforts to get FDA approval to use Leukine in chemotherapy applications.

Despite setbacks, Immunex continued to strengthen its oncology franchise operations and apply understanding of immune system science beyond cancer care and into infectious and inflammatory diseases. Studies continued on new indications for Leukine and the chemotherapeutic Novantrone, shown to benefit men with hormone refractory prostate cancer. Also in 1995, Immunex marked a milestone in the battle against rheumatoid arthritis, with a clinical study of a recombinant TNF (tumor necrosis factor) receptor that proved to neutralize TNF's ability to promote inflammation, resulting in improvement in swollen and painful joints.

Immunex Introduces Enbrel

The company's financial outlook improved in 1995 and 1996 through research efforts, the franchising of existing products, and development of a broader marketing focus. In 1996, the FDA approved a new claim for Novantrone for relieving pain in late-stage prostate cancer patients, and Leukine Liquid, a white blood cell stimulant available in a multidose vial. With revenue growth from the increased sales of these products, research continued on the TNF receptor, brand named Enbrel. Other products in the development pipeline included FLT-3 ligand, affecting transplant patients; CD40 ligand, a potential candidate for the treatment of cancer and infection; and other cancer and inflammation fighting products, including TRAIL and TACE, respectively. Wyeth-Ayerst, a division of AHP, and a leader in the anti-inflammatory market, came on board to assist with investing in and marketing Enbrel. The research agreement with AHP was restructured which allowed Immunex fewer investment concerns in discovery research, and a new senior vice president position of marketing was added. These developments enabled Immunex to "transition from a biotechnology research firm with a few pharmaceutical products into a pharmaceutical enterprise dedicated to the research and development of innovative new therapeutics." The company hoped to profit from a strong market awareness and aggressive commercialization of its products.

The year 1997 was seen as a breakthrough year for Immunex. In its race to become the first to market a successful rheumatoid arthritis therapy, Immunex continued clinical trials on Enbrel. A new indication for Novantrone was also launched for treating patients suffering from prostate cancer. Record sales of Novantrone and Leukine were reached. In the area of research, promising biological therapeutic candidates, Nuvance for asthma sufferers and Mobist, an anti-tumor therapy, were introduced. As a result of increased pressure for faster development of emerging technologies and intense competition in the pharmaceutical business, Immunex formed alliances with Digital Gene Technologies, Inc., a genomics company, and American Oncology Resources, a network of U.S. oncologists.

Enbrel Receives FDA Approval

Another breakthrough year followed in 1998, with the FDA's approval of Enbrel for treatment of moderate to severe rheumatoid arthritis in patients with inadequate response to existing therapies, thus making Enbrel the first in a new class of rheumatoid arthritis drugs. Sales of Enbrel alone reached nearly $13 million in the first weeks of marketing. Expanding the potential uses for other drugs, Immunex introduced research describing the potential for Novantrone for treating patients with progressive multiple sclerosis (MS). Leukine was being evaluated for its ability to treat patients with HIV/AIDS; and Enbrel was being studied for treatment of chronic heart failure. Studies continued on Nuvance, for asthma sufferers; and Mobist and CD40 ligand, for use in cancer treatment.

With product success came financial success: total product sales reached a record $170 million for the year; sales of cancer products grew to record levels as well, lead by Leukine with a 21 percent increase over the previous year. Cash reserves at year-end reached $145 million. Immunex restructured a strategic alliance with AHP, giving AHP options to select and develop certain products and returning to Immunex worldwide rights to certain cancer products. A new consumer campaign was launched, called Enliven, to assist new patients through their initial therapy on Enbrel. A new Web site was launched, www.enbrelinfolcom, providing reimbursement assistance and customer service for patients and providers. Through alliances with ArQule, Genetics Institute, Digital Gene Technologies, and Medarex, Immunex enhanced their product growth and development capabilities.

Enbrel continued to spell success in 1999, with $367 million in U.S. sales. Two stock splits were declared in 1999: two-for-one splits in March and August. Having previously been accepted in the adult rheumatoid arthritis market, Enbrel became the first FDA-approved therapy for juvenile rheumatoid arthritis as well. Additional research was conducted in expanding the uses of Enbrel for the treatment of psoriatic arthritis and chronic heart failure. In oncology treatments, studies continued on Leukine, Mobista, and CD40 ligand, brand-named Avrend. An alliance was announced with Genentech, Inc., to jointly develop TRAIL, found to suppress and reverse tumor growth.

Construction began on a new 50,000-square-foot process development facility located in Bothell, Washington. In partnership with Wyeth-Ayerst, renovations began on a commercial-scale biologics manufacturing plant in Rhode Island; and plans were underway for a new research and technology center in Seattle, called the Helix Project, to house a world-class collaborative team in the field of immune system science.

Marketed products in 2000 included two major therapeutic classes: anti-inflammatory (Enbrel) and specialty therapeutics (Leukine, Novantrone, Thioplex, Amicar, Methotrexate sodium injectable, and Leucovorin calcium). Revenues from sales of Enbrel reached $652.4 million, approximately 76 percent of the company's total revenue for the year. In anticipation of increasing demands for Enbrel, a program was initiated to help insure uninterrupted therapy for U.S. patients. The Enbrel enrollment program called for patients who were prescribed Enbrel before January 1, 2001, to register with Immunex and receive an enrollment number, thus insuring their continued supply of the drug.

As of 2001, Leukine had received FDA approval for use in bone marrow transplant therapies for the treatment of leukemia, lymphoma and Hodgkin's disease

As of 2001, Leukine had received FDA approval for use in bone marrow transplant therapies for the treatment of leukemia, lymphoma and Hodgkin's disease and for use in peripheral blood progenitor cell mobilization and post-transplantation support. Novantrone was approved for treatment of certain cancers, including acute nonlymphocytic leukemia; for treating patients with pain associated with hormone refractory prostate cancer; and for treatment in MS.

In the areas of research and development, Immunex continued to focus not only on producing new biological therapeutic candidates, but building pharmaceutical franchises and expanding the commercial usefulness and revenue-producing ability of key products. These included new indications of Enbrel to include therapies for congestive heart failure, psoriatic arthritis, and psoriasis. Leukine was investigated for treatment of malignant melanoma, mucositis, anti-tumor adjuvancy, and HIV/AIDS. Clinical trials continued on Nuvance in asthma therapy; Mobista as an anti-tumor agent; and Avrend in cancer treatment.

The marketing relationship continued with AHP, with Immunex owning the rights to Enbrel in the United States and Canada, and AHP owning the rights to Enbrel in all other countries. As a result, Immunex did not receive royalties or shares of gross profits from sales of Enbrel outside the United States and Canada. Leukine was available to patients only in the United States and marketed through a specialty sales force within Immunex. In June 2000, Immuntex entered into a five-year comprehensive genomics agreement with Celera Genomics. The following month, Immunex entered into a joint development and commercialization agreement for ABX-EGF, a fully human antibody created by Abgenix, Inc., for treatment of tumors, including lung, prostate, pancreatic, colorectal, renal cell, and esophageal. In December, a five-year agreement was reached with Cambridge Antibody Technology (CAT) for the use of CAT's proprietary antibody phage display library for the discovery, development and potential commercialization of human monoclonal antibodies. Other research and development arrangements continued with Genentec and Digital Gene Technologies.

Immunex Sets Records for Sales, Profit and Cash Flow

The business of biotechnology continued to be lucrative for Immunex in 2000. Records for product sales, profit and cash flow were broken from the previous year, and a new record in the financial world was set with the largest healthcare secondary stock offering ever. On March 20, 2000, Immunex effected a three-for-one stock split.

Product sales for 2001 reached $960 million, a 16-percent increase over the previous year's sales. New records were set for sales of Enbrel, with plans to expand manufacturing capacity to keep up with growing demand. For the first time, sales of Leukine exceeded $100 million. In its first full year of sales, Novantrone increased 19 percent from the previous year. Immunex was added to the S&P 500, and Fortune magazine recognized the company as the eighth "Fastest Growing Company in America" and one of the "100 Best Companies to Work for in America."

In expanding technologies, Enbrel received FDA approval for psoriatic arthritis and trials continued for the treatment of psoriasis; ankylosing spondylitis, an inflammatory disease of the spine; and Wegener's granulomatosis, an inflammatory disease of blood vessels. Biotechnology manufacturing capabilities were expanded through the acquisition of the Rhode Island manufacturing plant from AHP, with FDA approval expected in 2002.

Three new product candidates entered "transition" status, the stage in which clinical development commences within 12 to 18 months: RANK, a bone resorption inhibitor for use in cancer and osteoporosis treatment; TEK, an anti-angiogenesis factor for use in cancer treatment, and Anti-IL-4R, an antibody for asthma therapy. Two new products in clinical development included IL-1 for treatment of inflammatory disease and ABX-EGF, codeveloped with Abgenix for inhibiting the growth of cancerous tumors.

Immunex Announces Plans to Merge with Amgen

On December 17, 2001, Immunex announced an agreement and plan to merge with Amgen Inc. and AMS Acquisition, Inc., a wholly owned subsidiary of Amgen. The total Immunex price tag would be $16 billion. Under terms of the agreement, AMS Acquistion Inc. would be merged with and into Immunex, with Immunex becoming a wholly owned subsidiary of Amgen. Each share of Immunex common stock would be exchanged for a fixed ration of 0.44 shares of Amgen common stock and cash of $4.50. Amgen would also acquire AHP's 41 percent stake in Immunex for the same purchase price per share. The price would give AHP an 8 percent stake in the new company. According to Immunex Chairman Fritzky, "The proposed integration of Immunex into Amgen would unite two biotech industry pioneers, both of which have delivered on the promise of biotechnology with leading products. The product portfolio, scientific leadership, commercial expertise, and drive for results would create a strong foundation for the new Amgen in its aspiration to become the world's best human therapeutics company."

Representing a key step in accelerating Amgen's long-term growth, on July 16, 2002, the acquisition of Immunex Corporation was complete. According to Kevin Sharer, Amgen's chairman and CEO, "Amgen will now have an enhanced position as the biotechnology leader, with a wide range of important drugs, including proven blockbusters Epogen, Neupogen, and Enbrel." Amgen also acquired key Immunex personnel in the merger. Ed Fritzky, former chairman and CEO of Immunex, became a member of Amgen's board of directors, and Doug Williams, previously Immunex executive vice president and chief technology officer, will lead the Seattle research site. Peggy Phillips, Immunex executive vice president and chief operating officer was expected to serve as a special advisor to Amgen. The integration of Amgen and Immunex produced a new Amgen, the world's largest biotechnology company with an unrivaled portfolio of primo drugs and the marketing muscle to successfully commercialize its products.

Principal Competitors:AstraZeneca; Centocor; Genentech; GlaxoSmithKline; Merck; Roche; Wyeth.

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Inslaw, Incorporated

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Type

Private

Industry

Information Technology

Founded

Washington, D.C., U.S. (January 1981)

Founder

William Anthony Hamilton

Headquarters

Washington, D.C.

Products

CJIS, MODULAW, PROMIS

Website

http://www.inslawinc.com

Inslaw, Inc. is a Washington, D.C. based information technology company that markets case management software for corporate and government users.

Inslaw is known for developing Promis, an early case management software system. It is also known for a lawsuit that it brought against the United States Department of Justice in 1986 over Promis. Inslaw won damages in bankruptcy court, but these were overturned on appeal. The suit resulted in several Justice Department internal reviews, two Congressional investigations, the appointment of a special counsel by Attorney General William P. Barr, and a lengthy review of the special counsel's report under Attorney General Janet Reno. Inslaw's claims were finally referred by Congress to the Court of Federal Claims in 1995, and the dispute ended with the Court's ruling against Inslaw in 1998.

During the 12-year long legal proceedings, Inslaw accused the Department of Justice of conspiring to steal its software, attempting to drive it into Chapter 7 liquidation, using the stolen software for covert intelligence operations against foreign governments, and involvement in a murder. These accusations were eventually rejected by the special counsel and the Court of Federal Claims.

History of Inslaw

Inslaw began as a non-profit organization called the Institute for Law and Social Research. The Institute was founded in 1973 by William A. Hamilton to develop case management software for law enforcement office automation.[1] Funded by grants and contracts from the Law Enforcement Assistance Administration (LEAA), the Institute developed a program it called "Promis", an acronym for Prosecutors' Management Information System, for use in law enforcement record keeping and case-monitoring activities.[2] When Congress voted to abolish the LEAA in 1980, Hamilton decided to continue operating as a for-profit corporation and market the software to current and new users. In January 1981 Hamilton established the for-profit Inslaw, transferring the Institute's assets over to the new corporation.[2]

Development of Promis

Promis software was originally written in COBOL for use on mainframe computers; later a version was developed to run on 16 bit mini-computers such as the DEC PDP-11.[3] The primary users of this early version of the software were the United States Attorneys Offices of the District of Columbia, and state

the DEC PDP-11.[3] The primary users of this early version of the software were the United States Attorneys Office of the District of Columbia, and state and local law enforcement.[4] Both the mainframe and 16 bit mini-computer versions of Promis were developed under LEAA contracts, and in later litigation, both Inslaw and DOJ eventually agreed that the early version of Promis was in the public domain, meaning that neither the Institute nor its successor had exclusive rights to it.[5]

The Promis implementation contract

In 1979, the DOJ contracted with the Institute to do a pilot project that installed versions of Promis in four US Attorneys offices; two using the mini-computer version, and the other two a "word-processor" version which the Institute was developing.[2] Encouraged by the results, the Department decided in 1981 to go ahead with a full implementation of locally based Promis systems, and issued a request for proposals (RFP) to install the mini-computer version of Promis in the 20 largest United States Attorneys offices. This contract, usually called the "implementation contract" in later litigation, also included developing and installing "word-processor" versions of Promis at 74 smaller offices.[6] The now for-profit Inslaw responded to the RFP, and in March 1982 was awarded the three year $10m contract by the contracting division, the Executive Office of United States Attorneys (EOUSA).[7]

Contract disputes and Inslaw bankruptcy

The contract did not go smoothly. Disputes between EOUSA and Inslaw began soon after its execution.[7][8] A key dispute over proprietary rights had to be solved by a bi-lateral change to the original contract. (This change, "Modification 12," is discussed below.) EOUSA also determined that Inslaw was in violation of the terms of an "advance payment" clause in the contract. This clause was important to Inslaw's financing and became the subject of months of negotiations.[9] There were also disputes over service fees. During the first year of the contract, the DOJ did not have the hardware to run Promis in any of the offices covered by the contract. As a stopgap measure, Inslaw provided Promis on a time-share basis through a VAX computer in Virginia, allowing the offices to access Promis on the Inslaw VAX through remote terminals, until the needed equipment was installed on-site.[10] EOUSA claimed that Inslaw had overcharged for this service and withheld payments.[11]

The DOJ ultimately acquired Prime computers, and Inslaw began installing Promis on these in the second year of the contract, in August 1983.[12] The "word-processor" Promis installation, however, continued to have problems, and in February 1984 the DOJ cancelled this portion of the contract. Following this cancellation, the financial condition of Inslaw worsened, and the company filed for Chapter 11 bankruptcy in February 1985.[13]

Proprietary rights dispute

The implementation contract called for the installation of the mini-computer version of Promis, plus some later modifications that had also been funded by LEAA contracts and like the mini-computer version were in the public domain.[14] In addition, the contract data rights clause "gave the government unlimited rights in any technical data and computer software delivered under the contract."[15] This presented a potential conflict with Inslaw's plans to market a commercial version of Promis which it called "Promis 82" or "Enhanced Promis." The issue came up early in the implementation contract, but was resolved by an exchange of letters in which DOJ signed off on the issue after Inslaw assured the DOJ that Promis 82 contained "enhancements undertaken by Inslaw at private expense after the cessation of LEAA funding."[16]

The issue arose again in December 1982 when the DOJ invoked its contract rights to request all the PROMIS programs and documentation being provided under the contract.[17] The reason the DOJ gave for this request in later litigation was that it was concerned about Inslaw's financial condition. At that point, DOJ had access to Promis only through the Vax time-sharing arrangement with Inslaw; if Inslaw failed, DOJ would be left without a copy of the software and data it was entitled to under the contract.[18] Inslaw responded in February 1983 that it was willing to provide the computer tapes and documents for Promis, but that the tapes it had were for the Vax version of Promis, and included proprietary enhancements. Before providing the tapes, Inslaw wrote, "Inslaw and the Department of Justice will have to reach an agreement on the inclusion or exclusion" of the features.[19]

The DOJ response to Inslaw was to emphasize that the implementation contract called for a version of PROMIS in which the government had unlimited rights and to ask for information about the enhancements Inslaw claimed as proprietary.[20] Inslaw agreed to provide this information, but noted that it would be difficult to remove the enhancements from the time-sharing version of Promis and offered to provide the Vax version of Promis if the DOJ would agree to limit their distribution.[21] In March 1983, the DOJ again informed Inslaw that the implementation contract required Inslaw to produce software in which the government had unlimited rights, and that delivery of software with restrictions would not satisfy the contract.[22]

Contract revisions

After some back and forth, DOJ contracting officer Peter Videnieks sent a letter proposing a contract modification. Under the modification, in return for the software and data request, DOJ agreed not to disclose or disseminate the material "beyond the Executive Office for United States Attorney and the 94 United States Attorneys' Offices covered by the subject contract, until the data rights of the parties to the contract are resolved."[23] To resolve the data rights issue, the letter proposed that Inslaw identify its claimed proprietary enhancements and demonstrate that the enhancements were developed "at private expense and outside the scope of any government contract."[23] After these were identified, the government would then "either direct Inslaw to delete those enhancements from the versions of PROMIS to be delivered under the contract or negotiate with Inslaw regarding the inclusion of those enhancements in that software."[23] Inslaw eventually agreed to this suggestion, and the change, referred to as "Modification 12," was executed in April 1983. Inslaw then provided DOJ with tapes and documentation for the Vax version of Promis.[24]

Under this arrangement, however, Inslaw had substantial difficulty demonstrating the extent of the enhancements and the use of private funding in their development. It proposed several methods for doing this, but these were rejected by DOJ as inadequate.[25] Inslaw's attempts to identify the proprietary enhancements and their funding ended when it began installing Promis on the USAO Prime computers in August 1983. By the end of the contract in March 1983, it had completed installing Promis in all 20 of the offices specified in the implementation contract. Since none of the available versions of Promis was compatible with the Department's new Prime computers, Inslaw ported the Vax version, which contained Inslaw's claimed enhancements, to the Prime computers.[26]

Inslaw's bankruptcy case

After Inslaw filed for Chapter 11 bankruptcy in February 1985, there were still disputes over implementation contract payments, and as a result the DOJ was listed as one of Inslaw's creditors. At the same time, the DOJ continued its office automation program and, in place of the originally planned "word-processor" version of Promis, it installed the version ported to Prime mini-computers in at least 23 more offices. When Inslaw learned of the installations, it notified EOUSA that this was in violation of Modification 12 and filed a claim for $2.9m, which Inslaw said was the license fees for the software DOJ self-installed.[27] Inslaw also filed claims for services performed during the contract, for a total of $4.1m. The DOJ contracting officer, Peter Videnieks, denied all these claims.[28]

Inslaw appealed the denial of the service fees to the Department of Transportation Board of Contract Appeals (DOTBCA).[29] For the data rights claim, however, Inslaw took a different approach. In June 1986 it filed an adversary hearing in the Bankruptcy Court, claiming that DOJ's actions violated the automatic stay provision of the bankruptcy code by interfering with the company's rights to its software.[27]

Inslaw's initial filing claimed that the contract disputes arose because the DOJ officials who administered the contract were biased against Inslaw.[30] The filing specifically mentioned Promis project manager, C. Madison Brewer, and Associate Attorney General, D. Lowell Jensen. Brewer had previously been Inslaw's general counsel, but according to Inslaw had been terminated for cause. Inslaw claimed that Brewer's dismissal caused him to be unreasonably biased against Inslaw and owner William Hamilton.[31] Jensen was a member of the project oversight committee at the time of the contract. He had helped to develop another competing case management software system several years earlier, and Inslaw claimed that this led him to be prejudiced against Promis, so that he ignored the unreasonable bias of Brewer.[32]

"Independent handling" proceeding

In February 1987, Inslaw requested an "independent handling hearing", to force the DOJ to conduct the adversary hearing "independent of any Department of Justice officials involved in the allegations made" in the hearing.[33] The bankruptcy court judge assigned to handle Inslaw's Chapter 11 proceedings, Judge George F. Bason, granted the request, and scheduled the hearing for June.

Prior to the hearing, Inslaw owners William and Nancy Hamilton spoke to Anthony Pasciuto, then the Deputy Director of the Executive Office of the United States Trustees (EOUST), a DOJ component responsible for overseeing the administration of bankruptcy cases. Pasciuto told the Hamiltons that the Director of the EOUST, Thomas Stanton, had pressured the U.S. Trustee assigned to the Inslaw case, Edward White, to convert Inslaw's bankruptcy from chapter 11 (reorganization of the company), to chapter 7 (liquidation).[33] The Hamiltons had Inslaw's attorneys depose the people whom Pasciuto had named. One of them corroborated part of Pasciuto's claims: Cornelius Blackshear, then a U. S. Trustee in New York, swore in his deposition testimony that he was aware of pressure to convert the bankruptcy.[34] Two days later, however, Blackshear submitted an affidavit recanting his testimony, saying that he had mistakenly recalled an instance of pressure from another case.[34]

Blackshear repeated his retraction at the June hearing on Inslaw's request. Pasciuto also retracted part of his claims at this hearing, and said instead that he did not use the word "conversion." Judge Bason, however, chose to believe the original depositions of Pasciuto and Blackshear, and found that the DOJ, "unlawfully, intentionally and willfully" tried to convert INSLAW's Chapter 11 reorganization case to a Chapter 7 liquidation "without justification and by improper means."[35] In the ruling, Bason was harshly critical of the testimony of several DOJ officials, describing it as "evasive and unbelieveable," or "simply on its face unbelievable."[35] He enjoined the DOJ and the EOUST from contacting anyone in the U.S. Trustee's office handling the Inslaw case except for information requests.[35]

Adversary proceeding

Inslaw's adversary proceeding followed a month after the "independent handling hearing." The proceeding lasted for two and half weeks, from late July to August. In a bench ruling on September 28, Judge Bason found that DOJ project manager Brewer, "believing he had been wrongfully discharged by Mr. Hamilton and INSLAW, developed an intense and abiding hatred for Mr. Hamilton and INSLAW," and had used his position at DOJ to "vent his spleen." He also found that the DOJ "took, converted, stole, INSLAW's enhanced PROMIS by trickery, fraud, and deceit."[36] Specifically, he found that DOJ had used the threat of terminating "advance payments" to get a copy of the enhanced Promis that it was not entitled to, and that it had negotiated modification 12 of the contract in bad faith, never intending to meet its commitment under the modification.[37] In his ruling, Judge Bason again called the testimony of DOJ witnesses "biased", "unbelievable", and "unreliable."[36]

Judge Bason not reappointed

Bankruptcy Court Judge Bason was appointed to the District of Columbia Bankruptcy Court in February 1984 for a four-year term. He sought re-appointment early in 1987, but was informed in December that the Court of Appeals had chosen another candidate. Judge Bason then suggested in a letter to the Court of Appeals that DOJ might have improperly influenced the selection process because of his bench ruling for Inslaw.[38] After learning of this letter, DOJ lawyers moved to recuse Judge Bason from the Inslaw case, but their motion was rejected, and Judge Bason remained on the case until the expiration of his term on February 8, 1988.[38] In early February, Judge Bason filed a lawsuit seeking to prevent the judge the Court of Appeals had selected for the District of Columbia Bankruptcy Court from taking office, but the suit was rejected. Bason's last actions in the case were to file a written ruling on Inslaw's adversary proceeding, and to award damages and attorneys fees to Inslaw.[39]

Appeals of the bankruptcy suit

After Judge Bason left the bench, the Inslaw bankruptcy was assigned to Baltimore bankruptcy judge James Schneider.[40] Schneider accepted Inslaw's reorganization plan at the end of 1988 after a cash infusion from IBM.[41] In the meanwhile, DOJ filed an appeal of Judge Bason's adversary suit ruling in the District of Columbia Circuit Court.[42] In November 1989, Circuit Court Judge William Bryant upheld Bason's ruling. Reviewing the case under the "clear error" standard for reversal, Bryant wrote: "[T]here is convincing, perhaps compelling support for the findings set forth by the bankruptcy court."[43]

DOJ appealed the Circuit Court decision and in May 1991, the Court of Appeals found the DOJ had not violated the automatic stay provisions of the bankruptcy code and that the Bankruptcy Court therefore lacked jurisdiction over Inslaw's claims against DOJ.[44] It vacated the Bankruptcy Court's rulings and dismissed Inslaw's complaint.[45] Inslaw appealed the decision to the Supreme Court, which declined to hear the case.[44]

Federal investigations

Inslaw's allegations against the Justice Department led to a number of investigations, including internal Department probes and Congressional investigations by the Senate's Permanent Subcommittee on Investigations (PSI) and the House Judiciary Committee. The DOJ eventually appointed a special counsel to investigate. After the special counsel issued his report, Inslaw responded with a lengthy rebuttal. The DOJ then re-examined the special counsel's findings, resulting in the release of a final Department review.

During these federal investigations, Inslaw began making allegations of a broad, complex conspiracy to steal Promis, involving many more people and many more claims than the bankruptcy proceedings had covered. These later allegations are described below under the investigations which examined them.

Justice Department investigations

After Judge Bason's June 1987 bench ruling found several DOJ officials' testimony "unbelievable", DOJ's Office of Professional Responsibility (OPR) opened an investigation of DOJ staff who testified at the hearing, including C. Madison Brewer, Peter Videnieks, and EOUST director Thomas Stanton. It also

an investigation of DOJ staff who testified at the hearing, including C. Madison Brewer, Peter Videnieks, and EOUST director Thomas Stanton. It also opened a separate investigation of EOUST deputy director Anthony Pasciuto. OPR recommended Pasciuto be terminated, based on his hearing testimony that he had made false statements to the Hamiltons, but in its final report it found no evidence that the other officials investigated had applied pressure to convert Inslaw's bankruptcy or lied during the independent handling hearing.[46] After Judge Bason issued his written ruling in January 1988, Inslaw's attorneys also complained to the DOJ's Public Integrity Section that Judge Blackshear and U.S. Trustee Edward White had committed perjury. Public Integrity opened an investigation that ultimately found perjury cases could not be proven, and recommended declining prosecution.[47]

The Senate report

The first Congressional investigation into the Inslaw case came from the Senate's Permanent Subcommittee on Investigations (PSI). PSI's report was issued in September 1989, after a year and a half of investigation.[48] During the investigation, Inslaw made a number of new allegations, which take up most of the PSI report.

1. **New allegations**
   - Inslaw's new allegations described the Justice Department dispute with Inslaw as part of a broad conspiracy to drive Inslaw into bankruptcy so that Earl Brian, the founder of a venture capital firm called Biotech (later Infotechnology), could acquire Inslaw's assets, including its software Promis. Inslaw owner William Hamilton told PSI investigators that Brian had first attempted to acquire Inslaw through a computer services corporation he controlled, called Hadron. Hamilton said that he rejected an offer from Hadron to acquire Inslaw, and that Brian then attempted to drive Inslaw into bankruptcy through his influence with Attorney General Edwin Meese.[49]
   - Both Meese and Brian had served in the cabinet of Ronald Reagan when he was governor of California, and Meese's wife had later bought stock in Brian's company, so that Meese was willing to do this, Hamilton claimed. The contract dispute with DOJ was contrived by Brian and Meese with the help of Associate Attorney General Jensen, and Promis project manager Brewer.[50]
   - Hamilton also complained that a DOJ automation program, 'Project Eagle', was part of a scheme to benefit Brian after he acquired Promis,[51] and that an AT&T subsidiary, AT&T Information Systems, had engaged with the DOJ in a conspiracy to interfere with Inslaw's efforts to reorganize.[52] He also told PSI investigators that the DOJ had undermined Bankruptcy Court Judge Bason's reappointment,[53] and had attempted to undermine Inslaw's lead counsel in the bankruptcy suit.[54]
2. **Report findings**
   - Senate investigators found no proof for any of these claims. Their report noted that the bankruptcy court ruling had not concluded that Jensen had engaged in a conspiracy against Inslaw and that their own investigation had found no proof that Jensen and Meese had conspired to ruin Inslaw or steal its product, or that Brian or Hadron were involved in a conspiracy to undermine Inslaw and acquire its assets.[55]
   - The report did re-examine the bankruptcy finding that the DOJ had pressured the United States Trustee to recommend converting Inslaw's bankruptcy from Chapter 11 to Chapter 7, and found that EOUST director Thomas Stanton had improperly tried to get special handling for Inslaw's bankruptcy. He did this, the report stated, in order to gain support for the EOUST from the DOJ.
   - The report concluded that the Subcommittee found no proof for a broad conspiracy against Inslaw within the DOJ, or a conspiracy between DOJ officials and outside parties to force Inslaw into bankruptcy for personal benefit. However, it criticized DOJ for hiring a former Inslaw employee (Brewer) to oversee Inslaw's contract with EOUSA, and for failing to follow standard procedures in handling Inslaw's complaints. It also criticized the DOJ for a lack of cooperation with the Subcommittee, which delayed the investigation and undercut the Subcommittee's ability to interview Department employees.[56]

The House report

Following the PSI report, the House Judiciary Committee began another investigation into the dispute.[57] By the time the report was released in September 1992, Inslaw's bankruptcy suit had been first upheld in the D.C. Circuit Court, then vacated by the D.C. Appeals court. The House report thus took a different approach to several of the legal issues that the Senate report had discussed. Like the Senate report, much of the House report dealt with new evidence and new allegations from Inslaw.

1. **New allegations**[edit]
   - Inslaw's new evidence consisted of statements and affidavits from witnesses supporting Inslaw's previous claims. The most important of these witnesses was Michael Riconosciuto, who swore in an affidavit for Inslaw that businessman Earl Brian had provided him with a copy of Inslaw's enhanced Promis, supporting Inslaw's earlier claims that Brian had been interested in acquiring and marketing the software. A new allegation was also introduced in Riconosciuto's affidavit: Riconosciuto swore that he added modifications to enhanced Promis "to support a plan for the implementation of PROMIS in law enforcement and intelligence agencies worldwide." According to Riconosciuto, "Earl W. Brian was spearheading the plan for this worldwide use of the PROMIS computer software."[58]
   - Another important witness was Ari Ben-Menashe, who also provided affidavits for Inslaw that Brian had brought both public domain and enhanced versions of Promis to Israel, and eventually sold the enhanced version to the Israeli government.[59] Committee investigators interviewed Ben-Menashe in May 1991, and he told them that Brian sold enhanced Promis to both Israeli intelligence and Singapore's armed forces, receiving several million dollars in payment. He also testified that Brian sold public domain versions to Iraq and Jordan.[60][61]
2. **Report findings**[edit]
   - On the issue of Inslaw's rights in "enhanced Promis", the House report found that "There appears to be strong evidence" supporting Judge Bason's finding that DOJ "acted willfully and fraudulently" when it "took, converted and stole" INSLAW's Enhanced PROMIS by "trickery, fraud and deceit."[62]
   - Like Judge Bason, the report found that DOJ did not negotiate with Inslaw in good faith, citing a statement by Deputy Attorney General Arnold Burns as "one of the most damaging statements received by the committee."[63] According to the report, Burns told OPR investigators that Department attorneys informed him in 1986 that INSLAW's claim of proprietary rights was legitimate and that DOJ would probably lose in court on this issue. House Investigator found it "incredible" that DOJ would pursue litigation after such a determination, and concluded "This clearly raises the specter that the Department actions taken against INSLAW in this matter represent an abuse of power of shameful proportions."[63]
   - On the new allegations brought by Inslaw, although the Committee conducted extensive investigations, the report did not make any factual findings on the allegations, it did conclude that further investigation was warranted into the statements and claims of Inslaw's witnesses.
   - The report also discussed the case of Danny Casolaro, a free-lance writer who became interested in the Inslaw case in 1990, and began his own investigation.[64] According to statements from Casolaro's friends and family, the scope of his investigation eventually expanded to include a number of

scandals of the time, including the Iran-Contra affair, the October Surprise conspiracy claims, and the BCCI banking scandal. In August 1991, Casolaro was found dead in a hotel room where he was staying. The initial coroner's report ruled his death suicide, but Casolaro's family and friends were suspicious, and a lengthy second autopsy was conducted. This too ruled Casolaro's death a suicide, but House investigators noted that "The suspicious circumstances surrounding his death have led some law enforcement professionals and others to believe that his death may not have been a suicide," and strongly urged further investigation.[65]

- The Democratic majority called upon Attorney General Dick Thornburgh to compensate Inslaw immediately for the harm that the government had "egregiously" inflicted on Inslaw. The Republican minority dissented and the committee divided along party lines 21–13.[61]

Bua report

In October 1991 William P. Barr succeeded Dick Thornburgh as Attorney General. In November, Barr appointed retired federal judge Nicholas J. Bua as a Special Counsel to investigate the allegations in the Inslaw case.[66] Bua was granted authority to appoint his own staff and investigators, to impanel a grand jury, and to issue subpoenas.[67] In March 1993 he issued a 267-page report.

The report concluded that there was no credible evidence to support Inslaw's allegations that DOJ officials conspired to help Earl Brian acquire Promis software, and that the evidence was overwhelming that there was no connection between Brian and Promis.[68] It found the evidence "woefully insufficient" to support the claim that DOJ obtained enhanced PROMIS through "fraud, trickery, and deceit," or that DOJ illegally distributed PROMIS inside or outside of DOJ.[68] It found no credible evidence that DOJ had influenced the selection process that replaced Judge Bason.[68] It found "insufficient evidence" to confirm the allegation that DOJ employees sought to influence the conversion of Inslaw's bankruptcy or commit perjury to conceal the attempt to do so.[68] Finally, it concluded that the DOJ had not sought to influence the investigation of Danny Casolaro's death, and that the physical evidence strongly supported the autopsy finding of suicide.[69]

Bua's report came to a number of conclusions that contradicted earlier proceedings and investigations. Judge Bason had found that DOJ's claim it was concerned about Inslaw's financial condition when it requested a copy of Promis was a false pretext. Bua rejected this finding as "just plain wrong."[70] The House report had cited Deputy Attorney General Burns' statements as evidence that DOJ knew it did not have a valid defense to Inslaw's claims. Bua found this interpretation "entirely unwarranted."[71]

Bua was particularly critical of several of Inslaw's witnesses. He found that Michael Riconosciuto had given inconsistent accounts in statements to the Hamiltons, his affidavit, and in testimony at his 1992 trial for manufacturing methamphetamine.[72] Bua compared Riconosciuto's story about Promis to "a historical novel; a tale of total fiction woven against the background of accurate historical facts."[73]

Bua found Ari Ben-Menashe's affidavits for Inslaw inconsistent with his later statements to Bua, in which Ben-Menashe said that he had "no knowledge of the transfer of Inslaw's proprietary software by Earl Brian or DOJ" and denied that he had ever said this elsewhere.[74] Ben-Menashe said that others simply assumed that he was referring in his previous statements to Inslaw's Promis, but acknowledged that one reason he failed to clarify this was because he was going to publish a book and "he wanted to make sure that his affidavit was filed in court and came to the attention of the public."[75]

Bua also noted that the House October Surprise Task Force had examined Ben-Menashe's October Surprise allegations and found them "totally lacking in credibility," "demonstrably false from beginning to end," "riddled with inconsistencies and factual misstatements," and "a total fabrication." He specifically observed that the Task Force found no evidence to substantiate Ben-Menashe's October Surprise allegations about Earl Brian.[76]

DOJ review

Inslaw responded to the Bua report with a 130-page *Rebuttal*,[77] and another set of new allegations in an Addendum. These allegations included the claim that the DOJ's Office of Special Investigations was "a front for the Justice Department's own covert intelligence service" and that "another undeclared mission of the Justice Department's covert agents was to insure that investigative journalist Danny Casolaro remained silent about the role of the Justice Department in the INSLAW scandal by murdering him in west Virginia in August 1991."[78]

By this time, Janet Reno had succeeded Barr as Attorney General after Bill Clinton's election as president. Reno then asked for a review of Bua's report with recommendations on appropriate actions. In September 1994, the Department released a 187-page review (written by Assistant Associate Attorney General John C. Dwyer) which concluded that "there is no credible evidence that Department officials conspired to steal computer software developed by Inslaw, Inc. or that the company is entitled to additional government payments."[79] The review also reaffirmed the earlier police findings that Casolaro's death was a suicide and rejected Inslaw's claim that OSI agents had murdered Casolaro as "fantasy," with "no corroborative evidence that is even marginally credible." [80]

Court of Federal Claims trial and ruling

In May 1995, the United States Senate asked the U.S. Court of Federal Claims to determine if the United States owed Inslaw compensation for the government's use of Promis. On July 31, 1997, Judge Christine Miller, the hearing officer for the U.S. Court of Federal Claims ruled that all of the versions of Promis were in the public domain and that the government had therefore always been free to do whatever it wished with Promis.[81][82] The following year, the appellate authority, a three-judge Review Panel of the same court, upheld Miller's ruling and in August 1998 informed the Senate of its findings.[81]

Later developments

A 1999 book by the British journalist Gordon Thomas, titled *Gideon's Spies: The Secret History of the Mossad*, repeated the claims of Ari Ben-Menashe that Israeli intelligence created and marketed a Trojan horse version of Promis in order to spy on intelligence agencies in other countries.[83]

In 2001, the *Washington Times* and *Fox News* each quoted federal law enforcement officials familiar with debriefing former FBI Agent Robert Hanssen as claiming that the convicted spy had stolen copies of a Promis-*derivative* for his Soviet KGB handlers. Later reports and studies of Hanssen's activities have not repeated these claims.

1991 Vanity Fair magazine : THE STRANGE DEATH OF DANNY CASOLARO (by RON ROSENBAUM)

Investigation - Was the reporter who claimed to have found the missing link between Iran-contra, the October Surprise, and B.C.C.I. a victim of a conspiracy—or of conspiracy theories?

Source - [HP004G][GDrive]

One of the first stories I heard about Danny Caso laro's funeral was the five blondes at the grave site. Five stunners ranging in age from twenty to forty, all dressed in black, all weep ing copiously.

I was feeling pretty bad about Danny myself, for my own reasons. I'd been thinking, Maybe I shouldn't have yelled at him the last time we spoke. Maybe I shouldn't have been so harsh, shouldn't have told him, "Danny, you've got to get ruthless with yourself. ' '

I'd been feeling that way ever since the morning of August 13, when I was idly flipping through The Washington Post and froze at the headline: "WRITER PROBING INSLAW CASE FOUND DEAD— Freelancer Was in West Virginia to Meet Source, Friends Say."

Friends were saying more than that. Friends and family were disputing the local coroner's hasty preliminary verdict of suicide, a verdict issued before the locals learned about who Danny was and what kind of story he'd been looking into. About the death threats and warnings he'd been getting in the final weeks before he was found, his wrists sliced open with an X-Acto-type blade in a bloody motel-room bathtub. The friends were saying that Danny was hot on the trail of the long-sought Missing Link between the scandals that had been convulsing Washington—B.C.C.I., the October Surprise, and Iran-contra—and that he was killed to keep him quiet.

And it wasn't just friends saying this: a former U.S. attorney general, Elliot Richardson, the ordinarily circumspect Brahmin, was calling for a federal investigation, and suggesting Danny "was deliberately murdered because he was so close to uncovering sinister elements in what he called 'The Octopus.' " Was this another Silkwood case? Was Danny murdered because he was "The Man Who Knew Too Much," as Time put it?

But at that point I wasn't thinking murder. I was thinking guilt—my own. I'd had several phone conversations with Danny about his Octopus idea in the weeks before he died, and I'd been pretty skeptical: a lot of it sounded like a rehash of familiar conspiracy-theory connections. That's what I'd meant when I raised my voice and enjoined him to be "ruthless" with himself: slash away the underbrush, so that whatever he had that was news would emerge. Still, when someone you've yelled at to be ruthless with himself is found dead with his wrists slashed, it makes you wonder if he took your words too much to heart.

Which is why I had to go down to West Virginia. Which is why I'm sitting fully clothed in an empty bathtub in the motel room just across the hall from the one in which Danny died, here at the Sheraton Martinsburg ("where meetings and fitness are our business"). Staring up at the cheap cottage-cheese-textured ceiling of the bathroom, perhaps the last sight Danny Casolaro saw.

I've spent the past ten days immersing myself in Danny's world, retracing his steps from the fragments and pieces of the puzzle he left behind in his notes, trying to reconstruct the vision of the Octopus that led him to meet his death here. To see if I could find out, to my own satisfaction, the answer to the murder-orsuicide question: Did Danny Casolaro die because he was, in some sense, too ruthless with himself? Or because someone got too ruthless with him?

"Danny, this story isn't fun, it's no adventure. It's traumatic, it's a disease, it's like going into the depths of insanity. ... It [the story] is the Octopus." —Danny's friend Ann Klenk, summer 1991.

I didn't know the guy well. Met him about a dozen years ago down in D.C. I was doing a story about revisionist Watergate theories for The New Republic and someone had referred me to Danny as a guy who was pursuing the "Democratic trap" theory—the idea that shadowy figures in the intelligence community hostile to Richard Nixon actually set up the Nixon White House for the Watergate bust.

What I remember most about that evening was not so much the mysteries of Watergate as the mystery of Danny.

The Arabian horses, for instance. Not many investigative reporters I knew raised thoroughbred Arabians in the heart of Virginia horse country. Danny did. Good-looking, good-natured, goldenhaired Danny looked less the ink-stained wretch most investigative reporters are than a Fitzgerald golden boy. I was left with a hazy impression of a Gatsbyesque horsey-set dabbler in the arcana of right-wing conspiracy theories.

In fact, it turns out Danny did have a kind of Gatsby fixation, one that apparently persisted until the final hours of his life. One of the last people to report seeing him alive was a waitress at a Pizza Hut, the one that shares a parking lot with the Sheraton Martinsburg. She describes Danny as flirting with her in a lighthearted way on the Thursday afternoon before his body was found. She says that Danny, apparently in high spirits, was quoting to her some lines from a favorite poem, the one about the "goldhatted, high-bouncing lover" that Fitzgerald used as the epigraph to The Great Gatsby.

According to Wendy Weaver, an attractive blonde ad exec who was Danny's steadiest girlfriend, Danny was a romantic who loved to quote those particular lines, because it was how he saw himself. Once, Wendy told me, "he painted a tin hat gold, and came into a restaurant that I was in, wearing a tuxedo and carrying roses."

Had Danny struck gold in his Octopus investigation or was he just gilding tin? What was the grail he died trying to find?

He started calling me last winter—I hadn't heard from him in years—first to ask for a copy of a story I'd done for V.F. involving "the Blond Ghost," the legendary ex-C. I. A. -covert-operations mastermind Ted Shackley ("The General and 'the Blond Ghost,' " January 1990). He was pursuing some leads concerning Shackley, he said. Danny wouldn't tell me anything more at that point than that he was working on "something really big," that there was a Shackley angle to it, and that he was reluctant to elaborate ("It would take hours").

Then, this past summer, two months before he died, he started calling me again, asking me for advice on a proposal for a book, a book he wanted to call The Octopus, about a shadowy group of rogue intelligence operatives who, in a Ghostly way, were linked to spectacular covert-world-generated scandals from the Bay of Pigs and Watergate to Iran-contra, B.C.C.I., and the October Surprise.

I liked the guy, but when I tried to cut through the thicket of conspiracy-theory connections he was reeling off for me, I just couldn't get a clue to what he might have that was new.

And there was something in Danny's tone of voice that disturbed me, something I'd heard before: that note of smug, condescending certainty that begins to creep into the voice of those who feel they have it All Figured Out and are quite beyond the need to document and substantiate. (Later he left a message on my answering machine thanking me specifically for the advice to be ruthless—it was the last I heard from him.)

And so as I headed down to Washington and West Virginia to begin retracing the last journey Danny took, I was so skeptical about the Octopus murder theory that I even harbored a suspicion that Danny might have staged his own death. That, while his friends were saying it was murder disguised to look like suicide, maybe it was really a suicide staged to provoke suspicion of murder. That by killing himself and leaving enough ambiguities to raise the possibility of murder Danny would make his own death the sensational final chapter of the book he never wrote—the one thing that would validate the seriousness of the quest he was on. It would be the Gatsbyesque thing to do.

But now I think I may have wronged him in at least one respect. By the time I got to the motel here in Martinsburg— after spending hours immersed in his notes, days talking with his friends, nights having strange conversations with his sources—I still didn't believe in the Ludlumesque Octopus conspiracy Danny hyped up for his book proposal. But I now believed that he was onto something, that his investigations were real, and that, in the months before his death, they were taking him into areas that involved dangerous knowledge and dangerous characters—one of whom had already been convicted of "solicitation of murder. ' '

> *"Will you kiss me when I'm dead?" —Danny Casolaro to Ann Klenk three weeks before he died.*

The line that best characterizes the kind of journey Danny Casolaro was on in the months before his death was one I found on a scrap of paper amid the literally thousands of sheets and scraps of notebook paper, envelopes, and cocktail napkins I'd been studying. (Was the "Denise" whose number is written on a cocktail napkin from a bar in Tacoma, Washington, a key source or a waitress he was trying to pick up?)

Five big file boxes of Danny's Octopus-investigation notes were retrieved from his basement office by his close friend Ann Klenk, who raced over there as soon as she got the news he was dead.

"He'd told me several times that summer that if I heard he met with an accident, make sure I got that shit out of there," says Klenk, an attractive ex-girlfriend who stayed close to him for twelve years after they broke up. Over dinner at a place near her CNBC office, where she works as a producer for Jack Anderson, she told me that, toward the end, a change had come over Danny. That his obsession with the story had become grim and all-consuming and that one evening at her place he'd turned to her and asked, "Will you kiss me when I'm dead?" (Danny's brother Dr. Anthony Casolaro reports that in the last couple of months Danny warned him "not to believe it" if he died in what was reported to be an "accident.")

Was this another Silkwood case? Was Danny murdered because he was "The Man Who Knew Too Much"?

Anyway, there it was on a scrap of notepaper in Danny's files, that line, written in his cheap ballpoint, probably the best testimony to how he had come to see his quest:

In the middle of the journey of our life, I found myself in a dark wood, having lost the straight path.

It is, of course, the opening passage of the Inferno, the description of Dante's state of mind when he came upon the hole in the world that led down to the gates of hell.

Danny Casolaro's dark wood was a bizarre, tangled lawsuit involving a computer-software company called INSLAW; unfortunately, his guide was not exactly the wise Virgil figure who took Dante in hand. Danny's guide—some would say his Svengali—was a Machiavellian rogue scientist who wove the web Danny was tracing from a jail cell in Tacoma. And the hole in the world Danny fell into was a sunbaked Indian reservation located, appropriately enough, a few hours south of Death Valley as the buzzard flies.

Before plunging into that dark wood, it might be useful now to fill in the picture of the pre-Octopus Danny. He was always a restless soul. The son of a successful obstetrician, he grew up to be an affable, athletic six-footer, a boxer with a touch of the poet, searching for something more than his suburban-Virginia setting offered. At age sixteen, his brother Tony remembers, "Danny got it in his head to go down to Peru to look for the lost Inca treasure." Tony recalls he got only "as far as Ecuador, where he ran into some rich guy" who distracted him into a scheme to ship corbina fish to the U.S.

Danny's first brush with a mysterious death came when his younger sister died in San Francisco's Haight-Ashbury in the late sixties. It was never certain whether it was an accidental death or suicide. But friends say the traumatic effect of the death on his family made Danny, a Catholic, even more adamantly antisuicide.

After graduating from Providence College in 1968, Danny began a writing career that shifted fitfully back and forth between fiction and nonfiction. In a ten-year-old resume I dug out of the file boxes retrieved from his house, Danny informs us that, "in 1969, I wrote two books and authored the initial treatment for Rain for a Dusty Summer, a film starring Ernest Borgnine.

"From 1970 to the present [circa 1982], I've been a Washington correspondent, contributor, columnist, editor for national magazines, daily newspapers, weekly newspapers, professional journals and trade journals including World News, National Star, London Sun, Sydney Daily Mirror, National Enquirer. . .El Dorado News Times, Home and Auto, Washington Star, American Paint Journal. . .Media Horizons magazines. . . Washington Crime News."

A mixed bag, perhaps skewed a bit toward the supermarket tabs, but Danny goes on to claim, "During these years my investigative work included reporting on some of the most important stories of the decade. In 1970-71 I was one of the first journalists to expose the renewed Soviet Naval presence in Cuba, prompting the U.S. Government official warning statements. ... In 1971 I was one of the first U.S. journalists to uncover the make up and composition of the Castro intelligence network in the U.S. . . . In 1972-3 I was the first journalist to expose how the Chinese Communists were smuggling opium into America. In 1973 to 1974 I was the first journalist to expose and document the 'prior knowledge of Watergate' story, a major breakthrough showing an untold side of the Watergate Scandal."

In fact, there's some doubt about where his investigative output on some of these stories appeared. Reed Irvine, the chairman of the right-wing watchdog group Accuracy in Media, recalls that Danny came to talk to him about his revisionist Watergate theory. "But he never wrote anything for us and I never saw

group Accuracy in Media, recalls that Danny came to talk to him about his revisionist Watergate theory. "But he never wrote anything for us and I never saw anything on the subject he ever wrote," Irvine told me. "I think he was one of those guys who liked to talk big but never delivered."

What's interesting about Danny's investigations is that they all had a definite right-wing agenda. Subversive Castro spy networks, sinister opium-peddling Red Chinese, Soviet naval nukes in Cuba—these suggest Danny had a pipeline into right-wing intelligence networks, or at least hard-right propagandists. It's ironic that Danny's Octopus conspiracy theory has been picked up by the left-leaning Christie Institute. Because a close reading of his book proposals makes it clear that Danny viewed the Octopus as something that subverted the right-thinking, anti-Communist covert operations he believed in, like the Bay of Pigs.

By the end of the seventies, Danny's life changed in a couple of important ways. His ten-year marriage to his wife, Terrill, a former Miss Virginia, came to an end. She moved to Florida; their son, Trey, stayed with him. It was, by all accounts, a shattering breakup. "He loved her deeply, very deeply," Ann Klenk told me. "He even started writing a book about her. It was a romantic novel, he called it Pursuit."

Around that time, Danny dropped out of journalism and became a kind of entrepreneur. He started working for, then acquiring, a series of computer and dataprocessing trade journals. He began making good money, but with daily and weekly deadlines, he had little time for the kind of investigations he once boasted of. By the mid-eighties, after playing the field with a succession of what his friends invariably describe as remarkably beautiful women, he entered into a long-running relationship with Wendy Weaver.

"It was love at first sight for me," says Wendy, still very starry-eyed about Danny. "He was magnetic, charming, charismatic."

But then, at the end of the decade, just when it seemed he'd settled down into a comfortable, early middle age, he found himself adrift. He'd decided to sell his chain of computer publications, but according to friends and family, "Danny was really out of his league making the deal. He just didn't have a business sense." He walked away with a sum not commensurate with the sweat equity he had put in over the years.

Another friend says that Danny's bitterness over the deal marked the beginning of "a clear deterioration in his morale. He was not the kind of guy to run around bitterly raging. Danny just internalized. He felt under pressure to make something of himself in a highly achievement-oriented environment."

Danny set out to settle the score with fete by bagging that One Big Story, the contemporary equivalent of the Inca treasure.

His friends recall an enormously generous guy who'd throw them surprise bon voyage parties and write them soulful birthday poems. "He was someone with an incredible ability to give love, but he had trouble taking it in," another ex-girlfriend told me.

Clearly, something was missing. And so, in the spring of 1990, Danny set out to settle the score with fate by bagging that One Big Story, the contemporary equivalent of the lost treasure of the Incas.

> *"This story killed my friend, and I want very simple questions answered. . . . These people who were jerking him around—whether he killed himself or he was killed—/ still hate them." —Ann Klenk*

It was Danny's computer-world contacts that brought him to the INSLAW case, and it was INSLAW that brought him into the ambit—some would say under the spell—of the rogue scientist/ weapons designer/platinum miner/alleged crystal-meth manufacturer who sent Danny off on the quest for the grail he was to die seeking.

The INSLAW case alone is enough to drive a sane man to madness, if not suicide. The INSLAW lawsuit has devoured the lives of those involved the way the all-consuming Jarndyce v. Jarndyce Chancery suit devoured its progeny in Bleak House. If they ever make a movie of the INSLAW suit, it could be called Mr. and Mrs. Smith Go to Washington and Meet Franz Kafka.

The Mr. and Mrs. Smith in question are Bill and Nancy Hamilton, an earnest, dedicated St. Louis couple who went to Washington and, in the early seventies, began working on the hightech side of the war on crime, INSLAW, the software company they built, designed a breakthrough program for use by U.S. attorneys in administering the crime war: it tracks cases, ranking their priorities and helping allocate resources to them. It put INSLAW on the ground floor of a potential quarter-billion-dollar market.

[NOTE - See "**1990 (Oct 01) - Washington Post - "OBSESSED BY A THEORY OF CONSPIRACY" /** Source - [HN01C5][GDrive]]

Then, the Hamiltons claim, their company became a crime victim. They charge that elements within the Justice Department—cronies of Reagan attorney general Ed Meese's—plotted to sabotage their contract with Justice, drive the company into bankruptcy, and steal the valuable software for their own profit. Farfetched as that might sound, back in 1987 a federal bankruptcy judge ruled definitively in favor of Mr. and Mrs. Hamilton, declaring that the Justice Department had used "trickery, fraud, and deceit" to misappropriate the software and then tried to drive INSLAW out of business. (The decision, reversed on appeal, is now heading for the Supreme Court, where Elliot Richardson will argue the Hamiltons' case.)

But this victory was merely the cue for the real Kafkaesque weirdness to begin. Suffice it to say that the Hamiltons, struggling desperately to escape from bankruptcy, began to suspect there was something larger going on behind the scenes that accounted for what they saw as a pattern of mysterious interventions and string pulling directed against them.

Then along came a master conspiracy theorist who confirmed their darkest suspicion: That they weren't in the world of Kafka but that of Robert Ludlum. That the alleged theft of their software by Reagan-Meese Justice Department cat'spaws was actually a key element in the hottest new conspiracy theory of them all. He told them that their case was, in effect, the grassy knoll of the October Surprise plot.

His name is Michael Riconosciuto, and he's the rogue scientist and self-proclaimed former covert operator who became the Hamiltons' tutor and Danny's Svengali. (It should be noted that the person who brought Riconosciuto to the Hamiltons' attention was a key lieutenant of conspiracy-cult leader Lyndon LaRouche; LaRouche intelligence reports were also found in Danny's files.)

In May 1990, according to the Hamiltons' internal "Memorandum for the Record" I found in Danny's files—a memo which became a road map for Danny's fatal journey—Riconosciuto gave the Hamiltons the following account:

That in October 1980, Riconosciuto was serving as director of research of a weapons-design project operating out of the sparsely populated Cabazon Indian Reservation in the California desert (there were only twenty-four Cabazons living there at the time). That Bill Casey—then Reagan-campaign director, later C.I.A. head—hired Riconosciuto and a Reagan confidant, Earl Brian, to undertake a secret mission to Iran.

Riconosciuto told the Hamiltons that he "did the electronic funds transfer" to convey a payoff of more than $40 million to "certain elements in Iran" to "prevent a deal with the Carter Administration to release the American hostages prior to the election."

Riconosciuto added that Brian's reward was a kind of license to grab the Hamiltons' lucrative software, with the help of Reagan's Justice Department minions. Riconosciuto further told the Hamiltons that he "saw documents" in the law offices of a former U.S. senator in which the INSLAW-related October Surprise payoff was "chiselled in stone." (Brian denies all these charges and any connection to the INSLAW case.)

Enter Danny Casolaro. In the summer of 1990, shortly after Riconosciuto had disgorged the details of this story to the Hamiltons, Danny showed up in their offices on K Street in downtown Washington, expressing interest in doing some kind of story on the INSLAW case. And at some point that summer the Hamiltons made available to Danny their twelve-page Riconosciuto memo with its profusion of suggestive and seductive leads, its wealth of references to code names, cover-ups, corporate fronts, cutouts, and covert ops—all of which show up in the notes Danny left behind, many of which go far beyond the October Surprise.

The moment he got his hands on that maddening memo, with its maze of illusion and reality, was the moment Danny's life changed and he began his descent into the obsession that would lead to his death. He was slowly, then rapidly, sucked into a kind of covert-ops version of Dungeons & Dragons, with that memo as his guide and Michael Riconosciuto as his Dungeon Master.

"Stop it, Danny. Just stop it! Get a job. Just let this goddamn story go." —Ann Klenk

In Danny, Riconosciuto found the perfect audience. The spook and the journalist have always shared an affinity: each thriving in a realm of secrets and lies, cover-ups and cover stories, sharing the romance of the covert mentality, with its thrilling sense of being privy to the secret heart of matters undreamt of by the ordinary, CNN-watching citizen. And both Casolaro and Riconosciuto were in a similar position: lone operatives freelancing on the fringe, longing to be at center stage.

The turning point in their relationship came when a dramatic prediction Riconosciuto made seemed to come true. In February 1991, he told Danny, a highranking Justice Department official had warned him not to give a deposition to House Judiciary Committee staffers investigating the INSLAW controversy or he'd end up in jail. Several weeks later, federal agents arrested Riconosciuto on charges of distributing speed. (Riconosciuto, who did talk to Judiciary Committee staffers, insists the chemicals were actually being used in an innovative process for refining platinum ore; the Justice Department official has denied making any threat.) As soon as he got news of the arrest, Danny hopped a jet and flew all night cross-country to Tacoma, where he spent ten days working as an unpaid, unofficial investigator of the Riconosciuto "frame-up"—and of the endless tangled tales of intrigue and dirty tricks this imprisoned Scheherazade of the spook world had to tell.

Not many investigative reporters I knew raised thoroughbred Arabians in the heart of Virginia horse country. Danny did.

"Danny said that when he started out he only believed 5 percent of what I was saying" and doubted 95 percent. "But by the end," Riconosciuto boasted to me from jail during one of our marathon conversations, the ratio was reversed.

I'd still put his credibility at Danny's original figure of 5 percent—but even so, the 5 percent that does check out makes Riconosciuto one of the more remarkable characters I've encountered in years of debriefing spook types. If he's a liar, he's not your ordinary liar. He's extraordinarily skillful at weaving fact and fiction into a seamless web of seductive intrigue. And he did direct Danny down some dark paths in which he came into contact with some seriously dangerous dudes.

"These people in the desert were murdered. Murder, dope, government. That's dangerous. Think about it, Danny." —Warning from "Clark Gable."

It was a whipsaw, a psychological whipsaw, Danny Casolaro got caught in. A cruel game of paranoid psychout played with Danny's head. The players batting him back and forth were Michael Riconosciuto and his longtime shadow-world nemesis, the man we'll call, for reasons to be clear soon enough, "Clark Gable."

But it was no game, it was a long-distance duel. In fact, the only thing the two men agree on is this: Danny's death was murder. And each implies the other may well have had something to do with it.

Let's look first at Riconosciuto. Here are some of the things he told Danny— and me—about himself:

That he was a child prodigy who developed a powerful argon-based laser, then went to work in the lab of a Nobel Prize-winning scientist at Stanford at age sixteen. That his grandfather was a top military aide who worked with an early C.I.A. chief, General Walter Bedell Smith—family connections, he said, "opened a lot of doors for me."

That from Stanford he went on to Haight-Ashbury in the sixties, where he was responsible for an undergroundnewspaper spread in which, he said, "we published pictures of narcotics agents," including one "showing [an agent] having sex with these under-age girls that we took from a rooftop."

Ultimately, Riconosciuto told Danny and me, vengeful narcs engineered his "frame-up" on charges of manufacturing psychedelic drugs.

In Danny's notes I found evidence that he'd checked out these claims, even getting Riconosciuto's grades and I.Q. from a parochial school he attended: the I.Q. was a somewhat-less-than-prodigylevel 124; the story about building the argon laser is true. But Danny dug up clips which tell a somewhat different version of the narc-sex-vengeance "frame-up." They report that Riconosciuto was arrested in Seattle in September 1972 by "federal narcotics agents who say they have had the defendant under surveillance off and on since 1968." What Riconosciuto said back then at his trial was that sinister drug people tried to force him to make psychedelic drugs, threatening to kill him if he didn't do their bidding. They'd already been "responsible for 14 murders," he told the court.

That figure—"14 murders"—rang a bell. In my first conversation with Riconosciuto, I was exploring some cryptic but provocative notes I'd found in Danny's files about "biological warfare" projects. The notes made references to the possibility of manufacturing "slowacting brain viruses" such as "Mad Cow Disease" which could be slipped into "meat pies." (Hey, I just report the facts here.)

Riconosciuto was reluctant to talk about the germ-warfare leads. "It's a real Dr. Strangelove tale," he said. "But it's obviously real enough that anybody who's ever come near it has gotten killed. And Danny was starting to make progress."

When I asked him to elaborate on the germ-warfare story, he uncharacteristically—or perhaps theatrically— clammed up. "I really don't want to be the one to say, you know, because I know of fourteen people that are dead that have tried to come out publicly on this."

While it's clear Riconosciuto has a special affection for the figure of fourteen deaths, that's only a fraction of the mortality rate around him, he said. "That's only on the 'biotech,' " as he called the germ-warfare stuff. "There's almost fifty dead total that have been connected with me in one way or another since the early eighties."

While this claim captures the paranoid flavor of conversations with Riconosciuto, it's deceptive in one sense. Because, while there may not have been fifty, or even fourteen, there were some real, documentable murders happening around him, particularly after he arrived at the Cabazon Indian Reservation in the early eighties and became involved with Clark Gable and "Dr. John."

The whole Cabazon-reservation maze Danny was pursuing is further proof that the reality of the covert-ops shadow world will always outinvent the cliches of a Tom Clancy. It is also, to my mind, the strongest barrier to believing Danny's death was a simple suicide. Regardless of what money problems he had, or book-proposal rejections he suffered, he was really onto a story here.

His investigations were taking him into areas that involved dangerous knowledge and dangerous characters.

Evidence that Danny was onto something real can be found in a frontpage, three-part investigative series in the respected San Francisco Chronicle that appeared three weeks after Danny died and that was inspired in part by his probe into the Cabazon-reservation enigma.

"Just fifteen years ago," Chronicle reporter Jonathan Littman begins, "a handful of Cabazon Indians barely scratched out a living on their reservation in this tumbleweed desert just north of the Salton Sea," near Indio, California. But since a "mystery man," Dr. John Nichols, took control of their affairs as the "administrator" of the tiny tribe, a staggering quarter-billion dollars has been poured into projects based on the reservation.

What Nichols did was leverage the one asset of the woebegone Cabazon band—their "sovereign status" as a quasi-independent nation, which allows them to build casinos and enter into joint ventures with corporations. Such joint ventures are shielded to some degree from the usual legal and regulatory scrutiny, making the reservation extremely attractive to the kind of enterprise which prefers to operate in the shadows. In fact, Dr. Nichols (the doctorate is of divinity) seemed to have close contacts with C.I.A. and military-intelligence operatives (according to the Chronicle, he would tell some that he'd had a hand in the C.I.A. assassination attempts on Fidel Castro and Salvador Allende). Contacts which attracted to the desolate reservation what the Chronicle called "a maze of politicians, military officers, organized crime figures, intelligence agents, foreign officials ranging from Saudi sheiks to Nicaraguan Contras."

One of the people who materialized in this maze is our friend Michael Riconosciuto. He claimed he'd spent the years since his psychedelic-lab bust as a government informer on the anti-war movement and as a covert C.I.A. operative in South America (where he says he first met Dr. Nichols) infiltrating the liberationtheology movement. Back in the States, Riconoseiuto then became the "technical adviser" to mystery man Dr. Nichols on the reservation. Before long, Riconoseiuto says, he began to learn about some "horrible things" going on out there.

This is the labyrinth Riconoseiuto was leading Danny into—the one he died in. The Chronicle reporter tells us that, "just days before his death," Danny Casolaro "planned to visit the Reservation.

. . . Although he did not divulge what role the Cabazons may have had in the conspiracy [he was investigating], Casolaro. . . recently told this reporter that one of the titles he was considering for his [Octopus] book was Indio."

It would have been a more accurate title. Indeed, the grandiose "Octopus" of Danny's maladroit, overhyped book proposal was—to continue the piscine imagery—a red herring. But there was a lowercase octopus out there in the desert beyond Indio.

Riconoseiuto himself, the resident demon of this labyrinth, supports the more modest, lowercase characterization of the octopus: "Danny's theory was different" from the typical megaconspiracy theory, he told me. "Danny was dealing with real people and real crimes."

One of the crimes was murder. Several murders, all unsolved. One victim was Michael Riconosciuto's "business partner," a man named Paul Morasca, whom he candidly describes as a money launderer. Morasca was found hog-tied and asphyxiated in a San Francisco apartment. One of the initial suspects in the murder was Michael Riconoseiuto himself, and he says the accusation shocked—shocked—him, and motivated him to spill the beans on all the dirty deeds done on the reservation.

He claims he was responsible for pinning a "solicitation of murder" charge on Dr. Nichols for trying to hire a hit man to kill some casino associates on the reservation. (Nichols pleaded no contest and served sixteen months' jail time on the charge.) A Cabazon spokesman has said, "There's nothing sinister going on at the reservation. It's just a very successful operation."

Anyway, it was in the midst of this film noir intrigue out there in the sterile desert flats that Riconoseiuto first encountered the man who would become his partner, his target, his obsession, and, ultimately, the second pole of Danny's Octopus investigation: the man we're calling Clark Gable.

We're calling him Gable for two reasons: first, because those among Danny's friends who met this mysterious figure when he flew into D.C., to warn Danny his life was in danger, invariably describe him as "looking just like Clark Gable, only without the big ears," and, second, because his real name is Robert Booth Nichols, and there already is a Nichols (Dr. John, no relation) in this story.

The circumstances in which Riconosciuto and Gable met are in dispute. But it seems that for a time they planned some R&D ventures for high-tech hardware behind the shield of the Cabazons' sovereign status. Gable admits to being the head of a holding company, one of whose subsidiaries has licenses on the prototype for an automatic weapon. But he won't say much more about his business. When I finally reached him at a California number I'd found in Danny's notes, he denied any involvement in improper activities. He told me his falling-out with Riconoseiuto began at the reservation when he caught the selfstyled scientist in "lies" about his esoteric inventions. He blames Riconosciuto and others who have been "Michaelized" for peddling dark tales about him. He hedged when I asked him about intelligence-world connections. "I have been involved in sensitive activities. That's the only way I can describe it," he said. And while he denied being in the C.I.A., he said he'd "been involved with a lot of people who tell me they are in the C.I.A., although I have no way of substantiating it."

What is certain is that Michael Riconosciuto has it in for Gable, and that he began pointing Danny in Gable's direction, filling his head with allegations of Gable's sinister, international covertworld connections. Indeed, he began to paint a picture of Gable that linked him to very big, very dangerous organizedcrime syndicates, including the feared Japanese Yakuza and the fearsome Gambino crime family of John Gotti. That linked him in addition to various C.I.A. and British intelligence plots, because Gable was the friend of a legendary Bond-ish Brit known as "Double Deuce." (Are you beginning to get a feel for the texture of Danny Casolaro's world by now?)

In fact, Riconosciuto attempted to convince Danny, with some success for a while, that this man Gable was the key to what Danny was starting to call the Octopus.

According to an ex-F.B.I. man who was a source for Danny in his final weeks, Danny began rashly and unwisely calling Gable himself about these allegations. "Danny began getting into areas that were dangerous, very dangerous," the ex-F.B.I. guy told me. "This is dangerous work. He was warned. You know. Gable warned him."

warned him."

If they ever make a movie of the INSLAW suit, it could be called Mr. and Mrs. Smith Go to Washington and Meet Franz Kafka.

A VISIT FROM CLARK GABLE

I have the details of the strange encounters between Danny and Gable from three different sources, none of whom was eager to be the sole source.

Because all recalled them as chilling. The exotic quality of those meetings is captured by one of Danny's friends, who had lunch with Danny and Clark Gable. Gable had flown into Washington, D.C., on a weekend about a month before Danny's death, was staying at the top-bracket Four Seasons Hotel in Georgetown, and seemed to have little business other than to spend time with Danny Casolaro.

The friend, a well-connected player in Pacific Rim politics who requested that his name be withheld, said Gable was "very slick, very civilized-appearing. Danny used to say he had the manners of a gentleman, but underneath he was a thug."

The friend recalls Gable "doing that thing that guys do on barstools the world over. He looks at you with that wink and says, 'You know, I'm not in the C.I.A.' "

When the three of them finally sat down to lunch at Clyde's in Tyson's Comer, the friend says, Gable promptly informed them he'd "just taped a radio broadcast as the incoming minister of state security in Dominica, and was preparing a coup that 'some bimbo in the C.I.A.' was asking him about. But he was actually at a higher level than the 'bimbo.' " (The island of Dominica, which figures heavily in Danny's notes, is an impoverished flyspeck in the Caribbean that has been characterized as "the Third World's Third World." Gable says he was asked by the leader of the opposition party on the island if he'd become security minister, should an election bring it to power; he says he cleared this with the State and Justice departments. He also denies any C.I.A. coup plot and says the broadcast was an interview about economic development.)

Danny's friend says he "never witnessed a performance" like the one that ensued. "[Gable] had this story that they were going to turn Dominica into a C.I.A. base, had plans for a desalination program, and pulled out this design drawn by a French architect of a dome the size of Texas Stadium that was half underwater. Really, the whole thing reminded me of Ernst Stavro Blofeld [the Bond villain], I mean, good Lord, you could just see James Bond swimming out there with a babe. I excused myself at this point. I really didn't want to hear anything more after seeing Blofeld's underwater lair."

"Did he come across as a con man?" I asked Danny's friend.

"It's funny," he said. "It was like he was real slick, really like Clark Gable, and there were nuggets of truth. The guy just oozes intrigue." (Gable told me he was exploring plans for exploiting the island's heavy rainfall to export purified water, and denies anything improper about it.)

Then, the friend says, Danny showed him a side of Gable he didn't want to know about.

"After lunch Danny pulls me aside and pulls out this purported F.B.I. wiretap summary on [Gable], and it showed how [Gable] is connected. It linked him to the Yakuza and to the Gambinos as a money launderer. And that widened my eyes. I said, 'Danny, I'm gonna take you out back and whip your ass! You just put me in a meeting with this man and didn't tell me what the hell—why didn't you tell me before?' And Danny was kind of, 'Oh, I don't know. I wanted to see how [Gable] would react.' In other words, he gaffed me with a hook and tossed me in the water to see if the Octopus would move!"

Gable says the suggestion that he's involved with the Yakuza and the Gambinos is "totally false." It's "absolutely ridiculous" to link him to "the Gambia family," he told me, conspicuously mispronouncing the name. He traces the trouble to an F.B.I. misunderstanding of his screenplay career. He says he was introduced to a high-level executive of MCA several years ago at a coffee shop. When the MCA man encouraged him to turn some tales he'd told him into screenplays, they became friends and, briefly, business associates. Unknown to him, the MCA man was the subject of a full-court-press F.B.I. investigation for being a key organized-crime link to the entertainment industry. And so, Gable says, his voice was picked up by taps on the MCA man's phone. The bureau misinterpreted their conversations as containing code words for illegal activities, turned around, targeted him, and slandered him to his business associates. In fact, Gable's company is suing an F.B.I. man for libel and slander. He says that the wiretap summary was part of the F.B.I. man's affidavit in the Gable slander suit.

In addition to the dispute over the wiretap affidavit, there's also a dispute over the nature of the warning Gable gave Danny. Riconosciuto, who wasn't there, tries to portray it as a personal threat from Gable. But others recall that it was Gable warning Danny against Riconosciuto.

Danny's girlfriend Wendy Weaver, for instance, spent a long, strange evening with Danny and Gable and has an indelible memory of the warning.

"It was a weird night, so weird," she recalls. "We met at the Four Seasons [bar]. He was pretty well lit when we got there. He was very charming, very handsome. When I tried to find out who he really was, he really didn't give me an answer. He just started these warnings. ... He kept saying, 'You don't know how bad this guy Riconosciuto is. Tell Danny to stay away.' He said, 'Riconosciuto—he might not get you today, he might not get you next month. He might get you two years from now. If you say anything against him he will kill you.' "

He repeated it several times, Wendy says. "At least five times."

Later in the evening, Wendy reports, there was a heated altercation with "this

The only thing his two chief sources agree on is this: Danny was murdered. And each implies the other may well have had something to do with it

Asian-looking guy, who apparently insulted me in some way. And Danny was scared. After we got rid of [Gable], Danny goes, 'Wendy, this guy is scary.' That's the first I heard him say that."

While Gable was trying to warn Danny about Riconosciuto, Riconosciuto, for his part, was desperately trying to warn Danny about Gable. Or so he says. "I was absolutely frantic trying to warn him," Riconosciuto told me.

It was Danny's habit of "bouncing" Riconosciuto's stories off Gable that put him in peril, Riconosciuto says. One of the things he was supposedly "bouncing" involved what Riconosciuto said was a major heroin-related sting. (Gable denies any involvement in drug traffic. "I hate narcotics," he told me.) Another involved Riconosciuto's claims about an effort by the Cali cocaine cartel to derail the extradition of an alleged Colombian kingpin called Gilberto.

Gable just "went ballistic," Riconosciuto says, when Danny bounced this Gilberto matter off him. "But by the time I heard about it, there was nothing I could do, you know, except to warn Danny.

"And I called from that day on—it was on a late Monday—Tuesday, Wednesday, all the way through the weekend when they found Danny. Every day I was calling the Hamiltons, asking if anybody had heard from Danny. And I was frantic."

What was going on in Danny's head as he was being whipsawed between these two shadowy operators and their death warnings?

There was one point in my immersion in Danny's mental world when I felt a flash—a brief, chilling, but illuminating flash of what it must have been like for him when he got in too deep. It came in the course of a phone conversation I had with Ann Klenk, who was not only one of Danny's oldest and closest friends but also the one whose skeptical perspective on his obsession I'd come to rely upon.

She was telling me of her surprise and puzzlement over something she'd just learned: that not long before his death Danny had approached a nurse he knew and questioned her closely about the symptoms of multiple sclerosis and brain diseases.

This was particularly pertinent to the murder-or-suicide question, because an autopsy examination of Danny's brain revealed possible symptoms of M.S. Initially, his friends and family had dismissed this as irrelevant—it couldn't be a motive for suicide, because Danny had never complained of symptoms or, to their knowledge, known of the disease.

Then I mentioned to Ann the cryptic notes I'd found in Danny's files: on germ warfare, on slow-acting brain viruses like Mad Cow Disease, about targeting people with them by slipping them into meat pies.

That's when it struck me. "Oh, God," I said to Ann, "Danny's asking a nurse about brain disease—maybe he thought he'd been targeted."

Had he gone that far, or was / now too far gone down the road to paranoia that he'd traveled?

A few days later, I happened to mention the report of Danny's seeking information about brain-disease symptoms to Michael Riconosciuto. Who promptly said, "Oh, yes. He, uh, was concerned. And that was one of the reasons he had such an obsession [with this story]. Because he felt he had been hit by these people."

"Hit by them?"

"He confided this to me to try to get me to talk further" about biologicalwarfare projects he'd discovered, Riconosciuto explained. He'd been warning Danny that he wasn't appreciating the danger his investigation was exposing him to. "I told him, 'You can't envision your own death. Why would you want to do this [kind of reporting]?' And he finally came out and said, 'I'm going to die anyway and... I want to go out in a blaze of glory and take them with me.' "

What did he mean, he was going to die anyway? I asked Riconosciuto.

"He suspected that he had been, you know...a source told him that he, among others, had been targeted with this sort of [slow-acting virus] thing."

This was too much even for Riconosciuto. "I told Danny, 'Look, the paranoia will consume you. You need to go and get tests.' And Danny went and got tests and they were inconclusive. Now, what he probably had was the genesis of a naturally occurring ailment."

The paranoia will consume you. This exchange marks the moment when Danny's conspiracy-obsessed imagination surpassed even that of his most inventive source. In fact, the definition of true paranoia might be the point where Michael Riconosciuto says you're too paranoid for him.

And yet, there's something in Danny's reported remark that caught my attention: Riconosciuto's recollection of Danny's saying, I want to go out in a blaze of glory.

Certainly, as it turned out, Danny went out in a blaze of publicity. The networks, the magazines, the mainstream reporters who had given him the brushoff in the weeks before he died, gave him star treatment as a corpse. ABC's Nightline and CNN assigned swAT-team investigative squads to follow the leads in his notes. He couldn't have had it better if it had been scripted.

Could he have scripted it?

More than anything, it's the conspicuous theatricality of Danny's behavior in the last ten days of his life—when he suddenly went into his "I've cracked the whole case" mode—that led me to reluctantly revive consideration of what might be called "the Gatsby scenario": that his death was a final act of selfcreation.

What ultimately led me back to the Gatsby scenario was the inadequacy of both the case for murder and the case for simple suicide.

One can certainly understand why almost every one of Danny's friends and family leans toward the murder theory. (His mother's first reaction when she heard the news: "They've killed him!") They knew he'd been getting warnings. They knew he'd been getting threatening phone calls. On the Monday before the Saturday he died, he told his brother, "I'm getting these strange phone calls saying, 'You're gonna die.' " Also that week, shortly before he left on the fatal journey to that West Virginia motel, the neighbor who looked after his house reported answering Danny's phone and hearing a voice saying, "You're dead." She reports a similar "You're dead, you son of a bitch" call hours after his body was found—which rules out Danny himself as a possible source of the alleged threats against him.

And then there was the unmistakably clear—at least on the surface—prophecy to his brother: If anything happens to me it won't be an accident.

With admirable dedication, Danny's younger brother Dr. Tony Casolaro has made it his mission to ensure that there is any truth to this he will make certain it gets out. Which has resulted in this soft-spoken, reserved specialist in pulmonary medicine—quite the opposite of the extroverted, gung ho party dude Danny was—plunging into his dead brother's world.

He's talked to Clark Gable. He's even taken collect calls from Michael Riconosciuto in which Danny's jailbird Svengali spun out his "fentanyl" theory: that Danny was immobilized by the powerful synthetic heroin-like drug fentanyl, and then, in a state of compliant, semi-paralyzed alertness, was forced to cut his own wrists.

After spending weeks on his brother's case, Tony Casolaro is tom. He can't believe it's suicide, because his brother was so excited and upbeat about his investigation on that last Monday he saw him.

Tony is also troubled by a number of facts. Papers and files Danny had been seen with up in West Virginia were missing from his motel room. Stolen by his murderers? (Of course, if Danny wanted to create doubt he could have made a point of "disappearing" the papers before killing himself.) Then there are the still-unexplained phone calls from people who seemed familiar with the implications of Danny's death before even the police knew. There was the hasty embalming, the cursory look at the death scene by the cops, who made an initial judgment of suicide. (The reinvigorated Martinsburg police investigation—

ongoing as of this writing—has been far more thorough, but perhaps too late.)

But, on the other hand, Tony knows the actual scenario for murder is "kind of Tom Clancy-ish. "

"The way I envision it could have happened," Tony told me over dinner one night in downtown Washington, D.C., "someone stands over him and says, 'You write this suicide note or my partner who's standing with your son will, you know, [kill your son].' And Danny would just go, 'Fine.' "

Danny was a big, tough guy, a boxer, fearless, Tony says. But if he felt his son's life was being threatened, "he wouldn't be someone who would resist that kind of pressure."

Having written the suicide note, this murder scenario goes, Danny would then have run the bath, gotten undressed, gotten in, and started carving up his wrists with the blade his captors provided him.

The reason his friends and family, all solid-citizen types, could believe in such a farfetched scenario is precisely that Danny made such a big point of telling each of them in the week before his death that he was on the verge—or over the verge—of the big breakthrough he'd been looking for. That he was about to go to West Virginia to "wrap it up," to get the final piece of the puzzle, to nail it once and for all. He told one friend he was going to West Virginia "to meet the head of the Octopus." He told another he was going to West Virginia to "bring back the head of the Octopus."

Riconosciuto was reluctant to talk about the germ-warfare leads. "Anybody who's ever come near it has gotten killed."

The exact nature of the breakthrough he was trumpeting seemed to vary. He told three people he had finally solved the whole insanely complicated INSLAW mystery. He gave two other friends the impression that he'd gotten the goods on the October Surprise case and linked it to B.C.C.I. He told a source he met in West Virginia that he'd just "gotten enough information on B.C.C.I. to hang Clark Clifford." He went through an elaborate charade with the two friends — showing them a key document that he said tied it all up. The document was a photocopy of a $4 million check signed by Adnan Khashoggi, the Saudi arms dealer who's been linked to Iran-contra. The check, copies of which I found in his files, is made out to Manucher Ghorbanifar, the shadowy Iranian exile arms dealer who played a mysterious role in the Iran-contra deal.

"He was really excited when he got that," Danny's friend Ben Mason told me. "It was like, 'This is it!' "

Was this the magic document/smoking gun of the whole October Surprise/ B.C.C.I. /Iran-contra mega-conspiracy ?

That's what Danny implied to his friends. Mason, a musician who wrote songs with Danny, is still under the impression that the discovery of the check was a scoop, a Danny Casolaro exclusive. But, as it turns out, the check had been made public by the congressional Iran-contra committee in 1987 and was well known to reporters in the field.

Ben Mason says that the real bombshell significance of the check is in its link to another document Danny showed him on the eve of his West Virginia trip: a passport photo of an Iraqi named Hassan Ibrahim, a reputed arms dealer. There are those who say that it was Ibrahim whom Danny was going to meet in West Virginia, that it was most likely Ibrahim who was the mysterious "Middle Eastern-looking man" Danny was seen with in the bar of the Sheraton Martinsburg the day before he died. But thus far nothing solid has turned up to suggest the whole magic "Missing Link check" act was anything other than a creative leap of speculation by Danny— if not a deliberate charade.

It should also be recalled that Danny was a novelist. And that he'd spoken to a number of his friends about possibly telling the whole Cabazon-Octopus story as a novel. His theatrical "I cracked the case" declarations in that final week suggest the thriller-novelist imagination at work, setting the stage for the obligatory mysterious murder essential to every spy thriller—in this case, his own.

The timing for all this is notable. The sudden flurry of melodramatic "I cracked the case" calls began at the end of July, shortly after Danny's nonfiction-Octopus-book proposal was rejected by the first mainstream publisher he sent it to, Little, Brown. One friend Danny called that final week remembers him "planting the seeds" earlier that summer. "Danny began telling me about these death threats he was getting on his answering machine, ' ' the friend says. ' ' And I said, 'Look, Danny, the telephone company can find ways to trace these calls.' And he got very embarrassed."

Meaning he faked it? I ask.

"Right." This friend's theory is that Danny knew he was suffering from some progressive debility, like M.S.— there'd been several "accidents" involving Danny's muscle coordination. That Danny knew he wouldn't or couldn't ever get his book written, in part because he wasn't sure what he really had. "What he did is throw a whole issue up against the wall so that it would be sorted out in some fashion." The friend believes that if Danny staged his death to look like murder, it would be "tragic," but also a "very wild, courageous," desperate attempt to get the truth out.

Then why leave a suicide note? Ann Klenk asked. It's a cogent objection. If he'd left no note, or, she suggests, if he'd driven his car off a cliff, or jumped off a building, then people would be more likely to speculate he'd been run off the road like Karen Silkwood, or he'd been pushed off the building he "jumped" from. She thinks if it was suicide it may well have been because "Danny finally found it all a crock," because the whole thing was "LaRouche sickthink, doublethink," and disinformation.

Some, however, cite the note itself as a clue to the murder. The note read, "To those who I love the most: Please forgive me for the worst possible thing I could have done. Most of all I'm sorry to my son. I know deep down inside that God will let me in."

Several of Danny's friends have told me emphatically that that last line— "God will let me in"—is the tip-off. That Danny, a Catholic, knew that suicides could not be "let in" to the Kingdom of Heaven. And that by including that line, by saying he would be "let in," he was signaling—under the noses, or under the guns, of his captors—that his death was not suicide.

Perhaps. But the best response to Ann Klenk's contention that he wouldn't have left a suicide note if he had wanted people to think he'd been murdered is, well. . .the actual reaction to his death. A VICTIM OF "THE OCTOPUS"? asked Newsweek in a full-page takeout. THE MAN WHO KNEW TOO MUCH? asked Time. CLOUDED IN MYSTERY,People said darkly two months after his death.

And that's only the mainstream media. Among the conspiracy theorists it's already an article of faith that Danny was assassinated. "A government-sanctioned hit," declares Virginia McCullough, a California-based October Surprise-conspiracy specialist who exchanged notes with Danny before he died. She says Danny was just the latest of several reporters murdered because of their October Stirprise investigations— all "government hits." Riconosciuto has added Danny's body to the fifty he says were murdered because of their proximity to him and his schemes. Danny's missing files have already begun to assume the all-purpose, prove-anything status of such other totems of conspiracy theory as the eighteen-minute gap on the Watergate tapes, the stolen papers of Howard Hughes, and the missing diary of Mary Meyer (the murdered J.F.K. mistress).

Several of Danny's friends have told me emphatically that the last line of his suicide note is the tip-off

And Danny himself—the reality of who he was and what he was really after— has begun to be subsumed by his enshrinement in the rolls of the martyrs to the great Octopoidal conspiracy in the sky.

That evening, in my room at the Sheraton Martinsburg, I climbed out of the bathtub. You stare too long at that cottage-cheese ceiling and you begin to see patterns coalescing in the pockmarked surface.

I sat down at the functional desk, trying to ignore the heavy-handed irony of the hotel's promotional card in front of me. It showed a picture of a knotted rope being stretched taut between two fists. This trip probably has you tied up in knots. . . . If you're at the end of your rope, give us a call. It was an ad for the hotel's massage service.

I tried to imagine Danny Casolaro at the end of his rope, stretched to the breaking point by his two sources, staring at that knotted cord.

For about the tenth time in the past twenty-four hours, I opened up Danny's last surviving notebook, one of those cheap composition notebooks with a speckled black-and-white cover. On the inside cover was a date: August 6, four days before Danny died. Wendy Weaver had just located it and supplied it to me, along with ten loose pages of notes which had not previously surfaced.

The notebook itself had only one page written on by Danny. There was only one substantive note:

Bill Hamilton Aug. 6

M.R. . . . also brought up Gilberto.

This is an apparent reference to the alleged Cali-coke-cartel kingpin who figured in the last murky Michael Riconosciuto quest Danny was pursuing

What caught my attention were the two names and phone numbers on that page, above the note, under the heading "To Call."

One name was "Jonathan," apparently Jonathan Beaty, the reporter who broke Time magazine's story on alleged B.C.C.I. hit squads.

The other was "Ron." Followed by my phone number.

He didn't call, but I suspect that if he'd reached me in the forty-eight hours before he left for Martinsburg he might well have told me some version of the "I finally cracked the case" riff. And I suppose if I'd heard it, it would have had the same effect on me: I would have been far more predisposed to believe the murder theory.

There is, of course, a legitimate, even compelling reason to pursue every piece of missing evidence, every discrepancy, every unexplained circumstance surrounding Danny's death—the reason Jack Anderson, dean of investigative columnists (who believes it's likely that Danny was murdered), gave: "Anytime a reporter is found dead while covering a story, it's a threat to all of us until the truth comes out." I don't think we should close the book on Danny Casolaro until we rule out the murder theory. Just as maybe a disturbing 5 percent of what Michael Riconosciuto says is credible, I'd say there's still a disturbing 5 percent chance that Danny Casolaro was murdered.

But I do have my own theory about what really killed Danny Casolaro. And the larger lesson his death has for us.

I believe that, in a sense, Danny was correct when he worried he might have been "targeted" with a "slow-acting brain virus." Not exactly the organic virus he worried about, not Mad Cow Disease or multiple sclerosis. Rather, I believe what destabilized Danny was an extremely virulent strain of the information virus we're suffering from collectively as a nation: Conspiracy Theory Fever. A slow-acting virus that has infected our ability to know the truth about the secret history of our age.

Don't get me wrong: I believe there are real conspiracies—Watergate was one; Iran-contra and C.I.A./Mafia plots against Castro were others. But those in the grip of Conspiracy Theory Fever seem compelled to believe that (to paraphrase the Flannery O'Connor title) everything that conspires must converge. That all conspiracies are tentacles of one big Octopoidal conspiracy that contains and explains everything.

The chief symptom of slow-acting brain viruses like Mad Cow Disease is that the brain becomes "spongiform," riddled with holes. The chief symptom of Conspiracy Theory Fever is that the brain becomes too sponge-like, too absorbent, indiscriminately accepting all facts and conjectures as equals, turning coincidence into causality, conjectures into certainties.

It's clear that toward the end Danny Casolaro fell victim to this kind of fever. He couldn't be content with the lowercase octopus of the Cabazon-reservation maze. He somehow had to convince himself and the rest of the world that he'd come upon the mega-conspiracy that explained everything. Even if he died trying.

Certainly a share of the blame for conspiracy fever must go to spooky sources like Riconosciuto and Clark Gable, to the LaRouchians, to paranoids-in-power like C.I.A. counterintelligence guru James Angleton, to the overly credulous Christie Institute types. And to the mainstream media, whose inadequate performance on the key scandal nexuses of our time have left the field open to the paranoids and opportunists who populate it with phantom Octopi.

Still, I think of Danny Casolaro not as a paranoid or opportunist but as a kind of Gatsbyesque conjurer, a feverish romantic illusionist.

The far-off glow Danny Casolaro yearned for was the illusory Ultimate Story, the one that would illuminate the source of the ongoing American nightmare. It was an illusion Danny loved so much he may well have given his life to make it seem true.

1990 (Oct 01) - Washington Post - "OBSESSED BY A THEORY OF CONSPIRACY"

Source - [HN01C5][GDrive]

By **S**and**ra Sugawara**

Sometimes in the still of the night, in the quiet of his living room or in the isolation of his car, Bill Hamilton will remember a forgotten conversation with a Justice Department official or a long ago phone call from a competitor or a colleague. And his mind will take that information, mull it over, turning it this way and that, as he tries to fit it into the puzzle that has become his life's obsession.

The puzzle: Why did a seemingly simple contract dispute over a software product evolve into a blood feud with the Justice Department, plunging his District computer software company, Inslaw Inc., into bankruptcy court for almost four years? And was somebody powerful trying to destroy his company?

"He's consumed by that one thought constantly," said his 19-year-old daughter Molly. "I'll see him in the living room and I can tell by the expression on his face that he's thinking about it. ... He's always working on it.".

The 49-year-old former National Security Agency analyst has spent much of his waking hours over the past several years trying to prove a conspiracy theory about his company's plight. Hamilton is convinced that Inslaw's primary product, a software system that enables the Justice Department to keep track of large numbers of legal cases, was the target of politically powerful people who sought to take it away from Inslaw and sell it themselves to the government.

Among his list of suspects are D. Lowell Jensen, a former top ranking Justice Department official, and Earl Brian, a member of Ronald Reagan's cabinet when he was governor of California and a friend of former attorney general Edwin Meese. All those on his list have denied any wrongdoing, in court documents and in interviews.

"To the best of my knowledge, I never met him and I have no knowledge of his operations," said Brian, who is chairman of United Press International and Infotechnology Inc. of New York. Brian said he believes that Hamilton is trying to recover money he has lost over the years "and any story he can come up with that is the least bitplausible hopefully will get him his day in court, from his perspective."

In the course of his battle, Hamilton has alienated some people, who claim that he is hostile to those who do not buy his theory. While acknowledging that Hamilton has a phenomenal memory for facts, they argue that he takes those facts and alters them to fit into his own agenda.

However, Hamilton also has marshaled an impressive list of supporters, including former attorney general Elliott Richardson and Charles R. Work, former president of the D.C. Bar, a lawyer's group. He also has gotten a number of sympathetic stories and editorials from a wide range of reporters and columnists who he regularly bombards with documents, memorandum and press releases.

Confounding opponents, skeptics and some considerable odds, Hamilton has won two crucial courtroom victories.

George F. Bason Jr., the bankruptcy judge who oversaw the Inslaw case, issued in 1987 a scathing condemnation of the Justice Department's behavior, declaring that the agency used "trickery, fraud and deceit" to steal Inslaw's computer software. Senior U.S. District Judge William B. Bryant of Washington backed up Bason's decision, awarding Hamilton $6.1 million in compensatory damages.

The Justice Department has appealed the case and will not discuss its details. A spokesman said that the department has requested that the matter be considered for mediation by the appeals court, in an attempt to settle the long-running dispute.

The decisions, however, did not establish the second half of Hamilton's theory, that Brian, Jensen and others were behind the alleged campaign against Inslaw. So last December Hamilton filed suit in U.S. District Court seeking to force Attorney General Richard Thornburgh and the Justice Department to conduct a "fair and thorough" investigation into his larger conspiracy charges. The latest suit will not bring him any money if he wins, just answers to his many questions.

A Justice Department spokesman said that the department already has looked into the accusations and found nothing. Hamilton argues that those investigations were inadequate. The Justice Department spokesman also noted that a Senate investigation failed to find evidence of a conspiracy against Inslaw within the Justice Department.

However, the Senate report also complained that the Justice Department was uncooperative in the investigation. Unhappy that the Senate probe was not more aggressive, Hamilton has convinced the House Judiciary Committee to launch one of its own. But the results of that investigation are expected to be several months away.

"A lot of people think Bill Hamilton is paranoid. I don't think so," said Leigh Ratiner, who represented Inslaw during the mid-1980s. "Bill Hamilton does not feel unreasonably persecuted. ... Given the facts, it's entirely reasonable to feel the way he does."

Ratiner explained Hamilton this way: "Bill is besieged by the need to find justice and vindicate his life, his management capabilities and look good in the eyes of his family and employees."

But Hamilton said the root of his obsession is justice, not personal vindication. His company will not get a fair break from the government until his enemies are exposed, he said.

"The thing that's important to understand," said Hamilton, "is not only are we determined to get a fair and thorough and independent investigation of this matter, but we have no choice."

When Hamilton says this, he does not pound his fist or shout. His indictment proceeds as a matter-of-fact litany of names, dates, places and conversations, as he peers intently at the listener from behind his wire-rimmed glasses, as if to ask: "Do you get it?"

Or sometimes, after he presents a laundry list of wrongs he believes were committed against Inslaw, a sad but youthful grin will break out from behind his graying beard and he'll quietly shake his head in disbelief.

Software Called Promis Hamilton's pride and joy is a pioneering computer software called Promis (Prosecutors Management Information System), which was designed to help prosecutors and lawyers keep track of their cases.

Initially, Promis was developed with federal funds from the now-defunct Law Enforcement Assistant Administration (LEAA), when Inslaw was the nonprofit Institute for Law and Social Research. But in the late 1970s, when it became obvious that LEAA would be phased out, Hamilton decided to turn Inslaw into a for-profit company and sell the software improvements to the government.

Hamilton, a Notre Dame University graduate and St. Louis native, said he was just a naive Midwesterner back in those days, but even then, he appreciated the value of connections. He hired Roderick Hills, former chairman of the Securities and Exchange Commission, as one of his lawyers. A fortuitous choice,

Hills introduced Hamilton to an attorney who would come to play a key role in Inslaw's fate: Elliot L. Richardson.

Richardson originally was brought in to serve on a board of directors, but as Inslaw became more and more entangled in its feud with the Justice Department, it was Richardson who would serve as troubleshooter. Richardson's frequent calls, sometimes from airports or late at night, often boosted Hamilton's morale. And it was Richardson who gave Inslaw's case legitimacy in Congress and elsewhere, according to many.

"The more I got into this case, the angrier I got," at what was happening to Inslaw, Richardson said. "It goes to the heart of the integrity of the Department of Justice itself." He added, "In any situation where there is this much evidence ... to just brush aside this evidence is destructive of public confidence."

In retrospect, Hamilton said there were warning signs almost as soon as Inslaw won the three-year, $10 million contract from the Justice Department in March 1982 to install Promis software in the offices of U.S. attorneys across the country. Almost immediately, attorneys for Inslaw and the Justice Department were fighting over which improvements the government had financed and thus owned, and which enhancements belonged to Inslaw.

Hamilton said the dispute became unusually contentious.

Back then, Hamilton thought his problems could be directly traced to the project manager overseeing the Promis contract, C. Madison Brewer III. From 1974 to 1976, Brewer worked for Inslaw. Hamilton said he fired Brewer; the government said he resigned. Brewer declined to comment on the Inslaw case.

Hamilton said he tried to avoid Brewer, letting other company officials negotiate with him, believing that might make things go more smoothly. But by February 1985, the Justice Department had withheld $1.2 million in payments to Inslaw, forcing the company to file a Chapter 11 bankruptcy petition, staving off creditors while it attempted to regain control of its finances.

The entire family quickly became drawn into the survival fight.

"Bill and I are down here {at the office} from morning until late at night, and our kids are calling, saying that the sheriff was at the door looking to serve subpoenas to us," said a still angry Nancy Hamilton, Bill's wife, who joined the firm in late 1984 as vice president of administration. "It was very frightening for the kids."

After Richardson tried unsuccessfully for nearly a year to settle the dispute, the Hamiltons decided in 1986 to take the offensive, suing the Justice Department to recover the money they said they had lost.

Competing Program

Hamilton was forever digging through his old appointment books, memos and scribbled notes. One night, he said, he was jolted awake by the recollection of a forgotten conversation: A Justice Department official had confidentially told one of his attorneys that Brewer was not his only problem. At the time, Hamilton had assumed this was a reference to D. Lowell Jensen, a senior Justice Department official.

Before coming to the Justice Department, Jensen had been in the Alameda County, Calif., prosecutor's office, where he had supervised the development of a competing case-tracking software called Dalite. Jensen was disappointed when the Los Angeles district attorney's office and LEAA had opted for Promis, according to Hamilton. He now believes Jensen was part of the Justice Department group that allegedly wanted to get Inslaw.

Jensen, who is now a federal judge in San Francisco, declined to comment, through an assistant.

Seeing Shadows Everywhere

Before long, the Hamiltons acknowledge, they were seeing shadows everywhere.

"By this time, we were really distrusting," said Nancy Hamilton. The Hamiltons even became suspicious of the motives of the law firm they had hired, Dickstein Shapiro & Morin.

Hamilton began hearing from Ratiner, who was the Dickstein Shapiro attorney handling the case, that others in the firm felt Inslaw should stick to the narrow facts of the contract dispute and not go after Jensen.

The Hamiltons concluded that the Justice Department was pressuring the law firm to drop Jensen from the suit and that Dickstein Shapiro was selling out Inslaw to protect its ties with its more politically important clients. The law firm categorically denied Hamilton's assertions during a later court battle with Inslaw over legal fees and a Baltimore bankruptcy judge later ruled in favor of Dickstein Shapiro, clearing it of all malpractice accusations.

But it was these fears that caused the Hamiltons to take a most unusual step. They decided to file the suit themselves, before Dickstein Shapiro could make any changes in the legal papers.

On June 7, 1986, the Hamiltons told Ratiner of their plans. He urged them to wait. "Normally it's easy for a lawyer to intimidate a client," Ratiner said. "But not Bill."

Joined by their six children, ages 3 to 22, the Hamiltons piled into their 1963 Volkswagen and their Oldsmobile station wagon and headed down to the U.S. District Court for the District of Columbia. To photograph the event, they brought along a girlfriend of their oldest daughter Patty.

"It was a big day in our lives because for the first time, we understood what was happening to us and we had an opportunity to protest, it was quite a milestone," said Nancy Hamilton. "It makes me emotional to talk about it even now."

In October, Ratiner called to say he was being fired from Dickstein Shapiro. The Hamiltons said they were convinced it was because of the Inslaw case. Ratiner, who now teaches international negotiations at American University and has a small company specializing in data entry services, declined to comment on the question.

Work, a longtime friend of Hamilton's, was able to work out a temporary truce but Dickstein Shapiro and Hamilton parted for good when the firm concluded that Hamilton had overstated the improvements to the software produced by Inslaw. "

Thus in 1987, Inslaw was preparing to go to trial against the government without a lawyer and in the middle of a bankruptcy reorganization.

A determined Hamilton convinced two lawyer friends in California to fly to Washington and help out with the deposition. For a week, the two lawyers slept in one of the children's rooms in the Hamilton's house and took depositions from morning until night.

When Hamilton's lawyer friends returned to California, he prevailed on Work to take his case.

Work and Hamilton had worked closely together in the early 1970s when Work was an assistant U.S. Attorney, supervising the installation of the LEAA-funded versions of the Promis software. Work also served as deputy administrator of LEAA under Richardson.

Favorable Ruling The ruling by bankruptcy judge Bason in September 1987 elated the Hamiltons.

Bason concluded that Brewer was biased against Inslaw and that the Justice Department's "failure to begin to investigate Inslaw's complaints was outrageous and indefensible. It constituted an institutional decision by the Department of Justice, consciously made at the highest level, simply to ignore serious questions of ethical impropriety ... "

Although the ruling was critical of Jensen, too, it did not spell out the conspiracy that Hamilton said he believes existed.

The celebration over the ruling had barely ended before Hamilton was back on the case, his suspicions inflamed anew. A journalist who knew about Hamilton's fight mentioned to him that the Justice Department had awarded a computer contract to a subsidiary of Hadron Inc., a Fairfax government contracting company.

The reporter explained that Brian owned a major share of Hadron. The reporter also reminded him that the Meeses' had invested in one of Brian's companies. Suddenly, the name Hadron rang a bell. He hung up the telephone, turned to his wife and said: " 'Hadron! I think that company called me to try to buy me in '83.' I went to my desk calender, one of the old ones, started going through those months until I found it: April 20, 1983, with the name Dominic Laiti and his telephone number."

Hamilton remembers the phone call this way: Laiti, then chairman of Hadron, told Hamilton he was interested in the Promis software and wanted to buy Inslaw to get it. Hamilton replied that the company wasn't for sale.

Hamilton quotes Laiti as replying: "We have political supporters at the highest level of the Reagan administration," and "We have ways of making you sell."

Laiti, who is now president of Globalink Language Service, said he never tried to buy Inslaw, nor does he remember ever talking to Hamilton.

Assistance From IBM Bason's ruling pulled Inslaw out of the ditch. On Dec. 31, 1988, the company emerged from bankruptcy with the assistance of International Business Machines Corp. The computer giant had long been interested in jointly marketing Promis software and loaned the company $2.5 million.

Almost a year later, the Hamiltons got more good news.

On Nov. 22, 1989, the Court of Appeals confirmed the bankruptcy court decision against the Justice Department.

The appeals court said "Inslaw performed its contract in a hostile environment that extended from the higher echelons of the Justice Department to the officials who had the day-to-day responsibility for supervising its work."

The court concluded that the government "acted willfully and fraudulently to obtain property that it was not entitled to under the contract."

Tracking Down Leads Inslaw is still at the 15th Street offices where it has been since 1974. The office is filled with sleek furniture, dressed-for-success employees and other trappings of a successful computer software company. It has developed new sales with state and local governments and law firms.

But Hamilton still spends a good part of each week trying to track down leads on the case. He rarely watches television and hates sports. Occasionally he rents videos. One of his favorite movies in recent times was "All the President's Men," about the Watergate conspiracy.

Hamilton also has become a repository of phone calls from people who feel wronged by the government. He said he listens to them all, no matter how far out, because he understands their frustrations and is more that willing to believe the abuses they describe.

Today, suspicion of the government runs in his marrow. Was he like this before? No, Hamilton said.

"It might be that nobody will know who the real Bill Hamilton is again," said Ratiner. "For instance, I can imagine that before this case, he might have been concerned about real people. But now, if you're not talking to him about Inslaw, you're kind of invisible."

Hamilton said he's sad about the times he could not be there for friends, for family and about the part of his life that has been robbed by this case.

"I'm angry," Hamilton finally said quietly, after first skirting around the issue of his feelings. "I have enough anger to last me for a generation."

1993 (Jan) Wired Magazine - "The INSLAW Octopus : SOFTWARE PIRACY, CONSPIRACY, cover-up, stonewalling, covert action: Just another decade at the Department of Justice"

Source : [HP004F][GDrive]

The House Judiciary Committee lists these crimes as among the possible violations perpetrated by "high-level Justice officials and private individuals":

- Conspiracy to commit an offense
- Fraud
- Wire fraud
- Obstruction of proceedings before departments, agencies and committees
- Tampering with a witness

- Tampering with a witness
- Retaliation against a witness
- Perjury
- Interference with commerce by threats or violence
- Racketeer Influenced and Corrupt Organizations (RICO) violations
- Transportation of stolen goods, securities, moneys
- Receiving stolen goods

Bill Hamilton, Inslaw & PROMIS

Who:

Bill Hamilton and his wife, Nancy Hamilton, start Inslaw to nurture PROMIS (Prosecutors Management Information Systems).

Why #1:

The DOJ, aware that its case management system is in dire need of automation, funds Inslaw and PROMIS. After creating a public-domain version, Inslaw makes significant enhancements to PROMIS and, aware that the US market for legal automation is worth $3 billion, goes private in the early '80s.

Why #2:

Designed as case-management software for federal prosecutors, PROMIS has the ability to combine disparate databases, and to track people by their involvement with the legal system. Hamilton and others now claim that the DOJ has modified PROMIS to monitor intelligence operations, agents and targets, instead of legal cases.

By late November, 1992 the nation had turned its attention from the election-weary capital to Little Rock, Ark., where a new generation of leaders conferred about the future. But in a small Washington D.C. office, Bill Hamilton, president and founder of Inslaw Inc., and Dean Merrill, a former Inslaw vice president, were still very much concerned about the past.

The two men studied six photographs laid out before them. "Have you ever seen any of these men?" Merrill was asked. Immediately he singled out the second photo. In a separate line up, Hamilton's secretary singled out the same photo.

Both said the man had visited Inslaw in February 1983 for a presentation of PROMIS, Inslaw's bread-and-butter legal software. Hamilton, who knew the purpose of the line-up, identified the visitor as Dr. Ben Orr. At the time of his visit, Orr claimed to be a public prosecutor from Israel.

Orr was impressed with the power of PROMIS (Prosecutors Management Information Systems), which had recently been updated by Inslaw to run on powerful 32-bit VAX computers from Digital Equipment Corp. "He fell in love with the VAX version," Hamilton recalled.

Dr. Orr never came back, and he never bought anything. No one knew why at the time. But for Hamilton, who has fought the Department of Justice (DOJ) for almost 10 years in an effort to salvage his business, once his co- workers recognized the man in the second photo, it all made perfect sense.

For the second photo was not of the mysterious Dr. Orr, it was of Rafael Etian, chief of the Israeli defense force's anti-terrorism intelligence unit. The Department of Justice sent him over for a look at the property they were about to "misappropriate," and Etian liked what he saw. Department of Justice documents record that one Dr. Ben Orr left the DOJ on May 6, 1983, with a computer tape containing PROMIS tucked under his arm.

What for the past decade has been known as the Inslaw affair began to unravel in the final, shredder-happy days of the Bush administration. According to Federal court documents, PROMIS was stolen from Inslaw by the Department of Justice directly after Etian's 1983 visit to Inslaw (a later congressional investigation preferred to use the word "misappropriated"). And according to sworn affidavits, PROMIS was then given or sold at a profit to Israel and as many as 80 other countries by Dr. Earl W. Brian, a man with close personal and business ties to then-President Ronald Reagan and then-Presidential counsel Edwin Meese.

A House Judiciary Committee report released last September found evidence raising "serious concerns" that high officials at the Department of Justice executed a pre-meditated plan to destroy Inslaw and co-opt the rights to its PROMIS software. The committee's call for an independent counsel have fallen on deaf ears. One journalist, Danny Casolaro, died as he attempted to tell the story (see sidebar), and boxes of documents relating to the case have been destroyed, stolen, or conveniently "lost" by the Department of Justice.

But so far, not a single person has been held accountable.

WIRED has spent two years searching for the answers to the questions Inslaw poses: Why would Justice steal PROMIS? Did it then cover up the theft? Did it let associates of government officials sell PROMIS to foreign governments, which then used the software to track political dissidents instead of legal cases? (Israel has reportedly used PROMIS to track troublesome Palestinians.)

The implications continue: that Meese profited from the sales of the stolen property. That Brian, Meese's business associate, may have been involved in the October Surprise (the oft-debunked but persistent theory that the Reagan campaign conspired to insure that US hostages in Iran were held until after Reagan won the 1980 election, see sidebar). That some of the moneys derived from the illegal sales of PROMIS furthered covert and illegal government programs in Nicaragua. That Oliver used PROMIS as a population tracking instrument for his White House-based domestic emergency management program.

Each new set of allegations leads to a new set of possibilities, which makes the story still more difficult to comprehend. But one truth is obvious: What the Inslaw case presents, in its broadest possible implications, is a painfully clear snapshot of how the Justice Department operated during the Reagan-Bush years.

This is the case that won't go away, the case that shows how justice and public service gave way to profit and political expediency, how those within the administration's circle of privilege were allowed to violate private property and civil rights for their own profit.

Sound like a conspiracy theorist's dream? Absolutely. But the fact is, it's true.

The Background

Imagine you are in charge of the legal arm of the most powerful government on the face of the globe, but your internal information systems are mired in the archaic technology of the 1960s. There's a Department of Justice database, a CIA database, an Attorney's General database, an IRS database, and so on, but none of them can share information. That makes tracking multiple offenders pretty darn difficult, and building cases against them a long and bureaucratic task.

Along comes a computer program that can integrate all these databases, and it turns out its development was originally funded by the government under a Law Enforcement Assistance Administration grant in the 1970s. That means the software is public domain ... free!

Edwin Meese was apparently quite taken with PROMIS. He told an April 1981 gathering of prosecutors that PROMIS was "one of the greatest opportunities for [law enforcement] success in the future." In March 1982, Inslaw won a $9.6 million contract from the Justice Department to install the public domain version of PROMIS in 20 US Attorney's offices as a pilot program. If successful, the company would install PROMIS in the remaining 74 federal prosecutors' offices around the country. The eventual market for complete automation of the Federal court system was staggering: as much as $3 billion, according to Bill Hamilton. But Hamilton would never see another federal contract.

Designed as a case-management system for prosecutors, PROMIS has the ability to track people. "Every use of PROMIS in the court system is tracking people," said Inslaw President Hamilton. "You can rotate the file by case, defendant, arresting officer, judge, defense lawyer, and it's tracking all the names of all the people in all the cases."

What this means is that PROMIS can provide a complete rundown of all federal cases in which a lawyer has been involved, or all the cases in which a lawyer has represented defendant A, or all the cases in which a lawyer has represented white-collar criminals, at which stage in each of the cases the lawyer agreed to a plea bargain, and so on. Based on this information, PROMIS can help a prosecutor determine when a plea will be taken in a particular type of case.

But the real power of PROMIS, according to Hamilton, is that with a staggering 570,000 lines of computer code, PROMIS can integrate innumerable databases without requiring any reprogramming. In essence, PROMIS can turn blind data into information. And anyone in government will tell you that information, when wielded with finesse, begets power. Converted to use by intelligence agencies, as has been alleged in interviews by ex-CIA and Israeli Mossad agents, PROMIS can be a powerful tracking device capable of monitoring intelligence operations, agents and targets, instead of legal cases.

At the time of its inception, PROMIS was the most powerful program of its type. But a similar program, DALITE, was developed under another LEAA grant by D. Lowell Jensen, the Alameda County (Calif.) District Attorney. In the mid-1970s, the two programs vied for a lucrative Los Angeles County contract and Inslaw won out. (Early in his career, Ed Meese worked under Jensen at the Alameda County District Attorney's office. Jensen was later appointed to Meese's Justice Department during the Reagan presidency.)

In the final days of the Carter administration, the LEAA was phased out. Inslaw had made a name for itself and Hamilton wanted to stay in business, so he converted Inslaw to a for-profit, private business. The new Inslaw did not own the public domain version of PROMIS because it had been developed with LEAA funds. But because it had funded a major upgrade with its own money, Inslaw did claim ownership of the enhanced PROMIS.

Through his lawyers, Hamilton sent the Department of Justice a letter outlining his company's decision to go private with the enhanced PROMIS. The letter specifically asked the DOJ to waive any proprietary rights it might claim to the enhanced version. In a reply dated August 11, 1982, a DOJ lawyer wrote: "To the extent that any other enhancements (beyond the public domain PROMIS) were privately funded by Inslaw and not specified to be delivered to the Department of Justice under any contract or other agreement, Inslaw may assert whatever proprietary rights it may have."

Arnold Burns, then a deputy attorney general, clarified the DOJ's position in a now-critical 1988 deposition: "Our lawyers were satisfied that Inslaw's lawyers could sustain the claim in court, that we had waived those [proprietary] rights."

The enhancements Inslaw claimed were significant. In the 1970s the public- domain PROMIS was adapted to run on Burroughs, Prime, Wang and IBM machines, all of which used less-powerful 16-bit architectures. With private funds, Inslaw converted that version of PROMIS to a 32-bit architecture running on a DEC VAX minicomputer. It was this version that Etian saw in 1983. It was this version that the DOJ stole later that year through a pre-meditated plan, according to two court decisions.

The Dispute Grows

On a gorgeous spring morning in 1981, Lawrence McWhorter, director of the Executive Office for US Attorneys, put his feet on his desk, lit an Italian cigar, eyed his subordinate Frank Mallgrave and said through a haze of blue smoke: "We're out to get Inslaw."

McWhorter had just asked Mallgrave to oversee the pilot installation of PROMIS, a job Mallgrave refused, unaware at the time that he was being asked to participate in Inslaw's deliberate destruction.

"We were just in his office for what I call a B.S. type discussion," Mallgrave told WIRED. "I remember it was a bright sunny morning.... (McWhorter) asked me if I would be interested in assuming the position of Assistant Director for Data Processing...basically working with Inslaw. I told him...I just had no interest in that job. And then, almost as an afterthought, he said 'We're out to get Inslaw.' I remember it to this day."

After Mallgrave refused the job, McWhorter gave it to C. Madison "Brick" Brewer. Brewer at one time worked for Inslaw, but was allowed to resign when Hamilton found his performance inadequate, according to court documents. Brewer was then hired into the Department of Justice specifically to oversee the contract of his former employer. (The DOJ's Office of Professional Responsibility ruled there was no conflict of interest.) He would later tell a federal court that everything he did regarding Inslaw was approved by Deputy Attorney General Lowell Jensen, the same man who once supervised DALITE, the product which lost a major contract to Inslaw in the 1970s.

Brewer, who now refuses to comment on the Inslaw case, was aided in his new DOJ job by Peter Videnieks. Videnieks was fresh from the Customs Service, where he oversaw contracts between that agency and Hadron, Inc., a company controlled by Meese and Reagan-crony Earl Brian. Hadron, a closely held government systems consulting firm, was to figure prominently in the forthcoming scandal.

According to congressional and court documents, Brewer and Videnieks didn't tarry in their efforts to destroy Inslaw. After Inslaw's installation of public domain PROMIS had begun, the DOJ claimed that Inslaw, which was supporting the installation with its own computers running the enhanced version of PROMIS, was on the brink of bankruptcy. Although Inslaw was contracted to provide only the public domain PROMIS, the DOJ demanded that Inslaw turn over the enhanced version of PROMIS in case the company could not complete its contractual obligations. Inslaw agreed to this contract modification, but on two conditions: that the DOJ recognize Inslaw's proprietary rights to enhanced PROMIS, and that the DOJ not distribute enhanced PROMIS beyond the boundaries of the contract (the 94 US Attorney's offices.)

The DOJ agreed to these conditions, but requested Inslaw prove it had indeed created enhanced PROMIS with private funds. Inslaw said it would, and the enhanced software was given to the DOJ.

Once the DOJ had control of PROMIS, it dogmatically refused to verify that Inslaw had created the enhancements, essentially rendering the contract modification useless. When Inslaw protested, the DOJ began to withhold payments. Two years later, Inslaw was forced into bankruptcy.

As the contract problems with DOJ emerged, Hamilton received a phone call from Dominic Laiti, chief executive of Hadron. Laiti wanted to buy Inslaw. Hamilton refused to sell. According to Hamilton's statements in court documents, Laiti then warned him that Hadron had friends in the government and if Inslaw didn't sell willingly, it would be forced to sell.

Those government connections included Peter Videnieks over at the Justice Department, according to John Schoolmeester, Videnieks' former Customs Service supervisor. Laiti and Videnieks both deny ever meeting or having any contact, but Schoolmeester has told both WIRED and the House Judiciary Committee it was "impossible" for the pair not to know each other because of the type of work and oversight involved in Hadron's relationship with the Customs Service. Schoolmeester also said that because of Brian's relationship with then-President Reagan (see sidebar), Hadron was considered an "inside" company.

The full-court press continued. In 1985 Allen & Co., a New York investment banking concern with close business ties to Earl Brian, helped finance a second company, SCT, which also attempted to purchase Inslaw. That attempt also failed, but in the process a number of Inslaw's customers were warned by SCT that Inslaw would soon go bankrupt and would not survive reorganization, Hamilton said in court documents.

Broke and with no friends in the government, on June 9, 1986, Inslaw filed a $30 million lawsuit against the DOJ in bankruptcy court. Inslaw's attorney for the case (he was later fired from his firm under extremely suspicious circumstances – see sidebar) was Leigh Ratiner of the Wash- ington firm Dickstein, Shapiro & Morin. Ratiner chose bankruptcy court for the filing based on the premise that Justice, the creditor, had control of PROMIS. He explained recently, "It was forbidden by the BankruptcyAct for the creditor to exercise control over the debtor property. And that theory – that the Justice Department was exercising control – was the basis that the bankruptcy court had jurisdiction.

"As far as I know, this was the first time this theory had been used," Ratiner told WIRED. "This was ground-breaking. It was, in fact, a legitimate use of the code."

It worked, but to only a point. In 1987, Washington, D.C., bankruptcy judge George Bason ruled in a scathing opinion that Justice had stolen PROMIS through "trickery, fraud and deceit." He awarded Inslaw $6.8 million in damages and, in the process, found that Justice Department officials made a concerted effort to bankrupt Inslaw and place the company's enhanced PROMIS up for public auction (where it would then be fodder for Brian's Hadron). Bason's findings of fact relied on testimony from Justice employees and internal memoranda, some of which outlined a plan to "get" PROMIS software.

Bason cited the testimony of a number of the government's defense witnesses as being "unbelievable" and openly questioned the credibility of others. In his 216-page ruling, Bason cites numerous instances where testimony from government witnesses is contradictory. (In a private interview with WIRED he noted that as a bankruptcy judge he was precluded from bringing perjury charges against government employees, but he had recommended to various congressional panels that an inquiry was necessary.)

When the DOJ appealed, a federal district court affirmed Bason, ruling that there was "convincing, perhaps compelling support for the findings set forth by the bankruptcy court." But the D.C. Circuit Court of Appeals reversed the case on a legal technicality, finding that the bankruptcy court had no jurisdiction to hear the damages claim. A petition to the Supreme Court in October 1991 was denied review.

The IRS got into the act as well. Inslaw was audited several times in the course of their battles with the Department of Justice. In fact, the day following the bankruptcy trial, S. Martin Teel, a lawyer for the IRS, requested that Judge Bason liquidate Inslaw. Bason ruled against Teel. As a coda to the lawsuit, Bason, a respected jurist, was not re-appointed to the bench when his term expired. His replacement? S. Martin Teel. (Bason has testified before Congress that the DOJ orchestrated his replacement as punishment for his rulings in the Inslaw case.)

But Inslaw's troubles did not end with bankruptcy. Frustrated by Attorney General Dick Thornburgh's stubborn refusal to investigate the DOJ or appoint an independent prosecutor, Elliot Richardson, President Nixon's former attorney general and a counsel to Inslaw for nearly 10 years (he retired this January), filed a case in U.S. District Court demanding that Thornburgh investigate the Inslaw affair. In 1990, the court ruled that a prosecutor's decision not to investigate – "no matter how indefensible" – cannot be corrected by any court. Another loss for Inslaw.

Broke and still attempting to revive itself, Inslaw has not refiled its suit, preferring to wait for a new administration and a new DOJ.

By this time, the spinning jennies of the conspiracy network had grasped the Inslaw story and were all-too-eager to put their stitch in the unraveling yarn. According to documents and affidavits filed during court cases and congressional inquiries, the Hamiltons and their lawyers began receiving phone calls, visits and memos from a string of shadowy sources, many of them connected to international drug, spy and arms networks. Their allegations: That Earl Brian helped orchestrate the October Surprise for then-candidate Reagan, and that Brian's eventual payment for that orchestration was a cut of the PROMIS action. Brian and the DOJ then resold or gave PROMIS to as many as 80 foreign and domestic agencies. (Brian adamantly denies any connection to Inslaw or the October Surprise.)

These sources, which include ex-Israeli spy Ari Ben Menashe and a computer programmer of dubious reputation, Michael Riconosciuto, allege that PROMIS had been further modified by the DOJ so that any agency using it could be subject to undetected DOJ eavesdropping – a sort of software Trojan Horse. If these allegations are true, by the late 1980s PROMIS could have become the digital ears of the US Government's spy effort – both internal and external. Certainly something the administration wouldn't want nosy congressional committees looking into.

The diaphanous web of more than 30 sources who offered information to Inslaw were not "what a lawyer might consider ideal witnesses," Richardson admitted. But their stories yielded a surprising consistency. "The picture that emerges from the individual statements is remarkably detailed and consistent," he wrote in an Oct. 21, 1991 New York Times Op Ed.

The Congressional Investigation

The string of lawsuits and widening allegations caught the eye of House Judiciary Committee Chairman Jack Brooks, D-Texas, who in 1989 launched a three-year investigation into the Inslaw affair. In the resulting report, the Committee suggested that among others, Edwin Meese, while presidential counselor and later as attorney general, and D. Lowell Jensen, a former assistant and deputy attorney general and now a US district judge in San Francisco, conspired to steal PROMIS.

"High government officials were involved," the report states. "... (S)everal individuals testified under oath that Inslaw's PROMIS software was stolen and distributed internationally in order to provide financial gain and to further intelligence and foreign policy objectives."

"Actions against Inslaw were implemented through the Project Manager (Brick Brewer) from the beginning of the contract and under the direction of high-level Justice Department officials," the report says. "The evidence...demonstrates that high-level Department officials deliberately ignored Inslaw proprietary rights and misappropriated its PROMIS software for use at locations not covered under contract with the company."

The Committee report accuses former Attorney General Dick Thornburgh of stonewalling congressional inquiries, turning a blind eye to the possible destruction of evidence within the Justice Department, and ignoring the DOJ's harassment of employees questioned by Congressional investigators.

Rep. Brooks told WIRED that the report should be the starting point for a grand jury investigation. The owners of Inslaw, Brooks said, were "ravaged by the Justice Department...treated like dogs."

Brooks' committee voted along party lines, 21-13, to adopt the investigative report on Aug. 11, 1992. The report asked then-Attorney General William Barr to "immediately settle Inslaw's claims in a fair and equitable manner" and "strongly recommends that the Department seek the appointment of an Independent Counsel."

As he did with the burgeoning Iraqgate scandal and as his predecessor did before him, Barr refused to appoint an independent counsel to the Inslaw case, relying instead on a retired federal judge, in this case Nicholas Bua, who reported to Barr alone. In other words, the DOJ was responsible for investigating itself.

"The way in which the Department of Justice has treated this case, to me, is inexplicable," Richardson told WIRED. "I think the circumstances most strongly suggest that there must be wider ramifications."

The Threads Unravel

Proof of those wider ramifications are just starting to leak out, as DOJ and other agency employees begin to talk, although for the most part they spoke to WIRED only on condition of anonymity.

On Nov. 20, 1990, the Judiciary Committee wrote a letter asking CIA director William Webster to help the committee "by determining whether the CIA has the PROMIS software."

The official reply on December 11th: "We have checked with Agency components that track data processing procurement or that would be likely users of PROMIS, and we have been unable to find any indication that the Agency ever obtained PROMIS software."

But a retired CIA official whose job it was to investigate the Inslaw allegations internally told WIRED that the DOJ gave PROMIS to the CIA. "Well," the retired official told WIRED, "the congressional committees were after us to look into allegations that somehow the agency had been culpable of what would have been, in essence, taking advantage of, like stealing, the technology [PROMIS]. We looked into it and there was enough to it, the agency had been involved."

How was the CIA involved? According to the same source, who requested anonymity, the agency accepted stolen goods, not aware that a major scandal was brewing. In other words, the DOJ robbed the bank, and the CIA took a share of the plunder.

But the CIA was not the only place where illegal versions of PROMIS cropped up. Canadian documents (held by the House Judiciary Committee and obtained by WIRED) place PROMIS in the hands of various Canadian government agencies. These documents include two letters to Inslaw from Canadian agencies requesting detailed user manuals – even though Inslaw has never sold PROMIS to Canada. Canadian officials now claim the letters were in error.

And, of course, the software was transferred to Rafael Etian's anti- terrorism unit in Israel. The DOJ claims it was the LEAA version, but former Israeli spy Ben Menashe and others claim it was the 32-bit version. According to Ben Menashe, other government departments within Israel also saw PROMIS, and this time the pitchman was Dr. Earl Brian. In a 1991 affidavit related to the bankruptcy proceedings, Ben Menashe claimed: "I attended a meeting at my Department's headquarters in Tel Aviv in 1987 during which Dr. Earl W. Brian of the United States made a presentation intended to facilitate the use of the PROMIS computer software."

"Dr. Brian stated during his presentation that all U.S. Intelligence Agencies, including the Defense Intelligence Agency, the Central Intelligence Agency, and the National Security Agency and the U.S. Department of Justice were then using the PROMIS computer software," Ben Menashe continued. While the credibility of his statements has been questioned, the Israeli government has admitted that Ben Menashe had access to extremely sensitive information during his tenure at the Mossad.

Asked why Israeli intelligence would have been so interested in Inslaw and PROMIS, Ben Menashe said, "PROMIS was a very big thing for us guys, a very, very big thing ... it was probably the most important issue of the '80s because it just changed the whole intelligence outlook. The whole form of intelligence collection changed. This whole thing changed it." PROMIS, Ben Menashe said, was perfect for tracking Palestinians and other political dissidents.

(Ben Menashe's superior during this period was Rafael Etian, or Dr. Ben Orr, as he was known during his 1983 visit to Inslaw.)

Apparently, Israel was not the only country interested in using PROMIS for internal security purposes. Lt. Col. Oliver North also may have been using the program. According to several intelligence community sources, PROMIS was in use at a 6,100-square-foot command center built on the sixth floor of the Justice Department. According to both a contractor who helped design the center and information disclosed during the Iran-Contra hearings, Oliver North had a similar, but smaller, White House operations room that was connected by computer link to the DOJ's command center.

Using the computers in his command center, North tracked dissidents and potential troublemakers within the United States as part of a domestic emergency preparedness program, commissioned under Reagan's Federal Emergency Management Agency (FEMA), according to sources and published reports. Using PROMIS, sources point out, North could have drawn up lists of anyone ever arrested for a political protest, for example, or anyone who had ever refused to pay their taxes. Compared to PROMIS, Richard Nixon's enemies list or Sen. Joe McCarthy's blacklist look downright crude. This operation was so sensitive that when Rep. Jack Brooks asked North about it during the Iran-Contra hearings, the hearing was immediately suspended pending an executive (secret) conference. When the hearings were reconvened, the issue of North's FEMA dealings was dropped.

A Thorough Cleaning at the White House?

If the case against the Department of Justice is so solid, why hasn't anything been done? The answer is timing. The next move belongs to retired Federal

If the case against the Department of Justice is so solid, why hasn't anything been done? The answer is timing. The next move belongs to retired Federal Judge Bua, since he was given oversight by Attorney General Barr in lieu of an independent counsel. And everyone, including Judge Bua, whose non-binding report was pending at WIRED's early December deadline, seems to be waiting for the new administration. Both the Clinton/Gore transition team and House majority leader Richard Gephardt had no comment on the Inslaw case pending Clinton's inauguration.

But a source close to Bua's investigation said the retired judge may present the DOJ with a bombshell. While not required to suggest a settlement, the source believes Bua will reportedly recommend that Inslaw be given between $25 million and $50 million for its mistreatment by the DOJ. (In last-minute negotiations, Inslaw attorney Elliot Richardson held brief meetings with DOJ officials in mid-December. Richardson pressed for a settlement ranging from $25 million to $500 million, but the DOJ balked, according to newspaper reports.)

But the question remains: Can the DOJ paper over the willful destruction of a company, the plundering of its software, the illegal resale of that software to further foreign policy objectives, and the overt obstruction of justice with $25 million?

Bua's final recommendation, expected sometime before Clinton's inauguration, is that the Inslaw Affair "requires further investigation," the source said. That conclusion mirrors the House Judiciary Committee's report. Privately, many Democrats, including Gephardt, have expressed a strong desire to get to the bottom of the Inslaw case. Rep. Brooks will be pushing for yet another investigation of the scandal, this time independent of the Justice Department, according to Congressional sources. Once Bua's report is out, the next and possibly final move will be up to a new president, a new Congress, and, possibly, a renewed sense of justice.

Earl W. Brian - The Consumate Insider

Dr. Earl W. Brian has made quite a career of riding Reagan and Meese's coattails. After a stint in Vietnam, where he worked as a combat physician in the unit that supplied air support for Operation Phoenix, Brian returned to California with a chest full of ribbons and a waiting job - as Secretary of Health - with then-Governor Reagan's administration. (Operation Phoenix, a well-documented CIA political assassination program, used computers to track "enemies" in Vietnam.)

In 1974, Brian resigned his cabinet post with Governor Reagan to run for the Senate against Alan Cranston. After his defeat, Brian moved into the world of business and soon ran into trouble. His flagship company, Xionics, was cited by the Security and Exchange Commission for issuing press releases designed to boost stock prices with exaggerated or bloated information. The SEC also accused Xionics of illegally paying "commissions" to brokers, according to SEC documents.

At the close of the Reagan governorship, Brian was involved in a public scandal having to do with - surprise - stolen computer tapes. The tapes, which contained records of 70,000 state welfare files, were eventually returned - Brian claimed he had a right to them under a contract signed in the last hours of the administration. (Brian said he just wanted to develop a better way of doing welfare business.)

In 1980, Brian formed Biotech Capital Corp., a venture capital firm designed to invest in biological and medical companies. Ultimately, Brian has invested in and owned several companies, including FNN (Financial News Network) and UPI, both of which ended up in dire financial straits.

Ursula Meese, who like her husband knew Brian from the Reagan cabinet, was an early investor in Biotech, using $15,000 (borrowed from Edwin Thomas, a Meese aide in the White House and another Reaganite from California) to purchase 2,000 shares on behalf of the Meese's two children, according to information made public during Meese's confirmation hearings for Attorney General.

It is those Reagan-Meese connections that continue to drag Brian into the Inslaw affair. For why would Brian, of all people, be the recipient of stolen PROMIS? PROMIS, after all, was a major part in government automation contracts estimated at $3 billion, according to Inslaw President Bill Hamilton. That's quite a political plum.

One possibility is Ed and Ursula Meese's financial connections to Brian. Another is a payoff for Brian's role in the October Surprise Even if he manages to evade the Inslaw allegations, Brian may still be in hot water. As of this writing, Financial News Network's financial dealings were under investigation by a Los Angeles Grand Jury, according to sources who have testified before it. - RLF

What A Surprise!

Earl W. Brian says he wasn't in Paris in October 1980, but investors were told a different story

As Inslaw President Bill Hamilton moved his company from non-profit status to the private sector in 1980, Ronald Reagan was running for President, negotiations for the release of the American hostages in Iran had apparently hit a snag, and Dr. Earl W. Brian was touring Canada touting stock in his newly acquired Clinical Sciences Inc.

History records that the hostages were released as Ronald Reagan took the Presidential oath of office, and that shortly thereafter, Inslaw received a $9.6 million contract from the Department of Justice. At the same time, Earl Brian was appointed to a White House post to advise on health-care issues. Brian reported directly to Ed Meese. He also arranged White House tours to woo investors in his government contracting company, Hadron Inc., according to a Canadian investment banker who took a tour.

But these seemingly random historical connections between Inslaw, Hadron, the Reagan White House and Earl Brian take on a new meaning when considered in light of the "October Surprise," the persistent allegation that the Reagan campaign negotiated with Iranian officials to guarantee that US hostages would not be released before Reagan won election in 1980.

The October Surprise theory hinges in part on alleged negotiations between the Reagan campaign and the Iranians on the weekend of Oct. 17-21, 1980, in Paris, among other places.The deal, according to former Iranian President Abol Hassan Bani-Sadr, ex-Israeli spy Ari Ben Menashe, and a former CIA contract agent interviewed by WIRED, included the payment of $40 million to the Iranians.

According to several sources, Earl Brian, one of Reagan's close advisors, made it quite clear that he was planning to be in Paris that very weekend. Ben Menashe, who says he was one of six Israelis, 12 Americans and 16 Iranians present at the Paris talks, said, "I saw Brian in Paris."

Brian was interviewed by Senate investigators on July 28, 1992, and denied under oath any connection with the alleged negotiations. He told the investigators he did not have a valid passport during the October 1980 dates. But according to court documents and interviews, Brian told Canadian investors in his newly acquired Clinical Sciences, Inc., that he would be in Paris that weekend. Brian acquired controlling interest in Clinical Sciences in the summer of 1980. Clinical Sciences was then trading at around $2 a share. Brian worked with Janos P. Pasztor, a vice president and special situations analyst

with the Canadian investment bank of Nesbitt, Thomson, Bongard Inc., to create a market of Canadian investors for the stock.

Pasztor later testified in court documents that Brian said he would be in Paris the weekend of October 17 to do a deal with the Pasteur Institute (a medical research firm).

Two other brokers, Harry Scully, a broker based in Halifax, Nova Scotia, and John Belton, a senior account executive with Nesbitt-Thomson from 1968 to 1982 who is suing Nesbitt-Thomson and Pasztor for securities fraud, also claim that they were told that Brian was in Paris that weekend.

But if Brian went to Paris to see the Pasteur Institute, he seems to have missed his appointment. An investigation by the Royal Canadian Mounted Police into Clinical Sci-ences stock transactions revealed that the Pasteur Institute had never conducted business with, or even heard of Brian.

When asked by WIRED to elaborate on Brian's 1980 trip, Pasztor said, "These are political questions and I don't want to become involved." He refused further comment.Brian contends that the dates of his trip were in error and that he went to Paris in April 1981, not October 1980. But the passport he turned over to Senate investigators did not contain a French entry or exit stamp for April 1981.

Through his lawyers, Brian refused to be interviewed for this story. - RLF

Earl W. Brian: Closet Spook?

Michael Riconosciuto, a computer programmer and chemist who surfs the spooky fringe of the guns-'n'-money crowd, is currently serving a federal prison sentence for drug crimes. From his jail cell he has given several interviews claiming knowledge of Inslaw and the October Surprise (he also claims his jail term is the DOJ's way of punishing him for his knowledge). Much of what he claims cannot be verified, other statements have failed to be veri-fied conclusively.

But prior to his arrest in 1991, Riconosciuto provided the Hamiltons with an affidavit that once again brought Brian into the Inslaw picture. "I engaged in some software development and modification work in 1983 and 1984 on proprietary PROMIS computer software product," he stated. "The copy of PROMIS on which I worked came from the US Department of Justice. Earl W. Brian made it available to me through Wackenhut (a security company with close FBI and CIA connections) after acquiring it from Peter Videnieks, who was then a Department of Justice contracting official with the responsibility for PROMIS software. I performed the modifications to PROMIS in Indio, Calif.; Silver Springs, Md.; and Miami, Fla."

The modifications included a telecommunications "trap door" that would let the US Government eavesdrop on any other organization using the pirated software, Riconosciuto said.

Videnieks and Brian both told House investigators that they did not know Riconosciuto. After Riconosciuto was interviewed by House investigators, Videnieks refused to give Congress further interviews.

Although Brian denies any involvement with Inslaw or Riconosciuto, the House Judiciary Committee received a report from a special task force of the Riverside County, Calif., Sheriff's Office and District Attorney, stating that on the evening of Sept. 10, 1981, arms dealers, buyers and various intelligence operatives gathered at the Cabazon Indian Reservation near Indio, Calif., for a demonstration of night warfare weapons. The demonstration was orchestrated jointly by Wackenhut and the Cabazon Indian tribe. (Many published reports allege that the Wackenhut/Cabazon joint venture served as a weapons fencing operation for Oliver North's Iran- Contra dealings.)

According to Indio city police officers hired to provide security, those attending included Earl W. Brian, who was identified as "being with the CIA," and Michael Riconosciuto. - RLF

US Deputy Attorney General Jensen Lost Once To Inslaw

Could It Be He Wanted to Even The Score? At the time of its inception, PROMIS was the most powerful program of its type. But a similar program, DALITE, was developed under another LEAA grant by D. Lowell Jensen, the Alameda County, Calif., District Attorney. In the mid-1970s, the two programs vied for a lucrative Los Angeles County contract and Inslaw won out.

Early in his career, Attorney General-to-be Edwin Meese worked under Jensen at the Alameda County District Attorney's office. Jensen was later appointed as Deputy Attorney General into Meese's Justice Department.

C. Madison "Brick" Brewer, accused by the House Judiciary Committee of deliberately misappropriating PROMIS, testified in federal court that everything he did regarding Inslaw was approved by D. Lowell Jensen, the same man who once supervised DALITE.

Was Israel's PROMIS to Crush the Infitada?

Asked why Israeli intelligence would have been so interested in Inslaw and PROMIS, ex-Israeli spy Ari Ben Menashe said: "PROMIS was a very big thing for us guys, a very, very big thing ... it was probably the most important issue of the '80s because it just changed the whole intelligence outlook. The whole form of intelligence collection changed. This whole thing changed it." Why? PROMIS, Ben Menashe said, was perfect for tracking the Palestinian population and other political dissidents.

Did Oliver North Use PROMIS?

Apparently, Israel was not the only country interested in using PROMIS for internal security purposes. Lt. Col. Oliver North also may have been using the program. According to several intelligence community sources, PROMIS was in use at a 6,100-square-foot command center built on the sixth floor of the Justice Department. According to both a contractor who helped design the center and information disclosed during the Iran-Contra hearings, Oliver North had a similar, but smaller, White House operations room that was connected by computer link to the DOJ's command center.

Who Fired Inslaw's Lawyer?

As the Inslaw-DOJ battle was joined in bankruptcy court, Inslaw's chief attorney, Leigh Ratiner, was fired from Dickstein, Shapiro & Morin, the firm where he had been a partner for 10 years. His firing came after another Dickstein partner, Leonard Garment, met with Arnold Burns, then- deputy attorney general of the DOJ.

Garment was counsel to President Richard Nixon and assistant to President Gerald Ford. He testified before a Senate inquiry that he and Meese discussed the Inslaw case in October 1986, and afterward he met with Burns. Two days later Ratiner was fired.

The [illegible] of the firm's ties to the [illegible] Ratiner and his firm made [illegible] to [illegible] but WIRED has learned [illegible] Ari Ben Menashe that

The terms of the financial settlement between Ratiner and his firm were kept confidential, but WIRED has been told by ex-Israeli spy Ari Ben Menashe that Israeli intelligence paid to have Ratiner fired, and that the money was transferred through Hadron Inc., the same company that Earl Brian used to distribute illegal copies of PROMIS. Through informed sources, WIRED has independently confirmed portions of Ben Menashe's allegations.

Ben Menashe has told WIRED that he saw a memo in Israel, written in Hebrew, requesting funds for "a lawyer." He claims to have seen the memo at the office of a joint Mossad (Israeli CIA), Internal Defense Forces and Military committee specializing in Israeli-Iran relations. Israel admits that Ben Menashe handled communications at this level and therefore would have had access to such transmissions.

Ben Menashe said the money was used as Ratiner's settlement payment. "The money was transferred, $600,000, to Hadron," he said. As to why Hadron was used, Ben Menashe claims: "Because [Brian] was involved quite deeply." He said Ratiner was unaware of the source of the settlement funds.

Ratiner, contacted after the Ben Menashe interview, said he had never disclosed the amount of the separation settlement to anyone. He is limited contractually by his former firm from discussing any specifics of the firing. Asked if Ben Menashe's figures were correct, Ratiner said, "I can't comment because it would be the same as revealing them." WIRED located a deep background source who confirmed that the amount was "correct almost to the penny."

Ratiner said he was shocked at the allegations of money laundering. "Dickstein, Shapiro is the 10th largest firm in Washington and I had no reason to think it was other than reputable," he said. "Why is it that everyone who comes in contact with the Inslaw case becomes a victim?" - RLF

A Dead Journalist Raises Some Eyebrows

Among the many strong conclusions of the "House Judiciary Committee Report on the Inslaw Affair" was this rather startling and brief recommendation: "Investigate Mr. Casolaro's death."

Freelance reporter Danny Casolaro spent the last few years of his life investigating a pattern which he called "The Octopus." According to Casolaro, Inslaw was only part of a greater story of how intelligence agencies, the Department of Justice and even the mob had subverted the government and its various functions for their own profit.

Casolaro had hoped to write a book based on his reporting. His theories, which some seasoned investigative journalists have described as naive, led him into a Bermuda Triangle of spooks, guns, drugs and organized crime. On August 10th, 1991, he was found dead in a Martinsburg, W. Va., hotel room. Both wrists were deeply slashed.

Casolaro's death has only deepened the mystery surrounding Inslaw. Among the more unusual aspects of his death: He had gone to Martinsburg to meet an informant whose name he never revealed. He had called home the afternoon before his death to say he would be late for a family gathering. Martinsburg police allowed his body to be embalmed before family members were notified and warned hotel employees not to speak to reporters. The hotel room was immediately scrubbed by a cleaning service. Casolaro had told several friends and his brother that if anything ever happened to him, not to believe it was an accident. And his notes, which witnesses saw him carry into the hotel, were missing.

His death was ruled a suicide by Martinsburg and West Virginia authorities several months later. Friends, relatives and some investigators still cry foul.

A source close to retired Federal Judge Nicholas Bua (the Bush Administration appointee who is investigating Inslaw) said Bua will not come to any conclusions regarding Casolaro's fate. "I don't know if he committed suicide or if it was murder," the source said. "But the evidence is consistent with both theories. There are things that bother me but ... certainly no one can be indicted on the evidence that is available."

What does that mean? Either an independent investigation drums up more evidence, or the case may never be solved.

The House Judiciary Committee may have written what could be called the final word on Danny Casolaro's inexplicable death: "As long as the possibility exists that Danny Casolaro died as a result of his investigation into the Inslaw matter, it is imperative that further investigation be conducted." - RLF

InslawGate?

Elliot Richardson, President Nixon's former attorney general (he was fired when he refused to fire Archibald Cox during the Watergate scandal) has been a counsel to Inslaw for nearly 10 years (he retired this January). In a Oct. 21, 1991 New York Times Op Ed, Richardson wrote: "This is not the first time I have had to think about the need for an independent investigator. I had been a member of the Nixon Administration from the beginning when I was nominated as Attorney General in 1973. Confidence in the integrity of the Watergate investigation could best be insured, I thought, by entrusting it to someone who had no prior connection to the White House. With Inslaw, the charges against the Justice Department make the same course even more imperative.

"When the Watergate special prosecutor began his inquiry, indications of the President's complicity were not as strong as those that now point to a broad conspiracy implicating lesser Government officials in the theft of Inslaw's technology."

A Well-Covered Coverup?

The House Committee Report contained some no-holds-barred language on the issue of stonewalling:

"One of the principle reasons the committee could not reach any definitive conclusion about Inslaw's allegations of a high criminal conspiracy at Justice was the lack of cooperation from the Department," the report states. "Throughout the two Inslaw investigations, the Congress met with restrictions, delays and outright denials to requests for information and to unobstructed access to records and witnesses.

"During this committee's investigation, Attorney General Thornburgh repeatedly reneged on agreements made with this committee to provide full and open access to information and witnesses ... the Department failed to provide all the documents subpoenaed, claiming that some of the documents ... had been misplaced or accidentally destroyed."

Rep. Jack Brooks and the House Committee On the Inslaw Case

The string of lawsuits and widening allegations caught the eye of House Judiciary Committee Chairman Jack Brooks, D-Texas, who in 1989 launched a three-year investigation into the Inslaw affair. In the resulting report, the Committee suggested that among others, Edwin Meese, while presidential counselor and later as attorney general, and D. Lowell Jensen, a former assistant and deputy attorney general and now a U.S. district judge in San Francisco, conspired to steal PROMIS.

"There appears to be strong evidence," the report states, "as indicated by the findings in two Federal Court proceedings as well as by the committee

investigation, that the Department of Justice 'acted willfully and fraudulently,' and 'took, converted and stole,' Inslaw's Enhanced PROMIS by 'trickery fraud and deceit.' "

"While refusing to engage in good faith negotiations with Inslaw," the report continues, "Mr. Brewer and Mr. Videnieks, with the approval of high- level Justice Department officials, proceeded to take actions to misappropriate the Enhanced PROMIS software."

Furthermore, the report states, "several individuals have stated under oath that the Enhanced PROMIS software was stolen and distributed internationally in order to provide financial gain to Dr. Brian and to further intelligence and foreign policy objectives for the United States."

Rep. Brooks told WIRED that the report should be the starting point for a grand jury investigation. The owners of Inslaw, Brooks said, were "ravaged by the Justice Department ... treated like dogs."

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Housatonic

International Mining Corporation

1929

1929-10-21-chicago-tribune-pg-27.jpg / https://drive.google.com/open?id=1pJ4qdFpFnLxUZ3-EubMSSVppu6kJ_X5R

ORGANIZE NEW 10 MILLION DOLLAR MINING COMPANY

American and Canadian interests already linked in Noranda Mines, Ltd., an important Canadian corporation with assets at the close of 1928 in excess of $14,000,000, have joined in the formation of the International Mining company, a $10,000,000 corporation, the purpose of which will be to acquire and develop through subsidiaries metalliferous properties in Canada. Arthur Cutten and Silas H. Strawn of Chicago are directors.

1929-10-21-chicago-tribune-pg-27-clip-mining

1929-10-21-chicago-tribune-pg-27-clip-mining.jpg / https://drive.google.com/open?id=1pC6XzrpbpAil3PxYvchCuj5IHSrBOTqJ

1933

1933-07-05-the-brooklyn-daily-eagle-pg-28.jpg / https://drive.google.com/open?id=1nZkooVQRMKnY3ny-EsnkdB5yQ3icoOpG

Int'l Mining Offers Stock

Lehman Bros. are offering 63,505 shares of common stock of International Mining Corporation for sale at $11 a share. This circular which is quite complete and one of the few as yet issued under the new security law states that appraisal by Arthur Young & Company, accountant, shows the isted securities held by International Mining Corporation June 14, 1933, had a quoted value of $4,143,754. Assuming that all the 63,505 shares offered are sold the proceds of the sale together with the quoted value of the listed shares June 14, cash on hand and unlisted shares at cost would have given the 400,000 shares that would be outstanding a value of $13.24 a share, the circular states.

1933-07-05-the-brooklyn-daily-eagle-pg-28-clip-intl-mining-stock

International Mining Corporation is organized to search for mining properties and to acquire interests in other mining enterprises but is permitted to invest in other than mining securities by its charter. Its officers are mainly mining engineers. H. W. Chadbourne is president and Thomas L. Chadbourne, chairman of the board. A representative of Lehman Brothers is to be elected to the board of directors.

Operating expenses of the corporation in 1932 were $109,497. The purpose of the present issue is to provide the company with additional funds as the management feels that there are now desirable opportunities for the investment of additional moneys in mining and allied enterprises. The present issue if all sold will net the corporation $583,307.

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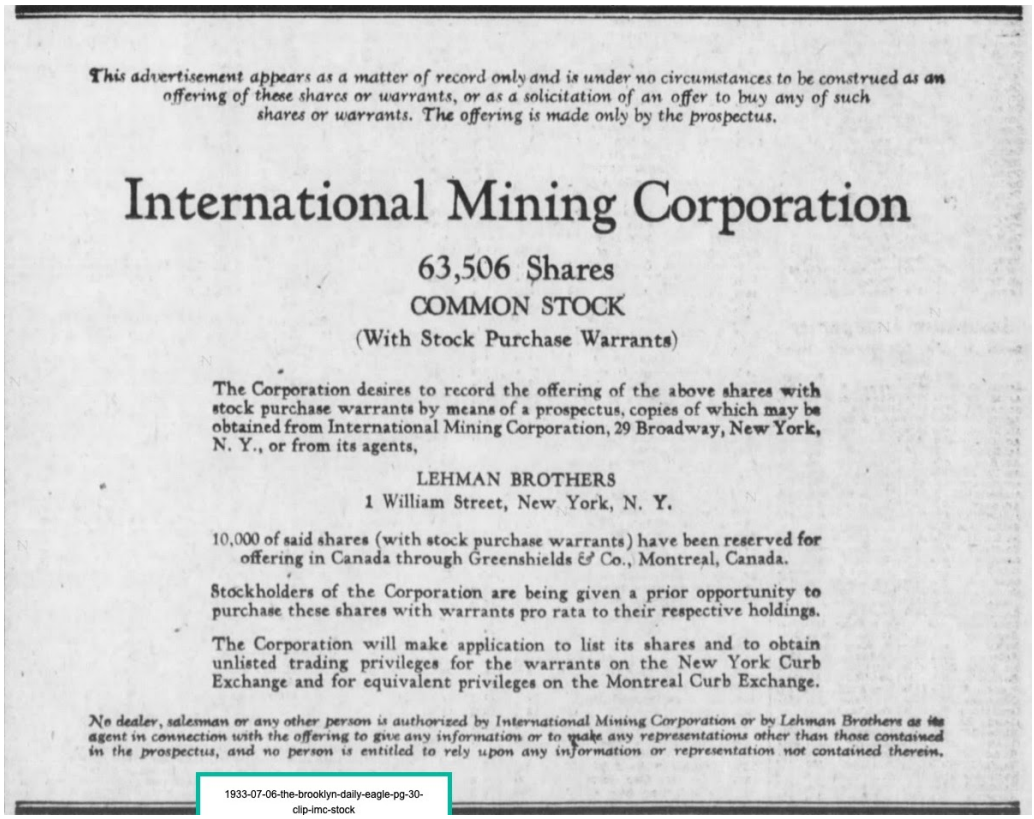
1933-07-06-the-brooklyn-daily-eagle-pg-30.jpg / https://drive.google.com/open?id=1ncptok9TItIBJ-qguvfo8ugs0eHjHAT-



This advertisement appears as a matter of record only and is under no circumstances to be construed as an offering of these shares or warrants, or as a solicitation of an offer to buy any of such shares or warrants. The offering is made only by the prospectus.

International Mining Corporation

63,506 Shares
COMMON STOCK
(With Stock Purchase Warrants)

The Corporation desires to record the offering of the above shares with stock purchase warrants by means of a prospectus, copies of which may be obtained from International Mining Corporation, 29 Broadway, New York, N. Y., or from its agents,

LEHMAN BROTHERS
1 William Street, New York, N. Y.

10,000 of said shares (with stock purchase warrants) have been reserved for offering in Canada through Greenshields & Co., Montreal, Canada.

Stockholders of the Corporation are being given a prior opportunity to purchase these shares with warrants pro rata to their respective holdings.

The Corporation will make application to list its shares and to obtain unlisted trading privileges for the warrants on the New York Curb Exchange and for equivalent privileges on the Montreal Curb Exchange.

No dealer, salesman or any other person is authorized by International Mining Corporation or by Lehman Brothers as its agent in connection with the offering to give any information or to make any representations other than those contained in the prospectus, and no person is entitled to rely upon any information or representation not contained therein.

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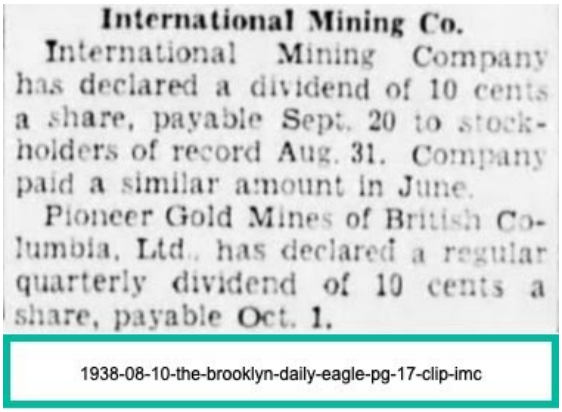
1938

1938-08-10-the-brooklyn-daily-eagle-pg-17.jpg / https://drive.google.com/open?id=1neaz3ueHjpp-3q8oOnc4W4982MJlBUG-



International Mining Co.

International Mining Company has declared a dividend of 10 cents a share, payable Sept. 20 to stockholders of record Aug. 31. Company paid a similar amount in June.

Pioneer Gold Mines of British Columbia, Ltd., has declared a regular quarterly dividend of 10 cents a share, payable Oct. 1.

1938-08-10-the-brooklyn-daily-eagle-pg-17-clip-imc

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1942 Worth leaves

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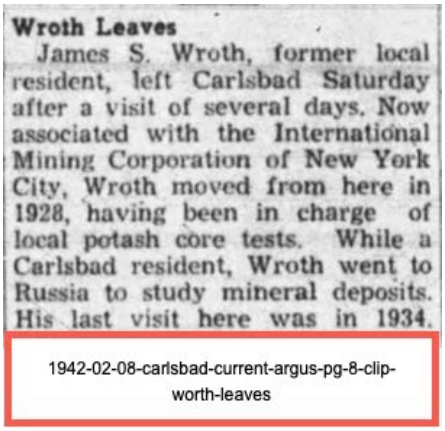

Wroth Leaves

James S. Wroth, former local resident, left Carlsbad Saturday after a visit of several days. Now associated with the International Mining Corporation of New York City, Wroth moved from here in 1928, having been in charge of local potash core tests. While a Carlsbad resident, Wroth went to Russia to study mineral deposits. His last visit here was in 1934.

1942-02-08-carlsbad-current-argus-pg-8-clip-worth-leaves

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1950

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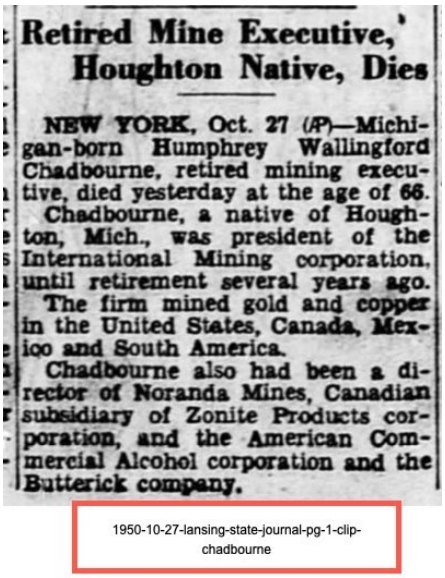

Retired Mine Executive, Houghton Native, Dies

NEW YORK, Oct. 27 (AP)—Michigan-born Humphrey Wallingford Chadbourne, retired mining executive, died yesterday at the age of 66.

Chadbourne, a native of Houghton, Mich., was president of the International Mining corporation, until retirement several years ago.

The firm mined gold and copper in the United States, Canada, Mexico and South America.

Chadbourne also had been a director of Noranda Mines, Canadian subsidiary of Zonite Products corporation, and the American Commercial Alcohol corporation and the Butterick company.

1950-10-27-lansing-state-journal-pg-1-clip-chadbourne

1950-10-27-lansing-state-journal-pg-1-clip-chadbourne.jpg / https://drive.google.com/open?id=1pvYJMgl_Lek-pYmiCZgZtG6w37vp_BS9

1956

1956-03-22-oakland-tribune-pg-30.jpg / https://drive.google.com/open?id=1q84S6fjtzxNOzsC5-Gk4VHT-AaNP7E96

Sunset Oil and Intl. Mining In Merger Deal

LOS ANGELES, March 22—Sunset Oil Company and International Mining Corporation today announced the execution of a merger agreement.

Sunset markets petroleum products in the Bay Area through a wholly owned subsidiary, the Craig Oil Company.

The merger plan, subject to final stockholders' approval at the annual meetings to be held in May, provides for the conversion of each share of Sunset common stock into three shares of the common stock of International Mining.

The agreement further provides for the change of International's name otSun set International Petroleum Corporation.

International Mining was originally founded as a natural resources company but has since become an investment company, holding substantial mining and other related natural resource securities.

Officials stated the merger would provide International with an opportunity to use its relatively dormant capital for development and expansion and place Sunset in a favorable position for acquisition of producing properties.

Proposed officers for the merged organization, to be called Sunset International Petroleum Corp., are J. Dave Sterling, president; Morton A. Sterling, executive vice president; George C. Sheahan, financial vice president; and W. H. Tietz, secretary-treasurer. They presently hold the same positions in Sunset.

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1956

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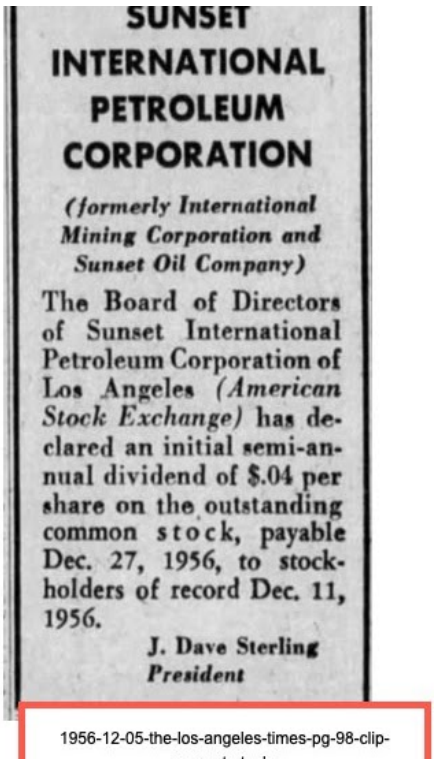

SUNSET INTERNATIONAL PETROLEUM CORPORATION

(formerly International Mining Corporation and Sunset Oil Company)

The Board of Directors of Sunset International Petroleum Corporation of Los Angeles *(American Stock Exchange)* has declared an initial semi-annual dividend of $.04 per share on the outstanding common stock, payable Dec. 27, 1956, to stockholders of record Dec. 11, 1956.

J. Dave Sterling
President

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1957-05-17-the-times-san-mateo-california-pg-26.jpg / https://drive.google.com/open?id=1qEGSoEdvPdXBIR1PakSVHlXo-vnLBlBd

JAMES P. KLEEMAN

Sunset Oil Tells Dividend

The board of directors of Sunset International Petroleum Corporation declared its second half semi-annual dividend of four cents a share on its common capital stock, payable June 27, 1957 to stockholders of record June 11, 1957. The company paid its initial semi-annual dividend of four cents per share on December 27, 1956 to stockholders of record December 11, 1956. Sunset began operations on a merged basis September 1, 1956 following a merger of Sunset Oil Company and International Mining Corporation. Effective with the merger the company's fiscal year was established as September 1 to August 31.

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Note that a 'International Mining Corporation' was acquired in 1957 and merged into 'Sunset Oil'

⚠️⚠️ From this point forward, 'International Mining Corporation' refers to a COMPLETELY different company! ⚠️⚠️

In June 1957, a financing company called 'National Department Stores' renamed itself to 'International Mining Corporation''

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1955 (April)

1955-04-25-pittsburgh-sun-telegraph-pg-10.jpg / https://drive.google.com/open?id=1rOCQG06TI9wobUYSeLwPSfIZuPli0P62

Page 10 Pittsburgh Sun-Telegraph Monday, April 25, 1955

Pittsburgh Business

Pennroad Corp., Investment Trust, Enlarges Holdings in This District

By Hi Howard

THE PITTSBURGH district has several business ties—direct and indirect—with the Pennroad Corp., the New York investment trust which has just acquired a substantial interest (along with South American Gold & Platinum Co.) in National Department Stores Corp.

Of major interest in local merchandising circles, National Department Stores owns both the Frank & Seder and Rosenbaum department stores here.

One of Pittsburgh's long-standing connections with Pennroad is that this investment company controls the Pittsburgh & West Virginia Railway, which has its headquarters here.

Mr. Howard

Another is that a number of Pittsburghers still own Pennroad stock. But this Pitsburgh financial interest in Pennroad is not nearly as strong as it once upon a time. The Mellon family, largely as a result of investments made by the late R. B. Mellon, father of Richard K. Mellon, had a fairly substantial holding in this company until several years ago.

But these personal holdings by members of the Mellon family, it's reported, have been sold, and the Mellon interest in Pennroad is either gone completely, or comparatively small and indirect.

MAY RESIGNED

Until recently, three of Pennroad's 11 directors were Pittsburghers. But one of the trio, Herbert A. May, who is also senior vice president of the Westinghouse Air Brake Co. here, resigned when he became a director of the Nickel Plate Railroad.

Those from this area sill on the Pennroad board are William T. Kilborn and F. Brian Reuter. Kilborn is president of the Flannery Bolt Co. and the Fort Pitt Manufacturing Co., and a director of the Pittsburgh & West Virginia Railway and of the National Union Fire Insurance Co. here. Reuter is vice president of the Mellon National Bank & Trust Co., and also a director of the Pittsburgh & West Virginia.

PRR 'CREATION'

The Pennroad Corp. started life, back in the Summer of 1929, as a brainchild of the late W. W. Atterbury, president of the Pennsylvania Railroad.

Atterbury and other PRR officers were concerned about the "consolidation" moves made by other Eastern railroads—notably the New York Central and Baltimore & Ohio—and came to the conclusion that the PRR had to protect its interests. They also had an eye on the Van Sweringen efforts to put together another major Eastern railroad system with the Nickel Plate as a nucleus.

At the same time, they had to keep in mind that the Pennsylvania had little hope of getting Federal approval for the purchase of a controlling interest in competing railroads.

SEPARATE CONCERN

The Van Sweringen brothers, of Cleveland, showed the way out of this dilemma by forming their Allegheny Corp. early in 1929, as a device for owning and controlling railway properties.

The PRR management arranged for the formation of Pennroad, as a separate company, to enable PRR stockholders to make investments in the transportation field which would not only be sound and profitable investments, but which would also serve to protect their interests as PRR stockholders.

Such protection of their interests, it was made clear, would include the purchase of railroad securities to prevent them from falling into hands which might be unfriendly to, or at least uncooperative with, the Pennsylvania.

VOTING TRUST

And to make assurance doubly sure that this would be Pennroad policy, all Pennroad stock was placed in a voting trust, with three PRR directors as trustees, and all but one of the eight directors were also PRR directors. And the eighth director was a former PRR treasurer.

Pennroad sold 80 per cent of its stock to PRR stockholders, at $15 a share, and raised a total of $91,125,000. A large chunk of this money was used to buy a controlling interest in the Detroit,Toledo & Ironton Railroad, formerly owned by Henry Ford and some associates, thus safeguarding the PRR's entry into the profitable Detroit area.

Another chunk was used to buy most of the stock of the Canton Co., of Baltimore, maintaining another PRR connection with a major terminal.

Pennroad also invested $17,500,000 in New Haven Railroad stocks, and more than $23,600,000 in Boston & Maine Railroad securities—both investments aimed at holding "friends" of the PRR.

BOUGHT P. & W. VA.

But Pennroad's largest investment was in 220,000 shares of Pittsburgh & West Virbinia Railroad Co., purchased from Frank E. Taplin, who tried to revive the old Gould railroad dream.

The total cost of this purchase, representing about 72 per cent of the outstanding stock, was $38,000,000. To aid in making this deal, Pennroad sold more of its own stock, and also offered additional voting trust certificates (each representing one share of stock) at $16.50 to the owners of its outstanding certificates.

The stock market crash of October, 1929, took place only a few weeks after this offer was first made. But the Pennroad stock sale was in the hands of an underwriting group, and this group made good on the whole issue, even though only about half of it was sold. Pennroad obtained a total of $44,660,000 from this new issue.

During the great depression of the early Thirties, the value of Pennroad's railroad holdings dropped sharply. Pennroad stock sold as low as $2 a share.

AFFILIATED WITH PRR

But Pennroad's close affiliation with the PRR continued until 1940, or until after the expiration of the voting trust agreement which kept majority control of Pennroad stock in the hands of PRR.

Since early 1941, none of the Pennroad directors has been a PRR director, and in that same year, Pennroad registered with the Securities & Exchange Commision as an investment trust, under the requirements of the Investment Co. Act of 1940.

At the same time, the new Pennroad management started a diversification program, aimed at switching a large part of its holdings out of railroad securities into other fields of business, as opportunity offered.

SOLD HOLDINGS

Pennroad has sold its holdings in the Detroit, Toledo & Ironton Railroad to the Pennsylvania, and also has disposed of its stock in the Wheeling & Lake Erie. The cash obtained from these and other sales has been invested largely in utilities, and also in oil and gas stocks, as well as in other interests.

But Pennroad still holds a controlling interest in the Pittsburgh & West Virginia here, which has been a profitable investment during recent years.

LEGAL ACTION

Pennroad also obtained more than $12,000,000 as a result of a suit filed by a group of Pennroad stockholders against the Pennsylvania Railroad in early 1943. This marathon legal action, known as the Overfield-Weigle case, charged the PRR officers and directors were responsible for losses reputedly totaling more than $95,000,000 as a result of Pennroad's investments during 1930 and 1931.

After four years of litigation, a compromise settlement was reached, and the PRR made a payment of $15,000,000. But out of this payment, 16 attorneys and law firms, and three members of the stockholders committee were awarded fees totaling $2,445,000.

Pennroad now has total assets of nearly $100,000,000, with about 5,000,000 shares outstanding. The price range on the American Stock Exchange this year has been from $16.12 to $18.75, and the stock sold last year Friday for about $17.60 a share.

1955-04-25-pittsburgh-sun-telegraph-pg-10-clip-pennroad

1955-04-25-pittsburgh-sun-telegraph-pg-10-clip-pennroad.jpg / https://drive.google.com/open?id=1rBUOxgQKlz2HwirNY6ibeI3EyO-DEwq7

1955 (April)

1955-04-25-pittsburgh-sun-telegraph-pg-1.jpg / https://drive.google.com/open?id=1r7wqZ7SPtLUzA6MvK5FX8v7qz0hD-TcE

1955-04-25-pittsburgh-sun-telegraph-pg-4.jpg / https://drive.google.com/open?id=1rE9t1vgkU7BJQD4JP1L_mHTjxMy9aqLr

Rosenbaum's, Frank & Seder in Unit

New Group Controls Chain of 16 Stores

1955-04-25-pittsburgh-sun-telegraph-pg-1-4-clip-new-group-16-stores

NEW YORK, April 25.—(AP.)—Control of National Department Stores Corp. has been acquired by a group headed by South American Gold & Platinum Co. and Pennroad Corp., Lewis B. Harder, president of South American, said today.

National Department Stores, with annual sales of 75 million dollars, owns and operates a chain of 16 stores in major cities in several sections of the country.

Two Pittsburgh subsidiaries of National are Frank & Seder and Rosenbaum Co.

Harder said the group now in control owns more than 50 per cent of the 782,140 shares of National Department Stores' stock.

A few days ago, it was disclosed that South American had acquired 100,000 shares.

Harder said today that South American and Pennroad Corp. since have bought 93,000 additional shares, the entire holdings of the Schwartz and Sadowsky families who have been identified with the chain for many years.

ANOTHER OFFER

South American bought 43,000 of these shares and Pennroad 50,000, he said. Associates of the two companies also own more than an additional 175,000 shares, according to Harder. The South American group has made an offer to certain large stockholders of National to acquire 91,000 shares more.

It is expected that Harder and Edward A. Merkle, executive vice president of Pennroad, will join the board of National. Harry A. Schwartz will continue as president.

Schwartz declared today:

"My family and myself, believing that it was in the best interests of the corporation, have agreed to sell our holdings to the group. They have asked me to carry on as president and director, which I have consented to do."

"It is their hope and the hope of the management that under new ownership the company will continue to progress and expand. The groupe has indicated a desire to develop National as a larger and more important department store company."

National has stores in Portland, Ore.; Morrisville, Pa.; Trenton, N. J.; Memphis; Atlanta; San Antonio; Houston; Baton Rouge; four in Cleveland, two in Wheeling, W. Va., and the two in Pittsburgh.

Harder became president of South American last July. Since then, the company, which has produced gold and platinum in Colombia since 1917, has undergone a major diversification of its investments in Latin America.

Pennroad Corp., which began as a railroad holding company, in recent years has become a general investment company, with holdings in a wide range of fields.

Harder said any future plans for National cannot be discussed at this time, pending an intensive engineering survey of the properties.

National's earnings for 1954 were reported at $422,905 or 54 cents a common share, the lowest in many years. The chain's profits have dropped sharply since reaching a high of $4,267,821 or $5.45 a share in 1947.

(The Mellon family formerly had a substantial interest in the Pennroad Corp., and this investment trust still has a little Pittsburgh money in its financial bloodstream. Two of Pennroad's directors are Pittsburghers — William T. Kilborn, president, Flannery Bolt Co., and F. Brian Reuter, vice president, Mellon National Bank & Trust Co. For details, see Hi Howard's Pittsburgh Business column on the financial page.)

1955-04-25-pittsburgh-sun-telegraph-pg-1-4-clip-new-group-16-stores.jpg / https://drive.google.com/open?id=1r1hW4gWzuJa-GIwIaWPR7mBL_rE3Vkh7

1955-04-25-the-pittsburgh-post-gazette-pg-17.jpg / https://drive.google.com/open?id=1sAf7P-fk2KQG90IePKmeCn6x_yN3boCB

Department Stores Chain Reorganized

Rosenbaum Co., Frank & Seder Are Subsidiaries Here

NEW YORK, April 24 (AP)—Control of National Department Stores Corporation has been acquired by a group headed by South American Gold & Platinum Company and Pennroad Corporation, Lewis B. Harder, president of South American, said today.

National Department Stores, with annual sales of 75 million dollars, owns and operates a chain of 16 stores in major cities including two in Pittsburgh and two in Wheeling, W. Va.

Operations of two Pittsburgh subsidiaries, Frank & Seder and Rosenbaum Company, were affected by the 15-months strike of truck delivery workers, which was settled last month.

Harder said any future plans for National cannot be discussed at this time, pending an intensive engineering survey of the properties.

Harder said the group now in control owns more than 50 percent of the 782,140 shares of National Department Stores' stock.

A few days ago, it was disclosed that South American had acquired 100,000 shares.

Harder said today that South American and Pennroad Corporation since have bought 93,000 additional shares, the entire holdings of the Schwartz and Sadowsky families who have been identified with the chain for many years.

1955-04-25-pittsburgh-post-gazette-pg-17-clip-nat-dep-reorg

1955-04-25-the-pittsburgh-post-gazette-pg-17-clip-nat-dep-reorg.jpg / https://drive.google.com/open?id=1s5fAzvJHKKP3aG2W3sdkFdOWHqTCSb_h

1955 (July)

1955-07-08-pittsburgh-sun-telegraph-pg-13.jpg / https://drive.google.com/open?id=1rO0lfuCF3VPr6RKl5QtYZtdgLq1dd_XI

National Aims For Volume

NEW YORK, July 8.—(AP.)—Frank L. Kellogg, recently elected chairman of National Department Stores, painted a grim picture today of the chain's operations before the new management that he heads took over.

Kellogg became chairman May 15 and presided at the annual stockholders' meeting yesterday. In the first four months of the chain's fiscal year beginning Feb. 1, he said, losses were running 15 per cent greater than in the same period of 1954, although sales were slightly higher.

Of the 17 stores in the National chain, said Kellogg, only seven showed sales increases between Feb. 1 and May 31, and the other ten failed to match their year-ago performance. Only three finished out of the red, he added.

May Sell Stores

Kellogg told stockholders that National must "secure for ourselves a greater share of the retail business in each city or community where we operate . . . your new management intends to strengthen our organization . . . (and) train our buyers to do a better job." Stores that fail to show definite promise may be sold, he said.

At a directors' meeting after the stockholders' session, Kellogg was elected to the additional post of president, succeeding Harry H. Schwartz. Lewis B. Harder, president of South American Gold & Platinum Co., was elected to the newly created post of financial vice president and George Lehrman was named secretary and treasurer.

Pass Dividend

South American Gold & Platinum recently acquired control of National.

Directors took no action on the common stock dividend usually declared at this time. The company had previously paid 25 cents at quarterly intervals. Kellogg said the company had not earned its dividends in 1953 and operated at a loss last year.

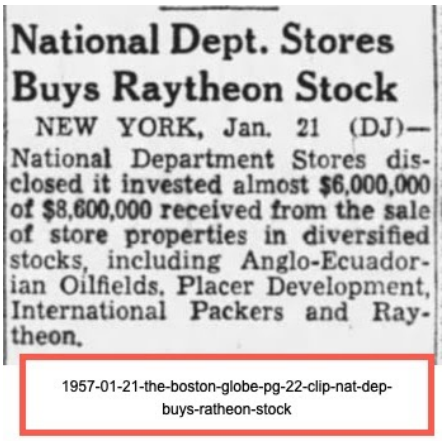
National Department Stores units here include Frank & Sedet of Pittsburgh Inc., and Rosenbaum Co here

1955-07-08-pittsburgh-sun-telegraph-pg-13-clip-nat-aims-volume

1955-07-08-pittsburgh-sun-telegraph-pg-13-clip-nat-aims-volume.jpg / https://drive.google.com/open?id=1rLrDBsUe9FHSscQA5JlOYp_P5kg-zrNQ

1957 (Jan)

1957-01-21-the-boston-globe-pg-22.jpg / https://drive.google.com/open?id=1rolbG27rZRXrkhjlhq_fLaOUbNUdPafI



National Dept. Stores Buys Raytheon Stock

NEW YORK, Jan. 21 (DJ)—National Department Stores disclosed it invested almost $6,000,000 of $8,600,000 received from the sale of store properties in diversified stocks, including Anglo-Ecuadorian Oilfields, Placer Development, International Packers and Raytheon.

1957-01-21-the-boston-globe-pg-22-clip-nat-dep-buys-ratheon-stock

1957-01-21-the-boston-globe-pg-22-clip-nat-dep-buys-ratheon-stock.jpg / https://drive.google.com/open?id=1r_cxlUK1sw6YFFlN7iliv7yVCSP7yHVE

1957-01-29-the-record-hackensack-new-jersey-pg-4.jpg / https://drive.google.com/open?id=1s4CMwLcgBoUw1RALQz8TiQP_pQ1I-shA

Today In Business

The Board of Directors of The Pennroad Corporation has announced that George W. Bovenizer, formerly chairman, has been elected honorary chairman of the Board. To fill the vacancy, Bradley Gaylord, formerly president, was elected chairman of the board and **Edward A. Merkle**, of Haworth, was elected president and chief executive officer.

Merkle started his career as a page boy on the floor of the New York Stock Exchange while attending New York University. Prior to joining the Pennroad organization, he was associated with Mitchell, Hutchins & Company. Merkle came to Pennroad January 1, 1949, was elected a vice-president in early 1951 and became a director in 1953.

Besides being on the Pennroad Board, he is a director of Drewrys, Ltd., National Department Stores, Rockland Light & Power and the South American Gold & Platinum Company.

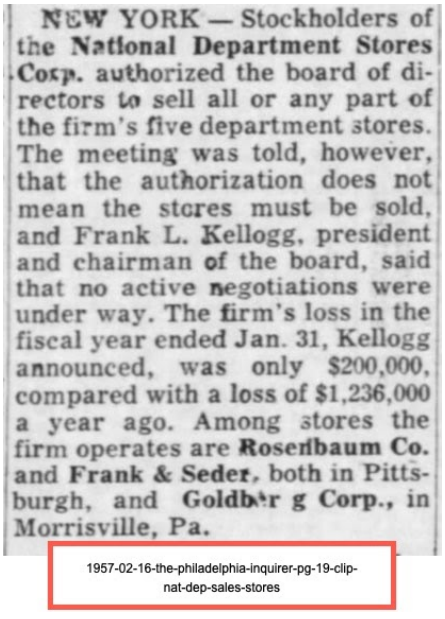
In addition to his business activities, Merkle is a member of the Board of Trustees of the Jacob A. Riis Neighborhood Settlement in New York, was one of the organizers of R. I. A. L., Religion in American Life and presently is a member of the Episcopal Bishop's Committee for the Diocese of Newark. Recently he has served in Haworth as chairman of Community Chest and National Foundation for Infantile Paralysis drives.

1957-01-29-the-record-hackensack-new-jersey-pg-4-clip-nat-dep-merkle

1957-01-29-the-record-hackensack-new-jersey-pg-4-nat-dep-merkle.jpg / https://drive.google.com/open?id=1s3PrU5eZdaSbFaPaCljZlyBEHYeAQe1Y

1957 (Feb)

1957-02-16-the-philadelphia-inquirer-pg-19.jpg / https://drive.google.com/open?id=1s0uvz50q9d6Sd1QW26kjjS2WGidI9cWM



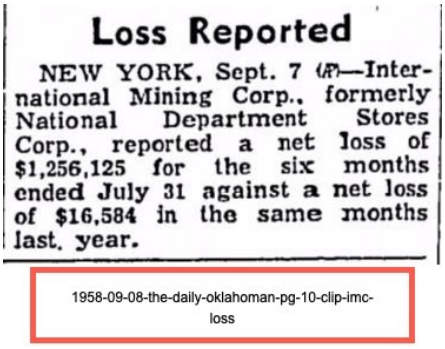
NEW YORK — Stockholders of the **National Department Stores Corp.** authorized the board of directors to sell all or any part of the firm's five department stores. The meeting was told, however, that the authorization does not mean the stores must be sold, and Frank L. Kellogg, president and chairman of the board, said that no active negotiations were under way. The firm's loss in the fiscal year ended Jan. 31, Kellogg announced, was only $200,000, compared with a loss of $1,236,000 a year ago. Among stores the firm operates are **Rosenbaum Co.** and **Frank & Seder**, both in Pittsburgh, and **Goldberg Corp.**, in Morrisville, Pa.

1957-02-16-the-philadelphia-inquirer-pg-19-clip-nat-dep-sales-stores

1957-02-16-the-philadelphia-inquirer-pg-19-clip-nat-dep-sales-stores.jpg / https://drive.google.com/open?id=1rzpKHsnBPyl0uCvu4NdiEuyTQp82bksj

1958 (Sep)

1958-09-08-the-daily-oklahoman-pg-10.jpg / https://drive.google.com/open?id=1rxIARfEWWw_3i99Hd-AUxWmf8pw5rquW



Loss Reported

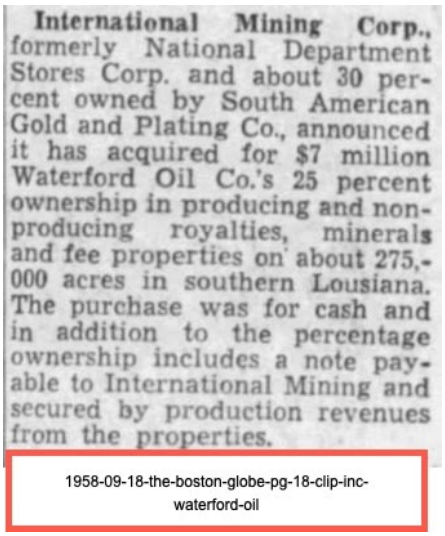
NEW YORK, Sept. 7 (AP)—International Mining Corp., formerly National Department Stores Corp., reported a net loss of $1,256,125 for the six months ended July 31 against a net loss of $16,584 in the same months last. year.

1958-09-08-the-daily-oklahoman-pg-10-clip-imc-loss

1958-09-08-the-daily-oklahoman-pg-10-clip-imc-loss.jpg / https://drive.google.com/open?id=1rulErHsFsAhan62mLscCA-U8k8RW-oTc

1958 (Sep)

1958-09-18-the-boston-globe-pg-18.jpg / https://drive.google.com/open?id=1rthkJyuOIi240TbvBE85L2J8oupRXhT1



International Mining Corp., formerly National Department Stores Corp. and about 30 percent owned by South American Gold and Plating Co., announced it has acquired for $7 million Waterford Oil Co.'s 25 percent ownership in producing and non-producing royalties, minerals and fee properties on about 275,000 acres in southern Lousiana. The purchase was for cash and in addition to the percentage ownership includes a note payable to International Mining and secured by production revenues from the properties.

1958-09-18-the-boston-globe-pg-18-clip-inc-waterford-oil

1958-09-18-the-boston-globe-pg-18-clip-inc-waterford-oil.jpg / https://drive.google.com/open?id=1rnGcLqmvz8VTshowprmKOBrAo79sHxSb

1957 (June) - A "group of financers interested in mining an natural resources (but also purchasing department stores)" changed its name to 'International Mining Corporation'

See (1958-12-27-the-pittsburgh-post-gazette-pg-5-clip-frank-seder-closing.jpg / https://drive.google.com/open?id=1qHg4LEOtjd-GHKMm_ccck6W4uPCfHteJ)

Not sure who this company is.

1957 (June 26)

1957-06-26-el-paso-herald-post-pg-22.jpg / https://drive.google.com/open?id=1ptODXdQRW_6oSpK7s5I2nliz6-KczYvi

CALL FOR PROPOSALS FOR PURCHASE OR LEASE OF AIRPORT LAND

The City of El Paso will receive sealed proposals for purchase or lease of the following parcel of land situated near the Airport, for light industrial development: bounded on the south by FM 2233, on the west by the east line of the property leased to International Mining Corporation, on the north by the south line of the Public Service easement, and on the east by a north-south line located so as to include 50 acres, more or less.

Detailed requirements for proposals are given in written instructions, a copy of which may be obtained from the City Clerk.

Sealed proposals must be filed with the City Clerk by 9:30 a. m. on July 5th, 1957, at which time they will be opened and read at the meeting of the City Council. Proposals must be accompanied by a bond or cashier's or certified check in the amount of $1,000, as a guaranty that the successful bidder will comply with his proposal if accepted.

The City reserves the right to reject any or all proposals and to negotiate for agreement on the final terms of the contract.

J. M. HERRERA,
City Clerk

1957-06-26-el-paso-herald-post-pg-22-clip-

1957-06-26-el-paso-herald-post-pg-22-clip-airport-sale.jpg / https://drive.google.com/open?id=1poe8e_JJLsVcGoJ0Kty6CF_KPz7cUtZ9

1958 (Dec)

1958-12-27-the-pittsburgh-post-gazette-pg-1.jpg / https://drive.google.com/open?id=1qHCkm41vuMqM5rpcUsHIgveuGNeLK5PS

1958-12-27-the-pittsburgh-post-gazette-pg-5.jpg / https://drive.google.com/open?id=1qKlgHtst3N7E6acVHahdeaQrxzYyrH2R

1958-12-27-pittsburgh-post-gazette-pg-5-clip-frank-seder-closing

51-Year-Old Frank & Seder Closing Doors

400 Employes Told Wednesday Will Be Their Final Day

Frank & Seder—department store in business in Downtown Pittsburgh for 51 years—plans to close its doors Wednesday, William Onasch, president, said yesterday.

The department store yesterday gave employes a week's notice, which will keep them on the payroll through January 2. However, some of the 400 workers will stay longer to help liquidate the operation, Mr. Onasch added.

The store president blamed an "unlivable" rental situation for the liquidation.

See Hungerford's cartoon, "Old Friends," on Page 6.

100 Landlords

Rent adds up to a bigger figure than Frank and Seder wants to pay and some 100 different landlords control the land. The store found it impossible to negotiate a lower rental.

In October, Frank & Seder notified the landlords it would terminate its lease April 30. The seven-story building, which the store built in 1918, will become the property of the landlords on that date.

Offered for Sale Before

Its fate will depend on what they can do with it, Mr. Onasch pointed out. Mean-

(Continued on Page 5, Col. 4)

Frank & Seder Closing Doors

(Continued From Page 1)

while, Frank & Seder is working on plans for liquidating its inventories.

The firm has been up for sale for some time.

The department store was owned by National Department Stores, owner of a number of similar stores in large cities across the country.

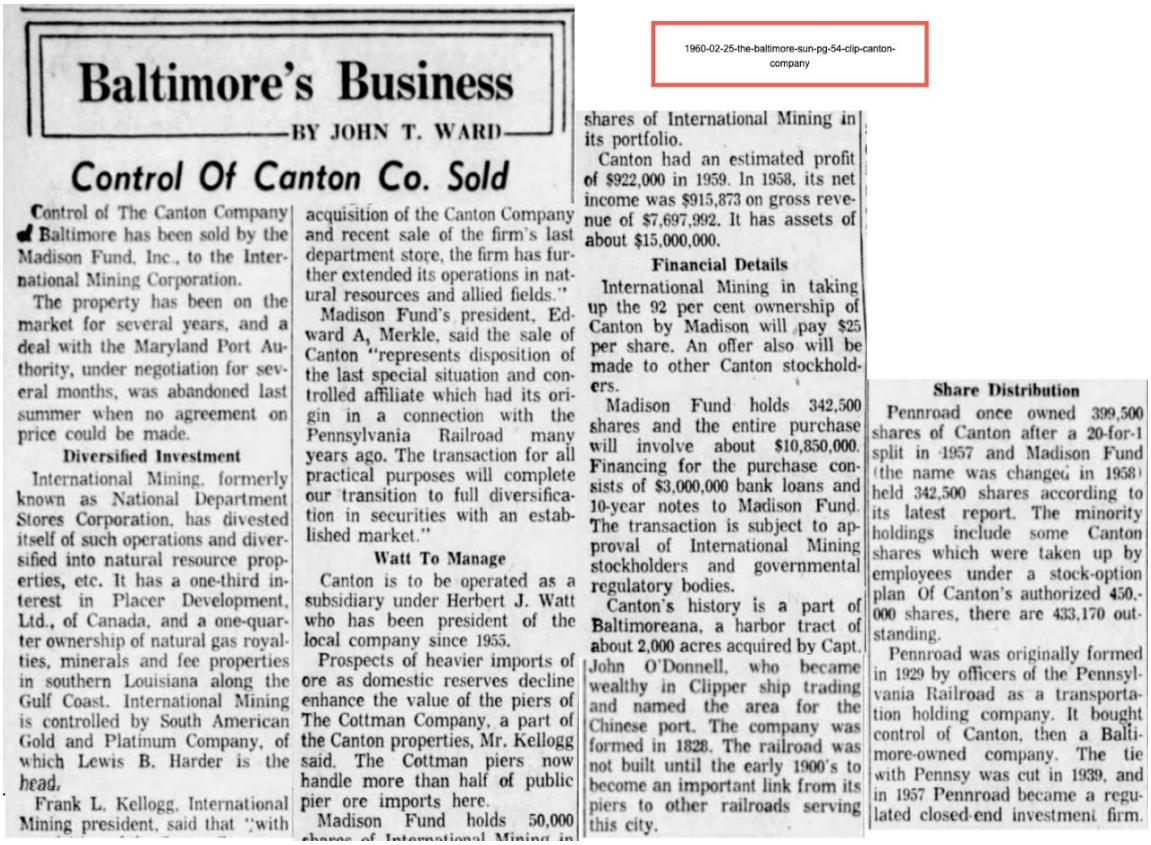
Several years ago, control of National moved into the hands of financiers more interested in mining and natural resources than department stores. They started selling department stores in June, 1955, and buying oil, natural gas and metal mining properties.

Last June, the company changed its name to International Mining Corporation.

1958-12-27-the-pittsburgh-post-gazette-pg-5-clip-frank-seder-closing.jpg / https://drive.google.com/open?id=1qHg4LEOtjd-GHKMm_cccK6W4uPCfHteJ

1960 (Feb)

1960-02-25-the-baltimore-sun-pg-54.jpg / https://drive.google.com/open?id=1qg3ty6RW6trOtT57mFubnXESBYK5zdu2



1960-02-25-the-baltimore-sun-pg-54-clip-canton-company

Baltimore's Business

BY JOHN T. WARD

Control Of Canton Co. Sold

Control of The Canton Company of Baltimore has been sold by the Madison Fund, Inc., to the International Mining Corporation.

The property has been on the market for several years, and a deal with the Maryland Port Authority, under negotiation for several months, was abandoned last summer when no agreement on price could be made.

Diversified Investment

International Mining, formerly known as National Department Stores Corporation, has divested itself of such operations and diversified into natural resource properties, etc. It has a one-third interest in Placer Development, Ltd., of Canada, and a one-quarter ownership of natural gas royalties, minerals and fee properties in southern Louisiana along the Gulf Coast. International Mining is controlled by South American Gold and Platinum Company, of which Lewis B. Harder is the head.

Frank L. Kellogg, International Mining president, said that "with acquisition of the Canton Company and recent sale of the firm's last department store, the firm has further extended its operations in natural resources and allied fields."

Madison Fund's president, Edward A. Merkle, said the sale of Canton "represents disposition of the last special situation and controlled affiliate which had its origin in a connection with the Pennsylvania Railroad many years ago. The transaction for all practical purposes will complete our transition to full diversification in securities with an established market."

Watt To Manage

Canton is to be operated as a subsidiary under Herbert J. Watt who has been president of the local company since 1955.

Prospects of heavier imports of ore as domestic reserves decline enhance the value of the piers of The Cottman Company, a part of the Canton properties, Mr. Kellogg said. The Cottman piers now handle more than half of public pier ore imports here.

Madison Fund holds 50,000 shares of International Mining in its portfolio.

Canton had an estimated profit of $922,000 in 1959. In 1958, its net income was $915,873 on gross revenue of $7,697,992. It has assets of about $15,000,000.

Financial Details

International Mining in taking up the 92 per cent ownership of Canton by Madison will pay $25 per share. An offer also will be made to other Canton stockholders.

Madison Fund holds 342,500 shares and the entire purchase will involve about $10,850,000. Financing for the purchase consists of $3,000,000 bank loans and 10-year notes to Madison Fund. The transaction is subject to approval of International Mining stockholders and governmental regulatory bodies.

Canton's history is a part of Baltimoreana, a harbor tract of about 2,000 acres acquired by Capt. John O'Donnell, who became wealthy in Clipper ship trading and named the area for the Chinese port. The company was formed in 1828. The railroad was not built until the early 1900's to become an important link from its piers to other railroads serving this city.

Share Distribution

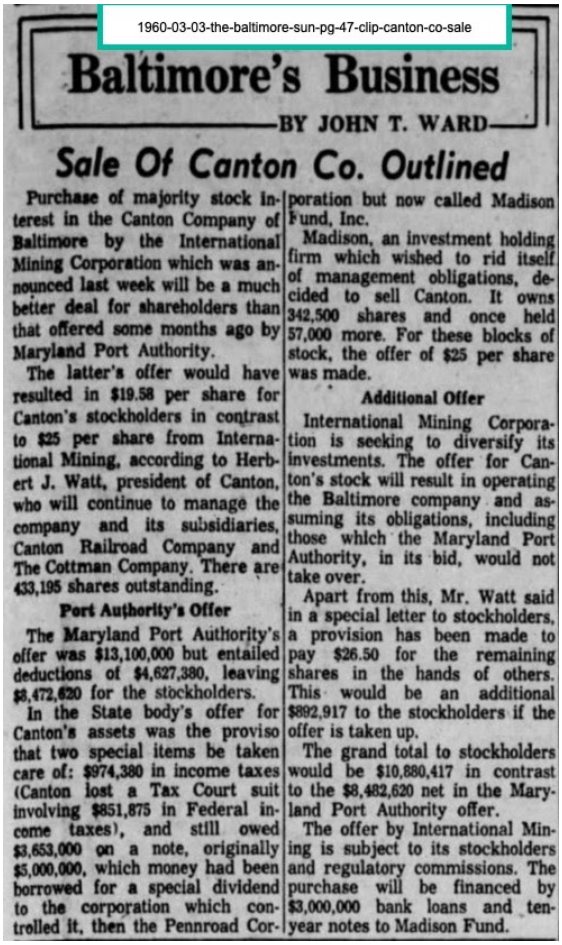
Pennroad once owned 399,500 shares of Canton after a 20-for-1 split in 1957 and Madison Fund (the name was changed in 1958) held 342,500 shares according to its latest report. The minority holdings include some Canton shares which were taken up by employees under a stock-option plan Of Canton's authorized 450,000 shares, there are 433,170 outstanding.

Pennroad was originally formed in 1929 by officers of the Pennsylvania Railroad as a transportation holding company. It bought control of Canton, then a Baltimore-owned company. The tie with Pennsy was cut in 1939, and in 1957 Pennroad became a regulated closed-end investment firm.

1960-02-25-the-baltimore-sun-pg-54-clip-canton-company.jpg / https://drive.google.com/open?id=1qbXLRMbIYkL_r8Kg5IdhoA4-Zc6RQEB8

1960

1960-03-03-the-baltimore-sun-pg-47.jpg / https://drive.google.com/open?id=1ns6BrX7WvFoMad8JYB2kr-MKn-tW0JXE



1960-03-03-the-baltimore-sun-pg-47-clip-canton-co-sale

Baltimore's Business

BY JOHN T. WARD

Sale Of Canton Co. Outlined

Purchase of majority stock interest in the Canton Company of Baltimore by the International Mining Corporation which was announced last week will be a much better deal for shareholders than that offered some months ago by Maryland Port Authority.

The latter's offer would have resulted in $19.58 per share for Canton's stockholders in contrast to $25 per share from International Mining, according to Herbert J. Watt, president of Canton, who will continue to manage the company and its subsidiaries, Canton Railroad Company and The Cottman Company. There are 433,195 shares outstanding.

Port Authority's Offer

The Maryland Port Authority's offer was $13,100,000 but entailed deductions of $4,627,380, leaving $8,472,620 for the stockholders.

In the State body's offer for Canton's assets was the proviso that two special items be taken care of: $974,380 in income taxes (Canton lost a Tax Court suit involving $851,875 in Federal income taxes), and still owed $3,653,000 on a note, originally $5,000,000, which money had been borrowed for a special dividend to the corporation which controlled it, then the Pennroad Corporation but now called Madison Fund, Inc.

Madison, an investment holding firm which wished to rid itself of management obligations, decided to sell Canton. It owns 342,500 shares and once held 57,000 more. For these blocks of stock, the offer of $25 per share was made.

Additional Offer

International Mining Corporation is seeking to diversify its investments. The offer for Canton's stock will result in operating the Baltimore company and assuming its obligations, including those which the Maryland Port Authority, in its bid, would not take over.

Apart from this, Mr. Watt said in a special letter to stockholders, a provision has been made to pay $26.50 for the remaining shares in the hands of others. This would be an additional $892,917 to the stockholders if the offer is taken up.

The grand total to stockholders would be $10,880,417 in contrast to the $8,482,620 net in the Maryland Port Authority offer.

The offer by International Mining is subject to its stockholders and regulatory commissions. The purchase will be financed by $3,000,000 bank loans and ten-year notes to Madison Fund.

1960-03-03-the-baltimore-sun-pg-47-clip-canton-co-sale.jpg / https://drive.google.com/open?id=1nmVegZoz1OSFNOQyWSAzoYVDedHME8AK

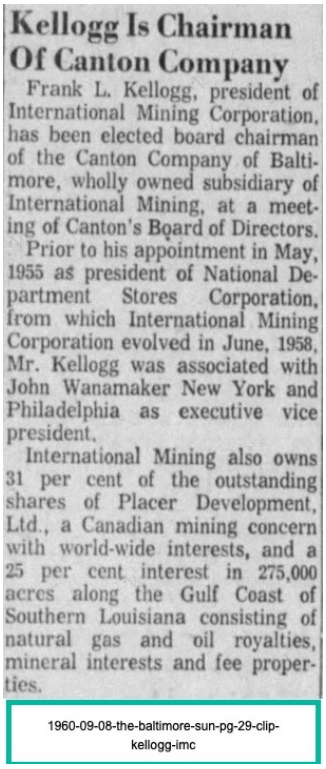
1960 (July 28) - The Canton Company became a wholly - owned subsidiary of the International Mining Corporation

Version of this book that had OCR run on it : 1978-historic-canton-baltimores-industrial-heartland-and-its-people-norman-rukert-ocr.pdf / https://drive.google.com/open?id=1mAn_vXKzMSBCn9ZARrUwrD0etnGmOcax

page 48 - ***"On July 28, 1960, The Canton Company became a wholly-owned subsidiary of the International Mining Corporation, a New York-based conglomerate."***

1960 (Sep)

1960-09-08-the-baltimore-sun-pg-29.jpg / https://drive.google.com/open?id=1oDp_j5eKzEMecse4A1pE0NP0CpWpr_Da



Kellogg Is Chairman Of Canton Company

Frank L. Kellogg, president of International Mining Corporation, has been elected board chairman of the Canton Company of Baltimore, wholly owned subsidiary of International Mining, at a meeting of Canton's Board of Directors.

Prior to his appointment in May, 1955 as president of National Department Stores Corporation, from which International Mining Corporation evolved in June, 1958, Mr. Kellogg was associated with John Wanamaker New York and Philadelphia as executive vice president.

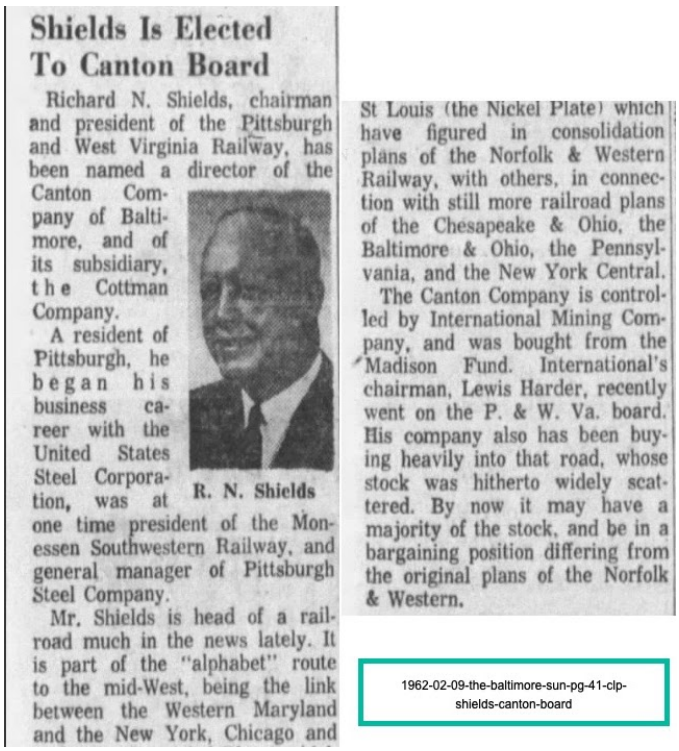
International Mining also owns 31 per cent of the outstanding shares of Placer Development, Ltd., a Canadian mining concern with world-wide interests, and a 25 per cent interest in 275,000 acres along the Gulf Coast of Southern Louisiana consisting of natural gas and oil royalties, mineral interests and fee properties.

1960-09-08-the-baltimore-sun-pg-29-clip-kellogg-imc

1960-09-08-the-baltimore-sun-pg-29-clip-kellogg-imc.jpg / https://drive.google.com/open?id=1o1LVq6KksrflhuEP-lKZnIoqU2lVyxwe

1962

1962-02-09-the-baltimore-sun-pg-41.jpg / https://drive.google.com/open?id=1oFcY_0Qgqjb663d-pl-18TpMDawD1WO-



Shields Is Elected To Canton Board

Richard N. Shields, chairman and president of the Pittsburgh and West Virginia Railway, has been named a director of the Canton Company of Baltimore, and of its subsidiary, the Cottman Company.

R. N. Shields

A resident of Pittsburgh, he began his business career with the United States Steel Corporation, was at one time president of the Monessen Southwestern Railway, and general manager of Pittsburgh Steel Company.

Mr. Shields is head of a railroad much in the news lately. It is part of the "alphabet" route to the mid-West, being the link between the Western Maryland and the New York, Chicago and St Louis (the Nickel Plate) which have figured in consolidation plans of the Norfolk & Western Railway, with others, in connection with still more railroad plans of the Chesapeake & Ohio, the Baltimore & Ohio, the Pennsylvania, and the New York Central.

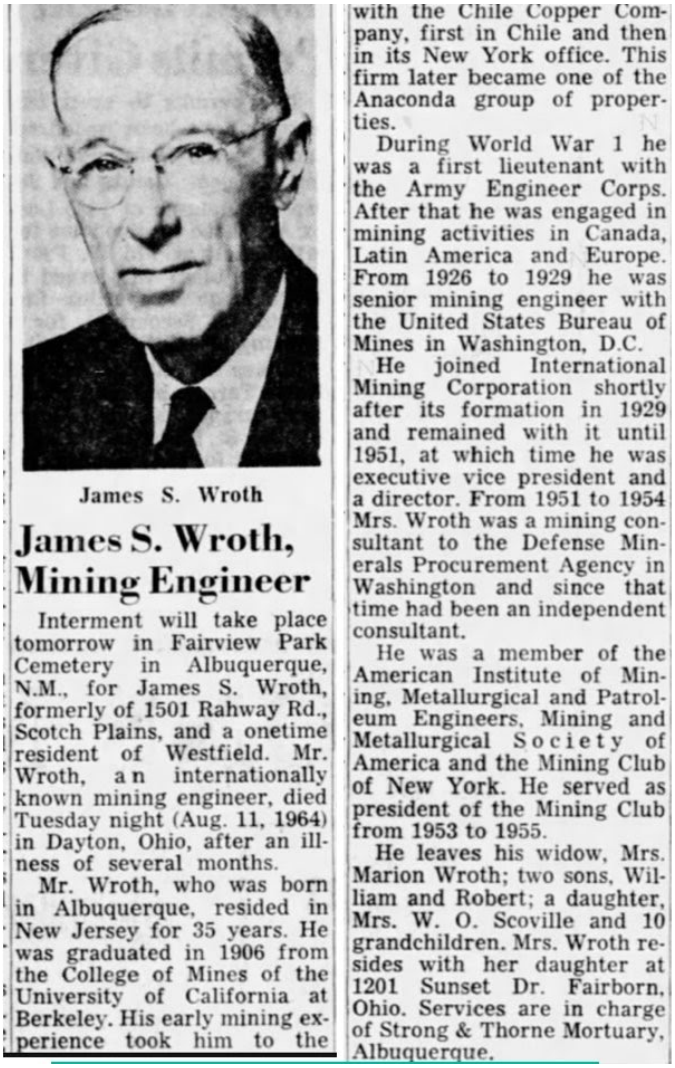
The Canton Company is controlled by International Mining Company, and was bought from the Madison Fund. International's chairman, Lewis Harder, recently went on the P. & W. Va. board. His company also has been buying heavily into that road, whose stock was hitherto widely scattered. By now it may have a majority of the stock, and be in a bargaining position differing from the original plans of the Norfolk & Western.

1962-02-09-the-baltimore-sun-pg-41-clp-shields-canton-board

1962-02-09-the-baltimore-sun-pg-41-clp-shields-canton-board.jpg / https://drive.google.com/open?id=1nnOOkjUC57h7pAM_fYh5cgsSUYM9bCed

1964 -James s Wroth

1964-08-14-the-courier-news-bridgewater-nj-pg-4.jpg / https://drive.google.com/open?id=1pM7_RtiEcYQYbUgqpD9tEjyqmANxS5Fg



James S. Wroth

James S. Wroth, Mining Engineer

Interment will take place tomorrow in Fairview Park Cemetery in Albuquerque, N.M., for James S. Wroth, formerly of 1501 Rahway Rd., Scotch Plains, and a onetime resident of Westfield. Mr. Wroth, an internationally known mining engineer, died Tuesday night (Aug. 11, 1964) in Dayton, Ohio, after an illness of several months.

Mr. Wroth, who was born in Albuquerque, resided in New Jersey for 35 years. He was graduated in 1906 from the College of Mines of the University of California at Berkeley. His early mining experience took him to the with the Chile Copper Company, first in Chile and then in its New York office. This firm later became one of the Anaconda group of properties.

During World War 1 he was a first lieutenant with the Army Engineer Corps. After that he was engaged in mining activities in Canada, Latin America and Europe. From 1926 to 1929 he was senior mining engineer with the United States Bureau of Mines in Washington, D.C.

He joined International Mining Corporation shortly after its formation in 1929 and remained with it until 1951, at which time he was executive vice president and a director. From 1951 to 1954 Mrs. Wroth was a mining consultant to the Defense Minerals Procurement Agency in Washington and since that time had been an independent consultant.

He was a member of the American Institute of Mining, Metallurgical and Patroleum Engineers, Mining and Metallurgical Society of America and the Mining Club of New York. He served as president of the Mining Club from 1953 to 1955.

He leaves his widow, Mrs. Marion Wroth; two sons, William and Robert; a daughter, Mrs. W. O. Scoville and 10 grandchildren. Mrs. Wroth resides with her daughter at 1201 Sunset Dr. Fairborn, Ohio. Services are in charge of Strong & Thorne Mortuary, Albuquerque.

1964-08-14-the-courier-news-bridgewater-nj-pg-4-clip-passing-james-s-worth.jpg / https://drive.google.com/open?id=1pJaLqwUFElCdfPf7njTLJO_X8DnnXSkz

1965

1965-12-08-the-baltimore-sun-pg-41.jpg / https://drive.google.com/open?id=1oVX6QzHLYOKw-vMFTXIknIsWA6QA3x5k

Two Companies Sell Rail Stock

(Dow Jones News Service)

New York, Dec. 7 — Two companies sold a total of 494,390 shares of Pittsburgh & West Virginia Railway's capital stock early in November. The company had 1,510,000 shares outstanding.

International Mining Company, New York-based firm with holdings in mining, gas, oil, and real estate, sold 351,810 of Pittsburgh & West Virginia's stock to "Institutional investors," according to L. B. Stein, vice president of International Mining.

Stein, who is also treasurer of Pittsburgh & West Virginia, said the stock was sold because International Mining will "eventually become a real estate trust."

1965-12-08-the-baltimore-sun-pg-41-clip-imc-pitt-sale

1965-12-08-the-baltimore-sun-pg-41-clip-imc-pitt-sale.jpg / https://drive.google.com/open?id=1oJB2E2DA-_IpjpgGIGhEuXYaAY5AuZXQ

Kellogg - New pier

1967

1967-05-27-the-baltimore-sun-pg-b-9.jpg / https://drive.google.com/open?id=1ofTFIEgwS2Wx2ZC-1sGjqkj8ak03TqrO

CONTAINER TERMINAL DEDICATED

17-Acre Cargo Facility To Cost $4,000,000, Is City's First

By JOHN B. O'DONNELL, JR.

Mayor McKeldin yesterday cut a ribbon to open officially the first Baltimore marine terminal specifically designed and built for the handling of cargo containers.

Mr. McKeldin joined with officials of Sea-Land Service, Inc., and the Canton Company in dedicating the new Sea-Land terminal in the Sea-Girt area of the port.

The $4,000,000 terminal, which will not be ready for actual ship operations for several weeks, is the first phase of what Canton expects to be a $35,000,000 to $40,000,000 marine terminal in the Sea-Girt area.

Canton built the new 17-acre facility, which stands largely on created fill land, and is leasing to Sea-Land for 25 years.

Executives Present

The dedication took place during a luncheon at the new terminal facility.

Participating in the ribbon-cutting ceremonies with Mr. McKeldin were Frank Kellogg, Canton chairman; Raymond S. Clark, Canton president; and Kenneth Younger, Sea-Land executive vice president. Kellogg also is president of the International Mining Corporation, which owns Canton.

1967-05-27-the-baltimore-sun-pg-b-9-clip-sea-land-service-balt

DEDICATED—Aerial view shows the new 17½ acre Sea-Land Service, Inc. terminal in Canton which was dedicated yesterday. The Canton Company built the facility.

Sea-Land has been operating containerships from Baltimore for the last four years, using Canton's Pier 10.

Both Mr. McKeldin and Clark noted in brief remarks that the terminal is Sea-Land's second major North Atlantic port facility.

Clark noted that proposed route of the East-West expressway would take some 70 acres of Canton's "best industrial land" in East Baltimore.

Omits Reference

"It is our hope," he added, "that we can replace this land lost for industrial development by filling in and bulkheading this area so that one day the entire area will be a modern marine terminal with large acreages available for industry."

However, in reading from a prepared text he omitted a sentence which said that "with this in mind, we have been discussing methods and possible solutions with both Baltimore city officials and officials of the Maryland Port Authority."

Sea-Land now operates a weekly service to Puerto Rico and a weekly service to Europe from Baltimore. The European service has been curtailed for about two months because of a shortage of ships. The shortage resulted from inauguration of a trans-Pacific service for the Government and the temporary withdrawal of two ships shipyard repair work.

The company hopes to get European service from Ba more under way again in near future, officials said.

The new Sea-Land termi has a marshaling yard for 35-foot containers, a 50,(square-foot office and wa house building, two rail sidi and a gantry crane especia designed for the handling containers.

1967-05-27-the-baltimore-sun-pg-b-9-clip-sea-land-service-balt.jpg / https://drive.google.com/open?id=1oYeqybPCcRtamH_VxeFfiJa1LbtAmE-A

1970

1970-11-15-the-baltimore-sun-pg-d-8.jpg / https://drive.google.com/open?id=1oiS7wIp8GndFx4hRuawwo7eAXezQEjoX

Spies Threatened With Guns At Australia Nickel Area

Perth (AP)—A sign that warns: "trespassers will be shot" illustrates the tension surrounding West Australia's latest glamour nickel area, Trough Wells.

Trough Wells, 35 miles north of Southern Cross and 250 miles east of Perth, is the drilling site of a company that is the current favorite of share speculators—the International Mining Corporation IMC. The eyes of the financial world have been on Trough Wells and IMC since the company's shares rocketed from 50 cents to more than $10.

The Trough Wells notice serves as a warning to spies who have been lurking near the drill sites. Another notice has been spelled out on the red earth in white stones for aerial spies —a two word message incorporating a four letter word meaning to go away.

In the past few weeks spies have chartered aircraft to plot the position of the drill holes and crept into the drill site at night to steal samples of test ore.

Others, armed with binoculars, have hidden in the bush around the drill site to spy on the drillers.

1970-11-15-the-baltimore-sun-pg-d-8-clip-spies-perth

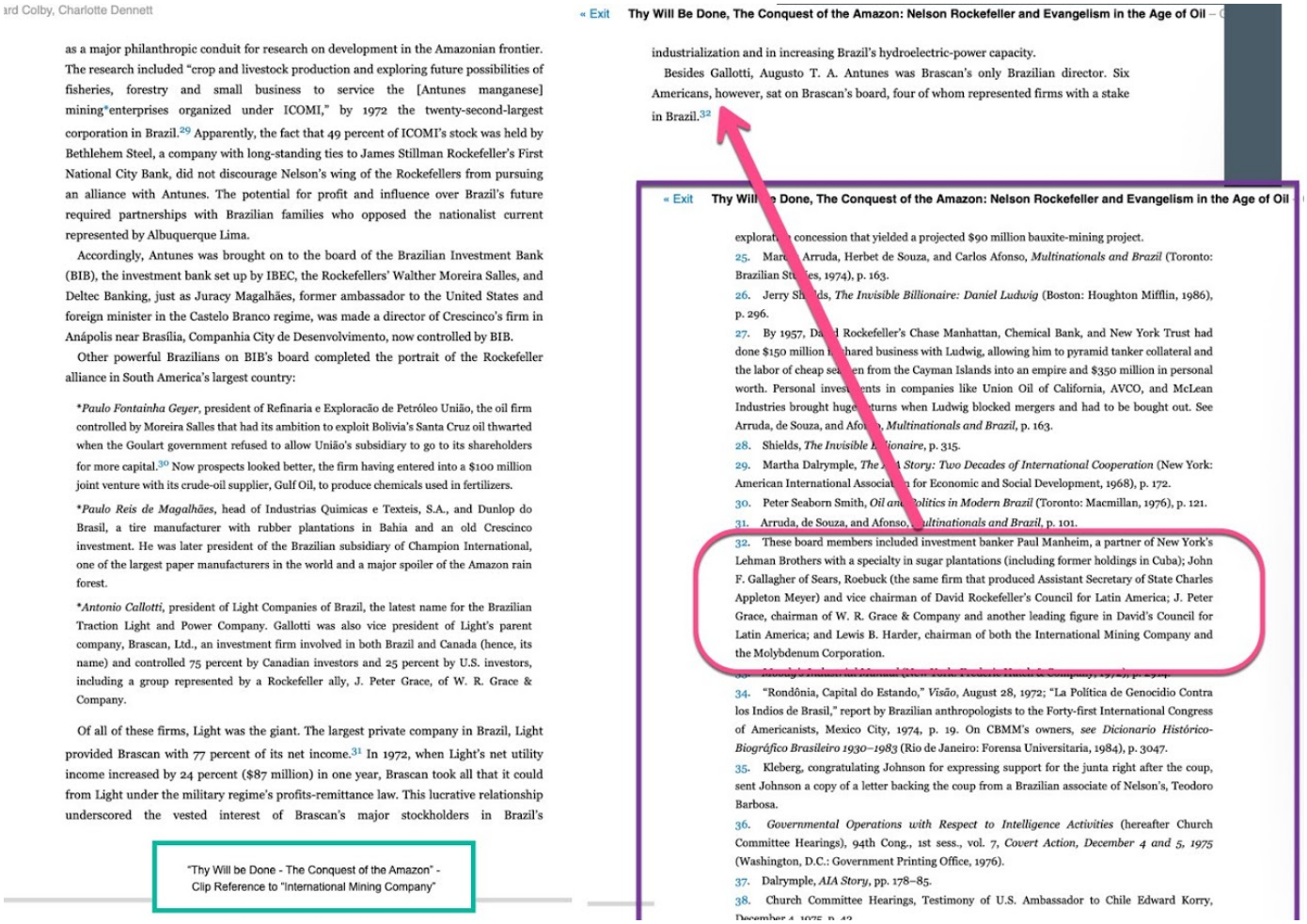
1970-11-15-the-baltimore-sun-pg-d-8-clip-spies-perth.jpg / https://drive.google.com/open?id=1rhZpV7aS0S1Jr7zKTDV-X6sRIywvLtal

1972 note in book = "Thy Will be Done : The Conquest of the Amazon"

Lewis Bradley Harder (born 1918) was chairman of ***"International Mining Company".*** This helps us verify that in media sources in the 1900s, ***"International Mining Corporation"*** is sometimes referred to as ***"International Mining Company"***.

The chairman **Lewis Bradley Harder (born 1918)** of **International Mining Corporation** was also the chairman of the **Molybdenum Corporation** .

https://books.google.com/books?id=t9U3DwAAQBAJ&dq=new+york+%22The+International+Mining+Company%22&source=gbs_navlinks_s



1995-thy-will-be-done-the-conquest-of-the-amazon-rockefeller-and-evangelism-in-the-age-of-oil-colby.jpg / https://drive.google.com/open?id=1qw9Yzp2hUHuOBnOcAGLIqmyWOv8tXEwS

1972

1972-07-20-the-central-new-jersey-home-news-pg-27.jpg / https://drive.google.com/open?id=1pfGrennD0fPL3wSwvRTNascl0CcffDrO

Washington Merry-Go-Round

Gerald Ford Linked to Lobby

By JACK ANDERSON

1972-07-20-the-central-new-jersey-home-news-pg-27-clip-ford-imc

WASHINGTON — It can now be documented that House GOP leader Gerald Ford had a cozy relationship with an influence-peddling Washington lobbyist who repaid Ford's favors with donations to the Republican party.

As far back as January 27, 1970, we reported that lobbyist Robert Winter-Berger was operating out of Ford's office. We then lacked evidence, however, that Winter-Berger gave campaign cash in return for Ford's intervention in federal cases.

Now, Winter-Berger has confessed his relationship with Ford, including the financial quid pro quo, in a book entitled "Washington Pay Off."

Ford has denounced the book as "a bunch of innuendoes and fabrications." The Republican leader said he knew Winter-Berger slightly but could remember only a single instance in which he helped one of the lobbyist's clients. This was an immigration case which Ford said was "meritorious."

Ford's staff told us the office files contain only a half-dozen letters relating to Winter-Berger, all of them dealing with the immigration case. Said Ford's top aide, Frank Meyer, of Winter-Berger: "He was not a close friend. He was no different than dozens of people who come into the office."

Our own investigation, however, has uncovered close to 50 letters from Ford's office involving Winter-Berger. We have also turned up several cases in which Ford went to bat for Winter-Berger's clients.

Ford's Favors

Once, Winter-Berger arranged for the GOP leader to give a public endorsement to an organization seeking to standardize the world calendar. Another time, Ford helped Winter-Berger in his efforts to get a diplomatic appointment from the Nixon Administration for Francis Kellog, president of International Mining Corporation.

Despite Ford's insistence there was "no quid qro quo" in his relationship with Winter-Berger, we have obtained copies of letters Ford wrote to the lobbyist thanking him for campaign contributions.

A typical letter, written after Winter-Berger donated $500 to the GOP in 1967, declared: "Many, many thanks for your most generous contribution." The letter is signed simply, "Jerry."

Another "Dear Bob" letter, thanking Winter-Berger for $250, calls the money "wonderful help" and says Ford is "deeply grateful."

Ford's principal help to Winter-Berger was the use of his office. This enabled the lobbyist to impress his clients with his friendship with Ford.

The congressman has now denied that Winter-Berger used the office. But letters in our possession show that the lobbyist was close not only with Ford but with members of his staff.

Ford doesn't deny that Winter-Berger made donations to the Republicans but insists that none were made to him. Yet we have found Winter-Berger gave campaign contributions in ways that could be of direct help to Ford.

For example, the lobbyist gave hundreds to the Republican Finance Committee in Kent County, Mich., which happens to be Ford's home base. A 1969 letter of gratitude from the GOP county finance chairman advised Winter-Berger:

"You have become a member of a small and distinguished group of Kent County 'Pace Setters' who donate $500 or more to the Republican cause."

The letter adds significantly: "Your good friend Jerry Ford was of course, re-elected. . .Your kind of party support was a major factor."

Whiskey Caper

A veteran investigator for the House Interstate Commerce Committee has been caught running whiskey, gin and wine across interstate lines.

The arrest of the investigator, William Druhan, is all the more embarrassing because his boss, Chairman Harley Staggers, D-W.Va., is one of Congress's most determined teetotalers.

Druhan and his immediate superior, committee counsel Daniel Manelli, mindful of Stagger's abstemious ways, have kept him in the dark about the arrest for six months.

The incident occured on February 3 when Druhan bought 40 bottles of Bourbon, scotch, gin and wine for a party in Washington. Before delivering the booze, however, he crossed into Virginia on another errand.

A Virginia trooper was following him in an unmarked car. He caught Druhane near the Pentagon. The charges were dropped after Druhan passed a four-month probation without further incidents.

Asked about the episode, Druhan said he "had no intention of doing anything wrong." He acknowledged, however, that he had planned to take some of the leftover liquor into Maryland. This, too, would have broken the law.

1972-07-20-the-central-new-jersey-home-news-pg-27-clip-ford-imc.jpg / https://drive.google.com/open?id=1pfEws8bdpJnipcH1DTjfoq2iKwSkhcwN

1973 (Aug)

https://history.state.gov/historicaldocuments/frus1969-76ve11p2/d259

1973-08-10-usa-state-department-memorandum-from-william-j-jordan-of-nat-sec-council-staff-for-kissinger.pdf

Memorandum From William J. Jorden of the National Security Council Staff to the President's Assistant for National Security Affairs (Kissinger)1

August 10 1973

Ten days ago, the Colombian Minister of Mines (strongly anti-American) sent to the Senate a bill that would permit expropriation of the US-owned International Mining Company without cash compensation

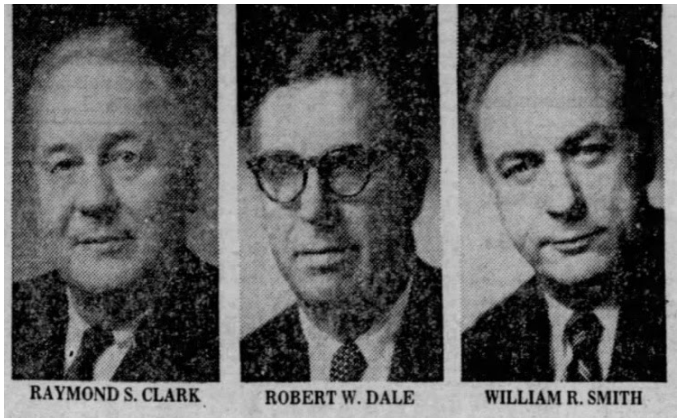
Background

IMC has been operating gold mines in Colombia for 50 years. It owns the mines and there is no contractual agreement. In recent years, the company had been losing money and was actively seeking Colombian participation, private or public. Now, with world gold prices at record highs, the company is showing a profit. I gather the company is unpopular in the region where it operates. This may be because of company actions or merely because it is foreign-owned, extractive and paternalistic. In any event, the ill feeling against the company makes expropriation attractive politically.

1976

Raymond S. Clark (born in 1913) was (and still is) a board member at Davison Chemical Company . This would imply that Robert Swan Mueller I (b1893) (who is the exclusive distributor for Davison Chemical), would be a business acquaintance. As Davison Chemical operations have been in the "lower Clinton St" area of Canton, this also suggests a long-time relationship between Robert Swan Mueller I (b1893) and the person who is now retiring as President of Canton Company .

1976-12-18-the-baltimore-sun-pg-11.jpg / https://drive.google.com/open?id=1osXwsi0MK-AmOutTM_wzIxQ-f9Pj2mb0



RAYMOND S. CLARK ROBERT W. DALE WILLIAM R. SMITH

Clark, president of Canton, will take early retirement

Raymond S. Clark, president of Canton Company since 1964, has chosen to take early retirement, according to an announcement yesterday by Lewis B. Harder, Canton's board chairman.

At a board meeting yesterday, Robert W. Dale, Jr., executive vice-president, was elected president and chief executive officer and William R. Smith, vice-president, was elected executive vice-president of the diversified, maritime-oriented company. The promotions are effective January 1.

Mr. Clark, who will turn 63 the day of his retirement, is a New York native who practiced law in Baltimore following his 1939 graduation from the Yale law school. He joined Davison Chemical Corporation in 1951 and moved to Canton Company in 1961. He will remain as a director of and consultant to Canton Company, a spokesman for the company said.

Canton Company, now a subsidiary of International Mining Corporation is in the real estate, insurance, warehousing and stevedoring businesses; it owns a marine terminal in the Canton section of Baltimore and the Canton Railroad, a switching line serving the terminal and nearby industrial installations.

"I think we've got a great thing going in this port if we don't run out of money and the appropriate governments will permit some form of dredging," the outgoing president said in an interview yesterday.

Canton Company itself, he said, is interested in the future development of its Sea Girt property, east of the main Canton Company Marine Terminal facilities, and hopes eventually to bulkhead and fill property there that is now under water to form additional berthing and backup storage area.

Under Mr. Clark, Canton Company has outgrown its office building, known as Canton House, on Water street. Last summer it reserved office space in the state's new World Trade Center, becoming the first formally committed private-sector tenant.

As for Mr. Clark's retirement plans, he said he "might try to hang out a shingle somewhere" and was looking forward to a trip to Australia.

Mr. Dale, the newly elected president and chief executive officer, became executive vice-president of both Canton Company and its Canton Railroad Company subsidiary in 1975.

Mr. Smith, Mr. Dale's replacement as executive vice-president, was elected this year to directorships of Canton Company and three subsidiaries: Canton Railroad Company, the Cottman Company and Canton Agency, Inc.

1976-12-18-the-baltimore-sun-pg-11-clip-clark-retirement

1976-12-18-the-baltimore-sun-pg-11-clip-clinton-retirement.jpg / https://drive.google.com/open?id=1oqh47w2qwCmIed4J52sNnoTVEvPJvUjQ

1977 - David Murdock / Pacific Group : Purchaser of International Mining Corporation

1977-10-30-the-lincoln-nebraska-star-pg-7b.jpg / https://drive.google.com/open?id=1sKqVuJbF-O9D576I4LP69OFrO1ChkFgp

1977-10-30-the-lincoln-nebraska-star-pg-8b.jpg / https://drive.google.com/open?id=1sP3F2L_lI1WREV1TFto9BpYIpejDY5XX

Back to the 'Sixties

Pacific Holding Corp., a conglomerate, is riding high

Reprinted by courtesy of Barron's, Oct. 24, 1977 issue

By Michael Brody

America is still a country where a high-school drop-out can start out pumping gas and end up putting together his own personal conglomerate with over $120 million in assets. To be sure, he may step on a few toes along the way and leave a few outraged shareholders (and lawsuits) in his wake. But then that tends to happen when you're an aggressive connoisseur of values. And David Murdock definitely is an aggressive connoisseur of values.

Ten days ago, Murdock's Pacific Holding Corp. announced its intention to purchase the remaining 26% minority interest in International Mining, major control of which it acquired last spring, and merge the company with a wholly owned subsidiary of Pacific. The gobbline-up of International Mining was a throwback to the good old days of the late 'Sixties: an obscure Amex holding company with interests in bricks, tiles and tin cans, total assets of $48 million and net income of $3 million, leveraging itself to the hilt to take over a Big Board mining firm boasting $89 million in total assets and net income of $5.5 million—a potential earnings stream more than adequate to service the debt on the 9% debentures used to buy it.

Pacific also disclosed the out-of-court settlement of an International Mining shareholder lawsuit, a settlement which will add $1 (and perhaps a few cents more) in cash to the $25 debenture purchase price—the debentures, listed on the Curb, are currently trading at around 21.

David Murdock

Even after upping the ante, Pacific can take pride in a bargain: the assets of International Mining, as pointed out at the time (Barron's, March 7, April 4), commanded a market value of around $35 a share. The takeover, which was not opposed by International Mining's board, was something less than arm's length; Pacific already was International's largest shareholder, with 21.4% of the stock, and Murdock had been a director for several months when the bid was made. But lawyers for the unhappy plaintiff apparently felt that this point was not likely to be worth much more than $1 in the courts.

Hackles raised

Murdock's takeover methods were raising hackles long before he hit the big time with International Mining. His signature techniques include a penchant for companies with rocky managements and unhappy shareholders, and the quiet buying-up of shares by a "group of investors," some of whom just happen to be directors of the same holding company. But the neatest twist Murdock has added to the takeover game has been to secure well-placed allies on the board of the company he has chosen to move in on—which in the case of International Mining appears to have included the entire board.

Murdock's record has not been one of unbroken success, though even when defeated in a takeover bid, he usually has managed to make money on the deal. His worst setback was a disastrous venture into the banking business which left him with little in the way of assets but a near-bankrupt tax-loss company, Financial Corp. of Arizona, a small personal fortune, and a good credit rating with a wide range of financial institutions apparently unconcerned about his lack of success in their own line of business. That was apparently all he needed to get him started on the acquisition trail.

Murdock's business career began in 1940, when he dropped out of high school to run first a gas station and then a short-order restaurant in Detroit. After World War II, he moved out to Phoenix and entered real estate. By 1960, the Arizona development boom had turned him into a 37-year-old millionaire real estate operator controlling $25 million in funds. With friends in Phoenix, he put together Financial Corp. of Arizona, an OTC financial services outfit which controlled a bank, a savings-and-loan association, two title insurance companies and a privately owned property management and development firm, David H. Murdock Development Co.

Timing off

Murdock's timing was way off; FCA became an easy source of loans for large commercial and residential projects when Phoenix already showed signs of overbuilding. The collapse of the Arizona real estate market in 1964, and the indictment of an officer at a subsidiary for lending irregularities, led to a run on the savings and loan and massive losses. The subsidiary, Union Title Insurance, was placed in receivership in April 1965. Most of FCA's assets, including its interests in Pioneer Bank of Arizona, Home Savings & Loan, another title insurance company and real estate acquired through foreclosures on bad loans, had to be sold off over the next several years to cover its debts. By the end of 1968, FCA was a shell, its principal assets two downtown Phoenix office buildings and tax-loss credits of $4.4 million which were usable between 1969 and 1973.

Murdock shrugged off the setback (he was FCA's largest shareholder, with over 20% of the stock); he switched turf to Southern California and went back into real estate in Orange County through his private development company. He also started to hunt takeover targets which could profitably use tax-loss credits, and was joined by two new business partners: Willard D. Voit, chairman of Voit Rubber, and George B. Cook, president and chairman of Bankers Life Insurance of Lincoln, Neb.

In February 1969, Murdock and Cook obtained a $1 million short-term bank loan from the First National Bank & Trust of Lincoln, which they personally guaranteed, and another $300,000 from Voit, and bought Yankee Hill Brick Manufacturing Co. (in Lincoln) for $1.25 million from its parent, Ferguson & Co. FCA than took over both Yankee Hill and the debt, together with additional loans from Cook and Voit (who became directors), in a series of transactions in which FCA's equity was substantially diluted and Murdock was issued shares in settlement of earlier loans which increased his holdings to 32%. A small Arizona property company, Mogollon Investment Corp., also was purchased. And, in October 1969, Murdock was narrowly prevented from snapping up another modest-sized Nebraska firm, Store Kraft Manufacturing, of Beatrice.

Parallels

The raid on Store Kraft holds interesting parallels with allegations currently being made in a lawsuit in which Murdock, is involved as the result of an attempt last year to take over Amex-listed Ormand Industries. George Cook's brother, William W. Cook, head of the Beatrice National Bank & Trust Co. and a director of Store Kraft, went to work soliciting options from shareholders without the knowledge of Store Kraft's management. George Cook's son, G. Bradford Cook (who later resigned as chairman of the SEC in 1973 in the wake of the Vesco case), also was heavily involved in the buying, as eventually was Murdock. Collectively, they managed to purchase about 17% of the company's stock; Murdock and another Cook associate and FCA director even gained seats on the board. But their bid for control was finally blocked when Store Kraft President Merle Jones solicited and received offers from possible corporate buyers of $15 a share, as against the $9.50 a share Murdock's partners were offering. Murdock and his partners were finally bought out—at a tidy profit—for $15 a share.

The Cooks' Nebraska connection short-circuited, Murdock went back to California to acquire a number of small building materials companies: ceramic tile-maker Huntington Tile in 1970, a couple of Huntington distributors in 1971, a hardware company in 1972, two more Huntington distributors in 1973 and 1974. By this time, FCA had sold off the last of its Phoenix real estate, shifted its corporate offices to Los Angeles and edged back into the black. In the company's 1973 annual report, Murdock reiterated management's commitment "to a program of aggressive

Cont. on page 8B

Great Plains real estate liked by David Murdock

David Murdock has such a strong liking for Great Plains investments that his real estate portfolio in 12 neighboring states is valued at more than $100 million, according to Murdock Development Co. of Los Angeles. This includes these Lincoln properties:

The 20-story First National Bank Building.

The 340,000 square foot Ace Hardware Distribution Center.

The former Nebraska Farmer building.

Murdock has developed more than $200 million in real estate. Murdock Management Co. handles the leasing of more than three million square feet of commercial real estate, through branch operations in 14 cities, a spokeswoman said.

Back to the 'Sixties

Cont. from page 7B

but conservative external growth. Our merger/acquisition efforts resulted in the analyzing of over 150 companies during 1973." Among them: Pacific Holding Corp.

Pacific Holding consisted of companies making clay pipe, clay tile and tin cans; some minor real estate interests; and a subsidiary real estate development firm, McCarthy Co., which was a drain on both the concern's balance sheet and its income statement. But excluding McCarthy, as management plaintively pointed out in its 1973 annual, Pacific's balance sheet showed $35 million in assets and long-term debt of only $45,000.

Other notice

Those enticing numbers drew other notice as well. In the summer of 1973, a group of investors led by M.J. Coen, a former associate of financier G. Arnholt Smith, began accumulating shares in Pacific, which filed suit to block any takeover. In December, New York wheeler-dealer Arthur L.

George B. Cook

Carter was elected to the board of Pacific following the purchase of a 5% holding by his South Bay Corp.—formerly Fifth Avenue Coach Lines (Barron's, May 28, 1973). Then, in January, Murdock and the Cooks disclosed the acquisition of 19% of Pacific's 1.7 million outstanding shares, having bought out the Coen group as well.

Once again Murdock had the inside track, with two allies on the Pacific board—former McCarthy Co. President James H. McCarthy, and Pacific Vice President Rene R. Woolcott. Woolcott, who had already borrowed $75,000 from Pacific in return for an option on his own 6% holding, received an additional bank loan of $75,000 guaranteed by Murdock and his partners in return for an irrevocable proxy on the shares. Carter sold out to Murdock in time for Pacific's annual meeting in April, where the rebels took over, backed by other shareholders dissatisfied with the ousted management.

After taking over Pacific Holding as a group of private investors, Murdock and his partners turned around and moved to have FCA acquired by Pacific at a price two and a half times its then-current OTC bid. Unfortunately, there were setbacks: McCarthy's losses caused Pacific's annual dividend to be slashed from 34 cents to 16 cents a share (the price of the stock tumbled from around 7½ to around 2½); and in February 1975 plans for the FCA acquisition were terminated (temporarily), due to "prolonged delays" in obtaining SEC approval of the transaction.

The FCA merger finally went through in April 1976. By that time, Woolcoot, whose proxies had helped give Murdock control of Pacific, had defaulted on his indebtedness both to Pacific and to several bank lenders and resigned from his positions with the company. Murdock picked up both the debts and the shares, adding the latter to the bulk of his partners' holdings which he had purchased from them through unsecured bank borrowings by his private development company. Repurchases of its own common by Pacific during 1976 left Murdock by year-end with 30% of the company's 1.3 million shares (now up sharply in price to around 11½).

Unloaded

Finally, moreover, Pacific succeeded in unloading the albatross McCarthy Co. to a group led by its chairman; Pacific then used its virtually debt-free equity base (reduced, it is true, from $29.3 million to $24.6 million by the McCarthy losses of 1974 and 1975), to secure revolving credit note lines with its banks totaling $13 million—ammunition for a new acquisition campaign.

The bullets, in fact, already were flying. In August 1976, a suit was filed in federal court in Los Angeles by Ormand Industries, which has stakes in cans, outdoor advertising and services connected with oil, gas and water well drilling. The suit alleged an illegal attempt to take over Ormand was being made by a group of investors led by Pacific directors G. Bradford Cook (the former chairman of the SEC), George B. Cook, and Willard D. Voit—and claimed that the defendants had filed a "false and misleading" Schedule 13D on acquiring more than 5% of Ormand's stock, attempting to conceal that they were acting on behalf of Murdock and Pacific Holding.

Bradford Cook flatly denied that he or the other directors were acting as anything but private investors; in May of this year, he hit back with a stockholders' suit alleging waste, mismanagement and violations of securities laws by Ormand management. Just six days later, Ormand consented to the court decree in a separate action brought against it by the SEC for improper use of corporate funds and faulty accounting practices, following complaints made by two stockholders, H. P. Skoglund and Barry Ackerley, who had been supporting the Cook partnership. But Ormand's suit to block the Cook takeover bid remains before the courts.

Whether or not Murdock and Pacific were behind those "private investors," Murdock was certainly busy elsewhere. In the fall of 1976, Pacific shelled out $7 million to buy up 21.4% of the shares of International Mining, on Murdock's advice, began accumulating shares in another Big Board firm, Iowa Beef Processors, the nation's largest meat packer. Iowa Beef's stock had been depressed as a result of press articles drawing attention to its management's history of underworld associations and violent labor disputes; International Mining has since snapped up 17% of the shares purely as an investment—according to Murdock—in an undervalued company.

Eye for value

Murdock's eye for value—and his recurring ability to get the inside track—were equally apparent in February of this year, when Pacific made its bid for the rest of International Mining. Murdock's co-directors on the IM board promptly declared that they would not oppose the offer of a $20, 9% debenture for each IM share; International Chairman Lewis B. Harder commented publicly that the offer "looks like a good one." Only outraged screams from small shareholders—and an embarrassingly high bid in April by Union Oil for Molycorp, in which International held a 23% stake—upped the offer to $25 in May; by July, Pacific had acquired 73.6% of International, and is now seeking the rest.

The market expressed no the better of the deal; in June, when it became clear that Pacific's bid had succeeded, Pacific's share price shot up from around 17 ($3 or more below International's) to 28, before settling back down to around 21 ($2-$3 above International's). On a pro forma basis, of course, the budding conglomerate already has a long-term debt-to-equity ratio of better than two-to-one, but International has the earnings to cover the paper.

Less clear is what contribution the ho-hum profits of FCA's bricks and ceramic tiles, or Pacific's clay pipes and tin cans, can make to a corporate collection which now includes interests in mineral resources, a marine terminal facility and substantial investments in Iowa Beef Processors and Union Oil (which traded its shares for Molycorp's). But conglomerates, old and new, don't require much in the way of synergy. All they need is companies with undervalued shares, underleveraged equity and/or acquiescent managements. Obviously, there are still plenty of them out

1977-10-30-the-lincoln-nebraska-star-pg-7b-8b-clip-murdock-pacific.jpg / https://drive.google.com/open?id=1sF0yhTDogI07OK2XF42I3bDVeyEQL7Yq

1978

1978-09-06-the-baltimore-sun-pg-a13.jpg / https://drive.google.com/open?id=1p-1E_csfsLYIdnb7vWWB-XQmQ6sozK8T

Canton Company changes hands, gets private owner

By JESSE GLASGOW
Financial Editor of The Sun

The Canton Company has changed hands again and, in the process, has become privately owned for the first time in many years.

More than a decade ago Canton was acquired by International Mining Corporation, which later became a wholly owned subsidiary of Pacific Holding Corporation.

Until a few days ago, 36.4 per cent of the stock in that Los Angeles firm was held by its chairman and president, David H. Murdock. Mr. Murdock made an offer last April for the other 63.6 per cent; shareholders have approved the cash offer, and now he owns it all, Canton included.

When Mr. Murdock proposed the deal, he offered $28 a share. Two investment banking firms were called in, one by Pacific Holding, the other by Mr. Murdock, and asked to give opinions on a fair market value for each share.

They put the price at $32.50, and that is what Mr. Murdock is paying. It works out to $29 million for the 63.6 per cent he did not already own.

Pacific Holding has about 9 per cent debentures outstanding, issued to raise money for the purchase of International Mining (and Canton), which will continue to be listed on the American Stock Exchange. Its common stock has traded on both the American and Pacific exchanges.

The Canton Company was founded in 1828, by some of the same men who organized the Baltimore and Ohio Railroad the same year.

Peter Cooper, the New York industrialist who built the B. & O.'s first locomotive, was a prime mover in Canton, and he claimed in later years that his money represented the only paid in capital. He still got out with a profit.

Daniel Drew, who admitted a "fondness for Canton shares," was in and out of the stock many times as it jumped up and down in market value.

From the beginning Canton was a big holder of land suitable for development, and gradually it expanded into stevedoring, marine terminal operations, warehousing and belt-line railroad operations.

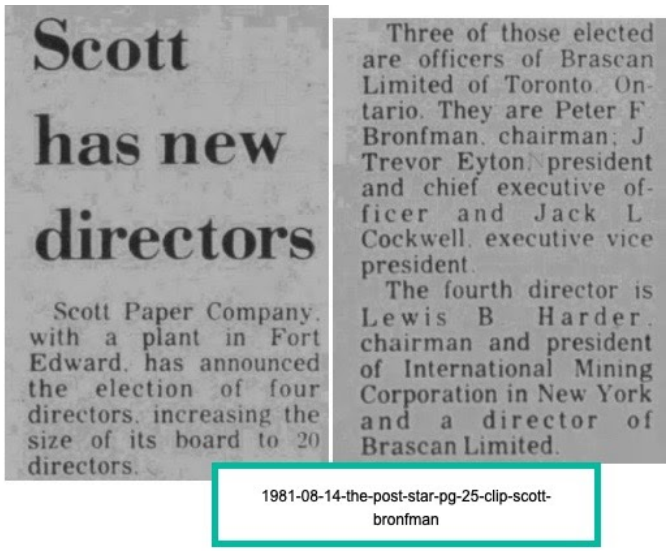
After the Depression, it was owned by Pennroad Corporation, a holding company that in 1958 became Madison Fund. The investment company sold it to International Mining in 1964, some years before International Mining became a wholly owned subsidiary of Pacific Holding.

1978-09-06-the-baltimore-sun-pg-a13-clip-canton-goes-private

1978-09-06-the-baltimore-sun-pg-a13-clip-canton-goes-private.jpg / https://drive.google.com/open?id=1owIk_cp1QL0ppM1X_2Xv5LSq_uydqYft

1981

1981-08-14-the-post-star-glens-falls-ny-pg-25.jpg / https://drive.google.com/open?id=1nKZKQsNB43wkGJoe8RrzLXJE7LCzgO1H



Scott has new directors

Scott Paper Company, with a plant in Fort Edward, has announced the election of four directors, increasing the size of its board to 20 directors.

Three of those elected are officers of Brascan Limited of Toronto, Ontario. They are Peter F Bronfman, chairman; J Trevor Eyton, president and chief executive officer and Jack L Cockwell, executive vice president.

The fourth director is Lewis B Harder, chairman and president of International Mining Corporation in New York and a director of Brascan Limited.

1981-08-14-the-post-star-pg-25-clip-scott-bronfman

1981-08-14-the-post-star-glens-falls-ny-pg-25-clip-scott-bronfman.jpg / https://drive.google.com/open?id=1nIYbqauB16uIIIIbVFyxUAqvKsG1GQck

Internet Media Network Incorporated

Employees / Executives :

- Rodney Lance Joffe (born 1954) (Founder - Created IMN as a division within his company American Computer Group)
- Thomas Johannes Obenhuber (born 1955) (one of the founding employees - stays until after Internet Media Network changed it's name (1997) to Genuity Incorporated)
- **Mr. Frank Dziuba - Founder of an Internet Service Provider [Silicon Beach Communications Inc.] in Santa Barbara, California in 1994**

Related / Associated companies

- American Computer Group [of CA/AZ] (IMN is created as a subsidiary of ACG, or so it has been claimed, by Rodney Lance Joffe (born 1954))
- Bechtel
- Silicon Beach Communications Inc.
- Genuity Incorporated
- GTE Corporation

HISTORY

"In the early 1990's, following the NSF disgorgement of commercial Internet traffic from the NSFNet, [Rodney Lance Joffe (born 1954)] launched [**Internet Media Network Incorporated**] as the Internet division of [American Computer Group [of CA/AZ]]. " Source - [HC004O][GDrive]

" In 1996 in partnership with **Bechtel Enterprises**, [**Internet Media Network Incorporated**] was renamed [Genuity Incorporated], which then went on to became one of the largest ISP Data Center Operators in the world. The company was driven by Hopscotch™, invented and patented by [Rodney Lance Joffe (born 1954)], and the very first formal content distribution and load balancing technology. " Source - [HC004O][GDrive]

"[Rodney Lance Joffe (born 1954)] remained as the Chief Technical Officer of **Genuity** until the end of 1997 when [Genuity Incorporated] was acquired by [GTE Corporation]. He was then appointed Vice-President, Strategic Technologies, and Chief Technology Officer of the Business Services division of **GTE Internetworking**." Source - [HC004O][GDrive]

EVIDENCE TIMELINE

1994 (est. May) - Internet Media Network was formed

Source - Archive - Discussion Group for NANOG (North America Network Operator's Group) ; See [HI0024][GDrive]

Rodney Lance Joffe (born 1954) : *"One of the misnomers about [Genuity Incorporated] is that we're a start up.* ***You'll actually find that we were one of the 22 direct connects to the CIX router in Santa Clara already in May of 1994****, so I'd hardly call Genuity a start up. Although we were certainly the smallest, or one of the smallest [...], we were very much in business before the Internet truly became mainstream.* ***Anyway, our early allocations were a couple of /24s, and then a 19/. We had to plead with Kim Hubbard for another 19/, but were successful in getting it only when we promised to be frugal in sub-allocations (she didn't ask for empirical evidence).*** *Then Genuity came in to being (December 1995 when I sold 75% of the company to Bechtel)."*

1994 (Oct) - Domain "imn" for "Internet Media Network" is registered

Source - https://ipfind.io/whois

Organization: Internet Media Network (IMN)
RegDate: 1994-10-25
Updated: 2000-09-19
Ref: https://rdap.arin.net/registry/ip/204.74.64.0
OrgName: Internet Media Network <--- note this is not necessarily the original address; it may have been updated.
OrgId: IMN
Address: 4535 S. Lakeshore Drive
Address: Suite 4A
City: Tempe
StateProv: AZ
PostalCode: 85282
Country: US
RegDate: 1994-10-26
Updated: 2019-07-31
Ref: https://rdap.arin.net/registry/entity/IMN
OrgAbuseHandle: RJ48-ARIN
OrgAbuseName: Joffe, Rodney
OrgAbusePhone: [...]

1994 (Nov) - Silicon Beach has announced a merger with Internet Media Network

Source - http://www.silcom.com/scta/941116min.html

Where - (November 16, 1994 - 7:00 p.m.) - South Coast Telecommunications Alliance: General Meeting

Frank Dzuiba, *Silicon Beach/Internet Media Network:*

*Silicon Beach has announced a merger [between **Silicon Beach Communications Inc.**] with Internet Media Network.*

They will be bringing many high speed data connections to the area.

1995 (Jan) - Thomas J Obenhuber joins Internet Media Networks

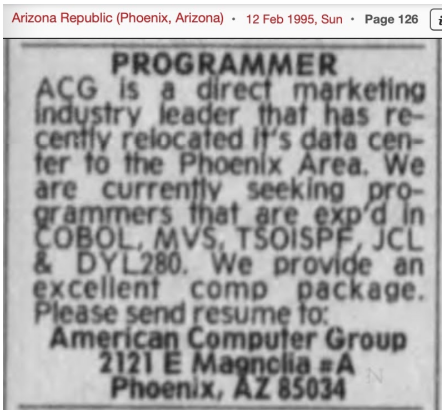
See **Thomas Johannes Obenhuber (born 1955)**

1995 (Feb) - "American Computer Group" (which owns Internet Media Group) has "recently relocated it's datacenter to Phoenix)

Source - https://www.newspapers.com/image/116998788/?terms=%22American%20Computer%20Group%22&match=1

1995-02-12-the-arizona-republic-pg-cl-26.jpg

1995-02-12-the-arizona-republic-pg-cl-26-clip-acg.jpg


Arizona Republic (Phoenix, Arizona) · 12 Feb 1995, Sun · Page 126

PROGRAMMER
ACG is a direct marketing industry leader that has recently relocated it's data center to the Phoenix Area. We are currently seeking programmers that are exp'd in COBOL, MVS, TSO/ISPF, JCL & DYL280. We provide an excellent comp package. Please send resume to:
American Computer Group
2121 E Magnolia #A
Phoenix, AZ 85034

1995 (?) – American Computer Group (ACG) joins Los Nettos as non-voting member.

https://www.losnettos.net/subpage-1/subpage-2/1995-2000-the-ds3-years/

NOTE : Los Nettos was co-founded by **Jon Bruce Postel (born 1943)** ; See https://archive.nanog.org/meetings/nanog44/presentations/Monday/Celeste_WelcometoLA.pdf

"Los Nettos was co-founded by Jon Postel back in 1988, 20 years ago. We wanted to celebrate Jon and his many contributions to the networking community by hosting the joint NANOG/ARIN meetings."

1995 (Oct 27) - ACG and Bechtel are both new/invested in Phoenix ...

https://www.newspapers.com/image/123749208/?terms=%22American%20Computer%20Group%22&match=1

1995 (Dec) - SFGate: Bechtel - "quietly purchased Phoenix-based Internet Media Network Inc"

Jonathan Marshall, Chronicle Economics Editor / Nov. 1, 1996Updated: Feb. 2, 2012 11:51 a.m. / Source - [HM001C][GDrive]

Late last year [, which would be 1995 - as this article is 1996], Bechtel quietly purchased Phoenix-based [Internet Media Network Incorporated], a dormant Internet access provider. The company, which it renamed [Genuity Incorporated], was one of 22 so-called "Tier 1" companies that make up the Internet's backbone.

Others in the same exclusive club include AT&T, MCI, UUNet, AOL and CompuServe. [...]

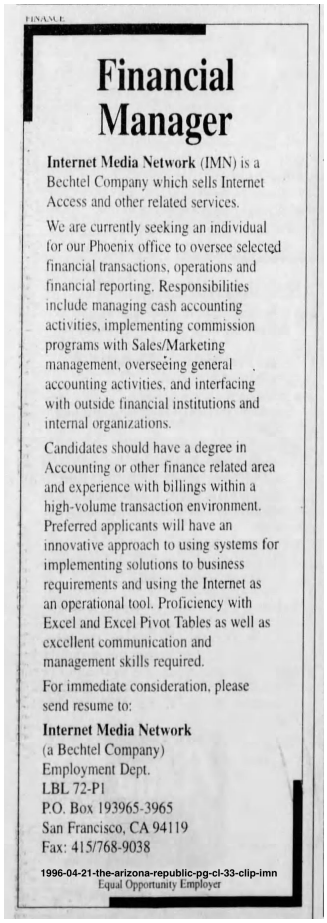
Owner/founder Rodney Lance Joffe (born 1954) sold 75% of the company [Internet Media Network, Inc.] to Bechtel

Source - Archive - Discussion Group for NANOG (North America Network Operator's Group) ; See [HI0024][GDrive]

Rodney Lance Joffe (born 1954) : *"One of the misnomers about [**Genuity Incorporated**] is that we're a start up.* ***You'll actually find that we were one of the 22 direct connects to the CIX router in Santa Clara already in May of 1994****, so I'd hardly call Genuity a start up. Although we were certainly the smallest, or one of the smallest [...], we were very much in business before the Internet truly became mainstream.* ***Anyway, our early allocations were a couple of /24s, and then a 19/. We had to plead with Kim Hubbard for another 19/, but were successful in getting it only when we promised to be frugal in sub-allocations (she didn't ask for empirical evidence). Then Genuity came in to being (December 1995 when I sold 75% of the company to Bechtel)."***

1996 (April 21) - IMN is a Bechtel company / 1996 (June 2) - "Genuity" is a "new" Bechtel company

Full newspaper pages : [HN01FU][GDrive] / [HN01FW][GDrive]



FINANCE

Financial Manager

Internet Media Network (IMN) is a Bechtel Company which sells Internet Access and other related services.

We are currently seeking an individual for our Phoenix office to oversee selected financial transactions, operations and financial reporting. Responsibilities include managing cash accounting activities, implementing commission programs with Sales/Marketing management, overseeing general accounting activities, and interfacing with outside financial institutions and internal organizations.

Candidates should have a degree in Accounting or other finance related area and experience with billings within a high-volume transaction environment. Preferred applicants will have an innovative approach to using systems for implementing solutions to business requirements and using the Internet as an operational tool. Proficiency with Excel and Excel Pivot Tables as well as excellent communication and management skills required.

For immediate consideration, please send resume to:

Internet Media Network
(a Bechtel Company)
Employment Dept.
LBL 72-P1
P.O. Box 193965-3965
San Francisco, CA 94119
Fax: 415/768-9038

1996-04-21-the-arizona-republic-pg-cl-33-clip-imn

Equal Opportunity Employer

"Internet Media Network"

1996 (April 21)
[HN01FV][GDrive]

COMPUTER

Systems Supervisor

Genuity, a new Bechtel start-up company located in Phoenix, is seeking a Systems Supervisor to oversee development and implementation for various systems.

Individual will supervise staff of programmers; develop business specifications; and install and customize systems to support internal operations. Ability to translate business requirements to systems implementation designs a must. Windows NT and SQL Server expertise required; Internet experience a plus.

For immediate consideration, please send resume to:

Genuity
Employment Dept. LBL 72-P-2
P.O. Box 193965
San Francisco, CA 94119
Fax: 415/768-9038

Equal Opportunity Employer

1996-06-02-arizona-republic-pg-cl28-clip-genuity

"Genuity"

1996 (June 2)
[HN01FX][GDrive]

Subsequent History for Internet Media Network, Inc. after the May/June 1996 can be found at :

Genuity Incorporated

https://archive.nanog.org/sites/default/files/Los-Nettos.pdf

The T1 years

Los Nettos Regional Network – the T1 years

While most regional networks were built as 56 kilobit per second networks, Los Nettos started with T1 (1.5 megabit per second) links between all of its sites. When CERFNet was completed in 1989, it provided Los Nettos with a backup connection to the NSF Backbone and vice versa.

- 1988 – NSFNET upgraded to T1 backbone.
- 1988, June – First commitments made for funding for Los Nettos.
- 1988, October – First Cisco gear arrives at USC's Information Sciences Institute for testing and configuration.
- 1988, December – First four nodes are up and passing packets (Caltech, UCLA, ISI, USC), as the all-T1 regional network is realized.
- 1989 – Los Nettos adds nodes for RAND Corporation, Jet Propulsion Laboratory (JPL), TRW, Trusted Information Systems (TIS), IBM, UNISYS, and Naval Ocean Systems Command (NOSC), completing the orginial network.
- 1989 – Los Nettos allows associate connections via member connections.
- 1994 – Los Nettos upgrades its connection to the Internet backbone to DS3 (45Mbps).

https://www.losnettos.net/subpage-1/subpage-2/1995-2000-the-ds3-years/

1995-2000 – The DS3 years

From 1988 to 1994, T1 connections were adequate to run the network, including connections to the NSFNet. In 1994, the connection to NSFNET was upgraded to DS3. Demand for internet connectivity jumped and Los Nettos upgraded the majority of its member connections to 45 Mbps connections (DS3).

- **1995 – American Computer Group (ACG) joins Los Nettos as non-voting member.**
- 1995 – Los Nettos backbone is ugraded to 45Mbps.(T3)
- 1995 – The Associate Program is integrated into Los Nettos and expanded to include hub sites at the Information Sciences Institute, University of Southern California, Caltech, American Computer Group, Jet Propulsion Laboratory, and TRW-Space Systems.
- 1996 – Los Nettos co-founds the MAE-LA / LAAP internet exchange in downtown Los Angeles and Marina del Rey with **Metropolitan Fiber Systems (MFS).**
- 1998 – Los Nettos Co-founder Jon Postel dies on October 16; anniversary plans are delayed.
- 1999 – Los Nettos starts upgrades to gigabit backbone.
- 2000 – Los Nettos celebrates belated 10th-anniversary party in October.

History

The Los Nettos Consortium was created in 1988 by group of Southern California researchers to provide cost-effective connections to the national NSFNET backbone for local campuses and research institutes. **Led by Danny Cohen and Jon Postel of USC's Information Sciences Institute (ISI), the group included Charles Seitz of Caltech, Leonard Kleinrock of UCLA, and Richard Kaplan of USC. The group had the benefit of support from Mark Pullen of the Defense Advanced Research Projects Agency's Information Science and Technology Office (DARPA/ISTO).**

The founding members of Los Nettos made commitments to create the regional network in June 1988. The necessary hardware began to arrive in October 1988; testing started in November, and the first four nodes of the network (ISI, UCLA, USC, Caltech) were up by December 1988. **After CERFNet was built in the San Diego area in 1989, Los Nettos and CERFNet provided backup links to the NSFNET backbone for each other.**

Today, Los Nettos continues to provide connectivity to Los Angeles area educational and research organizations. It is administered and operated by the Information Technology Services (ITS) division of the University of Southern California on behalf of the Los Nettos Consortium.

Timeline

- 1988-1995 – The T1 years
- 1995-2000 – The DS3 years
- 2000-present – 10 gigabits and beyond

See the 1988 entry in the Hobbes Internet Timeline for a more general timeline.

Dr. Bruce Edward Ivins (born 1946)

Wikipedia Dr. Bruce Edward Ivins

1962 - wins award as a teenager

https://www.newspapers.com/image/394478070/?terms=%22Bruce%2Bivins%22

1974 - a man of faith

https://www.newspapers.com/image/104602300/?terms=%22Bruce%2Bivins%22

May 2000

https://www.newspapers.com/image/102379336/?terms=%22Bruce%2Bivins%22

ALL 54 RESEARCH PAPERS

https://www.researchgate.net/scientific-contributions/39736280_B_E_Ivins

page a1

https://www.newspapers.com/image/248360407

Full newspaper page , page A6 : [HN0180][GDrive]

FROM THE COVER

U.S. releases evidence in anthrax case

ANTHRAX [From Page 1A]

million payment to a man wrongly identified as a person of interest, Steven J. Hatfill, who also worked at Fort Detrick.

A memorial service was held for Ivins yesterday at Fort Detrick, where the scientist had labored

cording to an affidavit, except that "home was not good" and he went to the lab "to escape."

Ivins "engaged in behavior and made a number of statements that suggest consciousness of guilt," Taylor said, including discarding a book on DNA coding while under round-the-clock sur-

HOW THE CASE DEVELOPED

September-October 2001

- Researcher Bruce Ivins' evening use of his laboratory at the U.S. Army Medical Institute of Infectious Diseases at Fort Detrick spikes. It is used for research on dangerous animal and human pathogens, including anthrax.
- Anthrax is mailed to lawmakers on Capitol Hill and members of the news media in New York and Florida. By late November, five people are dead and 17 sickened. The victims include postal workers and others who came into contact with the anthrax.

Feb. 2002: Ivins provided anthrax to the FBI to compare with that used in the attacks; however, authorities say the samples were unusable because he failed to follow proper protocols.

April 2002: Ivins provides another anthrax sample. Through genetic testing, it is found to be negative for the presence of the four mutations found in the anthrax used in the attacks.

December 12, 2003: An FBI special agent accompanies Ivins into the laboratory and identifies additional anthrax samples of Ivins' and others that had not been submitted previously.

April 7, 2004:

- Ivins submits the newly identified samples to the FBI.
- On this afternoon, an FBI special agent accompanies Ivins into his lab and seizes other samples that had previously not been submitted, including one known as RMR-1029.

June 17, 2004: The RMR-1029 samples seized from Ivins' lab test positive in comparison with the anthrax used in the 2001 attacks. However, the samples Ivins had submitted did not show a link.

Bruce Ivins in Army photo.
HO AFP/GETTY IMAGES

March 31, 2005. Ivins is informed of the test results. Ivins indicates that he had been aware of the match and that he had told an FBI agent of it. The agent denies having the conversation.

May 7, 2007: Ivins tells investigators that, within three months after the letter attacks, he was aware that his stock of anthrax exhibited similarities to that used in the attacks. He says he learned this information from three co-workers at the lab who participated in the forensic analysis of the anthrax in the letters. Each of those three coworkers denies disclosing such information to Ivins.

for decades to develop vaccines for anthrax. The service was attended by hundreds of soldiers, scientists and family members, according to Ivins' lawyers, who released a statement saying that no concrete evidence had been presented against their client.

"The government's press conference was an orchestrated dance of carefully worded statements, heaps of innuendo and a staggering lack of real evidence — all contorted to create the illusion of guilt by Dr. Ivins," said the lawyers, Paul F. Kemp and Thomas M. DeGonia. They have repeatedly said he was innocent.

But Ivins clearly knew investigators were closing in. His house had been under surveillance for a year, federal agents followed him wherever he went and he had been interviewed by investigators several times. Ivins had a history of mental illness, but the pressure led to a further decline in his condition, colleagues have said, to the point that he was hospitalized.

On July 9, Ivins was attending a group therapy session in Frederick. According to an affidavit released yesterday, he told the group he was a suspect in the anthrax investigation and that he was angry at the government and the investigators.

"He said he was not going to face the death penalty," the affidavit said, "but instead had a plan to kill co-workers and other individuals who had wronged him. He said he had a bulletproof vest, and a list of co-workers, and added that he was going to obtain a Glock firearm from his son within the next day, because federal agents are watching him and he could not obtain a weapon on his own."

He was admitted to a psychiatric wing of Frederick Memorial Hospital the next day. Shortly after he was released, on July 24, he took the overdose of Tylenol and codeine that killed him.

Yesterday, federal lawyers asked a judge in Washington to unseal search warrants and affidavits that spelled out their case, and FBI Director Robert S. Mueller III met with families of the anthrax victims and lawmakers to lay out the evidence against Ivins. One congressman who was briefed said that the presentation was "compelling" but that he was not convinced Ivins acted alone.

According to documents released, investigators traced the anthrax to Ivins' lab in 2005 using newly developed genetic mapping techniques. They concluded that all the anthrax used in the mailings that led to fatalities came from a single flask of anthrax spores known as RMR-1029.

That flask was "created and solely maintained by Dr. Ivins," said Jeffrey Taylor, U.S. attorney for the District of Columbia. "No one received material from that flask without going through Dr. Ivins. We thoroughly investigated every other person who could have had access to the flask, and we were able to rule out all but Dr. Ivins."

The time needed for that investigation explains why Ivins was not identified as the principal suspect until two years later, in 2007, Taylor said. There was "a tremendous amount of additional investigation that needs to take place to identify the universe of individuals who have access to that flask," he said. "We're talking about a large number of individuals, over 100, who potentially had access to this substance."

Ivins' off-hours time in the lab also raised suspicions. Just before the first set of anthrax letters was mailed, on Sept. 18, 2001, Ivins spent long hours at night in the lab containing the anthrax. And then again, before the second set of letters was mailed, on Oct. 9, he spent many night hours in the lab. He was alone during that time, officials said, suggesting he had the time to convert the anthrax into the deadly form that turned up in the letters.

When investigators asked Ivins about those extended hours, he offered "no legitimate reason," according to the affidavit. He said he was working on a project to develop a new vaccine, but he refused to provide any details, the affidavit said.

Ivins' lawyers said he was cooperating with the investigation and had provided hundreds of documents to the government. He had also undergone hours of polygraph tests, they said.

"Dr. Ivins has been extensively questioned by the FBI and has undergone multiple polygraph examinations," the lawyers said. "He has consistently denied any involvement in the anthrax attacks."

Ivins was also under surveillance. And in 2002, when investigators asked Ivins to provide a set of anthrax samples from the RMR-1029 flask, he provided a different set instead.

The correct sample was not provided until 2004.

Investigators also released e-mails yesterday that they said point to Ivins' guilt. On Sept. 26, 2001, Ivins wrote, "Bin Laden terrorists for sure have anthrax ... Osama Bin Laden has just decreed death to all Jews and all Americans." One of the anthrax mailings included the statement: "WE HAVE THIS ANTHRAX ... DEATH TO AMERICA ... DEATH TO ISRAEL."

The e-mails also chronicle Ivins' mental condition. Around the time of the attacks, he wrote a number of e-mails in which he seeks to understand his mental health issues. At one point, he writes that his psychiatrist and counselor believe he has a "Paranoid Personality Disorder" and he says that he has "incredible paranoid, delusional thoughts at times."

Ivins was also troubled during that time because an anthrax vaccine project on which he was working was failing, and he believed that success of the venture was important, the federal authorities said.

"One theory is that by launching these attacks, he creates a situation, a scenario where people realize they need to have this vaccine," Taylor said yesterday.

Officials also sought to explain why the anthrax letters — sent to the offices of Sens. Patrick J. Leahy and Tom Daschle as well as NBC News, *The Washington Post* and the *Sun* tabloid in Florida — were all mailed from Princeton, N.J. Ivins had a habit of traveling long distances to mail letters to disguise the sender, officials said.

They also said he was obsessed with the Kappa Kappa Gamma sorority, and the street box in Princeton from which the letters were posted is just 60 feet from a Kappa Kappa Gamma office. Among other evidence presented in the affidavits, one of the documents quotes a posting on a Web site last year in which Ivins wrote that the sorority had "labeled me as an enemy decades ago, and I can only abide by their 'Fatwah' on me."

Furthermore, investigators determined that the pre-stamped envelopes used in the mailings were bought from a Frederick post office where Ivins had a box. He was also a prolific writer to Congress and the media. A search of his house last fall turned up 68 such letters.

Officials acknowledged lacking direct evidence to connect Ivins to the anthrax attacks but said the circumstantial evidence was overwhelming.

"We have a flask that's effectively the murder weapon from which those spores were taken that was controlled by Dr. Ivins," Taylor said. "The anthrax in that flask was created by Dr. Ivins. We have the suspicious behavior that he had undertaken over the years.

"Circumstantial evidence, sure. Some of it is," Taylor continued. "But it's compelling evidence and in our view would have helped us prove the case against Dr. Ivins beyond a reasonable doubt."

Daschle said yesterday that he would not comment until he had a chance to review the evidence released. Rep. Rush Holt, whose central New Jersey district includes Princeton, said the evidence was "compelling" after receiving a briefing from the FBI director.

But, Holt said, "a number of important questions remain unanswered, such as why investigators remained focused on Dr. Hatfill long after they had begun to suspect Dr. Ivins of the crime and why investigators are so certain that Ivins acted alone."

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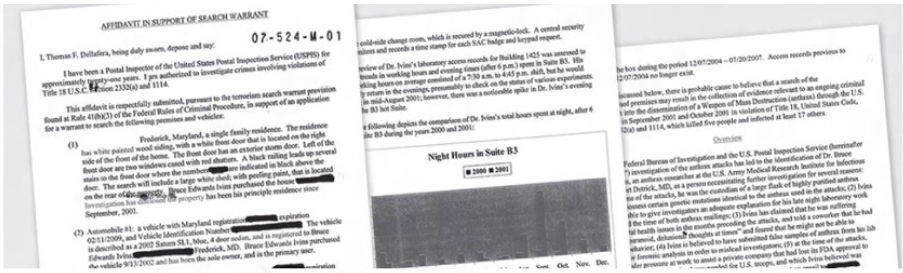
"DR. BRUCE E. IVINS WAS RESPONSIBLE FOR ... THE 2001 ANTHRAX MAILINGS."
JOSEPH PERSICHINI, FBI


AFFIDAVIT IN SUPPORT OF SEARCH WARRANT

07-524-M-01

I, Thomas F. Dellafera, being duly sworn, depose and say:

I have been a Postal Inspector of the United States Postal Inspection Service (USPIS) for approximately [redacted] years. I am authorized to investigate crimes involving violations of Title 18 U.S.C. Section 2332(a) and 1114.

This affidavit is respectfully submitted, pursuant to the terrorism search warrant provision found at Rule 41(b)(3) of the Federal Rules of Criminal Procedure, in support of an application for a warrant to search the following premises and vehicles:

(1) [redacted] Frederick, Maryland, a single family residence. The residence has white painted wood siding, with a white front door that is located on the right side of the front of the home. The front door has an exterior storm door. Left of the front door are two windows eased with red shutters. A black railing leads up several stairs to the front door where the numbers [redacted] are indicated in black above the door. The search will include a large white shed, with peeling paint, that is located on the rear of the property. [redacted] Bruce Edwards Ivins purchased the house [redacted] Investigation has determined the property has been his principle residence since September, 2001.

(3) Automobile #1: a vehicle with Maryland registration [redacted] expiration [redacted] The vehicle is described as a 2002 Saturn SL1, blue, 4 door sedan, and is registered to Bruce Edwards Ivins [redacted] Frederick, MD. Bruce Edwards Ivins purchased the vehicle 9/13/2002 and has been the sole owner, and is the primary user.

Night Hours in Suite B3

2000 2001

[HN0181][GDrive]

Saved Wikipedia "Bruce Edwards Ivins" (April 22 2020)

See [HK002Q][GDrive]

Picture - Ivins at a 2003 awards ceremony at USAMRIID

Born April 22, 1946 in Lebanon, Ohio, U.S.

Died July 29, 2008 (aged 62) at Frederick Memorial Hospital , Frederick, Maryland, U.S.

Cause of death Suicide by overdose

Education University of Cincinnati (Ph.D.)

Employer United States Army Medical Research Institute of Infectious Diseases

Bruce Edwards Ivins (/ˌ aɪvɪnz/; April 22, 1946 – July 29, 2008)[1] was an American microbiologist, vaccinologist,[1] senior biodefense researcher at the United States Army Medical Research Institute of Infectious Diseases (USAMRIID), Fort Detrick, Maryland, and the suspected perpetrator of the 2001 anthrax attacks.[2]

On July 29, 2008, he died of an overdose of acetaminophen (Tylenol) in an apparent suicide after learning that criminal charges were likely to be filed against him by the Federal Bureau of Investigation for an alleged criminal connection to the 2001 anthrax attacks.[3][4][5] No formal charges were ever filed against him for the crime, and no direct evidence of his involvement has been uncovered.[6]

At a news conference at the United States Department of Justice (DOJ) on August 6, 2008, FBI and DOJ officials formally announced that the Government had concluded that Ivins was likely solely responsible for "the deaths of five persons, and the injury of dozens of others, resulting from the mailings of several anonymous letters to members of Congress and members of the media in September and October 2001, which letters contained *Bacillus anthracis*, commonly referred to as anthrax."[7][8] On February 19, 2010, the FBI released a 92-page summary of evidence against Ivins and announced that it had concluded its investigation.[9][10] The FBI conclusions have been contested by many, including senior microbiologists, the widow of one of the victims,[11] and several prominent American politicians. Senator Patrick Leahy (D-VT) who was among the targets in the attack, Senator Chuck Grassley (R-IA), Senator Arlen Specter (R-PA), Representative Rush Holt (D-NJ), and Representative Jerrold Nadler (D-NY)[6][12][13] all argued that Ivins was not solely responsible for the attacks.

The FBI subsequently requested a panel from the National Academy of Sciences to review its scientific work on the case.[14] On May 15, 2011, the panel released its findings, which "conclude[d] that the bureau overstated the strength of genetic analysis linking the mailed anthrax to a supply kept by Bruce E. Ivins."[6][15] The committee stated that its primary finding was that "it is not possible to reach a definitive conclusion about the origins of the *B. anthracis* in the mailings based on the available scientific evidence alone."[12][13][16][17][18][19][20][21]

Early and family life

Bruce Ivins was born, and spent his youth, in Lebanon, Ohio, a small town 30 miles (48 km) northeast of Cincinnati.[22] His parents were Thomas Randall Ivins and Mary Johnson (*nee* Knight) Ivins, and he was the youngest of three brothers.[1] His father, a pharmacist, owned a drugstore and was active in the local Rotary Club and Chamber of Commerce. The family went regularly to Lebanon Presbyterian Church, although Ivins was later a Catholic parishioner.[23] According to C.W. Ivins, one of Ivins' older brothers, their mother Mary was violent and physically abusive to all three children. When she discovered she was pregnant with Bruce, a pregnancy that was unplanned and unwanted, she repeatedly tried to abort the child by throwing herself down a set of stairs. Ivins would eventually hear the story of his mother's attempt to abort him.[22]

Avidly interested in science, Ivins was an active participant in extracurricular activities in high school, including National Honor Society, science fairs, the current events club, and the scholarship team all four years. He ran on the track and cross-country teams, worked on the yearbook and school newspaper, and was in the school choir and junior and senior class plays.[23]

In December 1975, Ivins married nursing student Mary Diane Betsch (known as Diane), to whom he remained married until his death.[1][24] The couple had two children.[1][23][25]Diane Ivins was a homemaker and full time parent who also ran a daycare center out of the family's home.[26] His wife, children, and brothers were all still alive at the time of his death; his parents were deceased.[1]

Education and career

Ivins graduated with honors from the University of Cincinnati with a B.S. degree in 1968, an M.S. degree in 1971, and a Ph.D. degree in 1976, all in microbiology.[2] Ivins conducted his Ph.D. research under the supervision of Dr. Peter F. Bonventre. His dissertation focused on different aspects of toxicity in disease-causing bacteria.[23]

Ivins was a scientist for 36 years[1] and senior biodefense researcher at the United States Army Medical Research Institute of Infectious Diseases (USAMRIID) in Fort Detrick, Maryland for 18 years.[2] After conducting research on *Legionella* and cholera, in 1979, Ivins turned his attention to anthrax after the anthrax outbreak in the Soviet city of Sverdlovsk (now known as Yekaterinburg), which killed at least 105 after an accidental release at a military facility.[25]

Ivins had published at least 44 scientific papers dating back to May 18, 1969.[27][28] His earliest known published work pertained to the response of peritoneal macrophages, a type of white blood cell, to infection by *Chlamydia psittaci*, an infectious bacterium that can be transmitted from animals to humans.[29][30] He was the co-author of numerous anthrax studies, including one on a treatment for inhalational anthrax published in the July 7, 2008 issue of the journal *Antimicrobial Agents and Chemotherapy*.[5] He often cited the 2001 anthrax attacks in his papers to bolster the significance of his research in years subsequent to the attacks.[31] In a 2006 paper published in the prestigious journal *Proceedings of the National Academy of Sciences*, he wrote with his co-authors

Shortening the duration of antibiotic postexposure prophylaxis in a bioterrorism event involving *B. anthracis* by adding postexposure vaccination could greatly alleviate problems of noncompliance and side effects associated with prolonged antibiotic therapy. The value of adding vaccination to postexposure antibiotic prophylaxis should be considered in planning the public health response to bioterrorism events involving inhalational anthrax.[31]

antibiotic prophylaxis should be considered in planning the public health response to bioterrorism events involving inhalational anthrax.[31]

Ivins was a co-inventor on two United States patents for anthrax vaccine technology, U.S. Patent 6,316,006 and U.S. Patent 6,387,665. Both of these patents are owned by his employer at the time, the United States Army.

On March 14, 2003, Ivins and two of his colleagues at USAMRIID at Fort Detrick received the Decoration for Exceptional Civilian Service — the highest award given to Defense Department civilian employees — for helping solve technical problems in the manufacture of anthrax vaccines.[32]

Alleged involvement in 2001 anthrax attacks and investigations

The 2001 anthrax attacks involved the mailing of several letters proclaiming "Death to America ... Death to Israel ... Allah is Great",[33] and contaminated with anthrax, to the offices of U.S. Senators Tom Daschle and Patrick Leahy, as well as to the offices of ABC News, CBS News, NBC News, the *New York Post*, and the *National Enquirer*.[34][35]

Initial investigative role

Ivins became involved in the investigation of the 2001 anthrax attacks because he was regarded as a skilled microbiologist.[2] Starting in mid-October, Ivins and his colleagues worked long hours testing samples to distinguish real anthrax letters from the numerous hoaxes that were sent out at this time.[36] Ivins also helped the FBI analyze the powdery material recovered from one of the anthrax-tainted envelopes sent to a U.S. senator's office in Washington, D.C.[2]

Results of the investigation were initially distributed to the public via ABC News, claiming "four well placed sources" had confirmed that "trace amounts of the chemical additives bentonite" were found in the anthrax samples, and that this was the chemical signature of Iraqi-made anthrax.[33] However, it was later confirmed that no bentonite was ever found in the anthrax samples.[33] While it is presumed that Ivins was one of ABC News' four sources, ABC News refused to reveal their identities, which has contributed to a mystery surrounding Ivins' role in the initial investigation and its widely reported findings.[33]

2002 Fort Detrick anthrax containment breach

In 2002, an investigation was carried out as a result of an incident at Fort Detrick where anthrax spores had escaped carefully guarded rooms into the building's unprotected areas.[37] The incident called into question the ability of USAMRIID to keep its deadly agents within laboratory walls seven months after the anthrax mailings.

A coworker reportedly told Ivins that she was concerned she was exposed to anthrax spores when handling an anthrax-contaminated letter. Ivins tested the technician's desk area that December and found growth that had the earmarks of anthrax. He decontaminated her desk, computer, keypad and monitor, but did not notify his superiors.[37]

2008 investigation

For six years, the FBI focused its investigation on Steven Hatfill, considering him to be the chief suspect in the attacks. In March 2008, however, authorities exonerated Hatfill and settled a lawsuit he initiated for $5.8 million.[38] According to ABC News, some in the FBI considered Ivins a suspect as early as 2002.[39] FBI Director Robert Muellerchanged leadership of the investigation in late 2006, and at that time Ivins became the main focus of the investigation.[2]

After Hatfill was no longer considered a suspect, Ivins began "showing signs of serious strain".[40] As a result of his changed behavior, he lost access to sensitive areas at his job. He began being treated for depression and expressed some suicidal thoughts.[2] On March 19, 2008, police were summoned[*by whom?*] to Ivins' home in Frederick, where they found him unconscious and sent him to the hospital.[23]

In June 2008, Ivins was involuntarily committed to a psychiatric hospital. The FBI said that during a June 5 group therapy session there, Ivins had a conversation with a witness, during which he made a series of statements about the anthrax mailings that the FBI said could best be characterized as "non-denial denials".[41] When asked about the anthrax attacks and whether he could have had anything to do with them, the FBI said that Ivins admitted he suffered from loss of memory, stating that he would wake up dressed and wonder if he had gone out during the night. His responses allegedly included the following:

"I can tell you I don't have it in my heart to kill anybody"

"I do not have any recollection of ever have doing anything like that. As a matter of fact, I don't have no clue how to, how to make a bio-weapon and I don't want to know."

"I can tell you, I am not a killer at heart"

"If I found out I was involved in some way, and, and ..."

"I don't think of myself as a vicious, a, a nasty evil person."

"I don't like to hurt people, accidentally, in, in any way. And [several scientists at USAMRIID] wouldn't do that. And I, in my right mind wouldn't do it [laughs] ... But it's still, but I still feel responsibility because it [the anthrax] wasn't locked up at the time ..."

Late in July 2008, investigators informed Ivins of his impending prosecution for alleged involvement in the 2001 anthrax attacks that Ivins himself had previously assisted authorities in investigating. It was reported that the death penalty would have been sought in the case.[42] Ivins maintained his security clearance until July 10; he had been publicly critical of the laboratory's security procedures for several years.[43]

W. Russell Byrne, a colleague who worked in the bacteriology division of the Fort Detrick research facility, said FBI agents "hounded" Ivins by twice raiding his home and that Ivins had been hospitalized for depression earlier in the month.[44] According to Byrne and local police, Ivins had been removed from his workplace out of fears that he might harm himself or others. "I think he was just psychologically exhausted by the whole process", Byrne said.[45] "There are people who you just know are ticking bombs", Byrne said. "He was not one of them."[46] However, Tom Ivins, who last spoke to his brother in 1985, said, "It makes sense ... he considered himself like a god."[45]

The *Los Angeles Times* asserted that Ivins stood to profit from the attacks because he was a co-inventor on two patents for a genetically-engineered anthrax vaccine. San Francisco-area biotechnology company [**VaxGen, Incorporated**] licensed the vaccine and won a federal contract valued at $877.5 million to provide the vaccine under the Project Bioshield Act.[47] However, biological warfare and anthrax vaccine expert Meryl Nass expressed skepticism about this purported motive, pointing out that "Historically, government employees do not receive these royalties: the government does."[48]

On August 6, 2008, US Attorney Jeffrey A. Taylor, officially made a statement that Ivins was the "sole culprit" in the 2001 anthrax attacks.[49] Taylor stated

that Ivins had submitted false anthrax evidence to throw investigators off of his trail, was unable to adequately explain his late laboratory working hours around the time of the attacks, tried to frame his co-workers, had immunized himself against anthrax in early September 2001, was one of more than 100 people with access to the same strain of anthrax used in the killings, and had used similar language in an email to that in one of the anthrax mailings.[50] Ivins was also reportedly upset that the anthrax vaccine that he had spent years helping develop was being pulled from the market.[51]

Death

On the morning of July 27, 2008, Ivins was found unconscious at his home. He was taken to Frederick Memorial Hospital and died on July 29 from what was then called an overdose of Tylenol with codeine,[5][52] an apparent suicide. No autopsy was ordered following his death because, according to an officer in the local police department, the state medical examiner 'determined that an autopsy wouldn't be necessary' based on laboratory test results of blood taken from the body.[53] A summary of the police report of his death, released in 2009, lists the cause of death as liver and kidney failure, citing his purchase of two bottles of Tylenol PM (containing diphenhydramine), contradicting earlier reports of Tylenol with codeine.[54] His family declined to put him on the liver transplant list, and he was removed from life support.[54]

Immediately after news of his death, the FBI refused to comment on the situation.[5] Ivins' attorney released a statement asserting that Ivins had co-operated with the six-year investigation by the FBI and asserting that Ivins was innocent in the deaths.[55]

Anthrax investigation, post-death

Criticism of the official findings

Paul Kemp, Ivins' attorney, stated that the government's case against Ivins was "not convincing". Department of Justice official Dean Boyd stated that Ivins mailed anthrax to NBC in retaliation for an investigation of Ivins' laboratory's work on anthrax conducted by Gary Matsumoto, a former NBC news journalist. At the time, however, Matsumoto was working for ABC, not NBC. Also, Ivins passed a lie detector test in which he was questioned about his possible participation in the anthrax attacks. Boyd responded by saying that the FBI now believes that Ivins used countermeasures to deceive the polygraph examiners. "There are clearly a lot of unanswered questions," said Senator Chuck Grassley, who called for a congressional investigation into the allegations that Ivins was the anthrax killer.[56]

Those who argue for Ivins' innocence claim that the anthrax used in the attacks was too sophisticated to be produced by a lone researcher without relevant training. "In my opinion, there are maybe four or five people in the whole country who might be able to make this stuff, and I'm one of them," said Richard O. Spertzel, former deputy commander of USAMRIID.[57] "And even with a good lab and staff to help run it, it might take me a year to come up with a product as good."[57] The spores in the Daschle letter were 1.5 to 3 micrometres across, many times smaller than the finest known grade of anthrax produced by either the U.S. or Soviet bioweapons programs.[57] An electron microscope, which costs hundreds of thousands of dollars, would be needed to verify that the target spore size had been consistently achieved.[57] The presence of the anti-clumping additive silicon in the anthrax samples also suggests a high degree of sophistication as specialists working at Lawrence Livermore National Laboratory were unable to duplicate this property despite 56 attempts.[58]

While not outright rejecting the theory of Ivins' involvement, Senator Leahy asserted that "if he is the one who sent the letter, I do not believe in any way, shape or manner that he is the only person involved in this attack on Congress and the American people. I do not believe that at all."[59]

Allegations of mental illness

On August 6, 2008, the FBI released a collection of emails written by Ivins.[60] In some, Ivins describes episodes of anxiety, paranoia, and depression for which he was medicated;[61] these are referenced in the summary of the case against Ivins. A psychiatrist engaged by *The New York Times* to analyze the released documents found evidence of psychoses, but could not rule out the possibility that Ivins was feigning or exaggerating mental illness for purposes of attention or sympathy.[62]

A United States government investigative panel, called the Expert Behavioral Analysis Panel, issued a report in March 2011 which detailed more of Ivins' mental health issues. According to the panel's report, the Army did not examine Ivins' background adequately before clearing him to work with anthrax: such clearance should not have been given. The report endorses the government's implication of Ivins: circumstantial evidence from Ivins' psychiatric history supported the conclusion that Ivins was the anthrax killer.[63][64][65]

Allegations by Ivins' counselor

One of the most contested elements of the Ivins case involves the testimony of his former therapist, social worker Jean C. Duley. Documents show that Ivins was ordered late in July 2008 to stay away from Duley.[66] In her handwritten application for a protective order, Duley wrote that Ivins had stalked and threatened to kill her and had a long history of homicidal threats.[23] However, in her testimony, Duley also stated that she had only known Ivins for six months.[67]

Duley had been set to give testimony against Ivins on August 1, 2008.[45] Ivins, however, had no criminal record, whereas Duley had a history of convictions for driving under the influence and charges of battery of her ex-husband.[68] The charges forced her to quit her job, and attorney costs used up her savings, according to her fiance.[68] In a 1999 newspaper interview, Duley described herself as a former motorcycle gang member and drug user: "Heroin. Cocaine. PCP. You name it, I did it."[69] According to an article originally appearing in the *Frederick News-Post* on August 12, 2009, Duley was under house arrest when she tape recorded Ivins' allegedly "threatening" messages.[70] The *Frederick News-Post* also made available a recording of the allegedly threatening calls.[71] The nature of the audio recordings was characterized in the published report as "No threats are made or implied in the messages. More the sad ramblings of a broken man who felt betrayed."[70]

In her July 2008 restraining order Duley alleged that Ivins "has a history dating to his graduate days of homicidal threats, actions, plans, threats & actions towards theripist" [sic]. According to Duley, "Dr. David Irwin his psychiatrist called him homicidal, sociopathic with clear intentions" [sic] and she would "tetisfy with other details" [sic].[72] She further alleged a "detailed homicidal plan" to kill his co-workers after learning he was going to be indicted on capital murder charges and stated that, upon hearing of his possible indictment, Ivins had purchased a gun and a bulletproof vest.[73] Ivins was subsequently committed for psychiatric evaluation, and his home was raided by federal agents who confiscated ammunition and a bulletproof vest.[74] He was released from his committal on July 24, five days before his death.

Statement by Henry S. Heine

Henry S. Heine, a microbiologist who was Ivins' fellow researcher at the Army Medical Research Institute, told a National Academy of Sciences panel on April 22, 2010, that he considered it impossible that Ivins could have produced the anthrax used in the attacks without detection.[14]

Heine told the 16-member National Academy of Sciences panel that producing the quantity of spores in the letters would have taken at least a year of intensive work using the equipment at the U.S. Army laboratory. Such an effort would not have escaped colleagues' notice, and laboratory technicians who worked closely with Dr. Ivins have told him they saw no such work.[14]

Heine also disputed the notion that biological containment measures where Ivins worked were inadequate to prevent the spores from floating out of the laboratory into animal cages and offices. He told the panel that if the containment was inadequate, "You'd have had dead animals or dead people".[14]

Heine said he did not dispute that there was a genetic link between the spores in the letters and the anthrax in Ivins' flask, which led the FBI to conclude that Ivins had grown the spores from a sample taken from the flask. Heine pointed out that samples from the flask were widely shared. Accusing Ivins of the attacks, he said, was like tracing a murder to the clerk at the sporting goods shop who sold the bullets.[14]

Asked by reporters after his testimony whether he believed there was any chance that Ivins had carried out the attacks, Heine replied, "Absolutely not." At the Army's biodefense laboratory, he said, "among the senior scientists, no one believes it."[14]

National Academy of Sciences scientific evidence review

The FBI asked the National Academy of Sciences to review the FBI's scientific work on the case. A panel was created, chaired by Alice P. Gast, president of Lehigh University.[14] On May 15, 2011, the panel released its findings, which "conclude[d] that the bureau overstated the strength of genetic analysis linking the mailed anthrax to a supply kept by Bruce E. Ivins."[6]

Calls for further investigation

Following the release of a National Academy of Sciences report in February 2011, Congressman Rush D. Holt, Jr. (D-NJ), a physicist from whose district the anthrax letters were mailed, re-introduced legislation "to create a 9/11-style Commission, complete with subpoena power, with a mandate to review the entire matter."[6] Senator Chuck Grassley of Iowa told *The Washington Post*: "There are no more excuses for avoiding an independent review."[6] Journalist Glenn Greenwald, who was vocal in his criticism of the anthrax investigation,[68][75][76][77][78] argued that "[o]ther than a desire to avoid finding out who the culprit was (or to avoid having the FBI's case against Ivins subjected to scrutiny), there's no rational reason to oppose an independent investigation into this matter."[6]

Interests and beliefs

Personal life

Ivins was a Roman Catholic. The *Frederick News-Post* made public several letters to the editor written by Ivins dealing with his religious views.[79] These were cited in the Department of Justice summary of the case against Ivins as suggesting that he may have harbored a grudge against pro-choice Catholic senators Daschle and Leahy, recipients of anthrax mailings.[61] In a letter, Ivins stated, "By blood and faith, Jews are God's chosen, and have no need for 'dialogue' with any gentile."[80] Ivins praised a rabbifor refusing a dialogue with a Muslim cleric.[80]

His pastimes included playing keyboard at his local church, Saint John the Evangelist;[1] he was a member of the American Red Cross;[1] he was an avid juggler and founder of the Frederick Jugglers.[23] He played keyboards in a Celtic band and would often compose and play songs for coworkers who were moving to new jobs.[23][25]

Kappa Kappa Gamma sorority and Wikipedia editing

Wikinews has related news:***Alleged Anthrax killer Bruce Ivins reportedly made edits to Wikipedia***

Ivins was reportedly obsessed with the college sorority Kappa Kappa Gamma (KKG) ever since he was rebuffed by a woman in the sorority during his days as a student at the University of Cincinnati.[81][82] According to *The Smoking Gun*, U.S. government court documents stated that Ivins edited the KKG article on Wikipedia using the account name "Jimmyflathead", by which he made a number of edits that put derogatory information about the sorority into the article and engaged in some disputes and discussions[83][84] about the content of the article.[84][85]

The FBI claims, because anthrax spores were found in a postal drop box located 300 feet (91 m) away from Princeton University's Kappa Kappa Gamma storage facility (where the Sorority keeps rush paraphernalia, initiation robes and other materials), that the anthrax laced letters had been mailed from that drop box.[86] However, no evidence was found to place Ivins in Princeton, New Jersey, on the day the letters were mailed.[81] Katherine Breckinridge Graham, an advisor to Kappa's Princeton chapter, stated that there was nothing to indicate that any of the sorority members had anything to do with Ivins.[82] Officials claim that the sorority link helps explain why the letters were mailed from Princeton, 200 miles (320 km) from the Fort Detrick laboratory in Frederick, Maryland, where Ivins worked and where it is claimed the anthrax was produced.

A United States government investigative panel, called the Expert Behavioral Analysis Panel, issued a report in March 2011 which detailed more of Ivins' obsession with the sorority. According to the panel's report, Ivins tormented a sorority member at the University of North Carolina named Nancy Haigwood. Ivins stole her notebook, which documented her research for her doctoral studies, and vandalized her residence.[63]

Biography

In 2011, journalist David Willman's book on Ivins, *The Mirage Man: Bruce Ivins, the Anthrax Attacks, and America's Rush to War*, was published. The book details Ivins' troubled history and mental problems.[87]

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Housatonic

J

PEOPLE (by last name / then D.o.B.)

- Henry Martin "Scoop" **Jackson** (born 1912)
- Dr. Kuan-Teh **Jeang** (born 1958)
- Rodney Lance **Joffe** (born 1954)

Henry Martin "Scoop" Jackson (born 1912)

Wikipedia Henry M. Jackson

Associations:

- Richard Norman Perle (born 1941) (A former aide to Scoop Jackson who was inspired to join neoconservative movement)
- Gordon Calvin Culp (born 1926) (Culp was long-time counsel for Scoop Jackson)
- Daniel Jackson Evans (born 1925) (Governor while Scoop Jackson was Senator ; Replaced Scoop Jackson as Senator upon Jackon's death in 1983).

November 14, 1994 - Presentation at the Henry M. Jackson Foundation by James Schlesinger on Evans : Uncharted Waters: America's Role in the Post.-Cold War World

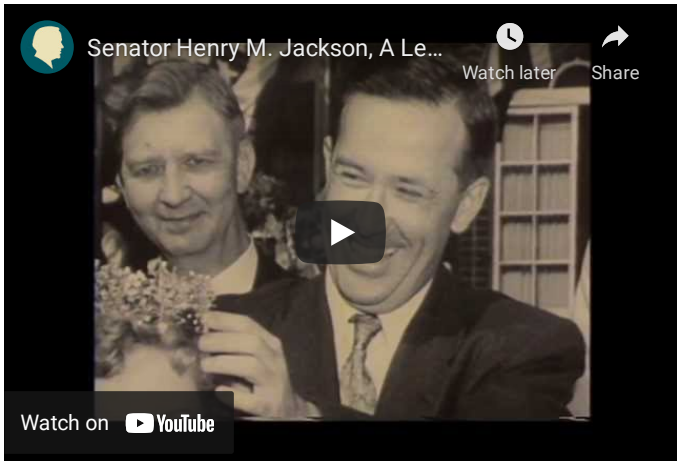
See : Original PDF : [HI001R][GDrive] / PDF with OCR : [HI001S][GDrive]

1975 Press Conference - SENATOR HENRY JACKSON ADDRESSES PRESS (via AP Archive)

video : [HV00DC][GDrive] / cover image : [HV00DD][GDrive]

2013 memorial video - Senator Henry M. Jackson, A Legacy of Leadership

video : [HV00DE][GDrive] / cover image : [HV00DC][GDrive]



Saved Wikipedia (Nov 21, 2020) on Scoop Jackson

See [HK003J][GDrive]

United States Senator from Washington ; In office January 3, 1953 – September 1, 1983

Preceded by Harry P. Cain

Succeeded by Daniel J. Evans

28th Chair of the Democratic National Committee ; In office July 17, 1960 – January 21, 1961

Preceded by Paul Butler

Succeeded by John Moran Bailey

Member of the U.S. House of Representatives from Washington's 2nd district ;In office January 3, 1941 – January 3, 1953

Preceded by Monrad Wallgren

Succeeded by Jack Westland

Born Henry Martin Jackson on May 31, 1912 Everett, Washington, U.S.

Died September 1, 1983 (aged 71) Everett, Washington, U.S.

Political party Democratic

Spouse(s) Helen Hardin (m. 1961)

Education

Stanford University (BA)

University of Washington, Seattle (JD)

Military service

Allegiance

United States

Branch/service

United States Army

Battles/wars

World War II

Henry Martin "Scoop" Jackson (May 31, 1912 – September 1, 1983) was an American politician who served as a U.S. Representative (1941–1953) and U.S. Senator (1953–1983) from the state of Washington. A Cold War liberal and anti-Communist Democrat, Jackson supported higher military spending and a hard line against the Soviet Union, while also supporting social welfare programs, civil rights, and labor unions.[1]

Born in Everett, Washington, to Norwegian immigrants, Jackson practiced law in Everett after graduating from the University of Washington School of Law. He won election to Congress in 1940 and joined the Senate in 1953 after defeating incumbent Republican Senator Harry P. Cain. Jackson supported the major civil rights of the 1960s and authored the National Environmental Policy Act, which helped establish the principle of publicly analyzing environmental impacts. He co-sponsored the Jackson–Vanik amendment, which denied normal trade relations to countries with restrictive emigration policies.

Jackson served as Chairman of the Senate Committee on Energy and Natural Resources from 1963 to 1981. He was twice an unsuccessful candidate for the Democratic presidential nomination, in 1972 and 1976. While still serving in the Senate, Jackson died in 1983.

His political beliefs were characterized by support of civil rights, human rights, and safeguarding the environment, but with an equally strong commitment to oppose totalitarianism in general, and communism in particular.[2] The political philosophies and positions of Scoop Jackson have been cited as an influence on a number of key figures associated with neoconservatism, including Paul Wolfowitz and Richard Perle, both of whom previously served as aides to the Senator.[1] The Seattle-based Henry M. Jackson Foundation was created in 1983 by his former colleagues and staff as well as his widow and other family members to further his work. In 1987, the Department of Defense gave to the Jackson Foundation a one-time, $10 million appropriation for its endowment in honor of the Senator. To date the Foundation has awarded over $26 million in grants to educational and nonprofit institutions.

Early life

Jackson was born in the home of his parents, Marine (Anderson) and Peter Jackson, in Everett, Washington on May 31, 1912. His mother and father were both immigrants from Norway.[3] Peter Jackson was born Peter Gresseth, and changed his name when he immigrated. He met Marine at the Lutheran church in Everett, where they were married in 1897. Henry was the fifth and youngest of the Jackson children; he was nicknamed "Scoop" by his sister in his childhood after a comic strip character that he was said to have resembled.

He went on to graduate with a B.A. degree from Stanford University and a J.D. degree from the University of Washington School of Law, where he joined the Delta Chi fraternity.

Early career

In 1935, the year of his law school graduation, he was admitted to the bar and began to practice law in Everett. He found immediate success and was elected to become the prosecuting attorney for Snohomish County from 1938 to 1940, where he made a name for himself prosecuting bootleggers and gamblers.

In 1961, Jackson, called by *Time* the Senate's "most eligible bachelor,"[4] married Helen Hardin, a 28-year-old Senate receptionist, but Jackson did not move out of his childhood home, where he lived with his unmarried sisters for several years. The Jacksons had two children, Anna Marie Laurence and Peter Jackson. Peter went on to serve as a speechwriter for Governor Christine Gregoire.

In Congress

Jackson successfully ran for Congress as a Democrat in 1940 and took his seat in the House of Representatives with the 77th Congress on January 3, 1941. From then on, Jackson did not lose any congressional elections.

Jackson joined the Army when the United States entered World War II but left when Franklin D. Roosevelt ordered all representatives to return home or resign their seats. He visited the Buchenwald concentration camp a few days after its liberation in 1945. He attended the International Maritime Conference in Copenhagen, Denmark, in 1945 with the American delegation, and he was elected president of the same conference in 1946, when it was held in Seattle. From 1945 to 1947, Jackson was also the chairman of the Committee on Indian Affairs.

In the 1952 election, Jackson relinquished his seat in the House for a run for one of Washington's Senate seats. Jackson soundly defeated Republican Senator Harry P. Cain and remained a senator for over thirty years. He was Washington's first U.S. Senator to be born in the state. Jackson died in office in 1983 after winning re-election for the fifth time in 1982.

Though Jackson opposed the excesses of Joe McCarthy, who had traveled to Washington state to campaign against him, he also criticized Dwight Eisenhower for not spending enough on national defense. Jackson called for more inter-continental ballistic missiles in the national arsenal, and his support for nuclear weapons resulted in a primary challenge from the left in 1958, when he handily defeated Seattle peace activist Alice Franklin Bryant before winning re-election with 67 percent of the vote, which he topped the next four times he ran for re-election.[1][5]

During the 1960 Democratic presidential primary, Jackson was the first choice of fellow Senator John F. Kennedy for a running mate, though JFK became convinced that a Southerner would better balance the ticket.[6] Lyndon B. Johnson was later selected.

Jackson boasted one of the strongest records on civil rights during the civil rights movement.[7][8] He supported the 1957 and the 1964 Civil Rights Acts.

On July 22, 1965, President Lyndon B. Johnson signed the Water Resources Planning Act into law, noting Jackson as one of the Congress members to "have made a very invaluable and very farsighted contribution to America's future."[9]

In April 1968, responding to the assassination of Martin Luther King Jr., Jackson gave a speech about the legacy and injustice of inequality.[10]

In 1963, Jackson was made chairman of the Committee on Interior and Insular Affairs, which became the Committee on Energy and Natural Resources in 1977, a position he held until 1981. In the 1970s, Jackson joined with fellow senators Ernest Hollings and Edward Kennedy in a press conference to oppose President Gerald Ford's request for Congress to end Richard Nixon's price controls on domestic oil, which had provoked oil companies into withholding gasoline during the 1973 Oil Crisis.[11][12]

Kaufman writes that after 1968, Jackson "emerged as an intellectual and political leader in the perennial struggle of U.S. foreign policy to reconcile ideals with self-interest."[6]

Jackson authored the National Environmental Policy Act, which has been called one of the most influential environmental laws in history. It helped to stimulate similar laws and the principle of publicly analyzed environmental impact in other states and in much of the world.[13] Jackson was also a leader of the fight for statehood for Alaska and Hawaii. In 1974, Jackson sponsored the Jackson-Vanik amendment in the Senate (with Charles Vanik sponsoring it in the House), which denied normal trade relations to certain countries with non-market economies that restricted the freedom of emigration. The amendment was intended to help refugees, particularly minorities, specifically Jews, to emigrate from the Soviet Bloc. Jackson and his assistant, Richard Perle, also lobbied personally for some people who were affected by this law such as Anatoly (now Natan) Sharansky.

In March 1975, Jackson released a statement in which he expressed the view that it was paramount the Franklin Peroff case be found out to be either "an aberration or was symptomatic of much greater problem" within the Drug Enforcement Administration.[14]

In June 1975, Jackson stated that if accounts about the conduct of former director of the Drug Enforcement Agency John R. Bartels Jr. were correct then his actions amounted to obstruction of justice and that evidence disclosed "in the last two days would indicate that there was a conscious, premeditated plan involving misconduct at the highest levels of the D.E.A."[15]

In July 1977, the Senate approved a funding for the experimental nuclear reactor compromise proposal by Jackson and Idaho Senator Frank Church. While the initial version by President Carter sought a decrease in funding from 150 million to 33 million, the Jackson and Church measure halved the funding to 75 million.[16]

In October 1979, the Senate voted in favor of President Carter's energy mobilization board plan, Jackson labeling the plan the "centerpiece" of Carter's program that was essential to guaranteeing the effectiveness of the rest of the legislation and was noted for successfully persuading colleagues to reject amendments to the plan.[17] Later that month, after the Senate Energy and Natural Resources Committee voted in favor of the Alaska public lands legislation, President Jimmy Carter issued a statement thanking Jackson and other members for supporting the legislation.[18]

President Jimmy Carter with Jackson

Jackson also led the opposition within the Democratic Party against the SALT II treaty and was one of the leading proponents of increased foreign aid to Israel.

For decades, Democrats who support a strong international presence for the United States have been called "Scoop Jackson Democrats," and the term is still used to describe contemporary Democrats such as Joe Lieberman and R. James Woolsey, Jr.[19][20]

Jackson served for all but the last three years of his Senate tenure with Democratic colleague and friend Warren G. Magnuson. As a result, he spent 28 years as the state's junior Senator, even though he had more seniority than all but a few of his colleagues. "Scoop" and "Maggie," as they affectionately called each other, gave Washington clout in national politics well beyond its population. They were one of the most effective delegations in the history of the Senate in terms of "bringing home the bacon" for their home state. Washington received nearly a sixth of public works appropriations but ranked only 23rd in population.[21]

Criticism

Jackson was known as a hawkish Democrat. He was often criticized for his support for the Vietnam War and his close ties to the defense industries of his state. His proposal of Fort Lawton as a site for an anti-ballistic missile system was strongly opposed by local residents, and Jackson was forced to modify his position on the location of the site several times, but continued to support ABM development. American Indian rights activists who protested Jackson's plan to give Fort Lawton to Seattle, instead of returning it to local tribes, staged a sit-in. In the eventual compromise, most of Fort Lawton became Discovery Park, with 20 acres (8.1 ha) leased to United Indians of All Tribes, who opened the Daybreak Star Cultural Center there in 1977.

Opponents derided him as "the Senator from Boeing"[22] and a "whore for Boeing"[23] because of his consistent support for additional military spending on weapons systems and accusations of wrongful contributions from the company; in 1965, 80% of Boeing's contracts were military.[1][21] Jackson and Magnuson's campaigning for an expensive government supersonic transport plane project eventually failed.

After his death, critics pointed to Jackson's support for Japanese American internment camps during World War II as a reason to protest the placement of his bust at the University of Washington.[24] Jackson was both an enthusiastic defender of the evacuation and a staunch proponent of the campaign to keep the Japanese-Americans from returning to the Pacific Coast after the war.[25]

Presidential campaigns

Jackson not only was successful as a politician in Washington state but also found recognition on the national level, rising to the position of chairman of the Democratic National Committee in 1960 after he was considered for the vice presidential ticket spot that eventually went to fellow Senator Lyndon Johnson.

Jackson ran for president twice, and both campaigns were noted for the hostile reception they received from the left wing of the Democratic Party. Jackson's one-on-one campaigning skills, which were so successful in Washington state, did not translate as well to the national stage. Even his supporters admitted that he suffered from a certain lack of charisma.[1][26][27]

1972 presidential campaign

Jackson was little known nationally when he first ran in 1972. George McGovern, who eventually won the nomination, even accused Jackson of racism for his opposition to busing despite Jackson's longstanding record on civil rights issues. Jackson's high point in the campaign was a distant third in the early Florida primary, but he failed to stand out of the pack of better-known rivals, and he made real news only later in the campaign, as part of the "Stop McGovern" coalition, which raised what would be known as the "Acid, Amnesty and Abortion" questions about McGovern. Jackson suspended active campaigning in May after a weak showing in the Ohio primary and finishing well behind McGovern, Ed Muskie, George Wallace, and Hubert Humphrey in early primaries.

Jackson re-emerged at the August Democratic convention after the runner-up, Humphrey, dropped out of the race. Jackson's name was placed in nomination by Georgia Governor Jimmy Carter, and he finished second in the delegate roll call, well behind nominee McGovern.[27][28]

1976 presidential campaign

Jackson raised his national profile by speaking out on Soviet-U.S. relations and Middle East policy regularly, and he was considered a front-runner for the nomination when he announced the start of his campaign in February 1975. Jackson received substantial financial support from Jewish-Americans who admired his pro-Israel views, but his support of the Vietnam War resulted in hostility from the left wing of the Democratic Party.

Jackson chose to run on social issues, emphasizing law and order and his opposition to busing. He was hoping for support from labor, but the possibility that Hubert Humphrey might enter the race caused unions to offer only lukewarm support.[1][26][27][29]

Jackson made the fateful decision not to compete in the early Iowa caucus and New Hampshire primary, which Jimmy Carter won after liberals split their votes among four other candidates. Though Jackson won the Massachusetts and New York primaries, he dropped out on May 1 after losing the critical Pennsylvania primary to Carter by 12% and running out of money.[1][26][27][29]

Death

Jackson's home on Grand Avenue in Everett

On September 1, 1983, Jackson died suddenly in Everett of an aortic aneurysm at the age of 71, shortly after giving a news conference condemning the

Soviet attack on Korean Air Lines Flight 007. News reports showed video footage in which he was seen reflexively massaging the left side of his chest while talking, and speculated that it was his reaction to an early symptom of the fatal attack.

Jackson's death was greatly mourned. New York Senator Daniel Patrick Moynihan stated "Henry Jackson is proof of the old belief in the Judaic tradition that at any moment in history goodness in the world is preserved by the deeds of 36 just men who do not know that this is the role the Lord has given them. Henry Jackson was one of those men." Jackson is buried in Evergreen Cemetery in Everett.

Legacy

- Jackson was posthumously awarded the Presidential Medal of Freedom in 1984. Ronald Reagan called him "one of the greatest lawmakers of our century,"[30] and stated:

  > Scoop Jackson was convinced that there's no place for partisanship in foreign and defense policy. He used to say, 'In matters of national security, the best politics is no politics.' His sense of bipartisanship was not only natural and complete; it was courageous. He wanted to be President, but I think he must have known that his outspoken ideas on the security of the Nation would deprive him of the chance to be his party's nominee in 1972 and '76. Still, he would not cut his convictions to fit the prevailing style. I'm deeply proud, as he would have been, to have Jackson Democrats serve in my administration. I'm proud that some of them have found a home here.

- In 1983, Jackson was awarded Delta Chi of the Year.
- One of Jackson's last acts as Senator was to sponsor legislation creating what became the Henry M. Jackson Foundation for the Advancement of Military Medicine, which was named after him after his death.
- Jackson's extended community of staff, colleagues and family members created the Henry M. Jackson Foundation from public monies and private donations to give grants to nonprofits and educational institutions. Its board members have included Richard Perle, Tom Foley, and Jeane Kirkpatrick.[31][32]
- On March 28, 1981, Jackson gave the principal address at the christening of the USS *Bremerton* (SSN 698). The *Bremerton* was the second ship to have the name, preceded by the USS *Bremerton* (CA 130). It was christened by Mrs. Henry M. Jackson on July 22, 1978. The USS *Bremerton* (SSN 698) was mentioned in the classic Tom Clancy novel, *The Hunt for Red October*.
- The University of Washington has named the Jackson School of International Studies in his honor. However, students objecting to Jackson's hawkish views on the Cold War in the mid-1980s caused the university to move a bust of the senator to the end of an abandoned corridor until it was restored to a more prominent place outside the Jackson School in 2006.[24]
- The U.S. Navy *Ohio*-class ballistic missile submarine *Henry M. Jackson* was also named after him, in recognition of his longtime support of the nation's military. It is the only Ohio-class submarine not named after a U.S. state.
- In 1983, the Snohomish County Public Utility District began operation of the Henry M. Jackson Hydroelectric Project outside Sultan, Washington.
- In 1994, the Everett School District completed construction of Henry M. Jackson High School in Mill Creek, Washington.
- The Henry M. Jackson Wilderness Area was created in his honor by the 1984 Washington Wilderness Act.
- **The Jewish Institute for National Security Affairs, with the cooperation of the Jackson family, awards a Henry M. "Scoop" Jackson Distinguished Service Award to individuals for their career dedication to U.S. national security. Jackson won the first award in 1982, and it was named after him after his death. Winners include Max Cleland, Joe Lieberman, Dick Cheney, Jane Harman, and Paul Wolfowitz.**[33]

Influence on neoconservatism

Jackson believed that evil should be confronted with power.[32] His support for civil rights and equality at home,[24] married to his opposition to *détente*,[32] his support for human rights[34] and democratic allies,[35] and his firm belief that the United States could be a force for good in the world[36] inspired a legion of loyal aides who went on to propound Jackson's philosophy as part of neoconservatism. **In addition to Richard Perle, neoconservatives Paul Wolfowitz, Bill Kristol, Charles Horner, and Douglas Feith were former Democratic aides to Jackson who, disillusioned with the Carter administration, supported Ronald Reagan and joined his administration in 1981,** later becoming prominent foreign policy makers in the 21st-century Bush administration. Neoconservative Ben Wattenberg was a prominent political aide to Jackson's 1972 and 1976 presidential campaigns. Wolfowitz has called himself a "Scoop Jackson Republican" on multiple occasions.[34][37] Many journalists and scholars across the political spectrum have noted links between Senator Jackson and modern neoconservatism.[1][32][35][38][39][40][41][42][43][44]

Jackson's influence on foreign policy has been cited as foundational to the George W. Bush administration's foreign policy, and the Iraq War.[45] Jackson biographer Robert Kaufman says "There is no question in my mind that the people who supported Iraq are supporting Henry Jackson's instincts."[32]

Peter Beinart, author of *The Good Fight: Why Liberals—and Only Liberals—Can Win the War on Terror and Make America Great Again*, argues that the Democratic Party should return to Jackson's values in its foreign policy, criticizing current-day neoconservatives for failing to adopt Jackson's domestic policy views along with his foreign policy views.[36][39]

The Henry Jackson Society

In 2005, the Henry Jackson Society was formed at the University of Cambridge, England. The non-partisan British group is dedicated to "pursuit of a robust foreign policy ... based on clear universal principles such as the global promotion of the rule of law, liberal democracy, civil rights, environmental responsibility and the market economy" as part of "Henry Jackson's legacy."[46] The organisation is now based in London and hosts high-profile speaker events in the House of Commons.

Jackson Papers controversy

Senator Jackson's documents were donated to the University of Washington shortly after his death in 1983, and have been archived there ever since.[47] When the materials were donated in 1983, university staff removed all information considered classified at the time.[48] Additional materials were added to the collection until 1995.[47]

At some point, library staff discovered a classified document in the collection and sent it to the government for declassification.[49] In response, in the summer of 2004, a man who identified himself as an employee of the Central Intelligence Agency (CIA) called the University of Washington asking to inspect Senator Jackson's archived documents housed there. He found a document labelled as classified and showed this to a librarian.[50] In February 2005, 22 years after Jackson's death, a five-person team including staff of the CIA, Department of Defense, the Department of Energy, and the Information

Security Oversight Office came to library to review all of Jackson's papers to remove anything still considered classified, or reclassified since then. The Department of Energy found nothing of concern, but the CIA blanked lines in about 20 papers and pulled 8 documents out of collection.[50][51][48][52][53] As of 2018, some files in the collection are available only to those regarded by the library as "serious researchers", who must first sign a release not to divulge some of the information contained in the files.[54][47]

University of Washington - Essay - Essay: A Legacy of Public Service (The Senator Henry M. Jackson Web Portal)

See [HE003J][GDrive]

Warren Magnuson and Henry Jackson began their careers in an era when the economies of the world were in deep depression. Both were of Scandinavian parentage, heirs of the progressive reformist tradition that has marked Washington State politics. That tradition embodied ingenuity and tenacity, openness to broad involvement in government (direct legislation, woman suffrage) to government intervention in economic and social development, and to a political system responsive to issues and personalities rather than to party. Both endorsed President Franklin Roosevelt's leadership in creating programs to relieve the effects of the Great Depression, and they were known as "New Deal Democrats" throughout their careers. Their tandem representation of Washington State is remarkable both for its length and for the breadth of their interests in Congress. What follows is a summary view of their activities during forty years of unparalleled change.

Jackson's Early Years

Henry Martin Jackson was born in 1912 of immigrant Norwegian parents, Peter and Marie Jackson. In Everett, his hometown teachers and friends remember him as a good student with early ambitions to become president or a U.S. senator. His father was a concrete mason, and in the constrained economy of the time, young "Scoop" (as his sister Gertrude nicknamed him) delivered newspapers to add to the family income. He briefly attended Stanford University, then worked his way through the University of Washington to a law degree.

While awaiting the results of his bar examination in 1935, Jackson served as a caseworker in a Snohomish County relief office. During his second year as a lawyer with a private firm in Everett, Jackson and his friends mounted an innovative door-to-door campaign that culminated in his election as Snohomish County prosecutor in 1938. His insistence on strict enforcement of gambling and liquor regulations secured his reputation for integrity and yielded yet another nickname, "Soda Pop," an allusion to his sparing use of alcohol.

In 1940, Jackson ran for the Second Congressional District seat vacated when Mon Wallgren sought election to the Senate. Campaigning as a supporter of New Deal programs and publicly owned utilities, Jackson defeated five other Democrats in the primary and his Republican opponent in November. Jackson's first committee assignments in the House conformed with his interests in fishing, small business, and flood control. He enlisted in the army in 1943, but was recalled to Congress after basic training, in 1944. Jackson joined a fact-finding mission which witnessed the horrors of Buchenwald a few days after its discovery by allied forces. Visiting Norway after its liberation, he observed the repatriation of Red Army soldiers captured by the Nazis. "I recall how reluctant most of those Russians were to go back to Russia," he later noted. "They knew they'd have even less freedom there." These firsthand encounters with totalitarian systems and the wartime occupation of his ancestral homeland were reference points for Jackson's view that government was responsible not only for the provision of social and economic justice but also for the adequate defense of its citizens. "The first priority is survival. I feel we can do both," he said.

Postwar Adjustments

The tensions and irritations that followed the death of FDR and the end of the war in 1945, including shortages of housing and consumer goods and inflation, were acute in Washington State. The population of the state grew by more than a million after 1935, and while the housing boom spurred the lumbering and construction industries, the major issue was jobs. Thousands of returning servicemen discharged from military service stayed in the state to take advantage of the GI Bill. Moreover, defense contractors laid off workers as they struggled to make the transition to peacetime pursuits.

Breaking ground in a bulldozer, Hanford, ca. 1960s

Senator Magnuson and Representative Jackson supported Truman administration efforts to redirect the economy. But voter discontent with the slow pace of reconversion extended into the 1946 elections. Jackson's personal popularity among the predominantly Scandinavian fishermen, loggers, and dairy farmers of his district enabled him to survive. He won reelection to his third term, the only Democrat elected from the Pacific Northwest. The election of a Republican Congress, however, reopened many questions about New Deal reforms and the extent of federal involvement in state and local affairs and in the regulation of private enterprise

Power to the West

One of the great disputes of twentieth-century U.S. history has been waged among public and private purveyors of electricity. In Washington State, the idea of building an irrigation and reclamation dam at Grand Coulee had been around since the turn of the century. Columbia Basin development advocates, such as Rufus Woods of Wenatchee and Albert Goss of the Washington Grange, joined forces with public power proponents, such as Sen. C. C. Dill and Homer Bone to boost the project at state and federal levels. FDR backed with action his own view that public power projects served to moderate the cost of electricity. His support for the Bonneville and Grand Coulee dams and his authorization of McNary and four dams on the lower Snake River in 1945 laid the foundation for a comprehensive hydroelectric, navigation, reclamation, and flood-control program in the Columbia Basin. But the Bonneville Power Administration (BPA) and the federal power concept were under attack in the Congress after 1947, and appropriations to complete Columbia Basin projects were withheld.

In the wake of the great Memorial Day flood of 1948 and the power shortages later that year, as well as his own reelection, President Truman revived proposals for a Columbia Valley Authority (CVA). Magnuson introduced the legislation in the Senate, and Jackson in the House, in 1949. Backed by agricultural, labor, and public power groups, they argued for the revenues and regional productivity benefits accruing from such a multipurpose system. "The Columbia Basin project is good for the nation as a whole," noted Magnuson, "the biggest bargain since Seward bought Alaska." But a system similar to that in the Tennessee Valley was not to be. Congress did approve the River and Harbor Flood Control Act of 1950. The act authorized projects in sections of the nation besides the Pacific Northwest and included plans for Chief Joseph, The Dalles, and John Day dams. Although the CVA idea faded, the role of the federal government in Washington State power and resource development remained central to the work of the Pacific Northwest congressional delegation in future years.

Science and the Federal Government

Besides continuation of such public projects as housing and flood control, Truman's postwar domestic agenda included unification of the armed forces through the Department of Defense, the formation of the Atomic Energy Commission, and promotion of research in each of those areas through the creation of the National Science Foundation.

After the first atomic bombs were dropped on Japan in 1945, Congress supported international cooperation for future development of atomic energy. The reactor at Hanford produced plutonium for Atomic Energy Commission uses, and Representative Jackson became interested in the military and peaceful applications of the atom, including its potential for generating electricity. He won appointment to the Joint Congressional Committee on Atomic Energy in 1948. After the USSR detonated its first atomic bomb in 1949 and prospects for international cooperation receded, Jackson advocated expansion of military research, including the hydrogen bomb program. "If strength is the road to peace, then let's not waste a minute getting strong," he reasoned. "If peace comes, we can dismantle our atomic warheads and use the same material to run machines, treat cancer, fertilize the soil and for dozens of other productive jobs."

Truman's proposal for a National Science Foundation (NSF) grew out of the federal research experience of the 1930s and wartime. It was a direct successor to the Office of Science Research and Development that FDR created in 1941 to coordinate and protect research with military applications. As a new member of the Commerce Committee, Senator Magnuson introduced legislation in 1945 for government-funded science research and education. Testimony from scientists during Commerce Committee hearings on this measure underscored his belief that sophisticated research and international cooperation in the emerging Cold War era would not be adequately advanced by isolated government laboratories and private industry. Arguments about the propriety of federal support of research, the administrative structure of the agency, patent rights, and the loyalty-security issue took years to resolve. After the National Science Foundation was established in 1950, NSF grants became the engine for a broad national program of basic research and for the training of succeeding generations of scientists.

Magnuson and Jackson supported President Truman's "Fair Deal" agenda in other areas as well. Congress enacted the Displaced Persons Act, which liberalized immigration, provided for low-income and rural housing and slum clearance, raised the minimum wage to 75 cents an hour, and increased Social Security benefits and extended coverage to ten million additional people. Magnuson and Jackson also endorsed Truman's foreign policy initiatives, including the Marshall Plan, the North Atlantic Treaty Organization (NATO) alliance, and U.S. involvement in the defense of South Korea.

The 1950s

Recriminations about the 1949 triumph of the communists in China, the stalemate on the Korean Peninsula, and the rearmament of the United States in response to the Cold War became key factors in the elections of 1952. The bipartisan consensus on foreign policy faltered amid charges that "communist subversives" and "twisted thinking New Dealers" undermined national security. The electorate chose Gen. Dwight D. Eisenhower to clean up "the mess in Washington" while in "the other Washington" Rep. Henry Jackson unseated Sen. Harry P. Cain. A former mayor of Tacoma and paratrooper during the Second World War, Cain charged that Jackson's record showed he was incapable of understanding the seriousness of the communist threat at home and abroad. Running on the slogan "Jackson will make a great U.S. senator," the Snohomish County Democrat relied on volunteers (Scoop's Troops) to pass out literature emphasizing his twelve-year record. Against Cain's charge that he was soft on communism for voting against a permanent House Un-American Activities Committee, Jackson posed his abilities as a lawyer that enabled him to fight communism without destroying individual liberties. **His role on the Joint Atomic Energy Committee and his proposal for an atomic plant at Hanford to power industrial development of the Tri-Cities area were important aspects of Jackson's campaign.** The general prosperity occasioned by consumer demand and expansion of defense appropriations to meet Cold War needs helped Jackson, and combined with his vigorous campaign on both sides of the Cascades, he won the Senate seat by a comfortable margin in a generally Republican year. President Eisenhower's victory resulted in slim GOP majorities in the Congress. The junior senator from Washington gained assignment to the Committee on Interior and Insular Affairs. His posting to the Committee on Government Operations and its Subcommittee on Permanent Investigations brought Jackson to national attention. Its chairman. Sen. Joseph McCarthy, had been making broad accusations since 1950 about government agencies harboring communists. He subjected alleged subversives to intense investigation but failed to substantiate his charges. Jackson opposed such unproductive investigations and joined his Democratic colleagues in protesting McCarthy's tactics. Public opinion turned against McCarthy after millions witnessed his televised attacks on the loyalty of army personnel, and in 1954, the Senate voted to censure him. The attitudes that sustained anticommunist crusaders like McCarthy, however, became part of the fabric of U.S. politics. Meanwhile, Magnuson had become chairman of the Senate Committee on Interstate and Foreign Commerce after the Democrats regained control of the Senate in 1955. He also chaired the Independent Offices Subcommittee on Appropriations that reviewed the activities of such agencies as the Federal Communications Commission, Federal Power Commission, Interstate Commerce Commission (ICC), and the Veterans Administration. Magnuson's positions gave him great influence in matters important to Washington State development, from fishing and merchant marine affairs to ports, aviation, and inland waterways. He steered shipping and shipbuilding for Pacific military projects to Puget Sound. When Washington cattlemen were threatened with increased freight rates, he intervened with the ICC. When the Highway Act of 1956 authorized a vast system of interstate highways, Magnuson made sure that Washington State's ferry system was included.

Holding a long petition, Washington, D.C., ca. 1950s

Magnuson and Jackson worked to diversify the state's economic base during the Eisenhower years, when the administration sought to limit federal spending through its partnership programs with private industry and local governments. Their actions included obtaining appropriations to continue federal hydroelectric and reclamation projects authorized in previous years. They helped build cooperative relationships among private and public agencies that produced dryland port and irrigation districts. They used their influence in Congress to produce more-available bank loans, price supports, and import/export legislation responsive to the fishermen, orchardists, cattlemen, wheat ranchers, and lumbermen of Washington. Both senators responded to the economic development needs of Alaska because of its importance to the Washington State economy. They supported the initiatives of territorial representatives in

building the Alaskan infrastructure of utilities, schools, and housing. As chairman of the Interior Subcommittee, responsible for territorial affairs, Jackson introduced statehood legislation for both Alaska and Hawaii in 1955. During the next four years, he worked to overcome bipartisan objections based on defense and racial issues. Southern congressmen feared that admission of Alaska would lead to admission of Hawaii, another racially diverse state, upsetting the civil rights balance in the Senate. Both states were admitted to the union in 1959. In the shift to Democratic control of the Senate in 1955, Jackson gained reassignment to the Joint Committee on Atomic Energy and moved to the Armed Services Committee. He became known for his advocacy of bipartisan foreign policy, speaking and writing often on defense and NATO affairs. Jackson supported the continued presence of U.S. troops in Europe. Moreover, he endorsed Eisenhower's strategy of deterrence, in part, through air power, and backed Adm. Hyman Rickover in development of atomic submarines. In the mid-1950s, Jackson worked to accelerate the U.S. intercontinental ballistic missile (ICBM) program. Soviet "firsts" in the space race, beginning with Sputnik in 1957, seemed to bear out his warnings that the U.S. missile program was lagging. Congress moved to close the technological and scientific "gaps" by creating NASA and by enacting the National Defense Education Act in 1958, making money available for improvements in science, mathematics, and foreign language programs. Similarly, at Atlantic Assembly meetings, Jackson advocated scholarship programs for exceptional students from NATO nations to foster scientific and technical education and the study of Asian and African languages.

The post-Sputnik years convinced Jackson of the need for more effective U.S. leadership in world affairs. In 1959, when he became chairman of the Government Operations National Policy Machinery Subcommittee, he and his staff studied the policy-making areas of the executive branch as they related to national security. Besides producing reports on the National Security Council, the State Department, and the Atlantic Alliance, the committee's studies helped shape Jackson's views on arms control, defense, and foreign policy.

The 1960s

Senator Jackson's growing reputation led to his emergence in 1960 as a contender for the vice presidency. Candidate John F. Kennedy, however, chose Senate Majority Leader Lyndon B. Johnson, who, he believed, improved Democratic chances in the South in his close race with Richard M. Nixon. Jackson was named chairman of the Democratic National Committee. The election of Kennedy, the first president to have come of age during the New Deal, seemed to signal a new era of reform.

From their positions on Senate committees, the Magnuson-Jackson team advanced the interests of Washington State during the Kennedy and Johnson administrations. **When Bangor, on the Kitsap Peninsula, was chosen as the base for Polaris submarines, Magnuson's legislation for assistance to communities impacted by federal employees helped build schools and housing.** As the children of the baby boom moved from elementary school to secondary school to higher education ages, the senators supported initiatives for federal assistance.

The senators also encouraged expanded Western power generation and interregional cooperation. As a member of the Interior Committee, Jackson worked with the Washington Public Power Supply System (WPPSS), the BPA, and administration officials to conclude the Columbia Storage Power Exchange agreement with Canada in 1963. The treaty ensured firm power capacities of downstream U.S. dams and allowed the sale of power throughout the Pacific Northwest and California through the west coast interties authorized by Congress in 1964. FDR's vision of slack-water navigation from Astoria to Clarkston became a reality as appropriations for the Lower Snake dams to complete that "new Northwest Passage" speeded up during the 1960s. Magnuson and Jackson also backed such projects as the giant third powerhouse at Grand Coulee that expanded the capacity of existing dams.

But concern about the ecological and fiscal costs of hydroelectric projects mounted. To meet the long-term power demands of the West, Senator Jackson's proposal for a dual-purpose reactor at Hanford was approved by President Kennedy. WPPSS became the managing partner with the Atomic Energy Commission to add the steam plant, and by 1966 the new production reactor began contributing to the Northwest power pool. Although the project was plagued with difficulties after 1971, Jackson spoke with pride of the effort: "There we literally did beat swords into plowshares and provided jobs."

Pushing a news car out of the mud, Mt. Rainier, 1963

The industrial and agricultural development of eastern Washington through dams and reclamation also provided residents and tourists with recreational facilities. Travel and tourism became a major industry, and Magnuson and Jackson endorsed state promotional programs from Westport to Walla Walla. When the citizens of Seattle hosted a world's fair in 1962, Magnuson obtained a $10 million subsidy to boost the Century 21 Exposition. The Pacific Science Center, centerpiece for the fair's "Man in Space" theme, showed off both the latest NASA triumph and the Washington aerospace industry. Magnuson also backed the 1974 world's fair in Spokane that promoted his perennial interests in Pacific Rim trade and environmental protection.

Within the month after the world's fair closed in October 1962, however. Senator Magnuson almost lost his bid for a fourth Senate term. His opponent was a neophyte politician, a thirty-two-year-old minister from Snohomish County whose youth and vigor inspired an enthusiastic corps of volunteers. Richard G. Christensen used television extensively, and advertisements showed him speaking to an empty rocking chair to depict both Magnuson's age and his refusal to debate. Magnuson embodied the old-style, cigar-smoking, pork-barrel political insider rather than a member of the New Frontier, and his bachelor life-style and reputation as a hard-drinking man seemed out of place to many voters. Beyond those factors, however, the election took place within days of the Cuban missile crisis and the threat of nuclear war played into the hands of the resurgent New Right, which decried Magnuson's liberal record. Eastern Washington voters supported Christensen, as did organizations that disapproved of Magnuson's work for such federal programs as Medicare. The senator's forty-eight-thousand-vote victory resulted from his traditional strength in urban western Washington, where labor, education, and maritime organizations heavily supported him.

Commerce Committee

The election of 1962 convinced Magnuson and his staff of a need to make changes to increase his effectiveness and visibility as chairman of the Senate Committee on Commerce. He added enterprising staff members to help him and other committee members identify and develop approaches to issues. Magnuson encouraged junior and minority party subcommittee members to develop workable bills and accommodated their concerns in final legislation as much as possible. "We seldom pass a bill in the Commerce Committee that isn't pretty well agreed upon," he noted. Although some senators objected that Magnuson's integrative approach "compromised" their legislation, most realized the value of the chairman's insistence on taking a unified committee to the Senate floor. His mastery of Senate rules and deference to the divergent views of his colleagues resulted in an unusually effective committee. During Magnuson's tenure - the longest continuous chairmanship in Senate history (1955-78) - more than two hundred measures he introduced became law. The Commerce Committee's work during this period resulted in such legislation as that creating the Corporation for Public Broadcasting, the Communications Satellite Corporation, Amtrak, Conrail, and the Department of Transportation.

Magnuson and his staff made consumer protection a central concern of the Commerce Committee. In 1966, he created and became chairman of a new Consumer Subcommittee. The Dark Side of the Marketplace, a book Magnuson wrote with Jean Carper in 1968, aimed to raise public awareness of the need for protection of the consumer's economic welfare, health, and safety. Such protection, he emphasized, also served the interests of responsible businessmen,

Among the many consumer measures passed as a result of subcommittee work were regulations on flammable fabrics for children's sleepwear, truth in packaging and labeling, generic drugs (to lower the cost of antibiotics), cigarette labeling and advertising, toy and auto safety, improved product warranties, packaging for poison prevention, and drinking water safety. He also helped create the Consumer Products Safety Commission (1972) and the Agency for Consumer Advocacy to represent citizens before federal agencies and courts.

Magnuson and his Commerce Committee staff also brought fresh approaches to his traditional interest in fisheries and maritime policy. The general course of his activities followed on the National Academy of Sciences oceanography report of 1959, which recommended an ambitious program of ocean exploration rivaling the federal effort in space science. Magnuson interested the maritime construction industry in his ideas and took testimony from marine and fisheries scientists scattered among federal agencies and universities. These efforts culminated in enactment of the Marine Resources and Engineering Development Act of 1966, which provided coordination of research, education, and planning for future oceanographic development. Magnuson also sought ecological safeguards through regulations on toxic substances and oil tanker construction and through prohibition of oil ports on Puget Sound. Long a proponent of measures to preserve and enhance North Pacific fisheries, he sponsored the bill that established the two-hundred-mile fishing jurisdiction in 1977.

Interior Committee

Concern about conservation of natural resources preoccupied reformers at regular intervals in U.S. history—from the establishment of the National Park Service in 1916 to the New Deal's extensive soil and water management programs. Wilderness preservation and conservation forces found support in the Kennedy-Johnson administrations for new programs to solve the nation's growing ecological problems. Finding a balance between environmental concern and economic development became a major task for the Senate Interior and Insular Affairs Committee. Jackson's tenure on this committee began in 1953. He served as its chairman from 1963 to 1980 and helped guide a wide range of environmental protection bills through Congress. The Wilderness Act of 1964 set up a system for designating wilderness areas on public lands. It was followed in 1965 by the creation of the Land and Water Conservation Fund to buy and develop land for preservation and recreation. Additions to the Olympic National Park, wildlife refuges, and public-access facilities in parks were provided by the fund. Jackson responded to the persistent efforts of such Washington advocates as the North Cascades Conservation Council to forge the compromise that established the North Cascades National Park in 1968. That same year, he sponsored, with congressional colleagues, the National Wild and Scenic Rivers Act and the National Trails Systems Act. A program that provided city youths with jobs in the nation's parks and forests resulted from the Youth Conservation Corps Act of 1970. This measure depended on the persistent legislative teamwork of Jackson and Washington Congressman Lloyd Meeds as well as on the appropriations strategy of Magnuson and Julia Butler Hansen.

The landmark National Environmental Policy Act of 1969 (NEPA), which also was a Jackson-created bill, established environmental protection as a priority. The act required all government agencies to consider the impact of proposed programs on the environment and to seek any needed protective alternatives. Legislation of such sweeping character as NEPA was not easily passed. Timber, ranching, and mining interests and agencies such as the Corps of Engineers and the Atomic Energy Commission argued that efficiency would be hampered by such close regulation.

The preoccupation of the Interior Committee with energy issues after the embargo imposed by the Organization of Petroleum Exporting Countries in 1973 was indicated by its title change to the Energy and Natural Resources Committee in 1977. Jackson's ability to achieve bipartisan consensus was demonstrated by the passage of the Surface Mining Control and Reclamation Act of 1977, after hearings and attempts that spanned the previous decade. His reputation as an arbiter, as well as his credibility as an advocate for Alaskan development, helped in the mediation of the land claims of Alaska natives (1971) and in passage of the Alaska National Interest Lands Conservation Act (1980).

Influential Advocates

Washington's senators were often called "the gold-dust twins" or the "senators from Boeing" because the legislation they initiated or supported often directed federal monies to Washington State. Their reputation for backing programs in the national interest, as well as their accumulated seniority, were factors in the deference accorded Magnuson's economic development programs and Jackson's programs for national defense. Both were consensus seekers known for their ability to build coalitions supportive of their bills.

During a tour of military installations, Korea, 1955

Both were active in Democratic party affairs and were friends and advisers to presidents. Magnuson played poker with FDR, whose affectionate use of the nickname "Maggie" was widely adopted by others. He went fishing with Harry Truman and swimming with John Kennedy. President Lyndon Johnson, who began his congressional career with Magnuson on the House Naval Affairs Committee in 1936, was best man when Magnuson married Jermaine Peralta in 1964. While both senators supported the domestic reforms of the 1960s, Kennedy and Johnson drew on Magnuson's unique position and reputation to pass civil rights legislation. Lunch-counter sit-ins and freedom riders in Southern states focused national attention on the drive to desegregate public facilities. As a result, the public accommodations section was introduced as a separate bill to ensure hearings in Magnuson's Commerce Committee rather than in the Judiciary Committee, known as "the civil rights graveyard." The strategy produced a public accommodations section that Congress adopted as part of the Civil Rights Act signed by President Johnson on July 2, 1964.

Jackson's advice on defense and foreign policy was sought by both Democratic and Republican administrations. While both senators were proponents of a bipartisan approach to global affairs, their contrasting views were illustrated by their positions on the Vietnam War and China. Magnuson endorsed a strong U.S. naval presence in the Pacific and such alliances as Southeast Asian Treaty Organization (SEATO) and Australia-New Zealand-United States alliance (ANZUS) to contain communism and maintain trade. After the Vietnam conflict escalated to involve more than half a million U.S. troops, and his old friend LBJ decided not to seek reelection in 1968, Magnuson joined those advocating a negotiated U.S. withdrawal.

Jackson initially stood by LBJ in his conduct of the war as a means to check the domination of Southeast Asia by the Chinese and Soviets. As a member of the Armed Services Committee, he endorsed the bombing of North Vietnamese military targets until the South Vietnamese could defend themselves. He believed in "going for the jugular," because the Korean experience had shown the American people would not support a protracted war. As the war dragged on, he advocated a mutual cease-fire and a negotiated settlement; in 1968, he privately advised the Johnson administration against sending more U.S. troops. Jackson continued this stance with President Nixon while supporting Nixon's effort to "Vietnamize" the war and withdraw U.S. ground troops. Jackson declined Nixon's invitation to serve either as secretary of defense or as secretary of state. In 1972, he lost the party's nomination for the presidency to Senator George McGovern, a leading opponent of the war.

Magnuson's experiences in China as a young man and in the Pacific theater during World War II helped him realize the implications of U.S. domestic policy in international affairs. In 1943, he sponsored legislation repealing the Chinese exclusion laws, which were used by the Japanese to illustrate U.S. prejudice

against its Asian ally. After the Chinese communists conquered the mainland in 1949, the United States recognized the nationalist government, which had retreated to Taiwan Magnuson, however, advocated nonstrategic trade and cultural relations with the mainland Chinese as early as 1956. His overture was politically unpopular, but he maintained his belief explaining, "We can't keep four hundred million people behind an economic bamboo curtain forever just because we don't like the policies of their government."

By 1969, the shifting alliances of the Cold War era and the geopolitical importance of China had convinced Jackson that closer U.S.-China ties were crucial to U.S. efforts to promote world stability. He agreed that the Chinese could help end the war in Southeast Asia and applauded President Nixon's visit to China in 1972. In July 1973, Magnuson led the first U.S. congressional delegation to the People's Republic of China in nearly twenty-five years. Jackson made four official trips to China between 1974 and 1983. Throughout the 1970s, Jackson led discussions regarding normalization of relations, and the two nations finally exchanged ambassadors during the Carter administration in 1979. Magnuson and Jackson were instrumental in arranging many business, educational, and community contacts between the Pacific Northwest and the People's Republic of China and became revered figures in China.

Arms Control and Human Rights

The ideological rivalry between the U.S. and the Soviet Union was complicated by nuclear weapons, and negotiations in search of a solution to the arms race became a fixture of foreign policy. In the aftermath of the Cuban missile crisis in 1962, President Kennedy and Premier Nikita Khrushchev resumed long-stalled discussions on nuclear testing and formally signed a treaty the following October. The treaty banned atmospheric, ocean, and space testing of nuclear weapons while permitting underground testing. In the course of debate on ratification, Senator Jackson led those who favored the treaty contingent on administration assurances that U.S. testing and monitoring capabilities would be maintained and improved. His floor speech endorsing the treaty helped ensure ratification of the Limited Nuclear Test Ban Treaty.

In 1969, the two nations again entered arms control negotiations. Phase one of the Strategic Arms Limitation Talks (SALT I) concluded in 1972 when President Nixon and Secretary Leonid Brezhnev signed a treaty limiting antiballistic missile (ABM) systems and a five-year interim agreement on the limitation of strategic offensive arms.

During the Senate ratification process, Jackson voted with the majority to ratify the ABM treaty. He supported the interim agreement, but only after the Senate had agreed to his amendment directing the president to achieve equality in levels of intercontinental forces in all future agreements.

As part of the relaxation of tensions, the two nations also began to normalize trade relations that had languished since 1951. Senator Jackson, a critic of the Soviet Union's violations of the human rights of its citizens, emerged as a leader of the opposition to the restoration of its most-favored nation status unless it met certain conditions. In 1972, Jackson introduced an amendment to the Trade Reform Act that denied most-forced nation status to countries that denied their citizens the right to emigrate freely. Jackson targeted the amendment in part at the "education tax" on Soviet citizens that was designed to stop the exodus of talented individuals. Jackson's linkage of human rights to a favored trade status touched off two years of debate that was complicated by Soviet encouragement of the attack on Israel by Egypt and Syria during Yom Kippur in 1973.

Jackson supported close ties with Israel after its formation as a separate state in 1948. Soviet intervention in the Middle East confirmed Jackson amendment supporters in their doubts about detente. Henry Kissinger, Nixon's secretary of state, argued against trying to influence Soviet internal affairs. A compromise was reached allowing the president to waive the requirements of the amendment when an individual nation moved substantially toward freer emigration. The Jackson-Vanik Amendment became law in 1974.

The Jackson amendment and the resulting debate about human rights, preferential trade, and the role of Congress in foreign policy were issues in the 1976 presidential campaigns. Jackson won the Massachusetts and New York primary elections but withdrew from campaigning after losing to Jimmy Carter in Pennsylvania. As president. Carter endorsed the concept of the Jackson-Vanik Amendment. Following Carter's negotiation with the Soviets of the SALT II agreement, Jackson again led the skeptics, criticizing the lack of reductions in ICBMs and the failure to respect the principle of equality of strategic forces. With the Soviet invasion of Afghanistan in 1979, Carter withdrew the SALT II treaty from Senate consideration.

Health Care

For Magnuson, the post- Vietnam era was a time to do rear-guard battle on the health-care front. Magnuson's first bill as a new representative from Washington State in 1937 was a cancer research bill cosponsored with his mentor. Senator Homer Bone. The National Cancer Institute established by passage of that legislation was an innovation. It embodied the idea that research into noninfectious disease was within the purview of the federal government and advanced the role of U.S. Public Health Service research by means of fellowships, private investigators, and medical schools. The wartime experience with battle casualties and draftees revealed the need for better national health care, and Congress passed the National Institutes of Health (NIH) bill introduced by Senators Magnuson and Lister Hill in 1948. Heart disease and mental illness were added to cancer as "dread diseases" to be conquered by the Public Health Service. In 1950, more institutes were added, and Magnuson's work for the National Science Foundation included a Medical Research Division to coordinate grant activities with the NIH.

During the next decade, Magnuson helped devise an effective network of activists and health professionals who countered opposition and exploited opportunities to further their cause. The Korean War validated Magnuson's advocacy for involvement of Veterans Administration hospitals in research and education. The development of a poliomyelitis vaccine by NIH researcher Jonas Salk proved the importance of biomedical research to millions of parents. The health-care lobby also helped pass the Medicare and Medicaid programs over the objections of those who feared "socialized medicine."

Magnuson's ability to influence health legislation increased when he became chairman of the Appropriations Subcommittee on Labor-Health, Education, and Welfare in 1969. In opposition to Nixon administration budget cutters, he sponsored and helped guide through Congress new programs for rural and children's health-care. In 1973, he stopped Nixon's campaign to close the nation's Public Health Service hospitals. During these years, Magnuson became known as the "most-vetoed senator."

Magnuson took his arguments for increased health-care appropriations to the public with the book How Much for Health?, co-authored with Elliot A. Segal in 1974. The book served as a summary of the current state of the nation's health-care system and as a guide for future action, including the need for better food safety, lead-based paint regulation, and fire prevention. Magnuson's efforts on behalf of national programs did not overlook Washington State. Besides keeping open the Public Health Service Hospital, he obtained matching funds for the Fred Hutchinson Cancer Research Center in Seattle and endorsed appropriations for clinics such as those on the Puyallup and Lummi Indian reservations. In 1978, the Board of Regents of the University of Washington named the Health Sciences Center in Magnuson's honor, an acknowledgement that his support for biomedical research and education was vital to its many programs in the Pacific Northwest and Alaska.

End of an Era

End of an Era

Senator Magnuson rose to his most powerful positions during his last three years in the Senate. In 1978, he became chairman of the Appropriations Committee while also serving on the Budget, Science, and Transportation committees. As the senior member of the majority party, he was third in line for the presidency in the otherwise largely ceremonial role of president pro tempore of the Senate in 1979-80. He continued to work on issues he considered to be in the long-term national interest: no-fault auto insurance, health-care insurance, and fisheries conservation.

But it was his position as appropriations chairman that claimed most of his time. President Carter's campaign pledge to balance the federal budget by 1980 received Magnuson's support. Magnuson expressed his determination to impose discipline on appropriations through increased oversight, confident that he and subcommittee heads could trim programs and critique spending requests. In response to queries about his new "frugal hand," Magnuson replied that he was a "closet conservative when federal spending is the issue." Budget cutting was popular in many states at the time. After Washington State voters limited revenue collections by passing an initiative in 1979, Magnuson introduced a bill tying federal spending to the gross national product. However, Magnuson was as generous as ever in assisting the Pacific Northwest in calamities of the moment. He engineered appropriations for new Hood Canal and West Seattle bridges (both accidentally destroyed in 1979), steered a $400 million contract to Todd Shipyards, and made $951 million available to assist government agencies coping with the effects of the 1980 eruption of Mount Saint Helens.

In response to criticism during the 1980 campaign that the Appropriations Committee had become the "Warren G. Magnuson Charitable Trust," Vice President Walter Mondale said: "Maggie assured me that he has decided to be scrupulously fair with federal appropriations. He has decided to divide them up 50-50-halffor Washington State and half for the rest of the country." Others noted that, "Grant is Magnuson's middle name." Such joking revealed the ambivalence some voters felt about Magnuson's ability to bring federal funds to bear on Washington problems. While Magnuson's reelection campaign was well financed by traditional groups in the labor, shipping, and fishing communities, actual voting support was diluted by the issues. Support of health professionals was divided; some physicians doubted that Magnuson's support for national health care plans was good for the nation. Regional economic problems associated with declining salmon runs and the shift of lumbering jobs to the South were heightened by the double-digit inflation, and they weakened Magnuson's traditional voting base. Some observers noted that a majority of voters were young or new to the state and thus immune to the tradition of voting for "Maggie." Those same voters, however, also had acquired the habit of voting for Magnuson's opponent, the state's highest elected Republican officeholder. Attorney General Slade Gorton.

Gorton rose to leadership of the moderate wing of the Republican Party during his ten years in the Washington State House of Representatives. Vigorous and articulate, Gorton's initiatives as attorney general included the establishment of an office of consumer protection, and earned him continuous reelection after 1969. In the 1980 race, Magnuson's age and declining health were factors in his defeat. The fifty-two-year-old Gorton jogged and cycled around the state, while Magnuson conducted a whistle-stop tour by rail. The seventy-five-year-old Magnuson rebutted observations on his age with the comment, "Age isn't a problem; it's a fact of life." Concerning the voters' mandate that ended his forty-four years in Congress, he concluded that is was “some sort of tidal wave. There is a time to come and a time to go.”

The 1980 election, with its shift to Ronald Reagan and the Republican Party, seemed to signal the end of the old New Deal reform coalition. An ironic consequence of the GOP tidal wave was that Henry Jackson became senior senator and leader of the Washington delegation to Congress for the first time-but lost his chairmanships.

As ranking Democrat on the Energy and Natural Resources, Armed Services, and Government Affairs committees, Jackson worked at issues ranging from the Columbia Gorge to Middle East tensions. He acted to block such Reagan administration proposals as the sale of the Bonneville Power Administration system to private interests and the leasing of wilderness areas for oil and gas exploration. As relations between the United States and the USSR deteriorated, Jackson joined with Senator John Warner to obtain the support of sixty- one cosigners to a resolution urging a renewal of arms-control negotiations. The bipartisan resolution advocated a long-term, mutual, and verifiable arms freeze at equal and sharply reduced levels. Also in response to national and local concern, he proposed the formation of a bipartisan commission on Central America to end the policy stalemate between Congress and the Reagan administration as well as to unify the nation. The final report of the bipartisan commission was dedicated to Jackson.

Senator Jackson died suddenly on September 1, 1983, during his forty-third year in Congress. He had just returned from China, and in his last press conference, that day, denounced the Soviet Union's action in destroying Korean Air Line's Flight 007 with its 269 passengers and crew. Congressional tributes to Jackson's memory included the naming of a Trident submarine, the federal office building in Seattle, and the Foundation for the Advancement of Military Medicine in his honor. Moreover, in 1986, Congress approved a $10 million grant to match private funds raised to support the Henry M. Jackson Foundation, which had been established in 1983 by his widow, Helen, and his friends and colleagues. The Jackson Foundation carries forward the senator's commitment to the advancement of education and scholarship in the fields of international affairs, environmental and resource policy, and other areas of interest to him. Jackson also had furthered programs of the University of Washington's School of Law and Graduate School of Public Affairs that promoted his interest in international education and training for foreign service. The University's School of International Studies was named for Jackson in recognition of his active support for its programs and its interdisciplinary approach to the study of world cultures.

On the occasion of what would have been Jackson's seventy-fifth birthday anniversary, May 31, 1987, former Senator Magnuson said, "I have lots of memories tonight. We were a team. It was rare that we voted opposite." Together, they recorded more than twenty thousand votes, and, in the matter of Washington State development, they seldom disagreed.

NOTE: This account of the careers of Senators Magnuson and Jackson was written by Jane Sanders in 1987 under the auspices of the University of Washington Libraries to accompany the exhibit based on the senators' papers administered by the libraries. Advisors for the exhibit and for the biographical essay were University of Washington faculty members Robert E. Burke, Department of History; Brewster Denny, Graduate School of Public Affairs; and Richard Ellings, Jackson School of International Studies; as well as Dorothy Fosdick of the Henry M. Jackson Foundation.

Wife - Helen Hardin Jackson

Source : HistoryLink : [HL005S][GDrive]

Helen Hardin Jackson grew up in New Mexico, received an excellent education, and after a brief first marriage, became a secretary to a senator in Washington, D.C. There, in 1961, she met and married Senator Henry M. "Scoop" Jackson (1912-1983), a Democrat from Everett. Helen became known as a hard-working wife, mother, and co-campaigner with her husband through his re-election campaigns and two unsuccessful presidential bids. After her husband's unexpected death in 1983, she established the Henry M. Jackson Foundation as a living memorial to him. The foundation assists public officials, diplomats, and journalists in addressing international problems and funds scholarships, visiting faculty, and other programs at the University of Washington's Jackson School of International Studies. Helen also took on a variety of leadership and philanthropic projects in and around Everett and during the 1980s and 1990s often hosted fundraisers in her home. The Helen H. Jackson Endowed Chair in Human Rights at the Jackson School of International Studies was created in 2008 to recognize her personal commitment to human rights. Helen Jackson was diagnosed with Alzheimer's disease in 2003, and health conditions prevented her from being as active and public in the community as she had previously been. Helen Jackson continued to reside in Everett, where she was widely admired for her graciousness, generosity, and leadership abilities, until her death in 2018.

Early Life and Education

Helen Eugenia Hardin was born in Clovis, New Mexico, on August 17, 1933, the only child of Marion Moody Hardin and Jeanne Hardin. She spent her early childhood in Hobbs, New Mexico. When she was 10 years old, Helen's family moved to Albuquerque, where her father served as president of the American Gypsum Company. Helen's maternal grandfather, Dr. Clyde Campbell, was a Methodist missionary who taught English and Bible studies at the University of Soochow in China from 1907 to 1911. Helen's mother was born in China, a place that has always held special interest for her. Helen credits her grandfather with instilling in her an early love of reading and literature.

Helen was a well-educated young woman. She attended the Hockaday School, a private college preparatory day and boarding school for girls in Dallas, Texas. She graduated from high school in Albuquerque, then studied for a year at Vassar College in Poughkeepsie, New York, before transferring to Scripps College in Claremont, California.

At Scripps she served as senior class president and graduated with a degree in English and philosophy in 1955. Helen returned to Scripps in 1976 to deliver a commencement address on "The Role of Women in Public Life." She earned a master's degree in English literature, specializing in Virginia Woolf, from Columbia University in 1958. While there, she studied under Mark Van Doren (1894-1972), a Pulitzer Prize-winning poet, writer, and critic, who had a profound influence on Helen's intellectual development. After graduating from Columbia, she worked as secretary to the editor of medical publications at Oxford University Press in New York.

First Marriage and Divorce

In April 1955, shortly before her college graduation, Helen became engaged to Dr. William Fuller from Albuquerque, who was a surgical resident at New York Hospital. The couple's five-year marriage ended in divorce, and Helen returned home to Albuquerque.

In 1960 she took a speedwriting course to improve her secretarial skills. Helen referred to this as a "ghastly part of my life" (*The Seattle Times*, March 8, 1972). She had an excellent education, but the sexism of the era limited her career opportunities to secretarial work. Helen's vocational training in Albuquerque nevertheless proved to be an important career move. She soon received an offer to work for Senator Clinton P. Anderson (1895-1975), a Democrat from New Mexico and a family friend. Helen relocated to Washington, D.C., in January 1961 to begin a new career in the nation's capital. The move was to have a profound effect on her life.

From Career Girl to Senator's Wife

Helen's first day on the job, January 4, 1961, was auspicious. Senator Anderson invited Helen to attend a swearing-in ceremony for new senators. In an elevator on the way to the ceremony she met Senator Henry M. "Scoop" Jackson, the Washington state Democratic senator, 21 years her senior.

Helen and Scoop made a striking first impression on one another. A few weeks later, he invited her to tea and then took her on several bicycling dates. The couple courted throughout the spring and summer of 1961. They rarely did anything extravagant "because Scoop was thrifty" (Kaufman, 128).

Single, successful, and 48 years old, Scoop was considered one of the capital's most eligible bachelors. That changed on November 27, 1961, when Scoop and Helen announced their engagement. They wed on December 16, 1961, in an intimate ceremony at the Central Methodist Church in Albuquerque. President Kennedy sent a telegram "extending heartiest congratulations to you and your bride on this happy day" (Kaufman, 128).

The newlyweds took a two-week honeymoon to Hawaii, where Helen found little respite from her husband's high-profile political life. Helen noted that "half the State of Washington appeared to be in Hawaii" (*Everett Daily Herald*, January 2, 1962). Senator Jackson talked to reporters and attended a briefing on antisubmarine warfare and the communist submarine threat in the Pacific. The newlyweds dined with several Washingtonians in Hawaii, including Commander and Mrs. John Riley of Everett and Commander Don McLain, aboard the U.S. naval destroyer escort USS *Whitehurst*. The lack of privacy or break from politics that the Jacksons experienced during their honeymoon became a recurring theme with which Helen graciously coped throughout their marriage.

The couple returned to Everett, Washington, Scoop's hometown, on January 2, 1962. This week-long visit was the first chance many Washingtonians had to meet the senator's new bride. Mr. and Mrs. Henry C. Gaul and Mr. and Mrs. Charles G. Westrom hosted a reception in the couple's honor on Sunday, January, 7, 1962, at the Gauls' picturesque Lake Stevens home. Guests traveled from as far away as California to attend the reception, eager to meet the young woman who took the bachelor senator off the market. The *Everett Herald* reported, "The lovely blonde who was just the right girl for Sen. Henry M. Jackson, won the hearts of many of his longtime, hometown friends Sunday afternoon" (*Everett Herald*, January 8, 1962).

Senator's Wife

The couple returned to Washington, D.C., on January 9, 1962, as Congress reconvened. The new Mrs. Jackson transformed the former bachelor pad at 2500 Q Street into a suitable family home. When Congress was not in session, the couple returned to Everett, where they lived with Scoop's beloved older sisters, Gertrude and Marie, at 3602 Oakes Avenue.

Being married to a hard-working senator was often challenging for Helen. She credited her year-long position in Senator Anderson's office with teaching her about political life and helping her learn cope with the challenges. She learned what a senator's life was like before she married one, and thus had a fairly easy time adjusting to her husband's long workdays and to managing the household alone.

As the wife of a prominent senator, Helen became a public figure in her own right. However, domestic life remained a top priority. She enjoyed decorating, entertaining, and even cleaning and ironing, but she was not particularly fond of cooking. After the birth of the couple's two children, Anna Marie (b. 1963) and Peter (b. 1966), childrearing and family became primary concerns. Helen believed strongly in being a good partner to her husband and a good mother to their children, as well as maintaining two households and managing the family's social relationships. She worked hard to strike a balance between the competing demands for her time, energy, and attention.

Charming, gracious, and publicly reserved, Helen played the part of a dutiful wife to an ambitious senator extremely well. She possessed a great deal of depth and intellect; however, the media often characterized her in simplistic and superficial terms. They focused on her svelte figure, attractive good looks, or decorating and fashion choices. Those close to Helen are quick to note her wry sense of humor, wit, and intellect, which the media often overlooked or rarely saw, especially in the early years of their marriage.

Setting Down Roots in Everett

In 1967 the couple purchased a large colonial revival house at 1703 Grand Avenue in Everett, where Helen Jackson continued to reside until her death in 2018. Scoop had strong Everett roots, and it was important to him to return to Everett as often as possible. The Jacksons split their time between Washington state and Washington, D.C.

Although not a Washington native, Helen quickly grew to love life in Everett. The small mill town offered a slower pace, the family had friends there, and the children had greater freedom than they did in Washington, D.C. The Jacksons' Everett neighbor, Jeanne Metzger, describes Helen as a very loyal member of the community. She has long been active and committed to her department of the Everett Woman's Book Club. The whole family enjoyed taking part in simple neighborhood activities, like caroling and trick-or-treating. Harry Metzger once noted that "Helen adopted his [Scoop's] sense of community. She was dedicated to staying here" (Kaufman, 187).

Candidate's Wife, Round One

When Senator Jackson officially announced his candidacy for the Democratic presidential nomination on November 19, 1971, Helen Jackson was thrust into the national limelight. She was enthusiastic about her husband's candidacy. "I think any woman would enjoy being First Lady," she told a reporter five months before the official announcement (*The Seattle Times*, June 27, 1971).

Senator Jackson had many assets that made him a suitable presidential candidate, not the least of which was his wife. Young, charming, energetic, and attractive, Helen campaigned actively with her husband as his "ever-cheerful sidekick" (*The Seattle Times*, March 8, 1972). Crisscrossing the country on Scoop's "campaign for common sense," Helen also managed to attend to her domestic responsibilities and their children.

Although many presidential hopefuls and their wives traveled and campaigned separately, for the 1972 election campaign, the Jacksons almost always campaigned together. Helen considered campaigning together good for the marriage because it united the couple in a common cause. Helen was adamant that she not make speeches for her husband. "You end up giving your husband's philosophy secondhand" (*The Seattle Times*, March 8, 1972). Helen cited day-care centers, the environment, and helping the elderly as her own top priorities if she were to become First Lady.

Candidate's Wife, Round Two

Senator Jackson won the Washington state caucuses in 1972, but lost in all other states. Undeterred, he remounted a stronger campaign in 1976. This time the Jacksons adopted a different campaign strategy, and the couple traveled and campaigned separately. As a result, Helen emerged as a more outspoken figure in the 1976 election than she had been four years earlier.

Because Helen was campaigning and speechmaking without her husband by her side, the public was able to gain greater access to her. They discovered a charismatic woman who expressed sincere professional and personal admiration for her husband, whom she called "Dear Heart" (*Seattle Post-Intelligencer*, May 8, 1975). She spoke more openly on a wide range of issues, from senior citizens to national defense. The public picture of Helen Jackson that emerged in the 1976 campaign contrasted dramatically with the "happy homemaker" persona of 1972 (*Everett Herald*, June 12, 1976). Some journalists covering the 1976 election described Helen's charisma and warmth as Scoop's secret weapon in the 1976 campaign (*Everett Herald*, April 2, 1976). She was able to charm and connect with audiences in a way her husband did not.

Helen believed it was her responsibility to inform the public on Scoop's views, whether or not she agreed with them. "Sometimes my opinions differ radically from Scoop's, but my job is to tell people what his opinions are. Otherwise when they get to the ballot box they will be confused. Did he say this? Or did she say this?" (*The Oregonian*, February 13, 1976). Abortion was one notable issue upon which Helen and Scoop disagreed. Scoop supported abortion only when the mother's life was at stake; Helen took a more pro-choice stance.

Jackson lost the 1976 Democratic presidential nomination to Jimmy Carter, and the couple was disappointed when Scoop was not selected as Carter's running mate at the 1976 Democratic convention. However, the family soon returned to its old routines, splitting time between Washington, D.C., and Everett. Helen remained an active force in Scoop's senatorial re-election efforts in Washington state.

Views on the Women's Movement

As the wife of a presidential hopeful during the 1970s, Helen was often asked to take a stance on the women's movement. Her responses suggest that Helen struggled internally to balance competing roles and priorities as a wife, mother, and public figure and to find a meaningful identity for herself within the burgeoning feminist movement.

She told one reporter, "At first it turned me off ... but they no longer consider housewives second-class citizens. I enjoy being a housewife, and I used to resent that" (*The Oregonian*, May 3, 1975). She reiterated her earlier aversion to the women's movement a few months later, stating, "At first it was such a shrill movement that it turned me off. Now that the emphasis seems to have settled on a woman doing what is right for her -- that she should have a say in what she'll do with her life, then I applaud it" (*Everett Herald*, September 2, 1975).

Helen appeared to embrace and accept the women's movement much more comfortably once she was able to find a place for her work in both the private and public spheres. Although not a feminist in the "bra burning" sense, Helen held strong convictions about equality of the sexes and had for many years (*Panorama*, June 5, 1976).

Congressional Wives for Soviet Jewry

Helen cited such relatively safe causes as the elderly and child care issues as her would-be platform as First Lady. After the 1976 election, she began to take on more controversial issues. In 1978 Helen co-founded a group called Congressional Wives for Soviet Jewry with Joanne Kemp (b. 1936), wife of Jack Kemp (1935-2009), a Republican congressman from New York.

The 45-member group lobbied for human rights in the Soviet Union. At a December 4, 1984, rally in Portland, Oregon, Helen stated:

> "The Soviet leaders are now systematically promoting anti-Semitism as state policy ... . They do so for their own reasons but perhaps because they think they can get away with it. They see little evidence that the world is paying attention" (*The Oregonian*, December 5, 1984).

The group's goal was to work with other political wives from around the world to lobby to ease restrictions on Soviet Jewish emigration. The group and cause, while very much Helen's own, was nevertheless well-aligned with Senator Jackson's staunch anti-Soviet and pro-Israel positions.

Henry M. Jackson Foundation

Helen Jackson was widowed unexpectedly at the age of 50, on September 1, 1983. She wasted no time in ensuring that her husband's long legacy of political activism would not be forgotten. On October 25, 1983, she announced the formation of the Jackson Foundation to assist public officials, diplomats, and journalists in addressing international problems, and to fund scholarships, visiting faculty, and other programs at the University of Washington's Jackson School of International Studies. The foundation was created with $600,000 left over from the senator's 1982 re-election campaign funds. Helen headed the foundation and devoted herself full-time to raising $10 million in private donations in its first two years.

For Helen, the foundation was a means of following through on her husband's unfinished agenda and cementing his legacy in state and national history. She shaped the foundation's mission to address concerns of interest to the late senator, such as foreign policy, national security, energy, and the environment. Helen called the foundation a "living memorial for Scoop" (*The Oregonian*, November 17, 1985). In creating the foundation and assuming responsibility for its major fundraising goals, Helen Jackson successfully stepped from the sidelines, where she had comfortably spent many years, and into the forefront of political action. The foundation -- and the commitment to keeping Scoop's memory alive -- gave her life a new direction and purpose.

Helen Jackson served as chairman of the board of governors for the foundation for more than a quarter century. Her children, Peter H. Jackson and Anna Marie Laurence, served with her on the board. In its first 28 years of operation, the foundation granted more than $22 million to nonprofit organizations and educational institutions in the United States and Russia. Grant-making and strategic initiatives fall in four program areas, all of which reflect the senator's interests: international affairs and education, environment and natural resource management, public service, and human rights. The foundation and its many successes would not have been possible without the dedication, resourcefulness, and fundraising talents of Helen Jackson.

A Chair in Her Honor

On March 18, 2008, the Henry M. Jackson Foundation announced that it would donate $1 million to the Henry M. Jackson School of International Studies at the University of Washington to endow the Helen H. Jackson Chair in Human Rights. The endowment provides funding for a full-time professor to teach on human rights issues.

The endowed chair was a fitting recognition of Helen's impressive leadership talents and also provided the necessary momentum to create a permanent home for the study of human rights at the University of Washington. The Center for Human Rights opened in 2009 within the Jackson School. It is a strong testament to Helen Jackson and her family's long commitment to human-rights advocacy.

At Home in Everett

Although she was neither born nor raised in Everett, Helen Jackson adopted it as her permanent hometown. When her children were young, she enjoyed setting down roots in Everett with her husband and becoming part of the community. Helen remained close with Henry Jackson's sisters, Gertrude and Marie, and later brought her grandmother to live in the family home on Oakes Avenue. She adopted Everett, and it in turn adopted her. She recalled, "I'll never forget the way the people of Everett rallied to my side when Scoop died" (*The Seattle Times*, May 27, 1987).

Helen's philanthropic work and community activism peaked in the 1980s. In addition to chairing the Henry M. Jackson Foundation, she became actively involved in a number of civic and charitable organizations, such as the Everett General Hospital (now Providence Hospital) and the United Way, as a board member, advocate, and fundraiser. She assumed a more active role in the Gertrude Jackson Memorial Fund after her husband passed away. Scoop established the fund in 1969 to honor his sister, who taught at Everett's Garfield Elementary School for over 40 years, by funding scholarships to deserving students in Everett. According to the Henry M. Jackson Foundation executive director Lara Iglitzin:

> "Helen in her own right has provided tremendous leadership, serving on hospital boards and playing a major role in many of the civic organizations in Snohomish County. She has always opened her home for fundraisers and was often asked to speak and provide leadership" (*The Seattle Times*, March 19, 2008).

Helen Jackson was diagnosed with Alzheimer's disease in 2003. Her declining health prevented her from remaining as active with the Henry M. Jackson Foundation and with the Everett community as she had been previously. Nevertheless, she remained an Everett icon, a beloved local woman almost always described as "gracious" by friends, colleagues, and casual acquaintances. Helen Hardin Jackson died on February 25, 2018, at the age of 84.

This essay made possible by:

Snohomish County Women's Legacy Project

Helen Hardin Jackson embroidering in Senator Henry M. Jackson's office, Washington, D.C., ca. 1970s

Courtesy UW Special Collections (HMJ0680)

Helen Hardin Jackson (left) and Senator Henry M. Jackson (in suit) visiting nuclear submarine while on honeymoon, Pearl Harbor, Hawaii, ca. 1961

Courtesy UW Special Collections (HMJ0568)

Senator Henry M. Jackson, Helen Hardin Jackson, Harpo Marx, Washington Press Club, Washington, D.C., ca. 1962

Courtesy Peter Jackson

Senator Henry M. Jackson and family, Christmas card, ca. 1969

Courtesy UW Special Collections (HMJ0194)

Senator Henry M. Jackson and his wife Helen Hardin Jackson, Democratic National Convention, Miami, Florida, ca. July 1972

Courtesy UW Special Collections (HMJ0743)

Senator Henry M. Jackson and Helen Hardin Jackson, ca. May 1974

Courtesy UW Special Collections (HMJ0207)

Helen Hardin Jackson in China, ca. July 1974

Courtesy UW Special Collections (HMJ0211)

Senator Henry M. Jackson and Helen Hardin Jackson during presidential campaign, Miami, ca. 1976

Courtesy UW Special Collections (HMJ0867)

Helen Hardin Jackson (second from right), Congressional Wives for Soviet Jewry luncheon, U.S. Capitol Building, Washington, D.C., March 12, 1979

Courtesy UW Special Collections (HMJ0666)

Henry M. Jackson, daughter Anna Marie, Senator Jackson, Helen Jackson, and son Peter, Seattle, ca. 1981

Courtesy UW Special Collections (HMJ0708)

Brochure, Henry M. Jackson Foundation's Helen H. Jackson Endowed Chair in Human Rights, University of Washington, Seattle, ca. 2008

Courtesy Larry O'Donnell

Sources: [...]

Note: This entry was updated on February 26, 2018.

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Housatonic

Dr. Kuan-Teh Jeang (born 1958)

[HW002U][GDrive]

Born - 1958 [HW002W][GDrive]

Died - Jan 27, 2013

HousatonicITS Research Pages :

- **Professional relations:**
  - Questioned XMRV assertions/research by Dr. Judy Anne Mikovits (born 1958)
- **Employers**
- **Other**

2013 (Jan 31) - In remembrance of Dr Kuan-Teh Jeang (by Srimathy Sriskantharajah)

Source : [HW002T][GDrive]

Dr Kuan-Teh Jeang, Editor-in-Chief of *Retrovirology*, passed away on 27th January. We understand that Teh was well known and well liked by his friends and colleagues, so we would like to invite you share your memories and add your messages of condolences to this post. Below is a message about Teh from Dr Gottesman of NIH.

Dear colleagues,

Some of you have now heard the tragic news about Kuan-Teh Jeang of NIAID, who died suddenly and unexpectedly late Sunday night, on January 27. The cause of his death has not been verified, and I do not have the full details to relay.

I am sure you share my sense of shock and grief. Teh was 54 years old, had a remarkably productive scientific career, and was broadly admired on the NIH campus and in the field of virology and, in particular, retroviruses. I still can't believe, more than a full day after his death, that I am sending this kind of message about him to the NIH staff.

In my introduction for Teh for the George Khoury Lecture that he delivered in October 2012, I described him as a dynamo. He was chief of the Molecular Virology Section in NIAID's Laboratory of Molecular Microbiology, where he was a major figure in the fields of HIV and HTLV-1. In his 27 years at the NIH, he co-authored more than 300 publications and edited six books. He was the editor-in-chief of the journal Retrovirology, editor at Cell & Bioscience, associate editor of Cancer Research, and on the editorial board of numerousother scientific journals, including the Journal of Virology. He also was the recent past-president of the Society of Chinese Bioscientists in America, where he was outspoken in his desire for increased representation in leadership positions for Asian American scientists.

Teh's recent awards include the International Retrovirology Association Dale McFarlin Award in 2011, Biomed Central's Open Access "Editor of the Year" in 2010, and several Gates Foundation grant awards.

Teh's lab studies host factors that influence the pathogenesis of human retroviruses HIV-1 and HTLV-I. Some of his group's notable recent findings include: new insights into RNA modification and RNA-binding factors that affect HIV-1 post-transcriptional gene expression; successful genome-wide characterization of 252 human host cell factors in Jurkat T cells that are contributory to HIV-1 replication; and characterization of several oncogenic microRNAs and their contributions to HTLV-1 oncogenesis.

Teh had a colorful childhood. He was born in Taiwan, spent his childhood in Libya, came to the United States at age 12, and was accepted to the Massachusetts Institute of Technology at age 16. He arrived at the NIH in 1985 upon earning MD and PhD degrees from Johns Hopkins University. He was a postdoc in the lab of George Khoury, another great NIHer who tragically died young, for whom an NIH Wednesday Afternoon Lecture is named.

Teh's death is a blow to the NIH and the retrovirus research community; and our thoughts and condolences are with Teh's family: his wife Diane, a veterinarian with the FDA's Office of Regulatory Affairs, and his children David, John and Diana. We will keep you informed about any planned funeral or memorial arrangements.

Michael Gottesman, M.D.

Deputy Director for Intramural Research, NIH

Image of Teh provided by Jean-Luc Darlix

2013 Obituary: Kuan-Teh Jeang (Retrovirology volume 10, Article number: 28 (2013))

Note : Downloadable PFD is here : [HW002V][GDrive]

Source of below : [HW002W][GDrive]

Authors - Ben Berkhout, Monsef Benkirane, Andrew Lever, Mark Wainberg, Ariberto Fassati, Persephone Borrow, Masahiro Fujii, Srimathy Sriskantharajah & Matthew Cockerill

Dear colleagues

Our loyal friend Kuan-Teh Jeang, "Teh" to friends and colleagues, passed away unexpectedly at the age of 54 on the evening of January 27, 2013. Great shock and sorrow was apparent in the avalanche of email messages by the very many international colleagues with whom Teh interacted over the years. Many of us came to know Teh as an energetic and gifted scientist for whom we had much respect and affection.

Teh was born in 1958 in Taichung, Taiwan and was the youngest to his two older brothers. Teh spent his childhood in Libya and came to the US in 1970. At age 16, he began college at the Massachusetts Institute of Technology, and after two years, started medical school at Johns Hopkins University, receiving both his M.D. and Ph.D. degrees by age 25. His Ph.D. thesis was on the regulation of gene expression in cytomegalovirus with Dr. Gary S. Hayward as advisor. During his time at Hopkins, Teh met his wife, Diane, a graduate student in the same laboratory. They married in 1984 in Iowa, where Teh completed his medical internship. The next year, Teh started his post-doctoral work at the National Institutes of Health (NIH) in the laboratory of Dr. George Khoury at the National Cancer Institute. Dr. Khoury died much too early at the age of 43 in 1987, but he was Teh's role model and influenced him greatly in his professional life. As a recognition of his scientific achievements, Teh was recently selected to deliver the 2012 George Khoury Lecture at NIH on cellular transformation by the human T cell leukemia virus (HTLV-I).

Teh had been working at the NIH in Bethesda for 27 years, exactly half of his life, and was chief of the Molecular Virology Section in the Laboratory of Molecular Microbiology. His major research interest was around the human immunodeficiency virus (HIV-1) and HTLV-I, with an abundant production of more than 300 scientific publications on the molecular details of virus replication and relevant disease-causing mechanisms of viral pathogenesis. Teh was a true experimentalist with an interest in the implementation of new technologies to get to the next level of understanding of the biology of human pathogenic viruses. He only stopped bench work in 2004 when he became editor-in-chief of *Retrovirology*.

HTLV-1 is linked to the development of adult T-cell leukemia and a variety of inflammatory manifestations including HTLV-1 associated myelopathy. Teh was

the first to show that HTLV-1 transcription is regulated through the cAMP signaling pathway implicating roles for CREB and CBP before these proteins were clearly identified and cloned. His research team also contributed to our understanding of how the viral Tax oncoprotein activates the pro-inflammatory factor NF-kB. More recently, he proposed a role for deubiquitinases in the regulation of TRAF6–mediated NF-kB signaling. Teh's work has also advanced our understanding of genetic damage in virus-cellular transformation. In 1990, he first reported that the HTLV-1 Tax oncoprotein repressed DNA-repair. Thereafter, he characterized the important roles of dysregulated mitotic checkpoint and AKT activation in cellular transformation. His work has contributed to the elucidation of the role played by the spindle assembly checkpoint in oncogenesis, helping to explain how the loss of multiple checkpoints alters cancer tropism in vivo.

Teh had a long standing interest in understanding the viral and cellular factors that govern HIV-1 gene expression in infected human cells. In the late 1980s, Teh's lab showed that HIV-1 uses an unprecedented mechanism of transcription that is dictated by an RNA-binding protein, Tat, which binds a nascent viral RNA target (TAR), the first RNA enhancer element ever described. Subsequently, Teh's group characterized cellular RNA-binding proteins that regulate HIV-1 replication, including the TAR RNA binding protein (TRBP) that later became known as an important factor of the cellular RNA interference machinery. In recent work, his lab completed a genome-wide screening for human cell factors that are needed for HIV-1 replication. Using novel technology, Teh extended his interests in RNA-biology through the identification of small RNAs (i.e. siRNAs and miRNAs) that have biologically important roles in viral infection, cellular metabolism and virus-induced pathogenesis.

In addition to all these accomplishments, one of Teh's greatest contributions to science probably lies in his role as mentor for young scientists. Teh trained 37 international postdoctoral fellows and 7 more are currently working in his group at the NIH. He has been a fantastic mentor of young scientists who have since spread across the globe, from Taiwan to China, from France to the Netherlands, from Canada to many places in the United States. Many flew into Washington DC to attend the funeral ceremony on February 9th. Teh was attentive, supportive and kind, but at the same time, demanding to his postdocs. Importantly, he set himself as an unselfish role model for them, working essentially 7 days per week and regular working days ran from 7 am to 7 pm. But, also during the evening and at night, one never had to wait long for reply emails. He was truly interested and at many times influenced the future careers of those who were lucky enough to have spent some time in his laboratory. In fact, his words of advice reached many more individuals with whom he came across in his professional and private life. His mentoring commitment is also reflected in his service to many professional societies. For instance, Teh was a standing member of the AIDS Molecular and Cellular Biology (AMCB) Study Section, where he had a reputation for being strongly supportive of new investigators.

Teh always had a special interest in the area of scientific publication. For instance, in 1994 he joined the editorial board of the *Journal of Biomedical Science* (JBS) of the National Science Council of Taiwan, the country in which he was born. He was an avid advocate for ways to improve the journal's Impact Factor. He left this journal in 2004 to free himself for an important new activity: the launch of the journal *Retrovirology*, where he served as Editor-in-Chief since the journal's inception. From the earliest years, Teh was an advocate of the Open Access publishing format. In particular, at the helm of *Retrovirology*, Teh witnessed much skepticism in regard to Open Access publishing during the early years and indomitably championed the new publishing format while overcoming initial prejudice. Teh often referred to himself and his Editorial Board members as the 'Young Turks' of virology, pioneering a new and exciting publishing format. Unsurprisingly, his talent for kicking off new initiatives paid off and *Retrovirology* is currently among the highest cited journals in the field of virology, and all of this was achieved in less than 10 years. In addition, he served on the editorial board of numerous journals, including the *Journal of Virology* and the *Journal of Biological Chemistry*.

Teh – as all who knew him will attest – would never rest on his laurels and although *Retrovirology* had become a leader in its field, he pushed for more journal involvement with the retroviral community .... and Frontiers in Retrovirology was born in 2009. It was the first conference organized by a BioMed Central journal – another example of Teh taking the lead – and proved to be such a universal success that the 3rd conference in the series will take place in September 2013 in the UK in Cambridge.

Teh was a scientist with a vision and a broad interest in all aspects of scientific endeavor. He also was a true scientific leader, initiating scientific debate, writing editorials, sitting on many committees, orchestrating new book volumes and organizing international meetings on diverse topics. For instance, he was president of the Society of Chinese Bioscientists in America (SCBA) in 2010 and voiced the strong opinion that the representation of Asian-American scientists in leadership positions should be increased. He was instrumental in the decision to take the 2011 SCBA conference to China.

He was the recipient of an extraordinary number of awards, most recently the International Retrovirology Association's Dale McFarlin Award in 2011, BioMed Central's Open Access "Editor of the Year" in 2010 and the John's Hopkins University Woodrow Wilson Award in 2009. Teh was also elected to membership of prestigious societies such as the Academia Sinica in Taiwan, Fellowship in the American Academy of Microbiology, and Fellowship in the American Association for the Advancement of Science.

Teh had an infectious enthusiasm and winner's mentality both at work and play. He was a skilled tennis and chess player, a gifted writer, and a great debater with strong opinions on virtually all subjects of science and life in general. Additionally, he had a passion for current events and a love of travel, movies, food and music.

Teh's death is a blow to the retrovirus research community and we will sorely miss his scientific leadership. He has been central to so much of what we have accomplished together as well as being a supportive and generous friend to many of us individually. Teh's life was much too short, but his legacy and our memories of him will last forever. Our hearts and condolences are with his wife Diane and his three children David (23), Diana (20), and John (15).

A note from the Publisher

- Kuan-Teh Jeang was one of BioMed Central's first academic Editors-in-Chief, launching *Retrovirology* on our platform in 2004. From the very beginning, his level of enthusiasm and energy was extraordinary, and the results he achieved in developing *Retrovirology*showed he was just as much of a dynamo as an Editor as he was in the laboratory.
- Teh was a friend and close colleague to many at BioMed Central, past and present. His passing at such a young age caused shock and great sadness. He was simultaneously one of our most solid friends and supporters, while also being a tireless force driving change and improvement, reminding us not to sit on our laurels, and always ready with forthright but constructive criticism when he thought we needed to do better.
- Teh took a "24x7" approach, and he encouraged those he worked with at BioMed Central to do the same. In return, he was generous with praise and each Christmas he would recognize the BioMed Central team which supported *Retrovirology* with thanks and gifts. Teh's determination to make *Retrovirology* the leading journal in its field was striking, and his journal's continuing progress up the impact factor rankings gave him huge satisfaction and pride, culminating in June 2012 when *Retrovirology* overtook *Journal of Virology*.
- Teh recognized that, for open access to the results of scientific research to become a reality, a viable business model was crucial, and so he was always

supportive of BioMed Central's growth as a publisher. Introductions made by Teh helped BioMed Central to build its journal portfolio, especially in Asia, with *Journal of Biomedical Science* and *Cell and Bioscience*.

- The success of *Retrovirology* demonstrated that a strong Editor-in-Chief could build a scientific community around an open access journal. Teh encouraged BioMed Central to take this community-building into the physical realm by arranging a scientific conference in association with the journal. The 3rd *Frontiers of Retrovirology* conference will be held this year, and the event has provided a template for BioMed Central's growing number of successful journal-associated conferences.
- Teh was a deserved winner of our 2010 Editor of the Year award, which he celebrated in London at BioMed Central's 10th anniversary party (Figure 2). He will be sadly missed by all of us.

Teh's Affiliations

1. **Department of Medical Microbiology, Laboratory of Experimental Virology, Center for Infection and Immunity Amsterdam (CINIMA), Academic Medical Center, University of Amsterdam, Meibergdreef 15, Amsterdam, 1105 AZ, The Netherlands**
   - Ben Berkhout
2. **Laboratoire de Virologie Moléculaire, Institut de Génétique Humaine, CNRS-UPR 1142, 141 rue de la Cardonille, 34296, Montpellier, cedex 5, France**
   - Monsef Benkirane
3. **Department of Medicine, University of Cambridge, Addenbrooke's Hospital, Cambridge, CB2 0QQ, UK**
   - Andrew Lever
4. **McGill University AIDS Centre, Lady Davis Institute, Jewish General Hospital, Montreal, Québec, Canada**
   - Mark Wainberg
5. **The Wohl Virion Centre and MRC Centre for Medical & Molecular Virology, Division of Infection and Immunity, University College London, Cruciform Building, 90 Gower Street, London, WC1E 6BT, UK**
   - Ariberto Fassati
6. **Nuffield Department of Clinical Medicine, University of Oxford, Weatherall Institute of Molecular Medicine, John Radcliffe Hospital, Headington, Oxford, OX3 9DS, UK**
   - Persephone Borrow
7. **Division of Virology, Niigata University Graduate School of Medical and Dental Sciences, Niigata, Japan**
   - Masahiro Fujii
8. **BioMed Central, 236 Gray's Inn Road, London, WC1X 8HB, UK**
   - Srimathy Sriskantharajah
   - & Matthew Cockerill

https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3599596/

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PMCID: PMC3599596

PMID: 23406502

A Community Mourn The Death Of Dr. Kuan-Teh Jean

Dear colleagues,

Our loyal friend Dr. Kuan-Teh Jeang passed away unexpectedly on the evening of January 27, 2013. The following night and day an avalanche of emails went across the Retrovirus research community, starting in Australia, then Asia, Europe and America. Great shock and sorrow was apparent in the messages by the very many colleagues with whom Teh interacted over the years. Many of us came to know Teh (Additional file 1) as an energetic and gifted scientist for whom we had much respect and affection.

Teh was chief of the Molecular Virology Section in the Laboratory of Molecular Microbiology at the National Institutes of Health in Bethesda, USA. His major research interest was around the human immunodeficiency virus (HIV-1) and human T-cell leukemia virus (HTLV-I), with an abundant production of more than 300 scientific publications on the molecular details of virus replication and the disease-causing mechanisms. He trained over 30 postdoctoral fellows and had been a fantastic mentor of young scientists who have since spread across the globe, from Taipei to Hong Kong, from Montpellier to Amsterdam and from Montreal to Los Angeles.

Teh was a very dynamic and internationally oriented scientist and he always felt a special bond with the scientific community in Taiwan. He was born and spent his early childhood in Taiwan, and later learned to speak Mandarin fluently. He actively participated in the scientific review processes in the National Science Council and the National Health Research Institute and various universities, often travelling long distances to Taiwan to offer comments and suggestions on various aspects of science. He had deep affection towards his home land Taiwan and hence contacted the founding editor Prof. C.C. Chang and volunteered his service for the Journal of Biomedical Science (JBS) of the National Science Council of Taiwan, which was the only international journal sponsored by Taiwan government at that time. He joined the editorial board of JBS in 1994 and had been very influential since then. Teh was a stabilizing force during the formative years of JBS when the biomedical community in Taiwan was somewhat skeptical of an international journal with its Editorial Office based in Taiwan. After JBS was listed in the Journal citation Index in 1999, he was also an avid advocate for ways to improve its impact factor. It is largely due to his suggestions and sometimes unorthodox ideas that JBS jumped in the annual Impact Factor ranking. The creation of Vignettes, which was well-received by our readers, was one of those suggestions.

He left our board in 2004 to free himself for an important new activity: the launch of the Retrovirology journal, where he had been editor-in-chief since then. Again his talent to kick off new initiatives paid off and Retrovirology is currently among the highest cited journals in the field of virology, all achieved in less than 10 years. Since the early years, he had been an advocate of the Open Access publishing format. He was invited for the JBS editorial board meeting last September to present his current views on this topic and gave his most insightful suggestions. Teh always kept a special interest in Taiwan and its research activities, which led to several productive collaborations. He was also a champion for advocacy of the rights of Taiwanese scientists in international scientific organizations. He was elected as Academician of the Academia Sinica in 2008.

Teh was a scientist with a vision and a broad interest in all aspects of the scientific endeavors. He also was a true scientific leader, starting scientific debate, writing editorials, sitting on many committees, orchestrating new book volumes and organizing international meetings on diverse topics. For instance, he was president of the Society of Chinese Bioscientists in America (SCBA) in 2010 and voiced a strong opinion to increase the representation of Asian-American scientists in leadership positions.

Teh's death is a blow to the retrovirus research community and we will sorely miss his scientific leadership. He has been central to so much of what we have done together as well as being a supportive and generous friend to many of us individually. In his spirit, several initiatives have been proposed over the last couple of days by his students and colleagues to honor his legacy. Teh was only 54 years old and the loss is devastating for the Jeang family. Our thoughts and condolences are with his wife Diane and his children David, John and Diana.

Present and past members of the Editorial Board

Journal of Biomedical Science

2010 (June 30) - Chronic-Fatigue Link to Virus Disputed : Wall Street Journal - "One Research Group Finds Virus XMRV in the Blood of Syndrome Sufferers, One Does Not; Papers Held From Publication"

Source - [HN00SW][GDrive]

Two groups of researchers studying a potential link between chronic-fatigue syndrome and a virus called XMRV have reached contradictory conclusions, according to people familiar with the findings.

One group found a link, and the other didn't.

Their reports were held from publication after being accepted by two science journals—a rare move that has caused a stir among scientists in the field.

A paper published in October in the journal Science first identified XMRV in people with chronic-fatigue syndrome. Studies published later by other groups produced conflicting results on whether there was a link, leading to intense scientific debate over the Science report's meaning.

The Centers for Disease Control and Prevention estimates that between one million and four million people in the U.S. have chronic-fatigue syndrome, which is characterized by debilitating fatigue and chronic pain. Doctors tend to treat the symptoms, but there are no established, specific treatments.

Many patients, desperate for answers as to the cause of the condition, pinned a great deal of hope on the original findings.

Scientists at the Food and Drug Administration and the National Institutes of Health, including NIH infectious-disease specialist Harvey Alter, recently finished research that came to a conclusion similar to that of the Science paper—that XMRV, or xenotropic murine leukemia virus-related virus, is found in the blood of chronic-fatigue syndrome patients.

The paper was accepted for publication in the journal Proceedings of the National Academy of Sciences of the United States of America but is on hold, according to Ashley Truxon, media coordinator for the journal. She had no further comment.

Separately, scientists at the CDC, led by microbiologist William Switzer, concluded in a paper in another journal, Retrovirology, that they couldn't find XMRV in the blood of people with chronic-fatigue syndrome, according to people familiar with the situation.

Kuan-Teh Jeang, editor-in-chief of Retrovirology, said the Switzer paper went through peer review and was accepted for publication when he got a call from the authors earlier this month. They asked that the Retrovirology paper be held.

"My understanding was HHS [Department of Health and Human Services] wanted to get it straightened out. Both reports are from different branches of the government," Dr. Jeang said.

In an email between scientists familiar with the situation, viewed by the Wall Street Journal, a researcher said the two teams were asked to put their papers on hold because senior public-health officials wanted to see consensus—or at least an explanation of how and why the papers reached different conclusions, said the people familiar with the situation.

A spokesman for Department of Health and Human Services said the research was being reviewed. "All of these activities need to be completed in order to ensure HHS's commitment to the accuracy and relevancy of the scientific information it reports."

Dr. Switzer and representatives of the FDA, CDC and NIH said they couldn't comment until the papers were published. Dr. Alter couldn't be reached for comment.

Publication of results is considered a critical part of the scientific process, and researchers familiar with the situation said they were puzzled by the move. It is unusual for a paper to be held after it has already gone through the formal peer-review process and been accepted for publication, say scientists who publish frequently.

"It's fair to say it's not a usual kind of thing," said John M. Coffin, a special adviser to the National Cancer Institute and a professor at Tufts University in Boston who wrote an editorial alongside the Science report in October. Dr. Coffin said he couldn't comment specifically on the XMRV papers, but that scientists often come up with conflicting data, especially when a virus is new and not well understood as is the case of XMRV.

Fred Friedberg, who has chronic-fatigue syndrome and is president of the International Association for Chronic Fatigue Syndrome, said that because the science on XMRV and the illness wasn't yet clear, it is crucial that data on XMRV be published.

https://www.virology.ws/2010/06/30/publication-of-xmrv-papers-should-not-be-blocked/

Publication of XMRV papers should not be blocked

30 JUNE 2010

The findings by the NIH and FDA that XMRV is associated with chronic fatigue syndromehas been accepted for publication by the *Proceedings of the National Academy of Sciences* (*PNAS*). Release of the article has been blocked by *PNAS* due to work carried out by the US Centers for Disease Control and Prevention (CDC). That study, which was submitted to *Retrovirology*, failed to find a link between XMRV and CFS. Its publication has also been placed on hold. According to *ScienceInsider*:

The contradiction has caused "nervousness" both at *PNAS* and among senior officials within the Department of Health and Human Services, of which all three agencies are part, says one scientist with inside knowledge.

It is senseless to block publication because the two papers reach different conclusions. If both manuscripts were subjected to proper peer-review, and were deemed acceptable by the referees, then they should be published. The journal editorial offices must respect the opinions of the reviewers. By overriding their decisions, they have compromised the entire peer reviewer process.

Blocking publication also sends the wrong message to CFS patients, to the public, and scientists. Not only does this action raise suspicions about their motives – are they trying to publish only the result they believe is correct? – but it ignores the very important fact that science is self correcting. Scientists are humans, and they make mistakes. But eventually the right answer will come to the surface. And that is why *PNAS* and *Retrovirology* should respect peer review, publish the XMRV papers, and let science correct itself.

2011 (April 21) - Article : "XMRV as a Human Pathogen?"

https://reader.elsevier.com/reader/sd/pii/S1931312811001016?token=41D250DAD64BBC0447F283BB0AF7AA8131DFE205FDBDB6C2BE8A401812A9AE24796E1E2EF5EF09408108D72A5A7B0691

"1-s2.0-S1931312811001016-main.pdf"

Author links open overlay panelMark A.Wainberg1Kuan-TehJeang2

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Xenotropic murine leukemia virus-related virus (XMRV) has been proposed to be associated with prostate cancer and chronic fatigue syndrome (CFS). This proposition has been controversial because many investigators have failed to replicate the reported associations. Here, we explore whether XMRV is an authentic human pathogen in the light of recent findings that indicate otherwise.

Main Text

Background

Xenotropic murine leukemia virus-related virus (XMRV) is a recently described gammaretrovirus that was originally detected in and molecularly cloned from a human prostate cancer (Urisman et al., 2006). A later paper reported that XMRV was present in the blood of 67% of patients with chronic fatigue syndrome (CFS) and in 4% of healthy controls (Lombardi et al., 2009). Since these publications, some investigators have detected XMRV in human prostate cancer samples while others have not (Silverman et al., 2010, Aloia et al., 2010). Aside from a single study that reported finding polytropic murine leukemia virus sequences (a virus related to but different from XMRV) in 87% of CFS samples (Lo et al., 2010), all other reports (at least seven) have failed to detect XMRV in CFS patients from Europe, China, and the U.S. (van der Kuyl et al., 2011).

The current state of XMRV as a human pathogen is controversial and remains confounding even to the most knowledgeable retrovirology aficionados. In this context, it is important to frame two separate issues for consideration. First, is XMRV a physiologically prevalent pathogen in humans? Second, based on where the virus has been detected in humans, is XMRV a passenger microbe or is it causal for prostate cancer and/or CFS?

XMRV Can Infect Human Cells

The receptor for XMRV is XPR1, a cell-surface protein ubiquitously expressed in many human and animal cells. Although XMRV was originally described as infecting human prostate stromal cells (Urisman et al., 2006), in vitro assays show that the virus can infect and replicate in various human, feral mouse, mink, monkey, and bovine cell lines (Stieler et al., 2010). A recent intravenous infection study of eight adult Indian rhesus macaques (five infected and three mock-infected controls) used immunohistochemical staining and in situ hybridization-based assays to show that the virus was widely disseminated in vivo. Infected tissues included lymphoid organs (CD4-positive cells) as well as the prostatic epithelium and reproductive tract (Onlamoon et al., 2011). These results show that XMRV has the capability to infect humans. Nevertheless, some of the controversy surrounding XMRV centers on the possibility that detection of this virus in human samples is due to contamination from mouse cells (Smith, 2010). A significant argument against this stance was the identification of 14 XMRV integrated proviral sequences in 9 human prostate cancers (Kim et al., 2008). However, a recent report showed that 2 of these 14 integrated proviral sequences were contaminants from an experimentally infected cell line that was propagated in the laboratory, raising the question of whether the other 12 reported XMRV prostate-cancer integration sequences may not also be erroneously tainted results (Garson et al., 2011).

Unlike other human pathogenic/oncogenic viruses such as human T cell leukemia virus (HTLV-1) or human papilloma virus (HPV) (Table 1), there is currently no conclusively reproducible epidemiological link for an XMRV-related human disease (prostate cancer or CFS) or a natural XMRV reservoir in humans, mice or other animals (Figure 1). In contrast to other "newly discovered" viral infections such as the severe acute respiratory syndrome (SARS) coronavirus or avian influenza virus, the infection source of XMRV for humans has remained elusive. Indeed, some investigators have argued that the high conservation of XMRV genome sequences reported from different geographic locales by multiple laboratories are inconsistent with significant infection or extensive replication of this virus in humans (Hué et al., 2010).

2011 (August)

https://retrovirology.biomedcentral.com/articles/10.1186/1742-4690-8-83

- Editorial
- Open Access
- Published: 21 October 2011

Equal versus equivalent access to the scientific literature

- Kuan-Teh Jeang

Retrovirology **volume 8**, Article number: 83 (2011) Cite this article

- **2384** Accesses
- **1** Altmetric
- Metrics details

The concepts of equal versus equivalent access to the scientific literature are discussed

In 1954, the United States Supreme Court in a landmark decision of *Brown vs. Board of Education of Topeka*, *Kansas* sharply repudiated the "separate but equal" principle of public education. The Court concluded that racially segregated education is "inherently unequal". In scientific publishing today, there exist two segregated means of knowledge dissemination --- the subscription journals and the Open Access (OA) journals. For those who can pay, there is immediate access to scientific papers published in both subscription and OA journals; those who cannot pay can access only OA journals. The status quo is thus an "inherently unequal" playing field between the "haves" and the "have nots".

How unequal is the current situation? In an August 1, 2011 posting on the *Nature News*website, Richard Van Noorden reported that "the proportion of research papers freely available is slowly and steadily creeping upwards... in 2009, it's above 28%. (Some of this literature is not immediately available at the time that it is published, because of journal policies that impose embargo periods on when material can become free)". The good news is that approximately 30% of published papers can be accessed freely. The bad news is that 70% of published, publicly funded research remains off-limits to those who cannot pay.

Can equal access be had by the "haves" and the "have nots"? To the extent that the subscription and OA tracks will likely co-exist, the foreseeable future is a "separate and unequal" reality. Without equal access, the next best goal is perhaps to achieve equivalent access.

What is equivalent access? Imagine two very similar papers reaching essentially the same conclusions; one is published in a subscription journal and the other published in an OA journal. The paying reader can read both papers; the non-paying person can read only the OA paper. This is "unequal" access. However, if the OA paper sufficiently conveys the same information as the subscription paper, then it is possible that "equivalent" knowledge is conveyed to both the can-pay and cannot-pay audiences.

The equivalent access concept works only if subscription and OA journals can attract and publish, in chronological proximity, similar articles of comparable quality and impact. Practically speaking, for this to occur, OA journals need to achieve quality metrics (e.g. Impact Factor numbers) that match their subscription counterparts. The *Retrovirology*experience suggests that such benchmark can be achieved (Figure 1).

https://grantome.com/grant/NIH/ZIA-AI000547-25

Molecular Mechanisms Of Human Immunodeficiency Virus Trans-regulatory Proteins

Jeang, Kuan-Teh
National Institute of Allergy and Infectious Diseases

This project focuses on HIV-1 replication in cultured cells to develop understandings of viral pathogenesis and the cellular factors that influence viral gene expression. Examples of important scientific advances that we have achieved in the 2011 to 2012 period are outlined below. RNA helicases are ubiquitous in plants and animals and function in many cellular processes. Retroviruses, such as human immunodeficiency virus (HIV-1), encode no RNA helicases in their genomes and utilize host cellular RNA helicases at various stages of their life cycle. We have continued our study of RNA helicases in HIV-1 replication. We have identified several novel RNA helicases that activate HIV-1 post-transcriptional gene expression and an RNA helicase that represses HIV-1 replication through the interferon pathway. HIV-1 Tat protein recruits host cell factors including CDK9/cyclin T1 to HIV-1 TAR RNA and thereby induces HIV-1 transcription. An interaction with host Ser/Thr protein phosphatase-1 (PP1) is critical for this function of Tat. PP1 binds to a Tat sequence, Q(35)VCF(38), which resembles the PP1-binding """""""""RVxF""""""""" motif present on PP1-binding regulatory subunits. We have found that expression of PP1 binding peptide, a central domain of Nuclear Inhibitor of PP1, disrupted the interaction of HIV-1 Tat with PP1 and inhibited HIV-1 transcription and replication. We have identified small molecule compounds that target the """""""""RVxF""""""""-binding cavity of PP1 to disrupt the interaction of PP1 with Tat and inhibit HIV-1 replication. One of the compounds, 1H4, inhibited HIV-1 transcription and replication at non-cytotoxic concentrations. Our study shows that HIV-inhibition can be achieved through using small molecules to target a non-catalytic site of PP1. We have constructed several HIV-1 molecular clones, each containing a discrete cellular miRNA positioned in Nef. These retroviral genomes express the inserted miRNA and are generally replication competent in T-cells. The inserted intragenomic miRNA was observed to elicit two different consequences for HIV-1 replication. First, the expression of miRNAs with predicted target sequences in the HIV-1 genome was found to reduce viral replication. Second, in one case, where an inserted miRNA was unusually well-processed by Drosha, this processing event inhibited viral replication. Our work is the first study to examine in detail the replication competence of HIV-1 genomes that express cis-embedded miRNAs. The results indicate that a replication competent retroviral genome is not precluded from encoding and expressing a viral miRNA. In FY 2013, we published our findings that NEAT1 long noncoding RNA and paraspeckle bodies modulate HIV-1 posttranscriptional expression. Most of the human genome is transcribed into protein-noncoding RNAs (ncRNAs), including small ncRNAs and long ncRNAs (lncRNAs). Over the past decade, rapidly emerging evidence has increasingly supported the view that lncRNAs serve key regulatory and functional roles in mammal cells. HIV-1 replication relies on various cell functions. To date, while the involvement of host protein factors and microRNAs (miRNAs) in the HIV-1 life cycle has been extensively studied, the relationship between lncRNAs and HIV-1 remains uncharacterized. Here, we have profiled 83 disease-related lncRNAs in HIV-1-infected T cells. We found NEAT1 to be one of several lncRNAs whose expression is changed by HIV-1 infection, and we have characterized its role in HIV-1 replication. We reported that the knockdown of NEAT1 enhances virus production through increased nucleus-to-cytoplasm export of Rev-dependent instability element (INS)-containing HIV-1 mRNAs.

BITCHUTE @Housatonic **YOUTUBE** @HousatonicLive **ODYSEE** @Housatonic **BRIGHTEON** @Housatonic

Housatonic

Rodney Lance Joffe (born 1954)

Born - 1954 (Dec)

Name Pronunciation : "Jawff" / one syllable

Associations

- Thomas Johannes Obenhuber (born 1955) (Co-founder of Internet Media Network Incorporated / Genuity Incorporated , joined shortly after Joffe created the company)
- Steve Michael Hotz (born 1963) (Steve was a leading technologist at Genuity Incorporated for Rodney Jaffe)
- Jon Bruce Postel (born 1943) (Joffe says he worked extensively with Postel; Jon Postel was offered a position on the board of directors for Genuity; and has been a top financial supporter of the Postel memorials at USC)

Companies / Employers:

- Internet Media Network Incorporated :
  - "In the early 1990's, following the NSF disgorgement of commercial Internet traffic from the NSFNet, [**Joffe**] launched [Internet Media Network Incorporated] as the Internet division of [American Computing Group]. " Source - [HC004O][GDrive]
- Genuity Incorporated :
  - " In 1996 in partnership with Bechtel Enterprises, [Internet Media Network Incorporated] was renamed [Genuity Incorporated], which then went on to became one of the largest ISP Data Center Operators in the world. The company was driven by Hopscotch™, invented and patented by Mr Joffe, and the very first formal content distribution and load balancing technology. " Source - [HC004O][GDrive]
- GTE Corporation :
  - "He remained as the Chief Technical Officer of **Genuity** until the end of 1997 when [Genuity Incorporated] was acquired by [GTE Corporation]. He was then appointed Vice-President, Strategic Technologies, and Chief Technology Officer of the Business Services division of **GTE Internetworking**." Source - [HC004O][GDrive]
- https://en.wikipedia.org/wiki/Neustar
-

Profiles for Rodney Joffe

Forbes - Rodney Joffe / Member Since 2020

https://profiles.forbes.com/members/tech/profile/Rodney-Joffe-Senior-Vice-President-Security-CTO-Fellow-Neustar-Neustar/f9b995e2-6578-4bd9-810e-9e94d09e6c20

Rodney Joffe : Senior Vice President, Security CTO and Fellow at Neustar , Washington D.C. Metro Area

- **Rodney Joffe's [...] accomplishments include founding the first commercial Internet hosting company, [Genuity Incorporated], as well as the first outsourced and cloud-based Domain Name System (DNS) company, UltraDNS, where he invented Anycast Technology for DNS.**
- Joffe has served on a number of the U.S. government's cybersecurity intelligence panels and was the leader of the groundbreaking **Conficker Working Group**.
- He is one of the first civilians to receive the Federal Bureau of Investigation (FBI) Director's Award due in no small part to **his role in uncovering and taking down the Butterfly Botnet**.
- He has also been honored with the Mary Litynski Lifetime Achievement Award from M3AAWG, the global Messaging, Malware and Mobile Anti-Abuse Working Group, and was most recently publicly recognized for his years of work and dedication in helping protect against cybercrime, winning The Computing Security Award for his contribution to Cyber Security in 2018.
- **Joffe is also the chairman of the Neustar International Security Council (NISC), which is comprised of an elite group of cybersecurity leaders across industries and companies who meet regularly to discuss the latest cyberattack trends.**

2020 - Capture of profile on Centergate Research Group, LLC website

Not sure when this page was last edited ... / Source - [HC004O][GDrive]

[HC004P][GDrive]

Rodney Joffe is the Chairman, Founder and Chief Technology Officer of **UltraDNS Corporation**. His operational responsibilities include defining and guiding the development of all technical initiatives within the company, as well as interaction with the standards bodies and working groups in the IETF, telecommunications, and network world.

Mr Joffe has been involved in the IT world since 1973 when he trained as a systems analyst and programmer in the Pensions Actuarial group of the Old Mutual Life Insurance Company in Cape Town, South Africa. **After co-founding Printronic Corporation of America (UK) Pty. LTD. in London, England, in 1977, he opened American Computer Group (ACG) - the first of his US based companies - in Los Angeles in 1983. He is still very involved in ACG as both the Chairman and acting CEO. ACG is one of the leading Data Processing Service Bureaus in the Direct Response advertising and marketing industry.**

In the early 1990's, following the NSF disgorgement of commercial Internet traffic from the NSFNet, he launched [Internet Media Network Incorporated] as the Internet division of ACG. In March of 1994, he established the first web-based online presence of a traditional mail-order company, Robert Redford's Sundance Catalog. In 1996 in partnership with Bechtel Enterprises, [Internet Media Network Incorporated] was renamed [Genuity Incorporated], which then went on to became one of the largest ISP Data Center Operators in the world. The company was driven by Hopscotch™, invented and patented by Mr Joffe, and the very first formal content distribution and load balancing technology. He remained as the Chief Technical Officer of Genuity until the end of 1997 when [Genuity Incorporated] was acquired by [GTE Corporation]. He was then appointed Vice-President, Strategic Technologies, and Chief Technology Officer of the Business Services division of GTE Internetworking.

Following his retirement from GTE Internetworking in 1999, he returned to Phoenix, Arizona, where he founded CenterGate Research Group, a technology think-tank that became the birthplace of UltraDNS, Catbird Networks, and a number of community focused services including GeekTools and the whois-servers.net project.

Mr. Joffe sits on the boards of a number of other technology companies, including Scientific Monitoring, an aerospace software company, and Plasmanet, one of the largest Internet database marketing networks.

In addition to his corporate activities, Mr. Joffe is a member of the Faculty Advisory Board of the USC Viterbi School of Engineering in Los Angeles, and the Advisory Board of the Postel Center at USC/ISI. He also serves on the ICANN SSAC (Security and Stability Advisory Committee) and is a member of the 2005 ICANN Nominating Committee.

Mr. Joffe is actively engaged in a number of Internet working groups and committees, including the IETF (Internet Engineering Task Force), OARC (Operations, Analysis, and Research Center), NANOG (North American Network Operators' Group), and ARIN (American Registry for Internet Numbers). He is involved in a number of initiatives to ensure the future of the Internet and is highly visible in the ongoing fight against spam, and similar attacks on Internet infrastructure and personal privacy. [...]

what is centergate ?

Source : [HC005N][GDrive]

CenterGate® Research is a group of entrepreneurial developers and engineers working on creating products and solutions designed to improve infrastructure performance for distributed computing.

CenterGate exists to improve the world of distributed computing.

The scope of CenterGate is as broad as the interests of its talented team. CenterGate funds and fosters the creative ideas of its founder, Rodney Joffe pairing his genius for technological innovation with the precise programming skills of some of the best minds in networking, systems engineering and software development.

CenterGate management pairs Rodney's strengths with the entrepreneurial vision and experience of angel investor Ron Lachman who brings his own zeal and enthusiasm to the business of marketing technology solutions. A developer himself, Ron mentors the CenterGate scientists in the product development process and oversees CenterGate business initiatives.

From enhancing fundamental Internet architecture services, such as the CenterGate UltraDNS system, to improving the desktop productivity of the individual user through the eFridge® online calendar, CenterGate is doing what others dream of, developing the solutions we all want and need.

Our latest adventure is Catbird Networks, a whole new breed of monitoring and measuring system for distributed computing.

2010 (July 14) - Application / Resume

NOTE - Rodney Joffe does not mention **Internet Media Network Incorporated** on his resume in 2010. Nor does he mention "American Computer Group".

Source - [HL005Z][GDrive]

NOTE - Most of this is repeated on the ICANN profile (as of 2020) for Rodney Joffe ; https://icannwiki.org/Rodney_Joffe

- Rodney Joffe is Senior Vice-President and Senior Technologist of Neustar, Inc (NYSE:NSR). He assumed this role after the acquisition in 2006 of UltraDNS Corporation, a directory services company he founded in 1999. His responsibilities include defining and guiding the technical direction of the company's Internet Infrastructure Services Group as well as heading the company's cybersecurity initiatives.
- Rodney is frequently called upon to assist Federal Authorities with regards to investigating and protecting against cyber-crime and cyber-terrorist activities where he is a recognized expert. He regularly briefs the White House and House/Senate groups on the subject, and has testified before congress as an expert. In addition to publishing a number of confidential papers in the field, he participated as a "Designated Trusted Agent" on the planning committee for the DHSs CyberStorm II International Cyber-Terrorism exercise in March 2008. He is participating in CyberStorm III as a lead on the core scenario design team.
- Besides these operational activities, Rodney is also active in Internet governance bodies, serving currently on the ICANN SSAC (Security and Stability Advisory Committee) and previously on both the ICANN RSTEP (Registry Services Technical Evaluation Panel) the ICANN NOMCOM (Nominating Committee) where he served three terms. He is a founding member of the Advisory Board of the Postel Center at USC/ISI, and is engaged in several Internet engineering organizations including OARC (Operations, Analysis, and Research Center), NANOG (North American Network Operators' Group), ARIN (American Registry for Internet Numbers), and the IETF (Internet Engineering Task Force). He holds a number of issued and pending patents in the network security field.

Employment

2006-Present: Neustar, Inc.
Sr. Vice President & Senior Technologist, and CTO, Internet Infrastructure Services Group

- Oversee all cyber security practices for the company
- Developer of Neustar technologies including UltraDNS Managed Services, DNS Shield, and the Cache Defender Cache Poisoning solution
- Responsible for design and architecture for DNS resolution
- Manage DDoS mitigation initiatives

1999-2006: UltraDNS
Founder, Chairman, and Chief Technology Officer

- Designed and developed the patented UltraDNS domain resolution system.
- Led development team from inception through sale of the company to Neustar in 2006.

1997- 1999: GTE Internetworking / [Genuity Incorporated]
Founder of [Genuity Incorporated], CTO of GTE Internetworking Business Services [a subsidiary of GTE Corporation]

- Founded one of the largest Internet Service and Hosting providers in the world
- Designed and developed the patented "Hopscotch" technology for DNS routing
- Served GTE Internetworking as CTO of GTE Internetworking Business Services when it acquired [**Genuity Incorporated**]

1984-current: Whitehat, Inc.
Founder and Chairman of Direct Marketing Service Bureau, (presently serve in an advisory capacity)

- Designed computer programs that migrated direct marketing database processes from main frame computers to desktop environments
- Invented the "add-a-name" file processing technology

Cybersecurity Expert:

- White House Advisor, CyberSecurity Issues: April 2010 – present
- DHS, FBI - March 2007 - ongoing advisory relationship
- Head of the Conficker Working Group - March 2009 – ongoing
- Congressional Testimony May 1, 2009 - House Committee on Communications, Technology, and the Internet on CyberSecurity issues
- Numerous Conferences and Symposia, Keynotes and technical presentations
- Cyberstorm III – Lead on the Core Scenario Design Team 2010
- Cyberstorm II - Planning and Exercise for DNS/Cybersecurity Scenario 2008

Internet Governance Service:

- 2004-Present - ICANN SSAC (Security and Stability Advisory Committee)
- 2006-2008 - ICANN RSTEP (Registry Services Technical Evaluation Panel)
- 2005, 2006, and 2009 - ICANN NOMCOM (Nominating Committee)
- 2004 –Present - OARC (Operations, Analysis and Research Center)
- 1993 – Present - NANOG (North American Network Operators' Group)
- 1997-Present - ARIN (American Registry for Internet Numbers)
- 1998 – Present - IETF (Internet Engineering Task Force)

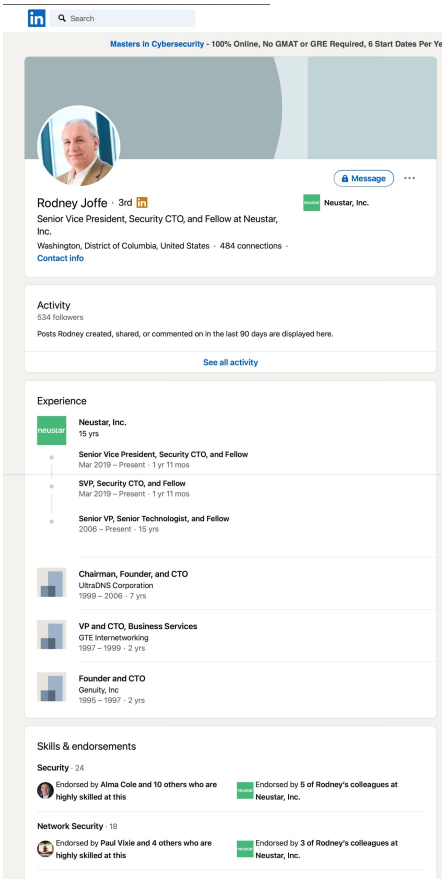
Patents:

- Multi-tenant Unit - U.S. Pat. No. 6,144,638 issued November 7, 2000 [NOTE : This patent is shared with **Thomas Johannes Obenhuber (born 1955)** , and Obenhuber may have been the significant contributor]
- "Hopscotch" - U.S. Pat. No. 6,185,619 issued February 6, 2001
- Domain name resolution system and method - Pending - App No 20040039798
- Suspect Traffic Redirection - Pending - App No 20070097976

Presenter/Speaker:

- Keynote speeches at leading industry conferences – Cloud Connect 2010
- Presenter/Session leader for key Cybersecurity and DNS Conferences – RSA 2009
- Radio, Webinar expert interviews in the areas of Cybersecurity and DNS

LinkedIN (as of Jan 2021)



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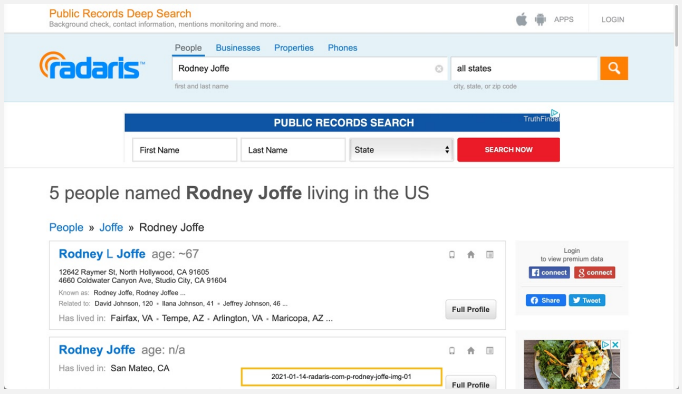
RADARIS - 2021 (Jan) profile for Rodney Joffe



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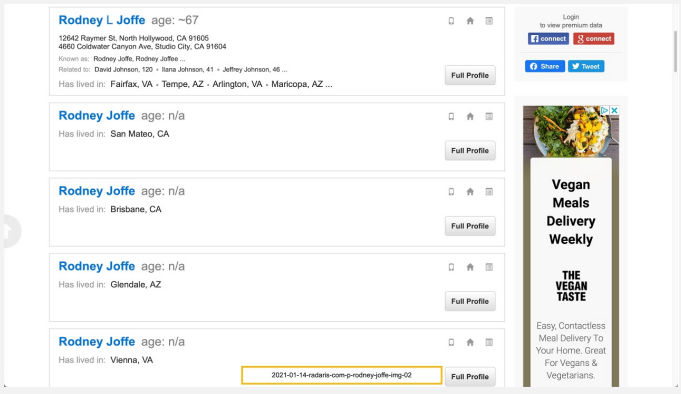

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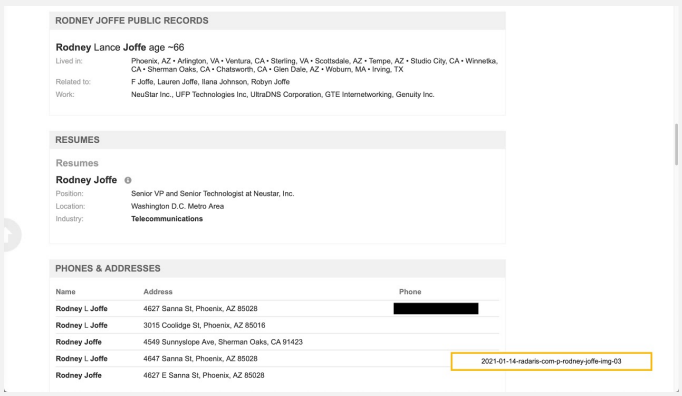

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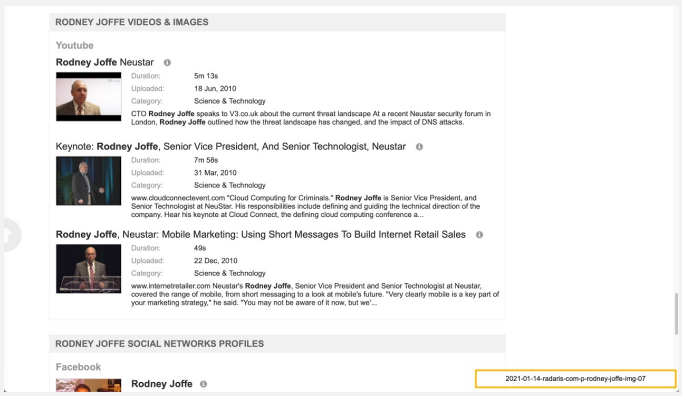

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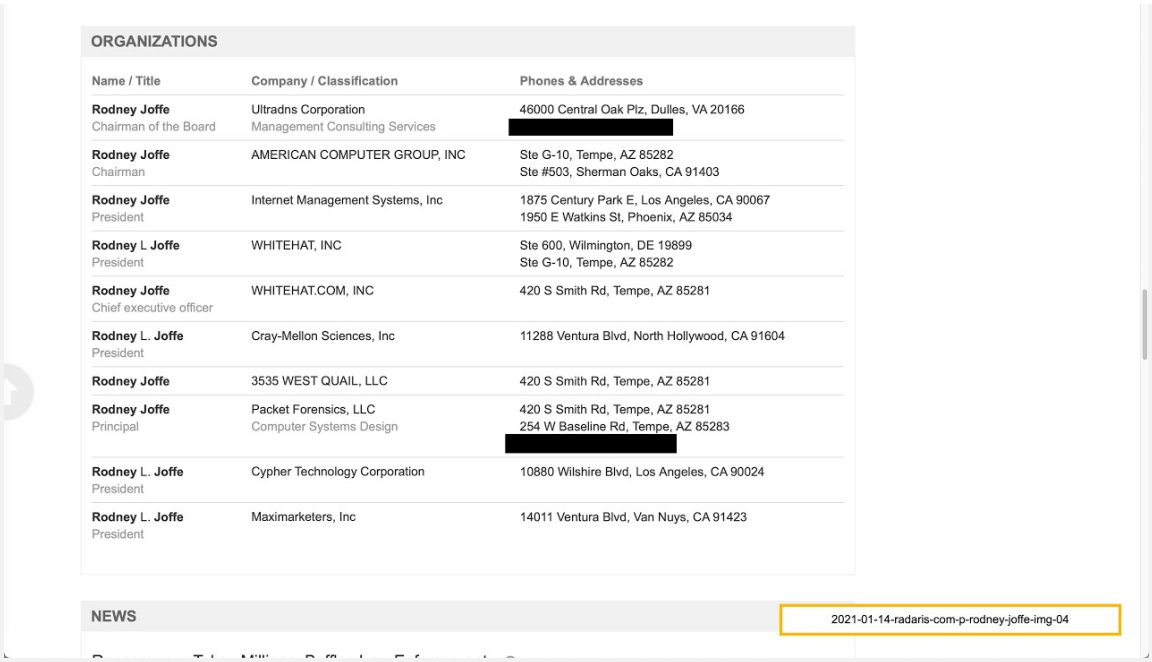

ORGANIZATIONS

Name / Title	Company / Classification	Phones & Addresses
Rodney Joffe Chairman of the Board	Ultradns Corporation Management Consulting Services	46000 Central Oak Plz, Dulles, VA 20166 [redacted]
Rodney Joffe Chairman	AMERICAN COMPUTER GROUP, INC	Ste G-10, Tempe, AZ 85282 Ste #503, Sherman Oaks, CA 91403
Rodney Joffe President	Internet Management Systems, Inc	1875 Century Park E, Los Angeles, CA 90067 1950 E Watkins St, Phoenix, AZ 85034
Rodney L Joffe President	WHITEHAT, INC	Ste 600, Wilmington, DE 19899 Ste G-10, Tempe, AZ 85282
Rodney Joffe Chief executive officer	WHITEHAT.COM, INC	420 S Smith Rd, Tempe, AZ 85281
Rodney L. Joffe President	Cray-Mellon Sciences, Inc	11288 Ventura Blvd, North Hollywood, CA 91604
Rodney Joffe	3535 WEST QUAIL, LLC	420 S Smith Rd, Tempe, AZ 85281
Rodney Joffe Principal	Packet Forensics, LLC Computer Systems Design	420 S Smith Rd, Tempe, AZ 85281 254 W Baseline Rd, Tempe, AZ 85283 [redacted]
Rodney L. Joffe President	Cypher Technology Corporation	10880 Wilshire Blvd, Los Angeles, CA 90024
Rodney L. Joffe President	Maximarketers, Inc	14011 Ventura Blvd, Van Nuys, CA 91423

NEWS

2021-01-14-radaris-com-p-rodney-joffe-img-04

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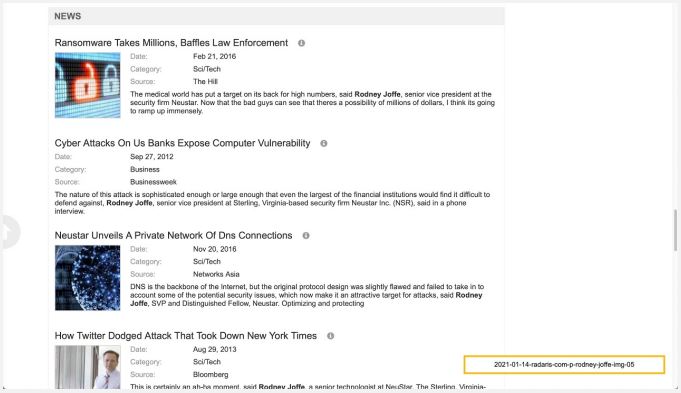


NEWS

Ransomware Takes Millions, Baffles Law Enforcement
Date: Feb 21, 2016
Category: Sci/Tech
Source: The Hill
The medical world has put a target on its back for high numbers, said **Rodney Joffe**, senior vice president at the security firm Neustar. Now that the bad guys can see that theres a possibility of millions of dollars, I think its going to ramp up immensely.

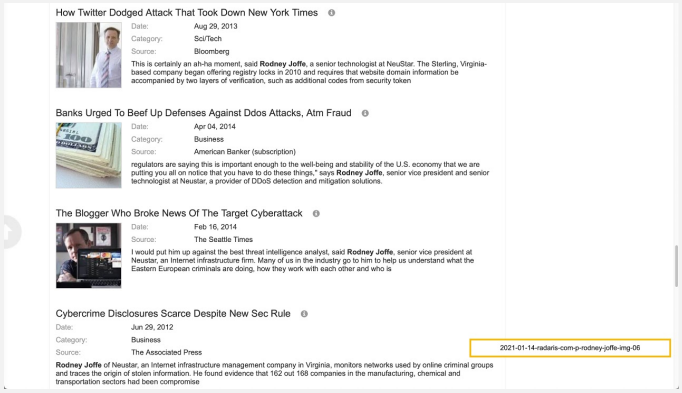
Cyber Attacks On Us Banks Expose Computer Vulnerability
Date: Sep 27, 2012
Category: Business
Source: Businessweek
The nature of this attack is sophisticated enough or large enough that even the largest of the financial institutions would find it difficult to defend against, **Rodney Joffe**, senior vice president at Sterling, Virginia-based security firm Neustar Inc. (NSR), said in a phone interview.

Neustar Unveils A Private Network Of Dns Connections
Date: Nov 20, 2016
Category: Sci/Tech
Source: Networks Asia
DNS is the backbone of the Internet, but the original protocol design was slightly flawed and failed to take in to account some of the potential security issues, which now make it an attractive target for attacks, said **Rodney Joffe**, SVP and Distinguished Fellow, Neustar. Optimizing and protecting

How Twitter Dodged Attack That Took Down New York Times
Date: Aug 29, 2013
Category: Sci/Tech
Source: Bloomberg

2021-01-14-radaris-com-p-rodney-joffe-img-05

[HL0067][GDrive]



How Twitter Dodged Attack That Took Down New York Times
Date: Aug 29, 2013
Category: Sci/Tech
Source: Bloomberg
This is certainly an ah-ha moment, said **Rodney Joffe**, a senior technologist at NeuStar. The Sterling, Virginia-based company began offering registry locks in 2010 and requires that website domain information be accompanied by two layers of verification, such as additional codes from security token

Banks Urged To Beef Up Defenses Against Ddos Attacks, Atm Fraud
Date: Apr 04, 2014
Category: Business
Source: American Banker (subscription)
regulators are saying this is important enough to the well-being and stability of the U.S. economy that we are putting you all on notice that you have to do these things," says **Rodney Joffe**, senior vice president and senior technologist at Neustar, a provider of DDoS detection and mitigation solutions.

The Blogger Who Broke News Of The Target Cyberattack
Date: Feb 16, 2014
Source: The Seattle Times
I would put him up against the best threat intelligence analyst, said **Rodney Joffe**, senior vice president at Neustar, an Internet infrastructure firm. Many of us in the industry go to him to help us understand what the Eastern European criminals are doing, how they work with each other and who is

Cybercrime Disclosures Scarce Despite New Sec Rule
Date: Jun 29, 2012
Category: Business
Source: The Associated Press
Rodney Joffe of Neustar, an Internet infrastructure management company in Virginia, monitors networks used by online criminal groups and traces the origin of stolen information. He found evidence that 162 out 168 companies in the manufacturing, chemical and transportation sectors had been compromise

2021-01-14-radaris-com-p-rodney-joffe-img-06

[HL0068][GDrive]

Source - ICANN website - Security and Stability Advisory Committee (SSAC)

Biographies and Statements of Interest of SSAC Members / Source - [HI0025][GDrive]

Rodney Joffe is Senior Vice-President and Senior Technologist at NeuStar, Inc. He assumed this role after the acquisition in 2006 of UltraDNS Corporation, a directory services company he founded in 1999. His responsibilities include defining and guiding the technical direction of the company's Internet Infrastructure Services Group, as well as leadership with Internet and telecommunications standards bodies and organizations, and the Federal Government's Cyberterrorism and Cybercrime task forces.

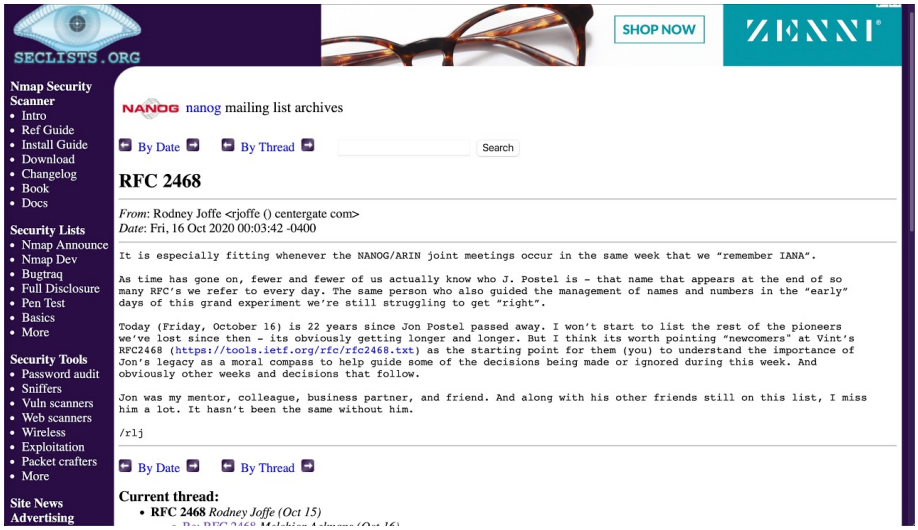
Mr. Joffe serves as a director on the boards of other technology companies, including Scientific Monitoring, an aerospace software company, and as **a founding director on the Advisory Board of the Postel Center at USC/ISI** (http://www.postel.org). He has served as a member of the ICANN SSAC since 2004, and has served as the SSAC representative on the ICANN Nominating Committee for three terms since 2004.

Mr Joffe has been involved in the IT world since 1973 when he trained as a systems analyst and programmer in the Pensions Actuarial group of the Old Mutual Life Insurance Company in Cape Town, South Africa. **After co-founding Printronic Corporation of America (UK) Pty. LTD. in London, England in 1977, he opened American Computer Group (ACG) - the first of his US based companies - in Los Angeles in 1983.** In 1995 he spun off ACG's Internet Services Division to form Genuity, Inc., one of the largest Hosting ISPs in the world, which was then acquired by GTE in 1997. He served as Vice-President, Strategic Technologies, and Chief Technology Officer of the Business Services division of GTE Internetworking until his retirement in 1999.

Statement of Interest: NeuStar, Inc is the ICANN appointed operator of the .biz registry, and operates the .us TLD under contract with the US Department of Commerce

Joffe recognizes the passing of Jon Postel every year -

PDF - [HI0026][GDrive]



[HI0027][GDrive]

EVIDENCE TIMELINE

"Rodney Lance Joffe" (born 1954)

Source - [HD002Y][GDrive]

1977 - Co-founded Printronic Corporation of America (UK) Pty. LTD. in London, England

Source - Centergate Research profile : [HC004O][GDrive]

1983 - Rodney Joffe creates first US-based company (in Los Angeles) : "American Computer Group"

Source - Centergate Research profile : [HC004O][GDrive]

"He opened American Computer Group (ACG) - the first of his US based companies - in Los Angeles in 1983. He is still very involved in ACG as both the Chairman and acting CEO. ACG is one of the leading Data Processing Service Bureaus in the Direct Response advertising and marketing industry."

Notes on American Computer Group (ACG) are here : American Computer Group [of CA/AZ]

1986 (April 2 incorporation) -Rodney Joffe crates "CRAY-MELLON SCIENCES, INC." in Los Angeles at 3599 CAHUENGA BLVD WEST

Cray-Mellon Sciences, Inc : https://opencorporates.com/companies/us_ca/C1370175

- Company Number C1370175
- Status Ftb Suspended
- Incorporation Date **2 April 1986** (almost 35 years ago)
- Company Type DOMESTIC STOCK
- Jurisdiction California (US)
- Registered Address 3599 CAHUENGA BLVD WEST, LOS ANGELES CA 90068, United States
- Agent Name RODNEY L JOFFE
- Agent Address 12642 RYE STREET STUDIO CITY CA 91604
- Inactive Directors / Officers RODNEY L JOFFE, agent

1988 (Feb 20) - The Los Angeles Times - Local News in Brief : Cash Seized in Sales Scam

https://www.latimes.com/archives/la-xpm-1988-02-20-me-11120-story.html

1988-02-20-the-los-angeles-times-cash-siezed-in-sales-scam.pdf

NOTE : This story was only available because it was on the LATimes website - it is suspiciously absent from Newspapers.com

Iowa's attorney general said Friday that his office impounded about $800,000 from a Beverly Hills company selling overpriced grandfather clocks.

Atty. Gen. Tom Miller said more than 10,000 consumers sent checks and money orders to a Clinton, Iowa, address after receiving a post card saying they had won a "world-famous Bentley IX Grandfather clock." Consumers were asked to send $69.19 for shipping.

The clocks are worth far less than the shipping fee, Miller said, and it was just a scheme to sell the cheap clocks at an inflated price.

"We believe the card was deceptive because it created the impression that the consumer had won the grandfather clock," Miller said. "The card also seriously overstates the quality of the clock, which is battery powered, pressed wood and plastic."

Miller said his office filed suit and a consent judgment against Prize Redemption Warehouse of Beverly Hills and a related corporation set up in Iowa, Merchandisers Warehouse Inc., and that no consumer will lose any money.

The Cedar Rapids Gazz

https://newspaperarchive.com/cedar-rapids-gazette-feb-20-1988-p-7/

https://drive.google.com/file/d/1SVOX4PrUMzfzj9PwZ6pZh2OQrDuLwnCB/view?usp=sharing

https://drive.google.com/file/d/1p2AxG3-Sok4m6gtA3UZFsmLSuf1ByeQW/view?usp=sharing

Note the misspelling as "Joffee" - and it was on NewspaperArchives.com . More evidence that this story has been scrubbed from the interent.

IOWA TODAY

The Cedar Rapids Gazette: Sat., Feb. 20, 1988 7A

Firm will refund $800,000 to Iowans

Attorney general sues to halt bogus grandfather clock offer

By Judy Daubenmier
Gazette Des Moines Bureau

DES MOINES — Iowa Attorney General Tom Miller's office has reached a settlement with a Beverly Hills company doing business in Iowa that will return approximately $800,000 to more than 10,000 consumers who believed they had won a grandfather clock.

Miller's spokesman, Bill Roach, said officials have impounded the mail ordering the clocks and it will be returned to consumers because the contest is believed to be a scheme to sell cheap clocks at an inflated price.

According to Miller's office, consumers all over the country were contacted with a postcard indicating they had won a Bentley Grandfather clock.

The postcard describes the clock as "the beautiful, five feet tall, world-famous Bentley IX Grandfather clock, complete with a fully encased pendulum, three weights and crafted in genuine old-world style wood grain finish."

> "We believe the card was deceptive because it created the impression that the consumer had won the grandfather clock."
>
> *Tom Miller, attorney general*

In order to receive the clock, the consumer was asked to pay $69.19 to cover shipping, handling and merchandising costs.

"We believe the card was deceptive because it created the impression that the consumer had won the grandfather clock," Miller said.

The attorney general said the consumers were merely buying a cheap, battery-powered, pressed wood and plastic clock at an inflated price.

The firm involved, Prize Redemption Warehouse of Beverly Hills, Calif., had set up an Iowa corporation, Merchandisers Warehouse Inc., of Clinton. Rodney Joffee was president of the Clinton firm and Linda Marilyn Carella was vice president.

MILLER CALLED the case unique because it involved a national scheme being operated from Iowa. Generally, he said, such schemes are set up outside the state and attempt to take advantage of Iowans.

After about a three-week investigation, the attorney general's office obtained a court order Jan. 22 impounding the mail as it was received.

A lawsuit and consent judgment filed Friday in Clinton County District Court ordered the return of the mail to consumers and enjoined the firm from continuing the scheme.

1988 (May) - Rodney Joffe owner of a warehouse related to a Grandfather clock scam

- Linda Carella - West Coast Direct Marketing - https://opencorporates.com/companies/us_ca/C1418900

14 The Ottumwa Courier, Wednesday, May 4, 1988

Iowa

Grandfather clocks sur(prize) winners

PROVIDENCE, R.I. (AP) — An Iowa-based mail-order company that sold grandfather clocks by claiming to give them away if the "winner" paid postage has been shut down, authorities said Tuesday.

The company, Merchandisers' Warehouse of Clinton, notified people by mail that they had won a grandfather clock and could claim their prizes by sending in $69.19 to cover postage and handling, Attorney General James E. O'Neil said.

The offer was deceptive because the value of the clocks was greatly exaggerated, O'Neil said in a news release.

"Postage and handling costs for these clocks would have been about $10 to $15, so customers were actually being asked to buy the clocks," he said. "Nobody was winning anything."

> *'You say grandfather clocks to people, they think of these big floor models. They thought they were getting a real deal.'*
>
> *— Tom Connell Rhode Island Attorney General's spokesman*

Tom Connell, a spokesman for O'Neil, said the clocks were "table-top things, worth about $50 to $60."

"You say grandfather clocks to people, they think of these big floor models," Connell said. "They thought they were getting a deal."

In a consent decree between the company and the U.S. Postal Service, the company agreed to stop the promotion and give consumers full refunds.

Connell said the company used mail drops in Smithfield; Fairfield, Conn.; Tucson, Ariz.; Albuquerque, N.M., and Memphis, Tenn.

About a dozen people from Rhode Island and six other states complained to O'Neil's office about the scam, citing the Smithfield mail drop, Connell said. He said he did not know how much business the company had done.

Merchandisers' Warehouse officials could not be located for comment. The owners, identified in court papers as Rodney Joffe of Beverly Hills, Calif., and Linda Carella of Los Angeles, do not have listed telephone numbers.

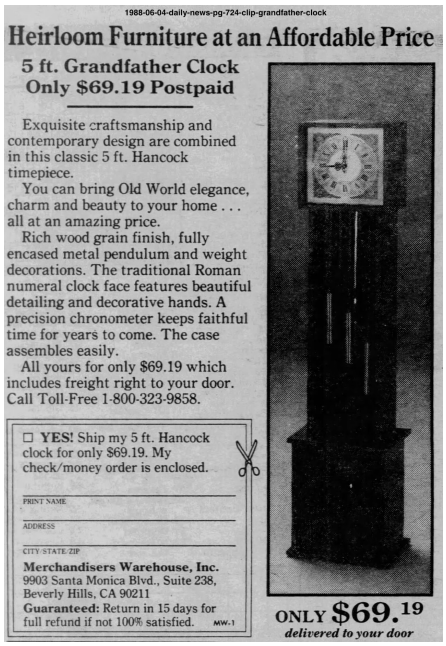
A recorded message at the company's Clinton, Iowa, office, began, "No doubt you are calling with a question or two about the grandfather clock you ordered."

"By now, you should have received a letter from the Iowa authorities, together with your order and check," the message said.

"When we originally offered you the grandfather clock, the government felt that our offer wasn't clear," the message said. "The letter you received from us gives you a second chance to order a grandfather clock, knowing all the facts."

The clocks are 5 feet tall and weight 27 pounds, the message said.

Full page: [HN01GD][GDrive] / Clip: [HN01GE][GDrive]



1988-06-04-daily-news-pg-724-clip-grandfather-clock

Heirloom Furniture at an Affordable Price

5 ft. Grandfather Clock
Only $69.19 Postpaid

Exquisite craftsmanship and contemporary design are combined in this classic 5 ft. Hancock timepiece.

You can bring Old World elegance, charm and beauty to your home . . . all at an amazing price.

Rich wood grain finish, fully encased metal pendulum and weight decorations. The traditional Roman numeral clock face features beautiful detailing and decorative hands. A precision chronometer keeps faithful time for years to come. The case assembles easily.

All yours for only $69.19 which includes freight right to your door. Call Toll-Free 1-800-323-9858.

☐ **YES!** Ship my 5 ft. Hancock clock for only $69.19. My check/money order is enclosed.

PRINT NAME

ADDRESS

CITY/STATE/ZIP

Merchandisers Warehouse, Inc.
9903 Santa Monica Blvd., Suite 238,
Beverly Hills, CA 90211
Guaranteed: Return in 15 days for full refund if not 100% satisfied. MW-1

ONLY $69.19
delivered to your door

Full page: [HN01GF][GDrive] / Clip: [HN01GG][GDrive]

1994 - Launched Internet Media Network, following NSFnet shedding commercial internet traffic

Source - [HC004O][GDrive]

"In the early 1990's, following the NSF disgorgement of commercial Internet traffic from the NSFNet, he launched [Internet Media Network Incorporated] as the Internet division of ACG. In March of 1994, he established the first web-based online presence of a traditional mail-order company, Robert Redford's Sundance Catalog."

1998 (Oct 13)

Full newspaper pages : Page 1 - [HN01G3][GDrive] / Page 10 - [HN01G4][GDrive]

SPECIAL TOPICS
Monday - PERSONAL COMPUTING
TODAY - PERSONAL FINANCE
Wednesday - SMALL BUSINESS
Thursday - MARKETPLACE
Friday - DIGITAL DESERT
Saturday - REAL ESTATE
Sunday - INVESTING & WORKPLACE

THE ARIZONA REPUBLIC

BUSINESS

E

TUESDAY
OCTOBER 13, 1998

Senior Editor,
Les Polk • 444-4813
les.polk@pni.com

Answer to spam on Net developed by Phoenix firm

By Rebecca Rolwing
The Arizona Republic

Rik Pierce, 59, got an e-mail recently, titled "overdue bill."

Naturally, he opened the notice only to discover it was an advertisement for a pornographic web site.

He was the victim of spamming — unsolicited, unwanted junk e-mail sent in bulk to addresses around the world.

"This is something that's fundamentally wrong," said Rik's son, Tim, a systems administrator for a Web-based company. "It's annoying and destructive."

A Phoenix company, American Computer Group, on Monday introduced its solution to the problem at a direct marketing convention in San Francisco. It is creating a global list of people who are sick of unwanted ads. Advertisers can then match their target audience with names on the list to find out who doesn't want to receive the messages.

Entire domains also may sign up for the service, called SAFEeps, meaning that Internet service providers and businesses can block all junk e-mail from going to any of their addresses.

For a fee, direct marketing firms can send lists of e-mail addresses targeted for a mass mailing to ACG. The company will scour the list and delete the addresses of those who don't want the ads.

It costs firms $29.95 to check up to 300,000 addresses. Consumers can be added to the list free by contacting www.safeeps.com.

The service comes as the spamming industry is staring down the barrel of government-enforced regulation that could make all unsolicited e-mail ads returned to sender.

ACG's Rodney Joffe, who has worked in both the direct marketing business and the Internet industry, is optimistic the service will be a success even though there's no requirement for marketers to use it.

— *Please see* **SPAMMING,** *Page E10*

Spamming answer developed in Phoenix

— **SPAMMING,** *from Page E1*

"It's a compromise between the anti-spam groups of the world and the marketers of the world," Joffe said.

Hotmail Corp., a major Internet provider of e-mail services, has signed up for SAFEeps to keep its subscribers from getting the bulk e-mail.

People whose service provider has signed up for SAFEeps can ask to have their names taken off the list if they wish to receive the ads. Or they ask to get only unsolicited ads about a certain subject, like dogs or hunting.

Any changes to reduce spamming can't come soon enough for Pierce, senior systems administrator for RootsWeb Genealogical Data Cooperative. The company has 4,000 mailing lists that genealogists use to talk and swap information.

Spammers also use the lists. Last month, RootsWeb got slammed with 12,000 messages — that's about 40,000 pages of material.

"When we get one of these attacks, the machine goes crazy trying to process them all," Pierce said. As the computer struggles with the e-mail onslaught, it sometimes rejects messages by regular users.

Extractor Marketing, a Detroit company that sells spamming software, gives SAFEeps a partial endorsement.

"It's definitely a major step in the right direction," Extractor President Todd Farmer said. "But it's probably a little too strong if all the (Internet providers) in the world decide to enforce this system instead of allowing their users to make this choice."

SAFEeps allows direct marketers to weed out people who hate spam and wouldn't buy products presented to them through unsolicited ads, Farmer said.

The Coalition Against Unsolicited Commercial Email also gives the system a partial blessing.

"If an opt-out system can work, (SAFEeps) will very well work," said Ray Everett-Church, an attorney and a CAUCE co-founder.

Still, marketing companies are not required to use SAFEeps, meaning that people who don't want commercial e-mail will still get it, Everett-Church said. The coalition will continue to push for a national bill to bar spamming.

Rebecca Rolwing can be reached at 444-8305 or rebecca.rolwing@pni.com via e-mail.

[HN01G5][GDrive]

1998 (Dec 08) - NYTimes - "Marketers and Net Activists Reach Agreement on Spam"

By JERI CLAUSING , Source = [HN01GC][GDrive]

ASHINGTON -- Internet activists and direct marketers, who have been fighting for years over whether and how states and the federal government should regulate the growing use of unsolicited commercial e-mail, said on Monday that they had reached an agreement that they hope will produce consensus legislation and industry rules governing the contentious issue of Internet marketing.

The agreement was hailed as significant by all sides in the debate over unsolicited commercial e-mail, or spam. Those who participated in the meeting, which was held on Friday, included the head of the Direct Marketing Association (DMA), representatives of the Coalition Against Unsolicited Commercial Email (CAUCE) and an executive from Microsoft Corp.. They came away with a consensus that both "opt-in" and "opt-out" mechanisms, for accepting or declining to receive marketing messages, need to be put in place.

Anti-spammers have historically pushed for "opt-in" systems, where marketers can only send their pitches to people who have signed up to receive so-called junk e-mail. The Direct Marketing Association, on the other hand, has pushed for the "opt-out" alternative, which would only require marketers to honor the requests of Internet users who have specifically asked not to receive e-mail advertisements.

Both sides also pledged to support legislation which, at a minimum, would prohibits false identification of the sender of commercial e-mail messages.

And both sides have agreed to work toward creation of a nonprofit global "opt-out" list, supported by marketers and free to consumers, which would allow both business entities and individuals to perform a one-time global choice to reject receiving unsolicited commercial bulk e-mail. That system would allow entire domains to "opt out," meaning companies that own their own Internet addresses and e-mail systems could ask to keep their entire systems free of junk e-mail.

Rodney Jaffe, an Arizona businessman who organized the meeting between the president of the Direct Marketing Association and key anti-spam groups, called the agreement "significant."

"I think if you look at it from the 50,000-foot level, the most important thing is that it was the very first time that the people who are really involved in dealing with spam sat down with no preconceived notions, no rules," said Joffe, chairman of Phoenix-based American Computer Group, a service bureau for direct marketing companies.

Joffe said he was interested in helping the competing groups find common ground because he is involved with businesses on both sides of the issue.

"Hopefully, this will have turned out to have been the pivotal meeting that actually gets control of the spam problem."

Deirdre Mulligan, a lawyer for the Center for Democracy and Technology who at the request of the Federal Trade Commission led a yearlong working group that studied potential solutions to the spam debate, said she was heartened by the announcement.

"I think what this shows is that when there is a table created and people step back from the rhetoric, that there is a lot of agreement at least on how to start addressing the problem," Mulligan said. "A year ago CAUCE and DMA couldn't agree on anything."

Ray Everett-Church, a lobbyist for CAUCE, said "the starting point is that the DMA seems to have realized that 'opt-in' marketing methods are good marketing methods and are the kind of methods that increase consumer comfort levels for receiving marketing e-mail."

He said being able to convince the Direct Marketing Association to support a system that would allow entire domains to opt-out of marketing lists was also significant.

"We were able to show them that there are not only a lot of ISPs out there with their domains but even more businesses who own their own domains and all the equipment and e-mail addresses to which that mail might be sent," Everett-Church said.

The law would be the first in the United States setting out potential fines and prison terms for convicted spammers.

"So for instance, a large corporation might have an entire sales fleet with e-mail paging systems. If you can't opt out the whole domain, there is no way that a pager, for instance, could opt itself out. So you need to be able to do that at a domain level."

Robert Wientzen, president of the Direct Marketing Association, said a key point for his group was the "general agreement that this is not going to inhibit the growth of e-mail as a marketing tool. We believe there is a great future for e-mail marketing."

At the meeting, Everett-Church said, "We were able to show them that we're not wild-eyed crazy people but that we really are business people and we are concerned with the tactics but we are also in the business of making money and we understand what it takes to do that."

Everett-Church and Wientzen both said they hoped that through continued meetings the groups can reach consensus on legislation being prepared for Congress's return in January.

The groups were on opposite sides of the aisle during the 105th Congress, with CAUCE pushing for an outright ban on unsolicited commercial e-mail. The Direct Marketing Association backed alternative bills that would have required senders of bulk e-mail to label their messages as unsolicited commercial e-mail, and to contain accurate reply information to enable recipients to be removed from the mailing lists.

CAUCE had strongly opposed the Direct Marketing Association proposals, saying they would legitimize a practice that is costly not only to the Internet service providers who have to process the spam but to many Internet users who pay long distance charges to download their incoming mail.

The bills died on adjournment after the House Commerce Committee decided the divisive issue needed more study.

Several states, including Nevada, California and Washington, have adopted laws making it illegal for spammers to use false return addresses. And more proposals are expected at the state level when legislatures return in January.

1999 - John Postel Research Center - sponsorship

See **Jon Bruce Postel (born 1943)** .

2000 (March) - Interview in BizJournals Phoenix

By J. Craig Anderson – Mar 26, 2000, 10:00pm MST Updated Mar 26, 2000, 10:00pm MST - Source : [HW005P][GDrive]

American Computer Group: With one foot in the technology world and the other in marketing, ACG is one of the direct marketing industry's most advanced computer service bureaus.

The company provides real-time contact list management and analysis services over the Internet to direct mail marketers and telemarketers.

ACG founder Rodney Joffe has been an innovator in the use of information technology for marketing purposes -- he holds patents in both the networking and marketing fields.

Chat with Rodney Joffe, founder and chairman

Greatest strength: "Innovation. We are the leading service bureau from a technology point of view in this field."

Although many competitors have crossed over to the Internet from the old-fashioned methods of data processing in the past six months, Joffe said his company made the switch five years ago.

Biggest obstacle: "The fact that we're in Arizona. Arizona has never been accepted as an innovator in any particular field. People from outside (the state) don't realize how big and technologically advanced Phoenix is.

"People are surprised to learn that there's a whole leading-edge world in Phoenix. They think we're all living out in the sticks."

Biggest mistake: Moving to metro Phoenix in 1994. Joffe moved the 17-year-old ACG to Tempe from a Los Angeles suburb after an earthquake nearly destroyed his home and business. Although he is safe from natural disasters, Joffe said it is more difficult to attract new business.

"You aren't taken seriously in the technology world if you're from Arizona. The move was almost catastrophic for us."

Key to financial success: "Having a complete understanding of our true costs and being able to model our pricing based on that.

"We know absolutely what everything costs every step of the way."

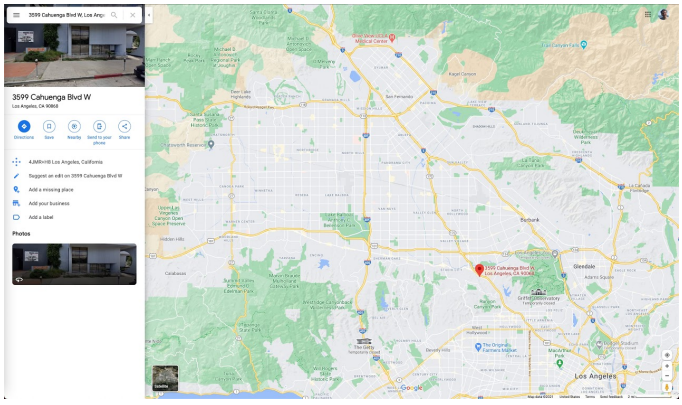
How technology improves business: "We are a technology-driven company. We've even spawned a couple of patents."

Joffe said 40 percent of his staff is made up of programmers.

ACG uses technology to communicate and transfer data -- unlike the old days when contact lists were stored on magnetic tape and shipped by mail

"We survive on technology."

EarthQuake - 1994 ?



2012 - Daily News mention

Note - **Dmitri Alperovitch (born b1980)** mentioned in this article as well

https://www.dailymail.co.uk/sciencetech/article-2161444/Hacking-hackers-U-S-Companies-fight-cyber-crime--illegally.html

Rodney Joffe refers to Jon Postel as "**Jon was my mentor, colleague, business partner, and friend.**"

https://seclists.org/nanog/2020/Oct/243

[...]

On Fri, Oct 16, 2020 at 6:05 AM Rodney Joffe <rjoffe () centergate com> wrote:

It is especially fitting whenever the NANOG/ARIN joint meetings occur in the same week that we “remember IANA”.

As time has gone on, fewer and fewer of us actually know who J. Postel is - that name that appears at the end of so many RFC’s we refer to every day.

The same person who also guided the management of names and numbers in the “early” days of this grand experiment we’re still struggling to get “right”.

Today (Friday, October 16) is 22 years since Jon Postel passed away. I won’t start to list the rest of the pioneers we’ve lost since then - its obviously getting longer and longer. But I think its worth pointing “newcomers" at Vint’s RFC2468 (https://tools.ietf.org/rfc/rfc2468.txt) as the starting point for them (you) to understand the importance of Jon’s legacy as a moral compass to help guide some of the decisions being made or ignored during this week. And obviously other weeks and decisions that follow.

Jon was my mentor, colleague, business partner, and friend. And along with his other friends still on this list, I miss him a lot. It hasn’t been the same without him.

2002 (August) - Joffe / Email spam / Centergate

https://www.newspapers.com/image/124815099/?terms=%22Rodney%20joffe%22&match=1

2020 (Feb 20) - Rodney Joffe Named a 2020 Cybersecurity Professional of the Year by the Cybersecurity Excellence Awards

https://www.home.neustar/blog/rodney-joffe-named-2020-cybersecurity-professional-of-year

by Miranda Joseph

We’re excited to announce that Rodney Joffe, Neustar Security CTO, SVP and Fellow and Chairman of the Neustar International Security Council, was named Cybersecurity Professional of the Year at the 2020 Cybersecurity Excellence Awards! Hosted by Cybersecurity Insiders, the Cybersecurity Excellence Awards honors individuals and companies that demonstrate excellence, innovation and leadership in information security.

Rodney was recognized for his work as a cybersecurity pioneer, his technical expertise, and his dedication to driving the field of cybersecurity forward. This award marks the third year in a row that Rodney has been recognized for his contributions to information security, after SC Media UK presented him with the ‘Outstanding Contribution to Cyber Security’ award in 2019 and winning the ‘Personal Contribution to IT Security’ category at the 2018 Computing Security Awards.

Anyone who has worked with Rodney here at Neustar will tell you how well-deserved this honor is. After all, Rodney was the architect for the development of Neustar Security’s DNS Shield and has been instrumental in building our security capabilities. Along with his work for Neustar, he has served as a cybersecurity advisor to the White House, sat on the U.S. government’s cybersecurity intelligence panel and has led a number of cyber working groups and investigations into national and international cyber-attacks and viruses. He is one of the first civilians to receive the FBI Director’s Award for outstanding cyber investigating, due to his role in uncovering and taking down the Butterfly Botnet. He is regularly called upon to assist federal authorities with investigating and protecting against cybercrime and cyberterrorist activities, and recently received the Mary Litynski Lifetime Achievement Award from M3AAWG, the global Messaging, Malware and Mobile Anti-Abuse Working Group, for his work in fighting text spam, malware and DDoS attacks.

Please join us in celebrating Rodney’s most recent accolade and the recognition Neustar continues to receive for our hard work in protecting clients with innovative and resilient security solutions.

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https://blog.executivebiz.com/2015/06/neustars-rodney-joffe-tcs-maurice-tose-extend-fcc-advisory-council-terms/

Neustar's Rodney Joffe, TCS' Maurice Tose Extend FCC Advisory Council Terms

Neel Mehta June 16, 2015 News

Rodney Joffe

Neustar Senior Vice President and Fellow Rodney Joffe has been reappointed to a third term on the Federal Communications Commission's Communications, Security, Reliability and Interoperability Council.

Joffe will assist in work on the recommendations of communication security, reliability and interoperability best practices to the FCC, Neustar said Tuesday.

Maurice Tose

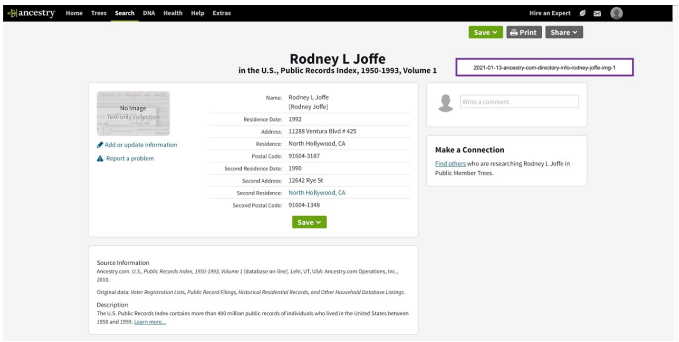
"Since the early 1990s, Rodney has recognized the inherent danger that can arise from Internet misuse and he has devoted himself and his resources to making it a safer place for all of us," said Lisa Hook, Neustar president and CEO.

TeleCommunication Systems CEO Maurice Tose has also been appointed to serve a fourth term on the council ending in 2017.

TCS said Tuesday Tose would help the council promote the 9-1-1 service, focus on network and mobile device security, protect communications networks and deliver alerts to the public.

Address Info

- 1990 12642 Rye St. North Hollywood, CA
- 1992 - 11288 Ventura Blvd #425 / Studio City, CA (or North Hollywood, CA)
- 1993 12642 Rye St. North Hollywood, CA
- 1996 12642 Rye St.studio city, CA
- ???- 15315 Magnolia Blvd, Sherman Oaks, California (see [HD0032][GDrive])



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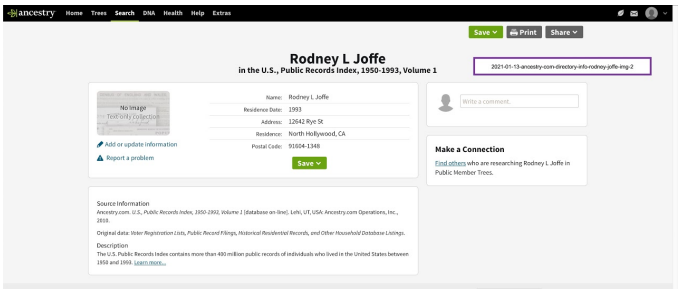

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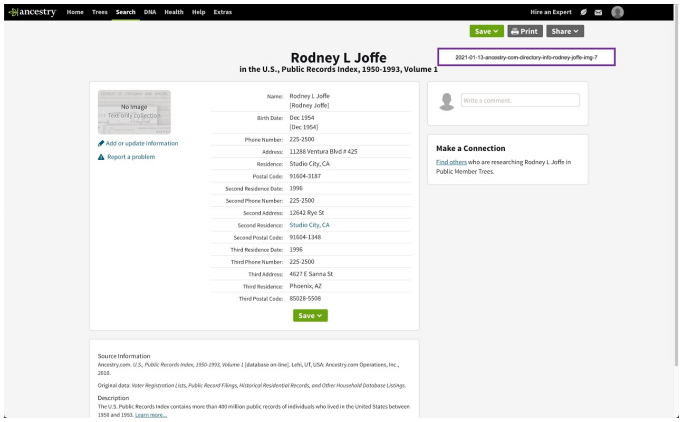

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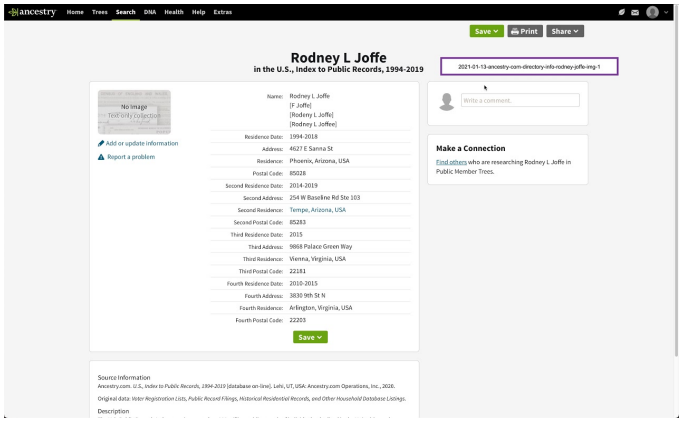

[HD0033][GDrive]

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Housatonic

K

A B C D E F G H I J K L M N O P Q R S T UVWXYZ

PEOPLE (by last name / then D.o.B.)

- Dr. William Bamberger **Karesh** (born1955)
- John George **Kemeny** (born 1926)
- Herman **Khan** (born 1922)
- Peter D. **Kiewit** (born 1900)
- Harold Jens **Kildall** (born 1894)
- Gary Arlen **Kildall** (born 1942)
- Dr. Ernst **Klenk** (born 1896)
- Dr. Hans-Dieter **Klenk** (born 1938)
- Dr. Gary Pignac **Kobinger** (born 1969)
- Neal **Koblitz** (born 1948)
- Marion Petronella Gerarda **Koopmans** (born 1956)
- Dr. Hilary **Koprowski** (born 1916)
- Thomas Eugene **Kurtz** (born 1928)

PLACES / COMPANIES / OTHER

- **Kiewit Corporation**
- **Kiewit Diversified** Group
- Gary Kildall's book "Computer Connections" (1994)

Dr. William Bamberger Karesh (born 1955)

Born March 25, 1955

Associations :

- **Professional relations:**
  - Peer at Eco Health Alliance of Dr. Peter Daszak (born 1965) and Kevin James Olival (born 1975)
- **Employers**
- **Other**

EcoHealth Alliance profile (May 2020) : Dr. William Karesh

https://www.ecohealthalliance.org/personnel/dr-william-karesh

2020-05-ecohealthallience-org-personnel-william-b-karesh.pdf

Dr. William Karesh : Executive Vice President for Health and Policy

TWITTER : @Dr_Wildlife

"EcoHealth Alliance is the only organization in the world that is completely focused on integrating global health with critical conservation challenges to make our world a better place for all. I'm really honored and proud to be a member of the EcoHealth Alliance team and work with our partners around the globe."

Scientists Bio

Dr. William B. Karesh is the Executive Vice President for Health and Policy at EcoHealth Alliance. He serves as the president of the World Animal Health Organization (OIE) Working Group on Wildlife Diseases and also chairs the International Union for the Conservation of Nature (IUCN) Wildlife Health Specialist Group, a network of wildlife and health experts around the world. Dr. Karesh also serves on the World Health Organization's (WHO) International Health Regulations Roster of Experts focused on the human-animal interface and wildlife health. Currently, Dr. Karesh is the EPT Partner Liaison for the USAID Emerging Pandemic Threats PREDICT-2 program, a >$120 million effort focused on predicting and preventing pandemic diseases. He is a Life Member of the Council on Foreign Relations.

Dr. Karesh coined the term "One Health" in 2003 to describe the interdependence of healthy ecosystems, animals and people and has pioneered solutions-oriented initiatives with this concept as the guiding principle. International programs under his direction in over 45 countries have covered terrain from Argentina to Zambia and include efforts in the Congo Basin to reduce the impact of diseases such as Ebola, measles, and tuberculosis on humans and endangered species such as gorillas and chimpanzees, to global surveillance systems for emerging diseases.

In addition to his work in the private sector, Dr. Karesh has also worked for the USDA, DOD, DOI and the Food and Agriculture Organization of the U.N. Dr. Karesh is internationally recognized as an authority on the subject of animal and human health linkages and wildlife. He has published more than 165 scientific papers and numerous book chapters, and written for the Huffington Post and journals such as Foreign Affairs.

https://biodefensecommission.org/teams/william-b-karesh-dvm/

William B. Karesh, DVM

Executive Vice President for Health and Policy, EcoHealth Alliance

Dr. William Karesh is the Executive Vice President for Health and Policy of EcoHealth Alliance, President of the World Organization for Animal Health (OIE) Working Group on Wildlife and Chair of the International Union for the Conservation of Nature (IUCN) Species Survival Commission's Wildlife Health Specialist Group. He serves as project liaison for the USAID Emerging Pandemic Threats PREDICT-2 program (a $140M effort to prevent infectious diseases in 30 countries) and is a member of World Health Organization's IHR Roster of Experts. In 2003, he coined the term "One Health" to describe the interdependence of healthy ecosystems, animals and people. In addition to his work in the private non-profit sector, Dr. Karesh has also worked for the USDA, US DOD and DOI. He served as a consultant for the Food and Agriculture Organization of the U.N., and is currently one of four members of the Steering Committee of OFFLU (OIE-FAO Network of Expertise for Influenzas), Dr. Karesh has led projects and programs in over 45 countries, has published over 180 scientific papers and book chapters, and written for broader audience publications such as Foreign Affairs and The Huffington Post.

One Health

2020-06-07-wikipedia-org-one-health

https://en.wikipedia.org/wiki/One_Health

One Health

From Wikipedia, the free encyclopedia

Jump to navigationJump to search

One Health is at the intersection of human health, animal health, and environmental health.

One Health is "the collaborative efforts of multiple disciplines working locally, nationally, and globally, to attain optimal health for people, animals and our environment", as defined by the One Health Initiative Task Force (OHITF).[1]

History[edit]

The recognition that environmental factors can impact human health can be traced as far back as to the Greek physician Hippocrates (c. 460 BCE – c. 370 BCE) in his text "On Airs, Waters, and Places".[2] He promoted the concept that public health depended on a clean environment.[3] In the mid-1800s, Rudolf Virchow, a physician, recognized the link between animal and human medicine, came up with the term zoonosis to describe a disease that can be passed from animals to humans, and actively advocated for veterinary medical education.[4] The founding of the Veterinary Public Health Division at the Centers for Disease Control and Prevention (CDC) in 1947 by James H. Steele, a veterinarian trained in public health, contributed to the understanding of how diseases are spread between animals and humans, or the epidemiology of zoonotic diseases.[4] Calvin Schwabe, another veterinarian trained in public health, coined the term One Medicine in a veterinary medical textbook in 1964, which reflects the similarities between animal and human medicine and stresses the importance of collaboration between veterinarians and physicians to help solve global health problems.[4] **"One Health" was first mentioned in a story about Ebola hemorrhagic fever on April 7, 2003, when Rick Weiss of the Washington Post quoted William Karesh as saying, "Human or livestock or wildlife health can't be discussed in isolation anymore. There is just one health."**[5] In 2004, The Wildlife Conservation Society held a conference at Rockefeller University in New York called One World, One Health, out of which the twelve Manhattan Principles were created.[6][7] These principles highlighted links between humans, animals, and the environment, how these links are integral to understanding disease dynamics, and the importance of interdisciplinary approaches to prevention, education, investment, and policy development.[7]

1985

https://www.newspapers.com/image/164596167/?terms=%22william%2Bkaresh%22

1987

https://www.newspapers.com/image/442654744/?terms=%22william%2Bkaresh%22

1992 - Book !

https://www.newspapers.com/image/33543263/?terms=%22william%2Bkaresh%22

Book -

https://archive.org/details/appointmentatend00kare

Family :

middle name Bamberger :

https://www.ancestry.com/discoveryui-content/view/291553161:62209?tid=&pid=&queryId=e4868fa3423a9cb3981d2249e4e5d7ae&_phsrc=bis69&_phstart=successSource

born march 25, 1955

father

https://researchworks.oclc.org/archivegrid/data/51831710

https://www.findagrave.com/memorial/57810874/karl-karesh

2021-02-08-findagrave-com-karl-karesh-1912-1997.pdf

Karl Karesh, the retired men's clothing store owner who was known as "Mr. King Street," died May 21, 1997 in a local hospital. He was 85.

Rabbi William Rosenthall, rabbi emeritus of K.K. Beth Elohim Temple, described Karesh as an "all-around wonderful citizen of Charleston. "He, how shall I say, clothed half of Charleston." Karesh and Max Krawcheck opened Karl Karesh Men's Apparel on King Street in 1946. The store later moved to 301 King St., where Karesh remained in business until his retirement in 1982. "I've said many times when Karl left King Street, it was one of the guard that you could not replace," said Henry Berlin, owner of Berlin's Clothiers. "He was a gentleman. He was a competitor of mine, but the kind of competitor that you would love to have." His son, Dr. William "Billy" Karesh, recalls working with his father in his store. "I don't think of him related to the business, though most of his life was committed to his work. I think my strongest thoughts about him have to do about his commitment to his community and to his family. It's really what mattered most to him throughout his life." "He was a remarkable man," daughter Barbara Stender said, noting that one of his favorite projects was the Christian-Jewish Council. "He was one of the founders. He always believed that there was a great friendship that could be developed between the Christian and Jewish people of Charleston." Eve Berlinsky, president of Beth Elohim Synagogue, said not only was Karesh a successful merchant but that "he was a caring volunteer. He was just a good citizen and a gentleman. He just cared about people and cared about life and lived it to the fullest."

Karesh was born in Charleston, SC, a son of Jacob L. Karesh and Mamie Ellison Karesh. He grew up on Radcliffe Street, the fifth of seven children. He attended Courtenay and Charleston high schools. He was an Air Force veteran of World War II. He served as president of the Jewish Community Center, chairman of the Charleston Zionist Chapter, president of B'nai B'rith Lodge, president of the Charleston Jewish Welfare Fund, treasurer of the Christian-Jewish Council of Charleston, treasurer and vice president of Beth Elohim Synagogue, and member of the Hebrew Orphan Society and Hebrew Benevolent Society. He was a member of the state board of the American Heart Association, president of North and South Carolina Retail Clothiers, and a member of the Charleston Chamber of Commerce Following his retirement in 1982, Karesh became involved with a real estate development group, Tremont Associates and worked as an agent with the Hamrick/Carter Inc. Real Estate Agency.

Surviving are his wife, Roslyn Furchgott Karesh; his son, of New York City, NY; two daughters, Barbara K. Stender of Charleston, SC, and Jae K. Casset of San Diego, CA; four step-sons, Dr. John M. Eisenberg of Washington, DC, Richard M. Eisenberg of Buffalo Grove, IL, William C. Eisenberg of Memphis, TN, and Jeff D. Eisenberg of Buffalo, NY; and 13 grandchildren.

step-brother ?

https://www.ncbi.nlm.nih.gov/pmc/articles/PMC1360928/

Health Serv Res. 2003 Aug; 38(4): 993–998.

doi: 10.1111/1475-6773.00158

PMCID: PMC1360928

PMID: 14524347

Tribute to John M. Eisenberg

Ann Barry Flood, PhD, Coeditors-in-Chief, HSR and Harold S Luft, PhD, Coeditors-in-Chief, HSR

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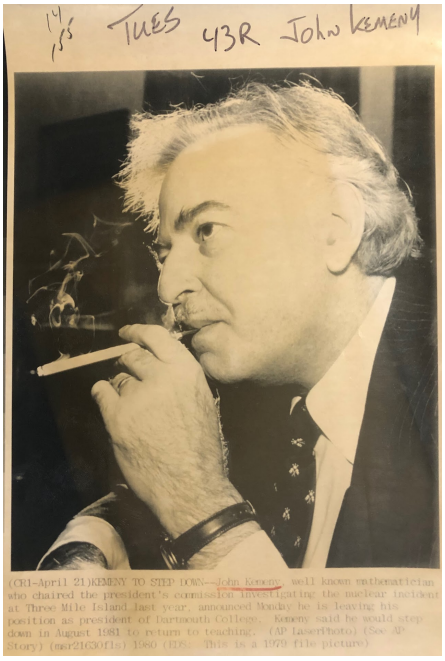
This issue is dedicated as a tribute to John M. Eisenberg, M.D., M.B.A., in recognition of his lifelong achievements in health services research. We have selected six articles, described below, which represent areas where John made significant contributions, either as a researcher and administrator or as a champion and mentor.

BITCHUTE @Housatonic YOUTUBE @HousatonicLive ODYSEE @Housatonic BRIGHTEON @Housatonic

Housatonic

John George Kemeny (born 1926)



[2020-09-01-housatonicits-image-purchase-john-kemeny-img-5920.jpeg]

Wikipedia John G. Kemeny

Born May 31, 1926 in Budapest, Hungary ([HK002J][GDrive])

Died December 26, 1992 (aged 66) in Hanover, New Hampshire, United States ([HK002J][GDrive])

Saved Wikipedia (Aug 28, 2020) - John G. Kemeny

Source : [HK002J][GDrive]

13th President of Dartmouth College : **In office** (1970–1981)

Preceded by John Sloan Dickey / Succeeded by David T. McLaughlin

[...]

John George Kemeny (born **Kemény János György**; May 31, 1926[1] – December 26, 1992) was a Hungarian-born American mathematician, computer scientist, and educator best known for co-developing[2] the BASIC programming language in 1964 with Thomas E. Kurtz. Kemeny served as the 13th President of Dartmouth College from 1970 to 1981 and pioneered the use of computers in college education. Kemeny chaired the presidential commission that investigated the Three Mile Island accident in 1979.[2] According to György Marx he was one of The Martians.[3]

Early life

Born in Budapest, Hungary, into a Jewish family,[1] Kemeny attended the Rácz private primary school in Budapest and was a classmate of Nándor Balázs. In 1938 his father left for the United States alone. In 1940, he took the whole Kemeny family to the United States[1] when the adoption of the second anti-Jewish law in Hungary became imminent.[4] His grandfather, however, refused to leave and perished in the Holocaust, along with an aunt and uncle.[5] Kemeny's family settled in New York City where he attended George Washington High School. He graduated with the best results in his class three years later.[2] In 1943,[1] Kemeny entered Princeton University where he studied mathematics and philosophy, but he took a year off during his studies to work on

the Manhattan Project at Los Alamos National Laboratory, where his boss was Richard Feynman. He also worked there with John von Neumann. Returning to Princeton, Kemeny graduated with an A.B. in mathematics in 1946 after completing a senior thesis, titled "Equivalent logical systems", under the supervision of Alonzo Church.[6] He then remained at Princeton to pursue graduate studies and received a Ph.D. in mathematics in 1949 after completing a doctoral dissertation, titled "Type-theory vs. set-theory", also under the supervision of Alonzo Church.[7][2] He worked as Albert Einstein's mathematical assistant during graduate school.[1]

Career

Kemeny was appointed to the Dartmouth Mathematics Department as a full professor in 1953, at the age of 27.[1] Two years later he became chairman of the Department, and held this post until 1967. Kemeny ventured into curriculum development when he introduced Finite mathematics courses. He teamed with Gerald L. Thompson and J. Laurie Snell to write *Introduction to Finite Mathematics* (1957) for students of biology and social sciences. The Dartmouth mathematics department professors also wrote *Finite Mathematical Structures* (1959) and *Finite Mathematics with Business Applications* (1962). Other colleges and universities followed this lead and several more textbooks in *Finite Mathematics* were composed elsewhere. The topic of Markov chains was particularly popular so Kemeny teamed with J. Laurie Snell to publish *Finite Markov Chains* (1960) to provide an introductory college textbook. Considering the advances using potential theory obtained by G. A. Hunt, they wrote *Denumerable Markov Chains* in 1966.[8] This textbook, suitable for advanced seminars,[9] was followed by a second edition in 1976 when an additional chapter on random fields by David Griffeath was included.

Kemeny and Kurtz were pioneers in the use of computers for ordinary people. After early experiments with the LGP-30, they invented the BASIC programming language in 1964, as well as one of the world's first time-sharing systems, the Dartmouth Time-Sharing System (DTSS). In 1974, the American Federation of Information Processing Societies gave an award to Kemeny and Kurtz at the National Computer Conference for their work on BASIC and time-sharing.[10] BASIC was the language used in most software written during the rise of the Apple II, the Commodore, the TRS-80, and the IBM PCs throughout the 80s.

Kemeny was president of Dartmouth from 1970 to 1981, and continued to teach undergraduate courses and to do research and publish papers during his time as president. He presided over the coeducation of Dartmouth in 1972. He also instituted the "Dartmouth Plan" of year-round operations, thereby allowing more students without more buildings. During his administration, Dartmouth became more proactive in recruiting and retaining minority students[2] and revived its founding commitment to provide education for American Indians. Kemeny made Dartmouth a pioneer in student use of computers, equating computer literacy with reading literacy. In 1982 he returned to teaching full-time.

In 1983, Kemeny and Kurtz co-founded a company called True BASIC, Inc. to market True BASIC, an updated version of the language.

Death

Commemorative plaque to John George Kemeny. It is affixed to the wall of his former domicile.

John Kemeny died at the age of 66, the result of heart failure in Lebanon, New Hampshire[2] on December 26, 1992.[4] He had lived in Etna, near the Dartmouth Campus.

See also

- Kemeny–Young method
- Kemeny's constant (an invariant sm arising in the study of finite Markov chains).
- The Martians (scientists)
- New Hampshire Historical Marker No. 261: BASIC: The First User-Friendly Computer Programming Language

References

1. ^ Jump up to:[a] [b] [c] [d] [e] [f] Weibel, Peter (2005). *Beyond Art - A Third Culture : a Comparative Study in Cultures, Art, and Science in 20th Century Austria and Hungary*. Springer. p. 350. ISBN 3-211-24562-6.
2. ^ Jump up to:[a] [b] [c] [d] [e] [f] Faison, Seth (1992-12-27). "John Kemeny, 66, Computer Pioneer and Educator (obituary)". *The New York Times*. Retrieved 2008-02-02.
3. ^ A marslakók legendája - György Marx
4. ^ Jump up to:[a] [b] Ohles, Frederik; Shirley M. Ohles; John G. Ramsay (1997). *Biographical Dictionary of Modern American Educators*. Greenwood Publishing Group. pp. 189. ISBN 0-313-29133-0.
5. ^ "True Basic. A sketch of John Kemeny" (PDF). *Dartmouth Alumni Magazine*. 2001-12-13. Retrieved 2012-07-23.
6. ^ Kemeny, John G. (1946). *Equivalent logical systems*. Princeton, NJ: Department of Mathematics.
7. ^ Kemeny, John George (1949). *Type-theory vs. set-theory*.
8. ^ J. L. Doob (1966) Review: *Denumerable Markov Chains*, MR0207042
9. ^ Preface, page vi
10. ^ "TRANSCRIPTS OF 1974 National Computer Conference Pioneer Day Session". *Dartmouth Time Sharing System*. Dartmouth College.

External links

- The Papers of John G. Kemeny in the Dartmouth College Library
- Posted in the article with permission from Dartmouth College
- Dartmouth Wheelock Succession
- Bio at Bellevue C.C. site
- A sketch of John Kemeny for the Dartmouth Alumni Magazine
- O'Connor, John J.; Robertson, Edmund F., "John G. Kemeny", *MacTutor History of Mathematics archive*, University of St Andrews.
- John G. Kemeny at the Mathematics Genealogy Project
- Interview with Kemeny about his experience at Princeton

- True Basic Inc. information

1949-07-15-the-times-journal-vineland-new-jersey-pg-2-clip-atomic-age

Full newspaper page : [HN016H][GDrive]

Two Times Journal, Vineland, N. J., Friday, July 15, 1949

Atomic Age Demands Strong World Government, Kemeny Tells Vineland Kiwanis Club

"The harnessing of atomic power had very serious historical implications," stated Dr. John G. Kemeny, assistant to Dr. Albert Einstein and chairman of the Princeton University chapter of the United World Federalists, at a meeting of the Vineland Kiwanis Club held last night at the Woman's Club.

Dr. Kemeny, a former member of the Atomic Bomb Project at Los Alamos, added, "Those who would go on overlooking these implications were the real dreamers of the time. Reality demands that we build political and social institutions adequate to cope with the scientific advances of our day."

"War, always morally wrong, has now become a threat to the physical existence and biological structure of every man, woman and child in the world," he emphasized.

Outlining the United World Federalists plans, Dr. Kemeny explained that the organization was started in February 1947 to strengthen the United Nations in the establishment and maintenance of peace through a world government. The group now numbers 47,000 members throughout the nation.

Strong World Govt. Urged

He urged the fundamental objective of the U.S. foreign policy to be the transformation of the United Nations into a world federation with powers clearly defined and limited to security matters. All nations would, he explained, maintain complete freedom to develop their internal political, religious, and economic systems as they chose.

"What about Russia?" Dr. Kemeny answered, "Faced by a world organized not only militarily but economically and morally, Russia could not stand alone long. Not daring to risk atomic retaliation and no longer wishing to be isolated, she would accept the necessary security checks and the way to peace would again be clear."

The speaker, who was obtained by Edward Mennies, a member of the UWF, was introduced by William G. Crossley, vice president and program chairman. John O. Milstead, past president, thanked the guest.

Samuel C. Sabul, president of the club appointed Silvio (Cy) Marcacci to the public relations committee. A report on the tuna fishing trip taken by the members was given at the meeting by Salvator Falsetta.

Guests ateding the meeting were Howard Dudley, of Millville; Stephen D. Wiley and Ann Wood, world federalists, of Morristown and Boston, respectively; Edward Mennies, and Victor Fischi, of Philadelphia.

The Vinelander
CLOTHES OF QUALITY

The special prize winner for the evening was Samuel Sabul. The prize was awarded by Dr. Lawrence R. Winchell and John Reisenwitz.

The birthdays of Duncan (Tim) Grant and Burt Dowler Sr. were celebrated.

A moment of silent prayer was observed in honor of Edward Vanaman, a member of the local chapter, who died this week. The invocation was pronounced by Rev. Calvin C. Felton, pastor of the Pilgrim Congregational Church.

Russia Won't Think Of War For 10 Years Yet, Says Gen. Smith

Philadelphia, July 15 (AP)— Gen. Walter Bedell Smith, former U. S. Ambassador to Russia, says the Soviet Union is hardly likely to consider herself ready for war with the West for at least 10 years.

He made the observation last night in a talk to 350 students and faculty members at the University of Pennsylvania.

The soldier-diplomat, now in command of the First Army, reiterated his previous observation that the outlook for the immediate future was generally for a period of "friction, disputes, and tension" between the two countries.

Gen. Smith said that the area comprising Turkey, Iran and the Middle East is now the "Achilles' heel" of Russian military planning, and that pressure may be expected to subdue these areas in the near future.

[HN016I][GDrive]

1949-08-16-the-times-journal-vineland-new-jersey-pg-3-clip-jewish-war-vets

Full newspaper page : [HN016F][GDrive]

Times Journal, Vineland, N. J., Tuesday, August 16, 1949

Jewish War Vets Discuss Move For World Government

"The What, Why, and How of World Government" was discussed last night at the open meeting of the Memorial Post No. 601, U.S. Jewish War Veterans, by members of the World Government Caravan, touring New Jersey this summer.

Research assistant of Dr. Albert Einstein, of Princeton University, Dr. John Kemeny presented the "Why" of world government. Dr. Kemeny, who worked on the Los Alamos atomic bomb project, described what World War III would be like, contrasting this with the possibilities of peaceful applications of atomic energy. He pointed out that the single problem of the control of the atomic bomb cannot be solved short of World Government.

Miss Ann Wood, of Smith College, told the "What" of the argument. She said the caravan represented the United World Federalists, an organization dedicated to the task of strengthening the United Nations into a World Federation with powers limited but adequate to maintain peace. She outlined points considered necessary in the UN: control of the atomic bomb, limitation of armaments, international police force, abolishing the veto, a democratic system of representation, and a world court which can apply world laws directly to individuals.

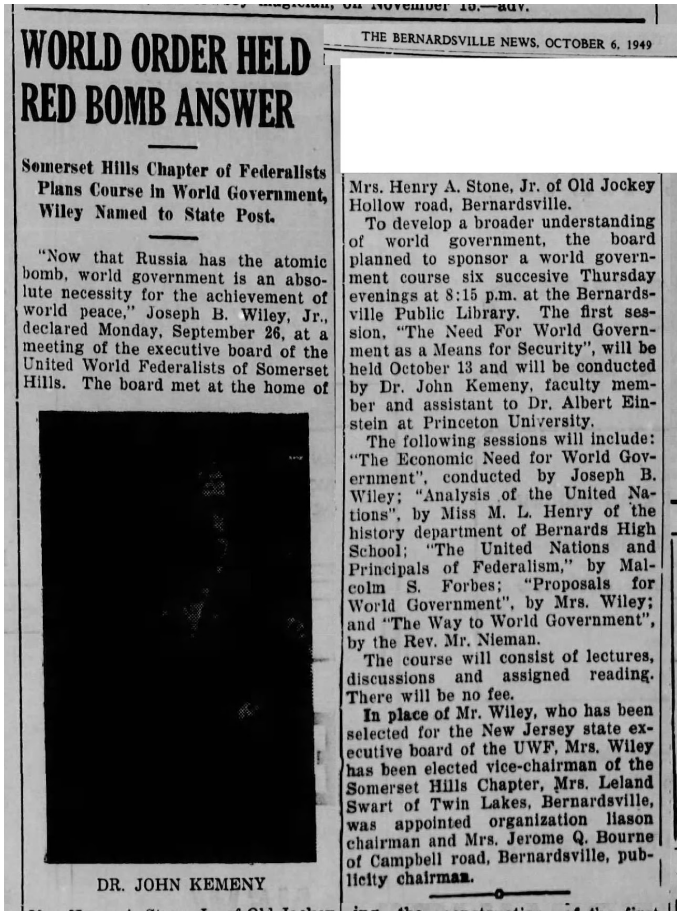
The progress made by the United World Federalists in two and a half years of its existence were stressed by Stephen Wiley, a Princeton University junior, majoring in political science. He stated that the organization has grown to 47,000 members. Twenty-two states have passed world government resolutions, he declared.

Following the program, plans were made by the post members for a dinner-dance to be held Oct. 3. Commander Bernard Selden announced that a television set will be awarded that evening. Tickets for the occasion have already been placed on sale.

[HN016G][GDrive]

1949-10-06-the-bernardsville-news-pg-15-clip-world-order-red-bomb-answer

Full newspaper page : [HN016D][GDrive]



THE BERNARDSVILLE NEWS, OCTOBER 6, 1949

WORLD ORDER HELD RED BOMB ANSWER

Somerset Hills Chapter of Federalists Plans Course in World Government, Wiley Named to State Post.

"Now that Russia has the atomic bomb, world government is an absolute necessity for the achievement of world peace," Joseph B. Wiley, Jr., declared Monday, September 26, at a meeting of the executive board of the United World Federalists of Somerset Hills. The board met at the home of Mrs. Henry A. Stone, Jr. of Old Jockey Hollow road, Bernardsville.

DR. JOHN KEMENY

To develop a broader understanding of world government, the board planned to sponsor a world government course six succesive Thursday evenings at 8:15 p.m. at the Bernardsville Public Library. The first session, "The Need For World Government as a Means for Security", will be held October 13 and will be conducted by Dr. John Kemeny, faculty member and assistant to Dr. Albert Einstein at Princeton University.

The following sessions will include: "The Economic Need for World Government", conducted by Joseph B. Wiley; "Analysis of the United Nations", by Miss M. L. Henry of the history department of Bernards High School; "The United Nations and Principals of Federalism," by Malcolm S. Forbes; "Proposals for World Government", by Mrs. Wiley; and "The Way to World Government", by the Rev. Mr. Nieman.

The course will consist of lectures, discussions and assigned reading. There will be no fee.

In place of Mr. Wiley, who has been selected for the New Jersey state executive board of the UWF, Mrs. Wiley has been elected vice-chairman of the Somerset Hills Chapter, Mrs. Leland Swart of Twin Lakes, Bernardsville, was appointed organization liason chairman and Mrs. Jerome Q. Bourne of Campbell road, Bernardsville, publicity chairman.

[HN016E][GDrive]

may 16 1950 - 1950-05-16-the-morning-call-allentown-pg-3-clip-einstein-world-government

Full newspaper page : [HN016B][GDrive]

SECOND THIRD

Bethlehem — Easton — Northampton County

FEDERALIST PARLEY — Dr. John B. Kemeny (seated right), assistant to Albert Einstein in the Institute of Advanced Study, Princeton university, is shown with Charles M. Butterworth (left), chairman, and David Caulkins, vice chairman of Lehigh university chapter, United World Federalists, at a rally Monday night in Packard auditorium, on the Lehigh campus.

Einstein Aide Urges World Government

The policy of world government was advocated by Dr. John Kemeny of Princeton university Monday night in Packard auditorium on the Lehigh university campus.

The speaker, assistant to Dr. Albert Einstein in research at the Institute for Advanced Study, told the assemblage that "great thinkers of the world have given thought to a world union for many years, but this program was only conceived as a good idea. Now these thinkers are convinced it is an immediate necessity."

Dr. Kemeny, introduced by Charles M. Butterwork, president of the United World Federalists of the Lehigh chapter, said "it is comforting to know that the same belief exists among those in prominent positions in the industrial, political and economic world."

A member of the unit which developed the atom bomb at Los Alamos, N. M., Dr. Kemeny explained that the United Nations would be benefitted by a world government. His policy, he pointed out, would be to limit power to international questions, with the countries to settle their own internal difficulties.

Butterworth, program chairman, and David Caulkins, vice chairman, discussed the purposes and beliefs of the federalists.

[HN016C][GDrive]

1952 - PHILOSOPHY ???

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1961

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1963

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Vannevar + Kemeny

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1965 (Sep 25) - Home computers

Full newspaper page : [HN016J][GDrive]

RUTLAND DAILY HERALD, SATURDAY MORNING, SEPTEMBER 25, 1965. 9

Home Computers Soon?

Dartmouth Professor, at Science Convention, Makes Prediction.

By WM. BURKE MILLER

MANCHESTER — (Special)— Within 50 or even 25 years some sort of computer will be standard home equipment, predicted Dr. John G. Kemeny of Dartmouth to the New England regional conference of the National Science Teachers Association Friday.

He stated that within 10 years every high school in the country will have some sort of computing equipment.

A research assistant for Dr. Albert Einstein at Princeton in 1948 and 1949, Dr. Kemeny is now chairman of the Mathematics Department and professor of philosophy at Dartmouth College in Hanover, N.H.

To show his audience of more than 375 science teachers that this was no idle statement, he described for them what is now going on at Dartmouth.

Our present computer is used by 30 students simultaneously for serious scientific purposes. Already we are planning one that will take care of 250 students, and its cost will be one quarter of the present one," he declared.

"The industrial revolution eased man's existence yet increased his ability to produce. And so it will be that computers, properly used, can vastly extend man's mental powers and accomplishments."

Only one problem appeared, Dr. Kemeny went on.

"It will be as difficult for a computer to decipher handwriting as man finds it," he said. Typing, not professional work but two finger hunt-and-punch, will suffice, he added.

The rainy day did not interfere too much with the second day of the three-day meeting. A poolside buffet luncheon was cancelled; some planned golf foursomes were called off and the stargazing from Burr & Burton observatory had to be cancelled.

Most sessions were well-attended throughout the afternoon. The exhibition hall had many browsing about longer than usual. Color movies on "Challenge of the Oceans," and "Viruses," were shown in the convention hall.

Loop projectors were on display next to the lobby at the Equinox House. Many had read and heard about them but said this was the first time they had seen or been able to operate them.

Other afternoon activities were a discussion of junior high school science, by Prof. Thomas Sachs of the University of Vermont.

Among the guests was Mrs. Westphalie G. Villahermosa, technical assistant of the National Science Development Board of the Philippines. She has been at Putney with the Experiment for International Living.

The conference will continue for most of Saturday.

At 9:45 a.m. there will be five concurrent sessions. These will be on a Princeton secondary school science project; Minnesota mathematics and science teaching project; AAAS Commission on Science Education; elementary school science project, University of Illinois, and a public school introduction to physical sciences.

From 11 a.m. to noon there will be a panel on in-service science education with Dr. Thomas Aylesworth and Ray Broekel of Wesleyan University, and Hiram R. Haggett, NASA educational program officer.

Following lunch, concurrent sessions will resume until 2:15 p.m. Exhibits will close at 2:30 p.m. and the conference will be ended.

Officers of the Vermont Mathematic and Science Teachers Association, who were sponsors of the event are John Emerson, president, Bradford Academy science department; Mrs. Barbara Ragle, vice president, elementary science teacher, Norwich, and Arthur Scott, secretary and treasurer, secondary mathematics teacher at Champlain Union High School, Hinesburg.

Herald photo—Miller

John Martin (left), Rutland High School science department program chairman for the National Science Teachers Association regional conference in Manchester, chats with Friday evening's banquet speaker, Dr. John G. Kemeny, chairman of the mathematics department and professor of philosophy at Dartmouth College.

[HN016K][GDrive]

1967-10-24-asbury-park-press-nj-pg-4-clip-monmouth-college-data-processing

Full newspaper page : [HN0169][GDrive]

CONTRACT SIGNED

1967-10-24-asbury-park-press-nj-pg-4-clip-monmouth-college-data-processing

Monmouth College Expands Data Processing Facilities

WEST LONG BRANCH — Students and faculty at Monmouth College will soon have access to the most advanced facilities in electronic data processing.

After intensive investigation into the academic applications of data processing, the college has signed a contract to tie in with the remote - access, time-shared facility operated at Teaneck by the General Electric Co.

By taking this step, Monmouth College has become one of the few colleges in New Jersey to provide this service for its students and staff and places itself among the relatively few colleges and universities in the United States with time-shared data processing on its campus.

Initially the installation at Monmouth College will be limited to teletypewriters in a computer center located in Edison Science Hall. Provision for expansion of the computer center includes addition of punched card transmission equipment and the installation of remote teletypewriters elsewhere on the campus as needed.

Besides the availability of the FORTRAN and ALGOL languages, one of the appeals of the facility at Monmouth College will be the inclusion of a language called BASIC, by which users of the equipment will be able to communicate. Developed by Professor John Kemeny of Dartmouth College, BASIC is an easy - to - learn, useful language for data processing communication.

It is applicable to both scientific and business education, and therefore is ideally suited to the college environment. Communication via teletypewriter directly with the GE 265 computer will permit the ultimate in data processing experience for the student.

Monmouth College has taken a step forward in providing this capability. Any student entering a technical or business field will have the advantage of previous knowledge of what electronic data processing can accomplish, and will have had experience with its use. It is expected that high schools will be teaching data processing soon. Monmouth College education majors may graduate qualified to teach data processing at the high school level.

Members of the Monmouth College Committee who studied the need and use of data processing were Everett W. Holt, dean of the faculty; Roscoe E. Labosier, business manager; and Dr. D. Robert Teeters, associate professor of physics.

Dr. William G. Van Note (right), president of Monmouth College, signs a contract for the college to tie in with the remote-access, time-shared facility operated at Teaneck by the General Electric Co. Everett W. Holt (left), dean of the faculty at the college, and Eugene W. Dooley, sales representative for G.E., look on.

[HN016A][GDrive]

1970

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1973

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March 3 1974

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1975 (june 9) https://www.newspapers.com/image/548147992/?terms=John%2Bkemeny%2Bbasic

1975-11-28-rutland-daily-herald-pg-24-clip-dartmouth-new-computer

Full newspaper page : [HN0167][GDrive]

New Computer Vastly Increases Dartmouth's Information System

HANOVER, N.H. — Purchase of a new Honeywell 66-40 computer to accommodate the continuing growth in computing among Dartmouth College students, faculty, administration, and educational networks encompassing other schools was announced by John G. Kemeny, president of the college and co-developer of the Dartmouth Time-Sharing System.

The financing of new fourth generation hardware was made possible, in part, by a second $500,000 gift from Peter and Evelyn Kiewit, in whose honor the college's computation center is named. The first $500,000 gift from Kiewit, a member of the Dartmouth Class of 1922 and president of the international construction firm of Peter Kiewit Sons & Co. of Omaha, Neb., helped to underwrite construction of the Kiewit Computation Center, dedicated in 1966 to provide Dartmouth with a physical base for its pioneering work in educational time-sharing computing.

The new Honeywell 66-40 — faster, more versatile and with larger storage and operating capacity than the Honeywell 635 it will replace — is scheduled to be installed prior to the winter term, early in January. Initially it will be run concurrently with the 635 and be tested in that configuration. Only after the new computer has been thoroughly tested will the old equipment be removed, in order to maintain uninterrupted computer service for its thousands of users.

Comparative simulations inducate that response time on the 66-40 system will improve by 10 to 40 per cent while storage and operational capacity will be enlarged by 30 per cent. The new machine will also provide capacity for growth and innovation during the next decade. The new configuration has two of every essential component, thereby permitting continued service while any part is being repaired or used for experimental development.

For several years now, an average of 85 to 90 per cent of the undergraduates at Dartmouth, now totalling 4,000 men and women, have gained direct computing experience on the Dartmouth Time-Sharing System (DTSS). The college's computer facilities also receive heavy use from graduate students at the Amos Tuck School of Business Administration, the Thayer School of Engineering and even the Dartmouth Medical School.

Faculty in virtually all disciplines from anthropology to zoology are making increasing use of the computer for their own research as well as utilizing it as a learning and functional tool for their students. Similarly, under the impetus of Dr. Kemeny, the College has developed a sophisticated management-information program, FIND, to assist in advance planning as well as data storage, retrieval and analysis.

In announcing the purchase of the Honeywell 66-40, Dr. Kemeny declared: "We have realized for some time that a new computer was going to be a necessity if we were to maintain the excellent computer service which has become part of the modern Dartmouth education. With the arrival of the new equipment, we can continue to grow in computer technology, while at the same time improving computing efficiency for the entire Dartmouth community."

He noted that extraordinary burdens had been placed on the 10-year old 635 machine because of the increase since 1972 in the number of undergraduates at Dartmouth from 3,000 to 4,000, following the advent of coeducation, the mounting use of the computer by individual students, year-round operation of the college and the greater administrative use of the computer.

"The new computer," he said, "will give us the increased capacity we presently need as well as additional capacity for future growth."

Commenting on the new acquisition, John S. McGeachie, director of the Kiewit Computation Center, added: "This new installation will ensure a continuation of the standard of excellence for which computing at Dartmouth is nationally recognized. I certainly look forward to its arrival.

"As an educational tool, the computer has come of age, and is an integral part of the academic life of the institution. The trustees' vote to purchase a new computer reinforces Dartmouth's continuing commitment to academic excellence and leadership in computing."

There are more than 400 computer terminals at strategic locations around the campus for student and faculty use. With the 635, more than 150 persons could use the computer simultaneously, each with his or her own program or project. The new equipment is expected to provide far better service to approximately the same number of simultaneous users.

The decision to purchase the new equipment was approved by the Board of Trustees at their fall meeting on the recommendations of the director of the computing center and two college-wide

1975-11-28-rutland-daily-herald-pg-24-clip-dartmouth-new-computer

[HN0168][GDrive]

1975-03-06-arizona-republic-pg-f-4-clip-dartmouth-computer

Full newspaper page : [HN0165][GDrive]

F-4 The Arizona Republic
Phoenix, Thurs., March 6, 1975

Dartmouth makes most of computer

United Press International

HANOVER, N.H. — On most college campuses students head for the library to work on assignments. At Dartmouth they are apt to head for the computer.

"We feel we're just as important a part of the education program as the library," said Thomas Byrne, assistant director for administration at the Kiewit Computation Center.

More than 90 per cent of the 4,000 Dartmouth students make use of the computer and more than 150 courses use it as an integral part of the course.

"One man computerized some lectures so they were self-teaching. This gave him two hours to lecture about things he never had time for before," Byrne said.

Courses involving complex computations can give more realistic problems. One student did tabulations on how the suburbs voted in 1972, finding on most issues they voted conservatively.

"The paper he did for one course would have gotten him a Ph D in years past" because it would have taken that much effort to get statistics together and analyze them, Byrne said.

Widespread use of Dartmouth's one computer is possible because of the work a decade ago by two Dartmouth professors — John G. Kemeny, now president of the college, and Thomas E. Kurtz, now director of the Kiewit Center.

They did two things that have helped revolutionize the computer industry worldwide.

They worked out a time-sharing program which allows many people to use a large central computer at the same time, while it seems to each user he has exclusive use of the system.

And they invented a computer language, called Basic, which lets computer users give commands in simple English instead of complex mathematical formulas.

"Massachusetts Institute of Technology had done some work on timesharing. We tried to do a less expensive version," Byrne said.

Kemeny and Kurtz felt one reason it was impractical to introduce students to the computer was that the language was too complex.

"They tried to design a language using simple English words to transmit commands to the computer. Basic turned out to be so simple a student could learn it in two hours," he said.

It now is the most popular language worldwide for use in timesharing programs. It is powerful because of its range of commands. With it, for example, you can edit texts, work in graphics and retrieve information.

Basic uses self-explanatory word commands such as "stop, run, print, end, list, read, write, scratch, go to, sort." Another important word is "let," as in mathematical formulas like "let X equal Y."

General Electric picked up the timesharing program, copied it around the country, and was so pleased it entered into a three-year research project with Dartmouth and gave the school a new $2.5 million computer.

"The Dartmouth time sharing system was raised in a college environment so our applications are peculiarly suited to a college environment," Byrne said. It has been leased to prep schools around New England, to several major companies, and to the U.S. Naval Academy at Annapolis.

The system has a library of 800 programs which can do anything from help design bridges to send out town water bills, to play word games with children—a good way to get them interested in using a tool which can give help in almost any field.

"We assume a great number of Dartmouth graduates will get into positions where they have to make decisions. With the world as it is, these decisons likely will involve information stored in a computer," Byrne said.

"We think it's essential the students understand the capabilities and limitations of the computer," he said.

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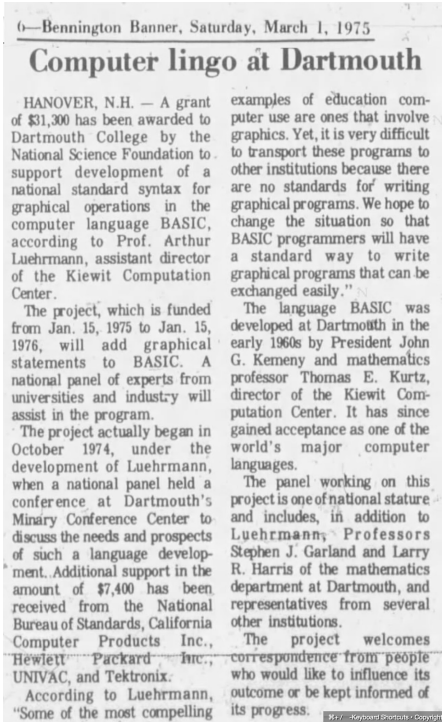
1975-03-01-bennington-banner-bennington-vermont-pg-6-clip-computer-lingo

Full newspaper page : [HN0163][GDrive]



6—Bennington Banner, Saturday, March 1, 1975

Computer lingo at Dartmouth

HANOVER, N.H. — A grant of $31,300 has been awarded to Dartmouth College by the National Science Foundation to support development of a national standard syntax for graphical operations in the computer language BASIC, according to Prof. Arthur Luehrmann, assistant director of the Kiewit Computation Center.

The project, which is funded from Jan. 15, 1975 to Jan. 15, 1976, will add graphical statements to BASIC. A national panel of experts from universities and industry will assist in the program.

The project actually began in October 1974, under the development of Luehrmann, when a national panel held a conference at Dartmouth's Minary Conference Center to discuss the needs and prospects of such a language development. Additional support in the amount of $7,400 has been received from the National Bureau of Standards, California Computer Products Inc., Hewlett Packard Inc., UNIVAC, and Tektronix.

According to Luehrmann, "Some of the most compelling examples of education computer use are ones that involve graphics. Yet, it is very difficult to transport these programs to other institutions because there are no standards for writing graphical programs. We hope to change the situation so that BASIC programmers will have a standard way to write graphical programs that can be exchanged easily."

The language BASIC was developed at Dartmouth in the early 1960s by President John G. Kemeny and mathematics professor Thomas E. Kurtz, director of the Kiewit Computation Center. It has since gained acceptance as one of the world's major computer languages.

The panel working on this project is one of national stature and includes, in addition to Luehrmann, Professors Stephen J. Garland and Larry R. Harris of the mathematics department at Dartmouth, and representatives from several other institutions.

The project welcomes correspondence from people who would like to influence its outcome or be kept informed of its progress.

[HN0164][GDrive]

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1979-01-07-the-roswell-daily-record-pg-25-clip-computer-literacy

Full newspaper page : [HN0161][GDrive]

Is U.S. becoming nation of computer illiterates?

© 1979 N.Y. Times News Service

NEW YORK — If "Why can't Johnny read and write?" has been the education story of the 1970s, then the story of the 1980s might well be "Why can't Johnny use a computer?"

With computers revolutionizing the way Americans pay their bills, shop, and make their major business and political decisions, many educators find a lack of understanding of the power and limitations of these machines and believe that America is a nation of computer illiterates.

John Kemeny, president of Dartmouth College and one of the nation's leading authorities on computers, believes the nation's ability to nurture a "computer literacy" is a fundamental issue of the next decade.

Currently, slightly under 40 percent of the nation's 11.3 million college students graduate with some basic knowledge of computers, according to figures compiled by Prof. John Hamblen, chairman of the computer science department at the University of Missouri at Rolla.

And only 10 to 20 percent of the faculty members know enough about computers to use them in their courses.

"I have run into a great many people in industry whose businesses depend on computers," Kemeny said, "and they simply don't even know what questions to ask of their computer experts. That's a dangerous situation."

To give as many students as possible an opportunity for computer experience, Kemeny believes every college and university should make computer services as readily available to their students as books on their library shelves.

That is the philosophy he has used in establishing Dartmouth as a national leader in the use of computers in education.

Computers have become so pervasive on campus that few faculty members or students consider them special any more.

"In many institutions," said Thomas Kurtz, a professor of mathematics who has worked closely with Kemeny to develop the services at Dartmouth, "the computer is an object of mystery surrounded by bureaucrats who are there to protect the knowledge of the computer experts."

Students must ask the experts to run their programs, Kurtz noted, and often hardly touch the machinery. They are left with the notion of the computer as "some sort of a God that hangs over their lives. Students at Dartmouth don't have to see anybody to get on the computer. It's no mystery."

More than 300 terminals, some like large electric typewriters and some like typewriters hooked up to a television screen, are in buildings around the campus. Any student can use one simply by typing in his student number.

Computers are used in nearly 200 courses, according to one recent survey. Even students who manage to avoid those courses often become so curious about the terminals that they learn to use them on their own.

"Part of being at Dartmouth is becoming comfortable with the computer," said Fran L'Esperance, a senior from Engiewood, N. J. "You can't help but learn something about it."

Indeed, in the last few years, more than 90 percent of the college's graduates had some computer experience while at Dartmouth. This figure was up to 96 percent last year, college surveys showed. The vast majority of them can write at least a simple program.

Few institutions offer such services to so many students, but the use of computers has been growing steadily on campuses for more than a decade.

In fact, Hamblen's study indicates that colleges and universities have now spent more than $1 billion on computing activities.

"The computer has pervaded practically every discipline, in both instruction and research," Hamblen said. "And it's really just beginning in instruction."

Examples include the following:

— A computer in a simulation game course on urban issues at the University of Southern California gives students playing the roles of city officials, developers and pressure groups information they need to make decisions on such issues as energy conservation, highway construction and capital budget planning.

The programs, covering more than 40 issues, have been used in 200 universities here and abroad.

— At Dartmouth, music students use a computer that reproduces dozens of musical sounds ranging from the human voice, piano and brass to electronic music only a computer can play. A student who writes music for a quartet, for example, can hear how it sounds on a computer before it is performed by live musicians.

— Also at Dartmouth, a special program known as IMPRESS provides sociology students with a vast resource of raw statistics, including census figures on sex, race, income and marital status, and political election results.

"The students go directly to the information on which their textbooks are based, and they question it," explained Gerald Levine, a sociologist.

— At Babson College, a business-management school in Wellesley, Mass., Prof. Jack Stamm programs into a computer background information on companies and unions involved in collective-bargaining disputes.

In simulating labor negotiations, graduate students must ask the computer for information to help them formulate bargaining positions.

— Physics students at Dartmouth study Newton's Laws by planning a voyage to the moon. Without a computer, such an assignment would involve tens of thousands of calculations.

Students program the computer to do the calculations by "teaching" it Newton's Laws, a process that requires the students to understand the laws.

These and other computer uses are going on at about 2,100 colleges and universities, according to information Hamblen has compiled, but 1.3 million students at 1,000 colleges have no access to computers.

For Kemeny the issue goes beyond a listing of the kinds of courses that use computers. It is a question of attitude.

He tells the story about a doctoral candidate at one institution with excellent computer facilities who was prevented from finishing his thesis for six months.

The student needed $500 worth of computer time and the university would not give it to him.

"Compare it to the library," Kemeny said. "For that student, anything he would have needed in the library to finish his thesis would have been available. And if it wasn't in the library, they would have paid interlibrary loan fees to get him the books or the journals to finish his thesis."

It is one illustration that convinces Kemeny that colleges have a long way to go in both available services and in philosophy in the effort to bring up a computer-educated generation.

"There really are very few schools that have adopted computer literacy as a major institutional goal," he said.

Roswell Daily Record

25 Sunday, January 7, 1979

[HN0162][GDrive]

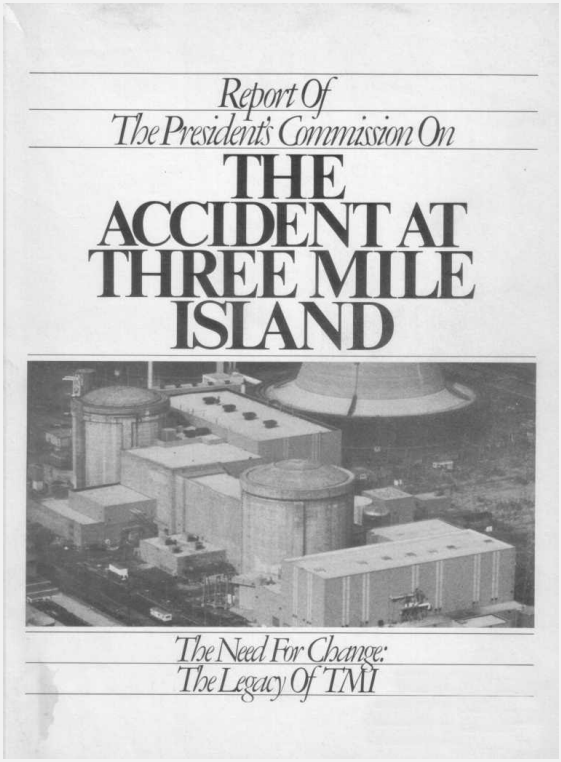
1979 - Kemeny - 3 Mile Island

1979-10-usa-report-on-the-presidents-commission-on-the-accident-at-three-mile-island-john-kemeny

[HG006N][GDrive]

Page 158 - Bio of John Kemeny

Kemeny, John G. President, Dartmouth College, Hanover, N.H., 1970- . Born: May 31, 1926, Budapest, Hungary; came to U.S. 1940; naturalized U.S. citizen, 1945. Education: Princeton University (BA, 1947; PhD) 1949). Experience: assistant, Theoretical Division, Manhattan Project, U.S. Dept. of the Army, Los Alamos Scientific Laboratory, N. Mex., 1945-46; research assistant to Albert Einstein, Institute for Advanced Study, 1948-49; Princeton University, 1949-53: Fine Instructor in Mathematics, 1949-51, assistant professor of philosophy, 1951-53; Dartmouth College, 1953-70: professor of mathematics, 1953-70, chairman of Mathematics Department, 1955-67, Albert Bradley Third Century Professor, 1969-70. Honors & Awards: Priestley Award, 1976; honorary doctorates from: Middlebury College, 1965, Columbia University, 1971, Princeton University, 1971, University of New Hampshire, 1972, Boston College, 1973, University of Pennsylvania, 1975, Colby College, 1976, Bard College, 1978, Lafayette College, 1978. Publications: A Philosopher Looks at Science (1959), Man and the Computer (1972), Random Essays, numerous articles; co-author: Basic Programming (1968), Denumerable Markov Chains (1966), Finite Mathematics with Business Applications (1962), Finite Markov Chains (1960), Mathematical Models in the Social Sciences (1962), Finite Mathematical Structures (1958), Introduction to Finite Mathematics (1957); contributor, Encyclopaedia Britannica; associate editor, Journal of Mathematical Analysis and Applications, 1959-70. Memberships: Phi Beta Kappa; Association for Symbolic Logic (consulting editor, 1950-59); Mathematical Association of America (chairman, New England Section, 1959-60; Board of Governors, 1960-63; chairman, Panel on Teacher Training, 1961-63; chairman, Panel on Biological and Social Sciences, 1963-64); American Mathematical Society; American Philosophical Association; American Academy of Arts and Sciences; Sigma Xi (national lecturer, 1967); National Council of Teachers of Mathematics; American Association for the Advancement of Science. Activities: consultant, Rand Corp., 1953-70; consultant, Educational Research Council of Greater Cleveland, 1959-70; chairman, U.S. Commission on Mathematics Instruction, 1958-60; National Research Council, 1963-66; vice chairman, Advisory Committee on Computing, National Science Foundation, 1968-69; delivered Vanuxem Lectures, Princeton University, 1974; National Commission on Libraries and Information Science, 1971-73; Advisory Committee to Regional Director, U.S. Dept. of Health, Education, and Welfare, 1971-73; trustee, Foundation Center, 1970-76; trustee, Carnegie Foundation for Advancement of Teaching, 1972-78; director, Council for Financial Aid to Education, 1976-79; director, Honeywell, Inc., 1978-79.



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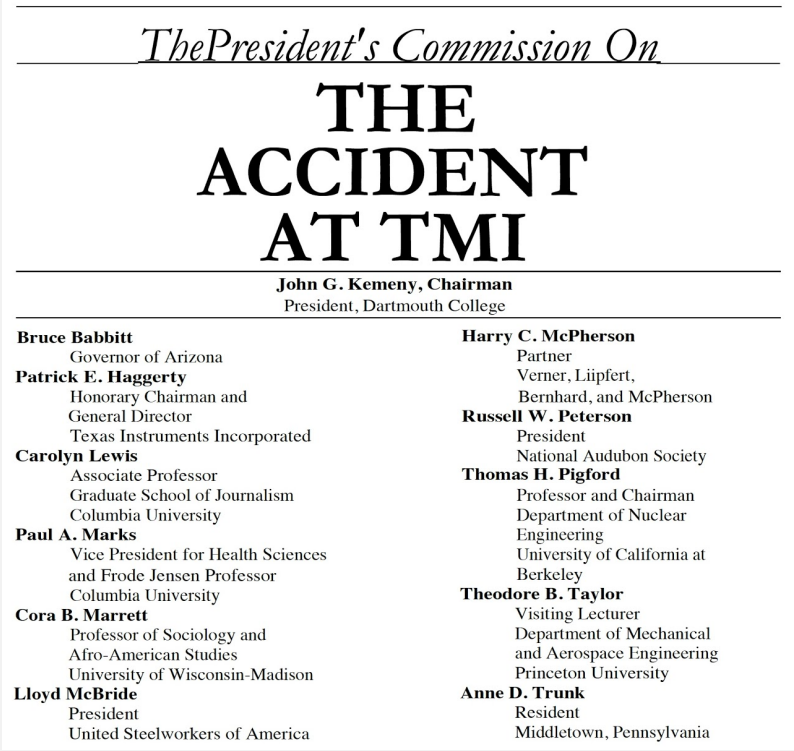
The President's Commission On

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1992-12-28-the-los-angeles-times-pg-a-2

Full page : [HN015Z][GDrive]

John G. Kemeny; Creator of BASIC Computer Language

From Times Staff and Wire Reports

LEBANON, N.H.—John G. Kemeny, a former president of Dartmouth College, co-creator of the widely used computer language BASIC and a scientist whose involvement in nuclear energy began with the Manhattan Project and extended through an investigation of the near-disaster at Three Mile Island, is dead.

The distinguished mathematician died Saturday, apparently of a heart attack, a Dartmouth spokesman said. He was 66.

Kemeny was a research assistant to Albert Einstein while studying at Princeton University, where he received his doctorate when he was only 23.

Earlier, as an Army soldier during World War II, he worked as an assistant in the theoretical division of the Los Alamos nuclear project that developed the atomic bomb.

Kemeny served as Dartmouth's 13th president from 1970 to 1981, when he stepped down to return to teaching. He guided the university through a series of changes, including the admission of women in 1972, and recommitted the school to its founding mission of educating American Indians.

His tenure also was marked by a growing conservative sentiment that came to dominate the New England campus. When he stepped down in 1981, Kemeny warned of the intolerance he saw within that movement.

Kemeny "pushed the fields of mathematics and computing to new heights, just as he raised the stature of Dartmouth during a decade of change in the 1970s," Dartmouth President James Freedman said.

Kemeny was born in Budapest, Hungary, and immigrated to the United States in 1940. He became a U.S. citizen in 1945 and quickly joined the Army.

He was graduated from Princeton in 1947 and earned his doctorate from the school two years later.

Kemeny and a colleague at Dartmouth, Prof. Thomas Kurtz, invented BASIC computer language in 1964. It remains a major tool in teaching computer programming.

In 1979, President Jimmy Carter named Kemeny to head a 12-member commission that investigated the accident at Three Mile Island nuclear power plant at Middletown, Pa. The Kemeny Commission, as it came to be called, was highly critical of the nuclear power industry and its federal regulators.

Associated Press

John G. Kemeny in 1979

[HN0160][GDrive]

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Housatonic

Herman Khan (born 1922)

Wikipedia Herman Kahn

Associations -

- Andrew Walter Marshall (born 1921)
  - ("After electing to defer his studies in favor of eventually pursuing a Ph.D. in statistics (a program not yet offered by the University of Chicago), Marshall joined the RAND Corporation, the original "think tank," at the behest of mentor **W. Allen Wallis** in 1949. While he would briefly return to academia to cover Wallis's courses during the 1953-1954 term and continued to take statistics courses at George Washington University, **Marshall soon gained the cachet of being part of "a cadre of strategic thinkers" that coalesced at the RAND Corporation in the 1950s and 1960s,** a group that also included Charles J. Hitch, **Herman Kahn**, James Schlesinger and Daniel Ellsberg. Notably, he worked with Kahn on developing and advancing Monte Carlo methods.") [HK003A][GDrive]
-

Saved Wikipedia (Nov 2020) - Herman Khan

[HK0039][GDrive]

Born

February 15, 1922

Bayonne, New Jersey, U.S.

Died

July 7, 1983 (aged 61)

Chappaqua, New York, U.S.

Alma mater

University of California, Los Angeles (B.S., Physics)

California Institute of Technology (M.S.)

Occupation

- Futurist
- Military strategist
- Systems theorist

Known for

On Thermonuclear War

Herman Kahn (February 15, 1922 – July 7, 1983) was a founder of the Hudson Institute and one of the preeminent futurists of the latter part of the twentieth century. He originally came to prominence as a military strategist and systems theorist while employed at the RAND Corporation. He became known for analyzing the likely consequences of nuclear war and recommending ways to improve survivability, making him one of the historical inspirations for the title character of Stanley Kubrick's classic black comedy film satire *Dr. Strangelove*.[1]

His theories contributed heavily to the development of the nuclear strategy of the United States.

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Background[edit]

Kahn was born in Bayonne, New Jersey, the son of Yetta (née Koslowsky) and Abraham Kahn, a tailor.[2] His parents were Jewish immigrants from Eastern Europe. He was raised in the Bronx, then in Los Angeles following his parents' divorce.[3] Raised Jewish, he later became an atheist.[4]

Cold War theories[edit]

Kahn's major contributions were the several strategies he developed during the Cold War to contemplate "the unthinkable" – namely, nuclear warfare – by using applications of game theory. Kahn is often cited (with Pierre Wack) as a father of scenario planning.[5]

Kahn argued for deterrence and believed that if the Soviet Union believed that the United States had a second strike capability then it would offer greater deterrence, which he wrote in his paper titled "The Nature and Feasibility of War and Deterrence".[6]

The bases of his work were systems theory and game theory as applied to economics and military strategy. Kahn argued that for deterrence to succeed, the Soviet Union had to be convinced that the United States had second-strike capability in order to leave the Politburo in no doubt that even a perfectly coordinated massive attack would guarantee a measure of retaliation that would leave them devastated as well:

> At the minimum, an adequate deterrent for the United States must provide an objective basis for a Soviet calculation that would persuade them that, no matter how skillful or ingenious they were, an attack on the United States would lead to a very high risk if not certainty of large-scale destruction to Soviet civil society and military forces.[7]

Hudson Institute[edit]

In 1961, Kahn, Max Singer and Oscar Ruebhausen founded the Hudson Institute,[8] a policy research organization initially located in Croton-on-Hudson, New York, where Kahn was living at the time. Luminaries such as sociologist Daniel Bell, political philosopher Raymond Aron and novelist Ralph Ellison (author of the 1952 classic *Invisible Man*) were recruited.

The Year 2000[edit]

In 1967, Herman Kahn and Anthony J. Wiener published *The Year 2000: A Framework for Speculation on the Next Thirty-Three Years*, which included contributions from staff members of the Hudson Institute and an introduction by Daniel Bell. Table XVIII in the document[9] contains a list called "One Hundred Technical Innovations Very Likely in the Last Third of the Twentieth Century". The first ten predictions were:

1. Multiple applications of lasers.
2. Extreme high-strength structural materials.
3. New or improved superperformance fabrics.
4. New or improved materials for equipment and appliances.
5. New airborne vehicles (ground-effect vehicles, giant or supersonic jets, VTOL, STOL).
6. Extensive commercial applications of shaped-charge explosives.
7. More reliable and longer-range weather forecasting.
8. Extensive and/or intensive expansion of tropical agriculture and forestry.
9. New sources of power for fixed installations.
10. New sources of power for ground transportation.

Later years[edit]

In Kahn's view, capitalism and technology held nearly boundless potential for progress, while the colonization of space lay in the near, not the distant, future.[10] Kahn's 1976 book *The Next 200 Years*, written with William Brown and Leon Martel, presented an optimistic scenario of economic conditions in the year 2176. He also wrote a number of books extrapolating the future of the American, Japanese and Australian economies and several works on systems theory, including the well-received 1957 monograph *Techniques of System Analysis*.[11]

During the mid-1970s, when South Korea's GDP per capita was one of the lowest in the world, Kahn predicted that the country would become one of the top 10 most powerful countries in the world by the year 2000.[12]

In his last year, 1983, Kahn wrote approvingly of Ronald Reagan's political agenda in *The Coming Boom: Economic, Political, and Social* and bluntly derided Jonathan Schell's claims about the long-term effects of nuclear war. On July 7 that year, he died of a stroke, aged 61.[13]

Personal life[edit]

Herman Kahn was the son of Abraham Kahn and Yetta Kahn. His wife was Rosalie "Jane" Kahn. He and Jane had two children, David and Debbie.[14]

Cultural influence[edit]

Along with John von Neumann, Edward Teller and Wernher von Braun, Kahn was, reportedly, an inspiration for the character "Dr. Strangelove" in the eponymous film by Stanley Kubrick released in 1964.[1] It was also said that Kubrick immersed himself in Kahn's book *On Thermonuclear War*.[15] In the film, Dr. Strangelove refers to a report on the Doomsday Machine by the "BLAND Corporation". Kahn gave Kubrick the idea for the "Doomsday Machine", a device which would immediately cause the destruction of the entire planet in the event of a nuclear attack. Both the name and the concept of the weapon are drawn from the text of *On Thermonuclear War*.[16] Louis Menand observes, "In Kahn's book, the Doomsday Machine is an example of the sort of deterrent that appeals to the military mind but that is dangerously destabilizing. Since nations are not suicidal, its only use is to threaten."[16]

In *The Politics of Ecstasy*,[17] Timothy Leary suggests that Kahn had taken LSD.

Publications[edit]

Outside physics and statistics, works written by Kahn include:

- 1960. *On Thermonuclear War*. Princeton University Press. ISBN 0-313-20060-2
- 1962. *Thinking about the unthinkable*. Horizon Press.
- 1965 *On escalation: metaphors and scenarios*. Praeger. ISBN 1-41283004-4
- 1967. *The Year 2000: a framework for speculation on the next thirty-three years*. MacMillan. ISBN 0-02-560440-6. With Anthony Wiener.
- 1968 *Can we win in Viet Nam?*. Praeger. Kahn with four other authors: Gastil, Raymond D.; Pfaff, William; Stillman, Edmund; Armbruster, Frank E.
- 1970. *The Emerging Japanese Superstate: challenge and response*. Prentice Hall. ISBN 0-13-274670-0
- 1971. *The Japanese challenge: The success and failure of economic success*. Morrow; Andre Deutsch. ISBN 0-688-08710-8
- 1972. *Things to come: thinking about the seventies and eighties*. MacMillan. ISBN 0-02-560470-8. With B. Bruce-Briggs.
- 1973. *Herman Kahnsciousness: the megaton ideas of the one-man think tank*. New American Library. Selected and edited by Jerome Agel.
- 1974. *The future of the corporation*. Mason & Lipscomb. ISBN 0-88405-009-2
- 1976. *The next 200 Years: a scenario for America and the world*. Morrow. ISBN 0-688-08029-4
- 1979. *World economic development: 1979 and beyond*. William Morrow; Croom Helm. ISBN 0-688-03479-9. With Hollender, Jeffrey, and Hollender, John A.
- 1981. *Will she be right? The future of Australia*. University of Queensland Press. ISBN 0-7022-1569-4. With Thomas Pepper.
- 1983. *The Coming Boom: economic, political, and social*. Simon & Schuster; Hutchinson. ISBN 0-671-49265-9
- 1984 *Thinking about the unthinkable in the 1980s*. New York: Simon and Schuster. ISBN 0-671-47544-4
- *The nature and feasibility of war, deterrence, and arms control* (Central nuclear war monograph series), (Hudson Institute)
- *A slightly optimistic world context for 1975–2000* (Hudson Institute)

- *Social limits to growth: "creeping stagnation" vs. "natural and inevitable"* (HPS paper)
- *A new kind of class struggle in the United States?* (Corporate Environment Program. Research memorandum)

Works published by the RAND Corporation involving Kahn:

- *The nature and feasibility of war and deterrence*, RAND Corporation paper P-1888-RC, 1960
- *Some specific suggestions for achieving early non-military defense capabilities and initiating long-range programs*, RAND Corporation research memorandum RM-2206-RC, 1958
- (team led by Herman Kahn) *Report on a study of Non-Military Defense*, RAND Corporation report R-322-RC, 1958
- Herman Kahn and Irwin Mann, *War Gaming*, RAND Corporation paper P-1167, 1957
- Herman Kahn and Irwin Mann, *Ten common pitfalls*, RAND research memorandum RM-1937-PR, 1957
- Herman Kahn, *Stochastic (Monte Carlo) attenuation analysis*, Santa, Monica, Calif., RAND Corp., 1949

See also[edit]

- Nuclear triad

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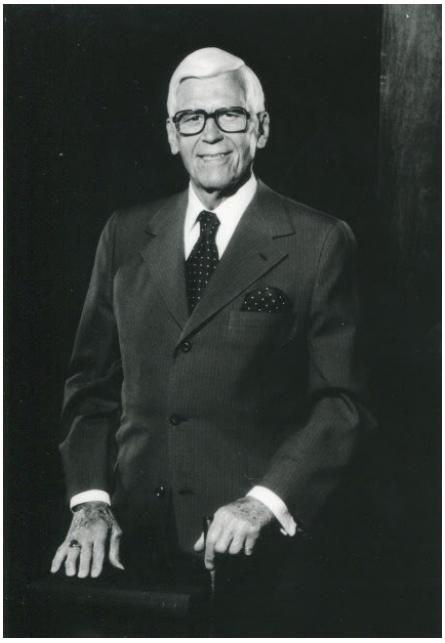
Housatonic

Peter D. Kiewit (born 1900)



Source : IntelligentFanatics (2017 article) : [HW003S]
[GDrive]

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https://www.myheritage.com/research/record-40001-341664131/peter-d-kiewit-jr-in-familysearch-family-tree

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Nov. 4, 1979 - Obituary, NY Times : "Peter Kiewit, 79, Builder in West; Public Works Created an Empire"

Source : [HN00ZJ][GDrive]

Peter Kiewit, a Nebraska construction executive whose $400 million dollar empire was amassed through building of tunnels, dams, highways and other public works projects that, critics charged, sometimes dragged far behind schedule at exorbitant costs to taxpayers, died Friday in Omaha. He was 79 years old.

Mr. Kiewit had been suffering from a malignant - tumor in his remaining lung. The other was removed on Sept. 21, at Omaha's Clarkson Hospital. Mr. Kiewit was released 10 days after the surgery but re - entered the hospital 10 days ago.

Mr. Kiewit, whose conservative, Middle Western manner was said to resemble that of a minister, devoted his adult life to expanding what his family, Dutch immigrants, began in 1884 as a modest masonry concern.

The enterprise — now known as Peter Kiewit Sons' Company, one of the world's largest construction concerns — was one in which Mr. Kiewit found a start as bricklayer at the age of 19. After one year at Dartmouth College, he dropped out, saying, later in life, "college was too expensive and not offering of enough results."

As the owner of The Omaha World - Herald properties — a daily newspaper, a publishing company, TV station and office buidlings and other real estate — Mr. Kiewit was perhaps the leading figure in Nebraskan social and business circles. Other Kiewit holdings include coal mines in Wyoming and Montana and a quarry in New Mexico.

He was a former board chairman of the Chicago, Rock Island and Pacific Railroads, the Northwestern Bell Telephone Company, the Omaha National Bank and the Northern Natural Gas Company. Estimates of his personal wealth ranged from $150 million to $200 million.

He maintained ranches in Nebraska, and in Wyoming, near the Big Horn Mountain range. He owned other residences in downtown Omaha and in Palm Springs, Calif.

Mr. Kiewit, a man who preferred to go unnoticed, nevertheless took a vigorous personal interest in business, crossing the nation constantly in his private plane, between his company branches and his residences. "Publicity never got us a job," he told his employes.

In one notable case, the builder was criticized in 1968 by a member of the board of directors of the Omaha power district over the the cost of a nuclear power plant at Fort Calhoun, Neb. Though the original cost estimate was $64 million, Mr. Kiewit eventually raised it to $163 million. The plant's operation date, first set for May 1, 1971, was moved back to June 1, 1973. The job went through despite the criticism.

Stressing his own problems with such things as low productivity by workers, and inflation, Mr. Kiewit finished the project in August 1973 at a cost of $172 million.

Mr. Kiewit is survived by his third wife, the former Marjorie Harkins Buchanan of Chicago, and a son, Peter Kiewit Jr., an attorney in Phoenix.

1979 (Nov 11)

Full newspaper page : [HN00ZK][GDrive]

Construction giant Peter Kiewit dead at 79

From News Wires

OMAHA — Peter Kiewit, a Nebraska bricklayer who built one of the world's largest construction firms, died Friday at the age of 79. Funeral arrangements were pending.

Kiewit's left lung was removed Sept. 21 at Clarkson Hospital after discovery of a malignant tumor. He was released about two weeks after the surgery, but re-entered the hospital about 10 days ago for surgery to repair a bleeding ulcer.

Kiewit started his career as a bricklayer in 1919. Today, the enterprises of Peter Kiewit Sons' Inc. are worth more than $400 million. Kiewit's company became principal owner of the Omaha World-Herald in 1962.

"Peter Kiewit will be remembered always as a construction leader, but his eminence in that field should not diminish his important Nebraska role as owner of the Omaha World-Herald," said Joe R. Seacrest, editor of the Lincoln Journal. "He brought to the World-Herald more than local ownership. He brought talent and a more moderate editorial leadership to a fine newspaper."

Kiewit was chairman of a contracting firm that spread over North America, but he kept his legal residence and his company's headquarters within two miles of the modest frame house in Omaha where he was born.

Highway builder

The construction company is one of the largest in the world and is the largest builder of Interstate highway in the United States. Since 1946, it has completed more than half a billion dollars worth of highways and superhighways.

The day Kiewit died, the company was working at more than 150 construction sites.

One of his company's trademarks was training employees for greater responsibilities. Some 370 employees own stock in the company and employees eventually will assume ownership of the firm.

Kiewit's philanthropies, already given or pledged for the next five years, total $20 million. Among his contributions was $2.5 million for the downtown Omaha education center-state office building.

Among projects on which Kiewit construction work is being done are pumping stations on the Alaska Pipeline, the Big Thompson Canyon highway reconstruction project in Colorado, the Eisenhower Tunnel in Colorado, a huge hydroelectric project in the James Bay region of northern Quebec, Canada, and subway projects in Boston, Washington, D.C., and New York City.

Kiewit companies are mining coal in Wyoming and Montana, quarrying rock in New Mexico and building tunnels through the Colorado Rocky Mountains. By 1978, Peter Kiewit Sons' become the 10th largest coal producer in the United States.

Coal mining

The company holds contracts to deliver some $4 billion worth of coal in the next 20 years.

In the corporate structure, Peter Kiewit Sons' Inc. is the parent holding company. Peter Kiewit Sons' Co. is the construction arm, with 14 regional and district offices in the United States and Canada, and is the largest of about 25 subsidiaries.

Kiewit received many honors and awards, but he said few touched him as much as a citation he received in 1968 from the Beavers, an organization of construction men.

The citation said: "Obviously, Peter Kiewit does more than build lasting monuments of masonry, concrete and steel. He also builds men and good things for a better, more meaningful world."

In 1922, Kiewit married Mary Drake, daughter of a bridge builder. They had two children, a son, Peter Kiewit Jr., now an attorney in Phoenix, Ariz., and a daughter, Mrs. Jeanne Kiewit Taylor, who died in 1953.

Mary and Peter Kiewit were divorced in 1951 and in 1952, he married Evelyn Stotts Newton, widow of one of Kiewit's early business associates in Omaha. She died in 1977 and in February 1978, Kiewit married a Chicago widow, Marjorie Harkins Buchanan.

1979-11-03-lincoln-journal-star-pg-5-clip-peter-kiewit

[HN00ZL][GDrive]

Kiewit and Buffett shared a pilot !

Wilbert Edwin Emshoff : November 2, 1927 - July 24, 2019

Source on TributeArchive : [HL004D][GDrive]

Wilbert E. Emshoff, age 91, of Omaha, passed away on July 24, 2019. Wilbert was born in Avoca, NE on November 2, 1927 to the late John and Matilde (Koester) Emshoff. He proudly served his country in the United States Air Force and worked as a corporate pilot for Peter Kiewit and Warren Buffett. Wilbert is survived by his wife, Leora, daughters, Peggy Cox (Bill), Debbie Schug (Mark), sons, Randy Emshoff (Janet), Keith Emshoff (Terry), five grandchildren and three great grandchildren. He was preceded in death by his parents, two brothers and two sisters.

Peter Kiewit – The Story of Warren Buffett's Mentor

Source : IntelligentFanatics (2017 article) : [HW003R][GDrive]

Here is an excerpt from our new book, Intelligent Fanatics: Standing on the Shoulders of Giants 82:

Peter Kiewit Sons', Inc.

"If you set out to replicate the Kiewit company, you could put as much capital into the business as it has. You could move into corporate quarters that rival Kiewit's. You could even buy all its equipment and replicate its organizational structure. But, you would not be able to build a culture like Kiewit's. That culture is the result of the vision of an extraordinary man, carried on and moved forward by extraordinary people. You could canvass the world, recruiting the top picks from Stanford, Harvard—you name it—and you would never replicate the magic and success that is the culture of the Kiewit company."

—Warren Buffett, in *Kiewit: An Uncommon Company*

"The three best operating companies I'm aware of are Costco, Kiewit, and Glenair. There is nothing remarkable about the product or field for any of these three. But there is something remarkable about the *culture* of all three."

—Charlie Munger, in a talk to Capital Group executives

In 1951, Warren Buffett received his graduate degree from Columbia University, where he studied under Benjamin Graham. After graduation, he worked at Buffett-Falk & Company until 1954. At the time, Buffett-Falk was located on the fourth floor of the Omaha National Bank Building, suite 445. In that same building, on the tenth floor, was an intelligent fanatic named Peter Kiewit. Peter grew his family's business from the twelfth-largest contractor in Omaha to one of the largest and most respected in the entire United States.

Buffett would learn as much from Peter Kiewit and his successor, Walter Scott Jr., as he did from Benjamin Graham. Peter Kiewit also made an indelible mark on Omaha. Most people outside of Omaha are not familiar with Peter Kiewit or the outstanding company he led—Peter Kiewit Sons', Inc. (PKS).

By the 1950s, Peter Kiewit was a legend in Omaha, having constructed dozens of buildings throughout the city. Young Buffett, fresh out of Dale Carnegie's course on public speaking, took it upon himself to reach out and meet Peter Kiewit. They met in 1952, and Buffett was surprised at how nice Kiewit was, for a man of his notoriety and stature.

From that one meeting in 1952, Warren would go onto emulate Peter in terms of character, business building, and giving. Buffett says, "It's better to hang out with people better than you. Pick out associates whose behavior is better than yours and you'll drift in that direction,"1 True to this, Buffett eventually chose to partner with Kiewit, the business, on a few deals and to locate Berkshire Hathaway only a few floors away from PKS, known today as Kiewit Corporation, in Kiewit Plaza.

The connections between Berkshire Hathaway and PKS have been strong over the decades. Walter Scott Jr., who became president of PKS after Peter Kiewit's passing, had been a childhood friend of Warren. Scott has been a long-term director on Berkshire Hathaway's board. When Warren was contemplating getting a corporate jet for Berkshire, in the late 1980s, he knew Peter Kiewit had successfully utilized multiple private aircraft to move himself and employees to remote construction sites. He asked Walter Scott his opinion: "Walter, how do you justify buying a private airplane?" Walter replied, "Warren, you don't justify it. You rationalize it."2 Buffett would later state, after purchasing the $6.8 million *Indefensible* in 1989, that the jet was one of his few "guilty pleasures." He rationalized the benefit of saving his time in traveling for Berkshire Hathaway.

Berkshire Hathaway also has had multiple business transactions directly or indirectly with PKS. Take, for instance, MidAmerican Energy Company. MidAmerican Energy's predecessor, CalEnergy Company, was a majority-owned stake of PKS before Berkshire Hathaway acquired it in 2000. Additionally, again with the help of Walter Scott Jr., Warren Buffett honored Peter Kiewit's wish to keep the Omaha newspaper the *World-Herald* locally owned. Peter Kiewit's company had purchased the newspaper in 1962, for $40.48 million, with only sixteen days' notice. The business was almost acquired by Samuel I. Newhouse's New York City newspaper franchise. Residents and employees were furious that a nonlocal entity could be the owner. Kiewit said, "I figure anything as important to a city as its newspaper will be a good, sound investment."3

With mounting debt, the *World-Herald* needed an opportunity to address its long-term capital needs while maintaining local ownership. Warren Buffett stepped up in 2011, as Peter had forty-nine years earlier, and through Berkshire Hathaway acquired the *World-Herald* for $150 million. Like Kiewit, Buffett saw the *World-Herald* as a sound investment, different than most newspapers in the United States, which he would not own "at any price." He said in the press release that this newspaper "delivers solid profits and is one of the best-run newspapers in America."4

Upon Peter's death, Warren also shared his view of Peter's giving. He said, "Peter Kiewit made major deposits in society's bank . . . but his withdrawals have been few."5 Peter Kiewit gave generously while he was alive, and the majority of his net worth upon his death. With the help of the Gates Foundation, Buffett will closely follow Kiewit's major deposits in society's bank, with minimal withdrawals.r

Peter Kiewit operated in a difficult industry. BizMiner, an industry analysis provider, estimated that from 2004 to 2006 the failure rate for various contracting firms in the United States was 23.6%.6 Developers and governments are highly price sensitive. Contractors bid for projects with no knowledge of their competitor's bids. Winning really comes down to price, and there are numerous factors outside the control of the owner.

So how was it that, in the depths of the Depression—1931 to be exact—Peter Kiewit persevered and grew his father's business from $400,000 in annual revenues to a $7 billion, nationally recognized contracting firm upon his death in 1979? And how does the company maintain dominance in the United States even to this day?

We will highlight Peter Kiewit's story and how he did it. Not surprisingly, he and PKS fit the intelligent fanatic mold. We also will juxtapose PKS with two other contracting firms that did not utilize the same strategies Peter Kiewit built and did not achieve the same sustained success.

You can read Peter Kiewit's story in our latest book, Intelligent Fanatics: Standing on the Shoulders of Giants 82. Become a Member and we'll send you the eBook-Kindle version for Free. **[Join Today]** 12

[...]

Dec '17 - I thought this was a very good excerpt from a 1986 Fortune article:

Buffett especially admires how fellow Omaha businessman Peter Kiewit solved his legacy problem. Kiewit arranged his affairs so that when he died in 1979 his 40% stake in the family's enormously successful construction company was sold to employees. The proceeds from the sale then went to a charitable foundation that he had established to promote education and social services in Nebraska. Kiewit left approximately 3% of his $186-million estate to his widow, his son, Peter Jr., 60, and other relatives. Peter, a successful Phoenix lawyer, was surprised by the $1.5-million legacy he received at age 53. Says he, "I was raised to expect nothing, and supported myself all my life. In the end, I think my father was saying from the grave that he approved."

Father's passing :

https://www.newspapers.com/image/146553660/?terms=Peter%2Bkiewit

Kiewit Corporation

https://en.wikipedia.org/wiki/Kiewit_Corporation

Also see -

- Kiewit Diversified Group
- **Level 3 Communications** (https://en.wikipedia.org/wiki/Level_3_Communications) - Saved Wikipedia : Level 3 Communications (Sep 3 2020) -- Source [HK002M][GDrive] - Also partially covered in Kiewit Diversified Group
- CEO Peter D. Kiewit (born 1900)

Saved Wikipedia : Kiewit Corporation (Sep 03 2020) -

Note - Source : [HK002L][GDrive]

Kiewit Corporation

Founded 1884 (Kiewit Brothers)

Headquarters Kiewit Plaza / Omaha, Nebraska, U.S.

Key people Rick Lanoha (CEO)

Revenue $12,338.0 million USD (2012)

Net income $581.0 million USD (2011)

Number of employees 22,000 [1] (2017)

Website www.kiewit.com

Kiewit Corporation is an employee-owned[2] Fortune 500 contractor[3] based in Omaha, Nebraska. Privately held, it is one of the largest construction and engineering organizations in North America.[4] Recent projects have included several bridge retrofittings in the San Francisco Bay Area, Interstate H-3 project in Hawaii, rebuilding the spillway at Oroville Dam, and building the world's largest geodesic dome at Henry Doorly Zoo in Omaha.[5] Along with significant mining and off-shore operations, the company also contracts small grading (dirt moving) projects for residential or commercial development.

History

The company was founded in 1884 as Kiewit Brothers Masonry Contractors by Peter and Andrew Kiewit, who were of Dutch descent. Their father, John Kiewit, emigrated from The Hague in 1857, where he learned the trade of brickmaking. John Kiewit established a brickyard in Omaha, Nebraska where his sons worked and learned the skills for their masonry business. Early projects included the seven-story Lincoln Hotel in Lincoln as stone masons and the Bekins warehouse as general contractor.[6][7]

The original brothers dissolved their partnership in 1904 and the founding Peter Kiewit would continue as a sole proprietorship. In 1912, two of his sons, Ralph and George Kiewit would join their father as partners in the firm. When the founding Peter Kiewit died in 1914, his son Ralph led the company. George and Ralph Kiewit would later leave the company.

The founder's youngest son, also named Peter Kiewit, joined the firm in 1919. He led the firm from 1924 until his death in 1979. This is the Peter Kiewit known for building one of the largest construction companies in the world. He was also very active in the Omaha area, including leadership of the Knights of Ak-Sar-Ben.[6]

Notable projects in the 1920s by the firm, now known by Peter Kiewit Sons, included the Livestock Exchange Building (1926), the Burlington railroad depot (Lincoln), the Nebraska State Capitol Tower (1927), Joslyn Art Museum (1928), and Union Station (1929). In 1931, Peter Kiewit incorporated the company as Peter Kiewit Sons' Co. The firm would begin building transportation projects during the Great Depression.[6][7]

Walter Scott, was also a key figure in the growth of Kiewit. Scott was initially hired to work on the tower project at the Nebraska State Capitol and spent the remainder of his career at Kiewit becoming chief engineer.[6] His son would not only work for Kiewit, but also rise to the position of CEO.[8]

Leadership

Rick Lanoha is the current chief executive officer of Kiewit Corporation. His predecessors include Peter Kiewit, Bob Wilson, Walter Scott Jr. Ken Stinson and Bruce E. Grewcock. Prior to Grewcock's retirement, on January 1st 2020, Lanoha had served as president and chief operating officer since 2016 and was elected to Kiewit's board of directors in 2009[9]

Walter Scott, Jr. was first elected to the Peter Kiewit Sons' Incorporated board in 1964. In 1979, he was elected president. When Peter Kiewit died later that same year, Scott was selected to succeed him as chairman.

Expansions

In 1963, Peter Kiewit bought the *Omaha World-Herald* to keep it locally owned. Under the terms of his will, the employees bought the paper in 1979.

Starting in 1985 (Kiewit built MFS in the early 1990s; Level 3 was built in the 1997 to 1999 circa), Kiewit also constructed a nationwide fiber optic network. This network was later spun off as Level 3 Communications, which became the formal successor corporation to the original Peter Kiewit Sons'.[10]

Other companies

- Continental Fire Sprinkler of Omaha, Nebraska
- Aero Automatic Sprinkler Company of Phoenix, Arizona
- Jet Pipe Industries of Phoenix, Arizona
- General Construction Company (Now a part of Kiewit Bridge and Marine) of Poulsbo, Washington
- InEight, Inc (formerly Hard Dollar Corporation) of Scottsdale, Arizona
- Mass. Electric Construction Co. – Industrial Group (MEC) of Boston, Massachusetts
- Mass. Electric Construction Co. – Transportation Group (MEC) of Dallas, Texas
- The Industrial Co. (TIC) of Englewood, Colorado
- Cherne Contracting Corporation of Minneapolis, Minnesota

kiewit

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KIEWIT BREAKS WITH TRADITION

By Steven Greenhouse

July 13, 1984

Link - [HN00ZI][GDrive]

Although Peter Kiewit Sons' Inc. is not well known around the nation, the construction and mining company is the stuff of legend in this agribusiness center along the Missouri River.

On June 29 the company announced plans to acquire the Continental Group, a diversified packaging company based in Stamford, Conn., in a $2.8 billion deal. It would be the first major diversification for Kiewit, which was founded here one hundred years ago as a brick manufacturing concern.

The founder, Peter Kiewit, was the son of a poor Dutch immigrant. His youngest son, also named Peter, took over the company in 1931 and built it into one of North America's largest construction companies. In doing so, the younger Kiewit, who dropped out of college to join the company, became a millionaire hundreds of times over.

He died five years ago at the age of 79, and until two weeks ago the new management had closely followed the lessons he taught: Work hard and stick to the businesses you know best.

But with the deal to take over Continental, Kiewit management broke sharply with company tradition. And many analysts are wondering whether Kiewit is biting off more than it can chew.

Making Tough Decisions

"I don't know if at the age of 79, Peter would have done it, but he just might have at age 50," said Walter Scott Jr., the soft-spoken, 53-year-old chairman and president of Kiewit, in discussing the deal, which is expected to be completed this fall. Mr. Scott, whose father was the first engineer Mr. Kiewit ever hired, said that before making tough decisions, he often asks himself what "Peter" would have done.

"If you take the contracting business during the time Peter was involved, it was almost an uninterrupted period of expansion, but in the last five or six years that has changed," Mr. Scott said, in explaining the company's acquisition plans. "Our primary businesses - mining and contracting - are now mature businesses. Although we expect to continue to be in them, we concluded that our greatest potential for growth was elsewhere."

And elsewhere turned out to be Continental Group, which has almost twice the revenues of the acquiring company. Kiewit's financial figures are hard to obtain because it is privately held. But Donald L. Sturm, chief financial officer and senior vice president at Kiewit, said it had revenues of about $1.5 billion last year and earned "more than $150 million."

The company has about $1.4 billion in assets and seems to have recovered from a bid-rigging scandal that tarnished its reputation two years ago. Its financial strength was demonstrated by its ability to arrange a $2 billion loan package in just two days to cement the deal.

Mr. Sturm, a 52-year-old lawyer, said the company, which is owned by its employees, had accumulated $500 million in cash and was looking to invest. "We were required to look beyond construction and coal because there was no opportunity to reinvest the funds on a profitable basis," he said.

So when David Murdock, the West Coast financier, approached Kiewit about acquiring Continental, he found a receptive audience. A week later, the deal was clinched, with Kiewit controlling 80 percent of the purchasing group and Mr. Murdock the remainder.

But there is little chance that Kiewit will keep Continental intact.

"They're taking on a big business," said Cornelius W. Thornton, an analyst with the First Boston Corporation. "They're talking about $2.8 billion. It would suggest that even with Continental's healthy cash flow, they would want to shed some of that debt as fast as they can. I think they will want to sell off some parts of Continental."

Mr. Sturm acknowledged that "we are going to have to dispose" of some of Continental, which has assets in packaging, insurance, forest products and oil and gas. Mr. Scott and Mr. Sturm said that they did not yet know which assets would be sold, saying that it would depend on which divisions received the best offers. In addition, they said they planned to leave Continental's management more or less alone because it was, in their view, doing such a good job.

Construction Challenges

Taking over Continental is only the latest in a series of challenges for Kiewit. Those have included taking just 90 days to build 760 barracks buildings, each housing 64 men, at Fort Lewis, Wash., in 1941. The company also marshaled 5,000 workers to build an airbase with a 10,000-foot runway in Greenland in 1951.

Its other projects have included the 63d Street subway tunnel between Manhattan and Queens, the seven- mile-long San Mateo-Hayward bridge over San Francisco Bay, and the mile-long, $425 million Fort McHenry tube in the Baltimore harbor.

A company spokesman said Kiewit has built $2.1 billion in highways and $825 million in tunnels since 1970. It has also built missile bases and parts of the trans-Alaska pipeline, as well as nuclear, hydroelectric and geothermal power plants.

In Omaha, moreover, the younger Mr. Kiewit, who started with the family company as a bricklayer, played the role of developer extraordinaire. He constructed many of the city's most ambitious products, leaving a personal stamp on the Omaha landscape.

He started with the Omaha Livestock Exchange, a brick, Romanesque tower finished in 1924. Later projects included Omaha's art museum, its most prestigious hotel, the Mutual of Omaha Insurance Company complex, and, coincidentally, a factory for the Continental Can Company, which was the Continental Group's original name.

Civic Participation

But the Kiewit reach extends far beyond construction in Omaha. In 1962, when he feared that outsiders were going to buy the city's major newspaper, The Omaha World-Herald, he moved quickly to buy it. His will provided for the sale of the newspaper to its employees. In addition, it provided for the establishment of a charitable foundation with a bequest of more than $100 million.

In the late 1960's, the construction company expanded into coal mining as a way of using its heavy equipment during the winter. It now mines more than 20 million tons a year in Wyoming and Montana. Mr. Sturm said coal accounts for a quarter of the company's revenues but half its profits, thanks to several long-term supply contracts it signed in the 1970's when coal prices were high.

Kiewit agreed in May to join the Occidental Petroleum Corporation in a $600 million venture to build a huge coal mine in China. Mr. Murdock, the partner in the Continental purchase, is Occidental's largest shareholder.

Expanding its energy interests, Kiewit has in the last three years bought 23 percent of Mapco, a coal, oil and gas company based in Tulsa, Okla. In another diversification move, it bought the Empire Savings, Building and Loan Association, Denver's largest savings and loan.

In Omaha, many think that the secret of Kiewit's success is hard work and employee loyalty.

"When you went to work for Kiewit, you dedicated yourself to Kiewit," said Warren E. Buffett, the Omaha investor and chairman of Berkshire Hathaway Inc. "The workers identify with the company the same way Nebraskans identify with the Nebraska football team."

To Mr. Sturm, growth was just a matter of shared self-interest.

"If you want the principal reason for the company's success," Mr. Sturm said, "it's that we're owned by our employees. That makes everyone feel like an owner, which means that every one works harder, is more dedicated and is willing to go that extra inch."

The stock is owned by about 900 of Kiewit's top managers and senior salaried employees. The company has an additional 1,800 salaried, white- collar employees and, depending on the season and the number of contracts, between 7,000 and 15,000 construction workers.

And thanks to the stock ownership program, dozens of Kiewit managers became millionaires when they sold their stock at retirement, as the company requires.

Costs Kept Low

Another key to the company's success has been its ability to underbid competitors for many big and profitable projects. The reason, industry experts say, is that Kiewit's costs are often lower than its rivals because it owns almost all the construction equipment it needs and has so much cash that it does not have to borrow for construction financing.

Even adversity has not derailed the company for long. Two years ago three low-level, regional executives were convicted of rigging bids. The company has taken pains, including the dismissal of employees, to insure that such a scandal is not repeated. "We had a few people who got down to the low morals of their particular marketplace," Mr. Sturm said. "We've taken measures to make sure that doesn't happen again."

June 12, 1985 (June 12) - NYTImes - "20% Interest Sold In Kiewit-Murdock"

Source : [HN00ZH][GDrive]

Peter Kiewit Sons' Inc., the Omaha-based construction and mining company, has purchased David H. Murdock's 20 percent equity interest in Kiewit-Murdock Inc., an investment company formed last year to acquire the Continental Group, the packaging company based in Stamford, Conn.

Investment community sources said the Pacific Holding Corporation, a closely held Los Angeles-based investment company controlled by Mr. Murdock, sold its interest in Kiewit-Murdock for about $200 million.

In a telephone interview from Los Angeles, Mr. Murdock said the deal was amicable. He added that Peter Kiewit Sons', which is also closely held, would continue to do construction work for him and that he hoped to enter future joint investments with the company.

"I didn't turn sour on the can business," Mr. Murdock said, "I just didn't see that I wanted to stay in the can business."

He continued, "In terms of day-to-day management, they said they wanted the whole thing, and I said, 'If you want it, you got it.' "

Kiewit-Murdock Inc. said that Donald L. Sturm, a senior vice president and director of Kiewit, had been elected its chairman, president and chief executive. The company also said Mr. Murdock and Raymond H. Henze, a senior vice president of Pacific Holding, had resigned as directors.

Mr. Murdock learned that Continental Group was up for sale last year and persuaded his longtime business acquaintance, Walter Scott, Kiewit's chairman, to join him in a $2.75 billion bid, which was successful. Investment community sources said that Mr. Murdock had invested $150 million and Kiewit Sons' $600 million to purchase Continental, and banks provided $2 billion in loans.

1972 (Feb 25 - Missile Award to Kiewit

Feb. 25, 1972

[HN00ZG][GDrive]

The Peter Kiewit Sons Company announced yesterday the receipt of a $110.9 - million Army award for work on the safeguard ballistic missile system in Montana.

Kiewit Corporation

Contents [show]

The Kiewit Corporation is a Fortune 500 contractor business headquartered in Omaha. It is an employee-owned privately held company, founded in 1884 as the Kiewit Brothers.

In 1884, the brothers Peter and Andrew Kiewit, two bricklayers of Dutch descent, founded the company that would eventually become the Kiewit Corporation. For a large chunk of the 20th century, the company was headed by the founder's youngest son – also named Peter Kiewit, and it was during his leadership that the business grew to become one of the world's major construction companies.

A lot of landmark infrastructure in the United States has been built by Kiewit, especially in the western states. The Flaming Gorge Dam in Utah, the Garrison Dam in North Dakota, the Montecillo Dam near Sacramento, and the 152-mile Friant-Kern Canal that brings water to California's Central Valley are just a few examples.

Many parts of the United States interstate highway system was also built by Kiewit, such as the Eisenhower Tunnel through the Colorado Rockies and the Fort McHenry Tunnel beneath Baltimore Harbor. Kiewit was also responsible for making the tricky sections of highway that runs through the Virgin River Canyon in Arizona and the Glenwood Canyon in Colorado.

Throughout is life, Peter Kiewit the younger was very devoted to his hometown Omaha and did for instance purchase the the newspaper Omaha World-Herald in 1963 just to keep it locally owned. Before he died, Kiewit left instructions in his will to ensure that the paper would remain locally owned, with a large part of the plan securing employee ownership.

Today, the Kiewit Corporation is one of the largest contractor companies in the world, and they have for instance build the world's biggest geodesic dome for the Henry Doorly Zoo in Omaha. Their fields of expertise include construction, welding, mining, and off-shore operations.

The Kiewit Corporation is subdivided into regional companies and divisions, that are then further divided into geographical districts. A lot of the administration is centralized to the corporate offices in Omaha.

Kiewit Plaza

Kiewit Plaza is where you'll find the headquarters for the Kiewit Corporation. It is a modernist-style high-rise office building, erected in 1960-1961 on 3555 Farnam Street, at the corner of S 36th street.

Background

The two brothers

In 1884, the brothers Peter and Andrew Kiewit formed a masonry partnership in Omaha and called it the Kiewit Brothers. They were the sons of a brick maker of Dutch descent who had moved to Omaha in the 1870s.

1889 is an important milestone in the early history of the Kiewit Brothers, since this is when they were contracted to build the 7-story Lincoln Hotel. At the turn of the century, the brothers ventured into general contracting, taking on responsibilities for the construction of the Bekins Warehouse.

In 1904, the partnership was dissolved, and Peter Kiewit continued the businesses as sole proprietor.

Peter Kiewit and his sons

In 1912, the 23-year-old Ralph and 21-year-old George joined their father Peter Kiewit as partners in the business. Two years later, Peter Kiewit died, and Ralph took over the leadership. Back then, the youngest son – also named Peter – was only 14 years old.

Another milestone was reached in 1924, as the now 40-year-old businesses landed its very first million-dollar contract: building the ten-story Livestock Exchange Building in the meat-packing district of South Omaha. By this point, Peter the younger had also become heavily involved in the firm, working as a project superintendent. 1924 was also the year when George left the firm, leaving it to his two brothers.

Ralph & Peter

After George's departure, Peter took charge of the field operations while Ralph focused on supervising estimations and bidding activities. During the second half of the 1920s, the firm built several notable buildings, including the Nebraska State Capitol Tower in 1927, the Joslyn Art Museum in 1928 and the Union Station in 1929. **For the Nebraska State Capital Tower project, Peter Kiewit recruited a man named Walter Scott, who would eventually turn out to be an very important man in the history of the business.**

In 1931, Ralph left Omaha for California. Peter dissolved the family business and replaced it with the company Peter Kiewit Sons', Co.

Peter Kiewit Sons' starts making highways

When Peter Kiewit the younger formed Peter Kiewit Sons', assets valued at $125,000 were put into the company. To avoid cash-flow problems, and to the make the staff more motivated, Peter decided to let key managers buy shares in the new company if they wanted to. Peter remained majority shareholder and was also president of the company.

Times weren't easy for the new company, as the United States were going through **the Great Depression and the house building sector was in a huge slump. Peter found a niche that could help them survive through the lean years: tax-funded highway construction projects. In order to carry it off, he assembled a core leadership group consisting of four men who all became directors and large shareholders of the company: Walter Scott, Homer Scott (not related to Walter), Ted Armstrong, and George Holling.** Soon, Kiewit Sons' were taking on highway projects not just in Nebraska but out of state as well, in places such as Colorado, Wyoming and North Dakota.

In 1939, the company opened its first district office. It was located in Sheridan, Wyoming, and led by Homer Scott.

Military contracts

Being agile and capable of changing with the times had become somewhat of a hallmark for the company, and in 1939 they complemented their highway business with a $7.5 million contract to build army barracks. The project wasn't just the company's biggest one so far – it also had to be completed in 90 days and the barracks were to be built in Fort Lewis, Washington, far away from Nebraska. As if this wasn't enough, the army changed their plans when work on the barracks had just begun in – they wanted to increase the scope of the contract to more than twice as many buildings, from 760 to 1540, but without moving the deadline. Kiewit Sons' agreed, and this became the start of a series of lucrative army contracts for the Omaha company. It also kicked the company's geographical expansion into high gear, as the army needed facilities built from the Pacific Coast (including Alaska) through the Rocky Mountains states and into the Great Plains region.

When the army needed something built rapidly and to standard, they knew they could count on Kiewit Sons' to get the job done. Throughout WWII, the company created army bases, airfields and more. In their native Omaha, they built the impressive Martin Bomber Plant just south of the city. Before the war was over, Kiewit had done more than $500 million of military work.

Mining

Instead of just being happy with the military construction contracts, Kiewit Sons' broadened their scope and started getting involved in mining. It was an offshoot to their military ventures, since coal from the Big Horn Mine in Wyoming was needed at the Hanford Project in Washington State. This was were the top-secret Manhattan Project was carried out.

Greenland

With their previous experience from military work and dealing with the bitter Alaskan cold, Kiewit Sons' was not a surprising choice when the U.S. Army needed to create a top-secret air base on Greenland in the early 1950s. To carry out the project, Kiewit had to hire and train 5,000 workers, and also handle perilous transports through icy waters.

Kiewit Son's didn't leave Greenland until the second half of the 1960s. Not only did they create an airbase on Greenland, they also made the enormous radar screens required for the Ballistic Missile Early Warning System (BMEWS) and built radar domes on the ice cap for the eastern end of the Distant Early Warning (DEW) line.

Nuclear

The $1.2 billion Gaseous Diffusion Plant Project at Portsmouth, Ohio was one of the biggest construction contracts ever awarded by the United States government. The plant was needed for the refinement of uranium for both military and civilian use. Who got the contract? Kiewit Sons'.

https://trendingtowns.com/9-hazardous-sites-near-denver-co/

https://en.wikipedia.org/wiki/Air_Force_Plant_PJKS

Air Force Plant PJKS

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For the differing FUDS for "Peter Kiewit Sons Co" (COD060613403)[1] at a different Colorado location from the namesake Air Force Plant (as in 1965 United States v. Peter Kiewit Sons' Co., 45 F. 2d 879[2]), see List of Superfund sites in Colorado.

Air Force Plant Peter J. Kiewit and Sons **(AFP PJKS,[3] AFP #79)[4] is a Formerly Used Defense Site (CO7570090038) at the Colorado Front Range and used during the Cold War (1957-1968) to provide "rocket assembly, engine testing, and research and development"[2]) for the Titan missile complexes southeast of Denver (construction began April 1959)**. The 464 acres (188 ha) of former "Martin Missile Test Site 1"[5] was "deeded" to the USAF in 1957, was subsequently operated by the builder (Glenn L. Martin Company), was listed on the EPA's National Priorities List on November 21, 1989; and remained USAF property until transferred to Lockheed Martin in February 2001.[2] The site is used by, and entirely within, the secure Lockheed Martin/United Launch Alliance Waterton Canyon facility of 5,200 acres (2,100 ha)[2] that produces Titan IV launch vehicles and the GPS III space vehicles. Entirely within the East Fork Brush Creek watershed,[6] the former USAF firearms ranges used by PJKS military police remains along the creek, is managed by the Skyline Hunting and Fishing Club,[7] and is used for periodic Jefferson County police and local Boy Scout training.

HGM-25A Titan I ICBMs were liquid-fueled rockets using LOX/RP-1 propellant which required the missiles to periodically be removed from the launch silos for servicing. Environmental sites at PJKS include 59 within six operable units (e.g., OU1, OU4, & OU6), and there are six areas of concern (12 of 14 underground tanks have been removed). Groundwater contaminants include trichloroethene (TCE), hydrazine, vinyl chloride, benzene, and nitrate. In fiscal year 1996, "technical work groups were formed with EPA, the State of Colorado, USGS, and the U.S. Army Corps of Engineers to support RI site characterization and risk assessment."[8]

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Series: Minuteman Missiles and the Nuclear Arms Race

ARTICLE

A Silo A Day

Minuteman Missile National Historic Site

A South Dakota missile silo under construction

NPS

On September 11, 1961, the groundbreaking ceremony for Ellsworth AFB's Minuteman installations took place at Site L-6 near Bear Butte. The festivities started with a bang. While the Sturgis High School band played, representatives from **Boeing, Kiewit, the Corps of Engineers, and Ellsworth AFB** set off an explosive charge to begin the excavation.

Despite extreme cold, high winds, and heavy snowfall, construction proceeded at a furious pace through the winter of 1961-62. In mid-December, the Corps of Engineers told reporters that "men are working seven days a week, three shifts a day on Minuteman construction." A Corps spokesman said that crews were "able to dig five silo emplacements simultaneously. Each takes from four to ten days . . . " The first squadron, near Wall, was well underway, said the Corps, and work ,on the second squadron, near Union Center, had already started.

In February 1962, General Delmar Wilson told the Rapid City Chamber of Commerce that despite an ongoing labor dispute between **Peter Kiewit Sons** and the Ironworkers Union, South Dakota's ICBM deployment suffered fewer work stoppages than any missile program in the Nation. "We're all out . . . to assure that our way of life is maintained," stated Wilson. "This missile project ... is the number one project in the country today. If this guy in Russia wants to start a show, we'll be there to put a hole in him to the best of our ability. "

By early summer of 1963, the steel fabrication was finished at all 165 South Dakota sites, and crews were completing the silos at the rate of one per day. On the last day of June, the first 20 silos were turned over to the Strategic Air Command. On October 23, the Nation's second wing of Minuteman ICBMs was fully operational. The work was completed nearly three weeks ahead of schedule.

https://www.nps.gov/parkhistory/online_books/mimi/hrs2-3a.htm

2020-11-nps-gov-minuteman-missile-nhs-chapter-3-section-ii.pdf

(note - pictures here : https://www.nps.gov/parkhistory/online_books/mimi/hrs2-3b.htm)

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Minuteman MissileHistoric Resource Study

Section II — Life on the South Dakota Plains: Before, During, and After Minuteman

Chapter 3:

Minuteman Missile Sites in South Dakota (1960s-80s)

In the late 1950s the Air Force chose South Dakota as one of the locations to base the nation's nuclear arsenal with the installation of Minuteman missiles. The Army Corps of Engineers (Army Corps) began surveying sites throughout western South Dakota by the fall of 1960, and subsequently began negotiating with landowners for rights-of-entry to construct Launch Facilities (LF) and Launch Control Facilities (LCF) on their property. The Minuteman I Intercontinental Ballistic Missile (ICBM) construction program at Ellsworth Air Force Base progressed rapidly. Under supervision of the Army Corps , Peter Kiewit and Sons' Inc. (Kiewit Company), the Boeing Corporation, and their subcontractors began construction of the 150 LFs and fifteen LCFs during the fall of 1961. Their work, both in construction and then in activation of the Minuteman I, furthered the nation's defense program, but also affected western South Dakota economically and socially, an influence that remained through the Minuteman's deactivation.

Site Location

The Air Force's policy on site selection in South Dakota was multifaceted. Sites were primarily selected by balancing a variety of criteria, including maximizing Minuteman operations, minimizing each sites' vulnerability to sabotage, using the taxpayers' money wisely, and adapting individual sites to construction and operational needs, all with an eye to unique qualities of individual locations. [204] Other factors that contributed to the selection of sites were the physical features of the land, including the geology and terrain of the area, the types of soil, and the amount of available ground water. [205]

For cost and efficiency, the Air Force located missile sites near the existing Ellsworth Air Force Base in order to provide logistical support to the facilities. The missiles were located within an area approximately one hundred miles east and north of the base, in an expanse covering approximately 13,500 square miles of western South Dakota. The three Minuteman I ICBM squadrons at Ellsworth Air Force Base, each consisting of five LCFs and fifty LFs, were located in the vicinity of the communities of Wall, Union Center, and Belle Fourche. [206]

The Air Force positioned each missile flight (one LCF and ten LFs) in the same geographic area, but individual LFs could not be directly adjacent to another LF or the LCF. Minimally, the Air Force required LFs and LCFs to be geographically separated by an area large enough to withstand a ten-megaton explosion at an adjacent facility. Air Force specifications also required that the sites be separated so multiple facilities could not be targeted together. [207] The Air Force additionally attempted to select sites that would have the least adverse effect on nearby communities and private property. [208]

Land Purchase

The Air Force selected LF and LCF sites based on the surveys completed by the Army Corps, Omaha District Office. Prior to construction of the missile sites in South Dakota, right-of-entry, easements, and land purchase agreements needed to be made with hundreds of property owners. The acquisition for the 150 LFs, fifteen LCFs, and approximately 1,732 miles of Hardened Intersite Cable System (HICS) connecting the facilities included three phases. The first phase was securing right-of-entry for survey and exploration of proposed sites. Next, the Air Force worked with landowners to obtain right-of-entry for facility construction. The final phase included negotiations for land purchase or permanent easements and compensation for damages during the construction of the facilities. [209]

Phase one began in the fall of 1960. The right-of-entry Air Force representatives inspected potential sites throughout western South Dakota to assess the soil, geology, terrain, and ground water for suitability for site construction. [210] By early 1961 the locations for the LFs and LCFs were identified and HICS routes mapped. Following site selection, the Army Corps solicited landowner's signatures for right-of-entry to commence construction of the LFs and LCFs on their property. For the construction of each LCF or LF the Air Force required temporary construction easements of between four to six acres for construction equipment and dirt removed from the silos. [211] Following the right-of-entry for construction, the Army Corps negotiated with landowners to purchase the land. In land purchase and easement negotiations, the government was required to provide just compensation, defined as fair market value. [212]

In addition to land purchase, the government obtained permanent easements at the LF and LCF sites. It needed these easements in order to restrict land use in the area surrounding each LF and LCF to certain types of construction and agricultural activities. [213] The government also obtained permanent easements for the access road at both the LF and LCF and for the azimuth markers at each LF site, which were located outside of the fence and used to site the missile. Following construction the land was inspected by a real estate representative of the Army Corps and through negotiation an agreement was made with the owner for a cash settlement of any damages. [214]

Army Corps representatives negotiated with several hundred more property owners for easements for the underground HICS connecting the LFs and LCFs. These cables, installed four to eight feet below ground and used to transmit data between missile sites, required a temporary construction easement of thirty-five feet in width for approximately 1,732 miles between all 165 sites. After construction was complete, the government obtained a permanent easement for a path sixteen and one-half feet wide. [215] Following installation of the HICS, landowners could return to using the land above the cable for normal ranching or agricultural activities.

Such large-scale construction was not without its inconveniences, and to address some of the issues pertaining to land acquisition during this initial period, the Army Corps real estate field office distributed a pamphlet to property owners in western South Dakota titled "Facts About Minuteman Land Acquisition." The pamphlet promised landowners that the government would negotiate for the purchase of property and address any damages and losses. The pamphlet reminded the property owners that the Constitution permits the taking of private property for public use as long as the landowner was paid "just compensation." [216] Even with the issue of national security at stake, policymakers had no desire simply to confiscate land. If the landowners and the government could not agree on compensation, however, the government had the right to acquire the land through condemnation. A declaration of taking was filed and compensation was deposited with the court for the property owner. Negotiations continued and if an agreement could not be made the condemnation case would be brought to trial.

Minuteman Missile Area Landowners Association

While construction crews built some of the Minuteman sites in South Dakota on land already owned by the government, such as LF Delta-09, contractors constructed most of the sites on private property. During the site-selection process, some landowners did not feel that the Army Corps provided enough information to sign rights-of-entry to their property. To ensure that the government took landowners' rights into consideration during site selection and fairly compensated landowners, a group of farmers and ranchers formed the Minuteman Missile Area Landowners Association (MALA) in the early 1960s.MALA disseminated information to area landowners, believing that working collectively would aid the defense effort while safeguarding their private interests.

Members paid a minimal fee of one dollar to participate in the organization, primarily to cover the cost of postage and mailings. The MALA's first president was Eugene Pellegrin of Enning, South Dakota, and the first vice president was Cecil Hayes of Elm Springs, South Dakota. Eight additional members, including Burle Dartt, Ray Naescher, Ben Paulsen, Tony Oergerli, Robert Simpfendoerfer, Delbert Paulsen, Ferdinand Schroeder, and Leonel Jensen, served as directors to assist in collecting and distributing information. [217] In addition to nearly 150 MALA members supporting their cause, United States Senator Francis H. Case also attempted to assist negotiations between the landowners and the Air Force and Army Corps. Although Case was a longtime proponent of strong national defense and a supporter of the Minuteman I missile program at Ellsworth Air Force Base, he often corresponded with the landowner organization and the Army Corps concerning the project and advocated for fair and timely compensation. [218]

Most landowners understood that the national defense program required the installation of Minuteman missiles, and the technical reasons why the Air Force required use of their land. Prior to signing any agreements, however, MALA members wanted the government to address the disadvantages of having a LF or LCF constructed within their property. Many landowners were concerned that the location of the proposed sites would disrupt irrigation systems,

take irreplaceable land, or interfere with agricultural operations. While their primary stated goal was to obtain a reasonable settlement for land and construction damages, the group also wanted to minimize the effects of the missile system upon nearby schools, roads, and the local police force. [219]

Prior to signing rights-of-entry needed for construction, the MALA voiced their concerns with Air Force and Army Corps personnel at several meetings in Rapid City in 1960 and 1961. MALA members questioned how the Air Force selected locations for the LFs and LCFs. Individual MALA members desired to know if selected sites could be moved to sections of their property less desirable for agricultural purposes. [220] In early April 1961, an Army Corps real estate representative explained that the missiles were part of an interrelated system and the location could not be altered aside from minor changes. [221] One property owner offered to donate the land if the Air Force would move the proposed LF to a corner of the wheat field instead of in the middle. His offer was rejected, and, in this case, the Air Force did not alter the proposed site for this facility. [222]

MALA members also pressed the Air Force at these meetings for further information about compensation for their land and losses. Many wanted to know what assessment they should expect for their property, and if they would receive compensation for damages incurred during construction or from decreases in land value due to the presence of the missiles in the area. [223] Army Corps officials responded that landowners were entitled to fair compensation for their losses and that the dollar value would be reached through negotiation between the government agency and individual property owners. Compensation for damages would be negotiated in much the same way. [224] Although many landowners received compensation for their land and losses, some felt the settlement offered was inadequate. [225]

After months of meetings and negotiations, seventy-five percent of the property owners of proposed missile sites signed rights-of-entry agreements by July of 1961. At the same time, approximately ninety percent of landowners involved with the underground cables had also signed agreements. [226] MALA president Pellegrin stated in a newspaper article that many of the property owners who refused to sign the agreement were negotiating for damages unique to their property. [227] In some cases, property owners never signed the rights-of-entry agreement needed to begin construction and in these cases, the Army Corps filed declarations of taking and deposited money with the court for the property owner. The Army Corps based the compensation on the government's original estimate of fair market value for the property. [228]

Despite efforts of the MALA to protect their rights and obtain compensation for their losses, some members of the public and government criticized the organization's members. They condemned landowners for slowing the defense effort, termed them unpatriotic, and accused them of holding up new business created by the influx of construction workers and additional Air Force officers. [229] The Air Force and Army Corps often reminded members of the MALA and other residents of western South Dakota of the importance of the Minuteman I ICBM program to the security of the United States. For example, the land acquisition pamphlet distributed to property owners stated, "like its prototype, the Minuteman of 1774, this immensely-important project for our national defense is authorized by the Congress of the United States." [230] Criticism aside, however, not every delay in Minuteman construction could be pinned on reluctant landowners. As late as March 1961, Congress had not yet fully appropriated the funding for the Minuteman I ICBM missile program at Ellsworth Air Force Base. Therefore, property owners did not stall construction of the sites in South Dakota or the nation's defense effort. [231] In reality, the land acquisition and construction of the Minuteman I missile facilities in South Dakota was an accelerated program that exceeded many expectations. Approximately one year after Army Corps representatives started testing soil and mapping missile facilities contractors began construction. After the construction of the LFs and LCFs in western South Dakota the MALA disbanded. The organization remained inactive until the early 1990s when the Air Force began the deactivation process of the Minuteman II ICBMs and a new generation of property owners worked together to disseminate information and provide support.

Chapter 3:

Minuteman Missile Sites in South Dakota (1960s-80s) (continued)

Site Construction

In 1960 the U.S. Army established the Corps of Engineers Ballistic Missile Construction Office (CEBMCO) as an independent organization to supervise missile site construction across the country, including Ellsworth Air Force Base. With the new agency, the construction of ICBM facilities fell under uniform and centralized control. [232] The commanding officer of CEBMCO appointed weapon system directors to manage the construction of Minuteman facilities at Ellsworth Air Force Base, as well as other ICBM construction sites. These directors worked at area offices, such as the one at Ellsworth Air Force Base, to directly supervise the construction of numerous contractors for the multiple phases of the construction process. [233]

CEBMCO originated with a staff of twenty-seven to supervise the construction of the missile facilities throughout the United States. That number grew to three thousand employees working in seventeen states by the mid-1960s. **In South Dakota, CEBMCO appointed Colonel Sidney T. Martin to direct the construction project, while Lieutenant Colonel George V. Svoboda was named deputy engineer, Lieutenant Colonel James M. Gale assistant engineer, and Warren Withee served as the Chief of the Construction Branch. [234] At the time, constructing missile facilities was one of the largest construction projects undertaken by the Army Corps. In** the 1960s CEBMCO and its predecessor agencies supervised the construction of 1,200 missile facility sites nationwide, including the 165 sites in South Dakota. [235]

Although CEBMCO staff at Ellsworth did not physically design or construct the LFs or LCFs, they were responsible for soliciting bids, selecting contractors, and reviewing plans. After supervising contractors during construction, CEBMCO aided the Air Force site activation task force in fitting the silos with operational missiles. [236]

In the summer of 1961 the Home Office Special Projects District at Kiewit Company in Omaha, Nebraska, won the bid to construct the Minuteman I ICBM silos for Ellsworth Air Force Base in South Dakota. The Kiewit Company bid estimate of $56,220,274 was nearly $10 million less than government projections. [237]

Using the designs developed by Parsons-Staven, a Los Angeles architectural-engineering firm, Kiewit Company was the primary contractor for the Minuteman I ICBM facilities in South Dakota. [238] The contract included preparing sites for facility construction and installing facilities using prefabricated parts. They were also responsible for negotiating with landowners over damages caused by the storage of excess dirt excavated from the silo shaft.

Groundbreaking ceremonies for the construction of the Minuteman I ICBM silos in South Dakota took place on 11 September 1961 in front of a crowd of approximately two hundred on-lookers at a site later known as Lima-06, located just north of Sturgis. Instead of the traditional shoveling of dirt to symbolize the start of construction, a small explosion signified the power of this immense undertaking. The ceremony theme was "Partners for Peace." [239]

To make for a more efficient construction process, contractors assigned crews specific tasks, which they then performed at numerous sites. Crews assigned to the Minuteman construction project in South Dakota varied in size from four to thirty, depending on the complexity of their task. [240] The first step in constructing the LFs was the excavation and grading at each site. The construction crew assigned this task used a bulldozer and clam shovel to create a circular cut that they then excavated to a depth of approximately thirty-five feet. After this task, the crew moved on to another site to complete the same task until all 150 LFs were excavated. A second crew moved in and proceeded to dig the shaft for the silo using a large auger. The shaft was a circular hole with a diameter approximately fifteen to eighteen feet and extended over eighty feet below the ground. The next task involved a third crew that poured a concrete deflector plate into the bottom of the shaft. After this crew secured the bottom of the hole, steel contractors lowered a twenty-five-ton, sixty-two-foot prefabricated steel liner into position. The liner, which formed the skeleton of the silo, included a quarter-inch steel plate and rings of reinforced bars. Contractors then poured concrete around the exterior of the steel liner, forming a twelve-inch-thick wall. Additional crews constructed a lower equipment room around the silo and a support building adjacent to the silo, both of reinforced concrete and below ground level. Once this stage was complete, crews backfilled the sites with dirt originally excavated for the silo and facility. [241]

Kiewit Company subcontracted much of the work to other firms. For example, Summit Construction Company was responsible for the initial site grading, excavating to the approximate thirty-five-foot level, and storing dirt from those tasks. The Gustav Hirsch Organization installed electrical conduit and backfilled the area around the conduit. Natkin and Company installed mechanical pipes and was responsible for the backfill and compaction around them. For the installation of the HICS, Kiewit Company retained American Bridge Design—United States Steel Corporation. [242]

The construction procedure involved moving nearly twenty million cubic yards of dirt for the 150 LFs and fifteen LCFs. In addition, contractors poured nearly one hundred fifty thousand cubic yards of concrete and used thirty-five thousand tons of steel to reinforce the underground facilities. [243] Although the numbers appear large, constructing Minuteman I ICBM LFs was much less challenging than the construction of earlier Atlas and Titan LFs. Minuteman I LFs were smaller than earlier ICBM facilities and they used prefabricated parts and standardized construction techniques. Furthermore, the Minuteman I LFs did not require the elevator that positioned the missile for launch or the complex loading system that burdened earlier missiles. [244]

Despite steps taken to minimize costs and speed deployment, Minuteman construction did not always proceed smoothly. In some instances, work stoppages, weather, and injuries delayed construction of the 165 Minuteman LFs and LCFs in South Dakota. The famously unpredictable plains weather affected the construction of the sites with dust storms, heavy rains, snow, and even severe cold temperatures. Moreover, work at the missile sites in South Dakota stopped on several occasions due to labor difficulties. For example, on 6 June 1962 the American Bridge Company millwright workers went on strike for two days to protest the Kiewit Company's assignment of the setting anchor bolt task to ironworkers, which they believed to be their task. One week later Gustav Hirsch electricians protested the Kiewit Company's requirement that they report for work directly to LFs instead of a central point. [245] Contractors and workers dealt with such problems using "policies, procedures, and methods of adjustment" developed by the Missile Sites Labor Commission, the eleven-person agency appointed by President Kennedy in 1961 to aid in resolving labor disputes at missile and space sites quickly, and therefore without delay to the national defense program. [246]

Worker safety was an important issue at the missile construction sites and the Kiewit Company required employees to wear hard hats. During the two-year intensive construction period employing thousands of workers, sixty-two injuries and two fatalities were reported at the missile facilities in South Dakota. [247] In comparison, Minot Air Force Base in North Dakota experienced thirty-six construction-related injuries and two deaths, while Malmstrom Air Force Base suffered twelve injuries and one fatality. [248] Clearly this was dangerous work, as with all heavy construction, though the Kiewit Company received the National Safety Council's Award of Honor in 1962 for its missile construction efforts. During the second half of that year, the company logged over eight hundred thousand accident-free work hours, offering a safety record due in part to regulations set forth by the Army Corps. For example, the Army Corps required that any excavations at the sites had to have a slope on its bank so it would not cave in on anyone working inside the hole or shaft. [249]

Despite delays and unfortunate incidents, construction in South Dakota was completed by the fall of 1963, in less than two years. Construction of Delta-01 had been completed the previous year on 29 November 1962 at an estimated cost of just over $800,000 and construction of Delta-09 was completed on 26 November 1962 at an estimated cost of $354,500. The final costs for the construction of the Minuteman missiles in South Dakota may have been as high as $75.7 million. 250]

Missile installation

While Kiewit Company and other contractors worked to construct missile facilities throughout western South Dakota, the Boeing Company assembled the actual missiles, and developed much of the ground-support equipment, such as the launch control system, and the security system. More importantly, Boeing ensured that the missiles worked through testing, installed the missiles beginning in February 1963, and maintained them before transfer to the Air Force in the summer and fall of 1963. [251] Delta-01 and Delta-09 were turned over to SAC on 30 June 1963, making them among the first Minuteman sites to be activated at Ellsworth.

The emplacement of the missile in the silo employed skilled crews using a Transporter Erector (TE). After operators backed the TE into place, the missile container was raised to a vertical position over the silo opening. The missile was then freed from its restraining harnesses and a large hoist lowered it into the launcher. Once the missile was in the silo, technicians attached the reentry vehicle on top of the guidance and control system. After installing the reentry vehicle, the missile was aligned and oriented to the North Star and a targeting team set the arming and fusing system. [252] After Boeing finished installing all 150 missiles, the Air Force Systems turned the LFs and LCFs into operational facilities and SAC declared all three Strategic Missile Squadrons (SMS) combat ready on 1 November 1963.

Site Activation

The 44th Strategic Missile Wing (SMW) at Ellsworth Air Force Base was activated on 1 January 1962. Air Force personnel assigned to the 44th Missile Wing began training even while construction and development of missiles for the South Dakota Minuteman program was underway. Ellsworth Air Force Base received its first Minuteman I in February 1963. [253] The Air Force placed the first total flight of Minuteman I ICBMs at Ellsworth Air Force Base on alert status in July 1963 when Base commander, Colonel Kenneth W. Northamer, handed over the keys for the flight to Colonel Virgil M. Cloyd, commander of the 44th SMW. [254] By November 1963, the 66th, 67th, and 68th SMS of the 44th SMW were ready for combat. [255] Each squadron was responsible for five flights of ten missiles, totaling 150 Minuteman I missiles.

Economic and Social Impacts on the Region

Economic Boost to the Region

Like earlier ICBM programs, the Minuteman program had many lasting effects on western South Dakota. The immediate and lasting impacts of the

Minuteman missile program on South Dakota and its people are clearly a part of the missile story and were described by former missileer, Craig Manson,

> "It is a world historical event as well, ... the communities, the people who lived in those communities—they are all part of the story, too. Wall Drug, where many, many, many missile crews had breakfast and lunch, that's kind of part of the story. The Diamond Caf` in Newell, South Dakota, I don't know if it is even still there, but that is part of the story because it would not have been there long if it hadn't been for the missile crews, you know; Bear Butte in western South Dakota, Spearfish and Belle Fourche and towns like Philip and White Owl in the north central part of the state, and all of these communities are part of the story, too, and the way the people in these communities felt, whether they liked it or whether they didn't like it, however they felt about living in the shadow of those missiles." [256]

The large influx of construction workers in the early 1960s and the presence of additional Air Force personnel over the following thirty years affected local communities both economically and socially. Construction of the Ellsworth Air Force Base Titan facilities outside of Sturgis, New Underwood, and Hermosa beginning in late 1959 boosted the local economy and real estate market by providing jobs and demands for housing and goods and services. [257] This trend continued with the construction of the Minuteman I facilities in western South Dakota. Rapid City and smaller communities near the bases and missile sites benefited economically. Examples of increased economic activity brought by the expansion of the staff at Ellsworth Air Force Base are described in the following paragraphs.

The Kiewit Company alone employed nearly three thousand workers at the missile construction sites. [258] The Army Corps and Boeing Company also employed large numbers of staff in South Dakota during the early 1960s. While some of the employees were transient and moved to South Dakota to work on the project, many area residents found work on the construction, therefore stimulating the local economy. [259]

The employment opportunities offered to local residents during the construction of the sites was a significant impact on the local economy. When local resident Gene S. Williams was asked about how the public felt about the missiles being placed in South Dakota, he stated: "Well when they first were being constructed, you know, I think there were a lot of people that looked at them as jobs. It was very good to the local economy. There were high paying jobs, there were a lot of people that had an opportunity to work on the missile sites that, you know, that was probably as good a paying job as you could have gotten anywhere at the time. There were people that picked up skills associated with working on them that have used them the rest of their life." [260] In another case, Thomas Wilson, a Kiewit Company worker who had relocated to South Dakota, was asked about his feelings constructing missile sites, he simply stated, "I figured I had a job." [261]

By some estimates, the influx of new South Dakota residents, most of them union members, helped decide one of the state's closest elections, George McGovern's 1962 Senate victory. As activist Jay Davis recalled: "they were outsiders, they weren't from here, they didn't stay here long but they voted in that election....so George McGovern the great spokesman for peace may have owed his very election, as close as it was, to the workers who were building the missile silos to further the nuclear arms race." [262]

The missile sites themselves brought increased staff to Ellsworth Air Force Base to operate and support the facilities, while the crews and their families became a permanent part of the area's economy and social fabric until the program's deactivation a generation later. "It brought more people into the area," Wall Drug owner Ted Hustead recalled. "There have been a lot of men that were stationed at Ellsworth Air Force Base during the '60s and even today, that found their bride in western South Dakota." [263]

Employment in the area increased not only from direct employment for missile construction, but through the industries that supported the influx of workers. Housing surrounding Ellsworth Air Force Base was needed to accommodate the temporary workers, for example, and Boeing planned three trailer parks in 1961 to accommodate 120 units each. [264] Housing construction and an increase in demand for basic day-to-day needs, such as food and clothing, was an economic boom for the area.

Many local businesses, such as Wall Drug, benefited from the increased population during the Minuteman construction phase. Although the business did not permanently expand due to the presence of construction crews, the workers did have an impact on the business in the early 1960s. During this time Wall Drug would open its doors at 4:30 in the morning to prepare breakfast for the construction crews and pack box lunches. [265] Wall Drug also experienced business from missileers and other Air Force personnel during the years Minuteman I and II ICBMs were on alert status in South Dakota. Many times, LCF personnel would stop at Wall Drug to pick up food for barbeques or personal essentials needed for their three-day alert tour that they may have forgotten on base. [266] With the introduction of new Air Force personnel regularly traveling through the area, Wall Drug began advertising free coffee and donuts for Minuteman missile crews. This eventually led to free coffee and donuts to all veterans, truck drivers, hunters, snowmobilers, and honeymooners. [267]

The local economy continued to benefit from the presence of the Minuteman at Ellsworth Air Force Base into the later part of the twentieth century. During the Force Modernization Program begun in 1971, the Air Force upgraded the Minuteman I missiles of the 44th SMW with Minuteman II missiles. The project continued until March 1973 and employed over three hundred local residents. Local businesses benefited from the sale of supplies for the project. [268] Rapid City, as a regional center in the state, can be attributed in part to the number of people that were stationed at Ellsworth Air Force Base over the years to work at the base and the missile sites.

Public Improvements

In addition to the economic boost, public utilities were also improved during the Minuteman I construction phase. In the spring of 1961 the Air Force initiated an accelerated program to improve 327 miles of roads. Contractors needed improved roads throughout rural, western South Dakota to move heavy equipment to the missile sites, and the U.S. Bureau of Public Roads, Defense Fund provided funds that Congress allocated for road improvements. [269] Many of the improved roads to the missile sites were paved, which was a significant improvement over the area's typically unpaved rural roads. During the missile site construction in South Dakota the federal government designated specific routes for construction crews to follow to the sites. The government contracted with the involved county to conduct road repairs for damage from trucks hauling equipment or materials. In some cases, however, contractors did not follow designated routes, and their crews and equipment inadvertently damaged additional roads. Pennington County billed the government some $150,000 in 1962, to cite one example, to offset the cost of road damage on undesignated routes caused by missile construction. [270] Over the years of Minuteman I and II activation in South Dakota, the road networks continued to be maintained through federal, state and local funds to accommodate Air Force personnel and maintenance activities of the sites.

Many schools also felt a direct impact from the Minuteman construction phase in the early 1960s. The Rapid City schools grew by about one thousand additional students from the nearby Titan project. *The Rapid City Journal* in January 1961 reported that it was anticipated that a similar number of students would also enroll in the Rapid City schools as a result of the Minuteman site construction. [271] It is unknown how much enrollment increased as a result of the influx of Minuteman workers' children during the two years of construction.

Race Relations

The influx of workers during the construction of the missile sites and Ellsworth Air Force Base personnel over the years included people of various ethnic backgrounds, including African Americans. Racial inequality and discrimination, both on and off base, were not isolated to Ellsworth Air Force Base and the Rapid City area, but rather are likely a window into the racial tension and discrimination being experienced by the rest of the country. Rapid City and the region around the base were not very racially diverse, and as a result, African American base personnel pointed out the lack of social centers and ethnic opportunities off base.

Alan Gropman's book, *The Air Force Integrates, 1945-1964*, reports that African American airmen at Ellsworth Air Force Base "were rejected by the local communities, and base officials seemed to be indifferent to their plight. Many business establishments were closed to blacks, all taverns were segregated, and housing for blacks was extremely limited, substandard, and exceptionally expensive." [272] Initially, some members of the Air Force opposed becoming involved in integration issues within the communities outside of the bases, feeling this was outside of their realm of control. The passing of the 1964 Civil Rights Act opened public accommodations to African Americans and allowed the Air Force to take more initiative in integration measures within the communities outside its bases. [273] Following the passage of the Civil Rights Act, some racial tensions continued to some extent both on and off base for air men of different cultural backgrounds.

Oral interviews with past personnel of Ellsworth Air Force Base during the late 1960s through the early 1990s offered varying opinions on the degree of racial tension between African American and minority Air Force personnel and the surrounding community. Ken Bush, an African American stationed at Ellsworth Air Force Base during the mid-1970s and 1980s, stated that "I can honestly say that I was never mistreated anywhere I went." However, he did recall an isolated incident from the 1980s where he and another African American were refused service at an establishment in Rapid City. The matter was taken to the Rapid City Council and the two did not pursue further action. [274] Lieutenant Colonel Robert Wilson stationed at Ellsworth stated that race relations were not a problem on base, but that there were significant problems outside the base community and was surprised how African Americans and Native Americans were treated. [275]

In the Rapid City area there has historically been racial tension between the descendants of Euro-American and Native Americans, but based on the oral interviews collected to date, there is no evidence of significant tensions between the military community at Ellsworth Air Force Base and the surrounding Native American residents, at least in terms of affecting base operations.

Living Next to the Missiles

As is often the case, the presence of a large military base has a significant impact on the region. Ellsworth has become an important fixture in the community. In these ways the Minuteman program left a lasting social and economic imprint on western South Dakota, and not only in ways typically measured by statistics and numbers. An amateur baseball team in Sturgis has adopted the name Titans, referencing the Titan missiles that were once deployed a few miles east of Sturgis. In another example, several streets in Rapid City now bear names reflecting the history and heritage of the base, including Minuteman Drive and Atlas Street.

Initially the missiles brought jobs and money to the area, but as time went on the residents had to learn to deal with nuclear weapons in their backyards. Local rancher Gene S. Williams recalled that a lot of the people that had missiles sites put on their land were from an era that had traveled by horse and buggy or could recall this time, "and now you're putting a hole in the ground for a missile that could launch and go, you know, fifteen thousand miles and blow up millions of people. I mean, these types of things I think were hard for people to even put their arms around." [276]

For the children growing up amongst the missiles and Ellsworth Air Force Base in South Dakota, the Cold War was a part of every day life and evokes vivid memories. Tim Pavek, an environmental engineer at Ellsworth Air Force Base, recalls from his childhood hearing the B-52s. "...I remember when I was a, a little boy in bed here on a hot summer night with the windows open and I'd hear the distant rumble of the B-52s here at Ellsworth taking off. And, and, almost lay in bed shaking wondering if that was a practice mission and they'd come back or if this was the real thing and within a few minutes we'd see the fireballs of, you know, nuclear weapons over western South Dakota. So, having lived next to this Air Force base, you know, we knew that we were a big red-and-white bull's eye on the Soviet map, or that was my perception at the time." [277]

Tim Pavek recalled another childhood memory of the Cold War told to him by a gentleman who grew up in South Dakota, "... he says 'I remember sitting down at the kitchen table with my parents and having a very frank discussion over what we should do with regard to this, the threat of nuclear war. Um, whether we should build a bomb shelter—the people down the street were building a bomb shelter. How we should prepare ourselves for this eventuality.' " [278]

The missiles also perhaps left emotional scars. "And here you're sitting with a thermonuclear device, that is a half mile from your house," local rancher Gene S. Williams commented, "and you know well somebody punches the wrong signal code in or turns the wrong key and you're just vapor. You don't want to dwell on that too much but you also recognize that it wasn't just the enemy that was going to blow you up, you could blow yourselves up." [279] Paradoxically, the missiles themselves, and their LFs and LCFs, were less physically imposing on the state's landscape.

The Cold War Continues

The domestic and local impact of the Minuteman program in economic, political, and even psychological terms, all occurred in the context of sweeping movements within the international system. Whereas the program had begun in an era when only the two superpowers possessed nuclear weapons, by the close of the 1960s at least three nations (Britain, France, and the People's Republic of China) publicly possessed this ultimate power. Other countries, Israel and South Africa (clandestinely), and Pakistan and India (publicly) would join the nuclear club within a generation, while at the time of this writing, North Korea appears on the brink of doing the same. What once was the domain of only superpowers clearly has grown in scope. Minuteman was designed largely for a total global nuclear war, as a deterrent of awful destruction useful for warding off the complete devastation of a large-scale nuclear exchange. Whether such a system would and could help control this new era's increased risk of limited nuclear exchanges remains to be seen.

The superpowers responded to growth of the nuclear club with alarm, and with a surprising amount of cooperation. Each led collective military organizations by the mid-1950s, the North Atlantic Treaty Organization (NATO) and the Warsaw Pact in Europe most famously. Each also believed their own nuclear sword sufficient for defending theirs and their allies' interests. American policymakers thus hesitantly approved of Britain's development of an independent nuclear capability in the 1950s, believing their objection would do little to halt Britain's nuclear program in any event, and loudly criticized France's nuclear program (and subsequent withdrawal from NATO) the following decade. For each of these new nuclear nations, possession of the ultimate weapon symbolized power in a changing world: the power not only to hold its own against lesser foes, but also the power to stand up to Washington or Moscow. "We must rely on the power of the nuclear deterrent," British Prime Minister Harold Macmillan declared, "or we must throw up the sponge!" Moscow proved more adept at halting nuclear development among its allies (who largely lacked the technological and financial resources to develop such expensive weaponry in any event), save for China, which joined the nuclear club only after its break with the Kremlin in the early 1960s. During their 1961 Summit in

Vienna, Kennedy and Soviet leader Nikita Khrushchev even obliquely discussed launching a joint air strike against China's embryonic nuclear program, as both leaders considered an Asian nuclear bomb a threat to their individual and collective interests. Realizing such a move would lead to war, they pursued other paths. [280]

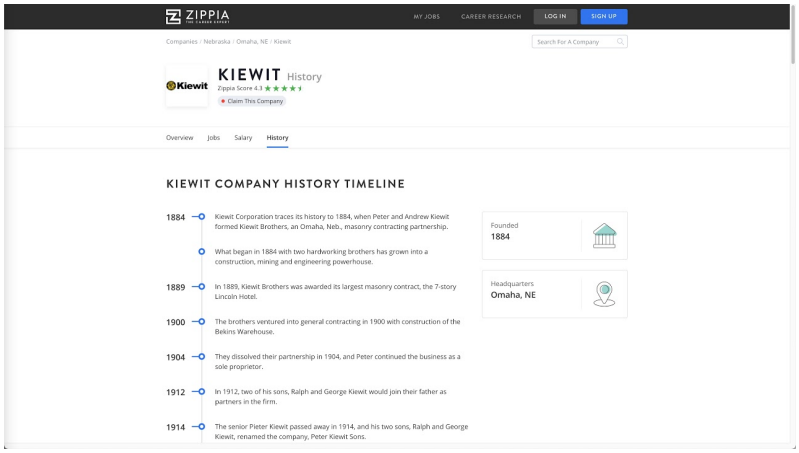
By the 1970s, therefore, the bipolarity of the international system seen in the first Cold War years had given way to a world of multiple points of power. Moscow and Washington remained the two largest powers—and possessed the two largest nuclear arsenals by far—but they were no longer wholly dominant. They retained the power to impose their will on others (as in 1954 in Guatemala or in Hungary in 1956 for the United States, to name only two cases), though as the Soviets would learn in 1968 in Czechoslovakia, and the Americans in Vietnam throughout the 1960s, the use of force often carried negative consequence that far outweighed the potential gains of proving hegemony. In recognition of these changes, and of their profound implications for Asian security in particular, President Richard Nixon slowly developed the practice of what his Secretary of State Henry Kissinger termed "triangular" diplomacy. By warming American relations with China, including development of formal diplomatic and trade ties, Nixon hoped to gain leverage in Europe over the Soviets, forcing them to the negotiating table and towards the lessening of East-West tensions known as dètente. The ongoing quagmire of the Vietnam War and domestic crises such as Watergate ultimately limited Nixon's diplomatic options, but the point of his effort remained: that the second half of the Cold War was far different than the first. There were more nuclear powers, and they possessed even greater stocks of nuclear weapons than before. [281]

Some argued the world was a safer place because of these developments. Others saw the breakdown of Soviet-American relations by the close of the Presidency of James Carter as foreboding and a new and more dangerous phase of the Cold War. The Soviet invasion of Afghanistan in 1979, prompted in part by fear of the new Islamist government in neighboring Iran that drew its power at least in part by anti-Americanism, sparked a new crisis in superpower relations. Washington condemned Moscow's move, which if successful would have given the Kremlin new influence in a region pivotal to the world's oil trade, and American leaders spent heavily to arm Afghan resistance forces in their battle against the Red Army. Ironically, these same forces spawned anti-American Islamist movements such as the Taliban and Al Queda, groups that each began as Mujahadiin fighters, armed by the United States for their battle against Communism. [282]

Carter's final year in office saw renewal of Cold War tensions. Contemporary critics such as Ronald Reagan, who won the White House in 1980, and later conservative historians and pundits eager to give Reagan credit for "winning" the Cold War, harshly rebuked what they perceived to be Carter's tepid opposition of and even tacit acceptance of Communism. Such biased interpretations are largely incorrect. Carter accelerated America's military build-up, and withdrew the Strategic Arms Limitation Talks II (SALT II) from the Senate (where it lacked the votes to pass in any event). He embargoed American wheat and technology exports to the Soviet Union, and even withdrew American participation from the 1980 Olympic Games in Moscow. Like President Truman thirty years before, Carter announced his own "Doctrine," vowing American intervention—most likely nuclear—against any Soviet threat to the vital Persian Gulf. The Cold War was on once more. [283]

President Reagan continued these policies of military strength and tough diplomacy against the Soviets. His rhetoric, and his long-standing visceral opposition to Communism more broadly, helped change the tone of the Cold War. Carter promised opposition to further Communist expansion. Reagan wanted to see Communism's collapse. He called the Soviet Union an "evil empire," and later declared that "Marxism-Leninism" was destined for "the ashheap of history." He refused, in 1981 at least, to meet Soviet requests for arms reductions. By the mid-1980s, the Soviet economy could no longer support the country's competition with the West. When Reagan announced plans for an expensive new space-based missile defense system termed "Star Wars," or officially the Strategic Defense Initiative (SDI), Soviet leaders knew they could not afford to keep pace. Most analysts believed SDI to be technically infeasible. The very fact that Washington seemed willing to spend the money to find out, coupled with their inability to do the same, pushed the realization among Soviet leaders of the necessity of change. They had by 1985 only fifty thousand computers in their entire country, compared to America's thirty million, and youthful reformers such as the energetic Mikhail Gorbachev began a series of radical changes of the Soviet system, with *glastnost* (openness to the West) and *perestroika* (economic reconstruction). Reagan wanted more. "Mr. Gorbachev," he declared in Berlin while overlooking the most visible symbol of the East-West divide, "tear down this wall." Gorbachev could not, at least not without prompting a right-wing revolt at home. The forces he set in play, however, those of change and of modernity, swept through Europe. In November of 1989, Berliners both East and West tore down the wall that had divided them for more than a generation. [284]

The Cold War was not officially over—it had never officially begun—but it was clearly at an end. It would be up to democratic reformers such as Russian President Boris Yeltsin (Gorbachev was a reformer, but he was no democrat) to move the remnants of the Soviet Empire into a new day of cooperation with its neighbors and the world. Political scientist Francis Fukuyama famously declared the progress of history to be finally at an end. With the close of the Cold War, "political liberalism" had finally won out over totalitarianism. The stability of democracies would thereafter reign. As events have sadly shown, the post-Cold War world did not bring the stability promised, leading some pundits to publicly long for the security the bipolar Cold War system offered. The threat of global thermonuclear war might have lessened after 1991, the very threat Minuteman was originally developed to counter and deter. But the world may be no less safe for it. To the question of who "won" the Cold War, while most evidence points to the West, as responsible historians we can only answer as Chinese Prime Minister Zhou Enlai did when asked the significance of the French Revolution: "it is too soon to tell." [285]



2020-11-zippia-com-kiewit-history-img-1

https://www.historylink.org/File/9899

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remember - " http://www.omahaimc.org/kiewit-corporation/ "

Mining

Instead of just being happy with the military construction contracts, Kiewit Sons' broadened their scope and started getting involved in mining. It was an offshoot to their military ventures, since coal from the Big Horn Mine in Wyoming was needed at the Hanford Project in Washington State. This was were the top-secret Manhattan Project was carried out.

https://sah-archipedia.org/buildings/OR-01-057-0011

Hangar B was the first hangar erected by the U.S. Bureau of Yards and Docks with the Sound Construction and Engineering Company; its construction lasted from October 1942 to mid-August 1943. Meanwhile, the first airship arrived in February 1943, but, with no hangar to protect it, the blimp was shredded in a late March coastal storm. The second structure, Hangar A, was built much more rapidly, in just 27 days (July to August 1943) since the engineering challenges had been sorted out in the construction of Hangar B. The hangars each required 2 million board feet of lumber, most of it from Oregon, which was supplied by 50 local lumber mills. Even the gutters and downspouts were wood, and as a result more than 2,000 tons of steel were conserved per hangar.

https://books.google.com/books?id=4n0UAQAAMAAJ&pg=PA19484&lpg=PA19484&dq=seattle+%22sound+construction+and+engineering%22&source=bl&ots=Zx8OIeRkLa&sig=ACfU3U1kYbNQ86Yl4QrmAh6vQ83eUkjo2A&hl=en&sa=X&ved=2ahUKEwjJ0eyb8KvtAhURUzUKHdMpAcs4ChDoATAJegQIDBAC#v=onepage&q=seattle%20%22sound%20construction%20and%20engineering%22&f=false

Kiewit in Canada !! Very helpful

https://newsroom.kiewit.com/kieways/75-years-and-counting/

oct 06 1940

https://www.newspapers.com/image/66282486/?terms=kiewit&match=1

2020-11-zippia-com-kiewit-history.pdf

https://www.zippia.com/kiewit-careers-28642/history/?survey=039&survey_step=step1&oneTapSurvey=true&src=survey-core-prompt

KIEWIT COMPANY HISTORY TIMELINE

1884

Kiewit Corporation traces its history to 1884, when Peter and Andrew Kiewit formed Kiewit Brothers, an Omaha, Neb., masonry contracting partnership.

What began in 1884 with two hardworking brothers has grown into a construction, mining and engineering powerhouse.

1889

In 1889, Kiewit Brothers was awarded its largest masonry contract, the 7-story Lincoln Hotel.

1900

The brothers ventured into general contracting in 1900 with construction of the Bekins Warehouse.

1904

They dissolved their partnership in 1904, and Peter continued the business as a sole proprietor.

1912

In 1912, two of his sons, Ralph and George Kiewit would join their father as partners in the firm.

1914

The senior Pieter Kiewit passed away in 1914, and his two sons, Ralph and George Kiewit, renamed the company, Peter Kiewit Sons.

1919

1919 After attending Dartmouth for a year, Kiewit returned to Omaha in 1919 to work at his family s general contracting business.

1920

By 1920, the youngest of the Kiewit children, also named Peter, left Dartmouth College in his freshman year and joined the company as a foreman.

Meanwhile family members began to pull out of the company, a move begun by George Kiewit in the mid-1920s.

1924

In 1924, the company reached the 40-year mark and landed its first million-dollar contract the 10-story Livestock Exchange Building in the South Omaha meat-packing district.

Also in 1924, George Kiewit left the company and Ralph and Peter Kiewit jointly managed the company.

1930

In 1930 Peter Kiewit suffered the obstruction of a blood vessel resulting from the chronic inflammation of his veins--a condition called phlebitis.

Around 1930, many of his family members began leaving the business, and it appeared that the Kiewit legacy nearly 50 years in the making was coming to an end.

1931

When Ralph Kiewit moved to California in 1931, Peter dissolved the family firm and reorganized as Peter Kiewit Sons', Co.

1939

Starting in 1939, war construction started to build, and Kiewit successfully bid on a 7.5 million government contract to build 760 barracks and related facilities in Fort Lewis, Washington.

1944

1944 While Peter constantly strove to educate himself and develop better business practices, he similarly pushed his employees to learn and grow.

His process of building better men and women through company training sessions formally began in 1944 with the first annual meeting of Peter Kiewit Sons . Peter said, Better trained men will perform more and work better and will do so in a safer manner.

1949

1949 In 1949, Peter purchased Pawnee Springs Ranch near North Platte, Nebraska, the second ranch he came to own in addition to the X-Bar-X in northern Wyoming.

1950

In 1950 the United States Corps of Army Engineers approached Kiewit for assistance in a joint venture to construct bomber and housing installations in Greenland.

The 1950 s saw many other development projects in which Kiewit was actively engaged.

1952

In 1952, the Atomic Energy Commission awarded Kiewit the contract for the construction of the 1.2 billion Gaseous Diffusion Plant at Portsmouth, Ohio.

1954

1954 Because of Peter Kiewit s deep commitment to his community, he served on the Ak-Sar-Ben board of governors for 16 years, beginning in 1954.

1958

In 1958 the United States Army awarded Kiewit a 5 million contract to build Alaska's first nuclear facility.

1959

1959 In Omaha, as the city s downtown waned, Kiewit became instrumental in revitalizing the area, serving on the Omaha Development Council and the Omaha Industrial Foundation.

1961

The United States Air Force awarded the company a 68 million contract in 1961 for the construction of Minuteman intercontinental ballistic missile launch bases near Minot Air Force Base in North Dakota.

1965

1965 Later in his life, Peter became more philanthropic and donated millions of dollars to charities and institutions that he admired.

One of his first sizeable public donations went to Creighton University in 1965 for the construction of Kiewit Hall, a women s dormitory.

1967

1967 Recognizing Peter s focus on workplace safety, the National Safety Council awarded Peter Kiewit Sons its highest accolade, the Award of Honor, based on the company s record of 21 million man-hours of safe work.

1969

In 1969, Peter turned the presidency over to Bob Wilson, and Peter remained as chairman.

1970

In the 1970 s, Kiewit became one of Canada s leading contractors through its participation in the building of the dam and powerhouse facilities on the La Grande and East Rivers in Northern Quebec, as part of the massive James Bay hydro-electric project.

1971

I**n 1971 the company was awarded a 50 million contract by the United States Army to begin preliminary work on building facilities at Malmstrom Air Force Base in Montana for the Safeguard anti-ballistic missile program.**

He was chairman of the building committee for the latter, and saw to the construction of the original hospital building, which was dedicated in 1971 before an audience that included President Richard Nixon and California Governor Ronald Reagan.

1976

The company gained an even greater share of the coal market in 1976, when Black Butte Coal Co., a joint venture with Rocky Mountain Energy, landed contracts to supply three million tons of coal annually to Idaho Power Light Co. for 25 years, and to Commonwealth Edison Co. for 20 years.

1976 The Jesuit community at Creighton awarded Peter its Manresa Medal for inspirational and enduring achievement and the University of Nebraska Medical Center presented Kiewit with its Distinguished Service to Medicine award.

1978

In 1978 Kiewit won yet another contract from the army for 245.3 million to build a powerhouse at the Bonneville lock and dam in Washington State.

1978 Peter was recognized as an Honorary Founder of Creighton University, only the second time in the school s then 100-year history that the honor was given.

1979

Peter Kiewit Foundation opened its doors in 1979 with a 150 million endowment.

Black Butte, a southwest Wyoming coal mine, began production in 1979.

In November 1979, Peter Kiewit died as a result of complications following the removal of a tumor on his left lung.

1983

By 1983, however, high interest rates had begun to severely limit the number of large public building projects.

1984

By the time Kiewit celebrated its centennial in 1984, the company had district offices throughout the United States and Canada, and was performing nearly all types of construction work.

1985

Kiewit initially owned 80 percent of Continental, but fully acquired the company in 1985 after purchasing Murdock's stake.

1986

After enlarging the breadth of its investments, the company was reorganized in 1986 to better reflect the more diverse nature of its businesses.

1991

Kiewit found a buyer for Continental Can in 1991, and the company returned to a more concentrated pursuit of its specialty--construction.

1993

By 1993 the average construction contract was for 5.3 million, with a typical year bringing in 200 to 300 contracts.

2004

Bruce Grewcock, Kiewit s president and CEO, has steered the company to excellence since 2004.

2010

In 2010, it partnered with the New York State Office of Cultural Education to establish the New Netherland Research Center, with matching funds from the State of the Netherlands.

2012

In 2012, Grewcock was chosen as chairman of the board.

Kiewit had 2012 revenues of more than 11 billion and consistently ranks among the top five contractors by Engineering News-Record.

2018

Kiewit had 2018 revenues of 9 billion and consistently ranks among the top ten contractors by Engineering News-Record.

Founded

1884

Headquarters

Omaha, NE

Minuteman at Minot Air Force Base

Built in the mid-1950s to host a Semi-Automatic Ground Environmental (SAGE) complex and Air Defense Command fighter aircraft, Minot became a Strategic Air Command base on July 1, 1962, pending the imminent activation of Minuteman I-B missile launchers.

The Corps of Engineers Ballistic Missile Construction Office (CEBMCO) oversaw the construction of the **150 silos and 10 launch complexes spread over a 12,000-square mile area. The prime contractor was the Peter Kiewit Sons' Company, which received the contract on December 22, 1961, with a bid of $67.8 million. At the peak of construction, Kiewit brought in 6,000 men with 1,100 vehicles and 115 cranes to ensure on-time completion of the contract.** Relations between management and this work force were amicable as there were only two work stoppages that cost 58 man-days lost.

To manage the project, CEMBCO used a "critical path" method, which is essentially a daily charting of progress geared to project future needs. However, despite improved management techniques, CEMBCO and the contractors faced challenges from the severe weather and logistics support for the remote locations. Recordbreaking spring rains turned roads and work sites into quagmires, making excavation and transport dangerous. Severe winter cold with temperatures as low as -35 F tested worker endurance. In the autumn, dust storms made travel hazardous.

Despite these challenges, Peter Kiewit Sons' Company used accelerated construction procedures and completed the project 51 days ahead of schedule. Two workers died in construction-related incidents and there were 36 disabling injuries. Four private citizens died in various traffic accidents with project construction vehicles.

With construction under way, the Air Force activated the 455th Strategic Missile Wing and component 740th Strategic Missile Squadron on November 1, 1962. During the following 2 months, the 741st and 742nd Strategic Missile Squadrons administratively came into existence.

To preserve the continuity of units with distinguished histories, on June 25, 1968, the 455th Strategic Missile Wing was redesignated as the 91st Strategic Missile Wing. The 91st had organizational roots dating from World War II and had gained recent fame as a B-52 wing operating over Vietnam.

The first Minuteman III missile to arrive in the field was accepted by the 91st Strategic Missile Wing on April 14, 1970. The following August, the first Minuteman IIIs were placed on alert status. By December 1971, the switchover to the new missile was completed.

In addition to Minuteman ICBMs, Minot AFB hosted another type of strategic missile. Assigned B-52H bombers were modified to carry Air Launched Cruise Missiles (ALCMs).

Look here for general information on Minot AFB

Kiewit Diversified Group

...

Parent Company : See **Kiewit Corporation**

Spinoffs include : **Level 3 Communications, Incorporated**

Note in 1998, the group as a whole was renamed to Level 3 Communications, Incorporated ; See the page on Level 3 for history and info after Jan 1998.

Saved Wikipedia : Kiewit Corporation (Sep 03 2020)

Note - Source : [HK002L][GDrive]

[**Walter Scott Jr. (born 1931)**] was first elected to the Peter Kiewit Sons' Incorporated board in 1964. In 1979, he was elected president. When Peter Kiewit died later that same year, Scott was selected to succeed him as chairman.

Expansions

In 1963, Peter Kiewit bought the *Omaha World-Herald* to keep it locally owned. Under the terms of his will, the employees bought the paper in 1979.

Starting in 1985 (Kiewit built MFS in the early 1990s; Level 3 was built in the 1997 to 1999 circa), Kiewit also constructed a nationwide fiber optic network. This network was later spun off as Level 3 Communications, which became the formal successor corporation to the original Peter Kiewit Sons'.

[...]

Saved Wikipedia : Level 3 Communications (Sep 3 2020) -

Source [HK002M][GDrive]

Not to be confused with L-3 Communications.

Level 3 Communications, Inc.

[...]

Products Mobile telephony, Internet services, Content delivery

Revenue [See **Level 3 Communications, Incorporated**]

[...]

Level 3 Communications was an American multinational telecommunications and Internet service provider company headquartered in Broomfield, Colorado.[4] It ultimately became a part of CenturyLink, where Level 3 President and CEO Jeff Storey was installed as Chief Operating Officer, becoming CEO of CenturyLink one year later in a prearranged succession plan.

Level 3 operated a Tier 1 network.[4] The company provided core transport, IP, voice, video, and content delivery for medium-to-large Internet carriers in North America, Latin America, Europe, and selected cities in Asia.[5] Level 3 was also the largest competitive local exchange carrier (CLEC) and the 3rd largest provider of fiber-optic internet access (based on coverage) in the United States.

[...]

History

1985 to 2000

In 1985, [**Kiewit Corporation**] created a subsidiary named **Kiewit Diversified Group** to manage the corporation's business that was not related to construction. **The division was spun off as a separate entity and changed its name to Level 3 Communications in 1998 to signify an increased focus on communication services**. That same year saw it make an IPO on NASDAQ. According to Level3's own history, it continued to build its telecommunications network after going public.[7]

[.... for the rest of the history, see the **Level 3 Communications, Incorporated** ...]

1992 (Jan 12)

Full newspaper page : [HN011O][GDrive]

1992-01-12-the-lincoln-nebraska-star-pg-7-e-clip-kiewit

STATE/LOCAL 7E

Peter Kiewit Sons firm announces reorganization

OMAHA (AP) — Officials at the Peter Kiewit Sons' Inc. construction company have announced a corporate reorganization that creates two classes of stock and combines businesses.

Officials said the reorganization created Class C stock, which tracks the company's construction and mining businesses. Another class — Class D — pertains to the company's other businesses, including telecommunications and electrical energy.

Walter Scott Jr., Kiewit's chairman, presented the new structure to stockholders at the annual meeting Friday in Omaha. Stockholders of the privately held firm approved the reorganization in December, Kiewit officials said.

Under the reorganization, Scott remains president and chairman of Peter Kiewit Sons Inc. and also will serve as president of Kiewit's Diversified Group, which includes the telecommunications and energy businesses, the company said.

The company's construction and mining businesses are combined under the new structure.

Charles H. Campbell, a Kiewit executive vice president and former president of the construction group under the old structure, was promoted to vice chairman of the parent firm. He also was named chairman of the Construction and Mining Group, the company said.

Kenneth E. Stinson, president of the mining group under the old structure, was named president of the construction and mining segment.

James Q. Crowe, who was division manager in the old construction group, will serve as president of Kiewit's Telecommunications Group, the company said.

Kiewit had construction and mining revenues of about $2 billion in 1991, company spokesman Brad Chapman said Friday. He declined to say what the firm's total revenue was.

The company had $5.1 billion in revenue in 1990, according to Fortune magazine.

Kiewit was under contract to build more than 700 projects in 1991. The company said it shipped about 17 million tons of coal.

Kiewit operates construction offices through the United States and Canada. The company builds major projects in the power, commercial building and telecommunications industries.

The company has 2,900 salaried, full-time employees and employs 20,000 to 25,000 independent craftsmen each year, Chapman said.

[HN011P][GDrive]

1994 (Jan 19)

Full newspaper page sources : Page 1 = [HN011S][GDrive] , Page 9 = [HN011T][GDrive]

Wednesday, January 19, 1994

COLOR

Lincoln Journal

CITY P.M. © 1994 Journal-Star Printing Co., Lincoln Neb. Serving Nebraska since 1867 40 pages, 6 sections 35¢ Less by carrier

Affordable housing in reach

Nebraska companies announce equity fund

BY ED RUSSO
Lincoln Journal

Warren Buffett of Omaha, the country's richest man, joined Gov. Ben Nelson, Lincoln Mayor Mike Johanns and Lincoln business executives today to announce a fund intended to build more affordable housing in Nebraska.

Warren Buffett

Buffett's Berkshire Hathaway Inc. and eight other corporations have contributed $5 million to the Equity Fund of Nebraska, which finances affordable-housing projects. In return, the fund provides the companies with federal tax credits granted over 10 years.

"It's the best of all worlds," Buffett said at a news conference in the Governor's Mansion.

Johanns and Nelson praised Buffett as well as Orrin Wilson of FirsTier Bank-Lincoln and John Haessler of Woodmen Accident and Life, which has contributed to the renovation of the President and Ambassodor building near the Capitol for low-income housing.

So far the 1993 fund has agreed to contribute $2.9 million to help pay for affordable housing ventures under way in Lincoln. One, the Charles Senior Housing Limited, is renovating housing at 1936 and 1938 F St., and building new housing at 1933 G St. The Indian Center is using the fund to help pay for an apartment project at Southwest Ninth and A streets.

Besides Berkshire Hathaway these other companies participated in the 1993 Equity Fund: Kiewit Diversified Group Inc., FirsTier Financial Inc., Guarantee Mutual Life Co., Mutual of Omaha, Norwest Bank Nebraska, Commercial Federal Bank, Central States Health and Life Company.

"The Nebraska business community has responded to this opportunity as we have expected them to," Nelson said.

Speaking to Buffett, Johanns said, "It's gotten around that you have made a wise investment here and there and that helped us sell the program."

Officials want companies to invest in the 1994 fund.

Affordable housing is one of Nebraska's most pressing needs, Nelson said. Studies show that one in 50 Nebraska families lives in substandard or overcrowded conditions or pays more than 30 percent of its income for housing. Affordable housing for moderate to low-income people is especially needed in Kearney, Aurora and Thurston County as well as Lincoln and Omaha.

National equity funds were created after the passage of the 1986 federal tax bill. Buffett said Berkshire Hathaway has contributed between $2[illegible] million and $30 million to such funds which help build affordable housing in various cities around the country.

For information about how to contribute to the 1994 Equity Fund of Nebraska, call executive director Jim Rieker at 346-2577, or write the Equity Fund of Nebraska, Suite 930, 1650 Farnam St., Omaha, NE 68102.

1994-01-19-the-lincoln-journal-pg-1-clip-affordable-housing

[HN011U][GDrive]

1994 (March 17) - Note that MFS was spun off from KDG in May 1993

Full newspaper page ; [HN011M][GDrive]

Centex stock surges after takeover bid by MFS

By Karen Padley
Bloomberg Business News

SAN FRANCISCO — Centex Telemanagement Inc., one of the first companies to manage local and long-distance telephone services for smaller businesses, saw its shares more than double yesterday after MFS Communications Co. offered to buy the company for $9 a share cash.

Centex stock gained $5.62½ to close at $10.50. More than 12.6 million of the 17.7 million shares outstanding changed hands, making it the most active Nasdaq issue.

MFS Communications, based in Omaha, Neb., announced its offer late Tuesday, saying it had been rebuffed by Centex's board. It already owns 8.4 percent of Centex stock.

Centex said yesterday it is considering the offer and will respond within the next 10 business days.

Analysts applauded the proposed merger, saying it would be a good fit. Both offer similar products for small and medium-sized businesses, although MFS Communications depends more heavily on networks and Centex on services.

A possible 'coup'

MFS Communications stock closed up $4.37½ at $35.12½. Volume was 1.45 million shares, almost three times the three-month daily average.

"If they get Centex, it will be a coup for them," said Ronald Altman, an analyst with Furman Selz, New York. "The combination makes an enormous amount of sense as competition increases in the local markets."

MFS was spun off in May 1993 from Kiewit Diversified Group Inc., a unit of closely held Peter Kiewit Sons' Inc. It benefited from a September 1992 ruling by the Federal Communications Commission that opened local telephone service to competition, ending the monopoly enjoyed by regional telephone systems.

The company lost $16 million, or 30 cents a share, in 1993. It is expected to keep losing money as it builds fiber optic networks in 65 cities over the next three to five years.

"MFS is making significant capital improvements in those networks so the more they add customers, the quicker they reach profitability," said Jacqueline Popp, a Duff & Phelps Corp. analyst.

Altman said two thirds of Centex's 11,000 customers are located in California, which would give MFS the kind of scope and scale it will need.

"This will accelerate MFS' move toward profitability," Altman said. He estimates MFS with Centex could break even by the end of 1996 instead of late 1998.

$5.1 million reserve

Centex, founded in 1983, has been publicly traded since 1987. It provides local, long-distance, conference calling, voice mail and other services for small to medium-sized businesses. It does not provide long-distance service directly, as MFS does, but uses various carriers.

The company set aside a $5.1 million reserve in the fourth quarter to restructure its operations, accelerate sales and improve efficiency. Centex last week laid off 18 people from its headquarters.

1994-03-17-the-rockland-ny-journal-news-pg-b-8-clip-centex

[HN011N][GDrive]

https://www.newspapers.com/image/461688793/?terms=%22Kiewit%2BDiversified%2BGroup%22

1994 (Oct 18) - Kiewit fuels

Full newspaper page : [HN011Q][GDrive]

Hawaii buying ethanol-powered cars

❑ State coalition backs grain-based fuel for new cars

By Steve Kline
Associated Press

OMAHA, Neb. — Ethanol-powered cars are on a roll.

Representatives from Hawaii and the other 18 states of the Governors' Ethanol Coalition meeting here announced a major purchase of such cars, Nebraska Gov. Ben Nelson said yesterday.

Orders for cars that can run on mixes of up to 85 percent ethanol and 15 percent gasoline might surpass 500 this year, he said.

By 1996, Nelson said, local, state and federal governments are expected to order more than 2,500 of the cars.

Ethanol derived from corn and other grains is often used as a fuel additive.

Nelson said the General Services Administration is purchasing 250 so-called E85 Ford Tauruses, the maximum number available from the manufacturer.

Nelson said ethanol interests expect to win a court battle over an Environmental Protection Agency rule that would benefit ethanol by requiring it in new mixes of gasoline used in the nation's most-polluted cities.

The oil industry has filed a lawsuit alleging that the EPA is going beyond the 1990 Clean Air Act by specifying a fuel additive, and a federal appeals court has blocked implementation of the rule.

Nelson said that ultimately, farm interests and oil interests will have to work together to resolve their differences.

"The Congress has continued to support this (the EPA rule). So has the White House. We'll play an important role in reformulated fuels," Nelson said.

In addition, Nelson announced that the federal government had agreed to fund, in part, a $1.3 million effort to add up to 40 publicly accessible E85-vehicle fueling sites throughout the Midwest.

Nelson said up to $510,000 will come from several government programs, with the remaining $810,000 coming from private sources.

Nelson said state and national groups already have pledged $285,000.

The effort would recondition existing fuel storage tanks or install new ones at filling stations in states with a large number of the ethanol-powered cars.

The most likely states are Nebraska, Iowa, Colorado, Illinois, Indiana, Minnesota, Missouri and Wisconsin, Nelson said.

In addition to those states, the ethanol coalition has representatives from Arkansas, Hawaii, Kansas, Kentucky, Michigan, Montana, New Mexico, North Dakota, Ohio, South Dakota and Texas.

Also during yesterday's news conference, retired Air Force Gen. Lee Butler, former commander of the Strategic Air Command (now the Strategic Command), announced the establishment of a company called Kiewit Fuels.

It is a newly formed unit of Kiewit Diversified Group of Omaha.

The company will merge with Sunthetic Energy of America, of Phoenix, which owns a patented process for making fuel alcohols and their derivatives.

The coalition meeting ends today.

1994-10-18-hawaii-tribune-herald-pg-4-clip-ethanol-cars

[HN011R][GDrive]

in 1997, they were "coal mining and communications"

https://www.newspapers.com/image/403153035/?terms=%22Kiewit%2BDiversified%2BGroup%22

1997 - split

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cal energy

https://www.newspapers.com/image/301122181/?terms=%22Kiewit%2BDiversified%2BGroup%22

1997 - Dec 06 - Plans to move KDG from Omaha

https://www.newspapers.com/image/297795225/?terms=%22Kiewit%2BDiversified%2BGroup%22

1998 (Jan 20) - "Kiewit Diversified" changed it's name to Level 3

Full page : [HN01CL][GDrive]

Fremont Tribune (Fremont, Nebraska) • 20 Jan 1998, Tue • Page 12

Kiewit Diversified plans name change, move to Denver

OMAHA (AP) — Kiewit Diversified Group has chosen Denver as the site of a new Internet-based company expected to create up to 3,000 jobs.

The company made the announcement Monday. It said it would not move until it receives word from the Internal Revenue Service on whether the company's split from Peter Kiewit Sons can be tax-free.

Kiewit Diversified is a subsidiary of Peter Kiewit Sons, an Omaha-based construction and mining company.

The company announced in December it would start the Internet-related business elsewhere because of the difficulty of attracting computer nerds to Omaha.

The IRS decision is expected before the end of June. The relocation will affect 30 to 40 Kiewit Diversified executives. No other Kiewit operation will be affected.

Kiewit Diversified also said it is changing its name to Level 3 Communications to better reflect the new venture.

Level 3 Communications will focus on building a nationwide, Internet-based network to compete with local and long distance telephone systems, the company said. Long-range plans include international competition.

Areas under consideration for the new headquarters were Dallas, northern Virginia and the Silicon Valley in California.

[HN01CM][GDrive]

1998 (Jan 21) - "Peter Kiewit Sons to Build National Fiber Optic Network"

By Seth Schiesel / Source : [HN00ZF][GDrive]

Adding to the growing list of companies that are building new national communications networks, Peter Kiewit Sons Inc. has said that it intends to spend up to $3 billion over the next three years to build a 20,000-mile web of fiber optic cable.

The system, which the company wants to complete by 2001, would be the first national fiber optic network based on Internet technology rather than on standard telephone technology. If the Internet technology works as predicted, it could allow Kiewit to charge prices for voice and data communications much lower than those of its competitors while maintaining healthy profit margins.

Kiewit plans to sell access to its network only to business customers. Most of those would be small and medium-sized companies, but some could be upstart long-distance carriers that would resell time on the Kiewit network to consumers.

On Monday, the Kiewit subsidiary that intends to build the network, **Kiewit Diversified Group Inc.**, announced that it had changed its name to [**Level 3 Communications, Incorporated**]. Level 3 is led by a team of executives who used to run the [**MFS Communications Company, Incorporated**], the alternate local telephone carrier acquired in 1996 by Worldcom Inc. for $14 billion.

The move by Kiewit, a private company based in Omaha that has its primary operations in construction and mining, brings to four the number of companies building new national communications networks. Kiewit joins IXC Communications, the Williams Companies and the Qwest Communications subsidiary of the Anschutz Corporation. Established long-distance carriers like the AT&T Corporation also spend billions each year upgrading their systems.

But Level 3's network would differ from the others in its reliance on Internet Protocol, or I.P., technology. I.P. can allow networks to be used more efficiently but can also be less reliable than traditional networks. Traditional networks generally allow voice and data messages to be transmitted in one continuous chunk. I.P. networks break messages into small packets that are each sent independently to their destination.

"I.P. is ready for prime time," said [**James Quell Crowe (born 1949)**], Level 3's chief executive, who was MFS's chairman. He said, however: "With today's technology, I.P. is fine for anything that's not timing-sensitive, like data or fax. Anything that's timing-sensitive, primarily voice and video, isn't handled very well."

But Mr. Crowe said that advances in the technology over the next few years would allow Level 3 to offer voice quality equal to that of more traditional systems.

Mr. Crowe said that Level 3 had about $2 billion in cash but that it was confident it could raise the remainder necessary to complete its network.

Harold Jens Kildall (born 1894)

Ancestry

Sources for the following : Full newspaper page : [HN019Y][GDrive]

- Michael Kildall
  - (Captain) Peter C Kildall (born March 9 1862 in Norway - migrated to Washington in 1887 - died 1913 in Albuquerque NM) - married to Anna Lind
    - Helen Kildall
    - Robert Kildall
  - Simon F Kildall
  - Joseph Kildall - married Mary Jenkins
    - Blanche Kildall (1892)
    - John H Kildall / Harold Jens Kildall (born 1894) - Married Gwendolyn Johnsen (born 1896 in England, immigrated in 1899)
      - Harold L Kildall
      - J M Kildall
        - Gary Arlen Kildall (born 1942)
      - Robert Kildall
  - John Kildall
  - Mary Mary Lee (of Bellingham)
  - Miss Anna Cavendar (of Seattle)
  - Mrs Marian Bordon (of Seattle)

See

- Gary Arlen Kildall (born 1942)

1894 (Feb 15) - "Harold Jens Kildall" born in Whatcom, Washington, USA

Name: Harold Jens Kildall / Date of Birth: **15 Feb 1894** / Gender: Male / Birth Place: Whatcom, Washington, USA

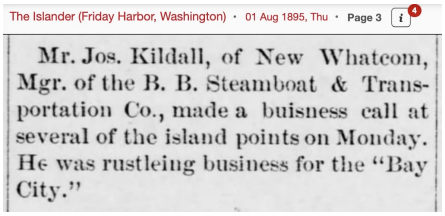
Father: Joseph Kildall / Mother: Mary Jenkins

NOTE - The record shows that the birth year is 1894 ... but on other forms, Harold says his birth year is 1893 ...

[HL0055][GDrive]

1895 (Aug 01)

Full newspaper page : [HN01A7][GDrive]

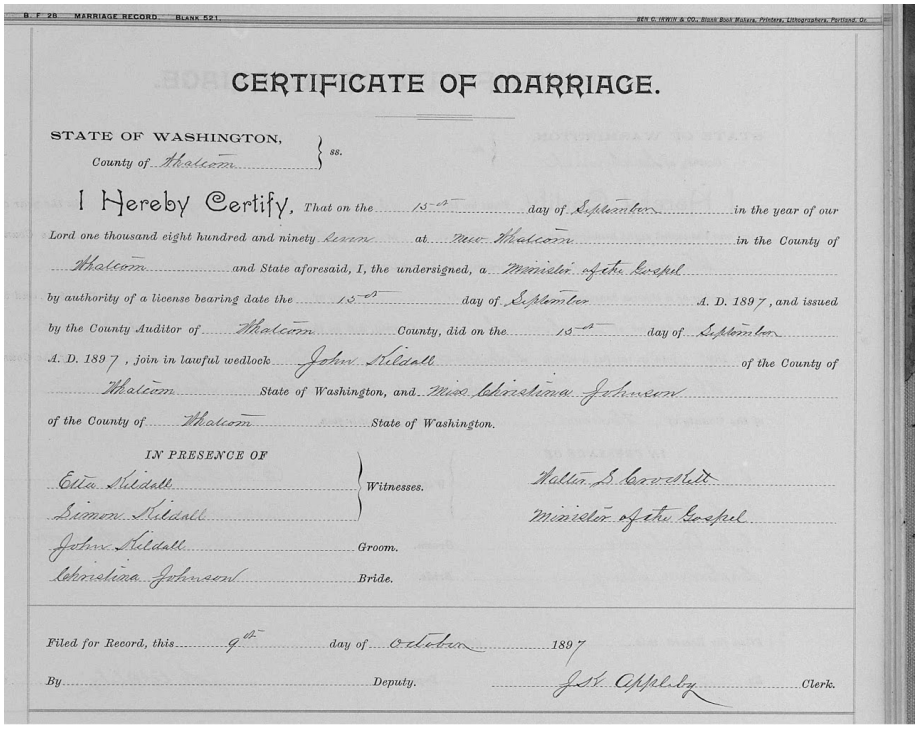


[HN01A8][GDrive]

1895 (Nov 11) - PC Kildall / "Bellingham Bay Steamboat and Transportation Company"

https://www.newspapers.com/image/332989236/?terms=kildall

1897 (Oct 09) - wedding-certificate-john-kildall-jonhnson



B. F. 28 MARRIAGE RECORD BLANK 521

CERTIFICATE OF MARRIAGE.

STATE OF WASHINGTON, County of Whatcom } ss.

I Hereby Certify, That on the 15th day of September in the year of our Lord one thousand eight hundred and ninety seven at Mec Whatcom in the County of Whatcom and State aforesaid, I, the undersigned, a Minister of the Gospel by authority of a license bearing date the 15th day of September A. D. 1897, and issued by the County Auditor of Whatcom County, did on the 15th day of September A. D. 1897, join in lawful wedlock John Kildall of the County of Whatcom State of Washington, and Miss Christina Johnson of the County of Whatcom State of Washington.

IN PRESENCE OF

Etta Kildall } Witnesses.
Simon Kildall }

John Kildall Groom.

Christina Johnson Bride.

Walter L. Bramblett
Minister of the Gospel

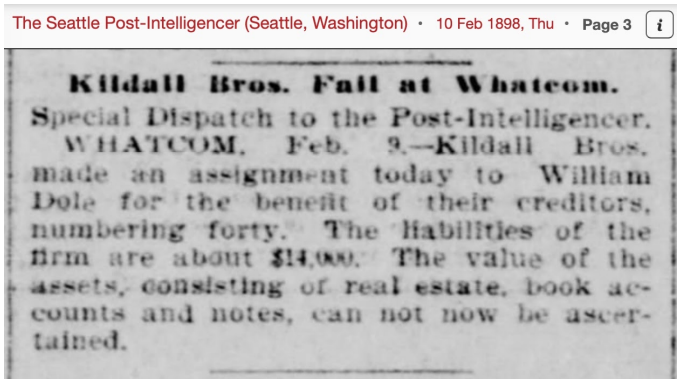
Filed for Record, this 9th day of October 1897

By Deputy. J.S. Appleby Clerk.

[HG007A][GDrive]

1898 (Feb 10)

Full newspaper page : [HN01A5][GDrive]



The Seattle Post-Intelligencer (Seattle, Washington) • 10 Feb 1898, Thu • Page 3

Kildall Bros. Fail at Whatcom.

Special Dispatch to the Post-Intelligencer.

WHATCOM, Feb. 9.—Kildall Bros. made an assignment today to William Dole for the benefit of their creditors, numbering forty. The liabilities of the firm are about $14,000. The value of the assets, consisting of real estate, book accounts and notes, can not now be ascertained.

[HN01A6][GDrive]

1899 (Sep 03)

Full newspaper page : [HN01A9][GDrive]

WORLD'S RECORD OF FISHING AND FISH-PACKING BEATEN BY PUGET SOUND SALMON-CATCHERS

Last Year the Combined Pack of the Puget Sound and Gulf of Georgia Canneries Was 265,000 Cases—Already This Season Nine Canneries in One County Have Packed 589,000 Cases, and All Are Still Working at High Pressure.

"Only Chinamen Were Employed in the Work and They Looked Like Blood-Smeared, Yellow Devils."

In a Puget Sound Salmon Cannery.

BY RUDYARD KIPLING.

Only Chinamen were employed on the work, and they looked like blood-besmeared yellow devils as they crossed the rifts of sunlight that lay upon the floor. When our consignment arrived, the rough, wooden boxes broke of themselves as they were dumped down under a jet of water, and the salmon burst in a stream of quicksilver. A Chinaman jerked up a twenty-pounder, beheaded and detailed it with two swift strokes of a knife, flicked out its internal arrangements with a third and cast it into a blood-dyed tank. The headless fish leaped from under his hands as though they were facing a rapid. Other Chinamen pulled them from the vat and thrust them under a thing like a chaff-cutter, which, descending, hewed them into unseemly red gobbets fit for the can.

More Chinamen, with yellow, crooked fingers jammed the stuff into the cans, which slid down some marvelous machine forthwith, soldering their own tops as they passed. Each can was hastily tested for flaws, and then sunk with a hundred companions into a vat of boiling water, there to be half cooked for a few minutes. The cans bulged slightly after the operation, and were, therefore, slidden along by the trolleyful to men with needles and soldering irons, who vented them and soldered the aperture. Except for the label, the "Finest Columbia Salmon" was ready for the market. I was impressed not so much with the speed of the manufacture as the character of the factory. Inside, on a floor ninety by forty, the most civilized and murderous of machinery; outside, three footsteps, the thick-growing pines and the immense solitude of the hills. Our steamer only staid twenty minutes at that place, but I counted two hundred and forty finished cans made from the catch of the previous night ere I left the slippery, blood-stained, scale-spangled, oily floors and the offal-smeared Chinamen.

NEW WHATCOM, Wash., August 29.—All records of fishing and fish-packing, in all the world's history, have been overwhelmingly eclipsed by the salmon canneries of Puget Sound and the Gulf of Georgia during the past six weeks.

The record of any single cannery for a single year has been distanced within six weeks by two different canneries in Whatcom county this season, and half a dozen traps have outdone any previous record of trap-fishing.

Last year the combined pack of the Puget Sound and Gulf of Georgia canneries was 265,000 cases.

Already this season nine canneries in Whatcom county alone have packed 589,000 cases—and the high tide is still keeping all available help busy at all the canneries and traps both day and night! Here are the figures showing the pack and put-up July 3d to August 23d inclusive:

Companies—	Cases.
Pacific-American Fisheries Co., Fairhaven	184,000
Alaska Packers' Association, Blaine	125,000
Alaska Packers' Association, Point Roberts	65,000
Young & Williams, Blaine	24,000
Ainsworth & Dunn, Blaine	58,000
Carlisle Canning Co., Village Point	36,000
Aberdeen Packing Co., Fairhaven	45,000
Fairhaven Canning Co., Fairhaven	40,000
Astoria and Puget Sound Co., Fairhaven	12,000
Total cases packed	589,000

On August 9th the Pacific-American Cannery received 130,000 fish, averaging seven pounds each dressed—about 400 tons of salmon in one day at one cannery—enough to load an ordinary freight train of twenty cars, twenty tons to the car.

Last Sunday, August 20th, this cannery received 115,000 salmon, and the rule has been, since July 7th, over 50,000 a day.

It is difficult to comprehend the enormousness and tremendous results of this marvelous run of salmon. Consider that within six weeks' time these nine canneries have packed 589,000 cases, which, at the lowest market price f. o. b., $4 50, represent a cash value of $2,650,500.

These 589,000 cases contain forty-eight one-pound cans each; therefore they weigh 28,272,000 pounds, exclusive of cases, or 14,131 tons, and it would require a freight train four and a half miles long to carry them all away, each car carrying twenty tons.

Had the serpent shunned the Garden of Eden and these 589,000 cases of salmon been available to Adam and Eve, the latter could have enjoyed a can of salmon three times a day for over 25,819 years!

Or, each man eating one can a day, an army of 100,000 men could eat from this tremendous pile for nine months and two weeks, and then have 75,000 cans left to gamble for!

Placing these cans end to end, they would make a solid, glittering band of sealed salmon over 2,068 miles in length.

But the canned pack is only the principal feature of the output of these fisheries, and the amount of energy set in motion when the silvery army comes. There are in connection several box factories, many cooper shops, a sheet-metal works employing over 100 hands, two fertilizer and fish-oil factories, several salting and pickling enterprises, can factories, ice factories, cold-storage warehouses and three or four fresh-fish shipping establishments.

In the nine canneries 1,956 persons are employed. The auxiliaries, such as can factories, cooper shops, etc., employ 600 more, and the traps, steamers, tugs and scows add about 700, making a total of 3,256 persons, of which over 1,000 are Chinamen and the balance are whites of all sexes from six to sixty years old.

Aside from these are about 1,000 gill-net fishermen, making a grand total, at a conservative estimate, of 4,250 persons employed in the fisheries of this county, which four years ago had but one small cannery—the A. P. A. Cannery at Point Roberts.

Sockeye salmon have commanded a higher price to the fishermen this year than ever before, ranging from 12 cents to 22 cents each. This is the great trap-fishing region, and 140 traps, the average cost of each of which is about $4,000, are operated in this county. Some of these have been unsuccessful this year. The Kiddall trap at Cherry Point, Gulf of Georgia, heads the successful ones, having taken 220,000 fish this season. Several others have done nearly as well.

The Pacific-American Fisheries Company, organized last March with $5,000,000 capital by prominent Chicago men, with Mr. Cudahy, the great meat packer, as President, has simply astonished old-time salmon men of Puget sound with its new methods of handling the fish-packing business. This company was no sooner afloat than it proceeded to buy up all the available trap locations in this region, securing forty-six of them for $720,000 cash. Three canneries were also absorbed, with many fishing vessels, and an island in the channel of Bellingham bay to be used as a rendezvous for trapmen and web-preparers.

Early in the spring the company established a shipyard at New Whatcom, employing about 200 men from April 15th till July 4th, paying out over $15,000 in wages. This shipyard built twenty-two scows, 16x50 feet, value $700 each, total value $15,400; twelve scows 8x30, $275, total value $3,300; six dories, 8x30 feet, $150, total $900; two steam piledrivers, 24x65 feet, guns 75 feet high, 7,000-pound hammers, value $6,000 each, total $12,000.

The shipyard razed up over 500,000 feet of lumber. The wages paid ranged from $1 50 to $5 per day.

But the most gigantic evidence of the revolutionary methods of this new force in our fisheries is the great cannery at Fairhaven. When the Alaska Packers' Association of San Francisco three years ago built its famous cannery at Blaine, having a capacity of 4,000 cases per day, the old-time packers of the Pacific Coast shook their heads dubiously and remarked that it would be impossible to operate so tremendous a concern at a profit. It was far the largest fish-packing establishment in the world. But when the Pacific-American Company required two or three acres for its new cannery buildings at Fairhaven and put up a main cannery building 350 feet long and 200 feet wide, and set machinery for a capacity of 6,000 cases a day, the old-time canners "had a fit."

Such a thing as employing from 500 to 600 persons within the walls of a single cannery was unheard of and, said to be impracticable; but it wasn't and has proved a wonderful success in a season of unprecedented rushing. Aside from its enormous pack, this great establishment ships from one to three carloads per day of fresh fish on ice to the great cities of the East, each car holding 26,325 pounds according to the average up to date; and as fresh iced salmon wholesales at 15 cents a pound in New York, a carload is worth $3,949 95, or about $2,000 net here.

The salting and pickling department of this big plant employs 200 hands and is operated with the greatest expediency day and night. No Chinamen are engaged in this work, although over 250 are employed in the cannery. Several methods of salting are employed, but the principal process is equipped with three enormous vats of timber, each vat being six feet deep, eight feet wide and ten feet long. The salmon are dressed, beheaded and disentrailed, and thrown into the vats in layers, a thick coat of salt marking the layers. The fish are tamped in solid, the meat being pressed in so that the interstices will admit no air.

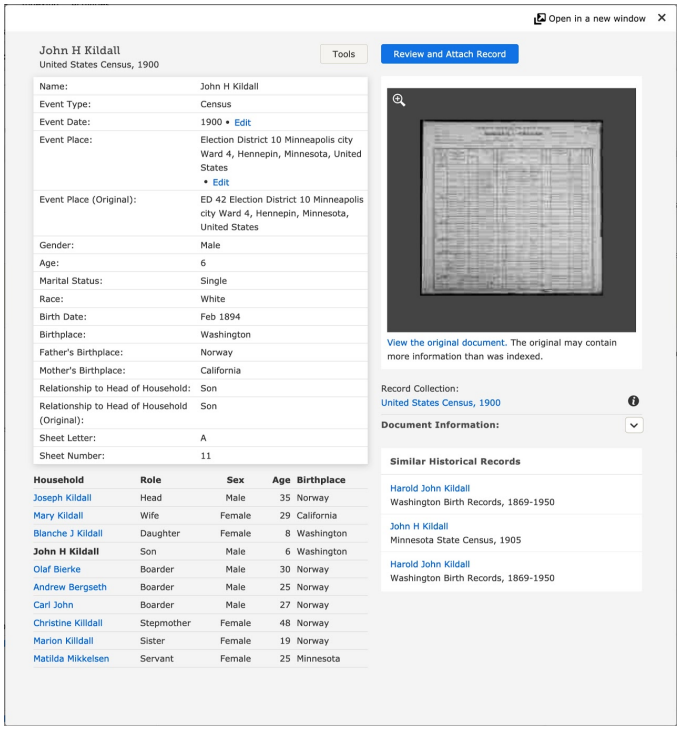
The P.-A. F. Co. has orders ahead for an extensive trade with the Japanese. The little Orientals require that salmon salted for them shall not be beheaded and that the fish must be allowed to fairly enter a state of decomposition or decay before salt is applied; then they must be dry salted and packed in barrels.

The Puget sound salmon pack will reach very close to a million cases this year, and the industry is still considered in its infancy. The eight new State salmon hatcheries will add about 75,000,000 young salmon to the storehouse of the Pacific next season, and the hope of this mighty industry rests with them.

[HN01AA][GDrive]

1900 Census - Minneapolis, Minnesota -

Full transcript : [HS003P][GDrive]



John H Kildall
United States Census, 1900

Tools | Review and Attach Record

Name:	John H Kildall
Event Type:	Census
Event Date:	1900 • Edit
Event Place:	Election District 10 Minneapolis city Ward 4, Hennepin, Minnesota, United States • Edit
Event Place (Original):	ED 42 Election District 10 Minneapolis city Ward 4, Hennepin, Minnesota, United States
Gender:	Male
Age:	6
Marital Status:	Single
Race:	White
Birth Date:	Feb 1894
Birthplace:	Washington
Father's Birthplace:	Norway
Mother's Birthplace:	California
Relationship to Head of Household:	Son
Relationship to Head of Household (Original):	Son
Sheet Letter:	A
Sheet Number:	11

View the original document. The original may contain more information than was indexed.

Record Collection: United States Census, 1900

Document Information:

Similar Historical Records

Harold John Kildall
Washington Birth Records, 1869-1950

John H Kildall
Minnesota State Census, 1905

Harold John Kildall
Washington Birth Records, 1869-1950

Household	Role	Sex	Age	Birthplace
Joseph Kildall	Head	Male	35	Norway
Mary Kildall	Wife	Female	29	California
Blanche J Kildall	Daughter	Female	8	Washington
John H Kildall	Son	Male	6	Washington
Olaf Bierke	Boarder	Male	30	Norway
Andrew Bergseth	Boarder	Male	25	Norway
Carl John	Boarder	Male	27	Norway
Christine Killdall	Stepmother	Female	48	Norway
Marion Killdall	Sister	Female	19	Norway
Matilda Mikkelsen	Servant	Female	25	Minnesota

[HS003Q][GDrive]

1901 (July 15)

https://www.newspapers.com/image/79597658/?terms=kildall%2Bpuget

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1905 Census (Minnesota fifth district)

Full census sheet : [HS003T][GDrive]

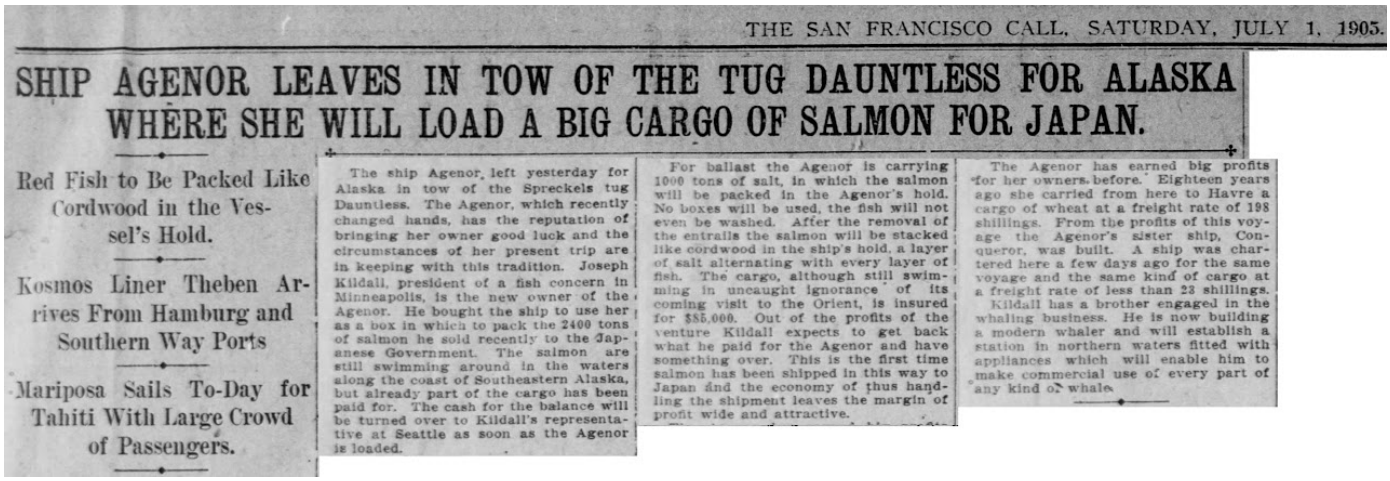
FIFTH DECENNIAL
CENSUS of MINNESOTA
POPULATION SCHEDULE

SCHEDULE SHEET NO.

[HS003U][GDrive]

1905 (July 1)

Full newspaper page : [HN019U][GDrive]



THE SAN FRANCISCO CALL, SATURDAY, JULY 1, 1905.

SHIP AGENOR LEAVES IN TOW OF THE TUG DAUNTLESS FOR ALASKA WHERE SHE WILL LOAD A BIG CARGO OF SALMON FOR JAPAN.

Red Fish to Be Packed Like Cordwood in the Vessel's Hold.

Kosmos Liner Theben Arrives From Hamburg and Southern Way Ports

Mariposa Sails To-Day for Tahiti With Large Crowd of Passengers.

The ship Agenor left yesterday for Alaska in tow of the Spreckels tug Dauntless. The Agenor, which recently changed hands, has the reputation of bringing her owner good luck and the circumstances of her present trip are in keeping with this tradition. Joseph Kildall, president of a fish concern in Minneapolis, is the new owner of the Agenor. He bought the ship to use her as a box in which to pack the 2400 tons of salmon he sold recently to the Japanese Government. The salmon are still swimming around in the waters along the coast of Southeastern Alaska, but already part of the cargo has been paid for. The cash for the balance will be turned over to Kildall's representative at Seattle as soon as the Agenor is loaded.

For ballast the Agenor is carrying 1000 tons of salt, in which the salmon will be packed in the Agenor's hold. No boxes will be used, the fish will not even be washed. After the removal of the entrails the salmon will be stacked like cordwood in the ship's hold, a layer of salt alternating with every layer of fish. The cargo, although still swimming in unconscious ignorance of its coming visit to the Orient, is insured for $85,000. Out of the profits of the venture Kildall expects to get back what he paid for the Agenor and have something over. This is the first time salmon has been shipped in this way to Japan and the economy of thus handling the shipment leaves the margin of profit wide and attractive.

The Agenor has earned big profits for her owners before. Eighteen years ago she carried from here to Havre a cargo of wheat at a freight rate of 198 shillings. From the profits of this voyage the Agenor's sister ship, Conqueror, was built. A ship was chartered here a few days ago for the same voyage and the same kind of cargo at a freight rate of less than 23 shillings.

Kildall has a brother engaged in the whaling business. He is now building a modern whaler and will establish a station in northern waters fitted with appliances which will enable him to make commercial use of every part of any kind of whale.

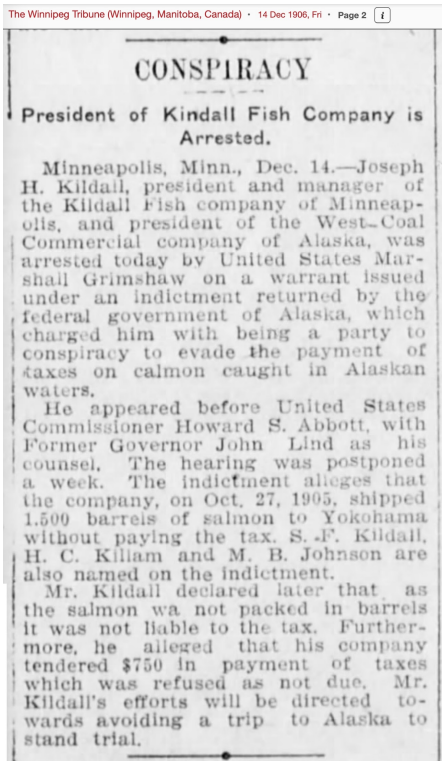
[HN019V][GDrive]

July 8 1905

https://www.newspapers.com/image/505186664/?terms=kildall

1906 (Dec 14)

Full newspaper page : [HN01AB][GDrive]



The Winnipeg Tribune (Winnipeg, Manitoba, Canada) · 14 Dec 1906, Fri · Page 2

CONSPIRACY

President of Kindall Fish Company is Arrested.

Minneapolis, Minn., Dec. 14.—Joseph H. Kildall, president and manager of the Kildall Fish company of Minneapolis, and president of the West Coal Commercial company of Alaska, was arrested today by United States Marshall Grimshaw on a warrant issued under an indictment returned by the federal government of Alaska, which charged him with being a party to conspiracy to evade the payment of taxes on calmon caught in Alaskan waters.

He appeared before United States Commissioner Howard S. Abbott, with Former Governor John Lind as his counsel. The hearing was postponed a week. The indictment alleges that the company, on Oct. 27, 1905, shipped 1,500 barrels of salmon to Yokohama without paying the tax. S. F. Kildall, H. C. Killam and M. B. Johnson are also named on the indictment.

Mr. Kildall declared later that as the salmon wa not packed in barrels it was not liable to the tax. Furthermore, he alleged that his company tendered $750 in payment of taxes which was refused as not due. Mr. Kildall's efforts will be directed towards avoiding a trip to Alaska to stand trial.

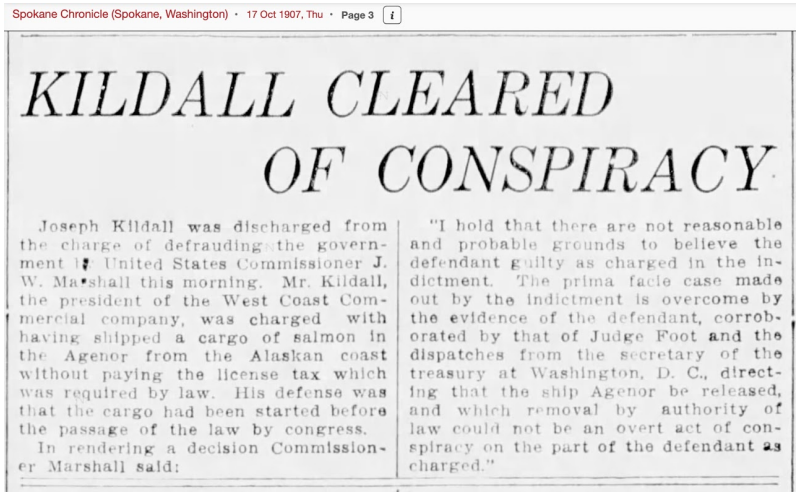
[HN01AC][GDrive]

1907 (May 1) - "Colonel Kildall" - only one reference in all newspapers to this ... Not sure who this is, but here are the references :

Full newspaper page : [HN01AD][GDrive] / clip : [HN01AE][GDrive]

1907 (Oct 17)

Full newspaper page : [HN019W][GDrive]



Spokane Chronicle (Spokane, Washington) · 17 Oct 1907, Thu · Page 3

KILDALL CLEARED OF CONSPIRACY

Joseph Kildall was discharged from the charge of defrauding the government by United States Commissioner J. W. Marshall this morning. Mr. Kildall, the president of the West Coast Commercial company, was charged with having shipped a cargo of salmon in the Agenor from the Alaskan coast without paying the license tax which was required by law. His defense was that the cargo had been started before the passage of the law by congress.

In rendering a decision Commissioner Marshall said:

"I hold that there are not reasonable and probable grounds to believe the defendant guilty as charged in the indictment. The prima facie case made out by the indictment is overcome by the evidence of the defendant, corroborated by that of Judge Foot and the dispatches from the secretary of the treasury at Washington, D. C., directing that the ship Agenor be released, and which removal by authority of law could not be an overt act of conspiracy on the part of the defendant as charged."

[HN019X][GDrive]

1910 Census - Cannot find the Kildall family .. .

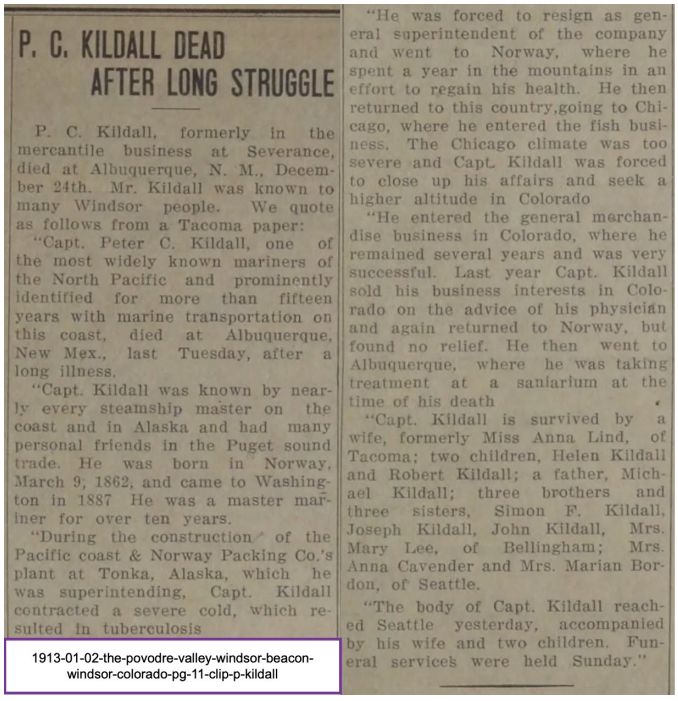
1910 - Peter kildall

https://search.findmypast.com/record?id=USC%2F1910%2F005157559%2F00801&parentid=USC%2F1910%2F005157559%2F00801%2F026

1913 (Jan 02) - "Captain Kildall" / Pater Kildall

Full newspaper page : [HN019Y][GDrive]

(also here : https://www.newspapers.com/image/145552189/?terms=Olympic%2Bkildall , but more brief)



P. C. KILDALL DEAD AFTER LONG STRUGGLE

P. C. Kildall, formerly in the mercantile business at Severance, died at Albuquerque, N. M., December 24th. Mr. Kildall was known to many Windsor people. We quote as follows from a Tacoma paper:

"Capt. Peter C. Kildall, one of the most widely known mariners of the North Pacific and prominently identified for more than fifteen years with marine transportation on this coast, died at Albuquerque, New Mex., last Tuesday, after a long illness.

"Capt. Kildall was known by nearly every steamship master on the coast and in Alaska and had many personal friends in the Puget sound trade. He was born in Norway, March 9, 1862, and came to Washington in 1887 He was a master mariner for over ten years.

"During the construction of the Pacific coast & Norway Packing Co.'s plant at Tonka, Alaska, which he was superintending, Capt. Kildall contracted a severe cold, which resulted in tuberculosis

"He was forced to resign as general superintendent of the company and went to Norway, where he spent a year in the mountains in an effort to regain his health. He then returned to this country,going to Chicago, where he entered the fish business. The Chicago climate was too severe and Capt. Kildall was forced to close up his affairs and seek a higher altitude in Colorado

"He entered the general merchandise business in Colorado, where he remained several years and was very successful. Last year Capt. Kildall sold his business interests in Colorado on the advice of his physician and again returned to Norway, but found no relief. He then went to Albuquerque, where he was taking treatment at a saniarium at the time of his death

"Capt. Kildall is survived by a wife, formerly Miss Anna Lind, of Tacoma; two children, Helen Kildall and Robert Kildall; a father, Michael Kildall; three brothers and three sisters, Simon F. Kildall, Joseph Kildall, John Kildall, Mrs. Mary Lee, of Bellingham; Mrs. Anna Cavender and Mrs. Marian Bordon, of Seattle.

"The body of Capt. Kildall reached Seattle yesterday, accompanied by his wife and two children. Funeral services were held Sunday."

1913-01-02-the-povodre-valley-windsor-beacon-windsor-colorado-pg-11-clip-p-kildall

[HN019Z][GDrive]

1913 (July 26)

Full newspaper page : [HN01AF][GDrive]

1913-07-26-the-progressive-petersburg-alaska-pg-3-clip-kildall-vacation

On a Short Vacation

Mr. and Mrs. Joseph Kildall, and their daughter and son, Blanch and Harold and Miss Doris Cavender, a relative, arrived from Seattle on the Jefferson for a visit of ten or twelve days duration. They are visiting with Mr. and Mrs. John Kildall.

Mr. Joseph Kildall, besides being secretary and one of the directors of the Pacific Coast and Norway Packing Company, is one of the stockholders and organizers of the Kildall Fishing Company with its headquarters at Seattle. This company has been quite successful last season, in that, many fishermen have shipped direct to the company, and report having obtained satisfactory results. On this trip Mr. Kildall combines both business and pleasure, but with the family, it is all pleasure as Mrs. Kildall said.

[HN01AG][GDrive]

1914 May 09 (search for "kildall")

https://newspaperarchive.com/petersburg-herald-may-09-1914-p-3/

1914 (May 20)

Full newspaper page : [HN01AH][GDrive]

At a recent meeting of the stockholders of the Pacific Coast & Norway Packing company, of Petersburg, held at Minneapolis, Minn., a new board of directors was elected, and later the board elected C. O. Steberg, of the Bank of Bukley, president, and Joseph Kildall, secretary and general manager, with his office in Seattle. It is reported that the stockholders voted an increase in the crpital stock. A complete line of can-making machinery has been ordered from the Seattle-Astoria Iron Works, and will replace the old line machinery now in the plant. The company will outfit for 60,000 cases the coming season.

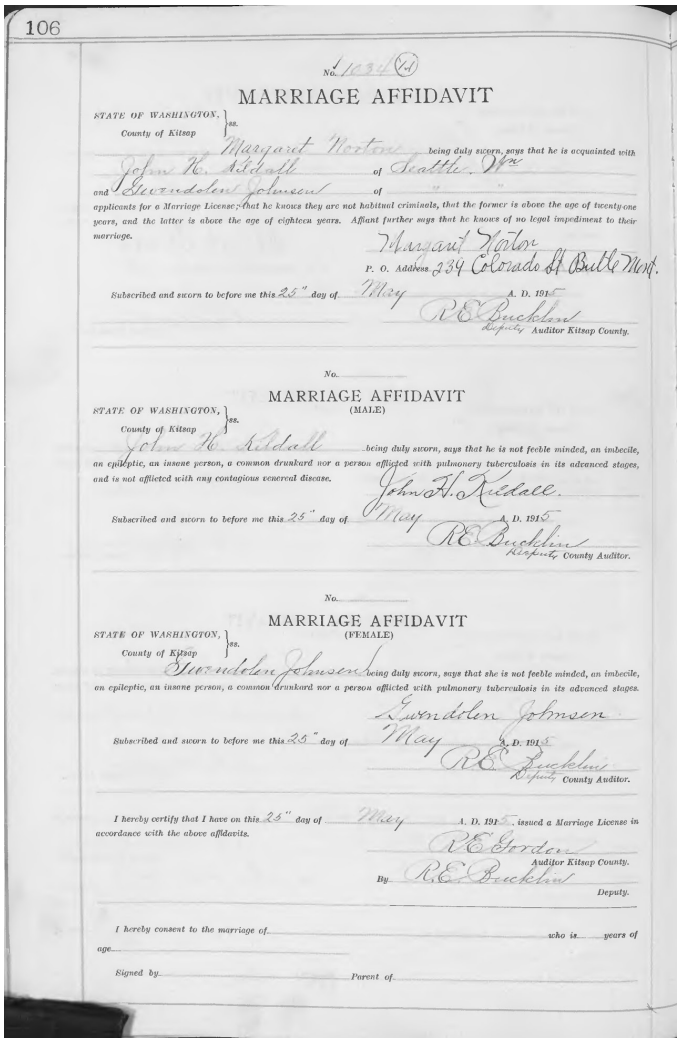
[HN01AI][GDrive]

1915 wedding - for "John H Kildall" to a "Gwendolyn Johnsen"

Port Orchard, Kitsap County wedding location ... .across from Bremerton ...

Did "Harold J Kildall "sometimes go by "John H Kildall" ?

NOTE : The marriage is ALSO filed in a 1914 Kitscap County book here - https://search.findmypast.com/record?id=https%3A%2F%2Ffamilysearch.org%2Fpal%3A%2FMM9.3.1%2FTH-1961-42953-15983-9&parentid=US%2FFS%2FM%2F090752732%2F1



106

No. 10334

MARRIAGE AFFIDAVIT

STATE OF WASHINGTON, County of Kitsap } ss.

Margaret Norton being duly sworn, says that he is acquainted with John H. Kildall of Seattle, Wn and Gwendolen Johnsen of applicants for a Marriage License; that he knows they are not habitual criminals, that the former is above the age of twenty one years, and the latter is above the age of eighteen years. Affiant further says that he knows of no legal impediment to their marriage.

Margaret Norton

P. O. Address 234 Colorado St Butte Mont.

Subscribed and sworn to before me this 25" day of May A. D. 1915

R E Buckland

Deputy Auditor Kitsap County.

No.

MARRIAGE AFFIDAVIT (MALE)

STATE OF WASHINGTON, County of Kitsap } ss.

John H. Kildall being duly sworn, says that he is not feeble minded, an imbecile, an epileptic, an insane person, a common drunkard nor a person afflicted with pulmonary tuberculosis in its advanced stages, and is not afflicted with any contagious venereal disease.

John H. Kildall.

Subscribed and sworn to before me this 25" day of May A. D. 1915

R E Buckland

Deputy County Auditor.

No.

MARRIAGE AFFIDAVIT (FEMALE)

STATE OF WASHINGTON, County of Kitsap } ss.

Gwendolen Johnsen being duly sworn, says that she is not feeble minded, an imbecile, an epileptic, an insane person, a common drunkard nor a person afflicted with pulmonary tuberculosis in its advanced stages.

Gwendolen Johnsen

Subscribed and sworn to before me this 25" day of May A. D. 1915

R E Buckland

Deputy County Auditor.

I hereby certify that I have on this 25" day of May A. D. 1915 issued a Marriage License in accordance with the above affidavits.

R E Gordon

Auditor Kitsap County.

By R E Buckland

Deputy.

I hereby consent to the marriage of ____ who is ____ years of age.

Signed by ____ Parent of ____

[HG0079][GDrive]

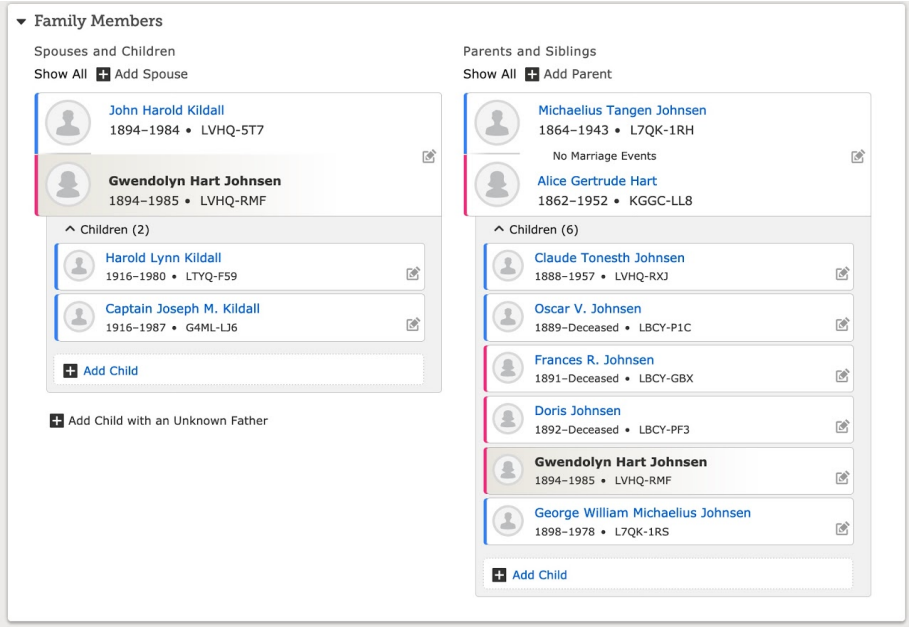
Ancestry info on "Gwendolyn Hart Johnsen"

Born 30 November 1894 = Birkdale, Lancashire, England, United Kingdom

Christening = 3 Aug 1899 = Hoose, Cheshire, England

Immigration to USA : 1899

PDF of source : [HL0056][GDrive]

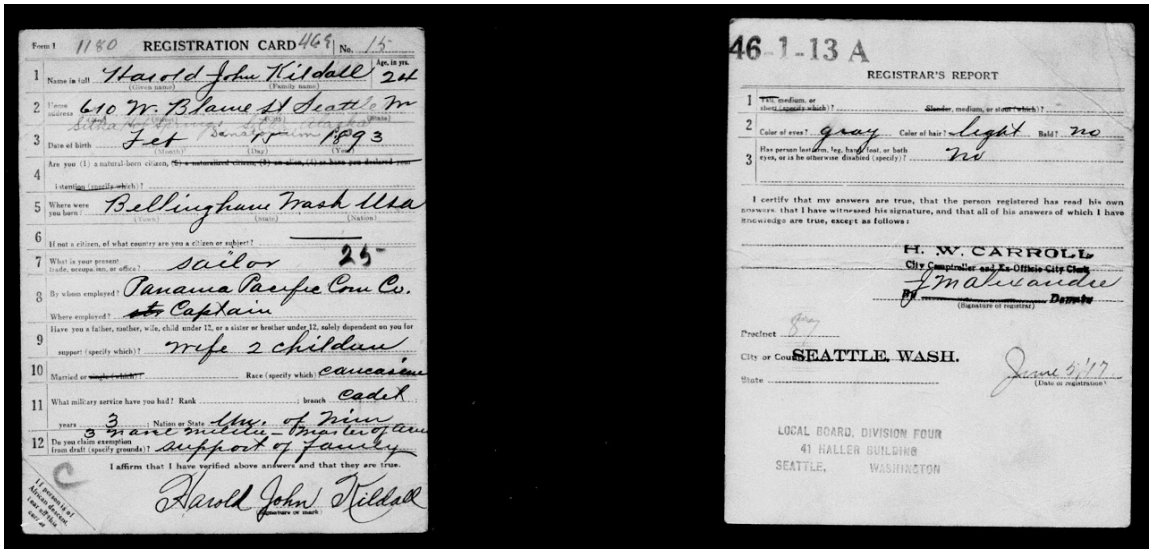


[HL0057][GDrive]

1917 - Draft (WW1) registration for Harold John Kildall

Harold John Kildall -

Worked at P**anama Pacific Commerical Corp**



[HG0077][GDrive]

1919 (Jan 09) "Captain S F Kildall"

Full newspaper page : [HN01A0][GDrive]

https://en.wikipedia.org/wiki/Bureau_Veritas

LUNEVILLE IS VESSEL OF YACHT-LINE LINES

Product of Portland Shipyard Attracting Wide Attention in Port. Auxiliary Schooner is Handsome Craft, Staunchly Built and Lavishly Equipped

"In model and finish she is a yacht." Unusual interest is being displayed in marine circles in the arrival of the French auxiliary schooner Luneville in port, and the above is the unanimous expression of the large coterie of shipping men who have taken the opportunity of looking over the ship since her arrival from the Columbia River.

One of the twenty ships built by the Foundation Company at its Portland yard, the Luneville represents the finest type of marine architecture in auxiliary-powered vessels that ever entered this or any other port. Lying at her berth at the Outer Docks the vessel is the cynosure of all eyes, and she is declared by men who have sailed in all kinds of vessels to be the trimmest craft of her type afloat.

Capt. S. F. Kildall, inspector for the Bureau Veritas, and who has been in charge of all the ships turned out at the Foundation yard at Portland on their trial trips, is most enthusiastic about the Luneville, and this reflects his attitude regarding all the other ships of her class, forty of which have been built at the Portland and Tacoma shipyards of the Foundation Company.

Delighted With Ship.

Capt. Kildall came from Portland as master of the Luneville and he is delighted with the vessel.

"They are absolutely the finest ships I ever sailed in," commented Capt. Kildall, in discussing the Luneville and other ships of her type with a member of The Times staff to-day. "You couldn't get better-handling ships." "She is the most complete ship that money could produce and I may add that she is a credit to the Foundation Company, her builders."

Lieut. Albert F. Vaison de Fontaube, of the French Navy, and a member of the French High Commission in the United States and Canada, who went over the ship this morning in company with Paul B. Thompson, manager of the Foundation yards here, was highly pleased with the vessel and took a keen interest in her equipment. "She redounds great credit to her builders," remarked Lieut. Vaison de Fontaube. "I am well satisfied with her."

Built Last Year.

The keel of the Luneville was laid down at Portland on May 31, 1918, and on October 30 the vessel was launched. She was completely outfitted at the company's plant and ran her official trials on December 12. On her trials she averaged a speed of 10.36 knots. The Luneville is a five-masted vessel, schooner rigged. She is a vessel of 3,000 deadweight tons and 285 feet in length.

The Luneville is equipped with triple-expansion steam engines of 700 horsepower, having twin engines of 350 horsepower each. An inspection of the engine-room gives one the impression of the engineering appointments of a large liner.

On the run up the coast from the Columbia River the vessel reeled off ten and a half knots, and even when she ran into a snorting easterly gale off Cape Flattery she managed to knock off eight and a half knots. Speaking of the Flattery storm Capt. Kildall said: "She handled like a duck." The vessel came up under power, only the fore and stay-sail being used.

Coal is burned in the furnaces of the Luneville. The bunkers, with a capacity of 600 tons, are located aft.

Fine Accommodation.

In accommodation, for the officers and members of the crew, the ship excels anything in workmanship ever put into a cargo carrier. In addition to the captain's cabin and a spare room for his use, there are twelve splendidly fitted compartments for the use of the officers. These quarters line the port and starboard side right aft, the dining saloon being located amidships aft, with an up-to-date pantry conveniently adjacent. The woodwork in the officers' quarters is of polished oak and the furnishings are of the best procurable. Right abaft the stacks which parallel the "jigger" is located the engineer's quarters, which compare in every way with the officers' accommodation.

Crew in Clover

The members of the crew of the Luneville will be fortunate sons of the sea. The French crew has yet to arrive to take over the ship, but when they do they will have a pleasant surprise in store.

The sailors of a freight-carrier or passenger-carrier for that matter never saw better quarters than are provided on the Luneville. All the quarters are on deck right forward. In a house located between the "Fore" and "Main" is the galley, wonderfully equipped and with a tiled floor, and right alongside is the sailor's mess-room. Immediately forward of this is another house used as the sleeping quarters for the crew. Just think of it, these cabins contain iron berths, spring and sanitary mattresses and also an iron wardrobe to hold the men's personal effects. No ordinary sailor ever saw such snug quarters before.

Has Pretty Lines

The Lunville has pretty lines, resembling the lines of a pleasure yacht. The vessel is staunchly built and every part of her reflects thoroughness in construction.

To give an idea of the strength of her construction, the ship has four 20 by 20 keelsons, four 16 by 16 sister keelsons and two 14 by 14 bilge keelsons, all bolted through and rivetted clear to the keel. There is no doubt in the minds of anyone who understands ship-construction that the fastening and everything else about the Luneville has been thoroughly done.

No Vibration

No engines ever worked more smoothly, say her engineers. There was not the slightest evidence of undue vibration throughout the run up the coast. Neither did the vessel "Yaw," a fact especially remarked upon by her skipper.

In deck-equipment the vessel is perfect. The winches, anchors and other gear, including the hoisting of the sails, is all done by steam.

In addition to her port and starboard anchors the vessel carries a spare kedge and steam anchor. The lighting of the ship is all done by electricity. Electric lights are used for the binnacle, side-lights, search-lights, compass, and telegraph. The accommodation is elaborately fitted with electric-lighting fixtures. Everything to assist navigation is complete. There is auxiliary power forward for the operation of the gear when the main engines are shut down.

The five masts are each 132 feet in height to the truck, and the spread of canvass carried is estimated at 50,000 square yards. The running gear is of the best, being of the four-strand variety, Manila rope.

Brings Car Here.

Capt. Kildall and his wife, who came north with her husband, propose to make a tour of Vancouver Island before returning South. With this tour in view Capt. Kildall brought his automobile with him, the car being stowed on deck amidships.

C. W. Craig, who was assistant to Manager Paul Thompson at Portland, also came north on the Luneville, accompanied by his wife. Both Mrs. Kildall and Mrs. Craig signed on the ship's articles as stewardesses.

The members of the ship's crew were composed mostly of men in the employ of the Foundation Company at Portland. Capt. Skog is chief mate, and the engines are under the supervision of Chief Engineer Riley.

The Luneville, after completing the discharge of her 1,700-ton cargo, will proceed to Seattle to load for the voyage to France.

[HN01A1][GDrive]

1920 - US Census - Harold "Kildahl" in Sitka (First Judicial District, Alaska Territory)

Harold J Kildahl (Age: 26 , Birth Year: about 1894 in Washington

Spouse's Name: Gwendolyn Kildahl

Father's Birthplace: Norway

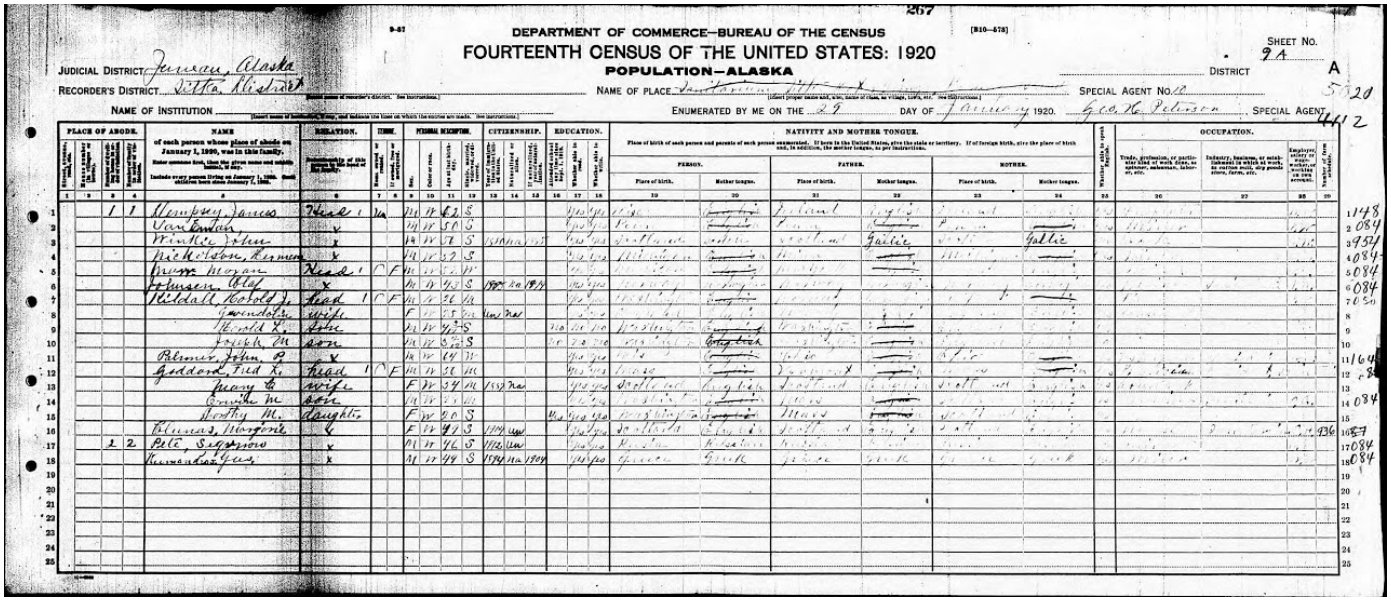
Mother's Birthplace: Washington

Native Tongue: English

Home Owned or Rented: Owned

Household Members:

- Harold J Kildahl 26
- Gwendolyn Kildahl 25
- Harold L Kildahl 4
- Joseph M Kildahl 3
- John P Palmer



DEPARTMENT OF COMMERCE—BUREAU OF THE CENSUS

FOURTEENTH CENSUS OF THE UNITED STATES: 1920

POPULATION—ALASKA

JUDICIAL DISTRICT Juneau, Alaska — SHEET NO. 9A — DISTRICT A

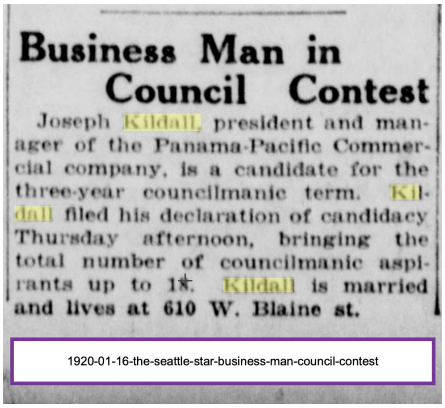
RECORDER'S DISTRICT Sitka, Kistrict — NAME OF PLACE San Francisco — SPECIAL AGENT NO. 22

NAME OF INSTITUTION — ENUMERATED BY ME ON THE 29 DAY OF January 1920. — Geo. N. Peterson SPECIAL AGENT

	Place of abode	Name	Relation	Personal description	Citizenship	Education	Nativity and mother tongue: Person	Father	Mother	Occupation
1	1 1	Dempsey James	Head	M W 42 S						
2		Van Landon	x	M W 50 S						
3		Winter John	x	M W 57 S					Gallic	
4		Nicholson, Kirmen	x	M W 57 S						
5		Brown Morgan	Head	F W						
6		Johnsen Olaf	x	M W 43 S						
7		Kildall, Harold J.	Head	M W 26 M						
8		Gwendolyn	wife	F W 25 M						
9		Harold L.	Son	M W 4 S						
10		Joseph M	son	M W 3 S						
11		Palmer, John P	x	M W 64 W						
12		Goddard, Fred L.	Head	M W 38 M						
13		Mary E	wife	F W 34 M						
14		Smith M	son	M W						
15		Worthy M.	daughter	F W 20 S						
16		Clemens, Margorie		F W 4 S						
17	2 2	Pete, Sagonno	x	M W 46 S						
18		Newman Lyn	x	M W 49 S						

[HS003O][GDrive]

1920 (Jan 16) - From "The Seattle Star" :



Business Man in Council Contest

Joseph Kildall, president and manager of the Panama-Pacific Commercial company, is a candidate for the three-year councilmanic term. Kildall filed his declaration of candidacy Thursday afternoon, bringing the total number of councilmanic aspirants up to 18. Kildall is married and lives at 610 W. Blaine st.

1920-01-16-the-seattle-star-business-man-council-contest

[HN01AL][GDrive]

1922 (August 10)

https://washingtondigitalnewspapers.org/?a=d&d=LYNDTRIB19220810.1.1&srpos=22&e=-------en-20--21-byDA.rev-txt-txIN-kildall+------

1922-08-10-the-lynden-tribune-city-mourns-loss-of-hugh-jamieson

NO. 8

CITY MOURNS LOSS OF HUGH JAMIESON

Lynden Merchant Passes Away Suddenly Wednesday Morning; Funeral Services Sunday

Funeral services for the late Hugh H. Jamieson, who passed away suddenly at 1 o'clock Tuesday morning, will be held on Sunday at 1:30 p. m. at Knapp's Parlors, with the Rev. E. O. Grimes and the Rev. Herbert Jones of Ferndale, formerly of Lynden, officiating.

Bellingham Lodge No. 44, F. and A. M. will have charge of the services at the family plot at 3 p. m. at the Bay View cemterey in Bellingham, with an escort of the Knights Templar.

Mr. Jamieson retired Tuesday evening early in the best of spirits, whistling as he walked up the stairs. He seemed to be breathing heavily about one o'clock, and had passed away before a doctor could reach him.

Mr. Jamieson was born at Canterbury, New Brunswick Dec. 1, 1859. He came to Lynden 18 years ago, purchasing the Kildall Mercantile Company. Previous to that time, he had conducted a store at Clearbrook, and had been with the Washington Grocery Company of Bellingham for one year.

1922-08-10-the-lynden-tribune-city-mourns-loss-of-hugh-jamieson

In the passing of Hugh Jamieson, Lynden loses a stalwart friend. He had always been a leader in community activities, and contributed liberally to worthy civic movements. During the war, he served on various patriotic committees, doing his utmost as a loyal American.

During his long business career in Whatcom County, he made a legion of friends, to whom the news of his sudden passing came as a distinct shock. Mr. Jamieson was a member of Bellingham Bay lodge no. 44, F. & A. M.; Royal Arch chapter No. 12 and Hesperus Commandery No. 8, of Bellingham.

He is survived by his widow, Mrs. Cena Jamieson; one daughter, Reta, two sons, Ivan, of Lynden, and Cecil J., a lieutenant in the army at Fort Douglas, Utah; two sisters, Mrs. Prudence Keith, Rhinelander, Wis., and Mrs. Minnie Hay, Riverside, Cal., and five brothers, Clarence, of Ferndale; Charles of Stillwater, Minnesota; Andrew of Seattle; Will of Riverside, Cal., and James of Warner, Alberta.

Cecil Jamieson will arrive in Lynden Friday, and James Jamieson of Warner, Alberta, is expected here Saturday.

1922 - Travel to Nagasaki

https://search.ancestry.com/cgi-bin/sse.dll?indiv=1&dbid=8945&h=2637948&tid=&pid=&queryId=ea0c9282dc62a1d54c55c88015cc1638&usePUB=true&_phsrc=MOW14&_phstart=successSource

Name: Harold Kildall

Gender: Male

Nationality: English

Arrival Age: 29

Birth Date: 1893

Departure Place: Nagasski

Arrival Date: Mar 1922

Arrival Place: Seattle, Washington

Ship Name: Eastern Merchant

Line Number: 4

1924

https://search.ancestry.com/cgi-bin/sse.dll?indiv=1&dbid=8945&h=570718&tid=&pid=&queryId=ea0c9282dc62a1d54c55c88015cc1638&usePUB=true&_phsrc=MOW10&_phstart=successSource

1924-03-usa-list-passenger-wam1383-94-0196.jpg

Name: Harold Kildall

Gender: Male

Nationality: English

Arrival Age: 30

Birth Date: 1894

Departure Place: Driren, China

Arrival Date: Mar 1924

Arrival Place: Seattle, Washington

Ship Name: Crosskeys

Line Number: 2

Crosskeys : China to Seattle ...

crossed out, not sure why

1926

1926

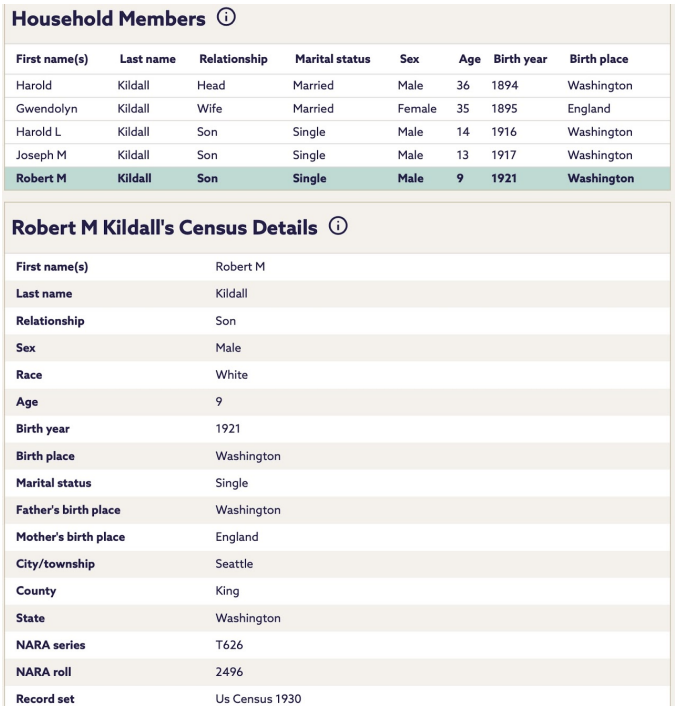
https://www.ancestry.com/imageviewer/collections/8945/images/WAM1383_120-0026?treeid=&personid=&hintid=&queryId=ea0c9282dc62a1d54c55c88015cc1638&usePUB=true&_phsrc=MOW12&_phstart=successSource&usePUBJs=true&_ga=2.38847268.642271785.1602734250-1282622217.1602734250&pId=701630

1930 Census - Harold Kildall

Full census sheet : [HS003M][GDrive]

1. harold - (1894)
2. Gwendolyn (1895)
3. Haronld L (1916)
4. Joseph M (1917)
5. **Robert M** (1921) (in the 1930 census, this is "Robert E"

Address : 1901 Fifth Avenue West



Household Members

First name(s)	Last name	Relationship	Marital status	Sex	Age	Birth year	Birth place
Harold	Kildall	Head	Married	Male	36	1894	Washington
Gwendolyn	Kildall	Wife	Married	Female	35	1895	England
Harold L	Kildall	Son	Single	Male	14	1916	Washington
Joseph M	Kildall	Son	Single	Male	13	1917	Washington
Robert M	**Kildall**	**Son**	**Single**	**Male**	**9**	**1921**	**Washington**

Robert M Kildall's Census Details

First name(s)	Robert M
Last name	Kildall
Relationship	Son
Sex	Male
Race	White
Age	9
Birth year	1921
Birth place	Washington
Marital status	Single
Father's birth place	Washington
Mother's birth place	England
City/township	Seattle
County	King
State	Washington
NARA series	T626
NARA roll	2496
Record set	Us Census 1930

[HS003L][GDrive]

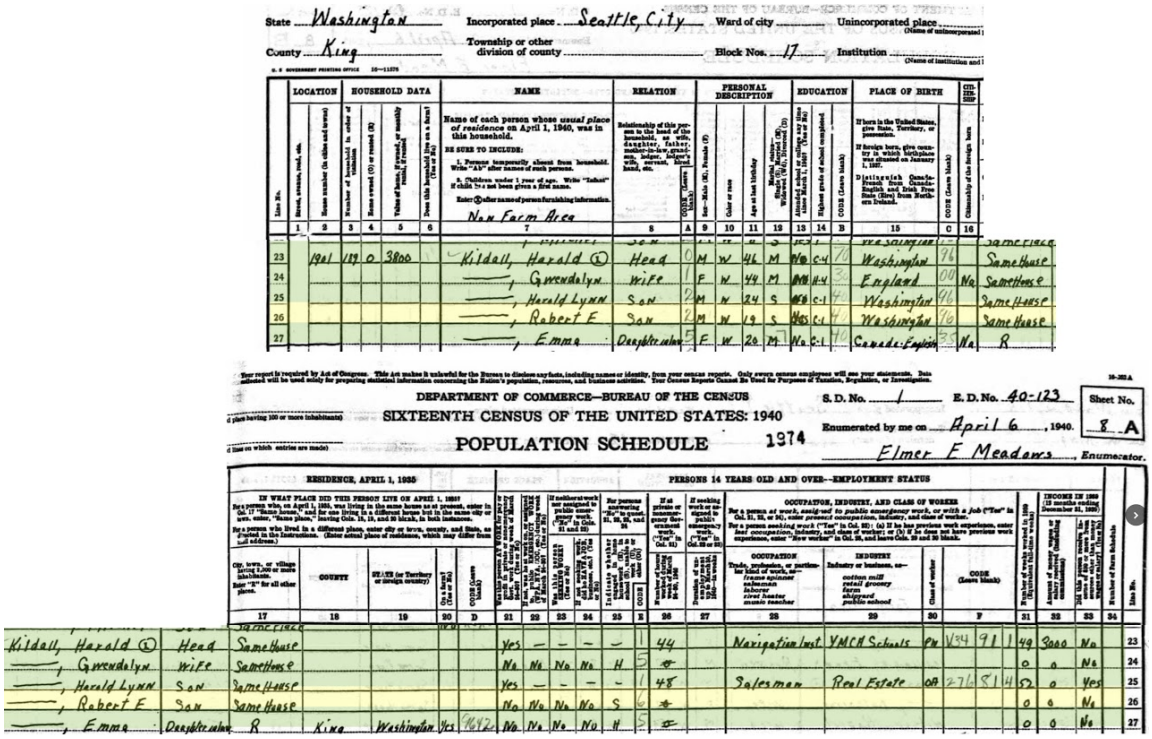
1940 census - "Harold Kildall"

Full census sheet : [HS003R][GDrive]

Household members :

- harold Kildall
- Gwendalyn
- Herald Lynn Kildall
- Robert E Kildall
- Emma Kildall
- (Not shown ... Joseph Maxwell Kildall)

1901 Fifth Avenue West



DEPARTMENT OF COMMERCE—BUREAU OF THE CENSUS
SIXTEENTH CENSUS OF THE UNITED STATES: 1940
POPULATION SCHEDULE

State Washington — Incorporated place Seattle City — Ward of city — Unincorporated place —
County King — Township or other division of county — Block No. 17 — Institution —

S. D. No. 1 — E. D. No. 40-123 — Sheet No. 8 A
Enumerated by me on April 6, 1940.
Elmer F Meadows, Enumerator.

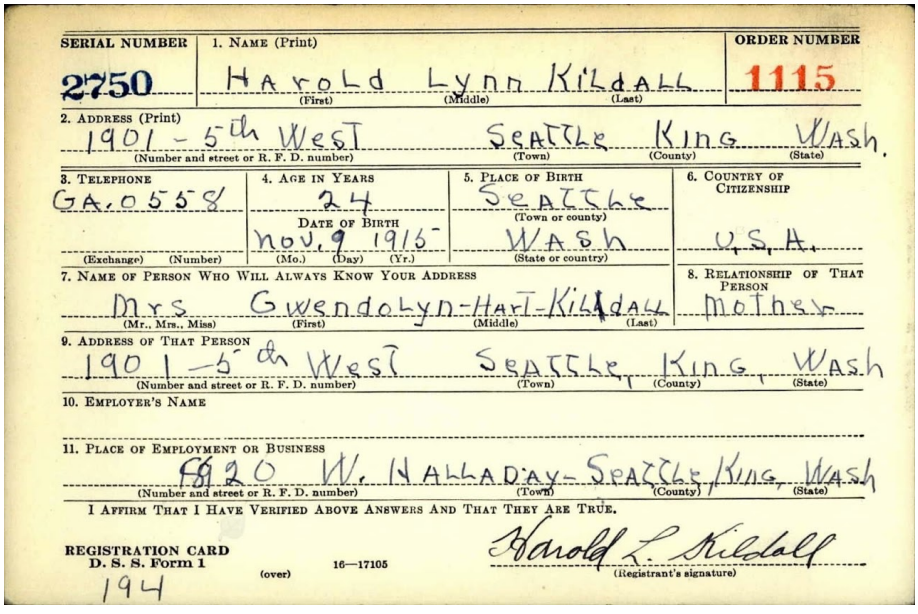
Line No.	Location: Street, avenue, road, etc.	Location: House number (in cities and towns)	Household data: Number of household in order of visitation	Household data: Home owned (O) or rented (R)	Household data: Value of home, if owned, or monthly rental, if rented	Household data: Does this household live on a farm? (Yes or No)	Name of each person whose usual place of residence on April 1, 1940, was in this household.	Relation	Personal description: Sex	Personal description: Color or race	Personal description: Age at last birthday	Personal description: Married, single, widowed, or divorced	Education: Attended school or college any time since March 1, 1940?	Education: Highest grade of school completed	Place of birth	Citizenship of the foreign born
23	1901	119	0	3800			Kildall, Harold ①	Head	M	W	46	M	No	C-4	Washington	Same House
24							——, Gwendolyn	Wife	F	W	44	M	No	H-4	England	No, Same House
25							——, Harold Lynn	Son	M	W	24	S	Yes	C-1	Washington	Same House
26							——, Robert E	Son	M	W	19	S	Yes	C-1	Washington	Same House
27							——, Emma	Daughter-in-law	F	W	20	M	No	C-1	Canada-English	No, R

RESIDENCE, APRIL 1, 1935 — PERSONS 14 YEARS OLD AND OVER—EMPLOYMENT STATUS

Kildall, Harold ①	Head	Same House					Yes	—	—	—	—	1	44		Navigation Inst.	YMCA Schools	PW	V-4	9	1	49	3200	No		23
——, Gwendolyn	Wife	Same House					No	No	No	No	H	5	∅								0	0	No		24
——, Harold Lynn	Son	Same House					Yes	—	—	—	—	1	48		Salesman	Real Estate	OA	2-7	6	1	52	0	Yes		25
——, Robert E	Son	Same House					No	No	No	No	S	6	∅								0	0	No		26
——, Emma	Daughter-in-law	R	King	Washington	Yes	4612	No	No	No	No	H	5	∅								0	0	No		27

[HS003S][GDrive]

1940 (Oct 16) - Harold Lynn Kildall



SERIAL NUMBER 2750 — ORDER NUMBER 1115

1. NAME (Print): Harold (First) Lynn (Middle) Kildall (Last)

2. ADDRESS (Print): 1901 - 5th West (Number and street or R. F. D. number) Seattle (Town) King (County) Wash. (State)

3. TELEPHONE: GA. 0558 (Exchange) (Number)

4. AGE IN YEARS: 24 — DATE OF BIRTH: Nov. 9 1915 (Mo.) (Day) (Yr.)

5. PLACE OF BIRTH: Seattle (Town or county) Wash (State or country)

6. COUNTRY OF CITIZENSHIP: U. S. A.

7. NAME OF PERSON WHO WILL ALWAYS KNOW YOUR ADDRESS: Mrs (Mr., Mrs., Miss) Gwendolyn Hart Kildall (First) (Middle) (Last)

8. RELATIONSHIP OF THAT PERSON: mother

9. ADDRESS OF THAT PERSON: 1901 - 5th West (Number and street or R. F. D. number) Seattle (Town) King (County) Wash (State)

10. EMPLOYER'S NAME:

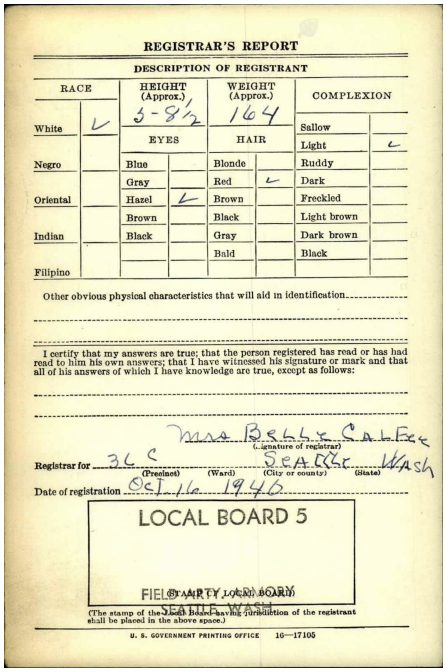
11. PLACE OF EMPLOYMENT OR BUSINESS: 6820 W. Halladay (Number and street or R. F. D. number) Seattle (Town) King (County) Wash (State)

I AFFIRM THAT I HAVE VERIFIED ABOVE ANSWERS AND THAT THEY ARE TRUE.

Harold L. Kildall (Registrant's signature)

REGISTRATION CARD
D. S. S. Form 1
(over) 16—17105
194

[HG0075][GDrive]



REGISTRAR'S REPORT

DESCRIPTION OF REGISTRANT

RACE		HEIGHT (Approx.)		WEIGHT (Approx.)		COMPLEXION	
White	✓	5-8½		164		Sallow	
Negro		EYES		HAIR		Light	✓
Oriental		Blue		Blonde		Ruddy	
		Gray		Red	✓	Dark	
Indian		Hazel	✓	Brown		Freckled	
		Brown		Black		Light brown	
Filipino		Black		Gray		Dark brown	
				Bald		Black	

Other obvious physical characteristics that will aid in identification:

I certify that my answers are true; that the person registered has read or has had read to him his own answers; that I have witnessed his signature or mark and that all of his answers of which I have knowledge are true, except as follows:

Mrs. Bessie Sallee (signature of registrar)

Registrar for 36 C (Precinct) Seattle (Ward) (City or county) Wash (State)

Date of registration Oct. 16 1940

LOCAL BOARD 5

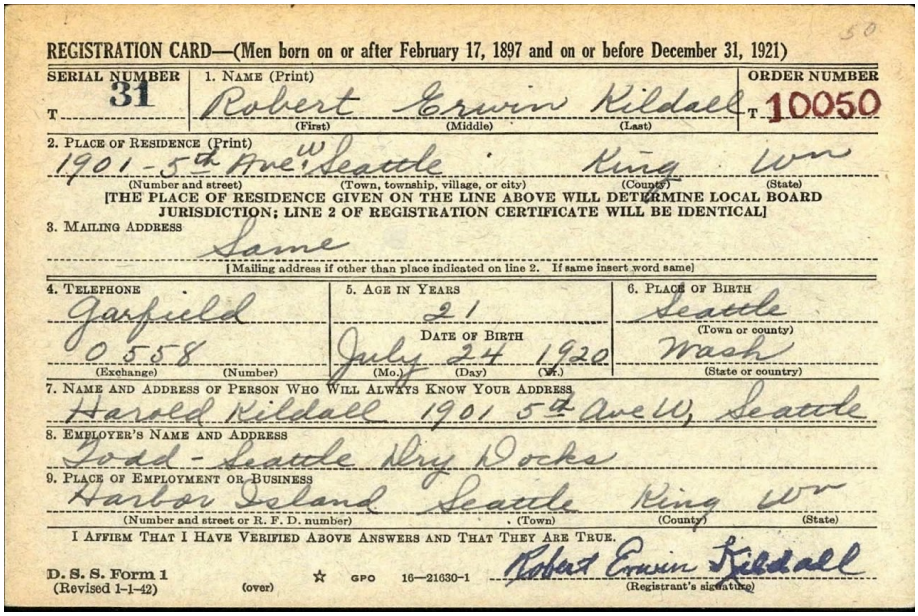
FIELD A. HARRY LOCAL BOARD
SEATTLE, WASH.

(The stamp of the local board having jurisdiction of the registrant shall be placed in the above space.)

U. S. GOVERNMENT PRINTING OFFICE 16—17105

[HG0076][GDrive]

1942 (Feb 14) - Robert Erwin Kildall



REGISTRATION CARD—(Men born on or after February 17, 1897 and on or before December 31, 1921)

SERIAL NUMBER 31 | 1. NAME (Print) Robert (First) Erwin (Middle) Kildall (Last) | ORDER NUMBER T 10050

2. PLACE OF RESIDENCE (Print) 1901 - 5th Ave W (Number and street) Seattle (Town, township, village, or city) King (County) Wn (State)

[THE PLACE OF RESIDENCE GIVEN ON THE LINE ABOVE WILL DETERMINE LOCAL BOARD JURISDICTION; LINE 2 OF REGISTRATION CERTIFICATE WILL BE IDENTICAL]

3. MAILING ADDRESS Same

[Mailing address if other than place indicated on line 2. If same insert word same]

4. TELEPHONE Garfield 0558 (Exchange) (Number)

5. AGE IN YEARS 21 — DATE OF BIRTH July 24 1920 (Mo.) (Day) (Yr.)

6. PLACE OF BIRTH Seattle (Town or county) Wash (State or country)

7. NAME AND ADDRESS OF PERSON WHO WILL ALWAYS KNOW YOUR ADDRESS Harold Kildall 1901 5th Ave W, Seattle

8. EMPLOYER'S NAME AND ADDRESS Todd - Seattle Dry Docks

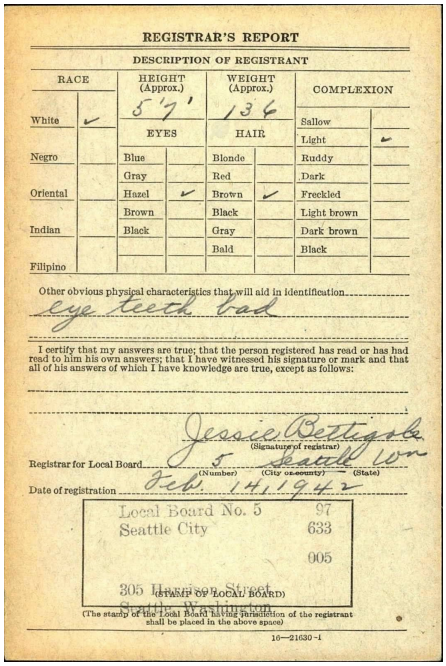
9. PLACE OF EMPLOYMENT OR BUSINESS Harbor Island (Number and street or R. F. D. number) Seattle (Town) King (County) Wn (State)

I AFFIRM THAT I HAVE VERIFIED ABOVE ANSWERS AND THAT THEY ARE TRUE.

Robert Erwin Kildall (Registrant's signature)

D. S. S. Form 1 (Revised 1-1-42) (over) ☆ GPO 16—21630-1

[HG0073][GDrive]



REGISTRAR'S REPORT

DESCRIPTION OF REGISTRANT

RACE		HEIGHT (Approx.)		WEIGHT (Approx.)		COMPLEXION	
White	✓	5' 7"		134		Sallow	
		EYES		HAIR		Light	✓
Negro		Blue		Blonde		Ruddy	
		Gray		Red		Dark	
Oriental		Hazel	✓	Brown	✓	Freckled	
		Brown		Black		Light brown	
Indian		Black		Gray		Dark brown	
				Bald		Black	
Filipino							

Other obvious physical characteristics that will aid in identification: Eye teeth bad

I certify that my answers are true; that the person registered has read or has had read to him his own answers; that I have witnessed his signature or mark and that all of his answers of which I have knowledge are true, except as follows:

Jessie Bettinger (Signature of registrar)

Registrar for Local Board 5 (Number) Seattle (City or county) Wn (State)

Date of registration Feb 14, 1942

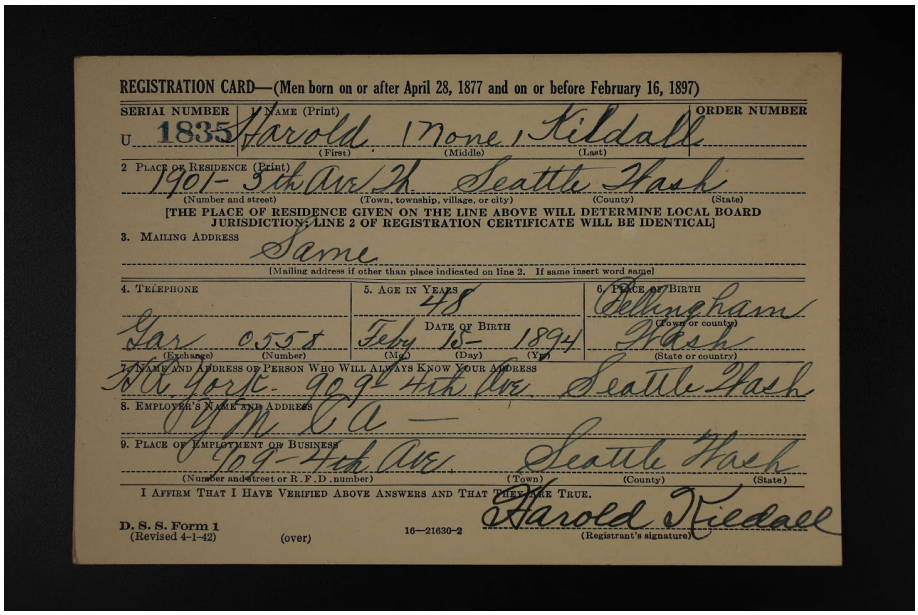
Local Board No. 5 97
Seattle City 633
005
305 Harrison Street (STAMP OF LOCAL BOARD)
Seattle, Washington

(The stamp of the Local Board having jurisdiction of the registrant shall be placed in the above space)

16—21630-1

[HG0074][GDrive]

1942 (Feb 15) - WW2 Draft - Harold Kildall (now using 1894 as birth year)



REGISTRATION CARD—(Men born on or after April 28, 1877 and on or before February 16, 1897)

SERIAL NUMBER U 1835 | 1. NAME (Print) Harold (First) None (Middle) Kildall (Last) | ORDER NUMBER

2 PLACE OF RESIDENCE (Print) 1901 - 5th Ave N. Seattle Wash (Number and street) (Town, township, village, or city) (County) (State)

[THE PLACE OF RESIDENCE GIVEN ON THE LINE ABOVE WILL DETERMINE LOCAL BOARD JURISDICTION; LINE 2 OF REGISTRATION CERTIFICATE WILL BE IDENTICAL]

3. MAILING ADDRESS Same

[Mailing address if other than place indicated on line 2. If same insert word same]

4. TELEPHONE Gar 0558 (Exchange) (Number)

5. AGE IN YEARS 48 — DATE OF BIRTH Feby 16 1894 (Mo.) (Day) (Yr.)

6. PLACE OF BIRTH Bellingham (Town or county) Wash. (State or country)

7. NAME AND ADDRESS OF PERSON WHO WILL ALWAYS KNOW YOUR ADDRESS M. A. Yorst 909 4th Ave Seattle Wash

8. EMPLOYER'S NAME AND ADDRESS Y M C A

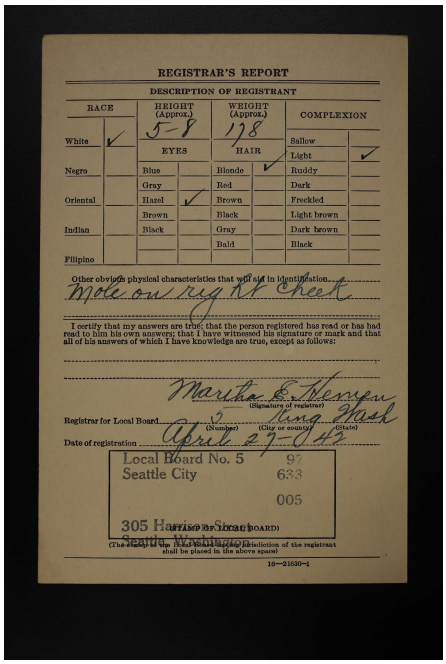
9. PLACE OF EMPLOYMENT OR BUSINESS 909 - 4th Ave (Number and street or R. F. D. number) Seattle (Town) Wash (State)

I AFFIRM THAT I HAVE VERIFIED ABOVE ANSWERS AND THAT THEY ARE TRUE.

Harold Kildall (Registrant's signature)

D. S. S. Form 1 (Revised 4-1-42) (over) 16—21630-2

[HG0071][GDrive]



REGISTRAR'S REPORT

DESCRIPTION OF REGISTRANT

RACE		HEIGHT (Approx.)		WEIGHT (Approx.)		COMPLEXION	
White	✓	5-8		178		Sallow	
		EYES		HAIR		Light	✓
Negro		Blue		Blonde	✓	Ruddy	
		Gray		Red		Dark	
Oriental		Hazel	✓	Brown		Freckled	
		Brown		Black		Light brown	
Indian		Black		Gray		Dark brown	
				Bald		Black	
Filipino							

Other obvious physical characteristics that will aid in identification: Mole on right cheek

I certify that my answers are true; that the person registered has read or has had read to him his own answers; that I have witnessed his signature or mark and that all of his answers of which I have knowledge are true, except as follows:

Martha E. Keegan (Signature of registrar)

Registrar for Local Board 5 (Number) King Wash (City or county) (State)

Date of registration April 27-1942

Local Board No. 5 97
Seattle City 633
005
305 Harrison Street (STAMP OF LOCAL BOARD)
Seattle, Washington

(The stamp of the Local Board having jurisdiction of the registrant shall be placed in the above space)

16—21630-1

[HG0072][GDrive]

1947 (Sep 11) - "OLYMPIC DISTRIBUTORS" (a rare reference)

Full newspaper page : [HS003V][GDrive]

The Spokesman-Review (Spokane, Washington) · 11 Sep 1947, Thu · Page 9

FUND CHECKUP ASKED IN MOTION

A court order permitting inspection of books of Pacific Electronics, including the personal account books of E. W. Johnson, partner in the firm, is asked by Washington Trust company in a motion filed in superior court yesterday.

It is asserted, in an affidavit supporting the motion, that Johnson may be diverting funds which should be used for repayment of the $125,000 due the trust company on a loan.

Johnson, it is alleged, may have used funds from the mortgaged property in Spokane to pay $35,000 operating expenses of a plant in Los Gatos, Calif., including payroll. He is also a partner in several business firms, the affidavit declares, including Ampitheatre, Northwest Motor-In, Aurora Motor-In and the Garland theater, Johnson & Spracher, E. W. Johnson Insurance company, Swanberg & Johnson and Olympic Distributors.

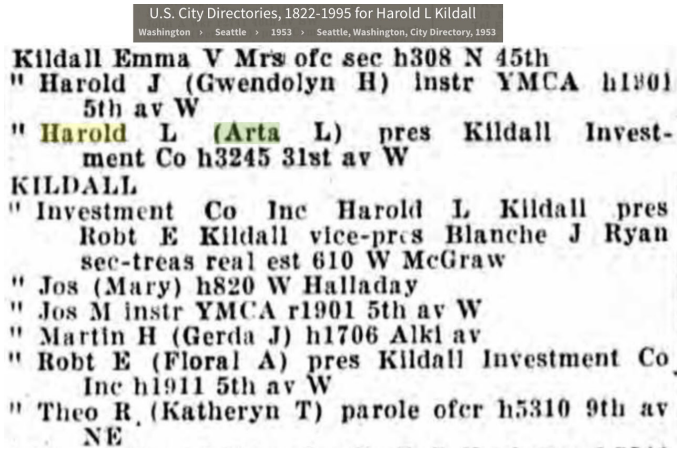
The affidavit asserts that a "purported accounting" has been made by Pacific Electronics, but that it is "contradictory."

The radio company sued Washington Trust last spring, asking $649,705 for alleged breach of contract in failure to pay a balance due on a $250,000 loan and for conversion of the electronics firm's stock and loss of business.

[HS003W][GDrive]

1953 Directory (Seattle) for all "Kildall"

Sources : Pages 740-741 : [HD002S][GDrive] / Pages 742-743 : [HD002U][GDrive]



U.S. City Directories, 1822-1995 for Harold L Kildall

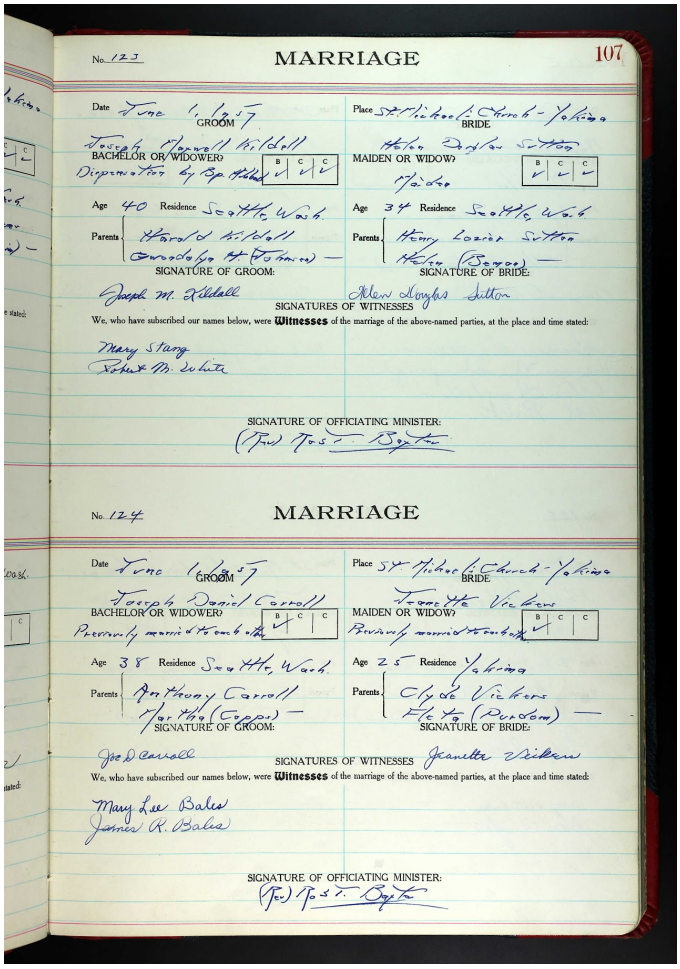
Washington › Seattle › 1953 › Seattle, Washington, City Directory, 1953

Kildall Emma V Mrs ofc sec h308 N 45th
" Harold J (Gwendolyn H) instr YMCA h1901 5th av W
" Harold L (Arta L) pres Kildall Investment Co h3245 31st av W
KILDALL
" Investment Co Inc Harold L Kildall pres Robt E Kildall vice-pres Blanche J Ryan sec-treas real est 610 W McGraw
" Jos (Mary) h820 W Halladay
" Jos M instr YMCA r1901 5th av W
" Martin H (Gerda J) h1706 Alki av
" Robt E (Floral A) pres Kildall Investment Co Inc h1911 5th av W
" Theo R (Katheryn T) parole ofcr h5310 9th av NE

[HD002T][GDrive]

1957 (June 1) - Marriage of Joseph Maxwell Kildall

Joseph Maxwell Kildall marries Helen D(??) Sutton



No. 123 MARRIAGE 107

Date June 1, 1957
GROOM
Place St. Michael's Church - Yakima
BRIDE

Joseph Harrell Kildall
BACHELOR OR WIDOWER?
Divorcee by Bp Keller
B V | C | C

Helen Douglas Sutton
MAIDEN OR WIDOW?
Widow
B | C V | C

Age 40 Residence Seattle, Wash.
Parents Harold Kildall
Gwendolyn Hartman —

Age 34 Residence Seattle, Wash.
Parents Henry Lozier Sutton
Helen (Bangs) —

SIGNATURE OF GROOM: Joseph M. Kildall
SIGNATURE OF BRIDE: Helen Douglas Sutton

SIGNATURES OF WITNESSES

We, who have subscribed our names below, were **Witnesses** of the marriage of the above-named parties, at the place and time stated:

Mary Stang
Robert M. White

SIGNATURE OF OFFICIATING MINISTER:
(Rev) Jos T. Boyle

No. 124 MARRIAGE

Date June 1, 1957
GROOM
Place St. Michael's Church - Yakima
BRIDE

Joseph Daniel Carroll
BACHELOR OR WIDOWER?
Previously married to each other
B V | C | C

Jeanette Vickers
MAIDEN OR WIDOW?
Previously married to each other
B | C V | C

Age 38 Residence Seattle, Wash.
Parents Anthony Carroll
Martha (Capps) —

Age 25 Residence Yakima
Parents Clyde Vickers
Elsie (Purdom) —

SIGNATURE OF GROOM: Joe D Carroll
SIGNATURE OF BRIDE: Jeanette Vickers

SIGNATURES OF WITNESSES

We, who have subscribed our names below, were **Witnesses** of the marriage of the above-named parties, at the place and time stated:

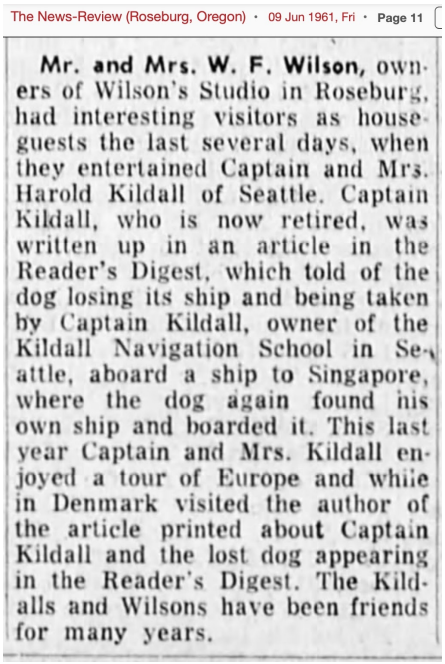
Mary Lee Bales
James R. Bales

SIGNATURE OF OFFICIATING MINISTER:
(Rev) Jos T. Boyle

[HG0078][GDrive]

1961 (June 09)

Full newspaper page : [HN01AJ][GDrive]



The News-Review (Roseburg, Oregon) · 09 Jun 1961, Fri · Page 11

Mr. and Mrs. W. F. Wilson, owners of Wilson's Studio in Roseburg, had interesting visitors as house-guests the last several days, when they entertained Captain and Mrs. Harold Kildall of Seattle. Captain Kildall, who is now retired, was written up in an article in the Reader's Digest, which told of the dog losing its ship and being taken by Captain Kildall, owner of the Kildall Navigation School in Seattle, aboard a ship to Singapore, where the dog again found his own ship and boarded it. This last year Captain and Mrs. Kildall enjoyed a tour of Europe and while in Denmark visited the author of the article printed about Captain Kildall and the lost dog appearing in the Reader's Digest. The Kildalls and Wilsons have been friends for many years.

[HN01AK][GDrive]

1963 (March 25) - "Fairbanks Daily News Miner" :

Source pages : [HN01A2][GDrive] and [HN01A3][GDrive]

OFFICIALS HAD WARNED, BUT . . .

Experts Not Consulted, Ferry Docks Are Taking a Beating

SKIPPER — Here is Capt. Casey Moran, who spent part of his childhood in Fairbanks and is now skipper of the Malaspina. Speaking of terminals in relation to wind and tide, Moran wonders who advised state officials on the locations.

BY JEROME SHELDON
Special to the News-Miner

KETCHIKAN — "I wouldn't put another dime in those terminals!" exploded Capt. Casey Moran, one of the most experienced mariners in Southeastern Alaska waters.

His criticism, added to the mounting outcry emanating from the state capital, is aimed at the most basic operational flaw of the new Alaska Marine Highway System.

In the latest reported incident, the ferry Malaspina knocked out a "dolphin," the guard rail and 80 feet of piling of the dock structure at Petersburg.

Parts of the debris were carried to Ketchikan on the car deck. Scratches on the ship's high, blue sides were hastily covered with paint after she tied up at the Standard Oil Company dock here to refuel.

No injuries were reported, but the pride of the captain in his own seamanship undoubtedly was hurt in the unfortunate docking at a poorly located terminal.

"Don't blame the skipper," editorialized the Ketchikan Daily News, in commenting on the situation. "After all, the powers-that-be were warned far in advance that locations of the terminals . . . were not the proper ones in view of tidal conditions and type of construction called for."

Tricky Locations

At Ketchikan, also, the terminal has felt the brunt of the ship's "pile-buster" bow. The dock has been repaired. But with the next gusty wind when the ferry comes in, the damage probably will be repeated.

Skagway's dock, too, is in a tricky location for the skipper of any ship, situated as it is at the head of Lynn Canal crosswise to the prevailing winds and tidal currents.

A legislative inquiry is underway with regard to the location and construction of the state ferry terminals. The information sought by the legislators was available a year ago, before the first piling was ever driven, Captain Moran declared.

He, himself, sounded a warning to various lawmakers now concerned with the matter, he said.

Of the officials, engineers and consultants involved, he rather bluntly said, "None of them knew a damn thing about this country to warrant their putting in the ferries."

And he added, "I would like to know the thoroughly experienced Alaskan mariner who advised them."

Captain Moran, owner of Alaska's only resident ship piloting service, said he — for one — was never consulted with regard to the location of the ferry terminals.

His qualifications would seem to speak for themselves. He holds an unlimited master's license and a first class pilot's license for Puget Sound, Southeastern and Southwestern Alaska — both for ships of any gross tonnage. His business for the past 10 years has been to guide freighters or oil tankers through tortuous channels, with their shifting tides and ever-changing winds, to the pulp mills at Ketchikan and Sitka, to canneries and saw-mills, or to the Army's pipeline terminal at Lutak, near Haines.

He probably knows Alaskan waters as intimately as any sailing vessels of large tonnage to these parts. The pilot was graduated from the Puget Sound Nautical College in 1924 and from Capt. Harold Kildall's Nautical School in Seattle in 1928. Captain Kildall was noted in sea-

(Continued on Page 3)

Terms of attorneys general are four years in 23 states, two years in 20, five years in New Hampshire and New Jersey, and a maximum of eight years in Tennessee.

WAITING AT KETCHIKAN — These passengers are waiting to board the Malaspina. Photo illustrates lack of a passenger waiting room. Passengers who want stateroom will find they cannot be reserved in advance. The 14 staterooms are available strictly on a first-come first-served basis.

FIRST OF THREE — Here is the Malaspina, first of three state ferries to ply the lovely Inside Passage between Prince Rupert, B. C. and Southeastern Alaska. She is 352 feet long with a 73½-foot beam and 3,585-ton displacement. Two 4,000-horsepower engines produce a service speed of 18 knots. She can carry 500 passengers and 108 cars.

—News-Miner Photos by Jerry Sheldon

PAINT SCRATCHES OFF — Terminal locations in relation to wind and tide have caused dock damage, and (above) crews at Ketchikan are covering scratches on the Malaspina's hull with paint. Ferry took 30 feet of piling away at Petersburg terminal.

Skipper Speaks Out...

(Continued from Page 1)

faring circles as a teacher.

During World War II, he was on the staff of Admiral Zeusler, commandant of the 17th Naval District. As assistant district marine engineer, Captain Moran handled a large ship salvaging operation at Ketchikan.

Though not Alaskan born, Captain Moran has a love for Alaska that's deeply-rooted in the gold rush era. His father, Casey Moran, went to Dawson in 1898 as a newspaperman. Later he worked on a newspaper in Fairbanks.

Young Casey was born in Seattle, but he spent the early years of his childhood in Fairbanks where his brother and sister were born.

The elder Moran took his family Outside in 1909, the year of the Alaska-Yukon Pacific Exposition. His career led from the Seattle Daily Times and Post-Intelligencer to Hearst's New York Journal. Eventually he went to South America and established English-language papers in Caracas and Maracaibo, Venezuela. He died in 1934.

"Pile-Buster" Bow

Ketchikan's ferry terminal juts into Tongass Narrows from the city's north end. The dock structure and transfer span are several hundred feet out in the water. The approach is provided over rock and gravel fill over the tidelands.

The dock structure is T-shaped. The top of the "T" is a row of pile bents on either side of the transfer span. The bents are cross-braced groups of piling supporting a walkway for those who receive the ship's lines when she ties up.

An outer row of piles facing the dock are in danger of being ripped out by the ship's "pile-buster" bow when the wind or currents slam the ship in too hard.

The ship is constructed with a projecting ledge running the length of the ship — at the water line — on either side. The angle at which it projects causes the "pile busting" effect, mariners say.

The transfer span is raised and lowered by a counter-balance system. It permits vehicles and passengers to board the ship through the large, side port, no matter what may be the stage of the tide.

Here, the dock structure cost $47,500. Bid prices on other terminals in Southeastern Alaska ranged from $59,314 (for Sitka) to $76,085 (for Haines and Skagway). These were all subject to negotiation for a smaller figure, for the state was short on cash.

Captain Moran said of the location chosen for the terminal ,the channel is subject to "very strong currents on the big, winter tides." The ships approach the dock broadside to the prevailing winds. He said this was "the most dangerous condition" for docking a vessel.

A Ketchikan construction man, who preferred that his name not be used, said the terminal could be changed in direction about 30 degrees for better wind and current conditions.

It would then face in the same direction as the nearby Nakat Packing Co. cannery. There would be a sizable cost for dredging and driving piling for a new dock.

Saxman Prefered

Captain Moran would prefer to place the ferry terminal at nearby Saxman where, he said, the wind is "fair with the current" and docking conditions would be easier.

Saxman is the site of the new Ketchikan & Northern Terminal Co. rail-barge terminal. It is "semi-public" in that an Area Redevelopment loan was obtained for part of its financing.

This was one of the sites considered last year for a ferry terminal. According to quoted statements of Public Works Commissioner Richard A. Downing at the time, the channel south of Ketchikan was rejected because of the expense of driving piling.

Captain Moran argued the freight-hauling capacity of the ferry system could be tripled if the ferries used the Saxman terminal. Merchandise could be transferred directly from the terminal warehouse to the ships without an expensive and time-consuming haul through town to the present ferry terminal on the north side.

With the railroad tracks planked over, the same transfer span could be used for the ferries as for the rail-barges from Prince Rupert. Stern loading could be employed, as at the Prince Rupert ferry terminal, Captain Moran said.

Commenting on other ferry terminal sites, he said those at Wrangell, Petersburg and Skagway are subject to conditions similar to those at Ketchikan.

He agreed with the feelings of ship officers who have stopped here that the terminal at Lutak (Haines) is the best. It is off one end of the Army's pipeline terminal dock.

The dock at Skagway should be re-located, Captain Moran said, to the end of the White Pass & Yukon Route wharf. This is situated at the side of the harbor, under the cliffs.

Favors Ferries

"I'm very much in favor of the ferries," Captain Moran emphasized. "The people in Fairbanks and Anchorage — the Interior—are the ones who will stand to gain the most.

"They will derive the biggest benefit because it will provide a second route North. The average person seeing the Panhandle on the map, will say, 'That's not even Alaska,' and will keep on driving."

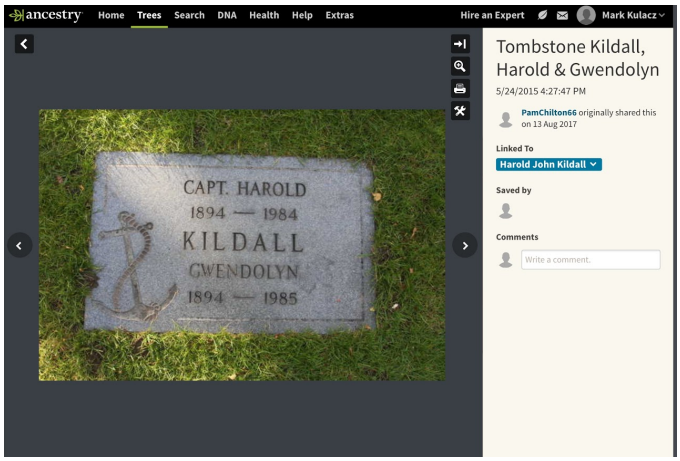
But he argued the terminals should be re-located. It's easy, he explained, to pick a docking site, then say to a licensed shipmaster, "You take it in."

"Docking, or undocking, is the greatest hazard in navigation. Records show that more docks are knocked down than ships are lost while underway.

"It's very unjust to masters of vessels to build docks without getting not one man's, opinion, but that of a group of masters competent to go in with a ship."

[HN01A4][GDrive]

1984 - (Captain) Harold Kildall passes



[HL0058][GDrive]

1987 (Oct 23) - Joesph M Kildall passes

https://search.ancestry.com/cgi-bin/sse.dll?indiv=1&dbid=6716&h=522034&tid=&pid=&queryId=fcdc18fb382c83386a6e19ee16ebe2f1&usePUB=true&_phsrc=MOW23&_phstart=successSource

in the Washington, Death Index, 1940-2017

Add or update information

Report a problem

Name: Joseph M Kildall

Gender: Male

Age: 70

Birth Year: abt 1917

Residence Place: Seattle, Washington, USA

Death Date: 23 Oct 1987

Death Place: Seattle, Washington

Social Security Number: 574-03-7405

Joseph Kildall - from 1916 book on Seattle history

Source : [HB004T][GDrive]

JOSEPH KILDALL

Joseph Kildall, president and manager of the Panama Pacific Commercial Company, was born in Norway, in March, 1865. His father, Michael Kildall, was a merchant and a large operator in the fish business in Horstad, Norway, for a number of years. He came to .America in 1888, crossing the Atlantic five years after the arrival of his son Joseph in the new world.

It was in 1883 that Joseph Kildall, then a youth of eighteen years, bade adieu to friends and native land and sailed for the new world, attracted by the favorable accounts which he heard concerning the business chances to be found in America. He made his way

to the Pacific coast, settling first in Tacoma, Washington, where he entered the employ of Hansan & Company, conducting a milling business at that place. Still later Mr. Kildall made his way to San Francisco, but remained in California for only a year. He afterward went to Port Gamble, Washington, and entered the employ of the **Puget Sound Mill Company**, with which he continued for three years, acting as a salesman in their store. He afterward embarked in general merchandising on his own account at Lynden, Washington, and there continued in business until 1892. He then turned his attention to steamboat interests, operating steamboats between Bellingham, Seattle and Tacoma, and still later he became connected with the fish industry on Puget Sound, making his headquarters at Bellingham. In 1897 he removed to Minneapolis, Minnesota, where he established the **Kildall Fish Company**, one of the largest wholesale fish houses of the United States, remaining in that city until 1911, supervising the interests of the company. In the meantime he organized the **Pacific Coast & Norway Packing Company**, with headquarters at Petersburg, Alaska. This company conducted a general merchandise, canning and saw-milling business, owned the town site and built up the town of Petersburg. Mr. Kildall also organized the **Kildall-Bright Company of Chicago, Illinois**, which did a very large importing business and engaged in the sale of foreign and domestic fish. In 1911. however, he decided to return to the Pacific coast and settled in Seattle. After investigating the Sound country, the geographic location, the climate and other conditions led to his choice. He became identified with several companies in the general fish business, packing, marketing and superintending several fish industries on the coast, operating throughout America and foreign countries in the shipment and marketing of fish. This business has been organized under the name of the **Panama Pacific Commercial Company**, a corporation which is capitalized for a large amount and which is now conducting an extensive business throughout the Pacific coast country, being one of the foremost concerns of the kind in the west.

In Bellingham, Washington. Mr. Kildall was united in marriage to **Miss Mary Jenkins**, a daughter of **Judge John R. Jenkins**, of that city, and one of its early settlers. **He served as justice of the peace at Bellingham for a number of years and for a long period was in the hotel business, but passed away about 1907**. Mr. and Mrs. Kildall have become the parents of two children, **Blanch and Harold**, aged respectively twenty-three and twenty-two years, the latter now assisting his father in the office work.

In politics Mr. Kildall has always been a stanch republican, working for the growth and success of the party, but at municipal elections where no political issue is involved he casts an independent ballot, considering only the capability of the candidate for office to which he aspires. He is a member of the **Transportation Club of Seattle** and he and his family attend the Trinity Episcopal church. Mr. Kildall has been a citizen of the new world for over thirty years and has been numbered among the representative business men of Seattle for five years. He has built up an immense business in his line, his well defined plans having been carried forward to successful completion. Energy and enterprise have enabled him to overcome obstacles and difficulties created by conditions and competition and he is today at the head of one of the foremost concerns of the kind on the Pacific coast. He has had broad experience and his powers have developed with the passing years, making him capable of controlling most important enterprises.

2018 - "Kildall Agency" advertisement

[HP003U][GDrive]

(alsomentioned in - https://www.historylink.org/file/8772)

Bob Kildall

https://www.legacy.com/obituaries/seattletimes/obituary.aspx?n=robert-kildall-bob&pid=171476320

7/24/1920 ~ 6/16/2014

Our long farewell, as the Alzheimer's disease has been called, came to an end when Bob passed on June 16 at the age of 93.

Sadness was replaced by cheerful and happy memories of the man we knew and loved. The man who, although family always came first, set the tone for commitment to the community. He owned and operated Olympic Distributors, an office equipment business on Queen Anne, for 50 years, but his passion was Seattle's park system in particular and the urban environment in general. **He was chairman of the Board of Park Commissioners from 1975 to 1976**.

While he acquired the moniker Mr. Discovery Park for his passionate and tenacious fight for the integrity of Discovery Park as a wilderness sanctuary all through its existence, his biggest personal pride was Commodore Park at the Locks. In 1967, a group of Magnolia citizens together averted the development of apartment buildings. They got the property rezoned, and the result was the beautiful park we now have with promenades along the Canal.

One of Bob's great gifts in his dealings with officials as well as private parties of the numerous civic affairs he was involved in throughout his life was his wit and non confrontational style. He often managed to turn opponents into friends, some of them lifelong. His basic values of openness and acceptance of everybody on their own terms were disarming.

It was that same wit and lightheartedness that permeated our family life. Some of the jokes outlived themselves, but there were always new originals coming along.

[...]

A lifelong resident of Queen Anne and Magnolia, Bob is survived by wife Ruth of 49 years, daughters Katie Bucy (Tom), Maria Kildall, son Kristian Kildall and four grandchildren.

[...]

7/1/2017 History Article by Greg Dash : "Seattle Won a Park in a Battle With a Missile System Dr. Greg Dash"

Source : [HW0054][GDrive]

Discovery Park has approximately 644 acres of meadow, walks and trees on a high bluff overlooking Puget Sound and the Olympic Mountains. It is Seattle's largest and newest park, established on September 1, 1972.

But a few years earlier, it seemed destined to become a missile base, where radars and intercept missiles would be prepared to detect and destroy intercontinental ballistic missiles. The struggle to change that destiny took the dedicated efforts of citizens' organizations, political leaders and scientists.

On September 18, 1967 Defense Secretary Robert McNamara announced that the U.S. would build a light anti ballistic missile (ABM) system as a deterrent against expected Chinese missile attack in mid-1970's. The "Sentinel" ABM system would consist initially of ten radar and missile sites along the northern tier of states. It would be adequate to defend against a light attack by a small number of simple missiles, but it could not defend the country against a massive attack such as USSR could launch, An ABM defense against the USSR was impractical, and perhaps unnecessary in view of the effectiveness of the policy of Mutual Assured Destruction, whereby each country held the other's cities in hostage.

Skeptics thought that Sentinel might actually be the thin end of a wedge, a start for a much larger, eventually anti-Soviet system. Indeed, John Foster, Director of Defense Research and Engineering, testified that while politically the system was designed to protect against a Chinese attack, it would actually have some degree of effectiveness against Soviet missiles. And on the day after the announcement Senator Henry M. Jackson hailed the decision as a step toward a massive ABM system.

When more details of the ABM system were described, Fort Lawton in Seattle was mentioned as a possible choice for its westernmost base.

The fort was an army base originally intended for a coastal gun battery, but never activated. This came as a shock, for Seattle had been looking forward to acquiring all or a substantial part of Fort Lawton for a city park. Mayor Dorm Braman said that it was disappointing news, but if the system needed Fort Lawton to make Seattle safer, it would be worth the loss.

The idea of turning the base into a park had a long history. In 1910 the Olmsted Brothers, who designed many of the country's parks, included Fort Lawton in their plans for a Seattle park system. In 1917 an editorial in the Seattle Post Intelligencer called for the city to acquire the Fort, and the Mayor and city officials supported the paper's position.

In the mid 30's U.S. Representative Warren G. Magnuson proposed a bill to offer the entire site to Seattle for $1.00. However, what might have been a gift in normal times was then seen as a liability, for it was during the worst years of the Depression. The city declined the offer because it could not afford the cost of maintenance.

In 1964 the Secretary of Defense, announced that 85% of the site would be declared surplus. The citizens voted $3 Million in a Forward Thrust proposal to acquire the land for a public park. At the time of the Sentinel announcement it seemed that the conversion was close at hand. And so it came as a great disappointment, when a few years later the Army named Fort Lawton a prime candidate for one of the ten Sentinel bases.

Seattle's Mayor Braman, who had been trying to wrest Fort Lawton away from the Army, complained, "I am in no position and would not, under any circumstance, oppose the judgment of the qualified authorities if in fact ...Fort Lawton... is (needed to defend) the sector of the country.... On the other hand, if the mere fact that the property is currently owned by the government and that the amenities of the base in this location ...are the governing factors, I would strenuously object to the choice."

However, a Pentagon spokesman replied that "The missile hardware has to go in at Fort Lawton if it is to defend Seattle properly".

To a few scientists at the University of Washington, the case was not so obvious. Their opposition rested on two principles. The first was a conviction that missile defense was unwise. The second was that, if an ABM base were to be built in the Northwest, Fort Lawton would not be a necessary or desirable location.

The issue of missile defense had been debated within high level Defense Department advisory committees and in public for several years. The considered judgment of non- governmental defense experts was that there was no foreseeable technology for an effective antimissile system. Therefore, an ABM system built with currently available technology would be ineffective and wasteful. Furthermore it could actually increase the risk of war. At that time, we and the USSR opposed each other with thousands of intercontinental missiles. The sure knowledge that an exchange would destroy both countries led to a state of mutual deterrence.

But if one country could ward off an attack, or even if it prepared to defend against it, that would threaten the other's security. So if the Sentinel system were built, although it might be only a thin defense against a Chinese attack, it could give rise to Soviet fears that it would lead to a larger and more advanced anti Soviet ABM, and that would compromise the Soviet defense. In response to the threat, the Soviets were likely to increase the number of its missiles targeting the U.S., to be sure that an adequate number would get through.

Along with the national debate, these arguments were discussed in University of Washington seminars. Newell Mack, a Physiology graduate student, had been so concerned by signs that national policy seemed to be leading toward missile defense, that he had convinced members of a graduate seminar on Conflict Studies in the University of Washington to study the issue. He was joined in leading the discussions by Philip Ekstrom, a Physics graduate student.

The meetings had begun with one or two sessions on the technical aspects of missile defense, when the Sentinel ABM was announced, and Fort Lawton was mentioned as a possible choice for the key site for the West Coast. As a bonus, it was said to protect Seattle.

The seminar members were disappointed in the national decision, but they felt that perhaps not all was lost; Fort Lawton might be saved for a park if the Pentagon spokesman was wrong, and that Seattle's defense could be based somewhat outside of the city. To determine that, one would have to know the technical characteristics of the Sentinel system. Fortunately, the details had been published, in an issue of Aviation Week.

Each installation would have a large Perimeter Acquisition Radar, to detect an ICBM attack at long range, while the missiles were on their inertial trajectories well above the Earth's atmosphere. The PAR would alert the system to fire Spartan interceptor missiles, which would target the incoming

ICBMs while they were still in space. The Spartans, guided to their targets by the PAR, would be able to destroy them with their 1 megaton nuclear warheads even if they didn't make contact. The PAR radars would be protected by a "last ditch defense", a battery of short-range high acceleration Sprint missiles, which could intercept and destroy ICBMs penetrating the Spartan shield. In fact, it might be necessary to hold fire until the ICBMs entered the atmosphere, so that air resistance could discriminate between actual missiles and decoys. The Sprints carried 'small' nuclear warheads, about a kiloton.

Dr. Philip Ekstrom, with help from Physics Prof. Edward Stern, calculated the "footprint" of the protected zone. Ekstrom's calculation had as input data the speed and range of the Sprints, and the probable trajectories of the attacking ICBMs. The physics problem was a bit like finding the area that can be kept dry by an umbrella in a driving rain. The footprint turned out to be so large that the ABM base could be placed well outside of Seattle, and yet include the city in its protected area. His colleague, Physics Prof. Greg Dash, described the good news in a March 31 The Seattle Times story; Fort Lawton could be saved for a park, and Seattle could have both missiles and picnics. Dash pointed out that the PAR site for the Northwest would be the key detection unit for the entire West Coast. If it were placed at Fort Lawton, Seattle would become a prime target. An enemy intending to attack San Francisco or Los Angeles would have to take out Seattle's radar unit in order to assure that its missiles could get through. Furthermore, having 1 kiloton warheads explode at close range could be suicidal, with fallout from airbursts.

The news gave a great boost to the public campaign, which became known as The Battle of Fort Lawton. The campaign had remarkably wide support, with twenty-five citizen and professional organizations, such as the Seattle chapters of the American Institute of Architects, the Federation of American Scientists, the Magnolia Community Club, the League of Women Voters, and The Mountaineers. They were joined into one group, Citizens for Fort Lawton Park, headed by Donald Voorhees, a prominent Seattle lawyer, who was a leader in Seattle's improvement activities. Strong support came from Senators Henry Jackson and Warren Magnuson, and Congressmen Thomas Pelly and Brock Adams, Mayor Braman, other city officials and The Seattle Times editor Herb Robinson and reporter Svein Gilje. The campaign was carried out in letters to newspapers, editorials, radio interviews, and personal contacts between the senators and the Sentinel system's director Gen. Alfred Starbird, for over a year. Yet the Army Defense Command and Gen. Starbird continued to claim that Seattle's defense required the an-city location.

The public campaign now was intensified by the realization that an ABM at Fort Lawton would increase the city's vulnerability.

As the criticism increased, Defense Department officials tried to explain that the dangers were overdrawn, but their arguments were unconvincing. In an October interview John Foster scoffed at the scientists' concern at having nuclear weapons based in the city. Foster claimed that the explosion of a Spartan warhead outside the atmosphere would be hardly noticeable, and the atmosphere would filter its fallout over a long period. The Sprint's one-kiloton warhead would be too low to cause damage. The group found his claims incredible and his breezy dismissal infuriating.

Senator Jackson then asked the scientists' group for detailed data showing alternative sites that could satisfy Sentinel's strategic plan. Ekstrom and Stern supplied it in late August. A few days later Jackson met with Gen. Starbird, and extracted a promise that the general would meet with a representative of the scientists and listen to arguments for alternate sites. Stern flew to Washington in mid September and offered three alternate sites.

A week later a Pentagon source informed The Seattle Times' reporter, Svein Gilje, that the alternate sites would not be feasible. Besides, he added, why look for others when the Army already owns a perfect site, Fort Lawton?

Senator Jackson suggested that perhaps the Army had not done all its homework. Senator Magnuson complained that Fort Lawton "would be the worst possible site that anyone could imagine."

On Dec.12, 1968 a crucial meeting was held in the Mayor's Office on the fate of "Ft. Lawton: Anti-Ballistic Missile Site or City Park?" Attending were 16 representatives of civic and environmental groups, Donald Voorhees, chairman of Citizens for Ft. Lawton Park, Senator Jackson, General Starbird, and Mayor Braman. Robert Kildall represented the Magnolia Community Club, a district surrounding Ft. Lawton. He said, in part, "General Starbird, I represent those citizens who would be most affected by an ABM site at Ft. Lawton.... We are overwhelmingly opposed to the placement of ABMs here." "The will of our citizens- as represented by these sixteen civic and environmental organizations around this table- is that if Ft. Lawton is the only place we can defend those things that are dear to us, so be it! But if there are other sites, move it! A park represents one of those important values we have that are worth fighting for."

On the next morning, Sen. Jackson had breakfast with Defense Secretary Clark Clifford in the Secretary's office. Jackson had flown in minutes before from Seattle in a military plane. He was there to transmit the strong feelings that had been expressed in Mayor Braman's meeting. Clifford told him that he was aware of Seattle's desire to preserve the open space, but he had not yet heard from Gen. Starbird; he promised that he would ask for a report from the General over the weekend and have a decision a few days later. Starbird, in turn, was reported to have been convinced that Seattle's arguments for open space were valid, and official policies for retaining Ft. Lawton for missiles were contradicted with technical arguments showing the feasibility of alternate sites.

On Dec. 22nd, the day promised for the decision, Sen. Jackson telephoned Secretary Clifford, who told him the good news: the ABM would go to an alternate site.

But there was still one more hurdle before the Army could turn over the property; there was a question of price. Under current federal law, the city would have to pay $37.5 million, equal to one-half of fair market value, to receive the land. The problem was solved by an amendment to the Land and Water Conservation Act, which enabled state and local governments to acquire surplus property free or at less than 50 percent of fair market cost. The Senate's bill was sponsored by Senator Jackson, and the House bill was shepherded by Congressmen Adams and Pelly. Together, the legislation became known as the 'Fort Lawton bill'.

Epilogue

This account has focused on Seattle's campaign, but there were other local groups that waged campaigns against Sentinel. In Berkeley and the Bay Area, Minneapolis, Chicago, Detroit, New York, Pittsburgh and Boston, groups opposed the establishment of nearby sites, or fought against the system as a whole. The opponents were partially successful. In March 1969 President Nixon announced that Sentinel's city defense would be abandoned in favor a "Safeguard" system, a defense of Minuteman ICBM sites. The change, in an influential paper by Harold Agnew, the Leader of Los Alamos' Weapons Division, was advisable because "...defense installations are primarily located in areas of existing military bases thus minimizing problems presently being posed by citizens worried over safety matters or angered over dislocation problems." However, Safeguard failed to get strong political support and adequate financing, and in the end, only two sites were constructed.

In 1971 Anne Cahn earned her Political Science Ph.D. from M.I.T. with a study of the scientists' influence in the struggle. She concluded, in part, "Across the country scientists, mostly Outer (i.e. non Defense Department), younger, not scientifically prominent men took it upon themselves to alert, inform and

educate the public about ballistic missile defense."

"The important event, in our opinion, was that scientists took their case to the people."

Missile defense was proposed again by President Reagan on March 23, 1983. The initial design of the Strategic Defense Initiative (SDI) was to provide a nearly perfect "astrodome" defense. It would rely on space-based laser or electron beams to disable attacking ICBMs. The system would be powered by orbiting nuclear power reactors. Vigorous opposition came from scientists. Particularly cogent criticism came from a committee of the American Physical Society, in a paper analyzing beam weapons. In an effort to answer the criticism the design was changed to "kinetic energy weapons", which would rely on direct impact. A furious national debate over the technical feasibility and the political effects of SDI eventually led to its failure to get congressional support.

In 1996, the Secretary of Defense announced a new program, National Missile Defense. NMD was begun as a technology development effort leading to deployment of system that would protect all 50 states from a limited strategic missile attack by a rogue nation. The system would detect the launch of enemy missiles and track them by surveillance satellites and ground based radars, and then guide-defending ABM's to intercept the incoming missiles. In response to the opposition to the previous two ABM system designs, nuclear warheads and nuclear reactors in orbit would be replaced by ground based defending missiles, and they would be kinetic energy, "hit-to-kill" weapons. However, a succession of tests has shown the difficulty of achieving direct impacts. Many attempts to hit the incoming missile have largely failed, in spite of advance knowledge of the launch time and trajectory of an incoming missile, even when carrying a beacon. Nevertheless, the administration of Pres. George W. Bush has decided to begin preparing the first site. But the system is already aiming at its first target: the Antiballistic Missile Treaty. In 1972 the United States and the Soviet Union agreed to forego missile defense, in order to avoid threatening each other's deterrence forces. But defense policy makers are now preparing to discard that policy for an unproven NMD system. Although the current system is far from ready, in the words of a Defense Department official. "We do not have the luxury of waiting" until the system is proven to be effective."

In a crowning bit of irony, the chairman of the Defense Science Board, reported last year that the continual test failures with the 'hit-to-kill' method has caused the Bush administration to consider putting nuclear warheads on the interceptor missiles.

But meanwhile, Seattle can look back at its fight against an ABM system 38 years ago, (in 2006) and take pleasure in its victory, which won it a beautiful city park.

April 18, 2012 4:09 AM - "Bob and Ruth Kildall: A love sparked by the World's Fair"

By Mike Dillon ; Source : Queen Anne News (.com) : [HM000X][GDrive]

The Seattle World's Fair created all kinds of legacies that still resonate, starting with the Seattle Center campus.

For Bob and Ruth Kildall of Magnolia, memories of the fair take on a more personal meaning: It's where they met.

Ruth, who grew up in a small town near Copenhagen, arrived in Seattle in 1962 as a 28-year-old hostess for the Denmark Pavilion. Back home, Ruth had worked as a translator of business documents — moving between Danish, English, French and German. Boring stuff, she said.

She jumped at the chance to work at the World's Fair.

"It was exciting," Ruth recalled. "We didn't know what we were getting into."

Copenhagen was Ruth's measure of a big-time city; Seattle struck her as a little provincial. Still, there were cultural nuances she had to learn the hard way.

Ruth and two of her hostess friends rented a cramped space on Taylor Avenue for $90 per month — nothing to sneeze at in those days. Rent gouging was part of the World's Fair scene. The trio finally changed quarters.

There was more.

"Back in Denmark only people invited to parties showed up," she laughed. But not in America: "We were shocked."

American gregariousness had its upside: "We were struck by the hospitality of the American people," Ruth said. "There were people we could have visited in every single state."

The Denmark Pavilion showcased Danish wares: furniture, industrial design, jewelry and other goods.

"I was so impressed that little Denmark exported this to the country of IBM," she noted. "Little did we know IKEA would be taking over 50 years later."

Bob Kildall, owner of Olympic Distributors, Inc., carried a Danish-made electronic stencil cutter, which was cutting edge in its day. Bob was a regular in the Danish venue.

Their relationship remained Platonic as the fair wore on. Meanwhile, Ruth took in fellow Dane Victor Borge's piano-comedy show, but the classical music lover skipped a chance to see Elvis. She's still kicking herself.

The Fair ended on a warm Sunday, October 21, 1962. "We went wild in the fountain outside the Pavilion," Ruth said.

And she headed back home.

There are different versions of what happened next, but this version, which reflects Bob's dry sense of humor, is a good bet.

Workers in the Denmark Pavilion, including Bob, had been given fine, Danish tea sets. Not long after the fair ended, he called Ruth in Denmark.

"Why don't we put our tea sets together so we can entertain more people?" he asked.

And they did.

1902 - S Kildall - Freemason (See "Masonic_History_of_the_Northwest")

Full book : [HB004R][GDrive]

MEMBERS, LYNDEN LODGE, No. 56, Lynden, Wash., 1903.

CARR BAILEY, S. D. & P. M., JOSEPH M. HUTCHINS, Tyler, JOHN W. SHOWERS, J. W. & P. M. CHESTER A. FRASHER, Marshal, OLIVER R. SCHUYLER, J. S., SIMON KILDALL, Sec., VERNON F. RANDALL, W.M.&P.M. ALEXANDER LA CLAIR, Chaplain, HENRY BARDENHAGEN, A. G. HYATT, S. S., R. O. BLOUDIN, HUGH BRECKENRIDGE, J. W. & P.M., JAMES S. WRIGHT, S. W., BENJAMIN SHOMAKER, Treas.

[HB004S][GDrive]

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Housatonic

Gary Arlen Kildall (born 1942)

https://en.wikipedia.org/wiki/Gary_Kildall

Born May 19, 1942 in Seattle, Washington, U.S. ([HK0037][GDrive])

Died July 11, 1994 (aged 52) Monterey, California, U.S. ([HK0037][GDrive])

Also see :

- Gary Kildall's book "Computer Connections" (1994)
- Grandfather (paternal) : Harold Jens Kildall (born 1894) (includes other ancestry info)

Associated with :

- **Monique R Rona (born 1928)** **(Very good friends - at University of Washington)**
- **William Henry Gates III (born 1955)**
- **Robert Gordon Gillespie (born 1933)** (Computer Center director of University of Washington while Gary Kildall was there)
- **Hellmut Paul Oscar Golde (born 1930)** (Oversaw doctoral work while at University of Washington)
- **Dr. David Bliss Dekker (born 1919)** (undergraduate professor while at University of Washington in the 1960s)

Computer Chronicles : Gary Kildall tribute video (1995)

Saved copy : [HV00CJ][GDrive]

Saved Wikipedia (Oct 13, 2020) - Gary Kildall

See : [HK0037][GDrive]

Alma mater University of Washington (BS, MS, PhD)[1][2]

[...]

Spouse(s)

Dorothy McEwen Kildall

Karen Kildall

Children

Scott and Kristen[3]

Gary Arlen Kildall (/ˈ kɪldˌɔːl/; May 19, 1942 – July 11, 1994) was an American computer scientist and microcomputer entrepreneur who created the CP/M operating system and founded Digital Research, Inc. (DRI). Kildall was one of the first people to see microprocessors as fully capable computers, rather than equipment controllers, and to organize a company around this concept.[4] He also co-hosted the PBS TV show *Computer Chronicles*. Although his career in computing spanned more than two decades, he is mainly remembered in connection with his development of the CP/M operating system, an early multi-platform microcomputer OS that has many parallels to the later MS-DOS used on the IBM PC.

Early life

Gary Kildall was born and grew up in Seattle, Washington, where his family operated a seamanship school. His father, Joseph Kildall, was a captain of Norwegian heritage. His mother Emma was of half Swedish descent, as Gary's grandmother was born in Långbäck, Sweden, in Skellefteå Municipality, but emigrated to Canada at 23 years of age.[5]

Gary attended the University of Washington (UW) hoping to become a mathematics teacher, but became increasingly interested in computer technology. After receiving his degree,[1] **he fulfilled a draft obligation to the United States Navy by teaching at the Naval Postgraduate School (NPS) in Monterey, California**.[6] Being within an hour's drive of Silicon Valley, Kildall heard about the first commercially available microprocessor, the Intel 4004. He bought one of the processors and began writing experimental programs for it. To learn more about the processors, he worked at Intel as a consultant on his days off.

Kildall briefly returned to UW and finished his doctorate in computer science in 1972,[2] then resumed teaching at NPS. He published a paper that introduced the theory of data-flow analysis used today in optimizing compilers[7] (sometimes known as Kildall's method), and he continued to experiment with microcomputers and the emerging technology of floppy disks. Intel lent him systems using the 8008 and 8080 processors, and in 1973, he developed the first high-level programming language for microprocessors, called PL/M.[6] For Intel he also wrote an 8080 instruction set simulator named INTERP/80. He created CP/M the same year to enable the 8080 to control a floppy drive, combining for the first time all the essential components of a computer at the microcomputer scale. He demonstrated CP/M to Intel, but Intel had little interest and chose to market PL/M instead.[6]

Business career

CP/M

Kildall and his wife Dorothy established a company, originally called "Intergalactic Digital Research" (later renamed as Digital Research, Inc.), to market CP/M through advertisements in hobbyist magazines. Digital Research licensed CP/M for the IMSAI 8080, a popular clone of the Altair 8800. As more manufacturers licensed CP/M, it became a de facto standard and had to support an increasing number of hardware variations. In response, Kildall pioneered the concept of a BIOS, a set of simple programs stored in the computer hardware (ROM or EPROM chip) that enabled CP/M to run on different systems without modification.[6]

CP/M's quick success took Kildall by surprise, and he was slow to update it for high density floppy disks and hard disk drives.[*citation needed*] After hardware manufacturers talked about creating a rival operating system, Kildall started a rush project to develop CP/M 2.[8] By 1981, at the peak of its popularity, CP/M ran on 3000 different computer models and DRI had US$5.4 million in yearly revenues.[6]

IBM dealings

IBM, presided by John R. Opel, approached Digital Research in 1980, at Bill Gates' suggestion,[9] to negotiate the purchase of a forthcoming version of CP/M called CP/M-86 for the IBM PC. Gary had left negotiations to his wife, Dorothy, as he usually did, while he and colleague and developer of MP/M operating system Tom Rolander used Gary's private airplane to deliver software to manufacturer Bill Godbout.[4][10] Before the IBM representatives would explain the purpose of their visit, they insisted that Dorothy sign a non-disclosure agreement. On the advice of DRI attorney Gerry Davis, Dorothy refused to sign the agreement without Gary's approval. Gary returned in the afternoon and tried to move the discussion with IBM forward, but accounts disagree on whether he signed the non-disclosure agreement, as well as if he ever met with the IBM representatives.[11]

Various reasons have been given for the two companies failing to reach an agreement. DRI, which had only a few products, might have been unwilling to sell its main product to IBM for a one-time payment rather than its usual royalty-based plan.[12] Dorothy might have believed that the company could not deliver CP/M-86 on IBM's proposed schedule, as the company was busy developing an implementation of the PL/I programming language for Data General.[13] Also possible, the IBM representatives might have been annoyed that DRI had spent hours on what they considered a routine formality.[10] According to Kildall, the IBM representatives took the same flight to Florida that night that he and Dorothy took for their vacation, and they negotiated further on the flight, reaching a handshake agreement. IBM lead negotiator Jack Sams insisted that he never met Gary, and one IBM colleague has confirmed that Sams said so at the time. He accepted that someone else in his group might have been on the same flight, but noted that he flew back to Seattle to talk with Microsoft again.[10]

Sams related the story to Gates, who had already agreed to provide a BASIC interpreter and several other programs for the PC. Gates' impression of the story was that Gary capriciously "went flying", as he would later tell reporters.[14] Sams left Gates with the task of finding a usable operating system, and a few weeks later he proposed using the operating system 86-DOS—an independently developed operating system that implemented Kildall's CP/M API—from Seattle Computer Products (SCP). Paul Allen negotiated a licensing deal with SCP. Allen had 86-DOS adapted for IBM's hardware, and IBM shipped it as IBM PC DOS.[11]

Kildall obtained a copy of PC DOS, examined it, and concluded that it infringed on CP/M. When he asked Gerry Davis what legal options were available, Davis told him that intellectual property law for software was not clear enough to sue.[15] Instead Kildall only threatened IBM with legal action, and IBM responded with a proposal to offer CP/M-86 as an option for the PC in return for a release of liability.[16] Kildall accepted, believing that IBM's new system (like its previous personal computers) would not be a significant commercial success.[17] When the IBM PC was introduced, IBM sold its operating system as an unbundled option. One of the operating system options was PC DOS, priced at US$40. PC DOS was seen as a practically necessary option; most software

titles required it and without it the IBM PC was limited to its built-in Cassette BASIC. CP/M-86 shipped a few months later six times more expensive at US$240, but sold poorly against DOS and enjoyed far less software support.[4]

Later work

With the loss of the IBM deal, Gary and Dorothy found themselves under pressure to bring in more experienced management, and Gary's influence over the company waned. He worked in various experimental and research projects, such as a version of CP/M with multitasking (MP/M) and an implementation of the Logo programming language.[6] He hoped that Logo, an educational dialect of LISP, would supplant BASIC in education, but it did not.[18] After seeing a demonstration of the Apple Lisa, Kildall oversaw the creation of DRI's own graphical user interface, called GEM. Novell acquired DRI in 1991 in a deal that netted millions for Kildall.[15]

Kildall resigned as CEO of Digital Research on 28 June 1985, but remained chairman of the board.[19]

Kildall also pursued computing-related projects outside DRI. During the seven years from 1983 to 1990 he co-hosted a public television program on the side, called *Computer Chronicles*, that followed trends in personal computing.

In 1984 he started another company, *Activenture*, which adapted optical disc technology for computer use.[20] In early 1985 it was renamed *KnowledgeSet* and released the first computer encyclopedia in June 1985, a CD-ROM version of Grolier's *Academic American Encyclopedia*[11][20][13] named *The Electronic Encyclopedia*,[21] later acquired by Banta Corporation.[22] Kildall's final business venture, known as *Prometheus Light and Sound* (PLS) and based in Austin, Texas, developed a home PBX system[6] that integrated land-line telephones with mobile phones.

Personal life

Kildall's colleagues recall him as creative, easygoing, and adventurous. In addition to flying, he loved sports cars, auto racing, and boating, and he had a lifelong love of the sea.[4][6]

Although Kildall preferred to leave the IBM affair in the past and to be known for his work before and afterward, he continually faced comparisons between himself and Bill Gates, as well as fading memories of his contributions. A legend grew around the fateful IBM-DRI meeting, encouraged by Gates and various journalists,[*citation needed*] suggesting that Kildall had irresponsibly taken the day off for a recreational flight, and he became tired of constantly having to refute that story.[13] In later years, he had occasional private expressions of bitterness at being overshadowed by Microsoft.[6]

Kildall was annoyed when the University of Washington asked him, as a distinguished graduate, to attend their computer science program anniversary in 1992, but gave the keynote speech to Gates, a dropout from Harvard. In response, he started writing his memoir, *Computer Connections*.[15] The memoir,[23][24][25] which he distributed only to a few friends, expressed his frustration that people did not seem to value elegance in software,[18] and it said of Gates, "He is divisive. He is manipulative. He is a user. He has taken much from me and the industry." In an appendix he called DOS "plain and simple theft" because its first 26 system calls worked the same as CP/M's.[26] He accused IBM of contriving the price difference between PC DOS and CP/M-86 in order to marginalize CP/M. The journalist Harold Evans used the memoir as a source for a chapter about Kildall in the 2004 book *They Made America*, concluding that Microsoft had robbed Kildall of his inventions.[13] IBM veterans from the PC project disputed the book's description of events, and Microsoft described it as "one-sided and inaccurate".[15] In August 2016, Kildall's family made the first part of his memoir available to the public.[24][23][25]

Selling DRI to Novell had made Kildall a wealthy man, and he moved to the West Lake Hills suburb of Austin. His Austin house was a lakeside property, with stalls for several sports cars, and a video studio in the basement. Kildall owned and flew his own Learjet and had at least one boat on the lake. While in Austin he also participated in volunteer efforts to assist children with HIV/AIDS. He owned a mansion with a panoramic ocean view in Pebble Beach, California, near the headquarters of DRI.

Death

On July 8, 1994, Kildall fell at a Monterey, California, biker bar and hit his head.[27] The exact circumstances of the injury remain unclear. He had been an alcoholic in his later years.[15][28] Various sources have claimed he fell from a chair, fell down steps, or was assaulted, because he had walked into the Franklin Street Bar & Grill wearing Harley-Davidson leathers.[12] He checked in and out of the hospital twice, and died three days later at the Community Hospital of the Monterey Peninsula. An autopsy the next day did not conclusively determine a cause of death.[26][3] A CP/M Usenet FAQ says he was concussed from the fall and died of a heart attack; the connection between the two are unclear.[29] He is buried in Evergreen Washelli Memorial Park in north Seattle.

Recognition

Following the announcement of Kildall's death, Bill Gates commented that he was "one of the original pioneers of the PC revolution" and "a very creative computer scientist who did excellent work. Although we were competitors, I always had tremendous respect for his contributions to the PC industry. His untimely death was very unfortunate and his work will be missed."[4]

In March 1995, Kildall was posthumously honored by the Software Publishers Association (SPA) for his contributions to the microcomputer industry:[30][31][6]

- The first programming language and first compiler specifically for microprocessors: PL/M. (1973)
- The first microprocessor disk operating system, which eventually sold a quarter of a million copies: CP/M. (1974)
- The first successful open system architecture by segregating system-specific hardware interfaces in a set of BIOS routines.[32][33][34][35] (1975)
- Creation of the first diskette track buffering schemes, read-ahead algorithms, file directory caches, and RAM drive emulators.
- Introduction of operating systems with preemptive multitasking and windowing capabilities and menu-driven user interfaces (with Digital Research): MP/M, Concurrent CP/M, Concurrent DOS, DOS Plus, GEM.
- Introduction of a binary recompiler: XLT86. (1981)[36]
- The first computer interface for video disks to allow automatic nonlinear playback, presaging today's interactive multimedia. (1984, with Activenture)
- The file system and data structures for the first consumer CD-ROM. (1985, with KnowledgeSet)

[...]

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[...]

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/* C P / M  B A S I C  I / O  S Y S T E M  (B I O S)

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            JUNE, 1975                  */
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- ^ Kildall, Gary Arlen (January 1980). "The History of CP/M, The Evolution of an Industry: One Person's Viewpoint". *Dr. Dobb's Journal of Computer Calisthenics & Orthodontia*. **5** (1): 6–7. Archived from the original on 2016-11-24. Retrieved 2013-06-03. [...] The first commercial licensing of CP/M took place in 1975 with contracts between Digital Systems and Omron of America for use in their intelligent terminal, and with Lawrence Livermore Laboratories where CP/M was used to monitor programs in the Octopus network. Little attention was paid to CP/M for about a year. In my spare time, I worked to improve overall facilities [...] By this time, CP/M had been adapted for four different controllers. [...] In 1976, Glenn Ewingapproached me with a problem: Imsai, Incorporated, for whom Glenn consulted, had shipped a large number of disk subsystems with a promise that an operating system would follow. I was somewhat reluctant to adapt CP/M to yet another controller, and thus the notion of a separated Basic I/O System (BIOS) evolved. In principle, the hardware dependent portions of CP/M were concentrated in the BIOS, thus allowing Glenn, or anyone else, to adapt CP/M to the Imsai equipment. Imsai was subsequently licensed to distribute CP/M version 1.3, which eventually evolved into an operating system called IMDOS. [...]
- ^ Killian, A. Joseph "Joe" (2001). "Gary Kildall's CP/M: Some early CP/M history - 1976-1977". Thomas "Todd" Fischer, IMSAI. Archived from the original on 2012-12-29. Retrieved 2013-06-03. [...] When we failed to produce an operating system in a timely manner, Glenn started talking with Gary about CPM [...] It took several months of twisting Gary's arm to get Gary to port it to the 8080. The final success came when Glenn talked Gary into just separating the I/O from the rest of it, with Glenn promising to re-write the I/O module for the IMSAI 8080 (which he did). So CPM on the IMSAI was a joint effort between Glenn and Gary. [...]
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External links

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1973 (or 1974) - Resume for Gary Kildall

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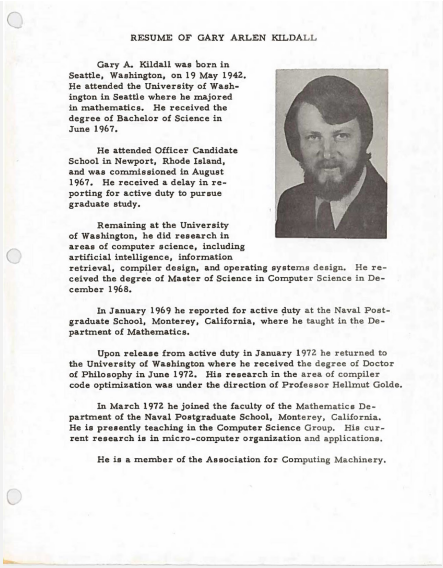

RESUME OF GARY ARLEN KILDALL

Gary A. Kildall was born in Seattle, Washington, on 19 May 1942. He attended the University of Washington in Seattle where he majored in mathematics. He received the degree of Bachelor of Science in June 1967.

He attended Officer Candidate School in Newport, Rhode Island, and was commissioned in August 1967. He received a delay in reporting for active duty to pursue graduate study.

Remaining at the University of Washington, he did research in areas of computer science, including artificial intelligence, information retrieval, compiler design, and operating systems design. He received the degree of Master of Science in Computer Science in December 1968.

In January 1969 he reported for active duty at the Naval Postgraduate School, Monterey, California, where he taught in the Department of Mathematics.

Upon release from active duty in January 1972 he returned to the University of Washington where he received the degree of Doctor of Philosophy in June 1972. His research in the area of compiler code optimization was under the direction of Professor Hellmut Golde.

In March 1972 he joined the faculty of the Mathematics Department of the Naval Postgraduate School, Monterey, California. He is presently teaching in the Computer Science Group. His current research is in micro-computer organization and applications.

He is a member of the Association for Computing Machinery.

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PUBLICATIONS OF G. A. KILDALL

OPEN LITERATURE

Books, published papers, notes, letters

1. 1ALGOL-E: An Experimental Approach to the Study of Progranming IP Languages with A. Roberts
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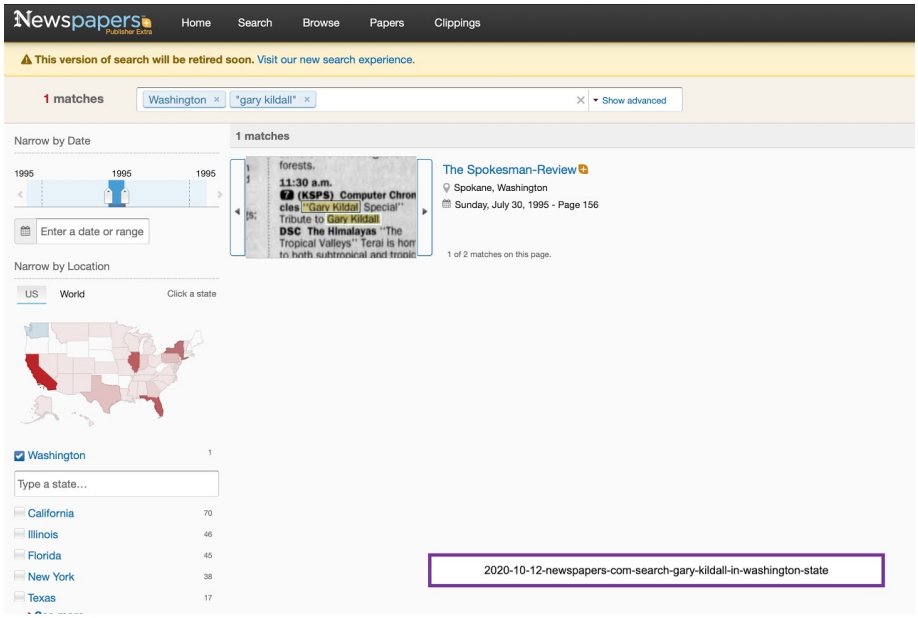
2020 (OCT 12) - Evidence that "Gary Kildall" has been intentionally wiped from Newspapers-dot-com site



[HN019S][GDrive]

1994 (July 13) - "*Gary Kildall, 52, Crucial Player In Computer Development, Dies*"

Source : [HN019T][GDrive]

Gary Kildall, a pioneering computer scientist who created the first popular operating system for personal computers, died on Monday at the Community Hospital of the Monterey Peninsula in Monterey, Calif. He was 52.

An autopsy performed yesterday failed to determine the cause of death, said John DiCarlo, Monterey County's deputy coroner.

While teaching computer science at the United States Naval Postgraduate School in Monterey in 1973, Mr. Kildall wrote a personal computer operating system, a fundamental program that controlled the way the central processing unit stored and retrieved information from a floppy disk drive. He named the program Control Program/Monitor, or CP/M.

Before his program was available, inexpensive hobbyist microcomputers were generally programmed with a punched paper tape reader or by laboriously entering information by setting combinations of on-off switches to encode each byte. Founding Digital Research

With his wife, Dorothy McEwen, Mr. Kildall founded a company to sell the CP/M operating system from their home in 1974. At first they called the company Intergalactic Digital Research, but the name was quickly shortened to Digital Research.

In 1977 Digital Research licensed CP/M to IMSAI, one of the early makers of personal computers. In the years afterward the program became the standard operating system for the first generation of 8-bit microcomputers.

Even before the invention of the electronic spreadsheet, these machines quickly became useful for business applications like word processing and relational databases, and by the early 1980's Digital Research's yearly revenues were $5 million.

Despite his business success, Mr. Kildall stayed on for several years as a professor at the Naval Postgraduate School because he enjoyed teaching. Meeting With I.B.M.

In one of the most controversial events in the history of personal computing, Mr. Kildall was approached by I.B.M. in 1980 to develop a 16-bit version of CP/M for its new personal computer.

There is a legend in the computer industry that Mr. Kildall ignored the I.B.M. representatives who had arrived for a meeting and went flying in his airplane instead. But Mr. Kildall has said that in fact he attended the meeting and left believing that he had struck a deal with I.B.M.

In any case, I.B.M. executives later met with a small software company, the Microsoft Corporation, then located in Bellevue, Wash., founded by William Gates to sell his version of the BASIC computer language. Upon learning that I.B.M. was designing a personal computer, Mr. Gates, who at the time did not sell an operating system, rushed to buy one from a small Seattle company.

Eventually I.B.M. offered both Digital Research's CP/M-16 and Microsoft's MS-DOS operating systems with the I.B.M. PC. But it priced its version of the Microsoft operating system, PC-DOS, at $40 and the Digital Resarch operating system at $240.

PC-DOS quickly became the standard operating system for the I.B.M. PC, and when Compaq produced the first I.B.M.-compatible personal computer, MS-DOS became the industry standard. Microsoft eventually became the leading supplier of all kinds of personal computer software, and eventually broke with I.B.M. in a dispute over MS-DOS's successor operating system, OS2.

Many people in the computer industry argued that Microsoft's MS-DOS infringed on CP/M patents, but Mr. Kildall decided not to sue.

"In those days everyone was imitating everyone else," he said in a magazine interview several years ago. "That's why I didn't do anything about CP/M; it never occurred to me."

Mr. Kildall was widely viewed as a creative innovator in software design who disliked the cut-throat aspects of business and avoided many of the more aggressive tactics employed by his competitors in the computer industry.

Thomas Rolander, who was director of engineering for Digital Research when the company was approached by I.B.M., said he had flown with Mr. Kildall on the day of the I.B.M. meeting. He said he and Mr. Kildall arrived late at the meeting and refused to sign a nondisclosure document from the computer maker after the I.B.M. executives refused to sign a similar document presented by Digital Research.

Mr. Rolander said that several months later I.B.M. returned with an offer that included a royalty, but that I.B.M. had made the decision to price the two competing programs differently.

Mr. Kildall remained involved as chairman of Digital Research until the company was sold to Novell in 1991. He founded a second company in 1985 called Knowledge-Set to develop one of the first consumer applications for CD-ROM, a disc-based version of the Grolier Encyclopedia.

More recently, he moved to Austin, Tex., to found Prometheus Light and Sound, which is developing a "home PBX system."

Several years ago, he moved back to the Monterey area, where he began working on a book titled Computer Connections, a history of the computer industry. Mr. Kildall self-published the book earlier this year.

Mr. Kildall was born in Seattle and received his Ph.D. in computer science from the University of Washington. He and Ms. McEwen were married in 1962 and divorced in 1983. He is also survived by two children, Scott, of San Francisco , and Kristin, of Seattle, and by his mother, Emma, and sister, Patricia Guberlet, both of Seattle.

1986 (January) article in "Picos Journal" IBM Picks the Winner by Kevin Strehlo

(all the following were copied in)

Sources : PDF at [HP003R][GDrive] / PDF with OCR at [HP003S][GDrive] / Raw text at [HP003T][GDrive]

IBM Picks the Winner

by Kevin Strehlo

Although a million CP/M computers have been sold, several million more run MS-DOS. How did the business of computing arrive at a standard?

It was a nice piece of business for Seattle Computer. Their project to write an operating system for the 8086 processor was under way anyway—they needed it for their own hardware. So getting some upfront money to finish the software, plus $10,000 for each customer Microsoft licensed it to, seemed like a great deal to Seattle Computer president Rob Brock.

Brock had his first glimmer of doubt about the wisdom of the deal one day late in 1980 when someone called Seattle Computer with a question.

"I'm with IBM," the voice said. "I want to know something about the operating system you're doing for us."

"You're with WHO?" Brock asked, his voice rising incredulously. The man on the other end of the receiver said "oops" and hung up.

When Brock mentioned the call to his employee Tim Paterson, who was writing the software to the specifications of Microsoft's customer, the two laughed about it and wondered if that customer might really be Big Blue. It seemed odd and, even if the customer was IBM, not necessarily significant. The chance that IBM would be able to make much of a dent in the wide open world of microcomputers—far from the tightly controlled, large sale environment of IBM—seemed pretty small. No one company dominated the personal computer business, and it seemed unlikely that IBM would be more than just another player in a crowded field.

Who's the Boss?

The one thing that did dominate personal computing was the CP/M operating system. Nearly every microcomputer used it—even the Apple II, although it required an add-on board with a processor that ran the 8080 instruction set. It seemed unreasonable that even IBM would switch from an industry standard as strong as CP/M.

It was only when Paterson went to work for Microsoft a few months later that he learned it was IBM. But even at the introduction of the IBM PC in August 1981, it wasn't clear that the MS-DOS operating system Tim Paterson had written, dubbed PC-DOS by the press—although IBM called it simply DOS—would be important.

IBM introduced the PC with three operating systems—PC-DOS, the p-system and CP/M 86. Even the market research firm, Future Computing, wrote that the most significant aspect of the new machine was that the PC ran CP/M.

But CP/M was not to dominate the personal computing world any longer, and Future Computing quickly changed its tune. Later reports by the Texas-based market research firm rated a new computer largely on a single factor: whether it could run off-the-shelf PC-DOS applications.

Today, while laptop computers remain a stronghold for CP/M, the majority of the action in software development and microcomputer sales has been with MS/PC-DOS machines.

How did it happen? Why did CP/M lose out to MS-DOS? Why is CP/M still important in the world of picocomputers? And what's the difference anyway? Is MS-DOS any better than CP/M?

The best way to answer these questions is to go back to the beginning.

The Birth of CP/M

In 1972, while Gary Kildall was teaching computer science at the U.S. Naval Postgraduate School in Monterey, Calif., he became intrigued with one of the first of a new type of semiconductor part called a microprocessor. Although the four-bit Intel 4004 was too limited to do anything useful, Kildall's curiosity was piqued by the idea of a computer on a chip, and he decided to visit the Silicon Valley company that was making the things and see what else Intel had cooking.

Kildall and the small group of engineers working on microprocessors at Intel hit it off, and soon Kildall found himself commuting inland from his ocean-side home one day a week to work at Intel. Using a minicomputer to simulate Intel's new eight-bit microprocessor, the 8008, Kildall soon had created a version of the PL-1 language that ran on it.

Kildall took one of the systems Intel sold as an aid in developing software for the new microprocessors as partial payment for his work. Although his students at the Institute loved to play with the 8008-based microcomputer (which was soon upgraded with the more powerful 8080 and a high-speed tape reader), Kildall knew it needed real data storage if it was going to be truly useful. He did some work for Shugart Associates in 1972 in exchange for one of the early eight-inch floppy disk drives. But Kildall, no hardware expert, failed in designing a controller board to interface the drive with his computer.

It was not until 1973, with John Torode from the University of Washington designing the hardware, that Kildall was able to write a simple operating system to control the transfer of data between the computer and the disk drive.

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The most popular of such cards was the SoftCard, developed and sold by Microsoft. In fact, sales of the Softcard were so high that Microsoft became DRI's largest customer for CP/M. As 1980 rolled to an end, that fact was soon to take on an ironic twist.

CP/M Upgraded

When IBM decided to enter the microcomputer business, it went to Microsoft—on one-day's notice—for advice on what kind of machine to build and for several key pieces of software. Gates had to cancel an appointment with Atari's chairman Ray Kassar in order to meet with IBM, but he did it on the theory that if IBM was entering the microcomputer business as rumored, Microsoft should do anything it could to be a part of it—because IBM succeeded at nearly everything it tried.

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Gary Kildall, operating system pioneer, took his Control Program/Monitor and formed Digital Research, Inc.

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It never happened. Bill Gates has said the problem was Kildall's expression of reluctance to modify CP/M for IBM's requirements; Kildall believed a standard was a standard. In any case, IBM eventually came back to Microsoft and asked if the Bellevue, Wash., firm could do an operating system, as well as the languages. It added only another 10 percent or so to the amount of code Microsoft was to write for the new machine; more important, Microsoft knew the operating system under development at Seattle Computer nearly fit the bill. When Microsoft had described that operating system in writing and IBM agreed it would be fine, provided a few changes were made, Microsoft negotiated rights to Seattle Computer's 8086 DOS.

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The operating system Paterson was writing for his newboard was to be CP/M compatible so that CP/M programs for the eight-bit Z80 could simply be translated and run unchanged on the new 16-bit 8086. Paterson had no access to CP/M other than its documentation, however, and used as his chief model the CP/M look-alike operating system called CDOS that ran on the Cromemco machine they used at Seattle Computing.

Thus it was that some of the improvements of Paterson's DOS over CP/M were accidental. If CP/M encountered an open door when it was trying to read from a disk, for example, it would crash. Paterson's operating system, like the CP/M look-alike he used as a model, responded to an open door with an "Abort, retry or ignore?" message.

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The key difference between the operating systems, however, was due to differences between the chips for which they were written. The Z80 processor that CP/M was designed for could address only 64K bytes of memory, while the 8088 and 8086 processors Paterson wrote his DOS for could address one Megabyte (1,000K bytes) of memory. IBM, through Microsoft, told Paterson to use only 640K bytes of that memory and reserve the remaining 360K bytes for the system's use. Even so, it was hard to imagine that programmers would ever need more than a 10-fold increase in memory. It augered much-improved programs for the next generation of personal computers.

This key improvement of Paterson's DOS over CP/M was also a feature of Digital Research's CP/M-86, of course, since it also ran on the more advanced chips. So why did MS-DOS win?

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CP/M-86 was only a glan on a blackboard on that fateful day in 1980 when IBM called on DRI. Unfortunately, IBM never called back, and Kildall was unaware of the project's process until, shortly before the IBM PC was to be introduced in August of 1981, IBM returned and asked him to write an operating system for its new machine. Since demand for the Z80-based CP/M had not abated, not much work had been done yet on CP/M for the 8086; a team immediately got to work.

In retrospect, it is clear IBM wanted CP/M only as a backup in case its new operating system did not gain support among third party developers. IBM had clearly stacked the cards in its DOS's favor. The price of PC-DOS was $40 compared to $250 for CP/M-86. Moreover, DRI was unable to ship CP/M-86 for a full year after the PC's introduction, whereas PC-DOS was not only ready on the day of introduction, the programs IBM sold for the machine ran on it. CP/M-86 never overcame DOS's headstart.

As it turned out, the need for MS-DOS to have CP/M compatibility was not significant. Rather than translate old programs that ran in 64K, most developers wrote new software that took advantage of the increased addressing space of the new IBM machine's operating system. Without it, the power and ease of use of such programs as Lotus 1-2-3, dBASE III and MultiMate would not have been possible. Without that extra addressing space, the IBM PC could not have been the overwhelming success it was.

The Best OS for Picos

For pico machines, however, such power is not always necessary. If a machine's intended tasks are note taking, simple communication via modem, limited number crunching and simple custom applications, the extra expense of more memory and a more powerful processor may not be justified. For many laptop machines, CP/M and a Z80 is just the ticket.

On the other hand, if compatibility with all the software one uses in the personal computer back at the office is called for, MS-DOS and the 8088 is the operating system of choice.

MS-DOS has continued to improve, but many of the improvements are of limited value for today's picos. Versions 2.0 and higher of MS-DOS incorporate a hierarchical file structure that facilitates keeping things straight on a large capacity disk, a need that's less than dire on today's laptop machines, since the power draw and bulk of large capacity hard disks is currently more than can be handled.

Yet, there can be no doubt that MS-DOS has eclipsed CP/M. Although a million CP/M computers have been sold, several million more run MS-DOS. In the world of operating-system specific magazines, it is *CP/M Users Guide* versus *PC*, *PC World*, *PC Tech Journal*, and *PC Week*. In the world of software publishing, the odds are even higher in favor of MS-DOS. And if you need further proof, look no further than to Digital Research's latest operating system, Concurrent DOS: it is MS-DOS compatible. The tables have been turned. ■

Kevin Strehlo is the former coordinator of PC Week's Rumor Central. He is currently a freelance writer specializing in IBM PC-related topics.

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Although a million CP/M computers have been sold, several million more run MS-DOS. How did the business of computing arrive at a standard?

It was n nice piece of business for Seattle Computer.Their project 10 write an operating system for the 8086 processor was under way anyway - they needed it for their own hardware. So getting some upfront money to finish the software. plus $10,000 for each customer Microsoft licensed it to, seemed like a great deal to Seattle Computer president Rob Brock.

Brock had his first glimmer of doubt about the wisdom of the deal one day late in 1980 when someone called Seattle Computer with a question.

"I'm with IBM." the voice said. ·•1 want 10 know something about the operating system you· re doing for us.·

"You're with WHO?" Brock asked, his voice rising incredulously. The man on the other end of the receiver said .. oops" and hung up.

When Brock mentioned the call to his employee Tim Paterson. who was writing the software to the specifications of Microsoft's customer, the 1wo laughed about it and wondered if that customer might really be Big Blue. It seemed odd and, even if the customer was IBM. not necessarily significant. The chance that TBM would be able to make much of a dent in the wide open world of microcomputers - far from the tightly controlled, large sale environment of IBM-seemed pretty small. No one company dominated the personal computer business, and it seemed unlikely that IBM would be more than just another player in a crowded field.

Who's the Boss?

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The one thing that did dominate personal computing was the CP/M operating system. Nearly every microcomputer used it-even the Apple II. although it required an add-on board with a processor that ran the 8080 instruction set. It seemed unreasonable that even TBM would switch from an industry standard as strong as CP/M.

It was only when Paterson went to work for Microsoft a few months later that he learned it was TBM. But even a1 the introduction of the TBM PC in August 1981, it wasn't clear that the MS-DOS operating system Tim Paterson had written, dubbed PC-DOS by the press - although IBM called it simply DOS-would be important.

IBM introduced the PC with three operating systems-PC-DOS. the p-system and CP/M 86. Even the market research firm, Future Computing, wrote that the most significant aspect of the new machine was that the PC ran CP/M.

But CP/M was not to dominate the personal computing world any longer. and Future Computing quickly changed its tune. Later reports by the Texas-based market research firm rated a new computer largely on a single factor: whether it could run off-the-shelf PC-DOS applications.

Today. while laptop computers remain a stronghold for CP/M. the majority of the action in software development and microcomputer sales has been with MS/PC-DOS machines.

How did it happen? Why did CP/M lose out to MS-DOS? Why is CP/M still important in the world of microcomputers? And what's the difference anyway? Is MS-DOS any better than CP/M?

The best way to answer these questions is to go back to the beginning.

The Birth of CP/M

In 1972, while Gary Kildall was teaching computer science at the U.S. Naval Postgraduate School 1n Monterey, Calif .• he became intrigued with one of the fin.I of a new type of semiconductor part called a microprocessor. Although the four-bit Intel 4004 was too limited 10 do anything useful. Kildall's curiosity was piqued by the idea of a computer on a chip, and he decided 10 visit the Silicon Valley company that was making the things and see what else Intel had cooking.

Kildall and the small group of engineers working on microprocessors at Intel hit it off, and soon Kildall found himself commuting inland from his ocean-side home one day u week to work at Intel. Using a minicomputer 10 simulate Intel's new eight-bit microprocessor, the 8008, Kildall soon had created a version of the PL-I language that ran on it.

Kildall took one of the systems Intel sold as :in aid in developing software for the new microprocessors as partial payment for his work. Although his students at the Institute loved to play with the 8008-based microcomputer (which was soon upgraded with the more powerful 8080 and a high-speed tape reader), Kildall knew it needed real data storage if it was going 10 be truly useful. He did some work for Shugart Associates in 1972 in exchange for one of the early eight-inch floppy disk drives. But Kildall, no hardware ex:expert. failed in designing a controller board to interface the drive with his computer.

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Thus it was that Kildall, encouraged by his wife Dorothy, formed a company called Intergalactic Digital Research. placed ads in a few magazines and began to sell his CP/M. As the business became more serious, the Kildalls incorporated as Digital Research. Inc. (DR!). Dorothy. to avoid any · 'just his wife·· stigma, began using her maiden name, McEwen. When they sold IMSAI unlimited rights to CP/M for $25,000 in 1977, Digital Research became a full-time enterprise with Gary running research and development and Dorothy hand I ing the business side.

When the ability to utilize a disk drive and i1s Z80 microprocessor (which was faster than the 8080 bu1 ran the same instruction set) gave IMSAI an edge over i1s chief competition. MITS (maker of 1he first commercially successful personal computer. I.he Altair), other emerging microcomputer companies began to make the trek to Digital Research in Pacific Grove, a suburb of Monterey.

Tarbell Electronics. Digital Microsystems, Heath Electronics and the dozens of other companies that licensed the CP/M operating sys1em had good reasons for 1he 1rip. fl was cheaper to license the operating system Kildall hod developed and 1ailor i110 o particular Z80-based microcomputer than it was 10 develop an opera1ing sys1em from scratch. More important. a machine on which CP/M ran could run I.he application programs 1hat had been written for other CP/M machines. The only operating systems in competition with CP/M were limited to a single manufacturer's machine. and so CP/M and the Z80 microprocessor on which it ran became a kind of standard by default.

Not all computer manufacturers offered CP/M. Radio Shack substituted its proprietary TRS-DOS for I.he Z80-based TRS-80 computers, for example. Bu1 many TRS-80 users bought a version ofCP/M tailored for I.he Radio Shack machines by other companies. such as Pickles and Trout, in order to run all the CP/M software.

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http://www.gaby.de/ekildall.htm

Dr. Dobb's Special Report, Spring 1997

by Michael Swaine

Michael, Dr. Dobb's Journal's editor-at-large, can be contacted at *mswaine@cruzio.com* or http://gate.cruzio.com/~mswaine.

In the early days of the personal-computer revolution, the atmosphere at those shoestring startup companies with names like "Golemics" and "Loving Grace Cybernetics" was often more academic than businesslike. This collegiate ambiance touched everything, from the ways in which decisions were made and respect allocated, right down to sophomoric pranks and styles of dress.

There's a fairly obvious reason for this, or at least for some of it: Microcomputers were a new field, ripe for rapid advances, and that's a situation that fits neatly into a collegial atmosphere in which information is openly shared. When discoveries are freely shared, it's easier to build quickly on those discoveries; conversely, when progress is rapid, there is less reason to hold onto yesterday's discoveries. This natural synergy between rapid progress and information sharing is one key factor in the spectacular growth in the use and acceptance of computers over the past 20 years. It's one of the reasons that the personal-computer revolution really has been a revolution.

In time, companies like Apple and Microsoft would emphasize this synergy, explicitly calling their corporate headquarters "campuses." Even today, computer hardware and software companies often have a lot of the look and feel of grad school. But this predilection for a collegial atmosphere predates Apple and Microsoft. And while it didn't start there either, it was nowhere more evident in the early days than at one of the first personal-computer software companies—Digital Research. Digital Research could hardly have been anything but collegial: The company that gave personal computers their first operating system was the brainchild of a perpetual academic and born teacher. His name was Gary Kildall.

Seattle

Gary Kildall seemed fated to be a teacher. His uncle would later claim that it was what Gary had always wanted. Teaching certainly was in his blood: The Kildall family actually owned and operated a small college. More precisely, it was a school for the teaching of navigation, based in Seattle, Washington. The Kildall College of Nautical Knowledge, the family called it; it was founded in 1924 by Gary's grandfather. Many Kildalls taught or worked at the school, including Gary himself for a while, after graduating from high school.

including Gary himself, for a while, after graduating from high school.

But he had decided that year that he was going to be a math teacher, so he enrolled at the University of Washington. Newly married to high-school sweetheart Dorothy McEwen, he buckled down and applied himself to his studies, trying to put a childhood of mediocre grades, fast cars, and pranks behind him.

Somewhere along the way to a math degree he got hooked on computers. On finishing his degree, Gary went on to graduate school in computer science. He was still headed for a career in teaching, only now it would be teaching computer science at one of the few colleges that had programs back then. But there was a hitch. He had joined the Naval Reserve, and it was the '60s, with the Vietnam war in full flower. The Navy gave him a choice: Go to Vietnam or take a faculty position at the Naval Postgraduate School in Monterey, California.

Gary thought about it for a microsecond and chose Monterey. Even when the Navy told him what to do, the answer was the same: Teach.

Monterey

It was in Monterey that Gary created CP/M, the program that brought him success and that became the unquestioned standard operating system throughout the microcomputer industry. CP/M was a good product and deserved, for many technical reasons, to be the standard. But getting there first always helps, too. And CP/M actually appeared a year before the first commercial microcomputer arrived on the scene.

Unlike operating systems before and since, CP/M was not the result of years of research by a team of software engineers. It was, like most software of its time, the invention of one individual. That individual was Gary Kildall, and if chance put Kildall in just the right place at just the right time, you would have to say, in retrospect, that chance chose well. As it did with Bill Gates, chance spoke to Gary Kildall through a note on a college bulletin board, college bulletin boards apparently being the Schwabb's Drug Store of personal-computer fame.

The note talked about a $25 "microcomputer," a pretty good deal even at 1972 prices. It was actually describing not a computer but the first microprocessor, the 4004 that Ted Hoff had designed at Intel. Presumably, this note was an advertisement torn from a recent issue of *Electronics News*. Intel had hired Regis McKenna to write the ad at Hoff's urging. Hoff was convinced that techies would see the virtue of this new device, this general-purpose processor, and urged that it be advertised, extravagantly but not altogether inaccurately, as a "microcomputer." This would make it absolutely clear that it was not just another limited-purpose device, but something fundamentally different. Hoff was sure that engineers and programmers would get it.

Kildall got it, literally, sending off his $25 for one of the first Intel 4004 chips.

It was 1972. Kildall was busy teaching computer science at the United States Naval Postgraduate School in Monterey. He and Dorothy (and son Scotty) had moved into a house in neighboring Pacific Grove. The Seattle natives loved this scenic coastal town, with its laid-back, fog-draped ambiance. The place suited the easy-going professor. Whether in class or among family and friends the lanky, shaggy-maned Kildall spoke with the same soft voice, the same disarming wit. Although he was teaching at a naval installation, he wouldn't have been out of place on any college campus in his customary sport shirts and jeans. When he had a point to make he would often cast about for chalk or a pencil; he was an incurable diagram drawer.

Gary was happy in his marriage, happy to be living by the ocean, happy not to have gone to Vietnam, and most definitely happy in his job. He loved teaching, and the work left him time to program. Nothing in his life was preparing him to run a business, to handle a spectacularly successful software company supplying the essential software for hundreds of different computer models in an industry running wild. Everything argued for his staying right where he was forever, teaching and programming. At first, the 4004 seemed to fit in with that scenario.

Gary started writing programs for the 4004. His father, up at that little navigation school in Seattle, had always wanted a machine that would compute navigation triangles. Gary made that his project, writing some arithmetic programs to run on the 4004, thinking idly that he might come up with something that his father could use. He was really just fooling around with the device, trying to see how far he could push it, and with what speed and accuracy.

Not all that far, he soon learned. The 4 in 4004 meant that the device dealt with data in 4-bit chunks—less than a character. Getting anything useful done with it was a pain, and performance was pitiful. Although he was frustrated by the limitations of the 4004, he was fascinated by what it promised. Early in 1972 he visited Intel and was surprised to see how small the microcomputer division (dedicated to the 4004 and the new 8008) was: The company had set aside only a few small rooms for the entire division. Gary and the Intel microcomputer people got along well, though, and he began working there as a consultant on his one free day a week. He spent months programming the 4004 in this day-a-week mode until he "nearly went crazy with it." He realized—and it was a radical idea for the time—that he would never go back to "big" computers again. Which is not to say that he stopped using "big" computers. With both the 4004 and the significantly more powerful 8008 that he soon moved on to, he was doing his development work on a minicomputer, much as Bill Gates and Paul Allen did later in writing software for the breakthrough MITS Altair computer. Like Paul Allen, he wrote programs to simulate the microprocessor on the "big" minicomputer, and used this simulated microprocessor, with its simulated instruction set, to test the programs he wrote to run on the real microprocessor.

But unlike Gates and Allen, Gary had the benefit of a development system, essentially a full microcomputer spun out around the microprocessor, so he could try out his work on the real thing as he went along. In a few months he had created a language implementation called "PL/M," a version of the mainframe language PL/I that was significantly more sophisticated than Basic.

The Lab

As partial payment for his work, Gary received a development system of his own, which he immediately set up in the back of his classroom. This allowed him to combine his new obsession with microcomputers and his love of teaching. The system in the back of the classroom became the Naval Postgraduate School's first—if not the world's first—academic microcomputer lab.

And academic it was. This was not just Gary's toy; he used it to teach students about the technology, and encouraged them to explore it. His curious students took him up on it, spending hours after class tinkering with the machine. When Intel upgraded this Intellec-8 from an 8008 to its new 8080 processor and gave Gary a display monitor and a high-speed paper tape reader, he and his students were working with a system comparable to—favorably comparable to—the early Altair computer before the Altair was even conceived.

Gary realized, though, that he was missing an essential ingredient of a really useful computer system—an efficient storage medium. In the early '70s, paper tape was one of the standard storage media, along with the infamous punched card. Neither was very efficient, and the issue was particularly critical on microcomputer systems because the relatively slow microprocessors couldn't offset the inherent slowness of the mechanical process of punching holes in

pieces of paper.

IBM had recently introduced a new storage medium that was much faster and more efficient. It was based on the existing technology of recording data as patterns of magnetization on large rapidly spinning disks, a medium that had everything going for it except price. But IBM engineers figured out how to scale down this technology to something smaller and more affordable, creating the floppy-disk drive.

One $5 floppy disk held as much data as a 200-foot spool of paper tape, and a floppy-disk drive could be had for around $500. The combination of the microprocessor and the floppy disk drive meant that, in Kildall's words, "It was no longer necessary to share computer resources." In other words, the elements of a personal computer were at hand. Well, most of the elements. Gary soon found that some important components were still annoyingly missing.

By this time, an industry was developing to create these floppy-disk drives in volume, and Shugart was the pioneer of this industry. Once again, Gary traded some programming for some hardware, getting himself (and the microcomputer lab) a Shugart disk drive. But for the disk drive to work with the Intellec-8, another piece of hardware was needed, a controller board that fit in the Intellec-8 and handled the complicated communication between the computer and disk drive. This piece of hardware, unfortunately, did not exist.

Gary tried his hand more than once at building the controller. When that proved more challenging than he expected, he explored the idea of using a different magnetic medium—ordinary audio tape, mounted on a conventional tape recorder. His efforts in interfacing a tape recorder with the Intellec-8 were no more successful than his efforts to build a disk controller. It soon became clear that his considerable programming expertise was no substitute for the hardware knowledge needed to build a device that would connect the Intellec-8 with an efficient storage device. It is worth noting that Kildall was well ahead of his time: When MITS, IMSAI, and other companies began marketing microcomputers, they began with paper-tape or magnetic-tape storage. It would be several years yet before disk drives came into common use on microcomputers.

Finally, in 1973, admitting hardware defeat, Gary turned to an old friend from the University of Washington, John Torode. Torode would later found his own computer company, but in 1973, he was just doing a favor for his old friend. "John," Gary said, "we've got a really good thing going here if we can just get this drive working." Torode got the drive working.

Entrepreneur

Meanwhile, Gary found himself involved with another hardware engineer on another microprocessor-based project. This project, for all its apparent frivolousness, was the first hint of any genuine commercial ambitions on the part of Gary Kildall. The project was the ill-fated Astrology Machine.

Ben Cooper was a San Francisco hardware designer who had worked with George Morrow on disk systems and later would, like Torode, start his own computer company, Micromation. In the early '70s, he thought he could build a commercially successful machine to cast horoscopes, and he enlisted Gary's help.

The business was not a success—"a total bust," Gary later called it. Still, the Astrology Machine gave Gary the first field test of several programs he had written and rewritten over the past months: a debugger, an assembler, and part of an editor. He also wrote a Basic interpreter that he used to program the Astrology Machine. Since, for Gary, there was little distinction between his academic work and his commercial or consulting work, he passed on the tricks he came up with to his students. He passed the tricks he came up with in writing the Basic interpreter on to a young naval officer named Gordon Eubanks (today, president and CEO of Symantec). All the programs, with the exception of the interpreter, became part of the disk operating system he was writing to control the controller that Torode was building.

CP/M

As they worked on the hardware and software to make the computer and disk drive work together, Kildall and Torode traded thoughts on the potential of these microprocessors. Neither of them thought that the computer system in the back of Gary's classroom would have a very large market. Microprocessors, they thought, as most everyone at Intel itself thought, would see their chief use in smart consumer devices, like blenders and carburetors. Kildall and Torode did see a small market for development systems like the Intellec-8, but only among the engineers who would be designing and developing those smart blenders and carburetors. This view was fostered by Intel management. In fact, Intel's top brass was even more conservative about the potential market for the devices than Kildall. When Gary and some Intel programmers wrote a game that ran on the 4004 and suggested that Intel market it, Intel chief Bob Noyce vetoed it. The future of microprocessors was elsewhere, he told them; "It's in watches."

When Intel passed on marketing the game, Gary wasn't fazed. He more or less agreed with Noyce about the market. But when the company turned down a piece of software closer to Gary's heart, he began to think that he might have a better sense of the value of microcomputer software than the powers-that-be at Intel.

When Torode finished the controller, Gary polished the software to control it. This was a disk operating system, the first such for a microcomputer, and Gary called it CP/M, for "Control Program/Monitor" or "Control Program for Microcomputers." He presented it proudly to Intel and suggested a reasonable price for it: $20,000. Intel passed. The thinking, apparently, was that the target market for Intel development systems was people like Gary, and since Gary had written some impressive software for the 4004, 8008, and 8080 without an operating system, clearly an operating system was not necessary for the target market. Not $20,000 necessary, anyway. Intel did buy Gary's system programming language, PL/M, but not CP/M.

Gary had been doing his consulting and development work under the name "MAA," or "Microcomputer Applications Associates." MAA (that is, Kildall) completed CP/M in 1974. It was a spartan system, containing only what was essential. It was also remarkably simple, reliable, and well suited to the limited microcomputers of the day. Gary believed in CP/M, and if Intel didn't want it, he was sure there were a lot of hardware hackers and engineers who would. He could sell it himself.

DRI

Gary might have been content to run a small ad in the back of one of the electronics magazines, maybe putting a note on that bulletin board. What actually ensued was a little more ambitious. At Dorothy's urging, the Kildalls formed a corporation. Gary would do the programming and Dorothy would run the business. She started using her maiden name, McEwen, so she wouldn't be seen as just "Gary's wife." They incorporated, dropping the MAA name and calling their corporation "Intergalactic Digital Research Inc." This was later shortened to Digital Research Inc. And they started selling CP/M.

It was the beginning of the personal-computer revolution. (Everything Gary had been doing up to then was prerevolution.) The Altair had been announced,

and a flock of other startup companies were starting work on microcomputers, usually kits but sometimes assembled systems, some with a paper tape interface but many with no satisfactory provision for data storage. They needed disk drives, and they needed a disk operating system.

In those days, there was no model for software pricing, so Digital Research's first customers got some pretty good deals. When Tom Lafleur came to them wanting a license for his company, GNAT Computers, Dorothy gave him unlimited rights to use CP/M as the operating system on any product his company produced, for a whopping $90. Within a year the price had gone up by a factor of 100.

The deal with IMSAI in 1977 was the turning point, and Dorothy knew it. Until 1977, Digital Research was, like most of the industry, little more than a hobby. And until 1977, IMSAI had been purchasing CP/M from Digital Research on a single-copy basis. But IMSAI, with its grandiose plans to sell thousands of floppy-disk-based microcomputers for use in businesses, wanted to restructure the deal. Marketing director Seymour Rubenstein (later of WordStar fame), a shrewd negotiator, haggled with Dorothy and Gary, ultimately arriving at a license fee of $25,000. Rubenstein gloated. He felt that he had virtually stolen CP/M from them. He respected Kildall's programming expertise, but thought the Kildalls were babes in the woods when it came to business. Perhaps they were, but the Kildalls' perspective was a bit different. After the IMSAI deal, Digital Research was a real, full-time business. The IMSAI deal also solidly established CP/M as the standard, and other companies followed IMSAI's lead in licensing it. CP/M quickly became and remained so solid a standard that, until IBM introduced a personal computer, Digital Research faced no serious competition.

And the programmers who would provide that competition were still working at MITS in Albuquerque.

Success

After the IMSAI deal, Digital Research began to grow rapidly. Although it wasn't a financial necessity, Gary continued to teach at the Naval Postgraduate School for years after the founding of DRI. DRI itself felt very academic. Relationships tended to be collegial, the atmosphere casual, discussions animated and cerebral. Or not so cerebral: The atmosphere sometimes was less like a college classroom than a college dorm. Gary liked to rollerskate through the halls, and once conducted an employee interview in a toga.

The staff was young, eager and deeply loyal.

"Gary built a campus in Monterey," Alan Cooper would later remember. DRI "was collegial in every respect." It was only when the company didn't function like a college that Gary got frustrated. Employees would come to him expecting him to solve business problems, marketing problems, personnel problems. He didn't know the answers; didn't really want to think about the problems. What he wanted to do was write code. "Code was his element," Cooper says.

So he wrote code, keeping out of the business end of things as much as possible. He improved CP/M, making it more portable. Certain features of the program were logically independent of the hardware, while others were intimately dependent on the exact features of the machine the program was running on. Gary shrewdly carved out the smallest possible set of machine-dependent elements, and made them easily field customizable. The result was that DRI could write one version of CP/M, and hardware vendors, field engineers, or whoever could customize it to their particular hardware configuration. This approach would be reinvented years later as the "hardware abstraction layer," but Gary had it down cold in 1978.

Even his second-in-command was—let's not mince words—a total code geek. Tom Rolander was exactly the sort of person Gary liked to have around him: just a kid in a candy store when it came to programming, without a business bone in his body. There weren't many business-boned bodies at DRI. But the company did have the operating system that you pretty much had to run on your computer system. It had the market because it had the technology.

DRI didn't actually have the entire market. In the early '80s, the Apple II was the largest-selling machine that did not run CP/M, but it was also the largest-selling machine, period. The base of software for CP/M systems was large and growing, and Microsoft, seeing an opportunity, made an uncharacteristic move into hardware: It developed a SoftCard for the Apple II that would let it run CP/M. Then it licensed CP/M from DRI to sell with the SoftCard. Soon Microsoft was selling as much CP/M as DRI.

Doubts

Gary had moments of doubt about whether this was what he wanted to be doing with his life. In one of the darkest of those moments in the late '70s, Gary passed the parking lot by on his way in to work, and continued around the block, realizing that he just couldn't bring himself to go in the door. He circled the block three times before he could force himself to confront another day at DRI.

Later, in frustration, he offered to sell the company to friends Keith Parsons and Alan Cooper. Parsons and Cooper were running one of the first companies to deliver business software for microcomputers, a kitchen-table startup named "Structured Systems Group." Gary was fed up with all the pointless games and distractions of business. They could have the whole operation for $70,000, he told them. As for him, he would go back to teaching.

It was a dream: There was no way it would have happened. Keith and Alan had little hope of coming up with $70,000, and Dorothy would never have okayed the deal. Dorothy's self-taught business skills would be sorely tested in the near future, but in the late '70s, she knew well enough that the Kildalls had something worth a lot more than $70,000 in DRI. By 1981, it was obvious to the dullest wit that she was right: In that year, there were some 200,000 microcomputers running CP/M, in more than 3000 different hardware configurations, a spectacular testament to the portability that Gary had designed into CP/M. That year, the company took in $6 million. Digital Research employed 75 people in 1981 in various capacities. It had come a long way since its inception only seven years earlier in Gary and Dorothy's house.

That was also the year that IBM announced its plan to build a personal computer.

The story has been told often—and variously—of how Digital Research lost the IBM operating-system contract to Microsoft, and how this made Microsoft's success. It had a big impact on DRI, too.

Multitasking

From that point on, DRI was going in several directions at once. DRI was one of the first personal-computer companies to seek venture-capital funding to go public. The VCs were willing, but insisted that strong management be brought in to get the business under control. Gary was thrilled by the idea of bringing in someone on whom he could unload all the annoying business decisions. John Rowley got that job. Gary quickly disappeared into the fold of Tom Rolander and the developers, and was rarely seen elsewhere. In particular he was rarely seen with John Rowley.

Personable, bright, enthusiastic, Rowley nevertheless struck some around him as just a bit unfocused. He was routinely late to meetings, and he called a lot

of them. If there was an overall strategy to his actions, it wasn't obvious. Sometimes, one employee later recalled, he forgot to pay his bills—his own bills, that is—and dunning letters would find him at work. He was boundlessly enthusiastic, but as company direction shifted from week to week, the optimism got old quickly.

But Rowley may very well have been doing the best anyone could under the circumstances. The circumstances being that the company remained Gary's company, and actions Gary took or authorized could drive the company into one market or another. And did.

Gary wrote a version of the programming language LOGO for his son Scott. He just thought it would be a cool thing and that Scott could learn about programming and logic from it. Then he handed it to Rowley, saying, what should we do with this? And that was how DRI LOGO became a product. Tom Rolander was fascinated with the Apple LISA (the slo-ow predecessor to the Mac), and set one up in his office. He messed with it for quite a while, but nothing ever came of that. Fortunately. Gary was also intrigued by the LISA/Mac user interface, and began exploring that realm. The company's focus was supposed to be operating systems, but the result of Gary's interest in user interfaces was that one of the many varieties of CP/M then under development got sidetracked into a user-interface shell that would sit atop an operating system. That was "GEM," a Mac-like UI for non-Mac computers. Apple thought it was a little too Mac-like and threatened to sue, and DRI caved. It couldn't have been lost on Gary that Microsoft, which also had a Mac-like UI called "Windows," did not (then, at least) get sued.

The company was making lots of money at first, but it was also making some serious mistakes. Not keeping customers happy was one of the worst. DRI in the early '80s occupied a role similar to Microsoft in the '90s: Everybody depended on it and resented it for that. But DRI just wasn't sufficiently responsive to customer complaints and requests.

Alan Cooper blames Gary. When anyone would tell Gary that he ought to add a particular feature, "Gary would try to argue you out of it." He didn't want to pollute good code with kludged-on features. The PIP command exemplified his attitude. In CP/M, you "Pipped" to drive B from drive A; in MS-DOS, you "Copied" from A to B. Gary thought that there was nothing wrong with using the command PIP to copy, and that any halfway intelligent person could master the concept that you copied (or pipped) from right to left. Bill Gates let people do it the way they wanted. "That difference in attitude," Cooper says, "is worth twenty million dollars." Gary didn't care. What Gary was interested in was inventing.

On Cooper's first day at DRI, he recalls, Gary took him to Esther Dyson's high-level industry conference. "He gave me John Rowley's badge, and we climbed into his Aerostar and flew [to Palm Springs]. I remember running into Bill Gates and saying I had just joined Gary Kildall in research. I said I was working in research and development. He chuckled that Gary had set up an R&D department. He considered R&D to be part of what everybody did. Bill was right."

Gary, however, wanted to segregate R&D from the mundane concerns of the business. He wanted a skunkworks, a small crew that pursued projects on the basis of interest, just as pure academic researchers follow the interesting idea rather than worry about someone's bottom line. And he did.

Some good ideas came out of the skunkworks, although the best mostly came from Gary. He did groundbreaking work on CD-ROM software and on interfacing computers and video disks. A company, KnowledgeSet, came out of that work. So did a CD-ROM-based Grolier's Encyclopedia, a product that showed everyone how to do CD-ROM content. Microsoft's later enviable position in the CD-ROM content market owes a lot to Gary Kildall's good ideas and Bill Gates' ability to spot a good idea and pounce on it.

In the midst of the rest of the confusion, Gary and Dorothy split up. It was more than a private, personal matter, since both of them stayed at DRI. So did the other woman. The atmosphere grew more tense than it already was.

Fame

As Digital Research floundered and flailed, Microsoft flourished. Sometimes Microsoft flourished in ground cleared by Gary Kildall, as in the case of MS-DOS, as in the case of multimedia/CD-ROM technology. The legend of Bill Gates as the technological genius who invented everything in the personal computer realm grew, while a dwindling percentage of computer users had even heard of Gary Kildall.

Kildall was always gracious about this.

At least publicly he was gracious. Inwardly, he hid a bitterness that few ever saw. One day, though, Cooper got a glimpse of Gary's depth of feeling about proper credit for invention.

"Kildall took me aside once, about '83. [He started] talking about Apple. He opened this door, and I saw the bitterness: 'Steve Jobs is nothing. Steve Wozniak did it all, the hardware and the software. All Jobs did was hang around and take the credit.'" Cooper was not blind to the implications of this. Kildall resented that Gates, this dropout, this businessman, was getting credit for things that Kildall had invented. "All of a sudden there was this cauldron of resentment. It must have tortured Gary that Bill Gates [got all the credit]."

Whether Kildall's resentment of Bill Gates was fair or not—and it is important to repeat that it was never publicly expressed—it was probably inevitable. When you look at the allocation of credit in the computer industry from a collegial, academic perspective, it does seem that Bill Gates and Microsoft have, now and then, got credit that rightfully belonged to others. It's hard to defend the idea that this is the right perspective to use in looking at an industry, but a collegial, academic perspective was exactly the perspective from which Gary Kildall viewed his world. He could hardly help but feel wronged.

Austin

Gary never went back into academia, staying with DRI to its end, when it was sold to Novell in 1991. At Novell, all traces of DRI products and projects quickly dissolved and were absorbed like sutures on a healing wound.

Gary then moved to the West Lake Hills suburb of Austin, Texas. The Novell deal had made him a wealthy man. His Austin house was a sort of lakeside car ranch, with stables for 14 sports cars and a video studio in the basement. He owned and flew his own Lear jet and had at least one boat. In California, he kept a second house: a mansion with a spectacular ocean view on 17 Mile Drive in Pebble Beach. He started a company in Austin to produce what he called a "home PBX system," called "Prometheus Light and Sound." He did charitable work in the area of pediatric AIDS. It should have been a good life, but all was not sublime. His second marriage was ending in divorce, and there were signs that lack of credit was continuing to eat at him.

Then, while in Monterey in 1994, Gary Kildall died from internal bleeding on July 11, three days after falling down in the Franklin Street Bar and Grill in downtown Monterey. He was 52.

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Legacy

And there the history of Gary Kildall and Digital Research ends. But it is more than mere politeness to say that a legacy remains. In March, 1995, the Software Publishers Association posthumously honored Gary for his contributions to the computer industry. They listed some of his accomplishments:

- He introduced operating systems with preemptive multitasking and windowing capabilities and menu-driven user interfaces.
- Through DRI, he created the first diskette track buffering schemes, read-ahead algorithms, file directory caches, and RAM disk emulators.
- In the 1980s, through DRI, he introduced a binary recompiler.
- Kildall defined the first programming language and wrote the first compiler specifically for microprocessors.
- He created the first microprocessor disk operating system, which eventually sold a quarter million copies.
- He created the first computer interface for video disks to allow automatic nonlinear playback, presaging today's interactive multimedia.
- He developed the file system and data structures for the first consumer CD-ROM.
- He created the first successful open-system architecture by segregating system-specific hardware interfaces in a set of BIOS routines, making the whole third-party software industry possible.

That's a good list, as far as it goes. But friends and students might make a different list, citing his gift for explaining, his patience, his high standards in his work, his generosity. Those who knew him in later years in Austin might cite his pediatric AIDS work.

These things are worth remembering, and represent a real positive impact on the world, whether remembered or not.

As for Kildall's place in computer history, it certainly shouldn't be as The Man Who Wasn't Bill Gates. "It was" as his friend and colleague Alan Cooper puts it, "Gary's bad luck that put him up next to the most successful businessman of a generation. Anyone is a failure standing next to Bill Gates."

He was by any measure an admirable man, a business success, an inventor of importance, a humanitarian.

And, above all, a teacher. "When *Fortune* magazine writes about Gary Kildall," Cooper said, "they don't see him in his natural habitat: a university." Kildall was never happier than when he was in that academic habitat, solving tough problems and sharing the solutions that he discovered openly with others.

He should have stayed in academia, a relative later said. It's what he loved. But in a sense, he never really left.

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The true story or ... Gary Killdall, inventor of the smart phone

by George Wenzel

I try to tell Gary's story to anyone that will listen. I tried to have everything I know about Gary added to the Wikipedia page, and there I was out voted... If it is reported in the press, it has more weight than if someone that was there reports what really happened.

Remember the story about Gary flying his plane instead of meeting with IBM when they were wanting to put CP/M on the PC? And how missing that meeting caused IBM to go with msdos?

That story is rubbish.

The PC was shipped with a crappy, buggy version of msdos, because msdos was cheap. The user was expected to pay $250 for CPM if they wanted to run the current commercial software (wordstar and others). CP/M was an upgrade path for the PC. The real story was that IBM thought of CP/M as the "good stuff" and it was a premium offering. But that isn't even a tiny part of the whole story...

Did you ever own an original IBM AT? On the IBM AT, the power-up post routine printed the words "AT Multiuser System" at the top of the screen during power up. What the heck is the AT Multiuser System??? The AT prototypes didn't boot msdos, they booted a secret new OS. This new OS (I don't know the code-name for it) was a multiuser dos. The design was simple, you buy an AT, and it comes with one or more 8 port serial cards. You buy Wyse terminals (the ones with the PC Emulation mode(as opposed to modes like VT100 emulation)) and put one one each desk, then you run serial cables to your AT. This OS was a true multitasking OS, and the AT was a small cheap minicomputer. THAT was what the AT was designed to be. Period.

So what the heck happened?

IBM had a successful project, the first manufacturing run filled the warehouse, the software was ready, and it was time to start packaging the retail boxes. The first of the manufactured systems used up the last of the initial supply of 286 chips, before Intel switched to a lower-cost run of the 286 chips. The new 286 chips had some minor changes to increase yields, allowing the price to be lowered. Apparently the yields were low on the original version that IBM started manufacturing with. At some point IBM found a bug in the OS that slipped through the QA tests... It was a subtle bug that only had an impact when the machine was multitasking with multiple users, and as it turns out it was only present on the systems with the new 286 chips.

There was a lot of finger pointing and hand-wringing going on over it. Something was broken in the protected mode functions. IBM sales execs were either going to have to insist Intel use the more expensive low-yield version of the 286 chip, OR IBM was going to have to scrap the multiuser system. IBM is managed by the sales department. Someone in sales did the math... we use the expensive 286 chip, and sell one AT to each customer's office of 15 to 20 people... OR we sell them 15 or 20 machines with a cheaper chip. Which makes more money? It was decided that scrapping the multiuser system would increase system sales volume in theory. Even if the 15 to 20 machines were PC's instead of AT's, more money was made selling more systems than selling one.

So what happened to the multiuser system? The 8-port serial boards were ground into dust, except for a few units that escaped with the beta testers (I used to have a bunch of these). The Wyse terminals still had the PC emulation mode, but the expected sales volume of those never happened, so Wyse suffered as their R&D investment in the project was scrapped. DR got paid for their work on the OS, but they never got to see any revenue from sales. Bill Gates went

from being a footnote in history to being who he is today. The first widely distributed multitasking OS never saw the light of day for several more years, and Gary went from being the grandfather of the small computer industry to a footnote. The operating system sat on a shelf for a couple years, but was dusted off and used when IBM started developing scanner cash registers. The new cash registers needed some sort of network or centralized computer, so DR got to sell a couple hundred copies of an OS that was supposed to sell millions (billions by today). The software got a new name, ConcurrentDOS.

Did Gary miss an IBM meeting because he was flying a plane, sure, he missed meeting all the time because travel prevented timely arrival. He was a pilot, and liked to fly, and sometimes that caused travel delays. Did that meeting cause Bill Gates OS to win over CP/M, not even close!

In engineering circles, there is a great deal of secrecy with regard to un-released projects. The press had no way to know the real story back then. Some low-level IBMer may have been aware of a missed meeting, and made a connection (that didn't exist) between that and the fact CP/M was not dominant, and leaked that to the press. That may have even become the semi-official story being as the real story was secret. But you and I have more proof that my version of the story is true, than the press have that their story is true. I don't have my boxed set of ConcurrentDos any more (it was lost along the way) but you have a copy of it in your archive... and there are probably more than one IBM AT around that still displays the AT Multiuser System banner... ConcurrentDos went on sale to the general public as soon as 386 chips were available, as they had a properly working protected mode. But by then it was too late, IBM didn't want to sell cheap minicomputers any more, and the whole industry had already grown accustomed to msdos.

If Intel hadn't broken the 286 chip, Microsoft would be remembered as the company that wrote software for the Apple II. I purchased my first copy of CP/M from Microsoft... they were selling a z80 board for the Apple, and shipping it with a copy of CP/M. That would have been my last memory of Microsoft, I would have never heard the name Bill Gates, and we would have had several generations of multitasking and graphical interfaces years earlier than the ones Microsoft eventually created. Gary already had the graphical OS, it would have just dropped it on top of ConcurrentDos.

This is just one of the stories I have, the others are more widely known... But the story of ConcurrentDOS and the AT Multiuser System goes untold. That story had a big impact on Gary. He died a rich man, but he also dies a defeated man. Bill Gates and Microsoft's anti-competitive activities haunted Gary. He didn't like talking about it much, he preferred to innovate something better, with the hope of securing a technology patent that would reestablish his deserved status. He did create the next killer app, but he died too soon to finish the push to get it into the hands of the public.

I have two of my prototype wire-wrap boards used in the Intelliphone project, as well as one of the first printed circuit prototypes. I'm the only one that knows how it was supposed to work, because I'm the one that designed it, and I never documented my hardware beyond schematics and verbal meetings with the engineers and customers. Gary should have patented his UI. We should have also patented my memory design.

The Intelliphone hardware consisted of a board called the PPU, and a PC. The PC was mainly used to program the PPU, and serve to hold a bunch of PPU's to form a communications mainframe to be located in telco central offices. The PPU was also designed to be packaged into a single chip, and located in a cell phone. The PPU did not do RF, the RF component was considered transient technology, and expected to frequently change with different phone networks. The PPU was the computer and interface controller for the phone. The PPU was also a subsystem inside the central office mainframe. In the mainframe, the PPU's resided on a PC bus, but the PC was just a power supply and file server to the PPUs. The PC could not transfer data fast enough for the application, so an additional bus was designed into the PPU. The PPU's had two communications paths in addition to the pc bus. The PPU bus consisted of multiple T1 lines, and a shared memory path. The shared memory path was essentially a crossbar memory switch. The crossbar switch allowed large blocks of data to be transported from PPU to another instantly, without wasting time on the PC bus. The T1's carried internal voice data, allowing 12 PPU's to have full duplex voice paths between them for each T1, and the design allowed as many T1's to be added as needed for the size of mainframe being built. My crossbar memory switch was actually more complex than a "simple" crossbar switch, as the intent was to have other capabilities such as blocks of memory that are "broadcast" to multiple CPU's, in addition to more simple bank switching that most crossbar switches do. But my hardware design was dependent on the software engineers writing software to make use of it. The prototypes only memory switched between two PPU's, so much of the memory design went unimplemented because I quit before any large mainframe systems were prototyped.

2014 (Feb 26) - Computer History Museum - blog - "GARY KILDALL AND THE 40TH ANNIVERSARY OF THE BIRTH OF THE PC OPERATING SYSTEM" (By David Laws)

See [HI001O][GDrive]

Late one afternoon in the fall of 1974, in the sleepy California seaside town of Pacific Grove, programmer Gary Kildall and electronic engineer John Torode "retired for the evening to take on the simpler task of emptying a jug of not-so-good red wine … and speculating on the future of our new software tool". [1] By successfully booting a computer from a floppy disk drive, they had just given birth to an operating system that, together with the microprocessor and the disk drive, would provide one of the three fundamental building blocks of the personal computer revolution. While they knew it was important, neither realized the extraordinary impact it would have on their lives and times.

EARLY DAYS

Gary Arlen Kildall was born to a family of Scandinavian descent in Seattle, Washington in 1942. His inventive skills flourished in repairing automobiles and having fun, but suffered in scholastic pursuits. He qualified for admission to the University of Washington based on his teaching experience at the family owned Kildall Nautical School rather than his high school grades.

In 1963, Kildall entered college and married his high school sweetheart Dorothy McEwen, who supported him in his studies. He was one of 20 students accepted into the university's first master's program in computer science. Here his mathematical talents were applied to a subject that fascinated him, all-night sessions programming a new Burroughs B5500 computer. To avoid the uncertainty of the draft at the height of the Vietnam War, on graduating with a PhD he entered a U. S. Navy officer training school and was posted to serve as an instructor in computer science at the Navy Postgraduate School (NPS) in Monterey, California.

CONSULTANT TO INTEL

Kildall remained at NPS as an associate professor after his tour of duty ended in 1972. He became fascinated with Intel Corporation's recently introduced 4004 microprocessor chip and simulated its operation on the school's IBM mainframe computer. This work earned a consulting relationship with Intel where Hank Smith of the Microcomputer Systems Group commissioned the development of PL/M, a high-level Programming Language for Microcomputers that served the company for decades.

To enable software development for Intel's second generation 8-bit device, the 8080, Kildall needed to connect the chip directly to a new 8" floppy disk-drive storage unit from Memorex. Using PL/M, he wrote the prototype code for his Control Program for Microcomputers (CP/M) in a few weeks. (It was later tuned and rewritten in 8080 assembly language.) His own efforts to build the complex electronic circuitry required to physically transfer the data failed and the project languished for a year. Frustrated, he called John Torode, a college friend then teaching at U.C. Berkeley, who crafted a "beautiful rat's nest of wirewraps, boards and cables" for the task.

"ONE OF THE MOST EXCITING DAYS OF MY LIFE"

Working in the tool shed behind his home in Pacific Grove, Kildall "loaded my CP/M program from paper tape to the diskette and 'booted' CP/M from the diskette, and up came the prompt: *. This may have been one of the most exciting days of my life, except, of course, when I visited Niagara Falls," [2] he exclaimed, "We now had the power of an IBM S/370 [mainframe computer] at our fingertips." [1] This is going to be a "big thing" they told each other. There is no record of the precise date of this event, but Torode recalls that it was before he moved to Chicago in the fall of 1974. [3]

As Intel expressed no interest in CP/M, Kildall was free to exploit the program on his own. Torode refined the "rat's nest" and produced a complete floppy disk controller system. The first commercial licensing of CP/M took place in 1975 with contracts between Torode's company, Digital Systems, and Omron of America. Kildall continued teaching part time at NPS and in 1976, with his wife Dorothy as co-founder, they established a company called Intergalactic Digital Research. They shortened the name to Digital Research Inc. (DRI) after a couple of years.

Glenn Ewing, a former NPS student, approached DRI with the opportunity to license CP/M for a new family of disk subsystems for microcomputer maker IMSAI, Inc. Reluctant to adapt the code for another controller, Kildall worked with Ewing to split out the hardware dependent portions so they could be incorporated into a separate Basic Input Output System (BIOS). This allowed all 8080 and compatible microprocessor-based computers to run same the operating system on any new hardware with trivial modifications that could be accomplished by the designer in a couple of hours.

According to John Wharton, Intel's technical liaison to DRI who became a DRI contractor and a friend of Kildall, this was "perhaps Gary's most profound contribution … All previous computer software had targeted specific hardware environments. Gary isolated the system specific hardware interfaces of his OS within a set of "basic I/O system" routines, so it and all applications code would be fully machine independent. This idea created the third-party software industry by expanding the potential market several orders of magnitude." [4]

Gordon Eubanks, who was a student of Kildall's at NPS, identifies another significant contribution: "While I think separating out the BIOS was very important, to me the actual breakthrough was the dynamic relocation of the OS so it could run at high memory on any size system with at least 16K of RAM. I met with him the morning after he figured out how to do this and he was floating." [5]

THE "GRASSROOTS" EFFECT

Dr. Dobbs Journal, "All-CP/M Issue!" January 1980. Copyright: Dr Dobbs (www.drdobbs.com)

With the release of CP/M version 1.3, customers responded to articles such as "Upgraded CP/M floppy disc operating system now available" published in the magazine Dr Dobbs' Journal of Computer Calisthenics and Orthodontia in late 1976 by purchasing disks at $70 per copy. According to Kildall, "In the months that followed, the nature of the computer hobbyist became apparent … CP/M gradually gained popularity through a 'grassroots' effect." [1]

A licensing deal concluded with IMSAI bestowed credibility across the industry. CP/M became accepted as a standard and was offered by most early personal computer manufacturers, including pioneers Altair, Amstrad, Kaypro, and Osborne. With a SoftCard, a Zilog Z80 microprocessor -based add-in card built by Microsoft, it also ran on the Apple II to enable popular applications such as Word Star and dBASE that were originally written for CP/M. Microsoft licensed CP/M from DRI to re-sell with the card.

In 1978 Dorothy and Gary purchased a Victorian house on Lighthouse Avenue in Pacific Grove and converted the spacious two-story residence into their company headquarters. One of their first recruits, Tom Rolander joined from Intel in 1979 and immediately set to work writing MP/M, a compatible multi-tasking version of CP/M.

By 1980 DRI employed more than 20 people and Fortune magazine reported that the company generated revenue of $3.5 million. [6] The same article noted that Microsoft earned about the same total over the prior 5 years combined, some of these sales being derived from reselling CP/M licenses. By 1982 DRI disclosed annualized sales in excess of $20 million and that "More than a million people are now using CP/M controlled systems." [7]

DRI staff outside the headquarters office, Pacific Grove CA, November 1980. Photo: Copyright John Pierce

MEANWHILE IN SEATTLE

In 1980 Rod Brock, owner of Seattle Computer Products, had developed a system using the 8086, a powerful new 16-bit microprocessor from Intel. Impatient for CP/M-86, DRI's promised upgrade for the new chip, his programmer Tim Paterson filled the gap by writing an operating system known initially as QDOS (Quick and Dirty Operating System) and later called 86-DOS. According to Paterson "if there had been a CP/M for the 8086 microprocessor, 86-DOS would never have been developed."

"I used the 1976 CP/M Interface Guide for my description of the requirements." To help developers port their software products from the 8080 to the 8086, "I also provided some similar commands from the console," said Paterson. "So 86-DOS generally had all the same application visible elements as CP/M—the function codes, the entry, point address, part of the File Control Block layout, etc." [8] He had written his operating system to emulate the 'look-and-feel' of

CP/M.

In July 1980, IBM assigned Philip "Don" Estridge to develop a desktop computer for the mass market. To get the IBM PC, as it became known, to market as quickly as possible, he used commercially available components, including the Intel 8088 (a lower-cost version of the 8086). When an IBM procurement team visited Bill Gates in Redmond, Washington to license Microsoft's BASIC interpreter program he referred them to DRI for an operating system.

BACK IN PACIFIC GROVE

When the IBM team arrived in Pacific Grove they met with Dorothy and worked with company attorney Gervaise "Gerry" Davis to settle the terms of a non-disclosure agreement. Gary, who had flown his aircraft to Oakland to meet an important customer, returned as scheduled to discuss technical matters. The meeting ended in an impasse over financial terms. IBM wished to purchase CP/M outright, whereas DRI sought a per-copy royalty payment in order to protect its existing base of business. With some alternative approaches in mind, Kildall tried to renew the negotiations a week later but IBM did not respond.

In the meantime, Gates negotiated terms to purchase 86-DOS from Brock. He then sold a one-time, non-exclusive license to IBM, who used the designation PC DOS, but retained the right to license the product as MS-DOS to others. When Kildall discovered that the function calls of the programmer's application interface were identical to those of the CP/M Interface Guide that was copyrighted and marked "Proprietary to Digital Research" he threatened IBM with a lawsuit.

Kildall and Davis negotiated a resolution that required IBM to market CP/M-86 alongside PC DOS. However the list price differential, $40 vs. $240 for the DRI product, discouraged consumer interest in the latter. Davis says "IBM clearly betrayed the impression they gave Gary and me." [2]

AFTERMATH

DRI continued to thrive for several years. CP/M-86 paved the way for a host of new products. CP/Net allowed cheap, simple microcomputers with no local disk storage to operate as clients from a central multiprogramming server. Concurrent CP/M-86 offered a multi-tasking operating system for the IBM PC-XT. Kildall acquired Gordon Eubanks' Compiler Systems Inc. for CBASIC and appointed him to head a language division. Both of these programs continue in daily use worldwide embedded in OS 4690, IBM's operating system for point-of-sale terminals. The company also introduced operating systems with windowing capability and menu-driven user interfaces years before Apple and Microsoft.

In other pursuits, Kildall founded KnowledgeSet with Tom Rolander where they created the first CD-ROM encyclopedia for Grolier. Brian Halla, Intel's technical liaison to DRI, recalls that he "showed me this VAX 11/780 that he had running in his basement and he was so proud of it and he said, 'I figured out a way to have a computer generate animation,' and he said, 'Watch this. And he runs a demo of a Coke bottle that starts real slowly and starts spinning and so as maybe several months went by, he lost interest in this and he sold his setup to a little company called Pixar.'" [9]

At its peak DRI employed over 500 people and opened operations in Asia and Europe. However by the mid-1980s, in the struggle with the juggernaut created by the combined efforts of IBM and Microsoft, DRI had lost the basis of its operating systems business. Gordon Eubanks recalls that "It became clear to me that Digital Research did not have the will to win and they were losing opportunities. So I went off and did my own thing." [10]

Dispirited, Kildall, who never enjoyed the responsibility of managing a large company or displayed the business acumen of Gates, and the other investors sold the company to Novell Inc. of Provo Utah in 1991. Ultimately Novell closed the California operation and in 1996 disposed of the assets to Caldera, Inc., which used DRI intellectual property assets to prevail in a lawsuit against Microsoft. [11]

After leaving DRI, Kildall continued to innovate. He moved to Austin, Texas where he founded Prometheus Light and Sound to explore wireless home networking technology and participated in charitable work for pediatric AIDS.

Gary Kildall died at age 52 following an accident in Monterey in 1994. His ashes were buried in Seattle, the hometown that he shared with Bill Gates.

THE LEGACY OF GARY KILDALL

In 1995, the Software and Information Industry Association presented a posthumous Lifetime Achievement Award to Gary Kildall citing eight significant areas in which he contributed to the microcomputer industry.

Despite these widely recognized technical accomplishments, his legacy remains mired in a tangle of myths and conspiracy theories. The most persistent being driven by a 1982 comment attributed to Bill Gates and published in the London Times newspaper that "Gary was out flying when IBM came to visit and that's why they did not get the contract." [2]

The former editor of the Times, Harold Evans atoned for that story in a PBS documentary and his book They Made America: Two Centuries of Innovators from the Steam Engine to the Search Engine. The subtitle of the chapter on Kildall, "He saw the future and made it work. He was the true founder of the personal computer revolution and the father of PC software," offers a sympathetic telling of the life and times of the brilliant and flawed genius who helped give birth to the PC operating system 40 years ago this year.

IEEE Milestone plaque installed outside 801 Lighthouse Avenue, Pacific Grove, CA

On April 25, 2014, the Institute of Electrical and Electronic Engineering "The world's largest professional association for the advancement of technology" will install a bronze IEEE Milestone in Electrical Engineering and Computing plaque outside the former DRI headquarters at 801 Lighthouse Avenue, Pacific Grove, CA. The Milestone program honors important events in electrical engineering and computing. Achievements such Thomas Edison's electric light bulb, Marconi's wireless communications, and Bell Labs first transistor are recognized with a plaque in an appropriate location. The citation reads:

Dr. Gary A. Kildall demonstrated the first working prototype of CP/M (Control Program for Microcomputers) in Pacific Grove in 1974. Together with his invention of the BIOS (Basic Input Output System), Kildall's operating system allowed a microprocessor-based computer to communicate with a disk drive storage unit and provided an important foundation for the personal computer revolution.

ACKNOWLEDGEMENTS AND REFERENCES

I would like to thank all those who have contributed information and background to this article, especially to Tom Rolander, John Wharton, and Herb Johnson who maintains a wealth of information on CP/M and the history of DRI on his website at: www.retrotechnology.com/dri/index.html

For more information about the IEEE plaque commemoration see: "Legacy of Gary Kildall - Event April 25, 2014" at www.facebook.com/KildallLegacy.

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Intel TESTING the 8080 ... for real .. this is what was needed..

http://archive.computerhistory.org/resources/text/Oral_History/Intel_8080/102658123.05.01.pdf

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Aug. 31, 1981 - NY Times - "VENTURE CAPITALISTS' NEW ROLE" by Kenneth B. Noble

Source : [HN01BT][GDrive]

Last year T.A. Associates, a venture capital firm, sensed a ready market in gene-splicing technology. But combing the field for a likely prospect, the firm found no candidate worth the investment. So T.A. Associates formed its own company by bringing together leading scientists in the field.

The result was Immunogen, a concern headed by Dr. Baruj Benacerraf, a Nobel laureate, and scientists from Harvard, M.I.T., Yale and leading research laboratories.

The evolution of Immunogen from a concept to a functioning company illustrates how venture capitalists are increasingly acting as trailblazers in starting and building unseasoned enterprises, rather than waiting for entrepreneurs to come along seeking backing.

"Back in the 1970's, venture capitalists were more or less in the driver's seat. When we offered money to a company, few questions were asked," said C. Kevin Landry, a partner with T A. Associates, based in Boston. "Now, there's a lot more venture capital money around, and we can't wait for these things to fall into our lap. You have to make your own opportunities." Developing a Management Team

The new genetic engineering company started by T.A. Associates plans to develop a line of therapeutic drugs to fight cancer and other diseases, although the scientific techniques involved in producing the necessary substances remain largely untested. Meanwhile, T.A. Associates, with its venture capital partner, the Inco Securities Corporation, is busy building a management team to sell Immunogen's products - if and when the time comes.

T.A. Associates' skill in developing lucrative positions in such risky embryonic fields as genetic engineering and microelectronics has made it one of the most successful venture capital firms in the country.

In the past decade, T.A. Associates' return on its investments have averaged 30 percent to 40 percent. And the amount of capital available has grown from $5 million in 1969, when the firm was founded, to more than $125 million, ranking it first among independent venture capitalists, according to Venture, a trade magazine.

As Mr. Landry sees it, the key to successful venture capitalism is a keen sense of where new industries are forming and the ability to seek out companies in the forefront. Although the odds against finding a winner are high - nationally an estimated half of all such initial investments are eventually written off as tax losses - the returns can also be startlingly high. The Biogen Challenge

Three years ago, for example, T.A. Associates formed Biogen S.A. to exploit the commercial potential of advanced microbiology, principally DNA recombinant technology and advanced mutational technology. The development of Biogen presented even greater obstacles than most new companies, a T.A. Associates spokesman said, because many of the leading scientists in molecular biology lived and worked in Europe. The solution was to base the new company in Geneva and to build laboratories there as well as in Cambridge, Mass.

The strategy paid off: T.A. Associates and Inco, its venture capital partner, have seen the worth of Biogen, in which their initial investment was $150,000, swell to more than $9 million today.

Another crucial factor in successful venture capital investing is the ability to move with speed and decisiveness, industry experts say. Mr. Landry, for example, took only 48 hours to commit $1.8 million for 37 percent of Artificial Intelligence, a software firm based in Waltham, Mass. "It's important to be able to make a quick decision on a good deal before someone else stumbles across it," Mr. Landry said.

T.A. Associates has also apparently scored another timely success with one of its most recent investments, Digital Research. This month it was announced that the small California-based manufacturer of computer software was chosen as a key subcontractor for the International Business Machines Corporation's new personal computer system. Searching for Growing Concern

T.A. Associates' search for an entry into the small but flourishing microcomputer software market started last October. "We wanted to find a company in the microcomputer industry with sales in the $1 million-to-$2 million range, but who in two or three years would be pulling in $100 million," said Jacqueline Morby, a vice president at T.A. Associates, who supervised the firm's entry into this field.

"I started simply by browsing through computer trade magazines and paying attention to the largest ads - I said to myself, this must be more than just a garage type operation if it could afford to place a $4,000 ad in a magazine," Mrs. Morby said.

From there, she winnowed the field of investment candidates by calling them up and questioning them about their companies. After several weeks of research, Mrs. Morby narrowed her choices to three companies that might be potential investments for a venture capitalist.

Back then, Digital Research, the creation of Gary Kildall, 39 years old, a microcomputer software expert, was still a small producer. Although the company had penetrated an impressive share of its market - more than 300 companies were already using its operating system - most of its management decisions were handled by a small group of employees trained primarily in computer science.

Mrs. Morby said that Dr. Kildall designed "the most beautiful market strategy for a company that I'd ever seen. But like most entrepreneurs, he thought that all a venture provided was money - and we had to convince them that we had more to offer than that." Digital's 'Big Decision'

As Mrs. Morby saw it, Digital Research represented an ideal opportunity for T.A. Associates' investor group to become partners in a company that was a market leader in a completely new industry that had taken shape in the last two years.

"To become partners with a venture capitalist was a big decision for them - Dr. Kildall had a beautiful little company; he had to decide whether to remain private or to take on partners, possibly go public and become an industry leader - a household name like Apple - which is possible,"

Sept. 15, 1981 - NY Times - "DIGITAL RESOURCES DRIVEN BY SUCCESS INTO MAJOR CHANGES"

Source : [HN01BR][GDrive]

COMPANY NEWS

Digital Resources Driven by Success Into Major Changes

Special to The New York Times

PACIFIC GROVE, Calif. — When Gary Kildall inspects his company's production floor and shipping dock, he walks through a kitchen, out to a patio where the company cat is sunning itself and into a former carriage house.

There, Digital Research Inc. stockpiles its product — magnetic disks that contain software that International Business Machines has selected to operate its new personal computer.

From headquarters in a yellow Victorian house in this quiet seaside village 125 miles south of San Francisco, Digital Research and its president, Mr. Kildall, function in a casual manner that belies the concern's leading position in the fast-paced microcomputer industry.

Changing Structure

But now, to cope with increased competition and larger contracts, such as that with I.B.M., Digital Research must change. It is formalizing its management structure, accepting venture-capital financing, altering its pricing policies and even planning to expand into a 16,000-square-foot modern office building, with a view of the ocean, of course.

All this business, quite frankly, is more than Mr. Kildall cares to deal with. "Basically I am a gadget-oriented person," the jeans-clad Mr. Kildall said. "I like to work with dials and knobs. I'm not a very competitive person. I'm forced into it."

Pacific Grove, a picturesque town near the artists colony of Carmel and a two-hour drive from California's Silicon Valley, seems an unlikely place for a computer concern. But there, in a small cottage near Monterey Bay, Mr. Kildall invented in the early 1970's what is now Digital Research's main product, an operating system.

Computer Traffic Policeman

Acting like a traffic policeman, an operating system is a type of software that directs a personal computer's activities. For example, if a user wants access to certain information, the operating system tells the computer how to retrieve it.

In 1973 Mr. Kildall licensed what has become the leading operating system for microcomputers. It is called CP/M, for Control Program for Microcomputers. The operating system was selected by the Xerox Corperation for its Xerox 820 office system and by I.B.M. as an option for its personal computer, set for delivery in October.

Despite his preference for the laboratory over the board room, Mr. Kildall, who holds a Ph.D. in computer science, has built his company to 50 employees in six years. For the year ended Aug. 31, the privately held concern had sales of about $6 million, and Mr. Kildall expects $10 million in revenues this fiscal year.

"They're doing terrific; they must be smiling from ear to ear with the I.B.M. contract," said Ulric Weil, an analyst with Morgan Stanley & Company.

"Within five years, I think sales will be $100 million," said Dorothy McEwan, Mr. Kildall's wife and high school sweetheart of 19 years ago. She has handled the financial and marketing aspects of the business since the two started Digital Research in a 10-foot-by-13-foot playroom at their first Pacific Grove home, a cottage a few blocks from the ocean.

But the expansion has become too much for Mrs. McEwan to supervise.

"The company grew so rapidly that we had gone from small-time to a big-time operation, and we had to have professional managers," she said.

After having venture capitalists knocking at his door for three years, Mr. Kildall recognized earlier this year that he should let them come in. Mr. Kildall said he did not need their money, but wanted their expertise so he would not need to "take chances" with business decisions.

Last month, giving up only a small share of ownership, he brought in four: T.A. Associates of Boston, Hambrecht & Quist of San Francisco, Venrock Associates of New York and Page Mills Partners of Palo Alto.

Under their counsel, Digital Research changed the structure of its sales agreements. In the past, the concern licensed its CP/M software to microcomputer makers for a one-time fee of $50,000. The simple arrangement was a bargain for manufacturers, said David Crockett, senior vice president of Dataquest Inc., a Cupertino, Calif., market research concern.

Since Sept. 1, Digital Research has required graduated payment based on the number of computers sold by the manufacturer. Details of the contract with I.B.M. were not available.

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Digital Research plans to branch into programming languages for computers. Just last week it purchased for an undisclosed amount Compiler Systems Inc., a small southern California concern that develops languages.

"The company has a lot of potential," the soft-spoken Mr. Kildall said. "I want to let the potential loose." He also said that he expected having a larger team would allow him to spend more time where he most likes to be — at a computer terminal.

Dorothy McEwan and her husband, Gary Kildall, in front of the seaside Victorian headquarters of Digital Research Inc. in Pacific Grove, Calif.

[HN01BR][GDrive]

When Gary Kildall inspects his company's production floor and shipping dock, he walks through a kitchen, out to a patio where the company cat is sunning itself and into a former carriage house.

There, Digital Research Inc. stockpiles its product - magnetic disks that contain software that International Business Machines has selected to operate its new personal computer.

From headquarters in a yellow Victorian house in this quiet seaside village 125 miles south of San Francisco, Digital Research and its president, Mr. Kildall, function in a casual manner that belies the concern's leading position in the fast-paced microcomputer industry. Changing Structure

But now, to cope with increased competition and larger contracts, such as that with I.B.M., Digital Research must change. It is formalizing its management structure, accepting venture-capital financing, altering its pricing policies and even planning to expand into a 16,000-square-foot modern office building, with a view of the ocean, of course.

All this business, quite frankly, is more than Mr. Kildall cares to deal with. "Basically I am a gadget-oriented person," the jeansclad Mr. Kildall said. "I like to work with dials and knobs. I'm not a very competitive person. I'm forced into it."

Pacific Grove, a picturesque town near the artists colony of Carmel and a two-hour drive from California's Silicon Valley, seems an unlikely place for a computer concern. But there, in a small cottage near Monterey Bay, Mr. Kildall invented in the early 1970's what is now Digital Research's main product, an operating system. Computer Traffic Policeman

Acting like a traffic policeman, an operating system is a type of software that directs a personal computer's activities. For example, if a user wants access to certain information, the operating system tells the computer how to retrieve it.

In 1975 Mr. Kildall licensed what has become the leading operating system for microcomputers. It is called CP/ M, for Control Program for Microcomputers. The operating system was selected by the Xerox Corporation for its Xerox 820 office system and by I.B.M. as an option for its personal computer, set for delivery in October.

Despite his preference for the laboratory over the board room, Mr. Kildall, who holds a Ph.D. in computer science, has built his company to 50 employees in six years. For the year ended Aug. 31, the privately held concern had sales of about $6 million, and Mr. Kildall expects $10 million in revenues this fiscal year.

"They're doing terrific; they must be smiling from ear to ear with the I.B.M. contract," said Ulric Weil, an analyst with Morgan Stanley & Company. Optimistic About Sales

"Within five years, I think sales will be $100 million," said Dorothy McEwan, Mr. Kildall's wife and high school sweetheart of 19 years ago. She has handled the financial and marketing aspects of the business since the two started Digital Research in a 10-foot-by-13-foot playroom at their first Pacific Grove home, a cottage a few blocks from the ocean.

But the expansion has become too much for Mrs. McEwan to supervise. "The company grew so rapidly that we had gone from small-time to a big-time operation, and we had to have professional managers," she said.

After having venture capit alists knocking at his door for three years, Mr. Ki ldall recognized earlier this year that he should let them come in. Mr. Kildall said he did not need their money, but wanted their expertise so he would not need to "take chances" with business deci sions.

Last month, giving up only a small share of ownership, he brought in four: T.A. Associates of Boston, Hambrecht & Quist of San Francisco, Venrock Associates of New York and Page Mills Partners of Palo Alto. Changed Licensing Methods

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March 27, 1983 - NY Times - "BIG I.B.M. HAS DONE IT AGAIN" by Andrew Pollack

Source : [HN01BQ][GDrive]

SEYMOUR MERRIN, owner of the Computerworks store in Westport, Conn.,couldn't wait to start carrying I.B.M.'s new personal computer in the fall of 1981. The product was destined for success, he felt, and would be a strong addition to any computer store's product line.

What Mr. Merrin didn't anticipate, however, was that the I.B.M. computer would come to dominate his sales so much that it would make him nervous. "Right now, it's the bulk of my business, overwhelmingly," said the dealer, who is trying to push Apple computers to counteract I.B.M.'s influence. "One does not want to have one vendor or one customer dominate one's business. Any dealer who is not concerned with that is out of his gourd."

So it has been with the International Business Machines Corporation's entry into the personal computer business. Everyone expected the computer giant to be successful. The mere fact that it was I.B.M., a company that has muscled others out of the way to dominate the computer industry, virtually assured it would be a leader in the personal computer business. "They don't have to be the best, they just have to be competitive," said Peter Wright, an analyst with the Gartner Group in Stamford, Conn.

Nevertheless, the speed and extent to which I.B.M. has been successful has surprised many people, including I.B.M. itself. That is especially so since success was achieved with an unspectacular machine - albeit a well-designed one - made of off-the-shelf parts supplied by others.

Now, after 18 months in the market, I.B.M. has caught up to longtime leaders Apple Computer Inc. and the Tandy Corporation (makers of Radio Shack computers), and most market researchers expect I.B.M. to surge ahead of everyone this year or the next. Analysts estimate that I.B.M. sold 175,000 to 200,000 computers in 1982, its first full year on the market, and will sell at least 400,000 to 500,000 this year, helped by I.B.M.'s expansion to the overseas market and by a new, more powerful version of its personal computer introduced late last month. The company is also planning additional products, including a home computer selling for under $1,000 - code-named the Peanut - that is expected to be introduced by the end of the year. But I.B.M.'s importance in the industry is greater than its current market share of roughly 20 percent would indicate. Indeed, to some extent, I.B.M.'s role in the personal computer world is beginning to resemble its central role in the mainframe computer business, in which I.B.M. is the sun around which everything else revolves. The I.B.M. personal computer has become a de facto standard for personal computers in its price range of $2,500 to $5,000. Virtually every software company is giving first priority to writing programs for the I.B.M. machine. And more than 20 companies have already introduced I.B.M. "clones" - computers that are interchangeable or almost interchangeable with the I.B.M. computer, allowing the computers to use software written for the I.B.M. machine and to be sold to I.B.M.'s vast and continuously growing customer base. Indeed, as happened first with the Apple II, an entire subindustry has sprung up to supply parts, accessories and advice for the I.B.M. personal computer. Two of the top four computer magazines in terms of advertising pages in February were exclusively devoted to the I.B.M. computer, according to Adtrak Inc., an advertising tracking service in Mountainview, Calif.

The emergence of I.B.M. will hasten a shakeout that is inevitable in an industry with more than 100 suppliers. Nevertheless, Apple still remains strong. And some other potential big hitters are coming into the market, most notably the American Telephone and Telegraph Company's American Bell unit.

But just as important as its effect on the industry is the effect of the personal computer on I.B.M. itself. The computer will account for $1 billion to $2 billion in I.B.M. revenues this year, a tiny fraction of I.B.M.'s expected total of $35 to $40 billion.

Yet the computer is attracting increasing attention within I.B.M. as a pivotal product in its overall office automation thrust. "They're rethinking their entire strategy," said H. Donald Haback, a consultant and analyst at Freimark Blair & Company, an investment research firm.

Integrating the personal computer into I.B.M.'s overall strategy is becoming imperative. Already, the personal computer is proving so versatile that it is eating into sales of other, sometimes more expensive, I.B.M. products such as terminals, word processors and more expensive computers. "I.B.M. doesn't want the personal computer to cannibalize its other products," said the head of a large software company.

One victim already appears to be the System/23 Datamaster, a $10,000 computer introduced just two weeks before the personal computer and then all but lost in the excitement over the PC. And the potential for the PC to undermine I.B.M.'s more expensive word processor, the Displaywriter, was demonstrated this month when NBI Inc., a major word processing manufacturer, introduced an attachment for the personal computer that will turn it into an NBI word processor.

I.B.M.'s success in its new business stems largely from its success in the older computer markets. I.B.M. was expected to be successful and therefore received the retail shelf space and software support that are critical to making a product successful. Software companies have limited resources and generally concentrate on writing programs for the most popular computers.

"From the day it hit the marketplace, it was perceived by the software companies as a winner," said Mr. Merrin. "Because they perceived it as a winner, they wrote software for it." And because much software is being written, the I.B.M. computer became more and more successful, a selffulfilling prophecy. And that generated more software in a snowball effect.

I.B.M. also had a big advantage in selling personal computers to large corporations, which already use its mainframes. Such companies are capable of ordering thousands of personal computers at a shot. And rather than having each employee choose a computer individually, the data processing manager - I.B.M.'s traditional customer - is gaining a bigger role in choosing which computers to use. The safe route for data processing managers has always been to buy I.B.M.

STILL, other companies with resources and reputations almost as large as I.B.M.'s - such as Hewlett-Packard, Xerox and Digital Equipment - have not made the same impact that I.B.M. has. To be successful, I.B.M. had to avoid major blunders. It exhibited an adroit ability to move quickly and to adapt to retail marketing, a new environment for it. "I think they did nothing brilliant, but they did everything right," said Lee R. Greenhouse, assistant vice president for personal computer services at E.F. Hutton & Company.

I.B.M. decided to enter the personal computer business in the summer of 1980, when then-chairman Frank T. Cary gave the go-ahead, according to sources close to I.B.M. The company did not want to lose its chance for leadership in the microcomputer business in the same way it had let the Digital Equipment Corporation get the lead on it in minicomputers years earlier. Moreover, personal computers were starting to appear on the desks of its corporate customers. Some I.B.M. officials referred to the personal computer as the "logo machine.

"I.B.M. didn't want to sell mainframes to a large company where four out of five managers had an Apple on his desk," said Sanford J. Garrett, an analyst at Paine Webber Mitchell Hutchins.

The assignment was given to a group in Boca Raton, Fla., which received an unusual amount of freedom from I.B.M. bureaucratic procedures and past practices. One year later, the machine, aptly named the Personal Computer, or PC for short, was introduced.

One departure from past practice was to rely on outsiders for parts and software. The heart of the computer was Intel Corporation's 8088 microprocessor, which was capable of handling 16 bits, or units, of information at a time, compared to the eight bits of information handled by most existing computers. That made the I.B.M. computer capable of handling more complex programs than earlier computers. Another nice but not spectacularly new feature was a keyboard that was detached from the screen and had plenty of keys for special functions.

I.B.M. also relied on outside companies to supply software for the machine, such as word processing and financial modeling packages. It used an operating system - the program that acts as a computer's traffic cop - from the Microsoft Corporation of Bellevue, Wash. Use of a publicly available operating system encouraged more software companies to write programs for the I.B.M. personal computer, yet also made it easier for other manufacturers to make computers compatible with the I.B.M. machine.

The operations were conducted in great secrecy and relations between I.B.M. and its young computer programming whizzes were at first somewhat awkward. "If you haven't seen an I.B.M. nondisclosure agreement before, you wouldn't sign it," said Gary Kildall, chairman of Digital Research Inc., a software company whose CP/M-86 operating system is offered as an option for the personal computer.

I.B.M. also slowly and deliberately recruited the cream of Apple's dealers. Now there are 770 separate outlets selling the machine in the United States and Canada. The limited distribution at first meant a bonanza for those stores with the computer and it meant that in virtually every store, the I.B.M. machine became the best-selling line. In Computerland stores, a nationwide chain, only the Apple and the Osborne machines have at times sold in as high a volume as the I.B.M., said Edward E. Faber, president.

I.B.M. has also been careful to avoid marketing the product through too many channels in an attempt to prevent discounting. Apple dealers often complained they spent time with customers convincing them to buy a computer only to find the customer actually make the purchase from a discount store like New York's 47th Street Photo.

Dealers are starting to face increasingly stiff competition from another quarter, however. I.B.M.'s own sales force is becoming more aggressive in selling the computers and it was recently authorized to offer greater discounts to large accounts. That largely reflects the changing view within I.B.M. of the importance of the computer as the potential future workstation that may one day be on every office worker's desk.

I.B.M. might make the personal computer its universal terminal. The same basic unit can be stamped out and then modified at the end to act as either a terminal, a computer, or a word processor. "It will give I.B.M. incredible economies in manufacturing," said Frank R. Gens of the Yankee Group, a telecommunications consulting firm.

I.B.M. has already introduced options that allow the personal computer to play the part of a computer terminal and retrieve data from I.B.M. mainframe computers in large corporations. It recently introduced an option that would turn its terminals into personal computers. Since there are an estimated 1.5 million terminals in use, conversion of a fraction of them to personal computers could represent a significant addition to the personal computer base.

I.B.M. is also pushing into new markets, such as the home. An inexpensive computer, code-named "Peanut," is expected to be introduced before the end of the year. It is expected the machine would sell for less than $1,000, come with 64 K bytes, or more than 64,000 typed characters of memory, and would be at least partly compatible with the existing personal computer. It would compete in the upper end of the home market against machines such as the Apple IIe, the Commodore 64 and Atari 1200.

I.B.M.'s presence is hurting other companies but is not yet killing them because the overall market is growing at a rapid rate. In addition, technology is changing quickly and there are many niches for companies to position themselves around I.B.M.

The introduction of the I.B.M. machine virtually choked off sales of the Apple III, the Apple product most directly competitive. But Apple's main machine, the Apple IIe continues to sell well. Its new machine, the Lisa, is priced somewhat higher and might compete effectively by offering features not yet available on the I.B.M. computer. Tandy, which owns and franchises the Radio Shack chain, has an extremely broad line, from handheld devices to powerful desktop machines. Because it is mainly a retailer, it also has some flexibility to market products made by others.

Companies like Texas Instruments and Commodore have strength at the very low end, with products selling for a few hundred dollars or less, an area I.B.M. is not likely to invade immediately.

Meanwhile, other giants, such as the Digital Equipment Corporation, Wang and NCR are only now starting to enter the 16-bit computer market and should diminish I.B.M.'s dominance of that segment. A.T.& T.'s American Bell subsidiary is also planning an assault on the market. And the Japanese companies, which have made a weak showing so far, are expected to get stronger. I.B.M.'S LUCRATIVE COATTAILS

As I.B.M. has swept to the forefront of the personal computer business, an entire subindustry has evolved and managed to profit from the product, either by selling directly to I.B.M. or to the market, or from receiving I.B.M.'s endorsement.

Among the most obvious suppliers to profit are the Intel Corporation, which supplies the microprocessor to I.B.M., the Tandon Corporation, which has made most of the disk drives and the Microsoft Corporation, which makes the main operating system.

SCI Systems Inc. of Huntsville, Ala. is known to assemble the electronic circuit boards that are the guts of the I.B.M. personal computer. The company, traded over the counter, experienced a 52 percent revenue increase, to $90 million, in the year ended June 30, 1982, and analysts expect revenue to double in the current year. While the company would not comment, its 10K report shows that I.B.M. accounted for 41.4 percent of its revenues in fiscal year 1982, up from 18.7 percent in 1981.

Another potential market is in manufacturing computers that are compatible with the I.B.M. computer, meaning they can use software written for the P.C. Many industry observers think the Compaq Computer Corporation of Houston, which makes a portable compatible computer, is poised for meteoric growth.

Numerous other companies supply either software for the computer or hardware accessories such as disk drives, video displays, game paddles and extra memory. Hundreds of software products and hardware accessories have flooded the market.

The Quadram Corporation of Norcross, Ga., makes 20 different accessories. Its most popular product, the Quadboard, includes additional memory, a clock

and calendar and communications ports for $600. Founded in 1981, Quadram was purchased by the Intelligent Systems Corporation in December 1982 in a stock deal valued at $35 million.

Living on the edges of I.B.M.'s business can be precarious, however. When a business gets too large, I.B.M. can reach out and recapture it. Recently I.B.M. introduced its own hard disk drive, color monitor and extra memory, cutting into the sales of independent companies that were supplying those products. It also reduced prices for its personal computer by about 15 percent, potentially hurting the compatible computer manufacturers.

2007 - Computer History Museum Spring/Summer "Core" magazine

https://computerhistory.org/wp-content/uploads/2019/08/core-2007.pdf

2007-spring-summer-core-computer-history-museum.pdf

EXPLODING MYTHS

These stories provide great insights into the history of IT companies. Sometimes they serve to explode long-stand-

ing industry myths. For example, many in the IT industry have heard the story that Gary Kildall, the founder of Digital Research, Inc., blew off a meeting with “the suits” from IBM regarding licensing the CP/M operating system to go gal- livanting in his private airplane. Supposedly the frustrated IBM folks turned to Microsoft’s MS-DOS operating system for their PC, and DRI missed out on the greatest opportunity in the software industry.

Claims and counter-claims about this story have floated about for years. But Curt Geske was there. In his story “DRI and IBM—First Meeting,” Geske tells us the meeting was a rather mundane affair between Dorothy Kildall, who ran the business end of things, and IBM lawyers over the wording of a nondisclosure agreement. IBM made it known that Micro- soft already had a contract to do the work and expected DRI

to supply them with the full source code for CP/M, which DRI was understandably reluctant to do. DRI and IBM did eventually reach an agreement for IBM to distribute CP/M, but as recounted in Steve Maysonave’s videotaped story, the agreement was structured in a way that gave all the advantage to Microsoft. The outcome was consistent with the legend, but it hinged on the intricacies of contract negotiations rather than on Gary’s preference for flying over attending meetings

July 14, 1994 - The Seattle Times - "A Career Spent in Gates' Shadow -- Computer Pioneer Dies at 52"

Source : [HN01AM][GDrive]

Seattle native and software pioneer Gary Kildall, who died Monday at age 52, never let on publicly how he felt about losing dominance of the personal computer industry to hometown rival Bill Gates.

But in "Computer Connections," his privately circulated memoir, Mr. Kildall is blunt:

"I have grown up in the industry with Gates. He is divisive. He is manipulative. He is a user. He has taken much from me and the industry."

It's not the first time the Microsoft billionaire - who built a software empire on BASIC, a computer language invented at Dartmouth; MS-DOS, a program he purchased, and Windows, modeled after Apple Computer's Macintosh - has been called predatory. But Mr. Kildall, an easygoing type who co-hosted a public-TV show on computers called "Computer Chronicles," previously had shied from pointing the finger. Gates was unavailable for comment. A Microsoft spokeswoman said Gates "regrets Gary passed away at such a young age, and it's a loss to the industry." But, she said, "no one can deny the size and strength of the personal-computer industry that has been made possible by MS-DOS and Intel technologies becoming the standard."

Mr. Kildall, who was en route to Seattle to visit relatives, died in a Monterey, Calif., hospital. The cause of death has not been determined. A press release issued by the county coroner said Mr. Kildall was injured late Friday at a Monterey restaurant but refused treatment.

Early Saturday, an ambulance was summoned to his home, and Mr. Kildall was taken to a hospital, then released. He was readmitted Sunday and stayed in the hospital until his death.

A service will be held in Seattle on Tuesday.

In his book-length memoir, Mr. Kildall acknowledged his sentiments about Gates are "sour grapes" but he defends his version of events as "the whole truth."

Associates are trying to have the memoir, which was shown to The Seattle Times, published by a trade press. Mr. Kildall spent two years writing it and did a limited printing for family and friends last fall.

Wrote one of the first systems

Twenty years ago, Mr. Kildall wrote CP/M, the first popular operating system for desktop computers. Called by some the father of personal computing for that contribution, Mr. Kildall became better known for something he didn't do.

In 1980, IBM needed an operating system for its personal computer project and was directed by Gates to Mr. Kildall's Digital Research Inc. in Pacific Grove, Calif. To run applications, a computer needs an operating system. IBM wanted to ship one with each of its new PCs.

In a frequently told story with numerous conflicting versions, IBM visited Digital Research, only to be rebuffed when Mr. Kildall's wife at that time, Dorothy McEwen, balked at signing a form limiting disclosure of the relationship between the companies.

Gates later told interviewers "Gary went flying" at the pivotal historical moment. But Mr. Kildall wrote that he returned from flying his Piper Turbo Arrow to a business appointment in the afternoon, signed the agreement and began negotiating a deal with IBM.

IBM wanted to purchase CP/M-86 outright for $250,000, but Mr. Kildall held out for the standard royalty of $10 a copy.

Mr. Kildall's version has never been confirmed. Jack Sams, an IBM program manager at the time, said Mr. Kildall was missing from most of the meeting but "might have been there at the time they signed the letter (nondisclosure agreement)." Mr. Kildall's ex-wife McEwen declined comment. Gerry Davis, his attorney at the time, did not return phone calls.

Tom Rolander, a Digital Research executive then, said he was with Mr. Kildall on the San Jose trip and at the meeting. He declined to give details but said, "a careful analysis of the whole relationship will indicate how ruthless IBM and Gates were, and how innocent Gary was." Mr. Kildall "was not a Gates-type person. He was an inventor of technology, not a businessman."

Gates steps into breach

When IBM returned without a deal, Gates purchased an operating system from Seattle Computer Products called QDOS, for Quick and Dirty Operating System, for use on the IBM PC. After renaming the program MS-DOS, Microsoft licensed it to makers of IBM PC "clones," making it by the mid-1980s the prevailing operating system for personal computers.

When Mr. Kildall, who had shown IBM his system, saw an early copy of DOS, he was incensed over similarities between the two. At a meeting with IBM, he agreed not to sue for copyright infringement if IBM marketed his program. IBM later priced CP/M at $240 but charged only $40 for DOS.

"The pricing difference set by IBM killed CP/M-86," Mr. Kildall wrote in the book. IBM's Sams acknowledged the price difference but said it reflected Mr. Kildall's higher price to IBM, which he recalls as $100 a unit.

Mr. Kildall, who knew Gates from the latter's early computing days at C-Cubed, a University District computer center, made millions from CP/M. But he was destined to be cast as the guy who lost the big one.

Mr. Kildall's and Gates' paths crossed often. In 1977 the two discussed merging their companies while Gates tried to decide where to move Microsoft, then in Albuquerque.

Mr. Kildall later offered to sell Digital Research for $26 million to Gates, who told him the company was worth no more than $10 million. In 1991, Digital Research was sold for $120 million to Novell.

Teaching, then work at Intel

While studying at the UW in the late 1960s, Mr. Kildall had entered the Navy. When given the choice between serving in Vietnam or teaching at the Naval Postgraduate School in California, he chose the latter. In 1973 he went to work for Intel, which today supplies chips for 80 percent of the world's personal computers. In 1976 he founded Intergalactic Digital Research. He soon shortened the name.

Mr. Kildall licensed CP/M to IMSAI, an early personal-computer manufacturer. By 1980 it had become the industry standard.

In an appendix, Mr. Kildall reprints copies of code for CP/M and DOS showing, he maintains, that the first 26 lines, or calls, are identical. Seattleite Tim Paterson, author of QDOS, has acknowledged that it was modeled after CP/M but denies it was a direct copy. In his book, Mr. Kildall calls it "plain and simple theft."

Mr. Kildall wrote he was advised by Davis, his attorney, not to sue. At the time, the software community widely imitated one another's work. Later, suing over "look and feel" and copyright or patent infringement became a means of protecting what became intellectual property potentially worth billions.

Mr. Kildall stayed with Digital Research through the 1980s and worked on a variety of ventures. He was residing in Austin, Texas, at the time of his death.

"We all thought Gary was a genius," said his sister, Patricia Guberlet of Seattle. "He was a genuinely likable person" who never received recognition tantamount to his contribution, she added.

"He paved the way for everybody," said a cousin, Tom Kildall, a Seattle marine-insurance broker. "When I talked to him about it (the lost IBM deal), it was like, `That's the way it goes.' All it would have gotten him was more money, and he wasn't poor."

Gary attended high school at Lincoln in Wallingford but graduated from Queen Anne High in 1960, his sister said. He enrolled at the UW in 1963 and earned a doctorate in computer science.

Mr. Kildall is survived by his mother, Emma, of Seattle; his sister; an uncle, Bob, of Seattle; a daughter, Kristin, of Seattle, and son Scott of Oakland. Services will be held tomorrow in Monterey and 11 a.m. Tuesday in Seattle's Trinity Parish Episcopal Church at 609 Eighth Ave. Donations may be made to Make-A-Wish Foundation.

PHOTO; Caption: 1) GARY KILDALL 2) BILL GATES

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Jul 16, 1994 - The Seattle Times - "Computer Pioneer's Death Probed -- Kildall Called Possible Victim Of Homicide" by Peyton Whitely

Source : [HN01AN][GDrive]

The death of Gary Kildall, who's been called the father of the personal computer, is being investigated by California police as a possible homicide.

Kildall, 52, a Seattle native who devised a computer-operating system known as CP/M, died Monday in Monterey, Calif., of what a coroner's report described as a traumatic head injury.

The report on the cause of death also said that Kildall suffered from chronic alcoholism, which it cited as a contributing medical condition. The coroner's report said the fatal injury may have taken place "as a result of foul play" and the incident was being turned over to the Monterey Police Department.

"We're going to investigate it as a possible homicide," said police Sgt. Frank Sollecito. "I'm not going to flat-out say it's a homicide."

Kildall was injured at the Franklin Street Bar & Grill on July 8 but refused medical treatment. He was taken to a hospital the following day and released.

But he was readmitted Sunday and died the following day.

Kildall could have died either from a blow to the head or from hitting his head as he fell, said Sollecito.

The first description of the incident at the bar, he said, was that Kildall had been in the bar between two to 20 minutes. Then witnesses "turned around, and he was on the floor," the sergeant said.

But Sollecito said stories are changing. "That version isn't going to hold up," he said.

Medical evidence of chronic alcoholism was found during the autopsy, said Sgt. Jim Smith, coroner-division commander for the Monterey County Sheriff's Department.

Kildall's CP/M was considered by IBM as a possible operating system for its new personal computers in 1980. But according to computer-age lore, IBM instead chose a competing system known as MS-DOS, buying it from another Seattle man named Bill Gates, who ran a company called Microsoft.

Kildall later wrote a private memoir that included a description of the IBM deal, entitling it "Computer Connections." In it, he told how he thought he had an agreement with IBM but the proper documents never were signed and the deal slipped away.

Gates has told his own version of the deal and of how Kildall lost it by going flying instead of attending a meeting with IBM. Numerous conflicting versions of the supposed arrangements exist.

Kildall later sold his company, Digital Research, for $120 million, and Gates went on to make billions of dollars through Microsoft.

2020 (Jan 05) - "The Death of Gary Kildall Remains a Mystery to This Date"

Posted in Bill Gates, Deception, Microsoft at 6:16 am by Dr. Roy Schestowitz

http://techrights.org/2020/01/05/history-canceled/

2020-01-05-techrights-org-history-cancelled

'He [Bill Gates] is divisive. He is manipulative. He is a user. He has taken much from me and the industry.' -Gary Kildall

Summary: Mr. Kildall reportedly “suffered a fatal heart attack,” but more recent media reports speak of a “biker bar brawl during a night out in Monterey” as the cause of death (shades of the last moments of Ian Murdock, who had been severely abused by police and then — after shocking humiliation — decided to hang himself)

THERE’s a story or two surrounding the relatively mysterious death of Gary Kildall at the age of 52. The story I heard as a young person may have changed over time (revisionism by the ‘victor’ plays a role), but Wikipedia puts it like this (at this time): “On July 8, 1994, Kildall fell at a Monterey, California, biker bar and hit his head.[26] The exact circumstances of the injury remain unclear. He had been an alcoholic in his later years.[15][27] Various sources have claimed he fell from a chair, fell down steps, or was assaulted, because he had walked into the Franklin Street Bar & Grill wearing Harley-Davidson leathers.[12] He checked in and out of the hospital twice, and died three days later at the Community Hospital of the Monterey Peninsula. An autopsy the next day did not conclusively determine a cause of death.[25][1] A CP/M Usenet FAQ says he was concussed from the fall and died of a heart attack; the connection between the two are unclear.[28] He is buried in Evergreen Washelli Memorial Park in north Seattle.”

Wikipedia cites several articles from sites that are funded by Bill Gates, for example the Seattle Times. They’re not likely to be objective.

“No matter if people retire early (unhappy with the way things are going), or leave due to health circumstances, or are forced to resign, or die earlier than expected and so on… the net effect is that they have less of a role to play.”To quote an associate of ours, “I read on TR (Techrights) that Bruce Perens has been driven out of OSI. Do you have a list? Guido, RMS, Linus, probably many others.”

“Perens himself left,” I responded, “after seeing the OSI doing bad things.”

No matter if people retire early (unhappy with the way things are going), or leave due to health circumstances, or are forced to resign, or die earlier than expected and so on… the net effect is that they have less of a role to play. Even Linus Torvalds is nowhere as active as he used to be; he mostly participates in announcements.

For the sake of documenting the fate of Mr. Kildall, here’s a copy of an article by Clive Akass of Personal Computer World that is no longer online (but exists on the Wayback Machine):

The birth of the IBM PC was also the making of Bill Gates, thanks to a door-step farce that has become an industry legend.

IBM at the time had dominated the industry for a quarter-century, though it had been late getting into digital computers, and even later getting into what were then called microcomputers, which it tried to pretend were not a threat to its mainframe business. By the late 1980s ‘micros’ (as in Microsoft) could not be ignored, and IBM set up a team to design one

The obvious person to provide the software was Gary Kildall, head of a company called Digital Research, who had written CP/M – the operating system used on almost all micros.

Legend has it that two suits from IBM called by appointment at Kildall’s home, but he was off flying and had left his wife Dorothy to do the talking. She baulked at signing a non-disclosure agreement and showed them the door

So they turned instead to a fledgling company run by a 24-year-old college dropout whose name was Bill Gates. Microsoft did not even have an operating system and promptly bought one called QDos, virtually a CP/M clone, for $50,000 from a Seattle engineer called Tim Patterson.

The legend is essentially true, though what really hassled Dorothy Kildall when IBM showed up was the fact that she was preparing to go on holiday the next day, according to former Symantec chief executive Gordon Eubanks, who knew everyone involved. No-one at the time knew that the IBM computer was going to become the industry’s major standard platform.

And the real reason Kildall did not get the contract was that he was simply too laid back to be a good businessman, Eubanks told me in 1996. “Gary could have owned this business [ie, computing] if he had made the right strategic decisions… He did not care that much. Dorothy ran the business and he ran the technical side, and they did not get on.”

It was Gates who had the vision. “Bill was extremely focused and driven,” Eubanks recalled.

Microsoft tweaked QDos a little and called it MS-Dos. It ended up running in nine out of 10 of the world’s PCs, and traces of it can still be found buried in Windows XP.

CP/M lingered on for a few years and Novell bought Digital Research in 1991. Kildall died in 1994 at the age of 52 from injuries received in a biker bar brawl during a night out in Monterey, California.

Kildall was one of the founding fathers of desktop computing, but he seems destined to go down in history as the man who gave Bill Gates the world.

The narrative of a brawl is partly disputed here:

Q4: What ever happened to Digital Research and Gary Kildall?

a: (Don Kirkpatrick)

DRI was bought out by Novell and subsequently sold off to Caldera, which currently owns the copyright to all DRI software.

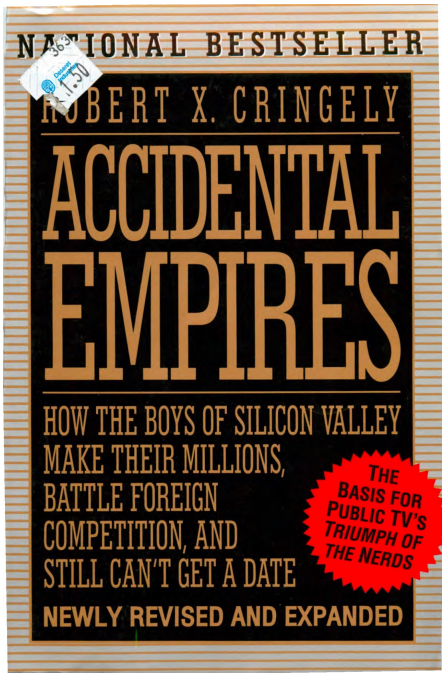
Personal computer pioneer Gary Kildall, who but for a single failed business deal might have enjoyed the wealth and fame of Bill Gates, died July 11, 1994, in a Monterey hospital at age 52.

Kildall was taken to the hospital after suffering a concussion in a fall. Evidence indicates Kildall suffered a fatal heart attack. It is unclear if the two conditions were related.

What troubles us most is the degree to which Gates-funded sites have been rewriting the history as recently as a couple of years back (when the Wikipedia article was last edited). Money buys narrative.

1996 book - References to Gary Kildall in "Accidental Empires" by Robert X Cringely

PDF Source : [HB004U][GDrive] / Text conversion : [HB004W][GDrive]



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You have to wonder what it was we were doing before we had all these computers in our lives. Same stuff, pretty much. Down at the auto parts store, the counterman had to get a ladder and climb way the heck up to reach some top shelf, where he'd feel around in a little box and find out that the muffler clamps were all gone. Today he uses a computer, which tells him that there are three muffler clamps sitting in that same little box on the top shelf. But he still has to get the ladder and climb up to get them, and, worse still, sometimes the computer lies, and there are no muffler clamps at all, spoiling the digital perfection of the auto parts world as we have come to know it.

What we're often looking for when we add the extra over head of building a computer into our businesses and our lives is certainty. We want something to believe in, something that will take from our shoulders the burden of knowing when to reorder muffler clamps. In the twelfth century, before there even were muffler clamps, such certainty came in the form of a belief in God, made tangible through the building of cathedrals—places where God could be accessed. For lots of us today, the belief is more in the sanctity of those digital zeros and ones, and our cathedral is the personal computer. In a way, we're replacing God with Bill Gates.

Uh-oh.

The problem, of course, is with those zeros and ones. Yes or no, right or wrong, is what those digital bits seem to signify, looking so clean and unconflicted that we forget for a moment about that time in the eighth grade when Miss Schwerko humiliated us all with a true-false test. The truth is, that for all the apparent precision of computers, and despite the fact that our mothers andTom Peters would still like to believe that perfection is attainable in this life, computer and software companies are still remarkably imprecise places, and their products reflect it.

And why shouldn't they, since we're still at the fumbling stage, where good and bad developments seem to happen at random. Look at Intel, for example. Up to this point in the story, Intel comes off pretty much as high-tech heaven on earth. As the semiconductor company that most directly begat the personal computer business, Intel invented the microprocessor and memory technologies used in PCs and acted as an example of how a high-tech company should be organized and managed.

But that doesn't mean that Bob Noyce's crew didn't screw up occasionally.

There was a time in the early 1980s when Intel suffered terrible quality problems. It was building microprocessors and other parts by the millions and by the millions these parts tested bad. The problem was caused by dust, the major enemy of computer chip makers. When your business relies on printing metal lic traces that are only a millionth of an inch wide, having adust mote ten times that size come rolling across a silicon wafer means that some traces won't be printed correctly and some parts won't work at all.A few bad parts are to be expected, since there are dozens, sometimes hundreds, printed on a single wafer, which is later cut into individual components. But Intel was suddenly getting as many bad parts as good, and that was bad for business.

Semiconductor companies fight dust by building their components in expensive clean rooms, where technicians wear surgical masks, paper booties, rubber gloves, and special suits and where the air is specially filtered. Intel had plenty of clean rooms, but it still had a big dust problem, so the engineers cleverly decided that the wafers were probably dusty before they ever arrived at Intel. **The wafers were made in the East by Monsanto.**

Suddenly it was Monsanto's dust problem.

Monsanto engineers spent months and millions trying to eliminate every last speck of dust from their silicon wafer production facility in South Carolina. They made what they thought was terrific progress, too, though it didn't show in Intel's production yields, which were still terrible. The funny thing was that Monsanto's other customers weren't complaining. IBM, for example, wasn't complaining, and IBM was a very picky customer, always asking for wafers that were extra-big or extra small or triangular instead of round. IBM was having no dust problems.

If Monsanto was clean and Intel was clean, the only remain ing possibility was that the wafers somehow got dusty on their trip between the two companies, so the Monsanto engineers hired a private investigator to tail the next shipment of wafers to Intel. Their private eye uncovered an Intel shipping clerk who was opening incoming boxes of super-clean silicon wafers and then counting out the wafers by hand into piles on a super-unclean desktop, just to make sure that Bob Noyce was getting every silicon wafer he was paying for.

The point of this story goes far beyond the undeification of Intel to a fundamental characteristic of most high-tech businesses. There is a business axiom that management gurus spout and that big-shot industrialists repeat to themselves as a mantra if they want to sleep well at night. The axiom says that when a business grows past $1 billion in annual sales, it becomes too large for any one individual to have a significant impact. Alas, this is not true when it's a $1 billion high-tech business, where too often the critical path goes right through the head of one particular programmer or engineer or even through the head of a well-meaning clerk down in the shipping department. Remember that Intel was already a $1 billion company when it was brought to its knees by desk dust.

The reason that there are so many points at which a chip, a computer, or a program is dependent on just one person is that the companies lack depth. Like any other new industry, this is one staffed mainly by pioneers, who are, by definition, a small minority. People in critical positions in these organizations don't usually have backup, so when they make a mistake, the whole company makes a mistake.

My estimate, in fact, is that there are only about twenty-five real people in the entire personal computer industry—this ship ping clerk at Intel and around twenty-four others. Sure, Apple Computer has 10,000 workers, or says it does, and IBM claims nearly 400,000 workers worldwide, but has to be lying. Those workers must be temps or maybe androids because I keep running into the same two dozen people at every company I visit.

Maybe it's a tax dodge. Finish this book and you'll see; the companies keep changing, but the names are always the same. Intel begat the microprocessor and the dynamic random access memory chip, which made possible MITS, the first of many per sonal computer companies with a stupid name. And MITS, in turn, made possible Microsoft,, because computer hardware must exist, or at least be claimed to exist, before programmers can

even envision software for it. Just as cave dwellers didn't squat with their flint tools chipping out parking brake assemblies for 1967 Buicks, so programmers don't write software that has no computer upon which to run. Hardware nearly always leads soft ware, enabling new development, which is why Bill Gates's con version from minicomputers to microcomputers did not come (could not come) until 1974, when he was a sophomore at Harvard University and the appearance of the MITS Altair 8800 computer made personal computer software finally possible.

Like the Buddha, Gates's enlightenment came in a flash. Walking across Harvard Yard while Paul Allen waved in his face the January 1975 issue of Popular Electronics announcing the Altair 8800 microcomputer from MITS, they both saw instantly that there would really be a personal computer industry and that the industry would need programming languages. Although there were no microcomputer software companies yet, 19-year-old Bill's first concern was that they were already too late. "We realized that the revolution might happen without us," Gates said. "After we saw that article, there was no question of where our life would focus."

"Our lifel" What the heck does Gates mean here—that he and Paul Allen were joined at the frontal lobe, sharing a single life, a single set of experiences? In those days, the answer was "yes." Drawn together by the idea of starting a pioneering soft ware company and each convinced that he couldn't succeed alone, they committed to sharing a single life—a life unlike that of most other PC pioneers because it was devoted as much to doing business as to doing technology.

Gates was a businessman from the start; otherwise, why would he have been worried about being passed by? There was plenty of room for high-level computer languages to be developed for the fledgling platforms, but there was only room for one first high-level language. Anyone could participate in a movement, but only those with the right timing could control it. Gates knew that the first language—the one resold by MITS, maker of the Altair—would become the standard for the whole industry. Those who seek to establish such de facto standards in any industry do so for business reasons.

"This is a very personal business, but success comes from appealing to groups," Gates says. "Money is made by setting d<_ facto standards."

The Altair was not much of a consumer product. It came typically as an unassembled $350 kit, clearly targeting only the electronic hobbyist market. There was no software for the machine, so, while it may have existed, it sure didn't compute. There wasn't even a keyboard. The only way of programming the computer at first was through entering strings of hexadecimal code by flicking a row of switches on the front panel. There was no display other than some blinking lights. The Altair was limited in its appeal to those who could solder (which eliminated most good programmers) and to those who could program in machine language (which eliminated most good solderers).

BASIC was generally recognized as the easiest programming language to learn in 1975. It automatically converted simple English-like commands to machine language, effectively removing the programming limitation and at least doubling the number of prospective Altair customers.

Since they didn't have an Altair 8800 computer (nobody did yet), **Gates and Allen wrote a program that made a PDP-10 mini computer at the Harvard Computation Center simulate the Altair's Intel 8080 microprocessor. In six weeks, they wrote a version of the BASIC programming language that would run on the phantom Altair synthesized in the minicomputer.** They hoped it would run on a real Altair equipped with at least 4096 bytes of random access memory. The first time they tried to run the language on a real microcomputer was when Paul Allen demonstrated the product to MITS founder Ed Roberts at the company's headquarters in Albuquerque. To their surprise and relief, it worked.

MITS BASIC, as it came to be called, gave substance to the microcomputer. Big computers ran BASIC. Real programs had been written in the language and were performing business, educational, and scientific functions in the real world. While the Altair was a computer of limited power, the fact that Allen and Gates were able to make a high-level language like BASIC run on the platform meant that potential users could imagine running these same sorts of applications now on a desktop rather than on a mainframe.

MITS BASIC was dramatic in its memory efficiency and made the bold move of adding commands that allowed programmers to control the computer memory directly. MITS BASIC wasn't perfect. The authors of the original BASIC, John Kemeny and Thomas Kurtz, both of Dartmouth College, were concerned that Gates and Allen's version deviated from the language they had designed and placed into the public domain a decade before. Kemeny and Kurtz might have been unimpressed, but the hobbyist world was euphoric.

I've got to point out here that for many years Kemeny was president of Dartmouth, a school that didn't accept me when I was applying to colleges. Later, toward the end of the Age of Jimmy Carter, I found myself working for Kemeny, who was then head of the presidential commission investigating the Three Mile Island nuclear accident. One day I told him how Dartmouth had rejected me, and he said, "College admissions are never per fect, though in your case I'm sure we did the right thing." After that I felt a certain affection for Bill Gates.

Gates dropped out of Harvard, Allen left his programming job at Honeywell, and both moved to New Mexico to be close to their customer, in the best Tom Peters style. Hobbyists don't move across country to maintain business relationships, but businessmen do. They camped out in the Sundowner Motel on Route 66 in a neighborhood noted for all-night coffee shops, hookers, and drug dealers.

Gates and Allen did not limit their interest to MITS. They wrote versions of BASIC for other microcomputers as they came to market, **leveraging their core technology**. The two eventually had a falling out with Ed Roberts of MITS, who claimed that he owned MITS BASIC and its derivatives; they fought and won, something that hackers rarely bothered to do. Capitalists to the bone, they railed against software piracy before it even had a name, writing whining letters to early PC publications. Gates and Allen started Microsoft with a stated mission of putting "a computer on every desk and in every home, running Microsoft software." Although it seemed ludicrous at the time, they meant it.

While Allen and Gates deliberately went about creating an industry and then controlling it, they were important exceptions to the general trend of PC entrepreneurism. Most of their eventual competitors were people who managed to be in just the right place at the right time and more or less fell into business. These people were mainly enthusiasts who at first developed computer languages and operating systems for their own use. It was worth the effort if only one person—the developer himself—used their product. Often they couldn't even imagine why anyone else would be interested.

Gary Kildall, for example, invented the first microcomputer operating system because he was tired of driving to work. In the early 1970s, Kildall taught computer science at the Naval Post graduate School in Monterey, California, where his specialty was compiler design. Compilers are software tools that take entire pro grams written in a high-level language like FORTRAN or Pascal and translate them into assembly language, which can be read directly by the computer. High-level languages are easier to learn than Assembler, so compilers allowed programs to be completed faster and with more features, although the final code was usually longer than if the program had been written directly in the internal language of the microprocessor. Compilers translate, or com pile, large sections of code into Assembler at one time, as opposed to interpreters, which translate commands one at a time.

By 1974, Intel had added the 8008 and 8080 to its family of microprocessors and had hired Gary Kildall as a consultant to write software to emulate the 8080 on a DEC time-sharing system, much as Gates and Allen would shortly do at Harvard. Since there were no microcomputers yet, Intel realized that the best way for companies to develop software for microprocessor-based devices was by using such an emulator on a larger system. Kildall's job was to write the emulator, called Interp/80, followed by a high-level language called PL/M, which was planned as a microcomputer equivalent of the XPL language developed for mainframe computers at Stanford University. Nothing so mundane (and useful by mere mortals) as BASIC for Gary Kildall, who had a Ph.D. in compiler design.

What bothered Kildall was not the difficulty of writing the software but the tedium of driving the fifty miles from his home in Pacific Grove across the Santa Cruz mountains to use the Intel minicomputer in Silicon Valley, He could have used a remote teletype terminal at home, but the terminal was incredibly slow for inputting thousands of lines of data over a phone line; driving was faster.

Or he could develop software directly on the 8080 processor, bypassing the time-sharing system completely. Not only could he avoid the long drive, but developing directly on the microprocessor would also bypass any errors in the minicomputer 8080 emulator. The only problem was that the 8080 microcomputer Gary Kildall wanted to take home didn't exist.

What did exist was the Intellec-8, an Intel product that could be used (sort of) to program an 8080 processor. The Intellec-8 had a microprocessor, some memory, and a port for attaching a Teletype 33 terminal. There was no software and no method for storing data and programs outside of main memory.

The primary difference between the Intellec-8 and a micro-computer was external data storage and the software to control it. IBM had invented a new device, called a floppy disk, to replace punched cards for its minicomputers. The disks themselves could be removed from the drive mechanism, were eight inches in diameter, and held the equivalent of thousands of pages of data. Priced at around $500, the floppy disk drive was perfect for Kildall's external storage device. Kildall, who didn't have $500, convinced Shugart Associates, a floppy disk drive maker, to give him a worn-out floppy drive used in its 10,000-hour torture test. While his friend John Torode invented a controller to link the Intellec-8 and the floppy disk drive, Kildall used the 8080 emulator on the Intel time-sharing system to develop his operating system, called CP/M, or Control Program/Monitor.

If a computer acquires a personality, it does so from its operating system. Users interact with the operating system, which interacts with the computer. The operating system controls the flow of data between a computer and its long-term storage sys tem. It also controls access to system memory and keeps those bits of data that are thrashing around the microprocessor from thrashing into each other. Operating systems usually store data in files, which have individual names and characteristics and can be called up as a program or the user requires them. Gary Kildall developed CP/M on a DEC PDP-10 minicomputer running the TOPS-10 operating system. Not surprisingly, most CP/M commands and file naming conventions look and op erate like their TOPS-10-counterparts. It wasn't pretty, but it did the job.

By the time he'd finished writing the operating system, Intel didn't want CP/M and had even lost interest in Kildall's PL/M language. **The only customers for CP/M in 1975 were a maker of intelligent terminals and Lawrence Livermore Labs, which used CP/M to monitor programs on its Octopus network.**

In 1976, Kildall was approached by Imsai, the second personal computer company with a stupid name. Imsai manufactured an early 8080-based microcomputer that competed with the Altair. In typical early microcomputer company fashion, Imsai had sold floppy disk drives to many of its customers, promising to send along an operating system eventually. With each of them now holding at least $1,000 worth of hardware that was only gathering dust, the customers wanted their operating system, and CP/M was the only operating system for Intel-based computers that was actually available.

By the time Imsai came along, Kildall and Torode had adapted CP/M to four different floppy disk controllers. There were probably 100 little companies talking about doing 8080- based computers, and neither man wanted to invest the endless hours of tedious coding required to adapt CP/M to each of these new platforms. So they split the parts of CP/M that interfaced with each new controller into a separate computer code module, called the Basic Input/Output System, or BIOS. With all the hard ware-dependent parts of CP/M concentrated in the BIOS, it be came a relatively easy job to adapt the operating system to many different Intel-based microcomputers by modifying just the BIOS. With his CP/M and invention of the BIOS, Gary Kildall defined the microcomputer. Peek into any personal computer to day, and you'll find a general-purpose operating system adapted to specific hardware through the use of a BIOS, which is now a specialized type of memory chip.

In the six years after Imsai offered the first CP/M computer, more than 500,000 CP/M computers were sold by dozens of makers. Programmers began to

write CP/M applications, relying on the operating system's features to control the keyboard, screen, and data storage. This base of applications turned CP/M into a de facto standard among microcomputer operating systems, guaranteeing its long-term success. Kildall started a company called Intergalactic Digital Research (later, just Digital Research) to sell the software in volume to computer makers and direct to users for $70 per copy. He made millions of dollars, essentially without trying.

Before he knew it, Gary Kildall had plenty of money, fast cars, a couple of airplanes, and a business that made increasing demands on his time. His success, while not unwelcome, was unexpected, which also meant that it was unplanned for. Success brings with it a whole new set of problems, as Gary Kildall discovered. You can plan for failure, but how do you plan for success?

Every entrepreneur has an objective, which, once achieved, leads to a crisis. In Gary Kildall's case, the objective—just to write CP/M, not even to sell it—was very low, so the crisis came quickly. He was a code god, a programmer who literally saw lines of code fully formed in his mind and then committed them effortlessly to the keyboard in much the same way that Mozart wrote music. He was one with the machine; what did' he need with seventy employees?

"Gary didn't give a shit about the business. He was more interested in getting laid," said Gordon Eubanks, a former student of Kildall who led development of computer languages at Digital Research. "So much went so well for so long that he couldn't imagine it would change. When it did—when change was forced upon him—Gary didn't know how to handle it."

"Gary and Dorothy [Kildall's wife and a Digital Research vice-president] had arrogance and cockiness but no passion for products. No one wanted to make the products great. Dan Bricklin [another PC software pioneer—read on] sent a document saying what should be fixed in CP/M, but it was ignored. Then I urged Gary to do a BASIC language to bundle with CP/M, but when we finally got him to do a language, he insisted on PL/i —a virtually unmarketable language."

Digital Research was slow in developing a language business to go with its operating systems. It was also slow in updating its core operating system and extending it into the new world of 16-bit microprocessors that came along after 1980. The company in those days was run like a little kingdom, ruled by Gary and Dorothy Kildall.

"In one board meeting," recalled a former Digital Research executive, "we were talking about whether to grant stock options to a woman employee. Dorothy said, 'No, she doesn't de serve options—she's not professional enough; her kids visit her at work after 5:00 p.m.' Two minutes later, Christy Kildall, their daughter, burst into the boardroom and dragged Gary off with her to the stable to ride horses, ending the meeting. Oh yeah, Dorothy knew about professionalism."

"Let's say for a minute that Eubanks was correct, and Gary Kildall didn't give a shit about the business. Who said that he had to? CP/M was his invention; Digital Research was his company. The fact that it succeeded beyond anyone's expectations did not make those earlier expectations invalid. Gary Kildall's ambition was limited, something that is not supposed to be a factor in American business. If you hope for a thousand and get a million, you are still expected to want more, but he didn't.

It's easy for authors of business books to get rankled by characters like Gary Kildall who don't take good care of the empires they have built. But in fact, there are no absolute rules of behavior for companies like Digital Research. The business world is, like computers, created entirely by people. God didn't come down and say there will be a corporation and it will have a board of directors. We made that up. Gary Kildall made up Digital Research.

Eubanks, who came to Digital Research after a naval career spent aboard submarines, hated Kildall's apparent lack of discipline, not understanding that it was just a different kind of discipline. Kildall was into programming, not business. "Programming is very much a religious experience for a lot of people," Kildall explained. "If you talk about programming to a group of programmers who use the same language, they can become almost evangelistic about the language. They form a tight-knit community, hold to certain beliefs, and follow certain rules in their programming. It's like a church with a program ming language for a bible."

Gary Kildall's bible said that writing a BASIC compiler to go with CP/M might be a shrewd business move, but it would be a step backward technically; Kildall wanted to break new ground, and a BASIC had already been done by Microsoft. "The unstated rule around Digital Research was that Microsoft did languages, while we did operating systems," Eubanks explained. "It was never stated emphatically, but I always thought that Gary assumed he had an agreement with Bill Gates about this separation and that as long as we didn't compete with Microsoft, they wouldn't compete with us."

Sure.

The Altair 8800 may have been the first microcomputer, but it was not a commercial success. The problem was that assembly took from forty to an infinite number of hours, depending on the hobbyist's mechanical ability. When the kit was done, the micro computer either worked or didn't. If it worked, the owner had a programmable computer with a BASIC interpreter, ready to run any software he felt like writing.

The first microcomputer that was a major commercial success was the Apple II. It succeeded because it was the first micro computer that looked like a consumer electronic product. You could buy the Apple from a dealer who would fix it if it broke and would give you at least a little help in learning to operate the beast. The Apple II had a floppy disk drive for data storage, did not require a separate Teletype or video terminal, and offered color graphics in addition to text. Most important, you could buy software written by others that would run on the Apple and with which a novice could do real work.

The Apple II still defines what a low-end computer is like. **Twenty-third century archaeologists excavating some ancient ComputerLand stockroom will see no significant functional difference between an Apple II of 1978 and an IBM PS/2 of 1992.** Both have processor, memory, storage, and video graphics. Sure, the PS/2 has a faster processor, more memory and storage, and higher-resolution graphics, but that only matters to us today. By the twenty-third century, both machines will seem equally primitive.

The Apple II was guided by three spirits. Steve Wozniak invented the earlier Apple I to show it off to his friends in the Homebrew Computer Club. Steve Jobs was Wozniak's younger sidekick who came up with the idea of building computers for sale and generally nagged Woz and others until the Apple II was working to his satisfaction. Mike Markkula was the semiretired Intel veteran (and one of Noyce's boys) who brought the money and status required for the other two to be taken at all seriously.

Wozniak made the Apple II a simple machine that used clever hardware tricks to get good performance at a smallish price (at least to produce—the retail price of a fully outfitted Apple II was around $3,000). **He found a way to allow the micro processor and the video display to share the same memory. His floppy disk controller, developed during a two-week period in December 1977, used less than a quarter the number of integrated circuits required by other controllers at the time.** The Apple's floppy disk controller made it clearly superior to machines appearing about the same time from Commodore and Radio Shack. More so than probably any other microcomputer, the Apple II was the invention of a single person; even Apple's original BASIC interpreter,

which was always available in read only memory, had been written by Woz.

Woz made the Apple II a color machine to prove that he could do it and so he could use the computer to play a color version of Breakout, a video game that he and Jobs had designed for Atari. Markkula, whose main contributions at Intel had been in finance, pushed development of the floppy disk drive so the computer could be used to run accounting programs and store resulting financial data for small business owners. Each man saw the Apple II as a new way of fulfilling an established need— to replace a video game for Woz and a mainframe for Markkula. This followed the trend that new media tend to imitate old media.

Radio began as vaudeville over the air, while early television was radio with pictures. For most users (though not for Woz) the microcomputer was a small mainframe, which explained why Apple's first application for the machine was an accounting pack age and the first application supplied by a third-party developer was a database—both perfect products for a mainframe substitute. But the Apple II wasn't a very good mainframe replacement. The fact is that new inventions often have to find uses of their own in order to find commercial success, and this was true for the Apple II, which became successful strictly as a spread sheet machine, a function that none of its inventors visualized.

At $3,000 for a fully configured system, the Apple II did not have a big future as a home machine. Old-timers like to reminisce about the early days of Apple when the company's computers were affordable, but the truth is that they never were. The Apple II found its eventual home in business, answering the prayers of all those middle managers who had not been able to gain access to the company's mainframe or who were tired of waiting the six weeks it took for the computer department to prepare a report, dragging the answers to simple business questions from corporate data. Instead, they quickly learned to use a spreadsheet program called VisiCalc, which was available at first only on the Apple II.

VisiCalc was a compelling application—an application so important that it, alone justified the computer purchase. Such an application was the last element required to turn the microcomputer from a hobbyist's toy into a business machine. No matter how powerful and brilliantly designed, no computer can be successful without a compelling application. To the people who bought them, mainframes were really inventory machines or ac counting machines, and minicomputers were office automation machines. The Apple II was a VisiCalc machine.

VisiCalc was a whole new thing, an application that had not appeared before on some other platform. There were no mini computer or mainframe spreadsheet programs that could be downsized to run on a microcomputer. The microcomputer and the spreadsheet came along at the same time. They were made for each other.

VisiCalc came about because its inventor, Dan Bricklin, went to business school. And Bricklin went to business school because he thought that his career as a programmer was about to end; it was becoming so easy to write programs that Bricklin was convinced there would eventually be no need for programmers at all, and he would be out of a job. So in the fall of 1977, 26 years old and worried about being washed up, he entered the Harvard Business School looking toward a new career.

At Harvard, Bricklin had an advantage over other students. He could whip up BASIC programs on the Harvard time-sharing system that would perform financial calculations. The problem with Bricklin's programs was that they had to be written and rewritten for each new problem. He began to look for a more general way of doing these calculations in a format that would be flexible.

What Bricklin really wanted was not a microcomputer program at all but a specialized piece of hardware—a kind of very advanced calculator with a heads-up display similar to the weapons system controls on an F-14 fighter. Like Luke Skywalker jumping into the turret of the Millennium Falcon, Bricklin saw himself blasting out financials, locking onto profit and loss numbers that would appear suspended in space before him. It was to be a business tool cum video game, a Saturday Night Special for M.B.A.s, only the hardware technology didn't exist in those days to make it happen.

Back in the semi-real world of the Harvard Business School, Bricklin's production professor described large blackboards that were used in some companies for production planning. These blackboards, often so long that they spanned several rooms, were segmented in a matrix of rows and columns. The production planners would fill each space with chalk scribbles relating to the time, materials, manpower, and money needed to manufacture a product. Each cell on the blackboard was located in both a column and a row, so each had a two-dimensional address. Some cells were related to others, so if the number of workers listed in cell C-3 was increased, it meant that the amount of total wages in cell D-5 had to be increased proportionally, as did the total number of items produced, listed in cell F-7. Changing the value in one cell required the recalculation of values in all other linked cells, which took a lot of erasing and a lot of recalculating and left the planners constantly worried that they had overlooked recalculating a linked value, making their overall conclusions incorrect.

Given that Bricklin's Luke Skywalker approach was out of the question, the blackboard metaphor made a good structure for Bricklin's financial calculator, with a video screen replacing the physical blackboard. Once data and formulas were introduced by the user into each cell, changing one variable would automatically cause all the other cells to be recalculated and changed too. No linked cells could be forgotten. The video screen would show a window on a spreadsheet that was actually held in computer memory. The virtual spreadsheet inside the box could be almost any size, putting on a desk what had once taken whole rooms filled with blackboards. Once the spreadsheet was set up, answer ing a what-if question like "How much more money will we make if we raise the price of each widget by a dime?" would take only seconds.

His production professor loved the idea, as did Bricklin's ac counting professor. Bricklin's finance professor, who had others to do his computing for him, said there were already financial analysis programs running on mainframes, so the world did not need Dan Bricklin's little program. Only the world did need Dan Bricklin's little program, which still didn't have a name. It's not surprising that VisiCalc grew out of a business school experience because it was the business schools that were produc ing most of the future VisiCalc users. They were the thousands of M.B.A.s who were coming into the workplace trained in analytical business techniques and, even more important, in typing. They had the skills and the motivation but usually not the access to their company computer. They were the first generation of businesspeople who could do it all by themselves, given the proper tools.

Bricklin cobbled up a demonstration version of his idea over a weekend. It was written in BASIC, was slow, and had only enough rows and columns to fill a single screen, but it demonstrated many of the basic functions of the spreadsheet. For one thing, it just sat there. This is the genius of the spreadsheet; it's event driven. Unless the user changes a cell, nothing happens. This may not seem like much, but being event driven makes a spreadsheet totally responsive to the user; it puts the user in charge in a way that most other programs did not. VisiCalc was a spreadsheet language, and what the users were doing was rudimentary programming, without the anxiety of knowing that's what it was.

By the time Bricklin had his demonstration program running, it was early 1978 and the mass market for microcomputers, such as it was, was being vied for by the Apple II, Commodore PET, and the Radio Shack TRS-80. Since he had no experience with micros, and so no preference for any particular machine, Bricklin and Bob Frankston, his old friend from MIT and new partner, developed VisiCalc for the Apple II, strictly because that was the computer their would-be publisher loaned them in the fall of 1978. No technical merit was involved in the decision.

Dan Fylstra was the publisher. He had graduated from Harvard Business School a year or two before and was trying to make a living selling microcomputer chess programs from his home. Fylstra's Personal Software was the archetypal microcomputer application software company. Bill Gates at Microsoft and Gary Kildall at Digital Research were specializing in operating systems and languages, products that were lumped together under the label of systems software, and were mainly sold to hardware manufacturers rather than directly to users. But Fylstra was sell ing applications direct to retailers and end users, often one pro gram at a time. With no clear example to follow, he had to make most of the mistakes himself, and did.

Since there was no obvious success story to emulate, no re tail software company that had already stumbled across the rules for making money, Fylstra dusted off his Harvard case study technique and looked for similar industries whose rules could be adapted to the microcomputer software biz. About the closest example he could find was book publishing, where the author accepts responsibility for designing and implementing the product, and the publisher is responsible for manufacturing, distribution, marketing, and sales. Transferred to the microcomputer arena, this meant that Software Arts, the company Bricklin and Frankston formed, would develop VisiCalc and its subsequent versions, while Personal Software, Fylstra's company, would copy the floppy disks, print the manuals, place ads in computer publications, and distribute the product to retailers and the pub lic. Software Arts would receive a royalty of 37.5 percent on copies of VisiCalc sold at retail and 50 percent for copies sold wholesale. "The numbers seemed fair at the time," Fylstra said. Bricklin was still in school, so he and Frankston divided their efforts in a way that would become a standard for micro computer programming projects. Bricklin designed the program, while Frankston wrote the actual code. Bricklin would say, "This is the way the program is supposed to look, these are the features, and this is the way it should function," but the actual de sign of the internal program was left up to Bob Frankston, who had been writing software since 1963 and was clearly up to the task. Frankston added a few features on his own, including one called "lookup," which could extract values from a table, so he could use VisiCalc to do his taxes.

Bob Frankston is a gentle man and a brilliant programmer who lives in a world that is just slightly out of sync with the world in which you and I live. (Okay, so it's out of sync with the world in which you live.) When I met him, Frankston was chief scientist at Lotus Development, the people who gave us the Lotus 1-2-3 spreadsheet. In a personal computer hardware or software company, being named chief scientist means that the boss doesn't know what to do with you. Chief scientists don't generally have to do anything; they're just smart people whom the company doesn't want to lose to a competitor. So they get a title and an office and are obliged to represent the glorious past at all company functions. At Apple Computer, they call them Apple Fellows, because you can't have more than one chief scientist.

Bob Frankston, a modified nerd (he combined the requisite flannel shirt with a full beard), seemed not to notice that his role of chief scientist was a sham, because to him it wasn't; it was the perfect opportunity to look inward and think deep thoughts without regard to their marketability.

"Why are you doing this as a book?" Frankston asked me over breakfast one morning in Newton, Massachusetts. By "this," he meant the book you have in your hands right now, the major literary work of my career and, I hope, the basis of an important American fortune. "Why not do it as a hypertext file that people could just browse through on their computers?" I will not be browsed through. The essence of writing books is the author's right to tell the story in his own words and in the order he chooses. Hypertext, which allows an instant accounting of how many times the words Dynamic Random-Access Memory or fuck appear, completely eliminates what I perceive as my value-added, turns this exercise into something like the Yellow Pages, and totally eliminates the prospect that it will help fund my retirement.

"Oh," said Frankston, with eyebrows raised. "Okay." Meanwhile, back in 1979, Bricklin and Frankston developed the first version of VisiCalc on an Apple II emulator running on a minicomputer, just as Microsoft BASIC and CP/M had been written. Money was tight, so Frankston worked at night, when computer time was cheaper and when the time-sharing system responded faster because there were fewer users.

They thought that the whole job would take a month, but it took close to a year to finish. During this time, Fylstra was show ing prerelease versions of the product to the first few software retailers and to computer companies like Apple and Atari. Atari was interested but did not yet have a computer to sell. Apple's reaction to the product was lukewarm.

VisiCalc hit the market in October 1979, selling for $100. The first 100 copies went to Marv Goldschmitt's computer store in Bedford, Massachusetts, where Dan Bricklin appeared regularly to give demonstrations to bewildered customers. Sales were slow. Nothing like this product had existed before, so it would be a mistake to blame the early microcomputer users for not realizing they were seeing the future when they stared at their first VisiCalc screen.

Nearly every software developer in those days believed that small businesspeople would be the main users of any financial products they'd develop. Markkula's beloved accounting system, for example, would be used by small retailers and manufacturers who could not afford access to a time-sharing system and preferred not to farm the job out to an accounting service. Bricklin's spreadsheet would be used by these same small businesspeople to prepare budgets and forecast business trends. Automation was supposed to come to the small business community through the microcomputer just as it had come to the large and medium businesses through mainframes and minicomputers. But it didn't work that way.

The problem with the small business market was that small businesses weren't, for the most part, very businesslike. Most small businesspeople didn't know what they were doing.

Accounting was clearly beyond them.

At the time, sales to hobbyists and would-be computer game players were topping out, and small businesses weren't buying.

Apple and most of its competitors were in real trouble. The personal computer revolution looked as if it might last only five /ears. But then VisiCalc sales began to kick in. Among the many customers who watched VisiCalc demos at Marv Goldschmitt's computer store were a few businesspeople— rare members of both the set of computer enthusiasts and the economic establishment. Many of these people had bought Apple lis, hoping to do real work until they attempted to come to terms with the computer's forty-column display and lack of lowercase letters. In VisiCalc, they found an application that did not care about lowercase letters, and since the program used a view through the screen on a larger, virtual spreadsheet, the forty column limit was less of one. For $100, they took a chance, carried the program home, then eventually took both the program and the computer it ran on with them to work. The true market for the Apple II turned out to be big business, and it was through the efforts of enthusiast employees, not Apple marketers, that the Apple II invaded industry.

"The beautiful thing about the spreadsheet was that customers in big business were really smart and understood the benefits right away," said Trip Hawkins, who was in charge of small business strategy at Apple. "I visited Westinghouse in Pittsburgh. The company had decided that Apple II technology wasn't suitable, but 1,000 Apple lis had somehow arrived in the corporate head quarters, bought with petty cash funds and popularized by the office intelligentsia."

Hawkins was among the first to realize that the spreadsheet was a new form of computer life and that VisiCalc—the only spreadsheet on the market and available at first only on the Apple II—would be Apple's tool for entering, maybe dominating, the microcomputer market for medium and large corporations.

available at first only on the Apple II—would be Apple's tool for entering, maybe dominating, the microcomputer market for medium and large corporations. VisiCalc was a strategic asset and one that had to be tied upfast before Bricklin and Frankston moved it onto other platforms like the Radio Shack TRS-80.

"When I brought the first copies of VisiCalc into Apple, it was clear to me that this was an important application, vital to the success of the Apple II," Hawkins said. "We didn't want it to appear on the Radio Shack or on the IBM machine we knew was coming, so I took Dan Fylstra to lunch and talked about a buy out. The price we settled on would have been $1 million worth of Apple stock, which would have been worth much more later. But when I took the deal to Markkula for approval, he said, 'No, it's too expensive.'"

A million dollars was an important value point in the early microcomputer software business. Every programmer who bothered to think about money at all looked toward the time when he would sell out for a cool million. Apple could have used owner ship of the program to dominate business micro-computing for years. The deal would have been good, too, for Dan Fylstra, who so recently had been selling chess programs out of his apartment. Except that Dan Fylstra didn't own VisiCalc — Dan Bricklin and Bob Frankston did. The deal came and went without the boys in Massachusetts even being told.

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Gary Kildall's book "Computer Connections" (1994)

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by Gary Kildall

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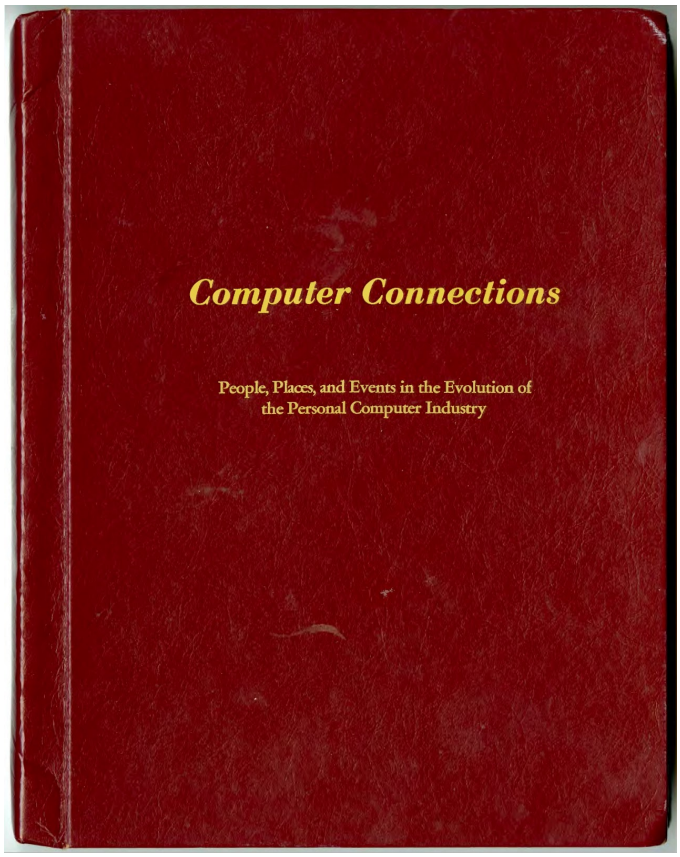
Written by Gary Arlen Kildall (born 1942)



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Rest of book is not public / published

Chapter 1 : One Person's Need For a Personal Computer

Kildall s Nautical School

My grandfather Harold was a seafaring man and ran the Seattle to Singapore route as Chief Mate of a 1920's steamship.

Lumber shipment from Everett, a port north of Seattle, to Singapore was a lively trade. After the longshoremen finished loading Grandpa Harold's ship, he noticed a mongrel dog pacing the pier. That mongrel decided quite boldly to board grandpa's ship. He named the dog "Hector."

Hector became grandpa's sidekick on the voyage to China. even lying beside him at the midnight watch while Harold scanned the horizon and worked navigational positions of his ship in crossing the Pacific Ocean.

Grandpa's freighter arrived at Singapore harbor and Hector became agitated. On impulse, Hector jumped overboard near a Sampan rowing by. Well, his real owner was riding on that Sampan and scooped that mongrel from the water. Two weeks earlier, it seems Hector's master had sailed from Everett on his own ship"s schedule.

Hector was nearby that day of sailing at Everett, but certainly not aboard his master's ship, and that sailing could not be delayed. Hector's little dog-brain recognized the situation, and scented grandpa's ship that was going to the same place as his lost master.

The story appeared in Reader's Digest in 1957. I always liked this story, and it was true, and grandpa told us many others like it. This is a book about computers. Why tell a dog story? I promise that it will be relevant, but not for awhile.

Harold returned from sea duty in 1927, maybe partially because my grandmother, Gwendolyn, would go to sleep with tears nearly every night he was away. Grandpa started a navigation school in Seattle, first located at the University of Washington, then later moved to downtown Seattle. It was called Kildall's Nautical School and, for fun, it became known as "Kildall's College of Nautical Knowledge." He taught merchant seamen to become officers onboard commercial ships. His students became Third Mates, Second Mates, Chief Officers, Masters, and Pilots. Grandpa Harold taught in that school to within a week of the day he died at 92 and educated over 30,000 students, many of which could not multiply zero times zero when they started.

I must admit that although I am one of grandpa's admirers, he was a bit disorganized. The Coast Guard did all the exams on his students, so he'd quiz his students afterward on their test questions. After a few years, his nautical school had bits and scraps of paper nearly everywhere. These scraps recorded questions and answers, kind of like Cliffs Notes, but randomly unsorted throughout the school's office as if arranged by a small explosive charge. Still, the "college" was known as the best in the country.

My dad, Joseph, followed in grandpa's wake and worked his way to a Master Ocean license, the top rank in merchant shipping. World War II came about, and Joe started with the "college" as an Instructor. **The school was valued by the government because Harold and Joe trained the skippers of the Victory Ships that dodged those Wolfpack U-boats to bring supplies to the war effort in Europe.**

Dad took all those scraps of Coast Guard Q&A and put them into a voluminous card catalog. He had every question that the Coast Guard examiners could conceive, right there in that office. Not that the students were just prep' don the questions, because there is no doubt that they were trained in every aspect of Marine Navigation and Engineering. The Coast Guard did not have a chance against the two. Harold and Joe's students knew their business quite well, indeed.

Being in the lineage, I was expected to continue the tradition of the Kildall School. which I did for a time in the early 60's. Grandpa, then slightly retired, lectured on Magnetism and Compass Correction and, on occasion. circled the cigarette smokefilled room to check his students' progress as they slaved at finding the answer to yet another of the school's "exercises."

Grandpa, dad, and I were a good trio. To my personal benefit, I learned the mathematics of Navigation and Trigonometry, and spent extra hours canvassing the dusty, rare old books of the school's small library that covered such oddities as "How to Rebabbit the Bearings of a Double Acting Steam Engine."

To navigate you take "sights." A sight is a reference point to a celestial body, such as a star. You look through a sextant, find the proper angle, and then look at your chronometer. Next, look in the Nautical Almanac for that exact time and date. Use standard, but tedious, calculation forms to plot the result. That tells you where you are on the face of the earth.

Joe often described a "machine" that he wanted to build. "You punch-in the navigation data and turn the crank, and out comes the position of your ship." He envisioned properly-shaped cams and gears to do this, because he was a mechanical person by nature. It wasn't until the microcomputer was invented that the "crank" was truly feasible. It's a connection we'll pick up in 1972 at Intel Corporation in Santa Clara. Strangely, dad's dream formed a link all the way to today's personal computing and operating systems.

In the early l 960's, I worked at the Kildall "college," and became heir-apparent to the Kildall School throne. Instead, I decided to get an advanced education. This didn't set well with my father, because it caused a discontinuity in the lineage. Not only that, my high school grades were so bad that there seemed no possibility of entry to college.

However. I wrote a petition to the Regents and cited my work as an Instructor at the Nautical School. **Because of the Nautical School's recognition, I gained entry to the University of Washington in 1963 by that petition, but by an entirely too close of a margin.**

The Kildall Nautical School taught me processes that high school hadn't. Such as the ability to do mathematics of a sort and, most important, the mental tools to dissect and solve complicated problems, and to work from the beginning to the end in an organized fashion.

However, the practice of Navigation. in the traditional sense, was fast becoming obsolete. My father tried to nix my leaving the Kildall Nautical School. but the challenge of becoming a full-fledged teacher was too much to ignore.

I signed for the University of Washington. My intent was to become a high school teacher. I didn't ever teach high school. Now that I have passed through three teenagers and their studies. I believe that Divine Providence did me a personal favor. But, I worked very, very hard and got top grades. I think that's because most of my fellow students were party animals, and I, being a "greaser" in high school, had that out of my system by college. During those first years at the UW, I studied the basics of Mathematics. Meanwhile, I worked at Harold and Joe's Nautical School. It was hard, rewarding, and fun.

My father was a precise man. His handwriting was unscripted block perfect. His workmanship could not be excelled whether it were in the schoolroom or over a lathe in his workshop. He took on a project to build an 83 foot yacht when I was only sixteen, and it was sort of finished when he died thirty years later. I think the project was too big, but that was the way he lived.

CHAPTER 2 Seattle and the University of Washington

Computer Life at the "U-Dub"

Taking courses at any university is a problem for someone who didn't study that hard in high school. Ok, so I had some good background in mathematics from

the Navigation School, such as fundamentals of trigonometry, but, hey, go take on calculus.

All those guys from the seventeenth century, like Keplar and Newton came up with some complicated stuff. They did it to figure where the planets would be. That made it easier to navigate. And, navigation let people do business. and it let them make money. There were two other subjects that I enjoyed, and these came into play in later years. My father 's precision in drawing brought an interest in art. Pencil drawing became a part of my life and allowed me to promote and exercise the graphics tools developed by Digital Research in later years. I studied art at that time, and I enjoy it today. Another was history. Mathematics, art, and history. These are three topics that kept my interest. We all have some. And, they are the mead of one's existence.

In 1963, at the "U-Dub," as it was called, I found myself in the evolutionary transition between mechanical calculation and digital computers. My first class in Numerical Analysis in 1964 was from a professor in his eighties. This nice old gentleman was retiring, and not too soon in my opinion, as he seemed quite feeble and at somewhat of a loss of memory. He taught the trade of computing with Marchant calculators. A Marchant calculator is a big, black machine, about three times the size of a typewriter. It has a giant carriage on top with about ten holes with little mechanical numbers that pop up in the slots. There are buttons all over the front with digits, decimal points, and keyed symbols that multiply and divide to control this mechanical nightmare.

They used these Marchant calculators for Numerical Analysis, starting in about the I 940's. A business would hire rows and rows of Marchant calculator operators to compute so-called "Finite Differences." This led to tables of figures that let you, for example, toss a mortar precisely into your enemy's backyard.

You sat there and pushed those keys while the mechnicals made a host of noises by cranking and grinding who-knows-what, until the rattling stopped. You got a number. You put the number on a form, and eventually, with enough numbers and forms, you got a result. Sometimes the resulting number was correct.

These operators also made tables to figure where the Sun, Moon, stars and planets would be at a particular time, much like the tables that solved the navigation problems that we talked about eariler. In a sense, dad's navigation "crank" was somewhat inconveniently embodied in the Marchant with a "form" alongside.

A Blunder

By the way, here's a little story about Numerical Analysis. Numerical Analysis is based upon computing formulas by stepwise refinement to within as close a tolerance as possible.

What that means in English is that the more you push all those damn Marchant keys, the closer that mortar will get to your neighbor's rear door when you decide to launch it. So, if the real answer is to aim that mortar at a 41 .34567 angle, and the Marchant operator computes it as 41 .34566, you have an "error" of 0.0000 I. Then, you decide if that is acceptable (which it is not for bankers, but might be for a Sergeant, or Boeing Corporation).

But, for myself, I always liked the term "blunder" used in Numerical Analysis. A blunder, contrary to an error, means that you didn't push the proper keys on that Marchant or, possibly pushed them in wrong order, or you didn' t write down numbers properly as they appeared. In short, you screwed-up. I like the word "blunder."

So, I make this proposal (with tongue placed properly at cheek level), that one should refrain from stating that "I have an 'error ' in my program," for that would mean that one is within .0 I% of a working program that has no error. This makes no sense, because ail engineering managers know that this .0 I % doubles the project length.

Instead, we engineers must from forever onward refer to a program that operates incorrectly as one that has a "blunder." Under interrogation as to the progress of your project you state quite objectively and in clear tone,

"Sir, my Device Driver does not yet operate, it has a Blunder."

Blunders are not errors. They are simply mistakes you made in writing your program. C'mon, your boss knows everyone has "blunders." Hey, he probably spilled a glass of wine on the hostess at that party last night for the company president.

Blunders can go on for years, and your manager will be completely confused, but knowingly accepting. A blunder. Try it tomorrow. Trust me.

Transition to Computers

Coincidentally, my study-student-friend, Dale Leatherman, stopped me outside our class a few days after that old professor retired. He opened his notebook and showed me an unpunched computer card. At the top was printed "FORTRAN STATEMENT." He told me that this computer stuff was going to be a "big thing." That was 1965.

Dale and I took courses together in computer studies, starting with assembly language programming for the IBM 7094. For you computer youngsters. here's the way it worked.

You walk into the keypunch room with your two-foot long cardboard box of FORTRAN STATEMENT cards. Then wait in line to get to a keypunch machine. Finally, someone tires of typing, and you get a seat.

Each card in that stupid cardboard box is like a single line on your computer screen today. I don't even want to think about it, because you young guys have it all too easy. But, my Computer Psychiatrist told me that "eet izz important to get zees feelingks about der dumbkopf keypunches out in der open." All us oldtimers remember that the keypunch machine is like a typewriter, but it shuffles cards through its mechanism and stamps rectangular holes in a column below each character. You leaf through your box, alter each necessary card, and then relinquish your keypunch to the next anxious student. Then, take your precious box of cards to the shelf outside the computer room and wait and wait and wait.

The computer room hides the IBM 7094 with SAC-like security doors. Computer operators, trained in "Grumbly IO I ," sit behind that door, attending to their work and throwing down coffee without even their own notice.

I know this because I spent about 1,312,467 hours looking through that little peephole window to see if the operator would arise from his or her throne to go to the restroom and possibly retrieve my box of punched cards on the way back into SAC.

If you stayed around very late at night, you might get a "turnaround" of an hour or so to get the printout. The program usually didn't work, so it was back to the keypunch. To know what it was like, go back to the heading for this section, "Transition to Computers," and re-read it until you fall soundly asleep.

Getting into Compilers

Getting into Compilers

Let me start with a short note about why I write about compilers. First, they are my primary interest in computing. Compilers, when perfected, can be elegant to the point that you want to paste a printed listing on your wall, like artwork. Ok, so you have to be into writing compilers to get my meaning, but when your compiler works, you are very proud and want to show it off.

But, for most engineers, compilers are simply mind tools. Our minds are too limited to write complicated programs that do things like GEM, Windows, or D-Base without them. Compilers make programs that computers understand from programs that people understand. They are sort of like natural language translators who sit in a business conference and make English into Japanese.

The UW bought a new computer. It was a Burroughs B5500. This computer, an offshoot of the English Electric KDF-9, was unique. It was designed to run ALGOL (ALGOL stands for Algorithmic Language, an improvement over FORTRAN, and the precursor of today's Pascal language).

The B5500, although today severly outdated, is a "stack machine." That means that data is held in temporary memory that is built and discarded as its program runs (that's the way the "C" programming language works today). The B5500 and ALGOL were the basis for compiler design at Stanford University and the model for Bill McKeeman's work on XPL. And, XPL led to Intel's "defacto standard processor."

During my graduate studies, I used Bill McKeeman's XPL. It was called a compiler- compiler. XPL is a program that makes compilers. What you do is plug-in rules of syntax, much like grammar rules of English but constrained to the rigidity of computer languages.

Linguistics and Compilers

For me, linguistics was only word phrase games, like the word "wind" that can mean a stiff breeze, or what you do to your watch to make it keep time. (No, don't answer with "I change the battery." I'm talking about the old windup kind, Jeez.)

Noam Chomsky was a well-known Linguist who helped define the difference between "syntax" and "semantics" in natural language through his work on "Transformational Grammar." He studied natural language by allowing for sentences like this.

"He broke the window with his little sister"

(and, I always liked this next one)

"He fed her dog biscuits"

(or, how about this one that took me awhile to figure out),

"Time flies like an arrow"

Just like the word "wind." these sentences have multiple meaning, but the form, or syntax, is correct in English.

The connection is simple. Chomsky's theories and symbolism for natural language helped in processing newly defined computer language forms. Take a look at those phrases. The syntax is correct, but the meaning is ambiguous.

McKeeman's XPL processed computer statements, not English, but it's sort of the same idea. That is, XPL looked for proper form (syntax) in the computer language, not the meaning (semantics). In order to make XPL work. you added more ALGOL programming to cause the compiler to "understand" each statement that you parsed.

Unlike natural language, there can be only one meaning to a computer sentence. That's why you cannot just "tell" a computer what to do. It needs to process the exact meaning of each thing you say, in context. And, even in context, the meaning may not always be clear. Here's an example.

"Hey, you know old George. He's down near the crossroads. Yeah, well he done got a new Intel 486 with a Connors Drive and 16 Megabytes of RAM. An' old George just booted it up this momin', don't ya know. But 'pears old George wam't too happy with it, 'cause he coundunt get that dum Microsoft Windows to work."

"Worse yet, George to!' me it near broke his left foot and scuffed his new pair of Lucheses that he'd been savin' up fur near a month or so. don't you know fersure. But. he's feelin' better now 'cause that 'dum 486 is stuck setting thur in that oak tree up yonder, an' it seems awork a mite better now, don't you know."

Get my point? Ok, you might retort "hey, man, I've got a computer that understands English at home." Fine, its vocabulary of, say, about 1000 words must be trained by the operator speaking those words over and over. It's like having a baby that's started to talk. And, what it eventually understands is a severe subset of English, with vocabulary limited to very special functions and people, such as mom and dad.

Unfortunately English. and other natural languages evolved somewhat inconsistently and constantly change. That's why we have computer languages that adhere to very strict rules of syntax and semantics.

The Computer Chronicles

"Ok. Gary, why are you bringing up the Computer Chronicles in the middle of a discussion about languages and compilers," you might say. First, I wish to brag about my seven-year stint with this FINE Public Broadcasting Show (viewed by over a million people, syndicated throughout the USA on every PBS channel, I might add, and even shown in China, and ... Ok, I'll stop).

Wait..., wait. .. , don't stop reading. I mean, after all, I was a STAR! But, for reasons quite unfathomable to me, I was not asked to place my computer-worn fingers in that cement down on Hollywood Boulevard at Gruman's. Hmmm ... could it be my acting? Someone wrote in once and said, "Gary is very good as co-host of Computer Chronicles," but it looked like my mother's handwriting.

Ok, so I'll make it relevant. I agree that the Chronicles is not in the timeline of our discussion, but a particular show one day demo'd how natural language doesn't match computer languages.

Stewart Cheifet hosted and organized the show, and I co-hosted which means "show-up Gary, on time, hey?" Stewart selected the computer companies to be taped in three segments for each show. He came up with the latest in modems, printers. PC's, games, and whatever else imaginable during those seven years from 1982 to 1989. However, there was that one "demo" that stood out, done by "Jim" from company "X" (the real names are withheld for a degree of sympathy). I want to tell you more about Chronicles itself before I bring out Jim.

Stewart, the crew, and I did twenty-six shows per year, taped in the studio at the College of San Mateo. The deal was that I drove from Monterey, California, to the college on a Saturday morning, arriving at about 9:00AM. We taped two shows on those Saturdays, so I needed to be there for thirteen Saturdays each year.

Now, work this backward. Hmmm ... It takes two hours to drive from Monterey to San Mateo, so that means I've got to leave home at 7:00AM, and, since I must wear a suit, that translates to 6:00AM. This is not a good time on Saturday for a DRI Standard Issue Party Animal.

No big deal. we taped the "opens" in the morning, and I could make as many mistakes as necessary because our director, Peter. would open the intercom and gently ask "did you like the take?" Considering my oft condition. the answer was usually "no," and Stewart and I would do another pass at it.

I can say, respectfully, that Stewart nearly always made it through his thoughts on those opens, for we had no teleprompters. He did flub a few times in the seven years. I enjoyed it immensely when he did. I give him a 96% on those "opens."

After that, we rolled in the marketing managers and promoters to set up hardware, usually two or three at a time, and do Q&A and demos.

Stewart is a connoisseur of fine software and hardware products. And, being trained in Law, he could talk endlessly, without great effort during taping. But, I believe he made a singular error by selecting Jim for the show that day.

Jim came on the set with his "HAL 9000." I was, of course, curious. This appeared to be the name of the talking computer in Arthur C. Clark's movie, 2001, but I gave no judgement. Jim's black box sat there before me on the set, with our director, Peter in the editing booth rolling tape. "Mr. Jim," I asked, "just what does your HAL 9000 do?" I awaited a response that I knew was coming, but sincerely did not want to hear.

"Yes, Mr. Kildall, my computer talks and thinks, just like the HAL 9000 in the movie 2001. It uses Artificial Intelligence."

"Just like the HAL 9000?" Yes, "Just like the HAL 9000." Well, I was of course taken aback by such a wondrous feat of the time, as talking and thinking machines were quite out of my realm. Jim continued with, "My HAL 9000 talks to you, makes judgements, and comes to conclusions, all by itself."

If you've viewed the Chronicles show, you realize that the segments are short. So, we got right into it. "Mr. Jim, can we get a demonstration of this immensely intelligent machine that you brought here today?"

Jim wanted Stewart, a person with extensive broadcasting experience, and quite a clear speaking voice, to "talk" to HAL. Ok, so the cameras are still rolling, right? Stewart surrounded himself with a headset and microphone while Jim "booted" HAL.

"Stewart. say hello to HAL." Stewart. in his finest speaking voice obeyed and said "Hello." In fact. he did this about eight or ten times and got random responses in computer-trashed English. like:

"Igmm Very Sorgy, Plse Say it Agan." or "I can not ungderstand wat youg are sayging," or "Plse say that one morge tigme" or "Igmm Very Sorgy, Plse Say it Agan."

Well. I can say with little reservation that the demo was not going well for Jim or HAL. So, changing the subject, I touched carefully on the topic of Artificial Intelligence with Jim after that debacle to fill the segment, because I surely did not want to repeat it.

The crew was going to lunch. so we broke down the set. and I was left alone with Jim. He wanted to do the segment over, because he felt " it just didn't go right." I can't imagine how he could have come to this conclusion, do you?

Tape's not rolling, and the set's hot lights are off. I patted Jim on the back, and assured him that it would show well, but he should get HAL's feelings on it to make sure.

I have not talked with HAL since, but that demo was the biggest waste of video tape, computer and TV cable time that I had ever seen. But, for the good, Jim and his friend, HAL, showed that natural languages and computers are not a good fit. and that was worthwhile.

I'll never forgive Stewart for setting up that segment; although I will allow a bunch of other PBS programming transgressions over the years of the Chronicles that are private to Stewart, the crew, and myself. The events will not be publicly disclosed unless under severe bribery, for which I show a weakness at times. I had fun with those guys at KCSM.

Oh, by the way, if you ever happen to watch re-runs of the Chronicles, take a look at the background. It makes us look like we're located in a building at San Francisco overlooking the Bay. Most "guests" were quite surprised to find us in the basement of the College of San Mateo studio on a set with a fake window and picture of the Bay. I'm not complaining. It was quite a nice set, with the exception that the Transamerica Building is shown half-finished in that picture background and remained so for the seven years that I did that show.

Booting a Computer

Ok, so let's get back to the PC industry.

I don 't know about you, but the word "booting" a computer seemed a little strange when I first used that B5500 at the UW. To "boot" you turned on the power of that room-sized computer and stuck-in a single punched card into the card reader. The card had a little itty-bitty program that read another program from disk, and that program read another, and so-forth, and that started the whole computer.

So, the origin of the phrase "to boot your computer" comes from the word "bootstrap," which means to "pull yourselfup by your own bootstraps." Today, this is the small built-in program in a computer system that lets you load your operating system.

But, "bootstrapping" has also been used to describe the process of writing a compiler for a language using the language itself. It's just like writing ALGOL in ALGOL, or "C" in "C." And, it's hardly different from describing English in English.

Where do you start bootstrapping? Consider this. "C" is written using "C," and there was a programming language before "C" called "B," and "B" was written using "A." What do you think "A" might have been? Hmmm ... assembly language perhaps?

Bootstrapping the Industry

Compilers for computer languages, like FOR1RAN and COBOL, were made to help take away the pain of assembly language programming. They make computer statements in their strict rules of syntax into the instruction set of the computer.

Computers in the 60's didn't have much main memory, and "assembly language programmers" could do a better job at fitting memory than automated compilers. So, high-level languages supported by those compilers were not considered efficient even by the late 60's.

There is a direct trace from the two Burroughs B5500s at the UW and Stanford University through to compiler development in XPL for the Intel chip set, and on to CP/M and DOS.

High-level languages like ALGOL on the B5500 changed the trend of using assembly language for "efficiency." For example, you really couldn't write a B5500 assembly language program unless you were a real technonerd. In 1966, the UW hired me to maintain the ALGOL compiler, and that old B5500 became my learning machine. I saw a ton of sunrises over that Computer Center.

It was a great personal computer. I'd just plant a sign that said "B5500 Down For Maintenance" at about midnight and open shop again at 6:00 AM for student programs. Ok, so that's not fair. but that was a long time ago, in a galaxy far-far away, so don't blame me, 'cause I was just a kid, Ok?

During this "maintenance," I'd take the whole B5500 system down. "reboot" and play in the B5500 ALGOL sandbox. In my own defense. I did, on occasion, actually fix some errors (sorry, "blunders") in the ALGOL compiler. However, Iseriously doubt that I ever deserved all of those paychecks.

I will personally attest that this ALGOL compiler was, for the day, an elegant piece of code. ALGOL was written in ALGOL, and this got everyone's attention. thirty years ago that was a neat hat-trick. How do you write a compiler in its own language? You have to have an ALGOL compiler to write the ALGOL compiler, right? Chicken and egg.

Solution? Write a small compiler using another computer, such as that KDF-9. This little program compiles code for the B5500 small ALGOL subset. Then, you start writing the ALGOL compiler using that subset. gradually improving the compiler step-by-step. Chicken and egg again.

It's called "incremental improvement," and that's how all complicated programs are written. You just gradually improve to reach your goal in small steps. That's how humans solve problems. Hey, it's not such a big deal. After all, that's how Mom Nature solves problems as well.

Systems Programming for that B5500

Locally, it was only Dick Hamlet and myself there to take care of the B5500. Dick is a very astute computer person. He is a tall, sandy-haired, bushy-faced guy with freckles and piercing eyes. He did not tolerate incompetence whether it be intellectual or otherwise, but rewarded you with a smile when you sparked his interest.

He understood the B5500 Operating System like no one I ever knew, and he gave a lecture to the new Computer Science Group at the UW where he described the thickness of a listing as a measure of the complexity of an operating system. I never forgot that line, because it was so often true. I always used that measure to determine the output of my own engineers in later years.

I learned much from the architecture of the B5500 computer. In particular, I learned about data structures for organizing disk drive information.

In later years, I extrapolated from these B5500 data structures to create the first personal computer operating system, which I named CP/M.

The Age of Timesharing

There was a new technology in the works. It was called Remote Access. At the UW, we used a data communications setup attached to the B5500. Only the privileged Oracles could hook up. There were eight ports tied to the B5500.

Dick Hamlet had a direct connection to the B5500 from his office, which I coveted dearly. There was another in the computer room. Some officials had the others, and I was never allowed entry there. But, they never used the lines, so it didn't matter anyway.

A modem was connected to a third port. I got the university to buy a portable acoustic coupled modem for me. This let me make a phone call to the B5500. "Big deal," you say, "I do this every day using my 2400 baud built-in modem, connected to Compuserve, Prodigy, Dow-Jones, and places that I don't even know I'm connected to .... "

Cut me some slack. Hey, that was almost thirty years ago. This acoustic coupler, or "modem" as we call it today, was grey, and about the size of a shoe box with two holes in the top to hold the handset, surrounded by foam padding that came ajar immediately after shipment from the factory, which, by the way had usually gone out of business directly after the sale.

Hook your teletype to the acoustic coupler. Then make a phone call to the B5500. Stick the handset into the coupler. Ok, then you "log-in" using your secret password that everyone seemed to know anyway. If you' re lucky, you see the sign-on:

University of Washington B5500 Remote Access, Version 1.0

*

The asterisk was the "prompt" to tell you to type more stuff. But. quite frankly, that 110 baud acoustic coupler failed more often than not, and the message appeared like this

Uni#44sityof Wash,:gton B5522 #@%%8<< version?[5 z

Oh, great response Mr. B5500, and this is only at 110 baud with a stupid phone stuck into the coupler with foam cushions falling out everywhere.

So, you stuff that phone and foam back into that lame coupler, a little harder this time, and try again, most often viewing a similar response and being not slightly entertained by the random letters and symbols that the coupler, the B5500, and AT&T had collectively selected. Dial again, and hope for the best.

I'm sorry, dear reader, that I got a little worked up over that. Phew .. ., Ok .. , ok, .. I'm really Ok now. I have occasional episodes of "Early Remote Access Shell-Shock." My Computer Psychiatrist tells me that the effects will decrease with time once I come out from under my computer desk when I try to use Compuserve.

The UW Computer Center bought one of those workhorse Teletype Model 33's. It's a heavy, mechanical device that, by observation. shouldn't operate any more than a Boeing 747 should be able to fly.

I built a grey wooden box for that teletype and went around showing how remote access to a computer system over telephone lines works. Or, I should say,

didn't work. I went to Seattle Pacific College in 1966 with my modem and teletype encased in its package on rollers.

The demonstration was typical. I couldn't log-in. The computer was down, or for some other reason didn't respond. Following that, I never gave a live demo again. But, Dick Hamlet believed in remote access to computers through timesharing and formed a company to provide that sort of service.

The Computer Center Corporation

I mention the Computer Center Corporation, or C-cubed, as it was called, because it predicated an interesting series of events involving Bill Gates, Paul Allen, and myself.

Dick Hamlet, Monique Rona *[See **Monique R Rona (born 1928)**]*, Carl Young *[See **Carl Garland Young (born 1926)**]*, director of the UW Computer Center, and my undergraduate professor David Dekker *[See **Dr. David Bliss Dekker (born 1919)**]* started C-cubed. It was one of the first timesharing computer companies in Seattle and used Digital Equipment Corporation's DEC PDP-I Os. C-cubed, located near the UW, was in business for only a short time and folded.

C-cubed depicted the mentality of the late sixties. No one wanted to manage punched cards, nor did they wish to wait at the operator's door in favor of a sampling of program output. Instead, timesharing became the watchword. Remote access to the B5500 sparked Dick, Monique, and David's interest in creating the Ccubed business.

There were two kids from Lakeview High School who broke into Dick's DEC PDP-IOs and stole passwords. This way, they could hook up to Dick's computers from a remote teletype and use it for free. The two kids were Gates and Allen.

Don't vilify Gates and Allen for this activity. Breaking in was not that hard. It was like stealing candy from the comer computer store. And, it was theft of the very basic sort.

Dick was one of the best systems programmers I had ever run across, and it didn't take him long to discover the theft of time on his machines. He found the culprits and cleverly allowed Gates and Allen access to C-cubed, so that he could recode and test the operating system to help prevent illegal access.

Dick explained how Gates and Allen did it. It's fairly simple. They "logged-in" to his DEC PDP-10 system from a remote location using a valid account and password. A sample limited account was given to Lakeview students by C-cubed, mostly through Monique's interest in the school. Well, the DEC PDP- I 0 used virtual memory that swapped RAM to disk. This left data in memory pages that were given to other programs. Dick's machine wasn't heavily used, so most of memory had operating system data structures like passwords, still lying around in memory. Gates and Allen just dumped "pages" of reassigned memory to their computer terminal and watched for things that looked like passwords. Once they found a few. they simply used them at no cost to themselves. The reason that I consider this theft is that I, even being a very good friend of both Dick and Monique, could not afford to pay C-cubed timesharing charges, although, I sincerely wished to do so.

Dick found the Gates and Allen scam when a customer complained about a bill for services when, in fact, no services were rendered. He fixed it by zeroing memory pages when they were swapped out and released. That took extra computer time but stopped the banditos.

I was attending the UW then. I noticed a couple of kids programming at C-cubed one day. They were Gates and Allen. I ran into them then, and again several years later.

There was not enough commercial interest in remote access to computers around Seattle in those days. Besides, Boeing Airplane Company was going broke, and, as a result, so was Seattle. C-cubed was hit squarely by this and folded. In those late I 960's, you could drive south on 1-5 and, stuck almost in front of you, was a huge billboard that read

"Last One Out, Please Tum Off The Lights"

The New U-Dub Computer

That old IBM 7094 computer was getting a bit tired in 1965. So, the university tasked the Computer Science team of professors, headed by Dr. Hellmut Golde [See **Hellmut Paul Oscar Golde (born 1930)**], to find a new one.

I, now being Hellmut's Ph.D. student and general lackey, was, in tum, tasked with creating a set of "benchmark" programs. The Computer Center normally pumped out FORTRAN programs for the students, so I made several boxes of sample programs and put them on magnetic tape. That was our benchmark. Our UW team went to IBM at Yorktown Heights and then visited CDC and General Electric for throughput timing using our test.

The CDC 6400 severly won that benchmark and ran about two to three times the capacity of the IBM System/360. Hellmut and the team made the decision, and the UW contracted for the CDC computer.

Three top IBM salesmen immediately approached the President of the university, Dr. Charles Odegaard, and told him of the error of his ways, and that he would be humiliated by the decision he had made, and that the decision should be reversed.

Odegaard listened patiently to the IBM salesmen and, when they were completely done, immediately sent them packing, with contracts flying loosely about in the room. I respect Odegaard for not succumbing to the IBM "end run" that was so prevalent in those years.

But, I got a call while at the UW "Hub" from my then wife Dorothy. She said I had received a draft notice. Uncle Sam wanted my bod for the Vietnam War.

Going to War

The Viet Nam War was unfortunate for me personally, and for the world in general. Being selected to serve in the Army wasn't particularly appealing because I had been offered the opportunity to enter the first Master's Degree Computer Science class in 1967. There were to be twenty of us in this first class of CS there, and a letter from the Draft Board wasn't really in the grand scheme of things.

I went to the draft center, like many of you did, and was probed by the government doctors in the chilly line of recruits. One doctor asked if I knew that I had a heart murmur. Relieved at the possibility of exemption, I said, "No," but it turned out his question was rhetorical. The doc asked everyone that one. I was sworn in to serve in the Army. Damn, all of a sudden visions of rice paddies flew through my head.

Of course, I tried a quick pass at the Draft Board to convince them to allow me to get to a master's degree. They laughed and told me there was not a chance, "you're going to war, young man."

Well, my dad had friends who were captains in the Navy. I know you 're not supposed to use connections, but, quite frankly, I didn't want to get shot at.

Dad connected me to one of his buddies, and I joined the Navy with his recommendation. That satisfied the Draft Board. Not only that, I got a reprieve to finish my master's degree while I worked toward my commission as an officer.

It took two summer sessions at Officer Candidate School at Newport, Rhode Island in 1967 and 1968 to complete my training to become an ensign.

When I got there, I didn't like the training one bit. They cut off all my hair on the fi rst day. It took all summer to grow back. They worked us. Guys dropped out. I told myself to never look back on OCS and think it was Ok. It wasn' t. It was a bummer. I was destined to become an officer on a destroyer tossing shells into the forests of Viet Nam.

Oh. by the way, this is a neat story about OCS. They had a course in navigation that we took daily. Well, of course, no one knew that I had been teaching it for years. So, when the weekly quiz came, I finished it momentarily after going over the problems twice. I'd turn it over to the instructor, and he'd visibly take notice that they were always all correct answers. Good old Harold and Joe at that Nautical School had something to do with those test scores. I graduated with the Technology Award, and nobody knew why.

The Navy allowed me to continue my education to the master's degree in 1969. During that year before graduation, I taught seaman apprentices how to win their data processing stripes. We had weekly Navy Reserve meetings at an ex-WW-II building on the south of Lake Union in Seattle.

These were horribly boring events. I headed the data processing squad, and we skipped-out right after colors and drove to the Naval Station at Sand Point, just off Lake Washington. There they had the oldest IBM collators, sorters. and machines programmed by inserting plug-in wires into "patch boards." We all got through Reserves, and my guys all got their stripes. Most important, we didn't have to march all evening between "colors" like the other guys.

Going from the UW to "War"

Graduation day came in December of 1969. I was to receive my M.S. with honors, for which I was very proud considering my high school grades. However, the prospect of a destroyer tour as a lowly Lieutenant JG seemed a dismal prospect.

But, the President of the university, Dr. Charles Odegaard, had been impressed by my work in their new Computer Science Department. Recall, I had been the technical advisor in selecting their new CDC 6400 computer. Dr. Odegaard was on the Board of the Naval Postgraduate School at Monterey, California. Then, Captain Williams of the Reserve Officer Training Corp at the University of Washington, who I had never met, called me for his counsel.

The Captain asked me to take a seat opposite his desk. You vet's know that it is very important that you take the seat that the Captain tells you to, and I obeyed, assuming a position of seated attention in that chair. Captain Williams, in his khaki regulars, looked me squarely in the eye. "Mr. Kildall, I understand that you are graduating in Computer Science." I was not aware that President Odegaard had made a private recommendation to the Captain.

[NOTE - Of course Odegaard went to Dartmouth College ! https://en.wikipedia.org/wiki/Charles_Odegaard I wonder if he was friends with Peter Kiewit Jr?]

"Mr. Kildall, you have a choice to make." Well, the Captain proposed that I could either be an officer on a destroyer off the coast of Viet Nam or take the post as an Instructor in Mathematics and Computer Science at the Naval Postgraduate School at Monterey, California. This particular question made me understand the length of a microsecond. "Well, sir, I would like dearly to serve my country in battle, but I think I shall take the second option, if you please."

Captain Williams warned that if I taught at the Naval Postgraduate School, I would probably not reach the level of Admiral. I took a pensive stance for a moment and then told him that I would accept that risk.

CHAPTER 3 The NPS Helps Foster Microcomputing

Life at the Naval Postgraduate School

The Naval Postgraduate School, generally referred to as the NPS, is located at Monterey, California. It is a very good school in all respects and placed at a magnificent oceanside locale. Although I have not had the opportunity to make a visit to Viet Nam, I am quite sure that Monterey has a nicer coastline.

They teach only postgraduate courses at NPS. The students are mostly U.S. Navy Military, with a smattering of foreigners. The students are dedicated. They have to be. Some of the foreign students were said to be put before a firing squad on return to their homeland when they failed. I don't know if this was true, but I was a bit more lenient on them because of that.

Strangely, the NPS contributed significantly to the rise of microcomputing in the early l 970's.

Breaking from the UW's B5500 computer mainframe was tough for me. Recall that I had the B5500 to myself for hours at a time. The B5500 had been my rather large personal computer. Now, I had to use that IBM System/370 at the NPS, just like any other programmer.

Not only that, it didn't have any good high level language. So. here I am. stuck with a stupid System/370, no high level language, and no direct access to the computer. This was a technonerd nightmare.

But then. Old Captain Williams' words rang in my ears, and I took particular solace in the fact that I was not floating over the swirling seas of the Gulf of Tonkin with no computer at hand whatsoever.

Ok. so first you make friends with the computer operator at NPS's Computer Center. Then. make friends with the systems programmers. I met a nice lady, an astute programmer, Kathy Strutynski, who was later instrumental in programming upgrades to CP/M, and with relationships between Microsoft and DRI many years later.

The NPS accorded me a few specific tasks. First, I was to teach computer courses. Second. I was to be on the "Crypto Staff," and third I was to take inventory of liquor at the Officers' Mess.

I enjoyed the teaching with a passion, but the crypto duty over that three years resulted in only one message that transmitted a notice to an Admiral "that a free turkey was due to arrive on Thanksgiving." It took about an hour for me to decode that one.

I never could figure the inventory. But, there was a little lady named Mabel Johnston, who, at about her 75 years of age, could figure it quite nicely. She patiently showed me journals of numbers in column after column because I, being the Naval Officer In Charge, was required to verify her numbers to the

penny.

Honestly, I just watched her and believed her additions, subtractions. allocations to inventory, taxes, and on and on and on. That was a risk, but after all, you must believe in a grandmother, right?

Mrs. Johnston knew the ropes. Years later, "Visicalc" on the Apple took some of the toil. Do you think that Bricklin's Visicalc made a substantial contribution to the success of Apple's PCs? I think so, because ifl could have had Dan's spreadsheet at the time, I'm sure I would have impressed old Mrs. Johnston. But, somehow, I don't think she would have taken notice of any sort. She would've just moved to the next page in her ledger.

How to Program the IBM System/370

Here I am at the Naval Postgraduate School in 1970. Ok, better than Viet Nam, but not better than the U-Dub's 85500. The NPS had just installed a System/370, one of the first delivered by IBM.

The IBM System/370 was an enigma for me. No languages. No access. I started with Nicklaus Wirth's PL/360, a sort of high-level assembly language. It wasn't any good. Wirth went on to define the Pascal programming language which was a considerable improvement. Faced with no reasonable high-level language softwaretools, I went to PL/I. IBM's runaway attempt at displacing FORTRAN and ALGOL.

How to be a Professor at NPS

As for my role at the NPS, some considered me a hard teacher. I don't think I was. A bunch of students said I was. So judge for yourself.

I often taught the Data Structures course. The class was called CS3 l l l. To combat boredom, one semester on a first day, I entered the classroom and told the thirty-odd students that "we will now have a pop-quiz." Everyone must place their books and notes on the floor and they, being good Naval Officers, did so.

The problem that I proposed was to write a program that would "perform symbolic differentiation and simplification of polynomials to any order."

Well, I can tell you right now that was a huge order. And I, being professor-incharge, may have barely gotten into a solution within that fifty minutes. Cruel, but I wanted to get a line on how my students thought about the problem of problem solving. I didn't really expect them to get to a solution of any sort whatsoever.

Those students worked away at that problem for fifteen minutes, at least. Then I said, "stop what you are doing now. I want you to think about how you are solving this problem, and what mind tools you are using at this moment."

Of course, the whole thing was a ruse, and the students were completely relieved, because not one could come close to a solution on that first day. I asked how their thought processes were working, and several of those students came up with good and different ideas on problem solving.

Ok, so I had this pop-quiz, right? The course proceeded through the semester, and I didn't give any other tests or quizzes. We worked entirely on problem solving, using Knuth's algorithmic notation and McCarthy's LISP List Processing symbolic programming language. At the end of the semester, I gave a final exam. There was only one question.

I don't think was being a mean professor. Do you?

Why did this group of students after two more semesters with me as their professor, post a finely emblazoned plaque at the NPS's Trident bar room that stated all too clearly:

"Class of 71 , Kildall CS3 l l I, CS 3112, CS3 l l 3, Three Time Losers‥

Ok, the guys did get their ultimate revenge. According to military protocol. I was required to usher the graduating students to their seats in King Hall. Although I was allowed civilian attire during classroom sessions, my ushering duty required my officer's dress uniform.

I had to let my "Three Time Losers" leave ten minutes early from the classroom, just before their graduation, to allow me time to change from my civvies to my officer's uniform. These were the same guys that I had taught all those three semesters. They knew that Kildall had to usher, and they enjoyed every minute. They knew, that by rank, I must cater to them.

I detected a few snickers here and there in the process. I have kept all their names in a special folder and intend sometime in the not-to-far-off future to reevaluate their grade scores as a basis for retracting a master's degree, or two. After all, I have kept all of their old tests, and I may have made an omission of some sort. Right?

It was a difficult study for these officer students, but, in the end, everyone graduated with their degrees, so I guess it couldn't have been all that bad for us.

But, in early 1972, my three-year obligation to the Navy was over. And, just as I had refused Captain William's option to go to Viet Nam, I declined both a "re-up" and the option of Naval Reserve meetings in a moment that may have been shorter than that "microsecond" that got me to NPS in the first place.

Back to School at the U-Dub

I kept my association with the NPS after my stint in the Navy. The Computer Science group at the NPS asked that I return as a professor, but I felt the need to complete my education.

Dr. Hellmut Golde [See **Hellmut Paul Oscar Golde (born 1930)**] at the University of Washington Computer Science Department had allowed that I continue work toward the next degree by "remote" from NPS while in the Navy, so I was prepared to finish my Ph.D. in fairly short order.

My research interest centered in compiler code generation. Recall, that this means that a compiler reads computer language statements and makes it into another program that the computer understands. Take, say a program with I 000 statements and make a computer readable form of it. The computer readable form might take 400 bytes of RAM. A good "optimizer" might reduce this by 25% to 300 bytes. This saves storage and generally makes the program run faster.

The name of this analysis is "Global Flow Optimization." You figure out how data values will vary or stay stable at each decision point in a program. Then you use that information to make small programs instead of big ones. That's called compiler code optimization.

Well, there was quite a bit of theory out there. Some was by John Cocke at IBM, and Harry Huskey at UC Santa Cruz, for example, and some was by Jefferey Ullman who was well-published in the Mathematics of Computer Science. But, I thought I had a process for flow optimization that was a general theory,

covering nearly all of the current techniques.

A quick program in McCarthy's LISP convinced me of the correctness of my process, and I then spent several months with McKeeman's XPL system making a production compiler. The process worked, but I couldn't create the mathematics to back it. I just knew that it worked, but that's not enough. This all happened in 1971 .

But, then I developed an algebraic model of my process. This so-called "algebra" is not like the one we study in high school, but instead is a mathematical modelling theory that lets you describe sets of objects (like program data values), and formulate ways to combine these objects (like through program branching and joining).

Well, my formulation was good, but I couldn't prove my central theorem, and that made my approach worthless as far as academicians were concerned. That was a basic problem, because, after all. I was trying to get the Ph.D., right?

I got out of the Navy in early 1972, without a proof of my theorem, and returned to the University of Washington, but my brain was about broken by then. None of my professors could help, and some were beginning to believe that my central theorem wasn't in fact true at all. This was not encouraging.

A Story About Light Bulbs

Ok, so I'm at the UW and I couldn't discover my proof. I just sat and sat and sat in my UW grad student office, resting my head in both hands, until my eyes shut by themselves late that evening. Nothing.

Then, in an instant the proof came to me. I wasn't even paying attention to it. I awoke in an instant and wrote the entire proof of my central theorem, not finishing until sunrise. I guess that's why they put light bulbs over cartoon characters. The discovery of this proof was one of the grandest experiences of my life, except, of course, for the time I visited Niagara Falls One Day.

It was a general theory, and it was quite elegant, if you will allow me to say so. Jefferey Ullman was a professor at Princeton University and picked up the thesis almost immediately after it was published. He liked it and elaborated on the theory in his own books.

Jeff is an astute Computer Scientist. He invited me to lecture at Princeton. which I did, and then to lecture again when he moved to Stanford. He is now Chairman of the Computer Science Department there. Jeff is an easy-going sort, and a great contributor in promoting the mathematics of the science of computing.

The NPS kept a civilian position open at the school, and I returned there with the rank of Associate Professor. Eventually, they gave me tenure. Tenure, as most of you are aware, means that you have a job "forever" or unless you die first. That is quite a nice deal in education, especially since the charts showed that NPS was second only to Stanford in salary in the entire nation. Not only that, education is one of the greatest scams concocted by mankind. Here's how it works.

You arrange to start your class at 11 :OOAM (9:30 wake-up, eh?). NEVER schedule more than one class of a different topic on the same day, for this makes you prepare two different lectures in your allotted ten minutes before each class, and if this rule is violated, it can be stressful and confusing in the classroom.

And, You allow your classes to be scheduled for at most three days of the week, although two is preferable. On all other possible occasions, use lowly, rarely paid "lab assistants" to off-load your heavy pressure.

You get holidays on every conceivable occasion. like Spring vacation, President's day, all summer, Christmas for a month, and then throw in Ground Hog's day for dessert.

Oh. yeah, I forgot that you must "Publish or Perish. right?" Well, that 's easy enough. Get the university to buy you a Macintosh (say "sir, the portable, if you please?"). Then, on holiday in Hawaii, get a good ole' charge on them there batteries and make up an Industry Opinion Newsletter of your own! Publish every month, make a few bucks, and call it something like, "A Wholistic View to the Future of Computers in the Next Decade." See, this works. It's kind of like Nostradamas, 'cause you don't really have to be specific; you make your money over the first few years, 'cause you' ve got a DR. on the front of your name, so people sort of believe you.

That Newsletter also prompts invitations to speak that sometimes pay up to $1000 per evening, plus a free meal (don't ever speak at a symposium where they don't pay for everything, including the airfare - you can try for First Class, but I never got it).

I apologize to you readers who are teachers by profession, but c'mon. it's kind of a cushy job at times, right?

Departing from "Cush"

Leaving this sort of job situation to move into industry was one of the hardest decisions of my life. So, I just didn' t make it. I'm good at that.

Best of all, the NPS faithfully encouraged one day of consulting work in the Silicon Valley area each week to bring the latest info back into the NPS classroom. I shall remain eternally grateful to the NPS powers-that-be for that particular edict.

CHAPTER 4 Silicon Valley Micros

New Technologies

Ed McCreight came from Seattle. He joined the budding group of researchers at Xerox PARC, the Palo Alto Research Center. Ed knew about my thesis work and invited me for a visit in 1972 on one of my "consulting" days. Alan Kaye was there, and they showed me their work. One was Alan's SmallTalk that used high-resolution graphics and windows.

I was nonplussed by their new computer design, called the ALTO, but their white background terminal with black character fonts of a wide variety drew my attention. I didn't know it at the time, but this was to foster the entire desktop publishing industry.

PARC's new technologies were severely interesting, but having no background in graphics, and having an intense interest in compilers, I thought of their efforts as futuristic oddities.

efforts as futuristic oddities.

A Small Ad

Back at the NPS, I had a co-teacher named Gerry Barber. Gerry was tall. thin. pale, and balding at 25. He spoke with a lisp that you accommodated in time and rode his bicycle to school. He wore horn-rimmed glasses and pens lined up in a little case that he carried you know where. He swooned in class one day, and I had to revive him and take him to his home.

Gerry read every journal. He gleaned a small advertisement from Electronic Engineering Times. It read "Intel Corporation offers a computer for $25." Well, considering that the NPS IBM System/370 cost about $3M, I thought that was a pretty good deal, and Gerry agreed. This was mid-1972. And. by the way, I'd never heard of this little chip company, called Intel, at the time.

No matter. This is Econ' 101. Ok, the chip was only a 4-bit computer, called the 4004. And, it really wasn't $25, unless you bought about 10,000 of them. The cheapest "development system" was about$ 1000, and that didn't include the Model 33 Teletype that nearly even completely worn-out, ran about $700.

Still. that was a lot less than the IBM System/370 with a list price of three mill', and certainly not within the budget of an up-and-coming Associate Professor with a wage of $20,000 per year.

Intel sent me the specs for the $25 i4004 chip. This was a very primitive computer by anyone's standard, but it foretold the possibility of one's own personal computer that need not be shared by anyone else. It may be hard to believe, but this little processor started the whole damn industry.

The 4004 was fallout from a project Intel did for Busicom, a Japanese calculator manufacturer. Instead of building a specialized chip for Busicom, they designed a single-chip microprocessor controlled by a small read-only-memory (ROM).

Think of the mentality of the time. You used a timesharing system that varied in its response depending upon the time of day (those of you who use Compuserve or Prodigy know what I'm talking about). These little 4004 computers promised constant response time; although, the problems they solved were about as big as the chip.

There in 1972. My dad's navigation "crank" had arrived in the Intel 4004, but there appeared some major programming work to get the crank to actually work.

Intel built a little foot-square blue box with a PC board on the top. The PC board included one of those little 4004's. You could write programs with the "development system," and I had to have one. It was called the SIM4-01 .

Oh. by the way, I enjoyed working with Gerry Barber. He was an honest, religious. intelligent man. He was astute.

An Introduction to Intel Corporation

I can say without reservation that the instruction set of that $25 Intel 4004 chip was the worst ever. Its only redeeming value was that it was dirt cheap in quantity, and that drew designers to use it in tons of dedicated applications like portable inventory data collection and specialized electronic monitors.

It was impossible for me to come up with $1700 for the SIM4-01 development system and teletype, so I wrote a simulator on the IBM System/370 that faked the operation of the 4004. Then, I went to work on dad's navigation crank. Well, this turned out to be quite a problem, because navigation requires computing "trig" functions, like sines and cosines, and that little processor had none of these. for sure.

I spent a few months writing trig functions for that little processor using my simulation on the IBM System/370. I didn ' t actually own a 4004, I just used my simulator on the System/370 to check and debug all of my trig functions.

All my 4004 programs came together, so I called Intel to see if I could scam a development system. I ran into Bob Garrow at a time when he was a fairly wellpromoted engineer at Intel. I tried to sell him on the notion of trading my 4004 simulator for one of his $1000 SIM4-01 development systems.

Being a hardware nut, Bob didn't want the simulator. But, he did want the trig routines, because they were the beginnings of a "library" for the 4004, of sorts. Hey, I didn 't care, I just wanted a SIM4-01 .

Bob always had a smile on his face, and I must have looked hungry for food and hardware. He craftily took me to his favorite Italian lunch spot in Santa Clara, fed me cannelloni, and worked to get a few "extras" in trade for that SIM4-01. In reality, I didn't mind, because I kept thinking about that $3M IBM computer that was my alternative.

Incidentally, five years later, Bob left Intel to found Convergent Systems, a nicely successful computer company in the Santa Clara Valley at the time.

The Age of Intel s 4004 Microprocessor

The SIM4-01 used the 4004 chip but included power supplies and support circuits. It had 1024 bytes (not kilobytes) of RAM for data storage, and up to four 256 byte (not kilobyte) ROMs for programs. We're talking primitive here.

Actually, these were not strictly ROMs. They were called EPROMs. an acronym for electronically erasable and programmable read only memories. They have a quartz window right over the chip. Shine an ultra violet light there for enough time, and the data goes clear. By the way, you have to scam a bunch of 1702 EPROMs because they were a hundred bucks each.

I met Tom Pittman on a journey to Intel. To me, Tom is the first personal computer developer and user. (Later, Tom wrote Tiny-C, for which he is best known.) Clever Tom wrote a "monitor" for the 4004, and a small assembler that actually ran on the SIM4-01 itself.

This, in effect, was the first self-hosted single chip microprocessor development system. Tom's "monitor" took 257 bytes, one more than the 1702 EPROM could hold. He condensed that to 256 bytes without changing the monitor. Ask him how he did it if you run into old Tom, or if you ask me, maybe I'll tell you.

Using a Teletype Model 33

I am going to have fun with this one, because only the diehards have ever experienced the infamous Model 33. It has a big case that holds the printer mechanism and a roll of, normally, yellow paper. On the left side is a paper tape device, half of which is a ··reader" that, of course, reads holes punched in that tape. The tape encoding is Ascii. just as we use today.

The second part of the paper tape device is the punch. The punch. of course, made the holes. So, to edit, you make a program and punch a tape. If you make an

error, you "backspace" and put "nulls" (all laterally punched holes). Then, start typing agam.

Ok, you' re saying the next part appears a bit tedious, but if you are a true computer person, you must go through it. After all, we "pioneers" all had to do this stuff two decades ago so that you can enjoy your sweet little lap top while cruising placidly over Colorado at 37,000 feet in UAL First Class. Hey, c'mon, just a little bit of torture for all our troubles in those days.

Here's how programming a 4004 worked in 1972. You buy a UV light, if you can find one, to erase the 256 bytes of memory in a 1702 EPROM for storing your program. Then plug in Tom's monitor and three EPROM assembler.

Stuff some paper tape into your teletype and type in each program line. Use that mechanical paper tape backspace to null out some holes in the tape if you make a mistake. (How'd you like that teletype today in your lap at 37,000 feet? Ok, so keep reading.)

Now you've got a program of sorts on that paper tape. Run the paper tape back through the teletype at ten characters per second, one more time. To understand I 0 cps, remember that a very good typist works at 100 words per minute. That's 600 characters per minute, or just about the speed of a teletype.

You get some "syntax errors" from the assembler. So, run that tape back through the reader and stop to "edit" while the paper tape punching is making a new tape, and hope the hell you don't make a mistake again.

Eventually your program is syntax error free, which, by the way, doesn't mean it works right, right? In any case, out pops another paper tape in Intel "hex" format of the machine code.

(I know that you are totally bored with this discussion about paper tape, but I also know that if you have gotten this far, you have enough curiosity to continue. Think of it as paybacks from those of us in the last generation.)

Take out Tom ·s four EPROMs that hold the monitor and assembler and put in the "hex programmer" that loads up I 702's. Putting these EPROMs in and out would often bend a pin. but by this time, I was so adroit that accidents were normally limited to poking my finger with one of those prongs a time or two every day.

Next, take your EPROMs that have been cooking under that UV light and stick them one at a time into the EPROM programming socket. Run that hex file paper tape that you just got into that stupid teletype again and load each EPROM. This takes 30 minutes to erase the EPROM, and five minutes to load the 256 bytes into that 1702. Meanwhile. reassure yourself that this is a lot cheaper than the IBM System/ 370 downstairs.

For reference, an average JFK to SFO flight takes about six hours. That's the time it takes to program twelve EPROMs of 256 bytes each, or a total of 4,096 bytes of memory. That laptop you ride around with these days loads program memory of that size in about I/5 of a second. Hmmmm ... 6 hours compared to I/5 of a second. Not bad. Ok, if you scammed enough of those I 702's you could erase four or five of them under that UV at the same time.

Are you bored with this discussion? Good. Hey, you can get through this in five minutes. It took us a year, Ok? Paybacks.

Let's go back to the 4004. So, now that you've written your 4004 assembly language program, you're ready to test. Stick in your newly programmed EPROMs, push the RESET button on the SIM4-0l and GO. Usually nothing happens. That's because there is a bug in your program. But, there's no way to tell where that bug is. The SIM4-0l just sits there and doesn't do anything.

There were a couple of LEDs on the SIM4-01 . To find your error, you reprogram and use those LEDs to see how far your program gets before "crashing." That usually took a day or two, or the equivalent of a few flights from coast-to-coast.

I wrote a simple BCD (binary coded decimal) calculator for the National Computer Conference in 1972 using this little SIM4- 01. It took a month, and by the time it was done, I had sat and stared at the teletype so long that I had to put it on a little pedestal, so I could stand and debug, for obvious medical reasons which I will not go into at this time.

So, next time you have an itsy-bitsy bug in your program running under Borland C++ with the Turbo Debugger, don't come to me for sympathy, because I'll just give you a SIM4-0I and stick you on an airplane with an old sixty pound teletype that I happen to have in my garage.

I built a briefcase computer using the 4004 in l 972. I'd take this around for demos, and people really liked it. It may have been the first personal computer. Once, I took this to a lecture at the University of Washington. A guy named Tom Ro lander was in the audience, and he became enthralled with this little computer. Tom was to play an important role at DRI.

Grace Hopper 's 4004

Here's a story about a lovely lady, Captain Grace Hopper. Actually, she became an Admiral after I met her.

Grace Hopper was self-proclaimed to be the first programmer, and I believe her. She was quite elderly when I met her, but wore the crisp dress uniform of the Navy each time I saw her.

She helped invent COBOL, that business language used throughout the world today. She was a brightly clever, petite gray-haired lady with a wit and brain sharper at her age than most who were half her's. She was like having a channing grandmother who could talk your socks off about computers. Quite a combo, indeed. All her stories were true, captivating, and always drew a crowd.

Captain Grace gave lectures at universities throughout the country. At the NPS, she handed-out strips of thin wire about a foot long that became known as "The Grace Hopper Nanosecond." That piece of wire she gave to those students showed how long it took for electricity, or the speed of light to travel in a millionth of a second. It was a good illustration for everyone to see the limits of linear computing.

Grace became a friend. I was helping to "man" the Intel booth at the National Computer Conference in the Fall of 1972, and Grace came by proudly in her military dress. She gazed sneakily at me with those eyes that shown in that brilliance of hers, though her outward appearance was of frail demeanor. With stealth, Grace reached into her purse and brought out an Intel 4004 chip, then whispered to me "this is the future."

Alas, Captain Hopper was forcibly retired some months later. After all, she was well past mandatory retirement. The Navy was her life, and I'm quite sure she was devastated. There is a good ending though, because popular naval opinion brought her back as an Admiral.

For analogy, Grace had become like the Blue Angels Flying Team that does fly-bys and airshows for the Navy, making a bunch of noise and burning lots of kerosene.

kerosene.

The Navy supports the Blue Angels to recruit Navy flyers. The Navy supported Grace to recruit the interest of college students in bringing their talents to the technology of computing for the Navy. She did a fine job of that. By the way, she was waaaay less expensive than the "Angels" to maintain.

Bugs in Your Programs

It's fun to tell you the story about how Grace and her buddies invented the word "bug" as it applies to an error in a computer program. She worked with John Von Neumann in the days of World War II. John worked on solving numerical analysis problems, like the kind that let you toss mortars around.

They had a repeating error in one of their programs while operating their "relay" computer. Remember, relay computers were built with mechanical clappers driven by magnetic solenoids. That was in the 1940's, before the vacuum tube machines, and certainly before the transistor and chip computers.

Upon investigation, they found that some of nature 's real live bugs were in there, preventing the relays from closing properly. So, next time you have a "bug" in your program. try "Raid." Oh, and by the way, that is why CP/M's debugger was called the "Dynamic Debugging Tool," or DDT for short.

The Age of the Intel 8008 Microprocessor

I began to work for Intel as a one-day-per-week consultant in 1973, following my somewhat discouraging experiences with the i4004. I was now the proud owner of a used Model 33 Teletype that I got by trading my 4004 teletype diagnostic program to a repair company in Cupertino.

Intel had developed a new microprocessor chip. It was called the i8008. The 8008 was more advanced, but that wasn 't hard to achieve, considering the design of the 4004. It was an 8-bit computer with a "Von Neumann" architecture. That means that the program and data are all in the same memory, like current PCs today.

The software group at Intel in 1973 consisted of Bill Byerly, Ken Burgett, and myself as a consultant**. I was under contract to develop a simulator for the Intel 8008, much like the one I had done for the 4004, under direction of microprocessor manager Hank Smith.**

The microprocessor group at Intel occupied the space of a not too large kitchen at the time. Bob Noyce, founder of Intel walked through occasionally with his usual smile. and gave a few pats, but they were token gestures. His interest was in making I 101 RAM chips in the other section of Intel's only factory on Bowers Avenue in Santa Clara.

Noyce and Computer Games

Bob Noyce was a clever, somewhat silent, gray-haired guy who mostly wore a white lab coat to cover his casual demeanor. At first, I must admit that I liked him because he was a pilot. But, there is one fun experience that I had with Bob, and this is not intended in any way to put him down, as I admired him greatly for all his contributions.

One engineer at Intel in 1972 had developed a graphics chip set that controlled a little triangular space ship. It mimicked the game of "Space Wars" that had traditionally operated on DEC minicomputers.

Space Wars worked like this. You control the velocity and direction of this graphics "space ship" using keyboard control. The ship operated under those Keplar's Laws of Motion around a "sun" that would pull it in if your spaceship came too close. I thought that it was a good idea for a commercial consumer game.

Later, I used my 4004 briefcase computer to build a simple game of "Nim" that used the 4004's LEDs. Stan Mazor, one of Bob's gurus, suggested we approach Noyce with the idea of making game computers. This was in 1973, before such things were popular. Noyce peered at the LEDs blinking away on my 4004. He looked at Stan and me and said, bluntly, that the future is in digital watches, not in computer games.

I suspect Bob's interest in watches came from Intel's then recent acquisition of "Microma," the first digital watch company. By the way, just like I scammed the SIM4-0 I. I worked a deal with Bob for a Microma digital watch that I was very proud of. in trade. of course. for more software.

But, unfortunately for Intel lots of other companies, mostly Japanese, also figured out how to make digital watches and flooded the industry. Intel dropped the Microma business. I don 't know if gaming would have been successful through Intel, but I have thought about Bob Noyce's decision that day.

He had the beginnings of a Nolan Bushnell-style industry that was sacrificed for a digital watch business that didn't take hold. I'm certainly not saying that Nim was the right game. but the Space Wars chip set was on the right track. It's fun to speculate.

Bob was a friend. He, like all of us, made some decisions that are right, and some that could have made the future unfold in a different manner. But, most of all, Bob treated his people with dignity. He had the foresight to build an industry in microprocessors. I was very sad when he died recently. I sent a note to his wife, Ann. I liked them both very much.

The NPS Microcomputer Lab

Microcomputers became the new "thing to study" at the Naval Postgraduate School in 1973, and the faculty backed me to get the funds to build a laboratory for them. We set up some SIM4-01 stations, then went to the Intel Intellec 8 development systems.

It turned out to be quite a nice lab that jump-started a bunch of guys like Glenn Ewing, who helped engineer the IMSAI computer, and Gordon Eubanks, who founded Semantec, along with a bunch of other projects with the Navy at the Naval Undersea Center at San Diego, and the test center at Keyport, Washington.

We taught the NPS students how to use micros. One project was a CMOS 8080 wristwatch computer that computed "partial pressures of nitrogen" according to standard Navy diving tables.

This means that a Navy diver could descend to a certain depth while the watch continuously monitored time at depth. Then, upon ascent, the diver looked at the LEDs on the watch to tell how long to remain at a certain level to avoid the "bends." Nice package, indeed.

It was a low power. obviously waterproof device, and is still used today. We used CP/M to make that software and others like it for the Navy. That little

Scuba computer was designed in 1975 and went into production for the Navy only a few years later.

A High Level Language for Microprocessors

Let's go back to 1973. I must admit that I spent more than the Postgraduate School allowance of a "day a week" on my consulting, but I will not admit how many. I lived in my Volkswagen van at night in the Intel Bowers Avenue parking lot after my eyeballs gave way.

One day, I knocked at the door of Hank Smith's office at Intel. He invited me in. Hank was the manager of our minuscule microprocessor software group. I told him that I could make a compiler for the 8008 so that his customers didn't need to use low-level assembly language. Hank didn't know what that meant, but I showed him how a customer could write:

X=Y+Z

and that would make several lines of assembly language. He immediately got on the phone and called a customer he was courting. The customer liked it, and Hank, with a smile, said to "go for it." I like corporate decisions like that.

The language I developed was named "PUM," and it used compiler technology of the time, based upon McKeeman's XPL. PIJM stands for a "Programming Language for Microcomputers," and is still used by Intel customers today, though largely supplanted by the "C" programming language. PUM allowed a microprocessor programmer to remove himself from the tedium of assembly language programming.

As spokesperson for high-level languages on those little Intel machines, I had to fight vigorously to show the advantages of the approach in public forum. It wasn't too difficult, because I often demonstrated that I could produce an effective program at ten times the hourly rate of an assembly language programmer using PUM, using about the same amount of program memory space. PUM became a success.

Meanwhile, Intel had developed the small computer system in 1974 called the Intellec 8 that I mentioned. It must have been the first commercial personal computer, although no one thought of it as that.

Toward Self Hosted PL/M

By "self hosted," I mean that program development and testing take place on the computer that sits directly in front of you, and the program you write can run on that same computer.

Unlike Tom Pittman's self hosted little development system for the 4004, PL/M used a minicomputer like C-cubed's DEC PDP-I 0. You write the program using the closest DEC PDP-I 0, run to the paper tape punch and get your "hex" file. Then, you program your EPROMs or load RAM using the paper tape. Messy, and not the right answer.

The Intellec 8 came with an EPROM "programmer" socket on the front, and standard with 4,096 bytes (not kilobytes) of RAM. You could make it l6K by adding three more memory boards at $1000 each. You used a good old teletype to make programs for the 8008 in much the same way as with Tom Pittman's 4004 monitor and assembler. And, Ken Burgett had developed a nice 8008 debugger called MONS.

I horse traded more software and got my own Intellec 8. Then, I got a loan for $1700 to buy a character video display and a huge printer. I was close to technoheaven. I now had a real personal computer that could actually be used to make real programs.

One of those programs for the Intellec 8 could be a compiler for PL/M that would operate directly on the 8008, rather than be tied to the expensive DEC PDP-10. This would make PL/M "self- hosted" on the Intellec 8.

But, there was a fundamental design problem. The 8008 had a "stack" size of eight return addresses. This means that only seven subroutines can be in effect before an undetectable overflow. And, this made it unusable for PL/M and lots of other microcomputer applications. But Intel, with Mr. Shima's help, came up with a solution.

The Age of the Intel 8080

Shima, as he was known to me, was a reserved Japanese chip architect. He had designed the Intel i4004, which for some reason, I did not hold against him any longer.

In 1973, Intel brought Shima back to their Bowers Avenue facility to upgrade the 8008. especially to take care of the short stack problem. Shima worked at his lab on his design. One day in late 1973, Shima hurried to the office where Bill, Ken, and I were programming. He said that the new i8080 was "running."

Of course. I followed in trail to his lab and found a poor assaulted microchip tethered by thin probes attached to some electronic monitors that must have told Shima something. There was a binocular microscope peering down into the middle of the mess.

Shima told me to take a look through the microscope. I saw nothing but a bunch of needle tips touching some apparently interesting spots on that chip. He told me that half his 8080 chip was running. Not wanting to break his stride, and not knowing what the heck was happening down there, I said, "Wow, Shima, that's really neat!"

Many people attribute Apple's entry with the Ile as the basis for the personal computer. But, I am of the opinion that Shima's little 8080 chip really started it all right then and there.

Ok, now Shima's got a pretty good microcomputer, called the 8080. Intel upgraded their Intellec 8 to a version they called the Intellec 8/Mod 80. It was truly a personal computer, although designed for development, with two exceptions. There was no large memory storage device such as the hard drives we have today. Second, the whole thing was waaay too expensive.

By the way, "backup" storage has two meanings in computing, so I should probably sort them out. Backup storage, in the beginning meant the big hard disk that stored program, data, and left-over student program output that you didn't ever receive, and, incidentally, may be yet awaiting. But, today a "backup" is a copy of the hard disk to something like a little tape drive.

To avoid confusion, I'll use the alternative term of "mass storage" to mean floppy disks and hard disks.

The Intel Intellec 8/80 showed an avenue to self hosted high level language development. I wanted severely to get away from the DEC PDP- I 0 cross-development and do PL/M compilation and debugging on the Intellec 8/80. I didn 't care about the expense, because I had already scammed my own Intellec, so I was only concerned about the lack of mass storage. And, hey, I had my own 9600 baud CRT (although I was still making payments in that area).

I had to solve the mass storage problem before PL/M could be operated independent from the DEC PDP- IO miniframe.

CHAPTER 5 The Advent of CPIM

The Quest for a Fast and Cheap Storage Device

So, the term "mass storage" means things like diskettes and hard drives today, but we just didn't have anything like that in 1973 that was affordable. The best was a high-speed paper tape reader and punch combination.

Some had proposed using cassette tapes rather than paper tape. I tried once to build a controller for a cassette tape in 1974, but failed miserably, thank God. For, if I had been successful, there would have been no CP/M, and certainly no MS-DOS.

I needed mass storage to support PUM development. Well, Memorex was just down the street from Intel. They had come up with the new "floppy disk" to replace those IBM punched cards we talked about. The floppy disk worked with IBM-style keypunches but made a disk instead of punching cards. (Incidentally, I don't know to this day why a floppy disk is a "disk," but a CD-ROM is a "disc.")

Getting back to the point, think about this. On the one hand, you have a teletype paper tape reader that processes at ten characters per second. Now, the floppy disk holds 250,000 characters and moves data at 10,000 characters per second. That's about the same as 2000 feet of paper tape, operating 1,000 times faster than that old teletype.

Quite a reasonable difference. Not only that. the diskette would, unlike a paper tape, instantly access any portion of the data without rewind or fast forward. That made Memorex's new floppy disk quite inviting for mass storage.

Those payments on my new CRT didn' t give any margin for a floppy disk drive at $ 1500. plus controller at $3000. But. Alan Shugart had started a small operation up the street, called Shugart Associates. Alan. also, was making "IBM Compatible" floppy disk drives. I went to Alan to scam one.

I misused my Intel credentials to get access. Finis Connor worked there as a marketing manager, and I got Finis to give me one of their old test drives. That poor drive was being used to evaluate MTBF (mean time between failure) and had a few hours on it. Like about 10,000. Finis gave me some new felt read/write head pads to replace the worn ones and sent me on my way.

Great. I've got this old, worn, 8 inch floppy drive. And, I don't have a "controller." Even ifI did, it wouldn't work in my Intellec 8/80.

See. you need some fairly complex electronics in that controller to make the diskette drive find certain locations and transfer data back and forth to the Intellec 8. I can tell you without reservation that I sat and stared at that damn diskette drive for hours on end and played by turning the wheels by hand, trying to figure a way to make it fly.

I even tried to build a diskette controller for that freebee drive from Finis. Bob Garrow from Intel roughed out a design. I bought the parts. But I, being mainly hardware inept when it comes to debugging the stuff, couldn't get my controller to work.

The absence of a controller for that floppy drive was the only thing between me and a self-hosted compiler for PUM on the Intellec 8/80. And, it drove me nuts that I couldn't get that little drive working.

The disk drive sat in my office at the NPS for a year. I'd just look at it every once in awhile. That didn't seem to make it work any better.

Origins of CP/M

I became tired of spinning that little diskette drive by hand, and I couldn't wait for a controller to magically pop up, so I used my software simulator for the 8080 commissioned by Hank.

So, I built an operting system program using the simulator. I called it CP/M, or a Control Program for Microcomputers, mimicking the name PL/M. For me, CP/M's sole purpose was to support the PL/M language. Nothing else.

Using the simulator, I developed all of the CP/M operating system in PL/M using a minicomputer.

Just like the early days of the i4004, I used no hardware. But, by using the simulation, I knew that CP/M worked. I just couldn't figure out how to make that damn disk drive work. I even made a program editor, the infamous ED that proved true under that simulator.

This was 1974. Out of frustration, I called my good friend from the University of Washington, John Torode. John was a Ph.D. graduate of the Electrical Engineering Department there, and I figured if John couldn't build that controller, no one could.

He did build it. He designed a neat little microcontroller and, after a few months of hardware and software testing, that microcontroller started to work. We loaded my CP/M program from paper tape to the diskette, and "booted" CP/M from the diskette, and up came the prompt

*

This may have been one of the most exciting days of my life, except, of course, when I visited Niagara Falls One Day.

We loaded ED onto the diskette, and I typed

*ED

The ED program editor came up quite well and alive. Ok, so far, so good. I made up a file with ED and put it to disk. The DIR command showed us the file was there, and the TYPE command showed us that what we typed was what we entered using the ED program.

That was in the late afternoon and, feeling lucky, John and I retired to have a Chinese dinner in Pacific Grove. We walked back to the house. and we told one another that this was going to be a "'big thing." (I think this is the third time so far that I heard this expressed. remember the other two?) We drank a jug of not very good red wine and took a well-deserved break.

The Astrology Machine

I only mention the astrology machine incident because it shows how CP/M utility programs were developed for the basic OS. I'm lying. I'm writing about it. because it was a fun project. Ok?

Ben Cooper from San Francisco contacted me through reference by Intel in 1974. Ben wanted to make a "game" machine. Put in a quarter, dial your birthdate, and out comes your horoscope. I'm not into horoscopes, but what the heck, Ben was paying by the hour and I'm not that proud.

Ben is a mousey guy, but an entrepreneur and very easy going. We had good fun working and talking through ideas. He always had his nervous laugh for anyone to accept. He knew quite well about hardware design and enough about software to proceed with building his astrology machine.

Ben liked CP/M, even though it was not a commercial product. And, by that time, I had made a BASIC compiler for CP/M that sort of worked. I despise the BASIC language with a passion, so it is hard for me to admit that I made one. But, I can claim to the good that I never sold it.

Also, by 1974, I had built a real two-diskette drive computer using John Torode's controller that we had replicated several times over. It was not a bad looking prototype, and we had it hooked to my Intellec 8/80 with my CRT that I had nearly paid off. And, good old John Torode, busy with his hardware, was starting a nice business of his own in Oakland, called Digital Microsystems.

I kept the handbuilt "system" in a small converted tool shed at the back of my home in Pacific Grove. Ben would come there from San Francisco and work for days on his Astrology Machine. I wrote programs for him, such as drivers for his little printer, and he used my BASIC to program the astrology algorithms.

Ben worked continuously without break. One sleepy evening he used the CP/M command "del *.*"to get a listing of all his files, which would normally be done with "dir *. *"

Unnecessary to say, but that "del" command didn' t do exactly what he wanted. It deleted all his files, including programs that he'd worked on for days with no backups. This is why, today, you have the choice to "era" files, rather than "del" them. And, this is why you get a prompt "Are You Sure (YIN)?" You can thank Ben for that. Ben, a bit discouraged, crashed at my house for the remainder of the evening and drove back home the next day for a short holiday from the topic of astrology.

He made a few astrology machine prototypes, and put one at San Francisco's Fisherman ·s Wharf. Then, he'd see how people liked it. I guess this would be called a low-budget test marketing scheme.

We watched one night. A young couple, hand-in-hand, walked up and stuck in a quarter. They didn't really bother with setting the birthdate knobs, they just took what happened to be set-in there. The young couple, of course, got someone else 's horoscope. They joined loving hands again and happily walked off, evaluating someone's future written on hardcopy as their own. Because of it, they are probably married with seven children to this day.

Ben Cooper got Remanco, a gaming company in Saratoga, to build 200 astrology machines. I'm not sure how he accomplished this, but Ben was resourceful. I believe they have about 199 left, so if you're interested in one, I'm sure Remanco would appreciate a call.

Ben's astrology machine allowed time and interest in developing CP/M utilies. I taught at NPS by day, and worked on "tools" for CP/M by night. The tools, or "utilities," were programs such as assemblers and debuggers, and programs that managed and manipulated files of programs and data on diskette. These were all necessary to effectively develop applications for the 8080 processor. They were needed to support Ben's game, but useful for any other 8080 developer as well.

The astrology machine was, shall we say, not wildly successful, but later Ben formed a company called Micromation in San Francisco that was. It wasn't until he, and a bunch of other grass-rooters got hit by IBM in the early eighties that his successful business went upside-down. After IBM took his market away with the PC, Ben sold what was left of his company, bought a sailboat, and took an exit stage-left from life. This was typical of hundreds of small companies that felt the brunt of IBM's entry into PCs.

Although he may not know it. his tenacity with that old astrology machine helped me sharpen the CP/M tools. If CP/M wasn 't working right, he'd tell me straight away to fix it.

Jim Warren and DDJ

I worked as a consultant to Signetics through the summer of 1975. Signetics, in competition with Intel. wanted a high level language like PUM. I designed and implemented one and called it PLuS for their 2650. This took all of the summer, and both PLuS and the Signetics 2650 microprocessor bombed.

During my consulting, I met Jim Warren who also consulted there. Jim was instrumental in the early PC cult magazine called Dr. Dobb 's Journal of Computer Calesthentics and Orthodontia. I don 't know what that means, but the Journal appealed to the grass roots of personal computing.

Jim knew of CP/M and, one day at Signetics, suggested that I sell it to the masses. I placed an advertisment in DDJ for CP/M at $25.

Jim was to have me on his TV program that he called Computer Chronicles, which I mentioned before, based at the Public Television Station at the College of San Mateo. Jim left the Chronicles that first year to Stewart Cheifet to host. Stewart then engaged me as co-host, and it turned into a full-time spot for that seven year period. Although an unpaid position, the show gave me weekly connections and exposure to technologies like the "HAL 9000." I have never forgiven Warren for that assignment. Ok ... , I'll again admit, the show was kind of fun .

CHAPTER 6 The Early Hardware and Software Suppliers

Omron, Altair and IMSAI Corporation

In 1975, John Torode and I got a connection to Omron, a CRT terminal manufacturer that specialized in word processing for newspaper editing. John convinced Omron to license CP/M and his controller design for their terminal. We got $25,000 for this, and we split it. This was the biggest pot either of us had won.

Omron built the first real CP/M-based computer hardware product, and, although a bit bulky, it was quite a nice personal machine for the day. We both snagged a couple for our own development. John adapted his controller to Omron's hardware, and I rewrote a diskette driver interface for them.

Meanwhile, during my consulting at Intel that year, we all heard rumors of a new small computer from a company called Altair, headed up by Ed Roberts

Meanwhile, during my consulting at Intel that year, we all heard rumors of a new small computer from a company called Altair, headed up by Ed Roberts. They offered a computer for $500. We all stood around at the Intel lab thinking this one over, because we knew Intel was selling their 8080 chip for $360. Hmmm ... Someone did a deal with someone else to get this to happen. After all, the Intellec 8/80 was selling for ten times that price.

The Altair was a hobby computer that came as a kit from Robert's company in New Mexico. It had a decent enclosure, lights on the front panel, an 8080 processor, but only 256 bytes of memory.

Dave August. a member of our local computer hobby club (called Computer Phreaks United. or CPU), bought one and built it. You programmed that Altair with toggle switches on the front panel. Ok. so that's a bit primitive, but better than the 4004.

Computer clubs were forming elsewhere, with the Palo Alto group being the most prominent. These clubs had members who were often daytime computer engineers from the Silicon Valley area working for firms like AMO and National. These guys were bright enough to build their own computers with no outside help, and they did. Each one was different and unique in its hardware interface.

Then. a new company formed up in San Rafael on the East Bay of Silicon Valley. It was called IMSAI (even though not at all Japanese). IMSAI took Ed's Altair 8080 direction to produce yet another low cost computer. This time headed for the commercial market rather than the hobbyists.

IMSAI products were marketed by Ed Faber, who I had dealt with at Omron, and I'm sure this helped to gain CP/M's entry into IMSAI's organization.

Not only that, but my student, Glenn Ewing was about to leave the Navy and had consulting deals going with IMSAI. IMSAI had promised delivery of a diskette operating system for their customers but hadn't written a line of code for it. Glenn, being my student at NPS, knew about CP/M and proposed that IMSAI use CP/M rather than make their own disk operating system.

Glenn came to my tool shed computer room in 1975, so we could "adapt" CP/M to the IMSAI hardware. What this means is that I would rewrite the parts of CP/M that manage things like diskette controllers and CRTs.

Well. come on, I'd already done this so many times that the tips of my fingers were wearing thin, so I designed a general interface, which I called the BIOS (BASIC 1/0 System) that a good programmer could change on the spot for their hardware. This little BIOS arrangement was the secret to the success of CP/M.

With the BIOS in place, a programmer could make CP/M work with their specialized hardware. With all those hobbyists out there, believe me, there was no shortage of specialized hardware. Glenn and I built a BIOS that afternoon and stuck CP/M on an IMSAI. He demo'd it to Ed Faber and the IMSAI engineers, and they loved it.

I licensed CP/M to IMSAI for $25,000. I was "rich," and IMSAI had their OS that they 'd been promising.

Then, I heard that two guys had made a small BASIC interpreter for the Altair. The two versions were called "4K and 8K BASIC," indicating the size of memory that they used. These two guys were Paul Allen and Bill Gates. who I had run into at Ccubed years before. I was to run into them often again.

And, oh, by the way, Ed Faber from the early days of Omron and IMS AI went on to help form and market today's Computerland.

The Early Days of Microsoft

Understand that the basis for Gates' and Allen's success was in the computer language called BASIC. developed at Dartmouth University in the l 960's. "Waz" wrote a BASIC for his Apple II, and, later, Gates and Allen in competition sold their "Softcard" add-in board for the Apple, with their own BASIC running on my CP/M. Here's how it all started.

Paul Allen and Bill Gates took their BASIC interpreter to the Altair market out of a company they named Microsoft, based in Albuquerque, New Mexico. The location being set, to some degree, by Ed Roberts' factory nearby. Allen and Gates licensed their BASIC language interpreter to Roberts for his Altair.

Bill came to me in Pacific Grove one day in 1977 to discuss his current quandary about relocation of his Microsoft company.

We invited him to stay that night at our home. Dorothy fixed a nice roast chicken dinner, and we had light conversation. Bill told us about the tickets he had received driving at high speed in his Porsche 911 through the main street of Albuquerque. We found a common topic since I. to my misfortune, also enjoy speed of the automotive type that sometimes, but not often, results in an encounter with The Law.

At this time, I was quite friendly with Bill, and we always talked of the "synergism" of our two businesses. But, quite frankly, I was always apprehensive of his business moves, as I found his manner too abrasive and deterministic, although he mostly carried a smile through a discussion of any sort.

Gates is more an opportunist than a technical type and severely opinionated even when the opinion he holds is absurd.

For example, we faced one another in debate over graphics standards at a National Computer Conference in 1979. Bill took the adamant position that NAPLPS would be the wave of the future. Of course, it wasn' t. It's only one example, but don't think for a minute that Gates made it "big time" because of his technical savvy.

Gates and I spent time that day in Monterey driving the Central California coastline while we talked of business possibilities. He wanted to relocate but had not decided where.

We talked of merging our companies in the Pacific Grove area. and we both took that into consideration. Our conversations were friendly, but, for some reason, I have always felt uneasy around Bill. I always kept one hand on my wallet, and the other on my program listings. It was no different that day.

The overriding factor for Bill's decision to relocate was that his family resided in Seattle, with his father being a prominent attorney, and his mother being on the Board of Regents at the University of Washington. His parents lived in a fine brick home at Wyndermere, a posh district just off Lake Washington.

Incidentally, a few months later, Dorothy and I were invited to dinner at Bill's parent's home in Seattle, and I can honestly say that their hospitality was without measure, and we enjoyed their company immensely. They were cordial, and it was apparent that they had been "well-to-do" for many years before.

Bill and Paul made the decision to take their little Microsoft company to Redmond, just a short drive across the "Floating Bridge" from the university campus and Wyndermere, rather than join ranks with DRI at Pacific Grove.

Part of the decision to not join with DRI came from the recognition and acceptance that DRI had in the industry. That recognition limited Bill's growth from within a merger.

The combination of Kildall and Gates could have been a killer-deal in those days. I had the operating systems for the decade to come, and he had the opportunistic approach to garner business. But, our attitudes differed entirely, and that could also have been a disaster. I think we both realized this and simply let the "deal" die.

The West Coast Computer Faire, SSG, and the Electric Pencil

I've talked about Jim Warren. He was a writer and an ex-hippie turned techno, but still with the quirks of his "hippie days." Jim was involved with that Dr. Dobb's Journal of Computer Calisthenics and Orthodontia, where, I mentioned, CP/M was first advertised.

DDJ promoted hobby computing. And, these were the guys who made the foundation for what we, today, think of as the personal computer industry. Jim also formed up the West Coast Computer Faire in 1976, consisting of a collection of small companies that were promoting small computer products.

I was very impressed by Michael Shrayer's "Electric Pencil" program that he presented there. It was the first small computer word processor. Although not elegant because it only used a TV screen with a forty character line in computer fonts, it did show that one need not use "White-Out."

But, the best was Structured Systems Group's display area. Alan Cooper and Keith Parsons made accounting systems using the IMSAI computer and CP/M. I recall telling Dorothy that SSG's was the first really complete application effort for inexpensive computers, and those applications like SSG's would be "a very big thing in the future." (Have we heard this line before?)

Our new company, Digital Research, was represented there. We even shared a booth with SSG. We sold CP/M and the rather technical, but not too inaccurate, documentation that let the hobbyists and budding micro-based commercial computer users access their floppy disks. CP/M was a success.

The next year the West Coast Computer Faire blossomed. Jim Warren took Le Charge de' Affair by roller skating from aisle to aisle, as the show's floor monitor.

In this second year, there were more applications offered to the public. Seymour Rubenstein from defunct IMSAI had coupled up with Rob Barnaby, their best programmer, to sell the word processor called WordMaster. WordMaster was shortlived and reissued as "WordStar." They called their company "MicroPro."

Seymour and Rob had both applied for positions at Digital Research, but I was adamant about avoiding applications that compete with computer makers and Independent Software Vendors, a phrase coined at DRI to describe small companies that make PC programs for specialized markets. These were our customers.

I felt a need to support my manufacturers with an operating system standard and provide a structure they could depend upon. Although this seems like a business position that doesn't max the profit, realize that many of the manufacturers with whom I dealt were personal friends of mine. Quite frankly, I could not, for example, sell an accounting package against Structured Systems Group, and then face Keith and Alan at the next computer conference.

Gates' philosophy was quite different. He had no problem competing with his customers. And, this is where we differed. Monetarily, Bill had the proper approach to get a stack of bucks, and lose a bunch of friends in the meantime. I guess that's ok.

The Softcard

By the year of the 1978 Computer Faire, Gates and Allen had moved their affairs to a small area located within a bank building in Redmond.

Allen had directed the design of the "Microsoft Softcard" (which I must acknowledge as a trademark, and while I'm at it, White-Out is probably a trademark too, oh, and Borland C++ is one, I'm sure, and, say, what have I left out?, Oh, yeah, CP/M is a trademark, and ...)

The Softcard was an add-in board to the Apple IIe. It was an Intel 8080 processor, with interface circuits, to disable that horrible MOS Technology 6502 processor that Steve Wozniak designed into the Apple. The Softcard was to run CP/M and Microsoft's BASIC.

I was contacted by Bill to determine licensing costs. We sat together at this Faire on the vacated second audience floor, overlooking the activity of the packed floor below and talked through the deal.

He got a good one. I wanted a royalty, but Bill wanted a buy-out, and was stuck on that point. 1 sold him 10,000 copies at $2.50 each; the deal was consummated, with my attorney Gerry Davis there taking notes, as lawyers always do.

The Microsoft Softcard was a success, because it gave Apple II users access to a large software base from the CP/M application suppliers, but mostly, for Bill, it gave access to his BASIC language. Bill signed agreements to protect the CP/M design under this licence, as shown in the Appendixes. And, the Softcard was the key to Microsoft's success.

This is the issue. Bill's Microsoft had a BASIC interpreter that would operate with the Apple computer using his Softcard and my CP/M. To Bill's dismay, the Apple platform for application software was controlled by Apple Computers, not Microsoft. That's a wild card for Bill. He "needed" to control the platform for his BASIC, and IBM was to provide him with that.

Battle of the BASICs

Gordon Eubanks is the Chairman of the Board at Semantec today. They have been successful at supplying PC software, such as Q&A and Norton Utilities. I need to write about Gordon, because he was a prime mover and often, but not always, my friend. Most important, Gordon fought a personal battle against Gates and Allens' BASIC language.

I met Gordon when he was a student at NPS. He entered the Computer Science program there to get a master's degree. Gordon was a bright student, but very caustic, vociferous, and downright nasty when he felt his professors were incompetent.

Gordon latched onto me when I was teaching at the NPS, and he was a student in 1974. He asked to do a thesis under my direction, using microprocessors, and I accepted. I proposed two topics. One could be a "word processor," and the other might be a compiler for the BASIC language, which I somewhat discouraged.

But, Gordon took the latter. I gave him my version of BASIC to start with. It was written in PL/M, so he could use the NPS computers to do development. Using this program, he made BASIC-E into a fully working language system for the 8080.

This BASIC-E compiler was Gordon's master's thesis and when he graduated, he went back into the Submarine Service as Engineering Officer onboard a nuclear submarine stationed in the city of Vallejo near IMSAI and IMSAI's new employee, Glenn Ewing, who Gordon knew quite well.

nuclear submarine stationed in the city of Vallejo near IMSAI and IMSAI's new employee, Glenn Ewing, who Gordon knew quite well.

IMSAI wanted a way to program commercial products, such as accounting packages for their new IMSAI 8080 computer. Gordon's thesis project was the right direction, but unfortunately for Gordon, BASIC-E was in the Public Domain. Not only that. I wrote much of it before he had worked on it at all. So, he couldn't sell it to IMSAI.

There was one other problem with Gates ' Basic. BASIC imitates a tiny version of FORTRAN. But, FORTRAN was built for tossing mortars, not computing the National Debt. For example, normally in BASIC or FORTRAN, you might want to print the value of l/3. It comes out .333333333333333 (ad infinitum) depending upon how the computer works. Not only that, internal computations start rounding off. sometimes in the wrong way, and you start to gain or lose pennies here and there. Accountants don't like that.

So, Gordon, while in the Navy, contracted with IMSAI down the street from Vallejo in San Raphael to build a new version of BASIC-E, where all those computations were in decimal (BCD) to make money counting easier to program and to ensure rounding-off didn't happen. Gordon called his compiler "Commercial BASIC." or C-BASIC, and it provided a software tool to make commercial. rather than just hobbyist application programs.

C-BASIC was Gordon's revamp of BASIC-E that he did for his master's thesis, but enough of a revamp that he could sell it. This C-BASIC became the foundation for his company called "Compiler Systems" formed in the Los Angeles basin, run by his frail, but quite clever mother, Mary Eubanks, and controlled by Gordon on his submarine whenever it surfaced.

Gordon became integrally involved in Digital Research in the years that followed. SSG with Alan and Keith in control formed a close alliance with Gordon. SSG developed their accounting software using Gordon's C-BASIC language and, thereby, helped debug the C-BASIC language itself.

Of course, Gates was not happy with Gordon's C-BASIC. This was a threat to him and his plans. I can tell you quite squarely that old Gordon, being a good naval officer hit a direct broadside on Gates with that C-BASIC, because it was very popular with the new ranks of program developers. As a result, Gordon and Bill did not share a love of any sort for one another.

Gordon's C-BASIC was different from Bill's BASIC. C-BASIC was made for commercial products, like SSG's accounting systems, and a host of other products that are alive and well today. Bill's BASIC was for the more casual user. Here's where the two engaged. Bill wanted the entire pie but couldn' t get it because nobody wanted his BASIC for commercial applications, like accounting or inventory. This locked up Bill and Gordon in the BASIC language "tools" marketplace by 1980.

When Gordon left the Navy, he went back to full-time computer work, with his mom holding the fort at his company, Compiler Systems. Shortly thereafter, Gordon joined forces against Gates and company through acquisition by ORI.

This all happened during and after the events at the first "commercial" small computer success, IMSAI, so I'll go back to those days for context.

The Culture at IMSAI

I must admit that IMSAI people were a mixed group in 1978. Seymour Rubenstein, before his departure to form MicroPro, sat in his marketing and sales office with his EST cube, like most of the others there.

Rob Barnaby, on the other hand, was a complete technonerd and lived only to write programs. Rob was a rather tall, lanky person with perpetually unkempt brown hair. He spoke in short sentences that were always direct and to the point. If a question did not relate to computers, Rob did not generally answer.

Rob typed continuously at his IMSAI computer with fingers too large to fit a modern keyboard. But, Rob was always a friendly sort, and I personally give him credit for starting the word processing industry.

While at IMSAI, Rob wrote a program called NED. It meant "New ED." Recall that the ED single line editor started working the same day CP/M did. Hey, in case you have doubts, forget them. I'm not taking credit for the design of NED, Wordstar, or any of those products. Especially not the progenitor, ED, even though under close scrutiny any Court of Law might balk.

Although old ED may have been the progenitor, he may well have only luckily out lasted his lifetime as program "editor."

The only reason ED survived is that it came "free" with CP/M. In ED's defense, however, I can honestly state that there is only one worse line editor that came to the fore later, in the l 980's. It was called Bill's EDLIN supplied by a company from up there in the North Woods.

ED Goes on the Big Screen

Rob Barnaby from IMSAI took my ED design and made it "visual" as well. By visual, I mean that he made ED into a full screen editor that allowed scrolling, paging, and cursor actions, that simplified ED's operation.

Rob wrote that visual NED program while working for IMSAI, but IMSAI went into bankruptcy in 1979, leaving a bunch of software around that the principals apparently didn 't value quite highly.

One was NED. Seymour seized the opportunity and grabbed it before the bankers found it. Then he grabbed up Rob, and Rob finished NED into the WordMaster that I told you about.

Although Rob was clever, he wrote "spaghetti code." This is assembly language programming that may be efficient but could not be understood by another programmer, because it winds in and out of itself. I know. I tried to fix a bug in NED once. I stared at that program for three days and gave up.

Those of you who remember ED may take solace in the events of ED's demise. DRI had an official gathering, organized by Alan Beebe and the Engineering Department in 1984. The attire was black. ED's death was celebrated by all present. I don' t think that was nice, do you? I mean ...

Beginnings of Micropro

After IMSAI's downfall, Seymour and Rob formed MicroPro up in Marin County 's San Ramon, near the George Lucas Ranch, Sear's Point Raceway, and the eternally boring Renaissance Faire.

Seymour and Rob had shown Wordmaster at that West Coast Computer Faire, but then Rob made WordMaster into WordStar, and WordStar was the first successful word processor. Then, Rob was dismissed by the board.

That may have been a fundamental error for MicroPro because, knowing Rob's programming style, I seriously doubt that anyone there could figure out what

he had done. They had to redo the entire WordStar program in the C language, and it took a year or two to get back on-line.

Ok, so Rob wasn 't the world's most generalized coder. He was trying to perform a task with the minimum amount of memory. Those were the constraints of the day. Tight, fast code sells products.

I saw Rob Barnaby five years ago. He was living in a small flat in San Francisco. He gained little personal wealth. But, without Rob's work, MicroPro would simply not exist, and Seymour would be out selling plastic EST cubes.

IMS AI died a quick death in 1979. The bankers sent out notices, and we all came to bid on IMSAI's remains. Computers, terminals, test equipment, chairs and tables.

I found a cabinet of particular interest. It contained all of the CP/M source code that seemed to have a gathering of interested people roaming about it. Our attorney, Gerry Davis, got a court injunction to prevent its sale. That's one thing that Gerry did right

CHAPTER 7 Digital Research

The Early Days of Digital Research

Digital Research started operation in 1976. It was named "Intergalactic Digital Research," because a consultant up in Sausalito held claim to the name "Digital Research." The "Intergalactic" was stuck there by Demi Moore, a creative assistant to our corporate counsel, Gerry Davis. We got the real name back when the consultant went out of business two years after.

The first CP/M Version 1.3 was a cheap piece of software, upped at $70. That was dirt cheap when compared to mainframe software priced in the thousands. Most computer software buffs were astonished. But, CP/M set standards in small computer pricing. And, customers liked it. Well, most liked it. On occasion, we'd get a call in customer service like this. "Any piece of software selling for $70 can't be any good ... bzzzzzzz ... "

God, it would be great if customers still had that attitude. Nowadays, $70 is a highprice. For 70 bucks, the average consumer expects integrated graphics, fax, voice mail, e-mail, data connections to all services, with a two-year no-cost warrantee, and then they make you toss in CD-ROM support with the $1 bonus coupon offer.

The Day Intel Went Flying

There is an old industry rumor. "Gary Kildall came to Intel and offered CP/M for their microcomputer operating system, and Intel rejected it." CP/M became wildly successful in the years that followed, and Intel received the brunt of the "Ha. Ha's."

Like most computer folklore, that's not really how it happened. By 1975, Intel's microcomputer software group had changed control. Hank Smith went to Venrock Investments to become a very successful venture capitalist, and. in fact. was instrumental in funding the two Steves at up-and-coming Apple Computers in Cupertino. Hank Smith. manager of that original Intel microprocessor division later employed me as a consultant to evaluate their investment at Apple Computers.

Bill Davidow took over Hank's position as leader of the Intel microcomputer group. Bill was a good manager but wanted all development to be internal to Intel. I was a wild card for him, and although we had no personal conflict, Bill stopped my consulting service contracts. This was, coincidentally, at the time of CP/M's inception.

Instead, Davidow tasked Ken Burgett, one of those two initial Intel programmers, to build a proprietary operating system. Ken built a good one called ISIS that later became Intel's platform for their own PIJM compiler. I believe it was a good decision by Bill, and a godsend for me and CP/M.

I went high-tailing it back to Pacific Grove and didn't spend much time with Intel after that. Maybe a consulting day or two, until the days of Digital Video Interactive (DVI) in 1990.

Ok, so, I've got this OS that I called CP/M that can be made to fit almost any microcomputer design. More important, I've got the "tool set" for someone to make their own programs without using a mainframe. And, it was priced right at $70.

CP/M and Software Pricing

Let's look at the mentality of the day in 1976. On one of those consulting days in 1976, I sat in a meeting at Intel with marketeer Jim Lally as he discussed pricing.

Says Jim, "Ok, so we sell the Intellec 8/80 for, say, $8.000. and then we sell them a fast paper tape reader for another $2,000. That makes $10,000 off the top. Ok, then we wait until we' ve sold a bunch of these paper tape systems and then introduce the floppy disk drive at $2,500 and ISIS software at another $1,000."

I was dumbfounded. This was a direct attempt to block advancements in our society's technology for the profit of Intel. It was a good lesson for me. I protested. I wasn't listened to, or even considered. But, Jim Lally is now a very successful venture capitalist. I think this is a statement about how certain people manage to get other's assets.

Accumulation of wealth is made by profits of those in possession of goods, and that makes the goods flow more smoothly. Certainly, Intel found that out, and probably mostly from Lally in those days. I never really liked Jim's approach to marketing, but this pricing issue is what made CP/M a success over ISIS and other proprietary designs.

I enlisted the help of my wife Dorothy. I asked that she take care of mailings in response to the DDJ ad for CP/M. The developers had a choice. They could buy Intel's hardware and software development system priced by Lally at $13,500, by the time they tossed their "old" paper tape reader, or they could build their own and buy CP/M at $70. Hmmm ... what would you do if you were a budding scientist?

CP/M was an instant success. The operation in the tool shed moved to Pacific Grove in a small building with an isolated cupola overlooking the normally placid waves of Monterey Bay. Dorothy now went by "Dorothy McEwen," to avoid an association with a "Mom and Pop" operation, and did a fine job of mailing CP/M systems, billing, and invoicing. She contributed in a diligent and directed manner.

But, the success of CP/M was "bang for the buck." It was small, it was fast, it was efficient in operation, it would run on all Intel computers and Zilog Z80s, and it was cheap. No other software product had been priced that way before. Ok, CP/M's price came up to $ I 00 per copy with version 1.4, but no one seemed to care.

Oh, by the way, we did version numbers like this: the first digit was a "major" revision, like I in the 1.3, and the "minor revision" was an "update" like the 3 in 1.3. This worked great.

You charge the manufacturers and customers a "minor" fee to get the minor revision, and then issue a "major" revision, like CP/M 2.0 and charge a major fee. That became the way microcomputer software was labelled. and for that purpose only. See, I did learn something from Jim Lally.

Launching the New DRI

In 1978, Digital Research reached $100,000 per month in sales at about 57% pretax profit, a milestone that allowed our company to move to new quarters in a converted Victorian home at Pacific Grove.

This Victorian spawned a new, growing phase of Digital Research. It was fun. It was exciting. It made new relationships between people. It made a lot of marriages, and they made a bunch of babies. I kind of like that part.

The Victorian home filled with ORI people had spunk. It was alive. It was active. People moving paper and products. People defining the industry through their work.

On my 39th birthday, all of the twenty or so ORI employees got together and held a party for me. That wasn't such an event, because we had parties every Friday afternoon at that Victorian. They gave me roller skates. You know, the kind that look like tennis shoes mounted on a Formula One car.

The party got a little rowdy, which was ok, but I was tasked with getting more champagne. Ok, so I have on my new roller skates, and I head out to the liquor store down the hill about three blocks away. I kept stumbling over those little acorn nuts that drop constantly from trees in Pacific Grove. But, finally, by the grace of God, I made it to that seemingly distant liquor store.

I found temporary haven by hugging a telephone pole near the liquor store for refuge. As I held tight, a guy in a Corvette came by and said, honestly, "hey, man, you're a GREAT skater!" It may have been the best compliment of my life. And, Lord knows how I got that champagne back, but I'm sure it wasn't entirely upon those skates.

Coincidentally, ORI had several "39th" birthday parties for me in the years that followed, and I can tell you, candidly, that ORI knew the meaning of "Party Hardy."

By 1980, DRI had sold millions of copies of CP/M to manufacturers and end-users. We held symposia for thousands of clients at Monterey to train them how to use and adapt CP/M as well as the new MP/M multitasking system and CP/NET. Digital Research was on a roll.

PL/I and New CP/M Versions

Of course, CP/M went through many "versions" like the major and minor ones that I already talked about. In 1978, there was a lot of pressure to make a new one. The pressure came from manufacturers that were using the smaller 5-1/4" disks, like the ones that were introduced with Woz's Apple II. And, our OEMs were pushing for a new standard BIOS for the small disks.

Meanwhile. I had been working intensely on my PUI project, one that took nearly two years to complete. I've talked about PL/M, the computer language that I designed for Intel's microprocessors in 1973, and now I'm talking about PUI.

I did not design PUI. Although the names are similar, these two languages are quite different. My PL/M was a "systems language" for writing tight microprocessor applications, like operating systems and utility programs, such as program editors.

PUI is a language that lets programmers write scientific and data processing applications. It's an entirely different breed of programming language tool.

CP/M version 1.4 was a success in the marketplace, but it really needed a good high-level language. I gave up on PL/M because, even though it was a high-level language, in the sense of today 's "C," it didn't give application programmers the proper operations to make commercially acceptable programs, like office accounting and billing.

We' re talking here about new CP/M versions, right? Not, about programming languages. But, I felt that PUI was necessary to advance the PC platform of applications. And, besides, Tom Rolander was busy on MP/M and CP/Net to support future processors, like Intel's new 16-bit i8086.

Why the Heck PL/I?

CP/M was a stable software item in those heydays of 1978, and it certainly held the title of the Operating System Standard. Ok, CP/M needed an upgrade from version 1.4, which held for a few years, but I felt that greater need to supply a programming language to promote applications under CP/M.

There were not many choices, and still aren ' t. The standard languages were FORTAN. COBOL, Pascal, PUI, and C. Ugggh. None really worked for all microcomputer applications that well.

I got a call in mid-1978 from Dr. Robert Freiburghouse at Data General Corporation near Boston. He was trying to pare down IBM's PL/I. a dinosaur every bit as well done as Disney could have produced.

Please understand that I had to live with that stupid, committee-designed, IBM PUI language on the IBM System/370 for three years by force of conscription. Next to BASIC, it was the worst language ever designed, though running a very close second.

Bob wanted me to attend an ANSI standards committee for a new PUI they called "Subset G," or PUI-G. Bob had known about my design of the PL/M compiler for the Intel microcomputers and figured, mistakenly in my estimation, that I might have something to contribute to the new PUI-G standard.

Freiburghouse's Standards Committee met at the La Playa Hotel at Carmel, California, in mid 1978. I can't say that I was downright nasty at that meeting by telling them that "PUI, by the way, appears as a somewhat overloaded One-Man Band that should, by its character and value, be immediately placed in prominent display at the Smithsonian nearly next to the Reptiles."

Ok, so that was a little nasty. I was particularly unimpressed by the whole affair, but what the heck, the meeting was only down the street from DRI and

Ok, so that was a little hasty. I was particularly unimpressed by the whole affair, but, what the heck, the meeting was only down the street from DRI, and Freiburghouse threw in a free lunch.

But, in listening, I found that Freiburghouse had worked-up a spec ' for a pareddown version of PUI that looked and acted more like Algol and Pascal, with all the business features of COBOL in a clean, complete, and quite usable programming language that might apply to microcomputer applications.

For one thing, PL/1-G adhered more to the rules of the new genre of programming languages, but it kept all the good points, like automatic access to BCD numbers (the kind that accountants like) and good string processing primitives.

Ok, so after complaining about PL/I for a committee session or two, I finally decided I liked Bob's Subset G. I really hate it when I have to admit that I am wrong. Well, at least, Bob got some jollies.

I engaged the PL/I project in that year of 1978 to make "Subset-G" to support our customers under CP/M. I estimated that the project would take Bill Byerly and myself nine months.

Being a truthful person by nature, I must admit that I still hang my head in shame, for that PL/1-G didn't hit the streets for about two years.

"Hey, Ok, so I went a little over schedule. I mean, that can happen to anybody, right? And ... And ... Hey ... my computer was down all week, and I can ' t get that code from Bill that I need before I can work on the next piece for Bill that he keeps asking me for."

"I mean, it's not my problem, it's Bill's. Or, if it's not Bill's it must be that salesman at Intel. I don't remember his name, but he keeps promising that memory board, and I can't load the linker 'til I get it, do you know what I mean? Hey, I even drove up there, but my car broke down in Gilroy and that's gonna cost. say, two grand, and don't you think I can get that Christmas bonus early, 'cause its almost Halloween, you know."

"Yeah, that's it, me and my wife are coming to the DRI party as Russian Cosmonauts. I'm Yuri Gagarin and ... ".

This is how I learned Engineering Management. I've not only heard all the excuses, I can say, quite proudly, that I actually made up most of those excuses myself.

To my defense in tardiness of my PL/I delivery, I make the analogy between building compilers and having babies. To my great fortune, I have not had the opportunity to experience the latter. Here's the analogy.

You can only design and write a few compilers in your lifetime. Otherwise, there are too many of your own creations around to take care of, and all you hear are sounds of crying and screaming when things aren't going right. Besides, although the design concept may be great at the beginning, they take too long to hatch, and meanwhile, you get headaches and can't sleep at night. But, of course, when they are finished. they are always perfect. I've had my last compiler.

But. I would say that this PL/I-80 compiler was quite an elegant design, as it incorporated all of my compiler code optimizing techniques. It made PL/I Subset-G language statements into quite perfect assembly language code for the 8080 to ingest. Hey, cut me some slack and let me brag a bit.

But. the whole project, although it came out properly, was a huge diversion. CP/M needed a revision during that two-year PL/I project. So, the pressures from OEMs and end-users stopped my PL/I efforts for a time to make CP/M version 2.2, and that allowed all those OEMs to make specialized BIOSs to fit other diskette drives that were, unfortunately, mostly incompatible. PL/I-G came out from Digital Research in 1980 and was, by excess, the best compiler built for the Intel chip set.

My interest was in getting a great application tool for the CP/M base through PL/IG. It was an excellent language for programming applications, and assembly language programmers could not do better than the machine code it produced. Many companies took it up, but there was a larger force in action.

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Housatonic

Dr. Ernst Klenk (born 1896)

Wikipedia (DE) Ernst Klenk (Biochemiker)

Born October 14, 1896 in Pfalzgrafenweiler [HK005H][GDrive]

Died December 29, 1971 in Cologne [HK005H][GDrive]

Children include : **Dr. Hans-Dieter Klenk (born 1938)**

Associations

- **Dr. Donald Sharp Fredrickson (born 1924)** (Both were pioneers in the study of lipids)

Saved Wikipedia (Feb 27, 2021) - (DE only) - Ernst Klenk

Source : [HK005H][GDrive]

Ernst Klenk (born October 14, 1896 in Pfalzgrafenweiler; died December 29, 1971 in Cologne) was a German biochemist.

Klenk's father had a farm and a brewery in the Black Forest. Klenk didn't want to take over his father's brewery and went to high school in Tübingen. After serving as a soldier from 1914 to 1919 in World War I, he studied chemistry at the University of Tübingen. There he received his doctorate in 1923 at the Institute for Physiological Chemistry under the guidance of Percy Brigl (1885–1945). rer. nat. PhD; the topic of the work was the behavior of dipeptides and elastin towards phthalic anhydride. **He then got the position as second assistant to Hans Thierfelder**. After his habilitation, he became a private lecturer there in 1926 and an adjunct professor at the Institute for **Physiological Chemistry** in 1930, which **was headed by Franz Knoop after Thierfelder's death**.

Klenk joined the NSDAP in 1933 [aka the nazi party - https://en.wikipedia.org/wiki/Nazi_Party] and the SA in 1934. [SA - paramilitary - stormtroopers - https://en.wikipedia.org/wiki/Sturmabteilung] [1]

He t**urned down a call to Marburg to succeed Friedrich Kutscher** (1866-1942) and became professor at the University of Cologne in 1936, where he headed the Institute for Physiological Chemistry of the Medical Faculty from 1937 to 1967, which he established. **After the Second World War, he rebuilt the destroyed institute, which had been evacuated to Marburg in 1944. From 1947 to 1948 he was dean of the medical faculty. In 1961/62 he was rector of the University of Cologne, during which time he also helped found the University of Bochum**.

He was Vice President from 1956 to 1959 and President of the Society for Biological Chemistry from 1959 to 1962.

K**lenk was a pioneer in the research of biolipids, their metabolism and related diseases**. He discovered various lipids in the nervous system like the gangliosides (which he named) and various cerebrosides, and he found the cause of Niemann-Pick disease (abnormal accumulation of sphingomyelin) and found the cerebroside accumulated in Gaucher's disease. **He discovered that glycoproteins were cell receptors for certain viruses (myxoviruses)**.

He was co-editor of Hoppe-Seyler's magazine for physiological chemistry.

In 1972 he was posthumously awarded the Otto Warburg Medal, 1964 the first Heinrich Wieland Prize, 1966 the Stouffer Prize [2], he received the Lipid Prize of the American Oil Chemists Society and in 1962 the Norman Medal [3] of the Society for Fat research. He was an honorary member of the American Society of Biological Chemistry and the Society for Physiological Chemistry, a member of the Leopoldina and an honorary member of the Hungarian Society of Neurology. Klenk received the university plaque from the University of Cologne and an honorary doctorate from the Medical Faculty of the University of Cologne.

He had been married to Grete Aldinger since 1937 (who had studied with him in Tübingen) and had three sons, [**Dr. Hans-Dieter Klenk (born 1938)**], Fritz Klenk and Wolfgang Klenk.

Klenk, Ernst

views **2,197,898** updated **Mar 15 2021**

(*b*. Pfalzgrafenweiler, near Freudenstadt, Germany, 14 October 1869; *d*. Cologne, Federal Republic of Germany, 29 December 1971)

physiological chemistry

The son of Johannes Klenk, a brewer, and of Katharina Grossman, Klenk attended gymnasium at Tübingen, and after serving in World War I, he entered the University of Tübingen in 1918 to study chemistry. He took his doctorate in 1923 and worked under Hans Thierfelder, and later Franz Knoop, the discoverer of the β–oxidation of fatty acids. With Thierfelder he wrote a book on the chemistry of the cerebrosides (1930). In his early research under Knoop, Klenk worked on the oxidation of fatty acyl benzene derivatives, thereby laying the foundation for his interest in lipid and fatty acid chemistry. He became associate professor at Tübingen in 1931, and in 1936 he accepted the chair of physiological chemistry at Cologne, a position he held until his retirement in 1967. In 1931 Klenk married Margarete Aldinger, a physician; they had three sons.

https://www.encyclopedia.com/science/dictionaries-thesauruses-pictures-and-press-releases/thierfelder-hans

https://en.wikipedia.org/wiki/Franz_Knoop : 20 September 1875, Shanghai – 2 August 1946, Tübingen) was a German biochemist, most well known for his discovery of the β-oxidation of the fatty acids in 1905.[1][2] ..... Alongside Hans Adolf Krebs and Carl Martius, he clarified the reaction sequence of the citric acid cycle in 1937.[*citation needed*] He determined the structure of histidine and demonstrated that amino acids can be synthesized not only in the plants, but also in animals.[*citation needed*]

Klenk made important contributions to lipid chemistry and more specifically to neurochemistry, a field that had been opened up by Johann Ludwig Wilhelm(John Louis William) Thudichum at the turn of the century. Thudichum summarized his lifework on the sphingolipids of the brain in his *Die chemische Konstitution des Gehirns des Menschen und der Tiere* (1901), Klenk did a considerable amount of work on the cerebrosides. He was the first to isolate nervon, cerebron, and other cerebrosides, and to describe in detail the structures of their fatty acid constituents. In 1929 he demonstrated for the first time the correct chain length (18C) of sphingosine; later he contributed to the elucidation of its structure. He also worked on the composition of polyenolic fatty acids, and he isolated a C_{22} fatty acid that was more highly unsaturated than the wellknown arachidonic acid.

In 1935 Klenk discovered a new class of sphingolipids, the gangliosides. This result came from the investigation of the biochemistry of various neurolipodystrophies, including Niemann-Pick disease, and especially from the study of Tay-Sachs disease, otherwise known as amanrotic idiocy. The latter is a familiar disease of infancy, characterized by a progressive degeneration of nerve cells, eventuating in weakness of the muscles and paralysis. Klenk suggested the name *ganglioside* for the type of glycolipid isolated in this disease, in direct analogy to the already named cerebrosides, and because this kind of glycolipid accumulated in the ganglia cells of the brain in Tay-Sachs disease.

Whereas cerebrosides are localized in white matter, gangliosides were initially thought to be unique to the gray matter of the brain. Because of their high concentration in the gray matter, they were initially regarded as characteristic components of nerve cells. Although gangliosides may be said generally to possess greater complexity than most other sphingolipids, it is now known that they are not exclusively localized either in neurons or in the brain.

In 1941 Klenk isolated neuraminic acid, in the form of the crystallized methylglycoside, from brain gangliosides. Later, with other groups, he went on to elucidate the structure of several gangliosides. He described the acceptor function of neuraminic acid for myxoviruses of the mumps-influenza group and found that neuraminic acid is the determinant group of the MN blood group system.

In the last years of his life, Klenk's major effort was directed to the further purification and elucidation of ganglioside structures. His life's work acted as a strong stimulus to others interested in the structure of sphingolipids and their chemical and enzymatic synthesis and metabolism.

Klenk was a founding member of the editorial board of the *Journal of Neurochemistry* (1957), and served as president of the Deutsche Gesellschaft für Biologische Chemie. Among his honors were the Norman Medal of the Deutsche Gesellschaft für Fettwissenschaft in 1953, the Oil Chemist Award in 1958, the Heinrich Wieland Prize in 1964, the American Oil Chemists Society Award in 1965, the Stouffer Prize in 1966, and the Otto Warburg Medal of the Deutsche Gesellschaft für Biologische Chemie in 1971.

1966 (Feb 01) - Journal of the American Oil Chemists Society : "Biography of Ernst Klenk, and scientific achievements"

Source : [HP0053][GDrive] / First published: 01 February 1966

On pages 57-74 of this issue appear papers from the Symposium given in honor of Ernst Klenk, entitled "Glycolipids and the Nervous System," presented in April 1965, in Houston.

Additional papers presented in this Symposium have appeared in Lipids. Professor Klenk, as further honored in Houston when he was named for the second AOCS Award in Lipid Chemistry.

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Professor Ernst Klenk

Personal Biography

MY HUSBAND, ERNST KLENK, was born October 14, 1896 in Pfalzgrafenweiler, a village near Freudenstadt in the Black Forest. His father owned a farm and a brewery. He grew up in a happy family and had a brother who was two years older.

When he started elementary school in his home village, the teacher inspired his father to send him to high school and to give him a good education. So he left home at the age of 8. Soon after he lost his brother. Even at that young age he had decided not to take over the brewery but to study, so that his father finally sold this part of his property. At school he was not very fond of languages but was extremely brilliant in mathematics. The schoolboys admired his dangerous experiments with rockets and montgolfieres.

Upon graduation from high school in Tübingen, and the outbreak of World War I, he entered the army as a volunteer. He belonged to the mountaineers and spent 4 difficult years. At least, these years were in beautiful surroundings: the Vogesen, the Dolomites, the Carpates and the mountains of the Balcany. Since that time he has enjoyed the mountains and spends all of his vacations there in summer as well as in winter.

After the end of the war he went to the University in Tübingen to study chemistry. It happened in one of his last terms that he could not get a laboratory space at the Institute of Chemistry, so he moved into the Institute of Physiological Chemistry of which Geheimrat Hans Thierfelder was in charge. The latter was very kind to him and took much interest in his studies. He wrote his thesis under the supervision of Percy Brigl. Before he had finished his thesis work, Thierfelder had made him an assistant. Although he (Klenk) nearly refused in the beginning, Thierfelder encouraged, almost pushed him, to take the academic career. He has always kept a feeling of deep gratefulness and respect towards his master.

After Thierfelder's death he went on working at the same institute under Franz Knoop, the discoverer of β-oxidation of fatty acids. I became acquainted with Ernst Klenk when he tutored me in two chemical courses. We married in 1937 and now have three sons.

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In the fall of 1945, Klenk returned to Cologne and again started to rebuild his Institute a fourth or fifth time under the greatest of difficulties and with the help of the Marshall Plan. Although the building looked rather poor h'om outside, the team working inside was always especially nice like a family. This family enlarged considerably in the course of the years. The laboratories became too snmll. In 1959 they moved into a fine modern building with very good working facilities.

In 1948 Klenk became dean of the medical faculty and the recipient of an honorary Doctor of Medicine degree by this faculty. In 1962 he was elected president of the University of Cologne. He was awarded the Norman medal of the Deutsche Gesellschaft fiir Fettforschung and the Heinrieh-Wieland-Preis. He is a member of the "Leopoldina" der Deutschen Akademie der Naturforseher and a member in honor of the American Society of Biological Chemistry.

DR. NED. GRETE KLENK, Cologne, Germany

Scientific Achievements

IN 1932 ERNST KLENK began his scientific career under Thierfelder, a former student of Hoppe-Seyler. His initial investigations were concerned with the behavior (retention) of the aromatic fatty aldehydes and of carbohydrates in animals. In his work some information concerning their oxidative degradation was gained. Above all, it was made clear that the oxidation of the methyl group of n-propyl benzene and its higher homologues to a carboxyl group precedes B-oxidation. This finding stimulated his interest in fats and lipids and led him to investigate in detail a glucosamine-containing phosphatide which had previously been reported by Frankel and Kafka in 1920. In an attempt to purify this substance, he came to the conclusion that the isolated phosphatide did not contain hexosamine. He then became interested in the chemical nature of sugar-containing substances in the brain. He succeeded in isolating a cerebroside which had previously been unknown and demonstrated it to consist of a 24-carbon monocarboxylic acid with one double bond, sphingosine, and galaetose. He gave to this cerebroside the name "nervon," and to the monoenoic acid with 24 carbons, "nervonic acid." In subsequent experiments he found

[HP0054][GDrive]

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DR. NED. GRETE KLENK, Cologne, Germany

Scientific Achievements

IN 1932 ERNST KLENK began his scientific career under Thierfelder, a former student of Hoppe-Seyler. His initial investigations were concerned with the behavior (retention) of the aromatic fatty aldehydes and of carbohydrates in animals. In his work some information concerning their oxidative degradation was gained. Above all, it was made clear that the oxidation of the methyl group of n-propyl benzene and its higher homologues to a carboxyl group precedes B-oxidation. This finding stimulated his interest in fats and lipids and led him to investigate in detail a glucosamine-containing phosphatide which had previously been reported by Frankel and Kafka in 1920. In an attempt to purify this substance, he came to the conclusion that the isolated phosphatide did not contain hexosamine. He then became interested in the chemical nature of sugar-containing substances in the brain. He succeeded in isolating a cerebroside which had previously been unknown and demonstrated it to consist of a 24-carbon monocarboxylic acid with one double bond, sphingosine, and galaetose. He gave to this cerebroside the name "nervon," and to the monoenoic acid with 24 carbons, "nervonic acid." In subsequent experiments he found

an additional cerebroside containing a 24-C hydroxy acid. This acid was designated as oxynervonic acid and the cerebroside containing this hydroxy was designated as oxynervon. By oxidative degradation of this hydroxy acid, he found it to be a mixture of two isomeric a-oxy-ntetraeosanoenic acids in which the double bond was at either C-15 or C-17. Similarly, cerebronie acid was shown to be an a-oxy-n-tetracosanoic acid.

In addition Ernst Klenk had directed his attention to the sphingosine moiety of the split products from the cerebroside. It was he who gave the first correct experimental formula CI~H.~O..N to sphingosine and thereby made an essential contribution to the elucidation of its structure. By oxidative degradation of triacetylsphingosine, an a, a-dihydroxy-fi-amino-butyric acid derivative was obtained, which after its deacetylation with lead tetra-acetate and subsequent oxidation, gave L (-) serine. Thus the position of the amino group at C-2 of the sphingosine and the configuration around this asymmetric carbon was established, which had also been proved by Carter.

Of Klenk's numerous works on the cerebrosides, one deserving of special mention was the discovery of the substance deposited in Gaucher's disease. This substance was found to be a cerebroside containing glucose instead of galactose. He found that the very high content of phosphatide in the brain, liver and spleen in Nieman-Pick's disease (another lipodosis) is due to the enornmus accumulation of sphingomyelin.

Even in his early days of investigation, Ernst Klenk was very much interested in phosphatides. Attracted by the abundance of acetalphosphatide in the cephalin fractions of the brain, he decided to work on this problem. In the meantime, it had become known that the formula for acetalphosphatide given by Feulgen did not account for a number of experimental findings. The data accumulated from various sources suggested that the substance isolated by Feulgen and Thanhauser is a secondary product derived from the genuine plasnmlogen. No watersoluble phosphate was formed when the phosphatide mixture was treated with acid. After hydrogenation only 30% of the total phosphate could be easily Split off with alkali, and 60-70% of the total phosphate was isolated in the form of chimyl or batylphosphoric acid. These findings led Klenk to propose a formula for the genuine plasmalogen. According to this formula the enol form of the C~ or C~ aldehyde is bound to the primary alcoholic hydroxyl group in an aeetal-like fashion, and the unsaturated fatty acids with 18, 20 and 22 carbons are esterified with the secondary hydroxyl group of glycerol. The chemical constitution of acetalphosphatide is therefore very similar to the classical formula of ethanolamine-cephalin, which explains the close relationship in the physical properties of these two substances. When plasmalogen is hydrolyzed with alkali, the fatty acids are split off. The remainder of the molecule possibly is rearranged to the ether-insoluble acetalphosphatide to which the original formula of Feulgen may be ascribed.

A considerable portion o2 Klenk's work has been concerned with investigation of the structures of highly unsaturated fatty acids found in mammalian organs and in fish oils. From the work of Burr in 1930's a question arose concerning the essential nature of the polyenoic acids such as linoleic and linolenic acids in foods and of the more highly unsaturated C~ tetraenoic acid (arachidonic acid) in liver phosphatides. In the early 1930's, Klenk found a C~ polyenoic acid more highly unsaturated than arachidonic acid. This C~ acid was very similar to "clupanodonic acid" of fish oil and was assumed to be docosapentaenoic acid. He later found eicosapentaenoic and docosahexaenoic acids to be the most highly unsaturated. In his extensive work after 1950, Klenk found it possible to elucidate the structure of a large nmnber of the highly unsaturated fatty acids, primarily by oxidative ozonolysis of the polyenoic acids and by quantitative chromatography of the resulting mono- and dicarboxylic acids. A general principle concerning the structure of these acids was established by this work. It was found that all the double bonds are arranged in a divinyl methane rhythm. They have the chain length of 18, 20, or 22 carbons and belong either to the so-called oleic-, linoleic-, or linolenic- type. Seen from the methyl end the first double bond is situated at the position which corresponds to that of the oleic, linoleic and linolenic acids respectively, i.e., C-9, -6 and -3. Some C~ polyenoic acids of fish oils are the only exceptions to the remarkable regularity mentioned above. The investigations by Klenk on the highly unsaturated acids made clear that the polyenoic acid of the oleic type are present in only small amounts in the mammalian phosphatides and that they are totally absent from fish oils. The principal polyenoic acids of fish oils are of the linolenic type.

By studying the metabolism of these acids he showed that the linoleic-type acids, for example arachidonic acid, arise from linoleic acid, and the linolenic-type acids, e.g., C~o- pentaenoic and C~- hexaenoic acid, arise from linolenic acid. The chains of linoleic and linolenic acids are elongated by "active" acetate addition to the carboxylic end and additional double bonds are introduced in the carboxylicend in a divinyl methane rhythm. On the other hand, all of the oleic-type polyenoic acids seem to be synthesized in the animal body. There exists presumably no fundamental difference among various vertebrates as regards the synthesis of the other polyenoic acids from the so-called essential fatty acids. This has been established by James Mead as well.

The investigations conducted on the lipidoses in the early days of Klenk's scientific career, provided him with another interesting field for research. He found a group of lipids in nerve tissue which had hitherto been unknown. **In 1935 he describel a "substance x" which apparently was closely related to the cerebrosides. This substance appears in larger amounts in nerve tissue in amaurotic infantile idiocy and in Niemann-Pick's disease and in smaller amounts in the normal brain. He designated this substance ganglioside. In 1941 from this glycolipid he was able to isolate by methanolysis a previously unknown crystalline substance. T**his substance was characterized by Klenk as the methylglycoside of a hexosamine-free polyhydroxy-amino acid with 9 or 10 carbon atoms. He called this substance, which yields a red-violet color with Bial's orcinol-ferric chloride-HC1 reagent, "neurarninic acid." Stimulated by the report of Blix of a sfinilar color reaction of submaxillary gland mucin with Bial's reagent , Klenk succeeded in isolating for the first time the N-acetyl derivative of neuraminic acid from mucin, after having been able previously in isolating the crystalline methylglycoside of neuraminie acid from the same material. The N-acetyl fo~ml occurs in blood serum and together with N-glycolyl, N, 0 -di and tri-acetyl derivatives in all mucins of endodermal origin. In addition to his significant contribution to the elucidation of the structure of this very interesting substance he showed that the primary and one of the most important functions of neuraminic acid is to serve as the determinant group of the acceptorsite for the myxovirus of the mumps-influenza group. He has contributed further to the biochemistry of neuraminie acid by showing that the enzymic action of myxovirus is the same as that of the receptor destroying enzyme from the culture filtrate of various bacteria, by showing the role of neuraminidase in virus hemagglutination and panagglutination reactions, and by showing this acid to be the determinant group of the MN blood group system.

In the 1960's Klenk turned his attention once again to the gangliosides. Purification of the gangliosides and determination of their structures by partial hydrolysis, isolation of the oligosaccharides, permethylation, periodate oxidation and by the treatment with neuraminidase, resulted in the conclusion that the gangliosides are a mixture of substances which are very closely related in their chemical compositions. The difference in the fatty acid and sphhigosine moieties are very slight, the main component of the former being stearie acid and that of the latter C~- sphingosine. The C~- sphingosine is replaced by its C~o- holnologue with increasing age. However, there is extensive variation in the carbohydrate portion of the molecule. The carbohydrate sequence in all hexosanline containing brain gangliosides, is glucose- (4-1) galaetose (4-1)- N-acetyl-galaetosamine (3-1)-galaetose with N-acetyl- neuraminic acid in a (3-2)-linkage at first galactose molecule and the glucose molecule is glycosidically bound to sphingosine. A second type of ganglioside which is devoid of the terminal galaetose group exists in only small amounts in the normal brain, but appears in abundance in amaurotic idiocy of Tay-Sachs type. A third ganglioside has two nmlecules of neuraminic acid, one of which lies in the central galactose molecule and the other (3-2) glycosidically bound to the terminal galactose molecule. Of these two neuraminic acids only the latter can be split off with neuraminidase. A fourth type of ganglioside is composed of the same carbohydrate sequence but having two molecules of N-acetyl-neuraminic acid at the first galactose molecule, linked to each other in (8-2) position. An additional molecule of N-acetyl-neuraminic acid may be attached to the 3-position of the second galaetose. The existence in small amounts of a hexosamine-

free ganglioside which contains only glucose, galaetose and N- acetyl-neuraminic acid, was also demonstrated. The configuration of the neutral sugar moiety corresponds to that of lactose. Another hexosaminefree ganglioside consists of 3 molecules of galactose with an N-acetyl-neuraminic acid in position 3 at the central galactose. (Of the extensive works of Ernst Klenk which have been presented in more than 160 publications, only the events of importance could be cited.)

Most of his work has been conducted at the University of Cologne following his appointment as director of the Institute for Physiological Chemistry in 1936. Here his works have been accomplished in cooperation with nearly 100 associates to which group the author of this biography has the honor to belong.

HANS FAILLARD, O. PROF. DR. PHIL.

Institut fur Physiologische Chemie der Ruhr-Universit~t Bochum, Germany

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1969 - Dr. Fredrickson and Dr. Ernst Klenk at a symposium on phospholipid

See **Dr. Donald Sharp Fredrickson (born 1924)** / Source : [HG00BP][GDrive] / **NOTES :** "*Abstract: Ernst Klenk, chair of physiologische chemie at the University of Cologne, Donald Fredrickson, of the National Heart Institute (NHI), and Willi Stoffel, docent of physiologische chemie at the University of Cologne, are seated at a table with wine glasses and a flower center piece.*" ; *Copyright: The National Library of Medicine believes this item to be in the public domain.*"

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Dr. Hans-Dieter Klenk (born 1938)

Wikipedia (DE) Hans-Dieter Klenk

Born June 25, 1938 in Cologne [HK005G][GDrive]

Parents : **Dr. Ernst Klenk (born 1896)**

ASSOCIATIONS

- **Dr. Heinz Ulrich Feldmann (born 1959)**
- **Prof. Rudolf Rott (born 1926)**

Saved Wikipedia (Feb 27, 2021) - (DE only) - Hans-Dieter Klenk

Source : [HK005G][GDrive]

English translation below :

Hans-Dieter Klenk (born June 25, 1938 in Cologne) is a German virologist, recipient of the Robert Koch Medal, university professor and long-time director of the Institute for Virology in Marburg.

Life [edit | Edit source]

Klenk, the son of Ernst Klenk, studied medicine from 1958 to 1963 at the universities of Tübingen, Vienna and Cologne. In 1964 he was awarded the grade summa cum laude Dr. med. PhD. From 1964 to 1967 he completed a postgraduate course in biochemistry at the University of Tübingen. In 1971 he completed his habilitation in virology at the University of Giessen.

While he was working on his habilitation thesis, **he initially worked for three years (1967–1970) at New York's Rockefeller University as a guest investigator in Purnell W. Choppin's laboratory**. [https://en.wikipedia.org/wiki/Purnell_W._Choppin] From 1970 he was research assistant at the Institute for Medical Virology at the University of Giessen, where he worked closely with [**Prof. Rudolf Rott (born 1926)**] for another three years. There he was appointed C3 professor in 1973. He held this professional position for almost twelve years until he was appointed as a C4 professorship and institute director at the Philipps University of Marburg in 1985.

Hans-Dieter Klenk is married and has three adult sons.

Scientific research focus [edit | Edit source]

The focus of the research that Hans-Dieter Klenk and his colleagues have dedicated themselves to are the influenza viruses as well as the Marburg and Ebola viruses. In the work, the structure and reproduction of these viruses were elucidated and important knowledge gained about the mechanisms that are responsible for the pathogenicity of the pathogens and for their transmission from animals to humans. In addition, this work formed the basis for the development of vaccines and antiviral drugs against the Ebola virus and other important pathogens.

refernce - https://watermark.silverchair.com/jir330.pdf?token=AQECAHi208BE49Ooan9kkhW_Ercy7Dm3ZL_9Cf3qfKAc485ysgAAAq4wggKqBgkqhkiG9w0BBwagggKbMIIClwIBADCCApAGCSqGSIb3DQEHATAeBglghkgBZQMEAS4wEQQMpf1AUfH2qQIGsSfIAgEQgIICYS7zf3RtF0hKGLjyvrwXLDypAUnawRsm_WCEvxTuMZcz0S470PU69d63iqQvjofR0NpKSRlGRPCEo2dfEwXDa--DV9XUtA0XEbiu1FrzB4DufBmLpJmKoTibgrOi4AXXfGFyDpU5cWvOck6Iv-Sp6HcGsR5wJJxxJYaQp1YNG-sqyfOzHE-ygAGaDfZhXuxLIQ4qB3ZU6pli2sSK0IcYpCxIYSIrnPyNAOGH8pBaKbCghQ5mtCCbkut3BYdWHHCGiTQkIihhPPFROUtvE0oxtNzniCKonsgdYIGLOsQ5XJFddeaPJh62_cBBLB11H2S_puJYKapqsCCAGk2eMZJA_oXmKX1IZ7zwYikkmf7ufY-bIgsuKU__FYdlR0fSp6fC95328aVorhBltFxpp1xZsBW-Za4GCIqBeMnem9qDD2VovG2ZRniqFQCO-4eoBwPfHH9KHNoTFqUTzYDn9Sa0OGonDbfT_BbZlKu_NKfrIIkDTSvafQeumRV9UUGwxXDuhcUgMATicQ4tAufwk4BU3JQ2Ji8O7fG8xl29pa5fQHG60Y39mWfXNwN7IWdFFA1xD8Fek7GjV8s49WhhjmUqDGeL8vN6tuTFdAzcUIhSGN86dzyqka25mn6hYuI_XzE5cGIpL_OtTIXEyIPaf4pUVd1IRcR6d4SScIUD2rC9-6LqjsgDYFYR8hEk19cz3st72Fu7g5oT-IEIK9n03YsSYwcDDsssm2QK3LS7MWnb5zbe9Gmg1rLdf3xyQyO9k5-isx5977_vtoPUt8xIN9oAy4rmnIdxTmeTnDeiAx-3-Tdpg

2011-jir330.pdf

Assessment of Rodents as Animal Models for Reston Ebolavirus Emmie de Wit,1 Vincent J. Munster,1 Samia A. Metwally,2 and Heinz Feldmann1 1 Laboratory of Virology, Division of Intramural Research, National Institute of Allergy and Infectious Diseases, National Institutes of Health, Hamilton, Montana; 2 Food and Agriculture Organization Reference Center for Vesicular Diseases, United States Department of Agriculture, Animal and Plant Health Inspection Service, Foreign Animal Disease Diagnostic Laboratory, National Veterinary Service Laboratories, Plum Island Animal Disease Center, Greenport, New York The emergence of Reston ebolavirus (REBOV) in domestic swine in the Philippines has caused a renewed interest in REBOV pathogenicity. Here, the use of different rodent species as animal disease models for REBOV was investigated. BALB/c and STAT12/2 mice, Hartley guinea pigs, and Syrian hamsters were inoculated intraperitoneally with REBOV strain Pennsylvania or Reston08-A. Although virus replication occurred in guinea pigs, hamsters, and STAT12/2 mice, progression to disease was only observed in STAT12/2 mice. Moreover, REBOV Pennsylvania was more pathogenic than REBOV Reston08-A in this model. Thus, STAT12/2 mice may be used for research of REBOV pathogenicity and intervention strategies

[..]

The absence of disease manifestation (in BALB/c mice, Hartley guinea pigs, and Syrian hamsters) and perhaps even replication (in BALB/c mice) makes these animals interesting models as they may resemble the situation in humans, among whom REBOV-induced disease has so far not been observed. The replication of REBOV in guinea pigs and hamsters also creates the possibility of adapting REBOV to these hosts, similar to the adaptation of Zaire ebolavirus to mice and guinea pigs [13, 14], possibly resulting in a disease manifestation similar to that observed in cynomolgus macaques and thus an opportunity to study REBOV disease in guinea pigs or hamsters

[..]

refers to -

4. Volchkov VE, Chepurnov AA, Volchkova VA, Ternovoj VA, Klenk HD. Molecular characterization of guinea pig-adapted variants of Ebola virus. Virology 2000; 277:147–55

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http://entnemdept.ufl.edu/Hodges/als4161/Secure/PDF%20Files/Articles/EmergingInfections.pdf

https://www.researchgate.net/publication/234159834_Zoonotic_diseases_and_human_health_The_human_influenza_example/link/57fae0b008ae8da3ce5bd3a9/download

https://collections.nlm.nih.gov/catalog/nlm:nlmuid-101446451-img

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2003 - Wrote obituary/memoriam for Rudolf Rott (1926-2003), with Prof. Jürgen Richt

Source is Virology Division News : [HP0051][GDrive] / Obituary/memoriam for **Prof. Rudolf Rott (born 1926)** , written with **Prof. Jürgen Albrecht Richt (born 1958)** .

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https://www.creative-biolabs.com/vaccine/ganglioside-vaccines.htm

he name ganglioside was first applied by the German scientist Ernst Klenk in 1942 to lipids newly isolated from ganglion cells of the brain. Most gangliosides considered as potential targets for cancer therapy are expressed primarily in tissues and tumors of neuroectodermal origin

There is also evidence suggesting prions may play a part in the process of Alzheimer's disease, Parkinson's disease, and amyotrophic lateral sclerosis (ALS); these have been termed *prion-like diseases*.

https://www.fens.org/News-Activities/Calendar/Meetings/2008/09/24Ernst-Klenk-Symposium-in-Molecular-Medicine/

Prof. Dr. Hans-Dieter Klenk

President of the Ernst Klenk

Foundation, Marburg

We are very pleased to announce that Prof. Adriano Aguzzi (Institute of Neuropathology, University Hospital of Zuerich, Switzerland) was substantially involved in the scientific coordination of the program. Prof. Aguzzi will also present the Ernst Klenk Lecture entitled Biology of Prion Diseases.

2011

http://www.sciforum.hu/cms/previous-fora/2011/speakers-2011/hans-dieter-klenk.html

KLENK, HANS-DIETER

Institute for Virology, University of Marburg

Hans-Dieter Klenk was born in 1938 in Cologne, Germany. He received his M.D. from the University of Cologne in 1964 and a degree in biochemistry from the University of Tübingen in 1967. **From 1967 to 1970 he was a postdoctoral fellow with Dr. P.W. Choppin at the Rockefeller University in New York**. From 1970 to 1985 he held several positions at the Institute of Virology of the University of Giessen. **From 1985 to 2007 he was Professor of Virology and Head of the Department of Virology of the University of Marburg where he is now Professor emeritus.** His research has focused on the structure and function of enveloped viruses (influenza viruses, paramyxoviruses, filoviruses) with special emphasis on the role of viral glycoproteins and RNA polymerase in the infection process, in pathogenesis and in interspezies transmission. He is author of more than 400 scientific publications. Prof. Klenk was President of the Gesellschaft für Virologie and Chairman of the Virology Division of the International Union of Microbiological Societies. **He serves presently on the International Scientific Board of the Institute of Medical Microbiology of Fudan University, Shanghai, on the Scientific Advisory Board of the Pasteur Institute of the Chinese Academy of Science, Shanghai, on the International Scientific Board of the Guangzhou Institute of Biomedicine and Health of the Chinese Academy of Science, and of the Influenza Pathogenesis and Immunology Research Center, Atlanta**. He is a member of EMBO and of the Deutsche Akademie der Naturforscher, Leopoldina. His awards include: Preis der Deutschen Gesellschaft für Hygiene und Mikrobiologie (1985), Feldberg Lecture, London (1987), Aronson-Preis, Berlin (1989), Shipley Lecture, Harvard Medical School (2003), Robert-Koch-Medal in Gold, Berlin (2006), Ernst-Jung-Medal in Gold, Hamburg (2008), Emil von Behring-Preis, Marburg (2010).

NOTES - "University of Giessen" is only 5 miles from Marburg

https://en.wikipedia.org/wiki/Purnell_W._Choppin

Purnell W. Choppin is an American virologist. He served on the faculty of Rockefeller University for nearly thirty years, becoming the Leon Hess Professor of Virology. He moved to the Howard Hughes Medical Institute in 1985, became the president of the institute in 1987, and retired in 1999, succeeded by Thomas Cech. He is currently the chair of the Scientific Advisory Board at the Center for the Study of Hepatitis C, supported by a university consortium consisting of Rockefeller, Weill Cornell Medical College, and New York-Presbyterian Hospital.[1][2]

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In 1985 Choppin moved from his position as the Leon Hess Professor of Virology at Rockefeller to the Howard Hughes Medical Institute, where he served as vice president and chief scientific officer. He assumed the presidency in 1987, succeeding Donald Fredrickson.[4]

https://www.ncbi.nlm.nih.gov/books/NBK234091/

Appendix CNational Institutes of Health Aids Program Advisory Committee

Aids Program Advisory Committee

Martin S. Hirsch (chair), Professor of Medicine, Harvard Medical School, Boston, Massachusetts

Baruj Benacerraf, Fabyan Professor of Comparative Pathology and Chairman, Department of Pathology, Harvard Medical School, Boston, Massachusetts

Dani Paul Bolognesi, James B. Duke Professor, Department of Surgery, Surgical Virology Laboratory, Duke University Medical Center, Durham, North Carolina

Purnell W. Choppin, President, Howard Hughes Medical Institute, Bethesda, Maryland

Evan M. Hersh, Chief, Section of Hematology and Oncology, Arizona Cancer Center, University of Arizona, Tucson

Robert J. Levine, Professor, Department of Internal Medicine, School of Medicine, Yale University, New Haven, Connecticut

Thomas E. Malone, Vice President, Division of Biomedical Research, Association of American Medical Colleges, Washington, D.C.

Wendy K. Mariner, Professor of Law and Public Health, Boston University School of Public Health, Boston, Massachusetts

William Raub, Acting Director, National Institutes of Health, Bethesda, Maryland

Gary R. Smith, Professor, School of Law, Emory University, Atlanta, Georgia

Jose Szapocznik, Research Professor, Department of Psychiatry, University of Miami

Diane W. Wara, Professor of Pediatrics, School of Medicine, University of California, San Francisco

Constance B. Wofsy, Co-director, AIDS Activities Division, and Assistant Chief, Infectious Diseases, San Francisco General Hospital

Anthony S. Fauci (executive secretary), Director, Office of AIDS Research, and Director, National Institute of Allergy and Infectious Diseases, National Institutes of Health, Bethesda, Maryland

https://www.tuftsmedicalcenter.org/-/media/Brochures/TuftsMC/Patient-Care-Services/Departments-and-Services/Infectious-Disease/Louis-Weinstein-Lectures-1977-2017.ashx?la=en&hash=74CBE7EC2F5AD13795A30281B09823EE88342968

Dr. Anthony Fauci NIAID, NIH 1985 Acquired Immunodeficiency Syndrome: Update Dr. Anthony Cerami Rockefeller University 1986 Cytokines and Human Disease

https://en.wikipedia.org/wiki/Rockefeller_University

The Rockefeller University was founded in June 1901 as **The Rockefeller Institute for Medical Research**—often called simply **The Rockefeller Institute**—by John D. Rockefeller, who had founded the University of Chicago in 1889, upon advice by his adviser **Frederick T. Gates**[1] and action taken in March 1901 by his son, John D. Rockefeller Jr.[7] Greatly elevating the prestige of American science and medicine, it was America's first biomedical institute, like France's Pasteur Institute (1888) and Germany's Robert Koch Institute (1891).[1] The Rockefeller Foundation, a philanthropic organization, founded in 1913, is a separate entity, but had close connections mediated by prominent figures holding dual positions.[8]

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Notable individuals

Notable figures to emerge from the institution include Alexis Carrel, Peyton Rous, Hideyo Noguchi, Thomas Milton Rivers, **Richard Shope,** Thomas Francis Jr, Oswald T. Avery, Rebecca Lancefield, Wendell Meredith Stanley, René Dubos, Ashton Carter, and Cornelius P. Rhoads. Others attained eminence before being drawn to the university. **Joshua Lederberg,** who won the Nobel Prize in Physiology or Medicine in 1958, served as president of the university from 1978 to 1990.[12] Paul Nurse, who won the Nobel Prize in Physiology or Medicine in 2001, was president from 2003 to 2010.[13] (Before Nurse's tenure, Thomas Sakmar was acting-president from 2002.[14]) In all, as of October 2020, 38 Nobel Prize recipients have been associated with the University. In the mid-1970s, the University attracted a few prominent academicians in the humanities, such as Saul Kripke.

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well well - look at this 1994 book

Preston, Richard (1994). The Hot Zone. New York: Random House. p. 300. ISBN 978-0679437840

http://1.droppdf.com/files/fr1vP/the-hot-zone-richard-preston.pdf

https://ia601202.us.archive.org/24/items/THEHOTZONE/THE_HOT_ZONE_Richard_Preston.pdf

Lessons to be learned from the ebolavirus outbreak in West Africa

- August 2014
- Emerging Microbes and Infections 3(8)

DOI: 10.1038/emi.2014.68

https://www.researchgate.net/publication/274795922_Lessons_to_be_learned_from_the_ebolavirus_outbreak_in_West_Africa/link/55763c5a08ae7521586c2ddb/download

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1977, from the book The Influenza Virus Hemagglutinin Symposium, Baden near Vienna, March 21-23, 1977 : "Activation of Influenza Virus Infectivity by Proteolytic Cleavage of the Hemagglutinin"

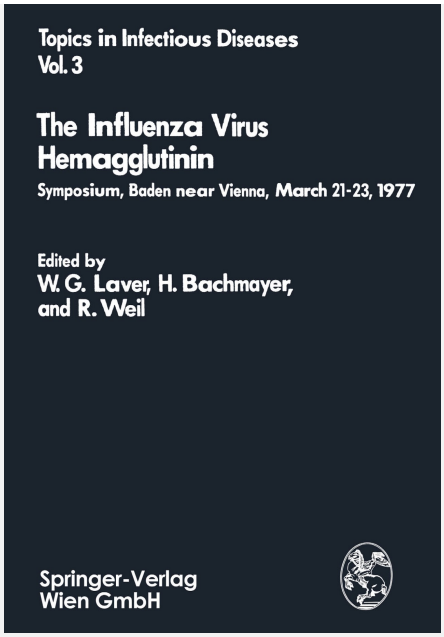
Source PDF of full book of the Symposium : [HI002H][GDrive] / PDF of this article only (pg 69-81): [HI002I][GDrive]

Authors :

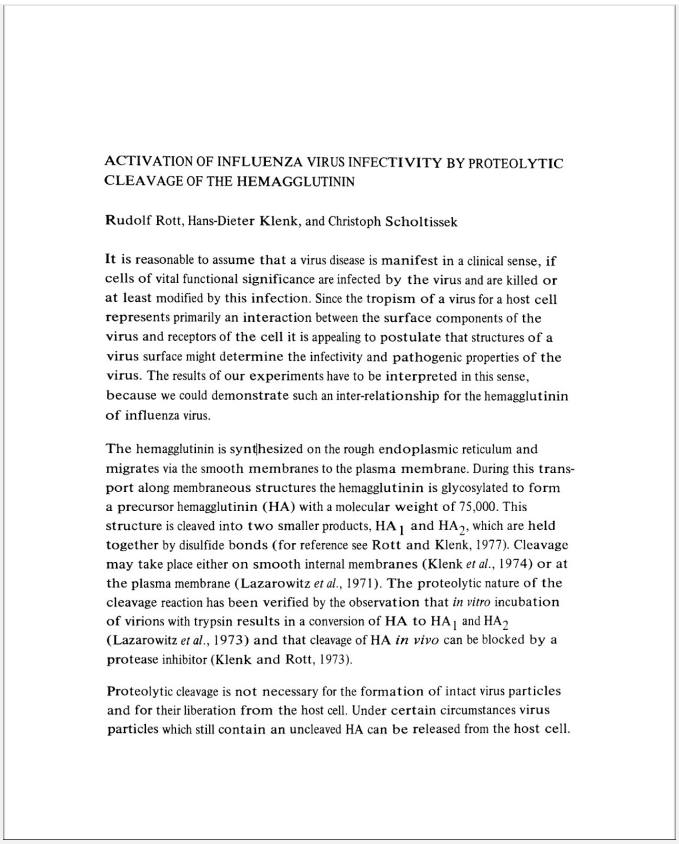
- [**Prof. Rudolf Rott (born 1926)**]
- [**Dr. Hans-Dieter Klenk (born 1938)**]
- [**Christoph Scholtissek (born 1929)**]

Abstract

"It is reasonable to assume that a virus disease is manifest in a clinical sense, if cells of vital functional significance are infected by the virus and are killed or at least modified by this infection. Since the tropism of a virus for a host cell represents primarily an interaction between the surface components of the virus and receptors of the cell it is appealing to postulate that structures of a virus surface might determine the infectivity and pathogenic properties of the virus. The results of our experiments have to be interpreted in this sense, because we could demonstrate such an inter-relationship for the hemagglutinin of influenza virus."



[HI002J][GDrive]



ACTIVATION OF INFLUENZA VIRUS INFECTIVITY BY PROTEOLYTIC CLEAVAGE OF THE HEMAGGLUTININ

Rudolf Rott, Hans-Dieter Klenk, and Christoph Scholtissek

It is reasonable to assume that a virus disease is manifest in a clinical sense, if cells of vital functional significance are infected by the virus and are killed or at least modified by this infection. Since the tropism of a virus for a host cell represents primarily an interaction between the surface components of the virus and receptors of the cell it is appealing to postulate that structures of a virus surface might determine the infectivity and pathogenic properties of the virus. The results of our experiments have to be interpreted in this sense, because we could demonstrate such an inter-relationship for the hemagglutinin of influenza virus.

The hemagglutinin is synthesized on the rough endoplasmic reticulum and migrates via the smooth membranes to the plasma membrane. During this transport along membraneous structures the hemagglutinin is glycosylated to form a precursor hemagglutinin (HA) with a molecular weight of 75,000. This structure is cleaved into two smaller products, HA_1 and HA_2, which are held together by disulfide bonds (for reference see Rott and Klenk, 1977). Cleavage may take place either on smooth internal membranes (Klenk *et al.*, 1974) or at the plasma membrane (Lazarowitz *et al.*, 1971). The proteolytic nature of the cleavage reaction has been verified by the observation that *in vitro* incubation of virions with trypsin results in a conversion of HA to HA_1 and HA_2 (Lazarowitz *et al.*, 1973) and that cleavage of HA *in vivo* can be blocked by a protease inhibitor (Klenk and Rott, 1973).

Proteolytic cleavage is not necessary for the formation of intact virus particles and for their liberation from the host cell. Under certain circumstances virus particles which still contain an uncleaved HA can be released from the host cell.

[HI002K][GDrive]

ACTIVATION OF INFLUENZA VIRUS INFECTIVITY BY PROTEOLYTIC CLEAVAGE OF THE HEMAGGLUTININ

It is reasonable to assume that a virus disease is manifest in a clinical sense, if cells of vital functional significance are infected by the virus and are killed or at least modified by this infection. Since the tropism of a virus for a host cell represents primarily an interaction between the surface components of the virus and receptors of the cell it is appealing to postulate that structures of a virus surface might determine the infectivity and pathogenic properties of the virus. The results of our experiments have to be interpreted in this sense, because we could demonstrate such an inter-relationship for the hemagglutinin of influenza virus.

The hemagglutinin is synthesized on the rough endoplasmic reticulum and migrates via the smooth membranes to the plasma membrane. During this transport along membraneous structures the hemagglutinin is glycosylated to form a precursor hemagglutinin (HA) with a molecular weight of 75,000. This structure is cleaved into two smaller products, HA 1 and HA2, which are held together by disulfide bonds (for reference see Rott and Klenk, 1977). Cleavage may take place either on smooth internal membranes (Klenk eta!., 1974) or at the plasma membrane (Lazarowitz eta!., 1971). The proteolytic nature of the cleavage reaction has been verified by the observation that in vitro incubation of virions with trypsin results in a conversion of HA to HA 1 and HA2 (Lazarowitz et at., 1973) and that cleavage of HA in vivo can be blocked by a protease inhibitor (Klenk and Rott, 1973).

Proteolytic cleavage is not necessary for the formation of intact virus particles and for their liberation from the host cell. Under certain circumstances virus particles which still contain an uncleaved HA can be released from the host cell.

Particles with a precursor HA or the hemagglutinin composed of the cleavage products HA 1 and HA2 are equally capable of a hemagglutination reaction, and in both cases the hemagglutination can be inhibited by specific antisera. This means that the reactive antigenic determinant is not significantly modified by proteolytic cleavage. The same holds true for the interaction of the hemagglutinin with the host cell. In all systems tested cleavage was not necessary to establish adsorption of virus particles to neuraminic acid containing receptors at the cell surface. A cleaved HA is necessary, however, for the infectious process to proceed further (Klenk eta/., 1975; Lazarowitz and Choppin, 1975).

Infection of embryonated chicken eggs or cells derived from the chorioallantoic membrane of the chick embryo with influenza strains of human and animal origin results in the formation of infectious progeny virus. Attempts to grow infectious viruses in chick fibroblasts are only successful with strains which possess the hema.gglutinin of fowl plague virus (FPV), while all others have only a negligible infectivity. Analyses in polyacrylamide gels show a direct correlation between infectivity and the structure of the hemagglutinin. Only particles with a cleaved HA are infectious. A successful cleavage of HA which corresponds to productive conditions in vivo can be carried out in vitro by treating the inactive virus particles with trypsin. Such a treatment also activates infectivity (Table 1).

A productive infection of cells in which infectious virus is normally not formed is attained if trypsin is added to the culture medium. This becomes particularly evident, if cells are infected under single and multiple cycle conditions with a multiplicity of infection ranging from 30 to 0.003 PFU/cell (Figure 1). Growth curves of FPV which is synthesized in such cells as infectious particles with cleaved HA are identical irrespective of the presence of trypsin. On the other hand a clear requirement for the enzyme is observed in the case of virus N.

When trypsin is present in the medium, replication is similar to that of FPV. In the absence of trypsin, however, newly synthesized non-infectious virus is only demonstrable under single cycle conditions. Under multiple cycle conditions virus production progressively decreases as the multiplicity of infection is reduced. This phenomenon also explains plaque formation by such strains which are normally non-plaque producers in chick fibroblasts in the presence of trypsin (Figure 2).

Whether a proteolytic cleavage is possible in a given host cell is determined primarily by the individual structural characteristics of the HA rather than by

the activation of cellular proteases by the infecting virus. This could be demonstrated by double infection of chicken fibroblasts with FPV and virus N, which are produced in highly infectious form or with reduced infectivity, respectively.

Since HA 1 and HA 2 have different electrophoretic mobilities in FPV and virus N, it was possible to determine the origin of the cleaved HA in the mixed virus population by coelectrophoresis with homogeneous preparations of each virus.

The glycoprotein pattern of the progeny virus is shown in Figure 3. The results show clearly that after double infection FPV does not induce cleavage of the hemagglutinin glycoprotein of virus N. Biological tests confirm our previous observation that virus N requires try;>sin to undergo multiple cycle replication in chick fibroblasts, whereas FPV can do so in the absence of the enzyme. In doubly infected cells only FPV-specific hemagglutinin is formed if trypsin is absent. In the presence of trypsin, however, hemagglutinin of both strains can be detected (Table 2).

[...]

Comparisons of the nuclear magnetic resonance (NMR) spectra of chicken fibroblasts exposed to virus N with either cleaved or uncleaved HA are being carried out in our laboratory by C. Nicolau and H-D. Klenk. The results suggest that the hemagglutinin is in fact involved in the penetration process. These studies indicate that virus N with cleaved HA induces an alteration in the fluidity of the lipid bilayer of the plasma membrane, whereas virus N containing uncleaved HA does not. Simitar but more distinct fluidity changes have been observed when Newcastle disease virus containing a biologically active fusion glycoprotein has been compared to virus containing an inactive F glycoprotein.

This could mean that the mechanisms of penetration process resemble each other in both cases and that the function, which is exerted by the F glycoprotein of paramyxoviruses must be attributed to the hemagglutinin of influenza viruses.

Since a hemagglutinin composed of the cleavage products of HA 1 and HA2 is indispensable for the formation of infectious virus particles, only those conditions which have been def"med in our in vitro studies can predispose to a pathological situation in the host organism. In contrast to former conclusions from others it is now clear, however, that viral glycoproteins alone do not determine pathogenicity of influenza viruses. This could be convincingly deduced from a series of experiments, where recombinants of fowl plague virus were compared in vitro and in vivo (Rott et al., 1976). In these experiments there was no correlation between the presence of cleaved glycoproteins and the pathogenicity of the virus. Furthermore, using the same parent recombinants for double infection, the progeny back recombinants were only infrequently pathogenic for chicken, although they carried both surface antigens of the highly pathogenic FPV (Table 5). The results of these experiments show clearly that the pathogenicity of influenza virus depends on more than one gene. This conclusion was underlined by experiments (Table 6) where FPV recombinants were employed which carried a particular defined gene from other influenza viruses (Scholtissek et al., 1977). Here again it became clear that the FPV derived HA cannot induce the disease in the natural host, but a certain gene constellation is necessary to make up a pathogenic virus. Full reconstitution of pathogenicity to levels of the wild type FPV largely depends on the parent strain being used for the gene exchange and the particular gene which is carried 0'Ä~er. This means again that there is no individual gene coding for pathogenicity and that the HA gene is not a 'virulence' gene by itself.

At the present time we cannot list the optimal gene constellation to make up a pathogenic virus and we are not in a position yet to define the particular contribution made by the individual genes which might finally result in the complex phenomenon of pathogenicity.

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Dr. Gary Pignac Kobinger (born 1969)

Associations

- **Dr. Heinz Ulrich Feldmann (born 1959)**
-

https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4868602/

2016-05-17-canadian-medical-association-journal-1880561-proifile-gary-kobinger.pdf

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CMAJ. 2016 May 17; 188(8): 561–562.

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Profile: Gary Kobinger — "My goal became to prevent death"

Véronique Morin

Gary Kobinger toiled in obscurity until a couple of years ago when, during the Ebola crisis, the chief of special pathogens at the Public Health Agency of Canada's (PHAC) microbiology laboratory in Winnipeg vaulted to the rank of international hero.

In the midst of the epidemic that claimed more than 11 000 lives, he and his team announced that they had developed both an effective treatment — a drug called ZMapp — and a vaccine against the lethal virus.

Although both are still in clinical assessment, these discoveries came as heartening news to a world gripped by fear of a hemorrhagic fever that, on average, kills half of those who contract it. The twin breakthroughs received attention from media, scientists and public health authorities across the globe, and led to Kobinger being nominated for such honours as Radio-Canada's scientist of the year.

Dr. Xiangguo Qiu of PHAC, who is first author on most of the publications related to ZMapp, says Kobinger's support was exceptional. "He immediately saw the potential for this treatment," said Qui. "We established a plan together. He is very quick and knowledgeable. It is great to work with him. Without him the treatment we developed would have never seen the light."

The praise and media attention has not distracted Kobinger from his work. He is quick to give credit to his team, and to point out that the Ebola breakthroughs were part of a much wider — and longer — battle against highly infectious diseases.

"My team and I are working on a MERS [Middle East respiratory syndrome] vaccine, currently tested in a phase one clinical trial," he said in an interview from his Winnipeg laboratory. "We also have a vaccine against Zika that could be ready as early as this summer."

With the mosquito-borne Zika virus spreading from Brazil to other countries and potentially causing increases in rates of both microcephaly in newborns and Guillain-Barré syndrome in adults, Kobinger fully understands there is no time to waste. Thankfully, he will not be starting from scratch.

"It may sound extraordinary, but we have known and developed this [method] for over 10 years. So what is in fact extraordinary is that it took an epidemic to receive the attention our work deserved," he said. "We were working in the shadows for years and years."

It would be hard to imagine a work environment less glamorous, or more dangerous. He often works alone in this maximum-containment facility — Canada's only level-4 biosafety containment laboratory — wearing what looks like a blue spacesuit, complete with a hood and gloves. Most of his days end with a

only level-4 biosafety containment laboratory — wearing what looks like a blue spacesuit, complete with a hood and gloves. Most of his days end with a chemical shower. Yet it is precisely these conditions that have helped Kobinger to attain understanding of the complex mechanisms that could protect human cells from highly infectious and deadly viruses.

“It is so quiet in a level-4 lab,” he said. “The air and temperature are controlled, which allows me to reach an intense level of concentration and focus on my work.”

From the perfect ambient temperature and controlled conditions of his lab, his research took him to the heat and squalor at the heart of the Ebola outbreak. His desire to stop infectious disease in its tracks was fanned by what he witnessed there.

“You never forget the expression of fear imprinted on the face of someone who has died of Ebola,” he said.

Over the course of four trips to Africa between 2007 and 2014, he was instrumental in implementing safety protocols as cochair of the World Health Organization’s (WHO) Emerging and Dangerous Pathogens Laboratory Network. With the danger of infection all around them, he and his team were careful to follow all protocols. “I’m motivated by the fact that we can prevent deaths. I have a wife and children, and of course I was thinking about them when I saw women and children dying of Ebola in front of us.”

It was particularly tough to watch death strike when he knew he had a potential cure, as well as a vaccine, at his lab back in Canada. “The hardest thing is administrative and bureaucratic delays which slow us down. Delays make me impatient.”

Kobinger’s sense of urgency about his mission is palpable, but the path that led the Quebec City–born scientist to the Winnipeg lab and to Africa’s shores was not always so direct. The self-described “medical school dropout” spent a year planting trees and travelling before finding his true calling.

“He came back very sick from a trip to India,” recounts his mother, Nicole Kobinger. “I think that this was a determinant for him. One day, after several months of lying ill in bed, he got up and decided to return to university.”

Kobinger’s brush with mortality gave him a sense of purpose. “I realized there was a great need to immunize and protect people from emerging infectious diseases. I became fascinated with viruses and I was convinced we could help people. My goal became to prevent death.”

He pursued his studies with those he considered the best in his field. His doctoral work was with Éric Cohen of Université de Montréal’s Institut de recherches cliniques de Montréal, who was known for his research into retroviruses such as HIV. Then from 1999 to 2004, he did postdoctoral training under James M. Wilson’s supervision at the University of Pennsylvania in Philadelphia. “He joined my lab at a time when [there was] a collection of incredibly ambitious and aggressive post-doc cohorts,” said Wilson. “He was part of that exceptional and superior class of researcher that came through.” Wilson credits Kobinger with conducting extremely challenging experiments using bits of the HIV virus and pseudotyping them with bits of the Ebola virus, at a time when bio-threats were heightened.

“After 9/11, and biosecurity heightened, it became very hard to gain access to one of those labs. Gary was very persistent and impatient with the bureaucratic delays, but not in a reckless way. I admire that in him,” said Wilson. “He is an amazing human being; the type that I have rarely encountered. What is so amazing about him is that he is one of the very rare people who are extremely smart, pursuing ambitious goals while abiding by very high levels of principles, and with great generosity. I mean, he would give his shirt off [his back]. What he did in Africa was selfless. It is very rare in our world, where competition is fierce and ruthless, to encounter that level of selflessness and integrity in one human being.”

Vaccines usually take at least 10 years to develop, but Kobinger and his PHAC team claim to have created what he calls a “template” — or recipe — that applies to several types of vaccines, including one tested against Ebola. This type of vaccine acts on several fronts to trigger an appropriate immune response.

“When you look at the structure of the wormlike Ebola virus under the microscope, you see its surface is peppered with glycoproteins,” he said. These proteins, which form the envelope of many other viruses, bind onto human cells and act as keys, opening a target cell and allowing the virus to penetrate and infect it. By using glycoproteins in combination with features of other infectious agents, this new type of vaccine triggers an immune reaction that has produced promising results in the recent initial human tests.

Kobinger leaves PHAC in June to head Laval University’s Infectious Disease Research Centre in his hometown of Quebec City. “We will miss him greatly, says Qiu. “We love him here, and we wish him luck.” Kobinger may be moving across the country, but his goal remains the same: preventing death.

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https://ipolitics.ca/2020/09/21/leading-vaccine-developer-walks-out-on-federal-vaccine-task-force/

NEWS

Leading vaccine developer walks out on federal vaccine task

force

By Kevin Dougherty. Published on Sep 21, 2020 8:05pm

Gary Kobinger

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Gary Kobinger, who worked with the Winnipeg team that developed a successful Ebola vaccine, has resigned from a federal task force of high-level vaccine experts, pleading for more transparency in the battle against COVID-19.

With conspiracy theorists interpreting the current low death rate from COVID-19 as a sign the pandemic is over, even as the number of cases continues to rise, experts and political leaders need to be more forthright, Kobinger believes.

His warning comes as public health authorities say Canada could be drifting into a second wave of the pandemic.

“The first step is transparency,” Kobinger said in a telephone interview Monday.

He would like to have journalists specializing in health sitting in on the deliberations of the task force, with a link allowing anyone in Canada to tune it as well.

“Everybody should be able to call in.”

The World Health Organization allows journalists with health expertise to sit in on its meetings, Kobinger said.

Kobinger also proposed that members of Canada’s task force publicly declare their conflicts of interest to put to rest potential suspicions they are not working in the public interest, and are not influenced by corporate or other connections.

On Monday, Conservative health critic Michelle Rempel Garner and public services and procurement critic Pierre Paul-Hus blamed the Trudeau government for lacking transparency in their deliberations over vaccines.

“Canada’s Conservatives will continue to press for these answers and demand to see a plan,” she said in a statement.

“Canadians’ health needs to drive vaccine decisions, not the bottom-line of pharmaceutical companies. It is extremely disturbing to see reports that members of Justin Trudeau’s vaccine task force stand to make money off of the outcome of procurement decisions.”

Canada’s National Research Council announced the creation of the task force, made up of 18 top-of-their-field experts from academia and vaccine producers, in August.

Kobinger noted that while task force members were required to sign a conflict of interest and confidentiality agreement, those conflicts of interest were not made public.

“I don’t want my name involved in this,” he said.

Joanne Langley, one of two task force co-chairs, is listed as a Dalhousie University professor of pediatrics, community health and epidemiology and head of infectious diseases at the IWK Health Care Centre in Halifax.

But Kobinger said Langley also receives funds from Novavax, Pfizer and Johnson & Johnson’s Janssen unit. On Aug. 31, federal Procurement Minister Anita Anand announced Ottawa would buy up to 76 million vaccine doses from Novavax in Maryland, as many as 38 million doses from Janssen.

Earlier that month, Canada ordered 20 million vaccine doses from Pfizer and 56 million doses from Moderna. It was also in talks with AstraZeneca.

Langley was also a principal investigator for a vaccine prospect being developed by China-based CanSino Biologics.

Kobinger wonders what happened to the federal funding Ottawa committed to that project, for testing centred in Halifax. It fell apart after China’s customs refused to allow CanSino’s candidate to ship to Canada for months.

READ MORE: Canada-bound vaccine blocked by China's customs was created with Canadian tech

Two of the prospective vaccines Canada is considering, developed by Pfizer and Moderna, are based on RNA, ribonucleic acid.

This is a new approach, which Kobinger said is interesting, but choosing two RNA vaccines is "taking a big risk."

Kobinger is working on his own vaccine project and is doing testing on vaccines developed by Medicago in Quebec City, as well as Inovio in Pennsylvania, which is developing a DNA (deoxyribonucleic acid) vaccine.

Medicago's plant-based vaccine uses virus-like particles, a technology employed in the successful HPV vaccine.

"That would be the first candidate I would look at," Kobinger said.

There is another Canadian vaccine project receiving federal funding at the University of Saskatchewan's VIDO-InterVac project.

The first priority in the task force's mandate calls for, "Prioritizing vaccine projects seeking support for activities in Canada."

Kobinger interprets this as meaning having vaccines produced in Montreal at the National Research Council's Biotechnology Research Institute, better known as NRC-BRI, where Ottawa has committed $125 million.

But he noted that Medicago now is the only vaccine developer in Canada with its own manufacturing facilities, and the capacity on its own to do testing through phases one to three.

Kobinger said he has been inundated with emails from others in the vaccine sector since his resignation from the task force became public. Some are nasty, but "an amazing number" are congratulating him.

"Some of my colleagues are really mad at me," he said.

Kobinger has also worked with the Singapore government in fighting COVID-19. Singapore is one of the East Asian countries that have controlled COVID-19 and have low death tolls. Kobinger said the reason Singapore has done so well is that they were prepared for a pandemic "five years ago," with the needed personal protective equipment, epidemiologists and other health experts ready to act.

Canada was not as well prepared, but Kobinger still has praise for Canada's chief public health officer Dr. Theresa Tam, who he says is doing "an incredible job."

Kobinger believes Canada, in addition to beating the current virus, has to prepare for the next pandemic.

"I've never seen Canada spending so much on science," he said.

But the mixed messages on masks, with public health authorities early-on advising against their use, now insisting that masks be worn, has confused people.

Prescribing transparency, Kobinger said public health should have said then, "We don't have enough masks."

Another critique is that in March, when there was awareness the virus was coming, Canadians travelled abroad during spring break, bringing the virus home with them.

Kobinger questions whether political leaders should be involved in the process, suggesting that a health authority, free of political considerations, might do a better job communicating the dangers and the prescriptions to defeat COVID-19 and future pandemics.

CORRECTION: A previous version of this story said Gary Kobinger led the Winnipeg team that developed a successful Ebola vaccine, instead of worked with the team.

https://www.eurekalert.org/pub_releases/2017-05/iavi-crw051717.php

PUBLIC RELEASE: 18-MAY-2017

Canadian researcher wins grant to explore promising HIV vaccine candidate

Canadian Institutes of Health Research funds Gary Kobinger to develop HIV vaccine in partnership with IAVI

INTERNATIONAL AIDS VACCINE INITIATIVE

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The Canadian Institutes of Health Research (CIHR) has awarded a new CA$3.99 million grant to Gary Kobinger of Université Laval for work on a vaccine to prevent HIV infection.

This three-year grant supports a scientific collaboration between Kobinger and the Design and Development Lab, a state-of-the-art research facility in Brooklyn, New York, operated by the International AIDS Vaccine Initiative (IAVI). Led by Kobinger and IAVI's Chris Parks, the respective Canadian and U.S. research teams aim to improve upon a promising HIV vaccine candidate designed by Parks, with the goal of advancing the candidate to clinical testing in human volunteers.

"We are encouraged by this support of Gary Kobinger's work and the prospects of his collaboration with IAVI's Design and Development Lab," said Mark Feinberg, IAVI CEO. "The innovative work of the Kobinger lab provides a great illustration of how creative and insightful science can advance the global response to emerging infectious diseases, and exemplifies ways in which the benefits of research progress in one disease area can be translated to another, in this case, from an understanding of how to develop an effective Ebola vaccine to the ongoing search for an AIDS vaccine."

Using a modified animal virus called Vesicular Stomatitis Virus (VSV) that does not cause disease in humans, the IAVI vaccine candidate delivers copies of a protein taken from HIV's surface. Once inside the body, the protein stimulates protective immune defenses against HIV infection. Studies in animals to date have yielded encouraging results.

Kobinger's team will further modify the IAVI candidate vaccine for greater efficacy and clinical testing. An expert in the Ebola virus, Kobinger helped develop the Ebola (rVSV-ZEBOV) vaccine, which to date has proven the most effective at preventing Ebola infection, and which also uses a VSV backbone.

"While there is still much work to be done, progress is being made towards finding a vaccine that will protect and eventually eliminate HIV/AIDS, one of the most serious health threats of our time," said Marc Ouellette, Scientific Director, Institute of Infection and Immunity, CIHR.

In 2016, more than 2 million people were newly infected with HIV around the world. Though antiretroviral treatment has prolonged life for millions, scientists concur that discovering a vaccine against HIV is the only way to end the AIDS epidemic. By combining their expertise, CIHR and IAVI hope to advance the field of HIV vaccine discovery and to build a more efficient vaccine-development model that can potentially be replicated in other disease areas.

Gary Kobinger is world-renowned for his work on the Ebola vaccine and treatment of those affected by the disease. More recently, while Chief of Special Pathogens with the Public Health Agency of Canada's microbiology laboratory in Winnipeg, Kobinger garnered international attention for his efforts to develop a treatment and vaccine against the Zika virus.

https://www.wbrz.com/news/canadian-company-announces-possible-coronavirus-vaccine-candidate/

Canadian company announces possible coronavirus vaccine candidate

March 13, 2020 10:08 PM in News
Source: WBRZ
By: WBRZ Staff
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CANADA- Medicago, a Quebec-based biopharmaceutical company, said it has produced a virus-like particle of the novel coronavirus, a first step to producing a vaccine.

The isolated particle will now undergo pre-clinical safety and efficacy.

Medicago said it could begin human trials as soon as July or August if approved by Health Canada and other agencies.

If the vaccine is successful, it could be available to the wider public by November 2021, CEO Bruce Clark said.

“These timelines are heavily reliant on what will give the regulators enough comfort to say this product is ready to go into human testing and then, secondly, for use in the broader public,” he said. “Our best guess right now is 18 months.”

Within just 20 days of obtaining the gene of the virus, Medicago researchers were able to produce a candidate vaccine, Clark said.

If given the green light, they could produce as many as 10 million doses per month out of their plant in North Carolina. The company currently has the resources to create about two million doses per month out of its plant in Quebec, according to Clark.

The biopharmaceutical company said they used a plant-based platform to grow vaccine proteins rather than chicken embryos, allowing for them to make the vaccine candidate quickly.

“We have a [seasonal flu vaccine] that is currently under review with Health Canada, and the [technology] we are using for this COVID vaccine is exactly the same, which has proven to be efficacious,” Clark explained.

The company’s ability to grow virus-like particles in plants has helped it produce vaccines in the past against influenza, including a vaccine candidate against H1N1 in 2009, Canada Research Chair Dawn Bowdish said.

“A virus-like particle looks like the outside of a virus but doesn’t have any of the genetic material on the inside,” said Bowdish, who also sits on the scientific advisory board of Medicago. “It doesn’t cause infection but looks really similar from your immune system’s perspective.”

Medical researchers around the world continue to race to develop a vaccine for COVID-19.

Medicago is also working to develop antibodies against SARS-CoV-2, the pathogen that causes COVID-19, in collaboration with Dr. Gary Kobinger, who helped develop the vaccine and treatment for Ebola.

Bowdish warns that most vaccine trials fail and in 17 years there was never a vaccine fully developed for the SARS outbreak.

"It’s unlikely there will be a miracle drug,” she said. “But Canada has had some incredible successes creating vaccines very quickly. We had huge success with the Ebola virus.”

Globally, roughly 20 coronavirus vaccine candidates are being developed by research institutes and drug-makers, including America’s Johnson & Johnson and France’s Sanofi SA, according to Reuters.

Two pharmaceutical companies in the U.S. are getting close to human testing.

Biotechnology company Moderna Inc. has announced plans to start a trial of a vaccine candidate on 45 people in Seattle this month. Testing on animals will proceed simultaneously with human trials, the NIH told Reuters.

Inovio Pharmaceuticals Inc., an immunotherapy company, is working with a company in China to develop a vaccine and expects to start human clinical trials in 30 U.S. volunteers in April.

Anthony Fauci, director of the National Institute of Allergy and Infectious Diseases, told the U.S. House Oversight and Reform Committee on Thursday that human trials for a vaccine would be possible “within a few weeks.”

“I want to make sure people understand, and I’ve said that over and over again, that does not mean we have a vaccine that we can use,” he said. “We mean it’s record time to get it tested. It’s going to take a year to a year and a half to really know if it works," Fauci said.

https://www.unige.ch/emerging-virus-symposium/archives/biography-speakers/kobinger/

SPEAKERS BIOGRAPHIES

Gary Kobinger PhD, Pr. Dr., Director of the Research Centre on Infectious Diseases, Faculty of Medicine at Université Laval, Adjunct Professor, Department of Pathology and Laboratory Medicine, University of Pennsylvannia, Adjunct Professor, Department of Medical Microbiology, Faculty of Medicine, University of Manitoba, Canada.

Gary Kobinger is a professor in the Department of Microbiology and Infectious Diseases and the Director of the Research Centre on Infectious Diseases, Faculty of Medicine at Université Laval. **He is also an adjunct professor in the Department of Pathology and Laboratory Medicine at the University of Pennsylvania,** and an associate professor in the Department of Medical Microbiology at the University of Manitoba. His work focuses on developing and testing new vaccine platforms and immune treatments against emerging and re-emerging viruses of high consequences to public health.

Gary was granted several awards including the Faculty Teaching Award from the University of Manitoba, the 2014 the Gully award, the 2015 scientists of the year award from Radio Canada (CBC) and the Order of Manitoba in 2016.

Between 2013-2016, 60 minutes, National Geographic, BBC Horizon, NOVA, France 2, PBS and others featured the leading work on successful treatment of Ebola infection that was developed by Gary and his team. In July 2016, Gary Kobinger initiated a new chapter of his career as the Director of the Centre de Recherche en Infectiologie de l'Université Laval, Quebec, Canada.

[Note - The University of Pennsylvania is a private Ivy League research university in Philadelphia, Pennsylvania.]

https://www.ancestry.com/discoveryui-content/view/16917113:62209?tid=&pid=&queryId=f79ca489abc2c7a3418b8d9de1f3a267&_phsrc=TmZ2&_phstart=successSource

[Gary Pignac Kobinger]

Mar 1969

2001 - combining AIDS and EBola to fight CF

https://www.newspapers.com/image/577553457/?terms=%22gary%20kobinger%22&match=1

2003 (july)

https://www.newspapers.com/image/203397343/?terms=%22gary%20kobinger%22&match=1

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Neal Koblitz (born 1948)

Wikipedia Neal Koblitz

See captured Wikipedia: [HK000F][GDrive]

Neal I. Koblitz (born December 24, 1948) is a Professor of Mathematics at the University of Washington. He is also an adjunct professor with the Centre for Applied Cryptographic Research at the University of Waterloo. He is the creator of hyperelliptic curve cryptography and the independent co-creator of elliptic curve cryptography.

Biography

Koblitz received his undergraduate degree from Harvard University in 1969. While at Harvard, he was a Putnam Fellow in 1968. He received his Ph.D. from Princeton University in 1974 under the direction of Nick Katz. From 1975 to 1979 he was an instructor at Harvard University.[2] In 1979 he began working at the University of Washington.

Koblitz's 1981 article "Mathematics as Propaganda" criticized the misuse of mathematics in the social sciences and helped motivate Serge Lang's successful challenge to the nomination of political scientist Samuel P. Huntington to the National Academy of Sciences.[4] In *The Mathematical Intelligencer*, Koblitz, Steven Weintraub, and Saunders Mac Lane later criticized the arguments of Herbert A. Simon, who had attempted to defend Huntington's work.

With his wife Ann Hibner Koblitz, he in 1985 founded the Kovalevskaia Prize, to honour women scientists in developing countries. It was financed from the royalties of Ann Hibner Koblitz's 1983 biography of Sofia Kovalevskaia. Although the awardees have ranged over many fields of science, one of the 2011 winners was a Vietnamese mathematician, Lê Thị Thanh Nhàn. Koblitz is an atheist.

2019 (July 13) Interview : Dr. Neal Koblitz: Independent Co-creator of Elliptic Curve Cryptography

Source article : [HW000I][GDrive]

Neal Koblitz and Victor Miller independently co-discovered elliptic-curve cryptography. In this interview with Dr. Koblitz, we learn about his life and passion for mathematics.

You might love math. You might love math enough that you've earned a degree for your studies. But do you love math enough to learn a Slavic language, travel behind the Iron Curtain during the height of the Cold War, and visit the only other Mathematics Center outside the US? Because that's how much Dr. Neal Koblitz loves math.

Dr. Neal Koblitz and Dr. Victor Miller independently co-discovered elliptic-curve cryptography (ECC), part of the mathematics that allows encrypted communication on the internet today. To learn what led these mathematicians to this breakthrough—and understand why these geniuses never patented their ideas—AAC's Mark Hughes spoke to Dr. Neal Koblitz.

If you're interested in the history of cryptography (especially during the Cold War) and want to hear what we can learn about modern cryptography, you may want to pull up a seat.

AAC: Tell us a little about your background and education.

NK: I have been interested in pure mathematics since I was a young child. When I went to college, I took courses in pure mathematics and a few courses in physics, but no engineering or other courses in practical application. My undergraduate work was at Harvard, and the department courses were very theoretical in nature. I never applied the math I was learning to real-life situations. I even learned calculus in a very abstract way.

I didn't actually learn about the applications of calculus until several years later when I started teaching it to students who were going into engineering, and the calculus I learned was completely inappropriate to those students. I had to teach the course in a very different way from the way I learned it.

In graduate school, I also studied an abstract area of mathematics: algebraic geometry in relation to number theory. That [area of mathematics] didn't give me any practical background—but, by happenstance, the subject of elliptic curves was central to my PhD thesis.

The same was true for the other fellow who came up with the ideas at the same time that I did. Victor Miller received his Ph.D. at Harvard at approximately

the same time I received my Ph.D. at Princeton in a similar area of mathematics; [we both were] doing a lot of work on elliptic curves.

But my background, and my early work into the 1980s, was in very theoretical mathematics. I had no grounding in applications.

AAC: When did your mathematics background shift from the theoretical realm to security applications?

NK: What changed my feeling about number theory was the invention of RSA cryptography (Rivest-Shamir-Adleman) in about 1977. That was the first important application of number theory to computer security. This really captured the imagination of a lot of people.

Many people who had previously thought of number theory as a purely theoretical area now saw that there might be some interesting work to be done in applications. Yet even in 1985, when I was thinking about using elliptic curves in cryptography, I had no idea that elliptic curve cryptography would ever be of great practical importance. (Author's note: Neither Dr. Koblitz nor Dr. Miller obtained patents for their work.)

AAC: I understand that you also spent some time in Russia. What compelled you to do that?

NK: When I was very young, during the Cold War between the United States and the Soviet Union, both countries were going all out to develop their scientific and technical capacity in a very competitive way. There was the race to the moon and other things like that.

The Soviet Union had at this point, in the 1960s, an extremely high level of theoretical mathematics. They were the only mathematical superpower besides the US. I realized at a young age that it would be really nice to be able to go over there and work with Soviet mathematicians, to learn how they do things. For this, I studied Russian intensively. In fact, as an undergraduate, I double-majored in Mathematics and Slavic Languages and Literature, which included Russian.

I was very serious about my studies and I started applying to study-abroad programs. In those days, it was much less common than now. I first went on a six-week summer language study program. My first trip to the Soviet Union was in 1967. After that, I went again as an independent tourist. Then, after I was married, my wife became very interested in Russian history, so we went again once I completed my PhD. We went several times in the 1970s and 1980s.

[By the 1970s,] at the advanced levels, there were some exchange programs. The National Academy of Sciences and the Soviet Union had an exchange program. So there were reasonable ways to get over there to spend a fair amount of time collaborating with Soviet specialists in theoretical mathematics. In 1985, I took my last long trip to the Soviet Union. That trip coincided with the starting of my work in cryptography.

The idea of elliptic-curve cryptography came in 1984. I, along with several other people received a pre-print, a rather preliminary-version, of an algorithm that Hendrik Lenstra developed to factor large integer numbers. If this algorithm was sufficiently fast, it could be a threat to RSA cryptography.

It turned out that this algorithm was not that much more efficient than other algorithms that existed at the time. [The algorithm] did not have a major impact on RSA, although it did have other uses in cryptography.

What fascinated us at the time is that Lenstra's algorithm used elliptic curves in a very fundamental way to attack a problem that, at first glance, didn't appear to involve elliptic curves—factoring integers. The fact that he was able to, in a clever way, use the geometry and number theory of elliptic curves to factor integers, was really intriguing. This was the first practical application of that sort of number theory, and I had that fresh in my mind when I went to the Soviet Union in 1984.

While I was in the Soviet Union, I thought that elliptic curves might be a really good basis for constructing a cryptosystem. I wrote about this idea to a mathematician I knew named Andrew Odlyzko, who worked at Bell Labs. Of the mathematicians I knew at the time, he was the person who most bridged the gap between pure and applied mathematics. He was knowledgeable about cryptography and had major work in pure number theory, so I mailed him this idea.

There was no email then, so replies were slow to come in through the mail. When I received his reply he said it was a good idea, and that Victor Miller of IBM had suggested the same thing that I was suggesting. He encouraged me, and I suspect Victor Miller, to pursue it. He saw no fallacies in basing a cryptosystem on what Victor and I suggested.

AAC: You obviously found your time in the USSR valuable. What were they doing differently and what were you gaining from the experience that you couldn't find in the United States?

NK: This [last trip to the Soviet Union] was planned before I really started working in cryptography. That trip was my last long visit—six months in 1985. No one in the Soviet Union worked openly on cryptography.

Even in the US in early years, there was a lot of controversy about whether people other than employees of the government working for the NSA should be permitted to study cryptography or permitted to publish their work on it. There were attempts by the NSA to restrict and create a [government] monopoly on cryptography research.

Ultimately, the people in the government that wanted to [restrict cryptography research] lost the battle. But in the Soviet Union, the governments did not want anybody outside government to be working on cryptography, and nobody did so. There was no way I could collaborate with anyone in the Soviet Union on cryptography, and in any case, I was just a beginner at that time.

During the time I was visiting the Soviet Union, I was still working in pure number theory and they had some of the top people in the world. One of them, named Yuri Manin, was one of the top Soviet specialists in number theory. I worked under his guidance for a couple of my trips—but when I came in 1985, he'd changed his interests to mathematical physics which I was not working or interested in.

In addition, since nobody was working in cryptography, my visit in 1985 was not as productive as my previous visits.

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In addition, since nobody was working in cryptography, my visit in 1985 was not as productive as my previous visits.

I'd gone over for a full year in 1974-1975, and six months in 1978. There, working in Moscow, it was really a unique experience because it was the biggest

concentration of mathematicians anywhere in the world at the time.

It's not that there weren't a very large number of mathematicians in the US, but they weren't all in one place. The US is much more decentralized. In the Soviet Union, as in many other countries, a disproportionate amount of scientific work is in the capital or one central location. This brings the top minds in a field all to one place. [In Moscow,] you could have a highly specialized seminar where 30, 40, 50 people attend whereas in the US that wouldn't be likely except at a large conference, but certainly not on a routine basis. So that was a thrilling experience... and stimulating.

Another thing I found both stimulating and intimidating was that the Soviet students were a lot more advanced than we were at the undergraduate level. In America, even the most serious math students normally wouldn't publish papers [as undergraduates] but in the Soviet Union the best students started publishing papers when they were juniors and seniors in college—and they were quite good papers.

When I went over there from Harvard and met Soviet students my age, they would ask me what the professors at Harvard were working on right now and I had no idea. I knew what courses they were teaching us students, but I had no idea what their research was. I felt pretty backward compared to [Russian] students and I thought I was pretty advanced for an American student.

AAC: You chose to get involved with the technical community in Vietnam. What can you tell us about that time period?

NK: My wife and I were very active in the student movement against the war in Vietnam. And a certain number of people who had been involved in the anti-war movement wanted to see if we could do something to support Vietnam because it was so badly destroyed during the war. Not just human suffering, but also economic and environmental destruction.

It was very hard for the people of Vietnam to recover from the war. There were some people in the West who were trying to in some ways help out. Vietnam was isolated because the US refused to have any diplomatic relations with Vietnam for about 20 years. So there were a lot of limitations and scientists in the West were in a position to help out.

A group of us called the US Committee for Scientific Cooperation with Vietnam encouraged their scientists with channels of communication to bring publications, send books, give guest lectures, and other things to help overcome the isolation the scientists were suffering from.

In the 1980s, my wife and I found out that in Vietnam, like other countries, there were big problems with the underrepresentation of women in the science and technical areas. On one visit, we talked to the head of the Hanoi Polytechnic Institute and we asked what proportion of the students are women—and they said 8%. We said, "That's terrible—we're going to help."

After consulting with some top Vietnamese scientists and mathematicians, we decided to start an annual prize for women in science, technology, and medicine that was coordinated with the Women's Union—the Kovalevskaia Fund. This has been going on for the 34 years since 1985 and has been very successful in terms of its visibility in Vietnam. It's very well publicized for a long period of time.

Until her retirement, the head of the committee that selects the winners in Vietnam was probably the most famous living woman in Vietnam. For that reason, the prize has gotten a lot of publicity and we've been encouraged to think that a lot of young women are very much aware of it and that encourages them to go into scientific and technical areas.

AAC: What should everyone know about the Kovalevskaia Prizes?

NK: The award is named after the 19th-century female Russian Mathematician Sofia Kovalevskaya. She was the first woman mathematician from any country to be a full member of the elite academic community of mathematicians. She was a full professor in Sweden and became a very active member of the European mathematical establishment.

While she was certainly not the first important woman mathematician, she was the first one to get full recognition for her accomplishments. That was surprising to a lot of people because Russian in the 19th century was considered somewhat backward country, so this woman was really a pioneer. There was no one in the west with her accomplishments in mathematics and other fields. There were so many restrictions against women in the universities of the world, hers was a unique achievement.

Quite a few of the Vietnamese best scientists studied in the Soviet Union, and there was a lot of exchange between the two countries. My wife wrote her doctoral thesis and a book on Kovalevskaya and we wanted to commemorate her through this prize.

AAC: Tell me about your views on the current field of cryptography. What does modern security need?

NK: The main weaknesses have to do with poor implementation, not using the cryptography that's available, or using it improperly.

Sometimes shortcuts are taken by companies that provide keys that lead to big problems later on: inadequate security, inadequate key length, outmoded systems, and so on. There is a lot of reluctance to change from the software you know.

A long time ago, it was recommended that either people change from RSA to ECC or to greatly increase their RSA key size. But I don't think everybody has done that yet even to this day. I think there are still a lot of weak keys lying around that could be attacked.

Now, in practice, weak cryptography does not necessarily cause huge amounts of problems because nobody with a lot of resources is really motivated to break into it. Sometimes people can get away with using fairly weak cryptography that if, say, the NSA or the Russian mafia or somebody were really determined they could break it. But if they are not interested, they have no reason to break into your system.

So if you're using fairly weak cryptography to protect your credit card numbers, you might find that the type of people who steal credit-card numbers don't have the resources to break it, and the people who do have the resources to break it simply don't care. So you can get away with weak cryptography if you're not a tempting target.

There are all sorts of problems in social engineering that frequently use phishing attacks and things like that. People use weak passwords and use the same passwords in different systems. People can use a password from a weak system to break into a strong system.

In all the cases I know of, breaches are not the result of weaknesses in the fundamental cryptography that's available, it's really because of the failure to use cryptography, failure to set it up correctly, taking shortcuts, social engineering, organizational problems, or system level problems.

But the basic types of cryptography that have been used—and that includes RSA, which is now 42 years old—is really sound.

You have to increase to quite large keys in RSA because of all the progress in factoring, but it's still basically a good system—so is ECC. The basic security of

RSA and ECC have really stood the test of time.

There have been many successful breaks in both, for example, the Sony disaster where the DRM was completely broken in 2011 because they used the same random number. They were supposed to choose a different random number for every signature and they just hardwired a single random number for everything and it made it absolutely trivial to break the system and find the secret keys.

The hack wasn't because ECC is a bad system, it was because there are certain things that are very important in implementing ECC and they ignored one of the crucial components. There are a lot of dangers that come from poor implementation and inadequate implementation where you are carefully locking the front door and meanwhile the back door is wide open.

Summary

The elliptic curve cryptography that Dr. Koblitz and Dr. Miller invented so many decades ago remains one of the best ways to protect data exchanges for embedded microcontrollers. "Hacks" do not break the mathematics of elliptic curve cryptography, at least not yet. But the hackers don't need to defeat the mathematics when it is so much simpler to look for poor implementations by a security engineer.

But it turns out that co-inventing ECC is not the only extraordinary thing about Dr. Neal Koblitz.

When some people see a problem, they say, "Someone should do something about that." When some people organize an award, they name it after themselves as a reminder to others of their magnanimity. When most people are interested in a subject, they go so far as visiting the local library to check out a book.

I hope you realize from this interview that Dr. Koblitz is not like most people.

Koblitz is a man of principle and action. He learned a new language so he could travel to a faraway place during the heights of the Cold War. He saw destruction after war and disrupted his life to help rebuild Vietnam. He created an award attributed to the greatness of another mathematician to raise the hopes and dreams of schoolchildren so that they, too, might one day be great.

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Housatonic

Dr. Marion Petronella Gerarda Koopmans (born 1956)

[HX0011][GDrive]

Wikipedia 🌐 Marion Koopmans

Born 21 September 1956 (age 64) [HK005R][GDrive]

Married to musician **Roger Neve** (https://www.nouveau.nl/artikel/powervrouwen/achter-de-schermen/zo-leuk-zijn-marion-koopmans-en-haar-man-ad)

Associations

- **Dr. Emmie de Wit (born 1980(est.))** (... research/publishing collaboration ...)
- **Dr. Vincent J. Munster (born 1973)** (... research/publishing collaboration ...)
- ...

Curriculum vitae (As of 2016) for Marion Koopmans

Source : [HL006Q][GDrive]

Saved Wikipedia (March 6, 2021) - Marion Koopmans

Source : [HK005R][GDrive]

- Alma mater Utrecht University

- Scientific career
- Institutions
- National Institute for Public Health and the Environment
- Erasmus MC
- Thesis : Diagnosis and epidemiology of torovirus infections in cattle (1990)

Maria Petronella Gerarda Koopmans[1] (born 21 September 1956) is a Dutch virologist who is Head of the Erasmus MC Department of Viroscience. Her research considers emerging infectious diseases, noroviruses and veterinary medicine. In 2018 she was awarded the Netherlands Organisation for Scientific Research (NWO) Stevin Prize. She serves on the scientific advisory group of the World Health Organization.

Early life and education

Koopmans studied veterinary medicine at Utrecht University.[2] She graduated from her Master's degree 1976, and remained there for her doctoral research. She earned two graduate degrees in veterinary medicine, and was officially registered as a veterinary microbiologist in 1977. She became increasingly interested in virology, and moved to the United States to specialise in viruses that can be transmitted between animals and humans.[3] From 1991 to 1994 Koopmans completed a fellowship at the Centers for Disease Control and Prevention, where she studied enteric viruses.[2] She joined the Virology Division, where she focussed on torovirus in cattle.

Research and career

Koopmans joined the National Institute for Public Health and the Environment (RIVM), where she was appointed Chief of Virology. She was involved with restructuring the department, and translating their research out of the laboratory and into practical applications for the control of infectious diseases. In 2006 she was appointed as Professor of Public Health at the Erasmus MC hospital in Rotterdam, which allowed her to strengthen the evidence-base of infectious disease research. Her laboratory makes use of basic scientific studies and epidemiology to understand the pathogenesis of infectious diseases, to establish their transmission routes and to translate this research base into diagnostic tools.

In 2003, when Influenza A virus subtype H7N7 spread around the Netherlands, Koopmans experienced her first infectious diseases outbreak. She was involved with the development of a coordinated public response, working with veterinarians and physicians to quickly develop public health policy. Her experiences in leading the response to the avian influenza outbreak prepared her for subsequent epidemics, including Middle East respiratory syndrome (MERS) and Zika virus. She was on the team that found, in 2013, that dromedary camels were an intermediate host for the virus that causes MERS.[4] She has since worked with Elmoubasher Farag to test camels for antibodies against MERS.[5]

During the Ebola outbreak in West Africa, Koopmans was responsible for the deployment of mobile laboratories in Sierra Leone and Liberia. Her Erasmus MC team trained volunteers to run testing and treatment programmes.[6] Koopmans is a member of the scientific advisory group (SAG) of the World Health Organization's R&D Blueprint project.[7] The project looks to understand what has gone wrong with epidemic and pandemic responses, and looks to build global disease preparedness.[7] As part of this effort, Koopmans analysed the public health response to the Zika virus. She identified three significant bottlenecks to an efficient response; including delays in regulatory approvals, challenges in the logistics of laboratory support and the absence of a structured timeline for funding.[8] Koopmans also leads the World Health Organization centre for Emerging Viral Diseases.[9] She is the scientific coordinator of COMPARE, a Horizon 2020 project that looks to develop next generation sequencing techniques for outbreak identification and mapping.[10] COMPARE look to contain and mitigate foodborne illnesses.[10]

In 2018 Koopmans was honoured by the Netherlands Organisation for Scientific Research (NWO) for her work on the transfer of viruses from animals to humans.[11] In 2019 she was awarded a $9 million NWO grant to establish a consortium, the Versatile Emerging infectious disease Observatory (VEO), that will study how changes in environment and travel will impact the risk of infectious diseases.[12][13] The diseases considered by VEO include vector-borne and zoonotic diseases, as well as hidden pathogens.[14] Koopmans wrote an article for Nature in which she called for a transformation in epidemic preparedness and response.[15] In the article, she quoted the World Health Organization's leader on health emergencies, “We are entering a very new phase of high-impact epidemics… This is a new normal,”[16] In 2019 Koopmans was elected member of the Royal Netherlands Academy of Arts and Sciences.[17]

From the start of 2020, Koopmans worked to understand SARS-CoV-2 and the spread of coronavirus disease.[3][18][19] In the Netherlands, Koopmans made an effort to test healthcare workers, and identified that there were large numbers of asymptomatic carriers amongst the dutch population.[20] With her team at the Erasmus MC, Koopmans looked to understand the efficacy of antibody tests.[21][22] Alongside leading the scientific response, Koopmans was also involved with scientific communication about the virus, making use of social media and media interviews to share up-to-date research with the public.[23][24] Koopmans said that as humans occupied more of planet earth, the number of dangerous diseases transmitted from animals to humans would increase.[25] She was appointed to the coronavirus disease advisory panel of the European Commission.[25] The panel served to develop public health recommendations to the member states during the pandemic.[25]

On 02 December 2020, Koopmans was appointed to the 13 member team of the World Health Organization's investigation into the origins of COVID-19.[26]

Awards and honours

- 2004 Dutch Association for Infectious Diseases WRO Goslings Prize [27]
- 2017 Technical University of Denmark Honorary Doctorate Honorary Doctor [28]
- 2018 Netherlands Organisation for Scientific Research Stevin Prize[11]

Selected publications

- Fouchier, R.A.M. (Ron) Schneeberger, P.M. (Peter) Rozendaal, F.W. (Frans) Broekman, J.M. (Jan) Kemink, S.A. (Stiena) Munster, V.J. (Vincent) Rimmelzwaan, G.F. (Guus) Schutten, M. (Martin) Doornum, G.J.J. (Gerard) van Koch, G. (Guus) Bosman, A. (Arnold) Koopmans D.V.M., M.P.G. (Marion) Osterhaus, A.D.M.E. (Albert) Kuiken, T. (Thijs) (3 February 2004). "Avian influenza A virus (H7N7) associated with human conjunctivitis and a fatal case of acute respiratory distress syndrome". Proceedings of the National Academy of Sciences of the United States of America. 101 (5): 1356–61. doi:10.1073/pnas.0308352100. OCLC 929966166. PMC 337057. PMID 14745020.
- Newell, Diane G.; Koopmans, Marion; Verhoef, Linda; Duizer, Erwin; Aidara-Kane, Awa; Sprong, Hein; Opsteegh, Marieke; Langelaar, Merel; Threfall, John; Scheutz, Flemming; der Giessen, Joke van (30 May 2010). "Food-borne diseases — The challenges of 20years ago still persist while new ones continue to emerge". International Journal of Food Microbiology. Future Challenges to Microbial Food Safety. 139: S3–S15. doi:10.1016/j.ijfoodmicro.2010.01.021.

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- "The Novel Coronavirus Outbreak: What We Know and What We Don't". Cell. 180 (6): 1034–1036. 19 March 2020. doi:10.1016/j.cell.2020.02.027. ISSN 0092-8674. PMC 7154513. PMID 32078801.

2020 (Jan 4) - StatNews : "Experts search for answers in limited information about mystery pneumonia outbreak in China"

By Helen Branswell Jan. 4, 2020 / Source : [HM001F][GDrive]

The mysterious and growing cluster of unexplained pneumonia cases in the Chinese city of Wuhan has infectious disease experts parsing limited public statements from Chinese authorities for clues to what is happening.

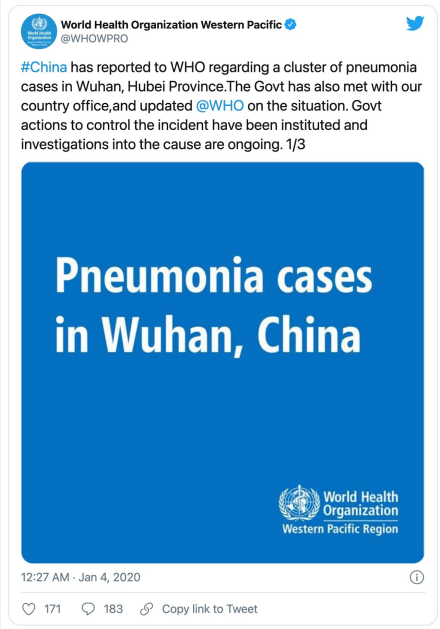
With machine-translated reports that the outbreak might be caused by a new virus, and perhaps even a new coronavirus — the family of viruses that produced both SARS and MERS — watchers are hoping that Chinese authorities will provide additional information soon.

"I think we need to give them a couple of days but I want to hear something from a credible source on the investigations that are ongoing," said Marion Koopmans, director of the department of virology at Erasmus Medical Center in Rotterdam, the Netherlands.

As of Friday, health authorities in Wuhan reported 44 cases, a big jump from the 27 reported on Tuesday. Eleven of the 44 were seriously ill, the Wuhan Municipal Health Commission said, though **there were no reported deaths to date**. The health of 121 close contacts of the cases was being monitored. **The infections are linked to a large seafood market where it is believed some exotic animals were also sold for consumption.**

The World Health Organization has said little about the outbreak beyond that it is in close contact with China authorities on the issue.

"We're closely monitoring the situation in Wuhan and are in active communication with our counterparts in China," WHO's regional office for the Western Pacific Region, which includes China, said on Twitter. "We've activated our incident management system across the three levels of WHO (country office, regional office, HQ) and can launch a broader response, if needed."



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The agency noted that China "has extensive capacity to respond to public health events and is responding proactively and rapidly to the current incident in Wuhan — isolating patients, tracing close contacts, cleaning up the market, and searching for the cause and for additional cases."

Ralph Baric, a coronavirus expert at the University of North Carolina, agreed that China has deep expertise in virology. Baric has a collaborative grant with some researchers in Wuhan to study emerging coronaviruses, and has visited the facilities there.

"Wuhan is the epicenter for a lot of virology research in China. They have state of the art BSL3 and BSL4 facilities and world-class facilities to do anything that you would want to do on new emerging infectious diseases. So it's occurring in the right spot," he said.

BSL is shorthand for the bio-safety level designation of a laboratory; level 3 and level 4 are the labs in which the most dangerous pathogens are worked on.

Social media platforms — both in China and outside it — have been abuzz with discussion of the Wuhan outbreak, with some commentators arguing the lack of a clear answer by now is reminiscent of China's behavior during the 2002-2003 SARS outbreak.

But Baric disagreed, saying China's approach to infectious disease outbreaks has evolved considerably since SARS, an event for which it was harshly criticized globally.

"The situation in China between 2003 and 2020 is night and day," he said. "They have many of the best virologists in the world there that are working on this. And my gut feeling is we're going to see a showcase of what they've accomplished in 20 years."

Koopmans and Baric have a number of questions they'd like answered — "very soon," Koopmans said — to help assess the severity of the situation.

Knowing whether Chinese scientists have identified the cause of the illness is top of the list. Whether it is indeed a new virus — and what viral family it belongs to — is right up there too.

During the SARS outbreak, it took a full month from when the WHO tasked a global network of 11 laboratories to find the cause of the outbreak before confirmation was received that a new coronavirus was the culprit. The SARS coronavirus probably originated in bats, but civet cats — wild animals eaten as a delicacy in southern China — were the virus' route to people.

Technology has improved a lot since then, said Baric, who said multiplexing PCR — polymerase chain reaction testing — and RNA-Seq, which looks for evidence of the RNA of pathogens in clinical samples, could make finding the culprit a much quicker job this time round.

But even with the new technology, finding the cause of pneumonia can be tricky. With some infections, by the time a person is evidently ill, their immune system has cleared away most of the causative agent. The symptoms of illness are actually the effect the cascade of immune system weapons unleashed on tissues that had been infected.

"There's a window there of viral detection of the viral nucleic acid," Baric said.

"If most of these initial patients were caught late in infection, when the more severe disease symptoms came on, they may not have any acute cases and it may be very difficult. Very low levels of nucleic acid to chase to discover the disease."

Koopmans noted finding the cause may be complicated by the fact that pneumonia is common and can be caused by many pathogens. If authorities started looking for pneumonia cases after realizing there was a problem in Wuhan, some of the cases they found might have been unrelated to the actual event.

Both are keen to know if there is any spread of the illness between people, which would be worrying. Wuhan health authorities have said there was no human-to-human transmission. But unless they know what is causing the illness, how long the illness takes to develop, and have developed a test that can detect mild cases, it is not clear that can be ruled out at this point.

"I don't find the comments [about human transmission] that I see spread throughout the internet as credible — unless they know what it is," Baric said.

The fact that health officials in Wuhan closed and decontaminated the seafood market — there is video of this happening on social media — is suggestive that an animal virus had spilled over into people, he added.

The statement from the Wuhan health board said that influenza, avian influenza, and adenovirus infections — the latter can cause serious respiratory illness — have been ruled out.

Because of SARS, attention is focusing on coronaviruses, though both Koopmans and Baric noted a number of different virus families could cause respiratory outbreaks.

But coronaviruses have shown themselves to be adept at jumping from animal hosts to people, sometimes establishing themselves as human pathogens. There are four human coronaviruses that are common causes of cold-like illness. Those viruses were formerly animal viruses — experts can tell by comparing their genetic sequences to animal coronaviruses. When the four started infecting humans is not clear in most cases.

Some coronaviruses have jumped from animals to people on multiple occasions — the MERS virus in the Arabian Peninsula is an example — but haven't acquired the ability to spread easily from person to person.

Sometimes the damage can be significant.

In late November of 2002, people in the southern Chinese province of Guangdong started to become ill from unexplained pneumonias. The WHO began hearing rumors of the illness, but Chinese authorities played it down.

But in late February, travelers from a number of countries — Vietnam, Singapore, Canada among them — stayed on the same floor in a Hong Kong hotel as a doctor from China who had been looking after some of the pneumonia cases. He was ill, and he infected multiple other hotel guests, seeding the new infection across Southeast Asia and to Toronto.

Transmission of the new disease was stopped by the summer of 2003, but in its short history SARS — short for severe acute respiratory syndrome — infected more than 8,000 people and killed nearly 800.

Baric said he's hopeful Chinese scientists will have figured out what is going on in Wuhan and will report on it soon.

"If the number of cases keeps increasing, then it becomes more and more of a global public health threat," he said. "The chance of [infected] people slipping through the screening platforms for international travel or travel elsewhere in China become greater as long as they don't know what the pathogen is."

2020 (Jan 24) - New England Journal of Medicine Article : "A Novel Coronavirus Emerging in China — Key Questions for Impact Assessment"

HOW WAS THIS AVAILABLE SO SOON ?

Source : [HP005B][GDrive]

AUTHORS : **Dr. Vincent J. Munster (born 1973)** , Marion Koopmans, D.V.M., Neeltje van Doremalen, Ph.D., Debby van Riel, Ph.D., **Dr. Emmie de Wit (born 1980(est.))**

(BTW.. who is **Neeltje van Doremalen, Ph.D.** ? Another [Rocky Mountain Labs] member from outside the USA ...) Who is pushing vaccines on US citizens with US taxpayer dollars.

The NEW ENGLAND JOURNAL of MEDICINE

Perspective

A Novel Coronavirus Emerging in China — Key Questions for Impact Assessment

Vincent J. Munster, Ph.D., Marion Koopmans, D.V.M., Neeltje van Doremalen, Ph.D., Debby van Riel, Ph.D., and Emmie de Wit, Ph.D.

A novel coronavirus, designated as 2019-nCoV, emerged in Wuhan, China, at the end of 2019. As of January 24, 2020, at least 830 cases had been diagnosed in nine countries: China, Thailand, Japan, South Korea, Singapore, Vietnam, Taiwan, Nepal, and the United States. Twenty-six fatalities occurred, mainly in patients who had serious underlying illness.[1] Although many details of the emergence of this virus — such as its origin and its ability to spread among humans — remain unknown, an increasing number of cases appear to have resulted from human-to-human transmission. Given the severe acute respiratory syndrome coronavirus (SARS-CoV) outbreak in 2002 and the Middle East respiratory syndrome coronavirus (MERS-CoV) outbreak in 2012,[2] 2019-nCoV is the third coronavirus to emerge in the human population in the past two decades — an emergence that has put global public health institutions on high alert.

China responded quickly by informing the World Health Organization (WHO) of the outbreak and sharing sequence information with the international community after discovery of the causative agent. The WHO responded rapidly by coordinating diagnostics development; issuing guidance on patient monitoring, specimen collection, and treatment; and providing up-to-date information on the outbreak.[3] Several countries in the region as well as the United States are screening travelers from Wuhan for fever, aiming to detect 2019-nCoV cases before the virus spreads further. Updates from China, Thailand, Korea, and Japan indicate that the disease associated with 2019-nCoV appears to be relatively mild as compared with SARS and MERS.

After initial reports of a SARS-like virus emerging in Wuhan, it appears that 2019-nCoV may be less pathogenic than MERS-CoV and SARS-CoV (see table). However, the virus's emergence raises an important question: What is the role of overall pathogenicity in our ability to contain emerging viruses, prevent large-scale spread, and prevent them from causing a pandemic or becoming endemic in the human population? Important questions regarding any emerging virus are, What is the shape of the disease pyramid? What proportion of infected people develop disease? And what proportion of those seek health care? These three questions inform the classic surveillance pyramid (see diagram).[4] Emerging coronaviruses raise an additional question: How widespread is the virus in its reservoir? Currently, epidemiologic data that would allow us to draw this pyramid are largely unavailable (see diagram).

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Table 1. Pathogenicity and Transmissibility Characteristics of Recently Emerged Viruses in Relation to Outbreak Containment.

Virus	Case Fatality Rate (%)	Pandemic	Contained	Remarks
2019-nCoV	Unknown*	Unknown	No, efforts ongoing	
pH1N1	0.02–0.4	Yes	No, postpandemic circulation and establishment in human population	
H7N9	39	No	No, eradication efforts in poultry reservoir ongoing	
NL63	Unknown	Unknown	No, endemic in human population	
SARS-CoV	9.5	Yes	Yes, eradicated from intermediate animal reservoir	58% of cases result from nosocomial transmission
MERS-CoV	34.4	No	No, continuous circulation in animal reservoir and zoonotic spillover	70% of cases result from nosocomial transmission
Ebola virus (West Africa)	63	No	Yes	

* Number will most likely continue to change until all infected persons recover.

Clearly, efficient human-to-human transmission is a requirement for large-scale spread of this emerging virus. However, the severity of disease is an important indirect factor in a virus's ability to spread, as well as in our ability to identify those infected and to contain it — a relationship that holds true whether an outbreak results from a single spillover event (SARS-CoV) or from repeated crossing of the species barrier (MERS-CoV).

If infection does not cause serious disease, infected people probably will not end up in health care centers. Instead, they will go to work and travel, thereby potentially spreading the virus to their contacts, possibly even internationally. Whether subclinical or mild disease from 2019-nCoV is also associated with a reduced risk of virus spread remains to be determined.

Much of our thinking regarding the relationship between transmissibility and pathogenicity of respiratory viruses has been influenced by our understanding of influenza A virus: the change in receptor specificity necessary for efficient human-to-human transmission of avian influenza viruses leads to a tropism shift from the lower to the upper respiratory tract, resulting in a lower disease burden. Two primary — and recent — examples are the pandemic H1N1 virus and the avian influenza H7N9 virus. Whereas the pandemic H1N1 virus — binding to receptors in the upper respiratory tract — caused relatively mild disease and became endemic in the population, the H7N9 virus — binding to receptors in the lower respiratory tract — has a case-fatality rate of approximately 40% and has so far resulted in only a few small clusters of human-to-human transmission.

It is tempting to assume that this association would apply to other viruses as well, but such a similarity is not a given: two coronaviruses that use the same receptor (ACE2) — NL63 and SARS-CoV — cause disease of different severity. Whereas NL63 usually causes mild upper respiratory tract disease and is endemic in the human population, SARS-CoV induced severe lower respiratory tract disease with a case-fatality rate of about 11% (see table). SARS-CoV was eventually contained by means of syndromic surveillance, isolation of patients, and quarantine of their contacts. Thus, disease severity is not necessarily linked to transmission efficiency.

Even if a virus causes subclinical or mild disease in general, some people may be more susceptible and end up seeking care. The majority of SARS-CoV and MERS-CoV cases were associated with nosocomial transmission in hospitals,[5] resulting at least in part from the use of aerosol-generating procedures in patients with respiratory disease. In particular, nosocomial super-spreader events appear to have driven large outbreaks within and between health care settings. For example, travel from Hong Kong to Toronto by one person with SARS-CoV resulted in 128 SARS cases in a local

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China responded quickly by informing the World Health Organization (WHO) of the outbreak and sharing sequence information with the international community after discovery of the causative agent. The WHO responded rapidly by coordinating diagnostics development; issuing guidance on patient monitoring, specimen collection, and treatment; and providing up-to-date information on the outbreak.3 Several countries in the region as well as the United States are screening travelers from Wuhan for fever, aiming to detect 2019-nCoV cases before the virus spreads further. Updates from China, Thailand, Korea, and Japan indicate that the disease associated with 2019-nCoV appears to be relatively mild as compared with SARS and MERS.

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Even if a virus causes subclinical or mild disease in general, some people may be more susceptible and end up seeking care. The majority of SARS-CoV and MERSCoV cases were associated with nosocomial transmission in hospitals, 5 resulting at least in part from the use of aerosol-generating procedures in patients with respiratory disease. In particular, nosocomial super-spreader events appear to have driven large outbreaks within and between health care settings. For example, travel from Hong Kong to Toronto by one person with SARS-CoV resulted in 128 SARS cases in a local hospital. Similarly, the introduction of a single patient with MERSCoV from Saudi Arabia into the South Korean health care system resulted in 186 MERS cases.

The substantial involvement of nosocomial transmission in both SARS-CoV and MERS-CoV outbreaks suggests that such transmission is a serious risk with other newly emerging respiratory coronaviruses. In addition to the vulnerability of health care settings to outbreaks of emerging coronaviruses, hospital populations are at significantly increased risk for complications from infection. Age and coexisting conditions (such as diabetes or heart disease) are independent predictors of adverse outcome in SARS-CoV and MERS-CoV. Thus, emergingviruses that may go undetected because of a lack of severe disease in healthy people can pose significant risk to vulnerable populations with underlying medical conditions.

A lack of severe disease manifestations affects our ability to contain the spread of the virus. Identification of chains of transmission and subsequent contact tracing are much more complicated if many infected people remain asymptomatic or mildly symptomatic (assuming that these people are able to transmit the virus). More pathogenic viruses that transmit well between humans can generally be contained effectively through syndromic (fever) surveillance and contact tracing, as exemplified by SARS-CoV and, more recently, Ebola virus. Although containment of the ongoing Ebola virus outbreak in the Democratic Republic of Congo is complicated by violent conflict, all previous outbreaks were contained through identification of cases and tracing of contacts, despite the virus's efficient person-to-person transmission.

We currently do not know where 2019-nCoV falls on the scale of human-to-human transmissibility. But it is safe to assume that if this virus transmits efficiently, its seemingly lower pathogenicity as compared with SARS, possibly combined with super-spreader events in specific cases, could allow large-scale spread. In this manner, a virus that poses a low health threat on the individual level can pose a high risk on the population level, with the potential to cause disruptions of global public health systems and economic losses. This possibility warrants the current aggressive response aimed at tracing and diagnosing every infected patient and thereby breaking the transmission chain of 2019-nCoV.

Epidemiologic information on the pathogenicity and transmissibility of this virus obtained by means of molecular detection and serosurveillance is needed to fill in the details in the surveillance pyramid and guide the response to this outbreak. Moreover, the propensity of novel coronaviruses to spread in health care centers indicates a need for peripheral health care facilities to be on standby to identify potential cases as well. In addition, increased preparedness is needed at animal markets and other animal facilities, while the possible source of this emerging virus is being investigated. If we are proactive in these ways, perhaps we will never have to discover the true epidemic or pandemic potential of 2019-nCoV.

Dr. Hilary Koprowski (born 1916)

Dr. Hilary Koprowski developed an effective polio vaccine before Jonas Salk and Albert Sabin. It was used overseas with good results, but it was never approved for use in the United States. Credit... Yale Joel/Time Life Pictures, via Getty Images
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Wikipedia Hilary Koprowski

- **Born** 5 December 1916 in Warsaw, Congress Poland, Russian Empire [HK006N][GDrive]
- **Died** 11 April 2013 (aged 96), in Wynnewood, Pennsylvania, U.S. [HK006N][GDrive]

ASSOCIATIONS

- **Dr. Jonas Edward Salk (born 1914)** (...)
- **Dr. Alice E. Moore (born 1908)** (Moore helped provide mice and virus for Koprowski's 1952 "LATENT OR DORMANT VIRAL INFECTIONS" / NOTE Page 971 Footnote, and the credit to **Dr. Alice E. Moore (born 1908)** : (PDF : [HP005Y][GDrive] / For this page, see [HP0061][GDrive]) : *"The author expresses his grateful appreciation to **Dr. Alice E. Moore**, of the Sloan-Kettering Institute for Cancer Research, for the mice-bearing tumors; and to Dr. Stanley Stellar, of the Department of Neurosurgery, New York School of Medicine, for the human tumors."*)
- **Dr. Albert Bruce Sabin (born 1906)** ([**Dr. Albert Bruce Sabin (born 1906)**]'s early work with attenuated-live-virus polio vaccine was developed from attenuated polio virus that Sabin had received from **Dr. Hilary Koprowski**. Source : [HK006N][GDrive])
- (...)

Saved Wikipedia (April 12, 2021) : "Hilary Koprowski"

Source : [HK006N][GDrive]

- Nationality Polish
- Citizenship Poland, United States
- Known for Polio vaccine
- Spouse(s) : Irena Koprowska (m. 1938)
- Children: 2
- Awards : Albert B. Sabin Gold Medal(2007)
- Scientific career Fields : Virology

Hilary Koprowski (5 December 1916 – 11 April 2013) was a Polishvirologist and immunologist active in the United States who demonstrated the world's first effective live polio vaccine. He authored or co-authored over 875 scientific papers and co-edited several scientific journals.

Koprowski received many academic honors and national decorations, including the Belgian Order of the Lion, the French Order of Merit and Legion of Honour, Finland's Order of the Lion, and Order of Merit of the Republic of Poland.

Koprowski was the target of accusations in the press related to the "oral polio vaccine AIDS hypothesis", which posited that the AIDS pandemic originated from live polio vaccines such as Koprowski's. This allegation has long been contested by claims that the HIV-1 virus was introduced to humans before his polio-vaccine trials were conducted in Africa.[1] The case was settled out of court with a formal apology from Rolling Stonemagazine.[2]

Life

Hilary Koprowski was born in Warsaw to an educated, assimilated Jewish family.[3][4] His parents met in 1906 when Paweł Koprowski (1882–1957) was serving in the Imperial Russian Army, and moved to Warsaw soon after their marriage in 1912.[5] His mother Sonia (née Berland; 1883–1967), was a dentist from Berdichev.[6][7] Hilary Koprowski attended Warsaw's Mikołaj Rej Secondary School, and from age twelve he took piano lessons at the Warsaw Conservatory. He received a medical degree from Warsaw University in 1939. He also received music degrees from the Warsaw Conservatory and, in 1940, from the Santa Cecilia Conservatory in Rome. He adopted scientific research as his life's work, but never gave up music and composed several musical works. In July 1938, while in medical school, Koprowski married Irena Grasberg.[8]

In 1939, after Germany's invasion of Poland, Koprowski and his wife, likewise a physician, fled the country, using Koprowski family business connections in Manchester, England. Hilary went to Rome, where he spent a year studying piano at the Santa Cecilia Conservatory; while Irena went to France, where she gave birth to their first child, Claude Koprowski, and worked as an attending physician at a psychiatric hospital.[9]

As the invasion of France loomed in 1940, Irena and the infant escaped from France via Spain and Portugal —where the Koprowski family reunited — to Brazil, where Koprowski worked in Rio de Janeiro for the Rockefeller Foundation. His field of research for several years was finding a live-virus vaccine against yellow fever. After World War II the Koprowskis settled in Pearl River, New York, where Hilary was hired as a researcher for Lederle Laboratories, the pharmaceutical division of American Cyanamid. Here he began his polio experiments, which ultimately led to the creation of the first oral polio vaccine. Koprowski served as director of the Wistar Institute, 1957–91, during which period Wistar achieved international recognition for its vaccine research and became a National Cancer Institute Cancer Center.[citation needed]

Koprowski died on April 11, 2013, aged 96,[10][11] in Wynnewood, near Philadelphia, Pennsylvania, of pneumonia.[12] He and his wife are buried at West Laurel Hill Cemetery, Southlawn Section, Lot 782, Bala Cynwyd, Pennsylvania.

Hilary Koprowski and his late wife are survived by two sons, Claude (born in Paris, 1940) and Christopher (born 1951). Claude Koprowski is a retired physician. Christopher Koprowski is a physician certified in two specialties, neurology and radio-oncology; he is the former chair of the department of radiation oncology at Christiana Hospital in Delaware.[13]

Polio vaccine

While at Lederle Laboratories,[10] Koprowski created the world's first polio vaccine, based on an orally administered attenuated polio virus. In researching a potential polio vaccine, he had focused on live viruses that were attenuated (rendered non-virulent) rather than on killed viruses (the latter became the basis for the injected vaccine subsequently developed by Jonas Salk).

Koprowski viewed the live vaccine as more powerful, since it entered the intestinal tract directly and could provide lifelong immunity, whereas the Salk vaccine required booster shots. Also, administering a vaccine by mouth is easy, whereas an injection requires medical facilities and is more expensive.[citation needed]

Koprowski developed his polio vaccine by attenuating the virus in brain cells of a cotton rat, Sigmodon hispidus, a New World species that is susceptible to polio.[10] He administered the vaccine to himself in January 1948 and, on 27 February 1950, to 20 children at Letchworth Village, a home for disabled persons in Rockland County, New York. Seventeen of the 20 children developed antibodies to polio virus — the other three apparently already had antibodies — and none of the children developed complications. Within 10 years, the vaccine was being used on four continents.

[**Dr. Albert Bruce Sabin (born 1906)**]'s early work with attenuated-live-virus polio vaccine was developed from attenuated polio virus that Sabin had received from Koprowski.

Rabies Vaccine

In addition to his work on the polio vaccine, Koprowski (along with Stanley Plotkin and Tadeusz Wiktor) did significant work on an improved vaccine against rabies.[11] He developed the HDCV rabies vaccine in the 1960s at the Wistar Institute. It was licensed for use in the United States in 1980.[14]

Affiliations

Koprowski was president of Biotechnology Foundation Laboratories, Inc, and head of the Center for Neurovirology at Thomas Jefferson University. In 2006 he was awarded a record 50th grant from the National Institutes of Health. He authored or co-authored over 875 scientific papers and co-edited several scientific journals. He served as a consultant to the World Health Organization and the Pan American Health Organization.

Honors/Legacy

Koprowski received many honorary degrees, academic honors, and national decorations, including the Order of the Lionfrom the King of Belgium, the French Order of Merit for Research and Invention, a Fulbright Scholarship, and appointment as Alexander von Humboldt Professor at the Max Planck Institute for Biochemistry in Munich. In 1989 he received the San Marino Award for Medicine and the Nicolaus Copernicus Medal of the Polish Academy of Sciences in Warsaw.

Koprowski received numerous honors in Philadelphia, including the Philadelphia Cancer Research Award, the John Scott Award and, in May 1990, the most prestigious honor of his home city, the Philadelphia Award. He was a Fellow of the College of Physicians of Philadelphia, which in 1959 presented him with its Alvarenga Prize.

Koprowski was a member of the National Academy of Sciences, the American Academy of Arts and Sciences, the New York Academy of Sciences, and the Polish Institute of Arts and Sciences of America.[15] He held foreign membership in the Yugoslav Academy of Sciences and Arts, the Polish Academy of Sciences, the Russian Academy of Medical Sciences, and the Finnish Society of Sciences and Letters.

On June 3, 1983, Koprowski received an honorary doctorate from the Faculty of Medicine at Uppsala University, Sweden.[16]

On 22 March 1995, Koprowski was made a Commander of Finland's Order of the Lion by Finland's president. On 13 March 1997 he received the Legion d'Honneur from the French government. On 29 September 1998 he was presented by Poland's president with the Grand Cross of Poland's Order of Merit.

On 25 February 2000 Koprowski was honored with a reception at Philadelphia's Thomas Jefferson University celebrating the 50th anniversary of the first administration of his oral polio vaccine. At the reception, he received commendations from the United States Senate, the Pennsylvania Senate, and Pennsylvania Governor Tom Ridge.

On 13 September 2004, Koprowski was presented with the Pioneer in NeuroVirology Award by the International Society for NeuroVirology at the 6th International Symposium on NeuroVirology held in Sardinia. On 1 May 2007, Koprowski was awarded the Albert Sabin Gold Medal by the Sabin Vaccine Institute in Baltimore, Maryland.[17]

In 2014 Drexel University established the Hilary Koprowski Prize in Neurovirology in honor of Dr. Koprowski's contributions to the field of neurovirology. The prize is awarded annually in conjunction with the International Symposium on Molecular Medicine and Infectious Disease, which is sponsored by the Institute for Molecular Medicine and Infectious Disease (IMMID) within the Drexel University College of Medicine. During the Symposium, the prize recipient is asked to deliver an honorary lecture.

AIDS accusation

Main article: Oral polio vaccine AIDS hypothesis

British journalist Edward Hooper publicized a hypothesis that Koprowski's research into a polio vaccine in the Belgian Congo in the late 1950s might have caused AIDS.

The OPV AIDS hypothesis has, however, been rejected within much of the medical community and is contradicted by at least one article in the journal Nature, which claims the HIV-1 group M virus originated in Africa 30 years before the OPV trials were conducted.[1] However, the field work within the study was limited to just 34 samples all taken within the immediate vicinity of Kisangani. Despite this the journal Science refuted Hooper's claims, writing: "[I]t can be stated with almost complete certainty that the large polio vaccine trial... was not the origin of AIDS."[18]

Koprowski rejected the claim, based on his own analysis. In a separate court case, he won a regretful clarification,[19] and a symbolic award of $1 in damages, [20] in a defamation suit against Rolling Stone, which had published an article repeating similar unproven allegations.[21] A concurrent defamation lawsuit that Koprowski brought against the Associated Press was settled several years later; the settlement's terms were not publicly disclosed.[20]

Koprowski's original reports from 1960 to 1961 detailing part of his vaccination campaign in the Belgian Congo are available online from the World Health Organization.[22][23][24]

See also

- [**Dr. Albert Bruce Sabin (born 1906)**]
- Discredited HIV/AIDS origins theories
- [**Dr. Jonas Edward Salk (born 1914)**]
- [...]
- Polio vaccine
- Wistar Institute

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External links

Hilary Koprowski

Wikimedia Commons has media related to Hilary Koprowski.

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2013 (April 20, 2021): NYTimes : "Hilary Koprowski, Who Developed First Live-Virus Polio Vaccine, Dies at 96"

By Margalit Fox , April 20, 2013 / Source : [HN01L3][GDrive]

It was a brew to rival any in “Macbeth.” The main ingredients were rat brain and a fearsome, carefully cultivated virus.

In his laboratory in Pearl River, N.Y., 20 miles north of Manhattan, Dr. Hilary Koprowski macerated the ingredients in an ordinary kitchen blender one January day in 1948. He poured the result — thick, cold, gray and greasy — into a beaker, lifted it to his lips and drank. It tasted, he later said, like cod liver oil.

With that sip, Dr. Koprowski, a virologist who died on April 11 at 96, inoculated himself against polio, years before the vaccines of Jonas Salk and Albert Sabin.

Dr. Koprowski was one of the world’s foremost biomedical researchers, helping usher in a spate of innovations, including a safer, less painful and more effective rabies vaccine that remains widely used.

But his most noteworthy innovation — developing the first viable vaccine against polio and testing it successfully on humans — is far less well known. It has long been eclipsed in public memory by the triumphs of Salk, whose injectable vaccine was introduced in 1955, and Sabin, whose oral vaccine was introduced in stages in the early 1960s.

“Koprowski’s was the first serious scientific attempt at a live-virus polio vaccine,” said the historian David M. Oshinsky, whose 2005 book, “Polio: An American Story,” chronicles the race to pre-empt the disease. “Jonas Salk is a god in America, Albert Sabin’s got a ton of publicity, and Hilary Koprowski, who really should be part of that trinity, is the forgotten man.”

From the beginning, a live-virus vaccine like Dr. Koprowski’s was the most coveted weapon in the war on polio. Such vaccines can be administered orally and are far cheaper than injections. And because they involve live viruses, which can spread within a community, they can also confer immunity on others. (The Salk vaccine, made from killed viruses, cannot.)

But there was a grave catch: for a live polio vaccine to be safe, the viruses would have to be sufficiently weakened — attenuated, in medical parlance — so they would produce antibodies without inducing polio’s neurological effects.

On the evidence, the Koprowski vaccine did precisely this. But though it was given to patients overseas with good results, it was never approved for use in the United States.

Dr. Koprowski was the last of the three great virologists who stalked polio at midcentury; Sabin died in 1993, Salk in 1995. His death raises a large retrospective question: Why, in an era when a polio vaccine was the most urgently sought grail in American public health, did his go unused?

The answer, gleaned from period news accounts, histories of the war on polio and interviews with Dr. Koprowski’s associates, illuminates the delicate balance of risk and reward — and the uneasy confluence of science, politics and personality — that can inform the development of a drug.

Dr. Koprowski, who spent more than 30 years as the director of the Wistar Institute, a biomedical research center in Philadelphia, was widely described as a titanic, sometimes polarizing figure: a refugee from Nazi-occupied Poland, he was a trained concert pianist, a fluent speaker of seven languages, a connoisseur of food and wine, and a collector of old master paintings.

“He was the single most forceful, dominant, charismatic person I have ever met in my life,” said Dr. Paul A. Offit, the chief of infectious diseases at Children’s Hospital of Philadelphia, who worked under Dr. Koprowski at Wistar in the 1980s.

That outsize personality, combined with Dr. Koprowski’s outsider status — he spent part of his career in industry at a time when academia had far more prestige — may have played a role in the fate of his vaccine, his biographer, Roger Vaughan, and Professor Oshinsky said in interviews.

Others, including Dr. Offit, say the outcome was based on science alone. But all agree that Dr. Koprowski, by demonstrating that a live-virus polio vaccine could be safe and effective, paved the way for the [**Dr. Albert Bruce Sabin (born 1906)**] vaccine.

And it was [**Dr. Albert Bruce Sabin (born 1906)**]'s vaccine, even more than Salk’s, that brought about the near-eradication of polio worldwide.

“Sometimes,” Dr. Koprowski says tellingly in Mr. Vaughan’s biography, “Listen to the Music: The Life of Hilary Koprowski” (2000), “I introduce myself as the developer of the Sabin poliomyelitis vaccine.”

Hilary Koprowski was born in Warsaw on Dec. 5, 1916. He attended the Warsaw Conservatory and Warsaw University simultaneously, earning a medical degree from the university in 1939.

Late that year, after the German invasion of Poland, Dr. Koprowski, who was partly of Jewish extraction, left the country with his family. He studied music in Rome before moving to Rio de Janeiro, where he worked for the Rockefeller Foundation’s Yellow Fever Research Service.

In 1944, Dr. Koprowski arrived in the United States and joined Lederle Laboratories, a pharmaceutical concern in Pearl River. It was there, in the late 1940s, that he began his work on polio.

By the mid-20th century, the United States was reporting 20,000 to 60,000 new cases of polio a year, most affecting children. In 1938, President Franklin D. Roosevelt, who had contracted polio as an adult, established what became the March of Dimes, which would finance the Salk and [**Dr. Albert Bruce Sabin (born 1906)**] vaccines.

“What you have to understand about Koprowski was that he was the leading polio researcher from private industry,” Professor Oshinsky said. “Had he come out of the university and had he been funded by the March of Dimes, I think he would have been a favorite of the virology community.”

But he seemed, at least at times, to roil that community, already skittish about polio.

In the 1930s, researchers had tested two vaccines made from killed polio viruses, in principle safer than live ones. But as it transpired, the viruses had not been killed entirely, and the vaccines paralyzed some children.

As a result, the idea of testing a polio vaccine — much less a live one — on humans was almost beyond contemplation by midcentury.

The first successful live-virus vaccine of any kind was for yellow fever, developed in the late 1930s by the virologist Max Theiler; for his work, he received the 1951 Nobel Prize in Physiology or Medicine.

The method Theiler devised for attenuating the virus involved injecting it into a series of nonhuman embryo cells, including those of mice and chickens. In the late ’40s, Dr. Koprowski wondered whether a similar method could be used to attenuate polio.

Because the cotton rat, a genus found in the Americas, was susceptible to polio, Dr. Koprowski injected the virus into cotton rat brains.

“The thinking is this,” Dr. Offit explained: “As the virus gets better and better at growing in, in this case, a rodent, it would become less and less capable of growing or reproducing itself in people.”

The result was the grim gray cocktail Dr. Koprowski drank in the lab that day in 1948. He suffered no ill effects.

Two years later, Dr. Koprowski received a call from Letchworth Village, a home for mentally disabled children in Rockland County, N.Y. Fearing an outbreak of polio, the home asked him to vaccinate its children.

In February 1950, in the first human trial of a live polio vaccine, Dr. Koprowski vaccinated 20 children there. At the time, approval from the federal

government was required to market drugs but not to test them.

Seventeen of the children developed antibodies against polio. (The other three turned out to have the antibodies already.) None of the children experienced complications.

Describing his trial at a scientific meeting the next year, Dr. Koprowski met with astonished displeasure. In an exchange recounted in Professor Oshinsky's book, Sabin, who was present, accosted him, saying: "Why did you do it? Why? Why?"

Sabin's objection was not to Dr. Koprowski's testing the vaccine on cognitively disabled children — that was common practice then. It was to his having tested a live polio vaccine on any human being at all.

"Koprowski replied that someone had to take the next step," Professor Oshinsky wrote, "so it might as well be him."

In 1958, Dr. Koprowski administered his vaccine to nearly a quarter million patients in the Belgian Congo. "It appears to have been completely safe, almost 100 percent effective," Time magazine reported.

(His work in the Congo came to renewed attention in the 1990s after two publications — Rolling Stone magazine and "The River," a book by the British writer Edward Hooper — asserted that Dr. Koprowski had unwittingly spread H.I.V., the virus that causes AIDS, by injecting patients there with contaminated polio vaccines. The assertions have since been discredited.)

In 1960, after several live attenuated polio vaccines, including Sabin's and Dr. Koprowski's, had been studied, the United States surgeon general, Leroy E. Burney, announced the approval of Sabin's. Tests on monkeys had shown it to be somewhat more attenuated, and therefore somewhat safer, than Dr. Koprowski's.

"He believed they exaggerated the deficiencies and the dangers of his vaccine," Professor Oshinsky said of Dr. Koprowski. "Hilary Koprowski's rebuttal to Sabin would have been, 'If you had started your vaccine when I started, in the late 1940s, there would be tens of thousands of kids who are not paralyzed now.' "

At Wistar, which he led from 1957 to 1991, Dr. Koprowski is credited with transforming the place from a moribund Victorian institution into a first-class research facility. Several important vaccines were created there under his stewardship, including one for rubella, developed in the 1960s by Stanley Plotkin.

Besides his own work on the improved rabies vaccine, which he helped develop in the '60s, Dr. Koprowski was known for significant early work on the therapeutic use of monoclonal antibodies.

Occurring naturally in the body, these antibodies help the immune system attack particular kinds of cells. Made in quantity in the laboratory, they can be used to combat a range of infectious diseases, as well as certain cancers.

Dr. Koprowski, who held faculty positions at the University of Pennsylvania, with which Wistar is associated, was later affiliated with Thomas Jefferson University in Philadelphia.

Dr. Koprowski's wife, the former Irena Grasberg, whom he married in 1938, died last year. He is survived by two sons, both of whom received his vaccine as children without complications — Christopher, who confirmed his father's death, at his home in Wynnewood, Pa., and Claude — and by five grandchildren and three great-grandchildren.

Asked publicly about the lack of recognition for his polio vaccine, Dr. Koprowski was courtly, saying the corresponding lack of hoopla freed him to focus on pure research.

His private feelings differed.

"I think that there was a great deal of hurt and jealousy on his part that he never got credit for what he discovered, and for the path that he blazed for others to follow," Professor Oshinsky said. "He pretty much told me that when I interviewed him."

Dr. Koprowski received many laurels, including the French Legion of Honor. In 2007, his work was recognized with a signal honor, presented annually for distinguished contributions to vaccinology.

The award is known as the Albert B. Sabin Gold Medal.

1952 Research - "LATENT OR DORMANT VIRAL INFECTIONS. Annals of the New York Academy of Sciences, 54(6), 963–976."

Koprowski, H. (1952). LATENT OR DORMANT VIRAL INFECTIONS. Annals of the New York Academy of Sciences, 54(6), 963–976. doi:10.1111/j.1749-6632.1952.tb39972.x / PDF : [HP005Y][GDrive]

NOTE Page 971 Footnote, and the credit to **Dr. Alice E. Moore (born 1908)** : (PDF : [HP005Y][GDrive] / For this page, see [HP0061][GDrive]) : *"The author expresses his grateful appreciation to **Dr. Alice E. Moore**, of the Sloan-Kettering Institute for Cancer Research, for the mice-bearing tumors; and to Dr. Stanley Stellar, of the Department of Neurosurgery, New York School of Medicine, for the human tumors."*

LATENT OR DORMANT VIRAL INFECTIONS

By Hilary Koprowski
Lederle Laboratories Division, American Cyanamid Company, Pearl River, New York

The purpose of this paper is to review some of our knowledge concerning latent virus infections, in the hope that such a survey of the distribution, variety and behavior of these infections may facilitate the study of the neoplastic processes in man and in domestic and laboratory animals. I shall purposely avoid giving a definition of latency, since, if a broad, ecological view of the phenomenon of survival of parasites in nature is taken, it becomes clear that the stabilization of the host-parasite relationship cannot be based only upon the multiplication of virus at the expense of destroyed cells. It is much more probable that, in many instances, a latent virus persists in its host-cell as an innocuous symbiont, with a capacity to shed virulent variants only in rare cases.[1] Thus, if the broader view is adopted, a paper on latency of viruses should really encompass all known viral infections of plants, animals and insects. This would obviously be much beyond the scope of this presentation. Therefore, following a brief discussion of the methods of detection of dormant viral infection, examples of only a few such infections will be described in detail and the others mentioned briefly.

Detection of Latent Infection. An inapparent infection may become apparent and cause signs of disease in its host whenever the delicate equilibrium between parasite and host is upset. This may be caused by a change in environmental conditions, by a disturbance of the physiologic equilibrium of the host, or by any other factor or factors of a nature as yet undetermined.

More commonly, a dormant virus infection may be detected by a careful examination of either animal or plant tissues, the cells of which are suspected to contain these viruses. If the latter is visible and morphologically identifiable, then such methods as electron microscopy can be used successfully for that purpose. In other instances, transplantation of the material into other animal or plant species, with resulting signs of infection, may constitute proof of latency. The demonstration of a specific antigen in the suspected tissue by serological tests may sometimes be the means of detecting an inapparent viral infection.

Finally, if the latent virus is able to evoke an immune reaction in its host, detection of specific antibodies and/or resistance to reinfection with the homologous agent may be considered as an indication of persistence of the virus in inapparent form in the host.

Obviously, these methods and techniques are neither exact nor exhaustive but they cannot be improved until our knowledge of the intricate mechanism of infection of living cells with viruses becomes more comprehensive. There seems to be little doubt, however, that many instances of latent infection escape notice because of the inadequacy of existing methods of detection. These reservations should be borne in mind during the ensuing discussion.

Page 963 : [HP005Z][GDrive]

Latent Viral Infections of Mammals. In a discussion of latency of viruses, herpes simplex and rabies infections represent two contrasting problems in the extreme. Herpes simplex is a classical example of latent infection in man. The virus is dormant in the majority of human beings[2] and there are many flaring factors which may provoke the quiescent virus to appear. They may be listed as fever (induced or due to infection), cold, menstruation, exposure to sun, and, last but not least, emotional upset.[3]

Conversely, our knowledge of possible latency in rabies is very slight, and it is obvious that an answer based solely on observations in man would be inadequate. It should be pointed out, however, that circumstances surrounding the transition from the inapparent to the apparent infection in rabies may tend to incriminate certain factors. Intensive Pasteur treatment, for instance, was associated with shorter incubation periods of the disease[4] and emotional shock was thought to precipitate an attack of rabies in an exposed individual.[5] One case, that of a young boy bitten by a rabid dog, possibly merits detailed description. After exposure, the boy received

TABLE 1
RECHALLENGE OF HAMSTERS WITH STREET STRAIN OF RABIES VIRUS

Experiment number		*Mortality ratio of hamsters exposed to street virus and injected with dilutions of antisera*				
		1:2	1:8	1:32	1:64	1:128
35	Original exposure	1/10	3/10	4/10	4/10	9/10
	Rechallenge*	3/9	2/7	0/6	0/6	0/1
35a	Original exposure	0/9	1/10	6/10	5/10	8/10
	Rechallenge*	2/9	0/9	0/4	0/5	0/2

* Five months later.

the full course of antirabies vaccine treatment and showed no signs of illness. Five months later, he became ill with bacterial pneumonia and while recovering began to exhibit signs of involvement of the central nervous system and later died of rabies.[6] Although coincidence of a prolonged incubation period cannot be ruled out in this case, the circumstantial evidence seems to demonstrate that the upset of the rabies virus-host cell equilibrium was caused by a febrile disease.

Evidence of viral latency in herpes simplex and rabies infections may be obtained in laboratory animals. Rabbits remained well, after either intramuscular or intravenous inoculation with herpes virus, but subjection to either anaphylactic or histamine shock invariably precipitated a severe encephalitis in the inoculated animals, and herpes virus could be demonstrated in the brain tissue. Characteristic pathological changes observed in the shocked animals were lacking in the control animals.[7, 8]

In the case of rabies, injection of Syrian hamsters seemed to provide a possible clue to the mechanism of its latency. When exposure to street virus was followed 24 hours later by administration of rabies antiserum, the

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[Pages 965 - 970]

the environment. It may be observed that symptoms of infection with potato mosaic virus are suppressed at temperatures above 24°C., whereas the virus becomes manifest at temperatures below 20°C.[50] A completely reverse situation exists in the case of potato yellow dwarf virus, which will remain masked at temperatures below 16°C., but which will flare up at temperatures of 24–28°C.[51] The same conditions were observed in the case of cabbage black ring virus.[52] Holmes' masked strain of tobacco-mosaic virus was isolated from infected stems treated for various times at 34–35°C.[53] Since then, it has also been discovered that tobacco mosaic virus remains in a masked form at temperatures below 7–10°C.[54]

Occurrence of Viruses in the Course of Propagation of Tumor Tissue in Mice and Eggs. The occurrence of viruses in mice, hamsters and eggs during passages of several types of neoplastic tissue, which I will now describe, will sound as unbelievable to you as it does to me. It will be presented, however, for the sake of argument and with the hope that other laboratories will try their hand at similar experiments.

During the past three years, many attempts were made to propagate transplantable mouse tumors in the central nervous tissue of mice following the technique described years ago by Shirai.[55] In almost all instances, tumors normally propagated by the subcutaneous route were grown in the brain tissue of mice. The mice inoculated intracerebrally usually showed signs of involvement of the central nervous system on the 9th to 14th day after implantation and, on autopsy, growing neoplasms were demonstrated by histopathological examination, and on bioassay. Some of the tumors underwent passage by this technique through 50 to 80 generations. In certain instances, however, in the course of subjecting some of the tumors to passage, mice became sick three to five days after inoculation with brain tissue material stemming from the preceding passage. Careful investigation of the resulting passage indicated that a filterable agent was causing the sickness of the animals,[56] and the study was extended in order to learn more about the nature of the phenomenon.

In TABLE 7 data are summarized covering the isolation of the viruses recovered in the course of these tumor studies.* The Ridgeway osteogenic sarcoma obtained from an outside laboratory was transplanted subcutaneously in AKM mice through eight passages, and tumor suspensions then were injected intracerebrally into Swiss albino mice. These animals became sick four days later, and the recovered virus was tentatively identified, on the basis of preliminary results of neutralization tests, as being related to Ilheus virus. In order to exclude the possibility that a latent virus might have been picked up from the host mice during the eight passages in the laboratory, another attempt at intracerebral passage of neoplastic tissue was made, using fresh tumors immediately upon receiving them from the outside laboratory. These tumors were injected directly into mice by the intracerebral route. Again, the same virus was isolated.

In the case of a Wagner osteogenic sarcoma, filterable agents were isolated

* The author expresses his grateful appreciation to Dr. Alice E. Moore, of the Sloan-Kettering Institute for Cancer Research, for the mice-bearing tumors; and to Dr. Stanley Stellar, of the Department of Neurosurgery, New York School of Medicine, for the human tumors.

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after two or three subcutaneous transplants, followed by one or two intracerebral passages. At this point, it became quite obvious that a plausible explanation of this phenomenon could be that a latent viral infection persisted in the mice of our laboratory, and that intracerebral inoculation of such a fast growing tissue as neoplasm made the infection manifest. In the next attempt, therefore, a suspension of Wagner osteogenic sarcoma propagated through four mouse passages by subcutaneous transfer was inoculated into the yolk sac of six-day-old chick embryos. The embryos were incubated at 37°C. and harvested three days later. A ten per cent embryonic suspension was injected intracerebrally into mice and underwent passage

TABLE 7
OCCURRENCE OF VIRUSES DURING PASSAGES OF TRANSPLANTABLE MOUSE TUMORS

Tumor		*Isolation of virus*			
			Number of passages preceding isolation		
Type	*Number of subcutaneous transplants in mice**	*Host species*	*Mouse i.c.*	*Hamster i.c.*	*Chick embryo y.s.*
Ridgeway osteogenic sarcoma	8 None	Mouse Mouse	1 1		
Wagner osteogenic sarcoma	2 3 4	Mouse Mouse Chick embryo	2 1 None		10
Patterson lymphosarcoma	13 13	Mouse Chick embryo	6 & 5 6		5
	19	Chick embryo	None		5
Spontaneous† mouse tumor	None	Chick embryo	None		5
MC-1	Numerous	Hamster	27	7	

* At Lederle Laboratories.
† Mammary adenocarcinoma.

into the yolk sac of six-day-old embryos. No signs of disease were observed in either the embryos or the mice injected with embryonic tissue, representing the first through the ninth egg passages. Embryos injected with the tenth embryo passage, however, died 48 to 72 hours after inoculation, and the inoculation of an emulsion of these into mice yielded a virus identical with that isolated by means of mouse passage. This virus, on the basis of preliminary neutralization tests, was found to be related to the West Nile, Japanese B, St. Louis, Ilheus group of viruses.

Similar results were obtained with the Patterson lymphosarcoma, except that in two passage series, the tumor was transplanted for 13 and 18 passages by the subcutaneous route in the AKM strain of mice before a filterable agent could be isolated in eggs or in mice injected intracerebrally. When

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1952... Testing polio vaccine on institutionalized children ?

Live youtube link > https://www.youtube.com/watch?v=92seQHDohho

Institutionalized Children - The Medical Community's Guinea Pigs of Choice during the 20th Century / Oct 30, 2013

Rock Ethics Institute : This is part of the Rock Ethics Institute's Research Ethics Lecture Series.

Saved MP4 : [HV00GX][GDrive] / Image : [HV00GY][GDrive]

Though often cited as our most precious resource and dearest commodity, children -- particularly those institutionalized in orphanages, mental asylums, and warehouses for the "feebleminded" -- were often sought out by physicians and medical researchers as test subjects for experimentation. Even a cursory examination of 20th century medical research will illuminate numerous examples of children -- some only days old -- being incorporated in a wide range of medical research. Many prominent investigators in search of practical treatments and vaccines, exploring the impact of radiation and psychotropic drugs, or new surgical procedures like lobotomy, routinely found their way to poorly funded and under-staffed state institutions housing the nation's most vulnerable citizens.

Thomas Eugene Kurtz (born 1928)

Wikipedia Thomas E. Kurtz

Born February 22, 1928 (age 92) , Oak Park, Illinois, U.S. [HK002I][GDrive]

Saved Wikipedia (Sep 1 2020) - Thomas E. Kurtz

Link - [HK002I][GDrive]

Education Princeton University, Knox College (Mathematics)

Known for *BASIC*, *TRUE BASIC*

Awards

1974 *AFIPS Pioneer Award*

1991 *IEEE Computer Science Pioneer Award*

Thomas Eugene Kurtz (born February 22, 1928) is a retired Dartmouth professor of mathematics and computer scientist, who along with his colleague John G. Kemeny[1] set in motion the then revolutionary concept of making computers as freely available to college students as library books were, by implementing the concept of time-sharingat Dartmouth College. In his mission to allow non-expert users to interact with the computer, he co-developed the BASIC programming language (Beginners All-purpose Symbolic Instruction Code) and the Dartmouth Time Sharing System during 1963 to 1964.

A native of Oak Park, Illinois, United States, Kurtz graduated from Knox College in 1950, and was awarded a Ph.D. degree from Princeton University in 1956, where his advisor was John Tukey, and joined the Mathematics Department of Dartmouth College that same year, where he taught statistics and numerical analysis.

In 1983, Kurtz and Kemeny co-founded a company called True BASIC, Inc. to market True BASIC, an updated version of the language.

Kurtz has also served as Council Chairman and Trustee of EDUCOM, as well as Trustee and Chairman of NERComP, and on the Pierce Panel of the President's Scientific Advisory Committee. Kurtz also served on the steering committees for the CONDUIT project and the CCUC conferences on instructional computing.

In 1974, the American Federation of Information Processing Societies gave an award to Kurtz and Kemeny at the National Computer Conference for their work on BASIC and time-sharing.[2] In 1991, the Computer Society honored Kurtz with the IEEE Computer Pioneer Award[3] and in 1994 he was inducted as a Fellow of the Association for Computing Machinery.[4]

Early life and education

In 1951, Kurtz' first experience with computing came at the Summer Session of the Institute for Numerical Analysis at University of California, Los Angeles. His interests have included numerical analysis, statistics, and computer science ever since. He graduated in 1950 when he obtained his bachelor's degree majoring in mathematics and in 1956, at the age of 28, he went on to acquire his PhD from Princeton University. His thesis was on a problem of multiple comparisons in mathematical statistics.[5] Kurtz composed his first computer program in 1951 while working with computers at UCLA in the institute of numerical analysis. He performed this feat just after finishing grad school and one year into his tuition at Princeton University.

Dartmouth

In 1963 to 1964, Kurtz and Kemeny developed the first version of the Dartmouth Time-Sharing System, a time-sharing system for university use, and the BASIC language.

From 1966 to 1975, Kurtz served as Director of the Kiewit Computation Center at Dartmouth,[6] and from 1975 to 1978, Director of the Office of Academic Computing. From 1980 to 1988 Kurtz was Director of the Computer and Information Systems program at Dartmouth, a ground-breaking multidisciplinary graduate program to develop IS leaders for industry. Subsequently, Kurtz returned to teaching full-time as a Professor of Mathematics, with an emphasis on statistics and computer science.

BASIC

As part of the Dartmouth Time-Sharing System, Kemeny and Kurtz created the BASIC programming language. The very first BASIC program ran on May 1, 1964 at 4 a.m., and neither Kemeny nor Kurtz thought of this as a start to something grand. They merely hoped it would help students learn something about the computers they were using. **The pair made certain that their invention was immediately dispersed to the public and made no real money from it.** Dartmouth College copyrighted BASIC; however it made BASIC available and free to anyone wanting to use it. The name for the language originated from Kurtz's wish to have a simple acronym that meant something as well. Kurtz states that, "We wanted a word that was simple but not simple-minded, and BASIC was that one."[7] **BASIC along with the books published on it earned a lot of positive feedback, f**or example: "This second edition of Basic Programming gives a thorough description of BASIC, which is useful not only for the beginner, but also for the more experienced programmer."; " My overall evaluation of BASIC programming is that it is ideal for the individual who wishes to program with a minimum of effort and of equal value for group or classroom instruction." [8]

The theme that BASIC was for the average computer user is stressed by Kurtz. In an open letter he reiterates upon past statements that BASIC was invented to give students a simple programming language that was easy to learn, as all the current languages of the time were dedicated to professionals. He then went on to say that BASIC was for people who did not want to dedicate their lives to programming.[9] The repetition of this idea by Kurtz accentuates that even through all of his success the language he wrote would remain implemented for the masses and not just specialists.

BASIC standards were created in the 1980s for the ECMA, and ANSI with their versions being released in 1986 and 1987 respectively.[10] **BASIC popularity skyrocketed in 1975 after a pair of youngsters in a Harvard dormitory, Bill Gates and Paul Allen, created a version of BASIC that was viable on one of the earliest personal computers. G**ates and Allen's version became the most prominent iterations of BASIC.

Influence

The road to BASIC itself was a long one. **Kemeny and Kurtz had forged DARSIMCO – Dartmouth Simplified Code – Dartmouth's inaugural attempt at making a computing language in 1956; however DARSIMCO soon became obsolete when the language FORTRAN manifested itself**. In 1962 Kemeny and a Dartmouth undergraduate, Sidney Marshall, created the language DOPE, Dartmouth Oversimplified Programming Experiment, which was a direct predecessor of BASIC. **DOPE itself was little used, and Kurtz preferred trying to implement successful languages such as FORTRAN and ALGOL.** Kurtz's experience with Dartmouth ALGOL 30 for the LGP-30 convinced him that devising subsets of these languages was not quite practical, and this led him to adopt Kemeny's notion of creating a new language entirely.

Critics

Although BASIC was widely regarded as a success, many computing professionals thought it was a poor choice for larger and more complicated programs. Larger programs became confusing and messy when they used the "GO TO" statement to jump from one line of a program to another. A further criticism of the original language was that it was unstructured, which made it difficult to split programs into separate parts to improve readability. BASIC not being structured also hindered the ability to debug and modify parts of the code, and this limited its use by larger companies. Hence it largely remained a language used for only smaller programs.[11]

True BASIC

In 1983, in response to a proliferation of "Street BASICs," a group of graduating Dartmouth students persuaded Kemeny and Kurtz to offer the Dartmouth version of the language as a commercial product. The first offering of their company, True Basic, Inc., was based on Dartmouth BASIC 7, which featured modern programming constructs such as "IF..THEN..ELSE, DO..LOOP and EXIT DO".[12] The company described its product as "Simple. Elegant. Powerful. True BASIC." Upon Kemeny's advice, True BASIC was not limited to a single OS or computer system. "Today versions of True BASIC are available for DOS, Mac OS, Windows, Unix, and Linux systems".[13] When Kurtz retired from Dartmouth College in 1993, he continued to develop and maintain True Basic.

See also

- New Hampshire Historical Marker No. 261: BASIC: The First User-Friendly Computer Programming Language

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Bio on Thomas E. Kurts - from IEEE / Computer History Museum

Source : [HI0018][GDrive]

Born February 22, 1928, Oak Park, Ill.; with John Kemeny, developer of the programming language and system BASIC.

Education: BA, Knox College, *1950*; PhD, mathematics/statistics, Princeton University, 1956.

Professional Experience: Dartmouth College: instructor, mathematics, 1956-1958, assistant professor, 1958-1963, associate professor, 1963-1966; professor, 1966-1993, director, Computing Center, 1959-1975, director, Kiewit Computation Center, 1966-1975, director, Office of Academic Computing, 1975-1978, vice chair and chair, Program in Computing and Information Science, 1979-1988; member, Pierce Panel, President's Science Advisory Council in Higher Education, 1965-1967; chairman, Council, EDUCOM, 1973-1974.

Honors and Awards: AFIPS Pioneer Award, 1974; DSc (Hon.), Knox College, 1987; IEEE Computer Science Pioneer Award, 1991.

Kurtz received his PhD in statistics from Princeton in 1956, his first contact with computing having occurred in 1951 at the summer session of the Institute for Numerical Analysis (INA) at UCLA in the summer of 1951. He joined the Dartmouth College Mathematics Department (chaired by John G. Kemeny) in 1956 as an instructor. Besides teaching statistics and numerical analysis, he served as the Dartmouth contact to the New England Regional Computer Center (NERComP), which was supported in part by IBM at MIT. In 1959 Dartmouth obtained an LGP-30 computer, and Kurtz became the first director of Dartmouth's computing center.

Around 1962, Kurtz and John G. Kemeny began jointly to supervise the design and development of a time-sharing system for university use. **The idea to use time-sharing to reach all Dartmouth students came from John McCarthy who, around 1961, advised, "you guys ought to do time-sharing."** This effort culminated in 1964 in the first Dartmouth Time-Sharing System (DTSS). Although o**ther languages such as Fortran and Algol were provided, the principal language was BASIC, which was deliberately designed to be easy to learn and easy to use.**

Subsequently, **Kurtz served as the director of the Kiewit Computation Center from 1966 to 1975, and as director of the Office of Academic Computing from 1975 to 1978.** In 1979 he and Stephen J. Garland organized a professional master's program in Computer and Information Systems, funded in part with a grant from IBM. Upon termination of the CIS program in 1988, Kurtz returned to teaching. He retired from Dartmouth College in 1993.

Outside of Dartmouth, Kurtz served as council chairman and trustee of EDUCOM, as trustee and chairman of NERcomP, and on the so-called Pierce Panel of the President's Advisory Committee. **He also served on the steering committee for two NSF- and ARPA-supported activities**, and was the chair of the first CCUC conference on instructional computing. **He helped form the American National Standards committee X3J2, which developed the ANSI standard for BASIC, serving as chair from 1974 to 1985,** and as secretary from 1990 to the present. He is a member of the ISO committee SC22/WG8, concerned with the international standard for BASIC, and served as its convener from 1987 to 1993.

In 1983, he joined John Kemeny and three former Dartmouth students in forming True BASIC, Inc., whose purpose was to develop quality educational software and a platform-independent BASIC compiler based on the ANSI standard. He continues to be associated with this company, and serves as its secretary/ treasurer.

QUOTATION

"If Fortran is the lingua franca, then certainly it must be true that BASIC is the lingua playpen."

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In 1994 Kurtz was made a Fellow of the ACM (MRW, 2012). Portrait replaced (MRW, 2013)

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A B C D E F G H I J K L M N O P Q R S T U V W X Y Z

PEOPLE (by last name / then D.o.B.)

- Sir Patrick Playfair **Laidlaw** (born 1881)
- Dr. Robert Salvatore **Lanciotti** (born 1960)
- Dr. Alexander Duncan **Langmuir** (born 1910)
- Lyndon Hermyle **LaRouche** Jr. (born 1922)
- Dr. Marcelle C. **Layton** (born 1958)
- Dr. Joshua **Lederberg** (born 1925)
- Herbert Henry **Lehman** (born 1878)
- Frank Thomson **Leighton** (born 1956)
- Daniel Mark **Lewin** (born 1970)
- Dr. Paul Adin **Lewis** (born 1879)
- Dr. Walter Ian **Lipkin** (born 1952)
- Richard Green **Lugar** (born 1932)

PLACES / COMPANIES / OTHER

- J. **Lehrenkrauss** Corporation
- **Level** 3 Communications, Incorporated
- **Litton** Bionetics
- **Lumen** Technologies, Incorporated

Sir Patrick Playfair Laidlaw (born 1881)

https://www.thelancet.com/pdfs/journals/lanres/PIIS2213-2600(13)70237-6.pdf

2013-11-the-lancet-historical-profile-sir-patrick-laidlaw-img-profile.jpg / https://drive.google.com/file/d/1dpnMnGlQYcv0LkUZDAUic2J50tGGL5pj/view?usp=sharing

Wikipedia 🌐 Patrick Laidlaw

Saved Wikipedia (March 6, 2021) - Patrick Laidlaw

https://en.wikipedia.org/wiki/Patrick_Laidlaw

2021-03-06-wikipedia-org-patrick-laidlaw

https://drive.google.com/file/d/1DvS3UzUv6KdmREbPA99nhITc2lSkZEvh/view?usp=sharing

Sir Patrick Playfair Laidlaw FRS FRCP (28 September 1881 – 19 March 1940) was a Scottish virologist.

Biography

Laidlaw was born in Glasgow, the son of Robert Laidlaw, M.D., at that time Superintendent of the Glasgow Medical Mission.[1] He was educated at Leys School, Cambridge and St. John's College, Cambridge.

From 1920–23, he studied the properties of histamine at the Wellcome Physiological Research Laboratories after which he went to Guy's Hospital as a lecturer in experimental pathology. As a virologist at the Medical Research Council in 1922 his researches on dog-distemper led to two ways of immunisation against it, which achievement earned him the award of a Royal Medal by the Royal Society in 1933. In 1927 he had been elected a fellow of the Royal Society.[2]

He was one of the scientists working at the Medical Research Council (NIMR Farm Laboratories) at Mill Hill who first isolated influenza virus from humans.[3] This happened when ferrets they were working on to develop a distemper vaccine caught influenza from one of the scientists in the laboratory.

He was knighted in the 1935 Birthday Honours for distinguished service to medical science.[4]

He died unmarried at the age of 58.

[...]

2013 (Nov) - Laidlaw memorial in The Lancet

https://www.thelancet.com/pdfs/journals/lanres/PIIS2213-2600(13)70237-6.pdf

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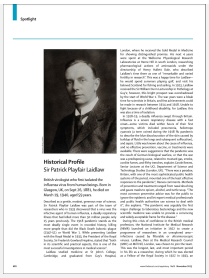

Historical Profile: Sir Patrick Playfair Laidlaw

British virologist who first isolated the influenza virus from human beings. Born in Glasgow, UK, on Sept 26, 1881, he died on March 19, 1940, aged 59 years.

Described as a gentle, modest, generous man of science, Sir Patrick Playfair Laidlaw was part of the team of researchers who in 1933 discovered that a virus was the infective agent of human influenza, a deadly respiratory illness that had killed more than 50 million people only 15 years previously. The 1918 pandemic stands as the most deadly single event in recorded history, killing more people than did the Black Death bubonic plague (1347–51) or World War 1. While presenting Laidlaw with the Royal Medal in 1933, the President of the Royal Society, Sir Frederick Gowland Hopkins, stated that "both in its scientific and practical aspects, this is one of the most successful investigations in medical science".

Laidlaw studied medicine at St John's College, Cambridge, and graduated from Guy's Hospital, London, where he received the Gold Medal in Medicine for showing distinguished promise. His next 4 years were spent at the Wellcome Physiological Research Laboratories at Herne Hill in south London, researching pharmacological actions of aminoacids under the directorship of Henry Hallett Dale, who described Laidlaw's time there as one of "remarkable and varied fertility in research". This was a happy time for Laidlaw— he would spend summers playing golf, and visit his beloved Scotland for fishing and sailing. In 1913, Laidlaw received the Sir William Dunn Lectureship in Pathology at Guy's; however, this bright prospect was overshadowed by the start of World War 1. The war years were a bleak time for scientists in Britain, and few achievements could be made in research between 1914 and 1918. Unable to fight because of a childhood disability, for Laidlaw, this was also a time of isolation.

In 1918–19, a deadly influenza swept through Britain. Influenza is a severe respiratory disease with a fast onset—some victims died within hours of their fi rst symptoms, which included pneumonia, heliotrope cyanosis (a term coined during the 1918 fl u pandemic to describe the blue discolouration of the skin caused by buildup of fluid in the lungs and subsequent suffocation), and sepsis. Little was known about the cause of influenza, and no effective prevention, vaccine, or treatments were available. **There were suggestions that the pandemic was the result of German biological warfare, or that the war was a predisposing cause, related to mustard gas, smoke, cordite fumes, and filthy trenches, explains Carole Reeves, Senior Lecturer at the UCL Department of Science and Technology Studies (London, UK). "There was a paradox; Britain, with one of the most sophisticated public health systems of the period, mounted one of the least effective responses to the pandemic", Reeves comments.** Methods of prevention and treatment ranged from nasal douching and gauze masks to opium, alcohol, and turtle soup. "The most common preventive advice was for the public to ignore the epidemic and let expert medical professionals and public health authorities use science to deal with it", she explains. "The pandemic was arguably the first major challenge to laboratory bacteriology and the new scientific medicine was unable to provide a convincing and widely acceptable frame for the disease."

During this crisis of confidence in the British medical profession, the National Institute for Medical Research (NIMR) launched an initiative in 1922 to create a programme of researchers in an unexplored area— infections caused by filterable or ultramicroscopic viruses. Laidlaw, then at the Medical Research Council (MRC) at Mill Hill, London, was chosen to join the team. This was the longest, last, and most important period in his life as a researcher, during which he was elected as a Fellow of the Royal Society in 1927. **In 1933, an outbreak of typical, epidemic influenza presented a chance for Laidlaw to test the possibility that an infection could be caused by a filterable virus.** "The work by Sir Patrick Laidlaw and his colleagues Wilson Smith, and later Sir Christopher Andrewes, on influenza can be classified as a key event in influenza research", explains John McCauley, Director of the WHO Influenza Centre at the MRC. The discovery was made when ferrets they were working on to develop a distemper vaccine caught influenza from one of the scientists in the laboratory. At this time, the systematic study of virus diseases was at an early stage, and as McCauley explains: "Until this truly revolutionary work that enabled the team to show that the agent of influenza was a virus and, crucially in so doing, how it could be propagated, influenza research was largely observational." The team's breakthrough enabled definitive research to be done on the properties of the virus, the discovery of its now notorious antigenic variation, and the characterisation of the immune response to infection, which combined led to the rapid development of influenza vaccines. McCauley points out that the ferret model developed by Laidlaw for his work on canine distemper virus and used for his investigations into influenza is still used for influenza research today. He also adds that although alternative laboratory animals, such as mice and guinea pig models, have been developed, none replicate the disease in human beings as well as the ferret model developed by Laidlaw.

In 1935, Laidlaw received an Honour of Knighthood, and, 1 year later, became Deputy Director of the NIMR. His final years were spent quietly (he gave only two lectures that came to publication), but in varied collaborations in entirely diff erent specialties. As Dale remarked: "Few men have given so freely of their knowledge and their ideas to assist the researches of others, and still fewer have been able to do so with effect over such a remarkable range of scientific problems." Laidlaw will be remembered as a dedicated researcher who boosted scientific credibility at a time when many had lost faith in the medical community, and revolutionised our understanding of a deadly virus, saving millions of lives and paving the way for further developments in infl uenza research and treatment. - Natalie Harrison

2016 (Sep) - History and evolution of influenza control through vaccination: from the first monovalent vaccine to universal vaccines

I. BARBERIS,[1] P. MYLES,[2] S.K. AULT,[3] N.L. BRAGAZZI,[1] and M. MARTINI[4]

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Summary

Influenza is a highly infectious airborne disease with an important epidemiological and societal burden; annual epidemics and pandemics have occurred since ancient times, causing tens of millions of deaths. A hundred years after this virus was first isolated, influenza vaccines are an important influenza prevention strategy and the preparations used display good safety and tolerability profiles. Innovative tools, such as recombinant technologies and intra-dermal devices, are currently being investigated in order to improve the immunological response. The recurring mutations of influenza strains has prompted the recent introduction of a quadrivalent inactivated vaccine. In the near future, scientific research will strive to produce a long-lasting universal vaccine containing an antigen that will offer protection against all influenza virus strains.

Introduction

Influenza viruses are negative-sense, single-stranded RNA viruses belonging to the Orthomyxoviridae family, together with Isavirus, Thogotovirus and Quaranjavirus. Three types of influenza viruses, namely influenza A, B and C, are capable of determining epidemics and pandemics in humans, with influenza A being the most common circulating type and causing significant illness, being most prone to antigenic shifts and the more likely type to lead to a pandemic [1, 2]. Recently, a new genus (termed influenza virus D) has been discovered in pigs and cattle with influenza-like illness syndrome in the United States [3, 4] and in Europe [5].

Influenza is a highly infectious airborne disease that affects a significant percentage of the world's population; local annual epidemics and pandemics have occurred since ancient times, causing tens of millions of deaths [6].

A history of influenza: from the classical period to the nineteenth century

In 412 BC, in the "Book of Epidemics", Hippocrates described a putative influenza-like illness syndrome called "fever of Perinthus" or "cough of Perinthus" [7]. While some scholars claim that this is probably the first historical description of influenza (a winter and a spring epidemic of an upper respiratory tract infection occurring regularly every year at Perinthus, a port-town in Marmaraereglisi, a northern part of Greece, now Turkey), others, including the notable 19th-century editor of Hippocrates, Émile Littré (1801-1881), think that a diagnosis of diphtheria would better fit the description of complications (pneumonia, fits of coughing and wheezing, angina and paralysis of soft palate and limbs). On the other hand, symptoms such as disturbed vision and night blindness suggest a combination of diseases, including deficiency syndromes (e.g. vitamin A deficiency) [8]. In the years 1173 and 1500, two other influenza outbreaks were described, though in scant detail [9-11]. The name "influenza" originated in the 15th century in Italy, from an epidemic attributed to the "influence of the stars", which, according to Ginctrac, raged across Europe and perhaps in Asia and Africa [12].

It seems that influenza also reached the Americas. Scholars and historians debate whether influenza was already present in the New World or whether it was carried by contaminated pigs transported on ships. Some Aztec texts speak of a "pestilential catarrh" outbreak in 1450-1456 in an area now corresponding to Mexico, but these manuscripts are difficult to interpret correctly and this hypothesis seems controversial [13].

The first reliable documents regarding influenza-like illness syndrome date from 1510, when the virus spread from Africa to Europe. The first pandemic, or worldwide epidemic, occurred in 1557, though some scholars deny that it really was an outbreak of influenza. The first pandemic/ worldwide epidemic that undoubtedly fits the description of influenza appeared in 1580, beginning in Asia and Russia and spreading to Europe via Asia Minor and North-West Africa. In Rome, it caused the death of over 8,000 people, while in Spain it decimated the populations of entire cities. Subsequently, it also affected the Americas [14].

Over the centuries, other pandemics were described worldwide. From 1404 to the middle of the 19th century, 31 influenza epidemics were recorded, including eight large-scale pandemics. Subsequently, others appeared, including three in the 20th century [14]. Some of the most notable outbreaks occurred in 1729, in 1781-1782 (a pandemic spreading from China to Russia, Europe and North America), in 1830-1833 (a pandemic which again spread from China to India, the Philippines, Indonesia, Russia, Europe and North America), in 1847-1848, and in 1898-1900 (spreading from Europe to India, Australia, and North and South America) [14].

One of the most devastating was the pandemic of "Spanish" influenza in 1918–1919, which caused an estimated 21 million deaths worldwide and was defined by Waring as "the greatest medical holocaust in history" [14, 15].

At the end of the 19th century, the etiology of this disease had yet not been well clarified; it was believed that the disease, termed "winter catarrh", was caused by bacteria (the so-called bacterial hypothesis), such as pneumococcus, streptococcus or Haemophilus influenzae. This latter was also named Bacillus influenzae or Pfeiffer's bacillus, after Richard Pfeiffer (1858-1945), who described it during the 1889-1892 influenza epidemic. This bacillus had already been discovered by the Polish microbiologist Bujwid Odo Feliks Kazimierz (1857- 1942) in biopsy material a year earlier [16].

In the same period, the French microbiologists Charles Nicolle (1866-1936), Charles Lébally and René Dujarric de la Rivière (1885-1969) of the Pasteur Institute showed that the flu pathogen could pass through a fine filter. However, despite their brilliant experiments, the viral hypothesis continued to be neglected until the virus was isolated [16, 17].

In 1889, some Spanish doctors believed that influenza was a variant of dengue fever, whilst others attributed influenza outbreaks to a variety of causes including cannon fire on the western front, the building of the Madrid underground, air pollution, sunspots, or the spread of the habit of smoking poor-quality tobacco [18].

The thirties: virus isolation and the first experimental vaccines

During the 1918-1919 pandemic, some scientists began to suspect that bacteria were not the real agent of influenza disease. **One of these was the scholar [Dr. Richard Edwin Shope (born 1901)], who deeply investigated swine flu in 1920.** However, it was only in 1932-1933 that the English scientists Wilson Smith (1897-1965), Sir Christopher Andrewes (1896-1988) and **Sir Patrick Laidlaw (1881-1940),** working at the Medical Research Council at Mill Hill, first isolated the influenza A virus from nasal secretions of infected patients, thereby demonstrating the intranasal human transmission of this virus [19, 20]. A few years later, the American virologist and epidemiologist Thomas Francis Junior (1900-1969) and Smith, in England, were able to transmit the virus to mice [21]. Subsequently, in 1935, Sir Frank Macfarlane Burnet (1899-1985) and Smith separately discovered that the flu virus could be grown on the chorio-allantoid membrane of embryonated hens' eggs [22], and in 1936 the first neutralized antibodies generated by infection by human influenza virus were isolated [23].

In the next five years, important developments took place: the demonstration that the virus inactivated by formalin was immunogenic in humans, purification of the virus by means of high-speed centrifugation, and the discovery that the influenza virus grew easily in fertilized hen eggs, a procedure that is still used today to manufacture most influenza vaccines [23].

The first clinical trials of influenza vaccines were conducted in the mid-1930s [24, 25].

A study by Smith, Andrewes and Stuart-Harris was conducted among military forces in England in 1937 using a subcutaneous vaccination with an inactivated strain isolated from a mouse lung [25].

In 1938, Francis, together with Jonas Edward Salk (1914-1995), managed to protect USA military forces. Salk would subsequently use this successful experience to develop an effective polio vaccine in 1952 [26, 27].

The forties: inactivated influenza vaccines

Influenza vaccination had two main objectives: (i) to protect against disease, and (ii) to achieve a high vaccination rate in order to ensure protection in unvaccinated people. The first vaccine was an inactivated, monovalent preparation which only contained a subtype of the influenza A virus [26, 27].

In December 1942, large studies were begun to be conducted on the first influenza virus vaccines; these provided the first official proof that inactivated influenza vaccines could yield effective protection against flu epidemics [28].

The efficacy and safety of inactivated vaccines were first studied between 1942 and 1945; in the meantime, a new strain of flu virus was discovered, the influenza virus type B, which is the main cause of seasonal epidemics, as was the phenomenon of so-called "influenza mismatch". Influenza mismatch is caused by major and minor mutations of circulating viruses. As a result, the virus contained in the vaccine does not match the circulating strain, determining a reduction in the effectiveness of subtype A influenza vaccines.

A new route of influenza immunization was tested in December 1942, with the subcutaneous inactivated bivalent vaccine containing viruses of type A and type B. The following years, the first bivalent vaccine was licensed in the United States and became available for use in the general population [29, 30].

The fifties: influenza mismatch and influenza surveillance

The first system for the surveillance of circulating influenza virus strains in several countries worldwide was created in 1952 by the World Health Organization (WHO) in order to monitor the various virus mismatches reported. This important innovative tool enabled the composition of seasonal influenza vaccines to be determined on the basis of the epidemiology of influenza in the previous season [31]. In 1946, as a result of viral mutation, a new variant of influenza A (H1N1), A/FM/1/47, appeared in Australia. This gave rise to a new influenza subtype, the H2N2 strain, which caused the pandemic known as Asian flu [32].

The following year, the US Commission on Influenza recommended that a representative of this strain be included in subsequent vaccines.

The emergence of an HA subtype different from those circulating in previous seasons determined the need for pandemic influenza vaccines [31].

The sixties: split vaccines

New inactivated compounds were tested for safety and efficacy during seasonal epidemics in the 1960s, in particular two new formulations were created: split and subunit vaccines. The 1968 pandemic led to the development of trivalent inactivated vaccines (TIVs) against influenza viruses; moreover the development of new split or subunit vaccines led to a decrease of adverse reactions in children. These vaccines were split using ether and/or detergent, and haemagglutinin and neuraminidase were, in the case of subunit vaccines, purified and enriched [33].

In the same period, the first flu vaccines were licensed in Europe, while in the US annual influenza vaccination was recommended for individuals at major risk of influenza complications.

In 1968, the new virus strain H3N2 (Hong Kong) appeared, completely replacing the previous type A strain (H2N2, or Asian influenza), and led to another global pandemic with high morbidity and mortality [34]. In the same year, a new type of vaccine, the split vaccine, was authorized in the US after several clinical studies had demonstrated that it was less reactogenic than whole virus vaccines, especially in the early years of life [35].

The seventies: genetic reassortment

Split vaccines were widely used during the pandemic swine influenza in 1976 and in 1977, when the H1N1 subtype re-emerged worldwide. However, they were seen to be less immunogenic than whole virus vaccines in "primed" subjects who had never been vaccinated. Indeed, it was shown that two vaccine doses were needed in order to ensure effective protection [36].

At the beginning of the 1970s, an important innovation was introduced into the production of influenza vaccines: the genetic reassortment of influenza virus strains; this technique enabled the vaccine strains to grow faster in embryonated hen eggs [37].

The first subunit vaccine was created between 1976 and 1977. This contained only the surface antigens, hemagglutinin (HA) and neuraminidase (NA), which were isolated by means of successive purification steps.

This innovative tool proved to be highly immunogenic and well tolerated in humans, especially in children, although two doses were needed to guarantee vaccine effectiveness during epidemics [38].

The eighties: subunit vaccines

In 1980, the first subunit vaccines were licensed in the United Kingdom and are currently available in several countries worldwide.

In 1978, as a result of a major mutation, a new virus strain, H1N1, appeared on the global epidemiological scene. This strain, which was similar to a virus circulating in 1958, emerged in Russia and began to co-circulate, either simultaneously or alternately, with the previous one [39].

Antigenic drift, caused by frequent changes in the composition of the virus, determined the need to update the vaccine composition each year. This necessity prompted both the implementation of the first surveillance systems and the production of the first trivalent vaccine, which included three formulation strains (one strain of influenza A/ H1N1, an influenza virus A /H3N2 and a type B virus), in order to ensure effective protection during the 1978 pandemic.

Live attenuated influenza vaccines

In the period 1935-1941, the first clinical trials involving live attenuated influenza vaccines were conducted. The efficacy of these seasonal vaccines was guaranteed by the correspondence between the circulating strain and the strain contained in the vaccine and by the virus dose grown in hen egg embryos [34].

In 1944, Stanley described in detail the preparation and properties of an influenza virus vaccine produced in embryonated hen eggs; this vaccine was concentrated and purified by means of differential centrifugation and inactivated by means of various procedures [23].

In 1949, an important change in vaccine development involved the introduction of the use of cell cultures for virus growth.

In 1997,the so-called "avian flu" pandemic broke out in Hong Kong. This was caused by influenza virus A/ H5N1, a highly pathogenic strain.

In order to contain this pandemic, the techniques of genetic rearrangement developed in those years enabled a huge number of vaccine doses to be produced in a short time by applying recombinant DNA technology to the influenza A/H5N1 virus [34].

Recent years

In recent years, scientific research developed new techniques of immunization, which may be more immunogenic and better tolerated during administration, thereby reducing adverse events. In 2003, for instance, the FDA in the United States authorized the use of an intranasally administered live attenuated vaccine, called FluMist®, in adults [40]. In the 2003-2004 influenza season, an outbreak in Asia was caused by an influenza A/H5N1 strain. This was later used to produce a vaccine, which was licensed in the United States by the FDA in 2007.

More recent years saw the development of adjuvanted vaccines, such as those containing alum adjuvants and the oil in water adjuvant MF-59, which significantly enhanced antigenicity [6].

Specifically, MF-59-adjuvanted vaccines were used in the elderly and in young children, and proved to elicit a good response even to pandemic strains with which subjects had not been primed by natural influenza infection. Similar responses were obtained through the use of other emulsions, such as stable emulsion (SE) and AS03, which were included in the 2009 pandemic influenza vaccines [36].

In the most recent pandemic season (2009), the influenza virus H1N1, which was transmitted to humans by pigs, was estimated to have caused more than 200,000 deaths in the first 12 months of its circulation [41].

A massive effort to produce vaccine for the new H1N1 strain began shortly after scientists identified the virus. The virus proved to grow slowly during the manufacturing process, which relies on cultivation of the virus in chicken eggs. Because of manufacturing delay, the vaccine was available in most countries after the second peak of influenza cases at the end of October leaving most people not immunized while influenza H1N1 virus was circulating [42].

In the elderly, the vaccine efficacy normally decreases, because of immunosenescence. For this reason, in 2009 the Advisory Committee on Immunization Practices (ACIP) recommended and authorized the use of high-dose Fluzone ®, a new formulation containing a 4-fold higher HA dose than the traditional trivalent vaccine [43].

In 2011, as a result of developments in research into new vaccine delivery techniques, the FDA first authorized the intradermal administration of Fluzone®. This new route of administration involved antigen-presenting cells (APCs) in the dermis; these cells process antigens for subsequent presentation in the lymphoid organs, resulting in the stimulation of both innate and adaptive immunity. The intradermal vaccines elicited a better immunological response than intramuscular vaccines, particularly in the elderly; in healthy adults, it yielded an immune response comparable to that elicited by the traditional vaccines, while saving on the HA dose [44-48]. In 2012, the FDA approved Fluarix®, the first quadrivalent vaccine in the United States. This split vaccine contained two influenza A strains and two influenza B antigens. The presence of an additional influenza B strain reduced the possibility of a mismatch between the circulating viruses and the vaccine composition, while maintaining the same immunogenicity and safety as standard trivalent vaccines [49].

In 2013, the FDA approved FluBlock®, a recombinant trivalent influenza vaccine, for use in people aged between 18 and 49 years. FluBlock® was licensed in a spray formulation and was the first trivalent influenza vaccine made by using recombinant DNA technology. Derived from Baculovirus, it contained a 3-fold higher HA dose than traditional trivalent vaccines [50, 51]. The scale-up potential of the insect cell/baculovirus vector system may offer advantages in terms of rapid antigen change and response to a pandemic situation [31].

Currently, scientists are exploring the fascinating prospect of developing a universal vaccine by exploiting T-cells and by attempting to elicit broadly neutralizing antibodies. Moreover, efforts are being made to design M2e- or stalk-based vaccines, since these proteins (the type-2 matrix protein and the stalk domain of HA, respectively) are quite well conserved from an evolutionary standpoint [52, 53].

Conclusions

In the hundred years since the influenza virus was isolated, influenza vaccine preparations have evolved to ensure effective protection, while maintaining a good safety and tolerability profile.

The recurring mutations of influenza strains prompted the introduction of a quadrivalent inactivated vaccine, the composition of which is determined on the basis of the most frequent strains isolated in the previous season during continuous surveillance by the WHO.

Current research priorities include the development of a universal influenza vaccine that could offer protection against all influenza virus strains, thereby overcoming the challenges faced due to antigenic drift and shift or of co-circulation of different viral strains. Another important priority is to identify sustainable vaccine production platforms capable of rapidly meeting the large global demands for influenza vaccine in the face of an influenza pandemic.

ACKNOWLEDGMENTS

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Lyndon Hermyle LaRouche Jr. (born 1922)

Wikipedia Lyndon LaRouche

2019 (Feb 13) - NY Times : "Lyndon LaRouche, cult figure, dies at 96

Source : [HN012D][GDrive]

[HN012E][GDrive]

Lyndon H. LaRouche Jr. speaking at a news conference in Trenton in 1984 in advance of the New Jersey primary as he sought the Democratic presidential nomination. It was one of his eight campaigns for the White House as a fringe candidate.

Lyndon LaRouche, the quixotic, apocalyptic leader of a cultlike political organization who ran for president eight times, once from a prison cell, died on Tuesday. He was 96.

His death was announced on the website of his organization, La Rouche/Pac. The statement did not specify a cause or say where he died.

Defining what Mr. LaRouche stood for was no easy task. He began his political career on the far left and ended it on the far right. He said he admired Benjamin Franklin, Alexander Hamilton, Abraham Lincoln and Ronald Reagan and loathed Hitler, the composer Richard Wagner and other anti-Semites, though he himself made anti-Semitic statements.

He was fascinated with physics and mathematics, particularly geometry, but called concerns about climate change “a scientific fraud.”

He condemned modern music as a tool of invidious conspiracies — he saw rock as a particularly British one — and found universal organizing principles in the music of Bach, Beethoven and Mozart.

Some called him a case study in paranoia and bigotry, his mild demeanor notwithstanding. One biographer, Dennis King, in “Lyndon LaRouche and the New

American Fascism" (1989), maintained that Mr. LaRouche and his followers were a danger to democratic institutions.

Mr. LaRouche denigrated a panoply of ethnic groups and organized religions. He railed against the "Eastern Establishment" and environmentalists, who he said were trying to wipe out the human race. Queen Elizabeth II of England was plotting to have him killed, he said. Jews had surreptitiously founded the Ku Klux Klan, he said. He described Native Americans as "lower beasts."

Even so, Mr. LaRouche was able to develop alliances with farmers, the Nation of Islam, teamsters, abortion opponents and Klan adherents. Acolytes kept Mr. LaRouche's political machine going by peddling his tracts and magazines in airports, and by persuading relatives and friends to donate large sums to help him fight his designated enemies.

He operated through a dizzying array of front groups, among them the National Democratic Policy Committee, through which he received millions of dollars in federal matching money in his recurring presidential campaigns. His forces also sponsored candidates at the state and local levels, including for school board seats.

His movement attracted national attention, especially in 1986, when two LaRouche followers, Mark Fairchild and Janice Hart, unexpectedly won the Democratic nomination for lieutenant governor and secretary of state, respectively, in Illinois.

Adlai E. Stevenson III, the Democratic candidate for governor of Illinois that year, was appalled. He denounced the LaRouche group as "neo-Nazis" and refused to run with Mr. Fairchild and Ms. Hart, organizing a third-party bid instead. He, as well as the LaRouche supporters, lost to James R. Thompson, the Republican incumbent.

Some voters said they had voted for Mr. Fairchild and Ms. Hart because they had been endorsed by Mr. LaRouche's National Democratic Policy Committee, which they thought was affiliated with the mainstream Democratic Party.

Critics of Mr. LaRouche said he had used that committee to deceive people abroad as well. In 1982, he managed to arrange a meeting with President José López Portillo of Mexico, evidently because Mexican officials thought Mr. LaRouche represented the Democratic Party.

"I'm as American as apple pie," Mr. LaRouche once said.

Whatever he was, he received thousands of votes in his campaigns for president. In 1980, he outpolled Gov. Jerry Brown of California by a thousand votes in the Democratic presidential primary in Connecticut. In 1986, the candidates fielded by his National Democratic Policy Committee received 20 to 40 percent of the vote in local elections in California, Idaho, Illinois, Indiana, Massachusetts, New Hampshire, Ohio, Pennsylvania and Texas.

Lyndon Hermyle LaRouche Jr. was born on Sept. 8, 1922, in Rochester, N.H., to Lyndon and Jesse (Weir) LaRouche. He grew up in the Quaker tradition. His father was a traveling salesman for the United States Shoe Machinery Corporation, and his mother once ran a Quaker meeting in Boston's Back Bay.

His was not a happy childhood. Boys would pick on him, he said, but he refused to fight them, which only brought more disapprobation.

It got no better after the family moved to Lynn, Mass. He regarded himself there as an outcast and had few friends in high school. He was not an "ugly duckling," he said, "but a nasty duckling."

When World War II began, Mr. LaRouche declared himself a conscientious objector, citing his pacifist Quaker upbringing. But toward the end of the war he enlisted in the Army, despite his mother's objections.

After the war, he enrolled in Northeastern University in Boston but "resigned," he said, because the university was not challenging his superior intellect. He said he had been able to become the century's leading economist without formal college study.

He married Janice Neuberger in the early 1950s and had a son, Daniel, by her in 1956. The marriage failed, and he never talked publicly about his son and his former wife in his later years.

Mr. LaRouche's political roots were Marxist. From 1948 to 1963, he was active in the Socialist Workers Party, a Trotskyite group.

His own group surfaced during the student unrest at Columbia University in the late 1960s as a faction of the left-wing Students for a Democratic Society. It evolved into the National Caucus of Labor Committees, an organization largely made up of young upper-middle-class people who espoused Mr. LaRouche's Marxist views.

He first ran for president in 1976 as the candidate of the left-wing United States Labor Party, now defunct.

By then, though, his politics had already begun moving to the right. And after spending much time in West Germany, he returned with right-wing, anti-Semitic views. Many of his followers made the shift with him.

George Johnson, the author of "Architects of Fear: Conspiracy Theories and Paranoia in American Politics" (1983), wrote that Mr. LaRouche had developed a conspiracy theory that stretched back to the beginnings of civilization.

"In the world according to LaRouche," Mr. Johnson wrote, "history is a war between the Platonists (the good guys) and the evil Aristotelians. Anyone who has taken Philosophy 101 can follow the drift: Platonists believe in standards, an absolute truth that can be divined by philosopher kings like Mr. LaRouche. To the Aristotelians everything is relative."

In Mr. LaRouche's view, Mr. Johnson continued, "true Platonists believe that industrialization, technology and classical music should be used to bring wealth and enlightenment to the citizens of the world."

He added: "The Aristotelians are trying to stop them by using not only sex, drugs and rock 'n' roll but also environmentalism and quantum theory. With their bag of brainwashing techniques, they hope to trick civilization into destroying itself, bringing on a new dark ages in which the world's riches will be firmly in the hands of the oligarchs."

Mr. LaRouche's views became the foundation of a political movement. By the mid-1970s, his organization had 37 offices in North America and 26 in Europe and Latin America. A core membership in the United States numbered about 1,000. One follower won 27 percent of the vote in a local election in Seattle. Mr. LaRouche was pulling in enough money nationally to qualify for federal matching funds for his presidential campaigns.

He had also become an entrepreneur, starting three companies, one of which printed newspapers for high schools; together they brought in revenues of $5 million or more a year.

In his efforts to build a worldwide organization, Mr. LaRouche was helped by his wife, Helga Zepp-LaRouche, a native of Germany who had been a journalist there. Information about his survivors was not immediately available.

Mr. LaRouche was at the apex of his power in the mid-1980s, when he moved his headquarters to a large rented estate in Northern Virginia, in Round Hill, outside Leesburg. When neighbors wondered aloud why he had turned the estate into an armed camp, rigged with electronic security and patrolled by men with semiautomatic rifles, Mr. LaRouche went on the attack. He said that the Leesburg Garden Club was “a nest of Soviet fellow travelers.”

In 1987, after an F.B.I. investigation, Mr. LaRouche was convicted in Virginia on charges of scheming to defraud the Internal Revenue Service and of deliberately defaulting on more than $30 million in loans from thousands of his supporters. He was sentenced to 15 years in prison and sent to a federal penitentiary in Minnesota.

The conviction hurt his movement but did not end it. He was released from prison in 1994, after serving a third of his sentence. He immediately announced that he would run for president in 1996. He ran again in 2000 and 2004. After Barack Obama was elected in 2008, Mr. LaRouche warned that the new president was in “grave and imminent danger” of being assassinated by the “British Empire,” a familiar target of Mr. LaRouche’s.

By 2015 he had long turned against Mr. Obama, calling for his impeachment and accusing him in one instance of orchestrating Turkey’s downing of a Russian fighter jet involved in the war in Syria. “Obama organized an act of war, and has thus endangered the United States, as well as all of humanity,” Mr. LaRouche wrote.

But he could be bipartisan in his attacks. He accused the Bush family of collaborating with Nazi Germany during World War II, and said that the invasion of Iraq in 2003 was a product of a neoconservative conspiracy, led by Vice President Dick Cheney, to deceive the American people. That view was expressed in a series of pamphlets, titled “Children of Satan.”

But Mr. LaRouche was heartened by the election of President Trump, though he perceived a British conspiratorial hand reaching into the United States to foment efforts to “politically paralyze” the president and bring about his impeachment.

That would be a mistake, he said. As his website declared, “Not since William McKinley has a president been so clear in his intent to return the nation to the economic tradition of Alexander Hamilton, to end the policies of British imperial free trade, and make a full commitment to industry, manufacturing, scientific advancement and world peace.

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https://en.wikipedia.org/wiki/Lyndon_LaRouche

This article's **lead section** **does not adequately** **summarize** **key points of its contents**. Please consider expanding the lead to provide an accessible overview of all important aspects of the article. Please discuss this issue on the article's talk page.
(May 2014)

Lyndon LaRouche

LaRouche seated with his hands clasped

Personal detailsBorn

Lyndon Hermyle LaRouche Jr.

September 8, 1922

Rochester, New Hampshire, U.S.

Died

February 12, 2019 (aged 96)

Political party

Socialist Workers (1949–1964)

Labor (1973–1979)

Democratic (1979–2019)

Other political

affiliations

LaRouche movement

National Caucus of Labor

Committees

Spouse(s)

Janice Neuberger

(m. 1954; div. 1963)

Helga Zepp (m. 1977)

Children

1

Mother

Jessie Lenore Weir

Father

Lyndon H. LaRouche

Lyndon Hermyle LaRouche Jr. (September 8, 1922 – February 12, 2019) was an American political activist, convicted fraudster, cult leader, and founder of the LaRouche movement, whose main organization was the National Caucus of Labor Committees (NCLC).[1][2][3][4]

Born in Rochester, New Hampshire, LaRouche became sympathetic to socialist and Marxist movements and ideals in his twenties during World War Two and by the 1960s became engaged in increasingly smaller and more radical splinter groups. During the 1970s he created the foundation of the LaRouche Movement and became more engaged in conspiratorial beliefs and violent and/or illegal activities. In 1986, his movement reached its height in electoral success when Larouchite candidates won several Democratic primaries for state offices in Illinois. (The defeated mainstream Democratic candidates ran in the general election as members of the Illinois Solidarity Party; the Larouchite Democrats all finished a distant third.) Later in the 1980s, criminal investigations led to convictions of several LaRouche movement members, including LaRouche himself. He was sentenced to fifteen years imprisonment, but only served five years.

LaRouche was a perennial candidate for President of the United States. He ran in every election from 1976 to 2004 as a candidate of third parties established by members of his movement. He also tried to gain the Democratic presidential nomination. In 1996, he got 5% of the total nationwide vote in Democratic primaries. In 2000, he received enough primary votes to qualify for delegates in some states, but ultimately was refused those delegates at the convention.

Early life

LaRouche was born in Rochester, New Hampshire, the oldest of three children of Jessie Lenore (née Weir) and Lyndon H. LaRouche, Sr.[5] His paternal grandfather's family emigrated to the United States from Rimouski, Quebec, whereas his maternal grandfather was born in Scotland.[6] His father worked for the United Shoe Machinery Corporation in Rochester before the family moved to Lynn, Massachusetts.[7]

His parents became Quakers after his father converted from Catholicism. They forbade him from fighting with other children, even in self-defence, which he said led to "years of hell" from bullies at school. As a result, he spent much of his time alone, taking long walks through the woods and identifying in his mind with great philosophers. He wrote that, between the ages of twelve and fourteen, he read philosophy extensively, embracing the ideas of Leibniz and rejecting those of Hume, Bacon, Hobbes, Locke, Berkeley, Rousseau, and Kant.[8][9][10][11] He graduated from Lynn English High School in 1940. In the same year, the Lynn Quakers expelled his father from the group, for reportedly accusing other Quakers of misusing funds, while writing under the pen name Hezekiah Micajah Jones. LaRouche and his mother resigned in sympathy for his father.[12][13][14]

University studies, Marxism, marriage

LaRouche attended Northeastern University in Boston and left in 1942. He later wrote that his teachers "lacked the competence to teach me on conditions I was willing to tolerate".[15] As a Quaker, he was a conscientious objector (CO) during World War II and joined a Civilian Public Service camp.[16] In 1944 he joined the United States Army as a non-combatant and served in India and Burma with medical units. He ultimately worked as an ordnance clerk at the end of the war. He described his decision to serve as one of the most important of his life.[17] While in India he developed sympathy for the Indian independence movement. LaRouche wrote that many GIs feared they would be asked to support British forces in actions against Indian independence forces and characterized that prospect as "revolting to most of us".[18]

He discussed Marxism in the CO camp, and while traveling home on the SS *General Bradley* in 1946, he met Don Merrill, a fellow soldier, also from Lynn, who converted him to Trotskyism. Back in the U.S., he resumed his education at Northeastern University. He returned to Lynn in 1948 and the next year joined the Socialist Workers Party (SWP), adopting the name "Lyn Marcus" for his political work.[19] He arrived in New York City in 1953, where he worked as a management consultant.[20] In 1954 he married Janice Neuberger, a psychiatrist[*citation needed*] and member of the SWP. Their son, Daniel, was born in 1956.[21]

Career

1960s

Teaching and the National Caucus of Labor Committees

Further information: National Caucus of Labor Committees

Twenty to thirty students would ... sit on the floor surrounding LaRouche, who now sported a very shaggy beard ... LaRouche gave them esoteric assignments, such as searching through the writings of Georges Sorel to discover Rudd's anarchistic origins, or studying Rosa Luxemburg's *The Accumulation of Capital*.

—Tim Wohlforth[22]

By 1961 the LaRouches were living on Central Park West in Manhattan, and LaRouche's activities were mostly focused on his career and not on the SWP. He and his wife separated in 1963, and he moved into a Greenwich Village apartment with another SWP member, Carol Schnitzer, also known as Larrabee.[23] In 1964 he began an association with an SWP faction called the Revolutionary Tendency, a faction which was later expelled from the SWP, and came under

the influence of British Trotskyist leader Gerry Healy.[24]

For six months, LaRouche worked with American Healyite leader Tim Wohlforth, who later wrote that LaRouche had a "gargantuan ego", and "a marvelous ability to place any world happening in a larger context, which seemed to give the event additional meaning, but his thinking was schematic, lacking factual detail and depth." Leaving Wohlforth's group, LaRouche briefly joined the rival Spartacist League before announcing his intention to build a new Fifth International.[22]

In 1967 LaRouche began teaching classes on Marx's dialectical materialism at New York City's Free School,[25][self-published source] and attracted a group of students from Columbia University and the City College of New York, recommending that they read *Das Kapital*, as well as Hegel, Kant, and Leibniz. During the 1968 Columbia University protests, he organized his supporters under the name *National Caucus of Labor Committees* (NCLC).[25] The aim of the NCLC was to win control of the Students for a Democratic Society branch—the university's main activist group—and build a political alliance between students, local residents, organized labor, and the Columbia faculty.[26][27][28][29] By 1973 the NCLC had over 600 members in 25 cities—including West Berlin and Stockholm—and produced what LaRouche's biographer, Dennis King, called the most literate of the far-left papers, *New Solidarity*.[30][31] The NCLC's internal activities became highly regimented over the next few years. Members gave up their jobs and devoted themselves to the group and its leader, believing it would soon take control of America's trade unions and overthrow the government.[32][33][34]

1970s

1971: Intelligence network

Further information: LaRouche movement

Robert J. Alexander writes that LaRouche first established an NCLC "intelligence network" in 1971. Members all over the world would send information to NCLC headquarters, which would distribute the information via briefings and other publications. LaRouche organized the network as a series of news services and magazines, which critics say was done to gain access to government officials under press cover.[35] The publications included *Executive Intelligence Review*, founded in 1974. Other periodicals under his aegis included; *New Solidarity*, *Fusion Magazine*, *21st Century Science and Technology*, and *Campaigner Magazine*. His news services and publishers included American System Publications, Campaigner Publications, New Solidarity International Press Service, and The New Benjamin Franklin House Publishing Company. LaRouche acknowledged in 1980 that his followers impersonated reporters and others, saying it had to be done for his security.[36] In 1982, *U.S. News and World Report* sued New Solidarity International Press Service and Campaigner Publications for damages, alleging that members were impersonating its reporters in phone calls.[37]

U.S. sources told *The Washington Post* in 1985 that the LaRouche organization had assembled a worldwide network of government and military contacts, and that his researchers sometimes supplied information to government officials. Bobby Ray Inman, the CIA's deputy director in 1981 and 1982, said LaRouche and his wife had visited him, offering information about the West German Green Party. A CIA spokesman said LaRouche met Deputy Director John McMahon in 1983 to discuss one of LaRouche's trips overseas. An aide to Deputy Secretary of State William Clark said when LaRouche's associates discussed technology or economics, they made good sense and seemed to be qualified. Norman Bailey, formerly with the National Security Council, said in 1984 that LaRouche's staff comprised "one of the best private intelligence services in the world. ... They do know a lot of people around the world. They do get to talk to prime ministers and presidents." Several government officials feared a security leak from the government's ties with the movement.[38] According to critics, the supposed behind-the-scenes processes were more often flights of fancy than inside information. Douglas Foster wrote in *Mother Jones* in 1982 that the briefings consisted of disinformation, "hate-filled" material about enemies, phony letters, intimidation, fake newspaper articles, and dirty tricks campaigns.[39] Opponents were accused of being gay or Nazis, or were linked to murders, which the movement called "psywar techniques".[40][41]

From the 1970s through to the first decade of the 21st century, LaRouche founded several groups and companies. In addition to the National Caucus of Labor Committees, there was the Citizens Electoral Council (Australia), the National Democratic Policy Committee, the Fusion Energy Foundation, and the U.S. Labor Party. In 1984 he founded the Schiller Institute in Germany with his second wife, and three political parties there—the *Europäische Arbeiterpartei*, *Patrioten für Deutschland*, and *Bürgerrechtsbewegung Solidarität*—and in 2000 the Worldwide LaRouche Youth Movement. His printing services included Computron Technologies, Computype, World Composition Services, and PMR Printing Company, Inc, or PMR Associates.[42]

1973: Political shift; "Operation Mop-Up"

A 1973 internal FBI letter, noting the Communist Party's efforts to eliminate LaRouche, and suggesting submission of a "blind memorandum" to the Communist Party's newspaper.

LaRouche wrote in his 1987 autobiography that violent altercations had begun in 1969 between his NCLC members and several New Left groups when Mark Rudd's faction began assaulting LaRouche's faction at Columbia University.[43] Press accounts alleged that between April and September 1973, during what LaRouche called "Operation Mop-Up", NCLC members began physically attacking members of leftist groups that LaRouche classified as "left-protofascists"; an editorial in LaRouche's *New Solidarity* said of the Communist Party that the movement "must dispose of this stinking corpse."[44][45][46] Armed with chains, bats, and martial-art nunchuksticks, NCLC members assaulted Communist Party, SWP, and Progressive Labor Party members and Black Power activists on the streets and during meetings. At least 60 assaults were reported. The operation ended when police arrested several of LaRouche's followers; there were no convictions, and LaRouche maintained they had acted in self-defense. Journalist and LaRouche biographer Dennis King writes that the FBI may have tried to aggravate the strife, using measures such as anonymous mailings, to keep the groups at each other's throats.[47][48][49][50][51][52] LaRouche said he met representatives of the Soviet Union at the United Nations in 1974 and 1975 to discuss attacks by the Communist Party USA on the NCLC and to propose a merger, but said he received no assistance from them.[53] One FBI memo, obtained under the Freedom of Information Act, proposes assisting the CPUSA in an investigation "for the purpose of ultimately eliminating him [LaRouche] and the threat of the NCLC." (see image to left)

LaRouche's critics such as Dennis King and Antony Lerman allege that in 1973 and with little warning, LaRouche adopted more extreme ideas, a process accompanied by a campaign of violence against his opponents on the left, and the development of conspiracy theories and paranoia about his personal safety.[54] According to these accounts, he began to believe he was under threat of assassination from the Soviet Union, the CIA, Libya, drug dealers, and bankers.[55] He also established a "Biological Holocaust Task Force," which, according to LaRouche, analyzed the public health consequences of International Monetary Fund (IMF) austerity policies toward impoverished nations in Africa, and predicted that epidemics of cholera as well as possibly entirely new diseases would strike Africa in the 1980s.[56][57]

1973: U.S. Labor Party

Further information: U.S. Labor Party

LaRouche founded the U.S. Labor Party in 1973 as the political arm of the NCLC.[58][59] At first the party was "preaching Marxist revolution", but by 1977 they shifted from left-wing to right-wing politics.[60] A two-part article in *The New York Times* in 1979 by Howard Blum and Paul L. Montgomery alleged that LaRouche had turned the party (at that point with 1,000 members in 37 offices in North America, and 26 in Europe and Latin America) into an extreme-right, antisemitic organization, despite the presence of Jewish members. LaRouche denied the newspaper's charges, and said he had filed a $100 million libel suit; his press secretary said the articles were intended to "set up a credible climate for an assassination hit."[61]

The *Times* alleged that members had taken courses in how to use knives and rifles; that a farm in upstate New York had been used for guerrilla training; and that several members had undergone a six-day anti-terrorist training course run by Mitchell WerBell III, an arms dealer and former member of the Office of Strategic Services, who said he had ties to the CIA. Journalists and publications the party regarded as unfriendly were harassed, and it published a list of potential assassins it saw as a threat. LaRouche expected members to devote themselves entirely to the party, and place their savings and possessions at its disposal, as well as take out loans on its behalf. Party officials would decide who each member should live with, and if someone left the movement, his remaining partner was expected to live separately from him. LaRouche would question spouses about their partner's sexual habits, the *Times* said, and in one case reportedly ordered a member to stop having sex with his wife, because it was making him "politically impotent."[62][63][64]

1973: "Ego-stripping" and "brainwashing" allegations

LaRouche began writing in 1973 about the use of certain psychological techniques on recruits. In an article called "Beyond Psychoanalysis", he wrote that a worker's persona had to be stripped away to arrive at a state he called "little me," from which it would be possible to "rebuild their personalities around a new socialist identity," according to *The Washington Post*.[65][66] *The New York Times* wrote that the first such session—which LaRouche called "ego-stripping"—involved a German member, Konstantin George, in the summer of 1973. LaRouche said that during the session he discovered that a plot to assassinate him had been implanted in George's mind.[67]

He recorded sessions with a 26-year-old British member, Chris White, who had moved to England with LaRouche's former partner, Carol Schnitzer. In December 1973 LaRouche asked the couple to return to the U.S. His followers sent tapes of the subsequent sessions with White to *The New York Times*as evidence of an assassination plot. According to the *Times*, "[t]here are sounds of weeping, and vomiting on the tapes, and Mr. White complains of being deprived of sleep, food and cigarettes. At one point someone says 'raise the voltage', but (LaRouche) says this was associated with the bright lights used in the questioning rather than an electric shock." The *Times* wrote, "Mr. White complains of a terrible pain in his arm, then LaRouche can be heard saying, 'That's not real. That's in the program.'" LaRouche told the newspaper White had been "reduced to an eight-cycle infinite loop with look-up table, with homosexual bestiality." He said White had not been harmed and that a physician—a LaRouche movement member—had been present throughout.[67][68] White ended up telling LaRouche he had been programmed by the CIA and British intelligence to set up LaRouche for assassination by Cuban exile frogmen.[69]

According to *The Washington Post*, "brainwashing hysteria" took hold of the movement. One activist said he attended meetings where members were writhing on the floor saying they needed de-programming.[15] In two weeks in January 1974, the group issued 41 separate press releases about brainwashing. One activist, Alice Weitzman, expressed skepticism about the claims.[70]

1974: Contacts with far right groups, intelligence gathering

LaRouche established contacts with Willis Carto's Liberty Lobby and elements of the Ku Klux Klan in 1974.[71] Frank Donner and Randall Rothenbergwrote that he made successful overtures to the Liberty Lobby and George Wallace's American Independent Party, adding that the "racist" policies of LaRouche's U.S. Labor Party endeared it to members of the Ku Klux Klan.[72] George Michael, in *Willis Carto and the American Far Right*, says that LaRouche shared with the Liberty Lobby's Willis Carto an antipathy towards the Rockefeller family.[73] The Liberty Lobby defended its alliance with LaRouche by saying the U.S. Labor Party had been able to "confuse, disorient, and disunify the Left."[73]

Gregory Rose, a former chief of counter-intelligence for LaRouche who became an FBI informant in 1973, said that while the LaRouche movement had extensive links to the Liberty Lobby, there was also copious evidence of a connection to the Soviet Union. George and Wilcox say neither connection amounted to much—they assert that LaRouche was "definitely not a Soviet agent" and state that while the contact with the Liberty Lobby is often used to imply "'links' and 'ties' between LaRouche and the extreme right," it was in fact transient and marked by mutual suspicion. The Liberty Lobby soon pronounced itself disillusioned with LaRouche, citing his movement's adherence to "basic socialist positions" and his softness on "the major Zionistgroups" as fundamental points of difference. According to George and Wilcox, American neo-Nazi leaders expressed misgivings over the number of Jews and members of other minority groups in his organization, and did not consider LaRouche an ally.[74] George Johnson, in *Architects of Fear*, similarly states that LaRouche's overtures to far right groups were pragmatic rather than sincere. A 1975 party memo spoke of uniting with these groups only to overthrow the established order, adding that once that goal had been accomplished, "eliminating our right-wing opposition will be comparatively easy."[75]

Howard Blum wrote in *The New York Times* that, from 1976 onwards, party members sent reports to the FBI and local police regarding members of left-wing organizations. In 1977, he wrote, commercial reports on U.S. anti-apartheid groups were prepared by LaRouche members for the South African government, student dissidents were reported to the Shah of Iran's Savak secret police, and the anti-nuclear movement was investigated on behalf of power companies. Johnson says the intelligence network was made up of "obnoxious devotees commandeering WATS lines and tricking bureaucrats into giving them information."[76] By the late 1970s, members were exchanging almost daily information with Roy Frankhouser, a government informant and infiltrator of both far right and far left groups who was involved with the Ku Klux Klan and the American Nazi Party.[77][78][79][80] The LaRouche organization believed Frankhouser to be a federal agent who had been assigned to infiltrate right-wing and left-wing groups, and that he had evidence that these groups were actually being manipulated or controlled by the FBI and other agencies.[81][82] LaRouche and his associates considered Frankhouser to be a valuable intelligence contact, and took his links to extremist groups to be a cover for his intelligence work.[77][83][84] Frankhouser played into these expectations, misrepresenting himself as a conduit for communications to LaRouche from "Mr. Ed", an alleged CIA contact who did not exist in reality.[77][85]

Blum wrote, at around this time, that LaRouche's Computron Technologies Corporation included Mobil Oil and Citibank among its clients, that his World Composition Services had one of the most advanced typesetting complexes in the city and had the Ford Foundation among its clients, and that his PMR Associates produced the party's publications and some high school newspapers.[84]

Around the same time, according to Blum, LaRouche was telling his membership several times a year that he was being targeted for assassination, including by the Queen of the United Kingdom, Zionist mobsters, the Council on Foreign Relations, the Justice Department, and the Mossad.[84]LaRouche sued the City of New York in 1974, saying that CIA and British spies had brainwashed his associates into killing him.[86] According to *The Patriot-News* of Harrisburg, Pennsylvania, LaRouche said he had been "threatened by Communists, Zionists, narcotics gangsters, the Rockefellers and international terrorists."[87] LaRouche later said that,

"Since late 1973, I have been repeatedly the target of serious assassination threats and my wife has been three times the target of attempted

assassination. ... My enemies are the circles of McGeorge Bundy, Henry Kissinger, Soviet President Yuri Andropov, W. Averell Harriman, certain powerful bankers, and the Socialist and Nazi Internationals, as well as international drug traffickers, Colonel Gadaffi, Ayatollah Khomeini, and the Malthusian lobby."[88]

1975–1976: presidential campaign

Further information: Lyndon LaRouche U.S. presidential campaigns and Views of Lyndon LaRouche and the LaRouche movement § LaRouche's campaign platforms

In 1975 Clarence M. Kelley, FBI Director, called the NCLC a "violence-oriented organization."[89]

In March 1975 Clarence M. Kelley, director of the FBI, testified before the House Appropriations Committee that LaRouche's NCLC was "a violence-oriented organization of 'revolutionary socialists' with a membership of nearly 1,000 in chapters in some 50 cities." He said that during the previous two years its members had been "involved in fights, beatings, using drugs, kidnappings, brainwashings, and at least one shooting. They are reported to be armed, to have received defensive training such as karate, and to attend cadre schools and training schools to learn military tactics."[89]

In 1975, under the name *Lyn Marcus*, LaRouche published *Dialectical Economics: An Introduction to Marxist Political Economy*, described by its only reviewer as "the most peculiar and idiosyncratic" introduction to economics he had ever seen. Mixing economics, history, anthropology, sociology and a surprisingly large helping of business administration, the work argued that most prominent Marxists had misunderstood Marx, and that bourgeois economics arose when philosophy took a wrong, reductionist turn under British empiricists like Locke and Hume.[90][91]

In 1976, LaRouche campaigned for the first time in a presidential election as a U.S. Labor Party candidate, polling 40,043 votes (0.05 percent). It was the first of eight consecutive presidential elections in which he took part between 1976 and 2004. It enabled him to attract $5.9 million in federal matching funds; candidates seeking their party's presidential nomination qualify for matching funds if they raise $5,000 in each of at least 20 states.[92] His platform predicted financial disaster by 1980 accompanied by famine and the virtual extinction of the human race within 15 years, and proposed a debt moratorium; nationalization of banks; government investment in industry especially in the aerospace sector, and an "International Development Bank" to facilitate higher food production.[93]When Legionnaires' disease appeared in the U.S. that year, he said it was a continuation of the swine flu outbreak, and that senators who opposed vaccination were suppressing the link as part of a "genocidal policy".[94]

His campaign included a paid half-hour television address, which allowed him to air his views before a national audience, something that became a regular feature of his later campaigns. There were protests about this, and about the involvement of the NCLC in public life generally. Writing in *The Washington Post*, Stephen Rosenfeld said LaRouche's ideas belonged to the radical right, neo-Nazi fringe, and that his main interests lay in disruption and disinformation; Rosenfeld called the NCLC one of the "chief polluters" of political democracy. Rosenfeld argued that the press should be "chary" of offering them print or air time: "A duplicitous violence-prone group with fascistic proclivities should not be presented to the public, unless there is reason to present it in those terms." LaRouche wrote in 1999 that this comment had "openly declared ... a policy of malicious lying" against him.[95]

Helga Zepp in 2005

1977: Second marriage

LaRouche married again in 1977. His wife, Helga Zepp, was then a leading activist in the West German branch of the movement. She went on to work closely with LaRouche for the rest of her career, standing for election in Germany in 1980 for his *Europäische Arbeiterpartei* (European Workers Party), and founding the Schiller Institute in Germany in 1984.[96]

1980s

National Democratic Policy Committee, "October Surprise" theory

From the autumn of 1979, the LaRouche movement conducted most of its U.S. electoral activities as the National Democratic Policy Committee (NDPC), a political action committee.[97] The name drew complaints from the Democratic Party's Democratic National Committee. Democratic Party leaders refused to recognize LaRouche as a party member, or to seat the few delegates he received in his seven primary campaigns as a Democrat.[98] His campaign platforms advocated a return to the Bretton Woods system, including a gold-based national and world monetary system; fixed exchange rates; and abolishing the International Monetary Fund.[99] He supported the replacement of the central bank system, including the U.S. Federal Reserve System, with a national bank;[100] a war on drug trafficking and prosecution of banks involved in money laundering;[101] building a tunnel under the Bering Strait; the building of nuclear power plants; and a crash program to build particle-beam weapons and lasers, including support for elements of the Strategic Defense Initiative (SDI). He opposed the Soviet Union and supported a military build-up to prepare for imminent war; supported the screening and quarantine of AIDS patients; and opposed environmentalism, deregulation, outcome-based education, and abortion.[102]

"No more will the United States fight World Wars to save the British Empire in any shape or guise. No more will the United States tolerate the British system, whether colonial or neo-colonial. No more will the United States tolerate the economics of Adam Smith in any part of the world. We are going to take this aching, poor, hungry world and we're going to transform it with American methods. We're going to transform it through the export and development of high technology, we're going to have Manhattan Projects and NASA projects and every *dirigiste*, Federally-directed, scientific crazed program that we deem necessary."

— Lyndon LaRouche, *at the opening of the National Democratic Policy Committee, 1979.*

In December 1980, LaRouche and his followers started what came to be known as the "October Surprise" allegation,[103] namely that in October 1980 Ronald Reagan's campaign staff conspired with the Iranian government during the Iran hostage crisis to delay the release of 52 American hostages held in Iran, with the aim of helping Reagan win the 1980 United States presidential election against Jimmy Carter. The Iranians had agreed to this, according to the theory, in exchange for future weapons sales from the Reagan administration. The first publication of the story was in LaRouche's *Executive Intelligence Review* on December 2, 1980, followed by his *New Solidarity* on September 2, 1983, alleging that Henry Kissinger, one of LaRouche's regular targets, had met Iran's Ayatollah Beheshti in Paris, according to Iranian sources in Paris. The theory was later echoed by former Iranian President Abolhassan Banisadr and former Naval intelligence officer and National Security Council member Gary Sick.[104]

1983: Move from New York to Loudoun County

The Washington Post wrote that LaRouche and his wife moved in August 1983 from New York to a 13-room Georgian mansion on a 250-acre section of the Woodburn Estate, near Leesburg, Loudoun County, Virginia. The property was owned at the time by a company registered in Switzerland. Companies associated with LaRouche continued to buy property in the area, including part of Leesburg's industrial park, purchased by LaRouche's Lafayette/Leesburg

associated with LaRouche continued to buy property in the area, including part of Leesburg's industrial park, purchased by LaRouche's Lafayette/Leesburg Ltd. Partnership to develop a printing plant and office complex.[105]

Neighbors said they saw LaRouche guards in camouflage clothes carrying semi-automatic weapons, and the *Post* wrote that the house had sandbag-buttressed guard posts nearby, along with metal spikes in the driveway and concrete barriers on the road. One of his aides said LaRouche was safer in Loudoun County: "The terrorist organizations which have targeted Mr. LaRouche do not have bases of operations in Virginia." LaRouche said his new home meant a shorter commute to Washington. A former associate said the move also meant his members would be more isolated from friends and family than they had been in New York.[105] According to the *Post* in 2004, local people who opposed him for any reason were accused in LaRouche publications of being commies, homosexual, drug pushers, and terrorists. He reportedly accused the Leesburg Garden Club of being a nest of Soviet sympathizers, and a local lawyer who opposed LaRouche on a zoning matter went into hiding after threatening phone calls and a death threat.[15] In leaflets supporting his application of concealed weapons permits for his bodyguards in Leesburg, Virginia, he wrote:

"I have a major personal security problem ... [Without the permits] the assassination teams of professional mercenaries now being trained in Canada and along the Mexico border may be expected to start arriving on the streets of Leesburg ... If they come, there will be many people dead or mutilated within as short an interval as 60 seconds of fire."[106]

Regarding LaRouche's paramilitary security force, armed with semi-automatic weapons,[107] a spokesperson said that they were necessary, because LaRouche was the subject of "assassination conspiracies".[108]

1984: Schiller Institute, television spots, contact with Reagan administration

Further information: Schiller Institute

Helga Zepp-LaRouche founded the Schiller Institute in Germany in 1984.[109] In the same year, LaRouche was able to raise enough money to purchase 14 television spots, at a cost of $330,000 each, in which he called Walter Mondale—the Democratic Party's presidential candidate—a Soviet agent of influence, triggering over 1,000 telephone complaints.[110] On April 19, 1986, NBC's *Saturday Night Live* aired a sketch satirizing the ads, portraying the Queen of the United Kingdom and Henry Kissinger as drug dealers. LaRouche received 78,773 votes in the 1984 presidential election.[111]

In 1984, media reports stated that LaRouche and his aides had met Reagan administration officials, including Norman Bailey, senior director of international economic affairs for the National Security Council (NSC), and Richard Morris, special assistant to William P. Clark, Jr. There were also reported contacts with the Drug Enforcement Administration, the Defense Intelligence Agency, and the CIA. The LaRouche campaign said the reporting was full of errors.[112] In 1984 two Pentagon officials spoke at a LaRouche rally in Virginia; a Defense Department spokesman said the Pentagon viewed LaRouche's group as a "conservative group ... very supportive of the administration." White House spokesman Larry Speakes said the Administration was "glad to talk to" any American citizen who might have information.[113] According to Bailey, the contacts were broken off when they became public.[32]Three years later, LaRouche blamed his criminal indictment on the NSC, saying he had been in conflict with Oliver North over LaRouche's opposition to the Nicaraguan Contras.[114] According to a LaRouche publication, a court-ordered search of North's files produced a May 1986 telex from Iran–Contradefendant General Richard Secord, discussing the gathering of information to be used against LaRouche.[115] King states that LaRouche's *Executive Intelligence Review* was the first to report on important details of the Iran–Contra affair, predicting that a major scandal was about to break months before mainstream media picked up on the story.[116]

Strategic Defense Initiative

Main article: Fusion Energy Foundation

The Wheat Building in Leesburg, Virginia, which housed the Fusion Energy Foundation in the 1980s.

The LaRouche campaign supported Reagan's Strategic Defense Initiative (SDI). Dennis King wrote that LaRouche had been speculating about space-based weaponry as early as 1975. He set up the Fusion Energy Foundation, which held conferences and tried to cultivate scientists, with some success. In 1979, FEF representatives attended a Moscow conference on laser fusion. LaRouche began to promote the use of lasers and related technologies for both military and civilian purposes, calling for a "revolution in machine tools."[117]

According to King, LaRouche's associates had for some years been in contact with members of the Reagan administration about LaRouche's space-based weapons ideas.[118] LaRouche proposed the development of defensive beam technologies as a policy that was in the interest of both the United States and the Soviet Union, as the alternative to an arms race in offensive weapons, and as a generator of spin-off economic benefits. Between February 1982 and February 1983, with the approval of the National Security Council, LaRouche met with Soviet embassy representative Evgeny Shershnev to discuss the proposal. During this period, Soviet economists also began to study LaRouche's economic forecasting model. However, following Reagan's public announcement of the SDI in March 1983, Soviet representatives broke off all contact with LaRouche and his representatives.[117]

Physicist Edward Teller, a proponent of SDI and X-ray lasers, told reporters in 1984 that he had been courted by LaRouche, but had kept his distance. LaRouche began calling his plan the "LaRouche-Teller proposal," though they had never met. Teller said LaRouche was "a poorly informed man with fantastic conceptions."[119]

LaRouche later attributed the collapse of the Soviet Union to its refusal to follow his advice to accept Reagan's offer to share the technology.[120] Former Secretary of Defense Donald Rumsfeld reported in his 2011 memoir that at a 2001 dinner in Russia with leading officials, he was told by General Yuri Baluyevsky, then the second highest-ranking officer in the Russian military, that LaRouche was the brains behind SDI. Rumsfeld stated that he believed LaRouche had had no influence whatsoever on the program, and surmised that Baluyevsky must have obtained the information off the Internet.[121] In 2012 the former head of the Russian bureau of Interpol, General Vladimir Ovchinsky, also described LaRouche as the man who proposed the SDI.[122]

1984: NBC lawsuit

In January 1984 NBC (National Broadcasting Company) aired a news segment about LaRouche, and in March a "First Camera" report produced by Pat Lynch. In an article for the *Columbia Journalism Review* in 1985, Lynch wrote that the reports included the allegation that LaRouche was "the leader of a violence-prone, anti-Semitic cult that smeared its opponents and sued its critics."[123] In interviews, former members of the movement gave details about their fundraising practices, and alleged that LaRouche had spoken about assassinating U.S. President Jimmy Carter. The reports said an investigation by the Internal Revenue Service (IRS) would lead to an indictment, and quoted Irwin Suall, the Anti-Defamation League's (ADL) fact-finding director, who called LaRouche a "small-time Hitler." After the broadcast, LaRouche members picketed NBC's office carrying signs saying "Lynch Pat Lynch," and the NBC switchboard said it received a death threat against her. Another NBC researcher said someone placed fliers around her parents' neighborhood saying she

was running a call-girl ring from her parents' home.[124] Lynch said LaRouche members began to impersonate her and her researchers in telephone calls, and called her "Fat Lynch" in their publications.[123]

LaRouche filed a defamation suit against NBC and the ADL, arguing that the programs were the result of a deliberate campaign of defamation against him.[125] The judge ruled that NBC need not reveal its sources, and LaRouche lost the case. NBC won a countersuit, the jury awarding the network $3 million in damages, later reduced to $258,459, for misuse of libel law, in what was called one of the more celebrated countersuits by a libel defendant.[126] LaRouche failed to pay the damages, pleading poverty, which the judge described as "completely lacking in credibility."[127] LaRouche said he had been unaware since 1973 who paid the rent on the estate, or for his food, lodging, clothing, transportation, bodyguards, and lawyers. The judge fined him for failing to answer. After the judge signed an order to allow discovery of LaRouche's personal finances, a cashier's check was delivered to the court to end the case.[128] When LaRouche appealed, the Fourth Circuit Court of Appeals, rejecting his arguments, set forth a three-pronged test, later called the "LaRouche test," to decide when anonymous sources must be named in libel cases.[129]

1985–1986: PANIC, LaRouche's AIDS initiative

Main article: 1986 California Proposition 64

LaRouche interpreted the AIDS pandemic as fulfillment of his 1973 prediction that an epidemic would strike humanity in the 1980s. According to Christopher Toumey, his subsequent campaign followed a familiar LaRouche pattern: challenging the scientific competence of government experts, and arguing that LaRouche had special scientific insights, and his own scientific associates were more competent than government scientists. LaRouche's view of AIDS agreed with orthodox medicine in that HIV caused AIDS, but differed from it in arguing that HIV spread like the cold virus or malaria, by way of casual contact and insect bites—which, if true, would make HIV-positive people extremely dangerous. He advocated testing anyone working in schools, restaurants, or healthcare, and quarantining those who tested positive. Some of LaRouche's views on AIDS were developed by John Seale, a British venereological physician who proposed that AIDS was created in a Soviet laboratory. Seale's highly speculative writings were published in three prestigious medical journals, lending these ideas some appearance of being hard science.[56]

LaRouche and his associates devised a "Biological Strategic Defense Initiative" that would cost $100 billion per annum, which they said would have to be directed by LaRouche. Toumey writes that those opposing the program, such as the World Health Organization and Centers for Disease Control, were accused of "viciously lying to the world," and of following an agenda of genocide and euthanasia.[130] In 1986 LaRouche proposed that AIDS be added to California's List of Communicable Diseases. Sponsored by his "Prevent AIDS Now Initiative Committee" (PANIC), Proposition 64—or the "LaRouche initiative"—qualified for the California ballot in 1986, with the required signature gatherers mostly paid for by LaRouche's Campaigner Publications. Seale, presented as an AIDS expert by PANIC, supported the LaRouche initiative, but disagreed with several of LaRouche's views, including that HIV could be spread by insects, and described the group's political beliefs and conspiracy theories as "rather odd".[131] According to David Kirp, professor of public policy at the University of California at Berkeley, the proposal would have required that 300,000 people in the area with HIV or AIDS be reported to public health authorities; might have removed over 100,000 of them from their jobs in schools, restaurants and agriculture; and would have forced 47,000 children to stay away from school.[132]

The proposal was opposed by leading scientists and local health officials as based on inaccurate scientific information and, as the public health schools put it, running "counter to all public health principles." It was defeated, reintroduced two years later, and defeated again, with two million votes in favor the first time, and 1.7 million the second. AIDS became a leading plank in LaRouche's platform during his 1988 presidential campaign.[133]

1986: Electoral success in Illinois; press conference allegations

In March 1986, Mark Fairchild and Janice Hart—LaRouche National Democratic Policy Committee candidates—won the Democratic primary for statewide offices in Illinois, bringing LaRouche national attention.[134] The Democratic gubernatorial candidate, Adlai Stevenson III, withdrew his nomination rather than run on the same slate as LaRouche members, and told reporters the party was "exploring every legal remedy to purge these bizarre and dangerous extremists from the Democratic ticket." A spokesman for the Democratic National Committee said it would have to do a better job of communicating to the electorate that LaRouche's National Democratic Policy Committee was unrelated to the Democratic Party.[135] *The New York Times* wrote that Democratic Party officials were trying to identify LaRouche candidates in order to alert voters, and asked the LaRouche organization to release a full list of its candidates.[136]

A month later, LaRouche held a press conference to accuse the Soviet government, British government, drug dealers, international bankers, and journalists of being involved in a variety of conspiracies. Flanked by bodyguards, he said, "If Abe Lincoln were alive, he'd probably be standing up here with me today," and that there was no criticism of him that did not originate "with the drug lobby or the Soviet operation ..." He said he had been in danger from Soviet assassins for over 13 years, and had to live in safe houses. He refused to answer a question from an NBC reporter, saying "How can I talk with a drug pusher like you?" He called the leadership of the United States "idiotic" and "berserk," and its foreign policy "criminal or insane." He warned of the imminent collapse of the banking system and accused banks of laundering drug money. Asked about the movement's finances, he said "I don't know. ... I'm not responsible, I'm not involved in that."[137]

1986–1988: Raids and criminal convictions

Main article: LaRouche criminal trials

In October 1986, hundreds of state and federal officers raided LaRouche offices in Virginia and Massachusetts. A federal grand jury indicted LaRouche and twelve of his associates on credit card fraud and obstruction of justice. The charges stated that they had attempted to defraud people of millions of dollars, including several elderly people, by borrowing money they did not intend to repay. LaRouche disputed the charges, alleging that they were politically motivated.[138]

When LaRouche's "heavily fortified"[139] estate was surrounded, he at first warned law-enforcement officials not to arrest him, saying that any attempt to do so would be an attempt to kill him. A spokesman would not rule out the use of violence against officials in response. While surrounded, LaRouche sent a telegram to President Ronald Reagan saying that an attempt to arrest him "would be an attempt to kill me. I will not submit passively to such an arrest, ... I will defend myself."[140][141]

In 1987, a number of LaRouche entities, including the Fusion Energy Foundation, were taken over through an involuntary bankruptcy proceeding. The government's use of a sealed order in this proceeding was regarded as a rare legal maneuver.[142]

On December 16, 1988, LaRouche was convicted of conspiracy to commit mail fraud involving more than $30 million in defaulted loans; eleven counts of actual mail fraud involving $294,000 in defaulted loans; and a single count of conspiring to defraud the U.S. Internal Revenue Service. He was sentenced to

15 years in federal prison, but was released on parole after serving five years on January 26, 1994.

Thirteen associates were sentenced to prison terms ranging from one month to 77 years for mail fraud and conspiracy.[138]

The trial judge called LaRouche's claim of a political vendetta "arrant nonsense", and said "the idea that this organization is a sufficient threat to anything that would warrant the government bringing a prosecution to silence them just defies human experience."[143]

Defense lawyers filed unsuccessful appeals that challenged the conduct of the grand jury, the contempt fines, the execution of the search warrants, and various trial procedures. At least ten appeals were heard by the United States Court of Appeals, and three were heard by the U.S. Supreme Court.

Former Attorney General Ramsey Clark joined the defense team for two appeals, writing that the case involved "a broader range of deliberate and systematic misconduct and abuse of power over a longer period of time in an effort to destroy a political movement and leader, than any other federal prosecution in my time or to my knowledge."[144]

In his 1988 autobiography, LaRouche says the raid on his operation was the work of Raisa Gorbachev.[145] In an interview that same year, he said that the Soviet Union opposed him, because he had invented the Strategic Defense Initiative. "The Soviet government hated me for it. Gorbachev also hated my guts and called for my assassination and imprisonment and so forth." He asserted that he had survived these threats, because he had been protected by unnamed U.S. government officials. "Even when they don't like me, they consider me a national asset, and they don't like to have their national assets killed."[146]

LaRouche received 25,562 votes in the 1988 presidential election.[147]

1989: Musical interests and Verdi tuning initiative

LaRouche had an interest in classical music up to the period of Brahms. A motto of LaRouche's European Workers' Party, is "Think like Beethoven"; movement offices typically include a piano and posters of German composers, and members are known for their choral singing at protest events and for using satirical lyrics tailored to their targets.[148] LaRouche abhorred popular music; he said in 1980, "Rock was not an accidental thing. This was done by people who set out in a deliberate way to subvert the United States. It was done by British intelligence", and wrote that the Beatles were "a product shaped according to British Psychological Warfare Division specifications."[149]

LaRouche movement members have protested at performances of Richard Wagner's operas, denouncing Wagner as an anti-Semite who found favor with the Nazis, and called a conductor "satanic", because he played contemporary music.[150]

In 1989 LaRouche advocated that classical orchestras should use a concert pitch based on A above middle C (A_4) tuned to 432 Hz, which the Schiller Institute called the "Verdi pitch", a pitch that Verdi had suggested as optimal, though he also composed and conducted in other pitches such as the French official *diapason normal* of 435 Hz, including his *Requiem* in 1874.[151]

The Schiller Institute initiative attracted support from more than 300 opera stars, including Joan Sutherland, Plácido Domingo, and Luciano Pavarotti, who according to *Opera Fanatic* may or may not have been aware of LaRouche's politics. A spokesman for Domingo said Domingo had simply signed a questionnaire, had not been aware of its origins, and would not agree with LaRouche's politics. Renata Tebaldi and Piero Cappuccilli, who were running for the European Parliament on LaRouche's "Patriots for Italy" platform, attended Schiller Institute conferences as featured speakers. The discussions led to debates in the Italian parliament about reinstating "Verdi" legislation. LaRouche gave an interview to National Public Radio on the initiative from prison. The initiative was opposed by the editor of *Opera Fanatic*, Stefan Zucker, who objected to the establishment of a "pitch police," and argued that LaRouche was using the issue to gain credibility.[152]

1990s

Imprisonment, release on parole, attempts at exoneration, visits to Russia

LaRouche began his jail sentence in 1989, serving it at the Federal Medical Center in Rochester, Minnesota. From there he ran for Congress in 1990, seeking to represent the 10th District of Virginia, but he received less than one percent of the vote. He ran for President again in 1992 with James Bevelas his running mate, a civil rights activist who had represented the LaRouche movement in its pursuit of the Franklin child prostitution ring allegations. It was only the second-ever campaign for president from prison.[153] He received 26,334 votes, standing again as the "Economic Recovery" party.[154] For a time he shared a cell with televangelist Jim Bakker. Bakker later wrote of his astonishment at LaRouche's detailed knowledge of the Bible. According to Bakker, LaRouche received a daily intelligence report by mail, and at times had information about news events days before they happened. Bakker also wrote that LaRouche believed their cell was bugged. In Bakker's view, "to say LaRouche was a little paranoid would be like saying that the *Titanic* had a little leak."[155]

Viktor Kuzin, a member of the Moscow City Council and a founder of the Democratic Union in Russia,[156] travelled to Minnesota in 1993 to meet LaRouche in prison, and afterwards participated in international campaigns to exonerate LaRouche.[157] An advertisement calling for exoneration was published in several U.S. newspapers, signed by Kuzin, Civil Rights attorney J. L. Chestnut, former Ugandan President Godfrey Binaisa, and others.[158]Chestnut was interviewed in the *Tuscaloosa News* saying that when he met LaRouche, "I told him that he might as well be black and in Alabama."[159]

The exoneration campaigns garnered the support of a number of State Representatives and State Senators in the U.S., as well as a former justice of the Washington State Supreme Court.[160][161]

LaRouche was released on parole in January 1994, and returned to Loudoun County. *The Washington Post* wrote that he would be supervised by parole and probation officers until January 2004.[162] Also in 1994, his followers joined members of the Nation of Islam to condemn the Anti-Defamation Leaguefor its alleged crimes against African Americans, reportedly one of several such meetings since 1992.[163]

The then former U.S. Attorney General Ramsey Clark wrote a letter in 1995 to then-Attorney General Janet Reno in which he said that the case against LaRouche involved "a broader range of deliberate and systematic misconduct and abuse of power over a longer period of time in an effort to destroy a political movement and leader, than any other federal prosecution in my time or to my knowledge". He asserted that, "The government, ex parte, sought and received an order effectively closing the doors of these publishing businesses, all of which were involved in First Amendment activities, effectively preventing the further repayment of their debts." He called the convictions "a tragic miscarriage of justice which at this time can only be corrected by an objective review and courageous action by the Department of Justice".[164] The LaRouche movement organized two panels to review the cases: the Curtis Clark Commission,[165] and the Mann-Chestnut hearings.[166]

Beginning in 1994, LaRouche made numerous visits to Russia, participating in conferences of the Vernadsky State Geological Museum of the Russian Academy of Sciences (RAS), the RAS Institute of the Far East, and other places. He addressed seminars at the RAS Institute of Economics, the RAS Institute

of Oriental Studies. He spoke at hearings in the State Duma of the Russian Federation on measures to ensure the development of the Russian economy at the point of destabilization of the world financial system. Two of his books were translated into Russian.[167]

On September 18, 1996, a full-page advertisement appeared in the *New Federalist*, a LaRouche publication, as well as *The Washington Post* and *Roll Call*. Entitled "Officials Call for LaRouche's Exoneration", its signatories included Arturo Frondizi, former President of Argentina; figures from the 1960s American civil rights movement such as Amelia Boynton Robinson (a leader of the Larouche-affiliated Schiller Institute), James Bevel (a Larouche movement participant) and Rosa Parks; former Minnesota Senator and Democratic presidential candidate Eugene McCarthy; Mervyn Dymally, who chaired the Congressional Black Caucus; and artists such as classical vocalist William Warfield and violinist Norbert Brainin, former 1st Violin of the Amadeus Quartet.[168]

In 1996, LaRouche was invited to speak at a convention organized by the Nation of Islam's Louis Farrakhan and Ben Chavis, then of the National African American Leadership Summit. As soon as he began speaking, he was booed off the stage.[169]

In the 1996 Democratic Party presidential primaries, he received enough votes in Louisiana and Virginia to get one delegate from each state, but before the primaries began, the Democratic National Committee chair, Donald Fowler, ruled that LaRouche was not a "bona fide Democrat" because of his "expressed political beliefs ... which are explicitly racist and anti-Semitic," and because of his "past activities, including exploitation of and defrauding contributors and voters." Fowler instructed state parties to disregard votes for LaRouche.[170]

LaRouche opposed attempts to impeach President Bill Clinton, charging it was a plot by the British Intelligence to destabilize the U.S. Government.[171][172] In 1996 he called for the impeachment of Pennsylvania governor Tom Ridge.[173][174]

Efforts to clear LaRouche's name continued, including in Australia, where the Parliament acknowledged receipt of 1,606 petition signatures in 1998.[175]

In 1999 China's press agency, the Xinhua News Agency, reported that LaRouche had criticized the Cox Report, a congressional investigation that accused the Chinese of stealing U.S. nuclear weapons secrets, calling it a "scientifically illiterate hoax."[176] On October 13, 1999, during a press conference to announce his plans to run for president, he predicted the collapse of the world's financial system, stating, "There's nothing like it in this century. ... it is systematic, and therefore, inevitable." He said the U.S. and other nations had built the "biggest financial bubble in all history," which was close to bankruptcy.[177]

2000s

2000–2003: Worldwide LaRouche Youth Movement, September 11 Attacks, presidential run

LaRouche supporters in Chicago, 2007

LaRouche founded the Worldwide LaRouche Youth Movement (WLYM) in 2000, saying in 2004 that it had hundreds of members in the U.S. and a lesser number overseas. During the Democratic primaries in June 2000, he received 53,280 votes, or 22 percent of the total, in Arkansas.[178]

In 2002 LaRouche's *Executive Intelligence Review* argued that the September 11, 2001 attacks had been an "inside job"and "attempted coup d'etat", and that Iran was the first country to question it. The article received wide coverage in Iran, and was cited by senior Iranian government officials, including Akbar Hashemi Rafsanjani and Hassan Rouhani. Mahmoud Alinejad wrote that, in a subsequent telephone interview with the *Voice of the Islamic Republic of Iran*, LaRouche said the attacks had been organized by rogue elements inside the U.S., aiming to use the incident to promote a war against Islam, and that Israel was a dictatorial regime prepared to commit Nazi-style crimes against the Palestinians.[179]

In 2003 LaRouche was living in a "heavily guarded" rented house in Round Hill, Loudoun County, Virginia.[180]

LaRouche again entered the primary elections for the Democratic Party's nomination in 2004, setting a record for the number of consecutive presidential campaigns; Democratic Party officials distanced themselves from him and did not allow him to participate in candidate forum debates. He did not run in 2008.[181]

As during the preceding decade, LaRouche and his followers denied that human civilization had harmed the environment through DDT, chlorofluorocarbons, or carbon dioxide. According to Chip Berlet, "Pro-LaRouche publications have been at the forefront of denying the reality of global warming".[182]

2003–2012: Overseas press coverage, financial crisis

Iqbal Qazwini wrote in the Arabic-language daily *Asharq Al-Awsat* in 2003 that LaRouche was one of the first to predict the fall of the Berlin Wall in 1988 and German unification. He said LaRouche had urged the West to pursue a policy of economic cooperation similar to the Marshall Plan for the advancement of the economy of the socialist countries. According to Qazwini, recent years have seen a proliferation of LaRouche's ideas in China and South Asia. Qazwini referred to him as the spiritual father of the revival of the new Silk Road or Eurasian Landbridge, which aims to link the continents through a network of ground transportation.[183]

In April 2005, Tang Yong of the *People's Daily* of China covered LaRouche's record of economic forecasting, and his warning that the present financial and currency system was already unsalvageable, thus it must be radically restructured, not just merely reformed.[184] Later that year, the paper published an eight-part interview with LaRouche, covering his economic forecasts, his battles with the American media, and his assessment of the neoconservatives. The interviewer wrote that LaRouche was "quite famous in mainland China today," and seemed to be better known overseas than in America.[185]

In 2007, LaRouche began a national lobbying campaign to restore the Glass-Steagall Act, saying that it would be possible to save the U.S. banking system by reorganizing it under bankruptcy protection.[186] Also during 2007 he proposed a "Homeowners and Bank Protection Act". This called for the establishment of a federal agency that would "place federal- and state-chartered banks under protection, freeze all existing home mortgages for a period of time, adjust mortgage values to fair prices, restructure existing mortgages at appropriate interest rates, and write off speculative debt obligations of mortgage-backed securities". The bill envisioned a foreclosure moratorium, allowing homeowners to make the equivalent of rental payments for an interim period, and an end to bank bail-outs, forcing banks to reorganize under bankruptcy laws.[187]

In Spring 2007 he was an honorary foreign guest at a ceremony in honor of the 80th birthday of Stanislav Menshikov at the Russian Academy of Sciences.[167]

2009: U.S. health care reform

LaRouche poster of Barack Obama with a 'Hitler mustache'

During the discussion of U.S. health care reform in 2009, LaRouche advocated a single-payer health care bill and took exception to what he described as

During the discussion of U.S. health care reform in 2009, LaRouche advocated a single-payer health care bill and took exception to what he described as Barack Obama's proposal that "independent boards of doctors and health care experts [should] make the life-and-death decisions of what care to provide, and what not, based on cost-effectiveness criteria." LaRouche said the proposed boards, later compared to "death panels" by Sarah Palin, would amount to the same thing as the Nazis' Action T4 euthanasia program, and urged Americans to "quickly and suddenly change the behavior of this president ... for no lesser reason than that your sister might not end up in somebody's gas oven."

Images at tables of volunteers compared Obama to Hitler, and at least one had a picture of Obama with a Hitler-style mustache. In Seattle, police were called twice in response to people threatening to attack the volunteers. During one widely reported public meeting, Congressman Barney Frank referred to the images as "vile, contemptible nonsense."[188][189][190][191][192][193][194]

Ideology and beliefs

Main article: Views of Lyndon LaRouche and the LaRouche movement

History as a struggle between Platonism and Aristotelianism

University of Notre Dame political philosophers Catherine Zuckert and Michael Zuckert write about LaRouche that "[I]t must be nearly unique in American politics that a presidential candidate ... makes the interpretation of Plato a major issue in his campaign."[195]

According to George Johnson, LaRouche saw history as a battle between Platonists, who believe in absolute truth, and Aristotelians, who rely on empirical data. Johnson characterizes LaRouche's views as follows: the Platonists include figures such as Beethoven, Mozart, Shakespeare, Leonardo da Vinci, and Leibniz. LaRouche believed that many of the world's ills result from the dominance of Aristotelianism as embraced by the empirical philosophers(such as Hobbes, Locke, Berkeley, and Hume), leading to a culture that favors the empirical over the metaphysical, embraces moral relativism, and seeks to keep the general population uninformed. Industry, technology, and classical music should be used to enlighten the world, LaRouche argued, whereas the Aristotelians use psychotherapy, drugs, rock music, jazz, environmentalism, and quantum theory to bring about a new Dark Age in which the world will be ruled by the oligarchs. Left and right are false distinctions for LaRouche; what matters is the Platonic versus Aristotelian outlook, a position that has led him to form relationships with groups as disparate as farmers, nuclear engineers, Black Muslims, Teamsters, and pro-life advocates.

In *Architects of Fear* (1983), Johnson compares LaRouche's view to an Illuminati conspiracy theory; Johnson writes that after he wrote about LaRouche in *The Minneapolis Star*, LaRouche's followers denounced him as part of a conspiracy of elitists that began in ancient Egypt.[196][197][198][199][200] However, according to LaRouche, Aristotelians are not necessarily in communication or coordination with one another: "From their standpoint, [they] are proceeding by instinct," LaRouche said. "If you're asking how their policy is developed—if there is an inside group sitting down and making plans—no, it doesn't work that way ... History doesn't function quite that consciously."[201][196][202][203][204]

Controversy

Despite LaRouche's self-identification with the left and some left-wing policies, his critics have said that he had "fascistic tendencies", took positions on the far right, and created disinformation.[205]

Designation as conspiracy theorist

LaRouche was commonly regarded as a conspiracy theorist, for example by his Fox News obituary.[206] An article in the Southern Poverty Law Center[207]website names him as "a fringe ideologue and conspiracy theorist whom Chip Berlet, senior analyst at Political Research Associates and an expert on the radical right calls “the man who brought us fascism wrapped in an American flag”." An NPR obituary is titled *Conspiracy Theorist And Frequent Presidential Candidate Lyndon LaRouche Dies At 96*[208]. *The Washington Post* obituary reports he was "often described as an extremist crank and fringe figure" and that he "built a worldwide following based on conspiracy theories, economic doom, anti-Semitism, homophobia and racism".[209]

Allegations of antisemitism

LaRouche and his ideas have been called antisemitic since at least the mid-1970s by dozens of individuals and organizations in countries across Europe and North America. LaRouche and his followers have responded to these allegations by claiming that LaRouche has Jewish supporters and denied the accusations.

Starting in the mid-1970s allegations appeared that LaRouche had fascist and antisemitic tendencies.[210]

In 1977 LaRouche married his second wife, Helga Zepp-LaRouche, a German 27 years younger than he. Her 1984 book, *The Hitler Book*, argues that "We need a movement that can finally free Germany from the control of the Versailles and Yalta treaties, thanks to which we have staggered from one catastrophe to another for an entire century."[211] Helga founded the Schiller Institute, which has been accused of antisemitism by the *Berliner Zeitung* and Political Research Associates, a non-profit research group which studies right wing, white supremacist, and militia groups.[212][213]

LaRouche claimed that he was anti-Zionist, not antisemitic.[214] When the Anti-Defamation League accused LaRouche of antisemitism in 1979, he filed a $26-million libel suit; however, the case failed when Justice Michael Dontzin of the New York Supreme Court ruled that it was fair comment and that the facts "reasonably give rise" to that description.[215][216] LaRouche started a campaign against the Anti-Defamation League of B'nai B'rith (ADL) and set up a group called "The Provisional Committee to Clean Up B'nai Brith."[*citation needed*] LaRouche said in 1986 that descriptions of him as a neo-fascist or anti-Semite stemmed from "the drug lobby or the Soviet operation—which is sometimes the same thing,"[217][218] and in 2006 wrote that "religious and racial hatred, such as antisemitism, or hatred against Islam, or, hatred of Christians, is, on record of known history, the most evil expression of criminality to be seen on the planet today."[219] Antony Lerman wrote in 1988 that LaRouche used "the British" as a code word for "Jews,"[220] a theory also propounded by Dennis King, author of *Lyndon LaRouche and the New American Fascism* (1989). George Johnson argued that King's presentation failed to take into account that several members of LaRouche's inner circle were themselves Jewish.[221] Daniel Pipes wrote in 1997 that LaRouche's references to the British really were to the British, though he agreed that an alleged British-Jewish alliance lay at the heart of LaRouche's conspiracism.[222] It was reported in 1989 that many members of LaRouche's inner circle were Jewish.[76]

As of 2016, the Jewish Virtual Library states that "The international organization run by Lyndon LaRouche is a major source of such masked antisemitic theories globally. In the U.S. the LaRouchites spread these conspiracy theories in an alliance with aides to Minister Louis Farrakhan of the Nation of Islam. A series of LaRouchite pamphlets calls the neoconservative movement the "Children of Satan", which links Jewish neo-conservatives to the historic rhetoric of the blood libel.[223]

the blood libel.[—]

Allegations of racism

Manning Marable of Columbia University wrote in 1998 that LaRouche tried in the mid-1980s to build bridges to the black community. Marable argued that most of the community was not fooled, and quoted the A. Philip Randolph Institute, an organization for African-American trade unionists, declaring that "LaRouche appeals to fear, hatred and ignorance. He seeks to exploit and exacerbate the anxieties and frustrations of Americans by offering an array of scapegoats and enemies: Jews, Zionists, international bankers, blacks, labor unions—much the way Hitler did in Germany."[224] During LaRouche's slander suit against NBC in 1984, Roy Innis, leader of the Congress of Racial Equality, took the stand for LaRouche as a character witness, stating under oath that LaRouche's views on racism were "consistent with his own." Asked whether he had seen any indication of racism in LaRouche's associates, he replied that he had not.[225]

Disputed record as economist and forecaster

LaRouche material frequently acclaims him as the world's greatest economist and the world's most successful forecaster. For example, his book title *The Economics of The Noösphere: Why Lyndon LaRouche Is The World's Most Successful Economic Forecaster Of the Past Four Decades*.[226]

However, a website of disgruntled ex-movement leaders lists incorrect predictions of sudden world economic collapse, war or depression in the years 1956, 1961-1970, 1972, 1975-1992,[227] and 1994-2011.[228]

Apart from the numerous failed predictions are claimed some successful predictions or proposals: the eventual reunification of Germany[228], the Star Wars initiative, the New Silk Road[228] (claimed as a precursor to the Chinese One Belt One Road initiative.)

Movement

Main article: LaRouche movement

Estimates of the size of LaRouche's movement have varied over the years; most say there is a core membership of 500 to 2,000. The estimated 600 members in 1978 paid monthly dues of $24. Johnson wrote in 1983 that both the Fusion Energy Foundation and the National Democratic Policy Committee had attracted some 20,000 members, as well as 300,000 magazine subscribers.[229][230][231][232][233][234]

According to Christopher Toumey, LaRouche's charismatic authority within the movement was grounded on members' belief that he possessed a unique level of insight and expertise. He identified an emotionally charged issue, conducted in-depth research into it, and then proposed a simplistic solution, which usually involved restructuring of the economy or national security apparatus. He and the membership portrayed anyone opposing him as immoral and part of the conspiracy.[235][236][237]

Characterization as a cult

The LaRouche movement, has been described as a cult or cult-like by critics and anti-cult organizations.[238][239][240][241][242]

A 1987 article by John Mintz in *The Washington Post* reported that members lived hand-to-mouth in crowded apartments, their basic needs, such as a mattress and pillowcase, paid for by the movement. They worked raising money or selling newspapers for LaRouche, doing research for him, or singing in a group choir, spending almost every waking hour together.[243]

The group is known for its caustic attacks on people it opposes and former members. In the past it has justified what it refers to as "psywar techniques" as necessary to shake people up; Johnson in 1983 quoted a LaRouche associate: "We're not very nice, so we're hated. Why be nice? It's a cruel world. We're in a war and the human race is up for grabs."[244] Charles Tate, a former long-term LaRouche associate, told *The Washington Post* in 1987 that members see themselves as not subject to the ordinary laws of society: "They feel that the continued existence of the human race is totally dependent on what they do in the organization, that nobody would be here without LaRouche. They feel justified in a peculiar way doing anything whatsoever."[243]

Death

LaRouche's death was announced on the website of one of his organizations. He died on February 12, 2019, at age 96. Neither the place nor cause of his death was specified.[1]

Publications

- Marcus, Lyn. *The third stage of imperialism*. New York: West Village Committee for Independent Political Action, 1967.
- with Tony Papert. *Mass action*. SDS Regional Labor Committee,1968.
- *The philosophy of Socialist education*. New York: National Caucus of Labor Committees, 1969.
- with Uwe Henke von Parpart. *Centrism as a social phenomenon: how not to build a revolutionary party*. New York: National Caucus of SDS Labor Committees 1970
- *Education, science and politics*. New York: National Caucus of Labor Committees, 1972.
- *The question of Stalinism today*. New York: Campaigner Publications, 1975.
- *How the International Development Bank will work*. New York: Campaigner Publications, 1975.
- *A presidential campaign white paper on agricultural production*. New York: New Solidarity International Press Service, 1975.
- *The Rothschilds, from Pit*

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Housatonic

Dr. Robert Salvatore Lanciotti (born 1960)

Wikipedia - NONE

Middle name - "Salvatore" - https://www.ancestry.com/discoveryui-content/view/19887994:62209?tid=&pid=&queryId=973888b87347b4a4737762f54e2ec5a2&_phsrc=llt25&_phstart=successSource

Born = jan 15, 1960 : https://www.ancestry.com/discoveryui-content/view/375731732:1788?tid=&pid=&queryId=973888b87347b4a4737762f54e2ec5a2&_phsrc=llt25&_phstart=successSource

Robert S. Lanciotti - made mistakes with Zika ? https://www.seattletimes.com/nation-world/four-years-before-the-cdc-fumbled-coronavirus-testing-the-agency-made-some-of-the-same-mistakes-with-zika/

https://denvercatholic.org/qa-deacon-rob-lanciotti-former-cdc-virologist-shares-coronavirus-tips/

Dr. Alexander Duncan Langmuir (born 1910)

"This is a photograph of Alexander Duncan Langmuir (September 12, 1910–November 22, 1993). Langmuir, a renowned epidemiologist who created the Epidemic Intelligence Service (EIS), developed the practice of modern public health surveillance in the United States and abroad." [HP006H][GDrive]

Wikipedia Alexander Langmuir

- **Born** - 12 September 1910 , Santa Monica, California [HK006V][GDrive]
- **Died** - 22 November 1993 (aged 83) [HK006V][GDrive]
-

Associations

- Dr. James Hahn Steele (born 1913) ([HP006F][GDrive]):)
  - *" [Dr. James Hahn Steele (born 1913)] enjoyed a good relationship with [Dr. Alexander Duncan Langmuir (born 1910)], who founded CDC's Epidemic Intelligence Service (EIS) training program in 1951. In 1953, Dr Langmuir asked Dr Steele to recruit veterinarians to work in all epidemiologic areas (animal and nonanimal diseases) of the EIS program. This was the beginning of a new sphere of opportunity for veterinarians in public health. Today, veterinarians are integrated into all areas of PHS activity."*
-

Saved Wikipedia (April 29, 2021) : "Alexander Langmuir"

Source : [HK006V][GDrive]

- **Nationality** - United States
- **Alma mater** - Johns Hopkins University, Harvard University, Cornell University
- **Known for** - Epidemic Intelligence Service
- Scientific career - Fields - Epidemiology

Alexander Duncan Langmuir (12 September 1910 – 22 November 1993) was an American epidemiologist. He is renowned for creating the Epidemic Intelligence Service.

Biography

This photograph depicts Dr. Alexander D. Langmuir seated beside Ms. Ida Sherwood during an Epidemic Intelligence Service (EIS) luncheon.

Alexander D. Langmuir was born in Santa Monica, California. He received his A.B. in 1931 from Harvard, his M.D. in 1935 from Cornell University Medical College, and his M.P.H. in 1940 from the Johns Hopkins School of Hygiene and Public Health. After serving as a public health officer in New York and as an epidemiologist with the U. S. Army from 1942 to 1946, Langmuir returned to Johns Hopkins to become associate professor of epidemiology in the school of medicine. In 1949, he became director of the epidemiology branch of the National Communicable Disease Center (now the Centers for Disease Control and Prevention) in Atlanta, a position he held for over 20 years. He wrote extensively on all phases of epidemiology on a global basis and was recognized internationally as a leading contributor in epidemiology. Langmuir was a visiting professor at the Johns Hopkins School of Hygiene and Public Health from 1988 until his death in 1993.

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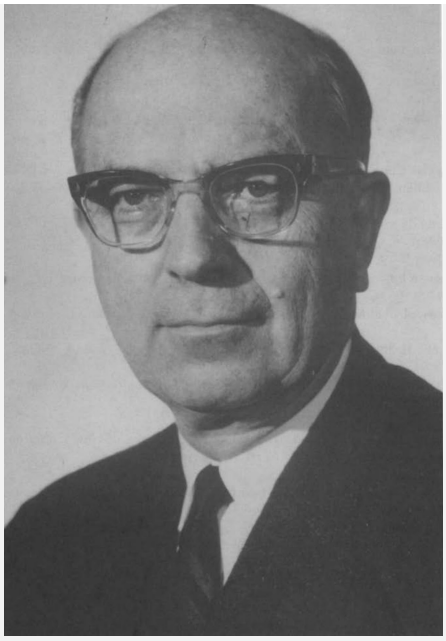
- Foege, W H (October 1996). "Alexander D. Langmuir--his impact on public health". Am. J. Epidemiol. 144 (8 Suppl): S11–5. doi:10.1093/aje/144.Supplement_8.S11. PMID 8857836.

External links

- The Alexander D. Langmuir Collection Alan Mason Chesney Medical Archives of the Johns Hopkins Medical Institutions
- The Alexander D. Langmuir papers can be found at The Center for the History of Medicine at the Countway Library, Harvard Medical School.

1996 - American Journal of Epidemiology : Vol. 144, No.8 : "Alexander D. Langmuir-A Brief Biographical Sketch"

Source : [HP006J][GDrive]



[HP006K][GDrive]

Date of Birth: September 12, 1910 [,] Santa Monica, California

Education:

- Harvard College, Cambridge, MA
  - Major: Physics, A.B. (cum laude)
  - 1927-1931
- Cornell University Medical College
  - Doctor of Medicine
  - 1931-1935
- Boston City Hospital
  - Internal Medicine
  - 1935-1937
- Johns Hopkins University School of Hygiene and Public Health
  - Masters in Public Health
  - 1940

Appointments:

- Medical Consultant, pneumonia control, New York State Health Department, Albany, NY
- 1937-1939
- Assistant District Health Officer, New York State Institute of Health, Albany, NY
- 1940-1941
- Deputy Commissioner of Health, Westchester County Health Department, Peekskill, NY
- 1941-1942
- Epidemiologist, Commission on Acute Respiratory Diseases, Army Epidemiological Board, Fort Bragg, NC
- 1942-1946
- Associate Professor of Epidemiology, Johns Hopkins University School of Hygiene and Public Health, Baltimore, MD
- 1946-1949
- Chief Epidemiologist, Communicable Disease Center (now known as the Centers for Disease Control and Prevention), Atlanta, GA
- 1949-1970
- Clinical Professor of Preventive Medicine and Community Health, Emory University, Atlanta, GA
- 1950-1970
- Visiting Professor of Epidemiology, Harvard Medical School, Boston, MA
- 1970-1977
- Retired, lived in Chilmark, Martha's Vineyard Island, MA
- 1977-1992
- Visiting Professor of Epidemiology, Johns Hopkins University School of Hygiene and Public Health, Baltimore, MD
- 1988-1993

https://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.630.5871&rep=rep1&type=pdf

2009-surveillance-and-society-woven-of-war-time-fabrics-public-health-surveillance-martin-french.pdf

https://drive.google.com/file/d/18dd-kFRMJzFWti4eyExSjxcfc8-411pY/view?usp=sharing

Surveillance & Society

Woven of War-Time Fabrics: the globalization of public health surveillance

By Martin A. French Department of Sociology, Queen's University, Kingston, Ontario, Canada. mailto: 3mf6@queensu.
French, Martin A. 2009. Woven of War-Time Fabrics: The Globalization of Public Health
Surveillance. Surveillance & Society 6(2): 101-115. http://www.surveillance-and-society.org | ISSN:
1477-7487
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Abstract - This article considers the imbrication of war-time logics with the ideational and institutional development of public health surveillance. It suggests that, as the Cold-War–era gave way to the 'age of globalization', public health discourse became less concerned with ideological enemies, and more concerned with ontological enemies. The discourse of emerging infectious disease exemplifies this preoccupation and illustrates how public health surveillance, dominated by war-time logics, is both globalized and predisposed to marginalized local orders of concern. However, at the same time that militarized configurations of public health surveillance set certain tendencies in motion, local orders of concern deconstruct, contest, resist, and negotiate these tendencies. Hence, this article concludes with a call for further empirical attention by Surveillance Studies scholars to the multiplicity of local sites that enact public health surveillance.

Introduction

In 1951 the United States (US) Department of Defense and the US Federal Civil Defense Administration aired a television program entitled What You Should Know About Biological Warfare. The program featured Alexander Langmuir, a decisive figure, as it turns out, in the history of public health. In the program, Langmuir presented a scary picture of the precise ways in which biological weapons could be deployed in attacks against the United States. He also made the case for a public health system that could defend against this threat. Elizabeth Fee and Theodore Brown give the following description:

At one point in the program, Langmuir turned on a Waring blender filled with dry ice for a vivid demonstration of how clouds of aerosol mist could contaminate a whole studio and infect everyone inside. He then used a familiar can of insecticide to demonstrate the working of an aerosol spray. Employing much the same principles, he said, an enemy could mount aerosols on airplanes and cover a city with a vast cloud of infectious material. Langmuir also injected colored liquid into a model of the water supply of a city to show how easily a biological warfare agent could spread. How could anyone protect or defend against such an attack? [...] In short, he said, the country needed an epidemic intelligence service (2001: 722-723).

Langmuir was able to successfully capitalize on fear about biological warfare by capturing the political will and funding for one of the most comprehensive public health surveillance undertakings in the world.

His creation of a highly trained cadre of disease detectives, and the institutional apparatus to support them, stands out amongst the achievements in the history of American public health. To some, Langmuir's use of the biological warfare issue to build public health infrastructure amounted to making

[...]

1979 (march) interview of Dr. Alex Langmuir

Youtube channel Global Health Chronicles / Live on youtube : https://www.youtube.com/watch?v=NICfQM9d0CM

Leaders in American Medicine: Dr. Alexander D. Langmuir Interviewed by Dr. Donald A. Henderson. A National Medical Audiovisual Center Production in cooperation with Alpha Omega Alpha. Atlanta, Georgia

Saved copy of video : [HV00HD][GDrive] / Download image : [HV00HE][GDrive]

2015, Emerging and Infectious Diseases, Vol21 : "Alexander Duncan Langmuir"

doi: 10.3201/eid2109.141445 / PMCID: PMC4550144 / PDF source : [HP006G][GDrive]

Emerging Infectious Diseases • www.cdc.gov/eid • Vol. 21, No. 9, September 2015 : 1635–1637. / Myron G. Schultz and William Schaffner

Alex Langmuir was born in Santa Monica, California, and grew up in New Jersey. His uncle, Irving Langmuir, a physicist and chemist, won the Nobel Prize in Chemistry in 1932. At Harvard College, Alex Langmuir tried to follow in his uncle's footsteps, but he found that the mathematics of advanced physics was beyond him and thus decided to pursue a career in medicine. He received his AB (cum laude) in 1931 from Harvard and his MD in 1935 from Cornell University Medical College. As a college student, Langmuir was inspired by Massachusetts Commissioner of Health George Hoyt Bigelow to enter the field of public health. His first 2 jobs were with the New York State Health Department; he began as a medical consultant and then became an assistant district health officer in Albany. After graduating with an MPH from the Johns Hopkins School of Hygiene and Public Health in 1940, Langmuir became a deputy commissioner of health in Westchester County, New York. His family was dismayed that he chose a career in public health rather than clinical medicine, but Langmuir expressed in his later years that his time in local public health taught him lessons that were fundamental to his achievements. From 1942 to 1946, he served as an epidemiologist with the Armed Forces Epidemiologic Board's Commission on Acute Respiratory Diseases, stimulating his lifelong interest in influenza. In 1946, Langmuir returned to Johns Hopkins University as an associate professor of epidemiology. However, by 1949 he was restive in academia and was attracted to the challenge of becoming the first chief epidemiologist of the newly established Communicable Disease Center (now the Centers for Disease Control and Prevention [CDC]) in Atlanta, Georgia, a position he held for over 20 years. When Langmuir retired from CDC, he became a visiting professor of epidemiology at Harvard Medical School and, later, a visiting professor of epidemiology at Johns Hopkins School of Hygiene and Public Health. He wrote extensively on all phases of epidemiology and public health surveillance on a global basis and was recognized internationally as an assertive public health authority.

[Consider this - One Health and CDC are this historically connected to biowarfare]

In 1951, following the start of the Korean War, Langmuir established the EIS program as an early warning system against biologic warfare. EIS officers then and now are physicians, veterinarians, nurses, and health scientists who serve 2-year assignments. In an obituary written for the New York Times, Lawrence Altman said Langmuir "taught what he called 'shoe leather epidemiology,' stressing that investigators go into the field to collect their own data and view directly the locale of the public health problem they were investigating." Langmuir said: "Each epidemic aid call was an adventure and a training experience, even the false alarms." He stressed that field epidemiology should be taught in the field, not in the classroom. Admission into the EIS program was highly selective. Langmuir believed that when competent persons were thrust into challenging circumstances with supportive supervision, excellent results were certain. He regarded the EIS officers as members of his extended family, backing them firmly when they found themselves in difficulty and joining them for the roasts of CDC leaders during the officers' annual skit night—often at his own expense.

In 1955, Langmuir and his young staff achieved early recognition due to the "Cutter Incident." The new inactivated (Salk) polio vaccine was causing cases of polio. Surgeon General Leonard Scheele asked Langmuir to develop a surveillance system to determine the extent of the problem. Langmuir deployed his staff, and within days they determined that the cases were caused by vaccine from a single manufacturer: Cutter Laboratories. "Langmuir was able to predict with great accuracy the expected size of the epidemic and the number of secondary cases that would occur," former CDC director William Foege noted. This response enhanced the reputation of the young agency and established epidemic aid as one of its singular characteristics.

Today, the EIS program has evolved into a surveillance and response unit for all types of health problems. During 1951–2014, more than 3,500 physicians, veterinarians, nurses, and health scientists were trained as EIS officers. Many of the nation's medical and public health leaders, including CDC directors, state health department directors, state epidemiologists, and deans of the country's premier schools of public health, are EIS alumni. Since 1980, CDC has supported the development and implementation of 48 two-year field epidemiology training programs that cover 60 countries and are modeled after the EIS in their teaching and practice of applied field epidemiology. More than 3,000 epidemiologists have graduated from these programs; many of these graduates now hold leadership positions within their countries' ministries of health, the World Health Organization, and other global health organizations.

The idea of effective national disease surveillance captured Alex Langmuir's imagination throughout his career. He believed that surveillance is the foundation for evidence-based public health action. Langmuir preached the importance of the systematic collection of pertinent data, the consolidation and analysis of these data into useful information, and the dissemination of the results to all who need to know so that they can take action. His goal was to use surveillance systems to define populations at risk for disease, determine interventions, and monitor their impact. Langmuir and his staff developed novel national surveillance programs for an array of communicable diseases and for chronic diseases, injuries, and reproductive health. Indeed, he considered the population explosion to be the most serious epidemic of all.

Altman described Langmuir as "a tall man who could command immediate attention when he stood to speak to audiences in his deep voice. He thrived on controversy and took pride in overcoming local political pressures to crusade for preventive medicine and other measures to safeguard public health." Philip Brachman, who succeeded Langmuir as EIS director, described Langmuir as "visionary, clairvoyant, tenacious, well prepared, scientifically honest, and optimistic." Langmuir enjoyed being a civil servant and working to benefit the public. "His concerns were to control and prevent disease by applying the principles of epidemiology to the identification of causes and solutions," Brachman wrote. Foege described Langmuir as someone with a public health message who arrived at the right time and place in history to be able to broadly disseminate his message.

In 1979, when Alex Langmuir was interviewed by D.A. Henderson about being recruited to work at CDC in 1949, Langmuir said, "As I looked it over and saw the vision, there was no question, [former CDC director] Justin Andrews took me to the mountain and showed me the Promised Land." At CDC, Alex Langmuir changed the way epidemiology is used in public health practice, first in the United States and then throughout the world. In the 65 years since Langmuir's arrival at CDC, his disciples—EIS and field epidemiology training program officers—have played pivotal roles in combating the root causes of major public health problems. Millions of persons live longer and healthier lives because of the accomplishments of Langmuir and his progeny in controlling and preventing disease. This is Alex Langmuir's grand legacy.

Footnotes

Suggested citation for this article: Schultz MG, Schaffner W. Photo quiz. Emerg Infect Dis. 2015 Sep [date cited].
http://dx.doi.org/10.3201/eid2109.141445

Suggested Reading

1. A tribute to Alexander D. Langmuir. Am J Epidemiol. 1996;144(8 Suppl):1 p preceding S1, S1–78. [PubMed] [Google Scholar]

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1993 (Nov 24) - NYTimes : "Alexander Langmuir Dies at 83; Helped Start U.S. Disease Centers"

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1993-11-24-nytimes-alexander-langmuir-dies-at-83

By Lawrence K. Altman

- Nov. 24, 1993

Dr. Alexander D. Langmuir, a leader in public health who is credited with saving hundreds of thousands of lives through his innovations in controlling epidemics, died on Monday in Baltimore, where he lived. He was 83.

The cause was kidney cancer, the Department of Health and Human Services said.

In 1949, Dr. Langmuir created a corps of epidemiologists at what is now the Federal Centers for Disease Control and Prevention in Atlanta. The corps was ready to fly anywhere immediately to investigate reports of an epidemic or an unusual cluster of cases. Known as the Epidemic Intelligence Service, the program played a crucial role in turning what was then an obscure and fledgling operation into a large Federal agency.

From 1949 to 1970, Dr. Langmuir was the disease centers' chief epidemiologist. When he retired, he taught at Harvard Medical School, staying until 1977.

Trained 500 Health Workers

As the Government's chief disease detective, he created the concept of surveillance for infectious diseases. The agency uses it to track dozens of diseases and to analyze patterns to take steps to prevent clusters and outbreaks from becoming epidemics. The agency also responds to requests from state health departments to investigate unusual cases and clusters.

It is through such investigations that scientists at the disease centers discovered the bacterium that causes Legionnaire's disease, identified toxic shock syndrome, and last week reported isolating and growing the strain of Hantavirus that causes a fatal illness first reported among Navajo Indians in New Mexico this year.

Dr. Langmuir trained the first 500 of the more than 2,200 doctors, veterinarians, statisticians and other health workers who have graduated from the epidemic intelligence program. Many now teach and conduct research in the country's schools of medicine and public health, and many others work in health departments throughout the country. Some have gone on to establish similar programs in other countries.

But when **Dr. Langmuir formed the Epidemic Intelligence Service,** he said the Atlanta agency's activity was limited primarily to malaria. It was "a bouncing, thriving, adolescent, gawky and awkward organization," he said.

"The information about malaria in the country was abominable," he recalled when he left the disease centers in 1970. Texas was reporting 10,000 cases a year, other states, 5,000. "It was perfectly clear there was gross error in the reporting," Dr. Langmuir said, adding that he was upset that the centers did not challenge the diagnosis of the doctors and state health officials.

Relished Jurisdictional Fights

Dr. Langmuir was a tall man who could command immediate attention when he stood to speak to audiences in his deep voice. He thrived on controversy and often took pride in overcoming local political pressures to crusade for preventive medicine and other measures to safeguard public health.

He relished jurisdictional and other fights with state and Federal officials and other scientists, including some on his own staff. In creating the E.I.S., Dr. Langmuir said he and officials of the National Institutes of Health "almost went to fisticuffs" as he overcame their opposition.

Dr. Langmuir taught what he called "shoe leather epidemiology," stressing that investigators go into the field to collect their own data and view directly the locale of the public health problem they were investigating. His graduates wore lapel pins of a shoe with a hole in the sole.

He paid careful attention to studying the way infectious and communicable agents spread -- through the air, water and food. Dr. Langmuir attributed his success to good communications with other scientists and health officials. He required investigators to write reports immediately and to send copies to all who needed the information.

Under his leadership, epidemiologists at the disease centers traced a number of cases of paralytic polio to the defective manufacture of a polio vaccine by Cutter Laboratories.

When the possibility of biological warfare was raised during the Korean War, scientists looked to epidemiology as the first line of defense. But the country was not prepared. Dr. Langmuir seized the opportunity to strengthen disease surveillance and his program. He found many young doctors facing the draft willing to spend two years learning epidemiology in the Public Health Service to fulfill their military service.

In later years, Dr. Langmuir criticized the disease centers for what he said was the poor quality of its epidemiological investigations of AIDS.

Grew Up in New Jersey

Alexander Duncan Langmuir was born on Sept. 22, 1910, in Santa Monica, Calif., and grew up in New Jersey.

At Harvard College, his studies were influenced by his uncle, Irving Langmuir, a physicist and chemist who won the Nobel Prize in Chemistry in 1932. But Alexander Langmuir said he found the advanced mathematics of physics "just impossible." So he went to medical school, receiving a degree from Cornell and interning at the Boston City Hospital. His math training and a flair for statistics helped him earn a degree in public health from Johns Hopkins University in Baltimore.

He then worked for the New York State Health Department in Albany and as Deputy Commissioner of Health for Westchester County. In World War II he was a member of the Army's Commission on Acute Respiratory Diseases at Fort Bragg, N.C.

After the war he returned to Johns Hopkins. But he left for the disease centers because, he later said, he "was rather disenchanted with academic life at Johns Hopkins."

In 1988, he returned to Johns Hopkins where, earlier this year, students selected him as an outstanding teacher.

Among his awards were those from the Charles A. Dana Foundation for pioneering achievements in public health, the American Public Health Association and the Royal Society of Medicine in England. He was a member of the Institute of Medicine of the National Academy of Sciences, a Fellow of the American Academy of Arts and Sciences, and a number of other professional organizations.

Dr. Langmuir married twice. His first wife was the former Sara Ann Harper. His second was Dr. Leona Baumgartner, a former Commissioner of Health in New York City. Both have died.

He is survived by three daughters, Anne Ruggles of Atlanta, Susan Davis of Philadelphia and Lynn Adams of Boston; a son, Paul H., of Providence, R.I.; a brother, David, of Los Angeles; a sister, Edith Leverenz of Naples, Fla., five grandchildren and three great-grandchildren.

https://vaxopedia.org/2018/08/15/who-is-alexander-langmuir/

Who is Alexander Langmuir?

By Vincent Iannelli, MD / August 15, 2018 / Alexander Langmuir, epidemiology, GBS, Guillain-Barré Syndrome, measles, polio, swine flu, The Cutter Incident

Alexander Langmuir is typically described as a hero or titan of public health.

Then why do some folks think he was against the flu and measles vaccines?

Who is Alexander Langmuir?

Dr. Alexander Langmuir has been called the father of infectious disease epidemiology.

Why?

In 1949, he established the CDC's Epidemiology Program. Actually, at the time, the CDC was still called the Communicable Disease Center.

Dr. Alexander Langmuir and his Polio Surveillance Unit at the EIS in 1955.

Dr. Alexander Langmuir and his Polio Surveillance Unit at the EIS in 1955.

Dr. Langmuir, as Chief Epidemiologist at CDC for 21 years, also:

founded the Epidemic Intelligence Service (EIS)

instituted a malaria surveillance system

established national disease surveillance system for the United States

was involved in resolving the Cutter incident

brought the Morbidity and Mortality Weekly Report to CDC

investigated the swine influenza virus vaccine incident, when it was thought that some people developed GBS after getting the new swine flu vaccine in 1976

His work saved the lives of hundreds of thousands of people.

Don't believe any propaganda or quotes without sources attributed to Alexander Langmuir.

Don't believe any propaganda or quotes without sources attributed to Dr. Alexander Langmuir.

Did he ever tell folks to not get a flu shot?

Was he ever concerned about mercury in flu shots?

Considering that Dr. Langmuir died in 1993, before folks became concerned about thimerosal in vaccines, that's unlikely. That's especially so considering that the only place you can find these types of quotes are on anti-vaccine websites.

Still, Langmuir was critical of flu shots.

Dr. Marcelle C. Layton (born 1958)

born Aug 1958 : https://www.ancestry.com/discoveryui-content/view/21688062:62209?tid=&pid=&queryId=6d0352fbdc1a3270bca894038ae731b4&_phsrc=llt64&_phstart=successSource

Aug 1 1958 - https://www.ancestry.com/discoveryui-content/view/223498516:1732?tid=&pid=&queryId=863d471633dc101a8fd41387c8727e1e&_phsrc=llt72&_phstart=successSource

Associations

- **Deborah Susan Asnis (born 1956)** (...)
-

Dr. Duane J. Gubler (born 1939)

2004 Interview with Marcelle C. Layton, MD : "BIOSECURITY AND BIOTERRORISM: BIODEFENSE STRATEGY, PRACTICE, AND SCIENCE, Volume 2, Number 4, 2004"

Interview with Marcelle C. Layton, MD : Assistant Commissioner, Bureau of Communicable Disease, New York City Department of Health and Mental Hygiene

Source : [HP006E][GDrive]

In 1992, Marci Layton, an infectious disease fellow at Yale University, applied for an Epidemic Intelligence Service (EIS) position with the U.S. Centers for Disease Control and Prevention (CDC). "When I was trying to decide where I wanted to do my two-year fellowship, I happened to bump into the current EIS officer in New York City. He said that if I really enjoyed infectious diseases and didn't want to specialize in just one, instead of traveling abroad—which reportedly gets old after a while—I could come to New York and work on a variety of things with the advantage of still sleeping in my own bed at night."

Layton was dubious. "I couldn't imagine living in New York City. It wasn't my first choice for EIS—it was my third choice. The city intimidated me. I'm by nature quiet, and not a public person. I originally wanted to be in New England or someplace more rural." Nevertheless, New York City is where she landed—just as a series of unprecedented infectious disease outbreaks was about to strike. In August 1994, she formally joined the department as Assistant Commissioner of Communicable Disease. Today, the EIS officer who had originally talked up New York City— Thomas Frieden, MD, MPH—is her Commissioner.

After ten years, more than a thousand outbreak investigations, a tuberculosis epidemic, the hemispheric debut of West Nile virus, the September 11 attacks, anthrax spores in the mail, the global SARS threat, a massive bioterrorism preparedness campaign, and countless other crises, Layton has more than adapted to the job. Her cool head, ferocious work ethic, and visionary approach to surveillance and communications have won her international respect.

After the 2001 terrorist attacks, Layton received numerous professional awards—honors that she insists belong to her entire department. "But the one that meant a lot to me was from the Council of State and Territorial Epidemiologists, the Pumphandle Award." It was given, in part, for her department's swift and fact-filled updates during the World Trade Center attacks and the city's anthrax outbreak that were shared with other state and local health departments nationwide. "I used to say, when I got awards like that, 'Wait a minute, you're supposed to get these at the end of your career.'"

Only in her mid-40s, Layton acknowledges that she has already entered the annals of public health history—an area of scholarship that itself fascinates her. "My dream retirement job is getting a degree in the history of medicine and specializing in the history of public health in New York City. I give a lot of talks. If I had to talk about hypertension or diabetes management, I wouldn't be able to give 30 talks a year—I would fall asleep while I was talking. But once I start talking about

something we've been through here—whether it's West Nile or anthrax or SARS—I get completely engaged. I happened to stumble into something that fits me perfectly."

Layton spoke on November 6, 2004, with Madeline Drexler, a Boston-based journalist and author of Secret Agents: The Menace of Emerging Infections

Q: Just a month after you began your current job, plague broke out in Surat, India. Did that foreshadow the many global infection threats that you would face?

A: Yes. It was an immediate reminder that by being based in New York City, one of the largest ports of entry to the U.S., we needed to remain alert to outbreaks worldwide. Given the amount of air travel between India and New York City, it was a very real possibility that someone with plague could come here and become ill either en route or after disembarking. We needed to raise awareness about plague among medical providers in the city and think through how we would isolate and manage a suspect case. We had ten calls of suspect plague cases, and though none were confirmed, this experience laid the foundation for our future emergency response planning for other infectious disease issues, including bioterrorism. We started a broadcast fax system for blasting health alerts to all city hospitals—which has transitioned into the Health Alert Network—right before the plague outbreak in India was recognized. It was a very simple technology to start. We had a fax machine that sequentially was able to fax every infection control office, microbiology laboratory, and emergency department in the city. It was very slow—taking most of the night to reach everyone— but that was the technology at the time. It was before email. Now it's evolved to an Internet-based network with the ability to send both fax and email alerts, similar to the Health Alert Networks that are in every other state.

Q: After that, New York City became known for its ability to quickly communicate with medical providers during an emergency.

A: My philosophy is that when a health issue is breaking, I do not want them to read about it in The New York Times or The New York Post the next day. I want them to get the detailed information that they need, and I want them to get it from us. At the same time as our press office is working on press releases, we're working on health alerts. It's not the last thing we do—it's often the first thing we do.

Q: Those public press releases are something else your department is known for.

A: In New York City, we've learned that when breaking news happens, we go public quickly. We don't want to keep secrets—and it's hard to keep things quiet in a city like New York. When the inhalational anthrax case happened in 2001, we announced it around 11:30 at night, soon after the confirmation came in. We've had a couple of rule-out smallpox cases in recent years. We first heard about one from the hospital. As we were on our way out to investigate it, I got a call from CDC: They had just heard there was a smallpox case in New York City—from CNN.

Q: What's the key to good risk communication?

A: It's trusting the public and providing honest information in a clear and effective way. One of the challenges we often face in public health is communicating uncertainty in a way that is understandable. If we tell them that this is a breaking story, we don't know yet what is going on, this is what we're doing to find out, this is when we're going to get back to you—the public can accept that—as opposed to saying, "Oh, don't worry about it, it will be OK." Because it may not be OK a couple hours later. Once you have miscommunication and lose the public's trust and the media's trust, it's really hard to regain.

Q: New York has had more than its share of public health emergencies in the past decade. What were the lessons learned after each—starting, say, with West Nile virus?

A: With West Nile, we began to think about emergency response. We recognized that when a citywide emergency happens, we need to mobilize the full resources of this department. We formalized our incident management system as a direct result of West Nile. With the delayed recognition that West Nile virus was the cause, partly due to the delays in recognizing the connection between the human outbreak and a simultaneous epizootic among birds in the city, we made animal diseases officially reportable to us. At the time, with the exception of rabies, there was no animal disease surveillance that we were directly responsible for. We didn't just change the law—we built relationships and hired a public health veterinarian whose primary role is outreach to the veterinary and wildlife community, not just the clinical veterinarians in the city. So, if they saw something unusual they'd call us. We built a mosquito surveillance and control program—we had none prior to the '99 outbreak. It's become a model mosquito arboviral surveillance and control program.

Q: What did you learn after the 9/11 attacks?

A: The World Trade Center attack was—it's beyond words. The department was activated 24 hours a day. We were doing 12-hour shifts each for the initial weeks after the response, dealing with a multitude of issues, including improving our surveillance for bioterrorism. It was an unprecedented emergency. The incident management system helped. The people who were assigned to the section that I'm the chief of—the surveillance and epi section—knew that they would be needed within minutes of the second plane hitting the towers, and they knew where to come. We had thought through the initial surveillance and epidemiologic response to any public health emergency and had developed a generic checklist. At the time, it seemed simplistic to do, but I can't tell you how useful it was on 9/11. Looking out the window, seeing the buildings on fire, realizing the tragedy that was about to unfold, it helped to have something to guide our initial response.

Q: What about SARS? What would New York City have done if it had seen the same number of cases as Toronto?

A: It's a fair question. Of all the major emergencies that we've gone through, we never went through anything like the SARS outbreaks in Toronto and other cities. We've not had a large contagious disease outbreak to test our emergency response plans. I'm very glad about that. With SARS, we did have a couple of close calls. The physician from Singapore who had been in New York City for an infectious disease conference, and who was recognized as having SARS after leaving the city and during a layover in Germany, easily could have been admitted to a New York City hospital. The woman who ended up being the index case in Toronto transited through the New York City area, and, since she became ill on the flight, she could have been taken off the plane and hospitalized locally. And the original index case in Vietnam was a New York City resident who could have decided to come home for his care; he was too sick to travel, however, and caused a large nosocomial outbreak in Vietnam. SARS, more than anything else, made us think through our plans for contact tracing, isolation, and quarantine. We triaged about 300 calls concerning potential SARS cases. There were only 20 or so that met the clinical case definition—none of them tested positive; it was a pretty broad case definition. But they all had close contacts. So we did experience the challenges in identifying and monitoring contacts for a 10-day period. It was a tremendous effort. We had two suspect cases who needed to be detained legally, because they were not able or willing to isolate themselves in a private residence once they were discharged from a hospital.

Q: New York had a close call. Still, what if the infection had silently broken out, as it did elsewhere? How would your department have handled it?

A: The index outbreak would have been difficult for any jurisdiction to have quickly prevented, because it happened so quickly and it was a newly recognized virus. The one thing that I walked away with, having observed the outbreak mostly from afar, was that SARS was relatively easily managed. The challenge was recognizing a suspect patient quickly so that the person could be immediately placed into isolation. Even countries that didn't have the capacity to utilize airborne precautions were able to stop the outbreak, just by isolating patients and identifying and monitoring contacts, and isolating them if they became ill. With something like SARS, where there was no treatment and no vaccination, the only measures you have are strict adherence to infection control and quarantine precautions. Once patients were discharged home, we mainly monitored them by phone. But when there was a concerning case, there were people who actually went and spot-checked patients at home to make sure they were being compliant with isolation precautions. Especially in these days of cell phones, you never know where somebody is.

Q: How would your department respond to a smallpox case?

A: One confirmed case of smallpox would be considered a bioterrorist outbreak, with the expectation that more cases were likely. If the outbreak were small enough, then our priority would be contact tracing and ring vaccination, because that's how we're going to control the outbreak. We would also begin mass vaccination— because once we have confirmed a smallpox outbreak, we know that somebody has the virus who shouldn't, and we'd need to vaccinate, given the concerns of future attacks. If we had hundreds or thousands of cases, contact tracing would be very labor intensive, and it makes more sense to put all our effort into mass vaccination.

Q: What is the biggest challenge in conceptualizing such a mass vaccination campaign?

A: From a medical perspective, it's realizing you can't do business as usual. You can't have a nurse or clinician at every step. Physicians and nurses tend to ask a lot of questions, and during a mass vaccine clinic, we need to use a triage protocol that optimizes our ability to move people through quickly; only people who have medical issues, such as underlying diseases, would be pulled offline to be seen by a medical provider. We will also need to address the public's concern and expectations for immediate access to vaccine. There's only going to be a small percentage of the public who will need the vaccine immediately, either because they were involved in the initial attack or exposed to a known case. We may not need to do everyone on Day One—but everyone is going to want it on Day One. Another issue is the tremendous need for staff to conduct these clinics citywide. Will staff come in to work at these clinics during a terrorist attack? We conduct drills every once in a while, so that our own staff and our volunteer corps understand their roles and buy into the fact that they would be needed and are comfortable with what they'd be doing.

Q: How would you handle public panic?

A: Preparing a community to be resilient to the mental health impact of terrorism is a challenge. In addition to pre-identifying and training the mental health resources that would need to be mobilized after an attack, there is a need to better educate the public regarding what steps to take after an attack to protect themselves. Israel has probably done a better job than any place in the United States. Many people in Israel know where they need to go for vaccine or antibiotics after a bioterrorism attack. In our emergency management materials to the public, this concept has been mentioned generally, but not in the detail that may be required for the public to know, "OK, this is where I go in my neighborhood." There are positives and negatives about publicizing this level of detail in our response plans. Some people believe that there are things you should keep behind the scenes—because if the terrorists knew, they could interfere with your response. But I've been impressed when I've met people from Israel. Many know what to expect from the government when something happens, and they know what they're supposed to do.

Q: Would mass vaccination be more difficult in New York today than it was during the smallpox outbreak of 1947?

A: I've done a lot of reading about the 1947 smallpox outbreak in New York City; I have a historical talk on the outbreak and how it unfolded from the perspective of my predecessors here at the department. It was a very different time. First, it wasn't a terrorist attack, so it didn't have that flavor on top of the outbreak itself. Second, it was actually a small outbreak, with only 12 cases in the third wave of the outbreak. In retrospect, mass vaccination probably wasn't even needed; contact tracing and ring vaccination would have controlled the outbreak. But at the time the decision was made to vaccinate the whole city, the epidemiology of the outbreak was not yet clear. Third, it also occurred right after the war, at a time when there was trust in government and a sense of civic duty. There was the Civilian Defense Board and other community groups that were geared up for community service and could be leveraged.

Q: How is New York carrying out flu vaccination this year?

A: The primary goal is that we want to direct the vaccine to those who need it most, based on targeting those at highest risk for hospitalization or death due to influenza. We normally provide very little influenza vaccine to the city—most of it is given out by private providers or clinics. But because many private providers don't have vaccine, our public health clinics are very busy in certain parts of the city. Our small immunization clinics weren't meant to have hundreds of people waiting outside. To avoid that, we put in place our point of distribution (PODs) mass vaccination plan. They're not full PODs; it's not like what would happen during smallpox, where we would be attempting to provide vaccine for everyone. But we are using that model to move people through our clinics efficiently. We looked at the Disney model of moving people through lines.

Q: One of America's unsolved public health mysteries is: Who mailed the anthrax letters in 2001? That October 31, a 61-year-old New York City woman died of inhalational anthrax. Did you ever pinpoint how she became infected?

A: I never felt more like a medical detective than when we investigated that case. I took the initial phone report from a very good infectious disease doctor in the city. I suspect that many other physicians may not have thought of anthrax that quickly—in a patient who wasn't in an obvious risk group given what was known about the outbreak up to that point: that is, being someone associated with a high-profile media site or government office. This was a woman who worked in a stock room in a very small hospital in New York City. The physician suspected anthrax based on her clinical presentation, even before the Gram stain came back. In that sense, it was even more impressive than Florida, where they suspected anthrax only after they saw Gram-positive rods in the spinal fluid. This case didn't fit the epidemiology of other cases associated with this outbreak. So the question was: Did she have the same mode of exposure as the other known cases at that point of the investigation—contaminated mail—or was this the beginning of a new outbreak? We also needed to ask: Was she the terrorist? Did she know the terrorist? Or did she accidentally walk by where the terrorists were working? And that is one of our lessons learned: that you can't necessarily predict risk exposures based on the current epidemiology of an intentional outbreak. The terrorists could change the mode or site of exposure. We can't predict what the next attack will be. During this investigation, we needed to determine everywhere this woman had been in the four or more weeks prior to her onset of illness. What was really challenging was that—hers was not an atypical story for New York—she was an older woman who lived by herself, had very few friends and no family in the area. We knew when she was at work, but we could only account for a small percentage of her time outside of work. We very quickly ruled out the worksite as the place of exposure based on active case-finding and environmental testing. As we were ruling out the worksite, we also were trying to find her friends and family, interview people in her neighborhood. We went with pictures of her. We knew she spent time at church, though not just one church, as she seemed to have lots of information about many different churches in her apartment. We knew where she

shopped, based on receipts that we found. So we tried to reconstruct her life, in order to focus our surveillance and environmental testing efforts, but we still could not account for most of her time. We are very confident that the exposure wasn't in her home or work. We also tested the subways. Although we knew by that point that there hadn't been a major release in the subway, it was possible there was a small release in the subway that was botched, and only one person got infected. And we recognized the importance of knowing if someone had tried this, especially to help focus the criminal investigation. We were able to test every station she went in, based on her subway card usage. All tests were negative. We didn't find one spore—which was good. But we needed to think through how we would respond if we did. We actually didn't start testing until we had a plan in place for how we would handle a positive finding, including risk communication to the public and media. At the end of our extensive investigation, we still did not know how she was exposed. She remains, by herself, an unsolved mystery. But then the Connecticut case happened, which led to this theory of cross-contaminated mail. Connecticut actually had an easier task than we did, as their patient's family knew everywhere the patient had been, to help guide their testing. And they still couldn't find a spore, except in the mail distribution center into the area. We knew we also had spores in our distribution center to the hospital and into the city. So in the end, I think that she was exposed to a letter that had been cross contaminated after passing through one of the affected postal distribution centers, but we'll never know for sure.

Q: If you could sit down with President Bush and make three requests for the public health system, what would you ask for?

A: [Pauses.] It's as if I've been given three wishes, and I want to use them effectively. First, there is a need to distribute funds based on risk. In public health, we always use risk-based strategies to target our prevention efforts, and we should do so when it comes to terrorism preparedness. In New York City, we always point out that we were the victims of two of the four planes that struck on September 11, and we received four of the seven known anthrax letters, but we receive a disproportionately small percentage of the federal preparedness dollars. Second, I've always been concerned about the sustainability of the federal bioterrorism funding. Most of what we do in public health isn't done by equipment or supplies that we can buy once, with the costs declining year to year. Public health is a personnel-intensive profession. It requires being able to recruit and retain qualified, motivated staff. We are lucky in New York City that way. We have used our grant funding mostly to hire staff. A lot of health departments didn't make that decision, because they were worried about the sustainability of this funding. The last thing you want to do is hire a lot of people for two to three years, build up a program, and then suddenly lose the funding so that all the efforts fall apart. We decided to take that risk, given the priority that emergency preparedness is in New York City. Third, we need to recognize that not all jurisdictions are the same and that preparedness plans are not "one size fits all." Each jurisdiction needs to determine how best to do things locally. Some federal grant programs have restrictions that don't allow for local capacities and priorities. One example is the City Readiness Initiative. It's new money that is less flexible with respect to how we can use it. This program to plan for prophylaxing the city in a short period of time has come with a lot of oversight and expectations. We've done so much work here on this issue already. We'd like to be allowed to say, "These are our needs; we want to use the money for this." Lastly (my extra wish), I also worry about our federal public health resources, especially the CDC, and hope that the necessary investments to maintain and enhance their capacities are sustained. The CDC has such a long and illustrious history in public health. What makes CDC such a valuable resource to local public health officials like me are the disease-specific experts they've been able to develop and nurture. No health department in the country is going to be able to maintain expertise in all these different diseases—we're generalists. When anthrax happens, I don't have time to pull out 20 journal articles and figure it out myself. I want to be able to call their expert or have access to their reference laboratory expertise. And the lab expertise at CDC is the best, bar none—the histopathologist there who helped us with West Nile and anthrax is one of my heroes, Dr. Sharif Zaki. They have some wonderful disease experts, like Keiji Fukuda for influenza.

Q: New York has invested heavily in syndromic surveillance. What do you see as its pros and cons?

A: We think it has value. Its ultimate worth—being able to identify an outbreak earlier than anything else, resulting in the ability to mobilize a response that significantly reduces morbidity and mortality—has yet to be proven. It may or may not be possible. And there are opportunity costs—depending on what threshold you use in your statistical analyses, you can generate a lot of signals that require investigation and use a lot of staff resources— resources that could be used for other things that are just as important. It's not for everywhere. I came here from Alaska. If I lived in Anchorage, where there are only a few infectious disease physicians, I would likely invest my time in building strong relationships with every ID doc in town. I'm a firm believer in traditional surveillance, but I'm not naïve enough to think that every doctor in New York City knows to call us, cares to call us, wants to call us. There are definitely examples where they haven't. So syndromic surveillance gives me at least a sense of what's going on in the city. The inhalational anthrax case was called in on a Sunday night around 10 o'clock. The next day, we had an alarm in our emergency department syndromic surveillance system around the Upper East Side, where the hospital she worked at was located. We investigated that signal extremely aggressively, because we were worried that it was the beginning of a third terrorist attack—an aerosolized release of anthrax. Obviously, it wasn't—and our signal investigation did not identify any other concerning cases. The signal didn't continue, and every day that syndromic stayed quiet, I felt better that we weren't missing an inhalational anthrax outbreak. The same during SARS: It was very quiet during SARS. I was worried that given the large amount of travel back and forth between here and Asia, we might be missing something. So with several syndromic systems in place by 2003 (emergency department visits, ambulance calls, pharmacy sales, and worker absenteeism), having an ability to keep your finger on the pulse of the city, even indirectly, is something I value. We've shown over the years that syndromic surveillance is really good for detecting citywide viral activity, whether it's flu or norovirus. What it hasn't been as useful for is detecting small outbreaks earlier than through traditional means. The one outbreak we detected that we would not have known about otherwise was a GI outbreak that occurred after the 2003 blackout, most likely caused by people eating food that was spoiled. The only evidence we had of this outbreak was through syndromic surveillance. No one called us. There's an interest now at the federal level in investing in national syndromic surveillance systems. For jurisdictions that don't have anything, there is some value in having it done for you. But I'm concerned about a perception— not necessarily at the federal public health level, but at the political level—that syndromic surveillance is better than traditional surveillance, that you don't want to depend on public health to detect outbreaks, so let's set up systems to do it for them. But syndromic surveillance systems are just smoke detectors—unless you have a public health infrastructure to investigate, it is impossible to determine if an actual outbreak is occurring and what the cause and routes of exposure are. We look at our data seven days a week. If we see anything, we have staff on call to investigate. It requires that commitment. If you don't, it's like placing smoke detectors all over the city but not investing in the fire departments needed to respond when they go off.

Q: Do you ever talk with old timers in public health and compare your job to theirs?

A: There are a lot of ways it's changed. For the most part, public health has benefited from all these recent emergencies—we're more visible. In New York, we've used these emergencies to promote the importance of reporting. The benefit of this is that people call us. But the disadvantage is that people call us—we're busy. It's amazing to me how busy we are compared to the way we used to be, even though we have five times the staff compared to when I first started. I average 200 emails a day. We have several new outbreaks each week. Taking an hour for lunch is a rare event. We are like the fire department within the NYC Department of Health. You have five things that are urgent to do. You walk in your office, and two new outbreaks happen. You have to put those five urgent things aside and deal with the acute outbreaks.

Q: What keeps you in this job?

A: I've accepted and take seriously the emergency preparedness aspects. But what I love about this job is the opportunity to work on and continue to learn about infectious disease epidemiology. New issues come up every week. Every week we do an outbreak review with the entire staff. I've got a very bright, opinionated staff, and we often disagree with each other. And these disagreements often lead to our developing better responses or plans than if we worked alone. Sometimes new people walk into one of our staff meetings, and they think we're not getting along—but we actually get along wonderfully. That meeting is my favorite meeting of the entire week. I run it like resident rounds, where we go over the outbreaks and I ask folks questions. It's just a fun time. Whenever I walk out of that meeting, I think: This is why I'm still here.

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Dr. Joshua Lederberg (born 1925)

Joshua Lederberg in 1958
https://cdn.britannica.com/33/21033-050-10D53657/Joshua-Lederberg-1958.jpg / 2021-cbn-britannica-com-Joshua-Lederberg-1958.jpg

Wikipedia Joshua Lederberg

Born May 23, 1925 , Montclair, New Jersey [HK005O][GDrive]

Died February 2, 2008 (aged 82) , New York City [HK005O][GDrive]

Spouse(s) [HK005O][GDrive]

- Esther Miriam Zimmer (1946–1966; divorced)
- Marguerite Stein Kirsch (1968–2008; 1 child, 1 stepchild)

Associations

- Dr Anthony Stephen Fauci (born 1940)
- **Dr. David Baltimore (born 1938)** (...)
- Dr. Robert Ellis Shope (born 1929) ("*Lederberg J, Shope RE, Oaks SC, editors. Emerging infections: microbial threats to health in the United States. Institute of Medicine, National Academy Press; Washington, DC: 1992.*")
- ...

Saved Wikipedia (March 2, 2021) - Joshua Lederberg

Source : [HK005O][GDrive]

5th President of Rockefeller University in office : 1978–1990

- Preceded by Frederick Seitz
- Succeeded by [**Dr. David Baltimore (born 1938)**]
- [...]
- **Alma mater**
  - Stuyvesant High School
  - Columbia University
  - Yale University
- **Known for**
  - Neurospora crassa
  - Bacterial conjugation
  - Dendral
  - Astrobiology
  - Transduction
- **Awards**
  - Nobel Prize in Physiology or Medicine (1958)
  - National Medal of Science(1989)
  - Presidential Medal of Freedom(2006)
- Scientific career Fields
- Microbiologist
- Thesis
- Genetic recombination in Escherichia coli (1947)
- Doctoral advisor
- Edward Tatum
- Doctoral students
  - Norton Zinder

Joshua Lederberg, ForMemRS[1] (May 23, 1925 – February 2, 2008)[2] was an American molecular biologist known for his work in microbial genetics, artificial intelligence, and the United States space program. He was 33 years old when he won the 1958 Nobel Prize in Physiology or Medicine for discovering that bacteria can mate and exchange genes (bacterial conjugation).[3] He shared the prize with Edward Tatum and George Beadle, who won for their work with genetics.

In addition to his contributions to biology, Lederberg did extensive research in artificial intelligence. This included work in the NASA experimental programs seeking life on Mars and the chemistry expert systemDendral.

Early life and education

Lederberg was born in Montclair, New Jersey, to a Jewish family, son of Esther Goldenbaum Schulman Lederberg and Rabbi Zvi Hirsch Lederberg, in 1925, and moved to Washington Heights, Manhattan as an infant.[4] He had two younger brothers. Lederberg graduated from Stuyvesant High School in New York City at the age of 15 in 1941.[5] After graduation, he was allowed lab space as part of the American Institute Science Laboratory, a forerunner of the Westinghouse Science Talent Search. He enrolled in Columbia University in 1941, majoring in zoology. Under the mentorship of Francis J. Ryan, he conducted biochemical and genetic studies on the bread mold Neurospora crassa. Intending to receive his MD and fulfill his military service obligations, Lederberg worked as a hospital corpsman during 1943 in the clinical pathology laboratory at St. Albans Naval Hospital, where he examined sailors' blood and stool samples for malaria. He went on to receive his undergraduate degree in 1944.

Bacterial genetics

Joshua Lederberg began medical studies at Columbia's College of Physicians and Surgeons while continuing to perform experiments. **Inspired by Oswald Avery's discovery of the importance of DNA, Lederberg began to investigate his hypothesis that, contrary to prevailing opinion, bacteria did not simply pass down exact copies of genetic information, making all cells in a lineage essentially clones.** After making little progress at Columbia, Lederberg wrote to Edward Tatum, Ryan's post-doctoral mentor, proposing a collaboration. In 1946 and 1947, Lederberg took a leave of absence to study under the mentorship of Tatum at Yale University. Lederberg and Tatum showed that the bacterium Escherichia coli entered a sexual phase during which it could share genetic information through bacterial conjugation.[6][7] With this discovery and some mapping of the E. coli chromosome, Lederberg was able to receive his Ph.D. from Yale University in 1947.[8] **Joshua married Esther Miriam Zimmer (herself a student of Edward Tatum) on December 13, 1946.**

Instead of returning to Columbia to finish his medical degree, Lederberg chose to accept an offer of an assistant professorship in genetics at the University of Wisconsin–Madison. His wife Esther Lederberg went with him to Wisconsin. She received her doctorate there in 1950.

Joshua Lederberg and Norton Zinder showed in 1951 that genetic material could be transferred from one strain of the bacterium Salmonella typhimurium to another using viral material as an intermediary step.[9] This process is called transduction. In 1956, M. Laurance Morse, Esther Lederberg and Joshua

Lederberg also discovered specialized transduction.[10][11] The research in specialized transduction focused upon lambda phage infection of E. coli. Transduction and specialized transduction explained how bacteria of different species could gain resistance to the same antibiotic very quickly.

During her time in Joshua Lederberg's laboratory, Esther Lederberg also discovered fertility factor F, later publishing with Joshua Lederberg and Luigi Luca Cavalli-Sforza. In 1956, the Society of Illinois Bacteriologists simultaneously awarded Joshua Lederberg and Esther Lederberg the Pasteur Medal, for "their outstanding contributions to the fields of microbiology and genetics".

In 1957, Joshua Lederberg founded the Department of Medical Genetics at the University of Wisconsin–Madison. He has held visiting professorship in Bacteriology at the University of California, Berkeley in summer 1950[12] and University of Melbourne (1957). Also in 1957, he was elected to the National Academy of Sciences.[5]

Sir Gustav Nossal views Lederberg as his mentor, describing him as "lightning fast" and "loving a robust debate."[13]

Post Nobel Prize research

Lederberg (right) receiving The National Medal of Science from George H. W. Bush.

In 1958, Joshua Lederberg received the Nobel Prize and moved to Stanford University, where he was the founder and chairman of the Department of Genetics. He collaborated with Frank Macfarlane Burnet to study viral antibodies. **With the launching of Sputnik in 1957, Lederberg became concerned about the biological impact of space exploration.** In a letter to the National Academies of Sciences, he outlined his concerns that extraterrestrial microbes might gain entry to Earth onboard spacecraft, causing catastrophic diseases. He also argued that, conversely, microbial contamination of manmade satellites and probes may obscure the search for extraterrestrial life. He advised quarantine for returning astronauts and equipment and sterilization of equipment prior to launch. Teaming up with Carl Sagan, his public advocacy for what he termed exobiology helped expand the role of biology in NASA.[14]

In the 1960s, he collaborated with Edward Feigenbaum in Stanford's computer science department to develop DENDRAL.

In 1978, he became the president of Rockefeller University, until he stepped down in 1990 and became professor-emeritus of molecular genetics and informatics at Rockefeller University, reflecting his extensive research and publications in these disciplines.[15][16]

Throughout his career, Lederberg was active as a scientific advisor to the U.S. government. **Starting in 1950, he was a member of various panels of the Presidential Science Advisory Committee. In 1979, he became a member of the U.S. Defense Science Board and the chairman of President Jimmy Carter's President's Cancer Panel. In 1989, he received National Medal of Science for his contributions to the scientific world. In 1994, he headed the Department of Defense's Task Force on Persian Gulf War Health Effects, which investigated Gulf War Syndrome.**

Awards and accolades

Impact crater Lederberg in Xanthe Terra on Mars

- The Benjamin Franklin Medal for Distinguished Achievement in the Sciences of the American Philosophical Society, 2002.[17]
- The Presidential Medal of Freedom, 2006.
- In Lederberg's honor, the 87 km diameter large impact crater in Xanthe Terra on the surface of Mars was named in the year 2012.[18]

Personal

Lederberg married fellow scientist Esther Miriam Zimmer in 1946; they divorced in 1966. He married psychiatrist Marguerite Stein Kirsch in 1968. He was survived by Marguerite, their daughter, Anne Lederberg, and his stepson, David Kirsch. [...]

In Memoriam: Joshua Lederberg (1925–2008)

James M. Hughes* and D. Peter Drotman†

Source - Emerging Infectious Diseases • www.cdc.gov/eid • Vol. 14, No. 6, June 2008 981 / Source : [HG00BT][GDrive]

The world of emerging infections lost a valuable friend and inspiring leader earlier this year with the death of Joshua Lederberg. The globally recognized scientist, educator, national and Presidential scientific advisor, and Nobel Laureate died of pneumonia on February 2, 2008, at the age of 82. Dr Lederberg's early work on bacterial genetics virtually established the discipline of molecular biology, earning him a Nobel Prize in Physiology or Medicine in 1958, when he was only 33 years of age. His contributions paved the way toward understanding microbial adaptation, including the development of antimicrobial drug resistance and the implications of these evolutionary changes for clinical medicine and public health. Equally impressive are his public service contributions; he served as a science advisor to 9 US presidents.

Dr Lederberg began his exploration of bacterial genetics as a doctoral student at Yale University, where he forged new paths and gained prominence in the developing field. Over the next 30 years, he held academic posts and chaired new genetics departments at the University of Wisconsin and Stanford University. In 1978, he joined Rockefeller University as its president. Over the next 12 years, his accomplishments and successes in this position were a testimony to his scholarly accomplishments and leadership skills; he remained affiliated with the university for the rest of his life. He offered science policy advice not only to 9 US administrations but also to the National Aeronautics and Space Administration and the Department of Defense. In addition to the Nobel Prize, his numerous prestigious awards included the National Medal of Science in 1989 and the Presidential Medal of Freedom in 2006.

To those of us working in the field of emerging infectious diseases, Dr Lederberg will be most remembered for his critical role in recognizing the threats posed by emerging and reemerging infections and their implications for public health and national security. He is well known to readers of Emerging Infectious Diseases (EID) as a contributor to the journal (1,2) and for his leadership as co-chair with the late [Dr. Robert Ellis Shope (born 1929)] (3) of t**he Institute of Medicine (IOM) Committee on Emerging Microbial Threats to Health, which produced the 1992 report Emerging Infections: Microbial Threats to Health in the United States (4) (Figure 1, panel A). [PDF : https://www.ncbi.nlm.nih.gov/books/NBK234855/pdf/Bookshelf_NBK234855.pdf]** This landmark report defined the concept of emerging and reemerging infections, identified factors contributing to disease emergence and reemergence, and emphasized current and future challenges posed by infectious diseases. The report also highlighted deficiencies in our nation's public health infrastructure and made recommendations on the need to strengthen surveillance systems, address new areas of research, provide multidisciplinary training for the next generation of scientists and public health workers, and establish new and enhance existing disease prevention and control programs. EID owes its genesis to this report.

[HG00BU][GDrive]
Dr Lederberg

Figure 1 : [HG00BV][GDrive]
A) Emerging Infections: Microbial Threats to Health in the United States (4), a report of the Institute of Medicine (IOM) Committee on Emerging Microbial Threats to Health, published in 1992. B) Microbial Threats to Health: Emergence, Detection, and Response (8), a report of the IOM Committee on Emerging Microbial Threats to Health, published in 2003.

Drs Lederberg and [Dr. Robert Ellis Shope (born 1929)] were extremely effective in communicating the committee's observations and recommendations to the scientific, public health, and public policy communities, generating broad and renewed interest in infectious diseases. **The report had a profound impact on the Centers for Disease Control and Prevention (CDC), the National Institute of Allergy and Infectious Diseases, the Department of Defense, and other federal agency programs involved in addressing emerging infectious disease threats.** The report's emphasis on the need for interdisciplinary strategies and coordinated approaches led to the establishment of the Working Group on Emerging and Re-emerging Infectious Diseases under the auspices of the National Science and Technology Council Committee on International Science, Engineering and Technology. This Working Group was chaired by CDC Director David Satcher, and its deliberations led to vastly improved communication and collaboration among many federal agencies (5).

For CDC, the impact of the IOM report and Dr Lederberg's contributions were substantial. CDC worked with partners to develop new domestic and global strategies to address emerging infections, including specific efforts to respond to the IOM recommendations. Dr Lederberg served as an advisor on the development of these strategies (Figure 2), the first of which was published in 1994 (6), with an update 4 years later (7). **From 1994 through 2004, CDC's funding for infectious diseases grew nearly 200-fold, from $1 million to >$190 million, enabling development and implementation of numerous programs to build epidemiology and laboratory capacity and improve preparedness and response capacity for infectious diseases and other health threats.** Examples of these programs include the Emerging Infections Programs with activities such as FoodNet and Active Bacterial Core surveillance; the International Emerging Infections Programs; the Epidemiology and Laboratory Capacity for Infectious Diseases cooperative agreement; the Emerging Infectious Diseases Laboratory Fellowship Program; this journal; and the International Conference on Emerging Infectious Diseases, first held in 1998 with Dr Lederberg serving as the inaugural plenary speaker (2) and, most recently, in March 2008.

As an advocate for improvements in information systems and transparency, Dr Lederberg enthusiastically supported innovative approaches that included the establishment of ProMED and the Global Public Health Information Network. Internationally, he served as an advisor to the World Health Organization (WHO) on the creation of its Emerging Infections Program and personally advocated the need for establishing this program with WHO's then director general, Dr Hiroshi Nakajima.

Figure 2 - [HG00BW][GDrive]
Institute of Medicine co-chair Joshua Lederberg (left) in conversation with James M. Hughes, director, National Center for Infectious Diseases, Centers for Disease Control and Prevention (CDC), during a meeting in 1993 with expert consultants on development of the first CDC emerging infectious disease strategy.

Figure 3 - [HG00BXU][GDrive]
Keynote speakers at the inaugural International Conference on Emerging Infectious Diseases in Atlanta, March 8–11, 1998. Left to right: Anthony Fauci, [Dr. David Lowell Heymann (born 1946)], Joshua Lederberg, Claire Broome, James Hughes, Guthrie Birkhead, D. Peter Drotman.

Dr Lederberg also served as co-chair, with Dr Margaret Hamburg, of a second IOM committee that produced a follow-up to the 1992 report. Microbial Threats to Health: Emergence, Detection, and Response was published in March 2003 (8), less than 1 week after WHO issued its first global health alert in response to the outbreak of severe acute respiratory syndrome (SARS). This report had a broader global perspective than the 1992 report and identified additional factors contributing to disease emergence, reemergence, and global spread. **The report also anticipated many issues that the 2003 SARS outbreak so starkly illustrated, including the need for increased collaboration among the human and animal health communities, a recommendation now supported by the One Health Initiative (9).** The 2003 report's cover (Figure 1, panel B) depicts an artistic rendering of influenza virus, reflecting Dr Lederberg's longstanding interest in influenza research and his concern about national and global preparedness for the next pandemic.

As a charter member of the IOM, Dr Lederberg was the driving force behind the creation of its Forum on Emerging Infections (now the Forum on Microbial Threats), steering it effectively as chairperson through 2002. Consistent with his approach, the forum comprises representatives of the medical, academic, public health, veterinary, agricultural, environmental, national security, and pharmaceutical sectors. An important part of his legacy, the forum continues to address a broad range of issues in an interdisciplinary setting on a regular basis, recently focusing on vector-borne and zoonotic diseases and the potential impact of climate change on infectious diseases. As Josh liked to say, there is an ongoing confrontation with the microbial world involving "our wits versus their genes." The forum held a workshop in May 2008 on microbial evolution and coadaptation in honor of Dr Lederberg (www.iom.edu/CMS/3783/3924/52347.aspx).

On a personal level, I (J.M.H.) first encountered Professor Lederberg in the late 1960s, when I was a medical student and he was the chairman of the Genetics Department at Stanford. His stature and accomplishments were legendary, and we were in awe of him. Over the course of my CDC career, I was fortunate to have many interactions with Josh and to greatly benefit from his insightful questions, keen observations, and constructive comments. He was very approachable and consistently available to discuss a broad range of issues, having an uncanny ability to readily span from basic science, to applied science, to public health, to policy, and to national security. He was a mentor, friend, and colleague to many.

For me (D.P.D.), Dr Lederberg was a great friend and early champion of EID, supporting the journal from its first issue in 1995. He helped us obtain credibility by recruiting editorial board members, supporting our application for early listing in national databases, and encouraging authors and reviewers of the nascent journal. We profiled him briefly when we published his plenary lecture at the inaugural International Conference on Emerging Infectious Diseases (Figure 3) (2) and compared his far-seeing work to that of Rudolf Virchow, one of the founders of modern medical science, because both wrote reports that called the attention of central governments to the manifold contributors to the web of causation of emerging diseases (10).

Dr Lederberg will be remembered for his scientific vision and contributions, his integrity and credibility, and his unwavering commitment to advocate for the highest quality science and evidence-based public policy. He was a firm believer in the need for scientists and public health officials to communicate clearly and concisely with policy makers and the public on scientific and public health issues. His influence and impact reached broadly, across areas of expertise and around the world. He will be greatly missed.

Biographies

Dr Hughes is professor of medicine in the Division of Infectious Diseases, Department of Medicine, School of Medicine, and professor of public health in the Hubert Department of Global Health, Rollins School of Public Health, at Emory University. His research interests include factors contributing to infectious disease emergence and antimicrobial resistance; global infectious disease surveillance and public health capacity building; and water-related diseases and the impact of water, sanitation, and hand hygiene interventions on health.

Dr Drotman is editor-in-chief of the journal Emerging Infectious Diseases at CDC.

Footnotes

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[1]All photographs used in this article were provided by the authors.

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Connected with ONA's Andrew Marshall "for decades"

See https://phe.rockefeller.edu/wp-content/uploads/2020/05/Andrew-Marshall-and-Classics2RU.pdf

"Andrew Marshall and Classics: A Remembrance Jesse H. Ausubel Forthcoming in Remembering Andy Marshall, Andrew May (ed.) In 1999 I was pondering a millennial book project titled The World's Progress exploring both what follows a forward arrow (science and technology) and what does not (human biology and behavior). Among my most valued interlocutors was Joshua Lederberg, a Nobel-winning Rockefeller University geneticist with a subtle, expansive mind and eidetic memory. Josh had been in conversation with Andy Marshall for decades on many topics, and was corresponding with him then about whether successful warriors have higher Malthusian fitness and the changing attributes of martial success, including effective leadership, technical prowess, and instinctive behaviors. Josh sensed an interesting match, and connected us, and thus began my own conversation with Andy, which would last almost 20 years. One naturally associates martial and Marshall. Martial stems from Mars, the Roman god of war, while Marshall in fact is a Norman name for persons who tend horses, but I associate Andy with the classics. The word "classics" derives from the Latin adjective classicus, meaning in ancient Rome "belonging to the highest class of citizens."1 By the second century CE, literary critics used the word to describe the highest-quality writers. Andrew W. Marshall lived for classics. He sought to grasp the broad meaning of the entirety of history, the ultimate design of the world. Such timeless understanding is not found in committee reports. Andy understood that most great intellectual achievements of the kind he valued came from individual minds. Andy's capacity to read and listen enabled him to voyage in space and time. For Andy space and time united. History was a set of developments of ideas in time, while geography was the development of a set of ideas in space. He always seemed at home in a room where maps covered the walls. At the same time, he understood that history employs people to do its work."

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EVIDENCE TIMELINE

1958 - https://www.newspapers.com/image/563242459/?terms=lederberg%20fauci&match=1

1960 (Feb 07)

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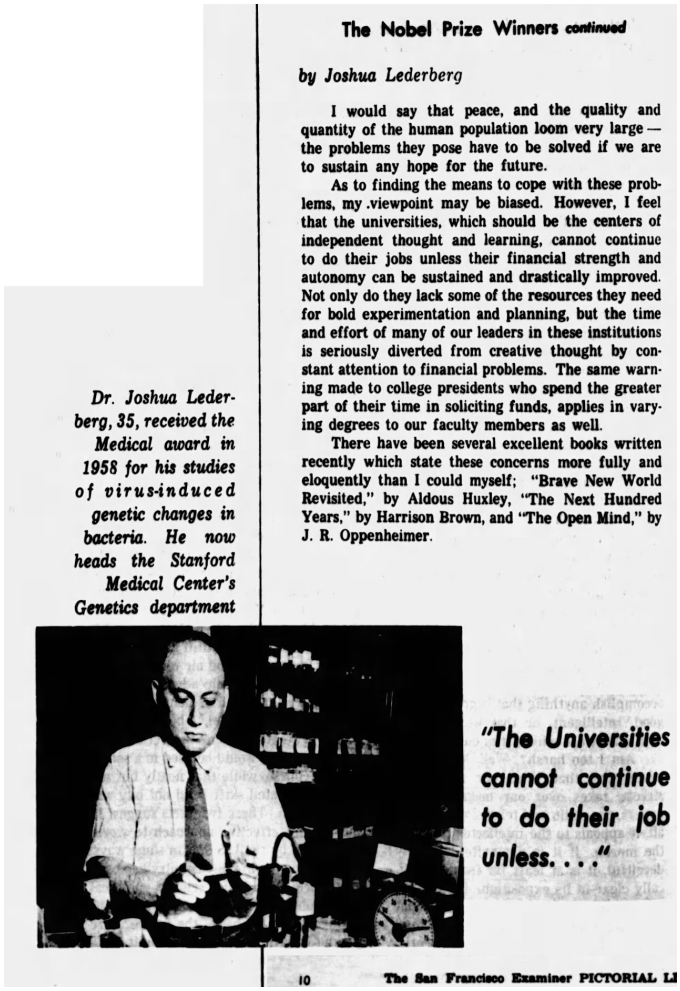
1960-02-07-the-san-francisco-examiner-pg-f-7-clip-lederberg.jpg



The Nobel Prize Winners continued

by Joshua Lederberg

I would say that peace, and the quality and quantity of the human population loom very large — the problems they pose have to be solved if we are to sustain any hope for the future.

As to finding the means to cope with these problems, my viewpoint may be biased. However, I feel that the universities, which should be the centers of independent thought and learning, cannot continue to do their jobs unless their financial strength and autonomy can be sustained and drastically improved. Not only do they lack some of the resources they need for bold experimentation and planning, but the time and effort of many of our leaders in these institutions is seriously diverted from creative thought by constant attention to financial problems. The same warning made to college presidents who spend the greater part of their time in soliciting funds, applies in varying degrees to our faculty members as well.

There have been several excellent books written recently which state these concerns more fully and eloquently than I could myself; "Brave New World Revisited," by Aldous Huxley, "The Next Hundred Years," by Harrison Brown, and "The Open Mind," by J. R. Oppenheimer.

Dr. Joshua Lederberg, 35, received the Medical award in 1958 for his studies of virus-induced genetic changes in bacteria. He now heads the Stanford Medical Center's Genetics department

"The Universities cannot continue to do their job unless. . . ."

10 The San Francisco Examiner PICTORIAL LI

1960 (Nov 07)

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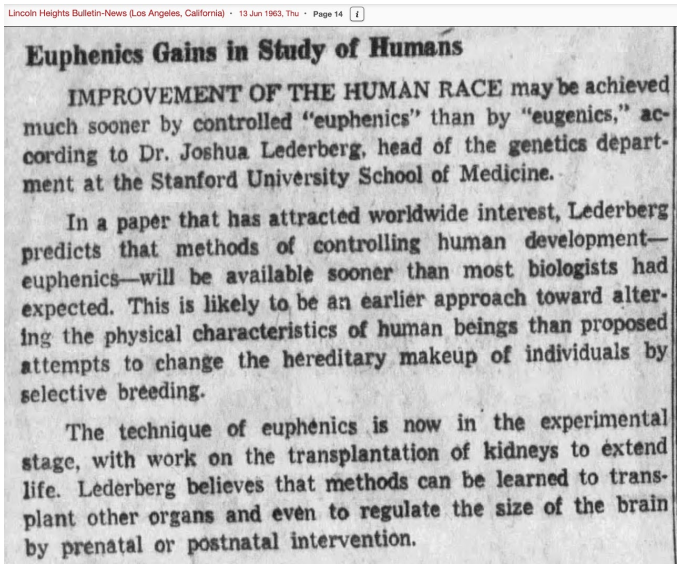
1963 (May) - Backs moon mission

https://www.newspapers.com/image/620470889/?terms=%22joshua%20lederberg%22&match=1

1963 (June 13)

https://www.newspapers.com/image/710448536/?terms=%22joshua%20lederberg%22&match=1

1963-06-13-lincoln-heights-bulletin-news-pg-14-clip-euphenics.jpg



Lincoln Heights Bulletin-News (Los Angeles, California) · 13 Jun 1963, Thu · Page 14

Euphenics Gains in Study of Humans

IMPROVEMENT OF THE HUMAN RACE may be achieved much sooner by controlled "euphenics" than by "eugenics," according to Dr. Joshua Lederberg, head of the genetics department at the Stanford University School of Medicine.

In a paper that has attracted worldwide interest, Lederberg predicts that methods of controlling human development—euphenics—will be available sooner than most biologists had expected. This is likely to be an earlier approach toward altering the physical characteristics of human beings than proposed attempts to change the hereditary makeup of individuals by selective breeding.

The technique of euphenics is now in the experimental stage, with work on the transplantation of kidneys to extend life. Lederberg believes that methods can be learned to transplant other organs and even to regulate the size of the brain by prenatal or postnatal intervention.

1983 (July 10)

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1983-07-10-the-news-and-observer-raleigh-nc-pg-6-d-lederberg-redesign.jpg

The News and Observer, Raleigh, N. C., Sun., July 10, 1983 6D

The power to redesign every species

ALGENY, by Jeremy Rifkin. New York: Viking, 298 pages, $14.75.

By JOSEPH J. MARON

If the Industrial Age can be thought of as the search for a better mousetrap, then the age we are now entering, the Age of Algeny, may be called the search for a better mouse.

You won't find the word "algeny" in the dictionary — yet. Coined by Dr. Joshua Lederberg of Rockefeller University, it refers to the coming transformations of the biotechnical revolution. Biological engineering is about to give man the power of redesigning every species on the planet, including his own. No power since the harnessing of fire will so affect our lives.

This is the warning of Jermy Rifkin, economist, social scientist and philosopher who, in his latest book, examines the steadily emerging implications spawned by the marriage of computer technology and the biological sciences.

"The final goal of the algenist is to engineer the perfect organism. The 'golden state' is the state of optimal efficiency. Nature is seen as a hierarchical order of increasingly efficient living systems."

Every age develops a cosmology or "world-view" as a way of justifying its behavior. Darwinism provided the cosmological justification for the Industrial Age. Consider how neatly capitalism's free enterprise and communism's class struggle fit into Darwinism's two great paradigms, natural selection and survival of the fittest.

The fruits of biological engineering will be both real and astonishing. Corporations like General Electric already assure us, "We bring good things to life."

"The problem," says Rifkin, "is that biotechnology has a beginning but no end. Cell by cell, tissue by tissue, organ by organ, we give up our bodies as we give up our political power, a piece at a time."

In his final chapter Rifkin posits "two futures, two choices. An engineering approach to the age of biology or an ecological approach. The battle between bioengineering and ecology is a battle of values."

Rifkin's passionately felt and eloquently argued choice is "to end our long, self-imposed exile; to rejoin the community of life. This is the task before us. It will require that we renounce our drive for sovereignty over everything that lives; that we restore the rest of creation to a place of dignity and respect. The resacralization of nature stands before us as the great mission of the coming age."

Rifkin's writing is crisp and clear with a touch of measured urgency. His analysis is appropriately repetitious as he approaches a complex subject from several directions. The text is well-documented, the bibliography extensive and up-to-date.

This is a book aimed at the general reader because Rifkin believes the subject is much too important to be left to the "experts."

(Joseph J. Maron teaches art at Meredith College.)

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1996 (Jan 17) - W/ Fauci

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1996-01-17-the-atlanta-constitution-pg-a-4-clip-infectious.jpg

PREDICTIONS PROVE WRONG

Infectious diseases now third leading killer

An aging population, AIDS partially blamed

Emerging diseases: A program to avert the possibility of devastating epidemics is proposed.

By Mike Toner
STAFF WRITER

Infectious diseases, once thought to have been vanquished by antibiotics and modern public health measures, are on the rise again in the United States.

The Centers for Disease Control and Prevention reported Tuesday that deaths from infectious disease rose 58 percent between 1980 and 1992. As a result of the surge, infectious diseases have surpassed strokes and accidents as a leading cause of death and now rank third behind only heart disease and cancer.

Although some of the increase is due to an aging population and the emergence of AIDS, researchers say deteriorating U.S. public health programs, increased virulence of disease-causing organisms and microbes' growing resistance to antibiotics have played a key role in the sudden turn of events.

"Despite historical predictions that infectious diseases would wane in the United States, infectious disease mortality has actually been increasing in recent years," the CDC's Dr. Robert Pinner said Tuesday in Washington.

He said the 58 percent increase — 39 percent even after being adjusted to reflect the aging population — represents only a part of the problem. Nonfatal infections, such as the childhood ear infections that cause 30 million doctors' visits a year, are increasing, too.

Pinner's report was part of a major news briefing on the threat of emerging diseases, sponsored by the American Medical Association, which Tuesday called for a concerted worldwide effort to combat emerging diseases and antibiotic-resistant organisms.

In a commentary in the current issue of the Journal of the American Medical Association (JAMA), Anthony Fauci, director of the National Institute of Allergy and Infectious Diseases, warned that without concerted action, the world would face "the worst effects of what is inevitable in the future — more emerging microbes and possibly more devastating epidemics."

In the same issue, Nobel laureate Joshua Lederberg said the "unprecedented mixing of people" caused by increased international travel has created a "tinderbox" for the spread of once-isolated diseases such as Ebola fever.

Lederberg, a microbiologist at Rockefeller University, proposed a five-point program to deal with emerging diseases that includes heightened global surveillance of disease outbreaks, improved sanitation and expanded research on new drugs and vaccines.

But two groups of researchers reported new evidence that the spread of resistant microbes is, in part, being abetted by the medical establishment's own overreliance on antibiotics as a cure-all for infectious diseases.

On the rise

Infectious disease is now the third leading cause of death in the United States. A comparison of the leading killers in 1980 and 1992:

Leading causes of infectious disease deaths in 1992:

Respiratory tract infections	77,336
AIDS	33,581
Blood infections	19,667
Kidney/urinary infections	12,399

Source: U.S. Centers for Disease Control and Prevention

STEPHEN CAMPER / Staff

Researchers at the Ohio State University Medical Center report in JAMA that "excessive antibiotic use appears to be the driving force" behind the spread of penicillin-resistant strains of streptococcus bacteria, which annually causes 500,000 cases of pneumonia, 7 million middle ear infections and 3,000 cases of meningitis.

Although other antibiotics are still effective against the germ, penicillin's dwindling efficacy makes treatment more difficult. The researchers say an education program for doctors and patients is needed to "reduce the demand and use of unnecessary antibiotics."

In the same issue of JAMA, researchers in Iceland say a concerted two-year effort to reduce antibiotic use in the nation's day care centers has reduced the number of resistant ear infections, which had increased steadily since 1988.

Under the new program, Icelandic doctors have been advised not to routinely prescribe antibiotics at the first signs of ear or respiratory infections. Instead, they watch patients more closely and order antibiotics only if it appears the infection is not going to resolve itself — as it often does.

"The greatest reduction in antimicrobial use has been in the youngest age group, where it matters the most," says Karl Kristinsson of Reykjavik's National University Hospital.

Fauci said he personally opposed restricting doctors' ability to prescribe antibiotics in the United States, but he said new guidelines on the use of antibiotics are needed.

"We need to have more education, counseling and guidelines for physicians on how to use antibiotics," he said.

ACCESS ATLANTA

Dr. David Satcher, director of the CDC, will be online Sunday to answer your questions about the CDC, its changing mission and other topics explored in a special Atlanta Journal-Constitution report coming this weekend. Talk live with Satcher from 5 to 6 p.m. in the Atlanta Chat room. *Members, jump: Chat, select Access Atlanta, then Atlanta Chat Room.* Information, **Page A2.**

New health threats feared if climates shift

Complex links: Scientists urge intensified studies of the potential effects of Earth's rising temperature.

By Jeff Nesmith
WASHINGTON BUREAU

Washington — Global warming — expected to push the Earth's temperature to its highest level in millions of years in the 21st century — could cause an unprecedented spread of some infectious diseases, scientists warned Tuesday.

Diseases such as dengue and malaria, traditionally confined to tropical areas, may move into temperate zones if mosquitoes, rats and other creatures that carry them expand their territories as climates change, said a team of researchers from Johns Hopkins, Harvard and George Washington universities.

On the other hand, diseases that seem to prefer cooler climates — especially those carried by ticks — may decline, the researchers said in an article in the Journal of the American Medical Association.

To deal with emerging epidemics, physicians and public health officials will have to understand complex linkages between environment and disease, said Dr. Jonathan Patz of Johns Hopkins, one of the article's authors.

He said the "potential human health impacts . . . on future generations" call for increased efforts to come to grips now with uncertainties of climate change and health.

The article was part of an international collection of more than 200 articles on emerging and re-emerging microbial threats being published in January issues of medical journals worldwide.

Despite disagreements over the rate and precise causes of global warming, many climate experts are convinced that the buildup of so-called greenhouse gases in the atmosphere is pushing up the overall temperature of the planet.

According to some projections, the Earth's temperature will increase by 5 degrees Fahrenheit by the year 2100.

Mosquito-borne diseases, such as malaria, dengue and viral encephalitis, are among the ailments most sensitive to climate, Patz said during a news conference Tuesday.

For example, a virulent dengue strain known as "breakbone fever" spread during the unseasonably warm summer of 1988 to areas of Mexico where it usually does not appear, Patz said.

He said female *Aedes aegypti* mosquitoes, which carry the disease, are typically smaller in hotter climates and must feed more often to produce their eggs. That means they bite people more often, increasing the odds of the disease spreading.

At the same time, the dengue virus becomes more infectious in warmer temperatures, Patz said.

In addition to heightening the spread of mosquito-borne diseases, climate change could lead to higher incidence of waterborne infections and toxin-related illnesses as a result of increases in sea surface temperatures, Patz said.

May 2003 - https://www.newspapers.com/image/630697732/?terms=lederberg%20fauci&match=1

https://www.newspapers.com/image/410418895/?terms=lederberg%20fauci&match=1

Herbert Henry Lehman (born 1878)

Wikipedia Herbert H. Lehman

1963-12-06-jewish-telegraphic-agency-no-230-231-herbert-lehman-dies.pdf / https://drive.google.com/open?id=1lBe1pO_UYZPBdOqf-ou4MG9K19VYs-uP

(source bulletin - 1963-12-06-jewish-telegraphic-agency-no-230-231.pdf / https://drive.google.com/open?id=1l8gb1GxnKumZzjpqecZQyd5ULTMCNJCe)

Herbert H. Lehman Dies in New York; Mourned by Jewry; Funeral Sunday

Herbert H. Lehman, twice elected to the United States Senate, Governor of New York State for 10 years, first director-general of the United Nations Relief and Rehabilitation Agency, and one of the foremost active leaders in many Jewish causes for many years, died suddenly here today. He was 85.

Funeral services will be held Sunday at 1. p.m., at Temple Emanu-El, and interment will be private. Mr. Lehman's remains will lie at the Universal Chapel, 52nd. St. and Lexington Avenue, tomorrow from 1. p. m. to 10 p.m., and Saturday from 10 a.m. to 10 p.m. Messages of condolence and grief, from every major Jewish organization, secular, religious and philanthropic, poured into the Lehman home and office here as soon as his death was announced. (See Page 5 for statements of condolence.)

The former Senator was universally acclaimed as the "elder statesman" of American Jewry, as well as one of the most outstanding Americans remaining in public life carrying on the traditions of President Franklin D. Roosevelt.

Throughout his long career in public office and in leadership of the affairs of the Democratic Party, Mr. Lehman never divorced himself from Jewish affairs and from activities supporting Israel. He affirmed many times the principle that he must be as free to participate in social welfare and other affairs affecting Jews as he was free to serve the general community on all levels–statewide, nationally and internationally.

Herbert Lehman was born in New York City in 1878, the scion of a German family that had immigrated to the United States in 1848, engaging in the textile business. He studied at Williams College, graduating in 1899, entered the cotton goods business, later became a partner in the banking firm of Lehman Brothers. He severed his connection with that company when he began his first term as New York State Governor in 1933.

WAS RE-ELECTED THREE TIMES AS GOVERNOR OF NEW YORK STATE

In 1917, when the United States entered World War I, young Lehman went to Washington and became an aide to Assistant Secretary of the Navy Franklin D. Roosevelt. Later, he was commissioned a captain in the U.S. Army. For his outstanding work, he was given the U.S. Distinguished Service Award. He retired from active army service in 1919, as a colonel on the General Staff.

In 1920, Mr. Lehman became known as one of the most active supporters of Alfred E. Smith. When Mr. Smith was elected Governor he appointed Mr. Lehman as mediator of industrial disputes in the garment industry, a trade in which Jewish workers as well as Jewish industrialists figured most prominently. In 1926, Mayor James J. Walker, of New York, commissioned Mr. Lehman to make a study of the city's finances.

When Franklin D. Roosevelt was nominated for Governor of New York in 1928, Mr. Lehman became Mr. Roosevelt's running partner in that campaign, as candidate for Lieutenant Governor. They were elected. When Governor Roosevelt was absent from the State, Mr. Lehman was Acting Governor. Roosevelt and Lehman ran together again, being elected by overwhelming votes. When Mr. Roosevelt ran for his first term for the Presidency in 1932, the reigns of the State were handed over to Mr. Lehman. He was re-elected three times, serving three terms of two years and one term of four years.

WAS FOUNDER OF J. D. C.; ACTIVE IN WORK FOR JEWS IN PALESTINE

From 1949 to 1957, Mr. Lehman served two terms as United States Senator, continuing in Washington his espousal of the New Deal policies which he had helped President Roosevelt develop.

Mr. Lehman entered social welfare work early in life, shortly after graduating from college, becoming an advisor to a boys' club at the Henry Street Settlement, one of the country's earliest institutions of the kind, operating chiefly on New York's lower East Side. He was one of the founders of the Joint Distribution Committee, and after the end of World War I, he became chairman of the Reconstruction Committee of the JDC. He also became a trustee of the Hebrew Sheltering Guardian Society, and of the Bureau of Jewish Social Research.

He displayed his interest in the Jewish settlement in Palestine early in his career, becoming vice-chairman of the Palestine Economic Corporation. When Israel became a State in 1948, Mr. Lehman continued to support the Jewish State. In 1958, he was general chairman of the United States Committee for the celebration of Israel's tenth anniversary. At his death, he was honorary general chairman of the National United Jewish Appeal; honorary chairman of the Joint Distribution Committee; and one of the topmost leaders of the Greater New York UJA. He was active for many years in the leadership of the American Jewish Committee, and was honorary vice-president of the AJC. He was also, for 15 years, honorary president of the American Friends of the Alliance Israelite Universelle.

DIRECTED AID TO MILLIONS OF REFUGEES AFTER WORLD WAR II

As first director-general of UNRRA, he established that United Nations Agency's successful activities toward aiding many millions of displaced persons, refugees, and others who suffered from the adverse social, economic and humanitarian consequences resulting from the broad devastations caused during World War II. He had acquired much of his experience aiding his work as head of UNRRA both through his welfare work in Jewish organizations and through his office as the U.S. State Department's director of foreign relief and rehabilitation operations in 1942.

In more recent years, although showing his advanced age, Mr. Lehman continued his activities both in Jewish causes and in general politics. Until a year ago, Mr. Lehman frequently appeared at New York street corners, during hot political campaigns, speaking vigorously on behalf of the election of reform candidates. Mrs. Lehman nearly always accompanied him in all of his public appearances, even standing behind him on shaky street-corner stands as he delivered political speeches.

WAS DIRECTOR OF NATIONAL ASSOCIATION FOR ADVANCEMENT OF COLORED PEOPLE

Among his many interests was an undeviating one in freedom and equality for Negroes in the United States. He was a member of the board of directors of the National Association for the Advancement of Colored People. He had been scheduled to receive honors tonight at a dinner planned by the National Committee Against Discrimination, where A. Philip Randolph, one of the country's outstanding Negro leaders, was to have shared in those honors.

Mr. Lehman was also among the topmost, active lay leaders in the Jewish Theological Seminary of America; the New York Foundation; Visiting Nurse Service; Institute for Advanced Study; Surprise Lake Camp; Franklin D. Roosevelt Memorial Foundation; the National Conference of Christians and Jews; the Jewish Child Care Association. He was honorary president of the World ORT Union; a member of the Council of the New York University School of Law; a national board member of the American Association for the United Nations; a member of the national council of the Boy Scouts of America.

For many years, Mr. Lehman was the recipient of many outstanding awards, citations and honorary degrees from many sources and institutions of higher learning. In 1941, he received the honorary degree of doctor of laws from the Jewish Theological Seminary. He was the recipient of at least 15 other honorary degrees from many colleges and universities, ranging from Yeshiva College to Fordham University (Catholic).

https://library.columbia.edu/libraries/rbml/units/lehman/biography.html

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J. Lehrenkrauss Corporation

https://en.wikipedia.org/wiki/J._Lehrenkrauss_Corporation

Saved Wikipedia (from July 10 2020)

See : [HK002O][GDrive]

The **J. Lehrenkrauss Corporation** was a Brooklyn, New York based mortgage-servicing business which became insolvent in 1934.[1] On January 25, 1935, Julius Lehrenkrauss, 67, the head of the firm, was convicted of mail fraud in the sale of $1,600,000 of preferred stock. The company is noteworthy because of the crimes it committed. Its failure happened during the Great Depression when credit lending agencies were strained due to deflation and a weak economy in the United States in the early 1930s.

Government prosecutors alleged that the business was bankrupt in 1932 and 1933, at the time the stock was sold.[2] Lehrenkrauss received a suspended sentence because of his advanced age. Two partners and a former salesman for the firm were given active prison terms. [3]

J. Lehrenkrauss & Sons, a banking and brokerage enterprise, was a subsidiary of the J. Lehrenkrauss Corporation. It was located at 359 Fulton Street (Brooklyn) in December 1933.[4]

References

1. ^ *12 Bid For Business of J. Lehrenkrauss*, New York Times, March 13, 1934, pg. 41.
2. ^ *Three Convicted In $1,600,000 Fraud*, New York Times, January 26, 1935, pg. 36.
3. ^ *Three Are Sentenced In Mail-Fraud Case*, New York Times, January 29, 1935, pg. 42.
4. ^ *Newspaper Specials* , Wall Street Journal, December 28, 1933, pg. 3.

1908 - vacations

https://www.newspapers.com/image/53148396/?terms=Lehrenkrauss%2BSachs

1925 (Dec 05)

https://www.newspapers.com/image/556346827/?terms=%22Julius%2BLehrenkrauss%22

1927 (July 12)

Full newspaper page : [HN00ZU][GDrive]

The Brooklyn Citizen (Brooklyn, New York) · 12 Jul 1927, Tue · Page 14

BORO HOSPITAL TRUSTEES NAME NEW MEMBERS

Julius Lehrenkrauss Elected by Wyckoff Heights Institution

Julius Lehrenkrauss was unanimously elected one of the trustees of the Wyckoff Heights Hospital at a meeting of the Board of Trustees held yesterday afternoon at the instiution.

Mr. Lehrenkrauss has been a member of the Hospital Society for many years and but recently he again manifested his interest for the institution by donating $5,000 for the new annex and madernization fund.

President John Welz announced that he new addition, practically completed now, has ample floor space connecting the present maternity department, which will increase the bed capacity by at least fifteen more beds. The administration offices are being moved into new and larger quarters and will be a complete unit.

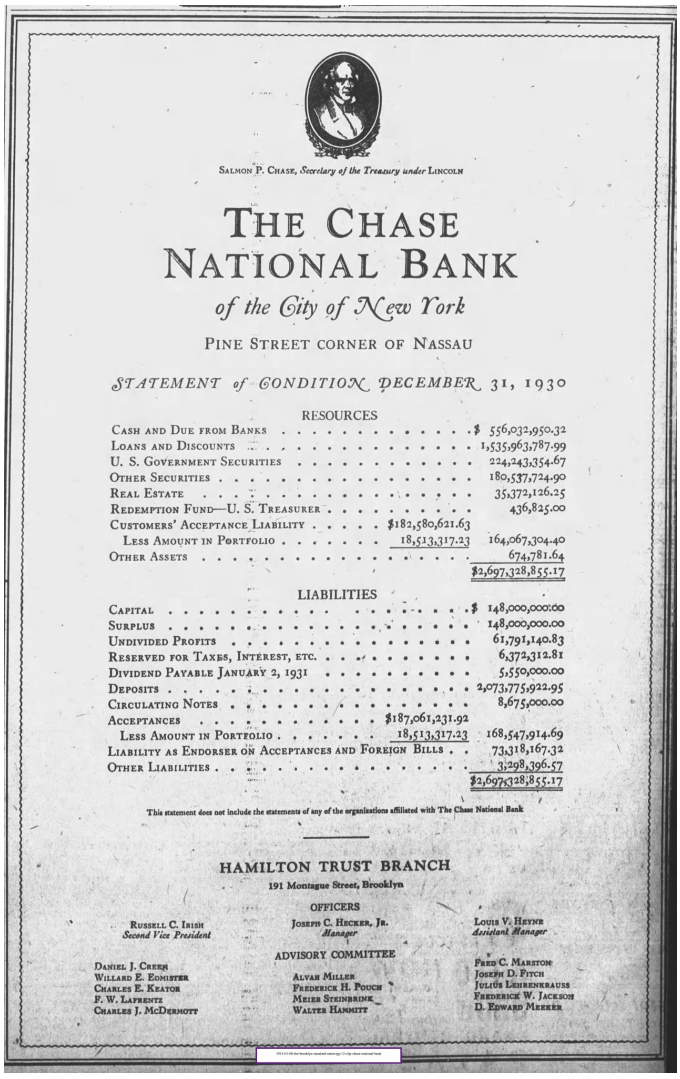
A complete renovation of the present hospital, which has now reached its twenty-eighth year, is under way.

Jacob Bartscherer, chairman of the Nurses' Training School Committee, said that the quota of student nurses is now almost filled and that further applications to enter the training school would be received during this month for the next term. A high school education is required for entering.

[HN00ZV][GDrive]

1931 (Jan 06)

Full newspaper page : [HN00ZW][GDrive]



Salmon P. Chase, *Secretary of the Treasury under* Lincoln

THE CHASE NATIONAL BANK

of the City of New York

PINE STREET CORNER OF NASSAU

STATEMENT of CONDITION DECEMBER 31, 1930

RESOURCES

Cash and Due from Banks		$ 556,032,950.32
Loans and Discounts		1,535,963,787.99
U. S. Government Securities		224,243,354.67
Other Securities		180,537,724.90
Real Estate		35,372,126.25
Redemption Fund—U. S. Treasurer		436,825.00
Customers' Acceptance Liability	$182,580,621.63	
Less Amount in Portfolio	18,513,317.23	164,067,304.40
Other Assets		674,781.64
		$2,697,328,855.17

LIABILITIES

Capital		$ 148,000,000.00
Surplus		148,000,000.00
Undivided Profits		61,791,140.83
Reserved for Taxes, Interest, etc.		6,372,312.81
Dividend Payable January 2, 1931		5,550,000.00
Deposits		2,073,775,922.95
Circulating Notes		8,675,000.00
Acceptances	$187,061,231.92	
Less Amount in Portfolio	18,513,317.23	168,547,914.69
Liability as Endorser on Acceptances and Foreign Bills		73,318,167.32
Other Liabilities		3,298,396.57
		$2,697,328,855.17

This statement does not include the statements of any of the organizations affiliated with The Chase National Bank

HAMILTON TRUST BRANCH

191 Montague Street, Brooklyn

OFFICERS

Russell C. Irish, *Second Vice President*
Joseph C. Hecker, Jr., *Manager*
Louis V. Heyne, *Assistant Manager*

ADVISORY COMMITTEE

Daniel J. Creen
Willard E. Edmister
Charles E. Keator
F. W. Lafrentz
Charles J. McDermott
Alvan Miller
Frederick H. Pouch
Meier Steinbrink
Walter Hammitt
Fred C. Marston
Joseph D. Fitch
Julius Lehrenkrauss
Frederick W. Jackson
D. Edward Meeker

[HN00ZX][GDrive]

1931 (Jan 11)

https://www.newspapers.com/image/59893481/?terms=%22Julius%2BLehrenkrauss%22

1931 (Feb 08)

https://www.newspapers.com/image/57564012/?terms=%22J%2BLehrenkrauss%22

1932 (Jan 08)

Full newspaper page : [HN00ZY][GDrive]

[HN00ZZ][GDrive]

1932 (Feb 08)

Full newspaper page : [HN00ZP][GDrive]

[HN00ZQ][GDrive]

1933 (Jan 06)

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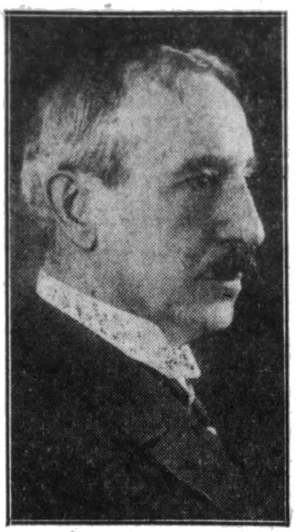
1933 (April 27)

Full newspaper page : [HN00ZR][GDrive]

EXTENDING SERVICE



Julius Lehrenkrauss

J. Lehrenkrauss Expands Service

J. Lehrenkrauss' Sons, Inc., one of the oldest financial houses in Brooklyn, and which on the first of next month celebrates its 55th anniversary, will open a New York City branch office at 85 Maiden Lane, on May 1, Julius Lehrenkrauss, president of the Lehrenkrauss Corporation, announced today.

1933-04-27-the-brooklyn-eagle-pg-28-clip-lehrenkrauss

"The extension of our facilities at this time is a clear indication of what we expect of business activity in the future," Mr. Lehrenkrauss stated. "Our firm has seen several periods of depression come and go, and has been in business long enough to know that each such period is merely starting ground for further progress.'"

Coincident with the opening of the Manhattan office the Lehrenkrauss firm also announces its appointment as suburban general agents and Metropolitan agents for the Allemannia Insurance Company of the Crum & Forster group, suburban general agents for the Insurance Company of the State of Pennsylvania and also Brooklyn agent for National Fire Insurance Company of Pittsburgh.

J. Lehrenkrauss' Sons, Inc., was founded on May 1, 1878, starting business in a humble office in a storeroom in Brooklyn. The past 55 years has seen steady and consistent growth. The company occupies its own five-story office building at 359 Fulton St. For many years it has served as general agent in Brooklyn for American Eagle Fire Insurance Company, Camden Fire Association, Franklin Fire Insurance Company and the Maryland Fire Insurance Company. It is also general agent for Columbian National Life Insurance Company.

David Howells will be in charge of the New York City office.

[HN00ZS][GDrive]

1933 (Dec 7)

The New York Times

THURSDAY, DECEMBER 7, 1933

LEHRENKRAUSS CORP. IN RECEIVERSHIP SUIT

Bankruptcy Petition Also Filed Against Partners in Brooklyn Mortgage Company.

An application for the appointment of a receiver to conserve the assets of the Lehrenkrauss Corporation of 359 Fulton Street, Brooklyn, and four subsidiary companies, was made in a suit in equity filed against the corporation in the Federal Court in the borough yesterday. Judge Marcus B. Campbell reserved decision until this morning.

At the same time, and in the same court, a petition in bankruptcy was filed against Julius Lehrenkrauss, Charles F. Lehrenkrauss and J. Lester M. Lehrenkrauss individually and as general partners in the Lehrenkrauss Corporation and against Herman Richter and Julius Kaiser, individually and as special partners in the concern. The persons named have twenty days in which to contest the charge of insolvency.

The papers in both actions were filed by Archibald Palmer, attorney of 2 Lafayette Street, Manhattan, who also asked the court for authority to conduct a hearing under the bankruptcy laws into the affairs of the Lehrenkrauss Corporation. This request was granted.

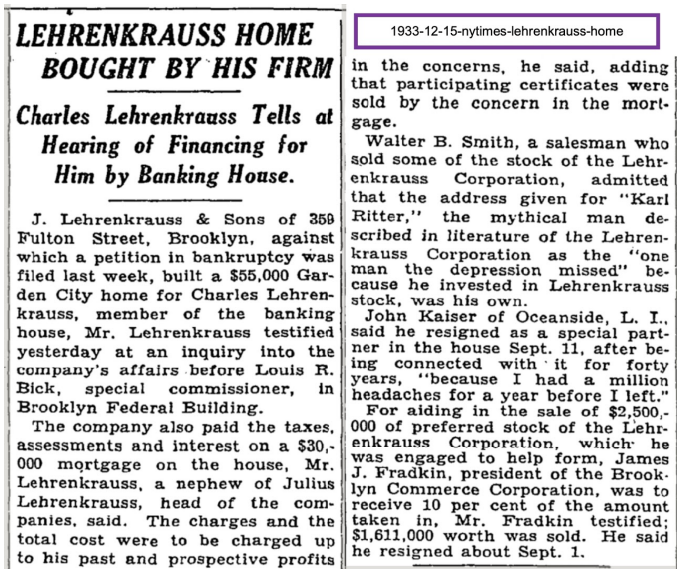
The Lehrenkrauss concern has been in business in Brooklyn since 1847. It dealt in mortgages, conducted a travel bureau and did a general banking and insurance business. The subsidiary corporations of the concern are the Lehrenkrauss Mortgage Title and Guaranty Company, Universal Tours, Inc. Omnis Corporation and J. Lehrenkrauss & Sons, Inc.

Mr. Palmer said yesterday the assets of the Lehrenkrauss Corporation were approximately $12,000,000 and the liabilities about $3,000,000, besides guarantees of an unknown amount on real estate mortgages.

The suit in equity was brought on behalf of William Greenbaum of Montclair, N. J., and the application for a receiver was concurred in by the Lehrenkrauss Corporation through its counsel, Kenneth McEwen, of 102 Maiden Lane.

Source - NYTimes : [HN00ZN][GDrive]

1933 (Dec 15)



1933-12-15-nytimes-lehrenkrauss-home

LEHRENKRAUSS HOME BOUGHT BY HIS FIRM

Charles Lehrenkrauss Tells at Hearing of Financing for Him by Banking House.

J. Lehrenkrauss & Sons of 359 Fulton Street, Brooklyn, against which a petition in bankruptcy was filed last week, built a $55,000 Garden City home for Charles Lehrenkrauss, member of the banking house, Mr. Lehrenkrauss testified yesterday at an inquiry into the company's affairs before Louis R. Bick, special commissioner, in Brooklyn Federal Building.

The company also paid the taxes, assessments and interest on a $30,000 mortgage on the house, Mr. Lehrenkrauss, a nephew of Julius Lehrenkrauss, head of the companies, said. The charges and the total cost were to be charged up to his past and prospective profits in the concerns, he said, adding that participating certificates were sold by the concern in the mortgage.

Walter B. Smith, a salesman who sold some of the stock of the Lehrenkrauss Corporation, admitted that the address given for "Karl Ritter," the mythical man described in literature of the Lehrenkrauss Corporation as the "one man the depression missed" because he invested in Lehrenkrauss stock, was his own.

John Kaiser of Oceanside, L. I., said he resigned as a special partner in the house Sept. 11, after being connected with it for forty years, "because I had a million headaches for a year before I left."

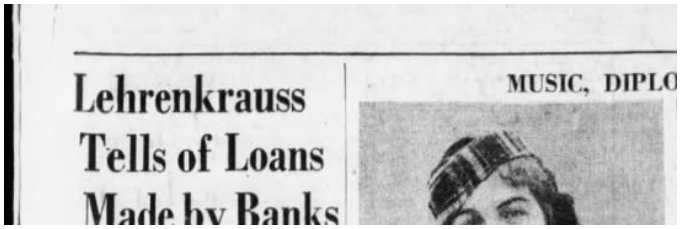
For aiding in the sale of $2,500,000 of preferred stock of the Lehrenkrauss Corporation, which he was engaged to help form, James J. Fradkin, president of the Brooklyn Commerce Corporation, was to receive 10 per cent of the amount taken in, Mr. Fradkin testified; $1,611,000 worth was sold. He said he resigned about Sept. 1.

Source : [HN00ZM][GDrive]

1933 (Dec 22)

https://www.newspapers.com/image/416590629/?terms=%22Julius%2BLehrenkrauss%22

1934 (Jan 04)



Lehrenkrauss Tells of Loans Made by Banks

MUSIC, DIPLO

Much Switching of Collateral When He Was Pressed for Payment

Continued from Page 1

$200,000 mortgage his firm held against the Shore Road Theater, Bay Ridge.

Participations Sold

Before pledging this mortgage, Palmer developed, $192,000 of participations in it had been sold to the public.

Palmer asked if before posting the mortgage as collateral the witness had made any effort to ascertain if participations in it had been sold. He said he had not, because it had been "only a special short-time loan that was soon paid off."

Bank Kept Mortgage

Q. What happened to the mortgage then? A. The bank refused to return it. They insisted that I sign a new collateral agreement covering my other loans that would add this mortgage to the collateral already posted.

Says Vom Lehn Is After Rents

Max M. Wolff, former manager of the heal estate division of the Lehrenkrauss organization was another witness of the day. He testified that Vom Lehn is currently "endeavoring to collect the rents on 15 properties belonging to the Omnis Corporation, a Lehrenkrauss realty holding corporation.

Properties on which Vom Lehn is "endeavoring" to collect the rents were enumerated by Wolff as 15 and 21 E. 88th St.; 155-13, 155-15, 155-17, 155-21, 155-23 and 155-29 Bergen Landing Road, Richmond Hill; 3, 5, 7, 9 and 11 Parkway Court; 49 E. 24th St., and an apartment house at Archer Place and 149th St., Jamaica.

Palmer said only the representative of the Brooklyn Federal Court had the right to collect rents now on these or other Lehrenkrauss properties.

Old Folks Homes Mulcted

Last evening's session ended with the questioning of Herman Richter, a special partner, regarding the sale of mortgages and mortgage participations to German orphanages, homes for the aged and sick benefit societies.

At least two, according to Palmer, are shown by the firm's books to have been sold participations in mortgages that previously had been sold to other individuals either as whole mortgages or in the fractional participations.

These, characterized by Palmer as "victimized institutions, were named as the the Marien Heim, 876 Ocean Parkway, a home for old German couples, and thePlattdeutsche Altenheim Gesellshaft, Hempstead, L. I

Julius a Trustee

Julius Lehrenkrauss is a trustee of the Marien Heim, Richter testified. He said it holds $25,000 of participation that Palmer asserted "appears to be no better than a partnership promissory note."

The institution at Hempstead holds $150,000 of Lehrenkrauss mortgage certificates.

While asserting that there were "a great many other" German societies and German organizations that bought Lehrenkrauss paper, Richter could recall "at this time" only three more, the addresses of which he did not remember.

He named them as the Amt Stolzenauer Verein, a sick benefit society, which holds $10,000; the Hanover Verein, another sick benefit, $8,000, and the Amt Severner, a Brooklyn German club, whose holdings he did not know. Richter said he was himself a member of the Amt Stolzenauer Verein.

Was 'Whole Business'

"Julius Lehrenkrauss," said Palmer, "has repeatedly testified that he was kept so busy signing guarantees that he did not read and checks that he did not examine that he had no time for anything else. Just what part did he take in the affairs of the House of Lehrenkrauss?"

"He was the entire business," replied Richter. "He had exclusive charge of the financial end."

Referring to testimony given by Richter at a prior hearing that was devoted to the operations of the Omnis Corporation, a realty holding concern of the partnership, Palmer continued:

Q. You testified that you were only a figurehead president of that corporation and signed whatever papers were put before you to sign? A. That is right.

Q. I show you the minutes of a directors meeting of Dec. 31, 1932, which lists you as having attended and as elected a director for the ensuing year; were you there? A. I was not.

Not at Meetings

Arrivals on Italian line's Atlantic speed queen Rex, which docked today. Photograph shows (left) Janet Olcott, adopted daughter of the famous Chauncey, a pianist in her own right

simply asked Vom Lehn to go and ask the bank to lend the money. At that time, according to Julius, the bank already held collateral for "between $200,000 and $300,000 of loans advanced."

When Vom Lehn returned and advised the money would be advanced. Julius then testified he had one of his employes give him a list of mortgages available for discount and had sent one or more of these mortgages, of a face value of $75,000, to the bank as collateral.

"Did you first ascertain if any participations had been sold against those mortgages?" questioned Palmer.

"No," was the reply.

The second time the witness was threatened with contempt proceedings was when he had stared in silence for 12 minutes by the court clock at the minutes of a meeting of his organization whereon was recorded that he had attended.

"It's about time you answered whether or not you attended that meeting," Palmer then exclaimed, reiterating the substance of the question, asked when the minutes were handed the witness.

Commissioner Bick demanded that the question be answered. He repeated his demand and noted the elapsed time. After he had threatened the contempt citation, Julius replied that he had not attended the meeting.

Only Signed Papers

Thereafter, the witness met question after question with the response that their substance concerned matters that were attended to by the 100 persons in his employ. Repeatedly he stated that all of the time spent in his offices at 359 Fulton St. had been devoted to signing papers. Prior to 1932 he said his nephew, Charles, or Richter or various employes were in control. He asserted that he had nothing to do with the hiring or firing of his employes, that having been done by Charles, "but I had complete confidence in my employes." After 1932 he said the entire business was run by James J. Fradkin, sales manager of an issue of $1,600,000 of Lehrenkrauss Corporation preferred stock that was sold the public.

"If I understand you right," said Palmer in conclusion, "you claim Vom Lehn fixed the value of all Lehrenkrauss properties and the amount of mortgages to be put on

directors' meeting of Jan. 23, 1933, which shows you to have been present and bears your signature, certified to, as present and having presided; were you there? A. I was not.

Q. You would sign minutes of meetings without having attended? A. Julius or Herman Hammel would give me the minutes to sign and because Julius told me to, I'd sign them—Julius was the boss.

Q. You'd sign anything, even if it wasn't true, because he'd tell you? A. Yes.

Julius, aging head of the house, had preceded Richter on the stand. Twice Commissioner Bick threatened to cite him for contempt of court for failing to answer questions. In both instances he had offered successions of answers in no wise responsive to the questions, then had lapsed into protracted silences which Palmer denounced as "putting on an act."

The first instance concerned a loan which Richard Vom Lehn had negotiated for J. Lehrenkrauss & Sons with the Kings County Trust last Oct. 3. It had been for $75,000. Palmer wanted to know how Vom Lehn had come to negotiate the loan.

After being permitted to leave the witness stand and go into another room and confer with his attorney, Julius returned and said he had

them, others sold the mortgages and participations and all you ever did was sit in the back and sign whatever was given you. Is that right?"

"Yes," was the reply.

Kaltenborn Re
Criticism,

Despite a request made to the Federal Radio Commission to discipline him for his statement that it was just as impossible for communists in Nazi Germany to receive a fair trial "as it is for the Scottsboro boys to receive a fair trial in Alabama," H. V. Kaltenborn, radio news commentator and former associate editor of The Eagle, today reiterated that statement and pointed to the record to support him.

Thomas E. Knight Jr., Attorney General of Alabama, had made the request to the commission, declaring that he knew the Negro defendants accused of assaulting two white girls "had a scrupulously fair trial."

"I explained," Mr. Kaltenborn said,

[HN00ZT][GDrive]

1934 (Jan 16)

THE NEW YORK TIMES, TUESDAY, JANUARY 16, 1934.

3 NAMED TRUSTEES FOR LEHRENKRAUSS

Close to 3,000 Persons Try to Get Into Meeting of the Bankrupt Firm's Creditors.

AFFAIRS FOUND MUDDLED

C. J. McDermott Calls Them 'Most Intricate Mess' in His 50 Years' Experience.

Charles J. McDermott, Charles Kriger and Frederick S. Martyn were elected trustees yesterday for the bankrupt banking and mortgage firm of J. Lehrenkrauss & Sons, 359 Fulton Street, Brooklyn, at a creditors' meeting in the Brooklyn Federal Building. Between 2,500 and 3,000 men and women tried to squeeze into a court room built to accommodate about 200 and those who failed to get in jammed the corridors on the seventh floor.

Archibald Palmer, attorney for a group of creditors at the bankruptcy hearings, advised those who had made wills designating members of the Lehrenkrauss firm as executors to get the instruments back and change them.

Mr. Palmer asked Theodore Stitt, referee in bankruptcy, to turn over to United States Attorney Ameli all testimony taken at the hearings on the activities of the firm, with the request that the Federal attorney consider the possibility of prosecution on the grounds of misuse of the mails. Mr. Stitt replied that this would have to be done under the bankruptcy laws.

Mr. McDermott told the creditors it was impossible as yet to determine the exact amount of the liabilities and assets of the firm.

"At the start," he said, "we were ready to accept every statement made by the House of Lehrenkrauss. To our surprise we found the picture hard to unravel. We cannot make a report at this time. It is the most interwoven, intricate and hopelessly muddled mess I have ever seen in more than fifty years' experience at the bar, but I believe something will be saved for the creditors."

Mr. Stitt announced that creditors would have until June 24 to file claims against the concern. He warned them not to sell their claims to persons who might offer to buy them for a small sum and advised them to consult the trustees for any information they desired.

The next meeting of the creditors will be held Jan. 29.

[HN0100][GDrive]

1934 (Jan 18)

https://www.newspapers.com/image/576214561/?terms=Lehrenkrauss%2BSachs

1943 (Dec 04) - Julius Lehrenkrauss dies

The New York Times

SATURDAY, DECEMBER 4, 1943

Man Who Dealt in Millions Dies in Poverty; Lehrenkrauss, Ex-Banker, Served in Prison

Julius Lehrenkrauss, once head of a leading Brooklyn mortgage and investment house, died late Wednesday after six years of poverty, following his release from Sing Sing Prison, where he served three years of a five-to-ten-year sentence for grand larceny.

The once wealthy and influential banker had been living in precarious circumstances, working at odd jobs, and death came as he left his furnished room at 149 St. Mark's Avenue on his way to work in McNulty's Shipyard, 9 Summit Street, Brooklyn. His pay was 85 cents an hour. His age was 76.

As head of "the House of Lehrenkrauss," he once dealt in millions. In 1933 his firm went into bankruptcy and soon afterward he was arrested on the grand larceny charge. In March, 1934, he was convicted of the theft of $32,000 in a mortgage after pleading guilty.

On the day he was sentenced, March 7, 1934, County Judge Algeron I. Nova, in Brooklyn, presiding at the trial, declared:

"Hundreds of thousands of dollars were taken in from poor German families that had faith in the name of Lehrenkrauss. They believed their bonds were as safe as United States bonds and they got waste paper."

Lehrenkrauss presented a distinguished appearance throughout the trial, appearing in striped trousers and wing collar. The day after sentence was pronounced he was handcuffed to a burglar and sent to prison. One year after entering prison he was assigned as secretary and record clerk in the Sing Sing school.

With $20 in his pocket he left the prison on parole, announcing that he would make a fresh start in life. He worked in various menial tasks until two months ago when he was taken on as a firewatcher in the shipyard. He lived alone and his sole survivor is a son, Lester, 35.

While he was in Sing Sing in 1935, he and four others of his defunct organization were brought to trial in the Brooklyn Federal Court on charges of using the mails to defraud as the result of the sale of $1,600,000 in preferred stock of the Lehrenkrauss Corporation, a holding company for the Lehrenkrauss enterprises. He, Charles Lehrenkrauss, a partner, and James J. Fradkin, a salesman, were convicted. The old man got a five-year suspended sentence. He appeared at the trial in striped trousers, wing collar and cutaway coat and gave his address as "Sing Sing prison."

Julius Lehrenkrauss was cremated yesterday in Fresh Pond Cemetery, Middle Village, Queens.

Source : NYTimes : [HN00ZO][GDrive]

Other reference info

1950 Newspaper article references Fred Trump and Lehrenkrauss

Also see Fred Christ Trump (born 1905) .

Newspapers reference - [HN0101][GDrive]

student, won the $30 Leisser Memorial Award for keenest observat

BROOKLYN'S MAN OF THE WEEK:

Trump the Builder Plays Mothers as Ace Cards

By RICHARD J. ROTH

Mother's Day is more than a once-a-year proposition so far as Fred Trump is concerned. The builder of Brooklyn's two new housing giants, Shore Haven at Bensonhurst and Beach Haven at Brighton, tries to keep mother in mind the other 364 days as well. And with good reason.

Trump has found that, while it may be papa who pays, it's mama who makes the decision on where the money is going in more than four out of every five apartment rentals.

"In 85 percent of our rentals the final decision has depended on the woman's say-so," the 44-year-old former carpenter's helper pointed out in his field office at the rapidly rising Beach Haven development. "The husband cares only about the convenience of transportation and whether his wife likes the apartment."

Emphasis on Labor Saving

With those statistics firmly in mind Trump built the 1,350-apartment Shore Haven development and is rushing to completion the 1,800-unit Beach Haven development with more than a nod in the direction of what he terms "the woman's point of view." The emphasis is on labor-saving conveniences and other features designed to appeal to the distaff side of the family, particularly to mothers with young children.

Fred C. Trump

At Beach Haven, for example, Trump has provided a building and 6,000 square feet of land at a $1-a-year rental, including heat, for the Board of Education. A unique kindergarten and first-grade school exclusively for residents of the development will be opened.

Baby-Sitter Service

Other innovations include an organized baby-sitter service, using girls from Abraham Lincoln High School, which is directly opposite the Brighton Beach development at Ocean Parkway and Shore Parkway. Also planned are a "courtesy car" bus service to the beach for those who prefer to ride, and ultra-violet clothing driers in the basement laundry rooms in each of the 23 buildings, thus eliminating the roof driers which, the builder declared, are "left over from an old-fashioned era."

A modern $300,000 shopping center, with 14 stores and a 250-car parking area, also is about to rise on Beach Haven property. Other parking spaces will be provided on the landscaped grounds, as well as playground and bench areas, with only 20 percent of the project covered with buildings. Heated garages, with a total capacity of 650 cars, are being constructed in the basement of every building.

'Renting Honeymoon Over'

Why all this consideration for the residents? an amazed veteran of the housing shortage might ask, and in this case, did. The answer, according to Fred Trump, is simple:

"We realize that the renting honeymoon is over. We're attempting to make a real step forward to attract the type of tenant who will appreciate these extra services. Our innovations, we hope, will make for a happier housewife, a happier home life, and a resultant happier community."

Fred Trump was born in the Bronx on Oct. 11, 1905, the son of a former Klondike restaurant operator. After the gold rush of '98 had subsided the elder Trump had dabbled on a small scale in the real estate business.

Started in Queens Village

The Trumps moved to Woodhaven shortly after Fred was born and he attended Richmond Hill High School. At 18, following graduation, he took a job as a carpenter's helper, supplementing this practical experience with courses in building construction three nights a week in the Y. M. C. A. Then he went out on his own.

The first Trump homes began to go up in Queens shortly afterward, about 400 or 500 one-family units in the Queens Village area. Then, after 1932, when home building was at an ebb, Trump was awarded, in Federal Court, the mortgage servicing for the bankrupt Lehrenkrauss financial empire.

This took up much of his time for a year. And he operated one of the first self-service food markets, building it up into a profitable large-volume business before leasing it to a well-known food chain.

Sold 78 Homes in 20 Days

In 1935 Fred Trump moved his operations to Brooklyn, picking a site at Avenue H and Kings Highway. On Nov. 10 he completed the model home; within the next 20 days he sold all 78 of the $3,990 homes, a price which was then about half the average rate.

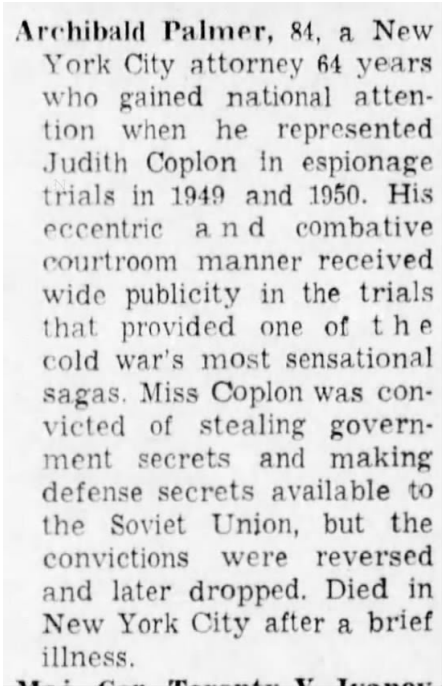
Those 78 homes have been followed by close to 2,500 in the last 15 years in Flatbush, Manhattan Beach and Bensonhurst. During the war he built 1,400 apartments for war workers at Norfolk and Newport News, Va., and Chester, Pa. Shore Haven was opened in June, 1948, and Beach Haven, begun last November, will be completed in a phenomenal year's time.

Much of Trump's success in his Brooklyn building can be attributed to his pioneering in the field of pile-driving, which permits construction on filled-in land. Beach Haven, for example, is built on land that was once marshy. It is atop 55-foot creosoted logs, each of which can sustain a 25-ton load, five times the required burden.

The good-looking builder was married in 1936 to a Scottish-born girl whom he met at a party. They have five children, ranging in ages from 2 to 13.

[HN0102][GDrive]

1969 (June 21) - Archibald palmer - Handled Russian espionage cases in 1949 and 1950



Archibald Palmer, 84, a New York City attorney 64 years who gained national attention when he represented Judith Coplon in espionage trials in 1949 and 1950. His eccentric and combative courtroom manner received wide publicity in the trials that provided one of the cold war's most sensational sagas. Miss Coplon was convicted of stealing government secrets and making defense secrets available to the Soviet Union, but the convictions were reversed and later dropped. Died in New York City after a brief illness.

[HN0172][GDrive]

Judith Coplon files :

1. judith-coplon-files-hq-2-text.pdf : Source at [HG006R][GDrive]
2. 1956-04-06-usa-senate-heatings-subcommittee-investigate-soviet-activity.pdf : [HG006S][GDrive]

Frank Thomson Leighton (born 1956)

Wikipedia F. Thomson Leighton

other links - https://computerhistory.org/profile/tom-leighton/

Saved Wikipedia (Dec 30, 2020) for "F. Thomson Leighton"

[HK004N][GDrive]

Frank Thomson "Tom" Leighton (born 1956) is the CEO of Akamai Technologies, the company he co-founded with Daniel Lewin in 1998.[1] Akamai has become the top content delivery provider in the 21st century with the arrival of dedicated techs. As one of the world's preeminent authorities on algorithms for network applications and cybersecurity, Dr. Leighton discovered a solution to freeing up web congestion using applied mathematics and distributed computing.[2]

He is on leave as a professor of Applied Mathematics and a member of the Computer Science and Artificial Intelligence Laboratory (CSAIL) at the Massachusetts Institute of Technology (MIT). He received his B.S.E. in Electrical Engineering from Princeton University in 1978, and his Ph.D.in Mathematics from MIT in 1981.[3] His brother David T. Leighton is a full professor at the University of Notre Dame, specializing in transport phenomena.[4] Their father was a U.S. Navy colleague and friend of Admiral Hyman G. Rickover, a founder of the Research Science Institute (RSI).

Dr. Leighton has served on numerous government, industry and academic advisory panels, including the Presidential Informational Technology Advisory Committee (PITAC) and chaired its subcommittee on cybersecurity.[5] He serves on the Board of Trustees of the Society for Science & the Public(SSP) and of the Center for Excellence in Education (CEE), and he has participated in the Distinguished Lecture Series at CEE's flagship program for high school students, the Research Science Institute (RSI).

Awards and honors[edit]

In 2018, Leighton won the Marconi Prize from the Marconi Society for "his fundamental contributions to the technology and establishment of content delivery networks".[6] In 2017, Leighton and Lewin were inducted into the National Inventors Hall of Fame, for Content Delivery Network methods.[7] He was the first winner of the Machtey Award in 1981 and is a Fellow of the American Academy of Arts and Sciences and a member of the National Academy of Engineering. In 2008, he was appointed as a member of the United States National Academy of Sciences. In 2012 he became a fellow of the American Mathematical Society.[8] He received the IEEE Computer Society Charles Babbage Award in 2001. He was elected as an ACM Fellow in 2018 for "his leadership in the establishment of content delivery networks, and his contributions to algorithm design".[9]

Books[edit]

- *Introduction to Parallel Algorithms and Architectures: Arrays, Trees, Hypercubes* (Morgan Kaufmann, 1991), ISBN 1-55860-117-1.
- *Complexity Issues in VLSI: Optimal layouts for the shuffle-exchange graph and other networks*, (MIT Press, 1983), ISBN 0-262-12104-2.
- *Mathematics for Computer Science* (with Eric Lehman and Albert R. Meyer, 2010)

Frank Thomson Leighton

Born

October 28, 1956 (age 64)

Nationality

American

Alma mater

Princeton University (B.S.E.)

Massachusetts Institute of Technology (Ph.D.)

Awards

Marconi Prize (2018)

NAE Member

NAS Member

AAAS Fellow

Scientific career

Fields

Applied Mathematics

Institutions

Akamai Technologies

Massachusetts Institute of Technology

Thesis

Layouts for the shuffle-exchange graph and lower bound techniques for VLSI (1981)

Doctoral advisor

Gary Miller

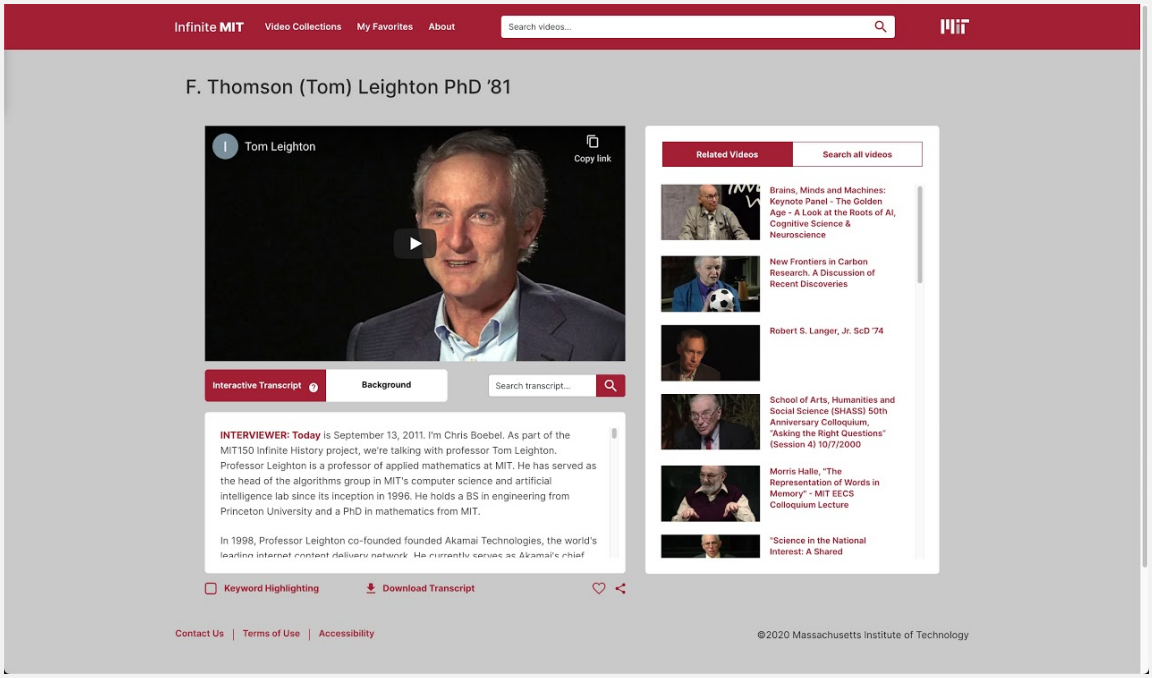
Doctoral students

Peter Shor, Mohammad Hajiaghayi, Robert Kleinberg

2011 (Sep 13) Interview - F. Thomson (Tom) Leighton PhD ’81

INTERVIEWER: Today is September 13, 2011. I'm Chris Boebel. As part of the MIT150 Infinite History **project,** we're ta

Transcript (below) - [HE003S][GDrive] (video - https://youtu.be/gWJW4TAquCI)



[HE003T][GDrive]

INTERVIEWER: So let's start at the beginning, as it were. Tell me a little bit about where you grew up, how you grew up, your life as a as a kid.

LEIGHTON: I grew up in Arlington, Virginia, right near Washington, DC. My dad was in the Navy, worked in the nuclear power program, and then continued that work, working for Admiral Rickover as a civilian when he got out of the Navy. My mom spent most of her time raising us kids and then became a librarian when they needed to get some extra cash to be able to afford college for myself and my brother. It was a nice environment for growing up. Parents cared a lot about us and a lot about our education. Made sure we had all the best opportunities they could afford for us. Went to good schools. My high school, Washington-Lee High School, was a very good public school. That's before the days when they had Thomas Jefferson in the Alexandria area, which is now a magnet school for all the science and math talented kids. And then went to Princeton for college. Majored in electrical engineering, computer science, and then found my way to MIT for graduate school in applied mathematics.

INTERVIEWER: So tell me a little bit about growing up as a kid. Were there moments that stand out in your memory as realizations that you had a particular aptitude for math or science?

LEIGHTON: I always just loved mathematics and really liked science. As far back as I can remember, there was no question that's what I wanted to do. I suppose when I was little enough, I wanted to be a train conductor. But once I got past that stage, I just wanted to do math, and science related to it. I didn't really know what that meant in terms of careers until much later. But it was very natural for me to evolve along the graduate student research track, become a postdoc, become a professor, because I just liked doing that stuff. I had a lot of help as a kid, starting with my parents, of course, but also through organizations like science fairs, the then Westinghouse Science Talent Search, now the Intel Science Talent Search, the International Science and Engineering Fair, teachers that went out of their way to help, and actually people in industry that went out of their way to give me special access to large-scale computing back then. Of course, the computers back then fit in my wallet today. But it was a special to have access when I was a kid to the old UNIVAC machines or whatever. And I was able to use the computing cycles to do research on number theory, which I enjoyed a lot as a kid. And that helped encourage me in the direction of mathematics and applied mathematics and computer science in later life.

INTERVIEWER: So when you were a senior, you were a finalist in the Westinghouse Talent Search, which I recall from my days in high school-- I think I went to high school before it was the Intel Talent Search-- was a pretty big deal. Tell me about that experience and how it shaped you.

LEIGHTON: It was a fantastic experience. You get to meet 40 other kids, or 39 other kids, with similar interests. It's where I met Eric Lander, who's probably somebody else you've interviewed here. In fact, that year Eric won first place, and I won second place. And of course, I've known Eric to this day. I met other folks there, in fact, including one of my college roommates my first year at Princeton. And I know several of those folks today. We're still friends. So it's a wonderful experience to get together with other kids who have similar interests in science and math and who really care about it. And so today, in fact, I'm now a trustee for SSP, which is the new version of Science Service, which used to run the Westinghouse Science Talent Search. And today, Science for the Society & the Public runs the Intel Science Search. So it's a chance to give back a little bit in thanks for the impact that they had on my life.

INTERVIEWER: I also wanted to follow up on something you mentioned, this sort of early exposure to computers and early programming experiences. Tell me a bit more about that. Where did that happen? What kinds of problems were you dealing with? I have a vague memory of this myself. Were these stacks of punch cards you were working with?

LEIGHTON: I am old enough to remember the paper tape, believe it or not, in my junior high school. And we were pretty fortunate to have any computer in junior high back then. And then it evolved into punch cards. My science project then was looking at some very famous conjectures. The first is Goldbach's conjecture. And about 300 years ago, Goldbach conjectured that every even number is expressible as the sum of two prime numbers. A prime number being a number like 3 or 11 that has no factors other than itself or 1. So for example, 12 = 5 + 7. And he conjectured that it was true for all even numbers, you could write them this way. And so I was trying to prove that. Now, I didn't realize then I had no chance of proving that, because a lot of serious mathematicians have been working on this for centuries. But I did computer studies that gave evidence to a theory of if you viewed numbers probabilistically, that the bigger the number gets, the more representations it has as the sum of two primes. And if you argue that primes are somehow random, then you could make an argument that says, yeah, it should be true for all of them. That's not a proof, but it gives-- today I'm not even sure I would say it gives evidence that it's true, but back then I thought it did, as a high school student. But doing the analysis involved programming with large computers back then to get this evidence that would back up the theory. The other problem was, again, a long, open question of number theory, which is that there's an infinite number of pairs of primes, p and p + 2, where p + 2 and p are both prime. They're called twin primes. And I was trying to give evidence for the fact that in fact there were an infinite number and that, in fact, for any arithmetic sequence of primes, either the pattern occurred once, or it would occur an infinite number of times, which was a new conjecture. I'm not sure anybody really picked up on that conjecture, but it's something I worked on in high school. And it got me introduced to computers and what they could do. And I learned how to program. And that's where people in government and industry reached out to me and gave me access. I remember a fellow named Carl Hammer who was the senior chief scientist at UNIVAC in Washington way back when. And because he was the chief scientist of a big computer company, he had special access to state-of-the-art equipment, and he lent me that access, which was wonderful. Here I am, 16 or 17, and I had access to the state-of-the-art computing back then.

INTERVIEWER: So what about the importance of those kinds of mentors or that kind of encouragement in encouraging your early career and, I guess, by extension other people's careers too? We'll talk later about your own work as a professor and a teacher.

LEIGHTON: I think mentors are incredibly important. They become role models. You want to become like them. You see career paths. And they help you. They encourage what you're doing, which, I think, is good for kids to be thinking about math and science problems and spending a lot of time working on them. I think that's really great. It helps launch them on a track as a researcher or as a scientist and mathematician. And they tackle real problems more seriously later in life. And it can make a difference that way. So I think mentorship is very, very important.

INTERVIEWER: Were there other important mentors to you that we haven't talked about, maybe in your high school years or at Princeton before MIT?

LEIGHTON: Yeah, I think there's a series of people. I remember there was a teacher of graph theory at Princeton. And he just was a great teacher, and he had a love for the field. And it becomes infectious. And you just love working extra hard to show him what you can do and to be able to have a dialogue with him. So it's very motivational. Here at MIT, there were some excellent professors-- good teachers, good advisers. And you want to become like them when you grow up. And that makes a big difference. It helps you evolve into the next level by seeing people that you have a lot of respect for and that are really good at what they do.

INTERVIEWER: So at Princeton, you majored in engineering. Tell me a bit about that, how that became your focus rather than mathematics or other directions you might have gone.

LEIGHTON: Well, a couple of things. First, I was afraid of real analysis. And if you were a math student, you had to take real analysis. Math at Princeton was

a little scary. Pretty tough. And it was very pure. And my interests were more on the discrete side of mathematics, which MIT is great at, the world's best at. They had their token discrete mathematician, who's the guy who I liked as my mentor at Princeton at that time. And I found that the kinds of things I liked best actually were done in the computer science or EECS department back then. And in fact, that's where I started learning about theoretical computer science-- algorithms, complexity theory. And you can almost think of it as a branch of discrete mathematics. It's in computer science, but the tools are all mathematics, and the kinds of problems are all discrete mathematics problems, combinatorial kinds of things. And so I really gravitated there, and they had a very flexible policy. You could do pretty much whatever you wanted. And so I just ended up going there for my degree and ended up getting lots of graduate courses and just taking everything they had, because it was so much fun. It was really great stuff.

INTERVIEWER: And then you made the decision to come to MIT for graduate school. Tell me about that.

LEIGHTON: MIT is the best place in the world for discrete mathematics and the best place in the world for theoretical computer science, so it was a perfect fit. And when I chose between the two, I decided when I came to MIT to do the applied math track. So I didn't do math as an undergrad but did do as a graduate student. Also, I had some encouragement from my father when I was an undergrad to go the engineering route. And somewhat joking, I think he felt that if you're doing mathematics, you'll never get a job. Engineering, well, that's okay. He himself, of course, was an engineer. I'm exaggerating a little bit. But then, by the time I got to graduate school, at that point I'm doing research anyway, and it doesn't really matter anymore to me. I'm not thinking about getting a job. I'm thinking, okay, I'm going to be a professor. Well, that's a job, but it's not the same kind of job. And so let's do the applied math thing, because that's where folks like Danny Kleitman, Gary Miller, Len Adleman, Richard Stanley-- those guys were all in the math department. And that was just a fantastic fit, because I could do everything. I could do the math I liked. I could do the computer science I liked in that department. It was very flexible. And I had a great time doing that.

INTERVIEWER: So what year roughly did you come to MIT, and what was the environment like at the time just generally on campus but also within your department?

LEIGHTON: I came in '78. I did notice when I came, there was tension in the department between within the applied math between the discrete side and the continuous side- - the guys that do partial differential equations and so forth. And this was relevant because we had to pass our oral exams. And the prior year, all the students on the discrete were failed. And being on the discrete side, that was of some concern. And I do remember that was a big issue, and there was a tension between the two sides of the department. Now, I think they since got beyond that. I think things on campus, I don't really have any recollection one way or the other. It was a fun experience. It was good. I really liked it. I could do research. Great faculty. Good colleagues. That was long past all the stuff with kicking ROTC off campus and all those kinds of things. So the campus, I think, was very peaceful when I came. The question was, are you going to win your intramural softball game this weekend? That was the extent of it, as I remember anyway. Maybe I was just oblivious.

INTERVIEWER: Is there a way of explaining for someone like me discrete versus continuous?

LEIGHTON: Continuous is calculus. You do an integral for discrete mathematics. You compute the area under a curve-- sorry, in continuous mathematics. In discrete mathematics, it's summing a series of numbers. What's the sum of 1 + 2 + 4 + 8 + 16? That kind of thing. You have differential equations on the continuous side. On the discrete side, you have a recurrence, that the running time for the algorithm on an input of size n is twice the running time it takes for an input of half the size plus n more steps. And the techniques really down deep, there's similarities, but the actual day to day is different from continuous mathematics and discrete mathematics. Counting things is discrete. How many ways are there to put five red balls and six green balls and pick from them-- that kind of thing is discrete. Continuous is complex analysis, real analysis, calculus, and stuff like that. Proof methods are different. You use induction when you're doing discrete mathematics. You use different approaches when you're doing pure or continuous mathematics.

INTERVIEWER: And what is it about discrete mathematics that you found attractive and appealing, that kind of clicked with you?

LEIGHTON: I found I could get my arms around it better. The definition of discrete mathematics is it's dealing with numbers, things that are countable. Doesn't mean they can't be infinite, but they're very constrained in how they're infinite, like 1, 2, 3, 4, 5, 6 to infinity. That's very concrete, get your arms around. Continuous mathematics, there's an uncountable number of points in the unit sphere. I found it conceptually more challenging to get my mind around it. I liked it. It was good, but I liked the discrete side much better. Also, when you get into the applications, things like computer science and theoretical computer science, it's the discrete mathematics that matters. And so you can have a chance to have impact with your applications from discrete mathematics. Structures like graphs, points and lines, or points and edges that connect them, nodes, arcs to represent communication problems or network flow problems-- that's all in discrete mathematics.

INTERVIEWER: And what kind of problems really attracted you as a grad student? What kinds of things were you working on and really drove your interest?

LEIGHTON: I think they primarily revolved around graphs-- using networks to model things and proving facts about them. Some were just pure graph theory. And most came up in the context of a computer science problem of some kind. Ultimately I wrote my thesis on problems-- the field then was called very-large-scale integration, or VLSI. And in practice, that referred to the design of tiny microprocessors on chips and how to lay out the transistors in the wires to fit as much as you can on the device. In my mathematical version of that world, it was all about taking a graph and embedding it in a grid in a way that was efficient somehow. And that's pure mathematics at that point. So that was sort of the focus, the sweet spot when I was a graduate student.

INTERVIEWER: And who were you working with, both in terms of faculty and even other grad students at that time? Who leaves an impression in your mind as being a particularly important influence?

LEIGHTON: Gary Miller was my adviser, and he was a great adviser. He was very giving, very unselfish. He would get me good problems to work on. He'd encourage me. He'd listen to me. He'd give me good ideas. He wouldn't even try to put his name on the paper. He wouldn't try to take credit in any way. He was just a really good guy. And that's a great role model. If you have nice parents, better chance you're going to be a nice parent yourself. So that was great. Danny Kleitman, fantastic influence. Again, super guy. Really nice. Very smart. Great to talk to. Great problems. Very encouraging, supportive. Always putting the student first. So they were probably the two largest influences on me as a graduate student, and they were both in applied math. Len Adleman comes to mind. I worked a little bit with Len. He left MIT pretty early on. He was a great teacher. And so that's the kind of thing you try to emulate on the teaching side of things. He made material clear. He made it be interesting, made you want to think, wow, this is important. I want to work on this stuff. And of course, you got guys like Ron Rivest. Very famous, doing huge things. Sort of a funny story. Today there's a thing called the RSA algorithm. It is used for the encryption on everything you do online. So very important thing. Early on, it was very revolutionary. Nobody thought that, oh, that can't be a good idea to base an encryption protocol on the difficulty of factoring numbers. Before it even became public, when I was a undergrad, I was at the then National Bureau of Standards, now called NIST. And because of the Westinghouse Science Talent Search, I got a summer job there. And I was working with a mathematician there. And the RSA paper was sent. The government got their hands on it, and they wanted to evaluate it. And so it went to the mathematicians at the National Bureau of Standards. And so my summer project was to evaluate the RSA algorithm. It's a little scary the government is relying on some undergrad

in a summer job to do the evaluation, but it was really cool. And then later, I come to MIT years later, and, wow, there's Ron Rivest. Pretty cool.

INTERVIEWER: Did you share your evaluation?

LEIGHTON: My evaluation was that I sure as heck didn't know how to break it, that it wasn't clear that anybody would know how to break it. But also there was no proof that it was unbreakable and that if we relied on it, people would try to figure out how to factor better and that this could cause a problem. And in the end, people have learned how to factor better. And so instead of using hundred-digit keys they were doing back, now you got to use thousand-digit keys, because people have got better factoring algorithms. And still nobody knows how to break it, but there's still no proof that they won't figure out how

INTERVIEWER: So it's just a matter of staying ahead?

LEIGHTON: Today? Yeah, that's right. But a lot of people have been thinking about it now, so factoring seems pretty tricky.

INTERVIEWER: So tell me a little bit about making the transition then to being on the faculty at MIT.

LEIGHTON: That means you've got to teach and you've got to get research grants. Now, I had, I would say, a very cushioned experience joining the faculty, because I got a postdoc first. And it was a two-year postdoc. And after the first year, I joined the faculty, but I had the postdoc, so it meant that I didn't have to teach, but I was on the faculty. So that gave me a breather to help adjust. And then when I did start teaching, the field, the community at large, started getting pretty excited about the field I was working in-- large-scale networks and doing large-scale parallel computation and distributed computing. The area I had gravitated to became hot out there. And so I got to create a graduate course on that material. So it was based on the field that I cared most about, and it took me a ton of time. I spent a week for every hour and a half of lecture. But it was very worthwhile for me, because it was my field of interest. And you never really learn something until you have to teach it, at least I find. So it gave me a chance to really learn even at a deeper level what was happening in my field. And so a lot of good research came out of the fact that I was teaching this class. Students that were interested in doing research in this new field took the class, ended up doing research with me because I'm the teacher of that class and designing it. And so it became highly productive, as opposed to my teaching a class that's unrelated to my research interests that takes a lot of time to do a good job but doesn't provide any side benefit in my research program. So it worked out very well for me. It helped boost and accelerate my research. And it worked out, I think, good for the students at the time and probably for, I think, the department, because now they get a new field being taught. And students are actively interested in it, and research is happening at MIT. So it was a very good experience moving into teaching and the faculty position at MIT.

INTERVIEWER: So you mentioned that your research topic became hot, which clearly is related to the rise of computer networks and the importance of computer networks and ultimately the internet. I was wondering if you could talk about that, especially the internet, and at what point the research you were doing sort of became of paramount importance to that.

LEIGHTON: Yeah, that's interesting. I'm a theoretician. I certainly was a full time theoretician before. And so the quality of my work was judged based on the depth of the mathematics and the perceived importance of the problem that's being solved, not based on its perceived applicability at all. I'm in a math department. I'm in a field of theoretical computer scientists. The conferences I go to are other people like me, and we're all mathematicians underneath the covers. Now, the field itself talks about large-scale networks and doing things like routing communication problems on those networks, avoiding congestion. And so it's not a stretch to say, hey, this might be relevant to practice. And so the first brush with practice I think came with the advent of companies like Thinking Machines, which is sort of an MIT spin-out nearby here, that were actually building large-scale parallel computers and starting to use the ideas that were in these theory papers that we'd developed. So a close colleague of mine, Charles Leiserson, actually spent a lot of time at Thinking Machines. I consulted there and taught courses there in the summer with him. But that started getting a brush with practice. Unfortunately, Thinking Machines went broke, and the practical side of that field sort of faded away. There never really was a impact in practice, I would say, to the work in the '80s and early '90s. Then the next brush came actually through encouragement from DARPA. DARPA was was, and probably in some sense still is, a big funder of research in computer science at the leading universities and at MIT. In fact, back in the early to mid '90s, it was probably 2/3 of the LCS research budget was DARPA. And theoreticians always had a hard time getting research money, because we're doing math, and DARPA's interested in things-- they're out there. They like research, but they want things that are going to really be applied-- the guys building systems and stuff like that. There was always encouragement in the lab for computer science for guys like me to at least look a little more practical so that you could get funded. So I'm doing work on very large-scale networks. People are waking up that the internet's an important thing. And gee, some of the stuff we're doing seems like it might be relevant. And so I did take a step a little bit to the right and start thinking about, with the encouragement and support of guys like Tim Berners-Lee, who's the father of the web, to start thinking about problems directly in the context of the internet. Using the mathematics from the large-scale network work, how would you now tackle the problem of routing around congestion in the internet? How would you solve the problem of getting a hot piece of content or piece of news to millions or billions of people in a short amount of time? And this is the kind of problem that was right up our alley in terms of expertise-- my group and the stuff we were doing. And well, boy, if we worked on that and made some progress, we might actually get funded. So we did. And we did get funded. Now, we weren't really thinking that we're going to change the world at this point. That started happening two years after the research began. The research, we're still publishing in theoretical conferences. It's still being judged based on the mathematical depth of the work. But there's this thing at MIT called the 50K contest. And my lead graduate student on this stuff, Danny Lewin, had a next-door neighbor who was a Sloan student who knew about the 50K. And they were talking, and Danny's going broke, because he's got all these student loans, and he's a theoretician. And we didn't get paid that much, especially when you're a graduate student. Kids in private school. So Preetish talked to him about taking the work in his thesis and turning it into a business plan for the 50K competition. And so then Danny talked me into engaging with them on it. And we thought it would be a good learning experience. And so we entered the 50K process, starting with the three of us and ultimately growing to 35 people. And through that experience, we really got exposed to the real world. It's hard to imagine now, but I didn't know what a VC was. I didn't know it stood for venture capitalist, and even if I did, I wouldn't know what venture capitalists did. It seems shocking today. We learned. But as part of the 50K process, we met VCs. We met industry pundits. We ended up talking to potential customers for our pretend business plan. And so we got exposed more to the real world, and we began to understand that wow, our technology really could work in practice and make a difference. And that was a first, a fundamental change. Because people who do mathematics and do theoretical computer science, that's a very rare outcome. Now, over the history of the field, there's been huge advances in practice from work on theoretical computer science. It really is a vital field to the economy and to the industry. But a lot of the work takes a long time before it's relevant, if ever. And this was sort of an eye-opening experience for us to see that, wow, we might be able to do something in the real world.

INTERVIEWER: So I know that at one point, with the work that ultimately became Akamai or on which Akamai founded, at one point you had attempted to approach various ISPs, internet service providers, and interest them in the work and had kind of gotten the brush-off. Was this before or after the 50K experience?

LEIGHTON: This is during and at the end of the 50K experience. The original idea of our plan was to take our technology and, well, in the business plan, sell it to ISPs with the idea that they could get better performance for their subscribers and lower their cost. Now, we actually went to go talk to some ISPs. We

went to Coolidge Corner to talk to HarvardNet. We talked to several of the local ones, called up UUNET down in Reston. And we quickly learned that they had no interest in what we were talking about. They said, look I can get caching software for free. I got much bigger problems to worry about. I'm going broke. And distributed computing, everybody knows that doesn't work in the real world. That's an ivory tower concept. Please go back to your ivory tower and let me get back to saving the company. They're all up in flames. They're in the process of going broke. That was not encouraging, so we modified our business plan over time. At the end of the 50K, we decided not to form a company. We were actually approached by some VCs that said, hey, look, you didn't win the contest, but we liked what you're doing. It's MIT. It's sexy. It's the internet. Let's go. Let's make a company, and in six months, we'll flip it. We're all going to go home rich. And again, showing you how naive we were, we said no. We didn't want to do that. I liked being a professor. Danny wanted to become a professor at MIT. And he was smart enough to do that. The business plan had been fleshed out. And we didn't know anything about really starting a company. The 50K thing had been as a learning experience and for fun and a challenge. We did keep thinking about it. We did have to decide about are we going to patent things or open source it? I remember having discussions with Tim and Michael Dertouzos, head of the lab, about that. As part of that, we talked about hey, can't we just get the companies to use the technology? Because we wanted it to be used. And even if we made it free, they didn't think it would work. They think they had other things for free that if they needed to go there, they could go there. And there just was no takers. And so at the end of the day, we decided that this is our chance to make a difference with technology. It doesn't come along very often in what we do. And we'd modified our business plan, changed it around, so we felt it could work, changed it to selling to people with websites-- the big websites of the world. Talked to some of them, and they started expressing interest, which was better than we'd had before with the ISPs. And so we said, the only way we're going to do this is to do it ourselves, so let's give it a try. So we spun out of MIT at the end of the summer of '98, a year after the 50K started and got offices over in One Kendall and then called up those VCs and said, hey, we could use some money. Turned out to be harder than we thought to actually get the money on terms we wanted, so we had a period of about three to four months where we were funding it ourselves with friends and with some angels, professional angels. We had friends of friends we knew to bridge us to the first round with the VCs.

INTERVIEWER: So stepping back for just one minute, what was the big idea behind what ultimately became Akamai? And why do you think there was so much resistance among those initial people, the ISPs that you approached? You mentioned sort of this ivory tower attitude that they had. But just expand on that a bit.

LEIGHTON: It's not one idea per se, but it's an approach. And the approach is mathematical and with depth in technology. And that's not the way any of those guys would approach it or even understand it. I still remember-- it seems funny in retrospect. Today I'm a professional salesman. I go out, and I give talks to customers or at keynotes at major conferences and explain the future of the internet and stuff like this. Back then, we would go talk to people. I'd get out my deep technical slides on here's the proof that consistent hashing, our brilliant new algorithm, does all these great things. And I'd start giving them a proof, mathematical proof, to the VCs. They didn't have a clue what I was talking about. out But somehow they had some belief that we were going to do something good. So it was based on deep technology. Not the deepest math ever done for sure, but in terms of this field, bringing some depth in mathematics to the field, that was different. It used distributed computing. It used algorithms. The algorithms were expressed as a function of n. n? What's n? So it's just very different than the way they would think. They'd build something for size four and then build a new one for size eight. And here we're just thinking at a whole different level. Ultimately it is that capability which made us be so successful, I think, in addition to getting really strong people who worked really hard. But having that technology, I think, made a real difference and still drives the company today. It allows us to give a lot better services than the dozens of competitors that have sprung up over the years. So I would say it's not so much one idea but a philosophy. One person I remember-- actually a well-known person in the field-- said to us years later, the only reason we were successful is because we were too naive to know that what we were trying to do was impossible. Because we were naive, and we did things out of the box. And we weren't constrained by the thinking in the industry at the time. Because we weren't even practical people. Here we are now building systems without a clue how you're supposed to do it. That means we made a lot of mistakes, but we also did things differently, because we were mathematicians building a large-scale system. And so we came at it from a very different angle, and that helped in some ways. Today, of course, we've evolved to the point where we have the world's best systems developers working with the mathematicians to develop our systems. You need both to really do it right. So it was sort of a philosophy, almost a naivete that we did things differently. We had a very open mind about how to approach the problems. It used things like distributed computing, which really weren't used and practiced so much back then. And we didn't know even at what level to explain things to the ISPs. Me going in and giving some proof to the guy at the ISP, I laugh at that now. No wonder they wouldn't be interested. It was what we were doing.

INTERVIEWER: I also wanted to just ask a bit more about the 50K experience. I guess first of all, for people who might not know what the 50K is, maybe just provide a little bit of context. But also you mentioned you didn't win, and yet it was also a valuable experience. Just tell me a bit more about that.

LEIGHTON: Yeah, the 50K contest, it's now called the 100K because the prize money has been increased. It's run by students in the Sloan School. And you submit a business plan. Actually there's several rounds. The first round is more of an elevator pitch. It's a one-page thing. But ultimately, as you go towards the later rounds, you flesh out a business plan and submit that. And they pick the ones they think are going to be the most successful, most likely to make money. And they use the money to fund the company. Now, in our case, we had no intention at that time of forming a company. It's a pretend exercise. And we were a bunch of folks-- Danny Lewin in particular-- that when you enter a contest, you like to win. So we got books out of the library, how to write a business plan. We didn't let our lack of experience hold us back. And we competed hard. And when we got to the final round, we saw the other finalists, and we just saw how much better they were than we were. They were very professional in their presentations, just a whole different level or two levels beyond where we were. And that was a great wake-up call, because we realized, wow, we don't know how to do it the way they do it, but we know we got to get to that level if we're ever going to be serious about it. So a slap in the face like that was good for us. At the time, we decided not to form a company. But when we changed our minds later in the summer and did start the company, knowing what we were missing was very important. And knowing what we weren't good at yet was important. Because then we would either get better at it or go get people who were really good at it. Now, in the case of the ultimate leadership of the company, both Danny and I decided that we weren't going to be the CEO. I told Danny, I'm the professor. He's the student. I told him I'd work for him if he wanted to be the CEO. I had tremendous respect for his capabilities. Tremendous leadership. Tremendous smarts. Driven guy. But he didn't want to be CEO either, because he was smart enough to recognize that he wanted to go get somebody really, really good. And we did. We got two people who are really, really good. We got Paul Sagan, who started Road Runner, and then George Conrades, who was number two at IBM, had gone to BBN. Bunch of academics there. Converted them into a real company. Sold it to Genuity very successfully. And now is an entrepreneur in residence at a local VC. So because of that experience, I think helped us understand where we needed other stuff, other people, or to improve ourselves. And we went out and got the best.

INTERVIEWER: So about a year after the 50k, you decided, okay, we're going to dive in and form a company. How did you manage to attract those kinds of people to something that was such an early startup, something that was the sort of getting bootstrapped? That would clearly seem to be a very early indicator of success. I'm just curious about how you did bootstrap it.

LEIGHTON: It was MIT. It was the internet. It was sexy. It was the bubble. We had a lot of things in our favor. We met some VCs through the 50K. We knew some people to start calling. We did research on who else to call. So the timing, the environment was great for that. Now, we also had really smart people, not

in the business necessarily, but at algorithms and computer science. And I think the VCs sensed that. I think they also sensed we were pretty clueless about business. But that's their job is to help people talented at something get the help on the business side they may need. And I think they sensed that we were motivated and committed. We wanted to have the technology be used in practice. Once we made the decision to do it, we wanted to make it be successful. We wanted it to work. And I think that helped a lot. Now, Battery Ventures, Todd Dagres was the lead for us there. He became convinced that it was a good investment for him to be engaged in. We had a second VC as his partner in the first round. And the very last minute, as the funds are supposed to be transferred-- we'd had the handshake, the signed term sheet, the deal all worked out, all ready for the final signature and the $4 million to get wired. That was happening at the Monday morning. On Sunday night, I get a call from the managing partner of the firm letting me know he's pulling out, because he just didn't think it was going to work. And that was devastating for us, because we'd already said no to all the other consortia that we'd negotiated with. And we were scared to death that that could put Battery in the driver's seat to really screw us, because we really needed the money at that point. And to their credit, Todd said, we'll go through with our share of the deal, same terms, and we'll help you find somebody to fill it out. Very important. You hear all these bad stories about VCs. That was great. So they did help us, and we went and got Polaris to fill out the round, because George Conrades was there. And we made this list of people we'd like for CEO. He was the top of the list, of your fantasy list. And he was there. And we said, okay, look we'll take Polaris if you put George on our board. And then we got him on our board. And then we seduced him into being the CEO.

INTERVIEWER: This is probably a good time for me to ask sort of the larger question about this mind-bending transition from being a professor to being an entrepreneur, to sort of be dealing with all of these things-- VC funding, and first round, second round, finding a CEO. What did that feel like?

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Level 3 Communications, Incorporated

Wikipedia Level 3 Communications

Oiginal Parent Company : See **Kiewit Corporation** / **Kiewit Diversified Group**

Note that **Kiewit Diversified Group** was renamed to Level 3 in January of 1998. For history on Level 3 before Jan 1998, see the page for KDG.

Note that Level 3 was purchased by and merged into **CenturyLink, Incorporated** in 2017 (which became **Lumen Technologies, Incorporated** in Sep 2020)

Saved Wikipedia : Level 3 Communications (Sep 3 2020) -

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Not to be confused with L-3 Communications.

Level 3 Communications, Inc.

Traded as NYSE: LVLT

Industry Telecom

Fate : Acquired by CenturyLink

Founded 1985

Headquarters Broomfield, Colorado, United States

Key people

James O. Ellis Jr. (Chairman)

Jeff Storey (CEO)

Sunit Patel (CFO)

Products

Mobile telephony, Internet services, Content delivery

Revenue US$ 8.3 billion (2015)[1]

Operating income US$ 1.3 billion (2015)[1]

Net income US$3.4 billion (2015)[1]

Total assets US$24.1 billion (2015)[2]

Total equity US$10.1 billion (2015)[3]

Number of employees 13,500

Parent CenturyLink

Level 3 Communications was an American multinational telecommunications and Internet service provider company headquartered in Broomfield, Colorado. It ultimately became a part of CenturyLink, where Level 3 President and CEO Jeff Storey was installed as Chief Operating Officer, becoming CEO of CenturyLink one year later in a prearranged succession plan.

Level 3 operated a Tier 1 network.[4] The company provided core transport, IP, voice, video, and content delivery for medium-to-large Internet carriers in North America, Latin America, Europe, and selected cities in Asia.[5] Level 3 was also the largest competitive local exchange carrier (CLEC) and the 3rd

largest provider of fiber-optic internet access (based on coverage) in the United States.

On October 31, 2016, CenturyLink announced an agreement to acquire Level 3 Communications in a cash and stock transaction.[6] Level 3 became part of CenturyLink on November 1, 2017.

History

1985 to 2000

In 1985, **Kiewit Corporation** created a subsidiary named **Kiewit Diversified Group** to manage the corporation's business that was not related to construction. The division was spun off as a separate entity and changed its name to Level 3 Communications in 1998 to signify an increased focus on communication services. That same year saw it make an IPO on NASDAQ. According to Level3's own history, it continued to build its telecommunications network after going public.

2001 to 2010

According to Level 3's own history, in 2003, the company acquired **Genuity**, and, between 2005 and 2007, it purchased several other companies including former rivals WilTel Communications, Broadwing Corporation, Looking Glass Networks, Progress Telecom, and Telcove (formerly Adelphia Business Solutions).[7] In 2004, Level 3 acquired ICG Communications' wholesale dial-up business for $35 million. Then, in 2006, Level 3 purchased the rest of ICG Communications for $163 million, taking over ICG's fiber network and nationwide Points of Presence (PoPs). It then integrated these companies through 2010.

2010 to present

On April 11, 2011, Level 3 announced a tender offer had been made to acquire fellow Tier 1 provider Global Crossing[8] in an all-stock transaction,[9] which was approved by shareholders on August 5,[10] and completed on October 4, 2011. On October 20, 2011, Level 3 Communications reduced its total shares and transferred its stock listing from NASDAQ to the larger New York Stock Exchange.[11]

On May 14, 2012, Level 3 was contracted by European content provider Voxility to provide 250 Gbit/s or more to Voxility's three main data centers in North America and Europe.[12] On May 7, 2012, Level 3 was contracted by the U.S. Department of Defense's Defense Information Systems Agency to provide fiber-cable operations and maintenance, and IP-based infrastructure under a ten-year, indefinite contract with a maximum value of approximately $411 million.[13]

On June 16, 2014, Level 3 acquired TW Telecom, a business Internet connection provider, for about $5.7 billion.[14]

In July 2015, Level 3 acquired Black Lotus, a provider of protection against distributed denial of service (DDoS).[15]

On October 31, 2016, [**CenturyLink, Incorporated**, known as of Sep 2020 as **Lumen Technologies, Incorporated**,] announced its intent to acquire Level 3 in a deal valued at around $34 billion.

On October 3, 2017, the deal was approved by the United States Department of Justice on condition of selling some of Level 3's telecom holdings in three states.[17] The deal officially closed and Level 3 became part of CenturyLink on November 1, 2017.

On November 1, 2017, Level 3 Communications officially merged with [CenturyLink, Incorporated , known as of Sep 2020 as Lumen Technologies, Incorporated]. As part of the merger, work was required to divest of 24 individual fiber optic lines spanning 30 city pairs as required by the US Department of Justice. Additionally, Level 3 was required to divest of metro Ethernet markets in Boise, Tucson, and Albuquerque to satisfy antitrust requirements. The company complied with the divestiture of those assets.

Operations

Network

Level 3 Communications satellite dish on one of its two ground stations located in Boise, Idaho

Level 3 Communications operated a large network Internet, with infrastructure in 46 states in the continental United States,[20][21] South America, Western Europe,[4][22] and some cities in Asia. It uses transatlantic cables,[23] including "Yellow" /AC-2 (on which it owned two of the four fiber pairs after Viatel's 2001 bankruptcy).[24] Level 3 Communications has also purchased 300 Gbit/s of capacity on the Apollo (cable system).[25]

At the time of acquisition by CenturyLink, it was owner of AS1[26] (following the acquisition of Genuity, from BBN Technologies), but it used AS3356 for operations. AS3356 as of 2007 consistently had one of the highest ranked connectivity degrees on the Internet.[27][28] It also operated the former Global Crossing network (AS3549) following the company acquisition in 2011.

Level 3 Communications delivered Netflix and Apple music and video content over the Internet.[29] The company ran a content delivery network which it acquired from Savvis in 2006.[30]

In 2006, Level 3 Communications announced with Internet2, an academic network, that they would deploy a next generation nationwide research network.[31]

Sales organization

Level 3 distributed and sold its services through a mix of six independent sales channels: large enterprise, wholesale, federal, content and media, midmarket, and indirect. All six sales channels reported to the president of sales Andrew Crouch.[32] The top performing Level 3 indirect sales agencies in 2010 included Intelisys, Microcorp, CDW/AVANT Communications, PlanetOne, Advantage Communications Group, Telarus, and Presidio.[33]

Comcast dispute

On November 11, 2010 a dispute arose between Level 3 and Comcast, when Level 3 announced that they were "selected to serve as a primary content delivery network (CDN) provider for Netflix, Inc. to support the company's streaming functionality."[34] Apparently, as a result of this distribution agreement, Comcast sought to renegotiate the peering agreement with Level 3 and sought a recurring fee for carrying the increased Level 3 internet traffic to and from Comcast broadband customers. Claims[35] and counter-claims[36] were made as the two companies sought to renegotiate the contract. In December 2010, the New America Foundation submitted information concerning the dispute to the FCC.[37]

December 2013, the New America Foundation submitted information concerning the dispute to the FCC.[37]

On July 16, 2013, Level 3 Communications and Comcast seemingly ended their three-year dispute by issuing a statement that "Level 3 and Comcast have resolved their prior interconnect dispute on mutually satisfactory terms. Details will not be released."[38] On May 21, 2015, Level 3 and Comcast announced a new multi-year bilateral agreement to "enhance their existing network capacity while extending their mutual interconnection agreements, ensuring that both maintain ample capacity to exchange Internet traffic between their networks."[39][40]

Other disputes

In July 2013, the NSA was accused of wiretapping large parts of data on the German Internet Exchange Point DE-CIX which was denied by Level 3,[41] and a few months later, was accused of tapping connections between Google and Yahoo data centers.[42]

See also

- ***Colorado portal***
- ***Companies portal***
- List of United States telephone companies

EVIDENCE TIMELINE

1992 (Jan 12)

Full newspaper page : [HN011O][GDrive]

1992-01-12-the-lincoln-nebraska-star-pg-7-e-clip-kiewit

STATE/LOCAL 7E

Peter Kiewit Sons firm announces reorganization

OMAHA (AP) — Officials at the Peter Kiewit Sons' Inc. construction company have announced a corporate reorganization that creates two classes of stock and combines businesses.

Officials said the reorganization created Class C stock, which tracks the company's construction and mining businesses. Another class — Class D — pertains to the company's other businesses, including telecommunications and electrical energy.

Walter Scott Jr., Kiewit's chairman, presented the new structure to stockholders at the annual meeting Friday in Omaha. Stockholders of the privately held firm approved the reorganization in December, Kiewit officials said.

Under the reorganization, Scott remains president and chairman of Peter Kiewit Sons Inc. and also will serve as president of Kiewit's Diversified Group, which includes the telecommunications and energy businesses, the company said.

The company's construction and mining businesses are combined under the new structure.

Charles H. Campbell, a Kiewit executive vice president and former president of the construction group under the old structure, was promoted to vice chairman of the parent firm. He also was named chairman of the Construction and Mining Group, the company said.

Kenneth E. Stinson, president of the mining group under the old structure, was named president of the construction and mining segment.

James Q. Crowe, who was division manager in the old construction group, will serve as president of Kiewit's Telecommunications Group, the company said.

Kiewit had construction and mining revenues of about $2 billion in 1991, company spokesman Brad Chapman said Friday. He declined to say what the firm's total revenue was.

The company had $5.1 billion in revenue in 1990, according to Fortune magazine.

Kiewit was under contract to build more than 700 projects in 1991. The company said it shipped about 17 million tons of coal.

Kiewit operates construction offices through the United States and Canada. The company builds major projects in the power, commercial building and telecommunications industries.

The company has 2,900 salaried, full-time employees and employs 20,000 to 25,000 independent craftsmen each year, Chapman said.

[HN011P][GDrive]

1998 (Jan 20) - "Kiewit Diversified" changed it's name to Level 3

Full page : [HN01CL][GDrive]

Fremont Tribune (Fremont, Nebraska) · 20 Jan 1998, Tue · Page 12

Kiewit Diversified plans name change, move to Denver

OMAHA (AP) — Kiewit Diversified Group has chosen Denver as the site of a new Internet-based company expected to create up to 3,000 jobs.

The company made the announcement Monday. It said it would not move until it receives word from the Internal Revenue Service on whether the company's split from Peter Kiewit Sons can be tax-free.

Kiewit Diversified is a subsidiary of Peter Kiewit Sons, an Omaha-based construction and mining company.

The company announced in December it would start the Internet-related business elsewhere because of the difficulty of attracting computer nerds to Omaha.

The IRS decision is expected before the end of June. The relocation will affect 30 to 40 Kiewit Diversified executives. No other Kiewit operation will be affected.

Kiewit Diversified also said it is changing its name to Level 3 Communications to better reflect the new venture.

Level 3 Communications will focus on building a nationwide, Internet-based network to compete with local and long distance telephone systems, the company said. Long-range plans include international competition.

Areas under consideration for the new headquarters were Dallas, northern Virginia and the Silicon Valley in California.

[HN01CM][GDrive]

1998 (Jan 21) - "Peter Kiewit Sons to Build National Fiber Optic Network"

By Seth Schiesel / Source : [HN00ZF][GDrive]

Adding to the growing list of companies that are building new national communications networks, Peter Kiewit Sons Inc. has said that it intends to spend up to $3 billion over the next three years to build a 20,000-mile web of fiber optic cable.

The system, which the company wants to complete by 2001, would be the first national fiber optic network based on Internet technology rather than on standard telephone technology. If the Internet technology works as predicted, it could allow Kiewit to charge prices for voice and data communications much lower than those of its competitors while maintaining healthy profit margins.

Kiewit plans to sell access to its network only to business customers. Most of those would be small and medium-sized companies, but some could be upstart long-distance carriers that would resell time on the Kiewit network to consumers.

On Monday, the Kiewit subsidiary that intends to build the network, [**Kiewit Diversified Group**], announced that it had changed its name to **Level 3 Communications Inc. Level 3 is led by a team of executives who used to run the** [**MFS Communications Company, Incorporated**], the alternate local telephone carrier acquired in 1996 by Worldcom Inc. for $14 billion.

The move by Kiewit, a private company based in Omaha that has its primary operations in construction and mining, brings to four the number of companies building new national communications networks. Kiewit joins IXC Communications, the Williams Companies and the Qwest Communications subsidiary of the Anschutz Corporation. Established long-distance carriers like the AT&T Corporation also spend billions each year upgrading their systems.

But Level 3's network would differ from the others in its reliance on Internet Protocol, or I.P., technology. I.P. can allow networks to be used more efficiently but can also be less reliable than traditional networks. Traditional networks generally allow voice and data messages to be transmitted in one continuous chunk. I.P. networks break messages into small packets that are each sent independently to their destination.

"I.P. is ready for prime time," said [**James Quell Crowe (born 1949)**], Level 3's chief executive, who was MFS's chairman. He said, however: "With today's technology, I.P. is fine for anything that's not timing-sensitive, like data or fax. Anything that's timing-sensitive, primarily voice and video, isn't handled very well."

But Mr. Crowe said that advances in the technology over the next few years would allow Level 3 to offer voice quality equal to that of more traditional systems.

Mr. Crowe said that Level 3 had about $2 billion in cash but that it was confident it could raise the remainder necessary to complete its network.

1999 (Oct 06)

Full page : [HN01CN][GDrive]

Business

Wednesday, October 6, 1999
The Pantagraph

C

The Pantagraph/MAUREEN O'CONNOR

Cable channeling

Top: A worker for Muller & Pribyl Utilities of Hamel, Minn., worked to bury innerduct cable Tuesday south of Lexington. It will contain fiber optic cable for Level 3 Communications, a communications and information services company, which is building a fiber optic communications network in the United States and Europe. The system will eventually offer local, long-distance and data transmission phone services, as well as a range of Internet access services to Level 3's business customers. Muller & Pribyl are subcontractors for Level 3 Communications. **Middle:** The cable was buried 42 inches deep. The U.S. network is slated for completion in 2001, the European, in the fall of 2000. Level 3, established last year as an independent company, was the former subsidiary of Omaha, Neb.-based Kiewit Diversified Group. **Bottom:** This particular segment of the fiber optic system will run from Lawndale to Joliet and is expected to be completed by spring.

[HN01CO][GDrive]

2002 (Nov 27) - NetworkWorld - Level 3 to buy bankrupt Genuity's assets

Stephen LawsonBy Stephen Lawson ; See [HP004I][GDrive]

This article is also located at **Verizon Communications Incorporated** and **Genuity Incorporated (2000)**

Internet backbone provider [**Level 3 Communications, Incorporated**] has agreed to acquire the bulk of the assets of network provider **Genuity** [(Genuity Incorporated (2000))], which has filed for bankruptcy, the companies announced Wednesday.

Level 3 will pay as much as $242 million in cash and assume a significant portion of **Genuity's** long-term operating agreements, according to a statement from the companies. The deal must be approved by regulatory agencies and a bankruptcy court and is expected to close in the first quarter of 2003.

Also Wednesday, **Genuity** [(Genuity Incorporated (2000))] filed voluntary petitions for reorganization under Chapter 11 of the U.S. bankruptcy code, the statement said. The cash on Genuity's balance sheet, together with Level 3's cash payment, will be distributed to creditors of Genuity.

Based in Woburn, Mass., **Genuity** [(Genuity Incorporated (2000))] was spun out of U.S. telecommunications carrier [Verizon Communications Incorporated] according to the terms of the merger of Bell Atlantic and [GTE Corporation] that created Verizon in 2000. More recently, the company has been suffering financially amid a glut of capacity on backbone networks. In May, Genuity announced that it would cut as much as 30 percent of its workforce, or 1,200 jobs.

[**Level 3 Communications, Incorporated**], in Broomfield, Colorado, will acquire Genuity's network transport business as well as its dedicated and dial-up Internet access operations. It also will take over Genuity's managed services business, which it will combine with its iStructure subsidiary but continue to operate under the Genuity brand.

Genuity's biggest customers are Verizon and AOL, according to the statement. Verizon has executed a new multi-year contract to buy wholesale dial-up, transport and other services from Level 3, which should take effect when the acquisition closes.

2002 (Nov 27) - "Level 3 to acquire Genuity assets and operations for $242 million"

Source - LightWaveOnline - [HW005H][GDrive]

This article is also located at [**Verizon Communications Incorporated**]

[**Level 3 Communications, Incorporated**] and **Genuity Inc.** [(Genuity Incorporated (2000))] announced today that they have signed a definitive agreement under which Level 3 will acquire substantially all of the assets of the Massachusetts-based communications company.

[**Level 3 Communications, Incorporated**] will pay up to $242 million in cash and assume a significant portion of existing long-term operating agreements to acquire Genuity's assets and operations. To facilitate the transaction, **Genuity** [(Genuity Incorporated (2000))] today is filing voluntary petitions for reorganization under Chapter 11 of the Bankruptcy Code. Level 3's cash consideration at closing could be reduced subject to certain material adjustments.

Closing is expected to occur during the first quarter of 2003. The transaction is subject to approval by the bankruptcy court and certain government regulatory agencies.

"This transaction represents the best outcome for the key constituencies of both Genuity and Level 3," contends Paul R. Gudonis, chairman and chief executive officer of Genuity. "Both companies, as well as Genuity's largest customers and creditors, have signed agreements supporting the transaction."

"There is a unique and compelling fit between Genuity and Level 3," adds [James Quell Crowe (born 1949)], Level 3's chief executive officer. "The transaction combines the assets and operations of Genuity, the company that helped invent the Internet, with Level 3, the company that built the first network fully optimized for Internet Protocol-based communications. Both companies are experienced providers of optical and IP-based services, and both are Tier 1 Internet backbone providers with industry-leading quality of service. Genuity's transport and dedicated and dial-up Internet access business--more than 80 percent of revenue--is complementary to Level 3's transport, managed modem and IP services business."

Based in Woburn, MA, **Genuity** [(Genuity Incorporated (2000))] operates an international IP network. The company provides dial-up and dedicated Internet access, transport, managed security and VPN, hosting and other services to communications companies, enterprises and government agencies. Its largest customers are Verizon Communications and America Online, which accounted for greater than 60 percent of its $223 million in revenue for the third quarter of 2002.

All but one of Genuity's banks have signed an agreement in support of the transaction. Verizon has executed a new multi-year contract to purchase wholesale dial-up, IP, transport and other services from Level 3, to take effect when the transaction closes. America Online has signed an agreement consenting to the transaction that contemplates [**Level 3 Communications, Incorporated**] acquiring America Online's network services agreement with Genuity. In addition, Allegiance Telecom Inc., Genuity's largest network supplier, supports the transaction.

As part of this transaction, Level 3 is also acquiring Genuity's managed services business and its associated enterprise customers and product set. "We recognize the importance of these customers and are committed to ensuring they receive the highest quality service without disruption," asserts Kevin O'Hara, president and chief operating officer of Level 3. "As a result, we plan to combine these operations with those of our (i)Structure subsidiary in order to focus on the needs of those customers. That new managed services operating company will do business under the name 'Genuity,' a recognized leader in that market." [...]

2003 (Aug 19) - CenturyLink corporate news - Level 3 to Sell Midwest Fiber Optic Network Acquired in Genuity Transaction

See [HC004L][GDrive]

This article is also located at [**Verizon Communications Incorporated**]

BROOMFIELD, Colo., Aug. 19 /PRNewswire-FirstCall/ -- [**Level 3 Communications, Incorporated**] announced today that it has signed a definitive agreement to sell the **Midwest Fiber Optic Network (MFON)**, a regional communications system it acquired through its recent transaction with **Genuity** [(Genuity Incorporated (2000))].

CenturyTel (NYSE: CTL) will purchase the stand-alone system, which serves as a regional backbone for a number of carriers, including CenturyTel itself, in Arkansas, Missouri and Illinois. The purchase price is approximately $17 million in cash, subject to adjustments including date of closure and system revenue at time of close. Closing is subject to regulatory approvals and customary conditions.

"This is a non-core asset for Level 3," said Sunit Patel, Level 3's chief financial officer. "While MFON currently generates approximately $1.5 million a month in revenue, the geography and architecture of the system do not offer us a practical or cost-effective way to integrate its operations into the Level 3 network. As such, we believe it makes sense to sell this business and continue to focus on the integration of the core assets, customers and traffic from the Genuity transaction."

Closing is expected to occur by the end of the fourth quarter of 2003.

Daniels & Associates, the Denver-based media and telecommunications mergers and acquisitions specialist, served as financial advisor to Level 3 on this transaction.

- **About Level 3 Communications :** Level 3 (Nasdaq: LVLT) is an international communications and information services company. The company operates one of the largest Internet backbones in the world, is one of the largest providers of wholesale dial-up service to ISPs in North America and is the primary provider of Internet connectivity for millions of broadband subscribers, through its cable and DSL partners. The company offers a wide range of communications services over its 22,500-mile broadband fiber optic network including Internet Protocol (IP) services, broadband transport, colocation services, and patented Softswitch-based managed modem and voice services. Its Web address is www.Level3.com. The company offers information services through its subsidiaries, (i)Structure and Software Spectrum. For additional information, visit their respective web sites at www.softwarespectrum.com, and www.i-structure.com.
- **About CenturyTel :** CenturyTel, Inc. provides communications services including local, long distance, Internet access and data services to more than 3 million customers in 22 states. The company, headquartered in Monroe, Louisiana, is publicly traded on the New York Stock Exchange under the symbol CTL, and is included in the S&P 500 Index. CenturyTel is the 8th largest local exchange telephone company, based on access lines, in the United States. Visit CenturyTel at www.centurytel.com.

2010 (Oct 04) - Business Wire : "President Obama Names Level 3 CEO James Crowe as Chairman of National Security Telecommunications Advisory Committee"

See [HW005D][GDrive] / October 04, 2010 07:46 PM Eastern Daylight Time

[**Level 3 Communications, Incorporated**] today welcomed President Obama's announcement of his intent to appoint James Q. Crowe, the company's chief executive officer, to the position of Chair of the National Security Telecommunications Advisory Committee (NSTAC).

"The public/private partnership of the NSTAC has resulted in unique contributions to critical infrastructure protection, information sharing, network convergence, security and communications infrastructure reliability across the nation."

As chairman, Crowe will preside over a 30-member committee that comprises industry executives from major network service providers, IT, finance and aerospace companies. The NSTAC provides critical industry-based analyses and advice to the President on policy and technical issues regarding national security and emergency preparedness communications. The committee also develops recommendations to the President to assure vital telecommunications links through any event or crisis.

"I am honored by the opportunity to chair this important committee," said Crowe. "The public/private partnership of the NSTAC has resulted in unique contributions to critical infrastructure protection, information sharing, network convergence, security and communications infrastructure reliability across the nation." [...]

2013 (May 09) - Omaha World Herald - "Crowe, who built Level 3 Communications from ground floor, to retire"

By Barbara Soderlin WORLD-HERALD STAFF WRITER / Source : [HN01CR][GDrive]

[James Quell Crowe (born 1949)], who led the development of **Level 3 Communications** from its Omaha origins, announced Thursday he plans to retire by the end of 2013 from his position as the Broomfield, Colo., firm's chief executive officer.

The board of directors, led by chairman [Walter Scott Jr. (born 1931)], has formed a committee to select a new CEO. Crowe will remain on the board.

Crowe led [MFS Communications Company, Incorporated] in Omaha when it was a subsidiary of Peter Kiewit Sons' Inc. under Scott and after it was spun off in 1995. It was sold in 1996, and Crowe returned to Kiewit to head the [Kiewit Diversified Group], which was founded in 1985 to hold Kiewit's nonconstruction assets.

A year later, he announced that Diversified Group would move its headquarters out of Omaha and start an Internet-related telecommunications business in a city where it would have an easier time attracting high-tech workers. It was discouraging news to the Omaha business community at a time when the Peter Kiewit Institute was in its infancy.

In 1998, [Kiewit Diversified Group] changed its name to **Level 3 Communications Inc.** and started trading on the NASDAQ exchange, drawing heavy investment from the Omaha area.

Today the firm provides data, Internet, voice, video, security, IT and managed services. It has service in more than 70 countries and more than 100,000 “route miles” of fiber optic cable.

“Level 3,” Crowe said, “is extraordinarily well-positioned to benefit from the worldwide explosion of voice, data and video carried over the Internet.”

In February, it reported year-end revenue of $6.38 billion, up from $6.32 billion in 2011. Level 3 in 2012 had a net loss of $422 million, compared with losses of $875 million the year before.

[Walter Scott Jr. (born 1931)] thanked Crowe for his leadership and for all that he has done to build Level 3. “It is no exaggeration to say that, without Jim, there would be no Level 3.”

Level 3 communication stuff

https://www.youtube.com/watch?v=kHA-Mtkuzno

evels of Internet Infrastructure

23,449 views•Mar 22, 2017

Kevin Burke

[HV00AZ]

2017-03-22-youtube-kevinburke-levels-of-internet-infrastructure

https://drive.google.com/file/d/1SkkGXR1PG0JU4BCPatcK2sKcYLyl2VXA/view?usp=sharing

[HV00B0]

https://drive.google.com/file/d/1_m7R0PROAgp6CfKP_weYLIQuPAThYTER/view?usp=sharing

https://www.youtube.com/watch?v=tR1sLLOYxnY

2010-12-03-youtube-digitalsocietyorg-level-3-versus-comcast-peering-dispute

- Level 3 versus Comcast peering dispute
- 18,517 views•Dec 3, 2010
- DigitalSocietyOrg
- 638 subscribers
- This video gives a full explanation of what happened between Level 3 Communications.
- Level 3 asserted that Comcast wanted to tax Netflix under the threat of blocking them which was therefore a "Net Neutrality" violation. Comcast said they threatened no such thing and this was just a private peering dispute between Level 3 and Comcast, and no website companies or applications were singled out or threatened.
-
- This video gets to the bottom of this by explaining how peering and Internet transit functions, and by examining the known facts surrounding this dispute.
-
- Note that video got slightly ahead of audio towards end because YouTube didn't sync it right in their encoding.
- http://www.digitalsociety.org/2010/12...
-
- Correction: Level 3 and Tata are the only transit providers for Comcast as of December 2010.
-
- Additional links.
- http://www.digitalsociety.org/2010/12...

[HV00B1][GDrive] https://drive.google.com/file/d/1eZnaN-BOPPK2Da-WdlItBeCE1MhkUgSj/view?us p=sharing

[HV00B2][GDrive] https://drive.google.com/file/d/1WKwgT-QZYUvhO1X709rqv6YwebhjMYzD/view?usp=sharing

https://www.youtube.com/watch?v=jVP3agI5FEA

The Level 3 Story - Level 3 Communications

3,118 views•Jan 24, 2016

kvanoort

74 subscribers

The Level 3 Story - Level 3 Communications corporate video. Created while working as senior director of corporate marketing at Level 3 Communications - circa 1998.

2016-12-24-youtube-kvanoort-the-level-3-story-communications

[HV00B3][GDrive] https://drive.google.com/file/d/1NgUpv4biwC85YxLjsWuqHqNsO9gP7gao/view?usp=sharing

[HV00B4][GDrive] jpg https://drive.google.com/file/d/1q0a2Ee2P3g_pZILt8r7WWlYhYwvGgRSt/view?usp=sharing

[HV00B5][GDrive] pdf https://drive.google.com/file/d/1L7VzCGDaSfSp7ZfEr1xIQQ9A2a-KMHP8/view?usp=sharing

CompaniesHistory : Level 3 Communications

Source from CompaniesHistory : [HW003Q][GDrive]

Video : https://www.youtube.com/watch?v=1yaAAwQ83Vs#action=share : Level 3 Communications - Introduction - All about Level 3, the leading network behind the internet :

•Sep 8, 2010 : **Level3Communication :** Level 3 is the leading IP Upstream carrier transferring terabytes per second around the globe. Find out how Level 3 enables the internet by providing bits and bytes on its fiber optic network around the world.

Level 3 Communications, Inc. provides a range of integrated communications services, non-switched and local-access telecommunications services. It provides IP-based communications services to enterprise, content, government and wholesale customers. The company delivers integrated IP solutions, including converged, data, voice, video and managed solutions to help enable customer's growth and efficiency. It operates through the two segments include: Level 3 and Global Crossing. The Level 3 segment offers services, include core network to transport, infrastructure, data, local and enterprise voice services, wholesale voice to domestic voice termination, international voice termination and toll free services and other communications services. The Global Crossing segment offers services include invest and grow through other carriers, sales agents and system integrators to transport, infrastructure, IP and data, voice and collaboration services to carrier and enterprise customers, Voice Services and Other services. Its content distribution products and services comprise content delivery network, media delivery services and fiber optic and satellite video transport services. Level 3 Communications was founded in 1985 and is headquartered in Broomfield, CO."

History - Stronger Connections around the Globe

From its beginning, Level 3 Communications was founded on the principles of the Silicon Economics℠ cycle: create a global telecommunications network with the scale to reduce unit costs, stimulate demand with these lower costs, support that demand by scaling even more. Level 3 created a network that serves as a foundation for the communications services of the 21st century by providing, among other things, information transmission over a fiber optic network and media delivery over a content delivery network. And we've grown to support the end-to-end communications services that businesses and carriers rely on.

Level 3 was originally founded in 1985 as Kiewit Diversified Group Inc. (KDG), a wholly-owned subsidiary of Peter Kiewit Sons', Inc. (PKS). Peter Kiewit Sons', Inc. is a 114-year-old construction, mining, information services and communications company headquartered in Omaha, Neb. KDG was originally created to hold PKS' non-construction business assets.

In early 1998, KDG announced it was changing its name to Level 3 Communications, Inc., after substantially increasing the emphasis it placed on and the resources devoted to its communications and information services business. On April 1, 1998, Level 3 common stock started trading on the NASDAQ Stock Market under the symbol LVLT.

During 1998, Level 3 raised $14 billion and was called the "best funded start-up in history." The company constructed 19,600 route miles, and built the world's first continuously upgradeable network fully optimized for internet protocol (IP). Over the next few years, explosive demand for bandwidth fueled growth in sales. By the end of 2000, Level 3 provided service to 2,700 customers.

Level 3 continued investments in infrastructure to become a world-class communications provider, and won the trust of the world's most sophisticated communications companies. In addition to ongoing construction, the company expanded its assets with the February 2003 acquisition of Genuity. Over the next few years, and through a major industry downturn, Level 3 pursued a strategy that focused on both the balance sheet and investing for the inevitable industry rebound. Level 3 won the confidence of investors, as the company raised more money than all other NexGen carriers combined; and also of customers, who made Level 3 one of the world's top three Internet traffic carriers.

Beginning with the late-2005 acquisition of WilTel, Level 3 has established itself as a natural industry consolidator. During 2006, the company went on to acquire Progress Telecom, ICG, TelCove and Looking Glass Networks. In 2007, Level 3 acquired Broadwing, the Content Delivery Network (CDN) services business of SAVVIS, Inc. and Servecast.

In the fall of 2011, Level 3 and Global Crossing joined forces. The new integrated network united Level 3's broad, deep U.S. and European footprint with Global Crossing's extensive international, intercity network. Continuing to operate under the name of Level 3, this new kind of company featured more than 500 global markets in North America, EMEA, Latin America and Asia, as well as a total of ~100,000 route miles."

*Information from Forbes.com and Level3.com

**Video published on YouTube by "Level3Communication"

XCom

https://www.newspapers.com/image/441836880/?terms=%22Todd%20Dagres%22&match=1

1998 (April 6) - Wall Street Journal - "Level 3 Agrees to Acquire XCOM In $165 Million Bid for Business"

Source - [HN01H1][GDrive]

Level 3 Communications Inc., whose efforts to build a national Internet-based communications network have left it under close scrutiny, said Monday that it agreed to acquire XCOM Technologies Inc., a provider of local-phone services and communications software, for about $165 million worth of stock.

Level 3, of Omaha, Neb., will exchange about 2.6 million shares to acquire XCOM, of Cambridge, Mass. Level 3 expects to close the deal during the second quarter.

The deal comes less than a week after Level 3 made an unusual debut on the Nasdaq National Market. The firm was a division of Peter Kiewit Sons Inc., a diversified holding company, and its stock previously traded on the OTC bulletin board as Class D Kiewit stock. Level 3 completed its split from Kiewit last week.

"This is an exciting and important merger for both companies," said James Q. Crowe, Level 3's president and chief executive officer, noting that XCOM holds the rights to technology which provides key components of the "bridge" necessary to fully interconnect the public switched telephone network with new networks based on the Internet Protocol, or IP -- such as that being built by Level 3.

"This bridge will allow Level 3 to offer a broad range of communications services, including voice and fax services, to customers at lower cost and, over time, with new features and enhancements," Mr. Crowe said. "Moreover, customers will be able to enjoy these benefits using their existing telephone equipment and without changing dialing patterns or adding additional devices."

David F. Callan, XCOM's president and chief executive, said both Level 3 and XCOM "are aggressively embracing and helping to shape the new world of IP-based technology and communications."

"Our cultures and views are virtually the same," he said. "Both companies' executives come from entrepreneurial backgrounds with successful track records in starting up and growing companies to very substantial size and success in their markets."

Level 3 doesn't have any customers, and it is still negotiating land rights to build its network. Yet, with some 147 million common shares outstanding, the company ended the first day of Nasdaq trading with a market capitalization of $10.91 billion.

The company, which is run by former managers of telecommunications trailblazer [**MFS Communications Company, Incorporated**], is armed with $3 billion in funding and has charted plans to build the first global system of Internet-based local and long-distance networks, a system which it sees as offering it the chance to challenge mature phone companies in major markets. Mr. Crowe built MFS and sold it to WorldCom Inc. for $14 billion two years ago.

Level 3 plans to employ the latest in fiber optics and packet data switches and routers to move voice and data traffic from users of the Internet. The plan, using IP technology, is a highly efficient, more powerful data-transmission alternative to traditional phone networks, which use slower circuit switches and are engineered primarily to handle phone calls.

Transmission via data packets, in which great stores of information are sent in electronic envelopes in a digital format over a high-speed data network, is far less costly than sending it along traditional phone lines and through switches, which use up far more transmission capacity to transmit calls and data and are far more expensive to operate.

Despite the buzz Level 3's plans have generated, doubters note that the company faces a great deal of competition, both from other network builders and phone giants eyeing similar opportunities.

Last month, Level 3 announced a deal to lease capacity on Frontier Corp.'s fiber-optic network for up to five years in an agreement valued at around $165 million. Frontier is helping to build a $475 million fiber-optic network that is set to be completed by the end of this year.

In trading on the Nasdaq Stock Market Monday, shares of Level 3 slipped $1 to close at $61.50.

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Housatonic

Daniel Mark Lewin (born 1970)

Wikipedia Daniel Lewin

Saved Wikipedia (Dec 29, 2020) - Daniel Lewin

[HK004M][GDrive]

Born

Daniel Mark Lewin

May 14, 1970

Denver, Colorado, U.S.

Died

September 11, 2001 (aged 31)

On board American Airlines Flight 11, approximately in the air over Worcester, Massachusetts, U.S.

Cause of death

Stabbing

Education

Technion – Israel Institute of Technology (BA, BS)

Massachusetts Institute of Technology

Occupation

Entrepreneur

Spouse(s)

Anne Lewin

Children

2

Military career

Allegiance

Israel

Service/branch

Sayeret Matkal

Rank

Captain

Daniel Mark Lewin (Hebrew: דניאל "דני" מארק לוין; May 14, 1970 – September 11, 2001), sometimes spelled **Levin**, was an American–Israeli mathematician and entrepreneur who co-founded internet company [**Akamai Technologies, Incorporated**]. A passenger on board American Airlines Flight 11, it is believed that Lewin was stabbed by one of the hijackers of that flight, and was the first person murdered during the course of the attacks.[1][2][3]

Early life[edit]

Lewin was born May 14, 1970 in Denver, Colorado, and moved to Israel with his parents at age 14 and was raised in Israel.[4]

Career[edit]

Lewin served for four years in the Israel Defense Forces (IDF) as an officer in Sayeret Matkal, one of the IDF's special forces units.[4] Lewin earned the rank of captain.[2]

He attended the Technion – Israel Institute of Technology in Haifa while simultaneously working at IBM's research laboratory in the city.[5] While at IBM, he was responsible for developing the Genesys system,[5] a processor verification tool that is used widely within IBM and in other companies such as Advanced Micro Devices and SGS-Thomson.[5]

Upon receiving a Bachelor of Arts and a Bachelor of Science, summa cum laude, in 1995,[5] he traveled to Cambridge, Massachusetts, to begin graduate studies toward a Ph.D at the Massachusetts Institute of Technology (MIT) in 1996. While there, he and his advisor, Professor [**Frank Thomson Leighton (born 1956)**], came up with consistent hashing, an innovative algorithm for optimizing Internet traffic.[6] These algorithms became the basis for [**Akamai Technologies, Incorporated**], which the two founded in 1998.[5] Lewin served as the company's chief technology officer and a board member, and achieved great wealth during the height of the Internet boom.[7]

Lewin's name is located on Panel N-75 of the National September 11 Memorial's North Pool, along with those of other passengers of Flight 11.

Death and legacy[edit]

Lewin was reportedly stabbed aboard American Airlines Flight 11 as it was hijacked during the September 11 attacks. A 2001 FAA memo suggests he may have been stabbed by Satam al-Suqami after attempting to foil the hijacking.[8][9] According to the FAA, Lewin was seated in business class in seat 9B, close to hijackers Mohamed Atta, Abdulaziz al-Omari and al-Suqami. It was first reported that he had been shot by al-Suqami, although this assertion was later changed to a stabbing. According to the 9/11 Commission, Lewin was stabbed by one of the hijackers, probably Satam al-Suqami, who was seated directly behind him. The commission speculates that this may have occurred during an attempt by Lewin to confront one of the hijackers in front of him, not knowing that al-Suqami was sitting just behind him.[10] Lewin was identified as the first victim of the September 11 attacks.[2][3][11]

Lewin, who was 31, was survived by his wife Anne and his two sons, Eitan and Itamar, who were aged five and eight at the time of the September 2001 attacks.[4][5][12]

After his death, the intersection of Main and Vassar Streets in Cambridge, Massachusetts, was renamed Danny Lewin Square in his honor.[12] The award given to the best student-authored paper at the ACM Symposium on Theory of Computing (STOC) was also named the Danny Lewin Best Student Paper Award, in his honor.[6] In 2011, on the tenth anniversary of his death, Lewin's contributions to the Internet were memorialized by friends and colleagues.[13][14]

At the National 9/11 Memorial, Lewin is memorialized at the North Pool, on Panel N-75.[15]

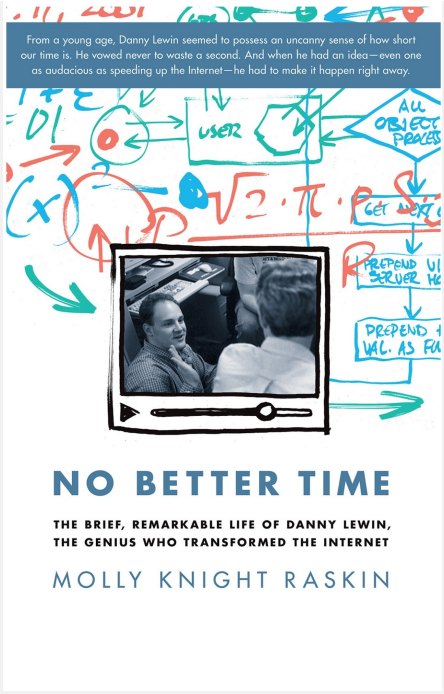
Lewin is the subject of the 2013 biography *No Better Time: The Brief, Remarkable Life of Danny Lewin, the Genius Who Transformed the Internet* by Molly Knight Raskin.

Awards[edit]

- 1995 – Technion named him the year's Outstanding Student in Computer Engineering.
- 1998 – Morris Joseph Levin Award for Best Masterworks Thesis Presentation at MIT.

2013 book - By Molly Knight Raskin - "No Better Time"

PDF - made from recording, with OCR - [HB005L][GDrive]



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Key pasage - His father Charles Lewin actually had an Altair

See **MITS Inc. Altair 8800** , made by **Micro Instrumentation and Telemetry Systems (MITS) Incorporated** .

FROM A YOUNG AGE , Danny Lewin brandished what his parents called “extraordinary vigor,” building impenetrable fortresses, constructing homemade computers, and climbing the foothills surrounding his early home in Englewood, Colorado. The Lewin family enjoyed an enviable, middle-class existence in the suburb of Denver, where they settled just before Danny, their eldest son, was born on May 14, 1970. Both Charles and Peggy, his parents, worked in medicine, Charles as a child and adolescent psychiatrist with a busy private practice and Peggy as a pediatrician for the Denver hospital health program. They owned a spacious home—a contemporary-style house they designed—in the quiet neighborhood of Greenwood Village, filled with young families. They attended Temple Sinai, a Reform Jewish synagogue where Danny celebrated his bar mitzvah. As an eighth grade student at Cherry Creek Middle School, Danny was a popular kid: he skied, flirted with girls, and excelled in both academics and athletics. The three Lewin boys—Danny, Jonathan, and Michael—were all extraordinarily gifted. But of the brothers, Danny had seemingly limitless talents of such broad scope they were often a study in contradiction. With thick, beefy hands like bear paws, he could effortlessly bark orders with the intensity of a drill sergeant yet also sing so beautifully he landed starring roles in the musicals staged at his synagogue, often committing all his lines to heart the night before the performance. The only thing he couldn’t do well, according to his parents, was play soccer, which frustrated him to no end. Peggy and Charles Lewin created a household that thrived on intellectual pursuits. Charles taught the boys music, literature, art, and science. For the Lewins, learning was a game—and Charles was the ringleader. He could turn almost anything, even routine family chores and meals, into an educational experience. Michael and Jonathan remember their initial dismay when their father pasted over the cartoons on the backs of their cereal boxes with math puzzles and snippets from Scientific American magazine. His nighttime stories became an event worth going to bed for; he would spin some fabulous tale into a problem-solving game, delighting and challenging his sons. “We enjoyed it,” said Michael Lewin. “My father always pushed us to excel; he wanted us to be interested in real things and not just sit around and listen to the television.” Charles Lewin also introduced his sons to technology, inspiring in all of them an early interest in computers. **Before the advent of the personal computer (PC) in the early 1970s, Charles purchased a kit to assemble a computer himself. The Altair didn’t have a keyboard or a video display, but, for early enthusiasts like Charles, the ability to input data into the machine was thrilling.** In 1979, he brought home an Apple II, one of the first successful PCs designed by Apple co-founder Steve Wozniak. The Lewins became the only family in their neighborhood to own one, and the three boys—then ages five, seven and nine—spent countless hours teaching themselves how to program it. Over the years, however, Charles Lewin had begun to feel increasingly dissatisfied with his comfortable Colorado life. It wasn’t unhappiness he suffered, but a nagging sense of restlessness. “I felt there had to be more to life,” explained Charles. A prolific poet (who later self-published several collections of his work under the pen name Yaakov Ben David), Charles was a serious, introspective man who loathed the trappings of material wealth. In search of a greater purpose in life, he turned to Zionism, the international movement for the return of the Jewish people to their homeland. Gradually, Charles’s identification with Zionism intensified, and he began to seriously consider a move to Israel. The longer he remained in Colorado, the more he felt his Jewish identity being threatened by the shadowy specter of assimilation. The best thing for himself and his family, he believed, was for them to “make aliyah ,” or immigrate to Israel. Translated literally from Hebrew, aliyah means “ascent”—a term used to describe the repatriation of the Jews to Israel. Returning to the their homeland has long been an aspiration for Jews and a core belief of Zionism. It was rare for Americans to make aliyah , and those who did were usually motivated by deep ideological yearnings. In 1984, when Charles older children was almost unheard of. That year, approximately 2,827 American families made aliyah, and, of those, it’s estimated only a fraction remained permanently in Israel—the majority returning to America frustrated by the challenges of relocating and missing the ease of life back home.

Housatonic

Dr. Paul Adin Lewis (born 1879)

https://collections.nlm.nih.gov/catalog/nlm:nlmuid-101421627-img nlm_nlmuid-101421627-img.jpg

Wikipedia Paul A. Lewis

- Born April 14, 1879 , Chicago, Illinois, USA : [HK005L][GDrive]
- Died June 30, 1929 (aged 50) , Bahia, Brazil : [HK005L][GDrive]

Associations

- **Dr. Richard Edwin Shope (born 1901)** (Mentored by Paul Lewis)
- **Dr. Hideyo Noguchi (born 1876)** (Peer at Rockefeller Institute)
- **Dr. Simon Flexner (born 1863)** - (In 1910 Dr. Flexner worked with Lewis, and] "Lewis discovered via a series of experiments that poliomyelitis is caused by a virus, the virus can be transmitted between monkeys, and exposure makes survivors immune to reinfection. These discoveries helped pave the way for development of a polio vaccine in 1955") ... [HK005L][GDrive]

Saved Wikipedia (March 03 2021) - Paul A. Lewis

Source : [HK005L][GDrive]

- Born April 14, 1879 , Chicago, Illinois, USA
- Died June 30, 1929 (aged 50) , Bahia, Brazil
- Nationality American
- Alma mater University of Wisconsin–Milwaukee, University of Pennsylvania

- Scientific career
- Fields Pathology, bacteriology, virology
- Institutions
  - University of Pennsylvania
  - Rockefeller University
- [Mentored : **Dr. Richard Edwin Shope (born 1901)**]

Paul Adin Lewis (1879-1929) was an American pathologist and **associate member of the Rockefeller Institute for Medical Research**. He was best known for his work in viral and bacterial pathology.[1]

Life

Lewis was born in Chicago and grew up in Milwaukee, Wisconsin. He was the eldest son of Dr. Clinton H. Lewis, a practicing physician. Lewis's sister, Dr. Marian Lewis, also practiced medicine in Milwaukee.[citation needed]Lewis married Louise Durbin in 1906. They had two children, Hobart and Janet.[2]

Education and career

After attending the University of Wisconsin–Milwaukee, Lewis went on to earn his M.D. from the University of Pennsylvania in 1904. While still an undergraduate, he chose to pursue a career as a laboratory scientist and never practiced medicine.[2]

Following stints at Boston City Hospital, the Massachusetts State Board of Health, Harvard University, and the Rockefeller Institute for Medical Research, Lewis became laboratory director at the Henry Phipps Institute and professor of experimental pathology at the University of Pennsylvania (1910-1923). He served in the U.S. Naval Reserve (1917-1921), attaining the rank of commander, and served during the 1918-19 Spanish flu pandemic.[3] Lewis rejoined the Rockefeller Institute in Princeton, New Jersey, in 1923 and worked in the department of animal pathology until his death six years later.[4]

Scientific contributions

From his graduation in 1904 to his death in 1929, Lewis published 78 articles on topics such as anaphylaxis, poliomyelitis, chemotherapy, and tuberculosis.[3] **With [Dr. Simon Flexner (born 1863)] in 1910, Lewis discovered via a series of experiments that poliomyelitis is caused by a virus, the virus can be transmitted between monkeys, and exposure makes survivors immune to reinfection. These discoveries helped pave the way for development of a polio vaccine in 1955.**[5] With Richard E. Shope in 1931, Lewis discovered an influenza A virus that could infect both pigs and humans. This virus turned deadly when mixed with Haemophilus influenzae, illuminating the origins of the Spanish flu.[6] Lewis's later work centered on tuberculosis, heredity, and allergies in guinea pigs.[2] Lewis served as director of the National Tuberculosis Association[3] and member of the American Association of Pathologists and Bacteriologists, Association of American Physicians, and American Association for the Advancement of Science.[4]

Death

In 1929, Lewis died of yellow fever in Bahia, Brazil, while investigating the disease under the auspices of the Rockefeller Foundation's International Health Board.[2] A telegram reporting his death to the Foundation noted that Lewis probably contracted yellow fever through a laboratory infection. [**Dr. Richard Edwin Shope (born 1901)**], who was mentored by Lewis at the Rockefeller Institute, noted to family a rumor that his mentor had somehow contaminated a cigarette with the virus entering through a cut on Lewis's lip. This theory of Lewis's untimely death mirrored some of the details of the Pulitzer Prize-winning novel Arrowsmith by Sinclair Lewis publish several years earlier in 1925.[7] Lewis is interred at the Forest Hills Cemetery in Madison, Wisconsin. The Lewis Playfield in Milwaukee's Bay View neighborhood is named in his honor.[8]

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External links

- Paul A. Lewis papers, Rockefeller Institute for Medical Research Scientific Staff (FA175)

- Photograph of Paul A. Lewis from the National Library of Medicine

Yes - He DID work with Noguchi ...

https://bayviewcompass.com/who-was-the-lewis-of-lewis-play-field/

EVIDENCE TIMELINE

1929 (July 02)

Full newspaper page : [HN01IU][GDrive]

ST. LOUIS POST-DISPATCH
The Only Evening Newspaper in St. Louis With the Associated Press News Service
ST. LOUIS, TUESDAY, JULY 2, 1929.—36 PAGES.

DR. PAUL A. LEWIS MARTYR TO STUDY OF YELLOW FEVER

Member of Rockefeller Institute Dies of Disease Which Killed Colleague, Dr. Hideyo Noguchi.

WAS IN INFECTED CITY OF BRAZIL

Research Pathologist Had Also Helped in Combatting Tuberculosis and Infantile Paralysis.

By Leased Wire From the New York Bureau of the Post-Dispatch.

NEW YORK, July 2.—Dr. Paul A. Lewis, research pathologist associated with the Rockefeller Institute for Medical Research, died last Sunday at the age of 50 in Bahia, Brazil, of yellow fever, while engaged in a study of that disease, it was learned yesterday.

Like the late Dr. Hideyo Noguchi, a colleague in the Rockefeller Institute, who died under identical circumstances a year ago, he was a martyr to the attempt to find a more efficient way of preventing the dread fever. He had gone to Bahia, where it is particularly prevalent, to study the effect of the South American variety of the yellow fever bacillus on both man and monkey.

Dr. Noguchi's death came in May, 1928, in Acera, a fever-stricken town on the African Gold Coast, just after he had succeeded in identifying its cause, a deadly bacillus of the family letospira, which is carried by the mosquito. He was seeking to discover the relationship between African and South American yellow fever.

Dr. Lewis was among the most eminent research bacteriologists in the country. In 1916 he was summoned to New York by the health department as one of a commission to fight the infantile paralysis then raging in the city. At that time he was professor of pathology in the University of Pennsylvania and head of the laboratories of the Phipps Institute.

In 1925 he was allied with a group of distinguished pathologists on the Research Committee of the National Tuberculosis Association, who began in that year to wage a war against the "white plague" which has since served to reduce the mortality from it considerably. He is described as a pioneer in the therapy of tuberculosis.

He was educated in the University of Wisconsin and the Wisconsin College of Physicians and Surgeons, and received his M. D. diploma from the University of Pennsylvania in 1904. From 1908 to 1910 he was an associate in pathology in the Rockefeller Institute. Thereafter he taught and did research in several medical colleges. In 1923 he became associated with the animal pathology department of the Rockefeller Institute in Princeton, N. J. He was a commander in the United States Naval Reserve from 1917 to 1921.

Dr. Lewis is survived by his wife and two children.

[HN01IU][GDrive]

full book - https://publicism.info/history/influenza/

https://publicism.info/history/influenza/37.html

The Great Influenza: The Epic Story of the Deadliest Plague in History - John M. Barry (2004)

Part X. ENDGAME

Chapter 36

IN THE FIRST YEARS after the pandemic, Paul Lewis continued to head the Henry Phipps Institute at the University of Pennsylvania.

Yet Lewis was not a happy man. He was one of those who continued to believe that B. influenzae caused the disease and continued to work on it after the epidemic passed. There was irony in that, since he had initially been reluctant to embrace its etiological role, suspecting instead a filterable virus. Perhaps the chief reason for his stubbornness was his own experience. He had not only found the bacillus with consistency, but he had produced a vaccine that seemed to work. True, the navy had administered a vaccine prepared according to his methods to several thousand men and it had proven ineffective, but he had not made that vaccine himself. A smaller batch that he had personally prepared and tested—during the peak of the epidemic, not in its later stages when many vaccines seemed to be working only because the disease itself was weakening—had given solid evidence of effectiveness. Only three of sixty people who received the vaccine developed pneumonia, and none died; a control group had ten pneumonias and three deaths.

Those results deceived him. In the past he had not always made the right scientific judgment—no investigator does—but this may have been his first significant scientific error. And it seemed to mark the beginning of a downhill slope for him.

That was not obvious at first. He had already built an international reputation. The German scientific journal Zeitschrift für Tuberkulose translated and reprinted his work. In 1917 he was invited to give the annual Harvey Lecture on tuberculosis, a great honor; Rufus Cole, for example, would not receive that invitation for another decade. Eighty-five years later, Dr. David Lewis Aronson, a scientist—whose father, a prize-winning scientist, had worked in the best European laboratories and considered Lewis the smartest man he ever met and gave his son Lewis's name—recalled reading that speech: "You could see Lewis's mind working, the depth of it, and vision, going well beyond what was going on at the time."

Lewis's views had broadened indeed. His interests now included mathematics and biophysics, and, with no resources of his own, he asked Flexner to "arrange for the support" of a physicist Lewis wanted to lure into medicine to examine fluorescent dyes and "the disinfectant power of light and the penetrating power of light for animal tissues." Flexner did so, and Flexner continued to be impressed by Lewis's own work, replying by return mail when Lewis sent him a paper, saying that he would publish it in the Journal of Experimental Medicine, calling it "interesting and important."

Yet Lewis's life after the war began pulling him away from the laboratory, frustrating him. Henry Phipps, the U.S. Steel magnate who had given his name to the institute Lewis headed, had not endowed it generously. Lewis's own salary had risen well enough, from $3,500 a year when he started in 1910 to $5,000 just before the war. Flexner still considered him vastly underpaid and saw to it that, immediately after the war, the University of California at Berkeley offered him a professorship. Lewis declined, but Penn raised his salary to $6,000, a substantial income at that time.

But if his own salary was more than adequate, he needed to fund an entire institute, even if a small one. He needed money for centrifuges, glassware, heating, not to mention "dieners"—the word still in use for technicians—and young scientists. He needed to raise the money for all that himself. As a result Lewis more and more found himself drawn into the social milieu of Philadelphia, raising money, being charming. More and more he was becoming a salesman, selling both the institute and himself. He hated it. He hated the time it took from the laboratory, the drain of his energies, the parties. And the country was in the midst of a deep recession, with four million soldiers suddenly thrown back onto the job market, with the government no longer building ships and tanks, with Europe desolate and unable to buy anything. Raising money was more than just difficult.

In 1921 the University of Iowa approached him. They wanted to become a first-class research institution, and they wanted him to run the program, to build the institution. The state would supply the money. Flexner was more than just a mentor to Lewis, and Lewis confided in him that the Iowa job seemed "heavy, safe and of limited inspiration. You know very well that I do not thrive on routine." And at Phipps, "Some of the work underway has great potential I believe.... You will see that I am trying to convince myself that I have a right to gamble here as against a rather dull safe outlook at Iowa City. A word from you would be much appreciated."

Flexner advised him to accept the offer: "All I have heard of the medical situation at Iowa City is favorable,...a pretty sharp contrast to the [situation] in Philadelphia. It is definite and has the elements of permanency.... I have no doubt under the influence of your vigorous guidance, the department—although quite large—over which you would preside would become so notable that the State would stand back of you in any enlargement."

He did not tell Lewis how well he thought the job might suit him, how extraordinary his gifts for a job like that were. But Flexner did tell a senior colleague that Lewis "might really come to exercise a real influence in medical teaching and research." There was perhaps some of what Welch had in him, that Lewis had "quite unusual gifts of exposition." He had broad knowledge, perhaps he even leaked knowledge, and, whether he realized it or not, he could inspire. Indeed, Flexner believed he could "be master of the field."

The University of Pennsylvania countered the offer: it gave him a new title, raised his salary to $8,000, guaranteed it for five years, and guaranteed funding for the institute itself for two years. He stayed. Flexner congratulated "you and the University especially on your new honor. Will the new chair add to your University responsibility?"

It would. Partly for that reason Lewis remained restless. He had rejected the Iowa position because, though it might allow him to build a major institution, it would keep him out of the laboratory. Now he found himself in much the same situation at Penn. He detested maneuvering with or around deans and he continued to play the role of social creature. Scientists were the new thing, Faustian figures able to create worlds and fashionable to show off on the Main Line. Lewis hated being shown off. There was tension at home with his wife as well. How much of that came from his research frustrations, how much because his wife liked the Philadelphia society that he wanted no part of, how much because his wife simply wanted more of him, it is impossible to know.

One research project in particular seemed to be going well, and he wanted to attend to it, and give up everything else. He envied not only Avery's ability to concentrate on one thing but also his opportunity to do so. For Lewis everything seemed to press upon him. Indeed, everything seemed ready to explode.

In 1922 Iowa offered him the position again. This time he accepted. He felt a responsibility to leave Phipps in good shape and recruited Eugene Opie from

Washington University to replace him. Opie had if anything an even greater reputation than his own.

Flexner had always respected Lewis, yet there had always been a gap between them. They had been getting closer. At one point Flexner wrote him, "Some time do let me take a little trouble for you." Lewis confided in return, "You have stood in the light of 'father' to me." Now, when Opie agreed to replace Lewis at Phipps, Flexner seemed to see Lewis in a new light, capable not only as a scientist but as someone who could play another game well, telling him, "Opie surprised me. I supposed him a fixture in St. Louis. If you prepared the way for so good a man at the Phipps Institute, you may well feel gratified."

Lewis did not feel gratified. He remained restless and discontented. What he really wanted was to be shut of everything, everything except the laboratory. Perhaps without quite realizing it, he had been moving toward a crisis. Again he told Flexner that what he really wanted more than anything was to work at his laboratory bench. He was shut of Philadelphia. Now he had to get himself shut of Iowa.

In January 1923 he wrote Flexner, "It is quite clear to me today that I am entitled again for a short time at least to cultivate my personal interests…. I am giving up my place here and all of my plans for a future in Philadelphia…. I have written to President Jessop, of the University of Iowa, telling him of my change of plan and that that is also in the discard…. I am going to try my best to develop the opportunity for a year of study in some place as far removed from any question of 'affairs or position' as possible…. I cannot make it too plain that for the coming year I am seeking no position in the conventional sense of the word. What I really want is…the rehabilitation of a more or less vacant mind."

He was quitting everything, walking away from position, prestige, and money, walking into the wilderness with no guarantee of anything, stripping himself naked at the age of forty-four with a wife and two children. He was free.

Where he had been happiest in his life, where he had done the best science, had been at the Rockefeller Institute. The institute had created a Division of Animal Pathology in Princeton, close to Philadelphia. Theobald Smith, the same man who had rejected Welch's offer to become the first head of the Rockefeller Institute itself, had left Harvard and now headed this division. Smith had also been Lewis's first mentor, and had recommended him so many years before to Flexner. Lewis explored with Smith the possibility of going to Princeton. Smith first wanted assurances that Lewis wanted "to go to work again and…that all this advertising business had not gone to [his] head." Lewis eagerly gave them.

Flexner had urged him to take the Iowa job but replied, "I shall be rejoiced to see you return to the lab where you so naturally belong and in which you will do your best, most lasting, and effective work. It seems to me a crying pity that men who have given years to the necessary preparation for a lab career should be so ruthlessly drawn away from it and made to fill executive positions." He also told Lewis that Smith was "very pleased with the prospect of having you associated with him again."

Lewis asked for no salary whatsoever, just full access to the laboratories for a year. Flexner gave him $8,000, his salary at Phipps, and a budget for laboratory equipment, filing cabinets, 540 animal cages for breeding and experimenting, and three assistants. He told Lewis he would expect nothing whatsoever from him for the year, and then they could talk again about the future.

Lewis was ecstatic: "To start with Dr. Smith again on any possible basis, takes me back to 1905—on I hope certainly a new higher level…. You will not find me lacking in effort…. I am most fortunate and happy in being able to regard myself as entirely in the hands of you two men who, without distinction, and excepting only my parents, have given me the means and the education and the direction. Few have such a chance to renew their youth. My only hope is that I continue to deserve your confidence."

Princeton then was still surrounded by farms and countryside. It was peaceful, almost bucolic. The Rockefeller facility was not far from the campus of Princeton University, which was still transforming itself from the finishing school for gentlemen that F. Scott Fitzgerald described to the intellectual center that it would not fully become until a decade later, when Flexner's brother Abraham started the Institute for Advanced Study with Einstein as its first member. But if the setting was bucolic, if crops grew and assorted animals—not simply guinea pigs or rabbits but cattle, pigs, and horses—grazed only yards from the laboratories, the Rockefeller part of Princeton brewed intensity. Smith was continuing to produce world-class work. Just being around him energized Lewis. For the first time since he left the Rockefeller Institute, he felt at home. Yet he was alone. His wife and children stayed in Philadelphia. He was alone to work, alone to go to the laboratory in the middle of the night, alone with his thoughts.

In nearly a year, however, he produced nothing. Flexner and he did discuss his future. He was forty-five years old. His next move would likely be his last one. He could still return to the University of Pennsylvania if he chose. He did not so choose, telling Flexner, "I can only repeat that I am free of any entanglement there, even of sentiment." The University of Iowa had also extended its offer once again and once again raised the salary. But what he wanted was to stay at Rockefeller. He had made little progress on the tuberculosis project he had brought with him from Philadelphia, but, more importantly, he had, he assured himself as much as Flexner, rejuvenated himself. He informed Flexner that, despite the higher salary at Iowa, "My only interest in 'position' is [here]."

Lewis's presence fitted perfectly into Flexner's own plans. Flexner explained, "I have always believed that our departments should not be one man affairs." In New York a dozen or more extraordinary investigators led groups of younger researchers, each group working on a major problem. The Princeton location had not developed similarly; beyond Smith's own operation, it had not filled out. Flexner told Lewis, "Your coming…[offers] the first chance to make a second center there."

Further, Smith would turn sixty-five that year. Flexner and Smith and even Welch hinted to Lewis that he might succeed Smith when he retired. Flexner suggested that Lewis stay one more year under a temporary arrangement, and then they would see.

Lewis told Flexner, "I am secure as I never was before." He believed he was home. It would be his last home.

If Lewis was going to build a department, he needed a young scientist—someone with more than just laboratory skills, someone with ideas. His contacts in Iowa urged him to try a young man they thought would make a mark.

Richard Shope was the son of a physician who was also a farmer. He had gotten his medical degree at the University of Iowa, then spent a year teaching pharmacology at the medical school and experimenting on dogs. An outstanding college track athlete, tall, a man's man at ease with himself—something Lewis never quite seemed to be—Shope always maintained contact with the wild, with the forest, with hunting, not only in the laboratory but with a gun in his hands. His mind had a certain wildness, too, like a small boy playing with a chemistry set hoping for an explosion; he had more than an inquiring mind, he had an original one.

Years later Thomas Rivers, the virologist who not only succeeded Cole as head of the Rockefeller Institute Hospital but served as president of four different scientific associations, said, "Dick Shope is one of the finest investigators I have ever seen…. A stubborn guy, and he is tough,…Dick would no sooner start to work on a problem than he would make a fundamental discovery. It never made one bit of difference where he was." In World War II, Rivers and Shope landed on Guam soon after combat troops secured it (in Okinawa they would come under fire) to investigate tropical diseases that might threaten soldiers. While

there, Shope occupied himself by isolating an agent from a fungus mold that mitigated some viral infections. Ultimately he was elected to membership in the National Academy of Sciences.

Yet even with Shope's help, Lewis's work did not go well. It was not for lack of intelligence on Lewis's part. Shope knew Welch, Flexner, Smith, Avery and many Nobel laureates well, yet he considered Lewis a notch above; like Aronson, the prize-winning scientist who had worked at the Pasteur Institute and knew Lewis at Penn, Shope considered Lewis the smartest person he ever met.

Lewis had reached some tentative conclusions in Philadelphia about tuberculosis. He believed that three, and possibly four, inherited factors affected the natural ability of guinea pigs to produce antibodies—i.e., to resist infection. He had planned to unravel precisely what the nature of these factors was. This was an important question, one that potentially went far beyond tuberculosis to a deep understanding of the immune system.

But when he and Shope repeated the Philadelphia experiments they got different results. They examined every element of the experiments to see what might explain the differences and repeated them again. Then they repeated the process and the experiments again. Again they got differing results, results from which it was impossible to draw a conclusion.

Nothing in science is as damning as the inability of an outside experimenter to reproduce results. Now Lewis himself could not reproduce the results he had gotten in Philadelphia, results he had depended upon. Much less could he build upon and expand them. He had run into a wall.

He began plugging away at it. Shope too plugged away at it. Both of them had the tenacity to stay after a thing. But they made no progress.

More distressing to Smith and Flexner, who watched closely, was the way Lewis was approaching the problem. His failures seemed to confuse him. Unlike Avery, who broke his problems down into smaller ones that could be solved and who learned from each failure, Lewis seemed simply to be applying brute force, huge numbers of experiments. He sought to add other scientists with particular expertise to his team, but he did not define what precise role new people would play. Unlike Avery, who recruited people with specific skills to attack a specific question, Lewis seemed simply to want to throw resources at the problem, hoping someone would solve it.

He seemed desperate now. Desperate men can be dangerous, and even feared, but they are rarely respected. He was losing their respect, and with that would go everything.

As Lewis approached the end of his third year in Princeton, Smith confided his disappointment to Flexner: "He is perhaps aiming higher than his training and equipment warrant and this results in a demand to surround himself with technically trained chemists, etc. This is what Carrel"—Alexis Carrel at the Rockefeller Institute in New York, who had already received the Nobel Prize—"is doing but Carrel has another type of mind and gets results from his organization. A closely-knit group requires that the ideas come from the head man."

Nor did Lewis seem to recognize as worth pursuing potentially promising side questions his experiments raised. His explanation for his failures, for example, was that the diet of the guinea pigs was different in Princeton than it had been in Philadelphia. This was potentially significant, and it was possible he was correct. The relationship between diet and disease had been noted before but chiefly in terms of outright diet deficiencies that directly caused such diseases as scurvy and pellagra. Lewis was thinking about far more subtle and indirect linkages between diet and disease, including infectious disease. But instead of pursuing this line of inquiry, Lewis continued to pound away at his old one. He did so without result. He reported to the Board of Scientific Directors, "I have planned no change in my line of work for the coming year."

Flexner wanted to hear something different. Lewis was making himself a marked man, marked in no good way. It wasn't Lewis's failures that did so; it was the manner in which he was failing—dully, without imagination, and without the gain of knowledge elsewhere. Lewis had shown enough, or failed to show enough, that Flexner had already made one judgment. When Smith retired, Lewis would not replace him.

Flexner wrote him a chilling letter. In a draft Flexner was brutal: "There is no obligation expressed or implied in the Institute's relation to you, or your relation to the Institute, beyond this service year period…. As the Iowa chair is still open and you are very much wanted to fill it, and the University of Iowa would make a supreme effort to secure you, I believe it due you to be minutely informed just what the position the Board of Scientific Directors has taken with reference to you…. There was doubt expressed about your future in general."

Flexner did not send that letter. It was too harsh even for him. Instead he simply informed Lewis that the board was "unequivocally opposed to the appointment of one primarily a human pathologist"—which Lewis was—"to the directorship of the Department of Animal Pathology," and that therefore he would not replace Smith. But he also warned Lewis that the board would not elevate him to the rank of a "member" of the institute, the equivalent of a tenured full professor. He would remain only an associate. His appointment expired in six months, in mid-1926, and the board would give him a three-year appointment into 1929. Perhaps he should accept the Iowa offer after all.

In Faust, Goethe wrote, "Too old am I to be content with play, / Too young to live untroubled by desire."

Lewis was too old to play, too young to be untroubled by desire. Reading Flexner's letter had to have been a crushing blow. He had expected to be told he would succeed Smith. He had been certain he would be elevated to the rank of "member" of the institute. From the laboratory, he drew his identity, and yet now the laboratory gave him not sustenance but cold rebuff. The two men he most admired in the world, two men he had thought of as scientific fathers—one of whom he regarded as almost a father—had judged that he lacked something, lacked a thing that would entitle him to join their brotherhood, to become a member.

By now Lewis's family had moved to Princeton, but his marriage was no better. Perhaps the fault lay entirely within him, within what was now not so much a failing ambition as a failing love.

He declined the Iowa job once again. He had always been willing to gamble. Now he gambled on proving himself to Flexner and Smith.

For the next year and a half, he worked, at first feverishly but then…Something in him made him withdraw. His son Hobart, then fourteen years old, was having difficulties emotionally and difficulties in school, although a change of schools seemed to help. And Lewis had a car accident that broke his concentration.

He accomplished little. Again his failures were not like those that Avery would confront for nearly a decade. Avery was attacking the most fundamental questions of immunology and, ultimately, genetics. From each failed experiment he learned, perhaps not much but something. And what he was learning went beyond how to fine-tune an experiment. What he was learning from his failures had large ramifications that applied to entire fields of knowledge. One could argue that none of Avery's experiments failed.

Lewis was simply foundering. He had spent hour after hour in the laboratory. It had always been his favorite place, his place of rest, of peace. It gave him no

Lewis was simply foundering. He had spent hour after hour in the laboratory. It had always been his favorite place, his place of rest, of peace. It gave him no peace now. He began to avoid it. His marriage was no better; his wife and he barely communicated. But he found other things to do, gardening, carpentry, things he had never attended to before. Perhaps he hoped getting away would clear his mind, allow him to see through the fog of data. Perhaps he thought that. But his mind never seemed to go back to the problem.

In August 1927, he confessed to Flexner, "I feel I have not been very productive—certainly I feel that I have had a meager return for a lot of hard work—but some way everything I have touched in the hope it would go faster than the very slow jobs I have been on for so long has either been a wash-out or turned into some other big [problem]."

Then he said something even more striking. He was no longer going to the laboratory: "I am spending most of my time on an old house and garden I have gotten hold of."

Flexner replied, for him, gently. Lewis was now more than a year into his three-year contract extension. Flexner warned that his tuberculosis work "has been under way as your major problem for four years. The outcome, even if continued many years longer, is uncertain and the yield of side issues, often the most fruitful of all, has been small. I do not believe in sticking to a rather barren subject. One of the requisites of an investigator is a kind of instinct which tells him quite as definitely when to drop, as well as when to take up a subject. Your time can be more promisingly employed along another major line."

Lewis rejected the advice.

On September 30, 1918, J. S. Koen, a veterinarian with the federal Bureau of Animal Industry, had been attending the National Swine Breeders Show in Cedar Rapids. Many of the swine were ill, some of them deathly ill. Over the next several weeks he tracked the spread of the disease, the deaths of thousands of swine, and concluded they had influenza—the same disease killing humans. Farmers attacked his diagnosis; it could cost them money. Nonetheless, a few months later he published his conclusion in the Journal of Veterinary Medicine: "Last fall and winter we were confronted with a new condition, if not a new disease. I believe I have as much to support this diagnosis in pigs as the physicians have to support a similar diagnosis in man. The similarity of the epidemic among people and the epidemic among pigs was so close, the reports so frequent, that an outbreak in the family would be followed immediately by an outbreak among the hogs, and vice versa, as to present a most striking coincidence if not suggesting a close relation between the two conditions."

The disease had continued to strike swine in the Midwest. In 1922 and 1923, veterinarians at the Bureau of Animal Industry transmitted the disease from pig to pig through mucus from the respiratory tract. They filtered the mucus and tried to transmit the disease with the filtrate. They failed.

Shope observed swine influenza during a trip home to Iowa. He began investigating it. Lewis helped him isolate a bacillus virtually identical to B. influenzae and named it B. influenzae suis. Shope also replicated the experiments by the veterinarians and began to move beyond them. He found this work potentially very interesting.

Lewis's own work, however, continued to founder. Flexner and Smith had kept their assessments of it confidential. As far as the rest of the world—even including Shope—knew, they held him in the highest regard. In June 1928, for the fourth time, the University of Iowa made Lewis still another offer, an outstanding offer. Flexner urged him to accept. Lewis replied that his "compelling" interest remained at Princeton.

Flexner called Smith to discuss "our future Lewis problem." They could not understand him. Lewis had produced nothing in five years. They in fact did have the highest regard for him—just no longer for his laboratory skills. Flexner still believed that Lewis had true gifts, broad and deep vision, an extraordinary ability to communicate and inspire. Flexner still believed that Lewis could become a dominant figure in medical teaching and research. Of that field, he could still be master.

Lewis had shown at least some of what Welch had. Perhaps he had much of it. And perhaps in the end he also lacked what Welch lacked, the creativity and organizational vision to actually run a major laboratory investigation.

Two days after Flexner and Smith talked, Flexner sat down with Lewis. He was blunt. But he assured Lewis the bluntness "was a conclusion placed before [you] in all kindness." The prospect of Lewis's becoming a member of the institute was a distant dream. His research had been "sterile" for the past five years. Unless it yielded something solid and important in the next year, he would not be reappointed even to a temporary position. He was approaching fifty years of age and Flexner told him, "The chances of [your] changing in the direction of more fertile ideas [are] small." He also said Lewis had not acted with "energy and determination." He had not fought. Then, most painfully, Flexner said he was "not essentially of the investigator type."

Flexner urged him—indeed, all but ordered him—to take the Iowa position. It was an extraordinary offer: $10,000 a year salary—more than double the median income for physicians—and a free hand in organizing a department. Flexner assured him that he still believed he had great gifts. Great gifts. He could still make a huge contribution, a significant and important contribution. At Iowa he could become a major figure, inspire respect, and be far happier.

Lewis listened quietly and said little. He did not remonstrate or argue. He was almost passive, yet firm. There was a cold, unreachable center within him. Regarding Iowa, that was settled. He would reject the offer. He had no interest in anything but the laboratory. He hoped in the next year to justify reappointment.

After the conversation Flexner was frustrated, frustrated and angry. "I put all the pressure I could upon him but without avail," he wrote Smith. "My notion is our obligations to Lewis are now fulfilled and that unless a great change takes place it will be our duty to act decisively next spring. He has been a real disappointment to me…. I left no doubt as to the risk he takes, and he left me no doubt that he understands and accepts that risk."

A few months before Flexner's brutal conversation with Lewis, Hideyo Noguchi had gone to Ghana to investigate yellow fever. Noguchi was as close to a pet as Flexner had. They had first met almost thirty years earlier, when Flexner was still at Penn and gave a speech in Tokyo. Uninvited, Noguchi had followed him to Philadelphia, knocked on his door, and announced he had come to work with him. Flexner found a position for him, then took him to the Rockefeller Institute. There Noguchi had developed an international reputation, but a controversial one.

He had done real science with Flexner, for example, identifying—and naming—neurotoxin in cobra venom. And he had claimed even more significant breakthroughs on his own, including the ability to grow polio and rabies viruses. (He could not have grown them with his techniques.) Rivers, also at Rockefeller and the first person to demonstrate that viruses were parasites on living cells, questioned those claims. Noguchi responded by telling him that a man who had done research for a long time had scars that he could never get rid of. Later Rivers discovered a significant unrelated mistake in his own work and confessed to Noguchi that he planned to retract his paper. Noguchi advised against it, saying it would take fifteen years for anyone else to find out he was wrong. Rivers was astounded, later saying, "I don't think Noguchi was honest."

Noguchi's most important claim, however, was to have isolated the pathogen that caused yellow fever. It was a spirochete, he said, a spiral-shaped

bacterium. Years before, Walter Reed had seemed to prove that a filterable virus caused the disease. Reed was long dead, but others attacked Noguchi's findings. In response to one such attack, Noguchi wrote Flexner, "[H]is objections were very unreasonable…. I am not certain whether these Havana men are really interested in scientific discussion or not."

Noguchi did not lack courage. And so he went to Ghana to prove himself correct.

In May 1928 he died there, of yellow fever.

Noguchi's death came one month before Flexner and Lewis had their conversation. It attracted international attention, made the front pages of newspapers around the world, inspired glowing tributes in all the New York papers. For Noguchi, it was a Viking funeral, a blazing glory that obliterated all questions about the quality of his science.

The entire Rockefeller Institute reeled from the loss. Despite any scientific controversies, Noguchi had been buoyant, enthusiastic, always helpful, universally liked. Both Flexner and Lewis suffered in particular. Noguchi had been, literally, like a son to Flexner. Lewis had known him well, very well, going back to his first happy days in New York.

Noguchi's death also left open the question of whether he had in fact isolated the pathogen that caused yellow fever. The institute wanted that question answered.

Shope volunteered to do it. He was young and believed himself invulnerable. He wanted action. He wanted to investigate yellow fever.

Flexner refused to allow him to go. Shope was also only twenty-eight years old, with a wife and an infant son. It was too dangerous.

Then Lewis volunteered. The scientific question remained, and it was a major one. Who was more qualified to investigate it than he? He had proven himself expert at cultivating bacteria and, even more important, he had proven that polio was a viral disease. Noguchi notwithstanding, it seemed a virus did cause yellow fever. And, important as the question was, it also had built-in limits; it was the kind of narrow and focused science that Flexner still had faith in Lewis to answer.

Lewis's wife, Louise, objected. The laboratory had taken him away from her and their two children enough. She was already furious at him for once again declining the Iowa position. But this…this was something else.

Lewis had never listened to her. They had not had a real marriage for a long time. For him, this solved every problem. If he succeeded, he would restore himself in Flexner's eyes. Five years before he had resigned from the Phipps Institute and simultaneously withdrawn his acceptance of the Iowa offer without any other prospects. All that he had done in order to do the one thing he loved, return to the laboratory. He was willing to gamble again. He was energized again. And he was more desperate than ever.

Instead of Ghana, however, he would go to Brazil. A particularly virulent strain of yellow fever had surfaced there.

In late November 1928, Flexner came to Princeton to see Lewis off. Flexner's attitude toward him had already seemed to change. He was willing again to talk about the future. He also wanted, he said, to "learn about Shope's Iowa work." Shope had recently observed an extraordinarily violent influenza epizootic—an epidemic in animals—in swine. The overall mortality of the entire local pig population had reached 4 percent; in some herds mortality had exceeded 10 percent. That very much sounded like the influenza pandemic in humans a decade earlier.

A month later Lewis sailed for Brazil. On January 12, 1929, Frederick Russell, the colonel who had organized much of the army's scientific work for Gorgas and who now worked for a Rockefeller-sponsored international health organization, received a cable saying Lewis had arrived and was well. The institute relayed the news to his wife, who had been so angry at Lewis's departure that she had wanted nothing to do with the Rockefeller Institute and returned to Milwaukee, where both she and Lewis had grown up. Each week Russell was to receive news of Lewis and send it on to her.

Lewis located his laboratory in Belem, a port city on the Para River, seventy-two miles from the ocean but the main port of entry into the Amazon Basin. Europeans settled there in 1615, and a rubber boom in the nineteenth century had filled the city with Europeans while Indians went back and forth into the interior in dugout canoes. It was steamy, equatorial, and received as much precipitation as any area in the world.

On February 1, Lewis wrote Flexner, "Arrived here on Tuesday and went right to work…. [H]ave been setting up my own shop here, awaiting materials, having additional screening prepared, etc…. Should be started at something by early next week I hope."

He seemed the old Lewis, energetic and confident. And each week Russell received a two-word wire: "Lewis well." He received them through February, March, April, and May. But if Lewis was well, he sent no word about his research; he gave no sign that work was going well.

Then, on June 29, Russell sent a note hand-delivered by messenger to Flexner: "The following message from Rio de Janeiro, regarding Dr. Paul Lewis, was sent to me today, with the request that it be delivered to you. 'Lewis's illness began on June 25th. Doctors state it to be yellow fever. Condition of June 28th, temperature 103.8, pulse 80…' The Foundation is sending the message to Dr. Theobald Smith and also to Mrs. Lewis at Milwaukee."

Even as Russell sent that note to Flexner, Lewis was in agony. He had vomited violently, the nearly black vomit of the severe cases; the virus attacked the mucosa in his stomach, which bled, giving the vomit the dark color; it attacked the bone marrow, causing violent aching. An intense, searing headache gave him no rest, except perhaps when he was delirious. He had seizures. His colleagues packed him in ice and tried to keep him hydrated but there was little else they could do.

The next day another wire came: "Lewis condition critical. Anuria supervened Saturday."

His kidneys were failing and he was producing no urine. All the toxins that the body normally rid itself of were now building up in his system. Later that same day, Russell received a second wire: "Lewis on fourth day of illness. Marked renal involvement." He was becoming jaundiced, taking on the classic color that gave the disease its name. Symptom by symptom, step by step his body was failing.

June 30, 1929, was a Sunday. All day Lewis suffered, writhed in delirium. He went into a coma. It was his only relief. It was the fifth day of his illness. There would not be a sixth.

Shortly before midnight Dr. Paul A. Lewis found release.

An unsigned wire to Russell reported, "Typical yellow fever. Probably laboratory infection. Wire instructions regarding body."

Shope walked down Maple Street on the edge of the Princeton campus to inform Lewis's wife, who had come back from Milwaukee, and son Hobart, now a

Shope walked down Maple Street on the edge of the Princeton campus to inform Lewis's wife, who had come back from Milwaukee, and son Hobart, now a college student who had remained in Princeton.

Lewis's widow gave simple and explicit instructions. She was returning immediately to Milwaukee and wanted the body shipped directly there, where those who cared about Paul were. She specifically stated that she wanted no memorial service held at the Rockefeller Institute, in either New York or Princeton.

There was none.

Shope accompanied the body to Wisconsin. The business manager of the Rockefeller Institute asked him, "I wonder if you could arrange when you arrive to order some flowers for the service for Dr. Lewis."

The flowers came, with a card signed "the Board of Scientific Directors of the Rockefeller Institute."

Lewis's daughter, Janet, wrote the thank you note, addressing it "Dear Sirs." Her mother could not bring herself to have any contact with the institute, particularly a thank you note. The institute paid Lewis's salary to her through June 1930 and also paid his son Hobart's college tuition. (Like his grandfather and aunt Marian, the first woman to graduate from Rush Medical College in Chicago, he became a physician—but a clinician, not a scientist.)

In the next report to the Board of Scientific Directors of the Rockefeller Institute—a board which now included Eugene Opie, whom Lewis had recruited as his successor at Phipps—Flexner noted that one scientist's resignation "which is much regretted, left the study of light phenomena unprovided for."

Lewis had originally suggested that work to Flexner. Flexner mentioned a "recrudescence of poliomyelitis." Lewis had proved that a filterable virus caused that disease.

Flexner went through item after item concerning the institute. He pointed out "a pressing problem was the one in connection with the still unfinished work of Dr. Noguchi." He made no mention of Paul A. Lewis, no mention of Dr. Lewis at all.

Later Flexner received Lewis's autopsy report and news that researchers at the institute in New York had succeeded in transmitting Lewis's virus—they called it "P.A.L."—to monkeys and were continuing experiments with it. Flexner wrote in reply, "Thank you for sending me the report on the comparison of the Rivas and P.A.L. strains of yellow fever virus. At your convenience I should like to talk over the report with you. Dr. Cole thinks white paint and some other improvements desirable in your animal quarters. Has he spoken with you about them?"

Lewis had worked with deadly pathogens his entire adult life and had never infected himself. Since Noguchi's death everyone working with yellow fever took special care.

In the five months Lewis worked in Brazil he did not report any details of his research and his laboratory notes provided almost no information about it. He died from a laboratory accident. Somehow he gave yellow fever to himself.

Shope later told his sons a rumor that Lewis, who smoked often, had somehow contaminated a cigarette with the virus and smoked it. The virus entered the bloodstream through a cut on his lip. David Lewis Anderson recalls that his father, Lewis's friend in Philadelphia, also blamed cigarettes for Lewis's death.

Three years earlier Sinclair Lewis, no relation, won the Pultizer Prize for his bestselling novel Arrowsmith, a novel about a young scientist at a fictionalized version of the Rockefeller Institute. Everyone in medical science, especially at the institute, knew that novel. In it the main character's wife dies from smoking a cigarette contaminated by a deadly pathogen.

Flexner wrote an obituary of Lewis for Science in which he referred to "the important observations made by him in association with Sewall Wright on the hereditary factors in research in tuberculosis." Lewis's work with Wright had been carried out in Philadelphia; Flexner made no mention of anything Lewis had done in the five years since his return to the institute.

Meanwhile, Shope returned to Iowa to explore further this swine influenza, to observe still another epidemic among pigs.

In 1931, two years after Lewis's death, Shope published three papers in a single issue of the Journal of Experimental Medicine. His work appeared in good company. In that same issue were articles by Avery, one of the series on the pneumococcus that would lead to his discovery of the transforming principle; by Thomas Rivers, the brilliant virologist; and by Karl Landsteiner, who had just won the Nobel Prize. All of these scientists were at the Rockefeller Institute.

Each of Shope's articles was about influenza. He listed Lewis as the lead author on one. He had found the cause of influenza, at least in swine. It was a virus. We now know that the virus he found in swine descended directly from the 1918 virus, the virus that made all the world a killing zone. It is still unclear whether humans gave the virus to swine, or swine gave it to humans, although the former seems more likely.

By then the virus had mutated into mild form, or the swine's immune systems had adjusted to it, or both, since the virus alone seemed to cause only mild disease. Shope did demonstrate that with B. influenzae as a secondary invader it could still be highly lethal. Later he would show that antibodies from human survivors of the 1918 pandemic protected pigs against this swine influenza.

Shope's work was momentous and provocative. As soon as his articles appeared, a British scientist named C. H. Andrewes contacted him. Andrewes and several colleagues had been expending all their efforts on influenza, and they found Shope's articles compelling. Andrewes and Shope became close friends; Shope even took him hunting and fishing where he had vacationed since he was six years old, at Woman Lake, Minnesota.

In England in 1933, during a minor outbreak of human influenza, Andrewes, Patrick Laidlaw, and Wilson Smith, largely following Shope's methodology, filtered fresh human material and transmitted influenza to ferrets. They found the human pathogen. It was a filter-passing organism, a virus, like Shope's swine influenza.

Had Lewis lived, he would have coauthored the papers with Shope, and even added breadth and experience to them. He would have helped produce another of the seminal papers in virology. His reputation would have been secure. Shope was not perfect. For all his later accomplishments in influenza and in other areas, some of his ideas, including some of those pertaining to influenza, were mistaken. Lewis, if energized and once again painstaking, might have prevented those errors. But no matter.

Shope was soon made a member of Rockefeller Institute. **Lewis would likely have also been made a member. He would have been invited into the inner sanctum. He would have had all that he wanted. He would have belonged to the community of those who do science. One could consider Lewis, in a way most personal to him, the last victim of the 1918 pandemic.**

Dr. Walter Ian Lipkin (born 1952)

Moved to Dr. Walter Ian Lipkin (born 1952).

Dr. Walter Ian Lipkin (born 1952)

Wikipedia W. Ian Lipkin

Full name : "Walter Ian Lipkin" https://www.ancestry.com/discoveryui-content/view/26119798:62209?tid=&pid=&queryId=d1459f171d80ba14a57441ebee439753&_phsrc=bis127&_phstart=successSource

ASSOCIATIONS

- **Dr. Tracey S. McNamara (born 1954)** - Found the Birds that tested positive for West Nile Virus in 1999, launching the **West Nile Virus discovery in the United States (1999)**
- **Dr. Judy Anne Mikovits (born 1958)** and **Francis William Ruscetti (born 1943)** , who both proposed XMRV - Dr. Lipkin is known as "the scientist who put the nail in XMRV's coffin
- **Dr Anthony Stephen Fauci (born 1940)** ([HK0050][GDrive] : *"Lipkin has earned the reputation of a "master virus hunter" for to his speed and innovative methods of identifying new viruses, and has been lauded by National Institute of Allergy and Infectious Diseases director [**Dr Anthony Stephen Fauci (born 1940)**]. ")*
- **Dr. Peter Daszak (born 1965)** (([HK0050][GDrive] : "Dr. Lipkin is Honorary Director of the Beijing Infectious Disease Center, Chair of the Scientific Advisory Board of the Institut Pasteur de Shanghai and serves on boards of the Australian Biosecurity Cooperative Research Centre for Emerging Infectious Disease, the Guangzhou Institute for Biomedicine and Health, the **EcoHealth Alliance** [EcoHealth President is **Dr. Peter Daszak (born 1965)**] ....")
- **Dr. Duane J. Gubler (born 1939)** (Worked together to identify West Nile in 1999 - See [HN01I9][GDrive])
-

Saved Wikipedia (Feb 16, 2021) - W. Ian Lipkin

[HK0050][GDrive]

Born 18 November 1952 (age 68) Chicago, Illinois, United States

Education University of Chicago Laboratory School

Alma mater

- Sarah Lawrence College
- Rush Medical College

Scientific career Fields

- Chronic Disease
- Infectious Disease
- Pathogen Discovery
- Epidemiology

Institutions

- Scripps Research Institute
- University of California, Irvine
- Columbia University

Website www.mailman.columbia.edu

W. Ian Lipkin (born November 18, 1952) is the John Snow Professor of Epidemiology at the Mailman School of Public Health at Columbia University and a professor of Neurology and Pathology at the College of Physicians and Surgeons at Columbia University. Lipkin is also director of the Center for Infection and Immunity, an academic laboratory for microbe hunting in acute and chronic diseases.

Education

Lipkin was born in Chicago, Illinois, where he attended the University of Chicago Laboratory School and was president of the student board in 1969. He relocated to New York and earned his BA from Sarah Lawrence College in 1974. At Sarah Lawrence, he "felt that if I went straight into cultural anthropology after college I'd be a parasite. I'd go someplace, take information about myths and ritual, and have nothing to offer. So I decided to become a medical anthropologist and try to bring back traditional medicines. Suddenly I found myself in medical school."[1] Returning to his hometown Chicago, Lipkin earned his MD from Rush Medical College, in 1978. He then became a clinical clerk at the UCL Institute of Neurology in Queen Square, London, on a fellowship, and an intern in Medicine at University of Pittsburgh (1978–1979). He completed a residency in Medicine at University of Washington (1979–1981), and completed a residency in Neurology at University of California, San Francisco (1981–1984). He conducted postdoctoral research in microbiology and neuroscience at The Scripps Research Institute, from 1984 to 1990, under the mentorship of Michael Oldstone and Floyd Bloom. In his six years at Scripps, Lipkin became a senior research associate upon completing his postdoctoral work, and was president of the Scripps' Society of Fellows in 1987.

Career

Lipkin has earned the reputation of a "master virus hunter" for to his speed and innovative methods of identifying new viruses, and has been lauded by National Institute of Allergy and Infectious Diseases director [**Dr Anthony Stephen Fauci (born 1940)**]. As director of the Center for Infection and Immunity at the Mailman School of Public Health; Lipkin, from the onset of the COVID-19 pandemic, has led CII researchers collaborating with researchers at Sun Yat-sen University in China. Dr. Lipkin had also advised the Chinese government and the World Health Organization (WHO) during the 2002–2004 SARS outbreak.[2][3] Dr. Lipkin described his own infection with the SARS-CoV-2 virus, beginning mid-March 2020, which resulted in a case of COVID-19 and necessitated his recovering from the illness at home, on the podcast This Week in Virology.[4]

Lipkin was the Louise Turner Arnold Chair in the Neurosciences[5] at the University of California, Irvine from 1990 to 2001 and was recruited shortly thereafter by Columbia University. He began his current tenure at Columbia as the founding director of the Jerome L. and Dawn Greene Infectious Disease Laboratory from 2002 to 2007, which transitioned to the John Snow Professorship he holds at present.

A physician-scientist, Lipkin is internationally recognized for his work with West Nile virus and SARS, as well as advancing pathogen discovery techniques by developing a staged strategy using techniques pioneered in his lab. These molecular biological methods, including MassTag-PCR, the GreeneChip diagnostic, and High Throughput Sequencing, are a major step towards identifying and studying new viral pathogens that emerge locally throughout the globe. A major node in a global network of investigators working to address the challenges of pathogen surveillance and discovery, Dr. Lipkin has trained over 30 internationally based scientists in these state-of-the art diagnostic techniques.

Lipkin is the director for the Center for Research in Diagnostics and Discovery (CRDD), under the NIH Centers of Excellence for Translational Research program.[6] The CRDD brings together leading investigators in microbial and human genetics, engineering, microbial ecology and public health to develop insights into mechanisms of disease and methods for detecting infectious agents, characterizing microflora and identifying biomarkers that can be used to guide clinical management. Lipkin was previously the Director of the Northeast Biodefense Center,[7] the Regional Center of Excellence in Biodefense and Emerging Infectious Diseases which comprised 28 private and public academic and public health institutions in New York, New Jersey and Connecticut. Within this consortium, his research focused on pathogen discovery, using unexplained hemorrhagic fever, febrile illness, encephalitis, and meningoencephalitis as targets. He is the Principal Investigator of the Autism Birth Cohort, a unique international program that investigates the epidemiology and basis of neurodevelopmental disorders through analyses of a prospective birth cohort of 100,000 children and their parents. The ABC is examining gene-environment-timing interactions, biomarkers and the trajectory of normal development and disease. Lipkin also directs the World Health Organization Collaborating Centre for Diagnostics in Zoonotic and Emerging Infectious Diseases, the only academic center, and one of two in the US (the other is CDC), that participates in outbreak investigation for the WHO.

Lipkin was co-chair of CDC Steering Committee of the National Biosurveillance Advisory Subcommittee (NBAS).[8] The NBAS was established in response to Homeland Security Presidential Directive 21 (HSPD-21),[9] "Public Health and Medical Preparedness."

He is Honorary Director of the Beijing Infectious Disease Center, Chair of the Scientific Advisory Board of the Institut Pasteur de Shanghai and serves on boards of the Australian Biosecurity Cooperative Research Centre for Emerging Infectious Disease, the Guangzhou Institute for Biomedicine and Health, the **EcoHealth Alliance** [EcoHealth President is **Dr. Peter Daszak (born 1965)**], Tetragenetics, and 454 Life Sciences Corporation.

Lipkin served as a science consultant for the film Contagion.[11] The film has been praised for its scientific accuracy.

Early career

While not quite a medical anthropologist, Lipkin specializes in infectious diseases and their neurological impact. His first professional publication came in 1979 during the time of his fellowship in London as a letter to the Editor at the Archives of Internal Medicine (now JAMA Internal Medicine), where he poses a potential correlation between eosinopenia and bacteremia in diagnostic evaluations for a bacteremic patient.[12] While at UCL, he worked with John Newsom-Davis, who was utilizing plasmapheresis to better understand myasthenia gravis, a neuromuscular disease.[13]

In 1981, Lipkin began his neurology residency and worked in a local San Francisco clinic, which was about the time AIDS began to affect the local city population. Because of the social view of homosexual people at the time, very few clinicians would see patients with these symptoms. He "was watching many patients fall ill with AIDS. It took years for scientists to discover the virus responsible for the disease... 'I saw all of this, and I said, 'We have to find new and better ways to do this.'"[14] It was during this epidemic that Lipkin took the approach of looking for a virus' genes instead of looking for antibodies in infected people as a way to speed up the diagnosis process. By the mid-1980s, Lipkin had published two papers specifically about AIDS research[15][16] and transitioned into utilizing a more pathological approach to virus identification. He identified AIDS-associated immunological abnormalities and inflammatory neuropathy, which he showed could be treated with plasmapheresis and demonstrated early life exposure to viral infections affects neurotransmitter function.

Bornavirus

In 1989, Lipkin was the first to identify a microbe using purely molecular tools.[17][18] During his time as Chair at UC Irvine, Lipkin published several papers throughout the decade dissecting and interpreting bornavirus.[19] Once it was apparent the viral infections could selectively alter behavior and steady state brain levels of neurotransmitter mRNAs, the next step was to look for infectious agents which could be used as probes to map anatomic and functional domains in the central nervous system (CNS).[20]

By the mid-1990s, it was asserted that "Borna disease is a neurotropic negative-strand RNA virus that infects a wide range of vertebrate hosts," causing

By the mid-1990s, it was asserted that "Borna disease is a neurotropic negative-strand RNA virus that infects a wide range of vertebrate hosts," causing "an immune-mediated syndrome resulting in disturbances in movement and behavior."[21] This led to several groups across the globe working to determine if there was a link between Borna disease virus (BDV) or a related agent and human neuropsychiatric disease.[22] The group was formally called Microbiology and Immunology of Neuropsychiatric Disorders (MIND) and the multicenter, multi-national group focused on using standardized methods for clinical diagnosis and blinded laboratory assessment of BDV infection.[23] After nearly two decades of inquiry, the first blinded case-controlled study of the link between BDV and psychiatric illness[24] was completed by the researchers at Columbia University's Center for Infection and Immunity in a joint effort that concluded there is no association between the two. Lipkin noted that "it was concern over the potential role of BDV in mental illness and the inability to identify it using classical techniques that led us to develop molecular methods for pathogen discovery. Ultimately these new techniques enabled us to refute a role for BDV in human disease. But the fact remains that we gained strategies for the discovery of hundreds of other pathogens that have important implications for medicine, agriculture, and environmental health."[25]

West Nile Virus

West Nile Virus in New York

In 1999, West Nile virus was reported in two patients in Flushing Hospital Medical Center in Queens, New York. Lipkin led the team identifying West Nile virus in brain tissue of encephalitis victims in New York State[14] It was determined potential routes for the spread of West Nile virus throughout New York (and the Eastern United States) originated from predominantly mosquitoes, but also possible from infected birds or human beings. There is a high likelihood the two international airports nearby the initial reported cases were also the initial points of entry into the United States.[26] During the five years after the first reported case, Lipkin worked on a study with the National Institutes of Health (NIH) and the Wadsworth Center at the New York State Department of Health (NYSDOH) to determine how a vaccine could be developed. While they had some success with the immunization of mice with prME-LPs,[27] as of 2018, there is still no human vaccine for WNV.[28]

SARS-CoV

Sars-corona

Chinese scientists first discovered the severe acute respiratory syndrome (SARS) coronavirus in February 2003, but due to initial misinterpretation of the data, the information of the correct agent associated with SARS was suppressed and the outbreak investigation had a delayed start. Advanced hospital facilities were at the greatest risk as they were most susceptible to virus transmission, so it was the "classical gumshoe epidemiology" of "contact tracing and isolation" that brought swift action against the epidemic.[29] Lipkin was requested to assist with the investigation by Chen Zhou, vice president of the Chinese Academy of Sciences and Xu Guanhua, minister of the Ministry of Science and Technology in China to "assess the state of the epidemic, identify the gaps in science, and develop a strategy for containing the virus and reducing morbidity and mortality."[30] This brought the development of Real-time polymerase chain reaction (qPCR) technology, which essentially allowed for the detection of infection at earlier time points as the process, in this instance, targets the N gene sequence and amplify the analysis in a closed system. This markedly reduces the risk of contamination during processing.[31] Test kits were developed with this PCR-based assay analysis[32] and 10,000 were hand-delivered to Beijing during the height of the outbreak by Lipkin, whereupon he trained local clinical microbiologists on the proper usage. He became ill upon his return to the U.S. and was quarantined.[33]

Lipkin was asked to join the Defense Science Board Task Force on SARS Quarantine Guidance during the height of the SARS outbreak between 2003 and 2004, to advise the U.S. Department of Defense on steps to domestically manage the epidemic. As part of the EcoHealth Alliance, Lipkin's center worked in conjunction with an NIH/NIAID grant[34] assessing bats as the reservoir for the SARS virus. 47 publications resulted from this grant, which also included assessment on Nipah, Hendra, Ebola, and Marburg viruses. This proved to be significant research on the overall study of viral reservoirs as it was determined that bats carry coronaviruses and either directly infect humans with an exchange of bodily fluid (such as a bite) or indirectly by infecting an intermediate host, such as swine.[35] Lipkin addressed a health forum in Guangzhou in January 2004 where China Daily reported him as saying: "SARS virus is probably rooted and spread by rats."[36]

In 2016, the Chinese government awarded him the International Science and Technology Cooperation Award, the nation's top science honor for foreign scientists,[37] and in January 2020, it awarded him a medal marking the People's Republic of China's 70th Anniversary, both awards for his work during the 2002–2004 SARS outbreak and in strengthening China's public health system.[38]

MERS-CoV

Middle East respiratory syndrome (MERS) was first reported in Saudi Arabia during June 2012 when a local man was initially diagnosed with acute pneumonia and later died of kidney failure. The early reports of the disease were similar to SARS as the symptoms are similar, but it was quickly determined these cases were caused by a new strain called MERS coronavirus (MERS-CoV). Given Lipkin's expertise with the SARS outbreak in China nearly ten years prior, the Saudi Arabian Ministry of Health granted Lipkin and his lab local access to animal samples related to the initial reported cases.[39] With the rare opportunity, Lipkin's team created a mobile lab able to fit in six pieces of personal luggage and was transported from New York to Saudi Arabia via commercial flight to complete the analysis of samples.[40]

It seemed unlikely that bats were directly infecting humans, as the direct physical interaction between the two is limited at best.[39] A study was completed in more local proximity, examining the diverse bat populations in southeastern Mexico and determining how diverse the viruses they carry could be.[41] However, it became apparent that dromedary camels were the intermediary in the transmission between bats and humans, since camel milk and meat are dietary staples in the Saudi Arabian region.[42] The instances of human-to-human transmission appeared to be isolated to case-patients and anyone in close direct contact with them, as opposed to a broad open-air transmission.[43] By 2017, it was determined that bats are most likely the evolutionary original source for MERS-CoV along with several other coronaviruses, though not all of those types of zoonotic viruses are direct threats to humans like MERS-CoV[44] and "[c]ollectively, these examples demonstrate that the MERS-related coronaviruses are high associated with bats and are geographically widespread."[45]

Myalgic Encephalomyelitis/Chronic Fatigue Syndrome (ME/CFS)

Myalgic Encephalomyelitis/Chronic Fatigue Syndrome (ME/CFS) is a chronic condition characterized by extreme fatigue after exertion that is not relieved by rest and includes other symptoms, such as muscle and joint pain and cognitive dysfunction. In September 2017, the NIH awarded a $9.6 million grant to Columbia University for the "CfS for ME/CFS" intended for the pursuit of basic research and the development of tools to help both physicians and patients effectively monitor the course of the illness.[46] This collaboration effort led by Lipkin includes other institutions, such as the Bateman Horne Center (Lucinda Bateman), Harvard University (Anthony L. Komaroff), Stanford University (Kegan Moneghetti), Sierra Internal Medicine (Daniel Peterson), University of California, Davis (Oliver Fiehn), and Albert Einstein College of Medicine (John Greally), along with private clinicians in New York City.[47]

The team of researchers and clinicians initially collaborated to de-link xenotropic murine leukemia virus-related virus (XMRV) to ME/CFS after the NIH requested research into the conflicting reports between XMRV and ME/CFS. The group "consolidated its vision with support from the Hutchins Family Foundation Chronic Fatigue Initiative (CFI) and a crowd-funding organization, The Microbe Discovery Project, to explore the role of infection and immunity in disease and identify biomarkers for diagnosis through functional genomic, proteomic, and metabolomic discovery."[48] The project will collect a large clinical database and sample repository representing oral, fecal, and blood samples from well-characterized ME/CFS subjects and frequency-matched controls collected nationwide over a period of several years. Additionally, researchers are working with ME/CFS community and advocacy groups as the project progresses.[49]

Acute flaccid myelitis (AFM)

Acute flaccid myelitis (AFM) is a serious condition of the spinal cord with symptoms including rapid onset of arm or leg weakness, decreased reflexes, difficulty moving the eyes, speaking, or swallowing may also occur. Occasionally numbness or pain may be present and complications can include trouble breathing. In August 2019, Lipkin and Dr. Nischay Mishra published a collaborative study with the CDC in analyzing serological data for serum and cerebrospinal fluid (CSF) samples of AFM patients.[50] The Lipkin team utilized high-density peptide arrays (also known as Serochips) to identify antibodies to EV-D68 in those samples. The technology was featured on the Dr. Oz Show in mid-September, illustrating how the enterovirus affects the CSF and the actual Serochip used to do the analysis.[51][52] In October, the University of California, San Francisco published a separate collaborative study with the CDC that confirmed the presence of antibodies to enterovirus in AFM patient CSF samples using phage display (VirScan).[53] "It's always good to see reproducibility. It gives more confidence in the findings for sure," commented Lipkin in an October 2019 CNN article. "This gives us more support of what we found."[54][55][56]

SARS-CoV-2

According to the Financial Times, Lipkin first learnt of COVID-19 from contacts in China, where it first emerged, in mid-December, and in early January he repeatedly urged his Chinese counterparts to publish the virus's genetic sequencing to aid research, and visited senior Chinese officials, including Premier Li Keqiang,[57] to discuss the disease.[58]

On January 29, 2020, Lipkin flew into Guangzhou, China to learn about the outbreak of SARS-CoV-2.[59] Lipkin met with the epidemiologist and pulmonologist Zhong Nanshan,[60] the lead advisor to the Chinese government during the outbreak.[61] Lipkin also worked with the China CDC to access blood samples from across the country for further study into the origin and spread of the virus.[62] Lipkin did not travel to Wuhan, the epicenter of the outbreak, due to fears that this would prevent him from returning to the United States.[63] On returning to the United States, Lipkin self-quarantined for 14 days.[64]Lipkin later contracted SARS-CoV-2 in New York City,[65] refusing to go to hospital and treating himself with hydroxychloroquine at home.[58]

Lipkin criticized what he considered a xenophobic response that blames China for the virus, specifically the words of US president Donald Trump calling it the "China virus" and his decision to suspend funding to the World Health Organization for being "China-centric", calling for "global problems" to be addressed by "global solutions". He said that a series of government missteps helped spread the virus around the world very rapidly, and criticized the US and UK's responses, calling them slow, and blamed insufficient and inadequate testing and tracing for rising fatality numbers. In the US, he singled out as an issue what he saw as an inconsistency in advice, including by president Trump, and highlighted the need for national leadership, while acknowledging states had the ability to make decisions in certain areas. He praised his NIAID superior Anthony Fauci for his integrity. He also warned about the danger of future emergence of new deadly viruses.[58]

After his trip to China, Lipkin maintained links with Lu Jiahai, his research partner at Sun Yat-sen University in Guangzhou, and Zhong Nanshan, to try to establish the origins of the virus.[60] Their efforts, aimed at finding out whether the virus emerged in other parts of China and circulated before it was first discovered in Wuhan in December, include antibody tests of nationwide blood bank samples from pneumonia patients which predate the pandemic, which led to a collaboration with the Chinese Centers for Disease Control and Prevention.[57] According to Lipkin, this research began in early February. The international research team also began studying blood samples from different wild animals which it deemed potential origins of the virus, in order to understand animal-to-human transmission.[57]

Lipkin thinks the virus could have originated in the wild animal trade and undergone “repeated jumps” from animal to human in the weeks before the first cases were logged, such a stream of events having recent precedents in the emergence of MERS-CoV, which jumped from dromedary camels to humans in 2012, and SARS-CoV, from civet cats to humans in 2003.[58]

Lipkin co-authored a paper on The proximal origin of SARS-CoV-2, which was published in Nature Medicine in March 2020.[66]

Views on gain-of-function research

Gain-of-function (GoF) experiments aim to increase the virulence and/or transmissibility of pathogens, in order to better understand them and inform public health preparedness efforts.[67] This includes targeted genetic modification (to create hybrid viruses), the serial passaging of a virus through a host animal (to generate adaptive mutations), and targeted mutagenesis (to introduce mutations).[68] Lipkin is a listed “supporter” of GoF advocate group, Scientists for Science,[69] which was co-founded by Columbia colleague Vincent Racaniello.[70] The US National Institutes of Health placed a moratorium on GoF research in October 2014, and lifted the moratorium in December 2017, after the implementation of stricter controls.[71][72]

Lipkin, while not endorsing every GoF experiment, has said that "[t]here clearly are going to be instances where gain-of-function research is necessary and appropriate." In the example of Ebola, which is incapable of airborne transfer, Lipkin believes that "researchers could make a case for the need to determine how the virus could evolve in nature by engineering a more dangerous version in the lab." Lipkin believes that there should be guidelines in place to govern GoF experiments.[73] Lipkin has called for the World Health Organization to establish strict biocontainment criteria that can be applied globally - including in the developing world - to GoF research.[74]

Selected awards and honors

Year(s)

Award/Honor

Institution/Organization

- 2020 / PRC 70th Anniversary Medal[38] / Chinese Central Government, Central Military Commission, and State Council

- 2016 / China International Science and Technology Cooperation Award[75] / People's Republic of China
- 2015 / Fellow[76] / Infectious Diseases Society of America (IDSA)
- 2010 / Member[77] / Association of American Physicians (AAP)
- 2008 / John Snow Professor of Epidemiology[76] / Columbia University
- 2006 / Fellow[77] / American Society for Microbiology (ASM)
- 2004 / Fellow[77] / New York Academy of Sciences
- 2003 / Special Advisor to the Ministry of Science and Technology[78] / People's Republic of China
- 1986-87 / President, Society of Fellows[79] / Scripps Research Institute

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ME-Pedia : (Feb 2021) - Ian Lipkin

https://me-pedia.org/wiki/Ian_Lipkin

Walter Ian Lipkin, or W. Ian Lipkin, MD, is the John Snow Professor of Epidemiology at the Mailman School of Public Health at Columbia University and Professor of Neurology and Pathology at the College of Physicians and Surgeons at Columbia University. Lipkin is also Director of the Center for Infection and Immunity, an academic laboratory for microbe hunting in acute and chronic diseases.[1] Dr. Lipkin traveled to China in 2003 to investigate the SARS outbreak of 2003, and to Saudi Arabia during the MERS outbreak, both coronaviruses.[1] He traveled again to China in 2020 during the COVID-19 outbreak and contracted the disease himself. [2]

Talk and interviews

- Oct 20, 2017 - ME/CFS Alert Episode 95 - Interview with Dr. W. Ian Lipkin
- Oct 14, 2017 - Solve ME/CFS Initiative Discovery Forum 2017: Presentation of Dr. Ian Lipkin, Columbia University
- Oct 14, 2017 - Solve ME/CFS Initiative Discovery Forum 2017: An Interview with Dr. Ian Lipkin by Dr. Zaher Nahle
- Discover Interview: The World's Most Celebrated Virus Hunter, Ian Lipkin

Discover - Health & Medicine By Grant Delin

"When Ian Lipkin chose a career in infectious diseases, he envisioned hunting for pathogens in daring treks around the world. Though disappointed to learn that modern-day virus hunters work largely from the lab, he still wound up a pioneer."[3]

- Forgotten Plague documentary by Ryan Prior[4]

Notable studies

- 2012, A Multicenter Blinded Analysis Indicates No Association between Chronic Fatigue Syndrome/Myalgic Encephalomyelitis and either Xenotropic Murine Leukemia Virus-Related Virus or Polytropic Murine Leukemia Virus[5] - (Full Text)
- 2015, Chronic fatigue syndrome/myalgic encephalomyelitis (CFS/ME) is associated with pandemic influenza infection, but not with an adjuvanted pandemic influenza vaccine[6] - (Abstract)
- 2015, Distinct plasma immune signatures in ME/CFS are present early in the course of illness[7] - (Full text)
- 2016, Cytokine network analysis of cerebrospinal fluid in myalgic encephalomyelitis/chronic fatigue syndrome[8] - (Abstract)
- 2017, Fecal metagenomic profiles in subgroups of patients with myalgic encephalomyelitis/chronic fatigue syndrome[9] - (Full Text)
- 2017, Immune network analysis of cerebrospinal fluid in myalgic encephalomyelitis/chronic fatigue syndrome with atypical and classical presentations[10] - (Full Text)
- 2018, Insights into myalgic encephalomyelitis/chronic fatigue syndrome phenotypes through comprehensive metabolomics[11] - (Full Text)

XMRV

The scientist who put the nail in XMRV's coffin

[Note - XMRV initially proposed by **Dr. Judy Anne Mikovits (born 1958)** and **Francis William Ruscetti (born 1943)**]

Nature By Ewen Callaway

"A study published today has found no evidence to support research linking the retroviruses XMRV2 and pMLV3 to chronic fatigue syndrome (CFS). The US$2.3-million study, funded by the US National Institutes of Health (NIH), comes three years after a link between XMRV and CFS was first reported in Science."[5][12]

Open letters and advocacy

Chilli ME Challenge

- Jul 1, 2015, Ian Lipkin and Mady Hornig accept Chilli ME Challenge

Open letters

- Oct 18, 2018, In response to the Fourth Annual Conference on Psychosomatics at Columbia University - ME/CFS is not a psychosomatic illness[13]

Online presence

- The Microbe Discovery Project (crowdfunding project)

- Columbia University Mailman School of Public Health

Learn more

- Wikipedia - W. Ian Lipkin
- Ian Lipkin: Three to Five Years* to Solve Chronic Fatigue Syndrome (ME/CFS)

Simmaron Research By Cort Johnson

"Ian Lipkin flew to Lake Tahoe this December to fund raise for work he's doing with the Simmaron Research Foundation. In a talk covering his virus hunting career, the threat of pathogens to humanity, and his work with chronic fatigue syndrome (ME/CFS), he dropped a bombshell: he stated that he believes it's possible to solve ME/CFS in three to five years."[14]

- Ian Lipkin Gets ME/CFS Grant – and So Do Others: the NIH Grants of 2015

Pro-Health By Cort Johnson

"Ian Lipkin gets a big grant and so did some others. (Could the IOM and P2P reports have prompted this little flurry of interest?)"[15]

- Drs Lipkin, Mady Hornig and colleagues discover robust evidence that chronic fatigue syndrome is a biological illness

The Microbe Discovery Project

"Researchers at the Center for Infection and Immunity at Columbia University's Mailman School of Public Health identified distinct immune changes in patients diagnosed with chronic fatigue syndrome, known medically as myalgic encephalomyelitis (ME/CFS) or Systemic Exertion Intolerance Disease."[16]

- 2015, Ian Lipkin, Mady Hornig - Chilli M.E. Challenge - YouTube

See also

- Mady Hornig
- Microbe Discovery Project

Reports that may have led to grants[edit | edit source]

- Institute of Medicine report - IOM
- Pathways to prevention report (P2P) - NIH

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https://www.sciencemag.org/news/2012/09/final-study-confirms-virus-not-implicated-chronic-fatigue-syndrome

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https://www.publichealth.columbia.edu/public-health-now/news/prof-ian-lipkin-brings-science-hollywoods-contagion

2011-08-28-publichealth-columbia-ed-ian-lipkin-science-to-hollywood.pdf

INFECTIOUS DISEASE Aug. 27 2011

INTERNATIONALLY-RENOWNED "MICROBE HUNTER" WORKED CLOSELY WITH FILMMAKERS TO ENSURE ACCURACY OF STAR-STUDDED SODERBERGH MOVIE ABOUT PANDEMIC.

Oscar-winning director Steven Soderbergh's new movie Contagion imagines a deadly virus outbreak that quickly sweeps around the world. The gripping story is fiction, but the global pandemic it portrays is entirely realistic. Soderbergh and Contagion screenwriter Scott Z. Burns were committed to the truth of the film right from the start and sought out Dr. W. Ian Lipkin, one of the world's foremost microbe hunters and a professor at Columbia University's Mailman School of Public Health, to tap his scientific expertise as they developed the concept.

It wasn't the first time Hollywood had knocked on Dr. Lipkin's door, but it was the first time he said "yes." Lipkin was persuaded that "this was an effort to accurately represent the science and to make a movie that would entertain as well as educate." Now that it is opening in theaters, he hopes that *Contagion* will help people to understand the urgent public health challenges that we face in the 21st century due to increasing international trade and travel, urbanization, loss of wildlife habitats, and inadequate investment in infrastructure for surveillance and vaccine production and distribution.

After early conversations about the movie concept, Lipkin signed on as technical adviser to *Contagion* in March, 2009 and played an active role throughout production. He suggested the movie's plot might be triggered by an outbreak of a virus similar to Nipah, a deadly virus that has, on occasion, migrated from animals to people.

At Columbia, Dr. Lipkin is the director of the Mailman School of Public Health's renowned Center for Infection and Immunity, which does cutting-edge work in microbe detection and discovery. He has identified more than 400 new viruses and was the first to determine that West Nile virus was the cause of the 1999 encephalitis epidemic in New York City.

Some of the scenes in *Contagion* reflect Dr. Lipkin's vivid memories of Beijing when he assisted the World Health Organization and the Chinese Health Ministry manage the SARS outbreak in 2003. At risk on the frontlines of the epidemic, as public health professionals sometimes are, he became ill and was quarantined when he returned to the U.S. On the movie set, Dr. Lipkin shared his experience in China with Matt Damon, offering the actor insight into what it feels like to be behind glass and cut off from loved ons.

Dr. Lipkin also coached *Contagion* actors on the practices and process of scientific research. Kate Winslet and Jennifer Ehle visited the Center for Infection and Immunity to learn the mechanics of being a bench scientist, working with the lab's equipment to do technical procedures. And Elliott Gould, who plays a research scientist named "Ian," talked to Dr. Lipkin about the intellectual process of making a scientific breakthrough. Suggesting to the actor how to look through a microscope and reflect on what it reveals, "I told Elliott it's important that you get this right, because you are playing me," Dr. Lipkin recalls.

The laboratory at the Center for Infection and Immunity, where Dr. Lipkin and his team of 65 conduct their research, also has an invisible role in the movie. In pursuit of authenticity, *Contagion*'s production crew traveled to the lab to record centrifuges whirring, liquid nitrogen hissing, and even the squeaky noise of opening animal cage doors for the film's soundtrack.

In addition to his work at Columbia, Dr. Lipkin co-chairs the National Biosurveillance Advisory Subcommittee (NBAS) of the Centers for Disease Control and Prevention, which was established in response to a Homeland Security Presidential Directive recognizing that infectious diseases are an increasing threat to the nation. From that perspective, Dr. Lipkin hopes that *Contagion* will be a wake-up call for the public that today's fiction could easily become fact tomorrow. He says, "Science is critical to address these challenges. We've been through this with SARS. We will be through it again."

Link to NBAS Report at http://www.cdc.gov/about/pdf/advisory/nbasfinalreport_april2011.pdf

https://www.bbc.com/news/av/entertainment-arts-53063584

1999 (Sep 26) - NYTimes : "Exotic Virus Is Identified In 3 Deaths"

By Andrew Jacobs / Sept. 26, 1999 / [HN01I9][GDrive]

The mosquito-borne illness that has killed three people in New York City is not St. Louis encephalitis, but a similar disease that has never before been found in the Western Hemisphere, health officials said early this morning.

Scientists in two states who have been examining brain tissue from the people killed by the outbreak of encephalitis confirmed that it was caused either by West Nile virus, from Africa, or Kunjin virus, a variant that is found only in Australia.

Since last month, 14 people in New York City and Westchester County have been diagnosed with encephalitis, although it was unclear whether the two strains identified today are responsible for all the cases.

An official with the Centers for Disease Control and Prevention in Atlanta, and a researcher at the University of California at Irvine said this morning that the closely related strains had been positively identified in the brain matter of New York City residents killed by encephalitis. Until now, neither strain had been found in birds or people in this hemisphere.

[Dr. Duane J. Gubler (born 1939)], director of the C.D.C.'s division of vector-borne infectious diseases, said that the agency's lab found the West Nile virus in the brain of one of the victims early last week. "It was a total surprise to us," he said. "There was no reason to suspect that we'd find West Nile here."

[**Dr. Walter Ian Lipkin (born 1952)**], the director of the Emerging Diseases Laboratory at the University of California at Irvine, said his colleagues had identified the virus in the brains of three victims from Queens that had been sent to his lab last week. "It's very odd that they've been found here," he said. "On the other hand, viruses evolve and they have the capacity to adapt themselves." Dr. Lipkin emphasized that the genetic difference between West Nile virus and Kunjin virus is so slight that the two are practically the same strain.

Until yesterday, New York health officials said they had found the West Nile virus only in birds that had died in and around the Bronx Zoo. But this morning, after the C.D.C confirmed the discovery of the virus in humans, a state official acknowledged that officials had known about the findings of [**Dr. Walter Ian Lipkin (born 1952)**] and Dr. Gubler for several days, but wanted to conduct more tests.

John Signor, a State Health Department spokesman, said the ageny was planning to release the information tomorrow after more testing confirmed the earlier findings. "The identification of a virus is a complex process," he said. "We felt more testing needed to be done."

Despite the discovery that the encephalitis outbreak had been caused by a different virus, officials said that the public health measures undertaken to date would not change: the spraying of mosquitos and warnings to reduce exposure to the insects remains. Mr. Signor said that the treatment for those already infected with the disease would remain the same.

The Federal Centers for Disease Control and Prevention said Friday night that its scientists had identified a West Nile-like virus in four birds from New York that they had tested in their laboratory in Fort Collins, Colo.

The birds included two flamingos and an Asian pheasant from the Bronx Zoo, and a crow reported to be from Scarsdale, said Kristine Smith, a spokeswoman for the New York State Health Department.

Yesterday, city health officials continued collecting dead birds, which they had started to do on Friday. Special telephone lines and asked residents to call in sightings of dead birds. By 4 P.M. yesterday, the City Health Department had received two dozen reports of dead birds in all five boroughs, and sent out staff members from its pest control division to retrieve specimens, said a spokeswoman, Sandra Mullen.

''The birds will be kept on dry ice and brought to our Bureau of Laboratories,'' she said, adding that most of the dead birds reported were crows, which have been dying in large numbers since the beginning of the outbreak. Health officials in Suffolk County collected five dead crows on Friday, and sent them for analysis to the State Department of Environmental Conservation yesterday, said the director of public health, Mahfouz Zaki.

And after receiving reports at 5:30 P.M. on Friday that earlier samples from dead crows tested positive for an encephalitis-like disease, they sprayed South Huntington and Huntington Station with pesticides.

In Manhattan, a team from the Parks Department swept through Central Park on Friday night searching for dead birds but found none, said Parks Commissioner Henry J. Stern. He said that more teams would be dispatched, but that all park staff members had been notified and were on the lookout.

News that the infection was either West Nile virus or an Australian variant has deepened an epidemiological mystery that began in July with the deaths of numerous crows around the Bronx Zoo.

A pathologist at the zoo, [Dr. Tracey S. McNamara (born 1954)], first noticed that large numbers of crows were dying, reaching 40 by August. Then, birds at the zoo, including a guanay cormorant, three Chilean flamingos, a pheasant and a bald eagle, died.

Though the symptoms of both diseases are similar, and the steps to combat them are the same, the mosquitoes that carry them can differ, health officials said.

Ms. Smith of the State Health Department said the mosquitoes that carry St. Louis encephalitis and West Nile viruses, the Culex pipiens, are generally active from dusk to dawn. But another type of mosquito known to carry the West Nile virus, the Aedes vexans, is also active during the day, she said.

The symptoms of both illnesses are usually mild, but in some cases can cause neurological disorders and even death.

https://www.youtube.com/watch?v=XFs1_y3Vp34

Microbe Hunting in the 21st Century - W. Ian Lipkin, MD - University of Washington

1,458 views • Jul 15, 2014

2014-07-015-youtube-university-of-washington-video-microbe-hunting-21st-century-lipkin.mp4

UW Video

Recent advances in nucleic acid diagnostic methods have revolutionized microbiology by facilitating rapid, sensitive microbial surveillance and differential diagnosis of infectious diseases. During his talk at the University of Washington, Dr. W. Ian Lipkin of the Center for Infection and Immunity, Mailman School of Public Health, Columbia University, shares how implementation of these methods may enable intervention when the prognosis is optimal for limiting replication, dissemination, transmission, morbidity and mortality.

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Litton Bionetics

Notable employees include :

- Francis William Ruscetti (born 1943)

1989 (November 19) - Special Report in the Chicago Tribune

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The Great AIDS Quest

Editor's note

The performance of the press in reporting the spread of the AIDS plague, one of the most important stories of the century, was abysmal.

No story caught us more ill-equipped or unprepared. The speed with which the disease spread, its enormously complex nature and the scientific ignorance of the press made it a story simply beyond our capabilities.

When the story moved to the search for and ultimate discovery of the cause of the disease, the combination of complexity and ignorance forced reporters into the role of stenographers, mostly unchallenging and unable to scrutinize. As some critics suggest, the story of the discovery of the AIDS virus has not really been reported at all—until today.

This special section of The Chicago Tribune contains that story, an almost book-length account culminating two years of intense work by one of journalism's premier investigative reporters. John Crewdson, 43, won the 1981 Pulitzer Prize for national reporting while a New York Times correspondent and later became metropolitan editor of The Tribune. Now a special national correspondent for The Tribune based in San Francisco, he has been assigned to the AIDS story almost exclusively since it crawled onto the front pages of the newspapers in mid-decade, not because of any special science or medical background but because Crewdson had proven over the years to be precise, cautious, curious and persistent in pursuit of the most difficult and elusive stories.

Twenty months ago, Crewdson was assigned to document how different segments of society, particularly the scientific community, the public health sector and the political establishment, reacted to the AIDS scare.

The resulting account of the quest for the cause of this mysterious and terrible disease is a classic story in many ways.

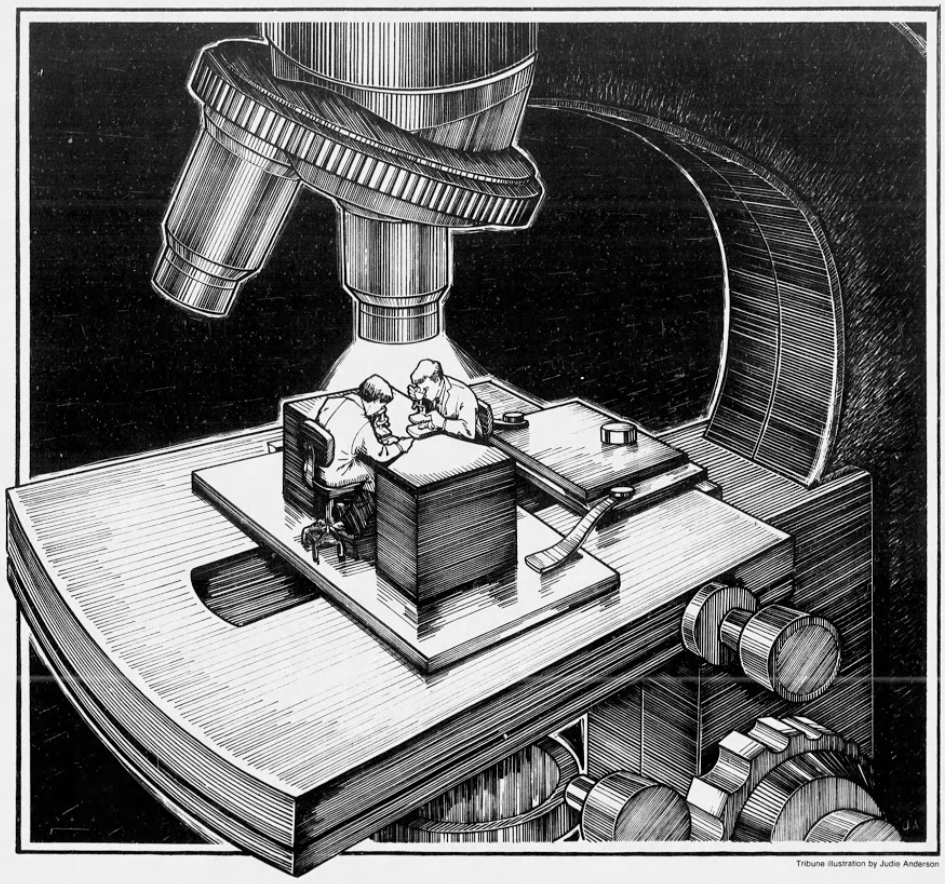
It is a story of commitment and dedication to mankind and of tireless, often brilliant detective work within the magic and marvelous world of modern medical technology. But it is also a story of cut-throat competition and bare-knuckled politics, of individual ego and national pride, and of the kind of intense pressure on human beings that often brings out the worst in even the best and can result in lying, cheating and outright fraud.

The presentation of this story, an entire special section consisting of more than 50,000 words spread over 16 pages, is extraordinary, to say the least. But the story itself is so extraordinary as to demand it.

As extensive as it is, this account is still far less complete than The Tribune would like, in part because precise scientific explanation can be so exhaustive and, more important, because early in Crewdson's investigation, Dr. Robert Gallo, a key figure, ceased to cooperate. Not only did he decline repeatedly to answer questions, he fought the Freedom of Information requests for public records and made numerous attempts to discredit Crewdson's reporting and impugn his personal integrity, both with his editors and with members of the scientific community.

Still, the story is by far the most complete and detailed look at how the government and scientific communities reacted to this huge and growing public health challenge. And it casts, perhaps for the first time, a brilliant and penetrating light on modern medical science.

James D. Squires



Tribune illustration by Judie Anderson

Science under the microscope

1 'We forgot to write the summary'

By John Crewdson

On the afternoon of the day before his 50th birthday, the American scientist Robert C. Gallo sat down at a small desk in a hotel room in Germany. In the chair next to his was Luc Montagnier, one of the French researchers from whom Gallo had been trying for nearly three years to steal the credit for discovering the cause of AIDS.

Neither Montagnier nor Gallo, the unchallenged AIDS superstar at the National Institutes of Health, was there by choice. The two scientists had been forced together by pressure from their governments, and their peers, to write a combined history of their research that would end their increasingly acrimonious dispute.

The Pasteur Institute, where Montagnier works, had formally challenged the patent on the blood test for AIDS developed in Gallo's lab, and the American government was eager to settle the case. Any settlement would turn on the question of who had been first to find the virus that causes the disease and use it to make a test.

The 'definitive scientific history' that emerged from that hotel room in Frankfurt made possible an agreement between the French and American governments, the first ever to resolve an international conflict over a scientific discovery. Officially, the dispute has been settled forever. In reality, the scientific world has been left with more questions than answers about who really discovered the cause of AIDS, and when and where and how.

In an effort to distinguish scientific truth from gossip, rumor and professional jealousy, The Chicago Tribune undertook a reconstruction of the discovery of the AIDS virus that has included the examination of more than 5,000 pages of government documents and interviews with 150 scientists in this country and abroad.

The story that emerges is less heroic than generally portrayed, but no less dramatic: misstated data and secret experiments, phantom viruses and disappearing genes, unreproducible results and muddled lab notes, mislabeled cultures and misleading photographs.

What also emerges is that the history—inelegant, vastly incomplete and technically inaccurate—even begins with a lie. Between the Gallo and Montagnier laboratories, it says, there had always been 'a spirit of scientific cooperation and a free exchange of ideas.'

As with many histories, the biggest lie is in what it doesn't say. Utterly missing from the account of this great scientific achievement is the story of an influential and intimidating scientist who chased the wrong virus for more than a year, only to reverse course and emerge with a virtual genetic twin of the virus that had really been discovered by his rivals in Paris and delivered to him months before.

What happened in Robert Gallo's lab during the winter of 1983-84 is a mystery that may never be entirely solved. But the evidence is compelling that it was either an accident or a theft.

The beginning of the 1980s looked like the beginning of the end for infectious diseases in America. Smallpox had been eradicated, polio was nearly nonexistent and the childhood illnesses were on the ropes. Then, in the spring of 1981, doctors noticed that a few young men in large American cities were dying horrible deaths. Something was ravaging their immune systems, but what?

As the death toll mounted, so did the theories. Because all the early patients were homosexuals, some scientists thought the disease that would later be called AIDS must be a byproduct of the gay lifestyle. But when the same symptoms began turning up in hemophiliacs and in heterosexuals who had received blood transfusions during surgery, the possibilities narrowed. Any number of infectious micro-organisms might be transmitted in semen or blood, but the only thing small enough to evade the filters used to screen the clotting factor given hemophiliacs was a virus.

In May of 1983, less than two years after the first AIDS cases had been recognized by physicians at UCLA, an anxious nation was relieved to learn that scientists at Harvard and the National Institutes of Health had found an important clue. As many researchers had been predicting, it seemed that AIDS was indeed caused by a virus. What came as a surprise was that the virus under suspicion had apparently been around for years.

Its scientific name was human T-cell leukemia virus, HTLV for short, and it belonged to a relatively small group of viruses known as retroviruses. So far HTLV had been linked only to a rare leukemia found mostly in the fishing villages of southern Japan. Now the experts were suggesting it might also be responsible for what would soon become the biggest public health emergency since half a million Americans perished in the great influenza epidemic of 1918.

One of those making the announcement was Robert Charles Gallo, a veteran researcher and laboratory chief at the National Cancer Institute, the biggest and richest of the research institutes that make up the multibillion-dollar federal biomedical complex known as the National Institutes of Health in Bethesda, Md. Not coincidentally, it was in Gallo's laboratory at NIH that the leukemia virus had first been isolated a few years before, a discovery that had propelled Gallo to the top rank of American medicine. Just six months before the announcement, when Gallo was awarded the Lasker prize, the top honor in American biomedicine and frequently a precursor of the Nobel prize, the citation had lauded his "revolutionary discovery of the first retrovirus known to be associated with a human malignancy."

In the summer and fall of 1982, just as the AIDS epidemic was beginning to grip the public's attention, the most important thing on Gallo's mind was finding out how many people around the world had been infected with his new leukemia virus and the even newer substrain, called HTLV-2, that one of his assistants had just isolated from a Seattle seafood salesman.

Arthur Levine, then chief of the cancer institute's pediatrics branch, remembers a conversation with Gallo about AIDS in June of 1982. From colleagues on the West Coast Levine had become aware of the AIDS epidemic early on, and he also knew a thing or two about retroviruses.

"It was a phone call from me to Bob Gallo," recalled Levine, now scientific director of the National Institute of Child Health and Human Development. "I said, 'Bob, have you heard of this bizarre syndrome that's happening in San Francisco and New York?' He hadn't heard of it. I described it to him, and he agreed that it was very intri-

See AIDS, pg. 3

How Tribune AIDS project was reported

Tribune correspondent John Crewdson began this examination of the scientific research on AIDS 20 months ago. Even though he interviewed more than 150 people in this country and abroad, and reviewed thousands of pages of documents, he wasn't able to answer all the questions surrounding the work of Robert Gallo, a key figure in the discovery of the cause of the disease.

The Tribune sought on many occasions to interview Gallo and some of his associates. Gallo answered some questions in a telephone call in September, 1988, but no in-person interview, at which documents could be reviewed and more extensive questions addressed, was ever granted.

In December, 1988, former U.S. Sen. Birch Bayh, Gallo's Washington-based attorney, sent The Tribune a letter stating that "Dr. Gallo is amenable to your interview request and suggests that it should be arranged expeditiously. We assume that your work will not be published until after the interview has taken place." Bayh also asked for a list of questions.

On Dec. 19, a day before the interview was to have taken place, The Tribune delivered 188 questions, to Bayh's office. Three days later, Bayh's office advised The Tribune that Gallo no longer wished to be interviewed.

In January, 1989, in a telephone conversation with Tribune Editor James D. Squires, Gallo said "the lawyers" had advised him not to grant the interview. In the months that followed there were more letters and telephone calls in which Gallo and Bayh complained about questions Crewdson was asking.

Through Squires, The Tribune again tried to obtain an interview with Gallo, agreeing to send Executive Editor Jack Fuller along with, or instead of, Crewdson. On July 28, Squires sent a letter to Bayh with a revised set of questions. There was no response. In October, The Tribune sent another letter noting that the lack of response was being taken to mean no interview would be granted.

Myron T. Essex, a retrovirologist from the Harvard School of Public Health and a longtime Gallo collaborator, declined a request for an interview because of "a heavy travel commitment and a tight schedule."

Another Gallo collaborator, Harvard biologist William Haseltine, also declined a request for an interview.

Gallo's chief molecular biologist, Flossie Wong-Staal, said in a letter to The Tribune that she did not "have the time or inclination to respond to every naive reporter to satisfy his idle curiosities."

Mikulas Popovic, Gallo's former chief virologist, also declined an interview, saying, "This is not the time to write a history. You should wait for 10 or 15 years."

Even outside of science, Robert Gallo is a celebrity

In just five years, Robert Charles Gallo has become one of the most prominent medical scientists in the world. He has won nearly every award his field has to offer—his biography lists nine single-spaced pages worth—and the hundreds of thousands of dollars in prize money that goes with them. He is the only scientist ever to win two Lasker awards, this country's highest biomedical honor. The New York Times calls him a "strong candidate" for a Nobel prize.

Gallo, who heads the National Cancer Institute's Laboratory of Tumor Cell Biology, is also a celebrity outside the realm of science. When the Italian-American Foundation throws its annual awards dinner, he is there with composer Gian Carlo Menotti. When People magazine chooses its "30 Hardest Working Celebs," he makes the list with Dan Rather and British Prime Minister Margaret Thatcher. Last month, Newsweek magazine counted him among America's 25 "leading innovators." Last week he met Pope John Paul II in Rome.

It is a rare news article about AIDS that does not contain Gallo's generously quoted opinion, and an even rarer conference on the disease where he is not a much-sought-after speaker. So much in demand is he by journalists that those attending last year's international AIDS conference in Stockholm were required to enter a lottery for a chance at a five-minute interview.

Gallo has made scientific careers, and those whose careers have become intertwined with his afford him the highest praise. William Blattner, a National Cancer Institute epidemiologist who has spent much of the last decade searching in different populations for the human leukemia virus first isolated in Gallo's lab, says, "Bob is one of the really great scientists of our time."

Dani Bolognesi, the Duke University virologist who followed Gallo into the field of human retroviruses, is often described as Gallo's closest friend. Bolognesi credits Gallo with "a tremendous amount of intelligence, a great deal of intuition. Bob sees through things and over things and around things in ways that are sometimes difficult for us."

Gallo is respected by other researchers less for his scientific acumen than his ability to see the larger picture. "He is able to synthesize," says Wolf Prensky, chief of virology at St. Clare's Hospital in Manhattan. "It's something that few scientists can do well."

"He is imaginative," says Robin Weiss, the noted British retrovirologist. "He doesn't know the literature well, because he's too busy flying around. He's not scholastic in the pedantic, obsessive way that we ought to be. But Gallo comes out with different ways of looking at things."

"I don't have a great analytical talent," Gallo told The Tribune. "I do think, however, I have some talent in thinking originally. And I have some perseverance and I work hard. But I am not dotting all i's and crossing all t's all the time. It has not been my strength. There are far better scientists than me in that line."

Gallo's strong emphasis on personal loyalty, and his legendary temper, are the reasons given most often by those who know him for declining to talk about Gallo on the record. One former associate spoke for many when he said, "If he died, I might talk to you."

Gallo is not unaware that he inspires controversy. "I have friends and enemies everywhere," he says. "I'm not rewarded by scientific peers. There's a lot of people with a lot to gain by certain things, and there's a lot of jealousy. It provides them with an explanation for their own inadequacies. You know what my flaws are; they're obvious. I tend to be aggressive. I tend to be competitive. I hope to God I don't hurt anybody."

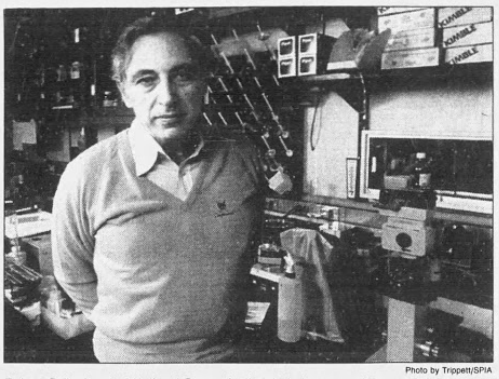


Photo by Trippett/SPIA

Robert Gallo, head of National Cancer Institute's Laboratory of Tumor Cell Biology.

It was Gallo's peers who, until last year, kept him from membership in the National Academy of Sciences, the 2,000-member body that comprises this country's scientific establishment. "He really wanted to be in the academy," says one Nobel laureate. "He would tell you himself that was one of the things that made him unhappy in life."

According to that scientist and others, although Gallo had been proposed for membership several times, on each occasion the selection committee declined to add his name to the ballot. What transpires during academy elections is a closely held secret, but several members confirmed that Gallo finally gained entrance through a process called voluntary nomination in which the selection committee can be bypassed if signatures are obtained from 20 members.

Academy memberships are a plum, but it is the gleaming gold disc with the bas-relief of Alfred Nobel that to a large degree drives science forward. "I don't know if I'll ever get it," Gallo told The Tribune. But he notes that three out of four Lasker recipients have gone on to win the Nobel, including this year's winners, J. Michael Bishop and Harold Varmus of the University of California, both of whom also shared the Lasker prize with Gallo in 1981.

Gallo suggests his two Laskers "ought to mean something" to his chances, and he adds that "the president of the University of Chicago, Leon Jacobsen, has more than once nominated me for a Nobel prize."

Jacobsen, an emeritus professor of medicine at Chicago, where Gallo served his internship and residency in the 1960s, has never been the university's president, and he will not discuss having placed Gallo's name in nomination. "People just don't talk to each other about those things," he says. But Jacobsen does volunteer that he helped engineer Gallo's admission to the National Academy of Sciences.

"We had a hell of a time getting him in," Jacobsen says, "because people are jealous of him. He's published 600 or 700 papers, and he runs a big show. I talked to a lot of these people who are against him, not because of his work but just on principal, whether he was doing too much or publishing too many papers. You know, these things get on some people's nerves, I guess, because maybe they'll put out one a year and he puts out 50."

Gallo's curriculum vitae, nearly a half-inch thick, contains more than 700 scientific articles—a prodigious number even for a scientific superstar. In the last three years alone, Gallo has been a coauthor on more than twice as many articles as any of the other leading scientists in his field. He has not done any scientific "bench work" in years, but in listing himself as an author on most of the papers published by other researchers in his lab, Gallo is hardly alone among the heads of major laboratories.

Several of the articles that bear his name also describe experiments done in other laboratories in which he and his staff played no direct part except perhaps to provide a snippet of DNA or some other piece of raw material. But engineering such collaborations is one of the things Gallo does best. "To be a success in science these days you need a different sort of talent than just the ability to be a good experimenter or ask the right questions," says another cancer institute scientist. "It's become an entrepreneurial business, and Gallo's good at that. He was one of the first of the big-time laboratory operators."

Gallo's laboratory, atop Building 37, a modern concrete-and-glass tower on the edge of the university-style campus of the National Institutes of Health in Bethesda, is the unabashed envy of his colleagues. So is his $8 million annual budget, an enormous sum even for a scientific laboratory that employs more than 50 researchers and support personnel. So is his devoted permanent staff, some of whom have been with him for a decade or more. "It's a very personal operation," says a cancer institute colleague. "That's what everybody wants, to be surrounded by people who will bust their backs to make you look good."

The quality of Gallo's staff is bound to be diminished by the departures of two of his top researchers. Mikulas Popovic, his chief virologist, who played a central role in the isolation of the AIDS virus, left in August for a job at New Mexico State University. Gallo's chief molecular biologist, Flossie Wong-Staal, is said to be leaving Bethesda in January for San Diego.

Each year for the past several years, Gallo has hinted to his friends that he, too, is on the verge of leaving the cancer institute for academia or private industry. At different times he has been rumored to be in negotiations with Duke, Johns Hopkins and Yale and, most recently, with the British financier Robert Maxwell.

The possibility that Gallo might move to Yale was seen by friends as particularly significant in light of his frequently quoted remark a few years back that, because he had attended a lesser-known medical college, he felt the need to work all the harder to prove himself.

Gallo, 52, the only son of a comfortably well-off family, grew up in Waterbury, Conn., where his late father, a metallurgist, owned a small but successful company. Gallo has often said it was the death of his younger sister, Judith, from childhood leukemia that inspired his interest in medical research. After graduating summa cum laude with a degree in biology from Providence College in Rhode Island, he won a medical degree from Philadelphia's Thomas Jefferson University.

In 1965, following his internship and residency at the University of Chicago, Gallo joined the National Cancer Institute as a clinical associate. But after a year of treating cancer patients, an experience he has described as unsettling, he joined the institute's research arm and began a rapid advancement through the ranks, gaining his current position as laboratory chief in 1972.

The rumors of Gallo's departure come and go but Gallo remains at NIH, and those who know him well believe he will never leave. "He never can get a set-up like he's got there now," one friend says, and the cancer institute is happy to see him stay. "In biological research I don't think a supreme personality reigns," says another scientist. "There's no Einstein. He's the only star the NIH has left. He's their big hope for a Nobel prize."

Money and prizes aside, nowhere else will Gallo be able to match the influence he enjoys among those at NIH whose policies determine the course of biomedical research in this country and, to a large extent, the rest of the world. For years, Gallo's position at the cancer institute as first among equals derived from his close personal relationship with the institute's longtime director, Vincent T. DeVita Jr., who resigned unexpectedly last fall to take the No. 2 job at Manhattan's Memorial-Sloan Kettering Cancer Center.

"DeVita and Gallo were very close," says one doctor who knows both men well, and after DeVita's resignation there were fresh rumors that Gallo would not be far behind. But the rumors ceased when DeVita was replaced by Samuel Broder, who worked closely with Gallo during the early years of AIDS research. A former NCI official predicts that "with Broder there, Gallo will still get everything he needs," and Broder's praise of Gallo is unrestrained.

"Gallo is one of the paradigmatic figures of the 20th Century," Broder told the Washington Post. "He's influenced things in our daily lives to an incalculable degree. Einstein, Freud—I'd put him on a list like that, I really would."

In right place at right time, three French scientists make history

When Luc Montagnier arrives for work at the Pasteur Institute, it's not uncommon for him to find someone with AIDS waiting outside his lab. The reason is always the same: the hope that somehow the scientist who discovered the virus that causes the disease will know how to cure it. "These poor AIDS patients," Montagnier says with a shake of his head, "they regard me as a god, you see."

Although Montagnier's work with AIDS has brought him an international reputation, he is regarded as less than a god by his colleagues at the Pasteur. Earlier, his most noteworthy achievement came in the mid-1960s; as a young scientist in London, he developed a method for growing animal cancer viruses that is still widely used.

Last year, when Montagnier offered himself as a candidate for the Pasteur's directorship, a position filled by a vote of the faculty, he reportedly lost by a large margin. Now he is "in discussions" with financial backers in California who want him to head a new research institute in La Jolla that will be devoted to the search for an effective treatment for AIDS.

"My motivation comes back to the patient," Montagnier says. Although he would like to oversee the La Jolla institute while keeping his position in Paris, he acknowledges that might not be possible. "As I view it now I won't be leaving Pasteur," he says. "But if I'm forced to leave I will leave, of course."

Montagnier, 57, grew up in a small town south of the Loire Valley during the World War II. "My father was an accountant," he says. "It was the dream of my parents that I should become a doctor. It was the first time in my family somebody went to college. But I decided I should study not only medicine but also science. I was more interested in science."

Jean-Claude Chermann also began his education with the idea of becoming a doctor. "I came from a very poor family," he says. "My parents were divorced since I was 4 years old. My mother was a seamstress, and at night she was an usher in the theater. I did not want to be a scientist. I would like to be a physician, a surgeon. But I have to work for paying my study and so on, and I decided that it was too long to make physician."

Chermann had been at the Pasteur only a few years when, in the early 1970s, he was approached by a friend of a friend, a young student named Francoise Barre. The only child of a middle-class Parisian family, Barre had played with microscopes and chemistry sets. "I was always interested in the mechanisms involved in human life," she recalls.

As a University of Paris undergraduate, Barre eventually faced the same decision as Montagnier and Chermann, whether to become a doctor or to go into pure science. Hoping hands-on experience would help her decide, she asked Chermann for a job in his lab. After she graduated the job became full time. In 1975, when Chermann elected to work on retroviruses rather than antiviral drugs, Barre remained at his side.

Chermann's decision would irrevocably alter the course of both their careers and their lives. In late 1982, Montagnier, by then the Pasteur's chief of viral oncology, was asked by a group of Paris physicians to look for a retrovirus in patients suffering from a new disease of the immune system. Chermann and Barre were the only other scientists in his unit experienced in isolating and growing retroviruses. Within a few weeks, Montagnier, Chermann and Barre had discovered the virus that causes AIDS.

Photo by Haley/SIPA

Luc Montagnier, chief of viral oncology at the Pasteur Institute in Paris.

Glossary

AMINO ACIDS: the building blocks of **proteins**. Although there are hundreds of amino acids, only 20 are ordinarily found in proteins.

ANTIBODIES: Protein chains produced by the immune system that bind to, and often neutralize, **viruses** and other invaders. Viral antibodies are a sign that the virus is, or has been, present.

ATLV: Adult T-cell leukemia virus, the name given by Japanese scientists to the virus that they discovered, which is the same as Robert Gallo's **HTLV-1**.

B-CELL: The immune system cell involved in producing **antibodies**. A line of cancerous B-cells, called BJAB, was used by the French to grow the AIDS virus called **LAV**.

DNA: Deoxyribonucleic acid; long chains of chemical compounds called **nucleotides** that contain genetic code for assembling proteins. The DNA containing the genetic code for the AIDS virus has about 9,200 nucleotides. By contrast, the DNA code for a human being has about 3 billion nucleotides.

ENZYME: Biochemically active **protein** that regulates viral and other biochemical activities. The enzyme the AIDS virus uses to reproduce itself is called **reverse transcriptase**.

H9: a permanent line of **T-cells** created in Gallo's lab by cloning a single T-cell from an established T-cell line called **HUT78**. When the H9 cells began to multiply, they were infected with the pooled AIDS virus that became known as **HTLV-3B**.

HIV: Human immunodeficiency virus, the generic name for the virus that most scientists believe causes AIDS.

HTLVA: The name given to what may have been an AIDS virus isolate used in experiments in Robert Gallo's lab in early 1984. The derivation of the term is unclear because the existence of such a virus was never publicly acknowledged.

HTLV-1: Human T-cell leukemia virus isolated in Gallo's lab. The first retrovirus associated with cancer in humans, it infects **helper T-cells** and causes them to proliferate wildly. Japanese scientists established a connection between HTLV-1 and adult T-cell leukemia.

HTLV-2: Variant of **HTLV-1**, also isolated in Gallo's lab. HTLV-2 was found in 1981 in a patient code-named MO. It has since been discovered in fewer than a half-dozen patients with an extremely rare disease called hairy cell T-cell leukemia, but scientists are unsure whether the virus is the cause of the disease.

HTLV-3: Gallo's original name for the human retrovirus that causes AIDS. The name was later changed to **HIV** after it became clear the AIDS virus was not related to **HTLV-1** and **HTLV-2**.

HTLV-3B: Gallo's principal AIDS virus isolate, reportedly obtained by pooling tissue culture fluids from 10 individuals in the **H9** T-cell line. Several distinct AIDS virus **DNAs** have been cloned from HTLV-3B that are genetically indistinguishable from the French AIDS virus called **LAV-1**.

HUT78: Human **T-cell** line established in the late 1970s by NCI researcher Adi Gazdar. The progenitor of the Gallo cell line called **H9**, HUT78 was also used in Gallo's lab to grow the French AIDS virus called **LAV-1**.

AIDS

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guing. And then I said the most intriguing thing is that I think the cause of this syndrome is going to be a retrovirus related to HTLV. He said that's very interesting and got off the phone."

The "bizarre syndrome" was being watched most closely by the federal Centers for Disease Control in Atlanta, where a small group of researchers was hunting frantically for its cause. In the fall of 1982, it occurred to a young CDC virologist named Cy Cabradilla, who had done his postdoctoral fellowship at the cancer institute a few years before, that one of Gallo's two human retroviruses might have something to do with AIDS.

"We were looking at every virus we could get our hands on to see if there was any relatedness," Cabradilla said. "The only one we hadn't really looked at was the human retrovirus. I made an appointment to go up and talk to Bob about evaluating some blood samples for us against HTLV. I spent an afternoon up there. He didn't seem that interested. I don't think he wanted to get involved with a gay disease. I think what turned him around was Max."

"Max" was Myron T. Essex, one of Gallo's longtime collaborators and a senior researcher at the Harvard School of Public Health. Using an established laboratory technique called an immune fluorescence assay, Essex had been testing blood samples from young homosexual men with this newly reported wasting disease.

In the Essex test, the patient samples were exposed to cultures of white blood cells that were known to be infected with the leukemia virus. If the blood contained antibodies to the virus—antibodies are proteins manufactured by the immune system to neutralize invading viruses and other microbes—they would presumably stick to the virus in the cells. When the cells were examined under an ultraviolet light, those to which antibodies had become attached would glow with an iridescent sheen.

Essex was finding that impressive percentages of the samples were positive, an indication that the AIDS patients were infected with the leukemia virus. According to Essex, however, his test was not picking up antibodies to the leukemia virus itself but to a mysterious new protein that seemed to appear on the outer surface of the virus-infected cells as a product of the process of infection.

Essex's data were hardly conclusive, but they were tantalizing nonetheless. As one member of Gallo's staff recalled later, when Gallo first heard about what was going on in Essex's lab at Harvard, "it was like Christmas." For Gallo, the idea that his obscure leukemia virus might be the cause of AIDS made a certain amount of scientific sense.

For one thing, the leukemia virus infected a particular kind of white blood cell known as a helper T-cell, and it was a shortage of helper T-cells that was apparently causing AIDS patients to fall ill with various exotic diseases by robbing their immune systems of the ability to respond to infection. For another, the leukemia virus was a retrovirus, and there was evidence that an animal retrovirus, feline leukemia virus, could cause the same kind of immune deficiency in house cats.

Because so many AIDS patients were homosexual men, many scientists assumed that whatever was causing the disease was transmitted sexually—and so, they thought, was HTLV.

But even if Essex was right, finding antibodies to a protein on the surface of leukemic T-cells was like finding the footprint outside the window after the burglar had fled. Gallo wanted to catch the burglar in the act by finding AIDS patients who were infected with the leukemia virus itself.

From doctors and hospitals around the world, blood and tissue cells from patients with AIDS or pre-AIDS, the collection of lesser symptoms that often precede the disease, had begun arriving in cartons of dry ice at Gallo's laboratory on the top floor of Building 37 on the NIH campus. After the samples were logged in they were tested for reverse transcriptase, the enzyme that retroviruses manufacture in order to reproduce themselves. Those that tested positive were examined for evidence that Gallo's leukemia virus was present in their cells.

The early results were encouraging. Within weeks, Gallo's assistants had detected the leukemia virus in the white blood cells of two East Coast homosexuals, a young Haitian woman named Marcellin who had died of AIDS in Paris, and a 31-year-old Frenchman named Claude Chardon who had been given a blood transfusion in Haiti after losing his left arm in a motorcycle accident.

Including the two East Coast homosexuals and Marcellin, nearly all of those outside Japan in whom the leukemia virus had been found were black. Daniel Catovsky, a researcher at London's Hammersmith Hospital, had discovered it recently in several Caribbean immigrants there, and some scientists were beginning to wonder whether blacks were somehow genetically predisposed to infection with HTLV-1. Most of the infected blacks didn't have AIDS. On the other hand, nearly all of those who were sick with AIDS were both white and homosexual. Chardon seemed to represent some kind of bridge. He wasn't black, and according to his widow he wasn't gay. If Chardon had the leukemia virus and he also had AIDS, then perhaps the two really were connected.

The cells from Marcellin and Chardon had been brought to Gallo in February of 1983 from Paris by a French immunologist named Jacques Leibowitch. When Leibowitch heard about Chardon's case from doctors at the Saint-Lazare Hospital in Paris, he had been quick to recognize its significance. "I was there at the seminar where they presented the case," the Harvard-trained Leibowitch recalled, "and I was strongly motivated to get the cells of this guy. It could serve the purpose of demonstrating that the cause of AIDS was not homosexually related."

In early March of 1983, Gallo sent a paper reporting the detection of his leukemia virus in the two East Coast homosexuals to Science magazine, a weekly published by the American Association for the Advancement of Science and second only to the British journal Nature as a prestigious forum for biomedical research. In a cover letter to the magazine's editors, Gallo made clear he was not claiming the leukemia virus caused AIDS. Rather, he hoped his findings might "direct research in AIDS toward a class of agents not addressed in the literature to this point."

Within a few weeks Gallo had sent Science a second paper, this one reporting that the leukemia virus had now actually been isolated from one of the two East Coast homosexuals and had also been detected in the cells of Marcellin and Claude Chardon. In the meantime Essex had submitted a paper of his own to Science, reporting that up to 40 percent of the AIDS patients whose blood he had tested had antibodies to the mysterious protein on the surface of leukemic helper T-cells. Harvard University, which like most universities owns its faculty members' inventions, promptly applied for a patent on the Essex test.

A few weeks before publication of the papers, Gallo presented his superiors at the National Cancer Institute with a bold proposal. The NCI, he wrote, should move quickly to take the lead in what seemed likely to become a fierce scientific and medical battle against AIDS. A special AIDS working group was needed, Gallo said, and he suggested that he be named its chief of research, an additional responsibility that would require more laboratory space and personnel, but only "until the problem is solved or [for] three years, whichever comes first."

When the papers from Gallo and Essex appeared in the same issue of Science in May of 1983, they made a considerable splash. The Washington Post called the possible involvement of Gallo's leukemia virus "the strongest clue yet to the cause of AIDS." The Boston Globe nominated the virus as "the leading suspect for causing the illness." Even Science's archrival, Nature, took note of "an important group of papers" that "confirms that HTLV is indeed somehow linked with AIDS."

More than 1,200 Americans were already sick with AIDS. Physicians in San Francisco, New York and other big cities were seeing new patients each week, and they were becoming increasingly anxious to know more about the mysterious and deadly disease with which they were confronted. Now they were being told that AIDS might be caused by a leukemia virus. To some, the idea that a cancer virus might underlie an immune deficiency didn't make immediate sense, but most of those who read the articles in Science put their confusion down to lapses in their own understanding of retroviruses and AIDS. The relatively small number of scientists who knew something about retroviruses did have some questions, however.

The curious thing about Essex's data, they thought, was that his numbers were neither high nor low—not high enough to show a conclusive link between the leukemia virus and AIDS and not low enough to be a coincidence. But Gallo and Essex agreed that Essex's test needed to be refined, and they had answers for the other objections as well. When it was pointed out that there was no AIDS in southwestern Japan, where the leukemia virus was most common, Gallo suggested that maybe AIDS hadn't been noticed there yet, or that Japanese people perhaps responded differently to the disease.

The news accounts about the possible link between HTLV and AIDS—and there were many in the spring and summer of 1983—barely mentioned a fourth paper in the same issue of Science. The lapse was perhaps understandable since the magazine itself, in an accompanying news article, had dispensed with the paper in a single sentence. When the nonscientific press referred to the paper at all, it was mostly as an afterthought, to note that researchers at the Pasteur Institute in Paris had provided confirmation of the findings by Gallo and Essex.

The origins of the AIDS work in Paris traced back to the end of 1981, when a group of physicians began meeting informally to discuss what one member, a young immunologist named David Klatzmann, called "a disease which at that time interested nobody." Jacques Leibowitch was also a part of the Paris group, and it was he who focused the group's attention on the possibility that a retrovirus was responsible for AIDS.

"None of us was a retrovirologist and we had no idea what this virus was," Klatzmann recalled. "We discussed how to isolate such a virus, and we reasoned that maybe the lymph node was the best point to look at." Another member, Francoise Brun-Vezinet, had taken a course in virology at the Pasteur Institute and remembered the name of one of her lecturers. In mid-December of 1982 Brun-Vezinet put in a call to Luc Montagnier, the chief of the Pasteur's department of viral oncology. Yes, Montagnier said, he had heard about AIDS and had thought about the possibility that a retrovirus was involved. If the clinicians would bring him a lymph node from someone with AIDS, he would look for such a virus.

The French physicians had already decided the best place to look was the cells of someone who did not yet have full-fledged AIDS. If a virus was present, and if the virus was infecting the helper T-cells, then a person in whom the disease was not so advanced might have more infected cells in which to find the virus. As it happened, another of the Paris clinicians, a tropical disease specialist at the Claude Bernard Hospital named Willy Rozenbaum, had been seeing just such a patient, a young homosexual named Frederic Brugiere.

A fashion designer, Brugiere had been suffering for several months from the persistently swollen lymph glands that often precede AIDS. Other than that, however, he was healthy. On the afternoon of Jan. 4, 1983, Francoise Brun-Vezinet delivered a slice of Brugiere's lymph node to Jean-Claude Chermann, who worked under Montagnier as a lab chief at the Pasteur. Chermann gave the sample to Montagnier, who minced the tissue and put the T-cells he extracted into a flask filled with nutrients to keep them alive. To encourage the growth of any virus that might be present in the cells, Montagnier added an antibody designed to counter the effects of interferon, a protein produced by the immune system that protects T-cells against viral infections.

Because the flask was stored in an incubator that kept it at body temperature, if a virus was present it should begin reproducing in the laboratory just as it would in Brugiere's body. If it happened to be a retrovirus, the first evidence of its existence would be the activation of an enzyme called reverse transcriptase as it assembled DNA copies of the virus's native RNA.

In one sense, the AIDS epidemic could not have come at a better time. If AIDS had appeared even a decade earlier, researchers would not have known where to begin searching for its cause. Helper T-cells had not yet been recognized as a separate class of white blood cells, retroviruses in humans were unknown and there were no reliable tests for reverse transcriptase. Now, however, there was such a test. Every three days Montagnier drained fluid from the culture and gave it to Francoise Barre, another Pasteur scientist who worked for Chermann and who was skilled at using radioactive isotopes to measure the amount of DNA being synthesized by a retrovirus.

Seven times, at three-day intervals, Barre tested the culture fluids for reverse transcriptase, and seven times the results were negative. But on Jan. 26, 1983, when the radioactivity in the fluids reached 5,600 counts per minute—about three times the background radiation at the Pasteur—Barre began paying attention. Three days later, when the radiation level reached 22,000, it seemed only one conclusion was possible: a retrovirus was growing in Frederic Brugiere's cells. Then the numbers on the radiation meter began to fall.

"The first reaction was to think that we had tissue culture problems," Barre recalled, and such a conclusion was understandable. When Gallo's leukemia virus, then the only known human retrovirus, was growing in a culture, the reverse transcriptase level didn't rise and fall; it simply continued to rise as the virus transformed increasing numbers of white blood cells into cancer cells. But the cells in the French AIDS virus culture weren't multiplying as they would have in the body of a cancer patient; they were dying.

If AIDS was characterized by a decline in the number of helper T-cells, and if a virus was infecting those same cells, then perhaps there was nothing wrong with the culture medium after all. Perhaps it was the virus that was killing the cells. That would explain not only the decline in reverse transcriptase activity and the dying cells, it would also explain the clinical progression of AIDS.

The Pasteur group's solution to the question of how to keep the virus growing was both simple and elegant. "We decided," Barre says, "to add fresh cells." When a second attempt was made to grow the virus, Brugiere's cells were mixed with fresh T-cells from blood recently donated by a Spanish tourist at the Pasteur's hospital. There was nothing special about the Spaniard. "I was in a hurry," Montagnier recalled. "The first donor who came along was the right one."

When the new culture was tested for reverse transcriptase on Feb. 14, the results were negative, and they were still negative on the 17th, the 20th and the 22d. But on Feb. 27, the radiation level began to climb, and on March 1 it peaked at 14,000. Three days later it began to fall, but this time there was no concern about possible tissue culture problems. Indeed, the excitement in the Pasteur's small AIDS group was palpable. But just to be sure, the group wanted to reproduce the same result one more time. From Montagnier's crowded lab, the culture was moved to its own room, across the hall from Barre's office on the first floor of one of the Pasteur's oldest buildings.

Because the Spaniard had gone back to Spain, when Barre and Chermann in-

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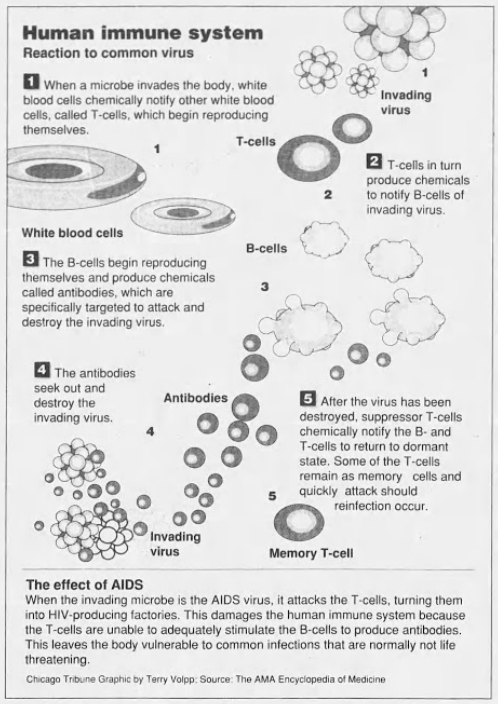

Antibodies: Weapons that target specific intruders

The human immune system fights disease with many weapons. Among the most formidable are antibodies, the biochemical medicine the body uses to cure everything from influenza to pneumonia—and, once cured, to protect itself against a recurrence.

Anything that is not a natural constituent of the body—anything "foreign"—may elicit an immune response, including the production of antibodies that are specifically designed to neutralize the invader. When a patient's body "rejects" an organ that has been transplanted from someone else, it is because the patient's immune system has recognized the heart or liver as something foreign.

In cases of infectious disease the foreign invader is often a virus, a particle a few millionths of an inch in diameter constructed primarily of proteins. As soon as the presence of a virus is noted by the immune system's sentinel cells, a biochemical message is passed to other cells that an invasion is underway.

Like a locksmith who fabricates a key from a wax impression of a lock, the immune system's complex machinery assembles a set of antibodies that have a unique biochemical attraction to the proteins of the invading virus.

When an antibody molecule recognizes a passing virus particle in the patient's bloodstream or tissue, it attaches itself to the virus and renders it harmless. If the person is otherwise healthy and his immune system is functioning properly, he will usually recover after all the virus particles have been neutralized. And because the immune system "remembers" the biochemical makeup of each invading virus, any future attack will be met with such a rapid immune response that the patient will probably never again experience any symptoms of disease.

The vaccines that protect against viral diseases like measles and polio are made with altered versions of the viruses that, although altered, still trigger the production of protective antibodies.

Whether there will ever be an effective vaccine for AIDS is still an open question. Although antibodies to the AIDS virus usually appear within several months of the initial infection, they almost always fail to eradicate the virus; there are only a few cases on record of patients who are antibody-positive and virus-negative, suggesting that the AIDS virus may have been eliminated by their immune systems.

Precisely why the immune response to AIDS is so ineffective is not yet fully understood, although it probably has something to do with the fact that during the first several years of infection the AIDS virus lies quiescent inside the very cells that control the patient's immune system—the helper T-cells—and also with the degree to which the AIDS virus alters its genetic makeup as it replicates inside the patient's body.

When the AIDS virus finally does begin to replicate, it destroys the ability of the T-cells to perform their protective function. With his immune system gravely impaired, the AIDS patient eventually dies of some otherwise nonfatal disease against which his body could no longer mount a defense. Because of the absence of T-cells and their inability to generate antibodies in the later stages of AIDS, patients who are seriously ill often test negative for antibodies to the AIDS virus.

LAV: Lymphadenopathy-associated virus, the name originally given by scientists at the Pasteur Institute to the AIDS virus they discovered in 1983. The original French isolate, found in T-cells from Frederic Brugiere, the patient known as BRU, was called **LAV-1**. Like **HTLV-3B**, LAV-1 contains several distinct AIDS virus DNAs, at least two of which are genetically indistinguishable from variants cloned from Gallo's HTLV-3B.

LENTIVIRUS: A class of slow-acting **retroviruses** including the AIDS virus. Before AIDS, lenti-retroviruses had been found only in animals.

LEUKEMIA: Cancer marked by the uncontrolled proliferation of white blood cells which can take several different forms depending on which cells have become cancerous. Cancers of lymphocytes such as T- and B-cells outside the blood are lymphomas.

MOV: The name used in Gallo's lab for an AIDS virus isolate in late 1983 and 1984. The initials apparently stand for "MO Variant," stemming from the belief among Gallo's assistants that the AIDS virus was genetically similar to HTLV-2. What became of MOV is unclear, because its existence was never publicly disclosed.

NUCLEOTIDES: Chemical building blocks of **DNA** and **RNA**. DNA is composed of four nucleotides: adenine, guanine, thymine and cytosine. RNA substitutes uracil for thymine.

PROTEINS: Chains of **amino acids** varying greatly in size and shape. **Enzymes** and hormones are biochemically active proteins. The AIDS virus has several structural and regulatory proteins including its main core protein, called p-24, and its envelope protein, gp120. The numbers refer to approximate molecular weights (in thousands).

RETROVIRUS: Virus whose genetic code is written in **RNA** rather than **DNA**. Retroviruses reproduce by using **reverse transcriptase** to copy RNA into DNA.

REVERSE TRANSCRIPTASE: The enzyme **retroviruses** manufacture to enable them to reproduce inside a host cell.

RNA: Ribonucleic acid; single-stranded chain of **nucleotides** that contains the genetic code for some viruses, including **retroviruses**. Various forms of RNA also assemble **proteins** according to instructions contained in **DNA**.

SERUM: The pale yellow fluid left over after the cells have been removed from blood. It is used for testing for viral antibodies.

T-CELLS: The "controllers" of the human immune system. **Helper T-cells**, also known as T-4 cells, direct the production of **antibodies** by **B-cells**. Suppressor T-cells signal the immune system to "stand down" after a virus or other invader has been vanquished.

TI7.4: Human **T-cell** line established at M.D. Anderson Hospital in Houston. Along with **HUT78**, it was used in Gallo's lab to grow the French AIDS virus called **LAV-1**.

VIRUS: Infectious organism consisting of nucleic acid, either **DNA** or **RNA**, and **proteins**, sometimes contained in protective envelope of fatty material. Some viruses are harmless; others cause disease by damaging the cells they infect.

WHITE BLOOD CELL: Immune system cells that circulate in the blood and of which there are several types, including the lymphocytes called **T-cells** and **B-cells**.

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fected the culture for a third time they used T-cells from umbilical cord blood supplied by a nearby maternity hospital. Cord blood cells, as they are called, are among the most susceptible to infection by a virus because the newborn babies from which they come are mostly virus-free. On March 14, when the reverse transcriptase level again reached 14,000, two important conclusions were unavoidable: "First, that the virus was killing the cells," Chermann said. "And secondly, that we have to add fresh cells to keep the virus growing. That was the most important thing."

Besides the presence of reverse transcriptase, there were other indications the Pasteur group had found a retrovirus. Tests showed that the virus's genetic material was RNA rather than DNA, and also that the virus particles were the right size and density for a retrovirus. When some of the infected cells were placed under an electron microscope, which uses beams of electrons rather than rays of light to "see" exceedingly tiny things, the resulting photographs showed what looked like retroviral particles budding from the surface of an infected T-cell.

But which retrovirus was it—Gallo's leukemia virus or a new human retrovirus altogether? The photographs were indistinct, but Chermann and Barre didn't see how it could be the leukemia virus. That virus made T-cells multiply rapidly, and this one was killing them.

In February of 1983 Montagnier called Gallo to say the Pasteur group had found what looked like a new retrovirus in an AIDS patient in Paris. Whether it was Gallo's leukemia virus or not wasn't clear, but if Gallo would send the French some antibodies to the leukemia virus they could find out. The request piqued Gallo's curiosity about what was happening on the other side of the Atlantic. "He was very interested," Barre recalled. "He told us that he also had some data indicating that HTLV could be involved in this disease."

The antibodies Gallo sent to Paris were designed to recognize the two main proteins that form the core of the leukemia virus. If they reacted with the virus growing in the Pasteur's culture, then it must be the leukemia virus. But when the antibodies were added to the culture, there was no reaction at all. "It was for us," says Chermann, "the first proof that the virus was different."

In early April, Montagnier informed Gallo that the antibody tests had been negative and that the French now believed they had found a new human retrovirus related to AIDS. "I said we were close to writing a paper," Montagnier recalled. "He said you have to hurry because we also have written some papers [and] Essex also has done it, and perhaps we could have all the papers in the same issue of Science."

Over a weekend, Montagnier and Barre, whose English was more fluent than Chermann's, hammered out a manuscript reporting the isolation of their new retrovirus from Frederic Brugiere, who would henceforth be known in the scientific literature as BRU. Listed first among the authors, the position traditionally reserved for the researcher who has made the greatest contribution to the work, was Francoise Barre. Chermann's name was second, followed by Brun-Vezinet and Rozenbaum. As the senior scientist in the group, Montagnier was last.

The French paper took careful account of the differences between the virus isolated from BRU and Gallo's leukemia virus. There hadn't been any reaction between their virus and the leukemia virus antibodies. Nor had any of the antibodies in BRU's blood reacted with the leukemia virus, which meant that BRU wasn't infected with HTLV-1. The two viruses, the paper concluded cautiously, were "not immunologically related," and the rest of the article was just as carefully worded. The French would have been rash to claim their virus was the cause of AIDS, and they didn't. Its role in the disease, they said, "remains to be determined." Still, the evidence suggested that they had found something new.

Rather than consign such an important article to the mail, Montagnier handed the finished manuscript to his technician, Jacqueline Gruest, who was on the way to visit her daughter in Washington, D.C. But instead of asking her to deliver it directly to Science, he told her to take it to Gallo in suburban Bethesda.

As with most major scientific journals, papers that are to appear in Science are subjected to peer review, an anonymous evaluation of their strengths and weaknesses by other experts in the same field. While a positive review does not ensure publication, a negative review usually means a paper will be rejected. Unlike any other major journal, however, Science allows its prospective authors to suggest their own reviewers, and when Gallo volunteered to review the paper Montagnier quickly agreed.

Once he had the paper in hand, Gallo noticed that the French had neglected to write an abstract, the long summary paragraph that precedes most scientific papers and other scholarly articles, and the absence of an abstract was more than a minor omission. The abstract is as much as many readers of scientific journals are willing to digest. Moreover, it is the only part of a paper reproduced in the electronic databases that are now the most common tools of bibliographic research. Gallo, however, stood ready to help. "Gallo called me," Montagnier said, "and since the time was very short he said to me that he should write the summary."

On April 19, 1983, Gallo sent the Pasteur paper to the editors of Science with a strong letter of recommendation signed by himself and two of his top assistants. "This paper," the three reviewers agreed, "is of obvious immediate great importance and relevance. It will be of very great interest to virtually all scientists and clinicians. The work is careful. The discussion is clear and well-thought-out. It should be published as rapidly as possible." Gallo also included his abstract with the manuscript, but his summary of the French research made it sound as though the virus in BRU's lymph nodes was either the Gallo leukemia virus or a very close relative.

The abstract began by calling the French virus a C-type retrovirus, the same class of retrovirus to which the leukemia virus belongs. It also said that the protein at the core of the French virus was similar to the core protein of the leukemia virus, and that antibodies in BRU's blood had reacted with some of the leukemia virus's proteins. Gallo had also added a sentence to the text of the paper itself. "The virus," he wrote, "appears to be a member of the human T-cell leukemia virus (HTLV) family."

Montagnier remembers being "confused on the phone" as Gallo read the French his abstract, and Barre recalls that "it was very difficult by phone to object" because "you cannot read, you just hear." Only when they saw the abstract later did the Pasteur group realize it didn't accurately reflect the conclusions in their paper.

The French hadn't determined, for example, whether their virus was a C-type or not. "I was very cautious," Montagnier recalled. "I was not saying it was something different from a C-type." Montagnier was also distressed by Gallo's description of the core proteins of the two viruses as similar. "I would not ever agree to that," he says now, "because we showed no cross-reaction" between the French virus and Gallo's antibodies. "This was misleading. The core proteins did not cross-react."

Nor was there any evidence in the French paper to support Gallo's assertion in the abstract that antibodies in BRU's blood had reacted with the proteins of the leukemia virus itself. The French had seen a reaction between BRU's blood and something on the surface of T-cells infected with the leukemia virus, an effect not unlike the one Max Essex was seeing at Harvard. But they thought the reaction involved a protein that was part of the cell itself, not one that belonged to the virus. "We didn't believe it," Barre said in a recent interview in Paris, pointing to a page in her lab notebook where the data is marked with an arrow. "We didn't think it was reacting with the virus."

There were other surprises. Montagnier said he thought Gallo had added the sentence saying the French virus was a member of the "HTLV family" to the abstract rather than to the text of the paper. It was also his understanding, he said, that Gallo had agreed to change what the "L" in HTLV stood for from "leukemia" to "lymphotropic," meaning a virus that has an attraction for white blood cells.

Whatever the French had found growing in BRU, they knew it wasn't a leukemia virus, and Montagnier wasn't even sure the viruses were closely enough related to bear the same general name. "I believed myself that this was wrong," Montagnier recalls, "but I could not really say this is wrong to Gallo, because I had too little evidence at that time."

Although the antibody reactions and the distinctions between the core proteins were crucial to understanding what the French had discovered, they were lost on those who wrote the government news releases and those who read them. A typical report was the one in the Washington Post, which announced that three independent groups of researchers, at Harvard, the National Cancer Institute and the Pasteur Institute, had "all found signs of human T-cell leukemia viruses" in patients with AIDS and pre-AIDS.

Even those scientists working in the same field were confused by the abstract of the French paper. "Everyone thought the French had isolated HTLV too," recalled Jay Levy, a virologist at the University of California medical center in San Francisco. As it began to dawn on the French that their work was being viewed not as an original and potentially important discovery but merely as support for the findings of Gallo and Essex, the elation in Paris gave way to dismay. "We were not very happy," Francoise Barre recalls with her typical understatement. "That's for sure."

Gallo's response to the expressions of displeasure from Paris was to portray the Pasteur group as ingrates whose paper would never have been published in Science without his intercession. "When Montagnier's paper was submitted to Science, I held back mine so he could join," Gallo said in a telephone conversation with The Tribune last year. "No one's ever written this—I don't think I've ever told a reporter before—that Montagnier's paper was rejected by Science, that I intervened and got it accepted. Doesn't that tell you a little bit about my motives?"

Montagnier is unaware of any such rejection—"all I ever heard," he says, "was that my paper had been accepted"—and correspondence from Gallo's files shows that he forwarded the paper to Science with his glowing review just four days after it reached Bethesda. Asked how the French manuscript could have been rejected by other reviewers during the short time it was in Gallo's hands, Ruth Kulstad, the Science editor who handled the paper, would say only, "Everything here is confidential, and we do not discuss papers, authors or referees."

Nearly five years later, sitting in his cramped office in the virology complex at the Pasteur Institute, Luc Montagnier remembered Gallo's motives less than charitably.

"He was not against me writing a paper," Montagnier said, "but he thought my paper would support his own paper on HTLV. Because he thought my virus was HTLV. Gallo didn't believe there could be more than one kind of human retrovirus. He was fully convinced that HTLV was the right one, that there was only one human retrovirus involved in AIDS."

2 The father of human retrovirology

Retroviruses have fascinated scientists since they were discovered in animals early in this century. Until Gallo's HTLV, however, the only known retroviruses were those that caused cancer and other diseases in animals, and a small group of foamy-looking retroviruses in humans that didn't seem to cause any disease at all.

The idea that retroviruses might have something to do with cancer in humans had been talked about for years, and it was a prospect that had vast implications for medicine. If it were possible to "catch" some kinds of cancer the same way one caught polio or smallpox, it might be possible to wipe out such cancers through vaccination the same way polio and smallpox were being eradicated.

When then-President Richard Nixon signed the National Cancer Act of 1971 and declared his "war on cancer," there was genuine hope that the effort might ultimately produce a cancer vaccine. But the promise of those early years has gone almost entirely unfulfilled. Only one human retrovirus, Gallo's HTLV, has been indisputably linked to cancer, a rare cancer called adult T-cell leukemia.

There was more reason for hope in the spring of 1970, when researchers at the University of Wisconsin and the Massachusetts Institute of Technology announced their nearly simultaneous discoveries of an enzyme called reverse transcriptase, the missing piece to the puzzle of how human retroviruses work.

When David Baltimore, the MIT scientist who would share the Nobel prize for reverse transcriptase with Wisconsin's Howard Temin, was invited to the National Institutes of Health to talk about his great discovery, Gallo was in the audience. "After Baltimore had finished speaking," one of Gallo's associates recalled, "Bob came right back up and said, this is what we're going to work on."

Baltimore and Temin had found reverse transcriptase in cancer cells taken from mice and chickens, but if the human cancer virus program was going to go forward somebody would have to find it in human cancer cells. Within a few months Gallo had obliged, publishing a paper reporting the discovery of reverse transcriptase in human leukemia cells.

It looked at first like another historic breakthrough, important enough to put Gallo on the same program with Baltimore and Temin at the Nobel ceremony in Stockholm. But no one who attempted the same experiments could reproduce Gallo's results, and reproducibility is the acid test of science.

Throughout the early 1970s Gallo continued to refine his test for reverse transcriptase, but his periodic reports of new detections of the enzyme in human cancer cells were met with varying degrees of skepticism by his fellow scientists. If Gallo could keep finding reverse transcriptase in human cancer cells, they wondered, why couldn't he find the retrovirus that was producing it?

It was a reasonable question and, in January of 1975, Gallo and a National Cancer Institute colleague named Robert Gallagher announced that they had found the first human cancer retrovirus, called HL-23, in some leukemic blood cells from a woman in Texas. Despite the scientific convention that frowns on announcing important breakthroughs in the news media, reports of Gallo's discovery were in the newspapers before his landmark article was in print. "I got up one morning and read the headlines of the Washington Post," Gallagher recalled. "I was shocked to find that he'd been talking to the press."

It was a great moment while it lasted—"a great Eureka," Gallo called it at the time—but it lasted for only a year. A group of American and British virologists, attempting to confirm his historic find, discovered that the first human cancer virus wasn't human at all but a cocktail of monkey, ape and baboon viruses.

Gallo tried to explain his error by suggesting that the Texas woman had somehow been infected with the baboon virus, but there was really only one conclusion to be reached: Gallo's culture had been contaminated in his laboratory. Gallo first attributed the contamination to "sabotage by my enemies"; now he says, "Who the hell knows?"

Whatever happened to HL-23, by the time it was discredited most of the bright young researchers who had enlisted in the hunt for a human cancer retrovirus had concluded there probably was no such thing, at least not in solid, or tumor, cancers of the breast, colon and lung, and they were the most common.

As Gallo's erstwhile colleagues departed the NIH campus for academia and private industry, they joked that human tumor viruses might as well have been called "human rumor viruses." Now that viruses were passe, the smart money in cancer research was betting on so-called "cancer genes," pieces of defective DNA that somehow trigger the cancerous proliferation of ordinary cells. The cancer crowd also joked about HL-23. Gallo remembers more than one occasion when, preparing to speak at a scientific meeting, he was greeted with derisive laughter.

The question of whether viruses might be involved in blood cancers like leukemias was technically still open. In 1978, scientists in the Netherlands not only detected reverse transcriptase but also photographed what looked like a retrovirus in cells from several patients with an uncommon kind of T-cell cancer known as mycosis fungoides.

But the Dutch weren't able to say much about the new retrovirus, or even whether it was actually responsible for their patients' disease. In order to prove that the virus was causing mycosis fungoides they would need to find it in a much larger number of patients, and they couldn't. "We tried," recalled Elizabeth van der Loo, who as a young graduate student was chiefly responsible

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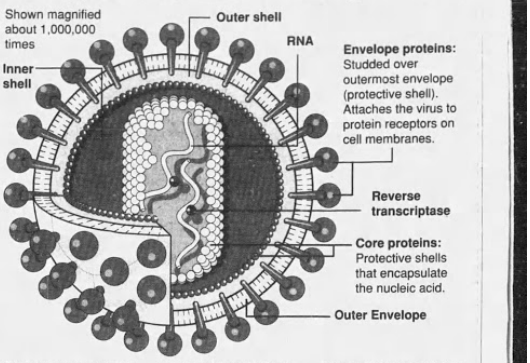
Anatomy of a Human Immunodeficiency Virus (HIV)



RNA (ribonucleic acid): Important in protein synthesis and genetic transmission and is found in all cells and many viruses. Nucleic acids are the chemicals that control cellular heredity and function. All viruses consist of nucleic acid, either RNA or DNA (deoxyribonucleic acid), but never both.

Reverse transcriptase: An enzyme that acts as a biological trigger, stimulating the formation of DNA on a template of RNA in certain viruses composed of RNA, a process crucial to the retrovirus life cycle. The flow of information from RNA to DNA is the reverse of the normal information pathway, hence the name.

Proteins: The tool kit and framework of all cells and components of viruses. They can also serve as enzymatic catalysts that cause or accelerate chemical reactions. Proteins are polymers, long strings of amino acids attached to one another like beads in a necklace to form a larger, more complex molecule.

Chicago Tribune Graphic by Terry Volpp; Sources: Abbott Laboratories. Applied Biosystems

How subtle invader destroys cells that control the body's defenses

The virus that causes AIDS is one of hundreds that inhabit humans, animals, insects, plants—even bacteria. Viruses can take many sizes and shapes. Some are harmless; others cause disease ranging from smallpox, polio and measles to yellow fever, herpes and flu.

Viruses are very small—a hundred times smaller than even bacteria. And, while some are more complex than others, they are among the simplest things on earth: a tiny shred of genetic information tucked inside a protein shell and sometimes covered with an envelope of fatty material. Viruses are not alive. They can reproduce themselves, but only after they have invaded the cells of their preferred host and gained control of the cells' genetic machinery.

Once inside the cell the virus begins its reproductive process, spewing forth new virus particles at such a rate that the cell is destroyed. A single virus can reproduce itself thousands of times in a matter of hours, which is why people who contract most viral diseases become ill a short time after infection.

All the diseases that have been linked to viruses result in some way from the process of infection. The leukemia virus called HTLV-1 infects mainly helper T-cells, the controllers of the human immune system, and causes them to multiply out of control. The AIDS virus infects the same kind of cells but kills them, leaving the body vulnerable to a variety of potentially lethal infections.

The genetic material of many viruses is DNA, a chain of molecules called nucleotides strung together in a sequence that spells out the life-code for every living thing from people to potatoes. When a DNA virus infects a cell, it begins the reproductive process by employing its cousin, RNA, to assemble amino acids into the catalytic proteins, called enzymes, that it needs to construct more copies of itself, and then to assemble the structural proteins that form new virus particles.

The genetic codes of some viruses, like the AIDS virus, are written not in DNA but in RNA. Such viruses, called retroviruses, use an enzyme called reverse transcriptase to copy their original genetic RNA into a complementary strand of DNA that inserts itself into the much larger strand of human DNA in the host cell.

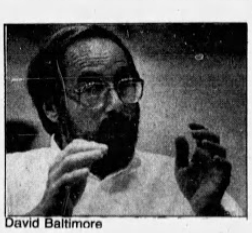
A historical look at AIDS research from 1970 to 1987

JUNE 27, 1970: **Howard Temin** and **David Baltimore** discover reverse transcriptase in cancer cells from mice and chickens.

DEC. 5, 1970: **Robert Gallo** first reports finding reverse transcriptase in human leukemia cells. The report is viewed with skepticism by fellow scientists.

JAN. 31, 1975: **Gallo** announces the isolation of the first human cancer virus, HL-23. It later proves to be a cocktail of monkey and baboon viruses.

SEPTEMBER, 1977: Japanese scientists report an epidemic of disease they call adult T-cell leukemia (ATL) in that country's southwestern provinces.


David Baltimore

1979: Dutch researchers report finding and photographing retrovirus particles in patients with a kind of cancer called mycosis fungoides.

MARCH, 1980: NCI's **Adi Gazdar** reports the establishment of the permanent T-cell lines HUT78 and HUT102, the latter from a 27-year-old mycosis fungoides patient named **Charles Robinson**.

DECEMBER, 1980: **Bernard Poiesz** and **Frank Ruscetti** report the isolation of the first human cancer virus, HTLV, from **Charles Robinson's** cells.

MARCH 24, 1981: At a meeting in Kyoto, Japan, **Gallo** learns **Yorio Hinuma** has found antibodies to a viral antigen in 100 percent of Japanese patients with ATL. **Gallo** tells the group he has found antibodies to HTLV in "some" ATL patients.

JUNE, 1981: UCLA's **Michael Gottlieb** reports first six cases of what will later be called AIDS.

FEB. 19, 1982: **Gallo** publishes data showing antibodies to HTLV in blood from Japanese ATL patients, suggesting his virus may be the same as that detected by the Japanese.

How the AIDS retrovirus attacks the helper T-cell

1. AIDS virus enters the human circulatory system.

2. Virus specifically targets a cell in the human immune system, known as the helper T-cell. It attaches itself to a special receptor that is on the outer wall of the T-cell.

3. Virus is absorbed into the host cell, shedding its outer shell and releasing its own genetic code (RNA) along with the reverse transcriptase enzyme.

4. Enzyme uses the viral RNA to manufacture a DNA copy of itself.

5. Viral DNA inserts itself into the host cell DNA, where it may lie dormant for up to 10 years.

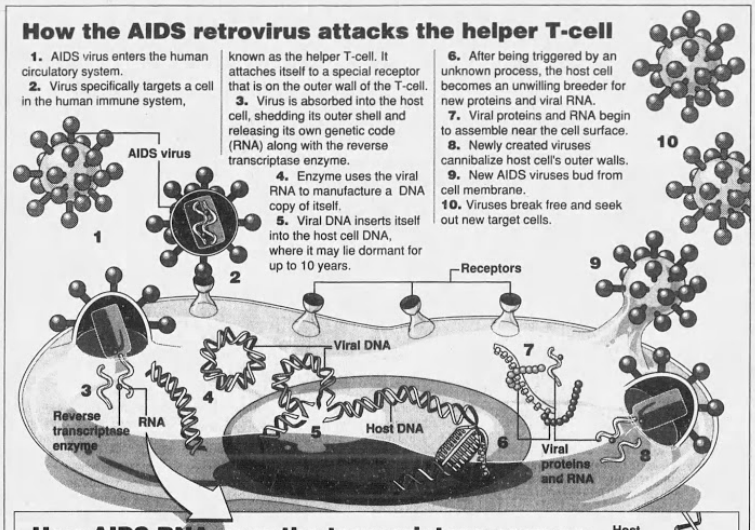
6. After being triggered by an unknown process, the host cell becomes an unwilling breeder for new proteins and viral RNA.

7. Viral proteins and RNA begin to assemble near the cell surface.

8. Newly created viruses cannibalize host cell's outer walls.

9. New AIDS viruses bud from cell membrane.

10. Viruses break free and seek out new target cells.



How AIDS RNA uses the transcriptase enzyme

Normal DNA contains the nucleotides adenine, cytosine, guanine and thymine (A,C,G and T). Instead of thymine, RNA uses uracil or U.

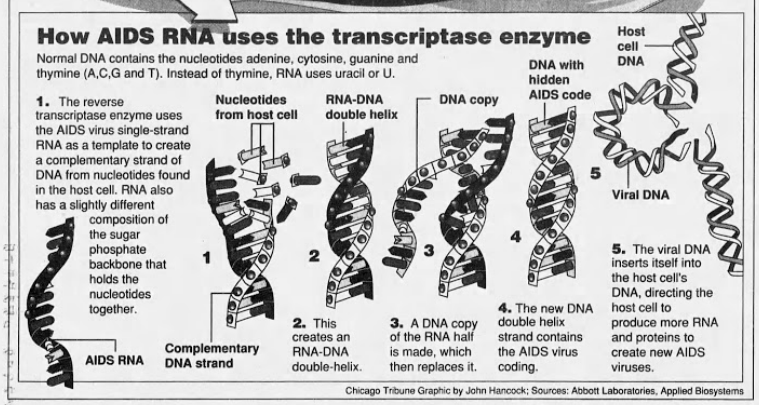
1. The reverse transcriptase enzyme uses the AIDS virus single-strand RNA as a template to create a complementary strand of DNA from nucleotides found in the host cell. RNA also has a slightly different composition of the sugar phosphate backbone that holds the nucleotides together.

2. This creates an RNA-DNA double-helix.

3. A DNA copy of the RNA half is made, which then replaces it.

4. The new DNA double helix strand contains the AIDS virus coding.

5. The viral DNA inserts itself into the host cell's DNA, directing the host cell to produce more RNA and proteins to create new AIDS viruses.



Chicago Tribune Graphic by John Hancock; Sources: Abbott Laboratories, Applied Biosystems

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for the discovery. "But in Holland there are not so many patients with mycosis fungoides."

Gallo's lab, which in the wake of the monkey virus contamination had all but stopped looking for a human cancer virus, had been reduced to publishing papers on the biochemistry of the blood. The initiative to renew the search came from a young physician named Bernard Poiesz who joined the lab in the fall of 1978 as a postdoctoral fellow.

Poiesz had elected to work under one of Gallo's associates, a young cell biologist named Frank Ruscetti, who had just made a great leap forward in the laboratory technique for growing T-cells. With another Gallo assistant named Doris Morgan, Ruscetti had discovered and isolated the protein, now called Interleukin-2, that the human immune system uses as a biochemical signal to encourage T-cells to divide and multiply in response to an infection.

The first year of Poiesz's fellowship had been spent with cancer patients, and he had seen a number with the T-cell cancers that are known as lymphomas. What he wanted, he told Ruscetti, was to continue looking at cells from such patients in hopes of finding a clue to what caused their disease.

The research from Holland had not yet been published, and Poiesz had no real reason to expect to find that lymphomas were being caused by a human cancer virus. But he had learned the art of testing cells for reverse transcriptase as a medical student at the University of Pennsylvania, and "it seemed reasonable to look, because we knew how to look."

Among the first cells Poiesz got to look at were some taken from the lymph node of one of his former patients, a 28-year-old Alabama man named Charles Robinson. "I actually wound up being the fellow that admitted him for the lymph node biopsy," Poiesz says, "not realizing what that lymph node biopsy was going to get us all into."

Robinson had been diagnosed as having mycosis fungoides, the same kind of T-cell cancer as Elizabeth van der Loo's patients. Before Robinson died, however, another cancer institute researcher named Adi Gazdar mixed some of Robinson's cancerous T-cells with Frank Ruscetti's Interleukin-2. The result was a continuous T-cell culture called HUT102, in which Robinson's leukemic T-cells would go on dividing and multiplying in the laboratory long after he was dead.

When Poiesz and Ruscetti began looking at the cells from HUT102 shortly before Christmas of 1978, they found measurable levels of reverse transcriptase. But Poiesz was aware that scientists in Gallo's lab and elsewhere claimed to have detected reverse transcriptase in human cancer cells before. There had been so many false alarms, Poiesz recalled, that "in order for something to be considered interesting there had to be an extraordinary amount of reverse transcriptase."

Because Robinson's cells were showing only a small amount of enzyme activity, Poiesz said, "many people were very skeptical. But I had done enough reverse transcriptase assays on normal T-cells to recognize that if there was a little bit of production, that's all you needed to see to be interested."

In fact, Poiesz and Ruscetti were more than interested. Over the next few months they worked night and day, growing huge quantities of Robinson's cells and trying to isolate, purify and analyze the virus they appeared to contained. "I grew 120 liters of it and saw that it didn't behave like anything else," Poiesz said, "yet it clearly was a retrovirus. We knew that we had stumbled onto something that was different."

Their main concern was that whatever virus was reproducing in Robinson's cells might be one of the many animal retroviruses that were being grown elsewhere in the same building—and which, in a bizarre reprise of the HL-23 fiasco, might have somehow contaminated their cultures. Painstakingly, the two researchers checked their cultures for every one of the dozens of known animal retroviruses. When there were no more animal viruses left, Poiesz recalled, "We knew we had something."

But they were unable to give the good news to Gallo, who was on an extended trip out of the country. "I'd proceeded to do the additional work while he was away," Poiesz said. "He was gone for a couple of months." When Gallo found out that what appeared to be the first human cancer retrovirus had been isolated in his lab, it was in a conversation with another scientist at a backyard cocktail party in Bethesda. "He had just come home that weekend," Poiesz recalled. "I was supposed to have a meeting with him on Monday. I must say he was a little ticked at us."

Considering that he had spent much of the previous decade looking for the first human cancer virus and then enduring the derision of other scientists after he mistakenly claimed to have found it, Gallo's annoyance was understandable to Poiesz. "He was a bit astounded that this had happened," Poiesz said, "because they had tried so long to find a retrovirus. Some very skilled people had tried it, and here was a junior member of the team, a postdoc, and in the first month of working he finds the human retrovirus. That seemed too lucky to be true."

To top it off, Poiesz and Ruscetti had been lucky not just once but three times out of three, finding what looked like the same new virus in a Caribbean islander and in a man from Boston. By then, another researcher in Gallo's lab recalled, there was "quite an uproar about the rest of the people in Gallo's lab not having been included in the discovery. Basically, they had opted out because they didn't believe Bernie in the first place. Then at that point Gallo kind of took over."

In December of 1980, a paper reporting the isolation of a new human retrovirus from a patient identified only as "CR" appeared in the distinguished monthly Proceedings of the National Academy of Sciences. The paper's first author was Bernie Poiesz, with Frank Ruscetti second. Gallo's name was last.

Gallo has called the discovery of HTLV "one of the most exciting stories of 20th Century biology," and it soon earned him informal recognition as "the father of human retrovirology." In keeping with scientific tradition, Gallo also gave the new virus its first name: human T-cell lymphoma virus.

What Gallo's associates remember most, however, was his disappointment that the new virus had not been found in a patient with leukemia, but in one with a lymphoma, mycosis fungoides, which affects far fewer people. "We argued whether it should be lymphoma or leukemia," Poiesz said. "I wanted to not even say it was a human virus until we knew for sure, but HTLV is the name that he wanted it to be."

As would have been true of any report of any new human virus, particularly one announcing the first human cancer retrovirus and especially one from the lab where the HL-23 debacle had occurred just five years before, the HTLV paper attracted a great deal of attention. But once the initial excitement had begun to fade, it became clear that the most important questions remained unanswered.

Although its name implied that the new virus was the cause of T-cell lymphoma, or at least played some central role in the disease, there is no way to be sure a virus isolated from a single patient, or even three such patients, is anything more than a laboratory curiosity. "It was clearly very different and we clearly had it in three humans at that point in time," Poiesz says. "But we hadn't proven that it had caused disease, nor did we at that point have any idea about what was really going on."

When Poiesz and Ruscetti began testing other mycosis fungoides patients for the virus, they couldn't find a single person who was infected, which meant that whatever the virus did, it probably didn't cause mycosis fungoides. "We were striking out," Poiesz says. "At that point it hadn't dawned on us that there might be an epidemic somewhere else in the world."

There was such an epidemic, but it was a long way from Bethesda and it involved a different disease. In the fall of 1977, a year before Bernie Poiesz arrived in Gallo's lab, a team of Japanese medical scientists in Kumamoto had published the first report, in the American journal Blood, of a newly recognized disease they called adult T-cell leukemia, or ATL for short.

A handful of other diseases had previously been discovered that involved the cancerous proliferation of T-cells, but these Japanese cases were unlike anything seen before. Not surprisingly, the urgency to find out what ATL was all about was greatest in the country where its victims lived. Within a few months, a researcher at the Okayama Cancer Institute named Isao Miyoshi had succeeded in growing T-cells taken from a 69-year-old man who had died four months after coming down with ATL.

From the way the old man's cells behaved in the lab, Miyoshi concluded that there must be something in his culture that was being transmitted from one cell to another. The most logical thing was a virus; and because the cells were producing reverse transcriptase, it seemed likely to be a retrovirus. When Miyoshi sent some of the cells to Yorio Hinuma, the eminent Kyoto virologist, Hinuma could see retrovirus particles under an electron microscope.

Three months after Poiesz and Ruscetti's paper electrified the scientific community, Gallo traveled to Kyoto to attend a hastily called meeting to discuss recent developments in human retrovirology. A short time before, Gallo's lab had received some blood samples from Japanese ATL patients sent by another Kyoto researcher, Yohei Ito, who had heard about Poiesz's paper and who wondered whether this new virus called HTLV might have something to do with ATL.

When Gallo's turn came to speak, he reported that some of the blood samples he got from Ito had contained antibodies that reacted with his virus—an indication that some of the Japanese ATL patients might be infected with a virus like HTLV-1. But Hinuma had done some similar experiments, and his results were more conclusive.

Hinuma had mixed Miyoshi's cells with serum, the liquid component of blood that remains after the cells have been removed, that had been taken from a number of patients with ATL. In each case, when the cells were placed under an ultraviolet light, a high percentage of them lit up—evidence that the serum from every single patient, not just some, contained antibodies that were reacting with something foreign in Miyoshi's leukemia cells.

Although he was too cautious to call it a virus at the time, the "something foreign" proved to be the retrovirus Hinuma had photographed. The Japanese named it ATLV, for adult T-cell leukemia virus.

"The Japanese work was driven by studying the pattern of the disease. Gallo's work was driven by coming across this virus and being unaware of ATL," says Robin Weiss of the Institute of Cancer Research in London, a noted retrovirologist and a coauthor of the definitive textbook on human retrovirology.

"Hinuma did that beautiful work," Weiss said. "I think he deserves real credit for that. I think Ito probably deserves the credit for saying this new virus of Gallo's might have something to do with this disease. I'd give Miyoshi the fine credit. Miyoshi's a modest and quiet man; he's continued to do super work in the field."

Except for the Japanese, Gallo's HTLV might well have remained a virus in search of a disease. But now that the Japanese patients were known to have antibodies to both Gallo's virus and to ATLV, it was important to know whether the two viruses were the same. The best way to find out was to crack their genetic codes—literally, to take them apart, identify their genetic building blocks one by one, and then compare them side by side. Although Gallo's assistants struggled with the problem for months, they were unable to clone their virus, a crucial step in breaking its code.

"To be honest," Bernie Poiesz recalls, "the people that were capable of cloning back at NIH were not all that interested. They didn't fully believe the story and they had other priorities. The Japanese worked very fast and very hard. They beat us to the punch."

In the summer of 1983, when scientists in Tokyo published the genetic sequence of ATLV, they managed even without a comparable sequence of HTLV to determine that the two viruses were "very similar." Later experiments appeared to show that the two viruses were in fact the same, which led to a final question: How could the same virus that caused adult T-cell leukemia in Japan have been discovered in Charles Robinson, a patient with mycosis fungoides who had never been anywhere near Japan?

The question became more compelling after Yorio Hinuma, in collaboration with Abraham Karpas, a retrovirologist at Cambridge University in England, reported that every mycosis fungoides patient they tested was negative for antibodies to ATLV. Not long afterward, Gallo and the cancer institute's clinicians concluded that Robinson had not died from mycosis fungoides but from a new kind of T-cell cancer that was much more like adult T-cell leukemia.

In scholarly articles recounting the discovery of HTLV, Gallo began referring to Charles Robinson as a patient with "leukemia-lymphoma," and then simply as someone who had died of adult T-cell leukemia. Although its initials stayed the same, the name of Gallo's virus changed as well: from human T-cell lymphoma virus, to human T-cell leukemia-lymphoma virus, and finally to human T-cell leukemia virus.

With the discovery of HTLV, the humiliation of HL-23 was nearly forgotten—and so, at least by Gallo, were the early contributions of the Dutch and the Japanese. Before their first paper on HTLV was published, Poiesz said, he and Ruscetti had given copies of both the Van der Loo paper from Holland and the one reporting the ATL epidemic in Japan to Gallo, with the suggestion that he might want to mention them in a footnote. He didn't.

In one scholarly article he authored later on the discovery of HTLV, Gallo awarded the Japanese two footnotes out of 85. In another, he gave his own lab credit for having established the link between the virus and adult T-cell leukemia, which was really something Hinuma and Miyoshi had done. To a colleague who asked for recommended reading on HTLV, Gallo sent a list of his own publications. "Much of the additional work," he wrote, "most of it from Japan, is really not terribly relevant. There are a few publications from Holland but they do not say anything particularly new."

When Gallo won his first Lasker prize in November of 1982, for the discovery of HTLV, there wasn't any mention of Bernie Poiesz or Frank Ruscetti. "When people talk about HTLV, it's always Gallo, Gallo, Gallo," an NIH scientist says. "You don't hear Bernie Poiesz's name, and you never hear Frank's name."

After Poiesz's postdoctoral fellowship was over he moved to Syracuse, where he now heads the division of hematology-oncology at the State University of New York Medical Center. When he used Gallo as a reference in applying for a grant to continue his work with HTLV, Poiesz recalls that Gallo responded with an unflattering letter.

"He basically wanted to make sure that he was the major player as the theme of HTLV worked its way out into the world," says Poiesz, who did go on working with HTLV. "I think his competitive nature was such that for some reason there was a false sense of concern that I might do well with it."

From his vantage point in Upstate New York he has watched while his former boss has taken the center stage of science. "There's many different reasons why people associate Bob Gallo's name as the discoverer of HTLV," he says. "I can't change how people perceive it, or how people presented it to the media. The only thing I can do is do my work. I spent many, many nights in that laboratory. The moment of discovery was mine."

In the years immediately following that discovery, Frank Ruscetti fared less well. "Frank's a relatively strong person and Bob's a pretty strong person," says one man who knows both of them. "There was a particular enmity between them for some time. There was a pyramid and Bob Gallo was the boss."

Before long Ruscetti was not only out of Gallo's lab but out of science altogether. It was nearly two years before he would find his way back in, at a National Cancer Institute satellite facility in Frederick, Md., where he is still

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MARCH, 1982: Japanese scientists report the isolation of a retrovirus they call ATLV from patients with ATL.

MARCH, 1982: Japanese scientists report the isolation of a retrovirus they call ATLV from patients with ATL.

MARCH 20, 1982: British researcher **Daniel Catovsky** reports the first ATL cases outside Japan, in several West Indian blacks living in London. All have antibodies to **Gallo's** HTLV.

NOV. 5, 1982: **Gallo** reports the isolation of a substrain of his human retrovirus, called HTLV-2, from a leukemic human T-cell line established by UCLA's **David Golde**.

Luc Montagnier

NOV. 19, 1982: **Gallo** wins the Lasker award for basic medical research, for "his revolutionary discovery of the first retrovirus known to be associated with a human malignancy."

JAN. 4, 1983: A portion of a lymph node from a 32-year-old Paris homosexual known as **BRU** is delivered to Pasteur Institute scientists, who begin efforts to culture the virus they suspect it contains.

JAN. 26, 1983: The Pasteur group obtains the first evidence of reverse transcriptase activity in **BRU's** cells, indicating the presence of a retrovirus.

FEB. 9, 1983: Paris physician **Jacques Leibowitch** brings **Gallo** cells from several AIDS patients, including **Marcellin** and **Claude Chardon**.

MARCH 3, 1983: **Gallo** sends Science magazine a paper reporting the detection of HTLV in two East Coast homosexuals with AIDS. Same day, he sends to Paris HTLV antibody that has been requested by the Pasteur researchers.

MARCH 24, 1983: Harvard's **Max Essex** submits a paper to Science reporting that 25 percent to 40 percent of AIDS patients have antibodies to a mysterious protein on the surface of HTLV-infected cells.

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employed. "My battles with Gallo were legendary," Ruscetti says, "but I won't talk to you. I just keep my mouth shut and try to do science."

When Gallo wrote the official history of his research on AIDS and human retroviruses, he recorded that the first human cancer virus, HTLV, had been discovered by "Gallo, Poiesz and coworkers." Asked about the history of that discovery last year, Gallo replied, "I think I've forgotten more than Poiesz and Ruscetti ever knew, times 10."

3 'You have to let Jean-Claude speak'

In the spring of 1983, while Bernie Poiesz was still enjoying the memory of a postdoctoral fellowship that had produced an almost unheard-of 11 major papers, and while Frank Ruscetti was still looking for work, Robert Gallo was channeling the search for the source of AIDS in the direction of the leukemia virus they had discovered.

But even as Gallo was promoting the virus, which he now called HTLV-1, in interviews and letters to his colleagues as the "leading candidate" for the cause of the AIDS epidemic, experiments in his own laboratory were producing persuasive evidence that HTLV-1 had nothing to do with AIDS.

At Harvard, Max Essex was finding ever-higher percentages of AIDS patients positive for what he said were antibodies to the leukemia virus. But Gallo's assistants had also begun testing AIDS patients' blood samples with a more specific test, one that measured antibodies to the virus itself, not to a mysterious protein on the surface of virus-infected cells, and they were obtaining very different results.

A few weeks before Gallo's papers on the possible link between the leukemia virus and AIDS were published in Science in May, 1983, one of Gallo's assistants sent him a note reporting that only 17 AIDS patients "out of a much larger number tested" had so far proven antibody-positive. The following month, Gallo acknowledged in a memo to a senior cancer institute official that, despite Essex's impressive numbers, his own lab was finding that most AIDS patients were not infected with HTLV-1.

Gallo's staff had also detected the leukemia virus itself, not just antibodies to the virus, in a small number of AIDS patients like Claude Chardon. But except for the four detections that Gallo reported in Science and a handful of others, efforts to find the virus in other AIDS patients had been unavailing. Lee Ratner, a molecular biologist who joined Gallo's lab as the hunt for HTLV-1 in AIDS patients was gathering speed, recalled that Gallo's assistants had looked for the virus in "something like a hundred" AIDS patients and that all of them were negative.

Gallo didn't report the low numbers of AIDS patients who had antibodies to the leukemia virus or who were infected with the virus itself. As the negative data piled up behind the scenes, Gallo continued to make the case for his virus in public. "The evidence is certainly accumulating," he told the Journal of the American Medical Association in June of 1983, that HTLV was "the best lead yet found" for the cause of AIDS.

In addition to overseeing the other operations of his cancer laboratory, in the spring of 1983 Gallo was spending increasing amounts of his time on AIDS—so much that, in April, he complained in a letter to a Japanese scientist that "the pressure on me is unusually severe." The reason, he said, was that he had just accepted an "additional new responsibility" as scientific director of a new cancer institute task force on AIDS.

When the task force held its first formal meeting in July, Luc Montagnier, chief of cancer virology at the Pasteur Institute in Paris, flew in to attend. In response to an appeal from Gallo, Montagnier brought a tiny vial containing a sample of the virus the French believed to be the cause of AIDS. In April, the French had sent Gallo a tiny vial of viral DNA. Gallo said it hadn't been enough. "We desperately need more DNA," Gallo wrote Montagnier a few days later. "The data is critical for you, us and the field so please do everything possible to get a good amount of DNA to us as soon as possible."

To the three dozen members of the task force Gallo said what he had been saying in public, that his leukemia virus made a "very attractive" candidate for the cause of AIDS. But Montagnier had brought data on new isolates of the French virus taken from other patients with AIDS, and also some photographs of the virus he hadn't published in Science. "I was reluctant to show them in the paper," Montagnier explained later, "because people would say it was just a viral contamination with something else."

The new pictures were viewed with a careful eye by Matthew A. Gonda, the chief of the cancer institute's electron microscope facility in Frederick, Md. Gonda had recently written a paper on a class of animal retroviruses known as lentiviruses, slow-acting retroviruses that until then had been found only in goats, horses and sheep and whose barlike core is readily distinguishable from the disc-like core of HTLV-1.

It looked to Gonda like the virus the French were now calling LAV had to be a lentivirus too. When Gonda wrote a memo to that effect, recalled Berge Hampar, the former general manager of the Frederick facility, "Gallo was really furious. The last thing he wanted to hear was that the French had a lentivirus, because if it was lenti that meant it wasn't HTLV. He called Gonda at home, ranting and raving. He screamed at him for an hour."

Scientific meetings at Long Island's venerable Cold Spring Harbor Laboratory have a special cachet. Apart from the laboratory's picturesque waterside setting, it has a history of producing good science. Its reputation derives largely from the fact that its director is James D. Watson, the American biologist who, with Francis Crick, solved the mystery of the double helix—the structure of DNA.

When Gallo and Essex were asked to organize an important conference on HTLV at Cold Spring Harbor for mid-September of 1983, they included a special forum on the known links between the leukemia virus and AIDS. Montagnier was among those invited to Cold Spring Harbor, and he had a good deal to say.

All summer the Paris group had been working with success to firm up the connection between its new virus and AIDS, and it had made some significant advances. When Montagnier learned he had been given just 15 minutes to speak, he protested. "I am asking you," he wrote to Gallo, "to allot me 30 minutes, and possibly not at the very end of the meeting."

The Cold Spring Harbor conference opened on the morning of Wednesday, Sept. 14, with a welcoming speech by Essex and an introduction by Gallo. For the rest of that day and most of the next, a succession of scientists reviewed various aspects of their work on Gallo's leukemia virus and its odd new cousin, HTLV-2.

When the session on AIDS began late Thursday afternoon, Essex began with the report that he had now detected leukemia virus antibodies in up to 70 percent of AIDS patients. He was followed by Gallo, whose talk highlighted "the possibility that HTLV plays an important role in the origin of AIDS." The next-to-last speaker was Montagnier, who had been given 20 minutes to speak instead of the half-hour he asked for and who was still at the end of the program. By the time he took the podium, many of those at the meeting had already left.

Since the beginning of the year, Montagnier began, the new French virus had been identified in a total of seven patients besides BRU, the fashion designer from whom it was first isolated. The French, moreover, had now found their virus in at least one member of every group in which AIDS seemed to be prevalent: three homosexuals, a hemophiliac and a Haitian.

They had also developed a test for antibodies to the virus. Since July, Francoise Brun-Vezinet, the physician who had delivered a piece of BRU's lymph node to the institute in January, had been growing the French virus in a special room in the basement of the Pasteur. The purified virus had been used to test for antibodies in dozens of AIDS patients' blood samples, including some that had been sent to Paris by doctors in New York.

The Pasteur tests, Montagnier said, were showing that more than 60 percent of patients with pre-AIDS, and nearly 20 percent of those with AIDS, had antibodies to the French virus. The same patients, however, had tested negative for HTLV. The two viruses, he said, seemed to be "clearly distinct." They didn't react biochemically, and when the French virus was looked at under an electron microscope it had an entirely different shape. The only other virus that resembled it at all was a lentivirus that caused infectious anemia in horses.

By all accounts, it was a dramatic moment. Montagnier was telling Gallo, and in front of many of his closest colleagues, that for the better part of a year he had been leading science down the wrong road. According to several of those present, when the time came for Montagnier to entertain questions Gallo rose to the attack, suggesting that the measurements of reverse transcriptase activity by the French had been flawed and that they hadn't isolated a retrovirus at all. "He told him it was terrible science," said a scientist who was there, "that there was no way it could be true."

"I went up to poor Montagnier afterwards," another scientist recalled. "He was sitting in the corner. He looked like he'd been beaten over the head with a sledgehammer. I said, 'The data looks good, I'm sure you've probably got it, don't take to heart what these guys have said to you.' "

Gallo now regrets his treatment of Montagnier. "He was definitely, definitely hurt and it certainly hurt our relationship badly," he told The Tribune. "I wouldn't do that again."

Montagnier's talk had gone far beyond the BRU paper in Science four months before, but many of those at Cold Spring Harbor were still not convinced by his data. For a few, however, the talk provided their first real understanding of the depth and importance of the French research on AIDS. The Science paper, recalled the British retrovirologist Robin Weiss, "turned out to be a seminal paper, but it didn't convince the world that this was the virus. His Cold Spring Harbor paper made me take that first one much more seriously."

Bernie Poiesz was in the audience that day. Like Gallo and Essex, Poiesz had been looking for evidence that the leukemia virus had something to do with AIDS, and he remembers thinking after Montagnier's presentation that the French might be right after all. "The data seemed to make sense," Poiesz said. "He obviously didn't have it fully developed, but he had gone a substantial way and it was plausible to me that they had found something that was different."

Impressive as the French data were, researchers who hadn't attended the Cold Spring Harbor meeting remained mostly unaware of the latest findings from Paris. One was the University of California's Jay Levy. In early October, in Paris for his brother's wedding, Levy stopped by the Pasteur to say hello. It was not until then, he recalled, "that I realized they did not have HTLV" but something completely different.

As an AIDS-causing agent, Levy said, the French virus "was almost too good to be true." It grew in the same helper T-cells that AIDS patients lacked, Levy said, and it killed them. "I came back to the hotel room and I told my wife, 'Sharon, I've been looking for this virus and I think they've found it.' But if I hadn't gone to see them I never would have known."

Within a few weeks, Levy would isolate the AIDS virus in his San Francisco lab, but he would not publish his discovery for several months after that. Levy wanted to make sure the virus, which he would call ARV, for AIDS-related virus, could survive the acid treatment used in the preparation of the clotting factor that keeps hemophiliacs from bleeding to death. If it couldn't, it was obviously the wrong virus and Levy would have to look somewhere else.

A few days after the September meeting at Cold Spring Harbor, one of Gallo's assistants sent him the latest draft of the still-unpublished paper reporting that only 8 percent of the AIDS patients they had tested had antibodies to HTLV-1. "Not sure he will want to publish on AIDS at this time," the assistant wrote to one of her colleagues, "but we'll see."

While Gallo pondered whether or not to publish, the French were having trouble getting their latest research into print. Their Science paper had shown that the French virus infected T-cells, but not which kind of T-cells. Since then, Paris immunologist David Klatzmann had proven that the virus had a particular affinity for infecting—and killing—the helper T-cell, precisely the same cells AIDS patients didn't have enough of.

Klatzmann's discovery made the most convincing case yet that the French virus played a critical role in the disease. Had it been published, Robin Weiss said later, "it would have added some weight, because it would have said this odd virus we have selectively grows in and kills the kinds of cells that disappear from AIDS patients."

In trying to determine the attraction of the virus for helper T-cells, Klatzmann had used blood samples taken from a young hemophiliac who had been injected regularly for years with a clotting factor known as Factor VIII, some of which had been made from blood tainted with the AIDS virus. What was significant was that, unlike all the other patients in whom the French had found the virus, this young man was perfectly healthy.

In the summer of 1983, no one suspected that infection with the AIDS virus would be as widespread as it is. Fewer than 2,000 Americans were then ill with the disease, and many doctors assumed that, as with most contagious diseases, illness set in a short time after infection. By isolating their new virus from someone who was still healthy and had been infected for some time, the French had discovered the phenomenon of the "healthy carrier," those infected but symptom-free individuals who, by unwittingly infecting others, had spread the virus through large populations of gay men and heroin users.

When Klatzmann and the Pasteur group sent a paper describing the affinity of the AIDS virus for helper T-cells to Nature in the summer of 1983, the paper was summarily rejected. One of the journal's reviewers had only a few technical criticisms, but the other dismissed it out of hand. If what the French were saying was true, the second reviewer wrote, it would be a very important paper. He just didn't think it was true—it sounded to him like what the French had was a mouse virus contaminant.

The authors quickly resubmitted their paper to an American journal, the Proceedings of the National Academy of Sciences. One of that journal's reviewers thought the paper should be published forthwith, but the second reviewer never replied. When Klatzmann encountered the man at an AIDS conference in Atlanta two years later, he recalled, "he told me that he had been too busy."

While many of those attempting to treat AIDS patients were under the misapprehension that Gallo's leukemia virus, or one very much like it, was the cause of AIDS, the French continued to try to make their voices heard. Because of the difficulties they were having in publishing their papers, the French decided to use important scientific meetings like the one at Cold Spring Harbor to spread the word of their discoveries.

But when Klatzmann presented his unpublished data to a meeting of the New York Academy of Sciences in November, his talk didn't produce many headlines. "The journalist from the New York Native [a weekly newspaper with a mostly homosexual readership] called and he did interview me, actually," Klatzmann recalled. "I was also interviewed by Channel 13," the public broadcasting station in New York, "but I was told later that they took off my part."

Despite the ongoing work in Paris, Gallo's human leukemia virus was still the hottest thing in virology. But even as Gallo was adding the American Cancer Society's medal of honor to his prizes and awards, the case for HTLV-1 as the cause of AIDS was beginning to collapse under its own weight. According to the minutes of the November meeting of Gallo's AIDS task force, that month's discussion focused on what to do about "the continuing problem" posed by the still-unpublished data showing that very few AIDS patients were infected with the leukemia virus.

Part of the problem was that the negative data were no longer coming only from Gallo's lab. One task force member had found only a single AIDS patient out of 59 positive for antibodies to the Gallo virus, and a handful of scientists outside NIH were now questioning Gallo's thesis in public. Some weeks earlier, a Boston University researcher named Paul Black had sent a letter to the New England Journal of Medicine suggesting that Gallo's leukemia virus was "unlikely to be in itself the cause" of AIDS. In an interview with the Associated Press, Black dismissed Gallo's research on the connection between AIDS and the leukemia virus as "hype."

Gallo was not pleased. "There are people who were writing letters at that time in the New England Journal saying we were nuts," Gallo recalls. "Paul Black. I know Paul, I regard him as a colleague and friend and I didn't understand why he wrote it. I called him up on the telephone and argued with him."

Although Black's objections were founded on intuition, a few other labs had been compiling the same sort of negative antibody data that Gallo had in his lab. But it was proving as difficult for the others as for the French to find their way into print.

Sometime in 1981 a Manhattan physician named Joseph Sonnabend first began seeing a few mysterious cases of what would later be called AIDS. Like other doctors in New York and San Francisco, Sonnabend was interested in learning as much as possible about the disease that was killing his patients. When Gallo began suggesting two years later that HTLV-1 played an important role in AIDS, Sonnabend started taking blood from his patients to be tested for antibodies to Gallo's virus.

The tests were conducted by Shinji Harada, who was spending a year at the University of Nebraska and who already knew a lot about the leukemia virus. Before coming to Omaha, Harada had investigated on his own the idea that the virus might have something to do with AIDS, but he hadn't found any connection.

When Sonnabend's blood samples arrived in Omaha, Harada ran the same tests again, and with the same results. "AIDS patients had no antibody against HTLV," Harada says.

Just to be sure, Harada forwarded some of the same samples to scientists in two other laboratories. One was Yorio Hinuma, the Kyoto University virologist who established the first link between Gallo's new human retrovirus and adult T-cell leukemia. The other was Abraham Karpas, a retrovirologist in the department of hematological medicine at Cambridge University in England. Both Hinuma and Karpas confirmed Harada's results in short order.

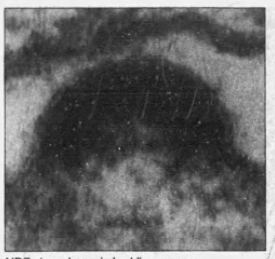
When the Sonnabend group wrote up its findings and sent the paper off to several major journals, none of them was interested. Sonnabend had recently taken on the task of editing a new journal devoted exclusively to AIDS, and in his capacity as editor Sonnabend decided to publish his own paper. "I toned it down somewhat," he recalls; "which I sort of regret now. I even added a sentence at the end, to the effect that maybe the difference between our results and Gallo's could be attributed to the different geographical ori-

Continued on following page

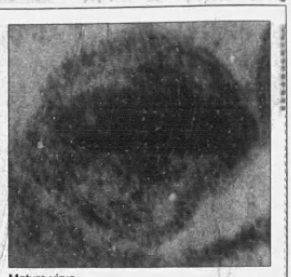
The AIDS virus

HTLV-3

■ **The photos at right show the AIDS virus in its later two stages of development. As new virus particles are created inside the helper T-cell they "bud" through the cell's membrane. Once free, the new viruses go in search of new cells to infect.**

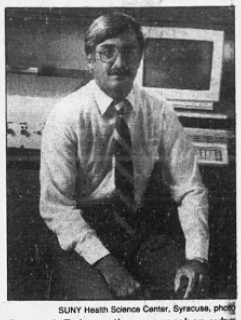


AIDS virus shown in budding process



Mature virus

Chicago Tribune Graphic; Source: National Cancer Institute



SUNY Health Science Center, Syracuse, photo

Bernard Poiesz, the researcher who isolated HTLV-1 as a postdoctoral fellow in Gallo's laboratory.

Myron Essex

APRIL 12, 1983: At **Gallo's** urging, Pasteur researchers begin writing a paper reporting the discovery in **BRU** of what they believe is a new human retrovirus different from HTLV.

APRIL 15, 1983: A Pasteur technician delivers the French paper to **Gallo** in Bethesda.

APRIL 19, 1983: **Gallo** sends a second paper to Science reporting the isolation of HTLV from one of the East Coast homosexuals and detections of the virus in **Marcellin** and **Chardon**. Same day, he sends the French paper to Science with a letter urging that it be published.

APRIL 27, 1983: Harvard University applies for a patent on the Essex test for antibodies to HTLV.

MAY 5, 1983: An assistant informs **Gallo** that, using a test different from the one developed by **Essex**, only 17 AIDS patients have tested positive for antibodies to HTLV "out of much larger number tested."

MAY 20, 1983: The three papers by **Essex** and **Gallo** reporting evidence of HTLV in AIDS patients are published in Science. A fourth paper, the one reporting the isolation of a retrovirus from **BRU**, is largely overlooked.

JUNE, 1983: **Gallo** informs his superiors that, despite **Essex's** published data, experiments in his lab show most AIDS patients are not infected with HTLV.

JUNE, 1983: Japanese researchers publish the first genetic sequence of ATLV; they suggest ATLV and HTLV-1 are "very similar."

JUNE, 1983: Pasteur researchers begin growing the **BRU** virus, now called LAV.

JUNE 3, 1983: **Gallo** tells scientists at the Centers for Disease Control HTLV is still "the best published lead to date" for the cause of AIDS.

JUNE 22, 1983: Pasteur researchers say they have found antibodies to LAV in six homosexuals with pre-AIDS and have detected the virus itself in four of the six. **Gallo** tells a reporter HTLV "is providing the best lead yet found" for the cause of AIDS.

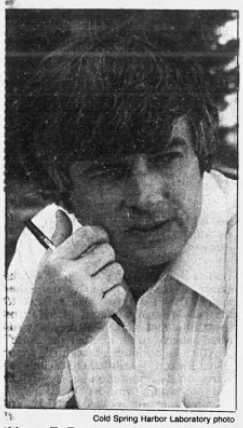
JUNE 29, 1983: **Gallo** asks **Montagnier** for another sample of the French virus.

JULY 10, 1983: In a letter to **Montagnier**, **Gallo** expresses concern that **Essex** has now detected antibodies to HTLV in more than half the AIDS patients he tested, while Pasteur researchers are reporting only 20 percent of AIDS patients positive for antibodies to their virus. "Something is missing," he says.

JULY 18, 1983: **Montagnier** attends the monthly meeting of **Gallo's** AIDS task force, bringing a sample of LAV and photographs showing particles that look different from HTLV. **Gallo** tells the meeting HTLV-1 is a "very attractive" candidate for the cause of AIDS.

Reuters photo

Pope John Paul II confers with Robert Gallo during the closing session of an AIDS conference sponsored by the Vatican in Rome last week. At the Pope's right is Msgr. Fiorenzo Angelini; at center is an unidentified priest.



Cold Spring Harbor Laboratory photo

Myron T. Essex, senior researcher at the Harvard School of Health and a longtime Gallo collaborator.

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gin. But I was just being polite."

In December of 1983, Gallo finally sent his negative findings on HTLV-1 and AIDS to the Lancet. At first glance the paper looked like a refutation of what he had been saying for the last year about possible links between the leukemia virus and AIDS, but it was much more subtle than that. In addition to reporting the mostly negative antibody data, the Lancet paper encouraged speculation that the cause of AIDS might be an undiscovered near-relative of HTLV-1. "There is no need," the paper cautioned, "to assume that members of the HTLV family are limited to two strains."

Max Essex had recently found a slight genetic variation in the feline leukemia virus that he said turned it from a cancer virus into a cell-killer, and now Gallo was suggesting that the AIDS agent might be a similarly mutant form of HTLV-1. The "undiscovered relative" theory was attractive for a number of reasons. Among other things, Gallo had never been able to explain the absence of AIDS in Japan, nor how a virus that caused the uncontrolled multiplication of white blood cells could also be responsible for the disappearance of those same cells.

As it happened, researchers in Gallo's lab had recently discovered just such a minor variant of HTLV-1 in an American homosexual with AIDS. It was very closely related genetically to the leukemia virus, but different enough to justify a name of its own. Gallo called his newest virus HTLV-1B.

Because most of the differences in the "1B strain" followed the same pattern as those in the feline virus variant, it looked like exactly what Gallo had been predicting in the way of a cell-killing mutant.

In mid-January of 1984, Gallo dispatched a new article to Science reporting the isolation of HTLV-1B from a patient with AIDS. "We were very excited," recalled one of the scientists in Gallo's lab.

The 1B paper had not yet appeared when, in early February, 250 of the world's leading researchers gathered at Park City, Utah, for what would be the biggest scientific conference thus far devoted exclusively to AIDS. As at Cold Spring Harbor, Gallo would be the star. "You are the keynote speaker," Harvard's Jerry Groopman, one of the conference organizers, had written to him earlier. "You can speak for 45 minutes, 90 minutes, or two days if you would like."

According to notes taken by one scientist in the audience, Gallo began his keynote address by declaring that the "only candidate" for an AIDS virus was one of the HTLVs—maybe HTLV-1, possibly HTLV-1B. Whether they were leukemia viruses or AIDS viruses, Gallo said, they were all "one big family."

On the last day of the Park City meeting Gallo dictated a letter to Jay Levy, who had made some comments to a reporter that Gallo considered misinformed. Levy had suggested that the reporter ask Gallo why, if HTLV caused AIDS, there weren't many AIDS patients who also had leukemia. "I never said HTLV caused AIDS," Gallo wrote to Levy. Then he added, "HTLV itself, nonetheless, could still cause AIDS."

Luc Montagnier had had a hard time at Cold Spring Harbor, and David Klatzmann had been virtually ignored in New York City. Perhaps Jean-Claude Chermann, the chief of the Pasteur lab where the French virus had been isolated, would be more successful in Park City.

Chermann had known Gallo for nearly 20 years. The two men had been to each other's homes and dined with each other's families. But when they had last seen one another, in early October, 1983, at a meeting in Seillac, France, there had been an unaccustomed tension between them. "In October we know that we have the virus," Chermann recalled in his heavily accented English. "But everybody was saying that we were wrong."

In the belief that the scientific community was taking its cues from Gallo, Chermann said, he made one last appeal in Seillac to his old friend. "We took a bicycle ride," Chermann said, "and I said to Gallo, you know me for a long time. I can tell you we have the virus. I will not fight anymore with you. The next meeting will be in Park City, Utah. In February we tell you exactly how LAV is the cause of AIDS."

When Chermann's plane landed in Park City four months later, Gallo was at the airport. As Chermann recalled his conversation with Gallo during the ride into town, "He say, 'You know, Jean-Claude, you are invited to this meeting, but you cannot speak about LAV as a retrovirus.' He say, 'You don't know if it's a retrovirus,' and so on.

"I said, Bob, you know that I am working with retrovirus for 20 years. I will give exactly how we think about the virus. It was very difficult for me to speak. Jerry Groopman came and told Gallo, 'You have to let Jean-Claude speak.' "

Besides Groopman, the other Park City organizer was Michael Gottlieb, the UCLA immunologist who had reported the first cases of AIDS, in five homosexual men from Los Angeles, nearly three years before. The previous spring, a few weeks after the Pasteur group had published the BRU paper in Science, Gottlieb had heard Chermann and Klatzmann speak at a sparsely attended meeting in Naples.

It was Gottlieb who had discovered the most important clinical feature of AIDS patients, the depletion of their helper T-cells, and when he heard the news from Paris about a virus that killed those same cells he was electrified. "The words that come to mind are amazed, astonished," Gottlieb said. "I was sitting there hearing something that clicked, saying, these guys have found something important, these guys are on the right track." At breakfast the next morning, Gottlieb invited Chermann to Park City.

Park City is a ski resort in winter, and Gottlieb admits that "at these ski meetings, the pressure is to get the morning meeting done by noon so we can get out onto the slopes." Chermann had been given a place near the end of the morning program. At the last minute, Gottlieb recalled, Groopman and Gallo, who was chairing the session, added a Harvard researcher named William Haseltine to the program ahead of Chermann.

"I had been told by Groopman that Haseltine was only going to talk for 10 minutes," Gottlieb said. "Haseltine is still going at 30 minutes, and it looks like he's going for 45. I went to Groopman and I said, 'Hey, Jerry, this is your guy and he's cutting into Chermann's time.' Jerry got the chair's attention, and Gallo said something to Haseltine. Jerry told me later that Haseltine was livid."

When Chermann finally spoke, Gottlieb recalled, "he was a little flustered by the events, and his English isn't that great anyway. Jean-Claude—I love him—he's a great guy, but his presentation was a little discombobulated. But people were sitting there ready to go skiing and all of a sudden there were people saying, 'Hey, these guys have something.' These were people who hadn't read the Science paper; they hadn't heard the story."

Chermann provided an impressive summary of what the French had accomplished in less than a year: 10 isolates of their virus from patients with AIDS or pre-AIDS, the attraction of the virus for helper T-cells, even a new picture of the virus showing clearly that it didn't look anything like Gallo's leukemia virus. Chermann also presented new data showing that the Pasteur's AIDS blood test had found antibodies to the virus in nearly 40 percent of AIDS patients, and in almost 75 percent of those with pre-AIDS.

Those numbers were a quantum leap from the ones Montagnier had brought to Cold Spring Harbor, and following Chermann's talk a small group of American scientists paid a clandestine visit to his room. They wanted him to know, one of them recalled, that no matter what Gallo thought they had been convinced. As far as they were concerned, the cause of AIDS was the French virus called LAV.

The data from Paris were looking good, but in Gallo's lab there was trouble. Not long after the paper on the discovery of HTLV-1B had been submitted to Science, someone had discovered that the virus hadn't been isolated from an AIDS patient after all. It had come instead from a Zairean man named Elomata, one of the blood samples Jacques Leibowitch had brought Gallo from Paris. Elomata had died of adult T-cell leukemia, not AIDS, which meant that HTLV-1B was just a new variant of Gallo's leukemia virus.

"There was a mixup between the different DNAs," said one scientist who worked on HTLV-1B, explaining that someone in Gallo's lab had mistaken a 7 for a 1. Whatever occurred, overnight Gallo's AIDS virus candidate had vanished into the great, dark void of laboratory error. The paper on HTLV-1B that had been sent to Science never appeared, and it was not the only paper from Gallo's lab to disappear before publication during the long winter of 1984.

In early March, Gallo wrote the editor of the Lancet to ask that the paper submitted the previous December, the one showing that very low percentages of AIDS patients had antibodies to the leukemia virus, also be put on hold. His lab, Gallo said, had recently obtained "over 40 new virus isolates" from patients with AIDS and pre-AIDS, viruses that were "significantly" different from the leukemia virus or any of its known variants.

"My concern," Gallo wrote, "is that the mostly negative HTLV-1 data will be construed as negative to all HTLV. I need some time to think about the best way to present this to avoid confusion."

With the exception of the ill-fated HTLV-1B, Gallo hadn't mentioned anything about a new AIDS virus when he spoke at Park City less than a month before. But when the proceedings of the meeting were published several months later, they contained a paper by Gallo reporting the isolation of a new human retrovirus called HTLV-3 from "a large number" of AIDS patients.

"The week after the meeting," recalled Mike Gottlieb, who as one of the organizers was responsible for collecting and publishing the papers delivered at Park City, "someone in Gallo's lab called and told me they were going to send me a manuscript and to keep it quiet, to keep the information confidential.

"It's not kosher, but I had no sense at the time of what was about to happen. I don't want to look stupid or naive, but I certainly was naive. I did not read it carefully enough to appreciate the significance of the work or the political overtones." There "definitely" should have been a footnote to Gallo's paper pointing out that it was not delivered at the symposium, Gottlieb says, but there wasn't.

When the proceedings of the Cold Spring Harbor conference the previous September were published in the summer of 1984, they also lacked any indication that Gallo's introductory lecture had been rewritten. According to the new version, Gallo had obtained "over 50 isolates of a retrovirus from AIDS or pre-AIDS patients" called HTLV-3, which was "closely related to, but distinguishable from, HTLV-I and HTLV-II." Gallo's other Cold Spring Harbor paper, the one in which he had discussed "the possibility that HTLV plays an important role in the origin of AIDS," had vanished from the proceedings altogether.

If Gallo's discovery of HTLV-3 seemed to settle the cause of AIDS, it left open the question of Max Essex and his antibody test. If HTLV-3 was the cause of AIDS, then it wasn't HTLV-1. If it wasn't HTLV-1, then something was the matter with the Essex test. In March of 1984 the U.S. Patent Office agreed, rejecting the Harvard application for a patent on Essex's test on the ground that it was "inoperative and therefore lacks utility."

In other words, the Essex test didn't work. Or, rather, it worked too well. "I think Max is very lucky, or unlucky," said Cy Cabradilla, who tried to replicate the test for the Centers for Disease Control. "I took that procedure back to CDC, and we did get results that were very comparable." But when blood from people who didn't have AIDS was tested, Cabradilla said, "we were getting the same results."

Whatever the Essex test measured, it wasn't Gallo's leukemia virus. Gallo says now that although he had long suspected Essex's data were wrong, "in time I recognized how wrong. Did I know it then? Perhaps. Are you getting me on a weak point? Probably. I really don't know what he was detecting."

When Essex, who has never retracted his HTLV antibody papers, shared the Lasker prize with Gallo three years ago, the citation noted their "unique contributions to the understanding of AIDS." Last year, when Harvard created a university-wide office to coordinate its research on AIDS, Max Essex was the man it put in charge. Essex declined a request for an interview with The Tribune, citing "a heavy travel commitment and a tight schedule."

4 'Could you patent the sun?'

The afternoon of April 23, 1984, was one of those occasions relished by the federal government, a rare chance for the bureaucrats to go before the television cameras with their white hats on. As the medical writers filed into the cramped auditorium shortly after lunchtime, they were handed an eight-page release from the National Cancer Institute's press office. Soon they were listening to Margaret Heckler, the secretary of health and human services, announcing that "the probable cause of AIDS has been found."

It was, Heckler said, a new virus, and its discoverer was "our eminent Dr. Robert Gallo," chief of the National Cancer Institute's Laboratory of Tumor Cell Biology. Those reporters who wanted the scientific details were handed preprints of four articles by Gallo that would appear 10 days later in Science magazine. "Getting one paper in Science is a lot," Gallo said later. "Getting two is fantastic. Getting three was a record. We had four at one time."

The first article described the new virus, which Gallo had named HTLV-3, as the latest member of the human leukemia virus family on which he had built his scientific reputation. The second article reported the isolation of the virus from nearly 50 patients with AIDS or pre-AIDS, the third described its major proteins, and the last reported the invention of a blood test for antibodies to the virus.

Like many big stories in Washington Gallo's discovery began as a news leak, and before the story had played itself out it would reveal as much about the science of politics as about the politics of science. It broke on Monday, April 16, when the Wall Street Journal reported, "Speculation is mounting in the medical community that researchers soon will announce discovery of a new variation of human cancer virus that may cause acquired immune deficiency syndrome." Gallo's leukemia virus, the Journal noted, "has been suspected of causing AIDS since it was isolated in an AIDS victim last year."

Most scientists agree, and Gallo concurs, that the first word of a major discovery should come not at a news conference but in a scholarly article that has been subjected to prepublication scrutiny by independent experts in the field. "Science is after peer review," he told The Tribune. "You can't just go putting stuff in notebooks and handing them to reporters." The fact that his own landmark discovery was announced at a news conference, Gallo said, "wasn't my idea. It was as the result of a reporter that things hit the fan."

Gallo was referring to Martin Redfern, a science correspondent for the British Broadcasing Corp., whom Gallo has accused of stealing copies of the unpublished Science papers from his office. Redfern emphatically denies the accusation and gives a different version of events. A few days before the news conference, Redfern says, he stopped in Washington to interview Gallo about his leukemia virus research. Halfway through the conversation, Redfern said, Gallo told him that "we've just discovered the cause of AIDS."

"When the interview had finished," Redfern recalled, "he said, 'Would you like preprints of the papers?' To which I said, 'Dead right.' He asked one of his colleagues to get them out. The chap's eyes opened rather wide and he said, 'Are you sure? All four of the AIDS papers?' And Gallo said, 'Yes, I trust this man.' There were several people around who were a little surprised that he'd given me the story."

In a 1987 interview with the Dutch newspaper Financiel Dagblad, Gallo maintained that "after the interview, when I left my room for lunch, he took private documents from my desk."

Redfern says that he promised Gallo he would keep the story to himself unless it broke first somewhere else, and that he reported what he knew only after the leak had appeared in the Wall Street Journal. In fact, it was Gallo himself who first disclosed the existence of HTLV-3 a month before the Journal article appeared, in a speech in mid-March to a meeting of the French Association for Cancer Research in Marseille.

To the millions of Americans who watched the evening news and read the next morning's newspapers, however, Gallo's news conference seemed a genuinely historic moment. Three years ago AIDS hadn't even been recognized. Two years ago it didn't have a name, and now an American cancer researcher had found the cause.

AIDS was fast becoming a partisan issue, and behind all the self-congratulation there were unmistakable political overtones. With increasing frequency the Reagan administration was being accused, not just by homosexual groups but by scientists and some members of Congress, of not having done enough or spent enough, quickly enough, to gain a foothold in the battle against the disease.

But here was Secretary Heckler telling the critics they could thank the Reagan administration for the fact that the cause of AIDS had been found, and with it a test to screen the blood supply for contamination with the virus. A vaccine to protect the uninfected, she said, might be available within two years. Heckler's optimism about an AIDS vaccine was unfounded, and much of what was said that April afternoon would not bear up later under scrutiny.

Near the end of the news conference, a reporter asked Gallo when he had actually made his momentous discovery. When, precisely, had he isolated the AIDS virus? "When you see the papers published in Science," Gallo said, "you will see that we've been mass-producing it for six months. Okay?"

Six months before the news conference was late October of 1983. But the minutes of Gallo's AIDS task force meetings for November and December contain no indication that the AIDS virus had even been identified, much less mass-produced, by Gallo's lab. Instead, the minutes reflect a mounting concern among the task force members about the lack of any solid link between AIDS and Gallo's leukemia virus.

The question of just when Gallo's lab found the AIDS virus is further obscured by his assertion to The Tribune

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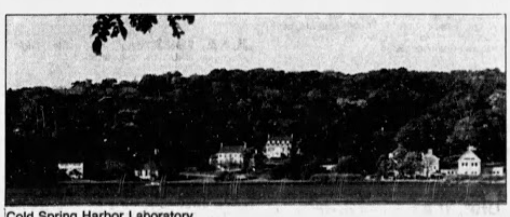
AUG. 4, 1983: Gallo and others conclude that **Charles Robinson** did not have mycosis fungoides but died of "a new form" of lymphoma very similar to ATL.

AUG. 15, 1983: Gallo receives a sample of **BRU's** serum from Paris. Same day, **Essex** sends a paper to Science reporting that hemophiliacs are also positive for antibodies to HTLV.

AUG. 26, 1983: The Pasteur group and collaborating French physicians send Nature magazine a paper reporting that LAV infects and kills helper T-cells, the same kind of cells whose disappearance causes an immune deficiency in AIDS patients. The paper, which provides the strongest link yet between the French virus and AIDS, is rejected.



Cold Spring Harbor Laboratory

SEPT. 14, 1983: A major conference on HTLV begins at Long Island's Cold Spring Harbor laboratory with an introduction by **Gallo**, who says he believes HTLV is involved in AIDS.

SEPT. 15, 1983: **Montagnier**, who is given only 20 minutes to speak, tells the conference his group has found LAV antibodies in nearly three-quarters of patients with pre-AIDS and in 20 percent with AIDS. Same day, Pasteur lawyers apply for a European patent on the LAV blood test used in the studies.

SEPT. 20, 1983: Gallo writes another scientist that he now has 11 isolates of HTLV "and related retroviruses" from AIDS patients.

SEPT. 22, 1983: A second shipment of LAV is delivered to **Gallo's** lab. **Mikulas Popovic, Gallo's** chief virologist, signs a receipt promising that it will not be used for commercial purposes. **Popovic** immediately begins trying to grow the virus and sends a small amount to **Matthew Gonda** in Frederick, Md., for observation under the electron microscope.

SEPT. 27, 1983: Gallo writes a German scientist that a genetic variant of HTLV is the "most likely" candidate for an AIDS virus, adding, "I have never seen the virus that **Luc Montagnier** has described." Same day, **Gallo's** assistants give him a copy of their unpublished paper reporting fewer than 10 percent of AIDS patients have antibodies to HTLV-1.

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that "in the month of January we had all essential data," and that by the time of the symposium in Park City in early February "we knew everything that we published."

According to Gallo's lab records, it was in mid-January that he sent to Science the paper reporting the discovery of HTLV-1B in an American homosexual with AIDS. It was during the Park City meeting that Gallo had admonished Jay Levy, the University of California virologist, that "HTLV itself" might be the cause of AIDS.

Gallo's records show, moreover, that some of the essential data contained in the four Science papers could not have existed until less than a month before the papers were submitted for publication at the end of March, and the discrepancies between the data in the records and the published articles suggest the haste with which they were assembled.

Three weeks before the news conference, Gallo flew to Paris to confer with the AIDS team at the Pasteur Institute. As Luc Montagnier remembers the meeting, Gallo told the French that he would soon be announcing his discovery of the cause of AIDS. "He said that he would have several papers published shortly in Science and he didn't know exactly how this would be announced," Montagnier said, "that perhaps a press conference would be done."

The French, who had been trying to persuade the scientific community for nearly a year that the virus they called LAV was the cause of AIDS, were taken aback. The day after Gallo's visit, they had published a paper in the Lancet, their first in a major journal in nearly a year, reporting the latest evidence linking their virus with AIDS.

According to Jean-Claude Chermann, in whose lab LAV had been discovered, Gallo assured the French that he thought his virus and theirs were the same and that he didn't intend to take any of the credit that rightfully belonged to the Pasteur Institute. After the news conference, Gallo telephoned Montagnier in Paris. "He said, 'It's over now,' " Montagnier recalled. " 'I mentioned your contribution and I think everything is fine.' "

Gallo has said repeatedly since then that he acknowledged at the news conference that the two viruses were the same. An official transcript of the news conference, however, does not contain such a statement. When a reporter asked Gallo whether the two viruses were the same, Gallo said, "It may in time be the same as what has been called LAV in a couple of publications," but he added that "I cannot say at this point whether the viruses are identical."

In that morning's Washington Post, Gallo had cautioned that "only time will tell" if the two viruses were the same. He was "astounded," he said, by the "hullabaloo" caused by "sour-grapes" comments from unnamed scientists "who seem to be threatened by my data." When the four Science papers were published 10 days later, one of them contained the assertion that "HTLV-III and LAV may be different."

Predictably, Gallo's comments caused consternation at the Pasteur. "He was just saying, we don't know if it be the same," Chermann said. "And that, scientifically for me, ethically and morally, was not acceptable." Chermann recalls that when he brought the matter up later, Gallo blamed his staff: "He say, 'I put all my people in the room and we discuss. At the end we ask, is the same or is not the same? And people say is not the same.' "

The question Gallo had left hanging—were the two viruses the same?—was not a trivial one for those engaged in the search for a vaccine and a cure. As Richard M. Krause, then-director of the National Institute of Allergies and Infectious Diseases, wrote in a memo to the head of NIH, "It is important to learn if HTLV-3 and LAV are one and the same virus, or are two somewhat different viruses each able to produce a syndrome that resembles AIDS."

According to records from Gallo's lab, experiments by his assistants had already produced evidence that his virus and the one from Paris were the same.

In the months before the news conference, Gallo's staff had begun a series of tests on several cell cultures in which they hoped the new AIDS virus was growing, mixing the cultures with blood serum known to contain antibodies to the AIDS virus. If the antibodies in the serum attached themselves to the cells, it meant the virus was present in the cultures.

Gallo's lab had several sources of serum from which to choose, including some from a hemophiliac with pre-AIDS identified as ET, and some from a laboratory rabbit that had been deliberately injected with the AIDS virus. According to Gallo's published papers, almost every one of the AIDS virus cultures showed a strong positive reaction to both the rabbit and ET.

Although it was not mentioned in any of his articles, Gallo had a third source of AIDS virus antibodies with which to test his cultures. In the summer of 1983, Luc Montagnier had sent Gallo a sample of blood serum from BRU, which experiments at the Pasteur had already shown was loaded with antibodies to the French virus—not surprising, since BRU was the source of the original French isolate.

When Gallo's assistants mixed BRU's serum with the cells where the AIDS virus was believed to be growing, the lab notes show, in some cases the reactions were more intense than with the serum from ET. If BRU had antibodies to Gallo's AIDS virus, then the Gallo virus and the French virus were almost certainly the same. But none of Gallo's Science articles reported that BRU's serum had even been used in the experiments, much less that the reactions had been positive.

As the controversy between Paris and Bethesda over who had been first to discover the AIDS virus began to generate heat, Gallo changed direction. Even if he and the French had isolated the same virus, he began to say, his lab had been first to develop a working blood test for the AIDS virus and first to prove that the virus was the cause of the disease.

According to Nature magazine, when Gallo and Montagnier shared the Lasker Prize in September of 1986 the news release, which had originally credited Montagnier with the discovery of the AIDS virus, was changed at the last minute because of objections from the American jurors to cite him for having found a virus that was "later shown to be the cause of AIDS."

The distinction is far from academic. Finding a new virus in a patient with a new disease, or even in several such patients, is not the same as discovering the cause of the disease. The new virus might be the cause, but so might some other virus still lurking in the background. To link a specific virus with a specific disease, it is necessary to show that everyone who has the disease is infected with the virus, by finding viral antibodies in the blood of large numbers of people who are sick. Before such a search could be mounted, however, there would have to be a blood test for AIDS. (See TEST, p. x.)

In the two centuries since Priestly and Lavoisier raced each other to discover oxygen, the desire to be first has helped push science forward. Nobels and Laskers have stepped up the pace. But there was much more than prizes and prestige riding on the development of a successful AIDS test.

Whether it was French or American, a test for AIDS would be a most welcome development from a public health standpoint. Although it had been clear for at least two years that AIDS was being spread through blood transfusions as well as sexual intercourse, there hadn't been any way to screen the blood supply.

As the number of people with AIDS grew, so did the market for such a test, and most of it was in the United States. Just to keep the domestic blood supply pure, the federal government estimated that 23 million tests would be needed each year, and that didn't take account of the growing demand from people in this country and abroad who wished to find out whether they had been infected.

The Reagan administration was much less interested in patent royalties than in the domestic and international political considerations of being first with an AIDS test. But for a nonprofit institution like the Pasteur that receives less than half its funding from the French government, the royalties from what has become a $175 million-a-year AIDS test market in the U.S. alone would pay for a great deal of research.

To the National Cancer Institute, stepping to the forefront of AIDS research could mean a welcome end to the long dry spell of budget increases that had followed the reverses of the government'a war on cancer. For Gallo and his senior assistants, an AIDS test patent would mean hundreds of thousands of dollars in royalty payments in addition to their government salaries.

By February of 1984 Gallo's lab had developed an AIDS blood test, called an ELISA, that is fundamentally the same as the test employed today by hospitals, clinics and blood banks around the world to guard the blood supply. As soon as it was ready, Gallo asked the Centers for Disease Control to send him a large number of blood samples from patients with AIDS and pre-AIDS with which he could prove its accuracy.

Among the more than 200 blood samples the CDC shipped to Bethesda on Feb. 27 were a number from men and women who didn't have AIDS and didn't belong to any of the groups most likely to get it. All the samples were "blind," labeled only with a code number that gave no indication of whether the donor was sick or well. If Gallo's ELISA could distinguish between them—if the sick donors had antibodies to his virus and the well donors didn't—it would prove not only that his blood test worked but also that his virus was the cause of AIDS.

A few weeks later the CDC gave Gallo the results. His ELISA had done so well that there was no doubt his virus was the cause of AIDS. But when Gallo arrived in Paris in early April to inform the French of the impending announcement of his discovery, he was met with a surprise. In the belief that the French should be given a chance to test their ELISA on the same blood samples, the CDC had shipped a second set to the Pasteur.

Among those at the Paris meeting was Donald Francis, the CDC epidemiologist in charge of ELISA testing. Francis, who has both a medical degree and a Harvard Ph.D. he earned in Max Essex's lab, had brought with an 11-page, single-spaced computer printout that contained the scores for both sides.

"We sat there in Jean-Claude Chermann's office with the printout, three or four fingers going down these columns, looking at the similarities and dissimilarities," Francis recalled. When they reached the bottom, it was clear that the French ELISA had scored as well as Gallo's. Both teams had gotten the right answer on 78 percent of the samples tested, but Gallo had marked many of his blood samples "plus-minus," scientific shorthand for "maybe it's there and maybe it's not."

"Gallo really cranked up the specificity on his test to make sure he wouldn't miss anything," Francis said, adding that Gallo had scored more than twice as many false positives as a result. When all the "plus-minuses" were changed to positives, Gallo scored 81 percent and the French, who had many fewer "plus-minuses," had 79 percent. Despite his slight margin in the corrected scores, two things were now obvious: Both the French virus and Gallo's were the cause of AIDS, and the French had an equally reliable test.

There had been considerable tension during the Paris meeting—at one point Gallo had insisted that Don Francis leave the room because he wasn't a practicing virologist—and that evening Chermann took everybody to the Paradis Latin, a glitzy supper club on the fringes of the Latin Quarter with a topless floorshow. According to Chermann, when he and Gallo found themselves in the men's room, Gallo suggested that perhaps the blood test results should be announced by himself and the Pasteur.

"We can do this together," Chermann recalls Gallo telling him. "We don't need CDC." Chermann was flabbergasted, but no more so than Francis, who remembers Gallo telling him the next morning at breakfast: "You and I can do this together. We don't need the French."

In the end, Gallo did it alone. At the news conference two weeks later he didn't mention that the French virus had passed the same test, and Gallo now hints that he mistrusted the CDC's results from the beginning. "I never stood over that code and went through it with them," Gallo told The Tribune. "How do I know and how do you know? It was in their hands."

The French were eager to publish the results of their performance in the CDC competition. Because the testing had been done in collaboration with Gallo, Montagnier said, the French felt the results should also be published jointly. "Enclosed is a draft of the comparative serology which we discussed last April in Paris," Francis wrote to Gallo in October, 1984. "Please send me comments, authors and corrections as soon as possible."

When Gallo replied two months later, his primary interest seemed to be in the apportionment of credit. "If LAV precedes HTLV-III in this paper as a title then I will be last author," he wrote to Francis. "If not, I don't care who the last author is. (One or the other Don, but not both for your friends abroad). If there is a problem for you then let's just forget the whole thing."

The results of the blood testing were never published. Two years later, when Gallo prepared a sworn statement recounting the history of his AIDS research, he maintained that at the time of the news conference in April of 1984, "my colleagues and I did not consider LAV and HTLV-III to be the same, or even substantially the same, virus. Quite clearly the data available to us indicated that the two viruses functioned differently and reacted differently."

More than 30 years ago, broadcaster Edward R. Murrow asked Jonas Salk who should own the rights to the polio vaccine that bears his name. "Well, the people, I would say," Salk replied. "There is no patent. Could you patent the sun?"

It is still not possible to patent the sun, or any of nature's original constituents. But it is possible to patent a useful rearrangement of nature, and when the Supreme Court ruled in 1980 that the patent and trademark laws could be applied to the products of genetic engineering—in that particular case, to a microbe that ingests petroleum and might be useful in cleaning up oil spills—the biotechnology industry was born.

On Sept. 15, 1983, as Luc Montagnier was announcing the Pasteur's initial ELISA results at Cold Spring Harbor, the institute's attorneys were in London filing an application for a patent on the Pasteur ELISA made with LAV. In early December, while Gallo was still trying to unravel the mysteries of HTLV-1B and the Essex test, the Pasteur filed an application for an American patent.

But as Gallo and Margaret Heckler stood before the television cameras in late April of 1984, the Pasteur no longer had the field to itself. A few hours before the news conference, the U.S. government filed an application of its own for a patent on the ELISA made with Gallo's AIDS virus, HTLV-3. The application included a sworn declaration in which Gallo stated that he was "the original, first and sole inventor" of the AIDS ELISA.

The stakes riding on the competing applications were enormous. If the American patent were granted to Pasteur, it meant no other AIDS test could be produced and sold in this country without paying royalties to the French. If the U.S. government's application prevailed, Pasteur would be shut out of the only market that really mattered.

In patent law priority is everything, and in the case of the AIDS test there didn't seem to be any question about who had finished first. Although Gallo later asserted in scientific articles that the first AIDS blood testing had been done in his lab, the Pasteur had been using its ELISA to test blood samples for months before Gallo even had a virus to test with.

The previous November, while Gallo was still deciding whether to publish the data showing that most AIDS patients weren't infected with his leukemia virus, the French were running the first controlled test of their ELISA with blood samples from the CDC. On the very day the CDC shipped blood samples to Gallo's lab, in fact, the Pasteur team was reporting the results of their ELISA tests in a French medical journal. But when the Gallo AIDS test patent was granted in May of 1985, the Pasteur's application was still gathering dust.

The French, Gallo said later, hadn't received the patent "because they didn't have a working test." In 1985, when the Pasteur Institute filed a formal challenge to the Gallo AIDS test patent, Gallo declared in a sworn statement that while he was "satisfied that HTLV-III had been proven to be the cause of AIDS. . . . I saw no evidence of this for LAV up through the allowance of the Gallo patent."

Such accusations greatly distress the French. "We had the test by the summer of 1983," Montagnier says. "The test was not as sensitive as it is now, so we missed more than half of the AIDS patients. But for people who were just healthy carriers it was OK. We could detect a very high proportion. It could have been used for blood supplies."

Montagnier wrote to the French Ministry of Health offering the ELISA to test the French blood supply and screen potential donors. "I got a nice answer but nothing was done," he said. "People did not believe. Even some of my French colleagues said, well, you have a new retrovirus. But why do you have to involve that retrovirus in AIDS? AIDS is caused by HTLV-1."

"We should have been able to produce the test for commercial use," Montagnier says. "It could have been done. Some time, perhaps a few months, could have been gained, if people had believed what we said. Some lives could have been saved."

When Gallo announced his AIDS virus in April of 1984, it had been more than eight months since the French had first sent a sample of their virus to Gallo's lab. But Gallo told the reporters he hadn't been able to compare his virus to theirs because the French hadn't sent enough to make such comparisons possible. "There could not be a definitive answer from the lack of material that was sent to us," Gallo said. "That's what's been the delay." In a letter to Chermann that summer, Gallo reaffirmed that "the material you sent to us was inadequate for comparative studies."

Gallo maintains that there was no virus in the small vial of frozen liquid that Montagnier had brought to Bethesda in July of 1983. According to Montagnier, when he delivered the vial to Gallo's home Gallo put it in the vegetable crisper of the family refrigerator where it eventually thawed, allowing the virus to die.

Whatever happened to the July shipment, a week after the confrontation between Gallo and Montagnier at Cold Spring Harbor the following September a second shipment of virus was on the way from Paris to Bethesda. Now that the French had applied for a patent on their virus, they asked Gallo to agree in writing that the sample would not be used for any commercial or industrial purpose.

On Sept. 22, 1983, the day the second shipment arrived in Bethesda, Mikulas Popovic, Gallo's chief virologist, began trying to grow it in the same kind of helper T-cells from fresh umbilical cord blood in which the French had first isolated the virus from BRU.

Although Chermann recalls Gallo telling him in Park City that "nobody believes your virus is a retrovirus," Gallo's lab records show that the French virus was kept alive in the cord blood culture for several weeks while Popovic established two critical facts: that the French had discovered a human retrovirus, and that it wasn't Gallo's leukemia virus.

According to the records, Gallo's lab also had visual evidence that the French virus was unique. On the same day the cord blood cultures were set up, Popovic sent a sample of the virus to Gonda's electron microscope lab in Frederick. Within a few days Gonda reported that the electron microscope showed a particle that looked like a lentivirus.

Growing the AIDS virus in fresh white blood cells, as both Popovic and the French had done, is not the only way of keeping it "alive." A more efficient method is to put the virus in a self-propagating culture known as a permanent cell line, but Gallo has repeatedly asserted that his lab was unable to grow the French virus successfully in such a cell line. (See LINE, p. x.)

The virus, he wrote in the first of the four Science articles published in May, 1984, "has not yet been transmitted to a permanently growing cell line for true isolation and therefore has been difficult to obtain in quantity." According to a 1986 memo from Popovic to Gallo, however, in December of 1983 the French AIDS virus was "successfully transmitted" into a permanent cell line, called Ti7.4, which "yielded reproducible but low-level LAV."

In his conversation with The Tribune, Gallo said that the laboratory comparisons between his AIDS virus and the one from Paris had never been made, and that his failure to make them was "the one thing that I regret. It is true

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Popovic memo about LAV

Final paragraph from memo dated Aug. 19, 1985, from Mikulas Popovic to Robert Gallo and associate NCI director Peter Fischinger, reporting that the French AIDS virus was grown successfully in Gallo's lab and found to be the same as Gallo's AIDS virus, HTLV-3.

By December 1983 we had prepared specific reagents against HTLV-III. We then transmitted LAV to a cell line developed at M.D. Anderson Hospital known as TI 7.4. This T-cell line yielded reproducible but low-level LAV. We later tested our reagents against this cell line and eventually showed that LAV and HTLV-III had cross-reactive major proteins. We concluded that they could be related viruses or the same general subtype. By January-February 1984 others in our group showed that more than 90% of AIDS sera reacted with HTLV-III specific proteins. We never "scaled-up" LAV for comparable testing but noted that as late as October-November 1983 Montagnier found only 20% AIDS sera reacted with LAV.

Mika Popovic, M.D.

OCT. 3, 1983: **Gonda** tells **Popovic** he has photographed the French virus and it appears to be a lentivirus, a slow-acting retrovirus of a different category than HTLV.

OCT. 6, 1983: **Popovic** determines LAV does not react with antibodies to HTLV, indicating the French have discovered a new human retrovirus.

OCT. 18, 1983: **James Hoxie** sends **Gallo** a blood sample from **RF**, a Haitian immigrant who is dying of AIDS in Philadelphia.

OCT. 19, 1983: A Long Island physician sends **Gallo** malignant tumor cells taken from a 57-year-old carpet salesman infected with the AIDS virus from a blood transfusion.

OCT. 24, 1983: **Gallo's** assistants use LAV to infect five permanent T-cell lines, including HUT78 and Ti7.4.

OCT. 26, 1983: Work is completed on HTLV-1B, a genetic variant of HTLV that Gallo believes may be the cause of AIDS.

NOVEMBER, 1983: The NCI AIDS task force learns that experiments by one of its own members show only 1 of 59 AIDS patients has antibodies to HTLV. The group says "the very low" percentages are "a continuing problem."

NOV. 10, 1983: **Popovic's** notes appear to show that the French virus is reproducing in Ti7.4 and HUT78. The next day, he apparently renames the two cultures HUT78/V and Ti7.4/V.

NOV. 11, 1983: **Gallo** is awarded the American Cancer Society's Medal of Honor.

NOV. 15, 1983: **Popovic** begins the isolation of HTLV-3B by pooling cells from the Long Island carpet salesman and two other patients in HUT78. Same day, he sends **Gonda** samples of the HUT78 and Ti7.4 cultures in which LAV is growing.

NOV. 16, 1983: French immunologist **David Klatzmann** presents the data from the paper rejected by Nature to a meeting of the New York Academy of Sciences. He is virtually ignored.

NOV. 21, 1983: **Popovic's** notes show HUT78/V and Ti7.4/V are "OK," an apparent indication that the French virus continues to grow in both lines.

NOV. 22, 1983: **Popovic's** notes contain the cryptic entry "HUT78/V; Ti7.4/V = MOV." Same day, he adds more material from the initial three patients to his pooled HUT78 culture. In Paris, Pasteur researchers make their first successful infection of a permanent B-cell line with LAV.

NOV. 28, 1983: The University of California's **Jay Levy** says he has isolated the retrovirus he calls ARV from a San Francisco homosexual with AIDS.

NOV. 29, 1983: According to **Popovic's** notes, a new cell line called Htu4, derived from HUT78, is infected with the virus **Popovic** now calls "MOV."

DEC. 5, 1983: Pasteur applies for a U.S. patent on its LAV blood antibody test. **Popovic** sends the virus called MOV to **M.G. Sarngadharan**, the Gallo assistant in charge of developing a blood test for AIDS.

AP Laserphoto

Gallo and then-Health and Human Services Secretary Margaret Heckler at the news conference announcing isolation of the virus.

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that we had reagents before submitting our papers to have analyzed Montagnier's virus, and to have concluded in those papers that his and ours were essentially the same virus."

The Popovic memos state, however, that the comparisons Gallo mentioned were carried out. The infected Ti7.4 cell line, one memo says, was "used for comparative studies" with the Gallo AIDS virus. "We later tested our reagents against this cell line," the memo maintains, "and eventually showed that LAV and HTLV-III had cross-reactive major proteins." Popovic declined to be interviewed.

Neither Popovic's memos nor the portions of his laboratory notes made public under the Freedom of Information Act contain the data produced by the experiments with the French virus to which the memos refer. According to one memo, however, the initial confirmation that the French virus was growing in the Ti7.4 cell line was obtained on Dec. 14, 1983—the same day Gonda informed Popovic in writing that the virus in that cell line was producing lentivirus particles.

It was also on Dec. 14 that Gallo wrote a letter to a French scientist, not one affiliated with the Pasteur, bringing him up to date on his AIDS virus research. Although his lab had now found antibodies to the human leukemia virus in a number of AIDS patients, Gallo wrote, "We still have not seen the Montagnier group's type of virus in a patient here, nor to my knowledge has anyone else."

The Popovic memos do not appear to contain some of the most important details of his AIDS virus research. According to the memos, the French virus was put into the Ti7.4 cell line in mid-December of 1983—*after* the Gallo AIDS virus had been isolated and used to make the rabbit antibody and the blood test for AIDS. But the lab notes on which the memos are based appear to show that the French virus actually began growing in Ti7.4 on Oct. 24, 1983—three weeks *before* the isolation of the Gallo AIDS virus was begun.

Nor do the Popovic memos mention that Ti7.4 was not the only cell line in which he succeeded in growing the French virus. According to Gallo's lab records, a second T-cell line called HUT78 was also successfully infected with the French virus on Oct. 24.

What ultimately became of the French AIDS virus Popovic was growing in the two cell lines is unclear from his laboratory notes. Popovic later maintained in an interview with Science magazine that the cells in both lines had died after two or three weeks. None of Gallo's lab records that were made public mention the death of either culture, and notes from a different section of Gallo's lab appear to show more than 70 references to further experiments involving LAV in the late winter and spring of 1984.

In January, the notes show, LAV was being compared genetically with the leukemia virus that Gallo incorrectly believed to be the cause of AIDS. In February, DNA was being obtained from "LAV producer human cells." Notes from March and April appear to reflect the use of LAV in several genetic engineering experiments.

Gallo says the handwritten notations are not references to the French virus, but rather a generic designation for the AIDS virus employed by some of his assistants before the name HTLV-3 was adopted in the four Science papers. "We didn't know what to call it," Gallo told The Tribune. "Until we published those papers we had a million and one names."

The lab notes, however, show that the Ti7.4 cell line and other cultures that were clearly infected with the French virus were called LAV, while those infected with other viruses were given different names. The notes also contain several references to LAV that bear dates later than March 30, the day the four papers were submitted to Science.

The fact that Gallo's lab had assembled persuasive evidence months before his news conference that the AIDS virus from Paris was the same as his own was never disclosed to his fellow scientists, to the press or to the public, much less to the researchers at Pasteur.

After the Park City meeting in February of 1984, Chermann was invited to Bethesda to give a talk on LAV. Popovic was in the audience. "Afterward I said to Mika, we send you twice or three times the virus," Chermann recalled. "We need to know if you are replicating or not the virus. And he told me—you know, with his pipe like this—'I cannot speak. Only the boss can speak.' "

5 'Only because there are so many'

In the summer of 1984, the race was over and Robert Gallo had won. With the publication of Gallo's unprecedented four papers in a single issue of Science, the medical community had accepted what the French had been saying for over a year: that AIDS was caused by a new human retrovirus. Now that there was a virus to study, the long march toward a vaccine and a cure could begin.

Still, there were some stray ends that needed tying up. In August, San Francisco's Jay Levy published a paper in Science reporting the isolation of the AIDS virus he called ARV. Levy said he had actually found ARV the previous November, making him the first American to have isolated the AIDS virus. But he was the second American to publish, and that made him an also-ran.

Gallo had a couple loose ends of his own. One was the paper he had withheld from the Lancet in March, reporting that most AIDS patients weren't infected with the human leukemia virus. Another was his paper on HTLV-1B, which had now been rewritten to identify the source of the virus as "an African patient with adult T-cell leukemia." But nobody outside Gallo's lab knew about the mixup with HTLV-1B or that the leukemia virus antibody paper had been held up for many months, and when those papers finally appeared in print hardly anybody noticed.

The only cloud on the horizon that summer was a paper in the Lancet by Robin Weiss and his colleagues in London, who had tested nearly 2,000 Britons for antibodies to the Gallo and French viruses. Half, who weren't at risk for AIDS, had tested negative. Almost all the others, who either had AIDS or were at risk, were positive. Since the CDC competition hadn't ever been published, the Weiss paper represented the first large-scale blood test results for the French virus.

What made the paper even more significant was the way the tests had been conducted. The first virus tested was LAV. But when HTLV-3 was exposed to the LAV-positive samples, all the antibodies had been "sopped up" by the French virus—a clear indication that the two AIDS viruses were the same.

Everyone who had anything to do with AIDS that summer was reading Gallo's papers, and many of them wanted a sample of his new virus to work with. If science was going to find a vaccine or a cure, scientists needed to study the virus that was now officially responsible for having claimed thousands of American lives.

There is a gentlemen's agreement in science that a researcher who claims to have isolated a new virus is obliged to send a sample to anyone who asks. The French, for example, had begun sending their virus to Gallo almost from the day it was discovered. The stated reason for such professional comity is to further the dissemination of scientific information; the unspoken one is to discourage cheating. And while some scientists are quicker than others to honor the unspoken agreement, it is NIH policy that cells, viruses and other materials discovered in its laboratories must be made available "to the field."

Early in April of 1984, workers at the cancer institute's Frederick, Md., facility, which occupies part of the Army's old biological warfare center at Fort Detrick, had begun growing the Gallo virus in enormous quantities. The day before Gallo's papers were published in Science, he wrote to several of his closest colleagues, including Max Essex at Harvard, to say that samples of his new AIDS virus would be available to them within a few weeks—on condition Gallo's name be included as an author on whatever papers they might publish later. But when a letter arrived from Jay Levy asking Gallo for a sample of HTLV-3, it was ignored. "I never got any virus from Bob," Levy says.

"Gallo was being very careful about who he gave the virus to," recalled W. Gerard Robey, who collaborated with Gallo while at Frederick and is now with Abbott Laboratories in Chicago. "He didn't want to give it to everybody and be scooped on half the interesting work."

Among those who had the most problems obtaining the Gallo virus were Donald Francis and his crew at the Centers for Disease Control. Although the CDC and NIH are sister agencies under the umbrella of the federal Public Health Service, there had never been much love lost between the two, and the tension between Francis's lab and Gallo's was especially thick. The CDC's decision to send blood samples to Paris for testing hadn't helped, and neither had the defection to Atlanta of one of Gallo's top assistants, V.S. "Kaly" Kalyanaraman.

"CDC was starting to be a big retrovirology center," recalled Jean-Claude Chermann. "It took Kaly, and some other scientists. Don't forget that the CDC had a lot of money for AIDS. At this time CDC was very important."

What appeared to bother Gallo most was the CDC's collaboration with the French. Don Francis's people had been growing the French virus in Atlanta for some time, and they insisted on referring to the AIDS virus in their papers by its French name, LAV. "I am puzzled," Gallo wrote to a senior CDC official, "by the continual use of LAV. As we have discussed periodically, the generic designation of the virus is HTLV-III/LAV."

According to Berge Hampar, then the general manager of the Frederick facility, while Max Essex and a few other researchers were given "tons of virus for free," the cancer institute charged the CDC $75 a liter. "The CDC actually had to open an account at Frederick," Hampar said. "Isn't that amazing?" Before Gallo would agree to give the CDC his new virus at any price, he made officials there sign a written promise not to compare it genetically with any other AIDS virus they might have growing in their lab.

The year 1983 had been a busy one for Gallo, and 1984 was busier still. When Gallo received the coveted General Motors cancer prize in early June, the citation was read by Robin Weiss, who recalls pointing out that Gallo had "published more papers during the previous year that I had in my entire career."

In between lectures and awards, Gallo continued to press the case for making the AIDS virus the newest member of his leukemia virus family. When the government applied for the patent on Gallo's AIDS test, it asserted that "the biological properties" of the AIDS virus proved that it was "a member of the HTLV family."

In scientific articles and interviews, Gallo elaborated on his rationale for making the AIDS virus the third HTLV. Both the AIDS virus and the other HTLVs were retroviruses, Gallo said, and both preferred to infect helper T-cells. Both viruses had core proteins that were the same size, he said, and their reverse transcriptases, the enzymes they used to reproduce themselves, had the same molecular weight. Both viruses, Gallo said, had a shared sequence of amino acids in the proteins that formed the outer envelopes that protected them when they were outside the cell.

Another of Gallo's arguments was that the leukemia virus and the AIDS virus had probably originated in Africa, and considering the number of AIDS cases there it seemed reasonable that AIDS had its beginnings somewhere on that continent. There wasn't very much adult T-cell leukemia in Africa, however—almost all the known cases had been found in the fishing villages of southwestern Japan—and there was virtually no AIDS in Japan.

Gallo set out to construct an epidemiological bridge between those two very different and distant societies, suggesting that the 16th Century Portuguese explorers who stopped in Japan might have brought with them African slaves or monkeys infected with a virus that eventually evolved into HTLV-1. In a letter to the British journal Nature, Gallo even maintained that the Japanese word for monkey, *amakawa*, was "derived from the Portuguese word macaco also meaning monkey."

When Yorio Hinuma, the Kyoto University virologist who with Isao Miyoshi had established the link between HTLV-1 and T-cell leukemia, heard about Gallo's hypothesis, he wrote his own letter to Nature. Hinuma cited evidence "that HTLV-1 was already present in aboriginal Japanese in pre-historic times." The Japanese word for monkey, Hinuma noted, was not *amakawa,* but *saru.*

The Pasteur's AIDS research group had known from the moment it discovered LAV that it bore no more than a superficial relationship to HTLV-1, and they had demonstrated many of the dissimilarities in their research. But Gallo kept insisting they were wrong.

"The virus, you explained to us, was not related to HTLV," he wrote to Jean-Claude Chermann in July. "We now know that it is related to HTLV-I and clearly belongs to that virus family." In an interview with the BBC a few weeks earlier Gallo went even farther, asserting that his lab had found genetic similarities between the AIDS virus and "the whole genome" of the leukemia virus.

In August of 1984, Gallo published a paper in Science that appeared to contain the first hard evidence to back up his assertions about the similarities between the AIDS virus and HTLV-1. Using a technique called hybridization analysis, which measures the degree to which two strands of DNA will adhere to each other biochemically and are thus alike, sections of the leukemia virus DNA had been found to have the same genetic composition as the AIDS virus DNA.

"The present data," the paper concluded, "support our proposal that this virus should be classified within the HTLV family." In November, Gallo published another paper endorsing the conclusions in his August paper. In a third paper published in December, he termed the genetic similarities between the AIDS and leukemia viruses "significant."

The day before the third paper appeared, dozens of biologists from around the world gathered in Wilson Hall on the tree-lined campus of the National Institutes of Health. They

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Breeding ground for killer AIDS virus: Cancer in a jar

Human beings are really not much more than a collection of different kinds of cells: skin cells, blood cells, heart muscle cells, hair-forming cells and thousands of others, each providing some aspect of the body's structure and function. As the body grows or ages or repairs damage to itself, new tissue is formed by the division of existing cells.

The process of cell division can also be induced in the laboratory, by placing cells in a culture that contains the biochemicals and nutrients they need to live and grow. No normal cell will go on multiplying endlessly outside the human body. A skin cell may produce perhaps 50 generations before it dies, other kinds as few as a dozen. The exception is the cancer cell. Cancer, by definition, is the uncontrolled multiplication of a cell, and under the right laboratory conditions human cancer cells will continue to reproduce forever.

The type of cell the AIDS virus prefers to infect is a white blood cell called the helper T-cell, a key component of the human immune system whose role is to direct companion immune system cells, called B-cells, in the production of antibodies designed to kill viruses, bacteria or other invaders. Because the AIDS virus ultimately kills the T-cells it infects, when all the infected T-cells are dead the virus will also stop reproducing. To keep the AIDS virus replicating in the laboratory, it must either be fed a continuous supply of fresh T-cells or placed in culture with a collection of cancerous T-cells that are continuously reproducing on their own, the laboratory equivalent of cancer in a jar.

When a leukemic T-cell line is exposed to particles of the AIDS virus, the particles attach themselves to a particular protein, known as CD4, on the surface of the cells. Using the CD4 protein as a kind of portal, the AIDS virus deposits its genetic material—a single strand of RNA—in the interior of the cell. Once inside, the enzyme called reverse transcriptase begins making virtual carbon copies of the viral RNA in the form of its genetic cousin, DNA. This "proviral" DNA then inserts itself into the much longer strand of DNA that occupies the center of every human cell and contains the individual's complete genetic code.

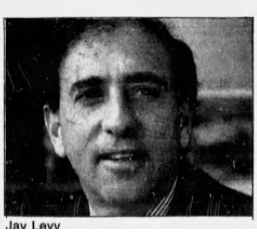
When, through a series of complicated internal and external events, the viral DNA is activated inside the T-cell, it produces new virus particles that burst forth from the occupied cell in search of new T-cells to infect. At the same time, the virus-infected T-cells often begin to divide and multiply. Because each new cell retains a copy of the virus's DNA and thus the ability to produce new particles of virus, the amount of virus in a patient's system—or in an infected T-cell line in a laboratory—can increase very rapidly.

Sooner or later, most AIDS-infected T-cells will be killed by the replicating virus, which does irreversible damage to the cell. However, some leukemic T-cell lines are resistant to the cell-killing effects of the virus. A few lines even seem to be immune, their infected cells apparently capable of surviving and dividing forever while providing a limitless source of virus for scientists to study.

DEC. 12, 1983: **Gallo** sends a paper to Science reporting that the Essex test is probably measuring antibodies to a protein from HTLV itself rather than a hybrid produced by an infected cell.

DEC. 13, 1983: A rabbit injected by **Samgadharan** with the AIDS virus begins producing antibodies that can be used to verify the presence of the virus in human cells.

DEC. 14, 1983: **Gonda** reports observing the AIDS virus in the HUT78 and Ti7.4 cultures in which LAV is growing. **Popovic** confirms LAV is growing in the Ti7.4 cell line. Same day, **Gallo** tells a French scientist, "We still have not seen the Montagnier group's virus in a patient here, nor to my knowledge has anyone else."



Jay Levy

DEC. 16, 1983: **Gallo** sends the Lancet his manuscript reporting fewer than 10 percent of AIDS patients have antibodies to HTLV.

DEC. 20, 1983: At its December meeting, the AIDS task force agrees that whether the Essex test is measuring antibodies to a viral or a cellular protein is now "a major question."

JAN. 2, 1984: **Popovic** sends more MOV to **Samgadharan.** Same day, he adds material from seven new patients to his pooled virus culture, now called "HTJV pool." His notes contain two other entries: "Sarang serolog. O.K.!!!" and

JAN. 6, 1984: The first AIDS virus antibody tests are performed in Gallo's lab on blood samples from patients with AIDS and pre-AIDS.

JAN. 10, 1984: **RF's** cells test negative for reverse transcriptase. **Gallo** tells a colleague that HTLV remains a leading candidate for the cause of AIDS.

JAN. 13, 1984: **Gallo** writes a German researcher that "we now have 18 isolates" of HTLV from AIDS patients, and that "it has become somewhat more likely that HTLV may be involved" in AIDS. He adds that the Essex test, which he had "worried" might be picking up antibody to a cellular protein, is measuring antibody

JAN. 18, 1984: **Gonda** reports that cells from **RF** and patients identified as **LS** and **BK** are all negative for virus. Same day, **Gallo** sends Science a paper reporting the isolation of HTLV-1B from a homosexual with AIDS.

JAN. 19, 1984: According to Gallo laboratory notes, the first experiments are begun in which "LAV" is genetically compared with HTLV-1 and HTLV-2.

JAN. 25, 1984: **Popovic** subdivides the HUT78 cell line, which he now calls HT, into 41

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were there partly for the reasons that scientists have always gone to scientific meetings—to see old friends, exchange gossip in the corridors and listen to one another talk—and partly because this meeting offered a special attraction.

In biology the topic of the moment was AIDS, and the group that had assembled that morning in Bethesda could fairly be considered the illuminati of AIDS research. Max Essex and William Haseltine had come down from Harvard. Hilary Koprowski from the Wistar Institute in Philadelphia was there, and so was the grand old man of retrovirology, Ludwik Gross. Once again, however, the star was Gallo, whose discovery of HTLV-3 had brought him almost instant recognition as this country's foremost AIDS researcher.

It was a critical time for AIDS research, as scientists in the U.S. and abroad began to gain their first detailed understanding of the mechanics of the virus that was now killing hemophiliacs, transfusion patients and intravenous drug users as well as homosexuals. Gallo had been chosen to deliver the symposium's opening lecture, and he used the occasion to repeat the many similarities between the AIDS virus and his leukemia virus. So far, the two viruses had been compared only by indirect methods. The only sure way to determine how related they really were was to unravel their DNAs and compare them side by side.

The genetic sequence of the leukemia virus had been worked out by scientists in Japan the year before, and an intensive effort to sequence the Gallo AIDS virus had been underway for months, by researchers in the labs of Gallo, Haseltine and two private companies. "There were 19 of us involved," recalled Lee Ratner, who coordinated the effort from Gallo's lab, "and we worked our tails off for three to four months."

On the other side of the Atlantic, the Pasteur Institute had put together a team of five young scientists to break the genetic code of LAV. Unlike Gallo, they had no stake in whether the AIDS virus was a member of the HTLV family or not, and they had been saying for months that it wasn't. The real value of the AIDS virus sequence was that, once in hand, it would lay open the secrets of how the virus worked—and, perhaps, how it could be made not to work. The Pasteur group had found the virus a year before Gallo, but they were only slightly ahead in the race to decode its DNA.

Before the virus could be sequenced, its DNA had to be cloned—extracted from an infected T-cell and then copied millions of times by inserting it into a bacterium, called E. coli, that is the biological equivalent of a photocopying machine. The reason for the delay in Paris had been the difficulty encountered by the Pasteur's AIDS group in finding someone who wanted to do the cloning.

Ordinarily, the molecular biologists would have leapt to take part in a historic scientific event. But it wasn't yet clear that the project would be historic, and none of them wanted to risk spending months cloning a virus that might not be the cause of AIDS. "At this time nobody was believing us," Chermann recalled. "Pasteur was not believing us, and we were fighting against the Americans."

Chermann's lab was near the institute's computer center, a place where the molecular biologists tended to congregate, and to get there they had to cross his corridor. "I tried to stop some people to say, could you help us to clone," Chermann recalled. "If one had taken the bet, the virus would have been cloned and sequenced before the announcement of HTLV-3."

In the end he and Montagnier persuaded Simon Wain-Hobson, an Oxford-educated British expatriate who was working on the virus that causes hepatitis-B and teaching gene-cloning courses on the side. "Montagnier had asked a number of people on the staff if they wanted to do it, and many people said no," Wain-Hobson recalled. "He and I discussed it for a long time and perhaps we should have got going earlier, but I must confess that I was terribly unimpressed at the time. I said, 'Well I've got a few things to finish off and I'll start as soon as I can.' If he'd made a more convincing case I'd probably have started a bit earlier."

Montagnier also recruited two graduate students from the department of molecular biology, Marc Alizon and Pierre Sonigo. Once the cloning was done, the genetic sequence followed in relatively short order. "It was all over by early November," Wain-Hobson recalled. "We worked in shifts. It took us longer to write the paper than it took to do the sequence, because we're terrible at writing. We tried to make a nice paper of it."

By chance, Montagnier had been invited to speak at the NIH symposium in December, 1984, and as soon as the French sequence was finished he telephoned the symposium's organizer, Samuel Broder, to ask that Wain-Hobson also be allowed to speak. The French, Montagnier told Broder, had data "of great importance" to present, but he didn't say exactly what it was.

When Broder, who has since become the cancer institute's director, agreed, Wain-Hobson and Montagnier began to have second thoughts about showing their genetic sequence on Gallo's turf. If they didn't bring their sequence and Gallo presented his, Wain-Hobson remembers thinking, it would look as though the French were behind. But relations between Gallo and the French had deteriorated so much, Wain-Hobson said, that he wasn't sure what might happen to his data. In the end they decided not to show the sequence itself, but to present instead a "map" of the virus's principal genes, those regions of its DNA that contained the instructions for manufacturing its principal proteins.

Gallo's opening paper was followed by one from Max Essex and another from Gallo's chief molecular biologist, Flossie Wong-Staal. Wain-Hobson had been given only 10 minutes to speak, and when his turn came he didn't waste words. He began by questioning Gallo's published data showing similarities between the AIDS virus and the leukemia virus, and ended by unveiling his genetic map.

Several of those who were present remember the auditorium falling quiet as Wain-Hobson's slide flashed on the screen. According to the French gene map, the AIDS virus and Gallo's leukemia virus were hardly alike. The leukemia virus had only four genes; the AIDS virus had at least five, and there were important differences in their size and placement that made the AIDS virus the most complex human retrovirus yet seen.

The first two genes in the AIDS virus—"gag," which contains the genetic code for its core proteins, and "pol," for the reverse transcriptase—were about the same size and in the same place as in the leukemia virus. But the ends of gag and pol overlapped, and the French AIDS virus had a short third gene called "Q" that the leukemia virus was missing.

Farther down the sequence the real differences began to emerge. The fourth gene in the AIDS virus was "env," the gene that contained the code for the proteins that formed its outer envelope. The leukemia virus had an envelope gene too, but it was only about half as long. And the leukemia virus didn't have anything resembling the fifth gene, "F," that the French had found behind the AIDS virus's envelope.

As soon as Wain-Hobson finished speaking, several members of the Gallo sequencing group left the auditorium. The exodus was led by Haseltine, Gallo's longtime associate from Harvard and a key member of the team that, less than a week before, had finished sequencing the Gallo AIDS virus.

"I remember Bill stomping out of there with a contingent of people," said the CDC's Cy Cabradilla, who was in the audience that day. "I also remember him grabbing people and saying, 'No, no, his sequence is wrong. We've got the right sequence.' Bill Haseltine was very upset. Molecular biologist, cloner, sequencer, supposed to be a top gun, and here he got upstaged by the French."

When it was time for questions the Gallo group filed back to their seats. There were one or two half-hearted queries for some of the other speakers but no questions for Wain-Hobson. One member of the audience remembers thinking that everyone was waiting for Gallo to fire the first shot. If they were, he didn't disappoint them.

"Gallo walked to the microphone," recalled one scientist who was there, "and he said, 'I have a question for Dr. Wain-Hobson.' But he didn't ask a question, he made a speech. He talked for more than 10 minutes."

When Gallo finished, Wain-Hobson recalled, it was with a question. "Why," Gallo wanted to know, "do you stress the differences between HTLV-1 and HTLV-3?"

"Only because there are so many," Wain-Hobson replied.

Gallo now says he cannot recall attending the symposium. "I don't think anybody in our lab went to it," he said. "Who went? I was there?" But Gallo was there, and in the space of 10 minutes he had seen his arguments for the similarities between the AIDS virus and his leukemia virus demolished by his rivals from Paris.

"The people from Gallo's camp couldn't believe it," said Cabradilla, who was working on the sequence of another AIDS virus clone. "They were shocked. This small band of molecular biologists out of the Pasteur Institute had just beaten these guys from NCI and Harvard. Other groups, myself included, were saying, hey, good job."

No one outside the Gallo group will ever know for sure what the Gallo gene map of the AIDS virus looked like that day, because neither Gallo nor his associates presented any of their data at the symposium. But one member of another group that was working feverishly to finish the sequence of Jay Levy's AIDS virus recalls talking to a member of Gallo's staff after the meeting broke up. "I got the distinct impression that Simon Wain-Hobson had the story," the scientist said, "and that everyone else, including us, was close but behind."

Constructing a gene map from a DNA sequence can be compared to translating poetry from a foreign language. The poet's thrust may be obvious, but the elegance of the finished translation will turn on words that can be interpreted in more than one way. For a multitude of reasons, it is possible for two scientists to look at the same DNA sequence and disagree about where a gene begins and ends, or even whether it exists at all.

According to several members of the Gallo group, one of their disagreements with the French was over whether the fifth gene shown in Wain-Hobson's map was a real gene or a mirage. Because the leukemia virus didn't have five genes, the prevailing opinion in Gallo's camp was that the AIDS virus probably didn't either, and that what looked like a fifth gene was simply an error in translation. "Nobody was believing that it was a functional gene," said Nancy Chang, one of the Gallo sequencers. "We thought maybe it was a sequencing error, or not really anything significant."

In late January of 1985, spread across several pages, Nature published the Gallo lab's genetic sequence of the AIDS virus, row after row of a's, c's, g's and t's, more than 9,200 in all. Gallo called the sequence "a significant step forward in understanding how the virus works." AIDS researchers, Haseltine said, could now "see the face of the enemy." But the face drawn by Gallo and Haseltine was that of the wrong enemy. Unlike the French, they were still fighting the last war.

The Gallo sequence paper also contained a gene map, and its first two genes, pol and gag, looked exactly like those in the gene map Simon Wain-Hobson had brought to Bethesda. The Gallo map had a third gene, called "sor," that matched the gene the French called Q. It also contained a fifth gene, "3'orf," but the Gallo group hedged the question of whether the fifth gene really existed or was just an error in translation.

The major difference between Gallo's map and the one drawn by the French was in the fourth gene. If the leukemia virus was any guide, the fourth gene was probably the env, or envelope gene. But it was so much longer than the env gene in the leukemia virus that the Gallo group thought it had to contain the code for some other protein as well. But what function would such a protein be likely to perform?

The leukemia virus had a transactivator gene that appeared to switch the virus on after years, or even decades, of latency. Because the AIDS virus can also remain latent for long periods, the Gallo group thought the second half of the envelope gene was probably the AIDS virus transactivator. Because they weren't sure what it did, they called it "lor," for "long open reading frame." All together, Gallo's fourth gene was "env-lor."

According to Simon Wain-Hobson, Nature had originally expressed interest in publishing the French sequence paper, and when it was finished he gave them a call. "I said, you'll have our paper tomorrow," he said. "And then they didn't want it." Fortunately for the French, a journal called Cell, published by the Massachusetts Institute of Technology, was more receptive.

"They were naturally somewhat upset about this," recalled Benjamin Lewin, the editor of Cell. "They felt they had been working pretty much evenly with Gallo's group and suddenly they were not going to get their paper published maybe until months afterwards. We said, yes, we thought the sequence of the first isolate of the AIDS virus was a significant event. It didn't take us very long to decide that we should publish the paper and that we should publish it

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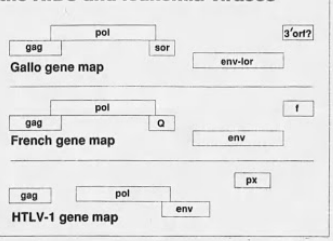
Cold Spring Harbor Laboratory photo

William Haseltine (left), a Harvard University researcher, and Mikulas Popovic, chief virologist at Gallo's lab, at the 1983 conference at Cold Spring Harbor.

Genetic maps of the AIDS and leukemia viruses

Top: The Gallo group's gene map of the AIDS virus, with the fourth gene identified as "env-lor."
Middle: The gene map presented by Simon Wain-Hobson at the NCI symposium, showing the fourth gene as an envelope gene.
Bottom: The four genes of the leukemia virus HTLV-1.



Chicago Tribune Graphic

As the cooks squabbled, the alphabet soup boiled down to HIV

As with mountains and galaxies, the naming of new viruses is a scientific honor reserved for their discoverers. Nomenclature in virology dates back to the time, not so long ago, when scientists' names were attached to the viruses they discovered. That is no longer common, but for Robert Gallo the best name for the virus that causes AIDS was the one that ensured its place as the newest member of his family of human retroviruses.

"Any impartial scientist," Gallo wrote to his French counterpart, Luc Montagnier, "will adopt the name HTLV-III. In fact, almost everyone in the U.S. and most people in Europe have already done so."

The French, understandably, preferred the name they had given their own isolate: LAV, which was short for lymphadenopathy-associated virus. Many other researchers, wishing not to anger Gallo but hoping to accord the French due credit as the discoverers, resorted to calling the virus HTLV-3/LAV. But each isolate of the AIDS virus was also given its own designation, and as more viruses were isolated the confusion engendered by such compound names was vastly increased.

The question was further complicated by the fact that the University of California's Jay Levy had found the AIDS virus independently—Levy said he had actually isolated the virus ahead of Gallo, but Gallo had published first—and Levy was calling his virus ARV, for AIDS-related virus.

"LAV is clearly an inaccurate name, and AIDS virus or AIDS related virus is the dumbest name I have heard yet," Gallo wrote to one colleague. "Clearly, human T-lymphotropic virus III is as accurate, as innocuous, and as consistent with the past as any name possible."

When Gallo was pressed for the rationale behind the name HTLV-3, he referred to a meeting at Cold Spring Harbor Laboratory on Long Island in September of 1983, where he had persuaded eight other scientists at a lobster dinner on the beach to join him in signing an "international agreement" that the next new virus related to his original human leukemia virus should be called HTLV-3.

The agreement, said British virologist Robin Weiss, who was among the signatories, had nothing to do with AIDS. It was was intended, he said, to resolve the dispute between Gallo and the Japanese over whether the leukemia virus should be called HTLV-1 or ATLV, the name being used in Japan.

Montagnier was there but wasn't asked to sign, Gallo said later, because "he only had one paper in the literature." In fact, Montagnier wouldn't have signed. "We never used the initials of HTLV," Montagnier wrote to Gallo later. "The initials of HTLV have been coined by you. In renaming this virus HTLV you have induced a lot of confusion amongst unaware people."

Gallo said his choice of names had been mandated by the "Cold Spring Harbor agreement." But in March of 1984 he wrote a personal letter to the editor of a London medical journal saying he was "debating whether to call [the AIDS virus] HTLV-III or HTLV-A (A = AIDS)."

Gallo chastised the French for having taken issue with his choice, imploring Montagnier to "save our energy in trying to contain the virus and the disease rather than to beat a dead horse over nomenclature." But it was Gallo who was firing off angry letters to colleagues whenever the name LAV appeared in a scientific paper. To one longtime collaborator who had used the French designation, Gallo wrote, "I cannot accept the excuse that: [a] 'you did not know,' or [b] 'the journal changed the name.'"

After nearly a year of dispute, the International Committee on the Taxonomy of Viruses stepped in. Under the chairmanship of Harold Varmus, the University of California virologist who won a Nobel prize last month, the committee assembled a panel to choose a new name. The panel included nearly everybody—Gallo and his friends, Robin Weiss, the French and the California ARV researchers—and the consensus was that none of the existing names was really right.

LAV wouldn't do, because it was possible to get AIDS without ever having had lymphadenopathy. ARV wouldn't do, because not everyone who was infected with the virus got AIDS. HTLV-3 was clearly wrong, because the AIDS virus had so little in common with the other HTLVs. The best name the group could come up with was human immunodeficiency virus, or HIV, a choice that Varmus concedes was less than inspired.

But when the 13-member panel published its decision in a letter to Nature, the letter bore only 11 signatures. Gallo and his closest colleague among the panelists, Max Essex of Harvard, had refused to sign.

Gallo vowed later never to use the new name. "The names of the virus that are already in the literature will be maintained," he said at the time. Although his AIDS papers referred to HTLV-3 for more than a year afterward, he has since joined the rest of the scientific community in adopting HIV.

JAN. 30, 1984: Using blood samples sent to Paris by the CDC, the Pasteur group finds antibodies to LAV in 10 of 10 patients with pre-AIDS and 3 of 10 with AIDS.

FEB. 7, 1984: In the keynote address at an AIDS symposium in Park City, Utah, **Gallo** says his "only candidate" for the AIDS virus is a close genetic variant of HTLV-1. His assistants passed a paper reporting that Claude Chandon

FEB. 9, 1984: **Gallo** writes **Jay Levy** that "HTLV itself . . . could still cause AIDS."

FEB. 13, 1984: **RF, SN, LS** and **BK** are still negative for electron microscopy. **Popovic** sends viruses called HTLVA and MO Variant to **Gonda** for observation.

FEB. 23, 1984: Lab notes show DNA being extracted from "LAV producer human cells." The French tell CDC they now have 11 retrovirus isolates from patients with AIDS and pre-AIDS.

FEB. 25, 1984: H9 and several other clones of the HT cell line are infected with the pooled virus culture **Popovic** now calls HT(pool

was infected with HTLV-1. **Jean-Claude Chermann** reveals that antibodies to LAV have now been found in 75 percent of pre-AIDS patients and 38 percent of those with AIDS.

FEB. 8, 1984: Pasteur researchers infect a new permanent cell line called FR8 cell line with LAV.

Robert Gallo (left) and Luc Montagnier

FEB. 14, 1984: Chermann, attending an NCI seminar, asks Popovic if he has succeeded in growing the LAV sent from Paris. "I cannot speak," **Popovic** replies. "Only the boss can speak."

FEB. 22, 1984: **Gonda** reports observing lentivirus in "HTLVA" and "MO Variant."

FEB. 27, 1984: CDC sends blood samples to **Gallo** and the French for testing with their respective AIDS tests. Same day, Pasteur researchers infect a new cell line called BJAB with LAV.

1991 - Dec 5

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2002 (Feb 03)

Full newspaper page : [HN010V][GDrive]

2002-03-23-the-gazette-montreal-canada-pg-13-clip-nobel

Nobel elicits ignoble ambition

Claim to have discovered HIV undid researcher Robert Gallo

Science Fictions
The War Between the Scientists Who Discovered HIV
By John Crewdson
Little Brown and Co., 688 pages, $39.95

MARK WAINBERG
Special to The Gazette

Studies have shown that peer approval and recognition are the most important factors that motivate scientists to achieve greatness. Many non-scientists might have difficulty identifying with this notion. After all, in the world of business and sports it is seemingly ever-higher salaries and other monetary considerations that drive people to do their best. But for scientists, ultimate recognition is really the Nobel Prize, sought by many and received by few. Among those who either covet a Nobel or who believe that they have a realistic chance of winning one, the quest can become all-consuming.

In this book, John Crewdson, a Pulitzer Prize-winning journalist at the Chicago Tribune, has chronicled the manner in which the need to be identified as the discoverer of HIV, the virus that causes AIDS, caused the well-known virologist Robert Gallo to embark on a course that would prove destructive for Gallo himself as well as for many of his colleagues, including a rival group of scientists at the Pasteur Institute in Paris, headed by professor Luc Montagnier.

The book is a detailed expansion of a riveting series of articles that Crewdson wrote on this subject for the Chicago Tribune in 1996. It includes a wealth of details that were omitted from the original, shorter version, and this is both its strength and its weakness. Notably, while the case that Crewdson, writing almost as a prosecutor, builds against Gallo is compelling, it is so detailed as to risk boring the casual reader.

It is hard to know what might have motivated Crewdson to write this lengthy description of the events surrounding the discovery of HIV. It is clear, however, that he must have felt a need to portray the excesses of human behaviour that can emerge when participants feel that a Nobel Prize is on the line, and that Gallo's excesses in pursuit of this goal were so egregious as to warrant full documentation.

Indeed, the author comes across as an excellent prosecutor. Readers who are fans of courtroom dramas or novels will know that such individuals are determined to obtain a conviction, even if it sometimes means providing an interpretation of events that best fits the prosecutorial thesis. This is clearly the case here thought it is doubtless within the scope of journalistic license.

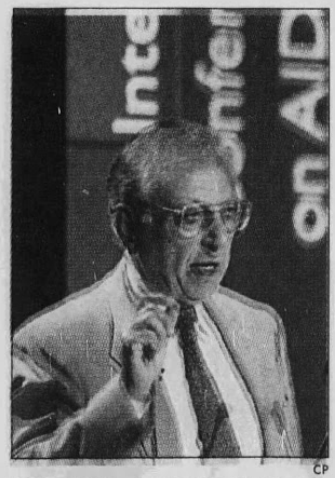
FACTUAL ERRORS

There are, however, several factual errors in this version of events. First, in the introductory pages, Crewdson makes the point that Gallo was extremely stingy and did not make his reagents and resources available to other laboratories for their own research. This is largely untrue. Indeed, the reviewer of this book received HIV from Gallo's lab in 1984, shortly after publication of Gallo's papers in Science (notwithstanding the fact that Gallo had appropriated the virus from the French) as well as cells in which to replicate the virus and monoclonal antibodies with which to perform biochemical analysis.

Gallo also made these reagents available to scientists from many laboratories around the world. Sadly, however, he refused to provide these same materials to many others, whom he might have perceived as enemies or competitors, and in this context Crewdson is dead-on.

Another example of a misstep by Crewdson is his statement that the first human retrovirus to be isolated, HTLV-I, a cause of a rare form of leukemia, was first identified by Frank Ruscetti and Bernard Poiesz at the National Cancer Institute in Bethesda, Md. Although this statement is true, Crewdson ascribes no credit to Gallo for this discovery. Yet both Ruscetti and Poiesz were postdoctoral fellows in Gallo's laboratory at the time that this work was done. Crewdson surely knows that it is accepted procedure for the head of a laboratory to claim credit for research conducted on his premises by more junior scientists.

It is sad that these shortcomings detract from what is otherwise a compelling case that Gallo claimed and obtained recognition for research that had, in fact, been accomplished by the French. But what Crewdson fails to acknowledge is that the work conducted in Gallo's laboratory added new findings to those that had been published by the French and that the cumulative effect of the research efforts of both groups was to spur the field forward much faster than would otherwise have been the case.



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Robert Gallo speaks at a Vancouver AIDS conference in 1996.

LACK OF OBJECTIVITY

It is probably incorrect to state, as Crewdson does, that the in-fighting between the American and French groups slowed the development of a blood test that could safeguard the blood supply against HIV-1 contamination. In reality, both groups contributed to the development of such tests.

Further evidence of the author's lack of objectivity is the inference that Gallo may have personally unplugged freezers that contained stockpiles of viruses that he was anxious to destroy, so that other scientists could neither corroborate nor contest the validity of his results. And, in fairness, the implication that Gallo deliberately stole the French virus is impossible to prove. It remains entirely possible that sloppy research led to the contamination of cultures in Gallo's laboratory by the French HIV isolate that grew out and was later claimed by the Gallo laboratory to be their own.

Although this book describes the history of the first cases of HIV/AIDS in the United States in succinct fashion, it misses out on one of the most important aspects of the epidemic – the extent of human suffering that has been wrought by HIV throughout the world. The book makes little mention of the important issues of drug access, attempts to develop a vaccine against HIV-1 and the ability of the virus to mutate with amazing agility, giving rise to problems of drug resistance as well a wide array of HIV strains that differ from one another with regard to immunological makeup.

Simply put, this means that it may be impossible to design a single vaccine that will protect against all forms of HIV-1. The latter issue is so important that it ensures that HIV will continue to be one of the world's most important problems in public health for many years to come.

Although the roles of the French vs. U.S. scientists in regard to the research performed are well described, it is also probably unfair, in spite of his undeniable faults, to single out Gallo as the sole villain of the piece. Most scientists in the field concur that the leader of the French group, Luc Montagnier, was himself prone to fits of vanity in regard to his own role in the story.

The book also gets sidetracked by the personal lives of some of its leading characters, and Crewdson seems to take joy in describing the extramarital relationships of some of them. In reality, these tidbits of information only detract from the main theme – how the quest for scientific glory, if taken to excess, can do harm.

In summary, this book is a successful indictment of Gallo, whom history will probably judge to have been guilty of excessive zeal in the pursuit of scientific glory. However, there are certainly worse crimes and the fact remains that the research performed in the Gallo lab helped advance HIV drug discovery and the development of antiviral treatments that have enabled many hundreds of thousands of people around the world to live longer and enjoy higher quality lives.

Most scientists, even those who have large laboratories, are not prone to the types of excessive behaviour attributed to Gallo in this book. At the same time, most scientists would be happy to leave behind his long and distinguished legacy of scientific accomplishment.

✤ *Mark Wainberg is director of the McGill University AIDS Centre at Montreal's Jewish General Hospital and past president of the International AIDS Society. He is acquainted with almost all the scientists described in this book.*

[HN010W][GDrive]

https://www.linkedin.com/in/sandra-ruscetti-85084623/

https://grantome.com/grant/NIH/ZIA-BC005657-22

book - retroviruses in rodents

https://books.google.com/books?id=rFzmBwAAQBAJ&pg=PA405&lpg=PA405&dq=sandra+ruscetti&source=bl&ots=lALuFNP7ag&sig=ACfU3U3x8hUmC4Z8vh122erNSF0LCf1t5Q&hl=en&sa=X&ved=2ahUKEwjn9_eTx7bpAhXcmXIEHbv0C88Q6AEwBXoECAoQAQ#v=onepage&q=sandra%20ruscetti&f=false

2011 (Dec 25)

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https://merutt.files.wordpress.com/2011/03/prosjektbeskrivelse_eng_no_cfs_stage-one_xmrv-study1.pdf

The Norwegian Study of CFS, NO-CFS Stage 1; Confirmatory stufy for the detection of Gamma-retroviruses related Gene Sequences

Norway 2010

2010-prosjektbeskrivelse-eng-no-cfs-stage-one-xmrv-study1.pdf

Litton

june 1972

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1977

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bionetics corps - Is this the same as Litton Bionetics? Answer - no!

1986

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1984

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1972 (June 25) - NYTimes : "Litton to Run Cancer Research Lab"

By Harold M. Schmeck Jr.; Special to The New York Times

Source : [HN012A][GDrive]

WASHINGTON, June 24— The National Cancer Institute named a contractor yesterday to operate its newly acquired facilities at Fort Detrick, Md., and predicted that, by fall, the former biological warfare lab oratories would be fully at work toward the conquest of cancer.

The contract, for renovation, management and operation of the facilities, goes to Litton Bionetics, a division of Litton Industries, Inc. The first - year contract is for $6.8 - million. At a news conference today, Dr. Frank J. Rauscher Jr., director of the cancer institute, said it was the largest single contract ever awarded by any of the National Institutes of Health.

Use of the facilities is part of the expanded national re search effort against cancer Fort Detrick is believed to have some of the world's best facili ties for research with hazardous chemicals and infectious agants.

Dr. Rauscher said the insti tute's work at Fort Detrick would include research on known cancer viruses of ani mals as well as some of the viruses suspected of roles in human cancer. The program will also include studies of chemicals capable of causing cancer and research on poten tial anticancer drugs.

Viruses to Be Made

Viruses and special biologi cal materials will be produced in large quantities for use, not only at Fort Detrick, but also at other laboratories doing cancer research.

Large numbers of small ani mals, mostly rats and mice, will be maintained for the re search at the newly acquired laboratories in Maryland. By the end of the second year of op eration, 30,000 laboratory ani mals will be maintained at the facilities for studies of the life time effects of hazardous chem icals and other potentially dangerous substances. Presum ably, this will be only part of the animal population.

Dr. Rauscher said the agree ment with Litton Bionetics of Bethesda, Md., was an award fee contract, meaning that the contractor has no guaranteed, profit. Only if the Government finds that the company's pro gress warrants it, will the con tractor be premitted some percenage or profit up to a possi ble maximum of 10 per cent, he said.

The over - all operational con tract is expected to expand in future years, perhaps reaching a legal level as high as $20 - million a year.

Fast Action Planned

At the news conference to day James C. Nance, president of Litton Bionetics, said the company planned to go into operation rapidly with an esti mated 75 persons on duty by the end of next week; 150 by the end of July and approach ing 300 by 1973.

Bionetics, which became a division of Litton Industries in 1968, has been active as a commercial biological research laboratory since 1961 and has done a substantial amount of previous contract work for the cancer institute. Litton Indus tries has come under sharp criticism recently for its per formance in ship - building con tracts for the Navy.

While Fort Detrick has been a largely secret facility while it was working on biological war fare research, it will now be open to scientists from the United States and abroad, in cluding some from the Soviet Union and, probably, from mainland China.

Dr. Rauscher said that some virus experts from the Soviet Union might be invited to tour the Fort Detrick facilities as early as this fall.

The cancer institute's opera tion at Fort Detrick will be located primarily in the “high security area” of the former biological warfare research fa cility.

1985 (Sep 2) - Washington Post : "Hazleton Labs Buys Litton Bionetics Units"

By Nell Henderson

Source : [HN012B][GDrive]

Hazleton Laboratories Corp. has acquired the animal and molecular toxicology units of Litton Bionetics from Litton Industries Inc. for an undisclosed amount.

Hazleton, based in Vienna, provides biological and chemical research services, manufactures laboratory and medical products, and is a major supplier of research animals. Litton Bionetics, based in Kensington, provides biomedical research and testing services and sells diagnostic products.

Litton Industries said recently that it had agreed to sell 50 percent of its Bionetics subsidiary to a Dutch company, Akzo N.V., and 25 percent to MetPath Inc., a subsidiary of Corning Glass Works. Hazleton said last week that it has agreed to buy the remaining 25 percent by leasing the facilities and paying cash for the assets, with the sale to be completed by Sept. 1.

Bionetics's toxicology units conduct tests of new substances for manufacturers that plan to use them in food, pharmaceuticals and cosmetics. The Food and Drug Administration requires such substances undergo tests to determine whether they have toxic effects, cause cancer or genetic mutations or have other dangerous properties. Both Litton Bionetics and Hazleton test effects of substances on laboratory animals.

The toxicology units employ about 200 workers and together generate annual sales of about $10 million.

Hazleton recently reported earnings of $2.2. million on sales of $55.9 million for its fiscal year, ended June 30.

Another book to read ..

2001 - Suppressed inventions

AIDS and Ebola: Where Did They Really Come Prom?

Dr. Leonard G. Horowitz

During the 1960s and early 1970s the World Health Organization functioned as the omnipotent supplier and standardizing authority of the world's experimental pharmaceuticals. In the field of virology, the United States Public Health Service (USPHS) and National Institutes of Health (NIH) directed the National Cancer Institute (NCI) to become, along with the Centers for Disease Control and Prevention (CDC) the WHO's chief distributor of viruses and antiviral vaccines. The WHO Chronicle noted by 1968—ten years into the WHO's viral research program—"WHO virus reference centres" had served as authorized technical advisors and suppliers of "prototype virus strains, diagnostic and reference reagents (e.g., antibodies), antigens, and cell cultures" for more than "120 laboratories in 35 different countries." Within a year of this announcement, this number increased to "592 virus laboratories . . . [and] only 137 were outside Europe and North America." Over these 12 months, the NCI and CDC helped the WHO distribute 2,514 strains of viruses, 1,888 ampoules of antisera mainly for reference purposes, 1,274 ampoules of antigens, and about 100 samples of cell cultures. More than 70,000 individual reports of virus isolations or related serological tests had been transmitted through the WHO-NCI network. 1 '2

At the NCI in Bethesda, Maryland, from the late 1960s to the present, the chief retrovirus research laboratory was associated with the Department of Cell Tumor Biology, and chaired by Dr. Robert Gallo—an esteemed member of the National Academy of Sciences (NAS) who was hailed by the U.S. Secretary of Health and Human Services Margaret Heckler in 1984 as the discoverer of the AIDS virus, HTLV-m. LAV, identical to HTLV-m had been isolated by Montagnier's French team and allegedly forwarded to Gallo in 1983.3

MILITARY ORDERS FOR AIDS-LIKE VIRUSES: THE BIOLOGICAL WEAPONS CONTRACTORS

As early as 1970, the U.S. Department of Defense (DOD) appropriated at least $10 million to "initiate an adequate program through the National Academy of Sciences-National Research Council (NAS-NRC)" to make a new infective microorganism which could differ in certain important aspects from any known disease-causing organisms. Most important of these [aspects] is that it might be refractory to the immunological and therapeutic processes upon which we depend to maintain our relative freedom from infectious disease. Members of the NAS-NRC had instructed scientific leaders in the DOD this work might be accomplished "within 5 years."4 This research was then carried out by American defense contractors despite the authorization and signing of the Geneva accord by Dr. Henry Kissinger and President Nixon outlawing the production and testing of such biological weapons.5

Also in 1970 Gallo and his co-workers presented research describing the experimental entry of bacterial ribonucleic acid (RNA) into human white blood cells (WBCs) before a special symposium sponsored by NATO.6 The paper published in the Proceedings of the National Academy of Sciences discussed several possible mechanisms prompting the "entry of foreign nucleic acids" into lymphocytes—the cells principally attacked by HTV. Prior to this, Gallo et al. had published studies identifying:

1. mechanisms responsible for reduced amino acid and protein synthesis by T-lymphocytes required for immunosuppression;7

2. specific enzymes required to produce such effects along with a “base pair switch mutation” in the genes of WBCs to create immune system dysfunction;8 and

3. methods by which WBC “DNA degradation” and immune system decay may be prompted by the “pooling” of purine bases and/or the addition of specific reagents.9

Subsequent studies published in 1970 by Gallo and co-workers identified “RNA dependent DNA polymerase” (i.e., the unique AIDS-linked enzyme, reverse transcriptase) responsible for “gene amplification ... biochemical cytodifferentiation,” (i.e., the development of unique WBC characteristics including cancer cell production) and “leukaemogenesis”; 10 and identified L-Asparaginase synthetase—a key enzyme that, if repressed, will induce treatment resistant leukemias and other cancers. 11

The year following the $10 million appropriation by the DOD for AIDS-like biological weapons research, the NCI acquired the lion's share of the facilities at

America's premier biological weapons testing center, Fort Detrick in Frederick, Maryland. 12 Perhaps not coincidentally, the Cell Tumor Biology Laboratory's output increased in 1971 as measured by the publication of eight scientific articles by Gallo and co-workers compared to at most four in previous years. These reports included Gallo's discovery that by adding a synthetic RNA and feline (i.e., cat) leukemia virus (FELV) "template" to "human type C" viruses (associated with cancers of the lymph nodes), the rate of DNA production (and subsequent provirus synthesis) increased as much as thirty times. The NCI researchers reported that such a virus may cause many cancers besides leukemias and lymphomas including sarcomas. 13

In this 1971 report Gallo et al. also reported modifying simian (i.e., monkey) viruses by infusing them with cat leukemia RNA to make them cause cancers as seen in AIDS patients. 13

Furthermore, Fujioka and Gallo concluded from studies conducted in late 1969 or early 1970 that they would need to further "evaluate the functional significance of tRNA changes in tumor cells," by designing an experiment in which "specific tumor cell tRNAs" would be "added directly to normal cells." They explained that one way of doing this was to use viruses to deliver the foreign cancer producing tRNA to normal cells. The viruses which were then employed to do this, the researchers noted, were the simian virus (SV40) and the mouse parotid tumor (polyoma) virus. 14

Such experiments clearly advanced immunodeficiency virus technology and even provided a model for the development of HTV, the AIDS virus—allegedly of simian virus descent—which similarly delivered unique enzymes and a foreign RNA to normal cells necessary to cause an acquired immunodeficiency syndrome in animals and humans.

DEVELOPING MORE AIDS-LIKE VIRUSES

In 1972, Gallo, his superiors and inferiors studied portions of simian viruses to determine differences in RNA activity between infected versus uninfected cancer cells, and whether the differences could be ascribed to the infection and related DNA alterations. 15 They stated that "by studying viral or cellular mutants or cell segregants . . . which have conditional variations in virus-specific cellular alterations, it should be possible to more precisely determine the biological significance of the RNA variation reported here."

Clearly, the group was working to determine the relevance of various viral genes on the development of human cancers and immune system collapse. They reported their desire to use this information to find a cure for cancer, but at this time their activity was more focused on creating various cancers as well as new carcinogenic viruses which could infect humans.

For example, Smith and Gallo published another National Academy of Sciences paper examining DNA polymerase (i.e., reverse transcriptase) activity in immature normal versus acute leukemic lymph cells. To do so, they evaluated the single stranded 70S RNA retrovirus found in chickens which causes prominent features of AIDS including WBC dysfunction, sarcomas, progressive wasting and death. 16 Borrow, Smith and Gallo injected this chicken virus RNA into human WBCs to determine if the cells were prompted to produce proteins (including new viruses) encoded by the viral RNA.17 Robert, Smith and Gallo also evaluated the neoplastic effects of single stranded 70S RNA reverse transcriptase delivered by the cat leukemia virus (FELV) and the mason-Pfizer monkey virus on normal human lymphocytes (NHL). 18

This work foreshadowed the observation made ten years later by the CDC's chiefAIDS researcher, Dr. Donald Francis who noted the "laundry - list" of feline leukemia-like diseases associated with AIDS.3

Other examples are detailed by Gallo and co-workers while discussing their adapting monkey, rat, and bird leukemia and tumor viruses fQr experimental use in a human (NG-37) cell line. 19 Wu, Ting and Gallo20 discussed the synthesis of new RNA tumor viruses "induced by 5-iodo-2'-deoxyuridine, IdU (a constituent of RNA) in rodent cell cultures, and noted that chemotherapy might be used to halt the reverse transcriptase-linked viral reproduction.

Howeyer, had HTV been synthesized for military purposes from various species components, it would be difficult, if not impossible, to prove. As Gillespie, Gillespie and Gallo et al. noted in 1973 concerning the origin of the RD114—another cat/human bioengineered virus—"it can always be argued that" a virus which naturally jumped species (as HIV is alleged to have done from the monkey) would be expected to have antigens that differ "from the antigen found on the viruses of known" origin.21

LITTON BIOHETICS: GALLO 'S LINK TO THE DOD

Four years later, during a U.S. Senate investigation of illegal "biological testing involving human subjects by the Department of Defense," Senators learned that Bionetics, Bionetics Research Laboratories, and Litton Bionetics—an organization which, along with the NCI, administered

and provided Dr. Gallo's research funding (10, 13, 15, 17-19, 22, 26) were not only acknowledged DOD biological weapons contractors, but their affiliated Litton Systems, Inc., was among the most frequently contracted institutions involved in biological weapons research and development between 1960 and 1970 (the end of the reported period).23 Additional biological weapons contractors with whom Dr. Gallo and/or his co-workers associated during the late 1960s and early 1970s included the University of Chicago,24 Texas,13 Virginia,25 and Yale,17 Merck and Co. Inc., 20 and Hazelton Laboratory, site of the famous 1989 Marburg-Ebola-like (Reston) virus outbreak.22

NCI staff reports revealed that Litton Bionetics had been granted the service contract to supply all NCI researchers, worldwide, with virtually every primate cancer research material requested, including seed viruses, viral hybrids, cell lines, experimental reagents, and African colony born monkeys including M. mulatta and C. aethiops which were associated with the major monkey AIDS virus outbreaks in California's Davis Lab, and the 1967 Marburg virus outbreaks in three European vaccine production facilities. 15"17

Litton Bionetics chief John Landon reported an experiment begun in 1965 when he inoculated 18 monkeys with rhaabdovirus simian—a rabies virus known to cause Ebola-like hemmorhagic fever in monkeys. "Nine [monkeys] died or were transferred," to allied laboratories or vaccine production facilities. This shipment was likely to have started the first hemmorhagic fever "Marburg virus" outbreak among European vaccine laboratory workers in 1967. As noted by the world's leading simian virus expert at the time, Dr. Seymour Kalter, the Marburg virus was apparently manmade.23-25

In fact, Litton Bionetics, the chief military and industrial supplier of primates for cancer virus experimentation during the 1960s and early 1970s, also maintained the colony of the specific genus of monkeys associated with all of the major monkey ADDS virus outbreaks in the United States.23

Through telephone interviews with Litton Bionetics and MedPath administrators, I learned that Bionetics Research Laboratories had been sold to MedPath Corporation—one of America's largest medical and blood testing laboratories—a division of Dow Corning. Dow Coming's parent, Dow Chemical Company, was alsp listed among the Army's chief biological weapons contractors during the 1960s and early 1970s.2627 Litton Bionetics, a subsidiary of Litton Industries, Inc. remains in business as a proprietor of the Frederick Cancer Research Center, a "privately owned, government contracted" facility. Bionetics, it was noted, currently acts as an agency under "contract to manage and operate the Frederick (Md.) [Fort Detrick affiliated] Cancer Research Center for

the National Cancer Institute." 27 Besides administering research grants and government funds earmarked for the NCI, Litton Bionetics also developed a division which produced and marketed test kits for bloodborne, infectious diseases including mononucleosis, hepatitis B, and AIDS.28 This division was sold to Organon Teknica in 1985.26

Apparently, the military-medical-industrial complex was well aware of Litton Industries' service as a DOD and NATO contractor. In 1978, the company was indicted for filing false claims for $37 million in cost-overruns during the building of three nuclear submarines under one of several multi-billion dollar defense contracts.29"34

ZAIRE AND ANGOLA: A CIA MILITARY ARENA

Between 1970 and 1975, the period the NAS-NCR scientific advisors informed DOD decision-makers that AIDS-like viruses could be readied,4 American cold war efforts focused on Zaire and Angola.33"35 Following the withdrawal of American forces in Vietnam, Secretary of State Henry Kissinger ordered the CIA to begin a major covert military operation against MPLA (communist bloc backed) "rebels" in Angola.36,37 Zaire, indebted by over $4.5j billion to the International Monetary Fund, and headed by President Mobutu—paradoxically regarded as one of the world's wealthiest men with "a personal fortune put at $2,939,200,000 [1$84 estimate] banked in Switzerland—was wooed by NATO allies during the 1970s (principally the U.S.) to be a staging area for CIA backed, Portuguese, French, and mainly South African mercenaries.38'39 "American corporate investment, notably in copper and aluminum, doubled to about $50 million following a 1970 visit by Mobutu to the United States. Major investors included Chase-Manhattan, Ford, General Motors, • Gulf, Shell, Union Carbide, and several other large concerns."43

However, in 1975 Mobutu apparently turned against NATO allies and increased negotiations with China and Russia40,41 He proclaimed his intention to nationalize foreign owned enterprises 42,43 In June 1975, following the CIA's thwarted efforts to convince the U.S. Congress to appropriate more funds for Mobutu and the Angola programme (A total of $3 1 .7 million had already been "drawn from the CIA's FY 75 contingency fund" which was "exhausted on 27 November 1975").39 Mobutu expelled the American ambassador and arrested many of the CIA's Zairian agents, placing some under death sentences.40,41

The following year, in October 1976, the "Ebola Zaire virus" broke-out in "fifty five villages surrounding the [Yambuku] hospital" first killing "people who had received injections." Mobutu then ordered his army to "seal off the Bumba zone with roadblocks" and "shoot anyone trying to come out" so "no one knew what was happening, who was dying, [or] what the vilrus was doing."44

Shortly thereafter, Ebola victim specimens were sent to the CDC, Special (meaning "secret" within the American intelligence community) Pathogens Branch; to Porton, England's controversial chemical and biological weapons (CBW) laboratories;45 and teams of WHO and CDC researchers were dispatched to the Ebola region in Mobutu's private, American supplied C-130 Buffalo troop-transport plane.44

By the end of 1976, the Zairian leader had reconciled his differences with the American intelligence and corporate communities believing that Zaire would continue to reap his non-communist allies' social and economic aid. On April 4, 1977, Mobutu suspended diplomatic relations with Cuba; on April 21, reduced ties with the Soviet Union; and on May 2, he cut ties with East Germany.46 Meanwhile, according to John Stockwell, Former Chief of the CIA's Angola Task Force, "the United States was exposed, dishonored and discredited in the eyes of the world," as "15,000 Cubans were installed in Angola"40 despite the CIA's best efforts and a continuing policy of lying "to State Department officials, Congressmen, American press, and world public opinion in varying degrees, depending on the need" about the CIA's covert military campaign in Angola and Zaire.39

Throughout 1976 and 1977, Mobutu, NATO, and the CIA, constrained by the Tunney, Cranston and Clark amendment which prevented the expenditure of American funds in Zaire/Angola, except to gather intelligence, 39 remained embroiled in the "Shaba rebellion" against allegedly Russian-backed "Katangan rebels."46

At the same time, perhaps not coincidentally, NATO ally West Germany was pouring financial aid into Zaire and white ruled South Africa.47-49 The Northeast region of Zaire, believed to be the epicenter of the AIDS epidemic, was specifically targetted for West German economic aid and industrialization.50

The "long tradition of friendship between Germans and South Africans" London's African Development noted, "dates back from the first waves of white immigrants to South Africa and the feeling of solidarity between Germans and Afrikaners during the Boer War, continuing throughout the First World War and then the Second World War. Many of today's Nationalist leaders in Pretoria," the paper reported, "were Nazi sympathizers: many ex-Nazis settled in South Africa after 1945 . . ,"48

THE WEST GERMAN COMPANY OTRAG

Not surprising then, on March 26, 1976 Mobutu signed what the British Broadcasting Company (BBC) reported was a "secret agreement" with the West German company OTRAG (Orbital Transport-und Raketen-Aktiengesellschaft) to lease 260,000 square kilometers—essentially the complete Kivu province—for military/industrial purposes for the sum of DM 800,000,000 (approximately $250 million at that time).51"54 The contract "made OTRAG sovereign over territories once inhabited by 760,000 people"54 in the Eastern and South-central portion of Zaire. The leased property positioned North of the Shaba militarized region, expanded Southeast along the Congo River—the countries main waterway, and south of the Kinshasa highway—better known as the "AIDS Highway" which runs through Zaire's Northeast corridor and across central Africa bypassing the "Isle of Plaques," Mount Elgon and Kitum Cave allegedly by the author of The Hot Zone to be the breeding ground for the Ebola, Marburg, and AIDS viruses.44

OTRAG was apparently authorized to conduct any "excavation and construction; including air fields, energy plants, communication systems, and manufacturing plants. All movement of people into and within the OTRAG territory was only with permission of OTRAG, [which was] absolved from any responsibility for damage caused by construction. Its people enjoy complete immunity from the laws of Zaire in the granted territory, until the year 2000."56

Believed to be of military intelligence gathering significance to NATO46"48 ' 55> 56 OTRAG and its principals were traced back to the West German government and "to those Nazi scientists who worked on VI and V2 rockets during World War n. For example, Dr. Kurt H. Debus, Chairman of the Board of OTRAG, once worked at the Peenemude V2 program and later, until 1975, worked as director of the Cape Canaveral (now Cape Kennedy) space program. Richard Gompertz, OTRAG's technical director and a U.S. citizen, once was a specialist on V2 engines and later presided over NASA's Chrysler space division. Lutz Thilo Kayer, OTRAG's founder and manager, when young was quite close to the Nazi rocket industry, often called 'Dadieu's young man,' a reference to Armin Dadieu, his mentor, whaserved as prominent SS officer and as Gorling's special representative for a research program on storing uranium. While working for OTRAG Kayser also acted as a contact for the West German government, a special advisor to the Minister of Research and Technology on matters concerning OTRAG. He was also on the ad hoc committee on . . . [America's] Apollo program."56

In 1979, under pressure from the Soviet Union and Zaire's neighboring countries, Mobutu announced OTRAG would "halt its rocket testing" program. It was clear, however, strong diplomatic, military, and economic ties between West Germany, the U.S. and Zaire continued.48,57

clear, however, strong diplomatic, military, and economic ties between West Germany, the U.S. and Zaire continued 49,57

COLD WAR PROPAGANDA VERSUS THE HARD CORE PACTS

According to the latest United States Army (USA) report, the "outlandish claim" that the AIDS virus was developed as a biological weapon for the Pentagon was communist propaganda "disavowed in 1987 by then Soviet President Mikhail Gorbachev, who apologized to President Ronald Reagan for the accusation."58 However, more recently, the high ranking Soviet press official Boris Belitskiy, offered an alternative account regarding the origin of such "propaganda."59

"Several U.S. Administration officials such as USIA [CIA] Director Charles Wick, have accused the Soviet Union of having invented this theory for propaganda purposes. But actually, it is not Soviet scientists at all who first came up with this theory," Belitskiy reported. "It was first reported in Western journals by Western scientists, such as Dr. John Seale, a specialist on venereal diseases at two big London hospitals.

"Just recently a Soviet journalist in Algeria, Aleksandr Zhukov, managed to interview a European physician at the Moustapha Hospital there, who made some relevant disclosures on the subject. In the early seventies, this physician, an immunologist, was working for the West German OTRAG Corporation in Zaire. His laboratory had been given the assignment to cultivate viruses ordinarily affecting animals but constituting a potential danger to man. They were particularly interested in certain unknown viruses isolated from the African green monkey, and capable of such rapid replication that they could completely destabilize the immune system. These viruses, however, were quite harmless for human beings and the lab's assignment was to develop a mutant virus that would be a human killer." 711 ' 13 22

"Did they succeed?" the announcer asked. 'To a large extent, yes," Belitskiy replied. "The lab was ordered to wind up the project and turn the results over to certain U.S. researchers, who had been following this work with keen interest, to such an extent that some of the researchers believed they were in reality working not for the West German OTRAG Corporation but for the Pentagon."59

Two years after Belitskiy's announcement, in 1991, Dr. Jacobo Segal, professor emeritus of Berlin's Humboldt University told the international press that the Pentagon theory of AIDS made sense. He alleged the virus was likely developed "through gene technology" as a result of Pentagon sponsored animal research, "to permit the attack on human immune cells." Furthermore, he reported this theory is "supported by many European scientists and has not been refuted."60

In 1977, at the height of OTRAG's Zairian missile testing phase, Litton Industries units received contracts worth: $5 million for medical electronic equipment from its Hellige division, in Freiburg, West Germany;61 $19.8 million worth of missile fire-control equipment from the Army;62 $32.9 million for electronic reconnaissance sensor equipment from the Air Force;63 and in 1978 $11.3 million worth of computerized communications systems for NATO.64 Some of these military supplies may have been earmarked for OTRAG.65

Moreover, given the "cooperation between NATO and the World Health Organization with regard to the control and regulation of the international exchange of pharmaceutical products, [and] the possible necessity of facing the dangers created by the use of chemickl or bacteriological weapons"66 It appears noteworthy that the outbreaks of the world's most feared and deadly viruses Marburg, Ebola, Reston, and AIDS—share the dubious distinction of breaking out in or around zones of U.S. and West German, NATO-allied, military experimentation at the height of the cold war; increased political/military interest in Central Africa, and a burgeoning of WHO and NCI contracts for the supply of simians for "defensive" research.44

AIDS, GAYS, BLACKS AHD THE CIA

It is also noteworthy that in 1975, five years following the signing of the Geneva accord by Nixon, congressional records revealed that the USPHS through the Special (i.e., covert) Operations Division of the Army continued to supply biological weapons including deadly neurotoxins and viruses to the CIA which illegally stored them in their Fort Detrick facility for future unsanctioned uses 67 Though records of who initiated and directed this covert activity were destroyed by the CIA, along with the famous Watergate tapes,68 Mr. Nathan Gordon, Former Chief of the CIA's Chemistry Branch, Technical Services Division confessed knowledge that some of the stored substances were to be used to "study immunization methods for diseases vis-a-vis—who knows, cancer."69 . Furthermore, following Nixon's resignation, President Ford and Henry Kissinger were made aware that the CIA maintained a residual supply of biological weapons, but neither ordered their destruction according to testimony provided by Former CIA Director Richard Helms.70

In subsequent congressional hearings before the Senate Subcommittee on Health and Scientific Research, it was revealed that George W. Merck, "of the prominent Merck pharmaceutical firm," directed America's biological weapons manufacturing industry for decades following World War

II 71 Merck & Company, Inc. was also listed among the DOD biological weapons contractors.72 Merck, Sharp and Dohme provided major financial support for the earliest hepatitis B vaccination studies conducted simultaneously in Central Africa and New York City during the early 1970s. Several authorities have argued these vaccine trials might best explain the unique and varying epidemiological patterns of HIV/AIDS transmission between the U.S. and Africa. "The vaccine was prepared in the laboratories of the Department of Virus and Cell Biology Research, Merck Institute for Therapeutic Research, West Point, Pennsylvania. The placebo, [was] also prepared in the Merck Laboratories."72

During the holocaust, Nazi scientists assayed non-Arian blood to determine race specific disease susceptibilities. Blacks and homosexuals, along with Jews, were persecuted by the Nazis. Over 10,000 gay men were murdered. 3

Similarly, U.S. intelligence agencies have been targeting blacks and gays for assassinations, harassment, illegal wire taps, and counterintelligence campaigns from the McCarthy era in the 1950s through the Reagan era in the 1980s. American black and gay civil rights groups and their leaders were considered communist threats during the cold war years — particularly during the late 1960s and early 1970s when Nixon, Kissinger, and Hoover supported COINTELPRO funding for covert FBI and CIA activities aimed at neutralizing all such domestic and foreign black and homosexual threats. 74-78

The use of Third World people and American, blacks and prisoners for unconscionable pharmaceutical experimentation and covert economic, social, and environmental exploitation by the U.S. and other western countries has been repeatedly alleged by reputable sources.79

1991 (Jan 31) - Chicago Tribune : EX-GALLO AIDE CHARGED WITH EMBEZZLEMENT

Source : [HN010Z][GDrive]

John Crewdson, Chicago TribuneCHICAGO TRIBUNE

A former longtime deputy to AIDS researcher Dr. Robert Gallo has been charged with stealing $25,000 that a German pharmaceutical firm paid the U.S. government for biological research in the Gallo laboratory.

The former deputy, Dr. Prem Sarin, 57, was charged by a federal grand jury here last week with embezzlement and three other violations of federal law, including two felony charges of making false statements on financial disclosure forms.

Sarin is the second scientist from the Gallo lab to have been charged with criminal offenses by the U.S. attorney`s office here. Last year, Syed Salahuddin, another longtime Gallo aide, pleaded guilty to accepting illegal gratuities from a Maryland company that supplied the Gallo lab with services and materials.

Ties between that company, Pan-Data Systems, and another Gallo assistant, Dr. Dharam Ablashi, are being investigated by Richard Kusserow, inspector-general of the Department of Health and Human Services, according to sources familiar with that investigation.

Kusserow`s investigators are also conducting an inquiry into possible perjury and false statements by Gallo himself in connection with his prize-winning AIDS research at the National Cancer Institute in suburban Bethesda, Md., just outside Washington.

The cancer institute is part of the National Institutes of Health, which is an agency of the Department of Health and Human Services. Kusserow, who previously headed the white-collar fraud unit in the Chicago office of the Federal Bureau of Investigation, has oversight responsibility at HHS.

According to federal court files in the Sarin case, Sarin had tentatively agreed to plead guilty earlier this month to two lesser offenses. When that deal fell through, federal prosecutors asked the grand jury to charge the scientist with four violations of law, including embezzlement.

The offenses to which Sarin had agreed to plead guilty carry a maximum penalty of six years in prison and a $350,000 fine. The maximum for the four offenses with which he is now charged is 21 years in prison and a fine of $850,000.

Asked why his client had chosen to stand trial, Sarin`s attorney, W. Neil Eggleston, said only, "He`s innocent." Eggleston declined to confirm reports that Sarin had repaid the $25,000 that is the focus of the alleged embezzlement.

Other sources close to the case suggested that Sarin had withdrawn from the deal because of prosecutors` insistence that any plea bargain include some jail time.

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Richard Green Lugar (born 1932)

Wikipedia Richard Lugar

https://en.wikipedia.org/wiki/Richard_Lugar

HK0065

https://drive.google.com/file/d/1Bh3eoMglVI6-nE-NCKCLYOGlrDM8YYnQ/view?usp=sharing

Richard Lugar

From Wikipedia, the free encyclopedia

(Redirected from Lugar Center)

Jump to navigationJump to search

Richard Lugar

United States Senator

from Indiana

In office

January 3, 1977 – January 3, 2013

Preceded by

Vance Hartke

Succeeded by

Joe Donnelly

Chair of the Senate Foreign Relations Committee

In office

January 3, 2003 – January 3, 2007

Preceded by

Joe Biden

Succeeded by

Joe Biden

In office

January 3, 1985 – January 3, 1987

Preceded by

Chuck Percy

Succeeded by

Claiborne Pell

Chair of the Senate Agriculture Committee

In office

January 20, 2001 – June 6, 2001

Preceded by

Tom Harkin

Succeeded by

Tom Harkin

In office

January 4, 1995 – January 3, 2001

Preceded by

Patrick Leahy

Succeeded by

Tom Harkin

44th Mayor of Indianapolis

In office

January 1, 1968 – January 1, 1976

Preceded by

John Barton

Succeeded by

William Hudnut

Personal detailsBorn

Richard Green Lugar

April 4, 1932

Indianapolis, Indiana, U.S.

Died

April 28, 2019 (aged 87)

Falls Church, Virginia, U.S.

Resting place

Arlington National Cemetery

Political party

Republican

Spouse(s)

Charlene Smeltzer

(m. 1956)

Children

4

Education

Denison University (BA)

Pembroke College, Oxford (BA, MA)

Signature

Military serviceAllegiance

United States

Branch/service

United States Navy

Years of service

1957–1960

Rank

Lieutenant, junior grade

Richard Green Lugar (April 4, 1932 – April 28, 2019) was an American politician who served as a United States Senator from Indiana from 1977 to 2013. He was a member of the Republican Party.

Born in Indianapolis, Lugar graduated from Denison University and the University of Oxford. He served on the Indianapolis Board of School Commissioners from 1964 to 1967 before he was elected to two terms as mayor of Indianapolis, serving from 1968 to 1976. During his tenure as mayor, Lugar served as the president of the National League of Cities in 1971 and gave the keynote address at the 1972 Republican National Convention.

In 1974, Lugar ran his first campaign for the U.S. Senate. In the year's senate elections he lost to incumbent Democratic senator Birch Bayh. He ran again in 1976, defeating Democratic incumbent Vance Hartke. Lugar was reelected in 1982, 1988, 1994, 2000, and 2006. In 2012, Lugar was defeated by Indiana State Treasurer Richard Mourdock in the Republican primary, ending his 36-year tenure in the U.S. Senate. Lugar ran for the Republican nomination for President of the United States in the 1996 primaries but lack of success led to his withdrawal early in the campaign.

During Lugar's tenure, he served as Chairman of the Senate Committee on Foreign Relations from 1985 to 1987 and from 2003 to 2007, serving as the ranking member of the committee from 2007 until his departure in 2013. Lugar also twice served as Chairman of the Senate Committee on Agriculture, Nutrition and Forestry, from 1995 to 2001 and briefly again in part of 2001. Much of Lugar's work in the Senate was toward the dismantling of nuclear, biological, and chemical weapons around the world, co-sponsoring his most notable piece of legislation with Georgia Democrat Sam Nunn: the Nunn–Lugar Act.

Following his service in the Senate, Lugar created a nonprofit organization which specializes in the policy areas he pursued while in office.

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Early life, education, and early career[edit]

Richard Lugar was born on April 4, 1932, in Indianapolis, Indiana, the son of Bertha (née Green) and Marvin Lugar.[1] He was of part German descent.[2] Lugar attended Indianapolis Public Schools. During this time he attained the rank of Eagle Scout, the Boy Scouts' highest.[3] Later, he became a recipient of the Distinguished Eagle Scout Award from the Boy Scouts of America.[4] He graduated first in his class at Shortridge High School in 1950 and from Denison University in 1954, where he was a member of Beta Theta Pi.[5] He went on to attend Pembroke College, Oxford, England, as a Rhodes Scholar and received a second bachelor's degree and a master's degree in 1956.[6] He served in the United States Navy from 1956 to 1960; one of his assignments was as an intelligence briefer for Admiral Arleigh Burke. He achieved the rank of Lieutenant, Junior Grade.[7]

Lugar managed his family's 604-acre (244 ha) Marion County corn, soybean and tree farm. Before entering public life, he helped his brother Tom manage the family's food machinery manufacturing business in Indianapolis.[5]

Indianapolis politics and mayorship[edit]

Lugar served on the Indianapolis Board of School Commissioners from 1964 to 1967. He was elected mayor of Indianapolis in 1967, at the age of 35, defeating incumbent Democrat John J. Barton, and began serving the first of two mayoral terms in 1968. (A political cartoon of the time questioned how an Eagle Scout could survive in the world of politics.)[3] He was closely associated with the adoption of Unigov in 1970, which unified the governments of Indianapolis and Marion County. The Unigov plan helped trigger Indianapolis's economic growth and earned Lugar the post of president of the National League of Cities in 1971. In 1972, Lugar was the keynote speaker at the Republican National Convention.[8] During this time he became known as "Richard Nixon's favorite mayor", owing to his support for devolving federal powers to local communities.[9] When Nixon visited Indianapolis in February 1970, he stated during a speech that he would meet with Lugar and other mayors ahead of a conference with Governors on environmental issues.[10] On March 14, 1974, Lugar dismissed Police Chief Winston L. Churchill following allegations of widespread corruption in the Indianapolis Police Department. Lugar stated the dismissal came following meetings with dozens of policemen and after having had the counsel of a seven member committee of citizens to aid in the investigation.[11]

U.S. Senate[edit]

Elections[edit]

See also: Electoral history of Richard Lugar

Lugar in 1977, during his first term in the Senate

Lugar first ran for the U.S. Senate in the 1974 election and lost to incumbent Democratic U.S. Senator Birch Bayh (51–46%).[12] Two years later, he ran against Indiana's other U.S. senator, Democratic Senator Vance Hartke, defeating him in a massive landslide, 59%–40%.[13]

In 1982, he defeated Democratic U.S. Congressman Floyd Fithian (54–46%) to win a second term,[14] and six years later Lugar won reelection to a third term, defeating Democrat Jack Wickes (68–32%).[15] In 1994, Lugar won a fourth term, defeating Democratic former U.S. Congressman Jim Jontz (67–31%).[16] He became the first U.S. senator from Indiana elected to a fourth term.

Lugar went on to serve a total of six terms in the Senate, defeating Democrat David Johnson (67–32%) in 2000[17] and defeating Libertarian Steve Osborn (87–13%) in 2006[18] in a contest in which the Democratic Party did not field a candidate. His was the highest-percentage win of the 2006 Senate elections despite a Democratic takeover of Washington.

In 2012, Lugar ran for reelection to a seventh term. Due to Lugar's unpopularity among some Tea Party voters because of his positions regarding illegal immigration, voting to confirm then-U.S. Supreme Court nominees Sonia Sotomayor and Elena Kagan, the DREAM Act, the New START Treaty, some gun control bills, and congressional earmarks, he was challenged by Tea Party-backed State Treasurer Richard Mourdock in a Republican primary.[19][20] Mourdock defeated Lugar, 61–39%, and went on to lose the general election to Democratic Rep. Joe Donnelly. Lugar carried only two counties, Boone and Marion.[21][22] He was the first six-term U.S. senator to lose his seat in a primary election since Kenneth McKellar in 1952.

Richard Lugar with then-Senator Barack Obama in August 2005 near Perm, Russia

Tenure[edit]

1970s[edit]

Future Governor of Indiana Mitch Daniels served as Lugar's chief of staff from 1977 to 1982.[23] During the 1980 Republican National Convention, Lugar was rumored as a potential Vice Presidential nominee for Presidential nominee Ronald Reagan.[24]

In his first months, Lugar backed legislation prompting the Senate to adopt a stringent code of ethics intended to assist with the restoration of public confidence in Congress.[25]

On June 30, 1978, the Senate voted to approve granting New York City long term federal loan guarantees of $1.5 billion that the city had cited as essential to its prevention of bankruptcy. The measure was a compromise proposal by Lugar and Wisconsin Senator William Proxmire. Later that day, during a news conference, Senator Jacob K. Javits thanked Lugar and Proxmire.[26]

1980s[edit]

Lugar attended the January 7, 1980 signing ceremony of the Chrysler Corporation Loan Guarantee Act of 1979 in the Cabinet Room. Lugar addressed President Jimmy Carter during the ceremony by thanking him for signing what Lugar called "very humane and compassionate legislation" that was important for the United States.[27]

In the early months of the Reagan administration, Lugar supported its program to eliminate all restrictions on planting and marketing of peanuts. An April 30, 1981 vote by members of the Senate Agriculture Committee continued the restrictions.[28]

On May 11, 1981, the Senate Foreign Relations Committee voted in favor of implementing restrictions on American aid to El Salvador requiring President Reagan to verify the Salvadorian government was using the funds to implement human rights along with political and economic changes. The measure was opposed by Lugar who voted against the entirety of its conditions.[29]

Lugar was one of four senators on the Senate Foreign Relations Committee to vote against the Senate rejecting the nomination of Ernest W. Lefever for Assistant Secretary of State for Human Rights on June 5, 1981.[30]

On October 15, 1981, Lugar voted against the recommendation of the disapproval toward the Reagan administration's intent to sell Awacs radar surveillance planes and other air-combat equipment to Saudi Arabia.[31]

On December 2, 1981, Lugar voted in favor[32] of an amendment to President Reagan's MX missiles proposal that would divert the silo system by $334 million as well as earmark further research for other methods that would allow giant missiles to be based. The vote was seen as a rebuff of the Reagan administration.[33][34]

In 1982, Lugar cosponsored a housing bill that would provide middle-class purchasers of new homes with mortgage subsidies, which he referred to as "an emergency jobs program" that would provide 700,000 Americans with jobs in the housing and related industries while costing $5 billion over the following five years. The cancellation of an April meeting of the Senate Banking, Housing, and Urban Affairs Committee to discuss how far-reaching the bill should be was seen as crippling to its chances of implementation.[35]

On December 23, 1982, Lugar voted in favor[36] of a 5 cent a gallon increase on gasoline taxes across the U.S. imposed to aid the financing of highway repairs and mass transit. The bill passed on the last day of the 97th United States Congress.[37][38]

On July 13, 1983, Lugar voted in favor[39] of an authorization to appropriate $130 million toward the development of nerve gas bombs and shells.[40][41]

Lugar led the February 2, 1984 hearing of William A. Wilson, the nominee of President Reagan for United States Ambassador to the Holy See.[42]

In March 1984, Lugar voted in favor of a constitutional amendment authorizing periods in public school for silent prayer,[43] and President Reagan's unsuccessful proposal for a constitutional amendment permitting organized school prayer in public schools.[44][45]

Lugar voted against the May 1984 budget freeze meant to reduce the budget deficit.[46][47]

United States Secretary of Transportation Elizabeth Dole announced President Reagan's support for legislation that would force states to raise the minimum drinking age to 21 during a news conference on June 13, 1984. Lugar was in attended the news conference and stated that Dole and himself had convinced President Reagan to change his mind through "the work of groups like MADD (Mothers Against Drunk Driving) and the concern of hundreds of high school organizations called SADD (Students Against Driving Drunk)". Lugar noted his commitment to working on bipartisan support for the legislation.[48] The same month, Lugar voted in favor of legislation restricting federal highway funds for states that did not raise the minimum age for drinking to 21.[49][50]

On May 9, 1986, Lugar held a news conference designed to coincide with the beginning of the Manila visit by Secretary of State George P. Shultz, during which he criticized the Reagan administration for what he perceived as a lack of support for the Philippine government under the rule of President of the Philippines Corazon Aquino and accused former Philippines President Ferdinand E. Marcos of using his Hawaii haven as an area to make hundreds of telephone calls to former allies still in Manila for the purpose of making his potential return to power of active speculation.[51] The fiscal year of 1986 included the United States providing 236 million to the Philippines. President Reagan also sought an additional 100 million for economic aid and 50 million for military aid. During a June 3 panel on the subject of providing aid for Manila, Lugar stated his support for the United States providing another 100 million to the government of President Aquino and called on the chamber to recognize Aquino's government "is threatened not only by a Communist insurgency but also by a possible challenge from the political right".[52]

In November 1986, amid the Iran–Contra affair, Lugar stated that President Reagan did not understand the law requiring a president to inform Congress in a timely fashion over operations and that Reagan's rhetoric on the third party arm shipments had been confusing. He also stressed that the president had not been damaged in his credibility.[53] Around this time, Lugar conferred with John Poindexter, a key figure in the scandal.[54] After the 1987 State of the Union Address, Lugar stated that he believed President Reagan had taken responsibility for the Iran–Contra affair by acknowledging that the deal had been unsuccessful.[55]

The 1986 midterm election featured 22 of the 53 Senate Republicans up for reelection. In late 1984, Lugar predicted that "a number of our people are not going to win in '86" unless there was economic growth.[56] The Republicans lost eight seats that election cycle. Shortly after the midterms, on November 13, it was disclosed that Senator Jesse Helms would challenge Lugar for ranking Republican on the Senate Foreign Relations Committee, Helms telling Lugar in a letter that the challenge would not have occurred had the Republicans maintained a majority in the Senate as "the ranking minority post is a different matter".[57][58] On January 6, 1987, Republican members of the Senate Foreign Relations Committee voted unanimously to retain Lugar as their ranking member. After the results, Lugar stated that he saw his win as a vote of confidence in his leadership.[59]

In January 1988, the Senate began work on the ratification of the Intermediate-Range Nuclear Forces Treaty.[60] Later that month, Lugar met with German Minister for Foreign Affairs Hans-Dietrich Genscher to discuss the INF Treaty, Lugar stating afterward that he was confident the treaty would eventually be ratified despite developments in the process.[61] Lugar believed technical errors existed within the treaty, aligning him with Senate critics of the measure, but differed from them on when they should be improved.[62] Lugar voted in favor of the treaty in May when it passed overwhelmingly in the Senate on May 27.[63][64]

Lugar attended the July 11, 1988, White House meeting on the subject of legislation to provide financial relief to farmers affected by the showers in the Midwestern and Southern United States, Lugar during which he indicated that there was willingness on the part of his political party to support the measure.[65] On August 11, 1988, President Reagan signed the Disaster Assistance Act of 1988 into law. During the ceremony, President Reagan noted Lugar as one

of the members of Congress "who've done so much to make this possible".[66]

After Vice President George H. W. Bush selected Lugar's fellow Indiana senator Dan Quayle for his running mate in the 1988 Presidential election, Lugar spoke with Bush by telephone, and the presidential candidate explained his pick of Quayle: "The Vice President told me he wanted somebody of a distinctly different generation. It was obvious he felt that was more important than some other considerations. I certainly understand that."[67] In a September 28, 1988 news conference, Democratic vice-presidential nominee Lloyd Bentsen cited Lugar as one of three "heavyweight" Republican senators who were more qualified for the vice presidential nomination than Quayle.[68] On December 12, 1988, Lugar attended Vice President-elect Quayle's first news conference following the election, during which Quayle stated the Bush administration would be seeking his aid along with that of Dan Coats in pushing their agenda through Congress.[69]

1990s[edit]

In February 1990, Lugar announced that the congressional group President Bush named to observe Nicaragua elections the following month was disbanded following their being denied visas by the Nicaraguan government.[70]

In 1990, after President Bush nominated James E. Cason to be Assistant Secretary for Natural Resources and Environment, the latter received scrutiny for his record during the Reagan administration.[71] During a September hearing, Lugar "asked a series of probing questions on the spotted owl",[72] and questioned him during a hearing the following month regarding his record at the Interior Department. On October 19, 1990, the Senate Agriculture Committee voted to recommend Cason for Assistant Agriculture Secretary.[73][74]

on August 21, 1990, Lugar told reporters that the move to a marketing economy on the part of Vietnam had created the possibility for American investment provided that differences between Washington and Hanoi be resolved.[75]

On October 2, 1990, Lugar voted in favor of the nomination of David Souter for Associate Justice on the United States Supreme Court.[76][77]

In November 1990, amid President Bush's handling of the Persian Gulf crisis, Lugar observed that President Bush should "call back the Congress and get an affirmative vote to authorize our staying power over there so that the world knows that we're going to back up whatever the President is doing."[78]

In June 1991, Lugar joined fellow Senators William Cohen and John Warner in revealing their dissent with space-based weapons, a central component of the Bush administration's version of the Strategic Defense Initiative, in a letter and speeches. The three offered an alternative that "would defer the deployment of 1,000 missile-destroying rockets in space, while calling for greater levels of ground-based missile defenses".[79]

On November 25, 1991, the Senate voted in favor of approving the Bush administration-backed package to transfer $500 million of the Pentagon budget to assist with dismantling Soviet nuclear weapons.[80] In support of the measure, Lugar said, "We can either seize the opportunity for cooperative efforts in this field now or witness a quantum leap in the proliferation of weapons of mass destruction in the next few years."[81]

During the 1992 election cycle, Lugar stated President Bush needed to signal that his reelection campaign was "a new campaign with a new game plan and a new vigor" and the best results would be formed through a message on "growth and jobs".[82]

In February 1993, after Secretary of State Warren Christopher declared that the United States would only use military power in seeking a settlement as it pertained to Bosnia, Lugar's spokesman stated that during a telephone conversation between Christopher and Lugar, the secretary of state said "that the United States could contribute as many as 5,000 to 10,000 American troops to a 40,000-member NATO force that would go to Bosnia under United Nations auspices after a new peace accord is concluded".[83] Lugar attended the April 28, 1993 meeting between President Clinton and lawmakers over American involvement in Bosnia. Following its conclusion, Lugar stated the president's views: "He had a positive feeling towards lifting the embargo—that justice has to be served in that respect. But the President was much less certain about heading down the trail of air strikes."[84] Weeks later, on May 11, Lugar met with President Clinton on the subject of Bosnia, Lugar stating afterward that President Clinton had developed "a plan that he has been pushing steadily" and was in favor of containing the Bosnia disaster.[85] Lugar was of the view that the United States wanted a full partnership with Europeans that could only arise from "recognition on their side that our men and women in the armed forces are taking risks right now".[86]

On November 20, 1993, Lugar voted in favor of the North American Free Trade Agreement.[87] The trade agreement linked the United States, Canada, and Mexico into a single free trade zone, and was signed into law on December 8 by President Clinton.[88]

In December 1994, President Clinton announced the nomination of Dan Glickman for Secretary of Agriculture.[89] During the ceremony, Glickman stated that agriculture should not be immune to change and cited Lugar as an official "asking good questions about the next farm bill".[90] During a March 1995 Senate hearing, Lugar indicated his distaste with Glickman not supporting the latest accord under the General Agreement on Tariffs and Trade the previous November. Lugar afterward spoke positively of Glickman.[91]

On August 3, 1997, Lugar stated his support for convening a hearing for William Weld for United States Ambassador to Mexico and overlook Senator Jesse Helms, noting that a Senate chairman "cannot be dictatorial, ultimately, when a majority of the committee, a majority of the Senate, a majority of the American people, want action".[92]

On February 12, 1999, Lugar voted in favor of both articles of impeachment against President Clinton,[93] calling his relationship with White House intern Monica Lewinsky "shameless, reckless and indefensible",[94] and criticizing him for creating a negative environment.

"Simply to be near him in the White House has meant not only tragic heartache for his wife and his daughter but enormous legal bills for staff members and friends who admired him and yearned for his success but who have been caught up in his incessant 'war room' strategies to maintain him in office."[95]

In October 1999, Lugar voted against the Comprehensive Nuclear-Test-Ban Treaty. The treaty was designed to ban underground nuclear testing and was the first major international security pact to be defeated in the Senate since the Treaty of Versailles.[96][97]

2000–2008[edit]

During the August recess of 2005, Lugar and then-freshman Senator Barack Obama of neighboring Illinois visited Russia, Azerbaijan, and Ukraine to inspect nuclear facilities there.[98] He was detained for three hours at an airport in the city of Perm, near the Ural Mountains, where they were scheduled to depart for a meeting with the President and the Speaker of the House of Ukraine. He was released after a brief dialogue between U.S. and Russian officials and the Russians later apologized for the incident. In January 2007, President Bush signed into law the Lugar–Obama Proliferation and Threat Reduction Initiative, which furthered Lugar's work with Senator Sam Nunn in deactivating weapons in the former Soviet Union. The Lugar–Obama program focuses on terrorists and their use of multiple types of weapons.[99] In April 2006, *Time* magazine selected Lugar as one of America's 10 Best Senators.[100]

Senator Lugar tours an agricultural research facility.

Although Lugar's party was then in the minority in the Senate, he had good relationships with President Obama and Vice President Joe Biden. Lugar was named an honorary co-chairman of their inauguration.[101] On the day of the final 2008 presidential debate, Lugar gave a speech at the National Defense University praising Obama's foreign policy approach and warning against the isolationist, reactive policies espoused by John McCain.[102] At that debate, Obama also listed Lugar as among the individuals "who have shaped my ideas and who will be surrounding me in the White House".[103] There were rumors that either Obama or McCain would select Lugar to be Secretary of State, but that he preferred to keep his Senate seat.[99][104]

Obama administration[edit]

On January 13, 2009, Lugar participated in the confirmation hearing for Secretary of State nominee Hillary Clinton, raising questions on the potential conflict of interest between her husband Bill's charitable activities and her new position.[105] Lugar offered praise to Clinton as "the epitome of a big leaguer",[106] Lugar's spokesman Andy Fisher said that before the hearing, Lugar offered Clinton's staff four ways in which to increase the transparency of former President Clinton's fundraising.[107]

On March 18, 2009, Lugar cast his 12,000th Senate vote, putting him in 13th place for most votes. During his 32 years as a Senator, he had a 98% attendance record.[108]

Committee assignments[edit]

- **Committee on Agriculture, Nutrition, and Forestry**
- **Committee on Foreign Relations**

1996 presidential campaign[edit]

See also: 1996 Republican Party presidential primaries

Richard Lugar inspects an SS-18 ICBM being prepared for destruction under the Nunn–Lugar cooperative threat reduction program.

Lugar ran for the Republican nomination for President in 1996. He declared his candidacy on April 19, 1995 in Indianapolis. However, the announcement was largely overshadowed by the Oklahoma City bombing, an event that was the largest act of domestic terrorism on U.S. soil up to that time. The primaries and caucuses began in January 1996. He ran on a campaign slogan of "nuclear security and fiscal sanity", but his campaign failed to gain traction.[109]

He came in 7th in the Iowa caucuses on February 12 with 4%, and 4th in the New Hampshire primary on February 20 with 5%. In the Delaware primary on February 24 he also won 5%, and in the Arizona and North Dakota primaries on February 27 he came in last with 1%. He was on the ballot in seven of the nine contests on Super Tuesday on March 5, winning 1% in Colorado, Connecticut, and Maryland, 2% in Massachusetts, 3% in Maine and Rhode Island and 14% in Vermont, which was the best result he managed, though he still only came in 4th. He quit the race the next day, March 6. Lugar's fellow senator, and eventual Republican nominee, Bob Dole, had won all nine contests and Lugar endorsed him.[110]

Lugar's presidential campaign logo

He remained on the ballot in a number of states, winning 2% of the vote in Florida, then 1% each in Oregon, Illinois, Ohio, and California, 5% in Pennsylvania and 1% in North Carolina and West Virginia. He finished sixth overall, with 127,111 votes, or 0.83%, and failed to win any contests or delegates. In retrospective, David Corn of *Mother Jones* called his presidential campaign "ludicrous".[111]

Post-Senate career[edit]

On February 15, 2018, Lugar made a joint appearance with Lee H. Hamilton at DePauw University for the program "Can We Talk?: Restoring Civility in Public and Political Discourse in the U.S. and Abroad".[112]

The Lugar Center[edit]

Sen. Susan Collins at an event facilitated by The Lugar Center

Following his service in the Senate, Lugar established The Lugar Center, a nonprofit public policy institution located in Washington, DC.[113]

Under the leadership of Lugar, the Lugar Center seeks to become a prominent voice in many of the global issues that defined the Senator's work in Congress. There are four "focus areas": Global Food Security, WMD Nonproliferation, Foreign Aid Effectiveness, and Bipartisan Governance. Since its inception in January 2013, the Lugar Center has served as a source of education and awareness on these pertinent issues.

Logo of The Lugar Center

The Center's initiatives include the following: working in conjunction with the McCourt School of Public Policy at Georgetown University to establish the Bipartisan Index,[114] partnering with the Arms Control Association to establish the Bipartisan Nuclear and WMD Policy Dialogue Project, and compiling a comprehensive selection of bibliographical resources for researchers and policymakers interested in global food security. In addition, the Lugar Diplomacy Series brings together American policy- and opinion-makers and the Washington diplomatic community. Guests have included Elena Kagan, David Petraeus, and Howard Buffett.[115]

In addition, the Lugar Center was awarded a grant by the Delegation of the European Union to conduct policy research regarding transatlantic cooperation. The grant permitted the Center to partner with the German Marshall Fund of the United States to work on bolstering trans-Atlantic energy security and economic cooperation, particularly in relation to the Trans-Atlantic Trade and Investment Partnership.

Political positions[edit]

Abortion[edit]

Lugar's 2007 rating from NARAL was 40%.[116] His 2007–2008 rating from the National Right to Life Committee was 85%.[117]

Agricultural reform[edit]

As Chairman of the Agriculture Committee, Lugar built bipartisan support for 1996 federal farm program reforms, ending 1930s-era federal production controls. He worked to initiate a biofuels research program to help increase U.S. utilization of ethanol and combustion fuels, and led initiatives to streamline the U.S. Department of Agriculture, reform the food stamp program, and preserve the federal school lunch program.

A sample from the Lugar Bipartisan Index, compiled by the Lugar Center

Bipartisan governance[edit]

Although Republican, Lugar often worked across the aisle, working alongside Democrats on many initiatives. For this reason, he commonly broke with traditional Republican lines, especially on non-domestic issues. Lugar's most well-known piece of legislation, the Nunn–Lugar Cooperative Threat Reduction Agreement, was co-sponsored with Sam Nunn, a Democratic Senator from Georgia. Lugar's bipartisan efforts earned him 24th place of 227 Senators' lifetime scores from 1993–2014 according to the Lugar Bipartisan Index, with a score of .668.[118] Lugar continued to support bipartisan solutions and initiatives as one of the policy focus areas of The Lugar Center.[119]

Climate change[edit]

Lugar was a firm believer in pragmatic, scientific solutions to climate change issues. In 2006, he co-sponsored Senate Resolution 312 with then-Senator Joe Biden, which encouraged American participation in international negotiations regarding mitigation agreements.[120] Until his death, he continued to support multilateral initiatives for the deployment of innovative clean technology around the world.[121]

Cuba[edit]

Richard Lugar meeting with actress Ashley Judd

Lugar described U.S. sanctions on Cuba as a failed policy and wrote to President Obama that "additional measures are needed...to recast a policy that has not only failed to promote human rights and democracy, but also undermines our broader security and political interests".[122] He supported the Freedom to Travel to Cuba Act (S.428), which would lift the restrictions on U.S. citizens visiting Cuba in place since the early 1960s.[123]

Economy[edit]

Lugar took a conservative approach to economics. He voted for the Economic Growth and Tax Relief Reconciliation Act of 2001.[124] He voted against the American Recovery and Reinvestment Act of 2009.[125]

Gun control[edit]

Lugar was a supporter of gun control, and supported a number of gun legislations and weapons bans. He had an F rating from the National Rifle Association of America.[126] He had an F rating from Gun Owners of America and a 53% positive rating from the Brady Campaign to Prevent Handgun Violence.

Health care reform[edit]

Lugar opposed President Barack Obama's health reform legislation, voted against the Patient Protection and Affordable Care Act in December 2009,[127] and voted against the Health Care and Education Reconciliation Act of 2010.[128]

Immigration[edit]

Lugar had a generally liberal stance on immigration, supporting the DREAM Act during the Obama administration and the McCain–Kennedy Comprehensive Immigration Reform bill under the Bush administration, both of which died in Congress. Both were described by critics as "amnesty".

Iraq War[edit]

Richard Lugar and then-President Ronald Reagan, July 1981

On June 25, 2007, Lugar, who had been "a reliable vote for President Bush on the war", said that "Bush's Iraq strategy [is] not working and... the United States should downsize the military's role".[129]

Lugar's blunt assessment has been viewed as significant because it showed the growing impatience and dissatisfaction with President Bush's strategy in Iraq. After Lugar finished his remarks, Senate Majority Whip Richard Durbin (D-IL), a sharp critic of the war, praised Lugar's "thoughtful, sincere and honest" speech, which Durbin said was in the "finest tradition of the U.S. Senate".[130] Durbin urged his Senate colleagues to take a copy of Lugar's speech home over the Fourth of July break and study it before returning to work.[130] Senate Majority Leader Harry Reid said, in reaction to Lugar's speech: "When this war comes to an end, and it will come to an end, and the history books are written, and they will be written, I believe that Sen. Lugar's words yesterday could be remembered as a turning point in this intractable civil war in Iraq."[131]

Two days later, on June 27, 2007, Lugar said that Congressional measures aimed at curtailing U.S. military involvement in Iraq – including "so-called timetables, benchmarks" – have "no particular legal consequence", are "very partisan", and "will not work".[132]

Judicial nominees[edit]

Senators Sam Nunn and Lugar leaving the White House in 1991 after briefing President George H. W. Bush on the Nunn–Lugar legislation

Lugar believed that judicial confirmation decisions should not be purely partisan. His view was if an appointee is properly qualified for the position by their education, integrity, and other similar factors, that they should be confirmed by the Senate. Lugar introduced President George W. Bush's appointee, now Chief Justice John Roberts, to the Senate at the beginning of Roberts's confirmation process and was instrumental in securing votes to confirm Roberts for the Supreme Court. Lugar was among the few Republican Senators to support President Barack Obama's first Supreme Court nominee United States Circuit Court of Appeals, Judge Sonia Sotomayor,[133] and also voted in favor of his second Supreme Court nominee, Solicitor General Elena Kagan.[134]

LGBT issues[edit]

Lugar held a socially conservative approach on LGBT issues. He voted for the Federal Marriage Amendment, limiting the definition of marriage to one man and one woman.[135] However, he has also voted in favor of the Matthew Shepard Act, which expanded the federal hate crime statutes to include sexual

and one woman.[135] However, he has also voted in favor of the Matthew Shepard Act, which expanded the federal hate crime statutes to include sexual orientation and gender identity.[136] In October 2010, Lugar voted against repeal of the Don't Ask, Don't Tell policy—which prevented gays and lesbians from serving openly in the armed forces.[137] Although Senator Joe Lieberman of Connecticut announced on November 18, 2010, that Lugar promised to vote to repeal the policy the next time it comes up for a vote,[138] Lugar voted against DADT repeal in both the cloture[139] and final votes on December 18, 2010.[140]

Middle East[edit]

In a television interview on September 11, 1983, amid President Reagan not defining the penalties for American casualties in the Middle East, Lugar stated the US position in Lebanon was "clearly defensive" but concurred that issue was debatable.[141]

On May 6, 1986, Lugar was among 22 senators to vote in favor of the Reagan administration-backed proposed arms sale to Saudi Arabia, warning other senators prior to voting that they "were taking a headlong plunge in opposition to the President of the United States".[142] Lugar and fellow Senator Bob Dole, both of whom supported the arms sale proposal, stated that President Reagan would be crippled in his role in the Middle East peace settlement in the event that he was unable to deliver a reduced arms package to the moderate Arab state.[143]

On August 7, 2012, Lugar called for the United States and Russia to work in collaboration to eliminate the stockpile of chemical weapons in Syria during an interview. He noted that the proposal had been turned down by Russian officials, who noted Syria had not previously supported the Chemical Weapons Convention, and that other countries saw the stockpile of Syrian weapons as "influencing very adversely the potential for peace and stability in the Middle East".[144]

Nuclear stockpile[edit]

Lugar was influential in gaining Senate ratification of treaties to reduce the world's use, production and stockpiling of nuclear, chemical, and biological weapons, and spearheaded many bipartisan nonproliferation initiatives. In 1991 he initiated a partnership with then-Senate Armed Services Committee Chairman Sam Nunn aiming to eliminate latent weapons of mass destruction in the former Soviet Union.[3] To date[*when?*], the Nunn–Lugar Cooperative Threat Reduction program has deactivated more than 7,500 nuclear warheads. In 2004, Lugar and Nunn were jointly awarded the Heinz Awards Chairman's Medal for their efforts.[145] He was an integral figure in the passing of the New START Treaty (which passed 71–26).[146]

Pakistan[edit]

In October 2008, Lugar and Joe Biden, his partner in the Committee on Foreign Relations, received the Hilal-i-Pakistan (Crescent of Pakistan) Award from the government of Pakistan for their continued support of the country. In July 2008 Lugar and Biden introduced a plan that would give $1.5 billion in aid per year to support economic development in Pakistan.[147]

Other international policy achievements[edit]

Senator Lugar supported Nelson Mandela's fight against South African apartheid. When President Reagan vetoed economic sanctions against South African leaders as a punitive measure for apartheid, Lugar turned against his own party and led the charge to overrule the veto successfully with bipartisan support. As Chair of the Senate Foreign Relations Committee, he declared on the Senate floor, "We are against tyranny, and there is tyranny in South Africa."[148]

Lugar was also instrumental to the fall of the dictatorial Marcos regime in the Philippines and overseeing the 1985 presidential election there, urging intervention from the Reagan administration.[149][150]

In addition, Lugar coauthored the Cardin–Lugar Amendment to the Dodd–Frank Act, which required all U.S.-listed oil and mining companies to report their payments to governments. Nearly identical pro-transparency measures, aimed at curbing natural resource-related corruption in the developing world, were subsequently adopted by the European Union and Canada, making extractive industry payment disclosure a global standard.[151]

Views on Trump administration[edit]

In a November 2017 interview, Lugar stated that President Donald Trump had not "demonstrated civility in his leadership" and that his usage of Twitter and "other bombastic avenues" were not solving issues.[152]

Electoral history[edit]

Main article: Electoral history of Richard Lugar

Indianapolis mayoral election, 1967[153]PartyCandidateVotes%

Republican

Richard Lugar

72,278

53.3

Democratic

John J. Barton (incumbent)

63,284

46.7

Indianapolis mayoral election, 1971[153]PartyCandidateVotes%

Republican

Richard Lugar

155,164

60.5

Democratic

John Neff

101,367

39.5

U.S. Senator of Indiana (Class 3), 1974 PartyCandidateVotes%

Democratic

Birch Bayh (incumbent)

889,269

50.7

Republican

Richard Lugar

814,117

46.4

American

Don L Lee

49,592

2.8

U.S. Senator of Indiana (Class 1), 1976 PartyCandidateVotes%

Republican

Richard Lugar

1,273,833

59.0

Democratic

Vance Hartke (incumbent)

868,522

40.2

Independent

Don L Lee

14,321

0.7

U.S. Labor

David Lee Hoagland

2,511

0.1

U.S. Senator of Indiana (Class 1), 1982 PartyCandidateVotes%

Republican

Richard Lugar (incumbent)

978,301

53.8

Democratic

Floyd Fithian

828,400

45.6

American

Raymond James

10,586

0.6

U.S. Senator of Indiana (Class 1), 1988 PartyCandidateVotes%

Republican

Richard Lugar (incumbent)

1,430,525

68.1

Democratic

Jack Wickes

668,778

31.9

U.S. Senator of Indiana (Class 1), 1994 PartyCandidateVotes%

Republican

Richard Lugar (incumbent)

1,039,625

67.4

Democratic

Jim Jontz

470,799

30.5

Libertarian

Barbara Bourland

17,343

1.1

New Alliance

Mary Catherine Barton

15,801

1.0

U.S. Senator of Indiana (Class 1), 2000 PartyCandidateVotes%

Republican

Richard Lugar (incumbent)

1,427,944

66.6

Democratic

David L. Johnson

683,273

31.9

Libertarian

Paul Hager

33,992

1.6

U.S. Senator of Indiana (Class 1), 2006 PartyCandidateVotes%

Republican

Richard Lugar (incumbent)

1,171,553

87.4

Libertarian	
Steve Osborn	
	168,820
	12.6
Independent	
Mark Pool (write in)	
	444
	0.0
Independent	
John H. Baldwin (write in)	
	294
	0.0

Republican US Senate Primary, 2012[154]	Party	Candidate	Votes	%
Republican				
Richard Mourdock				
			400,321	
			60.5	
Republican				
Richard Lugar (incumbent)				
			261,285	
			39.5	

Awards and honors[edit]

Lugar, left, Secretary of Defense Leon E. Panetta, center, and former Georgia Sen. Sam Nunn receive recognition for their bipartisan work regarding nuclear nonproliferation, December 2012

Lugar received numerous awards, including Guardian of Small Business, the Spirit of Enterprise, Watchdog of the Treasury, and 46 honorary doctorate degrees.[155] In 2001, Lugar received the Democracy Service Medal of the National Endowment for Democracy.[156] In 2010, Lugar received the Benjamin Harrison Presidential Site Advancing American Democracy Award. In June 2012, he was conferred with the Grand Collar of the Order of Lakandula by President Benigno S. Aquino III for his contributions to the enhancement of the Philippine-US alliance and friendship[157] as well as Poland's Knight of Freedom Award for his actions and support of the Polish accession process to NATO structures.[158]

On August 8, 2013, President Barack Obama named Lugar as a recipient of the Presidential Medal of Freedom. The citation in the press release read as follows:

"Richard Lugar represented Indiana in the United States Senate for more than 30 years. An internationally respected statesman, he is best known for his bipartisan leadership and decades-long commitment to reducing the threat of nuclear weapons. Prior to serving in Congress, Lugar was a Rhodes Scholar and Mayor of Indianapolis from 1968 to 1975. He currently serves as President of the Lugar Center."[159]

Lugar was knighted as a Knight Commander of the Order of the British Empire (KBE) for his efforts to reduce Weapons of Mass Destruction and supporting NATO.[160] Lugar was awarded the Grand Cross of the Order of Merit, from Germany, in 2013, for his work on fostering transatlantic cooperation.[161] In 2014, Lugar received the Golden Laurel Branch award, the highest honor given by the Bulgarian Ministry of Foreign Affairs. Lugar was recognized for his contributions to Bulgaria's accession to NATO.[162]

In August 2016, President Petro Poroshenko of Ukraine awarded Richard Lugar with the highest award for foreigners — Order of Liberty.[163] In November 2016 he was awarded the 2016 J. William Fulbright Prize for International Understanding.[164] In 2005, Lugar was presented the Lifetime Contributions to American Diplomacy Award by the American Foreign Service Association.[165]

Other outside activities[edit]

Lugar was a member the Indiana Society of the Sons of the American Revolution,[166] as well as a member of the Society of Indiana Pioneers, based on his descent from very early settlers in the state.[167] He joined the Rotary Club of Indianapolis in 1957 and spoke at the club annually during his time in the U.S. Senate. He remained an active Rotarian.[168][169] On February 16, 2013, Lugar was named the Rotarian of the Century.[170] He served on the Board of Directors of the National Endowment for Democracy from 1992 to 2001.[171]

Lugar was a member of the board of the International Foundation for Electoral Systems, an organization involved in international elections.[172] He was a member of the board of the Nuclear Threat Initiative (NTI).[173] Lugar was on the Board of Selectors of the Jefferson Awards for Public Service.[174]

Richard G. Lugar Center for Public Health Research[edit]

A biological research facility in Tbilisi, Georgia, is named after Lugar in honor of his efforts to reduce nuclear, chemical, and biological weapons around the world. The Richard G. Lugar Center for Public Health Research is a biological research facility funded by the U.S. Defense Threat Reduction Agency (DTRA)

world. The Richard G. Lugar Center for Public Health Research is a biological research facility funded by the U.S. Defense Threat Reduction Agency (DTRA)[175] to contain and house dangerous pathogens and support international research efforts. It and other upgraded bio-threat reduction facilities in the region are designed to stop diseases like plague and African swine fever from spreading globally.[176][177]

Lugar, utilizing the Nunn–Lugar Cooperative Threat Reduction Program (CTR) which helped former Soviet Union states dismantle weapons of mass destruction after the Cold War, worked with the country of Georgia on biosafety, biosecurity and biosurveillance efforts through CTR's Cooperative Biological Engagement Program (CBEP). The main goal was to improve the biosafety, biosecurity, disease surveillance, and establish the Central Public Health Reference Laboratory.[178]

In 2012, Georgian authorities renamed the facility the Richard G. Lugar Center for Public Health Research; it belongs to and is run by the Georgian National Center for Disease Control and Public Health (NCDC). In 2014, then-U.S. Ambassador to Georgia at the time, Richard Norland, signed an agreement with then-Georgian Prime Minister Irakli Garibashvili to transfer custody of the Center to the NCDC during the 2014 World Congress on Chemical, Biological, Radiological and Nuclear Science & Consequence Management. At the invitation of the Georgian government, a contingent of U.S. scientists from the U.S. Centers for Disease Control and Prevention (CDC) Global Disease Detection Program, and the U.S. Walter Reed Army Institute of Research are co-located in the facility. They work collaboratively alongside their Georgian counterparts.[179][180][181]

Personal life and death[edit]

Lugar married Charlene Smeltzer on September 8, 1956. The couple had four sons.[5] He was a member of the United Methodist Church.[182]

Lugar died in Falls Church, Virginia, on April 28, 2019, shortly after his 87th birthday, from complications of chronic inflammatory demyelinating polyneuropathy.[183][184] He was buried in Arlington National Cemetery.[185]

Legacy[edit]

John T. Shaw assessed the Nunn–Lugar Cooperative Threat Reduction as Lugar's landmark legislative accomplishment.[186] The initiative would later be considered "one of the most prescient pieces of legislation ever passed, and the most important nonproliferation program ever".[187]

In 2000, Eric Schmitt described Lugar as "a four-term senator, former presidential candidate and perhaps the most popular politician in Indiana history".[188] Following Lugar's 2012 Senate loss, Peter Rusthoven stated, "Historically, this is not just one of the great senators now. This is one of the great senators in United States history. He is like a Daniel Webster, he is like a Henry Clay—names that I fear too many of our kids in grade school and high school don't even know anymore."[189]

Lugar's defeat in the 2012 Senate Republican primary was written of as a sign of the national GOP base's escalation into strict support for the traditional views aligned with the right.[190] Former Senator John Danforth said the loss told him "that there is an attempt by a lot of people to purge the Republican Party and to kick out of it people who do not hue a very strict party line".[191] Geoffrey Kabaservice cast doubts on this view: "It may be that his bipartisanship and comparative moderation contributed to his loss, or his defeat may simply have reflected the political truism that young blood drives out the old. What's certain is that the Senate will miss his qualities, and in time so may we all."[192]

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- Foreign Service Journal article on his Lifetime Contributions to American Diplomacy Award.

Wikimedia Commons has media related to ***Richard Lugar***.

Wikisource has original works written by or about:

Richard Lugar

- The Lugar Center
- Biography at the *Biographical Directory of the United States Congress*
- Profile at Vote Smart
- Financial information (federal office) at the Federal Election Commission
- Appearances on C-SPAN
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Lumen Technologies, Incorporated

Wikipedia Lumen Technologies

NOTE - As of Sep 2020, **CenturyLink, Incorporated** has been renamed to be **Lumen Technologies, Incorporated** . This page will keep company starting around this rebranding, and for the time after this name change.

Saved Wikipedia (Dec 17, 2020) - Lumen Technologies

[HK0044][GDrive]

Lumen Technologies (formerly [**CenturyLink, Incorporated**]) is an American telecommunications company headquartered in Monroe, Louisiana, that offers communications, network services, security, cloud solutions, voice, and managed services. The company is a member of the S&P 500 index and the Fortune 500.[5] Its communications services include local and long-distance voice, broadband, Multi-Protocol Label Switching (MPLS), private line (including special access), Ethernet, hosting (including cloud hosting and managed hosting), data integration, video, network, public access, Voice over Internet Protocol (VoIP), information technology, and other ancillary services.[6] Lumen also serves global enterprise customers across North America, Latin America, EMEA (Europe, Middle East, and Africa), and Asia Pacific.[7]

History

The earliest predecessor of Lumen was the Oak Ridge Telephone Company in Oak Ridge, Louisiana, which was owned by F. E. Hogan, Sr. In 1930, Hogan sold the company, with 75 paid subscribers, to William Clarke and Marie Williams, for $500. They moved the switchboard to the Williams family front parlor. In 1946, the Williams' son, Clarke McRae Williams, received ownership of the family's telephone company as a wedding gift.[8] In 1947, Clarke Williams learned the telephone company in Marion, Louisiana was for sale. With a loan from business associate Joe Sydney Carter, Clarke purchased the Marion Telephone Company and eventually made it his base of operation as he grew his company through more acquisitions. Lumen still maintains offices in the former headquarters building.[9] The company remained as a family-operated business until it became incorporated in 1968.

- **1967–1999 :** [See **CenturyLink, Incorporated**]
- **2020 name change to Lumen :** On September 14, 2020, CenturyLink, Inc announced they have rebranded to Lumen Technologies, Inc.[65] Effective with the opening of the trading day on Sept. 18, 2020, the company stock ticker changed from CTL to LUMN. For residents and small businesses, the CenturyLink brand will continue to be used for traditional copper-based services. *Quantum Fiber* branding will be used for fiber-based products and services.[66]

Products and services

Lumen's products and services focus on three segments: Enterprise Business, Small Business, and Residential.[67]

Lumen Enterprise Business[edit]

Lumen Enterprise Business provides products and services around Network, Cloud, Security, Voice, and Managed Services to enterprise customers.[68] Lumen's Network services include SD WAN, MPLS/IPVPN, Hybrid WAN, Ethernet, Internet Access, Wavelength services, Dark Fiber, and Private Lines.[69] Lumen Cloud provides Big Data as a Service, Internet of Things (IoT), Multi-Cloud Management, Private Cloud, Public Cloud, Bare Metal, SaaS Applications, and Cloud Connect.[70] Lumen Security monitors more than a billion security events daily.[71]Services include: Cloud, Infrastructure, DDoS, Web Application, Email, and Web Security. The company also provides Analytics and Threat Management, Risk and Compliance support, and Threat Research Labs.[72] CenturyLink offers voice products ranging from traditional landlines to Unified Communications and Collaboration (UC&C) services and was recognized in 2018 by Frost & Sullivan for "growth excellence in VoIP access and SIP Trunking".[73] Lumen's Managed Services include Advanced Professional Services, IT consulting, and strategic partnerships.[74]

CenturyLink Small Business[edit]

CenturyLink Small Business provides products and services around Internet, Phone, TV, and Cloud Applications.[74]

CenturyLink Residential[edit]

CenturyLink Residential[edit]

CenturyLink Residential provides Internet (including Gigabit Fiber), Voice, and TV, via partnership with DirecTV.[75] The company also offers bundling with Verizon Wireless.[76]

Availability by state[edit]

CenturyLink Availability Map by Zip Code

CenturyLink residential services are available in the following states:[77]

- Alabama
- Arizona
- Arkansas
- Colorado
- Florida
- Georgia
- Idaho
- Illinois
- Indiana
- Iowa
- Kansas
- Kentucky
- Louisiana
- Michigan
- Minnesota
- Mississippi
- Missouri
- Montana
- Nebraska
- Nevada
- New Jersey
- New Mexico
- North Carolina
- North Dakota
- Ohio
- Oklahoma
- Oregon
- Pennsylvania
- South Carolina
- South Dakota
- Tennessee
- Texas
- Utah
- Virginia
- Washington
- Wisconsin
- Wyoming

Fiber[edit]

Quantum Fiber is a fiber to the premises service in the United States, providing broadband Internet to a small and very slowly growing number of locations. The service was first introduced to Omaha, Nebraska,[78] and next rolled out to Las Vegas, Nevada,[79] with plans for expansion to several other markets.[80] Unlike the company's existing high speed Internet deployments, which utilize fiber-to the node/neighborhood to increase the speed of ADSL2+ speeds up to 20/2 Mbit/s, Vectored VDSL2+ speeds up to 140/10Mbit/s, in these markets CenturyLink now installs their fiber optic cable all the way to the home or business with speeds up to 1,000 Mbit/s download and 1,000 Mbit/s upload[81] using Calix Optical Network Terminals.[82] On Feb. 2, 2014, CenturyLink announced the availability of Gigabit fiber service to multi-tenant businesses in Salt Lake City and surrounding communities.[83] On Aug. 5, 2014, CenturyLink announced the expansion of its gigabit fiber service to 16 additional markets.[84] On September 15, 2015, CenturyLink announced the expansion of its gigabit fiber service to residential and business customers in six additional states, increasing the company's service coverage to select areas of 17 states.[85]

Gigabit Fiber markets

State

Availability by City[86]

Arizona[87]

Flagstaff, Phoenix-Mesa-Scottsdale, Prescott, Safford, Sierra Vista-Douglas, Tucson, Yuma

Colorado[88]

Boulder, Colorado Springs, Denver-Aurora-Lakewood, Fort Collins, Grand Junction, Greeley, Pueblo

Florida[89]

Arcadia, Cape Coral-Fort Myers, Clewiston, Crestview-Fort Walton Beach-Destin, Deltona-Daytona Beach-Ormond Beach, Naples-Immokalee-Marco Island, Ocala, Orlando-Kissimmee-Sanford, Punta Gorda, Sebring, Tallahassee, The Villages

Georgia[90]

Hinesville

Iowa[87]

Ames, Cedar Rapids, Davenport-Moline-Rock Island, Des Moines-West Des Moines, Dubuque, Omaha-Council Bluffs, Sioux City, Waterloo-Cedar Falls

Idaho[87]

Boise City, Burley, Hailey, Idaho Falls, Lewiston, Pocatello, Rexburg, Twin Falls

Louisiana[91]

Lafayette, Ruston

Minnesota[92]

Alexandria, Bemidji, Duluth, Minneapolis-St. Paul-Bloomington, Rochester, St. Cloud

Missouri[92]

Columbia, Jefferson City, Springfield, Warrensburg

Montana[91]

Billings, Bozeman, Great Falls, Helena, Kalispell, Missoula

Nebraska[92]

Grand Island, Omaha-Council Bluffs

Nevada[92]

Las Vegas-Henderson-Paradise

New Mexico[87]

Albuquerque, Farmington, Las Cruces, Santa Fe

North Carolina[87]

Burlington, Dunn, Durham-Chapel Hill, Elizabeth City, Fayetteville, Greensboro-High Point, Greenville, Henderson, Hickory-Lenoir-Morganton, Jacksonville, Kill Devil Hills, Morehead City, New Bern, Pinehurst-Southern Pines, Raleigh, Rocky Mount, Virginia Beach-Norfolk-Newport News, Washington, Wilson

North Dakota[91]

Bismarck, Dickinson, Fargo

Ohio[92]

Mansfield, Wooster, Youngstown-Warren-Boardman

Oregon[92]

Albany, Bend-Redmond, Corvallis, Eugene, Grants Pass, Hermiston-Pendleton, Medford, Portland-Vancouver-Hillsboro, Prineville, Salem

Pennsylvania[91]

Gettysburg, Harrisburg-Carlisle, York-Hanover

South Dakota[87]

Pierre, Rapid City, Sioux Falls, Yankton

Texas[91]

Austin-Round Rock, Dallas-Fort Worth-Arlington, Killeen-Temple, Stephenville

Utah[92]

Cedar City, Heber, Logan, Ogden-Clearfield, Provo-Orem, Salt Lake City, St. George, Summit Park

Virginia[91]

Charlottesville

Washington[92]

Aberdeen, Bellingham, Bremerton-Silverdale, Kennewick-Richland, Longview, Moses Lake, Olympia-Tumwater, Port Angeles, Portland-Vancouver-Hillsboro, Seattle-Tacoma-Bellevue, Spokane-Spokane Valley, Walla Walla, Yakima

Wisconsin[92]

Baraboo, La Crosse-Onalaska, Madison, Marinette, Milwaukee-Waukesha-West Allis, Platteville

Wyoming[91]

Casper, Cheyenne, Gillette, Jackson, Laramie, Rock Springs

Data centers[edit]

On May 2, 2017 CenturyLink, Inc. completed the previously announced sale of its data centers and colocation business to funds advised by BC Partners, in a consortium including Medina Capital Advisors and Longview Asset Management. The deal was worth approximately $1.86 billion with CenturyLink retaining an approximately 10% equity stake in the consortium's newly formed global secure infrastructure company, Cyxtera Technologies.[67]

Organizational structure [as of Dec 17, 2020]

CenturyLink is the second largest U.S. communications provider to global enterprise customers. CenturyLink has customers in more than 60 countries.[93]

- Jeff Storey[94] - Chief Executive Officer
- Shaun Andrews[95] - Executive Vice President, Product Management and Chief Marketing Officer
- Richard Batelaan[96] - Executive Vice President, North American Operations
- Neel Dev[97] - Executive Vice President and CFO
- Andrew Dugan[98] - Chief Technology Officer
- Stacey W. Goff[99] - Executive Vice President, General Counsel and Chief Administrative Officer
- Fletcher Keister[100] - Chief Transformation Officer
- Edward Morche[101] - President, Strategic Enterprise and Government Markets
- Maxine L. Moreau[102] - President, Consumer Markets
- Laurinda Pang[103] - President, International and Global Accounts Management
- Scott A. Trezise[104] - Executive Vice President, Human Resources

Naming rights and sponsorships

Venue naming rights[edit]

Current[edit]

- Lumen Field – Seattle, Washington (formerly *Seahawks Stadium*, *Qwest Field*, and *CenturyLink Field*)

Former[edit]

- CenturyLink Arena Boise – Boise, Idaho (now *Idaho Central Arena*, formerly *Bank of America Centre* and *Qwest Arena*)
- CenturyLink Center – Bossier City, Louisiana (now *Brookshire Grocery Arena*, formerly *Bossier City Arena* and *CenturyTel Center*)
- CenturyLink Center Omaha – Omaha, Nebraska (now *CHI Health Center Omaha*, formerly *Qwest Center Omaha*)

Sponsorships[edit]

- Denver Broncos[105]
- Orlando Magic[105]
- Idaho Steelheads[105]
- Seattle Seahawks[105]
- Texas Rangers
- Tampa Bay Buccaneers
- Minnesota Vikings[105]
- Portland Trail Blazers[105]
- ULM[105]
- LA Tech

Criticism and controversy

The Federal Communications Commission ordered CenturyLink to pay a record $16 million for failing to alert authorities of a preventable programming error that left nearly 11 million people in seven states without access to emergency services for six hours in 2014.[106][107]

In December 2018, CenturyLink faced criticism for requiring residential customers in Utah to, via DNS hijacking, view and acknowledge a notice advertising its security and parental control software, before they could connect to the internet again. The provider claimed that this was required by a recently enacted state law, which requires all ISPs to inform users that they provide "the ability to block material harmful to minors". Bill sponsor and Utah State Senate member Todd Weiler stated that the law did not require that service be disrupted until the notice is acknowledged; the law only requires that this notice be delivered in a "conspicuous" manner (such as an advertisement within a bill or invoice) and does not require disruption of service.[108]

On December 27, 2018, a “nationwide outage” caused 9-1-1 service to be disrupted across the country. The Federal Communications Commission says it will investigate.[109][110] In some areas the outage lasted nearly twelve hours and was the third shutdown of the year following outages in April and November 2018. ATM and point of sale credit card machines were also widely affected.[111]

On August 30, 2020, CenturyLink suffered a major technical outage due to misconfiguration in one of the company's data centers. The outage impacted tech giants such as Cloudflare, Amazon, Twitter, Xbox Live and many more. Reports indicate that all services were restored by 11:12 am ET.[112][113]

See also

- List of CenturyLink operating companies
- List of United States telephone companies
- Tier 1 network

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Housatonic

M

A B C D E F G H I J K L M N O P Q R S T U V W X Y Z

PEOPLE (by last name / then D.o.B.)

- Warren Grant "Maggie" **Magnuson** (born 1905)
- M - Mann family
- Melissa Ann (Colvin) Mann (born 1965)
- 1967 **Marburg** virus outbreak in West Germany
- Andrew Walter **Marshall** (born 1921)
- General James Norman Mattis (born 1950)
- Ian Robert Maxwell (born 1923)
- Dr. Donald Malcolm **MacArthur** (born 1931)
- Diana Lee Taylor **MacArthur** (born 1933)
- Dr. Alan B. **MacDonald** (born 1948)
- Dr. John S. **MacKenzie** (born 1943(est.))
- Dr. Tracey S. **McNamara** (born 1954)
- Charles William Merritt (born 1951)
- Yevgeny Ilyich Mikerin (born 1928)
- John Lewis Mikovits (born 1931)
- Dr. Judy Anne Mikovits (born 1958)
- Michael Robert **Milken** (born 1946)
- Dr. Thomas Patrick **Monath** (born 1940)
- Dr. Alice E. **Moore** (born 1908)
- M - Mueller family
- Dr. Hermann Joseph **Muller** (born 1890)
- Dr. Vincent J. **Munster** (born 1973)
- Dr. Peter Keith **Murray** (born 1946)

PLACES / COMPANIES / OTHER

- 1967 **Marburg** virus outbreak in West Germany
- **MCI** WorldCom Corporation
- Megatons to Megawatts Program
- Melpar Incorporated
- **MFS** Communications Company, Incorporated
- **Micro** Instrumentation and Telemetry Systems (MITS) Incorporated
- MITS Inc. Altair 8800

Warren Grant "Maggie" Magnuson (born 1905)

Wikipedia 🌐 Warren Magnuson

2021-03-23-wikipedia-org-warren-magnuson.pdf

https://en.wikipedia.org/wiki/Warren_Magnuson

HK005U

https://drive.google.com/file/d/149_iNm10cUgnL-AQI1CO8peSDxzv0svn/view?usp=sharing

Warren Magnuson

From Wikipedia, the free encyclopedia

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Jump to search

Warren Magnuson

President pro tempore of the United States Senate

In office

December 6, 1980 – January 3, 1981

Preceded by

Milton Young

Succeeded by

Strom Thurmond

In office

January 3, 1979 – December 5, 1980

Preceded by

James Eastland

Succeeded by

Milton Young

Chair of the Senate Appropriations Committee

In office

January 3, 1977 – January 3, 1981

Preceded by

John Little McClellan

Succeeded by

Mark Hatfield

Chair of the Senate Commerce Committee

In office

January 3, 1955 – January 3, 1977

Preceded by

John W. Bricker

Succeeded by

Howard Cannon

United States Senator

from Washington

In office

December 14, 1944 – January 3, 1981

Preceded by

Homer Bone

Succeeded by

Slade Gorton

Member of the U.S. House of Representatives

from Washington's 1st district

In office

January 3, 1937 – December 13, 1944

Preceded by

Marion Zioncheck

Succeeded by

Emerson DeLacy

Member of the Washington House of Representatives from the 37th district

In office

January 9, 1933 – January 14, 1935

Preceded by

George F. Murray

Succeeded by

A. Lou Cohen

Personal details

Born

April 12, 1905

Moorhead, Minnesota, U.S.

Died

May 20, 1989 (aged 84)

Seattle, Washington, U.S.

Resting place

Acacia Memorial Park

47.73920°N 122.29280°W

Political party

Democratic

Spouse(s)

Eleanor Peggy "Peggins" Maddieux

(m. 1928; div. 1935)

Jermaine (Elliott) Peralta[1][2]

(m. 1964)

Education

University of North Dakota

North Dakota Agricultural College

University of Washington (BA, LLB)

Profession

Attorney

Military service

Allegiance

United States

Branch/service

United States Navy

Battles/wars

World War II

- Pacific War

Warren Grant "Maggie" Magnuson (April 12, 1905 – May 20, 1989) was an American lawyer and politician. A member of the Democratic Party, he served as a U.S. Representative (1937–1944) and a U.S. Senator (1944–1981) from Washington. He served over 36 years in the Senate, and was its most senior member during his final two years in office.

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Early life and education[edit]

Warren Magnuson was born in Moorhead, Minnesota.[3] His birthdate is supposedly April 12, 1905, but the actual records of his birth are sealed.[4] According to various sources, he never knew his birth parents; they may have died within a month of his birth,[5] or his unmarried mother put him up for adoption.[6] William Grant and Emma (née Anderson) Magnuson adopted Warren, who gave him their name.[7] The Magnusons were second-generation Scandinavian immigrants who operated a bar in Moorhead, and adopted a daughter, Clara, a year after adopting Warren.[8] His adoptive father left the family in 1921.[4]

Magnuson attended Moorhead High School, where he played quarterback on the football team and was captain of the baseball team.[6] While in high school, he ran a YMCA camp, worked on wheat farms, and delivered newspapers and telegrams in Moorhead and nearby Fargo, North Dakota.[7] He graduated in 1923, and then enrolled at the University of North Dakota in Grand Forks.[3] In 1924, he transferred to the North Dakota Agricultural College in Fargo, which he attended for a year.[6] He then traveled through Canada for some time, riding freight trains and working with threshing crews.[7]

Magnuson followed a high school girlfriend to Seattle, Washington, where he entered the University of Washington in 1925.[8] He was a member of Theta Chi fraternity, and worked delivering ice as a Teamsters member under Dave Beck.[4] He received a Bachelor of Arts degree in 1926, and earned a Bachelor of Laws degree from the University of Washington School of Law in 1929.[3] A Democrat, he first became active in politics in 1928, volunteering for A. Scott Bullitt for governor and Al Smith for president.[6]

Early career[edit]

In 1929, Magnuson was admitted to the bar and joined the law office of Judge Samuel Stern in Seattle.[6] He served as secretary of the Seattle Municipal League from 1930 to 1931[3] and served as a special prosecutor for King County in 1932, investigating official misconduct.[5] He founded the state chapter of the Young Democrats of America that same year.[9] He was a leading supporter of repealing state Prohibition laws and establishing the state Liquor Control Board.[10]

From 1933 to 1935, Magnuson served as a member of the Washington House of Representatives from the Seattle-based 37th Legislative District.[10] As a state legislator, he sponsored the first unemployment compensation bill in the nation.[7] Magnuson was a delegate to the state constitutional convention in 1933.[3] He briefly served as Assistant United States District Attorney before being elected prosecuting attorney of King County, serving from 1934 to 1936.[7]

Congressional career[edit]

Magnuson was first elected to the House of Representatives in 1936, filling a vacancy caused by the sudden death of fellow Democrat Marion Zioncheck on August 7, 1936. In 1937, along with senators Homer Bone and Matthew Neely, Magnuson introduced the National Cancer Institute Act, signed into law by Franklin Roosevelt on August 5 of that year.[11] He was reelected in 1938, 1940, and 1942. After the Attack on Pearl Harbor, Magnuson was a staunch supporter of the U.S. war effort.[12]

Magnuson served in the United States Navy during World War II. He was aboard the aircraft carrier USS *Enterprise* for several months, seeing heavy combat in the Pacific Theatre until Roosevelt ordered all congressmen on active duty to return home in 1942.

In 1944, Magnuson successfully ran for the U.S. Senate. On December 14, 1944, Governor Arthur B. Langlie appointed Magnuson to fill the vacancy created by Homer Bone's appointment to the Ninth Circuit Court of Appeals, thus resigning from the House and starting his Senate tenure a month early.

Magnuson was reelected in 1950, 1956, 1962, 1968, and 1974. He served on the Senate Commerce Committee throughout his tenure in the Senate, and the Senate Appropriations Committee during his final term. Magnuson served most of his tenure in the Senate alongside his friend and Democratic colleague from Washington State, Henry M. "Scoop" Jackson. State Attorney General Slade Gorton defeated Magnuson in the 1980 election.

In August 1950, Magnuson proposed voluntary enlistment for the Japanese in the American armed forces and sent a cable request to General Douglas MacArthur on the practicality of the proposal.[13]

In November 1961, President John F. Kennedy visited Seattle and was an honored guest at a celebration honoring Magnuson's first 25 years in Congress.[14] [15] Nearly 3,000 people paid $100 each to attend the dinner.

At the end of August 1966, after President Lyndon Johnson announced the nominations of Charles F. Luce for Undersecretary of the Interior, John A. Carver for Federal Power Commission membership, and David S. Black for BPA administrator, Magnuson announced the Senate Commerce committee would hold hearings on Carver's nomination on September 1. He called Luce "one of the most able, dedicated, productive public servants I know."[16]

On November 7, 1967, Johnson signed the Public Broadcasting Act of 1967, citing Magnuson as one of the members of Congress to "have been part of the team that has brought this measure to the White House to make it the law of our land."[17]

At least three important pieces of legislation bear his name: the Magnuson-Stevens Fishery Conservation and Management Act, the Chinese Exclusion Repeal Act of 1943 (commonly referred to as the Magnuson Act), and the Magnuson-Moss Warranty Act. He was also instrumental in keeping supertankers out of Puget Sound, by slipping through an amendment to a routine funding reauthorization bill on the Senate and House consent calendars.[18]

The bill that became the Civil Rights Act of 1964 was referred to the Committee on Commerce. Magnuson played a key role in getting it to the floor and enacted into law despite vigorous opposition by Senator William Fulbright and other staunch segregationists.

Magnuson was responsible for special legislation that allowed Poon Lim, a Chinese sailor who in 1942 survived 133 days alone at sea as a castaway, to immigrate to the U.S.

Magnuson attended the May 5, 1978, dedication ceremony for Riverfront Park in Spokane.[19] Shortly after that, during a town hall meeting, President Jimmy Carter said, "No one could be in a better political position than to be preceded and introduced by men like Tom Foley and Senator Warren Magnuson. I know of no one in the Congress than these two men who are more respected, more dedicated to serving their own people well, but who have also reached, because of their experience and knowledge, sound judgment and commitment, a position of national and even international renown and leadership."[20]

Personal life[edit]

In 1928, Magnuson married Eleanor Peggy "Peggins" Maddieux, crowned Miss Seattle the previous year.[6] They remained together until their divorce in 1935.[10] Magnuson dated several glamorous women, including heiress and cover girl June Millarde and actress Carole Parker.[4] In 1964, he married Jermaine Elliott Peralta (1923–2011), widowed as a teenager, in a ceremony conducted by Rev. Frederick Brown Harris at the Omni Shoreham Hotel.[10] The couple remained together until his death, and he helped raise Peralta's daughter from her previous marriage, Juanita.[5] Magnuson and his wife are interred in Acacia Memorial Park in Lake Forest Park, north of Seattle.[21]

Namesakes[edit]

- Warren G. Magnuson Health Sciences Building at the University of Washington's Health Sciences building complex was named in his honor in 1970.
- Warren Magnuson's Senate desk is located in an alcove in the Suzzallo Library graduate reading room at the University of Washington.
- Warren G. Magnuson Clinical Center at the National Institutes of Health in Bethesda, Maryland is also named for Senator Warren Magnuson.
- Warren G. Magnuson Park in northeast Seattle was named in his honor in 1977.
- Warren G. Magnuson Puget Sound Legacy Award has been established by the People For Puget Sound
- The Washington State Democratic Party[22] holds an annual Magnuson awards dinner (sometimes referred to as the Maggies, per his nickname).
- The Intercollegiate College of Nursing building in Spokane on Fort George Wright Drive near Spokane Falls Community College is named after him.

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- ^ "Magnuson weds Seattle widow". *Spokane Daily Chronicle*. United Press International. October 5, 1964. p. 2.
- ^ "Jermaine Elliott Magnuson". Find a Grave. Retrieved December 17, 2012.
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- Jump up to:
- a b c d e "MAGNUSON, Warren Grant, (1905 - 1989)". *Biographical Directory of the United States Congress*.
- ^
- Jump up to:
- a b c d Oldham, Kit (October 14, 2003). "Magnuson, Warren G. (1905-1989)". *HistoryLink*.
- ^
- Jump up to:
- a b c Saxon, Wolfgang (1989-05-21). "Warren G. Magnuson Dies at 84; Held Powerful Positions in Senate". *The New York Times*.
- ^
- Jump up to:
- a b c d e f Scates, Shelby (1997). *Warren G. Magnuson and the Shaping of Twentieth-Century America*. University of Washington Press.
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- a b c d e *Current Biography*. **II**. H. W. Wilson Company. 1945.
- ^
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- a b Van Dyk, Ted (2005-04-13). "Warren Magnuson was one of a kind". *Seattle Post-Intelligencer*.
- ^ "About the Young Democrats of Washington State".
- ^
- Jump up to:
- a b c d "Warren "Maggie" Magnuson". *Secretary of State of Washington*.
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- ^ Magnuson was instrumental in securing a commission in the U.S. Army for Bob Struble in 1942.
- ^ Arming of Germans, Japanese Proposed to Meet Red Threat (August 5, 1950)
- ^ "President Kennedy delivers major policy speech at UW on November 16, 1961. - HistoryLink.org". *www.historylink.org*. Retrieved 16 December 2017.
- ^ "JackGordon.org: Kennedy is Guest of Honor at Dinner honoring Sen. Warren Magnuson during his November, 1961, visit to Seattle". Retrieved 16 December2017.
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- ^ HistoryLink.org, the online encyclopedia of Washington State history. Accessed July 19, 2006
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- ^ Carter, Jimmy (May 5, 1978). "Spokane, Washington Remarks and a Question-and-Answer Session at a Town Meeting". American Presidency Project.
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- ^ "Washington State Democratic Party". *Washington State Democratic Party*. Retrieved 16 December 2017.

Related reading[edit]

- Scates, Shelby *Warren G. Magnuson and the Shaping of Twentieth-Century America* (Seattle: University of Washington Press, 1997)

External links[edit]

- United States Congress. "Warren Magnuson (id: M000053)". *Biographical Directory of the United States Congress*.
- Washington State History Link Entry
- History Link.org - Warren Magnuson
- Find a Grave.com - Warren Grant Magnuson
- NIH Clinical Center — The research hospital was renamed the Warren Grant Magnuson Clinical Center in his honor on October 22, 1981.
- Warren G. Magnuson Puget Sound Legacy Awards
- A film clip "Longines Chronoscope with Warren G. Mangnuson (SIC)" is available at the Internet Archive

http://archiveswest.orbiscascade.org/ark:/80444/xv97964

Born in 1905 and adopted by a Swedish family in Moorehead, Minnesota, Warren Magnuson moved to Seattle to attend the University of Washington. He began practicing law soon after he graduated from the University of Washington Law School in 1929. His early positions included Executive Secretary of the Seattle Municipal League, Special Prosecuting Attorney for King County, Assistant U.S. District Attorney and attorney to the Washington Emergency Relief Administration. Magnuson, a Democrat, began his political career in the Washington State House of Representatives during the 1933 legislative session. In 1934 he was elected King County Prosecuting Attorney, an office he held until his election to the U.S. House of Representatives from the First District in 1936. During his tenure in the House, Congressman Magnuson served on the Naval Affairs Committee and the Alaska International Highway Commission. A naval reservist before World War II, Magnuson spent several months on active duty in 1942.

In 1944 Magnuson was a successful candidate, for the Senate. **He assumed his Senate seat early when his predecessor, Homer T. Bone, resigned shortly before the end of his term, thereby giving Magnuson seniority over other newly elected Senators.**

Warren Magnuson was best known throughout his long Congressional career for his championship of consumer and health legislation. Appointed to the Commerce Committee in 1945, he became chair of that committee in 1955 after the Democrats took control of the Senate. Consumer protection legislation was an important part of the Commerce Committee's agenda throughout Magnuson's 23 years as chairman. In 1966 a separate Consumer Subcommittee was created and Magnuson served as its chairman also. His accomplishments were recognized by the National Consumer's League when, in 1977, they presented Magnuson with their Trumpeter Award for outstanding achievements in consumer protection. Magnuson co-authored a 1968 book, *The Dark Side of the Market Place* whichattempted to raise public awareness of the need for consumer safeguards.

Magnuson was also an advocate of government support for scientific research in the years following World War II. In 1945 he introduced a bill which, when finally signed into law in 1950, created the National Science Foundation. As a freshman Congressman Magnuson sponsored legislation in the House which created the country's first tax-supported research center, The National Cancer Institute. This bill marked the beginning of a career-long dedication to governmental support of biomedical research and education, which he continued through his 1948 sponsorship of a bill to create the National Institutes of Health, and expanded in the 91st Congress, when he assumed the chairmanship of the Appropriations subcommittee responsible for funding health, labor and education programs. In 1973 Magnuson was the recipient of the Albert Lasker Public Service in Health award.

A member of the Appropriations Committee since 1945, Magnuson assumed its chairmanship in 1978 and resigned as chair of the Commerce Committee. In 1979 he was elected President Pro Tempore of the Senate, reflecting his status as most senior member of the Senate.

Other issues which concerned Magnuson throughout his career were civil rights, particularly through his authorship of the public accommodations section of the 1964 civil rights act; environmental protection, including ports and waterways safety and supertanker regulation; and improvement of public power and irrigation systems in the Northwest.

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Harold Cornelius Mann (born 1892)

Born 29 Jan 1892 / Died 15 Jun 1972 in Yarmouth Port, Massachusetts (https://www.findmypast.com/transcript?id=US/TRIB/001764296)

Son - Donald Mann (born 1922)

Grandson - **Bruce Hartling Mann** (born 1950)

Father's name - John P Mann

Father's birth place - Massachusetts

Mother's name - Harriet E Mann

Mother's birth place - New York

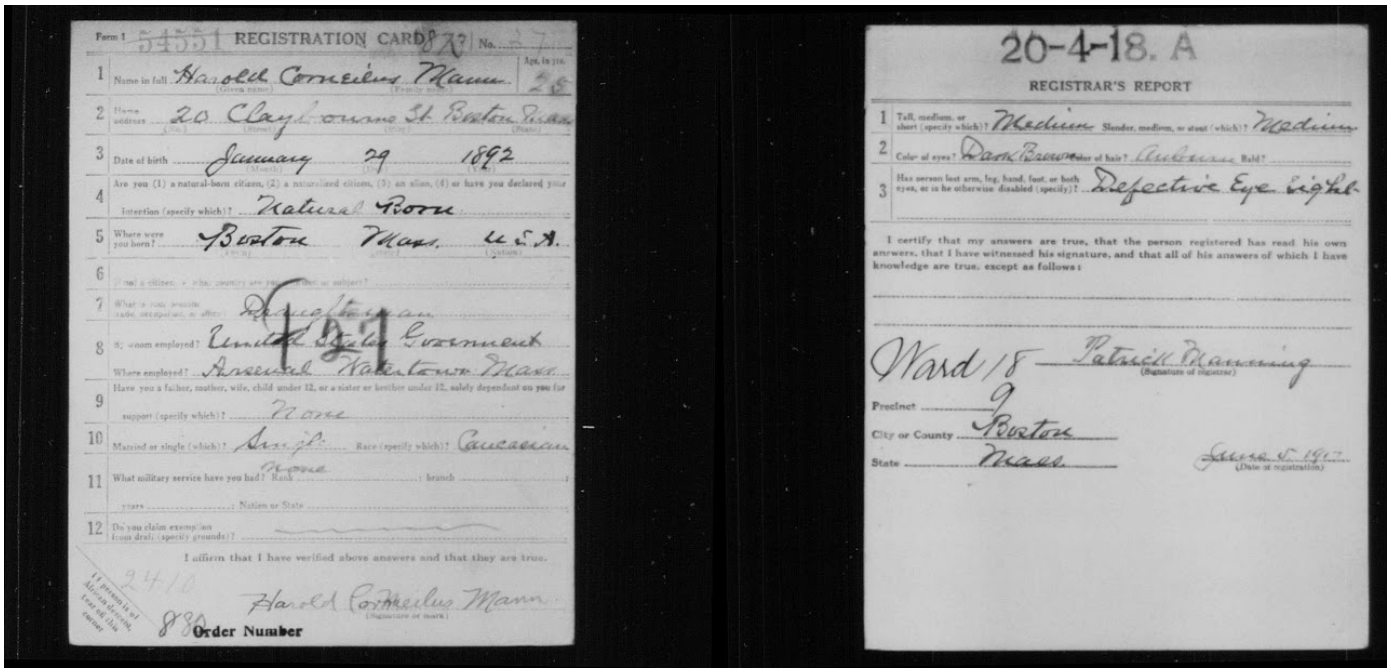
1910 census - Harold C Mann at home ?

https://search.findmypast.com/record?id=USC%2F1910%2F004972453%2F00763&parentid=USC%2F1910%2F004972453%2F00763%2F027

1917 (June) - WW1 Draft registration

Transcript - [HG003C][GDrive]

"Name - Harold Corneilus Mann / Birth date 29 Jan 1892 / Place of birth as transcribed Boston,Massachusetts, United States / Residence : Dorchester City No 18"



[HG003B][GDrive]

1919 - Son Robert born

https://books.google.com/books?id=jIDE0I9qLukC&pg=PA211&lpg=PA211&dq=%22robert+lapham+mann%22&source=bl&ots=HlWjqEVkMC&sig=ACfU3U3U0WIWw229hEPBhUt38MbsWDAc6w&hl=en&sa=X&ved=2ahUKEwiOgP6ewp_lAhWLmuAKHU52DzEQ6AEwAXoECAEQAQ#v=onepage&q=%22robert%20lapham%20mann%22&f=false

"Robert Lapham Mann"

1920 census - Watertown MA

Transcript - [HS0026][GDrive]

Full census sheet - [HS0027][GDrive]

Household Members

First name(s)	Last name	Relationship	Marital status	Gender	Age	Birth year	Birth place
Harold C	**Mann**	**Self**	**Married**	**Male**	**27**	**1893**	**Massachusetts**
Gladys S	Mann	Wife	Married	Female	27	1893	Massachusetts
Robert L	Mann	Son	Single	Male	1	1919	Massachusetts

[HS0028][GDrive]

1930 Census - Arlington MA

Note : It is "William R Lapham" who is father-in-law

Transcript- [HS0020][GDrive] / Full Census Sheet - [HS0021][GDrive]

Household Members

First name(s)	Last name	Relationship	Marital status	Sex	Age	Birth year	Birth place
Harold C	Mann	Head	Married	Male	38	1892	Massachusetts
Gladys S	Mann	Wife	Married	Female	37	1893	Massachusetts
Robert L	Mann	Son	Single	Male	11	1919	Massachusetts
Shirley	Mann	Daughter	Single	Female	8	1922	Massachusetts
Donald	**Mann**	**Son**	**Single**	**Male**	**7**	**1923**	**Massachusetts**
William R	Lapham	Father-in-law	Widowed	Male	71	1859	Massachusetts

[HS0022][GDrive]

1940 Census - Arlington MA

Father-in-law William Lapham born 1858 or 1859) living in same home

Transcript - [HS0023][GDrive] / Full Census Sheet - [HS0024][GDrive]

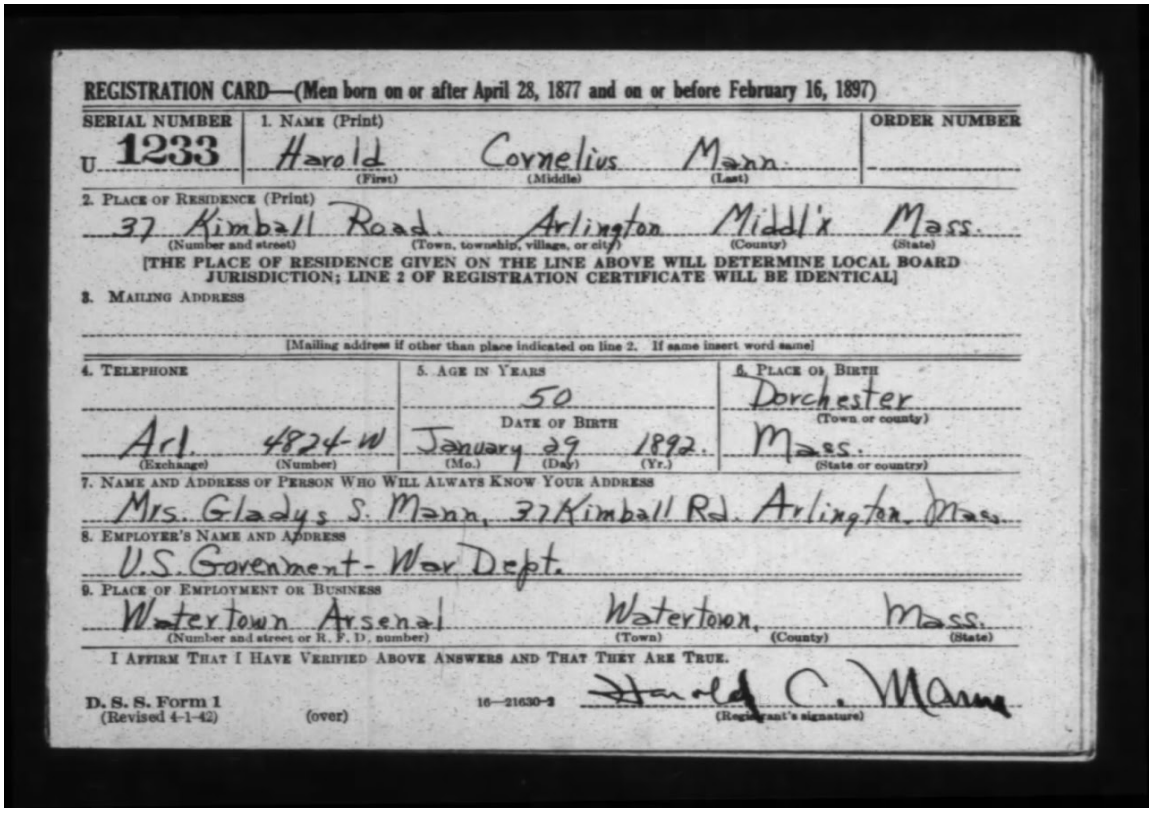
Household Members

First name(s)	Last name	Relationship	Marital Status	Gender	Age	Birth year	Birth place
Harold	Mann	Head	Married	Male	48	1892	Massachusetts
Gladys S	Mann	Wife	Married	Female	47	1893	Massachusetts
William	**Lapham**	**Father-in-law**	**Widowed**	**Male**	**81**	**1859**	**Massachusetts**
Robert	Mann	Son	Single	Male	21	1919	Massachusetts
Shirley	Mann	Daughter	Single	Female	18	1922	Massachusetts
Donald	Mann	Son	Single	Male	17	1923	Massachusetts

[HS0025][GDrive]

1942 (April 26) - Harold C Mann - WW2 draft

US Government - WarDepartment



REGISTRATION CARD—(Men born on or after April 28, 1877 and on or before February 16, 1897)

SERIAL NUMBER: U 1233 | 1. NAME (Print): Harold (First) Cornelius (Middle) Mann (Last) | ORDER NUMBER:

2. PLACE OF RESIDENCE (Print): 37 Kimball Road. (Number and street) Arlington (Town, township, village, or city) Midd'x (County) Mass. (State)

[THE PLACE OF RESIDENCE GIVEN ON THE LINE ABOVE WILL DETERMINE LOCAL BOARD JURISDICTION; LINE 2 OF REGISTRATION CERTIFICATE WILL BE IDENTICAL]

3. MAILING ADDRESS:

[Mailing address if other than place indicated on line 2. If same insert word same]

4. TELEPHONE: Arl. (Exchange) 4824-W (Number)

5. AGE IN YEARS: 50 — DATE OF BIRTH: January (Mo.) 29 (Day) 1892. (Yr.)

6. PLACE OF BIRTH: Dorchester (Town or county) Mass. (State or country)

7. NAME AND ADDRESS OF PERSON WHO WILL ALWAYS KNOW YOUR ADDRESS: Mrs. Gladys S. Mann, 37 Kimball Rd. Arlington, Mass.

8. EMPLOYER'S NAME AND ADDRESS: U.S. Government - War Dept.

9. PLACE OF EMPLOYMENT OR BUSINESS: Watertown Arsenal (Number and street, or R. F. D. number) Watertown, (Town) (County) Mass. (State)

I AFFIRM THAT I HAVE VERIFIED ABOVE ANSWERS AND THAT THEY ARE TRUE.

Harold C. Mann (Registrant's signature)

D. S. S. Form 1 (Revised 4-1-42) (over) 16—21630-2

[HG003D][GDrive]

1946 (Jan) - Daughter Shirley (USN) gets engaged

https://www.newspapers.com/image/433933667/?terms=robert%2Bmann%2Bnavy%2Barlington

---

1946 (May) - Daughter Shirley Wedding

Full page : [HN00Q1][GDrive]

Son **Robert Lapham Mann** is present ; Son Donald Mann (born 1922) misses this wedding.

The Boston Globe (Boston, Massachusetts) · 19 May 1946, Sun

Miss Mann Is Bride

Miss Shirley Mann, daughter of Mr. and Mrs. Harold Mann, 37 Kimball road, Arlington, became the bride yesterday afternoon of Charles R. Clough Jr., son of Mr. and Mrs. Charles R. Clough of Somerville.

The 4 o'clock ceremony was performed at the Orthodox Congregational Church by Rev. David G. Colwell, the minister, assisted by Rev. W. D. Clough of New York, uncle of the groom.

Mrs. Robert L. Mann of Cambridge, sister-in-law of the bride, was matron of honor. The flower girl was Kristin Albertson, Melrose, cousin of the groom. The bridesmaids were Mrs. Charles C. Bond, Arlington; Miss Elizabeth Merrill, Arlington; Miss Elsie Pease, Merrimac Port, and Miss Virginia Given, Arlington. Ralph Creeden of Boston was best man. The ushers included Harry E. Wood, Medford; Lt Com Robert L. Mann, Cambridge, brother of the bride; Andrew Mader of Merrimac Port, and James Russell Jr., Somerville, cousin of the groom.

Following the ceremony, a reception was held. After a wedding trip to New Hampshire and Chicago, Mr. and Mrs. Clough Jr. will make their home in Chicago after June 1. The bride is a graduate of Chandler Secretarial School, and the groom is a veteran of World War II.

[HN00Q2][GDrive]

1947 (Nov) - Son Donald Mann get engaged

Full page - [HN00PH][GDrive]

The Boston Globe (Boston, Massachusetts) · 16 Nov 1947, Sun

Miss Geraldine Hartling Engaged to Donald Mann

Mr. and Mrs. W. L. Hartling of Arlington announce the engagement of their daughter, Geraldine Marie,

(Jordan Marsh)

MISS GERALDINE HARTLING

to Donald Mann, son of Mr. and Mrs. Harold C. Mann, also of Arlington.

Miss Hartling studied at Burdett College, and is a member of the International Student Association in Boston.

Mr. Mann, formerly a lieutenant with the United States Navy, is a graduate of Tufts College Engineering School.

[HN00PI][GDrive]

1948 (June) - Son's wedding

Full page - [HN00PF][GDrive]

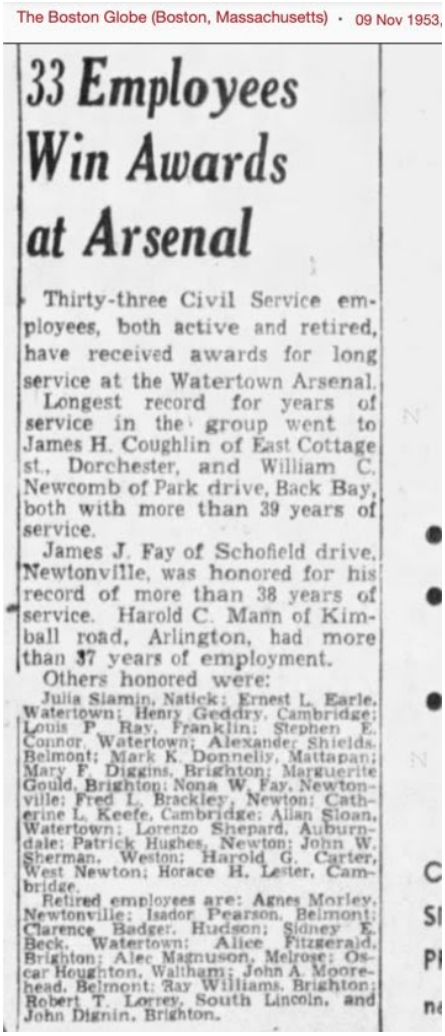
The Boston Globe (Boston, Massachusetts) · 01 Jul 1948, Thu · Page 4

MANN-HARTLING—Miss Geraldine Marie Hartling, daughter of Mr. and Mrs. W. L. Hartling of Arlingtono, became the bride last Saturday of Donald Mann, son of Mr. and Mrs. Harold C. Mann, also of Arlington. The ceremony was performed by Rev. Dr. Raymond Calkins in the First Church (Congregational) of Cambridge. After a wedding trip to Nantucket they will reside in Cambridge.

[HN00PG][GDrive]

1953 (Nov) - Harold C Mann - 38 years at Watertown Arsenal (as of 1953)

Full page - [HN00QI][GDrive]



The Boston Globe (Boston, Massachusetts) · 09 Nov 1953,

33 Employees Win Awards at Arsenal

Thirty-three Civil Service employees, both active and retired, have received awards for long service at the Watertown Arsenal.

Longest record for years of service in the group went to James H. Coughlin of East Cottage st., Dorchester, and William C. Newcomb of Park drive, Back Bay, both with more than 39 years of service.

James J. Fay of Schofield drive, Newtonville, was honored for his record of more than 38 years of service. Harold C. Mann of Kimball road, Arlington, had more than 37 years of employment.

Others honored were:

Julia Siamin, Natick; Ernest L. Earle, Watertown; Henry Geddry, Cambridge; Louis P. Ray, Franklin; Stephen E. Connor, Watertown; Alexander Shields, Belmont; Mark K. Donnelly, Mattapan; Mary F. Diggins, Brighton; Marguerite Gould, Brighton; Nona W. Fay, Newtonville; Fred L. Brackley, Newton; Catherine L. Keefe, Cambridge; Allan Sloan, Watertown; Lorenzo Shepard, Auburndale; Patrick Hughes, Newton; John W. Sherman, Weston; Harold G. Carter, West Newton; Horace H. Lester, Cambridge.

Retired employees are: Agnes Morley, Newtonville; Isador Pearson, Belmont; Clarence Badger, Hudson; Sidney E. Beck, Watertown; Alice Fitzgerald, Brighton; Alec Magnuson, Melrose; Oscar Houghton, Waltham; John A. Moorehead, Belmont; Ray Williams, Brighton; Robert T. Lorrey, South Lincoln, and John Dignin, Brighton.

[HN00QJ][GDrive]

1972 (June) - Harold Cornelius Mann passes

Also : https://www.newspapers.com/image/435448607/?terms=%22donald%2Bmann%22

Full page : [HN00PM][GDrive]

Harold Mann

Retired metallurgist

CUMMAQUID — Harold C. Mann, 80, of Keveney Lane died yesterday at his home. He was a retired engineer in metalurgy.

Born in Dorchester, and a former resident of Watertown and Arlington, Mr. Mann was a former employee of the Watertown Arsenal. He also was a member of the Howard Lodge AF & AM of South Yarmouth.

He is survived by his wife, Gladys S. (Lapham) Mann; two sons, Robert L. Mann of Dover and Donald Mann of Hingham; a daughter, Mrs. Shirley Klough of Cummaquid; nine grandchildren, and two great-grandchildren.

The Boston Globe (Boston, Massachusetts) · 08 Jun 1972, Thu · Page 31

[HN00PN][GDrive]

Father John P Mann

Father John P Mann - 1 yr old in 1860 census

https://www.findmypast.com/transcript?id=USC/1860/0000665768429

Donald Mann (born 1922)

[HN00QB][GDrive]

Father - Harold Cornelius Mann (born 1892)

Son - Bruce Hartling Mann (born 1950)

1922 (Oct 9) - Born

Per SS death Index - See [HL003E][GDrive]

1930 Census - Arlington MA

Transcript- [HS0020][GDrive] / Full Census Sheet - [HS0021][GDrive]

Household Members

First name(s)	Last name	Relationship	Marital status	Sex	Age	Birth year	Birth place
Harold C	Mann	Head	Married	Male	38	1892	Massachusetts
Gladys S	Mann	Wife	Married	Female	37	1893	Massachusetts
Robert L	Mann	Son	Single	Male	11	1919	Massachusetts
Shirley	Mann	Daughter	Single	Female	8	1922	Massachusetts
Donald	**Mann**	**Son**	**Single**	**Male**	**7**	**1923**	**Massachusetts**
William R	Lapham	Father-in-law	Widowed	Male	71	1859	Massachusetts

[HS0022][GDrive]

1934 - Donald Mann (boy) in Arlington, as a boy scout, rescues a cat ?

Full page : [HN00Q8][GDrive]

The Boston Globe (Boston, Massachusetts) · 10 Nov 1934, Sat · Page 5

LONG-LOST KITTEN BACK WITH FRIENDS

Arlington Boy Scout Makes Family Happy

It was his good deed for the day. The act not only marked his sense of duty as a good Boy Scout, but revealed his thoughtfulness and a love for dumb animals. Happiness resulted for all concerned.

A few weeks ago a handsome black-and-white kitten arrived from a country town at its new home on Kimball road, Arlington. The three youngsters of the household named him Blackie and in no time a Damon and Pythias comradeship grew between the junior cat and Bill Jr of the family.

For everybody, everything was new. One day Blackie slipped out only to be sent scrambling up a telegraph pole by a vociferous, but playful, puppy. Finally, the owner, with the aid of a delivery boy, rescued the kitten. As kittens will do, Blackie got into further trouble by disappearing a few days later. A widespread search was made without result.

Next door lives Donald Mann, a tenderfoot member of Troop 8, Boy Scouts, of Arlington. He heard about Blackie's climb and his later disappearance.

Out on his bicycle one rainy afternoon delivering magazines to his customers he saw a small cat that seemed bewildered. It looked familiar, a good deal like the missing Blackie. He called it by name and his hunch was right. It was the missing kitten.

Without much ado, Donald picked him up, stroked him tenderly, tucked the kitten under his arm, and Blackie rode home "on rubber" and was greeted with manifestations of great joy by his two youthful mistresses and boy pal.

Recommendation has been made to the merit badge committee of Donald's troop that he be commended for his thoughtfulness.

[HN00Q9][GDrive]

1938 - Arlington HS ski club - Donald Mann class of 1940

Donald Mann - officer - Arlington HS - 1938 - class of 1940 -

Full page : [HN00QA][GDrive]

1940 Census - Arlington MA

Transcript - [HS0023][GDrive] / Full Census Sheet - [HS0024][GDrive]

Household Members

First name(s)	Last name	Relationship	Marital Status	Gender	Age	Birth year	Birth place
Harold	Mann	Head	Married	Male	48	1892	Massachusetts
Gladys S	Mann	Wife	Married	Female	47	1893	Massachusetts
William	**Lapham**	**Father-in-law**	**Widowed**	**Male**	**81**	**1859**	**Massachusetts**
Robert	Mann	Son	Single	Male	21	1919	Massachusetts
Shirley	Mann	Daughter	Single	Female	18	1922	Massachusetts
Donald	Mann	Son	Single	Male	17	1923	Massachusetts

[HS0025][GDrive]

June 1940 - Donald Mann - Arlington HS graduate

Full page : [HN00Q7][GDrive]

1941 (Aug) - Recovering from major operation

https://www.newspapers.com/image/432086289/?terms=%22don%2Bmann%22

1944 (Feb) - graduates Tufts

Note these are civilian students who completed streamlined courses

Full page : [HN00Q5][GDrive]

The Boston Globe (Boston, Massachusetts) · 13 Feb 1944, Sun · Page 7

Tufts College to Name 163 as Degree Candidates Today

MEDFORD, Feb. 12—One hundred and sixty-three civilian students, who complete their streamlined courses at Tufts College by Feb. 19, will be named as degree candidates tomorrow afternoon at 3 o'clock by Dr. Leonard Carmichael, president of Tufts.

Dean Howard Mumford Jones of the Harvard Graduate School of Arts and Sciences will give the convocation address, "Attractions of Stupidity." The names of 300 .-12 students completing their naval training courses and 59 NROTC students leaving at the end of the present term will also be read.

Among engineering candidates will be Miss Charlotte C. Taylor of Upper Montclair, N. J., the first co-ed ever to be graduated from the school. She will be awarded a degree of B. S. in chemical engineering

A complete list of degree candidates includes:

SCHOOL OF LIBERAL ARTS

Bachelor of Arts

Robert H. Achin, Robert M. Blaisdell, Albert D'Orland, Harold M. Drake Jr., Harry F. Eaton Jr., Carmon M. Elliott Jr., Edward E. Harriman, George F. Jackson, Allyn F. Judd, Michael J. Kenny, Haig J. Nargesian, John P. Robertson, Robert I. Shohet, Ernest A. Thorsell, Friedrich J. von Mering.

Bachelor of Science

Theodore M. Behrman, Preston S. Billings, Harold J. Bornhold, Ralph A. Crusius, Anthony R. Gabriel, Andrew W. Gibbons, Thomas M. Gilroy, Julius Mark, Robert R. Nardone, Constantine Photos, Frederick M. Piecewicz, Anthony J. Pierangelo, Ralph S. Sawyer, Henry F. Snell, Sherman L. Waldron.

Bachelor of Science in Chemistry

Hubert R. Irvine, Hurire Kooshoian, August May Jr., John H. Mengel, Frank G. Nickerson, Morrs Stone, Richard E. Weymouth, Antonio Zullo.

JACKSON COLLEGE FOR WOMEN

Bachelor of Arts

Constance Arnold, Virginia L. Atwater, Barbara Baker, Pauline I. Beaupre, Loreto Besa, Barbara H. Blackwood, Harriett P. Brown, Ruth T. Carpenter, Anna L. Cole, Janet Cone, Constance Covell, Eleanor B. Desmond, Jane S. Doty, Martha E. Dwyer, Mildred A. Gilberto, Ruth G. Goldman, Ruth E. Hiebert, Murilyn Holland, Sybil H. Lamson, Priscilla C. Larner, Louise C. Lown, Beatrice R. Mandelstam, Dorothy R. Markell, Frances G. McCarthy, Olive A. Minot, Rebecca Moore, Wanda D. Ordon, Charlotte K. Patrician, Faylene E. Paul, Helen J. Sandler, Victoria L. Sears, Calliope Taloumis, Virginia T. Taylor, Helen L. Trayon, Mary V. Wallace.

Bachelor of Science

Elizabeth B. Brodney, Gertrude A. Caro, Ruth C. Dunn, Barbara J. Glidden, Lillian M. Hagopian, Curina J. Harian, Olive Mayper, Phyllis L. Yavner.

Bachelor of Science in Chemistry

Mary L. Herlihy.

ENGINEERING SCHOOL

Bachelor of Science in Civil Engineering

Clifford E. Adams, Vito W. Adams, Richard M. Bagnulo, Edward T. DiBerto, Edmund E. Downer, Harold M. Fish, Nicholas E. Gavrelis, John E. Lundberg Jr., Gerard A. Nardone, Arthur C. Neville Jr., Roland F. Nicklas, Francis A. Obert, John L. Poskus, George E. Sweeney.

Bachelor of Science in Mechanical Engineering

Robert E. Andrus, Frederick E. Baldwin, Robert F. Buckley, Carl H. J. Gottwald, Charles L. Hopkins, Robert E. Hunt, Warren N. Kernander, Robert F. Leahy, Frederick M. MacDonald, Donald G. Milligan, Brewster Morrill, Donald L. Nicklas, Albie R. Petruzzo, Douglas A. Pote, Hayden N. Ringer, Alan W. Sampson, John C. Souter, Calvin B. Steinberg, Richard E. Stevens.

Bachelor of Science in Electrical Engineering

Charles S. Corcoran Jr., Maurice E. Crystal, Robert K. Devejian, Abraham Dranetz, Frederic A. Foss, Richard J. Galeski, George H. Harmon, Walter C. Huening Jr., John G. Mavroides, John S. Meadows, Richard Mergendahl, Andrew M. Monahan, Aubrey L. Perry, Paul Rosen, Robert S. Sherry, George Smith Jr., Winston H. Thomas.

Bachelor of Science in Chemical Engineering

Lloyd E. Beebe, Bremner H. Brown, Thomas J. Carrig, Roland C. Dickson Jr., William S. Farmer Jr., Charles F. Field, James J. Garmon, Robert S. Goldberg, William S. Lenihan Jr., Richard W. Mooney, Charlotte O. Taylor, Norman H. Wacks, Allen E. Willis, Peter Wolynes.

Bachelor of Science in Engineering

Donald Mann.

SCHOOL OF RELIGION

Batchelor of Sacred Theology

James Bodge, B. S. (Tufts).

DIVISION OF UNIVERSITY EXTENSION

Bachelor of Science in Education

Beverly Benson, Elizabeth Shattuck.

GRADUATE SCHOOL

Master of Arts

Kenneth MacKillop Jr. (Music) B. S. (Tufts).

Master of Science

Frank S. Parker (Chemistry) B. S. Chemistry (Tufts).

Master of Education

Lillian A. Belanger, B. B. A. (Boston University); Edna A. Lambert, B. S. in Education (Lowell State Teachers' College); Edythe M. McQuaide, B. S. in Education (Lowell State Teachers' College); Hector G. Pettinati, B. S. in Civil Engineering (Tufts).

FLETCHER SCHOOL OF LAW AND DIPLOMACY

Master of Arts

Louis R. De Filippis, A. B. (DePauw); Paul T. K. Lin, A. B. (University of Michigan.

Degrees given subsequent to the last award of degrees whose names did not previously appear on a degree program:

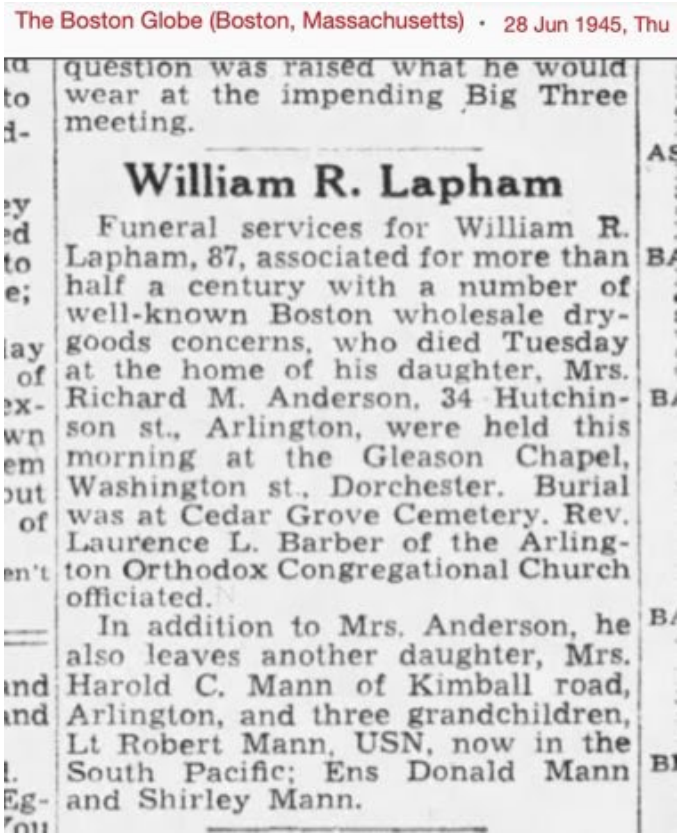
Doctor of Medicine, Frances F. Lannon, Henry O. Paquin Jr.

Doctor of Dental Medicine, Edward J. Kauskay.

[HN00Q6][GDrive]

June 28 1945 - Maternal-Grandfather William R Lapham passes

Full page : [HN00Q3][GDrive]



The Boston Globe (Boston, Massachusetts) · 28 Jun 1945, Thu

question was raised what he would wear at the impending Big Three meeting.

William R. Lapham

Funeral services for William R. Lapham, 87, associated for more than half a century with a number of well-known Boston wholesale dry-goods concerns, who died Tuesday at the home of his daughter, Mrs. Richard M. Anderson, 34 Hutchinson st., Arlington, were held this morning at the Gleason Chapel, Washington st., Dorchester. Burial was at Cedar Grove Cemetery. Rev. Laurence L. Barber of the Arlington Orthodox Congregational Church officiated.

In addition to Mrs. Anderson, he also leaves another daughter, Mrs. Harold C. Mann of Kimball road, Arlington, and three grandchildren, Lt Robert Mann, USN, now in the South Pacific; Ens Donald Mann and Shirley Mann.

[HN00Q4][GDrive]

1946 (May) - Sister Shirley's Wedding

Full page : [HN00Q1][GDrive]

Brother **Robert Lapham Mann** is present ; Donald Mann does not attend his sister's wedding - Why not ?

The Boston Globe (Boston, Massachusetts) · 19 May 1946, Sun

Miss Mann Is Bride

Miss Shirley Mann, daughter of Mr. and Mrs. Harold Mann, 37 Kimball road, Arlington, became the bride yesterday afternoon of Charles R. Clough Jr., son of Mr. and Mrs. Charles R. Clough of Somerville.

The 4 o'clock ceremony was performed at the Orthodox Congregational Church by Rev. David G. Colwell, the minister, assisted by Rev. W. D. Clough of New York, uncle of the groom.

Mrs. Robert L. Mann of Cambridge, sister-in-law of the bride, was matron of honor. The flower girl was Kristin Albertson, Melrose, cousin of the groom. The bridesmaids were Mrs. Charles C. Bond, Arlington; Miss Elizabeth Merrill, Arlington; Miss Elsie Pease, Merrimac Port, and Miss Virginia Given, Arlington. Ralph Creeden of Boston was best man. The ushers included Harry E. Wood, Medford; Lt Com Robert L. Mann, Cambridge, brother of the bride; Andrew Mader of Merrimac Port, and James Russell Jr., Somerville, cousin of the groom.

Following the ceremony, a reception was held. After a wedding trip to New Hampshire and Chicago, Mr. and Mrs. Clough Jr. will make their home in Chicago after June 1. The bride is a graduate of Chandler Secretarial School, and the groom is a veteran of World War II.

[HN00Q2][GDrive]

1947 (Nov) - Engagement

Full page - [HN00PH][GDrive]

The Boston Globe (Boston, Massachusetts) · 16 Nov 1947, Sun

Miss Geraldine Hartling Engaged to Donald Mann

Mr. and Mrs. W. L. Hartling of Arlington announce the engagement of their daughter, Geraldine Marie,

(Jordan Marsh)

MISS GERALDINE HARTLING

to Donald Mann, son of Mr. and Mrs. Harold C. Mann, also of Arlington.

Miss Hartling studied at Burdett College, and is a member of the International Student Association in Boston.

Mr. Mann, formerly a lieutenant with the United States Navy, is a graduate of Tufts College Engineering School.

[HN00PI][GDrive]

1948 (June) - Wedding

Full page - [HN00PF][GDrive]

The Boston Globe (Boston, Massachusetts) · 01 Jul 1948, Thu · Page 4

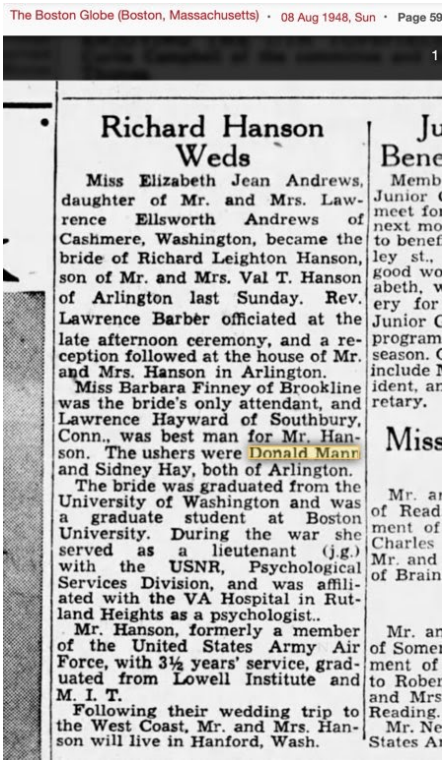
MANN-HARTLING—Miss Geraldine Marie Hartling, daughter of Mr. and Mrs. W. L. Hartling of Arlingtono, became the bride last Saturday of Donald Mann, son of Mr. and Mrs. Harold C. Mann, also of Arlington. The ceremony was performed by Rev. Dr. Raymond Calkins in the First Church (Congregational) of Cambridge. After a wedding trip to Nantucket they will reside in Cambridge.

[HN00PG][GDrive]

1948 (Aug) - Wedding attendance

Donald Mann attending a wedding in 1948, where he was an usher * The Bride was with the US Navy Reserve, Psychological Services Division * The Groom moving family to Hanford Washington, which is a top #ManahattanProject town

Full page : [HN00PO][GDrive]



The Boston Globe (Boston, Massachusetts) · 08 Aug 1948, Sun · Page 59

Richard Hanson Weds

Miss Elizabeth Jean Andrews, daughter of Mr. and Mrs. Lawrence Ellsworth Andrews of Cashmere, Washington, became the bride of Richard Leighton Hanson, son of Mr. and Mrs. Val T. Hanson of Arlington last Sunday. Rev. Lawrence Barber officiated at the late afternoon ceremony, and a reception followed at the house of Mr. and Mrs. Hanson in Arlington.

Miss Barbara Finney of Brookline was the bride's only attendant, and Lawrence Hayward of Southbury, Conn., was best man for Mr. Hanson. The ushers were Donald Mann and Sidney Hay, both of Arlington.

The bride was graduated from the University of Washington and was a graduate student at Boston University. During the war she served as a lieutenant (j.g.) with the USNR, Psychological Services Division, and was affiliated with the VA Hospital in Rutland Heights as a psychologist..

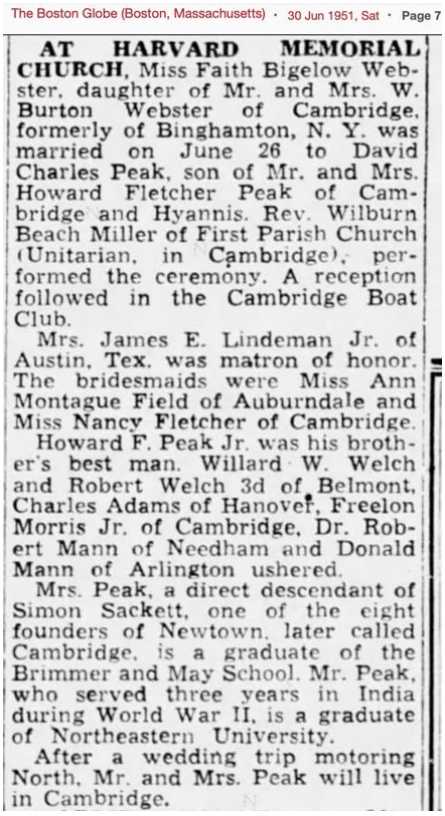
Mr. Hanson, formerly a member of the United States Army Air Force, with 3½ years' service, graduated from Lowell Institute and M. I. T.

Following their wedding trip to the West Coast, Mr. and Mrs. Hanson will live in Hanford, Wash.

[HN00PP][GDrive]

1951 (June) - At Peak Webster wedding with brother

Full page : [HN00PQ][GDrive]



The Boston Globe (Boston, Massachusetts) · 30 Jun 1951, Sat · Page 7

AT HARVARD MEMORIAL CHURCH, Miss Faith Bigelow Webster, daughter of Mr. and Mrs. W. Burton Webster of Cambridge, formerly of Binghamton, N. Y. was married on June 26 to David Charles Peak, son of Mr. and Mrs. Howard Fletcher Peak of Cambridge and Hyannis. Rev. Wilburn Beach Miller of First Parish Church (Unitarian, in Cambridge), performed the ceremony. A reception followed in the Cambridge Boat Club.

Mrs. James E. Lindeman Jr. of Austin, Tex. was matron of honor. The bridesmaids were Miss Ann Montague Field of Auburndale and Miss Nancy Fletcher of Cambridge.

Howard F. Peak Jr. was his brother's best man. Willard W. Welch and Robert Welch 3d of Belmont, Charles Adams of Hanover, Freelon Morris Jr. of Cambridge, Dr. Robert Mann of Needham and Donald Mann of Arlington ushered.

Mrs. Peak, a direct descendant of Simon Sackett, one of the eight founders of Newtown, later called Cambridge, is a graduate of the Brimmer and May School. Mr. Peak, who served three years in India during World War II, is a graduate of Northeastern University.

After a wedding trip motoring North, Mr. and Mrs. Peak will live in Cambridge.

[HN00PR][GDrive]

1956 / 1958 - Executive at Grossman

Employees of Grossmans given awards ...

See : [HN00PS][GDrive]

See full page below : [HN00PT][GDrive]

The Boston Globe (Boston, Massachusetts) · 19 Aug 1956, Sun · Page 121

Grossman Employees Receive Awards for Suggestions

REUBEN A. GROSSMAN, chairman of the board, second from right, presents awards to employees Fred Manchester, Donald Mann, James Donovan and George A. Lianos.

Fifteen employees of L. Grossman Sons, Inc. today were presented cash awards for ideas as part of the New Englandwide building materials concern's 60th anniversary celebration.

The awards ranged from $100 to $5. Among the nearly 100 suggestions submitted were ideas for improving safety conditions in the yard and on the road, sales promotion, office efficiency, public relations and customer services.

In presenting the prizes, company vice-president John Grossman said the number of ideas "pleased all of us as an indication of the productive thinking that goes on all the time by our people, who have become part of our 'team'."

"This response shows," he said, "that we have a tremendous reservoir of ideas which can be put to work to help Grossman's growth in service to customers as strongly and rapidly as we have during our long history. I am especially pleased to find that workable ideas came from all departments and from the newest employees as well as from our old-timers. With such productive, positive thinking going on in our ranks we cannot help but progress."

Judges were a committee selected from office staffs and a group elected by yard employees. James P. Donovan was chairman of this award committee.

[HN00PU][GDrive]

1958 (April) - Grossman' executive

Full page : [HN00PV][GDrive]

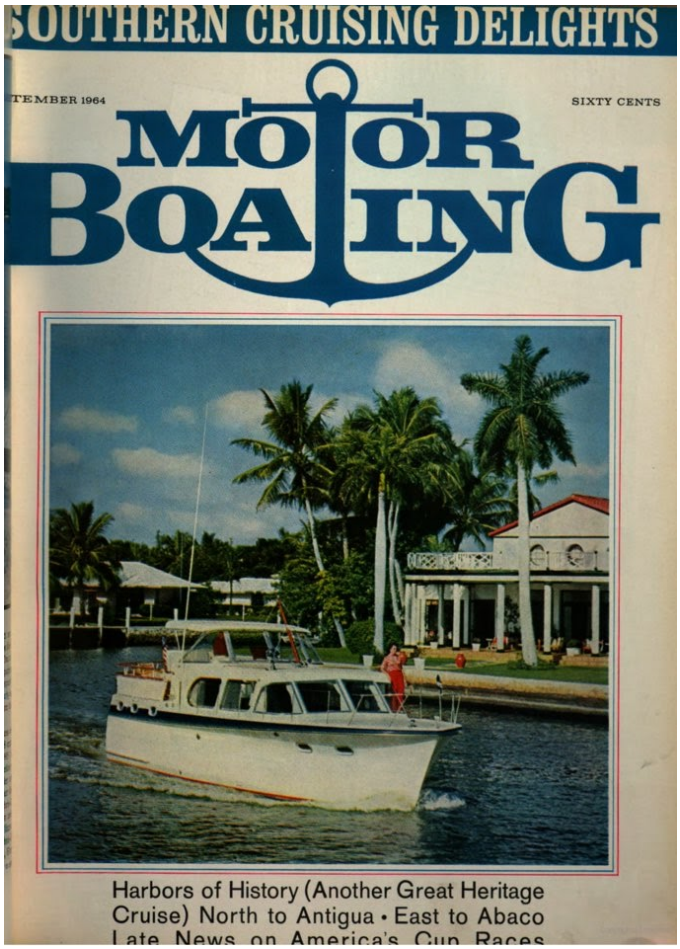
The Boston Globe (Boston, Massachusetts) · 13 Apr 1958, Sun · Page 154

GROSSMAN GRADUATES—Diplomas were presented recently to 15 employees of L. Grossman Sons on completion of a 16-week course in modern merchandising problems. Graduation exercises were held at Ship's Haven Restaurant, Quincy, with Dr. Ralph W. Fingar of Personnel Analysts the speaker. Shown here as a representative group of the graduating executives, l. to r., Saul Cooper, George Silver, Donald Mann, Morton Bernstein, Max Friedman, Warren Hill and Everett Grossman.

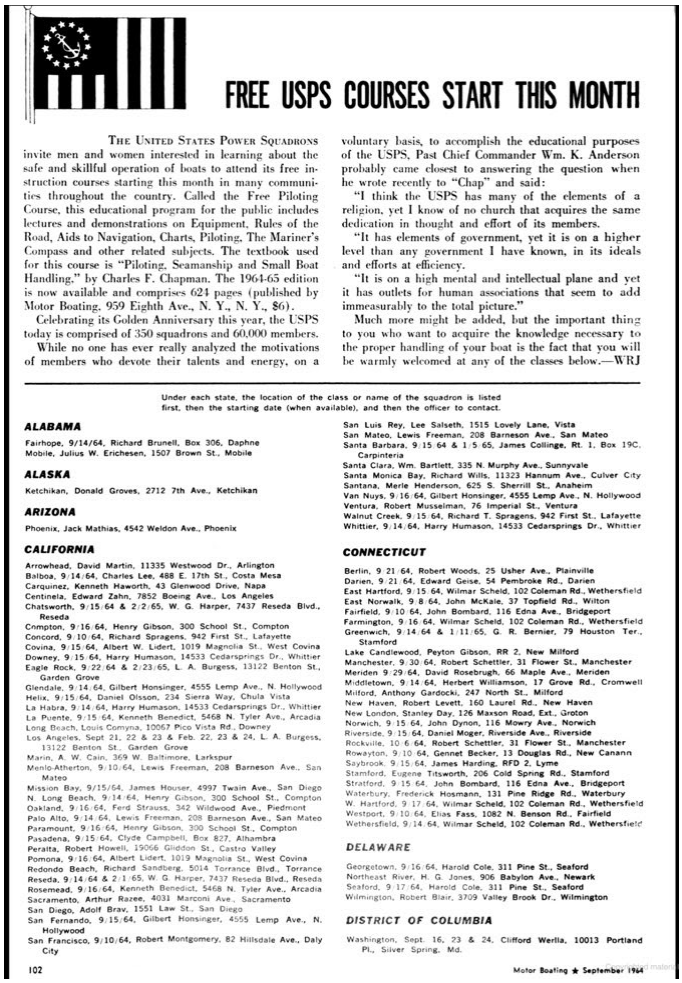
[HN00PW][GDrive]

1964 (Sep) - Mentioned in Motor Boating magazine

Full episode recording here - [HP002C][GDrive]



[HP002D][GDrive]



FREE USPS COURSES START THIS MONTH

THE UNITED STATES POWER SQUADRONS invite men and women interested in learning about the safe and skillful operation of boats to attend its free instruction courses starting this month in many communities throughout the country. Called the Free Piloting Course, this educational program for the public includes lectures and demonstrations on Equipment, Rules of the Road, Aids to Navigation, Charts, Piloting, The Mariner's Compass and other related subjects. The textbook used for this course is "Piloting, Seamanship and Small Boat Handling," by Charles F. Chapman. The 1964-65 edition is now available and comprises 624 pages (published by Motor Boating, 959 Eighth Ave., N. Y., N. Y., $6).

Celebrating its Golden Anniversary this year, the USPS today is comprised of 350 squadrons and 60,000 members.

While no one has ever really analyzed the motivations of members who devote their talents and energy, on a voluntary basis, to accomplish the educational purposes of the USPS, Past Chief Commander Wm. K. Anderson probably came closest to answering the question when he wrote recently to "Chap" and said:

"I think the USPS has many of the elements of a religion, yet I know of no church that acquires the same dedication in thought and effort of its members.

"It has elements of government, yet it is on a higher level than any government I have known, in its ideals and efforts at efficiency.

"It is on a high mental and intellectual plane and yet it has outlets for human associations that seem to add immeasurably to the total picture."

Much more might be added, but the important thing to you who want to acquire the knowledge necessary to the proper handling of your boat is the fact that you will be warmly welcomed at any of the classes below.—WRJ

Under each state, the location of the class or name of the squadron is listed first, then the starting date (when available), and then the officer to contact.

ALABAMA

Fairhope, 9/14/64, Richard Brunell, Box 306, Daphne
Mobile, Julius W. Erichesen, 1507 Brown St., Mobile

ALASKA

Ketchikan, Donald Groves, 2712 7th Ave., Ketchikan

ARIZONA

Phoenix, Jack Mathias, 4542 Weldon Ave., Phoenix

CALIFORNIA

Arrowhead, David Martin, 11335 Westwood Dr., Arlington
Balboa, 9/14/64, Charles Lee, 488 E. 17th St., Costa Mesa
Carquinez, Kenneth Haworth, 43 Glenwood Drive, Napa
Centinela, Edward Zahn, 7852 Boeing Ave., Los Angeles
Chatsworth, 9/15/64 & 2/2/65, W. G. Harper, 7437 Reseda Blvd., Reseda
Compton, 9/16/64, Henry Gibson, 300 School St., Compton
Concord, 9/10/64, Richard Spragens, 942 First St., Lafayette
Covina, 9/15/64, Albert W. Lidert, 1019 Magnolia St., West Covina
Downey, 9/15/64, Harry Humason, 14533 Cedarsprings Dr., Whittier
Eagle Rock, 9/22/64 & 2/23/65, L. A. Burgess, 13122 Benton St., Garden Grove
Glendale, 9/14/64, Gilbert Honsinger, 4555 Lemp Ave., N. Hollywood
Helix, 9/15/64, Daniel Olsson, 234 Sierra Way, Chula Vista
La Habra, 9/14/64, Harry Humason, 14533 Cedarsprings Dr., Whittier
La Puente, 9/15/64, Kenneth Benedict, 5468 N. Tyler Ave., Arcadia
Long Beach, Louis Comyna, 10067 Pico Vista Rd., Downey
Los Angeles, Sept. 21, 22 & 23 & Feb. 22, 23 & 24, L. A. Burgess, 13122 Benton St., Garden Grove
Marin, A. W. Cain, 369 W. Baltimore, Larkspur
Menlo-Atherton, 9/10/64, Lewis Freeman, 208 Barneson Ave., San Mateo
Mission Bay, 9/15/64, James Houser, 4997 Twain Ave., San Diego
N. Long Beach, 9/14/64, Henry Gibson, 300 School St., Compton
Oakland, 9/16/64, Ferd Strauss, 342 Wildwood Ave., Piedmont
Palo Alto, 9/14/64, Lewis Freeman, 208 Barneson Ave., San Mateo
Paramount, 9/16/64, Henry Gibson, 300 School St., Compton
Pasadena, 9/15/64, Clyde Campbell, Box 827, Alhambra
Peralta, Robert Howell, 19066 Gladden St., Castro Valley
Pomona, 9/16/64, Albert Lidert, 1019 Magnolia St., West Covina
Redondo Beach, Richard Sandberg, 5014 Torrance Blvd., Torrance
Reseda, 9/14/64 & 2/1/65, W. G. Harper, 7437 Reseda Blvd., Reseda
Rosemead, 9/16/64, Kenneth Benedict, 5468 N. Tyler Ave., Arcadia
Sacramento, Arthur Razee, 4031 Marconi Ave., Sacramento
San Diego, Adolf Brav, 1551 Law St., San Diego
San Fernando, 9/15/64, Gilbert Honsinger, 4555 Lemp Ave., N. Hollywood
San Francisco, 9/10/64, Robert Montgomery, 82 Hillsdale Ave., Daly City
San Luis Rey, Lee Salseth, 1515 Lovely Lane, Vista
San Mateo, Lewis Freeman, 208 Barneson Ave., San Mateo
Santa Barbara, 9/15/64 & 1/5/65, James Collinge, Rt. 1, Box 19C, Carpinteria
Santa Clara, Wm. Bartlett, 335 N. Murphy Ave., Sunnyvale
Santa Monica Bay, Richard Wills, 11323 Hannum Ave., Culver City
Santana, Merle Henderson, 625 S. Sherrill St., Anaheim
Van Nuys, 9/16/64, Gilbert Honsinger, 4555 Lemp Ave., N. Hollywood
Ventura, Robert Musselman, 76 Imperial St., Ventura
Walnut Creek, 9/15/64, Richard T. Spragens, 942 First St., Lafayette
Whittier, 9/14/64, Harry Humason, 14533 Cedarsprings Dr., Whittier

CONNECTICUT

Berlin, 9/21/64, Robert Woods, 25 Usher Ave., Plainville
Darien, 9/21/64, Edward Geise, 54 Pembroke Rd., Darien
East Hartford, 9/15/64, Wilmar Scheld, 102 Coleman Rd., Wethersfield
East Norwalk, 9/8/64, John McKale, 37 Topfield Rd., Wilton
Fairfield, 9/10/64, John Bombard, 116 Edna Ave., Bridgeport
Farmington, 9/16/64, Wilmar Scheld, 102 Coleman Rd., Wethersfield
Greenwich, 9/14/64 & 1/11/65, G. R. Bernier, 79 Houston Ter., Stamford
Lake Candlewood, Peyton Gibson, RR 2, New Milford
Manchester, 9/30/64, Robert Schettler, 31 Flower St., Manchester
Meriden 9/29/64, David Rosebrugh, 66 Maple Ave., Meriden
Middletown, 9/14/64, Herbert Williamson, 17 Grove Rd., Cromwell
Milford, Anthony Gardocki, 247 North St., Milford
New Haven, Robert Levett, 160 Laurel Rd., New Haven
New London, Stanley Day, 126 Maxson Road, Ext., Groton
Norwich, 9/15/64, John Dynon, 116 Mowry Ave., Norwich
Riverside, 9/15/64, Daniel Moger, Riverside Ave., Riverside
Rockville, 10/6/64, Robert Schettler, 31 Flower St., Manchester
Rowayton, 9/10/64, Gennet Becker, 13 Douglas Rd., New Canann
Saybrook, 9/15/64, James Harding, RFD 2, Lyme
Stamford, Eugene Titsworth, 206 Cold Spring Rd., Stamford
Stratford, 9/15/64, John Bombard, 116 Edna Ave., Bridgeport
Waterbury, Frederick Hosmann, 131 Pine Ridge Rd., Waterbury
W. Hartford, 9/17/64, Wilmar Scheld, 102 Coleman Rd., Wethersfield
Westport, 9/10/64, Elias Fass, 1082 N. Benson Rd., Fairfield
Wethersfield, 9/14/64, Wilmar Scheld, 102 Coleman Rd., Wethersfield

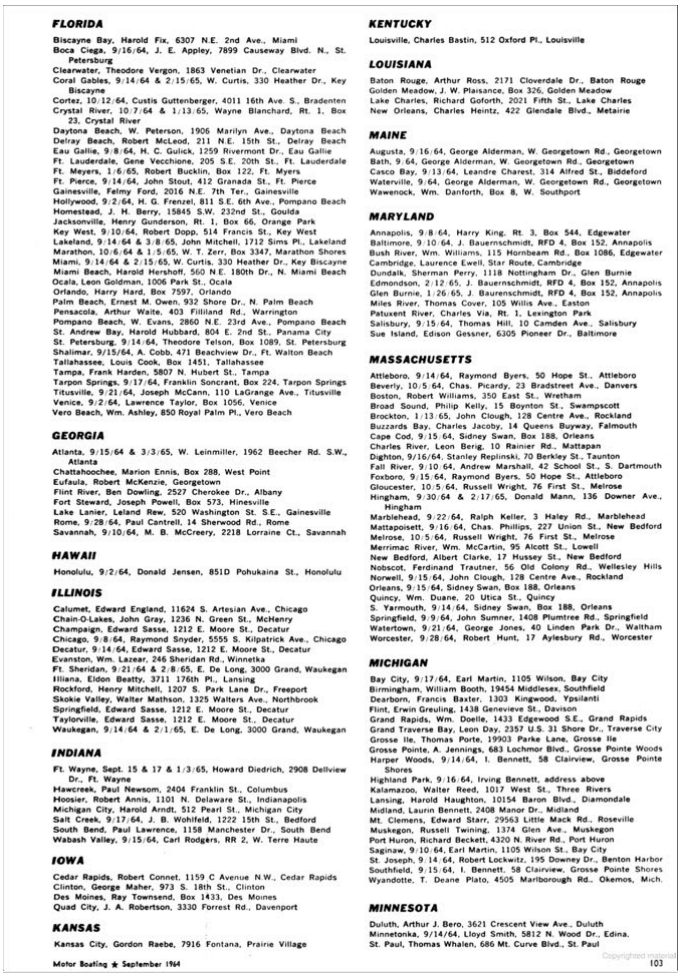
DELAWARE

Georgetown, 9/16/64, Harold Cole, 311 Pine St., Seaford
Northeast River, H. G. Jones, 906 Babylon Ave., Newark
Seaford, 9/17/64, Harold Cole, 311 Pine St., Seaford
Wilmington, Robert Blair, 3709 Valley Brook Dr., Wilmington

DISTRICT OF COLUMBIA

Washington, Sept. 16, 23 & 24, Clifford Werlla, 10013 Portland Pl., Silver Spring, Md.

[HP002E][GDrive]



FLORIDA

Biscayne Bay, Harold Fix, 6307 N.E. 2nd Ave., Miami
Boca Ciega, 9/16/64, J. E. Appley, 7899 Causeway Blvd. N., St. Petersburg
Clearwater, Theodore Vergon, 1863 Venetian Dr., Clearwater
Coral Gables, 9/14/64 & 2/15/65, W. Curtis, 330 Heather Dr., Key Biscayne
Cortez, 10/12/64, Custis Guttenberger, 4011 16th Ave. S., Bradenten
Crystal River, 10/7/64 & 1/13/65, Wayne Blanchard, Rt. 1, Box 23, Crystal River
Daytona Beach, W. Peterson, 1906 Marilyn Ave., Daytona Beach
Delray Beach, Robert McLeod, 211 N.E. 15th St., Delray Beach
Eau Gallie, 9/8/64, H. C. Gulick, 1259 Rivermont Dr., Eau Gallie
Ft. Lauderdale, Gene Vecchione, 205 S.E. 20th St., Ft. Lauderdale
Ft. Meyers, 1/6/65, Robert Bucklin, Box 122, Ft. Myers
Ft. Pierce, 9/14/64, John Stout, 412 Granada St., Ft. Pierce
Gainesville, Felmy Ford, 2016 N.E. 7th Ter., Gainesville
Hollywood, 9/2/64, H. G. Frenzel, 811 S.E. 6th Ave., Pompano Beach
Homestead, J. H. Berry, 15845 S.W. 232nd St., Goulda
Jacksonville, Henry Gunderson, Rt. 1, Box 66, Orange Park
Key West, 9/10/64, Robert Dopp, 514 Francis St., Key West
Lakeland, 9/14/64 & 3/8/65, John Mitchell, 1712 Sims Pl., Lakeland
Marathon, 10/6/64 & 1/5/65, W. T. Zerr, Box 3347, Marathon Shores
Miami, 9/14/64 & 2/15/65, W. Curtis, 330 Heather Dr., Key Biscayne
Miami Beach, Harold Hershoff, 560 N.E. 180th Dr., N. Miami Beach
Ocala, Leon Goldman, 1006 Park St., Ocala
Orlando, Harry Hard, Box 7597, Orlando
Palm Beach, Ernest M. Owen, 932 Shore Dr., N. Palm Beach
Pensacola, Arthur Waite, 403 Fillland Rd., Warrington
Pompano Beach, W. Evans, 2860 N.E. 23rd Ave., Pompano Beach
St. Andrew Bay, Harold Hubbard, 804 E. 2nd St., Panama City
St. Petersburg, 9/14/64, Theodore Telson, Box 1089, St. Petersburg
Shalimar, 9/15/64, A. Cobb, 471 Beachview Dr., Ft. Walton Beach
Tallahassee, Louis Cook, Box 1451, Tallahassee
Tampa, Frank Harden, 5807 N. Hubert St., Tampa
Tarpon Springs, 9/17/64, Franklin Soncrant, Box 224, Tarpon Springs
Titusville, 9/21/64, Joseph McCann, 110 LaGrange Ave., Titusville
Venice, 9/2/64, Lawrence Taylor, Box 1056, Venice
Vero Beach, Wm. Ashley, 850 Royal Palm Pl., Vero Beach

GEORGIA

Atlanta, 9/15/64 & 3/3/65, W. Leinmiller, 1962 Beecher Rd. S.W., Atlanta
Chattahoochee, Marion Ennis, Box 288, West Point
Eufaula, Robert McKenzie, Georgetown
Flint River, Ben Dowling, 2527 Cherokee Dr., Albany
Fort Steward, Joseph Powell, Box 573, Hinesville
Lake Lanier, Leland Rew, 520 Washington St. S.E., Gainesville
Rome, 9/28/64, Paul Cantrell, 14 Sherwood Rd., Rome
Savannah, 9/10/64, M. B. McCreery, 2218 Lorraine Ct., Savannah

HAWAII

Honolulu, 9/2/64, Donald Jensen, 851D Pohukaina St., Honolulu

ILLINOIS

Calumet, Edward England, 11624 S. Artesian Ave., Chicago
Chain-O-Lakes, John Gray, 1236 N. Green St., McHenry
Champaign, Edward Sasse, 1212 E. Moore St., Decatur
Chicago, 9/8/64, Raymond Snyder, 5555 S. Kilpatrick Ave., Chicago
Decatur, 9/14/64, Edward Sasse, 1212 E. Moore St., Decatur
Evanston, Wm. Lazear, 246 Sheridan Rd., Winnetka
Ft. Sheridan, 9/21/64 & 2/8/65, E. De Long, 3000 Grand, Waukegan
Illiana, Eldon Beatty, 3711 176th Pl., Lansing
Rockford, Henry Mitchell, 1207 S. Park Lane Dr., Freeport
Skokie Valley, Walter Mathson, 1325 Walters Ave., Northbrook
Springfield, Edward Sasse, 1212 E. Moore St., Decatur
Taylorville, Edward Sasse, 1212 E. Moore St., Decatur
Waukegan, 9/14/64 & 2/1/65, E. De Long, 3000 Grand, Waukegan

INDIANA

Ft. Wayne, Sept. 15 & 17 & 1/3/65, Howard Diedrich, 2908 Dellview Dr., Ft. Wayne
Hawcreek, Paul Newsom, 2404 Franklin St., Columbus
Hoosier, Robert Annis, 1101 N. Delaware St., Indianapolis
Michigan City, Harold Arndt, 512 Pearl St., Michigan City
Salt Creek, 9/17/64, J. B. Wohlfeld, 1222 15th St., Bedford
South Bend, Paul Lawrence, 1158 Manchester Dr., South Bend
Wabash Valley, 9/15/64, Carl Rodgers, RR 2, W. Terre Haute

IOWA

Cedar Rapids, Robert Connet, 1159 C Avenue N.W., Cedar Rapids
Clinton, George Maher, 973 S. 18th St., Clinton
Des Moines, Ray Townsend, Box 1433, Des Moines
Quad City, J. A. Robertson, 3330 Forrest Rd., Davenport

KANSAS

Kansas City, Gordon Raebe, 7916 Fontana, Prairie Village

KENTUCKY

Louisville, Charles Bastin, 512 Oxford Pl., Louisville

LOUISIANA

Baton Rouge, Arthur Ross, 2171 Cloverdale Dr., Baton Rouge
Golden Meadow, J. W. Plaisance, Box 326, Golden Meadow
Lake Charles, Richard Goforth, 2021 Fifth St., Lake Charles
New Orleans, Charles Heintz, 422 Glendale Blvd., Metairie

MAINE

Augusta, 9/16/64, George Alderman, W. Georgetown Rd., Georgetown
Bath, 9/64, George Alderman, W. Georgetown Rd., Georgetown
Casco Bay, 9/13/64, Leandre Charest, 314 Alfred St., Biddeford
Waterville, 9/64, George Alderman, W. Georgetown Rd., Georgetown
Wawenock, Wm. Danforth, Box 8, W. Southport

MARYLAND

Annapolis, 9/8/64, Harry King, Rt. 3, Box 544, Edgewater
Baltimore, 9/10/64, J. Bauernschmidt, RFD 4, Box 152, Annapolis
Bush River, Wm. Williams, 115 Hornbeam Rd., Box 1086, Edgewater
Cambridge, Laurence Ewell, Star Route, Cambridge
Dundalk, Sherman Perry, 1118 Nottingham Dr., Glen Burnie
Edmondson, 2/12/65, J. Bauernschmidt, RFD 4, Box 152, Annapolis
Glen Burnie, 1/26/65, J. Bauernschmidt, RFD 4, Box 152, Annapolis
Miles River, Thomas Cover, 105 Willis Ave., Easton
Patuxent River, Charles Via, Rt. 1, Lexington Park
Salisbury, 9/15/64, Thomas Hill, 10 Camden Ave., Salisbury
Sue Island, Edison Gessner, 6305 Pioneer Dr., Baltimore

MASSACHUSETTS

Attleboro, 9/14/64, Raymond Byers, 50 Hope St., Attleboro
Beverly, 10/5/64, Chas. Picardy, 23 Bradstreet Ave., Danvers
Boston, Robert Williams, 350 East St., Wretham
Broad Sound, Philip Kelly, 15 Boynton St., Swampscott
Brockton, 1/13/65, John Clough, 128 Centre Ave., Rockland
Buzzards Bay, Charles Jacoby, 14 Queens Buyway, Falmouth
Cape Cod, 9/15/64, Sidney Swan, Box 188, Orleans
Charles River, Leon Berig, 10 Rainier Rd., Mattapan
Dighton, 9/16/64, Stanley Replinski, 70 Berkley St., Taunton
Fall River, 9/10/64, Andrew Marshall, 42 School St., S. Dartmouth
Foxboro, 9/15/64, Raymond Byers, 50 Hope St., Attleboro
Gloucester, 10/5/64, Russell Wright, 76 First St., Melrose
Hingham, 9/30/64 & 2/17/65, Donald Mann, 136 Downer Ave., Hingham
Marblehead, 9/22/64, Ralph Keller, 3 Haley Rd., Marblehead
Mattapoisett, 9/16/64, Chas. Phillips, 227 Union St., New Bedford
Melrose, 10/5/64, Russell Wright, 76 First St., Melrose
Merrimac River, Wm. McCartin, 95 Alcott St., Lowell
New Bedford, Albert Clarke, 17 Hussey St., New Bedford
Nobscot, Ferdinand Trautner, 56 Old Colony Rd., Wellesley Hills
Norwell, 9/15/64, John Clough, 128 Centre Ave., Rockland
Orleans, 9/15/64, Sidney Swan, Box 188, Orleans
Quincy, Wm. Duane, 20 Utica St., Quincy
S. Yarmouth, 9/14/64, Sidney Swan, Box 188, Orleans
Springfield, 9/9/64, John Sumner, 1408 Plumtree Rd., Springfield
Watertown, 9/21/64, George Jones, 40 Linden Park Dr., Waltham
Worcester, 9/28/64, Robert Hunt, 17 Aylesbury Rd., Worcester

MICHIGAN

Bay City, 9/17/64, Earl Martin, 1105 Wilson, Bay City
Birmingham, William Booth, 19454 Middlesex, Southfield
Dearborn, Francis Baxter, 1303 Kingwood, Ypsilanti
Flint, Erwin Greuling, 1438 Genevieve St., Davison
Grand Rapids, Wm. Doelle, 1433 Edgewood S.E., Grand Rapids
Grand Traverse Bay, Leon Day, 2357 U.S. 31 Shore Dr., Traverse City
Grosse Ile, Thomas Porte, 19903 Parke Lane, Grosse Ile
Grosse Pointe, A. Jennings, 683 Lochmor Blvd., Grosse Pointe Woods
Harper Woods, 9/14/64, I. Bennett, 58 Clairview, Grosse Pointe Shores
Highland Park, 9/16/64, Irving Bennett, address above
Kalamazoo, Walter Reed, 1017 West St., Three Rivers
Lansing, Harold Haughton, 10154 Baron Blvd., Diamondale
Midland, Laurin Bennett, 2408 Manor Dr., Midland
Mt. Clemens, Edward Starr, 29563 Little Mack Rd., Roseville
Muskegon, Russell Twining, 1374 Glen Ave., Muskegon
Port Huron, Richard Beckett, 4320 N. River Rd., Port Huron
Saginaw, 9/10/64, Earl Martin, 1105 Wilson St., Bay City
St. Joseph, 9/14/64, Robert Lockwitz, 195 Downey Dr., Benton Harbor
Southfield, 9/15/64, I. Bennett, 58 Clairview, Grosse Pointe Shores
Wyandotte, T. Deane Plato, 4505 Marlborough Rd., Okemos, Mich.

MINNESOTA

Duluth, Arthur J. Bero, 3621 Crescent View Ave., Duluth
Minnetonka, 9/14/64, Lloyd Smith, 5812 N. Wood Dr., Edina.
St. Paul, Thomas Whalen, 686 Mt. Curve Blvd., St. Paul

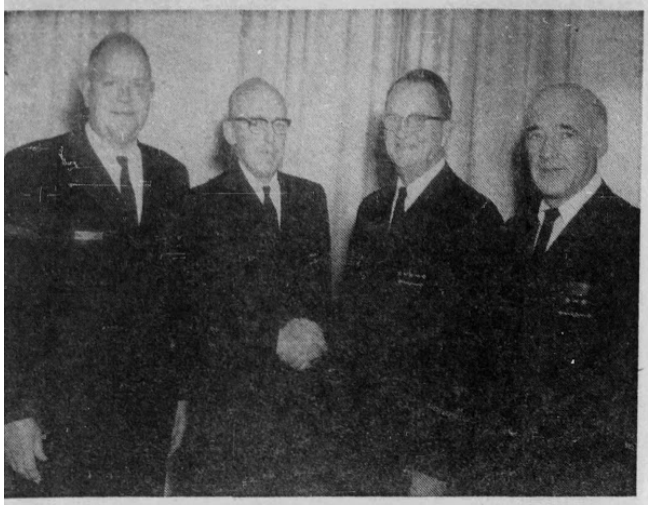
[HP002F][GDrive]

1968 (April)

Donald Man is with coast guard Auxiliary / power squadron

Full page : [HN00PX][GDrive]

Power Squadron, Coast Guard Auxiliary join hands



NEW BRIDGE of District 12, U.S. Power Squadrons, is shown here with retiring commander. Cmdr James Adam Jr., second left, is congratulated by his predecessor, Past Cmdr Cushing Ellis. At right is Lt Cmdr Robert L. Williams, new executive officer, and at left is Lt Cmdr Arthur C. Hill, administrative officer. (Robert Stilwell Photo)

By BARRY CADIGAN
Boating Editor

Boating's two biggest assets, the U.S. Power Squadron and Coast Guard Auxiliary, have engaged in serious talk on the local level searching for more meaningful cooperation between the two groups.

Instead of harmony and cooperation being mere platitudes on the highest levels, officials of the 1st Coast Guard District of Auxiliary and District 12 (Greater Boston as far as Worcester) actually sat down and compared notes.

The occasion was the 21st Spring Conference, annual meeting and change of watch of District 12, held last week at new Ocean House in Swampscott, a meeting that saw James Adam Jr. of Nobscot Squadron and Wellesley, take over from Cushing Ellis district commander.

Guests during the day-long meeting were Rear Adm. W. W. Childress, commander of the 1st Coast Guard District and District Commodore Ralph W. Anthony, top Auxiliarist in New England.

Adm Childress, one of the finest friends pleasure boating has ever had as commander of the district that includes most of New England, pointed up the similarities between the two groups—Power Squadrons and Auxiliary—and called for an even "closer cooperation" between the two sets of boating volunteers.

"The dynamic programs in boating education pursued by your members," said Adm Childress "have immeasureably aided the Coast Guard's safe boating program."

Commodore Anthony, a member of U.S.P.S. himself since 1946 (three years after joining the Auxiliary), asserted that he has already discussed with U.S.P.S. officials means for better cooperation.

He said arrangements have been made for the two groups to "sit down immediately to work out better, more closer paths" toward the common goal of safety afloat.

District Cmdr Adam, a civil engineer who was Nobscot's first commander six years ago and who does his boating aboard a 32-foot Pacemaker called Great Scot, promised renewed vigor in district programs especially calling for the district safety committee to become a real leader in the boating safety crusade.

Adam told the squadron officials present that every member of U.S.P.S. should be given some job.

"If he was really active you probably couldn't drive him out of U.S.P.S.," said Adam as he gave his cure for the organization's drop-out problem.

Continued growth of the organization nationally was traced by National Vice Cmdr Carl F. Just, who said increased numbers taking piloting classes have been reflected in new admissions annually going from 4700 in 1965 to 6600 at the latest count.

U.S.P.S. now stands at some 70,000 members in 369 separate squadrons.

National Rear Cmdr Jack T. Rehberg, national chairman of engine maintenance course, reported on a number of revisions being made in different course materials used by U.S.P.S.

Officers of District 12 sworn in with Cmdr Adam were Robert L. Williams, executive officer; Arthur C. Hill, administrative officer; Hubert M. Scott, secretary, and Thaxter A. Williams, treasurer.

Cited for 10 years' service to the district as treasurer was James H. Connington, while Warren A. Ellsworth was singled out for five years' service as secretary. A special citation for services above and beyond the call of duty went to veteran District Education Officer Samuel S. Lord.

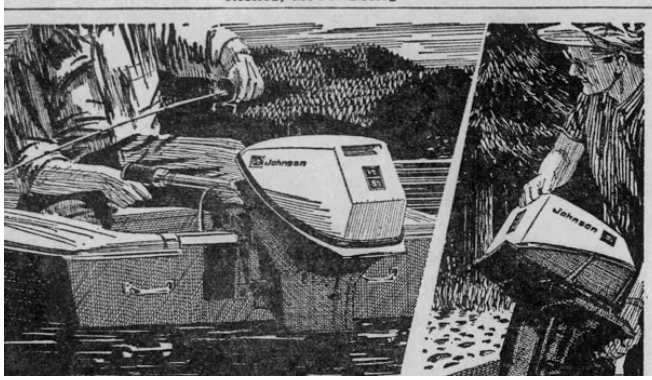
Appointments for the coming year made by Cmdr Adam included:

Donald Mann, assistant education officer; A. Francis Townsend, admissions; Chester W. Wilson, by-laws and historian; Arthur H. Melanson, chaplain; Charles E. Latham-Brown, commanders cup; and Henry R. Lambert Jr., conference committee.

Also, John Slavin, cooperative charting; William J. Maher, ensign correspondent; Ernest P. Sothman, entertainment; Cushing W. Ellis, finance; Leroy V. Calish, display, and Dana W. Hanchett, flag lieutenant.

Others, Syldon G. Bowie, government liaison; Chester E. Thompson, graphic arts; John F. Sullivan, law; Francis Crowe, legislative; Everett V. Mason, planning; Robert W. Stillwell, photographer; Arthur P. Morris, public relations; Hugo A. N. Semm, radio technical; H. Leroy Newbold, roster; Leon Berig, safety, and Frank A. Morrison, Robert S. Prescott, George J. Jones and Richard F. Cullen, aides.

YACHTS, MOTORBOATS



[HN00PY][GDrive]

1965 - Son Bruce H Mann living in Hingham Massachusetts / Winner of 1965 Scholarship

See [HN00PJ][GDrive]

Winners of the 1965 OIL HEAT Scholarship Awards

The independent fuel oil dealers of Eastern Massachusetts who display the Sleeping Baby Symbol are pleased to announce the names of the 34 winners who share in the $21,000.00 1965 Oil Heat Scholarship Awards. The winners were selected from entrants in an essay competition on the subject: Home . . . Building Block for the Future. The independent fuel oil dealers who have joined together to make these awards possible re-affirm their pledge to safeguard the warmth and security of the homes of their customers.

The winners are:

$1,000.00

Marc Biesoff 223 Lawrence Road, Medford
John Collins 37 Vincent Avenue, Worcester
Nancy Marion Dodge 23 Wyman Road, Lexington
Rita T. Donovan 44 Emmonsdale Road, West Roxbury
Joseph Malay 11 Haskell Street, Beverly Farms
Bruce Hartling Mann 136 Downer Avenue, Hingham
Marlene Rubitsky 61 Locust Street, Winthrop
Paula Stone 46 Greenlawn Avenue, Newton Centre

$500.00

Catherine Aylward 6 Stanton Street, Dorchester
Cynthia Ballentine County Road, North Falmouth
John Emond 39 Elm Street, Saugus
Noel A. Ward 3 Oakland Street, Lexington
Deborah Handy 12 Middle Street, Woods Hole
Gail Hanson Coolidge Road, Norwell
Barbara Ann Harmacinski 236 Sladen Street, Dracut
Marie Jeannette Hayes 19 Rosemary Street, Norwood
Nancy Hewett 150 Wheeler Street, Gloucester
Robert Hunter 648 Hammond Street, Brookline
Geraldine M. Kelleher 192 Andover St., Georgetown
Patricia Lewis 4 Branch Road, South Weymouth
Paula Lynch 37 Whitman Street, Lawrence

Deidre Susan Karem 50 Broadsound Avenue, Revere
Patricia M. McGrath 29 Ripley Road, Belmont
Jeremiah A. McQuillan 3 Glen Street, Marlboro
Martha A. Morrison 26 Jones Avenue, Chelsea
William Naas 14 Elva Road, No. Weymouth
Anne Pierce 165 Upland Road, Cambridge
Martha Chilton Pye 28 Spring Street, Hanson
Lorraine A. Salois 98 Blackstone Street, Blackstone
Gail Shindler 305 Mason Terrace, Brookline
Jean Sullivan 9 Tuttle Street, Saugus
Holly Underwood Reservoir Road, Lunenburg
Joan Warchol 11 Savage Street, Haverhill
Regina Marie Williams 17 Salman Street, West Roxbury

Congratulations to all from the fuel oil dealers who display the sleeping baby symbol

[HN00PJ][GDrive]

1972 (June) - Father Harold Cornelius Mann passes

Father Harold Cornelius Mann (born 1892) passes.

(also see https://www.newspapers.com/image/435448607/?terms=%22donald%2Bmann%22)

Full page : [HN00PM][GDrive]

Harold Mann

Retired metallurgist

CUMMAQUID — Harold C. Mann, 80, of Keveney Lane died yesterday at his home. He was a retired engineer in metalurgy.

Born in Dorchester, and a former resident of Watertown and Arlington, Mr. Mann was a former employee of the Watertown Arsenal. He also was a member of the Howard Lodge AF & AM of South Yarmouth.

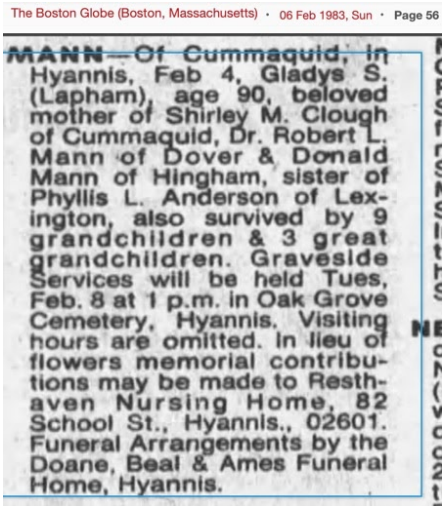
He is survived by his wife, Gladys S. (Lapham) Mann; two sons, Robert L. Mann of Dover and Donald Mann of Hingham; a daughter, Mrs. Shirley Klough of Cummaquid; nine grandchildren, and two great-grandchildren.

The Boston Globe (Boston, Massachusetts) · 08 Jun 1972, Thu · Page 31

[HN00PN][GDrive]

1983 (Feb) - Mother passes

Full page : [HN00PZ][GDrive]



The Boston Globe (Boston, Massachusetts) · 06 Feb 1983, Sun · Page 56

MANN — Of Cummaquid, in Hyannis, Feb 4, Gladys S. (Lapham), age 90, beloved mother of Shirley M. Clough of Cummaquid, Dr. Robert L. Mann of Dover & Donald Mann of Hingham, sister of Phyllis L. Anderson of Lexington, also survived by 9 grandchildren & 3 great grandchildren. Graveside Services will be held Tues, Feb. 8 at 1 p.m. in Oak Grove Cemetery, Hyannis. Visiting hours are omitted. In lieu of flowers memorial contributions may be made to Resthaven Nursing Home, 82 School St., Hyannis., 02601. Funeral Arrangements by the Doane, Beal & Ames Funeral Home, Hyannis.

[HN00Q0][GDrive]

2007 (June) - Donald Mann passes

See [HL003C][GDrive] :

"Donald Mann of Hingham died June 15, 2007. He leaves his wife, Geraldine M. Mann; his children, Bruce H. Mann of Cambridge, Jeffrey S. Mann of Hingham and Gretchen L. Zopatti of Plymouth; four grandchildren; and two great-grandchildren. Funeral services and interment were private. Arrangements were handled by Downing Cottage Funeral Chapel, Hingham."

Donald Mann

Add a Memory | Share This Page

MANN Donald, of Hingham, June 15th, husband of Geraldine M. Mann of Hingham. Father of Bruce H. Mann of Cambridge, Jeffrey S. Mann of Hingham and Gretchen L. Zopatti of Plymouth. Also survived by 4 grandchildren and 2 great-grandchildren. The Funeral Service and interment were private. Visiting hours and flowers omitted by family request. Arrangements by the Downing Cottage Funeral Chapel, Hingham. www.dowingchapel.com

Published in The Patriot Ledger from June 19 to June 20, 2007

[HL003D][GDrive]

BITCHUTE @Housatonic YOUTUBE @HousatonicLive ODYSEE @Housatonic BRIGHTEON @Housatonic

Housatonic

Bruce Hartling Mann (born 1950)

Wikipedia Bruce H. Mann

Born : April 27, 1950 (age 69) in Cambridge, Massachusetts, USA [HK001O][GDrive]

Father - **Donald Mann** (born 1922)

Grandfather - **Harold Cornelius Mann** (born 1892)

Spouse(s) : Elizabeth Warren (m. 1980) [HK001O][GDrive]

Wikipedia capture (Oct 11 2019)

See [HK001O][GDrive]

Academic background / Education

Brown University (BA, MA)

Yale University (MPhil, JD, PhD)

Thesis

"Rationality, Legal Change, and Community in Connecticut, 1690–1760."

Academic workInstitutions

Harvard Law School

Washington University in St. Louis

Bruce Hartling Mann (born April 27, 1950)[1] is the Carl F. Schipper, Jr. Professor of Law at Harvard Law School, and the husband of U.S. Senator Elizabeth Warren. He is a legal historian whose research focuses on the relationship among legal, social, and economic change in early America.[2] He began teaching at Harvard Law School in 2006, after being the Leon Meltzer Professor of Law and Professor of History at the University of Pennsylvania Law School.

Education

Mann graduated in 1968 from Hingham High School in Hingham, Massachusetts.

Mann holds A.B. and A.M. degrees from Brown University (1972) and M.Phil., J.D., and Ph.D. degrees from Yale University (1975, 1975, and 1977, respectively). His dissertation is titled "Rationality, Legal Change, and Community in Connecticut, 1690–1760." Mann has been licensed to practice law in Connecticut since 1975.

Career

After graduation, Mann taught at the University of Connecticut School of Law, Washington University in St. Louis, University of Houston, University of Texas, University of Michigan, and the history department at Princeton University. In 1987, Mann started to teach at the University of Pennsylvania Law School.

He is the author of *Neighbors and Strangers: Law and Community in Early Connecticut* (2001) and *Republic of Debtors: Bankruptcy in the Age of American Independence* (2009).

Personal life

Mann is married to Elizabeth Warren (née Herring), the senior United States Senator from Massachusetts and a former law professor. Warren proposed to Mann after he had finished teaching a property class that she had sat in on. Warren officially announced her candidacy for president of the United States on February 8, 2019.

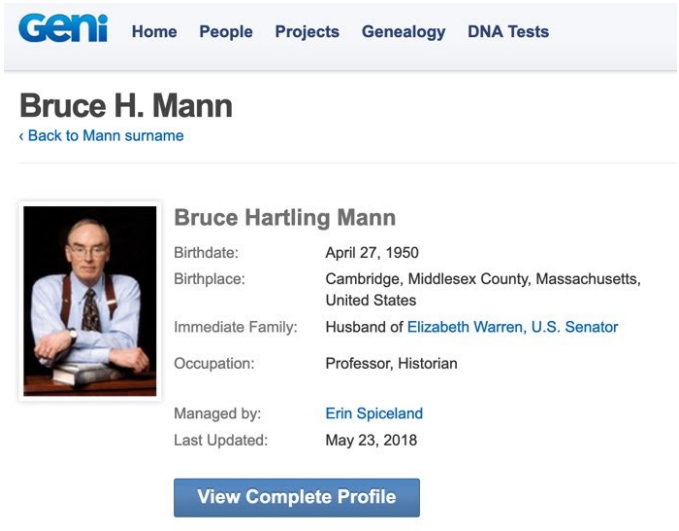
Awards

- SHEAR Book Prize from the Society for Historians of the Early American Republic.
- Littleton-Griswold Prize from the American Historical Association.
- J. Willard Hurst Prize from the Law and Society Association

Information about parents/family of Bruce H. Mann is not being disclosed (as of Oct 2019)

See [HL003A][GDrive]

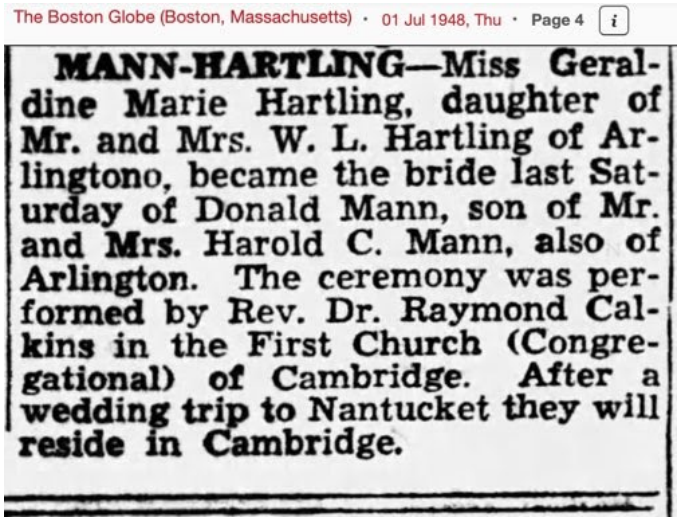
"Born Bruce Hartling Mann / April 27, 1950 (age 69) in Cambridge, Massachusetts, U.S."



[HL003B][GDrive]

1948 (June) - Father Donald Mann 's wedding

Full page - [HN00PF][GDrive]



The Boston Globe (Boston, Massachusetts) · 01 Jul 1948, Thu · Page 4

MANN-HARTLING—Miss Geraldine Marie Hartling, daughter of Mr. and Mrs. W. L. Hartling of Arlingtono, became the bride last Saturday of Donald Mann, son of Mr. and Mrs. Harold C. Mann, also of Arlington. The ceremony was performed by Rev. Dr. Raymond Calkins in the First Church (Congregational) of Cambridge. After a wedding trip to Nantucket they will reside in Cambridge.

[HN00PG][GDrive]

1965 - Bruce H Mann living in Hingham Massachusetts / Winner of 1965 Scholarship

See [HN00PJ][GDrive]

Winners of the 1965 OIL HEAT Scholarship Awards

The independent fuel oil dealers of Eastern Massachusetts who display the Sleeping Baby Symbol are pleased to announce the names of the 34 winners who share in the $21,000.00 1965 Oil Heat Scholarship Awards. The winners were selected from entrants in an essay competition on the subject: Home . . . Building Block for the Future. The independent fuel oil dealers who have joined together to make these awards possible re-affirm their pledge to safeguard the warmth and security of the homes of their customers.

The winners are:

$1,000.00

Marc Biesoff 223 Lawrence Road, Medford
John Collins 37 Vincent Avenue, Worcester
Nancy Marion Dodge 23 Wyman Road, Lexington
Rita T. Donovan 44 Emmonsdale Road, West Roxbury
Joseph Malay 11 Haskell Street, Beverly Farms
Bruce Hartling Mann 136 Downer Avenue, Hingham
Marlene Rubitsky 61 Locust Street, Winthrop
Paula Stone 46 Greenlawn Avenue, Newton Centre

$500.00

Catherine Aylward 6 Stanton Street, Dorchester
Cynthia Ballentine County Road, North Falmouth
John Emond 39 Elm Street, Saugus
Noel A. Ward 3 Oakland Street, Lexington
Deborah Handy 12 Middle Street, Woods Hole
Gail Hanson Coolidge Road, Norwell
Barbara Ann Harmacinski 236 Sladen Street, Dracut
Marie Jeannette Hayes 19 Rosemary Street, Norwood
Nancy Hewett 150 Wheeler Street, Gloucester
Robert Hunter 648 Hammond Street, Brookline
Geraldine M. Kelleher 192 Andover St., Georgetown
Patricia Lewis 4 Branch Road, South Weymouth
Paula Lynch 37 Whitman Street, Lawrence

Deidre Susan Karem 50 Broadsound Avenue, Revere
Patricia M. McGrath 29 Ripley Road, Belmont
Jeremiah A. McQuillan 3 Glen Street, Marlboro
Martha A. Morrison 26 Jones Avenue, Chelsea
William Naas 14 Elva Road, No. Weymouth
Anne Pierce 165 Upland Road, Cambridge
Martha Chilton Pye 28 Spring Street, Hanson
Lorraine A. Salois 98 Blackstone Street, Blackstone
Gail Shindler 305 Mason Terrace, Brookline
Jean Sullivan 9 Tuttle Street, Saugus
Holly Underwood Reservoir Road, Lunenburg
Joan Warchol 11 Savage Street, Haverhill
Regina Marie Williams 17 Salman Street, West Roxbury

Congratulations to all from the fuel oil dealers who display the sleeping baby symbol

[HN00PJ][GDrive]

1968 - Bruce H Mann of Hingham received National Merit Scholarship

Full page : [HN00PK][GDrive]

The Boston Globe (Boston, Massachusetts) · 02 May 1968, Thu · Page 14

National Merit Scholarships

Fifty-nine talented Massachusetts high school students have been named winners of National Merit Scholarships and admitted to colleges of their choice next Fall.

Boston College High School and Lexington High School tied for individual honors in Massachusetts with four winners each. Phillips Exeter Academy, Exeter, N.H. led all New England schools with 11 winners.

Among the more than 2800 winners announced today are 500 students receiving the first "National Merit $1000 Scholarships."

Following is a list of winners from Massachusetts:

Robert L. Collings, Allston; Janet R. Potash, Amherst; William Burroughs, Arlington; John C. Stearns, Auburn; Robert E. Shapiro, Belmont; Albion R. Fletcher, Braintree; William J. Keane, Brighton; Burton E. Rosenthal, Brookline; Stephen P. Darcy, Cambridge; John W. Keene, Centerville; Evelyn Chimelis, Chicopee; Matt S. Magoun, Cochituate; Warren R. Judd, Cohasset; David L. Clark, Dennis; James J. Little, Dorchester; Stephen J. Maguire Dorchester; Michael L. Ziegler, East Weymouth; Mary E. Black, Fairhaven; Michael R. Harris, Hamilton; Jonathan R. Harris, Haverhill; Bruce H. Mann, Hingham; and Forrest G. Clark, Holliston.

Also David L. Wernick, Holyoke; Eva B. Pitha, Lenox; Cedric C. Chao, Lexington; David A. Grayson, Lexinton; Ruth M. Ritter, Lexington; Mark J. Woodward, Lexington; Ellen J. Messing, Longmeadow; Robert N. Shapiro, Marblehead; Arthur P. Bergeron, Marlboro; Christine Peterson, Melrose; Richard C. Compton, Mount Hermon; Susan E. McCarthy, Newton Lower Falls; Gretchen L. Mueller, Newtonville; Robert C. Weiss, Newtonville; Vernon J. Harward, Northampton; Robin C. Rekas, Northbridge; Dana D. Craig, Norwood; John J. Bennett, Quincy and Dianne G. Lindewall, Quincy.

Also Keith D. White, Reading; Carol J. Garner, Sagamore; Katharine Anderson, Sheffield; Christine Darby, Sherborn; George R. Odell, Shirley Center; Margaret A. Power, Somerville; Jennifer N. Waters, South Hadley; Elaine C. Todd, Stoneham; Robert A. Snowdale, Stoughton; Paul E. Bailey, Swampscott; Albert W. Sprague, Walpole; James J. Heffernan, Watertown; Regina Schwabe, Wayland; Robert E. Kossack, Westboro; Stephen J. Roper, Westminster; Mark S. Dionne, Westwood; Peter K. Enberg, Westwood and Dean R. Gallant, Winchester.

[HN00PL][GDrive]

1972 (June) - Grandfather Harold Cornelius Mann passes

Full page : [HN00PM][GDrive]

Harold Mann

Retired metallurgist

CUMMAQUID — Harold C. Mann, 80, of Keveney Lane died yesterday at his home. He was a retired engineer in metalurgy.

Born in Dorchester, and a former resident of Watertown and Arlington, Mr. Mann was a former employee of the Watertown Arsenal. He also was a member of the Howard Lodge AF & AM of South Yarmouth.

He is survived by his wife, Gladys S. (Lapham) Mann; two sons, Robert L. Mann of Dover and Donald Mann of Hingham; a daughter, Mrs. Shirley Klough of Cummaquid; nine grandchildren, and two great-grandchildren.

The Boston Globe (Boston, Massachusetts) · 08 Jun 1972, Thu · Page 31

[HN00PN][GDrive]

2007 (June) - Father passes

Father Donald Mann (born 1922) passes. See [HL003C][GDrive] :

"Donald Mann of Hingham died June 15, 2007. He leaves his wife, Geraldine M. Mann; his children, Bruce H. Mann of Cambridge, Jeffrey S. Mann of Hingham and Gretchen L. Zopatti of Plymouth; four grandchildren; and two great-grandchildren. Funeral services and interment were private. Arrangements were handled by Downing Cottage Funeral Chapel, Hingham."

Donald Mann

Add a Memory Share This Page

MANN Donald, of Hingham, June 15th, husband of Geraldine M. Mann of Hingham. Father of Bruce H. Mann of Cambridge, Jeffrey S. Mann of Hingham and Gretchen L. Zopatti of Plymouth. Also survived by 4 grandchildren and 2 great-grandchildren. The Funeral Service and interment were private. Visiting hours and flowers omitted by family request. Arrangements by the Downing Cottage Funeral Chapel, Hingham. www.dowingchapel.com

Published in The Patriot Ledger from June 19 to June 20, 2007

[HL003D][GDrive]

Book -

Download - [HB002O][GDrive] / PDF downlaod of one section - [HB002P][GDrive]

Melissa Ann (Colvin) Mann (born 1965)

Born : Melissa Mann was born on 11/30/1965 [HL002N][GDrive]

Melissa Ann Mann (born **Melissa Ann Colvin**) is the daughter of **Joseph Frederick Colvin (born 1942)** .

Melissa Mann currently lives in Washington, DC; in the past Melissa has also lived in Takoma Park MD. Other names that Melissa uses includes Melissa Colvin, Melissa A Colvin, Melissa Anne Colvin, Melissa C Mann and Melissa Colvin Mann. [HL002N][GDrive]

Middle Name : Unsure if "ann" or "anne" ... going with Whitepages.com :

2019-06-whitepages-com-202-659-6387-melissa-ann-mann-washington-dc.pdf / https://drive.google.com/open?id=1h2CdtX3Q3UaqZZTEw2T1rTokFHCY2r5f

TIMELINE

1987 - Graduates from Rhodes College (Age 22) - Degree in International Relations / Emphasis on Energy and Non-Proliferation Policy

See [HW001O][GDrive]

See 2019-american-conference-institute-website-speakers-ms-melissa-mann.pdf / https://drive.google.com/open?id=1iymN2NFq40ABoOj7ejo12jEuOMuoZ2Zh

*[Melissa Mann] [...] holds **a degree in International Relations with an emphasis on energy and non-proliferation policy** from **Rhodes College**.*

1989 - Career starts as an International Affairs Specialist with Edlow International Company

Career starts at **Edlow International Company** .

See [HG002P][GDrive] : *[Melissa Mann, then Melissa Colvin,] started her career in 1989 as an International Affairs Specialist with Edlow International Company eventually serving as the company's International Vice President [...]*

1989 - Career starts as an International Affairs Specialist with Edlow International Company

Career starts at **Edlow International Company** .

See [HG002P][GDrive] : *[Melissa Mann, then Melissa Colvin,] started her career in 1989 as an International Affairs Specialist with Edlow International Company eventually serving as the company's International Vice President [...]*

1993 - Marriage to Christopher G Mann

1993 - Marriage license : [HN00LP][GDrive]

■ Christopher G. Mann, 33, Takoma Park, and Melissa Colvin, 27, Takoma Park.

1993-08-15-the-baltimore-sun-pg-9-b-clip-mann-wedding

[HN00LQ][GDrive]

RHODES COLLEGE "1994-spring-rhodes-magazine-150-dpi" announcing Melissa Colvin marriage ! (Source : [HE001N][GDrive])

For The Record

Marriages

'76 Debbie Ruble to **Leonard Ballard,** Sept. 11, 1993.

'77 Cynthia Ann Smith to **Michael P. Coury,** Oct. 16, 1993.

'77 Callan Elisabeth White to **Kelley Hinman,** Oct. 16, 1993.

'78 Currey Courtney to George Copple, Sept. 4, 1993.

'79 Susan Knowles to **Gary Minor,** Sept. 4, 1993.

'82 Faith Elizabeth Hart to Gregory Kyle Vickers, Dec. 4, 1993, Nashville, Tenn.

'82 Laura Huff to Gregg E. Hileman, July 24, 1993, Nashville, Tenn.

'85 Janet Marie Grinnell to John Mark Browder, May 5, 1990, Selmer, Tenn.

'86 Nancy Shoaf to Dr. Arthur C. Graesser II, Aug. 29, 1992.

'86 Ginger Leigh Guynes to **Dr. Stephen Threlkeld,** Oct. 9, 1993, Jackson, Miss.

'87 Melissa Colvin to Christopher Mann, Sept. 18, 1993, Annapolis, Md.

'87 Wendy Babcock Tallent to Cary G. Rotter, Dec. 12, 1993, Memphis.

'88 Deborah Marie Holland to **Anthony Edward Britten** ('90), Nov. 13, 1993.

'89 Della Bonicelli to William Thompson, Oct. 17, 1992, Bartlett, Tenn.

'89 Amy Rutherford Baldwin to **Stephen Campbell Crockett** ('90), Oct. 9, 1993, Memphis.

'89 Susan Walker to **James Augustine,** Oct. 23, 1993.

'90 Catharine Eschmeyer to Thomas M. Wade, Oct. 23, 1993, Cincinnati, Ohio.

'90 Dana Harmon to Kelly David Hunter, Oct. 2, 1993.

'90 Lisa Lawrence to **William Todd Daniel** ('89), May 29, 1993.

'90 Jill Parker to Mitchell Wells, Sept. 4, 1993, Fort Smith, Ark.

'90 Catherine Robertson to Ray Twesten, Aug. 8, 1992.

'91 Laurene Gremillion to William A. J. Shamblin, Oct. 9, 1993, Cincinnati, Ohio.

'91 Christina Ann Holyfield to Dr. Glenn Douglas Crater Jr., Oct. 30, 1993, Memphis.

'91 Lydia Troutman Turman to John A. Hansen, Nov. 20, 1993, Atlanta.

Births

'65 Bill Boyd and Joyce Jacobsen, a son, Kenneth Trevor Boyd, Oct. 16, 1993.

'73 Ken and Becky **Ellison,** a daughter, Amanda Colleen, June 27, 1993.

'75 John and Debby **Wallace,** a son, John Mason IV, Jan. 14, 1993.

'79 Jim and **Janet Olson Rack,** a daughter, Laura Elizabeth, July 1, 1993.

'80 Mark and **Kathleen "Kats" Smith Barry,** a son, Joseph Garrigan, Sept. 22, 1993.

'80 Bart and **Roni Davis Krupnick,** a daughter, Abby, March, 1993.

'80 Tim Marema and **Liz McGeachy,** a son, Walker John McGeachy Marema, Sept. 26, 1993.

'80 Wendell and **Madeline Mayes Price,** a son, Charles Anderson, Oct. 4, 1993.

'81 Jay and **Kathryn Keil Brown,** a daughter, Julia Louise, Aug. 27, 1993.

'81 Sean and **Joyce Holladay Doyle,** a daughter, Lauren Colleen, June 29, 1993.

'81 Woody and **Adrianne Alexander Hays,** a son, William Alexander, July 24, 1993.

'82 Richard and **Julia Reilly Fields,** a daughter, Mary Katherine, April 6, 1993.

'82 Bill and **Nancy Gable Rolland,** a daughter, Emily Grace, March 28, 1993.

'82 Rob and Stephanie **Threlkeld,** a son, Thomas Henry, Oct. 2, 1993.

'82 Saeed and **Marcelle Brinkley Zarshenas,** twin sons, Saeed Joshua and Shahram Justin, Oct. 29, 1993.

'83 Bert and Cathy **Barnes,** a daughter, Corinne, Sept. 23, 1993.

'83 John and **Elisa Yarber Clouthier,** a daughter, Katie Michelle, Sept. 24, 1993.

'83 Gary and **Lisa Lamb Marshall,** a daughter, Sarah Katharine, Nov. 8, 1993.

'83 John and **Diane Mount Nisbet,** a son, Matthew Lander, Oct. 11, 1993.

'83 Paul and **Charlotte Patton Parks,** a daughter, Rachel Frances, Nov. 3, 1993.

'83 Chip and Deborah **Parrott,** a daughter, Meredith Ruth, Nov. 12, 1993.

'83 Gary and **Christy Earl Patterson** ('84), a son, John Thomas, Oct. 20, 1993.

'83 Matt and Amy **Taliaferro,** a son, Weston Lane, Dec. 4, 1993.

'84 Greg and **Jody Lewis Driver,** a son, Gregory Scott Jr., Aug. 28, 1993.

'84 Eric and **Melissa Aquino Hooper** ('87), a son, Michele Hammond Hooper, Oct. 26, 1993.

'84 Randall and **Roxanne Weitman Malin,** a son, Marshall Luke, Oct. 26, 1993

'84 Paul Skjoldager and **Dr. Elizabeth Streete,** a daughter, Kara Elizabeth Skjoldager, Dec. 5, 1993.

'85 Lee and Lisa **Booth,** a son, William Connor, Oct. 7, 1993.

'85 James and **Caroline Payne Hendricks,** a son, James Taylor, July 25, 1993

'85 Daniel and **Paiden Stewart Hite,** a daughter, Virginia, Sept. 2, 1993.

'85 Stephen and **Robin Newcomb Miller,** a son, Stephen Calmore, Oct. 22, 1993.

'86 Michael and **Rebecca Sweet Rooney,** a son, Samuel Addison, Oct. 3, 1993.

'89 Roger and **Reagan Roper McNeil** ('88), a son, Jackson Campbell, Sept. 28, 1993.

'89 Capt. Jon and **Vivian Nichols Reesman** ('90), a daughter, Ashley Lauren, Sept. 27, 1993.

'90 Kevin and **Sherrill Cameron Garland,** a daughter, Mary Elizabeth, Sept. 8, 1993.

'90 Rich and **Jody Casella Eskildsen** ('89), a son, Benjamin Richard, Oct. 10, 1993.

'90 Scott and **Ajay Kittrell Jones Ownby,** a daughter, Allison Leila, Nov. 1, 1993.

Rhodes Alumni A-11

[HE001O][GDrive]

About Christopher G Mann -

From [HP001S][GDrive] : *"[Melissa Mann] and her husband, **Chris**, a marine biologist who works for the Pew Foundation,"*

Source [HL002O][GDrive] :

Christopher Mann is 58 years old and was born on 06/26/1960. Christopher's Reputation Score is 4.33. Previous to Christopher's current city of Washington, DC, Christopher Mann lived in Takoma Park MD. Other names that Christopher uses includes Christophe G Mann, Chris G Mann, Christopher G Mann and Christopher G Marr. We know that Christopher's political affiliation is currently a registered Democrat; ethnicity is Caucasian; and religious views are listed as Christian. As of this date, Christopher is married. Other family members and associates include Melissa Mann, Raymond Diphillips, Marisa Parrella, Kari El

https://www.whitepages.com/name/Christopher-G-Mann?q=christopher+g+mann

Previous addresses include Rhode island

https://www.linkedin.com/in/christopher-mann-62778830/

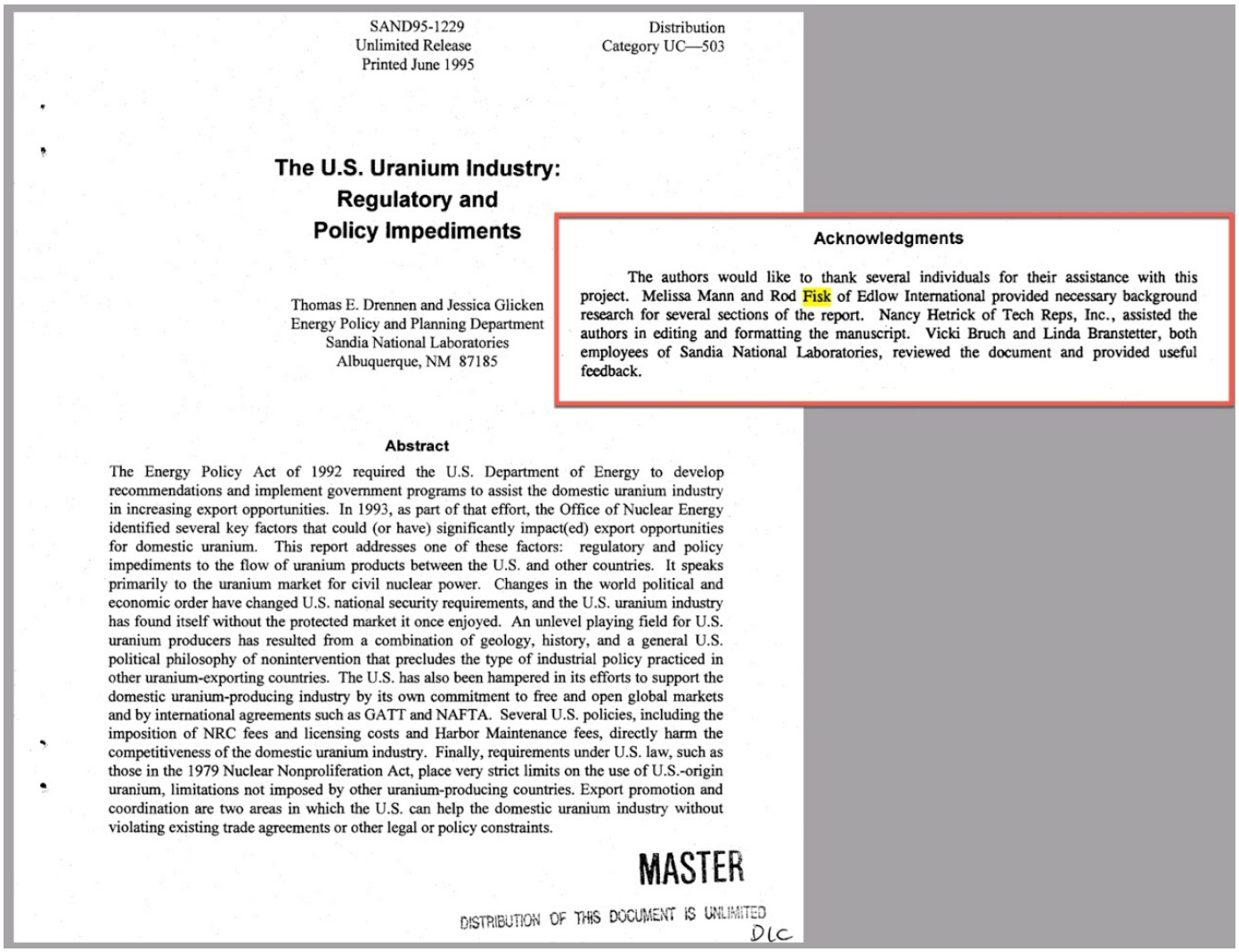
Pew charitable trusts

https://www.pewtrusts.org/~/media/legacy/legacy-and-pre-launch-image-edits/trust-mag-pdfs/pew-trust_mag_sp2008_51.pdf?la=nb

1995 - Sandia Labs Report - Major Contributor to "The U.S. Uranium Industry: Regulary and Policy Impediments"

Top contributor along with **Rodney Harald Fisk (born 1945)** , where they both represent the **Edlow International Company** as employees .

Full 1995 Report : [HG0025][GDrive]



SAND95-1229
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The U.S. Uranium Industry: Regulatory and Policy Impediments

Thomas E. Drennen and Jessica Glicken
Energy Policy and Planning Department
Sandia National Laboratories
Albuquerque, NM 87185

Acknowledgments

The authors would like to thank several individuals for their assistance with this project. Melissa Mann and Rod Fisk of Edlow International provided necessary background research for several sections of the report. Nancy Hetrick of Tech Reps, Inc., assisted the authors in editing and formatting the manuscript. Vicki Bruch and Linda Branstetter, both employees of Sandia National Laboratories, reviewed the document and provided useful feedback.

Abstract

The Energy Policy Act of 1992 required the U.S. Department of Energy to develop recommendations and implement government programs to assist the domestic uranium industry in increasing export opportunities. In 1993, as part of that effort, the Office of Nuclear Energy identified several key factors that could (or have) significantly impact(ed) export opportunities for domestic uranium. This report addresses one of these factors: regulatory and policy impediments to the flow of uranium products between the U.S. and other countries. It speaks primarily to the uranium market for civil nuclear power. Changes in the world political and economic order have changed U.S. national security requirements, and the U.S. uranium industry has found itself without the protected market it once enjoyed. An unlevel playing field for U.S. uranium producers has resulted from a combination of geology, history, and a general U.S. political philosophy of nonintervention that precludes the type of industrial policy practiced in other uranium-exporting countries. The U.S. has also been hampered in its efforts to support the domestic uranium-producing industry by its own commitment to free and open global markets and by international agreements such as GATT and NAFTA. Several U.S. policies, including the imposition of NRC fees and licensing costs and Harbor Maintenance fees, directly harm the competitiveness of the domestic uranium industry. Finally, requirements under U.S. law, such as those in the 1979 Nuclear Nonproliferation Act, place very strict limits on the use of U.S.-origin uranium, limitations not imposed by other uranium-producing countries. Export promotion and coordination are two areas in which the U.S. can help the domestic uranium industry without violating existing trade agreements or other legal or policy constraints.

MASTER

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DLC

[HG0026][GDrive]

1997 - A Mom! Congrats !

Devon - June 5 1997

https://www.newspapers.com/image/39818969/?terms=melissa%2Bmann

The_Capital_Fri__Jun_6__1997_.jpg

1998 (Feb) - Becomes a VP at Edlow International

VP at **Edlow International Company** .

See [HN00LC][GDrive] : *"Edlow International Co. of Washington named **Rodney Fisk** executive vice president and **Melissa Mann** vice president of international."*

2002

2002 - july

https://www.nrc.gov/docs/ML0601/ML060170433.pdf

2002 - june

https://www.nrc.gov/docs/ML0626/ML062610255.pdf

2003 (July) - News article in Baltimore Sun

Full Page : [HN00LM][GDrive]

ALGERINA PERNA : SUN STAFF PHOT

A worker at Rukert Terminals guides empty cylinders used to transport natural uranium hexaflouride during unloading from the TLI Aquila. The ship's two 80-ton cranes lifted the containers out of the hold and onto trucks

NUCLEAR FUEL AT SEA

Daily radiation readings and security drills are routine aboard the TLI Aquila, a ship that carries uranium from country to country.

By PAUL ADAMS
SUN STAFF

STANDING on the bridge of the *TLI Aquila*, Capt. Adelbert Hansen reaches into his faded shirt pocket and pulls out a small dosimeter, a pen-light-shaped device every crew member carries to monitor their exposure to radiation from the ship's uranium-laden cargo.

Pointed toward the Baltimore skyline, the device gives a reading of less than one microsievert — a standard unit of measure that represents a tiny fraction of the level considered safe by government standards.

"See, I don't worry," Hansen said, referring to the 48-inch diameter cylinders filled with uranium that the ship specializes in transporting. "I like this ship. It's a little ship, but it's fast. It's fast."

Daily dosimeter readings are just one of the standard precautions taken aboard the 330-foot *Aquila*, a blue-hulled freighter that criss-crosses the Atlantic, taking multi-million-dollar shipments of uranium from one refining facility to another before it is finally ready to be consumed as fuel in a nuclear power plant. With its proximity to nuclear customers in the Midwest, Baltimore is a regular port of call.

The daily attention to safety aboard the *Aquila* is a reminder that the ship's cargo is not ordinary. Regulations govern everything from crew selection to how the cargo is packaged and loaded to ensure against a nuclear accident. And with the world on high alert for terrorists, security around hazardous cargo is a top priority.

TLI AQUILA

The freighter, which docks at Baltimore (above) and hauls uranium across the Atlantic, features a double-lined hull and redundant electrical and fire-suppression systems. Other details:

Length	330 feet	Crew complement	13, mostly Russian
Cruising speed	15 knots	Special equipment	Six radiation detectors, hazardous materials suits
Carrying capacity	4,700 metric tons		
Cargo space	6,800 cubic meters		

"Because we're talking about inherently dangerous materials, it is probably the most highly regulated form of transportation in the world," said Lorne Green, secretary general of the World Nuclear Transport Institute, an industry trade group based in London. "It's like playing the piano — it looks easy until you try it yourself."

The ship's Maryland operator, Transportation Logistics International, is one of a handful of companies in the world that specialize in the politically charged, bureaucratic work of trans- [*See Uranium, 4D*]

[HN00LN][GDrive]

"Because we're talking about inherently dangerous materials, it is probably the most highly regulated form of transportation in the world. It's like playing the piano — it looks easy until you try it yourself."

Lorne Green, *secretary general of the World Nuclear Transport Institute*

Nuclear fuel a dangerous cargo at sea

[*Uranium, from Page 1D*]

porting radioactive material.

"It's a job that takes many

years of both formal and informal on-the-job training," said Rodney H. Fisk, Transportation Logistics' chief executive and a former South African diplomat. "For most people, once you get into this field, you stay in it. It's not a transitory job at all."

A self-described conservative businessman with an accent that reflects his Cape Town roots, Fisk's job is to communicate with regulators and Cabinet-level officials in overseas governments. That task has taken on added urgency as the International Atomic Energy Agency, International Maritime Organization and various government agencies here and abroad study ways to improve the security of hazardous cargo in the wake of the Sept. 11, 2001, attacks.

Those moves dovetail with the Department of Homeland Security's efforts to improve security at U.S. seaports. Coast Guard and Customs officials have stepped up inspections of ships and cargo, and ports have spent millions installing new surveillance systems, fencing and other security measures.

Though the uranium Transportation Logistics transports is well below weapons-grade, it could still be a potential target. The company says it is "absolutely fastidious" about following the volumes of international and domestic regulations designed to keep the cargo safe and out of unauthorized hands.

The nuclear transportation industry has a mostly unblemished track record. While vehicle accidents have occurred over the past 40 years, industry experts say, there has never been a deadly radioactive spill or loss recorded during the transport of nuclear materials. Uranium shipments have rolled across the docks in Baltimore for decades with little notice.

Reduced risk

Transportation Logistics won't talk about its security measures other than to say that some procedures change when national alert levels shift from yellow to orange. But the company points to a number of factors that it says reduce the risk that the cargo it carries could ever be diverted for illegal purposes.

The uranium hexafluoride and other materials it transports are extremely dense, making each cylinder so heavy it can't be lifted without a crane or other special equipment. Even if one were stolen, the material would have to undergo considerable processing that requires sophisticated technology to be used in a nuclear bomb.

And since it emits a relatively low level of radiation compared with other radioactive materials, it would have limited value as a "dirty bomb," which uses conventional explosives to spread radioactive materials over a wide area, Fisk said.

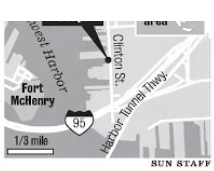
"I think ... they would look for something that's far more potent and dangerous," he said.

No firm statistics are available on the annual number of uranium shipments. But the global nature of the industry makes transportation a critical component in the nuclear fuel cycle.

It begins when uranium ore is mined in Canada, Russia, Australia and other uranium-rich countries. From there, it undergoes about a half-dozen steps in the refining process until the concentration of U-235 isotopes reaches nearly 5 percent, making it suitable for use as nuclear fuel. For economic and competitive reasons, each of the refining steps might take place in a different country.

"There's material that might originate out of the ground as ore in Canada, go to Europe to be partially processed, come to the U.S. to be processed further, then go back to Europe and finally end up in Japan," said Melissa Colvin Mann, a Transportation Logistics partner with a background in nuclear nonproliferation and international relations. "So there's a constant flow of material."

Formed in 1998, the company has 13 employees in a suburban office park in Burtonsville in Montgomery County and a small number of agents in offices overseas. Its five founding partners own 60 percent of the company, while the other 40 percent is held by a German affiliate, Nuclear Cargo Service. Customers include uranium mines, refining facilities and power plants.



SUN STAFF

The company doesn't disclose its revenue, but industry experts said nuclear transportation is a niche that commands premium rates because of the high value of the cargo and the expertise involved.

"It's not a big market, so there aren't a whole lot of players," said Felix Killar, director of fuel supply and material licensees for the Nuclear Energy Institute. "But [Transportation Logistics] is one of the players."

The company's biggest coup was landing a contract to transport tons of uranium that once armed Soviet nuclear weapons aimed at the United States. Part of a landmark arms-reduction treaty between the United States and Russia, the "Megatons to Megawatts" project involves diluting 90 percent pure weapons-grade uranium into a more benign form so it can be converted into fuel to produce electricity. The material is diluted in Russia before being shipped.

The program is a joint venture between Bethesda-based U.S. Enrichment Corp. and its Russian counterpart, Tenex. The 20-year, $8 billion program has converted the equivalent of about 7,000 warheads, creating enough nuclear fuel to power a city the size of Boston for about 270 years. By the time the program ends in 2013, the equivalent of 20,000 warheads will have been converted into enough fuel to power the entire United States for about two years, U.S. Enrichment officials say.

"It's a dream"

In addition to providing needed jobs for Russian scientists, the purpose of the project is to keep that country's nuclear materials from falling into the hands of terrorists or rogue nations. For Mann, whose training is in nuclear nonproliferation, the U.S. Enrichment contract is the opportunity of a lifetime.

"It's a dream," she said. "It really is a dream."

Since the *Aquila* doesn't call at Russian ports, Transportation Logistics uses other commercial ships to bring the diluted warhead material, some of which has passed through Baltimore, to the United States.

But the bulk freighter is the only ship in the world that is exclusively chartered to carry so-called "front-end" nuclear material, which consists of fresh uranium from the time it is mined until it is manufactured into fuel rods and delivered to a nuclear power plant. Front-end uranium is considered relatively benign and less controversial compared with back-end material, which consists of highly radioactive spent fuel or nuclear waste.

"It's radioactive, but not terribly so," said William H. Miller, a professor in the nuclear engineering department at the University of Missouri in Columbia. "You can stand right next to the truck and the [radiation level] would not be much elevated above background levels."

It is the movement of back-end fuels that often inspires protests from environmental and anti-nuclear groups. But environmentalists say that doesn't mean that front-end fuels like those aboard the *Aquila* are totally safe.

"I think this whole [uranium transport] industry is one that doesn't have a lot of public scrutiny on it due to the limited resources of the nonprofit community," said Tom Clements, a senior nuclear campaigner for global environmental group Greenpeace International. "So a lot of this happens without the proper public oversight, but there's definitely risks."

Company officials point out that the industry frequently goes beyond government safety requirements.

The cylinders that carry uranium are made of five-eighths-inch steel and are built to withstand intense fire, collision and other pressures. The uranium is extremely dense and is not explosive, unlike many other hazardous materials.

If you rammed a truck into one, Fisk said, "You'd have to write off your truck, probably."

The Antigua- and Barbuda-flagged *Aquila*, which calls at Rukert Terminals in Canton, was designed and certified to carry hazardous materials ranging from natural uranium to finished fuel assemblies worth millions of dollars each. Built in 2000, the ship has a double-layered hull, redundant electrical systems and cooling and ventilation equipment that typical commercial vessels don't have. In the event of fire, carbon dioxide tanks will flood the cargo hold, starving the blaze of oxygen while sprinklers douse the flames.

At mealtime, the ship's 13-member crew can look up from their plates in the mess hall and know instantly how much radiation their bodies are absorbing. Six digital dosimeters are mounted on walls throughout the ship, supplementing the devices crew members carry in their pockets.

Each day, the ship's officers take a reading from the six dosimeters and e-mail the data to headquarters. Every crew member's cumulative dose of radiation is recorded in a log kept on the bridge. Recent readings show the crew is receiving a radiation dose only slightly above natural background levels.

Before crew members can work on the ship, background checks are conducted by both the company and an outside contractor. Each member also must take part in safety drills and be certified to handle hazardous materials. Because of the added expertise required, the crew gets paid a premium over their regular salary, a company official said.

The training crew members must complete covers a wide range of scenarios, including everything from a broken seal on a uranium cylinder to an attack by pirates or terrorists. Details of each crew member's training are recorded in a three-ring binder.

"We drill at least weekly, but sometimes twice per week," said Chief Mate Oleg Stukalov, a native of St. Petersburg, Russia. Most of the crew is Russian, though the captain is German.

Every time the ship comes to Baltimore it is met by Mark T. Lambert, president of Transportation Logistics' shipping subsidiary, who has a background in military intelligence and international logistics.

When new cargo arrives, he positions the cylinders of uranium in the cargo hold based on complex mathematical equations that take into consideration the radioactivity level of each shipment. Regulations govern how much space must separate the containers to prevent them from interacting and causing a radioactive release.

"When you're handling these materials, you can't just throw them on the vessel any old where," Lambert said.

Multiple certifications

The scrutiny continues once the ship leaves port. The design and construction of the containers used to carry the uranium must be certified by international regulatory agencies and government regulators in every country that the material will travel to. That means that cylinders have to be certified in every country where the ship makes a port call, regardless of whether the uranium ever leaves the vessel.

"This can sometimes take a year to a couple of years to get completed," said Norman Ravenscroft, president of Transportation Logistics.

While in Baltimore recently, the *Aquila* off-loaded empty cylinders used for transporting natural uranium hexafluoride, which from a distance look like giant beer kegs. The crew used the ship's two 80-ton cranes to lift the containers out of the hold and onto trucks, which transported them to a nearby warehouse. Radioactive cargo stays in port only long enough to be transferred to a truck for delivery to customers, usually within one to two days.

Before leaving Baltimore, the ship took on another shipment of radioactive cargo destined for customers in Europe. The company keeps the precise contents and destination secret, for competitive and security reasons.

"We're protecting our customers' financial assets," Fisk said. "You're looking after it because there is an obligation, obviously, that the material is protected and won't fall into unauthorized hands."

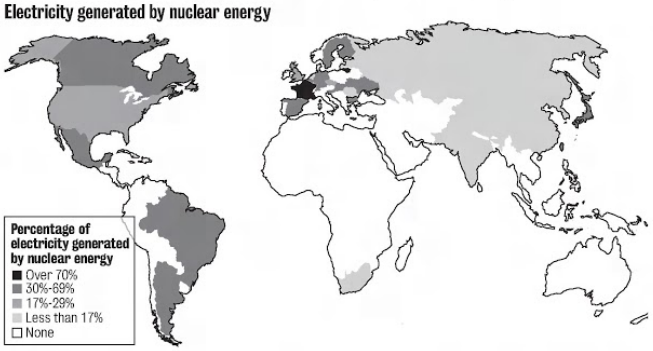
ALGERINA PERNA : SUN STAFF PHOTOS

Mark T. Lambert, president of Transportation Logistics International's shipping subsidiary, and Melissa Colvin Mann, a partner in Transportation Logistics, visit the bridge of the TLI Aquila while the uranium-hauling ship is docked at Rukert Terminals in Canton.

The nuclear marketplace

Uranium moves across borders and oceans before it is ready to be used in nuclear power plants. A look at countries that use nuclear power and where uranium is processed across the globe.

Electricity generated by nuclear energy



Nuclear fuel processing

Country	Uranium mining	Conversion	Enrichment	Fuel fabrication	Reprocessing	Vitrification*
United States	●	●	●	●		
Canada	●	●		●		
Mexico				●		
Brazil		●		●		
Argentina	●		●	●		
Portugal	●					
Spain				●		
France	●	●	●	●	●	●
Belgium				●		
Netherlands			●			
Germany			●	●		
Sweden				●		
United Kingdom		●	●	●	●	●
Italy				●	●	
Hungary	●					
Romania	●					
Bulgaria	●					
Ukraine	●					
Slovakia	●					
Niger	●					
Gabon	●					
Namibia	●					
South Africa	●	●	●			
Russia	●	●	●	●	●	
Kazakstan	●					
China	●	●	●	●		
India	●			●	●	
Pakistan	●		●	●		
Japan		●	●	●	●	
South Korea			●			
Taiwan				●		
Australia	●					

*The process of turning spent fuel into glass

Source: Nuclear Energy Institute

SUN STAFF

A small dosimeter that can fit into a hand is carried by all crew members of the TLI Aquila. It monitors exposure to radiation.

[HN00LO][GDrive]

2004 to 2006 - Melissa Mann is Vice President for Regulatory and Risk Assessment at the Ux Consulting Company

See [HG002P][GDrive] : *"Prior to joining URENCO ,as Vice President for Regulatory & Risk Assessment at **The Ux Consulting Company** from 2004 to 2006, Melissa supported commercial nuclear utilities and fuel cycle companies in managing risks associated with economic, regulatory, export control and nuclear energy policy matters."*

According to https://www.uxc.com/

UxC is The industry's leading source of Publications, Data Services, Market Research, and Analysis, on the Global Nuclear Fuel Cycle Markets

---

2005 - Melissa Mann attends NRC RIC conference, Representing Ux

See https://www.nrc.gov/public-involve/conference-symposia/ric/past/2005/reglist-03-07-05.pdf

Melissa Mann, Vice President, Regulation & Risk Assessment,

The Ux Consulting Company, LLC

8106 Roanoke AvenueTakoma Park, MD 20912

2006 - Melissa Mann joins Urenco

As her job is described in 2018 :

See 2019-american-conference-institute-website-speakers-ms-melissa-mann.pdf / https://drive.google.com/open?id=1iymN2NFq40ABoOj7ejo12jEuOMuoZ2Zh

*MELISSA MANN is the Manger of Marketing and Sales for Urenco, Inc. where s**he supervises URENCO Group enrichment services contracts in North America and markets enrichment services on behalf of URENCO and Louisiana Energy Services***

2007 (December) Melissa Mann / Urenco

https://www.nrc.gov/docs/ML0728/ML072890212.pdf

2008

https://www.nrc.gov/docs/ML0804/ML080420300.pdf

2009 (May) - Attendee at World Nuclear Fuel Market 2009 Conference - Representing URENCO

Rodney Harald Fisk (born 1945) is also there, representing **Transportation Logistics** .

Full doc : 2009-05-25-wnfm-attendee-list.pdf / https://drive.google.com/open?id=1dMjD5T81tRh1bMIjbOw9I0Ru74hFgVJ0

2012

See- https://umweltfairaendern.de/wp-content/uploads/2017/03/CRSMarkeyMemo_TritiumFuelOptions_051512.pdf

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2015 (Feb) Conference video : (123) Governing Uranium: From Pit to Port / Center for Strategic and International Studies

WATCH HERE : 2015-02-19-center-for-strategic-international-studies-governing-uranium-pit-to-port.mp4 / https://drive.google.com/open?id=1gO9awVXcEOAb3dEEZhd69A7vN2YC1KEN

Youtube download page : 2015-02-19-center-for-strategic-international-studies-governing-uranium-pit-to-port-youtube-info.pdf / https://drive.google.com/open?id=1gMjem15GkyUFkJWlKiZ4IeLfYrZb74uF

Featuring: Cindy Vestergaard / Director, Governing Uranium Project and Senior Researcher, International Security,

(123) Governing Uranium: From Pit to Port - YouTube 6/20/19, 5*08 AM

Danish Institute for International Studies (DIIS)

Melissa Mann

President, URENCO USA Inc.

Sharon Squassoni

Director and Senior Fellow, Proliferation Prevention Program, CSIS

1616 Rhode Island Ave NW

Washington D.C., 20036

CSIS and the Danish Institute for International Studies (DIIS) are pleased to invite you to the launch of the new, interactive Governing Uranium website. Based on the results of the Governing Uranium research project, the website allows users to explore the front-end of the nuclear fuel cycle and 'follow the uranium trail' from mining to conversion. It offers information, maps and analysis on the regulatory structures and industry best practices that govern uranium production and trade across

afteen uranium producing and consuming states.

2016

https://www.energy.gov/sites/prod/files/2016/10/f33/2016_RFI_URENCO.pdf

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2017

https://www.energy.gov/sites/prod/files/2017/04/f34/2017%20NIPC%20Comments%20-%20URENCO%20USA%20%204-10-17.pdf

2018 (May) - Melissa Mann (with URENCO) Speaking before US House

Government web page : 2018-05-22-energycommerce-house-gov-hearing-on-doe-modernization-advanced-nuclear-energy-technologies.pdf / https://drive.google.com/open?id=1hHBRoVSO3g5apS9ngygb6ACooA6Q8dDW

Transcript : 2018-05-22-usa-us-house-committee-on-energy-and-commerce-submittee-on-energy-testimony-of-melissa-c-mann.pdf / https://drive.google.com/open?id=1hEPL9P142I-bd3LkZsKdyxD_px32E-Xe

VIDEO / Recording : 2018-05-22-energycommerce-house-gov-hearing-on-doe-modernization-advanced-nuclear-energy-technologies-youtube-recording.mp4 / https://drive.google.com/open?id=1hHkUfRezRn6P-0aqBGmTzWS0Q0CkMU1v

See 2018-05-18-energycommerce-house-gov-hearing-on-doe-modernization-advanced-nuclear-energy-technologies-witness-disclosure-melissa-mann.pdf / https://drive.google.com/open?id=1iCvo4mn5MsMZk1KXvLfkBuWPArFWzlfi

Melissa Mann is President of URENCO USA Inc., the holding company for Louisiana Energy Services and its URENCO USA uranium enrichment facility, and the URENCO Group's Executive Director of Strategic& Government Affairs. The URENCO USA enrichment facility is located in Lea County, New Mexico and was the first facility to be licensed, constructed and operated under a Nuclear Regulatory Commission-approved Combined Construction and Operating License. URENCO USA represents an investment of roughly $5 billion to-date. A New Mexican by birth, Melissa is privileged to represent URENCO USA along with its more than two hundred New Mexican and Texan employees.

Melissa has spent her nearly 30-year career in the service of the commercial nuclear energy industry and as a licensee of the U.S. Nuclear Regulatory Commission. From 2006 to 2013, Melissa served as Manager of Marketing & Sales for URENCO, Inc., managing relationships with North American utilities and nuclear fuel cycle companies. This work entailed negotiating and administering a sales contract portfolio that significantly contributed to U.S. demand for uranium enrichment and hundreds of millions of dollars in revenue annually.

Prior to joining URENCO ,as Vice President for Regulatory & Risk Assessment at The Ux Consulting Company from 2004 to 2006,Melissa supported commercial nuclear utilities and fuel cycle companies in managing risks associated with economic, regulatory, export control and nuclear energy policy matters.

This role built on nearly two decades managing the international movement of radioactive materials and specializing in non-proliferation policy and export controls. She started her career in 1989 as an International Affairs Specialist with Edlow International Company eventually serving as the company's International Vice President, and then undertook similar roles as Director of Research & Consulting at Transportation Logistics International and as Executive Vice President of TLI Shipping, LLC, a specialized ocean servicefor international transport of sensitive commodities including fissile nuclear materials.

Melissa holds a degree in International Relations from Rhodes College.

Here are her written responses, provided before the hearing (on page 206) : https://www.hsdl.org/?view&did=822974

Full script - https://docs.house.gov/meetings/IF/IF03/20180522/108339/HHRG-115-IF03-Transcript-20180522.pdf

2018 (Sep) - Attending US UK signing ceremony

https://urenco.com/news/articles/us-uk-civil-nuclear-action-plan-signed

Quoted twice in 2018 -

See .. https://www.aub.edu.lb/ifi/Documents/publications/research_reports/2018-2019/20190103_middle_east_nuclear_energy_monitor_country_perspectives_2018.pdf

Video (must record)

https://globalnexusinitiative.org/results/video-deploying-safe-and-secure-advanced-reactors-for-the-low-carbon-economy/

ML022250582

ML022200474

ML022240711

IGNORE -

http://airline-whistleblower.blogspot.com/p/sec-affidavit-of-captain-daniel-hanley.html (different Melissa Mann...)

1967 Marburg virus outbreak in West Germany

Wikipedia 1967 Marburg virus outbreak in West Germany

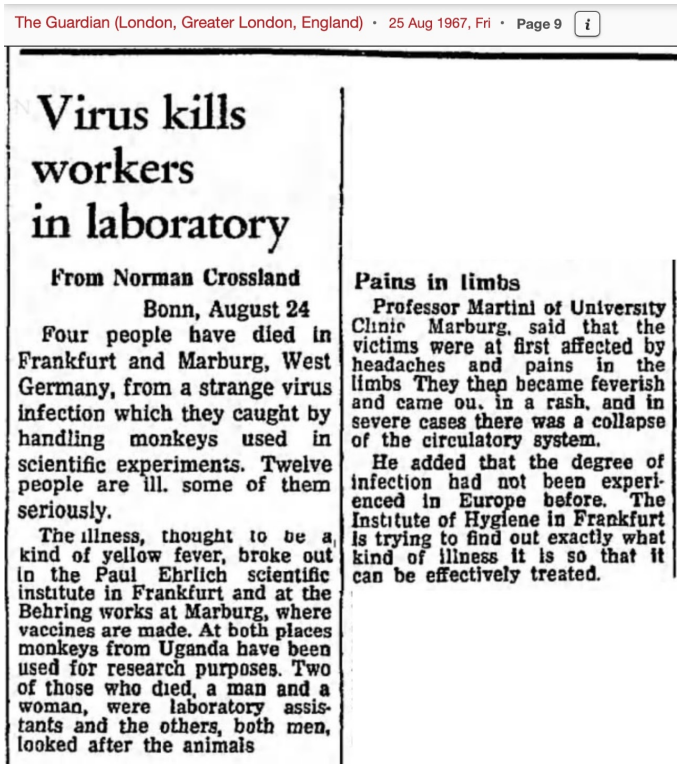
AUG 24 - https://www.newspapers.com/image/61197043/?terms=Marburg%20virus&match=1

1967 (Aug 25)

1967-08-25-the-guardian-pg-09.jpg

https://www.newspapers.com/image/259794521/?terms=Marburg%20virus&match=1

1967-08-25-the-guardian-pg-09-clip-virus-workers.jpg



The Guardian (London, Greater London, England) · 25 Aug 1967, Fri · Page 9

Virus kills workers in laboratory

From Norman Crossland

Bonn, August 24

Four people have died in Frankfurt and Marburg, West Germany, from a strange virus infection which they caught by handling monkeys used in scientific experiments. Twelve people are ill, some of them seriously.

The illness, thought to be a kind of yellow fever, broke out in the Paul Ehrlich scientific institute in Frankfurt and at the Behring works at Marburg, where vaccines are made. At both places monkeys from Uganda have been used for research purposes. Two of those who died, a man and a woman, were laboratory assistants and the others, both men, looked after the animals

Pains in limbs

Professor Martini of University Clinic Marburg, said that the victims were at first affected by headaches and pains in the limbs They then became feverish and came ou. in a rash, and in severe cases there was a collapse of the circulatory system.

He added that the degree of infection had not been experienced in Europe before. The Institute of Hygiene in Frankfurt is trying to find out exactly what kind of illness it is so that it can be effectively treated.

1967 (Aug 25)

page 1 - https://newspaperarchive.com/european-stars-and-stripes-aug-25-1967-p-1/

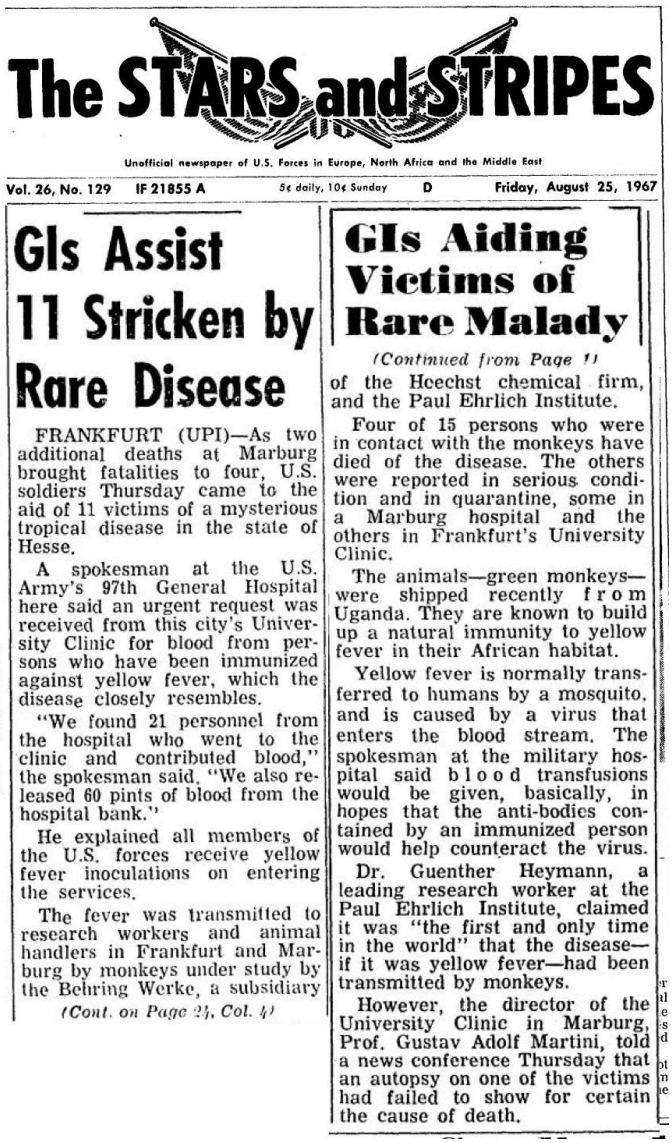
1967-08-25-european-stars-and-stripes-germany-pg-01

page 24- https://newspaperarchive.com/european-stars-and-stripes-aug-25-1967-p-23/

1967-08-25-european-stars-and-stripes-germany-pg-24

1967-08-25-european-stars-and-stripes-germany-pg-01-clip-gis-virus.jped

Paul Ehrluch Institute



The STARS and STRIPES

Unofficial newspaper of U.S. Forces in Europe, North Africa and the Middle East

Vol. 26, No. 129 IF 21855 A 5¢ daily, 10¢ Sunday D Friday, August 25, 1967

GIs Assist 11 Stricken by Rare Disease

FRANKFURT (UPI)—As two additional deaths at Marburg brought fatalities to four, U.S. soldiers Thursday came to the aid of 11 victims of a mysterious tropical disease in the state of Hesse.

A spokesman at the U.S. Army's 97th General Hospital here said an urgent request was received from this city's University Clinic for blood from persons who have been immunized against yellow fever, which the disease closely resembles.

"We found 21 personnel from the hospital who went to the clinic and contributed blood," the spokesman said. "We also released 60 pints of blood from the hospital bank."

He explained all members of the U.S. forces receive yellow fever inoculations on entering the services.

The fever was transmitted to research workers and animal handlers in Frankfurt and Marburg by monkeys under study by the Behring Werke, a subsidiary

(Cont. on Page 24, Col. 4)

GIs Aiding Victims of Rare Malady

(Continued from Page 1)

of the Hoechst chemical firm, and the Paul Ehrlich Institute.

Four of 15 persons who were in contact with the monkeys have died of the disease. The others were reported in serious condition and in quarantine, some in a Marburg hospital and the others in Frankfurt's University Clinic.

The animals—green monkeys—were shipped recently from Uganda. They are known to build up a natural immunity to yellow fever in their African habitat.

Yellow fever is normally transferred to humans by a mosquito, and is caused by a virus that enters the blood stream. The spokesman at the military hospital said blood transfusions would be given, basically, in hopes that the anti-bodies contained by an immunized person would help counteract the virus.

Dr. Guenther Heymann, a leading research worker at the Paul Ehrlich Institute, claimed it was "the first and only time in the world" that the disease—if it was yellow fever—had been transmitted by monkeys.

However, the director of the University Clinic in Marburg, Prof. Gustav Adolf Martini, told a news conference Thursday that an autopsy on one of the victims had failed to show for certain the cause of death.

1967 (AUG 26)

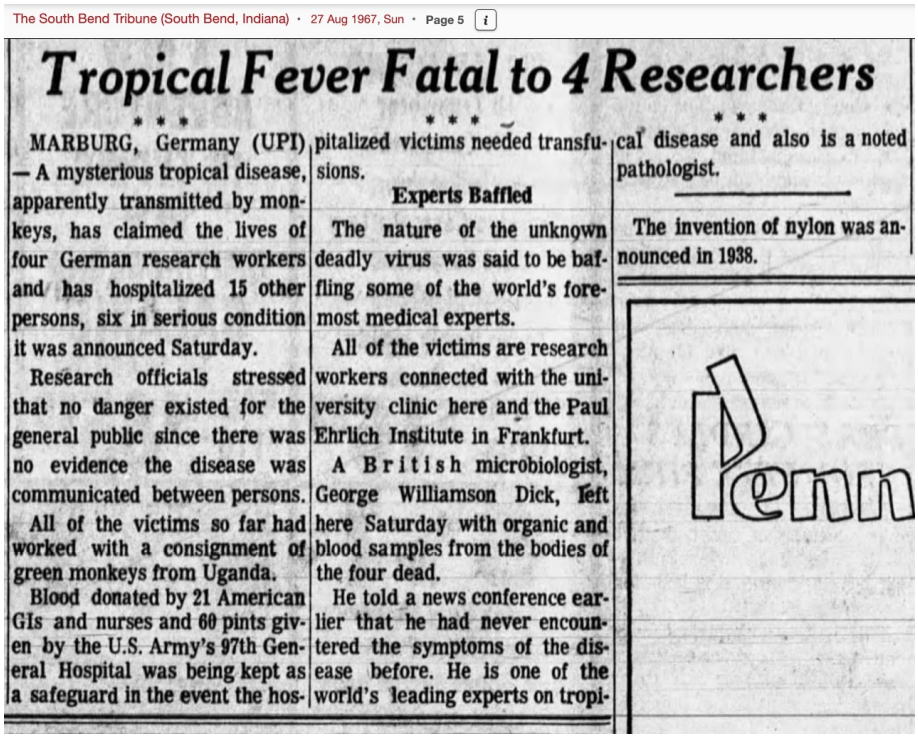
https://www.newspapers.com/image/376912092/?terms=Marburg%20virus&match=1

1967 AUG 27

https://www.newspapers.com/image/515329512/?terms=Marburg%20virus&match=2

1967-08-27-the-south-bend-tribune-indiana-pg-05

1967-08-27-the-south-bend-tribune-indiana-pg-05-clip-tropical-virus.jpg



The South Bend Tribune (South Bend, Indiana) • 27 Aug 1967, Sun • Page 5

Tropical Fever Fatal to 4 Researchers

* * *

MARBURG, Germany (UPI) — A mysterious tropical disease, apparently transmitted by monkeys, has claimed the lives of four German research workers and has hospitalized 15 other persons, six in serious condition it was announced Saturday.

Research officials stressed that no danger existed for the general public since there was no evidence the disease was communicated between persons.

All of the victims so far had worked with a consignment of green monkeys from Uganda.

Blood donated by 21 American GIs and nurses and 60 pints given by the U.S. Army's 97th General Hospital was being kept as a safeguard in the event the hospitalized victims needed transfusions.

* * *

Experts Baffled

The nature of the unknown deadly virus was said to be baffling some of the world's foremost medical experts.

All of the victims are research workers connected with the university clinic here and the Paul Ehrlich Institute in Frankfurt.

A British microbiologist, George Williamson Dick, left here Saturday with organic and blood samples from the bodies of the four dead.

He told a news conference earlier that he had never encountered the symptoms of the disease before. He is one of the world's leading experts on tropical disease and also is a noted pathologist.

* * *

The invention of nylon was announced in 1938.

Penn

Sep 05 https://www.newspapers.com/image/376610983/?terms=Marburg%20virus&match=1

Sep 11 1967 https://www.newspapers.com/image/256928567/?terms=Marburg%20virus&match=1

OCT 31 https://www.newspapers.com/image/180618862/?terms=Marburg%20virus&match=1

NOV 16 https://www.newspapers.com/image/371840953/?terms=Marburg%20virus&match=1

NOV 30 https://www.newspapers.com/image/398311980/?terms=Marburg%20virus&match=1

DEC 19 https://www.newspapers.com/image/259865859/?terms=Marburg%20virus&match=1

Saved Wikipedia (Feb 19, 2021) - "1967 Marburg virus outbreak in West Germany"

[HK0057][GDrive]

NOTE - NO MENTION OF "LABORATORY" or "Paul Ehrluch Institute" , ETC

- Disease Marburg virus disease
- Virus strain Marburg virus and Ravn virus
- Location West Germany and Yugoslavia
- First outbreak Marburg and Frankfurt
- Confirmed cases 32
- Deaths 2
- Territories 2

Marburg virus was named after Marburg in Germany where the first such outbreak ever, occurred (Above image-This negative stained transmission electron micrograph (TEM) depicts a number of filamentous Marburg virions, which had been cultured on Vero cell cultures, and purified on sucrose, rate-zonal gradients.)

The 1967 Marburg virus outbreak in West Germany was the first outbreak of Marburg virus disease.[1] It started in West Germany in early August 1967 when 30 people became ill in the German towns of Marburg and Frankfurt and two in Belgrade, Yugoslavia (now Serbia). One of these cases was diagnosed retrospectively. The outbreak involved 25 primary Marburg virus infections and seven deaths, and six non-lethal secondary cases.[2]

Overview

In early August 1967, patients with unusual symptoms indicating an infectious disease were admitted to the university hospitals in Marburg and Frankfurt. The first patients were treated in their homes for up to 10 days, even though the illness was described as beginning suddenly with extreme malaise, myalgia, headache, and a rapid increase in body temperature to as high as 39 °C (102.2 F) or more. Although the clinical symptoms were not very alarming during the first 3–4 days, additional symptoms and signs appeared at the end of the first week. The patients were therefore admitted to a hospital. In some cases, patients died from severe hemorrhagic shock on the day after hospital admission. Severe hemorrhagic shock occurred in ~25% of patients. All patients who died had hemorrhagic shock. The first infections occurred in laboratory workers who were conducting necropsies on imported African green monkeys. [3]

The incubation time of Marburg virus disease could only be estimated retrospectively, after the source of infection and the date of exposure were known. Incubation ranged from 5 to 9 days, with an average of 8 days. The ratio of primary to secondary infections was 21:3 in Marburg, 4:2 in Frankfurt, and 1:1 in Belgrade. Three cases of secondary infection resulted from inadvertent needle-stick inoculations; in one case, a pathology technician cut himself on the forearm with a knife during a postmortem examination. Airborne transmission between humans did not occur, as indicated, for example, by the instance of a young man who slept in the same bed with his brother only a couple of days before he died; the brother did not develop disease and was seronegative for Marburg virus disease six months later.[4]

History

The Marburg virus disease made reappearance in 1975, 1980, 1987, 1990, 1998–00, 2004–05, 2007, 2008 and 2017. The seven deaths out of the 31 initially diagnosed infections during the 1967 Marburg virus outbreak represents a case fatality rate of 23%. The 32nd case was diagnosed retroactively via serology.[5]

See also

- Marburg virus disease
- List of other Filoviridae outbreaks
- List of epidemics

BITCHUTE @Housatonic YOUTUBE @HousatonicLive ODYSEE @Housatonic BRIGHTEON @Housatonic

Andrew Walter Marshall (born 1921)

Wikipedia Andrew Marshall (foreign policy strategist)

Born: 13 Aug 1921 / Birth Place: Detroit [HN01B7][GDrive]

Parents: John Marshall; Katherine Marshall Marshall

Spouse: Mary Katherine Speer (Marriage Date: 1953)

Associations:

- David Friedman Epstein (born 1951) (long-time deputy director at ONI, while Marshall was the director)
- Thomas Paul Rona (born 1923) - Marshall was part of the DC military establishment that was interested in Rona's 1976 Boeing report that described "I
- **Herman Khan (born 1922)**
  - *"Marshall [as] part of "a cadre of strategic thinkers" that coalesced at the RAND Corporation in the 1950s and 1960s, a group that also included Charles J. Hitch, Herman Kahn, James Schlesinger and Daniel Ellsberg. Notably, he worked with Kahn on developing and advancing Monte Carlo methods. "* [HK003A] [GDrive]
- **James Rodney Schlesinger (born 1929)** (In 1973, Secretary of Defense James R. Schlesinger, Mr. Marshall's onetime colleague at Rand, created the Office of Net Assessment and put Mr. Marshall in charge.)
-

Saved Wikipedia - Nov 5, 2020

[HK003A][GDrive]

1st Director of Office of Net Assessment

In office 1973 – January 2, 2015

Preceded by Office Established

Succeeded by James H. Baker

Personal details

Born

September 13, 1921

Detroit, Michigan, U.S.

Died

March 26, 2019 (aged 97)

Alexandria, Virginia, U.S.

Nationality

United States

Education

University of Chicago

University of Detroit

Wayne State University

University of Chicago (M.A., 1949)

George Washington University

Andrew W. Marshall (September 13, 1921 – March 26, 2019)[1] was an American foreign policy strategist who served as director of the United States Department of Defense's Office of Net Assessment from 1973 to 2015. Appointed to the position by President Richard Nixon, Marshall remained in office during all successive administrations that followed until his retirement on January 2, 2015.[2][3][4] He was succeeded in the role by James H. Baker.[5]

Biography

Raised in Detroit, Michigan, Marshall pursued autodidactic interests in history, literature and the natural and social sciences from a young age. He graduated from Cass Technical High School (where he trained in machining and received the second-highest score on a citywide aptitude test for honors students similar in provenance to the SAT) in 1939. After briefly working in a factory and attending the University of Detroit for a year, he dropped out to take a position at the Murray Body Company, where he manufactured machine tools used in fabricating British airplane parts. Unable to serve in World War II due to a heart murmur, Marshall continued to work at Murray for the remainder of the war. He eventually resumed his formal studies at Wayne State University in 1943.

Marshall was admitted to the University of Chicago with graduate standing in 1945; under the chancellery of Robert Maynard Hutchins, students who were not enrolled in the generalist "Chicago Plan" undergraduate program pursued a course of study that led to a master's degree instead of the baccalaureate. Strongly influenced by Friedrich Hayek, he earned an M.A. in economics from the institution in 1949. His master's thesis was a sensitivity analysis of Lawrence Klein's econometric model of the US economy; influential for its methodology, it has never been published except for a short abstract.[6][7][8]

After electing to defer his studies in favor of eventually pursuing a Ph.D. in statistics (a program not yet offered by the University of Chicago), Marshall joined the RAND Corporation, the original "think tank," at the behest of mentor **W. Allen Wallis** in 1949. While he would briefly return to academia to cover Wallis's courses during the 1953-1954 term and continued to take statistics courses at George Washington University, **Marshall soon gained the cachet of being part of "a cadre of strategic thinkers" that coalesced at the RAND Corporation in the 1950s and 1960s,** a group that also included Charles J. Hitch, [Herman Khan (born 1922)], [James Rodney Schlesinger (born 1929)] and Daniel Ellsberg. Notably, he worked with Kahn on developing and advancing Monte Carlo methods.

Schlesinger would later become the U.S. Secretary of Defense and personally oversaw the creation of the Office of Net Assessment. The original main task of the office was to provide strategic evaluations on nuclear war issues. James Roche, Secretary of the Air Force in the administration of George W. Bush, worked for Marshall during the 1970s.[9]

Andrew Marshall was consulted for the 1992 draft of Defense Planning Guidance (DPG), created by then-Defense Department staffers I. Lewis Libby, Paul Wolfowitz, and Zalmay Khalilzad; all of whom took to influential roles in the administration of George W. Bush.[10]

> We studied RMA exhaustively. Our great hero was Andy Marshall in the Pentagon. We translated every word he wrote.
>
> —General Chen Zhou, PLA[11]

Marshall has been noted for fostering talent in younger associates, who then proceed to influential positions in and out of the federal government: "a slew of Marshall's former staffers have gone on to industry, academia and military think tanks."[12] **Dick Cheney, Donald Rumsfeld, and Wolfowitz, among others, have been cited as Marshall "star protégés**."[13]

In 2003, Marshall commissioned a report for the Pentagon predicting that abrupt climate change could bring the planet to the edge of anarchy as countries develop a nuclear threat to defend and secure dwindling food, water and energy supplies.[14] The report, authored by Peter Schwartz and Doug Randall, predicted that 'catastrophic' shortages of water and energy supply would become increasingly harder to overcome, plunging the planet into war by 2020. Schwarz and Randall further claimed that major European cities would be sunk beneath rising seas as Britain is plunged into a 'Siberian' climate by 2020.[15] At the time of the report's publishing, it became notable for its link to Marshall and its accusations that leadership of the Pentagon purportedly "covered up" the report for four months until it was obtained by the British weekly *The Observer*.[16]

In an interview in 2012, Major General Chen Zhou, the main author of four Chinese defence white papers, stated that Marshall was one of the most important figures in changing Chinese defence thinking in the 1990s and 2000s.[17]

Andrew Marshall funded and published three best selling books by Michael Pillsbury: *Chinese Views of Future Warfare* in 1998,[18] *China Debates the Future Security Environment*,[19] and in 2015 an international bestseller, *The Hundred-Year Marathon: China's Secret Strategy to Replace America*.[20] According to a biography, *The Last Warrior: Andrew Marshall and the Shaping of Modern American Defense Strategy*, "There was every reason for Marshall to expect that Chinese modes of thought would be even more alien to American ways of thinking than the Soviet leadership's had been, and that some insight into the thinking of China's political and military leaders could be gleaned from surveying open source writings. Pillsbury's work on China, which Marshall had encouraged and supported since the early 1970s, illustrates both points."[21] According to *The New York Times* March 26, 2019 obituary of Marshall, "His gift was the framing of the question, the discovery of the critical question," said Michael Pillsbury, a China expert who advised and worked with Mr. Marshall throughout his career."[22] The *Washington Post* obituary about Marshall stated, "He had an uncanny ability to pick out only the most significant questions, then to drill down deeply," Pillsbury, a colleague of 45 years, said in an interview. "He developed an iconoclastic, contrarian image."[23]

Foreign Policy named Marshall one of its 2012 Top 100 Global Thinkers, "for thinking way, way outside the Pentagon box".[24]

Death

Marshall died on March 26, 2019 in Arlington, Virginia, at the age of 97.[25][26] House Armed Services Committee ranking member Rep. Mac Thornberry (R-TX) announced his death during a hearing, saying, "I can think of fewer people who have had a bigger impact of focusing our defense efforts, our national

security, in the right direction than Mr. Marshall. He has been before our committee I don't know how many times over the years. So I wanted to note that passing, but also to honor his memory because he made such a difference."[27]

2019 - Obituary (March 28), from LNP Always Lancaster

Name: Andrew Walter Marshall ; Death Age: 97 ; [...]

Marriage Date: 1953

Death Date: Abt 2019 / Death Place: Alexandria, Virginia

Obituary Date: 28 Mar 2019 [...]

LNP Always Lancaster (Lancaster, Pennsylvania) · 28 Mar 2019, Thu · Page A10

2019-03-28-lancaster-pa-online-obituary-andrew-walter-marshall

ANDREW MARSHALL

Pentagon threat expert for decades dies

NEW YORK TIMES

Andrew Marshall, a Pentagon strategist who helped shape U.S. military thinking on the Soviet Union, China and others for more than four decades, died Tuesday in Alexandria, Virginia. He was 97.

His death was confirmed by Jaymie Durnan, his executor.

Marshall, as director of the Office of Net Assessment, was the secretive futurist of the Pentagon, a long-range thinker who both prodded and inspired secretaries of defense and high-level policymakers. Virtually unknown among the wider public, he came to be revered inside the Defense Department as a mysterious Yoda-like figure who embodied an exceptionally long institutional memory.

In the early 2000s, at a time when the Pentagon was focused on counterinsurgency and wars in Afghanistan and Iraq, Marshall urged officials to focus on the challenge of China — a view that many considered outdated. But today, national security officials are increasingly adopting Marshall's view of China as a potential strategic adversary, an idea now at the heart of national defense strategy.

Andrew Walter Marshall was born Aug. 13, 1921, in Detroit to John and Katherine Marshall

Marshall married Mary Katherine Speer, a fellow employee of the Rand Corp., in 1953. She died in 2004. He later married Ann Wheeler Smith, who died in 2017. No immediate family members survive.

Source : See newspaper article in the LNP Always Lancaster at [HN01B7][GDrive]

Washington Post - Andrew Marshall, Pentagon's gnomic 'Yoda' of long-range planning, dies at 97

[HN01B4][GDrive]

By **Matt Schudel**

March 27, 2019 at 7:31 p.m. EDT

Andrew W. Marshall in 1994. (Defense Department)
[HN01B5][GDrive]

Mr. Marshall in 1969. (Rand Corp.)
[HN01B6][GDrive]

For more than 40 years, Andrew W. Marshall presided over a little-known office deep in the bowels of the Pentagon as the Defense Department's designated deep thinker. A civilian scholar who had never served a day in uniform, he was charged with pondering the imponderable and with devising the country's long-range strategies for fighting — and surviving — future wars.

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Drawing on a variety of disciplines, from statistics and business management to nuclear physics, he was credited with foreseeing the collapse of the Soviet Union and with prodding reluctant U.S. leaders to adapt to changing military and technological needs.

Mr. Marshall, who guided the Defense Department's Office of Net Assessment for 42 years, had access to the nation's most sensitive intelligence secrets and worked directly for the secretary of defense. He was known for challenging established ways of thinking and for acquiring a reputation as the Pentagon's "Yoda," after the wise, gnomic Jedi master of "Star Wars."

"He had an uncanny ability to pick out only the most significant questions, then to drill down deeply," Michael Pillsbury, a colleague of 45 years, said in an interview. "He developed an iconoclastic, contrarian image."

Mr. Marshall inspired such loyalty and near-reverent devotion that his former staffers called themselves graduates of "St. Andrew's Prep." He was 97 when he died March 26 at a hospice facility in Arlington, Va.

The death was confirmed by Jeffrey McKitrick, a friend and former employee. He was present at Mr. Marshall's bedside when he died but said he could not cite a specific medical cause.

One reason Mr. Marshall was held in such esteem was his sheer longevity: **He had been studying U.S. military strategy since 1949, at the beginning of the Cold War, and retired at 93 in 2015. He worked for years at the Rand Corp., a California think tank associated with the military, and had witnessed nuclear explosions in the 1950s before coming to the White House in 1969 as an aide to then-National Security Adviser Henry Kissinger.**

In 1973, Secretary of Defense James R. Schlesinger, Mr. Marshall's onetime colleague at Rand, created the Office of Net Assessment and put Mr. Marshall in charge. (The term "net assessment" derived from studies of nuclear war, including estimates of casualties and damage.)

"We tend to look at not very happy futures," Mr. Marshall once told The Washington Post.

He brought an innovative approach to long-range military planning, including the use of business models of corporate competition to describe how powerful countries seek to gain geopolitical advantage over one another. He looked to history to see how advances in technology were reflected on the battlefield.

"What's amazing," he told the New Yorker in 2006, "is how much we know, it turns out, about the chariot revolution back in 1700 B.C."

He distributed more than $10 million each year in grants to think tanks, universities and defense contractors to imagine future conflicts, then devised "war games" to test hypothetical military strategies.

Mr. Marshall had a staff of only about 10 analysts, including military officers and civilians, working in windowless offices on the third floor of the Pentagon. They held the highest levels of security clearance.

"His approach was always to focus on the question," McKitrick, a defense researcher who worked for Mr. Marshall in the 1980s, said in an interview. "Too often, people focus on solutions but haven't identified the right questions. He thought it was very important to get the strategic questions right and then start thinking about the answers."

Mr. Marshall received intelligence reports from the CIA and Defense Department and gauged future military needs against what he learned about U.S. adversaries.

"One of the things that happens from time to time ," he told Armed Forces Journal in 2011, "is that you have to revise your entire notion of how your opponent sees things."

During the Cold War, the conventional Pentagon thinking was that a Soviet nuclear attack would be aimed at major cities.

"We assumed the Soviets were like us and that they would like to destroy our cities," Pillsbury said. "No, they wanted to destroy our command-and-control

systems," targeting military and political leaders.

As a result, billions of dollars were spent to strengthen emergency bunkers and to improve communications networks.

In the waning years of the Cold War, Mr. Marshall was among the first to suggest the Soviet Union's crumbling infrastructure and failing economy foretold the country's imminent collapse.

By then, Mr. Marshall had turned his attention in a different direction, following the adage that military leaders are always prepared to the fight the last war, not the next one. His view was that, as the world changed, the nature of warfare should change with it. In the 1990s, he recommended that military leaders shift their focus to China as the greatest long-term threat to U.S. preeminence.

In a 1993 memo called "Some Thoughts on Military Revolutions," Mr. Marshall called for a "revolution in military affairs," emphasizing a smaller, more mobile strike force and greater reliance on information technology. (Mr. Marshall did not use computers or email himself.)

During the administration of President George W. Bush, Defense Secretary Donald H. Rumsfeld called on Mr. Marshall to lead a comprehensive review of military readiness. Rumsfeld's recommendation of a smaller, nimbler military came directly out of Mr. Marshall's thinking.

Critics, however, noted that Mr. Marshall underestimated the social impact of the Internet and failed to anticipate the role of terrorism in the attacks of Sept. 11, 2001.

"You can never account for black swans, and 9/11 was a black swan," McKitrick said. "There is a difference between predictions and forecasting." Mr. Marshall, he added, "was about strategic forecasting."

Andrew Walter Marshall was born **Aug. 13, 1921**, in Detroit. His father was a stonemason, his mother a homemaker; both parents were immigrants from England.

As a child, Mr. Marshall was an eager reader with an interest in the military and history. He received a medical deferment during World War II because of a heart murmur and worked at an aircraft factory.

He attended Wayne State University in Detroit and, despite not having a bachelor's degree, was admitted to graduate school in economics at the University of Chicago, where he received a master's degree.

At the Rand Corp., his colleagues included futurist Herman Kahn — the best man at his wedding — and Daniel Ellsberg, who released the Pentagon Papers to news organizations, revealing the early history of the Vietnam War.

In those years, Mr. Marshall worked on early-warning systems and other ways to reduce the likelihood of nuclear attack.

His first wife, the former Mary Speer, died in 2004 after more than 50 years of marriage. His second wife, Ann Wheeler Smith, died in 2017. He had no immediate survivors.

Mr. Marshall was a political appointee who often expected that a change in administration would send him packing. (He never sold his house in California, expecting that eventuality.) In 1997, Defense Secretary William Cohen attempted to have him transferred out of the Pentagon, but the outcry was so strong that Mr. Marshall stayed put for another 18 years.

After he retired, Mr. Marshall continued to consult with military experts until a week before his death.

Mr. Marshall's office prepared more than 20 "net assessments" of future military strategies, each looking 10 to 20 years into the future. He delivered the reports by hand to the secretary of defense, carrying them in a zippered bag made of fireproof fabric. Only one copy was made of each report, which Mr. Marshall then kept locked in his office.

He is the only person known to have read all the reports, which remain classified to this day

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https://en.wikipedia.org/wiki/Office_of_Net_Assessment

Saved Wikipedia - Nov 5, 2020

[HK003B][GDrive]

Office of Net Assessment

The United States Department of Defense's **Office of Net Assessment**[1] (**ONA**) was created in 1973 by Richard Nixon to serve as the Pentagon's "internal think tank" that "looks 20 to 30 years into the military's future, often with the assistance of outside contractors, and produces reports on the results of its research".[2] The Director of Net Assessment is the principal staff assistant and advisor to the Secretary and Deputy Secretary of Defense on net assessment.[*clarification needed*]

According to Defense Directive 5111.11, the Director shall develop and coordinate net assessments of the standing, trends, and future prospects of U.S. military capabilities and military potential in comparison with those of other countries or groups of countries in order to identify emerging or future threats or opportunities for the United States.[3][4] Paul Bracken explains that it is important to have a good grasp of net assessment because it is an "important part of the language spoken by leaders in the higher levels of DOD" and officers who lack familiarity "will be at a disadvantage in communicating with the civilian leadership".[5]

Andrew Marshall was named its first director, a position he continued to hold under succeeding administrations.[6] In October 2014, Marshall announced plans to retire in January 2015.[7] He was replaced by Jim Baker in May 2015.[8][9]

Office of Net Assessment Directors[edit]

- Andrew Marshall, 1973 – January 2, 2015
- James H. Baker, May 14, 2015 – Present

Notable staff[edit]

Staff members have included:

- David S. Yost
- Andrew F. Krepinevich, Jr., formerly the president of the Center for Strategic and Budgetary Assessments
- Larry Seaquist, recently a member of Washington State's House of Representatives

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Presentation of the George P. Shultz Award for Distinguished Service

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Presentation of the George P. Shultz Award for Distinguished Service to Andrew Marshall, four-decade director of the Pentagon's "internal think tank," the Office of Net Assessment. The event is introduced by Andrew D. May, Office of Net Assessment and the discussion is moderated by Samantha Ravich, FDD CSIF board member and former Deputy National Security Advisor to the Vice President.

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https://americans4innovation.blogspot.com/2019/04/death-of-warmonger-andrew-marshall.html#warmonger-marshall-dead

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2019-04-11-youtube-steve-pieczenik-opus-140-andrew-marshall-rip-not.mp4

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OPUS 140 Andrew Marshall RIP NOT!

18,024 views•Apr 11, 2019

Steve Pieczenik

This guy was a nefarious traitor. Hear me on the death of Andy Marshall: responsible for rise of NEOCONS and 911 false flag.

keywords -

video - Highland forum / Highlands group (http://www.thehighlandgroup.net/about-us)

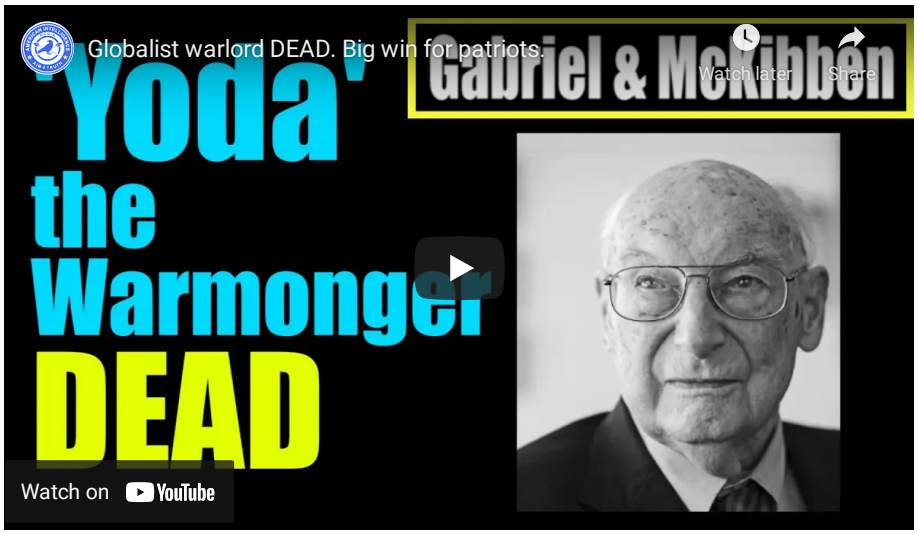
Blog - Marshall directed Highlands Group *patent theft planning as government policy* with James P. Chandler, III since 1973 through the DoD Office of Net Assessment & DARPA

2018 video - https://www.noxinfluencer.com/youtube/video-analytics/M_SZWIEXuNU

2019 (April) video - American Intelligence Media Michael McKibben and Douglas Gabriel explain why Andrew Marshall's death is a major victory in cleaning the swamp.

Live version : https://www.youtube.com/watch?v=iqY03UIjwJ0 / Saved Video - [HV00CV][GDrive]

screenshot - [HV00CW][GDrive]



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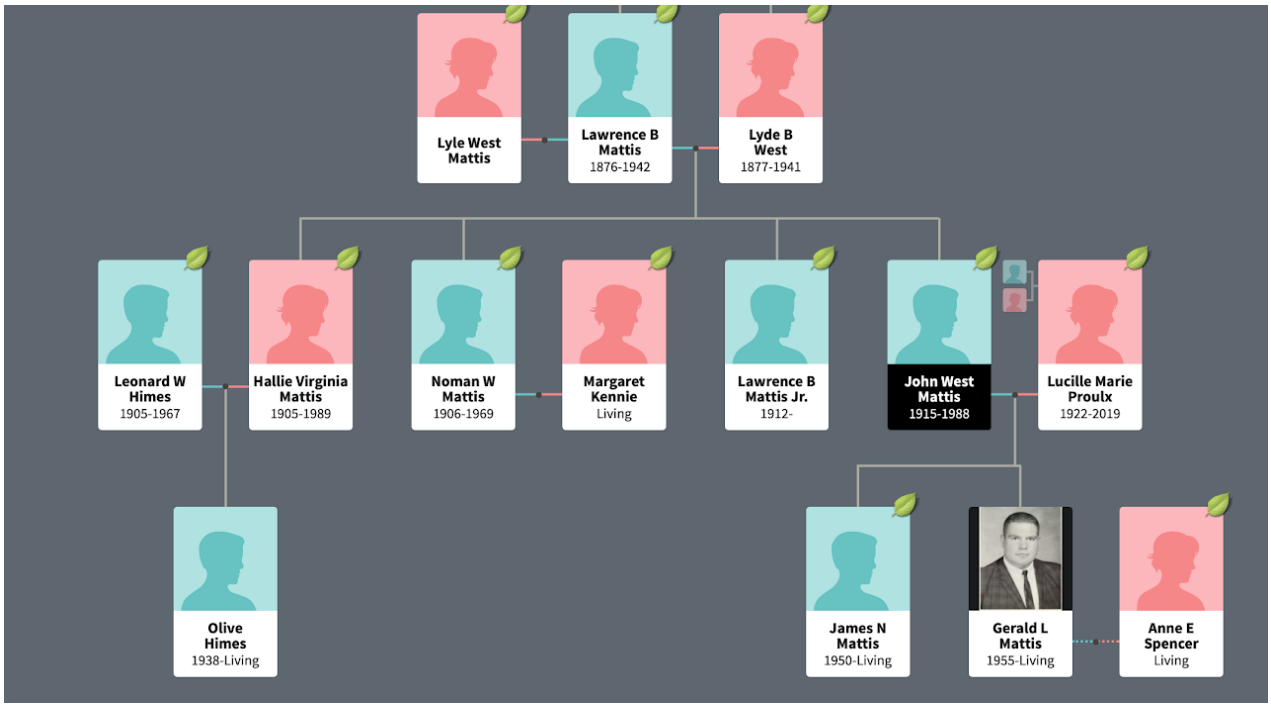
General James Norman Mattis (born 1950)

https://en.wikipedia.org/wiki/Jim_Mattis

Born Sept. 8, 1950 in Pullman, Washington to John West Mattis, a long distance merchant marine, and Lucille Marie Proulx, a WWII intelligence operative and later involved with the Atomic Energy Commiission.



John West Mattis met Lucille M. Proulx in 1945 onboard his ship as she was returning from South Africa at the end of the war. They then married in New York City. They moved to Washington State and John gave up the sea to work at the Hansard Nuclear site.

In recent research, we have seen merchant marines being close relatives of people we have been studying. Of more intrest is the wife/mother Lucille Proulx. She was born in Winnipeg, Manitoba. This immediately raises eyebrows as this has been the launching ground of British intelligence into the United States since the early 1900s. Sir William Stephenson, the OSS spymaster, was born in Winnipeg a generation earlier. The metadata suggests Sir William ran a British intelligence operation inside the USA long before WWII, and his quite possibly lived in Tennessee, where his wife is from.

Below is Lucille Proulx's obituary:

LUCILLE MARIE MATTIS of Richland passed away on August 4, 2019. She was born May 14, 1922 in St. Boniface (Winnipeg), Manitoba, Canada to Joseph and Eugenie Proulx. In 1923 th family emigrated to the Mesabi Iron Range in northern Minnesota where her father worked i the mines along with many other immigrants.

Lucille graduated from Horace Mann High School in Biwabik, Minnesota, in 1940. In 1941, aft attending nearby Evelyth Junior College for one year, she moved to Washington, D.C., where she went to work as a stenographer in the War Department as a civilian employee of Army Intelligence. In 1942, she moved to the newly completed Pentagon where among other tasks she typed up the plans for Operation Torch--the invasion of North Africa--America's first offensive campaign in the European Theater.

In 1943, she was assigned to the Office of the Military Attache at the U.S. Legation in Pretoria South Africa. She embarked from New York by ship along with other diplomatic personnel a a cargo of ammunition, was escorted by destroyers for the protection from German submarines to the Panama Canal, and then traveled down the west coast of South America, around Cape Horn and then to Capetown. En route she met one of the ship's mates, a Merchant Marine officer named West Mattis. When she left the ship in Capetown, they decide to write one another and after the war ended, they married in New York City on November 1 1945.

When West was transferred to a new homeport in San Francisco, Lucille worked for the Commonwealth Club of California in San Francisco until their son Tom was born in 1948. We subsequently left the Merchant Marine and in 1950, the family moved to Pullman, Washingt where he went to work at the Washington State College power plant. Son Jim was born in Pullman in 1950.

In 1952, the family moved to Richland when West went to work at the Hanford Site. Lucille worked variously for the US Army at Camp Hanford, the Richland School District and took time off to have a third son, Gerald, also born in Pullman in 1955. Lucille subsequently work for the Atomic Energy Commission and managed office services for Vitro Engineering, completing her career as a contracts officer with Washington Public Power Supply System.

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Ian Robert Maxwell (born 1923)

Wikipedia Ian Robert Maxwell

1991 (Oct) - Obituary - NYTimes

See [HN00QK][GDrive]

Robert Maxwell, who died today after going overboard from his yacht off the Canary Islands, fled the collapse of Czechoslovakia in 1939 to become one of the most powerful publishers in Britain and the world, presiding over a multibillion-dollar empire he assembled with brass and bravura over 40 years.

An avowed socialist whose newspapers here supported the Labor Party, the 68-year-old publisher ran his businesses with legendary ruthlessness and attention to earnings, paring by the hundreds the staffs of the companies he acquired and instantly dismissing editors of his newspapers when they disagreed with him.

As a global businessman with interests in scores of countries, he borrowed money on a heroic scale, but kept his bankers, executives and staffs toeing the line by the power of his physical presence and his insistence on having his way.

Despite his physical size -- he was about 6 feet tall and weighed about 290 pounds -- Mr. Maxwell was compulsively active. With his beetling black eyebrows and his booming baritone, he had a talent for self-dramatization and knew how to skirt the edge of scandal. Even after taking large parts of his empire public this year, he kept his own financial affairs well hidden in a multinational web of holding companies, the most closely guarded of them a private family trust in Liechtenstein.

Once described by British Government fraud investigators as unsuited to run a public company, he lost his seat on the board of his first company, Pergamon Press, but eventually won it back. "I have never worried about what the Establishment believes about me or doesn't," he said a few years ago. "I don't give a damn."

5 Family Members Die in Auschwitz

This complex figure who sought and cultivated political and government connections in the Soviet Union, Eastern Europe and Israel as well as in the United States, was born on June 10, 1923, into a Hasidic family called Hoch in the Ruthenian village of Slatinske Doly, then part of Czechoslovakia and now in the Soviet Union, and was given the name Ludvik. He was selling trinkets on the streets of Bratislava in March 1939 when Hitler's allies in Hungary occupied his homeland as the Nazis marched into western Czechoslovakia.

His mother and four other members of his immediate family died in the Auschwitz concentration camp, and his father is believed to have been shot either there or during transport to the camp. Only two of Mr. Maxwell's sisters survived it.

Though Mr. Maxwell never made much of his religion, he was an outspoken supporter of Israel all his life. He escaped the Holocaust by making his way to France and joining a group of Czechoslovak volunteers in the French Foreign Legion in March 1940.

After the French defeat that year, he escaped again, being evacuated with other Czechoslovak troops to Britain. He later claimed he learned English in only six weeks. Soon after his arrival he joined the British Army as a volunteer and earned a battlefield commission as lieutenant. His talent for languages then led him into intelligence work.

It was on such an assignment to Paris, just after its liberation in July of 1944, that he met the woman who would become his wife, a French Huguenot named Elisabeth Meynard. Proposing to her in December, he promised that he would win a Military Cross, re-create a family, make a fortune, and become Prime Minister of England. "And I shall make you happy until the end of my days," he said.

The first promise, at least, he kept in 1945, winning the Military Cross for "heroism in the face of enemy action" at the Dutch-German border. When the war ended, he was discharged as captain, a title he insisted on using in civilian life for 20 years afterward. He also acquired his name, Ian Robert Maxwell, at the suggestion of a Scottish officer friend.

Company Is Lost In a Scandal

For the next two years he served in occupied Germany with the British Foreign Office as head of the press section in war-ravaged Berlin. There he would make business contacts that led to the purchase of his first company, a publisher of scientific journals and textbooks that he bought from its German and British owners and renamed Pergamon Press.

With a bank loan and money borrowed from his wife's family and from relatives in America, Mr. Maxwell built it into a thriving company by 1964, when he took a step toward fulfilling his political ambitions by winning a seat as a Labor Party Member of Parliament for the rural constituency of Buckingham, north of London.

His political and business fortunes took a turn for the worse in 1969, when he lost Pergamon in a financial scandal after trying to sell it to Saul P. Steinberg, the New York financier. Mr. Steinberg contended that Mr. Maxwell had misled him about the company's worth, and pulled out of the deal.

The principal shareholders then angrily ousted Mr. Maxwell from Pergamon's board. The next year, Labor lost the elections to the Conservatives, and, embroiled in the scandal, Mr. Maxwell lost his seat.

A protracted British Government investigation concluded in mid-1971 "that, notwithstanding Mr. Maxwell's acknowledged abilities and energy, he is not in our opinion a person who can be relied on to exercise proper stewardship of a publicly quoted company."

"Not true," Mr. Maxwell responded with fury. Ultimately he recovered, going heavily into debt to buy back Pergamon privately in 1974 after reaching an out-of-court financial settlement with Mr. Steinberg and his investment partners. He sold the company again to a Dutch publisher, Elseviers, last March for $:440 million ($770 million).

He would never again run for public office, but as a newspaper publisher --- one of the few, in the past decade, to back the Labor Party instead of the Conservatives -- he exercised another kind of political influence. He also helped revolutionize the newspaper business in Britain, ruthlessly eliminating the ancient practices of overstaffing and the overlapping jurisdictions that had given Fleet Street unions a stranglehold over management and allowing Conservative publishing rivals like Rupert Murdoch to follow his example.

Newspaper Payrolls Are Slashed

When Mr. Maxwell bought the British Printing and Communication Corporation in London in 1980, it was nearly bankrupt. He told the unions that the only way to save any jobs at all was to cut the payroll from 13,000 to 7,000 workers. Later, as Maxwell Communications Corporation, the company came to be regarded as a model of efficiency.

So, too, was Mirror Group Newspapers, which Mr. Maxwell acquired as a privately owned company in 1984. There he found typesetters earning more than assistant editors and many people working four-hour days and four-day weeks. His arrival as chairman came at 3 A.M. the morning after the sale.

Told that the entire staff of The Daily Mail and The Sunday Record in Glasgow was holding a meeting to decide whether to work for him, Mr. Maxwell replied, "If they don't return to work I will close down their papers and they won't open again."

"Forward with Britain," the Mirror proclaimed under his leadership, and it and its sister papers in Scotland increased their circulation from three million to nearly four million last year, though it fell this year by about 300,000. Mr. Maxwell sold 49 percent of Mirror Group Newspapers to the public this year for $:245.5 million ($421.8 million), more than twice what he had originally paid for them.

His editors would soon learn that having him as publisher was an entirely new experience. "When I fire someone it is like a thunderclap," he told Sebastian Faulks of The Independent, not one of the newspapers he owns, last year. "My primary duty is to hire and fire editors. I treat them like a field marshal."

Magnus Linklater, one editor who worked for him, said, "Balance is not something usually associated with Robert Maxwell." He had a habit, Mr. Linklater said, "of suddenly appearing out of the blue, and woe betide the person who is not at his desk and doing what he's expecting them to be doing."

Mr. Linklater was hired to run a new afternoon tabloid, The London Daily News, that Mr. Maxwell launched in 1987. Asked at the time by a reporter from another newspaper whether he would dismiss Mr. Linklater if he wrote editorials supporting the Conservative Prime Minister, Margaret Thatcher, instead of Labor's leader, Neil Kinnock, Mr. Maxwell paused briefly and then answered:

"He would have my permission to do so. I would have him certified. But he would certainly be able to do it."

Mr. Linklater survived, but the newspaper did not, and the flop cost Mr. Maxwell the equivalent of $50 million. Later, he said, "I made certain that never again would I launch a paper and leave it in the hands of the professionals."

A Weekly Paper For All of Europe

The publisher, who at the end claimed to be able to speak 11 languages, launched a European-wide English-language color weekly newspaper, The European, in May of last year. Visiting its offices one weekend and finding that he had no office in the newsroom, he took the nameplate off the door of the one used by its first editor, Ian Watson, and took over that room on the spot.

Last winter, he replaced Mr. Watson as editor, easing him upstairs to the board of directors. The weekly has reportedly lost money since its inception, and Mr. Maxwell kept it as part of his private business operations.

In recent years, he turned his business eye toward the United States, acquiring the publishing house of Macmillan in 1989 for $2.6 billion and Official Airline Guides for $750 million. The acquisitions came at a price of a heavy debt load that later forced him to sell Pergamon and part of the Mirror Group, but Mr. Maxwell's real interest soon became The Daily News in New York City, which he acquired from the Tribune Company of Chicago last spring, ending a long and costly strike from which the tabloid has not yet recovered.

Mr. Maxwell always insisted that The Daily News was "in danger of becoming profitable" by early next year, and promised to spend most of his time running it. At first, he did, parking the yacht that took him on his last voyage, the Lady Ghislaine, named after a daughter, in the East River off 30th Street and holding court. Hailed at first for saving two-thirds of the paper's jobs, he was made an honorary Grand Marshal at the Salute to Israel Parade on Fifth Avenue. But later he seemed to fade from public view and to spend more of his time in London.

To the members of the sedate British Establishment he said he despised, Mr. Maxwell was regarded as an upstart outsider, the piratical financier the satirical press weekly Private Eye called "Captain Bob." An American author, Seymour M. Hersh, contended in a recent book, "The Samson Option," that he had close ties with Israel's top leadership, and that Nicholas Davies, the foreign editor of The Daily Mirror, was buying and selling arms in partnership with an Israeli intelligence operative.

Mr. Davies denied the charge last month, but later, confronted with evidence that he had met an arms dealer in Ohio despite his denials, he acknowledged that he had not told the truth about the trip and The Mirror dismissed him. But Mr. Maxwell maintained his lawsuit against Mr. Hersh, who has filed a countersuit.

New Interests In Eastern Europe

Mr. Maxwell's critics have often made fun of the fawning biographies he published of Eastern European Communist leaders like Erich Honecker of East

Germany, Nicolae Ceausescu of Romania and Todor Zhivkov of Bulgaria.

After they fell, he pirouetted neatly around and acquired interests in newly democratic newspapers in Hungary and Eastern Germany, and last year formed a $250 million fund to invest in joint ventures in the region. Prime Minister John Major, paying tribute to him today, said he had offered useful advice at the time of the failed coup in Moscow last August.

Mr. Maxwell never took a car when a helicopter would do, and roared in and out of his London headquarters --called, naturally, Maxwell House -- by helicopter every day from the Headington Hill Hall estate he rented from the city authorities in Oxford.

An ardent soccer fan, he owned clubs in both Britain and Israel at various times, but controversy attended his every attempt to buy another one. Last year, he was said to be growing disillusioned with the sport in Britain, saying it "could not be in a sorrier state," and put his interests in four clubs on the market.

Mr. Maxwell is survived by his wife, three sons and four daughters. Two of the sons, Ian Robert Charles Maxwell, 35, and Kevin Francis Herbert Maxwell, 32, are directors of the publishing company. Another daughter died of leukemia in infancy, and another son, the eldest, died in 1968, seven years after an automobile accident.

Correction: November 8, 1991

The obituary of Robert Maxwell on Wednesday misidentified the afternoon newspaper he began in 1987. It was The London Evening News, not The London Daily News.

2006 (March 10) - Article in Independent

See [HM0005][GDrive]

Robert Maxwell was being investigated for war crimes and was to be interviewed by police just before he mysteriously drowned 15 years ago.

Revelations that Maxwell, a captain in the British Army, knew he faced a possible life sentence for murdering an unarmed German civilian in 1945 lend support to the theory that he took his own life in 1991.

A Metropolitan Police file released to The Independent under the Freedom of Information Act shows that, weeks before he died, detectives had begun questioning members of Maxwell's platoon and were preparing a case for the Crown Prosecution Service.

Maxwell would have been told about the inquiry and knew that, if found guilty, he would be the first Briton to be prosecuted for war crimes. The War Crimes Act 1991 was enacted just six months before Maxwell's body was found floating in the Atlantic on 5 November after disappearing from his yacht, the Lady Ghislane.

No one has been able to explain how he came to die. But the police file shows that, by that time, officers had been able to establish the location in Germany where Maxwell was alleged to have killed an unarmed civilian. The shooting, which is said to have happened on 2 April 1945, was first disclosed by Maxwell's authorised biographer, Joe Haines, in 1988. Maxwell is quoted in the book describing how he tried to capture a German town by threatening the population with a mortar bombardment, a tactic that had proved successful on a nearby village hours earlier.

In a letter to his wife, published in the book, Maxwell recounts how he asked some Germans to fetch the mayor. He ordered the mayor to go back to town and tell the soldiers defending it to surrender or face destruction. One hour later the mayor returned, saying the soldiers had agreed to his demands. "But as soon as we marched off a German tank opened fire on us," Maxwell wrote. "Luckily, he missed, so I shot the mayor and withdrew."

The Met's file says: "The reported circumstances of the shooting gave rise to an allegation of War Crimes. To some extent, the reporting of the shooting incident was confirmed by Mr Maxwell in an interview he gave in 1988 to the journalist Brian Walden [30th October 1988]."

But the police could do nothing until Parliament had enacted the war crimes legislation which had been specifically designed to prosecute Nazi war criminals living in this country.

It was only when a member of the public made a complaint under the new legislation that an official investigation could begin. Two officers from the Met's historic war crimes unit began tracing members of his platoon but had been unable to find a witness to the alleged shooting of the mayor.

Maxwell is presumed to have fallen overboard from Lady Ghislane, which was cruising off the Canary Islands. The official verdict was accidental drowning, though many people, including members of his own family, believe he took his own life. It did not emerge until after his death that he had plundered the Mirror Group pensions' funds to bail out his ailing media empire.

Shortly after he was buried in Jerusalem, the police passed the conclusions of their investigation to the Crown Prosecution Service. The file obtained under the Freedom of Information Act says "it was determined that the case could be progressed no further, and it was closed in March 1992". The file also shows that although a lot of work had gone into the case the police had not been able to find a reliable witness to corroborate the account in Haines's biography. They had also raised concerns about having to rely on the quotes attributed to Maxwell in the book. But Maxwell would not have known this and he may have felt that the net was closing.

Maxwell was immensely proud of his war record. He fought his way across Europe from the Normandy beaches to Berlin, winning the Military Cross in January 1945. He had a hatred for Germans that stemmed from his earlier life, most of his family in Czechoslovakia having been killed by the Nazis. Later in life, he was reported to have said that the two things he hated most were Germans and taxes.

FindAGrave.com

See [HL003K][GDrive]

Robert Maxwell was born Ján Ludvík Hyman Binyamin Hoch into a poor Yiddish-speaking orthodox Jewish family in the small town of Slatinské Doly (now Solotvino, Ukraine), in the easternmost province of (pre-World War II) Czechoslovakia. His parents were Mechel Hoch and Hannah Slomowitz. He had six siblings. ***In 1939, the area was reclaimed by Hungary. Most members of his family died in Auschwitz after Hungary was occupied in 1944, by its former ally, Nazi Germany, but he had already escaped to France. In Marseille he joined the Czechoslovak Army in exile in May 1940.***

After the defeat in France and the retreat to Great Britain, Maxwell took part in the protest against the leadership of the Czechoslovak Army, and with 500 other soldiers, he was transferred to the British Pioneer Corps, and later to the North Staffordshire Regiment in 1943. He was then involved in action across Europe, from the Normandy beaches to Berlin, and achieved the rank of sergeant. ***He gained a commission in 1945, and was promoted to captain. In January 1945, he received the Military Cross from Field Marshal Montgomery. Attached to the British Foreign Office, he served in Berlin during the next two years in the press section.***

In 1945, he married Elisabeth "Betty" Meynard; a French Protestant, with whom he had nine children, with the goal of "recreating the family he lost in the Holocaust". Five of his children were later employed within his companies. His three-year-old daughter Karine died of leukemia and his eldest son, Michael, was severely injured in 1961 (at the age of 15), after being driven home from a post-Christmas party when his driver fell asleep at the wheel. Michael never regained consciousness and died seven years later.

After the war he used various contacts in the Allied occupation authorities to go into business, becoming the British and United States distributor for Springer Verlag, a publisher of scientific books. In 1951 he bought three quarters of Butterworth-Springer, a minor publisher; the remaining quarter was held by the experienced scientific editor Paul Rosbaud. They changed the name of the company to Pergamon Press and rapidly built it into a major publishing house.

WIKIPEDIA

https://en.wikipedia.org/wiki/Robert_Maxwell

ALSO SEE

[HN00QL][GDrive]

BITCHUTE @Housatonic **YOUTUBE** @HousatonicLive **ODYSEE** @Housatonic **BRIGHTEON** @Housatonic

Housatonic

Dr. Donald Malcolm MacArthur (born 1931)

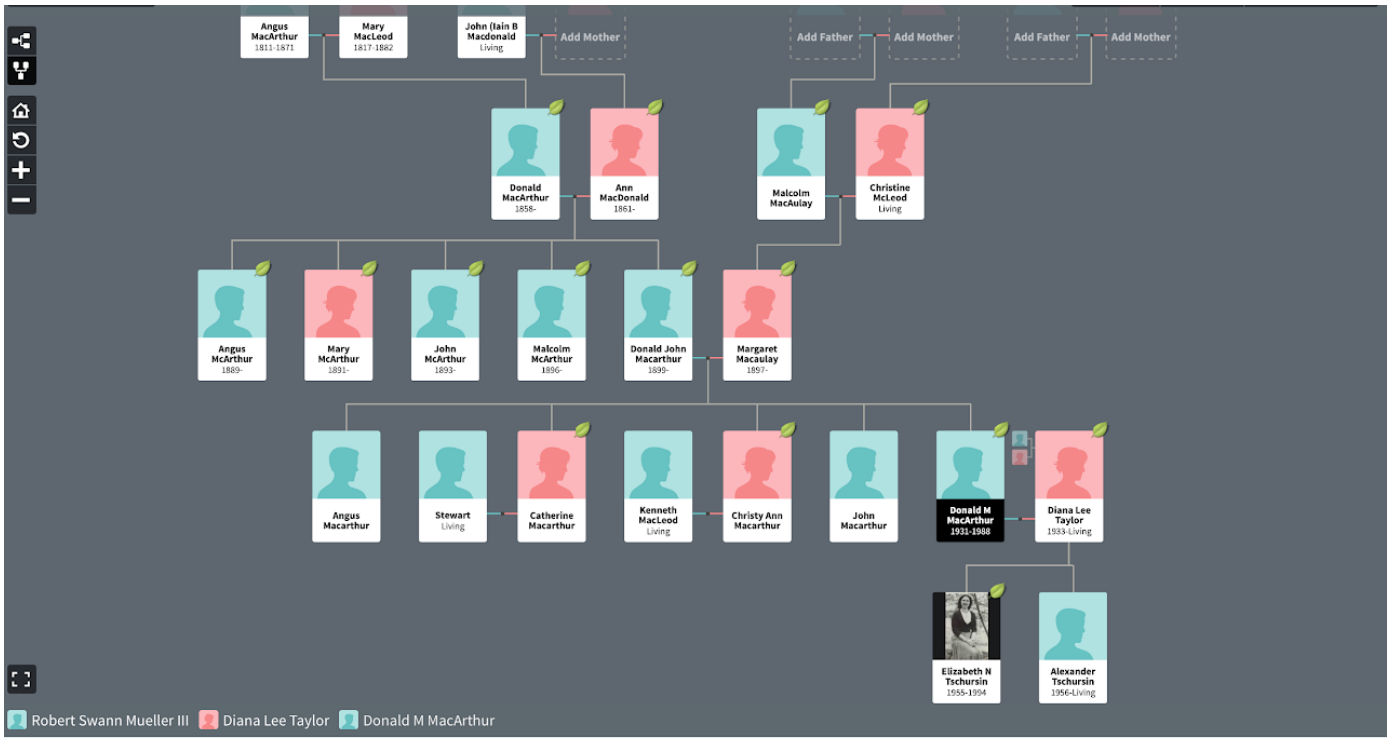
Born - Jan 7, 1931 [HN00T1][GDrive]

Parents -

Married to Diana Lee Taylor (born 1933) (also known as Diana Lee Taylor MacArthur (born 1933))

Worked at Melpar Incorporated ("From 1958 to 1966, he was with Melpar Inc., where he developed the Life Science Laboratories and directed the Chemistry and Life Sciences Division. ") [HN00T2][GDrive]

Founder of the Dynamac Corporation .



1988 (Dec 2) - Passing

Source - PDF - [HN00T2][GDrive] / JPEG is [HN00T1][GDrive]

Elsewhere

Donald MacArthur

Donald Malcolm MacArthur, 57, president of Dynamac Corp. of Rockville, Md., died Nov. 27 at the Austin Airport in Texas.

He and his wife were returning to their home in Bethesda after spending a family Thanksgiving at the L.B.J. Ranch. Mrs. MacArthur is a daughter of the late Tony Taylor, who died two years ago, former owner of The Old Mexico Shop in Santa Fe. She also is a niece of Mrs. Lyndon B. Johnson.

Mr. MacArthur, who was well known in Washington and Scotland, was a scientist and businessman. In 1970 he founded the Dynamac Corp., which specializes in providing technical services in environmental and health sciences, engineering, and information management and computer systems. The company now has 12 offices and employs more than 500.

Mr. MacArthur was born Jan. 7, 1931, in Detroit, Mich., of Scottish parents who had emigrated from the Isle of Lewis in the Outer Hebrides to escape hard times. In 1933 the family returned to the Isle of Lewis.

Mr. MacArthur was raised in the village of Carloway, at the age of 8, was enrolled in the Nicholson Institute in Stornoway where he received his primary and secondary education. He was a scholarship student at St. Andrew's University and was awarded a bachelor of science with honors in 1954. He received a doctorate from Edinburgh University in 1957.

He returned to the United States in 1957 and joined the faculty of the University of Connecticut at Storrs. From 1958 to 1966, he was with Melpar Inc., where he developed the Life Science Laboratories and directed the Chemistry and Life Sciences Division. From 1966 to 1970 he was deputy director of research and engineering in the office of the secretary of defense.

Mr. MacArthur was a Fellow of the American Institute of Chemists and a member of the New York Academy of Sciences, the American Chemical Society, the American Association of the Advancement of Science and the National Association of Life Sciences and Industries.

He sometimes referred to himself as a foreigner in his native land. Although born in the United States he was a Gaelic-speaking Hebridean Scot who maintained strong ties with his ancestrial land. He visited Scotland frequently and was active in the alumni association at St. Andrew's University. He was secretary of the St. Andrew's Society of Washington, D.C.

Survivors include his wife, Diana MacArthur of Bethesda; two stepchildren, Alexander Tschursin of Santa Fe and Elizabeth Tschursin of Bethesda; his father, Donald John MacArthur of the Isle of Lewis, Scotland; two brothers, Angus MacArthur of Burlington, Ontario, Canada, and John MacArthur of Glasgow, Scotland; and two sisters, Catherine Stewart of Perth, Australia, and Christie Ann MacLeod of Thunder Bay, Ontario, Canada.

At the time of his death, Mr. MacArthur was involved in raising funds to build the Bethesda Nursing Home on the Isle of Lewis.

Steve Miera

A wake service will be conducted today for Steve Miera, 47, of Nashville, Tenn., and formerly of Española. Mr. Miera died Wednesday in Nashville.

Survivors include his mother, Lugarda Miera of Española; five sisters, Berlinda Martinez and JoAnn Miera, both of Española, Lourdes Apodaca and Pablita Esquibel of Fairview and Cordelia Mares of Albuquerque; and a brother, Priscilliano Miera of Albuquerque.

Wally Berger

REDONDO BEACH, Calif. — Wally Berger, a Boston Braves' outfielder who held baseball's rookie home

[HN00T1][GDrive]

Donald Malcolm MacArthur, 57, president of Dynamac Corp. of Rockville, Md. . died Nov. 27 at the Austin Airport in Texas.

He and his wife were returning to their home in Bethesda after spending a family Thanksgiving at the L.B.J. Ranch. Mrs. MacArthur is a daughter of the late Tony Taylor, who died two years ago, former owner of The Old Mexico Shop in Santa Fe. She also is a niece of Mrs. Lyndon H. Johnson.

Mr. Mac.Arthur, who was well known in Washington and Scotland, was a scientist and businessman. In 1970 he founded the Dynamac Corp., which specialized in providing technical services in environmental and health sciences, engineering, and information management and computer systems. The company now has 12 offices and employs more than 500 people.

Mt. MacArthur wu bOrn Jan. 7, 1931, in Detroit, Michigan, of Scottish parents who had emigrated from the Isle of Lewis in the Outer Hebrides to escape hard times. In 1933 the family returned to the Isle of Lewis.

Mr. MacArthur was raised in the village of Carloway, at the age of 8, was enrolled in the Nicholson Institute in Stornoway where he received his primary and secondary education. He was a scholarship student at St. Andrew's University and was awarded a bachelor of science with honors in 1954. He received a doctorate from Edinburgh University in 1957.

He returned to the United States in 1957 and joined the faculty of the University of Connecticut at Storrs. From 1958 to 1966, he was with Melpar Inc., where he developed the Life Science Laboratories and directed the Chemistry and Life Sciences Division. From 1966 to 1970 he was deputy director of research and engineering in the office of the secretary of defense.

Mr. MacArthur was a Fellow of the American Institute of Chemists and a member of the New York Academy of Sciences, the American Chemical Society, the: American Association of the Advancement of Science and the National Association of Life Sciences and industries.

He sometimes referred to himself as a foreigner in his native land. Although born in the United States he was a Gaelic-speaking Hebridean Scot who maintained strong ties with this ancestral land. He visited Scotland frequently and was an active in the alumni association at St. Andrew's University. He was secretary of the St. Andrew's Society of Washington D.C..

Surviors include his wife, Diana MacArthur of Betesda; two stepchildren, Alexander Tschursin of Santa Fe and Elizabeth Tschursin of Bethesda; his father, Donald John MacArthur of the Isle of Lewis, Scotland; two brothers, Angus MacArthur of Burlington, Ontario, Canada, and John MacArthur of Glasgow, Scotland; and two sisters, Catherine Stewart of Perth Australia, and Christine Ann MacLeod of Thunder Bay, Ontario, Canada.

At the time of his death, Mr. MacArthur was involved in raising funds to build the Bethesda Nursing Home on the Isle of Lewis.

Evidence Timeline

1901 - Census - 1901 England, Wales & Scotland Census - Is this his father?

Record Transcription: 1901 England, Wales & Scotland Census / 57, Uig, Carloway, Ross and Cromarty, Scotland

Record Transcription:
1901 England, Wales & Scotland Census
57, Uig, Carloway, Ross and Cromarty, Scotland
Learn about this record set

Household Members

First name(s)	Last name	Relationship	Marital status	Sex	Age	Birth year	Occupation	Birth place
Mary	Campbell	Head	Widow	Female	54	1847	Crofter's Mother	Ross & Cromarty, Scotland
Donald	Campbell	Son	Married	Male	28	1873	Crofter	Ross & Cromarty, Scotland
Effie	Campbell	Wife	Married	Female	25	1876	Crofter's Wife	Ross & Cromarty, Scotland
Allan	Campbell	Son	-	Male	17	1884	Crofter's Son	Ross & Cromarty, Scotland
Roderick	Campbell	Son	-	Male	13	1888	Scholar	Ross & Cromarty, Scotland
Alexander	Macleod	Father	Widower	Male	87	1814	Crofter's Grandfather	Ross & Cromarty, Scotland
Donald	Macarthur	Head	Married	Male	32	1869	Farmer	Uig, Ross & Cromarty, Scotland
Chirsty	Macarthur	Wife	Married	Female	32	1869	Farmer's Wife	Uig, Ross & Cromarty, Scotland
Annie	Macarthur	Daughter	-	Female	10	1891	Scholar	Uig, Ross & Cromarty, Scotland
Duncan	Macarthur	Son	-	Male	8	1893	Scholar	Uig, Ross & Cromarty, Scotland
Catherine	Macarthur	Daughter	-	Female	5	1896	Scholar	Uig, Ross & Cromarty, Scotland
Donald J	**Macarthur**	**Son**	**-**	**Male**	**3**	**1898**	**-**	**Uig, Ross & Cromarty, Scotland**
Kenneth	Macarthur	Son	-	Male	1	1900	-	Uig, Ross & Cromarty, Scotland
Angus	Macarthur	Lodger	Single	Male	43	1858	Fisherman	Uig, Ross & Cromarty, Scotland

[HS003A][GDrive]

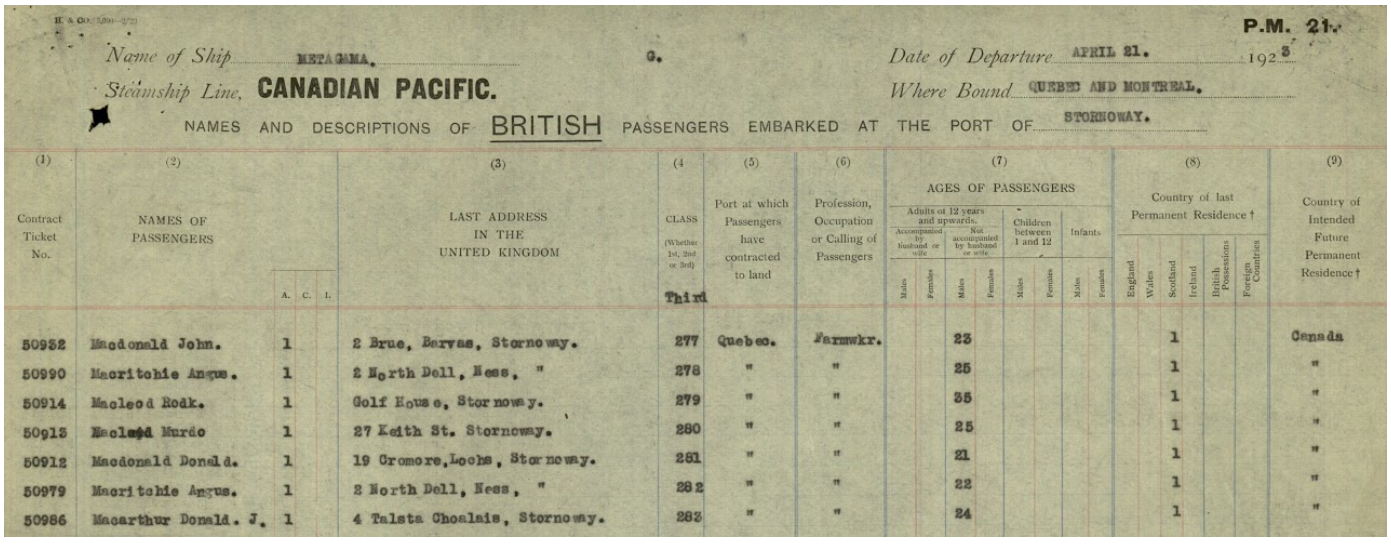
1923 (April) - Father "Donald John MacArthur (born 1899)" heading to Canada (Quebec / Montreal)

Full sheet - [HJ000E][GDrive]

Another? This is March 28th, Glasgow to halifax ... ??

- https://search.findmypast.com/record?id=TNA%2FBT27%2F0999%2F00%2F0061%2FP%2F0007F&parentid=TNA%2FBT27%2F0999000061%2F00211

Other travel? 1929 - https://search.findmypast.com/record?id=TNA%2FBT27%2F1230%2F00%2F0036%2FP%2F0008F&parentid=TNA%2FBT27%2F1230000036%2F00190



P.M. 21.

Name of Ship METAGAMA. G. *Date of Departure* APRIL 21. 1923

Steamship Line, **CANADIAN PACIFIC.** *Where Bound* QUEBEC AND MONTREAL.

NAMES AND DESCRIPTIONS OF BRITISH PASSENGERS EMBARKED AT THE PORT OF STORNOWAY.

(1) Contract Ticket No.	(2) NAMES OF PASSENGERS	A.	C.	I.	(3) LAST ADDRESS IN THE UNITED KINGDOM	(4) CLASS (Whether 1st, 2nd or 3rd)	(5) Port at which Passengers have contracted to land	(6) Profession, Occupation or Calling of Passengers	(7) AGES OF PASSENGERS: Adults of 12 years and upwards, Accompanied by husband or wife — Males	Females	Adults of 12 years and upwards, Not accompanied by husband or wife — Males	Females	Children between 1 and 12 — Males	Females	Infants — Males	Females	(8) Country of last Permanent Residence †: England	Wales	Scotland	Ireland	British Possessions	Foreign Countries	(9) Country of Intended Future Permanent Residence †
						Third																	
50932	Macdonald John.	1			2 Brue, Barvas, Stornoway.	277	Quebec.	Farmwkr.			23							1				Canada
50990	Macritchie Angus.	1			2 North Dell, Ness, "	278	"	"			25							1				"
50914	Macleod Rodk.	1			Golf House, Stornoway.	279	"	"			35							1				"
50913	Macleod Murdo	1			27 Keith St. Stornoway.	280	"	"			25							1				"
50912	Macdonald Donald.	1			19 Cromore, Lochs, Stornoway.	281	"	"			21							1				"
50979	Macritchie Angus.	1			2 North Dell, Ness, "	282	"	"			22							1				"
50986	Macarthur Donald. J.	1			4 Talsta Choalais, Stornoway.	283	"	"			24							1				"

[HJ000F][GDrive]

1930 - Father "Donald John MacArthur" Married, and living in Detroit - polisher at an auto plant ?

Full US Census sheet, 1930 Detroit - [HS0038][GDrive]

Record Transcription:
Us Census 1930

Household Members

First name(s)	Last name	Relationship	Marital status	Sex	Age	Birth year	Birth place
Donald J	**Macarthur**	**Head**	**Married**	**Male**	**32**	**1898**	**Scotland**
Margaret	Macarthur	Wife	Married	Female	33	1897	Scotland

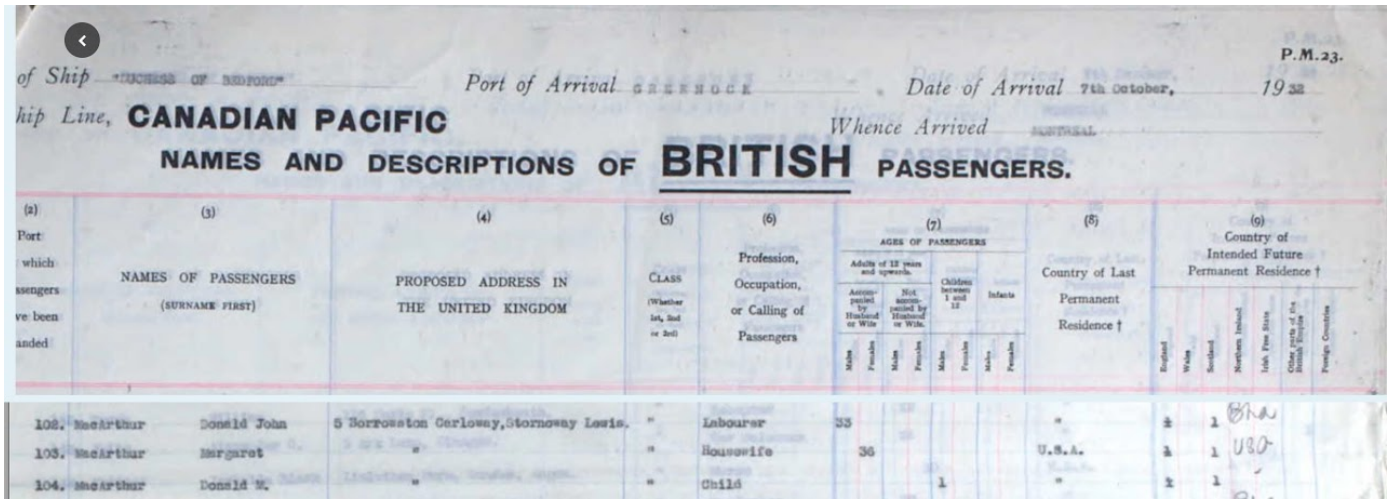
Donald J Macarthur's Census Details

First name(s)	Donald J
Last name	Macarthur
Relationship	Head
Sex	Male
Race	White
Age	32
Birth year	1898
Birth place	Scotland
Marital status	Married
Immigration year	1923
Father's birth place	Scotland
Mother's birth place	Scotland
City/township	Detroit
County	Wayne
State	Michigan
NARA series	T626
NARA roll	1037
Record set	Us Census 1930
Category	Census, Land & Substitutes
Subcategory	Census
Collections from	Americas, United States

[HS0039][GDrive]

1932 (October) - Family traveling back to Scotland

Full sheet - [HJ000G][GDrive]



of Ship "DUCHESS OF BEDFORD" Port of Arrival GREENOCK Date of Arrival 7th October, 1932 P.M.23.

hip Line, **CANADIAN PACIFIC** Whence Arrived

NAMES AND DESCRIPTIONS OF BRITISH PASSENGERS.

(2) Port which ssengers ve been anded	(3) NAMES OF PASSENGERS (SURNAME FIRST)	(4) PROPOSED ADDRESS IN THE UNITED KINGDOM	(5) CLASS (Whether 1st, 2nd or 3rd)	(6) Profession, Occupation, or Calling of Passengers	(7) AGES OF PASSENGERS: Adults of 12 years and upwards — Accompanied by Husband or Wife: Males / Females; Not accompanied by Husband or Wife: Males / Females; Children between 1 and 12: Males / Females; Infants: Males / Females	(8) Country of Last Permanent Residence †	(9) Country of Intended Future Permanent Residence †
102. MacArthur	Donald John	5 Borrosdon Carloway, Stornoway Lewis.	"	Labourer	33	"	England 1
103. MacArthur	Margaret	"	"	Housewife	36	U.S.A.	England 1
104. MacArthur	Donald M.	"	"	Child	1	"	England 1

[HJ000H][GDrive]

1957 - "Returned to the United States [] and joined the faculty of the University of Connecticut at Storrs

[HN00T1][GDrive]

1958 to 1966 - "Was with Melpar Inc., where he developed the Life Science Laboratories and directed the Chemistry and Life Sciences Division"

[HN00T1][GDrive]

1960 (March 31) - Georgetown Hoya newspaper

NOTE - "Doing research on guidance systems and **solid state fuels for missiles**."

Full issue of - [HE001Y][GDrive]

THE HOYA Thursday, March 31, 1960

Chem Club

Doctor Donald MacArthur, a research physical chemist at the Melpar Corporation, told the Chemistry Club about "high energy fuel cells and electrochemical devices" last Wednesday night, March 23.

Dr. MacArthur, 27, whose work, according to Chem Club president Bill Risen, is mostly classified, is doing research on guidance systems and solid state fuels for missiles. He received his PhD from the University of Edinburgh in 1957.

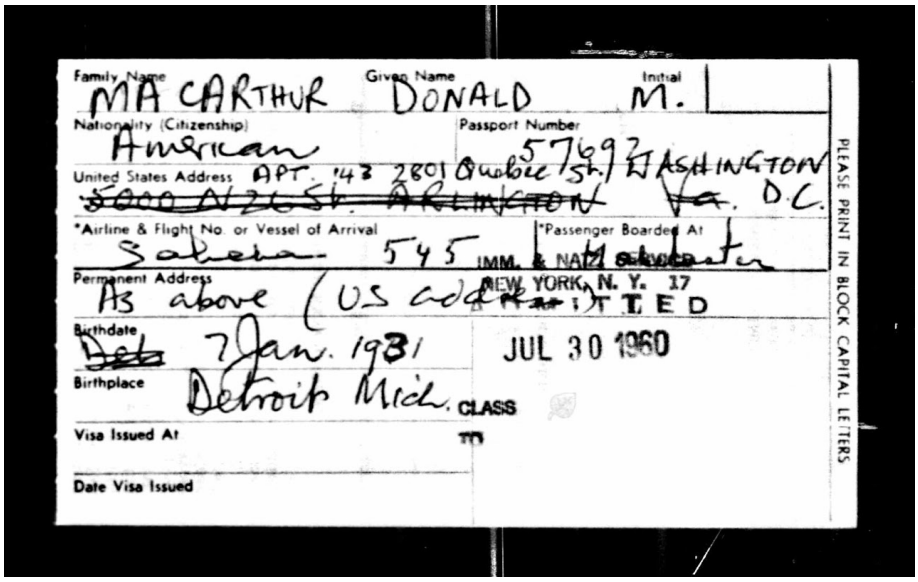
The club is going on a trip to the nuclear reactor at the Naval Research Laboratory on April 26, Mr. Risen said.

[HE001Z][GDrive]

1960 (July) - Flying from Manchester (England) to NYC (USA) - Sabera flight 545

Funny/interesting stuff here: "Visiting the Bahá'í World - by Ruhaniyyih Ruth Moffett - 1954-09" - See [HB004I][GDrive]

- What is **"Sabera flight 545"** ? *"s. He was most gracious. He arranged for Flight 545 leaving Manchester England at 11:00 p.m., August 30, arriving in New York, Idlewild Airport, Tuesday, 9:20 a.m. August 31."*


Family Name MA CARTHUR Given Name DONALD Initial M.
Nationality (Citizenship) American Passport Number 57697
United States Address APT. 143 2801 Quebec St. WASHINGTON D.C.
~~5000 N 26 St. ARLINGTON Va.~~
*Airline & Flight No. or Vessel of Arrival Sabena 545 IMM. & NAT. Manchester
Permanent Address As above (US address) NEW YORK, N. Y. 17
Birthdate ~~Feb~~ 7 Jan. 1931 JUL 30 1960
Birthplace Detroit Mich. CLASS
Visa Issued At
Date Visa Issued
PLEASE PRINT IN BLOCK CAPITAL LETTERS

[HJ000I][GDrive]

1961 (August 13) - Marriage announced

Marriage to Diana Lee Taylor (born 1933)

Two slightly different versions of announcement below

1961-08-13-the-santa-fe-new-mexican-pg-21-clip-macarthur-taylor

DIANA TAYLOR TSCHURSIN
— Hessler Studio

Diana Taylor Tschursin, Dr. MacArthur Will Wed

Antonio J. Taylor of Santa Fe announces the engagement of his daughter, Mrs. Diana Taylor Tschursin of Washington and New Mexico, to Dr. Donald Malcolm MacArthur of Washington and Stornoway, Scotland.

Mrs. Tschursin is the daughter of Mr. Taylor and Mrs. C. Noel Sibley of Marshall, Texas, and is the niece of Mrs. Lyndon B. Johnson. She attended the Shipley School at Bryn Mawr, Pa., and was graduated Phi Beta Kappa in economics at Vassar College in 1955. She is a vice president of the Thomas J. Deegan Company of New York City.

Dr. MacArthur is the son of Mr. and Mrs. Donald J. MacArthur of Scotland. He was graduated with a bachelor of science degree from St. Andrews University and graduated with a Ph.D. degree at the University of Edinburgh in 1957. He is the director of the Chemical and Biological Sciences Laboratories at Melpar, Inc. near Washington.

The couple plan a fall wedding.

Miller Twins Visit Relatives

Full page : [HN00TH][GDrive] / Clip - [HN00TI][GDrive]

1961-08-13-the-marshall-news-messenger-texas-pg-c-1-clip-macarthur-taylor

WASHINGTON WEDDING PLANNED FOR FALL — Mrs. C. Noel Sibley, 1309 Mobile, Marshall, announces the engagement of her daughter, Mrs. Diana Taylor Tschursin of Washington, to Dr. Donald Malcolm MacArthur of Washington and Stornoway, Scotland. Mrs. Tschursin is the daughter of Antonio J. Taylor of Santa Fe, N. M., and Mrs. Sibley. She is the niece of Mrs. Lyndon B. Johnson. She attended the Shipley School at Bryn Mawr, Pa., and graduated Phi Beta Kappa in economics at Vassar College in 1955. She is a vice president of the Thomas J. Deegan Co. of New York City. Dr. MacArthur is the son of Mr. and Mrs. Donald J. MacArthur of Scotland. He graduated with a bachelor of science degree from St. Andrews University and took a Ph. D degree at the University of Edinburgh in 1957. He is the director of the Chemical and Biological Sciences Laboratories at Melpar Inc. near Washington. The couple plans a fall wedding.

Full page : [HN00TJ][GDrive] / Clip - [HN00TK][GDrive]

1964 (Aug 13)

Full newspaper page [HN013Y][GDrive]

The Los Angeles Times (Los Angeles, California) · 13 Aug 1964, Thu · Page 21

Scientists Form Group for Johnson Campaign

Engineers Included in Committee That Plans Vote Drive at Grass-roots Level

BY ROBERT C. TOTH
Times National Science Correspondent

WASHINGTON — A committee of Scientists and Engineers for Johnson has been formed, it was announced here Wednesday.

The group is led by Dr. George B. Kistiakowsky, who was former President Dwight D. Eisenhower's science adviser, and Dr. Jerome B. Weisner, who was science adviser to the late President John. F. Kennedy.

Three Nobel Prize winners, a former president of the National Academy of Sciences, well known medical researchers and officials of the aerospace industry also were among the 42 organizing members of the committee.

The committee plans to mobilize "a vote drive at the grass-roots level" for the election of President Johnson. It hopes to enlist at least half of the 2 million scientists and engineers in the nation.

Termed 'Bipartisan'

Therefore, it differs from science committees for previous Presidential candidates who functioned as advisers rather than active workers. It thus represents a higher level of involvement by scientists in politics than in the past.

The committee called itself "bipartisan" and staff members said some of the members had been identified with Republican campaigns in the past.

The committee said it supports eight specific programs, some of which probably will become issues in the fall campaign.

These include a "balanced and rational defense policy, arms limitation consistent with national security . . . continued progress in space exploration, unqualified enforcement of the Civil Rights Act, and the rejection of extremism under any guise."

Local Branches Planned

The organization wants to set up 20 to 40 local chapters across the country, and will work in close co-operation with the National Citizens for Johnson, rather than the Democratic National Committee.

Members of the Scientists and Engineers for Johnson Committee "will comment through national media on science-related issues throughout the campaign," the announcement said.

No comparable group has been set up to support the Republican candidate, Sen. Barry Goldwater. A scientists panel did endorse Richard M. Nixon in 1960.

Among those on the science committee for President Johnson are two prominent Negroes, Dr. Rufus Clements, president of the University of Atlanta, and Dr. W. Montague Cobb, professor of anatomy at Howard University. Dr. Cobb also is president of the National Medical Assn., a primarily Negro association.

Nobel Recipients

The Nobel Prize winners are university professors: Dr. Owen Chamberlain and Dr. Harold Urey of the University of California, and Dr. Polykarp Kush of Columbia University.

Medical experts in the committee include Dr. Detlev W. Bronk, former president of the National Academy of Sciences and now president of Rockefeller Institute for Medical Research; Dr. Michael de Bakey, professor of surgery at Baylor University; Dr. Sidney Farber, director of the Children's Cancer Research Foundation in Boston, and Dr. Paul Dudley White, famed heart specialist who treated President Eisenhower.

Several university presidents are on the committee. These include Dr. Katharine McBride, president of Bryn Mawr; Dr. Kenneth S. Pitzer, president of Rice University, and Dr. Samuel M. Nabrit, president of Texas Southern University.

Aerospace Leaders

Top officials in aerospace and other industries on the committee include Clarence (Kelly) Johnson, vice president of Lockheed Aircraft Corp. and designer of the A-11 and U-2 aircraft; George S. Trimble Jr., vice president of the Martin Co.; Richard E. Horner, vice president of Northrop Corp.; Dr. Chauncey Starr, vice president of North American Aviation, Inc., and Dan A. Kimball, chairman of the board of Aerojet-General Corp.

The committee was formed in 10 days by two young scientists. Dr. Donald M. MacArthur, a chemist, got the original idea, he said, and has been helped by Rodney W. Nichols, a physicist. Both are members of its staff now.

[HN013Z][GDrive]

1964 (Sep 01)

Full page - [HN00TN][GDrive]

The Santa Fe New Mexican (Santa Fe, New Mexico) · 01 Sep 1964, Tue · Page 5

Anthony Taylor Represents President Johnson At Mrs. Mesta's Party

Anthony Taylor, Santa Fe Democrat, and brother of Lady Bird Johnson, represented the President and Mrs. Johnson at a gala Perle Mesta party in Atlantic City's Claridge Hotel on the last night of the Democratic convention.

Attending the convention as a delegate from New Mexico, Taylor carried to Mrs. Mesta's fiesta—the fifth given in honor of her longtime friend Lyndon Johnson that week — the first family's regrets that they could not attend in person.

He was accompanied by his daughter and her husband, Dr. and Mrs. Donald MacArthur of Washington.

Taylor, in his courtly manner, expressed the appreciation of both the President and the First Lady for all Mrs. Mesta had done for the Democratic party.

The President and his family were gathered with more than 1000 other guests in Convention Hall's upstairs ballroom, celebrating—among other things—his 56th birthday with Sen. and Mrs. Hubert Humphrey, comedian Danny Thomas, a 350-pound cake and a gigantic fireworks display.

[HN00TO][GDrive]

1964 (sep 30)

Full newspaper page : [HN0140][GDrive]

Scientist Group For Johnson Organized Here

The newly organized Scientists and Engineers for Johnson and Humphrey raised approximately $600 the past weekend in campaign funds and named a temporary chairman.

Dr. Donald MacArthur, of Washington, was here to launch the statewide link to the national group.

Dr. MacArthur and his wife, the former Diane Taylor of Santa Fe, niece of President and Mrs. Lyndon B. Johnson, departed early Monday for Dallas to continue organizing a coast-to-coast network of organizations of technical people for the Democratic nominees.

Temporary Chairman Named

Dr. MacArthur met with some 40 persons — all technical and scientists — Sunday at the home of Dr. Sidney Solomon, 2406 Morrow NE. Leo A. Dunn, of Sandia Corp., was named temporary chairman.

Dr. Julius R. Blum, of the University of New Mexico, will serve as temporary treasurer and Victor J. Goetz, with ACF Industries, Inc., acts as publicity chairman.

Another meeting of the newly formed group is planned for 7:30 p.m. tonight at the First National Bank Bldg. East.

Seek Big Victory

Dr. MacArthur said the technical and scientists are organizing " . . . to make sure of an overwhelming victory for Johnson and Humphrey.

Albuquerque will serve as state headquarters. Plans include forming at least one group in each state.

The meeting here was preceded by similar sessions at Santa Fe and Los Alamos.

A top speaker in the scientific - technical community is expected to address the group before the Nov. 3 election.

NATIONAL SCIENTISTS-ENGINEERS FOR LBJ: Dr. and Mrs. Donald M. MacArthur, of Washington, look over political material prepared specially for Scientists and Engineers for Johnson and Humphrey while standing just outside their national headquarters in Washington. Dr. MacArthur and his wife, the former Diane Taylor, of Santa Fe, were in New Mexico Saturday and Sunday. (UPI Teltphoto)

1964-09-30-the-albuquerque-journal-pg-c-3-clip-scientist-group

[HN0141][GDrive]

1964 (Oct 12)

Full PDF - From "Aviation Week" - [HP0039][GDrive]

Professionals Emerge as Political Force

Washington—Scientists and engineers are adding a new dimension to the art of politics by involving themselves to an unprecedented extent in this presidential campaign.

The experience of the Scientists and Engineers for Johnson citizens group shows that there is considerable unexploited political capital in the scientific community. The capital is in the form of providing prestigious names for window dressing, money for the campaign and volunteer work ranging from speech writing to phone calling.

Scientists and Engineers for Johnson got started earliest and appears to be having the most success, although Sen. Barry Goldwater (R-Ariz.) is organizing a counterpart group (see box). The Johnson group claims to have chapters in 35 states and estimates it will have raised $200,000 by election day.

Rodney W. Nichols in July took leave from his job as head of a systems analysis research group at Melpar, Inc., Falls Church, Va., to help organize Scientists and Engineers for Johnson. He was joined by an associate at the firm, Dr. Donald MacArthur, manager of the life sciences research center. Nichols said he wanted to do something to help defeat Goldwater while MacArthur received an extra push into the campaign from his wife, the former Diana Taylor, a niece of the President's wife. Nichols, 27, is now staff director and MacArthur, 33, executive director of the group.

"We decided at the outset that our group would only be meaningful if it was a vote getting mechanism, not another brain trust," Nichols said. This is what they set out to do, with some professional advice and encouragement from the man President Johnson had put in charge of such citizens groups, James Rowe. They also had as a guide the campaign handbook compiled by Lawrence F. O'Brien, the late President Kennedy's campaign director and now President Johnson's. "We found the handbook very 'commonsensical,'" Nichols said.

First step was to thumb through the various directories of people in the scientific and engineering fields and compile a list of recognized leaders who might be persuaded to join the committee and help expand its membership.

Nichols said the basic sales point in getting those first members went this way: "You may have been apolitical all your life, but this November the issues to be decided are so vital and so basic that we don't believe anybody can afford to be neutral." Usually, Nichols said the committee got a commitment.

He concedes this would not have been as easy if the presidential candidates were not as opposed in viewpoints. "We are exploiting the peculiar polarized character of this campaign." He said many members of the scientific community were looking for a way to become involved in the campaign, "so we're probably riding a trend."

Charter members who helped recruit others in their fields for the committee include Richard E. Horner, Northrop Corp. vice president; C. L. (Kelly) Johnson, Lockheed vice president who designed the YF-12A (A-11); Dan A. Kimball, Aerojet General Corp. board chairman and a former Navy secretary; Dr. Jerome Wiesner, President Kennedy's science advisor (AW&ST Sept. 14, p. 25); C. R. Able, vice president and general manager of the Missile & Space Systems Div. of Douglas Aircraft Co.; Charles D. Perrine, Jr., executive vice president of General Dynamics/Pomona; Finn Larsen, a vice president of Honeywell, Inc.; and Herbert F. York, director of Defense Research and Engineering during the Eisenhower Administration, have joined since then.

Just how deeply involved some members of the scientific community are willing to get was evidenced by Dr. Stanley Klein, clinical psychologist at a children's psychiatric hospital in Boston. He reported to the National Head quarters here last August, announced he was spending his vacation there and went to work. He made speeches, recruited volunteer workers for the committee from nearby colleges and handed out literature at the Convention.

There were many from the scientific community who were reluctant to join such a political action committee. Nichols said a lot of these were won over by having someone in their own field call and persuade them to join. One aerospace executive on the committee would call another who was not, a member college dean would call one of his counterparts, etc.

Nichols said one lesson learned in this recruiting was that medical doctors displeased with the American Medical Assn. usually welcomed the chance to join a political action group of professionals. "It provides them with an umbrella of legitimacy," he said because Scientists and Engineers for Johnson is not a competing medical group subject to attack by the AMA. The doctors are contributing time and money—prime requisites for a successful campaign.

Nichols said the committee to date has collected about $50,000. Although most of the money came from individuals, the Democratic President's Club donated $12,000 to help start the group. Sizable contributions from individuals included one of $3,000 from Thomas J. Watson, Jr., board chairman of International Business Machines. The committee expected to raise additional money at a rally in Washington Oct. 11 when Democratic vice presidential candidate Hubert Humphrey was scheduled to speak on "Science and Technology in the Great Society."

Committee expenses so far have ranged from paying a New York public relations man, David L. Garth, $1,000 a week for four weeks for helping organize state chapters to buying directories of those in the science and engineering professions. There also were the usual bills for campaign literature.

Nichols predicts scientists, engineers, doctors and other professionals will participate more fully in future political campaigns, both national and state.

President Johnson stated the case for more involvement of the scientific community in politics. He told the National Space Club Mar. 22, 1963: "We are at a point in our national history in which the future capabilities of our country—and the future of our country's role as a leader of freedom—depend decisively on both mutual understanding and mutual trust, as well as mutual comprehension, between the community of technology and the community of public affairs."

GOP Task Force

Washington—Sen. Barry Goldwater (R-Ariz.) has formed an advisory Task Force on Space, Science and the Atom headed by Lewis L. Strauss, former chairman of the Atomic Energy Commission. Sen. Goldwater said he wanted the panel to provide him with "a sharper definition of the issues."

Other members of the panel are USAF Gen. James H. Doolittle (ret.), chairman of the National Citizens for Goldwater-Miller Committee and former member of the President's Science Advisory Committee in 1957; Dr. John H. Lawrence, Donner Laboratory director at the University of California; Dr. Willard F. Libby, former member of the AEC and now a chemistry professor at the same school; Dr. Edward Teller, physicist who advocates development of big nuclear bombs and who opposed the test ban treaty; Gen. Arthur Trudeau (ret.), chief of Army research and development 1958-62 and now president of Gulf Research and Development Corp.; and Dr. Shields Warren, Harvard medical school professor and AEC consultant.

[HP003A][GDrive]

1964 (oct 29)

Full newspaper page : [HN0142][GDrive]

1964-10-29-the-philadelphia-inquirer-pg-22-clip-elect-johnson

THE ALTERNATIVE IS FRIGHTENING

JOHNSON/HUMPHREY

MUST BE ELECTED

WE SUPPORT:

A balanced and rational defense policy.

Arms limitations consistent with the national security.

Continued efforts toward lessening of international tensions.

Continued advancement in medical and other scientific research areas.

Uninterrupted growth in the number and quality of educational opportunities available to all citizens.

Expanded federal action on the application of science and technology to the social and economic problems of our time.

Unqualified support and enforcement of the Civil Rights Act.

PENNSYLVANIA STATE COMMITTEE OF SCIENTISTS, ENGINEERS AND PHYSICIANS FOR JOHNSON AND HUMPHREY

UNIVERSITY OF PENNSYLVANIA CHAPTER

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(Partial list of over 200 members)

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Scien. Advisor to late Pres. Kennedy M.I.T. (Dean of Science)

DR. VLADIMIR K. ZWORYKIN,
Honorary Vice President RCA Laboratories

Contributions should be sent to:

Pennsylvania State Committee Headquarters
1220 P.S.F.S. Building
Philadelphia, Pennsylvania 19107
Harold Berger, Executive Director

National Committee Headquarters
1106 Connecticut Avenue, N. W.
Washington, D. C. 20036
Donald M. MacArthur, Executive Director

This advertisement has been paid for by the University of Pennsylvania Chapter of the Pennsylvania State Committee of Scientists, Engineers and Physicians for Johnson and Humphrey. Harold Berger, Executive Director, Charles C. Price, Ph. D., and Robert G. Ravdin, M.D., Co-Chairmen.

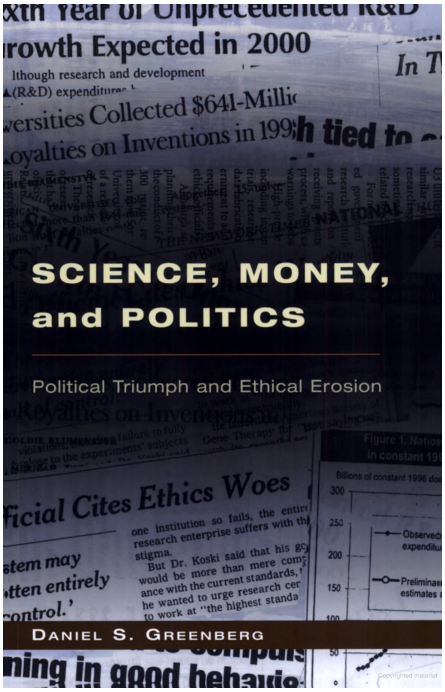
[HN0143][GDrive]

1964 - Detailed recollection of Dr. Donald MacArthur working to defect election of Goldwater

"Science, Money, and Politics: Political Triumph and Ethical Erosion" by Daniel S. Greenberg

Each year, Congress appropriates billions of dollars for scientific research. In this book, veteran science reporter Daniel S. Greenberg takes us behind closed doors to show us who gets it, and why. What he reveals is startling: an overlooked world of false claims, pork, and cronyism, where science, money, and politics all manipulate one another.

Full chapter 10 PDF - [HB0040][GDrive]



[HB0041][GDrive]

1965 (Jan 20)

Full newspaper page : [HN0144][GDrive]

Fort Worth Star-Telegram (Fort Worth, Texas) · 20 Jan 1965, Wed · Page 36

PAGE TEN — Section Three — FORT WORTH S

LBJ Clan Members Share His Triumph

BY JOHN MORT
Star-Telegram Washington Bureau

WASHINGTON, Jan. 20—President Johnson's Texas kin shared in his moment of glory Wednesday.

Numerous relatives of both the President and his First Lady occupied seats of honor among some of the nation's leading dignitaries at the inaugural ceremony.

Seated in the first row on the inaugural platform were Mrs. Johnson and their daughters, Lynda and Luci, with the First Lady placed immediately to her husband's right.

Other front - row occupants were the President's sister, Mrs. Birge Alexander of Fort Worth, her husband and their daughter, Becky, a University of Texas student; Mrs. Johnson's brother, A. J. Taylor of Santa Fe, N. M., and his wife; and two of the President's aunts, Mrs. Jessie Hatcher and Mrs. W. E. Saunders.

In the second row, seated next to U. S. Chief Justice Earl Warren, were Gov. John Connally, long-time Johnson intimate, and Mrs. Connally.

In the same row were Johnson's sister, Mrs. O. P. Bobbitt of Austin, and her husband; his brother, Sam Houston Johnson, also of Austin; and the Taylors' daughter, Mrs. Donald MacArthur of Washington.

Mrs. Johnson's sister-in-law, Mrs. T. J. Taylor Jr., and her daughter, Susan, were assigned third-row seats, along with two of the President's nephews, Phillip Bobbitt and Rodney White.

An uncle of the President, Huffman Baines Sr. of San Antonio, was in the fourth row, along with members of the cabinet.

Also on the presidential platform were Dale Miller of Dallas, chairman of this year's inauguration committee, and his wife.

The family of Vice President Hubert Humphrey also was well represented on the platform.

Mrs. Humphrey sat next to Mrs. Johnson, between the First Lady and the Johnson daughters.

Seated elsewhere on the platform were the Humphrey sons, Hubert H. III, Robert and Douglas; the daughter, Mrs. Bruce Salomson; and Humphrey's brother, Ralph, and his sister, Mrs. Frances Howard.

[HN0145][GDrive]

1965 (March 2) - "Water Resources Research: Hearings, Eighty-ninth Congress, First Session, on S. 22. March 2 and 3, 1965"

https://books.google.com/books?id=LYQRAAAAIAAJ&dq=%22melpar%22+%2B+%22Macarthur%22&source=gbs_navlinks_s

Water Resources Research: Hearings, Eighty-ninth Congress, First Session, on S. 22. March 2 and 3, 1965

United States. Congress. Senate. Committee on Interior and Insular Affairs. Subcommittee on Irrigation and Reclamation

U.S. Government Printing Office, 1965 - Water resources development - 78 pages

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1965 (May 9)

Full page - [HN00TL][GDrive]

B2 THE NEW MEXICAN Santa Fe, N.M., Sunday, May 9, 1965

MRS. DIANA TAYLOR MacARTHUR

SF Woman To Head Peace Corps Relations

Peace Corps Director Sargent Shriver has announced the appointment of Mrs. Diana Taylor MacArthur of Santa Fe, to head the Division of Private and International Organizations.

This division coordinates the relations of the Peace Corps with various organizations which cooperate in many of its programs and help to promote an understanding of its objectives.

Mrs. MacArthur is not new to the Peace Corps. Beginning in February 1963, she served first as deputy chief of the West Africa division and then as regional program officer for North Africa, Near East and South Asia. She also helped to prepare for the recent conference of returned volunteers.

"I was greatly inspired by the call to duty which President Kennedy sounded when he proposed the Peace Corps," Mrs. MacArthur said, "and this is something I want very much to do. I would like to have joined when I got out of college, but this is about the closest I can come now as an adult with a home and family to serving in a way which I would have chosen earlier, had there been a Peace Corps."

Prior to joining the Peace Corps, Mrs. MacArthur was vice president in charge of the Washington office of Thomas J. Deegan Company, New York public relations firm. From 1957 to 1961, she was a consulting economist for the firm of Checchi and Co., Washington, D.C. She is a member of the National Board of the Girl Scouts of America.

Mrs. MacArthur attended Vassar College from 1951 to 1955, majoring in economics and graduating Phi Beta Kappa. Her junior year was spent at the University of Geneva and Graduate School of International Studies, Geneva. She lived in France in 1950 under a scholarship from American Field Service, Experiment in International Living.

Mrs. MacArthur is married to Dr. Donald Malcolm MacArthur, scientist for a Washington industrial firm. They have a daughter Lisa, 10, and a son, Alex, 8.

[HN00TM][GDrive]

1965 (Aug 4)

Full newspaper page : [HN0146][GDrive]

AS OUR COLUMNISTS SEE IT

THE PHILADELPHIA INQUIRER, WEDNESDAY MORNING, AUGUST 4, 1965 h 27

Ruth Montgomery

Johnson Kinfolk Make News in Government Jobs

WASHINGTON.

SOME of President Johnson's kinfolk have been making headlines recently through their jobs with the Federal Government. Most of them could doubtless have done just dandy, even without an illustrious kinsman in the White House, but their appointments or promotions would not have been so newsworthy in that event.

LBJ's brother-in-law, Antonio J. Taylor, has just returned from a four weeks' mission to Latin America, where he served as a $75-a-day consultant to Agency for International Development officials on developing outlets for native handicrafts.

Lady Bird's only living brother has for the past 37 years been operating an import handicraft store in Santa Fe, N. M., and when President Johnson flew out West to meet the President of Mexico last year, he invited his Spanish-speaking brother-in-law to go along.

Tony Taylor's married daughter, Diana MacArthur, was appointed three months ago to head the Division of Private and International Organizations for the Peace Corps.

• • •

FORMERLY a vice president in charge of the Washington office of Thomas J. Deegan Associates, a New York public relations firm, Mrs. Donald Malcolm MacArthur switched to the Peace Corps while her uncle was Vice President, in February of 1963. A highly capable woman, she served as a deputy in charge of the West Africa division and as a regional programmer for the Peace Corps' North Africa division and as a regional programmer for the Peace Corps' North Africa, Near East and South African office before her recent promotion.

Another Presidential brother-in-law, Birge D. Alexander, has just been named to head a new Southwest area office of the Federal Aviation Agency. The 55-year-old husband of LBJ's sister could probably have made this step-up on his own, however, since he holds two bachelor of science degrees in mathematics and civil engineering from Southwest Texas State Teachers' College and the University of Texas, and has been with the FAA for many years.

A distaff Presidential cousin, Patsy Derby, works at the White House as one of Lady Bird's secretaries, and also accompanies 18-year-old Luci on visits to Volunteers for Vision projects, to Milwaukee for 4-H club appearances, and the like. Patsy's grandmother and Lady Bird's father, Thomas Jefferson Taylor, were brother and sister.

• • •

PRESIDENT Johnson will have a long way to go, however, to equal the kissin' kin record set by the Kennedy clan during the previous administration. The late President broke all precedents by naming his brother Bobby as Attorney General in the Cabinet, and his brother-in-law Sargent Shriver director of the Peace Corps.

JFK also placed another brother-in-law, Stephen Smith, in the State Department, and subsequently in a top spot at the Democratic National Committee; and he helped to elect his youngest brother, Teddy, to the Senate from Massachusetts.

The Texas drawl which has replaced the Boston twang in high circles is due far less to Presidential relatives than close friends. Scores of Lone Star Staters have been tapped by the magic wand, and their glittering jobs run the gamut from top White House advisory posts to chief of protocol and ambassador-designate to Australia.

All are bright, energetic and hard working, although most of them had no previous experience in government or diplomacy. The President's closest Congressional friend, Rep. Homer Thornberry of Texas, won appointment to the Federal bench in Texas through LBJ's intercession while Vice President, and has now been upped to a higher court.

OTHER long-time Johnsonian friends are also being tapped for exalted spots. The President's personal attorney, Abe Fortas, has been named to the Supreme Court, and the Johnson family's TV-radio lawyer, Leonard Marks, newly heads the United States Information Agency.

Precedent for this, too, was established by President Kennedy, who brought into government so many friends and advisers from Boston that they became known as the Irish Mafia. In President Truman's day, the cronies whom he brought to the seat of power were inelegantly known as the Missouri Gang, perhaps because President Harding's clique had been called the Ohio Gang.

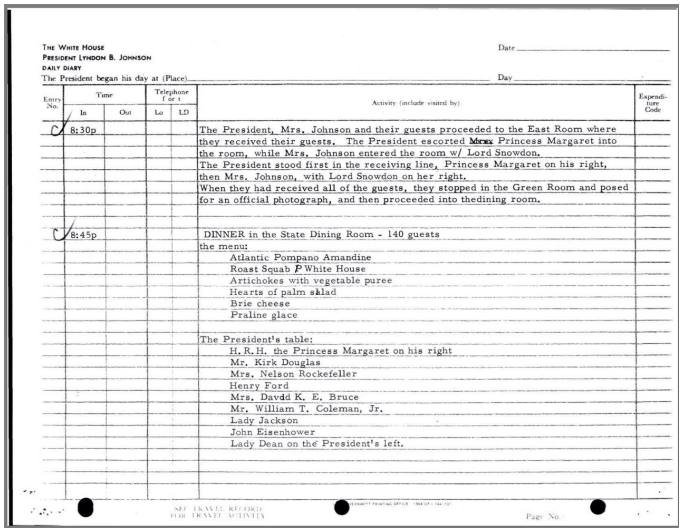
All of which goes to show that there's nothing new under the sun.

[HN0147][GDrive]

1965 (Nov 17) - White House Dinner party - Princess Margaret, Earl of Snowdon

See [HI0013][GDrive]

This was Pincess Maragaret's main tour to the USA. Donald MacArthur, and his wife, were part of a very limited guest list. Also see https://en.wikipedia.org/wiki/Princess_Margaret,_Countess_of_Snowdon .



THE WHITE HOUSE
PRESIDENT LYNDON B. JOHNSON
DAILY DIARY

Date _____

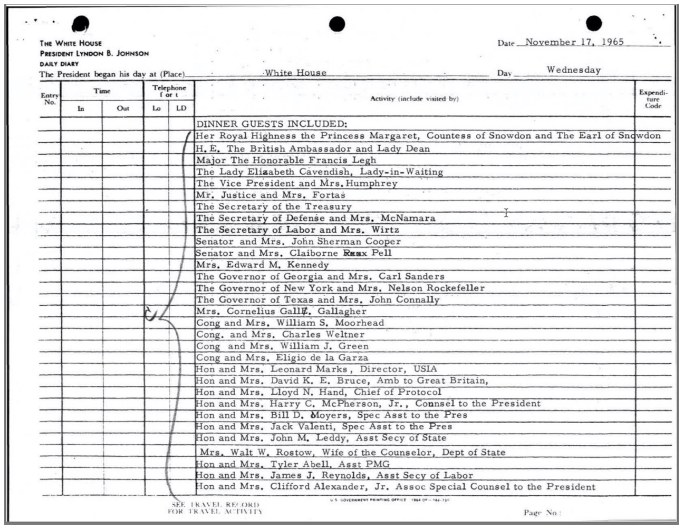
The President began his day at (Place) _____ Day _____

Entry No.	Time In	Time Out	Telephone For t Lo	Telephone For t LD	Activity (include visited by)	Expenditure Code
C	8:30p				The President, Mrs. Johnson and their guests proceeded to the East Room where they received their guests. The President escorted ~~Mrs~~ Princess Margaret into the room, while Mrs. Johnson entered the room w/ Lord Snowdon. The President stood first in the receiving line, Princess Margaret on his right, then Mrs. Johnson, with Lord Snowdon on her right. When they had received all of the guests, they stopped in the Green Room and posed for an official photograph, and then proceeded into thedining room.	
C	8:45p				DINNER in the State Dining Room - 140 guests the menu: Atlantic Pompano Amandine Roast Squab P White House Artichokes with vegetable puree Hearts of palm salad Brie cheese Praline glace The President's table: H.R.H. the Princess Margaret on his right Mr. Kirk Douglas Mrs. Nelson Rockefeller Henry Ford Mrs. Davdd K. E. Bruce Mr. William T. Coleman, Jr. Lady Jackson John Eisenhower Lady Dean on the President's left.	

SEE TRAVEL RECORD FOR TRAVEL ACTIVITY

Page No. _____

[HI0014][GDrive]



THE WHITE HOUSE
PRESIDENT LYNDON B. JOHNSON
DAILY DIARY

Date November 17, 1965

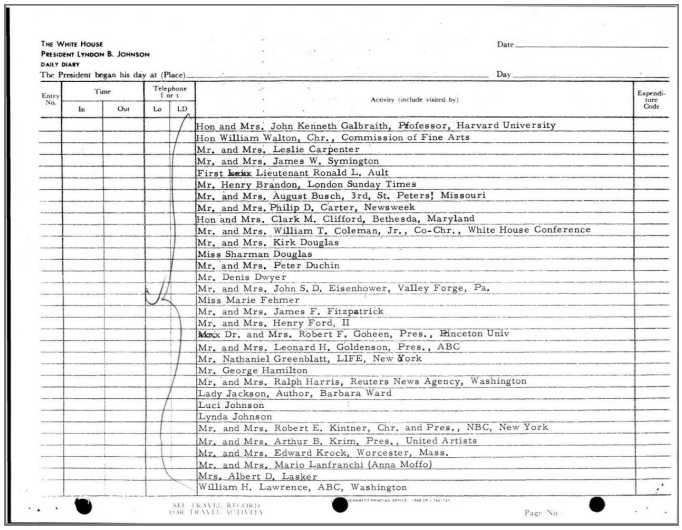
The President began his day at (Place) White House Day Wednesday

Entry No.	Time In	Time Out	Telephone For t Lo	Telephone For t LD	Activity (include visited by)	Expenditure Code
					DINNER GUESTS INCLUDED: Her Royal Highness the Princess Margaret, Countess of Snowdon and The Earl of Snowdon H. E. The British Ambassador and Lady Dean Major The Honorable Francis Legh The Lady Elisabeth Cavendish, Lady-in-Waiting The Vice President and Mrs. Humphrey Mr. Justice and Mrs. Fortas The Secretary of the Treasury The Secretary of Defense and Mrs. McNamara The Secretary of Labor and Mrs. Wirtz Senator and Mrs. John Sherman Cooper Senator and Mrs. Claiborne ~~Mrs~~ Pell Mrs. Edward M. Kennedy The Governor of Georgia and Mrs. Carl Sanders The Governor of New York and Mrs. Nelson Rockefeller The Governor of Texas and Mrs. John Connally Mrs. Cornelius Gall~~e~~, Gallagher Cong and Mrs. William S. Moorhead Cong. and Mrs. Charles Weltner Cong and Mrs. William J. Green Cong and Mrs. Eligio de la Garza Hon and Mrs. Leonard Marks, Director, USIA Hon and Mrs. David K. E. Bruce, Amb to Great Britain, Hon and Mrs. Lloyd N. Hand, Chief of Protocol Hon and Mrs. Harry C. McPherson, Jr., Counsel to the President Hon and Mrs. Bill D. Moyers, Spec Asst to the Pres Hon and Mrs. Jack Valenti, Spec Asst to the Pres Hon and Mrs. John M. Leddy, Asst Secy of State Mrs. Walt W. Rostow, Wife of the Counselor, Dept of State Hon and Mrs. Tyler Abell, Asst PMG Hon and Mrs. James J. Reynolds, Asst Secy of Labor Hon and Mrs. Clifford Alexander, Jr. Assoc Special Counsel to the President	

SEE TRAVEL RECORD FOR TRAVEL ACTIVITY

Page No. _____

[HI0015][GDrive]



THE WHITE HOUSE
PRESIDENT LYNDON B. JOHNSON
DAILY DIARY
The President began his day at (Place) Date Day

Entry No.	Time In	Time Out	Telephone To or f Lo	Telephone To or f LD	Activity (include visited by)	Expenditure Code
					Hon and Mrs. John Kenneth Galbraith, Professor, Harvard University	
					Hon William Walton, Chr., Commission of Fine Arts	
					Mr. and Mrs. Leslie Carpenter	
					Mr. and Mrs. James W. Symington	
					First ~~Lt~~ Lieutenant Ronald L. Ault	
					Mr. Henry Brandon, London Sunday Times	
					Mr. and Mrs. August Busch, 3rd, St. Peters, Missouri	
					Mr. and Mrs. Philip D. Carter, Newsweek	
					Hon and Mrs. Clark M. Clifford, Bethesda, Maryland	
					Mr. and Mrs. William T. Coleman, Jr., Co-Chr., White House Conference	
					Mr. and Mrs. Kirk Douglas	
					Miss Sharman Douglas	
					Mr. and Mrs. Peter Duchin	
					Mr. Denis Dwyer	
					Mr. and Mrs. John S. D. Eisenhower, Valley Forge, Pa.	
					Miss Marie Fehmer	
					Mr. and Mrs. James F. Fitzpatrick	
					Mr. and Mrs. Henry Ford, II	
					~~Mr.~~ Dr. and Mrs. Robert F. Goheen, Pres., Princeton Univ	
					Mr. and Mrs. Leonard H. Goldenson, Pres., ABC	
					Mr. Nathaniel Greenblatt, LIFE, New York	
					Mr. George Hamilton	
					Mr. and Mrs. Ralph Harris, Reuters News Agency, Washington	
					Lady Jackson, Author, Barbara Ward	
					Luci Johnson	
					Lynda Johnson	
					Mr. and Mrs. Robert E. Kintner, Chr. and Pres., NBC, New York	
					Mr. and Mrs. Arthur B. Krim, Pres., United Artists	
					Mr. and Mrs. Edward Krock, Worcester, Mass.	
					Mr. and Mrs. Mario Lanfranchi (Anna Moffo)	
					Mrs. Albert D. Lasker	
					William H. Lawrence, ABC, Washington	

SEE TRAVEL RECORD FOR TRAVEL ACTIVITY
Page No.

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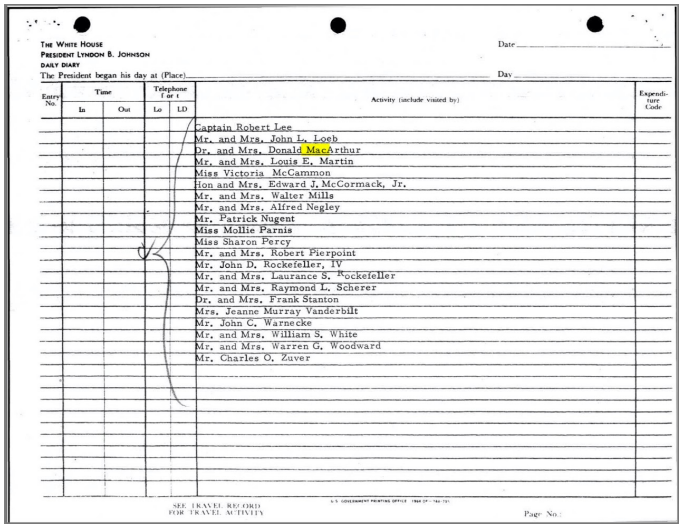

THE WHITE HOUSE
PRESIDENT LYNDON B. JOHNSON
DAILY DIARY
The President began his day at (Place) Date Day

Entry No.	Time In	Time Out	Telephone To or f Lo	Telephone To or f LD	Activity (include visited by)	Expenditure Code
					Captain Robert Lee	
					Mr. and Mrs. John L. Loeb	
					Dr. and Mrs. Donald MacArthur	
					Mr. and Mrs. Louis E. Martin	
					Miss Victoria McCammon	
					Hon and Mrs. Edward J. McCormack, Jr.	
					Mr. and Mrs. Walter Mills	
					Mr. and Mrs. Alfred Negley	
					Mr. Patrick Nugent	
					Miss Mollie Parnis	
					Miss Sharon Percy	
					Mr. and Mrs. Robert Pierpoint	
					Mr. John D. Rockefeller, IV	
					Mr. and Mrs. Laurance S. Rockefeller	
					Mr. and Mrs. Raymond L. Scherer	
					Dr. and Mrs. Frank Stanton	
					Mrs. Jeanne Murray Vanderbilt	
					Mr. John C. Warnecke	
					Mr. and Mrs. William S. White	
					Mr. and Mrs. Warren G. Woodward	
					Mr. Charles O. Zuver	

SEE TRAVEL RECORD FOR TRAVEL ACTIVITY
Page No.

[HI0017][GDrive]

1966 (Jan 23)

Full page - [HN00TP][GDrive]

The Santa Fe New Mexican (Santa Fe, New Mexico) · 23 Jan 1966, Sun · Page 21

Mr. And Mrs. Tony Taylor Welcomed In Madrid

Visiting in Madrid, Spain, this week, their first stop on a round-the-world flight, are Mr and Mrs. Tony Taylor.

The local couple spent several days in Washington enroute. While in the Capital, they were houseguests at the White House and attended the State of the Union Message occupying "front row" seats by invitation of his sister, Mrs. Johnson. They also spent time with their daughter, Mrs. Donald MacArthur and her family in nearby Maryland.

Officials of the Spanish Foreign Affice received the pair in Madrid where Santa Fe's Honorary Vice Consul of Spain Don Antonio Taylor conferred with his Spanish "colleagues."

Numerous festivities have been tendered the Taylors during their stay in the Spanish city. Among those honoring them was Miss Nini Montian (Marquesa Ampudia y de Montilla), Spanish chairman of the annual American - Madrid Debutante Ball, who complimented Mrs. Taylor, a member of the Ball's International Committee.

Mr. Taylor will fly from Madrid to Jordan on a government mission with the Agency for International Development program. Mrs. Taylor plans to tour Spain and Italy on a combined business - and - pleasure trip before joining her husband in the Holy Land.

From Jordan they will fly to India and the Far East for their first look at that side of the world and will return via Honolulu and the Pacific Coast.

Contrary to radio and television newscast reports, Mrs. Taylor's expenses are not being paid by the Government and his only during the period he is in Jordan as a consultant.

[HN00TQ][GDrive]

1966 (March 23)

Full page - [HN00TX][GDrive]

2A The Pensacola News Wednesday, March 23, 1966

FIRST RUN

Aides Briefed

EGLIN AFB — Two aides of the director of defense research and engineering in Washington, D. C., get a briefing on the conventional armament tests conducted on Range 22 during a visit here. From left are Dr. Donald M. MacArthur, deputy director, chemistry and materials, Lt. Gordon E. Buchan, back to camera, project engineer with the U. S. Air Force Armament Laboratory at Eglin, and Albert E. Hayward, deputy assistant director of chemical technology.

(Air Force Photo)

FIRST

[HN00TY][GDrive]

1966 (June) - Army R, D & A. Magazine, Volume 7

Full year PDF - [HP002T][GDrive]

Dr. MacArthur Gets New Deputy DDRE (C&M) Post

Transfer of the Office of Director of Defense Technical Information from the Deputy Director of Defense Research and Engineering (Administration and Management) to the Deputy Director (Chemistry and Materials) is part of a recent DDR&E realignment.

Appointment of Dr. Donald M. MacArthur as Deputy Director (Chemistry and Materials), a recently created position, makes him one of the youngest scientific managers in the Department of Defense. Until installed in his new office, he had served since 1958 as a senior chemist with Melpar, Inc.

In addition to his responsibility for the Office of Director of Defense Technical Information, formerly under the Deputy Director (Administration and Management), Dr. MacArthur is charged with technical review and evaluation of all Defense research and development in the fields of chemistry and materials.

Responsibility for chemistry and materials formerly was assigned to the Deputy Director (Research and Technology), Dr. Chalmers W. Sherwin, who is now charged with management of in-house laboratories and the research program of the Deputy Director of Defense Research and Engineering.

Dr. MacArthur was manager of the Melpar, Inc. Chemistry and Life Sciences Center before the DDDR&E appointment. Educated in Scotland, he received a BS degree in 1950 from St. Andrews University and a PhD degree in physical chemistry from Edinburgh University in 1957.

Dr. Donald M. MacArthur

Scientists Convene to Fathom 'Ice Islands'

Arctic research conducted from floating "ice island" stations was discussed by about 100 scientists and engineers at a recent 3-day symposium sponsored by the Office of Naval Research and the Arctic Institute of North America, the ONR contract agency.

Participants were representative of the U.S. Armed Forces, other Federal agencies, private industry and academic research organizations in the United States, Canada and Japan. The symposium was held at Airlie House, Warrenton, Va., and was highlighted by some 30 technical presentations.

[HP002U][GDrive]

1966 (July 19)

Full newspaper page : [HN0139][GDrive]

El Paso Times (El Paso, Texas) • 19 Jul 1966, Tue • Page 18

Travel To Capitol, Great Society Style

By SARAH McCLENDON
Times Washington Correspondent

Washington.—Here's how travel is some times arranged in the Great Society, so that persons who otherwise might not be able to afford a trip to Washington to attend one of those national conferences with the sponsorship of the White House may suddenly get a ticket and some times have hotel bills and meals all paid for.

Asked about reports of her personal solicitation of funds from big business for delegates' transportation expenses to the recent National Youth Conference on Natural Beauty and Conservation, Mrs. Diana MacArthur, niece of Mrs. Lyndon B. Johnson, told how she amassed $250,000.

Mrs. MacArthur said she told the firms which she was soliciting that their contribution would be made to the conference but their checks should be made out to the Girl Scouts of America, which was the organization that had been given the responsibility for management of this conference. The GSA was one of the cooperating organizations. Mrs. MacArthur said she was serving in this effort while on annual leave from her regular job as director of the Division of Private and International Organizations for the Peace Corps. She said she collected the funds as a member of the national public relations committee of the Girl Scouts. She is extremely interested in this organization and in youth. She has a daughter in the GSA and a son in Boy Scouts.

The conference fitted into the campaign for beauty and conservation which Mrs. Johnson as First Lady of the Land has been conducting with widespread results throughout the nation.

Mrs. MacArthur said the firms from which she collected could charge their contribution off in compiling income taxes. At least one of those firms, U.S. Steel Corp., when contacted about this, said they had not yet determined if they could charge this off.

Who asked you to pay part of the travel expenses of delegates to the conference?" an official of the corporation was asked.

"Mrs. Diana MacArthur," he replied.

"Did you know who she was?"

"Of course we did," he rejoined.

Other firms in the big business world from whom Mrs. MacArthur obtained funds for this purpose were, according to her, Campbell Soup, Coca Cola, Eastman Kodak, Hoover Foundation (Hoover vacuum cleaners), Texaco Inc., Zerox Corp.

Several of these firms have contracts with the Department of Defense where Mrs. MacArthur, is deputy director of Defense Research and Engineering for Chemistry and Materials.

Dr. and Mrs. Donald MacArthur together organized scientists and engineers for Johnson during the last presidential campaign.

ONE PLANT WATCHED

Mrs. MacArthur said that part of the money she collected went to pay for delegates' transportation and part for the salary of a coordinator. Some of the money which was left over from the conference will go to pay the salary of another coordinator who will soon start on her duties in carrying out the purposes of the conference.

U.S. Steel Corp., as a defense contractor, has been singled out as an example by the National Association for the Advancement of Colored People, which is making its Fairfield plant in Birmingham, Ala., a site of constant vigilance in the field of civil rights compliance, according to U.S. Steel officials.

Other large corporations recently helped defray the expenses for impoverished delegates and others to attend the White House Conference, "To Fulfill These Rights," held here June 1 and 2. There many of the delegates to the civil rights conference, whose bills at the Sheraton Park Hotel in Washington were paid, merely signed their names to the bill on leaving. Several contacted then said they did pay $25 for meals.

Among the big firms contributing to those costs were Textron, International Business Machines, Lockheed, Time, Inc.

Not all of the contributions came from management alone. United Steel Workers and the AFL-CIO also contributed.

[HN013A][GDrive]

1966 (July 31)

Full newspaper page : [HN013B][GDrive]

Sunday, July 31, '66 7
Delta Democrat-Times
Greenville, Miss.

Lausche Charges "Lop-Side Assignment" Of Science Grants Is Eroding Economy

By Medill News Service

WASHINGTON — Universities in some sections of the country are producing scientists in large numbers, only to have them "emmigrate" to areas where federal grants for research are heavily concentrated.

And Sen. Frank Lausche (D - Ohio) wants something done about it.

He says "the lop - sided assignment" of these federal grants is "eroding the economy of many states that aren't receiving these projects."

Lausche appeared before a Senate subcommittee which is investigating the procedure of federal agencies in assigning research money. The subcommittee heard testimony from officials of the Defense, Health Education and Welfare, and Agriculture Departments and the Atomic Energy Commission, all large flanaclers of research.

The officials all said that their departments were working to implement a Presidential directive which ordered the development of plans for a better geographical distribution of research funds. Most funds now go to large universities in the East and on the West Coast.

* * *

DR. DONALD MACARTHUR, deputy director of research and technology in the Defense Department, outlined his department's plan for a new $0.5 million program to develop "centers of excellence" in schools which now do not receive much Defense research money.

MacArthur said that inequality in the grants rests "upon an unequal development of graduate research facilities in the nation, and that it is in our interest, within the Defense Department, to provide some special attention toward equalization."

He said that to become "a center of excellence" for research, a school must attract a talented faculty. The new program would provide about $200,000 as an initial grant to start building up a faculty.

Chairman Glenn Seaborg of the Atomic Energy Commission said that the Commission's research program involved a few large laboratories which could not easily be set up in all parts of the country.

But, Seaborg said, "we have for many years, encouraged the use of these laboratories as regional and national research centers."

He said the Argonne, Ill., and Oak Ridge, Tenn., laboratories bring in graduate and undergraduate students from colleges in their areas. He said this program has lead to strengthened programs of research in 481 colleges and universities in all parts of the nation.

* * *

THE DIRECTOR of the National Institute of Health, Dr. James A. Shannon, said he did not think much would be gained "by a simple sharing of the wealth of science support" on a geographical formula basis.

"I do not believe any program or plan of support is reasonable as a federal action in the science field unless it requires as a counterpart a deep local commitment to excellence," Shannon said.

Sen. Carl Curtis (R - Neb.) said that many institutions in the Midwest and West have not received a "fair share" of research money because "Congress has not put agencies in a position of courage and risk in granting research contracts.

"If the contractor fails, it's the neck of the man who awarded the contract to the small school. But is he had awarded it to a big school, or to some company like General Electric, they would have said something was wrong with the project," Curtis said.

[HN013C][GDrive]

1967 (Aril 21)

Full page - [HN00TV][GDrive]

[HN00TW][GDrive]

1967 (June 11)

Full newspaper page : [HN013F][GDrive]

The Los Angeles Times (Los Angeles, California) · 11 Jun 1967, Sun

ters . . . President and Mrs. Johnson's nephew-by-marriage, Dr. Donald MacArthur, is getting ready to go to Vietnam with his boss, Dr. John Foster, director of defense research and engineering . . .

[HN013G][GDrive]

Jan 1968 - With Ambassador "Jimmy" Symington

See James Wadsworth Symington (born 1927), (son of William Stuart Symington III (born 1901))

Full page : [HN00T2][GDrive]

BETTY BEALE'S WASHINGTON LETTER

Expert Job by Chuck Robb on Honeymoon Secrecy

Washington, D. C.
Jan. 6, 1968

Dear News-Press Readers:

Chuck Robb shouldn't be heading for an overt war; he should join the covert part of the CIA. He's new to the goldfish bowl life, but he pulled off the greatest coup of any publicized bridegroom in recent memory.

He managed to cloak himself and his bride in a cloud of secrecy that must be the envy of everybody from Jacqueline Kennedy and Princess Margaret to Charles Lindbergh.

Despite reports that they honeymooned at Caneel Bay, V. I., to this day not even the First Lady is sure they did, and she is not the kind to ask. It's a cinch the President doesn't know either because he would be the first to tell, said a White House staffer with a chuckle.

Press Corps Alerted

And Chuck pulled this off at a time when the press corps all the way from the White House to the Caribbean, from Dulles Airport to Honolulu, was alerted to be on the lookout.

Yet not a single camera though equipped with telescopic lens and trained around the clock on the suspected honeymoon spot ever caught visible proof of the newlyweds' arrival,

Ambassador Jimmy Symington, chief of protocol, wowed his audience in the Shoreham Hotel's Blue room when he put on a fund-raising performance. A preview photo shows him with Mrs. Donald MacArthur, the First Lady's niece, and Warren Woodward.

wouldn't tell them when they looked at their social calendars.

The Middle East war, an earthquake and absences from town caused the swingingest diplomatic hostesses, the chatelaines of the Kuwait, Venezuelan, Spanish and Moroccan Embassies, to forego the usual

The Peabodys are now residents of Washington, but she recalled the time she was scheduled to be the main speaker at a B'nai B'rith dinner in Boston and canceled out the same day because her daughter had just come home from school and wanted very much to talk over

was nervous," he told them, "and I said 'Why should a col of protochief be nervous?"

Before singing "Shadow of Your Smile," he observed that there were many kinds of smiles.

"There is the kind you get when you call a king 'your royal highness;' or the kind you get when you step on the foot of a president as he is getting out of his car."

• • •

AROUND THE TOWN:

Sen. Joseph Clark's divorced wife of 32 years will marry a Washington socialite realtor in a couple of months. The Pennsylvania legislator who instigated the divorce remarried as soon as it was final.

Noel Clark, daughter of Mrs. William Hall of Louisville, Ky., and Easthampton, L. I., will wed Cuthbert Train, widower and son of the late Adm. and Mrs. Charles Russell Train. He has a post-debutante daughter and three sons. She has one married daughter.

Marjorie Post sent Mrs. Johnson a check for $10,000 made out to the Society for a More Beautiful Capital on Christmas eve. She had given an earlier check for $5,000 for the landscaping of a public school in a poor part of town.

What do you send a woman who has everything? To thank her the First Lady dispatched to the General Foods heiress' palatial residence on Christmas

day a basket of homey personal things such as loaves of bread baked at the White House, jars of peach and pear preserve put up at the LBJ Ranch, and a handwritten note.

CIA Director Dick Helms'

presence or departure. Jackie and Princess Margaret should seek his advice the next time they want to go off swimming somewhere in privacy.

How did he do it? He won't say.

"About 75 per cent of what we saw in print was amusing but not necessarily factual," he said. So the true story may never be known.

Said Lynda, regarding their first stop after leaving the White House, "I didn't know where we were going until we actually got there." Incidentally, they did not spend their wedding night at the Georgetown Inn as definitely stated in one paper.

An Early Riser

Lynda Robb, new Arlington resident, found out what it was like to be the dutiful wife of a marine officer even before she left the White House.

Her husband, she discovered during the two weeks they spent at the Executive Mansion after returning from their honeymoon, got up at 6:30 in the morning on work days.

"I think 8 a. m. is early!" exclaimed the President's daughter who, despite the fact that she was still surrounded by servants, arose in time to fix Chuck a real morning meal.

* * *

Washington had its quietest holiday season in years. A lot of chic people thought they must be slipping socially or had something their best friends ball on New Year's eve.

And there was even a new trend observed among the debutante set. The withdrawal from the exclusive Washington Debutante Ball of two girls whose parents had already paid $700 each for their participation and could not get their money back, is an indication of it.

Prefer to Travel

More and more prospective debutantes would rather have the money to go to Europe than have a coming out party. A lot would rather spend their vacation time at a ski resort where some of the most attractive stags are going. Many times it's the parents who nostagically are holding onto the traditional custom of presenting their daughters to society.

Even they skipped giving the usual holiday bashes for their contemporaries and spent their time instead keeping tabs on their gallivanting offspring—the reason being, the new morals among the young and the incredible crime on the streets.

Mrs. Endicott Peabody, the attractive wife of the former Governor of Massachusetts, says there would be a lot fewer hippies if parents were always there when their children needed them most.

Received an Award

Children, she thinks, "are desperately looking for someone who cares. And if they don't get the care at home they turn to love-ins and all the other things that go with it."

some things with her mother then and there.

Instead of not forgiving her for the last-minute cancellation, the same group gave Toni Peabody their next "Mother of the Year" award!

* * *

Ambassador Jimmy Symington, the socially impeacable, handsome young chief of protocol, made his professional debut as a singer at the Shoreham Hotel the other evening and was a smash hit.

The hotel's Blue room was packed with a society audience that cried "Fabulous!," "Sensational!," "Encore!" and "More!" when he finally put his guitar down and took a bow.

Guitar Project

The attractive director of the striped pants set, who may next run for Congress from Missouri, was making a one night appearance only to raise money for his pet project—guitar lessons and, if warranted, guitars, for the neglected poor children of Washington's dreary Junior Village.

"A guitar," said Jimmy, "is something you can treat with tenderness and love, and it gives you back the same." This was something these children need.

Washingtonians who have to go to so many dinners that when they have a night off they stay home—turned out in a large numbers to hear him. And what they heard was a very professional poised young man who interspersed his songs with an amusing patter.

"Doug Cater asked me if I

estranged wife [illegible] made a recent sale that firmly establishes her as a Washington sculptor of note. Although people were aware of her artistic talents, until last summer she was best known as the wife of the CIA boss because glamorous government jobs get more publicity here than any interpreter of the arts.

Now the Washington Gallery of Art has sold for $3,000 her garden bronze fountain sculpture of a young boy—her own son at a tender age—who is crouching down on a log and looking with beguiling interest at a frog. The purchasers were James Ramsay Hunt and his wife who is sister to the wife of Deputy Secretary of Defense Paul Nitze.

Yours, B. B.

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[HN00T3][GDrive]

1968 (Sep 01)

Full newspaper page : [HN013H][GDrive]

Washington Letter

Aga Khan's Sardinia 'Development' Draws Summer Resort Hounds

By Betty Beale
Special to The Bee

WASHINGTON — While the nation is suffering from tube eyestrain or Chicagnitis, and the Democrats are trying to unwind from their quadrennial swivet, the social pace in Newport, R.I., unfazed by it all, continues in its reassuring fashion.

Despite its tradition as "the" summer address, Newport of course is not the only posh summer vacation spot. Far from the crowds and threats of riots, the Aga Khan's heavenly new resort on the Island of Sardinia is gaining quickly in popularity.

Jay and Sharon Rockefeller, the glamour couple whose political prospects seem to be unlimited, own a house on the Costa Smeralda, which is the Aga's part of the island. Sharon's parents, Sen. and Mrs. Charles Percy, and their other children, who now are cruising in a chartered yacht on the Mediterranean, may put in there just to take a look.

Princess Alexandra and her husband, Angus Ogilvy, are constantly seen there. Rosalind Russell and her husband, Freddy Brisson, have been there this summer. Loel Guinness' magnificent yacht has been one of the 75 or 80 glistening yachts in the harbor at Puerto Cervo, and Tim Rootes of the Rolls Royce fortune has a house there.

The young Aga is determined to turn the rocky, Maine-like coast with its 82 sandy beaches into the smartest international resort in the world. He wants it elegant, not a jet set hangout.

During the past weeks you couldn't find a hippie in the whole area. The young might wear their hair a little long but they belong to the beautifully decked out, well-heeled segment of society.

Not the least fascinating of the Aga's developments is the little 17th Century village of Puerto Cervo that looks like something off a stage set. He also has built three big hotels and apartments designed like compilations of small houses, with some one-bedroom units for as modest a price tag as $12,000. That is so cheap compared to anything in the United States, Americans will probably flock there.

As the first agents for the Costa Smeralda, the Aga chose a Washington couple he has never met -- former American diplomat John Begg and his wife, Jeanne—to form the Islands Investment Corp.

Luckiest man in Paris, in his own opinion, is Robert O. Blake, new American minister to France.

Blake, a career diplomat, was all set to leave Washington and his family to head all civilian operations in the Mekong Delta, when Undersecretary of State Nicholas Katzenbach told him he was going to the plush capital of France instead. By this weekend he and his family have debarked and are ensconced in a beautiful government-owned house on the Left Bank.

The big switch came when Ambassador Sargent Shriver asked for a new minister who spoke French fluently and knew a great deal about Russia. When he found out Bob not only filled this bill but during the past year in Washington had organized 200 foreign service officers to give of their free time to inner city people, Sarge quickly said he'd take Blake.

Mrs. Blake, the former Sylvia Whitehouse, daughter of the Sheldon Whitehouses of New York and Newport, got a whole new wardrobe of American clothes to take to the fashion center of the world.

The Spanish Ambassador and Marquesa de Merry del Val got up a swinging dinner party for 40 just before the Democratic Convention on only 48 hours' notice.

Ordinarily, Washington rank has to be lined up a month in advance. But in the dog days of August it takes no time to put on a party of pomp, pep and pulchritude.

The dinner dance for Paris visitors turned out to be an unexpected farewell for Argentine Ambassador and Mrs. Alsogaray and Colombian Ambassador and Mrs. Echevarria. Neither man has been here for two years yet, which points up the rapid annual turnover of ambassadors — at least 25 per cent.

Alsogaray, an able politician, is going back home to persuade Argentina to adopt a more stable government which will include a prime minister as well as president. If it does, he may become the prime minister.

Also present was Lady Bird Johnson's niece, Mrs. Donald MacArthur, who is married to handsome Scotsbred scientist, deputy director of defense research, and is a very smart cookie herself.

Pretty, feminine Diana, daughter of Tony Taylor, knows all about ghetto gangs such as West Chicago's Conservative Vice Lords, Inc., New York's Real Great Society and California's Mission Rebels. These are gangs, she was saying, which don't want to end up in cemeteries or penitentiaries so have organized to help themselves to fit into "the system."

To help them she has volunteered her services to the new parent organization in Washington, YOU (Youth Organization United), and as chairman of its finance committee is raising money for it.

On a professional basis she has opened her own youth consulting firm.

So much news of FDR's romance with Lucy Mercer Rutherfurd was printed when Jonathan Daniels' "Washington Quadrille" came out that some of the other fascinating nuggets in the book were overlooked.

For instance, Alice Longworth — of whom her father said, "I can try to run the country or control Alice; I can't possibly do both" — appears throughout the book. And not the least fascinating story is how she and her husband made their own home brew during Prohibition.

As strong opponents of Prohibition, "they bought quantities of grapes and experimented in making wine." They also had, according to Alice, "a small still with which our butler managed to concoct a very passable gin from oranges."

Daniels recalls the Eugene Meyer dinner that instigated the Alice Longworth - Dolly Gann precedence feud. It started, he reveals, when Mrs. Meyer told Alice she was going to seat Vice President Curtis' sister at the highest spot at her dinner — ahead of Speaker Longworth's wife and other officials' wives.

When mischief-making Alice told her husband about the plan he used it as an excuse not to go to a "despised, dry dinner."

Incidentally, the protocol office at the State Department, for fear of getting into another feminine feud, has ever since that day refused to issue an approved list of precedence bearing the State Department's okay.

Former World Bank President George Woods and his wife, who have a house outside Lisbon, have returned to Portugal from Jerusalem in time for the "big parties," writes Louise.

She must be referring to the Pierre Schlumbergers' ball for 1,000 in their 16th Century house near Lisbon this Wednesday that is the talk of social Europe and America. Also the Atenor Patinos' ball Friday.

The ultra-chic Sao, second wife of the Texas industrialist, whose Houston house is done in exquisite taste, can be counted upon to produce something close to perfection even for a thousand.

Woods, incidentally, had his portrait painted in Portugal last month — the official one for the World Bank — by Henrique Medina, who also painted both CIA Director John McCone and his wife, Ty. Louise says of the Woods' portrait, "It's terrific!"

Sonja Haraldsen, future queen of Norway, who became the bride of Crown Prince Harald Thursday, once worked in a foreign home just as Anne-Marie Rockefeller did.

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Mia's father, he added, is a Norwegian merchant and she "was beautifully brought up."

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[HN013I][GDrive]

1968 (Sep 01)

Full newspaper page : [HN013J][GDrive]

6C The Cedar Rapids Gazette: Sun., Sept. 1, 1968

There's a Gem of a Reason for Small Debut

By Betty Beale

WASHINGTON — While the nation is suffering from tube eyestrain or Chicagoitis, and the Democrats are trying to unwind from their quadrennial swivet, the social pace in Newport, R.I., unfazed by it all, continues in its reassuring fashion.

The plush resort has been buzzing for weeks with the story of the disagreement between Mrs. John Bryce and her brother Huntington Hartford over their late mother's jewels.

Jo Bryce had Meyer Davis lined up for ages and invitations out for a ball of about 700 for Saturday, Aug. 31, in honor of her two debutante granddaughters, Dallas Pell and Betty O'Donnell. Dallas is the charming offspring of her chic daughter Nuala and dignified Sen. Claiborne Pell of Rhode Island.

BEALE

According to the grapevine, Huntington wanted his daughter to be the third honoree at the party to which his sister happily agreed but suggested as a return favor that he produce her mother's jewels.

Whether Hartford wouldn't or couldn't because he had bestowed them on wives, the disagreement was followed by a cancellation of the party altogether, with the explanation that Mrs. Bryce felt it would be inappropriate to have such a big ball during times of so much social unrest. In view of the senator's political connections, this may have been the real reason but to the Newport grapevine the gem of a reason was some very real gems.

The two granddaughters ended up by getting their party on the 31st, but a much smaller one for just the young set which in Newport adds up to less than 200.

* * *

Also people have been living it up, far from crowds and threats of riots, in the Aga Khan's heavenly new idyllic resort on the Island of Sardinia.

Jay and Sharon Rockefeller, the glamor couple whose political prospects seem to be unlimited, own a house on the Costa Smeralda, which is the Aga's part of the island. Sharon's parents, Sen. and Mrs. Charles Percy, and their other children, who are now cruising in a chartered yacht on the Mediterranean, may put in there just to take a look.

Glistening Yachts in Harbor

Princess Alexandra and her husband, Angus Oglivy, are constantly seen there. Rosalind Russell and her husband Freddy Brisson have been there this summer. Loel Guinness' magnificent yacht has been one of the 75 or 80 glistening yachts in the harbor at Puerto Cervo, and Tim Rootes of the Rolls Royce fortune has a house there.

The young Aga is determined to turn the rocky, Maine-like coast with its 82 sandy beaches into the smartest international resort in the world. He wants it elegant and not a jet set hangout.

During the past weeks you couldn't find a hippie in the whole area. The young might wear their hair a little long but they belong to the beautifully decked out, well-heeled segment of society.

Not the least fascinating of the Aga's development is the little 17th century village of Puerto Cervo that looks like something off a stage set. He has also built three big hotels and apartments designed like compilations of little houses, with some one-bedroom units for as modest a price tag as $12,000. That is so cheap compared to anything in the U.S.A., Americans will probably flock there.

As the first agents for the Costa Smeralda, the Aga chose a Washington couple he has never met — former American diplomat John Begg and his wife Jeanne, who together form the Islands Investment Corp.

* * *

Luckiest man in Paris, in his own opinion, is Robert O. Blake, new American minister to France.

Blake, a career diplomat, was all set to leave Washington and his family to head all civilian operations in the Mekong Delta, when Under Secretary of State Nicholas Katzenbach told him he was going to the plush capital of France instead. By this weekend he and his family have debarked and are ensconced in a beautiful government-owned house on the Left Bank.

The Big Shriver Switch

The big switch came when Ambassador Sargent Shriver asked for a new minister who spoke French fluently and knew a great deal about Russia. When he found out that Bob not only filled this bill but during the past year in Washington had organized 200 foreign service officers to give of their free time to inner city people, Sarge quickly said he'd take Blake.

Mrs. Blake, the former Sylvia Whitehouse, daughter of the Sheldon Whitehouses of New York and Newport, got a whole new wardrobe of American clothes to take to the fashion center of the world.

* * *

The Spanish Ambassador and Marquesa de Merry del Val got up a swinging dinner party for 40 just before the Democratic Convention on only 48 hours' notice.

Ordinarily, Washington rank has to be lined up a month in advance. But in the dog days of August it takes no time to put on a party of pomp, pep and pulchritude.

The dinner-dance for Paris visitors turned out to be an unexpected farewell for Argentine Ambassador and Mrs. Alsogaray and Colombian Ambassador and Mrs. Echevarria. Neither man has been here for two years yet, which points up the rapid annual turnover of ambassadors here — at least 25 percent.

Alsogaray, an able politician, is going back home to persuade Argentina to adopt a more stable government that will include a prime minister as well as president. If it does, he may become the prime minister.

Also present was Lady Bird Johnson's niece, Mrs. Donald MacArthur, who is married to the handsome Scots-bred scientist and Deputy Director of Defense Research. She is a very smart cookie herself.

Pretty, feminine Diana, daughter of Tony Taylor, knows all about ghetto gangs such as West Chicago's Conservative Vice Lords, Inc., New York's Real Great Society and California's Mission Rebels. These are gangs, she was saying, that don't want to end up in cemeteries or penitentiaries so have organized to help themselves to fit into "the system."

To help them she has volunteered her services to the new parent organization in Washington, YOU (Youth Organization United), and as chairman of its finance committee is raising money for it.

On a professional basis she has opened her own youth consulting firm.

* * *

So much news of FDR's romance with Lucy Mercer Rutherfurd was printed when Jonathan Daniels' "Washington Quadrille" came out that some of the other fascinating nuggets in the book were overlooked.

Run Country or Control Alice

For instance, Alice Longworth, of whom her father said, "I can try to run the country or control Alice; I can't possibly do both", appears throughout the book. And not the least fascinating story is how she and her husband made their own home brew during prohibition.

As strong opponents of the latter, "they bought quantities of grapes and experimented in making wine." They also had, according to Alice, "a small still with which our butler managed to concoct a very passable gin from oranges."

Daniels recalls the Eugene Meyer dinner that instigated the Alice Longworth-Dolly Gann precedence feud. It started, it reveals, when Mrs. Meyer told Alice that she was going to seat Vice-president Curtis' sister at the highest spot at her dinner — ahead of Speaker Longworth's wife and other officials' wives.

When mischiefmaking Alice told her husband about the plan he used it as an excuse not to go to a "despised, dry dinner."

Incidentally, the protocol office at the state department, for fear of getting into another feminine feud, has ever since that day refused to issue an approved list of precedence bearing the state department's okay.

* * *

Former World Bank President George Woods and his wife, who have a house outside Lisbon, have returned to Portugal from Jerusalem in time for the "big parties", writes Louise.

She must be referring to the Pierre Schlumbergers' ball of 1,000 in their 16th century house near Lisbon on Sept. 4 that is the talk of social Europe and America. Also the Atenor Patinos' ball on the 6th.

The ultra-chic Sao, second wife of the Texas industrialist, whose Houston house is done in exquisite taste, can be counted upon to produce something close to perfection even for a thousand.

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Dallas Pell, Huntington Hartford's great-niece, bows to society next weekend in Newport, R. I. She is pictured here with her father, Sen. Claiborne Pell (D-R.I.) The coming-out has been the subject of much speculation.

Scientist Donald MacArthur and his wife Diana, who is Mrs. Lyndon Johnson's niece, chat at a Spanish Embassy party with Col. Howard Burris, founder and president of Heritage Gardens, Washington's coming historical Disneyland.

[HN013K][GDrive]

1968 (Oct 17) - Note there is a Different "Donald MacArthur" who is of "Kensington, Maryland"

note on the other MacArthur at Koppers - here, in 1951 -(https://www.newspapers.com/image/476881090/?terms=macarthur%2Bkoppers)

Source full pages : Page 13 = [HN0148][GDrive] / Page 18 = [HN0149][GDrive] / Article = [HN014A][GDrive]

1969 - June 9 - Shocking House of Representatives hearings - Did Dr. MacArthur suggest HIV was being researched ?

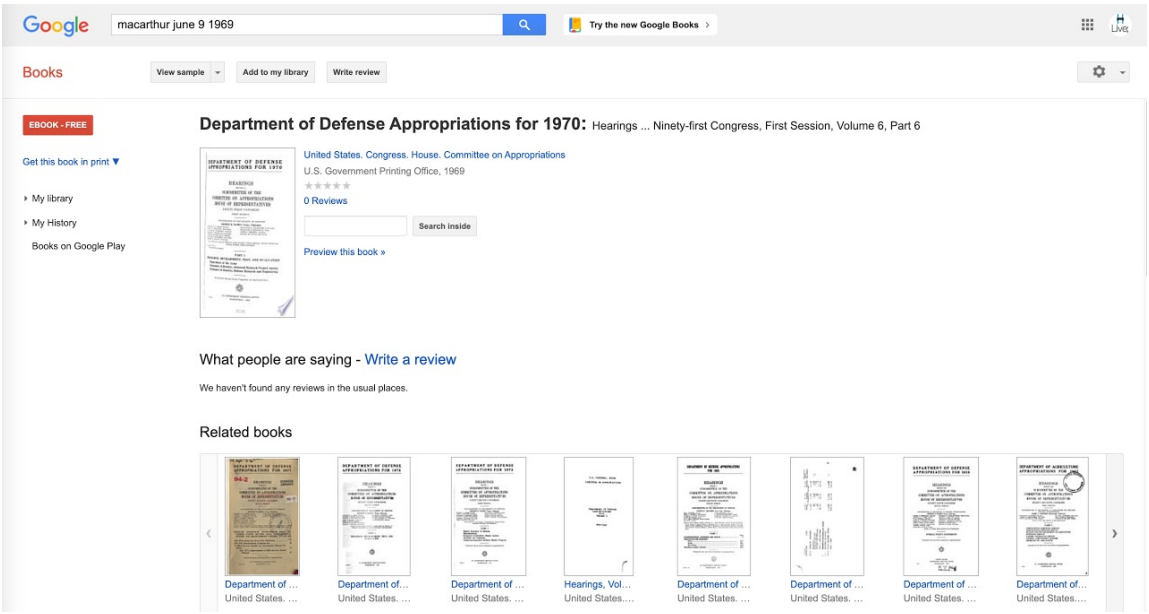
Full PDF, all 1969 D0D appropriations senate hearings preparing for 1970 - [HG004U][GDrive]

42 page selection with Dr. Donald MacArthur - [HG004X][GDrive]

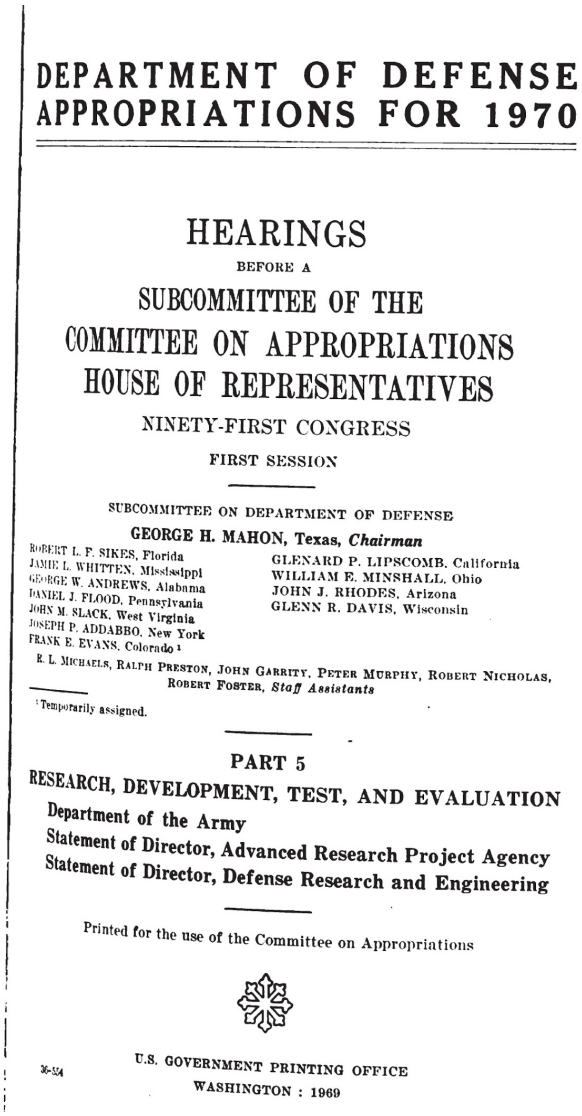
Department of Defense Appropriations for 1970: Hearings ... Ninety-first Congress, First Session, Volume 6, Part 6

United States. Congress. House. Committee on Appropriations

U.S. Government Printing Office, 1969



[HG004V][GDrive]



DEPARTMENT OF DEFENSE APPROPRIATIONS FOR 1970

HEARINGS

BEFORE A

SUBCOMMITTEE OF THE COMMITTEE ON APPROPRIATIONS HOUSE OF REPRESENTATIVES

NINETY-FIRST CONGRESS

FIRST SESSION

SUBCOMMITTEE ON DEPARTMENT OF DEFENSE

GEORGE H. MAHON, Texas, *Chairman*

ROBERT L. F. SIKES, Florida
JAMIE L. WHITTEN, Mississippi
GEORGE W. ANDREWS, Alabama
DANIEL J. FLOOD, Pennsylvania
JOHN M. SLACK, West Virginia
JOSEPH P. ADDABBO, New York
FRANK E. EVANS, Colorado [1]

GLENARD P. LIPSCOMB, California
WILLIAM E. MINSHALL, Ohio
JOHN J. RHODES, Arizona
GLENN R. DAVIS, Wisconsin

R. L. MICHAELS, RALPH PRESTON, JOHN GARRITY, PETER MURPHY, ROBERT NICHOLAS, ROBERT FOSTER, *Staff Assistants*

[1] Temporarily assigned.

PART 5

RESEARCH, DEVELOPMENT, TEST, AND EVALUATION

Department of the Army
Statement of Director, Advanced Research Project Agency
Statement of Director, Defense Research and Engineering

Printed for the use of the Committee on Appropriations

36-554

U.S. GOVERNMENT PRINTING OFFICE
WASHINGTON : 1969

[HG004W][GDrive]

video - june 9 1969

https://www.youtube.com/watch?v=eRC8ccRLvfI

What happened June 9, 1969? H.R. 15090

32,535 views•Aug 17, 2007

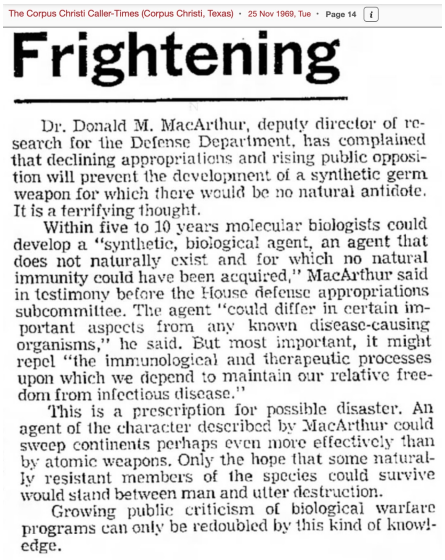
1969 (Aug 8) - Review of chemical and biological agents in Vietnam (to Congres)

With staff of McNamara

https://www.nal.usda.gov/exhibits/speccoll/files/original/10eea2c0364e48b0bf2860dc6f33bfee.pdf

1969 (Nov 25)

full newspaper page : [HN013L][GDrive]



The Corpus Christi Caller-Times (Corpus Christi, Texas) · 25 Nov 1969, Tue · Page 14

Frightening

Dr. Donald M. MacArthur, deputy director of research for the Defense Department, has complained that declining appropriations and rising public opposition will prevent the development of a synthetic germ weapon for which there would be no natural antidote. It is a terrifying thought.

Within five to 10 years molecular biologists could develop a "synthetic, biological agent, an agent that does not naturally exist and for which no natural immunity could have been acquired," MacArthur said in testimony before the House defense appropriations subcommittee. The agent "could differ in certain important aspects from any known disease-causing organisms," he said. But most important, it might repel "the immunological and therapeutic processes upon which we depend to maintain our relative freedom from infectious disease."

This is a prescription for possible disaster. An agent of the character described by MacArthur could sweep continents perhaps even more effectively than by atomic weapons. Only the hope that some naturally resistant members of the species could survive would stand between man and utter destruction.

Growing public criticism of biological warfare programs can only be redoubled by this kind of knowledge.

[HN013M][GDrive]

1969 (Dec 18)

Full newspaper page : [HN013N][GDrive]

The Bedford Daily-Times Mail (Bedford, India... · 18 Dec 1969, Thu · Page 18

Soviet Doctrine Envisions Use Of Chemical Weapons

WASHINGTON (AP) — The chairman of the joint chiefs of staff has told Congress Soviet military doctrine anticipates use of chemical and biological weapons in any future large-scale war.

Gen. Earle G. Wheeler called that doctrine outmoded, but said Soviet inventories of chemical and biological weapons still "are quite large."

His estimates of the Soviet and U.S. stockpiles were deleted by the censor from June 12 testimony before the Senate defense appropriations subcommittee, a transcript of which was made public Friday.

President Nixon on Nov. 25 renounced U.S. use of lethal chemical weaons unless an enemy employed them first. He ruled out the use of biological weapons under any circumstances, and said the United States will dispose of its stockpiles of those devices.

In his June 12 testimony, Wheeler said he hopes the situation is one in which no nation would unleash chemical or biological warfare for fear of retaliation.

Dr. Donald M. MacArthur, a Pentagon research deputy, testified on Sept. 17 the Soviet Union "appears to be much more completely prepared to start, fight and defend against a chemical war today than the United States.

"Russian stockpiles are much larger, and Russian training, more comprehensive, in both offensive and defensive missions," MacArthur told the subcommittee.

He said the United States has been criticized for reaching an overkill position in chemical weapons. "I have explained that our chemical agents can't kill everyone in the world," he said. "We believe the U.S. should have enough chemical stocks to act as a credible deterrent and to have a minimal retaliatory capability if deterrence fails."

[HN013O][GDrive]

1970 (Jan 26)

Full newspaper page : [HN013P][GDrive]

Austin, Texas—Page 37

Defense Research Cutback May Stir Up Some Confusion

By DIETRICK E. THOMSEN
Science Service Writer

WASHINGTON — Scientists who get money from the Department of Defense have been getting bad news for years. This year the message was especially bad. The script was written by Sen. Mike Mansfield (D-Mont.), majority leader of the Senate, who topped off a billion-dollar cut in Defense's requested $8 billion research and development budget for fiscal year 1970 with a prohibition amendment. Now famous as Ariticle 203, the amendment forbids the department to spend any of the appropriated year and a half about the possibility of State's taking over some of Defense's projects in the social sciences. Nothing solid has come of the talks, says Dr. Donald M. MacArthur, deputy director of Defense Research and Engineering. There is speculation that people at State are reluctant to get involved in basic social-science research of the sort the Pentagon is doing.

In physical sciences the alternative for many will be the National Science Foundation. The Science Foundation's policy is that anyone dropped by the Defense agency as part of the giving agency's activities. Since the Mansfield amendment forbids using the Defense appropriation for research unrelated to Defense's mission, it seems to forbid such subcontracting by definition.

The alternative of putting supplemental appropriation bills through Congress remains, but is unlikely to be used since the 1971 budget is almost ready for presentation. There is the chance that adjustments are likely to be made in the 1971 budget, which takes effect next July, instead of further tinkering with this year's budget.

money on research projects not related to its mission.

Article 203 is the culmination of several years of Congressional grumbling about Defense's alleged tendency to build a research empire for itself in areas where Congressmen thought it had no business to be. "It was the only agency that could always get more for research than it asked for," says an official of the Democratic Policy Committee. For several years Mansfield and others have been trying to change this favored status.

The problem with Article 203 is that it neither defines the Defense Department's mission nor names any categories of research that are in or out. It is open to wide intrepretation and raises the need for an arbiter.

Defense had hopes that the National Academy of Sciences would be the arbiter, and had invited the Academy to join in a review of Defense research efforts to see what ones violate Article 203. But the Academy tossed the potato right back. "The academy is ready to give advice," says a spokesman, "but we feel it would be sensible for the Defense Department to take a first stab at the situation."

The department is proceeding to review its research programs. It is still too early to tell what categories may go or to name specifiec projects that may be discontinued, but it is clear that with the budget cut and Article 203 something will have to go. The department has been negotiating with other government agencies to see if they can take up the slack.

Some of these talks have been going on since the Defense Department began to have Congressional trouble. Defense has been talking to the State Department for a Department will have to go through the same procedures of application and evaluation as anyone else on the NSF lists. People who have been supported by Defense are already getting in line. "There are dozens or a hundred or more," says Dr. Paul F. Donovan, director of NSF's intermediate energy physics program, and impementation of Article 203 has not yet been carried out. When that happens, there may be a further substantial increase, he says.

This sort of thing could lead to a severe money problem at the Science Foundation and other agencies unless additional money is made available to them. It was not Mansfield's intention to provoke such a crisis, says a spokesman for the Democratic Policy Committee, but rather to relieve Defense of research projects in favor of other agencies. This committee suggests the possibility of transferring money for Defense to other agencies.

According to Budget Bureau opinion, however, such transfer of funds appropriated for fiscal 1970 seems impossible. One Federal agency can give money to another, but only if the receiving agency does some work on behalf of the giving

Unless something is done, interpretation of Article 203 could bring dire consequences to the nation's research establishment. At the University of Illinios, for example, over half the outside support for research in the Engineering College comes from the Defense Department says Dr. Daniel Alpert, dean of the college. About one-third of the work in the university's Materials Research Laboratory is basic enough to be subject to different interpretations under the Mansfield amendment. The University will contend that the research is relevant to Defense's mission, but, says Dean Alpert, "We've got to hold our breath and hope for the best."

If Defense Department support is cut immediately, says Dr. Charles Schwartz, associate professor of physics at the University of California at Berkeley, a bitter situation of competition for available funds will develop.

Dr. Schwartz feels that the Mansfield amendment is a good thing even though he has an Air Force contract he may lose as a result of it. He feels scientific leaders should start to work with Congress to provide alternate means of support for the day when the impact of Article 203 reaches the laboratories.

1970-01-26-austin-american-statesman-pg-37-clip-defense-cutback

[HN013Q][GDrive]

1973 (May 23)

Full page - [HN00TR][GDrive]

The Santa Fe New Mexican (Santa Fe, New … · 23 May 1973, Wed · Page 6

Valedictorian of the senior class at Mount Airy High School in Towson, Md., is Leeza Tschursin, granddaughter of Mr. and Mrs. Antonio J. Taylor, who attended school here in earlier years. She transferred to Mount Airy after freshman and sophomore year studies at Santa Fe Preparatory School and a previous year at Loretto Academy.

Attending her graduation on May 30 will be her grandfather since he just happens to have business at the east at the time. He will visit at the home of Leeza's mother, Mrs. Donald MacArthur, the former Miss Diana Taylor, in Washington, D.C. Leeza plans to remain in Washington to work this summer, departing from her usual custom of spending the vacation months in Santa Fe.

[HN00TS][GDrive]

1976 (June 03)

Full page - [HN00TT][GDrive]

The Santa Fe New Mexican (Santa Fe, New … · 03 Jun 1976, Thu · Page 23

WEDDINGS ARE A TIME for tradition and it will be followed on June 19 when Miss Elizabeth Tschursin and John Francis Bierschenk are married at St. Francis Cathedral. Family and old friends of the family have been invited to attend the nuptial mass at 10:30 a.m. and the reception that will follow at the home of the bride's grandparents, Mr. and Mrs. Antonio J. Taylor. The guests further include the college set of the bride and groom both of whom attend the College of Santa Fe.

"Leeza," to use the bride's chosen nickname, is the daughter of Dr. and Mrs. Donald M. MacArthur of Washington, D.C., who will be arriving about a week before the wedding. Mrs. MacArthur, the former Miss Diana Taylor, introduced her daughter to Santa Fe at an early age with schooling at Loretto Academy in the first grade. Leeza returned to the east to attend the Madeira School in Maryland and to finish preparatory school in Baltimore before she again came to Santa Fe for college. She has called Santa Fe home for three years, attending St. John's College the first year and College of Santa Fe the past two.

Also arriving the week before the wedding, will be the groom's parents, Mr. and Mrs. John Bierschenk, and his paternal grandfather, all of Temple,Texas.

Others in the wedding party will include Miss Jennifer McLaughlin, maid of honor, and Mrs. Jack Hopkins Jr., bridesmaid, a cousin of the bride. The bride's brother, Alexander Tschursin, Boston University student, and Tom McLaughlin will be ushers with the best man coming from Texas.

[HN00TU][GDrive]

1978 (Oct 31)

Full newspaper page : [HN013T][GDrive]

Mr. and Mrs. A.J. Taylor and Mrs. Jack Hopkins went east to visit his daughter and son-in-law, Dr. and Mrs. Donald MacArthur of Washington. Mrs. MacArthur, a Washington career woman, is remembered as the former Diana Taylor, and is a sister of Mrs. Hopkins. The MacArthurs recently purchased a condominium in Bethany Beach, Md., so they drove the short distance to see this beautiful area, a new development in a magnificent setting.

1978-10-31-the-santa-fe-new-mexican-pg-a-7-clip-macarthur

[HN013U][GDrive]

1982 (Dec 25)

Full newspaper page : [HN013R][GDrive]

2A ©1982 FORT WORTH STAR-TELEGRAM ■ SATURDAY, DECEMBER 25, 1982

Texans bring a Lone Star Christmas to Washington

Continued from Page 1

Not everyone, of course, feels the urge to bankrupt their bank account before the New Year.

The Texans in town, who celebrated Christmas early before scattering home, seemed to cling to the simpler symbols and traditions of the Lone Star State.

Sandra Hall, who will return to Washington in January from Marshall to begin working for Rep. Steve Bartlett, R-Dallas, threw a party in her Georgetown row house for the staff of the State of Texas Federal Relations office.

The crowning touch of that gathering, besides the cannelloni, was a 9-foot scotch pine trimmed with Texas ornaments. Santas in chaps and cowboy hats, replicas of the state and balls with bluebonnets hung from the tree while yet another Santa, this one dressed in Levis and a cowboy hat, drove a train around the tree.

Atop it all was not a star, angel or elf, but a man-sized, black suede cowboy hat blinking with white lights.

"Because there are so many people in the business of public affairs here, Christmas is used as a time to go around and say howdy."
— Don Womack, a Texas Utilities representative in Washington

"I thought my favorite black cowboy hat would look great up there," said Sandra, the daughter of Rep. Sam Hall, D-Marshall.

The guests, all Texans, reportedly enjoyed the touches from home.

Elizabeth Morris, energy coordinator for the State of Texas office, doesn't spend the holiday in Washington and rarely gives a Christmas party because "there are so many to go to."

But she does make her friends homesick for Texas almost as soon as they get back with a New Year's Day party. It's all the ham, black-eyed peas and cornbread that you can eat.

There were more elaborate Texas bashes, and one of the memorable ones, according to the guests, was given by Wayne Gibbens, president of Mid-Continent Oil & Gas, and his wife.

The ornaments on the tree were little leather cowboy boots and the buffet table was filled with Tex-Mex food.

"It was delicious," said Bob Waldron, Lyndon Johnson's traveling secretary who now runs an interior design shop in Georgetown.

Waldron, a bachelor from Arp, thinks Christmas in Washington is "delightful."

He has been invited to no less than 25 Christmas get-togethers so far, and will accept an invitation to a day-after-Christmas party to be given by Lady Bird Johnson's niece and her husband, Donald MacArthur.

Although many of the government agencies throw Christmas office parties — the Equal Opportunity Employment Commission and the Securities and Exchange Commission even had some daylight disco — the highest in the government hierarchy can usually be found at some time during the season at the White House, enjoying a taste of the 15-odd tours, receptions, open houses and parties that the first family gives.

For the Reagans, the Christmas season means entertaining about 100,000 visitors in three weeks.

There are sessions to preview the decorations at the White House. Congress and its staff, at least 1,100 members of the news media, 400 children of the members of the diplomatic corps, senior citizens, the Secret Service, the White House staff and the handicapped have been sampling holiday cheer at the White House since Dec. 9.

Most of the town's professional partygoers, who step up their involvement socially at Christmas, don't think the cheerless state of the nation's economy has had an effect on the season.

"Because there are so many people in the business of public affairs here, Christmas is used as a time to go around and say howdy," said Don Womack, one of Texas Utilities' representatives in Washington who gives his friends a sample of his homemade chili blend at Christmas.

But there is a less glittery face to the holiday for those who were not invited to a tea at the vice president's house, a smorgasbord at the Swedish Embassy or a lavish Victorian Christmas at the home of conservative Richard Vigurie.

There will be single people who will not join the "party" at National Airport to go home to families. There will be native Washington families who will gather their families for a quiet celebration. And there are those — they may number 10,000 — who will spend most of the holiday on the street except for the special soup kitchen meals that volunteer groups will prepare and serve.

Lin Romano, a volunteer with the Center for Creative Non-Violence, said 600 are expected for her group's special Christmas Eve dinner. They may get a Christmas gift — probably a pair of socks.

For one homeless Washingtonian, the spirit of the season and the hope for world peace will only be realized when everyone can find shelter and "no one else freezes to death."

Merry Christmas.

[HN013S][GDrive]

1988 - Passing

https://www.washingtonpost.com/archive/local/1988/11/29/donald-m-macarthur-57-founder-of-md-firm-dies/5ffe116a-79f4-4351-bd24-317bd16cae6f/

BITCHUTE @Housatonic YOUTUBE @HousatonicLive ODYSEE @Housatonic BRIGHTEON @Housatonic

Housatonic

Diana Lee Taylor MacArthur (born 1933)

See Diana Lee Taylor (born 1933)

Dr. Alan B. MacDonald (born 1948)

https://durayresearch.wordpress.com/about-2/background/curriculum-vitae-alan-b-macdonald/

2020-08-31-durayresearch-wordpress-com-about-2-background-vitae-alan-b-macdonald

Dr. Paul Duray Research Fellowship Endowment Inc

Cutting-edge research into persistent Borrelia infection

Curriculum Vitae – Alan B. MacDonald

Date of Birth:

April 12, 1948, Boston, Massachusetts

Education:

Undergraduate:

Tufts University, B.S. (Chemistry, Neurophysiology) Magna Cum Laude, 1970

Medical:

College of Physicians and Surgeons, Columbia University in the City of New York, N.Y.

Internship, Internal Medicine, Rush Presbyterian Medical Center Chicago, Illinois 1974-75

Resident Pathology, Columbia Presbyterian Medical Center, (Anatomic Pathology) 1975-76

Resident and Chief Resident, Pathology, New York University and Bellevue Medical Center 1976-1979

Board Certification and Recertification:

American Board of Pathology, Diplomate, Anatomic and Clinical Pathology, 1979, 2006

Fellow, College of American Pathologists, 1979 – present

Fellow, American Society for Clinical Pathology, 1979 – present

Member, U.S. Canadian Association of Pathologists, 1982-present

Publications:

MacDonald, A. B. "Borrelia burgdorferi tissue morphologies and imaging methodologies." *European journal of clinical microbiology & infectious diseases* 32, no. 8 (2013): 1077-1082.

No Evidence for Contamination of Borrelia Blood Cultures: A review of Facts, Alan B. MacDonald, J. Clin. Microbiol., May 2014; 52:5 1803; doi:10.1128/JCM.02275-13

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Serological evidence for simultaneous occurrences of Lyme disease and babesiosis. Benach JL, Coleman JL, Habicht GS, MacDonald A, Grunwaldt E, Giron JA. J. Infect. Dis., 1985 Sep;152(3):473-7.

A case of crystal formation in bone marrow. Carter KJ, Jones JD, Mandel NS, Mandel GS, MacDonald AB. Clin Chem. 1984 Jul;30(7):1267-8.

Book Chapter:

Spirochatenpathologie der Lyme – Borreliose, Alan B. MacDonald, pp. 127-146 in "Einheimische ZeckenBorreliose (Lyme Krankheit) bei Mensch Und Tier", Horst, H. (Editor) Citation: Horst, Hans, ed. *Einheimische Zeckenborreliose (Lyme-Krankheit) bei Mensch und Tier*. Perimed-Fachbuch-Verlag-Ges., 1991.

Practice Experience:

Thirty-five years of community hospital anatomic and clinical pathology practice.

Research:

Borrelia biology and pathobiology :

- All areas in the realm of anatomic and clinical pathology, histologic diagnosis of spirochetes in tissue (animals, controls, infected cases submitted blindly for testing, immunohistochemistry applied to paraffin sections (Monoclonal antibodies for *borrelia burgdorferi*);

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- Design of immunodiagnosis methodologies for Borrelia antibodies in blood;
- Dark field microscopy of *Borrelia* in cerebrospinal fluid and blood;
- Culture and primary isolation of wild type *Borrelia* strains from human autopsy tissues, fetal autopsies, human adult blood, and human skin biopsies of Erythema migrans punch biopsies;
- Polymerase Chain Reaction of triturated human tissue for detection of *borrelia* DNA;
- Design of DNA probes for detection of *Borrelia* in human tissue using FISH method;

- Design of Molecular Beacons for detection of DNA of *Borrelia* species (of both USA and European strains of borrelia) in human tissue, and Borrelia miyamotoi in human tissues and human body fluids;

- First Isolation of *borrelia burgdorferi* in culture from autopsy fetal brain (Miscarriage);

- First isolation of *borrelia* from frozen autopsy Alzheimer's brain;

- First description of Cystic *Borrelia burgdorferi* in world's literature;

- First description of granular forms of *Borrelia burgdorferi* in human tissue (Alzheimer's disease);

- First proof, by FISH study, that brain Granulovacuolar Degeneration in Alzheimer's disease is due to granular forms of *Borrelia* which have penetrated human neurons;

- First direct identification of *Borrelia* spirochetes inside the cytoplasm of human neuronal cells in Alzheimer's disease autopsy brain;

- First description of Spheroplast forms of *Borrelia burgdorferi* in human tissue and in culture;

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- First description of transfection of human DNA by *Borrelia burgdorferi* DNA via horizontal DNA transfer;

- First to prove that amyloid plaques in Alzheimer's disease all contain biofilms of *Borrelia* dwelling inside of the topography of the plaques;

- First description of *Borrelia* Temporal arteritis with blindness (1989);

- First description of liposomal form of *Borrelia* (blebs) by electron microscopy, 1988;

- First description of electron microscopy identification of *Borrelia* in blood of Multiple Sclerosis patient;

- First serostudy of Amyotrophic Lateral Sclerosis patients from Long Island, New York area for antibodies to *Borrelia* species, with identification of 20% seropositive rate for *Borrelia* infection in ALS patients as compared with background rate of seropositive patients 8.2% in year 1987-1988;

- Elucidation of the "negative phase" in Borreliosis as a state in which infective *Borrelia* in minute granular form reconstitute spiral *borrelia* forms in *in vitro* cultures;

- Suggestion that autoimmune phenomenon in Borreliosis patients may represent proteins of *Borrelia* deposited on human cytoplasmic membranes consequent to Borrelia transfection of human DNA and resultant production of *Borrelia* proteins from the infected/transfected human DNA;

- Identification of 100 cases of *Babesia microti* infection in humans with Borreliosis with all categories of disease including death, transplacental transfer of infection in utero to the fetus, asymptomatic *Babesia* carrier state;

- Proof of *Babesiosis* with hamster inoculation method with seronegative cases;

  - Discovery of *Babesia* ***microti*** species seronegative *Babesia* infections in humans in 1986-1990. (in retrospect probable examples of *Duncani* species human babesiosis from East coast, USA tick vectored infections);

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  - First to call to action in New York Times (year 1988) to screen blood donors for possible asymptomatic babesiosis *to prevent transfusion transmitted babesiosis.*

Additional commentary on research projects completed:

1985 to Present:

The investigation of autopsy Alzheimer's brain tissues for evidence of *Borrelia burgdorferi* and *Borrelia miyamotoi*.

This approach was inspired by the model of Dr Hideyo Noguchi, who proved that *Treponema pallidum* infection in its tertiary phase was the cause of General Paresis.

Like syphilis, Lyme Borreliosis is recognized as having primary, secondary and tertiary manifestations. In 1985 I requested frozen Alzheimer's disease brains from Dr. George Glenner who maintained a research Brain Bank at the University of California, San Diego.

I received four frozen whole brains, after my credentials to undertake research studies were approved by Dr Glenner and by the Institutional Review Board of the Medical staff of Southampton Hospital, Southampton, N.Y. I had acquired experience in the primary isolation of *Borrelia burgdorferi* from human tissue in studies of the Erythema migrans lesion.

I was in possession of positive and negative control material from earlier studies which I completed on Gestational Lyme Borreliosis. I commenced culture of 0.5cm cubes of flame-sterilized thawed Alzheimer hippocampus and observed the cultures for growth of *Borrelia* spirochetes.

I submitted a manuscript to the Journal of the American Medical Association, which was entitled "*Borrelia* in the brains of patients dying with Alzheimer's disease". The Editors were concerned that the words "Alzheimer's disease" in the title would create problems among the readership and returned the manuscript for title revision, agreeing to publish my report of positive culture results as a "letter to the editor", with the words "*Borrelia* in the Brains of Patients Dying with Dementia".

This substitution to placate the Editor also meant that the phrase "Alzheimer's disease" was removed from the title and the word "Dementia" substituted. (JAMA, 1986, 256:2195-6) .

The classification of the cultured spirochetes from 2 patient autopsy hippocampus specimens was substantiated by positive immunoreactivity with Murine monoclonal antibodies H5332, and H9724, which were on hand in the laboratory courtesy of the generosity of Dr. Alan G. Barbour, at the Rocky Mountain Laboratory, NIAID, NIH, Hamilton Montana.

Subsequent studies of additional cases of Alzheimer's disease yielded more culture positive cases.

In 1987, the editors of the first-line academic pathology journal Human Pathology accepted a case report entitled "Concurrent Neocortical Borreliosis and Alzheimer's Disease. This was the first publication which allowed the use of the words "Alzheimer's" and "Borreliosis" in the title.

Subsequent work revealed a culture-positive case of Alzheimer's disease, from Dr. Glenner's Brain Bank, which disclosed a "cystic" form of *Borrelia burgdorferi* in tissue section, and immunoreactive *Borrelia* cysts with Dr. Barbour's gift of murine monoclonal antibody H9724 which recognizes the flagellin epitopes of *Borrelia burgdorferi* and related relapsing fever *borrelia*.

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This report was published in the Annals of the New York Academy of Sciences, 1988, 539: 468-70. I began work on molecular detection methods for the *Borrelia burgdorferi* genomic elements in Alzheimer's disease tissues – initially with PCR detection of the Flagellin B transcriptome, and subsequently with Fluorescein-labeled specific DNA probes for *in situ* DNA hybridization {FISH method}.

In 1993, Dr Judith Miklossy published her first paper on Alzheimer's disease and neuroborreliosis. Dr Miklossy has continued to produce multiple landmark manuscripts on Alzheimer's neuroborreliosis, the most recent in 2011 reviewing the evidence from the perspective of Koch and Hill's hypotheses.

My present research is the utilization of Molecular Beacons for *in situ* DNA hybridization to detect *Borrelia* transcriptomes in Alzheimer's disease autopsy brain tissues. Such tools have produced image evidence via i*n situ* DNA hybridization with both Molecular Beacons and conventional FISH reagents, that the Alzheimer plaques bind and hybridize with DNA probes which are uniquely specific for *Borrelia* DNA [Fla B ORF BBO 147], and *Borrelia miyamotoi* DNA .

The Alzheimer plaques and the GVB bodies hybridize with these FISH DNA probes, while the human autopsy brain tissue between the plaques and the GVB bodies produces no hybridization signals.

Based on these observations, it is my view that the Alzheimer plaques in Neuroborreliosis-related AD cases are Biofilm communities, consisting of Granular *Borrelia*, Cystic *Borrelia*, Cell wall-deficient *Borrelia* and peripheral rim-like areas of spiral *borrelia*.

Water channels are features of biofilms. Empty spaces within Alzheimer plaques also are consistent with water channels of borrelia biofilms. The possibility of mixed-species biofilms in AD plaques has merit, and multi-species infections are an open possibility in Neuroborreliosis-related AD cases.

I continue my work on primary isolation of *Borrelia* from Alzheimer's brain tissue. I believe that Molecular Beacons are the ultimate FISH DNA/RNA probes, because Molecular Beacons are endowed with the property of rejecting all potential hybridization sites in tissue if *even a single base mismatch* exists between the Molecular Beacon DNA probe and any potential hybridization tissue site.

FISH DNA/RNA hybridization is unique in allowing *back* correlation of areas showing hybridization with the DNA probes with tissue sites also showing either AD plaques or GVB foci by conventional methods.

Video Lectures on Internet (web links):

Youtube Lectures by Dr. Alan B. MacDonald MD (Free)

Introduction: Less Commonly Discussed Facts About Lyme Borreliosis:

Biology of Lyme Disease (part 1 of 3)

Link: https://www.youtube.com/watch?v=r8tESJVvM88

Biology of Lyme Disease (part 2 of 3)

Link: www.youtube.com/watch?v=2RATCS-3v9Q

Biology of Lyme Disease (part 3 of 3)

Link: www.youtube.com/watch?v=FEjNMlNM3I8

Advanced Topics in Lyme/Borreliosis Lectures:

Lyme Borreliosis Autopsy published Cases in the Literature

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Link: www.youtube.com/watch?v=5YlUhdiA7cM

Borreliosis complex Autopsy Deaths and Chronic Morbidities

Link: www.youtube.com/watch?v=bHA8VKq78BM

Lyme Borreliosis, Cardiac Deaths, Autopsies, and Chronic Morbidities

Link: https://www.youtube.com/watch?v=RpIZhArW-Vo

Lyme Borreliosis spirochetes detected in Autopsy Alzheimer Brain

Link; www.youtube.com/watch?v=44xL0z8I5X8

Lyme Borreliosis Acute and Chronic Disease in the United Kingdom: Inconvenient Truths

Link: www.youtube.com/watch?v=r6-wzKk8Utg

Lyme Borreliosis: Acute and chronic: Part 2 –United Kingdom

Link: www.youtube.com/watch?v=PZXL3UUa4mY

Dr. Alan MacDonald on Human *Borrelia* Deaths at Norvect Conference 2014

Link: www.youtube.com/watch?v=e8zVCeCUie8

Non-Spiral forms of *Borrelia*

Non-Spiral Borrelia Part I: explanation of Shape Shifting

Link: www.youtube.com/watch?v=pqKaM_J7KDI

Part II : Cystic *Borrelia* including Round body *Borrelia* Brain diseases Link: www.youtube.com/watch?v=1ojq_2-HlNg

Non-Spiral forms of *Borrelia*

Link: www.youtube.com/watch?v=KjbfeVeAHps

Borrelia Infections in Deep Soft tissues and Chronic Infections

Link: www.youtube.com/watch?v=5YlUhdiA7cM

Borrelia Miyamotoi Biofilms cause Alzheimer Plaques

Link: www.youtube.com/watch?v=_drEJgxQp7M

Alzheimer Plaques are Biofilm Communities of *Borrelia*

Link: www.youtube.com/watch?v=pLcDp2kdQF0

Lyme Biofilm

Link: www.youtube.com/watch?v=a4uNDWdChM8

Atomic Force Microscopy Composite Scan of *Borrelia burgdorferi* Biofilm

Link: https://www.youtube.com/watch?v=G21kast94Qo

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(List complete as of Sept 8, 2015)

Grand Rounds presentations and invited lectures:

Autopsy Studies in Human Fetal Death due to Intrauterine Lyme borreliosis, Second International Meeting, Lyme disease, Vienna, Austria

Southampton Hospital, Southampton, New York, Convener, Full Day Symposium on Lyme Disease – Case presentations in all medical specialties

Babesiosis, Harvard Medical School, Department of Public Health, Dr. Gustave Dammin, 1985

Lyme disease in human pregnancy, University of Utah, School of Medicine, Department of Obstetrics and Gynecology

Neuroborreliosis, Columbia University, College of Physicians and Surgeons, Department of Psychiatry

Lyme Borreliosis and Alzheimer's Disease, Columbia University/ Lyme Disease Association, National Scientific Meeting, Philadelphia, Penn.

International Dermatology and Molecular Dermatopathology of Lyme Borreliosis, International Lyme Disease and Associated Disorders Association, National Scientific Meeting.

Lyme Disease – Ocular Manifestations, University of Miami School of Medicine, Department of Ophthalmology

A Review of Neurological Lyme Borreliosis, Society for Neuro-opthalmology, Charlotte, Virginia

Biofilms of *Borrelia burgdorferi* and Clinical Application for Chronic Borreliosis, University of New Haven, West Haven, Conn.

Lyme Neuroborreliosis and Alzheimer's Disease, University of New Haven, West Haven, Conn.

Honorary Awards:

University of New Haven, Department of Biology,

Lifetime Achievement Award in Lyme Borreliosis Research

International Lyme Disease and Associated Diseases Society,

Pioneer in Lyme Disease Award

Commentaries on tick-borne diseases:

Multiple posts on Lyme Net Europe Website from 2012- present

http://www.Lymeneteurope.com

Websites , Alan B. MacDonald, M.D.

http://www.alzheimerborreliosis.net

http://www.gofundme.com/z3v2a2k

Research Foundation:

President, Dr. Paul H Duray Research Fellowship Endowment, Inc (Florida)

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The Duray Foundation is a not for profit medical research charity whose mission is to promote DNA probe research with the tools of molecular pathology to discover and to validate Borrelia strains as the etiologic agents of Alzheimer's disease, multiple sclerosis, and other neurodegerative diseases in the human host worldwide.

The Duray Foundation also provides training for physicians and for research scientists in the methods of Fluorescence in Situ Hybridization (FISH method) using Molecular Beacon DNA Probes which have been validated for the study of tick-borne disease co-infections in the Lyme borreliosis Complex of Diseases.

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MCI WorldCom Corporation

Wikipedia MCI Inc..

Saved Wikipedia (Dec 17, 2020) - MCI Inc.

Source : [HK0049][GDrive]

This article is about LDDS, which later changed its name to WorldCom and purchased MCI Communications. For other uses, see MCI (disambiguation).

[...]

Former type Subsidiary

Traded as NASDAQ: MCIP

Industry Telecommunications

Fate Acquired by Verizon Communications in 2006

Founded 1983; 37 years ago

Defunct 2006; 14 years ago

Headquarters Ashburn, Virginia, U.S.

Products Conferencing, Contact Centers, Data and IP Services, Internet access, IT Solutions and Hosting, Managed Networks, Premises Equipment (CPE), Security, Voice, VoIP, Wireless

Revenue US$20.6 billion (2005)

Parent Verizon Communications(2006–present)

Website enterprise.verizon.com / www.mci.com/mcihome.jsp

MCI, Inc. (previously **Worldcom** and **MCI WorldCom**) was a telecommunications company. For a time, it was the second largest long-distance telephone company in the United States, after AT&T. Worldcom grew largely by acquiring other telecommunications companies, including MCI Communications in 1998, and filed bankruptcy in 2002 after an accounting scandal, in which several executives, including CEO Bernard Ebbers, were convicted of a scheme to inflate the company's assets. In January 2006, the company, by now renamed MCI, was acquired by Verizon Communications and was later integrated into Verizon Business.

Worldcom was originally headquartered in Clinton, Mississippi before relocating to Ashburn, Virginia when it changed its name to MCI.[1][2]

Foundation

In 1983, in a coffee shop in Hattiesburg, Mississippi, Bernard Ebbers and 3 other investors formed Long Distance Discount Services, Inc. based in Jackson, Mississippi and in 1985, Ebbers was named chief executive officer. The company acquired over 60 telecommunications firms and in 1995, it changed its name to WorldCom.[3]

The company became a public company as a corporation in 1989 as a result of a merger with Advantage Companies Inc.[4] The company name was changed to **LDDS WorldCom**in 1995, and relocated to Clinton, Mississippi.

The company grew rapidly in the 1990s, after completing several mergers and acquisitions.

Worldcom's first major acquisition was in 1992 with the $720 million acquisition of Advanced Telecommunications Corporation, outbidding larger rivals Sprint Corporation and AT&Tto secure the deal, making Worldcom a larger player in the telecoms market.[5]

Other acquisitions included: Metromedia Communication Corp. and Resurgens Communications Group in 1993,[6] IDB Communications Group, Inc (1994), Williams Technology Group, Inc. (1995), and MFS Communications Company (1996), and MCI in 1998. The acquisition of MFS included UUNET Technologies, Inc., which had been acquired by MFS shortly before the merger with WorldCom. In February 1998, WorldCom acquired CompuServe from its parent company H&R Block. WorldCom then retained the CompuServe Network Services Division, sold its online service to America Online, and received AOL's network division, ANS. WorldCom acquired the corporate parent of Digex, Intermedia Communications in June 2001 and then sold all of Intermedia's non-Digex assets to Allegiance Telecom.

MCI acquisition

On November 4, 1997, WorldCom and MCI Communications announced a $37 billion merger to form MCI WorldCom, making it the largest corporate merger in U.S. history. On September 15, 1998, the merger was consummated, forming **MCI WorldCom**. MCI divested itself of its "internetMCI" business to gain approval from the U.S. United States Department of Justice.[7]

Proposed Sprint merger

On October 5, 1999, Sprint Corporation and MCI WorldCom announced a $129 billion merger. Had the deal been completed, it would have been the largest corporate merger in history. The merged company would have surpassed AT&T as the largest communications company in the United States. However, the deal floundered due to opposition from the United States Department of Justice and the European Union on concerns that it would create a monopoly. On July 13, 2000, the boards of directors of both companies terminated the merger. Later that year, MCI WorldCom renamed itself "WorldCom".[8]

Accounting scandals

See also: Cynthia Cooper, Eugene Morse, and WorldCom scandal

Between September 2000 and April 2002, the board of directors of Worldcom authorized several loans and loan guarantees to CEO Bernard Ebbers so that he would not have to sell his Worldcom shares to meet margin calls as the share price plummeted during the bursting of the dot-com bubble. By April 2002, the board had lost patience with these loans. Directors also believed that Ebbers didn't seem to have a coherent strategy after the Sprint merger collapsed. On April 26, the board voted to ask for Ebbers' resignation. Ebbers formally resigned on April 30, 2002 and was replaced by John W. Sidgmore, former CEO of UUNET. As part of his departure, Ebbers's loans were consolidated into a single $408.2 million promissory note.[9][10][11]:216–218 In 2003, Ebbers defaulted on the note and Worldcom foreclosed on many of his assets.[12]

Beginning modestly during mid-1999 and continuing at an accelerated pace through May 2002, Ebbers, CFO Scott Sullivan, controller David Myers and general accounting director Buford "Buddy" Yates used fraudulent accounting methods to disguise WorldCom's decreasing earnings in order to maintain the company's stock price.[12]

The fraud was accomplished primarily in two ways:

1. Booking "line costs" (interconnection expenses with other telecommunication companies) as capital expenditures on the balance sheet instead of expenses.
2. Inflating revenues with bogus accounting entries from "corporate unallocated revenue accounts".

In June 2002, a small team of internal auditors at WorldCom led by division vice president Cynthia Cooper and senior associate Eugene Morse worked together, often at night and secretly, to investigate and reveal what was ultimately discovered to be $3.8 billion worth of fraudulent entries in WorldCom's books.[13][14] The investigation was triggered by suspicious balance sheet entries discovered during a routine capital expenditure audit. Cooper notified the company's audit committee and board of directors in June 2002. The board moved swiftly, forcing Myers to resign and firing Sullivan when he refused to resign. Arthur Andersen withdrew its audit opinion for 2001.[11]:223–264 Cooper and her team had exposed the largest accounting fraud in American history, displacing the fraud uncovered at Enron less than a year earlier. It would remain the largest accounting fraud ever uncovered until the exposure of Bernard Madoff's giant Ponzi scheme in 2008.

By this time, the U. S. Attorney for the Southern District of Mississippi, the Federal Bureau of Investigation and the U.S. Securities and Exchange Commission were already looking into the matter as well. The SEC launched a formal inquiry into these matters on June 26, 2002.[11]:265 The SEC was already investigating WorldCom for questionable accounting practices.[15] By the end of 2003, it was estimated that the company's total assets had been inflated by about $11 billion.[12]

The fraud came to light just days after Andersen was convicted of obstruction of justice in the Enron scandal, a verdict that effectively put Andersen out of business. In his post-mortem of the Enron scandal, *Conspiracy of Fools*, journalist Kurt Eichenwald argued that Andersen's failure to uncover WorldCom's deceit would have brought Andersen down even if it had escaped the Enron fraud unscathed.[16]

Bankruptcy

On July 21, 2002, WorldCom filed bankruptcy in the largest such filing in United States history at the time (overtaken by the bankruptcies of both Lehman Brothers and Washington Mutual in a span of eleven days during September 2008). The WorldCom bankruptcy proceedings were held before U.S. Federal Bankruptcy Judge Arthur Gonzalez, who simultaneously heard the Enron bankruptcy proceedings, which were the second largest bankruptcy case resulting from one of the largest corporate fraud scandals. None of the criminal proceedings against WorldCom and its officers and agents were originated by referral from Gonzalez or the Department of Justice lawyers. By the bankruptcy reorganization agreement, the company paid $750 million to the SEC in cash and stock in the new MCI, which was intended to be paid to wronged investors.[17]

Effective December 16, 2002, Michael Capellas became chairman and chief executive officer.[18] On April 14, 2003, WorldCom changed its name to **MCI**, and relocated its corporate headquarters from Clinton, Mississippi, to Ashburn, Virginia.[19]

Even before then, however, employees from the MCI side of the merger had taken over top executive posts, while many longtime executives from the old WorldCom were pushed out. In late 2002, the company began moving most of its operations to its campus in Ashburn, which had opened in 2000. Capellas, for instance, spent most of his time in Northern Virginia. After the name change, one executive from the old MCI said, "We're taking our company back." Another wrote in an email, "My company was not founded in a motel coffee shop."[11]:320

In May 2003, in a controversial deal, the company was given a $45 million no-bid contract by the United States Department of Defense to build a

cellular phone service in Iraq as part of the U.S.-led reconstruction effort despite the fact that the company was not known for its expertise in building wireless networks.[20][21]

WorldCom agreed to pay a civil penalty of $2.25 billion to the U.S. Securities and Exchange Commission. The deal was approved by federal judge Jed Rakoff in July 2003.[22] In a sweeping consent decree, the SEC and Rakoff essentially took control of WorldCom. Rakoff appointed former SEC chairman Richard C. Breeden to oversee WorldCom's compliance with the SEC agreement. Breeden actively involved himself with the management of the company, and prepared a report for Rakoff, titled Restoring Trust, in which he proposed extensive corporate governance reforms, as part of an effort to "cast the new MCI into what he hoped would become a model of how shareholders should be protected and how companies should be run".[23]

Post-bankruptcy

The company emerged from bankruptcy in 2004 with about $5.7 billion in debt and $6 billion in cash. About half of the cash was intended to pay various claims and settlements. Previous bondholders ended up being paid 35.7 cents on the dollar, in bonds and stock in the new MCI company. The previous stockholders' stock was cancelled.[24]

It had yet to pay many of its creditors, who had waited for two years for a portion of the money owed. Many of the small creditors included former employees, primarily those who were dismissed during June 2002 and whose severance and benefits were withheld when WorldCom filed for bankruptcy.

Citigroup settled with Worldcom investors for $2.65 billion on May 10, 2004.[25] In March 2007, 16 of WorldCom's 17 former underwriters reached settlements with investors.[26]

On March 15, 2005, Bernard Ebbers was found guilty of all charges and convicted of fraud, conspiracy and filing false documents with regulators — all related to the $11 billion accounting scandal. Other former WorldCom officials charged with criminal penalties in relation to the company's financial misstatements include former CFO Scott Sullivan (entered a guilty plea on March 2, 2004, to one count each of securities fraud, conspiracy to commit securities fraud, and filing false statements),[27] former controller David Myers (pleaded guilty to securities fraud, conspiracy to commit securities fraud, and filing false statements on September 27, 2002),[28] former accounting director Buford Yates (pleaded guilty to conspiracy and fraud charges on October 7, 2002),[29] and former accounting managers Betty Vinson and Troy Normand (both pleading guilty to conspiracy and securities fraud on October 10, 2002).[30]

On July 13, 2005, Bernard Ebbers received a sentence that would have kept him imprisoned for 25 years. At time of sentencing, Ebbers was 63 years old. On September 26, 2006, Ebbers surrendered himself to the Federal Bureau of Prisons prison at Oakdale, Louisiana, the Oakdale Federal Correctional Institution, to begin serving his sentence; he was released in late 2019 for health reasons and died in February 2020, after serving 13 years of his sentence.[31]

In December 2005, Microsoft announced a partnership with MCI to provide Windows Live Messenger customers voice over IP service to make telephone calls - called "MCI Web Calling".[32] After the merger with Verizon, this product was renamed "Verizon Web Calling".

In January 2006, the company was acquired by Verizon Communications and was later integrated into Verizon Business.[33]

Evidence timeline

1998 (Feb 12)

Full newspaper page - [HN01EP][GDrive]

MCI, WorldCom merger would become nation's largest

(Editor's Note: The following article concerning the proposed acquisition of MCI by WorldCom Inc., and its possible effect on the Internet, is condensed from two articles which were published in the January, 1998, edition of Boardwatch Magazine. Information from the articles by Editor/Publisher Jack Rickard and Copy Editor Bill McCarthy is reprinted with permission.)

The concept of an Internet monopoly was originally an oxymoron. There were a large number of networks, most notably universities and DOD contractors. If you interconnected them in cooperative fashion, for the exchange of data, you had an internet. And if it somehow connected to the NSFNet backbone after about 1986, it was on the capital "I" Internet.

Since the commercialization and privatization of the Internet - intended to end the government "monopoly" of the Internet - there has been approximately 1,400 Teramanhours spent by nearly everyone, but particularly telco types, in trying to devise a method to control or "own" the Internet. This can be terribly difficult with over 4,000 vendors in a competitive environment.

But the Internet is quite hierarchical. Almost all of the 4,470 ISPs we count in operation in the U.S. and Canada as of Dec. 1 get THEIR connection to the Internet from a relative handful of top-level backbone operators. And the distribution there is not very symmetrical either. These 4,470 ISPs, many of which sport more than one connection, have a total of 5,458 connections between them to backbones that we have some data on. MCI, Sprint and UUNET, together, provide 74 percent of those connections with about 30 backbones splitting up the rest.

And while the number of Internet service providers continues to grow, the number of national backbones they can connect to is beginning to shrink. GTE has purchased BBN and now Genuity. Even PSINet, which has struggled financially in the past two years despite continued growth, has now acquired Canadian backbone operator iSTAR.

But nothing in the history of business mergers in North America matches WorldCom's 12-year buying spree with its most significant deals, at least in terms of the Internet, coming in the past two years. In 1996, the company bought MFS Communications and UUNET Technologies, two of the biggest players in Internet traffic. In September, it bought CompuServe Network Services and ANS Communications, two of the largest and fastest backbones in the United States. And none of this includes what the company has been doing overseas, such as the recent purchase of the largest ISP in the Netherlands.

In a frenzied season of telcos shopping for each other, MCI Communications Corp. agreed Nov. 10 to be acquired by WorldCom Inc., after the telco that appears determined to buy the Internet sweetened its bid for MCI to $37 billion in stock and cash.

The new offer, raised to $51 a share from $41.50, will be paid in WorldCom stock to all shareholders other than British Telecommunications. BT, which holds a 20 percent stake in MCI, will receive $7.4 billion in cash. WorldCom, the number four long-distance phone company, also picks up $5 billion in MCI debt. With British Telecommunications cashing out, MCI shareholders will own about 45 percent of the new company, while WorldCom will have a 55 percent stake.

The actual number of shares of WorldCom common stock to be exchanged for each MCI share owned by investors other than BT will be determined by dividing $51 by the 20-day average of the high and low sales prices for WorldCom common stock prior to the closing, but will not be less than 1.2439 shares (if WorldCom's average stock price exceeds $41) or more than 1.7586 shares (if WorldCom's average stock price is less than $29).

Although the merger will take six to nine months to garner regulator approvals, Bernard J. Ebbers, president and chief executive officer of WorldCom, said there are "no issues that we can anticipate in even the worst circumstances that will derail this transaction."

The MCI WorldCom deal would surpass the largest U.S. merger so far, a $25.6 billion union of Bell Atlantic Corp. and Nynex Corp. that was completed in August.

Since its founding in 1968 and its revolutionary leadership in the breakup of Ma Bell, MCI has been reminiscent of the rebellious teenager who wakes up in his thirties to realize he has become his parent. Meanwhile, WorldCom seems to be busting out like a 16-year-old with the keys to the family car and high hopes of picking up some girls and beer.

MCI WorldCom will provide an interesting mesh of the executive staffs, starting at the top. During a news conference, Ebbers referred to Bert C. Roberts Jr., chairman of MCI, as "bossman," but few people in the business believe that Ebbers will actually take a back seat to Roberts. Upon completion of the merger, Roberts, currently chairman of MCI, will become chairman of MCI WorldCom. Ebbers will serve as president and chief executive officer of MCI WorldCom.

The merger agreement is subject to the approvals of MCI and WorldCom stockholders as well as approvals from the Federal Communications Commission, the Justice Department, which is preoccupied with desktop icons, and numerous state government bodies. In addition, the merger is subject to review by the European Commission.

What is next on WorldCom's shopping list? Ebbers said that executives will "focus our time" on the merger. But he added: "Entrepreneurs look for opportunities. If there are opportunities out there that make sense, we certainly will not shy away from them."

(Boardwatch Magazine can be written to at 8500 W. Bowles Ave., Suite 210, Littleton, Colo., 80123, or called, toll-free, at 1-800-933-6038. It is available on the World Wide Web at www.boardwatch.com)

[HN01EQ][GDrive]

1998 - (May 10)

Full newspaper page - [HN01EU][GDrive]

wow - MCi-Worldcom eventually failed due to a scandal, and were bought by verizon anyways!

See **GTE Corporation** .

GTE seeks to block WorldCom-MCI merger

■ Company says deal would crimp competition

By JEANNINE AVERSA
The Associated Press

WASHINGTON — GTE Corp. is suing in an effort to stop the big WorldCom-MCI merger, contending it would crimp competition and possibly raise prices in the Internet and long-distance businesses.

GTE, which itself made an unsuccessful bid for MCI last November, says the merger would violate antitrust laws. MCI says GTE is just worried about competition.

The lawsuit, filed late Thursday in federal court, raises the same points GTE has made to the Justice Department and other regulatory bodies that are investigating the $37 billion deal.

GTE general counsel William Barr said Friday the lawsuit was "a firewall," filed in case regulators do not stop the merger.

"While we believe that the enforcement agencies are going to do the right thing ... at the end of the day GTE has to be in the position to defend its interests if our concerns are not fully addressed," he said.

Under the merger, MCI-WorldCom would control between 40 percent and 60 percent of Internet traffic flowing on "backbones" in the United States, Barr said. GTE accounts for between 8 percent and 10 percent of such Internet backbone traffic, Barr said.

Internet backbones are high capacity networks that carry Internet and other data traffic.

"The merger will give MCI-WorldCom a stranglehold over the burgeoning Internet and the incentive and ability to stifle competition from all other rival Internet backbone operators, including GTE," the company said in its suit.

WorldCom and MCI reject rivals' allegations that the merger would lead to higher pricing in the Internet and long-distance businesses, MCI spokesman Frank Walter said.

"We think GTE's motive is clearly to keep us from competing more aggressively in the local phone market where GTE has a virtual monopoly," said Walter. "It is disingenuous for them to take the mantle of pro-competition when they preside over one of the largest telephone monopolies in the country."

Walter also said there are 40 major companies, including AT&T, Sprint and IBM, that provide Internet backbone services.

GTE's lawsuit also alleges that the merger will "substantially lessen competition in the highly concentrated wholesale and retail markets for long-distance services."

MCI is the nation's second-largest long-distance company and WorldCom is the fourth largest. WorldCom accounts for 40 percent of long-distance service sold to other companies at wholesale rates, GTE's lawsuit says.

[HN01EV][GDrive]

BITCHUTE @Housatonic YOUTUBE @HousatonicLive ODYSEE @Housatonic BRIGHTEON @Housatonic

Housatonic

Dr. John S. MacKenzie (born 1943(est.))

2003 news conference

Born - Birth year is not easy to find. If Dr. MacKenzie started his college BCs in 1961, that would mean he was about 18 years old in 1961. We estimate his birth year to be 1943.

2021 (March) - No Wikipedia page for Dr. MacKenzie

Henipaviruses: Emerging Paramyxoviruses Associated with Fruit Bats

Guest Editor (s): James E. Childs,[5] John S. Mackenzie,[6] and Jürgen A. Richt[7]

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[6]Centre for Emerging Infectious Diseases, Australian Biosecurity Coo

https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7121910/

https://www.rcpa.edu.au/getattachment/94d8d8e3-fd96-4e6f-854e-2ef99538b9ef/Prof-John-Mackenzie-Emerging-zoonoses-in-the-Asian.aspx

JohnMacKenzie_EmergingZoonosesInTheAsianPacificRegion

google scholar

https://scholar.google.com.au/citations?user=f6WQYmIAAAAJ&hl=en

https://link.springer.com/book/10.1007%2F978-3-540-70962-6

541 publications

https://www.researchgate.net/profile/John-Mackenzie-9

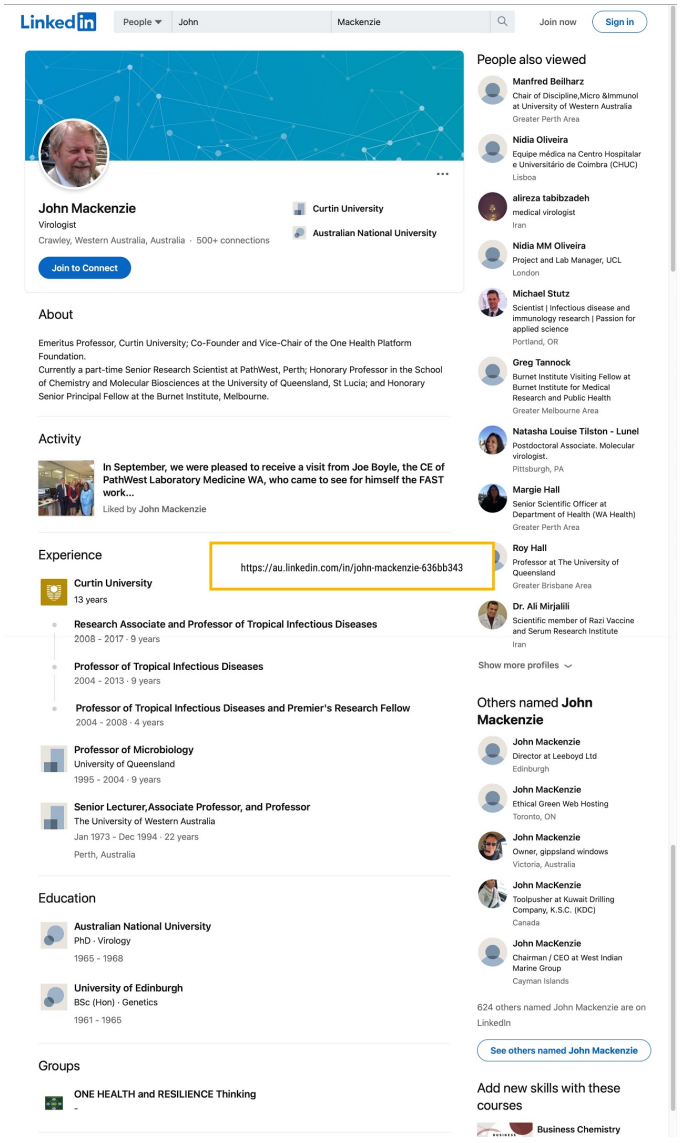
Book - Daszak, Richt, Jeggo ...

https://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=&ved=2ahUKEwjbvoKvqpfvAhWDFlkFHY2-BPkQFjAREgQIIBAD&url=https%3A%2F%2Frmportal.net%2Fgroups%2Fone-health-students-online-platform%2Fone-health-the-human2013-animal2013environment-interfaces-in-emerging-infectious-diseases%2Fat_download%2Ffile&usg=AOvVaw0gVcMrBYt9nbdGdIyhrhKk

SACIDS one health model.pdf

LinkedIn (2021) capture for Dr. John S. MacKenzie

Source - [HL0060][GDrive]



Professor John S Mackenzie BSc 1965 Elected

in 1999 to post of secretary-general,

International Union of Microbiological Societies.

Elected as President of Asian-Pacific Society of

Medical Virology (from July 2000).

Henipaviruses / Bryan T. Eaton, John S. MacKenzie, and Lin-Fa Wang

EVIDENCE TIMELINE

1998 (May 26)

https://www.newspapers.com/image/535780006/?terms=%22john%20S.%20mackenzie%22&match=1

Working with LinFa Wang since 1999

https://espace.library.uq.edu.au/view/UQ:150335

Use of monoclonal antibodies in an epitope blocking assay to detect Hendra virus-specific antibodies in sera of infected animals

Authors

BK Pham, RA Hall, K Halpin, BT Eaton, L Wang, JS Mackenzie

Publication date

1999/1/1

Pages

186

Publisher

Int. Union of Microbiological Societies

Description

Use of monoclonal antibodies in an epitope blocking assay to detect Hendra virus-specific antibodies in sera of infected animals. Author: Pham, BK. Author: Hall, RA. Author: Halpin, K. Author: Eaton, BT. Author: Wang, L. Author: Mackenzie, JS. 1999/01/01.

Total citations

Cited by 2

2000

2001

2002

Scholar articles

Use of monoclonal antibodies in an epitope blocking assay to detect Hendra virus-specific antibodies in sera of infected animals

BK Pham, RA Hall, K Halpin, BT Eaton, L Wang… - 1999

Cited by 2 Related articles All 2 versions

1999 (Nov/Dec)- Research : "Origin of the West Nile virus responsible for an outbreak of encephalitis in the northeastern United States"

Authors RS Lanciotti, JT Roehrig, V Deubel, J Smith, M Parker, K Steele, B Crise, KE Volpe, MB Crabtree, JH Scherret, RA Hall, JS MacKenzie, CB Cropp, B Panigrahy, E Ostlund, B Schmitt, M Malkinson, C Banet, J Weissman, N Komar, HM Savage, W Stone, T McNamara, DJ Gubler

1999-10-03-sciencemag-org-origiin-west-nile-virus-encephalitis-in-the-northeastern-usa.pd

1999/12/17

Journal

Science

Volume

286

Issue

5448

Pages

2333-2337

Publisher

American Association for the Advancement of Science

Description

In late summer 1999, an outbreak of human encephalitis occurred in the northeastern United States that was concurrent with extensive mortality in crows (Corvusspecies) as well as the deaths of several exotic birds at a zoological park in the same area. Complete genome sequencing of a flavivirus isolated from the brain of a dead Chilean flamingo (Phoenicopterus chilensis), together with partial sequence analysis of envelope glycoprotein (E-glycoprotein) genes amplified from several other species including mosquitoes and two fatal human cases, revealed that West Nile (WN) virus circulated in natural transmission cycles and was responsible for the human disease. Antigenic mapping with E-glycoprotein–specific monoclonal antibodies and E-glycoprotein phylogenetic analysis confirmed these viruses as WN. This North American WN virus was most closely related to a WN virus isolated from a dead goose in …

2000

Professor John S Mackenzie BSc 1965 Elected in 1999 to post of secretary-general, International Union of Microbiological Societies. Elected as President of Asian-Pacific Society of Medical Virology (from July 2000).

https://www.ed.ac.uk/files/atoms/files/edit-winter-2000vol2.issue03.pdf

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2003 - World Health Org team investigates possible mystery flu cases

Jul 23, 2015 / AP Archive / (24 Mar 2003) NB: wrong slate on tape, story correct

https://www.youtube.com/watch?v=OamNliEUcX0

2015-07-23-youtube-ap-archive-world-health-org-team-mystery-flu-cases-2003
https://drive.google.com/file/d/1r0yQdV4uluuRIAmsuFXQy81mWWKOCO_i/view?usp=sharing

2015-07-23-youtube-ap-archive-world-health-org-team-mystery-flu-cases-2003-img-1-mackenzie.jpg https://drive.google.com/file/d/1Oby-gSwI2jsczgrkV5BYUtrSjstqTaNF/view?usp=sharing

1. SOUNDBITE (English) Doctor (Dr) John S. MacKenzie, Team leader and virologist from the University of Queensland in Australia: "We hope it will be very productive from both sides. From the global perspective - in terms of knowing more about SARS - but also from the more local perspective, shall we say, in terms of us providing whatever information we can, whatever help we can to our colleagues here in China."
2. Pan from Dr Meirion R. Evans, UK epidemologist (left) and Dr Wolfgang Preiser, German virologist to Dr Robert F Breiman, US Infectious disease specialist (left) and MacKenzie
3. SOUNDBITE (English) Dr John S. MacKenzie, Team leader and virologist from the University of Queensland in Australia: "We've had 27 suspected cases in Australia but it's only information of the sort we're getting now - I mean, like we've been getting for the last three weeks - that we've been able to say that those 27 suspect cases in Australia are not SARS. And sure they've travelled in the right place. Sure they've got atypical pneumonia but they're not SARS under the current case-definition. So to be able to find out what the best definition possibly is, is incredibly important."
4. SOUNDBITE (English) Dr Robert F Breiman, American Epidemiologist and Infectious disease specialist: "In the case of Legionnaires disease and (unclear) virus - and there have been many other emerging diseases - there is plenty of evidence that those diseases existed before. What's made it recognised is the actual clustering, it's the epidemic."
5. SOUNDBITE (English) Dr James H. Maguire, Chief of epidemiology, US National Centre for Infectious Diseases, Centres for Disease Control and Prevention: "It may be, it may not be but it may be that what we learn, what is learned here in China will provide the key. There may be issues here. The fact that if this was really the first location for where these diseases occurred, there may be some reasons why that happened here that I think are gonna be very interesting to explore."

STORYLINE: A team of World Health Organization (WHO) experts said on Monday they were analyzing the cases of Chinese sickened in an outbreak of a fatal flu-like illness in hopes of finding out whether it is linked to a mystery disease that has spread to three continents. The five-member team arrived on Sunday and said they would examine Chinese records this week. They said they had not decided whether to visit the southern province of Guangdong, where five deaths from atypical pneumonia were reported. WHO says it is treating the outbreaks as part of the same emergency that has killed 10 people in Hong Kong, two in Vietnam and two in Canada, though it isn't clear if the deaths were caused by severe acute respiratory syndrome, or SARS. Another 305 people also were sickened in Guangdong since the first cases were reported in November, Chinese health authorities say. The Chinese government didn't report the outbreak until February and its reluctance to release information fueled a panic in Guangdong and neighboring Hong Kong. People bought up supplies of antibiotics and vinegar for use as a disinfectant. Cases of SARS have also been confirmed in Europe.

2003 (Mar 25)

https://www.newspapers.com/image/443074643/?terms=%22john%20S.%20mackenzie%22&match=1

2007

Henipaviruses: emerging paramyxoviruses associated with fruit bats

HE Field, JS Mackenzie, P Daszak

Wildlife and emerging zoonotic diseases: the biology, circumstances and ...

2011 - 1st International One Health Congress

https://link.springer.com/article/10.1007/s10393-011-0676-z / 2011-mackenzie-jeggo2011-article-1st-international-onehealth-congress.pdf

Letter from Dr. MacKenzie and

2011-mackenzie-jeggo2011-article-1st-international-onehealth-congress.pdf

2020-world-health-org-iht-ec-covid-19-biographies-final-img-1-pg-01.jpg / 2020-world-health-org-iht-ec-covid-19-biographies-final-img-1-pg-02.jpg

EcoHealth 7, S1–S2, 2011
DOI: 10.1007/s10393-011-0676-z

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Editorial

1st International One Health Congress

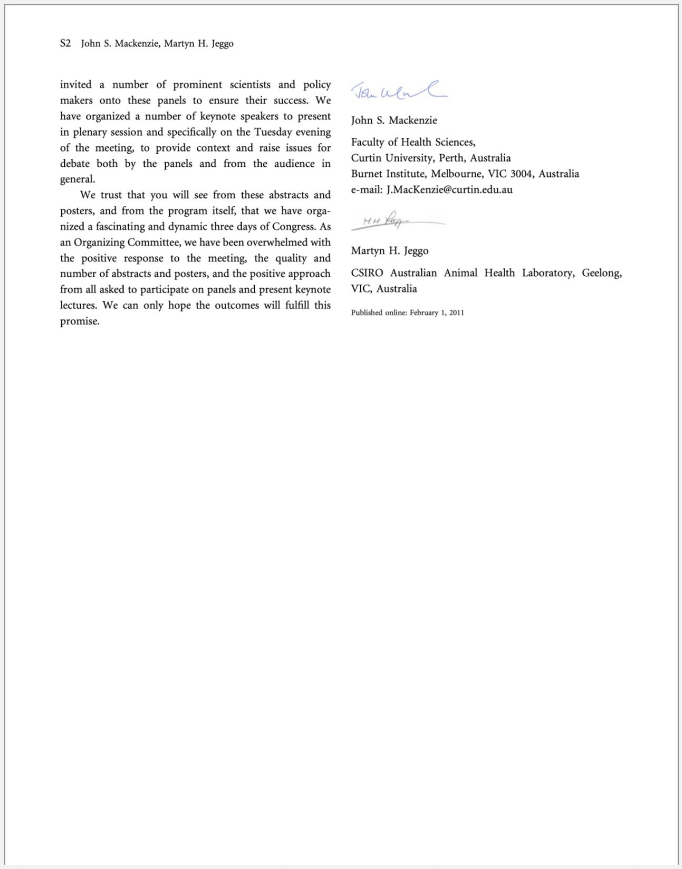
This supplemental edition of *EcoHealth* contains abstracts of the presentations and posters that will be given at the 1st International Congress on One Health being held in Melbourne, 14–16 February 2011.

The concept of One Health is not new but has been discussed for a number of years, and various meetings have been held on the subject. To date, however, all these have either been by invitation, had a very directed agenda, or have focused on specific elements of the One Health Concept. This 1st International Congress is open to all; wishes to address both the science and the policy issues; and includes not just infectious diseases as a discipline, but also the much broader issues of trade, food security and safety, and the impacts on the environment.

The One Health approach and the need to strengthen the cross-sectoral cooperation between the human and animal health community has been strongly endorsed by a number of national and international human and animal health organizations and at a series of international meetings over the past three to five years. In 2008, the three major international organizations charged with animal health and human health—FAO, OIE and WHO—collaborated with UNICEF, the UN System for Influenza Coordinator, and the World Bank to develop a joint strategic framework in response to the evolving risk of emerging and re-emerging infectious diseases. The document communicating this framework, 'Contributing to One World, One Health—A Strategic Framework for Reducing Risks of Infectious Diseases at the Animal-Human-Ecosystems Interface,' was officially released at the 6th International Ministerial Conference on Avian and Pandemic Influenza at Sharm-el-Sheikh in October 2008. A number of meetings have been held subsequently, the most recent international developments being (a) the Chatham House meeting report 'Shifting from Emergency Response to Prevention of Pandemic Disease Threats at Source'; (b) the document 'The FAO-OIE-WHO Collaboration: Sharing responsibilities and coordinating global activities to address health risks at the animal-human-ecosystems interfaces', which was endorsed by the Directors-General of the three organizations, and (c) the Hanoi Declaration at the International Ministerial Conference: "Animal and Pandemic Influenza: the Way Forward" in Hanoi, all of which occurred in April 2010. Two important international technical meetings have also been held, one hosted by the Canadian Government in Winnipeg in 2009, and the second in May 2010 by the US Centers for Disease Prevention and Control, both with the support of WHO, OIE and FAO, but importantly, in our view, these two meetings were by invitation only.

The purpose of the Melbourne meeting is to open the One Health debate to the wider international scientific and policy making community, particularly to the Asia Pacific countries where many of the risks emanate; to provide a forum for discussing these risks with respect to global health, trade, and food security; and to explore possible ways to better prepare and plan in order to prevent or mitigate future pandemic threats.

We are determined to achieve real outcomes from this meeting in terms of mapping forward One Health activities on a global basis and having Australia start to play a major role in achieving this. To this aim, we have organized a series of panel sessions during the meeting to debate the issues at hand and the way forward. We have



invited a number of prominent scientists and policy makers onto these panels to ensure their success. We have organized a number of keynote speakers to present in plenary session and specifically on the Tuesday evening of the meeting, to provide context and raise issues for debate both by the panels and from the audience in general.

We trust that you will see from these abstracts and posters, and from the program itself, that we have organized a fascinating and dynamic three days of Congress. As an Organizing Committee, we have been overwhelmed with the positive response to the meeting, the quality and number of abstracts and posters, and the positive approach from all asked to participate on panels and present keynote lectures. We can only hope the outcomes will fulfill this promise.

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Martyn H. Jeggo

CSIRO Australian Animal Health Laboratory, Geelong, VIC, Australia

Published online: February 1, 2011

2013 - "One Health: the human-animal-environment interfaces in emerging infectious diseases"

JS Mackenzie, M Jeggo, P Daszak, JA Richt

2013-current-topics-in-microbiology-and-immunology-vol-366-one health-the-human–animal–environment-interfaces.pdf

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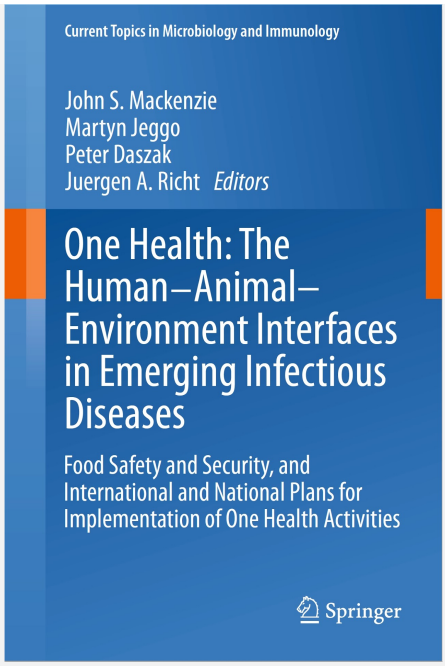
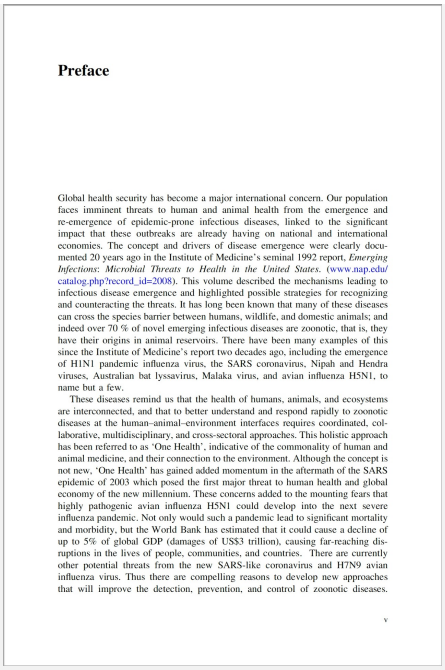


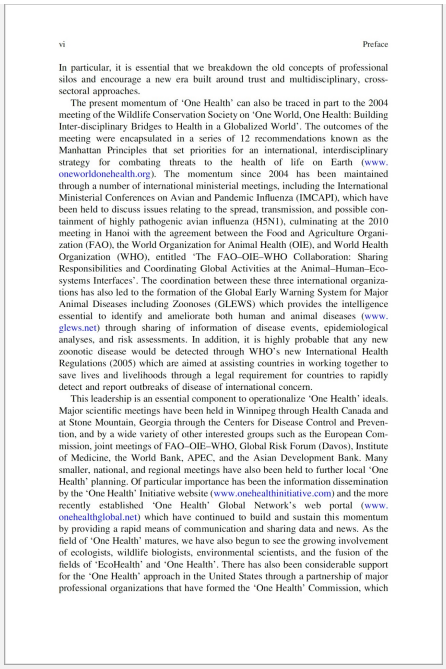


Preface

Global health security has become a major international concern. Our population faces imminent threats to human and animal health from the emergence and re-emergence of epidemic-prone infectious diseases, linked to the significant impact that these outbreaks are already having on national and international economies. The concept and drivers of disease emergence were clearly documented 20 years ago in the Institute of Medicine's seminal 1992 report, *Emerging Infections: Microbial Threats to Health in the United States*. (www.nap.edu/catalog.php?record_id=2008). This volume described the mechanisms leading to infectious disease emergence and highlighted possible strategies for recognizing and counteracting the threats. It has long been known that many of these diseases can cross the species barrier between humans, wildlife, and domestic animals; and indeed over 70 % of novel emerging infectious diseases are zoonotic, that is, they have their origins in animal reservoirs. There have been many examples of this since the Institute of Medicine's report two decades ago, including the emergence of H1N1 pandemic influenza virus, the SARS coronavirus, Nipah and Hendra viruses, Australian bat lyssavirus, Malaka virus, and avian influenza H5N1, to name but a few.

These diseases remind us that the health of humans, animals, and ecosystems are interconnected, and that to better understand and respond rapidly to zoonotic diseases at the human–animal–environment interfaces requires coordinated, collaborative, multidisciplinary, and cross-sectoral approaches. This holistic approach has been referred to as 'One Health', indicative of the commonality of human and animal medicine, and their connection to the environment. Although the concept is not new, 'One Health' has gained added momentum in the aftermath of the SARS epidemic of 2003 which posed the first major threat to human health and global economy of the new millennium. These concerns added to the mounting fears that highly pathogenic avian influenza H5N1 could develop into the next severe influenza pandemic. Not only would such a pandemic lead to significant mortality and morbidity, but the World Bank has estimated that it could cause a decline of up to 5% of global GDP (damages of US$3 trillion), causing far-reaching disruptions in the lives of people, communities, and countries. There are currently other potential threats from the new SARS-like coronavirus and H7N9 avian influenza virus. Thus there are compelling reasons to develop new approaches that will improve the detection, prevention, and control of zoonotic diseases.

v



vi Preface

In particular, it is essential that we breakdown the old concepts of professional silos and encourage a new era built around trust and multidisciplinary, cross-sectoral approaches.

The present momentum of 'One Health' can also be traced in part to the 2004 meeting of the Wildlife Conservation Society on 'One World, One Health: Building Inter-disciplinary Bridges to Health in a Globalized World'. The outcomes of the meeting were encapsulated in a series of 12 recommendations known as the Manhattan Principles that set priorities for an international, interdisciplinary strategy for combating threats to the health of life on Earth (www.oneworldonehealth.org). The momentum since 2004 has been maintained through a number of international ministerial meetings, including the International Ministerial Conferences on Avian and Pandemic Influenza (IMCAPI), which have been held to discuss issues relating to the spread, transmission, and possible containment of highly pathogenic avian influenza (H5N1), culminating at the 2010 meeting in Hanoi with the agreement between the Food and Agriculture Organization (FAO), the World Organization for Animal Health (OIE), and World Health Organization (WHO), entitled 'The FAO–OIE–WHO Collaboration: Sharing Responsibilities and Coordinating Global Activities at the Animal–Human–Ecosystems Interfaces'. The coordination between these three international organizations has also led to the formation of the Global Early Warning System for Major Animal Diseases including Zoonoses (GLEWS) which provides the intelligence essential to identify and ameliorate both human and animal diseases (www.glews.net) through sharing of information of disease events, epidemiological analyses, and risk assessments. In addition, it is highly probable that any new zoonotic disease would be detected through WHO's new International Health Regulations (2005) which are aimed at assisting countries in working together to save lives and livelihoods through a legal requirement for countries to rapidly detect and report outbreaks of disease of international concern.

This leadership is an essential component to operationalize 'One Health' ideals. Major scientific meetings have been held in Winnipeg through Health Canada and at Stone Mountain, Georgia through the Centers for Disease Control and Prevention, and by a wide variety of other interested groups such as the European Commission, joint meetings of FAO–OIE–WHO, Global Risk Forum (Davos), Institute of Medicine, the World Bank, APEC, and the Asian Development Bank. Many smaller, national, and regional meetings have also been held to further local 'One Health' planning. Of particular importance has been the information dissemination by the 'One Health' Initiative website (www.onehealthinitiative.com) and the more recently established 'One Health' Global Network's web portal (www.onehealthglobal.net) which have continued to build and sustain this momentum by providing a rapid means of communication and sharing data and news. As the field of 'One Health' matures, we have also begun to see the growing involvement of ecologists, wildlife biologists, environmental scientists, and the fusion of the fields of 'EcoHealth' and 'One Health'. There has also been considerable support for the 'One Health' approach in the United States through a partnership of major professional organizations that have formed the 'One Health' Commission, which

2014 (September) - Microbiology Australia - "In Focus : Influenza"

2014-09-microbiology-australia-article-infocus-influenza.pdf

2014-09-microbiology-australia-article-infocus-influenza-pg-133 / -134

Influenza

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Influenza virus infection has probably shaped human populations for centuries, if not millennia. Novel influenza viruses formed by genetic reassortment of avian and mammalian viruses emerge sporadically and, if they have the necessary infectivity and transmissibility in humans, spread rapidly around the globe causing a pandemic. While mortality and morbidity varied widely between the pandemics of the last century, the loss of an estimated 50 million lives in the most devastating pandemic of 1918–1919 has had a lasting global impact. Here we briefly review the history and effects of influenza pandemics on the global human population and events of the time. Then we discuss some of the ways in which the experience of the 1918–1919 and later pandemics has influenced development of international influenza surveillance and global public health policy, the full impact of which will become apparent in future pandemics.

Early history of influenza

Influenza viruses evolved in aquatic birds. They remain there in a number of antigenically diverse forms as an enzootic reservoir[1] from which they occasionally cross into and become established in other species, including humans. Swine and horses are known to have been infected with avian influenza viruses and suggested as intermediate hosts for introduction to humans[1,2]. Their domestication together with that of ducks, thousands of years ago, could have provided opportunities for repeated introductions into humans.

Outbreaks of human influenza have been chronicled from the late Middle Ages in Europe and Britain, and although outbreaks as early as the 5th century in Greece have been described by some historians, most believe that descriptions predating 1520, and possibly later, should be treated with caution[3,4]. Many of these outbreaks were accompanied by high morbidity and sometimes mortality. However, it is unclear whether any of those recorded in the pre-Elizabethan period shaped world history although influenza reputedly contributed to the demise of Oliver Cromwell[2]. A possible exception to this was the suggestion that influenza was introduced to the Americas by Columbus's second voyage in 1492, and was the first of the Old World diseases to depopulate indigenous peoples in Hispaniola and beyond with many hundred thousand deaths[5]. Although this has been questioned, it seems probable that influenza contributed to the depopulation of the New World and other remote, immunologically naive communities including French Polynesia[6]. Similarly, the first recorded influenza outbreak in Australia in 1820 severely affected the indigenous population[7].

A disproportionate impact on indigenous populations in Australia[8], New Zealand[9] and elsewhere[10] persists to this day.

Pandemic influenza: the 1918–1919 pandemic

We now know that recent, and presumably previous, influenza pandemics involved viruses bearing surface antigens, haemagglutinin (H) and neuraminidase (N), to which most or all of the population lacked immunity. These surface antigen genes originate from the avian influenza gene pool, by adaptation or genetic reassortment with circulating human or animal influenzas, thus acquiring the ability to infect and be serially transmitted in humans. Spread is global and rapid, with high morbidity and often high mortality. The new pandemic virus then persists for decades as a seasonal infection by virtue of exceptional mutability.

Although numerous epidemics with significant morbidity and mortality occurred from the 16th century it is generally agreed that the first recorded outbreak meeting pandemic criteria is that of 1580 followed by those commencing in 1729, 1781, 1830 and 1889[3,4]. The pandemic of 1918–1919 was the most deadly influenza pandemic recorded with a recent estimate of 50 million or more deaths[11]. The pandemic was inextricably intertwined with World War I. It influenced the capacity to conduct hostilities[12] while its evolution may have been influenced by crowded conditions and soldiers' exposure to toxic gases[13]. Remarkably the genetic blueprint of the H1N1 pandemic virus has been determined and the virus reconstructed[14]. Nevertheless, unanswered questions remain: how and where the virus evolved and reasons for the unusual age distribution of deaths and usually three distinct waves of differing pathogenicity.

Mortality varied across countries with sparing attributed to affluence[15] and delayed introduction achieved by maritime quarantine[16]. Australia, where introduction was delayed until March 1919, had one of the lowest mortality rates, particularly in Tasmania[16]. Undoubtedly the pandemic had enormous social and economic impact in most societies but most attention was given to elucidating its cause, mode of transmission and toll, rather than to its social and cultural dimensions or consequences. It may never be possible to disentangle these from the consequences of the war. In Australia, where it stressed relations between the states, it was a catalyst for formation of the Commonwealth Department of Health[17]. There is, however, the intriguing possibility of one huge historical consequence. US president Woodrow Wilson suffered severe influenza absenting him from much of the WW1 armistice negotiations. This resulted in Britain and France imposing severe punitive conditions on Germany in the Treaty of Versailles which may have facilitated the rise to power of Adolf Hitler[18].

The virologic era

Influenza viruses were first isolated in the early 1930s, and shortly afterwards the first inactivated virus vaccines were produced and used by the allied forces in the Second World War. In 1947, a major antigenic change in the circulating Type A viruses resulted in vaccine failures. This kindled fears of another influenza pandemic like 1918–1919 and was a driver for an informal meeting of influenza experts during the 4th International Congress of Microbiology in Copenhagen in July 1947. They recommended to the Interim Commission of the World Health Organization (WHO) that an international surveillance program for influenza be initiated. Following adoption by WHO in September 1947, a World Influenza Centre was established at the National Institute for Medical Research, London, to work with regional laboratories and, later, national centres to study epidemiology and isolate new influenza strains[19]. In Australia, the Commonwealth Serum Laboratories were designated as a Regional Influenza Centre in 1951, upgraded to Collaborating Centre in 1992, until 2006 when the responsibility for the Centre was transferred to the Victorian Infectious Diseases Reference Laboratory. Today, there are 141 national centres in 101 countries and six WHO Collaborating Centres for Influenza in London, Atlanta, Melbourne, Beijing, Tokyo and Memphis, the latter concerned with the Ecology of Influenza in Animals. The efficacy of the network in surveillance was demonstrated during the 1957 and 1968 pandemics and the re-emergence of H1N1 in 1977[20].

The pandemics of 1957 (Asian) and 1968-69 (Hong Kong) were far milder than that of 1918–1919. The first was moderately severe globally and spread quickly, reaching Australia within 3 months of its origin in China[21], while the second was a 'smouldering' pandemic and had a delayed peak in many countries including Australia in 1970[22]. In addition to demonstrating the difficulty in producing vaccine in the necessary timeframe[23], these pandemics provided the viruses which allowed elucidation of the origins of pandemic viruses.

The Fort Dix episode

In 1976 a small influenza outbreak occurred among military recruits at Fort Dix, New Jersey, with severe respiratory disease in 13 soldiers and one death. The outbreak involved a combination of H3N2 virus and a virus related to early swine-like H1N1 strains derived from the 1918–1919 pandemic[24]. Concerned that it might signal a re-introduction of a 1918 pandemic-like virus, and in a divisive decision, the US Government planned to immunise the whole country; scientific and medical evidence did not support the decision. The program was stopped after an epidemiologic association between vaccination and increased incidence of Guillain-Barré Syndrome was

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Avian influenza and recent pandemic concerns

The 1950s discovery that fowl plague was due to an influenza A virus, followed by the isolation of many additional avian influenza viruses, revealed the role of birds as a virus reservoir and the multiplicity of virus subtypes. H7 (responsible for fowl plague) and H5 can be highly pathogenic in domestic poultry, with exceptionally high mortality, and outbreaks of both subtypes have been recorded around the world, including Australia, since the 1950s26. Before 1997, recorded transmission of avian influenza to humans was rare, restricted to H7 viruses and almost always mild27.

In 1997, 18 H5N1 cases in humans with 6 deaths signalled poultry infections in Hong Kong. Culling appeared to stamp out the virus; however it reappeared in Thailand and Vietnam in 2003, and has since spread widely in birds and caused over 660 human cases with morethan 390 deaths across 16 countries28. Global concern over the pandemic potential of H5N1, so soon after SARS, reinvigorated pandemic planning nationally and internationally. An International Partnership on Avian and Pandemic Influenza was forged at a highlevel Plenary Meeting of the United Nations (UN) General Assembly in 2005, and the UN Secretary-General, Kofi Annan, subsequently pledged that theUNwould do all it could to ensure all countries, rich and poor, were protected and prepared for an avian influenza pandemic. A UN Systems Coordinator for Avian and Human Influenza (UNSIC) was appointed and International Ministerial Conferences on Avian and Pandemic Influenza (IMCAPI) were convened. These provided the impetus for a global response to emerging diseases and a One Health approach to manage zoonotic diseases29. In Australia, the National Action Plan forHumanInfluenza Pandemic and the Australian Health Management Plan for Pandemic Influenza have continued to be refined30,31.

Strain sharing: a new challenge for international collaboration

The H5N1 zoonotic also prompted the Government of Indonesia in 2006 to raise an issue of international equity. Developing countries share potential pandemic influenza viruses, such as A(H5N1), with WHO to support the development of vaccines and other interventions but cannot afford to purchase those products for the protection of their own people. Indonesia stopped sending H5N1 viruses to international WHO laboratories in protest. Several other countries lent their support to the campaign.

In response, WHO convened a series of technical, intergovernmental and working group meetings between 2007 and 2011. Discussions were technically, legally and politically complex, spanning influenza virology, commercial vaccine development and production, intellectual property, and sovereign rights of nations over their biological materials32. Ultimately, the meetings produced a new framework, the Pandemic Influenza Preparedness Framework for sharing of influenza viruses and access to vaccines and other benefits, adopted by the World Health Assembly in 201133,34, a crucial feature of which is the sharing of vaccines, antiviral drugs and other benefits through donations and financial contributions to WHO by manufacturers.

Implementation of the Framework faces challenges, including the use of genetic approaches to vaccine development that bypass the need to share the viruses themselves. Regardless, the Framework has embedded the principle of equity in the activities of theWHO's Global Influenza Surveillance and Response System. The true test will come with the next pandemic.

First pandemic of the 21st century

In March 2009 a respiratory outbreak in Mexico was caused by a reassortant swine H1N1 virus more closely related to pre-1950s viruses than to recent strains. With initial indications of high mortality in Mexico and rapid spread through North America and beyond, the WHO issued escalating alerts until 11 June when a pandemic was declared. Many countries, including Australia, had already activated their pandemic plans and placed orders for many millions of doses of vaccine. In retrospect mortality was well below the early indications from Mexico and, while virus spread and major target groups were generally similar to previous pandemics, overall impact was moderate. Vaccine availability again lagged behind the peak of the outbreak, invigorating efforts to develop "universal" influenza vaccines that will protect against diverse subtypes, as well as novel delivery systems and faster production processes35. There were allegations that the WHO and national responses had been unduly influenced by commercial interests and it became clear that planning documents lacked the flexibility to tailor responses according to ongoing assessment of severity36. While these issues have been largely addressed, pandemic preparedness and public support may have been damaged37.

The next pandemic

Today, H5N1 remains widespread in poultry and human infections continue. This large family of viruses has diversified genetically and antigenically, to the extent that a single vaccine would not protect against all circulating strains. In some H5N1 strains, only a few further mutations may enable respiratory droplet transmission between mammals38.

In 2013, a new threat emerged with human infections (>440) and deaths (>120) due to a novel H7N9 avian influenza in China39. Although this virus, unlike H5N1, causes a silent infection in poultry, human infections are strongly associated with exposure to live bird markets. These viruses have several features of adaptation to mammalian infection.

Although these and other novel influenza viruses pose a continuing pandemic risk, China's response to H7N9 exemplifies the benefits of the international networks and frameworks developed as a result of the 1918–1919 pandemic and later events outlined here. Early announcement of the outbreak, sharing of sequences and viruses, and openness about the epidemiology enabled rapid preparation of diagnostic reagents and candidate vaccine viruses by WHO laboratories and early interventions to limit spread. While sporadic influenza pandemics are an inevitable companion tohumanhistory, such international cooperation is the key to minimising their future impact on its course.

Acknowledgements

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2016 - World Health Org. profile, "Professor John Mackenzie"

https://www.who.int/docs/default-source/documents/ihr/ihr-committee-members-polio.pdf?sfvrsn=b174ea_2

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Professor John Mackenzie

Adjunct Professor of Tropical at Curtin University, Western Australia, Perth, Australia, and part-time Senior Medical Scientist-in-Charge at PathWest, Perth

Professor John Mackenzie is an Honorary Professor at the University of Queensland and Honorary Senior Principal Fellow at the Burnet Institute, Melbourne. He was formerly Professor of Microbiology and Adjunct Professor of Tropical Infectious Diseases at the University of Queensland.
He received his PhD in 1969 from the Australian National University where he worked with Professor Frank Fenner and Dr Robert Webster. He was then a faculty member at the University of Western Australia for 22 years, working principally on influenza and mosquito-borne viral diseases.
He was elected Secretary-General of the International Union of Microbiological Societies (IUMS) from 1999 to 2005, Fellow of the American Academy of Microbiology, and is a Past President of the Australian Society for Microbiology and the Asia-Pacific Society for Medical Virology. In 2002, he was appointed as Officer in the Order of Australia for services to public health research and to education, and in 2005, he was the inaugural recipient of the Academy of Science Malaysia's Mahathir Science Award for Excellence in Tropical Research. He was elected to Fellowship of the Australian Academy of Technological Sciences and Engineering in 2015.
He serves on a number of international committees with the World Health Organization (WHO) and other Non-Government Organizations. He is a member of the IHR Roster of Experts, and is currently a member of the Emergency Committee for Polio. He served as Chair of the IHR Emergency Committee for Influenza H1N1.He had previously served as a member of the steering committee of the Global Outbreak Alert and Response Network (GOARN) and a member of the Technical Advisory Group of the WHO Asia-Pacific Strategy for Emerging Diseases.
His recent major research interests have been in mosquito-borne virus diseases (particularly the ecology of Flaviviruses) and in emerging zoonotic viruses, and he has published over 300 major papers and research chapters on these and other research topics concerned with human and animal viral diseases. He has also been closely involved with the One Health concept and helped establish the One Health Platform foundation.
Professor MacKenzie is a member of the IHR Emergency Committee concerning ongoing events and context involving transmission and international spread of poliovirus. He is also member of the IHR Emergency Committee concerning Influenza Pandemic (H1N1) 2009.

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2019 Whitepaper Collection - "One Health and Zoonoses" by John S. Mackenzie and Martyn Jeggo

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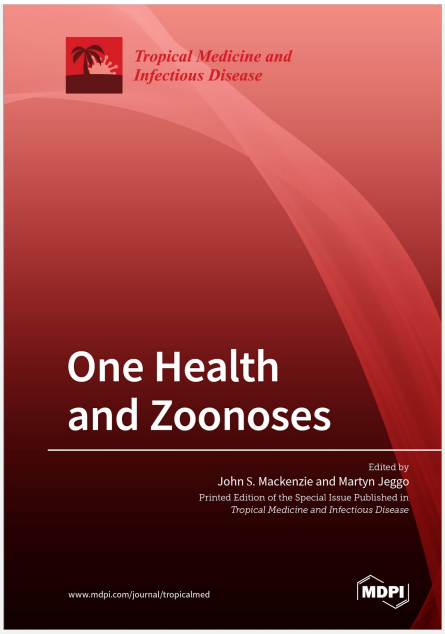

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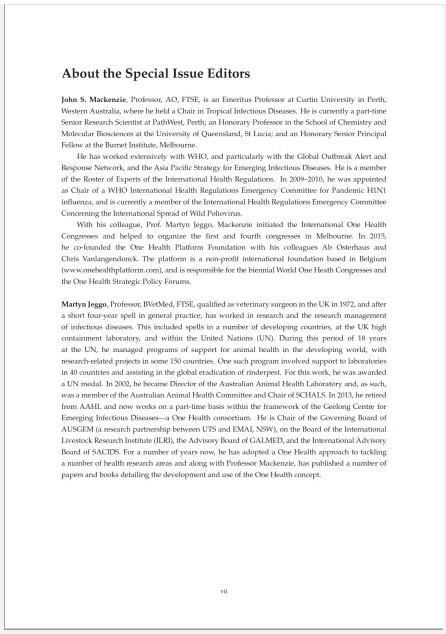

About the Special Issue Editors

John S. Mackenzie, Professor, AO, FTSE, is an Emeritus Professor at Curtin University in Perth, Western Australia, where he held a Chair in Tropical Infectious Diseases. He is currently a part-time Senior Research Scientist at PathWest, Perth; an Honorary Professor in the School of Chemistry and Molecular Biosciences at the University of Queensland, St Lucia; and an Honorary Senior Principal Fellow at the Burnet Institute, Melbourne.

He has worked extensively with WHO, and particularly with the Global Outbreak Alert and Response Network, and the Asia Pacific Strategy for Emerging Infectious Diseases. He is a member of the Roster of Experts of the International Health Regulations. In 2009–2010, he was appointed as Chair of a WHO International Health Regulations Emergency Committee for Pandemic H1N1 influenza, and is currently a member of the International Health Regulations Emergency Committee Concerning the International Spread of Wild Poliovirus.

With his colleague, Prof. Martyn Jeggo, Mackenzie initiated the International One Health Congresses and helped to organize the first and fourth congresses in Melbourne. In 2015, he co-founded the One Health Platform Foundation with his colleagues Ab Osterhaus and Chris Vanlangendonck. The platform is a non-profit international foundation based in Belgium (www.onehealthplatform.com), and is responsible for the biennial World One Heath Congresses and the One Health Strategic Policy Forums.

Martyn Jeggo, Professor, BVetMed, FTSE, qualified as veterinary surgeon in the UK in 1972, and after a short four-year spell in general practice, has worked in research and the research management of infectious diseases. This included spells in a number of developing countries, at the UK high containment laboratory, and within the United Nations (UN). During this period of 18 years at the UN, he managed programs of support for animal health in the developing world, with research-related projects in some 150 countries. One such program involved support to laboratories in 40 countries and assisting in the global eradication of rinderpest. For this work, he was awarded a UN medal. In 2002, he became Director of the Australian Animal Health Laboratory and, as such, was a member of the Australian Animal Health Committee and Chair of SCHALS. In 2013, he retired from AAHL and now works on a part-time basis within the framework of the Geelong Centre for Emerging Infectious Diseases—a One Health consortium. He is Chair of the Governing Board of AUSGEM (a research partnership between UTS and EMAI, NSW), on the Board of the International Livestock Research Institute (ILRI), the Advisory Board of GALMED, and the International Advisory Board of SACIDS. For a number of years now, he has adopted a One Health approach to tackling a number of health research areas and along with Professor Mackenzie, has published a number of papers and books detailing the development and use of the One Health concept.

2019 (Dec) - Nipah Conference in Singapore

Conference proceedings : [HI0025][GDrive]

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2019 (Dec) - TWiV 618 (in Singapore): Nipah virus at 20

May 26, 2020 / Vincent Racaniello

Live Youtube link: https://www.youtube.com/watch?v=C_BXze0VPrk / Saved copy : [HV00GW][GDrive]

From the Nipah Virus International Conference in Singapore, Vincent speaks with meeting participants about the history of the first Nipah virus outbreak, lessons learned from Hendra virus, surveillance of bats for viruses, and the development of a vaccine.

March 1 2020 - "Australia Microbiology" - Guest Eidotorial "Zoonoses"

https://www.publish.csiro.au/MA/pdf/MAv41n1

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Guest **Editorial**

Zoonoses

John S Mackenzie and David Williams

The selection of papers included in this issue of *Microbiology Australia* present a broad brush of zoonotic diseases, from those known or described in ancient times such as rabies, first described in the Eshnunna cuneiform law tablets from ancient Mesopotamia dating back to the 18th–19th centuries BC[1], and glanders, thought to be first described in donkeys by Aristotle in Ancient Greece in 420–450 BC[2] and subsequently by the Romans[3], to some discovered or recognised as zoonotic within the past 30 years, such as the recently described zoonotic bat-borne pathogens in Australia, and *Clostridium difficile*, only recently recognised as a zoonotic pathogen. The selection of papers also demonstrates the wide range of zoonotic origins, including arthropod-borne viruses and potentially seafood-borne parasites.

More than 60% of human infectious diseases are caused by pathogens shared with wild or domestic animals[4], and over 75% of emerging diseases are zoonotic in origin. Over the past few decades, an increasing number of infectious diseases have jumped the species barrier from animals to humans to cause disease, and in many instances have subsequently spread regionally and/or globally. Most of these have been viruses jumping from wildlife to humans, as exemplified by HIV/AIDS in the 1980s originating from the great apes possibly as early as the 1920s[5]; Sin Nombre virus, recognised as a cause of hantavirus pulmonary syndrome in 1993, originating from the deer mouse (*Peromyscus maniculatus*)[6]; Nipah virus in 1998–99 originating from bats via pigs[7]; severe acute respiratory syndrome coronavirus (SARS-CoV) in 2002–03 originating from bats via civets[8,9]; Middle East respiratory syndrome coronavirus (MERS-CoV) in 2012 from dromedary camels, but probably originating from bats more than 30 years previously[10]; and currently, the novel coronavirus, SARS-CoV-2, almost certainly originating from bats and probably via an as yet unknown intermediary host, such as pangolins. Other important emerging diseases have jumped from domesticated species, such as pandemic influenza H1N1 originating from pigs in 2009.

What precipitates the cross-species jump, and what can be done to prevent or mitigate it? Much of the recent increase in the emergence and spread of zoonoses can be linked to environmental and societal changes that have brought people and wild and/or domesticated animals closer together, increasing the potential for cross-species transmission. Environmental factors and climate change are altering the habitats of animals or arthropod vectors of zoonoses, changing how and where they live. Anthropogenic factors have changed the interactions between humans and their domestic animals through intensive agriculture and altered land use; and with the need to seek meat for human consumption, there has been increased hunting of wild animals for bushmeat. As cities have expanded and new population centres emerged, there has been increasing encroachment into wildlife habitats. In addition, increased city living and expanding metropolitan areas are providing new homes for a variety of wildlife, from rats and mice to foxes, birds, fruit bats, wallabies, bandicoots, possums, and other small marsupials in Australia, which can live off the plentiful food supply we discard or which are available in parks and gardens, and in additional green areas[4,11]. In other countries, many local wildlife species are commonly making their homes in cities, including monkeys, squirrels, mongooses and raccoons. Underscoring this is that 'synanthropic' mammal species, those wildlife species that adapt well in human-modified environments, are 15 times more likely to be the source of emerging infectious diseases[12]. As pathogens evolve and emerge, transmission of zoonotic infections and outbreaks have occurred because of the everyday practices of people. This often involves the chain of activities in livestock production, such as intensive growing, breeding, transport, slaughter and sale of animals. In many countries, live ('wet') animal markets where several species of domestic or wild animals may be caged in close proximity have been the origins of zoonoses. The interactions of people with wildlife areas for recreational purposes such as hunting, hiking and camping, also lead to zoonotic transmission of pathogens.

Lessons should have been learnt from some of the emergent zoonoses over the past few decades, but despite major outbreaks

Guest **Editorial**

of disease, the memories and messages seem to fail to resonate. The outbreak of SARS in 2002–03 was clearly associated with transmission from live wild animals in the wet markets of Guangdong. Despite strong recommendations that these markets be stopped because of the risks they pose of potential human transmission, they continue to flourish selling poultry and wild and often exotic animals, often illegally (a temporary ban on the trade in wild animals was introduced from 26 January 2020 by the Chinese Government). The same problem exists in the trade and export of bushmeat in Africa. While it is unlikely that the bushmeat trade will be halted in Africa as it provides a much-needed source of dietary protein, export of bushmeat to Europe, US and elsewhere provides an ongoing risk of disease including Ebola, Marburg and other exotic diseases[13–15]. The amount of bushmeat exported is in surprisingly large amounts, measured in tonnes/airport/year rather than kilograms.

Another recommendation that has not been sufficiently heeded is the need to incorporate surveillance of wildlife disease outbreaks into national and global disease surveillance programs. In Australia, a surveillance system has been implemented to detect outbreaks in free-living wildlife, and the information fed into coordination mechanisms that exist between animal health and public health[16], and similar systems are in place in the United States and the UK. Wildlife disease surveillance is not well resourced or well reported in many countries, and a concerted and cooperative push is urgently needed to develop improved wild animal disease surveillance mechanisms, especially in resource-poor countries.

Understanding the drivers of human behaviours that lead to the emergence or re-emergence of zoonoses, not just the behaviours themselves, will be equally important to enable comprehensive disease control and mitigation strategies to be put in place. Fundamental to this will be the commitment and support of relevant government departments and industry groups within an affected country to resource zoonotic disease control and prevention through the combined efforts of the human health, livestock and wildlife sectors. Continued efforts to identify potential zoonoses through initiatives such as the USAID Expanded Pandemic Threats program will also be another key element to zoonotic disease preparedness. Closer to home, in Australia, zoonotic disease risks are well recognised, and it will be important for those involved in zoonotic disease diagnosis, research, surveillance and response to remain vigilant and vocal about the ongoing threat they pose. Continued and expanded support for the disease control capabilities of our neighbours in the Pacific and Southeast Asia will also pay dividends for pre-border disease mitigation with the dual benefit of addressing zoonotic disease threats in-country and potentially reducing the importation or spread of pathogens into Australia via people or animals/animal products.

It has been estimated that zoonoses cause about a billion cases of illness in people and millions of deaths every year, and emerging zoonoses are a rising threat to global health, having caused hundreds of billions of US dollars of economic damage over the past 30 years[4]. With the current emergence of the novel coronavirus in China now threatening to develop into a global pandemic, this should surely raise enough concern for a concerted effort to reduce potential opportunities for future zoonosis emergence, using One Health approaches.

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2020- World Health Org. profile, "Professor John Mackenzie"

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2020-world-health-org-iht-ec-covid-19-biographies-final.pdf

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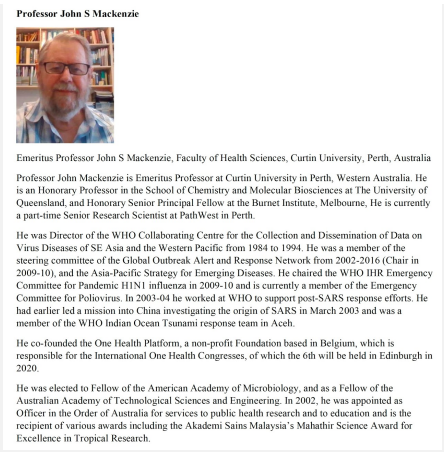

Professor John S Mackenzie

Emeritus Professor John S Mackenzie, Faculty of Health Sciences, Curtin University, Perth, Australia

Professor John Mackenzie is Emeritus Professor at Curtin University in Perth, Western Australia. He is an Honorary Professor in the School of Chemistry and Molecular Biosciences at The University of Queensland, and Honorary Senior Principal Fellow at the Burnet Institute, Melbourne, He is currently a part-time Senior Research Scientist at PathWest in Perth.

He was Director of the WHO Collaborating Centre for the Collection and Dissemination of Data on Virus Diseases of SE Asia and the Western Pacific from 1984 to 1994. He was a member of the steering committee of the Global Outbreak Alert and Response Network from 2002-2016 (Chair in 2009-10), and the Asia-Pacific Strategy for Emerging Diseases. He chaired the WHO IHR Emergency Committee for Pandemic H1N1 influenza in 2009-10 and is currently a member of the Emergency Committee for Poliovirus. In 2003-04 he worked at WHO to support post-SARS response efforts. He had earlier led a mission into China investigating the origin of SARS in March 2003 and was a member of the WHO Indian Ocean Tsunami response team in Aceh.

He co-founded the One Health Platform, a non-profit Foundation based in Belgium, which is responsible for the International One Health Congresses, of which the 6th will be held in Edinburgh in 2020.

He was elected to Fellow of the American Academy of Microbiology, and as a Fellow of the Australian Academy of Technological Sciences and Engineering. In 2002, he was appointed as Officer in the Order of Australia for services to public health research and to education and is the recipient of various awards including the Akademi Sains Malaysia's Mahathir Science Award for Excellence in Tropical Research.

Emeritus Professor John S Mackenzie, Faculty of Health Sciences, Curtin University, Perth, Australia
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Curtin College Professor bio for Emeritus Professor "John Mackenzie"

https://staffportal.curtin.edu.au/staff/profile/view/john-mackenzie-da9e4182/

2020-curtin-university-au-profile-ofor-john-mackenzie.pdf

- **Position** Emeritus Professor
- **Section** Health Sciences Research and Graduate Studies
- **Faculty** Faculty of Health Sciences
- **Portfolio** Office of the Provost
- [...]
- **ORCID** https://orcid.org/https://orcid.org/0000-0002-5918-2190
- **Google Scholar** https://scholar.google.com.au/citations?user=https://scholar.google.com.au/citations?user=f6WQYmIAAAAJ&hl=en

Post nominals

AO, PhD, FTSE, FASM, FACTM

Brief Summary

I was a Professor of Tropical Infectious Diseases at Curtin University prior to my retirement.. Most of my recent work has been concerned with global aspects of infectious disease surveillance and response, particularly concerned with emerging zoonotic diseases, through working with the World Health Organization on various committees and consultancies. I have also been closely involved with establishing a new foundation to support the concept of One Health, the One Health Platform. I am also involved in other One Health activities, including organising the One Health congresses and co Editor-in-Chief of a new journal from Elsevier, called One Health. I am also asisting some of the public health programs at PathWest, and was appointed an Associate Fellow at Chatham House, London.

Overview

I have retired but continue my association with Curtin University as an Emeritus Professor. Most of my recent work has been concerned with global surveillance and response to outbreaks of emerging diseases, usually zoonoses, with a strong commitment and involvement in programmes within the World Health Organization (WHO), particularly through the Global Outbreak Alert and Response Network and the Asia Pacific Strategy for Emerging Diseases. I'm also very involved in all aspects concerned with the concept of 'One Health' – a recognition that the health of humans, animals and ecosystems are interconnected. In addition to these activities, I am closely involved in federal and state health activities concerned with emerging diseases, arboviral disease surveillance and biosecurity.

My research falls in three sections. The first between 1965 and 1983 was concerned largely with influenza, with emphasis on virus genetics, live virus vaccines, and the ecology of avian influenza in wild birds in Western Australia. During this phase, studies were also undertaken with foot-and-mouth disease virus, avian paramyxoviruses and murine cytomegalovirus. The second phase from 1983 to the present has been concerned with mosquito-borne viruses, including Ross River, Barmah Forest, Murray Valley encephalitis, West Nile and Japanese encephalitis viruses. The emphasis has been broad and has included surveillance, virus ecology, molecular biology and phylogenetics, diagnostic developments, and host resistance. The third phase has been in two parts – one concerned with emerging zoonotics bat-borne diseases including Hendra virus and Australian Bat lyssavirus, and the other concerned with global surveillance and response activities for infectious diseases.

Most recently my main interest has shifted to develop and support activities directed towards the One Health paradigm - the concept that recognises that the health of humans, animals, and their ecosystems are interconnected, and that to better understand and respond to newly emergent and/or zoonotic diseases, food safety and food security, ana antimicrobial resistance, requires coordinated, collaborative, multidisciplinary and cross-sectoral approaches. To this end, and in colaboration with a number of colleagues, we have initiated the Interational One Health Congresses, a new open access One Health journal in collaboration with Elsevier (https://www.journals.elsevier.com/one-health), and a new foundation, the One Health Platform (https://onehealthplatform.com/) to further international linkages and to support the aims and activities in the One Health space.

During my research career, my achievements are best exemplified by my publication record, with four books edited, a number of major textbook chapters, and over 330 peer-reviewed publications.

Memberships, Awards and Training

I am a member of various international committees including Foundation Member of the Asian-Pacific Society for Medical Virology; a member of the Advisory Board, Centre for Emerging Infectious Diseases, Chinese University of Hong Kong; an Associate of the Consortium of Conservation Medicine, New York; a member of the Scientific Advisory Committee, Centre for Emerging Infectious Diseases, Wuhan Institute of Virology, Chinese Academy of Sciences; a member of the Center for Infection and Immunity, Mailman School of Public Health, Columbia University; a member of the Advisory Board, EcoHealth Alliance, New York; a founding member and Vice-Chair of the One Health Platform a foundation to promote the One Health concept. I am also a member of various national and state committees including, National Arbovirus and Malaria Advisory Committee; the Australian National Certification Committee for the Eradication of Poliovirus; and most recently, the Biosecurity Council of Western Australia.

I have been a Consultant in Virus Diseases at the World Health Organization (WHO) since 1982 and a member of various committees within the WHO, including the Steering Committee of the Global Outbreak Alert and Response Network; a member of the Asia Pacific Technical Advisory Group on Emerging Infectious Diseases, Regional Offices of the Western Pacific, Manila, and of South-East Asia, New Delhi; a member of the International Health Regulations Roster of Experts; Chair of the International Health Regulations Emergency Committee on Influenza H1N1; and member and rapporteur, International Health Regulations Emergency Committee on Poliovirus. I was also Team Leader of the firstTechnical Mission to China to investigate the origin of SARS and a member of the WHO Tsunami relief team to Banda Aceh. I was also Convenor of the SARS International Research Advisory Committee and the SARS Laboratory Verification Network Committee at WHO in Geneva.

I have received a number of honours and awards during my career, including recipient of the D I Ivanovsky Medal, Russian Academy of Sciences; co-recipient of the The Medical Journal of Australia/Wyeth Research Award, for the best original research paper published in The Medical Journal of Australia during 1996; Distinguished Service Award, The Australian Society for Microbiology; Excellence in Virology Award, Asian-Pacific Society for Medical Virology; co-recipient of the James H Nakano Citation of the US National Center for Infectious Diseases of the Centers for Disease Control and Prevention, for an outstanding scientific paper published in 1999; appointed an Officer in the Order of Australia, Queen's Birthday Honours List, 2002, for service to microbiology research, particularly as a leading contributor in the understanding of the genetics, pathogenesis and public health implications of viruses, and to education; awarded the Premier's Research Fellowship, Science Council of Western Australia, Office of Premier and Cabinet; and Awarded the Mahathir Science Award of the Academy of Sciences Malaysia for Scientific Excellence in recognition of contributions and innovations towards solving problems in the tropics through science and technology.

My elected honours include election to President of the Australian Society for Microbiology (1992-94); as a member of the International Advisory Board, Virology Division, International Union of Microbiological Societies (IUMS) (1990-1996); to Fellowship of the American Academy of Microbiology (1997); to Member-at-Large of the Executive Board of IUMS, and subsequently to the position of Secretary-General 1996-2005); to President of the; Asian-Pacific Society for Medical Virology 2000-03); and to member of the Executive Board and subsequently to Vice-President of the International Committee for the Taxonomy of Viruses, of IUMS (2005-11). I was also appointed Chair of the National Committee for Microbiology, Australian Academy of Science for the period 1993-2000.

Employment History

- 1969-70: Post-doctoral Fellow, Public Health Research Institute of the City of New York
- 1970-72: Senior Scientific Officer and Head of Genetics Dept, Animal Virus Research Institute, Pirbright, UK
- 1973-79: Senior Lecturer, Dept of Microbiology, University of Western Australia
- 1980-94: Associate Professor, Dept of Microbiology, University of Western Australia
- 1985-86: Visiting Fellow, School of Biological Sciences, University of Warwick, UK
- 1981-85 and 1990-94: Head, Dept of Microbiology, University of Western Australia
- 1994: Professor, Dept of Microbiology, University of Western Australia

- 1994: Professor, Dept of Microbiology, University of Western Australia
- 1995-2004: Professor and Head of Dept of Microbiology, University of Queensland
- 2000-04: Professor of Tropical Infectious Diseases, University of Queensland
- 2001-04: Honorary Senior Principal Fellow, Queensland Institute of Medical Research
- 2003: Interim Chief Executive Officer, Australian Biosecurity Cooperative Research Centre for Emerging Infectious Diseases
- 2003-04: Temporary Medical Officer, Dept of Communicable Disease Surveillance and Control, World Health Organization, Geneva
- 2004-08: Non-Executive Director, Panbio Ltd (ASX:PBO)
- 2004-08: Premier's Research Fellow and Professor of Tropical Infectious Diseases, Curtin University.
- 2007-08: Deputy Chief Executive Officer, Australian Biosecurity CRC
- 2008-continuing: Honorary Professor, School of Chemistry and Molecular Biosciences, University of Queensland
- 2008 – continuing: Honorary Senior Principal Fellow, Burnet Institute, Melbourne
- 2009 - 2017: Research Associate, Curtin University
- 2016 - continuing: Vice-Chair, One Health Platform Foundation;
- 2017 - continuing: part-time (one session/week), Senior Medical Technologist-in-charge, PathWest, Perth
- 2018 -continuing: Emerritus Professor, Curtin University
- 2018-2021 - Member, WA Biosecurity Council

Specialty Areas

- Emerging viral diseases
- Arboviruses (mosquito-borne viruses)
- One Health

Publications

2020

Journal Articles (Research)

- Williams, S. H., A. Levy, R. A. Yates, N. Somaweera, P. J. Neville, J. Nicholson, M. D. A. Lindsay, J. S. Mackenzie, K. Jain, A. Imrie, and 2 more contributors. 2020. "Discovery of Jogalong virus, a novel hepacivirus identified in a Culex annulirostris (Skuse) mosquito from the Kimberley region of Western Australia." PLoS ONE 15 (1)
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2017

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Journal Articles (Research)

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viruses." PLoS ONE 11 (10): 1-15.

- Reperant, L. A., J. MacKenzie, and A. D. M. E. Osterhaus. 2016. "Periodic global One Health threats update." One Health 2

2015

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2013

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Dr. Tracey S. McNamara (born 1954)

Wikipedia 🌐 NONE

Associations

- Dr. Walter Ian Lipkin (born 1952) - In 1999, the dead birds that were found by Dr. McNamara were tested in late September 1999 and determined to have West Nile Virus, hence the start of the West Nile Virus discovery in the United States (1999)

Associations - Organizations / Companies

- One Health / One Health Commission
-

Biographies / CV

LinkedIn Profile (Feb 2021)

Source - [HL006I][GDrive]

" About - Experienced Professor with a demonstrated history of working on zoonotic threats with public health, veterinary, defense and intelligence communities. Skilled in Veterinary Medicine, Clinical Research, Animal Models, Life Sciences, Biosurveillance, One Health and Epidemiology. TEDx speaker. Extensive travel experience. ***Worked in Uzbekistan, Kazakhstan and Georgia on DoD project. Also in Russia. Currently working on a Global Health Security Engagement project called GloHSA- an international group trying to bridge all sectors for a safer world.*** *Salzburg Global Seminar Fellow. [...] Graduated from New York State College of Veterinary Medicine (Cornell). "*

Activity - https://www.linkedin.com/feed/update/urn:li:activity:6721193448398974976/

" In the wake of 10,000 dead mink at a mink farm in Utah, I feel compelled to make others aware of something I published with two fellow veterinarians about the need to fund/perform veterinary studies to establish species susceptibility; risk of transmission to humans; and investigation of potential animal reservoirs. Studies that should have been performed in February were not funded. We could easily have established species susceptibility by doing serosurveys of zoo species. We did that with West Nile virus and it provided a wealth of information. COVID-19? Nope. There has been a reluctance to investigate companion animals borne out of the fear of "what if we find something bad"? By this point, I now firmly believe that our national bird needs to change from the Bald Eagle to an ostrich. Burying our heads in the sand is not the way to address a novel zoonotic threat. I hope COVID-19 makes people recognize that taking a human-centric approach to novel zoonoses is short sighted and dangerous. "

A Critical Needs Assessment for Research in Companion Animals and Livestock Following the Pandemic of COVID-19 in Humans Tracey McNamara, Juergen A. Richt, and Larry Glickman / VECTOR-BORNE AND ZOONOTIC DISEASES Volume XX, Number XX, 2020 ª Mary Ann Liebert, Inc. DOI: 10.1089/vbz.2020.2650

2011 (Nov 21) - One Health Commission page on West Nile virus

https://www.onehealthcommission.org/index.cfm/38649/15886/west_nile_virus

West Nile Virus / 11/21/2011

Human and animal science converges in defeating zoonotic diseases

West Nile virus causes an emerging infectious disease that was first discovered in Uganda in 1937. In recent years it has spread beyond its traditional boundaries, causing illness in birds, horses, and humans in Europe and the United States. Since [the **West Nile Virus discovery in the United States (1999)**], West Nile virus has been detected in humans, animals, and mosquitoes throughout the United States.

In 1999 in New York City, several elderly people became deathly ill with signs of encephalitis, and crows began dying in large numbers in the same area. Analyses of human blood specimens by the Centers for Disease Control and Prevention (CDC) initially suggested St. Louis encephalitis (SLE), a disease that had previously occurred in the area and is transmitted from infected birds to humans by mosquitoes. But something didn't seem right since birds do not normally show any signs of illness from SLE. Dr. Tracey McNamara, head pathologist at the Bronx Zoo, began to investigate why a growing number of crows were becoming ill and dying. An epidemiologist at the city health department raised concern that the large numbers of dead birds might be connected to the human cases of encephalitis. McNamara soon was dealing with the deaths of a cormorant, several flamingos, and a bald eagle.

Analysis of samples from the dead zoo birds by the US Department of Agriculture National Veterinary Services Lab in Ames, Iowa, revealed a virus too small to be SLE virus. It was soon clear that the human and bird deaths were being caused by the same virus and that this was a newly emerging disease. Nearly 3 months after the initial outbreak, government scientists announced that the disease was caused by West Nile virus, which had never before been found in the Western hemisphere.

The 1999 epidemic in the New York City area resulted in 62 cases of encephalitis and 7 deaths. Zoo birds, American crows and at least 20 other North American wild bird species and horses were also affected. It is not clear how West Nile virus entered the United States. It could have come from a mosquito carried on a plane, or it may have been from an infected wild or imported bird. But since its introduction, West Nile virus has continued to spread and is now a significant threat to the health of humans, birds, and horses. Since 1999, there have been 1.5 million West Nile virus infections in the United States.

Dr. Mcnamara was "trained at the USDA's Plum Island Animal Disease Center"

Dr. McNamara was recognized for her work on the West Nile Virus outbreak in New York. In 1999, Dr. McNamara was the Head of Pathology at the Wildlife Conservation Society headquartered at the Bronx Zoo. She noticed an unusual number of dead crows on the zoo's premises, and she became alarmed when many of the birds in the zoo's collection died shortly thereafter. The deaths coincided with a mysterious viral disease afflicting some New York City residents.

Public health experts initially attributed the human illnesses to St. Louis encephalitis. But Dr. McNamara and her colleagues at the zoo did their own pathology tests on the dead birds at the zoo and identified West Nile virus as the real culprit.

Her efforts and those of other veterinarians during the outbreak highlighted the important role veterinarians play in ensuring public health.

Dr. Brandt recognized Dr. McNamara in particular for her tenacity. "Dr. McNamara has learned to never say never," he said. "Her skill, reasoning, and tenacity may have saved hundreds of lives."

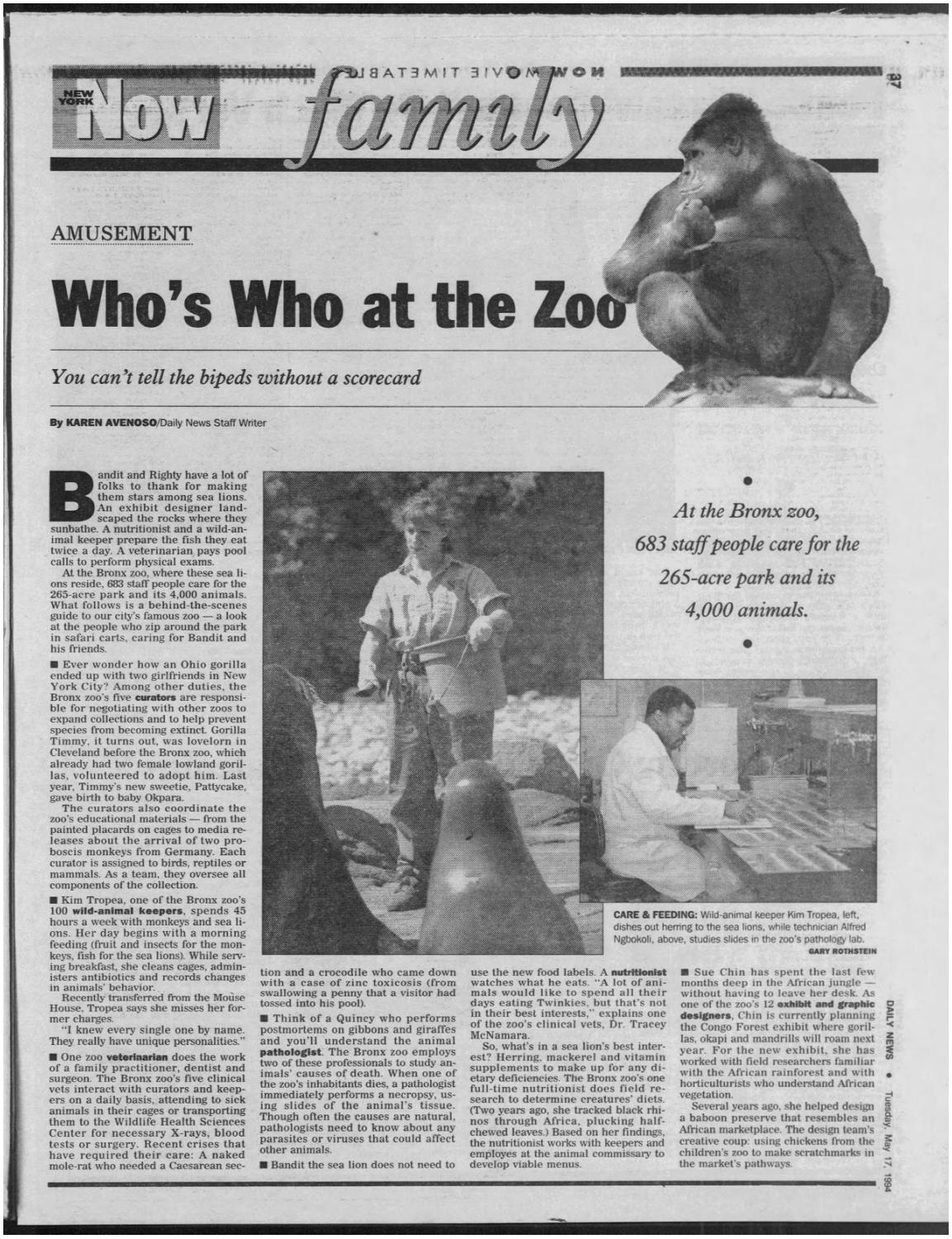
Dr. McNamara is a diplomate of the American College of Veterinary Pathologists, and **was trained at the USDA's Plum Island Animal Disease Cente**r. She earned her DVM degree from Cornell University and received an honorary Doctor of Science degree from St. Lawrence University. [...]

EVIDENCE TIMELINE

1994 (May 17) - Minor mention NYC Daily News

https://www.newspapers.com/image/472756255/?terms=%22tracey%20mcnamara%22&match=1

1994-05-17-the-daily-news-new-york-pg-37.jpg



NEW YORK Now family

AMUSEMENT

Who's Who at the Zoo

You can't tell the bipeds without a scorecard

By **KAREN AVENOSO**/Daily News Staff Writer

Bandit and Righty have a lot of folks to thank for making them stars among sea lions. An exhibit designer landscaped the rocks where they sunbathe. A nutritionist and a wild-animal keeper prepare the fish they eat twice a day. A veterinarian pays pool calls to perform physical exams.

At the Bronx zoo, where these sea lions reside, 683 staff people care for the 265-acre park and its 4,000 animals. What follows is a behind-the-scenes guide to our city's famous zoo — a look at the people who zip around the park in safari carts, caring for Bandit and his friends.

■ Ever wonder how an Ohio gorilla ended up with two girlfriends in New York City? Among other duties, the Bronx zoo's five **curators** are responsible for negotiating with other zoos to expand collections and to help prevent species from becoming extinct. Gorilla Timmy, it turns out, was lovelorn in Cleveland before the Bronx zoo, which already had two female lowland gorillas, volunteered to adopt him. Last year, Timmy's new sweetie, Pattycake, gave birth to baby Okpara.

The curators also coordinate the zoo's educational materials — from the painted placards on cages to media releases about the arrival of two proboscis monkeys from Germany. Each curator is assigned to birds, reptiles or mammals. As a team, they oversee all components of the collection.

■ Kim Tropea, one of the Bronx zoo's 100 **wild-animal keepers**, spends 45 hours a week with monkeys and sea lions. Her day begins with a morning feeding (fruit and insects for the monkeys, fish for the sea lions). While serving breakfast, she cleans cages, administers antibiotics and records changes in animals' behavior.

Recently transferred from the Mouse House, Tropea says she misses her former charges.

"I knew every single one by name. They really have unique personalities."

■ One zoo **veterinarian** does the work of a family practitioner, dentist and surgeon. The Bronx zoo's five clinical vets interact with curators and keepers on a daily basis, attending to sick animals in their cages or transporting them to the Wildlife Health Sciences Center for necessary X-rays, blood tests or surgery. Recent crises that have required their care: A naked mole-rat who needed a Caesarean section and a crocodile who came down with a case of zinc toxicosis (from swallowing a penny that a visitor had tossed into his pool).

■ Think of a Quincy who performs postmortems on gibbons and giraffes and you'll understand the animal **pathologist**. The Bronx zoo employs two of these professionals to study animals' causes of death. When one of the zoo's inhabitants dies, a pathologist immediately performs a necropsy, using slides of the animal's tissue. Though often the causes are natural, pathologists need to know about any parasites or viruses that could affect other animals.

■ Bandit the sea lion does not need to use the new food labels. A **nutritionist** watches what he eats. "A lot of animals would like to spend all their days eating Twinkies, but that's not in their best interests," explains one of the zoo's clinical vets, Dr. Tracey McNamara.

So, what's in a sea lion's best interest? Herring, mackerel and vitamin supplements to make up for any dietary deficiencies. The Bronx zoo's one full-time nutritionist does field research to determine creatures' diets. (Two years ago, she tracked black rhinos through Africa, plucking half-chewed leaves.) Based on her findings, the nutritionist works with keepers and employes at the animal commissary to develop viable menus.

■ Sue Chin has spent the last few months deep in the African jungle — without having to leave her desk. As one of the zoo's 12 **exhibit and graphic designers**, Chin is currently planning the Congo Forest exhibit where gorillas, okapi and mandrills will roam next year. For the new exhibit, she has worked with field researchers familiar with the African rainforest and with horticulturists who understand African vegetation.

Several years ago, she helped design a baboon preserve that resembles an African marketplace. The design team's creative coup: using chickens from the children's zoo to make scratchmarks in the market's pathways.

At the Bronx zoo, 683 staff people care for the 265-acre park and its 4,000 animals.

CARE & FEEDING: Wild-animal keeper Kim Tropea, left, dishes out herring to the sea lions, while technician Alfred Ngbokoli, above, studies slides in the zoo's pathology lab. GARY ROTHSTEIN

DAILY NEWS • Tuesday, May 17, 1994

1999 (June 11) - huh, zoo vets can be pathologists ?

Note - this article was run in many newspapers in the USA in June of 1999 - this just happens to be the earliest print I could find.

Full newspaper page : [HN01I4][GDrive]

Detectives of animal world, zoo pathologists track clues

WASHINGTON (AP) – The white fuzz all over the pink-toe tarantula was a telltale clue.

A fungus, most likely. A sign of the infection that probably killed the hairy creature, Dr. Richard Montali said as he glanced over paperwork on the lifeless spider. Tissues will be collected and blood smeared onto slides – and both will be preserved if needed for future research.

As the chief pathologist for the Smithsonian's National Zoo, Montali confronts death routinely.

"Any given day we might have a fish or a bat and a spiny mouse and a lobster. Some invertebrate. We might have a snake," he said. "People think in terms of lions and tigers and rhinos and elephants, and that's very rare. ... They have pretty long lives."

Zoo pathologists play crucial roles in keeping the exotic animals on display healthy – often uncovering new diseases that threaten animals in zoos nationwide and even preventing extinction in the wild.

Think of them as veterinarian detectives, working in a lab nestled behind the menagerie of lions, tigers and bears that get all the regular visitors. Montali's workshop is an entirely separate animal kingdom, one with a hospital, various laboratories and numerous veterinarian colleagues.

The information gathered by pathologists comes not only from their own zoos but from veterinarians and researchers throughout the world.

"I can receive tissues from Mongolia because we have field researchers in 300 projects in 50 countries," said Tracey McNamara, chief pathologist at the Bronx Zoo in New York. "I work on tissues on penguins from Patagonia, from dolphins in Brazil."

Zoo animals need different attention than the average household pet, McNamara said, and vets still have much to learn about these animals, many of which are experts at masking diseases from their curators.

"They're not like a domestic dog," she said. "They're not going to go up and whimper to the keeper. Sometimes animals are simply found dead."

Like the slipper lobster found on its back in the aquarium.

An autopsy yielded a preliminary diagnosis. A curator had noted the lobster had not been eating. The creature's flat claws and lack of body fat suggested it died from malnutrition.

"Sometimes we can tell immediately, if there's some kind of obvious injury, or a twist of the intestines or something visible," Montali said, watching a vet resident examine a short-tail bat that apparently died after flying into something. "But often we don't."

Autopsies are performed in a building where the stench of formaldehyde and carcasses hangs in the air. Here, among the steel gurneys and subzero freezers, pathologists look for clues among the dead, collecting tissue samples and slides to examine under the microscope.

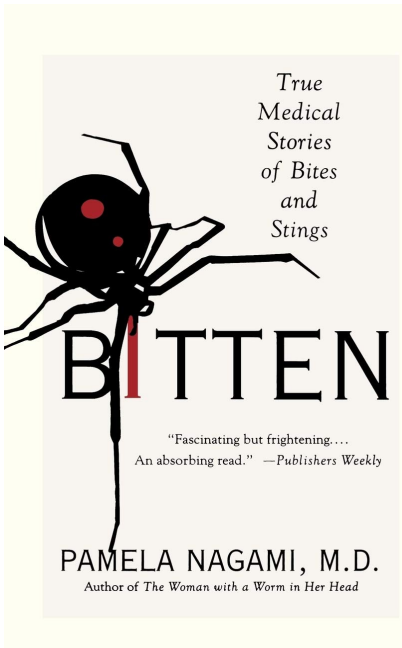
The information is then cataloged in a database that goes back several decades and is linked to zoos nationwide. Samples are often frozen for further investigation.

That's how Montali and an associate discovered a type of herpes virus that killed Kumari, the first elephant born at the National Zoo. Kumari died from a brief unknown illness in 1995, 16 months after she was born. Another apparent victim, 18-month old Astor, died in 1983 at the Bronx Zoo. Vets had no idea what killed these animals at the time, but tests of preserved tissue samples revealed the same herpes virus.

Montali's work also helped prevent golden lion tamarins from disappearing in Brazilian forests. Scientists had planned to propagate the South American monkeys in captivity and reintroduce them into the wild, but an unknown disease got in the way. About a dozen zoos reported similar outbreaks of the mysterious illness.

Montali worked with other veterinarians and physicians to pinpoint a cause, eventually identifying a virus similar to the one that causes hepatitis. In humans, the virus causes meningitis and affects the brain.

[HN01I5][GDrive]



Interesting book quote - says late July 1999 - birds are dying

2004-bitten-pamele-nagami-cover-img.jpg

https://drive.google.com/file/d/1saKA00_VWlcJyH-znr7-26GrooE0_DLQ/view?usp=sharing

See Chapter 9: "New York, Summer 1999" (online only - i made no local copy other than text copied below - https://play.google.com/books/reader?id=aKLu6T_DTX0C

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New York, Summer 1999 In late July 1999, Dr. Tracey S. McNamara, head of the veterinary pathology department at the Bronx Zoo, realized that crows

were dying in the neighborhood around the zoo grounds. Dr. McNamara's crow count had reached forty in August, about the same time that an infectious diseases specialist, Dr. Deborah S. Asnis, began caring for two elderly patients at the Flushing Hospital, across the East River in Queens.

The first patient, a sixty-year-old man, had been admitted to the hospital on August 12 complaining of three days of fever, weakness, and nausea. On admission, he had a temperature of 103°F and was thought to be suffering from pneumonia. However, on the fourth day he became confused and developed weakness in his limbs. His deep tendon reflexes, like the knee jerk, were feeble, his bladder stopped functioning, and his doctors had to insert a catheter to drain his urine.

Three days later, on August 15, an eighty-year-old man came to the same hospital with fever and weakness. He had collapsed at home and had been resuscitated in the field. On admission to the intensive care unit, he was already being supported by a mechanical ventilator, had a fever of of 104°F, and barely responded to the voices of his doctors. Then, on his third day in the hospital, sudden, total paralysis struck.

Laboratory tests suggested that the patients were suffering from viral encephalitis, and that the weakness was due to some kind of nerve damage, perhaps the Guillain-Barré syndrome. Unlike meningitis, which starts with inflammation limited to the membranes lining the outside of the brain, encephalitis affects the deep brain tissues immediately. Permanent neurological damage or death may result.

One of the most common causes of viral encephalitis is ***Herpes simplex***, the same virus that causes cold sores. But faced with cases of viral encephalitis during the summer, Dr. Asnis also had to consider infections contracted from the bite of a mosquito. The viruses that cause these arthropod-borne infections are called arboviruses, for short. Arboviruses in the United States include eastern equine encephalitis and St. Louis encephalitis. However, these two patients had a striking clinical feature in common that was not typical of any arbovirus with which Dr. Asnis was familiar. They had both been stricken with paralyzing weakness. Dr. Asnis wondered if she were dealing with an entirely new and very dangerous infection.

On Monday, August 23, she telephoned the New York City Health Department. She was put through to Dr. Marcelle Layton, the head of the department's Bureau of Communicable Diseases. Dr. Layton asked Dr. Asnis to submit samples of blood and of cerebrospinal fluid (the liquid that surrounds the brain, obtained by doing a spinal tap) to the New York State Health Department laboratory in Albany. Dr. Layton then dispatched an epidemiologist to Flushing Hospital to study the background of the two patients in order to determine whether they were linked by any common factors.

O**n Friday, August 27, Dr. Asnis called Dr. Layton to discuss a third possible case, and, while they were on the telephone, another doctor interrupted the call to tell Dr. Asnis about a fourth case. On Saturday, August 28, a fifth case was reported, this time from another hospital in North Queens.** Rather than a few sporadic cases, this was beginning to look like a true outbreak.

In addition to looking for clinical clues in the patients' histories, health department investigators sent samples of blood and cerebrospinal fluid from suspected encephalitis patients to the state laboratory for analysis. On August 31, the eighty-year-old man who had collapsed at home died in the intensive care unit at Flushing hospital. On September 2, one of the second group of patients Dr. Asnis had discussed with Dr. Layton also died. The victim, and eighty-seven-year-old woman, had been admitted to the hospital on August 20 with headache, loose stools, fever, and weakness. The health department obtained fresh brain samples from both of these fatalities and sent them t**o the state lab**.

The first apparent breakthrough in the encephalitis outbreak came from tests of blood and cerebrospinal fluid of this second fatality. **While no specific virus had been isolated on culture, the specimens from the eighty-seven-year-old woman did contain a type of antibody suggestive of infection by the St. Louis encephalitis virus, a mosquito-borne arbovirus in the yellow fever family.** Though it had never been reported in New York City, cases did occur during the summer months in rural and suburban areas in the southeast. Carried by birds and transmitted by mosquitoes, St. Louis encephalitis is known to cause very severe illness in patients over the age of fifty.

Based on these preliminary test results, Mayor Rudolph W. Giuliani called a news conference in Whitestone, Queens, on **September 4 and informed the public of the death of the eighty-seven-year-old woman from St. Louis encephalitis. He noted that it was likely, though not yet confirmed, that an eighty-year-old man who died at Flushing Hospital on August 31 had fallen to the same illness. While there is no specific treatment for St. Louis encephalitis, explained the mayor, the public needed to be informed and familiar with the symptoms of the illness.** Mayor Giuliani suggested that New Yorkers remain indoors in the evening and use insect repellent whenever they had to go outside. F**inally, the mayor reluctantly declared that the city would need to begin a limited program of nocturnal aerial spraying in northern Queens with the insecticide Malathion. This was a delicate issue; not only would he have to reassure people of the safety of the insecticide, but he would also have to convince everybody in the neighborhoods being sprayed to shut their windows tightly and keep air conditioners off all night despite the heat.**

While the public was trying to adjust to the first outbreak of St. Louis encephalitis, the crow epidemic spread over the fence and began killing birds inside the Bronx Zoo. By September 9, Dr. McNamara's zoo refrigerator contained a dead Guanay cormorant, five Chilean flamingos, a pheasant, and a bald eagle. Upon performing autopsies on the dead birds, she found that they had all died of encephalitis and severe inflammation of the heart. The forty-five-year-old pathologist felt certain that the bird and human encephalitis outbreaks were linked. However, she was not convinced that the infectious agent was St. Louis encephalitis, because birds infected with that virus typically don't die. On the other hand, she doubted that it was an equine agent, such as eastern equine encephalitis, and South America were affected. Like Dr. Asnis, Dr. McNamara suspected an unusual infectious agent, perhaps one that was newly evolved or recently introduced to this hemisphere. Undeterred by the official announcement, she decided to look further.

On September 9, Dr. McNamara called the Centers for Disease Control and Prevention in Atlanta (CDC) to alert them to a possible link between the avian outbreak and the human cases. She voiced her doubts about the diagnosis of St. Louis encephalitis and arranged to send them samples of bird tissue.

The next day Dr. McNamara also sent tissue samples from two flamingos to the United States Department of Agriculture National Veterinary Services Laboratory in Ames, Iowa. By Monday, September 13, cell cultures in Ames showed that the zoo birds and the wild crows appeared to be dying of the same virus. Although they could not tell exactly what it was, electron microscopy showed it to be the size of a flavivirus, the yellow fever group. Because the Ames laboratory lacked the necessary containment facilities to handle an uncharacterized virus that was potentially dangerous to human beings, they notified the CDC.

Meanwhile, Dr. McNamara's inquiries had led her to Dr. Daniel J. Gubler, head of the CDC's arbovirus field station in Fort Collins, Colorado. She sent more specimens and made frequent telephone calls to the Fort Collins laboratory. Later, when asked by the New York Times if it was "persistent sleuthing or persistent pestering" that solved the encephalitis mystery, she replied, "Let's say the secretaries recognize my voice."

On September 19, after a week without an answer from the CDC, Dr. McNamara decided to telephone the United States Army Medical Research Institute for Infectious Diseases (USAMRIID) in Maryland. USAMRIID took over the functions of the old biological warfare labs at Fort Detrick, and is now in charge

of national defense against biological agents. When she told the army about a possible new virus pathogenic for human beings as well as for birds, they expressed alarm for her safety and asked her to send samples to them immediately. By September 21, USAMRIID had confirmed the presence of a flavivirus in the bird samples and had notified the CDC.

While Dr. McNamara was pursuing a diagnosis of her avian cases, the scientists from the New York State Health Department were following a separate but ultimately converging trail of investigation. During the New York outbreak some of these scientists happened to be attending a conference in Albany, New York. In Albany, they had the brain samples from the fatal encephalitis cases to California and test them using advanced equipment for the study of rare viruses.

In mid-September, Dr. Lipkin began studying the brain samples in his Irvine lab using molecular probes to test the virus's genetic structure. By September 23, when the human toll had reached nine deaths, he had narrowed his search down to two flaviviruses, one native to Australia, called Kunjin, and West Nile virus. The next day both USAMRIID and his laboratories had completed their tests. The virus was West Nile.

West Nile virus was first isolated in 1937 from the blood of a feverish woman in the West Nile district of Uganda. It is in the yellow fever family, the flaviviruses (flavi means yellow in Latin)—a group of RNA viruses that also includes Japanese and St. Louis encephalitis, and Dengue fever. It is transmitted by the bite of the female mosquito to its bird host. Humans, horses, and domestic animals may also be infected, but are not important in perpetuating the virus in nature. Found throughout Africa and the Middle East and, less commonly, in Europe, Russia, India, and Indonesia, West Nile encephalitis caused an outbreak in Romania in 1996, in which there were approximately ninety thousand human cases with seventeen deaths. The strain of West Nile that the two labs isolated closely matched a virus found in a sick goose in Israel in 1998. Since West Nile is not generally lethal to its bird hosts, scientists speculate that the Israeli strain that found its way into the United States may have been particularly virulent. Alternatively, birds in the Western Hemisphere, being evolutionary strangers to the virus, may have been more sensitive to its effects.

In human beings, West Nile infection starts out like the flu, with fever and body aches. Patients may then develop some swollen glands, and about half will have a transient rash. Illness is usually mild, either because in areas where the disease is common, people, like birds, have become adapted to it over time, or because infection in these areas occurs in youth, when serious complications are unusual. In some parts of the Nile Delta in Egypt, for example, 40 percent of young adults show evidence on blood tests of past exposure to West Nile, and most do not recall a specific illness.

However, a fascinating experiment conducted in the early 1950s showed that West Nile could produce severe disease in some patients. Researchers working with cancer in laboratory animals had observed that certain viruses seemed to cause animal tumors to regress. In a desperate attempt to help patients with advanced malignancy, researchers injected them with massive doses of West Nile the inoculated patients came down with encephalitis, and one of the patients became paralyzed. Happily, they all recovered from their experimental infection.

We will probably never know how West Nile virus first arrived in the United States in 1999. That the epidemic started in the New York metropolitan area suggests that it was brought to this country by air or ship, rather than as a result of any natural bird migration. The three most likely sources were a recently infected airline passenger from the Near East, who still had the virus circulating in his bloodstream, an infected bird brought into the United States legally or illegally, or an infected mosquito brought by ship or airplane.

The New York patients were not suffering from a new disease then, but were the first cases of an old disease occurring in a new place. Based on past experience with West Nile, the investigators suspected that a wider outbreak of the disease was going on. Therefore, public health authorities asked all the hospitals in New York City and neighboring counties to report any suspected cases of viral infections of the central nervous system, including patients hospitalized back to August 1, 1999. They devised tests for West Nile antibodies in serum and cerebrospinal fluid. In that first year of the epidemic, the investigation identified fifty-nine patients hospitalized with West Nile infection in the New York metropolitan area, with seven fatalities. The median age of hospitalized patients was seventy-one years, but patients as young as five and as old as ninety were also affected. The risk of death was especially high in patients seventy-five years of age or older. In the first outbreak, thirty-two of the fifty-nine patients lived in the New York borough of Queens, and none of the cases occurred outside New York State. An ominous finding, however, was that infected birds were found in three nearby states—Connecticut, Maryland, and New Jersey.

Most North American birds proved more resistant to the virus than the crow; house sparrows and other migratory species can live with West Nile multiplying in their blood streams. Even as scientists were struggling to identify the virus during the fall of 1999, the bird migration season had already begun. West Nile was winging its way in a thousand birds to a thousand destinations.

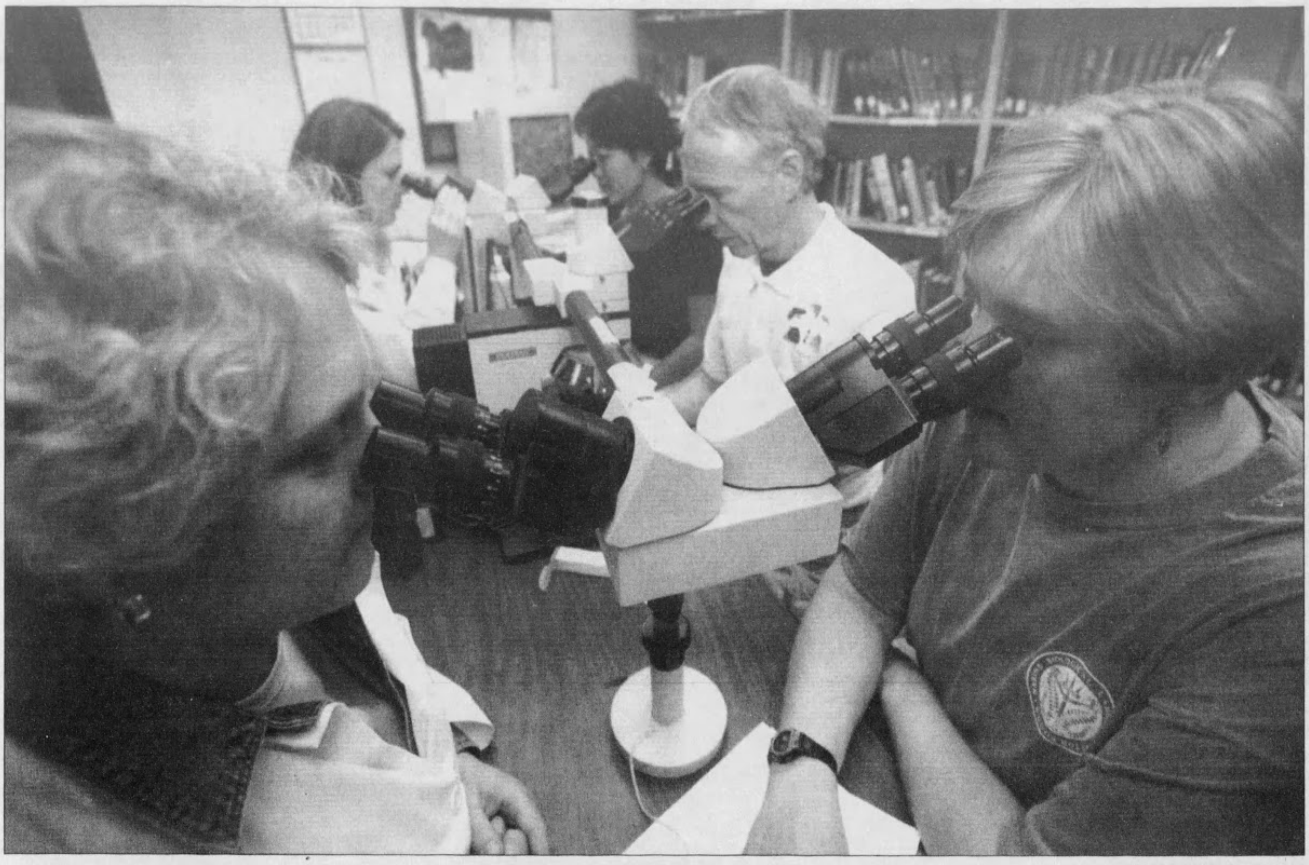
The last recorded patient that first year fell ill on September 22, and the human epidemic ended when the weather turned cold and the mosquitoes stopped biting. But it was already clear that West Nile could not be contained by spraying affected neighborhoods, or even by spraying whole states. West Nile was sure to return with each summer's birds and mosquitoes. Scientists only hoped spread through the human population would be slow.

In preparation for the 2000 West Nile season, seventeen eastern states along the Atlantic and Gulf coasts, New York City, and the District of Columbia began West Nile surveillance. Beginning in the winter they collected mosquitoes, set up sentinel chicken flocks, sampled wild birds, and collected serum from horses and other mammals. In 2000, West Nile was found in twelve states, with human cases occurring in three. There were twenty-one cases of acute West Nile infection, with nineteen patients hospitalized, one death, and one patient left in a "vegetative state." Although the number of people identified with severe disease was less than in 1999, CDC estimated that approximately two thousand people had milder forms of the disease. Ominously, animal surveillance found over four thousand dead birds with West Nile, and, in addition, sixty-five horses were identified with severe neurological diseases. West Nile was detected in fourteen bats, four rodents, three rabbits, two cats, and two raccoons in New York, and in a skunk in Connecticut. During this outbreak, the CDC noted that severe disease in people in any given county was always preceded by fatal cases in birds, confirming the value of avian surveillance.

1999 (Aug 05)

Full newspaper page : [HN01I2][GDrive] / Included :

- Dr Richard Montali (passed in 2018) - https://www.staufferfuneralhome.com/obituary/Richard-Montali



ASSOCIATED PRESS PHOTOS

Preventing extinction: *National Zoo pathologist Donna Fisher, left, and student pathologist Inga Sidor use a microscope to look for clues at the labratory of the National Zoo in Washington.*

Zoo detectives track animal diseases

■ **Veterinarians:** *Zoo pathologists at the National Zoo in Washington play crucial roles in keeping the exotic animals on display healthy.*

By Eun-Kyung Kim
ASSOCIATED PRESS

WASHINGTON — The white fuzz all over the pink-toe tarantula was a telltale clue.

A fungus, most likely. A sign of the infection that probably killed the hairy creature, Dr. Richard Montali said. Tissues will be collected and blood smeared onto slides — and both will be preserved if needed for future research.

As the chief pathologist for the National Zoo, Montali confronts death routinely.

"Any given day we might have a fish or a bat and a spiny mouse and a lobster. Some invertebrate. We might have a snake," he said. "People think in terms of lions and tigers and rhinos and elephants and that's very rare. ... They have pretty long lives."

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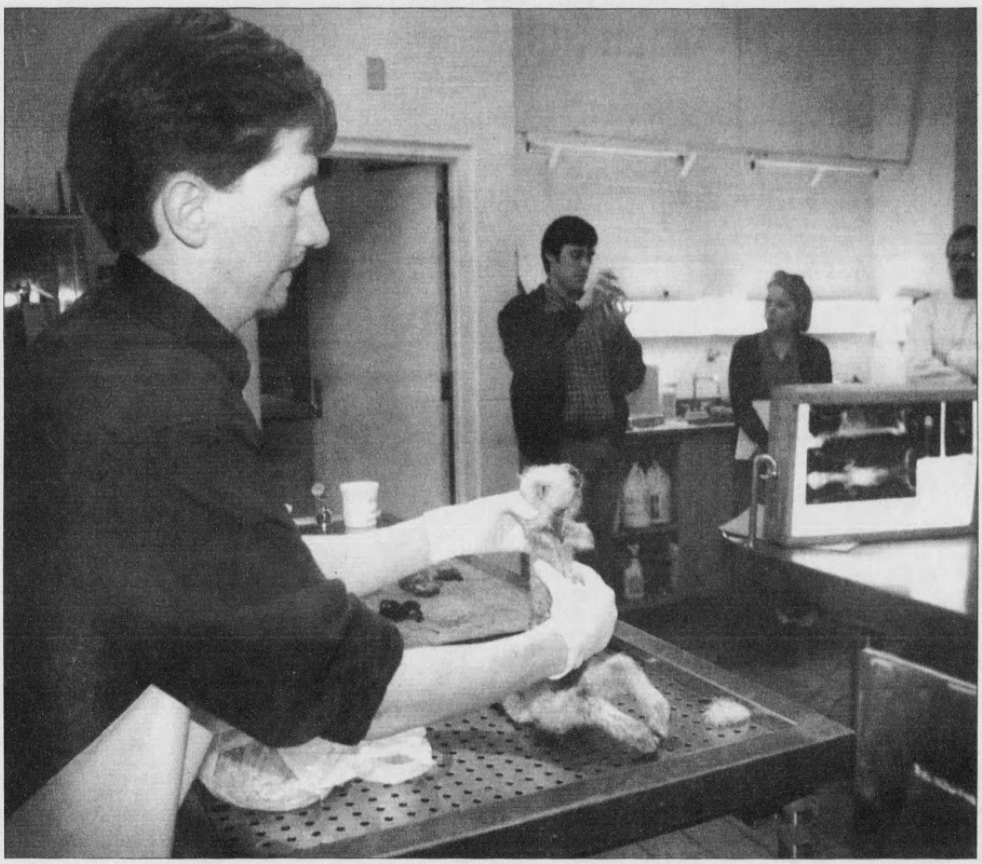


Autopsy: *National Zoo resident pathologist Jim Raymond discusses the autopsy and death of a baby lamb.*

mals are simply found dead."

Like the slipper lobster found on its back in the aquarium.

In its case, an autopsy yielded a preliminary diagnosis. A curator had noted the lobster had not been eating. The creature's flat claws and lack of body fat further suggested it died from malnutrition.

"Sometimes we can tell immediately, if there's some kind of obvious injury, or a twist of the intestines or something visible," Montali said, watching a vet resident examine a short-tail bat that apparently died after flying into something. "But often we don't."

Autopsies are performed in a building where the stench of formaldehyde and carcasses clings in the air. Among the steel gurneys and subzero freezers, pathologists look for clues among the dead, collecting tissue samples and slides to examine under the microscope.

The information is cataloged in a database that goes back several decades and is linked to zoos nationwide. Samples are often frozen for further investigation.

That's how Montali and an associate discovered a type of herpes virus that killed Kumari, the first elephant born at the National Zoo. Kumari died from a brief and unknown illness in 1995, 16 months after she was born. Another apparent victim, 18-month old Astor, died in 1983 at the Bronx Zoo. Vets had no idea what killed these animals at the time but later tests of preserved tissue samples revealed the same herpes virus.

Montali's work also helped prevent golden lion tamarins from disappearing in Brazilian forests. Scientists had planned to propagate the South American monkeys in captivity and reintroduce them into the wild, but an unknown disease got in the way. About a dozen zoos reported outbreaks of the mysterious illness.

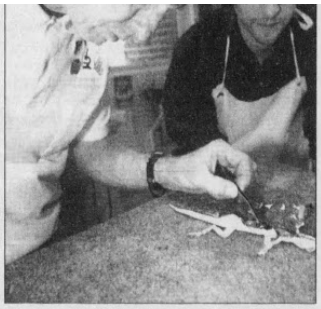
Montali worked with other veterinarians and physicians to pinpoint a cause, eventually identifying a virus similar to the one that causes hepatitis. In humans, the virus causes meningitis and affects the brain. In tamarins, it destroys the liver.

Once a disease is pinpointed, finding its cure or a treatment can be just as difficult. An antidote for one species doesn't necessarily work for another.

"Some of the vaccines available for domestic animals — say, canine distemper vaccine — are very effective in dogs," McNamara said. "But if you give that vaccine to red pandas, and they're very susceptible to [distemper], it actually induces disease."

Only a handful of accredited zoos have their own pathology departments, mainly because most zoos are nonprofit organizations that can't afford full-time pathologists.

"Those few of us working full-time in the field are understaffed and overworked," McNamara said.

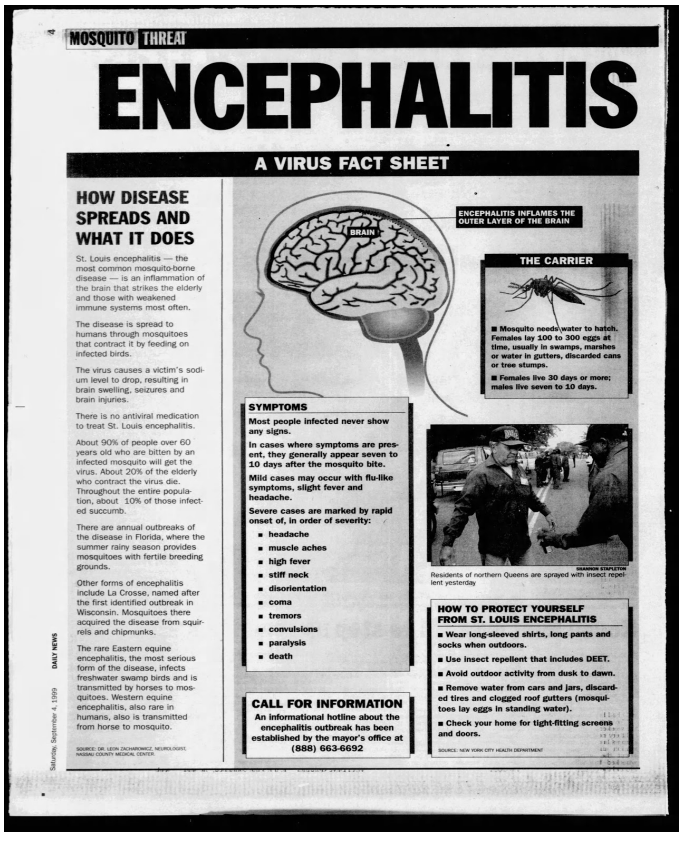


Lizard: *Dr. Don Nichols, left, and National Zoo resident pathologist Jim Raymond perform an autopsy on a lizard.*

Bat: *Pathologist Dr. Don Nichols performs an autopsy on a bat.*

[HN01I3][GDrive]

1999 (Sep 04)



MOSQUITO THREAT

ENCEPHALITIS

A VIRUS FACT SHEET

HOW DISEASE SPREADS AND WHAT IT DOES

St. Louis encephalitis — the most common mosquito-borne disease — is an inflammation of the brain that strikes the elderly and those with weakened immune systems most often.

The disease is spread to humans through mosquitoes that contract it by feeding on infected birds.

The virus causes a victim's sodium level to drop, resulting in brain swelling, seizures and brain injuries.

There is no antiviral medication to treat St. Louis encephalitis.

About 90% of people over 60 years old who are bitten by an infected mosquito will get the virus. About 20% of the elderly who contract the virus die. Throughout the entire population, about 10% of those infected succumb.

There are annual outbreaks of the disease in Florida, where the summer rainy season provides mosquitoes with fertile breeding grounds.

Other forms of encephalitis include La Crosse, named after the first identified outbreak in Wisconsin. Mosquitoes there acquired the disease from squirrels and chipmunks.

The rare Eastern equine encephalitis, the most serious form of the disease, infects freshwater swamp birds and is transmitted by horses to mosquitoes. Western equine encephalitis, also rare in humans, also is transmitted from horse to mosquito.

SOURCE: DR. LEON ZICHARKOWICZ, NEUROLOGIST, NASSAU COUNTY MEDICAL CENTER

THE CARRIER

- Mosquito needs water to hatch. Females lay 100 to 300 eggs at time, usually in swamps, marshes or water in gutters, discarded cans or tree stumps.
- Females live 30 days or more; males live seven to 10 days.

SYMPTOMS

Most people infected never show any signs.

In cases where symptoms are present, they generally appear seven to 10 days after the mosquito bite.

Mild cases may occur with flu-like symptoms, slight fever and headache.

Severe cases are marked by rapid onset of, in order of severity:

- headache
- muscle aches
- high fever
- stiff neck
- disorientation
- coma
- tremors
- convulsions
- paralysis
- death

SHANNON STAPLETON

Residents of northern Queens are sprayed with insect repellent yesterday

HOW TO PROTECT YOURSELF FROM ST. LOUIS ENCEPHALITIS

- Wear long-sleeved shirts, long pants and socks when outdoors.
- Use insect repellent that includes DEET.
- Avoid outdoor activity from dusk to dawn.
- Remove water from cars and jars, discarded tires and clogged roof gutters (mosquitoes lay eggs in standing water).
- Check your home for tight-fitting screens and doors.

SOURCE: NEW YORK CITY HEALTH DEPARTMENT

CALL FOR INFORMATION

An informational hotline about the encephalitis outbreak has been established by the mayor's office at (888) 663-6692

DAILY NEWS Saturday, September 4, 1999

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[HN01I6][GDrive]

HITS QUEENS

Man, 80, dies; city's spraying

JOHN ROCA DAILY NEWS

PREVENTIVE MEASURE Marilyn Hershewl of Chatsworth, Calif., concerned about the outbreak of encephalitis in Queens, sprays insect repellent during Mets game last night at Shea.

Viral peril worries nabe

By MICHAEL R. BLOOD, MARTY ROSEN and LISA L. COLANGELO
DAILY NEWS STAFF WRITERS

An outbreak of St. Louis encephalitis has killed an 80-year-old man in northern Queens and may have sickened as many as two dozen other people, health officials said yesterday.

Authorities confirmed three cases of the disease, which is transmitted by mosquitoes, and were investigating whether the virus had killed a second Queens resident, an 87-year-old woman.

The city started spraying the Whitestone, Flushing and Auburndale areas with the pesticide pyrethreum by helicopter last night. Spraying was expected to continue today.

Officials at the federal Centers for Disease Control and Prevention in Atlanta said most people recover from the St. Louis strain, but added that it can kill 5% to 10% of those it strikes, with the death rate as high as 30% in elderly victims.

Duane Gubler, director of the CDC's division of vector-borne infectious diseases, said the outbreak was probably not a major health risk, but he expressed surprise and worry that the disease had struck such an urban area as Queens.

"It's something to be very concerned about," he said. "But I don't think it is something you need to be concerned about for the whole city."

There is no vaccine to protect against St. Louis, which is striking here for the first time, according to Sandra Mullin of the city Health Department.

"It is the first-ever confirmed cases of this in New York City," Mullin said. "That certainly makes it a remarkable event. The fact is, while some people who are bitten by an infected mosquito can contract St. Louis encephalitis, there are very few mosquitoes that tend to be infected."

The last major nationwide epidemic of mosquito-borne encephalitis occurred in Illinois in 1975, when 581 cases of St. Louis encephalitis left 47 people dead.

"If you're bitten, and you're over 60, your chances of dying are pretty high," said Dr. Leon Zacharowicz, a neurologist at Nassau County Medical Center.

He said the outbreak, which is most dangerous for the young and the elderly, is cause for concern.

"It can cause a major epidemic if it's not contained," he said.

By LISA L. COLANGELO
DAILY NEWS STAFF WRITER

Kathy Reiter runs the air conditioner day and night to fend off mosquitoes that blow across her Queens neighborhood from Long Island Sound.

The longtime resident of the Malba section discovered yesterday that this year's crop of bugs is more than a nuisance. Some of the mosquitoes carry a form of potentially deadly encephalitis.

"It's just scary," said Reiter's daughter, Jaye Anne. "There are all these schools around here. What about the kids?"

Up and down the quiet tree-lined blocks, residents worried over reports of the outbreak of the fatal ailment, spraying overhead and police going door-to-door with pamphlets.

"I'm upset, because I really don't know anything about this," said Giovanna Battaglia. "I'm scared of it, and no one has told us what to do."

Battaglia has two daughters, 5-month-old Christina and 2-year-old Sabrina.

Warnings to keep them indoors and wearing long sleeves only had her more worried.

"I'm getting out of town for the weekend," she said.

Jittery neighbors gathered on corners last night, trading information and swapping rumors about the outbreak as boys whacked baseballs in a park around the corner.

Health officials said they hope to have the problem contained by next week and don't expect any special problems for children. People bitten by mosquitoes carrying the virus usually do not develop St. Louis encephalitis, health officials said.

Residents say mosquitoes always have infested this area, which looks out on the swamps Powell's Cove beneath the Bronx-Whitestone Bridge.

Reiter never goes swimming in the pool after a long day of work. Vicki Lanzellotto ducks indoors every summer evening at 7 o'clock.

"We've always had a problem with mosquitoes, but no one has ever been sick as far as I know," said Joanne McCauley, 52. "I am worried, just because I don't know anything about it."

Lanzellotto, who has lived in the area for 18 years, said officials once placed canisters of repellent in the sewers to ease the mosquito problem.

But no one ever worried the skeeters could put their lives in danger — until now.

"I just want to know how to protect my family," Lanzellotto said.

With Dave Goldiner

The city Health Department immediately sent a medical alert to all New York City hospitals, seeking assistance in identifying and reporting any possible cases of the virus.

Gubler estimated the outbreak began about Aug. 9, sparked by mosquitoes feeding on infected birds.

"That's what caused the cycle to get started," he said.

Gubler said the CDC received four samples from the New York State Health Department on Thursday, confirmed the existence of St. Louis encephalitis yesterday morning and immediately notified state and city officials.

Mayor Giuliani called for calm, and Queens Borough President Claire Shulman insisted, "This is not a moment for panic."

The mayor also implored area residents not to panic, but to stay inside their homes from dusk until dawn while the spraying is taking place.

"We will do everything we can to wipe out the mosquito population," he said at a hastily called news conference at the corner of 138th St. and 11th Ave.

Giuliani advised that anyone venturing out should wear long pants and long sleeves, and apply plenty of insect repellent containing DEET.

At Shea Stadium last night, an announcement was made on the scoreboard and over the loudspeaker that fans concerned about the disease could obtain bug repellent from ushers. The National Tennis Center next door, where the U.S. Open is in full swing, made no such offer and had no comment about the outbreak.

In all, health officials are investigating 24 cases. Only three cases have been confirmed: a 58-year-old man, a 60-year-old man and the 80-year-old man, a resident of Whitestone who died earlier this week.

Mullin said there was no evidence "right now that it is widespread. We don't expect this is going to happen citywide."

City officials think the disease was brought into Queens by a migrating bird.

Most of the victims live within a 4-mile radius, although one suspected case was detected in a South Bronx resident. Another victim lives in lower Manhattan but works in the Whitestone area.

Health officials said they planned to go door to door in the neighborhood, passing out information and cans of repellent.

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[HN01I7][GDrive]

1999 (Sep 12) - E. Coli AND the new encephalitis in New York State

Does not mention Dr. McNamara, but this is happening at the same time... very interesting

Full newspaper page : [HN01L9][GDrive]

1999-09-12-elmira-star-gazette-pg-7-c / 1999-09-12-elmira-star-gazette-pg-7-c-clip-ecoli-and-virus.jpg

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Encephalitis, E. coli outbreaks challenge state health officials

■ Investigators are seeking the sources of two deadly illnesses.

The Associated Press

ALBANY — Facing two major outbreaks, state Health Department workers have become detectives to root out the source of the deadly illnesses in New York City and upstate.

"They have to do a lot of what they call shoe leather epidemiology," said Donald Dixon Despommier, a microbiology professor at Columbia University's School of Public Health. The work requires seemingly unending walking and field interviews.

In New York City, at least nine cases of mosquito-borne encephalitis have been confirmed with another 89 under investigation. It has killed two people in Queens and one in Brooklyn, all senior citizens. The disease has never been recorded in the city before.

Officials ordered pesticide spraying from helicopters and on the ground. "The more dead mosquitoes, the better," Mayor Rudolph Giuliani said.

Upstate, 732 people have been sickened and one child and one adult have died after the largest E. coli outbreak in state history — and one of the worst nationally. Health officials said that reports of illness are still coming in and up to 1,000 people may be infected.

That outbreak was likely caused by the contamination of drinking water with cow manure at the Washington County Fair, about 35 miles north of Albany.

Investigators have yet to find the original carrier for either sickness, which would help determine how it happened and what could be done to prevent it from recurring.

State health officials are doing the best job they can under the circumstances, said Dr. David Swerdlow, a medical epidemiologist at the Centers for Disease Control in Atlanta, Ga.

"Unfortunately, sometimes these things do take a little bit of time," Swerdlow said. "The New York state Health Department is a very good

> "Unfortunately, sometimes these things do take a little bit of time. The New York state Health Department is a very good health department and they are certainly capable of investigating an outbreak of E. coli 0157:H7."
>
> Dr. David Swerdlow, Centers for Disease Control

early as Aug. 26, but the first samples they were able to take were from Sept. 3, meaning they're not testing the same water that people sickened by the bacteria drank.

Just about everything went wrong at the fair to contribute to the apparent contamination.

A freak thunderstorm roared on Aug. 26, which possibly drummed the cow manure into the ground.

The yearlong drought should have made the ground hard enough to keep water from soaking into the 20-foot-deep suspect well. But the ground had just been dug up and softened for the installation of two nearby wells and was ready to soak up E. coli-infected water.

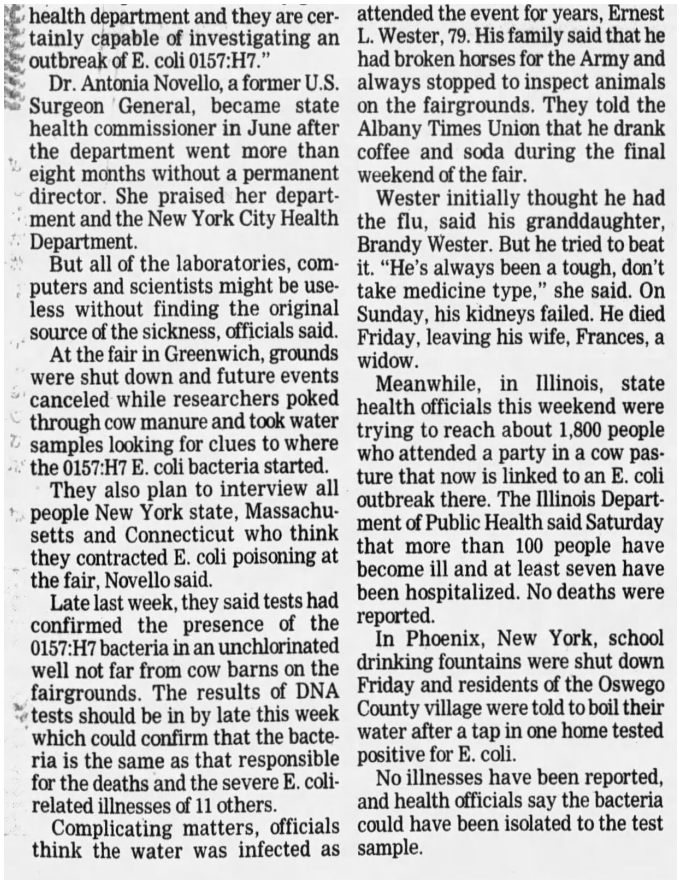
The well which health officials think the deadly strain came from wasn't even supposed to be used. But this summer's drought forced it into service, Novello said. The weekend was unusually hot and muggy, drawing people to iced drinks and frozen treats.

"It's like an act of God," Novello said.

Complicating matters, health officials said late last week that they confirmed more than two dozen cases of campylobaceteriosis among Washington County Fairgoers. Its symptoms and means of transmission mirror those of E. coli.

The first victim of the fair's water was 3-year-old Rachel Aldrich. Her parents buried her Friday.

The second casualty was a World War II veteran who faithfully



health department and they are certainly capable of investigating an outbreak of E. coli 0157:H7."

Dr. Antonia Novello, a former U.S. Surgeon General, became state health commissioner in June after the department went more than eight months without a permanent director. She praised her department and the New York City Health Department.

But all of the laboratories, computers and scientists might be useless without finding the original source of the sickness, officials said.

At the fair in Greenwich, grounds were shut down and future events canceled while researchers poked through cow manure and took water samples looking for clues to where the 0157:H7 E. coli bacteria started.

They also plan to interview all people New York state, Massachusetts and Connecticut who think they contracted E. coli poisoning at the fair, Novello said.

Late last week, they said tests had confirmed the presence of the 0157:H7 bacteria in an unchlorinated well not far from cow barns on the fairgrounds. The results of DNA tests should be in by late this week which could confirm that the bacteria is the same as that responsible for the deaths and the severe E. coli-related illnesses of 11 others.

Complicating matters, officials think the water was infected as

attended the event for years, Ernest L. Wester, 79. His family said that he had broken horses for the Army and always stopped to inspect animals on the fairgrounds. They told the Albany Times Union that he drank coffee and soda during the final weekend of the fair.

Wester initially thought he had the flu, said his granddaughter, Brandy Wester. But he tried to beat it. "He's always been a tough, don't take medicine type," she said. On Sunday, his kidneys failed. He died Friday, leaving his wife, Frances, a widow.

Meanwhile, in Illinois, state health officials this weekend were trying to reach about 1,800 people who attended a party in a cow pasture that now is linked to an E. coli outbreak there. The Illinois Department of Public Health said Saturday that more than 100 people have become ill and at least seven have been hospitalized. No deaths were reported.

In Phoenix, New York, school drinking fountains were shut down Friday and residents of the Oswego County village were told to boil their water after a tap in one home tested positive for E. coli.

No illnesses have been reported, and health officials say the bacteria could have been isolated to the test sample.

[HN01LA][GDrive]

1999 (Sep 25) - NYTimes : "African Virus May Be Culprit In Mosquito-Borne Illnesses"

By Jennifer Steinhauer / Sept. 25, 1999 / [HN01I8][GDrive]

The mosquito-borne illness that has killed three people in New York City may not be St. Louis encephalitis, as experts have thought, but rather a similar disease that has never been diagnosed in the Western Hemisphere, Government scientists said yesterday.

The disease, West Nile virus, was discovered this week in dozens of birds that died in and around the Bronx Zoo this summer. The virus is indigenous to Asia and northern and eastern Africa and occasionally makes its way to Europe, but has never been found in birds or people in this hemisphere, said **[Dr. Duane J. Gubler (born 1939)]**, the director of the division of vector-borne infectious disease at the Federal Centers for Disease Control and Prevention.

Before yesterday, the illness that has infected at least 14 people in New York City and 4 in Westchester County was believed to be St. Louis encephalitis, which was surprising enough because that disease is rarely found outside the Southeastern United States.

Scores of tests will need to be completed before health officials will be able to say for sure whether the infections were caused by some type of West Nile virus or St. Louis encephalitis. Officials at the C.D.C. said they hope to have the tests completed sometime next week.

But the discovery of the West Nile strain in the birds has cast some doubt on the original diagnosis, officials said. "West Nile virus is closely related to St. Louis encephalitis, the virus we thought was causing the outbreak," **[Dr. Duane J. Gubler (born 1939)]** said. The discovery of the dead birds, he said, "has caused some confusion as to whether that is true now."

The finding of the West Nile virus in New York stunned experts, who have no theory so far on how the strain found its way here.

If officials confirm that the disease that sickened New Yorkers was the West Nile virus, it would have no practical effect on those who have fallen sick, or on the efforts to control the disease from spreading. Both illnesses are transmitted from birds to mosquitoes to people by the same type of mosquitoes, and the same insecticide would be used.

The symptoms of both illnesses are virtually the same and are usually mild, though in rare cases they can cause neurological disorders and even death.

Experts said those severe cases -- which generally involve the elderly, children under 5 and those with compromised immune systems -- are even less frequent with West Nile virus.

"The important message to get across is that all the public health and responsive measures implemented are the same," said Tom Skinner, a spokesman at the C.D.C.

But from an epidemiological standpoint, the discovery of West Nile virus in New York is remarkable. "This is exciting," Dr. Gubler said. "We prefer it didn't occur, but it is interesting."

"What we are seeing in the waning years of the late 20th century is the transport and movement of these viruses in new areas," he added. "And you get a virus moving into a new area, the entire mosquito population is susceptible."

Yesterday, two elderly women were added to the list of confirmed cases of the mosquito-borne illness. One of the women, who is 90 years old and in critical condition, was the first case to be confirmed in Manhattan since the outbreak began in August. Officials said the woman, who lived near Central Park, apparently contracted the virus in Manhattan, but it was not clear where.

Now, old and new blood samples from people with symptoms, trapped mosquitoes, as well as roughly 450 birds will be examined to see whether the West Nile virus found in the birds was what has caused the New Yorkers to become ill.

It is not surprising that the diagnosis of those who have taken ill could have been mistaken, experts said -- the illnesses appear very similar, and few would have thought to look for an illness whose closest brush with this country was in France in the 1960's. The worst modern outbreak of the West Nile virus was in Romania in 1996, when 90,000 cases were confirmed and 17 people died.

The discovery of the West Nile virus came about in large part by some dogged sleuthing by a head of the department of pathology at the Bronx Zoo, Federal officials said. That pathologist, **Tracey McNamara, said she became concerned in late July when she heard that a large number of crows had been dying around the zoo. Then, birds at the zoo began to go. Over Labor Day weekend, the zoo lost a Guanay Cormorant, three Chilean flamingos, a pheasant and a bald eagle. Because these deaths followed those of some crows, experts strongly doubt that the disease originated in the zoo.**

Autopsies of the birds revealed streaking in the heart and brain hemorrhages. An equine encephalitis was suspected, but Dr. McNamara was skeptical, because the emus in her care, which are very susceptible to that illness, were thriving.

When two more flamingos died on Sept. 9, she sent samples to laboratories of the United States Department of Agriculture, which ruled out all the common bird viruses. Stymied, they called in an equine virologist to do further testing. The C.D.C. and doctors at an Army lab in Maryland were also sent samples.

Yesterday, the C.D.C. discovered the West Nile virus link."Everyone was shocked," Dr. McNamara said. "It's possible it came in with a human being or a smuggled bird, and I am not at all certain it will ever be established how it got here."

The Mayor's Office of Emergency Management, which has been in charge of the spraying, would not comment on the C.D.C. news.

As Westchester County prepared to continue its spraying last night, many Jewish residents voiced concern that such efforts would interfere with the start of the Succoth holiday, which requires observants to sit in an open air tent or hut to take their evening meal.

Victoria Hochman, a spokeswoman for the Westchester County Executive's office, said the agency was aware of the holiday and had contacted regional Jewish centers, "but we have decided it is a health emergency and we have to go with the spraying for the good of everyone."

Connecticut officials said they would not spray any more until receiving results from recent mosquito testing, and New York City completed its second round on Thursday night and would also wait to see when and if it would need to spray again.

1999 (Sep 26) - NYTimes : "Exotic Virus Is Identified In 3 Deaths"

By Andrew Jacobs / Sept. 26, 1999 / [HN01I9][GDrive]

The mosquito-borne illness that has killed three people in New York City is not St. Louis encephalitis, but a similar disease that has never before been found in the Western Hemisphere, health officials said early this morning.

Scientists in two states who have been examining brain tissue from the people killed by the outbreak of encephalitis confirmed that it was caused either by West Nile virus, from Africa, or Kunjin virus, a variant that is found only in Australia.

Since last month, 14 people in New York City and Westchester County have been diagnosed with encephalitis, although it was unclear whether the two strains identified today are responsible for all the cases.

An official with the Centers for Disease Control and Prevention in Atlanta, and a researcher at the University of California at Irvine said this morning that the closely related strains had been positively identified in the brain matter of New York City residents killed by encephalitis. Until now, neither strain had been found in birds or people in this hemisphere.

[**Dr. Duane J. Gubler (born 1939)**], director of the C.D.C.'s division of vector-borne infectious diseases, said that the agency's lab found the West Nile virus in the brain of one of the victims early last week. "It was a total surprise to us," he said. "There was no reason to suspect that we'd find West Nile here."

[**Dr. Walter Ian Lipkin (born 1952)**], the director of the Emerging Diseases Laboratory at the University of California at Irvine, said his colleagues had identified the virus in the brains of three victims from Queens that had been sent to his lab last week. "It's very odd that they've been found here," he said. "On the other hand, viruses evolve and they have the capacity to adapt themselves." Dr. Lipkin emphasized that the genetic difference between West Nile virus and Kunjin virus is so slight that the two are practically the same strain.

Until yesterday, New York health officials said they had found the West Nile virus only in birds that had died in and around the Bronx Zoo. But this morning, after the C.D.C confirmed the discovery of the virus in humans, a state official acknowledged that officials had known about the findings of [**Dr. Walter Ian Lipkin (born 1952)**] and Dr. Gubler for several days, but wanted to conduct more tests.

John Signor, a State Health Department spokesman, said the ageny was planning to release the information tomorrow after more testing confirmed the earlier findings. "The identification of a virus is a complex process," he said. "We felt more testing needed to be done."

Despite the discovery that the encephalitis outbreak had been caused by a different virus, officials said that the public health measures undertaken to date would not change: the spraying of mosquitos and warnings to reduce exposure to the insects remains. Mr. Signor said that the treatment for those already infected with the disease would remain the same.

The Federal Centers for Disease Control and Prevention said Friday night that its scientists had identified a West Nile-like virus in four birds from New York that they had tested in their laboratory in Fort Collins, Colo.

The birds included two flamingos and an Asian pheasant from the Bronx Zoo, and a crow reported to be from Scarsdale, said Kristine Smith, a spokeswoman for the New York State Health Department.

Yesterday, city health officials continued collecting dead birds, which they had started to do on Friday. Special telephone lines and asked residents to call in sightings of dead birds. By 4 P.M. yesterday, the City Health Department had received two dozen reports of dead birds in all five boroughs, and sent out staff members from its pest control division to retrieve specimens, said a spokeswoman, Sandra Mullen.

"The birds will be kept on dry ice and brought to our Bureau of Laboratories," she said, adding that most of the dead birds reported were crows, which have been dying in large numbers since the beginning of the outbreak. Health officials in Suffolk County collected five dead crows on Friday, and sent them for analysis to the State Department of Environmental Conservation yesterday, said the director of public health, Mahfouz Zaki.

And after receiving reports at 5:30 P.M. on Friday that earlier samples from dead crows tested positive for an encephalitis-like disease, they sprayed South Huntington and Huntington Station with pesticides.

In Manhattan, a team from the Parks Department swept through Central Park on Friday night searching for dead birds but found none, said Parks Commissioner Henry J. Stern. He said that more teams would be dispatched, but that all park staff members had been notified and were on the lookout.

News that the infection was either West Nile virus or an Australian variant has deepened an epidemiological mystery that began in July with the deaths of numerous crows around the Bronx Zoo.

A pathologist at the zoo, Tracey McNamara, first noticed that large numbers of crows were dying, reaching 40 by August. Then, birds at the zoo, including a guanay cormorant, three Chilean flamingos, a pheasant and a bald eagle, died.

Though the symptoms of both diseases are similar, and the steps to combat them are the same, the mosquitoes that carry them can differ, health officials said.

Ms. Smith of the State Health Department said the mosquitoes that carry St. Louis encephalitis and West Nile viruses, the Culex pipiens, are generally active from dusk to dawn. But another type of mosquito known to carry the West Nile virus, the Aedes vexans, is also active during the day, she said.

The symptoms of both illnesses are usually mild, but in some cases can cause neurological disorders and even death.

1999 (Sep 28) : NYTimes : "THE DOCTOR'S WORLD : THE DOCTOR'S WORLD; Encephalitis Outbreak Teaches an Old Lesson"

By Lawrence K. Altman, M.d. / Sept. 28, 1999 / [HN01IA][GDrive]

When you hear hoofbeats, don't think of zebras.

To doctors, the axiom is a call to focus on common ailments and not waste time on the exotic. But on those rare occasions when they do detect a zebra, doctors say they need to take extra steps in their investigation to make sure they have identified the right one.

A case in point is the encephalitis outbreak that is blamed for at least three deaths in New York City. Earlier this month, the Centers for Disease Control and Prevention in Atlanta and the New York City Health Department said the cause was the mosquito-borne St. Louis virus, which had never been identified in New York City before.

But last weekend the C.D.C., responding to findings from laboratory tests performed by Dr. Tracey McNamara, a pathologist at the Bronx Zoo, announced that the outbreak was caused by an even rarer zebra: the West Nile virus from Africa. [Dr. Walter Ian Lipkin (born 1952)], of the Emerging Diseases Laboratory at the University of California at Irvine, confirmed the findings.

The viruses are closely related, causing virtually the same type of inflammation of the brain. But the West Nile virus had never before been detected in the Western Hemisphere.

'C.D.C. would not have made the diagnosis of West Nile virus as quickly without Dr. McNamara's persistent medical sleuthing," [Dr. Duane J. Gubler (born 1939)], the head of the C.D.C.'s arbovirus field station in Fort Collins, Colo., said in an interview.

The change in diagnosis, though not important in terms of the spraying and other public health measures taken to combat the outbreak, was scientifically embarrassing to the C.D.C., the premier Federal agency that is responsible for tracking infectious diseases in this country.

In recent years, C.D.C. and other health officials have led a campaign against the threat of new and emerging infections, warning doctors to expect more infectious disease "zebras," like the sudden appearance of old microbes in new areas.

In fact, health officials thought they had scored a coup when they diagnosed the mysterious illness as the St. Louis virus. The disease is usually found in the Southeastern states, and humans are usually bystanders in such infections. Birds are the principal reservoir for the arboviruses, but they do not become sick. Instead, mosquitoes transmit the viruses to people, who may become ill.

In hindsight, the concurrent deaths of an unusual number of birds in the city has turned out to be an important but underestimated clue. Federal and local medical sleuths did not immediately relate the bird die-off to the human outbreak because West Nile, St. Louis and similar encephalitis viruses generally do not kill birds.

Now the C.D.C. is retesting blood and spinal fluid from patients who had symptoms of encephalitis and who did not show evidence of the St. Louis virus.

The new findings mean that health workers need to investigate a number of other possibilities, [Dr. Duane J. Gubler (born 1939)] said.

A critical one is that the C.D.C. can no longer be certain that the West Nile virus has never been present in the United States, because the Federal scientists never specifically checked for it in earlier outbreaks and individual cases. In testing mosquitoes and specimens from humans with encephalitis, the C.D.C. routinely checks all types of viral encephalitis known to have caused infection in the Western Hemisphere, Dr. Gubler said.

There can be considerable overlap in findings from the laboratory tests unless extra steps are taken to distinguish between the many types of encephalitis-causing arboviruses. In a sense they are all one virus, but with many variations that can be detected in the laboratory. The encephalitis they cause is the same disease, although there can be subtle differences in the type of brain damage they produce.

The viruses occur in different geographic areas, and by scientific custom they are named for the area where they were discovered. They include Murray Valley encephalitis in Australia, Japanese encephalitis, and Rocio virus in Brazil and Argentina. They are distinguished in the laboratory by small differences in the proteins in the covering of the virus known as its envelope.

"We don't include West Nile, Japanese and other encephalitis viruses because they have never been known to be here," Dr. Gubler said, adding that in the New York outbreak, "we had tunnel vision on St. Louis virus, because all the clinical, epidemiological, laboratory and geographic features pointed to St. Louis."

"We've learned a lesson here," Dr. Gubler continued. "We've got to be more open-minded.

"Once we get past this crisis, we are going to have to go back and check specimens from C.D.C. and state health departments to see if it has been here, and if so for how long."

The West Nile virus was discovered in 1937 in Uganda. Since then "it has rarely reared its head," [Dr. Duane J. Gubler (born 1939)] said, though outbreaks and occasional cases have been reported from Israel, France, Romania and elsewhere in Europe. Presumably the virus was carried northward by birds migrating from Africa.

After a nearly two-decade silence, West Nile virus caused a large outbreak in Romania in 1996. This year, West Nile virus apparently caused illness among humans in Volgograd, Russia, though Dr. Gubler said he had received no reply to an inquiry he has made to Russian scientists about the outbreak. Lack of communication among scientists thwarts efforts to learn why a virus is spreading.

When birds began dying in and near the Bronx Zoo, Dr. McNamara, the pathologist there, initially thought the deaths might be a result of viruses that cause avian influenza, Newcastle disease, fowl cholera or Eastern equine encephalitis, Dr. Gubler said.

Dr. McNamara sent the specimens to the Department of Agriculture Laboratory at Ames, Iowa, where scientists eliminated those candidates. Because the Ames laboratory lacked the material to test for the pertinent arboviruses, they forwarded the specimens to the C.D.C., Dr. Gubler said.

Dr. Gubler said scientists also needed to investigate whether the deaths of the birds indicated that West Nile virus had become more virulent.

Also, the virus has been shown to stay in the blood of humans longer than other types of encephalitis virus, so that mosquitoes are more likely to pick it up and transmit it to other humans. But whether such transmissions occur on a regular basis is not known, Dr. Gubler said.

A main focus will be to prevent a recurrence of the outbreak in New York next summer. Scientists do not know whether the virus can persist in infected mosquitoes while they hibernate over the winter, Dr. Gubler said. In the absence of definitive information, health officials will consider the need to begin control of storm drains to decrease the probability of infected mosquitoes' surviving over the winter.

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Sep 29

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1999 (Oct 11) - NYTimes : "In New York Outbreak, Glimpse Of Gaps in Biological Defenses"

By Jennifer Steinhauer and Judith Miller / Oct. 11, 1999 / [HN01IB][GDrive]

On Sept. 23, nearly three weeks after **Mayor Rudolph W. Giuliani** announced that New York was being attacked by a mosquito-borne virus often found in the Southern United States, senior Federal health officials convened a conference call to hear some startling news.

The scientist who initially identified the virus as St. Louis encephalitis said he had changed his mind, an official who was present said. It was probably a form of West Nile virus, a disease never before seen in the Western hemisphere.

Stunned by the sudden turn, senior officials at the Federal Centers for Disease Control and Prevention peppered their colleague with questions. Was he sure? What testing was done? Was it repeated?

The officials decided not to inform New York of the new finding immediately. They sent the scientist, **[Dr. Duane J. Gubler (born 1939)],** back to his laboratory in Fort Collins, Colo., to do more tests. He reconfirmed the conclusion, and the next morning, calls went out to New York City.

Federal public health officials were chagrined but not overly worried by the sudden switch in diagnosis. West Nile virus is slightly less virulent than St. Louis encephalitis, and the city was already eradicating the mosquitoes that transmitted the disease, whatever it was.

But the announcement caused concern among many of the scientists and Government officials who are working to strengthen the nation's defenses against biological warfare. They saw the New York outbreak as a dress rehearsal, a test of how public health officials could detect and deal with the sudden spread of a disease not typically found in the United States. To them, the missed diagnosis was unnerving.

''The encephalitis outbreak in New York is a powerful lesson for public health authorities,'' said Alan P. Zelicoff, a senior scientist at the Federal Center for National Security and Arms Control at Sandia National Laboratories in New Mexico. ''It is a sobering, not so reassuring, demonstration of the inadequacies of the U.S. detection network for emerging diseases.''

Local and Federal officials agree there is much to be learned from New York's experience that can be applied equally to defense against biological warfare and the emerging need to deal with the global spread of virulent disease.

While the public health system performed well in many regards, officials point to several key missteps. For instance, in testing samples from the initial victims, the C.D.C. screened only for six viruses common in this country. The scientists did not test for several that have been linked to foreign epidemics or germ warfare.

In addition, the scientist holding a key clue to the true identity of the virus, a bird specialist who had noticed the unexplained deaths of crows near the Bronx Zoo, could not get anyone at the C.D.C. to return her calls for a week. In the end, she turned to several other Government laboratories, including a military research center, to confirm her suspicions that the C.D.C. had the wrong virus.

Finally, the myriad state, local and Federal agencies involved in the investigation did not always communicate well with one another.

''We've learned about the need for, and benefits of, improvements in laboratory coordination,'' said Scott Lillibridge, who leads the C.D.C.'s Bioterrorism Preparedness and Response Program. ''We've also learned how helpful surveillance can be, particularly in beginning to track the beginning, extent or progress of an infectious disease outbreak.''

Over the past several years, the Federal Government has invested hundreds of millions of dollars on a national program to defend against biological terrorism. Several officials said that in light of New York's experiences, much more money should be invested in the public health systems detecting epidemics.

The Discovery : 2 Elderly Patients Sound an Alarm

On Aug. 23, **Dr. Deborah S. Asnis,** an infectious disease specialist at Flushing Hospital Medical Center in Queens, called the city's Health Department with some distressing news -- two elderly patients had come in with symptoms that looked like a neurological illness -- fever, muscle weakness and confusion.

Dr. [Dr. Marcelle C. Layton (born 1958)], who heads the Health Department's Bureau of Communicable Diseases, told Dr. Asnis to send samples to the State Department of Health, and then called the C.D.C. to warn them that something -- maybe botulism -- was happening in New York City. As the week went on, the number of sick people was starting to mount.

The case was assigned to Dr. Gubler, one of the C.D.C.'s experts on diseases spread by insects. His suspicions focused on St. Louis encephalitis, which is often found in the Southeastern United States.

To confirm his theory, **[Dr. Duane J. Gubler (born 1939)],** tested the samples for antibodies against six viruses transmitted by insects and commonly found in the United States. The tests came back positive for St. Louis encephalitis, a close relative of West Nile fever.

The C.D.C. announced on Sept. 3 that tests of blood and spinal fluid had confirmed Dr. Gubler's suspicion. The Mayor called a hasty news conference in Queens. His office of emergency management took the helm and began a $6 million campaign to wipe out New York's mosquitoes.

Within days, New York City had practically cornered the nation's supply of insect repellent, and 250,000 brochures about the disease were printed and distributed, along with the free repellent, by 500 city employees.

And New Yorkers quickly began to debate which thing unknown to their region they feared the most -- St. Louis encephalitis, or malathion, the insecticide that began to rain down from clacking helicopters.

At the Bronx Zoo, officials were worrying about what seemed to be a serious, but separate biological event. **Since July, zoo officials had been receiving calls from people in the Bronx and Queens about dead birds. Four days after the city's St. Louis encephalitis announcement, several exotic birds at the zoo were dead. But not emus. And that made Tracey S. McNamara nervous.**

Dr. McNamara, who is the head of the department of pathology at the zoo, knew that St. Louis encephalitis, which is carried by birds and transmitted through mosquitoes, does not normally kill the birds.

She considered the possibility that the birds were being killed by another common form of encephalitis. But that disease is deadly to emus, which were thriving. Something much more complicated was afoot, she reasoned.

The pathologist took to her lab, spending 12 hours a day analyzing bird samples. What she found was so disturbing, she said, that she called the C.D.C to alert them. The dead birds were bleeding from the brain and had badly damaged hearts. Was a similar virus infecting people?

"We had dead people and dead birds and I thought we needed to pursue this," she said.

She also contacted the National Veterinary Services Lab in Ames, Iowa, part of the United States Department of Agriculture, to study the samples. Around the same time, Ward Stone, the chief wildlife pathologist for the State Department of Environmental Conservation, began noticing large numbers of dead crows, and alerted his counterparts in New Jersey and Connecticut that something strange was happening to the local bird population.

While the C.D.C. agreed to take some of Dr. McNamara's samples, agency workers then did not return her daily calls for a week. "I got voice mail," she said. In fairness, she acknowledged, dead people were taking precedence.

But the agency seemed slow to grasp the possible link to the birds' illness. Dr. McNamara is circumspect about criticizing her colleagues at the C.D.C., but she said, "I would say a lesson to be learned was that there was some tunnel vision."

In the Federal Government's dress rehearsals of how a city might detect and handle a sudden outbreak of disease, officials had foreseen many different scenarios. But no one had anticipated an outbreak in which crucial evidence would be uncovered by a wildlife specialist.

"How we respond to introduced diseases in the wildlife perspective is not very well resolved," said Michael Samuel, a research project leader at the National Wildlife Health Center, a unit of the Department of Interior, which is also researching New York's outbreak. "I don't know that we as a nation have a contingency plan in place."

Dr. Stephen Ostroff, the acting deputy director for science and public health at the C.D.C., said that confusion is a normal part of an emerging diseases investigation.

"Anyone who continues to maintain that there was some mistake here doesn't understand the way science proceeds in outbreak investigations," Dr. Ostroff said. "You won't hear any apologies from me." He said he was not aware of Dr. McNamara's repeated attempts to reach C.D.C. officials.

The Breakthrough : Military Minds Turn to Outbreak

Back in the Bronx, Dr. McNamara was getting impatient. The veterinary lab in Ames had already exhausted its capabilities, but could not specifically identify the strange virus that was killing the birds.

Dr. McNamara sent more samples to the C.D.C., but she also put in a call to the United States Army Medical Research Institute of Infectious Diseases, looking for a favor.

Could the laboratory, which does not usually get involved with civilian requests, take a peek at her samples? Dr. McNamara, it turned out, had some chits to call in. She had recently attended the wedding of the pathologist who performs such tests. The lab agreed to take a look.

The system was working, after a fashion. The military's finest minds on bioterrorism had turned to New York's outbreak.

On Sept. 21, Dr. McNamara sent the samples to the lab by overnight mail. Within a day, the Army's unit, which is based in Fort Detrick, Md., confirmed that a virus of a very different sort was killing birds.

Meanwhile, the C.D.C. was beginning to make the connections. On the same day, officials at the agency called Dr. McNamara and said they wanted more material. She sent it out that evening.

On Sept. 24, scientists at the Army lab told her that the tests of bird samples for West Nile virus "really lit up," Dr. McNamara said.

The C.D.C., with help from each of the labs involved, had come to the same conclusion. That day, the agency announced that birds were dying in New York City, and a West Nile-like virus was the reason. The scientists strongly suspected that the humans had been killed by the same virus, but had yet to confirm it.

The answer came, strangely enough, from California. **The New York State Department of Health, without telling the C.D.C.,** sent some of the brain tissue from people believed to have died of St. Louis encephalitis to a lab run by [Dr. Walter Ian Lipkin (born 1952)], a scientist at the University of California in

Irvine who had bumped into state scientists at a conference in Albany.

On Sept. 24, [Dr. Walter Ian Lipkin (born 1952)] found that a form of West Nile virus -- which the C.D.C. now believes is similar to a strain previously found in Europe -- had sickened the New York patients. Soon after, the C.D.C. reached the same conclusion.

The words "West Nile virus" had little significance in New York. But in Washington, they raised red flags among American intelligence officials who follow bioterrorism, an incident reported by this week's New Yorker magazine.

In April, a supposed associate of Saddam Hussein published a book in Britain in which he claimed that the Iraqi leader had threatened in 1997 to unleash a form of West Nile virus against his enemies.

A closer look at the Iraqi biological weapons program found no evidence that Baghdad had ever experimented with the virus and intelligence officials, along with arms inspectors who had visited Iraq's laboratories, concluded the report was baseless.

Last night, the C.D.C. issued a statement saying it believed the West Nile outbreak was the work of "Mother Nature."

The eerie coincidence underscored what officials said was a new reality.

"Sadly the world has changed. The threat of bioterrorism is real and growing," said Dr. Margaret Hamburg, an assistant secretary at the Department of Health and Human Services who was previously head of the New York City Health Department. "Whenever a new or unexpected disease emerges in an outbreak such as this, it would be irresponsible not to at least consider the possibility of bioterrorism."

Congress, the officials said, has been slow to spend money on detecting outbreaks, even as they invest hundreds of millions in other bio-defense efforts and vaccines.

This year, lawmakers for the first time approved $120 million to strengthen the C.D.C.'s programs for education and monitoring disease. However, the $40 million set aside for improving state and local health detection was only disbursed late last month, as a West Nile-like virus was spreading through New York.

"We're spending hundreds of millions on questionable stockpiles of vaccines and antibiotics," said Dr. Zelicoff, the scientist at the Sandia Laboratory. "We should be improving the ability of local public health officials to recognize and report strange illnesses to a central authority that can quickly tell them what to do about it."

2020 (Sep 03) - ABC News : "As COVID-19 continues, experts warn of next pandemic likely to come from animals"

ByDr. Jonathan Chan andSony Salzman / September 3, 2020, 5:02 AM / Source : [HM001E][GDrive]

Included - **Dr. Tracey S. McNamara (born 1954)** ; Dr. Peter Daszak (born 1965)

Millions of deaths each year can be traced back to animal diseases, experts say.

Early cases of COVID-19 are believed to be linked to a live-animal market in Wuhan, China.

Even as the COVID-19 pandemic rages on, experts are warning that the next pandemic could arrive at any moment, and again, it could come from animals. To prevent history from repeating itself, experts say governments need to start investing heavily in pandemic prevention efforts.

That means deploying teams of biologists, zoologists and veterinarians to begin monitoring animals and the people who interact with them -- an army of scientists tasked with stamping out the next deadly virus before an animal disease balloons into a global pandemic.

According to the World Health Organization, approximately 1 billion cases and millions of deaths each year can be traced back to diseases originating from animal populations.

In the past three decades, researchers have found more than 30 bacteria or viruses that are capable of infecting humans. Over three quarters of those are believed to have come from animal populations.

And while the current pandemic may feel like a very rare happening, scientists say the pace of these pandemics is accelerating dramatically thanks to humans' ever-encroaching proximity to wildlife.

Beginning with SARS almost two decades ago and followed by West Nile, Ebola, Zika and currently, COVID-19, many of these pandemics originated with species of bats, and can be spread between people through coughing and sneezing or through insects such as mosquitoes.

"The time between these outbreaks is getting shorter and shorter," said [**Dr. Tracey S. McNamara (born 1954)**], a professor of pathology at Western University of Health Sciences College of Veterinary Medicine.

And it's becoming increasingly clear that these viruses aren't just a threat to our health -- they're also a threat to the global economy.

"We are only able to sustain an outbreak maybe once every decade," said [Dr. Peter Daszak (born 1965)], president of EcoHealth Alliance. "The rate we are going is not sustainable."

The COVID-19 pandemic did not surprise McNamara and Daszak. For decades, they, and other scientists, have been warning politicians and the public that wild and domestic animals -- and the viruses they carry -- pose a threat to humanity.

Without proper monitoring and surveillance of these creatures, they warned, we would be ill-prepared to stop a virus from spreading across the globe. [Dr. Tracey S. McNamara (born 1954)] was part of the "Red Dawn" group, a now-infamous email chain of top scientists that asked powerful U.S. government officials to mount a more vigorous domestic defense back when coronavirus was still considered a problem confined to China's borders.

And Daszak, who has spent much of his career hunting for the next pandemic-causing virus in bat caves in Asia, saw U.S. government funding for his science slashed back in April.

Perhaps most ominously, a U.S.-funded early-warning system called PREDICT, which was launched in 2009 in response to the H5N1 bird flu outbreak, saw its funding quietly lapse in late 2019. [Dr. Peter Daszak (born 1965)], whose group EcoHealth Alliance received some funding from PREDICT, lamented its loss at the time, arguing it's much cheaper for governments to stamp out small outbreaks than try to control a massive pandemic.

But there are some signs now, with the coronavirus pandemic in full swing, that funding to these crucial programs is coming back. PREDICT was granted an emergency six-month extension, and a new program, called Stop Spillover, is slated to launch in October.

And while it may be too late to stop this coronavirus in its tracks, scientists say the threat of the spillover event grows more imminent each year. As our population continues to expand, the interactions between humans and wildlife grow closer and closer. Cutting down forests and altering habitats push animals out of their own homes and deeper into human communities.

Poorly developed hygiene and sanitation systems can make it more likely for germs to build up. With humans and animals living in such close proximity, bacteria and viruses can easily jump from one species to another.

Once people become infected, the increasing interconnectedness of our world makes the spread of the disease easier. People and domestic animals are able to traverse the globe in a matter of hours. Illegal trade of exotic animals can move across borders undetected, carrying with them deadly bacteria and viruses.

"Several epidemiological drivers have been identified that make bacteria and viruses from animal populations suitable to emerge in a susceptible population. These drivers include climate change, industrial development, ecosystem change and social inequality," said Dr. John Brownstein, an epidemiologist, chief innovation officer at Boston Children's Hospital and contributor to ABC News.

So how do bacteria or viruses go from infecting animals to infecting humans?

One of the most common ways is coming into direct contact with the bodily fluids of an infected animal, such as a bat. This includes saliva, blood, urine and feces. Indirectly, people can come into contact with these through soil, plants, in animal habitats or by eating or drinking something that is contaminated.

Mosquitoes and ticks are two animals that are known to easily spread bacteria and viruses, including West Nile and Zika virus. After biting an infected person, mosquitoes and ticks are able to spread the virus to every subsequent person they bite.

According to [**Dr. Tracey S. McNamara (born 1954)**], rabies and plant diseases that can damage crops are the two diseases under surveillance in the United States.

"We don't think about it in the United States as much," said Dr. Christine Johnson, a professor of epidemiology and ecosystem health at the University of California--Davis School of Veterinary Medicine and director of the EpiCenter for Disease Dynamics. "There is a lot of active work to maintain vigilance for diseases. There is currently an outbreak of Ebola going on right now in the Democratic Republic of the Congo."

In Southeast Asia, efforts at identifying emerging diseases are focused on testing for viruses in both animals and people, especially in places where viruses can spill over, or find a new host, such as in humans, explained Daszak.

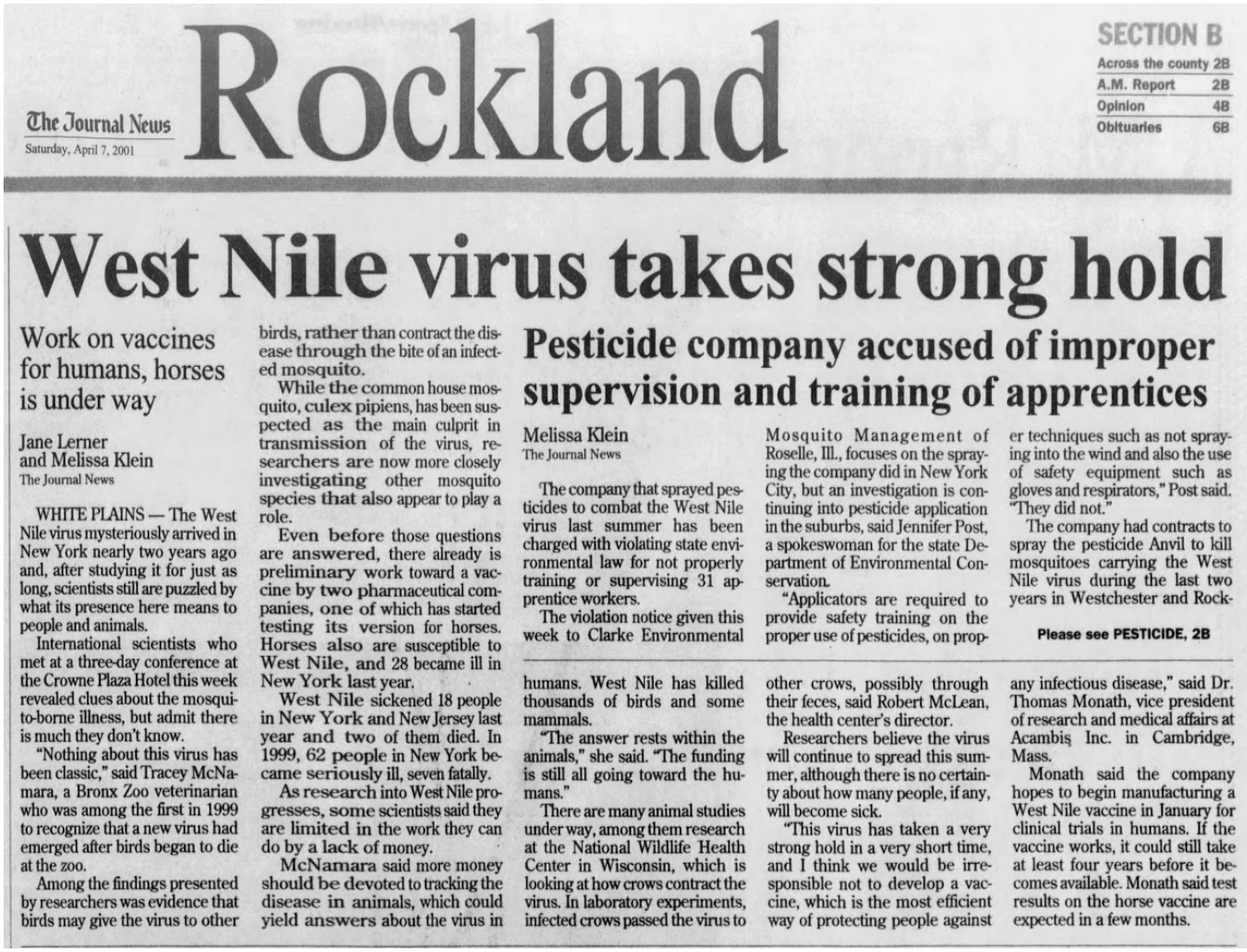
"We only know how to look for known diseases," said [**Dr. Tracey S. McNamara (born 1954)**]. Her vision is for a disease surveillance system to focus syndromes, a group of symptoms that are known to occur together.

By empowering veterinarians to share their findings with each other, McNamara hopes that this can help experts quickly identify the source of an outbreak before it spreads.

"Future efforts in zoonotic disease surveillance should include strong integration of animal and human agencies of health, including wildlife, agriculture and public health," added Brownstein.

2001 - (April 27) - with Thomas Monath

Also see : **Dr. Thomas Patrick Monath (born 1940)** / Full newspaper page : [HN01IC][GDrive]



The Journal News
Saturday, April 7, 2001

Rockland

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West Nile virus takes strong hold

Work on vaccines for humans, horses is under way

Jane Lerner
and Melissa Klein
The Journal News

WHITE PLAINS — The West Nile virus mysteriously arrived in New York nearly two years ago and, after studying it for just as long, scientists still are puzzled by what its presence here means to people and animals.

International scientists who met at a three-day conference at the Crowne Plaza Hotel this week revealed clues about the mosquito-borne illness, but admit there is much they don't know.

"Nothing about this virus has been classic," said Tracey McNamara, a Bronx Zoo veterinarian who was among the first in 1999 to recognize that a new virus had emerged after birds began to die at the zoo.

Among the findings presented by researchers was evidence that birds may give the virus to other birds, rather than contract the disease through the bite of an infected mosquito.

While the common house mosquito, culex pipiens, has been suspected as the main culprit in transmission of the virus, researchers are now more closely investigating other mosquito species that also appear to play a role.

Even before those questions are answered, there already is preliminary work toward a vaccine by two pharmaceutical companies, one of which has started testing its version for horses. Horses also are susceptible to West Nile, and 28 became ill in New York last year.

West Nile sickened 18 people in New York and New Jersey last year and two of them died. In 1999, 62 people in New York became seriously ill, seven fatally.

As research into West Nile progresses, some scientists said they are limited in the work they can do by a lack of money.

McNamara said more money should be devoted to tracking the disease in animals, which could yield answers about the virus in humans. West Nile has killed thousands of birds and some mammals.

"The answer rests within the animals," she said. "The funding is still all going toward the humans."

There are many animal studies under way, among them research at the National Wildlife Health Center in Wisconsin, which is looking at how crows contract the virus. In laboratory experiments, infected crows passed the virus to other crows, possibly through their feces, said Robert McLean, the health center's director.

Researchers believe the virus will continue to spread this summer, although there is no certainty about how many people, if any, will become sick.

"This virus has taken a very strong hold in a very short time, and I think we would be irresponsible not to develop a vaccine, which is the most efficient way of protecting people against any infectious disease," said Dr. Thomas Monath, vice president of research and medical affairs at Acambis Inc. in Cambridge, Mass.

Monath said the company hopes to begin manufacturing a West Nile vaccine in January for clinical trials in humans. If the vaccine works, it could still take at least four years before it becomes available. Monath said test results on the horse vaccine are expected in a few months.

Pesticide company accused of improper supervision and training of apprentices

Melissa Klein
The Journal News

The company that sprayed pesticides to combat the West Nile virus last summer has been charged with violating state environmental law for not properly training or supervising 31 apprentice workers.

The violation notice given this week to Clarke Environmental Mosquito Management of Roselle, Ill., focuses on the spraying the company did in New York City, but an investigation is continuing into pesticide application in the suburbs, said Jennifer Post, a spokeswoman for the state Department of Environmental Conservation.

"Applicators are required to provide safety training on the proper use of pesticides, on proper techniques such as not spraying into the wind and also the use of safety equipment such as gloves and respirators," Post said. "They did not."

The company had contracts to spray the pesticide Anvil to kill mosquitoes carrying the West Nile virus during the last two years in Westchester and Rock-

Please see PESTICIDE, 2B

[HN01ID][GDrive]

2001 - TV news special - "The mysterious disease that swept New York" (with old footage of Dr. Tracey McNamara)

Journeyman Pictures : Live Youtube Link : https://www.youtube.com/watch?v=Ii3xDuoErTo / Full video copy : [HV00GG][GDrive]

"West Nile Virus (2001) - When West Nile Virus broke out in New York in 1999, it caused panic. Researchers are getting closer to finding a vaccine, monitoring the city's mosquitoes, but the city remains on high alert. Nobody knows how the virus reached New York, but it was the first time it had been seen on the North American continent. It attacks the central nervous system leading to encephalitis, and there is no known cure. Several people died in the 1999 outbreak, but now a major public health effort is underway to learn more about how the mosquito-borne disease spreads, and how best to combat it."

2002 (Sep 24) - AP Archive - "Hearing told vaccine for West Nile fever imminent"

https://www.youtube.com/watch?v=Fd6IxkgGoXs

Hearing told vaccine for West Nile fever imminent / 120 views • Jul 21, 2015

AP Archive , Washington, DC - September 24, 2002

2003 (Oct 12)

Dr. Tracey S. McNamara (born 1954) LEFT the zoo after west nile ! pioneered National Zoological Surveillance working Group / Full page below : [HN01IE] [GDrive]

Also see : **Dr. Duane J. Gubler (born 1939)** / **Dr. Thomas Patrick Monath (born 1940)**

U.S. bioterror plans ripped

West Nile a wakeup call: expert

By BRIAN KATES
DAILY NEWS STAFF WRITER

As scientists battle the fast-spreading West Nile virus, anti-terrorism experts hope that developing a network to track and stop the epidemic will provide an early warning system for defense against biological attack.

But right now, the U.S. "is totally unprepared to deal with new vector-borne epidemics" — like West Nile virus or those spread by more lethal germs in the terrorist inventory, said Duane Gubler, an internationally recognized expert at the Centers for Disease Control and Prevention.

"West Nile was a wakeup call. We would have been just as unprepared for any other new pathogen," said Gubler, who is leaving the CDC after 14 years as chief of its vector-borne infectious disease lab. "That is a real national security concern."

When the epidemic surfaced in Queens in 1999 — its first appearance in the Western Hemisphere — it caught the nation's fragmented and underfunded public health system completely off guard.

The disease has spread unchecked from New York to 44 other states. This year, it has infected 6,292 Americans, killing 133 — six of them in New York. Two fatalities — a 69-year-old Ridgewood, Queens, man and a 93-year-old man from Dyker Heights, Brooklyn — were reported in the city last month.

"We still haven't been able to get a coordinated program off the ground," Gubler said of the battle to stop the virus.

He and other experts interviewed by the Daily News said the war against West Nile and other emerging biothreats has been mired in agency turf wars and hampered by lack of communication among various branches of government.

Typical example: When Health and Human Services Secretary Tommy Thompson proposed transforming the U.S. Public Health Service Commissioned Corps, a little-known 6,000-member branch of the military, into a rapid-response force against bioterrorism, it was publicly opposed by the heads of the CDC and the Food and Drug Administration.

Four years after the U.S. outbreak, the battle against West Nile remains hamstrung by "bureaucratic jurisdictions that respond to various aspects of the diseases, with little coordination and no clear plan for communicating with the public," according to a study this year by the Trust for America's Health, a nonprofit research group.

"This is especially troublesome," the report said, "given that many of the potential agents for biological weapons are zoonotic" — that is, they originate in animals and spread to humans.

West Nile virus, a relative of yellow fever, is spread by mosquitoes that become infected when they feed on infected birds, mostly crows. They then transmit the disease to people when they bite.

Encephalitis enigma

It started with the mysterious discovery of clusters of dead crows around the city. By August 1999, hundreds of dead crows had been found at the Bronx Zoo. Pathologist Tracey McNamara, fearful that some unknown pathogen would attack the zoo's animals, began autopsies of the birds.

She found severely inflamed hearts and the worst brain damage she'd seen in 18 years of performing animal autopsies.

After six people from Whitestone, Queens, were admitted to Flushing Hospital Medical Center with high fever, altered mental state and headaches, the feds announced on Sept. 3 of that year that the cases were St. Louis encephalitis.

But McNamara wasn't buying it.

"On one hand, there were all these dead birds," she told The News. "They died of encephalitis. On the other hand, you had the people in Queens. That was encephalitis, too." The cases had to be related, she reasoned.

Problem was, birds don't get St. Louis encephalitis. It had to be something else.

As birds continued to die at the zoo, two federal laboratories ruled out St. Louis encephalitis.

As the crisis loomed, McNamara said, she made out her will. "I was scared," she told The News. "The dead birds had given us six weeks of warning before the first people started to die, but that warning was ignored."

As the Trust for America's Health put it, "Public and animal health exist as two distinct fields, separated in both organization and culture."

But efforts are being made, belatedly, to close the gap.

McNamara — who left the zoo after the West Nile debacle was made public — pioneered the National Zoological Surveillance Working Group. A network of more than 35 zoos nationwide, it monitors diseases in zoo animals to provide an early warning of viruses that could spread to humans.

The CDC has established the West Nile Interagency Working Group, which combines the resources of the departments of Health and Human Services, Commerce, Interior, Defense, Agriculture and Environmental Protection.

Since the Sept. 11 attacks, money has poured into the public health system.

"State and local governments can't spend it fast enough," said Jerome Hauer, former city emergency management director and now head of the federal Office of Public Health Preparedness.

Last month, the CDC announced it was giving $870 million — $20.9 million of it to New York City alone — to bolster public health preparedness for bioterrorism and outbreaks of infectious diseases like West Nile virus.

"There has been a great deal of progress in rebuilding public health infrastructure," Hauer said. "There is a long way to go."

AP

FIRST WARNING State wildlife pathologist Ward Stone holds a dead crow that was found in Montrose in Westchester County in April 2000. Crow was tested for the deadly West Nile virus at wildlife pathology facility in New Scotland, south of Albany.

Skeeter virus hits 10,000 – docs fight on

Since the outbreak of West Nile virus in Queens four years ago, the disease has spread to all but three states in the lower 48, infecting more than 10,200 people and killing 421.

The virus can enter the body in myriad ways.

An infected woman can pass it to her unborn child or to her nursing baby. It can also invade its victims through blood from an infected donor.

Blood screening has flagged at least 617 infected blood donors since testing began last July. But just last week, the Centers for Disease Control and Prevention reported that the test can't detect all donated blood units infected with the virus.

"We catch most of the people, but not all of them," said Dr. Lyle Petersen, chief of the agency's division of vector-borne diseases.

Meanwhile, the disease continues to spread. And there is no cure.

But no sooner had the '99 outbreak been confirmed as West Nile virus than researchers began hunting for a remedy.

"We sent two scientists to the CDC lab [at Fort Collins, Colo.] with the goal of cloning the envelope protein of the virus to use in constructing a genetically engineered vaccine," said Thomas Monath, chief scientist at Acambis, the front-runner in developing a vaccine.

The company applied for a research and development grant, and was awarded about $3 million by the National Institutes of Health.

Now, after successful trials with animals, the scientists have applied to conduct tests with humans.

But even if everything goes perfectly, Monath said, it could be seven years before the vaccine is on the market.

By then, hundreds of thousands of people could fall victim to West Nile.

"The way things are progressing," Monath said, "we expect there will be in the neighborhood of 10,000 to 20,000 cases a year."

Brian Kates

2011 (March 23) - One Health and the Lessons Learned from the 1999 West Nile Virus Outbreak (MWV46)

Live Youtube Link : https://www.youtube.com/watch?v=D0kicnRNx64 / Full video copy : [HV00FR][GDrive] / Image of Youtube download page : [HV00FS] [GDrive]

Mar 23, 2011 / MicrobeWorld

Also see : One Health / One Health Commission

In episode 46 of MicrobeWorld Video, filmed at the American Association for the Advancement of Science Meeting in Washington, D.C., Dr. Stan Maloy talks with Tracey McNamara, professor of pathology at Western University of Health Sciences College of Veterinary Medicine, about her role as the head pathologist at the Bronx Zoo during the 1999 West Nile virus outbreak in New York City. As several local residents were hospitalized with encephalitis of unknown origin, many crows and exotic zoo birds were dying off. It was determined that the patients had St. Louis encephalitis (SLE) which is transmitted to humans by mosquitoes that got the virus from infected birds. However, birds with SLE do not get sick and a possible connection between the dying crows and human cases was dismissed by many experts.

McNamara suspected there was more to this story because of the large number of birds that were also contracting encephalitis and struggled to make her voice and preliminary research heard that suggested a new disease may be emerging in North America. It wasn't until she connected with researchers at the US Army Medical Research Institute in Infectious Diseases (USAMRIID) in Ft. Detrick, Maryland, who quickly confirmed that the virus that was killing the crows and her birds at the Bronx Zoo was West Nile virus, a disease endemic to Africa and parts of Europe that also infects people.

McNamara's experience has made her a champion of One Health -- "a call to action for collaboration and cooperation among health science professions, academic institutions, governmental agencies, non-governmental organizations, and industries towards improved assessment, treatment, and prevention of cross-species disease transmission and mutually prevalent, but non-transmitted, human and animal diseases and medical conditions."

2011 (Sep 22) - Tracey McNamara, CONTAGION movie premiere, Technical Advisor 9-16-11

Live Youtube Link : https://www.youtube.com/watch?v=3DDhdQF5-C8 / Full video copy : [HV00G8][GDrive] / Image of Youtube download page : [HV00G9] [GDrive]

Sep 22, 2011 / Diane McClure

Dr. Tracey McNamara is a professor at WesternU College of Veterinary Medicine. Dr. McNamara served as technical adviser for the hit film CONTAGION starring Matt Damon and Gweneth Paltrow. Fellow College faculty and staff attended a screening with Dr. McNamara to celebrate her role on the film. This film documents this event and included a brief interview with Dr. McNamara after the screening.

Example of other names : Mark Smolinkski : See https://www.forbes.com/sites/coronavirusfrontlines/2020/07/30/the-coronavirus-pandemic-is-not-the-end-of-humanity-but-its-putting-us-to-the-test/?sh=26b830835575)

2013 (Nov 01) - West Nile Virus outbreak - Lucy Shapiro (Stanford)

Live Youtube Link : https://www.youtube.com/watch?v=kRuUWyCG9z4 / Full video copy : [HV00GA][GDrive] / Image of Youtube download page : [HV00GB][GDrive]

Nov 1, 2013 / iBiology Techniques : West Nile virus had never been found in the western hemisphere, until birds in the Bronx zoo started the die and human patients in NYC started to exhibit the similar symptoms. Soon the virus was identified as West Nile virus.

2017 (Oct 20) - Biosecurity: Fighting West Nile virus - Tracey McNamara

Live Youtube Link : https://www.youtube.com/watch?v=17oLxx58U5k / Full video copy : [HV00GC][GDrive] / Image of Youtube download page : [HV00GD][GDrive]

Oct 20, 2017 / dvm360

2018 (Jun 21) - TEDx Talks : Canaries in the coal mine | Tracey McNamara | TEDxUCLA

Live Youtube Link : https://www.youtube.com/watch?v=qm8NnL582uc / Full video copy : [HV00GE][GDrive] / Image of Youtube download page : [HV00GF] [GDrive]

Jun 21, 2018 / TEDx Talks

How does the health of our animal population affect the health of our human population? Tracey McNamara shares her groundbreaking work in veterinary pathology and promotes the advancement of zoonotics, the study of disease as it spreads from animals to people. Tracey

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https://www.ancestry.com/discoveryui-content/view/246111818:1732?tid=&pid=&queryId=6a1c211fe764ad6216a1f4d261951db7&_phsrc=bis108&_phstart=successSource

Tracey McNamara / Birth Date: 15 Jun 1954 / 1522 Tier St 202a , Bronx, New York, USA

https://www.ancestry.com/discoveryui-content/view/143745337:1788?tid=&pid=&queryId=6a1c211fe764ad6216a1f4d261951db7&_phsrc=bis110&_phstart=successSource

Tracey S McNamara

in the U.S., Public Records Index, 1950-1993, Volume 1

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Megatons to Megawatts Program

Wikipedia Megatons to Megawatts Program

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The **Megatons to Megawatts Program**, successfully completed in December 2013, is the popular name given to the program which is also called the United States-Russia Highly Enriched Uranium Purchase Agreement. The official name of the program is the "Agreement between the Government of the Russian Federation and the Government of the United States of America Concerning the Disposition of Highly-Enriched Uranium Extracted from Nuclear Weapons", dated February 18, 1993.[1] Under this Agreement, Russia agreed to supply the United States with low-enriched uranium (LEU) obtained from high-enriched uranium (HEU) found to be in excess of Russian defense purposes. The United States agreed to purchase the low-enriched uranium fuel.

The original proposal for this program was made by Thomas Neff, a physicist at MIT, in an October 24, 1991 Op-Ed in *The New York Times*.[2] On August 28, 1992, in Moscow, U.S. and Russian negotiators initialed the 20-year agreement and President George H. W. Bush announced the agreement on August 31, 1992.[3] In 1993, the agreement was signed and initiated by President Clinton and the commercial implementing contract was then signed by both parties.

Terms of the program

Under this Agreement, United States and Russia agreed to commercially implement a 20-year program to convert 500 metric tons of HEU (uranium 235 enriched to 90 percent) taken from Soviet era warheads, into LEU (less than 5 percent uranium 235). The terms of the agreement required that it be implemented on commercial terms without government funds. The agreement named the Department of Energy as the executive agent for the US side.[4] The DOE appointed the newly privatized United States Enrichment Corporation (USEC) as the commercial agent, its executive program contractor. The Russian Federation designated Techsnabexport (TENEX), a commercial subsidiary of its Ministry for Atomic Energy (Minatom), as the agent to implement the program on commercial terms. On January 14, 1994, the commercial contract between USEC and TENEX (HEU-LEU Contract) was signed. The terms also required that the HEU be converted by dilution (downblending) to LEU in Russian nuclear facilities. USEC would then purchase the low-enriched fuel and transport it to its facilities in the US. The first shipment of LEU took place in May 1995.

The value of the process is in two components: the LEU Feed (feed component of natural uranium) and the work involved in the conversion process, measured as separative work units (SWU). Both have separate commercial values. Early disagreements on interpretations of the terms of the governmental and commercial agreements on this issue led to controversy and some delays. Although each shipment contains LEU, the commercial nature of the global uranium market defines the uranium and the enrichment components as separate commercial values and costs. The solution reached was for USEC to continue payments for the SWU component it purchased and also to transfer the equivalent of the LEU feed component to the Russian side. In March 1999, Minatom and the US Department of Energy signed the Agreement Concerning the Transfer of Source Material to the Russian Federation (the Transfer Agreement), and at the same time TENEX signed a Contract with a Group of Western Companies (Cameco, Canada; Cogema, France; Nukem, Germany/US) regarding the purchase of the LEU Feed. As years passed, numerous commercial contract terms were renegotiated and revised to accommodate mutual interests.

Summary of program

The Megatons to Megawatts program was initiated in 1993 and completed on schedule in December 2013. A total of 500 tonnes of Russian warhead grade HEU (equivalent to 20,008 nuclear warheads) were converted in Russia to nearly 15,000 tonnes tons of LEU (low enriched uranium) and sold to the US for use as fuel in American nuclear power plants. The program was the largest and most successful nuclear non-proliferation program to date. The first nuclear power plant to receive low-enriched fuel containing uranium under this program was the Cooper Nuclear Station in 1998.[5] During the 20-year Megatons to Megawatts program, as much as 10 percent of the electricity produced in the United States was generated by fuel fabricated using LEU from Russian HEU.[6]

During this period, on a comparatively modest basis, the US government has also been converting some of its excess nuclear warhead HEU into power plant fuel. Efforts have also been undertaken to demonstrate the commercial feasibility of converting warhead plutonium into fuel to augment nuclear fuel for US power plants.

Nuclear industry sources forecasted high demand trends that would require finding other uranium supply sources after the completion of the Megatons to Megawatts agreement.[6] In 2011, TENEX and USEC signed a long-term contract (Transitional Supply Agreement – TSA) for the provision of enrichment services to the United States that could see annual deliveries after 2015 reaching a level of around half the annual supply volume under the HEU Deal.[7] No plans have been announced for new initiatives similar to the Megatons to Megawatts program.

Other references

tons of great megatons info on these ages : https://web.archive.org/web/20080704052847/http://www.usec.com/megatonstomegawatts_news.htm

TIMELINE - From RussiaMatters.org

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See 2017-06-russiamatters-org-analysis-25yrs-of-nuclear-security-cooperation-by-the-us-russia-others-timeline.pdf / https://drive.google.com/open?id=1cMlOn19tTeA_CGOfmBkjCrrZ6R1irCzU

Timeline

1991

July 31, 1991. After nine years of negotiations, U.S. President George H.W. Bush and Soviet President Mikhail Gorbachev sign in Moscow the Strategic Arms Reduction and Limitation Treaty (START). The treaty reduces strategic warheads to 6,000 and deployed strategic delivery vehicles to 1,600 on each side, about a 40% reduction in the superpower strategic nuclear arsenals. The treaty is due to enter into force after ratification by the signatory parties

about a 40% reduction in the superpower strategic nuclear arsenals. The treaty is due to enter into force after ratification by the signatory parties.

August 19, 1991. A group of Soviet government hardliners stage a coup in Moscow, declaring a state of emergency to overcome "chaos and anarchy" threatening the USSR. President Gorbachev is confined at the government compound in Foros, Crimea. His nuclear launch authorization unit, the so-called nuclear suitcase, is disabled and removed to Moscow. By August 22, the coup is foiled and its perpetrators are detained. Soviet republics begin declaring independence from Moscow.

August 29, 1991. President Nursultan Nazarbayev of Kazakhstan decrees to close the Semipalatinsk Nuclear Test Site exactly 42 years to the day of the first Soviet nuclear test conducted there.

September 1, 1991. Sen. Sam Nunn (D-Ga.) visits Moscow and meets with President Gorbachev and Soviet Defense Minister Yevgeny Shaposhnikov. The visit convinces him of two things: "One, that there would be no more Soviet Empire. And two, that they and we had a huge, huge security problem." Upon his return, Nunn approaches the chairman of the House Armed Services Committee, Les Aspin (D-Wis.), who authored a proposal for a $1 billion humanitarian aid package to the USSR, and convinces Aspin to amend the approach to include targeted aid for dismantling the Soviet nuclear arsenal.

September 5, 1991. President Bush chairs a National Security Council (NSC) meeting where the possibility of the Soviet breakup and the idea of tactical and further strategic nuclear reductions is discussed. These ideas would materialize three weeks later as Presidential Nuclear Initiatives (PNIs).

September 6, 1991. Harvard's Graham Allison writes a private memorandum titled "Sounding the Alarm" to the Chairman of the Joint Chiefs of Staff Colin Powell, distributed also to National Security Advisor Brent Scowcroft, Counselor at the Department of State Robert Zoellick and other key figure in the administration. Allison, who found himself in Moscow during the coup, emphasizes: "Soviet disunion could create additional nuclear states, provoke struggles for control of Soviet nuclear weapons, and lead to a loss of control of strategic or non-strategic nuclear weapons."He recommends "extensive cooperative measures with the Soviet and Russian government to return all nuclear warheads to Russian territory immediately" to prevent the proliferation of so-called loose nukes.

September 12, 1991. Rep. Aspin authors a white paper called "A New Kind of Threat: Nuclear Weapons in an Uncertain Soviet Union." Aspin emphasizes the threat posed by Soviet nuclear arms caught in the middle of civil unrest and ethnic strife accompanying the disintegration of the USSR. "Many of the steps necessary to reduce nuclear risks associated with instability must be taken within the Soviet Union itself, from assuring the security of nuclear storage sites to promoting a more or less orderly transition to a much less centralized form of government."

September 27, 1991. President Bush, in an unprecedented unilateral move, announces the first round of PNIs that entail the withdrawal from Europe of all ground-launched and about half of naval tactical nuclear weapons to central storage facilities in the U.S. and their subsequent destruction, as well as de-alerting strategic nuclear systems. Bush also advances a proposal for eliminating ICBMs with multiple warheads (MIRVs), which eventually (in a modified form) becomes the START-II treaty. Bush suggests that the U.S. and USSR explore cooperation on safe and secure nuclear warhead command and control, storage, transport, dismantlement and destruction.

October 5, 1991. Gorbachev announces that the Soviet Union will reciprocate Bush's PNIs on non-strategic nuclear weapons and de-alerting a portion of the ICBM force and, further, proposes to eliminate an entire category of non-strategic nuclear weapons. Gorbachev declares a one-year moratorium on nuclear testing and urges the U.S. to do the same. He also proposes a no-first-use declaration by all nuclear powers.

October 7, 1991. U.S. Undersecretary of State Reginald Bartholomew meets with (the last) Soviet Foreign Minister Eduard Shevardnadze who praises the PNIs and admits that, although there is no need to worry about the loss of control over strategic weapons located in Russia, Ukraine, Belarus and Kazakhstan, the fears about tactical nuclear weapons are "in great measure justified." Shevardnadze also warns that civil war is imminent if the Soviet Union disintegrates.

October 18-24, 1991. A Soviet delegation, headed by Deputy Minister of Atomic Power and Industry Viktor Mikhailov, visits Washington, D.C. on the invitation of the Federation of American Scientists (FAS) and the National Resource Defense Council (NRDC) and meets with U.S. government officials and congressmen. Mikhailov assesses that if the Soviet Union is to destroy the 15,000 nuclear warheads earmarked for dismantlement under START and the PNIs over the next 7-9 years, it would require $2 billion just for new storage facilities. He urges Congress to fund a $400 million effort to assist Russia with dismantling nuclear weapons that would later become known as the Nunn-Lugar initiative.

October 24, 1991. Thomas Neff, an MIT physicist, publishes an op-ed in the New York Times titled "A Grand Uranium Bargain," suggesting that, in order to facilitate the disarmament process, the U.S. should buy or barter fissile material released from the Russian warheads slotted for dismantlement. Neff embarks on actively promoting the idea with the U.S. government.

October 1991. A U.S.-Russian working group on Safety, Security and Dismantlement (SSD) of Nuclear Weapons is established to facilitate the rapid and safe implementation of the PNIs. The U.S. delegation is led by Ambassador William Courtney, Dr. Robert Barker (Department of Defense) and Dr. James Turner (Department of Energy). The SSD is charged with reducing "the risks of both a nuclear weapon accident and loss of control of a nuclear weapon in either country," as well as facilitating "Soviet ability … to transport and store weapons they identify for retirement as a reciprocal response to … the President's initiatives."

November 1991. A group of authors from Harvard's Belfer Center—Kurt Campbell, Ashton Carter, Steven Miller and Charles Zraket—publish a report entitled "Soviet Nuclear Fission: Control of the Nuclear Arsenal in a Disintegrating Soviet Union." The report warns that the destiny of the 27,000 nuclear weapons on the territory of the uncertain Soviet Union is a paramount security concern. The report identifies three challenges: devolution of control over nuclear weapons to constituent republics, unauthorized seizure or use and proliferation of weapons and sensitive materials outside the Soviet Union. The authors recommend prompt implementation of PNIs and U.S. technical cooperation in transport, storage, disablement and dismantling of nuclear weapons and sensitive weapon-related components."

November 13, 1991. Sen. Nunn addresses the Senate stating that the U.S. is at a "unique juncture" in history when it could achieve "the greatest reduction in a former adversary's weaponry since the destruction of German and Japanese weapons" after WWII. He stresses that dismantling and destroying nuclear weapons requires two things that are in short supply in the Soviet Union—technology and resources—and urges Congress and the president to "invest wisely in a modest program" of technical assistance for demilitarization of the Soviet Union "that could produce dramatic dividends." Due to strong opposition to aid to the Soviet Union, however, Nunn is forced to withdraw the Nunn-Aspin bill. Despite this, Nunn proceeds to build bipartisan support for the idea by engaging Sen. Richard Lugar (R-In.) and others.

November 15, 1991. Sens. Nunn and Lugar meet with Sergei Rogov and Andrei Kokoshin of the Institute for U.S. and Canadian Studies of the Soviet Academy of Sciences (ISKAN); the Russians warn that nuclear weapons could be caught in a power struggle between the Soviet republics.

November 19, 1991. Ashton Carter presents the results of the Belfer Center's "Soviet Nuclear Fission" study to Sens. Nunn and Lugar and their staff. William Perry of Stanford University, John Steinbruner of Brookings Institution and David Hamburg of the Carnegie Corporation also attend the meeting.

November 21, 1991. Nunn invites 16 senators from both parties for a breakfast meeting where he and Carter brief them on the nuclear threat posed by the Soviet collapse. The senators give their approval to the Nunn-Lugar initiative to assist the Soviet Union with dismantling nuclear arms.

November 25, 1991. President Bush submits the START Treaty to the Senate for ratification.

November 25-27, 1991. The first round of U.S.-Soviet SSD talks take place in Washington, D.C., led by Undersecretary Bartholomew and Soviet Deputy Foreign Minister Alexei Obukhov. The sides broach discussions of safety, security and dismantlement of nuclear weapons per the PNIs. The head of the U.S. SSD working group, Amb. Courtney, relates a sense of urgency in rapid disablement of nuclear weapons slotted for destruction, citing risks of instability, armed conflict and accidental missile launch in the USSR. Courtney's Soviet counterpart, Sergei Zelentsov, chief engineer of the Defense Ministry directorate in charge of security of nuclear weapons, does not share the U.S. sense of urgency and remains skeptical about the need for U.S. assistance.

November 27, 1991. The Senate, in an 86-8 vote, passes the Soviet Nuclear Threat Reduction Act, authorizing the appropriation of $500 million from the Department of Defense (DoD) budget for Fiscal Year 1992, of which $100 million are designated for humanitarian assistance and $400 million for assisting with dismantling nuclear and chemical weapons in the Soviet Union. Allison describes the bill as "the most significant U.S. policy initiative toward Russia in the post-Cold War period."

December 8, 1991. Russian President Boris Yeltsin, Ukrainian President Leonid Kravchuk and Chairman of the Supreme Soviet of Belarus Stanislav Shushkevich meet at a hunting lodge in Belavezha Forest in western Belarus and sign an accord declaring that the Soviet Union as "a subject of international law and as geopolitical reality" has ceased to exist. The three Slavic republics form a Commonwealth of Independent States (CIS) and pledge to preserve "a single military strategic space" with "joint command" and "single control" over nuclear weapons. The Belavezha Accords, as the agreement becomes known, are ratified by the Ukrainian and Belarusian parliaments on December 10 and by the Russian parliament on December 12, 1991.

December 12, 1991. Secretary of State James Baker delivers an address at Princeton University outlining U.S. policy toward transformations in the Soviet Union. Baker declares that the U.S. does not want to see new nuclear states emerge and expects that Soviet nuclear weapons will remain under a common, unified command and control.

December 12, 1991. President Bush signs the Soviet Nuclear Threat Reduction Act into Public Law No. 102-228. Later, the program will be renamed Cooperative Threat Reduction (CTR). The law specifies the following objectives:

Facilitate transportation, storage, safeguarding and elimination of nuclear and other weapons;

Facilitate prevention of proliferation and establish verifiable safeguards;

Facilitate prevention of the diversion of weapons-related scientific expertise to terrorist groups or third-world countries;

Support demilitarization of defense-related industry and conversion of such industry and equipment to civilian purposes and uses;

Expand military-to-military and defense contacts between the U.S. and the independent states.

Congress, however, requires the executive branch to certify that the recipient of the Nunn-Lugar funds:

Make a substantial investment of its won in weapons destruction;

Forgo any military-modernization program that exceeds legitimate defense requirements and forgo the replacement of destroyed weapons of mass destruction;

Forgo any use of components of destroyed nuclear weapons in new nuclear weapons;

Facilitate U.S. verification of weapons destruction that is carried out with U.S. financial assistance;

Comply with all relevant arms control agreements;

Observe internationally recognized human rights.

Congress authorizes but does not appropriate the $400 million for the program. These funds would have to be reprogrammed from existing DoD Operations & Maintenance (O&M) accounts for FY92. The same pattern would be repeated for FY93.

December 1991. At an early interagency meeting on implementing the CTR legislation, the DoD general counsel Jack Beard proposes a way for the executive branch to meet the recipient-certification requirements included in the legislation. That approach would be followed every year until Congress lifted the certification requirements under the George W. Bush administration.

December 15-21, 1991. Secretary of State Baker visits the four Soviet republics where strategic nuclear arms are deployed—Ukraine, Belarus, Kazakhstan and Russia. He reiterates the U.S. position that no new nuclear states should emerge from the Soviet collapse and a single, collective command and control authority over the strategic nuclear weapons should be preserved.

December 16-20, 1991. U.S. and Soviet scientists from government- and public-sector organizations hold workshops in Moscow and Kyiv on Soviet warhead dismantlement and the best use of the $400 million authorized under the Nunn-Lugar act. The Soviet Ministry of Atomic Power and Industry (MAPI) presents a proposal to use the funds for the construction of a plutonium-storage facility under joint "safeguards."

December 16, 1991. At a retreat in Leesburg, Virgina, Secretary of Energy Admiral James Watkins and the directors of the U.S. nuclear labs discuss ways to help Soviet nuclear scientists and prevent brain drain from the former Soviet Union. They decide that the lab directors should engage with their Russian counterparts. The ensuing series of exchanges and programs, many funded by CTR, become known as lab-to-lab cooperation.

December 21, 1991. The CIS holds a summit in Alma-Ata, Kazakhstan, at which eight more Soviet republics join the grouping: Armenia, Azerbaijan, Kazakhstan, Kyrgyzstan, Moldova, Tajikistan, Turkmenistan and Uzbekistan. Belarus, Kazakhstan, Russia and Ukraine also sign the Agreement on Joint Measures on Nuclear Weapons, whereby Ukraine, Kazakhstan and Belarus pledge to withdraw all tactical nuclear weapons to Russia by July 1, 1992, and Ukraine and Belarus to eliminate strategic nuclear weapons on their territories by 1994 and join the international Treaty on the Non-Proliferation of Nuclear Weapons (NPT) as non-nuclear-weapons states. CIS members agree that Russia should succeed the USSR as a permanent member of the UN

Security Council. CIS member further elaborate the constitution of joint strategic forces and the decision-making process for nuclear use at a meeting in Minsk on December 30.

December 25, 1991. At 7 p.m. local time, in a televised address, Gorbachev resigns as president and commander-in-chief of the USSR. Immediately afterward, he transfers his "nuclear suitcase" to Russian President Yeltsin.

The Soviet flag is lowered over the Kremlin and replaced with the Russian tricolor. Soviet ambassador to the U.N. Yuri Vorontsov simply changes his title to Russian ambassador to the UN at midnight Moscow time and then sends UNSG Pérez de Cuéllar "Fax 2338" from the Kremlin stating: "Henceforth the name Russian Federation will be used in the United Nations instead of USSR."

December 26, 1991. The upper house of the Supreme Soviet of the USSR passes a declaration recognizing that due to the establishment of the CIS, the USSR ceases to exist and disbands itself.

The dissolution of the Soviet Union leaves 25% of the ex-country's ICBM force and 40% of its long-range strategic bomber force outside the territory of the Russian Federation. Ukraine inherits 176 silo-based ICMBs, 130 SS-19s and 46 SS-24s, each armed with multiple warheads, for a total of some 1,240 strategic warheads, 44 strategic bombers armed with almost 588 air-launched cruise missiles (ALCMs) and some 2,600 tactical nuclear weapons. Belarus inherits 81 land-mobile SS-25 ICBMs each armed with a single warhead and over 1,000 tactical nuclear weapons. Kazakhstan inherits 104 SS-18 silo-based ICBMs armed with a total of 1,040 warheads and 40 strategic aircraft armed with 370 ALCMs. All three former Soviet republics also inherit significant elements of the former Soviet nuclear research and production complex. In addition, Russia has an estimated inventory of 1,300 metric tons of highly enriched uranium (HEU) and somewhere between 120 and 170 metric tons of weapons-grade plutonium located at some 60 sites in hundreds of buildings.1

1992

January 15-20, 1992. Undersecretary Bartholomew leads the first interagency delegation to Moscow, Kyiv, Minsk and Alma-Ata,2 now capitals of the newly independent states, to discuss arms control, including the ratification and implementation of START, the Treaty on Conventional Armed Forces in Europe (CFE) and the NPT. Bartholomew mentions that the U.S. has funds, under the Nunn-Lugar program, to aid with weapons dismantlement, once the specific needs of the new states are better defined. Bartholomew also conducts another round of SSD talks in Moscow where the Russian side reiterates that the main bottleneck in the Russian process of dismantling warheads is lack of a fissile-materials storage facility.

January 28, 1992. President Bush in his State of the Union address announces a second installment of PNIs that entail the cancellation of development, production and procurement of certain strategic nuclear system programs. Bush further elaborates proposals for the START-II de-MIRV'ing treaty.

January 29, 1992. President Yeltsin responds with reciprocal measures to Bush's new PNIs, making specific commitments on the destruction of ground, naval and air non-strategic nuclear weapons, as well as a halt in production of a number of strategic nuclear systems.

January 29, 1992. President Yeltsin decrees to establish the Ministry of Atomic Energy of the Russian Federation, or Minatom, which oversees most of the Russian nuclear complex.

February 1, 1992. Yeltsin pays his first official working visit to the U.S. He meets with President Bush at Camp David.

February 10-14, 1992. The first visit in the series of exchanges between U.S. and Russian nuclear labs takes place. Directors of the Russian nuclear labs—Vladimir Belugin of VNIITF at Snezhinsk, formerly the closed city of Chelyabinsk-70, and Vladimir Nechai of VNIIEF at Sarov, formerly the closed city of Arzamaz-16—travel to the U.S. to visit nuclear labs and meet with their U.S. counterparts: John Nuckolls, director of Lawrence Livermore National Laboratory (LLNL), and Siegfried Hecker, director of Los Alamos National Laboratory (LANL).3

February 14, 1992. Secretary Baker visits the Soviet nuclear lab VNIITF. Its leadership informs him that the average employee salary is $15 per month and gives him a list of civilian-use products the facility can manufacture with U.S. investment.

February 17, 1992. Foreign ministers of Russia, the U.S. and Germany release a statement about the establishment of a Science and Technology Center intended to support Soviet nuclear scientists and prevent "brain drain" out of the FSU.

February 23-29, 1992. The U.S. nuclear lab directors, Hecker of LANL and Nuckolls of LLNL, pay a reciprocal visit to Russian nuclear labs.

Mid-February 1992. Drawing on the results of SSD negotiations, Secretary Baker proposes U.S. CTR assistance to Russian Foreign Minister Kozyrev in the following areas:

- Armored blankets;
- Emergency response equipment;
- Safe, secure railcars;
- Fissile-materials containers;
- Nuclear-materials storage;
- National system of materials protections, control and accounting (MPC&A);
- Fissile-materials disposition facility (FMDF).

DoD designates the Defense Nuclear Agency (DNA) to contract and project-manage CTR-funded programs.

March 2, 1992. Viktor Mikhailov, a nuclear scientist and deputy minister of atomic power, is promoted to the post of minister at Minatom. He would serve in this role until 1998.

April 1992. Belarus announced the completion of the withdrawal to Russia of all the tactical nuclear warheads deployed on Belarusian territory.

April 19, 1992. DoE's Victor Alessi and DoS's Robert Gallucci author a memorandum outlining general guidelines for scientific cooperation between Russian and U.S. nuclear weapons labs. This informal DoE-DoS agreement would continue to guide U.S.-Russian lab-to-lab collaboration and exchanges.

April 28-May 2, 1992. As part of the SSD talks, Sandia National Laboratory (SNL) hosts a large Russian delegation led by Anatoly Belov of the Russian Foreign Ministry and Georgy Tsyrkov of Minatom. The U.S. SSD delegation is led by DoS's Gen. William F. Burns, who replaced Amb. Courtney, and includes

representatives of DoD and DoE, as well as nuclear scientists. The delegations hold detailed technical discussions in areas of SSD cooperation outlined earlier, such as the provision of armored blankets, railcars, fissile-material containers and accident-response equipment totaling $145 million in CTR funds.

May 5, 1992. The Russian military announces that all tactical nuclear weapons have been removed from Ukraine to Russia, ahead of the July 1 deadline.

May 10, 1992. Secretary of Energy Watkins testifies before U.S. Congress that for the first time since 1945 the U.S. is not building nuclear weapons.

May 23, 1992. Belarus, Kazakhstan, Russia and Ukraine sign an Annex to START I in Lisbon, Portugal, whereby all four states are recognized as successors of the USSR in respect to the treaty. Article V of the Lisbon Protocol, as the document becomes known, obligates Ukraine, Belarus and Kazakhstan to join the NPT as non-nuclear weapon states "in the shortest possible time." Attached to the Lisbon Protocol are letters from Kravchuk, Nazarbayev and Shushkevich pledging that their countries will eliminate all nuclear weapons from their territories within the seven-year period provided by START.

June 16-17, 1992. President Bush and President Yeltsin meet for their first summit in Washington, D.C., where on June 17 they sign a declaration of "strategic partnership." Bush and Yeltsin also conclude the Agreement Concerning the Safe and Secure Transportation, Storage and Destruction of Weapons and the Prevention of Weapons Proliferation, or SSD agreement for short. The agreement sets for a seven-year period the general framework for CTR-funded projects. The U.S. and Russia initial three CTR implementing agreements: on provision of armored blankets, on fissile-material containers and on nuclear accident response equipment.

Bush and Yeltsin, June 1992

July 2, 1992. The parliament of Kazakhstan ratifies START I and the Lisbon Protocol.

July 1992. The first shipment of 200 sets of armored blankets for warhead transportation arrives in Moscow from U.S. army storage depots in Europe. By June 1993, the U.S. would deliver some 700 sets of armored blankets.

July 1992. The U.S. and Russia sign an implementing agreement "Concerning Safe, Secure and Ecologically Sound Destruction of Chemical Weapons," initially committing $25 million of CTR funds to the project.

August 28, 1992. DoD's John Birely and Minatom's Mikhailov sign an implementing agreement on the provision conversion kits to modify up to 100 cargo railcars and 15 guard railcars to enhance physical security of nuclear warheads and materials during transportation, pledging $20 million in CTR funds. Subsequently, a sample Soviet railcar is shipped to SNL in Albuquerque, New Mexico, for development of prototype conversion kits.

September 23, 1992. The U.S. conducts its last underground nuclear test.

October 1, 1992. The U.S. Senate ratifies START I.

October 2, 1992. President Bush signs legislation containing the Hatfield Amendment establishing a nine-month unilateral nuclear testing moratorium. President Clinton will subsequently extend the moratorium through 1996.

October 5, 1992. The U.S. and Russia sign a CTR implementation agreement dedicating $15 million to develop a design for a fissile-material storage facility (FMSF). A joint U.S.-Russian team complete the design by June 1993.

October 22, 1992. The U.S. and Belarus sign a CTR umbrella agreement and two implementing documents: one on the provision of emergency-response equipment and associated training with $5 million of CTR funds committed; and another for setting up and equipping an export-control system for identifying and controlling nuclear materials worth $1 million.

October 26, 1992. Belarus announces that it has finalized the schedule for the withdrawal of SS-25 units from its territory. The withdrawal would conclude in November 1996.

November 4, 1992. The Russian Duma ratifies START I and the Lisbon Protocol, but makes its entry into force conditional on the accession to the NPT of Ukraine, Kazakhstan and Belarus.

November 27, 1992. Russia, the U.S., Japan and the European Union sign an agreement on the establishment of the International Technology and Science Center (ITSC) in Moscow. ITSC's mission is to provide research support for weapons scientists in Russia and the former Soviet Union to engage in peaceful civilian science projects. The Russian Duma never ratifies the agreement and it enters into force only provisionally in March 1994. Eventually, it grows to involve 36 state-partners and opens regional offices in Georgia, Armenia, Kazakhstan, Kyrgyzstan and Tajikistan.

December 1992. U.S. and Russian experts meet at LANL to discuss the engineering design and monitoring system for the fissile-material storage facility to be constructed in Russia for housing nuclear materials extracted from dismantled Soviet nuclear warheads.

1993

FY1993. DoD authorization legislation for CTR projects is expanded to include dismantlement of missiles and missile launchers; elimination of destabilizing conventional weapons; establishment of science and technology centers; environmental restoration; defense conversion; and military-to-military contacts.

January 1993. Harvard's Allison, Carter and others publish a report entitled "Cooperative Denuclearization: From Pledges to Deeds," in which they argue that increased urgency and immediate assistance are needed to achieve safe disarmament in Russia and denuclearization of the non-Russian republics. Nuclear dangers created by the dissolution of the Soviet Union, including unauthorized launch, accident or illicit sale of a warhead, cannot be deterred in the traditional sense and can be tackled only by cooperative engagement with the former Soviet states that are undergoing profound political, economic and societal transformation. The report offers detailed policy recommendations on all aspects of the U.S.-Russian nuclear relationship, including arms control and nuclear security.

January 1993. The U.S. and Belarus sign an implementation treaty for a CTR-funded project to equip with communications systems and train the personnel of the Belarusian National Agency for Arms Control and Inspections.

January 3, 1993. Presidents Yeltsin and Clinton sign START II, a treaty that bans all ICBMs with multiple, independently targetable reentry vehicles (MIRVs) and makes further reductions to between 3,000 and 3,500 deployed nuclear warheads on each side. START II never enters into force.

January 13, 1993. The Chemical Weapons Convention (CWC) is opened for signature. By the end of the month both the U.S. and Russia sign on. The CWC would enter into force on April 29, 1997, obligating parties to eliminate all chemical weapons stockpiles within a decade, which in the U.S. amounted to

would enter into force on April 29, 1997, obligating parties to eliminate all chemical weapons stockpiles within a decade, which in the U.S. amounted to approximately 30,000 tons and in Russia to some 40,000 tons of chemical agents.

February 4, 1993. The Belarusian parliament votes to ratify START and the Lisbon Protocol and accede to the NPT.

February 18, 1993. The head of the U.S. SSD delegation, Gen. Burns, and Russian Atomic Energy Minister Mikhailov sign in Washington a U.S.-Russian agreement on the disposition of the HEU extracted from dismantled Soviet nuclear weapons. The agreement, based on the idea conceived by Tom Neff in 1991, provides a framework for the U.S. purchase of 500 metric tons of HEU from Russia, to be first blended down to low-enriched uranium at the facilities in Russia and then transferred to the U.S. for use in nuclear-power reactor fuel.

March, 1993. U.S. Secretary of State Warren Christopher pledges $65 million in CTR funds to Belarus to assist with its denuclearization.

March, 1993. Three CTR implementation agreements with Russia are finalized:

On strategic nuclear delivery vehicle dismantlement;

On fissile-material storage facilities; and

On equipment and material control and accounting.

The agreements are submitted for review to the relevant Russian ministries.

March 24, 1993. President Clinton issues Presidential Decision Directive (PDD)-3, "U.S. Policy on the Ratification and Implementation of START I and START II and the Denuclearization of Ukraine, Belarus and Kazakhstan," designating these issues as priority objectives of U.S. foreign, security and nonproliferation policy.4

April 4-5, 1993. At the U.S.-Russian summit in Vancouver, Canada, the Clinton administration pledges a $1 billion aid package to support market and democratic reforms in Russia.

April 28, 1993. Secretary of Defense Les Aspin assigns overall policy guidance for the CTR program to the Assistant Secretary of Defense for International Security Policy, a post occupied at the time by Ashton Carter.

June 15, 1993. At a meeting of CIS defense ministers, CIS commander-in-chief Marshal Shaposhnikov announces his resignation. Subsequently, CIS Joint Armed Forces are disbanded.

June 15, 1993. The U.S. completes the delivery of 2,520 protective armored blankets for the transportation of nuclear warheads to Russia and continues the deliveries of emergency-response equipment to Russia and Belarus.

July 5-6, 1993. SSD delegation visits Minsk to finalize CTR agreements in additional three areas:

Environmental restoration and clean-up of SS-25 bases ($25 million);

Conversion of strategic rocket bases and other defense-related facilities to civilian use ($20 million);

Military housing and retraining programs for former officers of the Strategic Missile Forces, or SMF ($10 million).

July 27, 1993. U.S. Secretary of Defense Les Aspin and Ukrainian Minister of Defense Kostyantin Morozov sign in Kyiv a memorandum of understanding on $175 million in CTR assistance to Ukraine.

August 23, 1993. DoD and the Russian government sign the implementing agreement "Concerning Cooperation in the Elimination of Strategic Offensive Arms (SOAE)," with the U.S. pledging $130 million in CTR funds. The project entails provision of U.S. equipment for transport and elimination of liquid ICBM fuel, silo, submarine launcher and long-range bomber elimination and emergency-response equipment.

September 2, 1993. Ambassador James Goodby, who in March 1993 replaced Gen. Burns as the head of the U.S. SSD delegation, and Deputy Atomic Energy Minister Nikolai Yegorov sign an implementing agreement for $75 million in CTR funds on assistance in construction and equipping of an FMSF. In 1997, the project would receive an additional $84 million.

September 2, 1993. The U.S. government and Minatom sign the implementing agreement on a nuclear MPC&A system, dedicating $10 million in CTR funds. MPC&A systems provide the capability to deter, detect, delay and respond to possible adversarial acts or other unauthorized use of nuclear material and, if necessary, to aid in their recovery. Subsequently, MPC&A would grow to include projects in Ukraine, Belarus and Kazakhstan, funded from the CTR budget, and in Lithuania, Latvia and Uzbekistan, funded from the DoE overhead budget. MPC&A becomes one of the largest and most successful programs in the history of CTR. By 2012, the U.S. will have spent some $4 billion to strengthen MPC&A systems in the FSU.

September 22, 1993. Under the auspices of lab-to-lab cooperation, the first joint U.S.-Russian scientific experiment is conducted at VNIIEF on a high-current generator.

October 11, 1993. The Soviet Nuclear Threat Reduction Act evolves into the Cooperative Threat Reduction Act of 1993, with emphasis on:

Warhead removal from the Soviet successor states to Russia;

Destruction and dismantlement of weapons systems;

Chain of custody projects;

Chemical weapons destruction assistance;

Demilitarization support.

October 25, 1993. U.S. and Ukraine sign the umbrella CTR agreement.

October 25, 1993. Ukraine, the U.S., Sweden and Canada sign an agreement to establish a Science and Technology Center in Ukraine (STCU) designed to provide research grants to Ukrainian scientists and prevent brain drain. President Kravchuk would bring the STCU agreement into force on May 4, 1994, after which the center becomes fully operational. In the years that follow, Japan, the EU, Germany and other countries become STCU contributors.

November 18, 1993. Ukraine's parliament votes to ratify START I and the Lisbon Protocol with extensive reservations and with the exclusion of Article V,

obligating it to join the NPT as a non-nuclear weapons state.

December 5, 1993. DoD's Gloria Duffy and the head of Ukraine's Strategic Nuclear Forces Administrative Control Center General Aleksei Kryzhko sign the first CTR implementing agreement on Strategic Nuclear Arms Elimination with an initial commitment of $135 million. Shortly thereafter, implementing agreements on an MPC&A system, defense conversion and military housing are signed.

December 13, 1993. DoD and Kazakhstan's Ministry of Science and New Technologies sign the agreement "Concerning the Destruction of Silo Launchers of Intercontinental Ballistic Missiles, Emergency Response and the Prevention of Proliferation of Nuclear Weapons" that serves as the umbrella CTR agreement, with an initial $85 million pledge. A further five CTR implementing agreements are signed on the same day.

December 13, 1993. Kazakhstan's parliament votes to accede to the NPT during the visit of Vice President Al Gore to Almaty.

December 1993. DoE and Minatom sign agreements on improving the safety of Russian nuclear reactors and to allow, by the end of 1994, bilateral inspection of some facilities that stored plutonium.

December 1993. DoE and the Ukrainian government sign an MPC&A implementing agreement, providing for improvement in MPC&A systems at four locations: Kharkiv Institute of Physics and Technology, Kyiv Institute for Nuclear Research, South Ukraine Nuclear Power Plant in Zaporizhia and Sevastopol Naval Institute.

December 1993. DoE and Kazakhstan sign an MPC&A implementing agreement, providing for improving MPC&A systems at four sites: Aktau BN-50 Breeder Reactor, Ulba Fuel Fabrication Plant, Almaty Research Reactor and Semipalatinsk-21 facility.

1994

January 1994. William J. Perry becomes secretary of defense. Under his leadership, DoD expands CTR programs, including authorizing the use of $40 million in CTR funds for a new Defense Enterprise Fund (DEF) designed to promote joint ventures in conversion and defense between U.S. firms and those in the FSU.

January 14, 1994. Russian state-owned company Tekhsnabexport (Tenex) and the United States Enrichment Corporation (USEC) sign a $12 billion, 20-year contract for the sale of 500 metric tons of HEU, implementing the agreement signed in February 1993. The deal is signed at the Kremlin in the same room where Soviet government and nuclear scientists first held a meeting about the Soviet bomb in 1945.

January 14, 1994. At the same meeting, the U.S., Russia and Ukraine sign a Trilateral Statement that outlines the main terms of Ukraine's nuclear disarmament. Russia agrees to compensate Ukraine for the value of HEU released from tactical and strategic nuclear warheads removed from Ukraine's territory in the form of nuclear fuel assemblies for Ukraine's power reactors and by forgiving part of Ukraine's energy debt to Russia. The statement noted that a minimum of $175 million in CTR funds will be dedicated to technical assistance projects in Ukraine. U.S. and Russia also pledge "security assurances" to respect Ukraine's territorial integrity and not to threaten it with nuclear weapons.

January 1994. During a visit to LANL, VNIIEF director Vladimir Belugin and LANL director Sig Hecker sign a memorandum of understanding, proposing areas of cooperation between the labs, including on nuclear MPC&A that involves the security of Russian nuclear materials and warheads.

February 3, 1994. The Ukrainian parliament removes reservations and ratifies START I and the Lisbon Protocol unconditionally.

March 17-22, 1994. U.S. Secretary of Defense Perry and Assistant Secretary Carter visit Moscow, Almaty, Minsk and Kyiv. While in Ukraine, Perry and Carter visit one of the ICBM sites at Pervomaisk and a missile production facility in Dnipropetrovsk.

April 1994. DoE's government-to-government approach to joint MPC&A cooperation with Russia is revised and augmented by lab-to-lab involvement, which helps to advance work on the MPC&A program.

May 3, 1994. A separate program office for CTR is established within the Office of the Assistant to the Secretary of Defense for Atomic Energy in order to "strengthen and hasten implementation of the CTR program." One agency that interfaces with the office in the CTR arena at the technical and expert level is the Defense Nuclear Agency (DNA).

June 23, 1994. U.S. Vice President Gore and Russian Prime Minister Viktor Chernomyrdin sign an agreement pledging to permanently end the operation of plutonium production reactors at Mayak Chemical Metallurgical Combine in Ozersk and Siberian Chemical Combine at Seversk by 2000, as well as to prohibit the restarting of reactors that are already closed.

June 1994. Hecker, now at SNL, travels to Russia to sign pilot lab-to-lab MPC&A agreements with three facilities: VNIIEF, VNIITF and the Kurchatov Institute.

July 1994. Russian and U.S. specialists exchange visits to the U.S. plutonium storage facility at Hanford, Washington, and the Russian plutonium storage facility at Mayak in Ozersk in the northern Urals. At Mayak, some 30 tons of plutonium is in storage at the time.

July 20, 1994. The new Belarusian leader, President Alexander Lukashenko assumes office. Under his leadership, Belarus becomes much less cooperative with the U.S. government, until CTR projects collapse completely in 1997.

July 1994. The Russian government begins the construction, with CTR assistance, of an FMSF for 25,000 containers at the Mayak facility within the nuclear complex in Ozersk, formerly Chelyabinsk-65.

September 15, 1994. President Yeltsin issues a decree on urgent measures to improve the system of accounting for and storing nuclear materials. The decree is a response to a series of highly publicized incidents of theft and smuggling of Russian nuclear materials, revealing serious gaps in MPC&A systems.

September 21, 1994. President Clinton issues PDD-30, "U.S Nuclear Posture and Policy on Nuclear Arms Control Beyond the START I and START II Treaties," stating, among other things, that DoD "will continue to support Nunn-Lugar programs to reduce the danger of unauthorized or accidental use or diversion of weapons or materials from and within the Former Soviet Union."

November 16, 1994. The Ukrainian parliament votes to have Ukraine accede to the NPT as a non-nuclear weapons state.

November 20-21, 1994. In a secret U.S.-Kazakhstani operation code-named "Project Sapphire," two U.S. C-5 cargo planes airlift 600 kg of HEU from Ulba Metallurgical Plant in Ust-Kamenogorsk in northern Kazakhstan to DoE's Oak Ridge facility in Tennessee. These C-5 nonstop flights (with three air-to-air refuelings) from Ust-Kamenogorsk to Dover AFB become the longest in history. Kazakhstan is compensated with about $20 million in CTR funds, as well as

refuelings) from Ust-Kamenogorsk to Dover AFB become the longest in history. Kazakhstan is compensated with about $20 million in CTR funds, as well as in non-cash assistance, for the value of the removed HEU.

December 5, 1994. At a summit of the Conference for Security and Cooperation in Europe in Budapest, Hungary, the U.S., Russia, the UK and Ukraine sign a memorandum on security assurances in connection with Ukraine's accession to the NPT. Similar assurances are also pledged to Belarus and Kazakhstan. China and France extend security assurances to the three former republics in separate statements. Pursuant to Ukraine's submission of NPT ratification instruments, START enters into force.

December 16, 1994. Minatom's Mikhailov and U.S. Secretary of Energy Hazel O'Leary sign the Warhead Safety and Security Exchange Agreement (WSSX). The agreement provides guidelines for cooperation to enhance the safety and security of nuclear warheads in Russia. The agreement will enter into force on June 1, 1995. The program results in a series of working groups, seminars, and exchanges between U.S. and Russian nuclear labs, especially SNL and VNIIA.5 This collaboration yields the design and provision to Russian nuclear warhead storage sites of equipment for mitigating accident consequences and providing authenticated monitoring and control, some of which was funded by CTR.

December 1994. USEC places the first order for LEU blended down from 6 metric tons of HEU, the maximum Russia is able to process for delivery in 1995.

FY1994. The Clinton administration decides to include funding for CTR programs as a separate title in DoE's budget and State's budget.

1994. DoE establishes the Initiatives for Proliferation Prevention (IPP) program with the objective of attracting U.S. businesses to laboratories and institutes of the former Soviet Union, with technology evaluations from the U.S. nuclear labs. IPP, which started operation as Industrial Partnership Program in 1992, received $35 million in FY94 appropriations.

1995

January 1995. The U.S. DoD and Russia's Minatom agree to add $20 million in CTR funds for joint MPC&A upgrades. Similar agreements are signed with Kazakhstan, Belarus, and Ukraine. Eventually, the two sides agree to cooperate on MPC&A upgrades at five locations: Institute of Physics and Power Engineering in Obninsk, NIIAR in Dmitrovgrad, NPO Luch in Podolsk, Mayak Chemical Metallurgical Combine in Ozersk (formerly Chelyabinsk-65) and Production Association Machine Building Plant in Elektrostal.6 Due to secrecy concerns and limited access to Russian HEU facilities, however, only $1.5 million of the dedicated funds are spent by mid-1995.

February 1995. Demonstrations are held at the first two facilities that completed MPC&A upgrades, at Building 116 of the Kurchatov Institute in Moscow and at VNIIEF in Sarov.

March 1, 1995. U.S. President Clinton announces that 200 metric tons of fissile material will be withdrawn from the U.S. nuclear stockpile and called for it to be rendered unusable for future military purposes.

April 25, 1995. Russian SMF commander Igor Sergeyev announces the completion of transfer of nuclear warheads from Kazakhstan to Russia.

May 1995. In a joint Russian-Kazakhstani operation, a nuclear explosive device is removed from Tunnel 108k at the Semipalatinsk nuclear test site, four years after it was placed there by the Soviet military in preparation for a test.

May 10, 1995. Presidents Clinton and Yeltsin issue a Joint Statement on Nonproliferation reaffirming the two states' commitment "to strengthen national and international regimes of control, accounting and physical protection of nuclear materials and to prevent illegal traffic in nuclear materials."

June 1995. DoE and Belarusian government sign an MPC&A implementing agreement, providing for MPC&A systems upgrades at the Minsk Institute of Nuclear Power Engineering at Sosny.

June 1995. On the sidelines of a meeting of the Gore-Chernomyrdin commission, DoE Secretary O'Leary and Minatom's Mikhailov sign a joint statement initiating site surveys in the five locations selected for MPC&A upgrades, which finally launched these MPC&A projects in earnest. At the same time, DoE and GAN, the Russian nuclear regulatory agency at the time, sign an agreement for cooperation on creating a standardized national system for safeguarding nuclear material and providing MPC&A upgrades at six additional sites in Russia.7

June 1995. The first two shipments of blended-down Russian HEU arrive in the U.S. under the Megatons to Megawatts program.

August 1995. Graham Allison testifies before the U.S. Senate, warning that the threat of loose nukes persists and calling for the expansion of CTR funding to secure the "30,000 nuclear weapons that are still left there; more than 1,000 tons of highly enriched uranium that are still left there; more than 100 tons of plutonium that are still there in place" in Russia.8

August 1995. DoE initiates the lab-to-lab Warhead Dismantlement and Fissile Material Transparency Program (WD&FMT) in order to develop a cooperative regime and transparency in warhead dismantlement and destruction under the PNIs.

October 3, 1995. The U.S. and Kazakhstan sign a CTR agreement to close the tunnels used for nuclear testing at the Semipalatinsk site. The project would spend $6 million to seal off—through explosion-induced collapse and concrete reinforcement—the portals to some 181 tunnels and 13 experimental shafts.

September 28, 1995. President Clinton signs PDD-41, which lays out the policy for strengthening MPC&A systems in the FSU and assigns formal responsibility for directing MPC&A projects to DoE.

1995. DoE and Minatom begin cooperation at Mayak, Luch, NIIAR, VNIITF and Seversk.

1995. DoE and Minatom launch a project for personnel training and skill enhancement at the Methodological and Training Center for Nuclear Materials Accounting and Control, Interdepartmental Special Training at Obninsk.

1995. DoE and Minatom begin work on safe transport of nuclear materials and creation of automated security system for transporters of nuclear materials at Eleron Design Bureau for Auto Transport Equipment.

1995. The project on a Federal Information System for Nuclear Materials Accounting and Control is launched at Minatom's Central Scientific Research Institute of Management, Economics and Information.

1995. DoE and Minatom begin cooperation at the Novosibirsk Chemical Concentrates Plant, Radium Institute (St. Petersburg), Beloyarsk Nuclear Power Plant (Zarechny), Urals Electrochemical Integrated Plant (Novouralsk), Mining and Chemical Combine (Zheleznogorsk), Scientific Research and Design Institute of Power Technology (NIKIET, Moscow), Siberian Branch of NIKIET (Zarechny), Institute of Theoretical and Experimental Physics (ITEP, Moscow) and Electrochemical Plant (Zelenogorsk).

and Electrochemical Plant (Zelenogorsk).

1996

FY1996. The Clinton administration transfers funding responsibility for certain activities out of the DoD budget request to the DoS and DoE budget requests. DoS becomes responsible for a WMD Scientist Redirection Program and the Export Controls and Border Security Program, and continues to fund the Nonproliferation and Disarmament Fund (NDF). DoE takes over MPC&A programs and a new program on transforming and downsizing Russia's large nuclear research and fissile-material production facilities.

March 1996. A new MPC&A system is commissioned at Salaspils Institute of Physics in Latvia. The project is carried on with DoE funding and in cooperation with the IAEA.

March 21, 1996. President Clinton issues PDD-47 declaring that sustaining the scientific competence of individuals responsible for ensuring confidence in the Russian and U.S. nuclear stockpiles is a national priority.

May 1996. A new MPC&A system is commissioned at a facility in Tbilisi, Georgia.

May 31, 1996. The last shipment of nuclear warheads leaves Ukraine's territory for Russia.

June 26-27, 1996. Congress passes the Defense Against Weapons of Mass Destruction Act of 1996, also known as the Nunn-Lugar-Domenici Amendment. The bill expands existing Nunn-Lugar work to include domestic preparedness for WMD terrorism. It also expands funding for DoE lab-to-lab cooperation, particularly the MPC&A project.

July 1996. A new facility for liquid missile propellant neutralization and missile disassembly, built with $27 million in CTR funds, opens in Dnipropetrovsk, Ukraine.

July 1996. U.S. and Russia sign a CTR agreement on Chemical Weapons Destruction Program to design, build and equip the first Russian CW destruction complex near Shchuchye in Siberia, eventually committing close to $1 billion in CTR funds.

1997

February 1997. U.S. and Russia agree to extend lab-to-lab cooperation on high-energy physics for five years.

May 1997. Commencement of a $54 million CTR project to design a new Solid Propellant Disposition Facility near Votkinsk in Russia.

June 20, 1997. The U.S. announces deactivation of its largest plutonium processing plant, the Plutonium Uranium Extraction Facility (PUREX) in Richland, Washington, a year ahead of schedule.

September 23, 1997. U.S. VP Gore and Russian PM Chernomyrdin sign an Agreement on Plutonium Production Reactors, in accordance with which any plutonium produced cannot be used for weapons purposes. They also agree that three remaining Russian plutonium production reactors at Seversk and Zheleznogorsk will be shut down by December 31, 2000. Russia, however, would prevent the entry into force of the agreement until alternative sources of energy for the surrounding communities are found.

1997. The Russian Defense Ministry submits a request for CTR assistance in eliminating 51 SS-N20 missile solid-fueled motors and components. Soon requests would follow for more assistance for the Strategic Offensive Arms Elimination (SOAE) projects that involved elimination and silo decommissioning of liquid-fueled missiles SS-18, SS-17 and SS-19, as well as solid-fueled SS-24s, SS-25s and SS-20-N missile systems.

1998

February 13, 1998. U.S. Secretary of Defense William Cohen and Russian Defense Minister Marshal Igor Sergeyev inaugurate Security Assessment and Training Center (SATC) at Sergiev Posad outside of Moscow built with CTR assistance. SATC's mission is to provide the Defense Ministry with a test-and-evaluation center for national nuclear security requirements.

March 4, 1998. President Yeltsin appoints Yevgeny Adamov, a nuclear physicist, to head Minatom after the retirement of Viktor Mikhailov. Adamov would remain in this position until 2001 and would go on to encounter a raft of legal problems.

March 31, 1998. Gore and Chernomyrdin announce a joint Nuclear Cities Initiative designed to promote the conversion of Russia's nuclear cities.

April 24, 1998. U.S. government announces the removal of about 5 kg of HEU from the former Soviet republic of Georgia in the so-called Operation Auburn Endeavor. The HEU, stored at the Nuclear Research Center in Tbilisi, is removed to safe storage in the UK and then to the U.S.

May 14, 1998. Ukrainian President Leonid Kuchma signs a decree on the elimination of Ukraine's 44 long-range strategic bombers and the ALCMs with which they're armed. This precipitates a CTR-funded project on the dismantlement of these aircraft and eventually additional non-strategic bombers and air-to-surface missiles. The project would end in December 2003.

June 1998. DoE and Russian State Customs Committee sign a protocol initiating a new program called the Second Line of Defense (SLD), with the goal of combatting illicit trafficking of nuclear and other radioactive material at some 350 Russian sea, air and land border crossings, by the end of 2011. By the end of 2006, the program would install radiation-detection equipment at more than 150 sea ports, airport and border crossings in Russia. The program is later renamed to Nuclear Smuggling Detection and Deterrence (NSDD) program and extended to other countries of the FSU, as well as to Africa, Asia and Europe.

June 5, 1998. The last of Ukraine's 130 SS-19 ICBMs is lifted from its silo, defueled and transported to a storage facility with CTR-funded equipment.

June 10, 1998. The United States first proposes amending the Convention on Physical Protection of Nuclear Materials (CPPNM); Russia later proposes a draft text that will eventually become the International Convention on the Suppression of Acts of Nuclear Terrorism (ICSANT, see 2005 below). Both conventions are key to securing vulnerable nuclear material and strengthening the global nuclear security architecture.

July 24, 1998. U.S. and Russian governments sign the Scientific and Technical Cooperation Agreement concerning the management of plutonium that has been withdrawn from military nuclear programs.

August 1998. Financial meltdown in Russia. U.S. responds by increasing the budget for the CTR program from $382 million in 1998 to $440 million in 1999 and $475.5 million in 2000. DoE's MPC&A budget goes from $137 million in 1998 to $152 million in 1999.

September 2, 1998. Presidents of U.S. and Russia sign the Joint Statement for Principles of Management and Disposition of Plutonium Designated as No

Longer Required for Defense Purposes. Each side declares approximately 50 metric tons of plutonium to be withdrawn from the weapons program and rendered unusable for nuclear weapons.

September 1998. The first of 46 SS-24 silos in Ukraine is eliminated using CTR funding. The last SS-24 silo would be decommissioned in 2001. The SS-24 missiles would be disassembled by 2002 at a special facility built with CTR funding at Pavlograd Mechanical Plant in eastern Ukraine.

November 1, 1998. DoD creates the Defense Threat Reduction Agency (DTRA) as a successor to the Defense Nuclear Agency (DNA).9 DTRA is responsible for nuclear stockpile stewardship and accountability to include surety inspections of military nuclear units to ensure they meet safe and readiness standards. It also becomes the point agency for implementing DoD CTR projects.

1998. DoE and Minatom begin joint project on the regulatory base for MPC&A.

1998. Official DoE-Minatom opening ceremony for the Methodological and Training Center for Nuclear Materials Accounting and Control (IPPE).

1998. Main phase of DoE-Minatom work to modernize MPC&A systems at NIKIET, Siberian Branch of NIKIET, Beloyarsk nuclear power plant and ITEP is completed.

1999

October 2, 1999. DoE and Minatom sign Agreement Regarding Cooperation in the Area of Nuclear Material Physical Protection, Control and Accounting (MPC&A). The agreement regulates MPC&A cooperation after the expiration of the original July 1992 SSD umbrella agreement. It provides for further development of MPC&A systems at nuclear enterprises in Russia and highlights the need to counteract illicit trafficking of nuclear materials.

2000

March 1, 2000. U.S. establishes National Nuclear Security Administration (NNSA), a separate semi-autonomous agency within DoE responsible for the management and security of U.S. nuclear weapons, nuclear nonproliferation and naval reactor programs. Some criticize the move as adding another bureaucratic layer that encumbers U.S.-Russian cooperative projects, such as lab-to-lab cooperation.

May 4, 2000. At a trilateral meeting, DoE Assistant Secretary Rose Gottemoeller, Minatom's Lev Ryabev and Kazakhstan's Minister of Energy, Industry and Trade Vladimir Shkolnik sign an agreement on remediation of the Semipalatinsk nuclear test site, including the disposition of plutonium, a byproduct of nuclear testing, left behind in underground shafts in several locations at the site. The project, dubbed Operation Groundhog, would remove 100 kg of weapons-grade plutonium from 26 areas of the test site, including, most famously, the Delegen mountain, and would be completed by August 2003. The U.S. would spend $200 million in CTR funds on this and other programs to secure nuclear materials and infrastructure at the Semipalatinsk site.

June 1, 2000. U.S. Secretary of Energy Bill Richardson and Minister Adamov sign the protocol extending the WSSX agreement and incorporating within the framework of the agreement cooperative activities related to nuclear warhead dismantlement, previously under the purview of the WD&FMT program. The WSSX agreement is extended for another five years. It would not be extended again.

September 1, 2000. The U.S. and Russia sign the Plutonium Management and Disposition Agreement (PMDA), which requires each country to dispose of at least 34 metric tons of weapons-grade plutonium. The PMDA would enter into force only on July 13, 2011, and Russia would unilaterally suspend its participation in the deal in October 2016 amid deteriorating bilateral relations.

2001

March 2001. Alexander Rumyantsev, an engineer and a former director of the Kurchatov Institute in Moscow, is appointed the head of Minatom. Rumyantsev becomes the first Minatom outsider to hold this post. His institute has been supportive of cooperative projects with the U.S.

March 2001. Within the framework of WSSX and with the support of the Russian Defense Ministry's 12th GUMO and DoD's DTRA, U.S. nuclear lab SNL and Russian nuclear lab VNIIA launch the Safety and Security Technology for Russian Warheads program, or TOBOS.10 The goal of the TOBOS program is to develop a system that provides round-the-clock security and location information on warhead containers in Russia. The program is terminated in 2007 due to a decline in U.S.-Russian relations.

September 2001. USEC achieves a milestone of purchasing a quantity of Russian LEU equivalent to 5,000 warheads-worth of HEU.

October 2001. DoD and Uzbekistan's Defense Ministry sign a CTR agreement to spend up to $6 million to prevent the spread of biological weapons, materials and technology.

December 2001. Funding responsibility for the project to Eliminate Weapons-Grade Plutonium Production is transferred from DoD to DoE. The departments of Health, Agriculture, Treasury and Commerce, the EPA, Customs and Coast Guard are enlisted to support CTR projects.

2002

April 2002. All new CTR projects in Russia are suspended, as President George W. Bush could not certify before Congress that Russia was in compliance with the existing agreements.

May 24, 2002. President Bush and President Putin sign a Treaty on Strategic Offensive Reductions (SORT) in Washington, D.C., providing for the reduction of each country's nuclear arsenal to between 1,700 and 2,200 warheads. After ratification by Congress and the State Duma, the treaty would enter into force on June 1, 2003.

June 27, 2002. During a summit at Kananaskis in Alberta, Canada, the G8 issues a statement outlining the Global Partnership Against the Spread of Weapons and Materials of Mass Destruction. The Global Partnership commits $20 billion—$10 billion from the U.S. and $10 billion from the other G7 nations—over a period of 10 years to fund nonproliferation projects and assist Russia and other nations in addressing nonproliferation, disarmament, counter-terrorism and other nuclear safety issues.

July 2002. The U.S. and Kazakhstan renew the CTR umbrella agreement that had lapsed at the end of 2000.

August 20, 2002. Ukraine officially disbands the 43rd Rocket Army that formerly commanded units associated with the 176 ICBMs inherited by Ukraine.

December 22, 2002. The U.S., Russia, the IAEA and Serbia complete a four-week joint operation to repatriate some 50 kg of HEU, as well as 2.4 tons of highly radioactive spent fuel, from a research reactor at the Vinca Institute of Nuclear Sciences in Serbia.

2003

FY2003. DoE and NNSA launch the Megaports Initiative that seeks to equip 100 of the world's busiest ports with enhanced capabilities to detect nuclear and other radioactive materials.

March 2003. DoD's CTR policy office commences a six-month review of every program and project to ascertain whether it addresses the administration's focus on terrorist threats. This leads to a scaling down of some CTR projects in the FSU and the emergence of two new programs: Biological Weapons Proliferation Prevention and Weapons of Mass Destruction Proliferation Prevention Initiative.

April 2003. The dismantlement of the Stepanogorsk biological weapons facility in Kazakhstan, carried out with CTR funds, is completed.

May 9, 2003. Congress adopts Sen. Lugar's Nunn-Lugar Expansion Act, which authorizes operators outside the former Soviet Union to address proliferation threats. CTR funds are committed for the first time outside of the FSU to destroy chemical weapons in Albania.

May 21, 2003. The governments of the U.S., Belgium, Denmark, Finland, France, Germany, the Netherlands, Norway, Sweden, the UK and Russia, as well as the EU and IAEA, sign a framework agreement on a Multilateral Nuclear Environmental Program in the Russian Federation (MNEPR). The agreement aims to provide assistance to Russia in the area of safety of spent nuclear fuel and radioactive waste.

September 2-4, 2003. VNIIEF and Minatom conduct a Sarov-2003 exercise that tests the entire upgraded MPC&A system. The exercise involves transporting nuclear materials by rail and vehicle guarded by Interior Ministry troops. The test is attended by a group of U.S. observers from DoE and the labs.

2004

March 9, 2004. The Russian government reorganizes Minatom into the Federal Agency on Atomic Energy, or Rosatom. Rumyantsev remains in charge.

May 26, 2004. Secretary of Energy Spencer Abrahams announces the Global Threat Reduction Initiative (GTRI) with the mission to identify, secure and recover high-risk vulnerable nuclear and other radiological materials around the world.

May 2004. Russia joins the Proliferation Security Initiative.

May 2004. DoE issues interim Guidelines for Sustaining Effective Operation of Material Protection, Control and Accounting Systems in the Russian Federation, or Sustainability Guidelines for short.

2004. DoE-Minatom work begins on MPC&A Operations Monitoring System project.

2004. Main phase of DoE-Minatom work to modernize MPC&A systems at the Novosibirsk Chemical Concentrates Plant is completed.

2005

February 24, 2005. At their summit in Bratislava, presidents Bush and Putin issue the Joint Statement on Cooperation on Nuclear Security. What becomes known as the Bratislava Initiative sets a 2008 deadline for completing physical security upgrades in Russia, including at 97 nuclear material and warhead sites. They also issue a joint statement on cooperation to prevent nuclear terrorism. This greatly increases the pace and scope of nuclear security work in Russia.

April 13, 2005. U.N. General Assembly adopts the International Convention for the Suppression of Acts of Nuclear Terrorism (ICSANT), the initial draft for which was presented by Russia in 1998. The convention is designed to criminalize nuclear terrorism and to foster law-enforcement cooperation against potential nuclear terrorists. It has been signed by 115 countries—74 of which, including Russia and the United States, have ratified it—and acceded to by 33 more.

May 4, 2005. Former Rosatom chief Adamov is arrested in Switzerland on charges brought by the U.S. accusing him of diverting $9 million from one of the DoE's nuclear security projects. Adamov is later extradited to Russia, where he is convicted of fraud and sentenced to five and a half years in prison—a sentence that would later be suspended.

June 2005. Rosatom and DoE sign the framework for continuing cooperation on MPC&A for the period 2005-2012. The scope of cooperation, however, is substantially reduced from the previous decade.

November 15, 2005. Sergei Kiriyenko is appointed to head Rosatom. Kiriyenko, who comes from an engineering and finance background and briefly served as prime minister in 1998, becomes the first person in this position without prior nuclear-related experience.

2006

April 19, 2006. As part of the NNSA-funded GTRI, some 60 kg of spent research reactor fuel is removed from Uzbekistan to Russia, the first such repatriation of spent fuel since the break-up of the Soviet Union.

June 16, 2006. The U.S. and Russia sign a new CTR implementing agreement on security enhancements and training at Russian nuclear storage sites.

July 1, 2006. The fissile-materials storage facility at Mayak, built with the help of CTR funds, begins accepting weapons-grade material.

July 15, 2006. The U.S. and Russia launch a Global Initiative to Combat Nuclear Terrorism.

August 9, 2006. NNSA and IAEA remove close to 40 kg of HEU from a research reactor near Warsaw, Poland, and transfer it to Russia.

October 24, 2006. DoE announces completion of security enhancements at all 50 Russian navy nuclear locations, both warhead and nuclear material sites.

October 30-31, 2006. The first meeting of the Global Initiative to Combat Nuclear Terrorism takes place in Rabat, Morocco, attended by representatives of 13 governments. The meeting adopts a statement of principles that include commitment to strengthening the global security architecture to prevent, detect and respond to the threat of nuclear terrorism.

2007

2007. Congress eliminates the certification requirements for CTR. For many previous years, Congress had conditioned funding for the Cooperative Threat Reduction Program on the president making an annual certification that each recipient nation was committed to certain goals.

August 2, 2007. Ground is broken for construction of the Mixed Oxide (MOX) Fuel Fabrication Facility at Savannah River National Laboratory, in Aiken, South Carolina, intended to enable the elimination of 34 metric tons of U.S. weapons grade plutonium. The DoE would later add an additional 9 metric tons of excess fissile material to the total. The facility would be plagued by problems and is still not complete as of this writing.

December 1, 2007. President Putin signs into law a bill transforming Rosatom from a government agency into the Russian State Atomic Energy Corporation. It continues to oversee all nuclear fuel cycle activities, both civilian and military.

2008

April 9, 2008. Sen. Lugar announces the elimination of the last of the 56 SS-24 ICBMs in Russia under the Strategic Offensive Arms Elimination (SOAE) program.

April 20, 2008. The first plutonium-producing reactor, ADE-4, at Seversk in Russia is shut down as part of the joint NNSA-Rosatom program. As part of the project, the U.S. constructed a coal-fired plant to provide electricity and steam heat to the surrounding community.

June 5, 2008. The second reactor at Seversk, ADE-5, is shut down, leaving only one more plutonium-producing reactor in Russia at Zheleznogorsk.

November 12, 2008. The NNSA announces the completion of security upgrades at Mayak ahead of the December 2008 deadline. The upgrades are part the ongoing MPC&A assistance to Russia, accelerated by the Bush-Putin Bratislava Initiative of February 2005.

2009

March 21, 2009. The Treaty on a Central Asian Nuclear Weapons Free Zone (CANWFZ), established by Kazakhstan, Kyrgyzstan, Tajikistan, Turkmenistan and Uzbekistan, enters into force.

May 29, 2009. A CTR-funded Chemical Weapons Destruction Facility opens in Schuchye, Russia.

2010

April 12-13, 2010. The U.S. hosts the first Nuclear Security Summit, which brings together leaders of 47 countries and three international organizations to advance global cooperation on nuclear security and combatting nuclear terrorism. The summit concludes with a joint communique by all the leaders to secure all nuclear materials in four years. The U.S., Russia, Ukraine and many other countries also make specific national commitments at the summit to strengthen nuclear security.

April 13, 2010. At the summit, Russian President Dmitry Medvedev announces the closure of Russia's last reactor producing weapons-grade plutonium, the ADE-2 at Zheleznogorsk, after 52 years of operation. The closure is a culmination of U.S.-Russian cooperation on deactivating plutonium-producing reactors that started in 1997. Since 1993, the Zheleznogorsk reactor was producing electricity for the surrounding communities, yet still generating weapons-grade plutonium as a byproduct.

April 13, 2010. On the sidelines of the summit, the U.S. and Russia sign a protocol to amend the 2000 Plutonium Management and Disposition Agreement, under which both countries would dispose of approximately 17,000 nuclear weapons' worth of excess weapon-grade plutonium.

May 11, 2010. President Barack Obama resubmits the U.S.-Russia Agreement for Peaceful Nuclear Cooperation, also known as the 123 Agreement, to Congress. The agreement was initially submitted to Congress by the Bush administration in 2008 but withdrawn after the Russian-Georgian war in August of that year.

June 10, 2010. DoE Secretary Steven Chu and deputy director of Rosatom Ivan Kamenskikh dedicate the MPC&A Training Center at VNIIEF. The center is established for the professional development, retraining and skill enhancement of personnel involved in operating the MPC&A systems.

October 12, 2010. The NNSA announces the completion of the return to Russia of 450 kg of spent HEU fuel from Poland's Ewa and Maria research reactors in Swierk. This is the single largest removal of HEU in the history of the GTRI. The U.S. also provides Poland with assistance in conversion of the Maria reactor from HEU to LEU fuel.

November 2010. The U.S. and Kazakhstan complete the transfer of weapons-grade nuclear materials stored in the Central Asian republic.

December 1, 2010. Russia announces that it has created the world's first international nuclear fuel bank in Angarsk to operate under the auspices of the IAEA.

2011

January 2011. The U.S. and Russia exchange notes to bring into force the 123 Agreement.

April 26, 2011. The UN Security Council gives a 10-year extension to Resolution 1540, its main legal instrument to prevent nuclear, chemical and biological weapons from falling into the hands of terrorist groups.

March 2011. Rosatom's Kiriyenko visits the U.S. to oversee the extension of a nuclear security program, the signing of a deal to supply uranium to the U.S. and to explore exchanges of nuclear technologies.

May 2011. The State Duma ratifies the U.S.-Russian plutonium disposition protocol signed by U.S. Secretary of State Hillary Clinton and Russian Foreign Minister Sergei Lavrov in April 2010. The protocol calls for both sides to dispose of 34 tons of plutonium each.

May 2011. G8 leaders extend the mandate of the Global Partnership Against the Spread of Weapons and Materials of Mass Destruction at their summit in Deauville, France. They make no financial commitments.

May 2011. The NNSA and the Federal Environmental, Industrial and Nuclear Supervision Service of Russia (Rostekhnadzor) sign an agreement to extend nuclear security cooperation for an additional seven years.

June 9, 2011. Secretary Chu signs an agreement with Rosatom's Kiriyenko to provide support for national and international efforts on nonproliferation of nuclear weapons, advancing research efforts and the development of a legal framework to expand joint activities between the two countries on nuclear research.

July 13, 2011. Secretary Clinton and Minister Lavrov exchange diplomatic notes in Washington, D.C., thus finally bringing the amended PMDA into force.

July 2011. The Russian government, in a diplomatic note, informs the U.S. and other states that it withdraws from the ITSC agreement. Since its opening in 1994, the ITSC has disbursed over $1 billion for research projects involving more than 30,000 scientists with dual-use skills in the FSU.

September 22, 2011. The NNSA and the Federal Customs Service of Russia announce the completion of joint work on equipping 383 Russian border crossing points with equipment designed to detect nuclear and radiological smuggling as part of the NNSA's Second Line of Defense Program.

2012

March 26-27, 2012. Heads of 52 states attend the second Nuclear Security Summit in Seoul, South Korea. At the summit, the Russian leadership makes a number of proposals, including an initiative to organize a workshop on nuclear security.

March 27, 2012. DoS announces the removal of 128 kg of HEU from two sites in Ukraine. This is the last of three shipments that removed of a total of 234 kg of HEU from Ukraine to Russia over a two-year period.

May 2012. Russia and Uzbekistan sign an intergovernmental agreement that will allow Russia to take back spent HEU fuel from Uzbekistan's research reactors.

October 9, 2012. Russia announces that it has notified the United States that it no longer wants to extend the CTR umbrella agreement due to expire in June 2013.

November 2012. The NNSA announces the removal of 72.8 kg of spent HEU fuel from the Institute of Nuclear Physics in Tashkent, Uzbekistan, to Russia.

2013

April 5, 2013. The NNSA announces the removal of the Czech Republic's last remaining HEU, some 68 kg, from the Nuclear Research Institute in Rez to Russia.

July 2, 2013. The U.S. and Russia announce the successful removal of 11 kg of HEU from Vietnam's Dalat Nuclear Research Institute.

June 14, 2013. CTR umbrella agreement expires. U.S. and Russia sign a protocol to the 2003 MNEPR framework agreement to govern nuclear security cooperation, albeit much narrower in scope.

September 16, 2013. U.S. Secretary of Energy Ernest Moniz and Rosatom's Kiriyenko sign in Vienna an Agreement on Cooperation in Nuclear- and Energy-Related Scientific Research and Development, which provides the legal framework necessary to expand cooperation between U.S. and Russian nuclear research laboratories, institutes and facilities in a broad range of areas, including nuclear technology, nonproliferation, fundamental and applied science, energy and environment.

November 2013. Deputy Assistant Secretary of State Frank Rose announces that the down-blending of HEU to LEU by Russia that was required by the 1993 U.S.-Russia HEU Purchase Agreement has been completed.

November 7, 2013. The NNSA and its Russian partners announce they have successfully completed the removal of 14 Russian radioisotope thermoelectric generators (RTGs) from the Northern Sea Route.

November 5, 2013. The U.S., Russia and the IAEA announce that they have completed removal of all remaining HEU from Hungary.

December 10, 2013. The last shipment of LEU from Russia's port of St. Petersburg arrives at the port of Baltimore in completion of the HEU Disposition Agreement, or Megatons to Megawatts program. Over the course of the 20 years since the program began, Russia blended down 500 metric tons of HEU, the equivalent of some 20,000 nuclear weapons, into more than 14,000 metric tons of LEU. The overall cost of LEU purchases by the U.S. reached $8 billion.

2014

March 28, 2014. U.S. government announces suspension of projects under the U.S.-Russia Bilateral Presidential Commission, established in 2009 as part of President Obama's "reset" policy with Moscow, over what Western governments and Ukraine describe as Russia's annexation of Crimea and support of armed insurgency in eastern Ukraine. The suspension includes the commission's working groups on nuclear energy and nuclear security and scientific cooperation. However, nuclear security cooperation on existing projects between DoE/NNSA and Rosatom continues.

March 24-25, 2014. The third Nuclear Security Summit takes place in The Hague. The U.S. and Russia set aside their differences over Crimea to endorse the final statement that calls for enhancing nuclear security. But while signing the final communiqué Russia, China and 16 other countries shun a separate initiative of the U.S., the Netherlands and South Korea to incorporate UN nuclear agency security guidelines into national rules.

September 22, 2014. The U.S. announces it has worked with Russia to help remove 50 kg of highly enriched uranium from Poland.

September 29, 2014. Kazakhstan removes a stockpile of Russian-origin HEU fuel from the WWR-K research reactor in Almaty to Russia.

November 5, 2014. U.S. DoS announces that it received in mid-October a Russian Foreign Ministry demarche stating that Moscow will not participate in the 2016 Nuclear Security Summit.

December 16, 2014. Russia terminates the MNEPR Protocol and ceases cooperation with the U.S. at most Russian weapons complexes and civilian nuclear sites.

2015

August 27, 2015. The government of Kazakhstan and the IAEA sign an agreement that establishes the international nuclear fuel bank at the Ulba Metallurgy Plant located in the city of Ust-Kamenogorsk in eastern Kazakhstan.

August 31, 2015. Vladimir Mikerin, president of the U.S. subsidiary of TENEX, a division of Rosatom, and the sole Russian executor of the U.S.-Russian HEU deal, pleads guilty before the district court in Maryland to receiving over $2 million in corrupt payments meant to influence the awarding of contracts with Rosatom to U.S. companies. At least two other individuals are convicted of participating in this corrupt scheme.

September 28, 2015. Russia's Rosatom formally launches a commercial mixed-oxide (MOX) fuel fabrication facility at the Mining and Chemical Combine (MCC) in Zheleznogorsk to comply with the plutonium disposition deal signed by the U.S. and Russia.

September 29, 2015. The NNSA announces that the final 5 kg of HEU has been removed from Uzbekistan's IIN-3M Foton research reactor to Russia.

December 22, 2015. IAEA announces that some 1.83 kg of HEU has been removed from the former Soviet republic of Georgia.

2016

March 31-April 1, 2016. Fourth and final Nuclear Security Summit takes place in Washington, D.C., without Russian participation.

September 26, 2016. Secretary Moniz announces that the NNSA in cooperation with Poland, Russia and IAEA has successfully repatriated 61kg of HEU spent fuel from Maria research reactor in Poland.

October 3, 2016. President Putin issues a decree suspending the U.S.-Russian Plutonium Management and Disposition Agreement and related cooperation, citing unfriendly U.S. policy toward Russia as one of the reasons. The State Duma later confirms the move by passing a law.

October 5, 2016. The Russian government suspends the 2013 U.S.-Russian Agreement on Nuclear Energy Research and Development. It also terminates the 2010 agreement between Rosatom and DoE on cooperation in the conversion of six Russian research reactors to low-enriched uranium fuel.

Footnotes

The IAEA considers 25 kg of HEU and 8 kg of plutonium as sufficient to build a single nuclear weapon.

Alma-Ata would be renamed Almaty in 1993.

VNIITF stands for Vserossiisky nauchno-issledovatel'sky institut tekhnicheskoi fiziki, or the All-Russian Scientific Research Institute of Technical Physics. VNIIEF stands for Vserossiisky nauchno-issledovatel'sky institut experimental'noi fiziki, or the All-Russian Scientific Research Institute of Experimental Physics. Soviet nuclear facilities included some 10 closed secret cities that were known internally only by their postal indexes. These would not appear on maps until 1992 and most retain a semi-closed status.

PDD-3 remains classified but some reference to it can be found in PDD-30.

VNIIA stands for Vserossiisky nauchko-issledovatel'sky insitut avtomatiki, or the All-Russian Scientific Research Institute of Automatics.

NIIAR stands for Nauchno-issledovatel'skiy institut atomnykh reaktorov, or Scientific Research Institute of Atomic Reactors. NPO stand for nauchno-proizvodstvennoe obyedinenie, or scientific production association.

GAN stands for Gosudarstvenny atomny nadzor, or State Atomic Safety Authority.

Excerpt from Graham Allison's testimony on loose nuclear material from the former Soviet Union. Given before the Senate Subcommittee on European Affairs, August 1995.

DNA was briefly renamed Defense Special Weapons Agency (DSWA) before becoming DTRA in 1998.

TOBOS stands for Tekhnologii obespecheniya bezopasnosti opasnykh sistem, or Technologies for Securing the Safety of Dangerous Systems. GUMO stands for Glavnoe upravlenie Ministerstva oborony, or Main Directorate of the Defense Ministry; the 12th Main Directorate was roughly a counterpart to DTRA.

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Housatonic

Melpar Incorporated

Wikipedia Melpar

For such an important and influential military tech company, Melpar Inc. is extremely difficult to find information on.

Also see :

- **E-Systems, Incorporated** (**LTV Electrosystems** acquired **American Standard Inc.'s Melpar Division** in 1970 and established a new Commercial Services Division in Greenville to perform heavy structural modification and maintenance for the airlines. **In 1971 LTV Electrosystems acquired Hamilton Watch Company's Electronics division and established a new domestic international sales company known as Electrosystems Export Company**. Nevertheless, after unloading several of its acquisitions, employment in 1970 was down to 7,000 from a high in 1968 of more than 11,000. **In 1972, E-Systems emerged as an independent, publicly owned corporation, headed by John W. Dixon, who had served as LTV Electrosystems' president and chief executive officer since 1969.)**
- **Raytheon Intelligence, Information, and Services Business Unit** (In 1995, Raytheon Company acquired E-Systems, Inc. ; E-Systems was renamed Raytheon Intelligence and Information Systems.)

Notable employees :

- **Dr. Donald Malcolm MacArthur (born 1931)** ("From 1958 to 1966, [Dr. Donald MacArthur] was with Melpar Inc., where he developed the Life Science Laboratories and directed the Chemistry and Life Sciences Division. ") [HN00T2][GDrive]

Saved Wikipedia (Sep 21, 2020) for Melpar Inc.

Source - [HK0034][GDrive]

Founded 1945

Headquarters Northern Virginia

Services Government research and development

Parent Westinghouse Air Brake

American Standard

Raytheon

Melpar was an American government contractor in the 20th century Cold War period. At a time when most employment in Washington, DC was directly by the US federal government, Melpar became an early private sector contracting company training a high technology workforce in the area.

History

In 1945, after the conclusion of World War II, the founders of Melpar Inc (Thomas Meloy and Joseph Parks), at the suggestion of the United States Navy, moved from New York City to the Washington, DC area to obtain government contracts.[1] Meloy had served as an assistant to Henry Stimson during the war. The company name was derived from the first syllable of their last names.[2] In late 1945 Parks accidentally killed himself in a hunting accident; nevertheless Meloy continued promote developing Melpar as an engineering and production company doing business with the Armed forces. He acquired the Carl Miller Engineering Company, a small firm that designed and produced electro-mechanical products. The new company took over a contract for airborne radar systems, and expanded. In the next few years Melpar moved to Alexandria, Virginia, added a second plant in Cambridge, Massachusetts, and a third plant in Alexandria. Within 15 years the company grew to more than 6,000 employees, and occupied ten facilities of more than 1,000,000 square feet (93,000 m^2) throughout Northern Virginia.

Events such as the Berlin Airlift, the detonation of the nuclear weapons by the Soviet Union, and the outbreak of the Korean War helped Melpar's business. In addition to military applications, technology began to play a role in nonmilitary areas. The US government had a pool of technical talent in its laboratories, and assumed an expanded role. The launch of Sputnik in 1957 further intensified competition with the Soviet Union.

Melpar embraced rather than shunned government work, as did most other companies. In 1951 Westinghouse Air Brake Company, a railway equipment producer founded in 1869, purchased the company for $1 million. It was a large sum for the time, despite typical profits on government contracts of only 1-2% of sales, which were generally reinvested in research.

The 1990s saw the development of the Internet, and its emphasis on computer science, information systems, and software technology. During the 1970s and 1980s a similar fervor was experienced in the telecommunications and biotechnology sectors. However, during the 1950s and 1960s the most exciting technical place to advance the knowledge was the fledgling aerospace and electronics industry. The 1950-60's had many new firms and people readily working long hours. A unique feature of the 1950s, however, was that the US government, not the commercial marketplace, was the prime source of funding of new technologies.

Melpar was located near its customers in Washington, DC. Other government contractors such as Atlantic Research, Vitro Laboratories, Page Communications Engineers, Hazleton Laboratories, COMSAT and the Applied Physics Laboratory also benefited. However, Melpar was the largest. In 1963, openings included astronomers, astrophysicists, microbiologists, entomologists, geophysicists and gas chromatagraphers. Melpar filled a void due to the lack of a technical university in the area (Melpar welcomed George Mason University in 1964).[3]

In 1952 Melpar built an expensive, modern plant 10 miles (16 km) from downtown on a 44-acre (180,000 m^2) wooded tract near Seven Corners on Route 50. The new building, surrounded by fields in a campus-like setting 400 feet (120 m) back from the road, had a pond, willow trees, brick facade, and parking behind the plant. It was a contrast to the small buildings and warehouses located downtown, and was promoted as harmonizing industrial design with residential surroundings. To accommodate Melpar, Fairfax County revamped its zoning laws to help relieve the tax burden on property owners. Melpar employees could work near their homes. In development advertising the state of Virginia touted Melpar as a model.[citation needed] The decision to move to the country was made more than ten years before the "circumferential highway" was completed, and more than 15 years before a shopping mall now known as Tysons Corner Center was built at Tyson's Corner. Later known as the Capital Beltway, this highway led to the term beltway bandits for the contracting firms that later proliferated.[2]

Melpar linked production facilities to its scientific and engineering capabilities. The company won two large contracts for B-58 aircraft electronics and Minuteman missile guidance components, requiring a buildup of manufacturing plants and an associated technical work force in the Washington area. These facilities enabled scientists to test their laboratory research with prototype hardware. By 1960 the company assembled products such as missile equipment, flight simulators, radar beacons, fuses, data processing equipment, communications, antennas, electronic countermeasure and reconnaissance systems.

Managing manufacturing programs presented a different set of challenges. Since Washington did not have a workforce of electronic technicians Melpar had to build and train one. The Minuteman production line required 1,800 people and as many as 130 were hired in a single day. Technology schools such as the Capitol Radio Engineering Institute expanded to help train designers and draftsmen to build products for space and missile programs. Universities conducted technical courses in Melpar's facilities for employees on their own time, in programs praised by the Secretary of Education. Melpar instituted tuition-reimbursement policies with incentives for high grades in technical courses. Positions for minorities and females opened at unprecedented levels. [citation needed]

During this time the company also pioneered manufacturing technology. Unlike today when existing commercial off-the-shelf technology is available, manufacturing had to translate ideas quickly into producible reality. Intense development occurred in areas of microelectronics technology such as fabrication and layout of miniature circuits, and use of thin film devices and plastic components. Processes such as welding, plating, soldering and automatic component insertion were studied and improved. Melpar's manufacturing engineers often found themselves writing engineering process documents that eventually became the government standard.

Melpar performed diverse research in physical and life sciences over 40 years. One project begun in the late 1950s (foreshadowing artificial intelligence) linked biology and the design of electrical devices–computer programs that emulated artificial nerve cells and simulated functions such as learning ability and initiative. The intent was to construct a thinking machine, similar to a human nervous system that learned pattern recognition and avoided mistakes (e.g. programming a mobile satellite on the moon to avoid a deep precipice). Studies on the nature of speech led to more efficient use of the radio spectrum through bandwidth compression, and improved long distance and coded communications–other related studies focused on elimination of speech deficiencies and development of a phonetic typewriter. In medical research Melpar developed synthetic materials (tissue growth) to be compatible with the heart (later known as the Jarvik heart), and produced an electronic heart monitor (Cardiac Sentry) which detected out-of-norm variations, maintained hospital records and administered prescribed treatments. The company was a pioneer in plasma physics and developed materials for communicating with manned space vehicles reentering the atmosphere. Using solar energy, desalinization experiments were conducted to make saline and brackish water drinkable. Detection systems to measure highway curves, motions and vibrations were developed to improvemass transit systems.

Melpar performed studies in cell biology, food chemistry, composite materials (light weight, high temperature), solar energy, meteorology, virology and immunology (cancer research), air and water pollution, air traffic control, global navigation (constructed a prototype map of the Global Positioning System), and underwater acoustics and optics. They studied methane detection in mines and conversion of coal to acetylene as a new source of energy. An antenna was placed on top of the Empire State Building to evaluate the feasibility of UHF broadcasting. Offshoot products from laboratory technology included resins, varnishes, foam, nonsmudge ink, adhesives, photoelectric readers and frequency standard instrumentation. Synthetic diamonds and emeralds were produced to test hardness in space age materials. While most of Melpar's efforts were technical, some involved the social sciences–creation of a stock index of S&P 500 companies for Business Week, and operation of a Job Corps center.

Melpar continued its work on military and space applications such as radar, communications, and electronic counter measure systems as well as airborne and ground intelligence systems. Devices to detect lethal chemical and biological agents were developed. The company participated in early unmanned (Vanguard and Explorer) and manned space programs (Mercury and Apollo), providing antennas and semidried food for lunar missions. A quarantine facility was produced to insure the astronauts had not brought any contamination from the moon.

Melpar also produced more than a dozen flight simulators, including many of the Air Force's century series fighters and helicopter systems for the Navy. These simulators enabled more realistic and demanding training, saving pilots' lives and reducing fuel consumption during the 1970s energy crisis.

A company newspaper editorial in 1957 stated, "We have sought the breeder job, the line of inquiry promising to expand a general field of engineering endeavor or open a new one."[citation needed]

However, in the mid-1960s Melpar's research, engineering and production began to decline. The government's budget priorities changed, with emphasis

placed on solving the nation's social problems.The human spaceflight program had few follow-on missions after landing a man on the moon. The military's budget was heavily dedicated to the Vietnam War. These budget trends reduced Melpar's programs.

Other factors contributed to the business decline. The government did not award follow-on manufacturing contracts, so layoffs of production workers took place. The American Standard Companies, bought the Westinghouse Air Brake Company, and immediately began to sell off the assets. Melpar's research programs were diverse, unprofitable, and had uncertain business prospects.

Some unfavorable publicity contributed to Melpar's misfortunes. In 1963 Bobby Baker was Secretary for the Majority Democratic caucus in the US Senate, and closely linked to Lyndon B. Johnson - he held perhaps the most powerful nonelected position in Congress. A Melpar vending machine contractor filed a lawsuit against Baker, accusing him of influence peddling to switch the contract to a competitor, with which he had financial ties. Within a few days Baker resigned his position. For almost two years there were headlines and congressional investigations into Baker's business deals and questionable relationships. Melpar's top management was called to testify before the Senate Rules committee, although ultimately the Melpar incident was settled out of court. Even so, the situation demoralized employees, did not enhance the company's ability to win new Government contracts, and changes in company management soon took place.

An investigation was also ordered into overpricing of the B-58 systems.[4]

Some employees left Melpar to start new companies (usually in the Washington area). Over the next 20 to 30 years more than a dozen spin-offs generated millions of dollars in annual sales and employed thousands in the Washington area. One employee began a communications company in Florida that ultimately became the Harris Corporation. Two employees from a research division near Boston formed the data communications manufacturer Codex Corporation in 1962.[5] . Many prospered in the 1970s and 1980s, but then left the area, due to industrial consolidations, mergers, and acquisitions. Meloy Laboratories continued Melpar's biotechnical, pharmaceutical research until Rhône-Poulenc moved the operation to Philadelphia in the 1980s. A flight simulator spin-off named Simulation Engineering Corporation (Secor), went through four changes in ownership in Northern Virginia–from Sperry Rand to Honeywell to Hughes to Raytheon - before being moved to Texas in 1998. The same employees started a second company, Quintron, which was purchased by Loral for $22 million and later owned by Lockheed. A few companies still reside in Northern Virginia –VSE Inc in Alexandria (1300 employees), RSI Inc in Sterling (500 employees), ISOMET in Springfield, ST Research (now a division of Boeing called Argon ST[6]) in Newington, as well as half a dozen small machine shops.[*citation needed*]

For almost 50 years Melpar used the same facility on U.S. Route 50 in Virginia and had about 1,500 employees. The company went through several changes in ownership, being purchased by LTV Electrosystems in 1970 (changed to E-Systems in 1972) and the Raytheon Company in 1995. The name Melpar was discontinued in 1994 and the facility served as headquarters for Raytheon's Strategic Systems Division. Over the last 25 to 30 years the company performed some government electronics contracts, such as production and support of ground systems for the U-2 reconnaissance aircraft, and unmanned aerial vehicles. Additionally this facility managed information systems for agencies such as the US Department of Education, and fabricated and tested electronic products. In 2010 Raytheon moved out of the building at 7700 Arlington Boulevard, and it was remodeled for Tricare.[7][8]

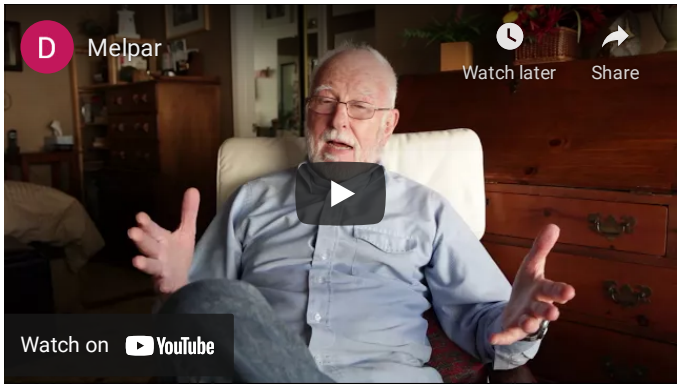
2018 - A video I found of an ex-Melpar employee

Source - https://www.youtube.com/watch?v=WUVlwELjYFg

2018-12-23-youtube-david-jolkovski-melpar (.jpg / .pdf / .mp4) /

Melpar (Dec 23, 2018)

David Jolkovski



"Meloy Laboratories continued Melpar's biotechnical, pharmaceutical research until Rhône-Poulenc moved the operation to Philadelphia in the 1980s. "

history of DoD research - good

https://books.google.com/books?id=Xkm8awAlBNMC&pg=PA24&lpg=PA24&dq=melpar+history&source=bl&ots=XAg5XLWaIg&sig=ACfU3U01pP-V3hOtObNxCPTfBt2STgMxzg&hl=en&sa=X&ved=2ahUKEwjZ-t7plo_qAhUkoXIEHUXEB8UQ6AEwCHoECAsQAQ#v=onepage&q=melpar%20history&f=false

june 8 1961

https://www.nrc.gov/docs/ML0925/ML092580609.pdf

https://ntrs.nasa.gov/archive/nasa/casi.ntrs.nasa.gov/19660025318.pdf

https://books.google.com/books?id=RN8VIZjnsRYC&pg=PA50&lpg=PA50&dq=melpar+history&source=bl&ots=XBbAHWosep&sig=ACfU3U2B-0fFQKD37Z5tubMyAWOns-zt1Q&hl=en&sa=X&ved=2ahUKEwjZ-t7plo_qAhUkoXIEHUXEB8UQ6AEwCnoECAoQAQ#v=onepage&q=melpar%20history&f=false

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https://www.worldcat.org/title/effects-of-r-f-energy-on-biological-macromolecules/oclc/50373688

Effects of R-F energy on biological macromolecules.

Author: Melpar, Inc.; US Army Edgewood Arsenal Chemical Research and Development Laboratories.

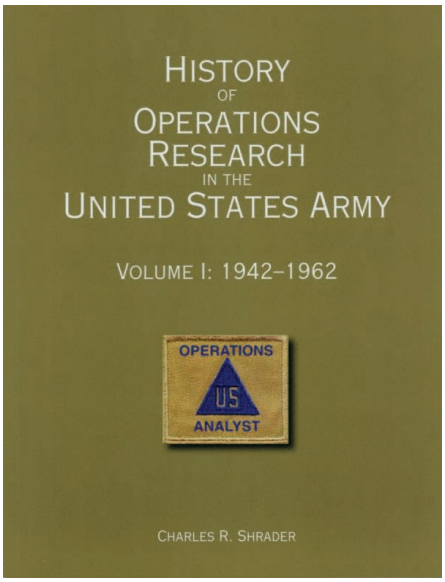
Publisher: Fall Church, Va. [1963?]-

Series: AD 618472, etc.

Edition/Format: Journal, magazine : English

History of Operations Research in the United States Army , volume 1 : 1942 - 1962 , by Charles R. Shrader

PDF : [HC003S][GDrive]



[HC003T][GDrive]

Pages 105 - 106 : International Relationships

Since World War II, American military operations research organizations had cooperated closely with their counterparts in Britain and Canada. ORO personnel worked closely with British and Canadian operations analysts in Korea, and the offi ce maintained a full-time liaison offi cer with the British Army Operational Research Establishment (AORE).184 Another important means of maintaining contact with the British and Canadian OR organizations was the series of annual Tripartite (later Quadripartite, with the addition of the Australians) Conferences on Army Operations Research, the fi rst of which was held in London in April 1949 and the second of which was hosted by ORO in Washington in October 1950.185 Each conference concentrated on a specifi c major topic and was attended by representatives from ORO, AORE, and the Canadian Army Operational Research Establishment (CAORE), as well as representatives from the OR organizations of the other services in all three countries. Th e British and Canadians also frequently participated in conferences sponsored by other U.S. Army agencies, such as the annual Army OR symposium sponsored by the Ordnance Corps Army Research Offi ce (Durham). At the second such symposium in March 1962, G. Neville Gadsby of AORE explained that his organization included a small element with the director of operational science and research in the War Offi ce and the main AORE, located at West Byfl eet a few miles outside London, which included an integrated staff of military and civilian analysts divided into subelements covering weapons, tactics, fi eld studies, general studies (logistics, economics, communications,

and so forth), human factors, and clothing and equipment physiology.186 As Gadsby explained, AORE was on a level with two other British Army OR groups, one in Germany (Operational Research Section, British Army of the Rhine) and one in southeast Asia (Operational Research Unit, Far East). At the same symposium, Henry H. Watson discussed the CAORE, which then was physically located at Canadian Army Headquarters in Ottawa and reported directly to the scientifi c advisor to the chief of the General Staff .187 Watson also explained that the entire staff of CAORE, which included military personnel, was in Ottawa and that CAORE conducted a program of research projects (10–15 percent of which were self generated) that fell into two main groups: tactical studies and systems studies.188

In the 1950s, the other nations of the North Atlantic Treaty Organization (NATO) also began to set up OR organizations, as did NATO itself.189 In the mid-1950s, an international OR group composed primarily of the British and the Canadians was established under Headquarters, Allied Air Forces Central Europe, at Fontainebleau, France, and a group led by Dr. H. F. Robertson was organized at Supreme Headquarters Allied Powers Europe (SHAPE).190 From 1953 the NATO Advisory Group on Aeronautical Research and Development (AGARD) (and later the OR group at SHAPE) was active in promoting lectures on operations research and helping interested nations form their own OR groups.191 Robertson's team at SHAPE also organized a number of conferences on OR in the various NATO member nations. Th e fi rst conference, in 1955, had 30 participants from only four nations, but the third gathering, held in November 1956, had 120 participants representing all but two of the NATO countries.192 In April 1957, the fourday NATO conference on operational research sponsored by AGARD was held at the Palais de Chaillot in Paris.193 Th e chief aims of the conference were to interest high-level NATO administrators in the need for OR and to familiarize NATO technical and operating personnel with the latest research methods.194 As the supreme allied commander in Europe, U.S. Air Force General Lauris Norstad, told attendees at the conference:

Operational research, by revealing methods for more eff ective utilization of our manpower, our skills, our material and our resources, is making a signifi cant contribution to the military potential of the Atlantic Alliance. Th is is of utmost importance, for our strength depends not alone on what we have but to a large extent on what we do with what we have.195

Th e attendees at the second SHAPE operations research conference, held at HQ SHAPE on 14–15 February 1956, noted that most NATO OR groups were in the central geographical area, with few in the NATO “fl ank” countries.196 In March 1956 AGARD organized a threeman team—Th ornton Page (from the ORO fi eld offi ce in Heidelberg), Tony Sargeaunt (from the SHAPE scientifi c advisory staff), and Glen D. Camp (from Melpar, Inc.)—to conduct a two-week trip to Italy, Greece, and Turkey to promote OR and help organize OR groups.197 Th e Italian General Staff expressed interest and asked for a followup visit, and, on 1 June 1956, the Turks established an OR group within the Turkish General Staff Scientifi c Advisory Board comprising ten reserve offi cers with mathematics and scientifi c training under the direction of Turkish Air Force Col. Fuat Ulug.198

As of 1956, allied OR groups in NATO included those at the headquarters of the British Army of the Rhine, the Second Allied Tactical Air Force, and the Canadian Infantry Brigade Group (all near Dusseldorf); a RAND representative and elements of the Offi ce of Operations Analysis at Headquarters, United States Air Forces Europe, in Wiesbaden; the ORO fi eld offi ce at Headquarters, United States Army Europe; Headquarters, Twelfth U.S. Air Force at Ramstein; Headquarters Allied Air Forces Central Europe at Fontainebleau; two Navy analysts at Headquarters, Commander SOUTH near Naples; the Air Defense Technical Center in Th e Hague; SHAPE near Paris; and the Turkish OR group under Col. Ulug.199 By 1963, Norway had an OR group of approximately 450 people concentrated in the Norwegian Defence Research Establishment (NDRE).200 By that time, operations research in NATO was focused in the SHAPE Air Defence Technical Center (SADTC), roughly 40 percent of whose scientifi c staff (thirty-fi ve analysts) were assigned to OR tasks.201 Th e SADTC analysts generated 70–80 percent of their own projects, and, as with the NDRE, military offi - cers were seconded to participate in specifi c projects.202

https://www.governmentattic.org/10docs/TechRptsDPG_1961-1965.pdf

CBRNIAC Number: CB-046345

AD Number: 326213

Site Holding: CB DT DW 509471

Title: Investigation of Bioelectro-Chemical Methods for Detection of Toxic CW Agents. Phase 3A. Final Comprehensive Report, 1 February-30 September 1961.

Author(s): MacArthur, D. M. Ambrose, J. F.

Report Number: DPG-62-0816

Publish Date: 1961-10-01

Corp Author Name: MELPAR FALLS CHURCH VA

Distribution Statement: Distribution limited to US Gov't agencies and their contractors. Other requests for this document shall be referred to Chemical Warfare Laboratories, Army Chemical Center, MD.

Document Classification: S

CBRNIAC Number: CB-046367

AD Number: 325557

Site Holding: CB DT DW 537601

Title: Research in the Area of CW Warning and Detection. Phase 3. Final Report, 1 January-31 August 1961. Author(s): MacArthur, D. M. Chaudet, J. H.

Report Number:

Publish Date: 1961-09-01

Corp Author Name: MELPAR FALLS CHURCH VA

Distribution Statement: Distribution limited to US Gov't agencies and their contractors. Document Classification: S

CBRNIAC Number: CB-046368

AD Number: 325556

Site Holding: DT DW

Title: Research in the Area of CW Warning and Detection. Volume 2 (Sections 4-6). Author(s): Chaudet, J. H. MacArthur, D. M.

Report Number:

Publish Date: 1961-08-01

Corp Author Name: MELPAR INC FALLS CHURCH VA

Distribution Statement: Distribution limited to US Gov't agencies and their contractors. Document Classification: C

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1951 (Sep 29) - Westinghouse air brake purchases all stock of Melpar Inc.

https://timesmachine.nytimes.com/timesmachine/1951/09/29/89462249.html?pageNumber=32

1953

https://www.newspapers.com/image/89764945/?terms=melpar

1956

https://www.newspapers.com/image/581830667/?terms=melpar

1959

https://www.newspapers.com/image/290258460/?terms=melpar

1961/62 - bionic mouse

http://cyberneticzoo.com/tag/artificial-neural-network/

1962

https://www.newspapers.com/image/453394144/?terms=melpar

1965 (November)

https://ntrs.nasa.gov/archive/nasa/casi.ntrs.nasa.gov/19660022516.pdf

1965-11-nasa-proceedings-of-experimenters-info-meeting-on-the-apollo-applications-program-in-bioscience.pdf

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1965 - Melpar - biowarfare ...

https://books.google.com/books?id=d45qAgAAQBAJ&dq=%22Life+Sciences+Division%22+%2B+%22melpar%22&source=gbs_navlinks_s

Toxicologic Assessment of the Army's Zinc Cadmium Sulfide Dispersion Tests

Subcommittee on Zinc Cadmium Sulfide, Commission on Life Sciences, Division on Earth and Life Studies, National Research Council

National Academies Press, Jun 13, 1997 - Political Science - 351 pages

During the 1950s and 1960s, the U.S. Army conducted atmospheric dispersion tests in many American cities using fluorescent particles of zinc cadmium sulfide (ZnCdS) to develop and verify meteorological models to estimate the dispersal of aerosols. Upon learning of the tests, many citizens and some public health officials in the affected cities raised concerns about the health consequences of the tests. This book assesses the public health effects of the Army's tests, including the toxicity of ZnCdS, the toxicity of surrogate cadmium compounds, the environmental fate of ZnCdS, the extent of public exposures from the dispersion tests, and the risks of such exposures.

1997-us-national-academies-press-toxicology-assessment-of-armys-zinc-cadmium-sulfide-dispersion-tests-google-books-into / -pg-229 / -pg-230

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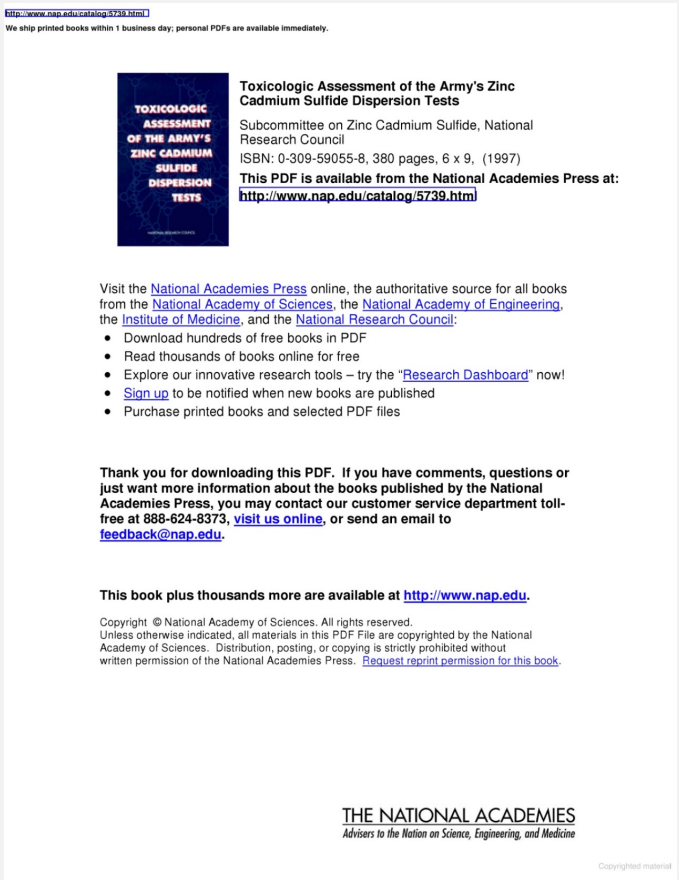

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TOXICOLOGIC ASSESSMENT OF THE ARMY'S ZINC CADMIUM SULFIDE DISPERSION TESTS

Toxicologic Assessment of the Army's Zinc Cadmium Sulfide Dispersion Tests

Subcommittee on Zinc Cadmium Sulfide, National Research Council

ISBN: 0-309-59055-8, 380 pages, 6 x 9, (1997)

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DESCRIPTION OF TEST

Name of test: *Meteorological Analog Test and Evaluation (Mate): First Field Test*

Reference-list number: 28

Reference: J.K. Allison, A.V. Duffield, and J.M. Morton. Meteorological Analog Test and Evaluation: First Field Test Operation. Final Report. Meteorological Research Laboratory, Melpar Division of American Standard, 7700 Arlington Blvd., Falls Church, Va. Contract DA 42-007-AMC-339(Y), Task VIII B, for U.S. Army Deseret Test Center, Fort Douglas, Utah. June 1970.

Principal object:

To evaluate the equipment systems to be used in the MATE program, which is "a broad, long-range study in applied meteorology," "to measure diffusion and micrometeorology at typical sites and characterize these sites in terms of CB (primarily of diffusion)," and to begin data collection for the MATE program with observations at the first forest analog site.

Site selection:

Sites had to be at least 1 mile square, relatively level, well-forested with mature deciduous trees, and accessible from Melpar laboratories. Two potential sites in Virginia were located, but were subsequently dismissed from consideration (the first because of public concern over the integrity of a Bald Eagle nesting site, the second when it was discovered that a gas transmission line was being built through it). A more extensive search into Maryland located the selected site in the Green Brier Swamp, 12 miles southwest of Cambridge, Md., and permission for use was obtained from the owners of the various parts of the site.

Number and nomenclature of releases:

There were 115 trials, numbered from 1 to 115. Green FP and yellow FP were released in 111. In four, no FP was released. Some additional unnumbered

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Toxicologic Assessment of the Army's Zinc Cadmium Sulfide Dispersion Tests
http://www.nap.edu/catalog/5739.html

"trials" involved other operations connected with the MATE program and did not involve any FP release.

Test conditions:

FP releases were made in the center of sampling grids, of which there were four. The main sampling grid consisted of three circular arrays of Rotorod samplers at 100 m radius (every 10 degrees of arc), 200 m and 400 m radius (every 5 degrees of arc). Additional samplers were located on a 1,000-m square ("XM3") grid around the circular grid. Two subsidiary sampling grids ("white" and "yellow") consisting of 100- and 200-m radius circles were constructed, the first off-set by approximately 500 m east from the center of the main grid, the second offset approximately 1 km from the main grid.

The whole site was forested, with trees of typical height 20 to 30 m, and tree density of 150 to 500 per hectare. The last 10 trials were performed after leaf fall to evaluate dispersion characteristics under such conditions.

Test material:

ZnCdS tracer materials. Green-fluorescing, type 3206, Lot SCM FPG-11. Yellow-fluorescing, type 2267, Lot FPY-12. (Note: The analysis dates given for these materials precede the experiment by 4 years.)

Place of release:

Releases were made close to ground level (1 or 1.5 m height, yellow FP, all trials) and at various heights of 1 m to 28 m (green FP). All releases were at the center of one or another of the sampling grids, in most cases with simultaneous release of yellow and green FP in the center of the main grid, occasionally with different colors in the centers of the different grids.

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1998 Cheryl Welsh - "The Code of the Brain : How the US Government Won the Arms Race to Control Man" - Main points only, from MindJustice.com

https://nutesla.com/wp-content/uploads/2010/08/The-1950s-Secret-Discovery-of-the-Code-of-the-Brain-..pdf

1998-code-of-the-brain-us-government-won-arms-race-by-cheryl-walsh-main-points-only-from-mindjustice-com

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The 1950s Secret Discovery ...

High-temperature Superconductors

(HTSC) contains the theory and basis for the technology used for remotely detecting brainwaves from a distance. Currently the military is developing it for remote sensing. While this may not be the classified mind reading technology used today, the point is to see that the level of technology is possible and the scientific theory behind mind reading can be figured out, even if it is classified. Please note that the Jonathan Tennenbaum article mentions HTSC and it's use for mind control weapons. Here is a list of articles on HTSC with brief comments.

Hewish, Mark. (1992,June 1). High-temperature Superconductors. International Defense Review. Vol.25. No.6;

- Pg. 624. "The United States government Office Of Technology Assessment believes that electronic components using high-temperature superconductors (HTSCs) will be available by the mid-1990s. ...DARPA (the US Defense Advanced Research Projects Agency) has awarded several contracts for work on HTSCs. E-Systems 'Melpar Division leads a team--including several universities and specialist companies such as Superconductor Technologies and Conductus--that has a $9.7 million contract from the agency to demonstrate a feasible approach to defense applications of HTSCs by 1994.
- ...HTSCs first made their appearance in 1986, when two researchers at the IBM laboratories in Zurich--who won a Nobel prize for their work...Radio-frequency energy encounters some resistance even in a superconductor, but this is negligible at frequencies below 1 GHz. ...Most radars of military interest operate at frequencies below 120GHz...

https://www.washingtonpost.com/archive/business/1988/03/21/meloy-packs-its-test-tubes-for-new-home/d41060ba-36b7-485a-b3a8-585970f9a89e/

1988-03-21-washington-post-meloy-packs-test-tubes-new-home.pdf

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The Washington Post

MELOY PACKS ITS TEST TUBES FOR NEW HOME

By Malcolm Gladwell

March 21, 1988

Meloy Laboratories, one of the Washington area's pioneering biomedical research companies, is moving out.

Over the next few weeks, Rorer Group Inc., the large Pennsylvania pharmaceutical company that bought Meloy two years ago, will move Meloy's Springfield laboratory and 80 of its scientists to Rorer's central research facility in Fort Washington, Pa.

The loss of Meloy is not a major blow to this area's burgeoning biotechnology community -- there are more than 100 biotech firms in the area, with companies coming and going each month.

But in many ways Meloy -- which grew out of the concerted effort to find a cure for cancer in the early 1970s and then was drawn away from government contract research by the commercial promise of genetic engineering -- is the archetypal Washington biotech firm. Many observers say its fate is a portent of changes that may ripple through the region's biotechnology community over the next few years.

Meloy is being moved to Pennsylvania so that its biotechnology expertise can be meshed with Rorer Group's multimillion-dollar drug research program. Virtually every major pharmaceutical company is making a similar investment in biotechnology, as it has become increasingly clear that genetic engineering will have a major impact on the way drugs are developed.

The result is a new concentration of resources in the biotech field and increased competition in key product areas, which some experts say could force some of the many biotech start-ups into bankruptcy, limit others to niche markets and push still more, like Meloy, into the arms of major pharmaceutical houses.

"People have been talking for years about a shakeout in the biotech industry," said L. Patrick Gage, vice president and director of exploratory research for the Nutley, N.J.-based American arm of Hoffmann-La Roche Inc., the Swiss drug giant. "I think it's finally coming."

Meloy had grown to $10 million in revenue from contract research by 1975 when it was acquired by Revlon Inc.'s drug division. That division, which also included USV Pharmaceutical Corp. and Armour Pharmaceutical Co., was in turn bought by Rorer in January 1986.

At the time, Meloy was only a small portion of the deal, which was part of Rorer's attempt to increase its pharmaceutical muscle. But later, when it became clear that Rorer needed to build a base in biotechnology, its management took a closer look at Meloy. "They'd brought in top-notch scientists and were doing some exciting work," said Rorer Chairman Robert F. Cawthorn. "We said, 'Boy, we've got a real gem here.' "

Robert L. Gawthrop. "We said, 'Boy, we've got a real gem here.'

What attracted Rorer to Meloy was the same thing that has attracted many of the major pharmaceutical companies to biotechnology -- expertise in the use of recombinant DNA techniques to screen chemical compounds for their potential as drugs.

In the past, new drugs were discovered by testing thousands of synthetic compounds on living organisms, a process that, at best, yielded one promising substance in 1,000. But by studying the chemical structures of cells linked to particular medical problems, biotechnology has made it possible to screen potential drugs far more effectively.

This process, known as receptor technology, allows scientists "to ask the right biological questions," said Dr. Alain Schreiber, who is heading up the integration of Meloy into Rorer. "Instead of using a shotgun approach, we can use a pointed rifle."

Meloy has two scientists on its roster from the Wietzmann Institute in Israel with international reputations in receptor work, and down the road the Meloy team hopes to lead Rorer into a second potentially revolutionary stage in drug development: allowing for the engineering of drugs to precise biological specifications by giving scientists a precise understanding of the nature of disease. Drug design, as it is known, promises to remove the guesswork from drug development and to allow for the creation of stable, targeted chemical compounds that are less prone to side effects.

"The dream of every chemist and every pharmaceutical house is to have rational design of their drugs -- to have a scientist sit down and draw a chemical compound on paper," Schreiber said.

In pursuit of this, Rorer has taken a drugdevelopment staff of about 100 scientists and supplemented it with an equivalent number of biologists from the Meloy group. Many of the other major drug firms are doing the same thing, looking to supplement the synthetic chemistry that has dominated drug development so far with expertise in biotechnology.

"In a decade, bioscience will be the major driving force behind drug development, and chemistry a tool," predicted Ralph Hardy, deputy chairman of Boston's Biotechnica International Inc. "At the moment, it's the opposite."

But drug companies are not simply turning themselves into biotech firms. For example, as Smith Kline & French, the research division of pharmaceutical giant SmithKline Beckman Corp., has hired about 200 biotech scientists in recent years the company's principal concern has been integrating the skills of the newcomers with those of the chemists. "We wanted molecular biologists to understand the existing world and wanted the reverse osmosis among our traditional scientists so they could begin to understand what molecular genetics was all about," said George Poste, the company's vice president for research.

If biologists design drugs in the future, it will be in tandem with chemists, who will construct the chemical compounds designed by the biologists.

Rorer felt it necessary to move Meloy Laboratories from Springfield to a building adjacent to the company's research center in Fort Washington for

building adjacent to the company's research center in Fort Washington for the same reason. Company officials say they want Meloy biologists to work more closely with Rorer's chemists.

Of course, not every small biotech company is destined to be swallowed whole by a giant like Rorer Group. But the enormous demands involved in integrating traditional chemistry and biotechnology for drug development in the next decade have made it less likely, according to industry experts, that many smaller companies looking to produce drugs can survive.

Although some biotech firms, like California's Genentech Inc., appear to have already made the leap from start-up to the pharmaceutical major leagues, and other older firms, like California's Amgen and Boston's Genetics Institute, have been touted as likely followers, analysts doubt whether many other companies are capable of finding the capital to join them.

"The time of the high market valuation for biotech companies is over," Schreiber said. "People have realized how difficult and expensive it is to bring a new therapeutic to market. The hype is gone."

Among the rest of the hundreds of biotechnology companies in the health care sector, there already seems to have developed a split between those small firms struggling to compete with pharmaceutical companies hundreds of times their size in the development of new drugs and biotech firms thriving on much more modest niche markets in medical devices.

The division is especially marked in the Washington area, where the majority of the most promising biotech health care firms -- such as Biotech Research Laboratories Inc., one of the nation's principal manufacturers of tests for acquired immune deficiency syndrome -- are in the business of producing recombinant DNA diagnostic kits.

"There will always be a trend toward fewer players in the pharmaceutical business because the costs of launching a product are so great. With diagnostics, the costs of approval are less, and the demand for differentiated products is much greater," said Leon Taub, president of Digene, a College Park firm that has, among other things, developed a DNA diagnostic test to supplement a pap smear.

"Diagnostics are a very different business," said Steve Turner, president of Gaithersburg's Oncor Inc., another local company that has made a successful entry into that market. "It's more like trench warfare. Products evolve rapidly, and you have to make constant changes. That fits more into themodus operandi of a smaller business."

For biotechnology firms in other parts of the health care market, the future is less certain. And in the Washington area, where -- unlike the thriving biotechnology communities in northern California and Boston -- there are no clear giants emerging, some analysts say that further absorption of small firms by large pharmaceutical companies is a distinct possibility.

"The ones that really have something are likely to be eaten up," said Thomas Taylor, an analyst with Chesapeake Securities in Towson.

And the others? "I think many of them are just going to die."

Housatonic

Charles William Merritt (born 1951)

Father - https://www.findagrave.com/memorial/176937437/william-cecil-merritt

Mother - https://www.findagrave.com/memorial/179505920/norma-emetta-merritt

Source : 1995 (March edition) of "PGP : Pretty Good Privacy"

1995-03-pgp-pretty-good-privacy-garfinkel.pdf / https://drive.google.com/open?id=106fR2C4q7enMCmxYT7aUpqoEucJV2PU6

Charlie Merritt

Charlie Merritt got his start in cryptography in 1977 in Houston, where he was technical director of a microcomputer marketing company. A friend in Arkansas sent him a copy of the original MIT public key paper by Rivest, Shamir, and Adleman. The friend wanted to know if RSA could be implemented on a microcomputer.

Merritt said, "Yes."

In 1980 Merritt moved to Fayetteville, where he formed a company with two other people to create an encryption system for Z80-based computers running the CP/M operating system. Merritt was right: RSA could run on the puny microcomputers of the time. It ran slowly but not as slowly as Merritt had feared. "We thought it would take a week or two to generate a 'pretty big' key. Encryption of a file might take 20 minutes," Merritt recalls. "Well, we did better than that. 256bit keys generated in 10 minutes; a small file encoded in 20–30 seconds."

Merritt and his friends started selling a system called DEDICATE/32, which performed encryption using 32byte (256bit) keys. After a while he had a falling out with his two partners and set up a new company called Merritt Software, which contracted with Merritt's former company to market DEDICATE/32.

By 1983 Merritt Software was having a problem: "Most interest came from business people who wanted privacy from Banana Republic competitors that had bribed 'El Jefe' or were related to him," he says. The company also kept getting visits from NSA employees ("They always travel in pairs," Merritt says) who informed Merritt Software that their RSA programs were "munitions" and couldn't be legally exported to any country in the world except Canada. "We had few customers as close as Canada. Evil spies could buy crypto in the U.S. and sneak it 'over there' and copy the beeJesus out of it, but I couldn't make an honest $50 by selling it to a business person who wanted privacy!" Merritt complains.

Merritt's call to Metamorphic was actually a marketing gimmick. Merritt had bought a few computer magazines and was calling every single company that might be the least bit interested in having his RSA encryption package run on its computer. (At this time, RSA had no known patent restrictions. Although MIT had filed for the patent on the RSA encryption algorithm, the patent had not yet been issued.)

Zimmermann "was the most gee-whiz-whoopie enthusiastic character I had run into," recalls Merritt. "He didn't have a need for crypto, but as he told me, he had been interested in ciphers since the Boy Scouts had introduced him to the subject. He was the only person I had run into that knew nothing about public keys, and wanted every single detail on how to do it. The thought crossed my mind that he might be a practical joke inspired by a friend."

Zimmermann told Merritt that he was anti-Big-Brother. Merritt liked that; he was really angry at the NSA for almost driving his company out of business with its policy against exporting cryptography. The two hit it off.

Indeed, Zimmermann had a lingering interest in cryptography since he had been a small boy; he simply hadn't had anyone to share it with and any practical knowledge of how to implement it. In fourth grade, Zimmermann found a copy of the book, Codes and Secret Writing by Herbert S. Zim, and read it cover to cover. "It was really cool," remembers Zimmermann. "I learned Morse code and Braille from it, and made invisible ink from lemon juice." A few years later, Zimmermann was making code wheels and transposition ciphers. He made codes in college with the school's computers. He even knew about the RSA algorithm that Merritt was using because he had written Ron Rivest asking for a copy of the RSA paper described in Scientific American.

Zimmermann had considered writing his own RSA implementation shortly after he received the original MIT paper but quickly gave up: microcomputers, Zimmermann thought, were just too slow. And here was Charlie Merritt, who had gotten RSA to work on a puny Z80. How did Merritt do it?

Merritt showed Zimmermann how. The Arkansas programmer had no formal training in mathematics, but he had taught himself the secrets of doing arithmetic with 100-digit numbers on a personal computer. Now he was teaching Zimmermann.

"He called more than once a week for [several] years," recalls Merritt. "He at first knew virtually nothing, but as time went on he began to grow quite formal. It was during this early time that he and I talked about his 8088 card for the Apple II and putting crypto on it. He studied the DES and gave me my first understandable explanation of why the cipher feedback would not melt down on a communication error.

I realized that this guy was real, and that he had a vision I had given up. He had drive, I felt beat. He began talking about protocols, in great detail. For hours, on the phone. I hate protocols, that's for the Phone Company. But he needed a brick wall. Then he began asking exactly how math was implemented on a Z80. I mean detailed stuff about memory allocation, and adding two giant numbers and what about the carry bit. We were back in my territory."

Merritt's territory, it turned out, was programming computers in assembly language—the actual machine code used by the computer. Zimmermann was a C programmer. He wanted to program in a language that could be run on more than one computer. Merritt thought that C was some sort of "weird language

programmer. He wanted to program in a language that could be run on more than one computer. Merritt thought that C was some sort of "world language" that PRZ

[Zimmermann] was hot on." Zimmermann sent Merritt a copy of Kernighan and Ritchie's C bible, with an inscription that said "Move into the 1980s." It was June 1985.

Phil Zimmermann Meets Public Key

Although the mathematics behind the RSA algorithm are theoretically simple, the difficulty of writing an RSA program is in performing the actual arithmetic. Making RSA work requires that you multiply numbers that are hundreds of digits long, then take those numbers to very high exponents, and finally perform modulo arithmetic.

Most computer languages have multiplications, exponentiation, and modulo-division built in, but they are limited in their precision to 10, 15, or 20 digits. To make RSA work securely with 200-digit numbers, you must write your own multi-precision arithmetic functions. While you can easily find these algorithms in textbooks today, such algorithms were relatively obscure just ten years ago. They were also difficult to teach over the telephone, as Merritt and Zimmermann discovered.

By the summer of 1986, Merritt and Zimmermann decided to have their first face-to-face meeting. The stated purpose of the trip was to teach Zimmermann the fine details of performing multi-precision arithmetic on a computer. Zimmermann was thinking of starting on his own project: an implementation of RSA for the computer that seemed to be taking over the world, the IBM PC. Merritt would fly to Boulder and stay with Zimmermann and his family for a week.

For Merritt, there was a second purpose for the trip as well. For more than a year, Merritt had been doing contract work for RSA Data Security, the company that Ron Rivest, Adi Shamir, and Len Adleman had started back in 1983. In February of 1986, RSADSI had hired a new employee, Jim Bidzos, who had risen to become the company's president within a year, firing all of the company's other employees and hiring his own team in the process. Merritt wanted to meet Bidzos. As for Bidzos, he had business in Denver: it was a simple matter to cruise down to Boulder and see Merritt. Meeting Merritt in Boulder was a lot easier than flying to Arkansas. The meeting was set.

A few days before Merritt flew to Boulder, he touched base with Bidzos. Bidzos said that he knew one of the best steak houses in Boulder. Merritt and Bidzos planned to go "eat thick slabs of dead cow, drink, and smoke some fine cigars in a dim steak house," recalls Merritt. "What a good way to meet someone you had been doing business with." To Bidzos, the fact that he was also going to be meeting Phil Zimmermann was inconsequential.

Face to Face with Jim Bidzos

Boulder, Colorado. November 1986. From the first moment that Merritt, Bidzos, and Zimmermann met, the three were off to a rocky start. Merritt found himself in the middle. On the one hand, Merritt's politics were more in line with Zimmermann's: neither trusted the government. Merritt had protested against the war in Vietnam, whereas Zimmermann was in the middle of his crusade against the nuclear arms race. Bidzos, Merritt learned, had volunteered for the U.S. Marines despite his being a Greek citizen. And yet, Merritt was working for Bidzos—and on a military contract, at that. When Bidzos learned that Zimmermann was a programmer, he asked Zimmermann if he wanted to help on a contract for the United States Navy. The contract wasn't classified or relevant to weapons, but Zimmermann refused. Sure, he needed the money, but how could an anti-nuclear peace activist work on a military contract?

Bidzos brought with him two copies of RSA Data Security's new MailSafe product, the program Ron Rivest wrote to sign and encrypt electronic mail. In many ways,

MailSafe was similar to the program that Zimmermann was thinking of writing.* Bidzos left a copy of the program with Zimmermann. They talked about encryption, and Zimmermann claims that during their meeting, Bidzos offered him a free license for the RSA algorithm—a claim Bidzos hotly disputes. The three then set their minds on dinner, and the evening continued to go downhill.

(* Despite MailSafe's similarities to PGP, Zimmermann says that he doesn't remember much from the demonstration and that he promptly lost his copy of MailSafe after Bidzos left.

Bidzos, on the other hand, claims that PGP is little more than a bad ripoff of the ideas that originated with MailSafe. It is true that the two programs have the same basic functionality, but they differ in two very important ways. The first has to do with the user interface: MailSafe has a graphical user interface, while PGP can be run only from the command line. The second is that MailSafe's system for encoding binary data as ASCII has a simple error-correction system that can correct some kinds of transmission errors — an important feature for people who are sending encrypted files by modem.)

Zimmermann vetoed the idea of going to the steak joint: he didn't drink and didn't smoke and he wasn't much of a meat-eater.

As the host of the evening, he had some influence on where the three men went for dinner. They ended up in the no smoking section of a well-lit restaurant that Merritt says was "PC before PC was PC."

"I was mixed up," recalls Merritt. "Jim and PRZ weren't. They flat out didn't get along. Jim kept pulling me aside, asking what was wrong with PRZ. PRZ kept giving me disgusted looks about the reactionary sitting with us." "Zimmermann kept saying he wanted to move to Canada so his tax dollars wouldn't go to military defense," recalls Bidzos. "I explained that Canadian tax dollars do the same."

Bidzos left for California the next day. Merritt stayed for a week at Zimmermann's house, teaching him everything he knew about doing fast arithmetic with huge numbers on a microcomputer. Phil's wife was a wonderful cook, Merritt recalls, and the house was a comfortable yuppie-ish place with a hippie crashpad feel to it.

"When I left, PRZ knew how my codes worked. He knew 95 percent of what I knew. He was now a 'real danger' to the national security machine."

1983 (April) - Quoted in Infoworld, as member of "PKS"

https://books.google.com/books?id=7y8EAAAAMBAJ&ppis=_c&dq=charles+merritt+software&source=gbs_navlinks_s

Infoworld

Apr 18, 1983

68 pages

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In Focus

Micro encryption devices protect your secrets

By Tom Shea, IW Staff

Three different kinds of encryption devices are available for small computers: chip-on-a-card devices, outboard hardware devices and software encryptors.

A start-up company in Washington, D.C., is offering the Osborne computer with a built-in DES (data-encryption standard) board and its own telecommunications software. Cypher Communications Technology (CCT) bundles encryption capability with special communications routines to create a portable communications device with built-in security. Called the CCT-01, the portable reportedly enables users to send messages via the public packet-switched networks (e.g., Telenet and Tymnet) in encrypted form. The firm also "upgrades" existing terminals with encryption and communications capabilities.

Jones Futurex of Fair Oaks, California, offers another DES encryption product of the chip-on-a-board variety. The Encryptor works with the Apple II ($250), the IBM PC ($300) or S-100-bus computers ($400). The board plugs into a slot in the computer, giving users encryption capability.

Racal-Milgo of Miami, Florida, sells an outboard hardware device called the DataCryptor II. The DataCryptor is a box that is connected via an RS-232 port to a small computer. The output of the encryption device then feeds into the modem, and from there to the phone line. Reportedly, the DataCryptor II uses a combination DES and proprietary encryption scheme. The latest version of the device can send messages over the phone company's dial-up network, thus avoiding the expense of using leased lines. Prices for the dial-up version start at $2300.

Several firms offer software encryption products for small computers; each has its own approach.

Prime Factors of Oakland, California, sells a fast (for software) version of DES called Micro Psypher. The firm, which has a history of creating secure systems on mainframes, has employed table-lookup techniques and other tricks to speed up the encryption process. Micro Psypher encrypts CP/M files; it costs $79.95 and comes with an extensive manual.

Public Key Systems (PKS) of Fayetteville, Arkansas, sells a software public-key encryptor called the Dedicate/32. Actually a hybrid system, Dedicate/32 uses the slow public-key RSA (Rivet, Shamir, Adleman) algorithm to exchange the encryption key between the sender and receiver. It then uses that key with a fast proprietary algorithm to scramble the rest of the data for transmission.

According to Charles Merritt of PKS, the proprietary system is even more secure than the supposedly unbroken RSA system. "It's flat-out unbreakable," Merritt claims. Dedicate/32 works with Z80-based computers; it costs $255.

The DES and RSA encryption algorithms appear to be highly secure—unless and until someone breaks them and announces that accomplishment publicly.

Proprietary systems

But some other enciphering schemes are unknown quantities. Such proprietary systems have been subjected to less public scrutiny; fewer cryptanalysts have attacked these ciphers and attempted to break them. Because the details of the encrypting techniques are not usually known, a "spook factor" comes into play, making it difficult to assess their strengths and weaknesses. This very secrecy may be a bulwark against cracking these ciphers. On the other hand, the secrecy may only conceal a paper tiger.

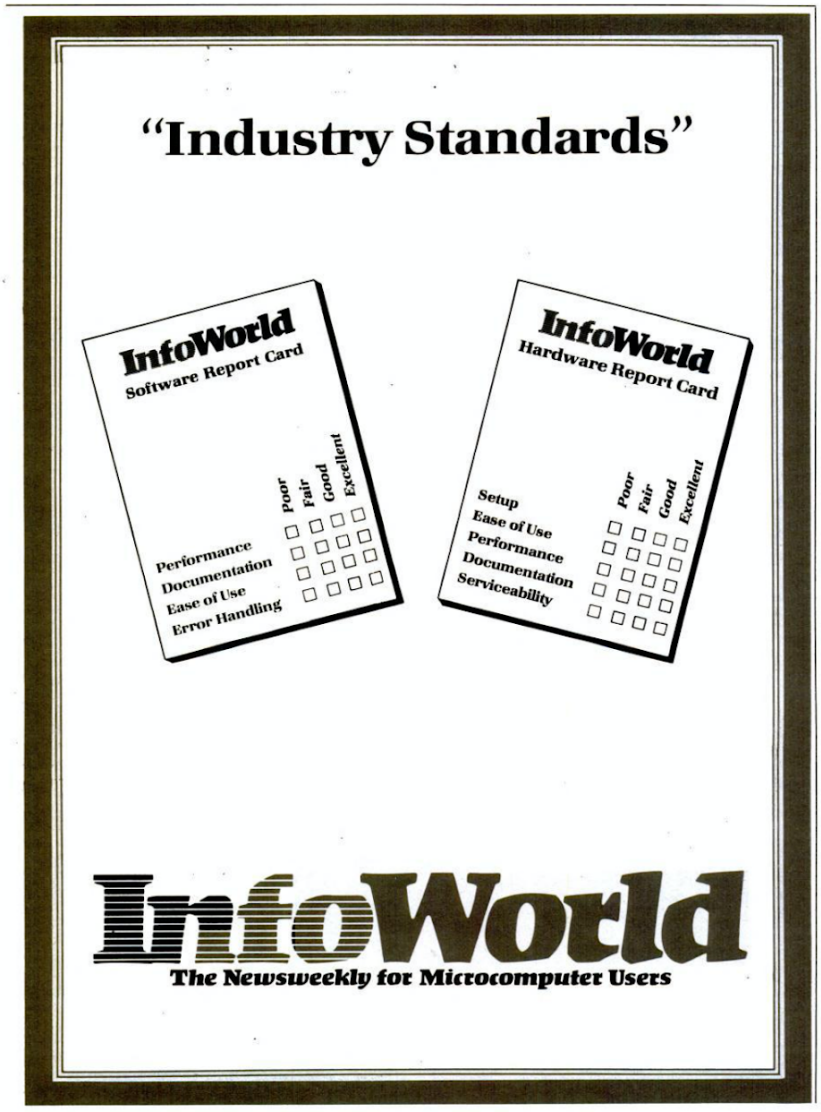
Among firms offering such proprietary systems are Passage Research of San Diego, California, which sells a DES-like system called Classified, reportedly for less than $50. Century Systems of Garden Grove, California, sells a $250 software encryptor for CP/M systems called ComCrypt.

A slew of companies now manufacture DES microprocessor chips that have been certified by the National Bureau of Standards (NBS). These chips find their way into plug-in boards and other computer encryption equipment.

Among the California makers of DES chips are Fairchild Semiconductor of Mountain View, Intel of Santa Clara, Advanced Micro Devices of Sunnyvale and Western Digital of Newport Beach. Hewlett-Packard is also reportedly getting ready to announce a DES chip. This list includes many of the big integrated-circuit makers of Silicon Valley.

Some DES implementations contain the entire device on a single LSI (large-scale integration) chip; others offer a four-chip set, or processor-chip and ROM combinations. The cheapest versions start at around $20 in large quantities.

East Coast manufacturers include IBM in White Plains, New York, and Nixdorf Computer of Burlington, Massachusetts. ■



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1981 (Sep) - Father passes

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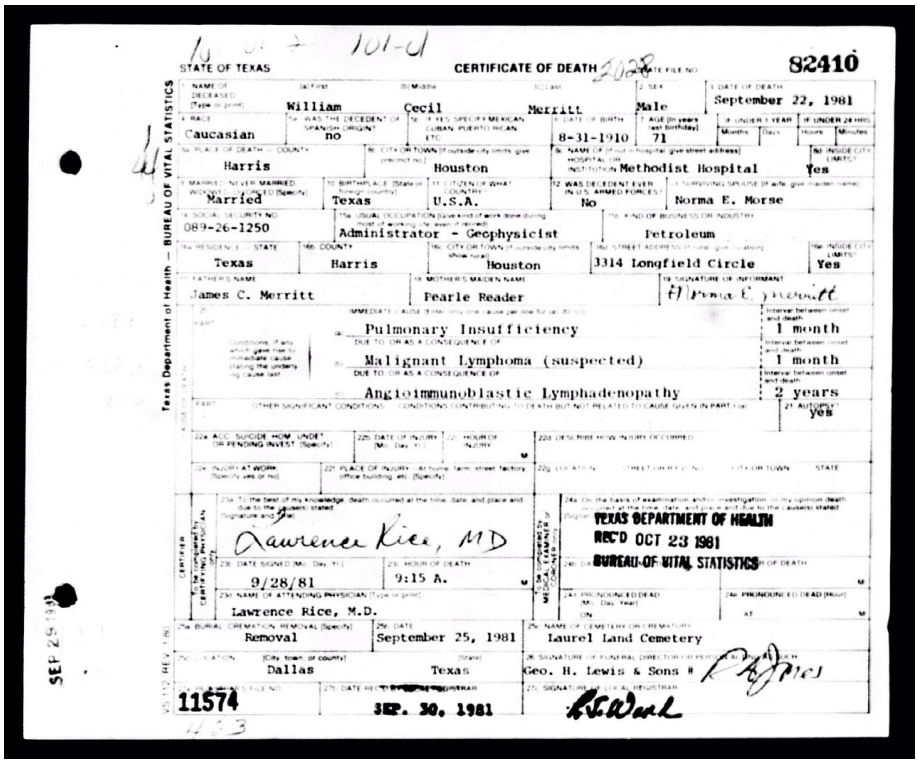
1981-09-25-usa-texas-death-certificate-william-merritt.jpg



STATE OF TEXAS — CERTIFICATE OF DEATH — 82410

Name of Deceased	William Cecil Merritt
Sex	Male
Date of Death	September 22, 1981
Race	Caucasian
Was the Decedent of Spanish Origin	no
Date of Birth	8-31-1910
Age	71
Place of Death — County	Harris
City or Town	Houston
Name of Hospital	Methodist Hospital
Inside City Limits	Yes
Married	Married
Birthplace	Texas
Citizen of What Country	U.S.A.
Was Decedent Ever in U.S. Armed Forces	No
Surviving Spouse	Norma E. Morse
Social Security No.	089-26-1250
Usual Occupation	Administrator - Geophysicist
Kind of Business or Industry	Petroleum
Residence — State	Texas
County	Harris
City or Town	Houston
Street Address	3314 Longfield Circle
Inside City Limits	Yes
Father's Name	James C. Merritt
Mother's Maiden Name	Pearle Reader
Informant	Norma E. Merritt
Immediate Cause	Pulmonary Insufficiency — 1 month
Due to or as a consequence of	Malignant Lymphoma (suspected) — 1 month
Due to or as a consequence of	Angioimmunoblastic Lymphadenopathy — 2 years
Other Significant Conditions	Autopsy: yes
Certifying Physician	Lawrence Rice, MD
Date Signed	9/28/81
Hour of Death	9:15 A.
Attending Physician	Lawrence Rice, M.D.
Burial, Cremation, Removal	Removal
Date	September 25, 1981
Name of Cemetery or Crematory	Laurel Land Cemetery
Location	Dallas, Texas
Funeral Director	Geo. H. Lewis & Sons
Local Registrar	11574
Date Received by Registrar	SEP. 30, 1981

TEXAS DEPARTMENT OF HEALTH
REC'D OCT 23 1981
BUREAU OF VITAL STATISTICS

1946 - Parents in ...

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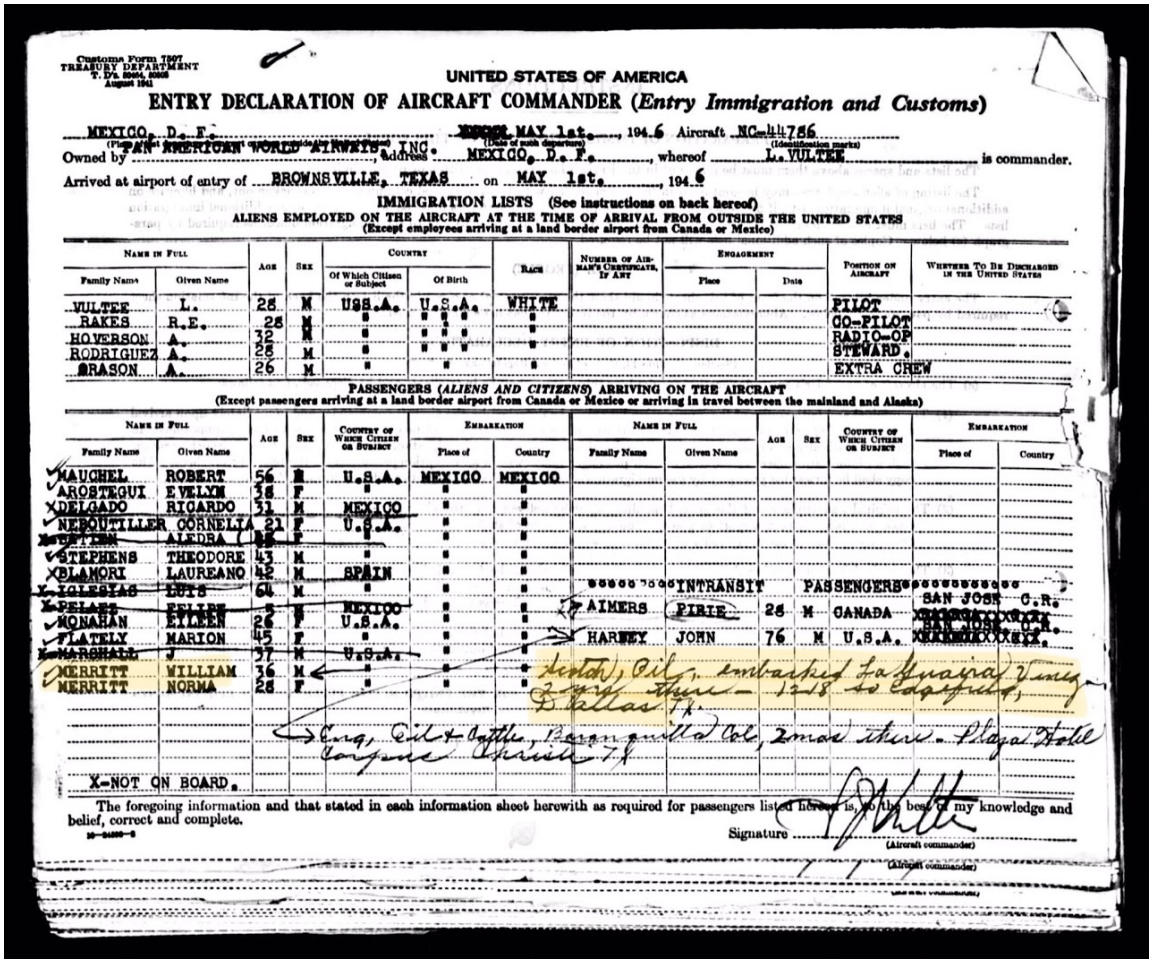
1946-05-01-usa-customs-entry-airfraft-nc44786.jpg



Customs Form 1907
TREASURY DEPARTMENT
T. D's. 50044, 50058
August 1941

UNITED STATES OF AMERICA

ENTRY DECLARATION OF AIRCRAFT COMMANDER (*Entry Immigration and Customs*)

MEXICO, D. F. (Place of departure) before MAY 1st., 1946 (Date of such departure) Aircraft NC44786 (Identification marks)

Owned by PAN AMERICAN WORLD AIRWAYS, INC. address MEXICO, D. F., whereof L. VULTEE is commander.

Arrived at airport of entry of BROWNSVILLE, TEXAS on MAY 1st., 1946

IMMIGRATION LISTS (See instructions on back hereof)

ALIENS EMPLOYED ON THE AIRCRAFT AT THE TIME OF ARRIVAL FROM OUTSIDE THE UNITED STATES
(Except employees arriving at a land border airport from Canada or Mexico)

Name in Full: Family Name	Given Name	Age	Sex	Country: Of Which Citizen or Subject	Country: Of Birth	Race	Number of Airman's Certificate, If Any	Engagement: Place	Engagement: Date	Position on Aircraft	Whether To Be Discharged in the United States
VULTEE	L.	28	M	USA.	U.S.A.	WHITE				PILOT	
RAKES	R.E.	28	M							CO-PILOT	
HOVERSON	A.	32	M							RADIO-OP	
RODRIGUEZ	A.	28	M							STEWARD	
BRASON	A.	26	M							EXTRA CREW	

PASSENGERS (*ALIENS AND CITIZENS*) ARRIVING ON THE AIRCRAFT
(Except passengers arriving at a land border airport from Canada or Mexico or arriving in travel between the mainland and Alaska)

Name in Full: Family Name	Given Name	Age	Sex	Country of Which Citizen or Subject	Embarkation: Place of	Embarkation: Country	Name in Full: Family Name	Given Name	Age	Sex	Country of Which Citizen or Subject	Embarkation: Place of	Embarkation: Country
MAUCHEL	ROBERT	56	M	U.S.A.	MEXICO	MEXICO							
AROSTEGUI	EVELYN	38	F										
DELGADO	RICARDO	31	M	MEXICO									
NEBOUTILLER	CORNELIA	21	F	U.S.A.									
[illegible]	ALEDRA	[illegible]	F										
STEPHENS	THEODORE	43	M										
DLAMORI	LAUREANO	42	M	SPAIN									
IGLESIAS	LUIS	64	M				INTRANSIT	PASSENGERS				SAN JOSE C.R.	
PELAEZ	FELIPE	5	M	MEXICO			AIMERS	PIRIE	28	M	CANADA	SAN JOSE, C.R.	
MONAHAN	EILEEN	26	F	U.S.A.			HARVEY	JOHN	76	M	U.S.A.	SAN JOSE, C.R.	
PLATELY	MARION	45	F										
MARSHALL	J	37	M	U.S.A.									
MERRITT	WILLIAM	36	M										
MERRITT	NORMA	28	F										

Dentist, Oil, embarked La Guaira Venez. Legal there - 1248 to Coapinol, Dallas Tx.

Eng, Oil + Cattle, Barranquilla Col, 2 mos there - Illegal Entry Consular Service 7.1

X-NOT ON BOARD.

The foregoing information and that stated in each information sheet herewith as required for passengers listed hereon is, to the best of my knowledge and belief, correct and complete.

Signature [illegible] (Aircraft commander)

(Aircraft commander)

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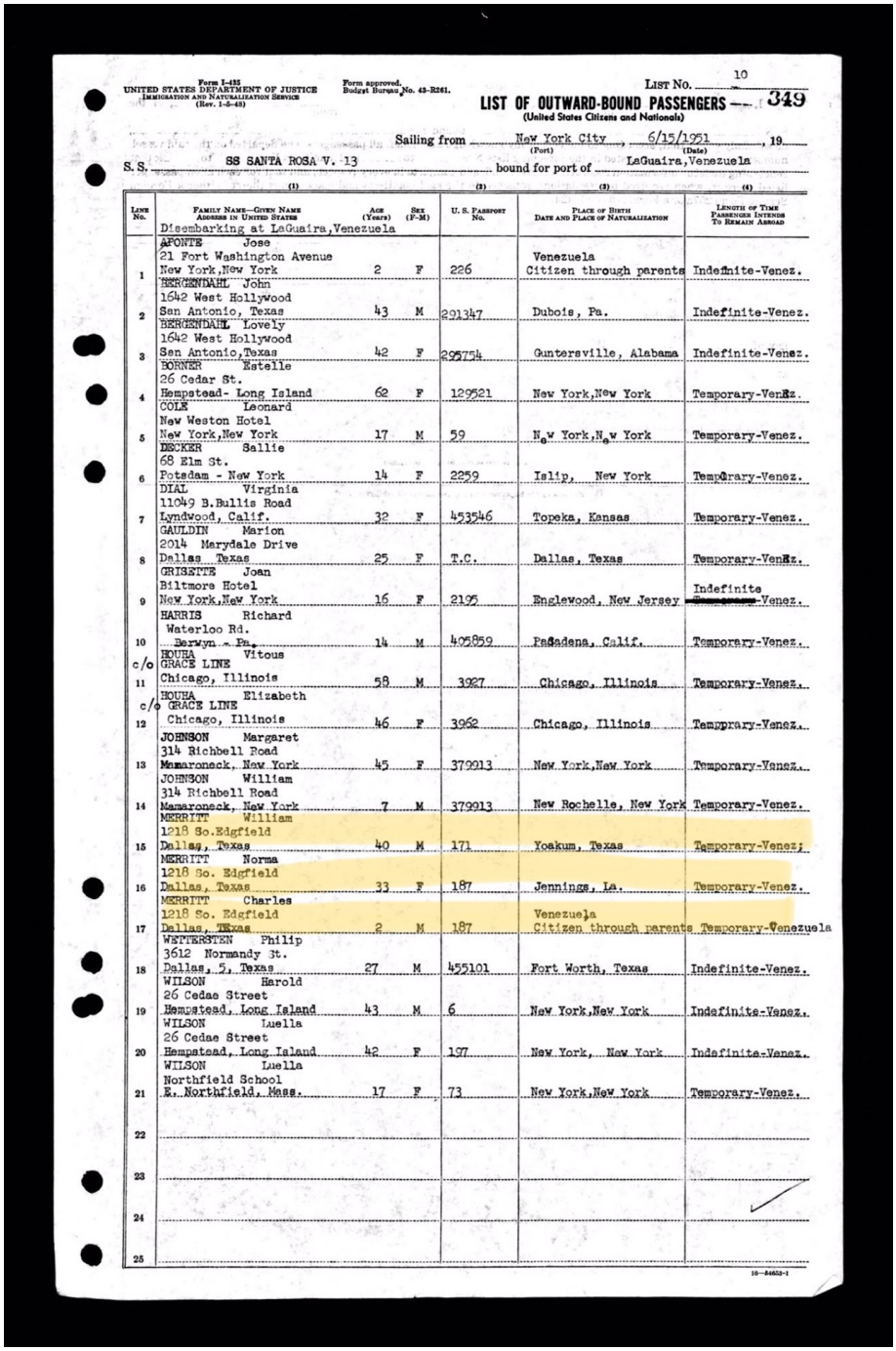
1951-06-15-usa-passengers-ss-santa-rosa-list-10.jpg



Form I-425
UNITED STATES DEPARTMENT OF JUSTICE
IMMIGRATION AND NATURALIZATION SERVICE
(Rev. 1-5-51)

Form approved.
Budget Bureau No. 43-R261.

List No. 10

LIST OF OUTWARD-BOUND PASSENGERS — 349

(United States Citizens and Nationals)

Sailing from New York City (Port), 6/15/1951 (Date), 19

S. S. SS SANTA ROSA V. 13 bound for port of LaGuaira, Venezuela

Disembarking at LaGuaira, Venezuela

Line No.	(1) Family Name—Given Name Address in United States	Age (Years)	Sex (F-M)	(2) U. S. Passport No.	(3) Place of Birth Date and Place of Naturalization	(4) Length of Time Passenger Intends To Remain Abroad
1	APONTE Jose 21 Fort Washington Avenue New York, New York	2	F	226	Venezuela Citizen through parents	Indefinite-Venez.
2	BERGENDAHL John 1642 West Hollywood San Antonio, Texas	43	M	291347	Dubois, Pa.	Indefinite-Venez.
3	BERGENDAHL Lovely 1642 West Hollywood San Antonio, Texas	42	F	295754	Guntersville, Alabama	Indefinite-Venez.
4	BORNER Estelle 26 Cedar St. Hempstead- Long Island	62	F	129521	New York, New York	Temporary-Venez.
5	COLE Leonard New Weston Hotel New York, New York	17	M	59	New York, New York	Temporary-Venez.
6	DECKER Sallie 68 Elm St. Potsdam - New York	14	F	2259	Islip, New York	Temporary-Venez.
7	DIAL Virginia 11049 B.Bullis Road Lyndwood, Calif.	32	F	453546	Topeka, Kansas	Temporary-Venez.
8	GAULDIN Marion 2014 Marydale Drive Dallas Texas	25	F	T.C.	Dallas, Texas	Temporary-Venez.
9	GRISETTE Joan Biltmore Hotel New York, New York	16	F	2195	Englewood, New Jersey	Indefinite -Venez.
10	HARRIS Richard Waterloo Rd. Berwyn - Pa.	14	M	405859	Pasadena, Calif.	Temporary-Venez.
11	HOUHA Vitous c/o GRACE LINE Chicago, Illinois	58	M	3927	Chicago, Illinois	Temporary-Venez.
12	HOUHA Elizabeth c/o GRACE LINE Chicago, Illinois	46	F	3962	Chicago, Illinois	Temporary-Venez.
13	JOHNSON Margaret 314 Richbell Road Mamaroneck, New York	45	F	379913	New York, New York	Temporary-Venez.
14	JOHNSON William 314 Richbell Road Mamaroneck, New York	7	M	379913	New Rochelle, New York	Temporary-Venez.
15	MERRITT William 1218 So.Edgfield Dallas, Texas	40	M	171	Yoakum, Texas	Temporary-Venez.
16	MERRITT Norma 1218 So. Edgfield Dallas, Texas	33	F	187	Jennings, La.	Temporary-Venez.
17	MERRITT Charles 1218 So. Edgfield Dallas, Texas	2	M	187	Venezuela Citizen through parents	Temporary-Venezuela
18	WATTERSTEN Philip 3612 Normandy St. Dallas, 5, Texas	27	M	455101	Fort Worth, Texas	Indefinite-Venez.
19	WILSON Harold 26 Cedae Street Hempstead, Long Island	43	M	6	New York, New York	Indefinite-Venez.
20	WILSON Luella 26 Cedae Street Hempstead, Long Island	42	F	197	New York, New York	Indefinite-Venez.
21	WILSON Luella Northfield School E. Northfield, Mass.	17	F	73	New York, New York	Temporary-Venez.
22						
23						
24						
25						

16—84653-1

2018 - In Albuquerque New Mexico ?

https://www.facebook.com/photo.php?fbid=1873445062668440&set=a.156884794324484&type=3&theater

2018-03-27-facebook-charlie-merritt-10-update-1873445062668440.jpg

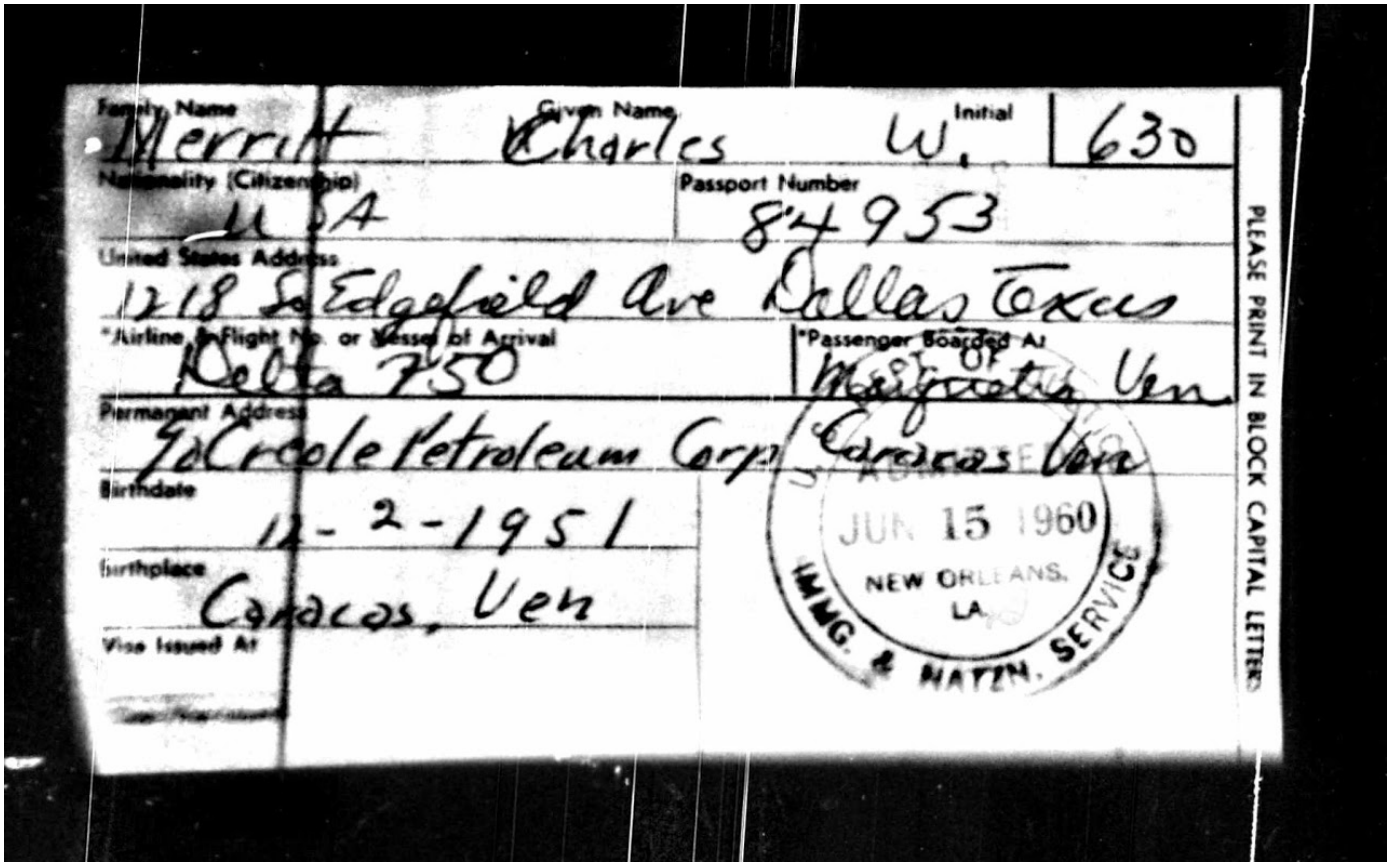
Uncle? (1999 - March 3 passing)

Source (Albuquerque Journal)- [HN0124][GDrive]

"**MERRITT --** Robert M. Merritt, a second-generation native New Mexican, passed away on march 6, 1999 after a long illness. He was born on May 16, 1924, in Lucy, New Mexico. He was preceded in death by his parents, Thomas E. and Rose D. Merritt; brother, Lee Weldon Merritt and a sister, Tommie J. Vaughan. **Robert is survived by two brothers, William C. Merritt of Truth of Consequences, NM and George L. Merritt of Houston, Texas and four sisters, Opal Garland of Estancia, NM, Lucy Clark and Ina Mitchell of Albuquerque, NM and Lynette Cox of Renton, WA**; many nieces and nephews and cousins. Robert received his BS degree in Electrical Engineering from the University of New Mexico after serving in the US Army in World War II. He also completed many courses at the Geo Washington University in Washington, DC. He was wounded in the Battle of the Bulge suffering a shattered hip. He was a member of the National Society of Professional Engineers, The Illuminating Engineering Society, American Institute of Electrical Engineers and the Institute of Radio Engineers, Sigma Tau Chi Fraternity Chapter and The Society of American Military Engineers. **He was employed by the Department of the Army Corps of Engineers for 27 years serving many of these years in the Middle East building military bases, specifically designing electrical generation and distribution systems for which he was awarded Sustained Superior Performance awards.** He received laudatory comments from the Secretary of Defense Weinberger and Secretary of the Army Marsh regarding his performance during the construction of the Neger-Airbases for world peace-especially in the Middle East. He was a member of the Ewing Community Baptist Church. He attended the Ewing Community Elementary School and graduated from Estancia, NM High School. After returning from the Corp of Engineers, he returned to his farm in the Ewing Community residing there until his illness prevented this. Interment will be in the Santa Fe National Cemetery in Santa Fe, NM after a private service at French Mortuary, 7121 Wyoming Blvd. NE. "

1960-06-15-usa-ticket-delta-750-charles-w-merritt.jpg

https://twitter.com/messages/1198295563114029056/media/1213581038536011780



Family Name: Merritt
Given Name: Charles
Initial: W.
630
Nationality (Citizenship): USA
Passport Number: 84953
United States Address: 1218 So Edgefield Ave Dallas Texas
*Airline & Flight No. or Vessel of Arrival: Delta 750
*Passenger Boarded At: Maracaibo Ven
Permanent Address: % Creole Petroleum Corp Caracas Ven
Birthdate: 12-2-1951
Birthplace: Caracas, Ven
Visa Issued At:
PLEASE PRINT IN BLOCK CAPITAL LETTERS
JUN 15 1960
NEW ORLEANS, LA.
IMMG. & NATZN. SERVICE

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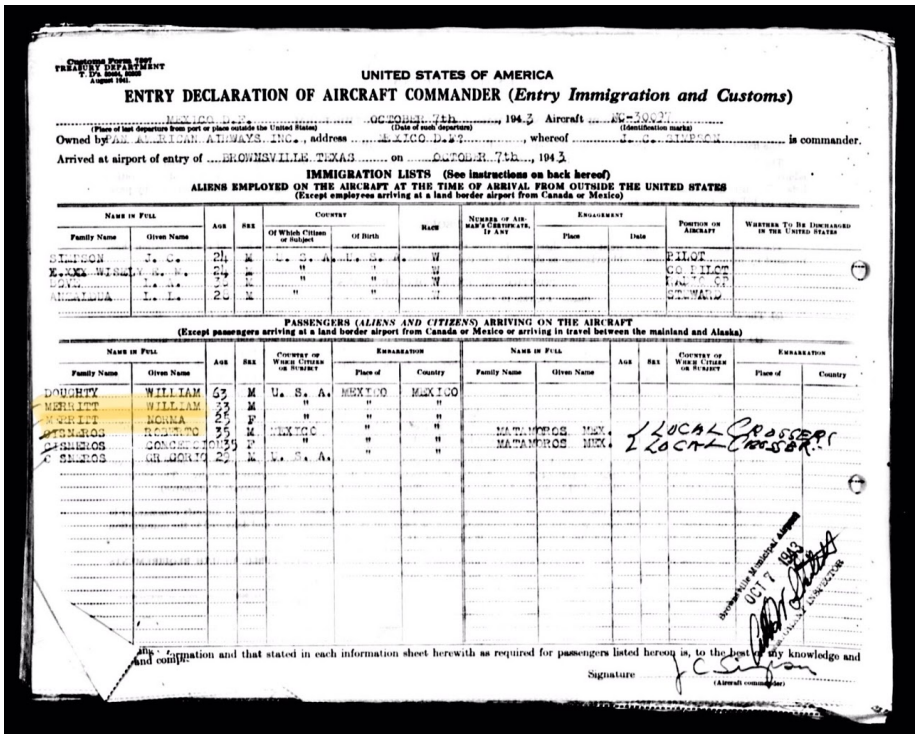
1943-10-07-usa-customs-entry-airfraft-nc30097.jpg



TREASURY DEPARTMENT

UNITED STATES OF AMERICA

ENTRY DECLARATION OF AIRCRAFT COMMANDER (*Entry Immigration and Customs*)

MEXICO D.F. (Place of last departure from port or place outside the United States) OCTOBER 7th (Date of such departure), 1943 Aircraft NC-30097 (Identification marks)

Owned by [illegible] AIRWAYS, INC., address MEXICO D.F., whereof [illegible] is commander.

Arrived at airport of entry of BROWNSVILLE, TEXAS on OCTOBER 7th, 1943

IMMIGRATION LISTS (See instructions on back hereof)

ALIENS EMPLOYED ON THE AIRCRAFT AT THE TIME OF ARRIVAL FROM OUTSIDE THE UNITED STATES (Except employees arriving at a land border airport from Canada or Mexico)

Name in Full: Family Name	Given Name	Age	Sex	Country: Of Which Citizen or Subject	Country: Of Birth	Race	Number of Air-man's Certificate, if any	Engagement: Place	Engagement: Date	Position on Aircraft	Whether To Be Discharged in the United States
STINSON	J. C.	21	M	U. S. A.	U. S. A.	W				PILOT	
[illegible]	[illegible]	21	M	"	"	W				CO-PILOT	
[illegible]	[illegible]	[illegible]	M	"	"	W				[illegible]	
[illegible]	[illegible]	20	M	"	"	W				[illegible]	

PASSENGERS (*ALIENS AND CITIZENS*) ARRIVING ON THE AIRCRAFT

(Except passengers arriving at a land border airport from Canada or Mexico or arriving in travel between the mainland and Alaska)

Name in Full: Family Name	Given Name	Age	Sex	Country of Which Citizen or Subject	Embarkation: Place of	Embarkation: Country	Name in Full: Family Name	Given Name	Age	Sex	Country of Which Citizen or Subject	Embarkation: Place of	Embarkation: Country
DOUGHTY	WILLIAM	63	M	U. S. A.	MEXICO	MEXICO							
MERRITT	WILLIAM	22	M	"	"	"							
MERRITT	MONNA	21	F	"	"	"							
[illegible]	[illegible]	35	M	MEXICO	"	"	MATAMOROS	MEX.	1 LOCAL CROSSER				
[illegible]	[illegible]	35	F	"	"	"	MATAMOROS	MEX.	1 LOCAL CROSSER				
[illegible]	[illegible]	22	M	U. S. A.	"	"							

OCT 7 1943

[illegible] formation and that stated in each information sheet herewith as required for passengers listed hereon is, to the best of my knowledge and [illegible]

Signature [illegible] (Aircraft commander)

BITCHUTE @Housatonic YOUTUBE @HousatonicLive ODYSEE @Housatonic BRIGHTEON @Housatonic

Housatonic

Mark Messonnier

- 2002

https://www.newspapers.com/image/410315035/?terms=messonnier

Feb 11 2005

https://www.newspapers.com/image/231713019/?terms=messonnier

2009 (March 22)

Two original full pages = [HN00RU][GDrive] / [HN00RV][GDrive]

Parents learn vaccine not all-powerful

Whooping cough: Cases at Cobb school show limits of current inoculations, but they are an essential weapon for now, doctors say.

ALISON YOUNG
spotlight
@ajc.com

A cluster of whooping cough cases among Cobb County elementary students is adding to concerns that an important vaccine isn't as effective as it needs to be to stop the spread of disease.

Whooping cough, also called pertussis, is highly contagious and can cause serious illness among infants and very young children. But the vaccine is only about 85 percent effective and wears off over time, leaving a significant number of children and adults vulnerable to an infection that is more common than many realize, health officials said.

Of the 18 students in the recent Cobb cluster, 17 were properly immunized with five doses of DTaP vaccine, which protects against diphtheria, tetanus and pertussis, health officials said.

The Centers for Disease Control and Prevention has been studying the Cobb cases. While a better

➤ Please see VACCINE, B3

The Atlanta Journal-Constitution / ajc.com 5 METRO Sunday, March 22, 2009 / B3

Vaccine: Pertussis cases on rise

➤ Continued from B1

pertussis vaccine is needed, CDC officials said, the available shots are still the best protection against the disease and they reduce the severity of symptoms in people who are infected.

"Despite the fact that we routinely vaccinate against pertussis, pertussis is endemic. There's lots of pertussis," said Dr. Nancy Messonnier, director of CDC's meningitis and vaccine preventable diseases branch.

But scientists are struggling to understand why reports of pertussis cases have risen dramatically since the 1980s. It may reflect more testing or diagnosis; it may reflect the cyclical nature of the disease. It's even unclear how often clusters like the one in Cobb occur.

"We are frustrated by the fact that we don't know," Messonnier said.

About 10,000 cases and 20 infant deaths were reported in the United States last year, but some studies have suggested the number of people sickened each year may be closer to 300,000, CDC officials said.

Experts believe the disease is underdiagnosed and underreported in vaccinated school-age children and adults who often have milder symptoms and whose childhood shots have worn off. They believe that adolescents and adults are spreading the disease to vulnerable infants and children.

In an effort to stop this under-the-radar disease transmission, the CDC about four years ago began recommending that adults and adolescents get pertussis booster shots. The goal is to increase "herd immunity" — the more people who are immune, the harder it is for the disease to spread to those who aren't protected because the vaccine didn't work for them or because they aren't vaccinated.

It's too early to tell whether the adult and adolescent booster shots will curb the spread of pertussis because it can take years for a significant number to get shots.

CURTIS COMPTON / ccompton@ajc.com

Eight-year-old **Charlie Wood**, shown studying with twin sister **Emily**, became ill with whooping cough. The Kincaid Elementary third-grader got sick despite being fully vaccinated. Emily didn't get sick.

While no vaccine is 100 percent effective, some parents are surprised and angry that a vaccine they trusted is failing to protect some children. And officials with the Georgia Division of Public Health said too many local doctors are not aware the disease is circulating in the community and can infect fully vaccinated children.

Earlier this month, the state health department sent a blast fax to area pediatricians and family doctors alerting them to be on the lookout for pertussis.

East Cobb parent Laurie Wood assumed her children were protected because they'd received all the shots. Then her 8-year-old son, Charlie, developed a cough so severe it caused him to vomit. In January, Charlie was diagnosed with pertussis.

"I was scared because he's been vaccinated," Wood said last week. "I also was mad because if the vaccination wasn't working, we should have known about it."

So far this year, 48 pertussis cases have been reported in Georgia, continuing an uptick in reports to state health officials that began last year when 103 cases were reported. Five Georgia infants have died from whooping cough since 2004.

Whooping cough starts with coldlike symptoms, but after a week or two, a severe cough can develop. Children can cough violently until all the air in their lungs is gone and they inhale with a "whooping" sound.

Between August and February, 18 cases were reported at four elementary schools in the Cobb County School District, including two third-graders at Mountain View; two second-graders and two fourth-graders at Garrison Mill; and three first-graders at Timber Ridge. Nine children had the disease at Rocky Mount Elementary: three third-graders, three fourth-graders and three fifth-graders.

Wood's son Charlie is a third-grader at Kincaid Elementary — just a few miles from Mountain View.

It was somewhat surprising that so many of the cases involved young children who were fully vaccinated, said Stacey Martin, a CDC epidemiologist who was involved in investigating the cluster.

Nationally, school-age children diagnosed with the disease are generally teenagers, which is what prompted a CDC advisory panel in 2005 to recommend an additional pertussis booster shot at age 11 or 12.

To try to determine the magnitude of the problem at the four Cobb schools, last month CDC and local health officials gave voluntary pertussis tests to 108 children and staff who were currently coughing, and 22 of them showed evidence of recent infection, said Julie Gabel, a state health department epidemiologist.

Despite the study's test results, some doctors refused to believe parents when they said that their children had pertussis. "More than one said to the parent: 'Well, your child couldn't have had pertussis, your child's been vaccinated," Gabel said, adding that the department is working to educate physicians.

At the four schools, health officials think the outbreaks are over or winding down. But whooping cough continues to be reported elsewhere. Georgia health officials aren't aware of any other current whooping cough clusters.

Dr. Walter Orenstein, a leading vaccine expert, was surprised to hear that the Cobb cluster involved young students who would have received a pertussis booster as they entered school.

"The real issue is what the rate of vaccine failure is," said Orenstein, a former CDC official who recently became deputy director for vaccine preventable diseases at the Gates Foundation in Seattle.

It's possible, Orenstein said, that the sick children were simply among the expected 15 percent of people immunized that the vaccine fails to protect.

Despite concerns about pertussis, the reported cases are still far fewer than before a vaccine became available.

In the 1920s and 1930s, there were more than 160,000 cases and more than 5,000 deaths each year. After the introduction of a pertussis vaccine in the 1940s, reports dropped dramatically. In 1976, just 1,010 cases were reported — the record low.

Whether it's possible to develop a more effective pertussis vaccine is a matter of scientific debate. But Dr. John Robbins, a scientist at the National Institutes of Health, has urged in scientific journals that a more effective vaccine be made using a different way of creating the component that produces immunity.

"I think we'd probably get rid of the disease," Robbins said.

Vaccine manufacturers aren't looking for more effective vaccine because the current one is "good enough" — especially once more adolescents and adults start getting booster shots, said Dr. Michael Decker, a vice president at Sanofi Pasteur. His company and GlaxoSmith-Kline make pertussis vaccines.

Decker said there's nothing unusual about the Cobb cluster. Until the U.S. population is more thoroughly vaccinated and receiving booster shots, he said, such clusters will occasionally occur across the country. "I look at this and see absolutely nothing remarkable," he said.

WHAT YOU NEED KNOW

➤ **What is whooping cough?** A contagious disease caused by bacteria called Bordetella pertussis.
➤ **What are the symptoms?** At first: runny nose, congestion, sneezing, and perhaps a mild cough or fever. After one or two weeks, a severe cough begins that can be so violent and repeated that children are forced to inhale with a loud "whooping" sound.
➤ **Who's at risk?** Infants and very young children develop the most severe illness. More than half of infants younger than 1 must be hospitalized.
➤ **How is it spread?** Coughing and sneezing while in close contact with other people.
➤ **How is it prevented?** Vaccination. **Children:** Five shots of DTaP vaccine (which protects against diphtheria, tetanus and pertussis): Given at 2, 4 and 6 months of age; the fourth shot is given when the child is between 15 and 18 months old; the fifth shot is given when the child enters school, around 4-6 years old. **Pre-teens:** One booster shot — called a Tdap — during their regular check-up when they're 11 or 12 years old. Tdap protects against tetanus, diphtheria and pertussis. **Adults:** Adults also should get one Tdap shot, to increase their pertussis immunity if they didn't get one when they were a pre-teen.

For more information, go to www.cdc.gov/vaccines/vpd-vac/pertussis/default.htm or call 1-800-232-4636.

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[HN00RW][GDrive]

2016 (oct 20)

2016-10-20-valley-morning-star-harlingen-texas-pg-a5

full page - [HN00RS][GDrive] [HN00RT][GDrive]

Preteens need only 2 HPV shots, not 3, panel says

By MIKE STOBBE
The Associated Press

NEW YORK — It may soon be easier for preteens to get the vaccine against cervical cancer. A government panel is recommending they get fewer shots spaced further apart.

Since the HPV vaccine went on sale a decade ago, three doses have been needed. The panel decided Wednesday that two doses are enough.

"It will be simpler now for parents to get their kids the HPV vaccine series, and protect their kids from HPVcancers," said Dr. Nancy Messonnier of the Centers for Disease Control and Prevention.

The vaccine protects against human papillomavirus — or HPV — which can cause cervical cancer, certain other cancers and genital warts. It is commonly spread through sex and, in most cases, the virus doesn't cause any problems. But some infections gradually lead to cancer.

Health officials want kids to get HPV vaccinations at age 11 or 12, well before most first have sex and before they could be infected.

But less than one-third of 13-year-old U.S. boys and girls have gotten three doses. Busy parents have struggled with the old schedule, which called for three trips to the doctor within six months.

"I know people who say 'I can't do that. Why even start?'" said Cynthia Pellegrini, a March of Dimes official who sits on the panel.

Recent studies have shown two doses of the current HPV vaccine — Gardasil 9 — work just as well in kids ages 9 to 14. The Food and Drug Administration two weeks ago said it could be given in two doses.

MERCK VIA AP

This image shows a vial and package for their GARDASIL 9 human papillomavirus vaccine. Yesterday, a government panel said preteens need only get two doses of HPV vaccine instead of three, a move some hope will raise languishing HPV vaccination rates.

What's more, two doses apparently work better when spaced six to 12 months apart. That means they could be given at annual checkups.

The Advisory Committee on Immunization Practices made the recommendation at a meeting in Atlanta. CDC officials usually adopt the panel's advice and send it to doctors and the public.

The vaccine was first recommended in 2006 for girls, and then for boys in 2011 — partly to reduce the spread of HPV to girls.

Vaccination rates have risen very slowly, and health officials have lamented the underuse of a potent cancer prevention tool.

Too many doctors have been timid about promoting the shots, experts say. That's at least partly because some parents have worried the vaccination seems like they are greenlighting their kids to have sex.

But the onerous schedule sure didn't help. "I think it was the icing on the cake" for parents already hesitant about HPV shots, said Dr. William Schaffner, a vaccines expert at Vanderbilt University.

The panel is sticking to three doses for anyone who doesn't get their first shot until they turn 15. That's because they didn't have enough data on how well two doses worked in older kids.

Until recently, there were three HPV vaccines on the market. Now there's only one — Merck & Co.'s Gardasil 9. This month, the company stopped selling an older version. GlaxoSmithKline phased out its vaccine, Cervarix, in the U.S. because of poor sales.

2018 (Oct 17)

https://newspaperarchive.com/arlington-heights-daily-herald-suburban-chicago-oct-17-2018-p-2/

2018 (Dec 24)

https://newspaperarchive.com/santa-barbara-news-press-dec-24-2018-p-5/

2019 (March 3)

2019-03-03-lawrence-journal-world-pg-4a-clip-measles

How 'completely avoidable' measles cases continue to climb

By Lauran Neergaard
AP Medical Writer

Widespread misinformation is strong contributing factor

WASHINGTON — The U.S. has counted more measles cases in the first two months of this year than in all of 2017 — and part of the rising threat is misinformation that makes some parents balk at a crucial vaccine, federal health officials told Congress on Wednesday.

Yet, the vaccine is hugely effective and very safe — so the rise of measles cases "is really unacceptable," said Dr. Anthony Fauci, infectious disease chief at the National Institutes of Health.

The disease was declared eliminated in the U.S. in 2000, which means it was not being spread domestically. But cases have been rising in recent years, and 2019 is shaping up to be a bad one.

Republican and Democratic lawmakers at the House Energy and Commerce subcommittee hearing bemoaned what's called "vaccine hesitancy," meaning when people refuse or delay vaccinations.

"These outbreaks are tragic since they're completely avoidable," said Rep. Brett Guthrie, R-Ky.

"This is a public health problem for which science has already provided a solution," agreed Rep. Frank Pallone, D-N.J.

Here are some questions and answers about measles:

Q: How dangerous is measles?

A: Measles typically begins with a high fever, and several days later, a characteristic rash appears on the face and then spreads over the body. Among serious complications, 1 in 20 patients get pneumonia, and 1 in 1,000 get brain swelling that can lead to seizures, deafness or intellectual disability.

Although it's rare in the U.S., 1 or 2 of every 1,000 children who get measles dies, according to the Centers for Disease Control and Prevention.

Q: How does it spread?

A: By coughing or sneezing, and someone can spread the virus for

› *MEASLES, 4A*

[HN00RQ][GDrive]

Measles

CONTINUED FROM PAGE 3A

2019-03-03-lawrence-journal-world-pg-4a-clip-measles

four days before the telltale rash appears, Fauci warned.

The virus can live for up to two hours in the air or on nearby surfaces. Nine of 10 unvaccinated people who come into contact with someone with measles will catch it. Fauci called it "one of the most contagious viruses known to man."

Q: How widespread is measles?

A: In the U.S., the CDC has confirmed 159 cases so far this year in 10 states: California, Colorado, Connecticut, Georgia, Illinois, Kentucky, New York, Oregon, Texas and Washington. That compares to 372 cases last year, and 120 in 2017.

But measles is far more common around the world — the World Health Organization said it claimed 110,000 lives in 2017. The WHO says there's been a 30 percent increase in measles cases in recent years. Unvaccinated Americans traveling abroad, or foreign visitors here, can easily bring in the virus.

For example, a huge outbreak in Madagascar has caused more than 68,000 illnesses and 900 deaths since September. But you don't need to go as far as Madagascar — common tourist destinations like England, France, Italy and Greece had measles outbreaks last year, noted CDC's Dr. Nancy Messonnier. Nearly 83,000 people contracted measles in Europe in 2018, the highest number in a decade.

Q: How many U.S. children are vulnerable?

A: Overall, about 92 percent of U.S. children have gotten the combination vaccine that protects against measles, mumps and rubella, known as the MMR vaccine. Two shots are required, one around the first birthday and a second between age 4 and 6. Full vaccination is 97 percent effective at preventing measles.

But the CDC says 1 in 12 children don't receive the first dose on time, and in some places vaccination rates are far lower than the national average. For example, an outbreak in Washington state is linked to a community where only about 80 percent of children were properly vaccinated.

Q: Is the vaccine safe?

A: Yes, said Fauci and Messonnier, who point to decades of use by millions of children each year — and who made sure their own children were vaccinated.

In the late 1990s, one study linked MMR vaccine to autism, but that study was found to be a fraud, and Fauci said later research found no risk of autism from the vaccine.

Still, misinformation about MMR safety is widespread. Fauci said the solution isn't to criticize people who have no way to know what's false. Instead, "we need to educate them to show them what the evidence is."

Q: Why isn't everyone vaccinated?

A: Some people can't be immunized for medical reasons — including infants and people with weak immune systems — and most states allow religious exemptions. But although vaccination against a list of contagious diseases is required to attend school, 17 states allow some type of nonmedical exemption for "personal, moral or other beliefs," according to the National Conference of State Legislatures.

Kansas law allows for religious, but not philosophical, exemptions.

In Washington state, lawmakers are debating ending that personal or philosophical exemption, as are several other states. California ended a similar exemption in 2015 after a measles outbreak at Disneyland sickened 147 people and spread across the U.S. and into Canada.

[HN00RR][GDrive]

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MFS Communications Company, Incorporated

Wikipedia Metropolitan Fiber Systems

Sometimes referred to as " **MFS Communications Corp.**" **or "MFSCC"** - See [HG00AH][GDrive]

- In August 1996, [**WorldCom Corporation**] announced the acquisition of **MFS Communications Company, Incorporated,** and the transaction was completed in December 1996. In 1998, this became **MCI WorldCom Corporation** .

Saved Wikipedia (Dec 16, 2020) - Metropolitan Fiber Systems

Source : [HK0047][GDrive]

- **Industry** Telecommunications
- **Fate** Acquired by Worldcom
- **Founded** 1988; 32 years ago
- **Defunct** December 31, 1996; 23 years ago
- **Headquarters** Omaha, Nebraska
- **Revenue** $506 million (Q1 1997)
- **Net income** $82 million (Q1 1997)
- **Total assets** $12.335 billion (1997)
- **Total equity** $10.190 billion (1997)

MFS Communications Company, Inc. (Metropolitan Fiber Systems) was a competitive local exchange carrier that owned and operated local network access facilities installed in and around major U.S. cities and several major European cities. MFS also possessed significant transmission and switching facilities and network capacity that it leased from other carriers in the United States and Western Europe.

History

- The company was founded in 1988 as Kiewit Communications, a subsidiary of Kiewit Corporation.
- By 1991, the company owned fiber-optic lines that serve large business customers in 11 cities.
- In 1993, the company became a public company via an initial public offering.[2]
- In April 1996, the company announced the acquisition of [**UUNET Technologies, Incorporated**] .
- In August 1996, [**WorldCom Corporation**] announced the acquisition of the company[5] and the transaction was completed in December 1996.[1]Worldcom filed bankruptcy in 2002.
- Level 3 Communications and NorthPoint Communications were founded by former executives of MFS.

Encyclopedia.com - "MFS Communications Company, Inc."

Source : [HW005E][GDrive]

[As of 1994 :] One Tower Lane, Suite 1600 , Oakbrook Terrace, Illinois 60181 , U.S.A. [...]

Incorporated: 1987 as Kiewit Communications Company, Inc.

Employees: 654

Sales: $141.1 million

[...]

A leading provider of communication services for businesses and government agencies in the United States, MFS Communications Company, Inc. competes with regional telephone companies by supplying such customers with telephone and data services through fiber-optic networks, enabling its customers to place long-distance telephone calls and transmit data without going through the local phone utility. Through five subsidiary companies, divided into two business segments, telecommunications services and network systems integration and facilities management, the company operated in 24 U.S. cities in 1994, with additional operations in the United Kingdom and Germany. Before the conclusion of the decade, MFS Communications planned to extend its service area to approximately 50 additional cities, an objective that included establishing service in ten international markets.

One of a new breed of telecommunication companies engendered by the deregulation of the telephone industry in the early 1980s, MFS Communications began operating in 1988 as a wholly owned subsidiary of Kiewit Diversified Group Inc., which in turn was a wholly owned subsidiary of Peter Kiewit Sons'Inc., one of the largest construction and mining companies in the United States. Peter Kiewit Sons ' entered the telecommunications business as part of a diversification strategy the company effected during the early 1980s, engaging in a series of acquisitions that led to the formation of Kiewit Holdings Group in 1986. From Kiewit Holdings Group evolved Kiewit Diversified Group, which oversaw the parent company's interests in telecommunications and incorporated MFS Communications ' predecessor, Kiewit Communications Company, Inc., in 1987.

Led by James Q. Crowe, who would continue to oversee the company once it became MFS Communications, Kiewit Communications was founded to test a theory formulated by himself and other members of Kiewit's management regarding the rapidly changing telecommunications market, the dynamics of which were transforming in the wake of the consent decree that deregulated the telephone industry and ushered in a new era of competition. Before deregulation, they theorized, competition in the telecommunications industry had been predicated on technology, guided by regulation, and driven by expansion into new markets; a company's success was largely determined by its ability to extend the geographic boundaries of its operations. The emphasis had been on securing new markets essentially through technological sophistication and financial might, but, as with monopolized industries before it, the telecommunications industry paid little attention to marketing toward specific types of customers or developing diversified services to suit the divergent needs of its clientele.

This was the direction Crowe and others saw the telecommunications industry moving toward after deregulation: a market reorganized around customers, spawning specialized market niches that addressed the specific needs of specific customers. Indeed, many of the characteristics that defined the industry before deregulation would continue to characterize it in its new competitive era. Technology and market expansion would continue to be the foundation from which growth and success would develop, but in a more competitive arena customer satisfaction and loyalty would play a much larger role in determining success in the industry.

With this perspective in mind, Kiewit Communications was organized to provide telecommunications services to specific clientele: large corporations and government agencies. In so doing, the company carved a niche in the broadly defined telecommunications market as a bypass provider of telecommunication services, generating revenue by enabling its customers to place long-distance telephone calls without going through the local telephone utility, thereby avoiding additional connection fees charged by the local utility.

Initially targeting financial institutions—large banks and investment firms—as the company's primary type of customer, Kiewit Communications began operating in 1988 with an emphasis on building its presence in its newly created market niche at the expense of short-term profits, structuring its growth around particular customer types located in particular metropolitan areas. Six years later, the company still had not recorded a profit, but prodigious growth had been recorded, as each metropolitan area added to the company's network increased its presence and influence in the U.S. telecommunications market and limited its capability to post any profit.

Chicago was the first city in which Kiewit Communications provided telecommunication services through a fiber-optic network, beginning in April 1988. By the end of the following year, seven more metropolitan areas were added, bringing Kiewit Communications ' revenues for the year to $397,000. Its net loss, however, approached $18 million, significantly more than the $2.9 million recorded as a loss the previous year, evidence that the company's initial intent was not to operate at a profit, but to establish itself as a long-term participant in the telecommunications market through rapid growth. This strategy was made possible by the financial support of its parent company, Peter Kiewit Sons ', and afforded Kiewit Communications an opportunity to grow more rapidly and pay less attention to the bottom line than other, newly emerging competitors.

Kiewit Communications focused on expansion, increasing the number of cities to which it provided long-distance and data transmission services to 12 by 1991—when Kiewit Communications became MFS Communications, Inc.—then to 14 the following year. In the course of this growth, the company's annual sales increased exponentially, rising from the $397,000 generated in 1989 to $10.6 million the following year, then soaring to $37.2 million by 1991 and $108 million in 1992. With robust revenue growth and market expansion, however, came further increases in MFS Communications ' net losses, which peaked at $30.9 million in 1990, then slid to $13.1 million by 1992. As these losses mounted and growth continued unabated, the company, still operating as a second tier subsidiary of Peter Kiewit Sons', began to look for additional ways to finance its growth. The most obvious solution involved a public underwriting of MFS and a separation from Peter Kiewit Sons ', which the company did the following year, in May 1993.

Once a publicly-held company, MFS Communications used the money raised from the sale of its stock—approximately $1 billion was realized in 1993 and early 1994—to begin marketing the company's services to a new class of customers: small and medium-sized businesses employing between five and 200 employees and using between one and 250 telephones. Before MFS Communications ' efforts toward entering this much larger and virtually untapped market materialized, the company unveiled a revolutionary telecommunications service in August 1993, when it built the first nationwide Asynchronous Transfer Mode (ATM) network, enabling customers to transmit voice, video, and data signals simultaneously through a single telephone or cable-television line. The company's establishment of nationwide ATM service evidenced its ability to offer more sophisticated telecommunication services than other much larger rivals, such as AT&T, MCI, and Sprint, without recording any profit, an ability that enabled the company to compete in a market dominated by wealthier competitors and provided a springboard for further market penetration.

The springboard provided by the establishment of an ATM network carried MFS Communications overseas the following month, when the company received a telecommunications license from the British government to build and operate a local fiber-optic network. Also utilizing an ATM network, the company's expansion overseas initially led to an agreement with roughly 70 business customers, primarily U.S. and U.K. multinational companies that MFS Communications had served in the United States, and established a base of operations for further European expansion. Entry into the United Kingdom, where telecommunication regulations were most permissible for such a foray, was also a suitable starting point because approximately 300 of the company's 800 business customers in the United States had operations in the United Kingdom. Building from this base, MFS Communications planned to

operate additional telecommunication networks in Frankfurt and Paris in the imminent future, then expand to other areas in Europe within the next several years, drawing on its established clientele in the United States and in the United Kingdom to fuel its international growth.

As the company was defining itself in its new era of operations after becoming a public company, two strategic objectives were readily apparent: international expansion and the development of a small and medium-sized business clientele. The former was being executed through the construction and operation of a fiber-optic network in England under the purview of a subsidiary company, MFS International, Inc., while the latter was being executed through another of the company's subsidiary units, MFS Intelenet, Inc. Although plans were developing for both of these objectives as the company effected the transition from operating as a subsidiary of Peter Kiewit Sons' to becoming a publicly-held corporation, neither materialized in any substantive form until 1994, when the company's transatlantic audio, data, and video service began and it purchased Centex Telemanagement Inc. in a bid to accelerate the introduction of its fiber-optic network services to small and medium-sized businesses.

A San Francisco-based telecommunications management company with 11,000 customers, Centex was among the first businesses in the United States to manage local and long-distance telecommunication services for smaller business, giving MFS Communications valuable assets, experience, and talent in a market it hoped to considerably strengthen its presence. In addition to the Centex acquisition, MFS Communications also constructed two new fiber-optic networks in 1994 in Phoenix and San Diego, further broadening its service area in the United States, which by mid-1994 comprised 31 U.S. metropolitan areas either serviced or under development by MFS Communications ' fiber-optic networks. Internationally, the company began offering telecommunication service in Frankfurt in July 1994, its first Continental European city of operation, and planned to begin offering service in Paris in September 1994. Positioned as such, the company entered the mid-1990s planning, as it had since its emergence in 1988, for further growth without expectations of posting a profit in the immediate future, but with considerable expectations of increasing its domestic and international presence.

Principal Subsidiaries

MFS Telecom, Inc.; MFS Network Technologies, Inc.; MFS Datanet, Inc.; MFS Intelenet, Inc.; MFS International, Inc.

EVIDENCE TIMELINE

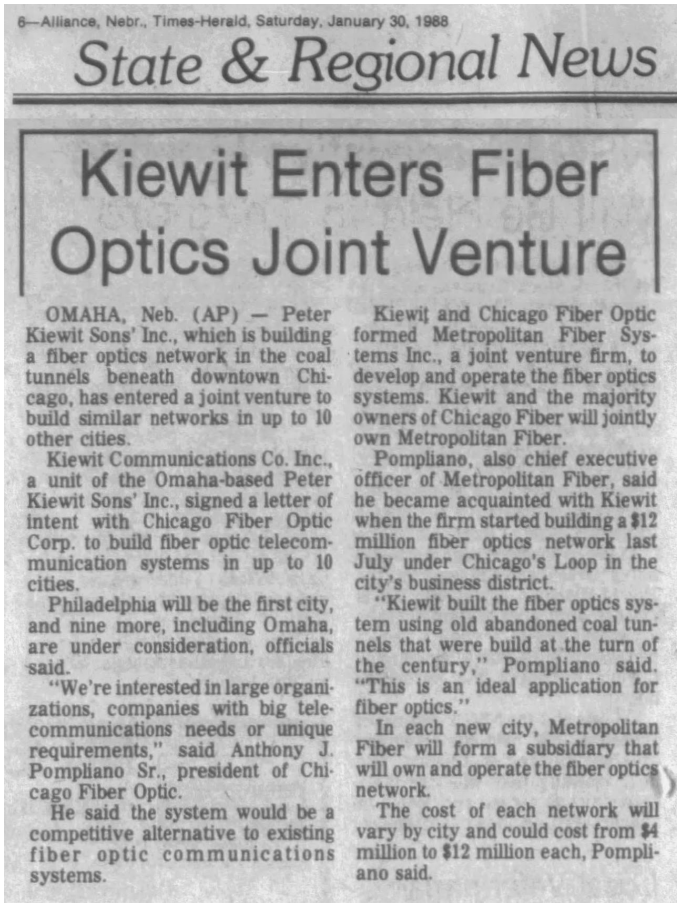
1988

Source : 1998 US District Court Case - Kiewit Diversified Group Inc. v. Federal Ins. Co., 999 F. Supp. 1169 (N.D. Ill. 1998) / See [HG00AH][GDrive]

[...] **In 1988, Kiewit formed a subsidiary, Kiewit Communications Co., which eventually became MFS Communications Corp. (MFSCC), to pursue business opportunities in the telecommunications industry and to provide businesses with an alternative source of local telecommunications services. In June 1989, MFSCC increased to 80% its ownership interest in Metropolitan Fiber Systems, Inc. (MFS Telecom), a company that managed an alternate local communications network in Chicago.** James Crowe, CEO of MFSCC; Royce Holland, president and chief operating officer; and Terrence Ferguson, general counsel; were the MFSCC executives primarily involved in these negotiations, with Crowe acting as the lead negotiator. The original owners of the companyArthur Brantman, Anthony Pompliano, Howard Gimbel and David Husmanretained the remaining 20% of the shares in MFS Telecom. In August 1990, the 20% interest was further divided so that 10 individuals held the shares. [...]

1988 (Jan 30) - Metropolitan Fiber Systems Inc. joint venture started between KDG and Chicago Fiber Optic

Full newspaper page : [HN01EW][GDrive]



6—Alliance, Nebr., Times-Herald, Saturday, January 30, 1988

State & Regional News

Kiewit Enters Fiber Optics Joint Venture

OMAHA, Neb. (AP) — Peter Kiewit Sons' Inc., which is building a fiber optics network in the coal tunnels beneath downtown Chicago, has entered a joint venture to build similar networks in up to 10 other cities.

Kiewit Communications Co. Inc., a unit of the Omaha-based Peter Kiewit Sons' Inc., signed a letter of intent with Chicago Fiber Optic Corp. to build fiber optic telecommunication systems in up to 10 cities.

Philadelphia will be the first city, and nine more, including Omaha, are under consideration, officials said.

"We're interested in large organizations, companies with big telecommunications needs or unique requirements," said Anthony J. Pompliano Sr., president of Chicago Fiber Optic.

He said the system would be a competitive alternative to existing fiber optic communications systems.

Kiewit and Chicago Fiber Optic formed Metropolitan Fiber Systems Inc., a joint venture firm, to develop and operate the fiber optics systems. Kiewit and the majority owners of Chicago Fiber will jointly own Metropolitan Fiber.

Pompliano, also chief executive officer of Metropolitan Fiber, said he became acquainted with Kiewit when the firm started building a $12 million fiber optics network last July under Chicago's Loop in the city's business district.

"Kiewit built the fiber optics system using old abandoned coal tunnels that were build at the turn of the century," Pompliano said. "This is an ideal application for fiber optics."

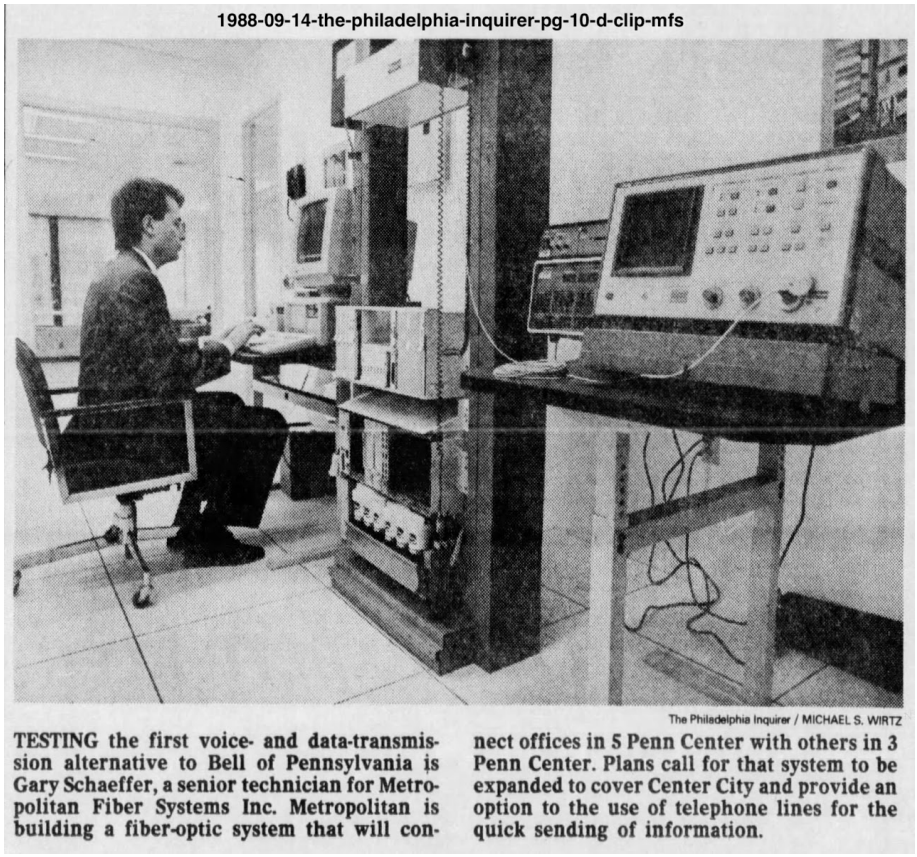
In each new city, Metropolitan Fiber will form a subsidiary that will own and operate the fiber optics network.

The cost of each network will vary by city and could cost from $4 million to $12 million each, Pompliano said.

[HN01EX][GDrive]

1988 (Sep 14)

Full newspaper page - [HN01EY][GDrive]



1988-09-14-the-philadelphia-inquirer-pg-10-d-clip-mfs

The Philadelphia Inquirer / MICHAEL S. WIRTZ

TESTING the first voice- and data-transmission alternative to Bell of Pennsylvania is Gary Schaeffer, a senior technician for Metropolitan Fiber Systems Inc. Metropolitan is building a fiber-optic system that will connect offices in 5 Penn Center with others in 3 Penn Center. Plans call for that system to be expanded to cover Center City and provide an option to the use of telephone lines for the quick sending of information.

[HN01EZ][GDrive]

1994 (March 17) - Note that MFS was spun off from KDG in May 1993

Full newspaper page ; [HN011M][GDrive]

Centex stock surges after takeover bid by MFS

By Karen Padley
Bloomberg Business News

SAN FRANCISCO — Centex Telemanagement Inc., one of the first companies to manage local and long-distance telephone services for smaller businesses, saw its shares more than double yesterday after MFS Communications Co. offered to buy the company for $9 a share cash.

Centex stock gained $5.62½ to close at $10.50. More than 12.6 million of the 17.7 million shares outstanding changed hands, making it the most active Nasdaq issue.

MFS Communications, based in Omaha, Neb., announced its offer late Tuesday, saying it had been rebuffed by Centex's board. It already owns 8.4 percent of Centex stock.

Centex said yesterday it is considering the offer and will respond within the next 10 business days.

Analysts applauded the proposed merger, saying it would be a good fit. Both offer similar products for small and medium-sized businesses, although MFS Communications depends more heavily on networks and Centex on services.

A possible 'coup'

MFS Communications stock closed up $4.37½ at $35.12½. Volume was 1.45 million shares, almost three times the three-month daily average.

"If they get Centex, it will be a coup for them," said Ronald Altman, an analyst with Furman Selz, New York. "The combination makes an enormous amount of sense as competition increases in the local markets."

MFS was spun off in May 1993 from Kiewit Diversified Group Inc., a unit of closely held Peter Kiewit Sons' Inc. It benefited from a September 1992 ruling by the Federal Communications Commission that opened local telephone service to competition, ending the monopoly enjoyed by regional telephone systems.

The company lost $16 million, or 30 cents a share, in 1993. It is expected to keep losing money as it builds fiber optic networks in 65 cities over the next three to five years.

"MFS is making significant capital improvements in those networks so the more they add customers, the quicker they reach profitability," said Jacqueline Popp, a Duff & Phelps Corp. analyst.

Altman said two thirds of Centex's 11,000 customers are located in California, which would give MFS the kind of scope and scale it will need.

"This will accelerate MFS' move toward profitability," Altman said. He estimates MFS with Centex could break even by the end of 1996 instead of late 1998.

$5.1 million reserve

Centex, founded in 1983, has been publicly traded since 1987. It provides local, long-distance, conference calling, voice mail and other services for small to medium-sized businesses. It does not provide long-distance service directly, as MFS does, but uses various carriers.

The company set aside a $5.1 million reserve in the fourth quarter to restructure its operations, accelerate sales and improve efficiency. Centex last week laid off 18 people from its headquarters.

1994-03-17-the-rockland-ny-journal-news-pg-b-8-clip-centex

[HN011N][GDrive]

1994 - Scott Yeager explains MFS Communications / MFS Datanet Frame Relay Services

Dec 2, 2016 : Scott Yeager explains MFS Datanet Frame Relay Services about 1994. Supporting documentation for the Biography "Routing Paths or How We Got from There to Here" coming soon to Amazon.

video - [HV00DT][GDrive] / Image : [HV00DT][GDrive]

1994 - Scott Yeager explains MFS Communications / MFS Datanet Frame Relay Services

Live version is below ... https://www.youtube.com/watch?v=Z0ZWUgNUpNE

1995 (April 3) MFS Commercial

Taken from the NCAA Men's Basketball championship game off WCBS/CBS.

Full 30 minute video of all commercials : [HV00DP][GDrive] / PDF : [HV00DQ][GDrive] / still image of source : [HV00DR][GDrive]

Just the single video MP4 download: [HV00DR][GDrive]

We also have a version that is live on Youtube (on "Live2") ... below (link is https://youtu.be/GBCSYAkDhGM)

1996 (May 06) - Baltimore Sun - $189 million bonanza on lucky venture MFS' takeover of UUNET to benefit local firm's clients; Humbled and looking ahead; At NEA it's 'thank God and we're on to the next dream'

Timothy J. Mullaney ; Source : [HN01CS][GDrive]

Of all the beneficiaries of last week's $2 billion deal for MFS Communications Co. to take over Internet access provider [UUNET Technologies, Incorporated], one of the biggest will be a Baltimore venture capital firm that stands to make $189 million on a $4 million investment.

New Enterprise Associates controlled 10.1 percent of Fairfax, Va.-based Uunet, having paid $3.9 million for the stake in 1994. NEA endured a wild roller-coaster ride in Uunet's stock price after the company went public last May, and stands to make a killing for its clients when the merger goes through. [...]

The 18-year-old firm has invested in about 320 companies, which [NEA general partner Charles W. Newhall III] said have $18 billion in annual revenues. NEA has capitalized on the historic bull market for new stock issues that has made millionaires out of people who founded NEA-backed companies such as Genetic Therapy Inc. of Gaithersburg and Integrated Health Systems Inc. of Owings Mills.

In most cases, venture capitalists get paid when a company is sold or goes public. NEA's 15 initial public offerings last year topped the venture capital industry for the third time in four years, according to a report by San Francisco-based Venture-One Corp.

"Over the last five years, NEA has averaged one IPO a month -- a remarkable track record for an entrepreneurial money machine," Venture-One said.

Not nearly all the cash from the [UUNET Technologies, Incorporated] takeover will go to NEA's principals, however. The investment was made with part of a $200 million fund the firm raised from pension funds and other investors in the early 1990s, Newhall said. NEA principals put up 1 percent, and otherwise get paid a share of the profits above the $200 million invested. Given the hit on Uunet, almost any return at all on the other $196 million in the pool is pure profit. [...]

[UUNET Technologies, Incorporated] founder **Richard Adams** was basically an engineer with a vision when he went looking for money in 1994. He met up with NEA, and with two other venture firms, and quickly raised the money he needed to move forward.

But it came with a price. The venture capitalists decided that [UUNET Technologies, Incorporated] needed upgraded management. "They said, basically, we're going to hire a management team and we're going to put some money in," said **Uunet President and Chief Executive [John William Sidgmore (born 1951)]**. "They brought people in in early '94."

[John William Sidgmore (born 1951)], **a colleague of NEA partner Peter Barris when they both worked for General Electric Co.**, was at the top of the list. **He had sold Intelecom Solutions, a Montgomery County software firm, to Computer Sciences Corp. in 1991 and was still running Intelecom for the new owner when Barris approached him.**

"He basically convinced me this would be an exciting area to work in," Sidgmore said. "It was a little tiny company, much smaller than the one I was running. But Peter convinced me it was a terrific opportunity." [...] Sidgmore said. "No, of course [I didn't know how terrific the opportunity was, ...] but you have to remember no one knew anything about the Internet two years ago. Now everyone thinks they're an expert."

What happened in between was 1995. [UUNET Technologies, Incorporated] did some big things right, and also rode a wave of interest in the Internet that was mostly beyond its control.

On its own, UUNET decided to focus on the business market, avoiding low-margin competition with the likes of America Online for consumers' business. And it made a key alliance with software titan Microsoft Corp., which took a 13 percent stake in Uunet.

"Microsoft, in essence, financed development of the network," [John William Sidgmore (born 1951)] said.

By then, the media had joined the Internet hype, and so had the stock market. And, Sidgmore says, there was good reason.

"People realized the Internet would become a revolutionary technology," he said. "It enables virtually everyone to communicate with each other, and it was dramatically cheaper than conventional networks. These two things were a sea change."

The wave allowed [UUNET Technologies, Incorporated] to go public at $47 a share last May. From then it was a roller-coaster, with the stock rocketing above $70, then plummeting as low as $24.50 after AT&T; Corp. said it was getting into the Internet access business, then rebounding as optimists comforted themselves with the idea that upstart AT&T; challengers past have grown into companies like MCI Communications Corp.

The takeover price was $61 a share. But the deal attracted negative attention as well, because suspicious trading in Uunet options made it appear news of the deal had leaked prematurely. Sidgmore said the company doesn't know who bought the options before the deal.

"A lot of communications technologies have come and gone, and AT&T; hasn't dominated them," Newhall said. "We felt that if you went into the business end of the Internet backbone, you could add products and services to be competitive."

But Sidgmore said the company made the deal because moves like AT&T;'s entry make the Internet business much more competitive.

The Virginia company simply needed a bigger partner with deeper pockets to make the technology investments Uunet will need to keep up.

"The Internet is getting very serious, and there are going to be a lot of very serious players," he said. "If we want to remain a leader, we were not going to be able to do it on our own."

Newhall said NEA's 16 investment professionals, based on St. Paul Street and in Silicon Valley, live by their ability to spot trends, mostly in health care and information technology industries. "In our business, our success is determined by our ability to participate in things that change the way the world is," he said. "I think we've done that."

"We've basically succeeded in what we dreamed of doing: starting businesses that are important."

1996 (Aug 27) - NYTimes : "Worldcom to Buy MFS for $12 Billion, Creating a Phone Giant"

By Mark Landler ; Source : [HN01CQ][GDrive]

In a sign of the rush toward "one-stop shopping" in telephone service, [WorldCom Corporation] agreed to buy MFS Communications yesterday in a stock

In a sign of the rush toward "one-stop shopping" in telephone service, [WorldCom Corporation] agreed to buy MFS Communications yesterday in a stock deal worth approximately **$12 billion**.

The combination of Worldcom and MFS creates the nation's first fully integrated local and long-distance phone company since the breakup of the Bell System in 1984. And though the companies are hardly household names, together they promise to be a new giant in the lucrative market of providing communications services to business customers.

By combining networks, MFS Worldcom will be able to offer corporate customers a full complement of services: local and long-distance phone, data transmission and access to the Internet. Worldcom, the fourth-largest long-distance carrier, has until now primarily sold its network capacity to other long-distance companies. MFS is the leading provider of alternative local phone services to business customers seeking better prices or services than are available from the local telephone monopolies.

For all its size, however, yesterday's merger is only the third-largest deal of the year in the roiling telecommunications industry, outranked by the $22.1 billion combination of Bell Atlantic and Nynex and the $16 billion merger of SBC Communications and Pacific Telesis.

And unlike those pending mergers, yesterday's deal will have scant impact on residential customers. Worldcom and MFS plan to focus almost exclusively on the business market, where for years big corporate customers have purchased phone service from carriers that lacked such familiar brand names as AT&T or Nynex.

Still, analysts and executives said the merger was another milestone in the redrawing of the communications landscape that began when the Government deregulated the industry in February.

"It's highly significant because it elevates one more player into the ranks of end-to-end service providers," said Paul T. Unger, a telecommunications consultant at A. T. Kearney.

Together, MFS and Worldcom will have $5.4 billion in revenues, operations in 45 domestic markets and 500,000 corporate customers. Worldcom will issue 500 million to 550 million shares to acquire MFS.

In Nasdaq trading yesterday, Worldcom's stock dropped $3.625, to $22.75, while **MFS jumped $9.94, to $44.81**.

MFS Worldcom faces plenty of competition in the business market. AT&T, MCI and Sprint are moving rapidly to offer packages of services to corporate customers. And the Baby Bells intend to be full-service providers as well, though they will cater primarily to businesses in their own regions.

Several analysts said the merger presaged even more deals, and they pointed to another alternative local-access provider, the Teleport Communications Group, as the next potential takeover. Teleport announced a deal with AT&T yesterday to carry long-distance calls by connecting its local networks in large cities to AT&T's nationwide network. Teleport's shares rose $1.375, to $23.625.

Neither MFS nor [WorldCom Corporation] is a stranger to mergers. MFS, which is based in Omaha, acquired a leading Internet access company, [UUNET Technologies, Incorporated], for $2 billion in April. And Worldcom, which is based in Jackson, Miss., was cobbled together from several small long-distance companies, reaching its current configuration through the $2.5 billion joining of LDDS and Wiltel Network Services in January 1995.

Analysts generally praised the latest deal, which was reported yesterday in The Wall Street Journal, though some noted Worldcom was paying a lofty premium. Under the terms of the deal, each share of MFS common stock will be exchanged for 2.5 shares of Worldcom stock. Based on yesterday's closing price, that values MFS shares at $47.80 each -- a 37 percent premium to the market value on Friday.

MFS, which has invested heavily to build fiber optic networks, had revenues of $583.2 million in 1995, but lost $267.9 million. "You're paying $12 billion for a company with negative net income and negative cash flow," said one analyst, who insisted on anonymity.

That prospect apparently does not daunt Bernard J. Ebbers, the president and chief executive of Worldcom, who proposed the merger to the chairman of MFS, [James Quell Crowe (born 1949)], over dinner two weeks ago at Mr. Crowe's home in Omaha. The two men took barely two weeks to hammer out a deal the size of Time Inc.'s 1990 acquisition of Warner Communications.

Mr. Ebbers, whose flowing hair and relaxed manner make him look more like a country-and-western singer than a corporate executive, will be the chief executive of the new company. [James Quell Crowe (born 1949)] will be the chairman.

Worldcom's current chairman is John W. Kluge, the billionaire investor and a major shareholder in the company. Mr. Ebbers said Mr. Kluge would step down when the merger is completed in four to eight months. He said it was not clear whether Mr. Kluge would remain on the board.

Mr. Ebbers said the companies did not plan any layoffs. But the merger will probably claim at least one casualty in the executive suite. Royce W. Holland, the president and chief operating officer of MFS and one of its founders, said he would probably depart in a few months.

"I've been at this for nine years," Mr. Holland said yesterday, "It's probably time for me to take a little time off."

In a joint interview, Mr. Ebbers and Mr. Crowe said the merger would give them a critical jump over AT&T, MCI and other rivals in offering a bundle of services to business customers.

Worldcom owns a fiber optic backbone that snakes around the country, while MFS has scores of smaller fiber optic rings in local markets. By connecting the companies' combined 25,000 miles of fiber, the two executives said they would be able to carry traffic entirely on their own networks.

"Being first to market is a tremendous advantage, because building these networks is not an overnight proposition," Mr. Ebbers said.

AT&T, MCI and Sprint do not own local systems. So as they move into the local phone business they must either lease capacity from the Baby Bells, or construct their own local switches and networks. The Baby Bells, meanwhile, are prevented from entering the long-distance business until they can demonstrate that their local markets are truly competitive.

Combining Worldcom and MFS will also squeeze savings out of both companies. Daniel Reingold, an analyst at Merrill Lynch & Company, estimated that MFS would save about $40 million a year by diverting its long-distance traffic from AT&T and other carriers to Worldcom's network. And Worldcom could save $200 million to $400 million in access charges by using MFS's local networks to connect calls from its long-distance customers.

Worldcom has racked up an impressive annual return to shareholders of 57.3 percent in the last decade -- in part by aggressively acquiring and managing other telephone companies.

"They've shown an ability to integrate acquisitions," said Simon Flannery, a telecommunications analyst at J. P. Morgan & Company, "It's important to look at their track record in analyzing this deal."

Whatever Mr. Ebbers's talents as a manager, some observers question whether he needed to buy MFS -- particularly given the $12 billion price tag. With fiber optics and digital technology expanding the capacity of telephone wires, some analysts forecast an eventual glut of network circuits that will probably enable long-distance carriers to lease capacity on local networks at increasingly favorable rates.

P. William Bane, a telecommunications consultant at Mercer Management Consulting in Washington, said Worldcom might have been able to get into the local phone business simply by leasing capacity on the local networks of the seven Baby Bells.

Indeed, MCI Communications announced something resembling such a deal yesterday with Nextwave Communications, a company that plans to offer a new type of local cellular service, called personal communications services. MCI will lease capacity on Nextwave's wireless system and sell it under the MCI brand name.

"If they can fill in all the pieces, they'll do very well," Mr. Bane said of MCI. "And they won't have to buy anything."

2001 (June 18) - WSJ - "How the Fiber Barons Plunged The U.S. Into a Telecom Glut"

By Rebecca BlumensteinStaff Reporter of The Wall Street Journal; June 18, 2001 1:03 pm ET

Source : [HN01CP][GDrive]

DENVER -- As he rushed to lace America with fiber-optic cable, James Crowe wasn't the sort to let anything stand in his way -- not the Rocky Mountains and certainly not his crosstown rival, Joseph Nacchio.

By 1999, when Mr. Crowe's [**Level 3 Communications, Incorporated**] started digging a line connecting Denver and Salt Lake City, Mr. Nacchio's Qwest Communications International Inc. had already threaded its own cable through the most direct route, a seven-mile railway passage through the granite of the Continental Divide. Undeterred, Level 3 swerved an extra 70 miles through southern Wyoming, installing fiber at a blistering 19-mile-per-day pace.

But now, Level 3 has hit a wall even Mr. Crowe may have trouble overcoming. The company's original ambition -- to build history's largest, most advanced fiber-optic network to carry exploding amounts of Internet traffic -- is now part of one of the biggest gluts the country has ever seen.

All told, about 39 million miles of fiber-optic cable stretch underneath U.S. railroad beds, corn fields, natural-gas lines and roads, enough to circle the earth 1,566 times. Companies racing to build or expand nationwide networks laid some $90 billion of fiber during the past four years. Merrill Lynch & Co. estimates that only 2.6% of the capacity is actually in use. Much of it may remain dark forever.

The fiber glut underlies much of the uncertainty plaguing the telecom sector -- and has even spilled over into the economy at large. Billions of dollars in shareholder value have evaporated in some of the biggest owners of fiber networks, including Global Crossing Ltd. ,Williams Communications Group Inc. and Genuity Inc. Many are struggling with massive debt: On Friday, 360networks Inc. said it was delaying a $10.9 million interest payment while it studies ways to preserve cash (see article).

The carnage has spread to suppliers such as fiber-maker Corning Inc. and Lucent Technologies Inc. Also on Friday, Nortel Networks Corp. , which makes gear for the Internet and telecom sectors, predicted a staggering $19.2 billion loss for the second quarter (see article).

Level 3, meanwhile, is fast retrenching. Its stock is off 94% from its high, and executives are expected Monday to announce plans to lay off as much as 20% of the work force, among other cost-cutting moves. The company's game plan: live off its stockpile of cash -- some of it raised from Omaha construction magnate Walter Scott Jr., a close friend of investor Warren Buffett -- until competitors die off and demand returns.

"The shake-out that is occurring is good for Level 3 in the long term, although it is awfully hard to convince someone who is sitting in a dentist's chair being drilled that this is a good thing," says Mr. Crowe. "It hurts."

Level 3's troubles represent an even bigger threat to the economy than the first round of the dot-com meltdown because the telecom companies involved are so much bigger. As a group, telecoms have gorged on some $650 billion in debt and are now failing in record numbers for the industry. The debacle is shaping up to be one of the biggest financial fiascoes ever, with losses to investors expected to approach the $150 billion government cleanup of the savings-and-loan industry a decade ago. And as more companies recognize the depth of their problems, the damage is likely to get worse.

To understand the origins of the mess, it helps to take a close look at two of the industry's pioneers, Qwest and Level 3. Located just miles apart in the Rocky Mountain foothills, each sprang from the ambitions of an old-style Western billionaire. Each dazzled investors early on with visions of rapidly expanding demand for telecommunications bandwidth, only to run into difficulties when Internet usage didn't soar as expected. But in the end, only one of the companies would figure out a way to shelter itself against the coming storm.

It has been said that the fiber glut bears a striking resemblance to the overbuilding of the railroads in the late 1800s. So perhaps it's fitting that one of the first to launch a nationwide network to compete with the long-distance companies was **Philip Anschutz**, a Denver railroad and mining baron whose net worth last year was put by Forbes Magazine at $18 billion.

By the mid-1990s, when Mr. Anschutz turned his attention to the industry, most of the nation's fiber was owned by AT&T Corp. , Sprint Corp. and MCI, along with a few upstarts. The hair-thin strands of superclear glass carry infrared light generated by tiny lasers that blink on and off billions of times per second, in a code that transmits voice calls or data traffic. Fiber dramatically increased the number of calls that could be handled at one time, making it far cheaper to use than coaxial cable, which is made of copper wire encased in plastic and aluminum.

Mr. Anschutz first became intrigued with the business through his ownership of Southern Pacific Rail Corp., which had a construction subsidiary that installed fiber along railroad tracks for other customers. When he sold Southern Pacific to Union Pacific Corp. in 1996, he retained the subsidiary, SP Telecom.

Laying fiber isn't technically difficult. Networks are built by burying plastic pipes, or conduits, in the ground and then literally blowing the fibers through with compressed air. One recurring problem is obtaining the right-of-way from property owners. It was there that Mr. Anschutz seized on his advantage: SP Telecom was already armed with the go-ahead to build along much of the nation's railroad tracks. He decided to build a newfangled network specifically designed to carry increasing amounts of data traffic -- with the goal of renting space to other telecommunications companies that needed long-distance capacity. In industry lingo, he would become a carrier's carrier.

Mr. Anschutz called the company Qwest and in January 1997 hired Mr. Nacchio, an engineer by training who was then head of AT&T's huge consumer unit, to bring it public. A compulsive workaholic who once finished the New York City marathon with a badly bleeding foot, the 51-year-old Mr. Nacchio left his family in New Jersey and commuted to the Denver headquarters, routinely working until 11 at night.

When Mr. Nacchio took over Qwest, he immediately bumped up the plan to build a 13,000-mile U.S. network to 18,500 miles. It looked like a financial stretch at first. Qwest had $150 million in seed money from Mr. Anschutz, but the rest came slowly. After a two-week road show in March 1997, Mr. Nacchio secured $300 million in debt at a relatively stiff 11.875% interest rate. Three months later, Qwest went public, raising $318 million.

But before long, business took off. As one of the first entrants to the market, Qwest was able to reel in some early telecom clients. GTE Corp., Frontier Corp. and WorldCom Inc. bought about half the fibers on Qwest's network for about $3.6 billion, enough to cover about 90% of the cost of building its entire network. Within six months, Qwest's stock price had doubled.

The success wasn't lost on one of Qwest's board members, a telecom visionary in his own right named Jim Crowe. A former WorldCom chairman, Mr. Crowe was fixed for life financially and testing out retirement.

But he was growing antsy and wanted back in the game. He had long toyed with the idea of setting up a long-distance fiber network himself. And he had a billionaire of his own to back him up: Mr. Scott, his former boss at Peter Kiewit & Sons, the closely held Omaha construction giant.

Mr. Scott was receptive to the idea. At a 1995 gathering in Ireland of executives close to Mr. Buffett, Mr. Scott had been dazzled by a talk by Bill Gates. The Microsoft Corp. chairman told the audience that the Internet "was radically going to change the world," Mr. Scott recalls. And Mr. Crowe already had a stellar track record: A few years earlier, he had built a Kiewit telecom spin-off, MFS Communications, and sold it to WorldCom for $14 billion.

So in 1997, Mr. Crowe told Mr. Anschutz that he was planning to leave the Qwest board at the end of the year. "I said that I might start a company and it might be competitive," says Mr. Crowe.

The move, when it came, caught Mr. Nacchio by surprise. He says he knew Mr. Crowe was drumming up a plan but believed he would focus on the local-phone business. "Jim asked me, 'What is the best place to locate a company?' I said Denver," says Mr. Nacchio. "I didn't know he was going to be a direct competitor. If I'd known that, I would have said Pennsylvania."

Mr. Crowe started Level 3 with $3 billion from Kiewit and a select group of investors, including Mr. Scott, who became Level 3's chairman. Instead of having an IPO, Level 3 simply took over a tracking stock held by Kiewit and was listed on the Nasdaq in April of 1998. He located the company in Broomfield -- just 14 miles from Qwest's Denver headquarters -- a spot Mr. Crowe says he picked after a national study about where high-tech talent wanted to live.

The 51-year-old Mr. Crowe, an imposing figure who could pass for a high-school football coach, started with plans for an ambitious global network. He broke ground for a 16,000-mile U.S. route in Schulenberg, Texas, in July 1998, and then drew up plans for a 4,750-mile network in Europe. Tapping an Omaha connection, Union Pacific head Richard Davidson, Mr. Crowe got permission to build on the railroad's lines for some of its routes. Before long, the company was working in 20 different time zones, with 250 crews digging at once in North America alone.

The Sniping Begins

The sniping between Qwest and Level 3 started almost immediately. A clearly hurt Mr. Nacchio groused that Mr. Crowe was pursuing a "copycat strategy" and openly wondered whether his rival had unfairly gained insights during his time on the Qwest board. "At the end of the day, I have always questioned why he would join," he says. "I'll bet you he learned something being on our board."

Mr. Crowe, who insists he was up-front at all times with Messrs. Anschutz and Nacchio, retorted that Level 3's network would be a technological leap beyond Qwest's. Level 3's innovation was to lay 12 conduits in each leg of the network, against Qwest's two. Only one might have any fiber blown through it at first, with the rest to come as demand warranted. Since one of the biggest costs in laying networks was the digging, Level 3 figured it could save money in the long run by doing it just once. It would also be able to adapt quickly as new kinds of fiber became available.

"Qwest is a fine company and I like Joe. However, we have a big disagreement," says Mr. Crowe. "Our goal is not simply to deploy one generation but to build an entirely new model that assumes technology will change quickly, and at times, unpredictably."

Mr. Crowe quickly attracted an almost cult-like following with his theories of how the Internet would revolutionize the stodgy world of communications. One of his best-known principles, and one of the main reasons he built such a large network, was known as disruptive pricing -- using low prices to stimulate Internet demand. "For every one percent you drop price, you get a greater than one percent increase in demand," Mr. Crowe said again and again.

He also had little patience for vertically integrated companies that try to do it all. Instead, he argued, communications would eventually drift toward a high-tech model, where each of the most successful companies carves out its own niche.

Investors ate it up, especially in Omaha, where the Peter Kiewit name was legend. Generations of engineers had already become wealthy through an employee stock ownership plan, and when Level 3 was spun off, the workers' paper profits soared. The fact that Mr. Scott sits on the board of Berkshire Hathaway Inc., and Berkshire's legendary leader, Mr. Buffett, keeps his offices on the 14th floor of Kiewit Plaza, only added to the allure. "A lot of people thought this was the next coming, the next Berkshire Hathaway. They loaded all their assets in," says Marc LeFebvre, a stock broker in the Omaha office of Dain Rauscher Inc. who, along with his father, once worked at Kiewit.

By February 2001, Level 3 had managed to raise $13 billion, enough to finance building its entire network and -- according to its plans -- keep it going until it achieved profitability. Derek Scarth, an equity analyst with Berger Funds, remembers Mr. Crowe's pitch boiled down to this: "If you build it, they will come."

But it wasn't customers who came so much as it was competitors, lured by the easy availability of funding. J.P. Morgan and McKinsey & Co. figure at least 50 companies, offering a range of Internet backbone services, joined the gold rush by the end of 2000.

"There was a time in 1998 and 1999 where we were getting five offerings a week, just in telecom," says Brian Hayward, head of telecom investing for

Invesco Capital Management Inc. The pile of prospectuses on his floor was two feet high.

Mr. Nacchio marvels at how easily the money flowed. In the fall of 1998, he remembers coming up with a second round of financing in a 10-minute call with bankers while driving to his son's soccer game. "Before the game was over, we had subscribed for a billion bucks at 8.9% interest," says Mr. Nacchio. "To me, we had arrived."

Once the big dig was set in motion, it was hard for any one player to scale back. Each had raised money by promising investors a new fiber-optic network, and each felt compelled to forge ahead to get revenue flowing as soon as possible. Mr. Crowe, who watched competitors creep up behind him much as he had crept up on Qwest, consoled himself with the conviction that his network would be superior. And he and all the others stood firm in the belief that Internet traffic -- whether e-mail, or pay-per-view movies or the frenetic transactions of day traders -- would soon be gushing so fast that it would engulf all their pipelines and more.

Major Miscalculations

In retrospect, the executives -- and Wall Street -- made some major miscalculations. Too many companies focused on the easy part of building a network: the long-distance loops that cut mostly through rural areas. Too little money went into widening the pipes that run into homes and offices, an extremely expensive undertaking complicated by the fact that the Baby Bells already own such "last-mile" connections. With high-speed access slow to reach businesses and consumers, development of the sort of "killer applications" that might spur new usage dwindled.

Some analysts tried to sound a warning. In October 1998, an Internet researcher at AT&T Labs named Andrew M. Odlyzko published a paper debunking the widely held view that Internet traffic was doubling every three months. Mr. Odlyzko laid out an argument that in fact Internet use was doubling only once a year. "It was an extremely convenient myth," says Mr. Odlyzko. "Every entrepreneur who was getting financing could quote it."

With the flood of investment money continuing unabated, few in the business paid him any heed. But Mr. Nacchio was starting to get rattled. With so many new entrants, he figured, life as a carrier's carrier might get tough. The entire wholesale market, Mr. Nacchio calculated, was roughly $9 billion a year. "There wasn't enough revenue to go around," he says. So Mr. Nacchio began converting Qwest into a retail company instead, acquiring LCI Communications, which made Qwest into the nation's fourth-largest long-distance company.

In June 1999, he dropped a bombshell by making a bid for U S West, the Denver-based Baby Bell. Coming as it did in the midst of America's Internet euphoria, the move stunned investors, who wondered why Qwest would buy such a traditional, slow-growing company. Mr. Nacchio even had trouble persuading Mr. Anschutz that the move was justified. "All I knew is that we were not going to succeed by being a one-trick pony," says Mr. Nacchio.

Whatever the justification, the stock market wasn't buying it. Qwest's shares plunged, but the $35 billion deal still went through. Mr. Crowe, for the time being, was looking brilliant. Level 3 stock surpassed $130 per share in March 2000. Dangling fat stock options, Level 3 poached Qwest employees, sometimes driving Mr. Nacchio to distraction.

Even though Level 3 was still more than a year away from completing its network, it managed to grab headlines. In October 1999, the company snagged a key piece of America Online's business from WorldCom. Analysts estimated that Level 3 undercut WorldCom's price by 50%. Mr. Crowe's theory of disruptive pricing was having an impact.

But Mr. Nacchio had some disruptions of his own in mind. Angered by the defections and worried about market share, the executive ordered his sales teams not to lose any contracts to competitors. The project, code-named "Operation Clean Sweep," turned the tide back in Qwest's favor.

It also kicked off a deflationary spiral the likes of which few industries have ever seen. In the wholesale market -- the business of selling network space to other phone and Internet companies -- prices are expected to plunge at least 60% this year.

It's even worse for so-called "dark fiber," which hasn't yet been connected to the expensive electronic equipment needed to make it usable. A major brokerage house, say, that wanted to purchase its own strand of fiber could pick it up for $1,200 a mile, down from as much as $5,000 in 1997, according to Qwest.

Such sales are becoming increasingly rare, however, because few companies are in a position to invest in the equipment needed to connect the fiber into a network. That equipment, including the ultra-fast switches called routers, costs many times more than the fiber itself.

The pricing collapse, combined with the bursting of the Internet bubble, has left the fiber industry gasping for air -- and Mr. Nacchio looking like a genius.

Saved by the Baby Bell

Thanks to the constant trickle of money from plain-vanilla local phone service, Qwest is projecting revenue of as much as $21.7 billion this year, up from $19 billion in 2000. It lost $81 million last year and won't be profitable anytime soon, but its stock price has been holding steady lately at around $33 on the New York Stock Exchange. That's down 48% from its high but still well above the initial offering price, adjusted for a split, of $5.50.

Life isn't so easy for Mr. Crowe. After trading as high as $130 in March of last year, the company's stock closed Friday on the Nasdaq Stock Market at $7.62, off 34 cents, or 4.3%. By some estimates, investors in the Omaha area alone have suffered paper losses of as much as $20 billion, leading to plenty of grumbling around town.

Tom Dowd, an Omaha attorney, is kicking himself for not selling his Level 3 shares earlier, but he still has faith the situation will improve. "Walter Scott has his reputation on the line with all these people getting it in the teeth," he says. "He doesn't want his legacy to be a foul ball."

It will take some doing to turn Level 3 back into a hit. Due to some environmental problems in California -- the digging was disrupted temporarily by regulators when a trout turned up dead near the route -- the network isn't quite finished. Of the 96 fibers in Level 3's first conduit, only two are currently lit.

And, despite winning high-profile customers such as Yahoo Inc. and XO CommunicationsInc., Level 3 recently lowered its projection of communications revenue for this year to as little as $1.4 billion from $1.7 billion. In 2000, the company reported a net loss of $1.45 billion on revenue of $1.18 billion, including $200 million in revenue from mining operations.

Some acquaintances have noticed that Mr. Crowe seems more subdued these days. But in public the executive remains the picture of confidence. He stresses that the company still has $4 billion in cash and says it will emerge from the shakeout.

"A year ago we were in a hothouse environment where every plant, regardless of its strength, prospered," he says. "Now, we are outside in the cold world. It is a better environment, as painful as it is."

2017 (Mar 14) - Level 3, which started with hopes of riches but ended with big losses for most shareholders, will cease to exist

See [HN01CT][GDrive] / Mar 14, 2017 Updated Aug 21, 2019

Thomas Dowd and hundreds of other Omahans soon will be digging out their Level 3 Communications Inc. stock records.

The reason: This week [in March of 2014], Level 3 shareholders are voting to sell the company to CenturyLink Communications.

The sale marks the end of an investment saga that began 20 years ago with hopes of riches but ended with big losses for most shareholders, despite the efforts of some of Omaha's biggest names in business.

"It was a very bad experience," said Dowd, a retired attorney and former director of the Metropolitan Utilities District. "It's just one purchase at a time, and you think everything's going good and then, bam! Anyway, lesson learned."

Although his loss was "substantial," he said, it didn't disrupt his lifestyle, and he figures he's better off than shareholders who lost their retirement savings or other vital funds. He's still a Level 3 shareholder and will get some cash and CenturyLink shares in the sale, which is scheduled for September.

But it works out to about $4.43 for shares he bought years ago, some of them costing more than $100.

It all started in the 1990s with the best of intentions, plus the admiration Omahans have for Peter Kiewit Sons' Inc., the Omaha construction and mining company, along with its then-chairman and chief executive, Walter Scott.

Along the way, Scott's friend and business associate Warren Buffett also gave an endorsement of Level 3. His Berkshire Hathaway Inc. invested $100 million in the company for a brief time.

In 2002 Buffett issued a statement that expressed confidence in Level 3's management, finances and "valuable assets" and added: "Level 3 is well-equipped to seize important opportunities that are likely to develop in the communications industry."

Level 3 started within a Kiewit division called Kiewit Diversified Group in 1990, eventually carving out its own shares of stock available to Kiewit employees. Unlike their shares in Kiewit's construction business, Kiewit Diversified shares could be sold publicly. Sales started showing up on informal trading sheets.

"All of the old Kiewit people were in it," said Jon Bischof, who retired in 1992 as a district construction manager for Kiewit. "It was really a hell of a deal. It was all very forward-thinking."

Under Kiewit executive [**James Quell Crowe (born 1949)**], Level 3 began building a fiber-optic highway for the upcoming information age. It was a marriage of high-tech fiber technology and Kiewit's time-tested construction skills, starting with $2 billion of Kiewit's cash. Scott became Level 3's first chairman, a position he held into 2014.

For Omahans, the risks of investing in an untested industry were clouded by the reputations of those involved and the logic of a fiber-optic network to serve the fledgling Internet revolution.

Omaha financial adviser Cella Quinn, who was specializing in mutual funds and advising against single-stock investments at the time, remembers the rush to buy Level 3 shares. Even Omaha mayors Hal Daub and Mike Fahey were Level 3 shareholders at one time.

"There was all this pent-up enthusiasm for anything Kiewit," Quinn said, because of Kiewit's well-known business success and the fact that only employees could own its stock. Average investors could only watch while Kiewit earned profits from work such as building Interstate highways and mining Wyoming coal.

On April 1, 1998, Level 3 shares began trading on the Nasdaq exchange, raising capital toward building the fiber-optic network.

"It was not only a Kiewit company, it was a Walter Scott company, too," Quinn said. "The man and woman on the street were looking at people who were involved in it who had become wealthy in private business. It was a way for the little guy to share in that."

Crowe and many other top Level 3 officers were alumni of MFS Communications Co. of Omaha, created within Kiewit as an early challenger to the newly separated Bell System companies. MFS was purchased by WorldCom Inc. in 1996.

Crowe served briefly as WorldCom chairman and then returned to Kiewit to form the fiber-optic operation that became Level 3. Scott served briefly on WorldCom's board of directors.

WorldCom filed for bankruptcy in 2002 after an improper auditing scandal that resulted in former CEO Bernard Ebbers being sentenced to 25 years in prison. Scott and Crowe were not implicated in the WorldCom case.

Although Level 3 moved its headquarters to Broomfield, Colorado, in 1998 to attract needed tech workers, some employees and a majority of its individual stockholders were in Omaha. It held annual shareholders meetings in Omaha through 2005.

On March 20, 2000, someone sold and someone bought Level 3 shares for $132.25, a price that made the company's publicly traded stock worth nearly $20 billion. By 2002, the price had nearly collapsed, putting most shareholders into the red.

Level 3 might have an information highway, but its toll system wasn't collecting enough to earn a profit. It was clear that the nation had a "bandwidth glut," a huge overcapacity of fiber networks.

Level 3 had installed its network, at an eventual cost of $14 billion, and could cheaply add more lines by stringing extra cable through its conduits.

But others had built networks, too, and the demand for bandwidth wasn't growing as Crowe had hoped. Researchers also found ways to send more data along existing fibers, meaning greater capacity along existing lines.

Most of the new fiber networks were unused, or "dark." Only a fraction of fibers in the buried bundles were "lit" by the light waves that carried digital communications and brought in revenue for companies like Level 3.

The supply of fiber far outran the demand, and Level 3's losses mounted, along with its stock price. Investors lost confidence that the company would begin making profits anytime soon. In fact, that didn't happen until 2014.

Local investors were encouraged by Berkshire's 2002 investment, accompanied by investment groups Legg Mason Inc. ($100 million) and Longleaf Partners Funds ($300 million). Berkshire and the two investment groups received bonds that they later converted into common stock. But the next year, Berkshire sold most of those shares.

It was a case of stock prices reflecting what investors would pay, rather than the value of the company — in short, speculating.

By late 2008, the stock price hit bottom at 60 cents a share, or a total value of about $80 million. Level 3 was losing more than that every three months, but had a healthy supply of capital from Kiewit to keep operating.

Quinn, the financial adviser, said investors had been reluctant to sell their Level 3 shares as the price went up because they didn't want to pay income taxes on their profits and because they believed the price would go higher.

Many of them also didn't sell when the price went down, either, thinking it would recover. **They couldn't imagine Kiewit, Scott and Buffett would back a loser.**

"One of the lessons to be learned is that falling in love with a local stock doesn't guarantee that you're going to make money," Quinn said. "So many people knew people who were affiliated with Level 3 through Kiewit or elsewhere that it was very difficult for them to realize that they would lose."

In recent years, Level 3's stock price rallied somewhat, but only after a 1-for-15 reverse stock split kept its shares in mutual funds and other institutional portfolios. Its operating results improved.

Kiewit, Buffett and Scott declined to comment for this story, but Scott spoke at Level 3's 2014 shareholder meeting, when he stepped down as chairman. (He was succeeded by James Ellis, who as a Navy admiral had commanded the U.S. Strategic Command in Omaha before retiring in 2005. Crowe retired as CEO at the end of 2013.)

"I wanted to stick around until I was convinced that Level 3 was solidly on a path toward its destiny," Scott told the shareholders, according to the Denver Post's account of the meeting.

"With the current management that you have, with your current finances, with the current opportunities that I think are available, and the fact that the market has finally decided that you're doing a great job, I think my time has come."

He addressed Level 3's challenges: "Who would've predicted that at the start of our new business, there would be a telecom meltdown, a tech wreck, terrorist attacks, a worldwide financial crisis and the Great Recession?"

In late 2003, Scott transferred most of his Level 3 holding, worth about $54 million at the time, to his family foundation. At the purchase price, those shares have doubled in value.

Level 3 has grown partly by acquisition, including Global Crossing, mostly an undersea cable company, in 2011 and TW Telecom, a networking company, in 2014.

Despite its rocky financial history, Level 3 represents an opportunity for CenturyLink.

The company, based in Monroe, Louisiana, had acquired Qwest Communications, the successor to U.S. West, which in turn was the successor to Omaha-based Northwestern Bell Telephone Co., a part of the old Bell System.

A "yes" vote on the sale is likely because most shares of both companies are owned by investment groups that, by their public silence, appear to favor the deal. Level 3's largest shareholder, a branch of Singapore's telecommunications agency, pledged its support in advance.

Directors of both companies endorsed the plan.

In a conference call last week, Ewing Stewart, CenturyLink's chief financial officer, said adding Level 3 would make CenturyLink the second-largest telecommunications company, moving past Verizon but trailing AT&T.

CenturyLink, which employs about 900 people in Omaha, said Level 3's past losses would offset income taxes it would owe on upcoming profits. Adding Level 3's global network will give it a presence in more than 60 countries, making it "positioned to further enhance the scope and transmission speeds of its broadband infrastructure."

Another advantage: the ability to meet customers' "demand for more bandwidth" and new communications services.

Eliminating duplication and consolidating operations would save $850 million a year, CenturyLink said.

Bischof, the retired Kiewit executive, said it's doubtful any other company will be able to duplicate Level 3's fiber network.

"Two hundred years from now, it'll turn out that Walter was exactly right," said Bischof, who sold his Level 3 shares years ago. "The only problem was

"Two hundred years from now, it'll turn out that Walter was exactly right," said Bischof, who sold his Level 3 shares years ago. "The only problem was, Walter's time frame on everything was 200 years, and for all the rest of us it was like three years."

He said early Kiewit-based shareholders who still have the stock will make money in the CenturyLink buyout because their original purchase price was so low — in Bischof's memory less than 50 cents a share.

At 50 cents a share, the equivalent purchase price of $4.43 represents a large gain. But from Level 3's first price on the Nasdaq exchange, $62 a share, it's a 93 percent loss. During that time, the overall stock market has nearly tripled.

For more recent Level 3 stock purchasers, the CenturyLink offer is 42 percent higher than the price last year before news accounts of a potential sale affected the trading price.

Some shareholders made money by selling shares at a profit years ago. Others donated shares to charity, gifted them to their children or passed them on through their estates.

But those who bought shares at high prices lost.

"They're out a bag of bucks," said one former Kiewit employee.

Dowd, the retired attorney, said he held onto the shares because it didn't seem worthwhile to sell at the lower prices and he figured someone would buy the company and he would get some of his money back.

"I always thought Walter Scott was going to pull a rabbit out of the hat," he said. "He never did."

Besides, Level 3 has improved, he said. The company has focused on cutting costs, improving efficiency and boosting sales, such as a lucrative 2013 deal to supply broadband connections for 7,000 Starbucks locations and high-volume customers like Netflix and Google.

"You've got to commend the present management," Dowd said. "They go in there and got the company moving, and moving well enough that someone was interested in buying them out."

2000 (May 6) - NYTimes : "New Life for Old Railroads; What Better Place to Lay Miles of Fiber Optic Cable"

By Jane Tanner / May 6, 2000 [HN01H3][GDrive]

Henry Flagler came to Florida in 1883 to build grand hotels in what was sparsely populated coastal scrub. Using wealth amassed as one of the Standard Oil Company's founders, he began cobbling together a railroad down the length of the state. He opened up Florida as he went, erecting posh resorts like the Palm Beach Inn, later called the Breakers, that would serve as starting points for future cities. By 1896, he had built 350 miles of track from Jacksonville to Miami.

Now Florida East Coast Industries, the holding company controlling the Flagler railroad, is using the right of way to establish itself in the new economy. Since last May, the company's subsidiary, Epik Communications, has been selling capacity to move digital information through fiber optic cables that run alongside chugging train cars piled high with crushed stone, building materials and vehicles.

Like most railroads, Florida East Coast Railroad had been collecting rent from giant telecommunications companies that had buried cable beside its tracks. But two years ago the company decided to jump directly into the market for bandwidth capacity. Just shy of one year into its venture selling transmission capacity to telephone companies, wireless services and Internet service providers, Epik's network covers 80 percent of Florida's population and extends west to Texas and north to Atlanta. The revenue backlog is $60 million.

"What makes it a great railroad franchise is what makes it a terrific telecom franchise," says Robert Anestis, the chairman, president and chief operating officer of Florida East Coast Industries, who came on board in January 1999 to exploit the telecommunications potential. "We're in the center of growth."

The story of how the little railroad leveraged the dirt along its tracks to leap into fiber optic communications provides a glimpse into some of the swaps and barters used to create a glass network for the streams of digital bits and bytes cycling around the globe. It also suggests how some old-economy transportation and power companies may find prosperity in a cyberage.

Railroad tracks make good paths for telecommunications cable because they offer cleared, linear routes. In fact, special railroad cars run along tracks plowing cable underground as they move. The cost of assembling such paths for conduits from scratch would be astronomical.

In the same way, energy and utility rights of way are used for fiber optics. For instance, the Williams Companies created a whole new venture by putting cables along its natural gas pipelines. Consolidated Edison's infrastructure is being used for fiber optic lines into 2,000 buildings in New York.

Southern Pacific Railroad is the textbook example of a railroad creating telecommunications companies, having spawned both Sprint and Qwest Communications International.

In this latest sweep of new entries along with FLorida East Coast are the Norfolk Southern Corporation and the CSX Corporation. "The pickings have been so good, a lot of people have been getting into this industry," says Tim Caffrey, who follows telecommunications for Standard & Poor's.

While Florida East Coast is small, it is beginning to attract attention. Since January 1999, its stock has gone from $27 a share to over $46; its market capitalization has risen from $800 million to just under $1.8 billion. In mid-April an investment group including the Texas billionaire Robert Bass acquired a 5

percent stake in the holding company, based in St. Augustine, Fla., with its railroad, trucking, real estate and now telecommunications businesses.

"It's in the nascent stages, but the company is beginning to make a major play in the telecom industry," says Andrew Hamerling, an analyst at BancAmerica Securities.

Florida East Coast was a fairly inert company until Mr. Anestis began to kick-start the assets that Mr. Flagler had put into place 100 years earlier. The company and the St. Joe Company, which held a 54 percent stake in Florida East Coast until recently, had lagged under the control of the conservative Alfred I. duPont Testamentary Trust.

But in the early 1990's, investors pressed St. Joe to start exploiting its assets for better shareholder returns. It shed operations like a paper mill, telephone company and bank to focus on its one million acres of real estate in the Florida Panhandle for resort development.

When St. Joe took a look at its 53.8 percent stake, it decided that it should put the company up for sale. But Mr. Anestis, then a consultant to Peter S. Rummel, St. Joe's chairman, convinced him that there was better way to capture the value of the telecommunications potential.

"I told him it's much better to jump into this thing proactively," Mr. Anestis recalls.

Mr. Anestis had had an eye on the company's telecommunications rights of way for some time. In the early 1980's AT&T, MCI, WorldCom and other big players installed fiber optic cables along Florida East Coast Railroad lines to reach the state's growing cities. These leases were a no-cost stream of passive revenue. The next big cable construction wave followed the 1996 telecommunications act. During this second buildup, Florida East Coast decided to get a piece of the digital action.

Mr. Anestis started as a mergers and acquisitions lawyer in Pittsburgh, then headed a railroad holding company, Guilford Transportation Industries, that a client had created. In 1984, AT&T leased right of way from Guilford on an unused line in the White Mountains to add capacity to its Boston-to-Montreal fiber link. The old line, with small trees growing in the tracks, showed Mr. Anestis how valuable such linear paths could be. Mr. Anestis left Guilford and started an investment advisory firm, still consulting with railroads and negotiating right of way leases with telecommunications companies.

In 1997, when Qwest wanted to bury cable on Florida East Coast Railroad routes, Mr. Anestis negotiated on behalf of the railroad and got Qwest to build three conduits for Florida East Coast as part of the bargain.

The next year when Williams was anxious to add Florida capacity along the railroad's right of way, Mr. Anestis brokered a deal for 36 strands of dark fiber from Williams. Dark fiber is unactivated cable.

Instead of being just a passive landlord, Florida East Coast now had telecommunication assets, but it did not know how to deploy them. "We were pretty good horse traders, but we really didn't know what to do with this," Mr. Anestis said. Soon after these deals, he was made head of Florida East Coast Industries.

Mr. Anestis hired strategic consultants at the Cambridge-based Monitor Company to determine whether 3 empty conduits and 36 strands were enough to jump-start a new telecommunications company. Each 1.25-inch conduit can hold 216 fiber optic strands. Two strands of activated cable can transmit 129,000 simultaneous telephone calls. New technology is expected to increase that number a hundredfold.

John McClellan, Monitor's head of telecommunications, concluded that the venture could work. Florida's economy was expected to grow 37 percent faster than the rest of the country over the next 10 years. The company's rights of way, conduits and fiber amounted to a base to reach the majority of the state's population.

Florida East Coast also had enough capital to invest nearly $100 million in cash to get the initial parts of the business up and running.

At the end of the consultation, Mr. McClellan decided to leave his 16-year career at Monitor to head the new Florida East Coast venture.

Now, Mr. McClellan splits his time between his home in Groton, Mass., and Epik's headquarters in Orlando. He took a two-thirds pay cut, spurred by the prospect of stock options. Mr. Anestis said Epik could go public in as few as six months, but acknowledged that market volatility could extend that timetable.

"I entered into this knowing we're in this a while trying to build a business," Mr. McClellan said.

Under Mr. McClellan, Epik has extended its reach beyond Florida in fiber and conduit swaps with Enron Broadband Services and Broadwing Communications.

"We're becoming experts in swaps and barter," Mr. Anestis said. Trade-outs allow quick geographic links without time-consuming installation. Fiber optic companies build excess capacity so they can use it as capital in future trades.

Florida East Coast and Epik officials, meanwhile, are huddling over aerial photos of the 18,000 Florida acres that Mr. Flagler accumulated and that remain under company control.

Gran Central, a real estate subsidiary, has built a portfolio of high-end office complexes and industrial buildings. Now, the company is considering the land for Telecom Hotels, high-rises intended to house equipment needed to keep data flowing smoothly. The company is also considering constructing office buildings prewired for the latest technology.

Many railroad industry executives are looking for new opportunities. Last year, Norfolk Southern created a subsidiary, Thoroughbred Technology and Telecommunications, or T-Cubed. The railroad plans to lay conduit and use its microwave towers to sell bandwidth capacity to carriers.

In March, CSX signed an agreement with Pathnet Inc., a wholesaler of bandwidth based in Reston, Va., to provide railroad right of way in exchange for equity in Pathnet. Burlington Northern Santa Fe and Colonial Pipeline also signed "right of way for equity" deals with Pathnet.

With all these new players, Mr. Caffrey at Standard & Poor's and other industry watchers say a glut of fiber capacity may be on the horizon. Mr. Anestis is not flustered by the prospect. "We assumed that this supply would cause prices to fall," he said. "Even so, with the slope of growth there's a great business here."

Correction: May 13, 2000

Because of an editing error, an article in Business Day on May 6 about the move of Florida East Coast Industries into the telecommunications business misstated the company's ownership. While the St. Joe Company, which holds nearly 54 percent of the company's shares, plans to spin off its stake to shareholders later this year, it has not yet done so.

1998 (April 1) - USA Today - "Fathers of Invention: How Level 3 Worked its Way to the Main Floor"

Source - [HN01CU][GDrive]

[HN01CV][GDrive]
Caption on the image that appeared on the USA Today Cover (at right): Billionaires Warren Buffett of Berkshire Hathaway, Bill Gates of Microsoft, and Walter Scott of Peter Kiewit Sons' crossed paths in 1995 at a manion in Dublin, Ireland, where they discussed the Internet. The result is James Crowe's Level 3 Communications, a budding force in the Telecom Industry.

Walter Scott, CEO of Peter Kiewit Sons', calls the group "Our Gang." They are Warren Buffett's billionaire and executive friends, including Scott, Microsoft CEO Bill Gates and former Coca-Cola President Don Keough.

Every two years, Buffett invites about 30 of them and their significant others to a multi-day retreat. In the summer of 1995, they gathered at a mansion outside Dublin, Ireland. The topic was the Internet. Gates and his wife, Melinda French, gave a presentation. It jarred Scott.

Over the decades, [**Walter Scott Jr. (born 1931)**] had so successfully run publicity-shy [**Kiewit Corporation**] - a builder of roads, dams and other monster projects - that the company often had excess cash to invest. One investment was funding [**James Quell Crowe (born 1949)**] in 1989 to build [**MFS Communications Company, Incorporated**], a phone network that would compete against the big local and long-distance phone companies for mostly corporate business. By the time of the Dublin retreat, MFS was the biggest of the so-called alternate access carriers.

Gates told Our Gang that the Internet was going to be huge and that he was swinging Microsoft to meet it. He said the Net would threaten the traditional phone powers by sucking away data and voice traffic. Scott realized MFS, too, could be hurt by the Internet. "Afterwards, I sat down with Bill and talked with him about it," Scott says. "My gut feeling was, if you weren't part of it, you were going to be left behind."

Scott flew back to Omaha with Buffett, whose office is on a floor of leased space in Kiewit's headquarters here. Scott sat down with Crowe "and talked to him about where Bill's head was." Scott wanted Crowe to look into the Internet.

Crowe says, "He told me that anytime anyone's told him there's a risk, there's always been an opportunity there."

Crowe launched what MFS called Project Silver to study the the Net and what MFS should do in response. That was the genesis of Level 3 Communications. Today, Level 3 is listed for the first time as a public company on Nasdaq. It begins life with a market value of $10 billion and a loud buzz.

A revolution in the making?

Level 3's business plan, if correct in its assumptions, could drive down the cost of long-distance phone calls to almost nothing and hasten the decline of the big phone companies.

Level 3 plans to build a global fiber-optic communication network entirely based on Internet Protocol (IP) technology. Crowe is betting that the dominant networks of the world — the ones that carry phone calls using circuit-switching technology based on a 100-year-old design — are dinosaurs.

Not everyone agrees, least of all phone company people. "There's a bright future for IP, but it's not a walk-away win," says Arno Penzias, chief scientist for Lucent Technologies.

And there's a twist to Level 3's story that could make things interesting. Level 3 has made a dangerous enemy: Bernie Ebbers, the dynamic and powerful CEO of WorldCom.

Yet for many reasons, the industry is watching Crowe closely. After all, he built MFS into an industry power, then sold it to WorldCom in 1996 for $14.3 billion. And he has an injection of $3 billion in cash and assets from Kiewit for Level 3.

"It's like watching him trying to make lightning strike twice," says industry analyst Jeffrey Kagan.

In 1995, the Internet was just taking off and Project Silver team members could find little reliable analysis beyond the fact that the Net was messy, unreliable, interesting and cheap.

Crowe's epiphany came when he flipped through an industry newsletter and saw a chart from consulting firm North River Ventures titled, Cost to Deliver 42 Page Document. Faxing it from New York to Tokyo using AT&T cost $28.83. E-mailing it over the Internet cost 9.5 cents. "That's when I realized this was not driven by cool people on the cover of Newsweek," Crowe says. "It was driven by economics. When we figured it boiled down to bucks, all of us took notice."

The Project Silver team visited 20 to 30 Internet service providers (ISPs). Crowe went to six. The team concluded that to move fast, MFS would have to buy its way into the Internet. The best ISP to buy was [UUNET Technologies, Incorporated]. The path had come full-circle back to Gates. Microsoft owned 14.7% of UUNet and Microsoft Network was its biggest customer.

Crowe and Scott flew to Microsoft headquarters in Redmond, Wash., to talk to Gates. If Gates had said no, MFS would not have tried to buy UUNet. Gates gave his OK. His only condition was that Crowe had to keep UUNet CEO John Sidgmore. In April 1996, MFS bought UUNet for a stunning $2 billion.

Clash of the titans

Crowe, 48, has big facial features and a booming voice. He prefers to dress casually in a Dockers style. He's a technology nut who wired all kinds of gadgets together in his home. He eats lunch in the cafeteria on the ground floor of Kiewit headquarters. Level 3's offices are in one small corner of the stoic 15-story building.

People describe Crowe as incredibly focused, good at communicating a point simply, good at recognizing and hiring talented people and a voracious reader. (One of his favorite books: Snow Crash, a science-fiction novel about cyberspace, by Neal Stephenson.) "He's very intelligent," Scott says. "And he gets loyalty and enthusiasm from his people."

That loyalty is what got Crowe in trouble with WorldCom's Ebbers. WorldCom, based in Jackson, Miss., has grown by making ever-bigger acquisitions, mostly in the long-distance phone business. Ebbers needed a company like MFS, which has lots of local networks and business customers. UUNet made MFS even more attractive. Within months of MFS buying UUNet, WorldCom made its $14.3 billion offer for MFS.

Crowe did not want to sell MFS, but the offer was too good. He knew the Internet train was coming and that MFS, mostly built on the older circuit-switching technology, would have a rough time making the transition — even with UUNet's help.

Crowe was to become chairman of the merged MFS and WorldCom, but it was clear he'd be second to Ebbers, who would be CEO. Most of MFS' top management packed up their Omaha homes and moved to Jackson. Three weeks after the merger closed, Crowe quit and returned to Kiewit.

"I was talking with Jim (Crowe) about what he'd like to do and told him we'd be willing to support him if he was interested in starting a business," Scott says. Kiewit has two parts. The main one is the construction business. The other one is Kiewit Diversified Group, which holds all Kiewit's investments in companies. Those companies have ranged from small telecommunications ventures to a power company. Scott asked Crowe if he'd like to take over Kiewit Diversified Group. "I felt Jim would do more with it than I would." Total value of the group: about $3 billion. It would become Crowe's seed money.

Reinventing a success

The concept for Level 3 is simple: It's MFS with a fresh start. Same business plan, but this time based on Internet Protocol (IP) technology. Crowe would use Kiewit's money to start building a network that could carry information and voice conversations far more efficiently than any network out there, then slowly fill his fiber-optic pipelines by siphoning off business from the telecom giants.

Crowe wasn't the only one with the idea. Around the time Crowe quit WorldCom, Qwest Communications was starting to get noticed. Based in Denver, Qwest was using money from railroad magnate Philip Anschutz to build its fiber network, which would be partly IP-based and partly circuit-switched. Anschutz put Crowe on Qwest's board. Qwest also hired fiery AT&T executive Joe Nacchio as CEO. From the outset, Crowe told Nacchio he might start a competing business.

Just before unveiling Level 3, Crowe quit Qwest's board. Now he's moving Level 3 to Denver, right in Qwest's back yard, to take advantage of telecommunications talent in that region. Relations between the two are said to be chilly. Nacchio did not respond to requests to talk about Crowe.

In the meantime, Crowe figured that if he was going to do an MFS all over again, he might as well get the MFS team back. One way or another, he got 18 of his top 20 MFS executives out of WorldCom. Most have taken the exact jobs they had at WorldCom. All were wealthy enough after MFS' sale to never work again, but they're in their 30s and 40s and sound thrilled to be back together for another run. Mike Frank, 44, head of Level 3's human resources, says that at WorldCom: "My usefulness was not appreciated, and I wasn't fulfilled."

"I have a lot of loyalty to the guys who got me here," says Ron Vidal, 37, another member of Crowe's reconstituted team.

Crowe's departure from WorldCom irritated Ebbers. But the mass exodus made him boil. The rancor runs deep throughout WorldCom. WorldCom would like nothing better than to bury Level 3 in the marketplace.

That threat notwithstanding, the combination of Kiewit's backing, the old MFS team and Crowe's savvy makes many in telecommunications believe Level 3 will succeed. "There's a lot of faith," says analyst Kagan.

Investors are expected to snap up the stock. Before the Nasdaq listing, shares were tough to come by. Peter Kiewit Sons' stock is privately held by employees only. Kiewit Diversified was held mostly by employees and former employees, though shares could be sold publicly. With the Nasdaq listing, an official split from Kiewit and a name change from Kiewit Diversified to Level 3, the stock goes public.

It's too soon to tell whether Level 3 can challenge some of the regional Bells or top long-distance companies. The telecom giants know about the efficiencies of IP, too, and some are building IP-based networks. They scoff at the notion that circuit-switched networks will become albatrosses. "Nobody's stupid here," Lucent's Penzias says. He holds that communications will wind up being a mixture of circuit-switching and IP. "One protocol to do every job would be a step backward."

Meanwhile, WorldCom, Qwest and others are building IP fiber networks. Teledesic and Motorola's Celestri will create high-bandwidth IP networks using satellites by around 2003. Still, demand is exploding. Communications capacity is already in short supply for data traffic, which is growing 150% or more a

year. Voice calls over IP networks, a business that barely existed in 1997, will be at least a $1 billion industry by 2002, according to Forrester Research. [...]

nov 22 1988

https://www.newspapers.com/image/377809471/?terms=%22Metropolitan%20Fiber%20Systems%22&match=1

nov 30

https://www.newspapers.com/image/267500511/?terms=%22Metropolitan%20Fiber%20Systems%22&match=1

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nov 16 1989

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may 11 1991

https://www.newspapers.com/image/204097092/?terms=%22Metropolitan%20Fiber%20Systems%22&match=1

1998 (May 25) - Washington Post - "E.SPIRE RINGS UP SALES AGAINST THE BELLS"

By Mike Mills / Source : [HN01H5][GDrive]

Most every successful start-up company has been through a period when it seemed things were about to fall apart. For e.spire Communications Inc. of Annapolis Junction, that time was April of last year.

A technology stock slump was hurting all small new companies, including "competitive local exchange carriers" such as e.spire, firms that planned to take on the huge Bell companies on their own turf with discount local phone service.

The company had planned to raise $133 million in a secondary public offering in the summer of 1996, but pulled the plug on the sale after existing shares sank from $14 to about $8. By April 1997, things were even worse -- the stock was around $5. But the company was forced to forge ahead with its stock sale, even at that low price. It raised just $40 million instead of its already scaled-back hope of $80 million.

"We had no choice. We had about three months of cash left," recalls chief executive Jack Reich. "Had we not raised money at the beginning of 1997," he trails off, then finds a way to put it diplomatically, "the company would have been facing decisions outside of its control."

Reich can smile about those hard times now. The company has since raised $635 million through further equity and debt offerings and has a market value of $850 million. Using today's highflying stock market as a tail wind, the shares of e.spire, formerly known as American Communications Services Inc., or ACSI,

now trade at $17 to $19 apiece.

But don't give Wall Street all the credit: Reich, who joined the company at the height of those cash troubles, has been busy transforming it from an early-stage construction enterprise, laying fiber-optic lines under the streets of American cities, into a revenue-generating business.

The company moves a broad line of voice and data services through its optical pipes and offers enough hand-holding to persuade business customers to abandon their longtime relationships with their local Bell telephone companies.

It's undergone an image make-over, including the new name. The smell of new carpeting and paint permeates its recently completed headquarters in a rural business park between Interstate 95 and the Baltimore-Washington Parkway. The company employs 350 of its 850 workers there.

How to count the ways in which e.spire has grown? - Revenue: $4.2 million at the end of 1996; $59 million at the end of 1997. During the first three months of 1998, $27.5 million. (It remains unprofitable.) - Phone lines in service: 360 at the beginning of 1997; 71,688 as of May 7. - Number of buildings where the service is available: 595 at year-end 1996; 1,912 as of this month. - Sales staff: 77 at the end of 1996; 220 today.

E.spire's growth is outstripping most other competitive local exchange carriers, also known as C-LECs. It ranked first on Network World magazine's recent list of the top 200 "hot growth companies," edging out Excite, Yahoo and AT&T's Teleport Communications Group.

"E.spire is one of the most attractive" competitive local carriers, said Frank Murphy, vice president for telecommunications research at securities firm Wheat First Union in Richmond. "They've really taken a lot of the complexity out of data sales for customers."

Under Reich and his sales and marketing team, Murphy said, "the company has changed directions. They've been able to distance themselves from the perception of the old ACSI as a fiber company with very little marketing direction."

E.spire and its fellow upstarts are taking advantage of the 1996 Telecommunications Act, the much-maligned law aimed at opening the $100 billion per year local telephone market to competition.

While most residential consumers remain without a choice of local phone service (most companies say there's no money in it), competition is starting to boom in downtown business areas. There, multiple rivals are able to offer local phone service along with data lines. And there's nothing but growth ahead. Companies such as e.spire have just less than 2 percent of the local calling market, and they're picking off business customers from the Bells like so much proverbial low-hanging fruit.

E.spire is among the first of its type to recognize a fundamental shift in the way such companies are valued by Wall Street, according to Murphy: "Now, in the past 12 months the focus has shifted to favor whoever is leveraging those assets into sales and traffic."

Eighteen to 24 months ago, he said, investors were adding $4 to $5 of market value for every $1 a company such as e.spire sank into its fiber property and equipment.

"That was the best way to measure the value of these companies," Murphy said. "E.spire hadn't shown that it had the wherewithal to properly sell its network. But the new management team has focused almost entirely on enhancing the value of its network. In my universe of fiber-based C-LECs, they've got the second-highest annualized revenue growth."

E.spire's strategy has been to focus on second-tier southern cities, leaving the big cities to AT&T Corp., MCI Communications Corp. and other giant competitors. Today the company has strung cable along 100,000 miles of routes and connected it to 50 switches. Those networks serve 250 customers in two dozen cities from Texas to Baltimore.

Most customers are small and medium-sized businesses with at least 10 phone lines. E.spire's bigger clients include Humana Healthcare and oil giant Ashland Inc., both in Kentucky.

E.spire already has entered the Washington market by "reselling" under its own name capacity it buys from Bell Atlantic Corp. Now it is wiring the streets of the area's business centers to begin operating its own network. The company recently completed a 109-mile fiber-optic loop connecting the city to Baltimore, and plans to install new switching equipment in the District.

Reich brings more than 15 years of telecommunications experience to e.spire. He spent eight years, from 1986 to 1994, at MCI, following stints at AT&T and telephone switch maker Rolm Corp.

At MCI he oversaw international accounts and played a key role in the early stages of MCI's venture with British Telecommunications PLC, called Concert. From there he went to the midwestern Bell company Ameritech Corp. for two years, an experience Reich said reminded him "how much more fun it was to grow" than to defend turf.

E.spire founders Anthony Pompliano and Richard Kozak grabbed Reich away from Ameritech in Chicago, where the new company was based until moving to this area in 1995. Pompliano was one of the first people to go up against the Bells. His Chicago Fiber Optic Corp. later evolved into MFS Communications Inc., which then was bought by WorldCom Inc.

With capital spending so much a focus of companies like e.spire, the group is highly vulnerable to fluctuations in interest rates. Recent pressure to raise rates has taken roughly 10 percent off the market value of most competitive local carriers' shares. Recently, e.spire has been trading in the $17 range, down from around $19 earlier this year.

But, given what the company went through in early 1997, Reich said, he's prepared for such seasonal fluctuations: "We've established a great foundation. The sweetness of success is even better when you've gone through a lot of adversity." CAPTION: Jack Reich, chief executive of e.spire, can smile now about the hard times the company faced last year.

1998 US District Court Case - Kiewit Diversified Group Inc. v. Federal Ins. Co., 999 F. Supp. 1169 (N.D. Ill. 1998)

See [HG00AH][GDrive]

U.S. District Court for the Northern District of Illinois - 999 F. Supp. 1169 (N.D. Ill. 1998)

March 31, 1998

999 F. Supp. 1169 (1998)

KIEWIT DIVERSIFIED GROUP INC., Plaintiff,

v.

FEDERAL INSURANCE COMPANY and Pacific Insurance Company, Defendants.

No. 96 C 5346.

United States District Court, N.D. Illinois, Eastern Division.

March 31, 1998.

***1170** Chaim T. Kiffel, S. Jonathan Silverman, Kirkland & Ellis, Chicago, IL, for Kiewit Diversified Group, Inc., Plaintiff.

David J. Hensler, Jonathan A. Constine, Hogan & Hartson, Washington, DC, Royal B. Martin, Jr., Leigh David Roadman, William Kevin Kane, Martin, Brown & Sullivan, Ltd., Chicago, IL, for Federal Insurance Company, Defendant.

William Michael Monat, David L. Koury, Anne Fiedler, Peterson & Ross, Chicago, IL, for Pacific Insurance Company, Defendant.

[...]

In 1988, Kiewit formed a subsidiary, Kiewit Communications Co., which eventually became MFS Communications Corp. (MFSCC), to pursue business opportunities in the telecommunications industry and to provide businesses with an alternative source of local telecommunications services. In June 1989, MFSCC increased to 80% its ownership interest in Metropolitan Fiber Systems, Inc. (MFS Telecom), a company that managed an alternate local communications network in Chicago. James Crowe, CEO of MFSCC; Royce Holland, president and chief operating officer; and Terrence Ferguson, general counsel; were the MFSCC executives primarily involved in these negotiations, with Crowe acting as the lead negotiator. The original owners of the companyArthur Brantman, Anthony Pompliano, Howard Gimbel and David Husmanretained the remaining 20% of the shares in MFS Telecom. In August 1990, the 20% interest was further divided so that 10 individuals held the shares.

Several of the minority shareholders approached Crowe in late 1991 regarding the sale of their shares to MFSCC. Only Anthony Pompliano completed the deal at this time, selling for $85,000 per share in June 1992. In July 1992, negotiations renewed with the remaining minority shareholders, leading to MFSCC's purchase of the remainder of the minority shares for $135,000 per share. MFSCC paid Pompliano an additional $50, 000 per share to equalize his sale price with that of the other minority shareholders.

In May 1993, MFSCC sold 20% of its stock through an initial public offering. As a result, six of the minority shareholders brought an action in March 1994 in the Northern District of Illinois against Crowe, MFSCC and Kiewit. The four-count complaint contained allegations of violations of federal securities laws, fraud, breach of fiduciary duty, and breach of contract and the duty of good faith and fair dealing. MFS was named in all four counts, while Crowe and Kiewit were named in Count I for violation of federal securities laws. Peter Kiewit notified Federal of the lawsuit in June 1994. In August 1994, Pompliano and his wife joined the suit as plaintiffs. Pompliano had served as president and CEO of MFS Telecom from January 1988 until April 1990. He was also a director and vice chairman of Telecom's board from April 1990 until June 1991. Federal learned of Pompliano's joining the law-suit sometime between August and October 1994.

[...]

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Housatonic

Micro Instrumentation and Telemetry Systems (MITS) Incorporated

Wikipedia Micro Instrumentation and Telemetry Systems

Also see :

- MITS Inc. Altair 8800
- Pertec Computer Corporation

Saved Wikipedia (Sep 30, 2020) for Micro Instrumentation and Telemetry Systems

See [HK003W][GDrive]

Micro Instrumentation and Telemetry Systems (MITS)

Industry

Computer hardware

Fate

Acquired by [**Pertec Computer Corporation**] in 1977

Founded

December 1969; 50 years ago in Albuquerque, New Mexico, United States

Founder

Ed Roberts, Forrest Mims

Defunct

1980

Headquarters

Albuquerque, New Mexico

,

United States

Products

Altair 8800

Number of employees

230 (1976)

Micro Instrumentation and Telemetry Systems (**MITS**) was an American electronics company founded in Albuquerque, New Mexico that began manufacturing electronic calculators in 1971 and personal computers in 1975.[1]

Ed Roberts and Forrest Mims founded MITS in December 1969 to produce miniaturized telemetry modules for model rockets such as a roll rate sensor.[2] In 1971, Roberts redirected the company into the electronic calculator market and the MITS 816 desktop calculator kit was featured on the November 1971 cover of *Popular Electronics*.[3] The calculators were very successful and sales topped one million dollars in 1973. A brutal calculator price war left the

company deeply in debt by 1974.

Roberts then developed the first commercially successful microcomputer, the Altair 8800, which was featured on the January 1975 cover of *Popular Electronics*. Hobbyists flooded MITS with orders for the $397 computer kit. Paul Allen and Bill Gates saw the magazine and began writing software for the Altair, later called Altair BASIC.[4] They moved to Albuquerque to work for MITS and in July 1975 started Microsoft.

MITS's annual sales had reached $6 million by 1977 when they were acquired by [**Pertec Computer Corporation**]. The operations were soon merged into the larger company and the MITS brand disappeared. Roberts retired to Georgia where he studied medicine and became a small town medical doctor.[5]

Origin

Founders

Henry Edward Roberts studied Electrical Engineering at the University of Miami before enlisting in the U.S. Air Force in 1962.[6] He soon became an electronics instructor at the Cryptographic Equipment Maintenance School at Lackland Air Force Base in San Antonio, Texas.[7] To augment his meager enlisted man's pay, Roberts worked on several off-duty projects and even set up a one-man company, Reliance Engineering. The most notable job was to create the electronics that animated the Christmas characters in the window display of Joske's department store in San Antonio. In 1965, he was selected for an Air Force program to complete his college degree, and became a commissioned officer. Roberts earned an Electrical Engineering degree from Oklahoma State University in 1968 and was assigned to the Weapons Laboratory at Kirtland AFB in Albuquerque, New Mexico.[8]

Forrest Mims was interested in science and electronics as a youth and even built an analog computer while in high school.[9] Mims graduated from Texas A&M University in 1966 (major in government with minors in English and history) then became a commissioned officer in the U.S. Air Force.[10] While serving in Vietnam as an intelligence officer, Mims continued his model rocket hobby.[11] At Texas A&M, Mims developed an infrared obstacle-sensing device and he experimented with it at the Saigon School for Blind Boys and Girls. Launching model rockets in an area accustomed to rocket attacks and working with blind children resulted in a story in the military newspaper, *Stars and Stripes*.[12] This caught the attention of an Air Force Colonel, who arranged for Mims to be assigned to the Weapons Laboratory at Kirtland AFB even though Mims lacked an engineering degree.[13]

Roberts and Mims were both assigned to the Lab's Laser Group in 1968. Roberts had reactivated Reliance Engineering and built an infrared intrusion alarm for his uncle's fish farm in Florida. Later, Roberts and Stan Cagle, a civilian worker who also went to Oklahoma State, started building a power supply they hoped to sell.[14] Mims became an advisor to the Albuquerque Model Rocket Club and met the publisher of *Model Rocketry* magazine in July 1969. Mims told him about a transistorized tracking light that he had used on night launches of rockets in Vietnam. This led to an article in the September 1969 issue of *Model Rocketry*; "Transistorized Tracking Light for Night Launched Model Rockets" by Captain Forrest Mims.[15] Mims became a regular contributor to *Model Rocketry*.

Model rocket kits

Transistorized tracking light for model rockets. The product that launched MITS

Manned space flight and the race to the moon in the 1960s made model rocketry a popular hobby. Roberts, Mims, Cagle and another Air Force officer from the Lab, Bob Zaller, decided they could design and sell electronics kits to model rocket hobbyists.[16] Roberts wanted to call the new company Reliance Engineering, Mims wanted to form an acronym similar to the Massachusetts Institute of Technology's MIT. Cagle came up with Micro Instrumentation and Telemetry Systems, MITS.[17] The December 1969 issue of *Model Rocketry* (circulation 15,000) carried a press release that began:

Reliance Engineering in Albuquerque, New Mexico has announced the formation of a subsidiary company for the manufacture of miniaturized electronic and telemetry systems designed for model rockets. The company is called Micro Instrumentation and Telemetry Systems (MITS). Reliance Engineering president Henry Roberts announced that "MITS is presently conducting an intensive research program involving high quality miniature telemetry systems."

The first commercially available model rocket telemetry transmitter is among the first items to be offered by MITS. Accessory modules including a tone beacon, temperature sensor, and a roll rate sensor, as well as tracking lights, ground systems for data reduction, and light weight, water activated batteries will soon be available.[18]

They designed and built the telemetry modules in their homes and garages but they were only able to sell a few hundred units. Mims had sold a feature article about the new solid-state device, light-emitting diodes, to *Popular Electronics* (circulation 400,000) that May. With the hope of selling kits to the larger readership; Roberts and Mims designed a device that would transmit voice over a beam of light, the Opticom. The editors accepted the project story and both articles were featured on the cover of the November 1970 issue. The payment for the articles was $400 but meeting Les Solomon, *Popular Electronics* technical editor, proved to be significant to both Mims and Roberts future success.

In August 1970, Les Solomon, his wife and daughter were on vacation in the southwest and arranged to visit Mims, Roberts and their families. At that time, Dan Meyer and Don Lancaster were among the most prolific authors in *Popular Electronics*. Meyer had built a million dollar a year business that sold kits of parts to build the project that he and Lancaster wrote about.[19] Mims and Roberts wanted to do the same and quizzed Solomon on the kit business. Solomon gave them some statistics but said there was no way of knowing how many kits an article would sell, maybe a hundred, maybe a thousand.[20]

MITS had purchased components to build 200 Opticoms but only sold around 100 units. Roberts wanted to design a new electronic calculator kit but his partners wanted out. Bob Zaller had already left MITS and Forrest Mims was out of the Air Force and wanted to become a full-time writer. Roberts bought his 3 partners out for $600 in cash and $350 in equipment.[21] (Roberts' four-year commitment to the Air Force ended in mid-1972.) Mims and Roberts remained friends and collaborated on books, magazines and instruction manuals.

Calculators

Sales had reached $100,000 per month when this advertisement ran in March 1973.

Ed Roberts' interest in computers began in high school when he built a simple digital computer from relays. His first real experience with computers came while at Oklahoma State University where engineering students had free access to an IBM 1620 computer. Roberts' office at Weapons Laboratory had the state of the art Hewlett-Packard 9100A programmable calculator in 1968. In July 1970, a semiconductor company, Electronic Arrays, announced a set of six LSI ICs that would make a four-function calculator.[22][23] Roberts was determined to design a calculator kit.

To fund the new project, Roberts sold 15% of MITS to fellow Air Force officer, Lieutenant William Yates. He also got an investment from another Weapons Laboratory officer, Major Ed Laughlin. Several other officers and scientist at the lab were interested in this state of the art calculator kit and helped with the

design. Forrest Mims wrote the assembly manual in return for a calculator kit.

The MITS 816 was known as a "four-function" calculator; it could add, subtract, multiply and divide. The display was only 8-digits but the calculations were done to 16-digits of accuracy. The custom molded case gave the kit a professional appearance; the kit was $179 and an assembled unit was $275. The MITS 816 was featured on the November 1971 cover of *Popular Electronics*.[3] Thousands of calculator orders came in each month, in contrast to poor results for previous kits that MITS had offered.[24]

The steady flow of calculator sales allowed MITS to run full page advertisements in *Radio-Electronics*, *Popular Electronics* and *Scientific American*. In the June 1972 *Radio-Electronics*, MITS announced a 14 digit calculator (Model 1440) with memory and square root function for $199.95 kit and $249.95 assembled. The original 816 kit was reduced from $179 to $149.95. Both calculators could be controlled by upcoming programming unit.[25]

The monthly sales reached $100,000 in March 1973 and MITS moved to larger building with 10,000 square feet (930 square meters) of space.[26] To meet the demand for assembled calculators, an automated wave solder machine was installed.[27] In 1973 MITS was selling every calculator they could make, 110 employees worked in two shifts assembling calculators.[28]

The functionality of calculator ICs increased at a rapid pace and Roberts was designing and producing new models. The MITS 7400 scientific and engineering calculator was introduced in December 1972. It featured trigonometric functions, polar to rectangular conversion, two memories, and up to a seven-level stack. A kit with a three-level stack was $299.95 and an assembled unit with a seven-level stack was $419.95.[29] The next month the Series 1200 four-function pocket calculators were announced. The six-digit model was $59.95 and the twelve-digit model was $99.95.

The Programmer accessory had been mentioned in the earliest advertisement but it was not featured until March 1974. This was the same size as a desktop calculator and could hold 256 programming steps. (It could be expanded to 512 steps.) It was limited to emulating calculator key presses and simple sequence branching. The programming was done by entering hexadecimal key codes. The combination of the MITS 7440 calculator and the programmer was not nearly as sophisticated as the HP 9830 calculator but $400 for both kits was a fraction of the HP price.

MITS calculators

The feature and price information is from advertisements in *Radio-Electronics* magazine (issue date shown). The 816 price is from the original article in *Popular Electronics*.

Model	Description	Introduced	Kit Price	Assembled
816	Desktop, 8-digit display, 16-digit calculations 4-function	Nov. 1971	$179	$275
1440	Desktop, 14-digit display, square root, memory	Jun. 1972	$199.95	$249.95
816B	Desktop, 8-digit display, 16-digit calculations, 4-function	Jun. 1972	$149.95	$189.95
7400	Desktop, 14-digit scientific. Trig functions, 3- (7400A), 5- (7400B), or 7-level stack (7400C)[30][31]	Dec. 1972	$339.95	$419.95
1206	Handheld, 6 digit display, 12-digit calculation, 4-function,	Jan. 1973	$49.95	$59.95
1209	Handheld, 9 digit display, 12-digit calculation, 4-function,	Jan. 1973		

$69.95

$79.95

1212

Handheld, 12 digit, 4-function,

Jan. 1973

$89.95

$99.95

1230

Handheld, 12 digit display, 4-function,

Jan. 1973

$89.95

$99.95

1240

Handheld, 12 digit display, 4-function, memory

Jan. 1973

$119.95

$149.95

7440

Desktop, 14-digit, scientific

Mar. 1973

$199.95

$299.95

Programmer

256 step programmer for 7440, 816, 1440, 908DM.

Mar. 1973

$199.95

$299.95

150

Handheld, 8-digit, 4-function, square root, memory

Aug. 1973

$119.95

$149.95

941M

Handheld, 8-digit, 4-function, percent, metric conversions

Jan. 1974

$129.95

$149.95

908M

Handheld, 8-digit, 4-function, square root, memory

Jan. 1974

$99.95

$129.95

605M

Handheld, 6-digit, 4-function, percent

Jan. 1974

$49.95

			$49.95
			$59.95
905M			
Handheld, 8-digit, 4-function, percent			
Jan. 1974			
			$59.95
			$69.95
908DM			
Desktop, 8-digit, 4-function, percent			
Feb. 1974			
			$129.95
			$149.95

Price wars

Bowmar Instrument Corporation introduced the "Bowmar Brain", a four-function pocket calculator, in September 1971 and the $179 calculator sold over 500,000 copies in the first year. Bowmar then developed the "901B" calculator that was priced at $120.[32] In September 1972, Texas Instruments (TI) introduced the TI-2500 portable four-function calculator that also sold for $120.[33] The 901B and the TI-2500 both used the TI TMS0100 family of "calculator-on-a-chip" integrated circuit. TI was now directly competing with their IC customers. Other semiconductor companies such as National Semiconductor and Rockwell began selling calculators. Commodore Business Machines and other office equipment companies also got into the market. A frenzied price war started. By early 1974, Ed Roberts found he could purchase a calculator in a retail store for less than his cost of materials. The larger companies could sell below cost to win market share. Bowmar lost $20 million in 1974 and filed for bankruptcy.[34] Commodore acquired their IC supplier, MOS Technology. Texas Instruments won the price war but their calculator division lost $16 million in 1975.[35]

To compete in this market, Roberts needed more capital. He took MITS public in November 1973 with a stock offering of 500,000 shares at $1 each. The 1973 oil crisis caused a stock market downturn and MITS was only able to sell 250,000 shares.[36] This allowed MITS to pay off the existing debt, but did not allow for any expansion. Roberts had developed several test equipment products such as a Waveform Generator and a Digital Voltmeter so he attempted to appeal to kit builders again by featuring the test equipment and digital clocks in the advertisements, instead of calculators. MITS was losing money, and by July 1974, the full page prominent ads were replaced with quarter-page ads in the back of the magazine.[37]

MITS was now $300,000 in debt and Roberts was looking for a new hit product. He decided to return to the kit market with a low cost computer. The target customer would think that "some assembly required" was a desirable feature. Roberts had looked at the Intel 4004 for calculators and thought the Intel 8008 was limited and difficult to work with. Intel had just released the 8080, their first microprocessor that could be a general purpose computer.[38] The target price of this complete computer kit had to be under $400. To meet this price, Roberts agreed to order 1000 microprocessors from Intel for $75 each.[39] Roberts and his head engineer, Bill Yates, began designing the computer. The company was down to 20 employees and a bank loan for $60,000 financed the design and initial production of the new computer.

Popular Electronics and Radio-Electronics

In January 1972, *Popular Electronics* changed its editorial focus in an attempt to attract more advertising revenues. Reviews of stereo equipment and citizens band radio were featured; experimenter and constructions projects were gone. Dan Meyer, Don Lancaster, Forrest Mims, John Simonton and many other authors immediately started contributing to the competing *Radio-Electronics* magazine. The June 1972 cover story was "Experimenting with a $32 Solid State Laser" by Forrest Mims. Another article in that issue was "Experiments with Op-Amps" by B.R. Rogen; this was a pseudonym of *Popular Electronics* technical editor, Les Solomon.[40] Solomon wrote articles for *Radio-Electronics* while working for *Popular Electronics*. Lou Garner, the longtime solid-state editor, moved to *Radio-Electronics* for a year.[41] Several MITS kit projects were featured in *Radio-Electronics* including the ITC 1800 Integrated Circuit Tester (May 1972), the Model 1700 Function Generator (July 1973), the Model 1440 Calculator (July 1973) and the 88 VLCT Computer Terminal (November 1974).

Radio-Electronics had a smaller circulation than *Popular Electronics* but led the way with innovative construction projects between 1972 and 1975. John Simonton's first modular electronic music synthesizer was featured on the cover of the May 1973 issue.[42] It sold for a fraction of commercial synthesizers and his PAiA Electronics produced them for decades. Don Lancaster's TV Typewriter in September 1973 and Jon Titus's Mark-8 computer in July 1974 were the catalyst of the home computer revolution.

Art Salsberg became the editor of *Popular Electronics* in 1974 with a goal of reclaiming the lead in projects. He wanted to publish a computer project that was more functional and elegant than the Mark-8.[43] Les Solomon knew MITS was working on an Intel 8080 based computer project and thought Roberts could provide the project for the always popular January issue.

Ed Roberts and Bill Yates finished the first prototype in October 1974 and shipped it to *Popular Electronics* in New York via the Railway Express Agency. However, it never arrived due to a strike by the shipping company. Solomon already had a number of pictures of the machine and the article was based on them. Roberts got to work on building a replacement. The computer on the magazine cover is an empty box with just switches and LEDs on the front panel. The finished Altair computer had a completely different circuit board layout than the prototype shown in the magazine.[44]

Altair computer

Altair 8800 Computer with 8 circuit boards installed. The Altair floppy disk system below has a [**Pertec Computer Corporation**] 8-inch drive.

Main article: Altair 8800

Products

The Altair 8800 was modeled after early 1970s minicomputers such as the Data General Nova. These machines contained a CPU board, memory boards

The Altair 8800 was modeled after early 1970s minicomputers such as the Data General Nova. These machines contained a CPU board, memory boards, and I/O boards; the data storage and display terminal were external devices. The Teletype Model 33 ASR was a popular terminal because it provided printed output and data storage on punched paper tape. More advanced systems would have 8-inch floppy disks and a video terminal that would display 24 lines of 80 characters such as the ADM-3A. (No graphics were available and lower-case letters were a $75 option.)[45] Most of these computers had a front panel with toggle switches for entering data and lights for displaying it. These were normally used to boot the computer and to diagnose problems.

The Altair 8800 kit came with a front panel, a CPU board with the Intel 8080 microprocessor, 256 bytes of RAM, a 4-slot backplane and an 8-amp power supply for $439.[46] A 1k byte memory board was $176 and the 4k byte was $264. The serial interface board was $124 and the parallel interface was $119. There was a special price for an 8k byte system with BASIC for $995. The Teletype Model 33 ASR was $1500.

When the January 1975 issue of *Popular Electronics* reached readers in mid December 1974, MITS was flooded with orders. They had to hire extra people just to answer the phones. In February, MITS received 1,000 orders for the Altair 8800. The quoted delivery time was 60 days but it was many more months before the machines were shipped. By August 1975, they had shipped over 5,000 computers.[47]

The Altair 8800 computer was a break-even sale for MITS. They needed to sell additional memory boards, I/O boards and other options to make a profit. The April 1975 issue of the MITS newsletter, *Computer Notes*, had a page-long price list that offered over 15 optional boards.[48] The delivery time given was 60 or 90 days, but many items were never produced and dropped from future price lists. Initially, Roberts decided to concentrate on production of the computers. Prompt delivery of optional boards did not occur until October 1975.

The Intel 8080 did not have dedicated circuitry to support dynamic random-access memory (DRAM) because in 1975, this type of memory was still a new technology. MITS wanted to use DRAM because it consumed less power than static RAM. However, they had several design and component problems that led to a high failure rate with their 4K Dynamic RAM board. By July, new companies such as Processor Technology were selling 4K Static RAM boards with the promise of reliable operation.[49] MITS released its own 4K Static RAM board in January 1976.

The only floppy disk drives that were readily available in 1975 were IBM compatible 8-inch drives. MITS selected the Pertec FD400 disk drive which could store over 300,000 bytes of data.[50] The Altair disk controller occupied two boards and had over 60 ICs. The initial units were to be available in August, but were delayed until the end of 1975. The production version of Extended Disk BASIC was released in April 1976. The controller with one disk drive sold for $1,480 (kit) and $1,980 (assembled).[48]

Marketing

Bill Gates was a regular contributor to *Computer Notes*. The MITS-Mobile van traveled all over the US including a stop near the Homebrew Computer Club

The first full page advertisements for the Altair computer appeared in the February issues of *Popular Electronics* and *Radio-Electronics* magazines. Soon MITS was advertising in technical journals such as the IEEE *Computer*,[51] and general interest magazines such as *Scientific American*. MITS was also the most prominent advertiser in the new hobbyist computer magazines such as *Creative Computing* and *Byte*.

David Bunnell joined MITS as a technical writer in the calculator heyday. In April 1975 he created a newsletter so the MITS staff could easily communicate with the customers. The newsletter, *Computer Notes*, was available to customers and other interested readers.[52] It was a large format newsletter; 11.25 by 15.5 inches (286 by 394 mm), and each issue had 8 to 24 pages. In January 1977, it switched to a smaller magazine format and the last issue was produced in January 1978. Bunnell started *Personal Computer* magazine in October 1976 and went on to a successful career as a magazine publisher.[53]

Computer Notes featured a wide variety of authors. Bill Gates and Paul Allen were regular contributors to the early issues. They wrote about Altair Basic and general software topics. Ed Roberts wrote a monthly "Letter from the President" column where he would answer customer questions and even review competing products. MITS engineers, such as Tom Durston and Steve Pollini, would give technical descriptions of new products. Altair owners would contribute software and hardware suggestions and occasionally a complete article.

MITS purchased a camper van in April 1975 and outfitted it with an Altair system complete with floppy disk, a Teletype Model 33 and every accessory MITS produced. The "MITS-MOBILE" was literally a showroom on wheels that would travel from city to city showcasing the MITS product line. They would hold seminars at hotel conference rooms that would draw crowds of over 200 people. The most notable seminar was at Rickey's Hyatt House in Palo Alto, California in early June 1975, where a member of the Homebrew Computer Club left with an unreleased copy of Altair BASIC.[54] After retail computer stores were established in most cities, the "MITS-MOBILE" was retired.[55]

The first (and only) World Altair Computer Convention was held in Albuquerque, New Mexico in March 1976. The convention, organized by David Bunnell, was an overwhelming success; with 700 people from 46 states and seven countries attending.[56] Many of the attendees would go on to become leaders of the personal computer revolution.

Clones

Many companies made boards that could plug into the Altair / S-100 bus.

Owners of mainframe systems and minicomputers could purchase additional memory, interface boards and peripherals from third party suppliers; so it was predictable that owners of the Altair 8800 computer would do the same. MITS's delays in delivery of systems and accessories accelerated the formation of Altair compatible suppliers. The first ones started appearing in mid-1975 and by July 1976 complete computers systems were readily available.[57] The technical manuals for the Altair 8800 provided electrical schematics of the 100 pin computer bus allowing others to design compatible boards. There was not a proper technical standard at the time and some "compatible" boards did not work with other "compatible" boards. Later, the industry developed the S-100 bus standard.[58]

Bill Godbout Electronics in Oakland, CA was the parts supplier to many of the hobbyists and students from Berkeley. George Morrow approached Godbout with several Altair compatible designs that Godbout agreed to produce and sell.[59][60] The October 1975 Byte magazine carried an advertisement headlining "Get your MITTS on a Godbout RAM kit." The 4K byte Altair compatible board was $131.07.

Godbout also sold components to Processor Technology for their 4K Static RAM board and serial / parallel interface board. Lee Felsenstein designed an Altair compatible video board that provided 16 lines of 64 upper and lower case characters on a black and white television. This $160 board became very popular and led to the Processor Technology Sol-20 Computer in 1976.[61]

The IMSAI 8080, the first "clone" of the Altair computer, was released in December 1975.[62] It corrected many shortcomings of the original Altair 8800 by providing a larger power supply, a 22 slot motherboard, and easier wiring of the front panel. Ed Roberts reviewed the IMSAI in his April 1976 column in

Computer Notes, and agreed that the IMSAI was in some ways better than the original Altair. Roberts also pointed out that the new Altair 8800B was superior to the IMSAI 8080 and the upgraded Altair 8800A fixed the same issues that the IMSAI did.[63]

Altair computers were only available from the 20 or so authorized Altair computer dealers, but the IMSAI 8080, Processor Technology Sol and many other clones were sold by hundreds of newly opening computer stores.

The S-100 bus was used throughout the 1980s until it was overtaken by the IBM PC ISA bus. Seattle Computer Products (SCP) was a manufacturer of S-100 memory boards. The company's engineer, Tim Paterson, designed an Intel 8086 CPU system on two S-100 boards in 1979. Microsoft, then in nearby Bellevue, Washington, used the prototype machine to test their 8086 version of BASIC. Digital Research had promised to deliver an 8086 version of their CP/M operating system by December 1979 but missed that date. SCP needed a disk operating system to sell its 8086 products so Patterson wrote QDOS, a "Quick and Dirty Operating System" in three months. Microsoft would later purchase QDOS from SCP for $50,000 and use it as the basis for the IBM PC DOS.[64][65]

Altair BASIC

Main article: Altair BASIC

An Altair 8800 kit with 8 KB of memory and Altair BASIC cost only $995 in August 1975.

In December 1974 Bill Gates was a student at Harvard University and Paul Allen worked for Honeywell in Boston. They saw the Altair 8800 computer in the January 1975 issue of *Popular Electronics* and knew it was powerful enough to support a BASIC interpreter.[66] They wanted to be the first to offer BASIC for the Altair computer, and the software development tools they had previously created for their Intel 8008 microprocessor based Traf-O-Data computer would give them a head start.[67] While their friend, Paul Gilbert, was building the computer, Allen wrote a program that ran on a DEC PDP-10 time-sharing computer that simulated the 8008 system. He also modified DEC's macro assembler to produce the machine code for the 8008 microprocessor. The Traf-O-Data software could be written and debugged before the computer hardware was complete.[68]

Harvard had a DEC PDP-10 that was available for student use. They would use it to develop BASIC.[69] While Allen modified their development software for the new 8080 microprocessor, Gates began writing 8080 assembly language by hand on yellow legal pads. They enlisted another Harvard student, Monte Davidoff, to write the math routines.[70]

By early February the program coding switched from legal pads to the PDP-10 and a preliminary version was completed by March 1975.[71] Gates and Allen had been in contact with Roberts and MITS and the older looking Paul Allen would travel to Albuquerque in March. MITS needed more time to get a computer with 7k bytes of memory working, and they needed more time to get the software finished. When Allen arrived at MITS it took a day to get the software running; Allen remembers this being caused by computer memory problems[72] while Roberts remembers the delay was due to software problems.[73]

The April 1975 issue of the Altair Newsletter, Computer Notes, had a banner headline "Altair BASIC - Up and Running". The software was to begin shipping on June 23, 1975.[74] The software price was $500, but discounted to $75 with the purchase of an Altair computer with 8k bytes of memory and a serial I/O card.

On July 22, 1975 MITS signed a contract for the Altair BASIC with Bill Gates and Paul Allen. They received $3000 at signing and a royalty for each copy of BASIC sold; $30 for the 4K version, $35 for the 8K version and $60 for the expanded version. The contract had a cap of $180,000. MITS received an exclusive worldwide license to the program for 10 years. They also had exclusive rights to sub-license the program to other companies and agreed to use its "best efforts" to license, promote and commercialize the program. MITS would supply the computer time necessary for development; a PDP-10 owned by the Albuquerque school district.[75] Paul Allen left his job at Honeywell and became the Vice President and Director of Software at MITS with a salary of $30,000 per year.[76] Bill Gates was still a student at Harvard and just a contractor with MITS. The October 1975 company newsletter gives his title as "Software Specialist".[77]

The price of Altair BASIC to customers who purchased additional memory and I/O boards from MITS was $75. Users may have gone along with that if the memory board were reliable. Customers bought the computer from MITS, and working memory from companies like Processor Technology. Rather than pay $500 for BASIC, they would acquire bootleg copies of the software. Only about ten percent of the early customers actually purchased BASIC.[78] With a royalty due of $30 per copy, Gates felt that the computer hobbyist were stealing money from him. In February 1976 Bill Gates, "General Partner, Micro-Soft", wrote an "Open Letter to Hobbyists" that was sent to every computer publication insinuating that the hobbyists were thieves.

MITS had announced a new computer based on the Motorola 6800 microprocessor in November 1975, the Altair 680. The machines were supposed to ship in January 1976, but hardware design problems delayed shipment until May.[79] Paul Allen rewrote their 8080 simulator to support the 6800 microprocessor. Ric Weiland, a high school friend of Gates and Allen, converted the Altair BASIC's 8080 assembly language to 6800 assembly language. To eliminate the per copy royalty loss issue, the 6800 BASIC was licensed to MITS on a non-exclusive basis for a flat fee of $31,200.[80] Weiland and Marc McDonald were impressed with the new MOS Technology 6502 microprocessor that was a derivative of the 6800. They modified the 6800 development system to support the 6502 and "cranked out" a 6502 edition of BASIC. This version was later sold to Commodore and Apple.[81]

The January 1976 issue of MITS's newsletter, Computer Notes, carried an ad for 8080 BASIC. The last paragraph stated: "Licenses for source listing and rights to distribute the binaries are also available to OEM buyers. Write or call Mr. Paul Allen at the MITS plant in Albuquerque for more detailed information."[82] Microsoft found several corporate customers for BASIC and proceeds were evenly split with MITS. Pertec acquired MITS in December 1976 and refused to allow any more OEM deals, even though the agreement required MITS to uses their "best efforts" to license the software. The contract required MITS and Microsoft to use binding arbitration to settle disputes. In September 1977, the arbitrator ruled in favor of Microsoft, MITS could continue to use BASIC on their machines but lost the exclusive license. Microsoft could license the software to anyone and keep all of the royalties.[83]

There was no longer a business requirement to remain in Albuquerque so Microsoft wanted to relocate to a larger city that would be more attractive to new employees. The San Francisco bay area was considered but Allen and Gates decided to return home to Seattle. Microsoft moved to Bellevue, Washington in January 1979.

Sale to Pertec

In 1976, MITS had 230 employees and sales of $6 million.[84][85] Roberts was tiring of his management responsibilities and was looking for a larger partner. MITS had always used [**Pertec Computer Corporation**] disk drives[86] and on December 3, 1976, Pertec signed a letter of intent to acquire MITS for $6 million in stock.[87] The deal was completed in May 1977 just before the National Computer Conference in Dallas, Texas. Roberts got $2 million and the other

500 MITS shareholders (including the Altair co-designer, William Yates) split the rest.[88][89]

[**Pertec Computer Corporation**] was eager to increase sales to small businesses through the 26 Altair Computer stores across the United States. The marketing toward hobby/home user was curtailed. The November 1977 issue of the MITS newsletter, Computer Notes, was the last produced by the Albuquerque staff. There was one more issue produced by the [**Pertec Computer Corporation**] staff in Chatsworth, California.[90] The back cover of the leading home computer magazine, Byte, always carried a full page Altair advertisement. This ended with the September 1977 issue. Roberts and Yates stayed on and worked on special projects.

In August 1979, [**Pertec Computer Corporation**] agreed to sell a 45% stake to North American Philips for $37 million. Before the deal was complete, Pertec agreed to be acquired by the West German computer company, Triumph-Adler, for $120 million. In 1978, Pertec had sales of $150 million and Triumph-Adler had sales of $466 million.[91][92]

The Altair products were merged into the [**Pertec Computer Corporation**] line and the MITS facility was used to produce the PCC-2000 small-business computer. The Albuquerque plant was closed in December 1980 and the production was moved to Pertec plants in Irvine, California.[93]

By the end of 1977 Roberts left MITS and returned to Georgia to be a gentleman farmer. He studied medicine at Mercer University in Macon, Georgia and graduated with a M.D. in 1986. Roberts practiced medicine in Cochran, Georgia, population 4500, until his death in 2010.[94] *[...]*

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move to the Cal-Ell Building, 6328 Linn NE in May. Now at 3404 Coal SE. Employment is expected to rise from 62 to 180 or 200. Company will have 10,000 square feet on one floor. Calculator sales reached $100,000 in March.

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Further reading

Magazine articles from the 1970s that show the general public's enthusiasm for science and new technology.

- Leckey, Wayne C. (March 1969). "This $16 Kit Makes You a Whiz at Model Rocketry". *Popular Mechanics*. Vol. 131 no. 3. Hearst Magazines. pp. 196–198, 227.
- Berger, Ivan (May 1973). "New calculator kits: From pocket minis to versatile desk models". *Popular Mechanics*. Vol. 139 no. 5. Hearst Magazines. pp. 151–152.
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- Hawkins, William (May 1977). "What it's like to build and use your own home computer". *Popular Science*. Vol. 210 no. 5. Bonnier Corporation. pp. 102–105, 152.

External links

- STARTUP: *Albuquerque and the Personal Computer Revolution* New Mexico Museum of Natural History and Science
- MITS Model 7440 Desktop Scientific Calculator at Old Calculator Web Museum
- MITS 150 Handheld Calculator at Vintage Calculators Web Museum
- TI-2500 at Datamath Calculator Museum
- Altair 8800 Computer at Vintage-Computer Web Site
- Forrest Mims - Early Days At MITS
- Brief History of the Altair, Copies of Altair articles in *Popular Electronics*

- Brief History of the Altair: Copies of Altair articles in *Popular Electronics*

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Housatonic

Yevgeny Ilyich Mikerin (born 1928)

[HI0005][GDrive]

Born - January 3, 1928 in the USSR . [HK0015][GDrive]

Evgeny Ilich Mikerin	
Date of Birth	January 3, 1928 (91 year)
Place of Birth	Yaroslavl , USSR
Citizenship	USSR → Russia
Spouse	Galina
Children	Two sons: Vadim and Igor
Awards and prizes	

External images
Photo E. I. Mikerina

[HK0015][GDrive]

INTERVIEW - Dec 6 2014

Source : [HI0004][GDrive]

Yevgeny Mikerin [sometimes "**Evgeny Ilyich Mikerin"],** *"father of **Vadim Mikerin**, a representative of **Techsnabexport** who was arrested in the US, recalls his participation in the Soviet atomic project."*

The following was translated in July 29 2019, with the help of https://translate.google.com/ .

Evgeny Ilyich, tell us how it all began?

In 1951 I graduated from the Moscow Institute of Fine Chemical Technology, I was sent to Glazov for three months at the Chepetsky Mechanical Plant. Probably, this time was needed for the paperwork, so that I could work in the First Head Office.

Chain of secrecy?

You can say so ... They called the personnel department and offered to go to Chelyabinsk-40. I refused. I enjoyed working in Glazov. There was a laboratory there, and

I already had time to do something about uranium ... My interlocutor in the personnel department smiled hardly noticeably, and then showed the sheets of the document with the cap "Council of Ministers of the USSR". Showed the place where my name was (there were many others in the list) and the signature: "I. Stalin. " I had no doubts, no questions left. It is necessary - it means it is necessary.

Thus, the majority of specialists went to the "Base 10" (as in those years was called Chelyabinsk-40, and then - the plant "Mayak")?

No one refused. At least, I don't know people who were able to say no after such a signature.

And how did you meet "Base 10"?

A tiny bus from Kyshtym station brought me to the "Far Dacha", in which I lived for two weeks while my documents were being sent. Then it was a hut for those who went to work at a very secret Object ... The documents finally arrived, and the same bus took me to the DOCK (wood-finishing plant). There were barracks too. They put me in a room, ordered me to wait for a guide who was supposed to take me to my place of work. I arrived in the morning, and the guide appeared only in the evening. He brought me to the city in a hostel, where they showed me the room in which I was supposed to live. It was on Stalin Avenue. The dormitory was later rebuilt, adapted for a hotel. If you happen to be in Ozersk, then this is house 19. There was a personnel department next door, and the State Security Committee was closer to the lake through two houses. It was thanks to his staff that the journey to the place of work took quite a long time. I started working at the "25th plant".

What is this plant? Does it exist today?

Yes, only now it is a factory of the Republic of Tatarstan, and earlier in closed literature it was called "factory B. This is the first radiochemical plant in the country, it was built and put into operation in 1948, in March 49th, it began to produce the first plutonium. A bomb was tested in August 1949.

As far as we know, it was the dirtiest enterprise in Chelyabinsk-40.

- So "dirty" that it was even supposed to close the enterprise. Having studied all the "weak points", they wanted to build a new plant. However, plans have changed: the government decided to reconstruct the plant and dramatically increase plutonium production. In addition to the first reactor "A", new ones began to appear - "AV-1", "AV-2", "AV-3" ... So the political situation developed - the "cold war" began, and therefore it was necessary not only to deprive the Americans of the monopoly, but also to show that we have enough nuclear weapons to ensure our security. In general, the thesis "to catch up and overtake America" concerned not only milk and meat, but also atomic bombs. Major events unfolded just in Chelyabinsk-40. For us, this meant one thing: to fulfill the plan at all costs and at the same time to carry out reconstruction to switch to a new, more efficient technology for producing plutonium, which was developed in Leningrad at the Khlopin Radium Institute. We had to go on the move to remove all unnecessary and dangerous. For example, the same filters, in which radioactivity was terrible - residual plutonium and uranium accumulated there. They had to be removed. By the way, because of this, in many respects a new technology was created.

*"**Did you get huge doses there ?!**"*

- We worked at the rate of one x-ray per day. I use the old terminology - it is more understandable and familiar than the current one. For the shift - X-ray, and no more! These were the rules and "combat" rules. In general, as in war. Nuclear, of course ... If you get more x-rays, it means that you violated the rules of radiation safety. Once he broke - a warning, another time - one more, and then the prizes were deprived ... But how not to break if almost every day something happened?

- Simple arithmetic: 150 working days and radiation sickness guaranteed?

- I guess, yes. True, radiation - not always. Even operators who did not take part in the liquidation of accidents, so to say, "in a calm atmosphere" received 0.6–0.8 X-rays per shift. Well, if there was a spill of a product, then there was no time for calculating the doses received - the main thing is to eliminate the accident at any cost.

- And the protection?

- Rubber boots and gloves. Fortunately, then Petryanov's filters appeared, they protected the airways. And even before the gauze bandages lacked ...

- Sorry for being frank: how are you still alive? After all, you already - 84 ...

- Officially, I have 283 X-rays. At least as much again I received

A lethal dose - 400 x-ray?

- Well yes. If you get it right away ... Yes, I'm alive. But my colleagues, with whom I began to work, and almost all those who came to replace me, have long gone ... Plant "B" produced not only plutonium and uranium, but also professional diseases.

In the radiochemical, reactor and metallurgical plants, several thousand professional patients appeared. Half of them did not live up to retirement, they no longer needed it. The X-rays that workers received forced medical workers to remove workers from the main workshops in a year or two. I worked there for three and a half years. There was no one to replace. Constantly there was not enough personnel, because they were constantly replacing everyone. Technicians, operators, equipment, repairmen, electricians, all had to be brought to the "clean zone".

Once I was informed that a group of young technicians was sent to us. They had to accept and distribute to jobs. I came to the office, and there I see the frightened eyes of two dozen girls. They were 18 years old. All dressed in worn coveralls are not for height. And I thought: What have we reached, if these girls are sent here? Until now, I have met some of them, and it is hard for me to look them in the eyes ... But I had to accept them, arrange them in shifts, in workplaces — I had no other choice then ...

As for me, my age, I can explain everything that happens only by the will of the Most High. As a joke, I say this: the 600 x-rays I received burned out all the harmful bacteria and microbes that were inside me. This made it possible to live to this day.

- And how did you encounter the first accident at the factory?

- I would call it "accidents". Accident is when the whole plant is involved, commissions are created and so on. And technological accidents happened all the time. A female operator, for example, overlooked it - the solution overflowed the column and poured out. It spread throughout the premises. Radioactivity is awesome.

"And what happened to that woman?"

- She was tried. A criminal case was initiated against her ... Such were the times ...

- Is it true that academician Petryanov, seeing the girls in your factory, immediately invented special filters to protect their breathing?

- True. Moreover, the academician insisted that the girls should not be sent to the radiochemical plant. However, he was not listened to. And how else: after the war,

the first issues of chemical faculties of universities and colleges consisted only of girls. There were no men. They took the war. When I arrived at the factory, I saw that all five shift supervisors were women. We gradually began to replace them.

- And how did your meeting with Beria happen?

- He came across quite often. Once, it was the 52nd year, and I was already working as a shift supervisor, and it lasted from 8 pm and until 2 am — they called me and said that there would be distinguished guests in the workshop, and therefore I should be at such and such a mark to wait. They will pass by, do not ask them about anything, and if they ask questions, they will answer. They walked along the 10th mark of the main workshop. There was unloading of irradiated fuel and the primary dissolution of uranium blocks. Three people are coming. The new director of the radiochemical plant Demyanovich. A very large man, tough, sometimes even merciless. He did not know the technology well, but he was appointed to restore order at the plant, which he did quite successfully. Someone from the bosses of the First Main Directorate was walking, and in the middle was a little man in a cap and pince-nez. There was a guard behind. I recognized Beria, said hello. He introduced himself, as was the case at the defense enterprise, they say, the shift supervisor, we carry out the task according to the plan, there are no comments on the work of the personnel. Suddenly, Beria said that he was explained in a nearby shop that such and such a product goes there, then another product goes to some banks and columns, and the next product is transferred to this shop. And he says: "Can you not explain to me in a worker-peasant manner what is being done here and how everything is happening." I explained to him. My story took only a few minutes. I did not use special terms, and plutonium called plutonium, uranium - uranium, which of course was absolutely forbidden to do then. We used the "bird language", which, by the way, was very difficult for the work, since it was really not always possible to understand what was going on. Beria says: "I meet the first person who explained everything clearly and precisely how this process is carried out. Thank you! "He shook my hand and went on.

Two days later I was called to the "31st house", where the security service was located. The boss himself began to talk to me. At first he thanked, they say, Beria was satisfied with my report, and then gave a uniform interrogation. Firstly, how do I know the process technology in other workshops so well? I replied that even though I am a young engineer, I must know this, otherwise I will not be able to work well. It is simply impossible to "pull out" some area from the process. This explanation seems to satisfy him. Well, the second question was unexpected. He asked: "Why did you break secrecy, and the products were called by their proper names?" He didn't say either "plutonium", "nor uranium

- 1957 Power reactors are already working ...

- And just one radiochemical plant.

- But the second is already under construction ...

- Yes, it will be launched in the 59th. Later than planned. The delay happened due to an accident. It should be remembered that in the year 57, radiochemistry was only at Mayak. In Siberia, similar production appeared later, while there was only one factory. Reactors produced plutonium much more than our factory could recycle. In 1952 there was a task to develop a new plant. In the 55th started its construction. In the 53rd, I got a chronic radiation sickness, I had to leave, but I stayed in the factory - there was simply no one to replace. When the construction of a new enterprise began, I was transferred there. The accident of the 57th year I met there. We were preparing to put the first string in the factory. It was a long, five-hundred-meter-long building, in which the full automation of processes was carried out. There were two tasks: first, to dramatically increase the plant's productivity, and, secondly, to ensure the safety of personnel. These tasks were implemented at the design and construction stage.

One day, September 29, 1957, on Sunday, suddenly everyone heard a powerful pop. A few minutes later my bell rang. The duty officer says that I need to go to the factory. We arrived. Not a single person was already on the site. Builders and installers rapidly left her. Littered suits, pants, shoes. It turns out that they received orders to throw off all unnecessary and run towards the high road. There were no other teams. From the site of the explosion, a new plant was located 500 meters away, and a black cloud covered it. We were bombarded with radioactive ash, earth, pieces of concrete and iron. We were five people that evening at the factory. Radiation situation did not know. Finally, dosimetrists appeared. The background was huge, and we realized that the situation was extremely difficult.

- Covered and the city?

- Fortunately, no. The ejection was set aside, only by a small corner of the KP-2, which came from Sverdlovsk, and the new quarters of the city. All the rest of the pollution came from the equipment and clothing of people who came from the industrial site.

- Is it true that in the first hours there was talk of shutting down the production and evacuation of the entire city?

- Such a proposal arose in the morning of September 30, until all the consequences of the accident were known. At that time, they did not have control over the situation and did not really understand what was going on. On Sunday evening, a working committee was already established. It was headed by Nikolai Nikolaevich Semenov (at that time he was deputy chief engineer, then he became director of the plant). We spent the whole day measuring in different directions. We built a new factory in a clean place, and by the evening of September 29 it turned out to be one of the most polluted.

Doctors spoke in favor of closing the city and the enterprise as a whole. I can immediately say that their proposal was not even discussed. Everyone understood that this was impossible - the country would have remained without nuclear weapons. All the directors of the factories were unanimous: we can do it on our own.

It was the first major accident. Pripyat and Chernobyl happened much later. By the way, I think that the zone, of course, is needed at Chernobyl, but the city of Pripyat could have been completely cleaned and saved. Had started decontamination work from the very beginning, but first - to make such a decision. As it was done in the year 57 in Ozersk. Then the work was planned clearly, and therefore it was possible to secure the territory in a fairly short time. But that's my personal opinion.

- Why is this experience not used in Chernobyl?

- In coordination with Moscow, or even as directed, from there all the work was done under the heading "owls." secret. " We gave a non-disclosure subscription, strangers were not involved in the works on the territory of the plant. Until the end of the 80s the secrecy was not filmed, he acted. This did not allow to fully use the experience of liquidation of the accident at "Mayak" in Chernobyl.

- After "Mayak" there was another, no less legendary Object - I mean "Krasnoyarsk-26".

- The number of reactors and radiochemical plants was calculated in such a way as to produce a sufficient amount of nuclear ammunition. From this point of view, the appearance of the complex near Krasnoyarsk is justified. However, no documents about who had the idea to climb the mountain, did not survive. It can be assumed why it was decided to create everything underground. It was already known by the example of Hiroshima and Nagasaki, how great is the power of atomic weapons. That is what determined the fate of the project. It was necessary to build a plant that would be protected from a direct nuclear strike. A great impression was made on the leadership, in particular, on Beria, the underground factories of the FAA missiles in Germany. In the spurs of the Sayan Mountains in the Krasnoyarsk Territory, the site for such an unusual construction was chosen.

I got there in 1965, having already worked for four years as a chief engineer at a plant in Chelyabinsk-40 and, as an ideologue of this reconstruction, being awarded the Order of Lenin. It was then that they decided to transfer me to Krasnoyarsk. We went down with the director of the plant Meshkov for the first time into the mine. Water, trucks with rock scurry back and forth, wires hang. It was December. Workers go underground in boots. Cold, damp, gloomy ... In general, the usual picture of the mine for that time. Three reactors were operating there - an underground nuclear power plant. And what is typical for nuclear scientists? Clean and tidy facility. So we began gradually to turn the mine into a unique structure, which was not equal in the world ... But it was not possible to fully realize my ideas, because later Meshkov was recalled to Moscow and appointed head of department, and I changed him as director. And then I began to engage in not only the mine, but also the city. It turned out the most beautiful of all ten closed cities of Sredmash. This is a common opinion.

Krasnoyarsk-26 is a unique structure. Once the minister, Efim Pavlovich Slavsky, having examined everything, said: "as a metro, even better than the Moscow metro!" Of course, he was somewhat exaggerated, nevertheless the comparison has a right to exist. It was not only interesting to work, but also pleasant ...

"But now everything that was done underground turned out to be unnecessary?"

- In the nuclear industry there is always a problem: what then when the object stops working? In Zheleznogorsk, this is the "Mountain" problem, as the mines later began to be called. In scale, the Mountain was larger than the Moscow metro at that time. It requires constant maintenance - pumping water, ventilation. Necessary lighting. And so on. Three reactors stopped. Dismantled all that is possible. The rest of the equipment needs to be buried. A sort of sarcophagus will be made.

- How to use the workings? Or "Mountain" will die?

- There are two workings empty. The other plants in radiochemical plants have four threads each, and there are only two. There are huge workings. The miners say that in the world no one has made such workings. It is 60 meters high and 500 meters long. Imagine ?! Mine workings have one feature. She even looks fantastic. Production is compressed. The breed tries to eliminate its wound. Collapse should be prevented.

- And now what to do in "Mountain"?

- Maybe a museum? There is such a proposal ... Now there is placed the production of MOX-fuel, which is necessary for fast neutron reactors. But you need to think about using the "Mountain" - you need fresh ideas and projects.

- Such a department as the Soviet Sredmash need modern Russia?

- In a market economy, such a powerful department cannot be created. Sredmash fulfilled its role by implementing the "Atomic Project of the USSR". It seems to me that he, together with the Soviet Union, is in the past. Nowadays, the development of nuclear energy in Russia is called by some "the Nuclear Project No. 2". It is not right. After the war, the "Atomic Project" was implemented by the whole country. Yes, poor, yes, bloodless, but mighty with her people ...

The `Master' of the Secret Cities;

Chief of the Minatom of Russia Main Scientific-Technological Administration on the Fate of Plutonium, Weapons Uranium, and on the Future of Closed Nuclear Centers

Moscow DELOVOY MIR, 18 Feb 95 p 10

Source : [HI0003][GDrive]

Interview with Yevgeniy Mikerin, chief of the Minatom [Ministry of Atomic Energy] Main Scientific-Technological Administration, conducted by Vladimir Gubarev

It would seem, the times of secrecy have passed. Previously, the cities, nuclear enterprises, and glavks [main administrations] of the Ministry of Medium-Scale Machine Building were designated only by numbers, which meant little to the outsider. Now all of them have received sonorous names, and finally we have learned that "medium-scale machine building" is none other than the nuclear industry, that the city of Chelyabinsk-40 is the "Mayka" combine, and that Krasnoyarsk-26 and Tomsk-7 are large reactor and radiochemical enterprises. And finally, that "Glavk Mikerina" [Mikerin's main administration] is a scientific-technological administration... And so, what has changed? Why, in fact nothing! The true secrets remain secrets. The closed thematics are still closed, and the tenth floor of the famous nuclear department on Bolshaya Ordynka is still inaccessible to outsiders. And I believe that this is for the better, because we should not share true secrets. They have been, are and always will be the property of the Homeland, because the people have invested not only huge material wealth in them, but also intellectual. To give them away for "the pittance of a few dollars" would be a crime (unfortunately, we are often seeing this today). And I am heartened by the fact that there are people who understand perfectly well that the numerous visits to our country by foreign colleagues have primarily one goal: To find out how things are going at our nuclear enterprises, to see with their own eyes the original technical resolutions, of which we have many. Today it is a recognized fact throughout the world, including also by USA specialists, that in very many parameters our nuclear industry surpasses the American, and that our radiochemical combines are much more effective and safe. I repeat: This is not our conclusion, but that of the Americans. And therefore, they are ready to engage in the broadest cooperation with Russia in this field. Well, of course, with benefit for themselves.

Yevgeniy Ilyich Mikerin heads up the ministry's main administration, which oversees and, as they say, "treats," half of the closed nuclear cities of Russia. All except those where nuclear weapons are developed and where they are series manufactured. And therefore, our conversation with Yevgeniy Ilyich began with my saying:

Correspondent: You are perhaps the most mighty man in Russia. After all, without you it would be impossible to develop nuclear weapons. Without you, the nuclear power plants could not operate...

Mikerin: Our main concern today is disarmament.

Correspondent: Why?

Mikerin: The main difficulties of disarmament fall not on those enterprises which developed and manufactured the components of nuclear weapons. These problems are associated not so much with the dismantling of the weapons themselves, as with the application of that which we obtain after this. And primarily those fissionable materials which had been produced for decades. And now we must remove them from the weapons and ensure their storage in a very skilled manner, or rather--not so much their storage as their application for the needs of man. And once again, the entire weight falls on those enterprises where the people, with the sweat of their brow and without a thought for their own lives, worked day and night to fulfill the state plans, the very large-scale, intensive and expensive plans for creation of the components of nuclear weapons. Now these same people are engaged in dismantling, and do not know what to do with what they get. Not in the sense of how to store it, but rather of how to utilize it for the current economy. And this is already a tragedy.

Correspondent: Let us assume, we have a nuclear warhead. What percentage of its parts and components can be utilized today?

Mikerin: In principle, it can all be used for developing a new nuclear weapon, but that is not the task of the present day. After all, we are sharply reducing the number of warheads. Therefore, we must think about where to send the materials after dismantling, so as to make use of them. The fissionable materials, and this is highly enriched uranium and plutonium, are suitable in one way or another for use in nuclear power production as fuel. This concerns primarily uranium. In a nuclear weapon, we use highly enriched uranium, with concentration of over 90 percent. Naturally, by diluting it, for example, with natural uranium, we can make it of low concentration. This is approximately the same as processing a certain amount of butter back into milk. Moreover, our reserves of this "milk" are quite sufficient... Please excuse such a household comparison, but it reflects the real state of affairs... Let us take the initial state, from which at one time and at great expenditure, both material and intellectual, we obtained highly enriched uranium. And now, during the reverse process, the losses of such a colossal labor are inevitable, labor which went for obtaining the conditioned uranium-235 by isotopes. Now we are de-concentrating it, turning it into low concentration... But this is also expensive! And not less expensive, but even more so. Plus, there are the losses of labor, resources and intellect. And it is specifically the "intellect" which is the saddest of all, because to make "butter" of such high condition was extraordinarily difficult.

Correspondent: And what about the plutonium?

Mikerin: With this, of course, the situation is even worse. Unfortunately, neither domestic nor world industry today are ready to utilize this material as fuel for nuclear power plants. It is necessary to conduct extensive scientific studies and bench testing of the heat-emitting assemblies, to develop regimens of operation of the active zone of the reactors. With plutonium we are still at the initial stages. It is true, in Europe a mixed uranium-plutonium fuel is rather widely used, but we are speaking here about plutonium which is obtained in commercial nuclear reactors and is isolated during the processing of fuel. Its isotope composition is entirely different as compared with our weapons plutonium--no one has ever really worked with it yet. First of all, no one has had any of it and, secondly, the thinking was oriented only toward using it in weapons. Therefore, this is a new direction of activity for scientists, designers and reactor builders. I believe that weapons plutonium will have to lie around, be stored, for about 10 or 15 years. And the main task is its protection, both from the standpoint of its radiation safety, and from the standpoint of its non-distribution. After all, this is a very "powerful" material from the standpoint of its power resource, and it has a low critical mass. Therefore, any actions--even accidental ones--by which this critical mass may be realized are not permissible. We need methods of separating this material, placing it in special containers which would prevent the possibility of occurrence of a chain reaction and, of course, special monitoring of its storage. Specifically, a large amount of thermal energy is emitted, and it must be released. And insufficient air tightness of the container in which it is placed may lead to the formation of various oxide compounds, and so forth, which is very dangerous. Therefore, there are special means of storage, special tare, containers and equipment for storing plutonium. Naturally, all of this is very expensive.

Correspondent: Can you say that we have resolved the problem of storage?

Mikerin: If we speak of the problem in its "pure form," then, of course, it has been resolved.

Correspondent: What do you mean? After all, there is a great deal of concern throughout the world...

Mikerin: Both in America and in our country, there are containers which reliably protect both uranium and plutonium under all physical effects which one can imagine...

Correspondent: Does this include accidents?

Mikerin: Accidents, airplane crashes, unsanctioned explosions of some devices, and so forth... And naturally, the containers which protect the personnel servicing the storage facility against ionizing radiation. In general, the problems of storage are well known, the appropriate devices exist, but it is necessary to build modern storage facilities. They are lacking. Both in our country and in America. I am speaking about the two countries which possess 95 percent of all the fissionable materials. The mobilization of considerable material resources is needed to create storage facilities. After all, it is necessary to store both uranium and plutonium reliably and for a very long time. Today "a threat" of great expenditures hangs over the country, if we may say so. Unfortunately, there is a catastrophic shortage of resources in Russia, but the system of storage facilities must nevertheless be developed, as long as we have agreed to global disarmament.

Correspondent: And why did you not tell the politicians who were making this decision on "avalanche" disarmament about such a prospect?

Mikerin: I believe it is not necessary to explain this to anyone--the problem is obvious! When a house is being dismantled, there is a pile of material formed, both useful and useless--is that not so? And therefore, before making the decision to dismantle a house, it is necessary to think about what to do with the bricks, boards, iron and rubbish. One does not have to be a very deep thinker to understand the need for utilization of all that is placed into a nuclear warhead. But those who were making the decision on disarmament thought very little about this. And they did not ask anyone! I am convinced that the politicians did not even ask those who ensure the security of our state... I am referring to the owners of the nuclear weapons, i.e., the Ministry of Defense.

Correspondent: A strange situation... For decades, we spoke of nuclear armament--and at that time they consulted with you. I am referring to Minsredmash. You were asked: "Can you do it, or not?"...

Mikerin: We always answered: "We can, but..." And then we said that, in order to do it, we would need this and this and this... And most often the state met us halfway.

Correspondent: Let us depart somewhat from this situation. Let us talk about you, about how you began, how you came to the nuclear industry?

Mikerin: After graduating from the Moscow Institute of Precision Chemical Technology in '51. A special course on radiochemistry was organized there. Of

course, we did not become specialists, but the general preparation was good. Our group received special training for 2 years to work in the atomic industry. They selected the best students, sent them for re-training, and then placed them one-on-one with the new technology, which was secret, encoded, and unintelligible. And so we began mastering the new field...

Correspondent: You worked at the first, second or third plant?

Mikerin: It was called the "25th Plant," for processing irradiated nuclear fuel. I did not work with the reactor--it was primarily the physicists who worked there. But radiochemistry--the most "thankless" part of the chain--we got the difficult task of processing the fuel, purifying it of all the isotopes, obtaining plutonium in pure form, and isolating uranium for its repeat application. Well, and of course, removing various by-products which are formed in the process. This was called the "25th Facility," which was built by inspiration, by individual rumor, or more precisely--by intelligence, and by the experiences of laboratory scientists. It was a "facility" without sufficient protection against radiation, without a thorough knowledge of technology. We proceeded by the method of trial and error. And naturally, there was a constant turnover of personnel, because after receiving a certain dose of radiation, it was no longer possible to work there. It was a unique sort of "mill"...

Correspondent: And how long were you at this "mill?"

Mikerin: Four years. That is a rather long time for that very "dirty" type of production. Sometimes in a day we received as much as is today the standard exposure for a year. Moreover, this occurred in the normal situation, not in an emergency.

Correspondent: And did that happen too?

Mikerin: Of course... I might add, we are talking about external radiation. At that time, we never even guessed about internal radiation. After all, there were neither the means nor the methods of control. They were developed gradually. I might add, knowing very well those who worked at the "25th Facility," I understand that most of them were afflicted specifically not by the external radiation, but by the aerosols, which contained uranium, and especially plutonium.

Correspondent: Who is left alive today?

Mikerin: Not many... And of our teachers, perhaps, no one is left.

Correspondent: Did you know that you would soon be replaced in production. Were you frightened?

Mikerin: No. That was not my personal feeling. I began working as shift foreman, and I had 25-30 people under me. Workers, operators, fitters, instrument men... None of us spent much time thinking about radiation, and we had little concern for protecting our health. At that time, the words "necessary," and sometimes, "necessary at any cost," were the main thing for us, and this brought people together... After all, the war had just ended, and we had all been raised on examples of that gigantic war which we had just experienced. The feats of our soldiers, our entire people... And here in production, they were not even shooting at us, and so it seemed less dangerous...

Correspondent: Did you know what you were doing?

Mikerin: Yes. We knew that we were obtaining plutonium for a nuclear weapon, and were monitoring it until testing.

Correspondent: And after the "mill?"

Mikerin: After 4 years, the construction of a new plant began. The so-called "35th Facility." By order of the doctors, I already had to leave, and therefore I was transferred to the group dealing with the construction of this facility. Here I was able to utilize in full measure the experience which I had obtained in prior years. Even before the start-up of the "35th," we had re-organized both its technology and its equipment. We expended much effort to see that the new plant was up-to-date and safe, so that there would not be a single one of the "dirty things" which we had encountered at the old enterprises. "We" at first consisted of around 20 people, and then there were already around 100 specialists... Our primary efforts were aimed at not permitting any effect of radiation on the personnel. We had to make the people safe from the gigantic radiation field, and we were able to accomplish this. To this day, I am proud that we were able to solve this problem.

Correspondent: How was this expressed?

Mikerin: We employed a new arrangement of the plant, created reliable protection, the technological process was equipped with good instrument control, and there was an automated control system... We were able to realize the basic principle: Radioactive chemical production must be reliably protected against man.

Correspondent: Is the "35th" operating to this day?

Mikerin: No, the plant has already been closed. Not because it had outlived its resource, but because plutonium is no longer needed now... Altogether, there were three radioactive chemical plants built with the new arrangement, with the new equipment, with the new systems of control and management. At Chelyabinsk-40, at Tomsk-7, and later at Krasnoyarsk-26. When we began cutting back the production of plutonium in the late 80's, they shut down the reactors and the first plant in Chelyabinsk, where all the technology had been developed. But we are still proud of the fact that, in all the time of its operation, not one person got a single dose of radiation which would lead to any work-related illness.

Correspondent: You mean there was not a single case?

Mikerin: In the process of normal operation of the plant--no. Of course, I am not counting the accident situations. Naturally, the participants in the liquidation of some accidents received increased doses... And there was one other exception. At the terminal section, where the plutonium was already obtained and from where it went to the metallurgical plant, the radiation norms of the personnel were higher. But even there, excessive radiation above the norm did not occur, and there was not a single case of a "work-related" illness. The control was very strict, monitoring of internal radiation was performed very carefully, and therefore at the recommendation of doctors a person was transferred to a less dangerous or totally safe sector of work.

Correspondent: Did this system operate strictly?

Mikerin: It depended on the people. And since the human factor always existed, there were some exceptions. Generally among the managers, who sometimes knowingly exposed themselves to excessive radiation for the sake of the cause--their responsibility was always too great. But on the whole, the system of control and safety operated strictly.

Correspondent: And how did your fate turn out later?

Mikerin: When the plant in Krasnoyarsk was placed in operation, I was offered a transfer there as chief engineer. That was in '65. An "underground combine" was being developed there. Naturally, they needed experienced cadres. Working at the "35th Plant" was very interesting for me. I had invested too much effort and health in the cause. At first I was the chief technologist there, then the chief engineer. In general, the entire technology was in my hands. I might add that I was never interested in administrative work, and therefore I refused various duties which were not associated with technology. There was much to think about, much I will wanted to change and improve at the "35th," and therefore I did not want to transfer to Krasnoyarsk... But Ivan Dmitriyevich Serbin was a member of the party Central Committee. At that time, he was in charge of placement of cadres in our ministry. I met with him three times regarding the new appointment. Twice he let me go in peace, but the last time he said--"it is necessary!" Well and, of course, the question was resolved... And that is where I met Aleksandr Grigoryevich Meshkov, who was appointed as the new combine director. We quickly became friends, understood each other, and I went to Krasnoyarsk. At that time were were both almost 37 years old...

Correspondent: Why was it built underground?! Could it be in case of nuclear war?

Mikerin: The people have a great deal of imagination... Even under Stalin, in the late 40's, the decision was adopted to build such an enterprise. The sector was being developed, and it was believed that three combines were needed: One in the Urals, the second in Tomsk, and the third--in Krasnoyarsk. Considering the specifics of the relief there, someone proposed "digging" into the mountain, excavating it, and locating the entire enterprise for building nuclear weapons there. Then, supposedly, in case of attack on the USSR and on the exposed facilities, they would be put out of commission, but the Krasnoyarsk complex would continue to operate. That is how the situation appeared in those years... I might add, the experience of the war with Germany was taken into consideration. After all, there were underground plants there which manufactured weapons practically until the end of the war. Specifically, those same FAU missiles... And so that is how it was planned: The combine near Krasnoyarsk would ensure the production of nuclear weapons for all cases of war and life. But while the combine was under construction, it became clear that there was no mountain, no depth in the ground which could ensure security. Moreover, it turned out that such a combine would be much more easily put out of operation than a ground level facility. It would be enough to destroy the electrical transmission lines. And an autonomous system of power supply was possible only for maintaining viability, but not for production. No energy--and the combine turns into a monument.

Correspondent: And an atom bomb is not needed?

Mikerin: Exactly! It would be enough to have paratroopers and a small group of trained professional persons... But in terms of expenditures, this combine was much more expensive that its brothers. It is enough to say that the volume of soil excavated (we computed this in the late 60's) was greater than in the Moscow metro. And plus, under conditions of very difficult rock and soil formations--granites and gneisses. The manpower required was tremendous--miners, metro builders, soldiers, and prisoners... Nevertheless, the combine was built!

Correspondent: And now this combine must cease operation!

Mikerin: It has practically ceased operation already. One atomic reactor is operating, and only because it is producing heat and electricity.

Correspondent: And what is to be done with this "nuclear mountain?"

Mikerin: The problem with which we began our conversation is much more complex for Krasnoyarsk-26. From the very beginning, it was clear that both the reactors and the radiochemical plant had a limited service life. But what to do with underground giant? Unfortunately, it is still unclear what the future of the "mountain" will be. It is imprudent to locate any civilian production at the primary facilities, because it would be necessary to "scrub" a large amount of equipment and communications--they are contaminated. And the main thing: Why should we go underground with any type of production? After all, operation here is much more expensive than at any analogous above-ground production. Should we make it a storehouse? We could, of course. We might add, part of the production is used for state reserves. But again this is very expensive... After all, you cannot throw away these developments. Nature does not tolerate emptiness. If they are not maintained, they will quickly go out of order.

Correspondent: Perhaps we could store spent nuclear fuel there?

Mikerin: It requires so-called permanent storage, and this requires the appropriate geological conditions. But the conditions for this are not very favorable at Krasnoyarsk-26. There is too much water there. And also, it is much simpler to build such a storehouse on land.

Correspondent: But, after all, a new plant is being built?

Mikerin: Yes, but it has nothing to do with the "mountain." Our nuclear power engineering is based on the ideology of comprehensive processing of fuel. A plant is needed for this, and it is being erected at Krasnoyarsk-26. I might add, the problem of waste utilization has been resolved there, specifically the deep burial of nuclear waste. Of course, there is much controversy surrounding this method. But I hold the opinion that, as long as we have given rise to nuclear power engineering, we must re-use the spent nuclear fuel and thoroughly and reliably store the by-products.

Correspondent: There was a discussion about the "Big Plant?"

Mikerin: Yes, that is what it is called. The idea of developing nuclear power engineering was planned in large volume, and by the time the AES [nuclear power plants] begin operating at full capacity, the plant in Krasnoyarsk-26 was to be built for processing the spent fuel. But after Chernobyl, the situation changed drastically. The rates of development of nuclear power production declined sharply, but in any case it is necessary to process the fuel elements..

Correspondent: One strong contradiction is always present in your thoughts. On one hand, you are not sorry that you worked your entire life in the nuclear industry, and on the other--we are constantly running into errors and dead ends in its development. How can you reconcile the irreconcilable?

Mikerin: In many ways, these are unrealized hopes and plans. Let us take that very same Krasnoyarsk-26. We believed that we would shut down the military reactors, but that in their place, or even on the surface, we would build commercial reactors, i.e., an electrical power plant. And such projects were developed in detail. After all, it was specifically the government which presented us with the task of increasing the capacity of nuclear power production by 10 times! And, naturally, we had to concern ourselves well ahead of time about the entire infrastructure of the sector. And this was done, believe me, in a very rational manner: The military reactors were replaced with civilian ones. This was conversion in real life, and not in slogans. And the construction of the "Big Plant" was, once again, a concern for the future. The city where very skilled cadres live is ready for such work. Unlike the present day, in those days we thought about the future, we cared about it, if you will, we constantly gave it attention. This was the strategic perspective, and not just immediate concerns. The same prospects existed also at Tomsk-7 and Chelyabinsk-40. We intended to change over entirely to nuclear power production.

Correspondent: And would this have been real disarmament?

Mikerin: Of course. And real conversion of that nuclear complex which was developed at Sredmash [Ministry of Medium-Scale Machine Building] over the course of many decades.

Correspondent: What is hindering you in this--after all, at the present time you still have the forces and the cadres?

Mikerin: First of all, it is you--journalists and newspapermen. You have begun stating that nuclear power production has no future. And you have frightened the community so much that now one does not even dare mention nuclear power plants.

Correspondent: The shadow of Chernobyl, how can one forget about it?!

Mikerin: Yes, our fault lies in the fact that we were too casual about the design of the reactors. I am referring to uranium-graphite ones... From the very beginning, the incorrect line was selected--the application of our experience and knowledge of military reactors and their transfer to the civil industry. The error consisted of the fact that we tried to develop cheap reactors. Chernobyl put an end to this erroneous line. Unfortunately, we did not take world experience into consideration, believing that "we were ahead of the whole planet." Such a psychology emerged after the first nuclear power plant, the first ice-breaker. Yet the whole world immediately followed a more reliable and safe path. Nuclear power production must have "its own" reactors, i.e., safer and more reliable than the military ones...

Correspondent: Does this mean that today the understanding of the future has changed, that it appears differently than it did before?

Mikerin: It is in a fog. And for the present not much can be seen. And that is why it is so difficult for us.

Correspondent: You are the master of closed cities. What do you think, how long will this last?

Mikerin: I am in favor of opening them... But the general situation in society in our country hinders us from doing so. Unfortunately, the currents of the criminal structures are great, as are the currents of various occurrences--theft, banditism, criminal groupings. If the country was at the level of the 70's-early 80's, the cities would have to be opened. After all, their closure gives nothing but additional problems. The secrets may be protected quite easily on the local territory of a specific facility. But the people living in the closed cities have become so accustomed to a normal life, to a decent human environment, that today they are asking that their cities not be opened. We held a referendum, and 95 percent of the residents spoke out against it. That was several years ago. But now, I am convinced, the figure would comprise the full 100 percent. So that, for the present time, we cannot open these cities.

Correspondent: Which of the cities in your charge do you like the best?

Mikerin: Krasnoyarsk-26. There I spent the best part of my life. First 4 years as the chief engineer, and then 10 years as director of the combine. As director, I was not so much caught up in developing production as in organizing the life in the city. And I was able to accomplish a lot, and that is why I have become "attached" to it. I am proud of the city, because much effort was put into every prospect, into every street, every house and structure. The city turned out to be convenient and beautiful. At least, that is how it seems to me. I love this city!... And, of course, the production as well. It was the most current. Many good and original ideas were realized there... And I did not want to leave there to go to Moscow.

Correspondent: There are other nuclear powers--the USA, England, France, and China. Do we yield to them?

Mikerin: In China today the technology in the nuclear industry is at the level of the 50's... So that it is best of all to make the comparison with America. Much has been disclosed now, and we know more about each other today. We have the right to be proud that in radiochemistry we have surpassed them, and consequently our productions are not only more effective, but also safer. And in terms of radioactive waste as well--both in quantity and in degree of purification of uranium and plutonium. And the main thing is that we have surpassed them in the problem of burying radioactive waste, in its utilization. In their country it is stored in containers which have long become outdated. They do not have any disposal methods. We have developed methods of deep pumping of waste. Yes, there is controversy surrounding it, but I am ready to defend this method at any level, because I have tested it out on "my own skin" in Krasnoyarsk-26. Two years ago, they even "gasped" when they learned that we were able to reliably bury the military portion of our waste at a depth of 500-800 meters in Tomsk and Krasnoyarsk. There are special strata there--collectors, which have no outlets. The radioactive waste is hidden and held by the soil there, so that for the present time I do not see any more reliable methods. We monitor these strata and see that there is no movement... The Americans have taken a cautious attitude toward this technology. Certainly not because it is bad, but simply because they have tried and failed to develop it... So that our level of military production does not yield to the American. And do not believe those who try to prove otherwise.

Correspondent: And what is the price of all this?

Mikerin: Much less! From the very beginning, the Americans' price for everything, from household needs to the most complex types of production, has exceeded ours many times over. It is characteristic that "a-la Chelyabinsk-40"--Hamford today receives $2 billion a year from the state budget. Yet there are no operating productions there! Reactors are kept there--but they are mothballed. Cleaning of equipment of radiochemical plants is performed there, laboratories of scientists are maintained, which continue to perform research on waste burial. In general, there is no less personnel there than at Chelyabinsk-40. But unlike our center, nothing is produced there. Nevertheless, it takes $2 billion! That is quite a bit...

Correspondent: Wouldn't you like to have a little part of that?

Mikerin: If we had even 10 percent of Hamford--even that would be a great help in solving the problems of rehabilitation of the territories in the region of Chelyabinsk-40. Unfortunately, in our time, we did not find suitable conditions there for underground burial of waste, and therefore we opted for the creation of open reservoirs and enclosed storage facilities. Therefore, a large network of open waste-filled reservoirs emerged at Chelyabinsk-40, including also highly radioactive ones. Everyone knows, specifically, about Lake Karachay. The radioactivity there is high, and there is plutonium and uranium there. Today we are completing the first stage of its burial, covering it over with dirt. This is not easy. An original plan has been developed--first the division of the lake into small check-dams, and then their gradual coverage. There are two reservoirs there--numbers 10 and 11, which contain low-radioactivite waste. The South Urals Nuclear Power Plant was to have been built near them, which would have operated on the evaporation of the reservoirs and on reduction of the activity...

Correspondent: But now everyone agrees that it should be built?!

Mikerin: Several years ago, there was a strong anti-nuclear campaign, and the construction of the nuclear power plant was halted. Time passed, and everyone realized--even the fierce opponents of the plant--that a mistake had been made. The oblast today needs power as much as it needs air, and therefore the administration is appealing to the government with a request to continue construction of the plant. And, it would seem, all the necessary decisions have been adopted, but the plant is not being built. The combine has developed a system of vitrification of the radioactive waste--and all the waste from the fuel

obtained from the nuclear power plant has been vitrified. The glass blocks will be stored for 30 years at Chelyabinsk-40, and then, when the disintegration of the primary isotopes is complete, they will be placed in wells--for permanent storage.

Correspondent: In principle, do you have a specifically defined program of work for all the centers?

Mikerin: Of course. But everything rests on the economy. With a sick economy, the current nuclear industry cannot develop. I understand that time will pass, and the knowledge and experience of the nuclear engineers will necessarily come into demand once again. But today we must preserve the collectives, the experience and the knowledge which were accumulated over the almost half a century of history of nuclear science and industry. And we are trying to do this to the best of our ability.

https://fas.org/nuke/norris/nuc_09089301c_114.pdf

"Mikerin, Yevgeniy Dich--Currently, and prior to 1989, Head of Fourth Department, Isotope Separation, Reprocessing, and Production Technology, Ministry of Atomic Energy (and formerly Ministry of Atomic Power and Industry); in charge of isotope production (production reactors and uranium e~chment), chemical separation, nuclear waste management, and plutonium and uranium componemt manufacturing - activities conducted at Chelyabinsk- 65, Tomsk-7, and Krasnoyarsk-26. "

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Housatonic

John Lewis Mikovits (born 1931)

Born - April 14 1931 (https://premium.whitepages.com/name/John-Louis-Mikovits/Dickson-TN/9NcyB_CRcDKVPziwY0VtU5u5TCGArzHKpJfw1_-B3oc%3D?coresite_id=226aa556-dc79-4529-bed5-a04d7f2b90cdR&type=person_query&wp_content=link_result_record_sb1&wp_medium=PersonContactInfoUpsell&wp_term=SB_Person_Serp_A)

Children include :

- Dr. Judy Anne Mikovits (born 1958)

HousatonicITS Research Pages :

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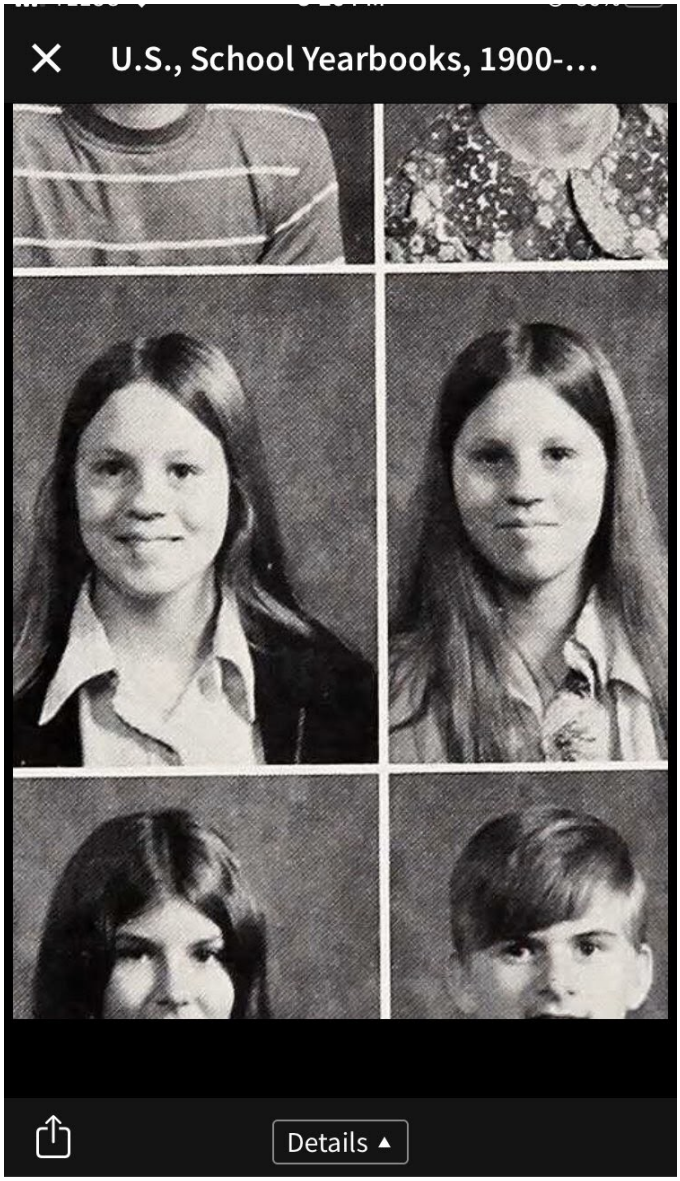
EVENT / EVIDENCE TIMELINE

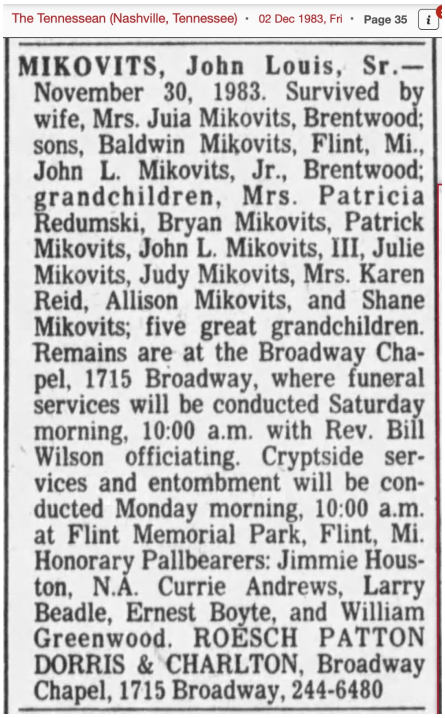
Daughters are twins - Judy and Julia Mikovits

Source - Twitter DM with a screenshot - Source is [HT004R][GDrive] - "On the left Judy, on the right Julia. Twins? Falls Church VA"



1983 (Dec 02) - Passing of John Louis Mikovits Sr. (father)

Full newspaper page - [HN00S9][GDrive]



The Tennessean (Nashville, Tennessee) · 02 Dec 1983, Fri · Page 35

MIKOVITS, John Louis, Sr.— November 30, 1983. Survived by wife, Mrs. Juia Mikovits, Brentwood; sons, Baldwin Mikovits, Flint, Mi., John L. Mikovits, Jr., Brentwood; grandchildren, Mrs. Patricia Redumski, Bryan Mikovits, Patrick Mikovits, John L. Mikovits, III, Julie Mikovits, Judy Mikovits, Mrs. Karen Reid, Allison Mikovits, and Shane Mikovits; five great grandchildren. Remains are at the Broadway Chapel, 1715 Broadway, where funeral services will be conducted Saturday morning, 10:00 a.m. with Rev. Bill Wilson officiating. Cryptside services and entombment will be conducted Monday morning, 10:00 a.m. at Flint Memorial Park, Flint, Mi. Honorary Pallbearers: Jimmie Houston, N.A. Currie Andrews, Larry Beadle, Ernest Boyte, and William Greenwood. ROESCH PATTON DORRIS & CHARLTON, Broadway Chapel, 1715 Broadway, 244-6480

[HN00SA][GDrive]

John L. Mikovits, Sr. dies

Review - Appeal - Dec. 6, 1983 WCHS

John Louis Mikovits, Sr. of Brentwood, 84, died on Wednesday, Nov. 30 at Baptist Hospital after a short illness. A native of Austria, he was the son of the late John L. and Marie Mikovits. He was retired from the Buick Motor Division of the General Motors Division of Flint, Mich.

Survivors are: wife, Mrs. Julia Mikovits, Brentwood; sons, Baldwin Mikovits, Flint, Mich., John L. Mikovits, Jr., Brentwood; nine grandchildren; five great grandchildren.

Services were conducted at the Broadway Chapel of Roesch, Patton, Dorris & Charlton on Saturday, Dec. 3, with the Reverend Bill Wilson officiating. Cryptside services and entombment were conducted on Monday, Dec. 5, at Flint Memorial Park.

Honorary pallbearers were: Jimie Houston, M.A. Currie Andrews, Larry Beadle, Ernest Boyte and William Greenwood. WCHS

[HL004I][GDrive]

Father (Sr) - immigration ?

https://www.fold3.com/image/26671750?terms=mikovits,john

https://www.fold3.com/image/236056979?terms=mikovits,john

https://www.fold3.com/image/236056626?terms=mikovits,john

1941 (Dec 07)

https://newspaperarchive.com/jefferson-city-news-and-tribune-dec-07-1941-p-10/

1941-12-07-jefferson-city-news-and-tribune-pg-10.png

1941-12-07-jefferson-city-news-and-tribune-pg-10-clip-mikovits

—K—

Music filled the dreams of John Mikovits when he came to this country from his native Russia after the World war number one. His fondest hopes were that his two sons, Baldwin, who is now 14, and John, Jr., now 10, should become a success in the musical world. Today his ambitions have been realized. Baldwin has already been acclaimed by such music masters as Fritz Kreisler, Albert Spalding, and others as "the greatest violin prodigy of the modern day." The second son, John, the pianist, made his debut before a critical gathering in Flint a short while ago, where he was instantly pronounced a budding musical genius. The career of the youngsters is as remarkable as it is meteoric, in that Mikovits trained the youngsters personally when he came home from his day's labors at the automobile plant, where he is employed as an expert mechanist on defense production. Mikovits thanks the Lord for the spirit that caused him to come to the United States, "The Land of Opportunity." He is now as loyal an American as the contry contains and is ready to sacrifice his son's musical career to serve the United States in war if need be. It is such stories as this one that warms the blood in the heart of all loyal Americans.

1941-12-07-jefferson-city-news-and-tribune-pg-10-clip-mikovits

1973 (Jan 22)

https://www.newspapers.com/image/111562317/?terms=mikovits%2Bjohn

1973-01-22-the-tennessean-pg-16

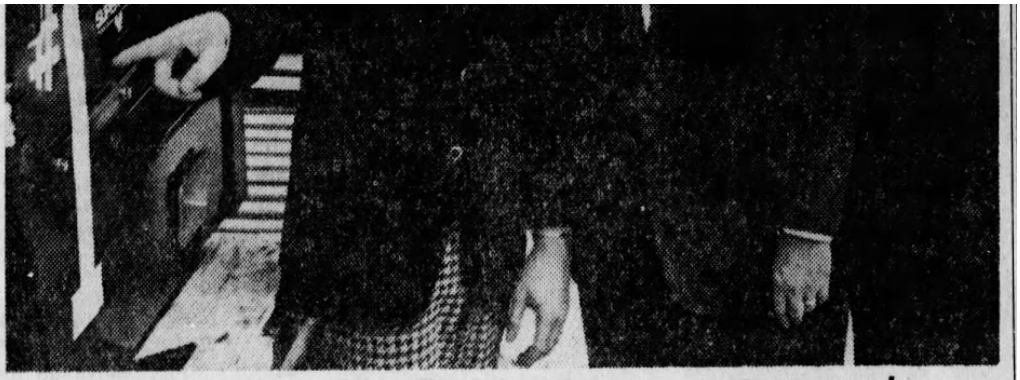
1973-01-22-the-tennessean-pg-16-clip-coats

Plant Near Lavergne Rolling

LAVERGNE, Tenn. — The Coats Co. has begun pilot production in its new $2 million plant in Interchange City with 153 employes and just over three months of time elapsed since plans for the 160,000 square-foot plant were announced.

John L. Mikovits, vice president and general manager of the company which produces automobile tire changing equipment and related accessories, said the company will add $1.2 million to the local payroll this year.

HE SAID a three-stage growth plan calls for the addition of 50 employes by next November and another 50 employes by November 1974 when production will be



Wasting No Time Getting Started

LAVERGNE, Tenn. — Viewing the Coats Co. production line for automobile tire changers are, from left, John L. Mikovits, vice president and general manager, Robert A. Hennessy, president of Hennessy Industries, Inc. of Chicago, William Allen, Coats' director of engineering, and Leon Nold, Coats' director of manufacturing.

further diversified in other wheel related equipment.

The industrial division of the Nashville Area Chamber of Commerce has estimated the cash generated by the company's payroll and sales will be about $12 million for the Rutherford-Davidson County economy this year.

Coats, headquartered in Fort Dodge, Iowa, is a subsidiary of Hennessy Industries, Inc. of Chicago, which through its subsidiaries, manufactures and distributes tire changers, service jacks, impact power tools, wheel balancing equipment and weights, tire studs and other similar equipment.

WITH AN initial model of a tire changer rolling off the production line last week, Mikovits said he was "extremely grateful to all those people who have taken a part in getting this facility into operation so quickly."

"I have been involved in locating new plants for many years, and this is the first time that all plans and expectations actually became realities. Everyone involved in this project had a lot to do, knew what they had to do and did it," he said.

Mikovits was complimentary of McDowell Development Corp., general contractor for the plant, and thanked George Barbee, vice president for industrial development for the Nashville Chamber of Commerce for "providing informative material and surveys which made Nashville and Middle Tennessee a logical choice for placing a new distribution plant."

HE SAID five base models of tire changers will be made here initially with daily production expected to reach 200 units.

The Coats market area covers the U.S. and includes parts of Europe and the Far East. The company has three distributors in Nashville and 10 others in Tennessee with a total of about 300 distributors and parts warehouses elsewhere across the nation.

1973 (June 24)

https://www.newspapers.com/image/111571605/?terms=%22john%2Bmikovits%22

1973-06-24-the-tennessean-pg-88

1973-06-24-the-tennessean-pg-88-clip-coats

John L. Mikovits, left, and Jack P . Hennessy admire a framed picture of comedian Bob Hope presenting an award to Hennessy for his contributions to international good will and understanding. The award was made by the National Tire Dealers and Retreaders Association to Hennessy, who is president of Hennessy International of Los Angeles, and executive vice president of Hennessy Industries, Inc., of Chicago. The award was presented at the NTDRA's annual convention last fall in Las Vegas. The picture was given to Mikovits and will hang in the executive conference room in the Coats plant at Interchange City.

Management Team Behind The Coats Co.

Just as men have women behind them (or most of them do) who keep them ticking over and making progress, companies have men behind them. They are the men who make the company go — and here are some of the team behind the Coats company.

* * *

John L. Mikovits is vice president of the Coats Company at Nashville, in addition to being general manager.

Mikovits joined Coats Company, a manufacturing facility for the Jack P. Hennessy Company, in 1971. Prior to that he spent 18 years with General Motors as a manufacturing executive.

One of Mikovits' outstanding achievements with Coats was the move of that company's production operations from Fort Dodge to the present expanded plant in Nashville.

Mikovits received his B.S. from General Motors Institute of Technology and his Masters from the University of Detroit. A veteran of the Korean War, he now resides in Nashville with his wife.

* * *

Jack P. Hennessy is president of Hennessy International, 3453 Cahuenga Boulevard, Los Angeles.

Hennessey is a Knight of the Military and Hospitaller Order of St. Lazarus of Jerusalem, and a Commander of the Chevaliers du Tastevin.

He is a member of the board of directors of the National Eye Research Foundation, Chicago; a member of the board of directors of the Los Angeles-Mexico DF Sister City Affiliate; a patron of the Eisenhower Medical Center, Palm Desert, California; chairman of the University of Southern California Parents League; a member of University of Southern California Associates, and a member of the Beverly Hills Wine & Food Society. His club memberships include Lake Side Golf Club, North Hollywood, California; Eldorado Country Club, Palm Desert, California.

Hennessy received his education at the University of Southern California, and at the School of Foreign Service of Georgetown University.

He served as a first lieutenant commanding in World War II and the Korean War.

Hennessy lives in Toluca Lake, California with his wife Shirlee and three children. They are Nancy, at University of Southern California, Mark at Notre Dame High School, and Lizbeth at Immaculate Heart High School.

* * *

Robert A. Hennessy is president of Jack P. Hennessy Industries, Inc. and in charge of finance. He graduated from Georgetown University and received a degree in Business Administration from Columbia University. He also served in the U.S. Navy.

Beginning with Jack Hennessy Sr. in 1954, he opened the first office in Chicago. He was President of Jack P. Hennessy Co. of Illinois in 1955 and when Hennessy bought Coats in 1962, he became president of Jack P. Hennessy Industries.

Hennessy lives in Chicago, Ill., and Lake Geneva, Wis., with his wife. He is a member of the La Quinta Club.

* * *

James D. Hennessy is executive vice president and director of marketing. He is also in charge of the Far East operations.

Hennessy received a law degree from Georgetown University. He was manager of an Arlington Village, Va., land developers' complex prior to joining Hennessy and also served in the Merchant Marine.

He lives in New Jersey with

(Turn to Page 13)

1973-06-24-the-tennessean-pg-88-clip-coats

1973 (June 17)

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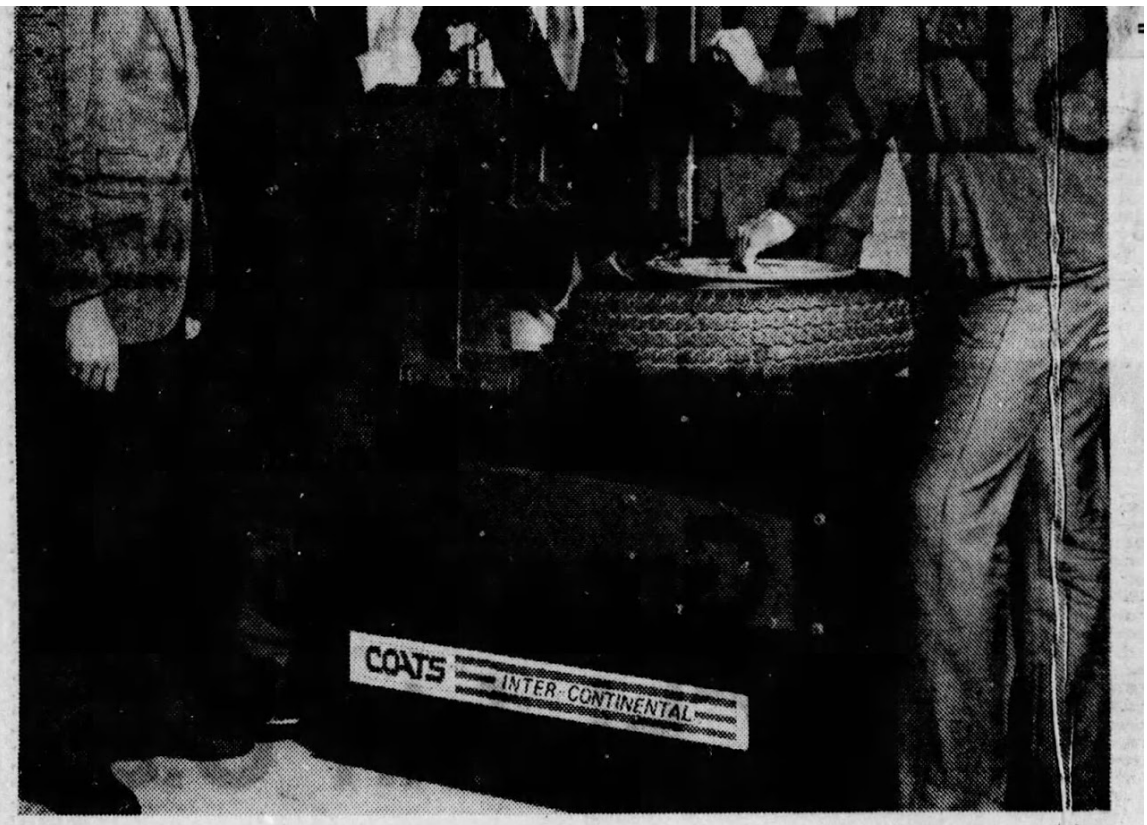
1973-07-17-the-tennessean-pg-2a

1973-07-17-the-tennessean-pg-2a-clip-euro-market



European Market in Mind

LAVERGNE, Tenn. — Mark P. Hennessy, right, demonstrates the Coats Co.'s new Inter-Continental-Nashville tire changer to Gerhard Dammann of Hamburg, Germany, Bernie Alm of Toronto, Canada, Jack Hennessy of Los Angeles, John L. Mikovits, Coats general plant manager, and George J. Papas of Caracus, Venezuela.

International Flavor Marks Area Firm's Product Show

LAVERGNE, Tenn. — The Coats Co., the world's largest manufacturer of tire changing equipment, showed off its latest model to a delegation of international representatives visiting the company's new plant in Interchange City last week.

Playing host to the visitors was Jack P. Hennessy of Los Angeles, president of Hennessy International of Los Angeles, and executive vice president of Hennessy Industries of Chicago, the parent firm of the Coats Co. which began pilot production here in January.

THE AGENDA of the company's first international group meeting was highlighted by a demonstration of Coats' first new model tire changer designed and built by local personnel at the new plant for sale on the international market.

Hennessy described the changer as "innovative" and said it is designed for initial distribution to the European market since it has the capability to handle European type car wheel rims which have no center holes.

He added that the machine can handle nearly any tire-rim combination without damage to either with particular attention focused on the growing use of sport rims made from chrome, magnesium and other alloys that are highly susceptible to damage in handling during tire-changing operations.

IN COMMENTING on the meeting, Hennesssy said the occasion "signified the company's strength abroad with executives attending from its leading distributors in Europe, Canada and South America.

John L. Mikowvits, Coats has plans for expansion into other wheel-related manufacturing operations and an increase in its work force over the next two years.

Visiting the plant with Hennessy was his son, Mark, representing the family's third generation in the Hennessy organization.

vice president and general manager of the havergne plant, praised the local engineering staff for the design of the equipment adding:

"We are certainly proud of our fine organization and extremely excited about our new home here in Middle Tennessee. We expect even greater things to happen in the future."

THE COATS plant occupies approximately 160,000 square-feet and represents an investment in excess of more than $2 million.

With 250 employes and an annual payroll exceeding $2 million, the plant makes six different base models of tire changers and produces about 200 units a day. The company

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1973 (June 24)

https://www.newspapers.com/image/111572408/?terms=%22john%2Bmikovits%22

1983 (October 20)

https://www.newspapers.com/image/393757914/?terms=%22john%2Bmikovits%22

1983-10-20-the-daily-news-journal-mufeesboro-tn-pg-74

1983-10-20-the-daily-news-journal-mufeesboro-tn-pg-74-clip-tri-tech

Tri Technical more than just engineering firm these days

By LISA LINDENSCHMIDT
Courier Staff Writer

With a history of corporate success under his belt, eight employees and a lot of optimism, John L. Mikovits established Tri Technical Corporation — an engineering firm — in January 1982.

But an engineering firm alone was not what he had in mind, and by October of that year Mikovits had reached an important goal in fulfilling the company name by building Tri Technical Corporation into a three-division company — engineering, construction and manufacturing.

By January 1983 he would reach a second goal by moving the company from Brentwood back to Rutherford County's Interchange City where he feels most at home.

"Work, commitment, dedication and starvation," is how Mikovits described the company's earliest growing pains.

Business was slow in the beginning — it took three months for the firm to get its first engineering contract — but by the end of its first fiscal year in July 1982, Tri Technical had secured $242,000 in business.

That amount would increase tenfold in another year.

This week Mikovits revealed that the General Motors corporation has selected Hofmann Corp. A.S.E. as the single source for GM-branded electronic wheel balancers. The selection includes a GM model LCB to be manufactured by Tri Technical Corp. GM will make formal announcements on Nov. 1.

"Most small companies, if run wisely, can grow very quickly, in an almost doubling effect until they reach a plateau," he explained.

And if Tri Tech's present growth rate indicates its future growth, Mikovits will meet his five-year goal of 100 employees and $10 million in gross sales.

However, it's not the dollar figures which motivate Mikovits, he explained, but a strong desire for achievement and a better quality of life for his employees, the community and himself.

"You need employees who are achievers themselves and who fit into the objective of the company," Mikovits said. "When you enhance learning and achievement, and in turn upgrade the quality of your products and services, a profit will occur and everyone will make money."

Extracting from people what they never thought they had to offer — recognizing the meaning of pulling people together — "that's what management is all about," Mikovits declared, "bringing out the best in people."

An engineer with a history in corporate management, Mikovits was vice president and general manager of the Coats Co. in LaVergne from 1971 until his 1979 move to Nortron, Inc., a subsidiary of Sun Electric Corporation.

Sun constructed the multi-million-dollar Rutherford Assembly Division in 1980 where Mikovits was named president and chief operating officer.

But the plant was closed the following year, a great disappointment, he recalled, and it was then that he turned his energies toward Tri Technical Corporation.

"Tri Technical has three technical divisions which are all operated and managed separately, but together contribute to the corporate objective of growth and profit," Mikovits said.

The company established itself on engineering contracts, but soon after obtaining a state general contractor's license in August 1982 was awarded a construction contract at Avco Aerostructures in Nashville which later earned an outstanding management award for its work on B1 Bomber projects.

A month later, Tri Technical signed a substantial manufacturing contract with the Hofmann Corp., a worldwide manufacturer and distributer of auto service equipment.

"With that contract, all three divisions were up and running," he recalled.

But there was one more adjustment which needed to be made, Mikovits said, and he made it last January when he moved the firm to a 30,000-square-foot facility in Interchange City.

TRI TECHNICAL PRESIDENT JOHN MIKOVITS

"I really feel close to this area," he said. He designed the Coats Co. manufacturing plant in Interchange City when the only other building there was the Firestone plant, the only street was Firestone Boulevard and it was not yet paved. Mikovits also designed the Sun Electric plant which stands in Interhcange City East.

And now he has plans — in color, framed and on his wall — for a new 80,000-square-foot Tri Technical Corporation facility in his Interchange City home base. "Our plan is to begin construction in the park by next July," he said. "It'll be our own facility — the foundation for some very ambitious grwoth."

Building Tri Tech into a household word in the neighborhood, as Nissan has come to be, is part of that ambition, Mikovits said. "As Nissan grows, we can be part of that growth and complement it."

The firm has been awarded many contracts at Nissan, ranging from the installation of 54 frame line robots to the mechanical and electric installation of overhead conveyors. Tri Tech engineers still serve Nissan during their startup period.

The firm also has had contracts with NKC of America, OTC of America, Teledyne, Ingersoll and others. Having recently constructed Huff's Bi-Rite supermarket in Brentwood, the firm is now bidding several projects and negotiating other substantial contracts, Mikovits said.

Tri Technical now employees more than 40 people.

1985 (Aug 25)

1985-08-25-the-daily-news-journal-mufeesboro-tn-pg-18.jpg

1985-08-25-the-daily-news-journal-mufeesboro-tn-pg-18-clip-lavergne-company.jpg

https://www.newspapers.com/image/393994352/?terms=%22john%2Bmikovits%22

6B Sun., Aug. 25, 1985, Murfreesboro, Tenn., News Journal

DNJ photo by Karen McCollum

TRI TECH DEDICATION — Nissan president Marvin Runyon congratulates Tri Technical Corp. president John Mikovits on his company's new plant facility during a dedication ceremony. The plaque was presented to all Tri Tech employees for their "loyalty and personal commitment" to the company.

Business News

LaVergne company is truly high tech

By KAREN McCOLLUM
News Journal Staff Writer

LAVERGNE — High technology in Rutherford County has reached new heights — and ventured into outer space — with the launching of a $1.5 million space shuttle contract by Tri Technical Corp.

During the recent dedication ceremony for Tri Tech's new plant facilities on Southway Boulevard, president John L. Mikovits announced the landing of a $1.5 million space shuttle contract with Gates Learjet Corp. and the acquisition of Mid-South Drywall Company of Madison.

"We are honored and delighted to have been chosen by Gates Learjet from amongst the stiffest hi-tech competition in the country," he said. "It's great for Tri Tech's people, the city of LaVergne and the state of Tennessee."

The ceremony marked the company's success story, rising in 3½ years from "a clean piece of paper to $7 million in gross sales for this fiscal year," he told the 150 employees and guests who attended the dinner and dedication.

Partitioned off from the band, chorus and guests seated at tables covered with white linen cloths, were numerous blue wheel balancers Tri Tech employees had manufactured only days before.

"The story began November 1981 with the shutdown of Sun Electric," he explained to guests seated in the plant.

Over 250 employees lost their jobs. Marvin Runyon, president of Nissan Motor Manufacturing Corp. U.S.A. in Smyrna, and guest of honor, agreed to evaluate and eventually hired over 100 of those people.

Since that time, Mikovits said, Tri Tech has performed numerous jobs for Nissan and other firms, establishing itself "firmly in the engineering, construction, manufacturing and now aerospace divisions" of industry.

On May 15, Mikovits said, he purchased the outstanding stock in Mid-South Drywall Company.

"Mid-South Drywall ranks among the top drywall companies in the country, specializing in hospital and high rise subcontract construction and renovation. Our work carries us through many states from Florida to the state of Washington," he said.

In addition he announced the following staff promotions: John Mikovits, president, Tri Technical Corp. and Mid-South Drywall Co.; Gene W. Pierce, senior vice president, Tri Technical Corp.; C. Clayton King, vice president, construction division, Tri Technical Corp.; James R. Pierrot, vice president, engineering-aerospace division, Tri Technical Corp.; Steve Gedelman, vice president, Mid-South Drywall Co.

Mikovits said the company will share Tri Tech's new plant facilities at 144 Southway Blvd., adjacent to Interchange City in LaVergne.

With the landing of the space shuttle contract, the new facilities must already be expanded. And on Aug. 12 workers broke ground in readiness for the new project.

Mikovits estimates it will take 60 days to complete and they will add about 14,000 square feet to the present 28,000 square-foot facility.

The equipment to be housed in the new two-story low bay will stand 20 feet tall, 60 feet long, 38 feet deep and will weigh approximately 40 tons, taking nearly 50 weeks to build, he explained.

The equipment, a computer-controlled CRT 400-CNC, was specifically designed for fastening fuel tank panels for the booster rockets, which will propel the space shuttle into its final orbit.

Mikovits told the audience the company's progress and growth was only possible through the Tri Tech employees.

"The people of Tri Tech made it happen against all odds," he said, "growing from six to 65 permanent and 130 temporary employees, from a clean piece of paper to $7 million in gross sales."

For that reason, he asked Runyon to present the company's dedication plaque to the two most senior hourly employees. The inscription on the plaque read, "To all employees of Tri Tech, whose loyalty and commitment made it possible."

Runyon told the audience that the company's accomplishment of the past 3½ years "speaks for itself."

"I knew he had the right stuff to make this company grow," Runyon said. "People are this company's valuable resource."

In addition, Runyon also presented 21 Tri Tech employees with employee-of-the-year plaques.

Mayor Vester Waldron presented Mikovits with the key to the city.

"Thanks to you and your staff and your foresight in LaVergne, LaVergne is now known as high-tech Tri Tech country," Waldron told Mikovits.

During the ceremony, Mikovits presented Runyon, this year's chairman of United Way in Nashville, with a check for $11,111.11.

"John L. Mikovits is listed as a President, Director with Mid-South Drywall Company, Inc. in Florida. The address on file for this person is 401 Granny Whitepike, Brentwood, TN. The company is a Florida Foreign Profit Corporation, which was filed on March 13, 1986. The filing status is listed as Inactive. The address on file for this company is 144 Southway Blvd., Lavergne, FL 37086-3614 in Rutherford County. The Registered Agent of record is C T Corporation System "

https://www.bizapedia.com/people/tennessee/brentwood/john-mikovits.html

What happened to "Tri Tech" or "Tri Technical Corp" in laVergne ?

1988

https://www.newspapers.com/image/112956134/?terms=%22tri%2Btechnical%2BCorp%22

1990 (Sep) - Liquidation sale of Tri-Technical Corporation

https://www.newspapers.com/image/113171310/?terms=%22tri%2Btechnical%2BCorp%22

1990-09-09-the-tennessean-pg-h-20

1990-09-09-the-tennessean-pg-h-20-clip-tri-tech

ABSOLUTE AUCTION

COMPLETE LIQUIDATION
TRI-TECHNICAL CORP. & MID-SOUTH DRY WALL CO.
144 SOUTHWAY BLVD. - LAVERGNE, TENN.

THURS. SEPT. 20 10:30 A.M.

FACTORY • DRY WALL • ENGINEERING • CONSTRUCTION • MACHINERY • OFFICE & LUNCH ROOM EQUIPMENT

DIRECTIONS: From Nashville, take I-24S to Exit #64 (Waldron Rd.) to 2nd. Traffic light, turn rt. to sale.

A PARTIAL LIST OF ITEMS TO BE SOLD AS FOLLOWS:

OFFICE & LUNCH ROOM FURNITURE & EQUIPMENT

(2) Olympia Typewriters ES1000
(6) 4-Drawer Files
Sofas & Love Seats
(16) Executive Wood Desks
Credenzas, Tables
Electra 16/48 Phone System
(3) Sectional Desks
Electric Paper Shredder
Minolta EP4502 Copier
Ricoh Rapicom Fax Machine
Okidate 84 Microline Printer
Brass Lamps
GE Humidifier
(10) Stack Chairs
(2) Lunchroom Tables
GE Side-by-side Refrigerator
Microwave Oven
Coffee Maker

ENGINEERING DEPARTMENT

AM Bruning PD 178 Copier
(2) Metal Filer Planhold
Hewlett Packard Draft Master w/2 Control Boxes
Multitech Computer
Magnavox Computer
(7) Drafting Tables/Chairs
Macro 80 Assembler
Mice Hoffman
Blueprint Machine
Temperature Meter
Capacitance Meter
Mulit Meter
A-B Industrial Terminal - T3
Personality Module
Pro Log Software
File Unit, Cap & Base
Master Precision Level
(2) Fowler SN52-215-012 /SN53-672-081
Mod. 53 Compression Small Load Cell w/52' Cable, MD/NK
Portable Transducer Indicators
Fluke Multimeter 75
Micro Computer System (CAD)
Desk Top Pal-Rev. 1.02-Ser. #5-00018
Hitachi Tiger Tablet HDG-1111
(2) Minuteman 500 w/Backup
(2) Disk Verbatim
Hewlett-Packard Draft Master 18 Pem A-E
TNB EDPSW-Wiremarking Software Prog. Graybar
Micro Computer System (#2) (Micro Com)
Para Sys Minute Man 500 Backup Battery

1990-09-09-the-tennessean-pg-h-20-clip-tri-tech

MACHINERY & FACTORY EQUIPMENT

Do All Saw
Arbor Press (2)
14 Metal Work Tables
Sigma Turret Lathe (2)
Air Compressor - Plant Air
Bridgeport Mill
Powermatic Disc. Sander
4 Metal Shelvings
65 Metal Bins w/390 Shelves
Metal Work Table
33# Steel Cylinder
Steel Storage Rack
Paint Booth Fan
6" Bench Grinder
Tapmatic Tapping Attach.
McDonald Scale
V Blocks & Clamps
20" Vert. Band Saw
Hilti Drill #TE72
Formula 62 Streess Relicit Machine
Steel Rack
Paint Pots, Hose, Gun, etc.
RCC 450 Rus Hobart Welder (2)
Walker & Turner Drill Press
Drafting Table #A5-234
Safe Meilink Ser. #72-73685
Rotex Punch Mod. 18A51
E-Prom Eraser & Light
Torgue Wrench
Fan Base/Circulator (2)
Lincoln Welder
Hipot
JGA 502 Devib-Gun
Universal Rotary Table 9"
York Forklift
Chevalier Mod. FSG-2A618-Surface Grinder s/n 2A-2352
Lawn Mower 12 HP Murry
Oscilloscope #Bo36048
Chevalier Mod. FCG-714L Tool & Cutter Grinder #714L287
Yam Engine Lathe
Stub Arbors 2470029
Elec. Power Tube Bender & Flaring Dics
Tube Bender Accessories
Radius Block #550578
5C Round Collect Set (33 pc.)
Tube Bender Stand & Flaring Die #8
Victor VCM Torch Cutting Machine
36" Scale for Bridgeport P/N 11813130
Pilgram Milling Machine Mod. 4 V5 & Accessories
3' Radial Arm Profit Master Drill & Accessories
Boring Head Combo & Access.

CONSTRUCTION EQUIPMENT

Ladders (3)
Air Hammer/Torch
Pipe Cutter/Threader
Welder & Attachments
Air Compressor (2)
Enerpac Bender
Milwaukee Hammer/Drill Kit
Hycter Fork Truck
Air Compressor Paint Spayer
Marita Grinder
Lietz Transit Level, Tripod
Detal Metal Lock Box
Power Drive Treader
Pipe Vise Stand. Oiler & Pot
Band Saw
Hilti Cone Drill & Accessories

SMALL TOOLS

Do All Tool Holder
Wire & Letter Drill Set
Angle Drill
Torgue Wrench
Weller OV Solder Station
Hand Crimping Tool
Wrench Torgue 3/4"
Drill Press 3/4" Mag
Hand Chain Hoist w/20' Lift 1½T.
Sander, 4076 & RT Angle-Wildcar 6000RPM
End Mill Cutter/Sharpener
Drill Grinder #91000
Collis #6733, Collett #64133-Collet #64132
3 ea. Terminal Install Tools
Engraving Mach. & Acc. (Hermes Inc.)

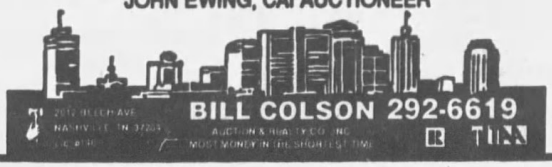
DRY WALL EQUIPMENT

16' Gooseneck Trailer
6 Spectra-Physice Laser Levels-w/Power Pack
2 Tape Tech Finishing Units
Hilti Drive Tools
Scaffolding
8 Job Boxes w/Casters
(10) 6' Ladders
(13) 10' Ladders
(27) 8' Ladders
4 Board Carts
6 Board Dollies
3 Pallet Jacks
Spray Insulation Machine
Misc. Dry Wall Supplies
16 Radio w/Chargers - Radio Maxon & Motorola

TERMS: Cash or approved check day of sale. Out-of-state buyers must have a recent bank letter of credit if paying by check. Positive ID required for a bidding number.

COLDWELL BANKER - RANDY WOLCOTT, AGENT
JOHN EWING, CAI AUCTIONEER

FAX 292-2609



SALE #98490

1991 - Building re-purposed

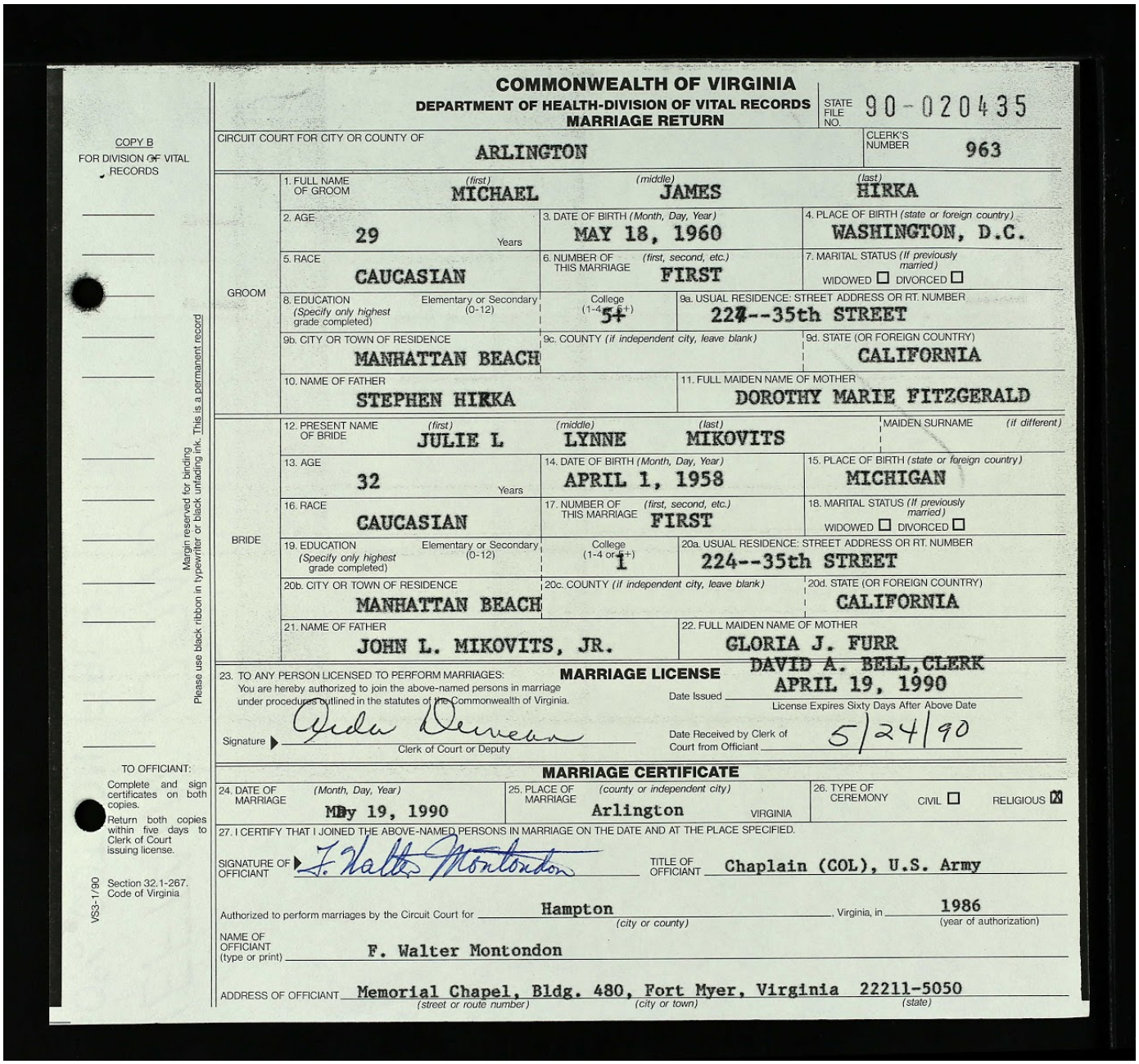
https://www.newspapers.com/image/112429643/?terms=%22tri%2Btechnical%2BCorp%22

1996

https://www.newspapers.com/image/422876296

Marriage

Below - [HL003W][GDrive]



COMMONWEALTH OF VIRGINIA
DEPARTMENT OF HEALTH-DIVISION OF VITAL RECORDS
MARRIAGE RETURN

STATE FILE NO. 90-020435

COPY B
FOR DIVISION OF VITAL RECORDS

CIRCUIT COURT FOR CITY OR COUNTY OF: ARLINGTON
CLERK'S NUMBER: 963

GROOM

1. FULL NAME OF GROOM	(first) MICHAEL	(middle) JAMES	(last) HIRKA
2. AGE: 29 Years	3. DATE OF BIRTH (Month, Day, Year): MAY 18, 1960	4. PLACE OF BIRTH (state or foreign country): WASHINGTON, D.C.	
5. RACE: CAUCASIAN	6. NUMBER OF THIS MARRIAGE (first, second, etc.): FIRST	7. MARITAL STATUS (If previously married) WIDOWED ☐ DIVORCED ☐	
8. EDUCATION (Specify only highest grade completed) Elementary or Secondary (0-12): 12	College (1-4 or 5+): 5+	9a. USUAL RESIDENCE: STREET ADDRESS OR RT. NUMBER: 224--35th STREET	
9b. CITY OR TOWN OF RESIDENCE: MANHATTAN BEACH	9c. COUNTY (if independent city, leave blank):	9d. STATE (OR FOREIGN COUNTRY): CALIFORNIA	
10. NAME OF FATHER: STEPHEN HIRKA		11. FULL MAIDEN NAME OF MOTHER: DOROTHY MARIE FITZGERALD	

BRIDE

12. PRESENT NAME OF BRIDE	(first) JULIE L	(middle) LYNNE	(last) MIKOVITS — MAIDEN SURNAME (if different)
13. AGE: 32 Years	14. DATE OF BIRTH (Month, Day, Year): APRIL 1, 1958	15. PLACE OF BIRTH (state or foreign country): MICHIGAN	
16. RACE: CAUCASIAN	17. NUMBER OF THIS MARRIAGE (first, second, etc.): FIRST	18. MARITAL STATUS (If previously married) WIDOWED ☐ DIVORCED ☐	
19. EDUCATION (Specify only highest grade completed) Elementary or Secondary (0-12): 12	College (1-4 or 5+): 1	20a. USUAL RESIDENCE: STREET ADDRESS OR RT. NUMBER: 224--35th STREET	
20b. CITY OR TOWN OF RESIDENCE: MANHATTAN BEACH	20c. COUNTY (if independent city, leave blank):	20d. STATE (OR FOREIGN COUNTRY): CALIFORNIA	
21. NAME OF FATHER: JOHN L. MIKOVITS, JR.		22. FULL MAIDEN NAME OF MOTHER: GLORIA J. FURR	

MARRIAGE LICENSE

23. TO ANY PERSON LICENSED TO PERFORM MARRIAGES:
You are hereby authorized to join the above-named persons in marriage under procedures outlined in the statutes of the Commonwealth of Virginia.

Signature: Clerk of Court or Deputy

Date Issued: DAVID A. BELL, CLERK APRIL 19, 1990
License Expires Sixty Days After Above Date

Date Received by Clerk of Court from Officiant: 5/24/90

MARRIAGE CERTIFICATE

24. DATE OF MARRIAGE (Month, Day, Year): May 19, 1990	25. PLACE OF MARRIAGE (county or independent city): Arlington VIRGINIA	26. TYPE OF CEREMONY CIVIL ☐ RELIGIOUS ☒

27. I CERTIFY THAT I JOINED THE ABOVE-NAMED PERSONS IN MARRIAGE ON THE DATE AND AT THE PLACE SPECIFIED.

SIGNATURE OF OFFICIANT: F. Walter Montondon
TITLE OF OFFICIANT: Chaplain (COL), U.S. Army

Authorized to perform marriages by the Circuit Court for Hampton (city or county), Virginia, in 1986 (year of authorization)

NAME OF OFFICIANT (type or print): F. Walter Montondon

ADDRESS OF OFFICIANT: Memorial Chapel, Bldg. 480, Fort Myer, Virginia 22211-5050
(street or route number) (city or town) (state)

TO OFFICIANT:
Complete and sign certificates on both copies.
Return both copies within five days to Clerk of Court issuing license.

VSS-1/90 Section 32.1-267. Code of Virginia

Please use black ribbon in typewriter or black unfading ink. This is a permanent record. Margin reserved for binding.

[HL003W][GDrive]

2019 (Jan 22) - Passing of wife Gloria Furr-Fornshill

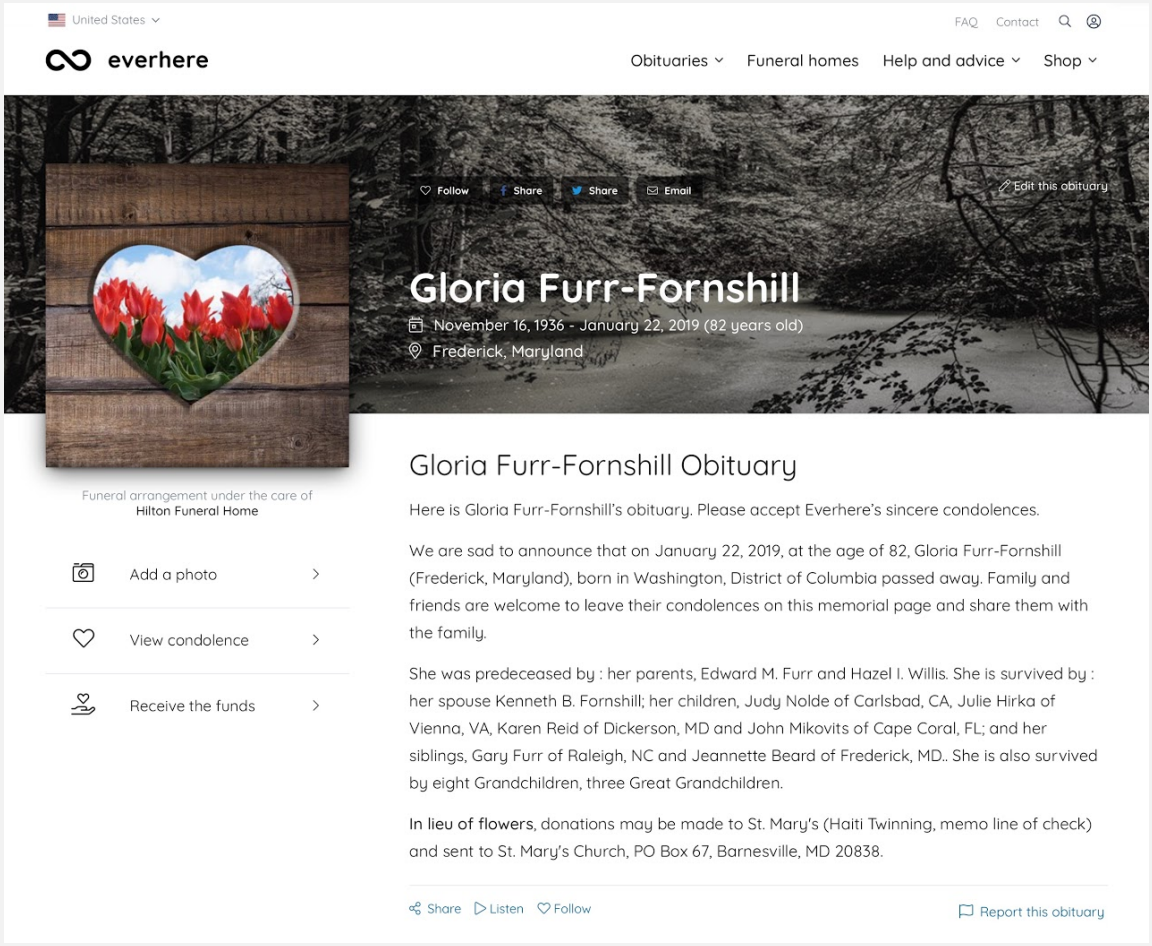
PDF - at [HL003X][GDrive]

November 16, 1936 - January 22, 2019 (82 years old)

Here is Gloria Furr-Fornshill's obituary. Please accept Everhere's sincere condolences.

We are sad to announce that on January 22, 2019, at the age of 82, Gloria Furr-Fornshill (Frederick, Maryland), born in Washington, District of Columbia passed away. Family and friends are welcome to leave their condolences on this memorial page and share them with the family.

She was predeceased by : her parents, Edward M. Furr and Hazel I. Willis. She is survived by : her spouse **Kenneth B. Fornshill**; her children, **Judy Nolde** of Carlsbad, CA, **Julie Hirka** of Vienna, VA, **Karen Reid** of Dickerson, MD and **John Mikovits** of Cape Coral, FL; and her siblings, **Gary Furr** of Raleigh, NC and Jeannette Beard of Frederick, MD.. She is also survived by eight Grandchildren, three Great Grandchildren.



[HL003Y][GDrive]

BITCHUTE @Housatonic YOUTUBE @HousatonicLive ODYSEE @Housatonic BRIGHTEON @Housatonic

Housatonic

Dr. Judy Anne Mikovits (born 1958)

Wikipedia Judy Mikovits

Born - April 1 1958

Parents - Father is John Lewis Mikovits (born 1931)

HousatonicITS Research Pages :

- **Professional relations:**
  - Long-time professsional associate of Francis William Ruscetti (born 1943)
  - XMRV research was questioned in 2010 by Dr. Kuan-Teh Jeang (born 1958) (he passed January 2013)
- **Employers**
  - EpiGenX Pharmaceuticals
- **Other**

Saved Wikipedia

See [HK0020][GDrive]

Judy Anne Mikovits (c. 1958) is an American anti-vaccination activist, conspiracy theorist, and former medical researcher. She has made several claims regarding vaccines, coronavirus, and chronic fatigue syndrome (CFS). As research director of CFS research organization Whittemore Peterson Institute (WPI) from 2006-2011, Mikovits led a research effort that reported in 2009 that a retrovirus known as xenotropic murine leukemia virus-related virus (XMRV) was associated with CFS and may have had a causal role. However, the research came under fire, leading to an eventual retraction on December 22, 2011, by the journal *Science*.[8] In November 2011, she was arrested and held on charges that she stole from WPI, but she was released after 5 days and the charges were later dropped. In 2020, Mikovits drew attention online for promoting conspiracy theories about the COVID-19 pandemic that were fact-checked and found to be either false or not based on scientific evidence.

Education

In 1980, Mikovits was awarded a Bachelor of Science degree in chemistry with a specialization in biology at the University of Virginia. After graduation, she went to the National Cancer Institute in Frederick, Maryland, where she developed purification methods for interferon alpha. In 1986–1987, she started working at Upjohn Pharmaceuticals in Kalamazoo, Michigan, working to develop production methods to ensure biological materials manufactured using human blood products were free of contamination from HIV-1. In 1992 she completed a joint PhD program in biochemistry and molecular biology at George Washington University.[13] Her PhD thesis was titled *"Negative Regulation of HIV Expression in Monocytes."* Mikovits was a postdoctoral scholar in molecular virology at the Laboratory of Genomic Diversity, National Cancer Institute, under Dr. David Derse.

Early career

Mikovits worked for Francis "Frank" Ruscetti at the National Cancer Institute in Maryland during the 1980s. She remained in his lab as a postdoctoral researcher. Her work with Ruscetti included studies of several retroviruses and their interactions with the immune system.

XMRV and CFS

Harvey Whittemore and his wife Annette were frustrated by lack of answers for CFS patients, including their daughter. In an effort to solve the CFS problem, they created the Whittemore Peterson Institute in 2005; Mikovits became the research director in 2006. Attempts to find a viral cause of CFS were unsuccessful.[16]

In 2007, Mikovits met a co-discoverer of XMRV, Robert Silverman, at a conference. Silverman had found XMRV sequences, which are highly similar to mouse genomic sequences, in prostate cancer specimens several years earlier. Using tools obtained from Silverman, Mikovits began to look for XMRV in her CFS samples. In late 2008, a graduate student, who subsequently was hired as her technician, obtained two positive results from a group of twenty samples. He and Mikovits successively altered the experimental conditions until all samples gave a positive signal.[16]

In 2009, Mikovits and co-workers reported in the journal *Science* that they had detected XMRV DNA in CFS patients and control subjects. Negative results were published soon after, disputing Mikovits's findings. Silverman, who was a co-author of the original XMRV-CFS article, told the Chicago Tribune that he was "concerned about lab contamination, despite our best efforts to avoid it."

Two of the original authors of this paper subsequently reanalyzed the samples used in the research and found that the samples were contaminated with XMRV plasmid DNA, leading them to publish a partial retraction of their original results.[20] In December 2011, after a request by first author Robert Silverman, the editors of *Science* retracted the paper in its entirety.[21][22]

Lo and Alter, in their 2010 paper titled "Detection of MLV-related virus gene sequences in blood of patients with chronic fatigue syndrome and healthy blood donors", stated "Although we find evidence of a broader group of MLV-related viruses, rather than just XMRV, in patients with CFS and healthy blood donors, our results clearly support the central argument by Lombardi et al. that MLV-related viruses are associated with CFS and are present in some blood donors." This paper was also later retracted by the authors.

In either September or October 2011, Mikovits was terminated by the WPI due to disputes over the control of lab samples and the integrity of her work; she subsequently came under investigation for alleged manipulation of data in her publications related to XMRV. On November 18, 2011, she was arrested in her Ventura County, California, home and jailed for 5 days based on WPI's allegations that she stole lab notebooks, a computer, and other material. She was held temporarily pursuant to that case, and her lawyer said the charges had no merit. By November 28, after negotiations with the WPI, some lab notes were returned. Later, the criminal charges brought against Mikovits by Washoe County, Nevada, were dismissed by the District Attorney and Assistant District Attorney in Reno, Nevada.

Mikovits and collaborators went on to participate, alongside two other research groups, in a larger 2012 study with 147 CFS patients and 146 controls. The study concluded that there was no evidence of XMRV or MLV infection in either group, a result that Mikovits said was "the definitive answer" on the issue.

Anti-vaccination activism and conspiracy theories

Mikovits has become a champion for believers in medical conspiracy theories, basing claims linking the XMRV to autism and cancer on other retracted papers, and claiming she had been jailed by the influence of the deep state and Big Pharma. This final claim refers to her arrest in 2011 for allegedly stealing materials from WPI.

Mikovits has spoken at a number of anti-vaccination events. She has claimed that retroviruses have contaminated 30% of vaccines.

Mikovits has garnered criticism from scientists for stating that XMRV is a communicable infection which is "clearly circulating through the population, as is our fear and your fear". Virologist Vincent Racaniello said that Mikovits's assertion "is just inciting fear." Mikovits showed slides at a conference linking XMRV to Parkinson's disease, autism and multiple sclerosis. However, there is no published evidence that XMRV is associated with these diseases.

Coronavirus conspiracy theories

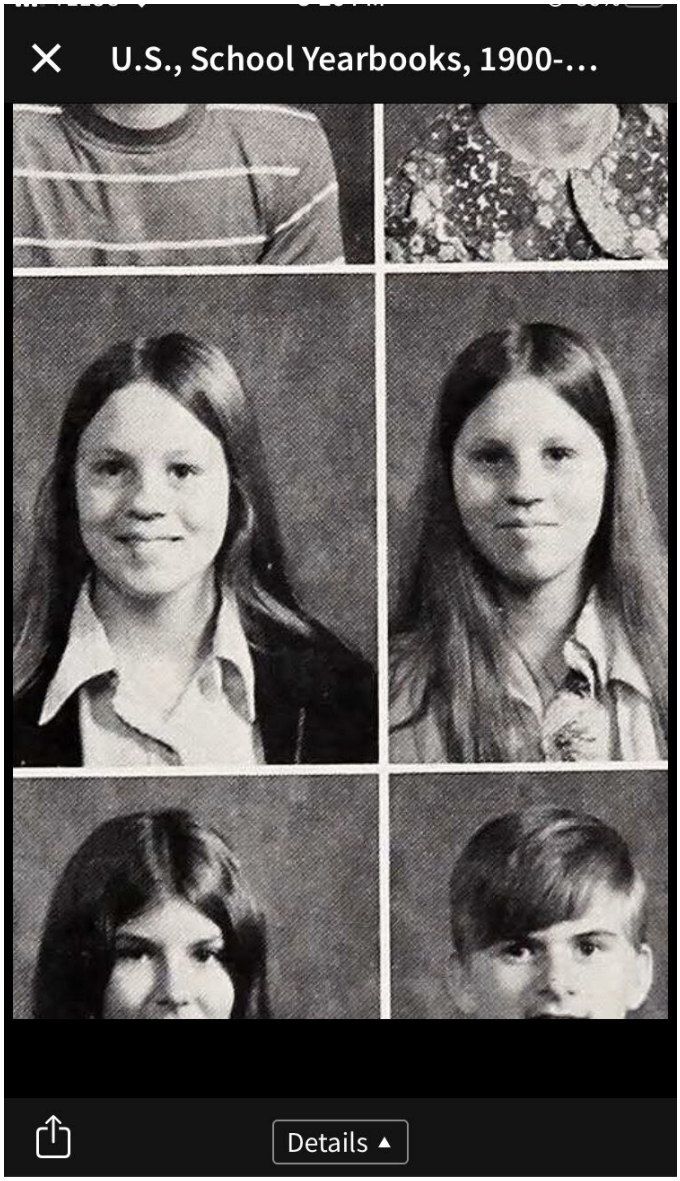
Mikovits gained attention on social media for promoting her ideas about the COVID-19 pandemic. She does not believe that a vaccine is needed to prevent COVID-19, and claims that the coronavirus was "caused by a bad strain of flu vaccine that was circulating between 2013 and 2015". She also claimed masks will “activate” the virus and reinfect a mask-wearer over and over. One of her videos about the coronavirus pandemic was fact-checked by the website Maldita.es, which rated the claims she made as either false or not based on evidence. The *Republic World* website also fact-checked her claim that the global health system uses vaccines as weapons to make profits, judging that the claim was false. *Politifact* described the video as "a deep dive into conspiracy theories about COVID-19, public health and the pharmaceutical industry." *The Daily Beast* reported that "experts say the allegations Mikovits lays out in the interview with Willis don’t stand up to the slightest scrutiny".

One such circulating video gained notoriety in May 2020. Titled *Plandemic Part 1*, this film is a half-hour long documentary-styled interview of Mikovits's perspective on the accusations thrown upon her by the WPI. YouTube removed this video from its website a number of times, citing its Community Guidelines. It was later removed by Vimeo and Facebook for similar reasons. David Gorski reviewed the video for his blog and remarked that "the amount of nonsense, misinformation, disinformation, and conspiracy mongering in Mikovits’ response to questions is truly epic."

EVENT / EVIDENCE TIMELINE

Twin sisters - Judy and Julia Mikovits

Source - Twitter DM with a screenshot - Source is [HT004R][GDrive] - "On the left Judy, on the right Julia. Twins? Falls Church VA"



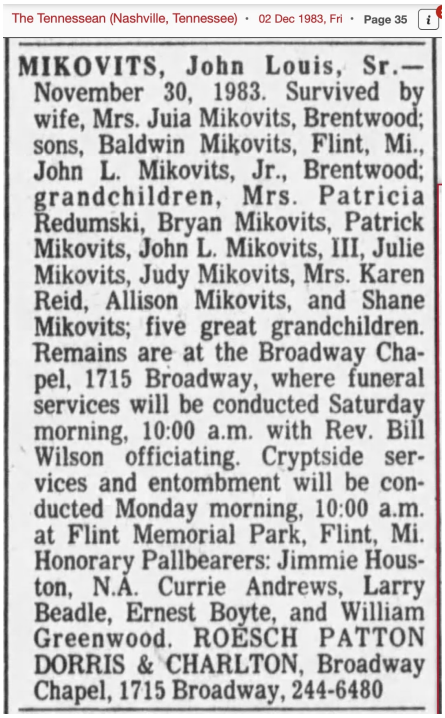
1981 - Bloodmobile / blood donation assistance ?

https://newspaperarchive.com/news-dec-10-1981-p-14/

1983 (Dec 02) - Grandfather passing (John Louis Mikovits Sr.)

Full newspaper page - [HN00S9][GDrive]

Q - "In that obituary, Karen Reid may be related to Harry Reid" ? A - "I checked and Karen Reid is not Harry's wife"



The Tennessean (Nashville, Tennessee) • 02 Dec 1983, Fri • Page 35

MIKOVITS, John Louis, Sr.— November 30, 1983. Survived by wife, Mrs. Juia Mikovits, Brentwood; sons, Baldwin Mikovits, Flint, Mi., John L. Mikovits, Jr., Brentwood; grandchildren, Mrs. Patricia Redumski, Bryan Mikovits, Patrick Mikovits, John L. Mikovits, III, Julie Mikovits, Judy Mikovits, Mrs. Karen Reid, Allison Mikovits, and Shane Mikovits; five great grandchildren. Remains are at the Broadway Chapel, 1715 Broadway, where funeral services will be conducted Saturday morning, 10:00 a.m. with Rev. Bill Wilson officiating. Cryptside services and entombment will be conducted Monday morning, 10:00 a.m. at Flint Memorial Park, Flint, Mi. Honorary Pallbearers: Jimmie Houston, N.A. Currie Andrews, Larry Beadle, Ernest Boyte, and William Greenwood. ROESCH PATTON DORRIS & CHARLTON, Broadway Chapel, 1715 Broadway, 244-6480

[HN00SA][GDrive]

1983 - big brother / big sister

https://newspaperarchive.com/frederick-news-post-nov-29-1983-p-6/

1985 (Feb 21)

Full newspaper page - [HN00S7][GDrive]

Explaining careers

In the left photo, Cindy Geraghty, left, of Casual Corner, and Alberta Reed, of Routzahn's, talk to Brunswick students about their careers in fashion display and retail management. At right, Judy Mikovits, a biochemist at the NCI-FCRF, discusses her career. (Photo by Pearl Roberts, Brunswick High)

1985-02-21-frederick-news-post-pg-11-clip-mikovits

[HN00S8][GDrive]

1988 (Jan 08)

Full newspaper page - [HN00S5][GDrive]

Bulletin Board

Big Brothers/Big Sisters appreciation luncheon Jan. 24

The fifth annual appreciation lunch of Big Brothers/Big Sisters will be held Sunday, Jan. 24 at the Sheraton Inn at 12:30 p.m. All active Big Brothers/Big Sisters, Little Brothers/Little Sisters and board members are invited. There is no charge. Potential Big Brothers/Big Sisters accompanied by active BB /BS will have an opportunity to get to know the program.

Barbara Brittain, one of the parents, and Helen Davis, an active Big Sister, will share their experiences. The following Big Brothers/Big Sisters will receive various awards:

Cheryl Bingham, Connie Caffes, Gerry Chipman, Helen Davis, Elizabeth Jones, Rose Lechner, George Blickenstaff, David Denton Jr., Diana Colliflower, Wanda Edens, Lisa Farbstein, Camille Kime, Barbara Mims, Sandra Motichak, Mary Pat Peace, Patricia Pearl, Susan Welcos, Charles Cathey, Michael Fluellen, Steve Giardina, Charles Guarino, Alfred Mayne, Paul Smoot, Dave Wilkinson, William Berg, Cathy Brittain, Mary Pat Dougherty, Terry Galloway, Dorothy Garland, Lori Grimes, Carol Humberson, Lorian Kropp, Julie Nicklin, Gail Padgett, Carolyn Wheeler, David Carney, Vince Coates, Michael Delaney, Gary Devilbliss, Donald Dougherty, Richard Hamelin, William Kuhn Jr., Benjamin Raugh, Richard Schneider, Paul Stronza, Jean Witt, David Beliliotti, Warren Harrison, Greg Kerr, Judy Mikovits, Christine Tresselt.

For further information and how you can get involved in the program, call 694-9455.

1988-01-08-frederick-news-post-pg-c-4-clip-bigbro-bigsis

[HN00S6][GDrive]

1988 (Jan 24)

https://newspaperarchive.com/news-jan-08-1988-p-22/

1990 (March 1) - Runner

Full newspaper page - [HN00S3][GDrive]

Steeplechasers

1990-03-01-frederick-news-post-pg-c-3-clip-steeplechase

Ruth Riemschneider, a runner with the Frederick Steeplechasers Running Club, recently won the women's division of the RRCA championships, held at Howard Community College in Columbia.

Riemschneider covered the 8-kilometer course in 1:04:00 while Karen Hawthorne was seventh (1:09:23). Other top women runners for the local club include Nancy Walz, 12th (1:11:32); Judy Mikovits, 28th (1:24:39); Laurie Widmer, 29th (1:24:46); and Rose Lechner, 41st (1:36:45).

Rusty Moore was the top men's finisher for the Steeplechasers, finishing eighth with a time of 54:25. Other top Steeplechaser runners in the race were Doug MacDonald, 15th (56:46); David Dia, 38th (1:01:09); Tom Thornhill, 40th (1:01:15); Tim O'Keefe, 41st (1:01:22); Corky Campbell, 46th (1:02:12); Tim Briscoe, 51st (1:03:23); Hal Carrier, 65th (1:05:39); Bob Imming, 68th (1:06:11); and Joe Tiso, 75th (1:07:05).

As a team, the Steeplechasers finished fourth overall.

[HN00S4][GDrive]

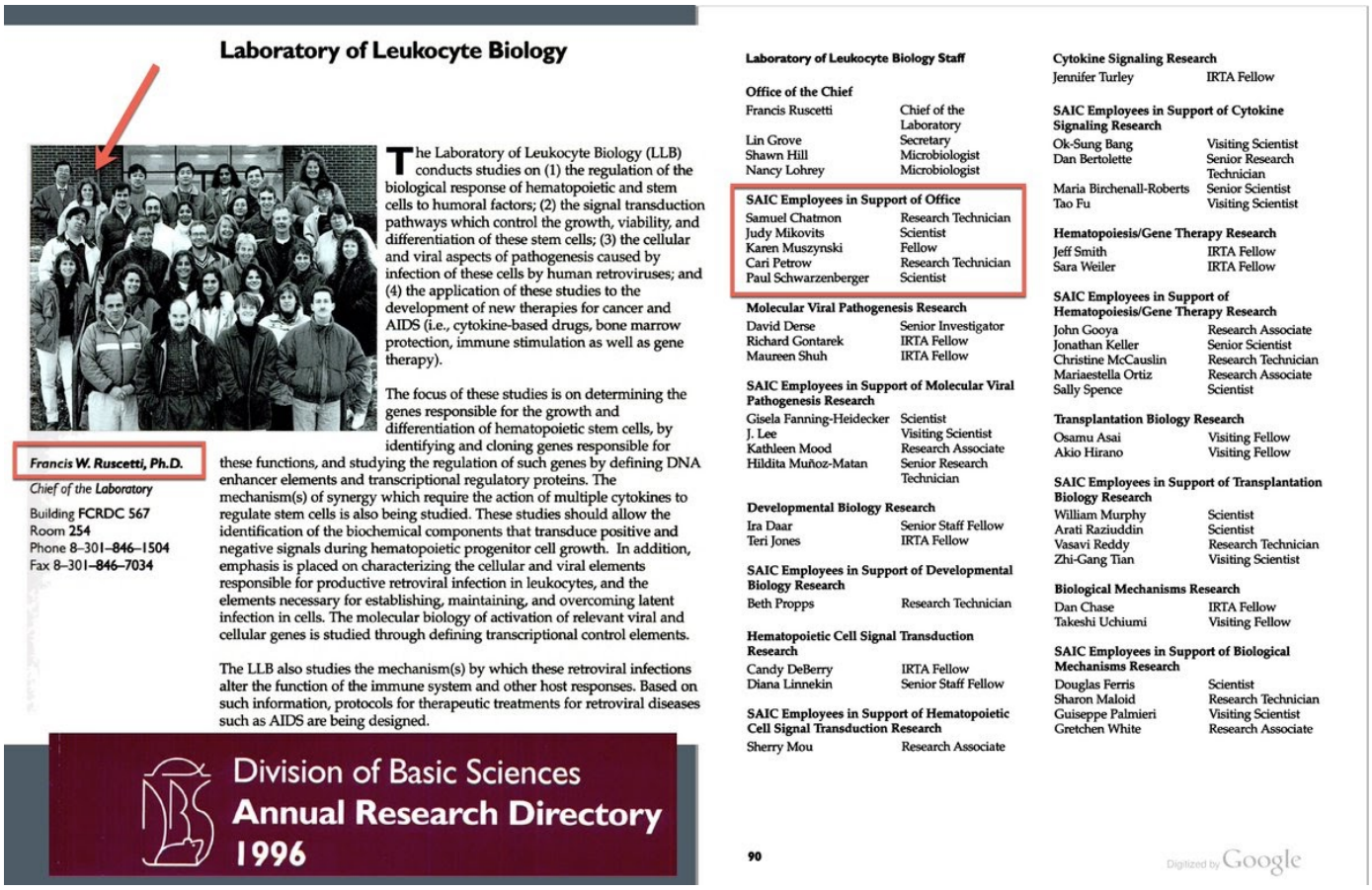
July 20, 1993 - Vince Foster suicide

Deputy White House counsel **Vincent W. Foster** was found dead in Fort Marcy Park off the George Washington Parkway in Virginia, outside Washington, D.C., on July 20, 1993. His death was ruled a suicide by five official investigations.

The body was found by the step-brother of Judy Mikovits .

1996 - Mikovits is with SAIC in 1996, reporting to the NCI

Tweet - [HT004W][GDrive]



Laboratory of Leukocyte Biology

The Laboratory of Leukocyte Biology (LLB) conducts studies on (1) the regulation of the biological response of hematopoietic and stem cells to humoral factors; (2) the signal transduction pathways which control the growth, viability, and differentiation of these stem cells; (3) the cellular and viral aspects of pathogenesis caused by infection of these cells by human retroviruses; and (4) the application of these studies to the development of new therapies for cancer and AIDS (i.e., cytokine-based drugs, bone marrow protection, immune stimulation as well as gene therapy).

The focus of these studies is on determining the genes responsible for the growth and differentiation of hematopoietic stem cells, by identifying and cloning genes responsible for these functions, and studying the regulation of such genes by defining DNA enhancer elements and transcriptional regulatory proteins. The mechanism(s) of synergy which require the action of multiple cytokines to regulate stem cells is also being studied. These studies should allow the identification of the biochemical components that transduce positive and negative signals during hematopoietic progenitor cell growth. In addition, emphasis is placed on characterizing the cellular and viral elements responsible for productive retroviral infection in leukocytes, and the elements necessary for establishing, maintaining, and overcoming latent infection in cells. The molecular biology of activation of relevant viral and cellular genes is studied through defining transcriptional control elements.

The LLB also studies the mechanism(s) by which these retroviral infections alter the function of the immune system and other host responses. Based on such information, protocols for therapeutic treatments for retroviral diseases such as AIDS are being designed.

Francis W. Ruscetti, Ph.D.
Chief of the Laboratory
Building **FCRDC 567**
Room **254**
Phone 8-301-**846-1504**
Fax 8-301-**846-7034**

Division of Basic Sciences
Annual Research Directory
1996

Laboratory of Leukocyte Biology Staff

Office of the Chief

Francis Ruscetti	Chief of the Laboratory
Lin Grove	Secretary
Shawn Hill	Microbiologist
Nancy Lohrey	Microbiologist

SAIC Employees in Support of Office

Samuel Chatmon	Research Technician
Judy Mikovits	Scientist
Karen Muszynski	Fellow
Cari Petrow	Research Technician
Paul Schwarzenberger	Scientist

Molecular Viral Pathogenesis Research

David Derse	Senior Investigator
Richard Gontarek	IRTA Fellow
Maureen Shuh	IRTA Fellow

SAIC Employees in Support of Molecular Viral Pathogenesis Research

Gisela Fanning-Heidecker	Scientist
J. Lee	Visiting Scientist
Kathleen Mood	Research Associate
Hildita Muñoz-Matan	Senior Research Technician

Developmental Biology Research

Ira Daar	Senior Staff Fellow
Teri Jones	IRTA Fellow

SAIC Employees in Support of Developmental Biology Research

Beth Propps	Research Technician

Hematopoietic Cell Signal Transduction Research

Candy DeBerry	IRTA Fellow
Diana Linnekin	Senior Staff Fellow

SAIC Employees in Support of Hematopoietic Cell Signal Transduction Research

Sherry Mou	Research Associate

Cytokine Signaling Research

Jennifer Turley	IRTA Fellow

SAIC Employees in Support of Cytokine Signaling Research

Ok-Sung Bang	Visiting Scientist
Dan Bertolette	Senior Research Technician
Maria Birchenall-Roberts	Senior Scientist
Tao Fu	Visiting Scientist

Hematopoiesis/Gene Therapy Research

Jeff Smith	IRTA Fellow
Sara Weiler	IRTA Fellow

SAIC Employees in Support of Hematopoiesis/Gene Therapy Research

John Gooya	Research Associate
Jonathan Keller	Senior Scientist
Christine McCauslin	Research Technician
Mariaestella Ortiz	Research Associate
Sally Spence	Scientist

Transplantation Biology Research

Osamu Asai	Visiting Fellow
Akio Hirano	Visiting Fellow

SAIC Employees in Support of Transplantation Biology Research

William Murphy	Scientist
Arati Raziuddin	Scientist
Vasavi Reddy	Research Technician
Zhi-Gang Tian	Visiting Scientist

Biological Mechanisms Research

Dan Chase	IRTA Fellow
Takeshi Uchiumi	Visiting Fellow

SAIC Employees in Support of Biological Mechanisms Research

Douglas Ferris	Scientist
Sharon Maloid	Research Technician
Guiseppe Palmieri	Visiting Scientist
Gretchen White	Research Associate

Digitized by Google

[HT004X][GDrive]

1999 (April 1) - Head of the Frederick County Branch of the American Association of University Women

https://newspaperarchive.com/news-apr-01-1999-p-26/

1999 (Sep 09)

Full newspaper page - [HN00SB][GDrive]

Staff photo by Sam Yu

New AAUW officers

1999-09-09-frederick-news-post-pg-a-10-clip-aauw

New officers of the Frederick Branch of the American Association of University Women were recently elected. From left are Ann Pyne, corresponding secretary; Judy Mikovits, program vice president; Frances Flynn, membership vice president; and Sally Spence, president. Not shown is Cindy Houdeshell, recording secretary. The group is sponsoring a book sale to be held Saturday from 10 a.m. to 4 p.m. at the Whittaker Center on the Hood College campus.

[HN00SC][GDrive]

2000 (July 13)

Full newspaper page - [HN00SD][GDrive]

Staff Photo by Liz Siwinski

New officers

2000-07-13-frederick-news-post-pg-7-clip-aauw

The new officers of the local chapter of the American Association of University Woman are, from left, Judy Mikovits, membership vice president; Cleopatra Campbell Anderson, president; Katherine Elder, newsletter editor; Francis Flynn, education chairwoman; Cindy Houdeshell, treasurer and recording secretary; Mary Anne Williams, program vice president; and Ann Pyne, corresponding secretary. For membership information, contact Judy Mikovits at 301-663-4982.

[HN00SE][GDrive]

2001

Takes role at EpiGenX Pharmaceuticals .

"Judy A. Mikovits, Ph.D., Director of Cancer Biology. Dr. Mikovits has over 17 years experience studying hematopoietic cell growth, regulation and tumor biology and has spent more than 8 years studying the role of aberrant methylation in retroviral pathogenesis at the National Cancer Institute (NCI) - Frederick Cancer Research and Development Center, Frederick MD. Before joining EpiGenX she held the position of Senior Scientist & Head, Laboratory of Antiviral Drug Mechanisms at the Screening Technologies, Branch of the NCI with the focus of using high throughput screening technologies (HTS) for the development of antiviral agents directed against molecular targets of HIV-1 and other viruses involved in the pathogenesis of AIDS associated malignancies."

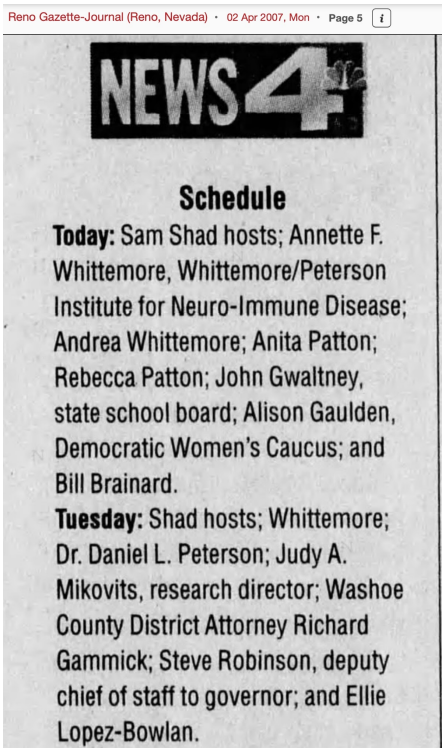
Her profile at EpiGenX (retried from archive.org) is below:

Judy A. Mikovits, Ph.D., Director of Cancer Biology. Dr. Mikovits has over 17 years experience studying hematopoietic cell growth, regulation and tumor biology and has spent more than 8 years studying the role of aberrant methylation in retroviral pathogenesis at the National Cancer Institute (NCI) - Frederick Cancer Research and Development Center, Frederick MD. Before joining EpiGenX she held the position of Senior Scientist & Head, Laboratory of Antiviral Drug Mechanisms at the Screening Technologies, Branch of the NCI with the focus of using high throughput screening technologies (HTS) for the development of antiviral agents directed against molecular targets of HIV-1 and other viruses involved in the pathogenesis of AIDS associated malignancies.

2005-epigenx-com-profile-mikovits-img-from-archive-org.jpg

2007 (April 02)

Full newspaper page - [HN00SF][GDrive]



Reno Gazette-Journal (Reno, Nevada) · 02 Apr 2007, Mon · Page 5

NEWS 4

Schedule

Today: Sam Shad hosts; Annette F. Whittemore, Whittemore/Peterson Institute for Neuro-Immune Disease; Andrea Whittemore; Anita Patton; Rebecca Patton; John Gwaltney, state school board; Alison Gaulden, Democratic Women's Caucus; and Bill Brainard.

Tuesday: Shad hosts; Whittemore; Dr. Daniel L. Peterson; Judy A. Mikovits, research director; Washoe County District Attorney Richard Gammick; Steve Robinson, deputy chief of staff to governor; and Ellie Lopez-Bowlan.

[HN00SG][GDrive]

2008 (June 03)

Full newspaper page (shown below) - [HN00SH][GDrive]

TUESDAY, JUNE 3, 2008 RENO GAZETTE-JOURNAL/RGJ.COM 3B

RESERVATIONS STILL AVAILABLE
$100 per each
All proceeds support community grants and scholarships for women in need in our community.
Tuesday, June 10th
Grand Sierra Resort
775-786-2335
nevadawomensfund.org

Nevada Women's Fund
17th Annual Salute to Women of Achievement 2008

Congratulations TO THE 2008 HONOREES

Special Guest Speaker
Geraldine Ferraro
Former member of the United States House of Representatives and 1984 Vice Presidential candidate

Nevada Women's Fund Salutes
Jennifer Satre
2008
Hall of Fame Honoree

Stacey Baggett, International Game Technology
Kelley Bailey, Atlantis Casino Resort Spa
Mary Benson, United Way of Northern Nevada and the Sierra
Amy Berry, Bauserman Group
Mary Ann Bordenkircher, Northern Nevada Medical Center
Linda Bowman, Esq., Second Judicial District Court
Alexia Bratiotis, Renown Health
Sara Beth Brown, Western Asbestos Settlement Trust
Barbara Buckley, AT&T Nevada
Corinne Cassell, Truckee Meadows Water Authority
Tracy L. Chase, City of Reno
Lindsay Clark, Younger Agency
Beverly Coleman, St. Mary's Regional Medical Center
Robin Collins, Nevada State Bank
Teresa Conner, Nevada Mining Association
Karen Creel, Bank of America

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UNDERWRITERS
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International Game Technology
Renown Health
Sierra Pacific Power Company
BREAKFAST UNDERWRITER
R&R Partners
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AT&T Nevada
Atlantis Casino Resort Spa
Jones Vargas
Western Asbestos Settlement Trust
ADVOCATES
Citi Smith Barney
Eldorado Hotel Casino
Grant Thornton LLP
Harrah's Reno and Harrah's, Harveys & Bill's Lake Tahoe
Kafoury Armstrong & Co.
McDonald Carano Wilson LLP
Nevada Mining Association
Nevada State Bank
Northern Nevada Medical Center
Peppermill Hotel Casino
Reno-Tahoe Airport Authority
Saint Mary's Regional Medical Center
Silver Legacy Resort Casino
The Paradies Shops
United Way of Northern Nevada and the Sierra
Wells Fargo Bank
Whittemore Peterson Institute
Younger Agency
PATRONS
ABD Insurance Services
Assistance League of Reno-Sparks
Bank of America
Barrick Gold of North America, Inc.
Bauserman Group
B.T. Mancini Company, Inc.
City of Reno
Deloitte & Touche, LLP
Democratic Women of Washoe County
John Ascuaga's Nugget
Kiley Ranch Communities
Lewis and Roca LLP Attorneys
Lionel Sawyer & Collins

2008 - IIMEC3 3rd Invest in ME Research International ME Conference 2008 Dr Judy Mikovits

YouTube video : [HV0030][GDrive]

"3rd Invest in ME Research International ME Conference 2008 in London #IIMEC3 Dr Judy Mikovits HOW SUB GROUPING WILL AFFECT RESEARCH STRATEGIES More from the #IIMEC3 conference at http://www.investinme.org/IIMEC3.shtm..."

2009 (Feb 05)

(Another article on this - Feb 26 - https://www.newspapers.com/image/483200672/?terms=%22judy%2Bmikovits%22)

Full newspaper page - [HN00SI][GDrive]

New UNR center raises hopes for CFS patients

2009-02-05-reno-gazette-journal-pg-2-a-clip-new-urn-center

Medical research facility is first built on campus in more than 20 years

BY LENITA POWERS
lpowers@rgj.com

People from across the nation and around the world who suffer from Chronic Fatigue Syndrome and other neuroimmune diseases are waiting anxiously for the opening next year of a new medical research center at the University of Nevada, Reno.

The $86 million Center for Molecular Medicine will expand the university's research capabilities into cancer and other diseases and house the headquarters of the Whittemore Peterson Institute, which offers hope in the form of clinical trials and treatment for people who suffer from such diseases as Chronic Fatigue Syndrome, fibromyalgia and atypical multiple sclerosis.

"I get letters from all over the world, Australia, Spain, Ireland, London," said Annette Whittemore, founder and vice president of the Whittemore Peterson Institute. "I got an e-mail saying Canada cheered when they heard the news that the institute was going to be a reality."

The institute plans to conduct clinical trials, but there is no waiting list yet, said Whittemore, wife of Nevada lobbyist, lawyer and developer Harvey Whittemore.

The Whittemores — whose 31-year-old daughter, Andrea, has suffered from CFS since she was 12 — donated $5 million to help build the Center for Molecular Medicine.

"We will actually be able to provide patient care that, right now, is very spotty

LENITA POWERS/RENO GAZETTE-JOURNAL

Kenneth Hunter is chairman of the Department of Microbiology and Immunology at the University of Nevada, Reno, and Judy Mikovits is the director of research with the Whittemore Peterson Institute for Neuro-immune Disease.

sense that it also is the first building ever built on this campus dedicated only to research, and that will allow us to generate more research dollars," he said.

The new center, along with other buildings that have recently opened or are under construction on campus, shouldn't draw the taxpayers' ire because they were in the pipeline and partly funded by the state before the economic crisis began, Glick said.

"The student union, the Knowledge Center, the Davidson Math and Science Center, every one of these buildings was approved three to six years ago by the Legislature at a time when the state was still booming," he said. "And the student

TAKE THE VISUAL TOUR

Log onto RGJ.com for a link to the University of Nevada School of Medicine Web site to take a tour of the architect's rendering of the building.

FAST FACTS

- $86 million, 100,000-square-foot Center for Molecular Medicine
- $19 million state funded, remainder from private donation and bonds paid by research grants, contracts
- Scheduled to open 2010
- Headquarters for Whittemore Peterson Institute for Neuro-immune Disease
- Will house portions of UNR's microbiology, pharmacology and physiology departments
- Will double the medical school's research and laboratory space

CFS PATIENTS MEET

Those who suffer from Chronic Fatigue Syndrome can sign up for a daylong patients' meeting March 12 to discuss new treatments and other issues as part of the International Association for CFS and Myalgic Encephalomyelitis Conference March 12-15 at the Peppermill in Reno. The cost is $75. To sign up, visit the association's Web site at www.iacfsme.org

in the clinics next to guys like Dr. Dan Peterson, who is one of the world's authorities on Chronic Fatigue Syndrome. This will give him an opportunity to run a first-class facility and train our students as well."

Judy Mikovits, director of research at the Whittemore Peterson Institute, is doing work based on blood samples taken

or nonexistent while also bringing expertise into the field," Annette Whittemore said.

Except for a one-time allocation of $19 million in state funds, the center will be financed with bonds funded by federal grants and contracts attracted by the center's expanded research capabilities and some of the nation's top researchers, said Kenneth Hunter, chairman of UNR's Department of Microbiology and Immunology.

"With this state-of-the-art facility and equipment, the ability we will have to recruit some of the best and brightest faculty and researchers with this extraordinary new building cannot be described," he said.

Hunter said the Center for Molecular Medicine received $1.6 million in federal grant money last year for equipment, much of which already is being used in laboratories on campus and that will be moved into the new building when it opens.

First research project in decades

The center is the first new medical research facility built at UNR in more than 20 years, and it will bring the university's research capabilities into the 21st century, President Milton Glick said.

"It's enormously important in the union was paid for by the students, who taxed themselves with an extra fee to pay for it."

The Center for Molecular Medicine will be funded in what is an unusual public-private partnership for the campus, Glick said.

"This is the first new building being constructed on campus where we will have the private sector occupying space they paid for," he said.

The Davidson Academy for exceptionally gifted students is a public academy started and partly funded by a private foundation, but it is located in the old Jot Travis Student Union, not part of a new construction project, Glick said.

Clinical trials draw funding

Hunter said the Whittemore Peterson Institute, which will be headquartered in the new center, will help the university's medical students, as well as patients.

"Think about having an institute that is one-of-a-kind in the world that is dealing with a highly prevalent condition, but there is really no specific place you can go to get this kind of treatment," Hunter said.

"Our students will be exposed to cutting-edge diagnosis and treatment for neuroimmune diseases," he said. "I envision our medical students standing by Peterson during a 1984 outbreak at Incline Village among about 100 people who exhibited symptoms of Chronic Fatigue Syndrome.

Hunter said the problem is that doctors have no test they can run to determine if someone has CFS, but research being done by Mikovits and other scientists that could one day lead to a blood test or other means of diagnosing the disease.

Mikovits, Peterson and other researchers with the institute will be making their presentations at the International Association for Chronic Fatigue Syndrome and Myalgic Encephalomyelitis conference scheduled on March 12-15 in Reno.

Hunter said only recently has enough scientific evidence has emerged to convince physicians and researchers that CFS is a disease and not just a catch phrase for a bunch of symptoms.

"You can imagine how frustrating that is for patients who clearly are suffering," Hunter said. "They go to a physician who, because this disease hasn't received acceptance in the medical community that others have, treats them for years for ancillary things other than CFS.

"So if this disease can be validated with research and strong clinical information, it's going to absolutely affect the lives of so many people in a positive way," he said.

[HN00SJ][GDrive]

2009 (July)

https://newspaperarchive.com/syracuse-post-standard-oct-09-2009-p-102/

2009 (Oct 14) - "WPI: Interview with Judy Mikovits and Annette Whittemore about XMRV [October 8,2009] Part 1"

YouTube video : [HV0033][GDrive]

This is a WPI interview performed by Sam Shad of Nevada Newsmakers. The interview aired Thursday, October 8, 2009. Here is the direct link to the video : http://

2009 (Nov 11) - NY TImes - A Big Splash From an Upstart Medical Center

See [HN00S0][GDrive]

PUZZLING ILLNESS Andrea Whittemore-Goad's chronic fatigue syndrome prompted her parents to take action.Credit...Candice Towell for The New York Times

To many people who suffer from the poorly understood illness called chronic fatigue syndrome, a recent study linking the disorder to a virus was a victory for the little guys.

For one thing, the study pointed to a physical cause for an illness that the medical establishment had often snidely dismissed as psychosomatic. The research could not be ignored: it was published last month in Science, one of the world's pickiest and most prestigious journals. The discovery came, in a sense, from within the patients' own ranks: several of the scientists, including the lead author of the report, worked for the Whittemore Peterson Institute for Neuro-Immune Disease, a nonprofit in Reno, Nev., founded recently by the parents of a young woman who has the syndrome. And even though the institute was new, it had attracted collaborators from two high-powered centers, the National Cancer Institute and the Cleveland Clinic.

Harvey and Annette Whittemore were not the first to start a research foundation out of desperation to find answers for an incurable disease. The actor Michael J. Fox did the same for his own illness, Parkinson's disease. Others have created groups for pancreatic cancer, amyotrophic lateral sclerosis (Lou Gehrig's disease) and breast cancer. The foundations have in common a desire to pick up the pace of research, often by financing innovative ideas and avoiding red tape and bureaucracy. But few if any of the private groups have produced notable results as quickly as the Whittemore Peterson Institute has.

At least one million Americans have chronic fatigue syndrome, which causes severe fatigue, muscle and joint pain, sleep problems, difficulty concentrating and other problems. Its cause is unknown, symptoms can last for years and there is no effective treatment. Women outnumber men as patients, and many people with the syndrome feel stigmatized and brushed off as neurotic by doctors. Andrea Whittemore-Goad, who is 31, has had a severe case of the syndrome for 20 years.

"Three major medical institutions tried to marginalize her, tell her she didn't want to get well," Annette Whittemore said in an interview.

But Mrs. Whittemore had seen her daughter turn abruptly from a happy, healthy child to a very sick one, and she has steadfastly believed that some sort of infection must have been the cause. Researchers have not pursued the infection theory seriously enough, in her opinion, and doctors have been scornful. One physician told her that if he could not understand her daughter's lab results, they couldn't be important.

Another said "he didn't look at my daughter's medical information because he didn't want the facts to get in the way of his theory," Mrs. Whittemore said in an e-mail message. "I could write a book on ridiculous things that doctors say to patients with C.F.S." She added: "One day I just had enough. I said, 'I've got to do something.' "

She and her husband had the means, the knowledge and the connections. They are real estate developers and part owners of a gas company and an energy drink, and they hold interests in other businesses. Mr. Whittemore is also a lawyer and a lobbyist. Starting in the fall of 2004, they put $5 million of their own money into setting up an institute at the University of Nevada's medical school. They also persuaded the governor and State Legislature to commit $10 million for a new building that would house the institute's researchers and a clinic, as well as scientists from the university and the Nevada Cancer Institute. The research began in 2006, and a clinic for patients is scheduled to open in about a year.

Rather than just doling out money to far-flung researchers, the Whittemores wanted to employ their own scientists who would be devoted full time to the cause. In the spring of 2006, they met Dr. Judy A. Mikovits, a virus expert who had spent 22 years working at the National Cancer Institute. She had left the institute in 2001 to get married and move to California, where she went to work for a drug development company that failed. She was tending bar at a yacht club when a patron said her constant talk about viruses reminded him of someone he knew in Nevada. That person was a friend of Annette Whittemore's. Dr. Mikovits soon found herself at a conference on chronic fatigue syndrome.

"The meeting was terrible," she said. "The science in C.F.S. is awful, not because the researchers are awful, but because they have no resources."

But one presentation made her practically leap out of her seat. The speaker was Dr. Daniel L. Peterson, who treats Ms. Whittemore-Goad (he is the Peterson for whom the institute is named). He has seen about 5,000 patients with the syndrome in the last 20 years, and he described some who had also developed a rare type of lymphoma.

"I said, 'That's a retrovirus,' " Dr. Mikovits recalled.

Dr. Mikovits began connecting the dots almost immediately. She knew that some patients with chronic fatigue syndrome, and some men with prostate cancer, had a certain enzyme deficiency. And she also knew that tissue samples from men with prostate cancer had been found to harbor a retrovirus called XMRV, for xenotropic murine leukemia virus-related virus. She began working part time with the institute, and by the fall of 2006, the Whittemores had hired her as research director. One of her first projects was to look for XMRV in blood samples from people with chronic fatigue syndrome and from healthy control subjects.

Many of the samples from syndrome patients 🗣 68 of 101, or 67 percent 🗣 were infected, she and her colleagues reported in Science. Only 3.7 percent of the healthy controls carried the virus. XMRV, the scientists suggested, may cause or at least contribute to chronic fatigue syndrome. Further tests found the virus in 90 of the 101, Dr. Mikovits said.

Retroviruses can cause cancers in animals, and in humans, they include HIV and a virus that can cause leukemia. "I knew how serious a retrovirus is," Mrs. Whittemore said. "I was very concerned, knowing there would be serious implications. My second thought was, of course it was going to be something serious like that. Look at my daughter and how ill she is. Why would we expect it to be something simple? I also felt like the weight of world was on my shoulders. We would have to be telling people some very bad news."

But many patients were grateful, and said they found hope in the discovery 🗣 hope that now their illness would be taken seriously, and hope that the new information would lead to effective treatments or even a cure.

But the study is not conclusive. Other scientists need to replicate the tests to find out if the initial findings hold up, and a great deal more work is needed to

determine whether XMRV really does play a role. Just detecting it in patients does not prove it made them sick; patients may have some other underlying problem that makes them susceptible to XMRV, which could be just a passenger in their cells.

Dr. Peterson said he thought the crux of the problem in chronic fatigue syndrome involved a derangement in the immune system that could allow old viral infections 🗣 with various herpes viruses, for instance 🗣 that were once under control to become active again.

"XMRV is the sort of agent that could create that effect on the immune system," Dr. Peterson said. But he emphasized that more research was needed.

AMONG those expected to try to replicate the XMRV findings is the Centers for Disease Control and Prevention. But Dr. William C. Reeves, who directs the agency's research on the syndrome, has said that he does not expect to find the virus in blood samples from patients. He said that no other studies had ever proved a virus to be the cause, and that stress and a history of sexual and emotional abuse were more likely to play a role in many cases. "I blame the C.D.C. for most of this mess," Mrs. Whittemore said, adding that thinking like Dr. Reeves's was what drove her to start her own research center.

The Whittemore Peterson Institute is running on about $1 million a year, to pay for salaries, equipment, supplies and other expenses. In the world of research, that is not much. The Whittemores are trying to raise more money, and have received donations as large as $50,000 from friend down to a few dollars from patients who are sick, out of work and broke, but eager to support any research that may one day help them.

Mrs. Whittemore feels that she is racing against time to save her daughter. For a while, Ms. Whittemore-Goad had improved on an antiviral drug, but she had to stop taking it because she had a reaction to it. She had worked part time as a yoga instructor, and she married in the last year, but now rarely goes out because she has seizures.

"She is just really very, very sick," Mrs. Whittemore said. "She's had this for a long time. We've got to get something for her as soon as possible. That is the driver for the speed on this. I don't want to lose her. I can't lose my daughter. I don't want to win this battle and lose the war." '

2009 (Nov)

http://cfspatientadvocate.blogspot.com/2009/11/

The Patient Advocate has known about the ImmuKnow test from Viracor for several years. Here are some quotes from the ViraCor site:

"ImmuKnow is a noninvasive biomarker of immune function that assesses cellular immune status by detecting cell-mediated immunity (CMI) in adult immunosuppressed patients. It measures the concentration of adenosine triphosphate (ATP) released from CD4 cells following cell stimulation."

"ImmuKnow is the first and only FDA-cleared blood test to measure the vitality of a patient's immune system."

This means that the test is regulated and that it does as advertised. The ImmuKnow test takes a small sample of blood and exposes it to a proprietary reagent (made by Cylex) that stimulates the CD4 cells. ATP activity is measured in these CD4 cells. ViraCor has created a scale (<225 – weak immune response, 225-525 – moderate immune response and >525 – strong immune response) and this test is a measurement of immune function. The ImmuKnow test is used for tracking immune function in AIDS management and in transplant patients who take immunosuppressant drugs. It is being tested in diabetic patients undergoing Islet Cell transplant. At a CFS conference, Dr. Dharam Ablashi (see picture above) suggested using it for CFS. The PA is unaware of anyone with CFS actively doing it - except for his daughter. A number of CFS patients were given this test and their average number was 281. Further information on the ImmuKnow test is available at the ViraCor website. The ImmuKnow test is a quick and easy blood test that can be done through various labs, including Focus Diagnostics.

Ablashi's study of 2005, using Dr. Daniel Peterson's patient population, tested the functionality of the global T-cell response using an FDA cleared response for cell-mediated immunity assessment (Cylex Immune Function Assay, ImmuKnow) - and these cellular responses were compared to patients with HIV and immunosuppressed transplant patients. The ImmuKnow test was assessed based on the amount of ATP expressed in ng/ml. All three groups has median immune function that was not statistically different. The transplant patients averaged 259 ng/ml ATP, followed by HIV patients at 263 and CFS patients at 281. CFS patients showed consistency with both the transplant and HIV patients - with the majority of patients in the median zone, followed by patients in the low zone, with the smallest percentage in the strong zone. More can be read in Ablashi's and Krueger's book Human Herpesvirus-6.

Dr. Dale Guyer uses this test in his practice and has a positive feeling about it, believing that the numbers rise as the immune system becomes stronger. This Patient Advocate is not aware of other CFS doctors using this test. It is an easy blood test and relatively cheap and fast - $180. Whether it is useful or not, is anyone's guess.

Posted by consuegra at 5:06 PM 1 comment:

SUNDAY, NOVEMBER 1, 2009

Judy Mikovits and serendipity – how lucky we are.

The Patient Advocate took a picture of Judy Mikovits from the 2009 UK conference DVD and gave it to his daughter, saying, "This is the woman who is going to make you well". My daughter put Judy's picture on the wall of her room where she rests.

The Patient Advocate first saw Judy Mikovits at the CFS conference in Ft. Lauderdale, FL in January 2007. She was presenting a paper on "Incidence of Chromosomally Integrated HHV-6 (CIHHV-6) in a Cohort of CFS patients with Clonal TCR-g and Lymphoid Malignancies". The PA did not take any special note of this lecture except to note that Dr. Mikovits talked like a typewriter.

In April of 2008, the PA saw Dr. Mikovits give another presentation in London. The PA's report at the time said this: "The last major lecture was an incredibly high-powered presentation by the American researcher, Dr. Judy Mikovits. She is the research director of the new Whittemore-Peterson Institute of Neuro-Immune disease in Reno, NV. In a lecture of which I understood next to nothing, she gave every indication that this institute has the funding, the drive and the independence to reveal some important elements of this disease. She also indicated a no-nonsense willingness to cooperate with others world-wide in this struggle. I have seen many scientists make presentations, and this gal was amazing. With this presentation, along with the others, there was a clear picture that the Americans were back in the UK doing what they do best."

Another attendee of this conference wrote this: "Dr Judy Mikovits is Research Director of the Whittemore Peterson Institute in Nevada and she presented

a most enthralling presentation on the focus the Institute's research although most of the technical detail was way over my head. The research looks at abnormal inflammatory response to viruses and part of it piggybacks off Dr Kerr's work."

Of the Reno conference in 2009, the PA wrote this: Mikovits, the director of the Whittemore-Peterson gave a slam-bang talk, one similar to what she delivered in the UK last May. However, this time she had less time and she really had to whirl through it. This gal is generally accepted as being a serious researcher and in a position to get some results. She is obviously bringing money and people over from her former research field in cancer. Here is a quote from Judy Mikovits that surfaced on Cort Johnson's site after the Reno conference: "We have a piece of data that would just knock your socks off but I'm not showing it. "

The PA has developed the habit of sitting through days of scientific or quasi- scientific lectures. It is possible to nose out the more scientifically interesting talks, even for a non-scientist. After awhile one can sense the "cannon fodder" talks that dominate all of these conferences – those happy little academic talks that are going to go nowhere.

Consequently this Patient Advocate was ready to really listen to Judy Mikovits in May 2009 at the London CFS/ME conference. "Dr. Judy Mikovits, who astonished so many folks at this conference last year, was back for another lecture. She made her usual complex and far reaching talk, most of which passed over my head. (I should have studied biochemistry.) Her work at the Institute involves sub-setting CFS through gene array chips and cytokine testing. The Institute is moving very fast and I get a sense that specific information is going to emerge here sooner rather than later. Certainly talking to Annette Whittemore and hearing Mikovits and Peterson makes one sense something is afoot, although they are smart enough not to say anything. During the question period Dr. Mikovits was asked if they had been working on a specific virus involved in CFS. She coyly answered, almost in a whisper, "yes" - and then she followed up that there is a novel virus not previously associated with CFS and that the WPI had submitted their research paper for publication at Science magazine."

And then came October 9, 2009 and the world of CFS/ME turned.

The connection between Judy Mikovits and the Whittemore-Peterson Institute was a bit of serendipity. Dan Peterson was giving the last lecture of the day at a HHV6 conference in Spain in 2005. Judy Mikovits was in the audience and responded to Dr. Peterson's plea to the audience (during the question period) for help with a problem that he was having. Ten of his CFS patients had developed mantle cell lymphoma and he was stumped. The following comes from an interview with Mikovits on Cort Johnson's site: "These people were getting lymphoma and they were getting it before anyone gets lymphoma and to me that says virus." "My background is in virus caused cancers. My training for over 22 years at the NCI was in how viruses dysregulate the immune system and cause disease – cancer. So when he told me to come meet with him after the talk I beat my way up to the front of the room because it was the only interesting thing that I had heard at the meeting, and I said, "There is something there, that's a smoking gun", so I gave him my card, told him that I'm interested, told him what I thought was going on, and he and Annette invited me out to Reno. Within two weeks of that meeting, they talked about setting up a summer research program."

Judy Mikovits showed up in the right place at the right time. However, she is not solving this problem on her own. Many physicians and researchers have plowed the ground ahead of her. She is the beneficiary of many efforts.. It is a bit like volleyball. The ball is controlled, set up and then spiked. Judy is the spike.

From all accounts, Dr. Mikovits has great empathy with the CFS/ME patient population. All good artists have empathy for their subject. An artist, as well as a scientist, benefits from "attachment to the subject". This empathy, this connection. does not come easy, and is not taught in schools. Not everyone has it. It is inherent in the personality of the individual. Dr. Mikovits seems to "have it". A recent article in the Reno Gazette Journal had a personal bit about Dr. Mikovits: "My grandfather was dying of cancer, and nobody would talk about it," Mikovits said. "One day I said to him, 'Don't you know you're dying?' And he said, 'Don't say that. I don't want your grandmother or your dog, George, to know." "He was dying of cancer, and nobody would talk about it. That's what bothered me most."

Annette Whittemore has spoken of how much Dr. Judy Mikovits lab collaborators enjoy working with her. "Dr. Judy", as her students call her, is both disciplined and relaxed, with a good sense of humor. "Dr. Judy" works long hours, setting the tone and direction. Others follow suit.

A recent article in the Reno Gazette Journal has a number of good quotes from Mikovits.

About the moment of truth with XMRV: "It was January 22, and we were in a San Diego restaurant called the Yard House," said Mikovits, who had gone there with fellow scientist Vincent Lombardi to present the results of their research to Frank Ruscetti and Robert Silverman, two of the world's leading virologists. "We kept waiting for them to say something," Mikovits said. "I was nauseous. Bob (Silverman) waited a long a time, and then he looked up and said, 'Well, this is going to change their world.'" And it has.

About getting traction: "They want us to send them the (XMRV) retrovirus so they can screen huge libraries of compounds and see what they have that could work," Mikovits said. "They already have drugs to treat HIV, so they could redesign a compound for the XMRV virus. Since they already have FDA approval, they could get something out to people fast."

"I've gotten more than 100 e-mails from physicians, and I've gotten calls from the head of the Mayo Clinic and the clinical director at Sloan-Kettering," she said. "Those people wouldn't take the time if they didn't think this was a significant finding."

"We've got about 500 samples from the United Kingdom, and we also were approached by the head of the syndrome organization in Spain," she said. "We eventually expect to collaborate with many other countries: Norway, Germany and others. Everybody is asking if we can test their samples and asking how they can get in the clinical trials."

About the Barcelona presentation in October 2009: "They applauded before I gave my presentation," she said. "It was such a surprise, because they never applaud before a presentation."

Posted by consuegra at 7:28 PM 1 comment:

2010 (est) - Resume for Dr Judy Mikovits PhD, "Research Director Whittemore-Peterson Institute, Nevada, USA"

Source - http://resime.org/JudyMikovits.htm

Dr. Mikovits obtained her Ph.D. in Biochemistry and Molecular Biology from George Washington University.

Dr. Mikovits spent more than 20 years at the National Cancer Institute in Frederick MD where she investigated mechanisms by which retroviruses dysregulate the delicate balance of cytokines in the immune response.

This work led to the discovery of the role aberrant DNA methylation plays in the pathogenesis of HIV. Later in her career at the NCI, Dr. Mikovits directed the **Lab of Antiviral Drug Mechanisms (LADM)** a section of the NCI's Screening Technologies Branch in the Developmental Therapeutics Program. The LADM's mission was to identify, characterize and validate molecular targets and to develop high-throughput cell-based, genomic and epigenomic screens for the development of novel therapeutic agents for AIDS and AIDS-associated malignancies (Kaposi's sarcoma).

Dr. Mikovits served as a senior scientist at Biosource International, where she led the development of proteomic assays for the Luminex platform that is used extensively for cytokine activity assessment in therapy development.

She also served as Chief Scientific Officer and VP Drug Discovery at Epigenx Biosciences, where she lead the development and commercialization of DNA methylation inhibitors for cancer therapy and of cell and array-based methylation assays for drug discovery and diagnostic development.

She is Research Director at the Whittemore Peterson Nevada CFS centre for Neuro-Immune disorders and has co-authored over 40 peer reviewed publications that address fundamental issues of viral pathogenesis, hematopoiesis and cytokine biology.

Formally trained as a cell biologist, molecular biologist and virologist, Dr. Mikovits has studied the immune response to retroviruses and herpes viruses including **HIV, SIV, HTLVI, HERV, HHV6 and HHV8 with a special emphasis on virus host cell interactions in cells of the hematopoietic system including hematopoietic stem cells (HSC).**

Dr Mikovits was co-author of the "Detection of an Infectious Retrovirus, XMRV, in Blood Cells of Patients with Chronic Fatigue Syndrome" research paper in October 2009 in Science magazine - click here

(with grateful thanks to the Whittemore-Peterson Institute for this information)

2010 (Feb 24) Interview - Mikovits XMRV Seminar – Transcript With Slides

Source : Part 1 is [HX000T][GDrive] , Source Part 2 is [HX000U][GDrive]

Long-time ProHealth subscriber and contributor Sandy Miarecki has compiled and edited in one transcript the XMRV Seminar that Whittemore Peterson Institute Research Director Dr. Judy Mikovits presented Jan 22 in Santa Barbara – helpfully indicating where each slide fits in the text. To download the slides (about 19 MB): click here.

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Annette Whittemore: I am happy that the ProHealth organization was able to get this online so a lot of patients who are too ill to make it are able to follow online. I'd like to thank Rich Carson, I'd like to thank ProHealth for putting this together, and the HHV-6 Foundation and Kristin Loomis. It's a pleasure to be here and to have an opportunity to speak to you about the recent discovery of XMRV in Chronic Fatigue Syndrome patients. Thank you for inviting Judy Mikovits today. We've made a special effort to learn more about the most exciting news in the world of CFS since the 1980s when major outbreaks of this disease were reported in several locations around the US, including three small towns in Nevada.

These reports came on the heels of the discovery of HIV and AIDS. During this time, Dr Mikovits was at the NCI working in laboratories that were actively studying this new virus, when she began her doctoral program at George Washington University. In fact, she wrote and presented her doctoral thesis on HIV latency, presenting it the same day that Magic Johnson announced he was HIV positive. The good news is that he is still healthy after all these years, having had the opportunity perhaps to prevent a high viral load from ever occurring.

Jumping forward to 1989 brings a critical event to the life of our family. Our daughter became ill, and suddenly we found ourselves in a black hole of medicine where no one seemed to agree on anything having to do with a disease that had been dubbed 'Chronic EBV.' The problem was that she didn't have EBV or even the antibodies that would have indicated that she'd been exposed to that virus. Like you, we sought answers, but instead we found confusing and even nonsensical theories about her illness. And thus began the journey for answers.

All of us have various milestones in that journey. Our first and probably one of our most exciting milestones was meeting Doctor Peterson, who at that time was promising that he would do all he could to help Andrea and to help this family. Our second milestone was really meeting Dr Mikovits. And that was a wonderful and perhaps prophetic meeting. We were at an international conference, and she had come along as a guest of the HHV-6 Foundation, when she heard a very important talk about a set of patients who were developing a rare form of cancer. She took a leap of faith with us to develop a medical research institute when we asked her to come to Reno, and the rest is history.

Judy brought with her a scientific passion for discovery of truth, and a curiosity, with well-taught skills from the laboratory of Dr Francis Rosetti, the co-discoverer of the first retrovirus HTLV-1. Judy has a fiery temperament and a heart of gold. And when she is not counseling CFS and cancer patients, she teaches students, devises experiments, and travels to major conferences and universities to educate others about the intricacies of the scientific methods used to find infectious and replicating XMRV in the blood of CFS patients.

Before I introduce you to Judy, I'd like to ask three things of you. First, please stay involved and advocate for your rights, medical treatment, and adequate funding of research. Your congressmen and senators need to hear from you. Second, please stay informed and educated. Listen critically to what is said and who is delivering the message. Are they speaking on your behalf? And third, I want you to know that the WPI is going to continue its promised mission. We are not going to stop until we find the answers, but we can't do it alone, and so we do continue to ask for your support and your help. We appreciate so much all the donations that have come in, all the amazing good wishes that have come our way, and we wanted to thank you today all around the world for letters that have come in to support this effort; that really really helps.

So now it is my good pleasure to introduce you to Dr. Judy Mikovits, research director of the WPI.

Dr Judy Mikovits: Well, thank you Annette. I too would like to thank ProHealth and particularly Kristen Loomis and the HHV-6 Foundation for sponsoring this event. What Annette didn't say is that it was Kristen Loomis who put us together by asking me to attend that meeting in Barcelona, Spain. I never did get outside to see Barcelona, but I saw some amazing scientists and physicians there in the room and in the meetings. So I'm also honored that you came out on this day, and I understand how difficult it is for patients to get here, and I appreciate all the calls and letters we have gotten around the world since the publication of this paper. It's amazing the response that we've gotten, and we're just delighted. We work for you.

[SLIDE 1: Whittemore Peterson]

The institute is a translational research institute. You can tell the architects drew this because they're making a lot of money. We don't usually drive Porsche cars [laughter]. But at any rate, this is what the building looks like. It is three-quarters built, and will be open to serve patients in September this year. So, keep your eye out for the opening ceremonies and the ground-breaking there. We're excited to see patients.

Before we could see patients, Annette knew that she would need to start a research program because there were no bio-markers, diagnostics, treatments, or anything. We started looking with the patients there, with the diagnostic acumen of Dan Peterson. So, I came up right after that meeting in Spain in 2006 and spent the summer just meeting the patients. I'd never heard of the disease before then, and it was just eye-opening to me to see how sick these patients really were and to try and understand really what the disease was. My dear husband, when I talked to him about Reno, all he kept saying was "Reno? That's not by the ocean" [laughter], but I'm a patient advocate as well in Ventura County with a Cancer Support group with Bible Fellowship Christian Cancer Support Group, and they were kind enough to let me go to Reno because I said "These people are much sicker than you." [laughs]

[SLIDE 2: XMRV, a New Pathogenic Retrovirus]

I'm going to talk to you exclusively about the retrovirus XMRV. I understand that I've left a lot of the detail of the science because, when we see the science, you start to understand the implications of this discovery, in not only this disease but perhaps a number of old diseases where we might find a new understanding. So, this is the Cleveland Clinic rendition of the retrovirus, and of course the electron micrograph that accompanied the publication in Science. I'm going to give you a little history lesson. We're going to walk through the publications.

[SLIDE 3: Identification of a Novel Gammaretrovirus]

Interestingly, XMRV was identified by Bob Silverman and Joe de Risi in 2006, so just at the time that we were meeting each other and making these fateful introductions, this virus came out, where Bob Silverman, who was an immunologist at the Cleveland Clinic, was looking at prostate cancer patients where there was familial prostate cancer. That is, it's hereditary, but that it's hereditary in a funny way where maybe brothers-in-law or distant relatives would get it and not direct father-son, things like that. We had a case in my own family where my stepfather died very young of prostate cancer. It's an aggressive cancer, and when you get prostate cancer very young, it suggests there's something else going on environmentally.

So he looked at a single nucleotide change of a variant in an anti-viral gene known as RNase-L. This gene, the protein's job is just to degrade RNA from viruses and protect you, and turn on the interferon response. But he found a variant in that gene where that single base change, that is in about 13% of the population, makes this enzyme only about 20% as active, so it dysfunctional because it doesn't work. So he hypothesized that maybe these men were susceptible to a virus. And he met Joe De Risi at UCSF, who had a technology which is basically a chip. It's like a chip with a bunch of information on it. The information is just sequences of every known mammalian virus, so 20-30 maybe 70 base pairs of every known virus from a considerable spectrum.

He simply took the DNA from these men and applied it to the chip, and the red part you see right here shows that it exactly matched [if you want to match in opposite] the sequences from this particular virus. So when they took this out, and they sequenced the virus there, they found that there were retroviral sequences in 10% of those tumors, and those with that particular variance, and that those sequences were most closely related to what was xenotropic murine leukemia virus. It's a gamma retrovirus, and we'll talk more about that later. They just number them alpha, beta, gamma for convenience because the numbers are known.

[SLIDE 4: Xenotropic Murine Leukemia Retrovirus-related Virus]

Xenotropic means it can no longer infect mice. Xeno means foreign. So what we know from the xeno family of viruses is that they look like murine leukemia viruses, but they lack a receptor, and we'll talk about that later, so that they can't infect mice. So he named this virus Xenotropic Murine Leukemia-Related Virus because it wasn't exactly the mouse virus. Clearly it was something different, suggesting that this might be a new virus. So, his laboratory did a little more work in the next 2 years. Again we're just talking about 2007-2008. Usually it takes a year just to get a paper published.

What he at first identified, they knew that the mouse family of xeno viruses would recognize and bind and actually enter the cell through this receptor. So it sees the receptor; it's called XPR-1, and this is a calcium channel type, an ionic receptor. They don't know the function of it. This is called the G protein; it has a particular role in sequencing. We know there's a loop right here or so, where the mouse virus has two or three amino acid changes, and that's why the virus can no longer infect mice. That's one of the reasons we know this is not from a mouse. This receptor is on every cell in the body. So it doesn't tell you a whole lot about the infection or what cells would get infected in the disease.

The next thing he did was he molecularly cloned this. He used techniques to write the virus, the entire 8,000 base pairs, and put it in a vector which allowed him to multiply it and make it an infectious virus. So, he made this infectious virus, but he didn't actually isolate it. Using the infectious clone, he then infected various cells and found that the virus integrated. It inserted itself into DNA preferentially at the start site of genes. And that's the part of the gene that turns on and off their expressions, so a lot of the differences you see in patients could be explained by turning on and off the wrong genes when a retrovirus integrates.

[SLIDE 5: Genomic Structure of Gamma Retrovirus]

Let's do a little bit of retrovirology 101. This is the genomic structure of a retrovirus. Now, retroviruses have an RNA genome. We have DNA genome. We

have nucleic acids; our genetic information is packaged in DNA. This virus has a single stranded RNA genome that's present in two copies in the virus. So, it first has to be reverse transcribed by the enzyme reverse transcriptase. So, you have to take the RNA back to DNA and then the integrase gene there, shown here; this is a pol, so all a simple retrovirus will encode is the structural proteins, gag, pol, and the envelope, and then the enzymes. They don't have any extra proteins like HIV or HTLV-1 which are complex retroviruses, and they write a bunch of proteins that regulate different parts of your body.

The good thing about this virus is that it's a simple retrovirus. There's less that it can do to interact with your cells to have those go wrong. That's the first piece of good news. It's the first ever simple retrovirus known to infect humans. We can think a lot about that as scientists and how it might cause disease.

[SLIDE 6: Schematic of Retrovirus Particle]

Once you make the virus, you go from your genetic information I showed you in the last slide into the envelope protein which has two proteins actually in the surface unit. This is what binds to that receptor, and then the trans-membrane unit that sets itself into the matrix of the capsid. This is the capsid protein there, and that's known as gag, so you're gonna see capsid and envelope throughout this talk, so you'll understand that when you have antibodies that develop. These antibodies are recognizing these areas of proteins, and this is depicted here as that double stranded RNA nucleus, and the polymerase which simply writes the RNA into DNA and then packages it all up and leaves the cell.

[SLIDE 7: Detection of Retroviruses]

Now let's talk about how you detect retroviruses, because that's important in thinking about how we found this virus and how we study it in the laboratory. The viral life-cycle is as I just described. Once you have the DNA integrated into the chromosome, once it's integrated to the reverse transcriptase integrated it into the chromosome it's there and it replicates every time your cell divides and your DNA replicates. So if your cell isn't dividing, theoretically it's just latent. It's just there in the DNA, and it's not making more viruses, it's not making copies of itself. It's not infecting more cells. This is a good state, if you have a retrovirus, is to just shut down the transcription.

As Annette said, when Magic Johnson was found to sero-convert, they found an antibody in his blood, so that's very shortly after he became infected. So they were able to give him therapeutics to prevent the virus from making many more copies in his body. Theoretically the reason why he never got sick is because he is maintained on those anti-retroviral therapies as well as the immunomodulating therapies. He's kept that virus down so that he never theoretically will get AIDS. We'll talk more about that later.

Once the cell starts dividing and you start writing that DNA and transcribing it into all of the proteins we just discussed, the envelope will then package the core of the capsid there, that looks like this, in the RNA genome, that double stranded genome, and it actually uses your cell membrane, cholesterol, and lipids to leave the cell then and look like that artist's rendition of the viral particle. So, when you're looking for retroviruses, and there are only two known, the HTLV-1 family – there's a one and a two – and HIV, the human immunodeficiency virus.

As Annette mentioned, Frank Ruscetti discovered this virus and reported it in 1980. At that time, there was no PCR, so he couldn't look for an infected cell by a sensitive method. He looked for that enzyme reverse transcriptase because reverse transcriptase is only in retroviruses and not in human cells, so it's easy to look for the activity of that protein that would then transcribe and make the virus. And sometime maybe if you've learned the history; it's amazing the small small signals they found in the early days to describe the virus.

But then you're going to do what we call a Western Blot, which is to run out the proteins of a cell on a gel electrophoresis and just blot it and look for antibodies – and we'll show you those later – for the viral proteins and test for specific antibodies to the envelope and the gag proteins and just look for the presence of virus in infected cells. The first thing you do clinically is you look for serology – that test that shows you that your system is making an antibody to that virus. That was the test that Magic Johnson got. You have a virus in your body and your immune system's job, to distinguish self from foreign. So we know this is foreign because you have made an antibody to it and then finally, it's rarely done clinically, to identify HIV or HTLV-1, is to isolate the virus and actually purify it in cell culture.

[SLIDE 8: Detection of an Infectious Retrovirus…]

So that leads us up to the next paper. After the first bit of work that Bob did in describing this virus, there wasn't a lot of excitement about it in the scientific community, because they didn't know that it was an infectious virus. It was just sequences in prostate tissue tumors, and it wasn't meaningful to the scientific community because we all have sequences of viruses in our body as we all know, maybe as much as 15% of our genome is made up of viruses that are silenced by our immune system so that they can't be expressed.

The work that we did then generated a lot of excitement. What we did was we detected this infectious retrovirus and showed that it was infectious in the blood cells of patients with Chronic Fatigue Syndrome. We're going to walk through exactly how we did this to show the virus. At first we did PCR because at the time this paper was done, the only thing that was known was Bob Silverman's specific PCR technique. We had not validated or identified any antibodies. It was not known that it was a pol-virus, an infectious virus. So that's what this work was, it was serendipitous really, that we happened to have the patients who had this virus because, if we did not have a well-identified cohort of CFS patients, and we were just looking at the general population, retroviruses aren't highly expressed in the general population. HTLV-1 is 0.2% in the US population, and we'll talk a little bit more about what that means too. Retroviruses are not ubiquitous. It's not like EBV and CMV, where everybody has them.

We had these well-characterized patients who had been sick for many years. I think it was a large part of why we're able to isolate this virus.

[SLIDE 9: CFS Study Cohort Reported in Science]

We'll start at the beginning, and that's the cohort, who they are. When it came to the Institute, what we talked about, was really important, was having a repository of samples from all of the patients so we could look at the RNA for their gene expression, at the DNA for maybe what was different about the genetics of some of you that might make you sick. Then we look at the plasma for proteins to see if we could identify immune modulators called cytokines that tell your immune system and tell your brain how to function. So we made these samples across RNA, DNA, protein and plasma, and then a culturable cell, so we kept some frozen such that we could grow them up and make more of them, any time we wanted, of your peripheral blood mononuclear cells; that's your white blood cells.

We used patients who came literally from around the world, and this was actually not correct in the Science paper because I didn't know there were international people in the repository at the time. When they come to Incline Village, it's assumed that they are from Nevada, and when we decoded this over the Christmas holidays we found 12 or 15 states, the UK, Ireland, Germany and Australia as well. So we had both international and people literally from all over this country, not necessarily Reno, Nevada, where the associated outbreak that we know occurred there in the early '80s.

The conclusion – all you had to do to be a sample in our repository was have a CDC diagnosis of Fukuda criteria or the Canadian definition diagnosis which is

The conclusion... all you had to do to be a sample in our repository was have a CDC diagnosis of Fukuda criteria or the Canadian definition diagnosis which is more stringent for various immune defects and inflammatory defects. Regardless of severity, the samples in the repository are from people aged 19-75. We don't have any whole bodies yet of people; though people do offer to donate whole bodies, however I don't think we need them at this point [laughs].

The study characteristic, like the disease, was 67% women, reflecting the gender bias in incidence of CFS. The mean age was 55, but some of these people had been sick since they were children or early 20s or early 30s, so they had a long haul with this illness. The 218 control samples were de-identified samples, so we don't know who these people are. They came from two places; they came from a medical practice in Reno, they came from a doctor who identified these people as healthy, and these were collected from people before I came to the University in 2007, and they were looking at the immune systems of healthy people to identify some of the functions, so we were able to use those samples under IRB approval. There is also a paternity diagnostic company in Reno, where they get samples from all over the world from mom and dad, so we tested from those 100 or so samples too, so we were at least able to zip code match. We have regional areas for the geographic location, so it was matched for location.

This is a PCR gel; I simply run them out for electrophoresis, and that gives you a different size so you can look at the exact size of the fragment of DNA that you're looking at. Again, this was done by Bob Silverman who is our collaborator in the study. Today is actually the first anniversary of January 22nd when I called … we saw some of these data right after the Christmas holidays, and we had promised Bob for a long time that we would look at this because RNA cell is a major defect in our patients, whether it's underactive or overactive. Something is wrong with the RNase-L pathway in CFS patients, according to decades of research.

We promised Bob that we would simply look, although we had done micro-ray technology, and we had not found the virus there. We had his specific primer pairs so we could go in and look for that gag structural and that envelope gene, so that we could see viral sequences in the cells that could make viral proteins theoretically. What we found was that 67% of the patients we looked at, we could find sequences in both the gag and the envelope gene or just the gag depending on the virus life cycle at the time. This was astounding because we only found the sequence in 3-4% of the healthy control population. It's also interesting; I said 68 out of 101 patients.

[SLIDE 10: Presence of XMRV Sequences in Human DNA]

On some of these patients, we looked three and four times for the DNA in the unstimulated cells. So this is just that pellet that I made when I sorted all the various samples. I just held one as white cells so that I could make DNA later or RNA later, depending on the technique I wanted to use downstream. So, it's important that this was in 68 out of 101 samples. It was 68 out of 101 patients, and it clearly says that in the paper. At any given time, depending on the viral life-cycle, we might not find this virus in the unstimulated group (inaudible). And I give you the example of that is: follow this patient 1118 throughout the talk, and you'll see that this patient, if you only use sequences, would have been called 'negative.' So, we were concerned because PCR is a technique that is fraught with contamination. If you're looking for a needle in a haystack, just a few sequences in a million bases, you might make an error in your enzyme, and it might put the wrong base in there.

[SLIDE 11: Comparison of Nucleotide Sequences from XMRV…]

Jaydip Das Gupta in Bob Silverman's lab cloned and sequenced three of these patients – and that's shown here – and what it's intended to show is: If you compare the isolates that they had from the 3 prostate cancer cases, where they had actually cloned these, you can see, if you compare it to the reference strain, known as VP62, that's the reference strain of what this virus looks like, the CFS samples here were clearly different, but they were highly similar – 99.7% – there were maybe 8 bases different across the entire 8,000 base pairs. This virus isn't like HIV theoretically. It's not changing. We don't find quasi-species in patients when there are lots of different viruses, because HIV mutates so much. Therapeutically, that's something that we can take advantage of and suggests that it might be easier to develop therapies because the virus is going to be largely the same.

[SLIDE 12: XMRV Isolates from Prostate Cancer and CFS…]

Rachel Bagni, my former student at the National Cancer Institute – I asked her if she could construct what is called a phylogenetic tree of this virus so we could understand where it came from (hopefully). And so that's shown on the next slide. And what a phylogenetic tree is – is you take all of the sequences of all the Murine Leukemia viruses – they're called Ecotropic viruses – all the families of virus that they've ever identified, Mason-Pfizer Monkey virus, all the sequences, and you put them into the computer, and then you put into the computer at the same time the sequences of our 6 isolates – the 3 prostate cancer and the 3 CFS isolates that we had at that time. And you do what's called 'blasting'. You ask the computer to find similarities. And when it doesn't find similarities, you get what's called a new branch on the tree. So, clearly, these diverge here, and we don't know when that is in time, but these data suggest that the prostate cancer – that XMRV both in prostate cancer and in CFS – form a new distinct branch, that it's a new human retrovirus. It doesn't have any of the sequences of mouse in it. And when we blasted it, also we did the same thing against the human genome – because I told you, we have a lot of endogenous viruses that don't actually come out of our bodies as infectious particles – we blasted it against the human genome and found that it did not match any sequence in the human genome. So, it's clearly a foreign, exogenous virus that can now, theoretically, be infectious. And that's what we'll show in the next slide.

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Here are our sequences. And you can see, they are clearly not contaminants. We didn't have this – we weren't working with this in the lab, actually, at the time. But we didn't have this, and maybe spread it through the sample in any way. It was there – clearly different isolates. We now have more than 170 isolates, because we isolate from every single patient in all of our studies. And we're actively looking for funds and going to sequence those viruses because it might give us clues as to some of the differences in what we see, maybe something, you know the various symptoms, because CFS is quite a heterogeneous disease.

[SLIDE 13: XMRV: A New Human Retrovirus]

At any rate, we next went to – I'll summarize that – in summary, what is XMRV then? These data suggest, at this point in time, we have sequences related to XMRV that were not found in any mouse strain. So, it's a new human retrovirus. The origin of XMRV remains unknown. We don't know how it got into the human species. We don't know how long it's been – 40 years is the guess of John Coffin, who is a mouse retrovirologist working on these families of viruses for more than 40 or so years. And that XMRV is not a mouse virus – clearly from these data. So it's a new human retrovirus.

[SLIDE 14: Detection of XMRV Protein Expressed in Activated…]

We next asked: Could we find those proteins I mentioned? We took advantage of (inaudible). Sandy Ruscetti, Frank Ruscetti's wife, had been in

retrovirology as long as he had, but because they didn't want to work on the same thing, men usually get the credit for what women do. So Sandy worked on mouse viruses, and Frank worked on human viruses, and I don't think they actually ever published together. But we were thinking about it and saying: None of the reagents that were out in the world, so far nobody had found viral proteins from XMRV, even though it had been discovered two or so years earlier. In January we started looking.

Sandy had saved a box of antibodies – this is really a tribute to the value of your tax dollars going to basic research – because they created this mouse retrovirology program and put a lot of money into trying to understand – if you can understand how viruses cause cancer in mice, you might understand how it causes cancer in humans. And this was in the late '70s and early '80s. And somewhere in the early 2000s, they were going to throw out all of these reagents that they developed and Sandy said, "No, I'll keep them in my freezer." Frank always says that the reason they're still married is because Sandy never throws out anything.

At any rate, she gave us these viruses, I mean these antibodies, and we screened our samples there for protein in our samples. So, we looked at the activated peripheral blood mononuclear cells. And what we do is we stimulate these to divide, and add T-cell growth factor, or now known as IL2, which was actually the discovery that Frank made that preceded the identification of the first human retroviruses. Retroviruses grow and divide in cells, so you have to divide the cells in order to get the virus to replicate to levels that you can see with the technology of the time. And that's important in this study too.

What we've got here is we looked at a number of her antibodies – these are all family members of the virus – this particular antibody which you'll hear a lot about is a spleen focus forming virus. It's a mouse virus that causes various diseases including a neurological disease and erythroleukemia – red blood cell leukemia. Its envelope is both a neurotoxin and an oncogene. It causes cancer and causes toxicity. This virus itself – she had this antibody that was highly specific. It recognizes all known polytropic and xenotropic viruses. We hypothesized that it would recognize this virus and clearly high levels in some patient's cells, but not in others. Interestingly enough, if you look, and use a panel of antibodies, this is a gag antibody to a gag protein I showed you there, that structural gene and this virus, this antibody is a polyphone virus that recognizes the entire MULV. And you can see when you use a panel of antibodies to the viruses, essentially everyone, 68% now of 50 people we tried just one time, you could see their proliferating blood cells. You can see evidence of viral proteins.

[SLIDE 15: Absence of XMRV Protein Expression…]

We next asked if we could see this in normal cells, because of course you want to make sure that it's not in normal people. And you can see clearly here in the 24 normal donors (now up to 60 or 70 that Frank's done) at the NIH clinical center where they have a good donor program – they're all negative. So, these proteins, these viral proteins are expressed specifically in the CFS patients and not in normal donors.

[SLIDE 16: Transmission of XMRV from CFS Patients…]

We next asked if we could transmit that. Is there any evidence that it's an infectious virus? So the first thing we did was we took plasma – so that's the plasma, the liquid off the white blood cells there – and we took their plasma and [this becomes essentially the key to the whole study] we co-cultured it. We simply put it in a flask with the cells known as LNCaP and that abbreviation comes from lymph node-cancer-prostate. This came from a lymph node of a 62 year old man who had metastatic advanced prostate cancer. And these cells grew by themselves in the laboratory so that you could use them as a tool for studying prostate cancer. And, in one of my lives, I developed prostate cancer drugs, because, when my stepfather got ill, I became interested in prostate cancer and had been working on this. So, I knew LNCaP was also deficient in RNase L, and the type one interferon pathway. It had no interferon response. So, we always look for biological multiplication of the virus instead of the multiplication you would use with PCR. So, actually replicate the virus or multiply the virus in cells. You have to find a cell that will grow a lot of virus so that you can study it. So we took that plasma from all of these patients. You see high levels – now 84% of the plasmas contain infectious virus that we could not see. I sent all of these plasmas to Bob Silverman and he said, "Sorry Judy, I don't see the RNA of the virus" there when he looked for the two copies of RNA in the particles which suggested there were very few copies of actual particles of virus in these cells. But again, we could transmit it.

[SLIDE 17: Transmission Electron Micrograph…]

And the next question we asked is: Is this a whole virus? Is this an infectious virus? Kunio Nagashima, my friend at the NCI who is an expert in Electron Microscopy, did this electron micrograph for me, and what you can see here is the budding of a virus from the cell. It shows you again that it's not a contamination, it's actually a transmission, because you've got a budding particle. And that particle is called a C-type retrovirus, because in the old days, when we used the word, they called them 'C' but they changed the name to gamma, but we're old-fashioned, so we keep the 'C' type.

And what you can see here, characteristic of a gammaretrovirus, you can see this budding – remember I showed you it takes the cholesterol and buds itself out of the cell to form the outer membrane. And here's that capsid that encloses where the viral RNA is, to protect it. So you can see both immature particles and many mature particles in those LNCaP that have just been exposed to patients' plasma, showing there is an infectious virus there. So the next thing, so we were pretty happy with this and we sent it off to Science in early May of last year, and they came back to us and they said, "We're 95% convinced, but show us an immune response. If this really is an infectious, non-self virus, not an endogenous virus, your body will make an immune response."

[SLIDE 18: Antibodies in CFS Patients' Plasma…]

Again we went to Sandy Ruscetti, and this part was funny too because we were struggling to do this, because you don't want a whole virus infected cell, you need to have just a part of the virus in order to get the noise out of there. And what Sandy had developed when she was studying the spleen focus-forming virus was this antibody again to the envelope protein. And she expressed it on the cell lines – used two cell lines. This is a mouse b-cell line that expresses the erythropoeitin receptor (it's just for red blood cells), and when she co-expressed the envelope, you see high levels of the envelope on the surface of these cells. So we took these cells and put them in what's called a flow cytometer, where a laser will see the fluorescently tagged antibody on the surface of the cell and count the infected cell as it runs through the instrument, the channel and single cell. So you can see that the cell line went out the envelope protein being expressed. You see the white and the black are superimposed showing that there's nothing reacting specifically with that. If you then take that antibody I showed you, to the envelope, its called 7C10, and expose the cells to it, they all light up, virtually 100% of these cells have the antibodies that are recognizing the cells with the envelope protein. If we then take a patient sample and do exactly the same thing, you see there's an antibody, this is for patient number 1104, that's one of the sequences we have, and there it is, there's the immune response in the plasma, showing now we have an infectious virus with particles that can exogenously infect and is non-self.

[SLIDE 19: XMRV is Present in Malignant Prostatic Epithelium…]

The next step in what happened in the literature is work in prostate cancer again. So this comes from the lab of Ila Singh, who's an MD-PhD at Utah, and she was looking at XMRV in malignant prostate cancer tissue in the tumor cells. One of the other reasons why the oncologists in the cancer community weren't

excited about Bob's discovery of XMRV sequences was because, when they looked at those, they only found them in the infiltrating stromal cells – the microenvironment. But those of us who think a little deeper than most oncologists about cancer know that 50% of all tumors are actually your immune system, your white blood cells, going in to try and clear the cancer because that's their job is to recognize tumor cells. So we weren't concerned. We were excited that it was, and it made sense to us that it wasn't the tumor cell itself harboring the virus, but the immune cells that were inside the tumor.

[SLIDE 20: Fluids from XMRV Positive Prostate Cancers…]

But Ila showed that XMRV WAS present in the malignant tumor cells and that it was associated with that high grade tumor, that tumor that my stepfather died of, that you get younger, and they get really sick really fast. And what was different in the advance in her study is she developed an antibody specifically to XMRV, to the whole virus, another polychromal antibody. And she showed that she could recognize with that antibody, in what's called Immunohistochemistry. When you send a biopsy to the lab, they look at it, at a tissue block. So she did that, and she showed that 23% of the prostate cancer tissues she looked at had a protein to XMRV, a lot like our study, but she saw a lot less DNA sequences than she saw proteins. This paper came out about a month before our paper, but we knew about it from about mid summer when we first met.

In her study, the limitation in her study, was that again that there is no evidence of the infectious virus that I just showed you. So we had evidence of infectious virus in CFS. Can we see evidence of infectious virus in prostate cancer?

[SLIDE 21: Transmission of XMRV in LNCaP]

Frank did this, this is again that antibody, looking for the antibody in the patients. And here he used, this is called a prostatic secretion, so they're just looking at the prostatic secretion and when they had a person who had sequences of the virus, positive in the prostatic secretion, you can see there that there are antibodies in that patient, so that patient is infected. In an XMRV PCR negative patient, we don't see antibodies, so that person is unlikely to be infected with XMRV. And again in the plasma of this integration here, so that now they have actually found in this patient exactly where the virus integrated into the cell, and that patient has a significant amount of antibody. In prostate cancer, no one had ever transmitted virus and shown that it was infectious that way. I show you the exact same study, where we took the plasma from the prostatic secretions there and found high levels of the virus when we put it on LNCaP, showing now in both prostate cancer and CFS, that XMRV is an infectious virus. And in a significant portion now they are finding in prostate cancer patients.

[SLIDE 22: PCR is not as Sensitive a Detection…]

Why bring that up today, is because if we look and we do a summary table of the technologies that I showed you that we used to find the virus, what you see is that patients here in red are clearly infected when you look at plasma antibody responses, and you look for transmissions through infectious particles in the plasma, you can see the red patients both in the prostate cancer and in the WPI patients. These patients were PCR negative, I bring back to you 1118, but we found plasma transmission of that virus that I didn't point out, pardon me when we passed that slide. But ALL of these samples were negative when you did the most sensitive PCR that Bob and everyone developed in unstimulated cells. So those white blood cells, fresh out of the body, not dividing, very low copy numbers of this virus, but clearly these individuals are infected.

[SLIDE 23: What is the Incidence of XMRV in Prostate Cancer and CFS]

Going back to the literature now, two studies have come out since then, and one was in October, right around the time our paper came out. And this was from a German group led by Norbert Bannert, and he found a lack of evidence for the virus in over 580 prostate tumor tissues, when he used the sensitive nested gag-PCR techniques that me and Bob and everyone is using right now. And he had developed his own ELISA which is looking for an antibody in the sera – it's a similar test to what I showed you for looking for antibodies to that. And he couldn't see any of the evidence of the virus in those sera, and so he concluded, they concluded that XMRV was not in prostate cancer. And then earlier this year, a similar study came out by a group in England that showed a failure to detect XMRV in CFS. And they looked at 186 DNA samples, and they did nested gag-PCR and they found nothing.

[SLIDE 24: What is the Reason for Discrepancy]

What could be the reasons for the discrepancies in these studies and what we've shown you in the studies of Ila Singh? First of all, the prevalence of XMRV, that's the distribution around the world, is unknown. The studies that we've shown you today is all we know about XMRV prevalence – that it's in the US and in several hundred people including those with both prostate cancer and CFS. But I remind you that retroviruses are not ubiquitous, they're not everywhere. The sensitivity of the assays in these studies was not the same because both of these studies didn't rely on (inaudible), they relied on PCR, they didn't look for infectious virus. Of course the Bannert group didn't know our study because the papers were under consideration at the same time. And then also that XMRV has an extremely low copy number that I showed you, that even if it is there, you could miss it by these sensitive techniques. And mostly importantly, and something that didn't occur to me until I saw all of this data, was that we don't know anything about the viral reservoir of XMRV. I assumed it's lymphocytes because that's what I know about HIV and HTLV-1. But what if the plasma virus was coming out of the tissues, and then the cells that were actually in the peripheral blood were not the main reservoir of the virus? What if there is another tissue reservoir? We don't know what that is, so these are all possible explanations for why we saw it, and we see a lot of it as you see in the plasma of these people, not a lot by copy number, but certainly there is infectious virus there. So that's what we're thinking.

[SLIDE 25: Distribution of HTLV-1]

If you look at data that supports these arguments, what you will see is the distribution here of HTLV-1. Now HTLV-1 infected people are 10-20 million across the world, and I bring up this one point that HTLV-1 causes a neurological disease known as HTLV-1 Associated Myelopathy. They have trouble walking and balance and almost like a paralysis looking disease. And that occurs only in about 20% of the infected individuals. And then of course HTLV-1 was shown to be causative, satisfied Koch's postulates as we know them for viruses – for an adult T-cell leukemia, and this is a very aggressive leukemia, and the mechanisms for how it causes that are still largely unknown. But at any rate, 10-20 million people are infected, but you see very few – only sporadic cases occur in the US or Europe, and the US incidence is only about 0.2%. They don't even test for it in the blood supply because it's just simply not a problem in America, its endemic in the regions that are shown here today.

[SLIDE 26: Transmission of XMRV from Activated PBMCs…]

And the second argument that supports maybe what's different between these studies is the transmission from the active PBMCs. So if I take the white blood cells, some of which where I can't see virus and just put them on LNCaP, I can transmit the virus to this indicator cell-line that has shown you because its defective in RNaseL (theoretically because its defective in those, but we learn more about it later), will amplify and replicate high levels of the virus. There are scientific reasons why there are differences between these studies, but I don't think there is any doubt that XMRV is a new human retrovirus, and since both HIV and HTLV-1 are associated with neurological diseases and cancer, and now we have associated them with a neurological disease and cancer

since both HIV and HTLV-1 are associated with neurological diseases and cancer, and now we have associated them with a neurological disease and cancer, that this is a real human pathogen.

[SLIDE 27: Recent Publications – Clues to Pathogenesis]

Recent publications after those publications (I'm just walking through the literature off the last few years) might give us a clue to the pathogenesis – how XMRV might cause disease. So this paper by Steve Goff's lab shows that XMRV establishes in an efficient infection, and spreading infection, that's enhanced by transcriptional activity in prostate cancer cells. And what that means is, I told you the receptor is on every cell of the body, but clearly every cell doesn't have the machinery necessary to replicate the virus to high levels. In fact we see that the peripheral blood mononuclear cells really don't, and that's why we don't know where the tissue reservoir is. So he simply infected a lot of different cell-lines, and he found that the expression was very very low level, except in essentially one cell-line, and that's LNCaP. So we got very very lucky in that this was the only cell-line I thought about as an indicator cell-line. We could have screened the hundreds of cell lines I know of that we do regularly when we're looking for viruses because if you can't grow it you can't study it.

[SLIDE 28: Hormones and Inflammation Increase Replication of XMRV]

LNCaP turned out to be really serendipitous, and I think the key technical advance to being able to make that discovery, it's just clearly luck. He showed that LNCaP responds to androgens, I told you it lacks interferon and RNA cell anti-viral responses, and I'll show you what's called the promoter, the response elements, that might give us a clue as to the pathogenesis. And then Bob Silverman's lab showed the same thing. He showed that androgens stimulate transcription which is the replication and division of the virus. Here's a clue to the disease because we know the only two diseases so far that are associated with this retrovirus are prostate cancer (a hormone responsive disease) and CFS (one that's thought to occur primarily in women).

Interestingly that I didn't say that I knew LNCaP is androgen responsive. So you can make it do a lot of good things and that's why we use it in drug development for prostate cancer. Let's look at that organization of the gag, pol, and envelope of this simple retrovirus. This U3 region is highlighted because this is sort of the on/off switch of the virus. This turns it on to make more of the particle in your genome, so this signals your cellular machinery to start making more virus, and what Steve Goth's lab showed (and he graciously gave me these slides about mid summer) was that there's only three responsive elements that turn on this virus that he can find so far.

Two are called glucocorticoid response elements and they're shown here. When a protein actually recognizes that exact sequence and sits down, it tells the virus to turn on replication. And so interestingly enough, what turns on the virus? Hormones. Progesterone, androgen receptor, and testosterone, and we don't know all the other hormones. There are a lot of estrogens and estrogen-like compounds, even in our environment these days, which might tell us maybe there's an estrogen compound that's not a naturally-occurring, estrogens in a plastic, in the environment, that is actually turning on the virus.

We don't know all of the things that turn it on at this point. And the other thing that turns it on is cortisol. What is cortisol? It's the stress hormone, and so right there you're turning on the replication, so it's an on/off switch for the virus with the stress response. When you're told that you respond poorly to stress, there might be a reason for that if you're replicating a retrovirus! (laughs). Sorry I shouldn't laugh.

[SLIDE 29: Clinical Research Findings]

Then we went back into thinking about this virus, we thought about the clinical research findings that had occurred throughout laboratories around the world throughout the years. What it mentioned in part was we know that CFS is a multi system disorder (and in Spanish I say sequelae), but there's lots of inflammation going on, you have allergies, multiple chemical sensitivities, there's a lot of inflammation, and increased numbers of activated T cells, and the production of these inflammatory molecules I mentioned known as cytokines and chemokines. Also a key dysfunction in the immune system of CFS patients is this low natural killer cell activity and sometimes numbers.

The natural killer cell has two jobs in the body: kill tumor cells and kill virus infected cells. In CFS, it's long been recognized (I think first identified by Nancy Klimas and her colleagues more than 20 years ago) that natural killer cells in CFS patients don't function normally, although the dysfunction is not known, but that again gives us a clue to the pathogenesis. So this suggested to us that this chronic infection with a retrovirus (retroviruses are associated with immune deficiencies) might lead to the creation of actual immune deficiency that has patients susceptible to opportunistic infections and more likely to develop cancer.

[SLIDE 30: Hypothesis of XMRV Pathogenesis]

I've schematically drawn our hypothesis on the next slide, and I basically just lifted the graph of what happens in HIV and changed it to what we know happens, and changed it to all the data that we have so far. In HIV what happens is that there's an early infection, the green line is actually the plasma viral load, and it goes up in a spike. This might be a flu-like syndrome, or it might be nothing at all. You might never know that you were actively infected at this point and get sick. But then you have multiple other infections, stress hormones, advanced inflammatory responses that cause these various spikes of the virus throughout a time course which we don't know.

I've heard the incubation period of HIV virus is 21 days. We don't know anything about the incubation of this virus, we've just discovered it! At any rate, all these events operate to set the viral load higher, because every time you divide a cell, that your white blood cells, the cells in your immune system, and actually our paper shows it's the TB and NK cells are infected. Those cells are getting infected, more and more and more of them, and some of them are long live memory cells that you need. Or they're going to the tissues then, and they're infected, and they're spreading the virus to other cells, and we don't know where that tissue reservoir is, and as I said the receptor theoretically is on every cell.

Not every cell can replicate the virus, but virus can get into every cell. So it's infecting more and more NK cells, as the load keeps coming up, and at this point, something happens to your NK cells. This envelope antigen comes to very high levels, like we see in our patients' plasma and white blood cells, and we know that in animal models or in animal viruses of this family is actually a noctogene and a neurotoxin. We hypothesize that the envelope alone is creating some of the neurological sequelae, and that they're different from the virus replicate. So it can be sort of the envelopes around a lot more, I showed you the defective particles with less infectious virus and more defective virus, but those proteins can affect your body.

We know you're making antibodies, but some of the sicker patients don't make antibodies, and CFS patients are known to have problems with antibody production for whatever reason. We're not saying that's direct to the virus, but you know it's not a great leap of faith because that's what we saw in the early 1980s with AIDS patients. We had no idea how long those men had the virus.

All of a sudden, they were getting Pneumocystis and Kaposi's sarcoma (a form of cancer that only occurs in older men in Italy), and that's because, as you age, your immune system loses effectiveness too. All of a sudden we're seeing a virus that is not endemic in the United States. Well actually from these

patients, they actually identified HHV8 (Human Herpes Virus 8) which actually is causative for Kaposi's Sarcoma, and that virus, I led a drug development program about a decade ago just before I came to California, and we were going to make drugs to target AIDS-associated malignancies, and we found as soon as we got the highly active anti-retroviral therapy and got rid of the HIV and silenced that, the Kaposi's Sarcoma went away, as did the HHV8. They cut the budget for that drug program and rightfully so, because there's no need to develop these drugs because they learned that, at that point, all you have to do is control the retrovirus, get the immune system back to functioning, and also the good news is most of those men, their immune systems are functioning well. You can get a lot of them back to at least a level of health, even though they have to stay on various drugs the rest of their lives. At least they could cure the immune deficiency.

[SLIDE 31: XMRV – A Human Gammaretrovirus of Unknown…]

In summary, then, of the science part of the talk: XMRV is the first simple human infectious retrovirus. It's a gamma retrovirus; it's not complex, so it's the first one known in this family, and we know nothing about the pathogenic potential, other than the two diseases that we've seen it in. We know that human retroviruses are not ubiquitous. I've shown you the distribution can be quite low in various places in the world. We don't know how it spreads across continents.

They're not benign, meaning they cause disease. All three known human retroviruses are associated with neurological diseases and cancer. And importantly, they are not airborne, retroviruses are not contagious, you don't get them in the air. We know that, for instance, with AIDS patients, that it's not a problem to kiss AIDS patients and hug AIDS patients, and so that knowledge is there for this virus as well. So there's 3 known now, the complex and now the simple, and I've mentioned that a number of times. Interestingly, and something we should think about, in light of the replication studies and the other studies as we're going on, I say HIV and HTLV, but I've been saying one, but there are variants of HIV. There's HIV2 that is less pathogenic, there's HTLV-2 that is less pathogenic, in fact hardly pathogenic at all. And these are clearly different and have different pathogenic profiles, and just a short extension of that suggests that there could be variants of XMRV. There could be subtly different sequences of viruses out there that are associated now with different phenotypes, so the way the disease looks, and different cancers or different neurological diseases.

I know that the scientific community is actively looking for variants, so another good news about these studies is that there are a lot of excited retrovirologists and immunologists who started as soon as they learned this in July, to the put the world resources and the best minds on this virus associated with CFS, and that's probably the first time that's happened in the world, so they're excited about that.

[SLIDE 32: Personal Reasons to be Tested]

A lot of the questions that I got, and I wrote this talk around the question that I got, had to do with reasons to be tested. You know we don't have the best diagnostic test yet because we still haven't validated that serology test. That serology test is done in a laboratory; it's very cumbersome, we need to validate it clinically in order to look for antibodies in the population against this virus, and that is the number one test when you go look for HTLV. But that said, there are opportunities to get tested, and you might have your own reasons to get tested. Now generally a physician won't test because there are no treatment options. There are no known anti retrovirals currently that are known to be good for XMRV, so why go get a test for it if you can't treat it?

But it can give you additional validation that your illness is an organic illness, and that can have a huge psychological boost because you can begin then to think about immune support and things you might do and changes in your lifestyle where you may be able to support your immune system in the meantime while we develop drugs. And importantly, you want to protect your personal family and public health. We need to know where this virus is. And it does help, physicians then start to see, physicians like Dr Peterson, will know how that might relate to your other infections, your other immune issues, if you have cytokine profiles in some of the tests he does. It might help him or some of the other physicians with your therapy to know that this is a player in the game now.

And again it underscores the more people that are infected, that 3.75% is 10 million Americans, so that I didn't have to say anything. The drug companies called me the next day and said "Gee we'd like to help!" and so we're actively working with them, and they are helping because there's another piece of good news which is that there are drugs that were on the shelf that were developed all the way through phase 2 clinical trials. They were shown to be safe in people, but they just didn't work as well against HIV as the drugs that were out there. Why spend a lot of money developing them? There are real targets that you can go after that can serve regions between these viruses right now and maybe come up within the next year with a drug and a clinical trial for that drug that would go a long way toward treatment.

[SLIDE 33: Preventing the Spread of XMRV]

Right now we recommend, to prevent the spread of XMRV, if you have CFS and you wanted to be prudent, even if you didn't get tested say "Okay I might be infected." What would we recommend? The HIV precautions, because it's a retrovirus we know it's spread, we found it in blood, in the body fluid secretion, and prostatic secretions. You just want to assume that these precautions that are very stringent, and have prevented the spread of HIV in some countries, that if you don't donate blood or sperm (this virus can infect sperm cells), so if you have CFS or maybe a history of aggressive prostate cancer in your family, you might think about not being a blood donor.

Follow the HIV precautions. Don't share toothbrushes, because you can have bleeding gums or razors. Use safe sexual techniques, and do not breastfeed. It's 'don't breastfeed after six weeks when the maternal antibodies go away.' When they did that in Japan where ATL (that aggressive leukemia) was rising in the late 70's and early 80's, all they did was say "Okay, no breast feeding!" and 40% reduction of ATL rates in Japan. So prevent the spread of this virus, and you can reduce the disease and protect your family.

Part 2: Transcript with slide citations of the Jan 22 Santa Barbara XMRV Seminar by Whittemore Peterson Research Director Dr. Judy Mikovits – compiled and edited by long-time ProHealth subscriber and contributor Sandy Miarecki. (To return to Part 1, click here. To download the slides, click here.)

[SLIDE 34: WPI Research Priorities]

What are our research priorities? At the WPI, we're actively working with the federal government to develop that next generation of tests. We expect that serological assay (Rachel will get mad at me) within a month. She told me yesterday that the data were looking really good. And we want to investigate the prevalence of XMRV. The federal government – the National Heart, Lung, and Blood institute – actually called as soon as the paper came out, and we set up a Blood Working Group to investigate what is the true prevalence. Prevalence means the presence, the distribution, not necessarily the disease; and we use incidence with disease, and prevalence of XMRV in the blood supply. Our numbers were small – they were only 200 or 300, that's 4%. But 4% is still 10 million Americans, so you want to look at that, and they actively are. And they're working on that second generation test as well.

We want to understand those tissue reservoirs, and clearly it may not be the PBMCs (peripheral blood mononuclear cells). Is it the lymph nodes? Is it bone marrow? It's possible (I don't expect it), but it could be the brain. We don't know at this point. We are actively working, as I said, with drug companies to

develop anti-retrovirals and immune based therapies.

We want to understand how it's transmitted. We've got a family study going on in the research plan; it's just getting IRB (Institutional Review Board) approval and ready to start. Hopefully we can get families who have any number of diseases across the spectrum, fibromyalgia, other neuro-immune diseases, maybe a higher incidence of cancer, but we need healthy people as well, so we'll take essentially anybody into that protocol. And, as I said, that protocol will help us investigate the incidence of XMRV in other neuro-immune diseases.

[SLIDE 35: Questions]

Important questions that the field is working hard to answer (and we are as well, but we won't be able to do all this):

• Is XMRV a causal factor in CFS, and possibly some aggressive prostate cancer? And we'll talk a little bit about how you think about a causal factor. One way to do that is, we have several patients who came to Dr. Peterson, and they said "I was fine until I got into a car accident. I got a blood transfusion in the hospital and I got CFS" or "I had a surgery and had a blood transfusion." So if you can identify a blood transfusion exchange of an acute infection that causes the disease, and the virus wasn't there before in the human, and it's there afterwards, and it's in the donor, then of course you've got causality, and that is one way that causality was shown in HIV as causing AIDS. I think we all know the tennis player Arthur Ashe, and that is how he got HIV/AIDS and subsequently died.

• How does XMRV enter the human population? Is it a zoonotic [from animals] transmission? We know it's not a mouse, at least not any of the mice we know. It could be a field rodent of some kind, but we've never found the virus in another animal. This is the first animal that is the "Xeno," and that is man. So, how does it enter the population, and when did it enter?

• What's the worldwide incidence of XMRV disease; that should say, "or prevalence" of XMRV. Where is it? Is it in England, in Europe, at what level? We know it's 1.7% in Japan because of a study done earlier this summer.

• And does it alter the risk of cancer development? Because HIV & HTLV-1 both, by causing immune deficiencies, do.

[SLIDE 36: WPI Collaborations International]

A lot of people wanted to know: are we working internationally to replicate the studies? Everyone you see on this slide, a lady in Canada, part of the blood group in Canada also had called me since the study came out. We've been working with Jonathan Kerr, and we have a 5-year RL1 with him. Ellie Barnes is in MRC in Oxford. Norbert Bannert on that German paper, he was working with an advocacy group led by Regina Koch, I think, and they found a few samples that were maybe positive. So he called me and said "Can we work together and have that antibody?" Again everybody you see on this list, Jonas Blomberg in Sweden. Norway, Germany, the Netherlands, Italy, Spain. We can't handle the samples we've got so far, but we'll try, and we'll send the reagents out to anybody to replicate the work and find out more about the disease.

[SLIDE 37: Additional Incidence Studies]

We also know of additional incidence studies that we're not involved with but are occurring at Kiel University, again in Germany. And here in the USA, Sam Chow is working and has identified the virus in China, and I do know that Richard Huber has had success at finding virus in CFS and other patient groups. And of course I mentioned that blood working group that's working throughout the United States, and I didn't list the number of US collaborators we have. There is a lot of interest. A lot of the world's best labs are working on this, and we're going to get there a lot more quickly than we would because of everything we have learned from HIV.

[SLIDE 38: XMRV Clinical Diagnostic Tests]

What about Diagnostic Tests? Should your physician or you want to be tested currently (the last time I looked online), there were only 3 companies offering the diagnostic test. Of course the WPI licensed the technology to VIP Dx (we're a non-profit institute), who is using our proprietary culture method and PCR, in combination along with a Western Confirmation. So, we look for both antibody and PCR positives in the cultured and co-cultured cells. And we use 20 mls of blood to do this, and make sure of the accuracy of the result, and the price is $450. Clongen lab has a real time PCR that is just looking for sequences on 1 ml of whole blood, and their price is here [$375]. You won't find this virus in 1 ml whole blood by PCR. I think I've shown you that with the negative cases in the prostate cancer. And also a company known as Cooperative Diagnostics in South Carolina. We don't know what their PCR method is, but they're using a drop of blood on a piece of paper. So, they tell you if you put a drop of blood on a piece of paper, you don't need a doctor or anything, just send a check, and of course they won't find anything.

[SLIDE 39: Your Help is Critical to Advance the Science]

Your help is critical to advance this science. At the WPI, we either want your money or your blood. That's the only two choices! We need you to participate in these research studies, and we have a form online where you can register: https://www.wpinstitute.org/patient/volunteer_form.html, and you can email me.

We're asking for some clinical characteristics, but we're asking for those more to help us put it in a study. We won't turn anybody away. We will look for the virus, if we can get those studies. We're waiting for the IRB approval, that's the human assurance to make sure we're not hurting you and we're protecting your privacy. So, we expect that this week.

Donate funds to the WPI research and clinical programs that will be established later this year. The clinical programs will really come from the research and the diagnostics. And then write to your government officials, and encourage them to support XMRV research. This is an infectious disease. Why isn't the National Institute of Allergy and Infectious Disease considering this virus? They've been pretty quiet, haven't they? We haven't heard a word from them. So, we need our government agencies to look at this virus because it's an emerging infection, as I said, of unknown pathogenic potential.

[SLIDE 40: Acknowledgements]

I'd like to thank the people who – we couldn't have done this study without them. This has been a 3-way collaboration between the National Cancer Institute and its contractor SAIC, Cleveland Clinic, and the WPI. As I said earlier, when Vinny Lombardi and I, together with Max Pfost, first saw the few sequences of the virus, I called Bob [Silverman] because obviously we were doing the work with him, and then I called Frank [Ruscetti], and said, "I need you," and he said, "I won't go," and I said, "I'll pay your way to San Diego on the beach for a week!" and he said, "Not any more of your schemes, Judy! I'm not going to do that again!" At any rate, we met at a restaurant, and we showed Bob, and he didn't know what I was going to tell him. Interesting, Frank's a bit cantankerous because I gave him about a week's notice because we'd had 3 weeks, and I was pretty sure I knew what we had. We had to get a 3-way inter-institutional confidentiality agreement. Frank called the office in the government, and they said: "No, we're not going to do that," and he said, "Look, we're talking next

Saturday. You can either have a confidentiality agreement or you won't," but they got one. So Frank and his lab, like Dan Bertolette, did every one of those beautiful Western's that I showed you, just a magician. Mike, Dean, and Burt Gold sequenced the entire RNAse-L gene in more than 100 patients. Ying Huang did all of the PCR that we had done, totally blinded, where samples never came to our labs to show it wasn't contamination.

And, of course I've mentioned the lab of Sandy Ruscetti, Charlotte Hanson, and Jami Troxler, who were key in providing all of those reagents, without which this study clearly wouldn't have been done. Cari Petrow-Sadowski developed that immune-response assay in a real hurry this summer, and I mentioned Kunio & Rachel, who did bioinformatics support and electron micrographs. We couldn't do it without Dan Peterson's diagnostic skill. I mean, he biased the patients such that we could find the needle in the haystack, but these are the patients that come to the institute. They have classic symptoms of CFS. When we have taken patients that have emailed us with exactly those same symptoms, we find the virus every time we look, including in Europe, in England, Ireland. We couldn't do it without the CFS patients and advocates. We do so appreciate the support all along.

This was a tremendously difficult year in trying to keep quiet. Knowing what you had and don't say anything until you are sure you're sure you're sure. Every day was just, "are we sure?" And so, we were able, with the small crew you see here, and this supportive staff. Vinny, Katy and Max – they pretty well have worked 24/7 for at least the last year… So, at any rate, with that I'll thank you for your attention and take questions.

QUESTIONS – Audience Q&A Session

Question: Before any of the questions, I just wanted to say thank you because through your work and your collaboration, you've brought more excitement to the CFS community, you and your collaborators have, than in 2 decades. And you've also brought more interest in the illness than we've probably seen ever, so I thank you.

Judy Mikovits: You're welcome. [Applause]. That's interesting, because the reviewers of the paper didn't really know what CFS was. They said: "oh, that's a poorly understood and complex disease" and they went on to the virology. So we were able to get that reviewed without any kind of bias. And I think that was significant as well.

Question: What percentage of the population has this virus?

Dr. Mikovits: We found it in 3.75 percent of the U.S. population, and it was from across the United States. And in Japan they found it, just screening the blood supply of a couple thousand people, they found it in 1.7 percent. So we don't know the true prevalence.

Question: So, only in 3.7 percent? What about the other 96 percent of CFS?

Dr. Mikovits: No, that's the healthy population. It's in 90-some percent of the CFS population. I stuck this slide in here, and Frank keeps taking it out, but you might have heard in the press after the paper came out, we didn't do all of the tests, all four tests, on all of the people prior to the submission in May. We just looked for evidence of infection and looked to see if we could isolate the virus, looked to make the point, and it wasn't so much about the CFS.

What we did, after the paper was published, we went back and we looked with all four assays for evidence of XMRV in those PCR negatives. Because now we know that indeed those negative samples may have evidence of infection, and what we found was that 19 of the 33 had antibodies in the plasma. We found transmissible virus in the plasma of 33 of those people, and then we looked at that latent virus because the company I used to work at here in Santa Barbara was called Epigenics, and it was developing methylation-inhibitors for epigenetic silencing, and that's what happens to viruses. So we used Decitabine, which is a demethylating agent that opens up the genome and turns on the virus and found that there was latent virus in 10 of those people. And when we summed it all up and tabled it out, 99 of the 101 patients in the Science paper had evidence of XMRV infection. Another way that HIV/AIDS causality was established was by saying, "So, the statistics of this means there's a 10 to the minus 35 chance that you had CFS in our study without having XMRV." So I'll go back to the AIDS analogy. You can have HIV. So, we wrote in the paper "virtually impossible," and the editor took it out. We wrote, "highly significant." The editor took it out. Finally we said, "significant." But at any rate, 35 zero's in front of a 1 would tell me it's virtually impossible to have had CFS without having XMRV in this study.

So, you can be infected with HIV and not have AIDS. We know that. People are being treated. A lot more elite-controllers are coming out, but you can't have AIDS without having HIV. So if we can establish that XMRV is to CFS as HIV is to AIDS, which is what we're trying to establish through that immune system understanding. So HIV kills CD4 cells and leads to AIDS. XMRV does what to the immune response? To the T, B and NK cells to lead to CFS? To turn your question around, sir. What about – the incidence of CFS in this country is 1 to 2 million – is that more or less what is said? By the Canadian or the Fukuda criteria? So I said 10 million people were infected. Where are the other 8 million? Do they have cancer? Do they have nothing? I showed you that only 20 percent of HTLV-1 infected people were actually sick with one of those diseases.

So you can be infected with retroviruses and be carriers and not be sick. And that's one reason to be tested. If there is a genetic susceptibility, which we're looking to, maybe a reason, an immune defect that was unknown as to why some people get sick and others don't. You certainly want to know where the virus is, so if you're a carrier you can protect your family.

Question: Do you know how many have tested with VIP-Dx, and how many are positive?

Dr. Mikovits: I don't work with the company. They only take samples two days a week because it takes three days to do that, so they've done hundreds of samples in the last couple of months, and at least half of them are positive. Or 40 percent. And again, their doctors are looking at, the doctors who are well versed with CFS, so they're immediately sending off. Dr. Cheney, Dr. Klimas, a doctor in Canada, Ellie Stein, maybe even Susan Levine in New York. I'm not sure, because it's illegal for me to know those data because there's confidentiality between the patient and the physician. But quite a number and, yes, it's there.

CFS is a heterogeneous disease. I mean anything based on fatigue. So certainly everything is not going to be this virus. But maybe there is a disease, and of course that's what we're looking for, biomarkers for understanding how you can get sick and be sick forever and not have drug targets, not have diagnostics. Certainly there are going to be lots of people who have what might be called CFS today, and that's why we've also coined the term XAND, for XMRV-Associated Neuroimmune Disease, and that would be because we've seen (inaudible). I had done a number of studies with family members after the paper came out and prior to now, where I just said there's a family member where the children have autism, there's fibromyalgia, there's excess cancer, and when you look, you find the virus. So, we've found the virus in Atypical MS. Atypical MS is a non-demyelinating MS – it looks like MS, it has some brain lesions like MS on SPECT scans. At any rate, I'm not a physician.

Just looking at families with different types of neuroimmune disease, we started seeing that the virus was there, and so that's why we started thinking it might be involved in a broader spectrum of neuroimmune diseases, with overlapping symptoms because in fibromyalgia, pain is the primary symptom, but, in a lot of people, it's this body-numbing fatigue, so fatigue goes along with it. In fact, Cindy Bateman, who's a fibromyalgia expert at the University of Utah,

says fibromyalgia is CFS with pain, and she can distinguish those who get better with fibro with certain therapies and compounds, and she takes the others away who don't respond at all, and puts them more into the CFS group. So definitely XMRV is not going to be everywhere. It's not – it's 4%, but the people who are infected are sick.

Annette Whittemore: Earlier you said that 40% were positive. So describe the fact that if you're positive, you're positive. But if you're negative, you're not necessarily so?

Dr. Mikovits: Yes, that's correct. I answered that question based on the samples that came through there. Everyone who is positive is definitely positive for having the virus. But we don't know what the people are, what the doctor is sending in, so the people might not have that disease. So it could be a clearly, distinguishing delineating marker – biomarker – or diagnostic at that point for various diseases. So a doctor might see a spectrum and say "I don't know, maybe I'd better check." Because the earlier you catch it, just like cancer. Early detection. Make sure the reservoir is (inaudible), make sure you don't have that virus multiplying, and you can live a normal life. Don't let it get (inaudible). You know the commercial out right now is "HIV doesn't have to equal AIDS"; well XMRV doesn't have to equal disease. If we keep it down, we keep the immune system strong.

Question: So what you're saying is you may test negative but not be negative?

Dr. Mikovits: That's correct. If you do it by the PCR. If you do it by VIP-Dx, at least right now, it's running along the lines of (inaudible). We've got the antibody, and we've got three of the four tests. We'll license it to anyone. We're a non-profit institute, so everybody pays the same royalty, so any diagnostic company could do the gold standard. But right now, if you test negative, you're not necessarily negative, even at VIP-Dx. Because we want to go do that serology test. Maybe we can't find evidence of the virus. But you've been exposed, which would be a good thing because your levels are theoretically low, and you've just now made the antibodies, so you can prevent disease, as we did with Magic Johnson. But we don't know anything about the immune response to the virus.

Question: What about transmitting it, when you get pregnant, to a child? I mean, you were talking about breast feeding?

Dr. Mikovits: Well, it is theoretically possible. We don't know. Gamma retroviruses are vertically transmitted, so the egg and the sperm can be infected and you can actually vertically transmit gamma retroviruses. But this is the first (inaudible), we've only studied it for two months. We don't know. Theoretically it's possible. If we make those data, it will certainly fall out when we start looking at family studies. The horizontal transmission is the only thing we know about right now. Because, of course, you have to find somebody who just gets infected in order to understand the disease. And since a diagnosis of CFS is being sick for six months. Well, if that's the only thing we can do is to stop that practice, making somebody wreck their immune system, or be totally sick for six months, that would be a great thing with the discovery. If that's the only thing that comes of it.

Question: Would you not recommend getting the test again if you did [test negative]? I just took the blood test with my doctor… and he's part of a study. He didn't tell me who he sent the samples to, it's a 20-patient study, so if that came back negative …

Dr. Mikovits: It depends on where it is sent.

Question: Take, for example, VIP-Dx?

Dr. Mikovits: If it's at VIP-Dx, as soon as we have the serology, we'll go back and do all the negatives. We save them… We do isolate virus from all of them, but it costs a lot. So if they're really negative, we won't isolate virus either. That's correct. At VIP-Dx, we're going all the way to virus isolation, because we want to make sure we are sure.

Question: So, at a non VIP-Dx?

Dr. Mikovits: They're only doing PCR. All bets are off. I showed you almost 60% of them are probably, they're all false negatives, because very few people can find them. And participate in our research studies, because as I said, there's no hurry. There's no real reason to pay for a diagnostic test because we can participate in research studies and fund those studies and you get better data. Because I'm not privy to those data. I can't answer the question of where they came from, where they are in the United States. Those patients and doctors have to release that information, and that's not the job of the diagnostic company. So the information is not usable in that way. We're pretty good right now. We've been as responsive as can be. By the way, if anybody thinks they might have been in our repository, if you simply e-mail me, we did decode that study over the Christmas holidays, so we can tell you if you're positive or not. We can tell you whether or not you were in the study. Because there's more than 500 samples, who are patients in the repository, and we only pulled about a hundred of those for this study. I don't remember everybody, but we did decode it, so we know who the positives are at this point, and we are sending letters, but you have to ask me first for our human-assurance protocol, so just ask me and we'll tell you.

Question: In the beginning, you mentioned that the virus uses lipids to grow?

Dr. Mikovits: It actually uses the cell lipids to make its lipid membrane. It's an envelope virus, and it has lipids, so it pulls cholesterol in to make its (inaudible), so it uses all the cell machinery. It only codes the enzymes and the envelope proteins and cells, so the lipid bilayer of the envelope virus, there's lipids in it. It's from your cells, and cholesterol's a part of that.

Question: Because I'm wondering, I've met a lot of other CFS patients who like me have high cholesterol. That just made me think: might there be a correlation?

Dr. Mikovits: Yeah, and nobody's ever looked. It's certainly something that they could look at correlating. I can't think of a reason why. You might presume you'd have less, if you're using it up for another purpose.

Question: What about children?

Dr. Mikovits: We do have a little bit of data on that because we have two children in a study who have a genetic disease of cholesterol. It's called Niemann-Pick's Disease. It's also known as Childhood Alzheimer's. And these kids, you know it's a cholesterol metabolism disease where eventually your brain, you'll eventually die of it because if you get too much cholesterol, it messes up your brain and everything. And those kids have been treated by James Hildreth in Nashville, Tennessee, at a small college… He's using Cyclodextran and some of the cholesterol drugs. He's actually an HIV drug developer, and the kids are showing some improvement when he modulates that pathway and stops the virus from entering or exiting the cell, so we don't know anything about XMRV. We just know what other viruses do, so he is having success, suggesting that there are some opportunities there.

Question: Are you working with him?

Dr. Mikovits: Yeah, we're working with him as well. That's why I didn't list all the collaborators in the United States. We're providing reagents and whatever

intellectual knowledge we have, and whatever physical abilities and instruments we have, to these collaborative efforts as well.

Question: Until forthcoming therapies are established for those who have XMRV, what are people doing once they are tested? Are they taking immuno-modulating therapies or whatever?

Dr. Mikovits: Some of what I showed you here, that turn on/off switch, suggests non-steroidal anti-inflammatories. So non-steroidal anti-inflammatories could help. Things that will balance cortisol. Maybe – these are just thought processes – because you know inflammation turns on the virus, and I don't know much about hormone therapies and how lowering hormone levels might help. But I do know anecdotally that a lot of women in a particular time in their cycle get much, much sicker and can't get over it. I do know in the laboratory progesterone really up-regulates the virus, so if you have a birth control pill – and again I don't really know anything about this (I'm not a physician) – you might think about just keeping the levels balanced and avoiding the fluctuation.

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So certainly supplements can help a lot. Retroviruses cause a lot of oxidative stress. So things like N-acetyl-cysteine and glutathione, the detox type. People do take supplements. I know that a lot of people have had success with immune modulators, just helping their disease, or supplements, because they know about them. I caution against taking too much or taking a bunch of things. Try to learn as much as you can, because supplements aren't controlled by regulatory agencies, and therefore, if you're not using a high quality, you could actually be putting poisons in you. Since we don't know much about the virus, you could modulate the wrong way. But things that up-regulate Natural Killer (NK) cell function (and there are known compounds out there that do that, that are marketed in our state), so that could help you. So, we don't know a lot about it, but that's how people are actually starting to help themselves.

The other thing is to stay out of stressful situations. It's hard to do. In fact, we've seen a lot of people get worse just with the stress of the discovery, which is sad. That's why I want you to call me. Because we don't want you to think: "Oh no, I have a retrovirus!" We want to talk to you because it's serious and you can have untold (inaudible). I mean most people say: "Wow I got it!" you know they're congratulating people when they come up positive, which is really strange… [laughter] Then they get really scared, because they don't know anything about it. And we're here as much as we can to help, but we don't know anything about that retrovirus. All we can say is the same thing I've been saying today. I hope you would walk home and say: "It's not a mouse retrovirus. Retroviruses are not ubiquitous, and they're not benign. So I have to think about those facts." It's wide open.

The drug companies – the one thing, if you do get tested, and we know you're positive, a confirmed positive – we'll get you into the earliest clinical trials. And they'll have things pretty soon because it's major Pharma, and I've given them the reagents and the cell lines – we've made several cell lines from people that make a lot of virus. And so we've given them those cell lines. All they have to do is take something off the shelf that rationally might inhibit a particular path, say the integrase gene or another gene that's conserved across the three retroviruses [HIV, HTLV, XMRV] and show that they can see the efficiency, efficacy and knock down levels of the virus in the lab to levels, which they're the known blood levels of the drug can achieve, and they can submit and do the paperwork for a clinical trial. And it's already known to be safe because it's already passed Phase 1, or safety trials, in humans. So we looked at those first. And there are a number of companies who, as I say, they are high quality companies, and they are more than interested. They are doing it now, and have been doing it since October.

Question: What about cancer, especially the hormone-responsive cancers?

Dr. Mikovits: We very much expect that some of the breast cancer incidence – we hypothesize that inflammatory breast cancer is a lot like what we saw with the inflammatory prostate. But yes, it is a very real hypothesis because the incidence of breast cancer in young women that you never used to see before, is rising at levels that suggest something environmental, and not necessarily genetic. You know, "we never had cancer in my family," and you see young women that way, so it certainly is something that we're looking at. The "we" here – I always say "we," and it's everybody but me usually – it's the National Cancer Institute. We're also looking at lymphoma, because CLL (chronic lymphocytic lymphoma) is a lymphoma, a B-cell lymphoma and it's also been going up and up, and it suggests to us some kind of role of an infectious nature. So we are looking at a number of lymphomas with a group in New York, a group in Florida, and the Nevada Cancer Institute. I don't have a breast cancer study set up.

Question: There's actually an anti-retroviral vaccine that's been used…

Dr. Mikovits: Yeah, a vaccine is a real opportunity, and we know that they still don't have an HIV vaccine yet that's efficacious, but HIV is a complex retrovirus. So when you're thinking about the reason why you have to take a flu vaccine every year, it's because the virus changes. Well, an HIV virus in a person in a week will change too much. They call them quasi-species. One of the really interesting things about this study is that we only isolate one thing out of these people. When we do the sequencing, it's clean. We don't isolate quasi-species. We don't have the virus have these changes here in one week or one year – we have patient samples across dozens of years. We isolated XMRV from a 1984 plasma sample from a patient. We got it in 2008 and we got it in 1984, which again suggests that the virus has been around at least 25 years, and it might have a role in the disease but is not causative. So yes indeed, it could play a role in other things.

Question: People with CFS have shown a lot of evidence in other studies of being immune-suppressed. How are you certain that it's XMRV that's causing immune-suppression as opposed to say 8 other viruses like Kerr is suggesting, or other viruses that are causing immune suppression and making XMRV opportunistic?

Dr. Mikovits: Well, there are a couple of things for that. First of all, we're not certain of anything. So I'd say it's a hypothesis. It's because of what I know about HIV, and HHV-8, herpes viruses, where it's the underlying immune deficiency. The other viruses aren't retroviruses, the other pathogens too, the bacteria, and they don't live in your immune systems forever and replicate and have reservoirs. They're across the board, so everybody's infected. Probably 90% of this room has an EBV infection. But very few people express EBV, have chronic active EBV. That suggests that your immune system has something wrong with it. It could certainly go either way, but retroviruses don't do that.

The CFS world has looked at many of those pathogens, so here's chronic Lyme and here's EBV and here's… It's never one place, something that unifies all of those. So it's certainly a testable hypothesis, and that's one of those things that will just happen. If you get an anti-retroviral and the chronic EBV goes away, and a lot of the symptoms go away… I'm not saying that the EBV doesn't cause a lot of those symptoms. That's what makes it so hard to figure out the disease. But if there's an underlying immune deficiency that's created… that's not simply depression… but is getting worse every year, could be an explanation. So we're happy that we can test that, because we do have different populations where we can see what the role of the co-infection is. We've never looked. We're looking with various groups at big cohorts of chronic Lyme and big cohorts of chronic EBV, Q Fever – things like that have been associated with. Jonathan Kerr, in fact, he's working actively with us to see if it makes sense, that you need the combination or you need one or the other. But, in the general population, the incidence of XMRV is something between 2% and 4% right now, whereas it's 90% of some of the herpes viruses. And most

But, in the general population, the incidence of XMRV is something between 2% and 4% right now, whereas it's 90% of some of the herpes viruses. And most of us are exposed to some of these other pathogens, so I certainly don't have an answer, but again, this gives us a testable hypothesis to look.

Question: I'm XMRV positive. And I have a son who is. I was told that he also had Lyme when he was 7. Explain the chronic Lyme connection in him?

Dr. Mikovits: Well, again, we don't know – it's our hypothesis that, especially in Lyme disease, where it goes away and it's almost cured and you only see some proteins that don't necessarily; you know; it suggests you almost cure it with the antibiotics, but you have to keep the antibiotic there because there is a low level that your immune system can't clear, and maybe it can't clear it because you've created an immune deficiency with the retroviral infection. We've never looked at a Lyme cohort yet. Again, we're setting that up, but we don't know the connection. The hypothesis is, if we can treat the retrovirus, then the chronic Lyme will go away. And you'll treat both.

Question: But he was untreated until about 7, and was bitten in Europe, and no-one understood that there. He had the rash on his legs, and no one believed me that that's what it was

Dr. Mikovits: Well, we can still clear the Lyme. For instance, in the AIDS population, you treated the pneumocystis pneumonia. You treat it with the appropriate antibiotics because you don't want the co-infections to kill him, and then do the anti-retrovirals too. There's no reason, for instance, one of the questions that I got online was, "Well, I'm taking antivirals. Do I need to stop in order to get tested?" No, because antivirals don't target retroviruses. Retroviruses are very distinct viruses, so no you don't need to stop. We'll still find the virus.

Question: But even 10 years later, because he was never treated. That was 10 years ago. You're still saying you would still treat for Lyme?

Dr. Mikovits: Yeah, well you probably should be at this point. Treated for both the Lyme and once we have a treatment, for the retrovirus.

Question: If XMRV is transmitted sexually, how come it's not seen as CFS in couples?

Dr. Mikovits: The possibility is that it's transmitted sexually, but we've never actually shown human-to-human transmission, meaning we caught the day when the other got sick. I don't actually have an answer for that, other than that I know that it might well be more in couples than we think, because it's a milder form of symptoms, or maybe this person's a carrier. There's still a lot we don't know about why prostate cancer and why CFS… What is the hormone component that turns on the virus? They may be carriers and not know it, and certainly there's a lot to study there, to understand the gender differences in these diseases.

Annette Whittemore: Maybe part of the answer is that, if XMRV turns out to be the cause, would you have said that you wouldn't have CFS without it, given you can have the virus without having CFS?

Dr. Mikovits: We have looked in a limited number of families that we've done, and in fact, maybe only one member of the family has CFS, and so it will be an interesting year, but, once we really get to the data of looking at these families and the various diseases and trying to understand – it's a very low replicating virus, so it really just sits there for a long time. If you can keep the reservoirs low, you might have the virus your whole life and never get sick. We don't know how long it's been in the population. We think, like with other retroviruses, the younger you get sick, the more severe the disease. When Sandy Ruscetti gives the rats the viruses when they're neonates, they get cancers. When they get it when they're 30 or 40, they don't get anything.

The immune system is educated and grows as you go along. It can be more fragile at different times in your life. We've seen a lot of puberty, boys and girls alike. There's a lot of infection or at least apparent infection, disease occurrence at 12 or 13. And I do know that's when Andrea got sick [to Annette Whittemore]. And yet presumably, your family was in the same space, but there was no child who had hit puberty at that point, and that might have been the difference. Retroviruses don't infect people differently. You can't go to Germany and say the reason they don't find it is because they have hardier genes in Germany (although my husband might argue that) [laughter]. Because everybody gets infected. It's just which immune system can control the virus and keep it down. Since we've been able to treat HIV/AIDS now – we found elite controllers, people who are walking around with HIV who never knew they had HIV, and the copy numbers are all low. Their immune system is fine, and they have no idea when they got it.

Question: A lot of patients say they had a flu, a weird flu-like condition, a week or two before they got CFS. What you're saying is that flu-like illness is a bug that came along and allowed the XMRV to create CFS?

Dr. Mikovits: Well, no. I know almost nothing about CFS, but what we think is happening is – remember the slide where I showed you with those little events? You know, what was the event that was the straw that broke the camel's back? Where did the balance tip between here you've got your immune system working well and the virus and the immune system are co-existing just fine, then some other, that other bug, whether it be Lyme, a flu, anything, gets you. Then the virus, the cells divide, and so do the B and T cells you need to mount an immune response. And now you've got your memory population that might have been harboring the virus, and it's replicating because it's seen that same pathogen before, so it could be a common everyday pathogen, and then you just tip the scale to where now your immune system can't handle it. And every day you're seeing more infection because your NK cells aren't working, your B cells aren't working.

We put that antibody up there for a reason. We haven't been able to correlate the levels yet, because we haven't been able to find high enough numbers. But we do see these infected families where infected spouses have very high levels of antibodies, that suggest maybe antibodies in this retrovirus can be protective, and maybe there's an immune therapy on the horizon as well. So you can think about it in that way. It doesn't have to be the insult. You might not know how long you harbored that virus.

Question: So what you're saying is XMRV was there, it wasn't the insult, then something else came along that was the tipping point?

Dr. Mikovits: Yes, that was the tipping point, that's correct. That's our hypothesis. And again, it's testable, we don't know.

Question: You've got a big population of patients with sudden onset and then you've got a big population that had gradual onset. And a lot of the gradual onset patients are worried that "Maybe I don't fit this equation." What would you say to that?

Dr. Mikovits: That little bump is smaller, so it's not a huge burst. That it was little insults over time. I think, for me anyway, I know only a handful that I've looked at, that I know the patients, and I know what the onset was. But the gradual onset – there's no real difference. It just depends on that environment, what the other triggers and events were that spurred it on. So, I don't see, if you are gradual onset, it doesn't mean that you might not be infected as well.
Questioner: That's an important thing to know.

Question: Have you tracked any of the inflammatory markers in the blood with the XMRV virus?

Dr. Mikovits: Yes.

Question: What are you finding?

Dr. Mikovits: We find a signature suggesting a viral infection, an unclear viral infection. We have 5-10 inflammatory cytokines and chemokines that will cluster in an infected person. The problem is we don't know if it indicates active infection. Certainly, when the virus is quiet, that inflammation will go down, and those cytokines will change. And it might be a nice biomarker for following active infection, but we haven't analyzed the data in that way yet. It very well could sit, and some of those go down and up very quickly. So, like in 3 days, your IL-8 and your IL-6 and some of the chemokines are elevated and then they go back, like an EEG. Just like you might assume the retrovirus could be an EEG, depending on where in the body that is. We don't know the reservoirs, so we don't know what's controlling it.

Question: I'm confused about something. You say you can't find it very easily by PCR, so you are culturing it. Then how did you find it for the Science paper?

Dr. Mikovits: Well, because I found it in 67%, by PCR, of the patients, but I looked at samples collected at several times. I just said it's like an EEG. So I got lucky and I found it at a time when the patient was high. They'll come to the doctor when they're sick, which might mean they're replicating more white blood cells, and there's more virus in their white blood cells.

Question: So you took like 10 samples from one patient?

Dr. Mikovits: Not that many, usually it was 4. The copy number could be as low as 5 or 10 copies per mil of blood, so there's a statistic called a Poisson distribution, where you might find it one out of three times, so we went more than one of that and went 4 on most people when we found it.

Question: So the UK paper had studied patients, if they had looked at 4 or 5 per patient, do you think they might have found it?

Dr. Mikovits: They might have certainly found more, yeah.

Question: They essentially accused you of contamination.

Dr. Mikovits: Right. But why would I have contamination in my sick people and not my healthy people? How would I do that? I did it in three different labs. I did it in Cleveland Clinic. When I first came to the Institute, we didn't have a lab. So everything we drew from around the world, I sent to Frank's office. They processed it. I went there, I put it in the microarray or did whatever I was going to do, and we worked there for a couple of weeks, you know, while we were building our lab and it got started.

From the way we did the study, there's just NO possible way there was contamination. And that's what the reviewers concluded. And the phylogenetic analysis was one of the things they asked for (they asked for 3 things after the initial submission). The phylogenetic analysis proved two things. It wasn't a mouse virus, it's a human virus; it wasn't a contaminant from a lab. We never do mouse work, but it wasn't a contaminant from mouse feces or something in the lab, and it clearly was a new branch in the [phylogenetic] tree, a human virus. And our virus wasn't exactly the same as the prostate cancer virus. It's still XMRV, because it's 99% similar. But that's enough to show it's not a contaminant. One of the things you have to use to get a good PCR is at least 750 nanograms of DNA. They have no idea how much DNA was there. And they quantitated 3-9 out of 186? Sure they found a band of globins, but globins are in every single cell, so again you're making an unfair comparison of what you're saying you see. And then you amplify it for fewer cycles than what would really push the envelope.

We've also done – to show no mouse contamination with the CDC, and Bill Switzer – after he saw the results in the paper before it became published. He said, "I have an assay that'll show it's a mouse contamination. It's a very sensitive, very specific PCR. Will you do it?" I said, "Sure, send it to me." We did it on all 100 and not a one. Not one cell line in our lab. He's found it in a couple in his lab, but we didn't find any. Perfectly controlled. He said, "Congratulations, it's not a mouse contaminant." So there's little else we can do, except wait for the rest of the community. It's there. And the prostate cancer people didn't say: "oh you didn't find it in 500 people; it must not have anything to do with prostate cancer." Because it just didn't have anything to do with that population.

And again, Norbert Bannert is a high-quality scientist. As soon as he saw the paper, he called me and asked for the reagents. Because he's gonna go back and look to see if it really is there, and help us find some answers. He's also looking at a CFS group. So it just depends on what you really want to find. We weren't biased in our study. You know, I'm a cancer cell biologist, and we aren't biased. I had to work really hard to get most of the people – not Frank and company – the National Cancer Institute (NCI) didn't know what CFS was. You know, fortunately, our scientists can to some level do what they want, as long as it's along with the mission. I remember one gentleman, high level NCI official, said "tell 'em to get over it." Again that's the credit to Annette and the formation of the WPI – we got a grant where we literally named XMRV within my first six months in 2007, because of the juxtaposition of seeing that paper in prostate cancer, right when we met.

And thinking about the possible mechanisms, and the grant got rejected three times, you know, because scientifically, retroviruses aren't in CFS. If you went to Wikipedia in August, it said retroviruses aren't in CFS. It doesn't say that anymore. So we made progress. [Audience: Wow!]

So, will there be a variant? Maybe England is the variant. Maybe there's XMRV2, and one causes more. Maybe we found the one that causes the least severe disease, and maybe there's XMRV2. A group emailed me from China, and the guy said "please," you know in very broken English, "please don't leave me, please write me back. Please help me." And so Sam Chow was going over there, and I said will you look up this group? And Sam Chow has found a virus that looks like it might not necessarily be the same virus, might be a lot more aggressive virus over there in disease, but that's just anecdotal.

So, we don't know. The good news is we have something to work with that is a very testable hypothesis. This has been very rigorous. You don't get more rigorous than Science, and certainly not Frank and Sandy Ruscetti. They're highly regarded. That entire team contains world experts. So, the CFS population had the opportunity to have them look at us, and they are good enough scientists that they didn't show any bias. They looked, you know – I asked Frank to come out to Reno before I took the job, because I said, I hear a lot of things about this. So he came out and stayed a few days and talked to some patients and spent some time with them. And I was on an East Coast trip working with my drug company. I came back a few days later, and I said, "Well, what do I do?" And he said, "Take the damn job!"

So, if you're really looking unbiased, and you look at this, it could be only 10 million people in America, it could be only endemic right here, it could be like Japan. And HTLV is pretty-well innocuous. 5% of people get ATL and 20% get that tropical spastic paraparesis or HTLV-1-associated myelopathy. I was glad when they changed that thing, by the way, because I can't say that and I couldn't spell it either! Those patients, they actually go on steroids to dampen the inflammation, the immune response, and they are fine for decades. But you know, in the Caribbean and in Japan, it was a health problem, so maybe we only have a health problem and the distribution is not – but we do have at least 10 million Americans, and maybe a majority of the CFS population here in America, that we have a lot of work, just to treat, and that will be the focus of the Institute in the coming years. Certainly, we will treat everybody else, but

obviously we don't see anyone else. Dan was funny, he was like "Well, Judy, I have to take care of everybody else" and I said "of course, there's not anybody else!" So it's an interesting and an exciting time for sure.

Question: I just wanted to say, you know, it is really exciting to hear you say we need to do this, we're gonna do this. The virus you are studying, it's our virus, and I think it is really important to note everyone that for you to do what you're talking about, and for other researches to do it, we patients need to get behind funding the research in a way we've never done before, or it is not going to happen.

Dr. Mikovits: But have your government fund the research. HIV incidence in this country is about 800,000 people, I just quoted 10 million….. I shouldn't say this, but when I saw it was a prostate cancer virus, I said "man, those men can't possibly ignore this now!" [laughter]. I never said that publicly.

Question: Would you talk about what is coming up in the next years, what are the next steps, where are possibilities with your treatments, with the replication studies?

Dr. Mikovits: Yeah, all of those people I showed you internationally are working to replicate the study as is the Blood Working Group. We have been intensely working with them. We have another conference call on Monday, these things are happening. We will put probably 20% effort in our lab into that study. We are very serious about transmission studies in our lab and in the Institute, and we have one starting where we're simply comparing infected people, people who we isolated from the blood, and just taking DNA in their saliva, for example, to see if there is any evidence in saliva or of that kind of transmission just again. That is just because of anecdotal stories, where people say, well, you know a bunch of kids on the playground with a water fountain, or at school. I don't know what the anecdotes are, but just thinking about ruling those kinds of things out is a study we are doing.

We are also actively looking at the incidence in other neuro-immune diseases, so we are looking at that study I told you about. We are looking at cancer and CFS, we are looking at Fibromyalgia, Atypical MS. We've got a study going with Vanderbilt in POTS, which is Postural Tachycardia, because of the overlapping symptoms. He is simply just sending me a bunch of samples, both sera and DNA, and we are just going to take a look to see if we see it there. Autism – we do have families with some autism, and there are some immune defects characterized by Judy Van de Water at the Mind Institute in Sacramento, and she sees some NK cell dysfunction, some inflammation, some of the things I told you about there. So, in that group of autism, we are looking to see if maybe there is not an underlying pathogen or XMRV infection. Those are just the priorities, just in the coming year.

The NCI, the National Cancer Institute, has already put $1 million into the development of the reagents and the assays, so very soon the best of tests and all the reagents can be distributed. So, the AIDS reference program (there is an AIDS Reagent Reference Program that if you just google that you will find them) has agreed to set up for XMRV and send reagents around the world. We're spending considerable time and resources just shipping…We are continuing the studies of the immune system, so I had an entire program set up from the beginning where we are looking at the genetics with Mary Carrington. We are looking at the type 1, so Vinny Lombardi will continue his studies. Just because that single nucleotide variant, we didn't find having any correlation with XMRV infection, doesn't mean there's still not something wrong with RNase-L, and that might be a therapeutic target. So Vinny is actively studying research, the type 1 interferon pathway and RNase-L.

Isabel Barao-Silvestre is a faculty member that's just joined us, she is a professor, and she is at UNR as well, and she is an expert in Natural Killer cells and killer cell function, so she is doing a lot of the innate immune response and understanding how XMRV infection in NK cells might contribute to disease. As I hypothesize, we don't know how yet, so those are the internal programs going on. Because of my background I'm actively perusing all the drug development efforts in our laboratory by working with at least three companies right now, to look at that.

Those of you in the audience and around the world, if you email a question, we try to answer every one of them (info@wpinstitute.org). One that came up which I think is good to address is, a lot of people wanted to know if XMRV somehow "piggybacked" on EBV or other pathogens to get into an affected individual, and I didn't know what that term meant. It's not a scientific term. But if it meant that you couldn't get XMRV unless you had come in with another infection, there is just no evidence of that in any retrovirus. So, yes, people think that people got infected with HHV-8 and HIV at the same time because of the Africa thing. You can get infected with 2 pathogens at once, but there is no need for any to piggyback. You don't need another pathogen in order to be infected with XMRV or any other retrovirus.

And any other question, if you have written them down, I am happy to answer them. Some people are like "I emailed you yesterday and you didn't answer" and I say "oh, I slept yesterday." If I don't answer you within a week, then write me back because sometimes I miss it, and sometimes our emails are so full these days, that they are throwing things into spam. So, if you haven't heard from me, you will usually hear from me within a week because I really do try and answer essentially every one that I get, which is probably foolish, but I like to actually, I like to work with the patients.

ProHealth Organizer: That was wonderful, thank you.

2010 (April) Interview

Source - [HX000S][GDrive]

Attachment toIACFS/ME Newsletter

Volume 3, Issue 1 • April 2010

Questions and Answer Session with: Dr. Judy Mikovits: Principal Investigator, Whittemore-Peterson Institute.

- [Andrew Bokelman] Q: From what I read, XMRV is infecting immune cells. If patients take nutriceuticals that have been shown to increase natural killer cell count, could some of this increase in NK cells come from dividing infected cells, thus risking a heavier load of XMRV?
- A: Because XMRV research is in its infancy, little is known about the tissue reservoirs of the virus, while many cell types can be infected (because the XPR1 entry molecule/receptor is on every cell in the body), few cells support high levels of replication of XMRV. You could potentially increase the viral load by increasing the NK cell count. However, we have done studies with compounds that increase NK cell Killing without increasing NK replication or XMRV viral loads so NK cells kill better and can therefore be efficacious in killing XMRV infected cell.
- An extremely minor species of HIV becomes a dominant species when a large mixture of the viruses (quasi-species) from the blood of AIDS patients is

cultured in the laboratory. As much as 18% of our human genome (3 billion genetic codes) are made of retrovirus sequences. The sequence of XMRV is 95% homologous to the human endogenous retrovirus (HERV) sequence in our human genome. Is the 5% genetic sequence variation enough to call XMRV a new virus? Is XMRV a minor quasispecies that is selected out and predominantly amplified from the tissue cultures?

- The 6 full length XMRV clones: 3 from prostate cancer tissue biopsies from men in Cleveland and 3 from leukocytes from female CFS patients in the Western United States drawn in 2006-2008..were 99% similar. We did not despite repeated attempts isolate ANY other variants from those individuals suggesting that the virus is very low replicating and unlike HIV does not have quasi species. As much at 18% of the human genome is retroviral elements or endogenous retroviruses. THESE ARE QUITE DISTINCT FROM EXOGENOUS VIRUSES! PRIOR TO THE SCIENCE PAPER THERE were ONLY 2 EXOGENOUS human retrovirus families, HTLV (1,2) and HIV (1,2). HERVS are not infectious exogenous retroviruses...The main point of the science paper was the demonstration that XMRV was the third human exogenous retrovirus and that it was blood borne and transmissable (can isolate it and do primary and secondary infections of primary human cells) Moreover, the full sequence of XMRV was blasted against the entire human and mouse genome and NEITHER the mouse genome or the HUMAN genome contained XMRV..proving it was NOT a mouse virus. XMRV was on the basis of our data proven to be a NEW HUMAN Blood borne infectious and transmissable retrovirus. Finally the proof of an immune response in CFS patients from whom the virus had been isolated and sequenced showed that the XMRV in CFS patient was not a mouse contaminant or a human lab contaminant.
- [John K. Chia M.D.] Q: It has been said in the new paper article that XMRV is transmitted by blood, sex and body fluid. The author may have meant that this is what happens in mice but is not yet defined for human. Sexual transmission (men who have sex with men) and transmission through blood (hemophiliacs) were long suspected based on epidemiologic data before HIV was found to be cause of AIDS in 1984. ME/CFS does not have typical pattern of sexual transmission although there are rare mentions of transmission between couples. Most of my patients have developed ME/CFS after flu-like illness with respiratory and/or gastrointestinal symptoms, which would speak against sexual and blood transmission. Furthermore, why are children developing this illness and why clusters of cases occurred in Incline village and other areas, if the transmission is as stated. Please clarify this issue.Thank you,
- A: Newspapers are notorious for extrapolating data and drawing conclusions. We and Dr. Stuart Legrice attempted several times in writing to correct the mis-statements in the Wall Street journal and the NY Times. The Science paper showed that XMRV was blood borne, infectious and transmissable SUGGESTING blood and body fluid transmission although NO studies have proven transmission of any kind. The authors meant this is the mode of transmission for the other two human exogenous retroviruses HTLV-1 and HIV. XMRV is NOT a Mouse virus and NO ONE knows how it got into the human population). This author has never worked with mice.
- It is important NOT to think only of HIV when considering modes of transmission. Body fluid means ANY body fluid, blood was proven in the Science paper, but one can also consider saliva, vomit, urine and feces. XMRV is a gammaretrovirus (simple) and these tend to be much more stable than HIV and HTLV1 which are complex retroviruses. XMRV has been demonstrated by us in the science paper to be very stable and easily transmissable CELL Free unlike its cousins HTLV (which is tightly cell associated) and HIV, which is very labile and not stable in vomit feces or urine and while it can be shed and theoretically transmitted in saliva this is rare as it is labile cell free as well.. the flu like illness and gastrointestinal issues are consistent with stability in other body fluids and particularly in acidic environments such as the gut and urine...We have isolated infectious XMRV from saliva and prostatic secretions to date and tested its stability. These are unpublished data and we await the development of a quantitative viral load assay, but when we can quantify the stability, my hypothesis is that XMRV is the most stable human retrovirus to date and while no human retrovirus (or animal retrovirus is transmitted airborne) our hypothesis is that we will find the transmission is in other body fluids and outbreaks occur because of the stability of XMRV in other body fluids
- [Pat Turello] Q: Do you think that any of the new biotech drugs for MS could be useful for CFIDS? Thank you.
- A: My (limited knowledge of the new MS drug is that they target the hyperactive immune response and trafficking of white blood cells from lymph nodes so if a reservoir of XMRV is the lymph nodes and the hyperactive immune response (as we suspect) plays a role in disease progression through increased replication of XMRV or trafficking of white blood cells harboring XMRV to sites of inflammation, then these drugs could be useful for XMRV associated CFIDS. Are there any official (or unofficial) records of forested areas near and around Incline Village being sprayed for 'insect control' prior to the outbreak of CFS there ?There is no data or records that I am aware of and no evidence that XMRV is spread through insects (in fact there is no evidence of how XMRV got into the human population)
- Q: Is it possible that XMRV is (or related to) an 'escaped,' genetically- engineered laboratory research retrovirus?
- A: NO laboratory researchers are not smart enough to engineer new human retroviruses. XMRV has never been detected in ANY other animal in nature except humans.
- [Nancy Allen] Q: Please explain the significance of "xenotropic" in the transmission or infectivity of XMRV ?
- A: Xenotropic viruses are not able to infect cells derived from laboratory mice (or the mice themselves but they can infect cell lines from a number of other species including humans and wild field mice...more proof that this is not a lab engineered or escape variant.
- [Nancy Klimas] Q: Hey guys! miss you! I am keeping things hopping here in Miami, but it isweird being off the board. I noticed VIP Dx has dropped the PCR part of the XMRV testing, in favor of culture. Why?
- A: PCR of genomic DNA was found by the WPI and its NCI collaborators to be the least sensitive method of detecting XMRV because of the low copy number of XMRV and the realization by the negative studies that only 1 in 1miiolon resting white blood cells harbors a copy of the XMRV provirus. Thus VIPDx was getting too many false negatives..ie the failure to detect XMRV. The same reason that other companies using sensitive PCR failed to detect XMRV from a spot of blood or 1 ml of blood. Retroviruses multiply only in dividing cells so VIPDx dropped the first PCR in favor of biological amplification of XMRV before PCR detection. Not only are the results more reliable but the test is considerably cheaper. The most important thing is to get the CORRECT answer!
- Q: Do you feel that XMRV is necessary and sufficient or necessary but not sufficient or not necessary or sufficient to cause chronic illnesses like CFS?
- A: Our hypothesis is that chronic XMRV infection creates results in an immune deficiency that is necessary but not necessarily sufficient to result in chronic illnesses like CFS. As with HIV/AIDS copathogens define AIDS, CMV retinitis, kaposi's sarcoma are AIDS defining co-pathogens. That said XMRV is a type C retrovirus and Type C retroviruses are associated with neurovirulence in a range of host species, including humans, cats, rodents and birds with or without concurrent immunological disease suggesting XMRV can be Necessary and sufficient to cause CFS.
- Q: What are your current % positives in CFS? In controls?
- A: In CFS disease satisfying the Canadian consensus criteria, we have isolated virus from more than 300 patients of~400 tested but we have serological evidence in another ~10% of CFS patients fulfilling CCC criteria, from whom we have not isolated virus, clear evidence of infection but the significance of which is not known.

- Q: Is there an indication that the virus is active and being transcribed in CFS? What percentage of positives are being transcribed?
- A: The Science paper clearly showed active transcription of XMRV in >75% of the pateitns tested and similar suggestion of latent infection or evidence of infection without isolation of virus in 10-15%.
- Q; With the known % of CFS patients positive for Mycoplasma species (~60% in multiple studies), Chlamydia pneumoniae (~10% in multiple studies), HHV-6 (~30% in some studies) and other infections, is there any concordance with XMRV positivity?
- A: We have only done those analyses on the 101 in the original study, HHV6A was 10%, EBV ~14% and nothing else more than 10%. We are working with several groups at Lyme and those numbers may approach 30%-40 of those tested.
- Q: Do you feel that XMRV could act to cause dysfunction of the immune system, allowing opportunistic infections (such as in 4, above), similar to HIV-1 in AIDS?
- A: Absolutely that is our working hypothesisQ: Do you think that treatment of XMRV might be useful or possibly too late in CFS to restore patients to pre-infection health status?
- A; I am extremely optimistic that treatment of XMRV or its immune target(s) will restore CFS patients to at least 85% of the original health status even in the sickest of the sick. I base this optimism solely on the level of health that was achieved in HIV AIDS patients with the advent of highly active antiretroviral therapy (HAART) and XMRV is much less cytopathic than HIV, its effects on the immune system are more subtle. I think the evidence is that some recover with out ever treating the XMRV or maintain relative health for years between “crashes”.
- Q: When you assess signs/symptoms of patients with positive XMRV, are there any that track or don't track well with XMRV positivity compared to CFS patients as a group?
- A; I am not a clinician and right now we don’t have sensitive quantitative assays to monitor viral load so we have not actually tracked symptom severity and XMRV positivity. For Science paper we did correlation analyses on every clinical marker of immune status, that we had available to us including RNAase L, NK (number and function, co-infections, cytokines and chemokines and NOTING significantly correlated with a CFS diagnosis (the referees and editors felt these data were not important for the paper as they were all negative data. The only one they published was the R462Q RNaseL variant as this was the original hypothesis under which XMRV was discovered. The ONLY immune marker which correlated with XMRV infection 100% was decreased Interferon alpha.
- Q: In families with more than one CFS (or other chronic illness), is there any indication that XMRV was transmitted to immediate family members? Prof. Garth NicolsonThe Institute for Molecular Medicine
- A: YES...lots of them and I have not looked at everyone but my knowledge of the 101 in the Science paper is that more than 2/3 of them have family member who are infected and MOST are ill perhaps with another overlapping chronic illness..for instance FM and CFS or CFS mom and autistic kids and the cancer in some of the families is frightening.
- Q: I read where 75 top researches met on 16 Dec. 2009 to discuss the current research findings about XMRV. I have been looking, but unable to find any information about what they had found. Hope you will include this.William HaysA:I am not aware of that meeting nor am I aware that on December 16th of 2009 there were 75 top researchers working on XMRV! On November 10 the Cleveland Clinic sponsored a meeting where ~15 scientists presented their data including the WPI) on XMRV in cancer and CFS. There were 75 people in attendance and it was an interesting meeting but honestly I would be surprised is there are yet 75 top researchers in the world working on XMRV.Q: How do you see HHV-6 and XMRV interacting?
- A: There are no data to suggest that HHV6 and XMRV directly interact in any way. XMRV is a simple retrovirus so it encodes only structural proteins and not transacting factors like HIV and HTLV. We are testing the hypothesis that like HIV, the transmission of XMRV and the progression of XMRV disease are accompanied by de novo infection by other microbes or by activation of microbes that were present in the host in homeostatic equilibrium before XMRV infection. In recent years, data have accumulated on the interactions of these coinfecting microbes—viruses in particular—with HIV. Coinfecting viruses generate negative and positive signals that suppress or upregulate HIV-1, suggesting that the signals generated by these viruses may largely affect XMRV transmission and pathogenesis as they do with HIV transmission and pathogenesis.
- Q: The Brits have commented that both M.E., and the U.S. cluster outbreaks of the 1980s, seem to spread like an enterovirus (a polio-like virus), not like a herpes virus.
- A: XMRV is a retrovirus not a herpesvirus so I don’t understand the comment. HIV causes leaky gut and disruption of the gut microbiome and an open blood brain barrier allowing pathogens access to areas of the body that these pathogens normally would not have access...the same could happen with XMRV...I guess I cannot answer this because more than 75 of the 101 patients in our study were not involved in cluster outbreaks.Whether that criticism holds, it certainly seems the outbreaks did not follow the pattern set by HIV. While our knowledge of HIV disease is useful in developing hypotheses and studying potential mechanisms of HIV pathogenesis, XMRV is totally unlike HIV and HTLV-1 in that it is a simple retrovirus the first ever identified human exogenous simple retrovirus and the family of viruses most closely related to XMRV causes neurological diseases and cancer very by mechanisms distinct in many aspects from HIV and HTLV. We discussed earlier XMRV may be much more stable in body fluids other than blood and cell free and would completely explain clusters and sporadic transmission as seen in CFS both in the US and UK
- Q: How would teachers in the same school, for example (who were not misbehaving), contract the disease from each other?
- A: See above but what if XMRV is more stable in body fluids such as saliva, urine, vomit such that exchange of body fluids less directly than sexual contact and blood borne direct infection were the mode of transmission.This hypotheses would satisfy the familial and close contact such as a school particularly if a co-pathogen enhanced transmission and progression as was the case of HIV and HSV in Africa.
- Q: What does this mean for young women who wish to become pregnant, but who might have XMRV?
- A: Gammaretroviruses can be transmitted vertically and are transmitted in breast milk. The hormone responsiveness of the virus suggests that lactating moms express more XMRV in breast milk. HTLV 1 was endemic in Japan so simply preventing breast feeding reduced HTLV-1 associated neuroimmune disease and cancer by 40% on one generation. Vertical transmission is more difficult but even if infected, the key is to keep the reservoirs of virus low..Stop the XMRV from being expressed and spread to healthy cells keep the XMRV provirus from integrating into long lived cells ....the variation was so small and the lack of quasi species and high levels of replication suggest that vaccine development will be easier with this retrovirus that with the complex retroviruses, HIV and HTLV. The most important thing to do is identify everyone infected and stop the spread and replication of the virus in every individual prevent disease in those who are well and stop the progression and restore the immune system in those who are ill.
- Q: Given the association of XMRV with patients whose blood was stored at WPI, how many other docs have sent samples that are positive?
- A: Contrary to the assumptions and misinformation about the samples in the WPI repository. These samples were NOT solely from the incline village outbreak. All samples were drawn from patients coming to Sierra Internal medicine between 2006 AND 2008. Fewer that 20 of the 101 were from the

original outbreak and more than 75 were sporadic cases of CFS from patients who came to Dr. Peterson from 12 states and Canada. The 101 were representative of patients satisfying CCC and Fukuda criteria throughout the US. At least 5 doctors from across the US including Dr Klimas and Dr Cheney had patients in the repository and in the study. The 101 patients were selected at random from the hundreds in the repository. The main consideration was that we had samples that could be cultured (retroviruses cannot multiply unless a cell divides and several samples from a given patient.

- Q: Are your "hit rates" different in the samples sent to you since the Science paper?
- A: Not as long as the physicians sending the samples are diagnosing as Dr Peterson does on CCC criteria. In fact the hit rates from overlapping diseases more than we expected now ~35%.
- Q: Given that a number of physicians who send you XMRV samples are also collecting HLA DR data, can we sort the positives and negatives by HLA DR haplotype, i.e., is there evidence of an increased relative risk for carriage of XMRV and presence of illness by HLA DR?
- A: We established the original WPI research program to look at the underlying genetics from the exact same population from which we were looking for novel viruses and correlating immune profiles and gene expression patterns. Therefore our collaborators Mary Carrington and Michael Dean of the NCI's genomic diversity program and the geneticists who identified the HLA and KIR susceptibility and resistance loci in HIV/AIDS have all of these studies well underway...some of these data were presented at last year's IACFS meeting. At that time we did not know XMRV status of those patients. Those data are currently being analyzed.
- Q: Do we know of any patients with acute acquisition of XMRV? How can you confirm a new case versus re-activation of transcription of intercalated viral material in DNA? What happens to their symptom with acquisition? What happens to their measures of innate immune responses?
- A: No. None of these studies can be done yet. We are working on cases of suspected "transfusion acquired" CFS which could establish an acute infection. These studies will require quantitative assays. The requirement that a diagnosis of CFS require an individual to be ill for 6months has precluded anyone from having such data. Hopefully at least one archaic practice will soon be gone ..the worst predictor of HIV disease progression is the viral set point and reservoir viral load. Set the reservoirs as low as possible! That is identify the infection as soon as possible. This is the best chance to prevent disease development and progression.
- Q: Do we know if genes carried by XMRV are being transcribed? If so would genomic data from samples collected by other labs be useful in a pooled analysis?
- A: XMRV is a simple retrovirus and encodes and expresses only the gag pol and env genes. ALL are expressed and proven to make functional proteins. This was clearly demonstrated in our Science paper. Gamma retroviruses do not cart or pick up cellular genes? Hope I answered the question because I don't understand the second part.
- Q: What regulatory mechanisms are felt to be present that would affect transcription of XMRV genetic material?
- A: Expression of XMRV and all simple retroviruses are controlled only by cis acting elements in the upstream untranslated region. In XMRV 3 transcriptional control elements have been identified two gluccocorticoid response elements (a strong one responding to androgens and estrogens, a weaker one responding to the stress hormone cortisol and an NfKB site) All turn on XMRV.
- Q: If XMRV is actively being transcribed, is there a difference in lab parameters and symptoms compared to those who carry XMRV but are without transcription?
- A: We don't have these data yet but that is a testable hypothesis.
- Q: If XMRV is present but inactive, are there any suggestions as to what could be a trigger for (re)-activation?
- A: Estrogens, Androgens, Cortisol (stress) and inflammation.
- Q: Given the problems with antigen presentation seen routinely in so many patients with chronic fatiguing illnesses, we would expect to see some patients with culture (+) XMRV who are antibody negative?
- A: Yes! We see lots of those...these data are very interesting and suggest immune therapy including antibody therapy may be most useful in this disease.
- Q: I heard that there may be another study in the U.K. that came to a different conclusion about a possible link between CFS and XMRV. Can you comment on the differing results, and whether the results of the two studies can be reconciled? Thank you.
- A: The negative studies were technically flawed in that their methods were demonstrated NOT to be capable of detecting XMRV. Their patient populations likely did not satisfy CCC criteria and they looked only by PCR on genomic DNA the least sensitive way of detecting XMRV. To date none one has attempted to replicate our study. It is very clear that the prevalence of XMRV in UK is NOT ZERO and that XMRV has been detected in CFS patients in the UK.
- Q: How might the finding of the XMRV virus relate to Lyme Disease?
- A: We are seeing XMRV in Chronic Lyme patients sent to us from several physicians. The hypothesis that chronic XMRV infection creates an underlying immune deficiency is consistent with many co-pathogens including Lyme.

2010 june

https://newspaperarchive.com/aiken-standard-jun-14-2010-p-21/

2010 CFS/ME

http://www.investinme.org/Documents/Journals/Journal%20of%20IiME%20Vol%204%20Issue%201%20Screen.pdf

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2010 (Aug 23) - "Judy Mikovits, PhD, reacts to the publication of the Lo/Alter paper in PNAS."

YouTube video - [HV0031][GDrive]

2011 (April 7) - NIH State of Knowledge Workshop 2011 - Harvey Alter opens up discussion on Xmrv and contamination

Youtube video - [HV0032][GDrive]

John Coffin/Judy Mikovits/Harvey Alter/Nancy Klimas Part 1

2011 (Oct 04) - Chronic Fatigue Syndrome Researcher Fired Amidst New Controversy

Source - [HP002P][GDrive]

Judy Mikovits has had a rough few weeks. On 22 September, *Science* published online a **nine-lab study** widely seen as **the final blow to the theory**, **championed by Mikovits and colleagues in an October 2009 *Science* paper**, that a recently detected mouse retrovirus might play a causal role in chronic fatigue syndrome (CFS). A letter in the same issue of *Science* from one of the contributing labs to the 2009 report revealed that a contamination had marred its contribution—PCR detection and sequencing of the mouse virus, dubbed XMRV. Mikovits and colleagues defended the validity of the rest of the study,

known as Lombardi *et al*., which detected the virus by several other methods, so *Science* issued a rare partial retraction of the original paper.

Then on 29 September, Mikovits was fired from her job as research director of the Whittemore Peterson Institute for Neuro-Immune Disease (WPI), a private organization in Reno, Nevada, devoted to CFS research and treatment. Both Mikovits and WPI's CEO, Annette Whittemore, say the firing was not related to the XMRV theory's demise.

The very next day, a graduate student who writes a snarky blog that has been highly critical of Mikovits and the XMRV theory raised questions about whether a figure in Lombardi *et al*. had been misrepresented. *Science* Executive Editor Monica Bradford said in a statement that the journal is investigating the allegation. "As is our policy in cases of alleged figure manipulation, we follow up with the research authors as soon as our own review of the allegation is complete," said Bradford. "*Science* takes all such matters seriously and seeks to respond thoroughly and efficiently."

The furor revolves around an image—the bottom half of Figure 2C in Lombardi *et al*.—that shows XMRV proteins in CFS patients but not healthy controls. In her blog known as ERV (endogenous retroviruses), Abbie Smith on 30 September noted the striking similarities between Figure 2C and a slide Mikovits presented at a CFS meeting in Ottawa, Canada, on 23 September. Smith, who is working on her doctoral dissertation at the University of Oklahoma, Oklahoma City, and studies HIV, wrote that an anonymous tipster had pointed out to her that the two images looked identical but had different patient numbers and experimental conditions. Smith questioned whether this was a simple mistake or an attempt to recycle old data to make a new argument.

The Ottawa slide supported Mikovits's contention that even if XMRV could not be detected in CFS patients, other gammaretroviruses still lurked in their chromosomes. Mikovits described how she had treated cells from two CFS patients with a chemical, 5-azacytidine, that takes methyl groups off DNA. This procedure prods cells that harbor latent versions of retroviruses to produce them, and the image on the slide showed the resultant proteins in what's known as a Western blot gel. In Lombardi *et al*. what appears to be the same image shows "XMRV proteins" and makes no mention of 5-azacytidine use.

Mikovits's collaborator, Francis Ruscetti of the National Cancer Institute (NCI) in Frederick, Maryland, who ran all of the Western blots, confirms that the Ottawa slide uses the same image that appears in Lombardi *et al*. Ruscetti and Mikovits, in a joint e-mail to *Science* for this article, said many patients and their doctor, Daniel Peterson (who since has had a falling out with WPI), knew the original coded numbers, so the researchers changed them for the *Science* publication to "protect the patient privacy." Ruscetti says it was a mistake for Mikovits to have used the original patient codes in Ottawa. "We were under so much pressure, we missed it," says Ruscetti.

As far as the use of 5-azacytidine, Ruscetti and Mikovits stressed in their e-mail that "there was no attempt in the original paper to hide anything." They say for the purposes of Lombardi *et al*., the use of 5-azacytidine was not germane: They were simply trying to demonstrate that CFS patients had viral proteins not seen in controls. By the time of the Ottawa meeting, they say they realized that this experiment did not in fact show XMRV but proteins from a broader family of gammaretroviruses.

After Lombardi *et al*. appeared, several laboratories had reported that they could not detect XMRV in CFS patients. **But Ruscetti and Mikovits note that most of these studies relied on polymerase chain reaction, which used DNA sequences of XMRV to fish out pieces of the virus from blood samples.** Those tests, they point out, would have missed other gammaretroviruses with different sequences. The Western blot assay they used in Lombardi *et al*. just so happened to cast a wider net that uncovered proteins from any member of the gammaretrovirus family. In addition, they say, the use of 5-azacytidine made clear that these infections would be missed in routine assays, as these viruses often exist in a latent state.

On the ERV blog, Smith and others also argued that the study lacked proper controls: the healthy controls in this experiment did not have 5-azacytidine added to their samples. "My [principal investigator] would say 'Why did you run this gel?' if I handed it to him," wrote Smith.

Vinay Pathak, a retrovirologist at NCI who earlier damaged the XMRV/CFS theory with a study published in *Science* that documented how the virus was accidentally created in laboratory experiments, says he is "bewildered" by Ruscetti's and Mikovits's explanations about Figure 2C. "If [5-azacytidine] was used in the original experiment, it's an egregious error to leave it out of the *Science* paper," says Pathak. "It makes a difference how I would interpret the results."

Jonathan Stoye, a retrovirologist who once supported the XMRV/CFS hypothesis but subsequently changed his mind after his own studies failed to replicate the finding, says its time to retract Lombardi *et al*. in its entirety. "I think there's a point where *Science* has to say, there is no substance to this paper," says Stoye. "It was published with a message, and that message is gone."

Neither Lombardi *et al*. nor the questions about the slides were mentioned in Whittemore's 30 September letter formally terminating Mikovits's contract, sent the day after the two had a heated phone conversation. **In that letter Whittemore charged her high-profile researcher with being "insubordinate and insolent."** Mikovits was immediately locked out of her lab.

Three letters between Whittemore and Mikovits say the firing hinged on Mikovits's failure to pass on a cell line that was sent to Vincent Lombardi, the first author of the October 2009 *Science* paper who runs UNEVX (formerly known as VIPDx), a diagnostic laboratory owned by WPI. Until recently, the lab sold a test for XMRV and related viruses.

In a 1 October written response to Whittemore, Mikovits contended that it was "completely appropriate" for her, as research director, not to give Lombardi the cell line. The cell line was not related to studies of the gammaretroviruses, but Lombardi wanted to use it for experiments connected to a grant Mikovits had secured from the U.S. National Institutes of Health to study possible causes of CFS. Mikovits contended that Lombardi "was unwilling to take my direction" and should not be undertaking a new project "while neglecting his other duties." She also questioned his ability to carry out that experiment.

Annette Whittemore issued a statement to *Science* in which she strongly defended Lombardi's performance. "Dr. Lombardi is a valued and important part of our team, and conducts his research work accordingly," wrote Whittemore. "While personnel matters are generally confidential, the statements made by Judy Mikovits are wrong, without merit and those of a disgruntled former employee."

In an interview with *Science*, Mikovits contended that her firing was also linked to a longstanding battle about WPI's decision to sell, through VIPDx/UNEVX, a test for human gammaretroviruses. The lab began offering the tests, which cost around $500, shortly after Lombardi *et al*. reported a link between XMRV and CFS. Some patients who tested positive went on to take antiretroviral drugs. "I said, 'No, no, no, no,' " says Mikovits of the test. "I've asked them for the better part of 2 years to show me that what we got in Lombardi *et al*. is the same thing they're selling to patients."

The issue came to a head with the recent publication by *Science* of the nine-lab study. The so-called Blood Working Group, which included the labs run by Mikovits and Ruscetti, failed to reliably find XMRV or other gammaretroviruses in blinded samples from people who previously had tested positive for these viruses. Both Mikovits and Ruscetti co-authored the paper, which invalidated their own assays for XMRV. WPI says UNEVX has stopped offering the

diagnostic tests, but did not give details about the timing or reasons.

Whittemore, who refers to CFS as myalgic encephalomyelitis (ME)—a common name for CFS in Europe—stressed that the institute remains devoted to studying human gammaretroviruses in "ME and related diseases" and that no one there "would ever put self interest ahead of research or finding the causes of ME."

Mikovits, who says she currently does not even have access to her laboratory notebooks, is looking for another institution to continue her work.

2011 (Dec 23)

https://newspaperarchive.com/beckley-register-herald-dec-23-2011-p-10/

2012 (Feb 06) - NY TImes article - "Fallout From Fatigue Syndrome Retraction Is Wide"

See [HN00S1][GDrive]

When scientists reported in 2009 that a little-known mouse retrovirus was present in a large number of people with chronic fatigue syndrome, suggesting a possible cause of the condition, the news made international headlines. For patients desperate for answers, many of them severely disabled for years, the finding from an obscure research center, the Whittemore Peterson Institute for Neuro-Immune Disease in Reno, Nev., seemed a godsend.

“I remember reading it and going, ‘Bingo, this is it!’ ” said Heidi Bauer, 42, a mother of triplets in Huntington, Md., who has had chronic fatigue syndrome since her 20s. “I thought it was going to mean treatment, that I was going to be able to play with my kids and be the kind of mom I wanted to be.”

Patients showered praise on the lead researcher, Dr. Judy Mikovits, a former scientist at the National Cancer Institute. They sent donations large and small to the institute, founded by Harvey and Annette Whittemore, a wealthy and politically well-connected Nevada couple seeking to help their daughter, who had the illness.

In hopes of treating their condition, some patients even began taking antiretroviral drugs used to treat H.I.V., a retrovirus related to the murine leukemia viruses suddenly suspected of involvement in chronic fatigue syndrome.

More recently, however, the hopes of these patients have suffered an extraordinary battering. In a scientific reversal as dramatic and strange as any in recent memory, the finding has been officially discredited; a string of subsequent studies failed to confirm it, and most scientists have attributed the initial results to laboratory contamination. In late December, the original paper, published in the journal Science, and one other study that appeared to support it were retracted within days of each other.

As the published evidence for the hypothesis fell apart, a legal melodrama erupted, dismaying and demoralizing patients and many members of the scientific community. Dr. Mikovits was even briefly jailed in California on charges of theft made by the institute.

“I’m stunned that it’s come to this point,” said Fred Friedberg, a professor at Stony Brook University Medical Center and president of the International Association for C.F.S./M.E., a scientific organization. “This is a really sad unraveling of something that was perhaps going to generate a whole new direction in this illness.”

Despite the controversy, Dr. Mikovits is now supervising some lab work as part of a large government-sponsored study being spearheaded by [**Dr. Walter Ian Lipkin (born 1952)**], a leading Columbia University virologist. The study was established before the two retractions to examine the possible link between chronic fatigue syndrome and mouse retroviruses. Dr. Mikovits still hopes to replicate her original results, and many patients continue to believe fervently in her hypothesis; study results are expected early this year.

She did not respond to requests for comment.

An estimated one million people in the United States suffer from chronic fatigue syndrome, which is characterized by profound exhaustion, a prolonged loss of energy following minimal exertion, swollen lymph nodes, sore throat, cognitive dysfunction and other symptoms. Experts now generally believe that one or more infectious agents, or perhaps exposure to toxins, set off a persistent, hyperactive immune response — the likely cause of many of the symptoms.

Although the Centers for Disease Control and Prevention first investigated the illness in the mid-1980s, the agency has not been able to find a cause, identify any biomarkers or diagnostic tests, or develop effective treatments. Patients have long accused the mainstream medical and scientific community of neglect and abandonment. Many say that the C.D.C. has largely treated their disease as a psychological or stress-related condition.

A 2010 paper from the agency, for example, galled patients with the conclusion that they suffer disproportionately from “paranoid, schizoid, avoidant, obsessive-compulsive and depressive personality disorders.”

Dr. Mikovits’s research, done with collaborators from such prestigious organizations as the National Cancer Institute and the Cleveland Clinic, seemed to vindicate the concerns of many with the condition. The scientists said they had found that 67 percent of patients sampled were infected with a mouse virus called XMRV, compared with 4 percent of the controls.

“If for years you’ve been told that your illness is all in your head and then you’re being told, ‘Look, we found something concrete and very substantial,’ then of course there will be rallying behind that,” said Rivka Solomon, 49, a Massachusetts playwright who has been largely homebound with the syndrome for more than 20 years.

The publication of Dr. Mikovits’s work brought immediate attention, much of it unflattering. Other scientists soon published studies challenging the findings, and Science issued first a statement of concern and then a partial retraction of the original study.

Even as her work was publicly debated, the blunt and feisty Dr. Mikovits raised eyebrows among other scientists for stating at conferences that murine leukemia viruses could be related to autism. Perhaps more disconcerting, a commercial lab associated with the Whittemore Peterson Institute began marketing screening tests for XMRV, the hypothesized cause of chronic fatigue syndrome, costing hundreds of dollars. The business enraged many patients once they realized the results might be meaningless.

Amid mounting concerns, Dr. Mikovits left her position as research director at the institute in a dispute over management practices and control over research materials. The institute sued her, accusing her of stealing notebooks and other proprietary items. Dr. Mikovits was arrested in Southern California, where she lives, and jailed for several days, charged with being a fugitive from justice.

After her split with the institute, Dr. Mikovits denied having the missing laboratory materials. But a lab employee, Max Pfost, said in an affidavit that he took items at her request, stashing notebooks in his mother's garage in Sparks, Nev., before turning them over to Dr. Mikovits.

At one point, "Mikovits informed me that she was hiding out on a boat to avoid being served with papers from W.P.I.," Mr. Pfost said in the affidavit. Some lab items have since been returned.

In December, a judge ruled against her in the civil case. The criminal case is pending; another hearing in the civil case is in late February. But in late January, the Whittemores were themselves accused of embezzling millions of dollars in a lawsuit filed by partners in Mr. Whittemore's real estate business.

The Whittemores, who have countersued, maintain their innocence of the embezzling charges, and Annette Whittemore stated in an e-mail that institute research continues.

The events of the past couple of years, though disheartening to chronic fatigue syndrome patients, may have a silver lining: Research into the disease, much of it privately financed, is ratcheting up.

A new research and treatment center has been created at Mount Sinai Hospital in New York. The Hutchins Family Foundation is investing $10 million in the Chronic Fatigue Initiative, an effort to find causes and treatments that has recruited top researchers from Columbia, Harvard, Duke and other institutions.

"The disease had languished in the background at N.I.H. and C.D.C., and other scientists had not been paying much attention to it," said John Coffin, a professor of molecular biology at Tufts University. "This has brought it back into attention."

Dr. Coffin, who at first supported the mouse retrovirus theory but later disputed it, noted that the illness "does seem to have characteristics that would suggest infectious origins" and that other retroviruses could be involved.

Despite the personal and professional setbacks for Dr. Mikovits, many patients, like Ms. Solomon, continue to believe that a retrovirus is causing their illness.

"But even if the retroviral research does not pan out, her work, and the publicity it has brought to our illness, has forever changed the landscape," said Ms. Solomon.

2012 (June 14) - NY TImes - "No Theft Charge for Chronic Fatigue Researcher"

See [HN00S2][GDrive]

Nevada authorities have dropped criminal charges against a researcher who gained wide attention for scientific reports linking chronic fatigue syndrome to an obscure mouse retrovirus.

The researcher, Judy A. Mikovits, had been charged with stealing proprietary laboratory materials from her former employer, the Whittemore Peterson Institute for Neuro-Immune Disease in Reno, Nev. She still faces related civil claims that the institute filed after her departure.

In October 2009, the journal Science published a study, with Dr. Mikovits as senior author, indicating that a disproportionate percentage of patients with the syndrome were infected with a mouse retrovirus, XMRV. But subsequent studies failed to confirm the initial findings. Other scientists argued that laboratory contamination was the cause of the apparent association.

As the hypothesis fell apart, so did the relationship between Dr. Mikovits and the institute. Dr. Mikovits left in September. In November, she was arrested and briefly jailed as a result of criminal charges filed by prosecutors in Washoe County, Nev., after the institute's allegations of theft.

In December, Science retracted her original paper. She is still involved in a large chronic fatigue syndrome study, whose findings are due this summer.

Harvey and Annette Whittemore, who founded the institute, have themselves been sued by former partners, who accused them of embezzling millions of dollars from a real estate business. Mr. Whittemore was indicted last week by federal prosecutors on charges of making illegal campaign contributions. He pleaded not guilty.

In March, the judge in the civil case against Dr. Mikovits disclosed that he had received campaign donations from Mr. Whittemore and recused himself.

2012 (September) - Conference

Info - [HV003Y][2012-09-youube-judy-mikovits-wrong-description-text.txt]

YouTube Video - [HV003X][2012-09-youube-judy-mikovits-wrong.mp4]

Skip to 19:00 to hear Judy say "We so rigorously excluded our initial findings..."

In 2009, Judy Mikovits was a research director at the Whittemore Peterson Institute (WPI), a private research center in Reno, Nevada. That year, she co-authored a paper in Science that suggested an obscure agent named xenotropic murine leukemia virus-related virus (XMRV) caused chronic fatigue syndrome (CFS).

The cause of CFS, also called myalgic encephalomyelitis, had long remained elusive, and the disease had been neglected by science. The study created hope that CFS might become treatable with antivirals. Some patients even began to take antiretroviral drugs used by HIV-infected people. But the paper also created worries that XMRV might spread via the blood supply.

Other researchers soon questioned the findings, and over the next 2 years, the paper's claims fell apart. Researchers showed that XMRV was created accidentally in the lab during mouse experiments; it may never have infected any humans. The authors first retracted two figures and a table from the paper in October 2011. Around the same time, a study by several labs, including WPI itself, showed the findings couldn't be replicated. Two months later, the entire Science paper was retracted.

Mikovits refused to sign the retraction notice, but she took part in another major replication effort. That $2.3 million study, led by [**Dr. Walter Ian Lipkin (born 1952)**] of Columbia University and funded by the National Institutes of Health, was "the definitive answer," Mikovits said at a September 2012 press conference where the results were announced. The rigorous study looked for XMRV in blinded blood samples from nearly 300 people, half of whom had the disease, and none had the virus. "There is no evidence that XMRV is a human pathogen," Mikovits conceded.

This is the video of that press conference.

Around this same time, Mikovits had an explosive breakup with WPI. The institute filed suit against her in November 2011 for allegedly removing laboratory notebooks and keeping other proprietary information on her laptop, on flash drives, and in a personal email account. She was arrested in California on felony charges that she was a fugitive from justice and jailed for several days. Prosecutors in Washoe county, Nevada, eventually dropped criminal charges against her in June 2012.

Soon after this press conference, she began to promote the XMRV hypothesis again, and attack this very study that she agreed had put the issue to rest. Her discredited work and her legal travails have made her a martyr in the eyes of some. Source:

CII Press Conference: 9/18/12

"Multicenter Study on Chronic Fatigue Syndrome/Myalgic Encephalomyelitis"

2014 resume (CV)

Source - [HL0041][GDrive]

Innovative Cellular and Molecular Biologist with over 20 years of scientific expertise as a PhD in life sciences, including planning, directing and implementing programs in HIV, Cancer, Epigenetics, Neuro-immune disease with a focus on development of novel drug and diagnostic technologies. Demonstrated leadership in introducing and establishing new programs and technologies, efficiently organizing and standardizing processes, and effectively managing multiple projects and personnel. Solution-oriented team-player with strong supervisory, project management, and problem solving skills. Ability to build solid multicultural teams within start-up and changing environments and demonstrated ability to foster strong relationships with strategic partners, collaborators, cross-functional teams, and scientific advisors.

PROFESSIONAL EXPERIENCE

PROFESSIONAL EXPERIENCE

- **MAR CONSULTING INC.（2013 - present）**
  - **Founder/Consultant**
  - **Mission Statement**
  - MAR Consulting Inc., led by Drs. Frank Ruscetti and Judy Mikovits, seeks to understand complex and innovative biological issues to yield unbiased integrated, cutting-edge information for patients and physicians impacted by some of the most challenging chronic diseases. Utilizing their combined 75 years experience in tumor biology, immunobiology of retroviral-associated inflammatory diseases, cancer, stem cell biology, hematopoiesis, and drug development, MAR focuses on research projects, consulting (to patients doctors, academia, and industry) and lecturing without the restrictive authority of vested interest groups, following Thomas Jefferson's dictum: "Here we are not afraid to follow the truth wherever it may lead, nor to tolerate error so long as freedom is left free to combat it."
- **YORKBRIDGE CAPITAL （2012 - present）**
  - **Advisor**
  - York Bridge Capital is a Toronto-based private equity firm focused on early stage Canadian technology companies. My role is in management advisory services for the medical devices and diagnostics sector.
- **GENYOUS BIOMED（2006 - 2012）**
  - **Senior Scientist/Consultant**
  - As a senior scientist I developed multivalent drugs for inflammation, immune modulation and virology targets. Genyous' Multifunctional Multi-

targeted (MFMT™) drug development platform is based on systems biology considerations that recognize the complex nature of chronic diseases and addresses the crosstalk between cells, their microenvironment (stroma) and the immune response system. Genyous' drug candidates are formulated with well-tolerated doses of actives derived from natural products that have a long history of safe consumption and which are orally bioavailable. MFMT™ drug design also minimizes disruption of homeostasis, thus reducing risk of toxicity and development of drug resistance. Genyous' multivalent drugs are designed to address the heterogeneous nature of chronic diseases by possessing multiple therapeutic functions and acting on multiple biological targets. As a consultant, I interacted with academic collaborators world-wide to establish milestones for MFMT research in prostate cancer, autoimmune and neuroimmune disease.

- **Whittemore Peterson Institute For Neuroimmune Disease (WPI)** (**2006 - 2011**)
  - **Research Director,** (11/2006- 10/2011)
  - I joined the Whittemore Peterson Institute for Neuro-immune Disease (WPI) in November of 2006 as the WPI's first Research Director. Responsible for establishing a translational research program aimed at identifying biomarkers and underlying causes of Chronic Fatigue Syndrome (CFS) and other debilitating neuro-immune diseases with overlapping symptoms such as Fibromyalgia (FM), Chronic Lyme Disease, Atypical Multiple Sclerosis and Autism Spectrum Disorder (ASD). As Research Director, I was responsible for planning, establishing and directing the Institute's scientific research program, including the selection, training and supervision of staff, writing, obtaining and managing grants and collaborating with other scientific organizations. The WPI under my direction grew from a small foundation to an internationally recognized center for the study of neuro-immune diseases in which I obtained investigator initiated grant money from the NIH and Department of Defense and brought international attention to ME/CFS as a physiological disease. Proven ability to recognize and recruit important collaborators and partners developing strong relationships within multiple scientific disciplines.
- **EPIGENX BIOSCIENCES, SANTA BARBARA, CA** (**2005 - 2006**)
  - *A holding company for technologies developed in EpiGenX Biosciences*
  - Chief Scientific Officer,
  - This company was formed to market intellectual properties and technologies developed in EpiGenX pharmaceuticals in order to get treatments to patients faster. As Chief Scientific officer, my job was to identify suitable business partners for product commercialization. We achieved this goal in less than two years and succeeded by having the lead compound acquired by a major pharmaceutical company and into clinical trials and our diagnostic platform licensed to a platform company.
- **EPIGENX PHARMACEUTICALS, SANTA BARBARA, CA** (**2001 - 2004**)
  - *A startup biotech company whose mission was to develop and commercialize cancer therapeutics and Diagnostics targeting aberrant DNA methylation in Cancer.*
  - **Director of Cancer Biology,**
  - Established, directed and managed a team charged with discovering and developing small molecule therapeutics targeting aberrant DNA methylation. In order to achieve this mission we needed first to develop multiplexed, higher throughput assays for determining methylation status of cellular genes.
- **BIOSOURCE INTERNATIONAL**, Camarillo, CA (Now part of **LIFE TECHNOLOGIES**) **2002 - 2004**
  - *A biotechnology company, which manufactures, markets, and distributes assays and biological reagents for drug discovery, functional proteomics, and biomedical research.*
  - Group Leader, Luminex Platform Research & Development.
  - Organized and directed a team for new product development on the Luminex platform technology for multiplex proteomics assays. Coordinated development and manufacturing of over 50 distinct Luminex assays including the first 30plex assay for human cytokines and chemokines. Responsibilities also included evaluation of external multiplex proteomic technologies and applications for corporate partnership, OEM opportunity and licensing, which led to a contract to commercialize a technology for development of a fully automated platform technology for both multiplex gene expression and proteomic assays on a single platform.
- **LABORATORY OF ANTIVIRAL DRUG MECHANISMS** (**1999 - 2001**)
  - **Screening Technologies Branch**, a division of the Developmental Therapeutics Branch of the National Cancer Institute, Frederick MD
  - **Lab Director,**
  - Established and managed a new laboratory to develop drugs targeting AIDS-associated malignancies, the first of which was Kaposi's Sarcoma, which had been recently associated with a new herpes virus. I hired a multidisciplinary team with expertise in high throughput screening, retroviruses, herpes viruses and medicinal chemists. This laboratory became internationally recognized as the first of its kind in cancer drug development developing multi-functional drugs to target pathogens as well as inflammation to fight cancer.
- **NATIONAL CANCER INSTITUTE, LAB OF LEUKOCYTE BIOLOGY** (**1994 - 1998**)
  - Staff Scientist
  - Established and managed an independent research laboratory involved mechanisms by which retroviruses disrupt the delicate balance of the immune system to contribute to disease. Pioneered the field of epigenetic dysregulation of cellular genes by human retroviruses
- **NATIONAL CANCER INSTITUTE, LAB OF GENOMIC DIVERSITY** (**1992 - 1994**)
  - Post Doctoral Fellow, Molecular Virology
  - Constructed and characterized the first infectious molecular clone of HTLV1. Investigated the role of defective provirus in HTLV-1 associated myelopathy (HAM/TSP)
- **NATIONAL CANCER INSTITUTE, LAB OF LEUKOCYTE BIOLOGY** **1983 - 1991**
  - Research Technician II-III,Research Associate, conducted biological and molecular experimentation in HIV AIDs and cancer as a part of the Biological Response Modifiers Program the NCI's first translational research program.
- **NATIONAL CANCER INSTITUTE, FERMENTATION CHEMISTRY PROGRAM** **1980 - 1982**
  - Research Technician I, purification of Interferon alpha, Interleukin 2, and numerous chemotherapeutics for human clinical trials.

EDUCATION

- Postdoctoral Scholar: Molecular Virology
- Laboratory of Genomic Diversity, National Cancer Institute with David Derse, Ph.D.
- Ph.D., Biochemistry and Molecular Biology, George Washington University, Washington, DC Doctoral Thesis: HIV Latency and mechanisms of Immune activation In Monocytes
- B.A., Biology with specialization in Biochemistry.☐ University of Virginia, Charlottesville, VA

PROFESSIONAL SOCIETIES AND AWARDS

- 2012 HHS Special recognition award
- AACR
- DNA Methylation Society
- AAI
- 1991 George Washington Graduate student of the year

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2014 (Nov. 24) - (Ventura County Star) - World-known Oxnard researcher claims she was smeared, pushed out

2014-11-24-ventura-county-star-world-known-oxnard-researcher-claims-she-was-smeared

http://archive.vcstar.com/news/local/oxnard/world-known-oxnard-researcher-claims-she-was-smeared-pushed-out-ep-792662230-350412251.html

The biochemist was fired, then arrested on suspicion of stealing research notebooks — her own research notebooks — from her lab and ultimately shackled to a woman nicknamed Crazy Mary.

She authored a study that turned the science world on its ear, interpreted as a step toward curing a disease, chronic fatigue syndrome, that affects more than 1 million Americans.

In dramas that unfolded as one of the study's primary conclusions was proved wrong, she lost everything: research opportunities, money, reputation.

Judy Mikovits, sitting in her 38-foot fishing boat in a racket club cap and flip-flops, said through it all she was never given a chance to tell her story.

So she spent weeks and months on this boat, the Pura Vida, in the Channel Islands Harbor, talking, sometimes yelling, into a cellphone. She told of experiences that melded retroviruses named with acronyms with allegations of conspiracy and being blackballed.

The result, "Plague," written by Mikovits and Kent Heckenlively and released by Skyhorse Publishing, hit bookstores Tuesday.

"I was forced out of science because I found an inconvenient truth," she said.

GLIMPSE OF HOPE

Before her life slid out of control, Mikovits split time between a laboratory in Reno and the home near Channel Islands Harbor she shared with her husband, David Nolde. She served on a race committee at the Pierpont Bay Yacht Club, volunteering her services as a club bartender.

Known as Judy Nolde, she worked with cancer patients at Community Presbyterian Church in Ventura, where her husband was a church elder.

She was a researcher who said her grandfather's death to cancer spurred her to a career focused on finding cures. She worked for more than 20 years at the National Cancer Institute, then later at EpiGenX Biosciences in Santa Barbara.

Nearly a decade ago, her studies turned from HIV and cancer to chronic fatigue syndrome, a mysterious, incurable disease marked by exhaustion, pain and memory loss. People with the condition may stay in darkened rooms due to light sensitivity, layering themselves with blankets because their bodies struggle to register warmth.

"I felt the illness had been stigmatized by the scientific community," said Robin Moulton, a Mikovits supporter from Portland who has struggled with chronic fatigue for 20 years. " ... There are no tests for diagnosis, treatment or any chance of cure."

At an institute created by Reno lawyer and former lobbyist Harvey Whittemore and his wife, Anne, Mikovits led a study that offered an explanation for the disease. The work claimed the syndrome was linked to a virus that converts itself into DNA and stays with a person for life. Defined as a retrovirus, it's called XMRV.

The discovery signaled hope. If the disease was caused or even just linked to a retrovirus, scientists might uncover ways to treat it, maybe cure it.

"All these patients went nuts," said Vincent Racaniello, a virologist from Columbia University in New York. "They could finally see an end to the suffering."

The discovery bought acclaim and controversy. Unable to duplicate the studies, some scientists challenged the finding.

Mikovits defended her work. She contended retroviruses could also be linked to autism. Patients from around the world blogged and emailed their support.

"I think they feel she was trying to help this patient population, which has been, like I say, stigmatized," said Moulton, who dismissed the challenges to Mikovits' work.

"It just seemed like a lot of negative paper came out quickly," she said. "It almost seemed like they were trying to take the focus off it."

GETTING WEIRD

A strange but not unprecedented story of challenged science turned bizarre three years ago on a November Friday.

A woman came to the door of Mikovits' beachside home outside of Oxnard, claiming to be a patient. Instead, she was a campus police officer from the University of Nevada, Reno. Another Nevada officer came from the bushes. Ventura County Sheriff's Office deputies emerged from the driveway.

Mikovits was arrested.

She had been fired by the Whittemore Peterson Institute in September over a dispute that involved turning over a cell line to another researcher. After the termination, her laboratory was searched, Mikovits said.

She worried about research notebooks kept in drawers that she was told had been unlocked. They contained her work on XMRV and other studies. They also revealed patient information. She told her assistant to secure the records.

The Whittemores went to the police accusing her of theft. The arrest made national news and led to five days in jail.

"The word I would use is surreal," Mikovits said. "There's a 24-hour light in your eye. There's no pillow. There are no bars. There's a locked door."

To this day, she defends her choice to have the notebooks removed from the lab.

"If we had left those notebooks unsecured, patient names would have been exposed," she said. "It's like letting your credit card information get out."

FORCED OUT

She said she lost everything.

The Whittemores sued her. A judge said she was in default because she refused to turn over materials that Mikovits' lawyer said were protected because of

the criminal charges stemming from her arrest.

The criminal case was later dropped. Mikovits filed bankruptcy. Her Oxnard area home was sold. She said the notebooks that triggered her arrest are being held under permanent court injunction, meaning she can't touch them.

The journal that published her study printed first a partial, then a total retraction. A 2012 study led by [Dr. Walter Ian Lipkin (born 1952)] and also involving Mikovits showed that XMRV was the result of lab contamination.

The study means XMRV isn't linked to chronic fatigue syndrome, Mikovits said. She also said her research shows a connection to a different, still unidentified retrovirus.

That is the inconvenient truth.

"Retroviruses and environmental toxins led to this explosion of chronic diseases," she said.

Mikovits wants more research on the retroviral connection not only to chronic fatigue, but cancer, autism and other conditions. She pushes for more studies on the role vaccines and chemicals in the environment play in the diseases.

She doesn't expect to be involved in the studies or to get a whiff of government research funding.

"She absolutely was blackballed," said Frank Ruscetti, her research partner in the XMRV study. He said the study and its false conclusion were used to punish Mikovits.

"They did their best to portray it as scientific mischief instead of honest science that didn't understand the exotic biology of this virus," he said.

'PLAGUE OF INTEGRITY'

Mikovits contends leaders of the U.S. Centers for Disease Control and Prevention and the National Institutes of Health saw her work as a threat to their long-held claims the disease was not affected by the environment. She said government officials have long fought efforts to change the way society views chronic fatigue, fearing it would show they covered up what they already knew.

She said her grants from the National Institutes of Health were taken away and given to someone else. She said she was barred from setting foot on the National Cancer Institute, where she once worked.

She said the contaminant that emerged in her study came from a Cleveland lab involved in a study that falsely linked XMRV to prostate cancer. That study wasn't vilified, Mikovits said, but hers was.

"It's a plague of integrity," Mikovits said, explaining her book's title. "The real plague is the censorship and special interests."

National Institutes of Health Officials offered no comment on Mikovits' allegations, saying they support a better understanding of chronic fatigue syndrome. Other observers said they saw no evidence of a conspiracy or government suppression.

"Nobody had anything against Judy," said Vincent Racaniello, a virologist from Columbia University, citing Mikovits' efforts to defend her work. "She was simply in the wrong and only at the end did she really admit it."

Boston researcher John Coffin is described in the book as the grand old man of virology and a supporter of Mikovits' study who became a foe. He also said he saw no evidence of a conspiracy.

As far as Mikovits' future, he said he would consider collaborating with her in the right situation.

"I don't know if she would collaborate with me," he said.

DESPERATE TO HELP

The story twists more than a tornado. Harvey Whittemore, once Mikovits' employer, was convicted of funneling $133,000 in illegal campaign contributions to his friend, Sen. Harry Reid, the Senate minority leader. Reid was not accused of wrongdoing.

Whittemore is serving a two-year sentence in federal prison in Lompoc.

Mikovits and her husband live off the pension from his years as personnel director at the Ventura County Health Care Agency. They split time between a small home in Carlsbad and the Channel Islands Harbor. Their boat is up for sale.

She thinks she has been slandered. She probably won't sue.

"To sue, you have to have a lawyer," she said. "You have to have money."

She formed a consulting company with Ruscetti in Carlsbad. She keeps up to date on research and tries to help the patients who still keep constant contact.

She wants to do more. Moulton, the woman with chronic fatigue, wants the same thing.

"She has so much experience with these things," Moulton said, referring to cancer, HIV and chronic fatigue. "I think the world would be better with her in a lab."

This story has been corrected from the original version, which misstated details regarding a search of Mikovits' office. Mikovits said the drawer containing her research notebooks had been unlocked, triggering her request the notebooks be secured.

2014 (April) - "Cannabis as Immunonotherapy for 21st Century Acquired Immune Deficiencies" presented by Judy Mikovits

Video - [HV0044][GDrive]

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Presented At:

Cannabis Sciences Virtual Event 2018

Presented By:

Judy Mikovits, PhD - Founder/Consultant at M.A.R.C. INC and Director of Cancer Biology at EpiGenX Pharmaceuticals

Speaker Bio:

Dr. Judy A. Mikovits earned a BA in Chemistry with a specialization in biology from the University of Virginia in 1980 and a PhD in biochemistry and molecular biology from George Washington University in 1992. Upon graduation from UVA, she went directly to the National Cancer Institute in Frederick Maryland where she developed purification methods for Interferon alpha. It was this Interferon which was used in the first immune therapy treatment for hairy cell leukemia in 1986. In 1986-7, prior to enrolling in graduate school. she went to Upjohn Pharmaceuticals in Kalamazoo Michigan to develop production methods to insure biological materials manufactured using human blood products were free of contamination from HIV-1. Her PhD thesis defense entitled "Negative Regulation of HIV Expression in Monocytes" changed the paradigm for therapeutic treatment of HIV. For this work, she was awarded the graduate student of the year in 1991. In her thirty-five-year quest to understand and develop therapies for chronic diseases, she has co-authored seminal papers culminating at least a decade of research in each of four fields: immunology, natural products chemistry, epigenetics, and HIV/AIDs drug development. In 2006, Dr. Mikovits became attracted to the plight of families with neuroimmune diseases including ME/CFS and Autism and was primarily responsible for demonstrating the relationship between environmentally acquired immune dysfunction, chronic inflammation and these diseases. Her pioneering work during a twenty year career at the National Cancer Institute includes the discovery of the modulation of DNA Methylation machinery by human retro viral infection and the development of the concept of inflammatory cytokines and chemokine signatures of infection and disease, which was first published in 1999, when Dr. Mikovits directed the Laboratory of Antiviral Drug Mechanisms in developing therapeutics and diagnostics for HIV/AIDS and AIDS associated malignancies.

Webinar:

Cannabis as Immunonotherapy for 21st Century Acquired Immune Deficiencies

Webinar Abstract:

It has only been in the last 20 years that we, the scientific/medical community, have appreciated the role of the endogenous Cannabinoid system (ECS) in maintaining a healthy immune system and brain. More recently, we recognized that the ECS is critical for stem cell development and homeostasis. The phytocannabinoid, THC is a modulator of Hematopoietic Stem Cells (HSC). It acts in part via stimulation of TGF beta production. The modulation of TGF beta, HSC and the NFkB by other natural product immunotherapy via some of the same pathways as THC suggest opportunities for synergy and decreasing psychoactive effects.

Combinations of phytocannabinoiss can be used as stem cell and immune therapy in combination with other natural products and chemotherapy as curative treatment strategies for cancer, AIDS, Autoimmune disease and chronic inflammatory diseases. Moreover, Evidence is accumulating that THC is actually reduces opioid addiction by modulating endogenous opioids. Endogenous opioids are peptides derived from food which can also modulate immune cells including hematopoietc stem cells and be valuable therapeutics against HIV/AIDS and Cancer as our collaborator, Candace Pert demonstrated in the 1980s when she/we developed peptide T as an AIDS and cancer therapeutic (book Molecules of Emotion). Endocannabinoids, phyto-cannabinoids, and opioids modulate the immune system, hematopoietic and mesenchymal stem cells, it may also modulate the opioid pathways to reduce addiction.

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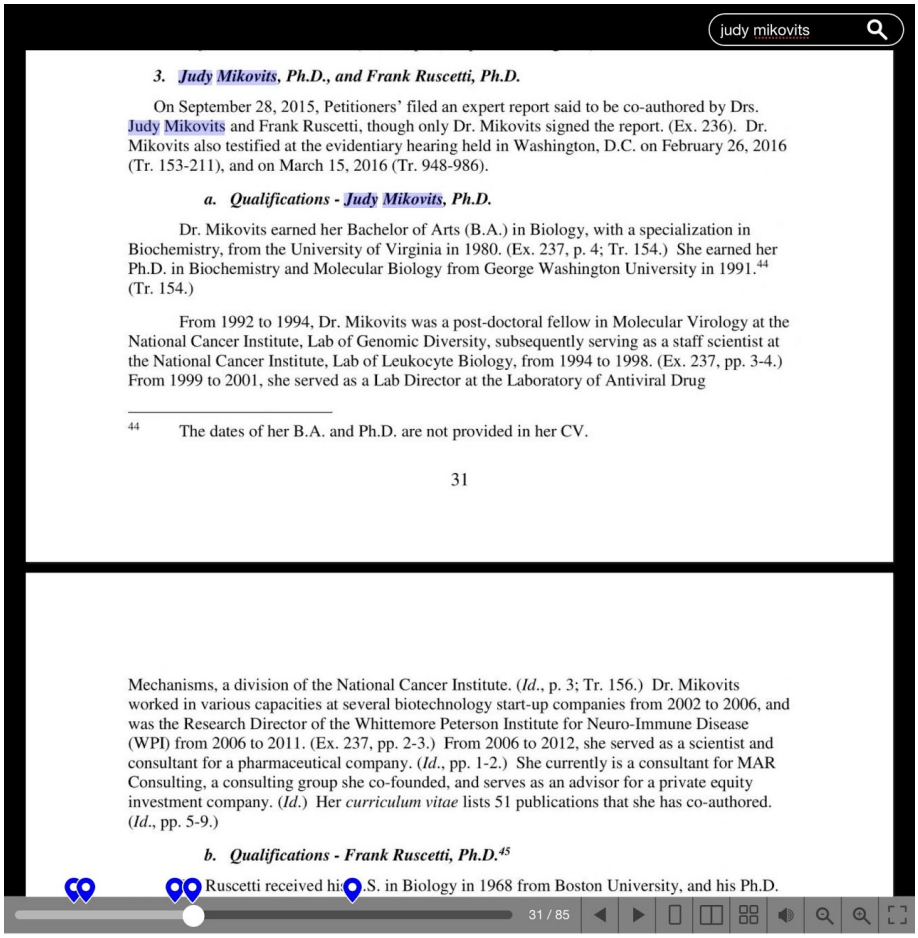

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2. Judy Mikovits, Ph.D. (for Petitioners), vs. Andrew MacGinnitie, M.D. (for Respondent)

As noted above, Dr. Mikovits has qualifications as a researcher in biochemistry and molecular biology. Based on those credentials, her opinions regarding chemistry and molecular biology might deserve a certain amount of deference -- but only her opinions in those subjects. The scope of her expert testimony in this case, however, went *far beyond* those subjects, and veered into providing opinions on medical disciplines in which she was *wholly unqualified*. (*E.g.*, Tr. 958-59; Ex. 236, pp. 12-13.) At the start of the evidentiary hearing, Dr. Mikovits even admitted on direct examination that she was an expert "as to nothing" (Tr. 163), and that she was *not* a clinician that could testify on the many medical specialties relevant to this case (Tr. 204). But Dr. Mikovits' position regarding her own areas of expertise drastically shifted towards the end of the litigation, when she stated, quite unbelievably, that she was testifying on rebuttal to rebut "all" of Respondent's experts in this case, and claimed that she had "an expertise in every area" of the case in order to provide such rebuttal testimony. (Tr. 974.)

In contrast, Dr. MacGinnitie, Respondent's expert who primarily rebutted Dr. Mikovits' testimony, was far more qualified, as a medical doctor, to provide an opinion regarding the causation of *medical disorders* in W.R., as well as to opine concerning the topics of allergy and immunology. Dr. MacGinnitie currently holds concurrent positions at the Harvard Medical School and the Children's Hospital Boston. (Ex. J, p. 1; Tr. 215-17.) He is board-certified in both pediatrics and allergy/immunology, and currently serves as a clinical director for a division at the Children's Hospital Boston -- a position that exposes him to the medical specialties of dermatology and rheumatology, in addition to his experience in allergy and immunology. (Tr. 215-16.) Approximately 90 to 95 percent of his practice is devoted to caring for children with

Frederick Harvey Whittemore close relationship with Harry Reid came under scrutiny because of perceived legislative and political pressure favors allowing Coyote Springs to overcome regulatory problems. Its total cost has been estimated at around $30 billion

Whittemore founded a research center known as the Whittemore Peterson Institute. Research began in 2006 with the opening of a small laboratory and an office on the University of Nevada, Reno campus under the direction of Judy Mikovits

Whittemore Peterson Institute filed a suit against Mikovits over her alleged possession of similar material, which included the laboratory notebooks she compiled while doing the CFS research for WPI. Mikovits, was briefly jailed on the charges.

https://www.sciencemag.org/news/2012/06/criminal-charges-dropped-against-chronic-fatigue-syndrome-researcher-judy-mikovits

2012-06-13-sciencemag-org-criminal-charges-dropped-against-judy-mikovits.pdf

Criminal Charges Dropped Against Chronic Fatigue Syndrome Researcher Judy Mikovits

By Jon CohenJun. 13, 2012 , 5:12 PM

Judy Mikovits, who faced a series of professional and legal woes after publishing a study in *Science* more than 2 years ago that linked chronic fatigue syndrome (CFS) to a mouse retrovirus, has had a pending criminal case against her dropped.

Last November, the district attorney in Washoe County, Nevada, filed a criminal complaint against Mikovits that charged the virologist with illegally taking computer data and related property from her former employer, the Whittemore Peterson Institute for Neuro-Immune Disease (WPI) in Reno, Nevada. In a separate civil court that month, WPI filed suit against Mikovits over her alleged possession of similar material, which included the laboratory notebooks she compiled while doing the CFS research.

On 11 June, the district attorney's office for Washoe County filed a petition to dismiss the criminal charges against Mikovits without prejudice (which means they can file a related complaint in the future), a clerk to the Justice Court of Reno told *Science*Insider.

Mikovits, who was briefly jailed on the charges, is still defending herself in the civil case, which has taken several bizarre twists, including a judge who had ruled against Mikovits recusing himself. The judge removed himself from the case because he received campaign donations from WPI co-founder Harvey Whittemore, who himself has been criminally charged with making illegal campaign contributions to a federal official. (He pled not guilty on 7 June).

Assistant District Attorney John Helzer, who filed the dismissal, says Whittemore's legal troubles factored into his decision. "There's a lot going on with the federal government and different levels that wasn't occurring when we first became involved with prosecuting this case," says Helzer. "And we have witness issues that have arisen."

Science last December retracted the 8 October 2009 CFS paper by Mikovits and co-authors, an action she opposed.

Mikovits told *Science*Insider that the only work she has been able to find has been collaborating on a large study funded by the National Institutes of Health that should be the final word on the otherwise dismissed theory that CFS is linked to a mouse retrovirus, XMRV, or its relatives. "Everyone who wanted to work with me

was deterred by the threat of litigation," Mikovits wrote in an e-mail.

The results of the large study, led by Ian Lipkin of Columbia University, are expected to be revealed in the next few weeks

"On June 17, 2013 Senate Majority Leader Harry Reid (D-NV) paid a visit to the NIH campus, where he met with NIH Director Dr. Francis S. Collins and Clinical Center Director Dr. John I. Gallin. He also met with Dr. Anthony S. Fauci, director of the National Institute of Allergy and Infectious Diseases; Dr. Gary H. Gibbons, director of the National Heart, Lung, and Blood Institute; Dr. Story C. Landis, director of the National Institute of Neurological Disorders and Stroke; and Dr. Cynthia J. Tifft, deputy clinical director of the National Human Genome Research Institute. The next day on the floor of the Senate, Reid expressed his concern about the effects of spending cuts on research efforts at NIH. "I hope we can move forward on this budget conference and get something done to set the nation's financial problems in the right direction," he said. Here Majority Leader Reid is pictured with Drs. Collins and Gallin in the North Atrium of the Clinical Center."

Harvey Whittemore's law license suspended Whittemore, a one-time influential lobbyist and land developer. He has been a licensed attorney since 1977.

2013-10-08-las-vegas-sun-harvey-whittemores-law-license-suspended.pdf

https://lasvegassun.com/news/2013/oct/08/harvey-whittemores-law-license-suspended-case-goin/

Defense attorney John Arrascada, left, with Harvey Whittemore at his side talks to the media after Whittemore's arraignment Thursday, June 7, 2012, in Reno.

By Cy Ryan

Tuesday, Oct. 8, 2013 | 2:40 p.m.

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- How Harvey Whittemore became a leper
- Indictment caps lobbyist Harvey Whittemore's dramatic fall from grace
- Whittemore overreached, but so does indictment

The Nevada Supreme Court has temporally suspended the law license of Reno attorney Harvey Whittemore, convicted of making an estimated $150,000 in illegal political campaign contributions to Senate Majority Leader Harry Reid.

Earlier this year, Whittemore was convicted by a federal court jury of felony crimes of making excessive political contributions, making contributions in the name of another and filing a false statement with the Federal Election Commission. He was sentenced to two years in prison starting Jan. 31, 2014 — giving him time to close his law practice — and fined $100,000.

Whittemore's attorneys have launched an appeal to the U.S. Ninth Circuit Court of Appeals, and Reid, D-Nev., has returned the money.

The court Tuesday referred the case to the Northern Nevada Disciplinary Board of the State Bar to determine the punishment for Whittemore, a one-time influential lobbyist and land developer. He has been a licensed attorney since 1977.

The court said Whittemore was convicted of three counts of serious crimes and it had the obligation to send the case to the disciplinary board to determine the extent of the punishment to be imposed, which must then be approved by the Nevada Supreme Court.

If and when he is freed from prison, Whittemore will be on two years of supervised release, requiring reporting to a probation officer, submitting to a DNA test, working regularly "at lawful occupation" and performing 100 hours of community service.

If his license is revoked, Whittemore won't be able to practice law unless the board reverses its decision.

https://twitter.com/messages/1198295563114029056/media/1259644175093346308

2020-05-10-twitter-housatonic-received-dm-1198295563114029056-1.jpg

2020-05-10-twitter-housatonic-received-dm-1198295563114029056-media-LkvDDigN.png

In 1998, a similar, privately funded quest was launched by the American researcher Craig Venter, and his firm Celera Corporation or Celera Genomics.

The $300,000,000 Celera effort was intended to proceed at a faster pace and at a fraction of the cost of the "Human Genome Project" roughly $3 billion publicly funded project. The Celera approach was able to proceed at a much more rapid rate, and at a lower cost than the public project because it relied upon data made available by the publicly funded project.

In March 2000, President Clinton announced that the genome sequence could not be patented, and should be made freely available to all researchers. The statement sent Celera's stock plummeting and dragged down the biotechnology-heavy Nasdaq. The biotechnology sector lost about $50 billion in market capitalization in two days.

So let me get this straight... the project cost $3 billion and the market lost $50 billion. How much of the money lost was union pensions, I wonder?

Opps....Celera initially announced that it would seek patent protection... Hummm? Then Clinton announced that the genome sequence could not be patented.

2020-05-10-twitter-housatonic-received-dm-1198295563114029056-2.jpg

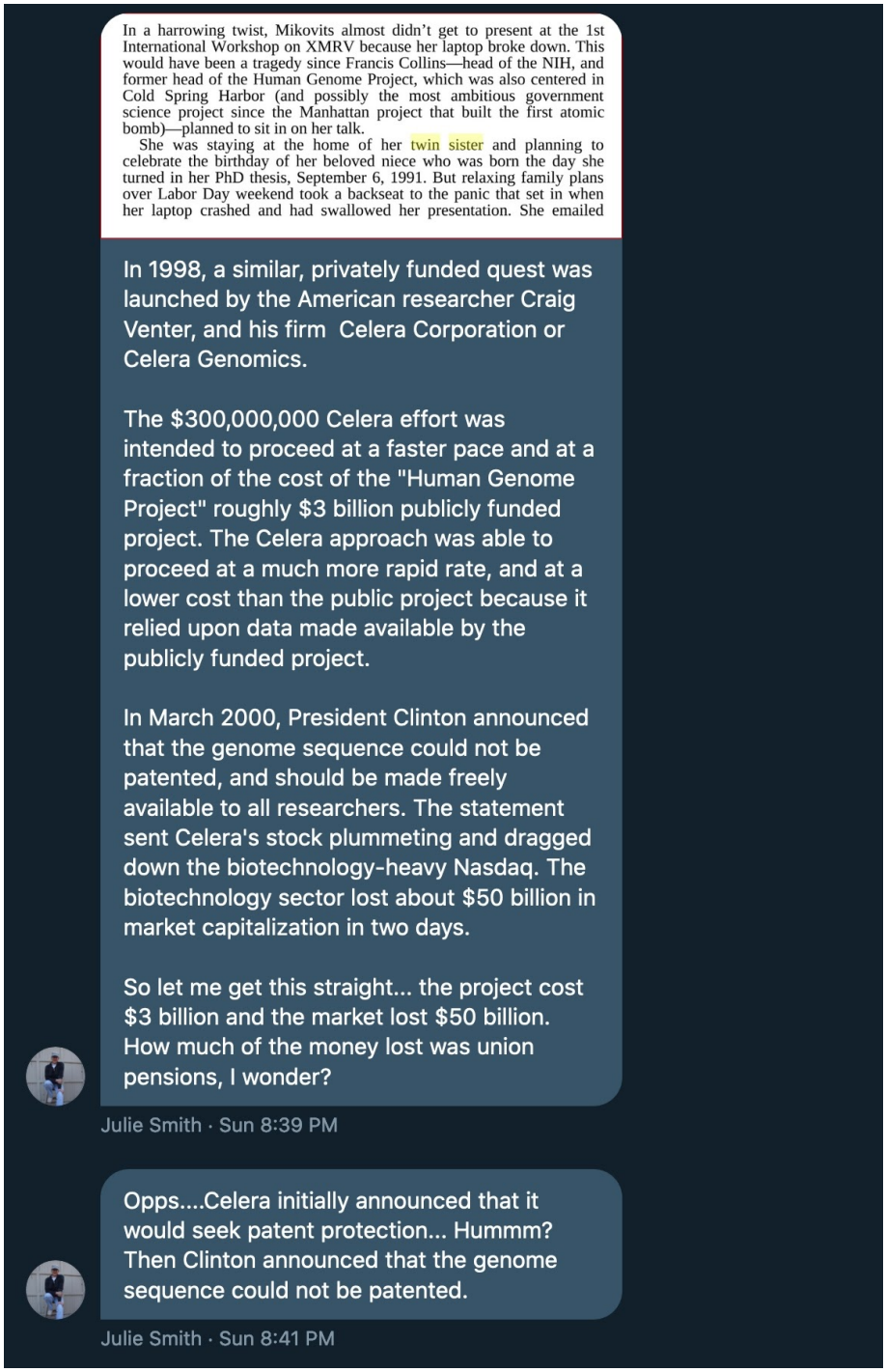
John Craig Venter was born in Salt Lake City, Utah and joined the National Institutes of Health in 1984.

In 2000, Venter and Francis Collins of the National Institutes of Health and U.S. Public Genome Project jointly made the announcement of the mapping of the human genome, a full three years ahead of the expected end of the Public Genome Program.

Venter was fired by Celera in early 2002. According to his biography, Venter was fired due to a conflict with the main investor, Tony White.

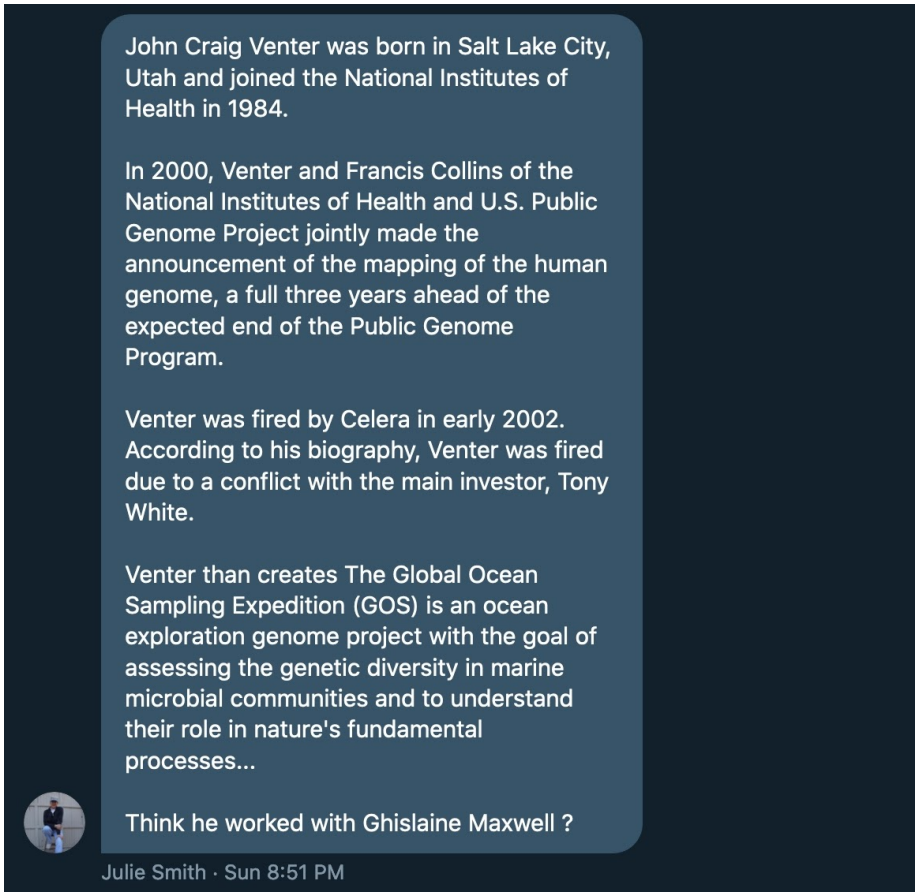
Venter than creates The Global Ocean Sampling Expedition (GOS) is an ocean exploration genome project with the goal of assessing the genetic diversity in marine microbial communities and to understand their role in nature's fundamental processes...

Think he worked with Ghislaine Maxwell ?



In a harrowing twist, Mikovits almost didn't get to present at the 1st International Workshop on XMRV because her laptop broke down. This would have been a tragedy since Francis Collins—head of the NIH, and former head of the Human Genome Project, which was also centered in Cold Spring Harbor (and possibly the most ambitious government science project since the Manhattan project that built the first atomic bomb)—planned to sit in on her talk.

She was staying at the home of her twin sister and planning to celebrate the birthday of her beloved niece who was born the day she turned in her PhD thesis, September 6, 1991. But relaxing family plans over Labor Day weekend took a backseat to the panic that set in when her laptop crashed and had swallowed her presentation. She emailed



â ğŸ“Plague,â ğŸ“ co-authored by Judy Mikovits and Kent Heckenlively, looks into the search for a link between retroviruses and chronic fatigue syndrome, autism and other conditions.

Judy Mikovits, shown with her husband, David, led breakthrough research regarding chronic fatigue syndrome that was later challenged.

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sources both bavari and mikovits

https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2731011/

https://www.researchgate.net/publication/51345256_Similar_Levels_of_Human_Immunodeficiency_Virus_Type_1_Replication_in_Human_TH1_and_TH2_Clones

https://www.mylife.com/judy-mikovits/e600488239206

2020-05-08-mylife-com-judy-mikovits-anne.pdf

Summary: Judy Mikovits is 62 years old today because Judy's birthday is on **04/01/1958.** Previously cities included Oxnard CA and Reno NV. Sometimes Judy goes by various nicknames including Judy A Mikoivits, Judy Anne Mikovits, Judy Nolde, Judy Mokovits and Judy A Mikovits. He currently works as a VPR; Director Research at Genyous Biomed ;Whittemore Peterson Institute. Currently, Judy is single. Judy maintains relationships with many people -- family, friends, associates, & neighbors -- including

7 Relatives/Associates

Richard NobleFrederick, MD

Halijah GolinskiVentura, CA

Kyla NoldeVentura, CA

David NoldeCarlsbad, CA

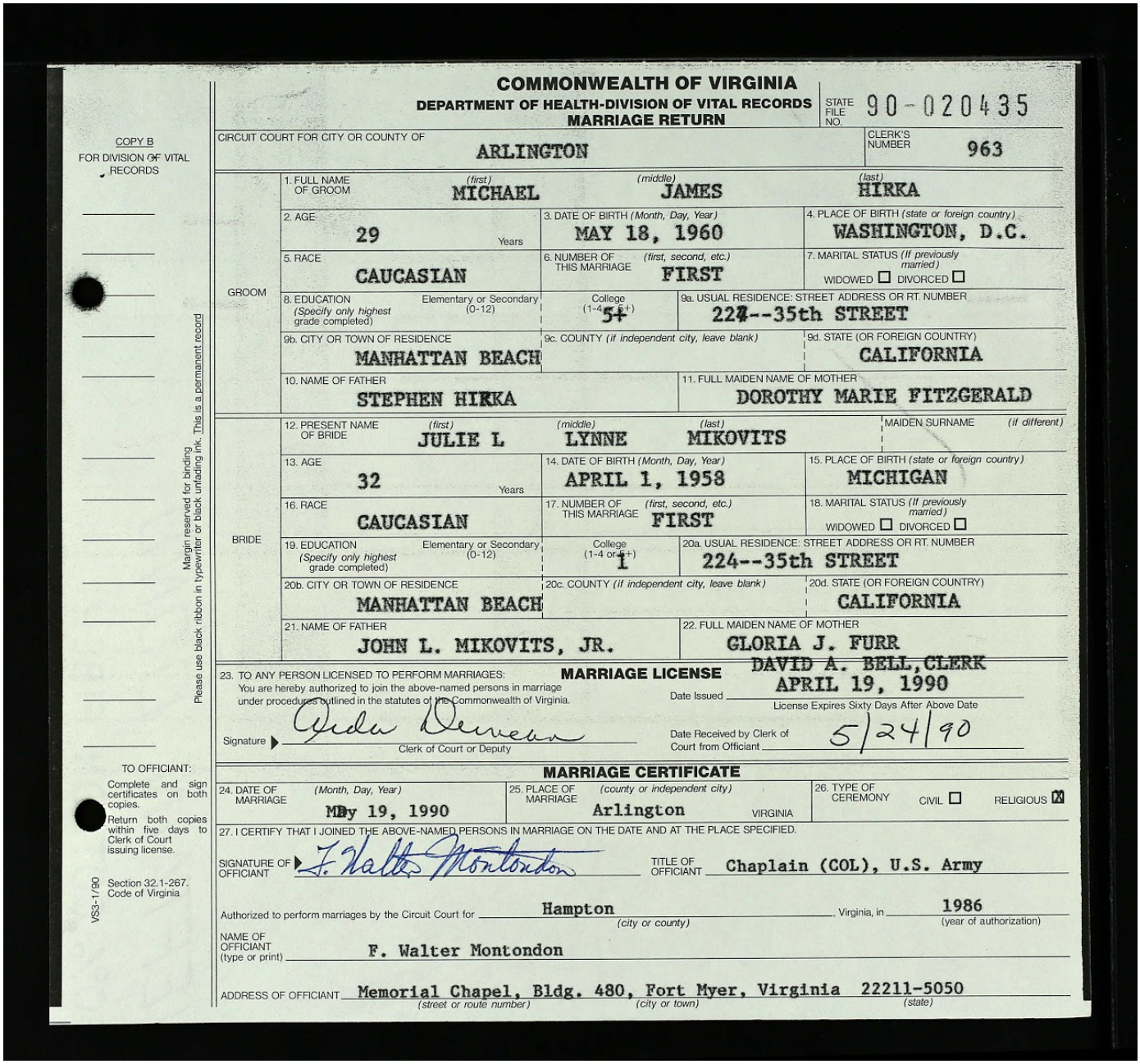
Derek NoldeWalnut Creek, CA

Lance NoldeVentura, CA

Twin sister - Julie Lynne Mikovits and family (married to Hirka)

Marriage

Below - [HL003W][GDrive]



COMMONWEALTH OF VIRGINIA
DEPARTMENT OF HEALTH-DIVISION OF VITAL RECORDS
MARRIAGE RETURN

STATE FILE NO. 90-020435

COPY B
FOR DIVISION OF VITAL RECORDS

CIRCUIT COURT FOR CITY OR COUNTY OF: ARLINGTON — CLERK'S NUMBER: 963

Please use black ribbon in typewriter or black unfading ink. This is a permanent record. Margin reserved for binding.

GROOM

1. FULL NAME OF GROOM	(first) MICHAEL	(middle) JAMES	(last) HIRKA
2. AGE	29 Years	3. DATE OF BIRTH (Month, Day, Year)	MAY 18, 1960
4. PLACE OF BIRTH (state or foreign country)	WASHINGTON, D.C.		
5. RACE	CAUCASIAN	6. NUMBER OF THIS MARRIAGE (first, second, etc.)	FIRST
7. MARITAL STATUS (If previously married)	WIDOWED ☐ DIVORCED ☐		
8. EDUCATION (Specify only highest grade completed)	Elementary or Secondary (0-12): 5+	College (1-4 or 5+):	
9a. USUAL RESIDENCE: STREET ADDRESS OR RT. NUMBER	224--35th STREET		
9b. CITY OR TOWN OF RESIDENCE	MANHATTAN BEACH	9c. COUNTY (if independent city, leave blank)	
9d. STATE (OR FOREIGN COUNTRY)	CALIFORNIA		
10. NAME OF FATHER	STEPHEN HIRKA	11. FULL MAIDEN NAME OF MOTHER	DOROTHY MARIE FITZGERALD

BRIDE

12. PRESENT NAME OF BRIDE	(first) JULIE L	(middle) LYNNE	(last) MIKOVITS
MAIDEN SURNAME (if different)			
13. AGE	32 Years	14. DATE OF BIRTH (Month, Day, Year)	APRIL 1, 1958
15. PLACE OF BIRTH (state or foreign country)	MICHIGAN		
16. RACE	CAUCASIAN	17. NUMBER OF THIS MARRIAGE (first, second, etc.)	FIRST
18. MARITAL STATUS (If previously married)	WIDOWED ☐ DIVORCED ☐		
19. EDUCATION (Specify only highest grade completed)	Elementary or Secondary (0-12):	College (1-4 or 5+): 1	
20a. USUAL RESIDENCE: STREET ADDRESS OR RT. NUMBER	224--35th STREET		
20b. CITY OR TOWN OF RESIDENCE	MANHATTAN BEACH	20c. COUNTY (if independent city, leave blank)	
20d. STATE (OR FOREIGN COUNTRY)	CALIFORNIA		
21. NAME OF FATHER	JOHN L. MIKOVITS, JR.	22. FULL MAIDEN NAME OF MOTHER	GLORIA J. FURR

MARRIAGE LICENSE

23. TO ANY PERSON LICENSED TO PERFORM MARRIAGES: You are hereby authorized to join the above-named persons in marriage under procedures outlined in the statutes of the Commonwealth of Virginia.

Signature: Linda Donovan — Clerk of Court or Deputy

Date Issued: DAVID A. BELL, CLERK APRIL 19, 1990 — License Expires Sixty Days After Above Date

Date Received by Clerk of Court from Officiant: 5/24/90

MARRIAGE CERTIFICATE

24. DATE OF MARRIAGE (Month, Day, Year)	25. PLACE OF MARRIAGE (county or independent city)	26. TYPE OF CEREMONY
May 19, 1990	Arlington VIRGINIA	CIVIL ☐ RELIGIOUS ☒

27. I CERTIFY THAT I JOINED THE ABOVE-NAMED PERSONS IN MARRIAGE ON THE DATE AND AT THE PLACE SPECIFIED.

SIGNATURE OF OFFICIANT: F. Walter Montondon — TITLE OF OFFICIANT: Chaplain (COL), U.S. Army

Authorized to perform marriages by the Circuit Court for Hampton (city or county), Virginia, in 1986 (year of authorization)

NAME OF OFFICIANT (type or print): F. Walter Montondon

ADDRESS OF OFFICIANT: Memorial Chapel, Bldg. 480, Fort Myer, Virginia 22211-5050 (street or route number) (city or town) (state)

TO OFFICIANT:
Complete and sign certificates on both copies.
Return both copies within five days to Clerk of Court issuing license.

VS3-1/90 Section 32.1-267. Code of Virginia

[HL003W][GDrive]

2008 (June 12) - brother-in-law ? Coloner Michael Hirka Retires, June 12 2008

See [HG004F][GDrive]

[HG004G][GDrive]

Col. Michael Hirka watches Tinker Honor Guard members Capt. Vanaryda Prom, left, and Senior Airman Saleem Salahuddin begin a flag folding ceremony during the 327th Aircraft Sustainment Group commander's June 2 retirement ceremony. Officiating over the ceremony in the Tinker Club was Sue Payton, assistant secretary of the Air Force for Acquisition at the Pentagon. Ms Payton once worked for Col. Hirka in the early years of their government service. (Air Force photo by Margo Wright)

TINKER AIR FORCE BASE -- Colonel Michael Hirka retired from the Air Force on June 2.

Standing before about 100 friends and colleagues in the Tinker Club ballroom, the former 327th Aircraft Sustainment Group commander participated in several traditional rituals and listened to kind words from guest speaker and personal friend, The Honorable Sue Payton. Ms. Payton is the Assistant Secretary of the Air Force for Acquisition.

"There's a big new chapter in Colonel Hirka's book," Ms. Payton said. "It's beginning today and in the life of the Hirka family, I look on this as a great commencement because wherever it takes Mike, his wife and sons, I know that he will continue to lead with the one ultimatum that mission success is really what matters."

Colonel Hirka's Air Force career began 26 years ago when he was commissioned from Norwich University's Reserve Officer Training Corps program in Vermont. Armed with a Bachelor of Science degree in electrical engineering, the then-second lieutenant embarked on his first assignment as a satellite systems engineering analysis officer at the Air Force Satellite Control Facility at Onizuka Air Force Base in California.

Within four years, he was promoted to first lieutenant and then to captain when he was stationed in the office of the Chief of the Communications Systems Division for the Secretary of the Air Force for Special Projects at Los Angeles AFB, Calif. It was here that then-Captain Hirka met and befriended a new contractor employee, Ms. Payton.

"I met Mike Hirka 22 years ago, as he was beginning just his fourth year in the Air Force and I was beginning my first year as a contractor on the east coast representing his program office," Ms. Payton said. "He was my boss.

"I thank you for being a boss who held the standards high," Ms. Payton said. "When I go to the product centers out and about in the Air Force, I tell the folks there, 'Be a demanding customer,' and I think of Mike Hirka because you wanted to do your best for Mike Hirka, as a contractor."

After his assignment with Ms. Payton, then-Captain Hirka and Ms. Payton followed different paths but their friendship remained intact.

Captain Hirka reached the rank of Colonel in December 2004. In his 26-year career, he completed 17 assignments, many of which had an emphasis on engineering, program management, acquisitions, space, communications and logistics.

Colonel Hirka's final assignment brought him to Tinker in June 2006.

"Whether it's in space, aircraft communications or information systems, he has supported and solved some of the most complex problems at both the national and strategic level, as well as the tactical level," said Ms. Payton. "I see him as a change agent. I see him as someone who knows how to take on resistance to change no matter what area of a lifecycle of a weapons system he finds himself working in."

Colonel Hirka was honored with the Legion of Merit award, the presidential certificate of appreciation, and participated in a flag folding presentation and received several gifts from colleagues. Colonel Hirka's wife, Julie, was also honored with a certificate of public appreciation.

"When I started in 1982, I figured I'd be punching out my path, my course at the time, and in four years, I'd be on my way as an engineer doing engineering projects," Colonel Hirka said. "(But) as long as it was fun, as long as I was contributing and as long as I was still learning, (I'd) keep doing it.

"Twenty six years later, and we're still here and we're still doing it and it's been a blast," Colonel Hirka said. "I'm not thinking of this as a retirement, more as a transition to more things and different things."

2008 - in Oklahoma City

https://www.newspapers.com/image/451543470/?terms=%22julie%2Bhirka%22

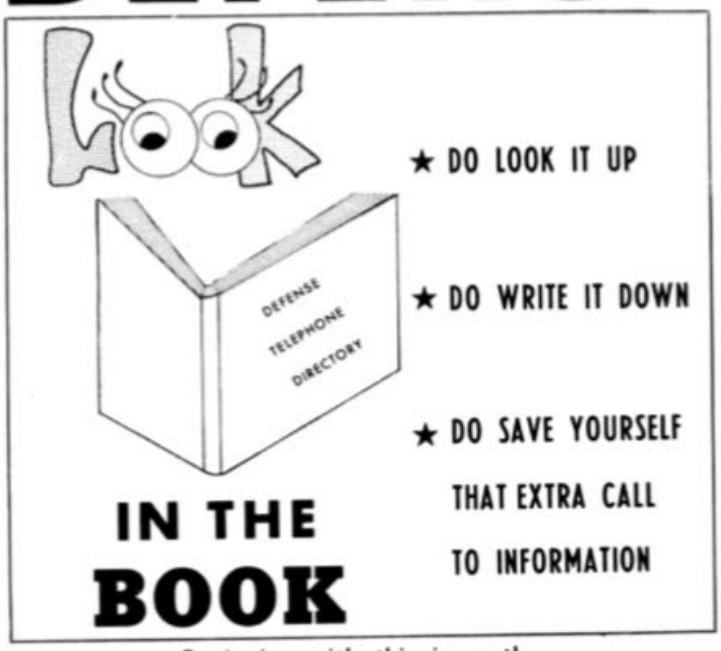
2010 - Father of Michael Hirka passes

https://www.newspapers.com/image/255468249/?terms=%22stephen%2Bhirka%22

Mother is Department of Defense

Source - [HT004U][GDrive]

DEPARTMENT OF DEFENSE



Beginning with this issue the Defense Telephone Directory will be published Triannually - April, August and December.

★ ★ ★

Refer to page XXIII OTHER GOVERNMENT AGENCIES

(C) denotes CENTREX locations

★ ★ ★

Area Code 202
Dial Direct In-dial Number
or
LIberty 5-6700
Interdepartmental codes
See page II

OHIO STATE UNIVERSITY
JUN 12 1974
LIBRARY

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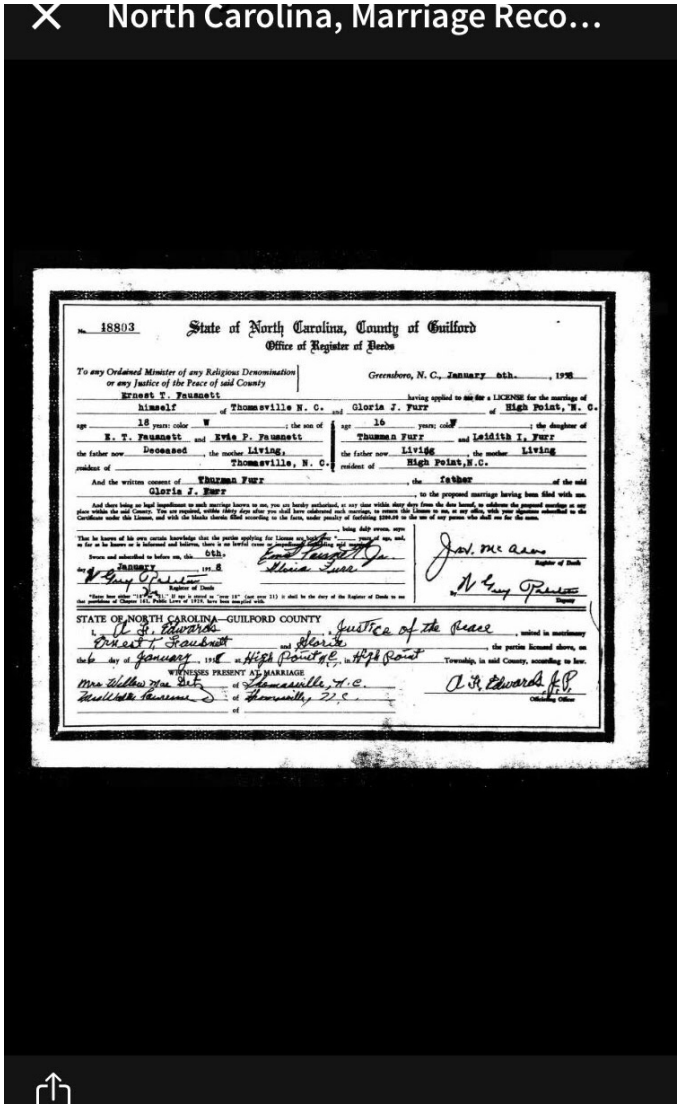
"DAMI" : DAMI stands for Department of the Army Military Intelligence

Miklich Paul A Jr DIADI-6D2 1501 A Bg AHS ---25822
Miklinski A LTC ACSFOR 3C445 Pnt ----------74148
Mikolajczak Edw F NAFC 211 CM 3----------71017
Mikolosko Michael D NRL 207 Bg 30 --------767-3045
Mikoni Thos NCSSA 3025 196 WNY --------433-3328
Mikoslnki Melvin C AFDSCGMB 1D1039 Pnt -----57125
Mikovch Wanda J DIADE 1006 PLA 1 --------48201
Mikovits Gloria J DAMI 2D484 Pnt ----------51899
Miksinski Thaddeus A ESA Bg 200 WNY ----433-3113
Mikulas John Jr MSG OCSA 3D676 Pnt ------53901
Mikus Raymond AMC 6S58 AMC Bg --------274-8220
Milam Roger R NSRDC ----------227-1380
Milan Lawrence F NAIR 713 CB ----------756-1278
Miland Rebekah J SP4 OCSA 3E668 Pnt --------78943
Milanese Erica W OASA(FM) 2E665 Pnt -------76147
Milano Louis L CAPT NCMR Bg 200 WNY ----433-4140
Milano V R CAPT NSEC 720 CTRBG -------43-61679

Source - [HT004V][GDrive]

"Their mother, Gloria J Furr, appears to have been married at least 3 times. "



2019 (Jan 22) - Passing of Gloria Furr-Fornshill

PDF - at [HL003X][GDrive]

November 16, 1936 - January 22, 2019 (82 years old)

Here is Gloria Furr-Fornshill's obituary. Please accept Everhere's sincere condolences.

We are sad to announce that on January 22, 2019, at the age of 82, Gloria Furr-Fornshill (Frederick, Maryland), born in Washington, District of Columbia passed away. Family and friends are welcome to leave their condolences on this memorial page and share them with the family.

She was predeceased by : her parents, Edward M. Furr and Hazel I. Willis. She is survived by : her spouse **Kenneth B. Fornshill**; her children, **Judy Nolde** of Carlsbad, CA, **Julie Hirka** of Vienna, VA, **Karen Reid** of Dickerson, MD and **John Mikovits** of Cape Coral, FL; and her siblings, **Gary Furr** of Raleigh, NC and Jeannette Beard of Frederick, MD.. She is also survived by eight Grandchildren, three Great Grandchildren.

[HL003Y][GDrive]

"Found Judy Mikovits' mother Gloria Furr Fornshill in Technical Standards for Command and Control Information Systems (CCISs) and Information Technology report by Defense Technical Information Center Publication date 1994-02-01"

Document - https://archive.org/details/DTIC_ADA279990/page/n889/mode/2up "DTIC ADA279990: Technical Standards for Command and Control Information Systems (CCISs) and Information Technology"

https://twitter.com/agentrevolt/status/1262449531993587717?s=21

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https://twitter.com/agentrevolt/status/1262449531993587717/photo/4

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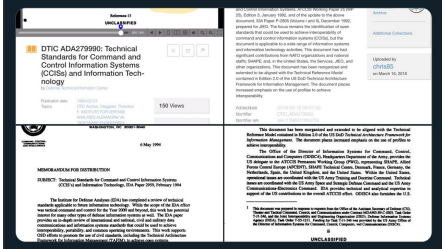
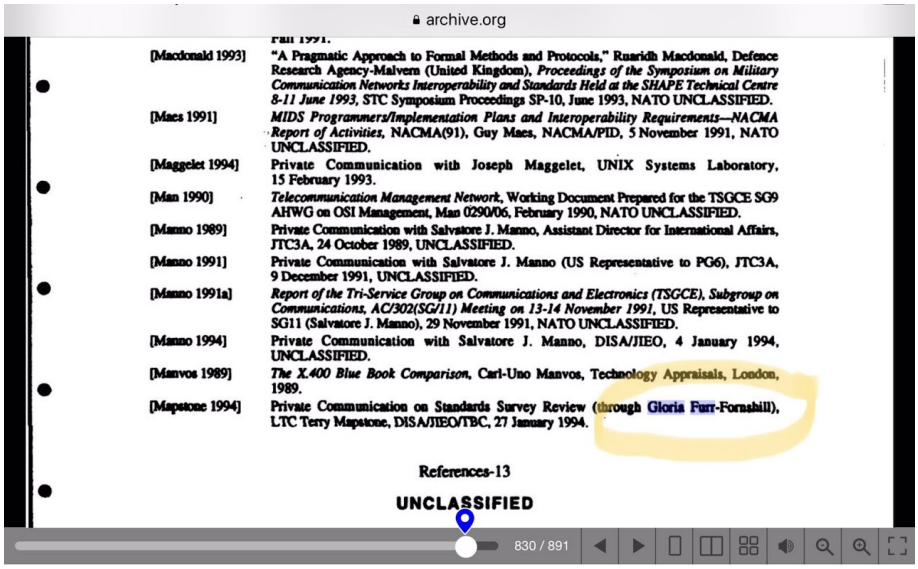
T Mills
@agentrevolt

Found Judy Mikovits' mother Gloria Furr Fornshill in Technical Standards for Command and Control Information Systems (CCISs) and Information Technology report by Defense Technical Information Center Publication date 1994-02-01



2:26 PM · May 18, 2020 · Twitter for iPad



DTIC ADA279990: Technical Standards for Command and Control Information Systems (CCISs) and Information Tech-nology

by Defense Technical Information Center

Publication date 1994-02-01

Topics DTIC Archive, Maggelet, Theodore F, INSTITUTE FOR DEFENSE ANALYSES ALEXANDRIA VA, *SOFTWARE ENGINEERING, *INFORMATION EXCHANGE, *DATA TRANSMISSION SYSTEMS, *TECHNOLOGY TRANSFER, *COMMAND AND CONTROL SYSTEMS, *TACTICAL DATA SYSTEMS, *COMPUTER NETWORKS, *COMPUTER ARCHITECTURE, *PROGRAMMING LANGUAGES, COMMAND CONTROL COMMUNICATIONS,

150 Views

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DAISY For print-disabled users	1 file
EPUB	1 file
FULL TEXT	1 file
ITEM TILE	1 file

INFORMATION SYSTEMS; NATO; DATA MANAGEMENT,
Collection dticarchive; additional_collections
Language English

IN COLLECTIONS

Defense Technical Information Archive

Additional Collections

Uploaded by chris85 on March 16, 2018

This document is a joint effort between JIEO, OSD, and the US Army. It is a major revision of Technical Standards for Command and Control Information Systems, ATCCIS Working Paper 25 (WP 25), Edition 3, January 1992, and of the update to the above document, IDA Paper P-2805 (Volume I and II), December 1992, prepared for JIEO. The focus remains the identification of open standards that could be used to achieve interoperability of command and control information systems (CCISs), but the document is applicable to a wide range of information systems and information technology activities. This document has had significant contributions from NATO organizations and national staffs; SHAPE; and, in the United States, the Services, JIEO, and other organizations. This document has been reorganized and extended to be aligned with the Technical Reference Model contained in Edition 2.0 of the US DoD Technical Architecture Framework for Information Management. The document places increased emphasis on the use of profiles to achieve interoperability.

Addeddate 2018-03-16 06:57:52
Identifier DTIC_ADA279990
Identifier-ark ark:/13960/t1tf6d75s
Ocr ABBYY FineReader 11.0 (Extended OCR)
Pages 891
Ppi 300
Year 1994

COMMAND, CONTROL, COMMUNICATIONS AND INTELLIGENCE

OFFICE OF THE ASSISTANT SECRETARY OF DEFENSE

WASHINGTON, DC 20301-3040

6 May 1994

MEMORANDUM FOR DISTRIBUTION

SUBJECT: Technical Standards for Command and Control Information Systems (CCIS's) and Information Technology, IDA Paper 2959, February 1994

The Institute for Defense Analyses (IDA) has completed a review of technical standards applicable to future information technology. While the scope of the IDA effort was tactical command and control for the Year 2000 and beyond, this work has potential interest for many other types of defense information systems as well. The IDA paper provides an in-depth review of international and national, civil and military data communications and information systems standards that could be used to achieve interoperability, portability, and common operating environments. This work supports OSD efforts to promote the use of civil standards, including the Technical Architecture Framework for Information Management (TAFIM), to achieve open systems environments.

Attached is a copy of the standards analysis that has been completed under my direction by the DISA/JIEO Center for Standards and the U.S. Army. Questions and requests for additional information, including electronic copies can be directed to Dr. Robert P. Walker ((703) 845-2462 (e-mail rwalker@ida.org).

Richard G. Howe

Richard G. Howe
Director, Theater & Tactical C3

FOREWORD

The purpose of this paper is to make available substantive work done in response to a major cooperative technical support activity among agencies in the US and many NATO nations. Specifically, this paper was prepared[1] by the Institute for Defense Analyses (IDA) in support of the Supreme Headquarters Allied Powers Europe (SHAPE)-sponsored Army Tactical Command and Control Information System (ATCCIS) Phase III study effort and the Defense Information Systems Agency (DISA), Joint Interoperability and Engineering Organization (JIEO), Center for Standards. The contents of this document were reviewed and agreed to in the international ATCCIS forum, and issued by SHAPE as a NATO UNCLASSIFIED document with the same title. It was also reviewed by the Center for Standards, Directorate for DoD Standards Assistance. Comments from NATO and national commands and agencies were solicited and have been incorporated. SHAPE will be distributing this paper to all NATO nations and to those NATO commands and agencies that have expressed an interest in the ATCCIS study. Additional distributions are planned by the ATCCIS nations, NATO Headquarters (to the TSGCE), and NACISC (to the Information Systems Working Group). Background information relating to the overall ATCCIS effort is contained in the Preface to this paper.

This document is a joint effort between JIEO, OSD, and the US Army. It is a major revision of *Technical Standards for Command and Control Information Systems*, ATCCIS Working Paper 25 (WP 25), Edition 3, January 1992, and of the update to the above document, IDA Paper P-2805 (Volumes I and II), December 1992, prepared for JIEO. The focus remains the identification of open standards that could be used to achieve interoperability of command and control information systems (CCISs), but the document is applicable to a wide range of information systems and information technology activities. This document has had significant contributions from NATO organizations and national staffs; SHAPE; and, in the United States, the Services, JIEO, and other organizations.

This document has been reorganized and extended to be aligned with the Technical Reference Model contained in Edition 2.0 of the US DoD *Technical Architecture Framework for Information Management*. The document places increased emphasis on the use of profiles to achieve interoperability.

The Office of the Director of Information Systems for Command, Control, Communications and Computers (ODISC4), Headquarters Department of the Army, provides the US delegate to the ATCCIS Permanent Working Group (PWG), representing SHAPE, Allied Forces Central Europe (AFCENT), SHAPE Technical Centre, Denmark, France, Germany, the Netherlands, Spain, the United Kingdom, and the United States. Within the United States, operational issues are coordinated with the US Army Training and Doctrine Command. Technical issues are coordinated with the US Army Space and Strategic Defense Command and the US Army Communications-Electronics Command. IDA provides technical and analytical expertise in support of the US contributions to the overall ATCCIS effort. ODISC4 also furnishes the U.S.

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1 This document was prepared in response to requests from the Office of the Assistant Secretary of Defense (C3I), Theater and Tactical Command, Control, and Communications under Contract MDA903-89-C-0003, Task Order T-J1-246, and the Joint Interoperability and Engineering Organization (JIEO), Defense Information Systems Agency (DISA), Task Order T-S5-1211. Funding for Task T-J1-246 was provided by the US Army Office of the Director of Information Systems for Command, Control, Computers, and Communications (DISC4).

Grandmother ?

https://www.legacy.com/obituaries/washingtonpost/obituary.aspx?fhid=2190&n=hazel-irene-furr&pid=821246

FURR, HAZEL IRENE

On Monday, February 24, 2003 at INOVA Fairfax Hospital. HAZEL IRENE FURR of Falls Church. Beloved wife of the late Edward M. Furr; dear mother of Jeannette C. Beard, Gloria Furr Fornshill, and Gary E. Furr. She is also survived by nine grandchildren and 13 great grandchildren. The family will receive friends at the EVERLY COMMUNITY FUNERAL CARE, 6161 Leesburg Pike, Falls Church, VA on Friday, February 28, from 6 to 8 p.m. where services will be held on Saturday, March 1, at 10 a.m. Interment Cedar Hill Cemetery, Suitland, MD.

Published in The Washington Post on Feb. 26, 2003

https://www.newspapers.com/image/619021391/?terms=%22Edward%2BM.%2BFurr%22

Married 1930 - born Hazel Irene Willis - Married Edward M Furr (age 24 .. so born around 1906)

The HHV-6 Foundation

About us page : (Source : [HI0019][GDrive])

The HHV-6 Foundation is a non-profit institution that encourages scientific exchange between investigators by holding conferences for virologists and clinical researchers, maintaining a repository of reagents to facilitate research, and offering pilot grants for promising research projects.

The Foundation also seeks to raise awareness among physicians of the many conditions that have recently been associated with HHV-6 infection and encourage the discovery of antiviral compounds appropriate for HHV-6. The Foundation pilot grants allow investigators the seed funds to gather preliminary data in order to apply for larger grants.

The Scientific Director is **Dharam Ablashi, co-discoverer of the HHV-6 virus and a 23-year veteran of the National Cancer Institute**. Ablashi is also the co-founder of the EBV Association and the IACFS. **Kristin Loomis** has served as the Executive Director since founding the organization in 2004 with the help of several other family members and patients who have suffered from HHV-6 associated central nervous system disease. The Scientific Advisory Board is comprised of many of the world's top experts on HHV-6.

Jill Chase manages the Foundation's Repository as well as many of the research projects initiated by the Foundation. Josh Pritchett writes the newsletters and assists with the web site updates. Emily Lum is a research assistant.

Louise Chatlynne and Courtney de Balmann volunteer their time to assist the Foundation on important research projects.

The Foundation sponsors a large international conference every other year.

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Michael Robert Milken (born 1946)

Michael Robert Milken (born 1946)

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Michael Milken

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Michael Milken

Milken in 2014

Born

Michael Robert Milken

July 4, 1946 (age 74)

Encino, California, U.S.

Citizenship

United States

Education

University of California, Berkeley (BS)

University of Pennsylvania (MBA)

Occupation

Businessman, financier, philanthropist

Known for

Developing the High-yield bond market, Indictment for securities fraud, philanthropy

Net worth

US$3.7 billion

(March 2020)[1]

Criminal status

Released

Pardoned (February 18, 2020)[2]

Spouse(s)

Lori Anne Hackel (m. 1968)

Children

3

Relatives

Lowell Milken (brother)

Conviction(s)

Securities and reporting violations (1989)

Criminal charge

Racketeering, securities fraud, etc.

Penalty

22 months imprisonment (actual time served)

$600 million fine

Website

http://www.mikemilken.com

Michael Robert Milken (born July 4, 1946) is an American convicted felon, financier and philanthropist. He is noted for his role in the development of the market for high-yield bonds ("junk bonds"),[3] and his conviction and sentence following a guilty plea on felony charges for violating U.S. securities laws.[4] Since his release from prison, he has also become known for his charitable giving.[5][6][7] Milken was pardoned by President Donald Trump on February 18, 2020.

Milken was indicted for racketeering and securities fraud in 1989 in an insider trading investigation. As the result of a plea bargain, he pleaded guilty to securities and reporting violations but not to racketeering or insider trading. Milken was sentenced to ten years in prison, fined $600 million, and permanently barred from the securities industry by the Securities and Exchange Commission. His sentence was later reduced to two years for cooperating with testimony against his former colleagues and for good behavior.[8] Since his release from prison, Milken has funded medical research.[9]

He is co-founder of the Milken Family Foundation, chairman of the Milken Institute, and founder of medical philanthropies funding research into melanoma, cancer and other life-threatening diseases. A prostate cancer survivor, Milken has devoted significant resources to research on the disease.[10] In a November 2004 cover article, *Fortune* magazine called him "The Man Who Changed Medicine" for changes in approach to funding and results that he initiated.[9] Milken's compensation while head of the high-yield bond department at Drexel Burnham Lambert in the late 1980s exceeded $1 billion over a four-year period, a record for U.S. income at that time.[11] With an estimated net worth of around $3.7 billion as of 2018, he is ranked by *Forbes* magazine as the 606th richest person in the world.[1][12]

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Education[edit]

Milken was born into a middle-class Jewish[13][14] family in Encino, California.[15]

He graduated from Birmingham High School where he was the head cheerleader and worked while in school at a diner.[16] His classmates included future Disney president Michael Ovitz[17] and actresses Sally Field and Cindy Williams. In 1968, he graduated from the University of California, Berkeley with a B.S. with highest honors where he was elected to Phi Beta Kappa and was a member of the Sigma Alpha Mu fraternity.[18] He received his MBA from the Wharton School of the University of Pennsylvania. While at Berkeley, Milken was influenced by credit studies authored by W. Braddock Hickman, a former president of the Federal Reserve Bank of Cleveland, who noted that a portfolio of non-investment grade bonds offered "risk-adjusted" returns greater than that of an investment-grade portfolio.

Career[edit]

Through his Wharton professors, Milken landed a summer job at Drexel Harriman Ripley, an old-line investment bank, in 1969. After completing his MBA, he joined Drexel (by then known as Drexel Firestone) as director of low-grade bond research. He was also given control of some capital and permitted to trade. Over the next 17 years, he had only four down months.[12]

Drexel merged with Burnham and Company in 1973 to form Drexel Burnham. Despite the firm's name, Burnham was the nominal survivor; the Drexel name came first only at the insistence of the more powerful investment banks, whose blessing was necessary for the merged firm to inherit Drexel's position as a "major" firm.

Milken was one of the few prominent holdovers from the Drexel side of the merger, and became the merged firm's head of convertibles. He persuaded his new boss, fellow Wharton alumnus Tubby Burnham, to let him start a high-yield bond trading department—an operation that soon earned a 100 percent return on investment.[12] By 1976, Milken's income at what was now Drexel Burnham Lambert was estimated at $5 million a year. In 1978, Milken moved the high-yield bond operation to Century City in Los Angeles.[19][20][21]

High-yield bonds and leveraged buyouts[edit]

History of private equity

and venture capital

Early history

(origins of modern private equity)

The 1980s

(leveraged buyout boom)

The 1990s

(leveraged buyout and the venture capital bubble)

The 2000s

(dot-com bubble to the credit crunch)

- v
- t
- e

See also: Private equity in the 1980s

By the mid-1980s, Milken's network of high-yield bond buyers (notably Fred Carr's Executive Life Insurance Company and Tom Spiegel's Columbia Savings & Loan) had reached a size that enabled him to raise large amounts of money quickly.

This money-raising ability also facilitated the activities of leveraged buyout (LBO) firms such as Kohlberg Kravis Roberts and of the so-called "greenmailers". Most of them were armed with a "highly confident letter" from Drexel, a tool Drexel's corporate finance wing crafted that promised to raise the necessary debt in time to fulfill the buyer's obligations. It carried no legal status, but by this time, Milken had a reputation for being able to make markets for any bonds that he underwrote. For this reason, "highly confident letters" were considered to reliably demonstrate capacity to pay.[22][23] Supporters, like George Gilder in his book, *Telecosm* (2000), state that Milken was "a key source of the organizational changes that have impelled economic growth over the last twenty years. Most striking was the productivity surge in capital, as Milken ... and others took the vast sums trapped in old-line businesses and put them back into the markets."[24]

Amongst his significant detractors have been Martin Fridson formerly of Merrill Lynch and author Ben Stein. Milken's high-yield "pioneer" status has proved dubious as studies show "original issue" high-yield issues were common during and after the Great Depression. Milken himself points out that high-yield bonds go back hundreds of years, having been issued by the Massachusetts Bay Colony in the 17th century and by America's first Treasury Secretary Alexander Hamilton. Others such as Stanford Phelps, an early co-associate and rival at Drexel, have also contested his credit as having pioneered the modern high-yield market.[*citation needed*]

Despite his influence in the financial world during the 1980s (at least one source called him the most powerful American financier since J. P. Morgan),[25] Milken was an intensely private man who shunned publicity; he reportedly owned almost all photographs taken of him.[12][17]

Later career[edit]

Milken and his brother Lowell founded Knowledge Universe in 1996, as well as Knowledge Learning Corporation (KLC), the parent company of KinderCare Learning Centers, the largest for-profit child care provider in the country. Michael Milken used to be chairman of Knowledge Universe, until it was sold in 2015.[26][27]

He established K12 Inc., a publicly traded education management organization (EMO) that provides online schooling, including to charter school students, for whom services are paid by tax dollars,[28] which is the largest EMO in terms of enrollment.[29]

Milken in 2018

Scandal[edit]

Dan Stone, a former Drexel executive, wrote in his book *April Fools* that Milken was under nearly constant scrutiny from the Securities and Exchange Commission from 1979 onward due to unethical and sometimes illegal behavior in the high-yield department.[25]

Milken's role in such behavior has been much debated. Stone claims that Milken viewed the securities laws, rules and regulations with a degree of contempt, feeling

Milken's role in such behavior has been much debated. Stone claims that Milken viewed the securities laws, rules and regulations with a degree of contempt, feeling they hindered the free flow of trade. However, Stone said that while Milken condoned questionable and illegal acts by his colleagues, Milken himself personally followed the rules.[25] He often called Drexel's president and CEO, Fred Joseph—known for his strict view of the securities laws—with ethical questions.[12]

On the other hand, several of the sources James B. Stewart used for *Den of Thieves* told him that Milken often tried to get as much as five times the maximum markup on trades than was permitted at the time.[30]

Harvey A. Silverglate, a prominent defense attorney who represented Milken during the appellate process, disputes that view in his book *Three Felonies a Day*: "Milken's biggest problem was that some of his most ingenious but entirely lawful maneuvers were viewed, by those who initially did not understand them, as felonious, precisely because they were novel – and often extremely profitable."[31]

Ivan Boesky and an intensifying investigation[edit]

The SEC inquiries never got beyond the investigation phase until 1986, when arbitrageur Ivan Boesky pleaded guilty to securities fraud as part of a larger insider trading investigation. As part of his plea, Boesky implicated Milken in several illegal transactions, including insider trading, stock manipulation, fraud and stock parking (buying stocks for the benefit of another). This led to an SEC probe of Drexel, as well as a separate criminal probe by Rudy Giuliani, then United States Attorney for the Southern District of New York. Although both investigations were almost entirely focused on Milken's department, Milken refused to talk with Drexel (which launched its own internal investigation) except through his lawyers.[12][25] It turned out that Milken's legal team believed Drexel would be forced to cooperate with the government at some point, believing that a securities firm would not survive the bad publicity of a long criminal and SEC probe.[30]

For two years, Drexel insisted that nothing illegal occurred, even when the SEC sued Drexel in 1988. Later that year, Giuliani began considering an indictment of Drexel under the powerful Racketeer Influenced and Corrupt Organizations Act. Drexel management immediately began plea bargain talks, concluding that a financial institution could not possibly survive a RICO indictment. However, talks collapsed on December 19, when Giuliani made several demands that Drexel found too harsh, including one that Milken leave the firm if indicted.[25]

Only a day later, however, Drexel lawyers discovered suspicious activity in one of the limited partnerships Milken set up to allow members of his department to make their own investments. That entity, MacPherson Partners, had acquired several warrants for the stock of Storer Broadcasting in 1985. At the time, Kohlberg Kravis Roberts was in the midst of a leveraged buyout of Storer, and Drexel was lead underwriter for the bonds being issued. One of Drexel's other clients bought several Storer warrants and sold them back to the high-yield bond department. The department in turn sold them to MacPherson. This partnership included Milken, other Drexel executives, and a few Drexel customers. However, it also included several managers of money market funds who had worked with Milken in the past. It appeared that the money managers bought the warrants for themselves and did not offer the same opportunity to the funds they managed.[25] Some of Milken's children also received warrants, according to Stewart, raising the appearance of Milken self-dealing.[30]

However, the warrants to money managers were especially problematic. At the very least, Milken's actions were a serious breach of Drexel's internal regulations, and the money managers had breached their fiduciary duty to their clients. At worst, the warrants could have been construed as bribes to the money managers to influence decisions they made for their funds.[30]

Indeed, several money managers were eventually convicted on bribery charges.[32] The discovery of MacPherson Partners—whose very existence had not been known to the public at the time—seriously eroded Milken's credibility with the board. On December 21, 1988, Drexel entered a guilty plea to six counts of stock parking and stock manipulation. Drexel said it "was not in a position to dispute" the allegations made by the government. As part of the deal, Drexel agreed that Milken had to leave the firm if indicted.[12][25]

Indictment and sentencing[edit]

In March 1989, a federal grand jury indicted Milken on 98 counts of racketeering and fraud. The indictment accused Milken of a litany of misconduct, including insider trading, stock parking (concealing the real owner of a stock), tax evasion and numerous instances of repayment of illicit profits. One charge was that Boesky paid Drexel $5.3 million in 1986 for Milken's share of profits from illegal trading. This payment was represented as a consulting fee to Drexel. Shortly afterward, Milken resigned from Drexel and formed his own firm, International Capital Access Group.[12][25]

On April 24, 1990, Milken pleaded guilty to six counts of securities and tax violations.[1] Three of them involved dealings with Boesky to conceal the real owner of a stock:[31]

- Aiding and abetting another person's failure to file an accurate 13d statement with the SEC, since the schedule was not amended to reflect an understanding that any loss would be made up
- Sending confirmation slips through the mail that failed to disclose that a commission was included in the price
- Aiding and abetting another in filing inaccurate broker-dealer reports with the SEC

Two other counts were related to tax evasion in transactions Milken carried out for a client of the firm, David Solomon, a fund manager[31]

- Selling stock without disclosure of an understanding that the purchaser would not lose money
- Agreeing to sell securities to a customer and to buy those securities back at a real loss to the customer, but with an understanding that he would try to find a future profitable transaction to make up for any losses

The last count was for conspiracy to commit these five violations.

As part of his plea, Milken agreed to pay $200 million in fines. At the same time, he agreed to a settlement with the SEC in which he paid $400 million to investors who had been hurt by his actions. He also accepted a lifetime ban from any involvement in the securities industry. In a related civil lawsuit against Drexel he agreed to pay $500 million to Drexel's investors.[33][34]

Critics of the government charge that the government indicted Milken's brother Lowell to pressure Milken to settle, a tactic some legal scholars condemn as unethical. "I am troubled by - and other scholars are troubled by - the notion of putting relatives on the bargaining table," said Vivian Berger, a professor at Columbia University Law School, in a 1990 interview with *The New York Times*.[35] As part of the deal, the case against Lowell was dropped. Federal investigators also questioned some of Milken's relatives about their investments.[12]

At Milken's sentencing, Judge Kimba Wood told him:

> You were willing to commit only crimes that were unlikely to be detected. ... When a man of your power in the financial world ... repeatedly conspires to violate, and violates, securities and tax business in order to achieve more power and wealth for himself ... a significant prison term is required.[30]

In statements to a parole board in 1991, Judge Wood estimated that the "total loss from Milken's crimes" was $318,000, less than the government's estimate of $4.7 million and she recommended that he be eligible for parole in three years.[36] Milken's sentence was later reduced to two years from ten; he served 22 months.[37][38]

Attempts to secure presidential pardon[edit]

In June 2018 it was reported that some of president Donald Trump's advisers, including Rudy Giuliani, the onetime federal prosecutor whose criminal investigation led to Milken's conviction, were urging the president to pardon Milken. Milken's attempts to secure a presidential pardon have spanned multiple administrations.[39]

On February 18, 2020, Trump granted clemency to Milken.[40][41] However, his previous trading license which he lost following his conviction still remained void, and he would still have to reapply and obtain a new trading license in order to return to trading securities.[42]

2013 SEC investigation[edit]

In February 2013, the SEC announced that they were investigating whether Milken violated his lifetime ban from the securities industry. The investigation revolved around Milken allegedly providing investment advice through Guggenheim Partners.[43]

Since 2011, the SEC has been investigating Guggenheim's relationship with Milken.[44]

Philanthropy[edit]

Milken lecturing on "PayPal and the poor", 2019

Upon his release from prison in 1993, Milken founded the Prostate Cancer Foundation for prostate cancer research, which by 2010 was "the largest philanthropic source of funds for research into prostate cancer".[45] Milken himself was diagnosed with advanced prostate cancer in the same month he was released.[46] His cancer is currently in remission. The Prostate Cancer Foundation works closely with Major League Baseball through its Home Run Challenge program to promote awareness of prostate cancer and raise money for medical research. Each season in the weeks leading up to Father's Day, Milken visits many ballparks and appears on TV and radio broadcasts during the games.

In 2003, Milken launched a Washington, D.C.-based think tank called FasterCures, which seeks greater efficiency in researching all serious diseases. Key initiatives of FasterCures are TRAIN, Partnering for Cures and the Philanthropy Advisory Service.[46]

Fortune magazine called Milken "The Man Who Changed Medicine" in a 2004 cover story on his philanthropy.[9]

In September 2012, Milken and the director of the National Institutes of Health, Dr. Francis Collins, jointly hosted 1,000 senior medical scientists, patients, activists, philanthropists, regulators, and members of Congress at a three-day conference[47] to demonstrate the return on investment in medical research.

On March 11, 2014, President Steven Knapp of George Washington University in Washington, D.C. announced the university was renaming its public health school after Milken as a result of a total of $80 million in gifts, $50 million from the Milken Institute and the Milken Family Foundation and $30 million gift from Viacom chairman Sumner Redstone. These gifts are designated to research and scholarship on public health issues.[48]

In popular culture[edit]

Milken became the first recipient of the Ig Nobel Economics Prize in 1991.[49][50][51]

Ayad Akhtar's play, *Junk*, set during the bond trading scandals of the 1980s, is partly based on Milken's "fall from grace". Milken is the inspiration for the main character in the play.[52]

Personal life[edit]

Milken is married to Lori Anne Hackel, whom he had dated in high school.[53] They have three children.[54] He reportedly follows a vegetarian-like diet rich in fruits and vegetables for its presumed health benefits and has co-authored a vegan cookbook with Beth Ginsberg.[55][56]

2019 (Oct 26) - NY Times : "Symbol of ’80s Greed Stands to Profit From Trump Tax Break for Poor Areas"

By Eric Lipton and Jesse Drucker

Published Oct. 26, 2019

Updated Feb. 19, 2020

https://www.nytimes.com/2019/10/26/business/michael-milken-trump-opportunity-zones.html

2020-02-19-nytimes-symbol-of-80s-greed-profit-trump-tax-break-poor-areas
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RENO, Nev. — In the 1980s, Michael Milken embodied Wall Street greed. A swashbuckling financier, he was charged with playing a central role in a vast insider-trading scheme and was sent to prison for violating federal securities and tax laws. He was an inspiration for the Gordon Gekko character in the film “Wall Street.”

Mr. Milken has spent the intervening decades trying to rehabilitate his reputation through an influential nonprofit think tank, the Milken Institute, devoted to initiatives "that advance prosperity."

These days, the Milken Institute is a leading proponent of a new federal tax break that was intended to coax wealthy investors to plow money into distressed communities known as "opportunity zones." The institute's leaders have helped push senior officials in the Trump administration to make the tax incentive more generous, even though it is under fire for being slanted toward the wealthy.

Mr. Milken, it turns out, is in a position to personally gain from some of the changes that his institute has urged the Trump administration to enact. In one case, the Treasury secretary, Steven Mnuchin, directly intervened in a way that benefited Mr. Milken, his longtime friend.

It is a vivid illustration of the power that Mr. Milken, who was barred from the securities industry and fined $600 million as part of his 1990 felony conviction, has amassed in President Trump's Washington. In addition to the favorable tax-policy changes, some of Mr. Trump's closest advisers — including Mr. Mnuchin, Jared Kushner and Rudolph W. Giuliani — have lobbied the president to pardon Mr. Milken for his crimes, or supported that effort, according to people familiar with the effort.

While the Milken Institute's advocacy of opportunity zones is public, Mr. Milken's financial stake in the outcome is not.

The former "junk bond king" has investments in at least two major real estate projects inside federally designated opportunity zones in Nevada, near Mr. Milken's Lake Tahoe vacation home, according to public records reviewed by The New York Times.

One of those developments, inside an industrial park, is a nearly 700-acre site in which Mr. Milken is a major investor. Last year, after pressure from Mr. Milken's business partner and other landowners, the Treasury Department ignored its own guidelines on how to select opportunity zones and made the area eligible for the tax break, according to people involved in the discussions and records reviewed by The Times.

The unusual decision was made at the personal instruction of Mr. Mnuchin, according to internal Treasury Department emails. It came shortly after he had spent time with Mr. Milken at an event his institute hosted.

"People were troubled," said Annie Donovan, who previously ran the Treasury office in charge of designating areas as opportunity zones. She and two of her former colleagues said they were upset that the Treasury secretary was intervening to bend rules, though they said they didn't realize at the time that Mr. Mnuchin's friend stood to profit. The agency's employees, Ms. Donovan said, "were put in a position where they had to compromise the integrity of the process."

The opportunity zone initiative, tucked into the tax cut bill that Mr. Trump signed into law in 2017, has become one of the White House's signature initiatives. It allows investors to delay or avoid taxes on capital gains by putting money in projects or companies in more than 8,700 federally designated opportunity zones. Mr. Trump has boasted that it will revitalize downtrodden neighborhoods.

But the incentive, also championed by some prominent Democrats, has been dogged by criticism that it is a gift to wealthy investors and real estate developers. From the start, the tax break targeted people with capital gains, the vast majority of which are held by the very richest investors. The Treasury permitted opportunity zones to encompass not only poor communities but some adjacent affluent neighborhoods. Much of the money so far has flowed to those wealthier areas, including many projects that were planned long before the new law was enacted.

Investors and others — including Mr. Milken's institute — have been pushing the Treasury Department to write the rules governing opportunity zones in ways that would make it easier to qualify for the tax break. That campaign worked, and Mr. Milken is among the potential beneficiaries.

Geoffrey Moore, a spokesman for Mr. Milken, confirmed that Mr. Milken had investments inside opportunity zones, though they are a sliver of his overall real estate holdings. He disputed that Mr. Milken had used his institute or Washington connections to benefit his investments and said no one at the institute "has any specific knowledge of Mike's personal investments."

Mr. Moore added that Mr. Milken's support for opportunity zones was based on his longstanding belief "that jobs and the democratization of ownership are the keys to helping people in economically struggling areas."

A spokesman for the Milken Institute, Geoffrey Baum, said that "to suggest that the work of the Milken Institute is motivated by or connected to Mr. Milken's investments is flat-out wrong." He said the institute advocated changes that were intended to spread the benefits to more low-income communities, not to help the wealthy.

The White House declined to comment on whether Mr. Trump is considering a presidential pardon for Mr. Milken.

A Notorious Symbol

ImageMr. Milken at the New York offices of Drexel Burnham Lambert in 1978.

Mr. Milken at the New York offices of Drexel Burnham Lambert in 1978.Credit...Neal Boenzi/The New York Times

Mr. Milken — operating from an X-shaped trading desk in Beverly Hills, Calif. — was a Wall Street legend. He pioneered the junk bond, which enabled financially risky companies to borrow billions of dollars and ignited a wave of often-hostile corporate takeovers that came to define a go-go era. His firm, Drexel Burnham Lambert, hosted an annual event, which came to be known as the Predators' Ball, where the era's greatest financiers mingled. Mr. Milken became a billionaire.

Then, in 1989, federal prosecutors charged him with violating securities and tax laws and with being part of a lucrative insider-trading ring. The next year, Drexel Burnham went bankrupt.

Mr. Milken pleaded guilty and was sentenced to 10 years in prison and paid $600 million in fines. After cooperating with the government, he ended up serving about two years behind bars.

Mr. Milken emerged with a considerable fortune intact. He invested in companies in for-profit education, health care and fast food, according to securities filings and company announcements. He also acquired lots of real estate, coming to own roughly 700 properties around the United States, Mr. Moore said.

Image

Mr. Milken after a presentencing hearing in 1990.Credit...Mark Lennihan/Associated Press

He continued to attract scrutiny from regulators, including one case in which Mr. Milken paid $47 million to resolve the Securities and Exchange

He continued to attract scrutiny from regulators, including one case in which Mr. Milken paid $47 million to resolve the Securities and Exchange Commission's allegations that he had violated his lifetime ban from the securities industry.

Mr. Milken, however, has largely managed to restore his reputation — and his clout. His family gave tens of millions of dollars to his Milken Institute, which he founded in 1991 and whose board of directors he leads. After battling prostate cancer, he helped raise hundreds of millions of dollars to fund cancer research.

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In Washington, Mr. Milken, 73, and his institute have courted influence, wooing and sometimes adding former federal officials. His family recently spent more than $85 million to buy three buildings opposite the White House and the Treasury Department, which he is transforming into his institute's new Washington offices.

The most public display of his renewed stature comes each spring in Los Angeles when Mr. Milken presides over a glitzy gathering at the Beverly Hilton — the same venue where his famed Predators' Balls took place three decades ago.

The Milken Institute's annual conference attracts thousands of the world's most powerful people — from government, finance, medicine, Hollywood and the like — for a frenzy of high-powered networking and conspicuous consumption. Recent guests have included Leon Black, the chairman of Apollo Global Management; David M. Solomon, the chief executive of Goldman Sachs; Eric Schmidt, the former chief executive of Google; and the New England Patriots quarterback Tom Brady.

Mr. Milken is the power broker at the center of the action. Onstage, he interviews famous guests. In private, he organizes exclusive dinners. Some have called the event the Davos of North America.

In the Trump era, cabinet secretaries and White House advisers have been among the event's marquee guests, more so than in other recent administrations. Coveted speaking roles have gone to Ivanka Trump and her husband, Mr. Kushner, giving them access to an elite audience.

Shaping the Rules of the Road

Image

Treasury Secretary Steve Mnuchin arriving for the Milken Institute Global Conference last year. He is a longtime friend of Mr. Milken.Credit...Jae C. Hong/Associated Press

At last year's event in Beverly Hills, attendees included Commerce Secretary Wilbur Ross and Mr. Mnuchin. The Treasury secretary was accompanied by several senior aides, including Daniel Kowalski, who is overseeing the department's drafting of the opportunity zone rules.

Mr. Kowalski, who has spent months drumming up support across the country for opportunity zones, is well acquainted with the Milken Institute.

After the tax incentive became law, it was up to the Treasury, and Mr. Kowalski in particular, to put it in effect through a series of rules. Officials at the Milken Institute met repeatedly with him to try to influence that rule-writing process. The institute submitted a series of letters and presentations to the Treasury and the Internal Revenue Service, and at times directly to Mr. Mnuchin, pushing for rules that would make the tax break easier to qualify for.

"Helping to shape the rules of the road" is how the Milken Institute describes its work on opportunity zones.

The institute "is incredibly active," Mr. Kowalski said in an interview. He said he thought he had discussed opportunity zones with Mr. Milken, although he said he could not specifically recall. He disputed that Mr. Milken or his institute exerted any special influence over the Treasury Department.

Image

Daniel Kowalski, third from left, a senior aide to Mr. Mnuchin, spoke at an opportunity-zones event in June. He oversaw the Treasury's drafting of rules for the zones.Credit...Melissa Lyttle for The New York Times

Among the Milken Institute's proposals was for the Treasury to give investors a generous amount of time to build on opportunity zone land and to reduce the amount that investors had to spend upgrading properties to be eligible for the tax break. Those changes would make it easier for investors to reap the benefits.

The institute also asked the Treasury a question that would clarify if investors who owned land in opportunity zones before the tax law was passed were eligible to receive the benefits. The Treasury ruled that such investments were permissible, a controversial decision since the purpose of the opportunity zone initiative was to spur new investments, not reward existing projects.

Mr. Milken's spokesman, Mr. Moore, said Mr. Milken "never attended any meeting focused on opportunity zone regulations with any federal agency, nor did he consult with any institute representatives who may have interacted with any agency."

But Aron Betru, who led the Milken Institute's opportunity zone efforts, told The Times in an interview that he did discuss opportunity zones with Mr. Milken, though he said he was not aware of Mr. Milken's specific investments. And in 2018 Mr. Mnuchin and Mr. Milken attended a small, private event, sponsored by the institute, to discuss opportunity zones.

Boomtown

Image

Mr. Milken is an investor in 700 acres in an industrial park in Nevada. The park didn't qualify for opportunity zone status until Mr. Mnuchin told Treasury officials that they should accept the nomination of the census tract it is in.

Mr. Milken is an investor in 700 acres in an industrial park in Nevada. The park didn't qualify for opportunity zone status until Mr. Mnuchin told Treasury officials that they should accept the nomination of the census tract it is in.

Credit...Tiffany Brown Anderson for The New York Times

High above Reno, on a vast hillside where wild horses roam, is the site of one of Nevada's biggest opportunity zones.

The center of this area is known as Comstock Meadows, a reference to the 1859 discovery of the so-called Comstock Lode, one of the largest deposits of silver ever found in the United States. The find generated hundreds of millions of dollars in wealth, creating a boomtown in nearby Virginia City.

Today it is home to the Tahoe-Reno Industrial Center. Lured by cheap land, Google is building a huge new complex inside the industrial park. Tesla and Switch, the data-center company, recently opened their own operations. And down the street, Mr. Milken co-owns a company that holds nearly 700 acres of empty land.

He and his partner — Chip Bowlby, president of a development company called Reno Land — planned to use that space to open a so-called tech incubator, where smaller companies could set up operations, among other possible uses.

Being inside an opportunity zone would potentially be a huge boon for the venture. It would mean that start-ups at the tech incubator could attract tax-advantaged money from outside investors.

Nevada officials wanted to nominate the census tract that included the industrial park as an opportunity zone. But in early 2018, Treasury officials had ruled that the area was ineligible because its residents were too affluent.

Major landowners at the site, including Mr. Bowlby, urged state and local officials to try to get the Treasury to reverse that ruling, said Kris Thompson, the project manager at the industrial center.

Storey County, where the industrial park is situated, deployed Jon Porter, a former House Republican from Nevada who is now a lobbyist, to push the matter. Dean Heller, at the time a Republican senator, and Brian Sandoval, then the governor, also were enlisted and had phone calls with Mr. Mnuchin around that time, according to Treasury records. Mr. Heller, Mr. Porter and Mr. Sandoval did not respond to requests for comment.

'My L.A. Friends'

Image

Mr. Milken at the Milken Institute Global Conference in April this year.

Mr. Milken at the Milken Institute Global Conference in April this year.Credit...Michael Kovac/Getty Images

Just as that lobbying intensified in the spring of 2018, Mr. Milken opened his institute's annual conference in Beverly Hills.

Mr. Mnuchin was a featured guest. "It's great to be here with you and all my L.A. friends," the Treasury secretary said in an onstage interview on April 30.

That afternoon, the institute organized an invitation-only meeting with Mr. Mnuchin and his staff to discuss opportunity zones. Other listed attendees included Sean Parker, the former Facebook president and an early advocate of opportunity zones, and Raymond J. McGuire, a top Citigroup executive. Mr. Betru was the moderator.

Within days, the Treasury Department had shifted its position and was now willing to let the state nominate the area around the Nevada industrial park as an opportunity zone.

Mr. Mnuchin told Mr. Kowalski to inform other Treasury officials that they should accept Storey County's nomination, according to email records reviewed by The Times.

Image

Mr. Mnuchin and his wife, Louise Linton, with Mr. Milken last year.Credit...Sean Zanni/Patrick McMullan, via Getty Images

Mr. Mnuchin spoke on the phone on May 8 with Mr. Sandoval. Forty-five minutes later, Mr. Sandoval formally nominated the site to be part of an opportunity zone, email records, including documents from Nevada, show. And the decision was soon officially blessed by the Treasury Department. (While the Treasury's reversal has been reported, Mr. Milken's connection has not been previously disclosed.)

Treasury officials said the change was part of an effort to iron out inconsistencies in different Treasury rules. But the switch provoked intense protests from Treasury and I.R.S. employees.

"Failure to apply the designation standards equally across the board will call into question the legitimacy of the process by which the designations were made," an unnamed I.R.S. employee wrote in an internal memo in May 2018. It added that the appearance of "arbitrary" Treasury standards risked "opening the door for accusations that the determination process was influenced by political considerations or bias."

"Any such controversy would in turn taint the opportunity zones and potentially chill or cloud the incentive for investors to invest in the opportunity zones," the memo said.

In an interview this month at an event co-sponsored by the Milken Institute in Jackson, Miss., Mr. Kowalski would not comment on whether Mr. Mnuchin had been the driving force behind the Treasury's reversal. "I can certainly say he was apprised of the situation," Mr. Kowalski said.

Brett Theodos, a senior fellow at the Urban Institute, which has advised state governments including Nevada on their nominations of opportunity zones, said the Treasury's decision-making appeared problematic. "Making exceptions for the politically connected is deeply troubling," he said.

Spokesmen for Mr. Milken and Mr. Mnuchin said the two men had never discussed the Storey County issue. Mr. Mnuchin's spokesman, Devin O'Malley, said Mr. Mnuchin "had no knowledge of Milken's investments in Nevada."

Wins for Milken

Image

Mr. Milken is an investor in this housing, retail and hotel development being built in Reno. It's in an opportunity zone.Credit...Tiffany Brown Anderson for The New York Times

In August 2018, Mr. Mnuchin and Mr. Milken met again. This time, the occasion was a small conference hosted by the Milken Institute to discuss opportunity zones. The event took place at the Hamptons home of the real estate developer Richard LeFrak, a friend of and donor to Mr. Trump, according to the event's agenda.

A handout from the event, which was obtained by The Times, showed that Mr. Milken's institute had lobbied the Treasury Department on opportunity zones.

A handout from the event, which was later posted online, showed a map of all 8,764 opportunity zones in the United States, but focused on the virtues of just one specific area: Reno. The handout promoted the city as a “hub to the western United States.”

The handout did not mention that Mr. Milken was a major investor in two projects in opportunity zones in that area: the tech incubator in the industrial park and a housing, hotel and retail development on the site of an old shopping mall in Reno.

As his institute was continuing to push the Treasury to tinker with its opportunity zone rules, Mr. Milken gave Mr. Mnuchin a flight in January on his private jet to Los Angeles, where both men have homes.

Three months later, the Treasury Department heeded the institute’s request and clarified that investors could receive the opportunity zone tax benefits by simply leasing properties to themselves. As a result, investors who had long owned land inside opportunity zones were now eligible for the tax break.

In a separate round of rule changes, Treasury agreed to loosen rules governing how quickly developers had to start work on opportunity zone projects and how much money they had to spend — both revisions that the Milken Institute, among many others, had sought.

This was a potential win for Mr. Milken. His partner, Mr. Bowlby, had bought the Nevada real estate — for both the tech incubator and the residential and retail complex — before the areas were designated as opportunity zones.

Mr. Bowlby, who didn’t respond to requests for comment, said at a public event this year that he was using a lease on his Reno project with Mr. Milken “so we can still be qualified for the opportunity zone.”

The Treasury’s leasing decision has faced criticism.

“Anybody who owned property in the zone prior to 2018 would have been out of luck until these rules,” said Michelle Layser, a tax law professor at the University of Illinois College of Law. “This really opens the door.”

Mr. Moore, the spokesman for Mr. Milken, denied that he received special treatment.

“Your insinuation that Mike has reaped personal financial benefits from Milken Institute programs is outrageous,” he said. “It’s clear that you are less interested in the objective truth than in assigning to Mike Milken sinister motives that simply do not exist.”

Mr. Moore said that Mr. Milken hadn’t hidden the fact that he had investments in the Nevada opportunity zones. He said Mr. Milken had described them at the Hamptons event that Mr. Mnuchin attended. “There was nothing secretive about it,” he said.

Mr. Kowalski said he hadn’t been aware that Mr. Milken was an investor in the Nevada projects at the same time that his institute was seeking to change the rules governing opportunity zones.

Was he surprised? Mr. Kowalski paused. “Nothing surprises me anymore,” he said.

2020 (Jan 30) - Wall Street Journal - OpEd from Michael Milken - "The New York Times builds a false narrative aimed at discrediting me and tax reform’s opportunity zones."

https://www.wsj.com/articles/no-one-is-safe-from-biased-reporting-11580428578

2020-01-30-wall-street-journal-milken-no-one-safe-from-biased-reporting-nytimes-is-false.pdf
https://drive.google.com/file/d/1Lf9sJvPZ5mJoGOYeihbduz80BUsuGDvq/view?usp=sharing

No One Is Safe From Biased Reporting

By Michael Milken Jan. 30, 2020 6:56 pm ET

A free and independent press is, and should always be, an impenetrable bulwark of our democracy. “Were it left to me to decide whether we should have a government without newspapers or newspapers without a government, I should not hesitate a moment to prefer the latter,” wrote Thomas Jefferson in a 1789 letter. The media’s hallowed role, embodied in the First Amendment, assures near-total freedom to report (and even misreport) the news.

Press freedom, however, implies a responsibility to place truth above narrow partisan campaigns. That’s why editorial and commentary pages must be kept separate from news reporting. That separation has often been breached, but certain prominent news organizations have branded themselves clarions of truth. The New York Times long nurtured such a reputation. So it is profoundly disappointing to see the Times’s news pages increasingly corrupted by the political views of its reporters and editorialists.

Candor requires that I note my own lack of objectivity. For complex reasons, I have been the object of unfounded and vicious attacks by the Times for more than three decades. An article in October falsely suggested that I had intervened to obtain opportunity-zone status for the 107,000-acre Tahoe-Reno Industrial Center, or TRIC, to benefit what the Times said was my minority investment in a partnership holding 688 acres of raw land in TRIC. (It’s my longstanding practice not to divulge what’s in my portfolio.) The singular focus on this tiny sliver of the 107,000 acres makes no sense. TRIC’s 99.4% owners include Tesla, Google, Panasonic, Walmart, Blockchains, Berkshire Hathaway, Switch and other giant companies that have spent billions of dollars at TRIC and have lobbied on its behalf.

I had no knowledge about the extensive activities of the major corporate owners, their lobbyists or advisers. I am not a manager, director or officer of the partnership that owns 688 acres. Yet the Times ignored the major corporate owners to focus on me, a clear indication of their intent to deceive their readers. I can take care of myself, but I’m concerned about all those other victims caught in the middle of partisan mudslinging by the institutions that claim dedication to the truth.

As Fred Smith, founder and CEO of FedEx, wrote in these pages in November, the Times attacked his company by “printing selected facts, connecting unrelated events, and implying nefarious activities when there were none whatever.” That’s exactly what the Times did to me last fall in a long article about Nevada real estate investments. Mr. Smith’s complaint centered on provisions of the 2017 Tax Cuts and Jobs Act and its benefits to FedEx that the Times asserted were unfair.

A different provision of the act established opportunity zones, which provide incentives for private capital to create jobs and assist families in economically depressed areas. It appears the Times doesn’t like the opportunity-zone concept. They and others might prefer direct government assistance rather than incentives to private capital. While reasonable people have taken principled positions on both sides of this debate, it’s a problem when a newspaper violates its mission by carrying editorial views over to the news pages.

This is part of the Times’s multiyear campaign opposing virtually every initiative of the Trump administration. The paper attacked Treasury Secretary Steven Mnuchin, whose department oversees opportunity zones. Then it determined it could conjure a news story virtually out of thin air if it could link Mr. Mnuchin in some way to a private citizen who might benefit from provisions of the Tax Cuts and Jobs Act.

Apparently I fit the bill, and the paper deployed six reporters and researchers for several months looking for dirt. They didn’t find any—I did none of the things they hinted at. But the editors weren’t about to let an absence of facts kill a breathless front-page exposé about how I and other investors stood to “Profit From Trump Tax Break for Poor Areas.” The Times claimed, wrongly, that the Treasury secretary directed regulatory changes for my benefit. Not only did he not make the changes for my benefit, the changes didn’t benefit me. The article reached false conclusions by claiming that mere coincidences proved intent, or by conflating events that occurred months apart in a dizzying feat of obfuscation. This ignored the public record of what really happened.

This is irresponsible journalism. The Times, which sometimes seems to exist in an alternate universe, knew before publication that important conclusions and implications in the article about me were wrong because we and the U.S. Treasury gave them every relevant fact. I’ve never spoken to Mr. Mnuchin, any other government official or anyone else about putting TRIC in an opportunity zone; I have never authorized anyone to act for me on that matter and no one has ever asked me to take any action related to it; I had no knowledge of any lobbying to put TRIC in an opportunity zone.

We gave the Times these and many other facts. They, and anyone with an internet connection, could have easily found the truth. I asked my lawyers to do just that by retaining someone to go online and figure out the real story from the public record. In three days this person found a deep trove of facts that the Times’s six reporters had apparently chosen to ignore. Anyone who wants to know the truth can find an article telling the real story plus a fact sheet and timeline at www.mikemilken.com. These documents provide a sobering antidote to the errors, omissions, deceptions and bias in the Times article.

The Times has now sent my office new questions that suggest another article is in the works. I will vigorously counter any further journalistic mendacity with hard facts and, where appropriate, other actions. But the greater risk is that no one is safe when a previously respected news organization deploys its considerable resources to twist the truth. Keep that in mind as you read future articles attacking opportunities for upward mobility through job creation.

Mr. Milken is chairman of the Milken Institute.

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MITS Inc. Altair 8800

Wikipedia Altair 8800

Also see :

- Paul Gardner Allen (born 1953)
- Micro Instrumentation and Telemetry Systems (MITS) Incorporated

1974 (April) - Intel releases the 8080

https://en.wikipedia.org/wiki/Intel_8080

1974 (May?) - Roberts of MITS is planning to make a kit using the new 8080 - price negotiations start...

See (https://en.wikipedia.org/wiki/Ed_Roberts_(computer_engineer))

Roberts decided to return to the kit market with a low cost computer. The target customer would think that "some assembly required" was a desirable feature. In April 1974, Intel released the 8080 microprocessor that Roberts felt was powerful enough for his computer kit, but each 8080 chip sold for $360 in small quantities.[23] Roberts felt that the price of a computer kit had to be under $400; to meet this price, he agreed to order 1,000 microprocessors from Intel for $75 each.[24] The company was down to 20 employees and a bank loan for $65,000 financed the design and initial production of the new computer. Roberts told the bank that he expected to sell 800 computers, but he guessed that it would be around 200.

1974 (May - October) - Amazing story about the Altair Bus that was conceived, designed, tested, and prototyped - All in a very short timespan

Source - https://en.wikipedia.org/wiki/S-100_bus

During the design of the Altair, the hardware required to make a usable machine was not available in time for the January 1975 launch date. The designer, Ed Roberts, also had the problem of the backplane taking up too much room. Attempting to avoid these problems, he placed the existing components in a case with additional "slots", so that the missing components could be plugged in later when they became available. The backplane is split into four separate cards, with the CPU on a fifth. **He then looked for an inexpensive source of connectors, and he came across a supply of military surplus 100-pin edge connectors. The 100-pin bus was created by an anonymous draftsman, who selected the connector from a parts catalog and arbitrarily assigned signal names to groups of connector pins.**[2]

1974 - One story is that the MITS 8800 prototype made it to New York, but it didnt work ..

NOTE that in 1980 - Ed brought eh prototype. but something happened in transit, and the unit would not work. They ran the article anyways.

Source : 1980 (Feb 18) Infoworld : Cover page is [HP0031][GDrive]

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Bits & Bytes

The S-100 Bus: Past, Present, and Future

Part I

By Sol Libes

This is the first of a two-part article analyzing the S-100-based computer systems picture. The S-100 bus is currently the most widely used microcomputer system bus and hence, I feel, is deserving of an in-depth analysis of where it came from, where it is presently, and what its future looks like. I would like to thank the following individuals who have spoken to me at great length on this topic: Dr. Bob Stewart, IEEE; Bill Godbout, Godbout Electronics; George Morrow, Morrow/Thinker Toys; Steve Edelman, Ithaca InterSystems; and Larry Stein, Computer Mart of New Jersey.

LATE IN 1974, Ed Roberts, then President of a small Albuquerque, New Mexico company by the name of Micro Instrumentation and Telemetry Systems (better known as MITS) called Les Solomon, Technical Editor of *Popular Electronics* magazine. Ed told Les that he had designed a microcomputer system using the new Intel 8080 microprocessor IC, and that MITS wanted to produce it as a kit aimed at hobbyists. MITS was then a small company of about a dozen people who had previously attempted, unsuccessfully, to make and sell radio telemetry kits for model rockets and programmable calculator kits. *Popular Electronics* had helped Ed in promoting these failures in the past; therefore, he turned to them again with his new computer kit project. Two earlier kits based on the Intel 8008 microprocessor had met with some limited acceptance.* MITS, in late 1974, was doing poorly, and the microcomputer kit was, as Ed himself later admitted "a sort of last hope."

Ed projected that they could sell 300 of these computer kits in 1975. Les Solomon thought the project was great and asked Ed to bring the working prototype to New York City for a demonstration and a photo session. PE agreed to run a feature construction-type article, including schematic diagrams. Ed, with Les' help, dream'nt up a name for the computer. They called it the "Altair 8800." Ed brought the prototype unit to NYC, but something happened in transit, and the unit would not work. Les had faith, and decided to run the article anyway.

THE REST OF THE STORY is pretty well known. The article appeared in the January 1975 issue of *Popular Electronics*, which was actually published and distributed in December, 1974. At the end of the article it was mentioned that MITS was offering a parts kit for the Altair 880 for $395. At the time, Intel was charging $350 for a single 8080 IC. The Altair price seemed like an absolute steal. Further, MITS offered a complete PC board set for the Altair for only $77, and a complete set of parts (less the cabinet, power supply and front panel switches) for only $189. How cheap could you get?

It was like opening the flood gates. Within one week after the article appeared, MITS had received 200 orders for the Altair; later that year, they received 300 orders in one afternoon. By the end of February, they had 2000 orders and still all they had was one prototype Altair. Working day and night, with the phones constantly jammed, they managed to ship some board sets by early April; in May, they started shipping complete kits.

THE ALTAIR-8080 used a 100-pin bus that was created by an anonymous draftsman, who selected the connector from a parts catalog and arbitrarily assigned signal names to groups of connector pins. Originally known as the "Altair BUS," its name was changed by other manufacturers of compatible products to the "S-100 Bus." The Altair-8800 came with a 1K-RAM card and promises from MITS of additional boards for I/O interfacing, memory expansion and the like. But the owners of Altairs were desperate for these boards so that they could get their systems to do something.

This led to the introduction of S-100 peripheral plug-in boards by other suppliers. The first company to introduce these boards was a small 2-man operation in a 1,000 square foot shop in Berkeley, California. Named Processor Technology Company, it was run by Gary Ingram and Bob Marsh. Most of their boards were designed by Lee Felsenstein, an independent electronics consultant. Lee's designs included the 3P+S I/O board, which allowed the interfacing of terminals, printers, etc., to the Altair, and the VDM-1, an amazing device which permitted the use of a television monitor to provide alphanumeric and graphics output at very low cost. PTCo also introduced RAM and ROM boards, as well as a software package (appropriately called "Package #1") which made the Altair a real computer rather than just a toy. PTCo also experienced incredible growth.

IN LATE 1975, Bill Gates, Paul Allen, and some cohorts wrote a small Basic language interpreter program in 8080 code with a cross-assembler on a large computer system. They took a paper tape of the program from their location in Seattle down to MITS in Albuquerque, loaded it into an Altair, and with only a few patches, got it to work the same day. Later, Bill and Paul formed Microsoft, Inc., to market their software directly. The result was that by the end of 1975, a person could build a CPU mainframe for a little over $1,000, to which he could attach a terminal and printer and run Basic, Assembler, Debugger, and even do basic word processing. This enabled MITS, during 1975, to sell about 8,000 Altair-8800 computers.

At the end of 1975, Imsai Manufacturing Corporation introduced their own 8080 CPU which also used the same bus structure and a similar operator panel. More rugged, with a larger power supply, it was considered more professional than the Altair so that, although it cost $100 more, it started to eat-out the Altair to both hobbyists and professional users. Imsai was also started as a garage-type operation by Bob Millard, a consulting electronics engineer.

OVER A DOZEN MORE S-100 board vendors came onto the scene in 1976. Cromemco (started in Harry Garland's garage), building the Dazzler,* a color television controller for the Altair and Imsai computers. TDL (Technical Design Labs - later to become XITAN) started in mid 1976 in Roger Amidon's basement with a 2.4-MHz CPU card and a powerful monitor software program. By the end of 1976, there were a half dozen different S-100 mainframes being sold, and close to 30 suppliers of S-100 plug-in boards. Over 30,000 S-100 systems were sold in 1976.

Meanwhile, MITS began thinking of themselves as "the IBM of the microcomputer business." They began to redirect their marketing to commercial and business users; and started to set up a dealer network that sold Altair products exclusively. They introduced a system package for business users.

BUT, MITS LEARNED the hard way that there was a big difference between a hobbyist system and a business system. Now with over 100 employees, MITS was having difficulty developing reliable memory, I/O, and disk storage systems. Even worse, the development of business software was proving an even more formidable task than they had envisioned. By early 1977, Ed Roberts realized that MITS did not have the financial wherewithall for the task. Further, Imsai's better mainframe and the new PTCo Sol computer teamed after Les Solomon, Cromemco, and TDL computers were having an impact on the sales of the Altair. An attempt by MITS to broaden its product line with an Altair-8800 computer was a failure. In addition, several products (e.g. a 4K dynamic RAM board) proved very unreliable, and caused an incredible number of returns to the factory.

AS MITS SOUGHT to move from kits to assembled business systems, they found that their production problems, restrictive marketing organization (limited to less than 60 dealers by early 1977), and the increased competition were causing financial problems. Therefore, in July 1977, Ed Roberts sold MITS to Pertec Computer Corp. Pertec, a conglomerate with high overhead, raised the Altair prices, stopped all kit production, and ceased all promotion to the personal computer market.

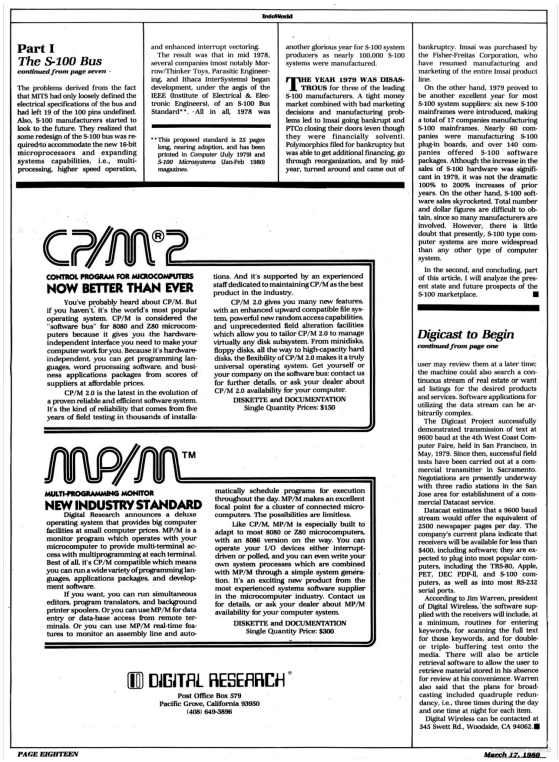
Imsai, PTCo, TDL, Cromemco, North Star, Vectorgraphics, and several other S-100 computer system makers were now selling systems through over 500 personal computer stores worldwide. As Pertec sought to turn the Altair into a serious business oriented system, a dark cloud appeared in the form of low-cost integrated computer systems from Commodore (PET) and Radio Shack (TRS-80), which had become available by the end of 1977. By year-end, Pertec gave up the ghost and ceased production of all Altair products. Despite this event, over 60,000 S-100 systems were sold in 1977.

AS MORE AND MORE manufacturers introduced S-100 mainframes and peripheral plug-in boards, it became apparent that compatibility problems were developing. In many cases, S-100 boards would operate in some S-100 systems and not in others.

continued on page eighteen

* Those interested in the early history of Personal Computing (1964 to 1974) should consult my article, "The First Ten Years of Amateur Computing," which appeared in the July, 1978, issue of *Byte* magazine.

[HP0032][GDrive]



InfoWorld

Part I

The S-100 Bus

continued from page seven

The problems derived from the fact that MITS had only loosely defined the electrical specifications of the bus and had left 19 of the 100 pins undefined. Also, S-100 manufacturers started to look to the future. They realized that some redesign of the S-100 bus was required to accommodate the new 16-bit microprocessors and expanding systems capabilities, i.e., multi-processing, higher speed operation, and enhanced interrupt vectoring.

The result was that in mid 1978, several companies (most notably Morrow/Thinker Toys, Parasitic Engineering, and Ithaca InterSystems) began development, under the aegis of the IEEE (Institute of Electrical & Electronic Engineers), of an S-100 Bus Standard**. All in all, 1978 was another glorious year for S-100 system producers as nearly 100,000 S-100 systems were manufactured.

THE YEAR 1979 WAS DISASTROUS for three of the leading S-100 manufacturers. A tight money market combined with bad marketing decisions and manufacturing problems led to Imsai going bankrupt and PTCo closing their doors (even though they were financially solvent). Polymorphics filed for bankruptcy but was able to get additional financing, go through reorganization, and by mid-year, turned around and came out of bankruptcy. Imsai was purchased by the Fisher-Freitas Corporation, who have resumed manufacturing and marketing of the entire Imsai product line.

On the other hand, 1979 proved to be another excellent year for most S-100 system suppliers: six new S-100 mainframes were introduced, making a total of 17 companies manufacturing S-100 mainframes. Nearly 60 companies were manufacturing S-100 plug-in boards, and over 140 companies offered S-100 software packages. Although the increase in the sales of S-100 hardware was significant in 1979, it was not the dramatic 100% to 200% increases of prior years. On the other hand, S-100 software sales skyrocketed. Total number and dollar figures are difficult to obtain, since so many manufacturers are involved. However, there is little doubt that presently, S-100 type computer systems are more widespread than any other type of computer system.

In the second, and concluding, part of this article, I will analyze the present state and future prospects of the S-100 marketplace. ■

**This proposed standard is 25 pages long, nearing adoption, and has been printed in *Computer* (July 1978) and *S-100 Microsystems* (Jan-Feb 1980) magazines.

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Digicast to Begin

continued from page one

user may review them at a later time: the machine could also search a continuous stream of real estate or want ad listings for the desired products and services. Software applications for utilizing the data stream can be arbitrarily complex.

The Digicast Project successfully demonstrated transmission of text at 9600 baud at the 4th West Coast Computer Faire, held in San Francisco, in May, 1979. Since then, successful field tests have been carried out at a commercial transmitter in Sacramento. Negotiations are presently underway with three radio stations in the San Jose area for establishment of a commercial Datacast service.

Datacast estimates that a 9600 baud stream would offer the equivalent of 2500 newspaper pages per day. The company's current plans indicate that receivers will be available for less than $400, including software; they are expected to plug into most popular computers, including the TRS-80, Apple, PET, DEC PDP-8, and S-100 computers, as well as into most RS-232 serial ports.

According to Jim Warren, president of Digital Wireless, the software supplied with the receivers will include, at a minimum, routines for entering keywords, for scanning the full text for those keywords, and for double- or triple- buffering text onto the media. There will also be article retrieval software to allow the user to retrieve material stored in his absence for review at his convenience. Warren also said that the plans for broadcasting included quadruple redundancy, i.e., three times during the day and one time at night for each item.

Digital Wireless can be contacted at 345 Swett Rd., Woodside, CA 94062. ■

[HP0033][GDrive]

1971 ARTICLE ON MITS

https://www.newspapers.com/image/156647143/?terms=%22MITS%2BINC%22

JAN 19 1975

https://www.newspapers.com/image/156367566/?terms=%22MITS%2BINC%22

micral 1973

https://www.arabianbusiness.com/photos/in-pictures-french-micral-n-first-commercial-non-kit-computer-based-on-microprocessor-674215.html

DEC 15 1976

https://www.newspapers.com/image/157625015/?terms=%22MITS%2BINC%22

Aug 14 2020 capture - [HK002G][GDrive]

S-100 bus

For other uses, see S-100 (disambiguation).

S-100 bus

Year created

1974; 46 years ago

Created by

Ed Roberts

Width in bits

8

The **S-100 bus** or **Altair bus**, ***IEEE696****-1983 (withdrawn)*, is an early computer bus designed in 1974 as a part of the Altair 8800. The S-100 bus was the first industry standard expansion bus for the microcomputer industry. S-100 computers, consisting of processor and peripheral cards, were produced by a number of manufacturers. The S-100 bus formed the basis for homebrew computers whose builders (e.g., the Homebrew Computer Club) implemented drivers for CP/M and MP/M. These S-100 microcomputers ran the gamut from hobbyist toy to small business workstation and were common in early home computers until the advent of the IBM PC (which some of them outperformed).

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Architecture[edit]

Harry Garland and Roger Melen, co-founders of Cromemco, holding S-100 backplane (1981)

The S-100 bus is a passive backplane of 100-pin printed circuit board edge connectors wired in parallel. Circuit cards measuring 5 × 10-inches serving the functions of CPU, memory, or I/O interface plugged into these connectors. The bus signal definitions closely follow those of an 8080 microprocessor system, since the Intel 8080 microprocessor was the first microprocessor hosted on the S-100 bus. The 100 lines of the S-100 bus can be grouped into four types: 1) Power, 2) Data, 3) Address, and 4) Clock and control.[1]

Power supplied on the bus is bulk unregulated +8 Volt DC and ±16 Volt DC, designed to be regulated on the cards to +5 V (used by TTL ICs), -5 V and +12 V for Intel 8080 CPU IC, ±12 V RS-232 line driver ICs, +12 V for disk drive motors. The onboard voltage regulation is typically performed by devices of the 78xx family (for example, a 7805 device to produce +5 volts). These were linear regulators which are commonly mounted on heat sinks.

The bi-directional 8-bit data bus of the Intel 8080 is split into two unidirectional 8-bit data buses. The processor could use only one of these at a time. The Sol-20 used a variation that had only a single 8-bit bus and used the now-unused pins as signal grounds to reduce electronic noise. The direction of the bus, in or out, was signaled using the otherwise unused DBIN pin. This became universal in the S-100 market as well, making the second bus superfluous. Later, these two 8-bit busses would be combined to support a 16-bit data width for more advanced processors, using the Sol's system to signal the direction.

The address bus is 16-bits wide in the initial implementation and later extended to 24-bits wide. A bus control signal can put these lines in a tri-state condition to allow direct memory access. The Cromemco Dazzler, for example, is an early S-100 card that retrieved digital images from memory using direct memory access.

Clock and control signals are used to manage the traffic on the bus. For example, the *DO Disable* line will tristate the address lines during direct memory access. Unassigned lines of the original bus specification were later assigned to support more advanced processors. For example, the Zilog Z-80 processor has a non-maskable interrupt line that the Intel 8080 processor does not. One unassigned line of the S-100 bus then was reassigned to support the non-maskable interrupt request.

History[edit]

The Cromemco XXU processor board, introduced in 1986. At 16.7 MHz, it is the fastest CPU ever developed for the S-100 bus. It uses a Motorola 68020 processor with 68881 co-processor and 16 Kbytes of high-speed cache memory. This CPU is used in the Cromemco CS-250 computer, widely deployed by the U.S. Air Force.

During the design of the Altair, the hardware required to make a usable machine was not available in time for the January 1975 launch date. The designer, Ed Roberts, also had the problem of the backplane taking up too much room. Attempting to avoid these problems, he placed the existing components in a case with additional "slots", so that the missing components could be plugged in later when they became available. The backplane is split into four separate cards, with the CPU on a fifth. He then looked for an inexpensive source of connectors, and he came across a supply of military surplus 100-pin edge connectors. The 100-pin bus was created by an anonymous draftsman, who selected the connector from a parts catalog and arbitrarily assigned signal names to groups of connector pins.[2]

A burgeoning industry of "clone" machines followed the introduction of the Altair in 1975. Most of these used the same bus layout as the Altair, creating a new industry standard. These companies were forced to refer to the system as the "Altair bus", and wanted another name in order to avoid referring to their competitor when describing their own system. The "S-100" name, short for "Standard 100", was coined by Harry Garland and Roger Melen, co-founders of Cromemco.[3][4] While on a flight to attend the Atlantic City PC '76 microcomputer conference in August 1976, they shared the cabin with Bob Marsh and Lee Felsenstein of Processor Technology. Melen went over to them to convince them to adopt the same name. He had a beer in his hand and when the plane hit a bump, Melen spilt some the beer on Marsh. Marsh agreed to use the name, which Melen ascribes to him wanting to get Melen to leave with his beer.[5]

The term first appeared in print in a Cromemco advertisement in the November 1976 issue of Byte magazine.[6] The first symposium on the S-100 bus, moderated by Jim Warren, was held November 20, 1976 at Diablo Valley College with a panel consisting of Harry Garland, George Morrow, and Lee Felsenstein.[7] Just one year later, the S-100 Bus would be described as "the most used busing standard ever developed in the computer industry."[8]

Cromemco was the largest of the S-100 manufacturers, followed by Vector Graphic and North Star Computers.[9] Other innovators were companies such as Alpha Microsystems, IMS Associates, Inc., Godbout Electronics (later CompuPro), and Ithaca Intersystems. In May 1984, *Microsystems* published a comprehensive S-100 product directory listing over 500 "S-100/IEEE-696" products from over 150 companies.[10]

The S-100 bus signals were simple to create using an 8080 CPU, but increasingly less so when using other processors like the 68000. More board space was occupied by signal conversion logic. Nonetheless by 1984, eleven different processors were hosted on the S-100 bus, from the 8-bit Intel 8080 to the 16-bit Zilog Z-8000.[10] In 1986, Cromemco introduced the XXU card, designed by Ed Lupin, utilizing a 32-bit Motorola 68020 processor.[11]

IEEE-696 Standard[edit]

As the S-100 bus gained momentum, there was a need to develop a formal specification of the bus to help assure compatibility of products produced by different manufacturers. There was also a need to extend the bus so that it could support processors more capable than the Intel 8080 used in the original Altair Computer. In May 1978, George Morrow and Howard Fullmer published a “Proposed Standard for the S-100 Bus” noting that 150 vendors were already supplying products for the S-100 Bus. This proposed standard documented the 8-bit data path and 16-bit address path of the bus and stated that

consideration was being given to extending the data path to 16 bits and the address path to 24 bits.[12]

In July 1979 Kells Elmquist, Howard Fullmer, David Gustavson, and George Morrow published a "Standard Specification for S-100 Bus Interface Devices."[13] In this specification the data path was extended to 16 bits and the address path was extended to 24 bits. The IEEE 696 Working Group, chaired by Mark Garetz, continued to develop the specification which was proposed as an IEEE Standard and approved by the IEEE Computer Society on June 10, 1982.[14]

The American National Standards Institute (ANSI) approved the IEEE standard on September 8, 1983. The computer bus structure developed by Ed Roberts for the Altair 8800 computer had been extended, rigorously documented, and now designated as the American National Standard IEEE Std 696-1983.[14]

Retirement[edit]

Racks of Cromemco S-100 Systems at the Chicago Mercantile Exchange in 1984

IBM introduced the IBM Personal Computer in 1981 and followed it with increasingly capable models: the XT in 1983 and the AT in 1984. The success of these computers cut deeply into the market for S-100 bus products. In May 1984, Sol Libes (who had been a member of the IEEE-696 Working Group) wrote in *Microsystems*: "there is no doubt that the S-100 market can now be considered a mature industry with only moderate growth potential, compared to the IBM PC-compatible market."[15]

As the IBM PC products captured the low-end of the market, S-100 machines moved up-scale to more powerful OEM and multiuser systems. Banks of S-100 bus computers were used, for example, to process the trades at the Chicago Mercantile Exchange; the United States Air Force deployed S-100 bus machines for their mission planning systems.[16][17] However throughout the 1980s the market for S-100 bus machines for the hobbyist, for personal use, and even for small business was on the decline.[18]

The market for S-100 bus products continued to contract through the early 1990s, as IBM-compatible computers became more capable. In 1992, the Chicago Mercantile Exchange, for example, replaced their S-100 bus computers with the IBM model PS/2.[19] By 1994 the S-100 bus industry had contracted sufficiently that the IEEE did not see a need to continue supporting the IEEE-696 standard. The IEEE-696 standard was retired on June 14, 1994.[14]

Saved wikipedia (Aug 2020) - Altair 8800

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Altair 8800 Computer with 8-inch floppy disk system

Developer

MITS

Manufacturer

MITS

Release date

January 1975; 45 years ago

Introductory price

Kit price 439 US$ ($2100 in 2019)

Assembled 621 US$ ($3000 in 2019)

CPU

Intel 8080 @ 2 MHz

The **Altair 8800** is a microcomputer designed in 1974 by MITS and based on the Intel 8080 CPU.[1] Interest grew quickly after it was featured on the cover of the January 1975 issue of Popular Electronics[2] and was sold by mail order through advertisements there, in *Radio-Electronics*, and in other hobbyist magazines.[3][4] The Altair is widely recognized as the spark that ignited the microcomputer revolution[5] as the first commercially successful personal computer.[6] The computer bus designed for the Altair was to become a *de facto* standard in the form of the S-100 bus, and the first programming language for the machine was Microsoft's founding product, Altair BASIC.[7][8]

History[edit]

This "Tracking Light for Model Rockets" project appeared in the September 1969 issue of *Model Rocketry* and was the first kit sold by MITS.

While serving at the Air Force Weapons Laboratory at Kirtland Air Force Base, Ed Roberts and Forrest M. Mims III decided to use their electronics background to produce small kits for model rocket hobbyists. In 1969, Roberts and Mims, along with Stan Cagle and Robert Zaller, founded Micro Instrumentation and Telemetry Systems (MITS) in Roberts' garage in Albuquerque, New Mexico, and started selling radio transmitters and instruments for model rockets.

Calculators[edit]

The model rocket kits were a modest success and MITS wanted to try a kit that would appeal to more hobbyists. The November 1970 issue of *Popular Electronics* featured the Opticom, a kit from MITS that would send voice over an LED light beam. As Mims and Cagle were losing interest in the kit business, Roberts bought his partners out, then began developing a calculator kit. Electronic Arrays had just announced a set of six large scale integrated (LSI) circuit chips that would make a four-function calculator.[9] The MITS 816 calculator kit used the chipset and was featured on the November 1971 cover of *Popular Electronics*. This calculator kit sold for $175 ($275 assembled).[10] Forrest Mims wrote the assembly manual for this kit and many others over the next several years. He often accepted a copy of the kit as payment.

The calculator was successful and was followed by several improved models. The MITS 1440 calculator was featured in the July 1973 issues of *Radio-Electronics*. It had a 14-digit display, memory, and square root function. The kit sold for $200 and the assembled version was $250.[11] MITS later developed a programmer unit that would connect to the 816 or 1440 calculator and allow programs of up to 256 steps.[12]

Test equipment[edit]

In addition to calculators, MITS made a line of test equipment kits. These included an IC tester, a waveform generator, a digital voltmeter, and several other instruments. To keep up with the demand, MITS moved into a larger building at 6328 Linn NE in Albuquerque in 1973. They installed a wave soldering machine and an assembly line at the new location. In 1972, Texas Instruments developed its own calculator chip and started selling complete calculators at less than half the price of other commercial models. MITS and many other companies were devastated by this, and Roberts struggled to reduce his quarter-million-dollar debt.

Popular Electronics[edit]

January 1975 *Popular Electronics* with the Altair 8800 computer. Published on November 29, 1974.[13]

In January 1972, *Popular Electronics* merged with another Ziff-Davis magazine, *Electronics World*. The change in editorial staff upset many of their authors, and they started writing for a competing magazine, *Radio-Electronics*. In 1972 and 1973, some of the best construction projects appeared in *Radio-Electronics*.

In 1974, Art Salsberg became editor of *Popular Electronics*. It was Salsberg's goal to reclaim the lead in electronics projects. He was impressed with Don Lancaster's TV Typewriter (*Radio Electronics*, September 1973) article and wanted computer projects for *Popular Electronics*. Don Lancaster did an ASCII keyboard for *Popular Electronics* in April 1974. They were evaluating a computer trainer project by Jerry Ogden when the Mark-8 8008-based computer by Jonathan Titus appeared on the July 1974 cover of *Radio-Electronics*. The computer trainer was put on hold and the editors looked for a real computer system. (*Popular Electronics* gave Jerry Ogden a column, *Computer Bits*, starting in June 1975.)[14]

One of the editors, Les Solomon, knew MITS was working on an Intel 8080 based computer project and thought Roberts could provide the project for the always popular January issue. The TV Typewriter and the Mark-8 computer projects were just a detailed set of plans and a set of bare printed circuit boards. The hobbyist faced the daunting task of acquiring all of the integrated circuits and other components. The editors of *Popular Electronics* wanted a complete kit in a professional-looking enclosure.[15]

Ed Roberts and his head engineer, Bill Yates, finished the first prototype in October 1974 and shipped it to *Popular Electronics* in New York via the Railway Express Agency. However, it never arrived due to a strike by the shipping company. Solomon already had a number of pictures of the machine and the article was based on them. Roberts got to work on building a replacement. The computer on the magazine cover is an empty box with just switches and LEDs on the front panel. The finished Altair computer had a completely different circuit board layout than the prototype shown in the magazine.[16] The January 1975 issues appeared on newsstands a week before Christmas of 1974 and the kit was officially (if not yet practically) available for sale.[14][15][13]

The name[edit]

A kit-built Altair 8800 computer with the popular Model 33 ASR (Automatic Send and Receive) Teletype as terminal.

The typical MITS product had a generic name like the "Model 1440 Calculator" or the "Model 1600 Digital Voltmeter". Ed Roberts was busy finishing the design and left the naming of the computer to the editors of *Popular Electronics*.

One explanation of the Altair name, which editor Les Solomon later told the audience at the first Altair Computer Convention (March 1976), is that the name was inspired by Les's 12-year-old daughter, Lauren. "She said why don't you call it Altair – that's where the Enterprise is going tonight."[17] The *Star Trek* episode is probably "Amok Time", as this is the only one from *The Original Series* which takes the Enterprise crew to Altair (Six).

Another explanation is that the Altair was originally going to be named the PE-8 (Popular Electronics 8-bit), but Les Solomon thought this name to be rather dull, so Les, Alexander Burawa (associate editor), and John McVeigh (technical editor) decided that: "It's a stellar event, so let's name it after a star." McVeigh suggested "Altair", the twelfth brightest star in the sky.[15][18]

Intel 8080[edit]

Ed Roberts had designed and manufactured programmable calculators and was familiar with the microprocessors available in 1974. He thought the Intel 4004 and Intel 8008 were not powerful enough (in fact several microcomputers based on Intel chips were already on the market: the Canadian company Microsystems International's CPS-1 built-in 1972 used a MIL MF7114 chip modeled on the 4004, the Micral marketed in January 1973 by the French company R2E and the MCM/70 marketed in 1974 by the Canadian company Micro Computer Machines); the National Semiconductor IMP-8 and IMP-16 required external hardware; the Motorola 6800 was still in development. So he chose the 8-bit Intel 8080.[19] At that time, Intel's main business was selling memory chips by the thousands to computer companies. They had no experience in selling small quantities of microprocessors. When the 8080 was introduced in April 1974, Intel set the single unit price at $360 (About $1,700 in 2014 dollars). "That figure had a nice ring to it," recalled Intel's Dave House in 1984. "Besides, it was a computer, and they usually cost thousands of dollars, so we felt it was a reasonable price."[20] Ed Roberts had experience in buying OEM quantities of calculator chips and he was able to negotiate a $75 price (about $350 in 2014 dollars) for the 8080 microprocessor chips.[21][22]

Intel made the Intellec-8 Microprocessor Development System that typically sold for a very profitable $10,000. It was functionally similar to the Altair 8800 but it was a commercial grade system with a wide selection of peripherals and development software.[23][24] Customers would ask Intel why their Intellec-8 was so expensive when that Altair was only $400. Some salesmen said that MITS was getting cosmetic rejects or otherwise inferior chips. In July

1975, Intel sent a letter to its sales force stating that the MITS Altair 8800 computer used standard Intel 8080 parts. The sales force should sell the Intellec system based on its merits and that no one should make derogatory comments about valued customers like MITS. The letter was reprinted in the August 1975 issue of MITS Computer Notes.[25] The "cosmetic defect" rumor has appeared in many accounts over the years although both MITS and Intel issued written denials in 1975.[26]

The launch[edit]

A May 1975 advertisement for the Altair 8800 Computer appeared in Popular Electronics, Radio-Electronics, and other magazines.

For a decade, colleges had required science and engineering majors to take a course in computer programming, typically using the FORTRAN or BASIC languages.[27][28] This meant there was a sizable customer base who knew about computers. In 1970, electronic calculators were not seen outside of a laboratory, but by 1974 they were a common household item. Calculators and video games like Pong introduced computer power to the general public. Electronics hobbyists were moving on to digital projects such as digital voltmeters and frequency counters. The Altair had enough power to be actually useful, and was designed as an expandable system that opened it up to all sorts of applications.

Ed Roberts optimistically told his banker that he could sell 800 computers, while in reality they needed to sell 200 over the next year just to break even. When readers got the January issue of *Popular Electronics*, MITS was flooded with inquiries and orders. They had to hire extra people just to answer the phones. In February MITS received 1,000 orders for the Altair 8800. The quoted delivery time was 60 days but it was months before they could meet that. Roberts focused on delivering the computer; all of the options would wait until they could keep pace with the orders. MITS claimed to have delivered 2,500 Altair 8800s by the end of May.[29] The number was over 5,000 by August 1975.[30] **MITS had under 20 employees in January but had grown to 90 by October 1975**.[31]

The Altair 8800 computer was a break-even sale for MITS. They needed to sell additional memory boards, I/O boards and other options to make a profit. The system came with a "1024 word" (1024 byte) memory board populated with 256 bytes. The BASIC language was announced in July 1975 and it required one or two 4096 word memory boards and an interface board.

MITS Price List, *Popular Electronics*, August 1975.[32]

DescriptionKit PriceAssembled

- 4K BASIC language (when purchased with Altair, 4096 words of memory and interface board) $60
- 8K BASIC language (when purchased with Altair, two 4096-word memory boards and interface board) $75

MITS had no competition in the US for the first half of 1975. Their 4K memory board used dynamic RAM and it had several design problems.[31] The delay in shipping optional boards and the problems with the 4K memory board created an opportunity for outside suppliers.

An enterprising Altair owner, Robert Marsh, designed a 4K static memory that was plug-in compatible with the Altair 8800 and sold for $255.[33] His company was Processor Technology, one of the most successful Altair compatible board suppliers. Their advertisement in the July 1975 issue of *Popular Electronics* promised interface and PROM boards in addition to the 4K memory board. They would later develop a popular video display board that would plug directly into the Altair.

A consulting company in San Leandro, California, IMS Associates Inc., wanted to purchase several Altair computers but the long delivery time convinced them that they should build their own computers. In the October 1975 *Popular Electronics*, a small advertisement announced the IMSAI 8080 computer. The ad noted that all boards were "plug compatible" with the Altair 8800. The computer cost $439 for a kit. The first 50 IMSAI computers shipped in December 1975.[34] The IMSAI 8080 computer improved on the original Altair design in several areas. It was easier to assemble: The Altair required 60 wire connections between the front panel and the mother board (backplane.) The IMSAI motherboard had 18 slots. The MITS motherboard consisted of 4 slots segments that had to be connected together with 100 wires. The IMSAI also had a larger power supply to handle the increasing number of expansion boards used in typical systems. The IMSAI advantage was short lived because MITS had recognized these shortcomings and developed the Altair 8800B which was introduced in June 1976.

In 1977, Pertec Computer Corporation purchased MITS and began to market the computer, without changes (except for branding), as the PCC 8800 in 1978.[35]

Description[edit]

Altair 8800 front panel (1st model)

Altair 8800b front panel (2nd model)

Inside the Altair 8800b (2nd model)

In the first design of the Altair, the parts needed to make a complete machine would not fit on a single motherboard, and the machine consisted of four boards stacked on top of each other with stand-offs. Another problem facing Roberts was that the parts needed to make a truly useful computer weren't available, or wouldn't be designed in time for the January launch date. So during the construction of the second model, he decided to build most of the machine on removable cards, reducing the motherboard to nothing more than an interconnect between the cards, a backplane. The basic machine consisted of five cards, including the CPU on one and memory on another. He then looked for a cheap source of connectors, and came across a supply of 100-pin edge connectors. The S-100 bus was eventually acknowledged by the professional computer community and adopted as the IEEE-696 computer bus standard.

The Altair bus consists of the pins of the Intel 8080 run out onto the backplane. No particular level of thought went into the design, which led to such disasters as shorting from various power lines of differing voltages being located next to each other.[*citation needed*] Another oddity was that the system included two unidirectional 8-bit data buses, when the normal practice was for a single bidirectional bus (this oddity did, however, allow a later expansion of the S-100 standard to 16 bits bidirectional by using both 8-bit buses in parallel). A deal on power supplies led to the use of +8V and +18V,[*citation needed*] which had to be locally regulated on the cards to TTL (+5V) or RS-232 (+12V) standard voltage levels.

The Altair shipped in a two-piece case. The backplane and power supply were mounted on a base plate, along with the front and rear of the box. The "lid" was shaped like a C, forming the top, left, and right sides of the box. The front panel, which was inspired by the Data General Nova minicomputer, included a large

number of toggle switches to feed binary data directly into the memory of the machine, and a number of red LEDs to read those values back out.[36]

Programming the Altair via the front panel could be a tedious and time-consuming process. Programming required the toggling of the switches to positions corresponding to the desired 8080 microprocessor instruction or opcode in binary, then used the 'DEPOSIT NEXT' switch to load that instruction into the next address of the machine's memory. This step was repeated until all the opcodes of a presumably complete and correct program were in place. The only output from the programs was the patterns of lights on the panel. Nevertheless, many were sold in this form. Development was already underway on additional cards, including a paper tape reader for storage, additional RAM cards, and an RS-232 interface to connect to a proper Teletype terminal.

Software[edit]

Altair BASIC[edit]

Main article: Altair BASIC

Ed Roberts received a letter from Traf-O-Data asking if he would be interested in buying its BASIC programming language for the machine. He called the company and reached a private home, where no one had heard of anything like BASIC. In fact the letter had been sent by Bill Gates and Paul Allen from the Boston area, and they had no BASIC yet to offer. When they called Roberts to follow up on the letter he expressed his interest, and the two started work on their BASIC interpreter using a self-made simulator for the 8080 on a PDP-10 minicomputer. They figured they had 30 days before someone else beat them to the punch, and once they had a version working on the simulator, Allen flew to Albuquerque to deliver the program, Altair BASIC (aka MITS 4K BASIC), on a paper tape. The first time it was run, it displayed "READY"[37] then Allen typed "PRINT 2+2" and it immediately printed the correct answer: "4". The game *Lunar Lander* was entered in and this worked as well. Gates soon joined Allen and formed Microsoft, then spelled "Micro-Soft".

Altair DOS[edit]

Announced in late 1975, it started shipping in August 1977.

VIDEOS

(Jan 22, 2020) - Bob Spencer of MITS Part 1: The Altair 8800 Computer

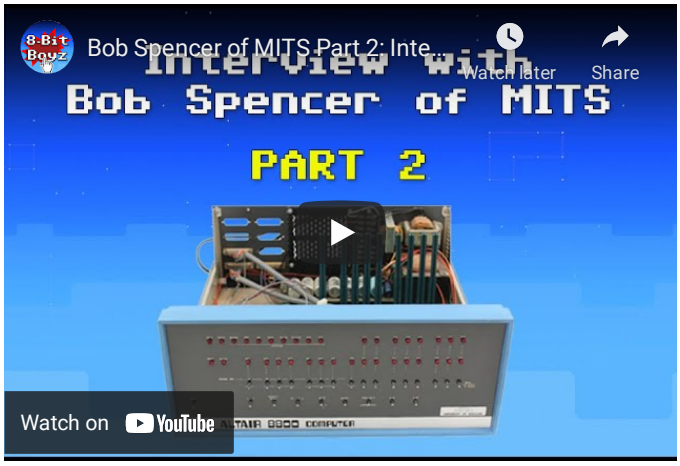
Saved video : [HV00CA][GDrive]

"This is part 1 of our 8-Bit Boyz interview with Bob Spencer who was one of the original engineers at MITS in Albuquerque, NM that worked on the Altair 8800 computer. "

(Jan 22, 2020) - Bob Spencer of MITS Part 2: Intel CPUs, PC Magazine and more!

Saved video : [HV00CB][GDrive]

"This is part 2 of our 8-Bit Boyz interview with Bob Spencer who was one of the original engineers at MITS in Albuquerque, NM that worked on the Altair 8800 computer. I was able to sit down with Bob and have him share his memories of his days back at MITS along with the folks that help start the computer revolution such as Bill Gates, Paul Allen, David Bunnell, Ed Roberts, Eddie Currie and more. Special thanks to Bob Spencer for all his memories and stories from a time that was historic and started the computer revolution which has lead us to the devices we use daily today! "



Aug 14 2020 saved wikipedia - [HK002F][GDrive]

Ed Roberts (computer engineer)

From Wikipedia, the free encyclopedia

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Ed Roberts

Ed Roberts in 2002

Born

Henry Edward Roberts

September 13, 1941

Miami, Florida, United States

Died

April 1, 2010 (aged 68)

Cochran, Georgia, United States

Nationality

American

Education

University of Miami

Oklahoma State University

Mercer University

Occupation

Electrical engineer

Businessman

Entrepreneur

Farmer

Medical doctor

Known for

Personal computer

Spouse(s)

Joan Clark

(

m. 1962–1988)

Donna Mauldin

(

m. 1991–1999)

Rosa Cooper

(

m. 2000–2010)

Children

6

Henry Edward "Ed" Roberts (September 13, 1941 – April 1, 2010) was an American engineer, entrepreneur and medical doctor who invented the first commercially successful personal computer in 1974.[1] He is most often known as "the father of the personal computer."[2] He founded Micro Instrumentation and Telemetry Systems (MITS) in 1970 to sell electronics kits to model rocketry hobbyists, but the first successful product was an electronic calculator kit that was featured on the cover of the November 1971 issue of *Popular Electronics*.[3] The calculators were very successful and sales topped one million dollars in 1973.[4] A brutal calculator price war left the company deeply in debt by 1974. Roberts then developed the Altair 8800 personal computer that used the new Intel 8080 microprocessor. This was featured on the cover of the January 1975 issue of *Popular Electronics*, and hobbyists flooded MITS with orders for this $397 computer kit.

Bill Gates and Paul Allen joined MITS to develop software and Altair BASIC was Microsoft's first product. Roberts sold MITS in 1977 and retired to Georgia where he farmed, studied medicine and eventually became a small-town doctor living in Cochran, Georgia.

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Early life[edit]

Roberts was born on September 13, 1941 in Miami, Florida to Henry Melvin Roberts, an appliance repairman, and Edna Wilcher Roberts, a homemaker. His younger sister Cheryl was born in 1947. During World War II, while his father was in the Army, Roberts and his mother lived on the Wilcher family farm in Wheeler County, Georgia. After the war, the family returned to Miami, but Roberts would spend his summers with his grandparents in rural Georgia. Roberts' father had an appliance repair business in Miami.[5][6]

Roberts became interested in electronics and built a small relay-based computer while in high school. Medicine was his true passion, however, and he entered University of Miami with the intention of becoming a doctor, the first in his family to attend college. There he met a neurosurgeon who shared his interest in electronics. The doctor suggested that Roberts get an engineering degree before applying to medical school, and Roberts changed his major to electrical engineering.[6][7]

Roberts married Joan Clark while at the university, and when she became pregnant Roberts knew that he would have to drop out of school to support his

Roberts married Joan Clark while at the university, and when she became pregnant Roberts knew that he would have to drop out of school to support his new family. The U.S. Air Force had a program that would pay for college, and in May 1962 he enlisted with the hope of finishing his degree through the Airman Education & Commissioning Program.[6][8]

After basic training, Roberts attended the Cryptographic Equipment Maintenance School at Lackland Air Force Base in San Antonio, Texas. Because of his electrical engineering studies at college, Roberts was made an instructor at the Cryptographic School when he finished the course. To augment his meager enlisted man's pay, Roberts worked on several off-duty projects and even set up a one-man company, Reliance Engineering. The most notable job was to create the electronics that animated the Christmas characters in the window display of Joske's department store in San Antonio. In 1965, he was selected for an Air Force program to complete his college degree and become a commissioned officer. Roberts earned an electrical engineering degree from Oklahoma State University in 1968 and was assigned to the Laser Division of the Weapons Laboratory at Kirtland AFB in Albuquerque, New Mexico.[6][9] In 1968, he looked into applying to medical school but learned that, at age 27, he was considered too old.[6]

Micro Instrumentation and Telemetry Systems[edit]

Main article: Micro Instrumentation and Telemetry Systems

March 1970 advertisement, when MITS was located in Ed Roberts' garage.

Roberts worked with Forrest Mims at the Weapons Laboratory, and both shared an interest in model rocketry. Mims was an advisor to the Albuquerque Model Rocket Club and met the publisher of *Model Rocketry* magazine at a rocketry conference. This led to an article in the September 1969 issue of *Model Rocketry*, "Transistorized Tracking Light for Night Launched Model Rockets".[10] Roberts, Mims, and lab coworkers Stan Cagle and Bob Zaller decided that they could design and sell electronics kits to model rocket hobbyists.[11] Roberts wanted to call the new company Reliance Engineering, but Mims wanted to form an acronym similar to the Massachusetts Institute of Technology's MIT. Cagle came up with Micro Instrumentation and Telemetry Systems (MITS).[12] They advertised the light flasher, a roll rate sensor with transmitter, and other kits in *Model Rocketry*, but the sales were disappointing.

Mims wrote an article about the new technology of light-emitting diodes that was to be published in the November 1970 issue of *Popular Electronics* magazine. He asked the editors if they also wanted a project story, and they agreed. Roberts and Mims developed an LED communicator that would transmit voice on an infrared beam of light to a receiver hundreds of feet away. Readers could buy a kit of parts to build the Opticom LED Communicator from MITS for $15.[13] MITS sold just over a hundred kits. Mims was now out of the Air Force and wanted to pursue a career as a technology writer. Roberts bought out his original partners and focused the company on the emerging market of electronic calculators.[14]

Calculators[edit]

June 1972 advertisement for MITS Model 1440 Calculator

Roberts's first real experience with computers came while at Oklahoma State University where engineering students had free access to an IBM 1620 computer.[15] His office at the Weapons Laboratory had the state of the art Hewlett-Packard 9100A programmable calculator in 1968. Roberts had always wanted to build a digital computer and, in July 1970, Electronic Arrays announced a set of six LSI integrated circuits that would make a four-function calculator.[16][17] Roberts was determined to design a calculator kit and got fellow Weapons Laboratory officers William Yates and Ed Laughlin to invest in the project with time and money.[18]

The first product was a "four-function" calculator that could add, subtract, multiply, and divide. The display was only eight digits, but the calculations were performed with 16 digits precision. The MITS Model 816 calculator kit was featured on the November 1971 cover of *Popular Electronics*.[3] The kit sold for $179 and an assembled unit was $275. Unlike the previous kits that MITS had offered, thousands of calculator orders came in each month.[19]

The monthly sales reached $100,000 in March 1973, and MITS moved to a larger building with 10,000 square feet (930 square meters) of space.[4] In 1973, MITS was selling every calculator that they could make, and 110 employees worked in two shifts assembling them.[20] The functionality of calculator integrated circuits increased at a rapid pace and Roberts was designing and producing new models. The popularity of electronic calculators drew the traditional office equipment companies and the semiconductor companies into the market. In September 1972, Texas Instruments (TI) introduced the TI-2500 portable four-function calculator that sold for $120.[21] The larger companies could sell below cost to win market share. By early 1974, Ed Roberts found that he could purchase a calculator in a retail store for less than his cost of materials. MITS was now $300,000 in debt, and Roberts was looking for a new hit product.[22]

Altair 8800 computer[edit]

Main article: Altair 8800

May 1975 advertisement for the Altair 8800 computer kit

Roberts decided to return to the kit market with a low cost computer. The target customer would think that "some assembly required" was a desirable feature. In April 1974, Intel released the 8080 microprocessor that Roberts felt was powerful enough for his computer kit, but each 8080 chip sold for $360 in small quantities.[23] Roberts felt that the price of a computer kit had to be under $400; to meet this price, he agreed to order 1,000 microprocessors from Intel for $75 each.[24] The company was down to 20 employees and a bank loan for $65,000 financed the design and initial production of the new computer. Roberts told the bank that he expected to sell 800 computers, but he guessed that it would be around 200.[25]

Art Salsberg, editorial director of *Popular Electronics*, was looking for a computer construction project, and his technical editor Les Solomon knew that MITS was working on an Intel 8080-based computer kit. Roberts assured Solomon that the project would be complete by November to meet the press deadline for the January 1975 issue. The first prototype was finished in October and shipped to *Popular Electronics* in New York for the cover photograph, but it was lost in transit. Solomon already had a number of pictures of the machine, and the article was based on them. Roberts and Yates got to work on building a replacement. The computer on the magazine cover was an empty box with just switches and LEDs on the front panel. The finished Altair computer had a completely different circuit board layout than the prototype shown in the magazine.[26]

Altair 8800 Computer with 8-inch floppy disk system

MITS products typically had generic names such as the Model 1440 Calculator or the Model 1600 Digital Voltmeter. The editors of *Popular Electronics* wanted a more alluring name for the computer. MITS technical writer David Bunnell came up with three pages of possible names, but Roberts was too busy

finishing the computer design to choose one. There are several versions of the story of who selected Altair as the computer name. At the first Altair Computer Convention (March 1976), Les Solomon told the audience that the name was inspired by his 12-year-old daughter Lauren. "She said why don't you call it Altair – that's where the [Star Trek] Enterprise is going tonight."[6][27] The December 1976 issue of *Popular Science* misquoted this account, giving credit to Ed Roberts' daughter.[28] His only daughter Dawn was not born until 1983.[1] Both of these versions have appeared in many books, magazines, and web sites.

Editor Alexander Burawa recalls a less dramatic version. The Altair was originally going to be named the PE-8 (Popular Electronics 8-bit), but Les Solomon thought this name to be rather dull, so Solomon, Burawa, and John McVeigh decided that: "It's a stellar event, so let's name it after a star." McVeigh suggested "Altair", the twelfth-brightest star in the sky.[29][30]

When the January 1975 issue of *Popular Electronics* reached readers in mid-December 1974, MITS was flooded with orders.[31] They had to hire extra people just to answer the phones. In February, MITS received 1,000 orders for the Altair 8800. The quoted delivery time was 60 days, but it was many more months before the machines were shipped. By August 1975, they had shipped over 5,000 computers.[32]

The Altair 8800 computer was a break-even sale for MITS. They needed to sell additional memory boards, I/O boards, and other options to make a profit. The April 1975 issue of the MITS newsletter *Computer Notes* had a page-long price list that offered over 15 optional boards.[33] The delivery time given was 60 or 90 days, but many items were never produced and dropped from future price lists. Initially, Roberts decided to concentrate on production of the computers. Prompt delivery of optional boards did not occur until October 1975.

There were several design and component problems in the MITS 4K Dynamic RAM board. By July, new companies such as Processor Technology were selling 4K Static RAM boards with the promise of reliable operation.[34] Ed Roberts acknowledged the 4K Dynamic RAM board problems in the October 1975 *Computer Notes*. The price was reduced from $264 to $195 and existing purchasers got a $50 refund. MITS released its own 4K Static RAM board in January 1976.

Several other companies started making add-in boards and the first clone, the IMSAI 8080, was available in December 1975.[35]

Altair BASIC[edit]

Main article: Altair BASIC

Bill Gates was a student at Harvard University and Paul Allen worked for Honeywell in Boston when they saw the Altair computer on the cover of *Popular Electronics*. They had previously written software for the earlier Intel 8008 microprocessor and knew the Intel 8080 was powerful enough to support a BASIC interpreter. They sent a letter to MITS claiming to have a BASIC interpreter for the 8080 microprocessor. Roberts was interested, so Gates and Allen began work on the software. Both had experience with the Digital Equipment Corporation PDP-10 minicomputers that they would use. Allen modified the DEC Macro Assembler to produce code for the Intel 8080 and wrote a program to emulate the 8080 so they could test their BASIC without having an Altair computer. Using DEC's BASIC-PLUS language as a guide, Gates determined what features would work with the limited resources of the Altair computer. Gates then started writing the 8080 assembly-language code on yellow legal pads. In February Gates and Allen started using a PDP-10 at Harvard to write and debug BASIC. They also enlisted another Harvard student, Monte Davidoff, to write the floating-point math routines.[36]

Altair 8K BASIC on paper tape. Bill Gates gave Paul Allen a paper tape containing BASIC to take to MITS.

Paul Allen flew to Albuquerque, New Mexico, in March 1975 to test BASIC on a real Altair 8800 computer. Roberts picked him up at the airport in his pickup truck and drove to the nondescript storefront where MITS was located. Allen was not impressed. The Altair computer with 7 kB of memory that BASIC required was still being tested and would not be ready until the next day. Roberts had booked Allen in the most expensive hotel in Albuquerque and the room was $40 more than Allen brought with him. Roberts paid for the room and wondered who is this software guy who can not afford a room in a hotel.[37]

The next day the Altair with 7 kB had finally passed its memory test and Allen had their BASIC interpreter on a paper tape Bill Gates had created just before Allen left Boston. It took almost 15 minutes for the Teletype to load the program into the Altair then the Teletype printed "MEMORY SIZE?" Allen entered 7168 and the Teletype printed "READY". Both Allen and Roberts were stunned their software and hardware actually worked. They entered several small programs and they worked. The BASIC interpreter was not complete and crashed several times, but Roberts had a high level language for his computer. Roberts hired Allen as Vice President and Director of Software at MITS.[38][39] Bill Gates also worked at MITS; the October 1975 company newsletter gives his title as "Software Specialist".[40]

Bill Gates remained at Harvard, but continued working on BASIC. Students were allowed to use the DEC PDP-10, but officials were not pleased when they found that Gates was developing a commercial product. The school then implemented a policy that forced Gates to use a commercial time share service to work on BASIC.[41]

On July 22, 1975, MITS signed a contract for the Altair BASIC with Bill Gates and Paul Allen. They received $3,000 at signing and a royalty for each copy of BASIC sold, with a cap of $180,000. MITS received an exclusive worldwide license to the program for 10 years. They also had exclusive rights to sublicense the program to other companies and agreed to use its "best efforts" to license, promote and commercialize the program. MITS would supply the computer time necessary for development on a PDP-10 owned by the Albuquerque school district.[42]

MITS realized that BASIC was a competitive advantage and bundled the software with computer hardware sales. Customers who purchased the computer, memory, and I/O boards from MITS could get BASIC for $75; the standalone price was $500. Many hobbyists purchased their hardware from a third-party and "borrowed" a copy of Altair BASIC. Roberts refused to sub-license BASIC to other companies; this led to arbitration in 1977 between MITS and the new "Micro-Soft". The arbitrator agreed with Microsoft and allowed them to license the 8080 BASIC to other companies. Roberts was disappointed with this ruling. Since both Allen and Gates had been employees of MITS and he paid for the computer time, Roberts felt it was his software.[43]

Sale to Pertec[edit]

In 1976, MITS had 230 employees and sales of $6 million.[44] Roberts was tiring of his management responsibilities and was looking for a larger partner. MITS had always used Pertec Computer Corporation disk drives[45] and on December 3, 1976, Pertec signed a letter of intent to acquire MITS for $6 million in stock.[46] The deal was completed in May 1977 and Roberts' share was $2–3 million.[6][47] The Altair products were merged into the Pertec line, and the MITS facility was used to produce the PCC-2000 small-business computer. The Albuquerque plant was closed in December 1980 and the production was moved to the Pertec plants in Irvine, California.[48]

Medical doctor[edit]

In late 1977 Roberts returned to rural Georgia and bought a large farm in Wheeler County where he had often visited his grandparents' home in his youth.[6][49] He had a non-compete agreement with Pertec covering hardware products, so he became a gentleman farmer and started a software company. His age could have thwarted his dream of becoming a medical doctor, but nearby Mercer University started a medical school in 1982. Roberts was in the first class and graduated with an M.D. in 1986. He did his residency in internal medicine and in 1988 established a practice in the small town of Cochran, Georgia.[6][50][51] In 2009, Dr. Roberts was elected to Alpha Omega Alpha, the medical honor society. He was nominated by Mercer alumnus Guy Foulkes, MD based on Roberts' dual accomplishment of developer of the first personal computer and his devotion to rural medicine.

Personal life[edit]

Roberts married Joan Clark (b. 1941) in 1962 and they had five sons, Melvin (b. 1963), Clark (b. 1964), John David (b. 1965), Edward (b. 1970), Martin (b. 1975) and a daughter Dawn (b. 1983). They were divorced in 1988.[1][6][52]

Roberts married Donna Mauldin in 1991 and they were still married when interviewed by *The Atlanta Journal-Constitution* in April 1997.[1] He was married to Rosa Cooper from 2000 until his death.[53]

Roberts died April 1, 2010 after a months-long bout with pneumonia, at the age of 68.[54][55] His sister, Cheryl R Roberts (b. November 13, 1947 – d. March 6, 2010), of nearby Dublin, Georgia died at age 62, a few weeks before his death.[56] During his last hospitalization in Macon, Georgia, hospital staffers were stunned to see an unannounced Bill Gates, who had come to pay last respects to his first employer. He was survived by his wife, all six of his children and his mother, Edna Wilcher Roberts. All live in Georgia.[57]

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SOLOMON'S MEMORY (by Les Solomon - atariarchives.org/)

[HW004Z][GDrive]

Les Solomon is technical director of Computers & Electronics. He is a member of the Bug-Eyed Monster Society and practices levitation in his spare time.

[HW0050][GDrive]

Les Solomon

When Popular Electronics ran its first cover story on the Altair in January 1975, 1 was the technical director for the magazine and therefore fortunate enough to witness and aid in the birth of the personal/ home computer. Before those early years become set in stone, I would like to offer this reminiscence and give credit to those pioneers whose names may be unknown to the home computer users now benefiting from the fruits of their labors.

It all started for me in the summer of 1972, during a vacation trip out west. My wife and I were near Albuquerque when I called Forrest Mims, a contributor to the magazine who lived in this town out in the middle of nowhere. His father had a small company called M. I. T. S. (Micro Instrumentation and Telemetry Systems), which occupied the bathroom of Forrest's mobile home and manufactured small electronic gadgets for radio-control airplanes and model rockets.

The Mims invited us out to see them, and during the conversation Forrest mentioned that he had a friend who was as crazy about electronics as I was. He insisted that I meet this fellow, Ed Roberts, so later that night we got together in a steak bar in downtown Albuquerque. Just out of the military, Ed had this idea about offering an electronic calculator kit. And I had to listen, since he stands over six feet and weighs 235 pounds or so.

Anyway, I decided to write about the kit in the pages of Popular Electronics. After the article appeared, many kits were sold and Ed bought out M.I.T.S., moved it into a real building and dropped the periods to make it MITS. Pretty soon, everybody and his uncle got into calculators and they were a dime a dozen. Ed was giving serious thought to folding his company when we heard some electronic stirrings that sounded really wild. One of our competitors, Radio-Electronics, was preparing a story on a "computer" using an Intel 8008 microprocessor chip. Ed looked into it, obtained an even newer Intel chip called the 8080, and with a couple of engineering friends set about creating his own computer.

The MITS computer was ready that summer. Ed said it could be sold as a kit for about $400, which was fantastic since I knew the Radio-Electronics Mark-8 computer was having difficulties (no peripherals, no language, etc.). One day he phoned to say his first computer was being shipped to me by Railway Express Agency. A week later, no computer had arrived. I complained to the people at REA, who retorted: "Our computer has never lost anything!" During the fourth week they went bankrupt, having lost not only the first MITS computer but their entire shipping empire as well.

Luckily, Ed had sent me another computer by a different route. There I was, in a small office in New York with a metal box marked PE-8 on my desk, and an ASR-33 Teletype as the only way of inputting or displaying instructions and data. Between the frontpanel switch start-up routine and the noisy Teletype, I was told to take "that thing" home, which I suppose made the PE-8 the first workable home computer.

Art Salsberg, my boss, said he would go along with me on publishing a construction article on a microcomputer ("Heaven only knows who will build one!"), so the next step was finding a catchy name for our 8-bitter. After dinner one night I asked my twelveyear-old daughter, who was watching Star Trek, what the computer on the Enterprise was called.

"Computer," she answered.

That's a nice name, I thought, but not sexy. Then she said:

"Why don't you call it Altair? That's where the Enterprise is going in this episode."

[HW0051][GDrive]

THE FIRST DO-IT YOURSELF PERSONAL COMPUTER

Titled simply "Computer," with the subhead "Build the Mark-8, Your Personal Minicomputer," RadioElectronic's cover story for July 1974 introduced the first homemade machine to use a microprocessor.

My introduction to the Mark-8 came one bright spring morning in 1973, when a forceful young man by the name of Jonathan Titus called to tell me about his working model of a microcomputer built around the new Intel 8008. (A bargain-priced 8008 microprocessor cost $125 at the time.) Deciding that a personal visit was necessary, I flew down to Blacksburg, Virginia, where Jon took me to a spare room in his college apartment and showed me the first micro system: a little green box decorated with a bunch of toggle switches and flickering red lights.

What, I wondered, would anyone do with a computer that needed to be programmed ... one step at a time ... by setting eight toggle switches to represent each instruction?

Despite my misgivings and after months of preparation, we published our article on the Mark-8 computer. There was no way we could squeeze it into a single issue, and for the second time in our history we offered a booklet of complete construction information. The booklet sold by the thousands: each new stack that came in from the printer was gone in no time, and we'd have to order more. To this day I don't know how many people spent how many hours entering instructions and data into the Mark-8 ...

I am often asked whether I anticipated the current personal computer revolution when I was introduced to Jon Titus' original micro system. My answer is yes, but I still don't think the computer is the ideal tool for everyone. In business and education there is no doubt that its growth as a tool and as a time- and dollar-saver will continue. When it comes to computers in the home, however, I have my doubts.

I am not convinced that the average person has enough need for a computer to justify its cost. Yes, it's a great game machine. Yes, it's a great educational device. Yes, it's a great typewriter. But unless you're going to do your banking, control your home appliances, keep your holiday mailing lists, calculate your income taxes and your budget, it's difficult for me to see a personal computer in every household. Until the price of hardware comes down, and until software exists at low cost to do the kinds of things the average American needs done around the home, the computer revolution will remain largely a business revolution.

LARRY STECKLER, publisher of Radio-Electronics

The next day I called Ed to try out the new name. His answer was curt: "I don't care what you call it, if we don't sell two hundred we're doomed!" So Altair it became.

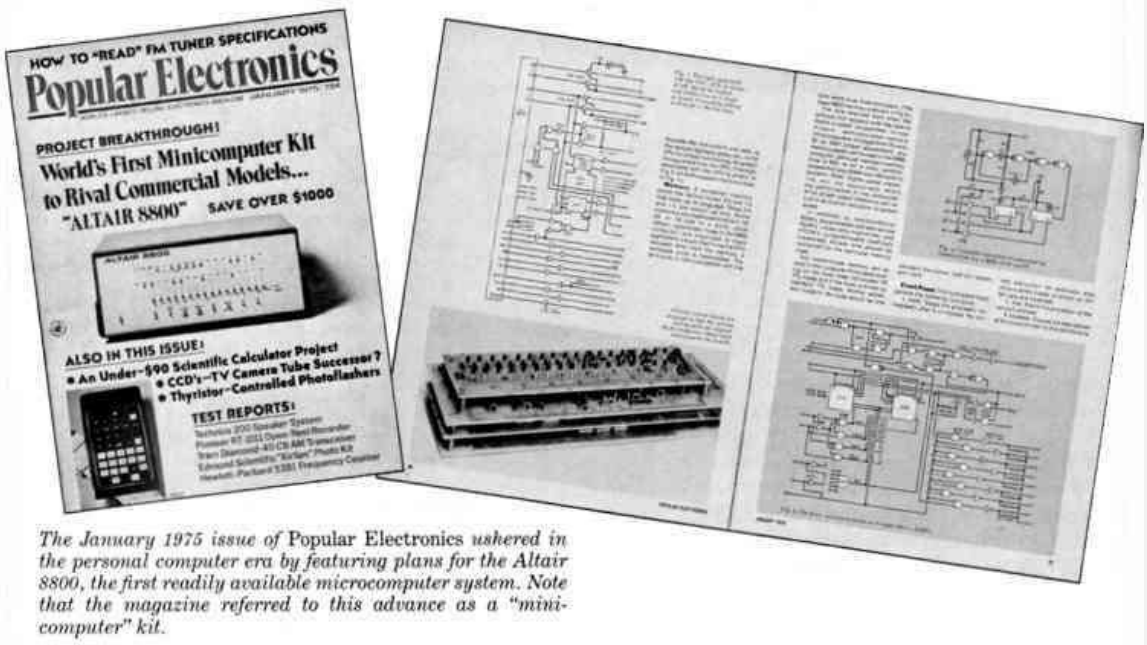
About a month before we ran the Altair story I had a visit from another imposingly large person, Roger Melen of Stanford University, who had written several articles for us. Roger contemplated the Altair set up on the table, and when I told him it was a computer his eyes glazed over. He muttered something about getting one for himself and his friend Harry Garland, who also wrote for us, and asked me for the name and address of the kit supplier. Then he vanished. Later I heard he took the next plane to Albuquerque, marched into Ed's office and bought Altair #2 right off his desk.

A few months later I got a call from Roger, asking me to fly out to San Francisco to see something very important. When I got there, he took me to the apartment he shared with Harry and showed me what he'd done with his Altair. Plugged into the machine was a double set of add-on circuit boards called the Dazzler, whose video output could create an amazing display on a color TV-the first plug-in expansion board for a personal computer. The software was called Kaleidoscope, a program that is relatively common today, but in 1976 ... ! Because of its ever-changing color display, Kaleidoscope would actually become a traffic stopper: Stan Veit ran the program all night in the window of his New York store, the first computer store east of the Mississippi, and the NYPD had to put an end to it because people kept slowing down to gawk at all those color images.

Dazzler sales went over so well that Roger and Harry formed a new company to manufacture Altair plug-ins. They decided to name it after Crothers Memorial Hall, where they had lived during their undergraduate days at Stanford. Cromemco (Crothers Memorial Company) was the first of what would become an entire subindustry of firms manufacturing add-ons to extend the capabilities of existing personal computers.

At about this time MITS held the world's first microcomputer convention, called, strangely enough, the World's First Altair Convention. Located in the Airport-Marina hotel in sunny downtown Albuquerque, it was attended by an amazing number of people who came from all over the country to see what was going on.

The Altair was a success, but the paper tape BASIC and paper tape software were an abomination. One day Jerry Ogdin, a computer consultant, had come to me with the idea of storing digital data using two tones (one for a zero, another for a zone) on an ordinary voice-grade tape cassette recorder. In September of 1975 we ran a construction article on what we called HITS (Hobbyists' Interchange Tape System), after which a number of manufacturers started using their own approach to two-tone data recording. Wayne Green, who had just started Byte magazine, wanted all the manufacturers to get together in a neutral site and hammer out a cassette standard. The site picked was Kansas City, Missouri. We all met for a weekend, and after many loud and serious discussions the Kansas City tape "standard" was born. Unfortunately, it didn't last long; before the month ended, everyone went back to his own tape standard and the recording confusion got worse.



The January 1975 issue of Popular Electronics *ushered in the personal computer era by featuring plans for the Altair 8800, the first readily available microcomputer system. Note that the magazine referred to this advance as a "mini-computer" kit.*

[HW0052][GDrive]

THE RISE AND FALL OF THE ALTAIR

Though computer kit makers like Scelbi Computer Consulting, RGS Electronics and Martin Research actually preceded MITS, the Altair 8800 with its 5100 bus and Microsoft BASIC became the foundation of the personal computer industry. More Altairs were sold than any single computer ever designed up to that time (including the famous IBM 360).

Why, then, isn't MITS one of today's industry leaders? Well, perhaps because its founder, Ed Roberts, was a better engineer than businessman.

When MITS struck it rich with the Altair, the small staff-less than ten people-geared up to handle the hundreds of orders that poured in. They set up manufacturing operations, software development and customer service, and even published one of the first computer magazines, Computer Notes. But problems arose because no one had ever made as many computers of one type. MITS had neither the experience nor its own capital to do the job, and in those days there were no venture capitalists breaking down doors to offer development money. Further, though computer hobbyists and potential dealers helped out with prepaid orders, Ed Roberts made some serious marketing errors. For example, MITS insisted that Altair dealers carry no other line of computers: "Ford dealers only carry Fords," Roberts declared, "and Altair dealers will only carry Altairs." When MITS could not deliver the computers, many dealers went out of business or dropped the Altair line.

MITS eventually did produce the Altair 8080B, a really fine computer with a good disk system and lots of good software including business applications. The company never solved its cash flow problems, however, and eventually Ed Roberts sold out to the Pertec Computer Co., which supplied the Altair disk drives. Ed retired from the computer industry to raise pigs in Georgia, then later decided to go to medical school.

Pertec, which had ambitions to become a major computer company, felt the name Altair was too identified with "hobby computers." The line was discontinued, and the Altair vanished from the market. When Pertec was itself bought out by Adler of Germany, the Altair name was condemned to oblivion. All that was left was Microsoft BASIC and the memory of the machine that started an industry.

STAN VEIT

It was at Kansas City that I first met Bob Marsh, who had formed a garage-based company in San Francisco called Processor Technology. Along with circuit designer Lee Felsenstein, he was making Altair memory boards and a graphics display board called the VDM-1, also for the Altair. Lee had worked for Marty Spergel, the driving force behind M&R Enterprises, and came through with plans for the Pennywhistle modem-the first hobby modem, published in our March 1976 issue. Now we computer hobbyists had a low-cost way to communicate over the telephone lines. Lee went on to design several trend-setting computers, including the portable Osborne.

I was still unhappy. The Altair needed a video display terminal with a self-contained keyboard. Like everyone else, I had been constantly startled by Don Lancaster's brilliant innovations over the years, and I knew he had just finished his TV typewriter. I went to Phoenix, loaded Don and his typewriter into the car, and took off for Albuquerque and MITS. One thing I must say for Don Lancaster and Ed Roberts: they both have very strong personalities. When I got them together in Ed's office, the clash was pretty fierce. Since the Altair and the TV typewriter were not compatible, something had to give. Neither man, however, would give an inch.

My next step was to talk to Bob Marsh of Processor Technology. It took a little doing, but I finally convinced him that a combination of his memory boards, his VDM-1 as the video display, plus an 8080, a power supply and the S-100 bus, would make a dandy "smart" terminal-or even a computer. We decided on the smart terminal approach, since I was fairly certain the magazine would not "buy" another computer. Lee Felsenstein did the preliminary design and, using one of Don Lancaster's approaches, came up with a computer. Steve Dompier and Gary Ingram did the software. Another software person, Gordon French, came up with the idea of wooden sides for the case-an odd first for computers.

In the summer of 1976 a new, easier-to-use computer was born, one with a self-contained operating system (no complex switches to get it started), built-in video capability, an integral keyboard and a small, typewriter-size enclosure. It was decided that this new approach would be called Sol. The story I was told by Marsh and Felsenstein was that if the strangelooking computer didn't fly, they had to have someone to blame it on ... guess who? At least they didn't call it the Les. Sol appeared in the July 1976 issue of Popular Electronics.

That summer there was also the famous Atlantic City Computer Conference at the snazzy Shelbourne Hotel/Motel. This was just about the first time almost all the microcomputer people got together in one place. It was a great show and the forerunner of the many computer fairs to follow.

During the 1977 First West Coast Computer Faire, I dropped in on the Heuristics Company to see what Horace Enea had wrought. His Speechlab plugin board would allow the user to actually talk to the computer, and the computer could "understand"! Not too much later Software Technology, an offshoot of Processor Technology, came up with a variation of Steve Dompier's music system (Dompier was the first to realize that microcomputers could make music) and produced a most marvelous sound system that was used in conjunction with an external audio amplifier. From now on, no microcomputer show would be silent!

The 1977 First West Coast Computer Faire (Jim Warren, chairperson) was a success in many ways. It was one of the first times such a wide variety of computer people got together in one place on the West Coast. Outside the Brooks Hall site of the show was parked a small van containing Mike Wise and his unique computer from the Sphere Company located in Bountiful, Utah. The one thing we remember about the Sphere was that its BASIC was s-1-o-w. Real s-1-o-w! The Sphere computer was never seen again: it was advertised and a couple were even delivered to computer stores, but very soon Sphere vanished from the face of the earth-a fate shared by many other pioneering computer models.

There were a lot of other developments over the years, some good, some transitory, none of them boring. Companies came and went, as did software. (Does anyone remember Target, the first personal computer game? Or Star Trek, with its umpteen versions?) Magazines also came and went. (Anyone remember ROM, with its column "From the Fountainhead" by a young writer named Adam Osborne?) Processor Technology vanished along with the late, great Sol and the unlamented Helios disk drive; Steve Jobs and Steve Wozniak came up with Apple I, a computer on a single circuit board that would lead to bigger things; Bob Suding of the Digital Group out in Denver came up with some good hardware, unfortunately too far ahead of its time.

A couple of guys in New Jersey, Roger Amidon and Chris Rutkowski, came up with a "supercomputer": the General, with its superb software. Although the General also soon folded its tent, the idea of this machine recently returned when Roger and Chris, using the Rising Star marketing firm as a base, introduced the Epson QX-10 with Valdocs word processing software-the most user-friendly computer system I've seen as of this writing and, incidentally, the machine I used to compose this account.

This just about brings me to the end of my musings about "the good old days"-to the end of 1977, just two years after the Altair. I personally don't believe we shall ever again see such an outburst of raw talent. They were great times. (If I missed any important event or name, forgive me, fellows, I am getting old.) I salute that long-haired, blue-jeans-and-T-shirt bunch, bearded or not shaven at all, fueled by hamburgers and Anchor Steam beer (I didn't forget, Steve), limited only by their imagination. They left the legacy that a handful of guys with an idea can change the world ... because that's exactly what they did. Just look around.

[HW0053][GDrive]

Come A Long Way

The horse-and-buggy days of home computing were not all that long ago. In fact, less than a decade has passed since I first read about the Altair and began thirsting-nay, lusting-for a computer of my own.

When I finally got one, of course, there was precious little I could do with it. My Altair turned out to be just a box with toggle switches and neat rows of red LEDs (light-emitting diodes) decorating the front panel. The switches were its only input device; the LEDs were its output, glowing and darkening in patterns that showed what you had input from the switches and what the computer had done as a result. Both operated at the same simple-minded level as the computer itself, in binary numbers built up of 1s and 0s. A "1" was entered by raising a switch, a "0" by lowering it. The corresponding LEDs glowed for each "1" and darkened for each "0."

A one-byte program instruction, nothing more arduous than STOP, took eight switch settings.

The Plug-In Problem

Luckily, there was a world beyond the binary level. I went out and got a "terminal," with keyboard and video display screen, but then found nothing on the Altair to plug it into. What I needed was an I/O (input/ output) circuit board through which the computer and terminal could communicate. The Altair had about a dozen slots where you could plug in I/O and other boards. Put a 25-pin connector into one of the oval holes in the computer's back, run a cable from the I/O board, and you had a place to plug in the terminal.

Problem: typing on the terminal had no effect on what the Altair did. Just as nice children don't speak until they're spoken to, computers don't communicate with terminals until a program has told them they can and how to do it. There was such a program in octal (base-8) numbering that you could translate into binary and toggle in from the front panel of the Altair. Unfortunately, the program was several hundred bytes long; at eight bits per byte, this meant well over a thousand switch-flicks before the program was in the machine. Since a computer's random access memory becomes amnesiac the instant its power is shut off, you'd have to toggle in that program every time you wanted to use the machine. And if you made just one of those thousand switch-flicks wrong, the program wouldn't run-or would run amok, randomly changing the bits you'd toggled in correctly.

The solution was to put that program, and any others you needed regularly, into an EPROM (erasable, programmable, read only memory), which would hold its contents even when the computer was shut off. A whole set of such programs fit easily into just two EPROM chips. Naturally the Altair had no place to plug in those chips, so I had to buy a Cromemco Bytesaver board to hold them and plug it into the Altair's bus. With those programs, typing in instructions like C2 D5 01 ("If the zero flag is not set, jump to the program steps at memory location 01D5") was simpler than setting switch sequences of 11000010 1101010 00000001. Writing programs in tiny steps of arbitrary symbols, however, was still infuriatingly slow. What I needed was a "high-level" programming language.

By that time the Altair could run an abbreviated BASIC, the first product of a tiny new firm called Microsoft. It was only available on punched paper tape, which required a special paper-tape reader, but for once I didn't have to buy any new equipment. I had a friend with a teletype-a printing terminal that could also read and punch such tapes. I ordered BASIC and my friend read it into his machine, then rerecorded it onto a tape cassette. I might not have a paper-tape reader, but I did have a cassette recorder.

Still Plugging Away

Not surprisingly, the Altair had no place to plug in the cassette. Now what I lacked was a board that would translate between computer and cassette deck. With this I would have a fully functioning system, including all the major parts a computer needs: a keyboard and screen (on the terminal), mass storage (the cassette), a processor, and both ROM (built-in program) and RAM (user-programmable) memory. But the Altair came with 4K of RAM memory and the BASIC interpreter took up 8K, not counting the program you then wanted to run. The solution here was to plug in still more memory boards.

In those early days, few programs were readymade, in part because not all the programs marketed for the Altair were available in the same tape format. Besides, there simply weren't that many to choose from. Then along came the next generation of personal computers: machines like the Radio Shack TRS-80 Model I, the Commodore PET and the Apple II, with resident programs in permanent memory, cassette connections, keyboards and (save for the Apple) screens built in. Not only that, but they had BASIC built in, so you could run your language immediately-no waiting while you loaded it from a tape.

In principle, they were little different from my old Altair. The major difference was that these computers didn't require months of learning and searching for parts before you could use them. All you had to do was plug them in …

IVAN BERGER, technical editor of Audio magazine

Housatonic

Dr. Thomas Patrick Monath (born 1940)

[HI0029][GDrive]

Profiles / Bio

Profile of Dr. Thomas Monath (Jan 2014) from One Health Platform

***Thomas P. Monath, MD Biography:** Source : [HI0029][GDrive]

Dr. Thomas P. Monath, a physician, is a consultant to the biotechnology industry. He is currently Chief Scientific and Chief Operations Officer of Newlink Genetics Corporation's wholly-owned subsidiary, BioProtection Systems Corp. and is helping determine if the Canadian/NewLink Ebola vaccine candidate will provide part of the solution to one of the world's biggest public health challenges. He was formerly Chief Medical Officer of Hookipa BioTech AG and Chief Technical Officer of PaxVax Inc, where he was also engaged in development of new vaccines. His expertise and experience cut across discovery research, process and analytical development, manufacturing, preclinical and clinical development, and regulatory affairs. Monath is also a Venture Partner at Kleiner Perkins Caufield & Byers and is a Director of Sentinext plc, Rapid MicroBiosystems Inc, and U.S. Biologics Inc.

Between1992-2012 he was Adjunct Professor, Harvard School of Public Health. Between 1992 and 2006. Dr. Monath was Chief Scientific Officer and an Executive Director, Acambis plc (a publicly traded biopharmaceutical company recently acquired by Sanofi Pasteur) where he pioneered the development of ChimeriVax® vaccines against dengue, West Nile, and Japanese encephalitis (using yellow fever as a live vector), vaccines against yellow fever, Clostridium difficile, and Helicobacter pylori, as well as a cell based smallpox vaccine, ACAM2000 which has now replaced calf lymph vaccine in the US national stockpile. The JE vaccine (IMOJEV®) is licensed in multiple countries; the West Nile vaccine (Prevenile®) is licensed for use in horses; and the dengue and C. difficile vaccines are in Phase III trials.

Dr. Monath received his undergraduate and M.D. degrees from Harvard and trained in internal medicine at the Peter Bent Brigham Hospital, Boston. COL Monath retired from the US Army in 1992 after 24 years in the uniformed services (Army and U.S. Public Health Service). Between 1973-1988, he was Director, Division of Vector-Borne Viral Diseases, U. S. Centers for Disease Control (CDC), Fort Collins CO and from 1989-92 Chief, Virology Division, U.S. Army Medical Research Institute of Infectious Diseases (USAMRIID). He has worked overseas in Nigeria, Sierra Leone, Cameroun, Argentina, Ecuador and elsewhere doing field research on arboviruses and hemorrhagic fevers. In 1972, he discovered the rodent reservoir of Lassa fever virus. He is on the editorial board of 5 scientific journals.

He received the Nathanial A. Young Award (1984), the Richard M. Taylor Award (1996), and the Walter Reed Medal (2002) from the American Society of Tropical Medicine & Hygiene and was President of that Society (2004-05). He has served on numerous government and international committees on infectious diseases, biosecurity, World Health Organization expert committees and the National Vaccines Advisory Committee (USA). From 1998-2000, Monath was Senior Science advisor to the Director, Central Intelligence Agency. Dr. Monath has published 400 papers and 6 books on the epidemiology, immunology and pathogenesis of arboviruses and on vaccine development.

A leader in the "One Health" movement, Dr. Monath served on the American Veterinary Medical Association's "One Health" Task Force and subsequently the One Health Commission (USA). He currently co-manages the One Health Initiative website http://www.onehealthinitiative.com with Laura H. Kahn, MD, MPH, MPP, Bruce Kaplan, DVM, Jack Woodall, PhD and Lisa A. Conti, DVM, MPH. Dr. Monath co-edited a unique 'first of its kind' One Health monograph in the Veterinaria Italiana Journal's 2009 - Volume 45 (1), January-March http://www.izs.it/vet_italiana/2009/45_1/45_1.htm with Drs. Kahn and Kaplan. They also co-authored the introductory chapter to the 2010 One Health book "Human-Animal Medicine – Clinical Approaches to Zoonoses, Toxicants and other Shared Health Risks" http://www.us.elsevierhealth.com/product.jsp?isbn=9781416068372 and co-edited the 2014 One Health book "Confronting Emerging Zoonoses – The One Health Paradigm" http://www.springer.com/978-4-431-55119-5 with Akio Yamada, DVM, PhD and the One Health Initiative team.

Profile of Dr. Thomas Month, from GeoVax.com

https://www.geovax.com/component/tlpteam/team/thomas-p-monath-md

Thomas P. Monath, MD, Chairman

Dr. Monath currently serves as Managing Partner and Chief Scientific Officer of Crozet BioPharma LLC. He was formerly Chief Scientific Officer and Chief Operating Officer of BioProtection Systems, a subsidiary of NewLink Genetics Corporation, where he led the development of an Ebola virus vaccine in partnership with Merck. Prior to joining NewLink, Dr. Monath held various industry roles at PaxVax Inc., Hookipa Biotech AG, Juvaris Inc., Xcellerex Inc., and Acambis Inc. prior to its acquisition by Sanofi Pasteur. In these roles, he led the development of a broad array of vaccines, including those against influenza, dengue, Japanese encephalitis, West Nile, yellow fever, cytomegalovirus, and smallpox viruses, as well as against Helicobacter pylori and Clostridium difficile; four of these are now licensed.

He is a former partner of the Pandemic and Bio Defense Fund at Kleiner Perkins Caufield & Byers, a leading venture capital firm with a strong life sciences practice. He joined the biotechnology industry following a 20-year career at the U.S. Army Medical Research Institute of Infectious Diseases and the CDC's Division of Vector-Borne Infectious Diseases. Dr. Monath received his undergraduate and medical degrees at Harvard, was awarded virology fellowships at the University of Ibadan in Ibadan, Nigeria, and at Massachusetts General Hospital in Boston, MA and completed residencies in medicine at Peter Bent Brigham Hospital in Boston.

His published work includes over 425 papers and 6 books in the field of virology and vaccine development.

2001 (summer) book - "Death in the Air: Globalism, Terrorism, and Toxic Warfare" by Dr. Leonard Horowitz

for purchase : https://www.cureshoppe.com/death-in-the-air-book/

Archive.org : https://archive.org/details/deathinairglobal00horo

The whole of chapter (7/8) - West Nile

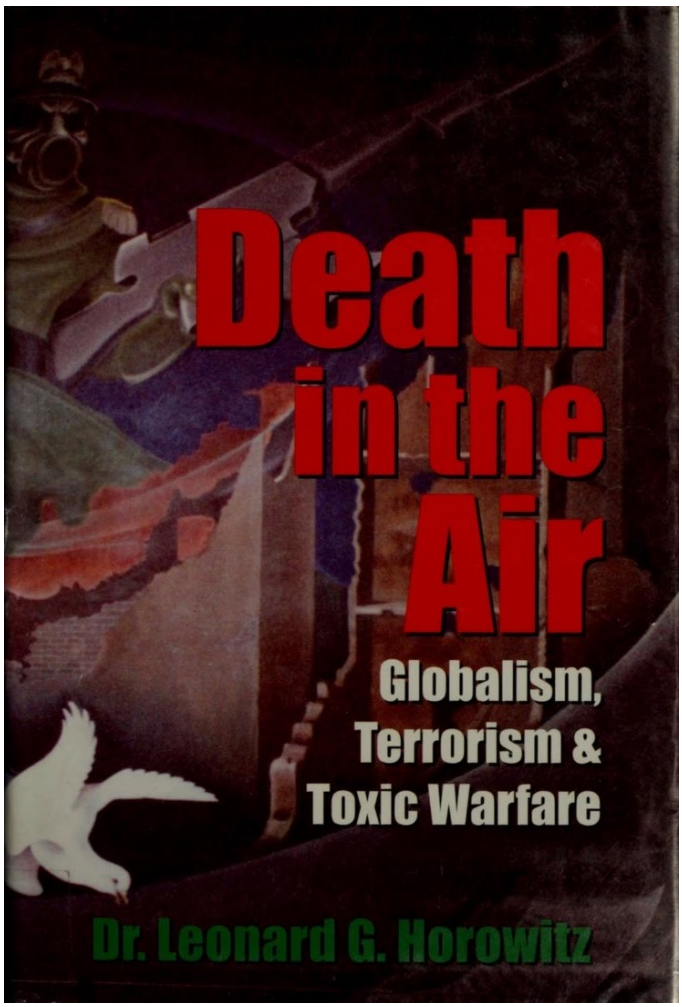
Video Recordings : Part 1 = [HB005P][GDrive] / Part 2 = [HB005Q][GDrive] / ...

Chapters 7 and 8 PDF w/ OCR : Focus onWest Nile (pages 091 to 113) : [HB005U][GDrive]

Product Description (Dr. Horowitz released this book in June, 2001, 3-full months before the 9-11 "attack on America." Consider the prophetic title!)

Silently killing us, our family and friends, the global plagues and toxic menaces are here, yet where are you? If you are like most Americans, you've become distracted by pastimes, passions, pleasures and psycho-sensory over-stimulation. The "Technotronic Era" is here. With it comes a New World of "non-lethal" biological and chemical weapons, and warfare applications, that are being waged against defenseless civilians. Regardless of what you now think, you are being manipulated and lethally affected, and this intelligence may be crucial to you and your family's survival. Death in the Air: Globalism, Terrorism and Toxic Warfare (ISBN: 0-923550-30-5) delivers the most heretical message in the annals of world health and American medicine, backed by the most astonishing hard-hitting documents ever revealed. Here, veteran investigator, Dr. Len Horowitz, the award-winning author of the national bestseller, Emerging Viruses: AIDS & Ebola: Nature, Accident or Intentional? relays how and why populations are being insidiously victimized. Exquisitely detailed in this book are the most advanced developments in the field of population control. Genetically engineered viruses and bacteria, the latest technologies for biological warfare, and combined exposures to biochemical, metallic, and electromagnetic agents, offer a "Star Wars"-like arsenal for conducting global genocide auspiciously for "public health", "National Security", and "world peace".

Also see : **Richard McCann Preston (born 1954)** / https://en.wikipedia.org/wiki/Michael_Crichton



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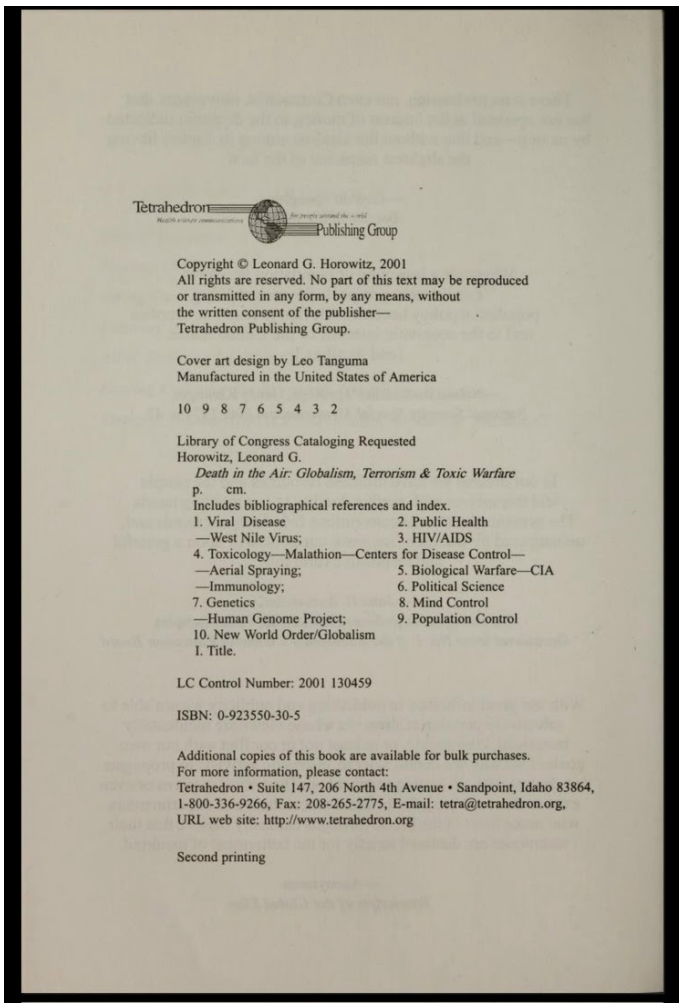
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Thomas P. Monath,

https://www.researchgate.net/publication/256983285_Vaccines_against_diseases_transmitted_from_animals_to_humans_A_one_health_paradigm

https://medicalveritas.org/anthrax-mailings-cover-up/

Apparent Origin of the Weaponized Anthrax-The Chief Suspects

21. In April, 1998, OraVax/Acambis Vice President, Dr. Thomas Monath met with President Clinton, New York's Emergency Management Director, Jerry Hauer, Rockefeller University president emeritus and American Type Culture Collection (ATCC) curator, Dr. Joshua Lederberg, CIA Director John Deutsch, and government biological weapons expert William C. Patrick, III, to discuss/negotiate the first of several multimillion dollar anthrax, smallpox, and West Nile virus vaccine contracts. According to New York Times reporters William Broad and Judith Miller,(37) "seven scientists endorsed the stockpile." These included "two men who stood to gain financially from the decision. . . ." These men included Dr. Monath and Dr. J. Craig Venter, president of The Institute for Genomic Research near Washington working on anthrax genetics. "The apparent consensus on acquiring vaccines masked deep divisions among scientists and military officials," according to the Times reporters.(10,37)

https://www.researchgate.net/publication/280012472_One_Health_One_Medicine

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MONATH + LIPKIN

https://genomebiology.biomedcentral.com/articles/10.1186/gb-spotlight-20030520-01

Research news

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Published: 20 May 2003

SARS unanswered questions

Catherine Zandonella

Genome Biology volume 4, Article number: spotlight-20030520-01 (2003) Cite this article

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Evidence Timeline

Born Aug 13 1940

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sep 1975

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may 1976

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1982 (Aug 20)

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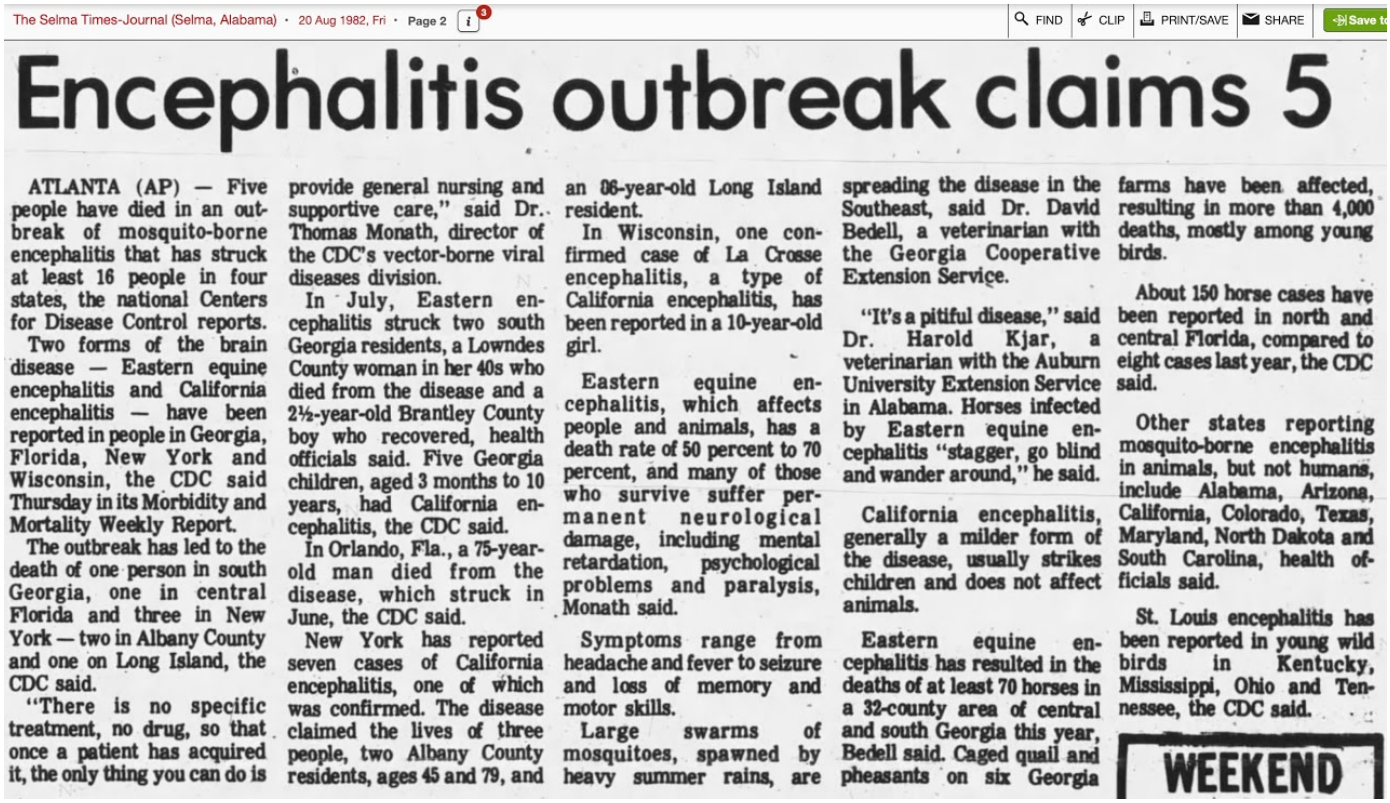

The Selma Times-Journal (Selma, Alabama) · 20 Aug 1982, Fri · Page 2

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Encephalitis outbreak claims 5

ATLANTA (AP) — Five people have died in an outbreak of mosquito-borne encephalitis that has struck at least 16 people in four states, the national Centers for Disease Control reports.

Two forms of the brain disease — Eastern equine encephalitis and California encephalitis — have been reported in people in Georgia, Florida, New York and Wisconsin, the CDC said Thursday in its Morbidity and Mortality Weekly Report.

The outbreak has led to the death of one person in south Georgia, one in central Florida and three in New York — two in Albany County and one on Long Island, the CDC said.

"There is no specific treatment, no drug, so that once a patient has acquired it, the only thing you can do is provide general nursing and supportive care," said Dr. Thomas Monath, director of the CDC's vector-borne viral diseases division.

In July, Eastern encephalitis struck two south Georgia residents, a Lowndes County woman in her 40s who died from the disease and a 2½-year-old Brantley County boy who recovered, health officials said. Five Georgia children, aged 3 months to 10 years, had California encephalitis, the CDC said.

In Orlando, Fla., a 75-year-old man died from the disease, which struck in June, the CDC said.

New York has reported seven cases of California encephalitis, one of which was confirmed. The disease claimed the lives of three people, two Albany County residents, ages 45 and 79, and an 06-year-old Long Island resident.

In Wisconsin, one confirmed case of La Crosse encephalitis, a type of California encephalitis, has been reported in a 10-year-old girl.

Eastern equine encephalitis, which affects people and animals, has a death rate of 50 percent to 70 percent, and many of those who survive suffer permanent neurological damage, including mental retardation, psychological problems and paralysis, Monath said.

Symptoms range from headache and fever to seizure and loss of memory and motor skills.

Large swarms of mosquitoes, spawned by heavy summer rains, are spreading the disease in the Southeast, said Dr. David Bedell, a veterinarian with the Georgia Cooperative Extension Service.

"It's a pitiful disease," said Dr. Harold Kjar, a veterinarian with the Auburn University Extension Service in Alabama. Horses infected by Eastern equine encephalitis "stagger, go blind and wander around," he said.

California encephalitis, generally a milder form of the disease, usually strikes children and does not affect animals.

Eastern equine encephalitis has resulted in the deaths of at least 70 horses in a 32-county area of central and south Georgia this year, Bedell said. Caged quail and pheasants on six Georgia farms have been affected, resulting in more than 4,000 deaths, mostly among young birds.

About 150 horse cases have been reported in north and central Florida, compared to eight cases last year, the CDC said.

Other states reporting mosquito-borne encephalitis in animals, but not humans, include Alabama, Arizona, California, Colorado, Texas, Maryland, North Dakota and South Carolina, health officials said.

St. Louis encephalitis has been reported in young wild birds in Kentucky, Mississippi, Ohio and Tennessee, the CDC said.

WEEKEND

1988 interview : Tom Monath, Part 1 of 4

uploaded onto May 17, 2011 / American Society of Tropical Medicine and Hygiene

An interview with Tom Monath from 1988. Part 1 of 4 from the "Workers in Tropical Medicine" series.

Part 1 of 4 : [HV00GK][GDrive] / Part 2 of 4 : [HV00GL][GDrive] / Part 3 of 4 : [HV00GM][GDrive] / Part 4 of 4 : [HV00GN][GDrive]

1990 (Dec 13)

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The San Bernardino County Sun (San Bernardino, California) · 13 Dec 1990, Thu · Page 6

U.S., Soviets OK vaccine research pact

Associated Press

FREDERICK, Md. — The U.S. Army has signed a pact with Soviet scientists to develop a vaccine to combat hemorrhagic fever, a deadly disease found in Asia, the Soviet Union and elsewhere, the military said Wednesday.

It is the first agreement of its kind between Army medical researchers and a Soviet scientific agency.

Army scientists have developed a vaccine they believe will work against hemorrhagic fever with renal syndrome. Under the agreement, Soviet scientists will work with them to refine the vaccine and test it on thousands of volunteers.

"This kind of collaboration is another confirmation of the openness that is developing and the willingness to draw closer together on scientific matters and other things," said Col. Thomas Monath, chief of virology at the U.S. Army Medical Research Institute of Infectious Diseases.

1995 (July 24)

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HEALTH | SCIENCE

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THE BOSTON GLOBE • MONDAY, JULY 24, 1995

For ulcers, end of line may be near

GLOBE STAFF PHOTO/PAT GREENHOUSE

With screening tests and an effective vaccine, "you could eliminate peptic ulcer disease from the population."

DR. THOMAS MONATH
Vice president, Oravax, Inc.

By Richard Saltus
GLOBE STAFF

Stomach ulcers, the painful ailment that until recently was wrongly linked to the stresses of modern life, could be headed the way of polio and smallpox if a preventive vaccine bears out its early promise, say researchers.

Now that even skeptics agree that most ulcers are caused by a common bacterial infection, not by diet or stomach acid or an oppressive boss, the stage appears set for their virtual eradication.

"You could eliminate peptic ulcer disease from the population" by combining screening tests with an effective vaccine, said Dr. Thomas Monath, formerly an infectious disease specialist with the US Army and now vice president for research at OraVax, Inc., in Cambridge. (Peptic ulcer disease is the medical term for what lay people often call stomach ulcers. They occur either in the stomach or, more commonly, in the duodenum, the upper end of the small intestine.)

The bacteria also appear to cause some forms of chronic gastritis and are believed to be the most common cause of stomach cancer. A preventive vaccine could sharply reduce the death toll from this hard-to-treat malignancy – particularly in the developing world where it is much more common, said Monath.

ULCERS, Page 29

For ulcers, the end may be approaching

■ ULCERS

Continued from Page 25

His company, in a joint venture with Pasteur Merieux Serums & Vaccins of France, is safety-testing an oral vaccine in Europe. Other vaccine efforts are in earlier stages.

Given the amount of suffering, doctoring and medication that ulcers cause, the thought of wiping them out with a vaccine taken by mouth is startling.

"Just 2½ years ago it was thought that this was an over-ambitious idea, but the medical community as a whole has become very enthusiastic about pursuing this goal," said Dr. Frank Hamilton, who heads the gastroenterology division of the National Institute of Diabetes and Digestive and Kidney Diseases.

What turned the tide, he said, was a report last year from Swiss scientists showing that a vaccine prevented mice from becoming infected with a bacterium closely related to *H. pylori*, the spiral-shaped bacterium that scientists now say causes the vast majority of ulcers.

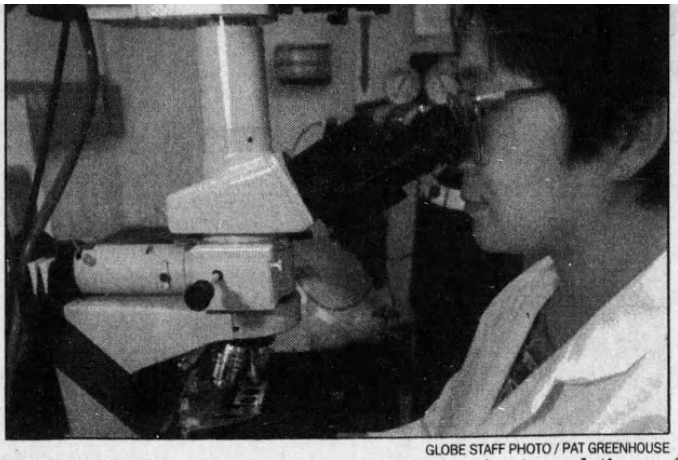
Still, the vision remains an ambitious one. An estimated 5 million people in the United States alone

voiced caution about the link: "I think we're now really persuaded that just about all ulcers are caused by *H. pylori*, and we have treatments that can eradicate the bacteria in 90 percent of cases.

H. pylori is transmitted by contact with fecal material, vomit and saliva. Once in the body, the bugs burrow under the mucous lining of the stomach and apparently remain there for life. They are estimated to infect about one-third of people in the United States and far more in developing countries. Researchers believe the percentage of people infected rises with age, so that at age 20, 20 percent have *H. pylori*, at age 30, it's 30 percent, and so forth.

In an interview last week, Monath pointed to a electron microscope photo showing several of the spiral bacteria lodged in one of the millions of deep pits, called crypts, that punctuate the stomach lining.

The bugs' spiral shape "is for moving in a corkscrew fashion through this slime," he said, indicating the mucus layer that protects the stomach – which *H. pylori* has learned to love and call home. He said the bacteria don't invade the



GLOBE STAFF PHOTO / PAT GREENHOUSE

Researcher Ru Ding calculates immune response in stomach tissue of mice during pre-clinical testing of ulcer vaccine.

suffer from peptic ulcer disease ("peptic" refers to pepsin, a digestive enzyme). In 1987, the last year for which the National Institutes of Health has figures, peptic ulcers led to 630,000 hospitalizations and 5 million visits to doctors' offices. Ulcers kill relatively few people – about 6,300 deaths annually – but cause enormous disability and lost productivity. In this country, more than $3.2 billion a year is spent on treating peptic ulcer disease.

For more than a century, doctors have veered from one idea to another about the cause of ulcers, which are eroded areas in the lining of the stomach or duodenum. Diet, emotional stress, excess acid production, failure of the chemical barrier that prevents the stomach from digesting itself – all have had their turn as the presumed villains.

In recent years, expensive drugs that block acid secretion in the stomach have been among the top-selling of pharmaceutical products.

In 1982, however, two Australian physicians argued – in the face of intense skepticism – that the real culprit was *H. pylori*, a bacterium that infects millions, beginning in childhood. Over the last several years the idea has come to be widely accepted, notably in a 1994 consensus report by the National Institutes of Health.

Only about one-tenth of those who harbor the bug actually develop ulcers in the stomach or duodenum, and it's not clear why *H. pylori* infection leads to ulcers in some people but not others. Genetic factors probably play a role; diet and environmental differences may be important, too. But these are contributing or modifying factors. Ulcers don't occur unless the bacteria are there.

A small minority of ulcers do have non-infectious origins. Overuse or misuse of non-steroidal anti-inflammatory drugs such as aspirin, ibuprofen, and others often given for arthritis account for less than 10 percent. A still-smaller fraction is traceable to rare diseases in which the stomach pours out extremely high amounts of acid.

Though slow in coming, recognition of *H. pylori* as the prime cause of ulcers has meant that patients who have been plagued with stomach trouble for years can be cured, often for good, with a two-week regimen of antibiotics and bismuth.

"This has changed the whole practice of treating ulcer disease," said Dr. Timothy Wang, a gastroenterologist at Massachusetts General Hospital.

Adds Dr. Peter Banks, head of clinical gastroenterology at the Brigham and Women's Hospital, who as recently as two years ago had cells of the stomach but instead attach themselves to them, "and sit there and pump out toxins" as they break down tissue to get at nutrients. The bugs also stimulate stomach acid production, adding to the assault on the cells lining the stomach and duodenum.

The body's defenses don't sit passively by when *H. pylori* take up residence. The immune system generates antibodies – proteins that seek out and attach to invading microbes. In fact, doctors use a blood test for the antibody as a means of diagnosing the infection. For reasons not understood, however, the immune reaction doesn't get rid of the bacteria.

But the vaccine now being tested by OraVax and its European partner does, at least in animals. The basis of the vaccine is an *H. pylori* gene for urease, an enzyme found on the bacteria's outer membrane that enables the bugs to survive in the highly acid environment of the stomach.

When a portion of the urease protein was given to mice in an experimental vaccine, it stimulated an immune response that protected the animals against *H. pylori* infection. Monath explained that the protein prompted certain cells in the stomach lining to secrete a substance called immunoglobulin G, which attacks the bacteria and causes them to clump together, ultimately to be swept away and excreted.

The purified urease protein is made through recombinant DNA technology and appears to be entirely safe, said OraVax's Monath.

"Our primary goal is a therapeutic vaccine" that will be even more effective than antibiotics and bismuth at ridding patients of ulcers, said Monath. Next, the company would target patients who have healed ulcers, to prevent relapses, a common problem.

Eventually, it would be possible to test the population at large – perhaps in the early school years – and administer a vaccine to those who are infected with *H. pylori*, and perhaps even those who aren't, as a preventive, he said.

Hamilton, the gastroenterology specialist at the NIH, said some are concered about the cost of the vaccine and whether widespread immunization would be practical, particularly in the developing world.

However, he added, "Gastric cancer is the second-most common cancer in the world. If it turns out that *H. pylori* has a true causal relationship to this disease, as it appears, that would be a strong reason why you would take a very aggressive position" on immunizing large population against the bug.

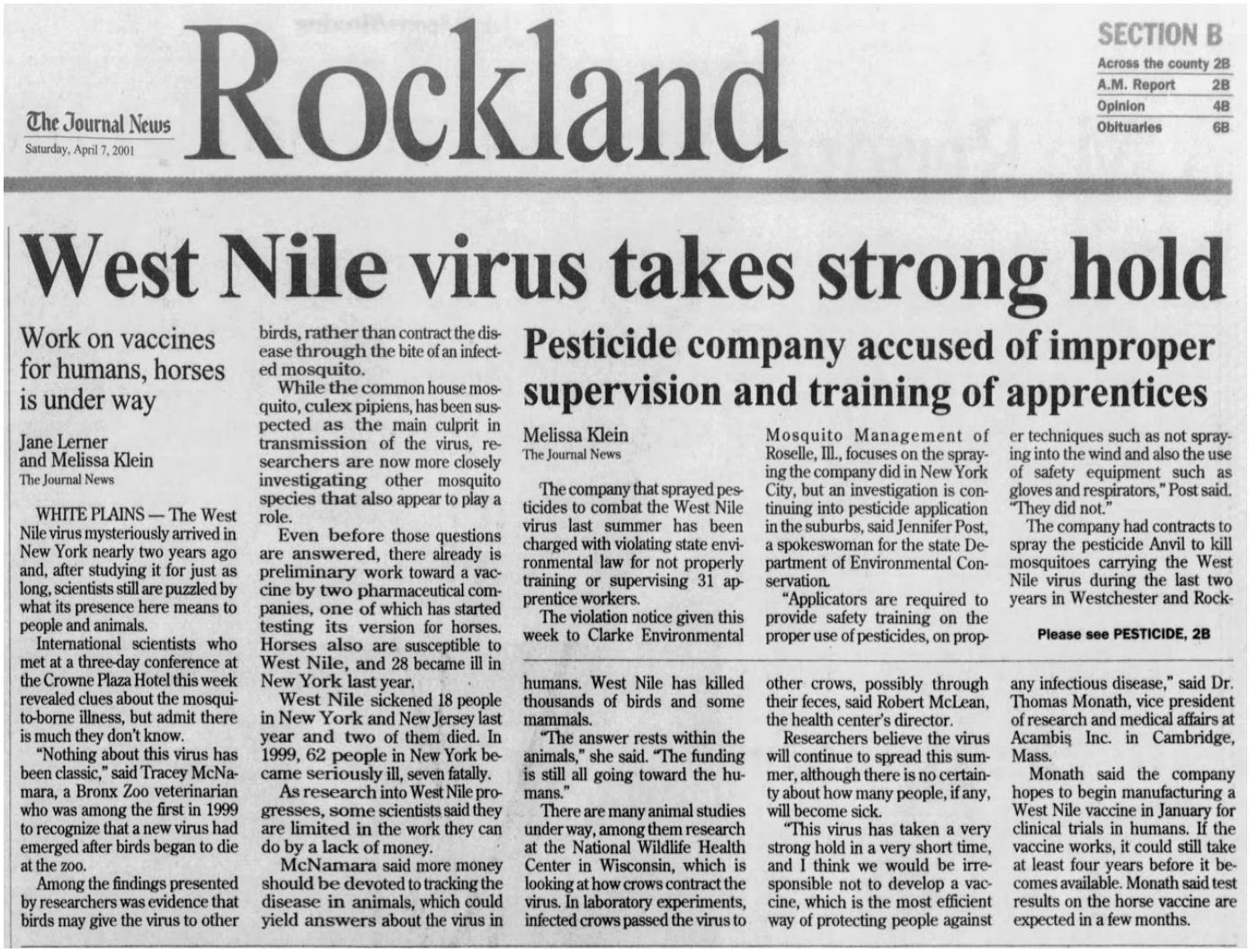
1999 (Sep 28) - Explaining bird migrations (potential cause of West Nile)

Also see : **West Nile Virus discovery in the United States (1999)**

https://www.newspapers.com/image/408224566/?terms=%22thomas%20monath%22&match=1

2001 - (April 27) - with Tracey McNamara

Also see : **Dr. Tracey S. McNamara (born 1954)** . / Full newspaper page : [HN01IC][GDrive]



The Journal News
Saturday, April 7, 2001

Rockland

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West Nile virus takes strong hold

Work on vaccines for humans, horses is under way

Jane Lerner
and Melissa Klein
The Journal News

WHITE PLAINS — The West Nile virus mysteriously arrived in New York nearly two years ago and, after studying it for just as long, scientists still are puzzled by what its presence here means to people and animals.

International scientists who met at a three-day conference at the Crowne Plaza Hotel this week revealed clues about the mosquito-borne illness, but admit there is much they don't know.

"Nothing about this virus has been classic," said Tracey McNamara, a Bronx Zoo veterinarian who was among the first in 1999 to recognize that a new virus had emerged after birds began to die at the zoo.

Among the findings presented by researchers was evidence that birds may give the virus to other birds, rather than contract the disease through the bite of an infected mosquito.

While the common house mosquito, culex pipiens, has been suspected as the main culprit in transmission of the virus, researchers are now more closely investigating other mosquito species that also appear to play a role.

Even before those questions are answered, there already is preliminary work toward a vaccine by two pharmaceutical companies, one of which has started testing its version for horses. Horses also are susceptible to West Nile, and 28 became ill in New York last year.

West Nile sickened 18 people in New York and New Jersey last year and two of them died. In 1999, 62 people in New York became seriously ill, seven fatally.

As research into West Nile progresses, some scientists said they are limited in the work they can do by a lack of money.

McNamara said more money should be devoted to tracking the disease in animals, which could yield answers about the virus in humans. West Nile has killed thousands of birds and some mammals.

"The answer rests within the animals," she said. "The funding is still all going toward the humans."

There are many animal studies under way, among them research at the National Wildlife Health Center in Wisconsin, which is looking at how crows contract the virus. In laboratory experiments, infected crows passed the virus to other crows, possibly through their feces, said Robert McLean, the health center's director.

Researchers believe the virus will continue to spread this summer, although there is no certainty about how many people, if any, will become sick.

"This virus has taken a very strong hold in a very short time, and I think we would be irresponsible not to develop a vaccine, which is the most efficient way of protecting people against any infectious disease," said Dr. Thomas Monath, vice president of research and medical affairs at Acambis Inc. in Cambridge, Mass.

Monath said the company hopes to begin manufacturing a West Nile vaccine in January for clinical trials in humans. If the vaccine works, it could still take at least four years before it becomes available. Monath said test results on the horse vaccine are expected in a few months.

Pesticide company accused of improper supervision and training of apprentices

Melissa Klein
The Journal News

The company that sprayed pesticides to combat the West Nile virus last summer has been charged with violating state environmental law for not properly training or supervising 31 apprentice workers.

The violation notice given this week to Clarke Environmental Mosquito Management of Roselle, Ill., focuses on the spraying the company did in New York City, but an investigation is continuing into pesticide application in the suburbs, said Jennifer Post, a spokeswoman for the state Department of Environmental Conservation.

"Applicators are required to provide safety training on the proper use of pesticides, on proper techniques such as not spraying into the wind and also the use of safety equipment such as gloves and respirators," Post said. "They did not."

The company had contracts to spray the pesticide Anvil to kill mosquitoes carrying the West Nile virus during the last two years in Westchester and Rock-

Please see PESTICIDE, 2B

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2001 (Oct 25)

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The Guardian (London, Greater London, England) • 25 Oct 2001, Thu • Page 1

Rules relaxed in rush for new smallpox vaccine

Charlotte Denny

The US government is to allow drug firms to speed up safety trials in their search for a new smallpox vaccine as fresh evidence emerges that Washington is preparing itself for full-scale biological warfare.

Tommy Thompson, the US health secretary, asked Congress this week for $500m (£350m) to produce enough smallpox vaccine "so every American will be assured there is a dose with his or her name on it if it is needed".

The administration has stepped up its preparations for more biological attacks after the anthrax campaign which has killed three people. Officials disclosed yesterday that three new suspected cases of inhalation anthrax had been reported by a hospital near Washington.

All were linked to a contaminated letter sent to Senator Tom Daschle in the Senate Hart office block. Last night police announced that a lift in the building had tested positive for anthras — the fifth location in the Capitol complex.

The health secretary wrote to leading companies asking if they could make a smallpox vaccine available by the end of next year. New drugs normally have several years of safety testing.

Industry observers say Washington is prepared to let firms compress clinical trials into 12 months. The government has promised legal protection for companies. No American producer has made smallpox vaccine since the 1980s and most will have to start from scratch. Vaccination for the disease stopped after smallpox was eradicated in the 1970s, but experts fear it might be used as a biological weapon.

A British company, Acambis, which has developed a new vaccine, said it hoped to complete safety trials in 18 months.

The Acambis vice-president, Thomas Monath, told a Senate committee yesterday that no private insurers would cover a company bringing out a vaccine in record time for potential use on a mass of people.

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2003 (Sep 23)

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YORK SUNDAY NEWS

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Virus drugs nearly ready

But approved Nile vaccine takes time

BY JUSTIN GILLIS
The Washington Post

At least half a dozen laboratories and companies around the world are reporting headway in developing a vaccine against the West Nile virus, with enough tests completed in animals to suggest that several of the vaccines are likely to work in people. Two labs are expected to launch human tests by late this year.

But despite the rapid progress, an approved vaccine to prevent West Nile fever and its potentially life-threatening complications remains several years away, scientists said, because of the time needed to conduct thorough safety and effectiveness tests in people.

And it remains unclear how large a commercial market a vaccine might command, given that the overwhelming majority of people infected with the virus never get sick.

Big vaccine companies

See **VIRUS**/*A12*

VIRUS

Vaccine research

Continued from Page A1

have so far stayed away from West Nile virus, apparently deterred by the business uncertainties. But a handful of small biotechnology companies, motivated in part by government grants meant to prod industry into action, are chasing the goal of being first to market.

These companies see a potential market among older Americans, who appear to be at greatest risk of developing West Nile fever or its most severe complication, a potentially deadly swelling of the brain called encephalitis. And the companies are also betting that in the long run at least some American parents, weary of slathering their children with greasy insect repellent, will want a vaccine.

Many of the infectious diseases that have emerged in recent years have frustrated vaccinologists, most notably the human immunodeficiency virus, which causes AIDS. Nearly 20 years of effort have produced no licensed vaccine.

But West Nile virus, which was never seen in the Western Hemisphere and barely noticed by American medicine before a 1999 outbreak in New York, is defying the pattern. So far, every laboratory known to be working on a West Nile vaccine appears to be succeeding, a strong hint to scientists that such a vaccine will eventually be licensed.

Growing concern: When the 1999 outbreak began, the National Institute of Allergy and Infectious Diseases, a unit of the National Institutes of Health in Bethesda, Md., began pushing vaccine research and awarding grants. The costly initiative was controversial at the time, since it was unclear whether West Nile would become a lasting problem in North America. But now—after thousands of cases throughout the United States, 284 deaths last year and 21 so far this year—that early jump-start from NIH appears to have shaved years off the time that might have been needed to develop a vaccine.

A 75-year-old man this week became the first York County resident to die from the West Nile virus, and the total number of people contracting the disease in Pennsylvania continues to rise.

So far this year, 10 York County residents have contracted the disease. The most recent is a 37-year-old man, reported by state health officials Friday.

Statewide the total is 120. Overall, three have died in Pennsylvania this year.

How used? Still, it's unclear how widely such a vaccine would be used or whether authorities would recommend universal childhood vaccination. That will depend on how the epidemic unfolds over the next few years, said Anthony Fauci, director of the infectious-disease institute. In most people who get infected, the virus causes no symptoms and the person acquires strong immunity to West Nile. In a few cases, people get a fever. In a tiny minority of cases, the disease turns into a life-threatening brain infection.

That has tended to happen in older people, which is why they might be the logical target for a vaccine, specialists said. But if the epidemic changes — say, the virus starts making children ill — that approach would likely change too.

"Would I see universal vaccination with West Nile at this point?" Fauci said. "Highly unlikely. But we need to go ahead and make the vaccine to plan for the worst."

Vaccine nearly ready: Leading the pack is Acambis PLC, a company with headquarters in Cambridge, England, and U.S. operations in Cambridge, Mass. That company is best known for supplying the U.S. government with millions of fresh doses of smallpox vaccine that might be used to halt a bioterror attack, a set of contracts that propelled Acambis to prominence in the biotech industry — and to early profitability by the standards of a biotech startup.

Acambis has already manufactured large amounts of a test vaccine for West Nile virus and will enter human trials within a few weeks, said Thomas Monath, the company's chief scientific officer. The company's product, developed with a federal grant, is a variant of the live virus used for decades to vaccinate people against yellow fever. It has been tweaked at a molecular level to look like West Nile on the outside, thus fooling the immune system into mounting a response that would be effective against later West Nile infection.

In trials, West Nile virus was injected directly into the brains of monkeys, the most rigorous animal test possible in a disease that causes brain inflammation. Monkeys that had not received the Acambis vaccine died, whereas monkeys that had received it lived, showing no sign of illness.

A similar approach underlies another advanced vaccine, under development in the laboratory of Brian Murphy at NIH. His lab tweaked a virus developed as an experimental vaccine against dengue fever to make it appear like West Nile to the immune system.

Tests have shown it to be effective in monkeys, and the vaccine is expected to enter human tests by late this year. No commercial sponsor has signed on, but the government is talking to several companies.

Living virus: Australian researchers are also pursuing a live-vaccine approach using a mild relative of West Nile virus, but their work is at an earlier stage. As a rule, live vaccines of this sort give the strongest immunity, but they also pose the greatest theoretical safety risk.

Since the vaccines contain living viruses that reproduce in the body, they can sometimes overwhelm a person with weak immunity, causing disease themselves. That is a particular concern in older people, since immunity declines with age, so the Food and Drug Administration likely will demand extensive study of such vaccines to clarify the risk.

Other approaches offer the potential of safer, but probably weaker, vaccines. These might require several shots to produce initial immunity, and might also require booster shots as a person ages.

One of the most advanced products of this type is under development at Hawaii Biotech Inc. of Aiea, Hawaii, a vaccine made with protein fragments from the coat of the West Nile virus. It has shown good protection in animals, and the company hopes to enter human tests in 2004.

Still other vaccine projects are underway, but most experts feel the world probably has room for two West Nile vaccines at most — one for healthy people, perhaps, and a second, safer-but-weaker vaccine for the elderly and people with immune problems.

Unexpected roadblocks are so common in drug development that most people in the field can't say right now which vaccines will make it to the finish line first.

Staff writer Wendi Himmelwright contributed to this story

2003 (Oct 12)

Dr. Tracey S. McNamara (born 1954) LEFT the zoo after west nile ! pioneered National Zoological Surveillance working Group / Full page below : [HN01IE] [GDrive]

Also see : Dr. Duane J. Gubler (born 1939) / **Dr. Thomas Patrick Monath (born 1940)**

U.S. bioterror plans ripped

West Nile a wakeup call: expert

By BRIAN KATES
DAILY NEWS STAFF WRITER

As scientists battle the fast-spreading West Nile virus, anti-terrorism experts hope that developing a network to track and stop the epidemic will provide an early warning system for defense against biological attack.

But right now, the U.S. "is totally unprepared to deal with new vector-borne epidemics" — like West Nile virus or those spread by more lethal germs in the terrorist inventory, said Duane Gubler, an internationally recognized expert at the Centers for Disease Control and Prevention.

"West Nile was a wakeup call. We would have been just as unprepared for any other new pathogen," said Gubler, who is leaving the CDC after 14 years as chief of its vector-borne infectious disease lab. "That is a real national security concern."

When the epidemic surfaced in Queens in 1999 — its first appearance in the Western Hemisphere — it caught the nation's fragmented and underfunded public health system completely off guard.

The disease has spread unchecked from New York to 44 other states. This year, it has infected 6,292 Americans, killing 133 — six of them in New York. Two fatalities — a 69-year-old Ridgewood, Queens, man and a 93-year-old man from Dyker Heights, Brooklyn — were reported in the city last month.

"We still haven't been able to get a coordinated program off the ground," Gubler said of the battle to stop the virus.

He and other experts interviewed by the Daily News said the war against West Nile and other emerging biothreats has been mired in agency turf wars and hampered by lack of communication among various branches of government.

Typical example: When Health and Human Services Secretary Tommy Thompson proposed transforming the U.S. Public Health Service Commissioned Corps, a little-known 6,000-member branch of the military, into a rapid-response force against bioterrorism, it was publicly opposed by the heads of the CDC and the Food and Drug Administration.

Four years after the U.S. outbreak, the battle against West Nile remains hamstrung by "bureaucratic jurisdictions that respond to various aspects of the diseases, with little coordination and no clear plan for communicating with the public," according to a study this year by the Trust for America's Health, a nonprofit research group.

"This is especially troublesome," the report said, "given that many of the potential agents for biological weapons are zoonotic" — that is, they originate in animals and spread to humans.

West Nile virus, a relative of yellow fever, is spread by mosquitoes that become infected when they feed on infected birds, mostly crows. They then transmit the disease to people when they bite.

Encephalitis enigma

It started with the mysterious discovery of clusters of dead crows around the city. By August 1999, hundreds of dead crows had been found at the Bronx Zoo. Pathologist Tracey McNamara, fearful that some unknown pathogen would attack the zoo's animals, began autopsies of the birds.

She found severely inflamed hearts and the worst brain damage she'd seen in 18 years of performing animal autopsies.

After six people from Whitestone, Queens, were admitted to Flushing Hospital Medical Center with high fever, altered mental state and headaches, the feds announced on Sept. 3 of that year that the cases were St. Louis encephalitis.

But McNamara wasn't buying it.

"On one hand, there were all these dead birds," she told The News. "They died of encephalitis. On the other hand, you had the people in Queens. That was encephalitis, too." The cases had to be related, she reasoned.

Problem was, birds don't get St. Louis encephalitis. It had to be something else.

As birds continued to die at the zoo, two federal laboratories ruled out St. Louis encephalitis.

As the crisis loomed, McNamara said, she made out her will. "I was scared," she told The News. "The dead birds had given us six weeks of warning before the first people started to die, but that warning was ignored."

As the Trust for America's Health put it, "Public and animal health exist as two distinct fields, separated in both organization and culture."

But efforts are being made, belatedly, to close the gap.

McNamara — who left the zoo after the West Nile debacle was made public — pioneered the National Zoological Surveillance Working Group. A network of more than 35 zoos nationwide, it monitors diseases in zoo animals to provide an early warning of viruses that could spread to humans.

The CDC has established the West Nile Interagency Working Group, which combines the resources of the departments of Health and Human Services, Commerce, Interior, Defense, Agriculture and Environmental Protection.

Since the Sept. 11 attacks, money has poured into the public health system.

"State and local governments can't spend it fast enough," said Jerome Hauer, former city emergency management director and now head of the federal Office of Public Health Preparedness.

Last month, the CDC announced it was giving $870 million — $20.9 million of it to New York City alone — to bolster public health preparedness for bioterrorism and outbreaks of infectious diseases like West Nile virus.

"There has been a great deal of progress in rebuilding public health infrastructure," Hauer said. "There is a long way to go."

AP

FIRST WARNING State wildlife pathologist Ward Stone holds a dead crow that was found in Montrose in Westchester County in April 2000. Crow was tested for the deadly West Nile virus at wildlife pathology facility in New Scotland, south of Albany.

Skeeter virus hits 10,000 – docs fight on

Since the outbreak of West Nile virus in Queens four years ago, the disease has spread to all but three states in the lower 48, infecting more than 10,200 people and killing 421.

The virus can enter the body in myriad ways.

An infected woman can pass it to her unborn child or to her nursing baby. It can also invade its victims through blood from an infected donor.

Blood screening has flagged at least 617 infected blood donors since testing began last July. But just last week, the Centers for Disease Control and Prevention reported that the test can't detect all donated blood units infected with the virus.

"We catch most of the people, but not all of them," said Dr. Lyle Petersen, chief of the agency's division of vector-borne diseases.

Meanwhile, the disease continues to spread. And there is no cure.

But no sooner had the '99 outbreak been confirmed as West Nile virus than researchers began hunting for a remedy.

"We sent two scientists to the CDC lab [at Fort Collins, Colo.] with the goal of cloning the envelope protein of the virus to use in constructing a genetically engineered vaccine," said Thomas Monath, chief scientist at Acambis, the front-runner in developing a vaccine.

The company applied for a research and development grant, and was awarded about $3 million by the National Institutes of Health.

Now, after successful trials with animals, the scientists have applied to conduct tests with humans.

But even if everything goes perfectly, Monath said, it could be seven years before the vaccine is on the market.

By then, hundreds of thousands of people could fall victim to West Nile.

"The way things are progressing," Monath said, "we expect there will be in the neighborhood of 10,000 to 20,000 cases a year."

Brian Kates

2003 (Dec 15) - vs Lipkin ...

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The Record
HEALTH

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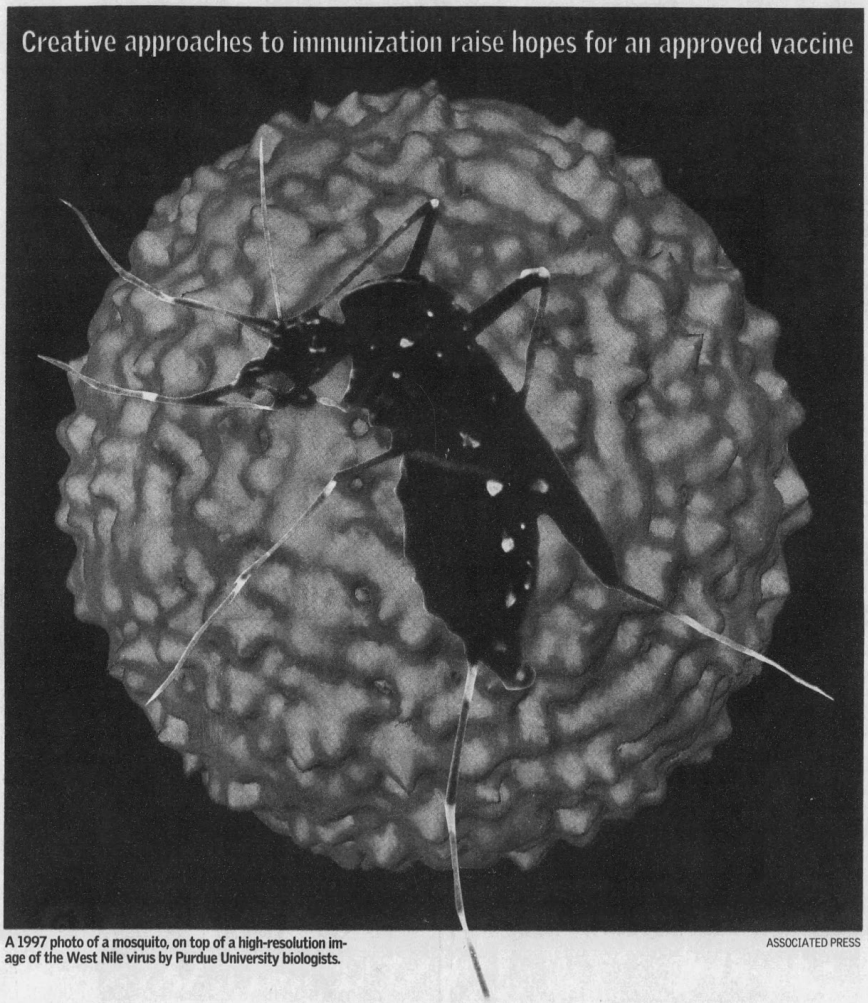
ENTERTAINMENT
David Bowie's music transcends generations. F - 7

TUESDAY IN LIVING
The Super Bowl of gift wrapping.

Outsmarting WEST NILE

Creative approaches to immunization raise hopes for an approved vaccine



A 1997 photo of a mosquito, on top of a high-resolution image of the West Nile virus by Purdue University biologists.

ASSOCIATED PRESS

By **BOB GROVES**
STAFF WRITER

Would you rather have an injection of a retooled yellow fever virus that was tested on monkeys, or a shot of dead meningitis germs that were given to geese?

No, this isn't a segment of the reality TV show "Fear Factor." These are two experimental West Nile virus vaccines awaiting human clinical trials. Others are in development.

However bizarre the science behind them may sound, the makers of both vaccines are confident that upcoming studies will prove their products to be safe and effective protection for people against the mosquito-borne illness.

As its fifth season comes to an end, the West Nile virus has infected 8,734 people in the United States, more than double the number recorded last year. This year, 208 died.

Colorado was hit the hardest, with 2,477 cases and 45 deaths. Nebraska ranked second, reporting 1,760 cases and 21 deaths. In New Jersey, 32 had the virus and two died.

"Unfortunately," said Dr. Eddy Bresnitz, the New Jersey state epidemiologist, "West Nile is alive and thriving in New Jersey. It's here to stay."

The West Nile virus is spread by mosquito bites. It can also be transmitted through donor blood, organ transplants, and breast milk.

The virus, which infects humans, birds, and other mammals, mainly causes flu-like symptoms. In a small percentage of cases, it can result in encephalitis and meningitis – inflammation of the brain and spinal cord – or death.

The West Nile virus originated in Africa and caused a number of outbreaks in the Middle East before spreading to New York in 1999. It has infected people in every state except Washington, Oregon, Alaska, Maine, and Hawaii. Though the number of cases doubled this year, deaths dropped by more than 80.

While vaccines to protect horses from the virus have been around for a few years, nothing has been available for humans. Now, two international drug companies lead the field of about a half-dozen firms that are developing West Nile vaccines.

Acambis Inc., a British company based in

See **VIRUS** Page **F-3**

Virus: Research on promising vaccines

From Page F-1

Massachusetts, is testing a "chimeric" vaccine, meaning it combines genetic material of two viruses. In this vaccine, protein genes from the West Nile virus are inserted into a live but weakened yellow fever virus and replace similar genes that create immunity.

The vaccine, tested successfully in monkeys, began human clinical trials last month.

Meanwhile, Crucell NV, a Dutch company, is working with a more traditional vaccine made with whole-killed –or inactivated – West Nile virus that is applied to human cells to produce an immune reaction.

Human tests of the Crucell vaccine, which was reportedly successful in protecting thousands of geese against West Nile in Israel, will begin in 2005.

To develop its human vaccine, Acambis chose yellow fever virus because it is closely related to the West Nile virus, said Dr. Thomas P. Monath, a virologist and chief science officer for the drug company.

"It means you're teaching a well-known vaccine [for yellow fever] a new trick" by genetically engineering it to produce immunity against West Nile, Monath said. "We chose the yellow fever vaccine because it's been in use for 65 years, and it's very safe and effective."

The Acambis vaccine is intended for residents of areas where there are ongoing West Nile outbreaks and for any people who are concerned about getting the virus, he said. "I don't know at this point if there will be a public health recommendation for West Nile vaccine," he said.

Crucell used brain cells of newborn mice in developing a West Nile vaccine for geese in Israel, said Dinko Valerio, chief executive officer of the company. The geese, which are bred there for paté fois gras, are very susceptible to the virus, Monath said.

After the vaccine proved effective in protecting more than 90 percent of the geese, Crucell used the same technique to develop a West Nile vaccine for people. But instead of applying the killed West Nile virus to human brain cells, the company used a line of general human cells it created and licensed for biological testing, Valerio said.

Crucell is aiming its vaccine primarily at the elderly, the group that has been most vulnerable to West Nile so far, Valerio said. "That is not to say we wouldn't consider making our vaccine available to younger people who go outside," he said.

It's too early to tell how big a demand there might be for a human West Nile vaccine, Valerio said. "I wouldn't want to be presumptuous. But I can tell you, as a smaller biotech company, whatever the market, it'll be a groundbreaking event for us," he said.

The competing scientists were reticent about discussing each other's proposed vaccine. "There are good things about both," said Monath of Acambis. His company's live, genetically engineered vaccine, he said however, has an advantage of working quickly and requiring only a single dose.

"Acambis took a high-tech approach that is very elegant from a scientific view," said Valerio of Crucell, whose vaccine is made the more traditional way. "But the burden [for Acambis] to prove its safety will be a heavy one [requiring] a tremendous amount of data."

The question for health officials is, who needs the West Nile vaccine? And how big a demand will there have to be to make it worth selling?

"I don't think there will be a large market for it," said Dr. W. Ian Lipkin, an epidemiologist at the Mailman School of Public Health at Columbia University. Lipkin led the team that identified West Nile in encephalitis victims in New York when the virus first arrived in North America.

Because so relatively few people develop symptoms when they are infected with West Nile, much less become fatally ill, there is not much demand for a vaccine or competition to make and market one, he said.

By contrast, the huge demand from horse owners was behind the speed in which a horse vaccine went from lab to marketplace. Horses are a multimillion dollar industry in the United States, and the animals are more vulnerable than humans to the virus. The animals are more vulnerable than humans to the virus. The process was also faster because veterinary vaccines go through a much less rigorous federal testing regimen, health officials say.

Added Bresnitz, "Horses don't wear clothing and they don't use insect repellent," two precautions that people can take against West Nile-spreading mosquito bites.

The challenge for health officials when the human vaccines finish testing will be determining who should be vaccinated, Bresnitz said. A recommendation that a specific group should be vaccinated can drive demand for the vaccine, he said.

New Jersey, like other states, would take guidance from the federal Centers for Disease Control and Prevention on any West Nile immunization recommendations, Bresnitz said.

"It's pure speculation on my part, but I'd bet they're going to target it to people who are more likely to be exposed because of their occupations, people working in an outdoor environment as part of their jobs," he said. This could include utility workers who come in contact with stagnant water and mosquitoes who transmit the virus. Or people who live near swampy marsh areas.

Like the vaccine for tick-borne Lyme disease, a West Nile vaccine probably wouldn't be recommended in general for city dwellers, who have less exposure to mosquitoes than suburbanites, Bresnitz said.

"Like any licensed vaccine, anyone can request it," Bresnitz said. "So it's really an issue of recommendation vs. those who want to have it. It'll be interesting to see what the recommendation will ultimately be."

In New Jersey this year, West Nile showed up in humans, horses, birds, or mosquitoes in all 21 counties. The number of human cases in New Jersey went from none in 1999, when the virus first appeared, to six in 2000, 12 in 2001, and 24 in 2002. This annual doubling rate might continue this year if, besides the 32 human cases confirmed so far, the 18 suspected cases tested and still pending turn out to be positive.

Although West Nile cases are increasing relatively slowly in the state, "the virus is well established throughout New Jersey and continues to circulate every season. We expect to see more of it," Bresnitz said. "It's really hard to predict exactly what's going to happen. It's hard to see any real patterns."

Mosquito control is the best weapon against West Nile, he said.

"We prevented a dramatic increase in cases in humans," he said. "There has been some significant increase in horses, but it probably could have been worse without the use of vaccine. Most of those horses that got West Nile virus were unvaccinated. That supports the efficacy of the horse vaccine.

"Overall, I thought we had a pretty reasonable season, compared to what happened around the rest of the country," he said. "Unfortunately, we can't eliminate West Nile virus as a risk to our citizens. But we can do a lot to minimize the risk."

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2005 (May 11) - West Nile vaccine looks good in early human trial

Center for Infectious Disease Research and Policy (CIDRAP)

University of Minnesota

May 11, 2005

Fauci + Monath

https://www.cidrap.umn.edu/news-perspective/2005/05/west-nile-vaccine-looks-good-early-human-trial

2005-05-11-cifrap-umn-edu-west-nile-vaccine-trials.pdf

May 11, 2005 (CIDRAP News) ⬭ An initial human trial of a West Nile virus (WNV) vaccine has yielded promising results, officials said today.

In the double-blind, randomized trial, all but one of the people who received the vaccine developed antibodies to it, according to an Associated Press (AP) report quoting Dr. Thomas Monath, chief scientist at Acambis, the company that created the vaccine.

Results of the trial were to be presented today at the National Foundation for Infectious Disease's (NFID) annual conference in Baltimore, 5 years after the company began researching WNV vaccines. Acambis had received a $3 million grant from the National Institutes of Health. Testing on volunteers began in 2003, the AP reported.

Acambis created the ChimeriVax-West Nile vaccine by combining some genes from WNV with a licensed yellow fever vaccine, the AP story said. The yellow fever virus is a relative of the West Nile virus, and the yellow fever vaccine is known to be safe.

The phase 1 clinical trial involved 80 volunteers. Thirty people received a single high dose of the vaccine, 15 were given a low dose, 30 received a placebo, and 5 received a yellow fever vaccine, Acambis officials said in a news release.

By 28 days after vaccination, 96% of the high-dose group and 100% of the low-dose group had a measurable antibody response, Acambis reported. The company reported mean antibody titers of 1280 and 1350, considered high, in the respective groups.

The rate of vaccination side effects varied relatively little among the high-dose group (40%), the low-dose group (46.7%), and the placebo groups (43.3%), Acambis announced. No serious adverse events were blamed on the vaccine.

"We are encouraged by the immune response generated by trial subjects who were vaccinated with a single inoculation," Monath said in the news release.

The next phase of testing will include a larger sample with more older adults, the AP reported. Provided the second phase goes well, the third phase will involve thousands of people.

Dr. Anthony Fauci, director of the National Institute of Allergy and Infectious Diseases, said he was impressed by the percentage of patients who showed high levels of antibodies, but he cautioned that these are early findings, the AP reported.

Use of the proven yellow fever vaccine to create a safe hybrid could shave years off vaccine development, Fauci added.

No vaccine has been approved for West Nile, which first appeared in the United States in New York in 1999 and has spread to every contiguous state except Washington since then. WNV caused at least 2,470 illnesses and 89 deaths in the United States last year, according to the Centers for Disease Control and Prevention (CDC).

Most people who contract the virus are don't become ill, but about 20% can experience fever, headache, nausea, and vomiting. About 1 in 150 suffers a severe illness, according to the CDC.

2005 (May 12) - with fauci

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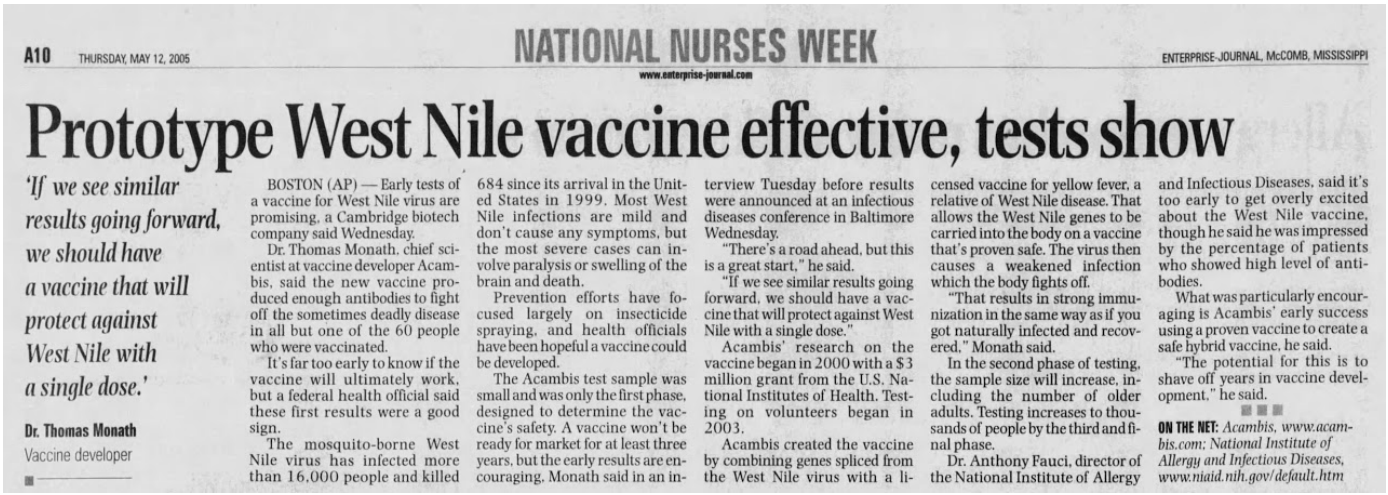


A10 THURSDAY, MAY 12, 2005 NATIONAL NURSES WEEK www.enterprise-journal.com ENTERPRISE-JOURNAL, McCOMB, MISSISSIPPI

Prototype West Nile vaccine effective, tests show

'If we see similar results going forward, we should have a vaccine that will protect against West Nile with a single dose.'

Dr. Thomas Monath
Vaccine developer

BOSTON (AP) — Early tests of a vaccine for West Nile virus are promising, a Cambridge biotech company said Wednesday.

Dr. Thomas Monath, chief scientist at vaccine developer Acambis, said the new vaccine produced enough antibodies to fight off the sometimes deadly disease in all but one of the 60 people who were vaccinated.

It's far too early to know if the vaccine will ultimately work, but a federal health official said these first results were a good sign.

The mosquito-borne West Nile virus has infected more than 16,000 people and killed 684 since its arrival in the United States in 1999. Most West Nile infections are mild and don't cause any symptoms, but the most severe cases can involve paralysis or swelling of the brain and death.

Prevention efforts have focused largely on insecticide spraying, and health officials have been hopeful a vaccine could be developed.

The Acambis test sample was small and was only the first phase, designed to determine the vaccine's safety. A vaccine won't be ready for market for at least three years, but the early results are encouraging, Monath said in an interview Tuesday before results were announced at an infectious diseases conference in Baltimore Wednesday.

"There's a road ahead, but this is a great start," he said.

"If we see similar results going forward, we should have a vaccine that will protect against West Nile with a single dose."

Acambis' research on the vaccine began in 2000 with a $3 million grant from the U.S. National Institutes of Health. Testing on volunteers began in 2003.

Acambis created the vaccine by combining genes spliced from the West Nile virus with a licensed vaccine for yellow fever, a relative of West Nile disease. That allows the West Nile genes to be carried into the body on a vaccine that's proven safe. The virus then causes a weakened infection which the body fights off.

"That results in strong immunization in the same way as if you got naturally infected and recovered," Monath said.

In the second phase of testing, the sample size will increase, including the number of older adults. Testing increases to thousands of people by the third and final phase.

Dr. Anthony Fauci, director of the National Institute of Allergy and Infectious Diseases, said it's too early to get overly excited about the West Nile vaccine, though he said he was impressed by the percentage of patients who showed high level of antibodies.

What was particularly encouraging is Acambis' early success using a proven vaccine to create a safe hybrid vaccine, he said.

"The potential for this is to shave off years in vaccine development," he said.

ON THE NET: *Acambis, www.acambis.com; National Institute of Allergy and Infectious Diseases, www.niaid.nih.gov/default.htm*

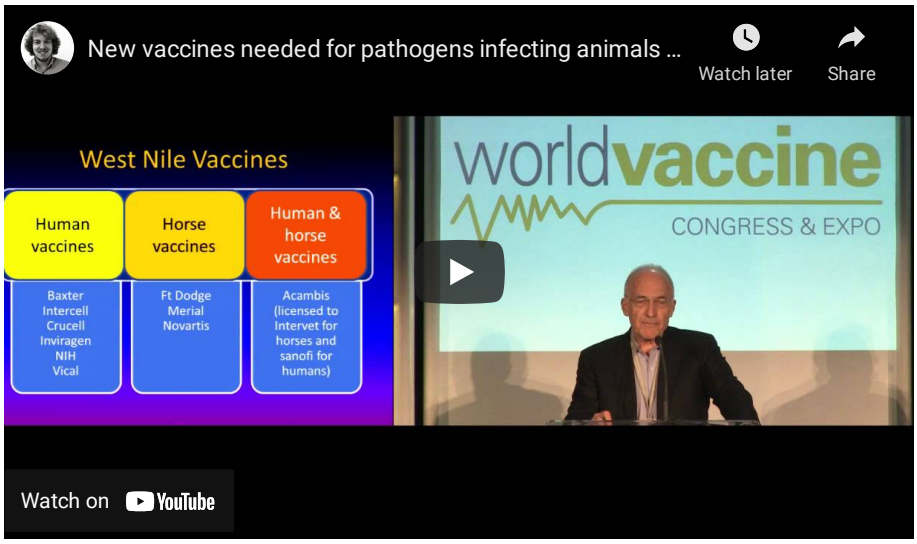
2013 (May) - New vaccines needed for pathogens infecting animals and humans: One Health - Dr. Thomas P. Monath

World Vaccine Congress & Expo 2013 : May 1, 2013 / Vaccine Nation

Dr Thomas P. Monath, Adjunct Professor at Harvard School of Public Health gives his presentation on 'New vaccines needed for pathogens infecting animals and humans: One Health'.

The World Vaccine Congress & Expo is now in its 13th year and is the biggest and most comprehensive event for the industry. Covering everything from the latest R&D to manufacturing to the corporate development strategies you'll be sure to find answers to all your questions.

Live : https://www.youtube.com/watch?v=ZaADs7b2svc / Downloaded copy : [HV00GR][GDrive]



2015 (Feb 15) - Scientists Scramble To Develop Tools, Treatments For Zika Virus

But with so little known about the basic biology of the mosquito-borne virus, they have a long road ahead

by Bethany Halford

FEBRUARY 12, 2016 | APPEARED IN VOLUME 94, ISSUE 8

Bavari and Monath

https://cen.acs.org/articles/94/i8/Scientists-Scramble-Develop-Tools-Treatments-Zika-Virus.html

2016-02-15-cen-acs-org-scientists-scramble-to-develop-tools-treatments-for-zika.pdf CEN : CHEMICAL AND ENGINEERING NEWS / AMERICAN CHEMICAL SOCIETY

When the Pan American Health Organization put out an alert last May about the first confirmed cases of Zika virus infection in Brazil, the news barely registered. After all, compared with other mosquito-borne viruses, such as potentially life-threatening dengue and yellow fever, Zika seemed pretty harmless. Only 20% of people infected with Zika even become ill, and their symptoms tend to be mild—fever, rash, joint pain, and conjunctivitis.

But in January, nine months after the organization raised the alarm, doctors in Brazil reported a disturbing trend that coincided with Zika's spread across the country. Since October 2015, more than 4,000 babies in Brazil had been born with abnormally small heads and brains—a rare condition known as microcephaly. Although further analysis lowered that figure by 462 cases, the sharp rise nonetheless has experts worried that Zika could be to blame. For comparison, Brazil reported just 147 cases of microcephaly in 2014.

VECTOR CONTROL: RECALCITRANT MOSQUITO BLAMED FOR ZIKA'S SPREAD

With a treatment or vaccine for Zika potentially years away, countries are relying on mosquito control to curb the virus' spread. Aedes aegypti mosquitoes, which inhabit tropical and subtropical regions, have been named as the culprit in transmitting the virus.

But getting rid of Aedes aegypti is extremely difficult because the mosquitoes don't seem to be affected by most spraying regimens, says Joseph M. Conlon, an entomologist and technical adviser to the American Mosquito Control Association. The problem, Conlon tells C&EN, is that Aedes aegypti feed during the day, and pesticides must be sprayed at dawn or dusk to be effective. Also, the mosquitoes like to come indoors to feed. So, unless pesticides are sprayed inside homes, chances are good they're not getting to the insects.

These mosquitoes are very small and you can't feel the bites. "Oftentimes you don't even know you've been bitten," Conlon says.

To get rid of the biting bugs, it's critical to eliminate any standing water. "I've seen Aedes aegypti breeding in discarded soda bottle caps," Conlon says. "They're survivors."

Despite Aedes aegypti's survival skills, the mosquitoes actually have a fairly limited flight range of about 150 m. That has made some scientists suspect that because

Zika has spread so quickly, the more common Culex mosquito may be transmitting the virus as well. The theory is currently being investigated.

"If that is true, that brings this to a whole different level," Conlon says. Culex mosquitoes have a much larger range, he notes, but they can usually be controlled through common mosquito abatement programs.

Zika is also being blamed for an uptick in cases of Guillain-Barré syndrome, a potentially life-threatening disorder in which the body's immune system attacks the central nervous system and causes paralysis. As with microcephaly, the evidence connecting Zika and Guillain-Barré is still circumstantial. Nevertheless, the link is strong enough for the World Health Organization to declare the Zika outbreak a public health emergency of international concern.

Margaret Chan, WHO's director-general, said earlier this month that the virus is "spreading explosively" through the Americas, with cases of active virus transmission in at least 26 countries and territories in the Americas. Panic over the virus has prompted health officials in some countries to take the drastic measure of advising women to delay pregnancy for months or longer. In El Salvador, Deputy Health Minister Eduardo Espinoza asked women to avoid becoming pregnant until 2018.

With Zika making headlines for the past month, scientists have been scrambling to get a handle on the virus. Industry, government, and academic scientists have all announced efforts to develop and test treatments and vaccines. But the path ahead for these researchers is long and full of pitfalls. Even though it's been around for almost 70 years, surprisingly little is known about the virus and its basic biology. A PubMed search for "Zika virus" turns up mostly case studies.

What we do know is that Zika is a flavivirus, a member of the same family as dengue, yellow fever, and West Nile virus. Zika is primarily transmitted via bites from infected mosquitoes, but in recent weeks doctors have reported that the virus can be sexually transmitted as well.

It was first identified in a monkey in Uganda's Zika forest in 1947, but only a handful of human Zika cases were reported until a 2007 outbreak in Micronesia's Yap Island. An outbreak in French Polynesia followed six years later. Last November officials in that country reexamined the cases of microcephaly that followed the outbreak. Before the outbreak, about one case of microcephaly was reported each year. In 2014-15 officials found 17 cases of fetuses and infants with "central nervous system malformations," which includes microcephaly.

As the case connecting Zika to serious health effects builds, the world would love a vaccine or treatment for the virus. But because so few have studied Zika, drug developers currently have few tools to work with. For example, there's no commercially available, U.S. Food & Drug Administration-approved test to screen for Zika virus.

Tracking Zika in people is hard because it's difficult to determine that they're infected with Zika and not a related flavivirus or that they're not infected with more than one virus, says Priscilla L. Yang, a flavivirus expert at Harvard Medical School. Simultaneous infection with Zika and another virus could cause health effects that haven't been seen before.

Scientists can use polymerase-chain-reaction-based methods to distinguish Zika from other flaviviruses. But those tests are accurate only during the short window patients still have the virus in their system—about seven days after infection. By the time a patient has symptoms that warrant a visit to the doctor, the virus is no longer circulating in their bloodstream, Yang notes.

Another option is to look for antibodies against the virus. But Zika and dengue are closely enough related that antibodies to Zika also recognize dengue and vice versa. Making a definitive diagnosis based on antibodies is possible but becomes time consuming and laborious, Yang says.

For scientists who have compounds that might be effective against Zika, actually testing them has been tough. "We have small molecules that seem to be broadly acting against dengue and West Nile virus," Yang says. "We want to test them, but getting access to the live virus has been hard." She's heard that certain labs known to have the Zika virus have been bombarded with hundreds of requests from researchers.

Even if someone manages to access the live virus and can find a compound that kills it in cells, the researcher will hit another roadblock: To date, no one has published practical animal models of Zika virus to screen potential therapies against. Yang points to a paper from the 1970s in which scientists did an intracranial injection of Zika virus in newborn mice, but she notes that is a poor model because many small molecules can't slip past the blood-brain barrier.

"We're basically starting from scratch on this one, unfortunately," says Sina Bavari, chief scientific officer (CSO) at the U.S. Army Medical Research Institute of Infectious Diseases. Bavari and colleagues are currently working with pharma companies to see if they have any compounds that inhibit Zika replication in cells.

They're primarily interested in compounds that have passed the hurdles of Phase I or Phase II clinical trials but are sitting idle for business reasons. That's because it can take upwards of a year and a half just to get a new compound ready for Phase I. "My worry is that by the time we get something out the door, this outbreak will have already burned out," Bavari says.

Scientists are also grappling with this question: If only 80% of people infected with Zika have symptoms, who would get the treatment? The most vulnerable patients are pregnant women, but Bavari points out, there's a high bar when it comes to approving a medication that can be given to them. "They don't even want to drink caffeine," he says.

Other scientists are working to develop a vaccineagainst the Zika virus. Earlier this month President Barack Obama said he would ask Congress for $1.8 billion to combat Zika at home and abroad. Of those funds, $200 million would be used for vaccine development. The U.S. National Institute of Allergy & Infectious Diseases, Sanofi Pasteur, and NewLink Genetics are among the heavy-hitters in the vaccine field who've said they'll step up to the plate.

Even so, it could take three to five years before a vaccine is ready, experts say. Thomas P. Monath, CSO of NewLink's infectious disease division, led that firm's efforts to develop an Ebola vaccine and was CSO at Acambis, where he worked on vaccines for dengue and yellow fever. Monath tells C&EN he thinks a large field trial of 10,000 to 20,000 people across multiple sites will be necessary to determine efficacy once a Zika vaccine is developed. "Only after those trials would you contemplate doing studies in pregnant women," he says.

Monath also says because so many people who are infected with Zika never show any symptoms, it is more difficult to determine whether the vaccine has actually prevented infections. Still, he thinks a large enough trial should be conclusive.

But some scientists say the emphasis on vaccines is misplaced. "We just don't know enough about Zika virus right now to run around and vaccinate people," Bavari says. "Understanding the immunopathology and immunology behind it would be really prudent before starting a full vaccination program."

Harvard's Yang says developing a vaccine for every emerging virus is impractical. "Vaccines are, for the most part, specific. You have one virus and you

Harvard's Yang says developing a vaccine for every emerging virus is impractical. "Vaccines are, for the most part, specific. You have one virus and you have one vaccine for it," she explains. "I don't think we'll ever have the luxury of enough resources to get a vaccine against every single possible emerging virus or enough time to do it in a reactive way."

One area that's not getting as much attention, she says, is development of broadly acting antivirals that could keep a virus in check while the immune system fights it off. Classical antivirals go after a single viral enzyme, but viruses are quick to develop resistance to them. "If people could identify targets that have the potential to be effective against multiple viral pathogens, it could be game-changing," Yang says.

H. Alex Brown, a Vanderbilt University professor who works on antivirals, agrees. "There are so many viruses out there. We need to be working on a much more broad-spectrum approach to infectious disease," he says. "If we can develop more tools to combat broad categories of viruses, I think we would be much better off than we are today."

[note - H. ALex Brown died in 2017 : https://www.asbmb.org/asbmb-today/people/090117/h-alex-brown-1960-2017]

In the meantime, scientists agree that the research community needs to be more organized if it's going to have a real shot at combating Zika. Yang thinks the first steps should be figuring out how to get the necessary reagents to the labs that need them and agreeing on standards so they can compare results and learn from each other's work. "If you actually want to have some sort of impact, we all need to work together," she says. In an encouraging sign, earlier this month, major scientific institutions and top research journals agreed to share data relevant to Zika virus.

Bavari agrees scientists need to be better at organizing their efforts, but he has doubts about the direction the community is taking. "The outbreak is moving so quickly that I am worried people will jump and we won't do the correct research," he says.

2/16/2016 - Session 2: Monath

Feb 19, 2016

https://www.youtube.com/watch?v=zzJaj3RKZuY

NASEM Health and Medicine Division

Scott C. Weaver, John Sealy Distinguished University Chair in Human

Infections and Immunity, University of Texas Medical Branch

2019 (Aug 22) - Crozet BioPharma announces $10.8 million agreement to support development of single dose Nipah virus vaccine through partnership with Public Health Vaccines

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thier one and only news release- https://www.crozetbiopharma.com/news-1

Devens, MA, USA; August 22, 2019— Crozet BioPharma, LLC (Crozet) announced today a $10.8 million total value partnering agreement with Public Health Vaccines, LLC (PHV) to advance the development and manufacture of a vaccine against the Nipah virus, listed as a priority pathogen by the World Health Organization.1

The Coalition for Epidemic Preparedness Innovations (CEPI) has granted PHV funding to support pre-clinical development, manufacturing, clinical advancement through Phase 2, and establishment of an investigational stockpile of the vaccine candidate worth up to $43.6 million.2 PHV, a Cambridge-based biotechnology firm, has partnered with Crozet to provide core technical and strategic development services to the program.

Crozet, in collaboration with PHV, will engage its expert team of vaccine developers and manage a coalition of partners to develop the rVSV-Nipah vaccine. This includes design and oversight of critical technical elements of the development program including manufacturing and quality control of the vaccine, nonclinical safety and efficacy studies, tests for measuring immune responses, and Phase 1 and 2 clinical trials.

Dr. Thomas Monath, Managing Partner and Chief Scientific Officer at Crozet Biopharma said: "The Crozet team spent several years developing the successful rVSV-ZEBOV Ebola vaccine. That expertise will greatly facilitate advancement of the rVSV-Nipah vaccine. We look forward to our partnership with PHV, support from CEPI, and the opportunity to work with an extraordinary coalition of experts to develop a rVSV-Nipah vaccine candidate. "

The vaccine candidate was developed by [**Dr. Heinz Ulrich Feldmann (born 1959)**] within the Laboratory of Virology, Division of Intramural Research, National Institute of Allergy and Infectious Diseases (NIAID), part of the National Institutes of Health, and has been licensed to PHV by NIAID. The recombinant vesicular stomatitis virus (rVSV) vaccine candidate expressing a type of Nipah-virus protein (known as glycoprotein G) is designed to induce protection against the virus after a single dose.

Nipah virus, a bat-borne virus, can spread to humans and cause brain inflammation and pneumonia with a high mortality. Epidemics of the disease have emerged during the last 20 years in India, Southeast Asia and the western Pacific.

Dr. D. Gray Heppner, Crozet's Chief Medical Officer said: "Nipah virus infection causes a dreadful disease for which there is no treatment. The Crozet team believes all people at risk of Nipah disease deserve the protection of a safe, effective vaccine."

About Crozet BioPharma

Crozet BioPharma, LLC, headquartered in Devens, Massachusetts, is a biotechnology company developing medical countermeasures for infectious disease and cancer. Crozet's team includes individuals with deep industry experience demonstrated by their collective track record and experience developing ten licensed vaccines. While at NewLink Genetics, the Crozet team enabled transfer of the technology to Merck, obtained over $100 million in funding and supported Merck's advanced development of the rVSV-EBOV Ebola vaccine. Most recently, Crozet has partnered with PHV to support delivery of PHV's rVSV-Marburg and rVSV-Nipah vaccine candidates. For more information, visit the company's website at www.crozetbiopharma.com.

About PHV

Public Health Vaccines, LLC. (PHV), headquartered in Cambridge, Massachusetts, is a privately-held biotechnology company developing vaccines for the prevention and control of emerging infectious diseases. For more information, visit the company's website at www.phvaccines.com.

2020 (July 22) - "The Origin of COVID-19 and Why It Matters"

PDF : [HI002B][GDrive]

american-society-of-tropical-medicine-and-hygiene

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The Origin of COVID-19 and Why It Matters

David M. Morens,1,2,* Joel G. Breman,3 Charles H. Calisher,4 Peter C. Doherty,5 Beatrice H. Hahn,6,7 Gerald T. Keusch,8,9,10 Laura D. Kramer,11,12 James W. LeDuc,13 Thomas P. Monath,3,14 and Jeffery K. Taubenberger15

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Perspective Piece

The Origin of COVID-19 and Why It Matters

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Abstract. The COVID-19 pandemic is among the deadliest infectious diseases to have emerged in recent history. As with all past pandemics, the specific mechanism of its emergence in humans remains unknown. Nevertheless, a large body of virologic, epidemiologic, veterinary, and ecologic data establishes that the new virus, SARS-CoV-2, evolved directly or indirectly from a β-coronavirus in the sarbecovirus (SARS-like virus) group that naturally infect bats and pangolins in Asia and Southeast Asia. Scientists have warned for decades that such sarbecoviruses are poised to emerge again and again, identified risk factors, and argued for enhanced pandemic prevention and control efforts. Unfortunately, few such preventive actions were taken resulting in the latest coronavirus emergence detected in late 2019 which quickly spread pandemically. The risk of similar coronavirus outbreaks in the future remains high. In addition to controlling the COVID-19 pandemic, we must undertake vigorous scientific, public health, and societal actions, including significantly increased funding for basic and applied research addressing disease emergence, to prevent this tragic history from repeating itself.

In 2007, scientists studying coronaviruses warned: "The presence of a large reservoir of SARS-CoV–like viruses in horseshoe bats... is a time bomb. The possibility of the re-emergence of SARS and other novel viruses... should not be ignored."[1]

Few paid attention following the disappearance of SARS after the initial outbreak in 2002. Now, 18 years later, COVID-19 has emerged as the deadliest respiratory disease pandemic since 1918, when the "Spanish" influenza pandemic killed an estimated 50 million people.[2] We need to understand what happened so that we can prevent it from happening again, and be better prepared to contain similar pandemics at their outsets.

EMERGENCE OF THE COVID-19 PANDEMIC

The agent of COVID-19, SARS-CoV-2, was named after the genetically related SARS-CoV (more recently distinguished by some as SARS-CoV-1), which caused a deadly near-pandemic in 2002–2003.[3] Before 2019, neither SARS-CoV-2 nor its genetic sequences had ever been identified in viruses of humans or animals.

Even so, scientific research conducted over the last two decades provides clues about how and why the COVID-19 pandemic appeared. We must understand these critically important scientific findings, described in the following text, so that we can better address significant existential risks we will continue to face for the foreseeable future.

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HOW VIRAL DISEASES EMERGE

Viruses are compact nucleic acid packages of either DNA or (in the case of coronaviruses) RNA associated with proteins, and in some cases with lipids. Viruses are not living organisms and can only reproduce inside living cells susceptible to viral entry and with the capacity to replicate viral nucleic acids and translate nucleic acid signals into amino acids to build viral proteins. Viruses are therefore nonliving self-contained genetic programs capable of redirecting a cell's machinery to produce more of themselves.

It follows that when a virus enters a human cell for the first time, it has very recently been transmitted from cells of some other host, that is, from another animal or, for example, an insect vector. Emergence of a pathogen between a vertebrate or an insect has been referred to as host-switching, sometimes described as a spillover event. Most of the human viral and nonviral infectious diseases that have existed for centuries—measles, influenza, cholera, smallpox (eradicated in 1980), falciparum malaria,[4] dengue, HIV, and many others—originated by animal-to-human host-switching.[5] The complex genetic events that underlie host-switching differ greatly from pathogen to pathogen, but general mechanisms have been recognized for many.[6–9]

Host-switching determinants prominently include social, environmental, and biological factors providing the opportunity for host–species interaction; shared host cell receptors; genetic distance between transmitting and receiving hosts; and characteristics and complexity of the viral quasi-species or viral swarm. (RNA viruses in particular are not transmitted to multiple cells as identical virions, but as collections of thousands of different genetically related virions. The ever-changing complexity of the viral swarm varies among species, genetically distinct but related individuals of the same species, and in single hosts over time.)

[HI002C][GDrive]

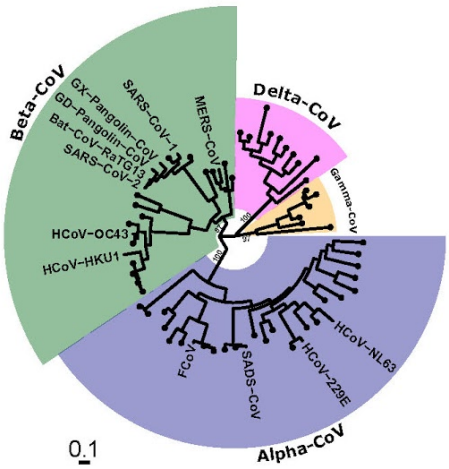


FIGURE 1. Phylogenetic relationships of selected coronaviruses of medical and veterinary importance. Human SARS-CoV and SARS-CoV-2 are closely related to numerous bat and pangolin coronaviruses in a viral genetic grouping called sarbecoviruses, which contains many other viruses very closely related to SARS-CoV and SARS-CoV-2. These viruses belong to the order *Nidovirales*, family *Coronaviridae*, subfamily *Coronavirinae* and the four genera *Alphacoronavirus*, *Betacoronavirus*, *Gammacoronavirus*, and *Deltacoronavirus*. The betacoronaviruses are comprised of two subgenera, *Sarbecovirus* and *Merbecovirus*. The former include SARS-CoV and SARS-CoV-2; the latter includes Middle East respiratory syndrome-related coronavirus (MERS-CoV). Image created by Sebastian M. Gygli, Ph.D., NIAID, NIH, and used with permission.

Studying animal viruses that have previously spilled over into humans provides clues about host-switching determinants. A well-understood example is influenza virus emergence into humans and other mammals.[2] Human pandemic and seasonal influenza viruses arise from enzootic viruses of wild waterfowl and shore birds. From within this natural reservoir, the 1918 pandemic "founder" virus somehow host-switched into humans. We know this from genetic studies comparing avian viruses, the 1918 virus, and its descendants, which have caused three subsequent pandemics, as well as annual seasonal influenza in each of the 102 years since 1918. Similarly, other avian influenza viruses have host-switched into horses, dogs, pigs, seals, and other vertebrates, with as yet unknown pandemic potential.[2,10,11] Although some molecular host-switching events remain unobserved, phylogenetic analyses of influenza viruses allow us to readily characterize evolution and host-switching as it occurs in nature.[2]

CORONAVIRUSES

Coronaviruses are RNA viruses globally distributed in a large but unknown number of animal species. Coronaviruses important for humans are found within phylogenetically distinct taxonomic subgroups, labeled as the α- and β-coronaviruses (Figure 1).[12] Four endemic human coronaviruses, which emerged at some undetermined time in the past, cause (mostly) mild self-limited upper respiratory tract infections (Figure 1).

RECENT CORONAVIRUS EMERGENCES FROM ANIMALS INTO HUMANS

Until recently, relatively little was known about coronaviruses, and research interest in these common cold viruses was minimal. Eighteen years ago, a previously unknown β-coronavirus named SARS-CoV suddenly emerged. Following its initial appearance in China it spread to 29 other countries, causing a near-pandemic and killing 813 of the 8,809 people with confirmed infection before being controlled by aggressive public health measures. It has not been seen since. In 2012, however, another previously unknown β-coronavirus named Middle East respiratory syndrome coronavirus (MERS-CoV), and closely related to SARS-CoV, emerged to cause high case-fatality human infections. Fortunately, this virus does not efficiently transmit between humans, and cases have been largely limited to the Middle East where its intermediary host, the dromedary camel, is present in relatively high numbers. In 2016, yet another novel bat-origin coronavirus, an α-coronavirus, emerged in China to cause a novel epizootic disease in pigs, termed swine acute diarrhea syndrome coronavirus (SADS-CoV). And most recently, at least as early as late November 2019, SARS-CoV-2 was recognized and became the third fatal bat virus–associated human disease

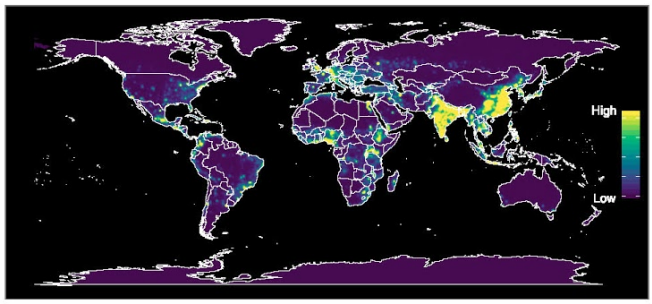


FIGURE 2. Predicted global hotspots for disease emergence, showing estimated risks, adjusted for reporting bias. From a comprehensive global study combining multiple data sources. Reproduced with permission from Allen et al.[14]

[HI002D][GDrive]

https://www.youtube.com/watch?v=ITELu0TdJZA

Laura Kahn - Meat, Monkeys, and Mosquitoes: A One Health Perspective on Emerging Diseases

Dec 14, 2017

CSER Cambridge

Agriculture is the foundation of civilization. Food security from agriculture enabled the growth of cities; cities led to nations, and nations discovered the science and technology that allowed our numbers to grow. But agriculture comes with costs including deforestation, environmental destruction, and emerging diseases. Meeting the growing world population's demand for food, especially meat, while ensuring global health and sustainability in an era of climate change is one of the great challenges of the 21st century. One Health is the concept that human, animal, and environmental health are linked. This concept can serve as a framework to analyze the interrelationships between food security, the environment, and emerging diseases. Approximately 75 percent of newly emerging diseases come from animals, called 'zoonoses.' Mosquito-borne zoonoses, such as West Nile virus and Zika virus, exemplify the importance of implementing a One Health approach to interdisciplinary threats. One Health is being embraced worldwide.

Speaker: Laura H. Kahn, MD, MPH, MPP

Research Scholar, Program on Science and Global Security, Woodrow Wilson School of Public and International Affairs, Princeton University

Co-Founder, One Health Initiative

BITCHUTE @Housatonic **YOUTUBE** @HousatonicLive **ODYSEE** @Housatonic **BRIGHTEON** @Housatonic

Dr. Alice E. Moore (born 1908)

Ohio State University, 1928-1929 school year - Profile pic from Sigma Kappa of Alice E. Moore (Age 20)
[HE004G][GDrive]

Wikipedia 🌐 NONE

Born June 1908 in Bellevue, Ohio [HL006S][GDrive]

Associated with :

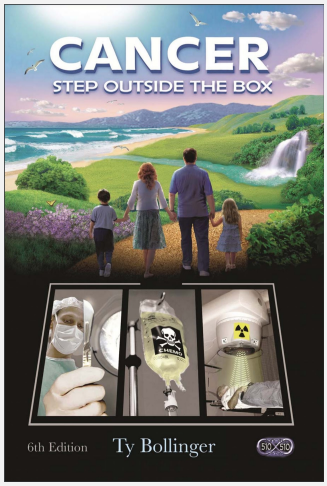
- Dr. Chester Milton Southam (born 1919) (...)
- Dr. Cornelius Packard "Dusty" Rhoads (born 1898) (...)
- Dr. Charlotte Friend (born 1921) (...)
- Dr. Thomas Francis Jr. (born 1900) (...)
- Dr. Jonas Edward Salk (born 1914) (...)
- Dr. Albert Bruce Sabin (born 1906) (...)
- Dr. Hilary Koprowski (born 1916) (Moore helped provide mice and virus for Dr. Hilary Koprowski (born 1916)'s 1952 "LATENT OR DORMANT VIRAL INFECTIONS" / NOTE Page 971 Footnote, and the credit to **Dr. Alice E. Moore (born 1908)** : (PDF : [HP005Y][GDrive] / For this page, see [HP0061][GDrive]) : *"The author expresses his grateful appreciation to **Dr. Alice E. Moore**, of the Sloan-Kettering Institute for Cancer Research, for the mice-bearing tumors; and to Dr. Stanley Stellar, of the Department of Neurosurgery, New York School of Medicine, for the human tumors."*)
-

REFERENCES: Books and Research Papers

TESTING ON HUMANS: Southam, Rhoads (boss of Dr. Chester Southam), and a "Gates" connection ? ... But no mention of Dr. Alice Moore ?

SEE Dr. Robert Charles Nowinski (born 1945) / Genetic Systems Corporation for info on the testing at the Fred Hutchinson Cancer Research Center

PDF of book **"Cancer: Step outside the box"** : [HB006A][GDrive]



[HB006B][GDrive]

I used to believe that the “cancer conspiracy” was an unintentional result of the love of money and that there were really no malicious intentions at its roots. However, due to stories like the three that follow, I believe that I was a bit naïve in my initial assessment of the situation.

In 1931, [**Dr. Cornelius Packard "Dusty" Rhoads (born 1898)**], a pathologist from the Rockefeller Institute for Medical Research, purposely infected human test subjects in Puerto Rico with cancer cells, and thirteen of them died. Despite the fact that Rhoads gave a written testimony stating he believed all Puerto Ricans should be killed, **he later established the U.S. Army Biological Warfare facilities in Maryland, Utah and Panama, and was named to the U.S. Atomic Energy Commission, where he began a series of radiation exposure experiments on American soldiers and civilian hospital patients**.

Then, in **1963, Chester M. Southam** (who injected Ohio State Prison inmates with live cancer cells in 1952) performed the same procedure on twenty-two senile, African-American female patients at the Brooklyn Jewish Chronic Disease Hospital in order to watch their immunological response. He told the patients that they were receiving “some cells,” but conveniently left out the fact that they were cancer cells. Ironically, Southam eventually became president of the American Association for Cancer Research!

In 1981, the **Seattle-based** **Genetic Systems Corporation** began an ongoing medical experiment called “Protocol No. 126” in which cancer patients at the **Fred Hutchinson Cancer Research Center** in Seattle were given bone marrow transplants that contained eight experimental proteins made by Genetic Systems, rather than standard bone marrow transplants. As a result, 19 human “subjects” died from complications directly related to the experimental treatment. [**MORE on the research in Seattle that may possibly connect to Gates : See** **Genetic Systems Corporation**] [...]

Sections of book Lab 257...

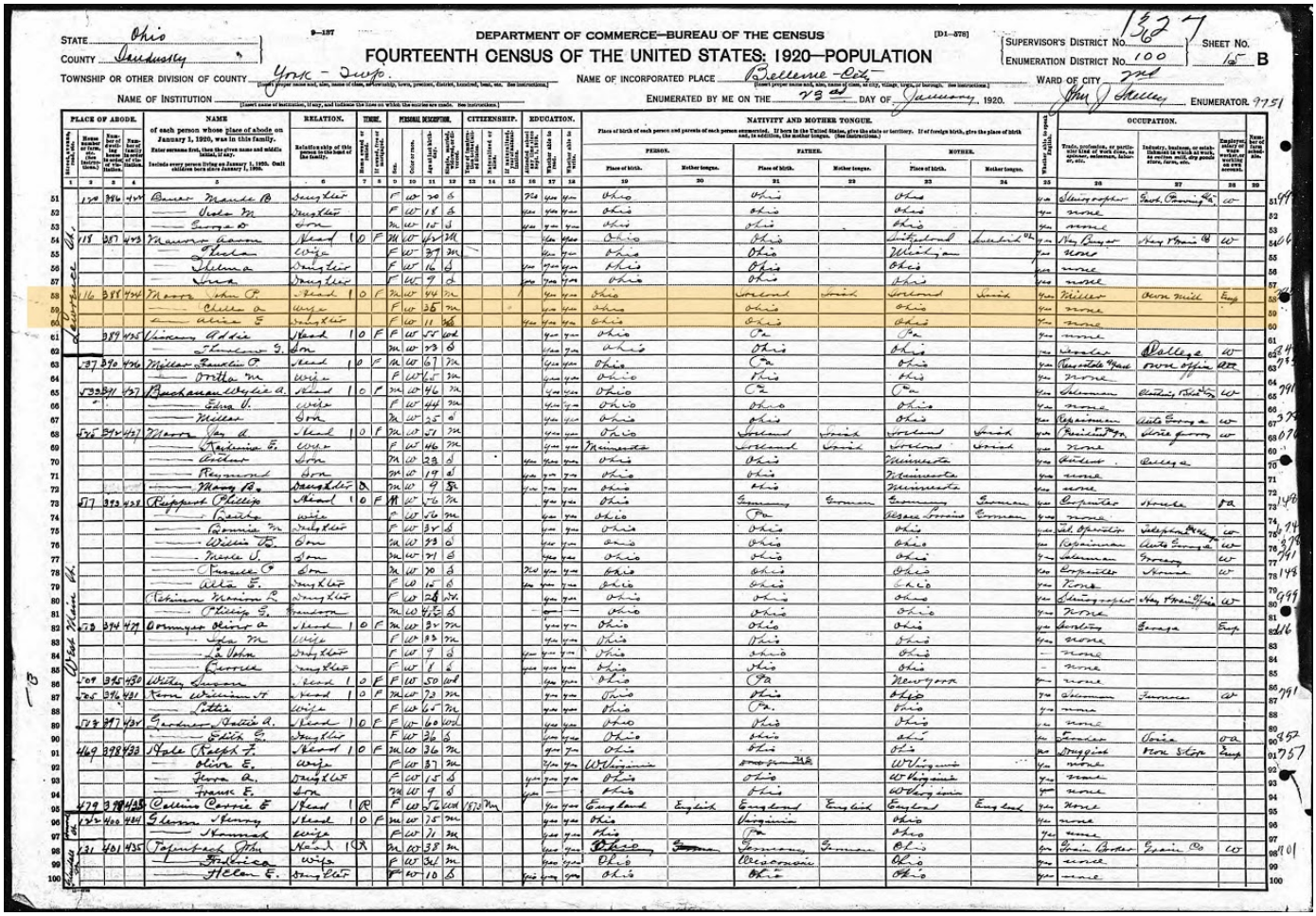
If Dr. Robert Shope had West Nile at Yale in the 1990s, was his "source" of West Nile connected to Dr. Chester Southam or Alice Moore?

Book by Michael Carroll - [HB0033][GDrive]

EVIDENCE TIMELINE

1920 US Census, Bellevue Ohio, Alice E. Moore

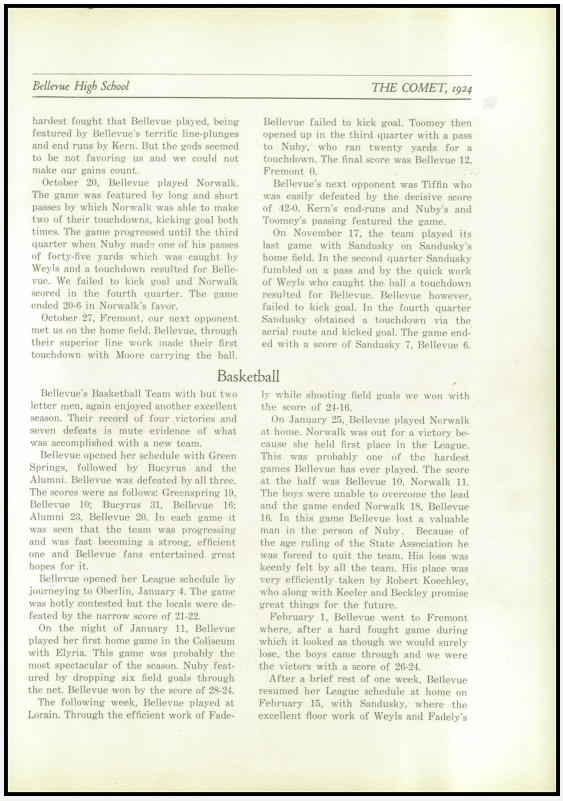
Alice Moore is 11 years old in 1920 / Mother is "Chella A. Moore" , father is John Moore



Full Census sheet : [HS0041][GDrive] / Census sheet cropped, with Moore highlighted (as above) : [HS0042][GDrive]

1923-1924 : Bellevue Ohio High school - As a Sophomore, already basketball star !

Also class president



Bellevue High School THE COMET, 1924

hardest fought that Bellevue played, being featured by Bellevue's terrific line-plunges and end runs by Kern. But the gods seemed to be not favoring us and we could not make our gains count.

October 20, Bellevue played Norwalk. The game was featured by long and short passes by which Norwalk was able to make two of their touchdowns, kicking goal both times. The game progressed until the third quarter when Nuby made one of his passes of forty-five yards which was caught by Weyls and a touchdown resulted for Bellevue. We failed to kick goal and Norwalk scored in the fourth quarter. The game ended 20-6 in Norwalk's favor.

October 27, Fremont, our next opponent met us on the home field, Bellevue, through their superior line work made their first touchdown with Moore carrying the ball. Bellevue failed to kick goal. Toomey then opened up in the third quarter with a pass to Nuby, who ran twenty yards for a touchdown. The final score was Bellevue 12, Fremont 0.

Bellevue's next opponent was Tiffin who was easily defeated by the decisive score of 42-0. Kern's end-runs and Nuby's and Toomey's passing featured the game.

On November 17, the team played its last game with Sandusky on Sandisky's home field. In the second quarter Sandusky fumbled on a pass and by the quick work of Weyls who caught the ball a touchdown resulted for Bellevue. Bellevue however, failed to kick goal. In the fourth quarter Sandusky obtained a touchdown via the aerial route and kicked goal. The game ended with a score of Sandusky 7, Bellevue 6.

Basketball

Bellevue's Basketball Team with but two letter men, again enjoyed another excellent season. Their record of four victories and seven defeats is mute evidence of what was accomplished with a new team.

Bellevue opened her schedule with Green Springs, followed by Bucyrus and the Alumni. Bellevue was defeated by all three. The scores were as follows: Greenspring 19, Bellevue 10; Bucyrus 31, Bellevue 16; Alumni 23, Bellevue 20. In each game it was seen that the team was progressing and was fast becoming a strong, efficient one and Bellevue fans entertained great hopes for it.

Bellevue opened her League schedule by journeying to Oberlin, January 4. The game was hotly contested but the locals were defeated by the narrow score of 21-22.

On the night of January 11, Bellevue played her first home game in the Coliseum with Elyria. This game was probably the most spectacular of the season. Nuby featured by dropping six field goals through the net. Bellevue won by the score of 28-24.

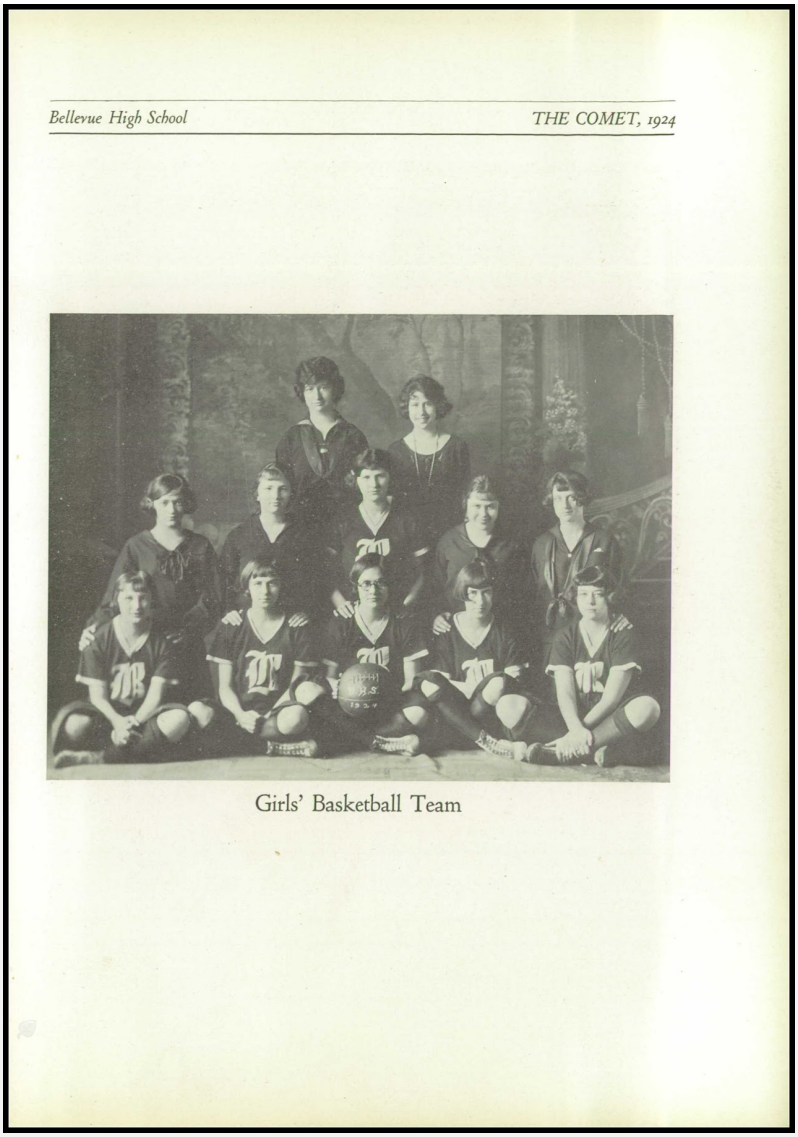
The following week, Bellevue played at Lorain. Through the efficient work of Fadely while shooting field goals we won with the score of 24-16.

On January 25, Bellevue played Norwalk at home. Norwalk was out for a victory because she held first place in the League. This was probably one of the hardest games Bellevue has ever played. The score at the half was Bellevue 10, Norwalk 11. The boys were unable to overcome the lead and the game ended Norwalk 18, Bellevue 16. In this game Bellevue lost a valuable man in the person of Nuby. Because of the age ruling of the State Association he was forced to quit the team. His loss was keenly felt by all the team. His place was very efficiently taken by Robert Koechley, who along with Keeler and Beckley promise great things for the future.

February 1, Bellevue went to Fremont where, after a hard fought game during which it looked as though we would surely lose, the boys came through and we were the victors with a score of 26-24.

After a brief rest of one week, Bellevue resumed her League schedule at home on February 15, with Sandusky, where the excellent floor work of Weyls and Fadely's

1923-1924 : Bellevue Ohio High school Yearbook (Page 57) - Alice E. Moore is a Sophomore, and already the start women's basketball player
[HE004J][GDrive]



Bellevue High School THE COMET, 1924

Girls' Basketball Team

1923-1924 : Bellevue Ohio High school Yearbook (Page 59) - Alice E. Moore is a Sophomore, and already the start women's basketball player
[HE004K][GDrive]

1926-1927 (College Freshman) and 1927-1928 (Sophomore) at Notre Dame ...

Alice Moore later transferred to Ohio State for her Junior and Senior years ; See See PDF for full Sigma Kappa Triangle Volume 38, No2, issue at [HE004B] [GDrive]

1929/1930 - Ohio State University yearbooks, SIGMA KAPPA - 1929 (Junior), 1930 (Senior)

ΣK

Founded at
Waterville, Maine, 1874
42 Active Chapters

Chi Chapter,
May 17, 1919
2051 Iuka Avenue

The Sigma Kappas are the proud possessors of one of the most beautiful sorority houses on the campus, with a little lily pond in the rear of the house. It is located in one of the pretty spots on Iuka. Frances Kirkpatrick and Alice Prout are some of their prominent girls on the campus, and Nina Sargent with her attractive southern brogue adds much to their chapter.

SIGMA KAPPA

MEMBERS IN FACULTY

Mildred Watson — Pearle Williams

CLASS OF 1929

Jane Creager, Eleanor Bakes, Georgia Bower, Margaret Jones, Dorothy Wilson, Martha Middleton, Martha Peters, Isabel Young, Alice Prout, Portia Steele

CLASS OF 1930

Marian Black, Kathryn Marion, Alice Moore, Agnes Warner

CLASS OF 1931

Ellen Fulmer, Nina Runyan, Marie Williams, Edna Wolfe

PLEDGES

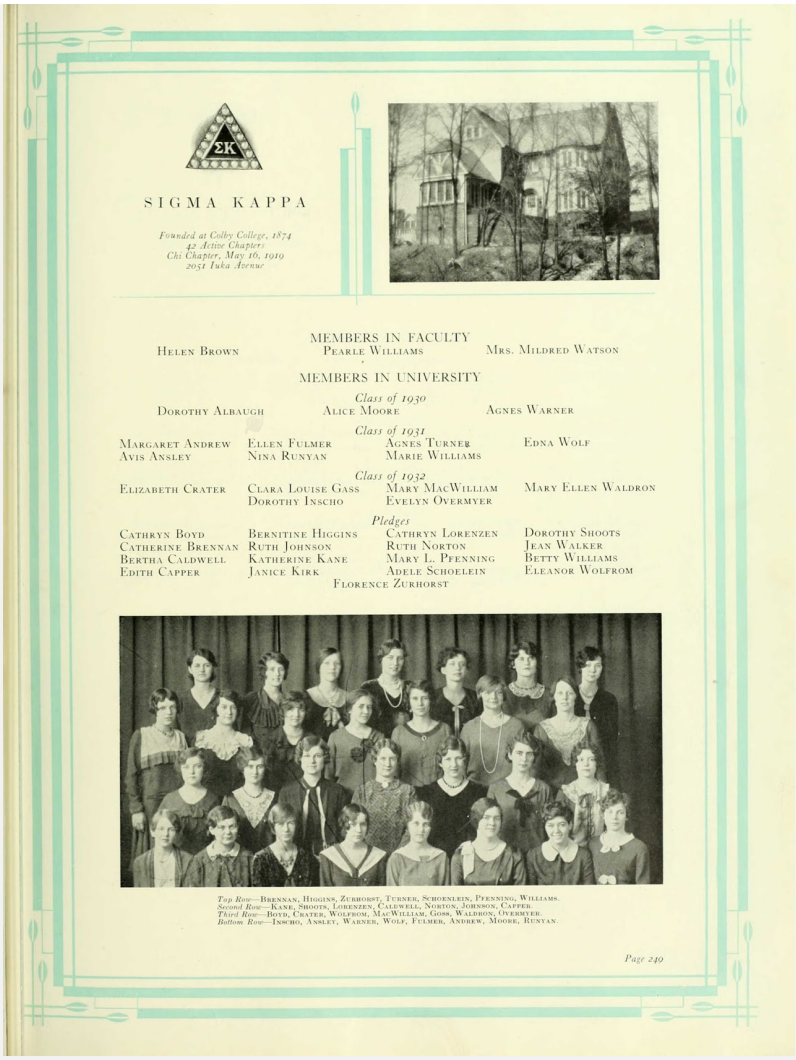
Dorothy Albaugh, Avis Ansley, Marian Clarke, Elizabeth Crater, Edith Ellis, Doris Giller, Ruth Gutches, Clara Goss, Alberta Yoerger, Dorothy Inscho, Martha McBride, Sue Ranier, Jane Shepard, Margaret Sines, Martha Smith, Ellen Teachout, Mary Waldron

Smith, Crater, Shepard, Williams, Warner, Williams, Marion, Ranier, Black, Clarke, Gutches, Runyan, Steele, Yoerger, Moore, Prout, Giller, Blakes, McBride, Fulmer, Sheldon, Ellis, Inscho, Ansley, Creager, Bower, Teachout, Goss, Wolfe, Jones

[260]

Ohio State University, 1928-1929 school year
[HE004F][GDrive]

Ohio State University, 1928-1929 school year - Profile pic from Sigma Kappa of Alice E. Moore (Age 20)
[HE004G][GDrive]



SIGMA KAPPA

Founded at Colby College, 1874
42 Active Chapters
Chi Chapter, May 16, 1919
2051 Iuka Avenue

MEMBERS IN FACULTY

Helen Brown — Pearle Williams — Mrs. Mildred Watson

MEMBERS IN UNIVERSITY

Class of 1930

Dorothy Albaugh — Alice Moore — Agnes Warner

Class of 1931

Margaret Andrew, Avis Ansley — Ellen Fulmer, Nina Runyan — Agnes Turner, Marie Williams — Edna Wolf

Class of 1932

Elizabeth Crater — Clara Louise Gass, Dorothy Inscho — Mary MacWilliam, Evelyn Overmyer — Mary Ellen Waldron

Pledges

Cathryn Boyd, Catherine Brennan, Bertha Caldwell, Edith Capper — Bernitine Higgins, Ruth Johnson, Katherine Kane, Janice Kirk — Florence Zurhorst — Cathryn Lorenzen, Ruth Norton, Mary L. Pfenning, Adele Schoelein — Dorothy Shoots, Jean Walker, Betty Williams, Eleanor Wolfrom

Top Row—Brennan, Higgins, Zurhorst, Turner, Schoenlein, Pfenning, Williams.
Second Row—Kane, Shoots, Lorenzen, Caldwell, Norton, Johnson, Capper.
Third Row—Boyd, Crater, Wolfrom, MacWilliam, Gass, Waldron, Overmyer.
Bottom Row—Inscho, Ansley, Warner, Wolf, Fulmer, Andrew, Moore, Runyan.

Page 240

Ohio State University, 1929-1930 school year
[HE004H][GDrive]

Ohio State University, 1929-1930 school year - Profile pic from Sigma Kappa of Alice E. Moore (age 21)
[HE004I][GDrive]

1930 (Mar 4) - Graduation at Ohio state (Bachelor's degree)

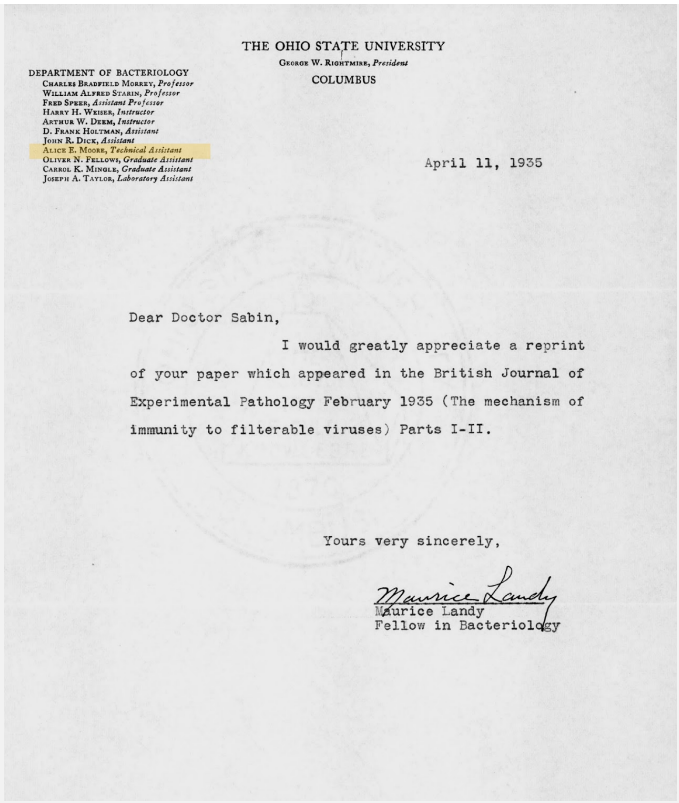
https://www.newspapers.com/image/4647094/?terms=%22Alice%20E.%20Moore%22&match=1

1934 (Jul) - Back at Ohio state (enrolled in Ohio state summer quarter)

https://www.newspapers.com/image/4729038/?terms=%22Alice%20E.%20Moore%22&match=1

1935 (April) - Currently a technical assistant, Dept. of bacteriology, Ohio State University

- Request (PDF : [HE0046][GDrive]) for research info from **Dr. Albert Bruce Sabin (born 1906)** , the developer of the oral Polio Vaccine
- Request was for *"The mechanism of immunity to filterable viruses, Parts I - II"* - https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2065086/?page=1



THE OHIO STATE UNIVERSITY
GEORGE W. RIGHTMIRE, *President*
COLUMBUS

DEPARTMENT OF BACTERIOLOGY
CHARLES BRADFIELD MORREY, *Professor*
WILLIAM ALFRED STARIN, *Professor*
FRED SPEER, *Assistant Professor*
HARRY H. WEISER, *Instructor*
ARTHUR W. DERR, *Instructor*
D. FRANK HOLTMAN, *Assistant*
JOHN R. DICK, *Assistant*
ALICE E. MOORE, *Technical Assistant*
OLIVER N. FELLOWS, *Graduate Assistant*
CARROL K. MINGLE, *Graduate Assistant*
JOSEPH A. TAYLOR, *Laboratory Assistant*

April 11, 1935

Dear Doctor Sabin,

I would greatly appreciate a reprint of your paper which appeared in the British Journal of Experimental Pathology February 1935 (The mechanism of immunity to filterable viruses) Parts I-II.

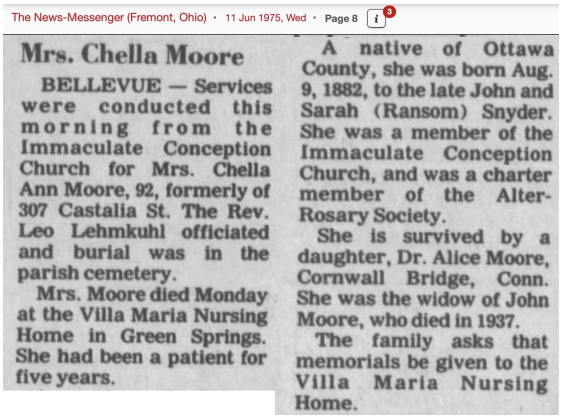
Yours very sincerely,

Maurice Landy

Maurice Landy
Fellow in Bacteriology

[HE0047][GDrive]

1937 - Father passes / Mother transfers property



The News-Messenger (Fremont, Ohio) · 11 Jun 1975, Wed · Page 8

Mrs. Chella Moore

BELLEVUE — Services were conducted this morning from the Immaculate Conception Church for Mrs. Chella Ann Moore, 92, formerly of 307 Castalia St. The Rev. Leo Lehmkuhl officiated and burial was in the parish cemetery.

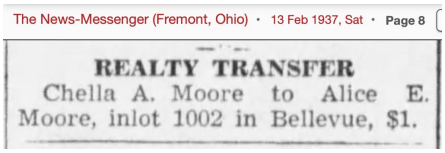
Mrs. Moore died Monday at the Villa Maria Nursing Home in Green Springs. She had been a patient for five years.

A native of Ottawa County, she was born Aug. 9, 1882, to the late John and Sarah (Ransom) Snyder. She was a member of the Immaculate Conception Church, and was a charter member of the Alter-Rosary Society.

She is survived by a daughter, Dr. Alice Moore, Cornwall Bridge, Conn. She was the widow of John Moore, who died in 1937.

The family asks that memorials be given to the Villa Maria Nursing Home.

Father John Moore passed in 1937, as noted in this 1975 newspaper clip
Full page : [HN01K6][GDrive] / Clip : [HN01K7][GDrive]



The News-Messenger (Fremont, Ohio) · 13 Feb 1937, Sat · Page 8

REALTY TRANSFER

Chella A. Moore to Alice E. Moore, inlot 1002 in Bellevue, $1.

1937 - property transfer, from mother (perhaps related to passing of father)
Full page : [HN01K8][GDrive] / Clip : [HN01K9][GDrive]

1936 (est?) - Alice Moore moves to New York City

Opportunity to work for **Dr. Thomas Francis Jr. (born 1900)** at **International Health Division of Rockefeller**

"[Alice Moore] found out quite a bit about infections and germs by working on animals -- but not quite enough. When she was awarded a Fellowship in Bacteriology she moved over to that department and got her M.A. ***Then came the chance to go to New York and work as a technician in the International Health Division at Rockefeller under [Dr. Thomas Francis Jr. (born 1900)] who has done the primary work on epidemic influenza." [...]"*** See See PDF for full Sigma Kappa Triangle Volume 38, No2, issue at [HE004B][GDrive]

Notes:

1. Alice Moore is age 27, Dr. Thomas Francis is age 36
2. Dr. Thomas Francis in 1935-1936 was working closely with **Dr. Richard Edwin Shope (born 1901)** , as shown in this influenza research : [HI0031][GDrive]
3. **Dr. Thomas Francis Jr. (born 1900)** was a later a mentor to **Dr. Jonas Edward Salk (born 1914)** starting at the University of Michigan in 1942

1938 - Dr. Francis joins New York University College of Medicine

See **Dr. Thomas Francis Jr. (born 1900)** : *"From 1938 to 1941 he was professor of bacteriology and chair of the department of the New York University College of Medicine."*

1938 - Alice Moore moves to New York University College ; Continues work for Dr. Thomas Francis

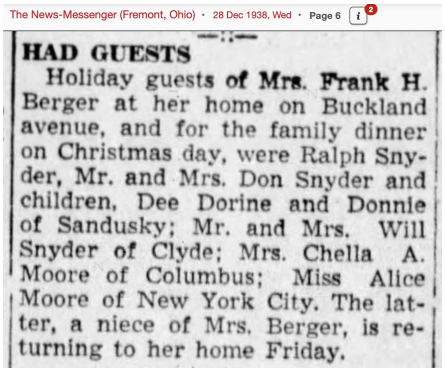
"When [Dr. Thomas Francis Jr. (born 1900)] joined the staff of New York University and transferred his carefully nurtured influenza viruses there, [Alice Moore] went to work there. *Flasks held these valuable remnants of infectious particles.* ***They had to be nourished to be kept alive so that scores of mice, monkeys, and ferrets could be infected every week in order to find out the nature of the virus and therefore prevent the disease."*** See See PDF for full Sigma Kappa Triangle Volume 38, No2, issue at [HE004B][GDrive]

1938 (Dec 28) - Alice Moore still in New York City

https://www.newspapers.com/image/304389399/

https://drive.google.com/file/d/15U69aA9eGewhrftm-yeQRUy9Xi2ZWRcl/view?usp=sharing

1938-12-28-the-fremont-news-messenger-ohio-pg-6-clip-moore https://drive.google.com/file/d/1V-V76vs-MXGHEHFdZzwa5V6WigLwMROG/view?usp=sharing



The News-Messenger (Fremont, Ohio) · 28 Dec 1938, Wed · Page 6

HAD GUESTS

Holiday guests of Mrs. Frank H. Berger at her home on Buckland avenue, and for the family dinner on Christmas day, were Ralph Snyder, Mr. and Mrs. Don Snyder and children, Dee Dorine and Donnie of Sandusky; Mr. and Mrs. Will Snyder of Clyde; Mrs. Chella A. Moore of Columbus; Miss Alice Moore of New York City. The latter, a niece of Mrs. Berger, is returning to her home Friday.

1940 (Aug) - Research publication at New York Univ. - With Dr. Thomas Francis Jr. - " A Study of the neurotropic tendency in strains of the virus of Epidemic Influenza"

This is the first published research with Alice E. Moore's name on it / Source of PDF : [HE0043][GDrive]

- **Dr. Thomas Francis Jr. (born 1900)** is the first person to isolate influenza virus in the United States
- Dr. Thomas Francis in 1935-1936 was working closely with **Dr. Richard Edwin Shope (born 1901)** , as shown in this influenza research : [HI0031] [GDrive]
- **Dr. Thomas Francis Jr. (born 1900)** was a later a mentor to **Dr. Jonas Edward Salk (born 1914)** starting at the University of Michigan in 1942

A STUDY OF THE NEUROTROPIC TENDENCY IN STRAINS OF THE VIRUS OF EPIDEMIC INFLUENZA*

By THOMAS FRANCIS, Jr., M.D., and ALICE E. MOORE

(From the Department of Bacteriology, College of Medicine, New York University, New York)

(Received for publication, August 13, 1940)

In our laboratory repeated efforts to adapt the virus of epidemic influenza to the brains of mice had been completely unsuccessful. The virus ordinarily failed after intracerebral inoculation to survive in the brain more than one or two days. Cerrutti (1), however, reported the recovery of virus from the brains of mice infected intranasally. Subsequently, Daddi and Pavà (2), and Cerrutti and di Aichelburg (3) noted that influenza virus survived in the brains of rabbits without producing symptoms. Finally, Stuart-Harris (4) described the development of a variant which produced a fatal neurological infection in the brains of mice after intracerebral inoculation. This variant was derived in the following manner: The W.S. strain maintained by pulmonary infection in mice was transferred to the chorioallantois of the developing chick. After 14 transfers on this tissue, hemorrhagic encephalitis of the embryo was noted and on the 21st transfer mice were inoculated intracerebrally. Serial passages at 2 or 3 day intervals were then made in mice until the 12th passage, after which neurological symptoms and deaths occurred regularly. During this entire period the presence of influenza virus was demonstrated by the occurrence of typical lesions in the lungs of mice receiving the same material intranasally.

These observations indicated that the success of the latter experiments was due to an adaptation of the virus to the nervous tissue of the chick embryo. It was decided, therefore, to attempt a similar adaptation by cultivation of influenza virus in tissue cultures containing embryonic chick brain and either Tyrode's solution or physiological salt solution. Since our earlier unsuccessful attempts had all been made with the PR8 strain while the reported positive results had all been obtained with the W.S. strain, the W.S. strain was used.

* This study was conducted under a grant from the International Health Division of The Rockefeller Foundation.

[HE0044][GDrive]

Materials and Methods

Strains of Virus.—The strains of the virus of epidemic influenza employed in this study had all been maintained in chick embryo tissue cultures for several years. The W.S. strain (5) was chosen for the primary investigation since the positive results mentioned above had been obtained with that strain. The PR8 strain which had yielded consistently negative results in our hands was studied simultaneously.

Subsequently other strains were used: Alaska; Henry, isolated in this country; Talmey, from England (6); Melbourne, from Australia (7); two strains of swine influenza virus, S-15 and S-1976, obtained originally from Dr. R. E. Shope.

Methods of Cultivation.—For ordinary purposes the virus was propagated in the customary medium of minced chick embryo (8), although physiological salt solution was usually substituted for Tyrode's solution (regular medium).

For the preparation of cultures in embryonic chick brain the brain of the embryo was removed, minced, and added to physiological salt solution in the absence of all other tissue (brain culture medium).

In some instances combinations of the two were used (mixed culture medium).

Cultures were incubated for 48 hours when transfers to fresh medium were made.

To determine whether virus was surviving in the different media, portions of the cultures at intervals after the 3rd transfer were inoculated intranasally into mice which were then observed for the development of characteristic pulmonary lesions. Neutralization tests with known immune serum were conducted from time to time for serological identification as well.

Attempts to Cultivate Strains of Epidemic Influenza Virus in Brain Culture Medium

In cultures containing only embryonic chick brain the W.S. strain was maintained with ease for as long as 20 transfers while the PR8 strain, in all of five attempts, had disappeared by the 3rd transfer. In two attempts each with Henry, Talmey, and Swine-1976 strains, and three attempts each with Alaska and Swine-15 strains, the virus failed to survive 3 transfers. It appeared at first, therefore, that the capacity to propagate in a medium of chick embryo brain was a characteristic essentially limited to the W.S. strain. The Melbourne strain, however, appeared to occupy an intermediate position between these extremes. In eight of twelve experiments, the virus survived from 3 to 6 transfers in brain or mixed culture medium but as will subsequently be seen differed from the W.S. in its adaptability to mice.

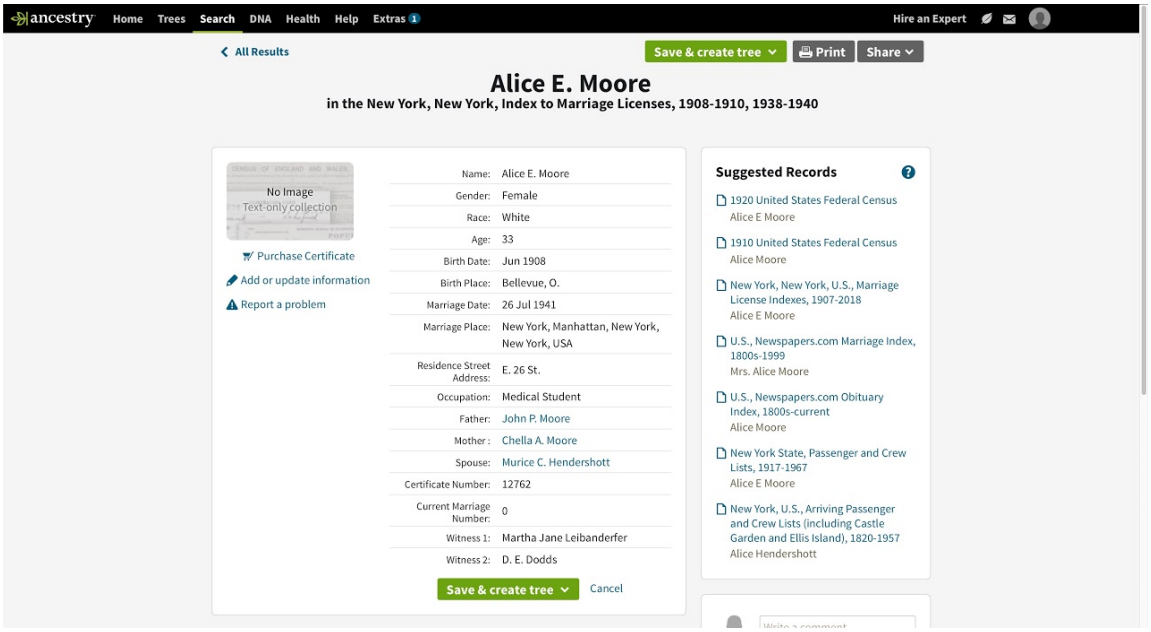
The results of these experiments, summarized in Table I, indicate the sharp differences in ability of different strains to propagate in cultures of brain of the embryonic chick.

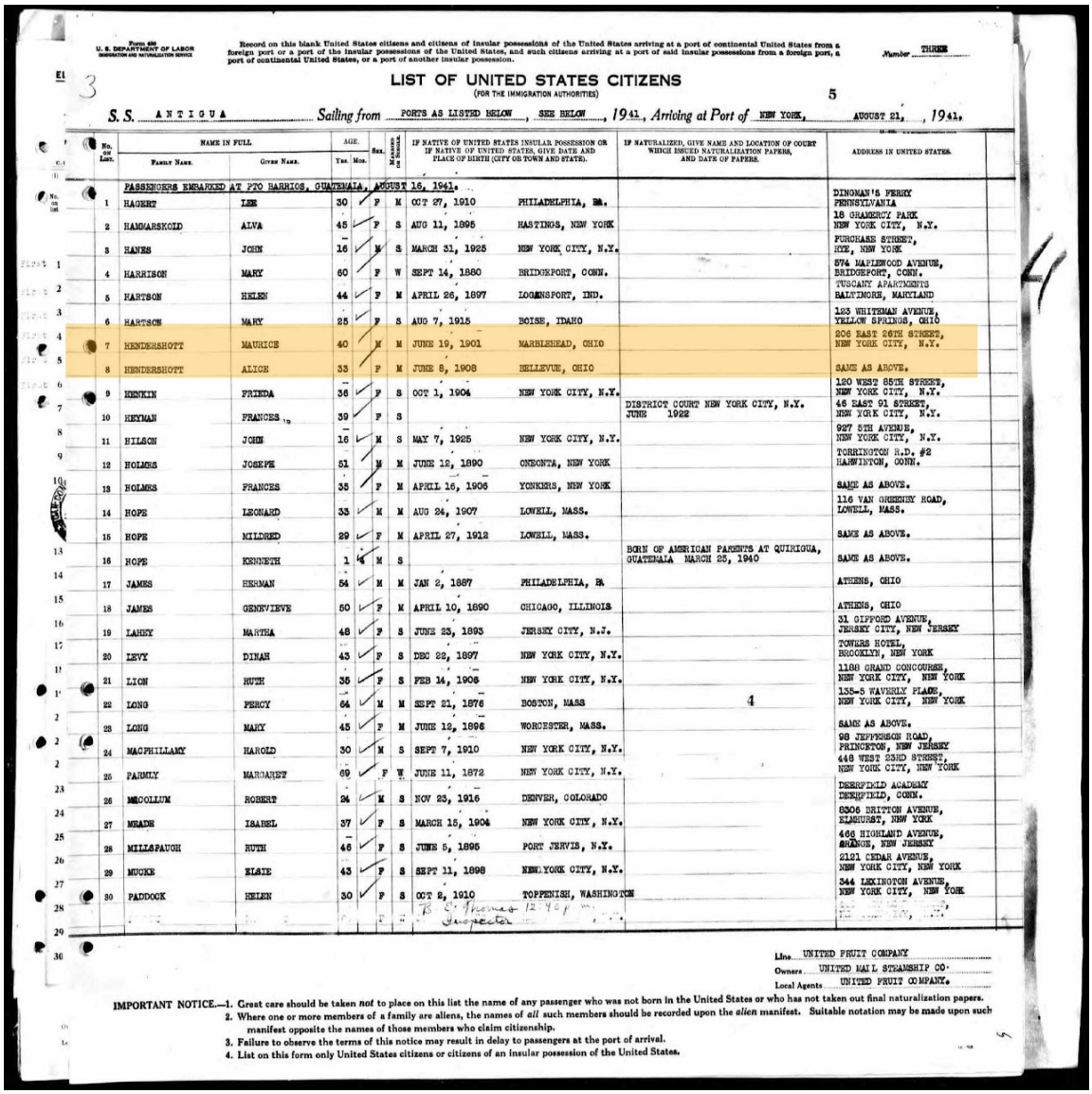
[HE0045][GDrive]

1941 (July 16) - Marriage to Maurice Henderschott ; Honeymoon to Guatemala

Source : Ancestry.com : [HL006S][GDrive]

- Name: Alice E. Moore (Age: 33 / Birth Date: Jun 1908 / Birth Place , Bellevue, Ohio)
- Marriage Date: 26 Jul 1941, in Marriage Place: New York, Manhattan, New York, New York, USA
- Residence Street Address: E. 26 St.
- Occupation: Medical Student
- Father: John P. Moore / Mother : Chella A. Moore
- Spouse: Murice C. Hendershott (from Ohio? Is this him ? https://osupublicationarchives.osu.edu/?a=d&d=LTN19230531-01.2.13&e=-------en-20--1--txt-txIN-------)
- Witnesses : Martha Jane Leibanderfer ; D. E. Dodds
- [Was this the honeymoon - to Guatemala ? See the image below : [HJ0012][GDrive] ..]





LIST OF UNITED STATES CITIZENS
(FOR THE IMMIGRATION AUTHORITIES)

S.S. ANTIGUA Sailing from PORTS AS LISTED BELOW, SEE BELOW, 1941, Arriving at Port of NEW YORK, AUGUST 21, 1941.

Record on this blank United States citizens and citizens of insular possessions of the United States arriving at a port of continental United States from a foreign port or a port of the insular possessions of the United States, and such citizens arriving at a port of said insular possessions from a foreign port, a port of continental United States, or a port of another insular possession.

No. on List	Family Name	Given Name	Age Yrs.	Age Mos.	Sex	Married or Single	If native of United States insular possession or if native of United States, give date and place of birth (city or town and state).	If naturalized, give name and location of court which issued naturalization papers, and date of papers.	Address in United States.
	PASSENGERS EMBARKED AT PTO BARRIOS, GUATEMALA, AUGUST 16, 1941.								
1	HAGERT	LEE	30		F	M	OCT 27, 1910	PHILADELPHIA, PA.	DINGMAN'S FERRY PENNSYLVANIA
2	HAMMARSKOLD	ALVA	45		F	S	AUG 11, 1895	HASTINGS, NEW YORK	18 GRAMERCY PARK NEW YORK CITY, N.Y.
3	HAYES	JOHN	16		M	S	MARCH 31, 1925	NEW YORK CITY, N.Y.	PURCHASE STREET, RYE, NEW YORK
4	HARRISON	MARY	60		F	W	SEPT 14, 1880	BRIDGEPORT, CONN.	574 MAPLEWOOD AVENUE, BRIDGEPORT, CONN.
5	HARTSON	HELEN	44		F	M	APRIL 26, 1897	LOGANSPORT, IND.	TUSCANY APARTMENTS BALTIMORE, MARYLAND
6	HARTSON	MARY	25		F	S	AUG 7, 1915	BOISE, IDAHO	123 WHITEMAN AVENUE, YELLOW SPRINGS, OHIO
7	HENDERSHOTT	MAURICE	40		M	M	JUNE 19, 1901	MARBLEHEAD, OHIO	206 EAST 26TH STREET, NEW YORK CITY, N.Y.
8	HENDERSHOTT	ALICE	33		F	M	JUNE 8, 1908	BELLEVUE, OHIO	SAME AS ABOVE.
9	HENKIN	FRIEDA	36		F	S	OCT 1, 1904	NEW YORK CITY, N.Y.	120 WEST 85TH STREET, NEW YORK CITY, N.Y.
10	HEYMAN	FRANCES	39		F	S		DISTRICT COURT NEW YORK CITY, N.Y. JUNE 1922	46 EAST 91 STREET, NEW YORK CITY, N.Y.
11	HILSON	JOHN	16		M	S	MAY 7, 1925	NEW YORK CITY, N.Y.	927 5TH AVENUE, NEW YORK CITY, N.Y.
12	HOLMES	JOSEPH	51		M	M	JUNE 12, 1890	ONEONTA, NEW YORK	TORRINGTON R.D. #2 HARWINTON, CONN.
13	HOLMES	FRANCES	35		F	M	APRIL 16, 1906	YONKERS, NEW YORK	SAME AS ABOVE.
14	HOPE	LEONARD	33		M	M	AUG 24, 1907	LOWELL, MASS.	116 VAN GREENBY ROAD, LOWELL, MASS.
15	HOPE	MILDRED	29		F	M	APRIL 27, 1912	LOWELL, MASS.	SAME AS ABOVE.
16	HOPE	KENNETH	1	4	M	S		BORN OF AMERICAN PARENTS AT QUIRIGUA, GUATEMALA MARCH 25, 1940	SAME AS ABOVE.
17	JAMES	HERMAN	54		M	M	JAN 2, 1887	PHILADELPHIA, PA	ATHENS, OHIO
18	JAMES	GENEVIEVE	50		F	M	APRIL 10, 1890	CHICAGO, ILLINOIS	ATHENS, OHIO
19	LAHEY	MARTHA	48		F	S	JUNE 23, 1893	JERSEY CITY, N.J.	31 GIFFORD AVENUE, JERSEY CITY, NEW JERSEY
20	LEVY	DINAH	43		F	S	DEC 22, 1897	NEW YORK CITY, N.Y.	TOWERS HOTEL, BROOKLYN, NEW YORK
21	LION	RUTH	35		F	S	FEB 14, 1906	NEW YORK CITY, N.Y.	1188 GRAND CONCOURSE, NEW YORK CITY, NEW YORK
22	LONG	PERCY	64		M	M	SEPT 21, 1876	BOSTON, MASS	155-5 WAVERLY PLACE, NEW YORK CITY, NEW YORK
23	LONG	MARY	45		F	M	JUNE 12, 1896	WORCESTER, MASS.	SAME AS ABOVE.
24	MACPHILLAMY	HAROLD	30		M	S	SEPT 7, 1910	NEW YORK CITY, N.Y.	98 JEFFERSON ROAD, PRINCETON, NEW JERSEY
25	PARMLY	MARGARET	69		F	W	JUNE 11, 1872	NEW YORK CITY, N.Y.	448 WEST 23RD STREET, NEW YORK CITY, NEW YORK
26	MCCOLLUM	ROBERT	24		M	S	NOV 23, 1916	DENVER, COLORADO	DERBFIELD ACADEMY DERBFIELD, CONN.
27	MEADE	ISABEL	37		F	S	MARCH 15, 1904	NEW YORK CITY, N.Y.	6306 BRITTON AVENUE, ELMHURST, NEW YORK
28	MILLSPAUGH	RUTH	46		F	S	JUNE 5, 1895	PORT JERVIS, N.Y.	466 HIGHLAND AVENUE, ORANGE, NEW JERSEY
29	MUCKE	ELSIE	43		F	S	SEPT 11, 1898	NEW YORK CITY, N.Y.	2121 CEDAR AVENUE, NEW YORK CITY, NEW YORK
30	PADDOCK	HELEN	30		F	S	OCT 2, 1910	TOPPENISH, WASHINGTON	344 LEXINGTON AVENUE, NEW YORK CITY, NEW YORK

R. E. Thomas 12-40 pm Inspector

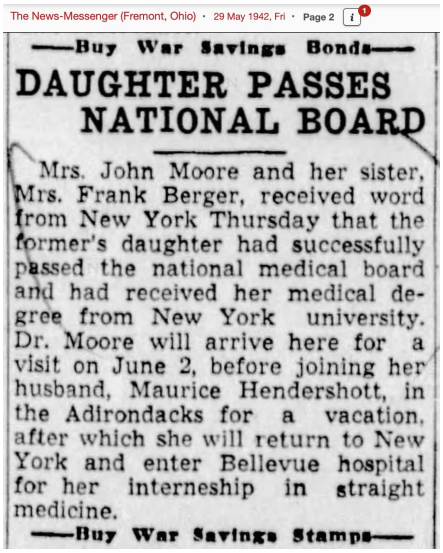
Line UNITED FRUIT COMPANY
Owners UNITED MAIL STEAMSHIP CO.
Local Agents UNITED FRUIT COMPANY.

IMPORTANT NOTICE.—1. Great care should be taken *not* to place on this list the name of any passenger who was not born in the United States or who has not taken out final naturalization papers.
2. Where one or more members of a family are aliens, the names of *all* such members should be recorded upon the *alien* manifest. Suitable notation may be made upon such manifest opposite the names of those members who claim citizenship.
3. Failure to observe the terms of this notice may result in delay to passengers at the port of arrival.
4. List on this form only United States citizens or citizens of an insular possession of the United States.

1942 (May 29) - Completed medical board degree from New York University

Others in her class include Saul J. Farber, Arnold W. Friedman, Robert M. Gabrielson, Irma H. Gross, Carol K. Smith, Harvey P. Kopell, Harold Lief, Doris H. Milman, and David F. Sunkin. (Source : https://sci-hub.se/10.1001/jama.1941.02820520079035#)

Newspaper clip page : [HN01JO][GDrive]


The News-Messenger (Fremont, Ohio) · 29 May 1942, Fri · Page 2

—Buy War Savings Bonds—

DAUGHTER PASSES NATIONAL BOARD

Mrs. John Moore and her sister, Mrs. Frank Berger, received word from New York Thursday that the former's daughter had successfully passed the national medical board and had received her medical degree from New York university. Dr. Moore will arrive here for a visit on June 2, before joining her husband, Maurice Hendershott, in the Adirondacks for a vacation, after which she will return to New York and enter Bellevue hospital for her interneship in straight medicine.

—Buy War Savings Stamps—

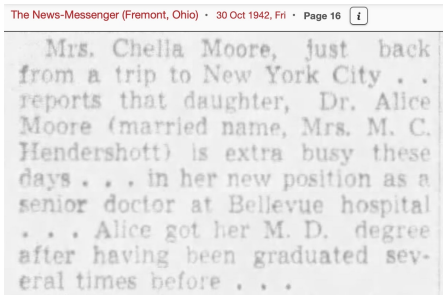
[HN01JP][GDrive]

A. O. A. at New York University

Under the auspices of the Delta chapter of Alpha Omega Alpha, Dr. William C. Stadie, associate professor of research medicine at the University of Pennsylvania School of Medicine, discussed fat embolism in diabetes mellitus on October 31. After the lecture the following newly elected members of the society were welcomed: Class of 1942: David A. Dreiling, Saul J. Farber, Arnold W. Friedman, Robert M. Gabrielson, Irma H. Gross, Carol K. Smith, Harvey P. Kopell, Harold Lief, Doris H. Milman, Alice E. Moore, David F. Sunkin; Class of 1943: Ernest Cotlove, Jerome Seides, Leon Sokoloff.

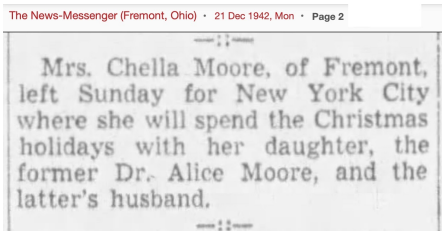
https://sci-hub.se/10.1001/jama.1941.02820520079035#
Clip from December 27, 1941
THE STUDENT SECTION of the Journal of the American Medical Association

1942 (Oct 30) - Dr. Alice Moore is a "senior doctor at Bellevue (NYC) Hospital"


The News-Messenger (Fremont, Ohio) · 30 Oct 1942, Fri · Page 16

Mrs. Chella Moore, just back from a trip to New York City . . reports that daughter, Dr. Alice Moore (married name, Mrs. M. C. Hendershott) is extra busy these days . . . in her new position as a senior doctor at Bellevue hospital . . . Alice got her M. D. degree after having been graduated several times before . . .

October 30, 1942
[HN01JR][GDrive]
Full newspaper page: [HN01JQ][GDrive]


The News-Messenger (Fremont, Ohio) · 21 Dec 1942, Mon · Page 2

Mrs. Chella Moore, of Fremont, left Sunday for New York City where she will spend the Christmas holidays with her daughter, the former Dr. Alice Moore, and the latter's husband.

December 21, 1942
[HN01JT][GDrive]
Full page: [HN01JS][GDrive]

1942 (late) or 1943(early) : Alice Moore is invited to OPERATE the Yellow Fever Vaccine Laboratory at Rockefeller Foundation

See PDF for full Sigma Kappa Triangle Volume 38, No2, issue at [HE004B][GDrive] :

- ***Interning at Bellevue was next -- with a stretch as "senior" on the men's psychopathic ward -- and it probably would have continued at least another year but the increasing medical needs of the war have meant that people who yearn to still learn have to go to active medical work.*** *[This suggests Dr. Alice Moore was there for less than a year]*
- ***And being invited to operate the Yellow Fever Vaccine Laboratory at Rockefeller Foundation, and the first medical female on the Rockefeller Foundation staff, was not anything to turn down.***

See https://en.wikipedia.org/wiki/Yellow_fever_vaccine

- *"In 1937, Max Theiler, working with Hugh Smith and Eugen Haagen at the Rockefeller Foundation to improve the vaccine from the "Asibi" strain, discovered that a favorable chance mutation in the attenuated virus had produced a highly effective strain that was named 17D. Following the work of Ernest Goodpasture, Theiler used chicken eggs to culture the virus After field trials in Brazil, over one million people were vaccinated by 1939, without severe complications.[7] This vaccine was widely used by the U.S. Army during World War II.[21] For his work on the yellow fever vaccine, Theiler received the 1951 Nobel Prize in Physiology or Medicine.[22]Only the 17D vaccine remains in use today.[4]*
- *Theiler's vaccine was responsible for the largest outbreak of Hepatitis B in history: infecting 330,000 soldiers and giving 50,000 jaundice between 1941 and 1942.[23] At the time, chronic infectious hepatitis was not known, so when human serum was used in vaccine preparation, serum drawn from a chronic Hepatitis B Virus (HBV) carrier would contaminate the Yellow Fever Vaccine. Since 1971, screening technology for HBV has been available and is routinely used in situations where HBV contamination is possible including vaccine preparation."*

NIH review of this ... https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3673520/

THE ROCKEFELLER FOUNDATION VIRUS PROGRAM: 1951-1971 WITH UPDATE TO 1981

Wilbur G. Downs, MD. : Department of Epidemiology and Public Health, School of Medicine, Yale Arbovirus Research Unit, Yale University, New Haven, Connecticut 06510

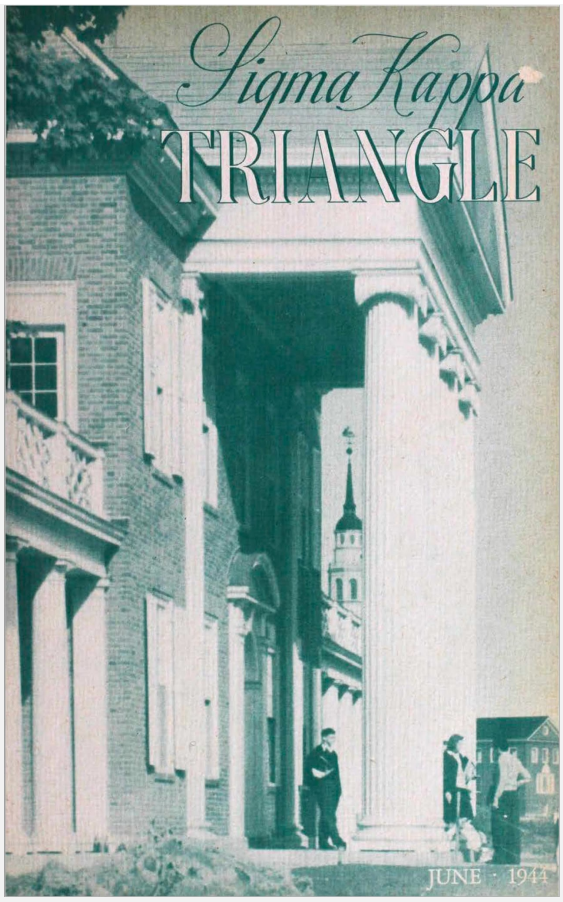
https://www.annualreviews.org/doi/pdf/10.1146/annurev.me.33.020182.000245

[...] When the RF closed out its yellow fever program in the late 1930s there were many experienced field and laboratory workers separated from their lifetime work. Every effort was made to accommodate these workers. Kenneth C. Smithbum, Richard M. Taylor, and J. Austin Kerr were absorbed into the RF Virus Laboratories (RFVL) housed in the North Building of the Rockefeller Institute (now Rockefeller University) complex at 66th Street and York Avenue, New York City. **Bauer was then the head of the Laboratories.** The laboratory did not involute. Theiler discovered the mouse encephalomyelitis virus, and his classic studies of the epidemiology of this infection, with fecal shedding of virus, provided valuable guidelines for later human poliomyelitis virus studies. George K. Hirst. William F. Friedewald, and **Frank L. Horsfall, Jr.** made significant contributions to knowledge of the influenza viruses, and Taylor described influenza C, a type as uncommonly encountered now as it was then.

The threat of World War II introduced new priorities for the RF Virus Laboratories. Studies were started on typhus fevers, with John C. Snyder and Charles R. Anderson participating. Anderson contracted typhus and recovered. Anticipated demands for heavy production of the 17D vaccine for military personnel plunged the laboratory staff into developing the necessary equipment and techniques for the job. **Staff members assigned to this task included, beside Bauer, Delphine H. Clarke and an assigned specialist, Alice Moore. Edward G. Pickels with a well-equipped machine shop and skilled machinists available developed and refined ultracentrifuges, filters, vacuum desiccating apparatus, and electrophoretic apparatus.** Much of this equipment served as prototypes for the laboratory-equipment manufacturing companies that proliferated in later decades. **Early production runs of the vaccine had diluted human serum added as a virus protective buffer. A serious outbreak of serum-transmitted hepatitis occurred in US Army personnel immunized with certain of the early vaccine lots.** Further lots of vaccine had an aqueous base, no serum, and this complication was thus circumvented.

1944 - Sigma Kappa biography of Dr. Alice Moore

PDF for full Sigma Kappa Triangle Volume 38, No2, issue at [HE004B][GDrive] / By FRANCES KIRKPATRICK, Chi



[HE004C][GDrive]

Dr. Moore and Mrs. Hendershott

By FRANCES KIRKPATRICK, *Chi*

THE mailbox is marked "Dr. A. E. Moore and Mr. M. C. Hendershott" in order to provide the necessary information and yet conform to conventions, and the maid and the janitor know that it means "Mr. and Mrs. Hendershott." That's in an apartment building in the Gramercy Park Section of New York City. Then uptown across from Central Park on the East River at the great pile that is the Rockefeller Foundation, it's "Dr. Alice Moore."

It was a long stretch from undergraduate work in bacteriology at Ohio State to being the first woman M.D. on the Rockefeller Foundation staff, and there were a few detours along the way. Al arrived at Ohio State for her junior year from Notre Dame College for Women in Cleveland with her mind all made up that she wanted to find out what was under your skin.

Two more years and she had a B.A. in bacteriology (but she didn't become a Sigma Xi because she had never heard of it so didn't answer the note). When she was a senior she began to work as a technician in veterinary medicine—and acquired the wire-haired Irish terrier who accompanied her to classes from then on, interrupted football games by unscheduled appearances on the field, stole butter regularly for the Sigma Kappa house, acted as host in "Daisy"—Al's famous Model T Ford, and by his name of "Junior" attracted some attention for the idea of not calling children by that name.

Al found out quite a bit about infections and germs by working on animals—but not quite enough. When she was awarded a Fellowship in Bacteriology she moved over to that department and got her M.A. Then came the chance to go to New York and work as a technician in the International Health Division at Rockefeller under Dr. Thomas Francis who has done the primary work on epidemic influenza.

Al, of course, was going to school all the time—and she narrowly escaped getting a Ph.D. in bacteriology. But just when about the only thing that stood in her way was turning in her dissertation, she decided definitely that that wasn't the kind of doctor's degree that she wanted—so she started all over again.

Dr. Alice Moore Hendershott, Chi

There were a few annoyances to get over with—all the bacteriology plus the subjects she'd picked on her own in the suit-yourself College of Arts days didn't quite satisfy for New York University Medical College—but those were made up on the side. So Al started in as a freshman medical student.

When Dr. Francis joined the staff of New York University and transferred his carefully nurtured influenza viruses there, Al went to work there. Flasks held these valuable remnants of infectious particles. They had to be nourished to be kept alive so that scores of mice, monkeys, and ferrets could be infected every week in order to find out the nature of the virus and therefore prevent the disease.

And feeding those viruses meant that Al in gleaming white (and admitted visitors were done up in long white coats too when they were permitted to enter the sterile cubicle) extracted an embryonic chick from a carefully cleansed egg, removed the eye (because the pigment ruined observation of

[HE004D][GDrive]

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And feeding those viruses meant that Al in gleaming white (and admitted visitors were done up in long white coats too when they were permitted to enter the sterile cubicle) extracted an embryonic chick from a carefully cleansed egg, removed the eye (because the pigment ruined observation of reaction) , and then minced the remainder with what looked like manicure scissors, sucked up some of the revolting mess in a pipette, and then carefully let a few drops fall in each test tube. And all of this on the dot, by the clock.

June 1942, brought the M.D. degree with Alpha Omega Alpha honorary medical and passing the National Board of Medical Examiners (good for practice in practically any of the 48 states and just about as much stiffer as that indicates) to indicate caliber of work.

Interning at Bellevue was next -- with a stretch as "senior" on the men's psychopathic ward -- and it probably would have continued at least another year but the increasing medical needs of the war have meant that people who yearn to still learn have to go to active medical work.

And being invited to operate the Yellow Fever Vaccine Laboratory at Rockefeller Foundation, and the first medical female on the Rockefeller Foundation staff, was not anything to turn down.

All of this has left out Mr. Hendershott. "Musty," known to Ohio Staters as one of the most popular Phi Gams, business manager of the Makio, and much such, who had put up with a lot in Al' s medical school and interne days. It looked as if for the first time he was going to get a break and see his wife occasionally, and go to bed without expecting a phone to break into his first slumbers.

And it did work out that way -- about two months. Now the shoe's on the other foot, and Al spends a good part of her weekends trying to catch up with her elusive husband who is moving around the country training navy flyers to spot moving targets -- that's about all that can be said about Musty, because he's too busy for permissible small talk about what he's doing.

Of course, the Vaccine lab is rather busy -- it's making vaccines for the Navy, for instance -- but Al says it's all set up on a production line and goes along smoothly. Night Medical Clinic as a faculty member of N.Y.U. takes up some time. But there was still some empty space-and Al isn't used to having time on her hands. And you can't play tennis in winter or ski in New York and you can't always get theater tickets and couldn't go all the time anyway, so Al's favorite amusements don't fill the gap.

1945 (Aug 06) - Hiroshima

1945 (Aug 08) - Funding announced for Sloan Kettering Cancer Research Institute

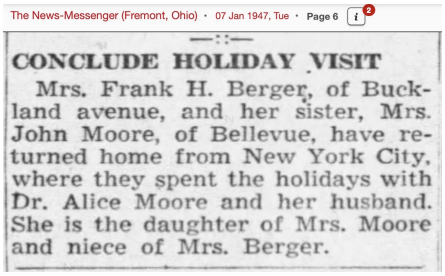
In 1945, the chairman of General Motors, Alfred P. Sloan, donated $4,000,000 to create the Sloan-Kettering Institute for Cancer Research through his Sloan Foundation, and Charles F. Kettering, GM's vice president and director of research, personally agreed to oversee the organization of a cancer research program based on industrial techniques.[21] The originally independent research institute was built adjacent to Memorial Hospital.[21]
Groundbreaking at the Sloan Kettering Institute, 1946
Newspaper - https://www.newspapers.com/image/52691550/?terms=sloan%20kettering%20cancer&match=1
wiki - https://en.wikipedia.org/wiki/Memorial_Sloan_Kettering_Cancer_Center

1947 (Jan 07) - Notes, still married

https://www.newspapers.com/image/304990277/?terms=%22Dr.%20Alice%20Moore%22&match=1

https://drive.google.com/file/d/1FS1LJRHZaKJ6jxGdQa2q-WXW5e89Ui7a/view?usp=sharing

1947-01-07-the-fremont-news-messenger-ohio-pg-6-clip-alice-moore.jpg
https://drive.google.com/file/d/10EHPHM3_Wd8LTCWbtrS3IBi6d08BDpqe/view?usp=sharing



The News-Messenger (Fremont, Ohio) · 07 Jan 1947, Tue · Page 6

CONCLUDE HOLIDAY VISIT

Mrs. Frank H. Berger, of Buckland avenue, and her sister, Mrs. John Moore, of Bellevue, have returned home from New York City, where they spent the holidays with Dr. Alice Moore and her husband. She is the daughter of Mrs. Moore and niece of Mrs. Berger.

1947 (Mar) - NY City Smallpox outbreak - Patient 1 goes to Bellevue Hospital (NYC)

https://en.wikipedia.org/wiki/1947_New_York_City_smallpox_outbreak

1947 (April 05) - "Israel Weinstein (NYC) says we need smallpox vaccinations!"

https://www.newspapers.com/image/444805567/?terms=bellevue%20smallpox&match=1

Late 1940s - Dr. Alice Moore has a lab at Sloan Kettering; Student is Charlotte Friend (who becomes a Pioneer in Cancer Cell Biology)

See Dr. Charlotte Friend (born 1921)

Source : https://www.newyorkalmanack.com/2014/03/charlotte-friend-a-pioneer-in-cancer-cell-biology/

"Charlotte Friend: A Pioneer in Cancer Cell Biology"

March 10, 2014 by Guest Contributor 1 Comment

The story of **Charlotte Friend** is a true New York story. Friend was a noted microbiologist who made important contributions to the study of cancer. She was an advocate for women's rights and worked hard to improve the position of women in science.

Charlotte Friend was born March 11, 1921 in New York City, a city she loved. She received a Bachelor's degree from Hunter College in 1944 and then entered the Navy, where she was assigned to help direct a hematology laboratory in California. She left the Navy in 1946 and began graduate work in microbiology at Yale University. **By the time she received her doctorate in 1950, Dr. Friend already had a position in the laboratory of Dr. Alice Moore at the Sloan-Kettering Institute in New York City.** She stayed in New York for the rest of her life.

In 1956, Friend gave a paper at the annual meeting of the American Association for Cancer Research in which she stated that she had discovered a virus that caused a leukemia-like disorder in newborn mice. **She was roundly criticized for bringing up what was considered to be the old canard of viruses causing cancer.** Only Peyton Rous, who had made a similar announcement years before, spoke in her defense.

But the tide of change on this issue was turning in the face of mounting evidence. Dr. Friend had not been the only researcher whose work suggested this. By the next year, Friend had published her work in the prestigious Journal of Experimental Medicine, with the careful editing of Dr. Rous. She was also supported by Jacob Furth, who announced that he had studied Dr. Friend's pathologic material and that leukemia truly had been found to result from the new virus, which became known as the Friend leukemia virus.

Friend spent the following years investigating different aspects of the virus, as did many other researchers. She worked with various collaborators, often cooperating in international research efforts. Dr. Friend loved to travel and formed many long-term friendships with colleagues in Europe. Her sabbatical years (1963 and 1975) were spent in laboratories in Australia, Israel, France and Italy. She also attended many international meetings, often being one of only a handful of women scientists there. Still, while clearly social, she also maintained a very small laboratory staff and did not take on many graduate students to work with her.

Dr. Friend was very active in scientific associations and in outside professional activities such as grant reviewing and serving on editorial boards and advisory councils. In the 1970s, when many associations 'discovered' their female members in reaction to the women's movement, Dr. Friend was asked to assume leadership roles in several important organizations including: chairman of the Gordon Conference (1973); member of the Board of Directors (1973-76) and president (1976) of the American Association for Cancer Research; president of the Harvey Society (1978/79); and president of the New York Academy of Sciences (1978).

In 1966, Charlotte Friend left Sloan-Kettering to become the first Director of the Center for Experimental Cell Biology and a Professor at the still developing Mount Sinai School of Medicine. She was the first and only female full Professor in the School when the faculty was officially formed in 1966. She also served as a Professor in the Mount Sinai Graduate School of Biological Sciences. At Mount Sinai, she established her own laboratory, which in 1967 was endowed as the Mollie B. Roth Laboratory. Peyton Rous was the speaker at the event. Still, it was an unending struggle to find the funding to keep the lab well-staffed and well equipped, a situation that got steadily harder as federal funding began to shrink in the 1970s.

[...]

1949 (April 18) -

(No full newspaper page saved)

The Times Dispatch (Richmond, Virginia) · 18 Apr 1949, Mon · Page 8

Virus Destroys Mice Cancer, New York Scientist Reports

DETROIT, April 17—(UP)—At least three types of mice cancer can be destroyed by a virus known as Russian Far Eastern encephalitis, the fortieth annual meeting of the American Association for Cancer Research was told today.

The report came from Dr. Alice Moore, of the Memorial Hospital Center for Cancer and Allied Diseases, New York City.

She reported that the virus has a strong affinity for cancerous tissue and destroys the cancer in time. However, the virus also attacks the normal tissue of the mice.

It has not been used in human cases and will not be used until more laboratory tests have been conducted. Dr. Moore gave no indication as to when these tests might be concluded.

Cause Is Isolated

A group of Columbia University scientists reported also that the virus which causes breast cancer in mice has been isolated and identified under the electron microscope.

Their work, considered one of the most important steps in recent years in the battle against cancer, said the isolated virus causes mice breast cancer, which closely resembles human breast cancer.

Dr. Moore said the discoveries were of "only theoretical value at the present stage."

"The virus is too strong for practical use," she said. "But an important finding was that cancerous tissue was destroyed before the healthy tissue was destroyed."

She said the next step would be an attempt to change the virus or to find another type which was less violent.

"If we can change the virus to protect healthy tissue, we might be able to cure mice with it. This has been done with virus used to cure other diseases," she said, "and it is possible the same changes can be made in the encephalitis virus to accomplish the same thing."

[HN01JL][GDrive]

1949 (Apri l18) -

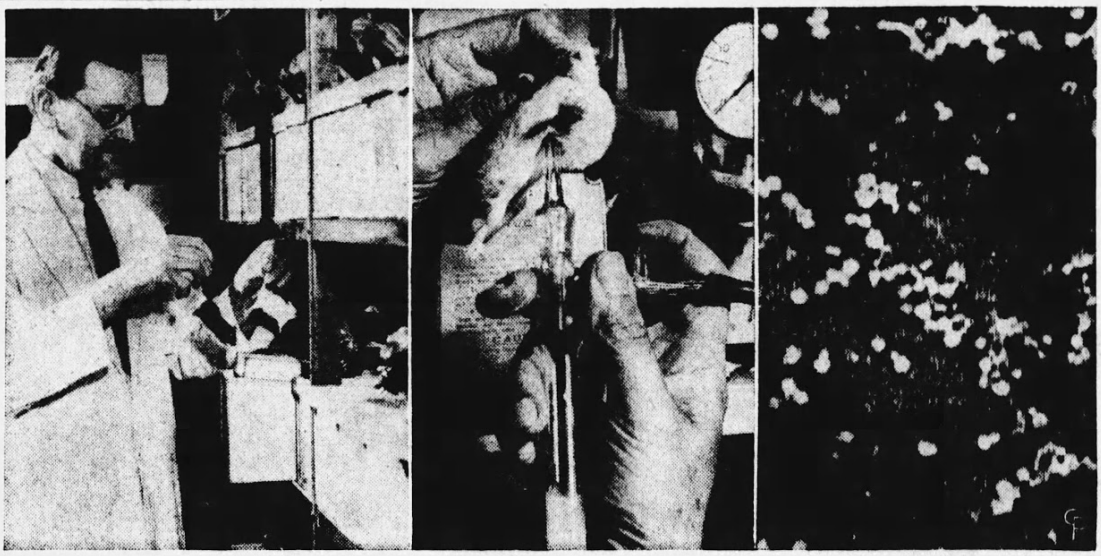
Full newspaper page : [HN01JJ][GDrive]

WEATHER
Colder, snow flurries tonight; Tuesday, slowly rising temperature.

MANSFIELD NEWS-JOURNAL

FINAL EDITION

VOL. 65, NO. 43 TELEPHONE 7231-6 MANSFIELD, OHIO, MONDAY, APRIL 18, 1949 ★ ★ Associated Press United Press International News Service PRICE FIVE CENTS



Technician takes cancerous mice in laboratory . . . Extracts milk . . . in which is found . . . Cancer virus (magnified 25,000 times).

CANCER VIRUS ISOLATED—Columbia university scientists believe they are on threshold of new discoveries in fight against dread cancer of the breast, which attacks about one in 25 women. Biochemists of the university's new Institute of Cancer Research have isolated cancer virus in milk of mice and magnified it by electronic microscope. From there they hope to find way to reduce the disease.

★ ★ ★

Key Viruses Found

One Kills Cancer, Other Produces It

NEW YORK—(UP)—Important gains in the battle against cancer were marked up today by medical science.

One victory on the front where scientists tediously work in the laboratory was the week-end report that a virus has been found that will destroy cancerous growth in mice.

A virus is a submicroscopic agent, a parasite that cannot live by itself—but must get its nourishment from tissue around it. One particular type of virus—that which causes a form of encephalitis, a paralyzing disease—has been "turned loose" on cancers in mice at Memorial Hospital Center for Cancer and Allied Diseases.

Dr. Alice Moore, reporting at the American Association for Cancer Research, said that at least three types of mouse cancer can be killed by the virus. It is the first time that a virus has been known to have such powers.

The virus, she disclosed, has an affinity for cancerous growth. In laboratory tests, it was found, however, that the virus also attacks normal tissue after the cancer has been destroyed, but Memorial doctors are hopeful that the activity of the virus can be checked after the "good work" is done.

Another victory in the cancer fight came from Columbia university where scientists have isolated another virus—but this one apparently doesn't stop cancer. It causes cancer.

The virus, appearing as a white sphere under the powerful electron microscope, has long been suspected as female mice pass breast cancer susceptibility along to their female offspring. The Columbia scientists reported that their new work confirms the theory that a virus causes breast cancer in mice.

The isolation and identification, Columbia pointed out, will give scientists means to study better the chemical makeup of the virus and its behavior. It may also mean that a vaccine against cancer in mice may be developed.

Over the week end there were also reports of new chemicals retarding the growth of cancer in mice. One such new chemical was identified at a meeting in Detroit as Guanazolo, which was reported by Dr. George W. Kidder, Amherst college biologist. The chemical is the newest one to be reported as effective against cancer in mice.

Wallace Beery Rites Scheduled Tuesday

BEVERLY HILLS, Calif.—(AP)—Wallace Beery, Hollywood's "lovable old rascal," will be buried in Forest Lawn Memorial park in nearby Glendale tomorrow.

Many of the film industry's great are expected to attend the funeral in the church of the Recessional at 10:30 a. m. in the Memorial park.

[HN01JK][GDrive]

1949 (April 29) - Update on Dr. Alice Moore's research at Sloan-Kettering ; Includes info on family in Bellevue, Ohio

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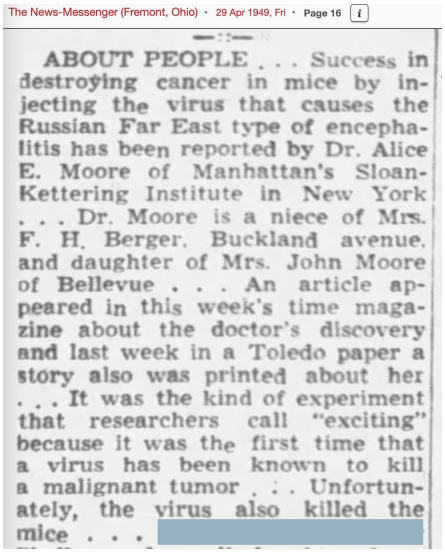
1949-04-29-the-fremont-news-messenger-ohio-pg-16-clip-alice-e-moore.jpg
https://drive.google.com/file/d/1MyJxXjcQUbXQq1pQFeIcz5Q_9XcNgt44/view?usp=sharing

- Dr. Alice E. Moore is a niece of **Mrs. F. H. Berger of Bluckland Avenue (presumably of Fremont, Ohio)**
- Dr. Alice E. Moore is a daughter of **Mrs. John Moore of Bellevue, Ohio**



The News-Messenger (Fremont, Ohio) · 29 Apr 1949, Fri · Page 16

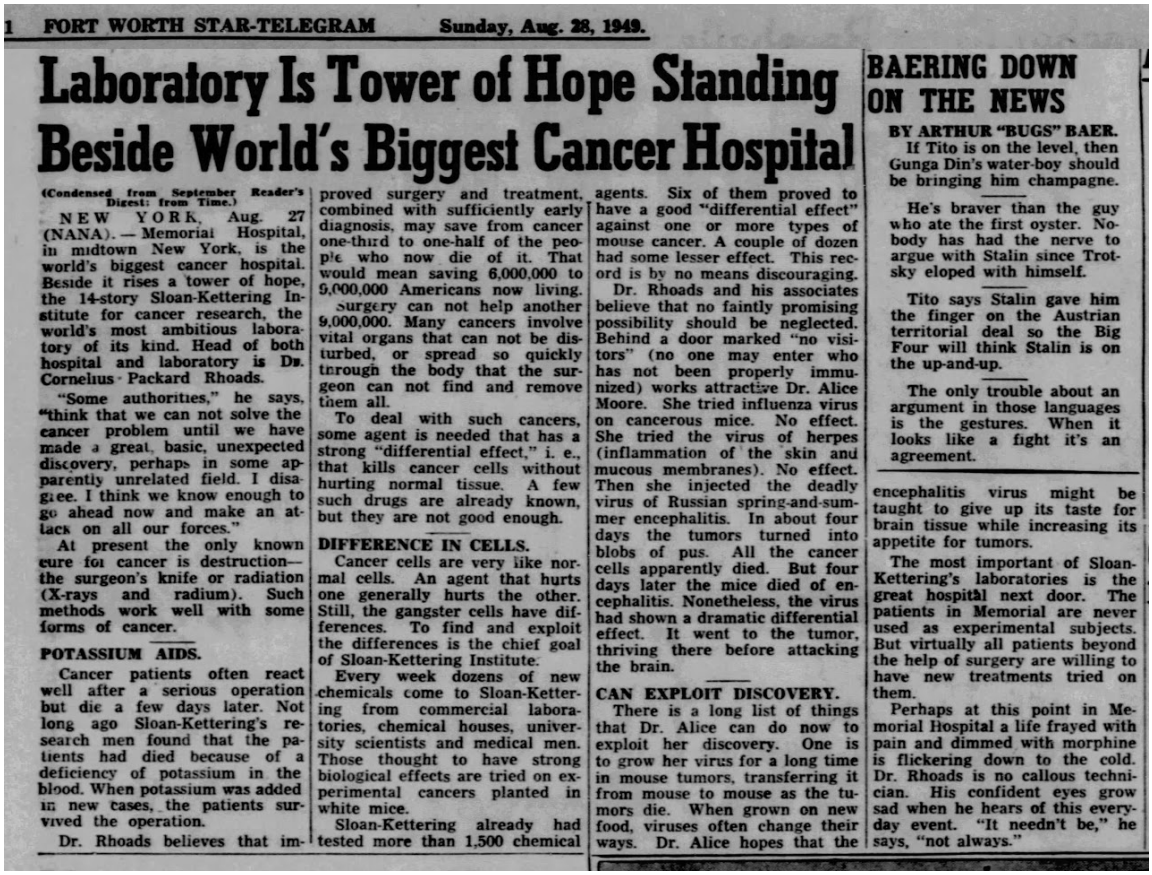
ABOUT PEOPLE . . . Success in destroying cancer in mice by injecting the virus that causes the Russian Far East type of encephalitis has been reported by Dr. Alice E. Moore of Manhattan's Sloan-Kettering Institute in New York . . . Dr. Moore is a niece of Mrs. F. H. Berger, Buckland avenue, and daughter of Mrs. John Moore of Bellevue . . . An article appeared in this week's time magazine about the doctor's discovery and last week in a Toledo paper a story also was printed about her . . . It was the kind of experiment that researchers call "exciting" because it was the first time that a virus has been known to kill a malignant tumor . . . Unfortunately, the virus also killed the mice . . .

1949 (Aug 28)

https://www.newspapers.com/image/637944890/?terms=%22Dr.%20Alice%20Moore%22&match=1

1949-08-28-fort-worth-star-telegram-pg-14-clip-cancer-center.jpg

NOTE - her boss RHoads had worked directly for Smon FLexner **In 1929 Rhoads joined the staff of the Rockefeller Institute for Medical Research, now Rockefeller University, where he worked for Simon Flexner. He was also staff pathologist at Rockefeller Hospital.[11] His early research interests included hematology and poliomyelitis. He worked at Rockefeller until 1939.[12][13]**



1 FORT WORTH STAR-TELEGRAM Sunday, Aug. 28, 1949.

Laboratory Is Tower of Hope Standing Beside World's Biggest Cancer Hospital

(Condensed from September Reader's Digest: from Time.)

NEW YORK, Aug. 27 (NANA). — Memorial Hospital, in midtown New York, is the world's biggest cancer hospital. Beside it rises a tower of hope, the 14-story Sloan-Kettering Institute for cancer research, the world's most ambitious laboratory of its kind. Head of both hospital and laboratory is Dr. Cornelius Packard Rhoads.

"Some authorities," he says, "think that we can not solve the cancer problem until we have made a great, basic, unexpected discovery, perhaps in some apparently unrelated field. I disagree. I think we know enough to go ahead now and make an attack on all our forces."

At present the only known cure for cancer is destruction—the surgeon's knife or radiation (X-rays and radium). Such methods work well with some forms of cancer.

POTASSIUM AIDS.

Cancer patients often react well after a serious operation but die a few days later. Not long ago Sloan-Kettering's research men found that the patients had died because of a deficiency of potassium in the blood. When potassium was added in new cases, the patients survived the operation.

Dr. Rhoads believes that improved surgery and treatment, combined with sufficiently early diagnosis, may save from cancer one-third to one-half of the people who now die of it. That would mean saving 6,000,000 to 9,000,000 Americans now living.

Surgery can not help another 9,000,000. Many cancers involve vital organs that can not be disturbed, or spread so quickly through the body that the surgeon can not find and remove them all.

To deal with such cancers, some agent is needed that has a strong "differential effect," i. e., that kills cancer cells without hurting normal tissue. A few such drugs are already known, but they are not good enough.

DIFFERENCE IN CELLS.

Cancer cells are very like normal cells. An agent that hurts one generally hurts the other. Still, the gangster cells have differences. To find and exploit the differences is the chief goal of Sloan-Kettering Institute.

Every week dozens of new chemicals come to Sloan-Kettering from commercial laboratories, chemical houses, university scientists and medical men. Those thought to have strong biological effects are tried on experimental cancers planted in white mice.

Sloan-Kettering already had tested more than 1,500 chemical agents. Six of them proved to have a good "differential effect" against one or more types of mouse cancer. A couple of dozen had some lesser effect. This record is by no means discouraging.

Dr. Rhoads and his associates believe that no faintly promising possibility should be neglected. Behind a door marked "no visitors" (no one may enter who has not been properly immunized) works attractive Dr. Alice Moore. She tried influenza virus on cancerous mice. No effect. She tried the virus of herpes (inflammation of the skin and mucous membranes). No effect. Then she injected the deadly virus of Russian spring-and-summer encephalitis. In about four days the tumors turned into blobs of pus. All the cancer cells apparently died. But four days later the mice died of encephalitis. Nonetheless, the virus had shown a dramatic differential effect. It went to the tumor, thriving there before attacking the brain.

CAN EXPLOIT DISCOVERY.

There is a long list of things that Dr. Alice can do now to exploit her discovery. One is to grow her virus for a long time in mouse tumors, transferring it from mouse to mouse as the tumors die. When grown on new food, viruses often change their ways. Dr. Alice hopes that the encephalitis virus might be taught to give up its taste for brain tissue while increasing its appetite for tumors.

The most important of Sloan-Kettering's laboratories is the great hospital next door. The patients in Memorial are never used as experimental subjects. But virtually all patients beyond the help of surgery are willing to have new treatments tried on them.

Perhaps at this point in Memorial Hospital a life frayed with pain and dimmed with morphine is flickering down to the cold. Dr. Rhoads is no callous technician. His confident eyes grow sad when he hears of this everyday event. "It needn't be," he says, "not always."

BAERING DOWN ON THE NEWS

BY ARTHUR "BUGS" BAER.

If Tito is on the level, then Gunga Din's water-boy should be bringing him champagne.

He's braver than the guy who ate the first oyster. Nobody has had the nerve to argue with Stalin since Trotsky eloped with himself.

Tito says Stalin gave him the finger on the Austrian territorial deal so the Big Four will think Stalin is on the up-and-up.

The only trouble about an argument in those languages is the gestures. When it looks like a fight it's an agreement.

1949 - Research at Sloan Kettering Institute for Cancer Research - "Inhibition of Development of Sarcoma 180 by 4-Amino-N^{10}-Methyl Pteroylglutamic Acid".

By : [Dr. Alice E. Moore (born 1908)], CC Stock, K Sugiura, [Cornelius Packard "Dusty" Rhoads (born 1898)]

Summary: The compound 4-Amino-N10-methyl pteroylglutamic acid, has shown the ability to inhibit the growth of the transplantable mouse Sarcoma 180 when administered intraperitoneally in concentrations of 1.5 mg/kg each day for 7 days. At this dosage very few ...

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from the blood into the spinal fluid in very small amounts.

Summary. After intravenous injection sucrose occurs in the spinal fluid in very low concentration. Even when hemorrhages into the central nervous system occur, the concentration does not approach that found in blood.

16939

Inhibition of Development of Sarcoma 180 by 4-Amino-N[10]-Methyl Pteroylglutamic Acid.*

Alice E. Moore, C. Chester Stock, K. Sugiura, and C. P. Rhoads.
From the Division of Experimental Chemotherapy, Sloan-Kettering Institute for Cancer Research, New York City.

In view of the extensive developments among the anti-metabolites it was a natural consequence that cancer chemotherapy studies should be initiated with analogs of folic acid. Interest in the folic acid antagonists has been stimulated by reports of the effectiveness of Aminopterin in the treatment of leukemia (Farber).[1] In an intensive screening program during the past year a large number of analogs of folic acid and various related simple compounds have been studied against mouse leukemia[2] and various mouse and rat tumors with particular emphasis on the Crocker mouse Sarcoma 180. Thus far, one folic acid antagonist,[3] 4-Amino-N[10]-methyl pteroylglutamic acid (A-Methopterin),† has been outstanding in its ability to inhibit the growth of Sarcoma 180. The preliminary results of the study are presented.

Materials and methods. The material was tested for ability to inhibit the growth of the Sarcoma 180 and also for its ability to damage a well established tumor.

Carefully selected tumors were cut into 2 mm cubes and implanted subcutaneously into the axillary region of groups of 5 weighed and marked white mice. In the inhibition tests, intraperitoneal injections of 0.5 cc of different doses of A-Methopterin were begun 24 hours later. In the therapeutic test, injections were begun after 3 to 7 days of tumor growth. In all instances, injections were given twice daily at 6-hour intervals for 7 consecutive days. If the animals showed definite signs of a toxic effect of the drug, administration was omitted until recovery had taken place. At the higher dosage (2.5-2.0 mg/kg/day) 3 or 4 omissions were often necessary. Below this level the drug was well tolerated.

Following the period of injections the animals were weighed and the size of their tumors determined by measurement in 2 diameters with calipers. The size of the tumors was then compared with those of the untreated controls and tumor growth was graded according to the following scheme: 1) Inconclusive, in groups of animals where 3 or more died, 2) No effect, when the largest diameter was ¾ or more of the diameter of the control tumors, 3) Moderate effect, when the diameter was ¼ to ¾ of the diameter of the control tumors, 4) Marked inhibition when the diameter was ¼ or less of that of the control tumors; actually, the volume of such a tumor would be 1/64 or less of the control if tumors may be considered spherical.

The animals were again weighed and their tumors measured at the end of the second week.

Results. Groups of 5 mice implanted with the Sarcoma 180 one day previously were injected intraperitoneally with daily doses of A-Methopterin at the following levels: 2.5 mg, 2.0 mg, 1.5 mg, and 1 mg/kg. Deaths due to the toxicity of the material were recorded during the 7-day period of injection. Tumor measurements were made at the end of the period and the effect of the substance on the tumor was evaluated. These data are summarized in Table I.

It is clear that A-Methopterin has a definite inhibitory effect on the growth of Sarcoma 180 at all the levels of drug above 1 mg/kg/day. The drug killed 46% and 18%, respectively, in the groups of mice receiving 2.5 and 2.0 mg/kg/day. At the lower dosages 7% and 5% of the mice receiving 1.5 and 1.0 mg died during the treatment. Male mice appeared to tolerate the drug better than female mice. The best results were obtained at the 1.5 mg dose where a definite effect was noted in almost all instances with little evidence of toxicity. The average weight loss of this group was 1.0 g as contrasted to a gain of 0.5 g for the controls. Fig. 1 shows the typical inhibition effect on the tumor of the injection of A-Methopterin at the level of 1.5 mg/kg/day.

The tumors have never been completely destroyed. When the injections are stopped, the small tumors grow normally.

When the tumors were allowed to grow for 3 to 7 days before the injections were begun, inhibition of growth was apparent in practically all instances. Of the 15 groups of mice receiving 2 mg/kg/day, inhibition was marked in 3 groups, moderate in 11 groups and absent in one group. Of the 24 groups receiving 1.5 mg/kg/day, inhibition was marked in 7, moderate in 16, and absent in one. The death rates for the 2 dosages were 12% and 16%, respectively. It is doubtful that these figures represent true toxicity deaths, because many of the tumors were so large at the time injections were initiated, that some of the mice probably died from the effects of tumor growth. The effect of A-Methopterin was definite although not as marked as in the groups of mice injected 24 hours after implantation.

In a few experiments a single injection of 50 mg/kg was administered when the tumor had grown one day. An inhibitory effect was evident when the tumors were measured a week later. In one group implanted 24 hours previously which received one injection of 50 mg/kg, small doses (0.5 mg/kg/day) were administered for 7 days. When the tumors were measured, they were very small but grew when the injections were stopped. The development of 7-day-old tumors was not affected by the injection of the single large dose.

Discussion. A-Methopterin has been shown to have a definite and consistent inhibitory effect on the growth of the transplantable mouse Sarcoma 180. In another report (Sugiura, Moore, Stock)[4] the folic acid antagonist, Aminopterin, was shown to have a similar effect; however, marked inhibition could be demonstrated only when the drug was administered in amounts which killed a large per cent of the mice. A-Methopterin appears to exhibit a more favorable therapeutic index. It has been outstanding in its effect among numerous compounds which might interfere with the utilization of folic acid or possibly with the synthesis of nucleic acid. In fact, it has been the most effective compound of over 700 miscellaneous compounds that have been screened. It is therefore advanced as a compound worthy of further experimental study and for clinical trial in various types of cancer.

Summary. The compound 4-Amino-N[10]-methyl pteroylglutamic acid, has shown the ability to inhibit the growth of the transplantable mouse Sarcoma 180 when administered intraperitoneally in concentrations of 1.5 mg/kg each day for 7 days. At this dosage very few mice died from drug toxicity. The inhibition is most apparent when the compound is administered early in the development of the tumor.

TABLE I.
Effect of Different Amounts of A-Methopterin on the Growth of the Sarcoma 180.

Dose in mg/kg/day	No. of groups of 5 mice	No. of mice	Deaths during inj. period		Effect on tumor*			
			No.	%	Inconclusive	Marked inhibition	Moderate effect	No effect
2.5	6	30	14	46.6	2*	4	0	0
2.0	15	75	14	18.6	2	9	4	0
1.5	31	155	11	7.1	0	16	11	4
1.0	8	40	2	5.0	0	1	4	3

* The tumor effects are expressed as the result obtained in each group of 5 mice. Thus, the numeral 2 indicates two groups of 5 mice each.

* We wish to acknowledge support of this study by funds from the American Cancer Society.

1 Farber, S., Diamond, L. K., Mercer, R. D., Sylvester, R. F., Jr., and Wolff, J. A., *New England J. Med.*, 1948, **238**, 787.

2 Burchenal, J. H., Burchenal, J. R., Kushida, M. N., Johnston, S. F., and Williams, B. S., *Cancer*, 1949, **2**, 113.

3 Franklin, A. L., Bolt, M., Stokstad, E. L. R., and Jukes, T. H., *J. Biol. Chem.*, 1949, **177**, 621.

† A-Methopterin is the name given to the compound by Lederle Laboratories, to whom we are indebted for supplies. The Calco Division, American Cyanamid Company also has provided a supply of this compound.

4 Sugiura, K., Moore, A., and Stock, C. C., *Cancer*, in press.

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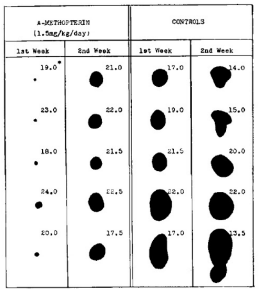

Fig. 1.
Area diagrams of tumors in mice treated with A-Methopterin compared with untreated controls. * Weight of mouse in grams.

16940

Beneficial Effects of Liver on Growth and Survival in the Immature Hyperthyroid Mouse.*

B. H. Ershoff.
Emory W. Thurston Laboratories, Los Angeles, and Department of Biochemistry and Nutrition, University of Southern California, Los Angeles.

Available data indicate that desiccated whole liver will prolong survival and counteract the growth retardation of immature rats fed massive doses of thyroactive materials.[1-5] The protective factor is distinct from any of the known nutrients and is retained in the water-insoluble fraction of liver.[2-5] The present experiment was undertaken to determine the effects of liver and liver fractions on growth and survival in the immature hyperthyroid mouse.

* This paper reports research undertaken in cooperation with the Quartermaster Food and Container Institute for the Armed Forces, and has been assigned number 241 in the series of papers approved for publication. The views or conclusions contained in this report are those of the author. They are not to be construed as necessarily reflecting the views or indorsement of the Department of the Army. Communication No. 204 from the Department of Biochemistry and Nutrition, University of Southern California.

1 Ershoff, B. H., Proc. Soc. Exp. Biol. and Med., 1947, **64**, 500.

2 Bethell, J. J., Wiebelhaus, V. D., and Lardy, H. A., *J. Nutrition*, 1947, **34**, 431.

3 Ershoff, B. H., *Arch. Biochem.*, 1947, **15**, 305.

4 Ershoff, B. H., *Exp. Med. Surg.*, 1948, **6**, 438.

5 Ershoff, B. H., and McWilliams, H. B., *Science*, 1948, **108**, 682.

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1949 (June 27) - Dr. Rhoads on the cover of Time Magazine as "Cancer-Fighter"

[HP005V][GDrive]
Full Text of full article : [HP005X][GDrive]
Mentioned : Cornelius Packard "Dusty" Rhoads (born 1898) / Dr. Alice E. Moore (born 1908) /

[...]

Promising Molds. Dr. Rhoads and his associates believe that no possibility, even faintly promising, should be neglected. One long shot is to look for something in the secretions of molds. One such secretion, penicillin, has a differential effect on bacteria: it kills bacteria but leaves human tissue unharmed. Molds might conceivably produce something with a differential effect on cancer cells.

In a cold, air-conditioned room in Sloan-Kettering, various molds (green or white mats) are growing in flasks. The program is still young, but already one mold has been found that secretes a substance with a slight differential effect on mouse tumors. [] does not even want to talk about it yet. He has no "cancer penicillin."

Behind a door marked "No Visitors" (no one may enter who has not been properly immunized), works attractive Dr. Alice Moore, a leading virus fancier. "I'm a virus girl," she says, "so I thought I'd try 'em." She tried influenza virus on cancerous mice. No effect. She tried the virus of herpes (inflammation of the skin and mucous membranes). No effect.

Then she turned to the deadly virus of Russian spring-and-summer encephalitis, injected it into the abdominal cavity of cancerous mice. In about two days the firm, round tumors turned into blobs of pus. All the cancer cells apparently died. But the virus then went on and attacked the nerves and brain. Four days later the mice, apparently cured of cancer, died of encephalitis. Nonetheless, the virus had shown a dramatic differential effect. It went first to the tumor and thrived there before attacking the brain.

Try the Viruses. There is a long list of things that Dr. Alice can do now to exploit her discovery—so many things that Dr. Rhoads is enlarging her dangerous laboratory. **One is to try the encephalitis virus on monkeys.** The laboratory strain has lived so long in mouse brains that it may have lost its ability to attack primates. If it proves harmless to monkeys, it probably will not hurt humans. The final step will be to try it on human cancer patients to see if it attacks their tumors.

Another thing that Dr. Alice hopes to do is to grow her virus for a long time in mouse tumors, transferring it from mouse to mouse as the tumors die. When grown on new food, viruses often change their ways. Dr. Alice hopes that the encephalitis virus might be taught to give up its taste for brain tissue while increasing its appetite for tumors.

If all these methods fail, there are plenty of other viruses to try against cancer. Some of them, comparatively harmless to normal human tissue, may attack tumors. If some such virus could be found or developed, it would be an ideal anti-cancer drug. Circulating through the body like a ferret through rat holes, it could hunt down every gangster cell.

[...]

1949 Summary - "Alice Moore was the first scientist to test oncolytic virotherapy in an animal model. "

Working with Russian Far East encephalitis virus, complete regression was achieved in some cases of mouse sarcoma 180 - the first animal model to demonstrate full regression through viral oncolysis [7]. "

https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3398296/ : J Transl Med. 2012; 10: 3.

Published online 2012 Jan 4. doi: 10.1186/1479-5876-10-3 / PMCID: PMC3398296 / PMID: 22216938

"Oncolytic virotherapy in veterinary medicine: current status and future prospects for canine patients"

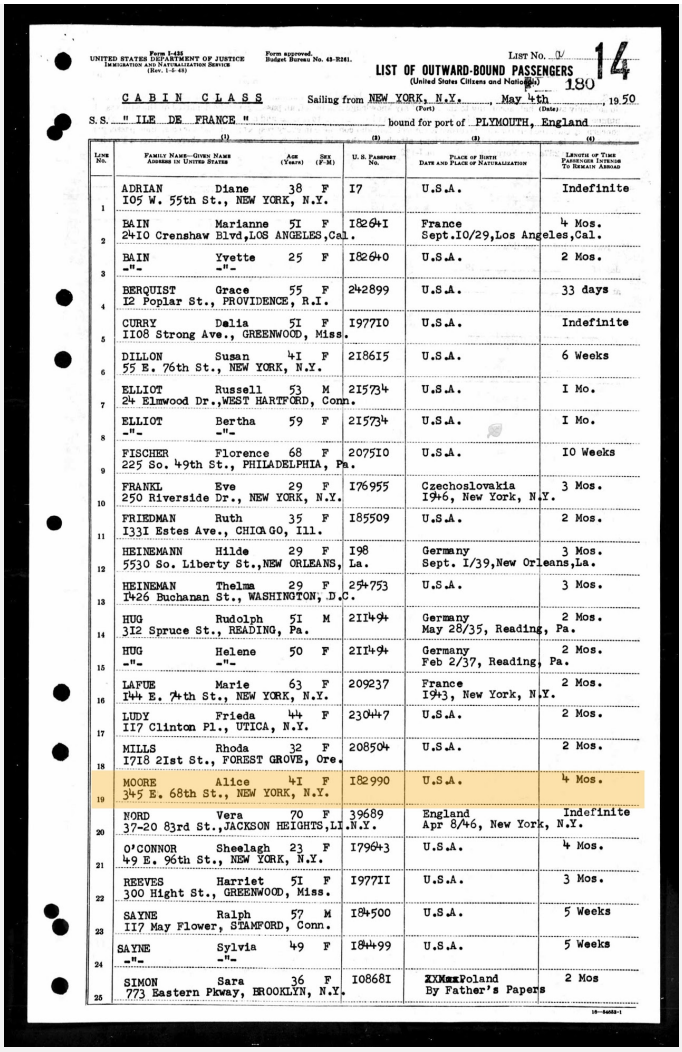
In 1950s... (https://core.ac.uk/download/pdf/322438727.pdf)

"1. Targeting and mechanism of OV

Even in the absence of tools to genetically modify viruses in order to make them safer, in the 1950s, Alice Moore observed that it was possible to generate virus strains with higher oncolytic capacity and more tumor specificity through adaptation. In particular, the oncolytic features of Russian encephalitis virus were enhanced after 20–30 passages in the Sarcoma 180 cell line as compared to the original strain, leading to the idea that the tumor cells could exert an evolutionary pressure upon the virus, favoring those particles adapted to replicate in the tumor [122]. After the development of techniques for the manipulation of DNA, these tools were used to break down the barriers for the development of virotherapy. Thus, undesirable virulence could be mitigated by eliminating key genes from the viral genome, generating attenuated viruses. The viral genome often codes important proteins that regulate its replication in postmitotic cells. For example, the thymidine kinase (TK) gene is associated with DNA synthesis and cell cycle progression [123]. Taking advantage of this information, Martuza and collaborators showed that HSV lacking the gene coding for TK could replicate in dividing cells, but replication was hampered in quiescent cells, in line with the need for selective replication in tumor cells. In an animal model of glioma, locally administrated mutant HSV led to inhibition of tumor growth and showed decreased neurotoxicity [121]. Alternatively, the viral life cycle may be guided by cellular or virus-encoded microRNAs that alter the level of expression of cell-specific proteins [124]."

1950 (May 04 to Sep 02) - Traveling to Europe for 4 months

- **Departure :** May 4, 1950 to Plymouth England (Original : [HJ000V][GDrive])
  - Ship : "SS Ile De France" [https://en.wikipedia.org/wiki/SS_%C3%8Ele_de_France]
- **Return:** Sep 2, 1950 (from Harve) (Original : [HJ000X][GDrive])
  - Ship : "RMS Caronia" [https://en.wikipedia.org/wiki/RMS_Caronia_(1947)]
  - NOTE - on the return, she went by her husband's name Hendershott"



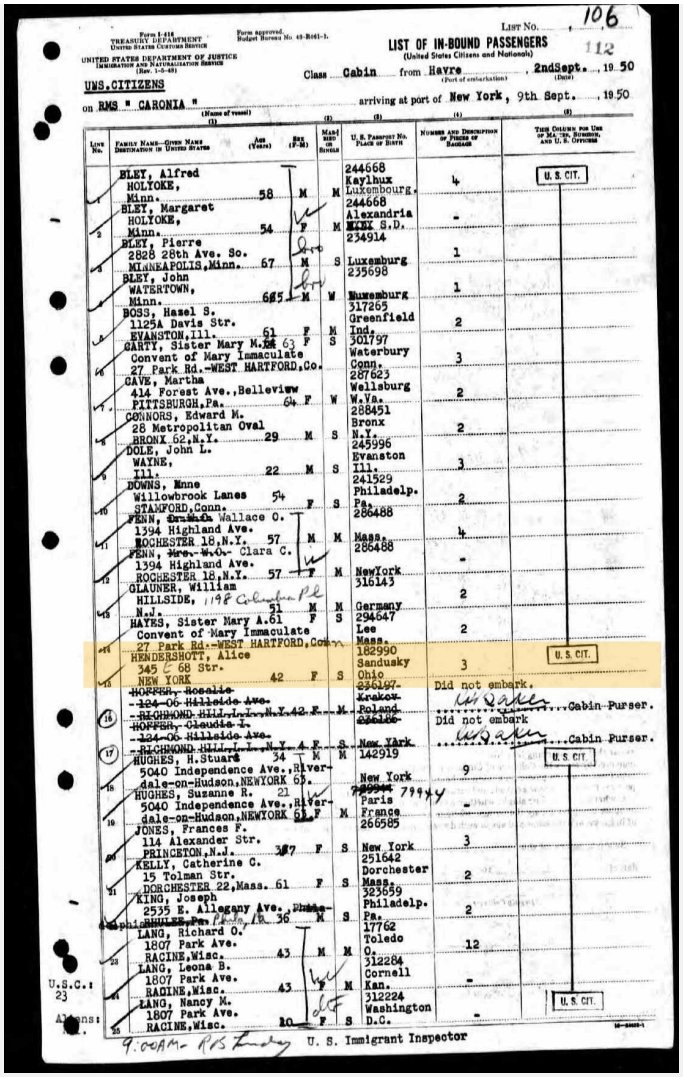
LIST OF OUTWARD-BOUND PASSENGERS
(United States Citizens and Nationals)

List No. 14

CABIN CLASS — Sailing from NEW YORK, N.Y., May 4th, 1950 — S.S. "ILE DE FRANCE" — bound for port of PLYMOUTH, England

Line No.	Family Name—Given Name; Address in United States	Age (Years)	Sex (F-M)	U.S. Passport No.	Place of Birth; Date and Place of Naturalization	Length of Time Passenger Intends to Remain Abroad
1	ADRIAN Diane 105 W. 55th St., NEW YORK, N.Y.	38	F	I7	U.S.A.	Indefinite
2	BAIN Marianne 2410 Crenshaw Blvd,LOS ANGELES,Cal.	51	F	I8264I	France Sept.10/29,Los Angeles,Cal.	4 Mos.
3	BAIN Yvette -"- -"-	25	F	I8264O	U.S.A.	2 Mos.
4	BERQUIST Grace 12 Poplar St., PROVIDENCE, R.I.	55	F	242899	U.S.A.	33 days
5	CURRY Delia 1108 Strong Ave., GREENWOOD, Miss.	51	F	I97710	U.S.A.	Indefinite
6	DILLON Susan 55 E. 76th St., NEW YORK, N.Y.	41	F	218615	U.S.A.	6 Weeks
7	ELLIOT Russell 24 Elmwood Dr.,WEST HARTFORD, Conn.	53	M	215734	U.S.A.	I Mo.
8	ELLIOT Bertha -"- -"-	59	F	215734	U.S.A.	I Mo.
9	FISCHER Florence 225 So. 49th St., PHILADELPHIA, Pa.	68	F	207510	U.S.A.	IO Weeks
10	FRANKL Eve 250 Riverside Dr., NEW YORK, N.Y.	29	F	I76955	Czechoslovakia I946, New York, N.Y.	3 Mos.
11	FRIEDMAN Ruth I33I Estes Ave., CHICAGO, Ill.	35	F	I85509	U.S.A.	2 Mos.
12	HEINEMANN Hilde 5530 So. Liberty St.,NEW ORLEANS, La.	29	F	I98	Germany Sept. I/39,New Orleans,La.	3 Mos.
13	HEINEMAN Thelma 1426 Buchanan St., WASHINGTON, D.C.	29	F	254753	U.S.A.	3 Mos.
14	HUG Rudolph 312 Spruce St., READING, Pa.	51	M	2II494	Germany May 28/35, Reading, Pa.	2 Mos.
15	HUG Helene -"- -"-	50	F	2II495	Germany Feb 2/37, Reading, Pa.	2 Mos.
16	LAFUE Marie 144 E. 74th St., NEW YORK, N.Y.	63	F	209237	France I943, New York, N.Y.	2 Mos.
17	LUDY Frieda 117 Clinton Pl., UTICA, N.Y.	44	F	230447	U.S.A.	2 Mos.
18	MILLS Rhoda 1718 21st St., FOREST GROVE, Ore.	32	F	208504	U.S.A.	2 Mos.
19	MOORE Alice 345 E. 68th St., NEW YORK, N.Y.	41	F	I82990	U.S.A.	4 Mos.
20	NORD Vera 37-20 83rd St.,JACKSON HEIGHTS,LI.N.Y.	70	F	39689	England Apr 8/46, New York, N.Y.	Indefinite
21	O'CONNOR Sheelagh 49 E. 96th St., NEW YORK, N.Y.	23	F	I79643	U.S.A.	4 Mos.
22	REEVES Harriet 300 Hight St., GREENWOOD, Miss.	51	F	I9771I	U.S.A.	3 Mos.
23	SAYNE Ralph 117 May Flower, STAMFORD, Conn.	57	M	I84500	U.S.A.	5 Weeks
24	SAYNE Sylvia -"- -"-	49	F	I8449I	U.S.A.	5 Weeks
25	SIMON Sara 773 Eastern Pkway, BROOKLYN, N.Y.	36	F	I08681	~~XXmxx~~Poland By Father's Papers	2 Mos

[HJ000W][GDrive]



LIST OF IN-BOUND PASSENGERS
(United States Citizens and Nationals)

List No. 106, 112

Class Cabin from Havre (Port of embarkation), 2nd Sept. (Date), 1950

U.S. CITIZENS

on RMS "CARONIA" arriving at port of New York, 9th Sept., 1950

Line No.	Family Name—Given Name; Destination in United States	Age (Years)	Sex (F-M)	Marital Status	U.S. Passport No. Place of Issue	Number and Description of Pieces of Baggage	Time Column for Use of Ex. Tm. Students, and U.S. Officials
1	BLEY, Alfred HOLYOKE, Minn.	58	M	M	244668 Kayllux Luxembourg	4	U.S. CIT.
2	BLEY, Margaret HOLYOKE, Minn.	54	F	M	244668 Alexandria S.D.	-	
3	BLEY, Pierre 2828 28th Ave. So. MINNEAPOLIS,Minn.	67	M	S	234914 Luxemburg	1	
4	BLEY, John WATERTOWN, Minn.	65	M	W	235698 Luxemburg	1	
5	BOSS, Hazel S. 1125A Davis Str. EVANSTON,Ill.	61	F	M	317265 Greenfield Ind.	2	
6	CARTY, Sister Mary M. Convent of Mary Immaculate 27 Park Rd.-WEST HARTFORD,Co.	63	F	S	301797 Waterbury Conn.	3	
7	CAVE, Martha 414 Forest Ave.,Belleview PITTSBURGH,Pa.	64	F	W	287623 Wallsburg W.Va.	2	
8	CONNORS, Edward M. 28 Metropolitan Oval BRONX 62,N.Y.	29	M	S	288451 Bronx N.Y.	2	
9	DOLE, John L. WAYNE, Ill.	22	M	S	245996 Evanston Ill.	3	
10	DOWNS, Anne Willowbrook Lanes STAMFORD,Conn.	54	F	S	241529 Philadelp. Pa.	2	
11	FENN, ~~Dr.Mrs.~~ Wallace C. 1394 Highland Ave. ROCHESTER 18,N.Y.	57	M	M	286488 Mass.	4	
12	FENN, ~~Mrs. W.C.~~ Clara C. 1394 Highland Ave. ROCHESTER 18,N.Y.	57	F	M	286488 NewYork	-	
13	GLAUNER, William HILLSIDE, 198 Columbus Pl. N.J.	51	M	M	516143 Germany	2	
14	HAYES, Sister Mary A. Convent of Mary Immaculate 27 Park Rd.-WEST HARTFORD,Conn.	61	F	S	294647 Lee Mass.	2	
15	HENDERSHOTT, Alice 345 E 68 Str. NEW YORK	42	F	S	182990 Sandusky Ohio	3	U.S. CIT.
16	~~HOFFER, Rosalie 124-06 Hillside Ave. RICHMOND HILL,L.I.,N.Y.~~	~~42~~	~~F~~	~~M~~	~~236197~~ Krakow Poland	Did not embark. W Drake	....Cabin Purser.
17	~~HOFFER, Claudia I. 124-06 Hillside Ave. RICHMOND HILL,L.I.,N.Y.~~	~~4~~	~~F~~	~~S~~	~~236196~~ New York	Did not embark W Drake	....Cabin Purser.
18	HUGHES, H.Stuart 5040 Independence Ave.,River- dale-on-Hudson,NEWYORK 63.	34	M	M	142919 New York	9	U.S. CIT.
19	HUGHES, Suzanne R. 5040 Independence Ave.,River- dale-on-Hudson,NEWYORK 63.	21	F	M	799944 Paris	-	
20	JONES, Frances F. 114 Alexander Str. PRINCETON,N.J.	387	F	S	266585 New York	3	
21	KELLY, Catherine C. 15 Tolman Str. DORCHESTER 22,Mass.	61	F	S	251642 Dorchester Mass.	2	
22	KING, Joseph 2535 E. Allegany Ave., ~~Phila~~ ~~PHILADELPHIA~~ Phila, PA.	36	M	S	323659 Philadelp. Pa.	2	
23	LANG, Richard O. 1807 Park Ave. RACINE,Wisc.	43	M	M	17762 Toledo O.	12	
24	LANG, Leona B. 1807 Park Ave. RACINE,Wisc.	43	F	M	312284 Cornell Kan.	-	
25	LANG, Nancy M. 1807 Park Ave. RACINE,Wisc.	10	F	S	312224 Washington D.C.	-	U.S. CIT.

U.S.C.: 23
Aliens:

9:00AM- RAS Tuesday U. S. Immigrant Inspector

[HJ000Y][GDrive]

1950 (May 22) -

https://www.newspapers.com/image/315324916/?terms=%22Alice%20E.%20Moore%22&match=1

1950-05-22-tampa-bay-times-pg-13-clip-chemical-cure.jpg

Tampa Bay Times (St. Petersburg, Florida) • 22 May 1950, Mon • Page 13

A Synthetic Chemical May Be Cancer Cure

By SCIENCE SERVICE

ATLANTIC CITY, N. J. — Search for a chemical cure for cancer has led scientists to investigate fungi, disease-causing viruses, male, female and adrenal hormones and synthetic chemicals from the textile industry.

One of these synthetic chemicals, called SK 1133, caused complete regression, or disappearance, of almost 100% of the highly malignant cancers called sarcomas, about 80% of carcinomas and about 40% of carcino-sarcomas in rats, Drs. Kanematsu Sugiura and C. Chester Stock of Sloan - Kettering Institute for Cancer Research, New York, reported at the meeting here of the American Association for Cancer Research.

A related chemical SK 1424, was almost as effective. The value of both chemicals in treating animal cancers was definitely greater than that of nitrogen mustard.

THE VIRUS of Russian Far East encephalitis, cause of the brain disease sometimes called "sleeping sickness", also showed striking anti-cancer activity, completely checking the growth of some animal cancers, though it was ineffective against others. The anti-cancer activity of the virus, however, is tied up with its disease-causing activity. The cancer in the mouse would be completely destroyed but the animal would always die of the virus infection. Study of this virus was reported by Dr. Stock and Dr. Alice E. Moore.

Anti-cancer but also toxic to the test animals was a substance from a fungus, Aspergillus fumigatus 943, investigated by Dr. Stock with Dr. H. Christine Reilly.

MORE ENCOURAGING was the report that mice expected to develop cancer of the outer part of the adrenal gland can be protected from this fate by pellets of male and female sex hormones and adrenal cortical hormones. Search for a substance with strong tumor-preventing effect without being a "strong sex hormone" is continuing and the outlook, Dr George W. Woolley of Sloan-Kettering reported, is hopeful.

1950 (July 25) - In Paris: "Fifth International Cancer Research Congress"

https://www.newspapers.com/image/109229307/?terms=%22Alice%20E.%20Moore%22&match=1

1950-07-25-the-eugene-guard-oregon-pg-8-clip-blood-test.jpg

Blood Test Proves Effective In Detecting Human Cancer

PARIS —(AP)— A new blood test has so far proved almost 100 per cent accurate in detecting cancer in humans, three Swiss physicians reported recently.

They told the Fifth International Cancer Research Congress the test is based on a chemical that appears in the blood of persons with cancer. The chemical breaks down a certain kind of sugar, pentose sugar. The test is made by adding blood serum from the person to a solution of the sugar.

The method was described by Dr. Georges Menkes, Dr. P. Rentchnick and Dr. S. Steenmf, of Geneva.

The test was tried, they said, on 200 persons with various kinds of cancer. It was 95 per cent right. An improved version was employed on the second hundred. Dr. Mankes said it was almost 100 per cent accurate.

Blood from 42 of 44 healthy persons produced no reaction on the pentose sugar, while 88 per cent of 124 persons with diseases other than cancer also showed negative reactions to the test, the Swiss expert said.

Rats were given a cancer-causing chemical. The sugar-destroying chemical appeared in their blood at the same time as the microscope showed cancerous changes in the rats' tissues.

The sugar-destroying chemical seems to be a constant and probably peculiar property of the blood of cancer patients, Dr. Menkes concluded.

The congress also heard a description of a new injection technique in which hollow tubes, pushed through human arteries, wind as far as five feet through the body to deliver cannon shots of drugs against cancer growths.

Dr. Michael B. Shimkin of San Francisco's National Cancer Institute said the tubes can carry large amounts of drugs to the site of the cancer. Twice as much of the drug injected into a vein would be greatly diluted before it reached the same site, he explained.

Drugs were given in this way to 50 patients, all dying of cancers, in the past year, Dr. Shimkin said. About half of them received temporary help and a few obtained an extra three months of life, he added. The drugs used were nitrogen mustards, made from wartime poison gases.

The tube method, Dr. Shimkin said, had proven safe and may become increasingly useful. The patient lies on a fluorscopic table and doctors watch where the tube, or catheter, is going. The patient gets a local anesthetic at the point of the tube's entry and doesn't seem to mind the process, the doctor added.

Two other reports at the session described the use of virus diseases to fight cancer. Smaller than basteria, the tiny viruses have to enter body cells to live and reproduce. If they get into cancer cells, they may be able to halt or slow down the cancerous growth.

A report from Dr. Shimkin and four other San Francisco experts—Dr. Howard A. Bierman, Dr. William M. D. Hammon, Dr. Bernice U. Eddie and Dr. Karl F. Meyer—said such diseases had been given to 16 persons suffering from cancer of the lymph glands or cancer of the blood, leukemia. Some recovered temporarily, for a few weeks or months, the doctors said.

Each virus administered was of a type that could be controlled or cut off with such modern antibiotics as aureomycin or chloromycetin. Diseases used included a virus disease of cats, a venereal disease called lymphopathia venereum and Rocky Mountain spotted fever.

Dr. Alice E. Moore of the Sloan-Kettering Institute for cancer research, New York, told of using another virus which causes Russian encephalitis. This dangerous disease, given mice, destroyed some kinds of cancer.

How Long for Stump? One is 25 Years Old

SOUTH BEND, Wash.—(AP)— How long will a stump live?

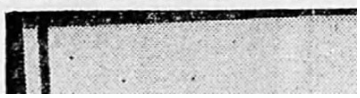
Two Douglas fir stumps from a 25-year-old cutting near Menlo are still alive, Mize Lazara, soil conservation service forester, said recently.

The stumps have calloused over and are continuing to show annual growth.

The reason?

Lazara said he believes that while the stump was a tree it had formed a natural root graft with another Douglas fir a few feet away.

The one tree was cut, but its stump continued to take life-giving and timber-building strength from the still-standing tree.



1951 (April) - Research : "Enhancement of Oncolytic Effect of Russian Encephalitis Virus."

Source : [HI002X][GDrive] / Alice E. Moore, First Published April 1, 1951 Research Article

- *Summary - By continuous passage in the transplantable mouse tumor sarcoma 180 it has been possible to increase the ability of the virus of Russian encephalitis to destroy this tumor. Conversely, continuous passage in the mouse brain resulted in a loss of oncolytic activity. In other experiments the virus of Russian encephalitis was changed by continuous passage in the Wagnar osteogenic sarcoma so that it caused destruction of this hitherto resistant tumor*

Enhancement of Oncolytic Effect of Russian Encephalitis Virus.* (18619)

ALICE E. MOORE. (Introduced by C. P. Rhoads)

From the Division of Experimental Chemotherapy, Sloan-Kettering Institute for Cancer Research, New York City.

In the study of the effect of neurotropic viruses on transplantable tumors in mice, it was found that the oncolytic action of these viruses was so closely associated with the neurotropism that the tumor bearing animals always died of the infection(1,2). If animals were immunized either actively or passively against the viruses no tumor destruction took place(3). It seemed possible that by continuous passage from tumor to tumor in cancer bearing animals, some change might be brought about in the tropism of the virus. That tumor destruction is not inevitably associated with nervous system injury was shown by Sharpless, Davies and Cox(4). They reported that both Russian and West Nile encephalitis viruses could cause the regression of the chicken tumor RPL-12 with the survival of the host.

For the past two years we have attempted to separate the neurotropic portion of the Russian encephalitis virus from its oncolytic portion. Although the objective has not been attained, certain changes have occurred in the affinity of the virus for tumor tissue. By continuous passage it can be shown that its oncolytic ability can be enhanced. As yet no marked change has occurred in its neurotropism.

Materials and methods. The methods used in trying to produce variant strains of virus from the parent or "stock virus" have been as follows: (1) Sarcoma 180 passages. Three types of passages are reported in this study. (a) Bi-weekly passage. Groups of 3 to 5 animals were implanted subcutaneously with tumors. When the growths were approximately 10 mm in diameter, 0.05 cc of "stock virus" was inoculated directly into the neoplasm. Three or 4 days later one animal from the group was killed, the tumor removed aseptically, and a 10% emulsion made in diluent. After centrifugation, 0.05 cc of the supernatant was inoculated into the tumors of another group of sarcoma 180 bearing animals. The remaining animals of each inoculated group were allowed to die of the infection and a record kept of their day of death and the condition of their tumor. (b) One- to 2-day passage. After 96 bi-weekly passages, another series was begun. The transfers were carried out in the same way except that inoculated tumors were removed and passed at one- and 2-day intervals. An attempt at daily tumor passage was abandoned because the virus was too readily lost. (c) Passage at higher dilutions. Numerous attempts have been made to make tumor to tumor passages after the virus has been diluted. A passage began with virus from the 117th bi-weekly passage diluted to 10^{-3} at the time of each passage had undergone 16 consecutive passages before testing. Continuous passage at higher levels (10^{-5}, 10^{-7}, 10^{-8}) have been difficult to maintain because of the possibility of diluting out the virus. (2) Brain Passage. The original "stock virus" was carried by transfer from brain to brain in order to have a comparison with the tumor to tumor passage material. 0.03 cc of 10% "stock virus" was inoculated intracerebrally and serial passages at that dilution were made at bi-weekly intervals. (3) Wagnar osteogenic sarcoma passage. Continuous passage was begun by inoculation of 0.1 cc of the "stock virus" directly into palpable Wagnar tumors. At intervals of 3 or 4 days, a tumor was removed aseptically, a 10% suspension made and 0.1 cc of centrifugate inoculated into the same type of neoplasm. *Virus.* The virus of Russian Far East encephalitis was used throughout these experiments.§ Whole mouse brains were kept frozen at −40°C in the dry ice chest. They were prepared from a single stock of brains so that all virus used and referred to as "stock virus." were at the same level of passage. All dilutions were made in 10% inactivated horse serum in physiological saline. *Titrations.* All titrations for virus content of brain and tumor were made with white mice of 18-22 g in weight obtained from commercial breeders. For intracerebral titrations 0.03 cc amounts were employed, and for the subcutaneous and intraperitoneal titrations 0.05 cc was inoculated. *Detection of changes in the virus.* Although virus variation is a recognized phenomenon the detection of variants, especially if present in small amounts, is very difficult. In the studies here reported if a "pure strain" oncolytic variant without effect on normal tissue appeared, it would be possible to detect it only by its activity against a transplantable tumor since intracerebral inoculation would produce no disease. It was necessary, therefore, to set up a standard procedure which would detect any increase in the oncolytic activity of the virus. The test for changes in activity of the sarcoma 180 passage viruses and the brain passage virus was done as follows: Mice bearing sarcoma 180 implanted 4 days previously, were inoculated intraperitoneally with 0.05 cc of a 10^{-3} dilution of virus. The inoculated virus was always titered intracerebrally and usually intraperitoneally and subcutaneously. The day following inoculation tumor and brain were removed and the amount of virus contained in each was determined by intracerebral titration. At the same time 2 mm cube pieces of tumor were implanted into virus immune but tumor susceptible mice to determine its viability (bioassay). The same procedure was done 3 days and occasionally 7 days after the original inoculation of virus.

* This work was supported by funds from the National Cancer Institute of the U. S. Public Health Service, American Cancer Society and the Damon Runyon Memorial Fund for Cancer Research.

1. Moore, A. E., *Cancer*, 1949, v2, 525.
2. Koprowski, H., and Norton, T. W., *Cancer*, 1950, v3, 874.
3. Moore, A. E., and O'Connor, S., *Cancer*, 1950, v3, 886.
4. Sharpless, G., Davies, M., and Cox, H., PROC. SOC. EXP. BIOL. AND MED., 1950, v73, 270.

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[HI002Y][GDrive]

§ Received through the courtesy of Dr. J. Casals of Rockefeller Institute.

The time at which the sarcoma 180 is destroyed following intraperitoneal inoculation with "stock virus" at different dilutions has been determined. It is possible therefore to detect, by the method described, any increase or decrease in the oncolytic ability of the virus consequent to a procedure designed to modify that ability.

The same type of test was used for the detection of changes in the tumor effect of the Wagnar passage virus. After a number of serial passages, the virus was tested against the Wagnar tumor by inoculation of 0.05 cc of a 10^{-1} suspension of virus intraperitoneally. At the same time the "stock virus" was inoculated in the same dilution into a comparable group of tumor bearing animals. Previous experiments† had shown that in the dilutions inoculated this virus has been ineffective in causing tumor destruction. When the animals became paralyzed, usually 6 or 7 days after the inoculation, 2 or 3 from each group were killed and the viability of the tumors determined by implantation into virus immune animals. Titrations of brain and tumor were carried out at the same time. *Tissue culture.*‡ The results obtained in animals with the sarcoma 180 passage and the brain to brain passage were confirmed by tissue cul-

Per cent of Sarcoma 180 destroyed at one and three days following intraperitoneal inoculation of 0.05 c.c. of 10^{-3} dilution of Tumor to Tumor and Brain to Brain Passage.

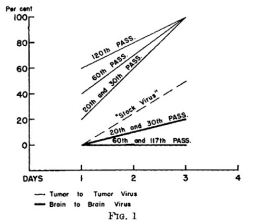

FIG. 1

† To be reported.

‡ The author wishes to thank Dr. C. Friend who performed these experiments.

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[HI002Z][GDrive]

TABLE I. Effect of Intraperitoneal Inoculation of Brain to Brain and Tumor to Tumor Passages on the Viability of Sarcoma 180.

Passage No.		Titer of inoculum i.c.*	i.p.	subq.	1 day after inoculation Tumor*	Brain*	% tumor destroyed	3 days after inoculation Tumor	Brain	% tumor destroyed
Original	"stock"	9.5§	7.5	7.5	4.5	1.5	0	9.0	4.0	50
B to B†	10th	>9.0	8.0	7.5	>5.0	3.0	20	8.5	4.5	20
T to T‡	10	9.5	7.5	6.0	3.5	1.0	0	8.25	3.5	60
B to B	20	8.5	—	—	2.0	4.0	0	8.0	3.5	20
T to T	20	8.0	—	—	6.5	1.5	20	8.0	>3.0	100
B to B	30	9.5	—	—	2.0	<1.0	0	8.0	3.5	20
T to T	30	8.0	—	—	4.5	3.0	20	8.0	4.0	100
B to B	40	9.5	—	—	<1.0	4.0	0	7.5	2.0	0
T to T	40	7.75	—	—	<1.0	2.5	20	8.0	4.0	60
B to B	60	8.0	—	—	4.0	<1.0	20	8.0	2.0	0
T to T	60	7.5	—	—	>5.0	1.75	40	6.5	2.0	100
B to B	77	9.5	6.5	7.5	4.0	<1.0	0	7.5	2.0	60
T to T	77	7.5	5.5	6.0	4.0	<1.0	20	8.0	4.0	100
B to B	100	8.0	6.0	4.0	2.5	<1.0	0	7.5	2.5	0
T to T	97	7.5	6.5	4.5	4.0	<1.0	75	8.0	2.0	100
B to B	111	7.5	5.5	5.5	1.5	<1.0	0	6.5	1.5	0
T to T	108	8.5	6.5	7.5	6.0	1.75	25	8.5	4.0	100
1 to 2 day T to T	60	7.5	4.0	4.0	4.5	1.25	40	>7.0	4.0	100
B to B	117	8.5	6.5	5.5	>7.0	>3.0	0	>7.0	2.5	0
T to T	120	8.0	6.0	6.0	>7.0	3.0	60	>7.0	4.0	100
1 to 2 day T to T	84	6.0	6.5	5.5	4.0	>3.0	60	7.0	>5.0	100

* Amt of virus determined by intracerebral titration.
† B to B indicates brain to brain.
‡ T to T indicates tumor to tumor.
§ All figures represent the reciprocal of the logarithm of the LD_{50}.

ture technics. One flask containing a simple Maitland type medium consisting of 4.5 cc Tyrode's solution, 0.5 cc normal horse serum and minced tumor was inoculated with 0.5 cc brain passage virus at a dilution of 10^{-3}. A comparable flask was inoculated with the tumor passage virus. Twenty-four, 48 and 72 hours later 10 tumor pieces along with tumor from a control flask were removed and implanted into immunized mice to determine their viability. Titrations of the supernatant were also carried out.

Results. Sarcoma 180 passage compared with brain passage. After 20 passages it was apparent that the bi-weekly tumor to tumor passage virus was destroying the tumor to a greater extent than the brain to brain passage, and further passage has resulted in an increase in the oncolytic effect of this virus while the brain passage has lost its ability to attack the tumor in the 3 day period. In fact bioassay experiments with the 128th brain to brain passage showed that only 30% of the sarcoma 180 was destroyed 7 days after inoculation, whereas inoculation of "stock virus" invariably destroys 100% of the tumor in the same length of time. The results are shown graphically in Fig. 1. Table I gives the detailed information obtained from the bioassay experiments. It can be seen that in each test but one, the inoculated brain to brain passage virus had a higher intracerebral titer than the tumor to tumor passage so that the tumor destructive ability of the latter virus can not be due to an increase in the number of infective virus particles. The titers of brain and tumor from animals killed one and 3 days after inoculation show no great consistency. In general the tumor passage virus appears in larger amounts in the tumor than does brain passage virus (5 of 8 instances) one day after inoculation, whereas 3 days after inoculation both passages are more apt to be present in nearly equal titer (5 of 8 instances). Obviously the intracerebral titer has little bearing on whether a tumor is destroyed since tumors of animals inoculated 3 days previously with brain to brain

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TABLE II. Effect of Inoculation of Brain to Brain Passage Virus and Tumor to Tumor Passage Virus on the Viability of Sarcoma 180 in Tissue Culture.

	Titer of virus inoc.	24 hr* Titer	% tumor destruction	48 hr* Titer	% tumor destruction	72 hr* Titer	% tumor destruction	96 hr* Titer	% tumor destruction
48th B to B†	8.0	3.0	0	6.5	60	6.0	70	7.0	87
48th T to T‡	8.0	1.5	33	5.0	50	6.0	70	7.0	100
107th B to B	9.5	5.0	50	3.0	20	2.5	25	—	—
107th T to T	8.5	3.5	100	5.0	100	1.0	100	—	—
1-2 day 52nd T to T	6.5	3.0	62	3.0	80	71.0	100	—	—

* Incubated at 37°C. Titrations and bioassay carried out at 24, 48, 72, and 96 hr.
† B to B indicates brain to brain.
‡ T to T indicates tumor to tumor.
Control tumor pieces exposed for the same length of time in the same medium grew in 100% of the instances.

passage have high titers and yet the virus has no ability to destroy the tumor tissue.

If the neurotropism of the tumor to tumor passage virus were decreased one would expect to get some survivors among the passage mice. This has happened in scattered instances but the total number is not very impressive—10 in 349 animals injected. However, when one realizes that 0.05 cc of a 10% suspension of virus is inoculated (approximately 1,000,000,000 LD_{50}'s) any survivors at all have special interest. None were observed in the brain to brain passage. The animals which survived with regressions of tumor were immune to challenge by fully virulent virus and, in most instances, reimplantation of sarcoma 180 resulted in failure of the tumor to grow. The results of testing 2 of the one to 2 day sarcoma 180 passages are shown in the last 2 experiments in Table I. So far these appear to be of the same order as the bi-weekly tumor passage and about the same number of survivors (14 out of 438) have been obtained. It was hoped that in this manner the particles of virus having strong tumor affinities could be selectively passed. One test of the 10^{-3} passage after 16 passages showed it to be similar to the other tumor to tumor passages.

Tissue culture experiments. Effective destruction of tumor by the Russian virus can also take place in tissue culture. Therefore the tumor to tumor passage and the brain to brain passages were tested by this means to see if the differences observed in animals could be confirmed. The set up of the test is given under *Methods.* The results obtained are given in Table II. The *in vitro* experiments showed no great difference between the brain to brain and tumor to tumor passages on the growth of the sarcoma 180 at the level of the 48th passage. However the 107th passage showed a difference between them. In this instance the tumor to tumor passages tested showed a much greater ability to destroy the tumor than did the brain to brain passage whose ability in this direction appeared to have decreased.

Wagnar passage virus compared to "stock virus." At regular intervals during serial passage, the virus was tested by bioassay experiments in the manner previously described to ascertain if it had acquired the ability to cause tumor destruction. "Stock virus" was tested in exactly the same manner each time for comparison. A summary of these experiments is given in Table III. It is clear that the Russian encephalitis virus, by continuous growth in a non-susceptible tumor, has been changed so that it is now capable of causing its destruction.

Discussion. From the results presented two conclusions can be drawn: (1) the oncolytic activity of the virus of Russian encephalitis for a susceptible tumor can be increased or decreased quantitatively by suitable procedures, (2) the activity can be modified, qualitatively so that it will cause destruc-

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TABLE III. Effect of Intraperitoneal Inoculation of Wagnar Passage Virus on Viability of Wagnar Tumor Compared to the Parent Strain.

Passage No.	Titration i.c.*	Titration i.p.†	Titration subq.‡	Titer Tumor	Titer Brain	% tumor destroyed
"Stock virus"	9.75§	7.5	6.5	6.5	8.0	0
41st passage	7.5 §	6.0	3.5	6.0	6.0	20
"Stock virus"	8.5	6.0	6.0	8.0	7.5	8
55th passage	9.0	7.5	3.5	8.0	8.5	64
"Stock virus"	8.5	6.0	6.5	6.5	8.0	0
79th passage	9.5	6.0	7.5	8.5	8.5	100
"Stock virus"	10.0	8.0	3.0	6.5	8.0	0
90th passage	10.0	6.5	3.0	7.5	8.5	100

* Intracerebral.
† Intraperitoneal.
‡ Subcutaneous.
§ Expressed as the reciprocal of the logarithm of the LD_{50}.

tion of a cytologic type of tumor which was originally resistant to the parent virus. These results were obtained by continuous passage of the virus in tumor or in brain tissue for relatively long periods of time. The changes in viral activity which occurred with passage were gradual. They show little indication of a discontinuous variation (mutation). Rather the product viruses can be looked upon as adaptive variants of the parent strain. They have retained their ability to attack nervous tissue and have changed only in their destructive capacity for tumor.

Viruses are well known for their capacity to vary with respect to the type of tissue which they can invade and injure. An understanding of the mechanism by which this takes place awaits further work on virus-host relationships but we can speculate on some of the possibilities, with reference to the present results with the strains.

If one thinks of a virus population as containing a number of variant particles, and there appears to be much evidence for this concept(5), it is conceivable that the above results were the result of selection. According to this interpretation the particles responsible for the neurotropism of the virus would have remained constant in number while the ones responsible for the tumor effect would have increased or decreased.

Another possibility resides in the make-up of the virus itself. At one point virus reproduces itself within the tumor without injury to its host cells. After long passage in that tissue the ability to destroy it is acquired by the virus. The transition is a gradual one. The process is reminiscent of the acquisition, by other forms, of the capacity to metabolize substrates after many generations of contact with them(6). It is conceivable that there exist in certain neoplastic cells specific components required for the anabolic processes of their reproduction. These may well be of the nature of nucleic acid precursors(7), and may be similar to those required by viruses(8). By continuous growth in a medium containing these components the virus may achieve the capacity for metabolizing one of them which is essential for the growth of the tumor cell. In this fashion a minor adaptive variation could endow a virus with oncolytic properties.

Still another possible explanation for the observed results may be offered. It has been shown that variant viruses may have different rates of growth(5) and it may be that the tumor trophic viruses become more rapidly adsorbed to the susceptible cell or that they may multiply more rapidly within the cell.

Summary. By continuous passage in the transplantable mouse tumor sarcoma 180 it has been possible to increase the ability of the virus of Russian encephalitis to destroy

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[HI0032][GDrive]

1951 (Nov) - Published Research with Dr. Chester Southam : "West Nile, Ilheus, and Bunyamwera virus infections in man" (But it appears to have been deleted!)

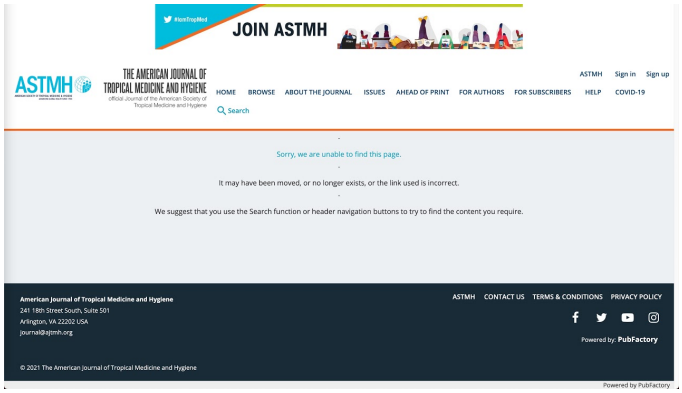
Am J Trop Med Hyg (aka 'The American journal of tropical medicine and hygiene') . 1951 Nov;31(6):724-41. doi: 10.4269/ajtmh.1951.s1-31.724.

C M SOUTHAM, A E MOORE

- PMID: 14894758
- DOI: 10.4269/ajtmh.1951.s1-31.724

Abstract only from Semantics Scholar :

- *West Nile, Ilheus and Bunyamwera viruses have been inoculated into patients with advanced inoperable neoplastic diseases in hopes of inhibiting the neoplasms. The course of infection of man by these viruses has not previously been known. Results of this study have been presented, with emphasis on the clinical picture and virology.*
- *West Nile produced an asymptomatic infection in 5 of 21 patients inoculated.*
- *Ilheus virus infected 9 of the 19 patients inoculated. It caused mild encephalitis in 3 patients, and in the other patients caused no symptoms.*
- *Bunyamwera virus caused a very severe encephalitis with residual mental damage in one patient. It failed to infect 3 other patients.*
- *There was no significant effect on growth of the neoplasms, but localization of virus in tumor tissue was demonstrated in some patients with each of the 3 viruses.*



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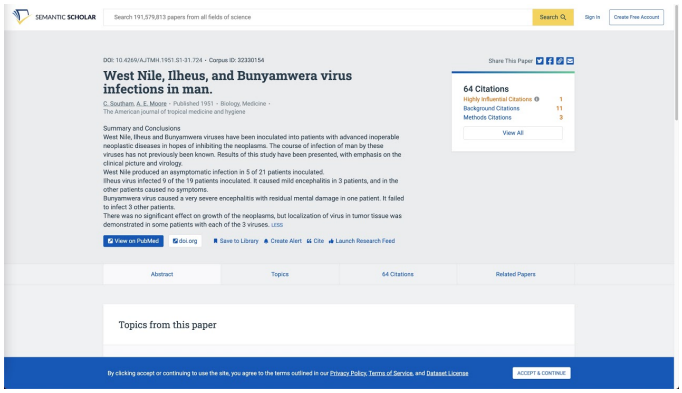

- https://www.semanticscholar.org/paper/West-Nile%2C-Ilheus%2C-and-Bunyamwera-virus-infections-Southam-Moore/5577cc8d44e8347051eff9746a1beaf44e353ff9

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1951 (Nov 16)

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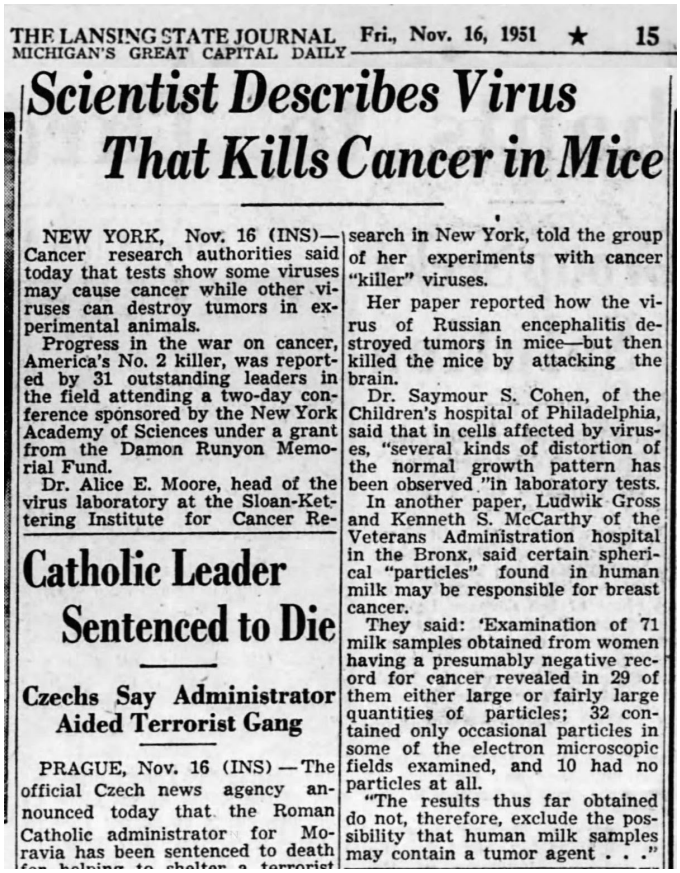

THE LANSING STATE JOURNAL Fri., Nov. 16, 1951 ★ 15
MICHIGAN'S GREAT CAPITAL DAILY

Scientist Describes Virus That Kills Cancer in Mice

NEW YORK, Nov. 16 (INS)—Cancer research authorities said today that tests show some viruses may cause cancer while other viruses can destroy tumors in experimental animals.

Progress in the war on cancer, America's No. 2 killer, was reported by 31 outstanding leaders in the field attending a two-day conference sponsored by the New York Academy of Sciences under a grant from the Damon Runyon Memorial Fund.

Dr. Alice E. Moore, head of the virus laboratory at the Sloan-Kettering Institute for Cancer Research in New York, told the group of her experiments with cancer "killer" viruses.

Her paper reported how the virus of Russian encephalitis destroyed tumors in mice—but then killed the mice by attacking the brain.

Dr. Saymour S. Cohen, of the Children's hospital of Philadelphia, said that in cells affected by viruses, "several kinds of distortion of the normal growth pattern has been observed "in laboratory tests.

In another paper, Ludwik Gross and Kenneth S. McCarthy of the Veterans Administration hospital in the Bronx, said certain spherical "particles" found in human milk may be responsible for breast cancer.

They said: 'Examination of 71 milk samples obtained from women having a presumably negative record for cancer revealed in 29 of them either large or fairly large quantities of particles; 32 contained only occasional particles in some of the electron microscopic fields examined, and 10 had no particles at all.

"The results thus far obtained do not, therefore, exclude the possibility that human milk samples may contain a tumor agent . . ."

Catholic Leader Sentenced to Die

Czechs Say Administrator Aided Terrorist Gang

PRAGUE, Nov. 16 (INS) — The official Czech news agency announced today that the Roman Catholic administrator for Moravia has been sentenced to death

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1952 - HEP2

hep2 https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6511639/

1952 (Jan 11)

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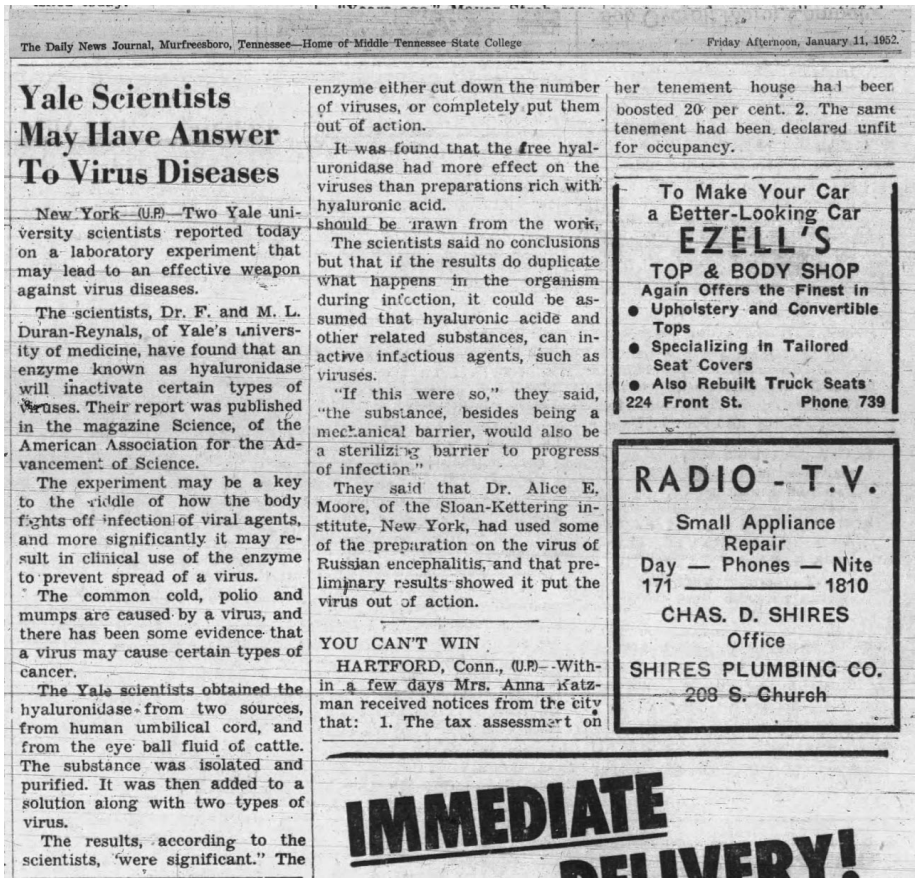
1952-01-11-the-daily-news-journal-mufeesboro-tn-pg-8-clip-cancer



The Daily News Journal, Murfreesboro, Tennessee—Home of Middle Tennessee State College — Friday Afternoon, January 11, 1952

Yale Scientists May Have Answer To Virus Diseases

New York—(U.P.)—Two Yale university scientists reported today on a laboratory experiment that may lead to an effective weapon against virus diseases.

The scientists, Dr. F. and M. L. Duran-Reynals, of Yale's university of medicine, have found that an enzyme known as hyaluronidase will inactivate certain types of viruses. Their report was published in the magazine Science, of the American Association for the Advancement of Science.

The experiment may be a key to the riddle of how the body fights off infection of viral agents, and more significantly it may result in clinical use of the enzyme to prevent spread of a virus.

The common cold, polio and mumps are caused by a virus, and there has been some evidence that a virus may cause certain types of cancer.

The Yale scientists obtained the hyaluronidase from two sources, from human umbilical cord, and from the eye ball fluid of cattle. The substance was isolated and purified. It was then added to a solution along with two types of virus.

The results, according to the scientists, "were significant." The enzyme either cut down the number of viruses, or completely put them out of action.

It was found that the free hyaluronidase had more effect on the viruses than preparations rich with hyaluronic acid.

should be drawn from the work.

The scientists said no conclusions but that if the results do duplicate what happens in the organism during infection, it could be assumed that hyaluronic acide and other related substances, can inactive infectious agents, such as viruses.

"If this were so," they said, "the substance, besides being a mechanical barrier, would also be a sterilizing barrier to progress of infection."

They said that Dr. Alice E. Moore, of the Sloan-Kettering institute, New York, had used some of the preparation on the virus of Russian encephalitis, and that preliminary results showed it put the virus out of action.

YOU CAN'T WIN

HARTFORD, Conn., (U.P.)—Within a few days Mrs. Anna Katzman received notices from the city that: 1. The tax assessment on her tenement house had been boosted 20 per cent. 2. The same tenement had been declared unfit for occupancy.

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1952 (Jan 22)

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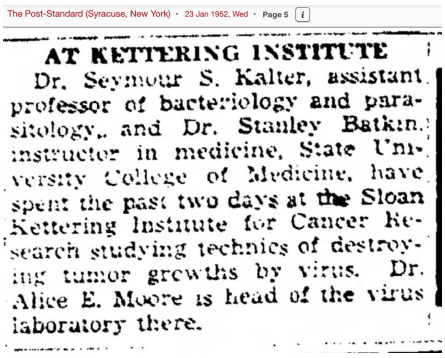

The Post-Standard (Syracuse, New York) · 23 Jan 1952, Wed · Page 5

AT KETTERING INSTITUTE

Dr. Seymour S. Kalter, assistant professor of bacteriology and parasitology, and Dr. Stanley Batkin, instructor in medicine, State University College of Medicine, have spent the past two days at the Sloan Kettering Institute for Cancer Research studying technics of destroying tumor growths by virus. Dr. Alice E. Moore is head of the virus laboratory there.

1952 (March 27)

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1952-03-27-the-baltimore-sun-pg-9-clip-cancers.jpg

NOTE - "Dr. Alice E. Moore, former head of the yellow-fever vaccine department of the Rockefeller Foundation and now an investigator at the Sloan-Kettering Institute for Cancer Research"

THE SUN, BALTIMORE, THURSDAY MORNING, MARCH 27, 1952

Woman Doctor Trains Viruses To Attack Cancerous Growths

By WILLIAM MANCHESTER
[Sunpapers Staff Correspondent]

New York, March 26—Training deadly viruses to attack tumors by feeding them a steady diet of cancer tissue is the purpose of research being conducted here by Dr. Alice E. Moore, former head of the yellow-fever vaccine department of the Rockefeller Foundation and now an investigator at the Sloan-Kettering Institute for Cancer Research.

The idea is that if the viruses develop an appetite for cancer, they may leave normal cells alone and feed on just the malignant tissue in a patient's body.

Although her work largely remains in the realm of theory after years of experimentation, including some with doomed human subjects, Dr. Moore has found that the behavior of certain virus strains can be changed—that they can be given appetites for tumor cells.

Lie In Twilight Zone

Viruses lie in a twilight zone between living and dead matter. They are, for the most part, made up of complex protein molecules and a nucleic acid. They can infect human beings with diseases ranging from colds to polio.

They are known to be what science calls "specific agents"—that is, they go after certain tissues. This characteristic was the starting point of Dr. Moore's research.

She first infected cancers in mice with influenza and with the herpes virus which causes cold sores in mouths. The viruses grew in the cancer but they didn't do it much damage, and so she turned to other agents.

Tried Encephalitis Virus

She hit upon the highly virulent Russian encephalitis virus. When ground up into a deadly broth and injected into cancerous mice, "the Russian," as Dr. Moore calls the virus, tended to concentrate in the tumor.

It worked better in some cases than in others. Of twelve mouse tumors, it completely destroyed six, a few others were inhibited. The rest were unaffected.

Unfortunately, all the mice died of Russian encephalitis.

"We had what you might call an inferior cancer cure," Dr. Moore says. "We could have done as well with a mousetrap."

But she did not expect to find a virus which would behave perfectly, multiplying in the tumor, destroying it and then going away without any damage to normal cells. She knew such an agent was unobtainable.

One Trained For Year

It was then she decided to train virus's appetites.

One virus was trained for a year. In the beginning, it was no more effective against cancer tissue than normal tissue. But after 80 passages—80 mice, that is—it completely destroyed mouse tumor before turning on other cells.

Other viruses also acquired a taste for cancer. One strain took six days to knock out a tumor when first given a tumor meal. After many passages it had become ravenous and did the job in 24 hours.

"We have found that a number of viruses attack the tumor and destroy it first," Dr. Moore says. "We know now we don't have to kill the mouse to do it. And we know a virus can be changed."

Some "Melt Away"

In some experiments, she said, the tumors "melt away." Certain strains of "the Russian" go directly to the cancer and feast only there. No traces of them can be found in a mouse's blood.

"The Russian" was considered too deadly for human patients. But some patients for whom all other methods of treatment had failed were inoculated with certan encephalitis strains which had turned up in yellow-fever surveys—the West Nile and the Bunjamwera viruses from Africa, and the Ilhéus virus, from the Amazon Valley.

Use of the Bunjamwera was discontinued when it infected its fourth patient with the encephalitis, an incurable disease. The other strains are still under study in humans.

Rats Get Inoculations

Dr. Moore is now working with Dr. Helene Wallace Toolan, whose contribution has been the growing of human tumor tissue in rats.

When a tumor is removed from a patient, it is taken directly from the operating table to Dr. Toolan, who grinds it up and inoculates rats with the broth. Of twenty rats so inoculated, she keeps ten. She gives the other ten to Dr. Moore.

Dr. Moore's rats receive viruses. Dr. Toolan's don't. Both groups are observed to see if the cancers in Dr. Moore's rats go away and those in the others stay.

When the doctors find a virus works against one of the human tumors thus transplanted, they keep a sharp eye out for the patient from whom it was taken. If he shows up with another tumor, and he may, there is an excellent chance it will be just like the first tumor and therefore amenable to treatment from that virus.

Curiously, Dr. Toolan has been able to grow normal human tissue, as well as human tumors, on rodents. Skin taken from the abdomen of a 72-year-old woman during an autopsy has been grafted onto a rat.

1952 (April 08)

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1952-04-08-the-greenville-daily-advocate-pg-3.jpg

1952-04-08-the-greenville-daily-advocate-pg-3-clip-ohio-woman-viruses.jpg

Greenville Daily Advocate (Greenville, Ohio) · 08 Apr 1952, Tue · Page 3

FORMER OHIO WOMAN DOCTOR REPORTS ON CANCER RESEARCH

NEW YORK — (U.P.) — Dr. Alice E. Moore, formerly of Bellevue, O., shuttles between a carefully guarded laboratory and a tiny, brick-walled office where she studies results of the unique cancer research department she heads.

The locked laboratory is opened only to doctors and technicians who have been vaccinated against deadly Russian encephalitis. Dr. Moore, a brisk grey-haired woman of 44 with a ready sense of humor, heads the virus section of the Sloan-Kettering Institute.

For three years the section has been searching for a virus which would destroy cancerous tissue. At first the experiments were done only on mice. Now viruses are injected into cancer patients in the hospital.

"The thing that makes the experiments unique in the field of cancer research is that we're using a living agent—virus," Dr. Moore explained. "But we definitely have not found any cure. I don't believe in giving people false hope."

She was sitting in her office which smelled strongly of ether and disinfectant, nine floors below the locked laboratory. On the walls were several humorous sketches of mice discussing their health problems with one another.

"We've never found any need to inject ourselves with any of the viruses to see how they react," she said, referring to herself and her staff of four other women doctors and a dozen technicians. "It would be very dramatic, but we haven't done it."

So far the staff has proved "that some viruses will destroy some transplantable tumors in mice and rats." Dr. Moore continued cautiously:

"We say that the results are encouraging—but to us, not to patients. After injecting patients, we have found that the virus does not collect in the tumor."

Russian encephalitis virus, the most effective in killing tumors in mice, can't be used on humans at this stage because of its deadly effect.

"It cures the cancer, but it always kills the mice," Dr. Moore said with a sigh.

1952 Research help for Hilary Koprowski - "LATENT OR DORMANT VIRAL INFECTIONS. Annals of the New York Academy of Sciences, 54(6), 963–976."

[**Dr. Hilary Koprowski (born 1916)**]. LATENT OR DORMANT VIRAL INFECTIONS. Annals of the New York Academy of Sciences, 54(6), 963–976. doi:10.1111/j.1749-6632.1952.tb39972.x / PDF : [HP005Y][GDrive]

NOTE Page 971 Footnote, and the credit to **Dr. Alice E. Moore (born 1908)** : (PDF : [HP005Y][GDrive] / For this page, see [HP0061][GDrive]) : *"The author expresses his grateful appreciation to **Dr. Alice E. Moore**, of the Sloan-Kettering Institute for Cancer Research, for the mice-bearing tumors; and to Dr. Stanley Stellar, of the Department of Neurosurgery, New York School of Medicine, for the human tumors."*

LATENT OR DORMANT VIRAL INFECTIONS

By Hilary Koprowski
Lederle Laboratories Division, American Cyanamid Company, Pearl River, New York

The purpose of this paper is to review some of our knowledge concerning latent virus infections, in the hope that such a survey of the distribution, variety and behavior of these infections may facilitate the study of the neoplastic processes in man and in domestic and laboratory animals. I shall purposely avoid giving a definition of latency, since, if a broad, ecological view of the phenomenon of survival of parasites in nature is taken, it becomes clear that the stabilization of the host-parasite relationship cannot be based only upon the multiplication of virus at the expense of destroyed cells. It is much more probable that, in many instances, a latent virus persists in its host-cell as an innocuous symbiont, with a capacity to shed virulent variants only in rare cases.[1] Thus, if the broader view is adopted, a paper on latency of viruses should really encompass all known viral infections of plants, animals and insects. This would obviously be much beyond the scope of this presentation. Therefore, following a brief discussion of the methods of detection of dormant viral infection, examples of only a few such infections will be described in detail and the others mentioned briefly.

Detection of Latent Infection. An inapparent infection may become apparent and cause signs of disease in its host whenever the delicate equilibrium between parasite and host is upset. This may be caused by a change in environmental conditions, by a disturbance of the physiologic equilibrium of the host, or by any other factor or factors of a nature as yet undetermined.

More commonly, a dormant virus infection may be detected by a careful examination of either animal or plant tissues, the cells of which are suspected to contain these viruses. If the latter is visible and morphologically identifiable, then such methods as electron microscopy can be used successfully for that purpose. In other instances, transplantation of the material into other animal or plant species, with resulting signs of infection, may constitute proof of latency. The demonstration of a specific antigen in the suspected tissue by serological tests may sometimes be the means of detecting an inapparent viral infection.

Finally, if the latent virus is able to evoke an immune reaction in its host, detection of specific antibodies and/or resistance to reinfection with the homologous agent may be considered as an indication of persistence of the virus in inapparent form in the host.

Obviously, these methods and techniques are neither exact nor exhaustive but they cannot be improved until our knowledge of the intricate mechanism of infection of living cells with viruses becomes more comprehensive. There seems to be little doubt, however, that many instances of latent infection escape notice because of the inadequacy of existing methods of detection. These reservations should be borne in mind during the ensuing discussion.

Latent Viral Infections of Mammals. In a discussion of latency of viruses, herpes simplex and rabies infections represent two contrasting problems in the extreme. Herpes simplex is a classical example of latent infection in man. The virus is dormant in the majority of human beings[2] and there are many flaring factors which may provoke the quiescent virus to appear. They may be listed as fever (induced or due to infection), cold, menstruation, exposure to sun, and, last but not least, emotional upset.[3]

Conversely, our knowledge of possible latency in rabies is very slight, and it is obvious that an answer based solely on observations in man would be inadequate. It should be pointed out, however, that circumstances surrounding the transition from the inapparent to the apparent infection in rabies may tend to incriminate certain factors. Intensive Pasteur treatment, for instance, was associated with shorter incubation periods of the disease[4] and emotional shock was thought to precipitate an attack of rabies in an exposed individual.[5] One case, that of a young boy bitten by a rabid dog, possibly merits detailed description. After exposure, the boy received

TABLE 1
RECHALLENGE OF HAMSTERS WITH STREET STRAIN OF RABIES VIRUS

Experiment number		*Mortality ratio of hamsters exposed to street virus and injected with dilutions of antisera*				
		1:2	1:8	1:32	1:64	1:128
35	Original exposure	1/10	3/10	4/10	4/10	9/10
	Rechallenge*	3/9	2/7	0/6	0/6	0/1
35a	Original exposure	0/9	1/10	6/10	5/10	8/10
	Rechallenge*	2/9	0/9	0/4	0/5	0/2

* Five months later.

the full course of antirabies vaccine treatment and showed no signs of illness. Five months later, he became ill with bacterial pneumonia and while recovering began to exhibit signs of involvement of the central nervous system and later died of rabies.[6] Although coincidence of a prolonged incubation period cannot be ruled out in this case, the circumstantial evidence seems to demonstrate that the upset of the rabies virus-host cell equilibrium was caused by a febrile disease.

Evidence of viral latency in herpes simplex and rabies infections may be obtained in laboratory animals. Rabbits remained well, after either intramuscular or intravenous inoculation with herpes virus, but subjection to either anaphylactic or histamine shock invariably precipitated a severe encephalitis in the inoculated animals, and herpes virus could be demonstrated in the brain tissue. Characteristic pathological changes observed in the shocked animals were lacking in the control animals.[7, 8]

In the case of rabies, injection of Syrian hamsters seemed to provide a possible clue to the mechanism of its latency. When exposure to street virus was followed 24 hours later by administration of rabies antiserum, the

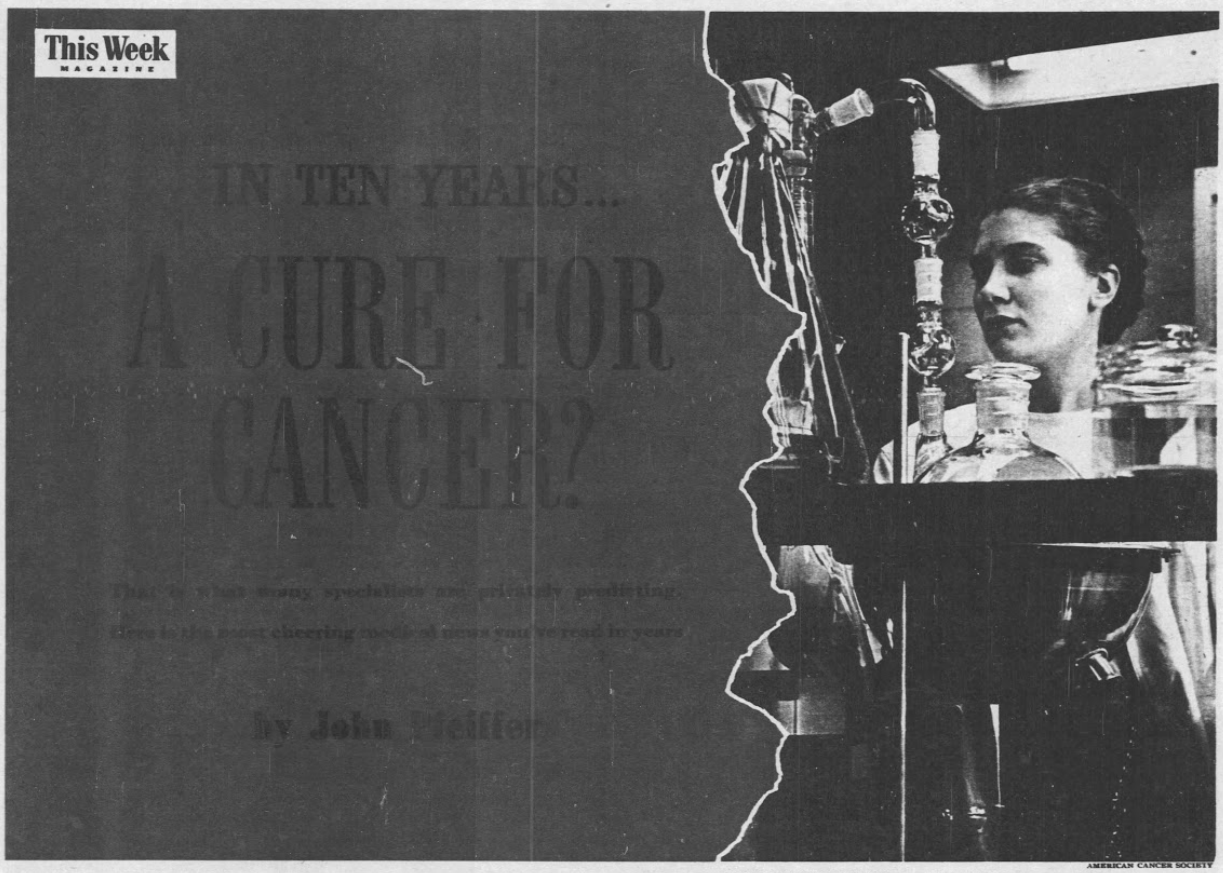
1953 (March 15) - "This Week Magazine" on "A cure for cancer" (Baltimore Sun version)

This Week
MAGAZINE

IN TEN YEARS...
A CURE FOR CANCER?

That is what many specialists are privately predicting. Here is the most cheering medical news you've read in years

by John Pfeiffer



AMERICAN CANCER SOCIETY

BOOM IN RESEARCH is opening exciting new possibilities for medicine

SCIENTISTS are closing in on cancer. That good news summarizes the views of most specialists I have interviewed in a survey of the battle against cancer.

They're looking forward to radically new treatments and cures in the foreseeable future, and 10 years seems to be the most popular prediction. But they won't talk about it, at least not in public. Last winter a usually reliable reporter quoted one leading cancer researcher to the effect that a cure would be forthcoming in five to 10 years. The statement was later denied.

Yet if the hunches of other investigators are any sign, it wasn't a bad guess, whoever made it! The director of a large eastern cancer hospital recently came up with an equally confident forecast (off the record, of course). He told me that he expects to see the cancer problem cracked "before the end of my active professional career" — and he's scheduled to retire in 10 years.

Another specialist says five to 15 years; still another speaks of "a decade or so."

These educated estimates are subject to qualification, of course. A third world war would be sure to disrupt cancer planning. Furthermore, the future is not clearly in focus. As soon as physicists split uranium before the war, the release of atomic energy became a matter for precise scientific prediction. No one has yet come up with a similarly crucial finding in cancer research.

Danger from Quacks

THIS is why some authorities, including spokesmen for the highly regarded American Cancer Society, refuse to go on record endorsing definite deadlines. And, of course, they have to be doubly careful. Cancer quacks still continue to prey on the fears of bewildered patients with claptrap about "miracle" cures, available *now*.

But — and this is the chief source of hope — basic research in biology is entering a boom period as exciting as that of atomic physics during the late 1930's. Although the secret of cancer has proved exquisitely elusive, science exists to deal with exactly this sort of problem. There is a feeling that we are on the verge of major advances. **Despite the reluctance of the experts to see their private remarks in print, work already under way explains their cautious optimism.**

The accelerating drive to curb cancer is being supported by the American Cancer Society, the National Cancer Institute and other agencies. It can be illustrated by three broad new avenues of approach: 1) the use of tumor-destroying viruses unknown a few years ago; 2) controlling the body's output of growth-affecting hormones by surgery and other methods; and 3) the search for new chemicals, "magic bullets" designed to kill cancer cells as effectively as conventional drugs kill germs. These studies are selected as examples from the mass of work that is modern cancer research. They are *not* listed in order of importance — we don't know enough at this stage to do that. But they hint strongly at the shape of things to come.

Anti-Cancer Viruses

OVERLOOKING a church near Manhattan's East River is a small ward in the James Ewing Hospital of the Memorial Center for Cancer and Allied Diseases. The ward has beds for only 10 patients. But it's the site of one of the most original and promising projects in the vast fight against cancer. During a recent visit I watched a procedure which, in itself, isn't particularly impressive. You've seen it many times. A doctor simply injected some milky white fluid into the right arm of a middle-aged woman.

What the fluid contained, however, is something else again. The doctor had carefully explained things to the patient — he was purposely injecting her with a colony of thriving viruses.

1,000-to-1 Gamble

LIKE all such agents, they were submicroscopic (25 million could be placed on the head of a pin) and attacked living cells. Only these parasites wouldn't hurt her. In fact, they had been selected because they were natural enemies of cancer cells and did negligible damage to the normal variety.

These injections are the result of a thousand-to-one medical gamble that is beginning to pay off. More than four years ago Dr. Alice E. Moore, Memorial's virus expert, launched a search for anti-cancer agents. She had no direct proof that such viruses existed. But she knew that all of them have finicky appetites. Some feed exclusively on lung tissue;

Continued on page 22

JOHN PFEIFFER, a former editor of "Scientific American," has won Guggenheim, Saxton fellowships, written medical articles for leading magazines. For this story, he visited hospitals, witnessed new cancer treatments, interviewed top specialists

IN TEN YEARS — A CURE FOR CANCER?

Continued from page seven

others, like the polio parasite, head for the cells of the brain and nervous system. Perhaps a type might be found which preferred cancer cells.

Flu viruses had no effect on mouse tumors. Neither did the viruses that cause cold sores or "fever blisters" on the lips. Dr. Moore tested viruses lurking in the bodies of ticks, rabid dogs, mosquitoes trapped in the jungles of Brazil and Africa. Several slowed down animal cancers, but cautious trials in patients gave little encouragement. Still no luck.

"Egypt 101"

THEN 18 months ago Yale doctors were testing blood samples obtained during a routine health survey from 250 children in a village near Cairo, Egypt. In the blood of Case No. 101, a two-year-old boy, they discovered a new virus, called it "Egypt 101" and sent it to Dr. Moore. The virus soon turned out to be a cancer-cell killer in mice, and is now being tested in men.

More than 125 patients have received shots of Egypt 101 and related viruses. Preliminary results show that temporary relief is obtained in certain tumors affecting the spleen, liver and lymph glands — and in cancer of the large intestine. According to a recent medical report, the latter condition "has never before responded even temporarily" to newer techniques. Egypt 101 can stop the growth of large-intestine cancers and, in several cases, has caused them to shrink by as much as a third.

A serious problem, however, is that the patient becomes immune to this particular virus. The body doesn't always know what's good for it. Mistaking the viruses for dangerous invaders, it throws up successful defenses and beneficial effects wear off. The expanded virus program includes research aimed at combatting this reaction, and "training" other viruses to do a better job.

Hormones and Surgery

IMPORTANT advances are being made in hormone research as well as virus research. A progress report of the American Cancer Society puts it this way: "A vast new field in the use of hormones — products of male and female glands — has opened in the past five years. True, they do not cure, but they often halt cancer growth and give relief from pain. Hundreds of men with cancer of the prostate and women with cancer of the breast have been enabled to return to something like a normal life through use of these hormones."

A new approach to the hormone problem is an operation developed by Dr. Charles Huggins of the University of Chicago. Cancer surgery usually means the direct removal of affected tissues. Dr. Huggins uses a different technique. He does not operate at the side of malignant growths; he changes body processes that keep tumors alive; he removes two small organs which are not afflicted with cancer themselves but seem to influence the disease by "remote control" — the adrenal glands, yellowish bodies about the size of orange segments, perched like three-cornered hats atop each kidney.

Incidentally, the odds are that this operation would have been fatal five years ago. Patients without adrenal glands must be supplied with the missing adrenal hormone, cortisone, and this substance hadn't yet been discovered.

One of the Chicago surgeon's patients is a 47-year-old housewife who was suffering from advanced breast cancer. She was bedridden and had only a few months to live at best. The operation halted the disease in its tracks. Today, 19 months after surgery, she is back home taking care of her family. "She feels so good," Dr. Huggins told me, "that she's eating too much and is on a reducing diet." Another patient, a man in a similarly hopeless state before his adrenals were removed, has worked 16 months as a boilermaker.

The Other Side

THIS is the sunny side of the story. If it were the whole truth, we wouldn't be looking ahead to the next 10 years — and we wouldn't avoid talking about "miracle" treatments. The two cases described above are not cured. Judging by past experience, benefits will not last indefinitely and the disease may flare up again without warning. Dr. Huggins is using the procedure for advanced breast and prostate gland cancer only. It isn't effective against other types.

A sober appraisal, however, reveals why surgeons at the Mayo Clinic, the Cleveland Clinic and the Massachusetts General Hospital are following Dr. Huggins' lead. About half of the 80 patients he's operated on have been dramatically relieved. Investigators don't yet know why, but one theory is based on observation that adrenal glands step up activity whenever your body is subjected to stress.

Cancer — like such conditions as arthritis, severe injury and emotional conflict — makes a heavy demand on these organs, It may require extra supplies of cortisone. By removing the adrenals and administering just enough of the hormone for normal tissues, doctors may be "starving" cancer cells. Whether or not the theory stands up, special surgery and other ways of controlling hormone balances will continue to yield important facts about the nature of malignant growth.

Hunting For Chemicals

BUT measured in terms of time and money spent, the greatest effort of all is going into a search for new cancer-killing chemicals. According to one view, cancer cells are simply super-stubborn parasites like germs and viruses. If so, there ought to be "magic bullet" substances to destroy them the way known drugs destroy bacteria. As a matter of fact, substances which show this ability — to a limited extent — have been widely used during the past few years.

Dr. Sidney Farber of the Harvard Medical School has conducted pioneer tests of a drug known as a-methopterin. His patients are about 350 children suffering from acute leukemia, a cancer of the blood. The chemical structure of this drug resembles that of one of the B vitamins — a vitamin, by the way, which cancerous blood cells require in their diets. The resemblance is so close that the abnormal cells can't tell the difference. They are fooled into devouring liberal doses of a-methopterin and by the time they discover their mistake, it's too late. They die of poison.

The Immunity Problem

USING the so-called "anti-vitamin" and similar drugs, Dr. Farber reports relief from certain forms of leukemia and an increased life span in two thirds of all cases. His prize patient, a nine-year-old girl, has already exceeded doctors' most optimistic hopes. She is alive today, almost five years after the start of her disease.

But such drugs cannot yield permanent results. Strangely enough, that doesn't necessarily mean new chemicals must be more effective. Two or three chemicals, each as good as a-methopterin and no better, might revolutionize the treatment of acute leukemia. And that goes for other types of cancer. The substances we have now work only for a while, because cancer cells gradually build a powerful resistance to them.

You may have come across a similar problem in your home. You can kill armies of houseflies with DDT, but a few of the insects may inherit "anti-DDT" genes

Continued on page 24

IN TEN YEARS — A CURE FOR CANCER?

Continued from page twenty-two

from their parents. The hardy offspring multiply rapidly in places dripping with the insecticide. The secret of fighting resistant houseflies — and perhaps, cancer cells — is to mix your weapons and use multi-drug combinations that can wipe out all enemies in a single blitz attack.

Screening Program

CANCER researchers have high hopes of developing such sudden-death measures. That's one reason why they're testing every new compound they can get their hands on — and testing it as quickly as possible. This is an unprecedented race against time.

Four chemicals are tested on standard mouse tumors every hour of the day at the Sloan-Kettering Institute in New York, the world's largest screening center. All substances, even the most unlikely, go through the same routine. One chance in a million is worth taking.

A grand total of 16,000 materials have already been screened. About 15 have been judged suitable for human trials and are either under investigation or about to be investigated. All widely used antibiotics such as penicillin and streptomycin have been tested with negative results. But animal trials of an extract of one soil-dwelling mold known as *Aspergillus fumigatus* were reported over two years ago, and studies of other antibiotics are continuing.

Natural Accelerators

SUCH tests are definitely on the experimental side. Chemicals being used now will not cure cancer. Neither will the Egypt 101 virus or adrenal surgery. But things look brighter for many reasons. **Basic studies of living cells are making sense out of a mass of hitherto unrelated facts.** The studies are under way at hundreds of large and small laboratories throughout the nation.

In other words, cancer is being attacked at a fundamental level, and such work has paid off handsomely in the past.

Furthermore, the pace of study has been stepped up tremendously during the last few years as physicists, biologists, chemists and specialists from many other fields join together in a great team effort. More activity will be concentrated in the coming decade than in any other previous decade in the history of cancer research. These are the facts that encourage many investigators to make off-record statements that important advances are in sight.

Meanwhile the situation today is not nearly as dark as some people believe. **Despite the fact that cancer is a mystery still, the over-all cure rate for all types of malignant conditions is more than 30 per cent.** Specialists are not waiting for the results of future research.

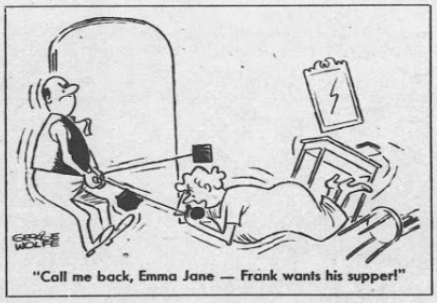
Important advances have been made in time-tested methods of treating the disease, notably conventional surgery and radiation. Cure rates for some kinds of cancer have doubled or tripled during the past decade.

Early Analysis

FINALLY, it is impossible to exaggerate the importance of early detection. A simple test for the diagnosis of early cancer, especially cancer of internal organs, would send death rates tumbling—even if doctors never learned a single new fact about the disease. Although the ideal test has not been discovered, already there are encouraging developments. For example, one new test can spot early-stage stomach tumors smaller than the nail of your little finger.

As for the future, the big point is that cancer cells can no longer be regarded as invulnerable enemies. They are being hit harder than ever before — and from more directions.

Here's what one brilliant young researcher has to say: "We're coming to grips with the problem. We wouldn't be working as hard as we are, if there weren't prospects for new cures that will surpass the ones available now. I'm confident that the next ten years will see major break-throughs on the entire cancer front." *The End*



"Call me back, Emma Jane — Frank wants his supper!"

TW—2-15-53

Pages 22 and 24 combined : [HN01JX][GDrive]
Original Page 22 : [HN01JV][GDrive] / Original Page 24 : [HN01JW][GDrive]

1954 (Jan) - Published Research : "Anti-Virus Antibody Studies Following Induced Infection of Man with West Nile, Ilhéus, and Other Viruses" by Chester M. Southam and Alice E. Moore

Published in : Journal of Immunology June 1, 1954, 72 (6) 446-462; Received November 6, 1953.

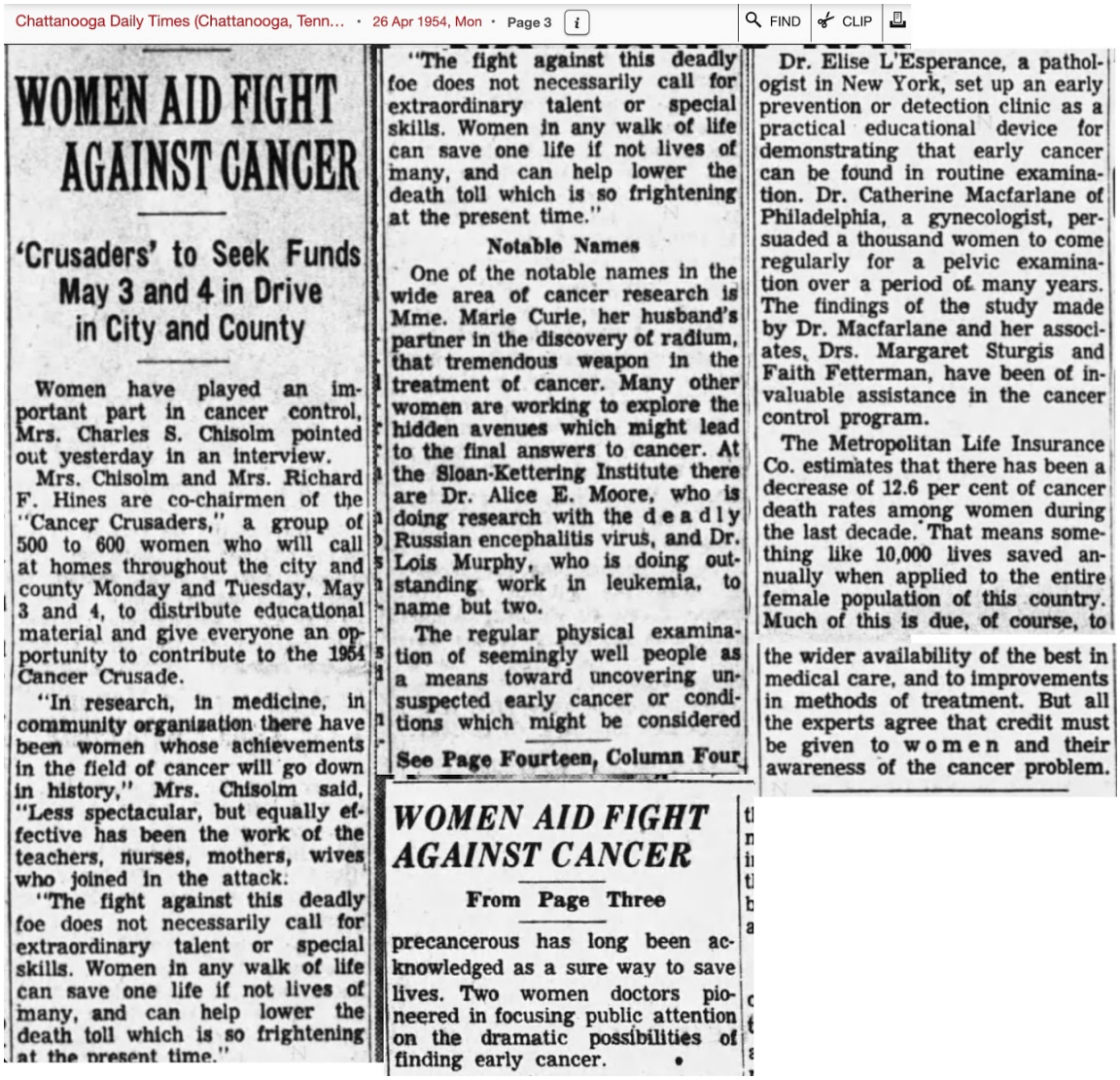
Full article not available - Has it been deleted ? See [HP005O][GDrive]

Summary and Conclusions :

- *Serial specimens of human serum were studied for the presence of anti-virus antibodies following the intentional inoculation of viruses as part of a clinical experimental study of the effects of these virus infections upon advanced cancer. Included in the study are sera from 20 patients following the inoculation of Smithburn's isolate of West Nile virus, and 50 patients following inoculation of the Egypt 101 isolate of West Nile virus; 20 patients following Ilhéus virus, 10 patients following Newcastle disease virus, and 1 or more patients following inoculation of Bunyamwera, Semliki Forest, Br I, Rabies, and R viruses, and the Egypt 19 and Egypt 21 isolates of West Nile virus. Almost all sera were studied by complement fixation technique, and many were studied by neutralization techniques. Sera from 3 patients were also studied for anti-hemagglutinating antibodies against West Nile virus.*
- *All of the techniques included in this study appeared to be approximately equivalent in their capacity to detect and quantitate antibody formation. In general, these viruses caused production of detectable antibodies in a majority of patients between 3 and 4 weeks after virus inoculation. Thereafter neutralizing antibody titers remained generally stable for the duration of this study, which rarely exceeded 6 months, but complement-fixation antibody titers often fell after 3 to 4 months. Newcastle disease virus differend from the other viruses studied in that the onset of complement-fixing antibody formation was more rapid and the titer of serum antibodies was greater than seen with the other viruses studied. This difference, however, was not observed when the neutralization technique was used.*
- *These data are in agreement with the conclusion that Egypt 101 virus and West Nile virus are antigenically identical, and data from a single patient is compatible with the view that Egypt 21 virus is also identical with West Nile virus. No satisfactory data were available for any conclusion concerning the Egypt 19 virus. There was no major cross-reaction between the West Nile viruses and Ilhéus virus. Antibodies against Japanese encephalitis virus were demonstrated in 2 patients following inoculation of Egypt 101 and Ilhéus virus. These same sera did not react with Western equine encephalitis virus.*
- *There were no data which suggested that any of the patients included in this study had had any previous exposure to West Nile or any antigenically similar virus. A few patients showed suggestive, but not conclusive, evidence of previous contact with antigenic material similar to Ilhéus and Newcastle disease viruses.*
- *Antibody formation occurred following inoculation of virus whether the virus propagated or not. Among patients inoculated with a single virus, there was no apparent correlation between the amount of virus propagation and the magnitude of the antibody response. However, when comparing different viruses, it appeared that those viruses which were more infective for man also stimulated greater antibody production. There were suggestive data to indicate that antibody formation in patients with lymphomatous neoplasms is poorer than in patients with other types of neoplastic disease. There was no apparent relationship between antibody forming ability and various types of cancer other than lymphoma.*

1954 (April 26) - At event fundraising/presenting - Mentioned along with Marie Curie

Full original newspaper pages : Page 3 at [HN01JY][GDrive] / Page 14 at [HN01K0][GDrive]



Chattanooga Daily Times (Chattanooga, Tenn… · 26 Apr 1954, Mon · Page 3

WOMEN AID FIGHT AGAINST CANCER

'Crusaders' to Seek Funds May 3 and 4 in Drive in City and County

Women have played an important part in cancer control, Mrs. Charles S. Chisolm pointed out yesterday in an interview.

Mrs. Chisolm and Mrs. Richard F. Hines are co-chairmen of the "Cancer Crusaders," a group of 500 to 600 women who will call at homes throughout the city and county Monday and Tuesday, May 3 and 4, to distribute educational material and give everyone an opportunity to contribute to the 1954 Cancer Crusade.

"In research, in medicine, in community organization there have been women whose achievements in the field of cancer will go down in history," Mrs. Chisolm said, "Less spectacular, but equally effective has been the work of the teachers, nurses, mothers, wives who joined in the attack.

"The fight against this deadly foe does not necessarily call for extraordinary talent or special skills. Women in any walk of life can save one life if not lives of many, and can help lower the death toll which is so frightening at the present time."

"The fight against this deadly foe does not necessarily call for extraordinary talent or special skills. Women in any walk of life can save one life if not lives of many, and can help lower the death toll which is so frightening at the present time."

Notable Names

One of the notable names in the wide area of cancer research is Mme. Marie Curie, her husband's partner in the discovery of radium, that tremendous weapon in the treatment of cancer. Many other women are working to explore the hidden avenues which might lead to the final answers to cancer. At the Sloan-Kettering Institute there are Dr. Alice E. Moore, who is doing research with the deadly Russian encephalitis virus, and Dr. Lois Murphy, who is doing outstanding work in leukemia, to name but two.

The regular physical examination of seemingly well people as a means toward uncovering unsuspected early cancer or conditions which might be considered

See Page Fourteen, Column Four

Dr. Elise L'Esperance, a pathologist in New York, set up an early prevention or detection clinic as a practical educational device for demonstrating that early cancer can be found in routine examination. Dr. Catherine Macfarlane of Philadelphia, a gynecologist, persuaded a thousand women to come regularly for a pelvic examination over a period of many years. The findings of the study made by Dr. Macfarlane and her associates, Drs. Margaret Sturgis and Faith Fetterman, have been of invaluable assistance in the cancer control program.

The Metropolitan Life Insurance Co. estimates that there has been a decrease of 12.6 per cent of cancer death rates among women during the last decade. That means something like 10,000 lives saved annually when applied to the entire female population of this country. Much of this is due, of course, to the wider availability of the best in medical care, and to improvements in methods of treatment. But all the experts agree that credit must be given to women and their awareness of the cancer problem.

WOMEN AID FIGHT AGAINST CANCER

From Page Three

precancerous has long been acknowledged as a sure way to save lives. Two women doctors pioneered in focusing public attention on the dramatic possibilities of finding early cancer.

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1955 (April 26)

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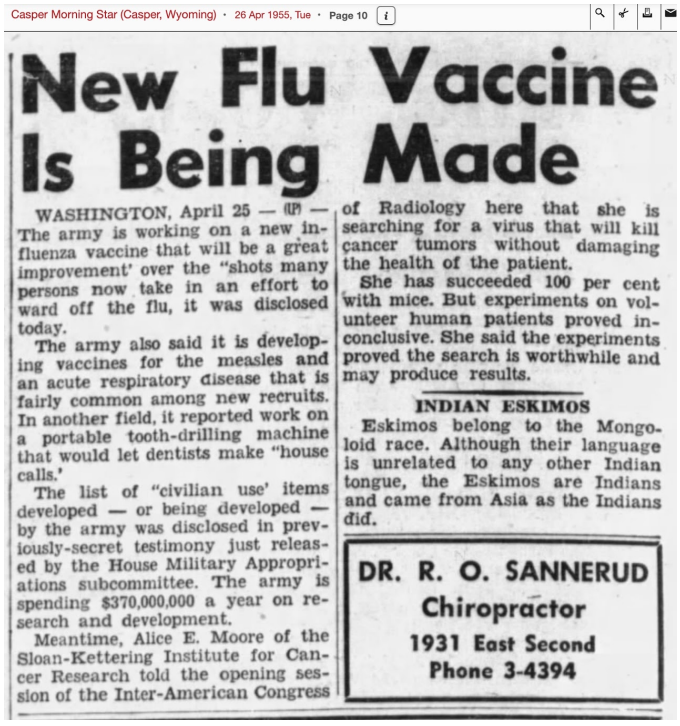

Casper Morning Star (Casper, Wyoming) · 26 Apr 1955, Tue · Page 10

New Flu Vaccine Is Being Made

WASHINGTON, April 25 — (AP) — The army is working on a new influenza vaccine that will be a great improvement' over the "shots many persons now take in an effort to ward off the flu, it was disclosed today.

The army also said it is developing vaccines for the measles and an acute respiratory disease that is fairly common among new recruits. In another field, it reported work on a portable tooth-drilling machine that would let dentists make "house calls.'

The list of "civilian use' items developed — or being developed — by the army was disclosed in previously-secret testimony just released by the House Military Appropriations subcommittee. The army is spending $370,000,000 a year on research and development.

Meantime, Alice E. Moore of the Sloan-Kettering Institute for Cancer Research told the opening session of the Inter-American Congress of Radiology here that she is searching for a virus that will kill cancer tumors without damaging the health of the patient.

She has succeeded 100 per cent with mice. But experiments on volunteer human patients proved inconclusive. She said the experiments proved the search is worthwhile and may produce results.

INDIAN ESKIMOS

Eskimos belong to the Mongoloid race. Although their language is unrelated to any other Indian tongue, the Eskimos are Indians and came from Asia as the Indians did.

DR. R. O. SANNERUD
Chiropractor
1931 East Second
Phone 3-4394

1955 (April 27)

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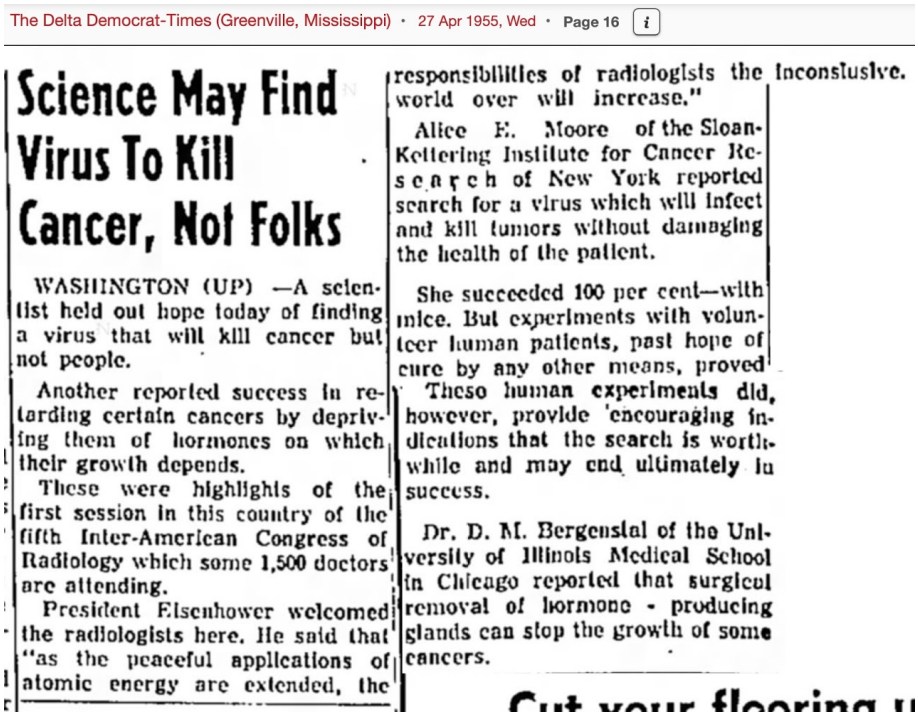
1955-04-27-the-delta-democrat-times-greenville-mississippi-pg-16-clip-virus-cancer



The Delta Democrat-Times (Greenville, Mississippi) · 27 Apr 1955, Wed · Page 16

Science May Find Virus To Kill Cancer, Not Folks

WASHINGTON (UP) —A scientist held out hope today of finding a virus that will kill cancer but not people.

Another reported success in retarding certain cancers by depriving them of hormones on which their growth depends.

These were highlights of the first session in this country of the fifth Inter-American Congress of Radiology which some 1,500 doctors are attending.

President Eisenhower welcomed the radiologists here. He said that "as the peaceful applications of atomic energy are extended, the responsibilities of radiologists the world over will increase."

Alice E. Moore of the Sloan-Kettering Institute for Cancer Research of New York reported search for a virus which will infect and kill tumors without damaging the health of the patient.

She succeeded 100 per cent—with mice. But experiments with volunteer human patients, past hope of cure by any other means, proved inconclusive.

These human experiments did, however, provide 'encouraging indications that the search is worthwhile and may end ultimately in success.

Dr. D. M. Bergenstal of the University of Illinois Medical School in Chicago reported that surgical removal of hormone - producing glands can stop the growth of some cancers.

Cut your flooring u

1955 (May 7)

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1955-05-07-newport-daily-news-pg-6-clip-cancers

Newport Daily News

Saturday, May 7, 1955

Doctor's Notebook

Cancer Treatments Discussed

By GLEN R. SHEPHERD, M. D.

The latest medical applications of X-rays, radium and other radioactive materials to the disgnosis and treatment of disease occupied the Fifth Inter-American Congress on Radiology in Washington, D. C., the week of April 25. Cancer research, diagnosis and treatment had a big place in the scientific discussions by Central and North American doctors.

A Texas radiation specialist reported that hollow needles containing radium implanted in the cancer is still one of the most effective treatments. Even in this age of super-power X-ray machines and powerful radioactive cobalt, Dr. Charles L. Martin of Dallas, Texas, observed that radium needles are highly effective. They can deliver radiation to accessible localized cancer, such as in the cervix, in sufficient quantity to kill it without harming nearby normal tissues of the body.

Another report, by Dr. Raymond R. Lanier, described experiments on mice, indicating that some chemicals made X-ray treatment of cancer more effective. Dr. Lanier is radiologist of the University of Colorado School of Medicine, Denver. His group has used nine different chemical compounds in experiments on mice, tending to show that the chemicals make certain mouse cancer more susceptible to the killing effect of X-rays. He doesn't yet know why. Finding that out might reveal more about the still-hidden basic growth differences between cancer and normal tissues.

Another approach in cancer research was described by Alice E. Moore, of the Sloan-Kettering Institute for Cancer Research. Miss Moore said, "We're trying to find a virus which, when injected into a cancerous tumor, will kill the tumor but leave the patient healthy and unharmed. Working with mice, Miss Moore has used six viruses from Africa and South America and one from Russia that tend to kill cancer without hurting the animal. One tumor that usually kills all the mice was destroyed by the virus and the mice remained well. However, these mice had been bred to resist fatal infection by the virus.

When tried in human beings having cancer who volunteered, the virus treatment did not provide any real benefit. Human experiments were stopped. Miss Moore said, "As usual, only more work wil tell whether this (virus) approach to the problem (of cancer) has any future."

A Philadelphia X-ray specialist, Dr. George E. Pfahler, reported from his 40-year experience that X-ray can almost always cure "strawberry" birthmarks. These are called cavernous hemangiomas by physicians, because they are flat swellings in the skin caused by new-formed blood vessels. However, X-ray has no effect on the "portwine stain" kind of birthmark.

Dr. Pfahler, an internationally known pioneer in the medical use of X-ray, is emeritus director of the Graduate Schoool of Medicine hospital of the University of Pennsylvania. He was honored by a French award at the meeting.

The strawberry birthmarks are best treated early in life, within the first few months, either by radium or X-ray or a combination of these with surgery, according to Dr. Pfahler. He said, "When radiation only (radium or X-ray) is skillfully udseilteeanhrtd mark. skillfully used and the interval between treatments is properly spaced, there is rarely any scarring and commonly no evidence of the location of the former (birthmark) unless it was ulcerated before treatment began."

1955 (June 08)

https://www.newspapers.com/image/4640036/?terms=%22Alice%20E.%20Moore%22&match=1

1955-06-08-the-sandusky-register-ohio-pg-14-clip-william-crombie.jpg

14 REGISTER-STAR-NEWS
Sandusky, O., Wed., June 8, 1955

NEIGHBORING DEATHS AND FUNERALS

Bellevue Native Resident Dies

BELLEVUE, June 8 — Mrs. William A. Crombie, 45, the former Josephine Nims, daughter of Mr. and Mrs. Walter Nims, died Monday in Youngstown.

Mrs. Crombie was born in Bellevue, was graduated from Bellevue High school, Hillsdale College and the Western Reserve Library School. She was a member of Chi Omega Sorority.

She had been associated with libraries of Cleveland Heights High school and Roosevelt Junior High school in Cleveland. She married William Crombie, Nov. 6, 1943, and has been residing in Youngstown. She had also been associated with the Youngstown Public Library, active in Camp Fire Girl work and in the Evangelical Reformed Church.

Survivors in addition to her husband and parents, include a sister, Mrs. Charles Toll of Bellevue and a brother, William, of Cleveland.

Services were Wednesday in Youngstown, followed Thursday at 2 p. m. at the home of her parents on Ridge-rd with burial to be in Strong's Ridge Cemetery, the Rev. Edwin Beers, officiating.

If preferred, contributions may be made to a fund in Mrs. Crombie's memory, to be sent to Dr. Alice E. Moore, head of the Virus Department of Memorial Center, New York City, to be used for cancer research. Mrs. Crombie and Dr. Moore were high school class mates.

1956 (March 9)

https://www.newspapers.com/image/81896150/?terms=%22Alice%20E.%20Moore%22&match=1

1956-03-09-the-daily-times-new-philadelphia-ohio-pg-9-clip-cancer-conquest

The Coming Conquest Of Cancer

"The Coming Conquest of Cancer"
(This is the fifth of six articles describing up-to-date developments in a massive and dramatic research attack on cancer.)

Article V

By JOHN GEIGER
I.N.S. Special Science Writer

NEW YORK ()—Of the several hundred thousand billion cells in the human body, one suddenly becomes malignant or cancerous. Why?

Trying to find the answer to this problem—the core of the cancer puzzle—poses some of the same sort of difficulties as understanding the social problem of juvenile delinquency.

A cancer cell is much like a delinquent. It's young and tough and lawless. In a population of body cells that perform useful functions, like citizens with regular jobs, the cancer cell refuses to grow up, refuses to do any useful work, and—by dividing and growing without control — eventually breaks down law and order.

People are likely to wonder what gets into a boy to make him a delinquent, or to theorize that the cause is something external — a change in his environment. Biologists wonder what gets into a cell to make it cancerous, and try to see if some change in its environment — some alteration in body chemistry—is the real cause.

A few scientists think they have the answer to "what gets into a cell." They think it's a virus.

These infinitely small organisms have been proved to cause many types of cancer in chickens and other fowl. In excitingly important new findings of the last few years, they have been shown to cause leukemia and some gland cancers in mice. But no one can be sure about cancer-viruses in humans.

The possibility of virus-caused cancers is all the more intriguing because new research at New York's Sloan-Kettering Institute suggests strongly that the key to the cancer cell may be locked in its master molecules of nucleic acid, those governing its activities.

And viruses, it seems, are nothing but little shells of protein—filled with nucleic acid. Could there be cancer viruses invading human cells—like little packets of extra nucleic acid — and changing the cell's nucleic acids into a cancerous type?

Or could a virus be found that might invade cancer cells, destroy their nucleic acids—and thus kill the cancer?

At Sloan-Kettering Institute, Dr. Alice E. Moore has been busy training viruses to do just that kind of job against human tumors.

Dr. Moore started with some obscure viruses that were found to attack cancer in mice. They routed the cancers—but they also caused infections that killed the mice, too.

"I wasn't doing anything," she told one visitor unhappily, "That I couldn't have done better with a mousetrap."

But by using the viruses against one tumor after another, over and over again, she managed to increase their appetite for cancer and decrease their appetite for mouse.

When it became possible to grow human cancer cells in test tubes or implanted in laboratory animals, Dr. Moore started training viruses to attack human tumors.

Today she has a number of virus strains that pack a profoundly destructive punch against some kinds of human cancer—in laboratory experiments.

Now, on the research wards at Memorial Center's James Ewing hospital, her viruses are being tried in volunteer patients with hopeless human cancer.

It is much too early to tell what the results will be, or whether the body will treat the friendly viruses like foreign invaders and find some way to block their effects. But win or lose, the knowledge gained will be useful in finding new and perhaps better ways to help future patients.

Other studies are aimed at understanding the effect on the cell of influences that come from other cells or from distant areas of the body, travelling through the blood stream and tissue fluids, or in electrical signals from nerves.

One of the most potent influences is the amount and type of hormones—chemical juices poured into the blood by glands like the adrenal, the pituitary, the thyroid and others.

Hormones are like chemical traffic lights for the life processes within each cell. Some say "go"—and accelerate its growth or activity. Others say "stop" — and slow or check cell functions. Some are like direction signals, steering the cell's activities in a particular pathway.

Could some change in hormone production help turn a normal cell into a cancer cell?

To learn some of the answers, Dr. Thomas F. Gallagher of Memorial Center's Sloan-Kettering Institute has been tracing out the patterns of hormone production in health and in a variety of diseases, including cancer.

The task is extremely difficult. Some hormones accelerate growth, others act like brakes. A rise in the output of one hormone may cause a fall in the production of a second, which in turn affects a third, yet somehow the whole system remains in balance.

The work to date, though still preliminary, already has disclosed strong suggestions that some imbalance of the hormone system exists in patients with cancer.

Even more important, there are hints of hormone abnormalities in patients with pre-cancerous conditions. That could lead to early diagnosis of cancer—while there is still time to treat it effectively.

And that could mean an enormous savings in lives, for quick diagnosis is one of the best weapons now available to stem cancer's tide. American Cancer Society figures show that if all cancers were diagnosed as promptly as possible with present techniques, the number of cures would be doubled.

There have been practical, down-to-earth results of the hormone research. Understanding of the thyroid gland and the fact that its hormone accelerates bodily activity led to temporary cancer control (and many extra months of life) for patients with thyroid tumor. Studies of the pituitary, the body's amazing "boss gland" at the base of the brain, showed that its hormones acted powerfully to promote the growth of breast tumors, one of the greatest cancer threats in women.

This opened a whole new field for investigation. As a result, surgeons today can remove the pituitary gland and bring marked, though temporary, benefit to some patients with breast cancer. The pituitary's output is replaced safely by controlled injections of hormones.

No one can foretell what uses the knowledge gained by fundamental studies of this type will have. It seems sure that it will not be limited to cancer treatment.

For the hormone studies are typical of much research in cancer, and demonstrate the strangest iron of all. The study of cancer—the great killer—is in many ways the study of life itself.

(Tomorrow: Cancer and Life)

People Say

NEW YORK — U.N. Secretary General Dag Hammarskjold: "I think we add to the tension by talking glibly about the danger of war. If we talk about the danger of war, we should do so with the full understanding of the underlying circumstances and with a very clear demonstration of our will to tackle impartially those underlying difficulties."

TOKYO — Democratic residential aspirant Adlai Stevenson: " . . . The attitude of Americans to Asians is not to be measured purely by our opposition to Com-

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THE CITY AUTO COMPANY
Rear of Hotel Reeves
Glen L. Graff, Mgr.

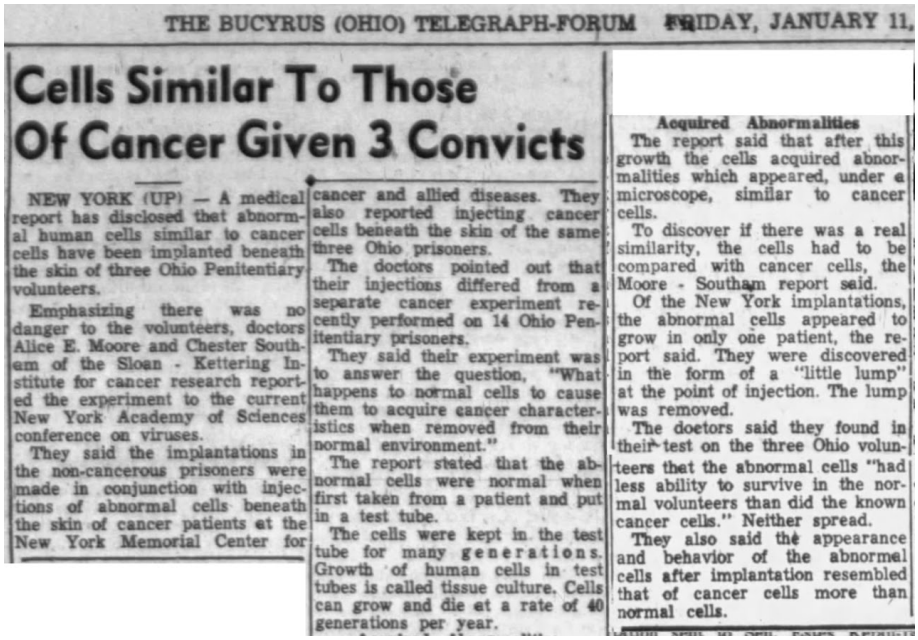
1956 (June 15)

https://www.newspapers.com/image/595495873/?terms=%22dr%20alice%20moore%22&match=1

1957 (Jan 11)

https://www.newspapers.com/image/601657761/?terms=%22Alice%20E.%20Moore%22&match=1

1957-01-11-the-bucyrus-ohio-telegraph-forum-pg-9-clip-cancer-prisoners.jpg



THE BUCYRUS (OHIO) TELEGRAPH-FORUM FRIDAY, JANUARY 11,

Cells Similar To Those Of Cancer Given 3 Convicts

NEW YORK (UP) — A medical report has disclosed that abnormal human cells similar to cancer cells have been implanted beneath the skin of three Ohio Penitentiary volunteers.

Emphasizing there was no danger to the volunteers, doctors Alice E. Moore and Chester Southam of the Sloan - Kettering Institute for cancer research reported the experiment to the current New York Academy of Sciences conference on viruses.

They said the implantations in the non-cancerous prisoners were made in conjunction with injections of abnormal cells beneath the skin of cancer patients at the New York Memorial Center for cancer and allied diseases. They also reported injecting cancer cells beneath the skin of the same three Ohio prisoners.

The doctors pointed out that their injections differed from a separate cancer experiment recently performed on 14 Ohio Penitentiary prisoners.

They said their experiment was to answer the question, "What happens to normal cells to cause them to acquire cancer characteristics when removed from their normal environment."

The report stated that the abnormal cells were normal when first taken from a patient and put in a test tube.

The cells were kept in the test tube for many generations. Growth of human cells in test tubes is called tissue culture. Cells can grow and die at a rate of 40 generations per year.

Acquired Abnormalities

The report said that after this growth the cells acquired abnormalities which appeared, under a microscope, similar to cancer cells.

To discover if there was a real similarity, the cells had to be compared with cancer cells, the Moore - Southam report said.

Of the New York implantations, the abnormal cells appeared to grow in only one patient, the report said. They were discovered in the form of a "little lump" at the point of injection. The lump was removed.

The doctors said they found in their test on the three Ohio volunteers that the abnormal cells "had less ability to survive in the normal volunteers than did the known cancer cells." Neither spread.

They also said the appearance and behavior of the abnormal cells after implantation resembled that of cancer cells more than normal cells.

1957 (Jan) - Testing reports (noted in a Tweet)

Link to Tweet : [HT00C2][GDrive] / Jason Sheltzer / @JSheltzer

A dark paper from the history of cancer research: HeLa and other malignant cells were injected into terminally-ill patients and healthy prisoners, "with the cooperation of their warden". Study author Chester Southam was *later* elected president of @AACR.

See - https://sci-hub.se/10.1126/science.125.3239.158#

See: **Dr. Alice E. Moore (born 1908)** / **Dr. Cornelius Packard "Dusty" Rhoads (born 1898)** / **Dr. Chester Milton Southam (born 1919)**

REPORTS

Homotransplantation of Human Cell Lines

+ See all authors and affiliations

Science 25 Jan 1957:
Vol. 125, Issue 3239, pp. 158-160
DOI: 10.1126/science.125.3239.158

[HT00C3][GDrive]

Studies to determine whether these homologous cancer cells had a similar capacity for propagation in normal healthy human beings were undertaken at the Ohio State Penitentiary in collaboration with Charles Doan and Richard Brooks and with the cooperation of John Porterfield and R. W. Alvis, warden. From a large group of volunteers, 14 were chosen for the initial study. Methods were identical with the aforementioned ones, except that only tissue cultures were used, and all studies were done simultaneously in June 1956.

[HT00C4][GDrive]

Table 1. Summary of homotransplantation studies with human cancer cells.

Implanted cells			Cancer patients		Normal volunteers	
Name	Type	Source	Positive/ total*	Latest day of positive biopsy	Positive/ total*	Latest day of positive biopsy
HeLa	Epid. Ca	TC	2/3	14, 18	0/2	
HEp#1	Epid. CA	TC	6/6	7, 19, 21, 34, 42, 77	2/3	14, 14
HEp#2	Epid. CA	TC	2/2	19, 19	1/3	14
HEp#3	Epid. CA	†	6/6	7, 7, 19, 42, 42, 57	1/4	14
HS#1	Fibro SA	Rat	1/1	57		
J-111	Leukemia	TC	3/4	6, 20, 42		
Deac 6	Adeno CA	Hamster	1/1	10		
Conjunctiva	‡	TC	3/6	9, 10, 10, 18, 60	0/3	
Liver	‡	TC	1/3	9		
Kidney	‡	TC	2/2	10, 12		
Appendix	‡	TC	0/1			
Fibroblast	Normal	TC	0/3			

* No. of recipients who had positive biopsies for the presence of the implanted cancer cells/No. of persons who were implanted with the same type of cell.
† HEp#3 in cancer patients includes one from tissue culture, 2 from cortisone-treated rats, and three from chick-embryo chorioallantoic membrane.
‡Cells isolated by Chang (*1*) from normal tissues but showing neoplastic changes in tissue culture (*6*).

[HT00C5][GDrive]

CHESTER M. SOUTHAM
ALICE E. MOORE
CORNELIUS P. RHOADS
Division of Experimental Pathology, Sloan-Kettering Institute for Cancer Research, New York, New York

[HT00C6][GDrive]

1957 (Feb 17)

https://www.newspapers.com/image/282599270/?terms=%22dr%20alice%20moore%22&match=1

1957-02-17-the-jackson-tennessee-sun-pg-5-clip-medical-testing.jpg

THE JACKSON SUN, JACKSON, TENN., SUNDAY, FEBRUARY 17, 1957

PRIME MOVERS IN PRISON CANCER EXPERIMENT—Doctors and Ohio state penitentiary officials involved in cancer research using convict volunteers huddle at Columbus, Ohio. Seated, left to right, are Dr. Arthur G. James, Dr. Chester M. Southam, Dr. Alice Moore, and Dr. Earl Albright, acting director of state Mental Hygiene and correction department; Warden A. W. Alvis, and M. C. Koblentz, chief of Ohio State division of Correction. —(AP Wirephoto)

1957 (Feb 25) : Time Magazine - "Medicine: Cancer Volunteers"

http://content.time.com/time/subscriber/article/0,33009,936841,00.html

On wooden benches in the well-guarded recreation hall of the Ohio Penitentiary at Columbus sat 53 convicts—killers in for life, bank robbers, embezzlers, check forgers. Some wore the white jacket and trousers of hospital attendants (duty for which they had volunteered in the prison); others, fresh from work gangs, wore blue dungarees. As a man's name was called he walked upstairs to a room equipped as an emergency surgery, sat down and proffered a bare forearm. Dr. Chester M. Southam of Manhattan's Sloan-Kettering Institute then proceeded to inject live cancer cells.

First, [Dr. Chester Milton Southam (born 1919)] used Novocain to anesthetize an area about three inches across. Into the middle of the area he stuck a tattoo needle that left a blue dot for a reference mark. Out of a vial and into a hypodermic syringe he drew up a cubic centimeter of pink fluid—mostly water, but containing millions of cancer cells from human victims of the disease. The cells had been grown for years in test tubes by **Dr. Alice E. Moore**, Sloan-Kettering tissue-culture specialist, who had carried the cells to Columbus herself —in her handbag.

Dr. Southam inserted the point of the needle alongside the tattoo mark and worked it up the arm for an inch and a half, just under the skin. A push on the plunger injected half the shot (three to five million cells) into the volunteer's arm. Dr. Southam pulled out the needle, turned it around and repeated the process lower down the arm. (Some volunteers received implants of tissue fragments of other human cancer strains, grown in animals and chick embryos.)

Three-Time Repeaters. The prisoners thus injected two weeks ago had been chosen from 150 who volunteered for the tests, which began last spring (TIME, June 4). The aim: to determine whether a healthy individual has an immunity against implanted cancer that will cause his system to reject it just as the healthy body rejects other transplants or grafts from a different individual. In advanced cancer victims this rejection mechanism seems to be greatly diminished or absent. Of the 53 subjects, 27 received implants for the first time, 15 were getting them for the second time, and eleven were three-shot veterans. This last group had received the same type of cancer cells (out of seven types cultivated by Dr. Moore) on the first two occasions, had already shown a high degree of immunity. Now, for their third pair of implants, they received cancer cells of a different type.

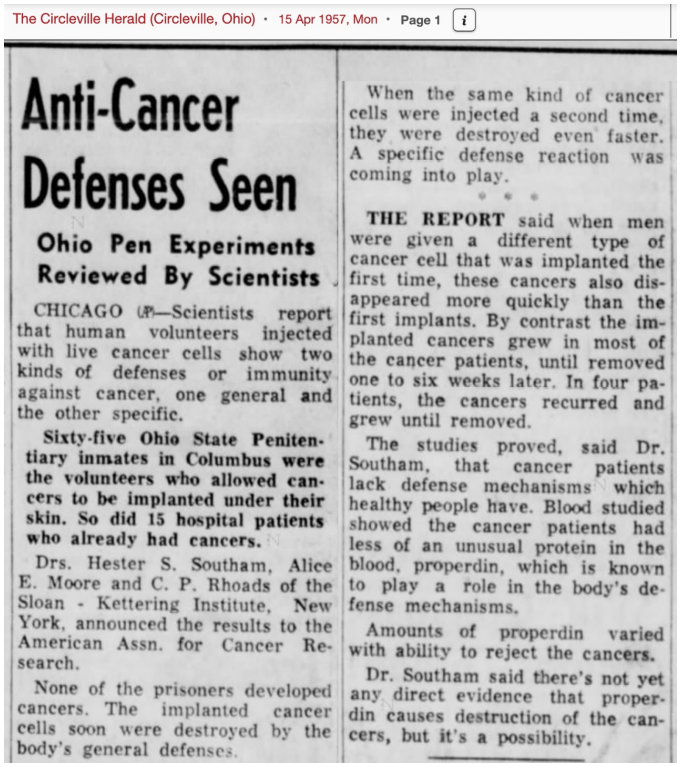
The blobs of fluid containing the cancer cells made little bumps on each man's arm. In a matter of hours or days, some of these swelled up and became tender and inflamed; the healthy body's natural defenses were at work and plain to see. In other cases the men felt no appreciable discomfort, and the swelling disappeared without any noticeable inflammatory stage; the body's defenses had worked just as effectively but less conspicuously.

1957 (April 15)

https://www.newspapers.com/image/90481145/?terms=%22Alice%20E.%20Moore%22&match=1

1957-04-15-the-circleville-herald-ohio-pg-1.jpg

1957-04-15-the-circleville-herald-ohio-pg-1-clip-prisoner-tests.jpg



The Circleville Herald (Circleville, Ohio) · 15 Apr 1957, Mon · Page 1

Anti-Cancer Defenses Seen

Ohio Pen Experiments Reviewed By Scientists

CHICAGO (AP)—Scientists report that human volunteers injected with live cancer cells show two kinds of defenses or immunity against cancer, one general and the other specific.

Sixty-five Ohio State Penitentiary inmates in Columbus were the volunteers who allowed cancers to be implanted under their skin. So did 15 hospital patients who already had cancers.

Drs. Hester S. Southam, Alice E. Moore and C. P. Rhoads of the Sloan - Kettering Institute, New York, announced the results to the American Assn. for Cancer Research.

None of the prisoners developed cancers. The implanted cancer cells soon were destroyed by the body's general defenses.

When the same kind of cancer cells were injected a second time, they were destroyed even faster. A specific defense reaction was coming into play.

* * *

THE REPORT said when men were given a different type of cancer cell that was implanted the first time, these cancers also disappeared more quickly than the first implants. By contrast the implanted cancers grew in most of the cancer patients, until removed one to six weeks later. In four patients, the cancers recurred and grew until removed.

The studies proved, said Dr. Southam, that cancer patients lack defense mechanisms which healthy people have. Blood studied showed the cancer patients had less of an unusual protein in the blood, properdin, which is known to play a role in the body's defense mechanisms.

Amounts of properdin varied with ability to reject the cancers.

Dr. Southam said there's not yet any direct evidence that properdin causes destruction of the cancers, but it's a possibility.

1957 (May 12) - Cancer is NOT contagious

https://www.newspapers.com/image/574931914/?terms=%22alice%20E.%20moore%22&match=1

1957 (Oct 05)

"recently at a two month research in cologne, Germany"

"discoverd a virus causes cancer"

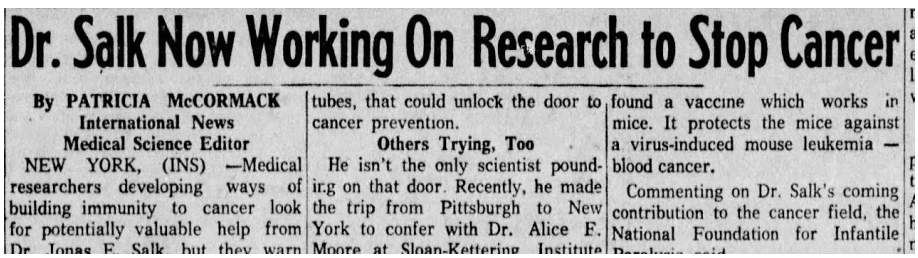
https://www.newspapers.com/image/305164179/?terms=%22alice%20E.%20moore%22&match=1

1957 (Dec 10) - Work with Dr. Salk

See **Dr. Jonas Edward Salk (born 1914)** ;

https://www.newspapers.com/image/162556455/?terms=alice%20moore%20sloan%20kettering&match=1

1957-12-10-the-journal-news-white-plains-ny-pg-6-clip-salk.jpg



Dr. Salk Now Working On Research to Stop Cancer

By PATRICIA McCORMACK
International News
Medical Science Editor

NEW YORK, (INS) —Medical researchers developing ways of building immunity to cancer look for potentially valuable help from Dr. Jonas E. Salk, but they warn

tubes, that could unlock the door to cancer prevention.

Others Trying, Too

He isn't the only scientist pounding on that door. Recently, he made the trip from Pittsburgh to New York to confer with Dr. Alice F. Moore at Sloan-Kettering Institute

found a vaccine which works in mice. It protects the mice against a virus-induced mouse leukemia — blood cancer.

Commenting on Dr. Salk's coming contribution to the cancer field, the National Foundation for Infantile

against expecting any cancer cure when he reveals details of his new studies.

While a pill or medicine that could cure cancer is sorely needed, men of science remind that Dr. Salk's forte is preventive medicine. This is a specialty that deals, among other things, with vaccines — tools that help healthy people build defenses against mysterious killers and cripplers.

As International News Service reported exclusively last week, Dr. Salk, discoverer of the polio vaccine, will tell of his new finds relating to cancer in a medical magazine within several weeks.

It is likely that the report will deal with advances in complex basic research that may lead to an artificial way of helping healthy people build a defense against cancer.

Some in the research field speculate that Dr. Salk may have forged a key, in the complex world of test

MOOSE UNPOPULAR

SOUTH PORTLAND, Me. — (UP) — Students at Maine Vocational-Technical Institute want to change the name of the yearbook, "The Moose Call" and remove the traditional picture of the antlered animal from its cover. They said elimination of the moose symbol would permit the book to represent technical progress rather than imparting "a wee flavor of Paul Bunyanism" to what they consider a growing technical institution.

numbers were, it was in the Mozart works that the group reached the height that leaves an audience deeply satisfied.

Singing with the chorus ,besides the soloists mentioned, were Mary Arbiter, Gwendolyn Ruddell, sopranos; Nancy Barnett, Lois Burcaw, Valentine Green, Beth Lynch, Marjorie Morgan, Jane Nordstrom, Rae Pochapsky, altos; John Bristow, Oscar Dike, tenors; Edwin Cassidy, Earl E. Gordon, Dwight Potter, and Arthur Thompson, baritones.

Assisting were Toni Wray at the organ, Miriam Dailey, Marianne Potter, Edward Simons, violin; Mrs. Potter, Janet Simons, viola; Phyllis Anwar, Pat Barrows, cello; Paul Fried, flute; Dorothy Heier, trumpet; George Koppleman, tympani. Mr. Simons is immediately identified as conductor of the Suburban Symphony and the others are mostly heads of sections for the same musical organization. — Mariruth Campbell.

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for Cancer Research.

Dr. Moore and other cancer sleuths at Sloan-Kettering have been delving into the question of building immunity to cancer, too.

Already the Sloan-Kettering team has come up with highly significant information on the defense mechanisms of the normal human body to implanted cancers.

Implants of human cancer were made in three groups of healthy inmates at Ohio State penitentiary. The same implants were made in a group of patient-volunteers with far advanced cancer at Memorial Center, the Sloan-Kettering Hospital.

In 13 out of 15 cancer patients, the implants grew until removed six weeks later.

In the first group of healthy volunteers, there was a vigorous local reaction to the cancer implants — something like a king-size reaction to vaccination for smallpox.

By the end of two weeks, the cancer cells were destroyed by this natural reaction.

The second part of the study at the Ohio State penitentiary involved re-inoculation of the first group of normal volunteers. This time, it was found that the cancer cells were destroyed more rapidly than they were the first time.

In the third part of the study, inmate volunteers who already had been implanted with one type of cancer cell received implants of cancer cells of a different type.

As if by magic, something in the body started to work and even these different cancer cells were destroyed.

Something Lacking

This proved an important point: that cancer patients lack something that healthy human beings have. Scientists call it a defense mechanism.

In polio vaccination, the defense is induced by the vaccine — which helps the body muster a power-packed army of antibodies in the blood.

These chemical soldiers lead an all-out attack on polio viruses when come along after vaccination — thus, prevent crippling or killing.

The viruses don't get to first base once the defense mechanism has been triggered by the vaccine.

In the cancer research, blood studies were made to find out just how the reaction came about when the cancers were implanted.

Properdin, a natural body-defense chemical occurring in the blood, was the only factor associated with immunity in which cancer patients were found deficient — when compared with the healthy people in the experiment.

The Sloan-Kettering scientists observed that the search is on for blood serum antibodies — which may have been called to duty to fight the cancer implants the moment they were made in the healthy people.

The Sloan-Kettering group has found antibodies associated with two types of virus-induced cancer in mice.

Virus Theory

Intensive work at Sloan-Kettering has thrown new light on the virus theory of cancer. This is a theory that holds that some human cancers may be caused by a virus.

If the theory can be proved, the next step would be to produce a vaccine — like the polio vaccine — which would help make people immune to cancer viruses.

The Sloan-Kettering people have

paralysis said.

"The paper deals with techniques now being used in Dr. Salk's laboratory which may conceivably contribute to future work on cancer.

"There is no question that his virus laboratory is uniquely equipped to perform the type of research in which it is now engaged."

No New Program

The foundation reminded, however, that in no sense does Dr. Salk's present work represent a new program for the national foundation — even if the work concerns cancer.

The foundation statement noted: "This demonstrates once more the unity of science and the already proven thesis that investigations in one area cannot but contribute knowledge useful to those operating in others.

"The National Foundation has no plans to enter the field of cancer research, as such."

For some years the National Foundation has made no secret about the fact that some of the research projects it supports may add to knowledge of the disease process known as cancer.

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SCHULTZ'S

1957 (Dec 15)

See **Dr. Jonas Edward Salk (born 1914)** ;

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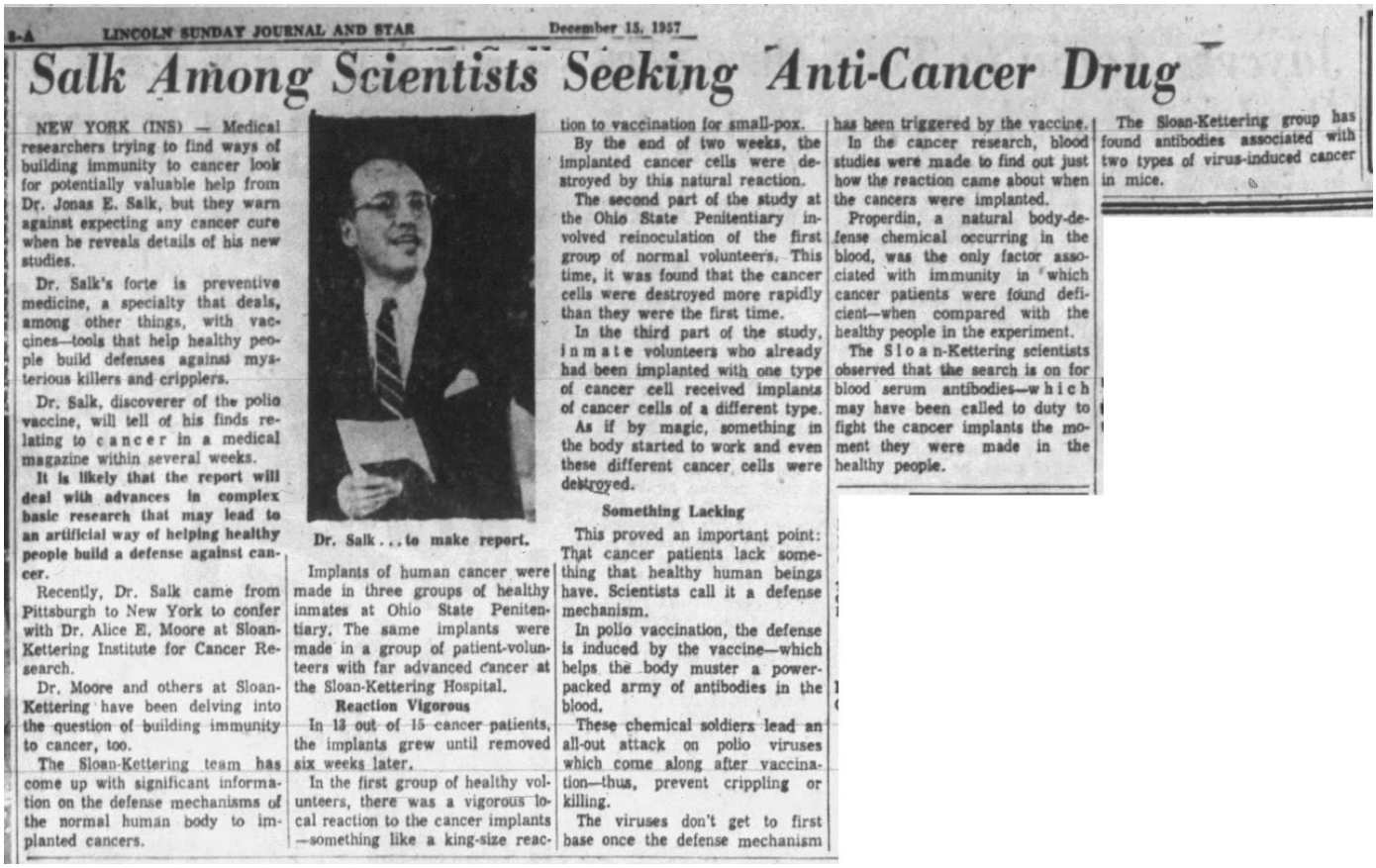
1957-12-15-the-lincoln-journal-pg-8-clip-salk.jpg



8-A LINCOLN SUNDAY JOURNAL AND STAR December 15, 1957

Salk Among Scientists Seeking Anti-Cancer Drug

NEW YORK (INS) — Medical researchers trying to find ways of building immunity to cancer look for potentially valuable help from Dr. Jonas E. Salk, but they warn against expecting any cancer cure when he reveals details of his new studies.

Dr. Salk's forte is preventive medicine, a specialty that deals, among other things, with vaccines—tools that help healthy people build defenses against mysterious killers and cripplers.

Dr. Salk, discoverer of the polio vaccine, will tell of his finds relating to cancer in a medical magazine within several weeks.

It is likely that the report will deal with advances in complex basic research that may lead to an artificial way of helping healthy people build a defense against cancer.

Recently, Dr. Salk came from Pittsburgh to New York to confer with Dr. Alice E. Moore at Sloan-Kettering Institute for Cancer Research.

Dr. Moore and others at Sloan-Kettering have been delving into the question of building immunity to cancer, too.

The Sloan-Kettering team has come up with significant information on the defense mechanisms of the normal human body to implanted cancers.

Dr. Salk . . . to make report.

Implants of human cancer were made in three groups of healthy inmates at Ohio State Penitentiary. The same implants were made in a group of patient-volunteers with far advanced cancer at the Sloan-Kettering Hospital.

Reaction Vigorous

In 13 out of 15 cancer patients, the implants grew until removed six weeks later.

In the first group of healthy volunteers, there was a vigorous local reaction to the cancer implants —something like a king-size reaction to vaccination for small-pox.

By the end of two weeks, the implanted cancer cells were destroyed by this natural reaction.

The second part of the study at the Ohio State Penitentiary involved reinoculation of the first group of normal volunteers. This time, it was found that the cancer cells were destroyed more rapidly than they were the first time.

In the third part of the study, inmate volunteers who already had been implanted with one type of cancer cell received implants of cancer cells of a different type.

As if by magic, something in the body started to work and even these different cancer cells were destroyed.

Something Lacking

This proved an important point: That cancer patients lack something that healthy human beings have. Scientists call it a defense mechanism.

In polio vaccination, the defense is induced by the vaccine—which helps the body muster a power-packed army of antibodies in the blood.

These chemical soldiers lead an all-out attack on polio viruses which come along after vaccination—thus, prevent crippling or killing.

The viruses don't get to first base once the defense mechanism has been triggered by the vaccine.

In the cancer research, blood studies were made to find out just how the reaction came about when the cancers were implanted.

Properdin, a natural body-defense chemical occurring in the blood, was the only factor associated with immunity in which cancer patients were found deficient—when compared with the healthy people in the experiment.

The Sloan-Kettering scientists observed that the search is on for blood serum antibodies—which may have been called to duty to fight the cancer implants the moment they were made in the healthy people.

The Sloan-Kettering group has found antibodies associated with two types of virus-induced cancer in mice.

1958 (specific date unknown) - First death of "Powassan Virus" (a 5-yr-old boy in Ontario, Canada)

See : https://en.wikipedia.org/wiki/Powassan_virus

Powassan virus (POWV) is a Flavivirus named after the town of Powassan, Ontario, Canada where it was identified in a 5 year old boy who died from encephalitis in 1958.[2][3] The virus exists in North America and causes long-term neurological sequelae.[4][5][6] The first human case in the United States was found in 1970 in New Jersey and in Russia in 1978.[2] As of 2010, Powassan virus has been noted as the only tick-borne Flavivirus in North America with human pathogenicity.[7]

Powassan virus is also found in the warm climate across Eurasia, where it is part of the tick-borne encephalitis virus-complex.[8] It is found in the Russian Far East (Primorsky Krai) and appears to have been introduced there 70 years ago.[2]

Abstract

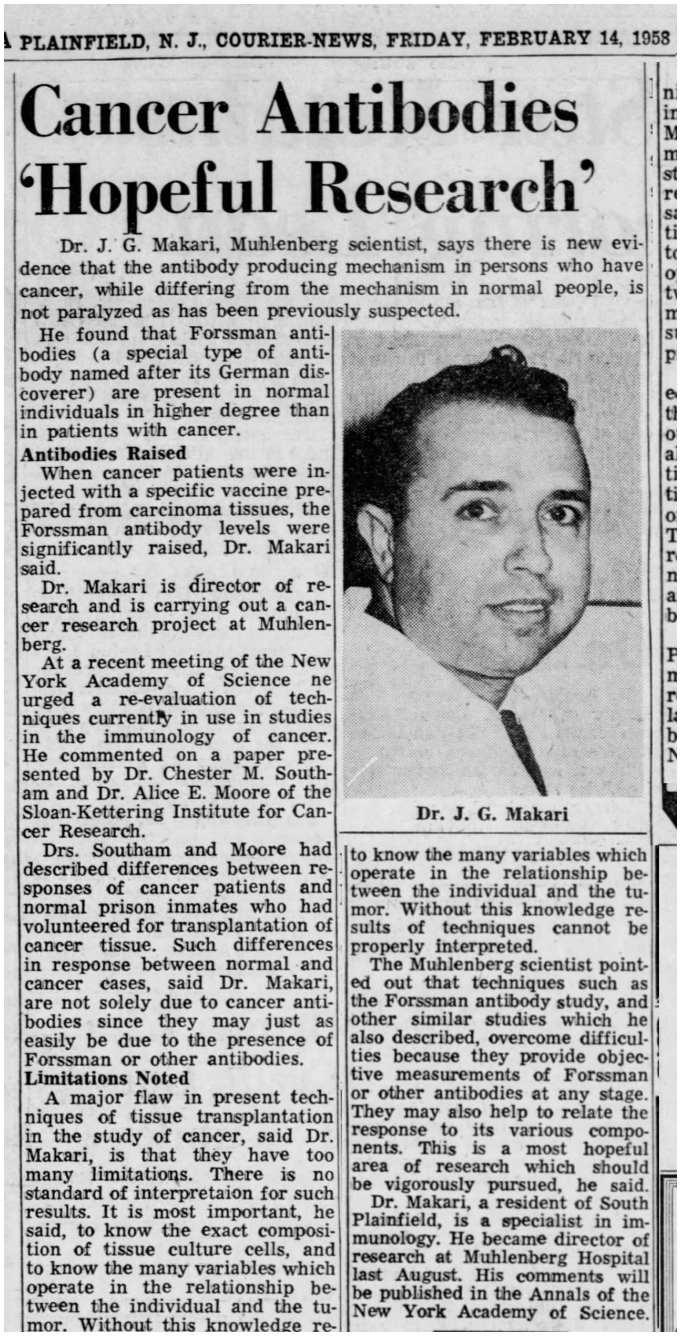
Issues associated with newly emerging viruses, their genetic diversity, and viral evolution in modern environments are currently attracting growing attention. In this study, a phylogenetic analysis was performed and the evolution rate was evaluated for such pathogenic flaviviruses endemic to Russia as tick-borne encephalitis virus (TBEV) and Powassan virus (PV). The analysis involved 47 nucleotide sequences of the TBEV genome region encoding protein E and 17 sequences of the PV NS5-encoding region. The nucleotide substitution rate was estimated as 1.4×10^{-4} and 5.4×10^{-5} substitutions per site per year for the E protein-encoding region of the TBEV genome and for the NS5 genome region of PV, respectively. The ratio of non-synonymous to synonymous nucleotide substitutions (dN/dS) in viral sequences was calculated as 0.049 for TBEV and 0.098 for PV. The highest dN/dS values of 0.201–0.220 were found in the subcluster of Russian and Canadian PV strains, and the lowest value of 0.024 was observed in the cluster of Russian and Chinese strains of the Far Eastern TBEV genotype. Evaluation of time intervals between the events of viral evolution showed that the European subtype of TBEV diverged from the common TBEV ancestor approximately 2750 years ago, while the Siberian and Far Eastern subtypes emerged approximately 2250 years ago. **The PV was introduced into its natural foci of the Russian Primorskii krai only approximately 70 years ago; these strains were very close to Canadian PV strains. The pattern of PV evolution in North America was similar to the evolution of the Siberian and Far Eastern TBEV subtypes in Asia.** The moments of divergence between major genetic groups of TBEV and PV coincide with historical periods of climate warming and cooling, suggesting that climate change was a key factor in the evolution of flaviviruses in past millennia

EARLY RESEARCH IN CANADA - https://www.newspapers.com/image/501924292/?terms=powassan%20tick&match=1

1958 (Feb 14)

https://www.newspapers.com/image/221670710/?terms=%22alice%20E.%20moore%22&match=1

1958-02-14-the-courier-news-bridgewater-nj-pg-21-clip-cancer



A PLAINFIELD, N. J., COURIER-NEWS, FRIDAY, FEBRUARY 14, 1958

Cancer Antibodies 'Hopeful Research'

Dr. J. G. Makari, Muhlenberg scientist, says there is new evidence that the antibody producing mechanism in persons who have cancer, while differing from the mechanism in normal people, is not paralyzed as has been previously suspected.

He found that Forssman antibodies (a special type of antibody named after its German discoverer) are present in normal individuals in higher degree than in patients with cancer.

Antibodies Raised

When cancer patients were injected with a specific vaccine prepared from carcinoma tissues, the Forssman antibody levels were significantly raised, Dr. Makari said.

Dr. Makari is director of research and is carrying out a cancer research project at Muhlenberg.

At a recent meeting of the New York Academy of Science ne urged a re-evaluation of techniques currently in use in studies in the immunology of cancer. He commented on a paper presented by Dr. Chester M. Southam and Dr. Alice E. Moore of the Sloan-Kettering Institute for Cancer Research.

Drs. Southam and Moore had described differences between responses of cancer patients and normal prison inmates who had volunteered for transplantation of cancer tissue. Such differences in response between normal and cancer cases, said Dr. Makari, are not solely due to cancer antibodies since they may just as easily be due to the presence of Forssman or other antibodies.

Limitations Noted

A major flaw in present techniques of tissue transplantation in the study of cancer, said Dr. Makari, is that they have too many limitations. There is no standard of interpretaion for such results. It is most important, he said, to know the exact composition of tissue culture cells, and to know the many variables which operate in the relationship between the individual and the tumor. Without this knowledge results of techniques cannot be properly interpreted.

Dr. J. G. Makari

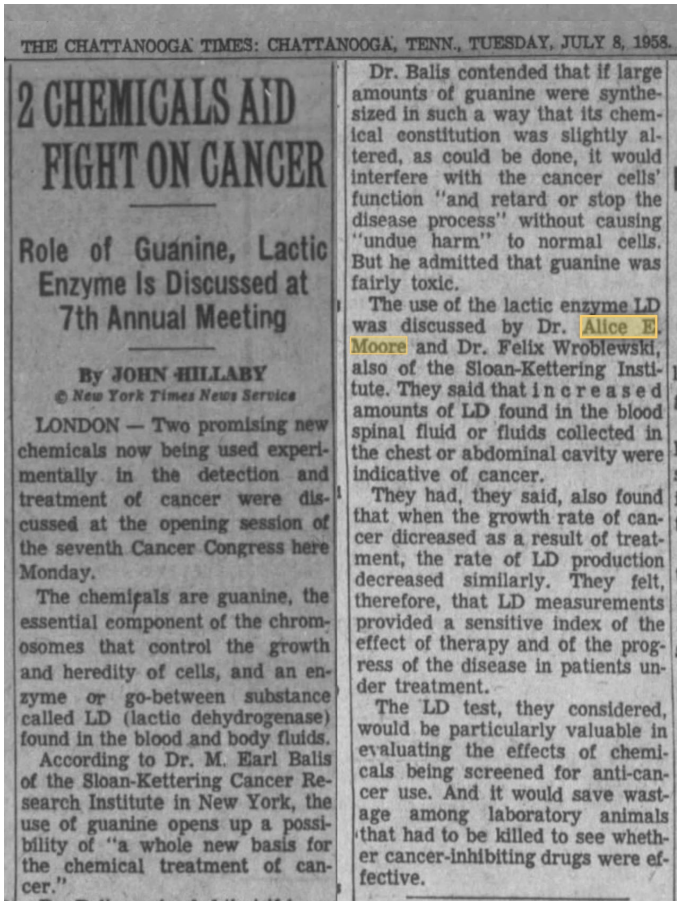
The Muhlenberg scientist pointed out that techniques such as the Forssman antibody study, and other similar studies which he also described, overcome difficulties because they provide objective measurements of Forssman or other antibodies at any stage. They may also help to relate the response to its various components. This is a most hopeful area of research which should be vigorously pursued, he said.

Dr. Makari, a resident of South Plainfield, is a specialist in immunology. He became director of research at Muhlenberg Hospital last August. His comments will be published in the Annals of the New York Academy of Science.

1958 (July 07) -

https://www.newspapers.com/image/604440745/?terms=%22alice%20E.%20moore%22&match=1

1958-07-08-the-chattanooga-times-pg-17-clip-chemical-aide.jpg



THE CHATTANOOGA TIMES: CHATTANOOGA, TENN., TUESDAY, JULY 8, 1958.

2 CHEMICALS AID FIGHT ON CANCER

Role of Guanine, Lactic Enzyme Is Discussed at 7th Annual Meeting

By JOHN HILLABY
© New York Times News Service

LONDON — Two promising new chemicals now being used experimentally in the detection and treatment of cancer were discussed at the opening session of the seventh Cancer Congress here Monday.

The chemicals are guanine, the essential component of the chromosomes that control the growth and heredity of cells, and an enzyme or go-between substance called LD (lactic dehydrogenase) found in the blood and body fluids.

According to Dr. M. Earl Balis of the Sloan-Kettering Cancer Research Institute in New York, the use of guanine opens up a possibility of "a whole new basis for the chemical treatment of cancer."

Dr. Balis contended that if large amounts of guanine were synthesized in such a way that its chemical constitution was slightly altered, as could be done, it would interfere with the cancer cells' function "and retard or stop the disease process" without causing "undue harm" to normal cells. But he admitted that guanine was fairly toxic.

The use of the lactic enzyme LD was discussed by Dr. Alice E. Moore and Dr. Felix Wroblewski, also of the Sloan-Kettering Institute. They said that increased amounts of LD found in the blood spinal fluid or fluids collected in the chest or abdominal cavity were indicative of cancer.

They had, they said, also found that when the growth rate of cancer dicreased as a result of treatment, the rate of LD production decreased similarly. They felt, therefore, that LD measurements provided a sensitive index of the effect of therapy and of the progress of the disease in patients under treatment.

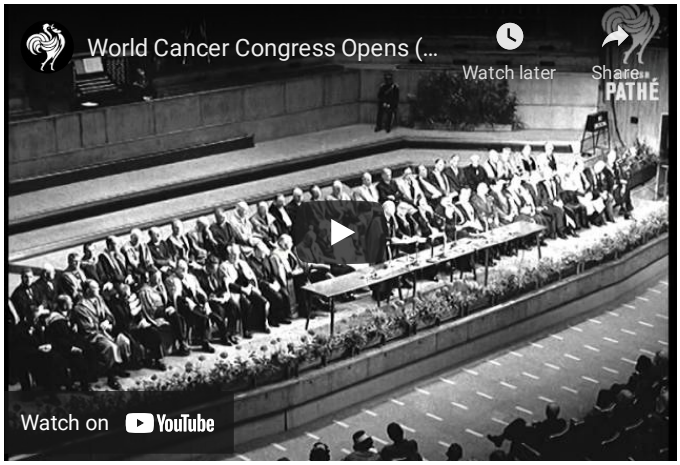
The LD test, they considered, would be particularly valuable in evaluating the effects of chemicals being screened for anti-cancer use. And it would save wastage among laboratory animals that had to be killed to see whether cancer-inhibiting drugs were effective.

1958 World Cancer Congress in London

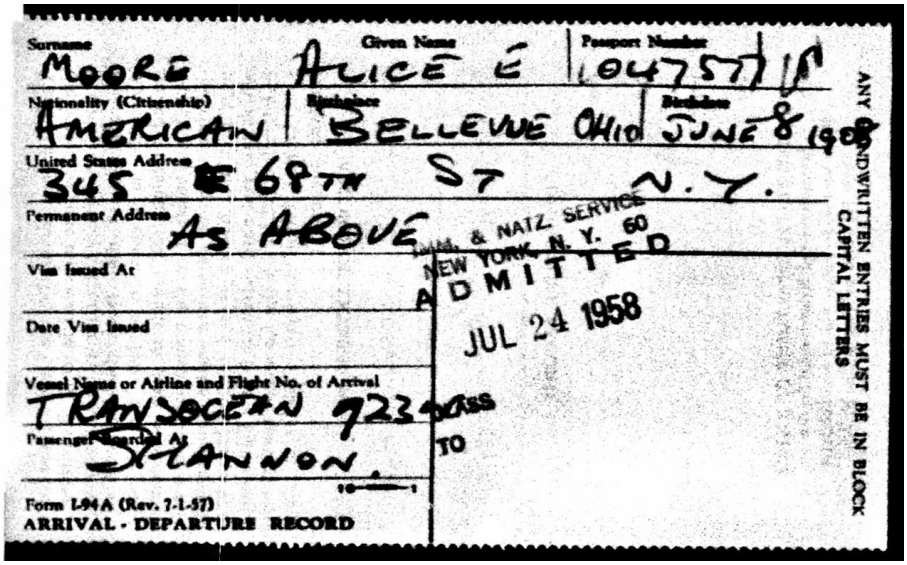
Video of opening : https://www.youtube.com/watch?v=WipYvpFJ580

World Cancer Congress Opens (1958)

Video posted Apr 13, 2014, on channel British Pathé



1958 (July 24) - Return from Shannon (Ireland?), from 7th World Cancer Congress



[HJ000Z][GDrive]

1958 (July 31)

https://www.newspapers.com/image/481675548/?terms=%22alice%20E.%20moore%22&match=1

1958-07-31-calgary-herald-pg-4-clip-cancer.jpg

THE CALGARY HERALD
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Vol. 75 THURSDAY, JULY 31, 1958 No. 177

Cancer Vaccine Sought

—By Leonard Engel

(Some day you may be able to take your cancer inoculation as easily as you now get immunized against smallpox or flu. This third article by an award-winning medical writer tells of the latest advances made in preventing this dread disease).

★

Nearly sixty years ago, it was noticed that animals ordinarily susceptible to particular types of cancer sometimes became resistant to them after preliminary inoculation with a bit of the cancer tissue. To early investigators, this opened up an exciting possibility — vaccines to immunize against cancer.

★ ★ ★

Their experiments ended in failure and discouragement. The whole idea of anti-cancer vaccines was virtually forgotten.

During the last few years, the question has been reopened. Immunity to cancer and the possibility of developing anti-cancer vaccines are among the most hotly-pursued fields of research in dozens of laboratories. Hope is growing that this may be achieved.

No vaccine against human cancer exists at present. But experts say that a host of new discoveries give solid hope for vaccines to prevent at least some types of cancer in man.

One of the discoveries that provides such hope was made a few years ago by Dr. Ludwik Gross of the Bronx (N.Y.) Veterans Hospital. Dr. Gross showed that mouse leukemia was caused by a virus. Cancer researchers had previously found that viruses were responsible for a number of animal cancers, including mammary cancer in mice. But virus-caused cancers had been believed to be the exception rather than the rule.

Dr. Gross's finding led to experiments that have radically changed this view, now it is known that many, if not most, animal cancers are caused by viruses.

So far, there has been no proof that viruses cause any form of human cancer, although specialists have found some evidence suggesting this. But, as Dr. Wendell Stanley, the University of California's Nobel prize-winning virus researcher, has pointed out: "It's inconceivable for viruses to cause cancer in animals and to have nothing whatever to do with it in man."

The significance of viruses having a part in cancer is simply that we already have vaccines against many viruses. Polio, influenza, yellow fever, smallpox — against which effective vaccines have been developed — are all virus diseases.

The big "if" is whether the human body is capable of making long-lasting defensive antibodies against cancer viruses. If not — as in the case of the common-cold virus — then an anti-cancer vaccine would accomplish little. But a woman scientist, Dr. Charlotte Friend of the Sloan-Kettering Institute in New York, already has produced a vaccine which protects 80 to 90 per cent of susceptible mice against leukemia.

★ ★ ★

Another development that has contributed to the hope of immunization against cancer came last year from the laboratory of Dr. Jonas E. Salk, discoverer of polio vaccine. In the course of research aimed at simplifying the manufacture of polio vaccine, Dr. Salk uncovered unequivocal proof that antibodies can be formed against cancer-like cells grown in test tubes. Thus, monkeys formed antibodies against monkey tissue which had become cancer-like (though not truly cancerous) through long cultivation in the test tube.

The virus studies and Dr. Salk's work have been confined to animals. Just recently, however, two Sloan-Kettering Institute researchers, Drs. Chester M. Southam and Alice E. Moore, performed a daring experiment. Human cancer cells were injected simultaneously under the skins of a group of patients in the terminal stages of cancer, and into a group of prison volunteers.

★ ★ ★

In thirteen of fifteen cancer patients, the cancer implants took and grew until removed, and in four they recurred and had to be removed a second time.

In fourteen volunteers, there were no takes and the implanted cancers were gone within two weeks. Moreover, when cancer cells of the same type were reinoculated into the volunteers at a later date, the implants were even more quickly destroyed than before—as though the first inoculation had immunized the healthy volunteers. Cancer implants of another kind were also rejected with unusual speed by volunteers who had received the original cancer-cell inoculations.

Plainly, immunity has something to do with cancer in man. Cancer researchers say that some day it should be possible to take advantage of it to devise methods of artificial immunization.

★

(Next: new ways of diagnosing disease).

(North American Newspaper Alliance, Copyright.)

1959 (Aug 13) - Dr. Rhoads dies

See **Dr. Cornelius Packard "Dusty" Rhoads (born 1898)**

1960 - Husband (ex?) Maurice Hendershott may be living separately in Detroit ?

- Was Maurice Hendershott in Detroit in 1960? https://www.newspapers.com/image/603150438/?terms=%22maurice%20hendershott%22&match=1
- He appears to have died in early 1966. See [HN01K2][GDrive]

1960 (Sep 29)

https://www.newspapers.com/image/584372977/?terms=%22alice%20E.%20moore%22&match=1

1960-09-29-the-santa-fe-new-mexican-pg-25-clip-human-cancer.jpg

Thursday, September 29, 1960 THE NEW MEXICAN 25

Human Cancer Virus Discovered

NEW YORY, (UPI) — The discovery of a human cancer virus was revealed today. It was the second such discovery announced this year in an onrushing strengthening of the theory that many if not all human cancers could be traced to viruses if only science knew how to do the tracing.

However, there is no proof that the newly discovered virus causes cancer either in human beings or in animals. But there is proof that in hamsters it causes a weird deforming of the skull which resembles the human affliction of mongolism.

The virus was found in eight cancers of different types which originated in different places in human bodies. But these cancers were not in human bodies when the virus was found. They were then being "carried" by successive transplantations through a series of laboratory animals.

The discovery was made by Drs. Helene W. Toolan, Gilbert Dalladorf, Marion Barclay, Satish Chandra and Alice E. Moore of the Sloan-Kettering Institute for Cancer Research and reported in the proceedings of the National Academy of Sciences.

The scientists said they are satisfied they are dealing with a virus "associated" with human cancer and not with a random virus of rodents which had been picked up somehow in the repeated transplantations. They are satisfied because —

They had found the viruses in the tissues, (although not in the cancers) of cancer patients but not in people free of cancer. They had found it in the tissues of rats bearing transplanted human cancers but not in normal rats. Nor could they find it in the tissues or cancers of rats carrying spontaneous rat cancers.

No hamster ever has been known to develop the strange disease which develops when the virus is injected into their newly born or their embryos. In that, the virus is unique. No "filterable agent," which is the term applied to a suspected but unproved virus, previously "associated" with human cancer has produced a new disease in laboratory animals.

The scientists made electron microscope picturse of diseased Hamster tissues. These enormous enlargements showed particles which may be the viruses themselves. The work is progressing and they may have more conclusive findings to report. Meanwhile, they said the virus seems to have no resemblance to the viruses known to cause cancers in mice and fowl.

Until last March no virus had ever been identified as a causer of human cancer. Dr. Steven O. Schwartz, of the Hektoen Institute for Medical Research, Chicago, revealed then that he had isolated a virus which causes Leukemia or "blood cancer" in human beings. So far his work has not been independently confirmed by other scientists.

Dr. Sarah E. Stewart, of the National Cancer Institute, Bethesda, Md., has five "filterable agents" which were isolated from five persons with five different kinds of cancer and which in laboratory cultures of human cells, behave as though they were viruses. So far she is unable to say they are human cancer viruses.

Toys Painted Red Outsell All Others

By HARRY MOSKOS
Associated Press Staff Writer

DEMING (AP)—The chances are the next toy you will buy—if you happen to be buying any toys—will be painted red.

And that's because toys painted red will outsell toys painted any other color, and consequently one of the nation's leading toy pro-

ed to the red-colored toy more than he is attracted to a toy of another color.

Even though the company may manufacture many of its toys in red, a variety of other colors is used in the designs of the numerous toys produced. Toys such as cars, trucks, farm animals and tractors, are made at the plant. The color least used in the man-

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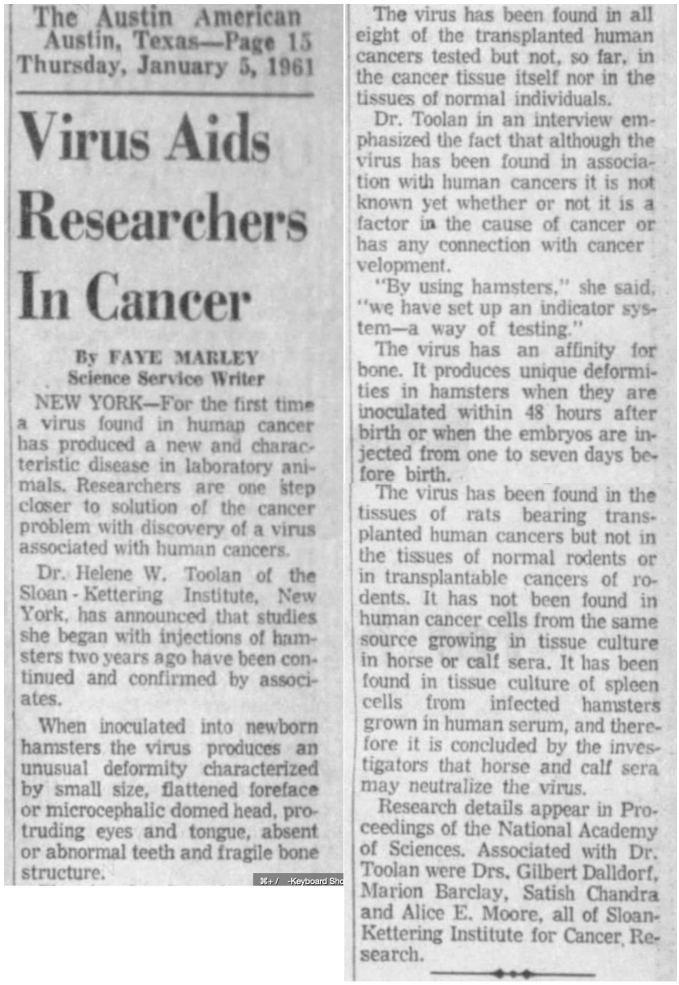
1961 (Jan 05)

https://www.newspapers.com/image/384942721/?terms=%22alice%20E.%20moore%22&match=1

1961-01-05-austin-american-statesman-pg-15-clip-virus-aids-researchers.jpg



The Austin American
Austin, Texas—Page 15
Thursday, January 5, 1961

Virus Aids Researchers In Cancer

By FAYE MARLEY
Science Service Writer

NEW YORK—For the first time a virus found in human cancer has produced a new and characteristic disease in laboratory animals. Researchers are one step closer to solution of the cancer problem with discovery of a virus associated with human cancers.

Dr. Helene W. Toolan of the Sloan-Kettering Institute, New York, has announced that studies she began with injections of hamsters two years ago have been continued and confirmed by associates.

When inoculated into newborn hamsters the virus produces an unusual deformity characterized by small size, flattened foreface or microcephalic domed head, protruding eyes and tongue, absent or abnormal teeth and fragile bone structure.

The virus has been found in all eight of the transplanted human cancers tested but not, so far, in the cancer tissue itself nor in the tissues of normal individuals.

Dr. Toolan in an interview emphasized the fact that although the virus has been found in association with human cancers it is not known yet whether or not it is a factor in the cause of cancer or has any connection with cancer velopment.

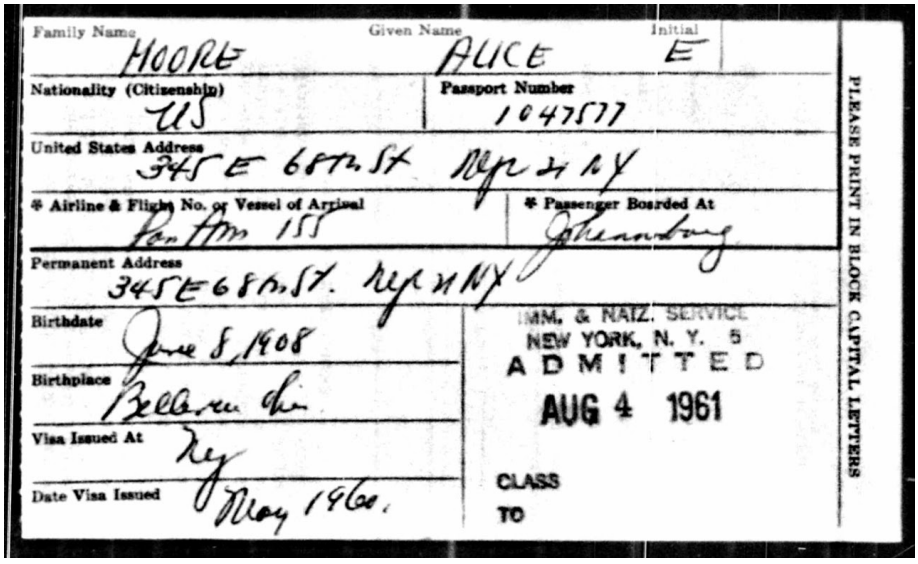
"By using hamsters," she said, "we have set up an indicator system—a way of testing."

The virus has an affinity for bone. It produces unique deformities in hamsters when they are inoculated within 48 hours after birth or when the embryos are injected from one to seven days before birth.

The virus has been found in the tissues of rats bearing transplanted human cancers but not in the tissues of normal rodents or in transplantable cancers of rodents. It has not been found in human cancer cells from the same source growing in tissue culture in horse or calf sera. It has been found in tissue culture of spleen cells from infected hamsters grown in human serum, and therefore it is concluded by the investigators that horse and calf sera may neutralize the virus.

Research details appear in Proceedings of the National Academy of Sciences. Associated with Dr. Toolan were Drs. Gilbert Dalldorf, Marion Barclay, Satish Chandra and Alice E. Moore, all of Sloan-Kettering Institute for Cancer Research.

1961 (Aug) - Returning form (cant read ...) ?



Family Name: MOORE
Given Name: ALICE
Initial: E
Nationality (Citizenship): US
Passport Number: 1047577
United States Address: 345 E 68th St Nyc & NY
* Airline & Flight No. or Vessel of Arrival: Pan Am 155
* Passenger Boarded At: Johannesburg
Permanent Address: 345 E 68th St. Nyc & NY
Birthdate: June 8, 1908
Birthplace: Bellaire Ohio
Visa Issued At: Ny
Date Visa Issued: May 1960.

IMM. & NATZ. SERVICE
NEW YORK, N. Y. 5
ADMITTED
AUG 4 1961
CLASS
TO

PLEASE PRINT IN BLOCK CAPITAL LETTERS

[HJ0010][GDrive]

1961 (Sep 26)

Mentioned: Dr. Alice E. Moore (born 1908) ; Dr. Charlotte Friend (born 1921) ; ...

Full newspaper page : [HN01JF][GDrive]

Women Scientists Aid In Battle Against Cancer

By PATRICIA MCCORMACK

NEW YORK (UPI) — Womanpower is helping to establish beachheads in the battle against cancer.

The women scientists work in the laboratories, in the surgical rooms and at the bedside. They help to man the X-ray equipment and to teach other doctors about cancer therapy.

There are so many women engaged in cancer research these days that it is rare not to find a woman or two reporting at any scientific meeting where the battle against cancer is discussed.

Their gains are of such importance that a medical journal, "Medical World News," devotes an entire section of its publication for doctors to the women making news in cancer research.

Among women scientists cited are the following:

—Dr. Sarah Stewart, of the National Cancer Institute in Bethesda, Md. She recently made the first report of a new virus isolated from an infant with a malignant bone disease.

Has Major Findings

—Dr. Thelma Dunn, a research pathologist, has become one of a half-dozen recognized authorities on pathology of cancer in mice. Dr. Dunn also works out of the National Cancer Institute. She is credited with several major findings on the pathogenesis of cancer.

—Dr. Alice Moore, of Sloan-Kettering Institute in New York, has been growing human cancer cells in tissue culture for use in studies in the responses of volunteers, cancer patients and healthy individuals, to implants of such cells.

—Dr. Helen Wallace Toolan, one of Dr. Moore's colleagues in New York, operated a tumor farm that is producing large amounts of tumor tissue for cancer researchers all over the country. Out of this work it is hoped will come a key to help man better understand the ways nature fights cancer.

—Dr. Charlotte Friend, another of the scientists at Sloan-Kettering, discovered a virus which causes leukemia in adult as well as newborn mice. In addition, she brewed a vaccine which is highly effective in protecting mice against development of the disease.

From Cellist To Scientist

—Eleanor MacDonald was well on her way to becoming a professional cellist when science caught her fancy. The professor of viostatistics at the University of Texas M. D. Anderson Hospital and Tumor Institute in Houston has contributed a wealth of data on incidence and distribution of cancer. She still plays the cello, frequently with the university symphony.

—Dr. Mila Pierce, of the University of Chicago, has been devoted to the fight against leukemia. Today, partly because of her efforts, life can be prolonged for some leukemia victims.

—Dr. Ruth Graham, of the Roswell Park Memorial Institute, is known in association with her husband, Dr. John Graham, also a cancer research scientist. At one point they prepared vaccines from the patient's own tumor and have been testing it among terminal cancer cases.

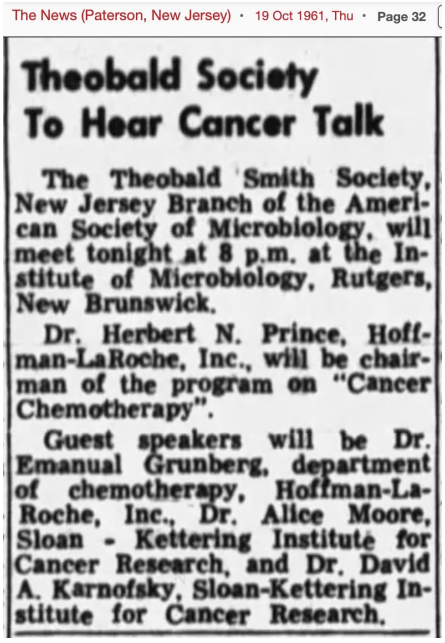
—Dr. Relda Cailleau, associated resident biochemist at the Institute of Cancer Research, Univer-

Tuesday Evening, September 26, 1961 — LUBBOCK AVALANCHE-JOURNAL ★★ B-3

[HN01JG][GDrive]

1961 (Oct 19) - Speaking with David A. Karnofsky

Full newspaper page : [HN01JM][GDrive] ; Speaking with https://en.wikipedia.org/wiki/David_A._Karnofsky



The News (Paterson, New Jersey) · 19 Oct 1961, Thu · Page 32

Theobald Society To Hear Cancer Talk

The Theobald Smith Society, New Jersey Branch of the American Society of Microbiology, will meet tonight at 8 p.m. at the Institute of Microbiology, Rutgers, New Brunswick.

Dr. Herbert N. Prince, Hoffman-LaRoche, Inc., will be chairman of the program on "Cancer Chemotherapy".

Guest speakers will be Dr. Emanual Grunberg, department of chemotherapy, Hoffman-La-Roche, Inc., Dr. Alice Moore, Sloan - Kettering Institute for Cancer Research, and Dr. David A. Karnofsky, Sloan-Kettering Institute for Cancer Research.

[HN01JN][GDrive]

1962 - Attending 9th International Cancer Congress, Moscow

Moscow, U.S.S.R., July 22–28, 1962

Report on the VIII International Cancer Congress : Source : [HP0063][GDrive]

Note - One section written by **Dr. Charlotte Friend (born 1921)** ...

Report on the VIII International Cancer Congress

Moscow, U.S.S.R., July 22–28, 1962

FOREWORD

Before the VIII International Cancer Congress was held in July, 1962, the Board of Directors of the American Association for Cancer Research recommended that a brief report of some of the highlights presented at these meetings be published in *Cancer Research*. Various scientists planning to attend the meetings were therefore asked to prepare a brief résumé of a particular topic being covered at the Congress.

I would like to take this opportunity to thank each of the following contributors, on behalf of the Board of Directors of the Association and the readers of this journal, for their assistance in preparing this report.

Lauren V. Ackerman, Washington University School of Medicine, St. Louis, Mo.
Joseph H. Burchenal, Sloan-Kettering Institute for Cancer Research, New York, N.Y.
Walter J. Burdette, University of Utah College of Medicine, Salt Lake City, Utah
Sidney J. Cutler, National Cancer Institute, Bethesda, Md.
Emerson Day, Memorial Hospital for Cancer and Allied Diseases, New York, N.Y.
Charlotte Friend, Sloan-Kettering Institute for Cancer Research, New York, N.Y.
William U. Gardner, Yale University School of Medicine, New Haven, Conn.
Alfred Gellhorn, Institute of Cancer Research, Columbia University, New York, N.Y.
J. R. Heller, Memorial Sloan-Kettering Cancer Center, New York, N.Y.
John Higginson, University of Kansas Medical Center, Kansas City, Kansas
W. C. Hueper, National Cancer Institute, Bethesda, Md.
N. Kaliss, Roscoe B. Jackson Memorial Laboratory, Bar Harbor, Maine
H. C. Pitot, McArdle Memorial Laboratory, University of Wisconsin Medical School, Madison, Wis.
Walter P. Quisenberry, Hawaii State Department of Health, Honolulu, Hawaii
Herman D. Suit, University of Texas, M. D. Anderson Hospital and Tumor Institute, Houston, Texas
R. M. Taylor, National Cancer Institute of Canada, Toronto, Canada
Elizabeth K. Weisburger, National Cancer Institute, Bethesda, Md.
John H. Weisburger, National Cancer Institute, Bethesda, Md.

Harold P. Rusch, *Editor*

BIOCHEMISTRY OF CANCER

Elizabeth K. Weisburger

The main Congress lecture on this subject was delivered by V. S. Shapot (Moscow) on behalf of V. A. Engelhardt who, unfortunately, was ill. The lecturer reviewed modern concepts of nucleic acid structure and function in relation to the genetic code and protein synthesis, with particular reference to alterations occurring in the transformation from normal to tumor cells.

The scientific program comprised 75 papers presented in five half-day sessions. The abstracts listed another 62 contributions presented by title. The search for characteristic biochemical differences between tumor cells and normal tissues continues unabated, with the dual aim of understanding the nature of the cancerous transformation and of attacking the neoplastic cells in a selective manner. The abnormalities investigated ranged from simple ions to complex enzyme systems or macromolecules. Other studies dealt with the isolation of inhibiting or promoting factors from tumor tissues. Some reports dealt with the effect of

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increased the responsiveness of the mammary tissue to subsequent intrinsic and extrinsic hormones. Strain differences in hormone production or balance were assumed to exist between the C57 and the C3H strains because of differences of the mammary mitotic counts during the estrous cycle and following hormone treatment (Laguchev, U.S.S.R.). The level of pituitary gonadotropins in mice with and without mammary tumors was the same (Demol *et al.*, Belgium). C3H mice with precancerous lesions and mice with mammary cancers showed similar metabolic patterns which could be reversed following ovariectomy or testosterone treatment, which reportedly caused regression of the tumors (Okita, U.S.A.).

The progression of human mammary cancer during pregnancy and the incidence during pregnancy were reported (Holleb *et al.*, U.S.A.). When corrections were made for delay of diagnosis and age of patient, the prognosis seemed little different from that for nonpregnant women similarly treated. Adrenalectomy often resulted in an increase in pituitary FSH in postmenopausal women in whom low values persisted after ovariectomy, a not infrequent observation made on cancerous women (Poulain *et al.*, France). Patients with breast cancer at different stages were given different steroids, and the metabolic derivatives were determined (Schubert *et al.*, East Germany). Although great individual variations occurred, patients with breast cancer showed differences in testosterone metabolism.

The panel discussion was opened by Dr. Kavetsky (U.S.S.R.), and he was followed by A. Lacassagne (France); A. Lipschutz (Chile); R. Larneske (France) substituting for M. Dargent; J. Furth (U.S.A.); and Y. Vasilyev (U.S.S.R.). Three programed participants were absent. Discussions were largely theoretical extrapolations from observations on specific models or on total organisms. The opening speaker discussed endocrine, immunological, and neutral factors in tumor initiation and tumor growth; Lacassagne, the neurohumoral pituitary hypothalamic integrations of normal and some abnormal endocrine functions; Lipschutz, his hypothesis of ovarian tumorigenesis; and Furth, a concise and well diagrammed summary of adrenal regulation or modification of carcinogenesis and of tumor growth. Vasilyev reduced the total organism reaction-response to a cellular level or tissue level involving small areas of cellular damage and cellular response and thus accounting for localization of neoplasia. Hypo- and hyperthyrodism were associated with both the appearance and growth of cancer (Larneske).

VIRUSES IN ONCOLOGY

Charlotte Friend

Among the many papers that were of interest were those concerned with (1) oncogenic properties of some of the "classical" viruses (2) the extension of the host range of tumor-inducing viruses that had been previously considered species-specific, and (3) the pathogenesis of simian virus SV_{40}.

J. J. Trentin (Houston) reported his studies on the induction of tumors in hamsters with a human virus, adeno type 12. R. J. Huebner (Bethesda) confirmed this finding during the discussion following this paper and added that adeno virus type 18 was also oncogenic in hamsters. M. L. Duran-Reynals (New Brunswick) discussed the high incidence of neoplasms, many of which were lymphomas, in cortisone-treated, methylcholanthrene-painted mice of the Swiss strain given inoculations of vaccinia virus. Rare types of neoplasms developed which were not seen among the control mice. N. P. Mazurenko (Moscow) described the properties of a leukemia virus isolated from vaccinia-treated CC57BR mice to which mice of CC57W and C3H strain, as well as rats, were susceptible. Since leukemia was not observed in vaccinia-inoculated mice other than the CC57BR, it is believed that the leukemia virus in question was latent in this strain of mice. Fjelde (Lund, Sweden) found chromosomal alterations in virus-infected (vaccinia or measles) H.Ep. #2 cells cultured in a medium containing D_2O.

Further studies on tumor induction in mammals with Rous chicken sarcoma virus were also presented. C. G. Ahlstrom (Lund, Sweden) reported the induction of tumors in mice, rats, hamsters, guinea pigs, and rabbits with a strain of Rous sarcoma virus that differs from the Mill Hill strain. G. Ya. Svet-Moldavsky (Moscow) and J. Svoboda (Prague) each presented results of studies on Rous-induced sarcoma in rats. Svoboda described very interesting experiments on the growth of the virus in rat cells *in vitro*. In addition, Shapiro (Moscow) found that sheep adenomatosis virus caused cystic disease in mice similar to that caused by Rous sarcoma virus in rats.

Since SV_{40} virus is known to have been a contaminant in polio virus vaccine, there is much concern about its oncogenic potential. Deitchman (Moscow) attempted to isolate an oncogenic virus from human mammary cancer material cultured in monkey kidney monolayer tissue culture. A virus identified as SV_{40}, recovered from both the experimental and control monkey tissue culture, grew in cultures of human tissue and induced re-

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ticulum sarcomas in rats. Koprowski (Philadelphia) observed transformation of human adult skin and buccal mucosa tissue-cultured cells infected with simian SV_{40}.

Infectious DNA preparations were obtained by Ito (Nara and Seattle) from wild cottontail rabbit papillomas, from partially purified Shope papilloma virus, and from domestic rabbit papillomas, which had no detectable virus. Using similar procedures, Moloney (Bethesda) isolated infectious RNA from the mouse leukemia virus which bears his name.

In relation to Rous sarcoma virus studies, R. Latarjet (Paris) observed the interference of ultraviolet or x-radiated inactivated virus with active virus. These experiments were conducted in tissue cultures or chick embryos, and the maximum interference was obtained when the radiated virus was added 1 hour before infective virus.

The list of tumor viruses isolated from the chicken, mouse, and rat is steadily increasing (Thurzo, Bratislava; Rauscher, Bethesda; Prigozhina, Moscow; Osamura, Tokyo; Svec, Bratislava), as is the evidence for the vertical transmission of the mouse leukemia viruses (Rudali, Paris; Krischke, Berlin; Mirand, Buffalo).

The vagaries and pitfalls inherent in the methods being used to establish the viral etiology of tumors were discussed by both Zdanov (Moscow) and Timofeyevsky (Moscow).

F. L. Horsfall, Jr. (New York) noted that the cancer-inducing viruses were widespread in the animal kingdom and had properties much like those of the "classical" viruses. He stressed the fact that the special relationship between the host cell genome and the viruses inducing cancer should be given more attention. Under natural conditions, these viruses frequently cause infections that do not result in cancer.

In reviewing the present concepts in viral oncology, L. A. Zilber (Moscow) expressed similar views. He also emphasized that malignancy may be the result of the integration of viral nucleic acid with the cell genome. Should this be the case, infectious virus would no longer be necessary for the further development of tumor and might therefore account, at least in part, for the difficulties encountered in attempts to isolate oncogenic viruses from human neoplasms.

CANCER DETECTION

Emerson Day

One section and one panel of the VIII International Cancer Congress were devoted to cancer detection.

In the section on cancer detection there was no revelation of new cancer screening tests but numerous reports of further experience and some possible improvements of previously reported detection and diagnostic technics. Inadequacies of the interpreting services made it difficult, frequently impossible, to follow details, but throughout the section the theme was clear: "early diagnosis is the most important weapon in the fight against cancer."

Zakharova (Krasnoyarsk, U.S.S.R.) reported successful application of cytology for the differentiation of sarcoma and carcinoma with specimens obtained by aspiration and by tumor imprint methods. Oakland (Birmingham, Great Britain) reported an accuracy of over 80 per cent in the cytologic study of colonic washings with particular success for the terminal portion of the sigmoid colon. Cook (St. Louis) reviewed the usefulness of silicone foam polymer casts of the lower gastrointestinal tract for the detection of small tumors by the imprints they form; the extruded mold also provides a sample of locally exfoliated cells for cytologic study. A balloon modification of this technic has given encouraging results in the esophagus and upper stomach.

Masuda (Kyoto, Japan) reported extensive experience with the Japanese gastro-camera, which is easily swallowed and gives a series of color photographs of the mucosa; with increasing experience it is possible to differentiate benign from early malignant lesions. Krasnov (Alma-Ata, U.S.S.R.) reported use of balloon electrodes to record electropotentials of the upper gastrointestinal tract whereby "bioelectric silence zones" can be used to determine the extent of tumor and to differentiate malignant from nonmalignant lesions.

Among other diagnostic procedures, Balter (Soroki, U.S.S.R.) reported use of noncontrast x-ray mammography with 95 per cent reliability in 267 patients when there was a histologic diagnosis. An 8-year experience with radioisotope technics in the study of over 1,000 patients with proved or suspected brain tumors was reported favorably by Shamov (Leningrad). Hysterography was reported by Yurukov (Sofia), on the basis of a 9-year study, as having a high degree of reliability in diagnostic studies for uterine cancer with essentially no contra-indications as long as the instillation is undertaken slowly under x-ray guidance. Baccaglini (Padua, Italy) reported that phase-contrast studies of tissue samples taken at operation had proved to be more rapid and more reliable than fluorescent technics in determining extent of tumor and required surgery at time of operation.

In the Czechoslovakian experience reported by

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1963 (Feb 20)

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1963-02-20-the-fremont-news-messenger-ohio-pg-21-clip-alice-moore
https://drive.google.com/file/d/1wtaezWsGxqpwUOr1QMtiXTZW6m0ejQ2y/view?usp=sharing

The News-Messenger (Fremont, Ohio) · 20 Feb 1963, Wed · Page 21

EX-BELLEVUEAN SPEAKS

BELLEVUE, O.—Child Conservation Study Club of the United Church of Christ was addressed Monday by Dr. Alice Moore, a former Bellevuean now research head of the Virus laboratory at Sloane Kettering Institute, New York City. Dr. Moore was introduced by her mother, Mrs. John Moore, a charter member of the local club. Dr. Moore showed pictures of Russia and Iron Curtain countries of Europe, which she visited last summer following sessions of the World Cancer Congress in Moscow.

1963 (May 12-14) - Dr. Alice E. Moore has multiple roles with the "Fifth Meeting of the Human Cancer Virus Task Force" ... which later becomes the SVCP (Special Virus Cancer Program)

See (2004) "An Administrative History of the National Cancer Institute's Viruses and Cancer Programs, 1950-1972 ", by By Carl G. Baker, M.D. / Source of PDF at [HB006C][GDrive]

Also See [**Special Virus-Cancer Program**]

The Fifth Meeting of the Human Cancer Virus Task Force

At this meeting held at the Airlie House Conference Center on May 12-14, 1963, twenty-six investigators from Task Force participating laboratories presented current work underway in their laboratories. The arrangement provided many opportunities for informal interchange of ideas, information, and future possibilities. The informality and common purpose encouraged the reporting of up-to-date activities well before publication. This meeting initiated a series of annual meetings attended by leading investigators in the cancer-viruses field and their staffs. The annual congregations continued for more than a decade and are continued still under the tutelage of Bob Gallo. At the close of the first meeting five informal subcommittees of the Task Force composed of members from the participating laboratories were formed:

- **PPLO Subcommittee**
  - J. Horoszewicz (Chairman) RPMI
  - E. de Harven SKI
  - ➡️ **A. Moore SKI**
  - R. Manaker LVO-NCI
  - N. Somerson LID-NIAID
  - K. Smith Baylor U.
  - R. Holdenried VRRB-NCI
  - R. Meyer VRRB-NCI
- **Laboratory Animals Subcommittee**
  - E Mirand (Chairman) RPMI
  - F. Rapp Baylor U.
  - [**Dr. Charlotte Friend (born 1921)**] SKI
  - W. Rowe LID-NIAID
  - P. Sarma LID-NIAID
  - J. Moloney LVO-NCI
  - R. Holdenried VRRB-NCI
  - L. Murphy VRRB-NCI
- **Primates Subcommittee**
  - J. Melnick (Chairman) Baylor U.
  - C. Southam SKI
  - H. Coates LID-NIAID
  - F. Rauscher LVO-NCI
  - E. Mirand RPMI
  - R. Holdenried VRRB-NCI
  - L. Murphy VRRB-NCI
- **Cell Culture Subcommittee**
  - R. Stevenson (Chairman) VRRB-NCI
  - S. Stewart LVO-NCI
  - D. Yohn RPMI
  - M. Benyesh-Melnick Baylor U.
  - ➡️ **A. Moore SKI**
  - R Chanock LID-NIAID
  - R. Meyer VRRB-NCI
- **Electron Microscope Subcommittee**
  - A. Dalton (Chairman) LVO-NCI
  - K. Smith Baylor U.
  - E. de Harven SKI
  - R. Zeigel LVO-NCI
  - G. Niwayama RPMI
  - J. Horoszewicz RPMI

1964 (Jan 30)

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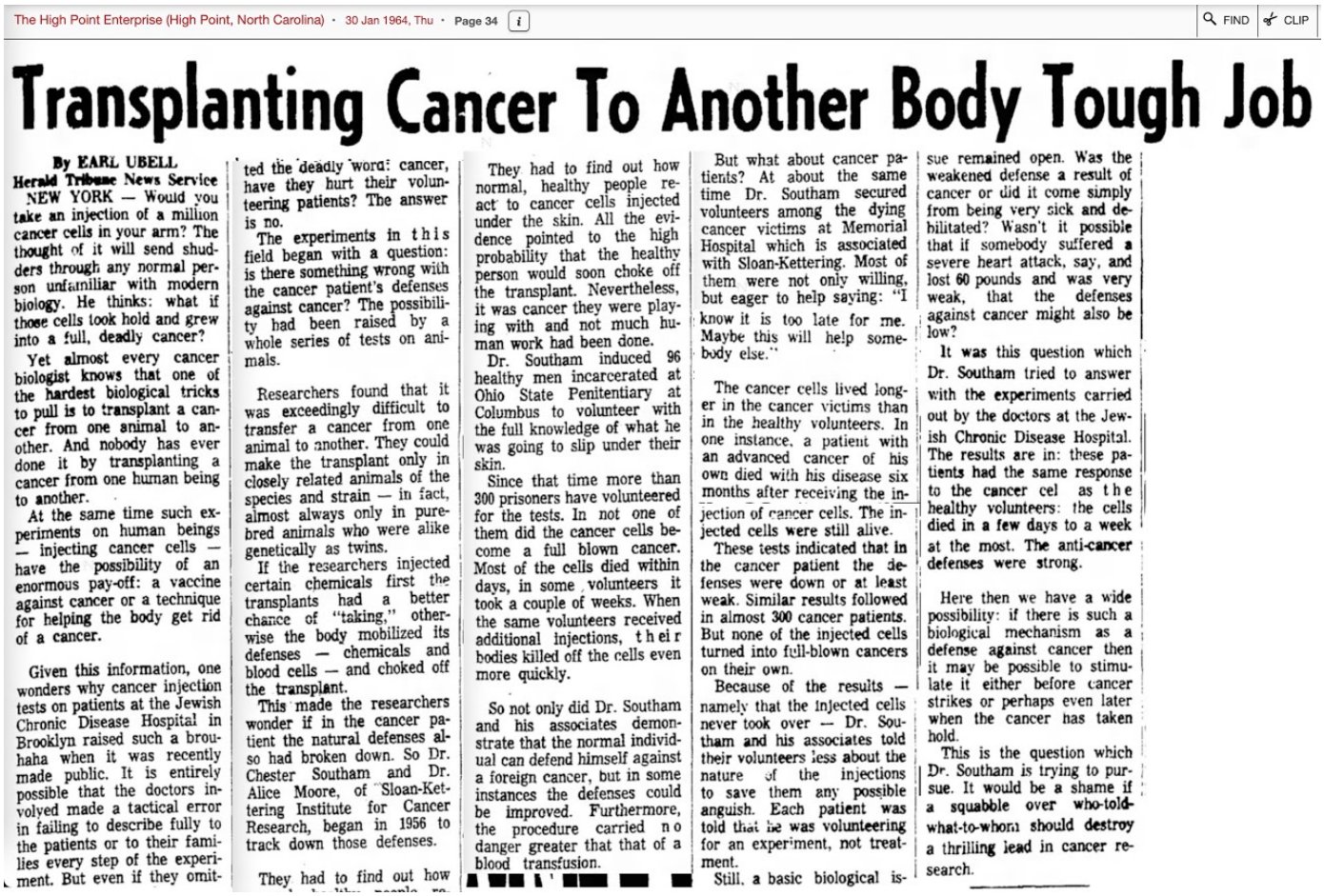
1964-01-30-the-high-point-enterprise-north-carolina-pg-11-c-clip-transplanting.jpg



The High Point Enterprise (High Point, North Carolina) · 30 Jan 1964, Thu · Page 34

Transplanting Cancer To Another Body Tough Job

By EARL UBELL
Herald Tribune News Service

NEW YORK — Would you take an injection of a million cancer cells in your arm? The thought of it will send shudders through any normal person unfamiliar with modern biology. He thinks: what if those cells took hold and grew into a full, deadly cancer?

Yet almost every cancer biologist knows that one of the hardest biological tricks to pull is to transplant a cancer from one animal to another. And nobody has ever done it by transplanting a cancer from one human being to another.

At the same time such experiments on human beings — injecting cancer cells — have the possibility of an enormous pay-off: a vaccine against cancer or a technique for helping the body get rid of a cancer.

Given this information, one wonders why cancer injection tests on patients at the Jewish Chronic Disease Hospital in Brooklyn raised such a brouhaha when it was recently made public. It is entirely possible that the doctors involved made a tactical error in failing to describe fully to the patients or to their families every step of the experiment. But even if they omitted the deadly word: cancer, have they hurt their volunteering patients? The answer is no.

The experiments in this field began with a question: is there something wrong with the cancer patient's defenses against cancer? The possibility had been raised by a whole series of tests on animals.

Researchers found that it was exceedingly difficult to transfer a cancer from one animal to another. They could make the transplant only in closely related animals of the species and strain — in fact, almost always only in pure-bred animals who were alike genetically as twins.

If the researchers injected certain chemicals first the transplants had a better chance of "taking," otherwise the body mobilized its defenses — chemicals and blood cells — and choked off the transplant.

This made the researchers wonder if in the cancer patient the natural defenses also had broken down. So Dr. Chester Southam and Dr. Alice Moore, of Sloan-Kettering Institute for Cancer Research, began in 1956 to track down those defenses.

They had to find out how normal, healthy people react to cancer cells injected under the skin. All the evidence pointed to the high probability that the healthy person would soon choke off the transplant. Nevertheless, it was cancer they were playing with and not much human work had been done.

Dr. Southam induced 96 healthy men incarcerated at Ohio State Penitentiary at Columbus to volunteer with the full knowledge of what he was going to slip under their skin.

Since that time more than 300 prisoners have volunteered for the tests. In not one of them did the cancer cells become a full blown cancer. Most of the cells died within days, in some volunteers it took a couple of weeks. When the same volunteers received additional injections, their bodies killed off the cells even more quickly.

So not only did Dr. Southam and his associates demonstrate that the normal individual can defend himself against a foreign cancer, but in some instances the defenses could be improved. Furthermore, the procedure carried no danger greater that that of a blood transfusion.

But what about cancer patients? At about the same time Dr. Southam secured volunteers among the dying cancer victims at Memorial Hospital which is associated with Sloan-Kettering. Most of them were not only willing, but eager to help saying: "I know it is too late for me. Maybe this will help somebody else."

The cancer cells lived longer in the cancer victims than in the healthy volunteers. In one instance, a patient with an advanced cancer of his own died with his disease six months after receiving the injection of cancer cells. The injected cells were still alive.

These tests indicated that in the cancer patient the defenses were down or at least weak. Similar results followed in almost 300 cancer patients. But none of the injected cells turned into full-blown cancers on their own.

Because of the results — namely that the injected cells never took over — Dr. Southam and his associates told their volunteers less about the nature of the injections to save them any possible anguish. Each patient was told that he was volunteering for an experiment, not treatment.

Still, a basic biological issue remained open. Was the weakened defense a result of cancer or did it come simply from being very sick and debilitated? Wasn't it possible that if somebody suffered a severe heart attack, say, and lost 60 pounds and was very weak, that the defenses against cancer might also be low?

It was this question which Dr. Southam tried to answer with the experiments carried out by the doctors at the Jewish Chronic Disease Hospital. The results are in: these patients had the same response to the cancer cel as the healthy volunteers: the cells died in a few days to a week at the most. The anti-cancer defenses were strong.

Here then we have a wide possibility: if there is such a biological mechanism as a defense against cancer then it may be possible to stimulate it either before cancer strikes or perhaps even later when the cancer has taken hold.

This is the question which Dr. Southam is trying to pursue. It would be a shame if a squabble over who-told-what-to-whom should destroy a thrilling lead in cancer research.

1964 (May 22)

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1964-05-22-the-daily-news-new-york-pg-48-clip-animal-blood-serum

ONLY HUMAN

By Sidney Fields

Animal Blood for Serum

Up at Otisville, N.Y., 90 miles from town, the city runs its own animal breeding farm. The animals help supply the Health Department's labs with serums, antiserums and antitoxins. The labs use them to detect a host of common and uncommon diseases.

The farm is run by handsome, lively Dr. Lisbeth Kraft, who says it's probably the only farm of its kind in the world. Started by the city in 1910 to make diphtheria serum, it is now a complex of 25 buildings on 166 pleasant acres and has a steady animal population of 1,600 mice, monkeys, goats, hamsters, chickens, ducks, geese, guinea pigs, rabbits, rats, sheep, cows, mules and horses.

"The horses are mostly retired city mounts," Dr. Kraft said during a visit to the farm. "It's a nice deal for them. We give them a country life in happy retirement and they give us blood for serum."

Dr. Kraft—and friend

Dr. Kraft holds a degree in veterinary medicine from Cornell and spent 14 years in researching diseases of lab animals. She discovered two viruses that afflict infant mice and, with Dr. Alice Moore of Sloan-Kettering Institute, described a third virus that attacks mice. Why is this important?

"Research people and those who raise mice for labs think they're important. For instance, by keeping some mice germ-free and giving others germs, we may be able to discover why one person gets typhoid fever and another just becomes a carrier and never gets it."

Staff of 50 at Farm

She came to the Otisville farm three years ago as the Health Department's assistant director of Laboratories. There's a staff of 50 at the place, animal caretakers, lab technicians, veterinarians, bacteriologists, biochemists.

They prepare tissue cultures from the animals which are eventually used to diagnose things such as polio, respiratory diseases, encaphalitis and intestinal afflictions.

They make antiserums needed to combat other diseases, to type Rh blood and to test for syphilis.

And they make vast quantities of serums and take whole blood from sheep, goats, horses, guinea pigs and chickens to detect diseases such as whooping cough, rheumatic fever, meningitis, diphtheria, influenza, mumps.

"As infrequent as some of these things now are in the city and its environs," Dr. Kraft said, "doctors have to keep tabs on them constantly to prevent epidemics."

All the serums, antiserums, antitoxins and blood are sent to the Health Department offices and labs in the city, where they are used; eventually they get to health stations and clinics throughout the city when needed.

Directed by Dr. Schaeffer

Besides its regular work, the farm undertook three years ago to be part of a center for adenoviruses. An adenovirus infects human beings with respiratory diseases. A few of the adenoviruses are used to produce tumors in mice.

The center is directed by Dr. Morris Schaeffer, who runs all the labs for the Health Department, and by Dr. John P. Fox, an epidemic expert. The materials necessary to diagnose the respiratory diseases in human beings and the tumors in mice are made at the Otisville farm.

"This is one of a number of such efforts around the country," Dr. Kraft said. "There are centers for other viruses because no one place has enough people, space, or time to study all of them."

Big, Old, House

Otisville is a very busy place indeed.

"Sometimes," Dr. Kraft sighed, "I don't know whether I run the farm or the farm runs me."

She lives in a big, old, white house on the grounds with her mother, her dog and her cat. Mention the word "loneliness" and she tells you calmly, "Loneliness is for people who haven't enough to do." Oh, there's time for the countryside, for her piano. But mostly it's her work.

"Because my work is play," she said. "The compensations are many: There's drama and excitement in it. And my bosses are 90 miles away."

At Your Service

By MARGARET BROWNE

Semi-annual collection of great European fashions for children at one store offers the cream of the crop from Spain, France, Italy, England, Denmark and Germany. There are starched frocks from Spain, little bikinis from France, printed terry cloth beach things from England and delicately beautiful baby clothes from Belgium. Fabrics include fine cotton lawns, satin-striped ginghams, fine cotton gabardines and twills, percales, and the famous Italian knits in cotton and twill. An overblouse of red cotton twill from Spain is appliqued with navy blue and white checkered fish and teamed with a smartly, pleated skirt of white cotton twill for a really spanking fresh look . . . Little play-dress of blue dotted white cotton percale has a charming frilled collar all hand-smocked and piped with blue. The whole thing is lined with cotton.

Send a stamped, self-addressed envelope to MARGARET BROWNE, THE NEWS, 220 E 42d St., New York, N. Y. 10017, for information on the above-mentioned items.

1964 (Dec 04) - NYTimes : "Mouse leukemia fought by a virus ..."

December 4, 1964, Page 47 / Source : [HN01K3][GDrive]

The discovery of a virus that appears capable of knocking out leukemia in mice without seriously harming the animals has been reported b/ a team of Long Island scientists.

The virus seems to he different from any other found in mice, a scientist said yesterday, and may represent a new category of these infectious agents.

Its unusual properties may account for the strange circumstances under which the virus was found by scientists at the Waldemar Research Foundation of Woodbury, L. I.

Those circumstances, in fact, may point the way to the development, of techniques for finding other viruses of similar characteristics — perhaps viruses that could be used safely against cancer In humans—the scientists said.

The report was presented yesterday to newsmen by Dr. Norman Molomut, director of Waldemar, at the New York Hilton Hotel. His colleagues, Dr. Morton Padnos and Dr. Leo Gross, were also present. Their findings will be published in Nature, the British scientific journal, in its issue of Dec. 5, and in a forthcoming number of The Journal of the National Cancer Institute.

The possibility of using viruses against cancer is not a new idea. The ability of viruses to kill cells and their preference for infecting only certain kinds led to speculation many years ago over whether viruses could be found that would attack cancer cells preferentially.

Work in 1920's Recalled

Work along this line began with the use of quite common viruses injected directly into animal cancers, and some measure of success was reported.

In the early nineteen - twenties for example, scientists at the Institut Pasteur in Paris reported making animal cancers shrink with injections of vaccinia, the virus in smallpox vaccine.

Early work on anticancer viruses in this country was done at the Sloan-Kettering Institute by Dr. Alice Moore.

In a telephone interview yesterday, Dr. Moore recalled trying several types of. viruses against several kinds of animal cancers. She killed some of the tumors that way but left others unaffected. Moreover, she said, it was never determined how to predict which virus would work on which cancer.

In the early nineteen-fifties she and Dr. Chester Southam began using viruses against tumors in human terminal cancer patients.

They found that the virus—Egypt 101, a strain of West Nile virus — sometimes was more destructive of cancer cells than of normal- ones or persisted! longer in tumors than in! healthy tissue.

The trouble was, Dr. Moore said, that the viruses did not "seem to be able to knock out" the very last cancer cell. Therefore, the tumors grew back when the viruses were depleted from the body. Additional injections of virus did not work because the first one acted as a vaccination, rendering the patient immune to further exposures to the virus.

New Findings Outlined

Nor would it have been practical to give an overwhelmingly large initial dose of the virushoping - in this way to kill all the cancer cells—because this would present the risk of death from viral infection.

In contrast, the virus that the Waldemar scientists have found seems to be ^effective against mouse leukemia —a blood cancer—at doses much lower than those that would cause overwhelming infection.

Moreover, all mice that received the virus are alive and free of cancer more than 150 days after receiving transplants of leukemia tissue, the scientists said. Normally, mice die of transplanted leukemias in a couple of weeks.

The virus was discovered in tissue cultures of a mouse tumor that would not grow when implanted into mice, Dr. Molomut said. The tumor was an Ehrlich ascites carcinoma, a cancer that grows in the abdominal fluid of mice.

In an effort to find out what was preventing the transplanted tumors from “taking” the scientists fractionated the cancer tissue and injected each fraction into mice, Dr. Molomut said.

Blood Stream Studied

Because their research focused primarily on tumor immunity, they, looked for reactions to the injections in the blood stream. One cell - free fraction of the tumor tissue culture caused a marked depletion in white blood cells, called lymphocytes, Dr. Molomut said.

Inasmuch as leukemia is characterized by an overabundance of white blood cells, he explained, that cell - free fraction was injected into mice that had received transplants of leukemia tissue. When growth of the leukemia tissue was inhibited, Dr. Molomut said, the fraction was studied further and found to contain a virus.

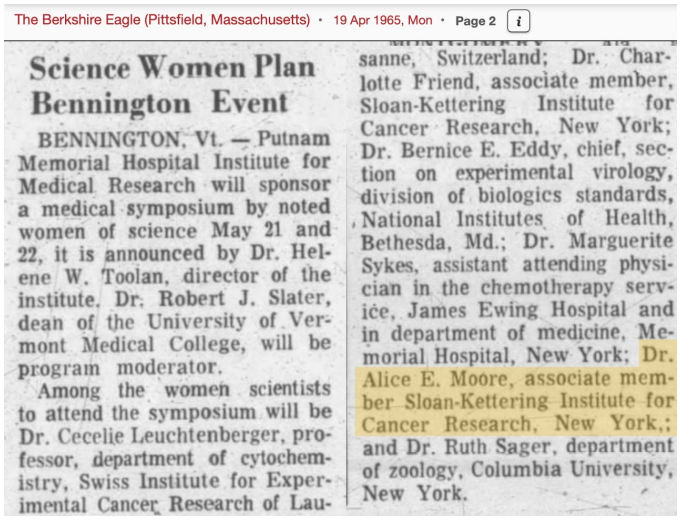
Dr. Molomut said he believed other viruses probably existed and should be sought in human material.

Meanwhile, the Waldemar virus is being more thoroughly studied by Dr. Molomut and his colleagues, Dr. John B. Nelson at the Rockefeller Institute and Dr. John Maloney of the National Institutes of Health in Bethesda, Md.

1965 (April 19)

Mentioned: **Dr. Alice E. Moore (born 1908)** ; **Dr. Charlotte Friend (born 1921)** ; ...

Full newspaper page : [HN01JH][GDrive]



The Berkshire Eagle (Pittsfield, Massachusetts) · 19 Apr 1965, Mon · Page 2

Science Women Plan Bennington Event

BENNINGTON, Vt. — Putnam Memorial Hospital Institute for Medical Research will sponsor a medical symposium by noted women of science May 21 and 22, it is announced by Dr. Helene W. Toolan, director of the institute. Dr. Robert J. Slater, dean of the University of Vermont Medical College, will be program moderator.

Among the women scientists to attend the symposium will be Dr. Cecelie Leuchtenberger, professor, department of cytochemistry, Swiss Institute for Experimental Cancer Research of Lausanne, Switzerland; Dr. Charlotte Friend, associate member, Sloan-Kettering Institute for Cancer Research, New York; Dr. Bernice E. Eddy, chief, section on experimental virology, division of biologics standards, National Institutes of Health, Bethesda, Md.; Dr. Marguerite Sykes, assistant attending physician in the chemotherapy service, James Ewing Hospital and in department of medicine, Memorial Hospital, New York; Dr. Alice E. Moore, associate member Sloan-Kettering Institute for Cancer Research, New York,; and Dr. Ruth Sager, department of zoology, Columbia University, New York.

[HN01JI][GDrive]

1965 (May 17)

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1965-05-17-bennington-banner-bennington-vermont-pg-10.jpg

Two-Day Science Seminar Here on Cancer Research

Scientific and medical personnel from across the Eastern United States, Canada and even England will be among those attending a special science seminar sponsored here Friday and Saturday by the Putnam Memorial Hospital Institute for Medical Research.

The symposium, to deal with latest developments in cancer research and related fields, will feature seven "Distinguished Women of Science." Lectures given by the seven women will all be presented at the auditorium at St. Joseph College in Old Bennington.

While understanding of the seven lectures generally presupposes some medical or scientific background, the symposium is also open to interested laymen. Persons who would like to attend should contact the research institute's director, Dr. Helen W. Toolan, regarding registration.

The first four lectures, to be held Friday afternoon, will all relate to "the hot subject of whether viruses can cause human cancer;" according to Dr. Toolan. The speakers and their subjects during the Friday afternoon session are:

Dr. Cecelle Leuchtenberger; professor, Department of Cytochemistry, Swiss Institute for Experimental Cancer Research, Lausanne, Switzerland; "The Significance of the Intracellular Nucleic Acid Metabolism for Virus Infections and Tumors;" at 1 p.m.

Dr. Charlotte Friend, associate member, Sloan Kettering Institute for Cancer Research, New York City; "Recent Studies on a Virus-Induced Murine Leukemia;" at 2 p.m.

Dr. Bernice E. Eddy, chief, Section on Experimental Virology, Division of Biologics Standards, National Institute of Health, Bethesda, Md.; "Studies on the Oncogenic Viruses: Simian Virus — 40 and Human Adenovirus Type 12;" at 3 p.m.

Dr. Sarah E. Stewart, Division of Viral Oncology, National Cancer Institute, National Institute of Health, Bethesda; "Viruses in Cultured Human Lymphoma Cells;" at 4 p.m.

Three more lectures on less closely related fields will be presented Saturday morning. The speakers and their subjects for this session are:

Dr. Marguerite Sykes, assistant attending physician in the Chemotherapy Service, James Ewing Hospital and in the Department of Medicine, Memorial Hospital, New York City; "Clinical Aspects of Cancer Chemotherapy—A Review;" at 9 a.m.

Dr. Alice E. Moore, associate member, Sloan Kettering Institute; "Emperipolesis: Cell - Through - Cell Transit (a movie)" at 10 a.m.

Dr. Ruth Sager, Department of Zoology, Columbia University, New York City; "Nonchromosomal Heredity;" at 11 a.m.

Each hour's session will consist of a 45-minute lecture with a 15-minute question and answer period. Moderator for the symposium will be Dr. Robert J. Slater, dean of the University of Vermont Medical College.

To complete the two-day session, there will be an open house Saturday afternoon from 1 to 3:30 at the Putnam Institute for Medical Research.

Autos Damaged In North Bennington

Two cars were damaged Sun-

1965 (June 30) - Start of Special Virus Leukemia Program

See (2004) "An Administrative History of the National Cancer Institute's Viruses and Cancer Programs, 1950-1972 ", by By Carl G. Baker, M.D. / Source of PDF at [HB006C][GDrive]

Also See [**Special Virus-Cancer Program**]

Special Virus Leukemia Program -- End of F. Y. 1965

With the end of Fiscal Year 1965 on June 30, 1965, the Science/Management Group sent on August 3 a summarizing memorandum to members of the working groups. Part of this memorandum follows:

In a span of approximately eight months, the chairmen and working group members have developed detailed program plans for their respective areas, and accomplished the difficult task of developing and reviewing numerous research projects which have been officially executed as 48 research contracts. As of the close of the books for fiscal year 1965, $9,932,000 of the $10,000,000 appropriated has been obligated. It is realized that the fast pace of activities required for this accomplishment has left insufficient time for working group members to acquire a detailed knowledge of the individual contracts developed by working groups other than their own.

Attachment I presents key information on each contract developed and implemented during the year. The contracts are listed by working groups to stay within the program structure of fiscal year 1965. It is hoped that this material will provide you with the necessary background information so that the tasks of developing new projects and modifying existing program elements can be performed against a complete knowledge of the total program.

There will be some attempt to establish a better distribution of contract renewal dates by fiscal year quarters so as to reduce the heavy concentration of contract reviews that usually takes place in the third and fourth quarters. If this can be practically accomplished, you will receive an updated list of contracts reflecting any changes in renewal date.

Attachment II presents a summary breakdown of the number of contracts and the amount of funds obligated by the working groups.

Attachment III is a summary report of both the scientific and administrative activities accomplished in the program for the time period September 1964 through June 1965.

Attachment IV presents a reiteration and discussion of the main underlying program assumption.

It became increasingly apparent during the year that areas of overlap between the functions of the working groups on Developmental Research, Production, and Resources and Logistics were resulting in an uneven degree of participation by these groups in the program and in confusion as to which group had the responsibility of soliciting, developing, reviewing, and requisite monitoring of various production type contracts. After several discussions with the chairmen of these groups, it seems desirable to effect the following changes:

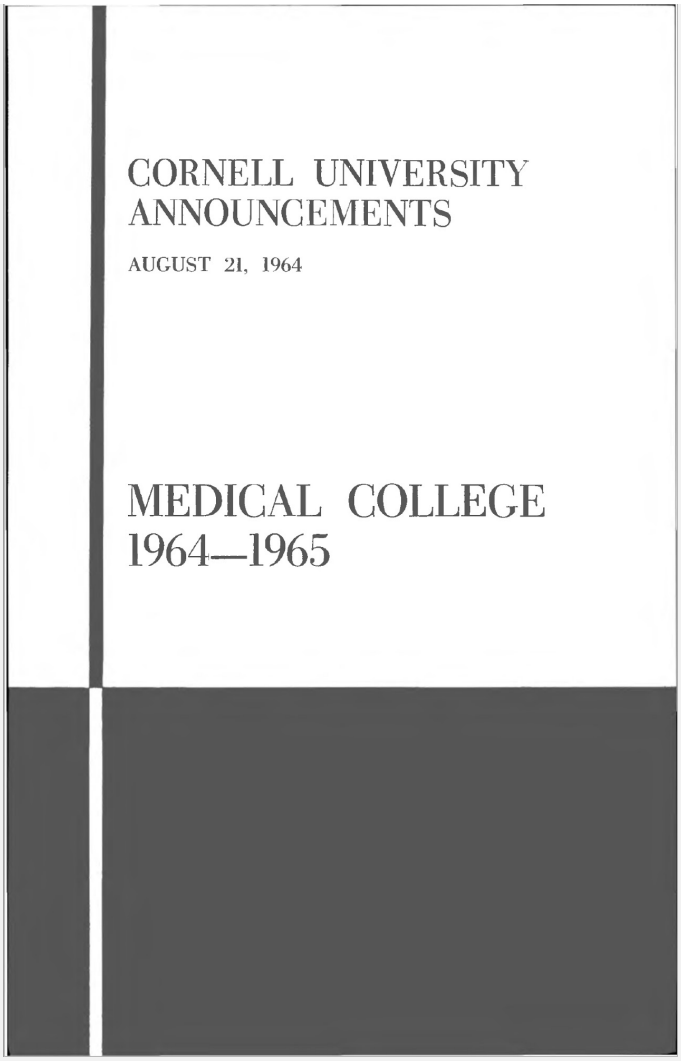
Eliminate the working group of Production at this time and re-align its membership with the Developmental Research and Resources and Logistics group as follows:

- ORIGINAL MEMBERSHIP OF PRODUCTION GROUP ----> NEW ALIGNMENT
- Dr. Robert Manaker, NCI (Chairman) ----> Developmental Research
- Dr. Robert Couch, NIAID ----> Resources & Logistics
- Dr. Paul Gerber, DBS ----> Developmental Research
- Dr. Leonard Hayflick, Wistar Institute ----> Testing & Monitoring
- **Dr. Alice Moore, Sloan-Kettering Inst. ----> Developmental Research**
- Dr. Timothy O'Conner, NCI ----> Developmental Research
- Dr. Alan Rabson, NCI ----> Developmental Research

With the end of the activities of the Special Virus Leukemia Program within fiscal year 1965, Dr. Ray Bryan has resigned as Chairman of the Developmental Research Working Group, in order to devote full time to his heavy responsibilities as a senior program leader in the NCI. Dr. Robert Manaker has agreed to succeed Dr. Bryan as Chairman of the Developmental Research Working Group -- effective July 1, 1965. Dr. A.J. Dalton has agreed to continue as Vice-Chairman.

1965 (August) - Currently at Cornell Medical

PDF of Cornell University Announcements, Aug 21, 1964 : [HE0048][GDrive]



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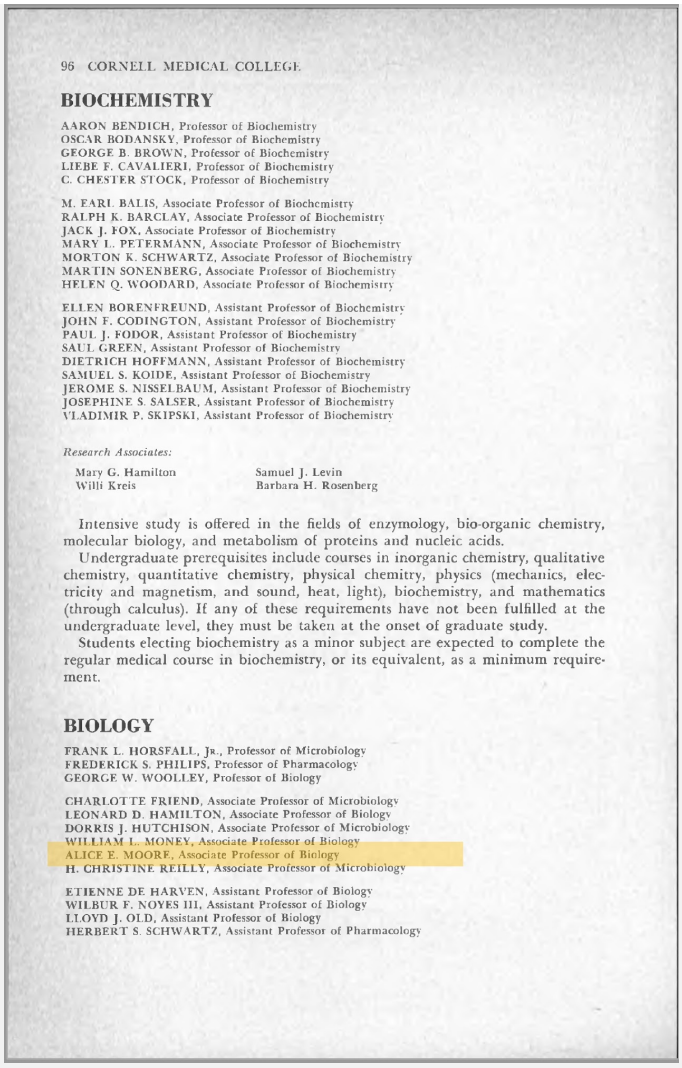


96 CORNELL MEDICAL COLLEGE

BIOCHEMISTRY

AARON BENDICH, Professor of Biochemistry
OSCAR BODANSKY, Professor of Biochemistry
GEORGE B. BROWN, Professor of Biochemistry
LIEBE F. CAVALIERI, Professor of Biochemistry
C. CHESTER STOCK, Professor of Biochemistry

M. EARL BALIS, Associate Professor of Biochemistry
RALPH K. BARCLAY, Associate Professor of Biochemistry
JACK J. FOX, Associate Professor of Biochemistry
MARY L. PETERMANN, Associate Professor of Biochemistry
MORTON K. SCHWARTZ, Associate Professor of Biochemistry
MARTIN SONENBERG, Associate Professor of Biochemistry
HELEN Q. WOODARD, Associate Professor of Biochemistry

ELLEN BORENFREUND, Assistant Professor of Biochemistry
JOHN F. CODINGTON, Assistant Professor of Biochemistry
PAUL J. FODOR, Assistant Professor of Biochemistry
SAUL GREEN, Assistant Professor of Biochemistry
DIETRICH HOFFMANN, Assistant Professor of Biochemistry
SAMUEL S. KOIDE, Assistant Professor of Biochemistry
JEROME S. NISSELBAUM, Assistant Professor of Biochemistry
JOSEPHINE S. SALSER, Assistant Professor of Biochemistry
VLADIMIR P. SKIPSKI, Assistant Professor of Biochemistry

Research Associates:

Mary G. Hamilton
Willi Kreis
Samuel J. Levin
Barbara H. Rosenberg

Intensive study is offered in the fields of enzymology, bio-organic chemistry, molecular biology, and metabolism of proteins and nucleic acids.

Undergraduate prerequisites include courses in inorganic chemistry, qualitative chemistry, quantitative chemistry, physical chemitry, physics (mechanics, electricity and magnetism, and sound, heat, light), biochemistry, and mathematics (through calculus). If any of these requirements have not been fulfilled at the undergraduate level, they must be taken at the onset of graduate study.

Students electing biochemistry as a minor subject are expected to complete the regular medical course in biochemistry, or its equivalent, as a minimum requirement.

BIOLOGY

FRANK L. HORSFALL, Jr., Professor of Microbiology
FREDERICK S. PHILIPS, Professor of Pharmacology
GEORGE W. WOOLLEY, Professor of Biology

CHARLOTTE FRIEND, Associate Professor of Microbiology
LEONARD D. HAMILTON, Associate Professor of Biology
DORRIS J. HUTCHISON, Associate Professor of Microbiology
WILLIAM L. MONEY, Associate Professor of Biology
ALICE E. MOORE, Associate Professor of Biology
H. CHRISTINE REILLY, Associate Professor of Microbiology

ETIENNE DE HARVEN, Assistant Professor of Biology
WILBUR F. NOYES III, Assistant Professor of Biology
LLOYD J. OLD, Assistant Professor of Biology
HERBERT S. SCHWARTZ, Assistant Professor of Pharmacology

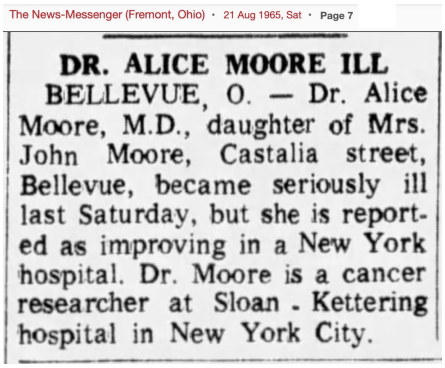
Page 96
[HE004A][GDrive]

1965 (Aug 21)

https://www.newspapers.com/image/305089873/?terms=%22dr%20alice%20moore%22&match=1

1965-08-21-the-fremont-news-messenger-ohio-pg-7.jpg https://drive.google.com/file/d/1clTlaAHWgcs5zWQKmydyclzXsRbvWP4k/view?usp=sharing

1965-08-21-the-fremont-news-messenger-ohio-pg-7-clip-alice-moore https://drive.google.com/file/d/1mqyaEmUPbR3wfiom5vltGPHnKfSzZT9_/view?usp=sharing



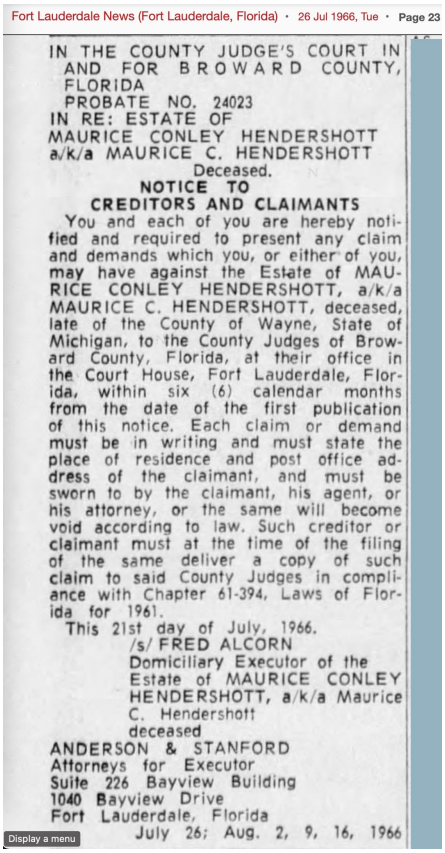
The News-Messenger (Fremont, Ohio) · 21 Aug 1965, Sat · Page 7

DR. ALICE MOORE ILL

BELLEVUE, O. — Dr. Alice Moore, M.D., daughter of Mrs. John Moore, Castalia street, Bellevue, became seriously ill last Saturday, but she is reported as improving in a New York hospital. Dr. Moore is a cancer researcher at Sloan - Kettering hospital in New York City.

1966 - Husband (or ex-husband) Maurice Hendershott has died

- Was Maurice Hendershott in detroit in 1960? https://www.newspapers.com/image/603150438/?terms=%22maurice%20hendershott%22&match=1
- July 1966 : Full page of credit claim notice in newspaper below : [HN01K1][GDrive]



Fort Lauderdale News (Fort Lauderdale, Florida) · 26 Jul 1966, Tue · Page 23

IN THE COUNTY JUDGE'S COURT IN AND FOR BROWARD COUNTY, FLORIDA
PROBATE NO. 24023
IN RE: ESTATE OF
MAURICE CONLEY HENDERSHOTT
a/k/a MAURICE C. HENDERSHOTT
Deceased.

NOTICE TO CREDITORS AND CLAIMANTS

You and each of you are hereby notified and required to present any claim and demands which you, or either of you, may have against the Estate of MAURICE CONLEY HENDERSHOTT, a/k/a MAURICE C. HENDERSHOTT, deceased, late of the County of Wayne, State of Michigan, to the County Judges of Broward County, Florida, at their office in the Court House, Fort Lauderdale, Florida, within six (6) calendar months from the date of the first publication of this notice. Each claim or demand must be in writing and must state the place of residence and post office address of the claimant, and must be sworn to by the claimant, his agent, or his attorney, or the same will become void according to law. Such creditor or claimant must at the time of the filing of the same deliver a copy of such claim to said County Judges in compliance with Chapter 61-394, Laws of Florida for 1961.

This 21st day of July, 1966.

/s/ FRED ALCORN
Domiciliary Executor of the Estate of MAURICE CONLEY HENDERSHOTT, a/k/a Maurice C. Hendershott deceased

ANDERSON & STANFORD
Attorneys for Executor
Suite 226 Bayview Building
1040 Bayview Drive
Fort Lauderdale, Florida

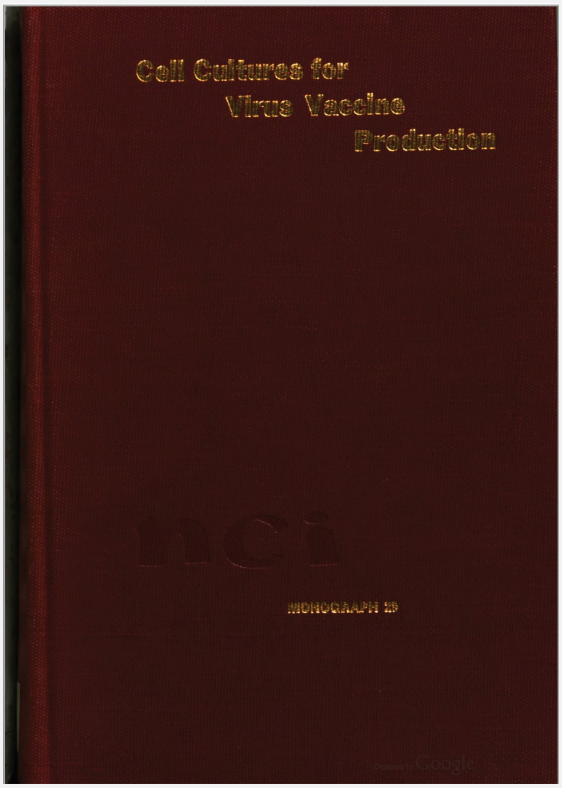
July 26; Aug. 2, 9, 16, 1966

Display a menu

[HN01K2][GDrive]

1968 (December) - National Cancer Institute Monographs: Cell Cultures for Virus Vaccine Production

PDF : 1968 (Dec) - Monograph 20 : [HG00C5][GDrive]



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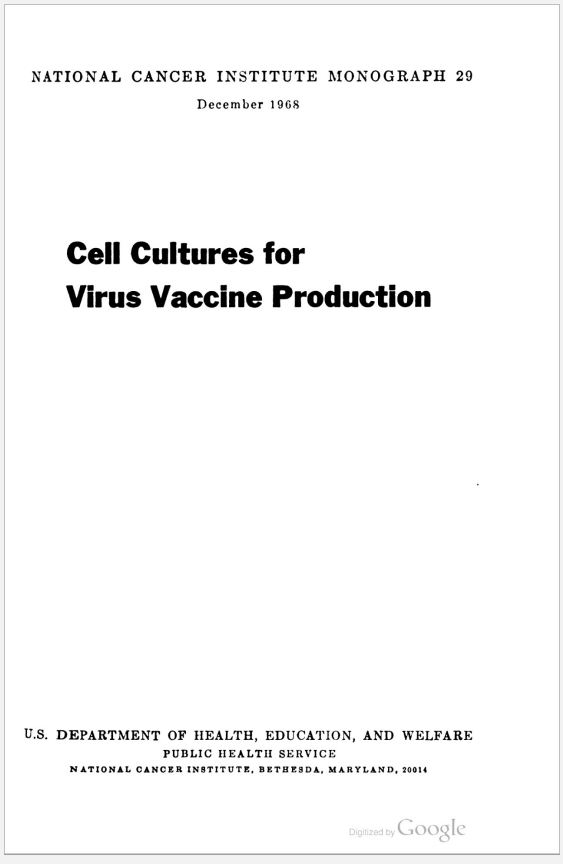

NATIONAL CANCER INSTITUTE MONOGRAPH 29

December 1968

Cell Cultures for Virus Vaccine Production

U.S. DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE
PUBLIC HEALTH SERVICE
NATIONAL CANCER INSTITUTE, BETHESDA, MARYLAND, 20014

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Evidence for Oncogenic Properties of Heteroploid Cell Lines—Discussion

ALICE E. MOORE, *Sloan-Kettering Institute for Cancer Research, New York, New York 10021*

IT seems appropriate to a conference discussing the use of vaccines made in tissue culture to ask the question: What happens if an individual is inoculated with living human cells—either normal, transformed, or cancerous?

I will discuss the work done a number of years ago by Dr. Chester Southam and myself which involved the inoculation of such cells into two groups of human adult volunteers—patients with advanced cancer at James Ewing and Memorial Hospitals and normal adult males at the Ohio Penitentiary. Only the data from our first studies are presented here, since the same results were obtained in later studies which involved much larger numbers of volunteers.

Freshly grown tissue-cultured cells were trypsinized, washed, and counted, and as soon as possible thereafter, 1–4 million cells were inoculated subcutaneously into the forearms of the volunteers. The inoculation sites were examined daily for any local reaction and for the appearance of nodules.

In the early studies, all nodules were completely excised. In later studies, some nodules were allowed to regress. The results are shown in table 1 which gives the cell lines inoculated and the two groups of volunteers.

When human embryonic fibroblasts were inoculated, no tumors were produced in the 3 cancer patients or in the normal humans. We have many more individuals who received these cells and we have never seen tumors in any of them.

The transformed lines (now, I believe, being called converted)—were originally normal cells which through cultivation developed biologic or morphologic characteristics which made us consider them no longer normal—when inoculated into the cancer patients, specimens from 8 of the 11 sites biopsied showed living cells. In one biopsy site, a nodule recurred. These same cells given to the normal human volunteers produced no nodules.

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TABLE 1.—Tissue culture cell lines inoculated into human volunteers*

Recipients	Cells inoculated				
	HEF†	Transformed		Cancer	
		Positive biopsy specimens	Recurrences	Positive biopsy specimens	Recurrences
Cancer patients...	0/3	8/11	1	11/12	4
Normal patients...	0/3	0/3	—	4/15	0

*Positive biopsy specimens/inoculated sites.
†Human embryonic fibroblasts.

A great difference between the two groups of volunteers was shown when the human epidermoid cancers were inoculated. In the cancer patients, there was very little, if any, local reaction. But 7–10 days later, a definite palpable nodule appeared. It was excised and showed growing cells in 11 of the 12 biopsy specimens. Also, at the biopsy site, there were 4 recurrences. In the later studies where the nodules were not removed, the HEp–3, our most tumorigenic cell line, produced nodules which persisted until the patient died of his own cancer. In one instance, we found a metastatic nodule in the axilla at autopsy 8 weeks post inoculation. In other words, some cancer cells inoculated into patients with far-advanced cancer were capable of sustained growth.

The picture was quite different in the normal humans. At the inoculation site, there was a definite reaction consisting of swelling, redness, and in some instances tenderness lasting sometimes as long as 2 weeks. Nodules also appeared, although they were difficult to define due to the local reaction. However, in 4 of the 15 biopsies performed, viable tumor cells were found. There were no recurrences. Under ordinary circumstances, the tumors regressed spontaneously within 2 weeks. Even when the individuals received the most tumorigenic line, the HEp–3, the nodules disappeared in 4–6 weeks.

I mention this rather ancient history to refresh your memory and also to point out that there are two things governing whether cells will produce tumors in individuals. One is the kind of cells inoculated and the other is the recipient. In other words, if a normal human is inoculated with cancer cells, we wouldn't expect him to develop a tumor, whereas in a patient with far-advanced cancer, a growing tumor could possibly be produced which would persist. Even with the most tumorigenic cell line, inoculated into the most susceptible patients, 1 million cells were necessary to produce a nodule. In other words, cancer cells grown under ordinary tissue culture conditions are probably less dangerous in a vaccine than the unseen microorganism, either bacterial or viral, that they may carry.

[HG00C9][GDrive]

GENERAL DISCUSSION

Dr. J. Furth: Dr. Moore introduced a chapter which hasn't been touched on yet, but which is so vital in oncology—the immunological surveillance, which operates not only versus homologous but also versus autologous cancer cells. A transformed neoplastic cell may grow *in vitro*, but may not be re-graftable in the host of origin if it is modified immunologically.

Dr. Orr (NIH): Dr. Sanford, in view of your evidence incriminating horse serum and cell conversion, what has been the experience with growing the WI–38 cells in horse serum? Or can anyone else answer this question?

Dr. K. Sanford: I don't know of any work on growth of WI–38 cells in horse serum. However, a neoplastic conversion in human cells would be difficult to detect with any reliability.

Dr. L. Hayflick: Most cultures of WI–38 that we and others have grown in the past 5 or 6 years have all been grown in calf serum. On the one or two occasions that we tried horse serum, we did not see any transformation of the type described here.

Dr. Sanford: Several lines in our laboratory have been grown on horse serum, fetal calf serum, or calf serum. With cells derived from a common pool, the ones on calf serum underwent neoplastic change almost as readily as those on the horse serum medium. Those grown on fetal calf serum showed the delay.

Dr. B. A. Rubin: Dr. Sanford, we, of course, in growing lots of diploid cells are very interested in your work.

Have you heat-inactivated any of these sera and, if so, what happens? You say you are fractionating these sera, but there is a very simple question that has come up, for instance, in regard to fetal calf serum about whether there are labile metabolites or something like that which might be affected. We have heard a lot about the possibility of viruses in sera in the last couple of days. So this is an important question. What is the effect of heating?

Dr. Sanford: We have not tried heated serum.

Dr. Furth: Dr. Sanford, to answer some of the problems raised, symmetrical systems are needed. The commercial horse sera come from adult or aged animals; calf and fetal calf sera are from another species, taken at diffrent ages. For basic comparison, it would be desirable to use sera of different species at various periods of life.

Dr. Sanford: Dr. Evans and Dr. Mitchell are exploring the effect of young and old, fetal and adult sera.

Dr. Furth: The old would be very interesting because there is ample evidence of transformation in old cells. They are innumerable and compatible with life.

Dr. K. G. Brand: Dr. Moore, did you ever extend your work to persons with diseases other than cancer, especially those with certain immune deficiencies? Also, could age be a factor, because your normal volunteers probably were young people in contrast to the older cancer patients?

Dr. A. E. Moore: The same type studies have been done on a group of debilitated volunteers who were in comparable condition to the patients with far-advanced cancer. They reacted more like the normal individuals. Regarding your second question about the age distribution, in the Ohio Penitentiary, many inmates come back repeatedly so that we did have quite a number of older individuals. Although I don't have the exact figures, I don't think age is a factor.

Dr. Furth: Did you say something about the immunological competence in age? Undoubtedly even the lymphocyte system deteriorates with age.

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Dr. Moore: This study was continued with Dr. Southam to study the immunological resistance developed to these transplants when the individual received repeated inoculations of the same type of tissue cultures. Other than that, I don't think a study has been done on the actual immunological competence.

Dr. Furth: And neoplasia?

Dr. Moore: The general feeling is that the individual with cancer develops more tumors and more progressively growing tumors than the normal individual.

Dr. Furth: How do cancer patients respond to a standard antigen at various stages of the disease compared to normal persons and persons with diseases other than cancer?

Dr. Moore: We know that cancer patients are perfectly capable of developing antibodies from previous virus studies. They develop them just as well as a normal individual.

[HG00CB][GDrive]

1969 (Oct 10)

https://www.newspapers.com/image/304146966/?terms=%22Alice%20E.%20Moore%22&match=1

https://drive.google.com/file/d/1JfOXv9UZIUtMmfmGylPQONhDp-gNWzJW/view?usp=sharing

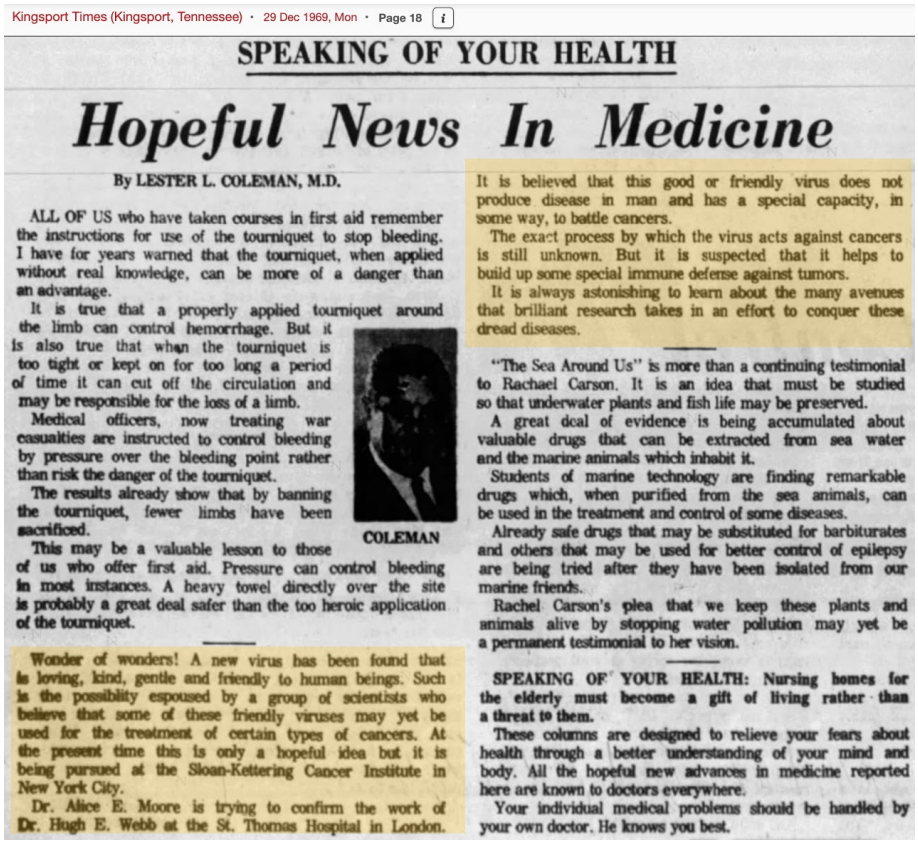
1969-10-10-the-fremont-news-messenger-ohio-pg-19-clip-125-members-cancer-talk.jpg
https://drive.google.com/file/d/1WoBmfuDDHanB5OKbmhUYly8uma93ubGY/view?usp=sharing

Friday, October 10, 1969 Fremont News-Messenger 19

MORE THAN 125 members and guests of Northwest Ohio Public health association met Thursday in Holiday Inn north of Fremont for their annual convention. Among principals were from the left, Mrs. Frances Kiger, R.M., Toledo, retiring chairman; Dr. Alice Moore, the principal speaker from Sloan-Kettering Institute, New York City, and J. T. Pool, executive director of the Betty Jane Center at Tiffin. Dr. Moore's talk was about "Cancer: The Disease as We See It Today." Professionals and volunteers in public health are members of the association. The convention theme was "Frontiers of Health." (News-Messenger Photo)

1969 (Dec 29) - Last newspaper article that mentions Alice E. Moore

Full newspaper page : [HN01KA][GDrive] mm



Kingsport Times (Kingsport, Tennessee) • 29 Dec 1969, Mon • Page 18

SPEAKING OF YOUR HEALTH

Hopeful News In Medicine

By LESTER L. COLEMAN, M.D.

ALL OF US who have taken courses in first aid remember the instructions for use of the tourniquet to stop bleeding. I have for years warned that the tourniquet, when applied without real knowledge, can be more of a danger than an advantage.

It is true that a properly applied tourniquet around the limb can control hemorrhage. But it is also true that when the tourniquet is too tight or kept on for too long a period of time it can cut off the circulation and may be responsible for the loss of a limb.

Medical officers, now treating war casualties are instructed to control bleeding by pressure over the bleeding point rather than risk the danger of the tourniquet.

The results already show that by banning the tourniquet, fewer limbs have been sacrificed.

This may be a valuable lesson to those of us who offer first aid. Pressure can control bleeding in most instances. A heavy towel directly over the site is probably a great deal safer than the too heroic application of the tourniquet.

COLEMAN

Wonder of wonders! A new virus has been found that is loving, kind, gentle and friendly to human beings. Such is the possiblity espoused by a group of scientists who believe that some of these friendly viruses may yet be used for the treatment of certain types of cancers. At the present time this is only a hopeful idea but it is being pursued at the Sloan-Kettering Cancer Institute in New York City.

Dr. Alice E. Moore is trying to confirm the work of Dr. Hugh E. Webb at the St. Thomas Hospital in London. It is believed that this good or friendly virus does not produce disease in man and has a special capacity, in some way, to battle cancers.

The exact process by which the virus acts against cancers is still unknown. But it is suspected that it helps to build up some special immune defense against tumors.

It is always astonishing to learn about the many avenues that brilliant research takes in an effort to conquer these dread diseases.

"The Sea Around Us" is more than a continuing testimonial to Rachael Carson. It is an idea that must be studied so that underwater plants and fish life may be preserved.

A great deal of evidence is being accumulated about valuable drugs that can be extracted from sea water and the marine animals which inhabit it.

Students of marine technology are finding remarkable drugs which, when purified from the sea animals, can be used in the treatment and control of some diseases.

Already safe drugs that may be substituted for barbiturates and others that may be used for better control of epilepsy are being tried after they have been isolated from our marine friends.

Rachel Carson's plea that we keep these plants and animals alive by stopping water pollution may yet be a permanent testimonial to her vision.

SPEAKING OF YOUR HEALTH: Nursing homes for the elderly must become a gift of living rather than a threat to them.

These columns are designed to relieve your fears about health through a better understanding of your mind and body. All the hopeful new advances in medicine reported here are known to doctors everywhere.

Your individual medical problems should be handled by your own doctor. He knows you best.

[HN01KB][GDrive]

1971 (Feb 20) - NYTimes : "Dr. Frank L. Horsfall Jr. Dies; Sloan - Kettering Institute Head"

Horsfall was for many years Dr. Alice Moore's boss, starting after Dr. Rhoads died in 1959. / Source : [HN01K4][GDrive]

See [https://en.wikipedia.org/wiki/Frank_Horsfall]

The New York Times

SATURDAY, FEBRUARY 20, 1971

Dr. Frank L. Horsfall Jr. Dies; Sloan-Kettering Institute Head

Virologist, 64, Served as the Director of Unit for Cancer Research Since 1960

Dr. Frank L. Horsfall Jr., president and director of the Sloan-Kettering Institute for Cancer Research, died last evening at the institute, 410 East 68th Street. He was 64 years old. The cause of death was not disclosed.

Dr. Horsfall had directed the institute as chief executive officer since early in 1960. It is a research unit of the Memorial Sloan-Kettering Cancer Center, the largest medical center in the world for cancer research.

Dr. Horsfall, a prominent virologist, chemotherapist and a specialist in respiratory infections, had spent 26 years at the Rockefeller Institute for Medical Research in this city before he succeeded Dr. C. P. Rhoads as head of the Sloan-Kettering Institute.

Dr. Rhoads had directed the institute from its establishment in 1945 until his death in August, 1949. In the latter year Dr. Horsfall joined the institute's board of scientific consultants.

Dr. Frank L. Horsfall Jr.

Medical Sciences at Cornell University; director or research and trustee of Memorial Sloan-Kettering Cancer Center, and director of research at the Memiroal Hospital for Cancer and Allied Diseases.

He was a member of the National Academy of Sciences, the

[HN01K5][GDrive]

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Dr. Rhoads had directed the institute from its establishment in 1945 until his death in August, 1949. In the latter year i Dr. Horsfall joined the institute's board of scientific consultants.

He was graduated from the University of Washington in 1927 and went on to McGill University, Montreal, where he received his M.D. in 1932.

Served Health Division

After serving his internship and residency periods at Peter Bent Brigham Hospital in Boston and Royal Victoria Hospital and Montreal General Hospital, both in Montreal, he joined the Rockefeller Institute in 1934.

He served as an assistant and assistant resident physician, then as resident physician, **until 1937, when he joined the Rockefeller Foundation as a staff member of the International Health Division.** He re turned to the institute in 1941 as a member and as physician to the hospital.

Dr. Horsfall served from 1942 to 1946 as a commander with the United States Naval Reserve. He was senior medical officer for the United States Naval Research Unit at the hospital of Rockefeller Institute in 1944–45.

In 1955 he was named vice president for clinical studies and physician in chief to the hospital and in 1957 he added the titles of member and professor.

From 1949 to 1953 he was a member of the board of Scientific Consultants at Sloan Kettering.

In an address at the University of Virginia in 1961, not long after he had taken the top post at the institute, he asserted that heredity can be changed and even directed, at least in the somewhat limited field of bacteria. He also stated that control of heredity in cells could be a key tool in prevent ing cancer.

The finding led to hope that tests could be devised to detect cancer - causing viruses before disease developed and even to work out immunization procedures to keep the viruses from entering the cells.

At his death Dr. Horsfall was a member and trustee of Sloan Kettering, professor of medi cine at Cornell University Medical College, director and professor of Microbiology at the Sloan - Kettering division of Medical Sciences at Cornell University; director or research and trustee of Memorial Sloan Kettering Cancer Center, and director of research at the Memorial Hospital for Cancer and Allied Diseases.

He was a member of the National Academy of Sciences, the American Philosophical Society, the Royal College of Physicians and Surgeons of Canada, the American Academy of Arts and Sciences and the Association of American Physicians as well as many other scientific societies and organizations.

He was president of the Harvey Society in 1956–57, vice president of the American Society for Clinical Investigation from 1934 to 1944, president of the American Association of Immunologists from 1967 to 1968 and president of the Practitioners' Society since 1969.

Dr. Horsfall was a consultant for and member of a number of private organizations and Government boards. He served on the committee on research - basic sciences and vaccine advisory committee of The National Foundation, New York, and on the Commission on Health Services of the City of New York.

He also was a member of the scientific advisory committee of the Institute for Cancer Re search, Philadelphia; the board of governors of the Weizmann Institute of Science, Rehovot, Israel; the management advisory council of the Oak Ridge National Laboratory, Oak Ridge, Tenn., and the U.S.A. National Committee of the International Union Against Cancer.

He was awarded honorary degrees from Uppsala University in Sweden in 1961 and the University of Alberta and Mc Gill university, both in 1963.

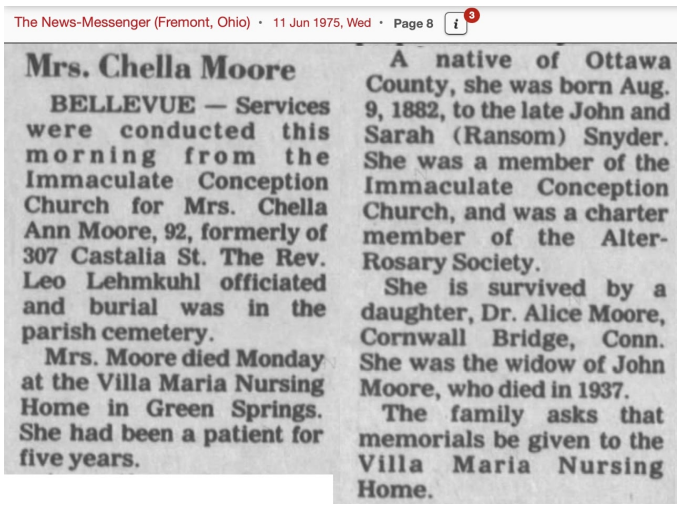
He received many scientific awards, including the Eli Lilly Award in Bacteriology and Immunology in 1937, the John F. Lewis Prize of the American Philosophical Society in 1959 and the Fiftieth Anniversary Gold Medal of Peter Bent Brig ham Hospital in 1963.

He leaves his wife, the for mer Norma E. Campagnari, who had been a registered nurse be fore their marriage on July 1, 1937.

He is survived also by three children, Frank L. 3d, Susan and Mary.

A funeral service will be held at Frank E. Campbell's, Madison Avenue and 81st Street, on Monday at 11:30 A.M.

1975 (June 11) - Mother passes


The News-Messenger (Fremont, Ohio) · 11 Jun 1975, Wed · Page 8

Mrs. Chella Moore

BELLEVUE — Services were conducted this morning from the Immaculate Conception Church for Mrs. Chella Ann Moore, 92, formerly of 307 Castalia St. The Rev. Leo Lehmkuhl officiated and burial was in the parish cemetery.

Mrs. Moore died Monday at the Villa Maria Nursing Home in Green Springs. She had been a patient for five years.

A native of Ottawa County, she was born Aug. 9, 1882, to the late John and Sarah (Ransom) Snyder. She was a member of the Immaculate Conception Church, and was a charter member of the Alter-Rosary Society.

She is survived by a daughter, Dr. Alice Moore, Cornwall Bridge, Conn. She was the widow of John Moore, who died in 1937.

The family asks that memorials be given to the Villa Maria Nursing Home.

Father John Moore passed in 1937, as noted in this 1975 newspaper clip
Full page : [HN01K6][GDrive] / Clip : [HN01K7][GDrive]

1982 - Dr. Moore retired by now ; Winters in Georgetown (Washington DC)

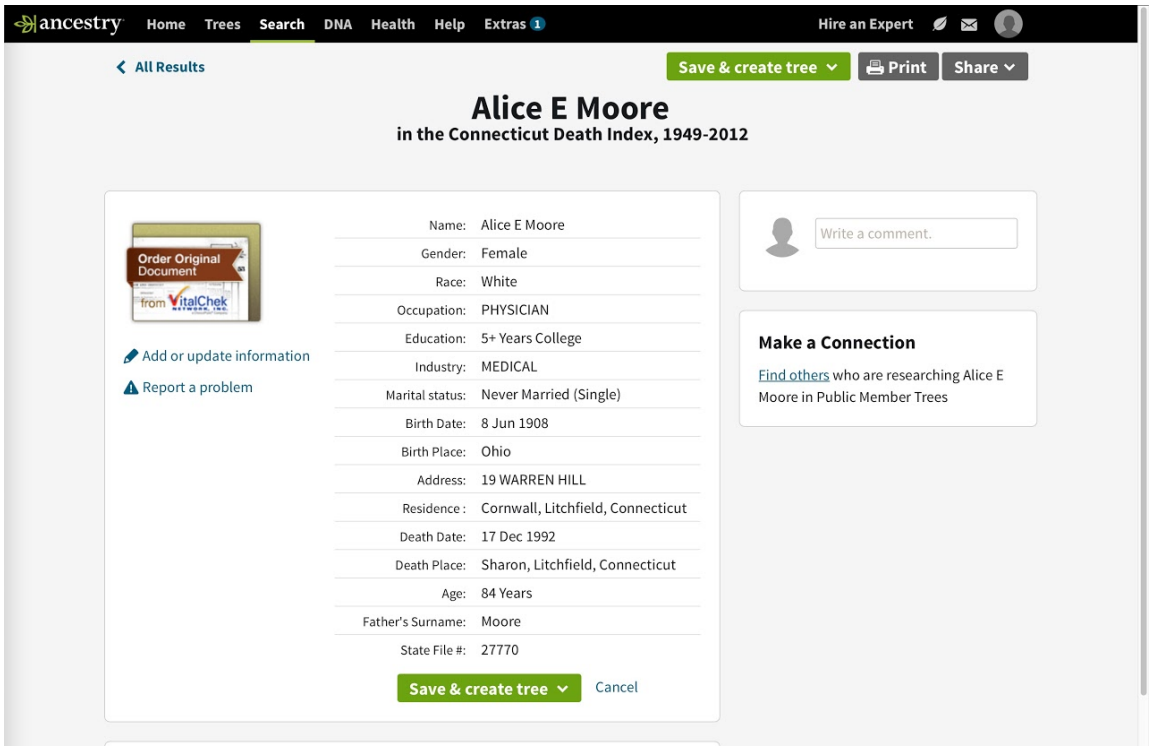
Source : **1982 Fall issue of New York University School of Medicine, "Physician"** : See [HE004L][GDrive]

" Alice Moore: Retired from cancer research at Memorial Hospital and Sloan-Kettering Institute. Summers at Cornwall Bridge, CT. Winters in Georgetown, Washington, D.C."

1992 (Dec 17) - Dr. Alice Moore , RIP

Source : [HL006T][GDrive]

- Industry: MEDICAL
- Marital status: Never Married (Single)
- Born: 8 Jun 1908, in Ohio
- Address: 19 WARREN HILL , Cornwall, Litchfield, Connecticut
- Death Date: 17 Dec 1992, at Sharon, Litchfield, Connecticut
- Age: 84 Years



Alice E. Moore's home in Cornwall, Connecticut

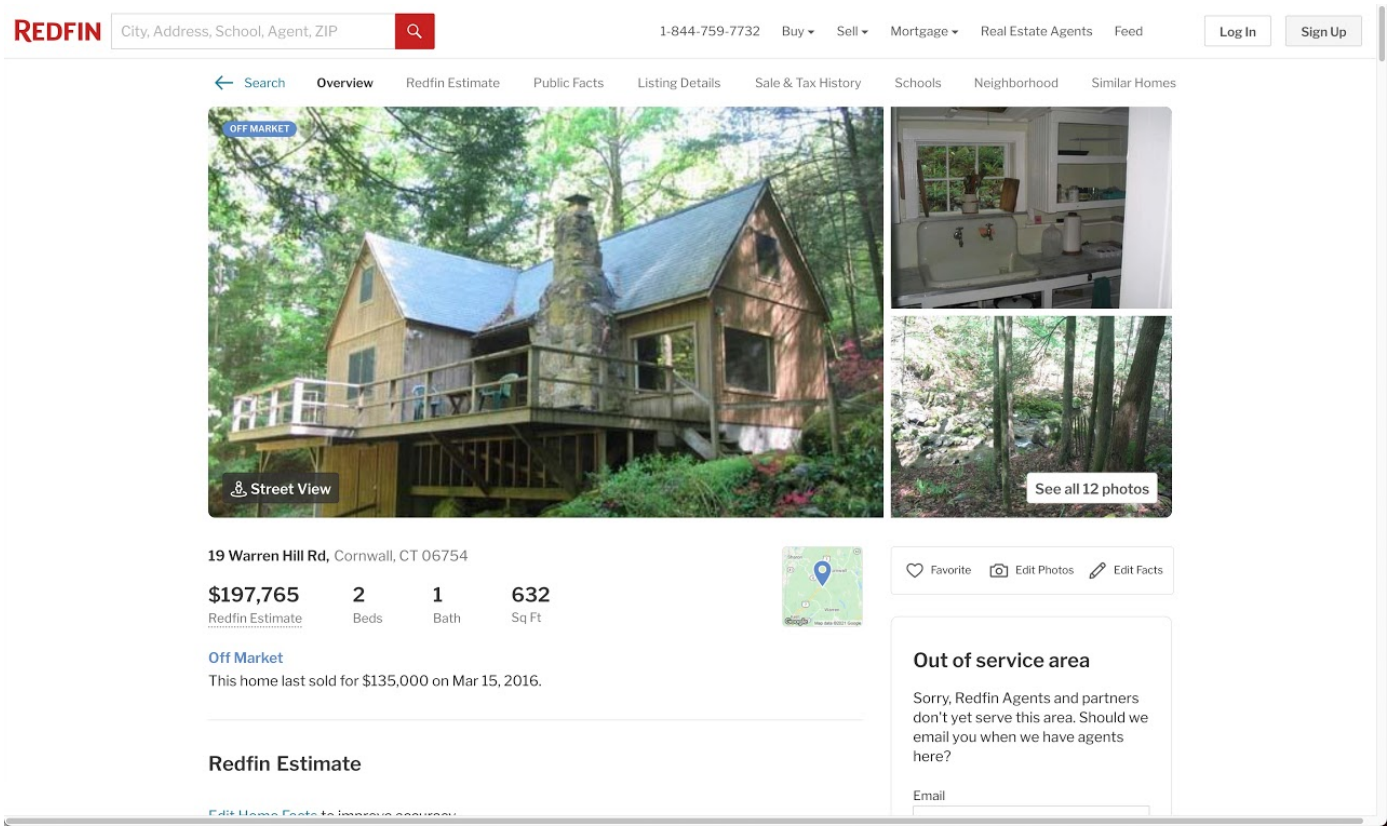
https://www.redfin.com/CT/Cornwall-Bridge/19-Warren-Hill-Rd-06754/home/107275411

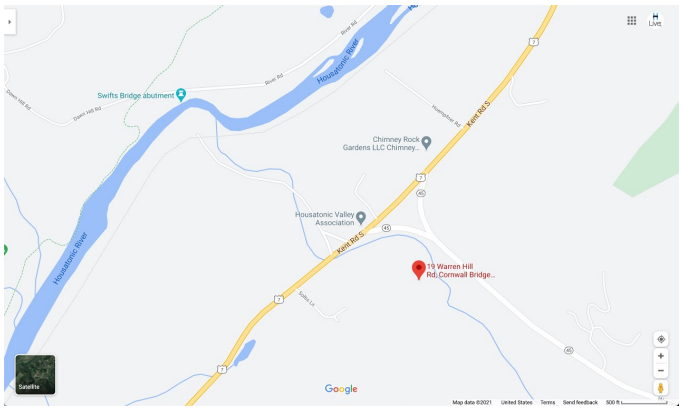
2021-03-20-redfin-com-ct-cornwall-bridge-19-warren-hill-road-06754-home-img-1

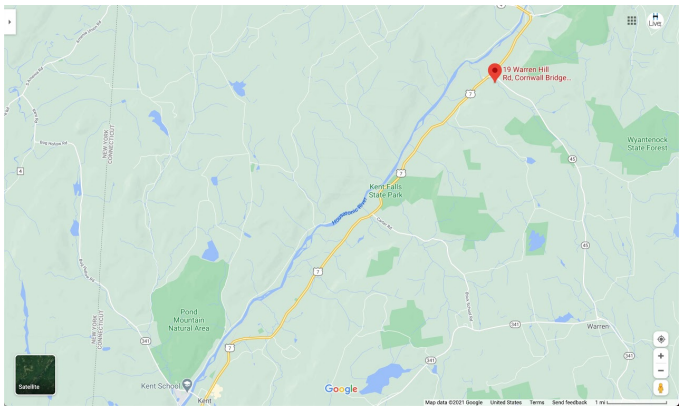
Only a few miles from Henry Kissinger's estate (which he bought in the early 1980s) ...
https://www.washingtonpost.com/archive/lifestyle/travel/1984/04/29/connecticuts-litchfield-hills-of-bygones-and-back-roads/56e7704b-66fe-49cb-b074-bd750441f301/

2021-03-20-google-maps-20-35-14-img-1.jpg

2021-03-20-google-maps-20-35-14-img-1.jpg







BITCHUTE @Housatonic YOUTUBE @HousatonicLive ODYSEE @Housatonic BRIGHTEON @Housatonic

Gustave Adolph Mueller (born 1863)

[HB000R][GDrive]

Born - Crestline, Ohio, Nov. 10, 1863,

"GUSTAVE A. MUELLER, M. D., of Pittsburg, Pa., a prominent physician and specialist on diseases of the ear, nose and throat." [HB000S][GDrive]. Gustave Adolph Mueller, M.D., is the father if Robert Swan Mueller I (b 1893).

1863 - Born

"GUSTAVE A. MUELLER, was born in Crestline, Ohio, Nov. 10, 1863, son of August C. E. Muel ler, a‘ native of Pomerania, Germany, who came to America in 1855 and located in Ohio, and of his wife, Elizabeth (Von Dorschlag) Mueller, also a native of the Fatherland. Dr. Mueller attended the third ward school of Allegheny city, and was graduated from the Sharpsburg academy. Later he attended the University of Michigan, and then matriculated at the Hahnemann medical college of Chicago, and was graduated from that well-known homoeopathic institution in 1885." [HB000S][GDrive] . Gustave Mueller was a graduate of university of Michigan 1884. [HE001J][GDrive]

1885 - 1894 - Early career

"Dr. Mueller began the general practice of medicine in Allegheny city soon after graduating [in 1885], and was there city physician from 1885 to 1894." [HB000S][GDrive]

1891 - Marriage

"Dr. Mueller was married, in 1891, to Grace Swan, daughter of Wm. B. and Grace (Swan) Miller, her mother having been the daughter of Robert Swan, one of the oldest citizens of Allegheny city, and an uncle of Mrs. Mueller's was postmaster of Allegheny city for several years. " [HB000S][GDrive]

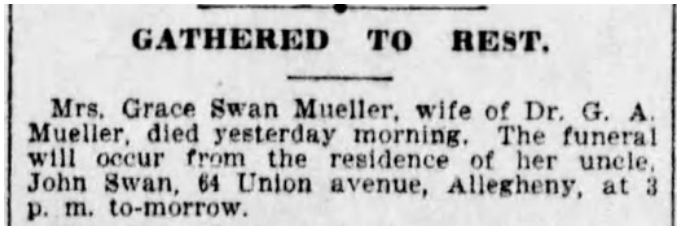
1894 - 1896 - Study in Europe

"During the latter year he sailed for Europe to study the nose, ear and throat, attended postgraduate courses in Berlin, Heidelberg, Munich, Vienna, Paris and Lon don, and spent two years abroad perfecting himself in his specialty.

Return travel - Note that from the passenger list, we can see that Gustav Mueller had his wife and son traveling with him. (See [HJ0006][GDrive])

1897 - Death of wife Grace Swan (Miller) Mueller

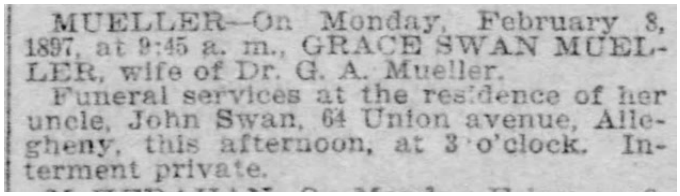
Grave Swan Mueller passed at an early age of 29 (or 30) in the year 1897 ([HL0018][GDrive]). Son Robert Swan Mueller I would have been about 4 years old. (See full pages of newspapers at [HN00L6][GDrive] and [HN00G1][GDrive]).



GATHERED TO REST.

Mrs. Grace Swan Mueller, wife of Dr. G. A. Mueller, died yesterday morning. The funeral will occur from the residence of her uncle, John Swan, 64 Union avenue, Allegheny, at 3 p. m. to-morrow.

[HN00L7][GDrive]



MUELLER—On Monday, February 8, 1897, at 9:45 a. m., GRACE SWAN MUELLER, wife of Dr. G. A. Mueller.
Funeral services at the residence of her uncle, John Swan, 64 Union avenue, Allegheny, this afternoon, at 3 o'clock. Interment private.

[HN00G2][GDrive]

1897-1904 - Career / Groups

Following source : [HB000S][GDrive]

Note - the fact that the bio ends at 1904, is what we use to frame in this timeline.

"Since [his travel to Europe] he has practiced in Pittsburg, confining his practice to the nose, ear and throat, and for a time had offices at No. 400 Penn Ave., but in 1900 removed to the Empire building, where he now enjoys one of the best practices in Pittsburg. He isa member of the staff of surgeons of the homoeopathic hospital, and has charge of the ear, nose and throat work in that institution. He has been three times appointed a member of the State board of medical examiners, is a member of the faculty of the Pittsburg training school for nurses, member and ex-president of the Allegheny county homoeopathic medical society, member of the East End doctors' club, the Pennsylvania State homoeopathic medical society, the American institute of homoeopathy, and the American homoeopathic, ophthalmological, otological and laryngological society. Dr. Mueller is also a member of the Masonic fraternity and the Odd Fellows, having held all offices in the local lodge of the latter order, served as representative to the grand lodge, and medical director of the Odd Fellows' endowment association. He was one of the incorporators of the Bank of secured savings of Allegheny city, and is a member of the University, Duquesne, Monongahela, Pittsburg country, Highland golf and other clubs; the Sportsmen's association of Cheat mountain, and of the alumni of Hahnemann medical college."

1900 - Remarried to Nell (Anderson) Mueller

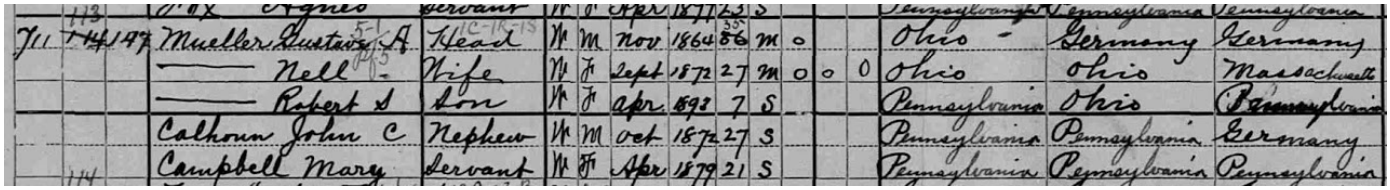
Dr. Gustave A. Mueller married his second wife, **Nell Anderson (Miller) Mueller**, before the year 1900 [HB000S][GDrive] .

"Dr. Mueller was again married, in 1900, and on this occasion to Nell W., daughter of H. C. and Louise (Worthington) Anderson, of Steubenville, Ohio, and their wedded life has been an ideal one."

1900

A clip from the 1900 USA Census from Allegheny, Pennsylvania is shown below. It was taken on June 7 in 1900. (Full page from census, here : [HS000D][GDrive]). This Census shows Gustave A Mueller, born in November 1864 in Oho (age 35 at the time of this 1900 Census); his occupation is identified as a "physician". His wife in 1900 was Nell Mueller (his second wife), born in September of 1872. The Mueller household had one resident servant as of the 1900 census, named **Mary Campbell** (age 21).

The 711 Arch Street in Allegheny, Pennsylvania that was described as an address no longer exists, according to Google maps (Jan 2019). A National Aviary is there now.



113	Fox Agnes	Servant	W	S	Apr	1877	23	S				Pennsylvania	Pennsylvania	Pennsylvania
Jul 14/97	Mueller Gustave A	Head	M	M	Nov	1864	33	M	0			Ohio	Germany	Germany
	Nell	Wife	M	F	Sept	1872	27	M	0	0	0	Ohio	Ohio	Massachusetts
	Robert S	Son	M	F	Apr	1893	7	S				Pennsylvania	Ohio	Pennsylvania
	Calhoun John C	Nephew	M	M	Oct	1872	27	S				Pennsylvania	Pennsylvania	Germany
114	Campbell Mary	Servant	W	F	Apr	1879	21	S				Pennsylvania	Pennsylvania	Pennsylvania

[HS000E][GDrive]

1912 (Feb) - Death

The ***"The Journal of the American Institute of Homeopathy, Volume 4, Issues 4-9"*** (available in digital form on Google here : [HP000Q][GDrive]) describes Dr. Gustave Mueller as having fallen to typhoid fever (page 1205):

Gustave A. Mueller, M. D., Hahnemann Medical College, Chicago, 1885; died at the Homœopathic Hospital, Pittsburgh, Pa., February 12, from typhoid fever, aged 48.

[HP000Q][GDrive]

Full page source of below article : [HN00L4][GDrive]

Gustave A. Mueller

Dr. Gustave A. Mueller, aged 48, of H street, Oakmont, one of the best known physicians of the homeopathic school in Pittsburgh, died yesterday morning of typhoid fever in the Homeopathic Hospital. Dr. Mueller was born in Crestline, O., and moved to Pittsburgh when a boy. He attended the Sharpsburg Academy and later the University of Michigan. In 1885 he graduated from the Hahnemann Medical College of Chicago, Ill., and began to practice in Allegheny. He was soon afterward appointed city physician, of Allegheny which position he held until 1884, when he went to Europe to study. There he took degrees in the universities of Berlin, Heidelberg, Munich, Vienna, Paris and London.

Dr. Mueller was a staff surgeon at the Homeopathic Hospital, and had been recently appointed to serve his fifth term as a member of the state medical board.

Dr. Mueller was one of the incorporators of the Bank of Secured Savings of Allegheny. He was married in 1891 to Miss Grace Miller, of the North Side, who died in 1896. In 1900 he married Miss Neil W. Anderson of Steubenville, O., who survives with two sons, Robert and Gustave A. Mueller. He also leaves five sisters, Mrs. Annie Mueller and Miss Clara Mueller of the North Side, Mrs. Moses Calhoun of Green Arbor, Mrs. N. L. Becker and Mrs. Emma Des Jardiens of Chicago.

Funeral from his late residence, Oakmont, Pa. Services at Trinity Episcopal Church, Sixth avenue, Monday afternoon at 2:30 o'clock. Interment private in Highwood Cemetery. Remains may be viewed at church from 2 o'clock until hour of service.

Mrs. Calhoun and daughter, Miss Clara were called to the stricken home today.

[HN00L5][GDrive]

Pittsburgh Directories -Used as references:

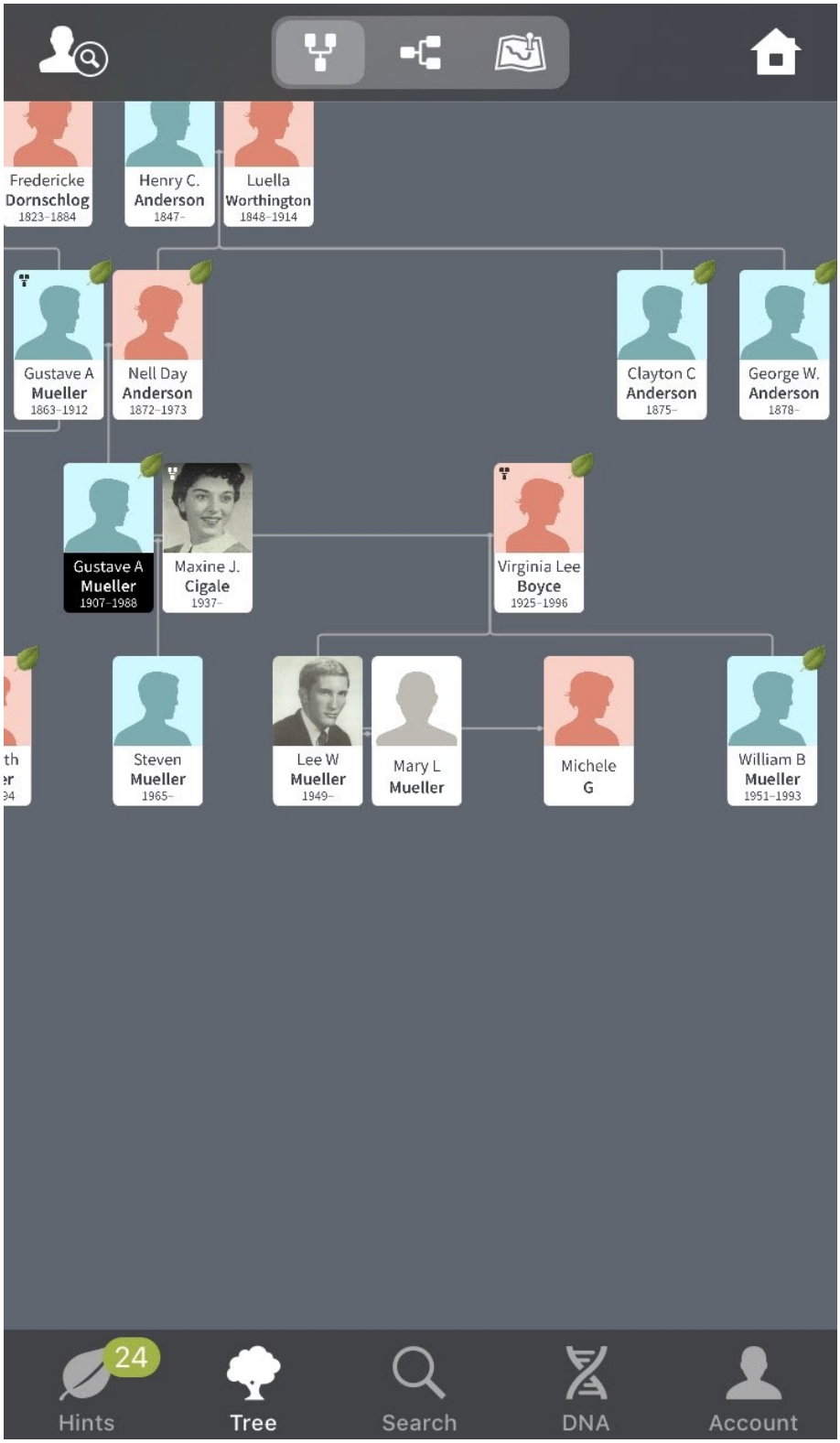
- 1885 : [HD000H][GDrive]
- 1886 : [HD000I][GDrive]
- 1887 : [HD000J][GDrive]
- 1888 : [HD000K][GDrive]
- 1889 : [HD000L][GDrive]
- 1890 : [HD000M][GDrive]
- 1891 : [HD000N][GDrive]
- 1892 : [HD000O][GDrive]
- 1893 : [HD000P][GDrive]
- 1894 : [HD000Q][GDrive]
- 1895 : [HD000R][GDrive]
- 1896 : [HD000S][GDrive]
- 1897 : [HD000T][GDrive]
- 1898 : [HD000U][GDrive]
- 1899 : [HD000V][GDrive]
- 1900 : [HD000W][GDrive]
- 1901 : [HD000X][GDrive]

Son Gustave A. Mueller

Tweet - [HT004H][GDrive] / attachmet =

Gustave A. Mueller has two wives - His first wife was Virginia Lee Boyce (became **Virginia Lee (Boyce) Mueller**)

His father was **Gustave A Mueller (this page)** , his half brother was Robert Swan Mueller I (b1893) .



[HT004I][GDrive]

William Boyce Mueller :

Obituary for William Boyce MUELLER

333-0161
MUELLER, William Boyce — 08/13/51 - 10/09/93 with family and friends at his side, Bill passed away peacefully at 9:00 p.m.; he is survived by his mother, Virginia Boyce Lind of Palm Beach, FL; his brother and sister-in-law, Lee Worthington Mueller and Michele G. Mueller of Victorville, CA; his brother Steven Mueller of Houston, TX; his brother Oliver James Sterling of New York City; his niece Vanessa Sterling and nephew James Sterling and his friends Ronnie Johnson and Ken McPherson.

Services will be held Tuesday at 10:00 a.m. at Trinity Episcopal Church located at 1668 Bush St., San Francisco with a Celebration of Life gathering afterward. Donations in Bill's name can be made to the Trinity Episcopal Church Organ Fund or the Living Waters Ministries at P.O. Box 460388, S.F., CA 94146.

ARTHUR J. SULLIVAN & CO., DIRECTORS
621-4567

Clipping location on The San Francisco Examiner page 21

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WScout • 1 day ago

CLIPPED FROM
The San Francisco Examiner
San Francisco, California
11 Oct 1993, Mon • Page 21

1993-10-11-the-san-francisco-examiner-pg-21-newspapers-com-clip-mueller

[HN00OW][GDrive]

Virginia Boyce Lind

Only living child of William Dickson Boyce (1858 - 1929) .

Obituary for Virginia Boyce Lind (Aged 95)

V. Lind, Boy Scouts founder's kin, dies

Virginia Boyce Lind of Palm Beach died Saturday, Aug. 5, 2006, in Palm Beach. She was 95.

Mrs. Lind was the only living child of William Dixon Boyce, founder of the Boy Scouts of America. She was a graduate of Miss Porter's School in Farmington, Conn., and a member of the First Families of Virginia Society. During World War II, she served in the Women's Motor Corps. She was a member of The Episcopal Church of Bethesda-by-the-Sea and the Bath & Tennis Club as well as the Bathing Corp. of Southampton, N.Y., the Colony Club of New York and the Greenwich Field Club.

Mrs. Lind was preceded in death by her husband, Albert Lind of Palm Beach and Hobe Sound, and her youngest son, William Boyce Mueller.

She is survived by two sons, Oliver James Sterling Jr. and Lee Worthington Mueller, and two grandchildren, Oliver James Sterling III and Vanessa Ruth Lancaster Sterling.

She will be buried at Congressional Cemetery in Washington, D.C.

Quattlebaum Funeral Home, 1200 S. Olive Ave., West Palm Beach, handled arrangements.

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WScout • 1 day ago

CLIPPED FROM
Palm Beach Daily News
Palm Beach, Florida
13 Aug 2006, Sun • Page 3

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[HN00OX][GDrive]

Robert Swan Mueller I (b1893)

[HN00FA][GDrive]

Robert Swan Mueller I (also known as **Robert Swan Mueller Sr.**) was born on April 9, 1893, in Allegheny City, Pennsylvania .

Parents : **Robert Swan Mueller I** was the son of Gustave Adolph(us) Mueller M.D. and **Grace Swan (Miller) Mueller**.

Robert Swan Mueller I (Referred to here sometimes as *"RSM1"*) is the father of Robert Swan Mueller II and John Freeman Mueller . He is also the grandfather of Robert Swan Mueller III, the man leading the "Russia 2016 election interference special council" in the United States.

EARLY YEARS

1893 (April 9) - Born

Robert Swan Mueller I was born on April 9, 1893 to Gustave Adolph(us) Mueller M.D. and **Grace Swan (Miller) Mueller**.

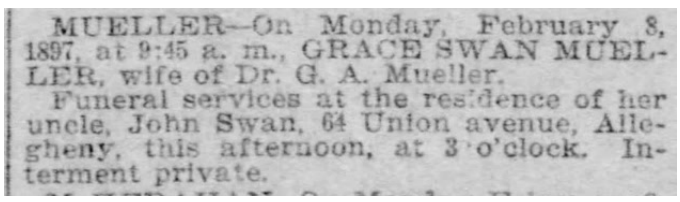
1894 - 1896 - Infant years in Europe, as father traveled for study

As an infant, a young Robert Swan Mueller I traveled with his parents to Europe for about two years, a time where his father studied *"the nose, ear and throat, attended postgraduate courses in Berlin, Heidelberg, Munich, Vienna, Paris and London, and spent two years abroad perfecting himself in his specialty."*

Return travel - Note that from the passenger list, we can see that Gustav Adolph(us) Mueller M.D. had his wife and son traveling with him. (See [HJ0006] [GDrive])

1897 - Death of Grace Swan (Miller) Mueller (Robert Swan Mueller I's mother)

Robert Swan Mueller I's mother passed at an early age of 29 (or 30) in the year 1897 [HL0018][GDrive]. Robert Swan Mueller I would have been about 4 years old. (See full page in newspaper at [HN00G1][GDrive]).



MUELLER—On Monday, February 8, 1897, at 9:45 a. m., GRACE SWAN MUELLER, wife of Dr. G. A. Mueller.
Funeral services at the residence of her uncle, John Swan, 64 Union avenue, Allegheny, this afternoon, at 3 o'clock. Interment private.

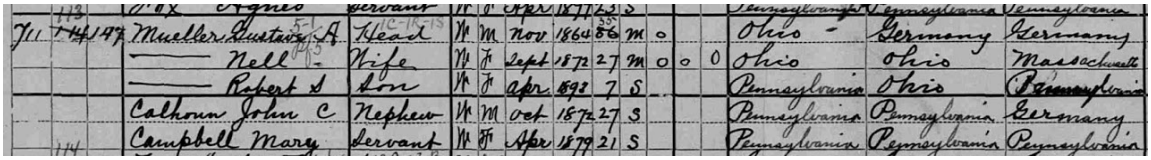
[HN00G2][GDrive]

1900 - Stepmother Nell (Anderson) Mueller

Robert's father, **Dr. Gustave A. Mueller**, married is second wife, **Nell Anderson (Miller) Mueller**, before the year 1900. [HB000S][GDrive]

1900

A clip from the 1900 USA Census from Allegheny, Pennsylvania is shown below. It was taken on June 7 in 1900. (Full page from census see [HS000D][GDrive]). This Census shows Gustave Adolph Mueller (b1863) (father) as a "physician, stepmother **Nell Mueller** (his second wife), and **Robert Swan Mueller I**. The Mueller household had one resident servant as of the 1900 census, named **Mary Campbell** (age 21). The 711 Arch Street in Allegheny, Pennsylvania no longer exists on a year-2019 Google map. A National Aviary is there now (2019).



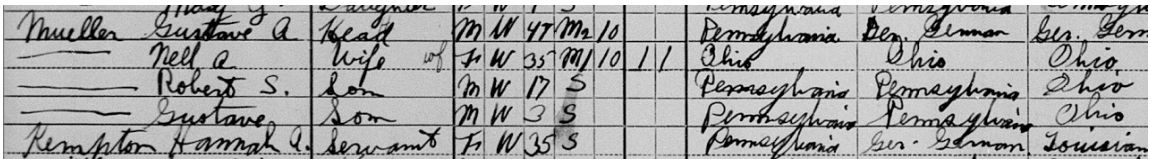
[HS000E][GDrive]

1904 - Attended Pittsburgh Public schools

"[...] Robert Swan Mueller, born in 1893, and now a pupil of the public schools of Pittsburg. " [HB000S][GDrive]

1910

The 1910 Census: In 1910, the Mueller family (with Dr Gustav Mueller as the head of the family, now age 47) moved to 🌐 **Oakmont, Pennsylvania** , which is a borough in Allegheny County in the Pennsylvania, but remaining in the Pittsburgh metro area. Dr. Gustav Mueller now identifies his profession as "surgeon". (Full census sheet at [HS000B][GDrive]). **Robert Swan Mueller I** is still living at home, now age 17. The new family member **Gustave Mueller (Jr.)** is only 3 years old as of the 1910 census. Their address of **"110/111 H-Street" in Oakmont** cannot be found on a year-2019 Google map.

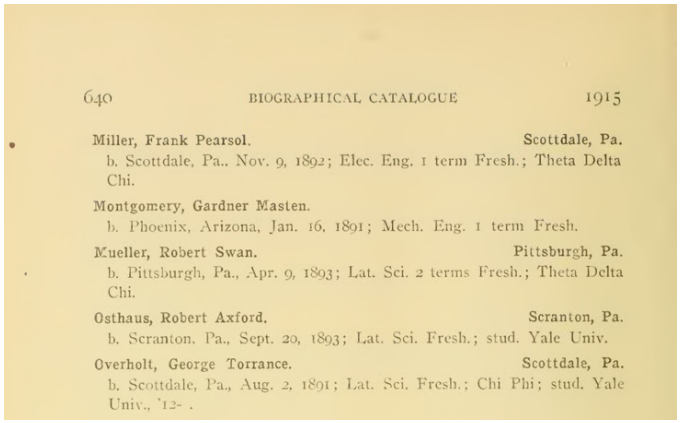


[HS000C][GDrive]

1911-1915 - Lafayette College

Starting 1911 Robert Swan Mueller I attended **Lafayette College**. In the Allentown Democrat (Oct 14 1915), in the wedding description for Robert Swan Mueller I, it says that Mueller completed 4 years of college and graduated in 1915. (For this reference, see the clipping here: [HN00DN][GDrive]).

Robert Swan Mueller I is identified in the 1912 Lafayette College yearbook, and was identified as a prospective 1915 graduate of Lafayette. (A link to the full PDF of the book for ***"Biographical catalogue of Lafayette college, 1832-1912"*** is here : [HE000E][GDrive]). 1911-1912 was his freshman year.



640 BIOGRAPHICAL CATALOGUE 1915

Miller, Frank Pearsol. Scottdale, Pa.
b. Scottdale, Pa., Nov. 9, 1892; Elec. Eng. 1 term Fresh.; Theta Delta Chi.

Montgomery, Gardner Masten.
b. Phoenix, Arizona, Jan. 16, 1891; Mech. Eng. 1 term Fresh.

Mueller, Robert Swan. Pittsburgh, Pa.
b. Pittsburgh, Pa., Apr. 9, 1893; Lat. Sci. 2 terms Fresh.; Theta Delta Chi.

Osthaus, Robert Axford. Scranton, Pa.
b. Scranton, Pa., Sept. 20, 1893; Lat. Sci. Fresh.; stud. Yale Univ.

Overholt, George Torrance. Scottdale, Pa.
b. Scottdale, Pa., Aug. 2, 1891; Lat. Sci. Fresh.; Chi Phi; stud. Yale Univ., '12- .

[HE000F][GDrive]

1912 - Death of Gustave Mueller (Robert Swan Mueller I's father)

Gustave Adolph(us) Mueller M.D., who Robert Swan Mueller' Is father, passed at the early age of 48 years on February 9, 1912. He passed away from typhoid fever at age 48. At the age of only 19, Robert Swan Mueller I has now lost both of his biological parents. His stepmother Nell Mueller and young half-brother Gustav Mueller are still alive.

The ***"The Journal of the American Institute of Homeopathy, Volume 4, Issues 4-9"*** (available at [HP000O][GDrive]) describes Dr. Gustave Mueller as having fallen to typhoid fever (page 1205):

Gustave A. Mueller, M. D., Hahnemann Medical College, Chicago, 1885; died at the Homœopathic Hospital, Pittsburgh, Pa., February 12, from typhoid fever, aged 48.

[HP000Q][GDrive]

1915 (Feb) - Wedding attendance for Law-Babst

(See full newspaper page at [HN00EA][GDrive])

If Robert Swan Mueller I was graduating from Lafayette in 2015, then his graduation would have been 2-3 months after this wedding, hence not yet employed.

Some information on the guests - *"Her father, Chester Babst, was president of the Charles Babst Company, which sold physician supplies. Chester died in 1925, at the age of 38"* (http://www.karensbranches.com/Memoir/BarbaraBabstFord.html)

The Law-Babst Wedding Party

An Event of Last Evening in Shadyside

Back row, left to right—Stanley O. Law, Paul C. Harper, Chester Rowland Babst, Marshall Kiehl, Robert Dickey and Robert Mueller. Front row, left to right—Miss Laura Elkin, Mrs. Clifford C. Wilkins, Mrs. Chester Rowland Babst, Miss Marie Laughner and Miss Nan Freeman.

[HN00EB][GDrive]

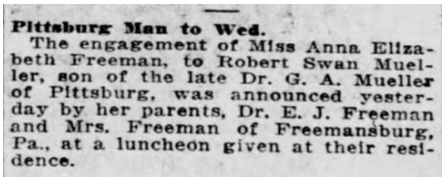
QUAINTLY frocked and not unlike the old-fashioned girl of the '70s were the bridesmaids at the wedding of Miss Katharine Overholt Law and Chester Roland Babst at 8 o'clock last evening in the Shady Avenue Baptist Church. The Rev. James E. Norcross, pastor of the church, performed the ceremony in the presence of a large assemblage. The bride, who was given away by her father, Carl Clayton Law, wore a beautiful gown of white French lace having a full court train, cut square, of Eltesse satin. Her tulle veil was fastened to a cap of rose pointe lace and coronet of orange blossoms, and she carried a bouquet of white roses and valley lilies centered with forget-me-nots. Her only ornament was the bridegroom's gift, an exquisite diamond and sapphire bar pin. The matron of honor, Mrs. Clifford C. Wilkins, wore her wedding gown of white satin and real lace and carried an armful of white sweet peas and Richmond roses, caught with green tulle. The three bridesmaids, Miss Marie Laughner, Miss Nan Freeman of Freemansburg, Pa., and Miss Laura Elkins of Indiana, Pa., appeared in white taffeta empire frocks with full skirts and carried large colonial bouquets of Richmond roses. An Oliver Twist suit of black velvet was worn by the little page, Nox McCain Kehew, son of Mr. and Mrs. Everett Kehew of Emerson street. Paul C. Harper was Mr. Babst's best man, and completing the bridal party were the ushers, Stanley O. Law, a brother of the bride and a student at Cornell University; Marshall Kiehl, who returned from Princeton for the wedding, Robert Dickey and Robert Mueller. A reception and wedding dinner supplemented the church service, the bride's parents and Mrs. Charles Babst of Fairmount avenue, mother of the bridegroom, receiving with the bridal party. Mrs. Law was attired in turquoise blue velvet and Mrs. Babst wore black Chantilly lace.

The bridal table held an artistic

[HN00ED][GDrive]

1915 (April) - Engagement to Anna Elizabeth Freeman

The engagement of **Miss Anna Elizabeth Freeman** to Robert Swan Mueller was announced in the Pittsburgh Press newspaper on April 8, 1915. Robert Swan Mueller I would have been about 22 years old at the time of his engagement/wedding to Anna. **Anna Elizabeth Freeman** was born in 1892 [HL001A] [GDrive]. The bride's parents were including **DR. Edward Jacob Freeman (born 1851)** (of Freemansburgh, Pennsylvania), means both the bride and groom (father was **Dr. Gustave Adolph Mueller**) had parents who were doctors. (See full newspaper page at [HN00EE][GDrive] , with clip shown below.



Pittsburg Man to Wed.

The engagement of Miss Anna Elizabeth Freeman, to Robert Swan Mueller, son of the late Dr. G. A. Mueller of Pittsburg, was announced yesterday by her parents, Dr. E. J. Freeman and Mrs. Freeman of Freemansburg, Pa., at a luncheon given at their residence.

[HN00EF][GDrive]

Is Miss Anna Elizabeth Freeman in the Bethlehem Steel family? We believe so.

John Knecht married **Eliza Reigel** on Feb 2, 1841 Their 4th daughter was **Emily J Knecht**,

Emily J Knecht married **Dr. Edward Jacob Freeman (b Dec 18, 1851)** . Dr E J Freeman and Emily J (Knecht) Freeman had 4 children; Only one lived to be an adult - **Anna ("Nan") Elizabeth Freeman** ,

Who is John Knecht ? "With keen business foresight, Mr. Knecht saw the great benefit the Valley might realize from the building of the railroad, and after its completion he inaugurated the movement that resulted in the formation of the Bethlehem Iron Company."

Hypothesis - The family of Robert Swan Mueller I's bride "Anna Freeman" included the unspoken founders of Bethlehem Steel . That would explain the connections to US Shipping Board. And the move to Baltimore. And the sudden jolt into all the "high society" headlines, and ability to live in nicer homes.

1915 (estimated around summertime) - Joins National Metal Moldings Co. in Pittsburgh

Learn more about National Metal Moldings Corporation in Pittsburgh - **National Metal Moldings Corporation** .

1915 (Oct) - Wedding to Anna Elizabeth Freeman

The wedding was hosted at the home of Anna Freeman's parents (**DR. Edward Jacob Freeman**) in Freemansburgh, Pennsylvania. The best man for the wedding of Robert Swan Mueller I was **Frank M. Everson** of Pittsburgh. At the time of the wedding, Robert Swan Mueller I was with **The National Metal Company** at Pittsburgh. (See full page from Allentown Democrat newspaper at [HN00DM][GDrive]).

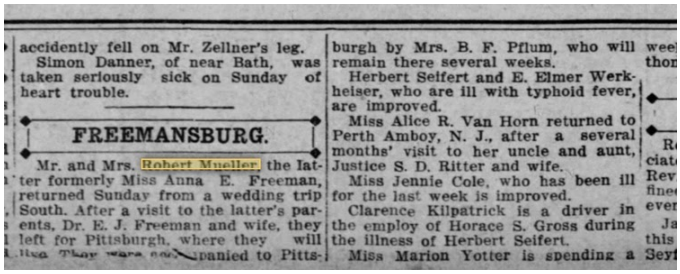
PRETTY HOME WEDDING AT FREEMANSBURG

A pretty home wedding was solemnized on Tuesday evening at the home of Dr. and Mrs. Edward J. Freeman at Freemansburg, when their daughter, Miss Anna E. Freeman, was married to Robert S. Mueller, of Pittsburgh. Rev. R. F. Reed, pastor of Trinity Reformed church, of Freemansburg, performed the ceremony. The couple were attended by Miss Ethel Bradely, of New York, who was maid of honor, and Miss Dorothy Mortimore, of Philadelphia. The best man was Frank M. Everson, of Pittsburgh.

The Freeman home and the grounds were beautifully decorated for the occasion. After the ceremony a wedding supper was served. Mr. Mueller is a graduate of Lafayette College, class of 1915, and is now identified with the National Metal Company at Pittsburgh.

[HN00DN][GDrive]

Robert Swan Mueller I stayed in Freemansburgh with his new bride and in-laws for a couple of weeks before returning home. (See full page - [HN00FS] [GDrive])



accidently fell on Mr. Zellner's leg.
Simon Danner, of near Bath, was taken seriously sick on Sunday of heart trouble.

FREEMANSBURG.

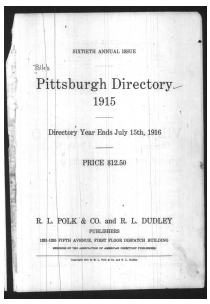
Mr. and Mrs. Robert Mueller, the latter formerly Miss Anna E. Freeman, returned Sunday from a wedding trip South. After a visit to the latter's parents, Dr. E. J. Freeman and wife, they left for Pittsburgh, where they will

burgh by Mrs. B. F. Pflum, who will remain there several weeks.
Herbert Seifert and E. Elmer Werkheiser, who are ill with typhoid fever, are improved.
Miss Alice R. Van Horn returned to Perth Amboy, N. J., after a several months' visit to her uncle and aunt, Justice S. D. Ritter and wife.
Miss Jennie Cole, who has been ill for the last week is improved.
Clarence Kilpatrick is a driver in the employ of Horace S. Gross during the illness of Herbert Seifert.
Miss Marion Yotter is spending a

[HN00FT][GDrive]

1915-1917 - Pittsburgh PA addresses / Moves to Thomas Blvd in 1916

Robert Swan Mueller I was a "clerk" in the "sales department" at **National Metal Molding Company** , as of the 1915-1917 Pittsburgh phone books. He is not listed in the 1918 Pittsburgh Directory, suggesting the Mueller family moved to Baltimore before between 1917 and 1918.



SIXTIETH ANNUAL ISSUE

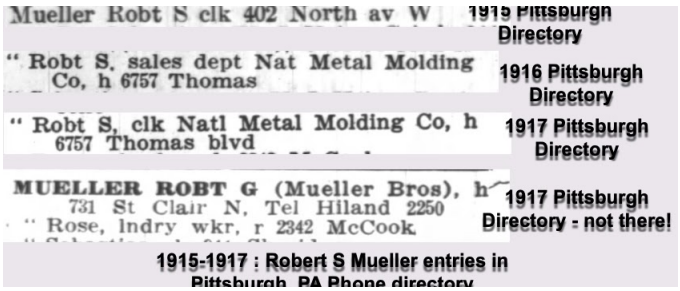
Pittsburgh Directory
1915

Directory Year Ends July 15th, 1916

PRICE $12.50

R. L. POLK & CO. and R. L. DUDLEY
PUBLISHERS

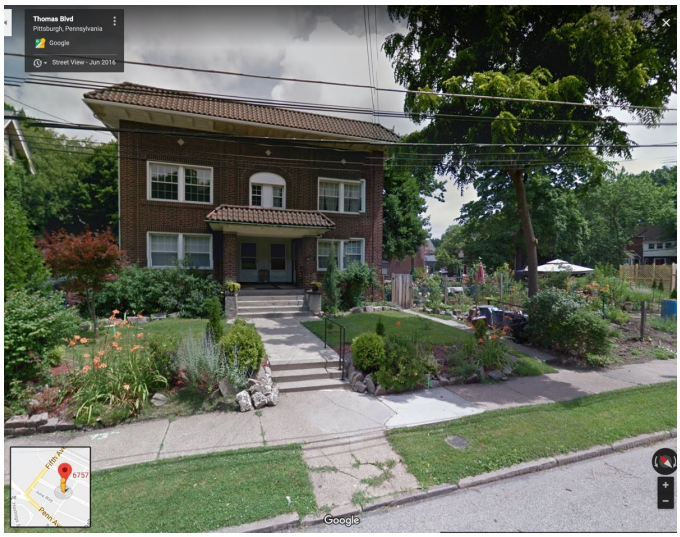
[HD000B][GDrive]



[HD000D][GDrive]

SOURCE [HD000C][GDrive] / [HD000E][GDrive] / [HD000F][GDrive] / [HD000G][GDrive]

The address of Robert Swan Mueller I is listed as "6757 Thomas" in Pittsburgh Pennsylvania, starting with 1916. His father passed a few years prior in 1912, so this home was not inherited from his family. It is a rather large home (still standing today, great neighborhood) for a man is 24 years of age. Presumably, the wealth from his wife's family afforded the young Mueller family to move to this location within a year of his graduation from Lafayette.



6757 Thomas, Pittsburgh PA

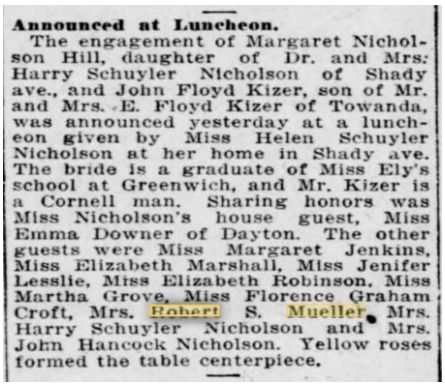
1916 (July) - First son Robert Swan Mueller II (Jr) born

Robert Swan Mueller II was born on July 30, 1916, in Pittsburgh Pennsylvania. [HL0019][GDrive]

1916 (Dec) - Weddings attendance

Pittsburgh press Nov 29 1916 p 9

Full page : [HN00EM][GDrive]



Announced at Luncheon.

The engagement of Margaret Nicholson Hill, daughter of Dr. and Mrs. Harry Schuyler Nicholson of Shady ave., and John Floyd Kizer, son of Mr. and Mrs. E. Floyd Kizer of Towanda, was announced yesterday at a luncheon given by Miss Helen Schuyler Nicholson at her home in Shady ave. The bride is a graduate of Miss Ely's school at Greenwich, and Mr. Kizer is a Cornell man. Sharing honors was Miss Nicholson's house guest, Miss Emma Downer of Dayton. The other guests were Miss Margaret Jenkins, Miss Elizabeth Marshall, Miss Jenifer Lesslie, Miss Elizabeth Robinson, Miss Martha Grove, Miss Florence Graham Croft, Mrs. Robert S. Mueller, Mrs. Harry Schuyler Nicholson and Mrs. John Hancock Nicholson. Yellow roses formed the table centerpiece.

[HN00EN][GDrive]

Pittsburgh Press Dec 23 1916p 3

Full page : [HN00EK][GDrive]

Interesting Announcements.

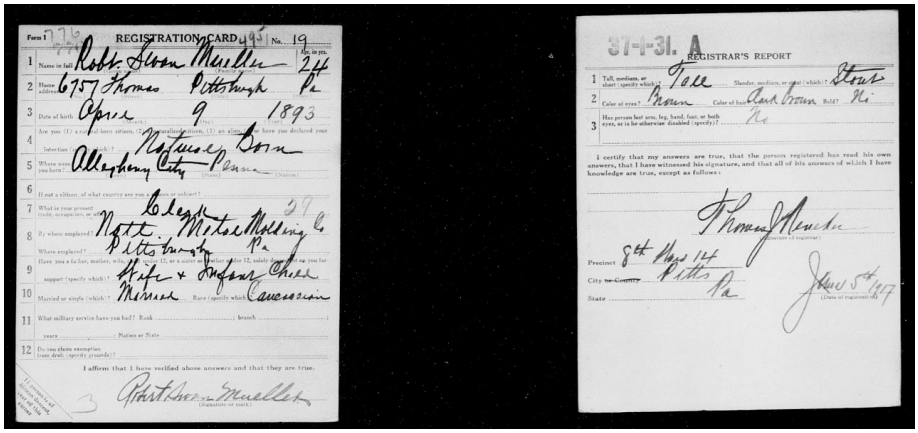
Miss Dorothy C. Marshall will serve as her sister's maid of honor at the wedding of Miss Elizabeth Phipps Marshall, daughter of Mr. and Mrs. Charles Donnell Marshall, and William Walker Darsie, son of Mr. and Mrs. James Darsie next Thursday; Miss Margaret Jenkins, Miss Helen B. Morrison, Miss Isabel Wanamaker of Philadelphia, and Miss Ruth Latimer of Washington, D. C., will be bridesmaids. Miss Mary Margaret and Miss Jane Irene Marshall, also sisters of Miss Marshall are flower girls. Abram P. Hays will serve as best man, and James A. Darsie and George Darsie, brothers of the groom; Charles G. Lewis, Phillip L. Chess, Robert S. Mueller, John N. Marshall, Robert G. Morrison and Mandeville J. Barker, Jr., the latter of Uniontown will be ushers.

The ceremony will be solemnized in the Church of the Ascension at 8 o'clock, with the rector, Rev. Wyatt Brown, reading the service, and a reception will follow in the home of the bride's parents in Fifth ave.

[HN00EL][GDrive]

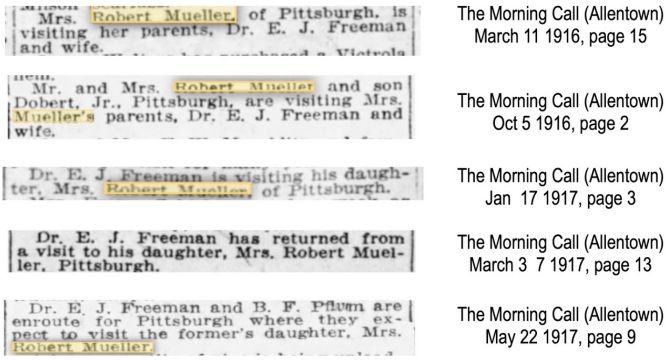
1917 - Military Enlistment

Robert Swan Mueller enrolled for the US military Draft Registration. His Registration date was in 1917. His address as of 1917 was 6757 Thomas, in Pittsburgh Pennsylvania (we know he moved there in late 1915 or early 1916). His height is described as "tall". A the time he was working at *"Natt Metal Molding Co."*, which we believe means **National Metal Molding Corporation**. The writing on the line of "present trade" is not legible.



(File name : 1919-us-ww1-draft-registration-card-image-005270468-01576.jpg / Google Drive : https://drive.google.com/open?id=15UvCxZ1jbUGQq0t4r4pOYcrxGBq5deu1)

1916-1918 : Frequent visits from Mrs. Anne (Freeman) Mueller' parents (staying weeks at a time)



Summary Image above : [HN00EX][GDrive]

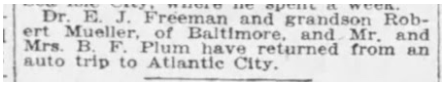
Sources for above image (Full pages from newspapers) : March 11, 1916 (page 5) : [HN00EO] [GDrive] / Oct 5 1916 (page 2) : [HN00EQ][GDrive] / Jan 17 1917 (Page 3) : [HN00ES] [GDrive] / March 7 1917 (Page 13) : [HN00ET][GDrive] / May 22 1917 (Page 9) : [HN00EV] [GDrive]

1918 (early-to-mid) Move to Baltimore

Note that on this visit from the parents described in [HN00EJ][GDrive], the Mueller family is "of Baltimore"

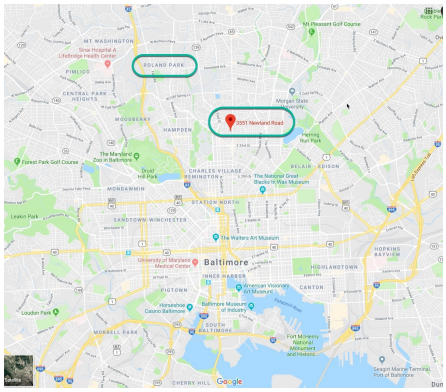
Aug 31 1918 p 12

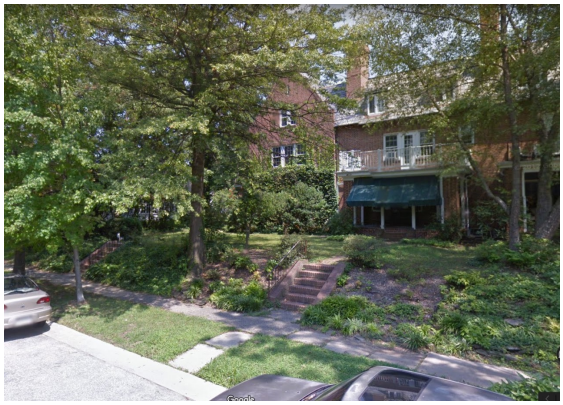
Full page : [HN00EI][GDrive]



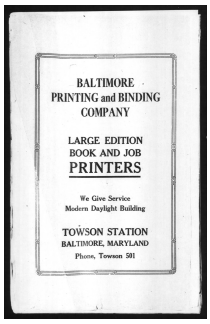
[HN00EJ][GDrive]

Their first address is **"3551 Newland Ave" in Baltimroe**, which is in a good neighborhood.





Early listings for Robert Swan Mueller I in Baltimore, 1920-1922

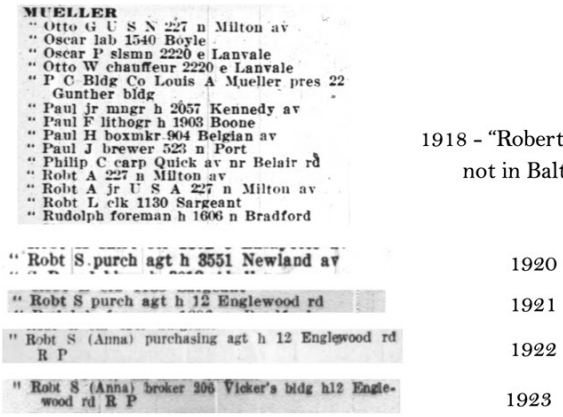

BALTIMORE
PRINTING and BINDING
COMPANY

LARGE EDITION
BOOK AND JOB
PRINTERS

We Give Service
Modern Daylight Building

TOWSON STATION
BALTIMORE, MARYLAND
Phone, Towson 581

[HD0007][GDrive]


MUELLER
" Otto G U S N 227 n Milton av
" Oscar lab 1540 Boyle
" Oscar P slsmn 2220 e Lanvale
" Otto W chauffeur 2220 e Lanvale
" P C Bldg Co Louis A Mueller pres 22 Gunther bldg
" Paul jr mngr h 2057 Kennedy av
" Paul F lithogr h 1903 Boone
" Paul H boxmkr 904 Belgian av
" Paul J brewer 523 n Port
" Philip C carp Quick av nr Belair rd
" Robt A 227 n Milton av
" Robt A jr U S A 227 n Milton av
" Robt L clk 1130 Sargeant
" Rudolph foreman h 1606 n Bradford

" Robt S purch agt h 3551 Newland av — 1920
" Robt S purch agt h 12 Englewood rd — 1921
" Robt S (Anna) purchasing agt h 12 Englewood rd R P — 1922
" Robt S (Anna) broker 206 Vicker's bldg h12 Englewood rd R P — 1923

1918 - "Robert S Mueller not in Baltimore

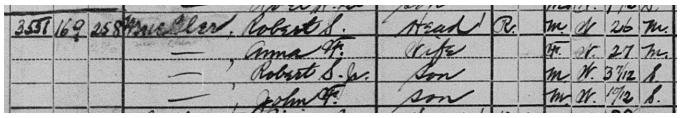
[HD000A][GDrive]

SOURCES: [HD0004][GDrive] / [HD0005][GDrive] / [HD0006][GDrive] / [HD0008][GDrive] / [HD0009][GDrive]

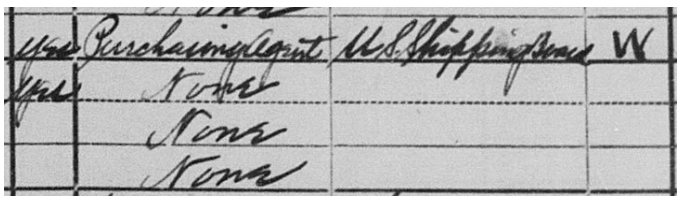
1920

The 1920 Census: In 1920, the Mueller family has now separated. The new family, with Robert Swan Mueller I now 27 years old and the head of household with wife Anna, has moved their family in 1918 o Baltimore Maryland ("Newland Ave."). They now have two children - **Robert Swan Mueller II** (who is still referred to as Robert Swan Mueller Jr. in 1920), who is 3 years and 7 months old as of this 1920 census, and **John F. Mueller** (who we believe is **John Freeman Mueller (born 1919)** (**t**aking his grandmother's maiden name "Freeman" as his middle name), who is less than 1 year old. (See full census page form at [HS0008][GDrive]).

Robert Swan Mueller I is now identifying his career as *"Purchasing Agent"* on the 1920 census. History researcher John O'Loughlin comments on Twitter "From the 1920 Census, Robert Swan Mueller I lists his employment, as a Purchasing Agent [...] for the **United States Shipping Board** !" Information on the USSB can be found here : [🔵**United States Shipping Board**]. We do not know when Robert Swan Mueller I joined the USSB, but it must have been between mid 1917, but before mid 1920.

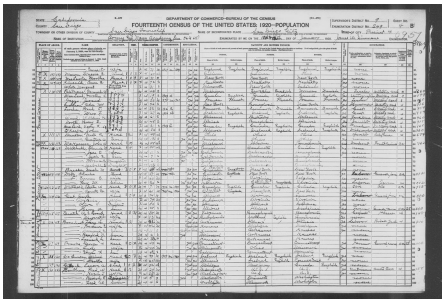

3551 169 258 Mueller, Robert S. Head R. M W 26 M.
Anna Wife W 27 M.
Robert S. Jr. Son M W 3 7/12 S.
John F. Son M W 7/12 S.

[HS0009][GDrive]


Purchasing Agent U.S. Shipping Board W
None
None
None

[HS000A][GDrive]

Also on the 1920 census, we see that Robert Swan Mueller I's stepmother **Nell Mueller** (now a widow) and her son (and Robert Swan Mueller's half-brother) Gustav Mueller, have moved to San Diego, California. None of Robert Swan Mueller I's immediate relatives remain in Pittsburgh.

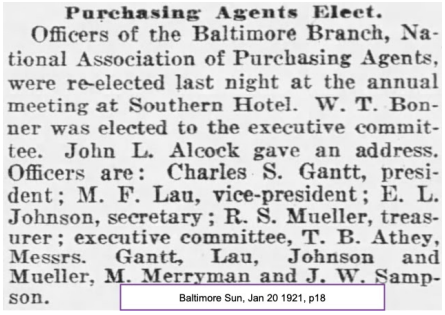


(File name : 1920-usa-census-san-diego-004964311-00965-nell-mueller.jpg / Google Drive : https://drive.google.com/open?id=1BFzJHdNVuNw22SJkw2y-zvSghd5ctbmC)

Click image to zoom

1921 (Jan) - Baltimore Branch of National Association of Purchasing Agent - Elected treasurer

On Jan 20 1921, the **Officers of the Baltimore Branch, National Association of Purchasing Agents** ... R.S. Mueller elected to be treasurer , and is on the executive committee. (See the full page in the Baltimore Sun at [HN00FG][GDrive])



Purchasing Agents Elect.

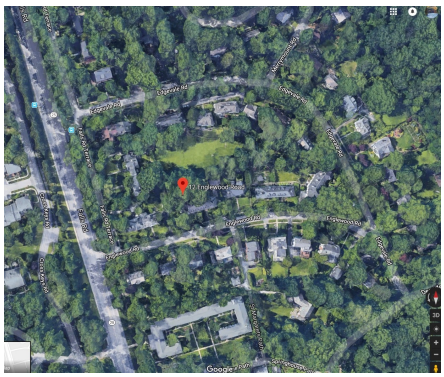
Officers of the Baltimore Branch, National Association of Purchasing Agents, were re-elected last night at the annual meeting at Southern Hotel. W. T. Bonner was elected to the executive committee. John L. Alcock gave an address. Officers are: Charles S. Gantt, president; M. F. Lau, vice-president; E. L. Johnson, secretary; R. S. Mueller, treasurer; executive committee, T. B. Athey, Messrs. Gantt, Lau, Johnson and Mueller, M. Merryman and J. W. Sampson.

Baltimore Sun, Jan 20 1921, p18

[HN00FH][GDrive]

1921 - Move to 12 Englewood Rd. in Baltimore

Based on the Baltimore phone directory, the Mueller family moved to the residence at 12 Englewood Rd in Baltimore between 1920 and 1921. The new Mueller family address is a duplex of a very high-end neighborhood of Baltimore. This is Google Street View today (Jan 2019) of that spot on Englewood Road in Baltimore. Robert Swan Mueller estimated his home value to be about 20,000 USD on the 1930 census (shown later), a time when the average US home price was under 5,000 USD. Combined with several children, and one servant to pay salary for, the 28-year-old Robert Swan Mueller I is apparently doing well financially as of 1921.



1922 (Feb) - Representing "Union Shipbuilding Co." in Baltimore at Local Association of Purchasing Agents

"R.S. Mueller" is described as the **Treasurer of the Union Shipbuilding Company in Baltimore**. See full Feb issue of "The Purchasing Agent" with all 1922 issues at [HP000R][GDrive].

THE PURCHASING AGENT
OFFICIAL ORGAN OF THE NATIONAL ASSOCIATION OF PURCHASING AGENTS

Vol. X NEW YORK, N. Y., FEBRUARY, 1921 No. 2

Government Method of Purchasing Supplies

By E. J. AYERS*

FOR many years prior to 1908, each of the executive departments and independent establishments of the Federal government made its own contracts for supplies for its own use, with little or no regard for uniformity. The contracts were let by calls and made selections from the samples best suited to the needs of the service. This system had grown until seventy-five different branches of the government, located in the District of Columbia, were each acting independently of the other and no effort had been made to consolidate the various interests by standardizing the articles in common use.

On June 11, 1908, a Board of Awards was established by executive order. This Board of Awards appointed a Supply Committee composed of a representative from each department and independent establishment. That committee, acting independently of the departments, accomplished the first steps toward standardization. They prepared a common schedule of supplies, giving each article a comprehensive heading description and placing all of the articles in groups of similar commodities. It was believed that this would result in an improvement in administrative methods over the prevailing methods of contracting for and purchasing supplies, which meant that the government in Washington had as many contracts for a given article as there were departments and independent establishments, including many bureaus. This schedule was approved by the Board of Awards on December 7, 1909.

The first attempt made by the House Appropriations Committee to enact legislation which would carry out the recommendations made to the President, November 14, 1910, by the Keep Commission on the Purchase of Supplies, failed, it was alleged, largely because of the fact that some of the departments feared the control and purchase of their supplies by some other department — that is, they objected to departmental instead of interdepartmental control.

On November 15, 1910, the Board of Awards addressed the heads of the various executive departments as to appointing delegates to compose a General Supply Committee, which was organized on January 12, 1909, and made a continuing body by Executive Order No. 1071, of May 11, 1909, and on June 17 of the following year the President approved the act creating the General Supply Committee, consisting of one representative from each department, appointed by the head thereof, whose duties were common to all.

Digitized by Google

[HP000S][GDrive]

LOCAL ASSOCIATION MEETINGS

BALTIMORE, MD. — The annual meeting of the Purchasing Agents' Association of Baltimore was held on January 19th. Election of officers was reported, with the following results: President, C. S. Gantt, of Baltimore Copper Smelting & Rolling Co.; Vice-President, M. F. Lau, of Davison Chemical Co.; Secretary, E. L. Johnson, of Black & Decker Mfg. Co.; Treasurer, R. S. Mueller, of Union Shipbuilding Co. National Directors: C. S. Gantt, of Baltimore Copper Smelting & Rolling Co.; C. C. Bartlett, of Poole Engineering & Machine Co. Local Executive Committee: T. B. Athey, of Bartlett-Hayward Co.; Mr. Merryman, of Mt. Vernon-Woodberry Mills; J. M. Bonner, of Western Electric Co. The resolution

[HP000U][GDrive]

Some info on hulls associated with Union Shipbuilding can be found here : [HW001G][GDrive]

"Union Shipbuilding Company was established in 1916 by the Riter-Conley Manufacturing Co. of Pittsburgh, a large industrial steel fabricator: the site was in the Fairfield section of Baltimore, on the west side of the harbor, where in 1913 Ellicott Machine Corp. had opened a yard to build dredge hulls. Riter-Conley's President, Thomas Riter, died in 1916, however, and the business was sold to McClintic-Marshall Co., who retained ownership until WWII, when it was acquired by the US government and became part of the Bethlehem Fairfield Shipyard."

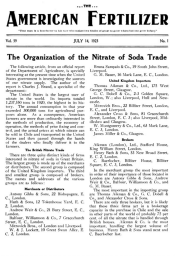
1923 (March) - "R. S. Mueller Company" opens in Baltimore

The following information was obtained from the 1935 issues of the periodical ***"The American Fertilizer"***. (You can download a copy of all of the volume 59 July-Dec 1923 issues in this PDF at [HP000X][GDrive]). A few pages at the front of the July 14, 1923 issue are below:

...THE...
AMERICAN FERTILIZER

JULY 14, 1923

THE PHOSPHATE MINING CO.


AMERICAN FERTILIZER

JULY 14, 1923

The Organization of the Nitrate of Soda Trade

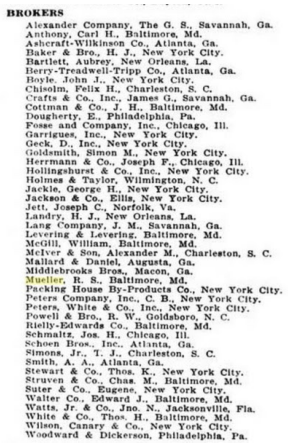
See the January thru June 1923 issues here : [HP000V][GDrive]. We see that in **March of 1923** (on page 23 of "The American Fertilizer"), **Robert Swan Mueller I** of Baltimore opened up his company **"R. S. Mueller Company"** in Baltimore. This solidifies out knowledge that as of March 1923, Robert Swan Mueller I was no longer with the United States Shipping Board, but now owned and operated his own business as a "Chemical broker", with an apparent focus on the fertilizer industry. The person associated with the new business, **W. Whiteley Baker Jr.** , is an important individual to research. (See his page here : **William Whiteley Baker Jr. (b1894)**). The R.S Mueller Company was initially located in the **Vickers Building, Baltimore** .

NEW BALTIMORE BROKERS

R. S. Mueller has opened an office at 206 Vickers Building, Baltimore, Md. This new concern will specialize in all kinds of fertilizer materials, chemicals and oils. W. Whiteley Baker, Jr., is associated with Mr. Mueller.

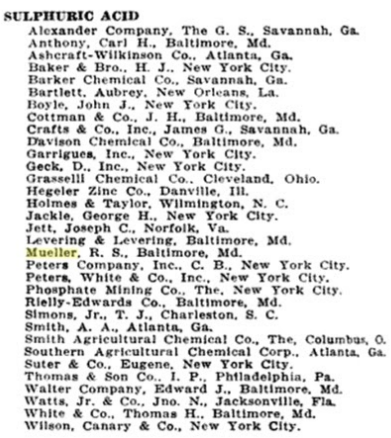
[HP000Y][GDrive]

The **R.S. Mueller Company** has several specialties including (but not limited to) Chemical brokering, Chemicals, Fertilizer materials, Fish scrap, and sulfuric acid. The following are all taken from the July 14, 1923 issue.



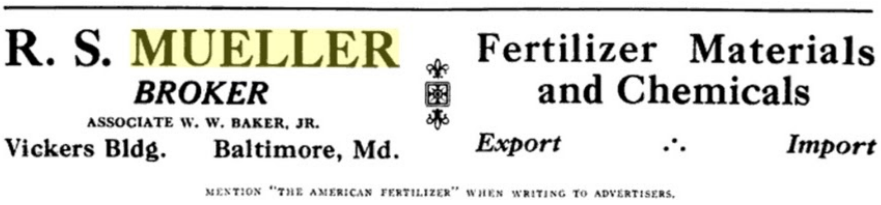
BROKERS

Alexander Company, The G. S., Savannah, Ga.
Anthony, Carl H., Baltimore, Md.
Ashcraft-Wilkinson Co., Atlanta, Ga.
Baker & Bro., H. J., New York City.
Bartlett, Aubrey, New Orleans, La.
Berry-Treadwell-Tripp Co., Atlanta, Ga.
Boyle, John J., New York City.
Chisolm, Felix H., Charleston, S. C.
Crafts & Co., Inc., James G., Savannah, Ga.
Cottman & Co., J. H., Baltimore, Md.
Dougherty, E., Philadelphia, Pa.
Fosse and Company, Inc., Chicago, Ill.
Garrigues, Inc., New York City.
Geck, D., Inc., New York City.
Goldsmith, Simon M., New York City.
Herrmann & Co., Joseph F., Chicago, Ill.
Hollingshurst & Co., Inc., New York City.
Holmes & Taylor, Wilmington, N. C.
Jackle, George H., New York City.
Jackson & Co., Ellis, New York City.
Jett, Joseph C., Norfolk, Va.
Landry, H. J., New Orleans, La.
Lang Company, J. M., Savannah, Ga.
Levering & Levering, Baltimore, Md.
McGill, William, Baltimore, Md.
McIver & Son, Alexander M., Charleston, S. C.
Mallard & Daniel, Augusta, Ga.
Middlebrooks Bros., Macon, Ga.
Mueller, R. S., Baltimore, Md.
Packing House By-Products Co., New York City.
Peters Company, Inc., C. B., New York City.
Peters, White & Co., Inc., New York City.
Powell & Bro., R. W., Goldsboro, N. C.
Rielly-Edwards Co., Baltimore, Md.
Schmaltz, Jos. H., Chicago, Ill.
Schoen Bros., Inc., Atlanta, Ga.
Simons, Jr., T. J., Charleston, S. C.
Smith, A. A., Atlanta, Ga.
Stewart & Co., Thos. K., New York City.
Struven & Co., Chas. M., Baltimore, Md.
Suter & Co., Eugene, New York City.
Walter Co., Edward J., Baltimore, Md.
Watts, Jr. & Co., Jno. N., Jacksonville, Fla.
White & Co., Thos. H., Baltimore, Md.
Wilson, Canary & Co., New York City.
Woodward & Dickerson, Philadelphia, Pa.



SULPHURIC ACID

Alexander Company, The G. S., Savannah, Ga.
Anthony, Carl H., Baltimore, Md.
Ashcraft-Wilkinson Co., Atlanta, Ga.
Baker & Bro., H. J., New York City.
Barker Chemical Co., Savannah, Ga.
Bartlett, Aubrey, New Orleans, La.
Boyle, John J., New York City.
Cottman & Co., J. H., Baltimore, Md.
Crafts & Co., Inc., James G., Savannah, Ga.
Davison Chemical Co., Baltimore, Md.
Garrigues, Inc., New York City.
Geck, D., Inc., New York City.
Grasselli Chemical Co., Cleveland, Ohio.
Hegeler Zinc Co., Danville, Ill.
Holmes & Taylor, Wilmington, N. C.
Jackle, George H., New York City.
Jett, Joseph C., Norfolk, Va.
Levering & Levering, Baltimore, Md.
Mueller, R. S., Baltimore, Md.
Peters Company, Inc., C. B., New York City.
Peters, White & Co., Inc., New York City.
Phosphate Mining Co., The, New York City.
Rielly-Edwards Co., Baltimore, Md.
Simons, Jr., T. J., Charleston, S. C.
Smith, A. A., Atlanta, Ga.
Smith Agricultural Chemical Co., The, Columbus, O.
Southern Agricultural Chemical Corp., Atlanta, Ga.
Suter & Co., Eugene, New York City.
Thomas & Son Co., I. P., Philadelphia, Pa.
Walter Company, Edward J., Baltimore, Md.
Watts, Jr. & Co., Jno. N., Jacksonville, Fla.
White & Co., Thomas H., Baltimore, Md.
Wilson, Canary & Co., New York City.

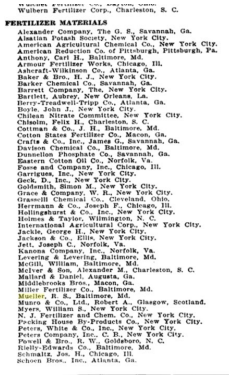


R. S. MUELLER
BROKER
ASSOCIATE W. W. BAKER, JR.
Vickers Bldg. Baltimore, Md.

Fertilizer Materials and Chemicals
Export .·. Import

MENTION "THE AMERICAN FERTILIZER" WHEN WRITING TO ADVERTISERS.

Banner : [HP0012][GDrive]



Wulbern Fertilizer Corp., Charleston, S. C.

FERTILIZER MATERIALS

Alexander Company, The G. S., Savannah, Ga.
Alsatian Potash Society, New York City.
American Agricultural Chemical Co., New York City.
American Reduction Co. of Pittsburgh, Pittsburgh, Pa.
Anthony, Carl H., Baltimore, Md.
Armour Fertilizer Works, Chicago, Ill.
Ashcraft-Wilkinson Co., Atlanta, Ga.
Baker & Bro., H. J., New York City.
Barker Chemical Co., Savannah, Ga.
Barrett Company, The, New York City.
Bartlett, Aubrey, New Orleans, La.
Berry-Treadwell-Tripp Co., Atlanta, Ga.
Boyle, John J., New York City.
Chilean Nitrate Committee, New York City.
Chisolm, Felix H., Charleston, S. C.
Cottman & Co., J. H., Baltimore, Md.
Cotton States Fertilizer Co., Macon, Ga.
Crafts & Co., Inc., James G., Savannah, Ga.
Davison Chemical Co., Baltimore, Md.
Dunnellon Phosphate Co., Savannah, Ga.
Eastern Cotton Oil Co., Norfolk, Va.
Fosse and Company, Inc., Chicago, Ill.
Garrigues, Inc., New York City.
Geck, D., Inc., New York City.
Goldsmith, Simon M., New York City.
Grace & Company, W. R., New York City.
Grasselli Chemical Co., Cleveland, Ohio.
Herrmann & Co., Joseph F., Chicago, Ill.
Hollingshurst & Co., Inc., New York City.
Holmes & Taylor, Wilmington, N. C.
International Agricultural Corp., New York City.
Jackle, George H., New York City.
Jackson & Co., Ellis, New York City.
Jett, Joseph C., Norfolk, Va.
Kanona Company, Inc., Norfolk, Va.
Levering & Levering, Baltimore, Md.
Lister, Miller Fertilizer Co., Md.
McIver & Son, Alexander M., Charleston, S. C.
Mallard & Daniel, Augusta, Ga.
Middlebrooks Bros., Macon, Ga.
Miller Fertilizer Co., Baltimore, Md.
Mueller, R. S., Baltimore, Md.
Munro & Co., Ltd., Robert A., Glasgow, Scotland.
Myers, William S., New York City.
N. J. Fertilizer and Chem. Co., New York City.
Packing House By-Products Co., New York City.
Peters, White & Co., Inc., New York City.
Peters Company, Inc., C. B., New York City.
Powell & Bro., R. W., Goldsboro, N. C.
Rielly-Edwards Co., Baltimore, Md.
Schmaltz, Jos. H., Chicago, Ill.
Schoen Bros., Inc., Atlanta, Ga.

FILLERS

Eastern Cotton Oil Co., Norfolk, Va.
Smith, A. A., Atlanta, Ga.

FILTER CLOTH

Ludlow-Saylor Wire Co., The, St. Louis, Mo.

FILTERS

Blaw-Knox Company, Pittsburgh, Pa.

FILTERS—Acid Suction

Knight, Maurice A., East Akron, Ohio.

FISH SCRAP

Alexander Company, The G. S., Savannah, Ga.
Anthony, Carl H., Baltimore, Md.
Ashcraft-Wilkinson Co., Atlanta, Ga.
Baker & Bro., H. J., New York City.
Berry-Treadwell-Tripp Co., Atlanta, Ga.
Boyle, John J., New York City.
Cottman & Co., J. H., Baltimore, Md.
Crafts & Co., Inc., James G., Savannah, Ga.
Farmers and Planters Company, Salisbury, Md.
Garrigues, Inc., New York City.
Geck, D., Inc., New York City.
Hollingshurst & Co., Inc., New York City.
Holmes & Taylor, Wilmington, N. C.
Jackle, George H., New York City.
Jett, Joseph C., Norfolk, Va.
Levering & Levering, Baltimore, Md.
Mueller, R. S., Baltimore, Md.
Packing House By-Products Co., New York City.
Peters, White & Co., Inc., New York City.
Powell & Bro., R. W., Goldsboro, N. C.
Rielly-Edwards Co., Baltimore, Md.
Schoen Bros., Atlanta, Ga.
Simons, Jr., T. J., Charleston, S. C.
Smith, A. A., Atlanta, Ga.
Stewart & Co., Thos. K., New York City.
Suter & Co., Eugene, New York City.
Walter Company, Edward J., Baltimore, Md.
Watts, Jr. & Co., Jno. N., Jacksonville, Fla.
White & Co., Thomas H., Baltimore, Md.
Wilson, Canary & Co., New York City.
Wulbern Fertilizer Corp., Charleston, S. C.

FREIGHT FORWARDERS

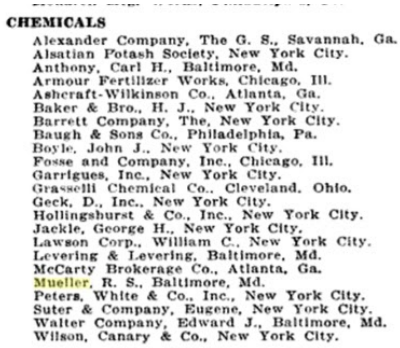
Smith & Kelly Co., Savannah, Ga.

FURNACES

Blaw-Knox Company, Pittsburgh, Pa.

GEARS—Silent

Link-Belt Company, Philadelphia, Chicago.



CHEMICALS

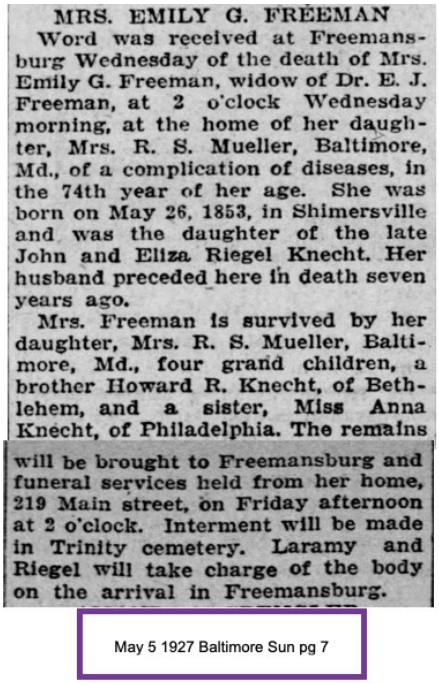
Alexander Company, The G. S., Savannah, Ga.
Alsatian Potash Society, New York City.
Anthony, Carl H., Baltimore, Md.
Armour Fertilizer Works, Chicago, Ill.
Ashcraft-Wilkinson Co., Atlanta, Ga.
Baker & Bro., H. J., New York City.
Barrett Company, The, New York City.
Baugh & Sons Co., Philadelphia, Pa.
Boyle, John J., New York City.
Fosse and Company, Inc., Chicago, Ill.
Garrigues, Inc., New York City.
Grasselli Chemical Co., Cleveland, Ohio.
Geck, D., Inc., New York City.
Hollingshurst & Co., Inc., New York City.
Jackle, George H., New York City.
Lawson Corp., William C., New York City.
Levering & Levering, Baltimore, Md.
McCarty Brokerage Co., Atlanta, Ga.
Mueller, R. S., Baltimore, Md.
Peters, White & Co., Inc., New York City.
Suter & Company, Eugene, New York City.
Walter Company, Edward J., Baltimore, Md.
Wilson, Canary & Co., New York City.

1925 (April) - Atlantic City Trip highlighted in News Personals

Full page : [HN00G3][GDrive] / Clip at [HN00G3][GDrive]

1927 (May) - Passing of Emily G Freeman (Mother in-law)

(See full page in 1927 newspaper at [HN00EG][GDrive]). Verification that **Emily Grace Freeman** was the wife of **Dr. Edward Jacob Freeman** , and she was the daughter of **John Knecht** and **Eliza (Riegel) Knecht**.



MRS. EMILY G. FREEMAN

Word was received at Freemansburg Wednesday of the death of Mrs. Emily G. Freeman, widow of Dr. E. J. Freeman, at 2 o'clock Wednesday morning, at the home of her daughter, Mrs. R. S. Mueller, Baltimore, Md., of a complication of diseases, in the 74th year of her age. She was born on May 26, 1853, in Shimersville and was the daughter of the late John and Eliza Riegel Knecht. Her husband preceded here in death seven years ago.

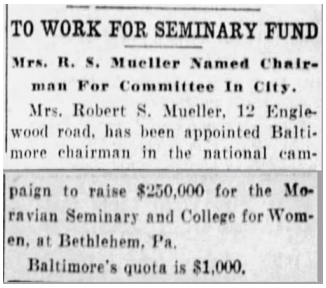
Mrs. Freeman is survived by her daughter, Mrs. R. S. Mueller, Baltimore, Md., four grand children, a brother Howard R. Knecht, of Bethlehem, and a sister, Miss Anna Knecht, of Philadelphia. The remains will be brought to Freemansburg and funeral services held from her home, 219 Main street, on Friday afternoon at 2 o'clock. Interment will be made in Trinity cemetery. Laramy and Riegel will take charge of the body on the arrival in Freemansburg.

May 5 1927 Baltimore Sun pg 7

[HN00EH][GDrive]

1928 (Jan)

Full page : [HN00EY][GDrive]



TO WORK FOR SEMINARY FUND

Mrs. R. S. Mueller Named Chairman For Committee In City.

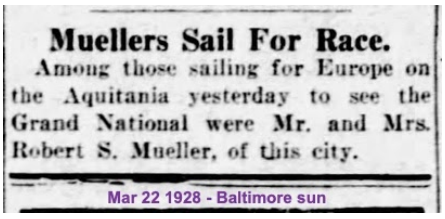
Mrs. Robert S. Mueller, 12 Englewood road, has been appointed Baltimore chairman in the national campaign to raise $250,000 for the Moravian Seminary and College for Women, at Bethlehem, Pa.

Baltimore's quota is $1,000.

[HN00EZ][GDrive]

1928 (March 21 to May 5) - Travel to Europe to see March 30 Grand National race

Robert Swan Mueller I and his wife Anna Mueller traveled to Europe on the luxury 🌐**R.M.S. Aquitania** . They left around March 21, to see the 🌐**1928 Grand National Horse Race** horse race in London. The race in 1928 was on March 30. Full page : [HN00F0][GDrive]



Muellers Sail For Race.

Among those sailing for Europe on the Aquitania yesterday to see the Grand National were Mr. and Mrs. Robert S. Mueller, of this city.

Mar 22 1928 - Baltimore sun

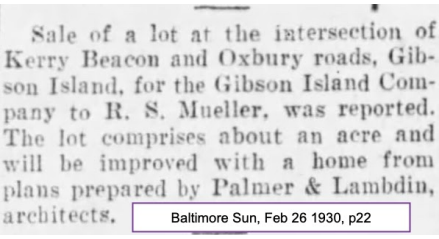
[HN00F1][GDrive]

On April 25 1928, they left Europe, and returned through the port of New York on May 5 1928. The ship they traveled on was the S.S. Homeric, a premier ocean liner in 1928 [🌐R.M.S. Homeric (1913)]. They left Europe out of the port of **Cherbourg**, which is in northern France. See the return passenger info sheet at [HJ0002][GDrive]. **Curious - What did they do with the three extra weeks?**

1930

1930 (Feb) - Purchase of summer home on Gibson Island

The Great Depression in the United States started in the late 1920s, but Robert Swan Mueller I was able to afford an investment in a summer home in the new community on **Gibson Island, Maryland** in 1930. *"Home lot purchase at the intersection of Kerry Beacon and Oxbury Road, on Gibson Island. Lot comprises about an acre and will be improved with a home from plans prepared by Palmer & Lambdin, architects."* (See full page in 1930 newspaper at [HN00F2][GDrive])



Sale of a lot at the intersection of Kerry Beacon and Oxbury roads, Gibson Island, for the Gibson Island Company to R. S. Mueller, was reported. The lot comprises about an acre and will be improved with a home from plans prepared by Palmer & Lambdin, architects.

Baltimore Sun, Feb 26 1930, p22

[HN00F3][GDrive]

MUELLER HOME ON GIBSON ISLAND

Evidence of Mueller' property construction on **Gibson Island** (no date here...). See [HX0008][GDrive] .

Tube Number	Description	Room Number	Range	Section	Shelf
Palmer, Nes, Cornbrooks & Partners Collection (PL)					
1	Mr. J.P. Dunn Homeland, Baltimore, MD	403	12	5	1
2	Mr. Thomas A. Cassilly Warrenton RD, Guilford Baltimore,MD	403	12	5	1
130	Mr. R.S. Mueller Gibson Island, MD Cottage lot 85, plat A	403	12	5	7

[HX0009][GDrive]

1930 Census

The 1930 Census: In 1930, the Robert Swan Mueller I family in Baltimore, Maryland has grown and appears to be thriving. Robert Swan Mueller I is now 37 years old, and he and his wife Anna are now blessed to have four children, and one servant. **Robert Swan Mueller II** is the oldest son (who is Robert Swan Mueller Jr. as of 1920), who is 13 years of age, and his younger brother **John Freeman Mueller** is now 10 years old. The new children are daughters **Emilie G. Mueller** (age 9, born in 1921) and Elizabeth Mueller (age 7, born in 1923). In 1930, the Mueller household still employs one servant (now **Maurine Scott**, a female from Virginia who is 21 years of age).

The occupation of Robert Swan Mueller I on the 1930 Census is now listed as a "*Broker in the Banking industry*". We know that he opened his own company **"R.S. Mueller Company"** in March 1923, so it is assumed he is still with that job (as we see he identifies that as his place of work in his 1942 military enlistment.

(See full page in 1930 Census sheet at [HS000F][GDrive]) .

1930 - R. S. Mueller Company has agents in Berlin ?

The R. S. Mueller Company had a Berlin agent in 1930 ? Sending mail on the **Dornier Do X** flight from Friedrichshafen, Germany to San Juan ? Image is from a 1931 issue of "The American Fertilizer" that is not being fully shared on Google :

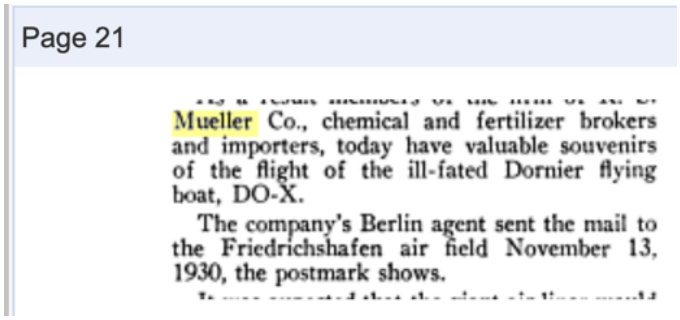
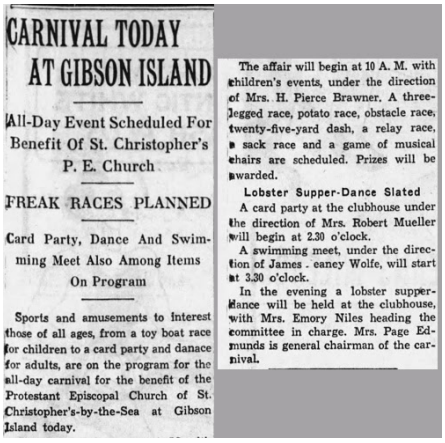


Image served from Twitter

1934 (July) - RSM1 doesnt just live on Gibson Island - He also hosts the Lobster Supper-Dance

See full page in 1934 newspaper at [HN00F4][GDrive]


CARNIVAL TODAY AT GIBSON ISLAND

All-Day Event Scheduled For Benefit Of St. Christopher's P. E. Church

FREAK RACES PLANNED

Card Party, Dance And Swimming Meet Also Among Items On Program

Sports and amusements to interest those of all ages, from a toy boat race for children to a card party and danace for adults, are on the program for the all-day carnival for the benefit of the Protestant Episcopal Church of St. Christopher's-by-the-Sea at Gibson Island today.

The affair will begin at 10 A. M. with children's events, under the direction of Mrs. H. Pierce Brawner. A three-legged race, potato race, obstacle race, twenty-five-yard dash, a relay race, a sack race and a game of musical chairs are scheduled. Prizes will be awarded.

Lobster Supper-Dance Slated

A card party at the clubhouse under the direction of Mrs. Robert Mueller will begin at 2.30 o'clock.

A swimming meet, under the direction of James . eaney Wolfe, will start at 3.30 o'clock.

In the evening a lobster supper-dance will be held at the clubhouse, with Mrs. Emory Niles heading the committee in charge. Mrs. Page Edmunds is general chairman of the carnival.

[HN00F5][GDrive]

1934 - Son Robert Swan Mueller II finishes high school / Travels to Europe for summer

Son **Robert Swan Mueller II** finished high school (**Gilman School** , in Baltimore Maryland) in 1934, and was prepared to begin college studies at **Princeton** in fall of 1934. In the summer of 1934, Robert Swan Mueller II traveled to Europe, returning on the **S.S. Clairton** on July 31 in 1934. The address on this passenger form helps identify that the family of Robert Swan Mueller I was still residing at 12 Englewood Road in Baltimore as of July in 1934. (See the full passenger sheet here: [HJ0003][GDrive].

1935 (July) - Fundraiser at Gibson Island / Mr and Mrs. Robert Mueller present

Full page : [HN00FB][GDrive]

1935 JULY - "I ST. CHRISTOPHER'S FETE TO BE HELD TUESDAY AFFAIR WILL OPEN WITH CHILDREN'S GYMKHANA AND WILL INCLUDE LUNCHEON, CARD PARTY AND DINNER DANCE IN ANNE ARUNDEL COUNTY"

The real beginning of the season at Gibson Island, the summer resort that is peculiarly our own. opened up with great eclat on July 4, and now the members of the island community are working whole-heartedly toward the success of a fete for the benefit of the little church, St. Christopher's-by-the-Sea,. which will be held Tuesday at the clubhouse.

The affair will begin at 10 A. M, with a children's gymkhana, under the chairmanship of Mrs. Merrill Stout, Mrs. James S. Sloan is co-chairman, Mrs. Sherman Trowbridge, Mrs. J. Herbert Bagg and Mrs. George Burgess are in charge of the paper chase and Mrs. Charles Peckham is in charge of the ice-cream cones. Miss Cynthia Williamson is taking care of the balloons, while her sister, Miss Jean Williamson, will manage the children's races. Miss Anne Palmer will direct the musical chairs; Mrs. H. W. Smith is chairman of the merry-go-round and Miss Carol Johnson of the ponies for the children.

Luncheon And Card Party

*Luncheon will be served at the club from 12 to 2, after which the card party, directed by **Mrs. Robert Mueller**, will start and be carried on until 4.30, when prizes will be distributed and refreshments served. Many reservations have been made, including that of Mrs. E. B. Freeman who will give a large luncheon and entertain five tables of bridge.*

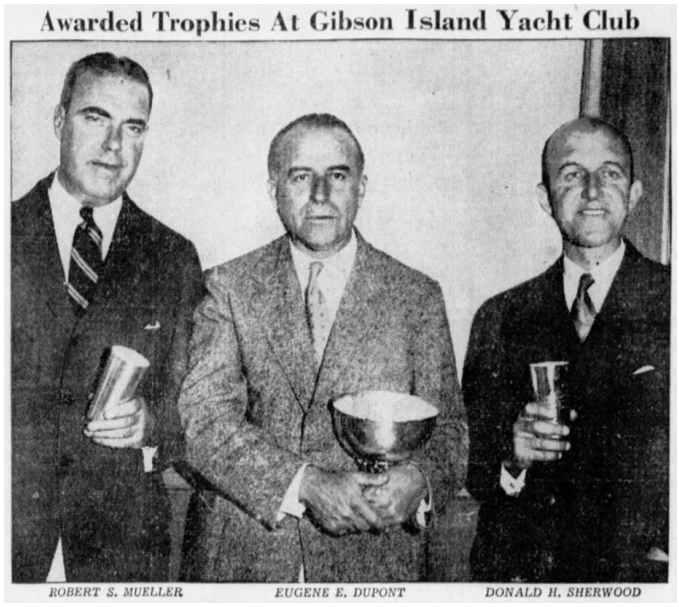
Mrs. John Voneiff and Mrs. Charles Scarlett, Jr., have charge of the candy and will be assisted by Miss Joan Whitehead and Miss Jacqueline Karr. At 2.30 the toy boat races will be held under the direction of Mrs. Frederick C. Lee. Prizes will be awarded to the winners.

*Mrs. George Englar is chairman of the dinner dance committee, consisting of Mrs. Duane Rice, Mrs. Walter Hughson, Mrs. Francis Key Murray, Mrs. Emory Niles, Mrs. Blanchard Randall, Jr., Miss Cynthia Williamson, Miss Jean Williamson, Miss Nancy Wolfe and Miss Betty Novak. Reservations for tables seating from two to ten people have been made by Mr. and Mrs. Corrin Strong, Mr. and Mrs. Frank Russell, Mrs. Charles J. Sloan, Mi-, and Mrs. Paul Patterson, Mr. and Mrs. Sifford Pearre, Mr. and Mrs. Blanchard Randall, Jr., Mr. and Mrs. Francis E. Shriner, **Mr. and Mrs. Mueller** and Doctor and Mrs. Page Edmunds.*

[HN00FC][GDrive]

1935 (Sep) - Gibson Island Yacht Club Race - RSM1 wins with his "Quest"

(See full page in 1935 newspaper at [HN00F6][GDrive]). This is **Robert Swan Mueller I** (on left) with his September 1935 winning trophy for the **Gibson Island** Yacht Club Race, standing next to Eugene E. du Pont (See **Eugene Éleuthère du Pont (born 1882)**).



[HN00F7][GDrive]

YACHT RACING PRIZES GIVEN

Skippers In Cedar Point Event Toast Craft At Gibson Island Club

Relaxing after the 100-mile cruising race to Cedar Point and back, skippers and crews of two dozen sailing craft toasted their boats last night at a banquet in the Gibson Island Club while prizes were awarded.

"Post mortems" of how one boat got jammed into the lee of the Eastern Shore, of how another crew sat becalmed and watched the rest of the fleet sail by were held, but soon were forgotten in the pleasures of the banquet board.

Plenty To Talk About

Prizes were not awarded on what might have happened. Skippers who shoved their boats first across the finish line off Baltimore Light got the awards. At that, there was plenty of excuse for talk, as no less than a half-dozen boats were in sight when the first one finished. And that, after a hundred miles of stick and rag, is something.

The boats set sail from Gibson Island Saturday morning and about 6.15 P. M. yesterday Mrs. D. C. Elphinstone's Rangoon, an eight-meter racing sloop, crossed the line first to win the Whiting trophy.

The Whiting trophy is awarded to the first boat to finish, regardless of class or time allowance. Mrs. Elphinstone sailed her own boat.

R. S. Mueller Wins Prize

The trophy in the racing division went to Robert S. Mueller, who put his Quest across the line in a good sailing breeze, which he had managed to carry most of the way.

The L. Corrin Strong cruising cup was won by Eugene E. du Pont, of Wilmington, Del., who brought his High Tide across the finish line a scant ten minutes ahead of J. Leo Flanigan's Gleam, which apparently had victory on its clean-swept decks only to watch, first place fade away when it ran into a calm within sight of the finish line.

However, the cruising division was divided into classes A and B. While the High Tide won Class A, the winner of Class B was the Sea Witch, owned and sailed by Donald H. Sherwood.

Bobby Miller Wins Trophy

As the long-distance racers were preparing for the evening's ceremonies the star boats went out to Baltimore Light and had a race of their own for the Symington Memorial trophy.

Ten stars slithered over a six-mile windward and leeward course in a close contest which was won by Bobby Miller in his Kingfish. After being in the ruck at the start, Miller took advantage of every slant of wind to nose out his brother, Berkeley T. R. (Bucky) Miller, who finished second in the Sole.

Others In Race

Others in the first division of the stars were Marjorie Hugson, in the Grayling, third; Aubrey Pearre, Jr., in the Bluefish, fourth, and Edmund Novak, in the Shark, fifth.

Others who were well up in the Cedar Point race were: Richard H. Randall, in the Loke, who finished third in the racing division; Theodore J. Hoster, in the Salabar, second in Class B of the cruising division; W. L. Henderson, in the Kelpie, third in the same class, and L. M. Balliere, in the Aweigh, third in Class A, behind the High Tide and the Gleam.

[HN00F9][GDrive]

1936 (Sep) -More yachting ...

See full page : [HN00FD][GDrive]

Amethyst Leads All Way To Win Final Of Whiting Trophy Yacht Series

FINISH FORCES TIE FOR PRIZE

Victory Places Sherwood Boat Even With Ariel At Gibson Island

Rangoon And Sunny In Deadlock For Second. Sail-Off In Doubt

By PETER C. CHAMBLISS

The Amethyst, leading all the way, finished well ahead of the fleet of eight yachts to win the final race of the George A. Whiting Trophy series for the racing class sailed yesterday off Mountain Ear under the auspices of the Gibson Island Yacht Squadron.

The final race of the series left the winner of the trophy very much in doubt. The Amethyst, sailed by John R. Sherwood, and the Ariel, owned by Donald H. Sherwood and sailed in yesterday's race by Corrin H. Strong, in the absence of the owner who is in Europe, are tied for first place.

Two other eight-meters—the Rangoon, sailed by Mrs. George Blakiston, and the Sunny, George A. Whiting, donor of the trophy—are tied for second place.

Sail-Off In Doubt

The manner in which the tie is to be broken is as much in doubt as the actual winner of the series. Whether the winner will be decided by the flip of a coin or whether there will be a sail-off between the leading boats or another race to pick the victor will be decided at a future meeting of the racing committee of which Phillip W. Howard is chairman.

Both the Amethyst and Ariel have 18 points and the Rangoon and Sunny have 16.

The Ariel, the former Priscilla II, and rated as the fastest 8-meter sloop in the country, went into the final race of the series with a perfect score, having won the first and second races. Her score for the first two races was 16. The Amethyst was standing third in the series at the beginning of the third race with a point score of 10. The score was tied at 18 when the Amethyst went over the line a winner and the Ariel dropped far behind, finishing in seventh place.

Competing Yachts

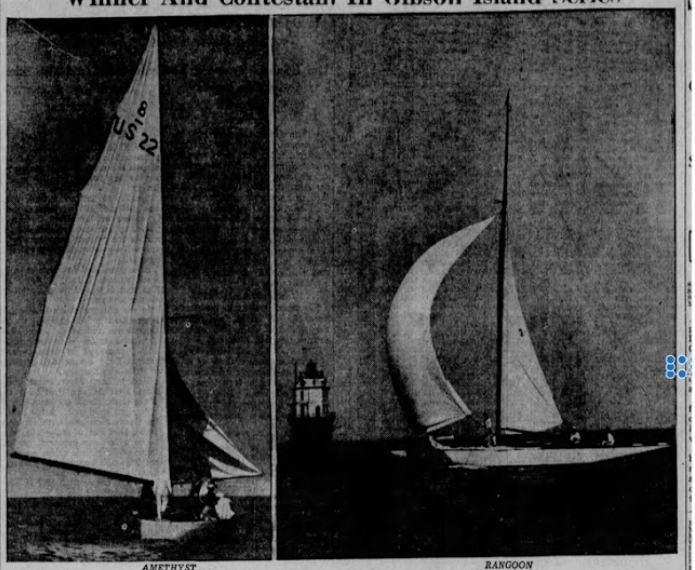
The competing yachts, their owners and point scores in the series are as follows:

Yacht.	Owner.	Point Score.
Amethyst,	John R. Sherwood	18
Ariel,	Donald H. Sherwood	18
Rangoon,	Mrs. George Blakiston	16
Sunny,	George A. Whiting	16
Loke,	Richard H. Randall	14
Valkyrie,	Phillip W. Howard	10
Quest,	Robert S. Mueller	9
Doble II,	C. Bon Mitchell, Jr.	7

Yesterday was an ideal day for sail yacht racing. Heading into the freshening southeast breeze, the Doble II, the Mitchell sloop, was first over the line, but in the extreme leeward position. Toward the other end of the line the Amethyst, the Mirage, the Larchmont sloop, owned by A. Karl Fischer, which started in the race, but was not actually racing, and the Loke went over well bunched.

The others were soon over and on their way, the majority of the yachts standing well over toward the Eastern Shore on their run down the Bay to Tolley Point Buoy, the windward mark which they were to round and return to the starting line. The Amethyst stepped right out and carried a nice lead around the windward mark. She apparently had little difficulty in maintaining the position on the return to the finish line.

Winner And Contestant In Gibson Island Series



AMETHYST RANGOON

Amethyst, 8-meter sloop, sailed by John R. Sherwood, is shown just after she crossed the finishing line yesterday winning the final race of the George A. Whiting series. She is tied with Ariel for first place in the series. Rangoon, sailed by Mrs. George Blakiston, was snapped just before she crossed the finish line between the committee boat and Baltimore Light. Rangoon is tied for second place with the Sunn, owned by George A. Whiting.

Sunny Second Boat

She finished the 16-mile course in 2 hours 55 minutes and 30 seconds, a minute and seven seconds ahead of the Sunny, the second boat to cross the finish line. The Loke, the Randall eight-meter, was third to finish, crossing in 2 hours, 58 minutes and 17 seconds.

That the race committee may establish some definite rule with regard to the participation of yachts in races that are not actually sailing in the race is probable after yesterday's contest during which the presence of the Mirage caused no little confusion.

Both the Mirage and the Lone Star, owned by John Markel, sailed in the race last Sunday and both started yesterday, though at the meeting of the race committee following the race they were ruled out as non-contestants. It so happened that the Mirage finished ahead of the Ariel and had she been an actual contestant the point score would thus have been changed, giving the Amethyst the lead by one point.

Hagerty's Boat Leads Model Yacht Series

In the contest between Harold T. Smith and William Hagerty for first honors in the series of races being held under the auspices of the Baltimore Model Yacht Club at the Wash Water Lake at Montebello, Hagerty took the lead yesterday afternoon by 1 point.

The previous Sunday ended with Smith and Hagerty tied with 11 points each. When the races closed yesterday Hagerty had accumulated 18 points for the series of three and Smith had 17. Hagerty's yacht is the V. M. H. 11 and Smith's boat is Smokeless.

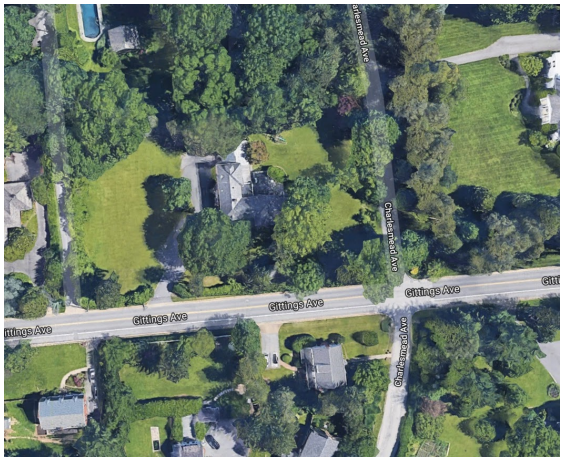
In order of their standing yesterday the other contestants were: Walter Bacon, Oreole, 11 points; Theodore G. Schulte, Atlanta, 11; J. R. Thomas, Tameriane, 10; Jan Butler, Catherine E. 9; John H. Coles, V. M. H. 3, and Oscar B. Perkins, My Maryland, tied with 4 points; J. M. Blake, Jan, Jr., 2, and Carl Dinkelman, Margaret Ann, 1.

[HN00FE][GDrive]

1935 to 1939 - Mueller family moves to 6 Gittings Ave. in Baltimore

On the 1940 Census (shown later), we see that the Mueller's Baltimore home address has changes since the summer of 1934, to 6 Gittings Ave. in Baltimore, Maryland (a truly prestigious home).

6 Gittings Ave. in Baltimore is a true estate property. Robert Swan Mueller I was well compensated for his work.



1937 - Fundraiser for chapel on Gibson Island (Mrs. Robert Mueller present?)

(Source : [HN00FY][GDrive])

1937 PARTY - "ANNUAL SUMMER CARNIVAL FOR THE BENEFIT OF THE PROTESTANT EPISCOPAL CHAPEL. ST. CHRISTOPHER'S-BY-THE- SEA, THE GIBSON ISLAND. MD."

Personal and Social : *For a number of years past, residents of Westminster have attended the annual summer carnival for the benefit of the Protestant Episcopal Chapel. St. Christopher's-by-the- Sea, the Gibson Island. Md., invitation having come from Mrs. H. A. Foothorap. Harrisburg. Pa., and Gibson Island. The 1937 event is under the chairmanship of Mrs. Sifford Pearre, who wras formerly Miss Angela Young, a cousin of Mrs. Henry M. Fitzhugh. Mr. Pearre is a first cousin of J. Pearre Wantz Taneytown 1and a member of the well-known Pearre family of Frederick County. Another member of the committee arranging this event is Mrs. George Monroe Englar. who was formerly Miss Bettie Walker. Mount Airy. Mr. Englar is a son of ex-Senator and Mrs. George P. B. Englar. New Windsor. Others well known here helping with the affair are Mrs. W. Buckey Clemson,* ***Mrs. Robert Mueller*** *and Mrs. James Sloan.*

Mrs. Edwin Waters was a recent guest of Mrs. Foothorap at her Gibson Island Home. Mrs. Waters has joined her husband, Captain Waters, U S. A., at Plattsburg. N. Y., where he has been stationed for several years. Captain and Mrs. Waters will soon leave for Idaho. Captain Waters having been detailed for duty in the R O. T. C. of the University of Idaho. Captain and Mrs. Waters were very popular here while Captain Waters was on the faculty of Western Maryland College Military Department. Their son, Edwin Waters. Jr., a member of the class of 1937 of Western Marvland College, has received an appointment as second lieutenant and has reported for duty at Fort Ontario, Oswego. [....]

1937 (June) - More yacht racing

Full page below : [HN00FF][GDrive]

Maryland And Gibson Island Yacht Clubs Hold Major Racing Events

SAILING MEN HAVE BUSY DAY

Snipe And Star Class Boats Hold Initial Races Of 1937

Fresh Breeze Heels Craft Over As Season Gets Under Way

By PETER C. CHAMBLISS

The interests of nearby yachtsmen were divided yesterday between the Maryland Yacht Club and Gibson Island, both of which had major events on their programs.

At the Maryland Yacht Club a twenty-one-mile race for cruising sailing yachts with the racing class participating as a separate unit over the same course from Ferry Bar to Swan Point to Rock Creek and a contest for the snipe class from the Maryland Yacht Club to the Sparrows Point Yacht Club closed the two-day regatta marking the opening of the club's yachting season.

At Gibson Island five yachts of the racing class of the Gibson Island Yacht Squadron sailed in the first of a three-race series for the George A. Whiting trophy and six of the star-class yachts were out for the first time to sail in the initial fleet race.

Fresh Breeze Encountered

Four large cruising yachts and three of the racing class started at the same time to sail the course from Ferry Bar to Rock creek via Swan Point. A fresh breeze that heeled the craft far over was blowing as the yachts jockeyed for position. As the gun was fired, the Mary, sailed by O. L. Tiedeman and Martin Alsey, slid across the line to be first over. The Mary, noted for many years in local boating circles as a fast sloop, has bloomered forth again in her original style of rig after being rigged as a yawl for a number of seasons.

Next came Rowena, William Bertalan's sloop, followed by Virgi Trois, sloop owned by Stanley Trott, which forged rapidly to the front in the early part of the race. Sparkle, a Sound Interclub sloop owned by G. W. Youngkeve, of the Sparrows Point Yacht Club; Natalie, a yawl, Harry Sachs; Gleam, yawl, J. Leo Flanigan, of the Gibson Island Yacht Squadron, and Nirvana, Carl Dochtman's schooner, rounded out the racers.

When the yachts were off the grain elevators at Canton Gleam, the Flanigan yawl, was buffeted by two hard flaws of wind from either side which caused her parachute spinnaker and mainsail to foul. J. Leo Flanigan, Jr., son of the skipper of the Gleam, suffered a "scorched" hand when the spinnaker halyard was ripped from his hand and the sail dragged in the water. To free the canvas young Flanigan dived overboard to cut it loose. Persons on other yachts in the race thought he had been pulled overboard by the sail. The Gleam withdrew from the race.

This was the only untoward happening on the run from Ferry Bar to Swan Point to Rock Creek. Virt Trois, the Trott sloop, with Robert W. Wayland at the tiller, was the first boat to finish reaching the mark in Rock Creek at 5:16 P. M., and placing first in the racing class. The Mary was second and Sparkle withdrew.

In the cruising class Nirvana was first; Rowena second, and Natalie third.

Trophy Is Perpetual

Just before the start of the cruising and racing class, seven of the Snipe Class sloops of the Sparrows Point Club, which participated in the class racing at the Maryland Yacht Club on Saturday were sent off on a race from Ferry Bar back to their own clubhouse. The start was at 10:45 A. M., and Little Mac, Roger Girdling, the first to finish, arrived at Sparrows Point at 12:35.

The Maryland Yacht Club has put up a perpetual trophy, which is awarded each year to winner in this race.

The snipes finished in the following order: Little Mac, R. Girdling; Sampan, L. Wright; Clytie, M. Wrightson; Mermaid, W. Campbell; Skipit, McNeill; Canuck, F. Rushton, and Shim Sham, E. Lipsky.

The first race of the Whiting Trophy series brought out five of the racing class of the Gibson Island club. Quant, R. S. Mueller owner, was first over the line on the triangular Baltimore Light, Swan Point, Love Point course. Ballymona, a 10-meter sloop, owned by Richard E. Reed III, made her first appearance in local racing in the contest. She stepped out in front and held that position until Love Point had been rounded. Then Luke, A. H. Clephane, owner, took charge and headed the rest of the fleet to the finish line On corrected time Valkyrie, P. W. Howard was second; Amethyst, the Amethyst syndicate, third; Ballymona, fourth, and Quest, fifth. The trophy will be decided upon a point basis. The two other races will be run next Saturday and Sunday.

The first fleet race of the star class brought out a new boat, the Wave, built by the noted Eastern Shore yachtsman, Lowndes Johnson, and she distinguished herself. Sailed by her new owner, David Dunigan, the Wave went to the lead of the other stars early and was never headed on the windward and leeward course. Others finished in the order named: Flounder II, Emil Mosbacher, Crest, Randolph Fisher; Albacore, Donald Frey; Onward, G. Graham, and Kingfish, Art Markel.

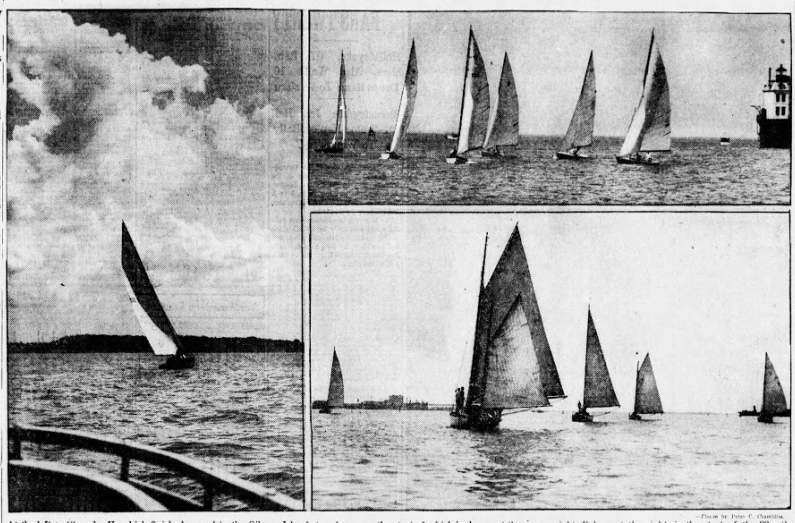
Irish Booters Score

Boston, June 6 (AP)—Ireland's claim to worthy football team, the Maple Celts, was established today shading a 17-6 decision in a picked team of Massachusetts players.

Light Wins Auto Card

Lancaster, Pa., June 6 (AP)— Mark Light swept the speed events today and several previously. This was the seventh straight he has won in central Pennsylvania.

As Chesapeake Yachtsmen Vied For Honors



Photos by Peter C. Chambliss.

At the left is Flounder II, which finished second in the Gibs on Island star-class race, the start of which is shown at the upper right. Below, at the right, is the start of the 22-mile cruising race of the Maryland Yacht Club's opening regatta.

SUBURBAN WINS GOLF CONTEST

Conquers Woodholme Team; Mr. And Mrs. Goblentz Triumph In Test

Suburban Club defeated Woodholme Country Club, 17½ to 12½, in a team match yesterday at Suburban. The visitors piled up a winning margin in the first three matches in which they won 8 of a possible 9 points.

SUBURBAN		WOODHOLME	
Nathan Baltzell, Jr.	2	J. J. Lilly and Joseph Wilner	0
Graham Bartlett and Nicholas Bartlett	2	Victor Lebell and Al Gallerie	1
Daniel Crane, Jr., and Dr. Edward Ward	2	Morris Lewis and Nathan Lewis	0
Mark Rayburn and George Rice	1	Morris Frank and Charles Baller	2
Wilson Bowie and Wilson Bowie, 2d	2	Myles Kidner and Joseph Kolodny	1
Purdy Hall and Sam Silberstein	1	Neil Richards and Milton Cahan	0
Dr. Louis Jacobs	1½	Samuel Cohen and Howard Cohen	1½
David Schmertz and Fred Nusbaum	2	Jerold Farbman and Harold Gross	0
Lewis Hechler and Donald Weiler	2	William Schlenker and L. Mahover	0
H. E. Grandison and	2	A. Wilkinson and David Bernie	0
Total	17½	Total	12½

Mr. and Mrs. O. B. Coblentz won first low net honors in the mixed two-ball tournament held yesterday at the Rolling Road Golf Club. They carded a score of 111-36—77. Second were Claire Wilson and J. B. Donovan, with a 109-30—79. Third prize went to Mrs. Settle and F. Hoffrogge, with 106-24—82.

Ray Rever, club president, and Doris Rever, his daughter, won low gross prize, with 106. Other scores:

Mr. and Mrs. C. H. Hoffrogge	106	24	82
Mr. and Mrs. Claire Wilson	109	26	83
Mrs. G. Strickland and C. Keller	110	26	84
Mrs. Hinke and George Hemsath	110	26	84
Mr. and Mrs. Ray Rever	106	20	86
M. Strickland and W. Brandt	110	24	86
Mrs. B. B. Rose and C. Lodtke	115	26	89
Mr. and Mrs. Hoffrogge	111	20	91
Mr. and Mrs. George Mellinger	121	26	95

Entrants in the women's State championship golf tournament will play their final practice rounds today at the Five Farms course, where qualifying is scheduled tomorrow. Mrs. Betty Meckley, champion for the last two years, and Helen Dettweiler, crowned winner in 1934, will head a list of favored Washington entrants. Thus far 44 have entered, but post entries will be accepted.

Pros of the Middle Atlantic Association and amateur partners will complete today in a regularly scheduled tournament at Hillendale.

Interclub Tennis

Scores Of Yesterday

Naval Officers, 5; Mt. Washington, 1

Homeland, 8; Catoctin, 1

Standing Of The Clubs

	W.	L.	Pct.	G. B.
Homeland	3	0	1.000	
Naval Officers	3	1	.750	½
Catoctin	1	2	.333	1½
Mt. Washington	0	3	.000	2½

Homeland Racket Club, by defeating Catoctin, 9 to 1, at Frederick, stepped into undisputed possession of first place in the Interclub Tennis League yesterday.

At the same time, Baltimore Country Club, which had been in a tie for second and in strong league competition, climbed to a tie for second place. Its smaller match, the Naval Officers reclaimed their shortcut of opening day by trimming Mount Washington, 5 to 1, at Mount Washington.

Homeland, 8; Catoctin, 1

SINGLES

Richard Symons, Homeland, defeated Victor Cahn, Catoctin		6-2, 6-2	
Bruce Bowers, Homeland, defeated Bruce Hoffman, Catoctin		6-3, 6-2	
Dr. Harry Hillman, Homeland, defeated Dr. Frank Hoffman, Catoctin		6-4, 6-1	

DOUBLES

Symons and Bowers, Homeland, defeated Hoffman and Cahn, Catoctin	6-4, 6-4	
Hillman and Dr. Hugh Hillman, Homeland, defeated Dr. Frank Hoffman and Dr. Harry Hoffman, Catoctin	6-2, 6-2	

Naval Officers, 5; Mt. Wash., 1

SINGLES

J. Jones, Naval Officers, defeated R. Brown, Mt. Washington	6-4, 6-4, 6-0	
Lieutenant Dick, Naval Officers, defeated P. Wagner, Mt. Washington	6-2, 6-2	
Lieutenant Washington, Naval Officers, defeated Lieutenant Commander Low, Naval Officers	6-2, 6-2	

DOUBLES

Jones and Lieutenant Dick, Naval Officers, defeated Washington and Lieutenant Commander Low, Naval Officers	6-4, 6-4	
Wagner and Brown, Mt. Washington, defeated Lieutenant Rogers, Naval Officers, and Major Washington, Mt. Washington	6-4, 6-4	

Baltimore C. C., 6; L'Hirondelle, 3

SINGLES

P. T. Goldsborough, Baltimore C. C., defeated Jesse King, L'Hirondelle	6-2, 6-3	
Dave Jacobs, Baltimore C. C., defeated Bill Hall, L'Hirondelle	6-2, 6-4	
Bill Hall, L'Hirondelle, defeated Stanley Frank	6-4, 6-4	

• GIBBERISH •

By C. M. GIBBS

THORNCLIFFE PARK, up Toronto way, added an interesting chapter to the ancient game of horse racing when a race was run with one of the entries missing and then ordered run over again.

It developed that the horse which didn't start was an 80-to-1 shot. It came out nice and fresh for the rerun and easily trounced the tired nags. This made those who had won bets on the race as originally run feel swell.

In fact they did swell up with righteous anger, crowded on the track and came near breaking up the plant before the gendarmes, cops or whatever you call 'em managed to clear the malcontents, or irked fans.

It was all a very goofy proceeding as that at least had a touch of originality whatever else you may say against it. What I'd like to know, however, is where the heck was Lassie's Mary, the nag that failed to go to the post at first, and also why.

o—o

Hubbell Hasn't Improved Yet

SPEAKING of going to the post, there seemed to be those who thought that the fracturing of Hubbell's winning streak of 24 straight over two seasons would be beneficial, that he would be tougher to beat after the strain was removed.

Gosh knows if you can't beat a guy in 24 straight times you wouldn't want him any tougher. But anyhow the strain of the streak evidently hadn't worn off the other day when Hub was chased for the second straight time.

Truth is it may take a little time for the great southpaw to get himself straightened out again and start winning consistently.

o—o

SPEAKING about getting straightened out, that was a cute trick of Dizzy Dean's in sitting down on the mound to cool off during Saturday's game. I bet he'll think up some better ones than that before the season is over.

The mysterious angle about all this is that the umpires appear to be afraid to do anything and apparently the Cardinal management isn't inclined to.

It's all a very interesting phenomenon.

o—o

AND as long as interesting phenomenas are the subject, there is Catcher Bolton, of the Washington Senators. You know how Bolton joined the team and then suddenly decides to go home—and hails the team.

He has been doing this a long time. Only recently he decided to return to the Senators, was there a couple of days and now I understand he has disappeared again.

o—o

PERHAPS he would not love baseball half so much did he not love his home more, or vice versa.

At any rate, he is a strange young man. He at least has the courage of his convictions, whatever they are. He loves his own life, baseball slavery to the contrary notwithstanding.

While he has been at it he has caused Owner Griffith to pluck many a hair out of his eyebrows. And I wonder how they decide whether and when the club owes Bolton any back wages, or Bolton owes them service, or do they?

o—o

IT is interesting to note that the umpires forfeited a game against the Phils yesterday for stalling tactics. Stalling, as you know, simply means killing time.

It's true that Dizzy Dean was allowed to take 11 minutes to throw three balls at Charley Wilson a week or so back, and that the umps didn't do a thing about it.

And it's also remembered that Dizzy sat down on the mound to rest the other day with not a whimper from the umps about stalling. But the Phils, well that's different. They stall and the umps run in their wrath and take the game away from them.

o—o

Gosh, The Ideas Are Numerous

THE National League is making a swell name for itself this season.

It's got all the gag writers busy studying the daily sports pages for jokes ideas—and they are finding plenty.

o—o

AND while speaking of jokes and things you may notice that the French Davis Cup team was pushed out of the cup play by Czechoslovakia.

It seems only a short time ago that the great French players were blasting the United States forces over the cup picture.

They had their day in the sun and are now on the way out as the American netters appear to be coming slowly back on the trail.

Ranger Races Rainbow In Today's Cup Trial

Newport, R. I., June 6 (AP)—Ranger, Harold S. Vanderbilt's unbeaten candidate for defense of the America's Cup, tomorrow will meet Chandler Hovey's Rainbow, the sloop with which Vanderbilt vanquished T. O. M. Sopwith's challenger, Endeavour I, in another of the cup trial races.

Ranger has yet to win a race in the trial series. She was designed by both Ranger and Yankee in her first sailing tests, but, to each, hard luck pursued her. When Yankee beat her she blew out her mainsail on the second leg of a 30-mile triangular course when Ranger led by nearly a minute. In the race that favored the Vanderbilt entry by capturing a 45-mile test to windward into a stiff breeze after Rainbow had held the advantage the first five miles.

SNEAD FAVORED FOR GOLF TITLE

Rice Likes Long Hitter's Chances In U. S. Open At Oakland Hills

By GRANTLAND RICE

(Special Dispatch. Copyright, 1937.)

New York, June 6—If you happen to run across a number of betting commissioners or golf bookmakers this week, don't be surprised to see a drawn and haggard look upon their faces. Like Mother Machree, their "brows are furrowed and wrinkled with care."

The answer is a young ex-caddie from the hillbilly country of West Virginia, playing in his first open championship. For it so happens the play on Sam Snead has made him the betting favorite over such stars as Harry Cooper, Henry Picard, Gene Sarazen, Ralph Guldahl, Horton Smith, Johnny Revolta, Ed Dudley and others who have been occupying the top places for the last few years.

"If Snead wins I'll be wrecked," one prominent betting commissioner told me. "I've cut him from 18 down to 8 to 1 and still the money rolls in."

"There are forty men who can win the championship," I said. "Maybe more."

Course For Big Hitters

"I know it," he said, "but as ran Snead. This is a course for big hitters—and Snead is a big hitter. He can also play every other shot—including putting. And he's proved he can win in fast company."

Thinking of Sammy Snead at Oakland Hills, Detroit, this week carries me back to Skokie, Chicago, the year being 1922. All the talk then was around Walter Hagen and Bobby Jones. I was sitting with Damon Runyan as two ex-caddies came by, starting for the first tee.

Who are those two fellows? Damon asked.

"A couple of kids." I said, "by the names of Gene Sarazen and Johnny Farrell."

"Are they any good?" Runyan asked.

"They are both good enough to win," was the answer, "And both will before they are through."

Gene Holes Two 40-Footers

Gene and Johnny were then around 21—Gene with his barrel legs, and lanky Johnny in a sartorial makeup of orange, blue and green. Gene won that championship, a stroke in front of Bobby Jones and dear John Black—but Johnny had to wait six years for his famous playoff against Bobby Jones in the same city—Chicago.

How many keene that, in that Skokie championship, Gene, staggering and struggling, figured he was completely out of the running until he holed two 40-footers in succession? That was the spark that sent him spinning along to the front. I'll never forget young Gene, ex-caddie from Westchester, smoking a big cigar on the clubhouse porch as Bob Jones and John Black were coming in. Gene had finished at 288—seven fives. Someone came rushing up and said that Jones and Black had pars for the same figure. "That's all right with me," Sarazen said. "I've got mine."

Now we have about the same type challenging again in Sammy Snead. Once more an ex-caddie just out of the hamons—a West Virginia hillbilly in place of a Westchester Italian who had lugged clubs on sturdy legs since he was 11 years old.

Whether he wins or loses, Sammy Snead is one of the great golfers of the world today.

Starts With Gallery

Sarazen had his chance to ride along winning and unbridled. He had almost no gallery most of the way. Snead faces a rougher road. He starts with Johnny Goodman, another crowd pleaser, at 1:25 on Thursday, and he is almost sure to carry more than his share of the thundering herd. This is a distinct handicap. Especially for a young player in his first championship. Seventy per cent. of golf—maybe 80 per cent.—in the upper levels—is concentration. It isn't as easy to concentrate with a thumpeting mob charging all over the landscape, swirling around you.

I hope the gallery at Oakland Hills gives Snead his chance. I hope Snead can detach himself from the crowd—take it as another tournament—and play his game. For he has a game worth watching—he has everything except experience. He is a terrific hitter with a loose, willowy body—where body, hands and arms work together in amazing coordination.

But after all, in this field, you are shooting against 143 survivors from more than 1,0[illegible] starters. And you are in a game where anything can happen—and always does.

Armour Misses $300 Putt By Inch In Loss To Cooper And Smith

Toledo, Ohio, June 6 (AP)—Silver-haired Tommy Armour, veteran of the golfing wars, missed by an inch today a putt worth $300 as Lighthorse Harry Cooper and Horton Smith, the red-headed Joplin Ghost, grabbed the first prize of $1,000 in the third annual Inverness best-ball match-play tourney.

The heart-breaking 25-foot putt came on the final hole of the 128-hole tourney, providing the greatest finish the event has ever seen. Armour, winner of the National Open in 1927, and Thomson, not in the group's class at the game has ever known, needed a victory on the last hole to tie Smith and Cooper in the standings.

The 16 professionals scored 298 birdies and 64 eagles during the seven matches. 75 of the sub-par holes being recorded down the stretch.

BUDGE NAMED NET FAVORITE

Rated Even Against Field In Forthcoming Wimbledon Tournament

By the Associated Press

London, June 6 — England's biggest tennis bookmaker today listed Don Budge, red-headed American Davis Cup star, as an even-money favorite to win the all-England singles championship at Wimbledon.

Gottfried von Cramm, of Germany, was second choice at 2 to 1 for the tournament which begins June 21. Bunny Austin, England's leading amateur since Fred Perry turned pro, and Adrian Quist, Australian ace, were quoted at 6 to 1.

Henner Henkel, of Germany, was listed at 7-1; Bryant Grant, the "midget" United States Davis Cupper, and Vivian McGrath and Jack Crawford, of Australia, followed at 10-1, and Frankie Parker, United States; Roderich Menzel, Czechoslovakia, and Bernard Destremau, France, at 20-1.

Mrs. Hilda Krahwinkle Sperling, of Denmark, at 2 to 1, carried the shortest odds among the women. Helen Jacobs was quoted at 3 to 1, Anita Lizana, of Chile, 4 to 1, and America's Alice Marble and England's Dorothy Round at 6 to 1.

Germany Leads Italy In European Series

New York, June 6 (AP)—While the United States team was getting ready in Europe to prepare for the inter-zone round of their zone competition next Friday, Germany, the favorite took the lead in the quarter-final series with Italy.

Hungarians and Czechoslovakia quite tied to zero in the semi-finals by the same margin as Roderich Menzel and Henner Henkel defeated Bernard Destremau and Christian Boussus, respectively.

Belgium turned back Sweden 3-2 as Jacques Brugnon, playing Max Ellmer in the deciding match, defeated Karl Schroeder and Andre Lamot.

TENNIS EVENTS TO BEGIN TODAY

Men's And Women's State Championships To Start At Roland Park

Many Visitors Practice At Baltimore Country Club For Tourney

By CRAIG E. TAYLOR

New champions in both men's and women's divisions will be crowned in the State tennis tournaments scheduled to begin today at the Baltimore Country Club.

Berkeley Bell, victor in 1933, has since turned professional, and Thelma Smith, the California girl who won the women's title that year, will not defend the crown. Neither tournament was held last year.

In both events there will be many newcomers to local courts. Lots of them practiced yesterday on the Roland Park courts. Six youths from the University of California were on hand. So were many others from various institutions of higher learning, with more expected to arrive this morning.

Heads Seeded Eight

Barney Welsh, of Rockville, top-ranking player of the Middle Atlantic list and among the first 20 in national ranking, heads the seeded eight, with collegians taking most of the remaining places. Only Eddie Jacobs, placed sixth, made the grade from among local entrants. All the others are strangers here, but their records indicate that the fight for the crown will be an open one.

University of North Carolina, year in and year out one of the leaders in the collegiate field, has sent three of its regulars and three freshmen. University of Texas has a group headed by Lindsay Franklin, second seeded player. Princeton, Yale and Tulane all have capable racquet wielders in the competition, and the seeded list is not likely to reach the quarter-final round intact.

With the exception of the Davis Cup squad, bound for Europe and 10 it hoped possession of the international trophy, most of the capable players were communicated with by the committee and the result has been a field that promises some good tennis for the revival of the tournament.

Play Begins At 3 P. M.

Play will begin at 3 o'clock, and for the first day the committee will be somewhat lenient on defaults. Starting tomorrow, the default rule will be enforced strictly. It is hoped to conclude the preliminary and first rounds today, reducing the field to 32 tomorrow and 16 on Wednesday. If this is accomplished, the doubles tournament can begin on Wednesday with a fair chance of finishing at the same time as the singles—on Saturday afternoon.

The women's tournament also lists an unusual number of players not so very well known to local galleries. In fact, despite the placing at No. 1 of Mary Coates, from Washington, it is felt that a dark horse may win. Thirty players are entered in this tournament. Play will begin at 10:30 A. M. and continue for three hours.

Blues Win in Maryland Polo Club Match

As a gracious welcome one brings out Mount Vernon, the patrician of American rye. Gentlemen have done it since George Washington's day.

Mount Vernon
STRAIGHT RYE WHISKEY

YOUR GUIDE TO GOOD LIQUORS

Bottled in Bond under U. S. Government supervision — Full 100 proof

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Gordon P. Gardner

Personal Hits of Oriole Pontiac

G. P. GARNER who has been associated with us for the past six months in the capacity of used car salesman is taking this opportunity to thank his many friends for their past patronage and to extend them an invitation to visit our showrooms.

Oriole Pontiac Co.
H. D. SHIPLEY, Pres.
200 W. North Ave.
VErnon 6764

1937 July 1 - Rothachild wins yacht race !

See 1937-07-02-nytimes-page13-clip-94396187.pdf / https://drive.google.com/open?id=1C-tWN3hy5kXrySZ05huL2VIFwerPnfBA

1937 July Gibson Island Carnival

Full page : [HN00FU][GDrive]

Gibson Island Carnival Set For

Society Notes

By NORAH GITTINGS

GIBSON ISLAND, one of our most popular nearby summer resorts, will be in gala attire on Tuesday for its annual summer carnival, to be held all day for the benefit of the little Protestant Episcopal chapel, St. Christopher's-by-the-Sea. Mrs. Sifford Pearre is general chairman, assisted by Mrs. Walter Galloway as vice-chairman and Mrs. John R. Sherwood as publicity chairman.

For the children it is the big day of the season, everything imaginable being done for their entertainment. The day starts off at 10.30 A. M. with a gymkhana for them, including all kinds of games, a Punch and Judy show, a magician, a talking doll and animal circus, with plenty of soft drinks and ice-cream cones, all under the chairmanship of Mrs. James Sloan, assisted by Mrs. N. Taylor Kennedy, Mrs. Donald McKnew, Mrs. Merrell Stout and Mrs. Stover Foster. Mrs. Rentzell Cleaveland is in charge of the cake and candy committee.

Luncheon And Card Party

Luncheon will be served at the clubhouse, after which a card party will be held in the club from 2 until 4.30 P. M., under the direction of Mrs. Nathaniel S. Kenny. Her committee includes Mrs. Frank H. Linthicum, Mrs. Page Edmunds, Mrs. Edgar Snowden, of Washington; Mrs. E. B. Freeman and Mrs. Robert Miller.

At 2.30 P. M. the greatest excitement of the day comes for the children with the toyboat race under the direction of Mrs. Frederic C. Lee. Helping her will be George Penniman, John Donohue, Harrison Sadtler, of Annapolis; Harry Primrose and Stuart Symington Orrick. Prizes will be awarded to the winners. There will also be some one on hand to cut silhouettes.

In the evening the grownups come into their own with a sea-food supper and dancing, held in the clubhouse. Mrs. Thomas R. Symington is in charge, assisted by Mrs. Richard Breed, Mrs. L. Corrin Strong, of Washington; Mrs. C. Ellis Ellicott, Jr., Mrs. Lawrence M. Bailliere and Miss Margaret Bowen.

Reservations Are Many

Among those who have made reservations are Mr. and Mrs. Symington, Mr. and Mrs. Sifford Pearre, Doctor and Mrs. Merrell L. Stout, Mr. and Mrs. William M. Passano, Doctor and Mrs. Edmunds, Mr. and Mrs. Philip Frohman, Mr. and Mrs. Edward Palmer, Mr. and Mrs. Melville Grosvenor, Mr. and Mrs. Edgar Hoen, Mr. and Mrs. Bailliere, Mr. and Mrs. Edmund L. R. Smith and Mr. and Mrs. Sherwood.

St. Christopher's Day is open to the public and guest privileges of the club will be extended to all. On Tuesday Gibson Island will throw open its doors.

MRS. JOHN R. SHERWOOD

Mrs. John R. Sherwood, who is publicity chairman for the benefit to be given Tuesday for St. Christopher's-by-the-Sea, and Mr. Sherwood, who have long had a home at Gibson Island, are both enthusiastic about water sports

[HN00FV][GDrive]

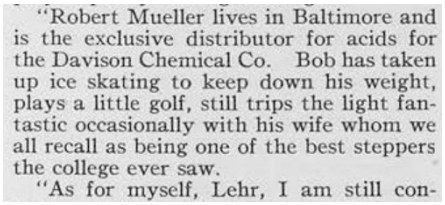
MISS ELIZABETH MUELLER, MISS CHARLOTTE NOLAND SMITH AND MISS EMILIE MUELLER

The Misses Mueller are the daughters of Mr. and Mrs. Robert Mueller, of Gittings avenue; Miss Smith is the daughter of Mr. and Mrs. Edmund R. Law Smith. They are spending the summer at Gibson Island

[HN00FW][GDrive]

1938

(See full Lafayette Alumnus 1938 PDF at [HE000G][GDrive])



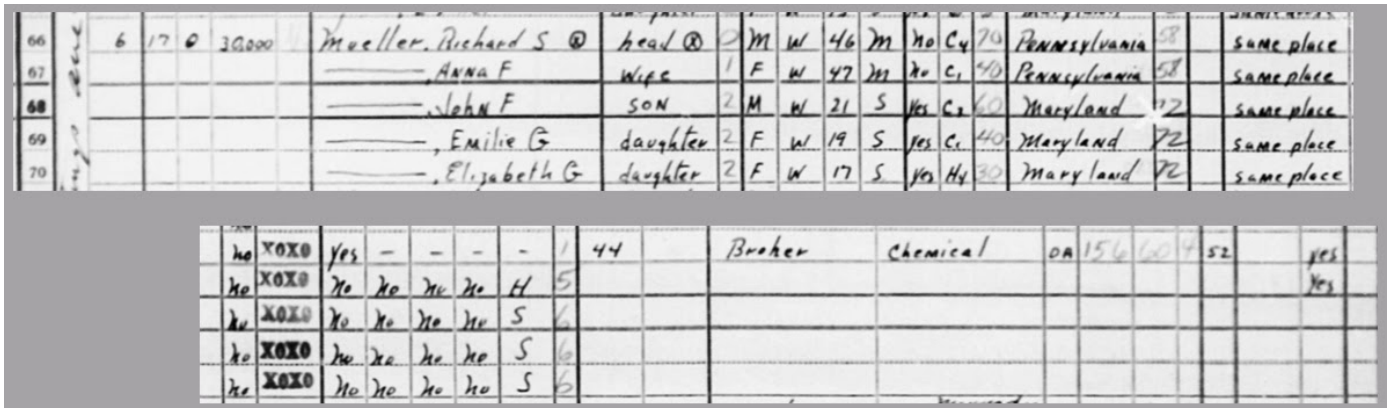
"Robert Mueller lives in Baltimore and is the exclusive distributor for acids for the Davison Chemical Co. Bob has taken up ice skating to keep down his weight, plays a little golf, still trips the light fantastic occasionally with his wife whom we all recall as being one of the best steppers the college ever saw.
"As for myself, Lehr, I am still con-

[HE000H][GDrive]

Read more about the **Davison Chemical Company** on the research page.

1940

The 1940 Census: In 1940, the Robert Swan Mueller I family in Baltimore, Maryland has added no new children since 1930, but they have moved. Robert Swan Mueller I is now 47 years old. Their oldest son, Robert Swan Mueller II, has apparently moved out of their Baltimore home. Their second child **John Freeman Mueller** is now 21 years old, and their daughters **Emilie G. Mueller** (age 19) and Elizabeth Mueller (age 17) are still in the home. Robert Swan Mueller I's job is now listed as *"a Broker at a Chemical company"*, which is assumed to still be at his own **R.S. Mueller Company** that he started in 1923 (Robert Swan Mueller I would have 17 years with his own company by now). (For full page from census, see : [HS000G][GDrive])



66		6	17	6	30000	Mueller, Richard S ⓡ	head ⓡ	2	M	W	46	M	No	C4	70	Pennsylvania	58		same place												
67						——— Anna F	Wife	1	F	W	47	M	No	C1	40	Pennsylvania	58		same place												
68						——— John F	son	2	M	W	21	S	Yes	C2	60	Maryland	72		same place												
69						——— Emilie G	daughter	2	F	W	19	S	yes	C1	40	Maryland	72		same place												
70						——— Elizabeth G	daughter	2	F	W	17	S	yes	Hy	30	Maryland	72		same place												
		No	XOXO	yes	—	—	—	—	1	44		Broker		Chemical		OA	156	60	4	52		yes									
		No	XOXO	No	No	No	No	H	5													Yes									
		No	XOXO	No	No	No	No	S	6																						
		No	XOXO	No	No	No	No	S	6																						
		No	XOXO	No	No	No	No	S	6																						

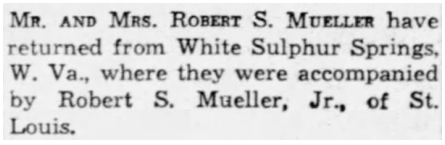
[HS000H][GDrive]

1940 - R.S. Mueller Company mentioned in legal case

"33 F. Supp. 367 (1940) In re GRAND JURY INVESTIGATION. District Court, M. D. North Carolina, Winston Salem Division. March 30, 1940.On Reargument April 12, 1940." See [HX000A][GDrive] .

1940 (June) - Travel to West Virginia to visit son RSM2

See full page in 1940 newspaper at [HN00E4][GDrive]



MR. AND MRS. ROBERT S. MUELLER have returned from White Sulphur Springs, W. Va., where they were accompanied by Robert S. Mueller, Jr., of St. Louis.

[HN00E5][GDrive]

1942 (Aug) - Reside in Miami Beach, Florida, while sons are stationed in Miami

(See full page in 1942 newspaper at [HN00E6][GDrive])

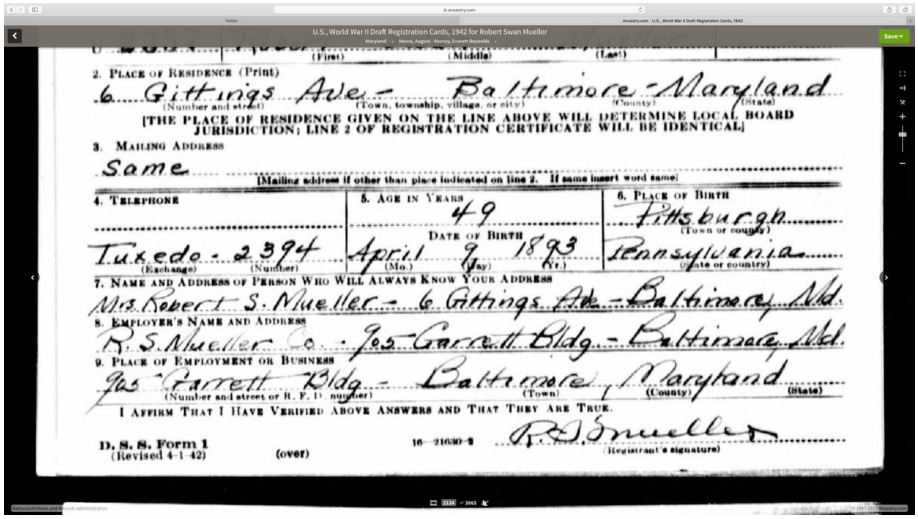
Returned From Miami

Mrs. Robert Swan Mueller and her daughter, Miss Emily Mueller, of Gittings avenue, returned Monday after spending several months at Miami Beach, Fla., where they took an apartment. Mrs. Mueller sons, Ensign John F. Mueller and Ensign Robert S. Mueller, Jr., were both stationed at Miami. Her other daughter, Miss Elizabeth Mueller, is a councilor for the summer at Camp Marlin, in Andover, N. H.

[HN00E7][GDrive]

1942 - October - Military Enlistment

In October of 1942, **Robert Swan Mueller I** again completed a War enlistment card. *Robert Swan Mueller I was 49 years old at this time, so it is very strange that he is filling out registration at that age.* His home address of 6 Gittings Avenue in Baltimore, Maryland matches the 1940 US Census data. His continued employment at his chemical/brokerage company **R. S. Mueller Co.** is verified (now opened for almost 20 years) at 905 Garrett Building in Baltimore, Maryland. (Historic info on the Garrett Building can be viewed here : 1982-us-dept-of-interior-national-reg-historic-places-nomintation-706-baltimore-garrett-building.pdf / https://drive.google.com/open?id=1ENVPWcmYugZd4scE-pbBH40QUHOzYh7I).



U.S., World War II Draft Registration Cards, 1942 for Robert Swan Mueller

(First) (Middle) (Last)

2. PLACE OF RESIDENCE (Print)
6 Gittings Ave. (Number and street) Baltimore (Town, township, village, or city) Maryland (County) (State)

[THE PLACE OF RESIDENCE GIVEN ON THE LINE ABOVE WILL DETERMINE LOCAL BOARD JURISDICTION; LINE 2 OF REGISTRATION CERTIFICATE WILL BE IDENTICAL]

3. MAILING ADDRESS
Same
[Mailing address if other than place indicated on line 2. If same insert word same]

4. TELEPHONE
Tuxedo 2394 (Exchange) (Number)

5. AGE IN YEARS 49
DATE OF BIRTH April 9 1893 (Mo.) (Day) (Yr.)

6. PLACE OF BIRTH
Pittsburgh (Town or county)
Pennsylvania (State or country)

7. NAME AND ADDRESS OF PERSON WHO WILL ALWAYS KNOW YOUR ADDRESS
Mrs. Robert S. Mueller - 6 Gittings Ave. - Baltimore, Md.

8. EMPLOYER'S NAME AND ADDRESS
R. S. Mueller Co. - 905 Garrett Bldg. - Baltimore, Md.

9. PLACE OF EMPLOYMENT OR BUSINESS
905 Garrett Bldg. (Number and street or R. F. D. number) - Baltimore (Town) Maryland (County) (State)

I AFFIRM THAT I HAVE VERIFIED ABOVE ANSWERS AND THAT THEY ARE TRUE.

R. S. Mueller (Registrant's signature)

D. S. S. Form 1 (Revised 4-1-42) (over) 16-21630-1

[HG000Z][GDrive]

1943 (June) - Wedding announcement of son Robert Mueller II to Alice Truesdale

The June 28 1943 NY Times, in a big article, announces the wedding. This bonds the family of Robert Swan Mueller I to the **Truesdale Family**. The bride (and now daughter-in-law) is notably a niece of of **Mrs. Richard Bissell** of Washington, and also a niece of the late **Mrs. Jonathan Bulkley**. Full article available here : [HN00DQ][GDrive]

ALICE TRUESDALE WILL BE MARRIED

Graduate of Miss Hall's School Is Fiancee of Lieut. Robert S. Mueller Jr. of Navy

WEDDING SET FOR AUTUMN

The Prospective Bridegroom Is an Alumnus of Princeton University, Class of '38

Lieut. Commdr. Melville D. Truesdale, USNR, and Mrs. Truesdale of 580 Park Avenue have announced the engagement of their daughter, Alice, to Lieut. Robert Swan Mueller Jr., USNR, son of Mr. and Mrs. Mueller of Baltimore. The wedding will take place in the early autumn.

Miss Truesdale was graduated from Miss Hall's School, and was introduced to society in 1938. She is a granddaughter of the late Mr. and Mrs. William Hanes Truesdale of this city and of the late Mr. and Mrs. Frederick William Moss, also of New York; a niece of Mrs. Richard Bissell of Washington and of the late Mrs. Jonathan Bulkley.

Lieutenant Mueller was graduated in 1938 from Princeton University, where he was a member of Cap and Gown.

ENGAGED TO MEN IN THE ARMED FORCES

Miss Alice Truesdale Phyfe

Miss Mary Bushnell Pearce Bachrach

BARBARA Y. LUTZ FIANCEE OF ENSIGN

MISS MARY PEARCE BECOMES ENGAGED

MISS A WED I

Becomes Hurdma Chape

WEARS

Sally Loh Maid—E Army S

Special t NEW HA Miss Ann Carl A. Yale Univ mann, was to Frederic son of Mr. White Plai quand Cha The cerem the Rev. D at Yale. The brid her father, gown and white orchi Miss Sa sister's ma attendants Pervere of Misses Ge so: of this of Germa Rutledge o Corp. Ed

[HN00DR][GDrive]

1943 (Aug) - Daughter Elizabeth engagement

See full newspaper page : [HN00FK][GDrive]

MISS ELIZABETH ANN MUELLER

The engagement of Miss Mueller and Second Lieutenant Benjamin A. Bosher, USMCR, of Richmond and Baltimore, is being announced today by her parents, Mr. and Mrs. Robert S. Mueller

Miss Mueller Engaged To Marine Lieutenant

MR. AND MRS. ROBERT SWAN MUELLER, of Gittings avenue, have announced the engagement of their daughter, Miss Elizabeth Ann Mueller, and Second Lieutenant Benjamin A. Bosher, USMCR, son of Mr. and Mrs. Lewis H. Bosher, of Richmond, Va.

Miss Mueller was graduated from Miss Hall's School, Pittsfield, Mass., and made her debut here in 1941. Lieutenant Bosher is a graduate of the Massachusetts Institute of Technology, class of 1940, and is a member of the Delta Psi Fraternity. Prior to joining the Marine Corps a few months ago, he lived in Baltimore several years.

The wedding will take place September 11.

Mr. and Mrs. Gresham H. Poe will leave the middle of the month for Magnolia, Mass.

Mrs. George Weems Williams has left for Craftsbury Common, Vt. Mrs. John S. Gibbs plans to go to the resort later. Every summer she visits Mrs. J. H. Covington, of Washington, who has a summer home at Craftsbury.

Aug 8 1943 Baltimore Sun

[HN00FK][GDrive]

1947 (Oct) - Sale of home on Gibson Island

(See full page in 1947 newspaper at [HN00FM][GDrive])

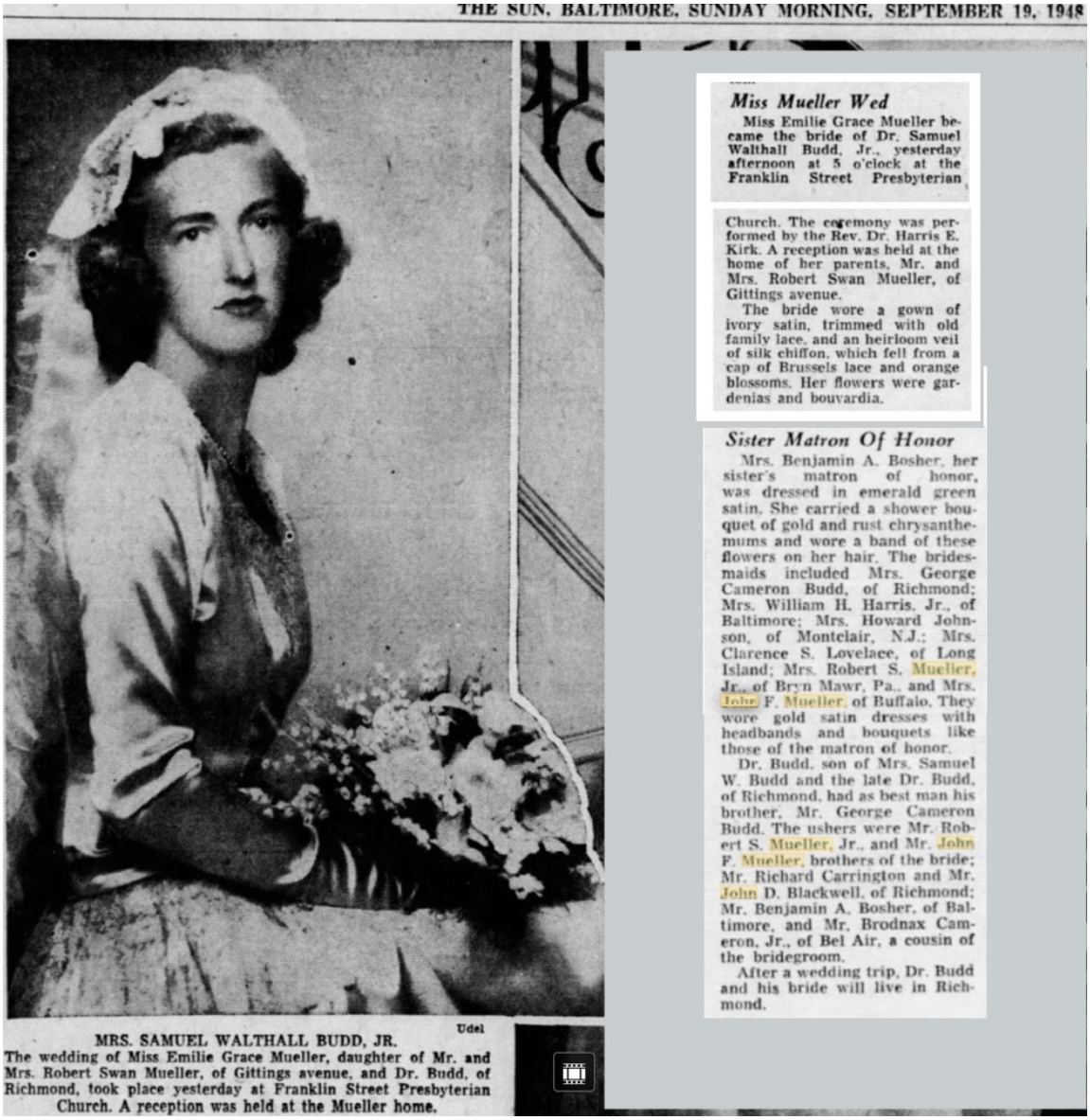
Sloan Company—Sale of dwelling on Gibson Island overlooking Chesapeake Bay at Oxbury and Kerry Beacon roads for Robert S. Mueller to Edmund A. Staub; water-front property on Mountain road, between Pinehurst and Gibson Island, for Harry F. Ogden and Dr. Frank N. Ogden to C. Preston Scheffenacker.

Oct 26 1947 Baltimore Sun

[HN00FN][GDrive]

1948 (September) - Wedding of daughter Emilie Grace Mueller to Dr. Samuel Walthall Budd

(See full page in 1948 newspaper at [HN00FI][GDrive])



THE SUN, BALTIMORE, SUNDAY MORNING, SEPTEMBER 19, 1948

Udel

MRS. SAMUEL WALTHALL BUDD, JR.
The wedding of Miss Emilie Grace Mueller, daughter of Mr. and Mrs. Robert Swan Mueller, of Gittings avenue, and Dr. Budd, of Richmond, took place yesterday at Franklin Street Presbyterian Church. A reception was held at the Mueller home.

Miss Mueller Wed

Miss Emilie Grace Mueller became the bride of Dr. Samuel Walthall Budd, Jr., yesterday afternoon at 5 o'clock at the Franklin Street Presbyterian Church. The ceremony was performed by the Rev. Dr. Harris E. Kirk. A reception was held at the home of her parents, Mr. and Mrs. Robert Swan Mueller, of Gittings avenue.

The bride wore a gown of ivory satin, trimmed with old family lace, and an heirloom veil of silk chiffon, which fell from a cap of Brussels lace and orange blossoms. Her flowers were gardenias and bouvardia.

Sister Matron Of Honor

Mrs. Benjamin A. Bosher, her sister's matron of honor, was dressed in emerald green satin. She carried a shower bouquet of gold and rust chrysanthemums and wore a band of these flowers on her hair. The bridesmaids included Mrs. George Cameron Budd, of Richmond; Mrs. William H. Harris, Jr., of Baltimore; Mrs. Howard Johnson, of Montclair, N.J.; Mrs. Clarence S. Lovelace, of Long Island; Mrs. Robert S. Mueller, Jr., of Bryn Mawr, Pa., and Mrs. John F. Mueller, of Buffalo. They wore gold satin dresses with headbands and bouquets like those of the matron of honor.

Dr. Budd, son of Mrs. Samuel W. Budd and the late Dr. Budd, of Richmond, had as best man his brother, Mr. George Cameron Budd. The ushers were Mr. Robert S. Mueller, Jr., and Mr. John F. Mueller, brothers of the bride; Mr. Richard Carrington and Mr. John D. Blackwell, of Richmond; Mr. Benjamin A. Bosher, of Baltimore, and Mr. Brodnax Cameron, Jr., of Bel Air, a cousin of the bridegroom.

After a wedding trip, Dr. Budd and his bride will live in Richmond.

[HN00FJ][GDrive]

1960 (Nov) - Public support for Presidential candidate Richard Nixon

(See full page in 1960 newspaper at [HN00FO][GDrive])

1964 (May) - R. S. Mueller Company still in business, moved to Baltimore's new One North Charles office building

Also known as "🔵The Blaustein Building, Baltimore ". "**The Blaustein Building** is a highrise building located in Baltimore, Maryland, United States. The building stands at 360 feet (110 m), containing 30 floors. The building was constructed in 1962, and was developed by Vincent Kling & Associates.". We know that in 1964, the Baltimore and Ohio Railroad was the largest single tenant in "**One Charles Center**" [HN00FX][GDrive] . See Jacob Blaustein (born 1892) page for biography: "**Jacob Blaustein**, founder of the **American Oil Company** and a president of the American Jewish Committee, died tonight at his farm. He was 78 years old."

THE EVENING SUN, BALTIMORE, THURSDAY, MAY 28, 1964 PAGE B 3

DEDICATED TO THE NEW BALTIMORE

ONE NORTH CHARLES
THE BLAUSTEIN BUILDING

WE ARE PROUD TO DEDICATE TODAY ONE NORTH CHARLES, THE BLAUSTEIN BUILDING, OUR CONTRIBUTION TO THE NEW BALTIMORE. OUR FAITH IN DOWNTOWN BALTIMORE IS SHARED BY THE FOLLOWING DISTINGUISHED BUSINESS FIRMS WHO HAVE JOINED US AS TENANTS IN THIS GREAT NEW BUILDING:

AMERICAN OIL COMPANY
AMERICAN RADIO-TELEPHONE SERVICE
AMERICAN TRADING AND PRODUCTION CORPORATION
MELVIN BALOTIN
BALTIMORE GAS & ELECTRIC COMPANY
BALTIMORE & OHIO RAILROAD COMPANY
BETHLEHEM STEEL CORPORATION
CONSULATE OF BRAZIL
BRITISH OVERSEAS AIRWAYS CORPORATION
CABLE & McDANIEL
CELLO CHEMICAL COMPANY
CONNECTICUT GENERAL LIFE INSURANCE COMPANY
CROWN CENTRAL PETROLEUM CORPORATION
ERNST & ERNST
FARBOIL COMPANY
GENERAL ELECTRIC COMPANY
GIORDANO'S BARBER SHOP
GOLDMAN, SACHS & COMPANY
BETTY GRAY COMPANY
GRUNTAL & CO.
RICHARD M. HUTMAN, A.I.A.
INVESTORS PLANNING CORPORATION
KANSAS CITY TITLE COMPANY
LAWRENCE LOCKWOOD
MARTIN MARIETTA COMPANY
METROPOLITAN LIFE INSURANCE COMPANY
MEZGER & MEZGER
MILLER, ROSENTHAL & LAND
MONUMENTAL TITLE COMPANY
MORGAN PAPER COMPANY
MYLANDER & ATWATER
R. S. MUELLER COMPANY
O'FERRALL & O'FERRALL
PAGE PERSONNEL
PEAKLOAD COMPANY
PRUDENTIAL INSURANCE COMPANY OF AMERICA
RCA COMMUNICATIONS, INC.
B. HOWARD RICHARDS, INC.
JOHN ROANE, INC.
MORTON ROBINSON, ESQ.
STATE OF MARYLAND — BANKING COMMISSION
SAUNA HEALTH CLUB
UNITED AIR LINES, INC.
UNION TRUST COMPANY OF MARYLAND
VANSANT, DUGDALE & COMPANY, INC.

OWNER-MANAGEMENT

BLAUSTEIN INTERESTS
BALTIMORE, MARYLAND

McCLOSKEY INTERESTS
PHILADELPHIA, PENNSYLVANIA

ARCHITECT

VINCENT G. KLING, FAIA
PHILADELPHIA, PENNSYLVANIA

[HN00FP][GDrive]

1968 - Wedding of granddaughter Roberta Ashby Bosher to Lt. John Lester Dashiells

(See full page in 1968 newspaper at [HN00FQ][GDrive])

Wed To Mr. Dashiells

The wedding of Miss Roberta Ashby Bosher, of Washington, daughter of Mr. and Mrs. Benjamin Ashby Bosher, of Providence, R.I., formerly of Owings Mills, and Lt. John Lester Dashiells, Jr., USA, son of Mr. J. Lester Dashiells, of Chestnut avenue, and the late Mrs. Dashiells, took place Friday at St. Thomas's Episcopal Church in Garrison.

The ceremony was performed by the Rev. Robert S. Bosher, of New York, uncle of the bride, assisted by the Rev. George E. Sinkinson, Jr. A reception followed at the Greenspring Valley Hunt Club.

Miss Elizabeth S. Bosher attended her sister as maid of honor. The bridesmaids were Miss Nancy R. Dashiells, sister of the bridegroom; Miss Anna F. Budd, the bride's cousin, and Miss Melissa H. Montague.

The best man was was Mr. W. David MacCool. The ushers included Mr. Benjamin A. Bosher, brother of the bride; Mr. John O. Kenworthy, Mr. Craig C. Singer and Lt. Homer R. Schwartz, USA.

The bride is the granddaughter of Mr. and Mrs. Robert S. Mueller, of East Lake avenue, and Mr. and Mrs. Lewis H. Bosher, of Richmond.

Mr. Dashiells is the grandson of Mrs. Steven R. Batson, of Birmingham, Ala., and the late Mr. Batson, and Mr. George H. Dashiells, of East Thirty-third street, and the late Mrs. Dashiells.

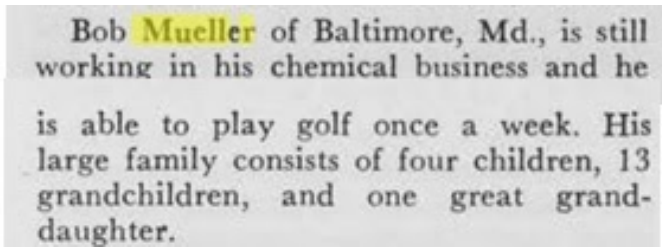
Leonard L. Greif, Jr.

Mrs. John Lester Dashiells, Jr., formerly Miss Roberta Bosher, was wed Friday.

[HN00FR][GDrive]

1971 (April) - Still working in (his) chemical business

Full PDF - [HE000K][GDrive]

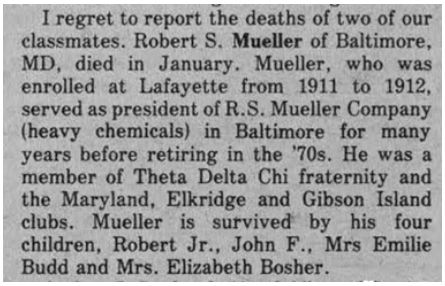


Bob Mueller of Baltimore, Md., is still working in his chemical business and he is able to play golf once a week. His large family consists of four children, 13 grandchildren, and one great granddaughter.

[HE000L][GDrive]

1970(s) - Retirement

In the 1970s (unknown date, but absolutely no earlier than April 1971), Robert Swan Mueller I retired according to his obituary from the May 1981 issue of Lafayette Alumni News (full issue here: [HE000I][GDrive])

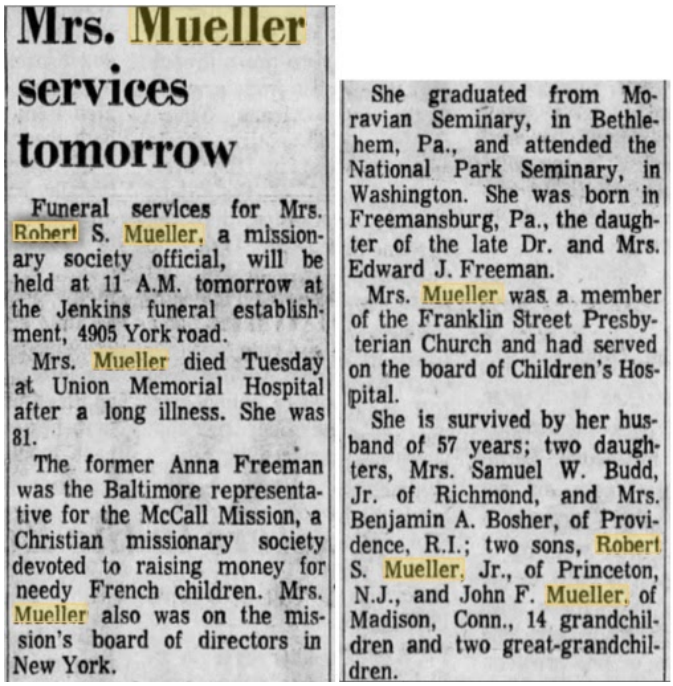


I regret to report the deaths of two of our classmates. Robert S. **Mueller** of Baltimore, MD, died in January. Mueller, who was enrolled at Lafayette from 1911 to 1912, served as president of R.S. Mueller Company (heavy chemicals) in Baltimore for many years before retiring in the '70s. He was a member of Theta Delta Chi fraternity and the Maryland, Elkridge and Gibson Island clubs. Mueller is survived by his four children, Robert Jr., John F., Mrs Emilie Budd and Mrs. Elizabeth Bosher.

[HE000J][GDrive]

1973 (May) - Death of wife Anna Elizabeth Freeman Mueller

Anna Mueller passed on May 8, 1973, at age 81 [HL001A][GDrive]. A news article regarding funeral services can be found below (full page from Baltimore Sun visible here : [HN00DZ][**GDrive**]).



Mrs. Mueller services tomorrow

Funeral services for Mrs. Robert S. Mueller, a missionary society official, will be held at 11 A.M. tomorrow at the Jenkins funeral establishment, 4905 York road.

Mrs. Mueller died Tuesday at Union Memorial Hospital after a long illness. She was 81.

The former Anna Freeman was the Baltimore representative for the McCall Mission, a Christian missionary society devoted to raising money for needy French children. Mrs. Mueller also was on the mission's board of directors in New York.

She graduated from Moravian Seminary, in Bethlehem, Pa., and attended the National Park Seminary, in Washington. She was born in Freemansburg, Pa., the daughter of the late Dr. and Mrs. Edward J. Freeman.

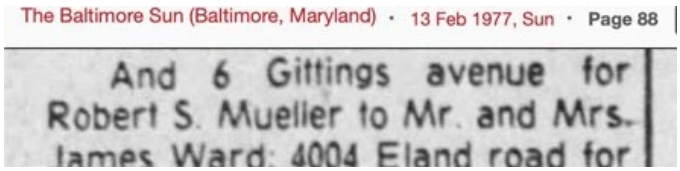
Mrs. Mueller was a member of the Franklin Street Presbyterian Church and had served on the board of Children's Hospital.

She is survived by her husband of 57 years; two daughters, Mrs. Samuel W. Budd, Jr. of Richmond, and Mrs. Benjamin A. Bosher, of Providence, R.I.; two sons, Robert S. Mueller, Jr., of Princeton, N.J., and John F. Mueller, of Madison, Conn., 14 grandchildren and two great-grandchildren.

[HN00E0][GDrive]

1977 (Feb) - Family home at 6 Gittings Avenue Sold

Full page : [HN00DO][GDrive]



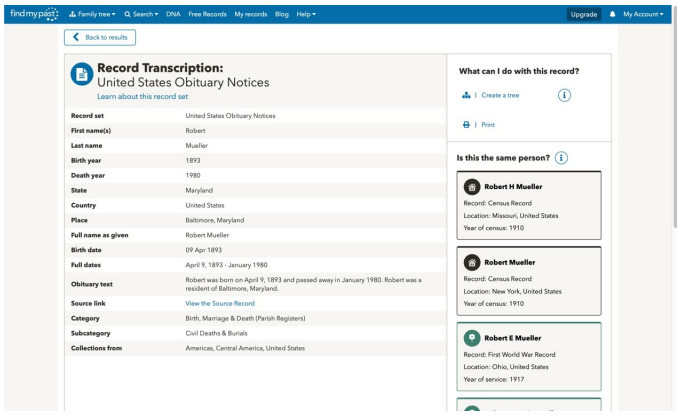
The Baltimore Sun (Baltimore, Maryland) · 13 Feb 1977, Sun · Page 88

And 6 Gittings avenue for Robert S. Mueller to Mr. and Mrs. James Ward; 4004 Eland road for

[HN00DP][GDrive]

1980 - Death

Robert Swan Mueller I is listed as having died in January of 1980 in Baltimore, Maryland. The most detailed obituary located as of today (Jan 30 2019) is the paragraph in the Lafayette Alumni News (full issue here: [HE000I][GDrive]). Below is the record of the United States obituary notice.



findmypast

Back to results

Record Transcription:
United States Obituary Notices
Learn about this record set

Record set	United States Obituary Notices
First name(s)	Robert
Last name	Mueller
Birth year	1893
Death year	1980
State	Maryland
Country	United States
Place	Baltimore, Maryland
Full name as given	Robert Mueller
Birth date	09 Apr 1893
Full dates	April 9, 1893 - January 1980
Obituary text	Robert was born on April 9, 1893 and passed away in January 1980. Robert was a resident of Baltimore, Maryland.
Source link	View the Source Record
Category	Birth, Marriage & Death (Parish Registers)
Subcategory	Civil Deaths & Burials
Collections from	Americas, Central America, United States

What can I do with this record?
Create a tree
Print

Is this the same person?
Robert H Mueller — Record: Census Record; Location: Missouri, United States; Year of census: 1910
Robert Mueller — Record: Census Record; Location: New York, United States; Year of census: 1910
Robert E Mueller — Record: First World War Record; Location: Ohio, United States; Year of service: 1917

[HL001B][GDrive]

Additional Family Info

2001 (July) - Passing of daughter Emiliie

BUDD
Emilie Mueller Budd, 80, of Richmond, widow of Dr. Samuel W. Budd Jr., died peacefully Tuesday, July 10, 2001. She is survived by three daughters, Nancy Budd of Iowa City, Iowa, Emilie Budd of Dolores, Colo, and Helen Jennings of South Riding, Va.; four grandchildren, Justin Fecteau, Ann Fecteau, Robbie Jennings and Rickie Jennings; two brothers, Robert S. Mueller Jr. of New Hampshire and John F. Mueller of Charlottesville. Mrs. Budd was a member of St. Stephen's Episcopal Church, the Tuckahoe Artists' Association, the Tuckahoe Garden Club, The Country Club of Virginia, The Woman's Club and volunteered at Westminster-Canterbury where she resided. A memorial service will be held 2 p.m., Friday, July 13 at Westminster-Canterbury. Interment private. In lieu of flowers, contributions may be made to the Lewis Ginter Botanical Garden.

2001-07-10-obituary-emilie_mueller-budd.jpg

* DuPont key to Fernald Feed

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Housatonic

Robert Swan Mueller II (born 1916)

Robert Swan Mueller II , age 47, Princeton 25-yr yearbook photo

---

Robert Swan Mueller II was **born on July 30, 1916**, in Pittsburgh Pennsylvania [HL0019][GDrive].

Robert Swan Mueller II is the son of **Robert Swan Mueller I (born 1893)** , and father of **Robert Swan Mueller III (born 1944)** . He is also the older brother of **John Freeman Mueller (born 1919)** .

1916 (July) - Born

Robert Swan Mueller II was born on July 30, 1916, in **Pittsburgh Pennsylvania** [HL0019][GDrive]. His name at the time was **Robert Swan Mueller Jr**.

1930

The 1930 Census: In 1930, the Robert Swan Mueller I family in Baltimore, Maryland has grown and appears to be thriving. Robert Swan Mueller II is now 13 years old, lives with his father, mother, 3 siblings, and one servant. His younger brother **John Freeman Mueller** is now 10 years old. The new siblings are sisters **Emilie G. Mueller** (age 9, born in 1921) and **Elizabeth Mueller** (age 7, born in 1923). In 1930, the Mueller household still employs one servant (now **Maurine Scott**, a female from Virginia who is 21 years of age). The occupation of father Robert Swan Mueller I on the 1930 Census is now listed as a "*Broker in the Banking industry*", which we know that he opened his own company **"R.S. Mueller Company"** in March 1923. (For image of Census doc see [HS000F] [GDrive]).

1932 - HS

24 THE EVENING SUN, BALTIMORE, WEDNESDAY, APRIL 20, 1932

It's All In The VIEWPOINT by Paul Menton Sports Editor

New Fans; New Favorites

THEY are still eating it up. They are just as enthusiastic as ever. They are just as partisan. They suffer and they triumph with their favorites. They are worn out at the end.

I refer to the wrestling fans.

I sat among them last night from the first bout until the last. I was right up in the midst of the bleachers, where the real critics are located each Tuesday night.

It was the first time in many months I have sat through the entire weekly program. Ed Contos arranges and I get quite a shock.

There was a new group of fans attending the shows today than once each week when John Contos first revived wrestling here nearly three years ago.

But if the hangs in the audience was a shock — me I got a bigger one as the matches went on. There's an entirely new group of matmen providing the thrills for these new fans.

Reaction Just The Same

LATER I inquired from Joe Kelly, secretary of the Maryland Athletic Commission, re: his doormen, who have been on the job throughout the regime of wrestling here, as to whether the old fans have deserted.

"No," replied Joe. "After about a year they stop coming every week. They now come when certain of their favorites are on the card. But their places at the weekly shows were taken by others. Pretty soon this crowd will take a rest and the others will be coming out again more frequently. Few drop out entirely. The action holds them."

There was a different audience, but the fans react to the shows in the old manner.

They become all wrapped up in the bouts. They strike and cringe with their favorites. They lose themselves in the roughhouse that is taking place on the mat. They imagine themselves delivering the blows.

Go Through The Motions

A CHAP next to me nudged me in the ribs. I looked around, thinking it as some one I knew. He was watching the ring. Then he jabbed me again. Finally he gave me a rather stiff jolt.

At that I called his attention to the fact that he and I were not wrestling. He got red in the face and apologized. He didn't realize he had poked me. He had simply been helping George McLeod get in a few blows on Mike Rossano.

A little later, about two rows in front of me, a small middle-aged man, weighing about 140 pounds, stood up shaking his fist and calling Frank Speera a "dirty bum." He was immediately challenged by Speera's admirers and for a while it looked like we might have an extra attraction.

I did not have to see the bout between George Zaharias and Cueball Kvariani, the feature of the evening. A party of four, two men and two women, all pulling for the Greek, sat to my right. I simply watched the expressions on their faces.

Wrestling Hard Life

THESE little occurrences around me were not unusual. They take place continually all over the house every time a wrestling show is held, regardless of the city, state or section.

These wrestlers have been doing things to people now for nearly three years, from Maine to Florida and from New York to California, and so long as they can make people forget themselves, can stir them, they will remain in the spotlight.

But what about the wrestlers themselves?

How long will they continue to stand the constant grind night after night? There's a lot of new fellows in the game. They are big. They are strong. They are young.

But they take some awful beatings physically. They do not know the tricks of the oldtimers and they are not allowed to learn them because the public wants action. It wants blood. It would not be adverse to a murder or two at times and wrestlers cater to the wants of the fans.

We are going to have punch drunk wrestlers around the country just as surely as the land is infested with punch drunk fighters.

Zaharias An Example

THERE is more punching, more wild diving, more throwing of men around the ring and through the ropes than ever before.

There was less wrestling and more action last night than a year ago and the action then was faster than the year before that.

As big as are those bulls that now arouse the audiences they are getting hurt with more frequency. They quietly drop out for a while.

The show goes on, with others in their place.

Take, for instance, last night. Ed Brockman, referee of the early bouts, told me Frank Speers had burned a blood vessel in his eye and the doctor told him it was dangerous for him to work for at least a week.

Then there is George Zaharias, the "big shot" here at present. In the last two years he has taken some unmerciful beatings in the ring. He won't quit. Of course, he gives some brutish ish, too.

And that's the reason he is so popular here today. He arouses the fans. He makes them forget themselves. You can watch them suffer and triumph with him—they work hard.

TICK ON TO RACE AT 'GRAW ON SATURDAY

JIMMY PARKS, HURT, DUE BACK IN JOHNNY STICK LINE-UP SOON

St. John's Twelve Points For May Tilts—Terps First Big Foe

By Paul Broderick

NEARING the turning point in the regular season, St. John's College's lacrosse team is looking ahead to the more decisive games on its schedule with the prospect of having greater resources at its command than even the most ardent Johnnie follower had hoped for a month ago.

When speaking of St. John's decisive games, the clash that the Annapolis outfit has with Maryland on May 7 at College Park first comes to mind.

To Spring Parks

By the time the Terrapin game rolls around, Dinty Moore, St. John's coach, expects to give his defense just the touch it needs by springing Jimmy Parks, veteran close defense stickman, into action.

Parks, one of the few holdovers from the crack 1931 team at St. John's, has been unable to play so far due to an injury. However, Parks is fast recovering and he is expected to break into the line-up almost any day now.

As a defense player, Parks had few equals last season. He is big and rugged and an expert stickhandler. When he gets into uniform again, Moore will have Phil Letz paired with Parks at point and cover point, with Sonny Jim Morris at first defense and Larry Carpenter, second defense.

Few New Faces

The only new faces in the Johnny line-up then will be Gibbs LaMotte, at goal, and Ed Williams, third defense. Both of the latter jumped from the Freshman team of last year to the varsity this season.

A defense combination of the known capabilities of these players should give Moore a feeling of security.

The attack is a hodge-podge of 1931 veterans and newcomers. Johnny Trader, center; Bill Zeigler, third attack, and Bill Athey, outhouse, are action last year as regulars, while Willie Lynch broke into things occasionally.

Lynch plays first attack. Doug Ranzay, in home, and Carl MacCartney, second attack, are new but were familiar with lacrosse, both coming up from the freshmen team.

Fans Must Wait

It seems that curious stick people hereabouts anxious to see St. John's under pressure will have to bide their time until the Terrapins take their annual crack at the Johnnies at College Park.

On Saturday, St. John's plays Penn State at State College, Pa., and the following week the team is away again, playing Colgate at Hamilton, N. Y. Then comes Maryland.

Sutherland, Mentor Of North's Gridmen, Visits Jackson Here

Jack Sutherland, football coach at the University of Pittsburgh, who has agreed to act as coach of the Northern team next fall in the North-South football game, which is scheduled for the Stadium on December 10, was in Baltimore for a short while today.

He paid a visit to Mayor Jackon and then left for Washington.

It is expected that an announcement will shortly be made as to the coach of the Southern team.

Week-End Busy

The Shamrock A. C. will play the Blue team Saturday at Carroll Park in the opening game of the Industrial League. Sunday the Shamrocks will travel to Pimlico to take on the All-Stars at the latter's oval. May 1 is open for a game to be played away Gardenville, Overlea, Essex or Middle River nines preferred. Address Fay MacGabee, 851 Mangold street.

Golf's Goofiest Goofs Glorified By Gambol

By Jean Rouchard

GOLF etiquette will have no place in the scheme of things tomorrow when Maryland State Golf Association divot lifters usher in the competitive season with a novelty tournament at Rolling Road. Officially termed a "goofy" competition the affair is fashioned after the hilarious links parties common in the mid-West, and State officials are quite cognizant of the fact that good golf may be conspicuous by its absence, what with musicians stationed at various points on the course and prizes being awarded for grotesque costumes and achievements not generally recognized in hard and fast tournaments.

Unusual Rewarded

True, worthy feats will be properly rewarded, but the prize list fairly bugles with awards for out-of-the-ordinary accomplishments.

Starting at 9 o'clock in the morning when the notes of "How I Hate To Get Up In The Morning" will pierce the atmosphere of the usually placid Catonsville countryside, the linksmen will attempt to play 18 holes of golf.

Saxophones will blare forth mournful notes, and cymbals will clash as the club swingers tee up and try to sink their putts. Contestants will be allowed to run, walk, talk or shout during the proceedings; as a matter of fact, anything not in keeping with the fine traditions of the ancient and honorable game will be tolerated.

Feast In Order

Following the putt-putt on the greensward, the golfers will gather around the festive board, and during the dinner prizes will be awarded the successful contestants. The prize-winners must remain for the dinner to receive their prizes.

According to Ed Peppler, president of the State Association, the Baltimore Country Club would be represented by approximately 50 golfers, while all the other clubs hereabouts will have numerous linksmen playing.

Woodholme Country Club will be the scene next Tuesday of the State Association's first 18-hole medal tournament.

The usual three classes will vie for prizes, and only those golfers who possess 1932 association handicap cards will be eligible to compete.

Following the usual custom, the players can make up their own foursomes and play in the forenoon if they so desire.

STARS OF TWO GILMAN SPRING SPORT TEAMS

And You Can See These Clever Young Athletes In Action By Traveling Out To Roland Park

BOBBY MUELLER PEPPER CONSTABLE COOPER WALKER

BASEBALL and lacrosse are two big pastimes at Gilman these days, and the young men you glimpse above are stellar performers on the stick and diamond teams at Roland Park. Constable is a hard-hitting ball player, while Mueller and Walker are rated two of the best stickwielders wearing the Blue and Gray. Friday the Gilman lacrosse team plays Poly at Homewood, while today Constable was to be in action against the Forest Park ball nine.

Oriole Batting Averages

	AB	H	2B	3B	R	RBI	P.C.
McGowan, 2b	32	12	3	0	8	10	.375
Hollaway, c	31	11	2	0	4	4	.355
Arnovich, 1b	33	11	2	0	5	4	.333
Sukeforth, 1b	24	8	4	0	1	5	.333
Packard, 3b	37	12	2	0	3	5	.324
Holloway, c	6	2	0	0	0	2	.333
Stringer, ss	34	11	0	0	5	3	.324
Shearing, 1b	14	4	0	0	2	2	.286
Heffner, ss	34	7	4	0	1	3	.206
Kress, ss-2b	10	2	0	0	0	0	.200
Linton, 1b	10	2	0	0	0	0	.200
Richmond, 2b	5	1	0	0	0	0	.200
Rojas, ss	7	1	0	0	0	0	.143
Carruetta, 2	7	0	0	0	0	0	.000
Smythe, c-2	8	0	0	0	0	0	.000
Stroner, 1	3	0	0	0	0	0	.000
Wilson, 2b	3	0	0	0	0	0	.000
Hopkins, c	2	0	0	0	0	0	.000
Gumbert, 1	0	0	0	0	0	0	.000

PITCHING RECORDS

	W.	L.	P.C.	G.	CG.	P.C.
Richmond, c	6	0	1.000	9	3	1.000
Holloway, c	4	0	1.000	5	1	.800
Kelley, ...	1	0	1.000	1	1	.000
Hollaway, c	1	0	1.000	1	0	.000
Gumbert, 1	0	1	.000	1	0	.000
Cascarella, ...	0	0	.000	1	0	.000
Smythe, ...	0	0	.000	2	0	.000
Walker, ...	0	0	.000	1	0	.000
Hopkins, ...	0	0	.000	1	0	.000

LEAGUE HOMER HITTERS

McGowan, Orioles 4
Packard, Orioles 4
Tucker, Buffalo 4
Purcinelli, Rochester 4

EIGHT NET MATCHES FOR FORESTER TEAM

Forest Park High School's tennis squad faces a schedule of eight matches this spring. The card had nine tests until the Foresters have already played one opponent.

A strong nucleus is on hand to carry on for Forest Park this year. The Green and Gray has been very successful during the past few years, winning the Maryland Scholastic championship two years in the last five.

Earl Shaver, Herbert Fribush, Sylvan Goldberg, Tom Conner and Jacob Selis are veterans in the line-up.

The schedule follows:

April 23—Towson High, home.
April 26—Catonsville High, away.
April 30—Western High, Washington, away.
May 3—Mount St. Joseph's, at home.
May 7—Knox Police, away.
May 14—Towson High, away.
May 18—City tilts, home.

Chippewa Win

The Chippewa A. C. defeated the Martin A. C., 24-21.

Hornsby Sees Hurling Key To National Pennant Race

Cub Boss Relies More On Moundsmen Than Sluggers—Says 93 Or 94 Games Will Win Flag, .335 To .350 Bagging Swat Crown

By George Kirksey

CHICAGO, April 20 (U.P.)—This is an interview with Rogers Hornsby, who has his ideas about baseball and isn't afraid to speak them. Hornsby is entering his second full season as manager of the Chicago Cubs, has put in 17 years in the National League, held the batting championship seven times, and three times in his career hit more than .400.

"How do you size up the National League race?"

Pitching To Decide

"Four or five teams will battle for the pennant and pitching will be the deciding issue," says Hornsby. "St. Louis is weaker than last year. They will miss Haley's hitting and Grimes' pitching. The Giants have a strong team except in the box.

"Cincinnati has lots of hitting strength but outside of Johnson and Lucas they don't seem to have much pitching. Brooklyn is hard to figure because of their many changes. Pittsburgh is an improved team over last year. I don't know anything about Boston or Philadelphia."

"What about your team?"

"The Cubs rank as good as any of 'em. I call my pitching staff the best in the league. I have nine nine pitchers to—are going to be winners. They are Root, Malone, Bush, Grimes, Warneke, Smith, Baecht, May and Tinning. We may lack hitting strength but I figure pitching is 80 per cent. of any team and we may get by without any real sluggers."

Looks To Grimes

"How many games will Grimes win?"

"He's been set back by the flu and an infected tooth which he had pulled Monday in St. Louis but he'll win from fifteen to twenty."

"Do you consider yourself through as a player?"

"No. I may have to get in there later if we don't now enough hitting strength. That's one of the things we'll have to decide when we come to it. Right now Herman and Hack, the two young infielders, are making good. They'll make a few mistakes, but they are hustlers and good ball players."

"How many games will win the National League pennant?"

"Ninety-three or ninety-four." (The Cardinals won 101 last year and 92 in 1930).

Changes In Game

"Any noticeable changes in baseball?"

"Yes, the game is going back to speed. Base running, pitching and pitching. Three isn't likely to be one outstanding hitter, and anywhere from 325 to 350 probably will win the batting championship."

"Do you have any good base runners?"

"Yes, I have players like Cuyler, Herman, Hack and Hemsley, who will

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Dan'l Turns Greedy

DEAR EDITOR—Once again I did better than break even, but, fans, I don't care for that sort of thing. I'm greedy. Like to win 'em all and that's what I'm out to do today . . . when, if possible. Had a winner at the Stadium yesterday and some of my baseball boys won, but not enough to suit me. Now for today:

Orioles to beat Montreal.
Toronto to beat Jersey City.
Buffalo to beat Reading.
Newark to beat Rochester.
Senators to beat Red Sox.
A's to beat Yanks.
Phils to beat Giants.
Reds to beat Cubs.
Cards to beat Pirates.
Gilmen to beat Forest Park, baseball.

Tred Aron at 'Graw.

Yours,
DAN.
W. L.
Dan's record 358 180

White Sox Woefully Weak On Offensive

Chicago, April 20 (AP)—The early suspicion that Chicago White Sox batsmen would not push back fences with their drives this season already is becoming a fact.

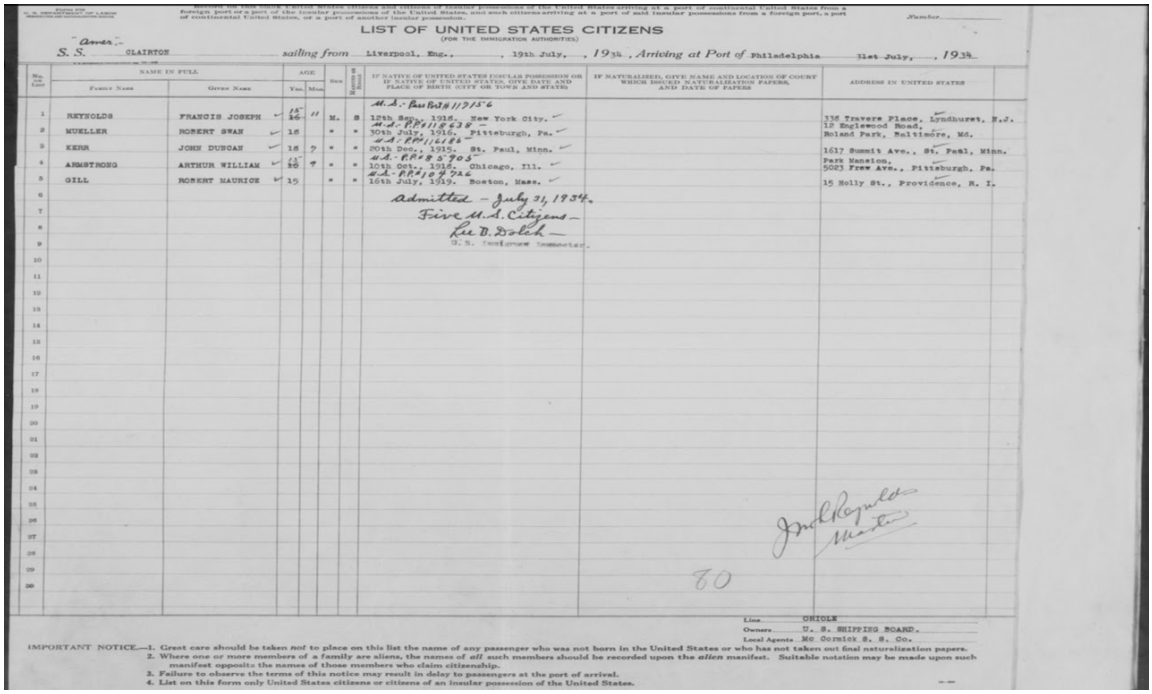
In their last three games with Cleveland, all of which were lost, the Sox collected just eighteen hits and all of them were singles.

INTERCITY SCRAPS BOOKED TO AID FUND

Washington amateur boxing stars will match punches with leading simon pures of Baltimore tonight on a program to be held at the former site of the Carroll Outing Club, 3134 Frederick avenue, which is now the Cross Country Club.

The proceeds of the show will be turned into the local Olympic Fund. Al Farrell, heavyweight titleholder of the District of Columbia, will perform in the feature bout. Farrell's opponent will be Walter Richmond, of the host organization, the only battle to gain a draw with Duke Crinkley, present South Atlantic champion. The card follows:

[illegible] vs. Earl Dixon, Washington, vs. Joe Bernard, Billy A.
[illegible] Charles Jones, Washington, vs. Jack Hall, Baltimore, 3 rounds.
[illegible] Pinkie Hall, Washington, vs. Jack Hall, Baltimore, 3 rounds.
[illegible] Bobby Ross, Washington, vs. Bobby Ross, Washington, vs. Jack Hall, Baltimore, 3 rounds.
[illegible] Bobby Ross, Washington, vs. Charles Mack, Baltimore, 3 rounds.
[illegible] Harry Haas, Washington, vs. Harry Haas, Washington, 3 rounds.
[illegible] Jones, Washington, vs. [illegible] Jones, Washington, 3 rounds.
[illegible] Jones, Washington, vs. [illegible] Jones, Washington, 3 rounds.
[illegible] Washington, vs. Charles Mack, Baltimore



LIST OF UNITED STATES CITIZENS
(FOR THE IMMIGRATION AUTHORITIES)

Amer.
S. S. CLAIRTON sailing from Liverpool, Eng., 19th July, 1934, Arriving at Port of Philadelphia 31st July, 1934

No. on List	Family Name	Given Name	Age Yrs.	Age Mos.	Sex	Married or Single	If native of United States insular possession or if native of United States, give date and place of birth (city or town and State)	If naturalized, give name and location of court which issued naturalization papers, and date of papers	Address in United States
							M.S.-Pas Port #117156		
1	REYNOLDS	FRANCIS JOSEPH	15	11	M.	S	12th Sept., 1918. New York City. M.S.-PP#118638		336 Travers Place, Lyndhurst, N.J.
2	MUELLER	ROBERT SWAN	18		"	"	30th July, 1916. Pittsburgh, Pa. M.S.-PP#114185		12 Englewood Road, Roland Park, Baltimore, Md.
3	KERR	JOHN DUNCAN	18	7	"	"	20th Dec., 1915. St. Paul, Minn. M.S.-PP#85705		1617 Summit Ave., St. Paul, Minn.
4	ARMSTRONG	ARTHUR WILLIAM	18	7	"	"	10th Oct., 1916. Chicago, Ill. M.S.-PP#109726		Park Mansion, 5023 Frew Ave., Pittsburgh, Pa.
5	GILL	ROBERT MAURICE	15		"	"	16th July, 1919. Boston, Mass.		15 Holly St., Providence, R. I.
6							Admitted - July 31, 1934. Five U.S. Citizens - Lee D. Bolch - U.S. Immigrant Inspector.		
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Jno. H. Reynolds Master

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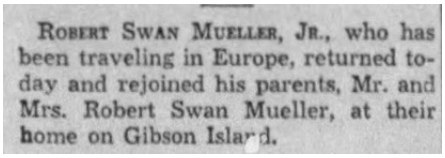
IMPORTANT NOTICE.—1. Great care should be taken *not* to place on this list the name of any passenger who was not born in the United States or who has not taken out final naturalization papers.
2. Where one *or* more members of a family are aliens, the names of *all* such members should be recorded upon the *alien* manifest. Suitable notation may be made upon such manifest opposite the names of those members who claim citizenship.
3. Failure to observe the terms of this notice may result in delay to passengers at the port of arrival.
4. List on this form only United States citizens or citizens of an insular possession of the United States.

[HJ0003][GDrive]

Newspaper article announcing return - (For image of full page see [HN00DT][GDrive]). (Alternative page - see [HN00E3][GDrive])



ROBERT SWAN MUELLER, JR., who has been traveling in Europe, returned today and rejoined his parents, Mr. and Mrs. Robert Swan Mueller, at their home on Gibson Island.

[HN00DU][GDrive]

1934 (Sep) to 1938 (June) - Princeton

From the Jan 7 1938 issue of Princeton Alumni Weekly - (full page : [HE000U][GDrive])

Wide World

Among the Seniors on the Hockey Team

Jack Bissell, Last Year's Captain, Kneels in the Center. Standing: Bob Mueller, Bill Barrett, Court Nicoll, Captain Bob Burke, Sky Woodhull

[HE000V][GDrive]

1935 - Baltimore Sun acknowledges RS Mueller II's election.

See full page at [HN00DV][GDrive]

BALTIMOREAN HONORED

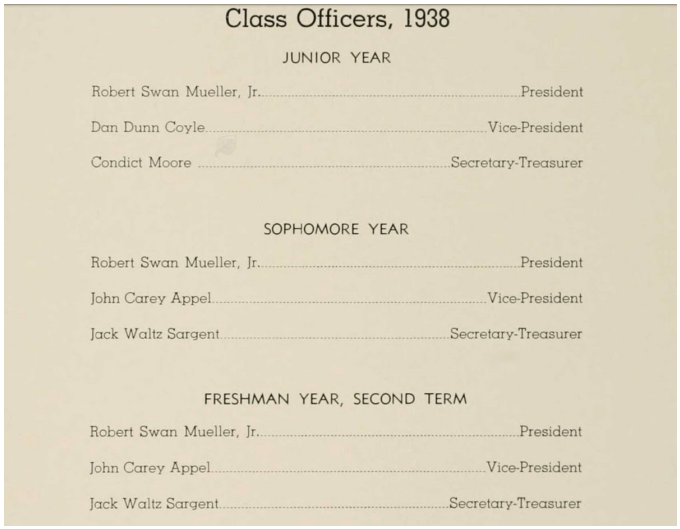
R. S. Mueller, Jr., Elected To Princeton's Student Council

Robert S. Mueller, Jr., of Baltimore, has been elected to the recently reorganized undergraduate student council at Princeton University, according to dispatches received here today.

Mueller is the son of Mr. and Mrs. Robert S. Mueller, of 12 Englewood road. He is president of the sophomore class at the university.

[HN00DW][GDrive]

Robert Swan Mueller II was the Princeton Class Vice-President for all four of his years at Princeton. He was a Princeton 1939 graduate.



Class Officers, 1938

JUNIOR YEAR

Robert Swan Mueller, Jr. ..... President
Dan Dunn Coyle ..... Vice-President
Condict Moore ..... Secretary-Treasurer

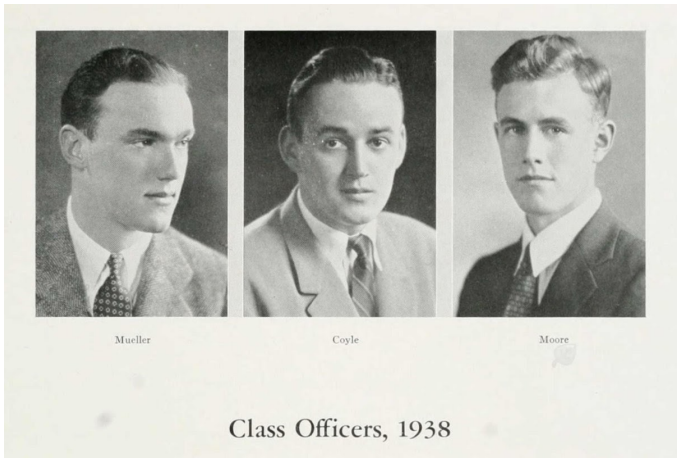
SOPHOMORE YEAR

Robert Swan Mueller, Jr. ..... President
John Carey Appel ..... Vice-President
Jack Waltz Sargent ..... Secretary-Treasurer

FRESHMAN YEAR, SECOND TERM

Robert Swan Mueller, Jr. ..... President
John Carey Appel ..... Vice-President
Jack Waltz Sargent ..... Secretary-Treasurer

A profile of Robert Swan Mueller II from Princeton Class of 1938.



Mueller Coyle Moore

Class Officers, 1938

From the July 1 1928 issue of Princeton Alumni Weekly - See full page at [HE000W][GDrive]

Frank Kane Jr.

Planting 1938's Class Ivy

Robert S. Mueller Jr., Ivy Orator, and Dan D. Coyle, Class President

[HE000X][GDrive]

Fall 1938 - Joins du Pont Corporation / Moves to St. Louis

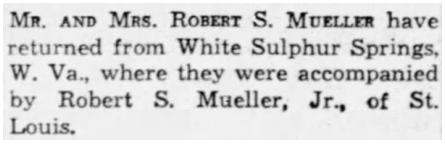
Robert Swan Mueller II joined du Pont Co. upon graduation [HE000Q][GDrive] . *"As a salesman for the Photo Products Department, he was first sent out to St. Louis, from whence soon drifted report of phenomenal sales of **du Pont Ex-Ray film** ...."*

From the Jan 20 1939 issue of Princeton alumni weekly : *"Bob Mueller [aka Robert Swan Mueller II] who is working with the du-Pont Film MFG Co. has changed his address to 5463 Delmar Blvd. St. Louis. He is rooming with **Bob Meyer**, who is working at the Hotel Statler. "* [HE000Y][GDrive]. Apartment complex shown below; it is very modest.

5463 Delmar Blvd. St. Louis (Google street view, Jan 2019)

1940 (June) - Travel to West Virginia to visit parents RSM2

See full page in 1940 newspaper at [HN00E4][GDrive]

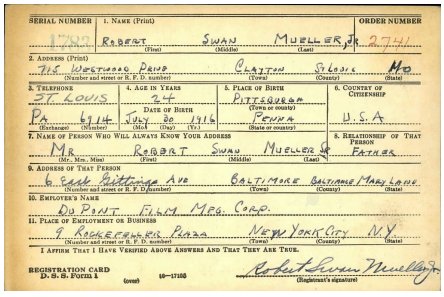


MR. AND MRS. ROBERT S. MUELLER have returned from White Sulphur Springs, W. Va., where they were accompanied by Robert S. Mueller, Jr., of St. Louis.

[HN00E5][GDrive]

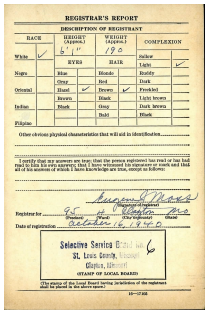
1940 (Oct) - Military draft registration

1940 draft card for **Robert Swan Mueller II** from Oct 16 1940. He was living in St. Louis (Clayton?) Missouri at this time, and working for **DuPont Film Mfo Corporation**.



SERIAL NUMBER 1-793 | 1. NAME (Print) ROBERT SWAN MUELLER Jr. | ORDER NUMBER 2741
2. ADDRESS (Print) 715 WORTHMAR PRIVE CLAYTON ST LOUIS MO
3. TELEPHONE ST LOUIS PA 6114 | 4. AGE IN YEARS 24 DATE OF BIRTH JULY 30 1916 | 5. PLACE OF BIRTH PITTSBURGH PENNA | 6. COUNTRY OF CITIZENSHIP U.S.A.
7. NAME OF PERSON WHO WILL ALWAYS KNOW YOUR ADDRESS MR ROBERT SWAN MUELLER SR | 8. RELATIONSHIP OF THAT PERSON FATHER
9. ADDRESS OF THAT PERSON 6 EAST GITTINGS AVE BALTIMORE BALTIMORE MARYLAND
10. EMPLOYER'S NAME DU PONT FILM MFG. CORP.
11. PLACE OF EMPLOYMENT OR BUSINESS 9 ROCKEFELLER PLAZA NEW YORK CITY N.Y.
I AFFIRM THAT I HAVE VERIFIED ABOVE ANSWERS AND THAT THEY ARE TRUE. Robert Swan Mueller Jr
REGISTRATION CARD D. S. S. Form 1 (Revised) 10—1718D (Registrant's signature)

[HG0010][GDrive]



REGISTRAR'S REPORT
DESCRIPTION OF REGISTRANT
RACE: White ✓ | HEIGHT (Approx.): 5' 11" | WEIGHT (Approx.): 190 | COMPLEXION: Sallow
EYES: Blue, Gray, Hazel ✓, Brown, Black, Mixed | HAIR: Light, Red, Brown ✓, Black, Gray, Bald, Mixed | Ruddy, Dark, Freckled, Light brown, Dark brown, Black
Other obvious physical characteristics that will aid in identification
I certify that my answers are true; that the person registered has read or has had read to him his answers and that all of his answers of which I have knowledge are true, except as follows:
Registrar's Signature
Registered at 95 Kingsbury Place, St. Louis, Mo.
Date of registration October 16 1940
Selective Service Local Board No. 6, St. Louis County, Missouri, City, Missouri, STAMP OF LOCAL BOARD

[HG0011][GDrive]

1941 (Jan) - Still living in St. Louis

From the Jan 27 1941 issue of the Princeton Alumni Weekly (Full page from this issue : see [HE000Z][GDrive}) : He is now living with a **Dave Reynolds**. (NOTE - This is a fellow Princeton 1938 classmate of Robert Swan Mueller II - **David Parham Reynolds** would be the last member of his family to serve as chairman and CEO of Reynolds Metals Co - See https://www.richmond.com/business/former-longtime-reynolds-metals-ceo-david-reynolds-dies/article_0cb77dcd-7477-54c1-a99f-04415f848811.html).

Robert Swan Mueller II (aka ***"Bobby Mueller"***) and roommate are now living at 715 Westwood Drive in Clayton Missouri. This is a nicer apartment complex (pic shown below).

Bobby Mueller and *Dave Reynolds* are living together at 715 Westwood Drive, Clayton, Mo. Bob is talking about being back for the June reunion already.

[HE0010][GDrive]

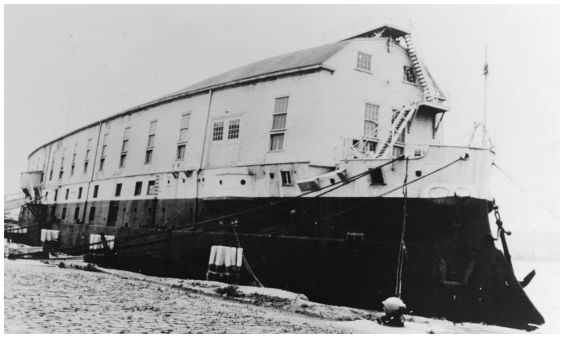
1942 (March-May) - RSM2 now in the service, performing course work on the Prairie State

From the March 03 1942 issue of the Princeton alumni weekly (see page at [HE0011][GDrive]) , we see that Robert Swan Mueller II was on the **U.S.S. Prairie State**. The source at [HT0027][GDrive] tells us that Robert Swan Mueller II's first day of pay was December 16, 1941.

ROBERT SWAN MUELLER JR. '38, U.S.N.R.,
U.S.S. Prairie State,
135th St. & North River, New York, N.Y.

[HE0012][GDrive]

From the May 15 1942 issue of the Princeton alumni weekly : "***Bobby Mueller*** *[aka* ***Robert Swan Mueller II*** *] is [about to finish his course on the* ***'Prairie State'****] , and "has high hopes of of shipping on a destroyer."* [HE0013][GDrive]. The **U.S.S. Prairie State** , as noted below, has an address... this is because it is a floating school docked near/in New York City. See https://en.wikipedia.org/wiki/United_States_Naval_Reserve_Midshipmen%27s_School .



1942 (Aug) - Parents resided in Miami Beach, Florida, while RSM2 and brother John are stationed in Miami

See full page in 1942 newspaper at [HN00E6][GDrive] .

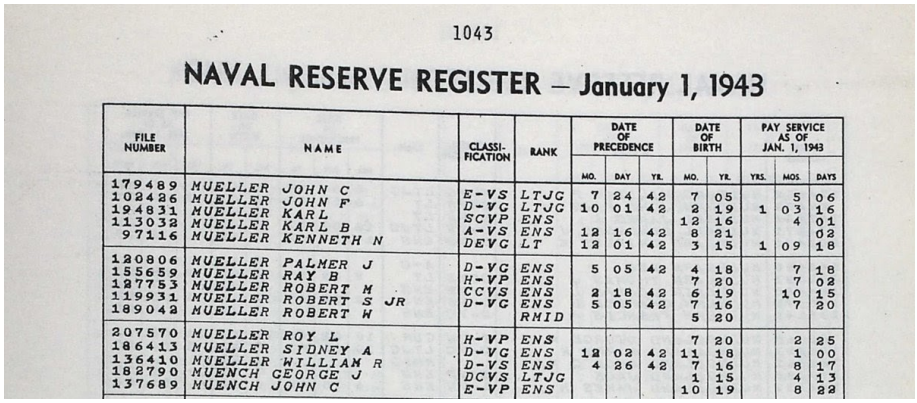
Returned From Miami

Mrs. Robert Swan Mueller and her daughter, Miss Emily Mueller, of Gittings avenue, returned Monday after spending several months at Miami Beach, Fla., where they took an apartment. Mrs. Mueller sons, Ensign John F. Mueller and Ensign Robert S. Mueller, Jr., were both stationed at Miami. Her other daughter, Miss Elizabeth Mueller, is a councilor for the summer at Camp Marlin, in Andover, N. H.

[HN00E7][GDrive]

1943 (Jan) - Ongoing Navy service

Robert Swan Mueller II and his brother **John Freeman Mueller** were both in the Navy Register on January 1 1943 (show below). Robert Swan Mueller II (File number is 119931) was classification D-VC, Rank RNS, with 7 months a 20 days of pay service as of Jan 1 1943. John Freeman Mueller was Classification D-VG, Rank LTJG, with 1 year, 3 months, and 16 days of pay service as of Jan 1 1943.



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NAVAL RESERVE REGISTER – January 1, 1943

FILE NUMBER	NAME	CLASSIFICATION	RANK	DATE OF PRECEDENCE MO.	DAY	YR.	DATE OF BIRTH MO.	YR.	PAY SERVICE AS OF JAN. 1, 1943 YRS.	MOS.	DAYS
179489	MUELLER JOHN C	E-VS	LTJG	7	24	42	7	05		5	06
102486	MUELLER JOHN F	D-VG	LTJG	10	01	42	2	19	1	03	16
194831	MUELLER KARL	SCVP	ENS				12	16		4	01
113032	MUELLER KARL B	A-VS	ENS	12	16	42	8	21			02
97116	MUELLER KENNETH N	DEVG	LT	12	01	42	3	15	1	09	18
120806	MUELLER PALMER J	D-VG	ENS	5	05	42	4	18		7	18
155659	MUELLER RAY B	H-VP	ENS				7	20		7	02
127753	MUELLER ROBERT M	CCVS	ENS	2	18	42	6	19		10	15
119931	MUELLER ROBERT S JR	D-VC	ENS	5	05	42	7	16		7	20
189042	MUELLER ROBERT W		RMID				5	20			
207570	MUELLER ROY L	H-VP	ENS				7	20		2	25
186413	MUELLER SIDNEY A	D-VG	ENS	12	02	42	11	18		1	00
136410	MUELLER WILLIAM R	D-VS	ENS	4	26	42	7	16		8	17
182790	MUENCH GEORGE J	DCVS	LTJG				1	15		4	13
137689	MUENCH JOHN C	E-VP	ENS				10	19		8	22

[HT0027][GDrive]

1943 (June) - Wedding announcement to Alice Truesdale

The June 28 1943 NY Times, in a big article, announces the wedding. This bonds the Mueller family to the **Truesdale Family**. Note that Robert Swan Mueller II is also noted as a Lieutenant in this announcement. Full PDF : [HN00DQ][GDrive]

ENGAGED TO MEN IN THE ARMED FORCES

ALICE TRUESDALE WILL BE MARRIED

Graduate of Miss Hall's School Is Fiancee of Lieut. Robert S. Mueller Jr. of Navy

WEDDING SET FOR AUTUMN

The Prospective Bridegroom Is an Alumnus of Princeton University, Class of '38

Lieut. Commdr. Melville D. Truesdale, USNR, and Mrs. Truesdale of 580 Park Avenue have announced the engagement of their daughter, Alice, to Lieut. Robert Swan Mueller Jr., USNR, son of Mr. and Mrs. Mueller of Baltimore. The wedding will take place in the early autumn.

Miss Truesdale was graduated from Miss Hall's School, and was introduced to society in 1938. She is a granddaughter of the late Mr. and Mrs. William Haynes Truesdale of this city and of the late Mr. and Mrs. Frederick William Moss, also of New York; a niece of Mrs. Richard Bissell of Washington and of the late Mrs. Jonathan Bulkley.

Lieutenant Mueller was graduated in 1938 from Princeton University, where he was a member of Cap and Gown.

Miss Alice Truesdale Physe

Miss Mary Bushnell Pearce Bachrach

BARBARA Y. LUTZ FIANCEE OF ENSIGN

MISS MARY PEARCE BECOMES ENGAGED

MISS A WED I

Becomes Hurdma Chape

WEARS

Sally Loh Maid—E Army S

Special t NEW HA Miss Ann Carl A. Yale Univ mann, was to Frederic son of Mr. White Plai quand Cha The cerem the Rev. D at Yale. The brid her father, gown and white orchi Miss Sa sister's ma attendants Pervere of Misses Ge so: of this of Germa Rutledge o Corp. Ed

[HN00DR][GDrive]

1943 (Sep) - Marriage to Alice Truesdale

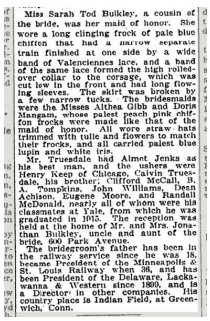
ALICE TRUESDALE'S PARENTS

*The **William Haynes Truesdale** is the grandfather of Alice Truesdale. He was the president of the **Lackawanna** **Railroad** back 1917. He was previously president of the Minneapolis and St. Paul railway by age 36.*

*LINK to 1917 news article : **WAR HURRIES NUPTIAL OF M.D. TRUESDALE; Son of Lackawanna's President, a Member of Coast Defense Reserve, Weds Miss Alice Moss.** Another link in the long chain of hurried war weddings was forged yesterday afternoon when the marriage of Melville Douglas Truesdale, youngest son of William Haynes Truesdale, President of the Lacka... https://timesmachine.nytimes.com/timesmachine/1917/05/13/102342728.html?action=click&pageNumber=16*

WAR HURRIES NUPTIAL OF M. D. TRUESDALE

Son of Lackawanna's President, a Member of Coast Defense Reserve, Weds Miss Alice Moss.



Miss Sarah Tod Bulkley, a cousin of the bride, was her maid of honor. She wore a long clinging frock of pale blue chiffon that had a narrow separate train finished at one side by a wide band of Valenciennes lace, and a band of the same lace formed the high rolled-over collar to the corsage, which was cut low in the front and had long flowing sleeves. The skirt was broken by a few narrow tucks. The bridesmaids were the Misses Althea Gibb and Doris Mangan, whose palest peach pink chiffon frocks were made like that of the maid of honor. All wore straw hats trimmed with tulle and flowers to match their frocks, and all carried palest blue lupin and white iris.

Mr. Truesdale had Almet Jenks as his best man, and the ushers were Henry Keep of Chicago, Calvin Truesdale, his brother; Clifford McCall, B. A. Pomplins, John Williams, Dean Achison, Eugene Moore, and Randall McDonald, nearly all of whom were his classmates at Yale, from which he was graduated in 1915. The reception was held at the home of Mr. and Mrs. Jonathan Bulkley, uncle and aunt of the bride, 640 Park Avenue.

The bridegroom's father has been in the railway service since he was 18, became President of the Minneapolis & St. Louis Railway when 36, and has been President of the Delaware, Lackawanna & Western since 1899, and is a Director in other companies. His country place is Indian Field, at Greenwich, Conn.

bride, 640 Park Avenue.

The bridegroom's father has been in the railway service since he was 18, became President of the Minneapolis & St. Louis Railway when 36, and has been President of the Delaware, Lackawanna & Western since 1899, and is a Director in other companies. His country place is Indian Field, at Greenwich, Conn.

The Truesdale and Townsend residences of Greenwich Connecticut. When your great grandparents have an estate in Greenwich that actually has its own name... that mans MONEY.

- **Greenwich, CT Residences, 1929, four**
  - Pickwick Arms Hotel, Greenwich, John W. Heath, General Manager
  - Edgewood Inn, George A. Richards, Proprietor
  - Residence of A.P. De Malglaive, Old Church Road
  - Putnam Trust Company, 1929
- **Greenwich, CT Residences, 1929, five**
  - Residence of Osborne M. Saxton, Broad and Shore Roads, Belle Haven
  - "Capenor," Residence of Edwin H. Baker, Broad Road
  - "Apple Tree Cottage," Residence of Mr. and Mrs. J. Baird Magnus, Belle Haven
- **Greenwich, CT Residences, 1929, six**
  - Residence of Presley N. Guthrie, Jr., 61 Park Avenue
  - "Horley Court," Residence of Robert T. McGusty, North Street
  - "Devador," Residence of Mr. and Mrs. Ewald H. Schniewind, North Street
- **Greenwich, CT Residences, 1929, seven**
  - "Indian Field," Residence of W. H. Truesdale, Bruce Park
  - "The Ledges, Residence of Calvin Truesdale, Bruce Park
  - "Horse Island," Residence of Geo H. Townsend
- **The Benjamin Mead II, Esq. Estate and Family Cemetery**

TRUESDALE COONNECTION TO BISSELL FAMILY

Robert Mueller's great aunt (mom's side) married a #Bissell ... what are the odds ? (see https://pbs.twimg.com/media/DxeiWoGWsAAlIMi.jpg)

#RobertMueller is related to By Richard M. Bissell, Jr. ... "Richard Mervin Bissell Jr. was a Central Intelligence Agency officer responsible for major projects such as the U-2 spy plane and the Bay of Pigs Invasion." (see https://pbs.twimg.com/media/DxejTi-WwAAZajU.jpg)

1943 (November / December) - In Florida

From the Dec 3 1943 issue of Princeton Alumni Weekly (see the full page at [HE000O][GDrive] / Princeton Alumni Weekly, Volume 44 in full (Sep 1943 to Summer 1944) available at [HE000M][GDrive]): It says that in November (of 1943), **Mr. and Mrs. Robert Swan Mueller** attended a Princeton reunion dinner along with 45 other Princetonians in Miami, most of them stationed at the Sub-Chaser Training Center in Miami, Florida. A Submarine Chaser (or "SC") is a small and fast naval vessel that is specifically intended for anti-submarine warfare. Many of the American submarine chasers used in World War I found their way to Allied nations by way of Lend-Lease in World War II. (WikiPedia - https://en.wikipedia.org/wiki/Submarine_chaser).

SEE HTTP://WWW.SPLINTERFLEET.ORG/

Over 40,000 men served on subchasers in World War II, and in those days the word "Subchaser" was as familiar to the folks at home as the words "PT Boat," "Tin Can Destroyer," "Liberty Ship" and "Jeep Carrier." Today only the people who lived during that time remember that subchasers existed and even many of these have forgotten about them. That's because subchasers didn't have the glamour of PT boats, the power and speed of destroyers, or the silent mystery of the submarines. Consequently they weren't romanticized by the media and kept in the public eye.

The **U.S. Navy Sub Chaster Training Center** in Miami, Florida is shown below in this May 11, 1942 photo. (80-G-16043 U.S. Navy sub chaser training center, Miami, Florida)

[HW001K][GDrive]

A week later, in the December 10 1943 issue of the Princeton Alumni Weekly, we read that Robert Swan Mueller II is decommissioning his old ship in Miami, turning her over to a foreign government under lend-lease. He them comes to N.Y. to get a new and better subchaser. (Princeton Alumni Weekly, Volume 44 in full (Sep 1943 to Summer 1944) - [HE000M][GDrive])

38 CHARLES A. POWERS
205 W. 39th Street
New York City 18

Ken Frick is now in the Navy at the Sampson Naval Training Station. He is studying for a commission and he is working now as a chief clerk. Lt. (j.g.) *Robert Mueller* is decommissioning his old ship in Miami, turning her over to a foreign government under lend-lease. He then comes to N.Y. to get a new and better subchaser. Married Alice Truesdale of N.Y., Sept. 3.

[HE000N][GDrive]

1944 (Feb)

From the Feb 1944 issue of the Princeton alumni weekly : *"Lt. (j.g.): **Bobby Mueller** [aka Robert Swan Mueller II] has been in New York for a short time, fitting out a new type PC boat; then out to sea again."* (Full page : [HE0014][GDrive] / Clip : [HE0015][GDrive])

1944 (Aug) - Birth of first son (Robert Swan Mueller III)

Robert Swan Mueller III was born on August 7, 1944. The birth took place at Doctors Hospital in the New York City borough of Manhattan , most likely because father Robert Swan Mueller II was in NYC in the US Navy at the time.

1945 (Feb) - Robert Swan Mueller II Navy assignment

Record of Lt. Robert Swan Mueller II, 1945 assignment to USS PC 1169. File number 119931.

NAVPERS 605-B
(Revised October 1942)
Page 4 (1st Qtr 45)

REPORT OF CHANGES
OFFICERS

of U. S. S. PC 1169 17 FEB 45

for the month ending 31st day of JANUARY, 1945, date of sailing

from to

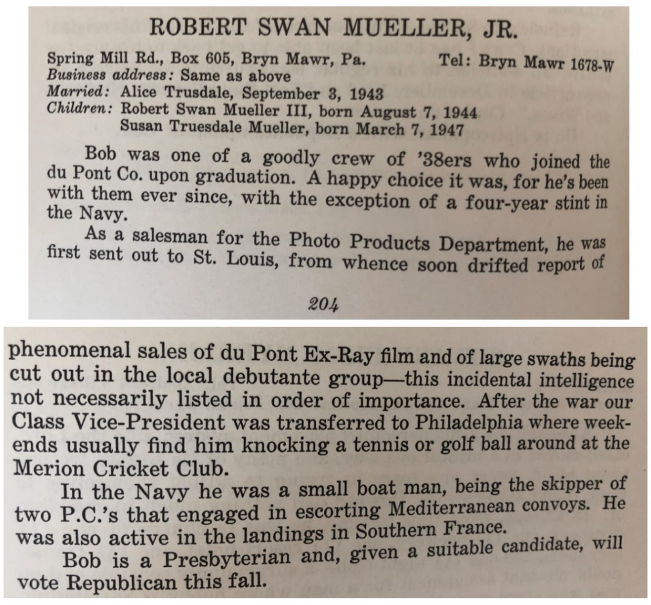
	1 NAMES (Alphabetically arranged without regard to ratings, with surname to the left and the first name written in full)	2 SERVICE NUMBER (The service number must under no condition be omitted)	3 Rating at Date of Last Report	4 Date of Enlistment	5 Place of Enlistment
1	MUELLER, Robert Swan, Jr.	119931	Lieut.		
2	PEARSON, Virgil L.	286097	Ensign		
3					
4	DIST.:				
5	BuPers				
6	ComSubSoSthFlt				
7	MLU, Navy 147				
8	Lantflt Records Office				
	File				

1947 (Nov) -Still a salesman with the X-Ray film division of Du Pont

From the Nov 28 1947 issue of Princeton Alumni Weekly (Pg 23) - *"Bob Mueller had child daughter **Susan Truesdale** on March 7 1947. Bob is a salesman with the X-ray film division of du Pont."'* ([HE000P][GDrive]).

1948 - Princeton 10-yr graduate update

(See full PDF generated from a copy of the book at [HE000Q][GDrive]).



ROBERT SWAN MUELLER, JR.

Spring Mill Rd., Box 605, Bryn Mawr, Pa. Tel: Bryn Mawr 1678-W
Business address: Same as above
Married: Alice Trusdale, September 3, 1943
Children: Robert Swan Mueller III, born August 7, 1944
Susan Truesdale Mueller, born March 7, 1947

Bob was one of a goodly crew of '38ers who joined the du Pont Co. upon graduation. A happy choice it was, for he's been with them ever since, with the exception of a four-year stint in the Navy.

As a salesman for the Photo Products Department, he was first sent out to St. Louis, from whence soon drifted report of

204

phenomenal sales of du Pont Ex-Ray film and of large swaths being cut out in the local debutante group—this incidental intelligence not necessarily listed in order of importance. After the war our Class Vice-President was transferred to Philadelphia where week-ends usually find him knocking a tennis or golf ball around at the Merion Cricket Club.

In the Navy he was a small boat man, being the skipper of two P.C.'s that engaged in escorting Mediterranean convoys. He was also active in the landings in Southern France.

Bob is a Presbyterian and, given a suitable candidate, will vote Republican this fall.

[HE000R][GDrive]

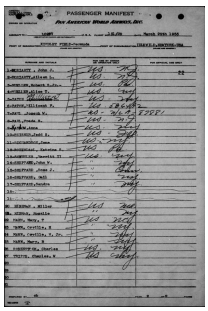
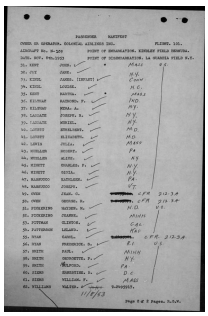
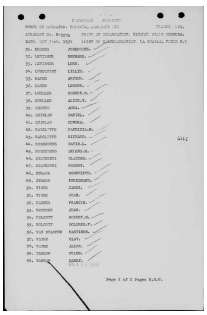
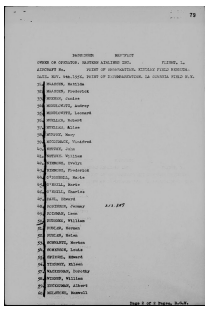
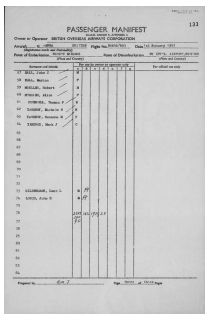
- Address - Spring Mill Rd., Box 605, Bryn Mawr, Pa.
- Joined du Pont Co. upon graduation.
- As a salesman for the Photo Products Department, he was first sent out to St. Louis, from whence soon drifted report of phenomenal sales of du Pont Ex-Ray film and of large swaths being cut out in the local debutante group. .. suggests he did not yet meet Alice when he went to St. Louis

1953 (March) / 1953 (Nov) / 1954 (Oct) - Travel (Vacation) to Bermuda

1956 (Nov) - Return from travel to Bermuda

1957(Jan) - Return from travel (vacation) to Bahamas

With wife Alice.

1956 (July or August) - Move from Philadelphia to Princeton, New Jersey

*"[**Robert Swan Mueller II**] and his family moved to Princeton in the 1950s so that he could commute to Dupont's New York office.[...] The Muellers lived at 158 Springdale, 120 Winant Road, and 49 Balcort Drive. Young [**Robert Swan Mueller III**] attended Princeton Day School before heading off to St. Paul's School in New Hampshire."* [HW001J][GDrive]. Also see, from Oct 19 1956 Princeton Alumni Review :

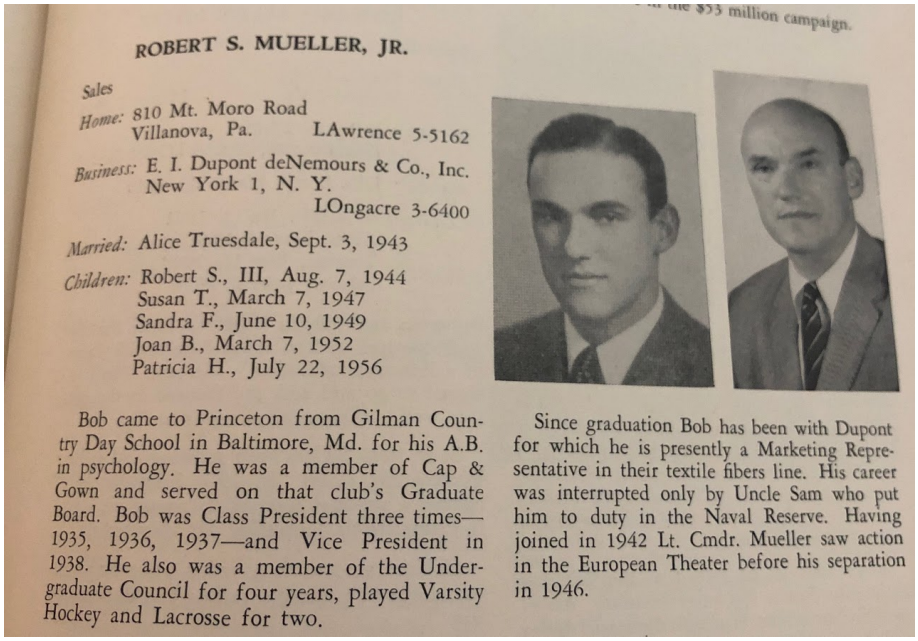
38 FREDERICK C. FIELD JR.
2409 West 17 St., Wilmington 6, Del.
Tel.: WIlmington 2-8240

Here in the fair city of Wilmington our stout '38 contingent has been reduced from a normal of eleven to a mere nine, and as of the date of this issue will be reduced temporarily to eight.

The basic eleven consisted of *Howie Brokaw, Sam Carpenter, Don Cook, Freddy Field, Charlie Freeman, Al Furbeck, Bill Johns, Sam McCune, Ed McLean, Bob Orr* and *Willie Tams*. To this list with a slight stretch could have been added *Bob Mueller* who worked in Wilmington but lived in Philadelphia until a few months ago, when he moved to Princeton.

Princeton Alumni Review, Vol 57
(Oct 19 1956, p29)

1963 - Graduation 25yr Update



the $33 million campaign.

ROBERT S. MUELLER, JR.

Sales

Home: 810 Mt. Moro Road
Villanova, Pa. LAwrence 5-5162

Business: E. I. Dupont deNemours & Co., Inc.
New York 1, N. Y.
LOngacre 3-6400

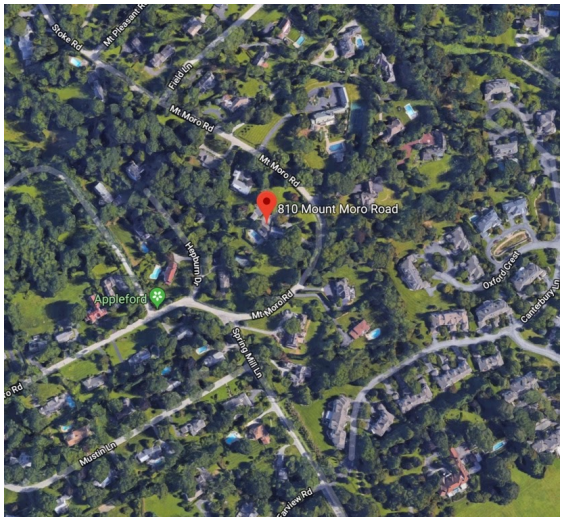
Married: Alice Truesdale, Sept. 3, 1943

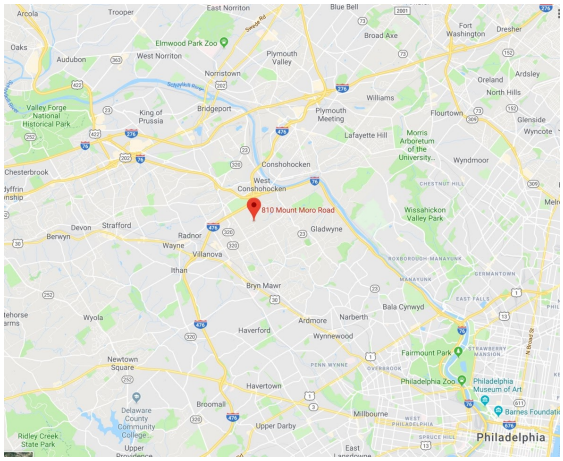
Children: Robert S., III, Aug. 7, 1944
Susan T., March 7, 1947
Sandra F., June 10, 1949
Joan B., March 7, 1952
Patricia H., July 22, 1956

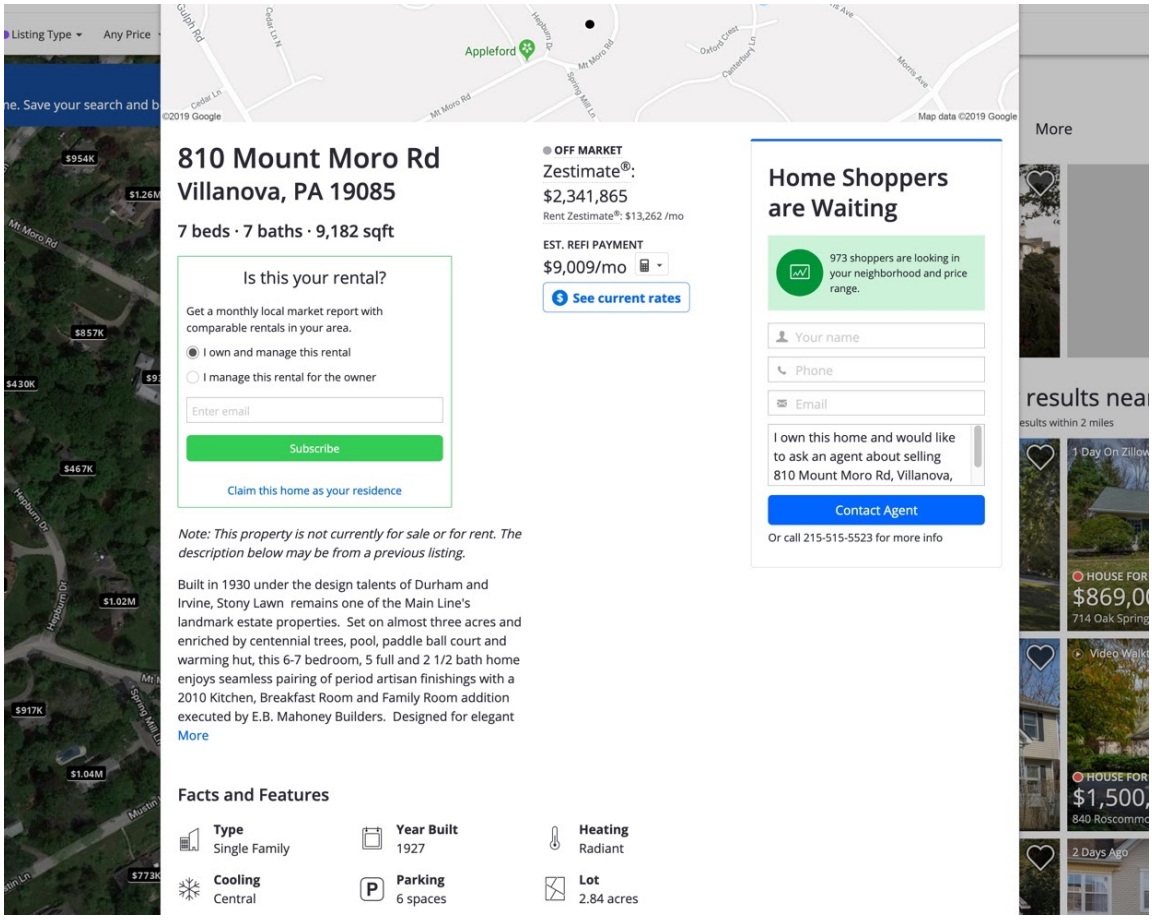
Bob came to Princeton from Gilman Country Day School in Baltimore, Md. for his A.B. in psychology. He was a member of Cap & Gown and served on that club's Graduate Board. Bob was Class President three times—1935, 1936, 1937—and Vice President in 1938. He also was a member of the Undergraduate Council for four years, played Varsity Hockey and Lacrosse for two.

Since graduation Bob has been with Dupont for which he is presently a Marketing Representative in their textile fibers line. His career was interrupted only by Uncle Sam who put him to duty in the Naval Reserve. Having joined in 1942 Lt. Cmdr. Mueller saw action in the European Theater before his separation in 1946.

Robert Swan Mueller II and his family as of 1963 were living at 810 Mt. Moro Road, in **Villanova PA**. This is within diving distance of Philadelphia, ext to **Bryn Mawr**. The home, described by Zillow :*" Built in 1930 under the design talents of Durham and Irvine, Stony Lawn remains one of the Main Line's landmark estate properties. Set on almost three acres and enriched by centennial trees, pool, paddle ball court and warming hut, this 6-7 bedroom, 5 full and 2 1/2 bath home..."*





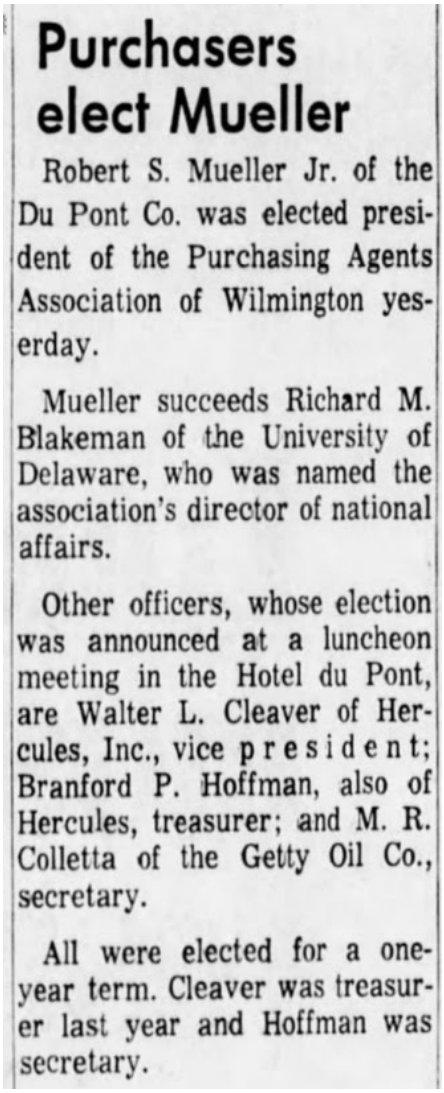


1966 - Son Robert Swan Mueller III engages Ann Standish

Full page : [HN00E8][GDrive] / Clip : [HN00E9][GDrive]

1968 (May)

(See full newspaper from May 7 1968 at [HN00DX][GDrive]).



Purchasers elect Mueller

Robert S. Mueller Jr. of the Du Pont Co. was elected president of the Purchasing Agents Association of Wilmington yesterday.

Mueller succeeds Richard M. Blakeman of the University of Delaware, who was named the association's director of national affairs.

Other officers, whose election was announced at a luncheon meeting in the Hotel du Pont, are Walter L. Cleaver of Hercules, Inc., vice president; Branford P. Hoffman, also of Hercules, treasurer; and M. R. Colletta of the Getty Oil Co., secretary.

All were elected for a one-year term. Cleaver was treasurer last year and Hoffman was secretary.

[HN00DY][GDrive]

1972 (June) - Daughter Susan T. Mueller Married To Louis Timchak Jr.

Full NY Times article - See [HN00GI][GDrive]

Commentary on current job of Robert Swan Mueller II - *"Mrs. Timchak's father is **senior purchasing agent with the E. L du Pont de Nemours & Co. In Wilmington**"*

Miss Susan T. Mueller Married To Louis Timchak Jr., Lawyer

Special to The New York Times

BRYN MAWR, Pa., June 3 — Miss Susan Truesdale Mueller, daughter of Mr. and Mrs. Robert Swan Mueller Jr. of Haverford and Hillock, Warick, Bermuda, was married here this afternoon to Louis John Timchak Jr., son of Mr. and Mrs. Timchak of Johnstown, Pa.

The Rev. Francis X. Metzbower performed the ceremony at the Blessed John Neumann Church here, assisted by Msgr. Patrick J. Ryan, Major General, Chief of Chaplains, U.S.A., retired, and the Rev. Rex F. Clements, retired pastor of the Presbyterian Church in Bryn Mawr.

The bride is executive assistant to the president of the Government Research Company, publishers of The National Journal in Washington. Her husband is a lawyer with the Marriott Corporation in Washington.

Mrs. Timchak's father is senior purchasing agent with the E. I. du Pont de Nemours & Co. in Wilmington, Del.

Mrs. Timchak's father is senpresident of the Laurel Development Company, Latrobe, Pa., real estate developers.

The bride is an alumna of Miss Porter's School in Farmington, Conn., of Bradford Junior College in Massachusetts and received an A.B. Degree from George Washington University in 1970.

Mr. Timchak is a graduate of the Georgetown Preparatory School, of Georgetown University, and of the University of Pittsburgh School of Law. He served as a lieutenant in the Judge Advocate General's Corps, U.S. Naval Reserve from 1965 to 1968 and for 16 months he was on the staff of the Commander, U.S. Naval Support Activity, Danang, Vietnam, as a Judge Advocate and as Foreign Claims Officer.

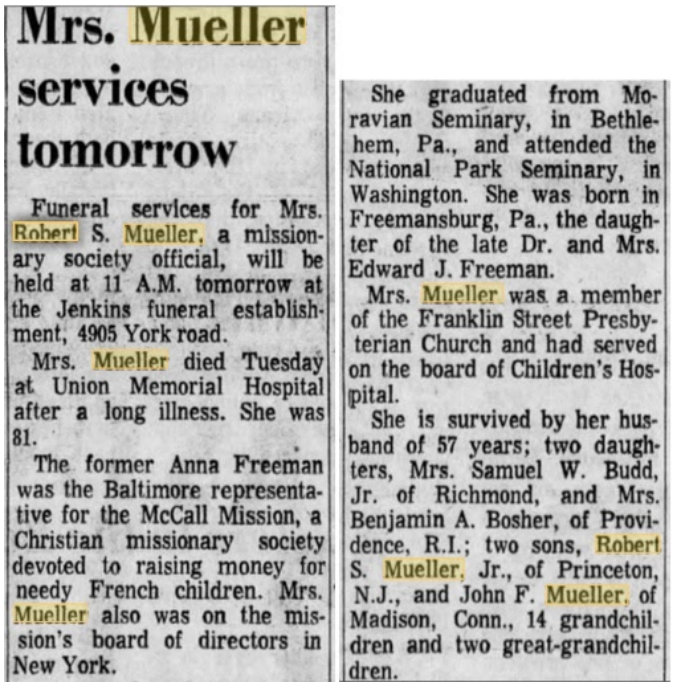
Tom McCaffrey

Mrs. Louis Timchak Jr., was Susan T. Mueller.

[HN00GJ][GDrive]

1973 (May) - Passing of mother Anna Elizabeth Freeman Mueller

Anna Mueller passed on May 8, 1973, at age 81. A news article regarding funeral services can be found below (full page from Baltimore Sun visible here : [HN00DZ][GDrive]).



Mrs. Mueller services tomorrow

Funeral services for Mrs. Robert S. Mueller, a missionary society official, will be held at 11 A.M. tomorrow at the Jenkins funeral establishment, 4905 York road.

Mrs. Mueller died Tuesday at Union Memorial Hospital after a long illness. She was 81.

The former Anna Freeman was the Baltimore representative for the McCall Mission, a Christian missionary society devoted to raising money for needy French children. Mrs. Mueller also was on the mission's board of directors in New York.

She graduated from Moravian Seminary, in Bethlehem, Pa., and attended the National Park Seminary, in Washington. She was born in Freemansburg, Pa., the daughter of the late Dr. and Mrs. Edward J. Freeman.

Mrs. Mueller was a member of the Franklin Street Presbyterian Church and had served on the board of Children's Hospital.

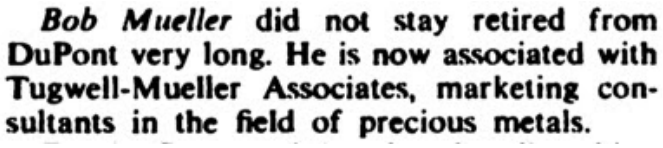
She is survived by her husband of 57 years; two daughters, Mrs. Samuel W. Budd, Jr. of Richmond, and Mrs. Benjamin A. Bosher, of Providence, R.I.; two sons, Robert S. Mueller, Jr., of Princeton, N.J., and John F. Mueller, of Madison, Conn., 14 grandchildren and two great-grandchildren.

[HN00E0][GDrive]

1975 (Jan/Feb) - Recently retired from DuPont, Robert Swan Mueller II launches TMA Inc.

Robert Swan Mueller II worked at **DuPont** for a 35 year career. The Princeton book say he did not stay retired long through, and shortly afterwards started **Tugwell-Mueller Associates Inc.**. We do not know his retirement date, but the Feb 1975 in the Princeton Alumni Review suggests it was late 1974 or early 1975.

(See full issue at [HE000S][GDrive]). TMA Inc. was started in Feb 1975, then Robert Swan Mueller II would have a few months before his 59th birthday.



Bob Mueller **did not stay retired from DuPont very long. He is now associated with Tugwell-Mueller Associates, marketing consultants in the field of precious metals.**

[HE000T][GDrive]

More on **Tugwell-Mueller Associates, Inc. ("TMA, Inc.")**. ... This company was started with **Gilbert Leonard Tugwell (born 1919)** , who was born in Sussex England, but had enjoyed a nearly 40 year career with **Engelhard Corporation** , where he succeeded in 1969 of becoming President of the **Engelhard Industries Division of Engelhard Minerals & Chemicals Corporation** .

1977 (Aug 28) - Wedding - Patricia H Mueller to Henry H Lewis - RSM2 and RSM3 there

Full page : [HN00E1][GDrive]

The Burlington Free Press (Burlington, Vermont) · 28 Aug 1977, Sun · Page 26

Lewis— Mueller

PRINCETON, N.J. — Patricia H. Mueller, daughter of Mr. and Mrs. Robert S. Mueller Jr., and Henry H. Lewis of Jericho, N.Y., were united in marriage Aug. 20.

Rev. Charles T. Fritsch officiated at the single ring ceremony in the Columbus Boy Choir School.

The bride wore an eyelet lace gown with train.

Joan B. Mueller was maid of honor. Bridesmaids were Polly Lewis, Cynthia Heyer, Cynthia Hoyt, Alice Mauran, Elizabeth Baker and Hanna McCrum.

Best man was Henry Lewis III, the groom's father. Ushers were Gregg Preston, John Nichols, Joe Cacioppo, Jay Dowling, Richard Priem and Robert S. Mueller III.

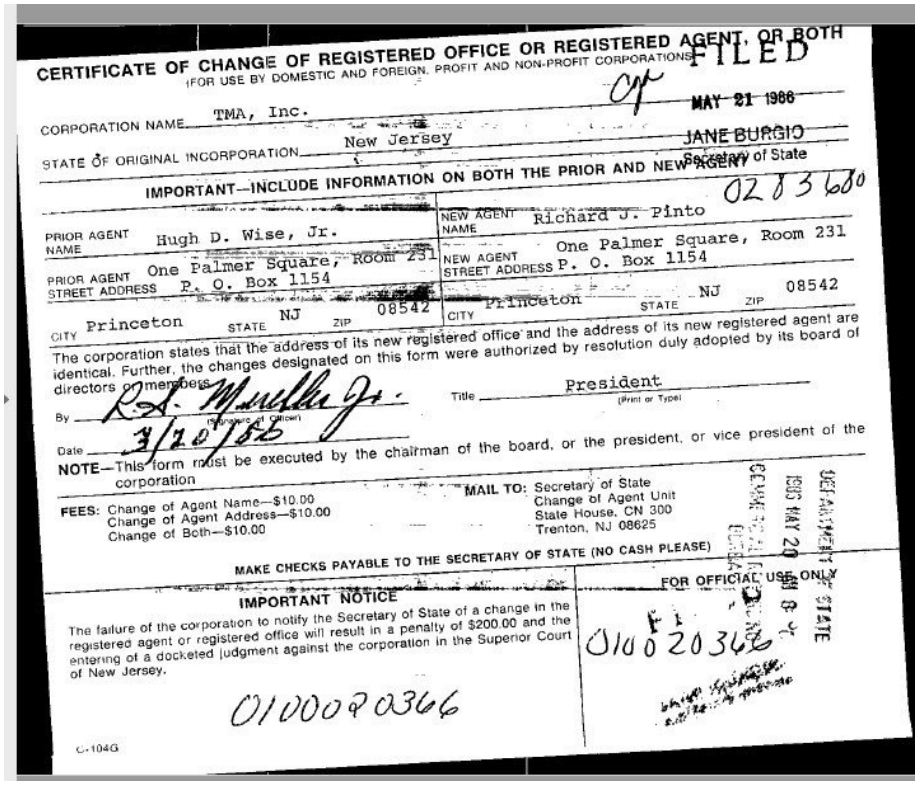
A reception was held at the Columbus Boy Choir School, following which the couple left for Vermont. They will live in South Burlington, Vt.

Mr. and Mrs. Lewis are students at the University of Vermont.

[HN00E2][GDrive]

1986 (March) - TMA New Jersey Change of Registered Office or Agent Filing

TMA (Tugwell-Mueller Associates) NJ Corp 1986 filing. Signed by Robert Swan Mueller Jr. (aka Robert Swan Mueller II). Shared on Twitter : See [HT0003] [GDrive] . Previous agent name was **Hugh D. Wise, Jr.** New agent name is **Richard J. Pinto**. The TMA office remains at One Palmer Square, Room 231, Princeton NJ.



CERTIFICATE OF CHANGE OF REGISTERED OFFICE OR REGISTERED AGENT, OR BOTH
(FOR USE BY DOMESTIC AND FOREIGN, PROFIT AND NON-PROFIT CORPORATIONS)

FILED
MAY 21 1986
JANE BURGIO
Secretary of State

CORPORATION NAME TMA, Inc.

STATE OF ORIGINAL INCORPORATION New Jersey

IMPORTANT—INCLUDE INFORMATION ON BOTH THE PRIOR AND NEW AGENT

0283680

PRIOR AGENT	NEW AGENT
NAME: Hugh D. Wise, Jr.	NAME: Richard J. Pinto
STREET ADDRESS: One Palmer Square, Room 231 P. O. Box 1154	STREET ADDRESS: One Palmer Square, Room 231 P. O. Box 1154
CITY: Princeton STATE: NJ ZIP: 08542	CITY: Princeton STATE: NJ ZIP: 08542

The corporation states that the address of its new registered office and the address of its new registered agent are identical. Further, the changes designated on this form were authorized by resolution duly adopted by its board of directors or members.

By R. L. Mueller Jr. (Signature of Officer) Title President (Print or Type)

Date 3/20/86

NOTE—This form must be executed by the chairman of the board, or the president, or vice president of the corporation

FEES: Change of Agent Name—$10.00
Change of Agent Address—$10.00
Change of Both—$10.00

MAIL TO: Secretary of State
Change of Agent Unit
State House, CN 300
Trenton, NJ 08625

MAKE CHECKS PAYABLE TO THE SECRETARY OF STATE (NO CASH PLEASE)

FOR OFFICIAL USE ONLY

IMPORTANT NOTICE

The failure of the corporation to notify the Secretary of State of a change in the registered agent or registered office will result in a penalty of $200.00 and the entering of a docketed judgment against the corporation in the Superior Court of New Jersey.

0100020366

0100020366

C-104G

[HT0004][GDrive]

2007 (May) - Passing of wife Alice Mueller

Alice Mueller

May 29, 2007

OBITUARY | GUESTBOOK | DIRECTIONS | PRINT PAGE

Alice (Truesdale) Mueller - Of Dedham, formerly of Philadelphia, PA & Wolfboro, NH, May 29, 2007. Beloved wife of Robert S. Mueller Jr. Devoted mother of Robert S. Mueller III of Washington DC, Susan M. Timchak of Lutz, FL, Sandra M. Dick of Brookline, Joan B. Mueller of Pownal, ME and Patricia H. Mueller of Jericho, VT. Also survived by 11 grandchildren & 4 great grandchildren. Sister of the late William Truesdale.

A private Funeral Service will be held at the George F. Doherty & Sons Wilson-Cannon Funeral Home, 456 High St., DEDHAM, on Thursday, Rev. Dorsey McConnell of the Church of The Redeemer, Brookline, will officiate. Private Interment.

In lieu of flowers donations may be made in Alice's memory to the American Cancer Society, 30 Speen St., Framingham, MA 01701-4688.

[HL0017][GDrive]

Robert Swan Mueller II passed on December 26, 2007

Robert Swan Mueller II passed on December 26, 2007, in Dedham Massachusetts at the age of 91. (See [HT002V][GDrive]).

BITCHUTE @Housatonic YOUTUBE @HousatonicLive ODYSEE @Housatonic BRIGHTEON @Housatonic

Housatonic

John Freeman Mueller (born 1919)

Timeline for **John Freeman Mueller** .

1919 (Feb) - Born

John Freeman Mueller was **born on February 19 of 1919** ([HT0027][GDrive])

He is the son of **Robert Swan Mueller I (b1893)** . His older brother is **Robert Swan Mueller II** .

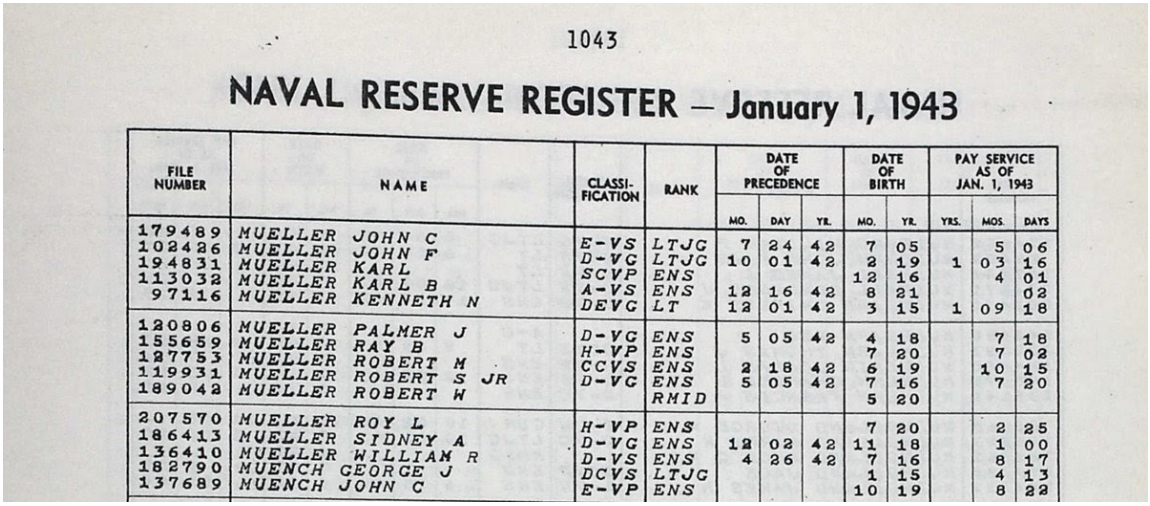
Grade school / college

"[**John Freeman Mueller** was a] graduate of Gilman School, he majored in geology at Princeton and joined Cap and Gown Club. He roomed first with Dave Barrett and then three years with Stuart Emmons. **"Johnnie"** played freshman hockey and lacrosse, junior varsity hockey and lacrosse, and varsity lacrosse senior year." [HL001C][GDrive] .

1934 : Swimming. See [HN00G5][GDrive]

US Navy

John Freeman Mueller was in the US Navy with his brother **Robert Swan Mueller II** ; Both were in the Navy Register. Robert Swan Mueller II was classification D-VC, Rank RNS, with 7 months a 20 days of pay service as of jan 1 1943. John Freeman Mueller was Classification D-VG, Rank LTJG, with 1 year, 3 months, and 16 days of pay service as of Jan 1 1943.



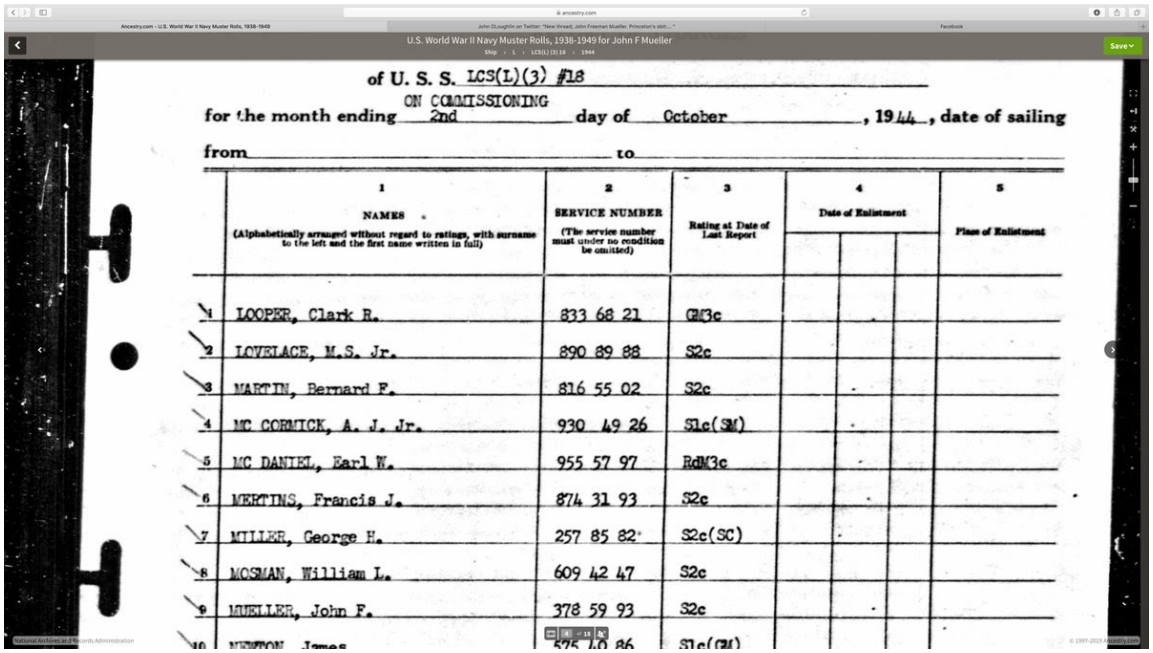
1043

NAVAL RESERVE REGISTER — January 1, 1943

FILE NUMBER	NAME	CLASSI-FICATION	RANK	DATE OF PRECEDENCE MO.	DAY	YR.	DATE OF BIRTH MO.	YR.	PAY SERVICE AS OF JAN. 1, 1943 YRS.	MOS.	DAYS
179489	MUELLER JOHN C	E-VS	LTJG	7	24	42	7	05		5	06
102486	MUELLER JOHN F	D-VG	LTJG	10	01	42	2	19	1	03	16
194831	MUELLER KARL	SCVP	ENS				12	16		4	01
113032	MUELLER KARL B	A-VS	ENS	12	16	42	8	21			02
97116	MUELLER KENNETH N	DEVG	LT	12	01	42	3	15	1	09	18
120806	MUELLER PALMER J	D-VG	ENS	5	05	42	4	18		7	18
155659	MUELLER RAY B	H-VP	ENS				7	20		7	02
127753	MUELLER ROBERT M	CCVS	ENS	2	18	42	6	19		10	15
119931	MUELLER ROBERT S JR	D-VG	ENS	5	05	42	7	16		7	20
189042	MUELLER ROBERT W		RMID				5	20			
207570	MUELLER ROY L	H-VP	ENS				7	20		2	25
186413	MUELLER SIDNEY A	D-VG	ENS	12	02	42	11	18		1	00
136410	MUELLER WILLIAM R	D-VS	ENS	4	26	42	7	16		8	17
182790	MUENCH GEORGE J	DCVS	LTJG				1	15		4	13
137689	MUENCH JOHN C	E-VP	ENS				10	19		8	22

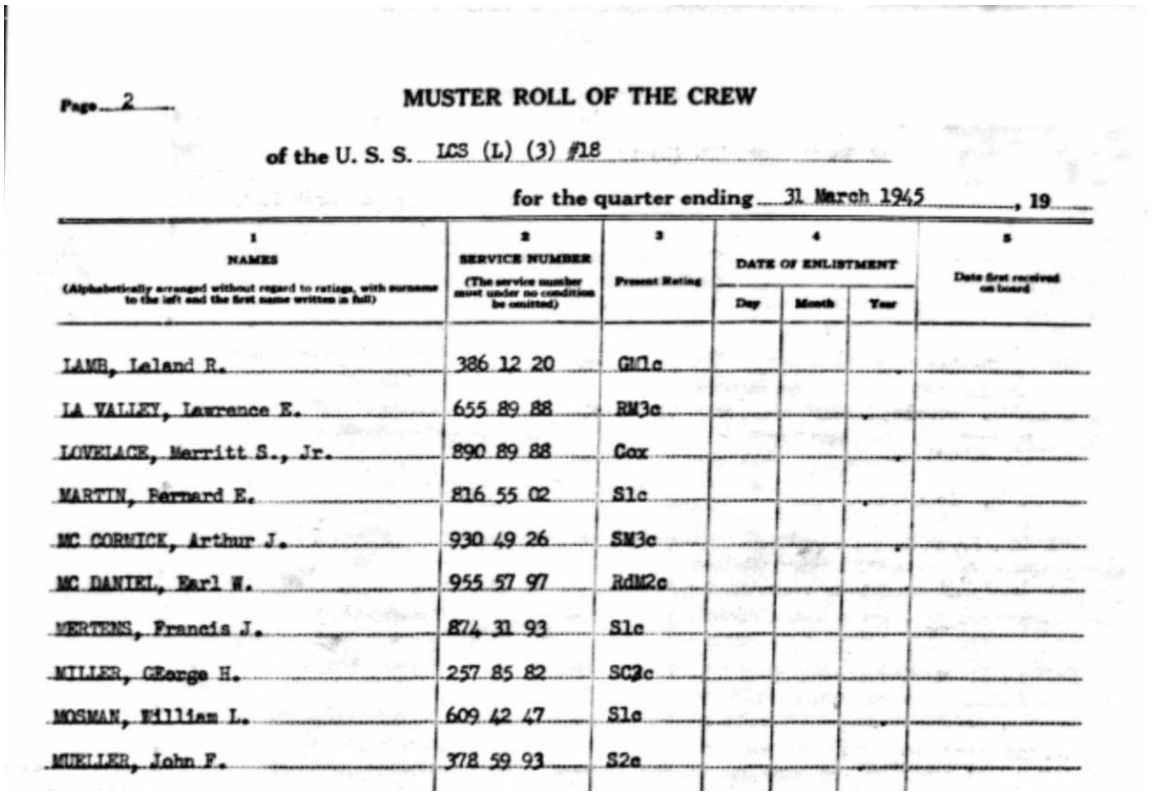
[HT0027][GDrive]

October 1944 Muster roll. Location of records: National Archives at College Park; College Park, Maryland, United States; Muster Rolls of U.S. Navy Ships, Stations, and Other Naval Activities, 01/01/1939 - 01/01/1949; Record Group: 24, Records of the Bureau of Naval Personnel, 1798 - 2007; See [HT002E] [GDrive]) Source Tweet of below : [HT002F][GDrive]



[HT002G][GDrive]

March 31, 1945 muster roll. What is this ship? Source Tweet : [HT002C][GDrive]



[HT002D][GDrive]

August 1945 Muster roll for LCI (G) 17 shows John F. Mueller enlisted in Milwaukee, Wisconsin March 15, 1945. Source Tweet : [HT002Q][GDrive]

Page _____

REPORT OF CHANGES

of U. S. S. LCI (G) #17

for the month ending 1 day of AuGust, 19 45, date of sailing

from _____ to _____

	1 NAMES (Alphabetically arranged without regard to ratings, with surname to the left and the first name written in full)	2 SERVICE NUMBER (The service number must under no condition be omitted)	3 Rating at Date of Last Report	4 Date of Enlistment			5 Place of Enlistment
16	Mueller, John F.	307 48 37	S2c	15	Mar.	1945	Milwaukee, Wis.
17	Munro, John I.	947 03 06	S2c	5	Mar.	1945	Chicago, Ill.
18	Munro, John I.	947 43 06	S2c	5	Mar.	1945	Chicago, Ill.
19	Munsell, Clarence W.	343 61 10	S2c	2	Mar.	1945	KansasCity, Mo.

[HT002R][GDrive]

JFM Muster roll for USS Dartmouth (CL-102, a Light Cruiser like Nashville).

Source Tweet : [HT0028][GDrive]

NAVPERS 000-B (Revised October 1942)

Page _____

REPORT OF CHANGES

of U. S. S. PORTSMOUTH (CL-102)

for the month ending 1st day of January, 1946, date of sailing

from _____ to _____

	1 NAMES (Alphabetically arranged without regard to ratings, with surname to the left and the first name written in full)	2 SERVICE NUMBER (The service number must under no condition be omitted)	3 Rating at Date of Last Report	4 Date of Enlistment	5 Place of Enlistment
X 1	MC CORMICK, Frank R., Jr.	286 00 41	S1c, V6 USNR		
✓ 2	MC CRAY, Willard (n)	831 18 04	St3c(T) SV6 USNR		
X 3	MC ENANY, Joseph A.	643 74 95	S2c, V6 USNR		
X 4	MC GRATH, Edward F.	714 97 68	S2c(RdM), V6 USNR		
X 5	MISLER, Abraham (n)	256 50 26	S1c USN		
X 6	MONTS, Ralph M.	753 66 35	S1c (RdM) V6 USNR		
✓ 7	MONTS, Ralph M.	753 66 35	RdM3c V6 USNR		
✓ 8	MORAVEC, Alexander B.	312 06 74	PhoM2c(T) USN		
X 9	MORONG, George (n)	667 95 59	S2c, V6 USNR		
X 10	MOYLAN, Andrew T.	714 21 60	S2c(FCO) USNR V6		
X 11	MUELLER, John F.	715 03 07	S2c(RdM) V6 USNR		

[HT0029][GDrive]

Bottom half of same, he is No. 11, showing transfer from...?(what do these codes mean). Source Tweet : [HT002A][GDrive]

	6 Branch of Service	7 Received, transferred, deserted, discharged, change of rating, death, or any other change of status	8 Date of Occurrence in column 7	9 Vessel or station from which received, to what vessel or station transferred, where discharged and character of discharge; where deserted, and amount due or overpaid. Where died, cause of death and where and when buried. If rated and authority for same. If liberated, give cause; if on detached duty, give place of duty. If passenger, give purpose of travel and final disposition.
1	V6 USNR	CR:	12/16/45	From Slc V6 USNR to RdM3c(T) V6 USNR. AUTH: BuPers C/L 297-44.
2	SV6 USNR	Trans.	12/17/45	To RS,Phila,Pa.FFT USPSC, NAS, Jacksonville, Fla. for disc. AUTH: ALNAV 395-45.
3	V6 USNR	CR:	12/16/45	From S2c V6 USNR to Slc V6 USNR. AUTH: BuPers C/L 297-44.
4	V6 USNR	CR:	12/16/45	From S2c(RdM) to Slc(RdM) V6 USNR. AUTH: BuPers C/L 297-44.
5	USN	CR:	12/16/45	From Slc USN to Cox(T) USN. AUTH: BuPers C/L 297-44.
6	V6 USNR	CR:	12/16/45	From Slc(RdM) V6 USNR to RdM3c(T) V6 USNR. AUTH: BuPers C/L 297-44.
7	V6 USNR	Trans.	1/1/46	To RS,Phila,Pa.FFT USPSC, NTC, Great Lakes, Ill. for disc. AUTH: ALNAV 395-45.
8	USN	Rec.	12/25/45	From RS, Philadelphia, Pa. for duty.
9	V6 USNR	CR:	12/16/45	From S2c V6 USNR to Slc V6 USNR. AUTH: BuPers C/L 297-44.
10	V6 USNR	CR:	12/16/45	From S2c(FCO) V6 USNR to Slc(FCO)V6 USNR. AUTH: BuPers C/L 297-44.
11	V6 USNR	CR:	12/16/45	From S2c(RdM)V6 USNR to Slc(RdM) V6 USNR. AUTH: BuPers C/L 297-44.

[HT002B][GDrive]

Muster roll of LCI (G) 17, decomissioning 1946. Source Tweet : [HT002H][GDrive]

NAVPERS 601-2
(Revised October 1945)
Page _____

REPORT OF CHANGES

MAR 2 - 1946

of U. S. S. LCI (G) 17

DECOMMISSIONING

for the month ending 15 day of March, 19 46, date of sailing

from San Diego, Calif. to

	1 NAMES (Alphabetically arranged without regard to ratings, with surname to the left and the first name written in full)	2 SERVICE NUMBER (The service number must under no condition be omitted)	3 Rating at Date of Last Report	4 Date of Enlistment			5 Place of Enlistment
1	Bedell, James R.	314 25 01	Cox				
2	Corcoran, Thomas B. Jr.	238 91 49	PhM2c				
3	Johnson, Rubin E.	730 61 45	Flc(EM)				
4	Jones, "R" "R"	981 26 83	S1c				
5	Morrison, Andrew H.	958 25 38	S1c				
6	Mortensen, Lloyd G.	307 48 99	S1c				
7	Mueller, John F.	307 48 37	S1c				
8	Neumann, John H.	730 61 62	Flc				
9	Pesce, Thomas J.	908 12 43	Cox				
10	Shaenboen, Francis (n)	951 29 49	SM2c				
11	Stroud, Talmadge C.	971 16 01	MoMM3c				
12	Wilbert, Frank III	923 53 42	GM3c				
13	Wood, James N.	322 26 14	RT3c				
14	Wright, Curtis (n)	787 09 39	StM2c				
15	Zenkoski, Frank R.	712 56 78	S1c				

	6 Branch of Service	7 Received, transferred, deserted, discharged, change of rating, death, or any other change of status	8 Date of Occurrence in column 7	9 Vessel or station from which received, to what vessel or station transferred, where discharged and character of discharge; where deserted, and amount due or overpaid. Where died, cause of death and where and when buried. If rated and authority for same. If disrated, give cause; if on detached duty, give place of duty. If passenger, give purpose of travel and final disposition.
1	V6 USNR	Transferred	6 March 1946	To Camp Elliot FURAS ComWestSeaFron
2	USN	Transferred	6 March 1946	To LCI (G) 196 for duty
3	V6 USR	Change Rate	15 March 1946	To EM3c Auth. BuPers C/L 297-44
4	SV6 USNR	Transferred	6 March 1946	To Camp Elliot, Calif FURAS ComWestSeaFron
5	SV6 USNR	Transferred	6 March 1946	To Camp Elliot, Calif. FURAS ComWestSeaFron
6	V6 USNR	Change Rate	15 March 1946	To SM3c Auth. BuPers C/L 297-44
7	V6 USNR	Change Rate	15 March 1946	To Cox Auth. BuPers C/L 297-44

[HT002I][GDrive]

	Branch of Service	Received, transferred, deserted, discharged, change of rating, death, or any other change of status	Date of Occurrence in column 7	Vessel or station from which received, to what vessel or station transferred, where discharged and character of discharge; where deserted, and amount due or overpaid. Where died, cause of death and where and when buried. If rated and authority for same. If disrated, give cause; if on detached duty, give place of duty. If passenger, give purpose of travel and final disposition.
1	V6 USNR	Transferred	6 March 1946	To Camp Elliot FURAS ComWestSeaFron
2	USN	Transferred	6 March 1946	To LCI (G) 196 for duty
3	V6 USR	Change Rate	15 March 1946	To EM3c Auth. BuPers C/L 297-44
4	SV6 USNR	Transferred	6 March 1946	To Camp Elliot, Calif FURAS ComWestSeaFron
5	SV6 USNR	Transferred	6 March 1946	To Camp Elliot, Calif. FURAS ComWestSeaFron
6	V6 USNR	Change Rate	15 March 1946	To SM3c Auth. BuPers C/L 297-44
7	V6 USNR	Change Rate	15 March 1946	To Cox Auth. BuPers C/L 297-44

[HT002J][GDrive]

LCI (G) 17 is a Landing Craft, Infantry. Source Tweet : [HT002K][GDrive]

LCI(G) -- Landing Craft, Infantry (Gunboat)

Click on "LCI(G)-##" for link to page with specifications, history, photographs (where available).

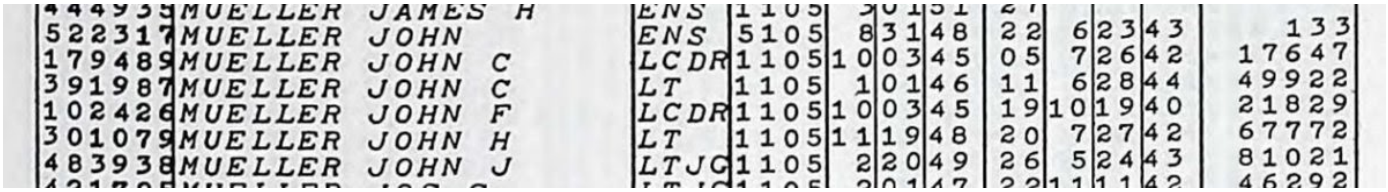
- Displacement: 387 tons (full load)
- Length: 160'4"
- Beam: 23'3"
- Draft: Landing: 2'10" forward, 5'3" aft (LCI(G)-1--350); 2'8" forward, 5' aft (LCI(G)-351 & above)
- Speed: 15.5 knots
- Armament: 2-3 40mm, 3-4 20mm, 6 .50 cal, 10 Mk 7 & 2 Mk 22 rocket launchers
- Complement: 5 officers, 65 enlisted
- 8 GM diesels, twin screws
- Converted from Landing Craft, Infantry (Large) -- LCI(L) for close-in fire support of landing operations

- Transport Doctrine, Amphibious Forces, U.S. Pacific Fleet, Chapter 27: Gunfire Support, Section 6: LCS(L) and LCI(G)

No.	Name	Comm.	Notes (†: Lost)
LCI(G)-2		1944-45	
LCI(G)-17		1944-45	
LCI(G)-18		1944-45	
LCI(G)-19		1944-45	
LCI(G)-22		1944-45	Converted from LCI(L)-22
LCI(G)-31		1944-45	

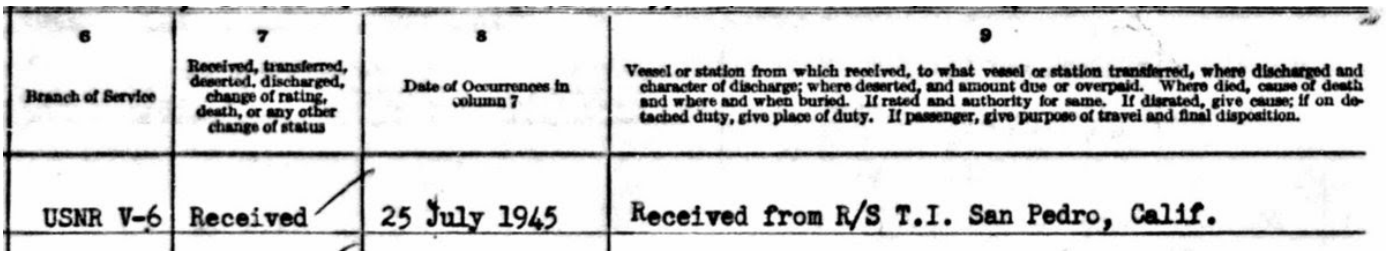
[HT002L][GDrive]

"John F. Mueller" as "LCDR" (or Lieutenant Commander) in 1946 US Navy Reserve . This is the same man - Birthyear is "19" (John Freeman Mueller was born in February of 2019). Source Tweet : [HT002M][GDrive]



[HT002N][GDrive]

John F. Mueller Muster above was a transfer from this station. Source Tweet : [HT002S][GDrive]

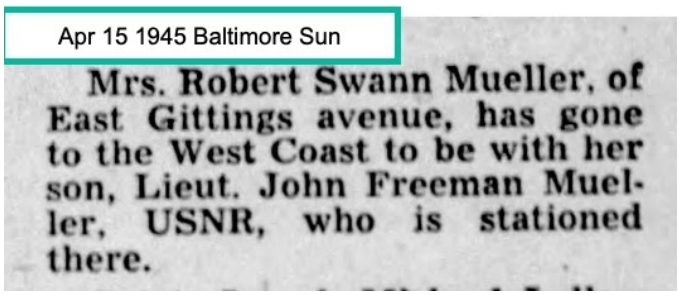


6 Branch of Service	7 Received, transferred, deserted, discharged, change of rating, death, or any other change of status	8 Date of Occurrences in column 7	9 Vessel or station from which received, to what vessel or station transferred, where discharged and character of discharge; where deserted, and amount due or overpaid. Where died, cause of death and where and when buried. If rated and authority for same. If disrated, give cause; if on detached duty, give place of duty. If passenger, give purpose of travel and final disposition.
USNR V-6	Received	25 July 1945	Received from R/S T.I. San Pedro, Calif.

[HT002T][GDrive]

1945 (April) - John Freeman Mueller is serving on Pacific Coast, gets visit from mother

Full page : [HN00G6][GDrive]


Apr 15 1945 Baltimore Sun

Mrs. Robert Swann Mueller, of East Gittings avenue, has gone to the West Coast to be with her son, Lieut. John Freeman Mueller, USNR, who is stationed there.

[HN00G7][GDrive]

1946 (Aug) - Engagement announcement to Miss Jermain Duncan Johnson

(See full page in newspaper at [HN00G8][GDrive])

MISS JERMAIN DUNCAN JOHNSON

Mr. and Mrs. George Frederick Betts Johnson announced the engagement of their daughter, Miss Jermain Duncan Johnson to Mr. John Freeman Mueller yesterday at a party at their home in Buffalo, N.Y. Mr. Mueller is the son of Mr. and Mrs. Robert Swan Mueller, of Gittings avenue

[HN00G9][GDrive]

Newport Mercury News of 1946 (Aug 30) :

Full page : [HN00GC][GDrive]

Miss Johnson Engaged

Mr. and Mrs. George Frederick Betts Johnson of Buffalo, N. Y., announced the engagement of their daughter, Miss Jermain Duncan Johnson, to John Freeman Mueller, son of Mr. and Mrs. Robert Swan Mueller of Baltimore, Md. Miss Johnson is related to Mrs. Stuart Duncan of "Bonniecrest," and was named for her. Miss Johnson's father and Mrs. Duncan are first cousins.

[HN00GDC][GDrive]

1946 - Wedding (Nov/Dec)

See full newspaper page : [HN00GA][GDrive]

MRS. JOHN FREEMAN MUELLER
Before her recent marriage to Mr. Mueller, son of Mr. and Mrs. Robert Swan Mueller, of Gittings avenue, Mrs. Mueller was Miss Jermain Duncan Johnson. She is the daughter of Mr. and Mrs. George Frederick Betts Johnson, of Buffalo, N.Y.

[HN00GB][GDrive]

1946 (November) - John Freeman Mueller working with DuPont while living in Buffalo

Johnnie ***Mueller*** is in Buffalo working in the sales department of duPont. John's engagement to Miss Jermain Johnson of Buffalo was announced August 27; the wedding is set for November 29.

Princeton Alumni Review, Vol 47 (Nov 1 1946, p24)

1948 (September) - Wedding of sister Emilie Grace Mueller to Dr. Samuel Walthall Budd

(See full newspaper page at [HN00FI][GDrive] / clipping at [HN00FJ][GDrive]).

1948 or 1949 - Birth of daughter Jermain Johnson Mueller

She was 70 yrs old as of March 2019 (married in 1976 - see later).

1950 (Jan 27) - Birth of son John Freeman Mueller Jr.

1951 (March 1) - 197x(?) - Career at Reynolds Metals

1950 (March) - Having just left Du Pont in Buffalo NY, John Freeman Mueller joins aluminum window distributor

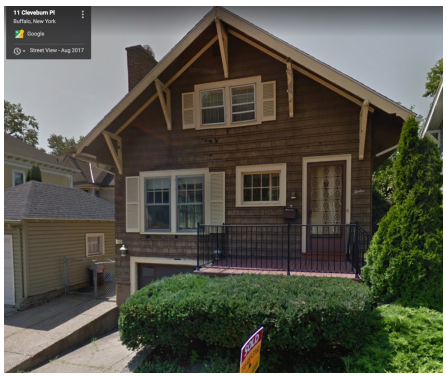
March 1950 - Having just left Du Pont in Buffalo NY, John Freeman Mueller joins aluminum window distributor

"Johnny Mueller says he's settled in Buffalo to stay, having bought a house then at 12 Clevebum Place last October. He resigned from the Du Pont Company the end of the year to accept a position as sales engineer in charge of the aluminum window division of "Alsco" Distributors, Inc. of New York State, where he's associated with Ed Kryder '42. Daughter Jermain, who will be two in March, acquired a baby brother January 27, John F., Jr."

41 H. PHILIPS AUSTIN JR.
4 Griffin Lane
Haverford, Pa.

Princeton Alumni Review, Vol 47 (March 17 1950, p24)

Johnny ***Mueller*** says he's settled in Buffalo to stay, having bought a house there at 12 Cleveburn Place last October. He resigned from the Du Pont Company the end of the year to accept a position as sales engineer in charge of the aluminum window division of "Alsco" Distributors, Inc. of New York State, where he's associated with Ed Kryder '42. Daughter Jermain, who will be two in March, acquired a baby brother January 27, John F., Jr.



March 1963 Princeton Alumni Review - *"**Jack Mueller** has rejoined Reynolds Metals Company, located in N.Y.C. Jack was formerly with Reynolds from 1950 to 1955 in Louisville, Kentucky, and Philadelphia".*

Reynolds Metals had their sales force offices in Louisville Kentucky, but moved them to Richmond Virginia in the (late) 1950s.

*"In June 1958, Reynolds Metals Co. entered a new era in Richmond. Big changes began several years earlier with the transporting of the company's **sales** force from Louisville, Kentucky, to Richmond. This involved moving over 400 employees and their families, 600,000 pounds of office files and equipment and 2,400,000 pounds of employees' household goods almost 600 miles. For several employees this included company-paid visits to Richmond for several months to look for homes in the area"*

See - https://www.richmond.com/from-the-archives/from-the-archives-reynold-metals-richmond-office/article_52ba42fa-0708-11e6-bb2a-a35bf95548fc.html

The other big employer at the time in Louisville Kentucky was Du Pont -

"The 1950s shift from Louisville increased Reynolds's employment in Richmond to 3,050—the largest of any private industrial organization except the Du Pont Co., which had 3,700 (in 1958)."

... Meaning that John Freeman Mueller, working in sales for Du Pont in Buffalo in the late 1940s, might have had some level of continuity if he transitioned to sales with Reynolds Metals in Louisville Kentucky in the early 1950s.

We also read that John F Mueller joined Reynolds Metals "after the way" (See [HL001C][GDrive]), but that is not specific ....

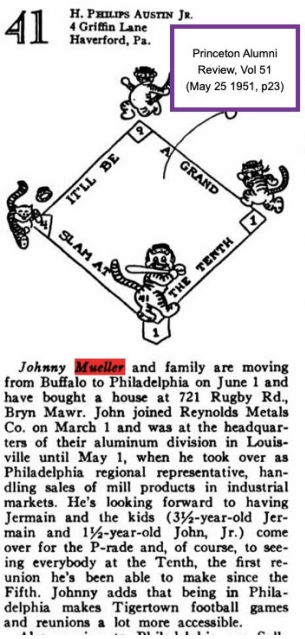
"After the war, Johnnie went into the aluminum-extrusion industry, initially with Reynolds Metals. After his retirement he was still working as a consultant with Indal Extrusion Co. of Gainesville, Ga."

As of April 1969, we know John Freeman Mueller is commuting to Manhattan where is an **"architectural and highway industry manager for Reynolds Metals."**

See WikiPedia articles : https://en.wikipedia.org/wiki/Reynolds_Group_Holdings /

We dont know when John Freeman Mueller retired - But we know "*After his retirement he was still working as a consultant with **Indal Extrusion Co.** of Gainesville, Ga.*" [HL001C][GDrive]

1951 (May) - John Freeman Mueller joins Reynolds Metals on March 1, moved to Bryn Mawr (iow Philadelphia)



41 H. Philips Austin Jr.
4 Griffin Lane
Haverford, Pa.

Princeton Alumni Review, Vol 51 (May 25 1951, p23)

Johnny Mueller and family are moving from Buffalo to Philadelphia on June 1 and have bought a house at 721 Rugby Rd., Bryn Mawr. John joined Reynolds Metals Co. on March 1 and was at the headquarters of their aluminum division in Louisville until May 1, when he took over as Philadelphia regional representative, handling sales of mill products in industrial markets. He's looking forward to having Jermain and the kids (3½-year-old Jermain and 1½-year-old John, Jr.) come over for the P-rade and, of course, to seeing everybody at the Tenth, the first reunion he's been able to make since the Fifth. Johnny adds that being in Philadelphia makes Tigertown football games and reunions a lot more accessible.

1957 (Sep) - Working with the growing New Jersey Aluminum Extrusion Company in New Brunswick, NJ

quite an experience.
John Mueller is with the growing New Jersey Aluminum Extrusion Co., Inc., New Brunswick, N.J., and is associated with Paul H. Metcalf '37, president, and Harold B. Erdman '46, vice-president, both co-founders of the company. The company fabricates custom extrusion and tubing.

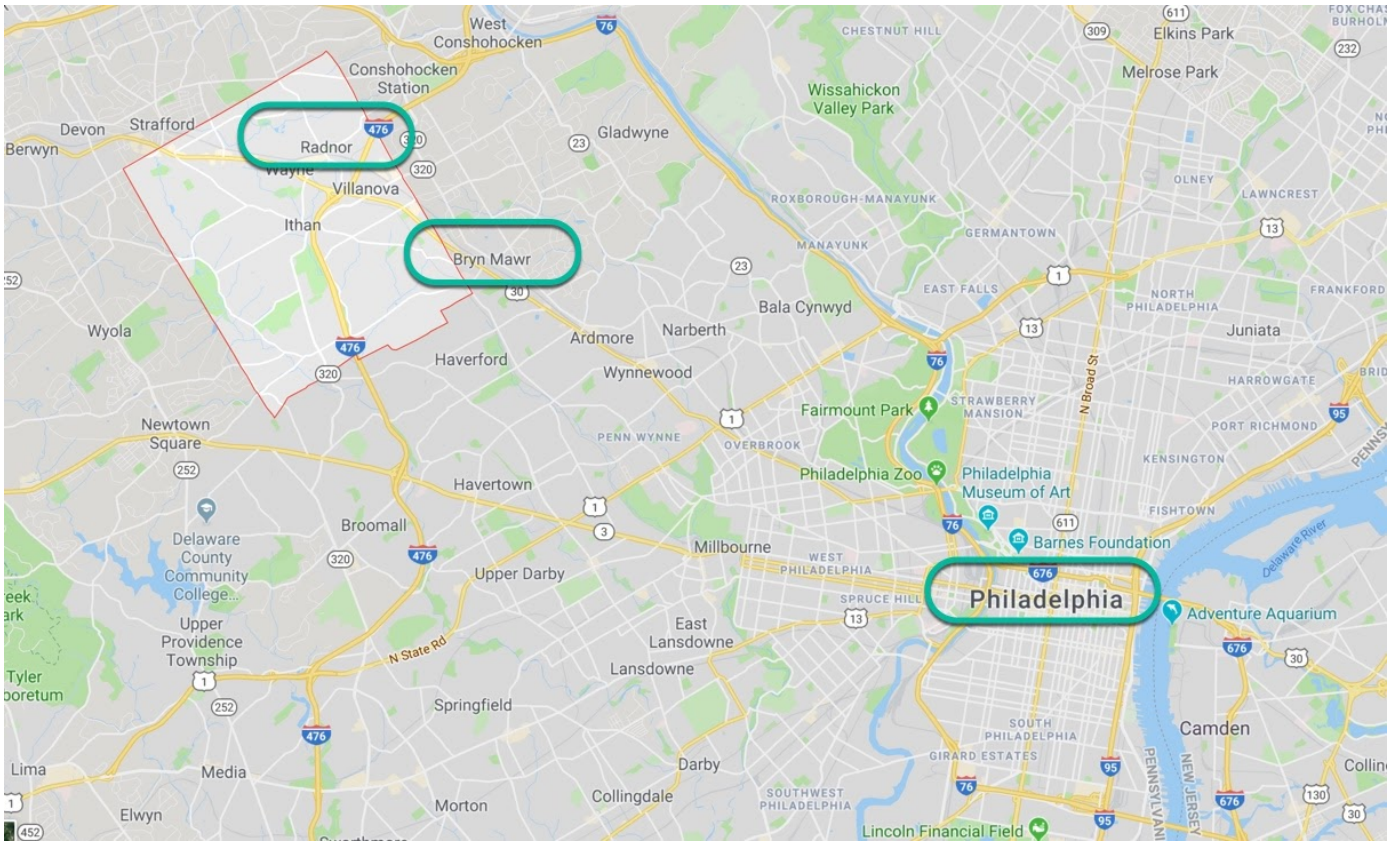
Princeton Alumni Review, Vol 58
(Sep 20 1957, p27)

1957 (Sep) - Selling home in Radnor Pennsylvania , and planning to move to Princeton

Inc., publishers.
John Mueller is moving to Princeton as soon as his home in Radnor, Pa., is sold. He hopes this will be by next spring.

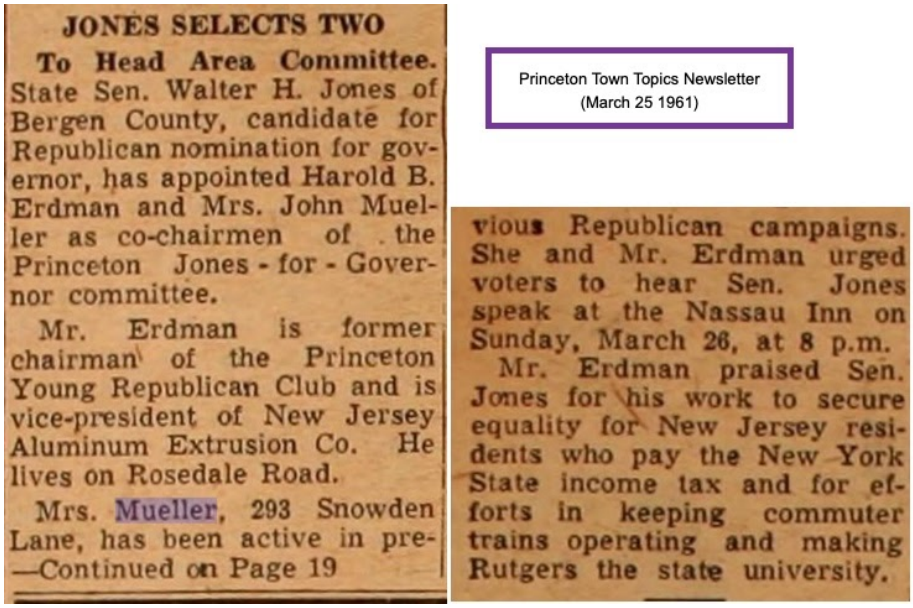
Princeton Alumni Review, Vol 58
(Sep 27 1957, p24)

Where is Radnor?



1961 - Residing at 293 Snowden Lane / Working for NJ Republican governor campaigns

Full doc - [HN00GE][GDrive]



JONES SELECTS TWO

To Head Area Committee.

State Sen. Walter H. Jones of Bergen County, candidate for Republican nomination for governor, has appointed Harold B. Erdman and Mrs. John Mueller as co-chairmen of the Princeton Jones - for - Governor committee.

Mr. Erdman is former chairman of the Princeton Young Republican Club and is vice-president of New Jersey Aluminum Extrusion Co. He lives on Rosedale Road.

Mrs. Mueller, 293 Snowden Lane, has been active in pre-

—Continued on Page 19

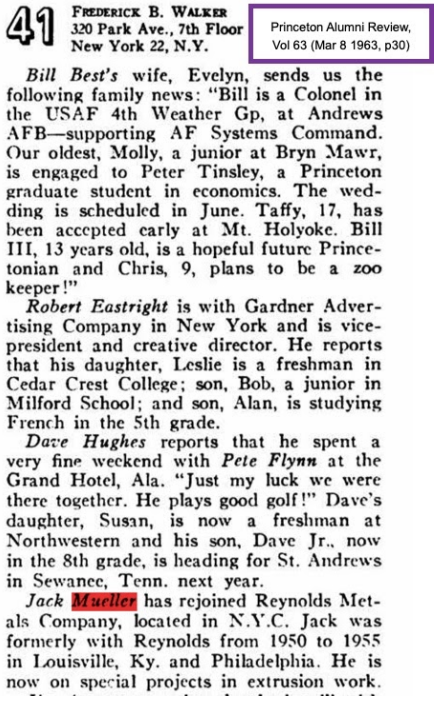
vious Republican campaigns. She and Mr. Erdman urged voters to hear Sen. Jones speak at the Nassau Inn on Sunday, March 26, at 8 p.m.

Mr. Erdman praised Sen. Jones for his work to secure equality for New Jersey residents who pay the New York State income tax and for efforts in keeping commuter trains operating and making Rutgers the state university.

Princeton Town Topics Newsletter
(March 25 1961)

[HN00GF][GDrive]

1963 (March) - Rejoins Reynolds Metals Company in NYC



41 FREDERICK B. WALKER
320 Park Ave., 7th Floor
New York 22, N.Y.

Princeton Alumni Review,
Vol 63 (Mar 8 1963, p30)

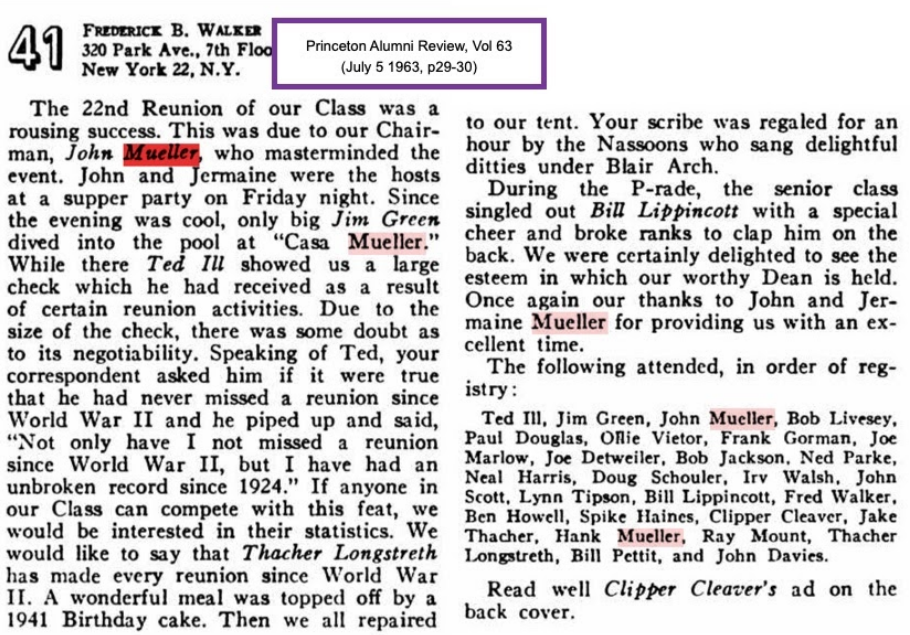
Bill Best's wife, Evelyn, sends us the following family news: "Bill is a Colonel in the USAF 4th Weather Gp, at Andrews AFB—supporting AF Systems Command. Our oldest, Molly, a junior at Bryn Mawr, is engaged to Peter Tinsley, a Princeton graduate student in economics. The wedding is scheduled in June. Taffy, 17, has been accepted early at Mt. Holyoke. Bill III, 13 years old, is a hopeful future Princetonian and Chris, 9, plans to be a zoo keeper!"

Robert Eastright is with Gardner Advertising Company in New York and is vice-president and creative director. He reports that his daughter, Leslie is a freshman in Cedar Crest College; son, Bob, a junior in Milford School; and son, Alan, is studying French in the 5th grade.

Dave Hughes reports that he spent a very fine weekend with *Pete Flynn* at the Grand Hotel, Ala. "Just my luck we were there together. He plays good golf!" Dave's daughter, Susan, is now a freshman at Northwestern and his son, Dave Jr., now in the 8th grade, is heading for St. Andrews in Sewanee, Tenn. next year.

Jack Mueller has rejoined Reynolds Metals Company, located in N.Y.C. Jack was formerly with Reynolds from 1950 to 1955 in Louisville, Ky. and Philadelphia. He is now on special projects in extrusion work.

1963 (July) - 22nd Princeton reunion for Class of 1941



41 FREDERICK B. WALKER
320 Park Ave., 7th Floo
New York 22, N.Y.

Princeton Alumni Review, Vol 63
(July 5 1963, p29-30)

The 22nd Reunion of our Class was a rousing success. This was due to our Chairman, *John Mueller*, who masterminded the event. John and Jermaine were the hosts at a supper party on Friday night. Since the evening was cool, only big *Jim Green* dived into the pool at "Casa Mueller." While there *Ted Ill* showed us a large check which he had received as a result of certain reunion activities. Due to the size of the check, there was some doubt as to its negotiability. Speaking of Ted, your correspondent asked him if it were true that he had never missed a reunion since World War II and he piped up and said, "Not only have I not missed a reunion since World War II, but I have had an unbroken record since 1924." If anyone in our Class can compete with this feat, we would be interested in their statistics. We would like to say that *Thacher Longstreth* has made every reunion since World War II. A wonderful meal was topped off by a 1941 Birthday cake. Then we all repaired to our tent. Your scribe was regaled for an hour by the Nassoons who sang delightful ditties under Blair Arch.

During the P-rade, the senior class singled out *Bill Lippincott* with a special cheer and broke ranks to clap him on the back. We were certainly delighted to see the esteem in which our worthy Dean is held. Once again our thanks to John and Jermaine Mueller for providing us with an excellent time.

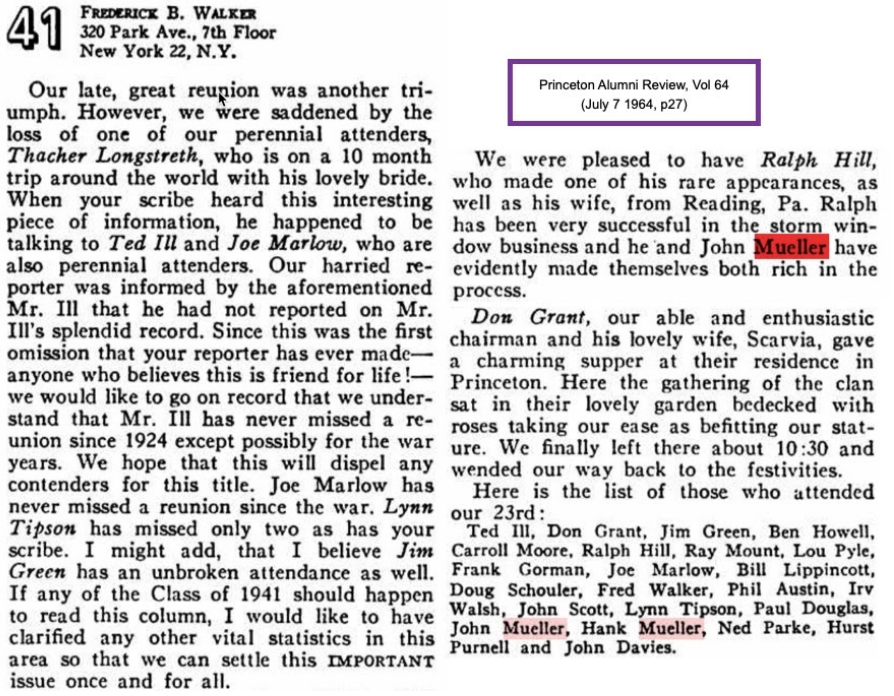
The following attended, in order of registry:

Ted Ill, Jim Green, John Mueller, Bob Livesey, Paul Douglas, Ollie Vietor, Frank Gorman, Joe Marlow, Joe Detweiler, Bob Jackson, Ned Parke, Neal Harris, Doug Schouler, Irv Walsh, John Scott, Lynn Tipson, Bill Lippincott, Fred Walker, Ben Howell, Spike Haines, Clipper Cleaver, Jake Thacher, Hank Mueller, Ray Mount, Thacher Longstreth, Bill Pettit, and John Davies.

Read well *Clipper Cleaver's* ad on the back cover.

1964 (July)

John Freeman Mueller - has made good money with storm windows?



41 FREDERICK B. WALKER
320 Park Ave., 7th Floor
New York 22, N.Y.

Princeton Alumni Review, Vol 64
(July 7 1964, p27)

Our late, great reunion was another triumph. However, we were saddened by the loss of one of our perennial attenders, *Thacher Longstreth*, who is on a 10 month trip around the world with his lovely bride. When your scribe heard this interesting piece of information, he happened to be talking to *Ted Ill* and *Joe Marlow*, who are also perennial attenders. Our harried reporter was informed by the aforementioned Mr. Ill that he had not reported on Mr. Ill's splendid record. Since this was the first omission that your reporter has ever made—anyone who believes this is friend for life!—we would like to go on record that we understand that Mr. Ill has never missed a reunion since 1924 except possibly for the war years. We hope that this will dispel any contenders for this title. Joe Marlow has never missed a reunion since the war. *Lynn Tipson* has missed only two as has your scribe. I might add, that I believe *Jim Green* has an unbroken attendance as well. If any of the Class of 1941 should happen to read this column, I would like to have clarified any other vital statistics in this area so that we can settle this IMPORTANT issue once and for all.

We were pleased to have *Ralph Hill*, who made one of his rare appearances, as well as his wife, from Reading, Pa. Ralph has been very successful in the storm window business and he and John Mueller have evidently made themselves both rich in the process.

Don Grant, our able and enthusiastic chairman and his lovely wife, Scarvia, gave a charming supper at their residence in Princeton. Here the gathering of the clan sat in their lovely garden bedecked with roses taking our ease as befitting our stature. We finally left there about 10:30 and wended our way back to the festivities.

Here is the list of those who attended our 23rd:

Ted Ill, Don Grant, Jim Green, Ben Howell, Carroll Moore, Ralph Hill, Ray Mount, Lou Pyle, Frank Gorman, Joe Marlow, Bill Lippincott, Doug Schouler, Fred Walker, Phil Austin, Irv Walsh, John Scott, Lynn Tipson, Paul Douglas, John Mueller, Hank Mueller, Ned Parke, Hurst Purnell and John Davies.

1967 (Mach 31) - Marriage to " Ellen Michele Girard"

Per divorce certificate.

1967 (April 22) - Ex-wife Mrs. Jermain (Johnson) Mueller remarries to Jack F Andrews of Lawrenceville

The first wife of John Freeman Mueller is from now on sometimes referred to as "**Mrs. Jack Frost Andrews**".

See https://alldokument.com/town-topics-princeton-apr-27-1967.html - The below clip is from March 22 2019 -

,

Mrs. Jermain Johnson Mueller of Princeton, daughter of Mr. and Mrs. George F. B. Johnson of Buffalo. N. Y., to Jack F. An-

drews

of Lawrenceville; Saturday, April 22. The bride is a graduate of the Bouve Boston School of Physical Education. Mr. Andrews, son of Mrs. Horace St. John Andrews of Kew Gardens, N. Y., and the late Mr. Andrews, is a graduate of

Massachusetts Institute of Technology and New York '

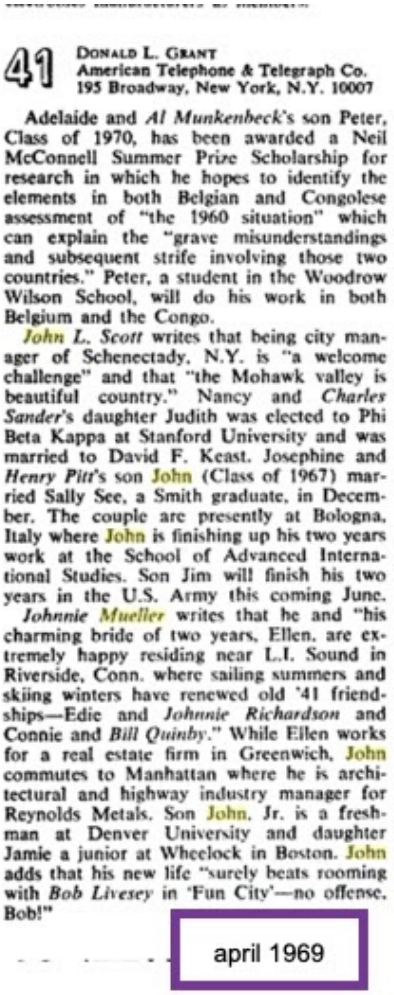
University. The couple will live Lane. Cleveland at 70-A

Princeton. It's

New To Us

1969 (April) - Update

- John Freeman Mueller has been married for two years now - to Ellen Mueller.
- Research Note - Due to James Girard Swan Mueller being half Italian, we suspect Ellen Mueller is full-Italian. We are not sure if she herself was born in Italy or not.
- As of April 1969, John and Ellen are residing in Riverside, Connecticut on Long Island Sound
- John Freeman Mueller is commuting to Manhattan where is an **"architectural and highway industry manager for Reynolds Metals."**
- We learn of a son (with his first wife), John Freeman Mueller Jr. who is a freshman in Denver (meaning he was born in the early 1950s)



41 DONALD L. GRANT
American Telephone & Telegraph Co.
195 Broadway, New York, N.Y. 10007

Adelaide and *Al Munkenbeck*'s son Peter, Class of 1970, has been awarded a Neil McConnell Summer Prize Scholarship for research in which he hopes to identify the elements in both Belgian and Congolese assessment of "the 1960 situation" which can explain the "grave misunderstandings and subsequent strife involving those two countries." Peter, a student in the Woodrow Wilson School, will do his work in both Belgium and the Congo.

John L. Scott writes that being city manager of Schenectady, N.Y. is "a welcome challenge" and that "the Mohawk valley is beautiful country." Nancy and *Charles Sander*'s daughter Judith was elected to Phi Beta Kappa at Stanford University and was married to David F. Keast. Josephine and *Henry Pitt*'s son John (Class of 1967) married Sally See, a Smith graduate, in December. The couple are presently at Bologna, Italy where John is finishing up his two years work at the School of Advanced International Studies. Son Jim will finish his two years in the U.S. Army this coming June.

Johnnie Mueller writes that he and "his charming bride of two years, Ellen, are extremely happy residing near L.I. Sound in Riverside, Conn. where sailing summers and skiing winters have renewed old '41 friendships—Edie and *Johnnie Richardson* and Connie and *Bill Quinby*." While Ellen works for a real estate firm in Greenwich, John commutes to Manhattan where he is architectural and highway industry manager for Reynolds Metals. Son John, Jr. is a freshman at Denver University and daughter Jamie a junior at Wheelock in Boston. John adds that his new life "surely beats rooming with *Bob Livesey* in 'Fun City'—no offense, Bob!"

april 1969

1969 (July) - Verification of being in marketing with Reynolds Metals

Bill Quimby "had a pleasant cocktail hour at my house on March 2nd with two classmates": *John Mueller* and *Doug McAvity*. John, as noted recently in PAW, is in marketing with Reynolds Metals. Doug moved recently to Greenwich with his family from Birmingham, Alabama. Doug is treasurer of the Eastern Division, U.S. Steel. According to Bill, "the argument of steel vs. aluminum was settled by the second martini!"

Princeton Alumni Review, Vol 69 (July 1 1969, p31)

1971 (April) - Michele Girard Mueller born / Now living in Stamford Connecticut

april 1971

41 DONALD L. GRANT
A.T.&T., 195 Broadway
New York, N.Y. 10007

OUR 30TH!
JUNE 3-5

Have you sent in your application?

From Ellen & *John Mueller* we received the good news that Michele Girard Mueller arrived on Feb. 17—our first entry for the 1971 Class Progeny Award! John also informs us that the Muellers now reside at 164 Van Rensselaer Ave., Stamford, Conn. 06902, where they have more room for "Missy" and are closer to Long Island Sound. Our congratulations to Ellen & John.

We've done it again! Our Class, led by *John Scott*, contributed $191,621 to Annual Giving. This ranks us 3rd among all classes, with only the 50th and 25th Reunion classes exceeding our totals. Furthermore, *Win Short* spurred the drive as AG Chairman for the University to a fine total of over $3.1 million.

Jim Armstrong wrote the memorial of *Bob Johnson*, which appears in this issue of the WEEKLY.

1973 (Sep) - Birth of son James Girard Swan Mueller

John Freeman Mueller's son **James Girard Swan Mueller** was born on Sep 1973 in New Haven, Connecticut, USA.

His mothers family is from Biella, Italy. Girard is derived from the Italian name **"Gilardino"**.

Grew up in New Haven and Greenwich, Connecticut, Baltimore, Maryland and Richmond, Charlottesville and Waynesboro, Virginia.

As of today (2019), he is a Hollywood actor whose name goes by **"Girard Swan"**. See his latest biography on IMDB (captured March 2019) at [HW001I] [GDrive] .

1976 (April) - Still yachting to Gibson Island

The Islander Sloop SHASSEUR .

41 CHARLES N. BARTON
233 Broadway, Suite 1275
New York, N.Y. 10007

As of March 12 we had 74 paid acceptances for reunions. That's a good start! Here are the additions since the last list: *Chuck Waugh*; *Beas Williamson*; *F. S. Harris*; *Bob Brokaw*; *Thorpe Goodfellow*; *Jake Thacher*; *Dana Knowlton*; *Dave Hughes*; *Ward Reighley*; *George Richardson*; *Bonny Bonnyman*; *Red Stewart*; *Walt McCarthy*; *Art Rice*; *Mac McCandlish*; *Bill Rich*; *Sam Folger*; *Bob Walker*; *Wes Janney*; *Tommy Tomlinson*; *Chuck Rounds*; *Bill Bausch*; *Jack Cornwell*; *Tom Fortune*; *John Scott*; *John Richardson*; *Bob McCullam*; *Brud Smith*; *Bill Smart*; *Ross Woolsey*; *Warren Broadbent*; *Irish Maguire* and *Les Rice*. Between this and previous listings you can see who of your closer friends are already coming back—Come join them! "Crew Call"—from *Johnny Mueller* "to '41 classmates before going through Corinthians. Need two handy (& lucky) seamen to help sail his newly owned 34′ Islander Sloop SHASSEUR from Gibson Island Yacht Club, Md. Tuesday, April 25th, to Stanford Yacht Club, Saturday, April 30th." It's a wonderful trip (I've done it so I know), a perfect time to do it, and the boat is beautiful and completely equipped even down to cushions in orange and black with the Beer Suit design on them. Call Johnny quickly (203) 421-4321. Incidentally Johnny is still representing Reynolds Metals in Conn. and R.I., but has rejoined the U.S. Naval Reserve in New Haven and is teaching weekends and using his boat for it. Now that's not all dumb!

Princeton Alumni Review, Vol 76 (April 19 1976, p28)

1976 (Oct) - Wedding of daughter Jermain Johnson Mueller to Eric Randall Steiner

(See full page in newspaper at [HN00GG][GDrive]) . Note that "**Mrs. Jack Frost Andrews**" is actually **Mrs. Jermain Duncan (Johnson) Mueller** , the first wife of John Freeman Mueller ; She remarried April 22 1967.

Steiner - Mueller

Married Saturday in Nassau Presbyterian Church, Princeton, N. J., were Jermain Johnson Mueller and Eric Randall Steiner.

The bride is the daughter of Mrs. Jack Frost Andrews, Lawrenceville, N. J. and John Freeman Mueller, Madison, Conn. The bridegroom is the son of Mr. and Mrs. Theodore Otis Steiner, 4155 W. Bath Rd.

In the wedding party were: Mrs. Bruce Williams, Terry O. Steiner and Thomas W. Hess.

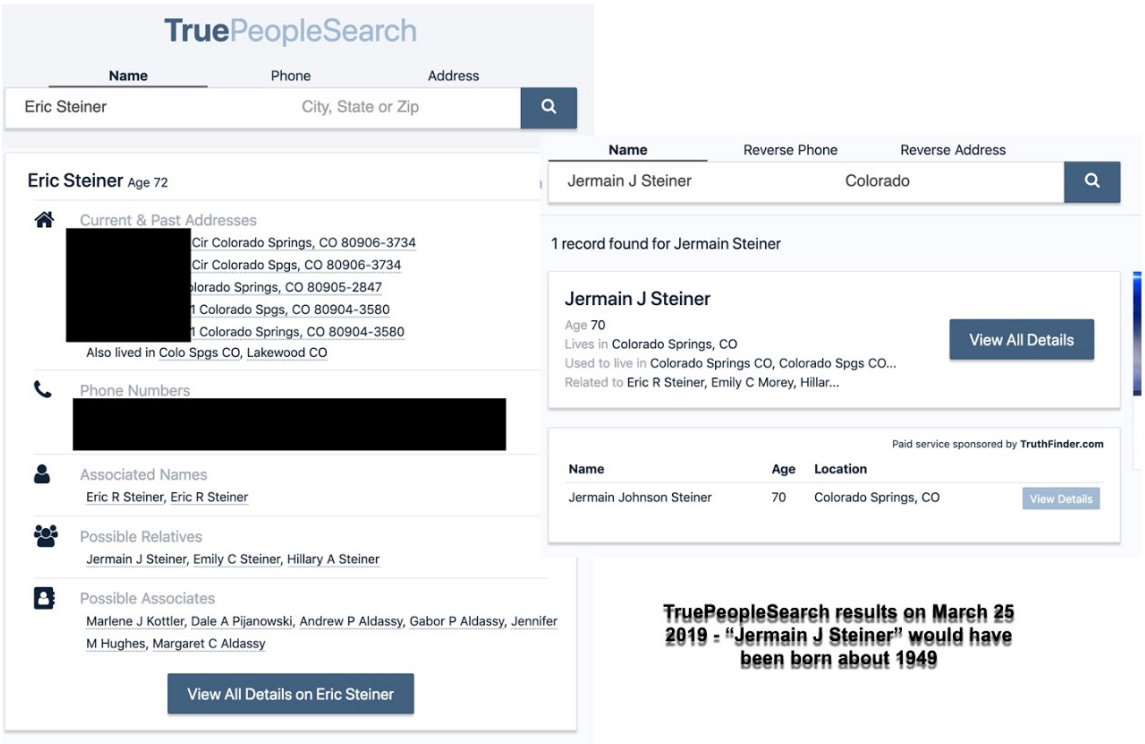
The bride is a graduate of the Wheelock College, Boston, Mass., and is employed by Jefferson County Public Schools, Littleton, Colo. Her bridegroom is a graduate of Ohio University and Ohio State University Law School. He is employed by Amax, Inc., Golden, Colo.

The couple plans a honeymoon to Canada.

MRS. STEINER
. . . Jermain Johnson Mueller

[HN00GH][GDrive]

At some point, she moved to Colorado Springs, Colorado. See below capture, from (https://www.truepeoplesearch.com/) .



TruePeopleSearch results on March 25 2019 - "Jermain J Steiner" would have been born about 1949

1977 (Nov) - Retirement from Reynolds Metals

Got a note from *John* ***Mueller***. After 27 years in the aluminum business he took early retirement from Reynolds Metals. Sold his house and boat in Connecticut and moved home—Baltimore area! He immediately went in a service business, where he has no more manufacturing headaches. He's now a professional counselor with Eastern Employment Service in Baltimore and lives in Crafton, Md., near Annapolis and Chesapeake Bay, which means sailing!

Princeton Alumni Review, Vol 78 (Nov 21 1977, p34)

1978 (Oct) - Joins Carolina Aluminum Company

41 CHARLES N. BARTON
John F. Curry Agency
225 Broadway, NYC 10007

Howie Ziegler has retired from the National Security Agency after 36 years of doing what he can't tell. He's moving to Scotland, where he says the living is easier.

A note from *Irv Walsh* recounts his busy life with real estate in the San Pedro, Ca., area. He's in residential, income, and buying-and-fixing-for-sale-themselves real estate. He's on the board of the local hospital.

After retiring from Reynolds Aluminum last year, *Johnny* ***Mueller*** moved to Maryland and went right back to his old industry as sales service manager of Carolina Aluminum Company. When you're visiting wonderful Williamsburg, Va., look him up.

Princeton Alumni Review, Vol 79 (Oct 09 1978, p42)

1979 (Nov) - Sales and service manager for Easco Aluminum in Winton, NC

Princeton Alumni Review, Vol 80 (Nov 19 1979, p29)

Got a long note from *Johnny Mueller*. He tried retirement after 27 years with Reynolds Metals—for one year. Decided it was for the kids and that he liked the aluminum industry after all, so he is back in it as sales service manager of Easco Aluminum in Winton, N.C. I quote: "The work is so challenging and rewarding I'll never retire again!" He likes living in Franklin, Va., just 30 minutes from his plant, and being home every night.

1980 (June) - Starts second career with Aluminum Extrusion & Tubing

Princeton Alumni Review, Vol 80 (June 30 1980, p29)

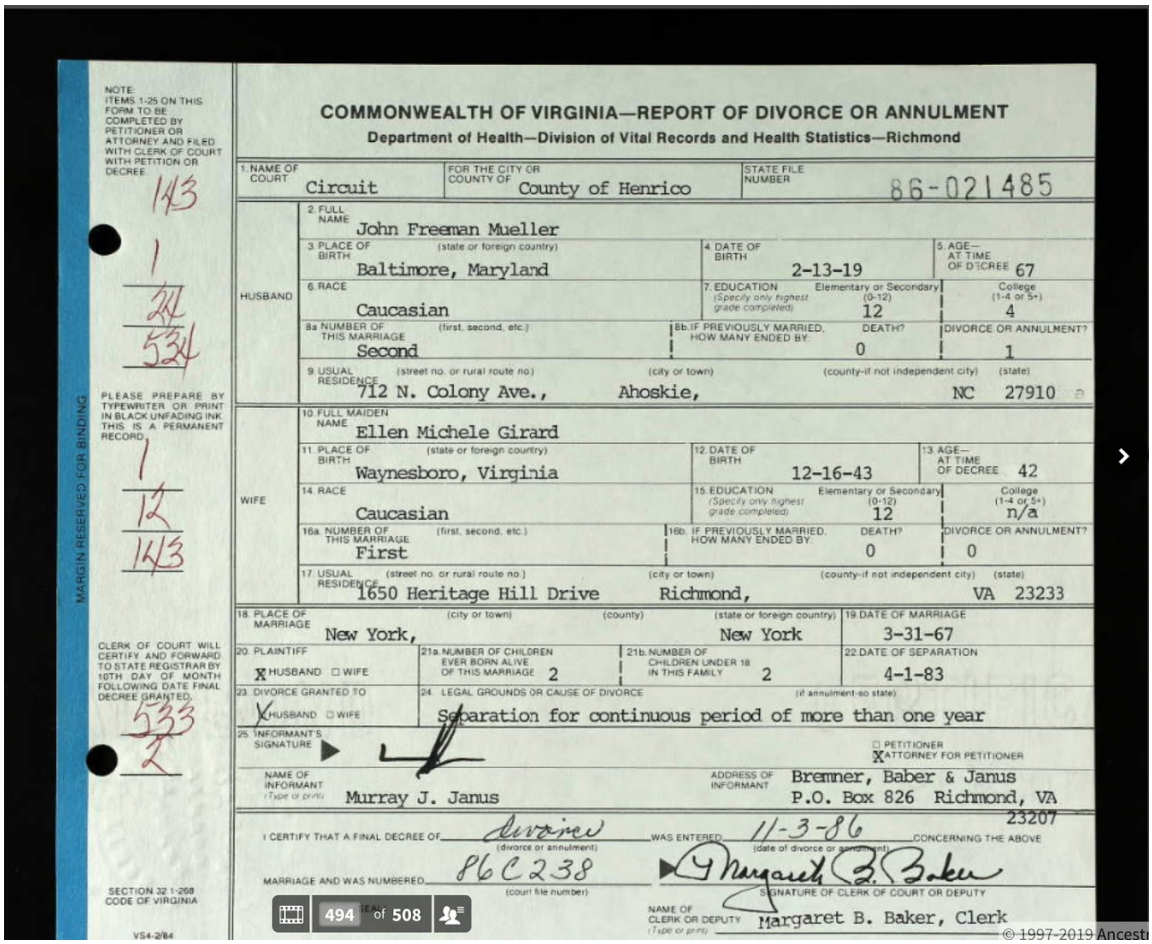
Johnny Mueller has just started a second career with Aluminum Extrusion & Tubing sales, covering Delaware, Maryland, Virginia, and North Carolina from his base in Richmond. He spent two years in the North Carolina plant preparing for this after retiring from Reynolds Metals.

1986 Divorce (Nov)

Separated since at least a year before.

Now we know Ellen Michele Girard was her name

Maybe it was "Ellen Michele **"Gilardino"**. ?



COMMONWEALTH OF VIRGINIA—REPORT OF DIVORCE OR ANNULMENT

Department of Health—Division of Vital Records and Health Statistics—Richmond

NOTE: ITEMS 1-25 ON THIS FORM TO BE COMPLETED BY PETITIONER OR ATTORNEY AND FILED WITH CLERK OF COURT WITH PETITION OR DECREE.

PLEASE PREPARE BY TYPEWRITER OR PRINT IN BLACK UNFADING INK. THIS IS A PERMANENT RECORD.

CLERK OF COURT WILL CERTIFY AND FORWARD TO STATE REGISTRAR BY 10TH DAY OF MONTH FOLLOWING DATE FINAL DECREE GRANTED.

MARGIN RESERVED FOR BINDING

SECTION 32.1-268 CODE OF VIRGINIA

VS4-2/84

1. NAME OF COURT: Circuit — FOR THE CITY OR COUNTY OF: County of Henrico — STATE FILE NUMBER: 86-021485

HUSBAND

2. FULL NAME: John Freeman Mueller
3. PLACE OF BIRTH (state or foreign country): Baltimore, Maryland
4. DATE OF BIRTH: 2-13-19
5. AGE—AT TIME OF DECREE: 67
6. RACE: Caucasian
7. EDUCATION (Specify only highest grade completed): Elementary or Secondary (0-12): 12; College (1-4 or 5+): 4
8a. NUMBER OF THIS MARRIAGE (first, second, etc.): Second
8b. IF PREVIOUSLY MARRIED, HOW MANY ENDED BY: DEATH?: 0; DIVORCE OR ANNULMENT?: 1
9. USUAL RESIDENCE (street no. or rural route no.): 712 N. Colony Ave., (city or town): Ahoskie, (county-if not independent city): (state): NC 27910

WIFE

10. FULL MAIDEN NAME: Ellen Michele Girard
11. PLACE OF BIRTH (state or foreign country): Waynesboro, Virginia
12. DATE OF BIRTH: 12-16-43
13. AGE—AT TIME OF DECREE: 42
14. RACE: Caucasian
15. EDUCATION (Specify only highest grade completed): Elementary or Secondary (0-12): 12; College (1-4 or 5+): n/a
16a. NUMBER OF THIS MARRIAGE (first, second, etc.): First
16b. IF PREVIOUSLY MARRIED, HOW MANY ENDED BY: DEATH?: 0; DIVORCE OR ANNULMENT?: 0
17. USUAL RESIDENCE (street no. or rural route no.): 1650 Heritage Hill Drive (city or town): Richmond, (county-if not independent city): (state): VA 23233

18. PLACE OF MARRIAGE (city or town): New York, (county): (state or foreign country): New York
19. DATE OF MARRIAGE: 3-31-67
20. PLAINTIFF: X HUSBAND ☐ WIFE
21a. NUMBER OF CHILDREN EVER BORN ALIVE OF THIS MARRIAGE: 2
21b. NUMBER OF CHILDREN UNDER 18 IN THIS FAMILY: 2
22. DATE OF SEPARATION: 4-1-83
23. DIVORCE GRANTED TO: X HUSBAND ☐ WIFE
24. LEGAL GROUNDS OR CAUSE OF DIVORCE (if annulment-so state): Separation for continuous period of more than one year
25. INFORMANT'S SIGNATURE: [signature] ☐ PETITIONER X ATTORNEY FOR PETITIONER

NAME OF INFORMANT (Type or print): Murray J. Janus
ADDRESS OF INFORMANT: Bremner, Baber & Janus P.O. Box 826 Richmond, VA 23207

I CERTIFY THAT A FINAL DECREE OF divorce (divorce or annulment) WAS ENTERED 11-3-86 (date of divorce or annulment) CONCERNING THE ABOVE MARRIAGE AND WAS NUMBERED 86C238 (court file number)

SIGNATURE OF CLERK OF COURT OR DEPUTY: Margaret B. Baker

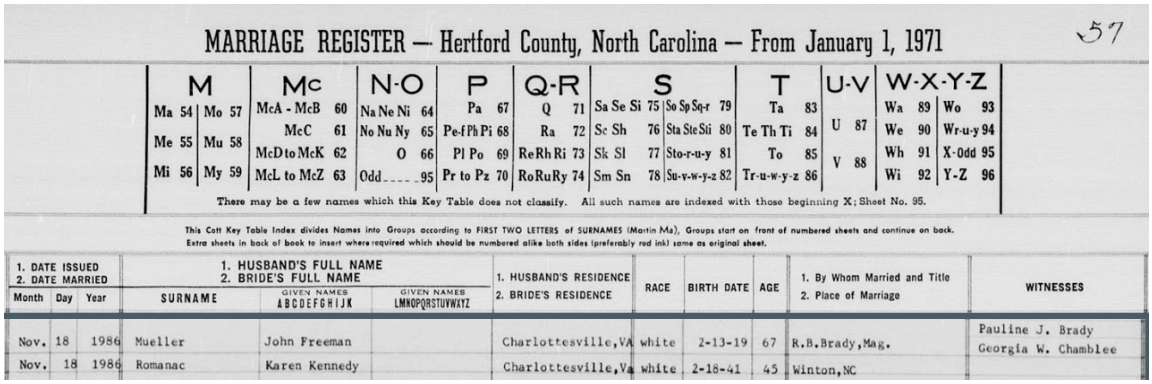
NAME OF CLERK OR DEPUTY (Type or print): Margaret B. Baker, Clerk

494 of 508

© 1997-2019 Ancestr

1986 (Nov) - Marriage to Karen Kennedy (Romanac) in Charlottesville, Virginia

In November of 1986, **John Freeman Mueller** (age 67) married **Karen Kennedy Romanac** (age 45 at that time, born in 1941 - see https://www.findmypast.com/transcript?id=US/FS/M/088845200/1). (See full marriage register page 57 at [HL001E][GDrive]).



MARRIAGE REGISTER — Hertford County, North Carolina — From January 1, 1971

57

M		Mc		N-O		P		Q-R		S		T		U-V		W-X-Y-Z	
Ma 54	Mo 57	McA - McB	60	Na Ne Ni	64	Pa	67	Q	71	Sa Se Si	75	So Sp Sq-r	79	Ta	83	Wa	89
Me 55	Mu 58	McC	61	No Nu Ny	65	Pe-f Ph Pi	68	Ra	72	Sc Sh	76	Sta Ste Sti	80	Te Th Ti	84	We	90
Mi 56	My 59	McD to McK	62	O	66	Pl Po	69	Re Rh Ri	73	Sk Sl	77	Sto-r-u-y	81	To	85	Wh	91
		McL to McZ	63	Odd	95	Pr to Pz	70	Ro Ru Ry	74	Sm Sn	78	Su-v-w-y-z	82	Tr-u-w-y-z	86	Wi	92

U 87 V 88

Wo 93 Wr-u-y 94 X-Odd 95 Y-Z 96

There may be a few names which this Key Table does not classify. All such names are indexed with those beginning X; Sheet No. 95.

This Catt Key Table Index divides Names into Groups according to FIRST TWO LETTERS of SURNAMES (Martin Ma), Groups start on front of numbered sheets and continue on back.
Extra sheets in back of book to insert where required which should be numbered alike both sides (preferably red ink) same as original sheet.

1. DATE ISSUED 2. DATE MARRIED			1. HUSBAND'S FULL NAME 2. BRIDE'S FULL NAME			1. HUSBAND'S RESIDENCE 2. BRIDE'S RESIDENCE	RACE	BIRTH DATE	AGE	1. By Whom Married and Title 2. Place of Marriage	WITNESSES
Month	Day	Year	SURNAME	GIVEN NAMES A B C D E F G H I J K	GIVEN NAMES L M N O P Q R S T U V W X Y Z						
Nov.	18	1986	Mueller	John Freeman		Charlottesville, VA	white	2-13-19	67	R.B.Brady, Mag.	Pauline J. Brady Georgia W. Chamblee
Nov.	18	1986	Romanac	Karen Kennedy		Charlottesville, Va	white	2-18-41	45	Winton, NC	

[HL001F][GDrive]

2005 (Feb 04) - Passing

(See [HL001C][GDrive])

"We have just learned that Johnnie died Feb. 4, 2005, in a nursing home in Charlottesville, Va."

"He joined the Navy as a midshipman just before graduation and spent the war on PC-type escort ships, serving two years in the Atlantic, a year and a half in the Caribbean, and a year in the Pacific. He was separated in February 1946 as a lieutenant commander."

BITCHUTE @Housatonic YOUTUBE @HousatonicLive ODYSEE @Housatonic BRIGHTEON @Housatonic

Housatonic

Robert Swan Mueller III (born 1944)

Wikipedia Robert Swan Mueller III

Intro

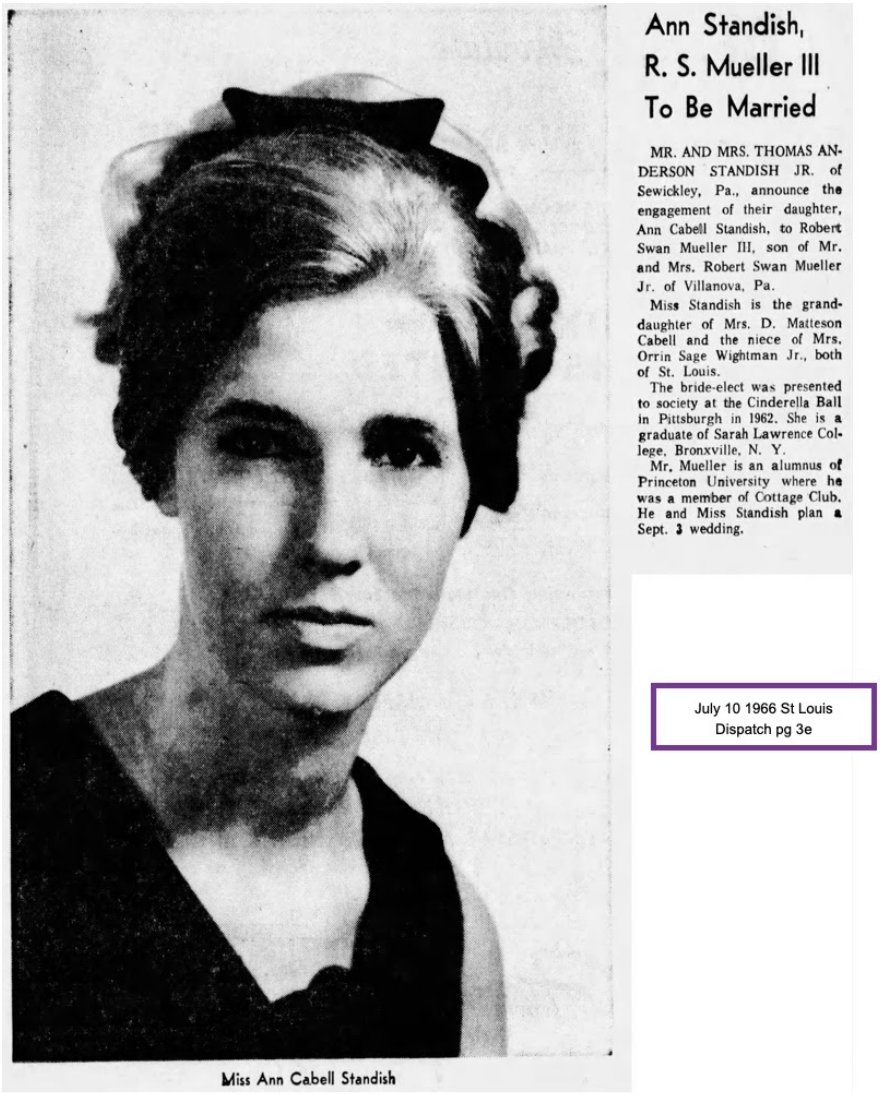
Robert Swan Mueller III was born born on August 7, 1944. The birth took place at Doctors Hospital in the New York City borough of Manhattan; his father Robert Swan Mueller II (born 1916) was residing in NYC and with the the US Navy at the time.

Robert Swan Mueller III is the nephew of John Freeman Mueller (born 1919) .

Robert Swan Mueller III is the grandson of of Robert Swan Mueller I (b1893) .

1966 - Engages Ann Standish

Full page : [HN00E8][GDrive]



Ann Standish, R. S. Mueller III To Be Married

MR. AND MRS. THOMAS ANDERSON STANDISH JR. of Sewickley, Pa., announce the engagement of their daughter, Ann Cabell Standish, to Robert Swan Mueller III, son of Mr. and Mrs. Robert Swan Mueller Jr. of Villanova, Pa.

Miss Standish is the granddaughter of Mrs. D. Matteson Cabell and the niece of Mrs. Orrin Sage Wightman Jr., both of St. Louis.

The bride-elect was presented to society at the Cinderella Ball in Pittsburgh in 1962. She is a graduate of Sarah Lawrence College, Bronxville, N. Y.

Mr. Mueller is an alumnus of Princeton University where he was a member of Cottage Club. He and Miss Standish plan a Sept. 3 wedding.

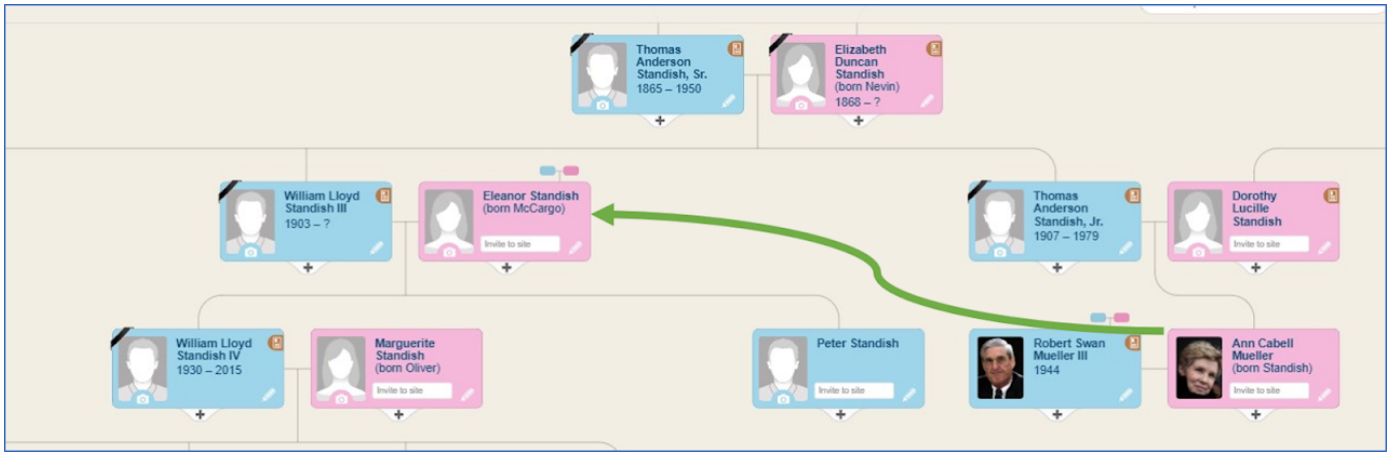
Miss Ann Cabell Standish

July 10 1966 St Louis Dispatch pg 3e

[HN00E9][GDrive]

Excellent research on **Miss Ann Cabell (Standish) Mueller** is available on the blog **DState Analytics** :

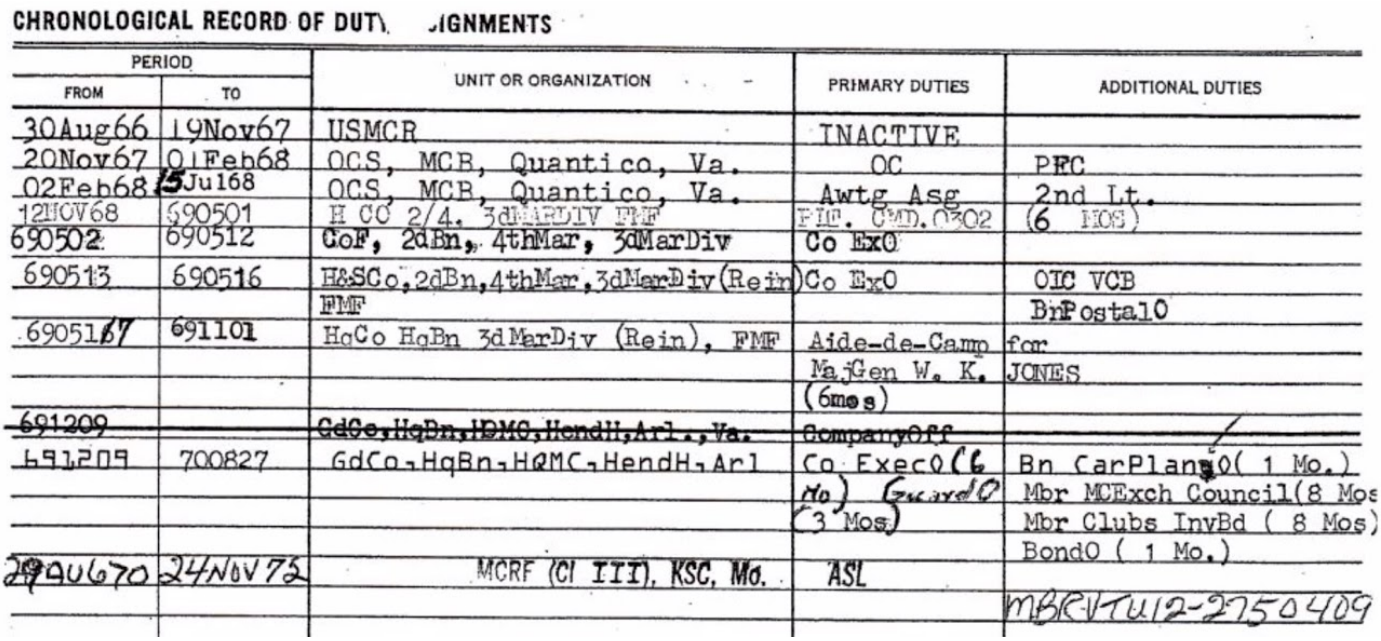
1. [https://dstate-analytics.blogspot.com/2019/07/another-standard-oil-tentacle-in.html][aa24][GDrive]
    1. *"The Mueller Family Tree can be definitively connected to **Standard Oil** via the family of **Ann Cabell Standish** [...]. The family of her Aunt through marriage, **Eleanor Standish**, nee **McCargo**, once owned **the Pennsylvania Lubricating Company** (the first grease manufacturing plant in the U.S.), before it was acquired by Standard Oil in 1929."*
    2. *"Ann Cabell's uncle, **William Lloyd Standish the 3rd**, was Co-Owner of **National Barge Co.** We are looking more closely at National Barge Co. to see if there are connections to Standard Oil."*
2. [https://dstate-analytics.blogspot.com/2019/07/muellers-first-cousin-once-removed.html][aa25][GDrive]
3. [https://dstate-analytics.blogspot.com/2019/07/mueller-bissell-prudhomme-wwi.html][aa26][GDrive]
    1. *"Our interest in **the Belgian American Coke Company** was initiated by the deeper dive we did into the Mueller family tree. As noted in previous posts, Robert Swan Mueller the 3rd is related to Richard Bissell Jr., the famed CIA Director of Plans, fired by JFK for the Bay of Pigs debacle, along with Allen Dulles and General Charles Pearre Cabell."*



[https://dstate-analytics.blogspot.com/2019/07/another-standard-oil-tentacle-in.html][aa27][GDrive]

1966 (Aug) - 1970 (Aug)

US Military (Marines) Service



CHRONOLOGICAL RECORD OF DUTY ASSIGNMENTS

PERIOD FROM	PERIOD TO	UNIT OR ORGANIZATION	PRIMARY DUTIES	ADDITIONAL DUTIES
30Aug66	19Nov67	USMCR	INACTIVE	
20Nov67	01Feb68	OCS, MCB, Quantico, Va.	OC	PFC
02Feb68	15Jul68	OCS, MCB, Quantico, Va.	Awtg Asg	2nd Lt.
12NOV68	690501	H CO 2/4, 3dMARDIV FMF	PLC. CMD. 0302	(6 MOS)
690502	690512	CoF, 2dBn, 4thMar, 3dMarDiv	Co ExO	
690513	690516	H&SCo, 2dBn, 4thMar, 3dMarDiv (Rein) FMF	Co ExO	OIC VCB BnPostalO
690517	691101	HqCo HqBn 3dMarDiv (Rein), FMF	Aide-de-Camp MajGen W. K. (6mos)	for JONES
~~691209~~		~~GdCo, HqBn, HQMC, HendH, Arl., Va.~~	~~CompanyOff~~	
691209	700827	GdCo, HqBn, HQMC, HendH, Arl	Co ExecO (6 Mo) (3 Mos) GuardO	Bn CarPlanO (1 Mo.) Mbr MCExch Council (8 Mos Mbr Clubs InvBd (8 Mos) BondO (1 Mo.)
29Au670	24NOV72	MCRF (CI III), KSC, Mo.	ASL	MBRVTU12-2750409

[aa29][GDrive]

Above - From FOIA request [aa31][GDrive]

Some of the initialisms :

- **FMF** = "Fleet Marine Force"
- **OCS** = Officer Candidates School (see https://en.wikipedia.org/wiki/Officer_Candidates_School_(United_States_Marine_Corps))
- **MCB** = "Marine Corps. Base, Quantico" (see https://en.wikipedia.org/wiki/Marine_Corps_Base_Quantico)
- **OIC** = "Officer in Charge"
- **VCB** = "Vandegrift Combat Base"

1966 - Graduates from Princeton - Enlists in Marine Corps, but first studies International Relations at New York University (to allow a leg injury to heal)

"Just a few weeks after he finished Princeton with a degree in politics in 1966, Mueller enlisted in the Marine Corps, a rare choice for an Ivy League graduate at a time when many young men were casting about for ways to avoid the draft. Mueller, who declined to be interviewed for this article, has often said he was inspired to join the Marines by his lacrosse teammate David Hackett, who had graduated from Princeton a year earlier and gone off to fight in Vietnam." [aa21][GDrive]

Robert Swan Mueller III was on inactive duty from Aug 30 1966 to November 19 1967 (As shown in [aa29][GDrive] .

*"Before beginning his military training, and **while recovering from a knee injury**, [before starting at Officer Candidates School], Mueller studied international relations at **New York University**"* [aa21][GDrive]

1967 (spring?) - Earns a Master of Arts in international relations from New York University

See 🔵 Robert Swan Mueller III

1967 (Nov 20) - 1968 (July 15) - Officer Candidates School (OCS) at Quantico Virginia

8 months

"[After] recovering from a knee injury [while studying] at New York University [, Robert S Mueller III then starts] Officer Candidates School at Quantico, Va., where he excelled, although he did get a D in delegation." [aa21][GDrive]

"[In full, Mueller attended] training at Parris Island, Officer Candidate School, Army Ranger School, and Army jump school. Of these, he said later that he considered Ranger School the most valuable because he felt "more than anything teaches you about how you react with no sleep and nothing to eat." [aa39][GDrive]

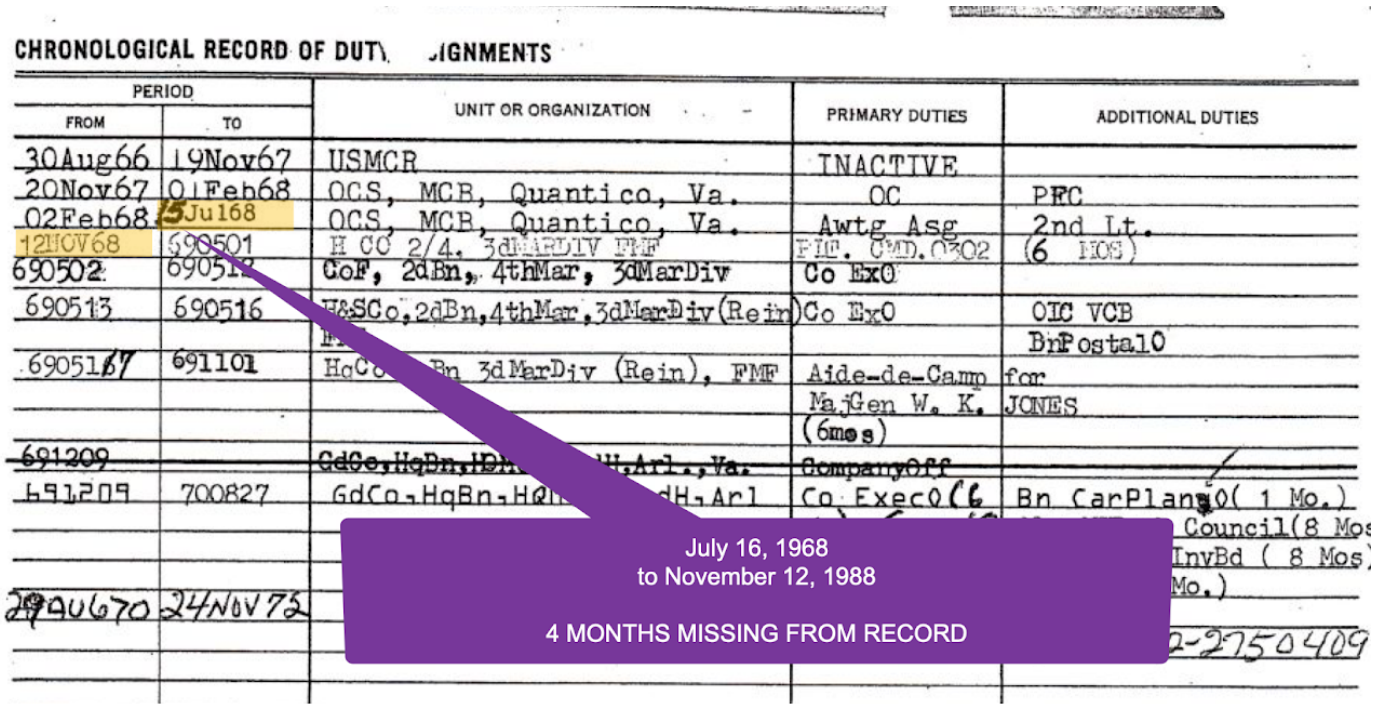
"[The] Army's Ranger School [is a highly regarded by grueling] course for combat leadership[.] The assignments are unusual for Marines and, typically, set aside for just a handful of the best each year." [aa9][GDrive]

"[This] unusual training for a Marine [also signaled that he was going places." [aa21][GDrive]

*"In 2004, the **Army's Ranger Hall of Fame** inducted Mueller [See https://ranger.org/Resources/Documents/RHOF%20Master%20List%20(05-24-2013).pdf]. The shrine recognizes Rangers who have distinguished themselves among their peers, as well as Ranger School alumni like Mueller who did not serve in a Ranger unit, but graduated from Ranger School and distinguished themselves in other ways. [...] The hall credited Mueller with leading the FBI "through the dramatic transformation required in the aftermath of the September 11th terrorist attacks." It cited his continued leadership in transforming the bureau into a modern counter-terrorism agency."* [aa9][GDrive]

1968 (July 15) - 1968 (Nov 11)

4 months missing from record. Where was Robert Swan Mueller III ?



1968 (Nov 12) - 1969 (May 1) Active Duty, Vietnam

*"When Robert Swan Mueller III deployed to Vietnam as a Marine infantry platoon commander in 1968, he surely knew it would be difficult. Mueller's regiment, the 4th Marines, had faced bloody jungle warfare for months, and Mueller joined in them [...] at th**e tail end** of what military historians say was the service's defining year in the war due to the size and scope of their operations."* [aa9][GDrive]

These several book chapters well document activities in Vietnam, 1968, September thru December.

1. "Book - US Marines in Vietnam - The Defining Year : 1968", Chapters 17-20 : [aa22][GDrive]
2. "Book - US Marines in Vietnam - The Defining Year : 1968", Chapters 21 and 22 (includes December 1968) : [aa23][GDrive]

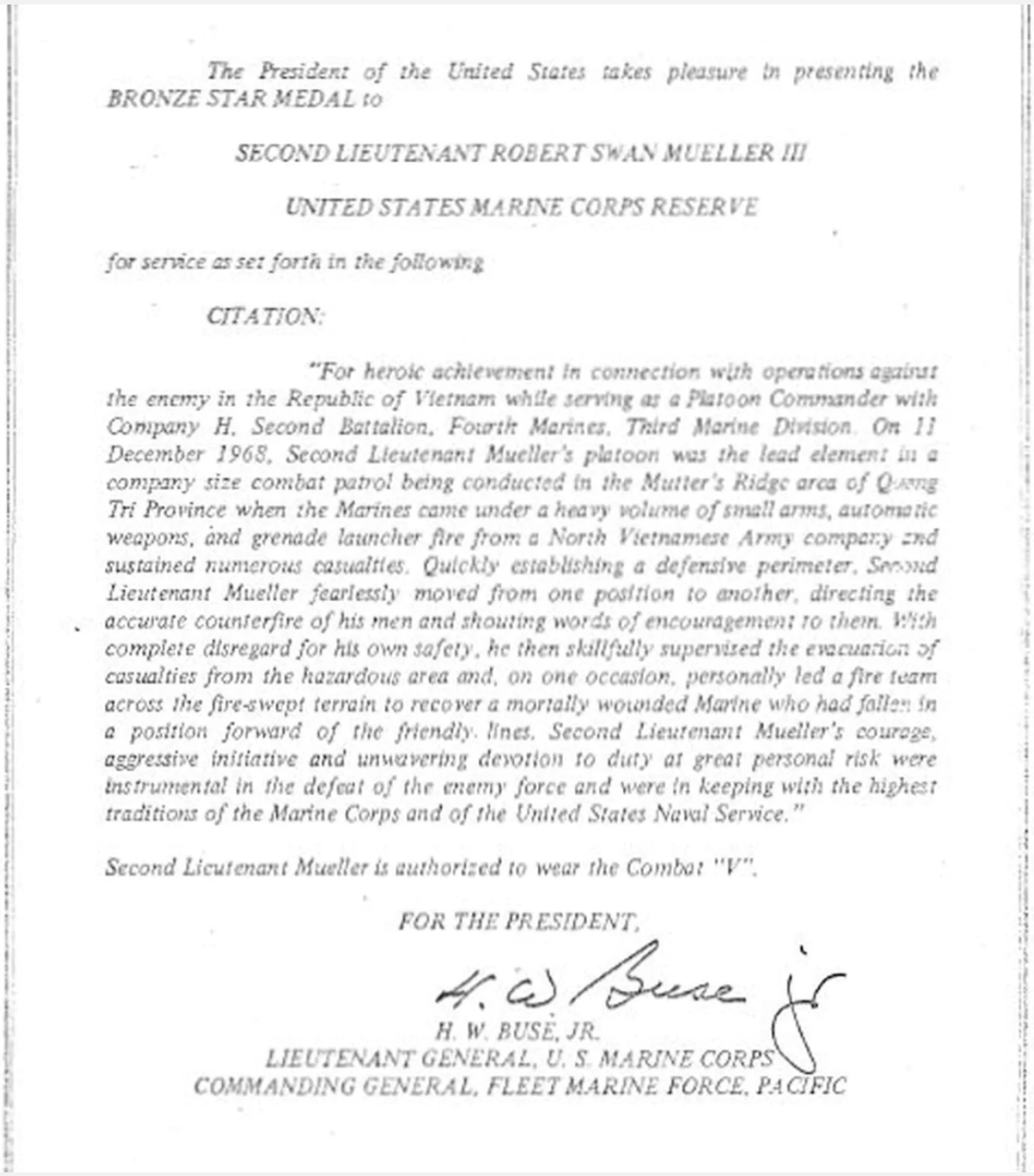
*"In combat, Mueller was a member of H Company, 2nd Battalion, 4th Marines, an infantry unit assigned along dangerous **Mutter's Ridge**. It was a section of **Quang Tri province** that overlooked the Vietnamese Demilitarized Zone that separated North Vietnam and South Vietnam."* [aa9][GDrive]

How bad was the war in September of 1968? Here are References :

1. 25 American's were killed at Mutter's Ridge in one day alone on Sep 16 1968 - https://www.newspapers.com/image/434375045/?terms=vietnam%2Bmutter%2Bridge
2. Sep 19 - https://www.newspapers.com/image/154671960/?terms=vietnam%2Bmutter%2Bridge

"Mueller's unit was decorated for two battles outlined in media accounts[.] In the first, he led Marines through an eight-hour battle near Mutter's Ridge in which the his men faced fire from small arms and automatic weapons, as well as a grenade launcher. Mueller, then a second lieutenant, moved among Marine positions in the

battle, directing counter-fire and setting up a defensive perimeter and then supervising the evacuation of wounded Marines, including one who died. For his actions, Mueller would receive the Bronze Star with "V" device and this citation: (n award citation detailing then 2nd Lt. Robert S. Mueller III's valor in Vietnam in December 1968.)" [aa9][GDrive]



The President of the United States takes pleasure in presenting the BRONZE STAR MEDAL to

SECOND LIEUTENANT ROBERT SWAN MUELLER III

UNITED STATES MARINE CORPS RESERVE

for service as set forth in the following

CITATION:

"For heroic achievement in connection with operations against the enemy in the Republic of Vietnam while serving as a Platoon Commander with Company H, Second Battalion, Fourth Marines, Third Marine Division. On 11 December 1968, Second Lieutenant Mueller's platoon was the lead element in a company size combat patrol being conducted in the Mutter's Ridge area of Quang Tri Province when the Marines came under a heavy volume of small arms, automatic weapons, and grenade launcher fire from a North Vietnamese Army company and sustained numerous casualties. Quickly establishing a defensive perimeter, Second Lieutenant Mueller fearlessly moved from one position to another, directing the accurate counterfire of his men and shouting words of encouragement to them. With complete disregard for his own safety, he then skillfully supervised the evacuation of casualties from the hazardous area and, on one occasion, personally led a fire team across the fire-swept terrain to recover a mortally wounded Marine who had fallen in a position forward of the friendly lines. Second Lieutenant Mueller's courage, aggressive initiative and unwavering devotion to duty at great personal risk were instrumental in the defeat of the enemy force and were in keeping with the highest traditions of the Marine Corps and of the United States Naval Service."

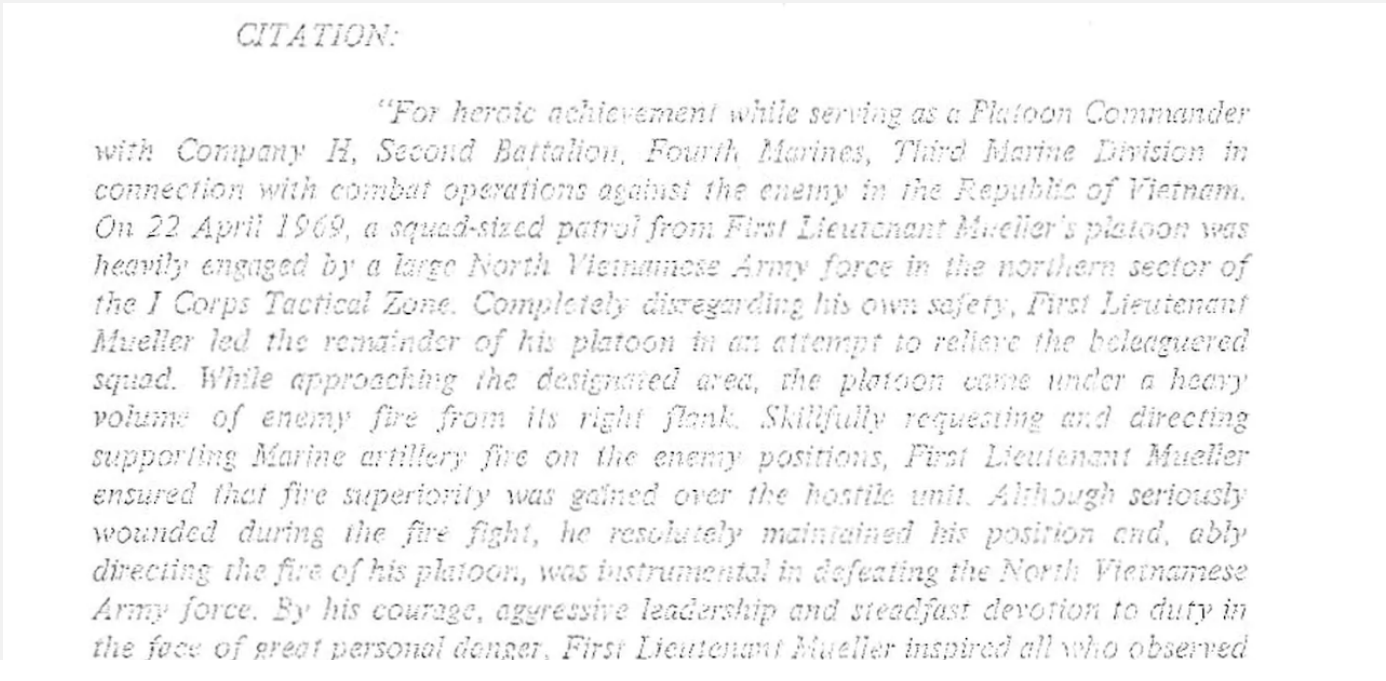
Second Lieutenant Mueller is authorized to wear the Combat "V".

FOR THE PRESIDENT,

H. W. Buse Jr.

H. W. BUSE, JR.
LIEUTENANT GENERAL, U. S. MARINE CORPS
COMMANDING GENERAL, FLEET MARINE FORCE, PACIFIC

Four months later [in April 1969], Mueller was shot in the thigh responding to the ambush of some of the Marines under his command. A description of his actions from the Navy Commendation Medal with "V" that he received: [A Navy Commendation Medal with "V" citation describes Robert S. Mueller III's actions the day he was wounded in Vietnam. }



CITATION:

"For heroic achievement while serving as a Platoon Commander with Company H, Second Battalion, Fourth Marines, Third Marine Division in connection with combat operations against the enemy in the Republic of Vietnam. On 22 April 1969, a squad-sized patrol from First Lieutenant Mueller's platoon was heavily engaged by a large North Vietnamese Army force in the northern sector of the I Corps Tactical Zone. Completely disregarding his own safety, First Lieutenant Mueller led the remainder of his platoon in an attempt to relieve the beleaguered squad. While approaching the designated area, the platoon came under a heavy volume of enemy fire from its right flank. Skillfully requesting and directing supporting Marine artillery fire on the enemy positions, First Lieutenant Mueller ensured that fire superiority was gained over the hostile unit. Although seriously wounded during the fire fight, he resolutely maintained his position and, ably directing the fire of his platoon, was instrumental in defeating the North Vietnamese Army force. By his courage, aggressive leadership and steadfast devotion to duty in the face of great personal danger, First Lieutenant Mueller inspired all who observed

him and uphold the finest traditions of the Marine Corps and of the United States Naval Service."

BACKGROUND - Lt. General Henry W Buse Jr

See 🔵 Lt. General Henry William Buse Jr. : "*At the beginning of July 1967, **Buse** was appointed chief of staff, Headquarters Marine Corps. [This] assignment lasted until May 31, 1968, when he received the Navy Distinguished Service Medal for his service in this capacity, and was then transferred to Hawaii.*" In April 1968 **Lt. Gen Buse Jr.** was appointed Commanding General Fleet Marine Force Pacific, in charge of all Marine units in the Pacific. See article clip below; full page at [aa36][GDrive] .

See 🔵 Lt. General Henry William Buse Jr. : "*[In Vietnam, **General Buse**] frequently visited the combat zone in Vietnam and always moved immediately to forward areas to assess operational requirements, investigate problem areas, and encourage and assist his Marines in every way possible. Under Lieutenant General Buse's dynamic leadership, Marine infantry units were reorganized into well-coordinated, mobile elements, **the command's electronic warfare operational capability increased to a degree unparalleled in Marine aviation history,** and numerous major amphibious operations were planned and executed with tremendous success.*"

🔵 Lt. General Henry William Buse Jr. was relieved by 🔵 Lt. General William Kenefick Jones on July 1, 1970, and subsequently retired from the military service. He distinguished himself in his last assignment and received his second Navy Distinguished Service Medal.

- NOTE : W K Jones is person whom Robert Swan Mueller III was an Aide-de-Camp to from 1969 (May 19) to 1969 (Nov 01)

"***General Buse** was the authorizing authority on [all of] Mueller's awards.*" [**From "The Mule: Robert Swan Mueller III" by Gene "Chip" Tatum**]

Pic from 🔵 Lt. General Henry William Buse Jr.

Passed-Over General Asks To Be Retired

WASHINGTON (AP) —A senior Marine general whose star rose under former Secretary of Defense Robert S. McNamara has put in for retirement.

He is Lt. Gen. Victor H. Krulak, passed over for Marine commandant and considered a leading contender for two other top posts until they were filled earlier this month by others.

The White House said President Johnson is nominating Krulak for permanent rank of lieutenant general when he retires about June 1.

For the last four years, Krulak has commanded Fleet Marine Forces in the Pacific with headquarters in Honolulu.

Krulak, 55, came to McNamara's attention while serving as a specialist on counterinsurgency under the Joint Chiefs of Staff.

It was reported President John F. Kennedy also was impressed with Krulak, who is credited with a major role in developing clear-and-hold tactics used by the Marines in Vietnam until major North Vietnamese incursions changed the character of the war.

Although Krulak was considered at one time the leading contender for Marine commandant, Johnson chose Gen. Leonard F. Chapman Jr. last December.

Johnson made his announcement five days after McNamara's intention to leave the Pentagon was made public. Krulak reportedly was McNamara's first choice.

In subsequent months, sources said Krulak was a leading candidate to become commander in chief of all Pacific forces—a job that would have meant promotion to full general. He also was mentioned as possible deputy to the U.S. commander in Vietnam, also a four star post.

But on April 10 Johnson named Adm. John S. McCain Jr. to become commander in chief of the Pacific and Army Gen. Andrew Goodpaster for the deputy position in Saigon.

Krulak, a native of Denver, Colo. is said by some sources to be planning to retire to San Diego, Calif.

The Pentagon said his successor as commanding general of Pacific Fleet Marine Froces will be Lt. Gen. Henry W. Buse, 56, a native of Ridley Park, Pa. Buse now is chief of staff at Marine headquarters.

[aa37][GDrive]

🔵 **Lt. General Henry William Buse Jr.** and 🔵 **Admiral John S. McCain Jr.** together in Hawaii at party - (Oct 9 1968) Full: [aa32][GDrive] Clip: [aa33][GDrive]

On Feb 6 1970, [🔵 **Lt. General Henry William Buse Jr.**] announced his retirement - **see** Full Page: [aa40][GDrive]

🔵 **Lt. General Henry William Buse Jr.** **was involved in Olympic lobbying since (or before) Feb 2 1967; see** Full Page: [aa34][GDrive] / Clip :[aa35][GDrive] . By 1973 , Buse was involved in the Olympic Committee - **see** Full Page: [aa38][GDrive]

Col Paul D. Lafond, Commanding Officer, 3d Marines briefs, from left, MajGen Carl A. Youngdale, Deputy Commanding General, III MAF; LtGen Henry W. Buse, Jr., Commanding General, FMFPac; MajGen Raymond G. Davis; and BGen Frank E. Garretson, Commanding General, Task Force Hotel, on search operations in the Vietnam Salient.

Abel Papers, Marine Corps Historical Center

April 1969

1988-us-marines-in-vietnam-high-mobility-and-standdown-full-charles-r-smith-pg-62-img-1.jpg /

A good reference of Buse's activities in Vietnam is in the 1988 book **"United States Marines in Vietnam - High mobility and standdown"** by Charles R Smith (see 1988-us-marines-in-vietnam-high-mobility-and-standdown-full-charles-r-smith.pdf / https://drive.google.com/open?id=1Cq55zUDuHuRBI0gdw3Qbz50exY6g5_xJ)

1969 (May 19) to 1969 (Nov 01) - Aide-de-Camp to Major General W. K. Jones - Get attention of William Colby and Ted Shackley

"Mueller [healed from his war wounds in Vietnam] and then became an 🔵 ***Aide-de-camp*** *to a senior officer, [*🔵 ***Lt. General William Kenefick Jones****], who was a towering figure in the Marines. Jones had earned a Silver Star and Navy Cross for valor as a battalion commander during the World War II battles of Tarawa and Saipan, respectively, and went on to become a regimental commander in the Korean War."* [aa9][GDrive]

- An 🔵 **Aide-de-camp** is "*is a personal assistant or secretary to a person of high rank, usually a senior military, police or government officer, or to a member of a royal family or a head of state. "*

See 🔵 **Lt. General William Kenefick Jones** :

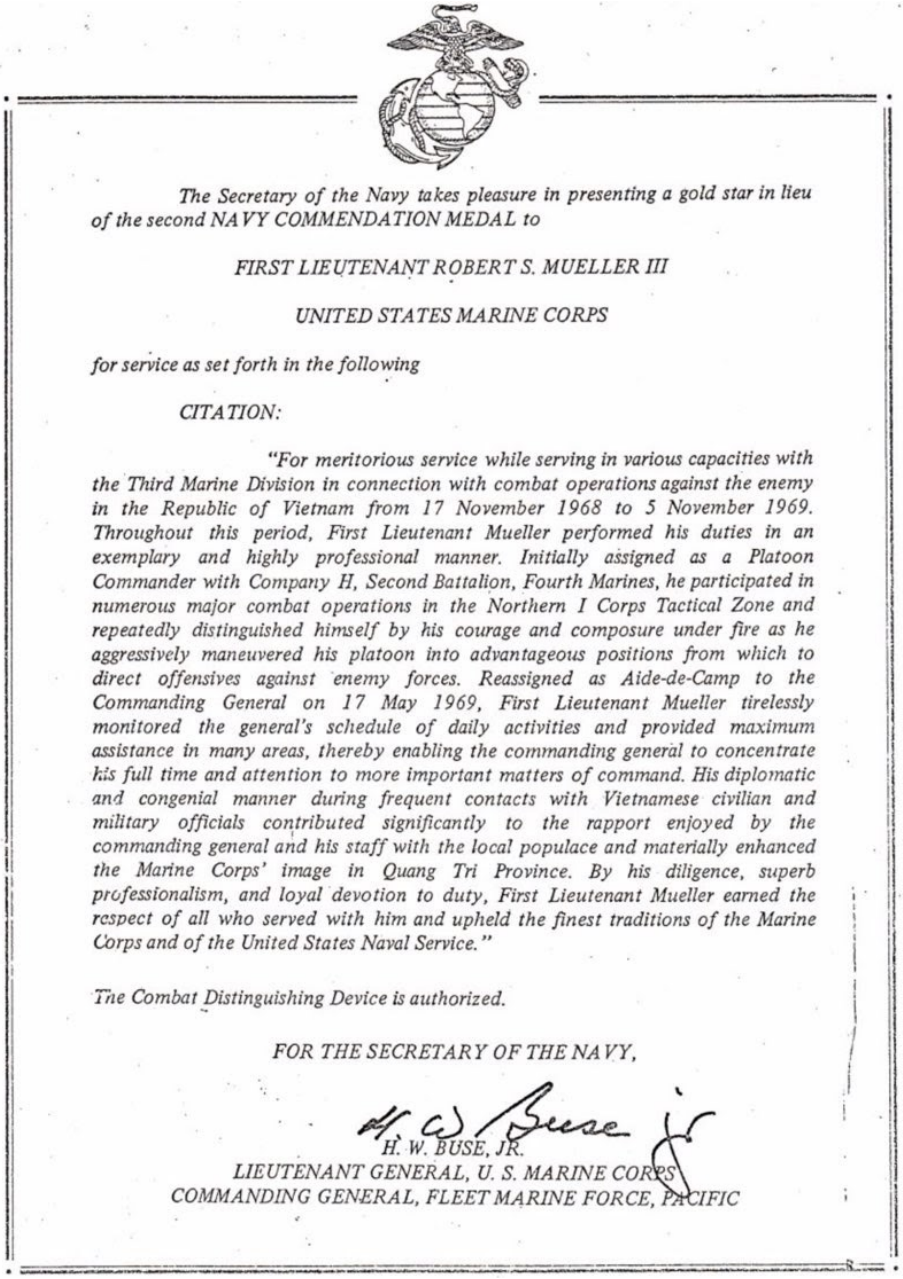
- *"Jones served with distinction in two combat tours of duty during the Vietnam War. He was sent to South Vietnam in December 1965, serving as director, Combat Operations Center, Headquarters, U.S. Military Assistance Command, Vietnam in Saigon. [...] He was promoted to major general in November 1966. He returned the States in December. "*
- *"From January 1, 1967, to March 1, 1969, he served as deputy director of personnel, Headquarters Marine Corps. [...]"*
- ***"He returned to Vietnam in April 1969, taking command of the*** 🔵 ***United States 3rd Marine Division*** ***. The division conducted extensive combat operation near the DMZ from April to November of that year.*** *In November 1969, the 3rd Marine Division was redeployed to Okinawa, Japan. While in Japan, in addition to command of the division, Jones became the commanding general of the I Marine Expeditionary Force and commander, Task Force 79 of the U.S. Seventh Fleet. "*

"Jones regarded ***Mueller*** *well, said retired Marine* 🔵 ***General James L. Jones Jr.*** *, who was William Jones's nephew. The younger Jones did not know Mueller during the Vietnam War, but he learned about Mueller's past service to the elder Jones in former president Barack Obama's White House, where Mueller was the FBI director and* ***the younger Jones was his first national security adviser****."* [aa9][GDrive]

See From "The Mule: Robert Swan Mueller III" by Gene "Chip" Tatum :

During {Mueller's] time in Vietnam and as an assistant to the General [W. K. Jones] he gained the attention of a number of top government officials including the future CIA Director, ***William Colby*** *and future Deputy Director of covert Operations for the CIA* ***Ted Shackley****. Unknown to Mueller at the time, the path for his future was set by being included in "The List". The List is a highly classified and never released document passed on from DCI to DCI of trusted operators and their area of expertise. If asked about this document the DCI ["Director of Central Intelligence"] will claim absolute deniability of its existence.*

Note that Gen Buse wrote ANOTHER letter of recommendation (see below, **From "The Mule: Robert Swan Mueller III" by Gene "Chip" Tatum**) for Robert Swan Mueller III for a Gold Star, after his months as Aide-de-Camp to Major General W. K. Jones , for being "professional" and "diplomatic". The number of letters feels to be exceptionally high for one person. Was Buse tasked with ensuring a successful record was documented for Robert Swan Mueller III ?



The Secretary of the Navy takes pleasure in presenting a gold star in lieu of the second NAVY COMMENDATION MEDAL to

FIRST LIEUTENANT ROBERT S. MUELLER III

UNITED STATES MARINE CORPS

for service as set forth in the following

CITATION:

"For meritorious service while serving in various capacities with the Third Marine Division in connection with combat operations against the enemy in the Republic of Vietnam from 17 November 1968 to 5 November 1969. Throughout this period, First Lieutenant Mueller performed his duties in an exemplary and highly professional manner. Initially assigned as a Platoon Commander with Company H, Second Battalion, Fourth Marines, he participated in numerous major combat operations in the Northern I Corps Tactical Zone and repeatedly distinguished himself by his courage and composure under fire as he aggressively maneuvered his platoon into advantageous positions from which to direct offensives against enemy forces. Reassigned as Aide-de-Camp to the Commanding General on 17 May 1969, First Lieutenant Mueller tirelessly monitored the general's schedule of daily activities and provided maximum assistance in many areas, thereby enabling the commanding general to concentrate his full time and attention to more important matters of command. His diplomatic and congenial manner during frequent contacts with Vietnamese civilian and military officials contributed significantly to the rapport enjoyed by the commanding general and his staff with the local populace and materially enhanced the Marine Corps' image in Quang Tri Province. By his diligence, superb professionalism, and loyal devotion to duty, First Lieutenant Mueller earned the respect of all who served with him and upheld the finest traditions of the Marine Corps and of the United States Naval Service."

The Combat Distinguishing Device is authorized.

FOR THE SECRETARY OF THE NAVY,

H. W. BUSE, JR.
LIEUTENANT GENERAL, U. S. MARINE CORPS
COMMANDING GENERAL, FLEET MARINE FORCE, PACIFIC

20xx-us-military-foia-response-robert-s-mueller-3-us-marine-corp-service-clip-2.jpg / https://drive.google.com/open?id=1CjGM-DmaLCX3Mn7LrcZIk0lr3KwBYiLQ

🔵 **United States 3rd Marine Division**

"During the 1968 Tet Offensive, the division conducted operations along the DMZ with a portion of the division fighting in the Battle of Huế. The operational tempo increased with the initiation of the Tet Offensive in late January 1968. At the time, 3rd Marine Division intelligence estimated the combat strength of PAVN and Viet Cong (VC) forces in the DMZ area was 40,943 troops.[15] The PAVN and VC stepped up their attacks by fire on every combat base in the division area of operations. This included daily attempts at interdiction of naval traffic on the Cua Viet River near Đông Hà. The division had to invest many of its assets to open the Cua Viet River to traffic. BLT 5/I, the Landing Force of SLF B, remained under the operational control (OPCON) of the division throughout February 1968. BLT 3/I continued Operation Saline under operational control of the 1st Amphibian Tractor Battalion with the mission of clearing the area adjacent to the Cua Viet River between Cua Viet and Đông Hà. BLT 2nd Battalion, 4th Marines, the Landing Force of SLF A, remained under operational control of the division throughout the month. BLT 2/4 conducted operations in the Lancaster II and Kentucky areas.

During the Vietnam War, the 3rd Marine Division suffered 6,869 men killed in action.

The division departed South Vietnam in November 1969 with more than 20 Marines having received the Medal of Honor and moved to Camp Courtney, Okinawa, where it is presently located."

[aa9][GDrive]

"Mueller [...] healed [from his war wounds in Vietnam] and then became an aide to a senior officer, Jones, who was a towering figure in the Marines. Jones had earned a Silver Star and Navy Cross for valor as a battalion commander during the World War II battles of Tarawa and Saipan, respectively, and went on to become a regimental commander in the Korean War.

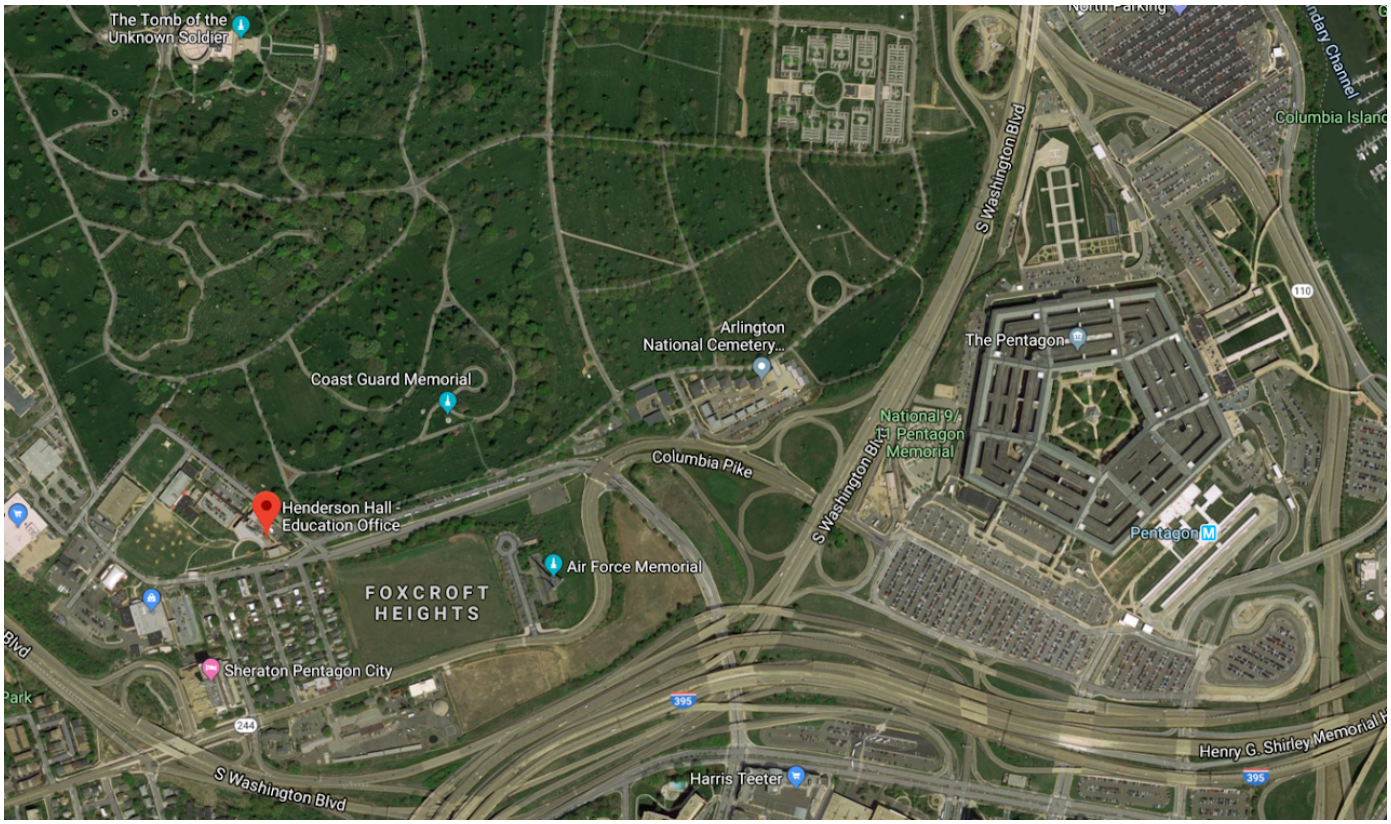
Jones regarded Mueller well, said retired Marine Gen. James L. Jones, who was William Jones's nephew. The younger Jones did not know Mueller during the Vietnam War, but he learned about Mueller's past service to the elder Jones in former president Barack Obama's White House, where Mueller was the FBI director and the younger Jones was his first national security adviser."

1969 (Dec 09) - 1970 (August) - At Henderson Hall (in Arlington Virginia)

See From "The Mule: Robert Swan Mueller III" by Gene "Chip" Tatum :

After returning from Vietnam, Mueller was briefly stationed at Henderson Hall in Arlington, Virginia where he would be debriefed by Military and CIA personnel before leaving active-duty service in August 1970.

Note : **Henderson Hall** (https://en.wikipedia.org/wiki/Henderson_Hall_(Arlington,_Virginia)) is a Marine Corps installation that is immediately next to the Pentagon - See the images below. Robert Swan Mueller III was so impressive in combat that he almost went directly into the Pentagon.



1969 (December) to 1970 (Jan 23)- At Henderson, Assistant Recorder of Officer Screening Board

A01G-glm-1
23 JAN 1970

From: President, Temporary Officer Screening Board
To: First Lieutenant Robert S. MUELLER III, 010 56 00/ 0302, United States Marine Corps Reserve
Via: Commanding Officer, Headquarters Battalion, Headquarters United States Marine Corps, Henderson Hall, Arlington, Virginia 22214

Subj: Letter of Appreciation

1. From 15 December 1969 to 16 January 1970 you were assigned as the Assistant Recorder of the Temporary Officer Screening Board convened at Headquarters Marine Corps. Your duties required that you make all preparations for the convening of the board, arranging for suitable facilities for the board, for the drawing from Officer Records Branch over 3,300 temporary officer records, for orderlies, rosters and other administrative necessities, and for security of the records under study by the board.

2. Although understandably unfamiliar with selection board matters and Headquarters Marine Corps organization and given but limited guidance you demonstrated outstanding initiative and exceptionally fine professional competance in rapidly accomplishing a myriad of details so that the board could convene on time.

3. During the deliberations of the board it was your responsibility to apportion to the board members an equivalent work load so that the board could effeciently and expeditiously review and brief the cases submitted to it for consideration. In addition it was your duty to maintain precise records of the proceeding of the board as well as continual changing statistical data employed by the board. Your devotion to duty, long hours of application, cheerful cooperation, interest, enthusiasm, good judgement and sound recommendations regarding procedures were invaluable in the accomplishment of the boards mission. Throughout your assignment as Assistant Recorder you conducted yourself in a highly professional manner and demonstrated a truly impressive growth potential as an officer in the Marine Corps.

20xx-us-military-foia-response-robert-s-mueller-3-us-marine-corp-service-clip-pg14.jpg /

A01G-glm-1
23 JAN 1970

Subj: Letter of Appreciation

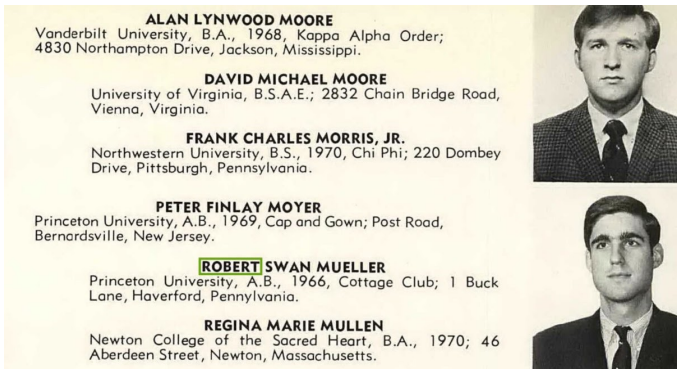
4. Your continual productive efforts, initiative and exemplary performance of duty have been deeply appreciated, not only by myself, but by all the members of the board. Without your competent assistance it would not have been possible for the board to expeditiously accomplish its mission.

A. J. POILLON
Colonel, U. S. Marine Corps

20xx-us-military-foia-response-robert-s-mueller-3-us-marine-corp-service-clip-pg15.jpg /

1970 (Aug) - Robert Swan Mueller III return to private citizen life, attends Univ. Virginia for law degree

U Virginia law school yearbook.



ALAN LYNWOOD MOORE
Vanderbilt University, B.A., 1968, Kappa Alpha Order; 4830 Northampton Drive, Jackson, Mississippi.

DAVID MICHAEL MOORE
University of Virginia, B.S.A.E.; 2832 Chain Bridge Road, Vienna, Virginia.

FRANK CHARLES MORRIS, JR.
Northwestern University, B.S., 1970, Chi Phi; 220 Dombey Drive, Pittsburgh, Pennsylvania.

PETER FINLAY MOYER
Princeton University, A.B., 1969, Cap and Gown; Post Road, Bernardsville, New Jersey.

ROBERT SWAN MUELLER
Princeton University, A.B., 1966, Cottage Club; 1 Buck Lane, Haverford, Pennylvania.

REGINA MARIE MULLEN
Newton College of the Sacred Heart, B.A., 1970; 46 Aberdeen Street, Newton, Massachusetts.

1973 (May?) - Completed Law degree from Univ. Virginia

Robert S. Mueller III – Civilian *Following his two plus year military tour, Mueller entered The University of Virginia School of Law from which he earned his Juris Doctor degree in 1973.*

1973 to 1976 : Associate in the San Francisco law firm of Pillsbury, Madison and Sutro

https://usa.usembassy.de/etexts/gov/biograph/mueller.htm

"From 1973 to 1976, Mr. Mueller was a litigation associate in the San Francisco law firm of Pillsbury, Madison and Sutro."

http://lawbrain.com/wiki/Robert_Swann_Mueller_III

"From 1973 to 1976, Mueller worked as a litigation associate at the law firm of Pillsbury, Madison & Sutro in San Francisco. "

See From "The Mule: Robert Swan Mueller III" by Gene "Chip" Tatum :

*"Following his bar, Mueller was recruited by the firm Pillsbury, Madison and Sutro in San Francisco, at the behest of his former handler and now Director of Central Intelligence, **William Colby**. Mueller worked as a litigator. The firm's interests were by no means limited to California or construction.*

In 1954, after the Central Intelligence Agency had helped install Shah Pahlevi in Iran, Pillsbury Madison & Sutro helped create a new international consortium to produce and refine Iran's oil and give Western powers access to Iranian oil. This Iranian consortium would prove pivotal in establishing the United States as a major influence in the oil industry and political life of the Middle East. Mueller's litigation prowess drew the attention of several influential people."

See From "The Mule: Robert Swan Mueller III" by Gene "Chip" Tatum :

*"**Encouraged by the firm's partners** and the need for an inside man to protect the movements of the CIA, Mueller accepted a job with the U.S. Attorney's office in San Francisco in **1976**."*

ETC

https://www.muckrock.com/news/archives/2019/apr/16/cia-barr-crest/

A memo uncovered in the Central Intelligence Agency's declassified archives shows that during his time at the CIA's Office of Legislative Council, current Attorney General William P. Barr drafted letters calling for the end of the moratorium on destroying records imposed on the Agency ahead of the Church Committee hearings.

https://www.commondreams.org/views/2019/01/16/william-barrs-deep-state-resume-cover-ups-covert-ops-and-pardons

Background : Nugan Hand Bank (up to 1976)

See From "The Mule: Robert Swan Mueller III" by Gene "Chip" Tatum :

*In 1973 **Frank Nugan**, an Australian lawyer, and **Michael Hand**, a former CIA contract operative, established the Nugan Hand Bank. Another key figure in this venture was Bernie Houghton, who was closely connected to CIA officials, Ted Shackley and Thomas G. Clines*

Nugan ran operations in Sydney whereas Hand established a branch in Hong Kong. This enabled Australian depositors to access a money-laundering facility for illegal transfers of Australian money to Hong Kong. According to Alfred W. McCoy, the "Hand-Houghton partnership led the bank's international division into new fields drug finance, arms trading, and support work for CIA covert operations." Hand told friends "it was his ambition that Nugan Hand became banker for the CIA."

In 1974 the Nugan Hand Bank got involved in helping the CIA to take part in covert arms deals with contacts within Angola. It was at this time that Edwin Wilson became involved with the bank. Two CIA agents based in Indonesia, James Hawes and Robert Moore, called on Wilson at his World Marine offices to discuss "an African arms deal". Later, Bernie Houghton arrived from Sydney to place an order for 10 million rounds of ammunition and 3,000 weapons including machine guns. The following year Houghton asked Wilson to arrange for World Marine to purchase a high-technology spy ship. This ship was then sold to Iran.

*By 1976 the Nugan-Hand Bank appeared to have become a CIA-fronted company. This is reflected in the type of people recruited to hold senior positions in the bank. For example, Rear-Admiral E**arl P. Yates**, the former Chief of Staff for Policy and Plans of the U.S. Pacific Command and a counter-insurgency specialist, became president of the company. Other appointments included William Colby, retired director of the CIA, General Leroy J. Manor, the former chief of staff of the U.S. Pacific Command and deputy director for counterinsurgency and special activities, General Edwin F. Black, former commander of U.S. forces in Thailand, Walter J. McDonald, retired CIA deputy director for economic research, Dale C. Holmgren, former chairman of the CIA's Civil Air Transport and Guy J. Pauker, senior Republican foreign policy adviser.*

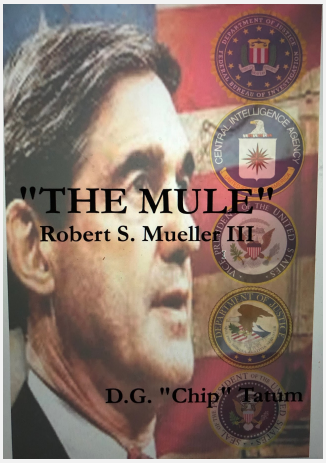
One of those that Earl P. Yates brought in to help the Nugan Hand Bank was Mitchell WerBell. Yates later told the Joint Task Force on Drug Trafficking he recruited WerBell as a consultant because he "had extensive experience in Central America". Former CIA agent, Kevin P. Mulcahy later told the National Times newspaper "about the Agency's use of Nugan Hand for shifting money for various covert operations around the globe."

Book - "The Mule: Robert Swan Mueller III" by Gene 'Chip' Tatum

From "The Mule: Robert Swan Mueller III" by Gene "Chip" Tatum

BUY YOUR COPY HERE : https://www.amazon.com/dp/B07NFB8M9Q

PLEASE PURCHASE YOUR OWN COPY IF YOU USE THIS – THE AUTHOR WORKED VERY HARD AND DESERVES FINANCIAL SUPPORT TO ENCOURAGE FUTURE GREAT WORK ! I ONLY MAKE COPIES SUCH AS THIS AVAILABLE AS, OFTEN, GREAT RESOURCES CAN "GO MISSING" IF POWERFUL PEOPLE ARE MOTIVATED. – MWK



[aa10][GDrive]

*It is interesting to note that **Jones** served as Director of the Combat Operations Center Military Assistance Command Vietnam (MACV) in Saigon. His boss was **General William C. Westmorland**.*

On July 1, 1970, Lt. General Jones assumed his last duty assignment as Commanding General, Fleet Marine Force, Pacific, when he relieved Lt General Henry W. Buse Jr. and served in this capacity until his retirement from active duty on September 1, 1972.

[....]

As an established officer known within the command and having been recruited by the Phoenix Program, Mueller quickly moved up the proverbial ladder. He would find that those contacts made as a young Lieutenant would prove valuable in civilian life.

[...]

Nugan Hand Bank [1976 - on]

[aa11][GDrive]

[...]

The investigative journalist, Jonathan Kwitny, became convinced that the Nugan Hand Bank had replaced the Castle Bank and Trust Company in Nassau, as the CIA's covert banker. The bank, run by Paul Helliwell, was forced to close after the Internal Revenue Service discovered that he Castle Bank was laundering CIA funds and drug profits.

On 27th November 1979 Michael Hand wrote to Ted Shackley. It concerned a meeting the two men had recently attended in Washington: "The opportunity of meeting you again on different terms was very enjoyable and I sincerely trust that something worthwhile businesswise may surface and be profitable for both of us."

In the winter of 1979, Edwin Wilson had a meeting with Bernie Houghton and Thomas G. Clines in Switzerland in an attempt to help him out of his difficulties. This included a non-delivery of 5,000 M16 automatic rifles. The three men discussed ways of using the Nugan Hand Bank to float a $22 million loan to finance the delivery. Hand was obviously concerned that if Wilson was arrested he might begin talking about his dealings with Nugan Hand.

On 7th January 1980, Robert Wilson (House of Representatives Armed Services Committee) and Richard Ichord (chairman of the Research and Development Subcommittee of the Armed Services Committee) had dinner with Bernie Houghton at the Bourbon and Beefsteak Bar and Restaurant in Sydney.

On 27th January, 1980, Frank Nugan was found shot dead in his Mercedes Benz. With his body was a Bible that included a piece of paper. On it were written the names "Bob Wilson" and "Bill Colby". Robert Wilson was a senior member of the U.S. House of Representatives Armed Services Committee and William Colby was a former director of the CIA.

Bernie Houghton was in Switzerland at the time and he immediately rang his branch office in Saudi Arabia and ordered the staff to leave the country. Houghton also visited Edwin Wilson's office in Geneva and left a briefcase with bank documents for safekeeping. Soon afterwards, a witness saw Thomas G. Clines going through the briefcase at Wilson's office and remove papers that referred to him and General Richard Secord.

Two days after Nugan died, Michael Hand held a meeting of Nugan Hand Bank directors. He warned them that unless they did as they were told they could "finish up with concrete shoes" and would be "liable to find their wives being delivered to them in pieces".

Michael Hand, Patricia Swan, Bernie Houghton and his lawyer, Mike Moloney, spent the next few days removing files from Nugan's office. They also began paying back selected clients. One estimate is that over $1.3 million was paid out in this way.

Frank Nugan's inquest took place in April, 1980. Testimony from Michael Hand revealed that Nugan Hand was insolvent, owing at least $50 million. Hand then promptly fled Australia under a false identity on a flight to Fiji in June 1980. Bernie Houghton also disappeared at this time and it is believed both men eventually reached the United States.

According to one witness, Thomas G. Clines helped Bernie Houghton escape. Michael Hand also left the country accompanied by James Oswald Spencer, a man who served with Ted Shackley in Laos. The two men traveled to America via Fiji and Vancouver. One report published in November, 1980, suggested that Michael Hand was living in South America. It claimed that he had managed to escape with the help of "former CIA employees".

The Australian government asked the Royal Commissioner D. G. Stewart to investigate the Nugan-Hand Bank scandal. Stewart contacted the U.S. Department of Justice requesting full cooperation. The U.S. Attorney assigned to the case was "The Mule"

The Stewart Royal Commission was published in June, 1985. It stated that the "Nugan Hand Ltd. was at all times insolvent... and flouted the provisions of the legislation as it then stood in that large volumes of currency were moved in and out of Australia".

Stewart went on to blame the dead Frank Nugan and the missing Michael Hand for the illegal activities of the bank. Rear-Admiral Earl P. Yates, William Colby, General Leroy J. Manor, General Edwin F. Black, Walter J. McDonald, Dale C. Holmgren, Guy J. Pauker and Bernie Houghton were considered blameless. Despite the evidence, Hand and Patricia Swan, Nugan's secretary, were accused of being the only ones "responsible for the shredding of documents".

The Mule

Russian Connection

In 1980 Pillsbury Madison & Sutro lawyers helped make financial history when they were hired by Genentech in that company's bid to go public. Founded in 1976 by a professor at the University of California at San Francisco Medical Center, Genentech pioneered the new field of genetic engineering or biotechnology when it showed that gene-splicing was commercially viable. Pillsbury Madison & Sutro represented Blyth Eastman Paine Webber Inc., a New York investment banking firm and the main underwriter of Genentech in its initial public offering. That IPO, in just one minute, sold one million shares of common stock for $35 million, the fastest public offering in history at the time. The Genentech IPO marked Pillsbury Madison and Sutro's entry into one of the major growth industries of the late 20th century, and the firm would go on to represent such high-tech companies as LSI Logic Corporation and others. To support high-tech firms interested in investing in Russia, Pillsbury Madison in 1989 chaired a group of advisors of the first Soviet-American venture capital fund. It was imperative that the U.S. Attorney's office recommend to Washington the need for entry into the Soviet Financial Marketplace. The man for that job was a former CIA asset placed in the Department of Justice. He was referred to as "The MULE" Robert S. Mueller III.

The Take Down

Backtracking a bit Mueller achieved the position of assistant U.S. attorney for the District of Northern California in 1976, rising to chief of its criminal division in 1981. Mueller then became assistant U.S. attorney for the District of Massachusetts in 1982, and served as the district's acting attorney from 1986 to '87.

But none of this is news. His climb up the ladder was swift. As the demand for his special skills increased, he was moved in and out of the U.S. Attorney's office to major law firms. This is called the revolving door. The CIA normally uses this tactic with their assets and operatives.

In 1987 Mueller was repositioned to the Boston firm of Hill and Barlow. It is there that he convinced a major department to resign from the firm and in favor of an international firm aligned with various Governments' This action caused bankruptcy and closure of the firm, sending messages to other firms to align or face the same fate.

Mission complete "The Mule" was once again called on to lend a helping hand to the U.S. Attorney's office.

How to Silence Threats

For many years, Panama's General Manuel Noriega was the embodiment of the terms "military strongman" and "de facto leader".

Although he was never the actual president of Panama, he was the key figure from 1983 to 1989 and a key US ally and CIA Asset in Central America for four decades.

His connection with the United States dated back to the 1950s, when according to various accounts, he was recruited as a CIA informant while studying at a military academy in Peru.

Noriega eventually became a prized American "asset" in a region that was becoming politically hostile to US interests in the wake of the Cuban Revolution.

He rose within the ranks of the Panamanian armed forces to become a key supporter of Gen Omar Torrijos, the military ruler who signed a treaty with the US to restore the Panama Canal zone to Panamanian sovereignty in 1977.

After Gen Torrijos's death in a mysterious plane crash in 1981, Noriega became the power behind the scenes as head of the security services.

The US relied on Panama as a regional listening post and Noriega obliged with unfaltering support for the Contras in Nicaragua, and in the fight against the FMLN guerrillas in El Salvador.

Officials in the Reagan Administration and past Administrations said in interviews that they had overlooked General Noriega's illegal activities because of his cooperation with American intelligence and his willingness to permit the American military extensive leeway to operate in Panama.

They said, for example, that General Noriega had been a valuable asset to Washington in countering insurgencies in Central America and was now cooperating with the Central Intelligence Agency in providing sensitive information from Nicaragua.

Noriega played a role in the mid-1980s Iran-Contra affair, which involved the smuggling of weapons and drugs to aid US undercover efforts to support the anti-government forces opposing the Sandinistas in Nicaragua through a group of companies called the Enterprise..

Proceeds from the Enterprise were laundered through several U.S. and offshore banks.

However, the Enterprise became increasingly suspicious of Noriega amid indications that he was skimming proceeds from the sale of weapons and drugs.

Although a congressional investigation revealed that the Reagan Administration was unaware of the illicit activities, documents released show that Reagan's vice president, George H.W. Bush was in the loop and overseeing "The Enterprise" Operations.

Flight plans released from pilots and U.S. military aircraft operating in Honduras in support of the Nicaraguan Contras show direct involvement of Vice President Bush and other U.S. Officials in the South American operations.

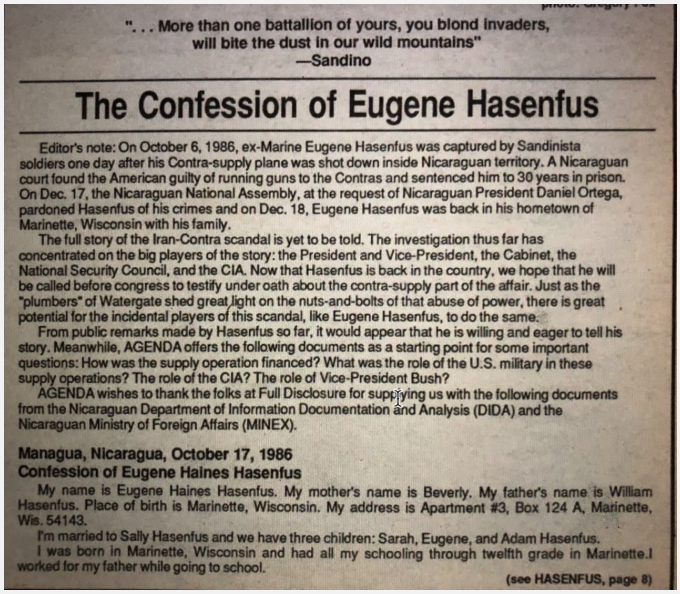
Through the use of CIA proprietary companies, drugs and monies were moved through Panama and Mexico to the U.S. and other destinations. General Noriega was a key figure in these operations.

The unfortunate downing of a Corporate Air Services aircraft supplying contras in Nicaragua and Honduras on October 5 th , 1986 started a chain of events that would result in both criminal and Congressional investigations in addition to the death of several key figures having knowledge or direct involvement in "The Enterprise".

The sole survivor of the crash was Eugene Hasenfus, an ex marine and Air America employee.

Hasenfus was the CIA operative [a cargo handler] captured by the Nicaraguan Army on 6 October 1986 after his airplane was shot down over Nicaragua's southern region and where he had parachuted safely to the ground. [He had been previously ordered to no t wear a parachute! The pilot and co-pilot were killed in the crash.] He thus functioned in that chaotic region of the planet as a spy of sorts, chiefly providing arms to the Contra Rebels (Ronald Reagan's covert crusade.) His capture eventually led to the revelation of, and subsequent media frenzy over, the infamous Iran-Contra Affair .

Below you will find the confession of Mr. Hasenfus, which lay out the operational and command structure of the operations.



"... More than one battallion of yours, you blond invaders,
will bite the dust in our wild mountains"
—Sandino

The Confession of Eugene Hasenfus

Editor's note: On October 6, 1986, ex-Marine Eugene Hasenfus was captured by Sandinista soldiers one day after his Contra-supply plane was shot down inside Nicaraguan territory. A Nicaraguan court found the American guilty of running guns to the Contras and sentenced him to 30 years in prison. On Dec. 17, the Nicaraguan National Assembly, at the request of Nicaraguan President Daniel Ortega, pardoned Hasenfus of his crimes and on Dec. 18, Eugene Hasenfus was back in his hometown of Marinette, Wisconsin with his family.

The full story of the Iran-Contra scandal is yet to be told. The investigation thus far has concentrated on the big players of the story: the President and Vice-President, the Cabinet, the National Security Council, and the CIA. Now that Hasenfus is back in the country, we hope that he will be called before congress to testify under oath about the contra-supply part of the affair. Just as the "plumbers" of Watergate shed great light on the nuts-and-bolts of that abuse of power, there is great potential for the incidental players of this scandal, like Eugene Hasenfus, to do the same.

From public remarks made by Hasenfus so far, it would appear that he is willing and eager to tell his story. Meanwhile, AGENDA offers the following documents as a starting point for some important questions: How was the supply operation financed? What was the role of the U.S. military in these supply operations? The role of the CIA? The role of Vice-President Bush?

AGENDA wishes to thank the folks at Full Disclosure for supplying us with the following documents from the Nicaraguan Department of Information Documentation and Analysis (DIDA) and the Nicaraguan Ministry of Foreign Affairs (MINEX).

Managua, Nicaragua, October 17, 1986
Confession of Eugene Haines Hasenfus

My name is Eugene Haines Hasenfus. My mother's name is Beverly. My father's name is William Hasenfus. Place of birth is Marinette, Wisconsin. My address is Apartment #3, Box 124 A, Marinette, Wis. 54143.

I'm married to Sally Hasenfus and we have three children: Sarah, Eugene, and Adam Hasenfus.

I was born in Marinette, Wisconsin and had all my schooling through twelfth grade in Marinette.I worked for my father while going to school.

(see HASENFUS, page 8)

[aa13][GDrive]

The Case of Eugene Hasenfus

Managua, Nicaragua, October 17, 1986
Confession of Eugene Haines Hasenfus
(cont. from page 1)

After graduating from high school in June, 1960, I enlisted in the Marines. My rank was E4 and my serial number was 1917376. I completed Air Borne and Riggers and was assigned to 1st Air Delivery Platoon, Camp Pendelton, California. My duty stations were Okinawa and Camp Pendleton, California. I was discharged from the Marines in 1965 at Camp Pendelton.

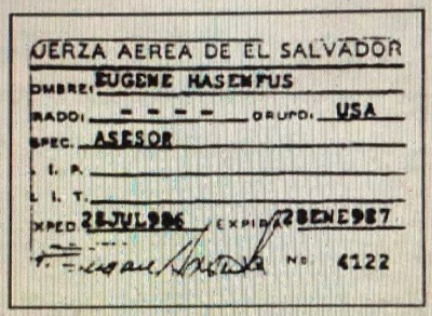
In 1966, through Job Service, I got my job with Air America. Air America in Southeast Asia had different contracts with U.S. Aid, USOM and the embassy. Many contracts were with the CIA to deliver military aid. I worked with Air America until 1973 in which I terminated myself.

In 1973 I got married to Sally and we started our family. My employment was in construction.

In June of 1986, I was called by an ex-Air America Pilot, Bill Cooper, and was asked if I would be interested in flying in Central America. The work would be much the same as Air America in Southeast Asia. On July 7, 1986, I went to Miami, Florida and was hired. The name of the company was Corporate Air Services.

While in Miami, Mr. Cooper took me over to Southern Air Transport and showed me one of the C-123's we would be flying out of El Salvador. We also talked about wages. The wages were to be $3000 per month and we would be working [from] El Salvador and Honduras and flying into Nicaragua. Any time we flew into Nicaragua we were to receive $750.00.

On July 10th, I was booked on TACA Airlines to El Salvador and was met in El Salvador by John McRainey. The other American personnel that were there were: Buzz Sawyer, Dan Gamblin, Joe Messer and Ernie and later on there was Jerry Stimdel, Jake Worel, John Piowate, Dave,


FUERZA AEREA DE EL SALVADOR
NOMBRE: EUGENE HASENFUS
RADO: - - - - GRUPO: USA
ESPEC. ASESOR
I. P.
L. I. T.
EXPED 28-JUL-986 EXPIRA 28-ENE-987
No 4122

Frank, Moe Becker.

Corporate Air Services was a front name for Southern Air Transport and was to fly aid and military aid to and from Honduras and into Nicaragua for armed groups which carried the names such as FDN and UNO.

This work was coordinated by Bill Cooper but mostly by Max Gomez and Ramon Madina [who] worked for the CIA. Max Gomez was a personal friend of Mr. George Bush through the CIA.

I participated in flights from Ilopango, El Salvador to Aguacate, Honduras. From Aguacate we would have flights to and from Mokoron and Rus Rus. The cargo carried was mainly food and some small arms and ammunition belonging to an armed group which fought against the Nicaraguan government and carried the name of FDN.

Out of Aguacate, we would make night drops into Nicaragua. I was on four of these night drops. The drops were made by the Rio Grande de Matagalpa between El Gallo and San Pedro del Norte in a DHC-4 Caribou. The cargo also belonged to the FDN.

Out of Ilopango, El Salvador we would take a C-123K and go south to Costa Rica and then east into Costa Rica and then back north into Nicaragua and drop small arms and ammunition. I was on six of these flights to drop zones near Bluefields and the River Punta Gorda.

On October 5th, 1986, Captain Bill Cooper, co-pilot Buzz Sawyer and myself left our residence for Ilopango air base. We arrived at Ilopango about 8:30. The aircraft we were flying was a C-123K [serial] # C-825, loaded with 10,000 lbs. [Nicaraguan reports state 20,000 lbs.] of small arms and ammunition. We left Ilopango air base at 9:30 with an extra passenger who was a Nicaraguan radio operator.

The aircraft proceeded out over the ocean. We were going south about forty miles off the Nicaraguan coast. When we got to Costa Rica the aircraft [turned] east into Costa Rica. There was a checkpoint on the Nicaragua-Costa Rica border river. The checkpoint was an island in the turn of the river where a boat was sunk. At this point we would turn north into Nicaragua and were heading for our drop zone. About four minutes out from our drop zone the aircraft was hit by a ground-to-air missile. The right engine and wing blew up and the aircraft lost immediate control. At this time I bailed out [at] about 3000 feet and watched the aircraft spin into the ground. Each crew member had a pistol and the radio operator had an AK-47. I was captured the next morning by the soldiers who shot the aircraft down. At the time I was captured I was carrying a 7.82 mm pistol of Russian design.

The cargo that was being carried on this trip came out of Aguacate by DHC-4's into Ilopango, and was transferred there onto the C-123K #C-825 and was property of the FDN and was to be dropped to their armed groups in Nicaragua.

Eugene Hasenfus

[aa14][GDrive]

The United States Government vehemently denied any connection to the doomed flight or their purported CIA activities.

Here you will find a CIA sanitized document concerning the CIA and government denial of the aircraft and its activities.

STAT
Sanitized Copy Approved for Release 2010/06/21 : CIA-RDP90-00552R000202270003-7
STAT
ARTICLE APPEARED
ON PAGE 1
WASHINGTON POST
8 October 1986

Reagan Administration Denies U.S. Link to Plane

STAT

By Joanne Omang
Washington Post Staff Writer

Top Reagan administration officials yesterday flatly denied any U.S. government connection with a transport plane that the Sandinista government said it shot down in Nicaragua with three Americans and a man of Latin origin aboard.

At the same time, U.S. officials indicated that they knew more about the situation than they were willing to disclose, including the names of those killed in the crash. Secretary of State George P. Shultz said the aircraft was "hired by private people" who "had no connection with the U.S. government at all." He said they were "not from our military, not from any U.S. government agency, CIA included . . . . These are private citizens."

A spokesman for the Central Intelligence Agency denied the agency was involved in the mission, as the Nicaraguan government asserted, but refused to deny that it knew anything about it.

The issue of CIA involvement was heightened by Wisconsin relatives of Eugene Hasenfus, the lone survivor of the crash. Sen. David F. Durenberger (R-Minn.), chairman of the Senate Select Committee on Intelligence, told reporters that Hasenfus' wife, Sally, had telephoned the State Department yesterday morning from her home in Marinette, Wis., "and said her husband worked for the CIA."

A spokesman for Sally Hasenfus said she "is not granting any interviews to anyone." Earlier Hasenfus was quoted by wire services as saying of her husband, "I don't know where he is and what he's doing. I only know what I see on the TV, too, and I really don't know anymore."

The Associated Press said that Hasenfus' brother, William, reportedly told a friend that Hasenfus had gone to work 20 years ago for Air America in Vietnam, when it was a CIA cover company, and later returned to work for the firm readying cargo for air drops.

Kathy Pherson, a CIA spokesman, denied any link. "We have nothing to do with the plane, nothing to do with the guy. He does not work for us, and we are not involved," she said. The CIA is barred by law from aiding the Nicaraguan contras, or counterrevolutionaries, with anything but intelligence information, "and we do not break those restrictions," she said.

Asked whether that meant the agency knew nothing about the incident, Pherson said, "I can't help you."

Asked to identify the four men, State Department officials said they had the names but would not reveal them. They would not say how they had obtained the names.

Elliott Abrams, assistant secretary of state for inter-American affairs, told reporters that if reports that the four were carrying arms to anti-Nicaraguan rebels were true, "then they are heroes."

Ernesto Palazio, spokesman here for the United Nicaraguan Opposition, the rebels' umbrella organization, said the downed plane "could very well be" one of the contras' planes, but that he was not yet certain. "Ever since Congress placed restrictions on aid, we have had to go get private donations," he said. "Occasionally we have had to use the services of volunteers to complement our own pilots."

He said there had been no contact yet with contras on the ground near the crash site in southern Nicaragua.

Spokesmen for several groups previously associated with aid shipments to the contras denied any link to or knowledge of this flight. They included officials of the Civilian Materiel Assistance, formerly Civilian-Military Assistance, in Memphis, which supplies medical and other aid and which lost two members in a September 1984 helicopter crash in Nicaragua.

Retired major general John K. Singlaub, head of the U.S. Council for World Freedom in Phoenix, who has spoken proudly of facilitating arms purchases for the contras, said from the Far East through spokeswoman Joyce Downey that he knew nothing about the plane. "We have located all of our people," Downey said.

Officials of Southern Air Transport in Miami, whose planes have reportedly been chartered for previous aid flights to Nicaragua, said they knew nothing about this one or Hasenfus. William Hasenfus said his brother, Eugene, had been working for a Florida air freight company, but refused to name it.

Defense Department records show that a Eugene Hasenfus joined the U.S. Marines on May 9, 1960, was trained as a parachute rigger for equipment drops and sent to Camp Pendleton, Calif., where he remained until he left the service as a corporal June 17, 1965.

His military records say he did not serve abroad. His stepmother, Theresa Hasenfus, told The Associated Press, however, that he had served in Vietnam.

Durenberger said at a news conference that the CIA had assured the intelligence committee that "there is absolutely no connection between that plane, what was in that airplane, the pilots or anybody else [on board] and a U.S. government-financed or -sponsored effort such as the so-called contra operation."

Durenberger added that he believes the agency: "They have so much riding on this . . . . I don't think they've ever lied to any of us. The problem is what they don't tell you."

Sen. Patrick J. Leahy (D-Vt.), the committee vice chairman, said he was concerned that the flight might have been "connected with any of these soldier of fortune type operations which are sort of sent out there with a wink and a shrug as a way of going around our stated foreign policy." If there is such a link, he said, "then I think we're in for some very serious trouble."

Committee spokesman David Holliday said later that, based on current information, "nobody on the committee believes that the CIA or any government agency violated the law or did something they shouldn't have done."

[aa15][GDrive]

Sanitized Copy Approved for Release 2010/06/21 : CIA-RDP90-0

Rep. Michael D. Barnes (D-Md.), head of the Foreign Affairs subcommittee on Western Hemisphere affairs, said he thought it "unlikely" that the government was not involved. "Very little of what's happening down there right now is not somehow affected by U.S. action," he said.

Rep. Henry B. Gonzalez (D-Tex.), meanwhile, called for a House investigation into two recent air crashes in Texas and Nicaragua to determine whether they were part of an alleged covert CIA operation aimed at toppling the Sandinista government.

Rep. Henry J. Hyde (R-Ill.), a member of the House Permanent Select Committee on Intelligence, said he agreed with Assistant Secretary of State Abrams. "The Soviets are pouring all kinds of stuff in there. And unless there's some kind of an effort at equalization, the contras will be overwhelmed," he said. "Anyone who's attempting to keep them viable, I say, 'God bless 'em.'"

Abrams said he thought the plane was "what we call a benefactor flight" of the sort that had "kept the resistance alive" since Congress cut off U.S. aid to it in May 1984. "Some very brave people . . . have been willing to actually bring this material into Nicaragua, which seems to be the case with this flight," Abrams said. "God bless them . . . . If these people were involved in this effort, then they are heroes."

He said he had "some intelligence about the plane" and the people on it but that the information "is not for public consumption."

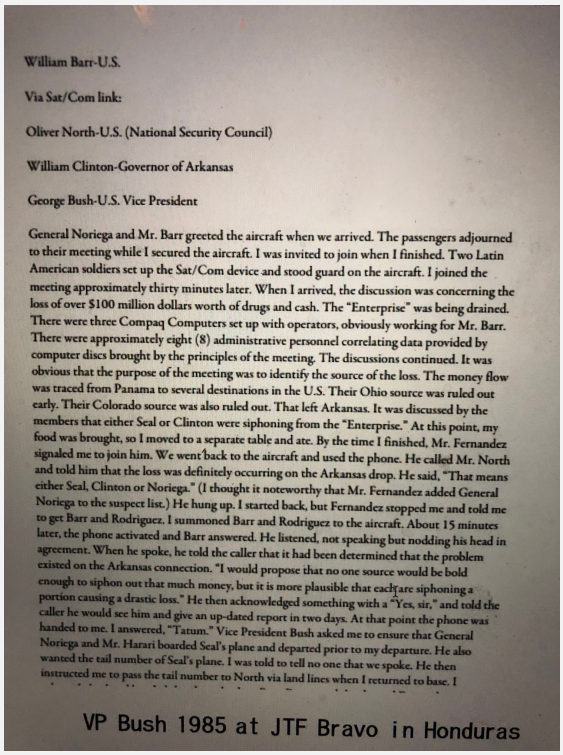
Asked about possible violations of the Neutrality Act, which bars U.S. citizens from supporting attacks on nations with which the United States is not at war, Abrams said he had advice for others seeking to aid the Nicaraguan rebels: "If you're planning to do something like this, get yourself a lawyer."

[aa16][GDrive]

Ultimately, the government would accept responsibility for the flight and curtail all activities by Corporate air Services, They did not, however stop the supply train to the contras.

While utilizing the proprietary company Corporate Air Services, the CIA also utilized assets within the U.S. Military to accomplish their missions. Pilots stationed in Honduras began supporting the Contras in the early 80's from an Air Force Joint Task Force out of Palmerola AFB. JTF Bravo pilots continued support via MEDEVAC Helicopters flying from Honduras to the various contra camps in Nicarauga.

Here is a flight plan filed by pilots of one such flight. Supporting documents are found on Page 48 of the Tatum Chronicles



William Barr-U.S.

Via Sat/Com link:

Oliver North-U.S. (National Security Council)

William Clinton-Governor of Arkansas

George Bush-U.S. Vice President

General Noriega and Mr. Barr greeted the aircraft when we arrived. The passengers adjourned to their meeting while I secured the aircraft. I was invited to join when I finished. Two Latin American soldiers set up the Sat/Com device and stood guard on the aircraft. I joined the meeting approximately thirty minutes later. When I arrived, the discussion was concerning the loss of over $100 million dollars worth of drugs and cash. The "Enterprise" was being drained. There were three Compaq Computers set up with operators, obviously working for Mr. Barr. There were approximately eight (8) administrative personnel correlating data provided by computer discs brought by the principles of the meeting. The discussions continued. It was obvious that the purpose of the meeting was to identify the source of the loss. The money flow was traced from Panama to several destinations in the U.S. Their Ohio source was ruled out early. Their Colorado source was also ruled out. That left Arkansas. It was discussed by the members that either Seal or Clinton were siphoning from the "Enterprise." At this point, my food was brought, so I moved to a separate table and ate. By the time I finished, Mr. Fernandez signaled me to join him. We went back to the aircraft and used the phone. He called Mr. North and told him that the loss was definitely occurring on the Arkansas drop. He said, "That means either Seal, Clinton or Noriega." (I thought it noteworthy that Mr. Fernandez added General Noriega to the suspect list.) He hung up. I started back, but Fernandez stopped me and told me to get Barr and Rodriguez. I summoned Barr and Rodriguez to the aircraft. About 15 minutes later, the phone activated and Barr answered. He listened, not speaking but nodding his head in agreement. When he spoke, he told the caller that it had been determined that the problem existed on the Arkansas connection. "I would propose that no one source would be bold enough to siphon out that much money, but it is more plausible that each are siphoning a portion causing a drastic loss." He then acknowledged something with a "Yes, sir," and told the caller he would see him and give an up-dated report in two days. At that point the phone was handed to me. I answered, "Tatum." Vice President Bush asked me to ensure that General Noriega and Mr. Harari boarded Seal's plane and departed prior to my departure. He also wanted the tail number of Seal's plane. I was told to tell no one that we spoke. He then instructed me to pass the tail number to North via land lines when I returned to base. I

VP Bush 1985 at JTF Bravo in Honduras

[aa17][GDrive]

[aa18][GDrive]

*The documents indicate that General Noriega was suspected of draining monies and drugs from "The Enterprise". In later documents recovered from Honduras it would be revealed that both **Barry Seal** and Manual Noriega were to be eliminated. The Clintons were found to be supporting The Enterprise as agreed.*

Thus in February 1986, Barry Seal was assassinated outside a federally protected facility in Baton Rouge Louisiana.

*5 May 1989: An aide to President Ronald Reagan was convicted after a newspaper reported that the US had secretly supplied arms to Iran From **Alex Brummer** and **Martin Walker** in Washington. The former National Security aide, **Oliver North**, the man at the heart of the 1986 Iran-contra affair, was yesterday found guilty on three counts including deceiving Congress and receiving an illegal gratuity in a verdict which seems certain to rebound with a vengeance on President Bush and his predecessor, Mr Reagan.*

The three counts were: shredding government documents; accepting a bribe in the shape of a security fence; and seeking to keep the truth from Congress.

Emerging from the courtroom yesterday, the chief prosecutor, Mr John Kekker, said: "The jury has spoken after a long and difficult trial and the principle that no man is above the law has been vindicated." Mr Kekker, a marine veteran of Vietnam like North, added: "He has been found guilty of three very serious charges" in a case which "some people said could not be tried." The North verdict paves the way for several other Iran-contra trials including those of Admiral John Poindexter, the former national security advisor; as well as middlemen, Mr Richard Secord and Mr Albert Hakim.

The Special Prosecutor is expected to continue his investigations which could affect several figures in the Republican Administration. As the verdict emerged

The Special Prosecutor is expected to continue his investigations which could affect several figures in the Republican Administration. As the verdict emerged, President Bush sought to clear his own name saying: "There has been much needless, mindless speculation about my word of honor." The President has said that he would respond to questions about his role in the affair as soon as the trial ended.

The Findings :The Jury appeared to have accepted the arguments of the defense lawyer, Mr Brendan Sullivan that North was only following the orders of his White House superiors. They were convinced, however, that North should be declared a common criminal for arranging for a $13,800 (£8,118) security fence for his Virginia home and for joining his secretary, Ms Fawn Hall, in the destruction of sensitive government documents and falsifying the record after congressional and other investigations of his activities had begun. The counts on which North has been found guilty carry penalties which could put him behind bars for 10 years and result in fines of up to $750,000. The sentencing has been set for June 23. There has been no indication from President Bush that he would consider a pardon for the man he considers a hero for his service in Vietnam and Central America. The verdict by a Washington jury of nine men and three women came after 23 days of deliberation and less than 24 hours after Judge Gerhard Gesell urged them to put in longer hours to reach a decision. It brings to a jolting end North's claims throughout congressional testimony that he was simply the fall guy, carrying out his superiors' orders. This verdict became problematic for Bush and the "Enterprise". It paved the way for further in depth investigations and trials, no doubt leading to the involvement by the White House and Oval office. Witnesses had to go, and on top of the list were several high profile officials.

*The General Has To Go : In a 1985 meeting, in Costa Rica, **William Barr** advised V.P Bush that funds and product were being siphoned off by partners in "The Enterprise". Bush ordered Barr to find out who was responsible. The Finding was simple. The Clintons were cleared, but Barry Seal and Manual Noriega were the thieves. Vice President Bush was adamant that both Seal and Noriega had to be "taken care of". His fear of a path leading to the White House and possible impeachment at the minimum resulted in orders for is trusted counsel William Barr to pave the path and find a solution. Below is a synopsis of the meeting*

Who is William Barr

[See William Pelham Barr (born 1950)]

*From 1973 to 1977, William Barr was employed by the Central Intelligence Agency. A confidant to DCI ["Director of Central Intelligence'] GHW Bush, Barr was well trusted and very adept at whatever assignment given by the DCI. Barr was a law clerk to Judge Malcolm Wilkey of the U.S. Court of Appeals for the District of Columbia Circuit from 1977 through 1978. **He served on the domestic policy staff at the Reagan White House from May 3, 1982 to September 5, 1983, with his official title being Deputy Assistant Director for Legal Policy.***

As a confidant, V.P. Bush used Barr as unofficial legal counsel for "The Enterprise". As the result of the 1985 meeting he was well aware of the need to neutralize General Noriega. After all, it was Barr that found the thieves.

Seal was no longer a threat as he was "taken care of" in 1986 by friends of Jeb Bush out of Colombia..

The Path is Paved

In 1989, at the beginning of his administration, President George H. W. Bush appointed William Barr to the U.S. Department of Justice as Assistant Attorney General for the Office of Legal Counsel, an office which functions as the legal advisor for the President and executive agencies.

Barr was known as a strong defender of Presidential power and wrote advisory opinions justifying the U.S. invasion of Panama and arrest of Manuel Noriega, and a controversial opinion that the F.B.I. could enter onto foreign soil without the consent of the host government to apprehend fugitives wanted by the United States government for terrorism or drug-trafficking.

By mid-December that year, ties had deteriorated so far that President George H W Bush launched an invasion, ostensibly because a US marine had been killed in Panama City, although the operation had been months in the planning.

Noriega sought refuge in the Vatican's diplomatic mission in Panama City. The US tactic to flush him out was to play deafening pop and heavy metal music non-stop outside the building.

By 3 January 1990, it had worked and Noriega surrendered. He was flown to the US with prisoner of war status to face charges of drug-trafficking, money-laundering and racketeering.

Although Barr had written the opinion that the invasion was justified, It was up to Attorney General Dick Thornburgh to prosecute the General.

Though General Noriega was indicted in February 1988, the three lawyers who prosecuted him were assigned exclusively to the case only after he was brought to the United States in January 1990. Until then the case had been developed by Government lawyers largely for political purposes and with no certainty that it would ever go to court.

Many Worries at First

The chief prosecutor would be Michael (Pat) Sullivan who would be assisted by Myles H. Malman and William C. Bryson, the deputy United States Solicitor General, a specialist in classified documents.

The prosecutors had a number of concerns: an indictment they considered weak, a decision by the Government not to try to consolidate the charges against the General a move that would have strengthened the team's hand and the possibility that the defense would exercise the General's right to an immediate trial, thereby forcing them to play their hand as it was dealt.

But the Government team also said it got a break when the defense elected not to exercise its right to a speedy trial. Under Federal law, General Noriega and others charged with him would have been entitled to a trial within 70 days of arraignment.

President Bush was briefed by AG Richard Thornburgh concerning the lack of evidence and confidence in gaining a prosecution. It did not take Bush long to come up with the answer. "We need The Mule".

Mueller was working as the U.S. Attorney for Massachusetts when he got the call and according to a Princeton alumni report, was on the next plane.

Mueller and Barr became friends in the early to mid 70's as both assets of the CIA.

The Mule proceeded to train Sullivan on witness intimidation and training techniques. Ethical conduct was off the board. Mueller explained that they are dealing with a murderer, drug lord, and terrorist.

They assessed the prospective list of witnesses to determine who would be the witness best to deliver the blow to the Jury. Gabriel Taboada was chosen. Taboada was extradited from Switzerland and placed in protective custody. Facing 25 years on drug charges and money laundering, he was given the opportunity to receive

extradited from Switzerland and placed in protective custody. Facing 25 years on drug charges and money laundering, he was given the opportunity to receive testimony necessary to convict Noriega. In return he was promised minimum security prison and rapid freedom.

Barr, Sullivan and Mueller would weave a story which guaranteed a conviction. And if delivered properly by Taboada a jury would have to convict.

Taboada's testimony was so convincing that the Justice Department decided to use him in several other high profile cases.

Unfortunately for Taboada, his sentence was not reduced as promised.

Taboada was eventually released only to be killed in Bogota by a gunman.

On April 9, 1992, Noriega was convicted on eight counts of drug smuggling and racketeering. He received a 40-year sentence, reduced to 30 years, and served 17 years before being extradited to France for money laundering, signed on the order of Secretary of State Hillary Clinton.

General Manual Noriega died on May 29 th , 2017.

Here is the announcement about The Mules return to the Department of Justice. Mueller joined the U.S. Department of Justice in 1989 to spearhead the prosecution of Panamanian dictator Manuel Noriega. He took charge of the DOJ's criminal division in 1990, where he oversaw the Lockerbie bombing case and formed the agency's first cyber-dedicated unit.

Mueller is the assistant to Attorney General Dick Thornburgh and as acting Deputy Attorney General. James Baker, with whom he worked on national security matters.

BCCI : Enter "The Mule"

In 1986 investigations began into banks tied to the Iran Contra scandal.

In 1989 it was found that a small bank branch in Atlanta, Georgia was making large loans to Iraq. As Justice Officials briefed the President, an emergency session with his trusted inner circle was called.

The CIA and The Enterprise apparently had accounts tied to the bank. An investigation would surely reveal the association to other banks and account owners which could be devastating.

As historian Roger Morris has usefully reminded us, Saddam's regime was midwifed by not one but two coups supported by the CIA: the first brought the Baathist Party to power, the second, an internal coup, engineered the ascension of Saddam's family-centered faction to the top. It is unlikely that Saddam would have ever been a position to impose his perverted militarist vision on Iraqi society without the assistance of the elitist operatives whose headquarters now proudly bears the name of George Herbert Walker Bush. Let us also remember that Saddam was sustained in his harsh rule with the eager support of Ronald Reagan and the aforementioned George H.W. Bush. Indeed, the latter's passionate embrace of Saddam seemed to know no bounds, so avidly did Bush ply the dictator with money, agricultural credits (which allowed Saddam to use his scarce hard currency for weapons) and advanced technology – including "dual-use" gear for weapons of mass destruction – despite the strong warnings of his own Cabinet against such reckless policies, and a 1989 report by the CIA that Iraq had greatly accelerated its nuclear program, and was now the world's largest maker of chemical weapons.

Bush also used the global criminal network of the Bank of Credit and Commerce International (BCCI) to secretly funnel cash and weaponry to Saddam – then intervened to quash federal investigations of the scam. What was BCCI? Only "one of the largest criminal enterprises in history," according to the United States Senate. What did BCCI do? "It engaged in pandemic bribery of officials in Europe, Africa, Asia and the Americas," says journalist Christopher Bryon, who first exposed the operation. "It laundered money on a global scale, intimidated witnesses and law officers, engaged in extortion and blackmail. It supplied the financing for illegal arms trafficking and global terrorism. It financed and facilitated income tax evasion, smuggling and prostitution."

The Italian bank BNL was one of BCCI's main tentacles. BNL's Atlanta branch was the primary funnel used to send millions of secret dollars to Saddam for arms purchases, including deadly chemicals and other WMD materials supplied by the Chilean arms dealer Cardoen and various politically-connected operators in the United States like, weapons merchant Matrix Churchill.

As soon as the BNL case broke, Bush moved to throttle the investigation. He appointed lawyers from both Cardoen and Matrix to top Justice Department posts – where they supervised the officials investigating their old companies. The overall probe was directed by Justice Department investigator Robert "The Mule" Mueller.

*Additional support would be provided by **William Barr**. Meanwhile, White House aides applied heavy pressure on other prosecutors to restrict the range of the probe – especially the fact that Bush cabinet officials Brent Scowcroft and Lawrence Eagleburger had served as consultants for BNL during their pre-White House days as spear-carriers for yet another secretive international front that profits from war, weapons, and the avid greasing of highly-placed palms: Kissinger Associates.*

The U.S. Senate later found that the probe had been unaccountably "botched" – witnesses went missing, CIA records got "lost," all sorts of bad luck. Most of the big BCCI players went unpunished or got off with wrist-slap fines and sanctions.

John Kerry, Mueller friend and College Team Mate : The Unbeatable Duo

William Colby passed the mantle of secrecy as Director of the CIA to George H.W. Bush in 1976. Along with this mantle included "The List".

*As discussed earlier two of the trusted few on that list was Robert Swan Mueller III and **William P. Barr.***

William P. Barr earned his place in the intelligence community as a young legal aid to Director of Central Intelligence George H.W. Bush.

These two young CIA assets would soon form an alliance which would change the landscape of American Politics and protect the assets and operators in what would eventually be called, The Deep State.

In time they would both move up the proverbial ladder to become the leaders of our United States Justice System.

As CIA director in the mid-1970s and as Ronald Reagan's vice president, George H.W. Bush helped forge a world of strongmen, wars, cartels, and refugees that continues today. In particular, he was deeply involved in the events that became known as the Iran-Contra scandal, a series of illegal operations that began with a secret effort to arm Contra fighters in Nicaragua in the hopes of toppling the leftist Sandinista government; this effort became connected to drug trafficking, trading weapons for hostages with Iran, and banking scandals.

In 1987, Arthur Liman, chief counsel for the Senate Select Committee on Secret Military Assistance to Iran and the Nicaraguan Opposition, described it as a "secret government-within-a-government … with its own army, air force, diplomatic agents, Justice Department officials, intelligence operatives and appropriations

capacity."

Independent counsel Lawrence Walsh, tasked with investigating Iran-Contra, concluded that the White House cover-up "forestalled timely impeachment proceedings against President Reagan and other officials." Bush was a central figure in this.

Today the secret government has been renamed "The Deep State". This entity is comprised of government officials and permanent employees in decision making positions.

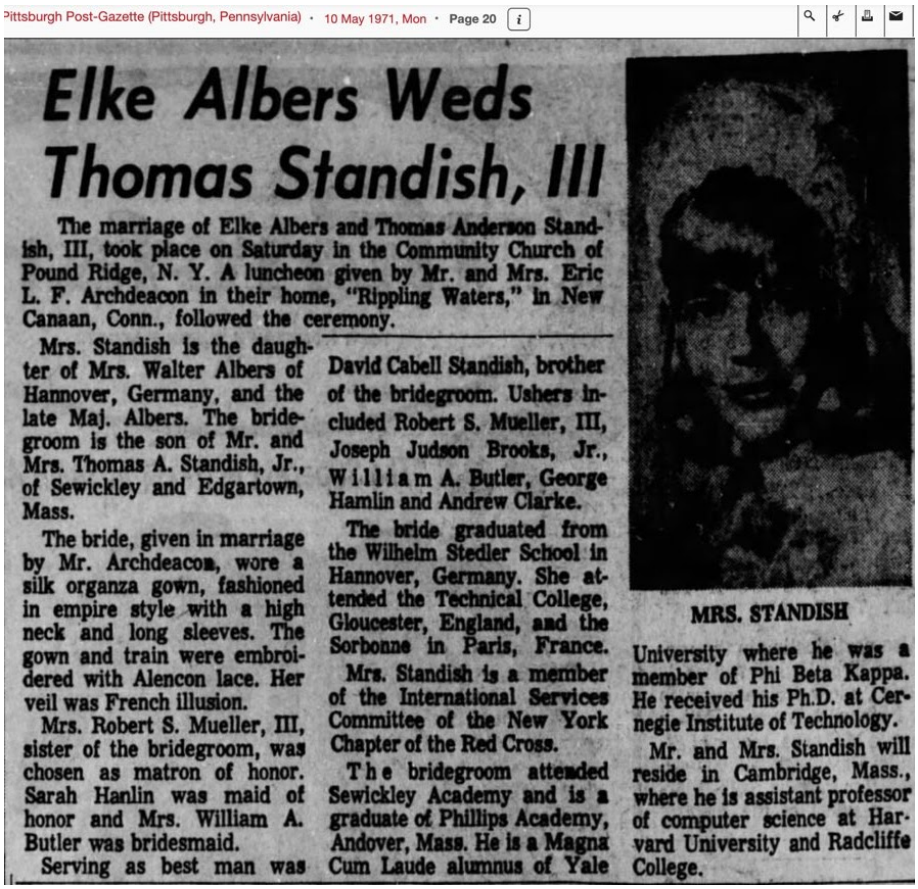
Without the support of the Deep State operators, an elected official is set on a path of destruction

https://www.law.virginia.edu/static/uvalawyer/html/alumni/uvalawyer/f02/mueller.htm

Mueller's work and reputation came to the attention of U.S. Attorney General Richard L. Thornburgh. He called Mueller in 1989 and asked him if he could oversee from Justice Department headquarters the prosecution of Manuel Noriega, a precedent-setting international law case with daunting political overtones. Mueller readily accepted, and the team won that case and jailed Noriega.

1971 (May 10)

1971-05-10-the-pittsburgh-post-gazette-pg-20.jpg / https://drive.google.com/open?id=13IoEOi2kclIX36Glcy7kAQNqKMf9z54u



Pittsburgh Post-Gazette (Pittsburgh, Pennsylvania) · 10 May 1971, Mon · Page 20

Elke Albers Weds Thomas Standish, III

The marriage of Elke Albers and Thomas Anderson Standish, III, took place on Saturday in the Community Church of Pound Ridge, N. Y. A luncheon given by Mr. and Mrs. Eric L. F. Archdeacon in their home, "Rippling Waters," in New Canaan, Conn., followed the ceremony.

Mrs. Standish is the daughter of Mrs. Walter Albers of Hannover, Germany, and the late Maj. Albers. The bridegroom is the son of Mr. and Mrs. Thomas A. Standish, Jr., of Sewickley and Edgartown, Mass.

The bride, given in marriage by Mr. Archdeacon, wore a silk organza gown, fashioned in empire style with a high neck and long sleeves. The gown and train were embroidered with Alencon lace. Her veil was French illusion.

Mrs. Robert S. Mueller, III, sister of the bridegroom, was chosen as matron of honor. Sarah Hanlin was maid of honor and Mrs. William A. Butler was bridesmaid.

Serving as best man was David Cabell Standish, brother of the bridegroom. Ushers included Robert S. Mueller, III, Joseph Judson Brooks, Jr., William A. Butler, George Hamlin and Andrew Clarke.

The bride graduated from the Wilhelm Stedler School in Hannover, Germany. She attended the Technical College, Gloucester, England, and the Sorbonne in Paris, France.

Mrs. Standish is a member of the International Services Committee of the New York Chapter of the Red Cross.

The bridegroom attended Sewickley Academy and is a graduate of Phillips Academy, Andover, Mass. He is a Magna Cum Laude alumnus of Yale University where he was a member of Phi Beta Kappa. He received his Ph.D. at Cernegie Institute of Technology.

Mr. and Mrs. Standish will reside in Cambridge, Mass., where he is assistant professor of computer science at Harvard University and Radcliffe College.

MRS. STANDISH

1971-05-10-the-pittsburgh-post-gazette-pg-20-clip-albers-standish-wed.jpg / https://drive.google.com/open?id=13H0lkgtQPOYDI12mF4Oae_KQyuIw9LUI

May 3 1973 - Marhshall ?

1973-05-03-the-daily-press-newport-news-virginia-pg-54.jpg / https://drive.google.com/open?id=13Mf42e9l0ejTFDJLF61Qh8nunNZlDbTX

Daily Press (Newport News, Virginia) · 03 May 1973, Thu · Page 56

Alumni To Hear Thurgood Marshall

CHARLOTTESVILLE — University of Virginia law school alumni will hear U.S. Supreme Court Justice Thurgood Marshall Saturday at a question-and-answer session sponsored by the University's Student Legal Forum. Justice Marshall will be one of a number of legal authorities scheduled Friday and Saturday for the 16th Annual Law Alumni Day.

Former Virginia Governor Colgate W. Darden Jr. will address a Saturday luncheon of some 500 alumni from classes marking fifth-year anniversaries.

Darden, who served as president of the University from 1947 to 1959, will be introduced by Justice Albertis S. Harrison of the Virginia Supreme Court, a member of the law class of 1928. Following Darden's speech, awards will be presented to alumni celebrating 50-year reunions.

Judge John D. Butzner ('41) of the Fourth Circuit of the U.S. Court of Appeals and Judge John C. Godbold of the Fifth Circuit will join Justice Marshall Saturday at 8:30 p.m. in Cabell Hall to judge the Lile Moot Court competition. All three judges have selected clerks for next year from the law school classes of 1972 and 1973.

The case before the Lile Moot Court involves the balance between a soldier's right to free speech and the military's need to control its own affairs.

James K. Quillian from Miami, Fla., and Joseph A. Schwartz from Mishawaka, Inc., will argue the petitioner's side, with Timothy W. Finchem from Virginia Beach, and Virgil H. Goode Jr. from Rocky Mount, representing the soldier as respondent.

The ratio of in-state to out-of-state law students at the University and admissions criteria will be discussed at the Partnership Meeting, the focus for alumni of the weekend program, according to Frances Farmer, secretary of alumni planning committee and law school librarian.

State Sen. Edward Holland ('65), Professor Emerson G. Spies and third-year law student Robert S. Mueller III from Haverford, Pa., will represent the interests of each partner — alumni, faculty and students.

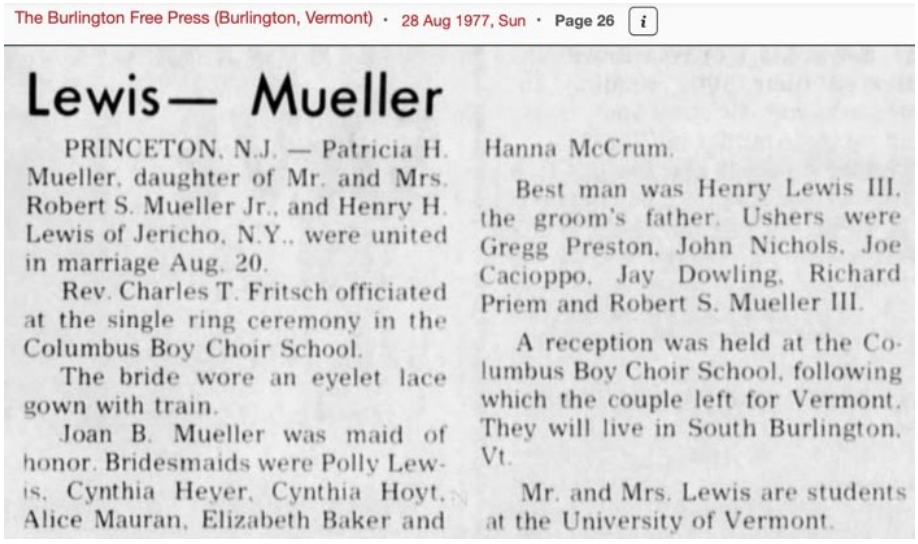
A second panel will consider implementation of a third year practice plan in Virginia in which students could practice law before graduation from law school.

Other activities include a picnic at "Verulam Farm,"

1973-05-03-the-daily-press-newport-news-virginia-pg-54-clip-alumni-marshall.jpg / https://drive.google.com/open?id=13M-BOI5aAgMaGqoIdnAPnMMfYUtjBw-I

1977 (Aug 28) - Wedding - Patricia H Mueller to Henry H Lewis - RSM2 and RSM3 there

Full newspaper page : [HN00E1][GDrive]



The Burlington Free Press (Burlington, Vermont) · 28 Aug 1977, Sun · Page 26

Lewis— Mueller

PRINCETON, N.J. — Patricia H. Mueller, daughter of Mr. and Mrs. Robert S. Mueller Jr., and Henry H. Lewis of Jericho, N.Y., were united in marriage Aug. 20.

Rev. Charles T. Fritsch officiated at the single ring ceremony in the Columbus Boy Choir School.

The bride wore an eyelet lace gown with train.

Joan B. Mueller was maid of honor. Bridesmaids were Polly Lewis, Cynthia Heyer, Cynthia Hoyt, Alice Mauran, Elizabeth Baker and Hanna McCrum.

Best man was Henry Lewis III, the groom's father. Ushers were Gregg Preston, John Nichols, Joe Cacioppo, Jay Dowling, Richard Priem and Robert S. Mueller III.

A reception was held at the Columbus Boy Choir School, following which the couple left for Vermont. They will live in South Burlington, Vt.

Mr. and Mrs. Lewis are students at the University of Vermont.

[HN00E2][GDrive]

1980 - mueller - hells Angels

1980-07-30-arizona-daily-sun-flagstaff-arizona-pg-5.jpg / https://drive.google.com/open?id=12jKPj4buJz8Ct3Me-97eoKLdHqYqC69N

Arizona Daily Sun (Flagstaff, Arizona) · 30 Jul 1980, Wed · Page 5

Charges Dropped

SAN FRANCISCO (UPI) — The government has dropped charges against three persons in the massive Hells Angels conspiracy and racketeering case, leaving 21 of the original 33 defendants still facing trial this fall.

Assistant U.S. Attorney Robert S. Mueller said Tuesday that charges were dropped against Anita Musick, 38, Castro Valley, Calif.; William Solano Jr., 36, Seattle, and Michael Overstreet, 31, Novato, Calif.

Of the original Hells Angels members and associates charged, nine had charges dropped or were convicted of minor charges, three are still fugitives and 21 face trial.

A previous nine-month trial of 18 defendants ended July 2 with a hung jury except for convictions of several persons on minor charges.

U.S. District Judge William H. Orrick has told attorneys to recommend how the case can be split into smaller units. He will rule on the matter Aug. 12.

1980-07-30-arizona-daily-sun-flagstaff-arizona-pg-5-clip-hells-angels.jpg / https://drive.google.com/open?id=12gGcqqWk_7o61WTDrji-vn7TY-Epyfy

1982 (Feb)

1982-02-28-the-boston-globe-pg-a-37.jpg / https://drive.google.com/open?id=130Mc1BnxGtuf0NesNPHDxdsAoAg47H4w

The Boston Globe (Boston, Massachusetts) · 28 Feb 1982, Sun · Page 113

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CRIMINAL JUSTICE

Weld assembling impressive prosecutorial force

David Farrell

Two months ago when US Atty. William F. Weld began looking for a tough prosecutor to head his criminal division, he was hopeful but didn't expect to come up with a pair of outstanding prosecutors from other major Justice Department jurisdictions.

Within a fortnight of his telex message to various US attorney districts throughout the country soliciting candidates for chief of the criminal division in the Massachusetts office, Weld had nibbles from veterans in two of the busiest and most prestigious offices.

From Miami's Southern Florida District came an inquiry from First Asst. US Atty. C. Brian McDonald, a 40-year-old former Peace Corps volunteer with 15 years experience in civil rights and criminal investigation work for the government.

And from San Francisco's Northern California District came an application from Asst. US Atty. Robert S. Mueller 3d, former chief of that office's large criminal division. The 37-year-old Mueller, a much-decorated Marine Corps veteran of the Vietnam War, has worked closely with the Federal Strike Force on Organized Crime probing the vast underworld crime network headquartered in the Bay Area of California.

Weld, of course, was delighted at the prospect of getting two such outstanding men. But persuading men with growing families to leave the milder climates of southern Florida and San Francisco to come here was another matter and would be difficult, he knew.

And it was. But McDonald and Mueller, lured by the challenge in Massachusetts, decided to join Weld's staff after meeting with him and his chief deputy, Mark L. Wolf.

McDonald will head Weld's staff in the Springfield field office and be responsible for overseeing all investigations of criminal, civil and Hobbs Act (political corruption) cases in Western Massachusetts. A graduate of Union College in Schenectady, N.Y., and Georgetown Law School, he worked six years as the US Department of Health Education and Welfare's liaison attorney with Congress on civil rights and coal mine safety compliance legislation before joining the Justice Dept. in 1974. At Justice, he was senior trial attorney for civil rights violation prosecutions and then deputy chief of the department's criminal section for civil rights. In 1980, he left Washington to become first assistant in the Miami US attorney's office.

Mueller will join Weld's staff as chief of the criminal division in April. He is a graduate of Princeton and received a master's degree in international relations at NYU before entering the Marine Corps in 1967 as a 2d lieutenant. After OCS at Quantico, he graduated from the Army Ranger School and the Army Jump School before shipping overseas for combat service with the famous Third Marine Division. His battlefield bravery won him the Bronze Star, Navy Commendation with one star, the Purple Heart and the Vietnamese Cross of Gallantry.

Following his discharge as a captain, he attended Virginia Law School and then went to work as a public defender in San Francisco. After three years with a private law firm, he joined the US attorney's office in San Francisco where he specialized in criminal investigations.

Since persuading Wolf, who had been one of his two major competitors for the US attorney job here, to join his team as deputy US attorney and chief of his political corruption unit, Weld has been steadily assembling an unusually strong and experienced group of prosecutors.

Weld has hired 11 new assistants since he succeeded former US attorney Edward F. Harrington last fall. These, along with the veteran career assistants he inherited, constitute a highly skilled group of seasoned professionals.

Weld hopes to persuade several of them, including Asst. US Attys. Hugh Scott and Douglass Woodlock, to stay on. Scott, who prosecuted the Frank Tracey, Samuel Bithoney and George Stavros white-collar cases and is trying the Fall River (Arruda) Housing case, will handle the Jack Williams (Boston shakedown) prosecution next month.

Woodlock recently successfully prosecuted a Somerville housing scandal case, handled the Danvers cable TV investigation which led to the imprisonment of Charles O'Donnell and Raymond White, and got a guilty plea in the George Collatos Boston case.

Among Weld's new appointments is one which could cause him some flak with the Reagan Administration. When word gets back to Washington that former Norfolk County assistant DA Richard G. Stearns began work last Thursday as chief of Weld's Government Program Fraud section, there is likely to be grumbling in national Republican circles.

The 37-year-old Stearns, one of the many bright young men and women who have been trained by Dist. Atty. William D. Delahunt, has been active with national Democratic leaders and party causes, on and off, during and after his broad schooling at Stanford, American University of Beirut, Oxford and Harvard Law School.

In 1968, he was a regional campaign manager for former Sen. Eugene McCarthy's presidential campaign; four years later he was deputy campaign manager of George McGovern's presidential campaign; since then, he has worked for Michael Dukakis' successful 1974 campaign for governor and the winning efforts of US Reps. Edward Markey of Malden and Morris Udall of Arizona.

But Stearns' most visible political effort was his top position as director of delegate selection for Sen. Edward M. Kennedy's 1980 presidential campaign against former President Jimmy Carter. The Republican National Committee regards Kennedy as one of the major obstacles in the way of the GOP in the 1984 presidential election and is not likely to welcome Weld's selection of the highly qualified Stearns for a spot on his prosecutorial team.

Weld also has appointed another of Delahunt's able former assistants to a key slot in his office. A. John Pappalardo, who graduated from Suffolk Law in 1974, worked as deputy chief counsel to the Ward Corruption Commission for two and a half years before returning to Delahunt's office as head of his white collar crime unit in 1981. He joined Weld's staff three months ago and is working as one of Wolf's deputies in the political corruption unit.

Another highly regarded Weld appointee is Robert J. Cordy of Medford, who will begin work March 8 with Pappalardo in Wolf's special investigations political unit. Cordy, a Dartmouth and Harvard Law School graduate, is regarded as a "steal" by Weld from the State Ethics Commission where he has been working for three years as associate general counsel. In that capacity, he has directed the ethics panel's investigation and enforcement of the state's conflict of interest statutes.

Weld reached into Goodwin, Procter & Hoar to get attorney Brackett B. Denniston as chief of his business crimes section and attorney Tobin N. Harvey for Mueller's criminal division. Denniston is a magna cum laude out of Harvard Law and Harvey a graduate of Harvard College and Virginia Law School. Attorney Dennis J. Kelly from Herrick & Smith and Marie T. Buckley, a staff attorney with the Mass. Defenders Committee, will also work for Mueller on criminal prosecutions. Attorney Ralph A. Child, a graduate of Dartmouth and Harvard Law, left Foley, Hoag & Eliot last November to join Weld's civil division.

David Farrell is a Globe political columnist.

1982-02-28-the-boston-globe-pg-a-37-clip-criminal-justice.jpg / https://drive.google.com/open?id=130AkmEMXDHu7gR-E4jVgWGQit5Ks18Io

1982 (July 18)

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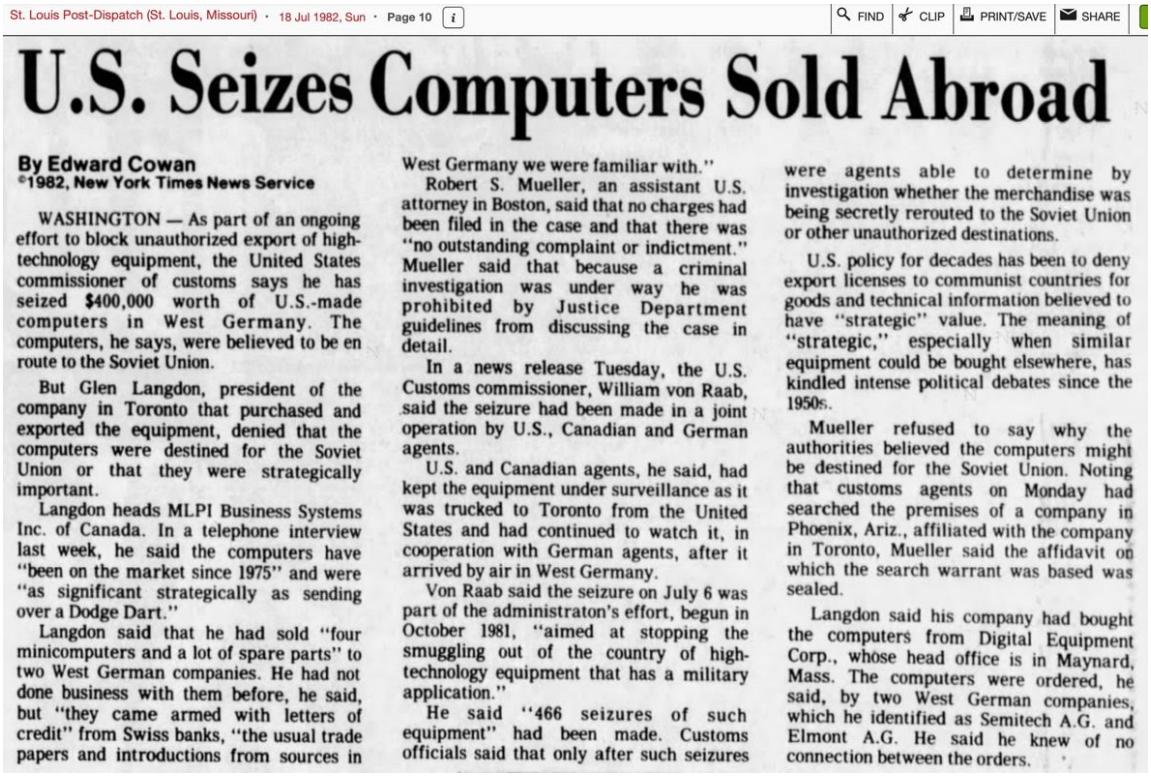


St. Louis Post-Dispatch (St. Louis, Missouri) · 18 Jul 1982, Sun · Page 10

U.S. Seizes Computers Sold Abroad

By Edward Cowan
©1982, New York Times News Service

WASHINGTON — As part of an ongoing effort to block unauthorized export of high-technology equipment, the United States commissioner of customs says he has seized $400,000 worth of U.S.-made computers in West Germany. The computers, he says, were believed to be en route to the Soviet Union.

But Glen Langdon, president of the company in Toronto that purchased and exported the equipment, denied that the computers were destined for the Soviet Union or that they were strategically important.

Langdon heads MLPI Business Systems Inc. of Canada. In a telephone interview last week, he said the computers have "been on the market since 1975" and were "as significant strategically as sending over a Dodge Dart."

Langdon said that he had sold "four minicomputers and a lot of spare parts" to two West German companies. He had not done business with them before, he said, but "they came armed with letters of credit" from Swiss banks, "the usual trade papers and introductions from sources in West Germany we were familiar with."

Robert S. Mueller, an assistant U.S. attorney in Boston, said that no charges had been filed in the case and that there was "no outstanding complaint or indictment." Mueller said that because a criminal investigation was under way he was prohibited by Justice Department guidelines from discussing the case in detail.

In a news release Tuesday, the U.S. Customs commissioner, William von Raab, said the seizure had been made in a joint operation by U.S., Canadian and German agents.

U.S. and Canadian agents, he said, had kept the equipment under surveillance as it was trucked to Toronto from the United States and had continued to watch it, in cooperation with German agents, after it arrived by air in West Germany.

Von Raab said the seizure on July 6 was part of the administraton's effort, begun in October 1981, "aimed at stopping the smuggling out of the country of high-technology equipment that has a military application."

He said "466 seizures of such equipment" had been made. Customs officials said that only after such seizures were agents able to determine by investigation whether the merchandise was being secretly rerouted to the Soviet Union or other unauthorized destinations.

U.S. policy for decades has been to deny export licenses to communist countries for goods and technical information believed to have "strategic" value. The meaning of "strategic," especially when similar equipment could be bought elsewhere, has kindled intense political debates since the 1950s.

Mueller refused to say why the authorities believed the computers might be destined for the Soviet Union. Noting that customs agents on Monday had searched the premises of a company in Phoenix, Ariz., affiliated with the company in Toronto, Mueller said the affidavit on which the search warrant was based was sealed.

Langdon said his company had bought the computers from Digital Equipment Corp., whose head office is in Maynard, Mass. The computers were ordered, he said, by two West German companies, which he identified as Semitech A.G. and Elmont A.G. He said he knew of no connection between the orders.

1982-07-18-st-louis-post-dispatch-pg-10-clip-us-seizes-computers.jpg / https://drive.google.com/open?id=12ZBFir7V8dqyFw7iytxLo4DWKANaoxot

1982 (Oct 30)

1982-10-30-the-ottawa-citizen-pg-60.jpg / https://drive.google.com/open?id=13CAIbx_JfBJShnr0AEOHGYwpQM7pOLvG

The Ottawa Citizen (Ottawa, Ontario, Canada) · 30 Oct 1982, Sat · Page 60

U.S.

Man charged for bomb plot against Turkish consulate

BOSTON (UPI) — Federal officials have charged a 20-year-old California man with plotting to blow up the offices of the honorary Turkish consul general in Philadelphia.

Steven J. Dadaian of Canoga Park, Calif., was arrested last week in Boston and charged with interstate transportation of explosives after a suitcase containing dynamite was found at Logan International Airport, officials said.

Three other men were arrested in Los Angeles on the same day.

The FBI alleged in federal court in Los Angeles Thursday that the explosives were intended to be used on the offices of honorary Turkish Consul General Kanat Arbay.

A conspiracy charge, based on an affidavit filed in Los Angeles and Boston, was filed against Dadaian at a hearing Thursday before U.S. Magistrate Lawrence Cohen at which bail was reduced from $1 million to $500,000.

A conspiracy charge, based on an affidavit filed in Los Angeles and Boston, was filed against Dadaian at a hearing Thursday before U.S. Magistrate Lawrence Cohen at which bail was reduced from $1 million to $500,000.

Assistant U.S. Attorney Robert S. Mueller III told Cohen that Dadaian has "possible" ties to the Justice Commandos of the Armenian Genocide, a group seeking vengeance for the massacre of Armenians by the Turks in 1915. Dadaian's attorney said the charge was "fanciful."

The Armenians claim as many as 1.5 million of their people died during a war with the Ottoman Empire, but Turkish officials have strenuously denied charges of genocide and dispute the figures on the number of those killed.

The Commandos have claimed responsibility for the killing of Orhan Gunduz, the honorary Turkish Consul General of New England, last May in Somerville, Mass., Dadaian has not been charged in that killing.

Police said they found five sticks of dynamite, a detonator cap, an electronic arming device and a timer in a piece of luggage allegedly left by Dadaian at Logan Airport last Friday.

1982-10-30-the-ottawa-citizen-pg-60-clip-bomb-plot.jpg / https://drive.google.com/open?id=13ACZAw1pQ9PRmvEY-y4O4jrUmQ2voYqZ

1983 (Sep 13)

1983-09-13-the-boston-globe-pg-19.jpg / https://drive.google.com/open?id=132IIHvEgTbe_Spj9ZqYgfszH6r7X8fZ6

1983-09-13-the-boston-globe-pg-26.jpg / https://drive.google.com/open?id=132n1ZT9ieKtFu2ayD4cVAZS5uWL_RSWb

The Boston Globe (Boston, Massachusetts) · 13 Sep 1983, Tue · Page 19

Trial opens for two accused in island drug-profit scheme

By William Doherty
Globe Staff

When Joseph Barkett appeared at the Registry of Deeds on Martha's Vineyard to "pass papers," closing the sale on a parcel of land in Edgartown, he did not bring a check for the purchase price, but, a jury was told yesterday, he brought the money in cash – $63,000 in small bills in a leather shoulder bag.

A federal prosecutor told the court that the cash was drug money Barkett was investing in expensive Martha's Vineyard real estate to conceal its source.

Barkett, 38 of West Tisbury, and Joseph C. Pioggia, 35, of Florence, both unemployed iron workers, are on trial in US District Court in Boston, charged under a so-called drug "kingpin statute." They are accused of "conducting a continuing criminal enterprise," supervising a cocaine-trafficking and money-laundering scheme centered on the resort island.

In his opening statement to the jury, Robert S. Mueller 3d, an assistant US attorney, said the lawyers assembled at the Registry of Deeds in Edgartown in October 1981, for the sale of the parcel on Slough's Cove road, were nonplussed when Barkett asked: "Do you mind taking cash?"

TRIAL, Page 26

■ TRIAL

Continued from Page 19

It took so long to count the money, Mueller said, the lawyers adjourned to a nearby bank and persuaded it to stay open after hours until they finished counting.

Conviction would bring mandatory 10-year minimum sentences and possibly life in prison. The indictment also seeks forfeiture of four pieces of real estate in Oak Bluffs and Edgartown, allegedly purchased with drug money.

Mueller said he will present evidence that Pioggia and Barkett made $320,000 in profits from the resale of eight kilograms (8.8 pounds) of cocaine flown from Florida for distribution throughout Massachusetts.

The prosecutor said evidence will come from the pilot who flew the cocaine, from a cousin of Pioggia's who helped distribute the drug in the Springfield area, and from a former Northampton lawyer who purchased cocaine.

According to Mueller, the key witness will be the pilot, Anthony A. Cellilli, 35, of Ludlow, who twice a month allegedly flew a one-kilogram cargo of cocaine in a private plane from Florida to Massachusetts

Cellilli is a former banker who also served as "straw" purchaser for Pioggia in several of the real estate deals. He has entered the federal witness protection program and has received a new identity.

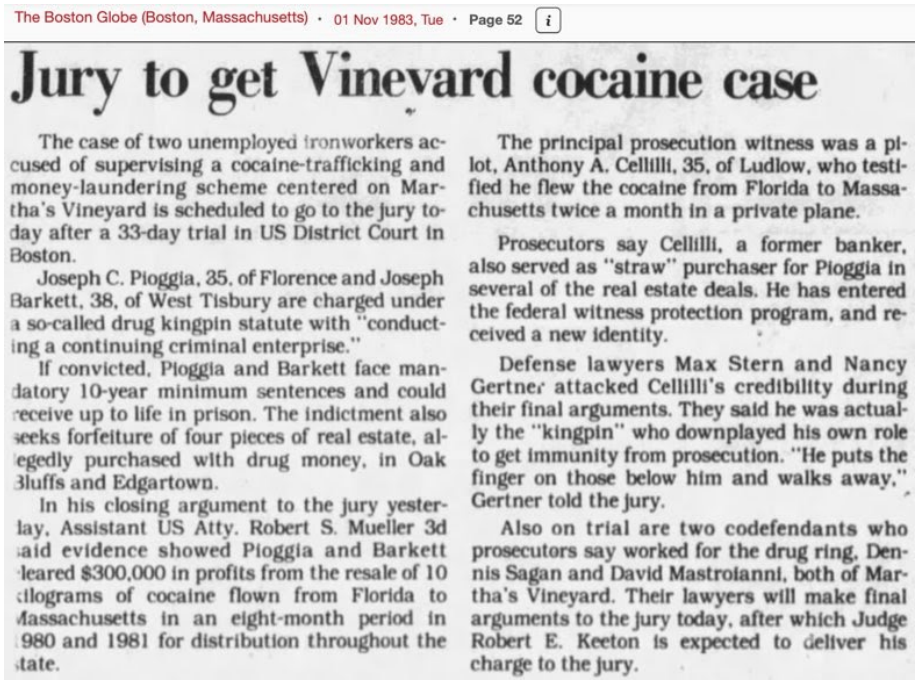
Mueller said Pioggia's telephone conversations were taped and that Pioggia used "lumber" as a code word for cocaine.

Also on trial are Dennis Sagan and David Mastroianni, both of Martha's Vineyard. They are charged with conspiring to possess and distribute cocaine. Three other defendants have pleaded guilty and a fourth is a fugitive. The trial may last several months.

1983-09-13-the-boston-globe-pg-19-and-26-clip-trial-drugs.jpg / https://drive.google.com/open?id=130faX60kI3eK9wT6TSjR_d6bPhdenW1v

1983 (Nov 1)

1983-11-01-the-boston-globe-pg-52.jpg / https://drive.google.com/open?id=138THVGxQdutjF9lOZk7pj3MFy-n4oaeZ



The Boston Globe (Boston, Massachusetts) · 01 Nov 1983, Tue · Page 52

Jury to get Vineyard cocaine case

The case of two unemployed ironworkers accused of supervising a cocaine-trafficking and money-laundering scheme centered on Martha's Vineyard is scheduled to go to the jury today after a 33-day trial in US District Court in Boston.

Joseph C. Pioggia, 35, of Florence and Joseph Barkett, 38, of West Tisbury are charged under a so-called drug kingpin statute with "conducting a continuing criminal enterprise."

If convicted, Pioggia and Barkett face mandatory 10-year minimum sentences and could receive up to life in prison. The indictment also seeks forfeiture of four pieces of real estate, allegedly purchased with drug money, in Oak Bluffs and Edgartown.

In his closing argument to the jury yesterday, Assistant US Atty. Robert S. Mueller 3d said evidence showed Pioggia and Barkett cleared $300,000 in profits from the resale of 10 kilograms of cocaine flown from Florida to Massachusetts in an eight-month period in 1980 and 1981 for distribution throughout the state.

The principal prosecution witness was a pilot, Anthony A. Cellilli, 35, of Ludlow, who testified he flew the cocaine from Florida to Massachusetts twice a month in a private plane.

Prosecutors say Cellilli, a former banker, also served as "straw" purchaser for Pioggia in several of the real estate deals. He has entered the federal witness protection program, and received a new identity.

Defense lawyers Max Stern and Nancy Gertner attacked Cellilli's credibility during their final arguments. They said he was actually the "kingpin" who downplayed his own role to get immunity from prosecution. "He puts the finger on those below him and walks away," Gertner told the jury.

Also on trial are two codefendants who prosecutors say worked for the drug ring, Dennis Sagan and David Mastroianni, both of Martha's Vineyard. Their lawyers will make final arguments to the jury today, after which Judge Robert E. Keeton is expected to deliver his charge to the jury.

1983-11-01-the-boston-globe-pg-52-clip-jury-vineyard-cocaine.jpg / https://drive.google.com/open?id=136ouendX86ch1Y03pYivEhWHxfFHBVpH

1983

1983-11-06-longview-news-journal-longview-texas-pg-2-e.jpg / https://drive.google.com/open?id=12pZU7hUaXhN8x4XIG4Meoluwr2Yb0isC

Longview News-Journal (Longview, Texas) · 06 Nov 1983, Sun · Page 58 FIND CLIP PRINT/SAV

East German scientist accused of spying

N.Y. Times News Service

BOSTON — Alfred Zehe, an East German scientist accused of espionage, was held without bail this weekend after a prosecutor told Robert B. Collings, a U.S. magistrate, that Zehe would try to flee if released.

Assistant District Attorney Robert S. Mueller said Zehe, who was arrested Thursday at a Boston hotel while attending a scientific convention, was "a trained East German intelligence agent," and added, "It would be his duty to escape and to leave this jurisdiction if at all possible."

Zehe, a stocky, 44-year-old man with thick blond hair, was led into the courtroom in handcuffs. He turned to Mueller at the arraignment proceeding and denied the espionage charges, which carry a maximum sentence of death or life imprisonment.

"A highly trained spy?" Zehe asked, speaking softly, with a German accent. "I am very sorry, I am a university professor."

An affadavit filed in court by James E. Lancaster, a special agent of the Federal Bureau of Investigation, detailed several meetings between East German officials, Zehe, and a "confidential source" who cooperated with the bureau and the U.S. Naval Investigative Service.

The source, according to the affadavit, is "a private citizen employed in a responsible position" by the Naval Electronics Systems Engineering Center in Charleston, S.C. The affadavit said the source met in December 1981 with Dieter Walsch, an attache at the East German Embassy in Washington, who requested "classified U.S. defense information" in exchange for money.

The FBI and Naval Intelligence Service provided the classified documents, according to the affadavit. An FBI spokesman said the documents did not jeopardize national security.

The affadavit cited five meetings of the source with East German Embassy officials in Washington, seven meetings at the East German Embassy in Mexico City, and one trip to East Berlin. In Mexico, the source allegedly met Zehe, described by an East German counselor officer as a "scientific-technical expert" who would evaluate the document.

1983-11-06-longview-news-journal-longview-texas-pg-2-e-clip-german-spying.jpg / https://drive.google.com/open?id=12lRRS7I6Ur8GGTU15vJO0_ahjTpBaemU

1989 (May 16-31)

See https://historicpittsburgh.org/islandora/object/pitt%3AUS-PPiU-ais199830-13/from_search/ca8e58282d44cbd9569f726020dc8d50-19

1. AG announced appointment of Robert S. Mueller, III as an assistant to the AG, May 16, 1989 ("AG announced appointment of Robert S. Mueller, III as an assistant to the AG," online pending)

2. DOJ announced the resignation of Henry G. Barr as an assistant to the AG, May 16, 1989 ("DOJ announced the resignation of Henry G. Barr as an assistant to the AG," online pending)

3. AG issued a statement regarding the guilty finding and life sentence imposed on Mudhammed Ali Hamadei, Lebanese terrorist who hijacked a TWA airliner, May 17, 1989 ("AG issued a statement regarding the guilty finding and life sentence imposed on Mudhammed Ali Hamadei, Lebanese terrorist who hijacked a TWA airliner," online pending)

4. DOJ announced resignation of Harold G. Christensen as Deputy Attorney General, May 22, 1989 ("DOJ announced resignation of Harold G. Christensen as Deputy Attorney General," online pending)

5. AG's statement regarding the conviction of three former executives of Commodore Savings Association of Dallas on bank fraud charges and violations of federal election laws, May 26, 1989 ("AG's statement regarding the conviction of three former executives of Commodore Savings Association of Dallas on bank fraud charges and violations of federal election laws," online pending)

6. AG made available a copy of the letter sent to William Gray, III regarding the Department's investigation into leaks within DOJ, May 31, 1989 ("AG made available a copy of the letter sent to William Gray, III regarding the Department's investigation into leaks within DOJ," online pending)

Mueller, Robert (Criminal Division), Washington, DC April 3, 1989

Organized Crime: National Organized Crime Strategy, memorandum to Robert Mueller, III, and report on Organized Crime Program accomplishments December 11, 1990

On July 12, 1988, President Reagan formally requested that Dick Thornburgh serve as his Attorney General, following the resignation of Edwin Meese, with only five months remaining in his presidency. On November 19, then President-elect Bush asked Thornburgh to stay on. Three years later, on April 4, 1991, the news of Pennsylvania Senator John Heinz's tragic death in a plane crash ultimately resulted in Thornburgh's resignation in August 1991 to run for the U.S. Senate. During his tenure, Thornburgh's priorities concentrated on drug trafficking, organized and white-collar crime, civil rights, antitrust and environmental fields. Major topics include: savings and loans scandals, Bank of Credit and Commerce International (BCCI) money laundering scandal, and Banca Nazionale del Lavoro (BNL). Thornburgh signed the United Nations Drug Convention in Vienna, December 1989, and participated in major TREVI (Terrorism, Radicalism, Extremism, Violence International) meetings. The war on drugs extended to South and Central America and topics include the apprehension of Noriega. Other topics are, for example: Project Triggerlock (regarding violent career criminals), the terrorist bombing of Pan Am flight 103, the bombing and death of Judge Robert Vance, Operation Weed and Seed, Superfund hazardous waste cleanup actions, and the Exxon Valdez case. During glasnost Soviet Justice Minister Veniamin F. Yakovlev invited Thornburgh to visit Moscow to discuss democracy, the rule of law, and human rights, the first visit ever by a sitting Attorney General of the United States to the Soviet Union. Thornburgh served as the Bush administration's "point man" for efforts to enact the landmark Americans with Disabilities Act (ADA), signed into law on July 26, 1990. Other matters on the domestic front include Thornburgh's participation in the Council on Competitiveness (CC), the Domestic Policy Council (DPC), Economic Policy Council (EPC), judicial appointment issues, and the so-called Thornburgh Memorandum. The Attorney General files are in fourteen sections: Speeches; News Releases; Transcripts; Nomination and Confirmation; Attorney General's Files; Daily Schedules; Events; Foreign Trips; DPC, EPC, and CC; Department of Justice Issues; Weekly Reports; Correspondence; News Clippings; and Reports. Digital reproductions of portions of the collection are available online.

1989 (May 21)

1989-05-21-nytimes-magazine-shaking-up-justice.pdf https://drive.google.com/open?id=13T59EdGpnqnIX71IOtIxdkAwfNhJbLfZ

Thornburgh is running the Justice Department today through three senior aides, all of whom served him during his two terms as Pennsylvania Governor, from 1979 to 1987. Closest is the executive assistant Robert S. (Robin) Ross Jr., deputy general counsel during Thornburgh's first term as Governor. As "gatekeeper," Ross shuttles requests and reports from the bureaucracy through the Attorney General's office.

Murray Dickman, a mustachioed computer jock, runs the Justice Department's budget and personnel operations. He also serves as the department's liaison to conservative political forces.

David Runkel, Thornburgh's low-key media adviser, also served as his press secretary in Harrisburg. Now press officials throughout the law-enforcement community report to Runkel each morning to alert him of potential public-relations problems in their departments and to receive their marching orders for the day.

As they did in Harrisburg, these three men have set much of the tone for Thornburgh's first year as Attorney General, leaving little doubt that change is afoot.

Thornburgh

Yes. But most of our department contact with the FBI was carried out through Bob Mueller, who was my personal assistant first and then head of the criminal division, and of course now is the director of the FBI. Again, one of those things where I didn't meddle with the FBI. If there was something going on there that I had to know about, then I counted on them to let me know or Mueller to let me know.

Early in the Bush administration it was quite clear that something had to be done about Manuel Noriega. He was under indictment in the United States, an indictment that had been secured under my predecessor. The President called me over one day to the White House to ask me, Was this a good indictment? Were we going to be able to convict him on these drug and money laundering charges that had been secured before the grand jury? He didn't have to spell it out for me, I could very easily get the drift that what was contemplated was some action designed to take him into custody and it would be a Pyrrhic victory indeed to take him into custody, bring him back here and find the case fell apart at the seams.

So I went back to the department, talked to Bob Mueller, who was then probably my special assistant for criminal matters, and asked him to undertake, as an experienced prosecutor, a review of the case, the evidence, and give me an assessment as to whether there was a good case. He did, there was, and I so advised the President. Of course, not long thereafter, Operation Just Cause was initiated and General Noriega was apprehended, brought back, tried, convicted and rests today in federal prison. That, I think, is a very important role for an Attorney General to play in advising the President on issues well outside the province of the Attorney General but a necessary predicate for that kind of action.

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1992- April 7

1992-04-07-the-titusville-herald-pg-1.jpg / https://drive.google.com/open?id=13KAW5Vgt2nfco05FgNWKG0A38pH2HVsN

High Court, in Pornography Case, Tightens 'Sting' Rules

WASHINGTON (AP) — The Supreme Court on Monday limited some undercover "sting" operations when it ruled that a Nebraska farmer was entrapped by postal agents who coaxed him for two years to buy mail-order child pornography.

By a 5-4 vote, the justices said the farmer lacked predisposition to commit a crime and only purchased the contraband material after the prolonged solicitation of the government.

While the ruling is a defeat for law enforcement officials and a surprise from an increasingly conservative court, its impact could prove limited.

The court's four dissenters said the decision is a major departure that could hobble investigators. The majority said the ruling represents no change from standards that have let the government conduct sweeping undercover investigations into political corruption, drug dealing and fencing of stolen goods.

Justice Byron R. White wrote for the court, "In their zeal to enforce the law, government agents may not originate a criminal design, implant in an innocent person's mind the disposition to commit a criminal act and then induce commission of the crime so that the government may prosecute."

He was joined by Justices Harry A. Blackmun, John Paul Stevens, David H. Souter and Clarence Thomas.

Thomas' vote surprised many because the newest justice generally has taken a tough approach to crime and punishment.

Justice Sandra Day O'Connor, writing for the dissenters, said the ruling "redefines predisposition and introduces a new requirement that government sting operations have a reasonable suspicion of illegal activity before contacting a suspect."

She was joined by Chief Justice William H. Rehnquist, and Justices Antonin Scalia and Anthony M. Kennedy.

"There are good guidelines here that will protect some people who need protection," said Paul Marcus, a law professor at the College of William & Mary. "You can't pursue someone so relentlessly."

Assistant Attorney General Robert S. Mueller III said the court's decision was "generally limited" to the particulars of the Nebraska case, and "will not affect the government's sting operations in the areas of narcotics trafficking and similar crimes."

The case stems from the investigation of Keith Jacobson, 61, of Newman Grove, Neb.

Police found Jacobson's name on a San Diego, Calif., pornography bookstore's mailing list in 1984. He had ordered two nudist magazines from the store that were legal to purchase.

Postal inspectors continuously solicited Jacobson through the mail to buy illegal pornography. Investigators said he voluntarily responded to mailed questionnaires asking him about his interests in sexually explicit material.

He was convicted of receiving in 1987 a copy of a magazine called "Boys Who Love Boys." In the magazine, "11-year-old and 14-year-old boys get it on in every way possible," according to a catalog description.

Jacobson was sentenced to two years probation and 250 hours of community service. He lost his job as a school bus driver the morning after he was charged, and he said he was "humiliated and depressed" for months.

"Well, I'm overjoyed," Jacobson said Monday. "It's been almost a five-year ordeal. It's something I've learned to live with."

In other action, the court:

—Agreed to decide in case from New Jersey whether newspapers and other businesses can treat paying customers as depreciable assets worth millions in tax write-offs.

—Said it will decide in a District of Columbia case whether states may require all employers with health plans for active employees to provide the same benefits to employees eligible for workers' compensation.

—Let stand a ruling in a Virginia case that limits the power of federal prosecutors to seek longer prison terms for some defendants sentenced after plea bargains.

1992-04-07-the-titusville-herald-pg-1-clip-pornography-sting.jpg

1992-04-07-the-titusville-herald-pg-1-clip-pornography-sting.jpg / https://drive.google.com/open?id=13J31v3BEOdNMx3XyfTkTRpNIF-vvTYVl

2001 - Considerations for new FBI Director

2001-06-12-the-atlanta-constitution-pg-a-23.jpg / https://drive.google.com/open?id=12TrPsiyIj9KRp_I_QGH62fyziZa7LlYL

Short list should be a little longer in Bush's search for FBI director

WILLIAM SAFIRE

The breakdown in FBI procedures that delayed Timothy McVeigh's execution may have been the last straw for Louis Freeh. The nonpartisan former agent and judge who was such a thorn in Janet Reno's partisan side decided to retire two years before his term was up.

Who will President Bush nominate to replace Freeh? The next FBI director will have to grapple not only with "the 10 most wanted" but with perpetrators of cybercriminal and bioterrorist crimes not yet nightmared of.

Needed is a director less ego-driven than J. Edgar Hoover, less politically loyal than L. Patrick Gray and less bureaucratically naive than William Sessions. William Webster — straight arrow, judicious, tough-minded — is a good model.

Oddly, Bush's search for Freeh's replacement has received little attention. Yet this will be as significant as any cabinet choice, directing more than 25,000 employees with an annual budget of $3.4 billion. The appointee will serve until 2011, well beyond the Bush years. From what I hear, the "short list" is too short.

The leading contender is Robert Mueller III. A marine with Vietnam service, he headed the Justice Department's Criminal Division in the final years of Bush the elder's administration. I remember him as an intelligent apparatchik who showed a marked lack of interest in pursuing the Iraqgate investigation. He helped staff the Public Integrity Division with time-servers who would not rock the boat.

Credit Mueller with political agility, however. In the Clinton years, he applied for a job with Eric Holder, then a U.S. attorney (later famed for his role in the Marc Rich pardon). As Democrat Holder moved up the ladder at Reno Justice, so did his friend Mueller, and — with the strong support of Sen. Barbara Boxer of California — Mueller was rewarded with a Clinton appointment as U.S. attorney in San Francisco.

Then, with Bush the younger's election, he spun about and made his bureaucratic expertise known to the knocked-about John Ashcroft. Named acting deputy attorney general, Mueller made certain his Public Integrity associates remained secure, taught the new deputy the ropes and now has Ashcroft's backing for the FBI job.

The professionals I know at Justice and the FBI are dismayed. The nimble Mueller may have blundered in failing to warn Ashcroft early about the McVeigh document botch, but he has law enforcement experience, an interest in the troublesome record systems and the advantage of being confirmable.

Senate confirmability has never been a more valuable asset. One ultra-liberal senator not only can block Bush's choice for the California appeals court, she also may be able to determine his pick for the FBI (Bring on a conservatives' Boxer rebellion).

Also on the short list is George Terwilliger III, a White & Case partner who was Mueller's boss in the last Bush administration, but whose legal representation of the Bush campaign in Tallahassee might arouse get-even instincts on the Judiciary Committee.

A third active possibility is Sterling Johnson Jr. (not III), a former New York City cop and prosecutor, named to the federal bench by Bush the elder 10 years ago along with Louis Freeh. The well-respected Judge Johnson would be the bureau's first black director, which could lessen internal tension. Problem: he's 67, not exactly geezerhood, but the appointment is to a high-pressure 10-year term.

Among African-American long shots are Ron Noble, New York law professor who has just taken a top job at Interpol, and Atlanta's Larry Thompson, just confirmed as deputy attorney general. But Thompson is being groomed to be the first black AG if Ashcroft goes home next year to regain his Senate seat.

Favorite choice among FBI agents would be one of their own who rose to be governor of Oklahoma, but the GOP's Frank Keating would take Democratic flak in hearings for heavy help to his children from a financier.

What should the president do? First, resist the rush. Next, interview a range of candidates himself; he's shown himself to be good at that. Finally, pick an experienced enforcer of the law who respects individual rights, and who will nip government corruption in the bud — even in the Bush administration.

RICK BOWMER / Associated Press

FBI Director Louis Freeh has decided to step down two years early.

William Safire is a New York Times columnist. His column appears Tuesdays.

2001-06-12-the-atlanta-constitution-pg-a-23-clip-mueller-short-list.jpg / https://drive.google.com/open?id=12UWx29mfECRICxVaFR1TsIvBzxJCuVAC

2007 (May) - Passing of mother Alice Mueller

Alice Mueller

May 29, 2007

OBITUARY | GUESTBOOK | DIRECTIONS | PRINT PAGE

Alice (Truesdale) Mueller - Of Dedham, formerly of Philadelphia, PA & Wolfboro, NH, May 29, 2007. Beloved wife of Robert S. Mueller Jr. Devoted mother of Robert S. Mueller III of Washington DC, Susan M. Timchak of Lutz, FL, Sandra M. Dick of Brookline, Joan B. Mueller of Pownal, ME and Patricia H. Mueller of Jericho, VT. Also survived by 11 grandchildren & 4 great grandchildren. Sister of the late William Truesdale.

A private Funeral Service will be held at the George F. Doherty & Sons Wilson-Cannon Funeral Home, 456 High St., DEDHAM, on Thursday, Rev. Dorsey McConnell of the Church of The Redeemer, Brookline, will officiate. Private Interment.

In lieu of flowers donations may be made in Alice's memory to the American Cancer Society, 30 Speen St., Framingham, MA 01701-4688.

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2014 - Robert Swan Mueller III - Involved with the NFL too...

See 2014-09-12-asbury-park-press-page-c11.pdf / https://drive.google.com/open?id=1aAkjTFQH8jOpkIfNxw2dUI7si3yxJXuF

NFL

Mixed reaction on independent investigation

Jim Corbett and Josh Peter
@ByJimCorbett, @joshpeterII
USA TODAY Sports

Former FBI director Robert Mueller had barely been named to head the NFL's independent investigation into its handling of the Ray Rice domestic violence case and the move was being widely criticized.

Terry O'Neill, the president of the National Organization for Women (NOW), which has called for NFL Commissioner Roger Goodell to resign, questioned whether the investigation would be independent because the league has hired Mueller who works for a law firm that has represented the NFL. In addition, the investigation is being overseen by two owners.

WilmerHale has worked with the league on a variety of matters, such as the NFL Sunday Ticket broadcast package. In addition, Dick Cass — team president for the Ravens, who cut Rice on Monday — worked for WilmerHale before moving to his current role.

"That sounds like an insider investigation," O'Neill told USA TODAY Sports on Thursday. "There needs to be a truly independent, top-to-bottom review by individuals who have full authority to gather all the facts and to suggest solutions."

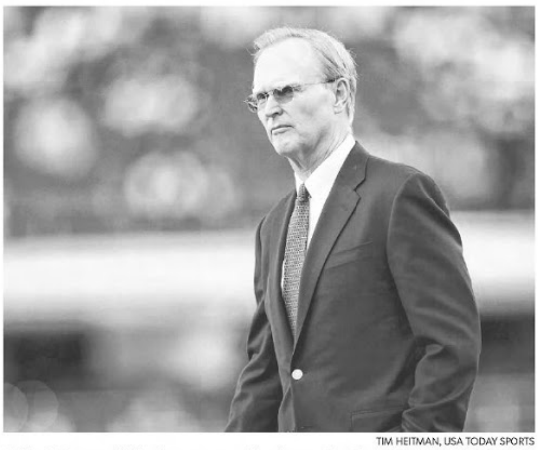
Attorney Peter Ginsberg, who represented then-New Orleans Saints linebacker Jonathan Vilma during an investigation into allegations that members of the Saints earned bonuses for inflicting injuries on opposing players, expressed skepticism about the league's plan.

Ginsberg pointed out that the NFL appointed an independent investigator, former U.S. attorney Mary Jo White, and her Bountygate investigation "failed significantly."

Goodell named former commissioner Paul Tagliabue to hear appeals from defensive players Vilma, Scott Fujita, Will Smith and Anthony Hargrove. Tagliabue affirmed Goodell's factual findings that the Saints operated a bounty program from 2009 to 2011. But his decision to vacate all penalties wiped Goodell's suspensions and fines off the board.

"It's also important to remember the last time the commissioner appointed a supposedly independent investigator that person was co-opted by the NFL and failed significantly in her responsibilities truly to investigate," Ginsberg told USA TODAY Sports, referencing White. "So the idea that Commissioner Goodell is the person appointing an independent investigator is troubling."

But attorney John M. Dowd, who conducted an investigation into the Pete Rose gambling scandal for Major League Baseball in 1989, said the criticism was unwarranted — in part because the NFL picked Mueller to lead the investigation.



TIM HEITMAN, USA TODAY SPORTS

John Mara will help oversee the investigation into the NFL.

"I don't think it's fair criticism," Dowd told USA TODAY Sports. "I think you've got to wait until he's done and see his work product and then make any judgments you want to make.

"Bobby Mueller is an outstanding lawyer, an honest man, and has a reputation to protect," Dowd said.

Dowd said also he had no qualms about New York Giants owner John Mara and Pittsburgh Steelers owner Art Rooney overseeing the investigation.

"I reported to the commissioner and the deputy commissioner of baseball," Dowd said. "The real key to all these investigations, inside the government or outside the government, is that they be done with integrity."

Mara and Rooney issued a joint statement Thursday and said they had been in contact with Mueller. The owners said the investigation would be independent and the final report would be made public.

"Our role is not to conduct or direct the investigation but to support Mr. Mueller and assist him in gaining whatever access or resources he needs," the statement reads. "Our sole motive here is to get the truth and then share Mr. Mueller's findings with the public."

Mueller is preparing to begin the investigation, according to the statement. "No timeline was established, and we stressed that he should take as much time as necessary to complete a thorough investigation," the statement read. "We agreed that the scope of the investigation should be aimed at getting answers to specific questions, including what efforts were made by league staff to obtain the video of what took place inside the elevator and to determine whether, in fact, the video was ever delivered to someone at the league office, and, if so, what happened to the video after it was delivered."

O'Neill did say Goodell recently took positive steps by reaching out to the National Network To End Domestic Violence and strengthening the league's policy against domestic violence.

"So I do see some movement," she said. "But the overarching picture you get is of an individual who only wants do as little as he can possibly get away with so he can go back to the business of making money."

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Dr. Hermann Joseph Muller (born 1890)

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Hermann Joseph Muller

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For other people with the same name, see Hermann Müller (disambiguation).

Hermann Joseph Muller (December 21, 1890 – April 5, 1967) was an American geneticist, educator, and Nobel laureate best known for his work on the physiological and genetic effects of radiation (mutagenesis), as well as his outspoken political beliefs.[2] Muller frequently warned of long-term dangers of radioactive fallout from nuclear war and nuclear testing, which resulted in greater public scrutiny of these practices.

Early life[edit]

Muller was born in New York City, the son of Frances (Lyons) and Hermann Joseph Muller, Sr., an artisan who worked with metals. Muller was a third-generation American whose father's ancestors were originally Catholic and came to the United States from Koblenz.[3] His mother's family was of mixed Jewish (descended from Spanish and Portuguese Jews) and Anglican background, and had come from Britain.[3][4] Among his first cousins are Herbert J. Muller and Alfred Kroeber (Kroeber is Ursula Le Guin's father).[3] As an adolescent, Muller attended a Unitarian church and considered himself a pantheist; in high school, he became an atheist. He excelled in the public schools. At 16, he entered Columbia College. From his first semester, he was interested in biology; he became an early convert of the Mendelian-chromosometheory of heredity — and the concept of genetic mutations and natural selection as the basis for evolution. He formed a biology club and also became a proponent of eugenics; the connections between biology and society would be his perennial concern. Muller earned a bachelor of arts degree in 1910.[5]

Muller remained at Columbia (the pre-eminent American zoology program at the time, due to E. B. Wilsonand his students) for graduate school. He became interested in the *Drosophila* genetics work of Thomas Hunt Morgan's fly lab after undergraduate bottle washers Alfred Sturtevant and Calvin Bridges joined his biology club. In 1911–1912, he studied metabolism at Cornell University, but remained involved with Columbia. He followed the drosophilists as the first genetic maps emerged from Morgan's experiments, and joined Morgan's group in 1912 (after two years of informal participation).[6]

In the fly group, Muller's contributions were primarily theoretical - explanations for experimental results and ideas and predictions for new experiments. In the emerging collaborative culture of the drosophilists, however, credit was assigned based on results rather than ideas; Muller felt cheated when he was left out of major publications.[7]

Career[edit]

In 1914, Julian Huxley offered Muller a position at the recently founded William Marsh Rice Institute, now Rice University; he hurried to complete his Doctor of philosophy degree and moved to Houston for the beginning of the 1915–1916 academic year (his degree was issued in 1916). At Rice, Muller taught biology and continued *Drosophila* lab work. In 1918, he proposed an explanation for the dramatic discontinuous alterations in *Oenothera lamarckiana* that were the basis of Hugo de Vries's theory of mutationism: "balanced lethals" allowed the accumulation of recessive mutations, and rare crossing over events resulted in the sudden expression of these hidden traits. In other words, de Vries's experiments were explainable by the Mendelian-chromosome theory.

resulted in the sudden expression of these hidden traits. In other words, do White's experiments were explainable by the Mendelian chromosome theory?

Muller's work was increasingly focused on mutation rate and lethal mutations. In 1918, Morgan, short-handed because many of his students and assistants were drafted for the U.S. entry into World War I, convinced Muller to return to Columbia to teach and to expand his experimental program.[8]

At Columbia, Muller and his collaborator and longtime friend Edgar Altenburg continued the investigation of lethal mutations. The primary method for detecting such mutations was to measure the sex ratios of the offspring of female flies. They predicted the ratio would vary from 1:1 due to recessive mutations on the X chromosome, which would be expressed only in males (which lacked the functional allele on a second X chromosome). Muller found a strong temperature dependence in mutation rate, leading him to believe that spontaneous mutation was the dominant mode (and to initially discount the role of external factors such as ionizing radiation or chemical agents). In 1920, Muller and Altenburg coauthored a seminal paper in *Genetics* on "modifier genes" that determine the size of mutant *Drosophila* wings. In 1919, Muller made the important discovery of a mutant (later found to be a chromosomal inversion) that appeared to suppress crossing over, which opened up new avenues in mutation-rate studies. However, his appointment at Columbia was not continued; he accepted an offer from the University of Texas and left Columbia after the summer of 1920.[9]

Muller taught at the University of Texas from 1920 until 1932. Soon after returning to Texas, he married mathematics professor Jessie Marie Jacobs, whom he had courted previously. In his early years at Texas, Muller's *Drosophila* work was slow going; the data from his mutation rate studies were difficult to interpret. In 1923, he began using radium and X-rays,[10] but the relationship between radiation and mutation was difficult to measure because such radiation also sterilized the flies. In this period, he also became involved with eugenics and human genetics. He carried out a study of twins separated at birth that seemed to indicate a strong hereditary component of I.Q. Muller was critical of the new directions of the eugenics movement (such as anti-immigration), but was hopeful about the prospects for positive eugenics.[11] In 1932, at the Third International Eugenics Congress, Muller gave a speech and stated, "eugenics might yet perfect the human race, but only in a society consciously organized for the common good.[12]

Discovery of X-ray mutagenesis[edit]

In 1926, a series of major breakthroughs began. In November, Muller carried out two experiments with varied doses of X-rays, the second of which used the crossing over suppressor stock ("CIB") he had found in 1919. A clear, quantitative connection between radiation and lethal mutations quickly emerged. Muller's discovery created a media sensation after he delivered a paper entitled "The Problem of Genetic Modification" at the Fifth International Congress of Genetics in Berlin; it would make him one of the better-known public intellectuals of the early 20th century. By 1928, others had replicated his dramatic results, expanding them to other model organisms, such as wasps and maize. In the following years, he began publicizing the likely dangers of radiation exposure in humans (such as physicians who frequently operate X-ray equipment or shoe sellers who radiated their customers' feet).[13]

His lab grew quickly, but it shrank again following the onset of the Great Depression. Especially after the stock market crash, Muller was increasingly pessimistic about the prospects of capitalism. Some of his visiting lab members were from the USSR, and he helped edit and distribute an illegal leftist student newspaper, *The Spark*. It was a difficult period for Muller both scientifically and personally; his marriage was falling apart, and he was increasingly dissatisfied with his life in Texas. Meanwhile, the waning of the eugenics movement, ironically hastened by his own work pointing to the previously ignored connections between environment and genetics, meant that his ideas on the future of human evolution had reduced impact in the public sphere.[14]

Work in Europe[edit]

In September 1932, Muller moved to Berlin to work with the Russian expatriate geneticist Nikolay Timofeeff-Ressovsky; a trip intended as a limited sabbatical stretched into an eight-year, five-country journey. In Berlin, he met two physicists who would later be significant to the biology community: Niels Bohr and Max Delbrück. The Nazi movement was precipitating the rapid emigration of scientific talent from Germany, and Muller was particularly opposed to the politics of National Socialism. The FBI was investigating Muller because of his involvement with *The Spark*, so he chose instead to go to the Soviet Union (an environment better suited to his political beliefs). In 1933, Muller and his wife reconciled, and their son David E. Muller and she moved with Hermann to Leningrad. There, at the Institute of Genetics, he imported the basic equipment for a *Drosophila* lab—including the flies—and set up shop. The institute was moved to Moscow in 1934, and Muller and his wife were divorced in 1935.[15]

In the USSR, Muller supervised a large and productive lab, and organized work on medical genetics. Most of his work involved further explorations of genetics and radiation. There he completed his eugenics book, *Out of the Night*, the main ideas of which dated to 1910.[16] By 1936, however, Joseph Stalin's repressive policies and the rise of Lysenkoism was making the USSR an increasingly problematic place to live and work. Muller and many of the Russian genetics community did what they could to oppose Trofim Lysenko and his Larmarckian evolutionary theory, but Muller was soon forced to leave the Soviet Union after Stalin read a translation of his eugenics book and was "displeased by it, and...ordered an attack prepared against it."[17]

Muller, with about 250 strains of *Drosophila*, moved to Edinburgh in September 1937, after brief stays in Madrid and Paris. In 1938, with war on the horizon, he began looking for a permanent position back in the United States. He also began courting Dorothea "Thea" Kantorowicz, a German refugee; they were married in May 1939. The Seventh International Congress on Genetics was held in Edinburgh later that year; Muller wrote a "Geneticists' Manifesto"[18] in response to the question: "How could the world's population be improved most effectively genetically?" He also engaged in a debate with the perennial genetics gadfly Richard Goldschmidt over the existence of the gene, for which little direct physical evidence existed at the time.[19]

Later career[edit]

Muller's house in Bloomington, Indiana

When Muller returned to the United States in 1940, he took an untenured research position at Amherst College, in the department of Otto C. Glaser. After the U.S. entry into World War II, his position was extended indefinitely and expanded to include teaching. His *Drosophila* work in this period focused on measuring the rate of spontaneous (as opposed to radiation-induced) mutations. Muller's publication rate decreased greatly in this period, from a combination of lack of lab workers and experimentally challenging projects. However, he also worked as an adviser in the Manhattan Project (though he did not know that was what it was), as well as a study of the mutational effects of radar. Muller's appointment was ended after the 1944–1945 academic year, and despite

difficulties stemming from his socialist political activities, he found a position as professor of zoology at Indiana University.[20] Here, he lived in a Dutch Colonial Revival house in Bloomington's Vinegar Hill neighborhood.[21]

In 1946, Muller was awarded the Nobel Prize in Physiology or Medicine, "for the discovery that mutations can be induced by X-rays". Genetics, and especially the physical and physiological nature of the gene, was becoming a central topic in biology, and X-ray mutagenesis was a key to many recent advances, among them George Beadle and Edward Tatum's work on *Neurospora* that established in 1941 the one gene-one enzyme hypothesis.[22] In Muller's Nobel Prize lecture, he argued that no threshold dose of radiation existed that did not produce mutagenesis, which led to the adoption of the linear no-threshold model of radiation on cancer risks.[23]

The Nobel Prize, in the wake of the atomic bombings of Hiroshima and Nagasaki, focused public attention on a subject Muller had been publicizing for two decades - the dangers of radiation. In 1952, nuclear fallout became a public issue; since Operation Crossroads, more and more evidence had been leaking out about radiation sickness and death caused by nuclear testing. Muller and many other scientists pursued an array of political activities to defuse the threat of nuclear war. With the Castle Bravo fallout controversy in 1954, the issue became even more urgent.[*citation needed*] In 1955, Muller was one of 11 prominent intellectuals to sign the Russell-Einstein Manifesto, the upshot of which was the first 1957 Pugwash Conference on Science and World Affairs, which addressed the control of nuclear weapons.[24][25] He was a signatory (with many other scientists) of the 1958 petition to the United Nations, calling for an end to nuclear weapons testing, which was initiated by the Nobel Prize-winning chemist Linus Pauling.[24]

Muller's opinions on the effect of radiation on mutagenesis, however, had been criticized by some scientists; geneticist James F. Crow called Muller's view "alarmist" and wrote that it created in the public "an irrational fear of low-level radiation relative to other risks".[26][27] It has been argued that Muller's opinion was not supported by studies on the survivors of the atomic bombings, or by research on mice,[28] and that he ignored another study that contradicted the linear no-threshold model he supported, thereby affecting the formulation of policy that favored this model.[23]

Muller was awarded the Linnean Society of London's Darwin-Wallace Medal in 1958 and the Kimber Genetics Award of the U.S. National Academy of Sciences in 1955.[29] He served as president of the American Humanist Association from 1956 to 1958.[30] The American Mathematical Society selected him as its Gibbs Lecturer for 1958.[31] He retired in 1964.[32] The *Drosophila* basic units of inheritance, their chromosomal arms, are named "Muller elements" in Muller's honor.[33]

H. J. Muller and science-fiction writer Ursula K. Le Guin were second cousins; his father (Hermann J. Muller Sr.) and her father's mother (Johanna Muller Kroeber) were siblings, the children of Nicholas Müller, who immigrated to the United States in 1848, and at that time dropped the umlaut from his name. Another cousin was Herbert J. Muller, whose grandfather Otto was another son of Nicholas and a sibling of Hermann Sr. and Johanna.[34]

Personal life[edit]

Muller is survived by his daughter, Helen J. Muller, now a professor emerita at the University of New Mexico, who has a daughter, Mala Htun, also a professor at the University of New Mexico. His son, David E. Muller, professor emeritus of mathematics and computer science at the University of Illinoisand at New Mexico State University, died in 2008 in Las Cruces, New Mexico. David's mother was Jessie Jacobs Muller Offermann (1890-1954), Hermann's first wife. Helen's mother was Dorothea Kantorowicz Muller (1909-1986), Hermann's second wife.[3] He had a brief affair with Milly Bennett.[35]

Impact[edit]

His work on the biological effects of radiation exposure is referenced in Rachel Carson's revelatory book, Silent Spring.[36]

Former graduate students[edit]

- Seymour Abrahamson
- Raissa L. Berg
- Elof Axel Carlson
- Sara Helen Frye
- H. Bentley Glass
- C. P. Oliver
- Irwin I. Oster
- Abraham P. Schalet
- Wilson Stone
- William Edgar Trout III
- Dale Eugene Wagoner

Former postdoctoral fellows

- George D. Snell

Worked in lab as undergraduates

- Margaret Russell Edmondson
- Carl Sagan

People who worked in his lab in Indiana [1]

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See also[edit]

- Mutagenesis
- Bateson–Dobzhansky–Muller model
- Repository for Germinal Choice
- Muller's ratchet
- Muller's morphs
- History of biology
- History of genetics
- History of model organisms

Hermann Joseph Muller

ForMemRS

Hermann J. Muller speaking at the 1952 World Science Fiction Convention

Born

December 21, 1890

New York City, New York, U.S.

Died

April 5, 1967 (aged 76)

Indianapolis, Indiana, U.S.

Nationality

United States

Alma mater

Columbia University

Known for

The genetic effects of radiation

Spouse(s)

- Jessie Marie Jacobs (m. 1923)
- Dorothea Kantorowicz (m. 1939)

Children

2

Awards

1927

- Newcomb Cleveland Prize
- 1946 Nobel Prize in Physiology or Medicine
- Linnean Society of London's Darwin–Wallace Medal (1958)
- Foreign Member of the Royal Society[1]
- 1963 Humanist of the Year (American Humanist Association)

Scientific career

Fields

Genetics, molecular biology

Doctoral advisor

Thomas Hunt Morgan

Doctoral students

H. Bentley Glass

Influences

J. T. Patterson

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Dr. Vincent J. Munster (born 1973)

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born 1973 age 48

2013 - with feldmann

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TUESDAY, JANUARY 8, 2013 The MONTANA STANDARD | mtstandard.com Page 3C

Hamilton lab studies deadly new virus

BY DAVID ERICKSON
of The Ravalli Republic

HAMILTON — Scientists at Rocky Mountain Laboratories in Hamilton are scrambling to research and understand a deadly new virus that has sparked fears of a new SARS-like outbreak.

This newly identified coronavirus first caught the attention of scientists when it claimed the life of a man in Saudia Arabia this past September.

A short while later, doctors in the United Kingdom treated a man who had contracted the virus while traveling in Saudia Arabia. That patient survived, and there was a short lull of no new cases that had researchers cautiously optimistic.

However, in November, five more people died in Quatar and Saudi Arabia and four more were infected. The rapid spread of the disease brought back memories of 2003, when SARS caused a worldwide panic.

SARS (severe acute respiratory syndrome) is also caused by a coronavirus and killed more than 900 people in several different countries and sickened more than 8,000 other patients. The coronavirus is a nightmare for scientists because it can spread rapidly from person to person through the air. Until SARS, coronaviruses were viewed by most scientists as relatively harmless causes of the common cold.

> *'Our studies will provide valuable knowledge that should help us if this disease is indeed similar to SARS.'*
>
> **Dr. Vincent Munster, the head of the Virus Ecology Unit at RML**

Dr. Heinz Feldmann, the chief of the Laboratory of Virology at RML, which is a division of the National Institute of Allergy and Infectious Diseases, was among a group of scientists who tracked the spread of SARS in 2003 from its origin in southern China to a Hong Kong hotel, where several guests had contracted the virus.

In response to this new outbreak, he teamed up with Dr. Vincent Munster, the head of the Virus Ecology Unit at RML. They have begun to study the new coronavirus in Syrian hamsters and rhesus macaques, a monkey native to Asia.

"The virus appears to cause severe lung and kidney damage," Feldmann explained in a statement about the research. "We want to mimic human infection in an animal model to understand how this novel coronavirus causes disease and whether there is a potential for transmission of the virus among humans."

Other scientists at Erasmus University in the Netherlands are conducting similar tests in ferrets and cynomolgus macaques. The two research groups are coordinating their efforts to see which species might be the most suitable to study as a model of human infection, according to RML officials.

According to Feldmann and Munster, bats are quite possibly the natural carrier for the new coronavirus, since it is closely related to viruses only they carry. However, the precise mode of transmission is still unknown. Once the scientists learn how the virus spreads in an animal model, they will begin working on creating countermeasures such as antiviral treatments and vaccines to assist in preparedness efforts.

Right now, however, scientists are holding their breath hoping another outbreak doesn't occur before their research is done.

"Several weeks passed between the cases, so we still are not sure whether there is potential for this new coronavirus to infect more people," Munster said. "Our studies will provide valuable knowledge that should help us if this disease is indeed similar to SARS."

—Reach reporter David Erickson at 363-3300 or **david.erickson@ravallirepublic.com**

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WHILE AMERICANS HAVE LARGELY MOVED ON FROM WORRYING ABOUT EBOLA, RESEARCHERS AT HAMILTON'S ROCKY MOUNTAIN LABORATORIES CONTINUE TO STUDY THE DEADLY PATHOGEN

FAR FROM OVER

by Kate Whittle

INSIDE

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NEWS NEW REGIONAL PARK POSES PROBLEMS WITH AG LAND

FAR FROM OVER

by Kate Whittle

WHILE AMERICANS HAVE LARGELY MOVED ON FROM WORRYING ABOUT EBOLA, RESEARCHERS AT HAMILTON'S ROCKY MOUNTAIN LABORATORIES CONTINUE TO STUDY THE DEADLY PATHOGEN

photo by Cathrine L. Walters

In early February, thousands of volunteers in Monrovia, Liberia, signed up for the first large-scale human clinical trial of Ebola vaccines. A successful vaccine would be instrumental in stopping a virus that caused a worldwide fervor last year, infecting at least 20,000 people when a major epidemic spread throughout West Africa. In Monrovia, a coastal town of about 1 million, trial participants will receive a shot containing one of the vaccines or a placebo, and be monitored for side effects or reactions over the course of a year or so.

What those volunteers likely don't know is that one of the vaccines originated under the research program of Dr. Heinz Feldmann, who is currently chief scientist at the Rocky Mountain Laboratories, a facility occupying 36 acres in a quiet residential part of Hamilton in the Bitterroot Valley. In Feldmann's department, the Lab of Virology, he studies highly lethal pathogens in a secure setting.

"We are among a few programs among the U.S. and worldwide, just a handful, maybe two or three handfuls of programs, that have always concentrated on these rare diseases," he says. "That's our mission, that's why we're operating [at] high containment."

While the American media panic over Ebola has subsided, the disease has by no means disappeared. In early March, the World Health Organization marked a milestone of 10,000 recorded deaths from the illness. As new cases continue to crop up in West Africa, Feldmann and a team of internationally trained scientists keep hard at work unlocking the secrets of the pathogen and other diseases like it. Simply put, their continued efforts hold the potential to save lives around the world.

Numbers denote a research facility's security and safety settings, from level 1, comparable to a high school science lab, to 4, which is afforded to the most dangerous and exotic pathogens on earth, like Ebola. Very few labs in the world are equipped with Biosafety Level 4 protections, and Hamilton is home to the only BSL 4 lab in western North America.

Even entering the BSL 4 lab requires a year of training in proper safety procedures. Researchers don one-piece hooded suits, hook up to ventilation hoses and wear three pairs of gloves while working with samples that are kept in cabinets with a separate air flow. All cuffs are triple duct-taped to keep suits air-tight. The entire building's negative pressure airflow features redundant vent systems filtered by layers of HEPA screens, ensuring that if a microscopic pathogen somehow becomes airborne in the lab, it won't be able to make its way outside.

In a separate building, RML has a mock lab where new technicians get trained and visitors can see what it's like to wear the claustrophobic biohazard suits. Inside the helmet, the whooshing ventilation system makes it difficult to hear anything, and suits contain radio intercoms so researchers can chat with each other.

On a recent day inside the training lab, Dr. Vincent Munster, an ecologist-investigator who Feldmann invited to work at RML, demonstrates how he wriggles into and out of the suit in minutes, and how he's learned to deftly maneuver syringes and test tubes through several pairs of gloves. "It's very structured, there's not much that can go wrong," he says. Once he's in the lab, he can work for about five hours at a time before he's required to take off the suit and decontaminate in a 15-minute shower process. On busy days, he might suit up four to five times.

The rest of the RML campus has a multicultural, collegiate feel, with stately brick buildings and manicured lawns, and staff strolling around wearing street clothes and IDs dangling from lanyards. Conference rooms are equipped with high-tech SmartBoards and small bottles of hand sanitizer.

The BSL 4 lab is a relatively new addition to the RML campus, but scientists have been studying deadly diseases in this scenic mountain town for nearly a century. RML was founded as a site to study Rocky Mountain spotted fever, also called black measles, a tick-borne disease that plagued settlers of the Bitterroot Valley. In the early 1900s, some of the pioneering researchers studying Rocky Mountain fever worked out of tents and woodsheds. They also drew the ire of locals with their sometimes-offbeat ways of combatting the illness, like walking cattle through harsh baths of disinfectant.

In the mid-1920s, when the Montana Legislature appropriated funds to build a permanent lab in Hamilton, some residents protested, fearing diseased ticks would escape from the facility. Their concerns led to the construction of a small ditch around the research building because "ticks, it was supposed, could not swim the moat," according to a RML brochure. (The moat was never filled with water, and a historic placard currently marks where it used to be.)

Today, the lab is part of the National Institute of Allergy and Infectious Diseases, and its staff of about 450 studies everything from plagues to Chlamydia. In 2002, when RML announced plans to build the BSL 4 maximum-containment facility, it prompted fears from Bitterroot residents once again. Local organizations including the Friends of the Bitterroot filed a lawsuit alleging violation of the National Environmental Policy Act. They settled the suit in 2004 when, among other stipulations, authorities agreed

to build a special isolation unit within 75 miles of the lab that could care for any RML worker accidentally infected by a rare pathogen.

Accidents can sometimes happen. In 2004, the lab reported that 13 monkeys and several hamsters died when the heating system malfunctioned over the weekend in the 10,000-square-foot animal research wing, according to a *Billings Gazette* article. But to date, RML's BSL 4 facility has not recorded any lab-acquired infections in staffers.

Last year, St. Patrick Hospital briefly appeared on a list of four U.S. facilities equipped to handle Ebola patients, making the rare disease seem all too close to many western Montanans for the first time. But to doctors like George Risi, a Missoula-based private-practice infectious disease specialist and clinical consultant to RML, Ebola isn't a novelty.

"The typical American response to any of these kinds of diseases is, 'Oh, it's a disease of somewhere else,'" Risi says.

Before last year's outbreak in countries including Liberia, Sierra Leone and Guinea, Ebola was a rare but notable affliction. Less than 30 outbreaks have been recorded since 1976, when doctors in Sudan and Zaire first reported seeing patients stricken with an unfamiliar, grisly malady characterized by headaches, fever, bloody vomiting, diarrhea, unexplained bruising and death. The disease, formally called Ebola hemorrhagic fever, was eventually named after the Ebola River, near the village where it was first identified in Zaire (now referred to as the Democratic Republic of the Congo).

For most of the 20th century, Ebola was limited to small outbreaks in isolated rural regions, where it quickly flared up and burned out. But scientists and government officials took note of this new pathogen's mortality rate—untreated, Ebola fever kills as much as 88 percent of its victims—and the challenges it presented. Ebola sometimes disappears for up to 15 years without a trace, making it especially difficult to study, according to *Spillover: Animal Infections and the Next Human Pandemic* by David Quammen.

Scientists now have a better understanding of how Ebola emerges, since it is thought to naturally reside in jungle fruit bats and spread to humans through intermediaries like great apes and gazelle-like mammals called duikers. In many rural areas, villagers rely on bushmeat, or tropical game, as a source of protein. Several Ebola outbreaks have been tied to hunters or foragers finding infected carcasses and harvesting them. According to a recent RML study, the Ebola virus can remain viable for several days after the host has died, making it that much more dangerous.

Thanks to increasing development and industry, humans are coming into contact with Ebola-infected animals more frequently, says Risi. As part of his work with RML, he's trained local staff on what to do in case of an accidental exposure at the lab—and because of last year's epidemic, he's now dealt with Ebola in real life.

"When it became clear that this [2014] outbreak was not going to go like [previous smaller outbreaks], it was a chance for me to field-test, if you will, all the protocols, and get some real hands-on experience with taking care of Ebola patients," Risi says.

Risi spent three weeks in Sierra Leone last fall, along with a small team of American doctors and a nurse, working at the only hospital in the country equipped to help Ebola patients.

"Under the best of circumstances, those hospitals have limited resources," he says. "Sierra Leone went through a couple decades of civil war, huge deterioration of basic health care infrastructure… You couldn't pick a worse place for an outbreak."

Risi would arrive at the hospital around 8 a.m. each day, where he'd pull on a protective Tyvek suit, face mask, two pairs of gloves and rubber boots. The heat and humidity of the rainy season in equatorial Africa added to the challenge of caring for patients. "You can stay in that environment for about three hours or so before you need a break because you're dehydrated," he says. "Your body temperature is up to 103." He'd do about three shifts a day, seven days a week.

Risi estimates his group of five clinicians and a small local staff oversaw a staggering load of about 90 patients at a time, giving what basic help they could with intravenous fluids and antibiotics. Ambulances, which were just trucks painted white, brought in several new patients daily, sometimes from as far away as Freetown, a five-hour drive.

Nonetheless, Risi says, Ebola is a survivable disease if it's caught early enough and the patient is in otherwise reasonably good health. The virus mainly takes advantage of vulnerable populations in poverty-stricken rural areas.

"You go into these situations in Africa, you have people who may be malnourished, may have chronic malaria, may have a variety of intestinal parasites, are anemic, and then don't get to health care until late in their disease," he says. "In those situations, mortality is significantly higher."

When Risi left Sierra Leone, the disease was still raging. After a brief lull, the country recently reported a slight uptick. On March 8, Sierra Leone's vice president voluntarily quarantined himself after one of his security guards died, becoming one of the highest-ranked officials to acknowledge possible infection.

Risi was dismayed at the health care available for Ebola patients, but he has been impressed with how quickly Ebola vaccines have moved into human trials. Moving an experimental drug through development to clinical trials often takes five years at a minimum, he says, calling the pace that Ebola has moved into large-scale trials "unprecedented in the history of medicine."

That speed is due in part to the work being done at RML.

The two Ebola vaccines currently under study in Liberia are both based on the same principle: The outer shell of

photo courtesy of David Porembka

photo by Cathrine L. Walters

photo courtesy of NIAID/WCS

TOP: Dr. George Risi, back row, and a team of American clinicians pose with Sierra Leone orphans whose parents died of Ebola. CENTER: Ecologist-investigator Dr. Vincent Munster wears a protective suit in the training laboratory that's similar to the kind worn inside the highly secure BSL 4 lab. BOTTOM: Munster, right, and a colleague take a blood sample from a hammer-headed fruit bat in the Republic of the Congo. The hammer-headed bat is believed to be a natural host for Ebola virus.

the Ebola virus is combined with the genetic backbone of another virus, which should trigger the patient's immune system to create antibodies to Ebola without developing symptoms of the disease. The vaccine template developed by Feldmann and his associates uses the vesicular stomatitis virus, a nonlethal disease that mostly affects South American cattle, as the delivery platform for Ebola.

Feldmann, a German-born medical doctor who did post-doctoral work at the Centers for Disease Control, says he's been working with vesicular stomatitis as a vaccine platform for at least a decade. Feldmann joined RML in 2008, when the lab constructed its high containment facility, and brought the ongoing Ebola research he'd done at a BSL 4 lab in Winnipeg, Canada, with him. He thinks the vesicular stomatitis virus is one of the most promising approaches for a viable vaccine, although he works strictly in the experimental side of the field.

"We design the approaches, we provide the experimental data on these drugs and vaccines, as far as it comes to animal models," he says.

Once Feldmann's team designs a vaccine platform and tests it on small primates, it can be sent off to other health authorities to be manufactured and tested on humans, as has happened with the Ebola vaccine.

The rapid progress with Ebola vaccinations wouldn't be possible without the body of work already established by scientists like Feldmann and Munster, and their interest in unusual pathogens. The researchers could conceivably spend years studying a virus that never poses a widespread threat to humans—or end up in the thick of an outbreak, like they did with Ebola.

Munster mentions other deadly diseases studied at RML that are currently as obscure as Ebola once was. The deadly Hendra virus, for instance, has only been recorded in seven human cases since it was discovered in Australia in 1994. Nipah, named after the region in Malaysia where it was first found, has caused a series of small outbreaks of respiratory ailments in southeast Asia. Munster says Nipah, unlike Ebola, can't be easily transmitted from human to human, but a chance genetic mutation could give it the ability to become the next public health threat.

"The viruses we work on are extremely lethal, but they cause relatively small outbreaks," says Munster. "But this particular [Ebola] outbreak in Liberia shows that most of these viruses do have the potential to cause harmful epidemics. I do think that's a validation for facilities like this."

Another key to stopping Ebola is to find out where it starts—and for researchers at RML, that means long weeks of venturing into the field.

Munster's studies begin on hot moonless nights in the Congolese jungle, where his team traps giant fruit bats in nets. It's part of a several-year study on the hammer-headed bat, which is believed to be a "reservoir" for Ebola. In epidemiology lingo, the "reservoir" host is the species that co-evolved with the virus, often going relatively unharmed by it.

Sometimes, when a virus escapes its natural host, it wreaks havoc on the other species it comes into contact with, as Ebola does with humans and other primates.

"And that's something we're trying to understand—why it's relatively benign in the reservoir host versus causing extreme disease in what we call a dead-end host, humans," Munster says.

The hammer-headed bat, which is the largest species of its kind in Africa with a three-foot wingspan, is easiest to catch when males gather to perform mating calls. "The sound is like, *bong bong bong*, really deafening loud," Munster says.

Once Munster's team sees a bat wiggling in the net, they take it to a nearby field lab and work under tents and generator-powered lights. While wearing protective clothing, researchers examine captured bats and take blood samples and swabs. Then, they release them back into the wild, so as not to disturb the natural ecology of the long-term study. He adds that he enjoys working with the bats, and finds the species docile and cute. "At least I think it's pretty," he says.

Field work in the Congo lasts about two weeks at a time, and Munster visits a few times each year. Once he returns to the lab, he and his team begin sorting through the samples to search for genetic evidence of Ebola or antibodies.

So far Munster has found evidence of Ebola antibodies in the bats, but he's still searching for the actual virus itself, which would be most useful for understanding how it co-exists with the species. His group has been gathering data since 2011, and he doesn't currently have an end-date for the study in mind. "There's always more to discover," he says.

Examining the spread of disease often exposes just how complex ecology really is. For instance, Munster says, the respiratory illness Nipah appeared periodically in Malaysia and Bangladesh at seemingly random intervals, affecting humans and pigs. The disease was found residing in

photo by Cathrine L. Walters

Vincent Munster discusses his work studying bats in Ebola in a conference room at Rocky Mountain Laboratories.

photo courtesy of NIAID/WCS

Munster and his team visit the Congo a few times each year to trap and study bats.

photo by Cathrine L. Walters

Inside the training lab, Munster demonstrates how he handles samples.

The hammer-headed fruit bat is one of Africa's largest, with a three-foot wingspan. photo courtesy of NIAID/WCS

fruit bats, but it was unclear how it was spreading to both pigs and people. In the mid-2000s, researchers discovered that Nipah-infected Bangladeshi villagers had one thing in common: they'd recently ingested raw date palm juice, a seasonal treat that's harvested similarly to maple syrup. The unfiltered juice was often contaminated by infected bat droppings. Nipah also afflicted Malaysian pig farmers when infected bats fed on fruit trees hanging over pig pens, spreading the disease first to the pigs and then to the humans that handled them. Once officials understood that was the case, they banned pork production and, so far, effectively limited additional outbreaks.

When it comes to stopping the spread of Ebola and diseases like it, Munster says it's important to maintain the balance of the ecosystem. Exterminating reservoir species, for instance, would be a terrible mistake. Fruit bats serve as pollinators and are crucial to jungle ecology. Plus, trying to slaughter the animals might lead to people coming into contact with infected tissue.

"Culling is not a feasible strategy, especially not in the jungle, because Africa needs those populations in the first place," he says.

Further complicating matters is development. As African nations open up to new businesses, Munster foresees new ways of disrupting wildlife and exposing humans to exotic diseases, particularly when it comes to foreign mining interests operating in the Republic of the Congo, where he studies bats. (The Republic of the Congo is the western neighbor of the Democratic Republic of the Congo, where Ebola was first discovered, and they are separate, sovereign nations.)

"So in this particular area," Munster says, while sketching a rough map on a conference room whiteboard, "what they're trying to do is, opening this stretch up to make it almost the same [size] as the road from Hamilton to Missoula, opening up pristine areas of rainforest for logging and mining… So that could potentially spark additional Ebola virus outbreaks."

The simplest and best defense at the moment, Munster says, is basic outreach and education in the communities most at risk. In the meantime, he'll continue to focus on better understanding how outbreaks come from reservoir species, as well as how they can be accelerated by the realities of modern life.

"That's what we saw with that case in Texas—everybody's a plane ride away," he says of an incident last September when a Dallas man died of Ebola fever after returning from a trip to Liberia.

The likelihood of another rare disease hitching a plane ride also bothers infectious disease specialist Risi. Ebola may seem like it's another continent's problem, even after last year's scare, but all it takes is one series of events for it to hit close to home. He cites the lessons of legendary infectious disease doctor Rene Dubos, who coined the term "think globally, act locally."

"Everything we do locally has an international impact," Risi says, "whether that's what we eat, whether we vaccinate our children or not, and provincialism, I think, is the major weakness in the American mindset."

Risi also says it's alarming to have observed first-hand how ill-equipped many countries are for dealing with major epidemics—especially combined with how many new diseases are discovered annually. New, lethal pathogens hit poor and densely populated communities the hardest, and the global population is only growing. It all adds up to a worrying set of circumstances.

"I have a lot of faith in medical science, and in vaccine development and treatments, but what keeps me up at night is the increasing disparity in health care that we can offer in developed parts of the world and what we can offer in places like Sierra Leone, Guinea and Liberia," he says.

He's at least encouraged by how the World Health Organization formed a more robust infrastructure in response to the Ebola crisis.

"This should never have gotten so out of control," he says. "And hopefully the next outbreak, we'll be much better able to control it before it gets bad."

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Dr. Peter Keith Murray (born 1946)

CSIRO online encyclopedia / Entry for "Keith Murray – Head of AAHL"
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Wikipedia 🌐 NONE

- **Born** May 18, 1946 - ([HL006Y][GDrive] / [HL006Z][GDrive])

Resume - (2006, estimated)

Source : [HL0070][GDrive]

Dr Peter Keith Murray Peter Keith Murray BVMS(Glasgow) PhD(Glasgow) MRCVS FASM, has had a distinguished international career in veterinary science as the leader of the key national government animal health diagnostic laboratories in the United Kingdom, Australia, and the United States. During his appointment as Head of the CSIRO Australian Animal Health Laboratory at Geelong between 1989 and 1998, Keith Murray was a Professorial Associate in the Faculty of Veterinary Science, and made important contributions as a member of Faculty, and facilitator of research collaborations. After graduating in veterinary science from the University of Glasgow in 1969 Keith Murray spent two years as a lecturer teaching clinical veterinary medicine at the University of Nairobi, School of Veterinary Medicine, Kabete, Kenya, and commenced research on the pathogenesis of Haemonchus contortus known as the Barber's Pole Worm in sheep. He then returned to Glasgow as a research fellow and commenced research on the immunology and pathogenesis of African trypanosomiasis, also known as sleeping sickness in humans. In 1974 he returned to Africa as leader of a Rockefeller Foundation funded research project on trypanosomiasis in tolerant and resistant breeds of cattle at the Medical Research Council Laboratories at Faraja in Gambia. This research led to a position at the Merck, Sharp and Dohme Research Laboratories in Rahway, New Jersey in the United States and the discovery of novel therapeutics for African trypanosomiasis and trichomoniasis. In 1982 he was appointed Director of the Departments of Immunoparasitology and Experimental Pathology at the Merk, Sharp and Dohme Research Laboratories. His research team developed molecular vaccines for poultry coccidiosis and showed that these could be effective to prevent this economically important infection. Keith Murray was appointed Head of the Division of Immunology and Pathology and the Institute for Animal Health, Pirbright Laboratory in the United Kingdom in 1986. Here he led research on exotic virus diseases of livestock, particularly foot and mouth disease, African swine fever, rinderpest, and equine herpes virus infection, including the further development of molecular vaccines. Keith Murray was recruited to lead the CSIRO Australian Animal Health Laboratory at Geelong in 1989 as the second Head of this national laboratory which opened in 1985. From 1989 to 1998 the laboratory developed as a major international facility under his leadership with outstanding microbiological security status, and one of the world's major reference laboratories for animal disease diagnosis. In 1996, Keith Murray was awarded with the CSIRO Chairman's Medal, which recognised the best CSIRO research in 1994/5, for leading the team which investigated the outbreak of Acute Respiratory Syndrome and discovering a novel virus, the Hendra virus. This virus was shown to be carried by fruit bats, infected horses, and was able to be transmitted to humans with fatal outcomes. This work was recognized internationally for the speed, the accuracy, and the quality of the research. Keith Murray was recruited to become the Center Director of the United States Department of Agriculture National Animal Disease Center at Ames Iowa from 1998 to 2004. This is the United States Federal Government's largest animal health research facility. Keith Murray re-organised the laboratory's research programs, enhanced biosecurity and biosafety, and led the efforts that secured funding of $US460 million to build a new national facility for animal health research and diagnosis at Iowa that will be completed by 2010.

In recognition of his substantial contribution to international veterinary science, Peter Keith Murray is nominated for the award of Doctor of Veterinary Science honoris causa.

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https://www.eoas.info/biogs/P005024b.htm

Born

18 May 1946

Scotland

Occupation

Immunoparasitologist, Parasitologist, Veterinary scientist and Veterinary surgeon

Summary

Dr Peter Keith Murray is an internationally renowned veterinary scientist. He has directed national animal health laboratories in England, Australia and the United States.

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Details

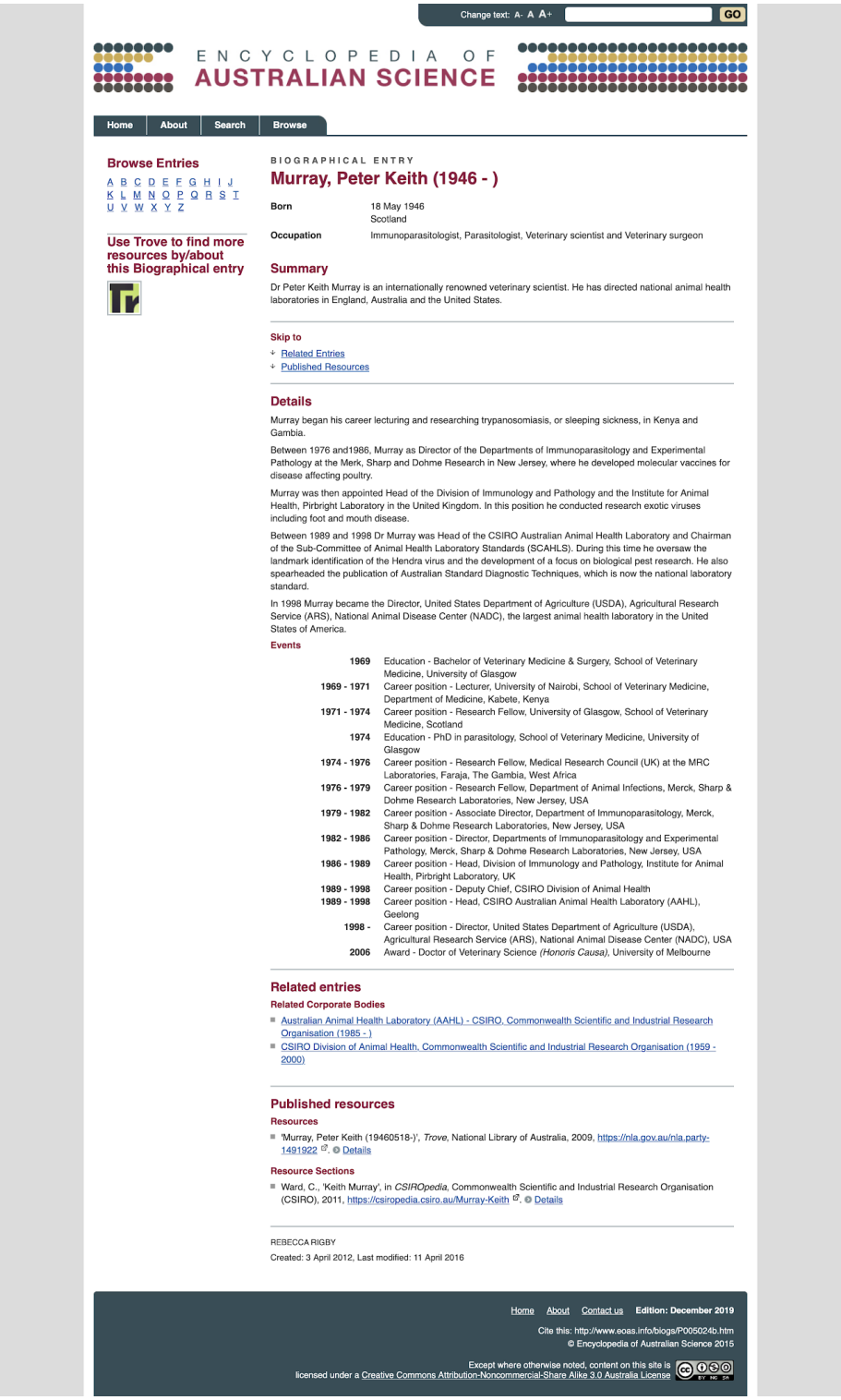
Murray began his career lecturing and researching trypanosomiasis, or sleeping sickness, in Kenya and Gambia.

Between 1976 and1986, Murray as Director of the Departments of Immunoparasitology and Experimental Pathology at the Merk, Sharp and Dohme Research in New Jersey, where he developed molecular vaccines for disease affecting poultry.

Murray was then appointed Head of the Division of Immunology and Pathology and the Institute for Animal Health, Pirbright Laboratory in the United Kingdom. In this position he conducted research exotic viruses including foot and mouth disease.

Between 1989 and 1998 Dr Murray was Head of the CSIRO Australian Animal Health Laboratory and Chairman of the Sub-Committee of Animal Health Laboratory Standards (SCAHLS). **During this time he oversaw the landmark identification of the Hendra virus and the development of a focus on biological pest research.** He also spearheaded the publication of Australian Standard Diagnostic Techniques, which is now the national laboratory standard.

In 1998 Murray became the Director, United States Department of Agriculture (USDA), Agricultural Research Service (ARS), National Animal Disease Center (NADC), the largest animal health laboratory in the United States of America.



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BIOGRAPHICAL ENTRY

Murray, Peter Keith (1946 -)

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Events

1969	Education - Bachelor of Veterinary Medicine & Surgery, School of Veterinary Medicine, University of Glasgow
1969 - 1971	Career position - Lecturer, University of Nairobi, School of Veterinary Medicine, Department of Medicine, Kabete, Kenya
1971 - 1974	Career position - Research Fellow, University of Glasgow, School of Veterinary Medicine, Scotland
1974	Education - PhD in parasitology, School of Veterinary Medicine, University of Glasgow
1974 - 1976	Career position - Research Fellow, Medical Research Council (UK) at the MRC Laboratories, Faraja, The Gambia, West Africa
1976 - 1979	Career position - Research Fellow, Department of Animal Infections, Merck, Sharp & Dohme Research Laboratories, New Jersey, USA
1979 - 1982	Career position - Associate Director, Department of Immunoparasitology, Merck, Sharp & Dohme Research Laboratories, New Jersey, USA
1982 - 1986	Career position - Director, Departments of Immunoparasitology and Experimental Pathology, Merck, Sharp & Dohme Research Laboratories, New Jersey, USA
1986 - 1989	Career position - Head, Division of Immunology and Pathology, Institute for Animal Health, Pirbright Laboratory, UK
1989 - 1998	Career position - Deputy Chief, CSIRO Division of Animal Health
1989 - 1998	Career position - Head, CSIRO Australian Animal Health Laboratory (AAHL), Geelong
1998 -	Career position - Director, United States Department of Agriculture (USDA), Agricultural Research Service (ARS), National Animal Disease Center (NADC), USA
2006	Award - Doctor of Veterinary Science *(Honoris Causa)*, University of Melbourne

Related entries

Related Corporate Bodies
- Australian Animal Health Laboratory (AAHL) - CSIRO, Commonwealth Scientific and Industrial Research Organisation (1985 -)
- CSIRO Division of Animal Health, Commonwealth Scientific and Industrial Research Organisation (1959 - 2000)

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REBECCA RIGBY

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CSIRO online encyclopedia / Entry for "Keith Murray – Head of AAHL"

By Steve GartnerOctober 20th, 2014 / Source : [HL0071][GDrive]

Biography

Keith Murray was born in Scotland on 18 May 1946.

He obtained his BVMS (Bachelor of Veterinary Medicine & Surgery) degree in 1969 from the School of Veterinary Medicine, Glasgow University and became a registered member of the Royal College of Veterinary Surgeons in 1969.

From 1969 to 1971, he was a Lecturer, University of Nairobi, School of Veterinary Medicine, Department of Medicine, Kabete, Kenya, East Africa while on secondment from the University of Glasgow. The position was funded by the UK Overseas Aid Agency and involved teaching clinical veterinary medicine to undergraduate veterinary students; running an ambulatory clinic for farm animals and emergency services for companion animals; and conducting research on the pathogenesis of Haemonchus contortus in sheep.

From 1971 to 1974, he was a Research Fellow, University of Glasgow, School of Veterinary Medicine, Scotland where he completed his PhD in parasitology.

His thesis was titled 'Immunology and Pathogenesis of African Trypanosomiasis'.

He was a Registered Veterinary Surgeon with the Veterinary Board of Victoria from 1990 to 1998. He was awarded a DVSc (honoris causa) from the University of Melbourne in 2006.

Pre CSIRO research

From 1974 to 1976, he was a Research Fellow, Medical Research Council (UK) at the MRC Laboratories, Faraja, The Gambia, West Africa. There he was Leader of a Rockefeller Foundation funded ' Glasgow University staffed ' research project on the epidemiology and pathogenesis of trypanosomiasis in tolerant and resistant breeds of cattle in The Gambia, West Africa. At this time he also provided veterinary care (unpaid) for small animals and companion animals in the local community.

From 1976 to 1979, he was a Research Fellow, Department of Animal Infections, Merck, Sharp & Dohme Research Laboratories, Rahway, New Jersey, USA where he was involved in the planning and execution of research on African trypanosomiasis and trichomoniasis. During this time his team developed improved screening methods for compounds active against Trypanosoma and Trichomonas spp. and identified several lead compounds for development as trichomonicidal agents.

From 1979 to 1982, he was Associate Director, Department of Immunoparasitology, Merck, Sharp & Dohme Research Laboratories, Rahway, New Jersey, USA responsible for the planning and execution of research in immunoparasitology, particularly on coccidiosis, trypanosomiasis, Chagas' disease, ticks and gastro-intestinal immunity, in support of the discovery of new methods for controlling parasitic disease. During this time he identified 2-substituted 5-nitroimidazole (MK436) as being a curative in models of chronic Chagas' disease; developed improved methods for the synchronous culture of Trypanosoma cruzi amastigotes and trypomastigotes; developed a murine model of chronic human Chagas' disease; developed a greatly improved tissue culture procedures for the in vitro growth of the avian coccidian parasite Eimeria tenella which has allowed greatly improved drug screening procedures and quantitative assays for the effects of immunological mediations on infection.

From 1982 to 1986, he was Director, Departments of Immunoparasitology and Experimental Pathology, Merck, Sharp & Dohme Research Laboratories, Rahway, New Jersey, USA. His major achievements were: the discovery that poultry can be vaccinated successfully against coccidiosis using sub-unit materials; the identification of protective polypeptide and non-protein antigens in Eimeria tenella; the demonstration of protective antigens in E. acervulina that cross protect against heterologous species; and obtaining patents on E. tenella protective antigens: one on E. acervulina cross-protective antigens; another on an anti-idiotype vaccine. This work established the feasibility of developing a molecular vaccine to control coccidiosis, a major poultry disease in which prophylactic drug sales then exceeded $300 million annually. Unfortunately at the time of writing (2009), this vaccine for coccidiosis remains unrealised.

From 1986 to 1989, he was Head, Division of Immunology and Pathology, Institute for Animal Health, Pirbright Laboratory, UK where his Research Interests centered around development of molecular vaccines; exotic viruses, e.g. foot and mouth disease; rinderpest; African swine fever; immunology; tropical diseases and parasitology.

At CSIRO

Keith Murray joined CSIRO in 1989 as Head, CSIRO Australian Animal Health Laboratory (AAHL), Geelong, Victoria, Australia, and Deputy Chief, CSIRO Division of Animal Health, positions he held until 1998. During this time, building on the work of his predecessor, Dr Bill Snowdon, AAHL increasingly became viewed as a major international facility with a positive national and international image.

The AAHL scientific programs were completely restructured, as were the support programs. The science effort was successfully extended into new areas which were seen to provide national good; for example, much greater use of AAHL as a national facility by collaborating medical scientists and others and the initiation of major programs for the biological control of feral pests. One consequence was a significant increase in external funds for the laboratory.

Other major initiatives included broadening the scope of collaborations in Asia and an increasing emphasis on technology transfer and training to State laboratories. In addition, the quality of expert advice provided to government, especially the Quarantine Service, was increased markedly.

Some of the research successes during his time were the discovery of the Hendra virus, a novel agent that caused fatalities in horses and humans, and the discovery of a new rabies-related virus for the first time in Australia.

While at CSIRO he served as Chairman of the Sub-Committee of Animal Health Laboratory Standards (SCAHLS). This is a technical sub-committee of the national Animal Health Committee and its members included the principal laboratory officer of each State and Territory. It provides critical support to livestock commodity export industries, among others. Under his Chairmanship they published a fifty-four chapter volume of Australian Standard Diagnostic Techniques which is now used as the national laboratory standard; implemented a National Quality Assurance Program for veterinary laboratories covering tests for more than 30 diseases of export significance and obtained Quality Accreditation to ISO 9002 and ISO 25 Standards for AAHL and most principal State animal health laboratories.

Post CSIRO

Keith Murray resigned from CSIRO in 1998 to take up the position of Director, United States Department of Agriculture (USDA), Agricultural Research Service (ARS), National Animal Disease Center (NADC), Ames, Iowa, USA. In this position he is responsible for:

- the leadership and direction of the US Federal Government's largest animal health research facility
- planning and program development of research, goals and policies for USDA-ARS, with primary responsibility for NADC
- developing and directing research programs
- managing a major high-containment research facility with responsibility for around 300 scientific and support staff
- developing and monitoring budgetary priorities within a US$30 million annual budget
- maintaining the highest levels of biosecurity and biosafety
- communicating, and fostering collaborative research, with other government agencies, universities and outside institutions.

In this position he initiated the development of a Strategic Plan for genomics research at NADC leading to the development of comprehensive resources for genomics and bioinformatics capabilities for staff and collaborators. One consequence was that NADC, in collaboration with the University of Minnesota, was the first to fully sequence the genome of M. paratuberculosis, the causative agent of Johne's Disease.

Honours and awards

Fellowships

- 1998 : Appointment to the US Government Senior Executive Service, the SES includes the top managerial, supervisory and policy positions in the executive branch of the Federal Government
- 1998 : Coopers Lecturer, selected by Coopers Animal Health Ltd to provide a series of lectures around Australia and New Zealand on molecular vaccines for animal parasites
- 1993 : Fellow of the Australian Society for Microbiology

Awards

- 2006 : Awarded an honorary Doctorate of Veterinary Science, As a person distinguished in Veterinary Science by the University of Melbourne
- 1997 : The Arnold G Weedum Award, presented by the American Biological Safety Association, In recognition of outstanding work that provides greater knowledge in the field of biological safety
- 1996 : CSIRO Chairman's Medal

Committee work

- 2004 : Chair, National Centers for Animal Health, Board of Directors
- 2004 : Selection Committee, Dean of Veterinary Medicine, Iowa State University
- 2001 – 04 : Chair, Steering Committee for the Ames Facilities Modernization Plan
- 1999 – 2002 : Member, Biological Research and Development Corporation, Scientific advisory committee
- 1992 – 95 : Member, The AAHL-Berrimah Agricultural Research Centre Joint Program Management Committee, A national project to strengthen disease preparedness across Northern Australia
- 1990 – 97 : Chairman, Animal Health Committee Sub-Committee of Animal Health Laboratory Standards, SCAHLS, The Australian national committee for establishing quality systems across the veterinary laboratory network
- 1990 – 95 : Chairman, AAHL Industry Liaison Committee, The interface committee between CSIRO-AAHL and the livestock industries
- 1990 – 92 : Chairman, Animal Health Committee Sub-Committee on Fish Health, The Australian National Committee for establishing and maintaining policy and standards for fish health
- 1989 – 98 : Member, Australian Agricultural Councils Veterinary Committee, previously Animal Health Committee, The Australian national committee for developing and implementing animal health policies and operations
- 1989 – 98 : Member, Australian Agricultural Councils Consultative Committee on Emergency Animal Diseases, The Australian national committee dealing with exotic disease emergencies

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N

A B C D E F G H I J K L M N O P Q R S T U V W X Y Z

PEOPLE (by last name / then D.o.B.)

- Lee Miller **Neff** (born 1912)
- Thomas L **Neff** (born 1943)
- William David **Neff** (born 1945)
- William Horlick **Neukom** (born 1942)
- Dr. Hideyo **Noguchi** (born 1876)
- Maximilian Irving **Nowinski** (born 1920)
- Dr. Robert Charles **Nowinski** (born 1945)

PLACES / COMPANIES / OTHER

- **National Cancer** Institute
- **National Institutes of Health**
- **National Institutes of Health Clinical Center**
- National Metal Moldings Corporation
- National Patent Development Corporation
- USS Neunzer (DE-150)
- **Nipah** Virus
- **NSFNET**
- **Nuclear** Fuel Services, Inc. (NFS)

National Cancer Institute

Wikipedia National Cancer Institute

2021-03-23-wikipedia-org-national-cancer-institute.pdf

https://en.wikipedia.org/wiki/National_Cancer_Institute

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https://drive.google.com/file/d/11MNQsXFiHhOMIrM0C0O8Cl4eVMs6qlav/view?usp=sharing

National Cancer Institute

From Wikipedia, the free encyclopedia

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Agency overview

Formed

August 5, 1937; 83 years ago

Jurisdiction

Federal government of the United States

Headquarters

Office of the Director,

31 Center Drive, Building 31, Bethesda, Maryland,

20814

Agency executive

- Norman Sharpless, Director

Parent department

United States Department of Health and Human Services

Parent agency

National Institutes of Health

Child agencies

- NCI Shady Grove Campus
- NCI at NIH Bethesda Campus
- NCI Frederick Campus

Website

Cancer.gov

Footnotes

[1][2][3][4][5]

The **National Cancer Institute** (**NCI**) coordinates the United States National Cancer Program and is part of the National Institutes of Health (NIH), which is one of

The **National Cancer Institute (NCI)** coordinates the United States National Cancer Program and is part of the National Institutes of Health (NIH), which is one of eleven agencies that are part of the U.S. Department of Health and Human Services. The NCI conducts and supports research, training, health information dissemination, and other activities related to the causes, prevention, diagnosis, and treatment of cancer; the supportive care of cancer patients and their families; and cancer survivorship.

NCI is the oldest and has the largest budget and research program of the 27 institutes and centers of the NIH. It fulfills the majority of its mission via an extramural program that provides grants for cancer research. Additionally, the National Cancer Institute has intramural research programs in Bethesda, Maryland and at the Frederick National Laboratory for Cancer Research[6] at Fort Detrick, in Frederick, Maryland. The NCI receives more than US$5 billion in funding each year.[7]

The NCI supports a nationwide network of 71 NCI-designated Cancer Centers with a dedicated focus on cancer research and treatment[8] and maintains the National Clinical Trials Network.[9]

History[edit]

Timeline[edit]

An early wooden sign for the National Cancer Institute

- August 5, 1937: President Franklin D. Roosevelt signed into law the National Cancer Institute Act (Pub. Law 75-244; 50 Stat. 559), which established the National Cancer Institute, as a division of the Public Health Service.[10][11][12][13]
- 1940: The first issue of the Journal of the National Cancer Institute was published.
- 1944: The United States Congress made the NCI an operating division of the National Institutes of Health by its passage of the Public Health Service Act. Congress later amended the Public Health Service Act with the National Cancer Act of 1971, to broaden the scope and responsibilities of the NCI "in order more effectively to carry out the national effort against cancer."
- 1955: NCI established the Clinical Trials Cooperative Group Program, which included several research networks that conducted cancer clinical research primarily under the sponsorship of NCI.
- 1957: The first cancer, choriocarcinoma, was cured with chemotherapy at NCI.
- 1960: NCI began funding government-supported cancer centers.
- 1971: President Richard Nixon converted the U.S. Army's former biological warfare facilities at Fort Detrick, Maryland, to house research activities on the causes, treatment, and prevention of cancer.
- 1971: The National Cancer Act of 1971 declares "war on cancer," establishes the National Cancer Advisory Board, and allots additional funding for cancer research.
- 1975: The Frederick National Laboratory for Cancer Research opened in Frederick, Maryland, as a Federally Funded Research and Development Center
- 1993: The NIH Revitalization Act of 1993 encourages NCI to expand its efforts in prostate cancer, breast and other cancers which primarily or solely affected women, and authorized increased appropriations.
- 1998: Establishes the Office of Cancer Complementary and Alternative Medicine to study pseudoscientific Alternative Medicine treatments for cancer
- 2009: The American Recovery and Reinvestment Act of 2009 provided US$10 billion in additional funding for the NIH; the NCI received US$1.3 billion from that amount.
- 2016: The 21st Century Cures Act increased funding for biomedical research. The "Cancer Moonshot" program promised additional support for cancer research.[14]
- On October 17, 2017, Norman Sharpless was sworn in as the 15th director of the National Cancer Institute. In April 2019, Sharpless left NCI to serve as the acting Commissioner of Food and Drugs.[15] He returned to the institute in November 2019 as director.[16]

Anti-cancer drug investigations[edit]

Alkylating agents

Cyclophosphamide

- Chlorambucil (Leukeran) (1957)
- Cyclophosphamide (Cytoxan) (1959)
- Thiotepa (1959)
- Melphalan (Alkeran) (1959) (IV in 1993)
- Streptozotocin (Zanosar) (1982)
- Ifosfamide (Ifex) (1988)

Antimetabolites

- Mercaptopurine (1953)
- Methotrexate (1953)
- Thioguanine (1966)
- Cytosine arabinoside (Ara-C) (1969)
- Floxuridine (FUDR) (1970)
- Fludarabine phosphate (1991)
- Pentostatin (1991)
- Chlorodeoxyadenosine (1992)

Plant alkaloids and antibiotics

Vincristine

- Vincristine (Oncovin) (1963)

- Actinomycin D (Cosmegen) (1964)
- Mithramycin (Mithracin) (1970)
- Bleomycin (Blenoxane) (1973)
- Doxorubicin (Adriamycin) (1974)
- Mitomycin C (Mutamycin) (1974)
- L-Asparaginase (Elspar) (1978)
- Daunomycin (Cerubidine) (1979)
- VP-16-213 (Etoposide) (1983)
- VM-26 (Teniposide) (1992)
- Taxol (Paclitaxel) (1992)

Synthetic drugs

Carboplatin

- Hydroxyurea (Hydrea) (1967)
- Procarbazine (Matulane) (1969)
- O, P'-DDD (Lysodren, Mitotane) (1970)
- Dacarbazine (DTIC) (1975)
- CCNU (Lomustine) (1976)
- BCNU (Carmustine) (1977)
- Cis-diamminedichloroplatinum (Cisplatin) (1978)
- Mitoxantrone (Novantrone) (1988)
- Carboplatin (Paraplatin) (1989)
- Levamisole (Ergamisol) (1990)
- Hexamethylmelamine (Hexalen) (1990)
- All-trans retinoid acid (Vesanoid) (1995)
- Porfimer sodium (Photofrin) (1995)

Hormones and steroids

- DES (1950)
- Prednisone (1953)
- Fluoxymesterone (Halotestin) (1958)
- Dromostanolone (Drolban) (1961)
- Testolactone (Teslac) (1970)
- Methyl prednisolone
- Prednisolone
- Zoladex (1989)

Biologicals

- Alpha interferon (Intron A, Roferon-A) (1986)
- BCG (TheraCys, TICE) (1990)
- G-CSF (1991)
- GM-CSF (1991)
- Interleukin 2 (Proleukin) (1992)

Organization[edit]

The NCI is divided into several divisions and centers.[17]

Intramural[edit]

- Center for Cancer Research

  The CCR includes approximately 250 internal NCI research groups in Frederick and Bethesda.[18]

- Division of Cancer Epidemiology and Genetics

  DCEG is divided into the Epidemiology and Biostatistics Program and the Human Genetics Program.[19]

Extramural[edit]

- Division of Cancer Biology

  DCB oversees approximately 2000 grants per year in the areas of cancer cell biology; cancer immunology, hematology, and etiology; DNA and chromosome aberrations; structural biology and molecular applications; tumor biology and microenvironment; and tumor metastasis.[20] "Special Research Programs" falling under the aegis of the DCB include: Physical Sciences-Oncology Network, Cancer Systems Biology Consortium, Oncology Models Forum, Barrett's Esophagus Translational Research Network, New Approaches to Synthetic Lethality for Mutant KRAS-Dependent Cancers, Molecular and Cellular Characterization of Screen-Detected Lesions, Fusion Oncoproteins in Childhood Cancers, and Cancer Tissue Engineering Collaborative.[21]

- Division of Cancer Control and Population Sciences
- Division of Cancer Prevention
- Division of Cancer Treatment and Diagnosis

  DCTD supports eight research programs: The Biometric Research Program, The Cancer Diagnosis Program, The Cancer Imaging Program, The Cancer Therapy Evaluation Program, The Developmental Therapeutics Program, The Radiation Research Program, The Translational Research Program, and The Office of Cancer Complementary and Alternative Medicine.[22]

- Division of Extramural Activities

  DEA processes and supports the thousands of grant applications NCI receives each year and compiles reports on the progress of research funded by the NCI's programs.[23]

Office of the director[edit]

- Center for Biomedical Informatics and Information Technology
- Center for Cancer Genomics

  CCG was created in 2011 and is responsible for management of The Cancer Genome Atlas and cancer genomics initiatives.

- Center for Cancer Training
- Center for Global Health
- Center for Strategic Scientific Initiatives

  In the 1990s, the Unconventional Innovation Program was created to integrate interdisciplinary technology research with biological applications. It was reorganized in 2004 as the CSSI.[24]

- Center to Reduce Cancer Health Disparities
- Center for Research Strategy
- Coordinating Center for Clinical Trials
- Technology Transfer Center

Programs[edit]

NCI-designated Cancer Centers[edit]

The NCI-designated Cancer Centers are one of the primary arms in the NCI's mission in supporting cancer research. There are currently 69 so-designated centers; 13 clinical cancer centers, 49 comprehensive cancer centers, and 7 basic laboratory cancer centers. NCI supports these centers with grant funding in the form of P30 Cancer Center Support Grants to support shared research resources and interdisciplinary programs. Additionally, faculty at the cancer centers receive approximately 75% of the grant funding awarded by the NCI to individual investigators.[8][25]

The NCI cancer centers program was introduced in 1971 with 15 participating institutions.[26]

National Clinical Trials Network[edit]

The NCTN was formed in 2014, from the Cooperative Group program to modernize the existing system to support precision medicine clinical trials. With precision medicine, many patients must be screened to determine eligibility for treatments in development.

Lead Academic Participating Sites (LAPS) were chosen at 30 academic institutions for their ability to conduct clinical trials and screen a large number of participants and awarded grants to support the infrastructure and administration required for clinical trials. Most LAPS grant recipients are also NCI-designated cancer centers.[9] NCTN also stores surgical tissue from patients in a nationwide network of tissue banks at various universities.

Developmental Therapeutics Program[edit]

The NCI Development Therapeutics Program (DTP) provides services and resources to the academic and private-sector research communities worldwide to facilitate the discovery and development of new cancer therapeutic agents.[27]

Under the label "Discovery & Development Services" several services are offered, among them the NCI-60 human cancer cell line screen and the Molecular Target Program.[28]

In the Molecular Target Program thousands of molecular targets have been measured in the NCI panel of 60 human tumor cell lines. Measurements include protein levels, RNA measurements, mutation status and enzyme activity levels.[29]

NCI-60 Human Tumor Cell Lines Screen[edit]

The evolution of strategies at the National Cancer Institute (NCI) illustrates the changes in screening that have resulted from advances in cancer biology. The Developmental Therapeutics Program (DTP) operates a tiered anti-cancer compound screening program with the goal of identifying novel chemical leads and biological mechanisms. The DTP screen is a three phase screen which includes: an initial screen which first involves a single dose cytotoxicity screen with the 60 cell line assay. Those passing certain thresholds are subjected to a 5 dose screen of the same 60 cell-line panel to determine a more detailed picture of the biological activity. A second phase screen establishes the maximum tolerable dosage and involves in vivo examination of tumor regression using the hollow fiber assay. The third phase of the study is the human tumor xenograft evaluation.

Active compounds are selected for testing based on several criteria: disease type specificity in the in vitro assay, unique structure, potency, and demonstration of a unique pattern of cellular cytotoxicity or cytostasis, indicating a unique mechanism of action or intracellular target.

A high correlation of cytotoxicity with compounds of known biological mechanism is often predictive of the drugs mechanism of action and thus a tool to aid in the drug development and testing. It also tells if there is any unique response of the drug which is not similar to any of the standard prototype compounds in the NCI database.

Leadership[edit]

Director	Tenure	Notes
Carl Voegtlin[30]	1938–1943	
Roscoe Roy Spencer	1943–1947	
Leonard Andrew Scheele	1947–1948	Served as the seventh Surgeon General of the United States from 1948 to 1956.
John Roderick Heller	1948–1960	
Kenneth Millo Endicott	1960–1969	
Carl Gwin Baker	1970–1972	
Frank Joseph Rauscher, Jr.	1972–1976	
Arthur Canfield Upton	1977–1980	
Vincent T. DeVita, Jr.	1980–1988	
Samuel Broder	1988–1995	
Richard D. Klausner	1995–2001	11th Director, left to become President of the Case Institute of Health, Science, and Technology and later Executive Director of Global Health for the Bill & Melinda Gates Foundation.[31]
Andrew C. von Eschenbach	2002–2006	12th Director, served from 2001 to 2006 before transitioning to a role as Commissioner of Food and Drugs.[32][33]
John E. Niederhuber		

2006–2010

13th Director of the NCI, was nominated by President George W. Bush.[34]

Harold Varmus

2010–2015

Co-winner of the Nobel Prize for studies of the genetic basis of cancer.[35] He was director of the National Institutes of Health from 1993 to 1999.

Norman E. Sharpless

October 2017–Present

15th Director of the NCI.[36][37] Transitioned to acting Commissioner of Food and Drugs in April 2019 and returned to NCI in November 2019.[38]

Notable NCI faculty[edit]

- Amy Berrington de González, senior investigator and radiation epidemiology branch chief.
- Kathryn Zoon, Principal Deputy Director, 2002 to 2004.
- Michael B. Sporn was the Chief of the Laboratory of Chemoprevention, 1978 to 1995.
- Susan Gottesman
- Sankar Adhya
- Ira Pastan
- Elaine Jaffe
- Michael Gottesman
- Robert C. Gallo
- Michael Potter
- Sandra Wolin
- Charles J. Sherr
- Louis M. Staudt
- Gordon Zubrod
- Steven Rosenberg
- Frank Arguello
- Alfred Singer, Chief of the Experimental Immunology Branch of the National Cancer Institute

See also[edit]

- American Cancer Society Center
- caBIG, the Cancer BioInformatics Grid, a National Cancer Institute (USA) initiative to link cancer researchers and their data
- Cancer Information Service (CIS)
- European Organisation for Research and Treatment of Cancer (EORTC)
- *Journal of the National Cancer Institute*
- National Comprehensive Cancer Network
- NCI-designated Cancer Center

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1937 (April 06)

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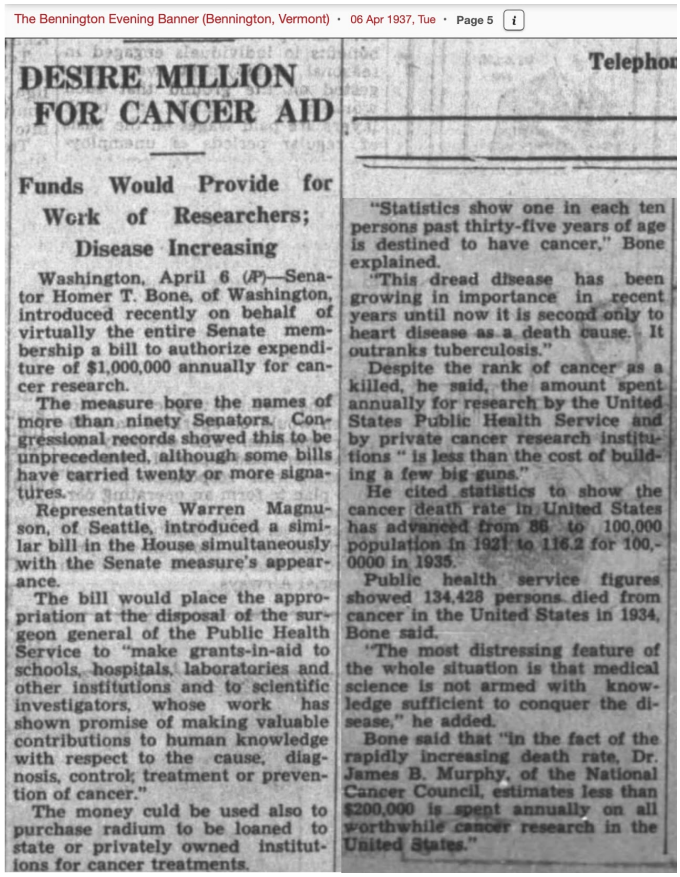

The Bennington Evening Banner (Bennington, Vermont) · 06 Apr 1937, Tue · Page 5

DESIRE MILLION FOR CANCER AID

Funds Would Provide for Work of Researchers; Disease Increasing

Washington, April 6 (AP)—Senator Homer T. Bone, of Washington, introduced recently on behalf of virtually the entire Senate membership a bill to authorize expenditure of $1,000,000 annually for cancer research.

The measure bore the names of more than ninety Senators. Congressional records showed this to be unprecedented, although some bills have carried twenty or more signatures.

Representative Warren Magnuson, of Seattle, introduced a similar bill in the House simultaneously with the Senate measure's appearance.

The bill would place the appropriation at the disposal of the surgeon general of the Public Health Service to "make grants-in-aid to schools, hospitals, laboratories and other institutions and to scientific investigators, whose work has shown promise of making valuable contributions to human knowledge with respect to the cause, diagnosis, control, treatment or prevention of cancer."

The money culd be used also to purchase radium to be loaned to state or privately owned institutions for cancer treatments.

Telephon

"Statistics show one in each ten persons past thirty-five years of age is destined to have cancer," Bone explained.

"This dread disease has been growing in importance in recent years until now it is second only to heart disease as a death cause. It outranks tuberculosis."

Despite the rank of cancer as a killed, he said, the amount spent annually for research by the United States Public Health Service and by private cancer research institutions " is less than the cost of building a few big guns."

He cited statistics to show the cancer death rate in United States has advanced from 86 to 100,000 population in 1921 to 116.2 for 100,-0000 in 1935.

Public health service figures showed 134,428 persons died from cancer in the United States in 1934, Bone said.

"The most distressing feature of the whole situation is that medical science is not armed with knowledge sufficient to conquer the disease," he added.

Bone said that "in the fact of the rapidly increasing death rate, Dr. James B. Murphy, of the National Cancer Council, estimates less than $200,000 is spent annually on all worthwhile cancer research in the United States."

1937 (Sep 19)

https://www.newspapers.com/image/457950512/?terms=%22national%20cancer%22&match=1

1937-09-19-the-san-francisco-examiner-pg-31.jpg

The United States Public Health Service Speaks:

Dr. L. R. THOMPSON, M. D.,
Asst. Surgeon General, U. S Public Health Service

Who Prophecies:

'Wider Diffusion of Knowledge to All People Will Save 28,000 Lives Every Year'

'Proposed National Cancer Institute Will Provide Maximum Study of Disease Which Takes Annual U.S. Toll of 140,000'

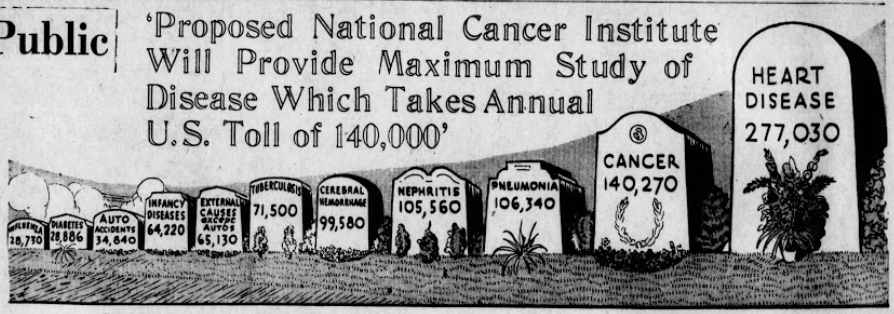

CHART SHOWING ELEVEN LEADING CAUSES OF DEATH

Increase in Deaths from Dread Ailment Could Be Retarded

By Dr. L. R. THOMPSON, M.D.,
Asst. Surgeon General, U. S. Public Health Service

CANCER is the second cause of death in the United States today, with only heart diseases outranking it. Last year approximately 140,000 persons died of cancer in this country, and there are 400,000 existing cases of cancer currently.

Unlike diphtheria, tuberculosis and scarlet fever, whose death rate is constantly declining, the death rate from cancer is increasing.

By 1960, according to tabulations based on our present figures, there will be a 50 per cent increase in deaths from cancer although there will be no change in the basic prevalence of the disease, because we will have a larger proportion of the population living long enough to die from the disease, which is primarily an ailment of older people.

Surely a disease which takes such a sweeping toll, and against which preventative measures are virtually useless, (since the cause of cancer may be said to be unknown), merits the maximum amount of research which can be given it.

It is the purpose of the proposed National Cancer Institute to gather, co-ordinate, and then disseminate all the existing information with relation to cancer which is available, or which will come to light as research and investigation progress.

Extensive Laboratory Investigation and Research of Cancer Causes and Treatments Will Be Fostered

Through appropriated funds, once the Institute itself is erected, equipped and staffed, the United States Government through the Public Health Service will be able to conduct experiments and investigations relating to the cause, diagnosis, and treatment of cancer, and assist and foster similar research activities by other agencies, both public and private, by the distribution of funds and the co-operation of personnel.

Laboratory research in the fields wherein lie present methods of investigation will be extensively carried out.

This includes the fields of pathology, radiology, advanced methods of cancer surgery, and research studies in bio-chemistry and bio-physics with their relation to the cancer problem.

While the National Cancer Institute, as created in the Public Health Service, comes under the jurisdiction of the Surgeon General, the bill signed by the President for the creation of a National Advisory Cancer Council of six members, to be appointed by the Surgeon General with the approval of the Secretary of the Treasury, and with the Surgeon General, ex-officio, as chairman.

These men, selected from leading medical or scientific authorities who are outstanding in the study, diagnosis or treatment of cancer in the United States, bring to the Institute the finest administrative and scientific minds available for the guidance of the Institute.

The people of the United States can look to them confidently for the most advanced thinking and ablest advice obtainable.

Two important functions of the National Cancer Institute, as provided in the bill, will be in relation to radium and in the training of personnel.

DR. THOMAS PARRAN, Jr., of New York, Surgeon General, U. S. Public Health Service. International News Photo.

Ablest Advice Obtainable From Finest Scientific Minds Will Aid the Entire Nation

With the approval of the Secretary of the Treasury, the Surgeon General is authorized to purchase radium from time to time, and then make that radium available on loan to institutions engaged in the study of the cause, prevention, methods of diagnosis or treatment of cancer, or for the actual treatment of cancer.

There is, at present, in this country, only about 50 per cent of the radium needed for such research and treatment, and this function of the National Cancer Institute is of inestimable value.

The provision for the training of such persons as the Surgeon General considers properly equipped (by reason of previous technical training) in all technical matters relating to diagnosis and treatment of cancer, is also of paramount importance.

Leading cancer authorities have stated that, if all the knowledge which we now have on the subject of cancer were made available to all the people, 20 per cent of the deaths now occurring from the disease could be prevented.

The training of personnel, whose future function will be mainly utilizing the knowledge they have gained, and making it available to larger numbers of sufferers from cancer, should substantially aid in the reduction of fatalities.

It was brought out when the original plans were formulated for the establishment of the National Cancer Institute that its primary object was to be research and the dissemination of information which results from these research activities.

Correct Diagnosis of This Dread Disease in Its Earliest Stages Is the Goal of the Institute

Clarifying the stipulation further, it should be stated that the establishment of no hospital or working cancer clinic is contemplated in relation to the Institute. There is a very definite need, on the part of hospitals already existing, for the services of trained scientific personnel, money to further their own research and enlarge their own cancer laboratories, and for radium for the treatment of cancerous growths.

With its determined policy to augment research and support worthwhile and promising cancer studies already being carried on by other organizations or institutions, the Institute will attack this problem solely from that angle.

What the establishment of this National Cancer Institute can mean to the people of the United States is not by any means limited to those now suffering from cancer.

The correct diagnosis of the disease in its early stages, before it has made such inroads that death can only be postponed, has always been and is at the present time a critical handicap in the prevention of fatalities.

The advantage to the people in having a centralized point of training, where men going into the field are given the latest available data and the most up-to-date courses in how to recognize the symptoms of cancer quickly and surely, is an advantage of OVERWHELMING VALUE IN THE CONCERTED WARFARE AGAINST THE DISEASE.

Men Are Better Drivers Than Women ! ! !

Thousands of Tests in 35 Cities In Widely Separated States Cited to Prove It

By BURTON W. MARSH,
Director of Safety and Traffic Engineering, American Automobile Association.

DRIVER tests in thirty-five cities in widely separated States given to thousands of men and women in the twenty to forty age group have developed some important information regarding physical qualifications that affect driving ability.

Outstanding is the fact that the female of the species is losing ground as a holder of "better driving" honors and the tests indicate that her superiority at the wheel is only a legend.

Men as a whole have better vision, all-important in good driving, but feminine supremacy is maintained in certain fields of vision. The man at the wheel is quicker to spot a friend a block away, but had better be careful in signaling for a "night out" if the wife is along, because women are more alert in the traditional practice of seeing from the corner of the eye. Women are more apt to see a car approaching from the side.

Women Spot Colors Quicker

The only other point on which women scored was in ability to better distinguish colors. They are quicker to spot a green light when the way is clear. More men tend to have a dominant eye, which might explain that "look where you are going" call on the highways.

Men are not as easily blinded by glare and recover more quickly from blurred vision caused by glaring lights. This is particularly important in night driving.

The average man tested required 5.55 seconds to recover from a bright light, while the average woman required 7.47 seconds.

Men's Hearing More Accurate

Men as a rule hear better than women, are not as much affected by sudden noise and are better able to concentrate on the job at hand. Here is evidence that men are freer from emotional instability, a scoring point in driver qualifications.

Men react more quickly to emergencies and are better judges of distance, the latter of great importance in passing other vehicles and in parking. For example, in a test with a different reaction required for each of three signals coming unexpectedly, the driver not knowing which would come next, the average time for men was .573 seconds and for women .605 seconds.

This difference would mean that traveling at sixty miles per hour the average woman would go three feet further than the average man before she got her foot on the brake.

The variation between men and women in judging distance was not so great. Men would misjudge distance equivalent to thirty-seven feet on the highway, while the average woman would misjudge the distance thirty-eight and a half feet.

It must be conceded that through common sense and natural caution women drivers unquestionably offset the advantages shown by men drivers in the tests, which would account for their general record for good driving. But this is an article on the tests alone and does not allow for other advantages or disadvantages. Science works only on the facts at hand.

Slight Edge For the Men

It was apparent from the tests records that women can rightly point to some advantages, for they claimed to drive on the average 44.7 miles per hour, while the men claimed to drive an average of 47.4 miles per hour on the open road. Women say they drive only about half as many miles per year as men, the latter claiming to drive on the average 15,790 miles annually.

Experience at the wheel is another factor. All results indicated that men learn to drive at a slightly younger age than women. For the age group considered, the average man had been driving 11.3 years and the average woman 10.1 years.

Tests Held in 35 Cities

Putting all the results together, however, it would seem that the men have a slight edge on the women as far as physical characteristics measured by the driver tests are concerned. In some instances the differences are small; the large number of records studied make it quite probable that the results are quite typical of men and women drivers in general.

Drivers in THIRTY-FIVE CITIES in WIDELY SCATTERED STATES were tested with the scientific apparatus developed by leaders in the field of driver testing and assembled as a mobile unit by the American Automobile Association.

Approximately a year has been required to make the tests and study the records of drivers.

Tests Helpful In Many Ways

These records offer valuable experience data for traffic specialists and engineers concerned with traffic safety, which will be helpful in studying driver characteristics. It brings much nearer the day when the driver problem can be solved.

And whatever may be shown that has a bearing on the age-old controversy between man and woman over their respective superiorities at the wheel, the tests are a serious business, representing the newest aid of science in the effort to help bring about better driving conditions.

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National Institutes of Health

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Introduction

The NIH traces its roots to 1887, when a one-room laboratory was created within the Marine Hospital Service (MHS), predecessor agency to the U.S. Public Health Service (PHS). The MHS had been established in 1798 to provide for the medical care of merchant seamen. One clerk in the Treasury Department collected twenty cents per month from the wages of each seaman to cover costs at a series of contract hospitals. In the 1880s, the MHS had been charged by Congress with examining passengers on arriving ships for clinical signs of infectious diseases, especially for the dreaded diseases cholera and yellow fever, in order to prevent epidemics. During the 1870s and 1880s, moreover, scientists in Europe presented compelling evidence that microscopic organisms were the causes of several infectious diseases. In 1884, for example, Koch described a comma-shaped bacterium as the cause of cholera.

Officials of the MHS followed these developments with great interest. In 1887, they authorized Joseph J. Kinyoun, a young MHS physician trained in the new bacteriological methods, to set up a one-room laboratory in the Marine Hospital at Stapleton, Staten Island, New York. Kinyoun called this facility a "laboratory of hygiene" in imitation of German facilities and to indicate that the laboratory's purpose was to serve the public's health. Within a few months, Kinyoun had identified the cholera bacillus in suspicious cases and used his Zeiss microscope to demonstrate it to his colleagues as confirmation of their clinical diagnoses. "As the symptoms . . . were by no means well defined," he wrote, "the examinations were confirmatory evidence of the value of bacteria cultivation as a means of positive diagnosis."

The move to Washington

In 1891, the Hygienic Laboratory, as it came to be called, was moved to Washington, D.C., near the U.S. Capitol. For the next decade, Kinyoun remained the sole full-time staff member. He inaugurated a training program in bacteriology for MHS officers and conducted numerous tests of water purity and air pollution for the District of Columbia and the Congress. In 1901, the laboratory was belatedly recognized in law when Congress authorized $35,000 for construction of a new building in which the laboratory could investigate "infectious and contagious diseases and matters pertaining to the public health." Occupied in 1904, this building was located at 25th and E Streets, N. W., in Washington, D.C. The founding legislation for the NIH, therefore, resides in a routine supplemental appropriations act. Many other scientific agencies of the federal government were also created via "money bills." Congress was not convinced that such bureaucracies would prove demonstratively useful, so it chose to preserve the option of divesting the government of them simply by not renewing their funding.

In 1902 two acts contributed significantly to the emergence of the Hygienic Laboratory as a center for research within the federal government. The first reorganized the MHS and renamed it the Public Health and Marine Hospital Service (PH-MHS), moving it toward its status as the chief U.S. public health agency. More importantly for the Hygienic Laboratory, the act launched a formal program of research by designating the pathological and bacteriological work as the Division of Pathology and Bacteriology and by creating three new components that represented the most fruitful areas for research at that time: the Divisions of Chemistry, Pharmacology, and Zoology. The importance of these new programs was underscored by the provision that the PH-MHS could hire scientist researchers with Ph.D.'s to head them. Up until this time, the professional staff had been limited to physicians.

Biologics

The Biologics Control Act was a second piece of legislation enacted in 1902 that had major consequences for the Hygienic Laboratory. It charged the laboratory with regulating the production of vaccines and antitoxins, thus making it a regulatory agency four years before passage of the better-known 1906 Pure Food and Drugs Act. The danger posed by biological products-technologies that had emerged from bacteriologic discoveries—resulted from their production in animals and their administration by injection. Diphtheria antitoxin, for example, was made by inoculating horses with increasingly concentrated doses of diphtheria bacteria, then bleeding the animals to obtain their blood serum, which was bottled as antitoxin. When injected into the body of a patient suffering from diphtheria, the antibodies in the horse serum neutralized the toxin causing the patient's symptoms. Possibilities for contamination lurked at every stage of the antitoxin production process, and the amount of horse serum necessary to cure was initially undefined. In 1901, thirteen children in St. Louis died after receiving diphtheria antitoxin contaminated with tetanus spores. This tragedy spurred Congress into passing the Biologics Control Act. Between 1903 and 1907 standards were established and licenses issued to pharmaceutical firms for making smallpox and rabies vaccines, diphtheria and tetanus antitoxins, various other antibacterial antisera, thyroidectomized goat serum, and horse serum. The research required to set standards led investigators into new fields, such as immunology, in order to understand the sudden deaths that sometimes followed repeated injections of biologics prepared in foreign-protein media such as horse serum. (Note: In 1972, responsibility for regulation of biologics was transferred to the Food and Drug Administration.)

Drug Administration.)

In 1912 another Service reorganization act shortened the name of the PH-MHS to Public Health Service (PHS). This brief act also authorized the laboratory to conduct research into non contagious diseases and into the pollution of streams and lakes in the United States. Under this law, PHS officer Joseph Goldberger in 1914 conducted an epidemiological study that identified the cause of the disease pellagra, a scourge of poor Southerners, as a dietary deficiency and brewers' yeast as a cheap and widely available cure. Also, Earl B. Phelps, then director of the Division of Chemistry, described the behavior of oxygen in water that fostered better understanding of the effects of pollution in lakes and rivers.

WWI and the Ransdell Act of 1930

During World War I, the Public Health Service attended primarily to sanitation of areas around military bases in the U.S. The staff of the Hygienic Laboratory traced the cause of anthrax outbreaks among the troops to contaminated shaving brushes and discovered that the bunion pads widely used to cover smallpox vaccinations could harbor tetanus spores. In 1916, the director of the laboratory, Dr. George McCoy , hired the laboratory's first female bacteriologist, Dr. Ida Bengtson. When the 1918 influenza pandemic struck Washington, physicians from the laboratory were pressed into service treating patients in the District of Columbia because so many local doctors fell ill.

In 1930, the Ransdell Act changed the name of the Hygienic Laboratory to National Institute (singular) of Health (NIH) and authorized the establishment of fellowships for research into basic biological and medical problems. The roots of this act extended to 1918, when chemists who had worked with the Chemical Warfare Service in World War I sought to establish an institute in the private sector to apply fundamental knowledge in chemistry to problems of medicine. In 1926, after no philanthropic patron could be found to endow such an institute, the proponents joined with Louisiana Senator Joseph E. Ransdell to seek federal sponsorship. **The truncated form in which the bill was finally enacted in 1930 reflected the harsh economic realities imposed by the Great Depression. Nonetheless, this legislation marked a change in the attitude of the U.S. scientific community toward public funding of medical researc**h.

NCI

Seven years later, the National Cancer Institute (NCI) was created with sponsorship from every Senator in Congress. This unusual agreement among lawmakers revealed growing concern in the nation about cancer and foreshadowed the categorical-disease structure of NIH that has characterized the agency since that time. The NCI was authorized to award grants to nonfederal scientists for research on cancer and to fund fellowships at NCI for young researchers. Under the original legislation, NCI's administrative relationship to NIH was not specified. **A research facility was constructed, however, as "Building 6" of a new NIH campus in Bethesda, Maryland, that was occupied between 1938 and 1941. In the 1944 PHS legislation, NCI was specifically designated as a component of NIH**.

During World War II, the NIH focused almost entirely on war-related problems. At the outset, a Division of Public Health Methods worked with the Selective Service to analyze why 43 percent of potential inductees were unfit for general military service and 28 percent were unfit for any military service. The most common cause of rejection, it was found, was defective teeth. Many of those rejected also had syphilis. **The Division of Industrial Hygiene collaborated with the Divisions of Pathology and Pharmacology to conduct research on hazardous substances and conditions to protect workers in war industries. The investigators examined new explosives, developed methods to determine the amount of lead or TNT in urine so that workers could be tested for undue exposure, and demonstrated the affinity of lead for bone tissue. Other investigators determined that the vapors of methyl, ethyl, isopropyl, and butyl alcohol were acutely toxic to workers.** This work improved conditions of employment for more than 300,000 workers in defense industries.

World War II Research and the Grants Program

Vaccines and therapies to deal with tropical diseases were also critically important to the war effort. At the NIH's Rocky Mountain Laboratory in Hamilton, Montana, yellow fever and typhus vaccines were prepared for military forces. In Bethesda as well as through grants to investigators at universities a synthetic substitute for quinine was sought to treat malaria. The Division of Biologics investigated the fever-producing properties of bacteria which might appear as contaminants of plasma, serum albumin, or whole blood, and developed sampling techniques to avoid contamination. Research in the Division of Chemotherapy revealed that sodium deficiency was the critical element leading to death after burns or traumatic shock. This led to the widespread use of oral saline therapy as a first-aid measure on the battlefield. NIH and military physiologists collaborated on research into problems related to high altitude flying. They determined the altitude at which oxygen had to be administered to prevent pilots from blacking out and designed an apparatus to supply extra oxygen efficiently. They also studied the relation of pressure changes to bubble formation in liquids to address the problem of emboli forming in the blood of pilots. Other tests were made to evaluate the efficiency of flight clothing, especially electrically heated suits, and to determine the effect of altitude on visual acuity and the use of visual devices for improvement of night vision.

As the war drew to a close, PHS officials guided through Congress the 1944 Public Health Service Act, which defined the shape of medical research in the post-war world. Two provisions in particular had an impact on the NIH. First, in 1946 the successful grants program of the NCI was expanded to the entire NIH. From just over $4 million in 1947, the program grew to more than $100 million in 1957 and to $1 billion in 1974. The entire NIH budget expanded from $8 million in 1947 to more than $1 billion in 1966. Between 1955 and 1968, NIH Director James A. Shannon presided over the spectacular growth that is now fondly remembered as "the golden years" of NIH expansion.

New Institutes

Accompanying growth in the grants program was the proliferation of new categorical institutes. Between 1946 and 1949, voluntary health organizations motivated Congress to create institutes for research on mental health, dental diseases, and heart disease. In 1948, language in the National Heart Act also made the name of the umbrella organization plural: National Institutes of Health. The original divisions of the old National Institute of Health were divided into two newly created institutes: the National Microbiological Institute (NMI) and the Experimental Biology and Medicine Institute (EMBI). The tradition of using such academic medical names, however, was being transformed by the conviction that institutes named after diseases stood a better chance for being funded by Congress. In 1950, the EMBI was absorbed by the newly created National Institute of Arthritis and Metabolic Diseases. In 1955 the NMI similarly became part of the National Institute of Allergy and Infectious Diseases. By 1960 there were ten components. This number increased by 1970 to 15, and by 1998 the NIH had 27 institutes and centers.

In addition, specialized offices such as the Office of AIDS Research, were created but subsumed administratively under existing components.

The Clinical Center

The second key provision of the 1944 Public Health Service Act authorized the National Institute of Health to conduct clinical research. After the war, Congress provided funding to build a research hospital, now called the Warren Grant Magnuson Clinical Center, on the NIH campus in Bethesda. Opened in 1953 with 540 beds, the hospital was designed to bring research laboratories into close proximity with hospital wards in order to promote productive collaboration between laboratory scientists and clinicians. Special care was taken to communicate to local physicians that the Clinical Center dealt only with research and did not represent a move toward "socialized medicine," which was opposed by most physicians in the 1950s. The Clinical Center was also launched under the shadow of revelations about Nazi medical experiments during World War II, thus a medical board was charged with reviewing research protocols to ensure that participants would not be harmed. During the 1960s institutions receiving NIH grant awards were required to state the ethical principles guiding their research involving humans. In 1979, the oversight process was codified into written guidelines for research on human subjects. The NIH Office for Protection from Research Risks, utilizing a computerized tracking system, now monitors over 500 major institutions and more than 5,000 smaller institutions, community hospitals, and clinics where research is conducted.

Any research protocol raises ethical uses about the treatment of research subjects, whether human or animal. Since its inception in 1887, the NIH has maintained the necessity for animal research and simultaneously has insisted upon humane treatment. "Animals are to be used in the proper work of the laboratory," wrote Hygienic laboratory director Dr. Milton J. Rosenau in 1904, but anything which inflicts pain upon them will not under any circumstances be allowed." In 1963 the NIH issued a guide for the care and use of laboratory animals that has gone through many editions and is considered a standard reference for scientific institutions. During the early 1970s, an official policy regarding the humane use of animals introduced the concept of institutional animal care committees for those institutions receiving NIH funds. In 1975 members of "study sections," the scientific peers of grant applicants who judge the scientific potential of each application, were assigned the responsibility of considering animal welfare in proposed projects before funds were awarded. Since 1985, NIH officials have conducted unannounced site visits to spot-check animal facilities and laboratory research programs.

Expansion

Toward the end of the 1960s, the growth of NIH budgets slowed considerably, in part because of inflation in the U.S. economy and the advent of new programs such as Medicare and Medicaid that competed for congressional "health" funding. Tighter budgets also led to debate over the relative efficacy of unfettered basic research versus goal-directed applied research. In the early 1970s Congress authorized major initiatives against two chronic killers, cancer and heart disease. The National Cancer Act of 1971 created fifteen new research, training, and demonstration cancer centers. The following year the National Heart, Blood Vessel, Lung, and Blood Act mandated an expanded program against all aspects of heart disease, including high blood pressure, elevated cholesterol levels, stroke, and particular blood diseases such as sickle-cell anemia. The AIDS crisis of the 1980s similarly provided at first an opportunity for goal-directed research quickly to uncover an effective therapy or vaccine. When no quick solution was forthcoming, leaders of the research effort against AIDS began to emphasize study of basic immunological processes as the most efficient strategy to find an effective therapy or preventative.

Thorny social and ethical issues were also raised in the 1970s by the first recombinant DNA experiments. Dr. DeWitt Stetten, Jr., then the NIH Deputy Director for Science, chaired a national committee of scientists to develop guidelines for the new technology. Intramural investigators associated with the National Institute of Allergy and Infectious Diseases conducted biosafety studies which helped to demonstrate that recombinant DNA research did not pose great risk of unleashing deadly novel organisms. Since that time, research on the molecular level has transformed the way scientists study most diseases. In the late 1980s, NIH and the Department of Energy launched the Human Genome Project with the goal of mapping and sequencing the entire collection of human genes. The medical, ethical, and legal implications of this work continue to have profound effects on society.

National Institute of Health Centers

Research in medicine knows no international boundaries. Since its founding, the NIH has maintained close relations with many of its Western Hemisphere counterparts through the Pan American Sanitary Bureau, now called the Pan American Health Organization . In 1947, the first NIH grants were awarded to investigators in foreign universities, and in 1968, the creation of the John E. Fogarty International Center institutionalized coordination of international exchanges at NIH. The Fogarty Center also maintains liaisons with the World Health Organization and European medical research organizations. One branch of the center supports translation, documentation, and critical reviews of new health science information.

Worldwide biomedical communications are also fostered by the NIH's National Library of Medicine (NLM) . As the world's largest medical library, the NLM boasts a collection of more than 5.1 million items. Founded in 1836 as the library of the surgeon general of the Army, the NLM became a component of NIH in 1968. The NLM has made freely available on the World Wide Web a database holding the most current medical literature. Also available are LocatorPlus, the online catalog of books and manuscripts in the library, AIDSLINE, a subset of MEDLINE devoted to AIDS research, and various databases useful for researchers, practicing physicians, and members of the public who use the resources available for research on medical topics.

Biomedical Research

The close relationship between basic and clinical research at the NIH reflects Louis Pasteur's observation that science is indivisible: "There is only science and the fruits of science." On the NIH campus, intramural clinical investigators interact with their basic science colleagues with the aim of developing improved intervention strategies for treating the knottiest disease problems. The NIH also holds Consensus Development Conferences of investigators and physicians from around the world at which panels of experts appraise new modes of therapy or evaluate existing therapies about which questions have been raised. The first, held in 1977, recommended mammography as a routine diagnostic tool for breast cancer in women over fifty. Since then more than 100 Consensus Development Conferences have rapidly channeled research findings on devices, drugs, and medical or surgical procedures to practicing physicians.

Biomedical research and development is a continuing process. New knowledge yields new drugs, devices, and procedures; the study of how the products act yields more knowledge; refinements in knowledge then enable the development of even better therapies. Whether an idea originates in a university laboratory or starts with basic product research carried out in the private sector, important findings percolate through the entire scientific community. Each new finding serves as a building block for establishing a deeper understanding of human health and disease. The 1986 Technology Transfer Act codified and fostered partnerships between NIH research and private-sector development of therapeutic products.

NIH Successes

It is impossible to list all of the discoveries made by NIH-supported investigators. More than eighty Nobel prizes have been awarded for NIH-supported research. Five of these prizes were awarded to investigators in the NIH intramural programs. The intramural discoveries have included deciphering the genetic code that governs all life processes, demonstrating how chemicals act to transmit electrical signals between nerve cells, and describing the relationship between the chemical composition of proteins and how they fold into biologically active conformations. In turn, these basic research discoveries

have led to greater understanding of genetically based diseases, to better antidepressants, and to drugs specially designed to target proteins involved in particular disease processes. Long-term research has dispelled preconceptions that morbidity and dementia are a normal part of the aging process. Some cancers have been cured and deaths from heart attack and stroke have been significantly lowered. Research has also revealed that preventive strategies such as a balanced diet, an exercise program, and not smoking can reduce the need for therapeutic interventions and thus save money otherwise expended for health care.

In 1887, Dr. Joseph Kinyoun could hardly have imagined the size and scope of the NIH's present program. As a result of the numerous scientific opportunities and policy decisions that make up the historical fabric of the NIH, this premier medical research institution is poised to foster even more significant contributions to human health in the twenty-first century.

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https://en.wikipedia.org/wiki/National_Institutes_of_Health

The **National Institutes of Health** (**NIH**) (/ɛnaɪ eɪtʃ/; each letter separately) is the primary agency of the United States government responsible for biomedical and public health research. It was founded in the late 1870s, and is now part of the United States Department of Health and Human Services. The majority of NIH facilities are located in Bethesda, Maryland. The NIH conducts its own scientific research through its Intramural Research Program (IRP) and provides major biomedical research funding to non-NIH research facilities through its Extramural Research Program.

As of 2013, the Intramural Research Program (IRP) had 1,200 principal investigators and more than 4,000 postdoctoral fellows in basic, translational, and clinical research, being the largest biomedical research institution in the world,[5] while, as of 2003, the extramural arm provided 28% of biomedical research funding spent annually in the U.S., or about US$26.4 billion.[6]

The NIH comprises 27 separate institutes and centers of different biomedical disciplines and is responsible for many scientific accomplishments, including the discovery of fluoride to prevent tooth decay, the use of lithium to manage bipolar disorder, and the creation of vaccines against hepatitis, *Haemophilus influenzae* (HIB), and human papillomavirus (HPV).[7]

In 2019, the NIH was ranked #2 in the world for biomedical sciences by the Nature Index, which measured the largest contributors to papers published in a subset of leading journals from 2015–2018.[8][9]

History[edit]

Ida A. Bengtson, a bacteriologistwho in 1916 was the first woman hired to work in the Hygienic Laboratory.[10]

Dedication of first six NIH buildings by President Franklin D. Roosevelt in 1940

NIH campus in Bethesda, Maryland, in 1945

NIH's roots extend back to the Marine Hospital Service in the late 1790s that provided medical relief to sick and disabled men in the U.S. Navy. By 1870, a network of marine hospitals had developed and was placed under the charge of a medical officer within the Bureau of the Treasury Department. In the late 1870s, Congress allocated funds to investigate the causes of epidemics like cholera and yellow fever, and it created the National Board of Health, making medical research an official government initiative.[11]

In 1887, a laboratory for the study of bacteria, the Hygienic Laboratory, was established at the Marine Hospital in New York.[12][13] In the early 1900s, Congress began appropriating funds for the Marine Hospital Service. By 1922, this organization changed its name to Public Health Services and established a Special Cancer Investigations laboratory at Harvard Medical School. This marked the beginning of a partnership with universities. In 1930, the Hygienic Laboratory was re-designated as the National Institute of Health by the Ransdell Act, and was given $750,000 to construct two NIH buildings. Over the next few decades, Congress would markedly increase funding of the NIH, and various institutes and centers within the NIH were created for specific research programs.[14] In 1944, the Public Health Service Act was approved, and the National Cancer Institute became a division of NIH. In 1948, the name changed from National Institute of Health to National Institutes of Health.

In the 1960s, virologist and cancer researcher Chester M. Southam injected HeLa cancer cells into patients at the Jewish Chronic Disease Hospital.[15]:130When three doctors resigned after refusing to inject patients without their consent, the experiment gained considerable media attention.[15]:133 The NIH was a major source of funding for Southam's research and had required all research involving human subjects to obtain their consent prior to any experimentation.[15]:135 Upon investigating all of their grantee institutions, the NIH discovered that the majority of them did not protect the rights of human subjects. From then on, the NIH has required all grantee institutions to approve any research proposals involving human experimentation with review boards.[15]:135

In 1967, the Division of Regional Medical Programs was created to administer grants for research for heart disease, cancer, and strokes. That same year, the NIH director lobbied the White House for increased federal funding in order to increase research and the speed with which health benefits could be brought to the people. An advisory committee was formed to oversee further development of the NIH and its research programs. By 1971 cancer research was in full force and President Nixon signed the National Cancer Act, initiating a National Cancer Program, President's Cancer Panel, National Cancer Advisory Board, and 15 new research, training, and demonstration centers.[16]

Funding for the NIH has often been a source of contention in Congress, serving as a proxy for the political currents of the time. In 1992, the NIH encompassed nearly 1 percent of the federal government's operating budget and controlled more than 50 percent of all funding for health research, and 85 percent of all funding for health studies in universities.[17] While government funding for research in other disciplines has been increasing at a rate similar to inflation since the 1970s, research funding for the NIH nearly tripled through the 1990s and early 2000s, but has remained relatively stagnant since then.[18]

By the 1990s, the NIH committee focus had shifted to DNA research, and launched the Human Genome Project.[19]

Leadership[edit]

The NIH **Office of the Director** is the central office responsible for setting policy for NIH, and for planning, managing and coordinating the programs and activities of all NIH components. The NIH Director plays an active role in shaping the agency's activities and outlook. The Director is responsible for providing leadership to the Institutes and Centers by identifying needs and opportunities, especially in efforts involving multiple Institutes.[20] Within this Office is the Division of Program Coordination, Planning and Strategic Initiatives with 12 divisions including:

- Office of AIDS Research
- Office of Research on Women's Health
- Office of Disease Prevention
- Sexual and Gender Minority Research Office
- Tribal Heath Research Office
- Office of Program Evaluation and Performance

Locations and campuses[edit]

Intramural research is primarily conducted at the main campus in Bethesda, Maryland and Rockville, Maryland, and the surrounding communities.

The Bayview Campus in Baltimore, Maryland houses the research programs of the National Institute on Aging, National Institute on Drug Abuse, and National Human Genome Research Institute with nearly 1,000 scientists and support staff.[21] The Frederick National Laboratory in Frederick, MD and the nearby Riverside Research Park, houses many components of the National Cancer Institute, including the Center for Cancer Research, Office of Scientific Operations, Management Operations Support Branch, the division of Cancer Epidemiology and Genetics and the division of Cancer Treatment and Diagnosis.[22]

The National Institute of Environmental Health Sciences is located in the Research Triangle region of North Carolina.

Other ICs have satellite locations in addition to operations at the main campus. The National Institute of Allergy and Infectious Diseases maintains its Rocky Mountain Labs in Hamilton, Montana,[23]with an emphasis on BSL3 and BSL4 laboratory work. NIDKK operates the Phoenix Epidemiology and Clinical Research Branch in Phoenix, AZ.

Research[edit]

Clinical Center – Building 10

As of 2017, 153 scientists receiving financial support from the NIH have been awarded a Nobel Prize and 195 have been awarded a Lasker Award.[24]

Intramural and extramural research[edit]

NIH devotes 10% of its funding to research within its own facilities (intramural research), and gives >80% of its funding in research grants to extramural (outside) researchers.[2] Of this extramural funding, a certain percentage (2.8% in 2014) must be granted to small businesses under the SBIR/STTRprogram.[25] As of 2011, the extramural funding consisted of about 50,000 grants to more than 325,000 researchers at more than 3000 institutions.[26] By 2018, this rate of granting remained reasonably steady, at 47,000 grants to 2,700 organizations.[2] In FY 2010, NIH spent US$10.7bn (not including temporary funding from the American Recovery and Reinvestment Act of 2009) on clinical research, US$7.4bn on genetics-related research, US$6.0bn on prevention research, US$5.8bn on cancer, and US$5.7bn on biotechnology.[27]

Public Access Policy[edit]

Main article: NIH Public Access Policy

In 2008 a Congressional mandate called for investigators funded by the NIH to submit an electronic version of their final manuscripts to the National Library of Medicine's research repository, PubMed Central (PMC), no later than 12 months after the official date of publication.[28] The NIH Public Access Policy was the first public access mandate for a U.S. public funding agency.[29]

NIH Interagency Pain Research Coordinating Committee[edit]

On February 13, 2012, the National Institutes of Health (NIH) announced a new group of individuals assigned to research pain. This committee is composed of researchers from different organizations and will focus to "coordinate pain research activities across the federal government with the goals of stimulating pain research collaboration… and providing an important avenue for public involvement" ("Members of new," 2012). With a committee such as this research will not be conducted by each individual organization or person but instead a collaborating group which will increase the information available. With this hopefully more pain management will be available including techniques for arthritis sufferers.[30]

Economic return[edit]

In 2000, the Joint Economic Committee of Congress reported NIH research, which was funded at $16 billion a year in 2000, that some econometric studies had given a rate of return of 25 to 40 percent per year by reducing the economic cost of illness in the US. It found that of the 21 drugs with the highest therapeutic impact on society introduced between 1965 and 1992, public funding was "instrumental" for 15.[31] As of 2011 NIH-supported research helped to discover 153 new FDA-approved drugs, vaccines, and new indications for drugs in the 40 years prior.[32] One study found NIH funding aided either directly or indirectly in developing the drugs or drug targets for all of the 210 FDA-approved drugs from 2010 to 2016.[33] In 2015, Pierre Azoulay et al. estimated $10 million invested in research generated two to three new patents.[34]

Notable discoveries and developments[edit]

Since its inception, the NIH intramural research program has been a source of many pivotal scientific and medical discoveries. Some of these include:

- 1908 – George W. McCoy's discovery that rodents were a reservoir of bubonic plague.
- 1911 – George W. McCoy, Charles W. Chapin, William B. Wherry, and B. H. Lamb described the previously-unknown tularemia.
- 1924 – Roscoe R. Spencer and Ralph R. Parker developed a vaccine against Rocky Mountain spotted fever.
- 1930 – Sanford M. Rosenthal developed a treatment for mercury poisoning used widely before the development of dimercaptoethanol.
- 1943 – Wilton R. Earle pioneered the cell culture process and published a paper describing the production of malignancy in vitro, Katherine K. Sanford developed the first clone from an isolated cancer cell, and Virginia J. Evans devised a medium that supported growth of cells in vitro.
- 1940s-50s – Bernard Horecker and colleagues described the pentose phosphate pathway.
- 1950s – Julius Axelrod discovered a new class of enzymes, cytochrome P450 monooxygenases, a fundamental of drug metabolism.
- 1950 – Earl Stadtman discovered phosphotransacetylose, elucidating the role of acetyl CoA in fatty acid metabolism.
- 1960s – Discovered the first human slow virus disease, kuru, which is a degenerative, fatal infection of the central nervous system. This discovery of a new mechanism for infectious diseases revolutionized thinking in microbiology and neurology.
- 1960s – Defined the mechanisms that regulate noradrenaline, one of the most important neurotransmitters in the brain.
- 1960s – Developed the first licensed rubella vaccine and the first test for rubella antibodies for large scale testing.
- 1960s – Developed an effective combination drug regimen for Hodgkin's lymphoma.
- 1960s – Discovery that tooth decay is caused by bacteria.
- 1970s – Developed the assay for human chorionic gonadotropin that evolved into the home pregnancy tests.
- 1970s – Described the hormonal cycle involved in menstruation.
- 1980s – Determined the complete structure of the IgE receptor that is involved in allergic reactions.
- 1990s – First trial of gene therapy in humans.

NIH Toolbox[edit]

In September 2006, the NIH Blueprint for Neuroscience Research started a contract for the NIH Toolbox for the Assessment of Neurological and Behavioral Function to develop a set of state-of-the-art measurement tools to enhance collection of data in large cohort studies. Scientists from more than 100 institutions nationwide contributed. In September 2012, the NIH Toolbox was rolled out to the research community. NIH Toolbox assessments are based, where possible, on Item Response Theory and adapted for testing by computer.[*citation needed*]

Funding[edit]

Budget and politics[edit]

Historical NIH budget[35]YearBudget (millions)

To allocate funds, the NIH must first obtain its budget from Congress. This process begins with institute and center (IC) leaders collaborating with scientists to determine the most important and promising research areas within their fields. IC leaders discuss research areas with NIH management who then develops a budget request for continuing projects, new research proposals, and new initiatives from the Director. NIH submits its budget request to the Department of Health and Human Services(HHS), and the HHS considers this request as a portion of its budget. Many adjustments and appeals occur between NIH and HHS before the agency submits NIH's budget request to the Office of Management and Budget (OMB). OMB determines what amounts and research areas are approved for incorporation into the President's final budget. The President then sends NIH's budget request to Congress in February for the next fiscal year's allocations.[36] The House and Senate Appropriations Subcommittees deliberate and by fall, Congress usually appropriates funding. This process takes approximately 18 months before the NIH can allocate any actual funds.[37]

When a government shutdown occurs, the NIH continues to treat people who are already enrolled in clinical trials, but does not start any new clinical trials and does not admit new patients who are not already enrolled in a clinical trial, except for the most critically ill, as determined by the NIH Director.[38][39][40][41]

Historical funding[edit]

Over the last century, the responsibility to allocate funding has shifted from the OD and Advisory Committee to the individual ICs and Congress increasingly set apart funding for particular causes. In the 1970s, Congress began to earmark funds specifically for cancer research, and in the 1980s there was a significant amount allocated for AIDS/HIV research.[42]

Funding for the NIH has often been a source of contention in Congress, serving as a proxy for the political currents of the time. During the 1980s, President Reagan repeatedly tried to cut funding for research, only to see Congress partly restore funding. The political contention over NIH funding slowed the nation's response to the AIDS epidemic; while AIDS was reported in newspaper articles from 1981, no funding was provided for research on the disease. In 1984 National Cancer Institute scientists found implications that "variants of a human cancer virus called HTLV-III are the primary cause of acquired immunodeficiency syndrome (AIDS)," a new epidemic that gripped the nation.[43]

In 1992, the NIH encompassed nearly 1 percent of the federal government's operating budget and controlled more than 50 percent of all funding for health research and 85 percent of all funding for health studies in universities.[17] From 1993 to 2001 the NIH budget doubled. Since then, funding essentially remained flat, and during the decade following the financial crisis, the NIH budget struggled to keep up with inflation.[44]

In 1999 Congress increased the NIH's budget by $2.3 billion[42] to $17.2 billion in 2000.[45] In 2009 Congress again increased the NIH budget to $31 billion in 2010.[45] In 2017 and 2018, Congress passed laws with bipartisan support that substantially increasing appropriations for NIH, which was 37.3 billion dollars annually in FY2018.[46][47]

Extramural research[edit]

Main article: NIH grant

Researchers at universities or other institutions outside of NIH can apply for research project grants (RPGs) from the NIH. There are numerous funding

mechanisms for different project types (e.g., basic research, clinical research etc.) and career stages (e.g., early career, postdoc fellowships etc.). The NIH regularly issues "requests for applications" (RFAs), e.g., on specific programmatic priorities or timely medical problems (such as Zika virus research in early 2016). In addition, researchers can apply for "investigator-initiated grants" whose subject is determined by the scientist.

The total number of applicants has increased substantially, from about 60,000 investigators who had applied during the period from 1999 to 2003 to slightly less than 90,000 in who had applied during the period from 2011 to 2015.[48] Due to this, the "cumulative investigator rate," that is, the likelihood that unique investigators are funded over a 5-year window, has declined from 43% to 31%.[48]

R01 grants are the most common funding mechanism and include investigator-initiated projects. The roughly 27,000 to 29,000 R01 applications had a funding success of 17-19% during 2012 though 2014. Similarly, the 13,000 to 14,000 R21 applications had a funding success of 13-14% during the same period.[49] In FY 2016, the total number of grant applications received by the NIH was 54,220, with approximately 19% being awarded funding.[50] Institutes have varying funding rates. The National Cancer Institute awarded funding to 12% of applicants, while the National Institute for General Medical Science awarded funding to 30% of applicants.[50]

Funding criteria[edit]

NIH employs five broad decision criteria in its funding policy. First, ensure the highest quality of scientific research by employing an arduous peer review process. Second, seize opportunities that have the greatest potential to yield new knowledge and that will lead to better prevention and treatment of disease. Third, maintain a diverse research portfolio in order to capitalize on major discoveries in a variety of fields such as cell biology, genetics, physics, engineering, and computer science. Fourth, address public health needs according to the disease burden (e.g., prevalence and mortality). And fifth, construct and support the scientific infrastructure (e.g., well-equipped laboratories and safe research facilities) necessary to conduct research.[51]

Advisory committee members advise the Institute on policy and procedures affecting the external research programs and provide a second level of review for all grant and cooperative agreement applications considered by the Institute for funding.[52]

Gender and sex bias[edit]

In 2014, it was announced that the NIH is directing scientists to perform their experiments with both female and male animals, or cells derived from females as well as males if they are studying cell cultures, and that the NIH would take the balance of each study design into consideration when awarding grants.[53] The announcement also stated that this rule would probably not apply when studying sex-specific diseases (for example, ovarian or testicular cancer).[53]

Stakeholders[edit]

General public[edit]

One of the goals of the NIH is to "expand the base in medical and associated sciences in order to ensure a continued high return on the public investment in research."[54] Taxpayer dollars funding NIH are from the taxpayers, making them the primary beneficiaries of advances in research. Thus, the general public is a key stakeholder in the decisions resulting from the NIH funding policy.[55]However, some in the general public do not feel their interests are being represented, and individuals have formed patient advocacy groups to represent their own interests.[56]

Extramural researchers and scientists[edit]

Important stakeholders of the NIH funding policy include researchers and scientists. Extramural researchers differ from intramural researchers in that they are not employed by the NIH but may apply for funding. Throughout the history of the NIH, the amount of funding received has increased, but the proportion to each IC remains relatively constant. The individual ICs then decide who will receive the grant money and how much will be allotted.

Policy changes on who receives funding significantly affects researchers. For example, the NIH has recently attempted to approve more first-time NIH R01 applicants, or the research grant applications of young scientists. To encourage the participation of young scientists, the application process has been shortened and made easier.[57] In addition, first-time applicants are being offered more funding for their research grants than those who have received grants in the past.[58]

Commercial partnerships[edit]

In 2011 and 2012, the Department of Health and Human Services Office of Inspector General published a series of audit reports revealing that throughout the fiscal years 2000–2010, institutes under the aegis of the NIH did not comply with the time and amount requirements specified in appropriations statutes, in awarding federal contracts to commercial partners, committing the federal government to tens of millions of dollars of expenditure ahead of appropriation of funds from Congress.[59]

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National Institutes of Health Clinical Center

Aerial photo of the NIH Mark O. Hatfield Clinical Research Center, Bethesda, Maryland
https://en.wikipedia.org/wiki/National_Institutes_of_Health_Clinical_Center#/media/File:NIH_Clinical_Research_Center_aerial.jpg
2021-04-19-wikipedia-org-national-institutes-of-health-clinical-center-img-aerial

Wikipedia 🌐 National Institutes of Health Clinical Center

Saved Wikipedia (April 19, 2021) - "National Institutes of Health Clinical Center"

2021-04-19-wikipedia-org-national-institutes-of-health-clinical-center.pdf

https://en.wikipedia.org/wiki/National_Institutes_of_Health_Clinical_Center

Agency overview

Formed

1953

Jurisdiction

United States

Headquarters

Bethesda, Maryland, U.S.

Coordinates: 39°0′6″N 77°6′16″W

Agency executive

- James K. Gilman, CEO

Parent agency

National Institutes of Health, Department of Health & Human Services

Website

www.cc.nih.gov

The NIH Clinical Center is a hospital solely dedicated to clinical research at the National Institutes of Health campus in Bethesda, Maryland. The Clinical Center, known as Building 10, **consists of the original part of the hospital, the Warren Grant Magnuson Clinical Center**, and the newest addition, the Mark O. Hatfield Clinical Research Center. The two parts are connected to form one large building.[1]

Since the hospital's opening in 1953,[2] NIH scientists have worked with volunteer patients to create medical innovations. Clinical Center successes include pioneering the cure of cancerous solid tumors with chemotherapy; the use of nitroglycerin to treat heart attacks; identifying a genetic component in schizophrenia; conducting the first successful replacement of a mitral valve to treat heart disease; and the **creation of blood tests to identify both Acquired Immune Deficiency Syndrome (AIDS) and hepatitis**.[3]

In October 2014, Clinical Center staff successfully treated one of the first few Ebola virus cases in the United States.

The Clinical Center has been a leader in the "bench-to-bedside" concept. Its specialized hospital design places patient care units in close proximity to research laboratories. This model supports interaction and collaboration among clinical researchers.

The Clinical Center also provides training opportunities for students, new and mid-career professionals.[4] A Summer Internship Program offers internships to students who are currently enrolled in high school, college, graduate programs and health professional schools such as nursing or medicine.[5] The Medical Research Scholars Program is a year-long research enrichment program designed for research-oriented medical, dental and veterinary students.[6] The Clinical Research Management Sabbatical is a self-directed educational experience designed for clinical research investigators and managers of clinical research programs.[7] The Clinical Center also provides a course called the Introduction to the Principles and Practice of Clinical Research to train physicians, scientists, medical students, nurses and other health professionals how to effectively conduct clinical research.[8]

History[edit]

The Warren Grant Magnuson Clinical Center opened in 1953 and is 13 floors at its highest point. It is named after Senator [**Warren Grant "Maggie" Magnuson (born 1905)**] of Washington.

The Mark O. Hatfield Clinical Research Center, located at the north end of the Clinical Center, opened in 2005. It was named after Senator Mark O. Hatfield of Oregon.[9]

The hospital has 200 inpatient beds, 11 operating rooms, 93 day hospital stations, critical care services and research labs, an ambulatory care research facility and a complex array of imaging services. The Clinical Center is also one of the few facilities in the world with state-of-the-art infrastructure that allows for isolation capabilities and infection control while patients participate in clinical research studies.[1][10]

Patients at the Clinical Center consent to participate in research studies, also called protocols, and are treated without charge. Admission is selective: only those patients who have a medical condition being studied by NIH Institutes or Centers and who meet the specific inclusion criteria can enroll in the studies. In 2014, there were 1,611 clinical research studies underway at the Clinical Center including those focused on cancer, infectious diseases, blood disorders, heart disease, lung disease, alcoholism and drug abuse.[1]

More than 500,000 patients from all 50 states, and from countries around the world, have participated in clinical research at the Clinical Center.[1]

Dr. John I. Gallin served as director of the Clinical Center beginning in May 1994. In January 2017, as part of an update to the hospital's leadership structure, NIH Director [**Dr. Francis Sellers Collins (born 1950)**] named Dr. James K. Gilman to the newly created position of chief executive officer Clinical Center. With the arrival of Dr. Gilman, Dr. Gallin assumed new roles as the NIH Associate Director for Clinical Research and Chief Scientific Officer, Clinical Center.[11]

Clinical Trials[edit]

In 2014, the NIH Clinical Center had 1,611 active research protocols. 48% of those were clinical trials (773 protocols), another 46% were natural history studies (744 protocols) and the remaining 6% were screening and training protocols.[12]

The Clinical Center provides an environment for both patient care and conducting clinical trials, most of which are in Phase I or Phase II.[1] In 2014, of the 773 active clinical trials protocols, 23% were Phase I trials (261 protocols), 60% were Phase II trials (462 protocols), 5% were Phase III (39 protocols) and 3% were Phase IV (11 protocols).[12]

The Clinical Center also integrates data from all intramural clinical trials in an integrated data repository called Biomedical Translational Research Information System (BTRIS).[13]

Documentary[edit]

The Discovery Channel documentary First In Human: The Trials of Building 10, hosted by Jim Parsons, aired in August 2017.[14] The three-episode documentary showed experiences of some staff, patients and caregivers at the NIH Clinical Center.

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External links[edit]

Wikimedia Commons has media related to NIH Building 10.

- Official website
- First in Human website

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https://clinicalcenter.nih.gov/nursing/index.html

Clinical Research Nursing is nursing practice with a specialty focus on clinical research. It includes care provided to research participants, as well as activities to support protocol implementation, data collection and research participant protection. In addition to providing and coordinating clinical care, clinical research nurses have a central role in assuring ongoing maintenance of informed consent, integrity of protocol procedures and accuracy of research data collection.

https://www.nih.gov/about-nih/what-we-do/nih-almanac/clinical-center-cc

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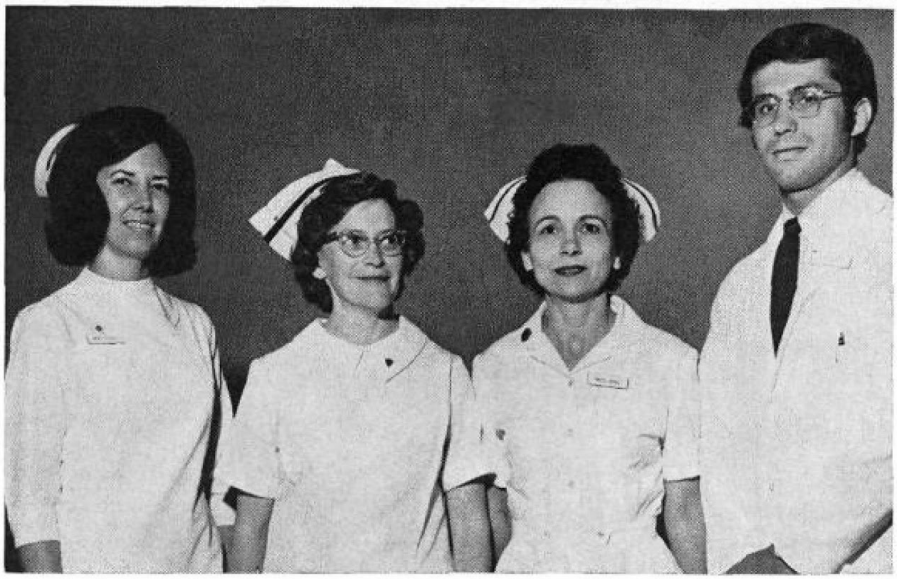

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1969-07-09-nih-the-nih-record.pdf

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page 2 - " Core of patients with midline granulomo and current research on this disorder were discussed by members of the CC's Allergy and Infectious Diseases Nursing Service at a recent conference. Principal speakers we re (L to R: Lila Elaine Stiles and Virginia Weber, clinical nurses; Josephine Bro,:, head nurse, AID Nursing Service, and Dr. Anthony S. Fauci, clinical associate, NIAID. The conference is one of a series presented annually as part of the CC Nursing Department's continuing education program."

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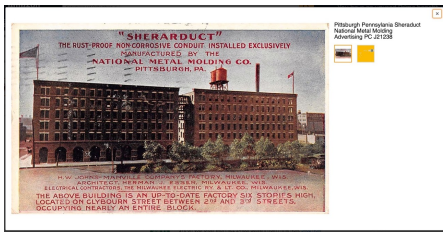
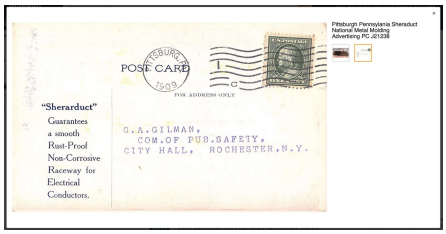
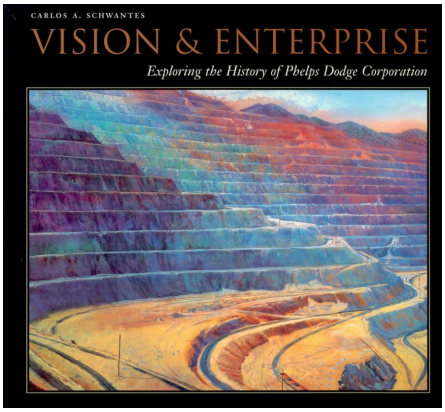
National Metal Moldings Corporation

Here are some postcards of **National Metal Moldings Corp.** advertising major buildings with their *"Sherarduct"* product.





The book ***"Vision & Enterprise: Exploring the History of Phelps Dodge Corporation"*** (By Carlos A. Schwantes) has a reference... apparently a copper consumer? In 1928, the company **National Electric Products Corporation** was formed, and it was ranked among the largest consumers of copper in the world. This company was created from three other companies that came under control because of their dependency on copper - These companies include **William C. Robinson's National Metal Molding Company** in Pittsburgh, the **Habirshaw Cable and Wire Company** in Yonkers, and the **Inca Manufacturing Company** in Fort Wayne.



transportation, so too were its brass condenser tubes to ocean commerce when great and luxurious steamships ruled the waves.

Brown, a Cornell-trained engineer, soon became unhappy because he thought Bridgeport Brass paid him too little; so he transferred to the sales side of the business. During the opening decade of the twentieth century he traveled to every corner of the United States, observing the nation's industrial growth and selling service as well as brass condenser tubes. In this way he came to see that the market for tubes and pipes—unglamorous products, to be sure, but a vital part of the modern infrastructure of the country—offered rich rewards to a man with his knowledge and vast network of business contacts.

In 1914 Brown resigned from Bridgeport Brass, where he was secretary and general manager, and struck out on his own. He was certain he would never attain his goal of becoming a millionaire if he worked for someone else. Not only did he become a supersalesman of the condenser tubing required by many ships built during World War I, but he also formed a new company to supply it. In fact, even before Uncle Sam placed his first orders for the product, Brown organized the British American Tube Company in 1914 and secured machinery and a suitable plant in Plainfield, New Jersey. All during the Great War the factory ran at top speed day and night, and for a time it was the largest producer of condenser tubes in the world.

When the conflict ended, Brown's bank account overflowed. The newfound wealth made him expansion minded. That was the main reason he joined with investors in 1920 to form the American Copper Products Corporation. Next he used the firm's financial clout to buy the Bayway plant of the Wadark Wire Company from the legendary Montanan William Andrews Clark (of United Verde fame), who back in 1897 added the fabricating works to his extensive holdings. Located in an industrial waterfront area called Bayway (later part of Elizabeth, New Jersey), the plant helped to make American Copper Products a major manufacturer of copper wire during the 1920s. Brown served as its vice-president and general manager.

American Copper Products sold copper rod to many customers including the Habirshaw Cable and Wire Company in Yonkers, William C. Robinson's National Metal Molding Company in Pittsburgh, and the Inca Manufacturing Company in Fort Wayne. That was how all three enterprises fell under Brown's spell. The blunt manner in which he approached George Jacobs of Inca was vintage Brown. He asked, "Why the hell don't you sell out. You certainly have enough money." Jacobs, who was contemplating taking more time away from business to spend some of his fast-growing fortune, responded, "Sure thing, if you pay me enough." Obviously he did. Further expanding his manufacturing empire, Brown added a tube mill in Los Angeles to settle a bad debt.[11]

Perhaps Brown alone could sort out the innumerable technical and financial details of his enterprise, which under the inclusive name National Electric Products Corporation (formed in 1928) ranked among the largest consumers of copper in the world. The multimillion-dollar combination of metal fabricators, together with such subsidiary firms as Habirshaw Cable and Wire, produced some two hundred million

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(Google Link to this book : https://books.google.com/books?id=JDzY8-E4YMsC&pg=PA177&lpg=PA177&dq=national+electric+pittsburgh+national+metal+molding&source=bl&ots=Pu49iuUEoJ&sig=ACfU3U315qbI0vFuG9MKvBIxXkJt8XlY0w&hl=en&sa=X&ved=2ahUKEwiYppiAzZTgAhWyc98KHZGTCwYQ6AEwB3oECAIQAQ#v=onepage&q=national%20electric%20pittsburgh%20national%20metal%20molding&f=false)

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National Patent Development Corporation

April 6 1994 - Mention of National Patent Development Corproation

See S3 Technologies .

- [HN0013][GDrive]

MARKET SUMMARY, 20D

THE SUN

Business

PAGE 11D
WEDNESDAY
APRIL 6, 1994

Computer simulation firms announce merger

By Michael Dresser
Sun Staff Writer

Three Columbia-based companies and a Swedish firm are joining forces to create an international computer simulation company based in Columbia.

Simulation, Systems and Services Technologies Co., known as S3, agreed Friday to merge with EuroSim AB of Sweden and two Columbia-based units of National Patent Development Corp. to form a new company to be known as Global Simulation and Engineering Systems Inc. (GSE).

The new company, which will be housed in S3's Columbia headquarters, will be headed by S3 Chief Executive William E. Kuhlmann, a former General Physics Corp. president. Mr. Kuhlmann said yesterday that the merging companies now account for annual sales of about $55 million.

"We hope to do a public financing in the fall of this year, probably at the earliest," he said. The merger would help the companies make the transition from a hardware orientation to an emphasis on software, he said.

The existing companies are active in the creation of computer simulations of power generation operations, both for nuclear and fossil fuel plants, and chemical processing. The simulations are used both for training and the development of new procedures in those industries.

The merger of the three companies is not expected to result in any significant job losses, said S3 Vice President Michael Allocco.

S3's Columbia operation will continue to employ about 275 workers, and they will be joined by an estimated 50 to 60 workers from General Physics International Simulation and Engineering Inc. and GPC Simulation Services Division. For the short term, he said, the merging companies will be operated with their current management structure intact.

General Physics International is owned by General Physics Corp. of Columbia, which is itself owned by National Patent Development Corp. of New York. GPC Simulation Services is a General Physics spinoff that is now directly owned by National Patent, which will control three of the seven board seats in GSE.

ManTech International Corp. of Fairfax, Va., which owns S3, will control another three seats, while the Swedish firm will control one.

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National Patent Development Corporation

[HW000H][GDrive]

Address : 9 West 57th Street, New York, New York 10019 U.S.A.

Public Company

Incorporated: 1959

Employees: 2,570

Sales: $204 million

Stock Exchanges: American

SICs:

National Patent Development Corporation (NPD), incorporated in Delaware in 1959, is primarily a holding company, a legal entity separate and distinct from its various operating subsidiaries. NPD's operations comprise three business segments: Physical Science, Distribution, and Optical Plastics. In addition, National Patent has numerous investments in the domestic health care, biopharmaceutical, and environmental technology industries and holds 54 percent of outstanding shares of common stock in a company distributing pharmaceutical products in Russia.

In 1959, three New York City lawyers, Jerome Feldman, Martin M. Pollak, and Jess Larson, began NPD as a scouting service for dormant patents. Their idea originated in 1958 after Feldman and Pollak heard about a new resin plasticizer developed and put on hold by a company unsure about the product's marketability. The partners believed the resin offered a superior base material for the manufacture of lipstick and they offered to arrange a licensing agreement. Although the partners found a major cosmetics manufacturer, problems arose when each company told them to get their fee from the other.

While the deal ultimately fell through, Feldman and Pollak saw profit potential in the patent exchange business and decided to form a company that could act, under contract, as a middleman. They found a third partner in **Jess Larson, an attorney with considerable government experience, having formerly served as Administrator of the General Services Administration, War Assets Administrator, and Brigadier General in the Air Force Reserve. Larson also saw the possibility of reaping substantial profits developing new commercial products from forgotten patents.**

From the beginning NPD focused on screening and buying patents on various devices, technologies, and materials, and then licensing them to other companies or trying to market the products themselves. To screen the thousands of patents lying idle in corporate files, the partners formed a consulting board consisting of patent lawyers, scientists, and engineers.

National Patent began gaining momentum in 1961, a year before the Cuban Missile Crisis, after Feldman and Pollak wrote a letter to then-Soviet Premier Nikita Khrushchev asking for rights to Soviet inventions. Surprisingly, despite Cold War tensions, the Soviets were willing to deal to obtain American dollars and invited them to visit. After three weeks in Russia, NPD experts screened Soviet developments by conferring with some 250 Russian scientists and technicians and won patent rights to market 14 innovations in the United States. **National Patent then signed an agreement with Amtorg, the U.S.-based Soviet trade wing.**

While some Soviet-acquired innovations proved profitable, others flopped. A surgical stapling device that replaced needle-and-thread suturing earned enough for Feldman to start a medical instrument business. That venture—U.S. Surgical—was later sold off and grew into a multi-million dollar corporation. Unfortunately, most products were far less successful, like an electric eyepad touted as inducing a blissful nap.

Using their Kremlin link, NPD made inquiries in other Communist bloc countries; in Czechoslovakia they met Otto Wichterle, polymer chemist at the Czechoslovak Academy of Sciences. Wichterle devised a novel application for a new plastic compound called Hema, which turned soft and pliable when infused with a liquid. Hema was originally intended for making artificial veins and body organs, but Wichterle found that spinning a droplet of Hema in a thimble-size dish could produce a soft contact lens.

In the West, contact lenses were still produced of hard plastic. By purchasing the spinning technology and the rights to make and market Hema, NPD found its first important product. Nevertheless, for two years the company experimented with the compound, prevented by scarce capital from marketing its new product. Then in 1966 NPD concluded a licensing agreement with Bausch & Lomb of Rochester, New York, a major player in the optical business and well aware of the potential market for soft lenses. The agreement gave Bausch & Lomb exclusive license to the new lens material and Wichterle's spinning and manufacturing technology. In return, NPD would receive a licensing fee plus half of all Bausch & Lomb's domestic lens profits.

After the Bausch & Lomb agreement, Feldman searched for other uses for Hema, which had been trademarked as Hydron. While National Patent licensed the rights to Hydron for contact lenses, it retained rights to use the compound for other applications and to produce new products. The company's labs produced a range of new Hydron-based products, including nail polish, burn-wound dressings, dental root-canal fillers, artificial breasts, and algae-resistant boat paint.

Most promising of all was a reactive chemical that showed potential for dissolving tooth decay, thus replacing drilling. Feldman found the compound at Tufts University, bought the patent rights, and offered the product to Warner-Lambert, which anticipated a use for the product as a plaque-removal agent in mouthwash. NPD's stock shot up from less than $10 in 1971 to $67 a share in 1972, one year after the Food & Drug Administration (FDA) approved Bausch & Lomb's new soft lens.

NPD shareholders' rising expectations proved false when the company's fortunes turned sour. Bausch & Lomb royalties proved disappointing, prompting National Patent to file suit in a protracted legal battle that threatened to end NPD's royalties entirely. Then Warner-Lambert announced that trial tests on schoolchildren showed their new mouthwash to be a failure as a plaque remover. NPD's stock collapsed to just $4 a share in 1973. Responding to these disappointments, Feldman diversified the company into gardening supplies, sporting equipment, solar energy, medical instruments, and contact lenses, planning to make NPD more independent. He also recruited a Russian professor to train company chemists in the production of inter-ferons, a group of proteins produced by the body's immune system to help combat disease. This erratic strategy proved a dismal failure, causing a decade of poor earnings and a blighted reputation for the company. Feldman later recalled this period as the "dark years."

Through the 1970s, National Patent's fortunes rested on a $14 million settlement from Bausch & Lomb. Charles Allen, a world-class deal-maker and founder of Allen & Co., also figured prominently in the company's survival. Allen took Feldman as a client, arranged private infusions of cash, and bought NPD stock even when times appeared bleakest. He soon controlled one of the largest interests in NPD after the combined holdings of Feldman and Pollak. In spite of Allen's help, NPD continued to be plagued by marketing mishaps and technological failures. For example, a malfunction in an intravenous control system forced an expensive recall, and the company fell more than a year behind schedule in developing and marketing a solar energy cell. As a result, Feldman cut corporate staff and sold off NPD's medical equipment and solar energy ventures.

Pollak had better luck with American Hydron, NPD's contact-lens subsidiary. Established in 1979 as International Hydron Corporation to manufacture and

sell contact lenses in the United States, the subsidiary produced its first earnings in 1982. A year later industry leader Bausch & Lomb considered American Hydron its major competitor in the sale of daily-wear soft contacts. Pollak's clever marketing strategy—offering Mercedes-Benzes, videocassette recorders, and gold coins to optometrists who placed large orders—caused the subsidiary's second-year shipments to double.

Despite intense competition, American Hydron fared well in producing high-quality lenses at a low cost. By the end of 1983, the subsidiary unveiled a new, compact, spincast system that could make lenses similar to Bausch & Lomb's most popular line. American Hydron also began testing collagen, a protein produced from cowhide, in an attempt to displace Hydron in low-cost lens production. By 1987, American Hydron was producing contact lenses using three distinct methods—lathing, cast molding, and spincasting, each having its own production and marketing advantages. While lens lathing was labor intensive, it proved superior for specialty lenses and low production. Cast molding maintained high optical lens quality but was more efficient in large-volume production. Spincasting was particularly suited for large-volume manufacture with low labor costs.

At the same time, NPD's Interferon Sciences, Inc. (ISI) subsidiary was moving toward marketing a host of interferon-based treatments for viral diseases. Production problems stemming from inefficiencies in extracting interferon from leukocytes, or white blood cells, were helped by the company's Czech connection. Pollak was vice-chairman of the Czechoslovak-U.S. Economic Council, a bilateral organization formed to promote trade between the two countries. This role introduced him to council chairman Fred Kuhlmann, vice-president of Anheuser-Busch, a St. Louis-based brewery that used Czechoslovakian hops to make beer. Anheuser's advanced fermentation technology for cultivating yeast cells proved to be the solution to the interferon production problem. Through the innovative process of "transformation," DNA molecules containing the genetic code for interferon could be extracted from human white blood cells and inserted into yeast cells, thereby producing interferon on a large scale.

Mutual interest in this process led both companies to embark on a joint production enterprise. ISI would alter individual yeast cells for use by Anheuser to produce billions of offspring. In return for the option of making new interferon products, Anheuser would provide ISI $6 million for research and development. This money aided Interferon Sciences' clinical trials of an interferon ointment for treating genital herpes—which afflicted an estimated 20 million in the United States alone— and allowed the company to begin testing a treatment for genital warts.

Feldman's typical business strategy was to spin off new technological ventures into separate companies while retaining most of their stock. By doing so, he transformed NPD into a holding company benefitted by the rising asset value of satellite companies taken public. In 1981, Feldman spun off ISI into a public company while retaining 75 percent of the shares. Two years later he spun off NPS Waste Technologies, an innovator in particle-glass filtering mechanisms for radioactive waste.

By 1987, NPD essentially operated through various subsidiaries and affiliates as a manufacturer and distributer of a wide array of products and services. The company's operations consisted primarily of four business segments, as well as various research and development programs that were not yet commercially viable. The company's Ophthalmic Products Group produced and marketed soft contact lenses and accessories. The Medical Science Group produced and distributed first aid products, surgical dressings, and various other hospital and medical products primarily through three subsidiaries, Acme Cotton Products, Chaston Medical & Surgical Products, and Abbey Medical, Inc. In addition to its interferon subsidiary, the Medical Group included dental products, such as the Caridex (R) Caries Removal System. An FDA-approved product that showed promise in removing tooth decay without the need for drilling, Caridex was the same failed dental plaque remover that had shown false promise a decade earlier.

NPD's Consumer and Service Group distributed home and garden products, as well as produced paint, paint specialties, coated and molded plastic products, and electronic components through several subsidiaries: J. Levin & Co., Inc., E. Rabinowe & Co., Inc., acquired in 1985, and Interstate Paint Distributors Inc., acquired in 1986**. The Physical Science Group provided training, operations, engineering, and maintenance services to the electrical power industry and the U.S. Navy. In addition, this group also developed, manufactured, and marketed products and services used in the clean-up of low-level radioactive material from waste water at utility-operated nuclear power plants.**

In 1987, NPD sold its interest in both International Hydron and Abbey Medical, Inc., a renter and seller of durable medical equipment. In 1989, the Medical Group introduced a new quick-opening adhesive bandage, STAT STRIP, to the hospital and medical markets. Interferon Sciences (ISI), received FDA approval of its Alferon N Injection, an alpha interferon product derived from human leukocytes developed for the treatment of recurring genital warts in patients 18 years or older. This achievement essentially transformed ISI from a research and development firm into an operating pharmaceutical company. An agreement was made with the Purdue Fredrick Company, a privately owned multinational drug company, to market Alferon N Injections in the United States and abroad. In addition, ISI acquired the worldwide rights from Amarillo Cell Culture for the oral administration of natural interferon, apparently effective in boosting the immune system. In addition, NPD's consumer and service group, collectively known as the Five Star Group, acquired State Leed, a distributor of various paint items. Together these companies, comprising J. Levin, E. Rabinowe, and Interstate Paint Distributors, had become the largest U.S. distributor of paint specialties, including interior and exterior stains, brushes, rollers, and caulking compounds.

By 1995, NPD had developed into three primary business segments: Physical Science, Distribution, and Optical Plastics. The company also had investments in Hydro Med Sciences (HMS), a health care business, and GTS Duratek, Inc., an environmental technology firm, as well as continuing investments in ISI.

The Physical Science Group consisted of SGLG, Inc. (formerly GPS Technologies), of which NPD had a 91 percent controlling interest; and General Physics Corporation, approximately 51 percent owned. General Physics provided numerous services, including personnel training and engineering, environmental, and technical support, to commercial nuclear and power utilities, the U.S. Departments of Defense and Energy, *Fortune* 500 companies, and other commercial and governmental clients. SGLG was a holding company with a 35 percent interest in GSE Systems, a company specializing in simulator software. In 1995 General Physics acquired Cygna Energy Services, a provider of design engineering, materials management, and safety analysis services to the nuclear power industry. General Physics also acquired all of the assets of SGLG, Inc. for approximately $34 million. In response to federal cutbacks in the Departments of Defense and Energy, General Physics began focusing on expanding its management and technical training services as well as specialized engineering services to manufacturers and federal agencies.

Five Star operated as a wholesale distributor of home decorating, hardware, and finishing products. Through the mid-1990s, Five Star remained the largest distributor in the United States of paint products and accessories, caulking compounds, and other items, despite intense competition from considerably larger hardware franchises, including Servistar and True Value.

The Optical Plastics Group operated through NPD's wholly owned subsidiary MXL Industries, a producer of molded and coated optical and non-optical products. MXL also made state-of-the-art injection molding tools, using polycarbonate resin to make shields, face masks, and lenses for over 55 clients in the safety, recreation, and military industries.

NPD's Hydro Med Sciences subsidiary manufactured medical devices, drugs, and cosmetic polymer products. HMS was established to explore the application of HydronR polymers for biomedical purposes. Since the 1970s HMS was involved in the development of human and veterinary drugs and dental

and medical devices. The company developed the Syncro-Mate BR implant for the synchronized breeding of bovine heifers, the first veterinary implant drug to be approved by the FDA. HMS also produced a water-soluble HydronR polymer for commercial applications in cosmetic products, including body lotions, moisturizers, and sunscreens.

ISI, a biopharmaceutical company, continued to be involved principally in the production and sale of Alferon N Injections. In 1995, the product still represented the only FDA-approved drug based on a natural source for the treatment of certain types of genital warts. ISI also explored new applications for its injectable, topical, and oral formulations of natural alpha interferon for the treatment of HIV, hepatitis C, hepatitis B, multiple sclerosis, cancers, and other diseases. In the biomedical industry, various alpha interferon drugs have been approved for 17 different medical uses in more than 60 countries. As a group, sales of these biopharmaceuticals approached $2 billion in 1994. Gaining approval to sell the product in Mexico in the mid-1990s, ISI also sought regulatory approval to market Alferon N Injections in Austria, Canada, Hong Kong, Israel, Singapore, and the United Kingdom.

ISI's other products under development included Alferon N Gel and Alferon LDO. Alferon N Gel, a topical application, had potential for treating cervical dysplasia, recurrent genital herpes, other viral diseases, and cancers. Alferon LDO constituted a low oral dose of liquid alpha interferon, possibly proving beneficial in treating HIV and other viral diseases. These products were undergoing clinical trials during the mid-1990s.

NPD organized its American Drug Company (ADC) subsidiary in 1993 to distribute general Pharmaceuticals and medical products in Russia and the Commonwealth of Independent States (CIS), the former Soviet republic. ADC was formed from NPD Trading (USA), Inc., which had been set up in 1990 to provide consulting services to Western businesses in Russia and Eastern Europe. NPD Trading would continue to operate as a subsidiary of the newly formed ADC, providing a broad range of business services to many American and Western corporations. Through NPD Trading, ADC's various activities involved developing and assisting Western businesses to create trading, manufacturing, and investment opportunities in Russia, the Czech and Slovak Republics, and other countries in Eastern Europe and the CIS. ADC also focused on marketing American-made pharmaceuticals and health care products—antibiotic ointments, pain-relief medication, vitamins, bandages, prescription injectable anti-cancer drugs, antibiotics, and other prescription drugs— under its own label in Russia and the CIS. To distribute these products, ADC initiated marketing ventures with hospitals, pharmacies, and clinics throughout Russia and the CIS.

NPD's interests in environmental technology centered on GTS Duratek, Inc. As of March 1, 1995, NPD decreased its holdings of Duratek's outstanding shares of common stock from 61 to 40 percent. Incorporated in Delaware in December 1982, Duratek's operations comprised two principal groups: the Technology Group converted radioactive and hazardous waste to glass by means of in-furnace vitrification processes, as well as specializing in removing radioactive and hazardous contaminants from waste water through a filtration and ion process. The Services Group provided consulting, engineering, and training services, as well as technical personnel, assistance with nuclear power outages and operations, and Department of Energy environmental restoration projects. As of 1995, major customers for these services included Duke Power Company, Vermont Yankee Nuclear Power Corporation, New York Power Authority, Tennessee Valley Authority, GPU Nuclear Corporation, PECO Energy Company, and FERMCO.

Principal Subsidiaries

GPS Technologies; GTS Duratek, Inc.; General Physics Corporation; Interferon Sciences, Inc.; Five Star Group, Inc.; MXL Industries, Inc.; American Drug Company.

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1997 (Sep 22) - Washington Post - "NATIONAL PATENT LOOKS TO LEANER, GREENER TIMES"

By Jerry Knight, September 22, 1997

Source : [HN014P][GDrive]

Washington investors old enough to remember when the stock market sometimes went down as well as up may also recall National Patent Development Corp.

Back in the days when high technology meant pocket calculators, NPD was a hot tech stock. In the 1960s and 1970s the firm made a bundle from its investment in the development of soft contact lenses and another bundle when it financed U.S. Surgical Corp., the pioneer in surgical staples.

But NPD's last big hits were in the early 1980s. Then a $100-a-share-plus stock, it hasn't seen triple digits in more than a decade. The stock, traded on the American Stock Exchange as NPD, sank to a record low of $6.12 1/2 last April but regained altitude over the summer.

At least one Wall Street analyst sees the potential for substantial future gains in the stock of National Patent, which plans to sell half a dozen businesses and concentrate on its primary subsidiary, General Physics Corp. of Columbia.

Since its glory days, NPD has become a major player in the Washington tech community by making investments in three companies, all based in Columbia.

General Physics, best known for training nuclear power plant operators, is owned outright by NPD, which bought out shareholders in January. NPD also owns a 15 percent stake in GTS Duratek Inc., a hazardous-waste disposal firm, and 22 percent of the stock of GSE Systems Inc., a simulation and training software company.

Besides its Washington investments, NPD also owns Five Star Group Inc., a New Jersey distributor of decorative hardware and painting products, and MXL Industries, a Pennsylvania maker of safety glasses. It also holds 15 percent of the stock of Interferon Sciences Inc. a New Jersey biopharmaceutical firm, and 30 percent of Avenue Entertainment, a New York movie production company.

Acquired over the years, none of these companies proved to be a big success, leaving NPD with a conglomeration of second-string players in disparate industries that didn't add up to much as far as Wall Street was concerned.

Five Star and MXL are privately held companies and General Physics is a wholly owned subsidiary of NPD. The other firms are publicly traded.

GSE shares trade as GSES on the Nasdaq Stock Market and closed Friday at $4.25. GTS Duratek is DRTK on Nasdaq, closing Friday at $14.18 3/4. Interferon Sciences is IFSC on Nasdaq, $8.87 1/2 at Friday's close. Avenue trades as PIX on the American Stock Exchange, where it closed at $9.50 Friday.

National Patent's founder and chairman, Jerome Feldman, now spends more time in Howard County than he does at the conglomerate's headquarters in New York. Feldman, 68, divides his time between the offices of General Physics, NPDs biggest division, and those of GSE, where he took over as chairman in April, replacing William Kuhlmann.

In a recent interview, Feldman said his main short-term goal is to turn around GSE, a General Physics spinoff that specializes in simulation software and programs that handle manufacturing and distributions systems.

In the long term, Feldman wants to convert NPD from an investment firm into an operating company built around General Physics. In the process, the company plans to methodically dispose of most of the rest of NPD's diverse portfolio of companies, he said. "The only one I don't know if we're going to sell is GSE. That's so close to what General Physics is doing."

GSE reported a loss of slightly more than $1 million in the three months ended June 30 compared with a profit $426,000 in the same period a year earlier. The loss of some key contracts pared almost 20 percent from GSE's revenue for the first half of the year, prompting Feldman to implement a plan aimed at trimming overhead by $4 million a year.

GSE stock, trading for more than $10 a share at the beginning of this year, hit a 52-week low of $4 last month and has only recovered a little.

Fixing problems has become a way of life for Feldman. He spent most of the past decade digging NPD out from under a mountain of debt that the company accumulated in the early 1980s. When its soft contact lens patents ran out and with them a steady stream of revenue, the company invested in several businesses, among them General Physics. A lot of those companies couldn't be sold for a price high enough to pay off their debts, so NPD had to hold on to them.

To make matters worse, NPD borrowed heavily from Swiss banks. The loans were in Swiss francs. When the value of the dollar dropped compared with the Swiss currency, NPD had to pay back millions more than it had borrowed.

Feldman has whittled NPD's long-term debt from $277 million to about $6 million as of the company's last financial statement. He now wants to become debt free. "There's nothing like $300 million in debt to make you learn your lesson," he rues. "Never again."

To eliminate the debt, the company has sold off several investments, some at painfully low prices. One of those companies was GTS Duratek, an NPD subsidiary before it went public in 1986.

National Patent remained the principal owner of Duratek until early 1995 when it sold 1.6 million shares to Washington's Carlyle Group, which agreed to pump $16 million into the firm. NPD gave up its seats on the Duratek board, turning control of the business over to the prominent investment banking firm.

Carlyle paid only $3 a share for NPD's Duratek stock, which is now worth almost five times that much. The stock sank to about $5 in April after Duratek posted a $4.7 million first-quarter loss, but has recovered steadily since.

Since giving up control of Duratek, NPD has been methodically reducing its stake in the company. It sold 26,000 shares in June, 16,000 in July and another 27,000 in August, according to insider-trading reports filed with the Securities and Exchange Commission.

While those stock sales are expected to continue at a regular pace, the liquidation of NPD's other investments will depend on finding buyers willing to look at the companies at the right price. "Opportunistic" is the word Feldman uses.

How much money can the company raise by monetizing its holdings? That's the kind of question that causes investment bankers and securities analysts to crank up their spreadsheets and start crunching numbers.

Analyst David Kardell of New York's Oppenheimer & Co. has done the calculations. He figures NPD's assets are worth at least $20 a share. With the stock selling for $12, there's money to be made, said Kardell, who issued a "buy" recommendation in mid-August.

Though the stock of many companies sells for much more than the value of their assets, the market won't pay full price -- let alone a premium -- for an out-of-favor outfit like NPD. Kardell estimated the company's shares could move up to $15 within a year. The stock was trading at less than $10 when the Oppenheimer research report came out and already is almost halfway to Kardell's goal.

Feldman said if he can successfully cash in NPD's other investments the holding company may merge into General Physics. He shrugs off questions about what the company would be named but waxes enthusiastic about the future of GP, as lots of people call it.

Launched to train nuclear power plant operators, including engine-room crews on U.S. nuclear submarines, GP had to reinvent itself when the industry went into decline.

What has emerged is a "performance improvement" company that has accelerated its growth since longtime employee John McAuliffe worked his way up to the president's job. Revenue has grown from $108 million in 1995 to $117 million in 1996, and hit $69 million in the first half of this year, putting the company on track toward its 1997 revenue goal of $140 million. The company's profits are growing along with revenues, but are not broken out from NPD's.

As GP has grown, so has the share of its business generated by private-sector clients, which rose by 36 percent last year and accounted for more than half of revenue. Profit from private-sector business is substantially better than that from work for government agencies.

Training workers to do their jobs more efficiently and use new technology has become GP's specialty, McAuliffe explained. A lot of it is "mistake and error proofing," which involves not only teaching workers techniques that avoid flaws, but adopting processes to improve quality control.

Oppenheimer analyst Kardell projects that GP will be able to continue growing by 20 percent a year and that if it were a separate company, General Physics stock could be worth $11 to $14 a share.

With the parent company's shares already selling in that range, and the potential to turn the conglomerate's other assets into cash, NPD could have one more chance to become a hot tech company again. A LOOK AT . . . NATIONAL PATENT DEVELOPMENT The holding company owns stakes in three Maryland companies. National Patent Development Corp. General Physics Headquarters: Columbia Business: Provides "performance improvement" training for business and government. 1996 sales: $117 million 1996 profit: $6.5 million Ownership: Wholly owned by National Patent Development. GSE Systems Inc. Headquarters: Columbia Business: Makes enterprise-wide software. 1996 sales: $96 million 1996 profit: $4.1 million Ownership: 22 percent owned by

National Patent Development. GTS Duratek Headquarters: Columbia Business: nuclear waste disposal service 1996 sales: $44 million 1996 profit: $2.1 million Ownership: 15 percent owned by National Patent Development. Other NPD investments

- Five Star Group Inc.: Owns 100 percent of the New Jersey distributor of hardware and painting products.
- Avenue Entertainment: Owns 30 percent of the New York film producer.
- Interferon Sciences Inc.: Owns 15 percent stake in the New Jersey biotech firm.
- MXL Industries: Owns 100 percent of the plastic lens manufacturer.

Steven Katz joined the board of directors in May 1999. He is President of Steven Katz & Associates, Inc., a management consulting firm specializing in strategic planning and corporate development for technology and service-based companies in the health care, environmental, telecommunications and Internet markets. Mr. Katz`s prior experience includes five years with PriceWaterhouse & Co. in audit, tax and management advisory services; two years of corporate planning with Revlon, Inc.; five years with National Patent Development Corporation (NPDC) in strategic planning, merger and acquisition, technology in-licensing and out-licensing, and corporate turnaround experience as President of three NPDC subsidiaries; and two years as a Vice President and General Manager of a non-banking division of Citicorp, N.A. Mr. Katz is also a Director of Health Systems Solutions Inc. and NaturalNano, Inc., each publicly traded companies. From May 2007 until September 2008, Mr. Katz was President and Chairman of the Board of GammaCan International, Inc., a publicly traded corporation.

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.1 PC's:Although devices having fewer resources are considered suitable for ECC, some companies are developing ECC based software to provide security on PCs, mainly for protection of data and for mail encryption. One such company is Guardian Edge Technologies, whose Data Protection Platform supports ECC. Its component products, Guardian Edge Hard Disk Encryption, Guardian Edge Removable Storage Encryption etc., use ECC with a 233-bit encryption key to protect critical data on a Windows based PC [9]. The Top Secret Messenger software was developed by Encryption Software Inc. It encrypts the messages of some of the most popular instant

ISSN (Online) 2394-2320International Journal of Engineering Research in Computer Science and Engineering (IJERCSE) Vol 4, Issue 12, December2017All Rights Reserved © 2017 IJERCSEmessaging programs today, like ICQ and MSN. It can also be used with e-mail clients such as Microsoft Outlook and Outlook Express to encrypt e-mail messages. This product uses both private and public key cryptosystems, including a 307-bit key for its implementation of the ECC

BITCHUTE @Housatonic YOUTUBE @HousatonicLive ODYSEE @Housatonic BRIGHTEON @Housatonic

Housatonic

Lee Miller Neff (born 1912)

Children :

- Thomas L Neff (born 1943)
- William David Neff (born 1945)

1940 CENSUS

https://search.ancestry.com/cgi-bin/sse.dll?indiv=1&dbid=2442&h=61199319&tid=&pid=&usePUB=true&_phsrc=jWH43&_phstart=successSource

Occupation: Traffic Manager

Lee M Neff 27

Louise H Neff

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LEE MILLER NEFF - WW2 DRAFT

Employer: Pierce Auto Freight Lines

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http://digitalcollections.lclark.edu/items/show/8991

Title Lee M. Neff

Subject Lewis & Clark College Faculty and Staff

Description Assistant Professor of Business Administration (1947-1973)

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https://www.myheritage.com/names/lee_neff

Lee Miller Neff, 1912 - 1999

Lee Miller Neff was born on month day 1912, at birth place, Oregon, to Jessie Vincent Neff and Saloma "Loma" H. Neff.

Lee had one brother: James Thomas Neff.

Lee married Louise Hattie Neff on month day 1937, at age 24 at marriage place, Washington.

Lee lived in 1920, at address, Oregon.

He lived in 1930, at address, Oregon.

Lee passed away on month day 1999, at age 86 at death place, Oregon.

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brother james - Always interesting

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Sep 1944

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Lee M Neff - botn in 1912

https://www.findmypast.com/transcript?id=USBMD%2FSSDI%2F543109400

First name(s) Lee M

Last name Neff

Birth year 1912

Birth month May

Birth day 02

Death year 1999

Death month Jan

Death day 29

Social Security number 543-10-9400

Place of issue Oregon

State Oregon

Country United States

Record set Social Security Death Index

Category Birth, Marriage & Death (Parish Registers)

Subcategory Civil Deaths & Burials

Collections from Americas, United States

Marriage

https://www.findmypast.com/transcript?id=US%2FFS%2FM%2F092824321%2F1

Thomas L Neff (born 1943)

Born - 1943-09-25 PDF : [HW000W][GDrive]

Father - **Lee Miller Neff (born 1912)**

Siblings (1) - William David Neff (born 1945)

NYTimes 2014 article - "From Warheads to Cheap Energy"

See [HN007O][hGDrive]

As the Cold War ended in the late 1980s and early '90s, a new fear arose amid the rejoicing and relief: that atomic security might fail in the disintegrating Soviet Union, allowing its huge stockpile of nuclear warheads to fall into unfriendly hands.

The jitters intensified in late 1991, as Moscow announced plans to store thousands of weapons from missiles and bombers in what experts viewed as decrepit bunkers, policed by impoverished guards of dubious reliability.

Many officials and scientists worried. Few knew what to do.

That is when Thomas L. Neff, a physicist at the Massachusetts Institute of Technology, hit on his improbable idea: Why not let Moscow sell the uranium from its retired weapons and dilute it into fuel for electric utilities in the United States, giving Russians desperately needed cash and Americans a cheap source of power?

Last month, Dr. Neff's idea came to a happy conclusion as the last shipment of uranium from Russia arrived in the United States. In all, over two decades, the program known as [the] **Megatons to Megawatts Program** turned 20,000 Russian warheads into electricity that has illuminated one in 10 American light bulbs.

Dr. Neff fathered the atomic recycling program in spite (or perhaps because) of his lack of name recognition, his inexperience on the world stage and his modest credentials in arms control. Moreover, he not only came up with the original plan but shepherded it for decades.

"I was naïve," Dr. Neff, 70, recalled in a recent interview. "I thought the idea would take care of itself."

In fact, it required sheer doggedness and considerable skill in applying nuclear science to a global deal freighted with technical complexities and political uncertainties. Yet in the end, Dr. Neff noted, the mission was accomplished: Uranium once meant to obliterate American cities ended up endowing them with energy.

Nuclear experts hail it as a remarkable if poorly known chapter of atomic history. The two decades of bomb recycling, they say, not only reduced the threat of atomic terrorism and helped stabilize the former Soviet Union but achieved a major feat of nuclear disarmament — a popular goal that is seldom achieved.

"It's an amazing thing," said Frank N. von Hippel, a physicist who advised the Clinton White House and now teaches at Princeton. The wave of arms destruction, he said, eliminated up to a third of the planet's atomic bomb fuel, making it "the biggest single step" in the history of nuclear arms reduction.

He called Dr. Neff an underappreciated hero, adding that in a time of governmental muddle and paralysis, his success was a striking example "of what one person can do."

Thomas Lee Neff was born in 1943 in Oregon, the older of two boys; his family raised chickens and grew most of its own food. He studied math and physics at Lewis & Clark College in Portland, graduating with highest honors, and received his Ph.D. in physics from Stanford. As a senior M.I.T. researcher, he specialized in energy studies, writing books on nuclear power, solar energy and, in 1984, the global uranium market. His timing was propitious.

In the nuclear age, the rare isotope uranium 235 has played starring roles in war and peace. When highly purified, to a level of 90 percent, it fuels atom bombs; at 5 percent, it powers nuclear reactors for electric utilities.

As the Cold War ended, Dr. Neff wondered whether these disparate worlds might be able to do business together. When Washington and Moscow announced major unilateral arms reductions in late 1991, he recalled, "I said: 'Wow. What's going to happen to all these weapons?' "

Dr. Neff, like many experts of the day, worried that the Soviet Union was ill equipped to deal with thousands of discarded bombs. The treaties and independent actions of the Cold War allowed nuclear arms taken from bombers and missiles to be kept in storage, raising the possibility of reuse, diversion and theft.

The beleaguered communist state, he feared, was already cutting back on nuclear upkeep, workers' pay and dozens of measures meant to keep weapons safe. He also suspected that newly impoverished Russian nuclear scientists, once a pampered elite, might seek work elsewhere.

“It all sounded dangerous,” he said.

His solution was atomic recycling. The question was how to float the idea.

On Oct. 19, 1991, nuclear experts filed into the Diplomat Room of the State Plaza Hotel in Washington. The agenda of the nongovernmental meeting was demilitarization. A Soviet delegation attended, as did Dr. Neff.

Outside the conference room during a break, he approached a leader of the Soviet bomb complex, Viktor N. Mikhailov, a canny apparatchik known for his love of Western cigarettes.

Dr. Neff asked whether he would consider selling the uranium in Soviet weapons.

“Interesting,” he said Dr. Mikhailov replied, puffing away. “How much?”

Five hundred metric tons, Dr. Neff said, giving what he considered a high estimate for the quantity of Soviet bomb fuel soon to become surplus. “If I had known how much they really had,” he recalled, “I would have said 700 tons.”

Even so, 500 metric tons was a lot: 1.1 million pounds, heavier than a fully loaded 747 jetliner.

Five days later, Dr. Neff made his idea public in an Op-Ed article in The New York Times, “A Grand Uranium Bargain.” The illustration showed a kitchen pot and spoon floating eerily above a countertop and — just behind — an open window. Outside was a bomber.

“If we do not obtain the material,” he warned, shadowy agents in the former Soviet Union, perhaps uncontrolled by central authority, might seek to “sell weapons-grade materials to the highest bidders.”

The idea gained support in both Washington and Moscow. Carrying it out, through a tangle of conflicting state and commercial interests, was another matter. Dr. Neff was there to prod it along at almost every turn. In late December 1991, he was among the last Westerners to see the Soviet hammer and sickle flying over the Kremlin.

The first shipment of uranium arrived in 1995; 250 more followed over the next 18 years. Last month, a freighter sailing from St. Petersburg to Baltimore delivered the last shipment. Strapped into transport pallets were giant steel drums, each holding about two bombs’ worth of diluted uranium.

Colorful signs on the drums showed fluttering Russian and United States flags, with a message in large type: “20,000 Nuclear Warheads Eliminated.”

Dr. Neff estimates that he flew 20 times to Russia and other former Soviet states to work on the original deal and its amendments. He says a book he is writing draws on thousands of documents.

Thomas B. Cochran — a senior scientist at the Natural Resources Defense Council in Washington who helped organize East-West interactions at the Cold War’s end, including the gathering where Dr. Neff met the Soviet official — said the American physicist deserved “99 percent of the credit” for the uranium deal. Its most important result, he added, was simply improving the relationship between the United States and Russia at a critical moment in history.

Last month, the Russian Embassy in Washington held a reception to mark the end of the Megatons to Megawatts program. Dr. Neff was an honored guest.

A brochure handed out at the reception reprinted his Op-Ed article, praising the commercial deal as a first for nuclear disarmament. It put the overall cost of the transaction at $17 billion.

Uranium from the dismantled weapons, it said, was diluted into 15,432 tons of low enriched uranium. The resulting reactor fuel supplied half of all American nuclear power plants.

The total electric power, it said, could illuminate the whole of the United States (roughly 20,000 cities and 115 million households) for about two years — or Washington, D.C., for 185 years.

The atomic sale, the brochure said, “is widely held to symbolize the end of the era of confrontation between the two major nuclear powers.”

In an interview, Ernest Moniz, the federal secretary of energy and a former colleague of Dr. Neff’s at M.I.T., praised him for not only proposing the plan but helping guide it for more than two decades.

“If he hadn’t stuck with it,” Dr. Moniz said, “it could have very easily been one of these great ideas that ends up just spinning its wheels.”

Millions of idealists, from President Obama on down, have sought a world without nuclear weapons. Dr. Neff, despite doing more than almost anyone to advance that goal, is circumspect about what he accomplished.

He made no mention of energy windfalls, geopolitical realignments or the biblical injunction to turn swords into plowshares.

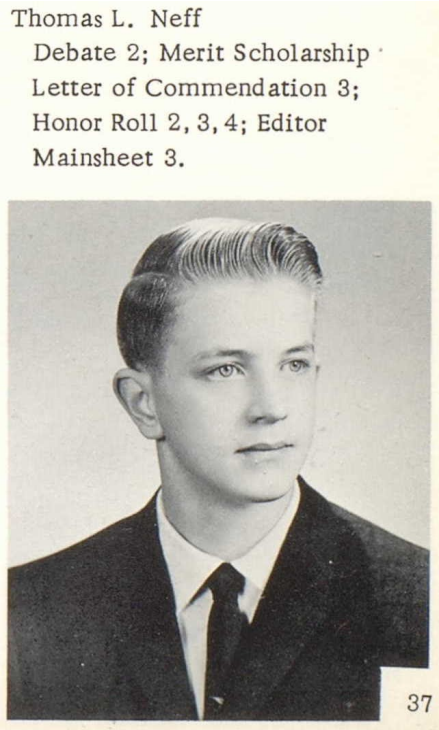
The lesson of the story, he remarked in an interview, “is that private citizens can actually *do* something.”

A shipment of low-enriched uranium, equivalent to 10,000 warheads, arrived at an American plant in 2005.Credit...USEC
[HN008D][GDrive]

Russia's minister of atomic energy, **Aleksandr Rumyantsev**, second from left, at a 2002 dinner for Thomas L. Neff, second from right, who had worked with Mr. Rumyantsev on the uranium purchase agreement.
[HN008E][GDrive]

1961 - Graduate Lake Oswego High School, Oregon

Full Page : [HE0007][GDrive]



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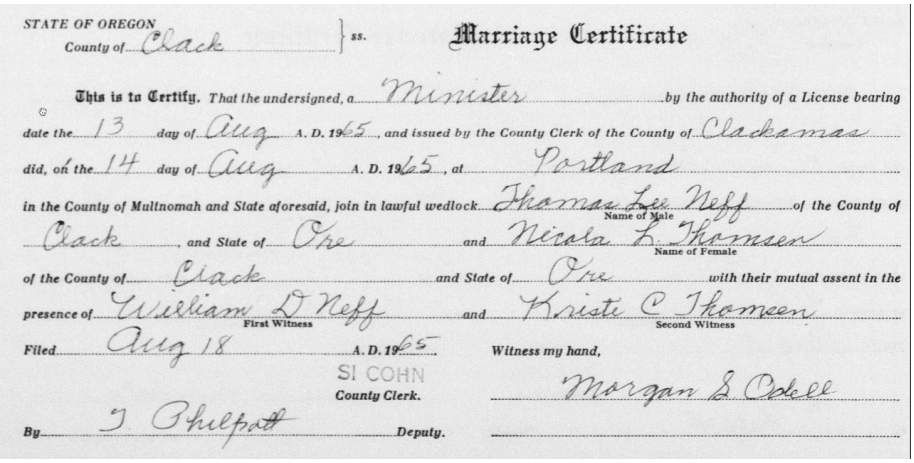
1965 (August) - Marriage

Brother William David Neff (born 1945) attends



STATE OF OREGON
County of Clack } ss.

Marriage Certificate

This is to Certify. That the undersigned, a Minister by the authority of a License bearing date the 13 day of Aug A. D. 1965, and issued by the County Clerk of the County of Clackamas did, on the 14 day of Aug A. D. 1965, at Portland in the County of Multnomah and State aforesaid, join in lawful wedlock Thomas Lee Neff (Name of Male) of the County of Clack, and State of Ore and Nicola L. Thomsen (Name of Female) of the County of Clack and State of Ore with their mutual assent in the presence of William D Neff (First Witness) and Kristi C Thomsen (Second Witness)

Filed Aug 18 A. D. 1965
SI COHN
County Clerk.
By J Philpott Deputy.

Witness my hand,
Morgan L Odell

[HG000R][GDrive]

1966 (Sep) - Mrs. Thomas Neff (of Palo Calto) at wedding in Oregon

https://www.newspapers.com/image/442041149/?terms=%22thomas%2Bneff%22

1968 (Sep 08)

Note who is there - **Robert Lewis Harris (born 1937)** .

Full page - [HN007M][GDrive]

Harris-Kluge Recent Wedding

Sun., Sept. 8, 1968 7K
ST. LOUIS POST-DISPATCH

OF INTEREST TO St. Louisans is the wedding last Sunday in Nyack, N.Y., of Miss Svetlana Kluge and Robert Lewis Harris. The ceremony took place at the Russian Orthodox Church of the Holy Virgin Protection. The bride's parents are Mr. and Mrs. Michael C. Kluge, New York.

The bridegroom's parents are Mr. and Mrs. Lewis S. Harris, 1942 South Signal Hills drive, Kirkwood.

Maid of honor was Miss Catherine Giritsky. Other bridal attendants were Miss Natalie Giritsky, Miss Irina Troubetzkoy and Miss Natalia Troubetzkoy.

Thomas Neff was best man. Ushers were Victor Brunst, Steven Darland, Robert Druckenmiller, Alexander Giritsky, Frederick Hornbruch, Andre Kotchoubey and Serge Troubetzkoy.

After a wedding trip to the Caribbean, the couple will live in New York. Mrs. Harris is a doctoral candidate at Columbia University.

Unwanted Hair
REMOVED FOREVER
OVER 30 YEARS EXPERIENCE
Theresa A. Heick
ELECTROLOGIST

[HN007N][GDrive]

1973 - Divorce

https://search.ancestry.com/cgi-bin/sse.dll?indiv=1&dbid=1141&h=3031904&tid=&pid=&usePUB=true&_phsrc=jWH35&_phstart=successSource

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1974 - Participated in APS (American Physical Society) Reactor Safety Study - With Wolfgang (Pief) Panofsky and Harold (Hal) Lewis

See article in Journal for Peace and Nuclear Disarmament - [HP000G][GDrive]

Involves :

- Wolfgang Kurt Hermann Panofsky (born 1919)
- (https://en.wikipedia.org/wiki/Frank_N._von_Hippel)
  - father is - https://en.wikipedia.org/wiki/Arthur_R._von_Hippel
  - * Von Hippel received his Ph.D. in physics in 1924, and in 1930 married Franck's daughter, Dagmar.
  - ***James Franck - https://en.wikipedia.org/wiki/James_Franck***

Frank von Hippel *is a Senior Research Physicist and a Professor emeritus of Public and International Affairs in Princeton University's Program on Science and Global Security. He has a Ph.D. in nuclear physics from Oxford University (1962). He has worked on nuclear policy issues for almost half a century and has been praised by his fellow physicists "for his outstanding work and leadership in using physics to illuminate public policy in the areas of nuclear arms control and nonproliferation, nuclear energy, and energy efficiency" (American Physical Society 2010). The publisher of a collection of his essays, described him as "at the forefront of those scientists grappling with the troubled legacy of our Nuclear Age" and as offering "insights about the choices we must make and how science can help us to make them" (Springer Nature 1991).*

The edited and footnoted interviews published here are von Hippel's account of his years of engagement with a series of nuclear policy problems – mostly as an outsider but also as a White House official. He began by trying to strengthen nuclear-safety regulation in the United States. He and his colleagues then fought successfully to stop the US Atomic Energy Commission's planned "plutonium economy." As the chairman of the Federation of American Scientists, he worked with a group of physicists advising Mikhail Gorbachev in his successful efforts to end nuclear testing, reverse the nuclear arms race, and dismantle the tank confrontation across the Cold War boundary dividing Germany. After the Soviet Union collapsed, von Hippel worked in the White House to help launch cooperative programs to secure nuclear materials in Russia from theft and to eliminate the stocks of highly enriched uranium and plutonium resulting from the drastic down-sizing of the US and Soviet Cold War nuclear arsenals. In 2006, he co-founded the International Panel on Fissile Materials, which seeks to end the production and use of highly-enriched uranium and separated plutonium for both weapons and non-weapons purposes.

In a sense, von Hippel inherited the problem of nuclear weapons from his grandfather, James Franck, who participated in the US World War II nuclear-weapon project, overseeing the development of the process to separate plutonium from irradiated uranium. In the spring of 1945, Franck convened the group that produced the Franck Report, which became famous after the end of the war because it had warned of a nuclear arms race with the Soviet Union if the US used the new weapon in a surprise attack on Japan.

Von Hippel initially proceeded down the career path of a theoretical physicist until he was an assistant professor at Stanford. There, because of the Vietnam War and revelations that many consequential government decisions for technology had been based on political calculations rather than considerations of effectiveness or the public interest, he decided to change his career to focus on public policy. He and Joel Primack, a younger activist physicist, co-authored a book on the roles of scientific insiders and outsiders in influencing government policy. Von Hippel then opted for the outsider role for himself, starting in 1974 by organizing a study of reactor safety sponsored by the professional society of American physicists.

The impact of that study resulted in an offer to continue his research at Princeton. There, he learned from a colleague, Harold Feiveson, of the Atomic Energy Commission's (AEC's) proposal to base the world's future energy system on plutonium breeder reactors. India had just tested a bomb using plutonium that had been separated for supposedly peaceful purposes with AEC assistance. Feiveson, von Hippel and a third colleague, Robert Williams, organized a group that critiqued the AEC's proposed "plutonium economy." Their work helped provide the analytical basis for the Carter Administration's 1977 decision to try to shut down the program, which Congress finally agreed to five years later.

In 1979, von Hippel was elected chairman of the Federation of American Scientists (FAS), *a group created in 1945 by veterans of the US World War II nuclear-weapons program to try to prevent a nuclear arms race with the Soviet Union. Two years later, the Reagan Administration took office asserting that the Soviet Union believed it could fight and win a nuclear war. The Reagan Administration asserted that the only way for the US to deter nuclear war was to develop a similar posture. The public's reaction was the Nuclear Weapons Freeze movement. Von Hippel joined the movement, focusing his efforts on ending nuclear testing and the production of "fissile" materials for nuclear weapons.*

In 1983, in response to public concerns, President Reagan announced a program to develop a system to protect the US from a Soviet ballistic-missile attack – quickly labeled "Star Wars" by critics. A group of Soviet academicians wrote an open letter to US scientists asking whether they had changed their view that the proposed ballistic missile defenses (BMD) could easily be overcome by countermeasures and would provoke an offense-defense arms race. The FAS leadership responded that it had not changed its views and was invited to Moscow to brainstorm with a small group of the academicians on how to end the nuclear arms race. Two years later, Mikhail Gorbachev became the leader of the Soviet Union and the FAS group learned that the Soviet academicians they had been brainstorming with were advising Gorbachev.

During the ensuing five years, von Hippel found himself and his colleagues swept up in a head-spinning series of Gorbachev initiatives to end the nuclear arms race:

- *A unilateral nuclear test moratorium, verified by the US Natural Resources Defense Council (NRDC) because the Reagan Administration refused to reciprocate;*
- *A decision, after a public debate, that President Reagan's "Star Wars" initiative would collapse under its own weight (which it did), and therefore the Soviet Union could agree with the United States in the INF and START Treaties on the bilateral elimination of their land-based intermediate-range missiles and the withdrawal from deployment of half of their strategic warheads;*
- *The unilateral withdrawal of 5,000 Soviet tanks from eastern Europe, and an agreement to further Soviet reductions in the 1990 Treaty on Conventional Forces in Europe;*
- *"Glasnost" ("openness") visits to the Soviet Union's first plutonium-production city, its ballistic missile defense (BMD) test site, and demonstrations of the detectability of the radiation from a Soviet cruise-missile warhead on a Soviet missile cruiser in the Black Sea off Yalta; and*
- *Just before the Soviet Union's disintegration in 1991, denuclearization of the Soviet Army and withdrawal of nuclear weapons from all Soviet surface ships in parallel to similar actions by the United States.*

In 1993, von Hippel was invited in as an advisor on the Clinton Administration's plan to end US nuclear testing. Later that year, he was invited to join the White House Office of Science and Technology Policy where he became involved in launching programs to secure nuclear materials in Russia and to stabilize Russia's nuclear cities. He was also responsible for supervising the process of deciding how to dispose of excess US weapons-grade plutonium, and pushed to expand programs to end the use of weapon-grade uranium as a reactor fuel.

Back in Princeton, von Hippel co-founded Princeton's Program on Science and Global Security and the International Panel on Fissile Materials. His research since has focused primarily on ending the production and use of highly-enriched uranium and plutonium as reactor fuels worldwide and dealing with Iran's nuclear program along with the longer-term goal of total nuclear disarmament. He also has been working with citizens groups to educate the US Congress and the public on opportunities to advance nuclear nonproliferation and disarmament.

Now... the part that mentions Tom Neff : See article in Journal for Peace and Nuclear Disarmament - [HP000G][GDrive]

*[...] **The APS Reactor Safety Study***

*That year, 1974, **Wolfgang (Pief) Panofsky**, was president of the American Physical Society. He had been one of the younger physicists in the Manhattan Project and was in the observational aircraft that accompanied the bomber that destroyed Nagasaki. He was one of the original members of the President's Science Advisory Committee, which President Eisenhower created after the surprise of Sputnik in 1957 and he was a leading advisor on nuclear arms control for the following half century. My favorite recollection of Panofsky is toward the end of his life when we were standing at adjoining urinals at the National Academy of Sciences and he turned and said to me, "Frank, this is the only place where people know what they are doing!"*

*Panofsky chose **Harold (Hal) Lewis** as chairman for this APS study. For some reason, I took an immediate dislike to Lewis. I decided that his interest in the issue was to prepare himself to become a consultant to the nuclear industry. It is very difficult for me to conceal my feelings so the situation quickly escalated into one in which Panofsky felt he had to intervene. Somehow, with the help of Panofsky and **Tom Neff, who had taken a class with me at Stanford and was acting as Panofsky's assistant during Panofsky's year as APS President**, Lewis and I papered over our mutual dislike sufficiently to proceed.*

Again, the summer study was at Los Alamos but this time it was for a month.

*While we were there, I met **Harold Agnew**, the director of of the Los Alamos National Laboratory. He had worked on Fermi's reactor at the University of Chicago in 1942 and had been on the observation plane that had accompanied the bomber that destroyed Hiroshima .*

[...]

- *[**Wolfgang Kurt Hermann Panofsky (born 1919)**] - German-born American physicist who led the construction and operation of the two-mile-long electron accelerator at Stanford. Panofsky also was a leading government advisor and educator on nuclear arms control issues. The "Panofsky Ratio" I had measured as an MIT undergraduate was named after him because he had made the first measurement.*
- *[**Harold (Hal) Lewis**] - An Oppenheimer student who was a physics professor at the University of California, Santa Barbara.*

1979 (Feb) - Mention in MIT Research Paper - "ESSAYS ON URANIUM ENRICHMENT by RICHARD ALAN CHARPIE"

See PDF here : [HE0006][GDrive]

"Acknowledgements - I wish to thank my thesis supervisor, Professor Henry Jacoby, for his assistance and encouragement throughout the duration of this thesis. His ability to successfully wear two hats, as co-principal investigator on the Nuclear Fuel Assurance Project and as thesis supervisor, has contributed substantially to the progress of my research by coaxing me in a direction which simultaneously satisfied academic and policy analysis goals. In addition, I wish to thank Dr. Thomas Neff, the Project's other co-principal investigator, for his assistance with the analysis. Lastly, thanks are to due to the Department of Energy whose financial support of the Fuel Assurance Project made the research possible."

1980 (Dec)

See **"THE INTERNATIONAL URANIUM MARKET - by Thomas L. Neff and Henry D.Jacoby - MIT Energy Laboratory Report No. MIT-EL 80-014 - December 1980"**

Download at : [HE0005][GDrive]

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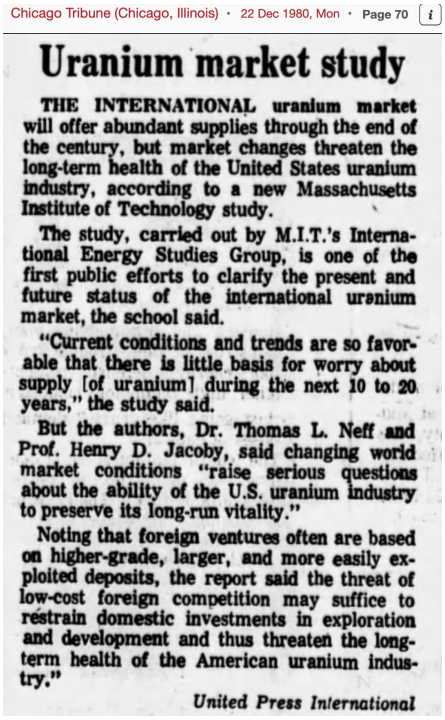
Uranium is also the subject of international security concerns because of its association with the proliferation of nuclear weapons

These security concerns are related to the nature and behavior of the international market for nuclear fuels. For example, political aspects of security become more salient if the uranium market is tight, or if there is little flexibility in supply arrangements. Conversely, an oversupply situation--or growing diversity of supply--lessens the impact of political and other constraints.

1980 (Dec 22)

Full page : [HN007S][GDrive]



Chicago Tribune (Chicago, Illinois) · 22 Dec 1980, Mon · Page 70

Uranium market study

THE INTERNATIONAL uranium market will offer abundant supplies through the end of the century, but market changes threaten the long-term health of the United States uranium industry, according to a new Massachusetts Institute of Technology study.

The study, carried out by M.I.T.'s International Energy Studies Group, is one of the first public efforts to clarify the present and future status of the international uranium market, the school said.

"Current conditions and trends are so favorable that there is little basis for worry about supply [of uranium] during the next 10 to 20 years," the study said.

But the authors, Dr. Thomas L. Neff and Prof. Henry D. Jacoby, said changing world market conditions "raise serious questions about the ability of the U.S. uranium industry to preserve its long-run vitality."

Noting that foreign ventures often are based on higher-grade, larger, and more easily exploited deposits, the report said the threat of low-cost foreign competition may suffice to restrain domestic investments in exploration and development and thus threaten the long-term health of the American uranium industry."

United Press International

[HN007T][GDrive]

1981 (Aug 17)

Full page : [HN007Q][GDrive]

News-Journal (Mansfield, Ohio) · 17 Aug 1981, Mon · Page 25

U.S. firms import uranium from Soviet, newspaper says

NEW YORK (AP) — American concerns imported $43.8 million of enriched uranium from the Soviet Union last year, the New York Times reported today.

The newspaper said it was the first time that a large amount of uranium had been traded directly between the two superpowers, whose trade has suffered since the Soviet intervention in Afghanistan at the end of 1979.

The imports of uranium, which made up 10 percent of U.S. imports from the Soviet Union last year, were recorded in the Commerce Department's report on Soviet-American trade in 1980, the newspaper said.

The Times quoted unidentified sources as saying the uranium was bought in Canada by a West German electric utility and was sent to the Soviet Union for enrichment. It was then sold to the Exxon Nuclear Co. of Bellevue, Wash., for nuclear fuel fabrication at a plant in Richland, Wash. The fuel then was to be re-exported to West Germany.

The United States monopolized the market for enriched uranium outside the Soviet bloc until 1974, when the Soviet Union began to offer the enriched uranium to Western countries. Some Western European nations are now also in the business. American nuclear power plants usually use uranium mined and enriched in the United States.

In another deal last year, Soviet enriched uranium was imported from West Germany for a reactor in upstate New York owned by the Rochester Gas and Electric Corp.

Neil Moore, the senior licensing officer of the Office of International Programs at the Nuclear Regulatory Commission, said the two incidents seemed to be the first U.S. imports ever of enriched uranium from the Soviet Union.

Thomas L. Neff, the head of the International Energy Studies Program at the Massachusetts Institute of Technology, said, "The arrival of Soviet enriched uranium in the United States indicates increasing flexibility in international transactions to meet the growing demand."

[HN007R][GDrive]

1981 (jan 31)

Full page : [HN007U][GDrive]

Tulare Advance-Register (Tulare, California) • 31 Jan 1981, Sat • Page 1

Impact of oil prices studied

SACRAMENTO (UPI) — The state Energy Commission Friday set up a special committee to study the impact on the poor and elderly of President Reagan's decision to decontrol oil prices.

At the same time, Reagan's action was praised by energy experts from Harvard and Massachusetts Institute of Technology in Sacramento to advise the state government on coping with future oil shortages.

Gov. Edmund G. Brown Jr. had no immediate comment.

The commission will set up an advisory committee to "examine the economic and social impacts of Reagan's decontrol order," Chairman Russell Schweikart said.

He predicted that Reagan's decision to end oil price controls eight months before they would have expired eventually will mean higher gas prices for motorists and renewed pressure on smallscale oil refiners.

"The utilities also will undoubtedly pass on increased prices paid for their oil to California electric consumers," Schweikart commented. About 56 percent of the state's electricity is generated by burning oil and natural gas.

Reagan's move may force a more rational allocation of American oil supplies said David A. Deese, editor of the widely read book "Energy and Security."

Deese and Thomas L. Neff, an energy specialist from Massachusetts Institute of Technology, were in Sacramento to advise the enegy commission on oil shortages they said are sure to be felt in California in the 1980s. Deese is director of security studies at Harvard's Center for Science and International Affairs. They held a news conference Friday.

Neff said it was a "major mistake" for government to try to protect the American consumer from the oil price runups by Middle East countries in the 1970s, the Iranian hostage crisis and the Iran-Iraq war.

"By isolating our internal oil markets from the world, we only encouraged the growth of oil demand," he commented. "That played into the hands of the OPEC countries. Also, by not planning for emergencies or stockpiling oil we made it easy for OPEC to raise prices."

Deese, director of security studies for Harvard's Center for Science and International Affairs, urged Californians to see their oil problem in a global context.

Reagan's move may force a more rational allocation of American oil

[HN007V][GDrive]

1981 (aug18)

Full page : [HN0088][GDrive]

10 THE TENNESSEAN, Tuesday, August 18, 1981

Soviets Transferred Uranium Worth $43 Million to U.S.

By THEODORE SHABAD
The New York Times News Service

NEW YORK — Soviet-American trade, which has been limping along since Moscow's military intervention in Afghanistan, was given impetus from an unusual source last year — the transfer of enriched uranium from the Soviet Union.

The Department of Commerce has disclosed in a trade review, without elaboration, that $43.8 million worth of uranium entered the United States from the Soviet Union in 1980. It was the first time that a sizable amount of the strategic commodity had figured in direct trade between the two countries. Some industry sources suggested that it could be the beginning of a trend.

THE URANIUM industry is secretive, and producers and consumers do not ordinarily disclose amounts or prices of imports and exports or information on origin and destination. But interviews with government officials, industry spokesmen and academic specialists revealed that a West German electric utility had sent uranium to be enriched in the Soviet Union and then to be fabricated in the United States into nuclear fuel for reexport to West Germany.

In an unrelated transaction last year, Soviet enriched uranium originally intended for an Austrian utility was imported from West Germany, for use as fuel in the Ginna nuclear station of the Rochester Gas and Electric Corporation in upstate New York. American nuclear plants normally use uranium mined and enriched in the United States.

The transfers added a new twist to the already complex patterns of uranium trade. With most production, consumption and processing plants concentrated in a few nations, it is not unusual for shipments to crisscross the world, covering long distances on their way from mine to nuclear power plant.

THOMAS L. Neff, an authority on the uranium market who heads the International Energy Studies Program at the Massachusetts Institute of Technology, noted that the Soviet Union had been enriching uranium for utilities in Western Europe, especially West Germany, since 1974. The site of the Soviet plant, because of secrecy surrounding nuclear weapons, has not been disclosed.

"The arrival of Soviet enriched uranium in the United States indicates increasing flexibility in international transactions to meet the growing demand," Neff said. "With continuing large-scale procurement of fuel for power plants, we are likely to see more such complex deals."

At the Nuclear Regulatory Commission in Washington, Neil Moore, senior licensing officer in the Office of International Programs, said the two import licenses issued appeared to be the first for Soviet enriched uranium. He said he was aware of no legal barriers to such importation.

To Moscow Talk, Bush Says Nuts

PHILADELPHIA (UPI) — Vice President George Bush said "nuts" to the Soviet Union yesterday for criticizing the U.S. decision to produce the neutron bomb.

In a speech at the 82nd national convention of the Veterans of Foreign Wars, Bush also said the Reagan administration's decision to add $32 billion to the defense budget for fiscal 1981 and 1982 was necessary to preserve peace.

"I'VE BEEN mulling over the things that the Soviets said about us last week" regarding "the de-

Vice President George Bush
"...They said we're inhuman..."

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We BUY ALUMINUM

[HN0089][GDrive]

1987 (April 6)

- On two pages - Links to full pages :
  - (PG 43) [HN007W][GDrive]
  - (PG 44) [HN007Y][GDrive]

The Boston Globe (Boston, Massachusetts) • 06 Apr 1987, Mon • Page 43

NUCLEAR ENERGY

Sale of novel nuclear fuel triggers alarm

Plutonium-bearing MOX, in wrong hands, could be used for bombs, critics say

By Corie Brown
Special to the Globe

A number of government and academic nuclear fuel experts in the United States are having nightmares over recent decisions by France, Germany and Belgium to begin worldwide marketing of a new type of nuclear reactor fuel containing plutonium.

The critics say widespread marketing of the fuel, known as mixed oxide or MOX fuel, will greatly increase world stockpiles of plutonium in a form that can easily be converted to a mixture rich enough to build a nuclear bomb or at least set off a deadly "nuclear fizzle." Ultimately, they say, that escalates the risk that a terrorist group or a government intent on evading treaties limiting profiferation of nuclear weapons could get their hands on a supply of the fuel and use it to build a bomb.

The Reagan administration quietly has been seeking assurances from nations planning to market or use MOX fuel that they will impose tight controls, said a State Department official, who spoke on condition of anonymity.

Those efforts, however, do not allay the concerns of many nuclear experts. The United States does not make or use this type of fuel, which, in the view of several specialists, has no cost or efficiency advantages over conventional nuclear fuels.

What is particularly worrisome to the critics is that the reported customers for MOX fuel include countries, such as Brazil, that do not have nuclear weapons and have no visible need for specialty nuclear fuels.

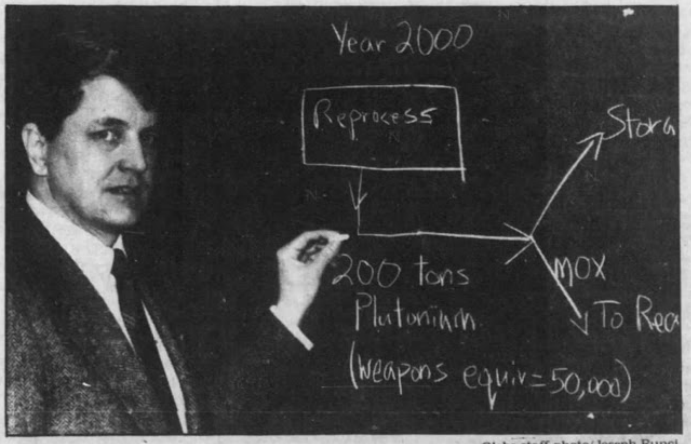
"The international commerce of MOX fuel is the central nuclear weapons proliferation question in the world," said Dr. Harold Feiveson, a plutonium expert at Princeton University's Center for Energy and Environmental Studies. The traffic in MOX fuel, he added in an interview, threatens to make an "ordinary commodity" of plutonium.

In an article in the journal Science last month, Feiveson warned that widespread reprocessing of spent nuclear fuel to produce MOX and other plutonium products "would create a challenge of nightmarish proportions for those seeking to prevent diversion of plutonium to weapons."

The prospects are, however, that the trade in MOX fuel will grow. Great Britain and Japan say they plan to introduce their own lines of mixed-oxide fuel early in the 1990's.

MOX fuel has the look and feel of the standard fuel used in reactors around the world and would be used in conventional light-water reactors similar to the Pilgrim plant in Plymouth or Seabrook in New Hampshire. Both fuels have cylindrical

MOX, Page 44



Globe staff photo/Joseph Runci

Dr. Thomas L. Neff of MIT's Center for International Studies.

[HN007X][GDrive]

Sale of nuclear fuel creates alarm

1987-04-06-the-boston-globe-pg-44-clip-nuclear-energy

■ **MOX**

Continued from Page 43

fuel pellets stacked end to end in slender rods several yards long, which are bound together into bundles to form a reactor core.

The difference is that the MOX is a blend of 95 percent natural uranium (U-238), 1 percent enriched uranium (U-235) and 4 percent plutonium oxide. Conventional fuel has no plutonium.

Reports have been circulating for months that Brazil has approached France to buy MOX. The Brazilian official authorized to speak on the subject could not be reached last week. Taiwan, South Korea, India, Pakistan, Israel and Argentina also reportedly are in the market for MOX fuel.

Although France, Belgium and West Germany say they have not sold MOX to these countries, Princeton's Feiveson said it is disturbing that non-nuclear weapons nations are seeking MOX, precisely because it could secretly be used to develop weapons.

Even if governments resist the opportunity to join the nuclear weapons club, individuals might not, added Dr. Thomas Neff of the Massachusetts Institute of Technology's Center for International Studies. A handful of terrorists working in a basement laboratory with rudimentary skills and crude instruments could create a nuclear bomb with a single pirated 220-pound shipment of MOX fuel.

The 'dirty fizzle' threat

It is theoretically possible, Neff said, for relatively unsophisticated laboratory technicians to extract the plutonium from the MOX fuel powder with nitric acid. In that rough state, the plutonium could be enough to set off a nuclear chain reaction and create a "dirty fizzle" of radioactivity. This would not technically be a nuclear explosion, but the effect could be just as deadly and could easily make uninhabitable the center of a city the size of Boston. With a little finesse, Neff added, an actual nuclear bomb could be built.

A key official in the US arms control bureaucracy, who requested anonymity, said uncontrolled shipments of MOX fuel around the world make such a scenario "inevitable." Although it is frequently assumed that it would be impossible for a terrorist group to produce a bomb, this official, like Neff, contended that MOX, it would take just five technicians to build a simple plutonium nuclear bomb from a supply of MOX.

Theodore Taylor, a former Department of Defense nuclear weapons specialist and now an independent physicist working for international nuclear disarmament, agreed. "It is certainly possible [under those circumstances] to build a bomb equal to 1,000 tons of high explosives," he said. "The international commerce in mixed oxide nuclear fuel, unless much more effectively protected from theft or diversion to weapons use, could allow this to happen."

In light of such risks, why are France, Germany and Belgium anxious to sell MOX fuel?

There is no performance advantage to MOX, said Bertram Wolfe, General Electric Co. vice president and general manager for nuclear fuel. It does not last longer than conventional fuel nor generate more heat. And it is costlier to use, Wolfe said.

Part of the answer, he added, probably lies in the hundreds of millions of dollars that France, West Germany, Japan and others have invested in nuclear fuel reprocessing, in large part to guarantee their energy independence in the future. Much of that investment, he noted, began at a time when partially refined uranium (yellowcake) was selling for $40 a pound and it made economic sense to reprocess spent nuclear fuel for reuse. Today, with uranium selling for $17 per pound, it costs far more to recover the usable uranium and plutonium than to buy fresh uranium and bury the spent fuel.

But for countries that made the investment in reprocessing, making and selling MOX fuel is one way to recover some of those costs. Aside from that rationale, Wolfe said, "There is a realization around the world that this [reprocessing and MOX fuel] activity does not make sense."

Recouping investments

The business of reprocessing spent nuclear fuel is part of what is known as "completing the nuclear fuel cycle."

That cycle begins with mining uranium; next it is fabricated into fuel and used in a reactor. In the United States, Canada and Sweden, most spent fuel is simply disposed of in storage systems when too much of the uranium has broken down into other elements to sustain a fission reaction.

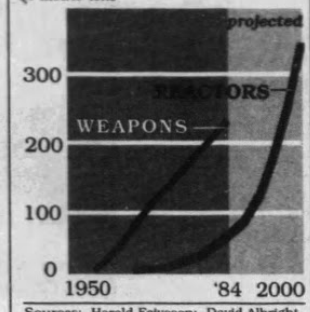
Reprocessing makes it possible – though at great expense – to extract unused uranium from the highly radioactive spent fuel rods, along with the plutonium created during nuclear fission. What remains is intensely radioactive waste. In the United States, a different process produces plutonium for nuclear weapons.

But in France, Germany and Belgium, the extracted uranium and plutonium are being fed back into the front end of the cycle to be fabricated into conventional, MOX or breeder reactor fuel. "Breeder" reactors use plutonium as fuel and produce even more plutonium as a by-product.

France and other countries have made major investments in developing breeder reactors, but much more plutonium is gathered from reprocessing than is needed for them. Some of that plutonium is now being used in MOX fuel. The rest is being stockpiled. French officials have estimated there will be a cumulative worldwide plutonium stockpile of 70 tons by 1995 and 170 tons by 2000.

The growing plutonium stockpile

Growth in non-communist countries of plutonium in reactor fuels, compared with plutonium in nuclear weapons of the US, USSR, France and UK, through start of 1984. Projections not available for weapons plutonium.



Sources: Harold Feiveson; David Albright. Globe staff chart

France defends decision

The French government defends as "prudent" its decision to market MOX. In a written response to queries on the issue, the French Embassy in Washington said "because France has no coal, oil or natural gas resources, an ambitious nuclear power program was launched. . . and a strong fuel cycle industry was developed" to ensure maximum use of uranium resources.

Because of the expense of stockpiling the plutonium it doesn't now need, the French government estimates, it could save the equivalent of $600 million between now and the year 2000 if some of that stockpile were woven into MOX fuel.

Dr. Rolf Randl, head of the nuclear fuel division at the Ministry of Research and Technology in Bonn, said Germany, like France, decided more than a decade ago to "close the fuel cycle" as the greatest assurance of a domestic energy supply. That means reprocessing spent fuel, building breeder reactors and using excess plutonium in fuel for commercial reactors.

"We are in the very beginning phases of (MOX fuel use) right now. . .," he added. "We are adding fabrication capacity. . . Actively marketing our MOX fuel abroad has not really happened yet. . . It will depend on what kind of world market develops."

A State Department spokesman who would not speak for attribution said the United States considers it inconsequential if France, Belgium, West Germany, Japan or Great Britain produce MOX for their own use. The United States assumes they are observing the 1979 Nuclear Non-Proliferation Treaty and trusts that the United Nation's International Atomic Energy Agency is acting as the watchdog assuring compliance with that treaty, he said.

But US officials and others are worried now that these countries and others want to sell plutonium fuels outside their borders, and the United States is pressing for new controls.

Corie Brown is freelance writer living in Boston.

[HN007Z][GDrive]

1991 (Oct 24) - NY Times editorial - "A Grand Uranium Bargain"

THIS IS THE BIG EDITORIAL THAT WAS USED AS THE "INSPIRATION" FOR **Megatons to Megawatts Program** .

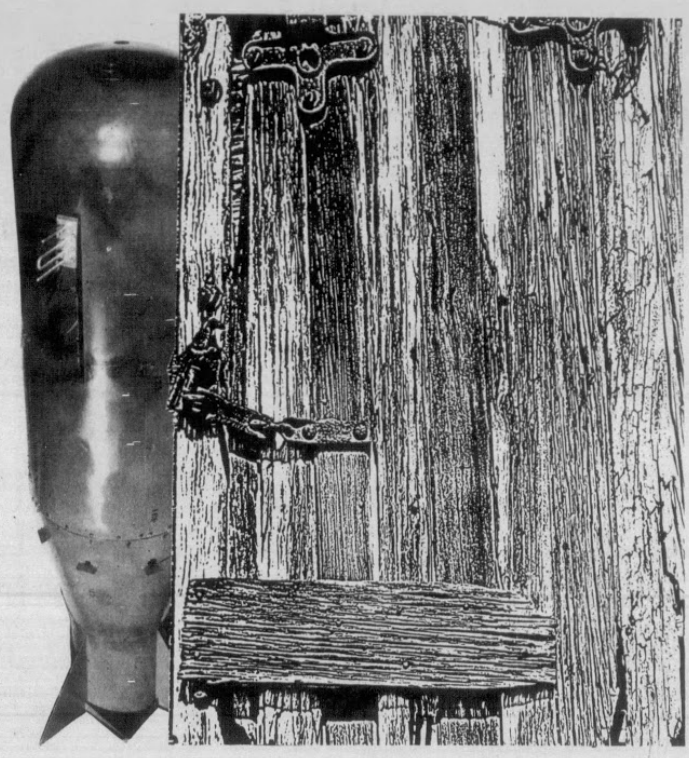
See [HN007P][GDrive]

1992 (Jan 19)

Full page : [HN0080][GDrive]

Doors of secrecy unlock to reveal nuclear cities

Like in U.S., ex-Soviet Union's nuclear complexes struggle to find role in changed world



By WILLIAM J. BROAD
N.Y. Times News Service

■ **EDITORIAL:** Soviet scientists a valuable resource. **Page D-6.**

Ten previotsly unknown cities of the former Soviet Union have suddenly emerged from the mists of the Cold War, prompting anxious speculation about their fate.

The cities, with code names like Tomsk-7 and Arzamas-16, formed the heart of the Soviet military's vast industrial complex for the design and production of nuclear arms.

Their disintegration is now seen as threatening to send scientists and materials flying into foreign hands in a new kind of international peril.

But scores of interviews with experts in the United States and Moscow, including Russian arms scientists themselves, show that the nuclear cities and their hidden reservoirs of scientific talent are also struggling to save themselves.

Lifting some secrecy, they now want to go commercial, embark on joint projects with the West and do nearly anything in their power to survive and avoid falling apart.

These cities are mirrored in America by a coast-to-coast complex built over the decades. Its major sites, Los Alamos, Livermore, Hanford, Pantex, Savannah River, are well known and far less secretive.

The American complex employs nearly 100,000 people in 13 states and costs about $11 billion a year just to operate.

It turns out that the former Soviet complex is far larger. Its fate poses far larger problems — and perhaps opportunities.

The Bush administration recently warned that economic chaos, military decline and high unemployment could shatter the complex and scatter its experts to the wind. Yet some Western analysts, and Russian ones as well, express guarded optimism.

"There is hope," Dr. Nikolai N. Ponomarev-Stepnoi, a high official of the Kurchatov Institute of Atomic Energy in Moscow, said in an interview. But he added that if cuts in government financing were not offset by new revenue or joint ventures with the West, "there is danger."

Not all experts agree. Russian government officials often dismiss the specter of atom mercenaries as a scare tactic used by arms scientists intent on stabilizing their salaries in a time of economic discord.

Cultural barriers, these officials say, would bar the easy transfer of scientists and their families to foreign lands.

Yet ferment is real. Russian nuclear experts have received job offers from Iraq and Libya and a few are said to be taking up Western posts, in Albuquerque, for instance.

Meanwhile, Russian bomb makers in the secret cities are striving to invent new ways of making money at home. Some of the initiatives would hinder atomic leakage, others encourage it.

A Russian leader trying to save the cities is Viktor N. Mikhailov, a chain-smoking apparatchik who directs the bomb complex from his Moscow post at the Ministry of Atomic Power and Industry.

He exudes confidence, even when asking for a handout.

Smiling broadly, he argued last month in Moscow that $400 million recently appropriated by the American Congress for warhead dismantlement in Russia should be given exclusively to his agency, saying his workers "are almost unemployed these days."

Some American experts fear any American aid might covertly be used to bolster Moscow's arsenal.

In a different area, Mikhailov has stirred Western anxiety by encouraging his legions in the secret cities to sell atomic services abroad, including peaceful nuclear explosions for the bulk incineration of chemical weapons and toxic wastes.

Western experts fear such nuclear sales will expand to include bomb parts and weapon materials, but Mikhailov derides that idea.

A favorable outcome from all this is possible, some experts say. But many speak only of lessening the dissemination threat, not eliminating it.

Dr. William G. Sutcliffe, a senior physicist at the Lawrence Livermore National Laboratory in California, a federal center for the design of nuclear arms, recently went to Russia to speak with his counterparts there. He said the danger was acute.

The Soviet Union got a late start in the nuclear arms race but then forged ahead in perfecting weapons for the Cold War. Its first atomic bomb was detonated in 1949, four years after America's initial mushroom cloud. Its first hydrogen bomb was exploded in 1955, three years after the United States did so. In 1961, the complex came into its own by detonating the largest nuclear blast of all time, one equal to a staggering 58 million tons of high explosive or nearly 4,000 times more powerful than the bomb that leveled Hiroshima.

By the late 1980s, the Soviet Union's secretive maze of nuclear design labs, reactors and factories had grown enormously in size, dwarfing the American complex.

"It was several times larger, if only because it had 14 reactors operating" simultaneously to make plutonium and tritium for bomb fuel, said Dr. Robert S. Norris, senior researcher at the Natural Resources Defense Council in Washington and co-author of the *Nuclear Weapons Databook*, a multivolume reference series.

A recent federal intelligence report estimates that the complex now employs some 900,000 people ranging from blue-collar workers running lathes to members of the military guarding nuclear arms.

Federal officials said as many as 2,000 people know how to make nuclear arms.

The newspaper Yomiuri Shimbun of Tokyo, citing a secret Russian document, reported late last year that 755,800 experts and their families live in the 10 top-secret Soviet cities devoted to nuclear arms work. American experts are familiar with only some of the cities.

The Soviet complex was a closed society for decades. But it is now opening to the outside world in a desperate bid for survival, giving a rare glimpse of its inner workings.

Some 200 or so miles east of Moscow, not far from Nizhny Novgorod, or what used to be called Gorky, lies the main nuclear weapons laboratory of the former Soviet Union, Arzamas-16.

It is now regaining its former historical name, Sarov. This ancient city was once known for the famous Sarov monastery and one of Russia's most hallowed saints, St. Seraphim.

But in the 1940s it was ringed with barbed wire and disappeared from maps as it was turned into the first Soviet center dedicated to the design of nuclear arms. It created the first bomb.

Today the site has 80,300 residents, including scientists, their families and townspeople, Yomiuri Shimbun said. In addition to designing arms, the laboratory has developed powerful lasers for trying to harness nuclear fusion for energy production.

The laboratory's day-to-day activities are run by Dr. Yuri A. Trutnev, a elder physicist who speaks of shifting the lab's nuclear work toward peaceful ends.

"The genie is out of the bottle," he said in an interview last month. "Let's use it for the benefit of mankind."

But Trutnev was quick to add that the weapons legacy would not suddenly disappear. "Realistic politicians say nuclear weapons must be preserved," he said. "That doesn't mean we shouldn't reduce them. But the knowledge and the know-how must be preserved."

At a Kiev meeting on warhead dismantlement in December, Trutnev outlined a plan to use underground nuclear explosions to destroy the cores of discarded nuclear arms.

A single blast could demolish up to 20,000 cores, he said. Such work would give the laboratory a new challenge, at least for a while.

In a similar vein, Arzamas-16 is allied with Mikhailov in marketing nuclear blasts for the incineration of highly toxic wastes. It has close ties to a new Soviet company, International Chetek Corp. of Moscow, which is promoting the work, and has a team of scientists preparing a bomb for a test.

Yet some analysts said political foes of underground blasts might succeed in blocking the project.

Just east of the Ural Mountains, some 25 miles north of Kyshtym, lies Chelyabinsk-70, founded in 1955 as the second design laboratory. Today it has 46,300 residents, according to Yomiuri Shimbun.

Ahead of the times, the scientific director of Chelyabinsk-70, Dr. Evgenie N. Avrorin, went to the Livermore weapons laboratory in California to discuss joint research in 1990.

On his agenda was what to do with nuclear materials from old warheads, how to conduct ecologically clean blasts in closed chambers and how to make fuels for laser fusion. To date his efforts have yielded no joint projects.

More successfully, Chelyabinsk-70 has gone commercial. Soviet television reported last year that it was producing and selling personal computers. And it has perfected the explosive synthesis of very small industrial diamonds, which are now for sale.

"Entrepreneurs and business are the best way to go," Dr. Vadim A. Simonenko, the senior arms designer at Chelyabinsk-70, said in an interview.

Stalin's early interest in the bomb got serious in 1943 when he directed that its feasibility be studied in Moscow. Dr. Igor V. Kurchatov led the work, which included building the Soviet Union's first nuclear reactor.

Since then, the Kurchatov Institute, as it is known, has focused on making innovative reactors, including ones for use in space. Though not a secret city, it is facing serious problems as budgets fall and temptations rise to send its nuclear expertise abroad.

Ponomarev-Stepnoi, the institute's first deputy director, said Kurchatov experts had been recently courted by Libya, adding that the job offers were rejected.

"Our scientists should work in the civilized world, in civilized countries," he said. "There is danger that our people will try to find employment in Third-World countries if their desire to work in the civilized world is not appreciated."

To help finance its scientists amid growing turmoil, the institute last year agreed to sell one of its formerly secret technologies, a Topaz-2 space reactor, to the Pentagon.

But the $15 million deal has been stymied by American red tape.

Dr. Mohamed S. El-Genk, a nuclear engineer at the University of New Mexico, has bought Kurchatov equipment, saying the power of the dollar over the ruble is so great that even relatively small sales can keep Russian teams supported financially for years.

"The best thing we can do is buy their technologies and try to insure that they still do science there," he said, adding that the situation could otherwise become "really dangerous."

In a sign of the times, El-Genk noted that he now runs a collaborative research project with Kurchatov and that some of its Moscow experts were soon to take up posts at the University of New Mexico.

Russia and other former Soviet republics have many other secretive nuclear sites, including Krasnoyarsk-26, Penza-19 and Zlatoust-36.

New projects at them could easily include the accelerated cleanup of pollution. At Chelyabinsk-65, six nuclear reactors have so poisoned the Techa River with radioactivity that, according to a working paper of the Nuclear Weapons Databook, "it is cordoned off with a wire fence and people are forbidden to catch fish, pick mushrooms or berries, or cut the hay."

Western experts say the fate of the Russian complex partly depends on the American government, which is still pondering its options and wary of aiding its former foes.

Some analysts fault the Bush administration for moving slowly to accept Russian offers for nuclear sales or joint projects, saying a modest investment could help lessen the risk of a Russian brain drain.

The Natural Resources Defense Council, a private group whose Washington office has strong ties to Russian weapon scientists, is mounting a crash effort to fund their research and shift it toward environmental issues, including how to clean up Russia's mountain of nuclear waste.

"The U.S. should hire all of them and put them to work on some hard technical problem," said Dr. Thomas L. Neff, a physicist at the Massachusetts Institute of Technology who attended the Kiev conference last month. "It would be cheaper than buying a battleship."

Indeed, Sutcliffe of the Livermore laboratory has calculated that as little as $10 million a year could finance the work of 10,000 important nuclear experts in the former Soviet Union.

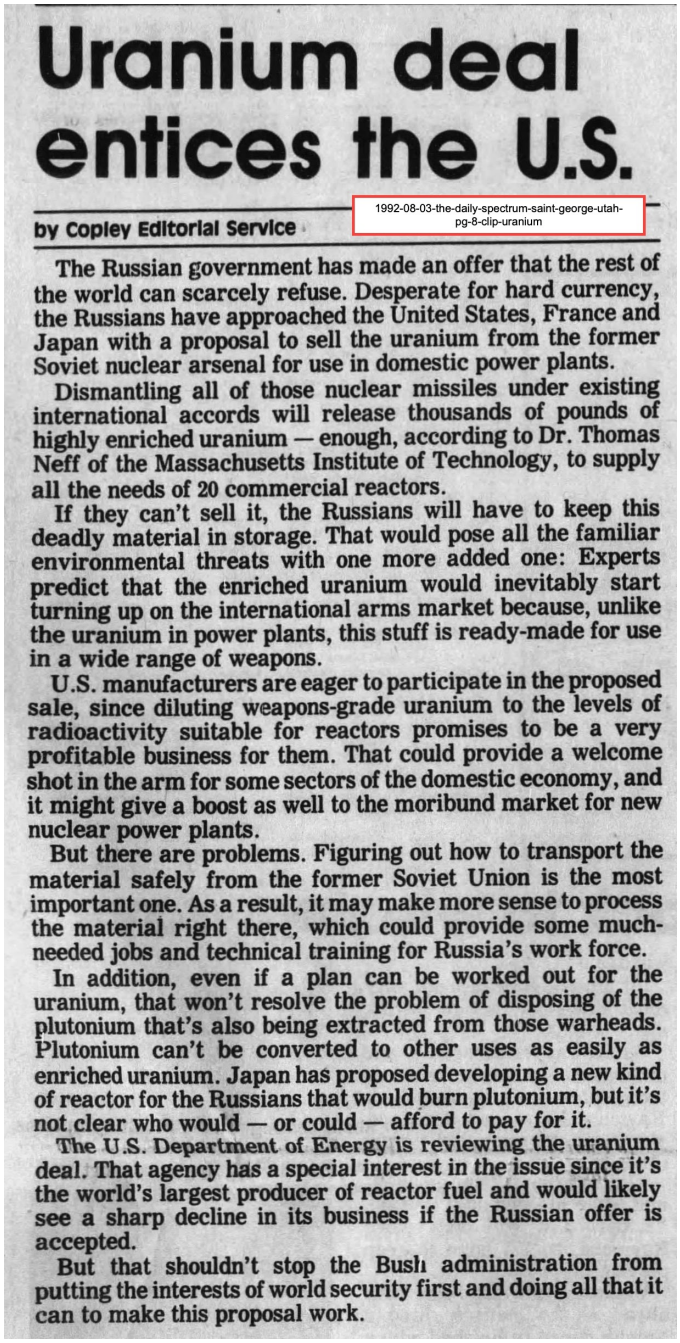
But many experts say the federal government is likely to balk at direct bailouts, given the reticence it has already shown in buying Russian technology.

"There is hope," said Ponomarev-Stepnoi of the Kurchatov Institute. "But the American bureaucracy works very slowly. Up to now, there is no agreement between our countries for the peaceful utilization of atomic energy. And this makes any other contacts and programs very difficult."

[HN0081][GDrive]

1992 (Aug 3)

Full page : [HN0082][GDrive]



Uranium deal entices the U.S.

1992-08-03-the-daily-spectrum-saint-george-utah-pg-8-clip-uranium

by Copley Editorial Service

The Russian government has made an offer that the rest of the world can scarcely refuse. Desperate for hard currency, the Russians have approached the United States, France and Japan with a proposal to sell the uranium from the former Soviet nuclear arsenal for use in domestic power plants.

Dismantling all of those nuclear missiles under existing international accords will release thousands of pounds of highly enriched uranium — enough, according to Dr. Thomas Neff of the Massachusetts Institute of Technology, to supply all the needs of 20 commercial reactors.

If they can't sell it, the Russians will have to keep this deadly material in storage. That would pose all the familiar environmental threats with one more added one: Experts predict that the enriched uranium would inevitably start turning up on the international arms market because, unlike the uranium in power plants, this stuff is ready-made for use in a wide range of weapons.

U.S. manufacturers are eager to participate in the proposed sale, since diluting weapons-grade uranium to the levels of radioactivity suitable for reactors promises to be a very profitable business for them. That could provide a welcome shot in the arm for some sectors of the domestic economy, and it might give a boost as well to the moribund market for new nuclear power plants.

But there are problems. Figuring out how to transport the material safely from the former Soviet Union is the most important one. As a result, it may make more sense to process the material right there, which could provide some much-needed jobs and technical training for Russia's work force.

In addition, even if a plan can be worked out for the uranium, that won't resolve the problem of disposing of the plutonium that's also being extracted from those warheads. Plutonium can't be converted to other uses as easily as enriched uranium. Japan has proposed developing a new kind of reactor for the Russians that would burn plutonium, but it's not clear who would — or could — afford to pay for it.

The U.S. Department of Energy is reviewing the uranium deal. That agency has a special interest in the issue since it's the world's largest producer of reactor fuel and would likely see a sharp decline in its business if the Russian offer is accepted.

But that shouldn't stop the Bush administration from putting the interests of world security first and doing all that it can to make this proposal work.

[HN0083][GDrive]

1993 - Mention in IAEA Bulletin

[HI0001][GDrive]

1997 (April) - Szilard Award Goes to Tom Neff

See American Physical Society - Newsletter - Physics and Society Apr '97 - News - [HX0005][GDrive]

- *At the April meeting in Washington, DC, APS will give the Leo Szilard Award for Physics in the Public Interest to Thomas Neff, a senior member of MIT's Center for International Studies. Neff is being cited "for proposing and working to keep on track the historic agreement for the US to purchase uranium from the former Soviet Union weapons stockpile and to transform it from highly enriched uranium to low-enriched uranium for civilian purposes, thereby significantly reducing the numbers of nuclear weapons." According to Frank von Hippel (Princeton University), this agreement has also helped to stabilize Ukraine's decision to become a non-nuclear-weapon state by giving that new nation an economic interest in disarmament.*
- *After receiving his* ***PhD in theoretical physics from Stanford University in 1973, Neff held postdoctoral positions at Berkeley, Stanford and MIT. At Stanford, he worked as an assistant to Wolfgang Kurt Hermann Panofsky (born 1919), who was APS president at the time, on matters of science and public policy, helping with the first studies of these topics and assisting in the formation of the Panel on Public Affairs****. From 1977-85, Neff was manager and director of MIT's International Energy Studies program. He has been an advisor to numerous US government agencies as well as to governments and companies around the world.*
- *Over the years, Tom has worked on issues of energy policy and nuclear nonproliferation. He was a senior staff member of the Ford Foundation's study, "Nuclear Power Issues and Choices." He has written books and articles on oil and nuclear fuel markets and on solar energy.*
- *In a New York Times Op-ed on 24 October 1991, Neff proposed the purchase of Soviet weapons-grade uranium by the US government. The Government picked up his idea and agreed in January 1994 to purchase 500,000 kilograms of Soviet weapon-grade uranium after it has been blended down to low-enriched uranium for use in power-reactor fuel. Since then Neff has worked creatively and successfully to help devise strategies to overcome the obstacles to the agreement as they have arisen. The obstacles have ranged from trivial to profound commercial and policy problems on both the Russian and US sides of the deal. In Neff's words, "I've had to become part of the interagency process in Russia as well as the US, broker a deal between the US Administration and Congress (the Domenici legislation) and keep the commercial players true to the terms of the deal. The larger issue is that policy processes and institutions still reflect the cold war, rather than being redesigned to undo it. I hope to talk about this in Washington."*

1998 (Aug)

https://www.armscontrol.org/act/1998-08/press-releases/privatizing-us-national-security-us-russian-heu-deal-risk

Privatizing U.S. National Security: The U.S.-Russian HEU Deal At Risk

Just before their end of summit press conference on September 2, Russian President Boris Yeltsin informed President Bill Clinton that he was going to announce the end of the historic "HEU deal" signed by the two countries in 1993. Under this unprecedented government-to-government agreement, the United States agreed to purchase, over a 20 year period, 500 metric tons of highly enriched uranium (HEU) from dismantled Soviet weapons that Russia would "blend down" to low-enriched uranium (LEU) for sale to the United States as fuel for civilian nuclear reactors. The deal—worth an estimated $12 billion to Moscow—would guarantee that the Russian HEU, enough to build more than 20,000 nuclear weapons, would never again be used for weapons purposes.

The HEU deal, initiated by President George Bush and signed by President Clinton in February 1993, arose from a proposal to U.S. and Russian officials in October 1991 (only weeks before the dissolution of the Soviet Union)< 1 > and subsequently became the centerpiece of U.S. efforts to address what is arguably the most extreme proliferation threat since the beginning of the nuclear age: the possibility that nuclear weapons, the fissile material from them, or the technical skills necessary to make them would be diverted from the rapidly decaying Soviet military industrial complex to rogue states, terrorist groups or countries with nuclear ambitions. To date, Russia has shipped LEU made from about 50 tons of HEU (10 percent of the total)—the equivalent of about 2,000 nuclear weapons.

Because Russia's closed "nuclear cities" that are responsible for making nuclear weapons are unavoidably involved in the destruction of these weapons and the purification and blending down of HEU, the U.S.-Russian deal ensures that money flows to precisely those places and people that present the largest proliferation threat to the world. The need to verify that the LEU that Russia sells under the deal truly comes from HEU has given the United States the opportunity not just to monitor the destruction of Russian weapons-usable fissile material, the so called transparency process, but also to assist Moscow in improving fissile material protection, control and accounting systems that further protect inventories of these materials. In addition, U.S. national laboratories have developed active relationships with an increasing number of Russian "nuclear cities," an engagement that builds peaceful relationships with the most capable of Cold War adversaries and the most dangerous potential contributors to global nuclear weapons proliferation. These otherwise intrusive measures—and new initiatives on plutonium and closed cities—are possible largely because of the more than one half billion dollars per year Russia gains from the HEU deal.

In short, the HEU deal benefits Russia, the United States and international security. Why then did Yeltsin threaten to end the deal? The answer lies in recurrent failures on the part of both governments to implement the deal. While this failure is due in part to Russian bumbling and commercial incompetence, it is the United States that has created the real impediments to success. Despite warnings and opportunities to intervene, Washington has consistently put domestic commercial and financial interests, most notably those involved in the recent privatization of the U.S. Enrichment Corporation (USEC), ahead of U.S. national security interests. If the deal is to be repaired, the United States must reassume the responsibility it has abdicated. If decisive action is not taken, shipments will end, perhaps permanently.

An Unusual Deal

The basic terms of the HEU deal are outlined in an agreement signed by the United States and Russia on February 18, 1993. However, the HEU deal is unusual in that it calls for the parties to carry out their obligations through commercial mechanisms. Under the agreement, each government was to appoint an "executive agent" that would carry out commercial implementation of the deal through contracts for the purchase and sale of the Russian LEU.

Russia assigned implementation to its Ministry of Atomic Energy (MINATOM), which would utilize its experienced government trade organization AO Techsnabexport (TENEX). In a fateful move, the United States, which initially made the Department of Energy (DOE) its executive agent, committed to make USEC—a newly created, government-owned corporation—its ultimate executive agent. Created by the Energy Policy Act of 1992 and slated for eventual sale to private investors, USEC was the result of a 20 year effort to make the government's uranium enrichment operations more "business-like."

Unfortunately, actions taken by U.S. government officials—some of whom later joined USEC—to assure the corporation profitability and increase its value at privatization have systematically worked against the HEU deal. National security officials, skilled in negotiating agreements and wielding U.S. power in conventional ways, have either failed in their oversight of the commercial implementation at home, been misled, or simply been outvoted in the administration.

administration.

While some administration officials now take the position that the United States has no financial responsibility for the HEU deal, and that Russia must simply take what it can get, the 1993 agreement is quite clear that the ultimate responsibility belongs to the governments. The agreement specifies that the "[commercial] terms (including price), shall be subject to approval by the Parties." The United States committed to "use the LEU converted from HEU in such a manner as to minimize disruptions in the market and maximize the overall economic benefit for both Parties." Such provisions show the responsibility of both governments to manage carefully the commercial implementation of the HEU deal. From the Russian perspective, the United States has failed to do so.

The Uranium Problem

While the United States is committed under the government to government agreement to purchase LEU from Russian HEU and the initial contract was for the purchase of LEU, that is not how things have turned out. The Russian LEU contains two inputs of value: the natural uranium (as uranium hexafluoride, or UF_6) and the "enrichment" services (measured in separative work units, or SWUs).

The current problem is that Russia is not being paid for the uranium component, which is a state asset of the Russian government, like gold. The enrichment component is being purchased by USEC, with that money going to MINATOM. Because it is not possible to ship a SWU (except as an input of enriched uranium) and because Russian law prohibits export of state assets without a contract for sale and payment within 180 days, LEU derived from HEU cannot be exported from Russia without a uranium sales agreement. Thus, the whole HEU deal rests on finding a workable solution to the uranium problem.

The uranium problem has been present from the beginning of the deal. Following the intergovernmental agreement, an implementing contract for the HEU deal was negotiated with MINATOM and TENEX by DOE Deputy Assistant Secretary Philip Sewell in May 1993. That contract called for DOE to purchase Russian LEU but to pay immediately only for the enrichment component. The uranium component (actually, an equivalent amount of feedstock material that USEC customers had previously delivered for enrichment) was to be paid for when USEC "used or sold" the uranium equivalent or at the conclusion of the deal, which might be as late as 2013. At the time the contract was negotiated, it was expected that USEC would be assigned the contract after the company came into existence in July 1993. Indeed, Sewell left government for USEC several months later and the final contract was signed by USEC and TENEX at the January 1994 Moscow summit.

This defective LEU purchase contract, which Russia contends did not carry out the intent of the 1993 agreement, was designed more to benefit the commercial interests of USEC than to implement the intergovernmental agreement. USEC would get control of the uranium component of Russia's LEU without having to pay for it until the company wanted to. Of course, USEC would not be able to resell the accumulating inventory of displaced feedstock for some years because of trade restrictions on the sale in the United States of Russian uranium. USEC could have *used* the uranium for a process called "overfeeding," that is, using more uranium in the enrichment process to reduce consumption of electricity. DOE had been overfeeding the two gaseous diffusion plants it owned for years, a practice that was assumed to continue when the HEU deal was proposed. However, subsidies provided to USEC (in particular, DOE's below-market-value electricity contracts) eliminated incentives to overfeed and it soon became apparent that Russia would not get paid for its uranium anytime soon.

Thus, even from the beginning, the United States did not act to ensure payment to Russia for the uranium component of the LEU, which was estimated to be worth up to $4 billion over the course of the agreement. But USEC supporters were too clever by half: the corporation would, two decades hence, have to pay for the Russian uranium it held title to under the contract, a major liability that would interfere with the ultimate privatization of the corporation.

The uranium problem was addressed, but not fully solved, by the USEC Privatization Act, which Congress passed and President Clinton signed into law on April 26, 1996.< 2 > The legislation called for the United States to purchase the uranium component of the Russian LEU delivered in 1995 and 1996 and, overriding the defective LEU purchase contract, returned title to the uranium content (rather, the displaced uranium set aside by USEC) to Russia for it to sell on its own beginning January 1, 1997. To facilitate Russian uranium sales, the legislation overrode trade restrictions imposed on Russia in 1992 (as a result of an anti dumping action against uranium exporters from the former Soviet Union) by creating a new and gradually expanding quota for Russian sales of uranium to the United States.

By returning title of the displaced uranium to Russia, USEC was relieved of a $4 billion liability on its books, but Russia was left with a substantial amount of uranium to sell. When annual Russian LEU shipments to the United States are scheduled to reach 30 metric tons HEU equivalent in 1999, the uranium component will reach 9,000 metric tons (23.4 million pounds U_3O_8) annually. By comparison, the United States consumes about 17,000 tons of uranium each year, while other Western nations together consume about 36,000 tons.

Moscow will face serious obstacles to selling such large amounts of uranium in the current market. Both the United States and the European Community impose restrictions on the amount of Russian uranium that can be sold, and Japan is reluctant to buy Russian uranium because of ongoing territorial disputes with Moscow. In addition, because most utilities purchase uranium under long term contracts that cover requirements for several years forward, there is little near term market for new sales of any kind of uranium. Thus, Russia will not be able to sell its uranium directly to utility end users, but only to companies that are willing to purchase the uranium and hold it for future sales when market demand and trade restrictions allow.

On June 2, 1998, Russia reached a preliminary agreement with a consortium of three Western uranium companies (CAMECO of Canada, COGEMA of France and NUKEM of Germany) to purchase its uranium at USEC for a 10 year period, including the 11,000 tons remaining from LEU deliveries to USEC in 1997 and 1998. Under the preliminary agreement, Russia would receive payment promptly when the uranium contained in the LEU delivered to the United States was returned to Russian control at USEC. The companies offered to pay the going market price, less a profit margin when prices rose above $29 per kilogram of uranium (as UF_6).

For this deal to make commercial sense, the price of uranium would have to be expected to increase at a rate at least as great as the interest rate used to finance the purchase and holding of the uranium. Based on their own market analyses, the companies clearly believed that uranium prices would rise, particularly if the sale of the Russian uranium was handled responsibly, and that they would not have to hold the Russian uranium for more than a few years. After an extensive review, the Russian government approved the draft agreement by issuing a formal decree. In its own effort to be clever and put pressure on the companies to pay a minimum price in a final contract, MINATOM asked that the decree establish $29 per kilogram of uranium as the minimal acceptable price.

USEC Privatization

Unfortunately, just as Russia was approving its agreement with the uranium companies, the United States was completing its plans for USEC's privatization. Unbeknownst to all but those directly involved, USEC had convinced mid-level DOE and Office of Management and Budget (OMB) officials to transfer large amounts of DOE inventories of uranium to USEC to increase the company's value. The existence of this uranium was not generally known until May, when

amounts of DOE inventories of uranium to USEC to increase the company's value. The existence of this uranium was not generally known until May, when merger and acquisition bidders involved in USEC's privatization tried to find buyers for the uranium as part of their plans to finance the company's acquisition.

On May 20, the author alerted national security officials at the State Department and the National Security Council to the uranium transfers, and the potential negative implications for the HEU deal of USEC sales of uranium in competition with Russia. National security officials subsequently met with DOE and Treasury Department officials to discuss the implications of possible USEC uranium sales for the HEU deal. However, Treasury and White House officials pushing USEC privatization overruled any actions. The reasons given ranged from the parochial to the absurd: nothing could be done that might threaten the privatization, and government officials were forbidden to discuss any matters concerning USEC (even among themselves) during the "quiet period" mandated by the Securities and Exchange Commission (SEC). The latter turned out to be a fabrication—SEC rules apply only to company management's public disclosures and only *after* a securities offering is filed with the SEC. Neither was the case.

On June 26, Senator Pete Domenici (R-NM), who co authored the USEC Privatization Act, wrote to national security advisor Samuel Berger (with a copy to Secretary of the Treasury Robert Rubin) stating his concern that "sale of [the USEC uranium inventory] would negatively impact the sale of HEU Agreement derived natural uranium and could significantly reduce the Russian Federation's incentive to continue the [HEU] Agreement." Domenici concluded: "I have worked for over a decade to privatize the USEC. But if circumstances are different than what we have assumed, you need to take those new circumstances into account before a decision to privatize is made." Three days later, the Treasury Department proceeded to file the prospectus for the sale of USEC with the SEC, starting the countdown to the sale of USEC shares to private investors.< 3 > Domenici never received an answer to his letter.

If the president's highest national security advisor could, or would, do nothing, Secretary Rubin should have been in a position to weigh the foreign policy implications of USEC privatization against the domestic forces promoting privatization. But on June 24, Rubin delegated to the undersecretary for domestic finance the necessary authority for all matters relating to the privatization of USEC.< 4 > Whatever Rubin's reasons, he delegated the decision-making authority to the government's leading cheerleader for USEC privatization, a move that had the full support of more than 60 Wall Street investment firms set to profit from the sale of USEC.

The June 29 SEC filing confirmed not only the huge size of USEC's uranium stockpile, but also the fact that USEC was stockpiling additional uranium at one of the plants it was leasing from DOE by a process called "underfeeding."< 5 > To make matters worse, the SEC filing committed USEC to sell more than 60 million pounds of uranium on an accelerated schedule, before July 2005. A subsequent leak of an internal USEC planning document revealed plans to sell nearly 90 million pounds in this period, reaching a peak level of more than 22 million pounds in 2002.< 6 > If USEC and its administration supporters had intended to sabotage Russia's pending agreement with the three uranium companies, they could not have done more. USEC's planned sales totally changed the economics of any commercial deal to buy and hold Russian uranium. Not only would the holding time, and thus holding costs, increase, but the ultimate price received would be lower because of the additional supply to the market.

Perhaps coincidentally, DOE, under pressure from OMB (which strongly supported USEC privatization and DOE uranium transfers to the company), advanced a proposal in May to sell about 30 million pounds of its uranium inventories (in addition to that already transferred to USEC) between 1998 and 2003. New projections of uranium prices by industry analysts and the independent Energy Information Administration soon showed reductions of up to 40 percent in future uranium prices.< 7 > Not surprisingly, in the face of USEC plans and DOE uncertainties, the three Western companies re evaluated the draft agreement and informed Russian authorities it would have to be revised.

As USEC's privatization moved forward, Russia also made clear its serious reservations about the future of the HEU deal. On July 17, Russian Minister of Atomic Energy Yevgeniy Adamov wrote a letter to Domenici, who had visited Moscow in early July and discussed the deal with Russian officials. Adamov wrote:

We are not sure that after actual privatization USEC as a private company will be able to fulfill its commitments of the U.S. executive agent under this Agreement and ensure further acceptance and full payment for the low enriched uranium supplied.... We think that this constitutes deviation of the U.S. Party from the implementation of agreed provisions of the Agreement and affect its fulfillment. In such situation Russia will bear significant financial losses and this will result in strengthening the negative reaction of the Russian legislators both with respect to the implementation of this Agreement and other arrangements with the USA on the issues of nuclear arms control.

Adamov was undoubtedly referring to the opposition in the Russia Duma (the lower house of parliament) to the ratification of START II, to intrusive transparency and security measures, and pending legislation to end the HEU deal itself. Adamov's warning, which foreshadowed Yeltsin's threat to end the deal at the upcoming Moscow summit, should have made the dangers clear to the United States.

Additional interagency meetings on the HEU deal broke down because OMB officials insisted that President Clinton had approved a go ahead on privatization on July 25, 1997, and had not altered this order. In fact, Clinton reportedly had read a press article questioning privatization and forwarded it to his advisors, asking: "Are we sure we are doing the right thing?" Despite U.S. officials' prior knowledge of the impending problem and sober warnings from responsible Russian officials, the privatization juggernaut plowed on, raising questions about the source of the pressure to proceed at any cost, including U.S. national security interests. On July 28, USEC became a private company.

The Current Situation

At the Moscow summit, Clinton managed to dissuade Yeltsin from withdrawing from the HEU deal by assuring him that the United States would find a solution to the problems. Adamov and Energy Secretary Bill Richardson were appointed to coordinate the effort. However, Richardson was soon handicapped by differences within the administration about how to deal with the uranium feed issue. For a long time, White House officials steadfastly refused to consider a U.S. purchase of any part of the uranium feed component, arguing that Moscow must recognize that market circumstances had changed (even if the United States changed them) and therefore must settle for much less money from commercial buyers. In effect, these officials contended that the United States had no responsibility under the government-to-government agreement, and that Russia was on its own in the commercial implementation of the HEU deal.

This position arises from a fundamentally flawed assumption about the HEU deal. When it was first proposed, it was thought that the HEU deal would be "budget-neutral." At that time, it was the U.S. government, through DOE, that was to purchase the Russian LEU. DOE would then resell the LEU without requiring an appropriation by a Congress that was trying to balance the U.S. federal budget. It was thus politically and budgetarily necessary to assert that DOE would incur no costs when it entered into the contract. In fact, under government accounting rules for the enrichment enterprise, the HEU deal would not only be budget-neutral, but "profitable." The price the United States would pay for the uranium content of the Russian LEU would be recovered by reduced costs (according to government accounting rules at least) from overfeeding the enrichment plants, and the price paid for the SWUs would be far

below the full-cost recovery values attributed to operation of the enrichment plants.

In privatizing the U.S. enrichment enterprise and transferring large amounts of uranium, administration officials themselves destroyed the budget neutrality of the HEU deal. The transfer of below-market-value electricity supplies to the new government corporation and the failure to charge a capital cost per SWU for use of the enrichment plants not only destroyed any incentive to overfeed and thus buy the uranium, but also subsidized USEC production costs for SWUs so that they were below what was promised Russia. The privatization of USEC compounded this problem, since the private corporation—unlike the government corporation—must make a profit in reselling the Russian SWUs. As discussed below, it is now impossible to pay Russia a fair market value for its enrichment services. Transfer of amounts of uranium greater than was statutorily authorized and aggressive USEC uranium sales plans made it impossible for Russia to sell the uranium from HEU at prices even close to those originally agreed.< 8

If U.S. actions taken in connection with USEC privatization have altered not just the economic factors, but also the fundamental assumptions of the deal, it is important to ask what responsibilities the United States retains under the original government-to-government agreement. In the world of commercial agreements, the answer would be clear: the United States would be obligated to compensate Russia for any lost income. Of course, Russia lost the Cold War and is desperate for money. Perhaps U.S. officials believe Russia will just have to accept the dictates of the victors.

For its part, Russia holds the United States responsible for purchasing the LEU and will not continue to ship without payment. Russia is undoubtedly counting on the importance of the HEU deal to the United States to force a resolution. However, this is a dangerous game of brinkmanship: Washington may push Moscow so far that it is impossible to revive the deal. The inability of policy makers to perceive the consequences of their actions, or inaction, or to act to fix things, does not give confidence. Nor is it easy to identify anyone in Russia who would champion a resumption of the deal once it ended.

Domenici's Proposal

In a September 8 letter to Clinton, Domenici wrestled with this dilemma and came down on the side of prudence. Commenting that he did not think Russia could bend further on terms and that changed political circumstances in Russia would make it difficult for ministries involved to accept much lower prices, Domenici suggested that the United States take partial responsibility for the situation and intervene in a limited way.

Under Domenici's proposal, the United States would, in effect, purchase about 28 million pounds of uranium from Russia's 1997 and 1998 LEU shipments—at a cost of about $300 million—*conditional* on Moscow reaching a long term commercial agreement for the uranium component of its future deliveries. The United States would hold the Russian uranium and remaining DOE stocks of uranium off the market for 10 years. The hope was that removing an estimated 58 million pounds of uranium from the market (28 million pounds of Russian uranium and 30 million pounds of DOE inventory) would partly reverse the negative market impact of uranium transfers to USEC. Domenici also called for the United States to define terms for returning the uranium component of the LEU to Russia for use in the blending down of HEU or as fuel in Soviet design reactors in Russia and elsewhere.

Essentially, Domenici invited Clinton to join in a bipartisan effort to strengthen the HEU deal and signaled congressional receptiveness to a budget request under the president's emergency appropriation powers. Such a presidential request would not be unusual; Congress finally settled on more than $20 billion of such emergency requests. On September 22, Richardson and Adamov, meeting in Vienna, issued a joint report on the status of implementation of the HEU deal.< 9 The framework proposed in the report was intended to facilitate a purchase agreement between Russia and the Western companies. The framework included most of the Domenici proposal, but no commitment to purchase the uranium from 1997 and 1998 deliveries. Subsequently, after a great debate at high levels, the administration agreed to accept a congressional appropriation of $325 million for the 1997 and 1998 deliveries, which was passed into law on October 21.

The resolution of the uranium problem is still uncertain. Russia continues to insist on prices for its uranium that are now significantly above market and refuses to recognize that commercial buyers will have to pay even lower amounts due to the high costs of holding the uranium until market and trade conditions allow it to be resold. Some in the administration still resist spending the funds authorized by Congress and seem unwilling to accept limits on DOE sales of uranium. Between Russian inflexibility, administration equivocation, and worsening uranium market conditions, it will be hard to reach a commercial deal that relieves the United States of all future responsibility for the HEU deal.

The Future of the Deal

If the uranium problem can be solved, the next challenge to the HEU deal will come from USEC's obligation to pay Russia for the enrichment component of its LEU deliveries. As a government owned corporation, USEC was—at least in principle—under the control of the U.S. government. The United States could ask USEC to pay for Russian enrichment services even if the cost was greater than the company's own cost of production and the corporation made no profit on the Russian SWUs. With privatization, USEC has no strong incentives to continue its role in the HEU deal. In fact, according to revelations in its SEC filing, USEC has a strong incentive to quit its role and even to seek to end the HEU deal.

Moreover, even when it was a government-owned corporation, USEC put its business interests ahead of the HEU deal. In 1996, Russia asked USEC to increase its 1997 purchases of LEU from 10 tons HEU equivalent to 18 tons. According to a protocol, or summary, of discussions in Moscow in July (in which no non-USEC U.S. government official participated), "USEC responded that because of power and labor commitments and level of demand for SWUs, this could not be done in 1997," offering instead to purchase the HEU equivalent of 12 tons.< 10 USEC officials asked U.S. government officials to approve the 12 ton level, but failed to inform them of the Russian offer to deliver more. Russian officials naturally assumed that USEC was speaking on behalf of the U.S. government. Without outside intervention, Washington might never have detected this subversion of the HEU deal.

The dominance of USEC's commercial interests has been amplified by privatization, enrichment market developments and continued ineffective oversight by government officials. According to the company's SEC filing: "Unit costs of SWU purchased under the Russian HEU Contract are substantially higher than the Company's marginal cost of production." Increasingly large volumes of Russian SWUs result in USEC having to operate its two enrichment plants at inefficient levels, raising unit costs on the SWUs that USEC does produce. The plants are most efficient at a production level of about 13 million SWUs per year. USEC sells 11 million to 13 million SWUs per year, but, by next year, Russian LEU deliveries will reach 5.5 million SWUs, meaning that USEC will have to operate its plants far below their optimum production levels.

Meanwhile, USEC's portfolio of old high priced SWU contracts, inherited from DOE, are ending and market prices for new contracts are declining. Under its present contract with Russia, USEC must, in 1999, pay about $88.90 per SWU (including transportation)—more than the current price for new SWU contracts, implying that USEC must market Russian SWUs on which it can make no profit. When USEC was owned by the U.S. government, the United States could simply tell USEC to buy and resell the SWUs even if it did not make a profit. Obviously, privatization has changed this; private shareholders demand a profit.

Thus, the best outcome, by far, for USEC is for the HEU deal to fail entirely; that is, for the Duma or the Russian government, in nationalistic frustration, to

stop exporting its sensitive national treasure. Based on the above SWU-cost factors and the higher prices expected for uranium if Russian uranium were kept from the market, USEC's profits would be approximately three times as high as at present if the HEU deal ended completely.< 11 USEC's private investors and the Wall Street firms that still hold stock could see an increase in their return on investment from about 7 percent to 22 percent, or, equivalently, a trebling of share price.

The transfer of large amounts of uranium to USEC by its administration supporters, together with USEC leaks of aggressive sales plans, nearly caused an end to the HEU deal on September 2. Failure of the United States to ensure payment for Russia's uranium may yet guarantee that result. Given declining SWU prices and increased deliveries, it is inevitable that USEC will seek a deferral of Russian SWU purchases and a substantial reduction in the price paid to Russia to ensure the company's profitability. The U.S. government would either have to explain to Russia why it has to sell at a price well below the market price—so a private American company can make a profit—or subsidize that profit from taxpayer funds. Of course, it may not come to such a clear conclusion: there are many ways to frustrate performance of a contract to the point that Russia finds continuing the HEU deal unacceptable.

Solutions

The United States must recognize that its own actions have severely undermined the HEU deal and that the assumption that the deal can be accomplished at no net cost to the United States is a serious mistake. In subsidizing and otherwise biasing USEC financial incentives against the SWU part of the deal and by transferring large amounts of uranium to the corporation without limits on sales, Washington may have increased the value received by the Treasury Department for USEC's sale but created a threat to national security that will most likely require continued expenditure of funds to alleviate. But even if the United States cannot shift the entire cost of the deal to the private sector, the HEU deal is a good buy, perhaps the most cost effective national security initiative in history. Trillions of dollars were spent in the Cold War to counter the threat of tens of thousands of Soviet nuclear weapons. If the United States can forever remove large numbers of such weapons from the world for less than the cost of one B-1 bomber, it will be money well spent.

There are several immediate tasks for the administration. The first is to use the uranium-funding "carrot" provided by Congress to secure the best possible long-term commercial agreement for the sale of Russian uranium beginning in 1999, and to formalize such an agreement in a way that ensures that it will continue in the future. To do so, the United States needs to convince Russian officials to be realistic about market conditions and the low salability of its large volumes of uranium, recognizing the Russian complaint that U.S. actions—from USEC transfers to trade restrictions—have significantly worsened the market situation for Moscow.

The second is to improve U.S. oversight over the HEU deal to a level commensurate with its national importance and U.S. commitments under the intergovernmental agreement. The president appointed an interagency oversight committee, but it has failed to recognize problems and take timely action. This failure is due partly to inadequate staffing and lack of information, partly to the inattention by national security officials preoccupied with other crises, and partly to the lack of influence of national security advisors in the White House policy process.

An immediate need is better information about what is happening in the HEU deal. The memorandum of agreement between the U.S. government and USEC defers excessively to USEC commercial interests.< 12 The United States should not depend on limited self reporting by the corporation about what is happening in the HEU deal. USEC's position, endorsed by the agreement, is that all information connected with the HEU deal is proprietary, preventing public as well as government scrutiny of developments—including those initiated by USEC—that involve profound public and national security interests. In short, privatizing USEC appears to have resulted in the privatization of an important aspect of U.S. national security. At the very least, a U.S. government observer should participate in all negotiations and meetings relating to the HEU deal and all documents should routinely be provided to a more knowledgeable and attentive oversight process.

With regard to the impending SWU problem, the United States could take several actions to alter USEC's economic incentives so that it was more willing to continue the HEU deal. After all, the United States owns the enrichment plants that USEC leases for only a few million dollars a year, and DOE holds the below market-value electricity contracts that benefit the company. One measure would be to increase power costs; another would be to impose an increasing fee per SWU for use of the enrichment plants above a certain level of production, so that USEC would have to pay more to produce SWUs that would otherwise replace Russian SWUs. Such a fee would also correct the artificial incentives that lead USEC to underfeed its enrichment plants and thus accumulate more uranium. If this cannot be done, the United States should itself (through DOE, for instance) replace USEC as executive agent for the HEU deal, taking over direct relations with Russia and reselling Russian SWUs to the highest bidders. If politically necessary, USEC might be given a right of first refusal to purchase the Russian SWUs.

Alternatively, while one must always be wary of institutional invention, creating a government owned corporation that could take on nuclear security tasks on a multi year basis, without the constraints of annual budget cycles and with a certain amount of commercial intelligence and flexibility, offers a number of advantages. Indeed, USEC was not a bad idea in principle; it was largely the pursuit of privatization and inadequate supervision that led to problems. The creation of a USEC II, for example, would provide the United States with a vehicle with which to bargain with both Russia and commercial parties to achieve the most efficient implementation of the HEU deal, including the ability to enter into long term commercial agreements that are impossible for government agencies. Such a government-owned corporation could also take on other post-Cold War tasks, including those relating to plutonium disposition, securing (including by direct purchase) smaller quantities of HEU and plutonium at diverse sites across the former Soviet Union, and other nuclear security matters that require sustained attention and funding.

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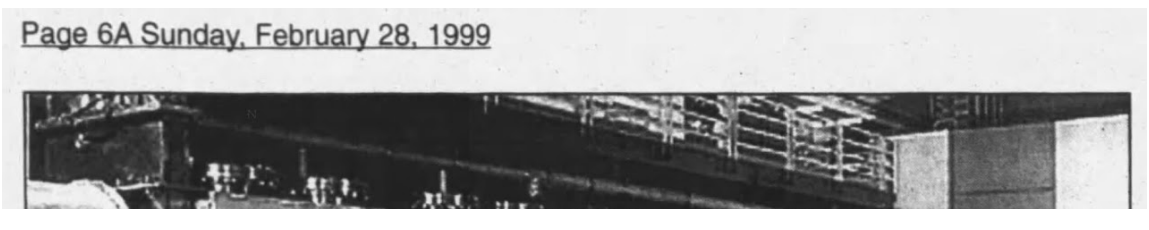

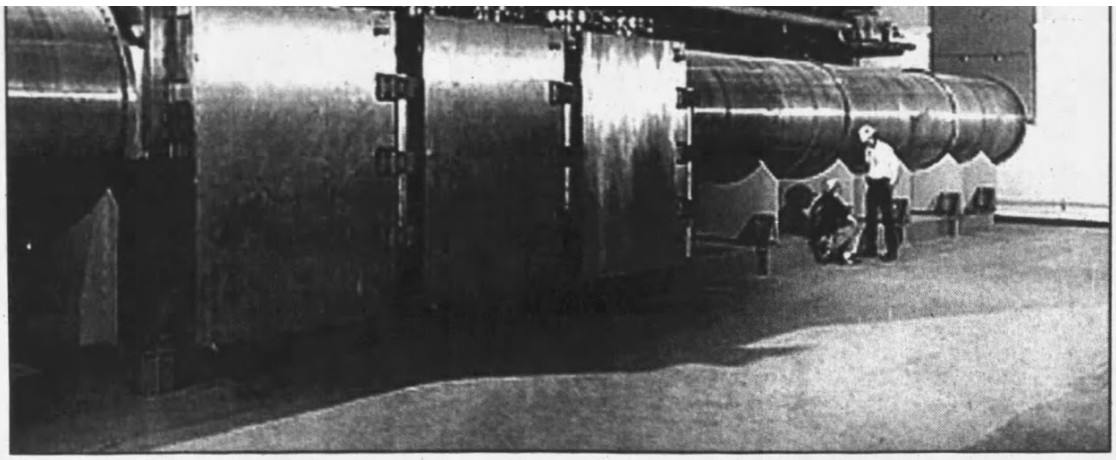

Courtesy/USEC

USEC has built a full-scale pilot of the Atomic Vapor Laser Isotope Separation facility at Lawrence Livermore National Laboratory in northern California. Shown here are three full-scale separators, one of which is capable of operation.

Process: *USEC took over AVLIS research in '68*

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lion nuclear fuel plant that would employ 1,300 people or more.

United States Enrichment Corporation, the new owner of the AVLIS technology says that the process is almost ready.

But a number of industry observers say they have doubts about the technology's readiness, the need for new nuclear fuel plants, USEC's ability to pay for the plant, and the company's ability to win a license from the federal Nuclear Regulatory Commission.

USEC, based in Bethesda, Md., took over research into AVLIS in 1998 when the former Energy Department operation was sold to the public in a stock offering. USEC produces 40 percent of the nuclear fuel used worldwide. USEC has built a full-scale AVLIS pilot production line at Lawrence Livermore National Laboratory in California.

The doubt that settled over the project in its earlier stages like a fog still hasn't been burned off by USEC's site shopping. Such doubts aren't only important to whether Fort McClellan or some other area will get a major investment. They are also important because USEC has staked its investment appeal on a promise of increased profits through the revolutionary technology.

Elizabeth Stuckle, a spokeswoman for USEC, said the doubts aren't surprising, considering the program's long history.

"I think that's understandable, considering the many, many years that have gone into this," she said.

But Ms. Stuckle said USEC wouldn't be looking for a site if the technical problems hadn't been conquered.

"Obviously if we are in the siting process, we are confident enough that AVLIS is going to be deployed."

AVLIS is a major part of the appeal of the new company. Its stock opened with a whimper last year, not rising above the initial offering price of $14.25 per share.

"USEC's managers have been Pacific Gas and Electric, a California utility, for 23 years. He helped examine USEC for another company that considered buying USEC before the stock sale last year.

Julian Steyn, president of Energy Resources International, another consulting firm, called the current AVLIS test "more than academic, but not industrial."

That's the rub. No one disputes that AVLIS works in laboratory conditions, but several experts say they're not sure they would build a large factory around what they see as a fragile prototype technology prone to breakdowns.

"If it's not able to run on a continuous basis, the economics are going to be unacceptable," Witzell said

That would sap AVLIS' promise of more efficient preparation of nuclear fuel. Currently USEC enriches fuel at decades-old plants in Kentucky and Ohio that guzzle huge amounts of electricity. The laser process is envisioned to use one-tenth the electricity of the current plants.

Natural uranium contains only about 0.7 percent uranium-238, the type that can be split in a reactor to create energy. The rest is inert uranium-235. Power reactors need fuel that is between 3 percent and 5 percent U-238.

AVLIS takes bars of uranium metal and vaporizes them with a high-powered electron laser. Then another laser is fired to give a magnetic charge to the desirable U-235 atoms. Once charged, they are pulled to one side of the chamber by a magnetic field. The atoms then collect as small clumps of metal.

The details of AVLIS' exact specifications are trade secrets, but Witzell and Lindeman said USEC has suffered AVLIS component failures.

"They have, in their last two production runs, had mechanical problems," Lindeman said.

Dr. Thomas Neff, a senior research scientist at the Massachusetts Institute of Technology, said USEC's pilot facility doesn't push much uranium is worth it hinges on predicting whether nuclear power has a future. If oil and coal continue to be cheap, the high cost of a nuclear power plant looks bad.

"In the next 10 to 20 years, a lot of plants are going to be shut down," Lindeman said.

Plants in the United States, USEC's most important market, and Europe also face unbudging opposition from environmentalists. Most American plants will have to have their licenses renewed by the Nuclear Regulatory Commission in the next decade. If high operating costs or public opposition lead them to pull the plug, USEC's market could collapse.

"I'm not sure there's any good financial reason to do this," said Lindeman, who believes that in a declining market, the high electrical costs of the current plants might be cheaper than taking on debt for AVLIS.

But brighter pictures can be summoned from the crystal ball. Oil-, gas- and coal-fired plants produce carbon dioxide, which contributes to global warming. Nuclear plants don't produce carbon dioxide.

As utility deregulation continues in the United States, it could spur demand, making existing nuclear plants more attractive to operate. Also, developing nations in Latin America and Asia could increase their reliance on nuclear power. Additional reactors are expected or under construction in India, China, South Korea, Japan and Taiwan, according to industry publications.

For Schanzer, the future of nuclear power is bright, even in the United States.

"I do believe that at some point in time, even the plants in mothballs will be taken out and used," he said.

Schanzer said USEC will be able to borrow the money to build an AVLIS plant.

"I can say with complete honesty that the financial community is prepared to provide the necessary capital to see the project is done," he said.

But Steyn, the consultant, thinks that USEC will have to find a partner of some kind to share the burden

relying on AVLIS to attract investors," said Eric Lindeman, director of Washington Nuclear Corporation, a consulting firm and newsletter publisher.

Over the short term, USEC's prospects appear rather ordinary to Dave Schanzer, analyst for Janney Montgomery Scott, a New York investment firm. But he thinks that when AVLIS is up and running, and the high costs from USEC's two older enrichment plants are gone, the company could have a 15 percent to 20 percent profit margin every year.

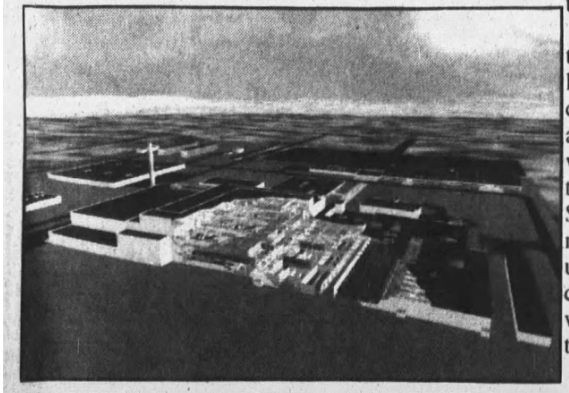
John Rezai, director of research in Baltimore for another investment firm, Blaylock and Partners, agrees.

"AVLIS kind of represents the home run in terms of the investment community in regards to USEC," Rezai said.

That enthusiasm could be misplaced if AVLIS is delayed or doesn't go forward. If analysts sour on the project, it could also affect the company's ability to borrow money for it.

"There's a real question of whether the process will work for commercial application," said Ron Witzell, a consultant to the electric industry.

Witzell was fuel manager for



Courtesy/USEC

Fort McClellan is one of more than a dozen sites being considered by USEC for a $2 billion uranium fuel plant. Shown here is an architect's rendering of such a full-scale plant.

vapor through the chamber. Neff said pushing more vapor through will mean that more U-235 and U-238 atoms will mix and collide, making it harder to keep them apart.

"It's mostly an engineering problem," Neff said. "The physics of it work against you."

Analysts who follow USEC's stock are somewhat more bullish on the company than nuclear industry consultants and observers. But even they recognize AVLIS is not yet a done deal.

"The question that is left is can the technology be brought up to scale at a cost acceptable to USEC?" asked Schanzer, the stock analyst.

To Mike Knapik, chief editor of Nuclear Fuel, the answer is no. Thus the site selection process is a joke intended only to keep investors interested in USEC.

"There's almost a charade of selecting a site, but they'll never actually build a facility," Knapik said.

But Ms. Stuckle said that, from the company's perspective, all the major hurdles have been crossed, and those remaining are minor.

"The (research and development) part is over," she said. "We're in what would be called the fine-tuning phase."

Even if the technical problems can be overcome, Lindeman and others still ask why USEC wants to go forward. Sure, AVLIS will make enriching uranium fuel cheaper. But that won't mean anything if the company takes on a big debt only to find it no longer has any customers.

Deciding whether the debt because it already has $550 million in debt.

USEC officials say cash flow is strong, and the company can handle more debt. Officials also say USEC can sell some of its hoard of raw uranium that the Energy Department transferred to it at the time of privatization.

Finally, when the technology is ready and the money is in hand, USEC will have to win a license from the Nuclear Regulatory Commission, or NRC.

Ms. Stuckle, the USEC spokeswoman, said the company is already talking to the commission about licensing, and that it has gained experience when the commission licensed the Kentucky and Ohio plants at the time of privatization.

"We feel that the licensing process will go rather expeditiously with the NRC," she said.

The commission, in a report to Congress on the two current USEC plants, acknowledged it is preparing for the AVLIS licensing procedure.

"The AVLIS project will present some unique and highly complex issues for NRC review," the report said.

Knapik interprets that statement differently than Ms. Stuckle. He predicted NRC licensing proceedings for AVLIS would look like the seven-year battle over an enrichment plant proposed for northern Louisiana using European technology. That application was dropped last year when the European group gave up.

"I think licensing would be much more problematic than (in Louisiana)," Knapik said.

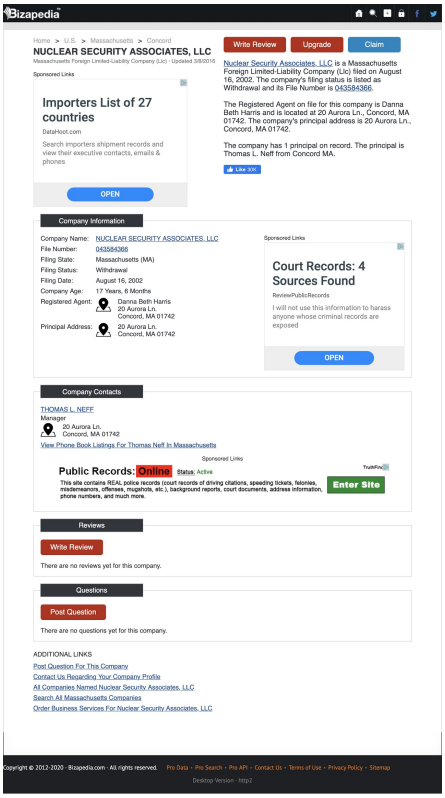
Knapik's and Ms. Stuckle's expectations are the extremes. Most expect a rough, but not impossible slog, with lots of intervention by outside environmental groups.

"I don't think they will have a hard time. It is, however, a new process for the NRC to evaluate " Steyn said. "I'm sure the activists will help the NRC come up with some tough questions."

[HN0085][GDrive]

2002 (Aug) - Nuclear Security Associates, LLC

From 2002 to 2019, Owned a company "Nuclear Security Associates, LLC' - operated out out of home in Concord, Massachusetts.



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2007 (March 21) - Uranium Investing Conferences Focus on Picking Market Winners

See [HX0003][GDrive]

VANCOUVER, BC -- U3O8 Media Inc., in association with Carriere Consulting Group and Academy & Finance SA, are pleased to present Uranium Investor Forums in Zurich (March 27, 2007) and Geneva, Switzerland (March 29, 2007).

*Experts, including **Dr. Thomas L. Neff**, senior researcher at MIT's Center for International Studies since 1975 and **President of Nuclear Security Associates, LLC**, will provide valuable information to help investors understand the uranium industry, uranium supply and demand to 2025, and the relation between production and uranium enrichment, and the investment opportunities in enrichment capabilities.*

Investors will also hear from experts on subjects ranging from U.S. uranium consumption, factors likely to influence U.S. nuclear power plant construction, the ever-changing political climate toward nuclear energy and what new opportunities have been created by the trend toward nuclear energy in the U.S. International investors will learn how to invest and benefit from these trends by investing in uranium exploration and development companies.

In addition, forum attendees will learn about investment opportunities in promising junior, mid-tier and near-production uranium companies. Senior executives from ten of the fastest growing uranium companies will be on hand to answer investor questions about investing in the burgeoning uranium exploration industry.

"We are pleased to be involved in these important conferences that are designed to assist investors profit from the rapidly growing uranium market," says John Gomez, President U3O8 Media Inc.

"Investors will gain insight on the market from industry experts and have the opportunity to meet with management of some of the world's most dynamic uranium companies."

The ten invited participating companies are Augen Capital Corp. (TSX-V: AUG), Bayswater Uranium Corp. (TSX-V: BAY), Crosshair Exploration & Mining Corp. (TSX-V: CXX), Forum Uranium Corp. (TSX-V: FDC), Forsys Metals Corp., Monster Copper Corp., Powertech Uranium Corp., Strathmore Minerals Corp., Uranium Energy Corp., and Xemplar Energy Corp.

March 22, 2007 - Lack Of Fuel May Limit US Nuclear Power Expansion - MIT

See [HW000U][GDrive]

Limited supplies of fuel for nuclear power plants may thwart the renewed and growing interest in nuclear energy in the United States and other nations, says an MIT expert on the industry.

Over the past 20 years, safety concerns dampened all aspects of development of nuclear energy: No new reactors were ordered and there was investment neither in new uranium mines nor in building facilities to produce fuel for existing reactors. Instead, the industry lived off commercial and government inventories, which are now nearly gone. worldwide, uranium production meets only about 65 percent of current reactor requirements.

*That shortage of uranium and of processing facilities worldwide leaves a gap between the potential increase in demand for nuclear energy and the ability to supply fuel for it, said **Dr. Thomas Neff**, a research affiliate at MIT's Center for International Studies.*

"Just as large numbers of new reactors are being planned, we are only starting to emerge from 20 years of underinvestment in the production capacity for the nuclear fuel to operate them. There has been a nuclear industry myopia; they didn't take a long-term view," Neff said. For example, only a few years ago uranium inventories were being sold at $10 per pound; the current price is $85 per pound.

Neff has been giving a series of talks at industry meetings and investment conferences around the world about the nature of the fuel supply problem and its implications for the so-called "nuclear renaissance," pointing out both the sharply rising cost of nuclear fuel and the lack of capacity to produce it.

Currently, much of the uranium used by the United States is coming from mines in such countries as Australia, Canada, Namibia, and, most recently, Kazakhstan. Small amounts are mined in the western United States, but the United States is largely reliant on overseas supplies. The United States also relies for half its fuel on Russia under a "swords to ploughshares" deal that Neff originated in 1991. This deal is converting about 20,000 Russian nuclear weapons to fuel for U.S. nuclear power plants, but it ends in 2013, leaving a substantial supply gap for the United States.

Further, China, India, and even Russia have plans for massive deployments of nuclear power and are trying to lock up supplies from countries on which the United States has traditionally relied. As a result, the United States could be the "last one to buy, and it could pay the highest prices, if it can get uranium at all," Neff said. "The take-home message is that if we're going to increase use of nuclear power, we need massive new investments in capacity to mine uranium and facilities to process it."

Mined uranium comes in several forms, or isotopes. For starting a nuclear chain reaction in a reactor, the only important isotope is uranium-235, which accounts for JUST 7 out of 1000 atoms in the mined product. To fuel a nuclear reactor, the concentration of uranium-235 has to be increased to 40 to 50 out of 1000 atoms. This is done by separating isotopes in an enrichment plant to achieve the higher concentration.

As Neff points out, reactor operators could increase the amount of fuel made from a given amount of natural uranium by buying more enrichment services to recover more uranium-235 atoms. Current enrichment capacity is enough to recover only about 4 out of 7 uranium-235 atoms. Limited uranium supplies could be stretched if industry could recover 5 or 6 of these atoms, but there is not enough processing capacity worldwide to do so.

2011 (March 16)

Full page : [HN0086][GDrive]

Japan Slipping out of control

CONTINUED FROM A1

In the first hint of international frustration at the pace of updates, Yukiya Amano, director general of the International Atomic Energy Agency, said he wanted more timely and detailed information.

"We do not have all the details of the information so what we can do is limited," Amano told a news conference in Vienna. "I am trying to further improve the communication."

Several experts said that Japanese authorities were underplaying the severity of the incident, particular on a scale called INES used to rank nuclear incidents. The Japanese have so far rated the accident a four on a one-to-seven scale, but that rating was issued on Saturday and since then the situation has worsened dramatically.

"This is a slow-moving nightmare," said Dr. Thomas Neff, a research affiliate at the Center for International Studies, which is part of the Massachusetts Institute of Technology. "This could be a five or a six — it's premature to say since this event is not over yet."

France's nuclear safety authority ASN said Tuesday it should be classed as a level-six incident.

Japanese Prime Minister Naoto Kan on Tuesday urged people within 30 kilometres of the facility — a population of 140,000 — to remain indoors, as authorities grappled with the world's most serious nuclear accident since the Chernobyl disaster in Ukraine in 1986.

Officials in Tokyo said radiation in the capital was 10 times normal at one point but not a threat to human health in the sprawling high-tech city of 13 million people.

The best advice experts could give them was to stay indoors, close the windows and avoid breathing bad air — steps very similar to those for handling a smog alert or avoiding influenza.

While these steps may sound inconsequential, experts said the danger in Tokyo, while worrisome, is slight — at least for now.

"Everything I've seen so far suggests there have been nominal amounts of material released. Therefore, the risks are generally low to the population," Jerrold Bushberg, who directs programs in health physics at the University of California at Davis, said in a telephone interview.

Winds over the plant will blow from the north along the Pacific coast early today and then from the northwest towards the ocean during the day, the Japan Meteorological Agency said.

Fears of trans-Pacific nuclear fallout sent consumers scrambling for radiation antidotes in the U.S. Pacific Northwest and Canada. Authorities warned people would expose themselves to other medical problems by needlessly taking potassium iodide in the hope of protection from cancer.

The nuclear crisis and concerns about the economic impact from last week's earthquake and tsunami have hammered Japan's stock market.

The Nikkei index was up over five per cent in early trading today after ending down 10.6 per cent on Tuesday and 6.2 per cent the day before. The fall wiped some $620 billion off the market.

Authorities have spent days desperately trying to prevent the water which is designed to cool the radioactive cores of the reactors from evaporating, which would lead to overheating and the release of dangerous radioactive material into the atmosphere.

"The possibility of further radioactive leakage is heightening," a grim-faced Kan said in his address to the nation on Tuesday.

"We are making every effort to prevent the leak from spreading. I know that people are very worried but I would like to ask you to act calmly."

The plant operator, Tokyo Electric Power Co., pulled out 750 workers, leaving just 50, and a 30-kilometre no-fly zone was imposed around the reactors.

There have been no detailed updates on what levels the radiation reached inside the exclusion zone.

Despite pleas for calm, residents rushed to shops in Tokyo to stock up on supplies. Don Quixote, a multi-storey, 24-hour general store in Roppongi district, sold out of radios, flashlights, candles and sleeping bags.

Several embassies advised staff and citizens to leave affected areas in Japan. Tourists cut short vacations and multinational companies either urged staff to leave or said they were considering plans to move outside Tokyo.

German technology companies SAP and Infineon were among those moving staff to safety in the south.

SAP said it was evacuating its offices in Tokyo, Osaka and Nagoya and had offered its 1,100 employees and their family members transport to the south, where the company has rented a hotel for staff to work online.

"Everyone is going out of the country today," said Gunta Brunner, a 25-year-old creative director from Argentina preparing to board a flight at Narita airport. "With the radiation, it's like you cannot escape and you can't see it."

Japanese media have became more critical of Kan's handling of the disaster and criticized the government and the nuclear plant operator for their failure to provide enough information on the incident.

Kan himself lambasted the operator for taking so long to inform his office about one of the blasts on Tuesday, Kyodo news agency reported.

Kyodo said Kan had ordered TEPCO not to pull employees out of the plant. "The TV reported an explosion. But nothing was said to the premier's office for about an hour," a Kyodo reporter quoted Kan telling power company executives.

"What the hell is going on?"

BY THE NUMBERS

The following is a list of the likely impact of and response to the devastating earthquake and tsunami that rocked the northeast coast of Japan on Friday, and subsequent crisis at nuclear power plants.

DEATH TOLL
The death toll is expected to exceed 10,000, with northeastern prefectures of Miyagi, Iwate and Fukushima most severely hit. At least 3,570 people were confirmed dead, but 7,558 people are still missing, Japan's NHK public broadcaster says.

PEOPLE EVACUATED
More than 440,000 people have been evacuated, NHK says. Hundreds of people are waiting for help in isolated areas and have no access to food.

PEOPLE WITHOUT ELECTRICITY, WATER
About 850,000 households in the north are still without electricity in near-freezing weather, Tohuku Electric Power Co. says. The government says at least 1.5 million households lack running water.

BUILDINGS DAMAGED
More than 76,000 buildings have been damaged, including at least 6,300 completely destroyed, NHK says.

IMPACT ON ECONOMY
Citigroup expects 5-10 trillion yen ($60-120 billion) in damage to housing and infrastructure, while Barclays Capital estimates economic losses of 15 trillion yen ($180 billion) or three per cent of Japan's GDP.

UBS expects Japan's economy to grow 1.4 per cent this year, compared with its previous forecast of 1.5 per cent expansion.

But it upgraded its growth forecast for 2012 to 2.5 per cent, up from the previous estimate of 2.1 per cent.

COUNTRIES OFFERING AID
According to Japanese foreign ministry, 102 countries and 14 international organizations have offered assistance. Teams from 14 countries/regions have arrived or already left for Japan.

Reuters

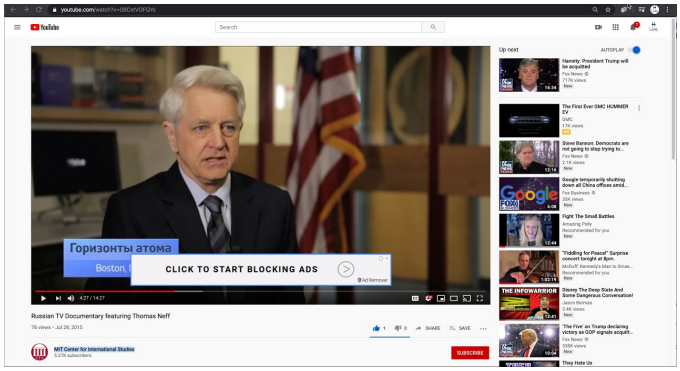
2011-03-16-the-windsor-star-pg-4-clip-japan-slipping

[HN0087][GDrive]

Video (2015) - Russian TV Documentary featuring Thomas Neff

See [HV0002][GDrive]

MIT Center for International Studies



(Screenshot - [HV0003][GDrive])

Thomas Neff - Address / Bio info via Clustermaps.com

JPG : [HW000V][GDrive] **PDF :** [HW000W][GDrive]

*"Quick Facts : Thomas is a high school graduate. Current occupation is listed as Clerical/White Collar. Thomas was born on **1943-09-25**. Thomas's age is 76. You may also know Thomas as Tl Neff, Thomas Neff, Tom Neff, Thomas L Neff, Tom L Neff, Neff Tl, T Neff. Thomas lives at [REDACTED ON THIS SITE], Jackson, WY 83001-9372. This address has been used for business registration by Harris Capital Strategies LLC and Centennial Advisors LLC. "*

NOTE - At least one address was in Concord MA - Must be correct Thomas L Neff

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2014 Article in Lewis & Clark college magazine

See [HE000B][GDrive]

Like most Americans born in the 1940s, Thomas Neff BA '65 remembers the "duck-and-cover" days. He recalls the siren tests, the Civil Defense ads, the emergency broadcast system, and Life magazine stories about nuclear fallout shelters. This was the national Cold War anxiety that Neff absorbed as a child in Portland, where his father taught at Lewis & Clark.

Even though Neff says Portland was "kind of remote" in the 1950s, "we had to go through all these nuclear attack drills in grade school and high school. At the time, I really didn't understand how getting under my desk was going to do any good."

Thomas Neff Decades later, as the Cold War angst of Neff's youth was defused by détente, a different form of nuclear anxiety emerged. As the Soviet Union broke apart, many feared that cash-strapped Russia would sell or lose control of thousands of "loose nukes" then deployed across the former Soviet Union—and that its underemployed nuclear scientists and technicians would offer their knowledge and skills to the highest bidder. Nuclear weapons expert Rose Gottemoeller—now under secretary of state for arms control and international security—describes American policy-makers in 1991 as fearing "nuclear mayhem."

For Tom Neff, it was not a time to duck and cover. A scheme he proposed in an October 24, 1991, New York Times op-ed became a win-win solution to the nuclear weapons problem. And not only did he conceive of it, he put himself in a position to pitch it to a key Soviet official—a meeting that came about both by chance and by design.

Neff's idea was so simple that it was almost dismissed as an impossibility by Washington. In essence, he based his plan on Russia's economic self-interest. Neff calculated that the highly enriched uranium in a typical nuclear weapon could be "blended down" to make low-enriched fuel for nuclear reactors that was worth about $500,000 per weapon. If the United States were to buy this fuel, the Russians would be motivated to continue guarding their massive arsenal and paying their many nuclear scientists and technicians—not to build and maintain nuclear weapons but to dismantle them.

Under Secretary Gottemoeller calls Thomas Neff "the genius who pulled this whole thing together in a very skillful way. He had the idea, communicated it well, and sold it to top people on both sides." Neff was "the complete package in terms of crystallizing the concept. Although there were years of implementation work and some difficult issues to work out, the idea itself was inherently so good that it survived all of this. And it has fulfilled its original promise—an amazing nonproliferation program with important benefits for both sides."

*"Thomas Neff was the genius who pulled this whole thing together. He had the idea, communicated it well, and sold it to top people on both sides."***Rose Gottemoeller***Under Secretary of State for Arms Control and International Security*

During the next 22 years—with Tom Neff's constant attention —what came to be called the Megatons to Megawatts program actually worked. More than 20,000 Russian warheads—any one of which could have destroyed an American city—were converted into U.S. electricity, a deal ultimately worth $17 billion.

The final shipment of Russian fuel-grade uranium arrived in Baltimore in late 2013. Shortly thereafter, the Bulletin of the Atomic Scientists reported the little-known fact that "nearly half of the uranium burned in U.S. power plants during the past 20 years came from decommissioned Russian weapons." This fuel supplied roughly 10 percent of all U.S. electricity during that period. And while the United States and Russia continue to spar today in what some have called a new Cold War, those nukes never got loose.

Neff, who is currently writing a book about his experiences, remembers 1950s Portland as a working-class town where "everybody around me was pretty much blue collar, working on just getting through life." **His father taught business courses at Lewis & Clark and was a small-time entrepreneur—starting several businesses and managing an apartment house that he built in nearby Lake Grove (now Lake Oswego).**

Tom went to work at an early age, picking berries and beans. "Before migrant labor," he recalls, "they let school out to pick the crops. By the time you were 12, the school bus would come and take you to the fields. You'd see all your classmates on the bus, and from 7 a.m. to 3 p.m. you'd pick—a nickel a flat for strawberries."

A good student, Neff graduated from Lake Oswego High School in 1961. He applied to Harvard, but his father wouldn't fill out the financial aid forms. As a result, Neff ended up living at home and attending Lewis & Clark tuition free due to his father's position. At the college, he took a wide range of courses while majoring in math and physics. He feels privileged to have had Elvy Fredrickson as a mathematics professor, observing that "she could have been at MIT or Stanford." (Fredrickson taught at Lewis & Clark from 1946 until 1980. She passed away in 2008.)

A key mentor was Robert Dusenbery, a published poet who built the college's English department in the decades following World War II, hiring fellow poets

William Stafford and Vern Rutsala, both of whom taught Neff. Dusenbery stopped Neff on campus during the fall of his senior year to ask whether he might nominate him for a Danforth Fellowship—a full graduate-school scholarship. It turned out to be Neff's long-awaited ticket out of Portland. After graduating at the top of his class in 1965, he moved to California to begin a doctoral program in physics at Stanford University

So how does a Cold War kid from Portland end up imagining a key international deal that ends up destroying one-third of the world's nuclear weapons arsenal? How did Thomas Neff become the right person in the right place at the right time— with such an elegant but practical idea? Looking back, nearly every aspect of his intellectual and social formation seemed to contribute to his being the right person. And every twist of his career seemed to carry him toward the right time and place— his October 19, 1991, encounter with Viktor Mikhailov, deputy minister of atomic power and industry and head of the Soviet nuclear weapons complex.

Academically at Stanford, he says, "I was in way over my head." (He had actually completed his physics major at Lewis & Clark through self-study and a set of examinations.) The summer before leaving for Palo Alto, he says he acquired the physics books that were being used at Stanford and "worked through them."

"It was the math I got at Lewis & Clark that saved me," he says with a nod to Professor Fredrickson, "along with good physical intuition." He earned a PhD in 1973 and went on to a postdoctoral fellowship at the University of California at Berkeley, planning an academic career.

Yet just as he had the right teachers and mentors at Lewis & Clark, Neff attracted some important attention at Stanford. "Out of the blue one day came something that really changed my life long term," he says. It was a call from Wolfgang Panofsky, an internationally renowned particle physicist and director of the Stanford Linear Accelerator. Panofsky (known as "Pief") was president-elect of the American Physical Society (APS) and was looking for an executive assistant. Would Neff take the job?

"I thought long and hard about that," Neff says. "It meant putting my physics career on hold. But it was really about the best thing that ever happened to me."

The "half-time" job thrust 29-year-old Tom Neff into the world of national science policy. "Pief didn't have time to be president-elect of the APS, let alone its president, so he would send me to his meetings," Neff says. "He was also an advisor to various parts of the government and a member of the Association of Presidents of Scientific Societies—where there were all these famous gray-beard guys—so I would go to those meetings for him too. I had to buy a suit for the first time, but I kept wearing my sandals."

In the course of his work with Panofsky, Neff helped draft the legislation that led to the creation of the Department of Energy. And when Panofsky launched the APS Panel on Public Affairs in 1974, Neff became its program coordinator. In 1975, he moved to the Center for Theoretical Physics at Massachusetts Institute of Technology, where he continued physics research and assisted the next two chairs of the APS panel, Philip Morse and Herman Feshbach. During this period, he also served as chief staff officer for the Ford Foundation's comprehensive Nuclear Energy Policy Study, which he later helped present to President Jimmy Carter and members of his cabinet.

In 1977, Neff was appointed director of MIT's International Energy Studies program, a position he held until 1985, when he became a senior member of the institute's Center for International Studies. Thus, when the time came to find a way to contain and destroy thousands of Soviet nuclear weapons, no one was better positioned to see the big picture than Tom Neff.

The deal wasn't a slam dunk. But Neff's Times op-ed, which he had circulated to key actors in advance of publication, got him an invitation to a nongovernmental bilateral meeting between American nuclear scientists and their Soviet counterparts. The Russians, led by Deputy Minister Mikhailov, were in Washington to discuss the technical details of implementing START 1— the historic July 1991 agreement to radically reduce the number of nuclear weapons deployed by the U.S. and Soviet Union.

The Soviet empire was financially ruined and on the brink of falling apart—mere weeks from its December 1991 demise— and the Russians were also in Washington looking for help.

Neff made sure he was in the right place to pitch his idea to the person who mattered. Following a short break in the talks, Neff noticed that Mikhailov had remained in the hallway with his interpreter—chain smoking. Seeing an opportunity to talk to the top Russian, Neff also stayed out of the meeting.

"I approached him in the hall to make my proposal, simply asking if he would be willing to sell fuel derived from [highly enriched uranium] in destroyed weapons to support his program," Neff writes in a draft of his book. "Mikhailov's response was that he was interested. I handed him a draft of the op-ed and the summary I had prepared, which Mikhailov folded and put into his suit coat pocket. As I turned to go, he suddenly asked a question through his interpreter: 'How much could I sell?' "

Neff had not anticipated this question—and he had no idea how much highly enriched uranium could be harvested from decommissioned Soviet weapons. "So I said 500 metric tons. Mikhailov thought for a minute and surprised me by saying he thought he could do that."

Earlier that day, Mikhailov had invited the American scientists to come to Moscow and Kiev in December for further talks, and Neff became part of that delegation. On October 24, his op-ed,

"A Grand Uranium Bargain," was published. He hoped the idea would take hold in Washington—"that someone in power would actually do something about it, the so-called decision makers," he says. "My great discovery was that that there aren't many real decision makers in Washington. But I had met a bunch of Russians. I had their business cards."

The idea was relatively easy to sell to the Russians, Neff says. In the confusion surrounding the collapse of the Soviet Union, a business deal made more sense than a treaty. Cash could accomplish more in the starving post-Soviet economy than could American diplomacy.

However, in the United States, many were still in a Cold War mindset, even as President George H.W. Bush was declaring that America had "won the Cold War." Regarding the Russian nukes, the State Department had a different view than the Energy Department, which had a different view than the National Security Council. And few in government, particularly Defense Secretary Dick Cheney, could imagine that the Russians could safely collect and dismantle their own weapons without U.S. assistance.

In the confusion surrounding the collapse of the Soviet Union, a business deal made more sense than a treaty.

Russia's minister of atomic energy, Aleksandr Rumyantsev (second from left), at a 2002 dinner for Thomas Neff (second from right). Rumyantsev and Neff worked together on the uranium purchase agreement.

"A lot of U.S. government and military people wanted to stick their noses in to tag, seal, and track everything," Neff says. "That wasn't possible. The Russians

were not going to let in a lot of 'spies' to play with their weapons. I figured they would find a way to keep them safe, just to harvest the reward of taking them apart and selling stuff off."

Trading megatons for megawatts was a way around the diplomatic and geopolitical impasse—but Neff had to make one final adjustment before his idea could get a fair hearing in Washington: He convinced the Russians to propose it. Once a concrete proposal came from the Russian side, the United States was compelled to respond and negotiate. An interagency group concluded that the deal had merit and, after some haggling over quantities and prices, an agreement to "recycle" 500 metric tons of weapons-grade uranium was signed in early 1993. The first shipment of fuel-grade uranium arrived in the United States in 1995.

With his scientific mind and the practical wisdom of his Oregon upbringing, Tom Neff saw an opportunity to propose and propel change. "I think there are always opportunities," he says. "There are always people who see something that can be fixed. The average college graduate will probably have an opportunity in his or her life to do something that actually improves things.

"But the trick," he says, "is recognizing it."

First wife - Nicola (Thomsen) Neff

Newspapers -

- 1951 - (NEED TO VERIFY) Wife Nicola Thomsen and (sister ?) Kristi Thomsen at camp : See https://www.newspapers.com/image/569864170/?terms=%22kristi%2Bthomsen%22
- 1985 - Dr. Nicola Neff presenting in Pennsylvana : See https://www.newspapers.com/image/563390027/?terms=%22nicola%2Bneff%22
- I think she married a Richard Shultz - (1988 home sale) : See https://www.newspapers.com/image/168616524/?terms=%22nicola%2Bneff%22

Nicola T Neff research archive -

https://www.researchgate.net/scientific-contributions/4201808_Nicola_T_Neff

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Nicola (T) Neff - Address / Bio info via Clustermaps.com

JPG : [HW000X][GDrive] **PDF:** [HW000Y][GDrive]

"Quick Facts - January 31, 1944 is her birth date. Her age is 76. [REDACTED], Davis, CA is the current address for Nicola. The expected price of renting a two bedrooms in the 95616 zip code is $1,630/month. This is a business registration address for Cultive Franchise LLC and Consolidated Orthopedic Services Inc. Richard Neff and Richard Schultz are connected to this place".

Beth Harris - Second wife ?

Beth Harris - LinkedIn (as of 2020)

See [HW000Z][GDrive]

- President
  - Company Name : **Harris Capital Strategies LLC**
  - Dates Employed Jan 2014 – Present
  - Employment Duration 6 yrs 2 mos
  - Location Jackson Hole, Wyoming
- Vice President, Finance and Analysis
  - Company Name : **Resource Strategy Associates, Inc.**
  - Dates Employed Oct 1996 – Dec 2013
  - Employment Duration 17 yrs 3 mos
  - Location Concord, Massachusetts
- Financial Analyst
  - Company Name : **Rio Algom Mining Corp**
  - Dates Employed Aug 1994 – Sep 1996
  - Employment Duration 2 yrs 2 mo

Housatonic

William David Neff (born 1945)

Born - https://www.mylife.com/william-neff/e623029124298 : **Birthday: 3/25/1945**

Father - Lee Miller Neff (born 1912)

Siblings (1) - Thomas L Neff (born 1943)

NYTimes 2014 article - "From Warheads to Cheap Energy"

See [HN007O][hGDrive]

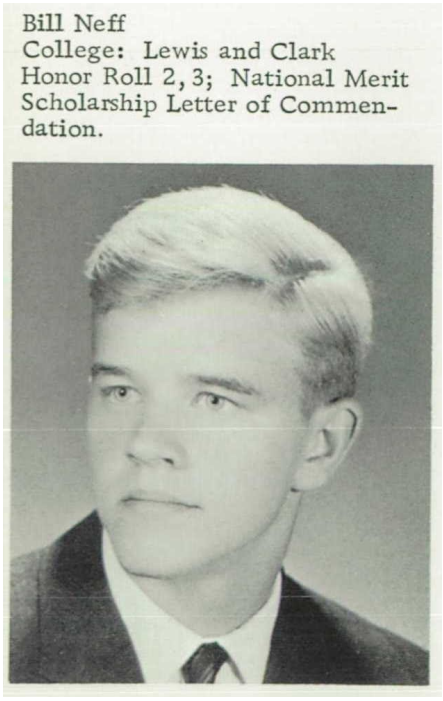
[...]

Thomas Lee Neff was born in 1943 in Oregon, the older of two boys; his family raised chickens and grew most of its own food. He studied math and physics at Lewis & Clark College in Portland, graduating with highest honors, and received his Ph.D. in physics from Stanford. As a senior M.I.T. researcher, he specialized in energy studies, writing books on nuclear power, solar energy and, in 1984, the global uranium market. His timing was propitious.

[...]

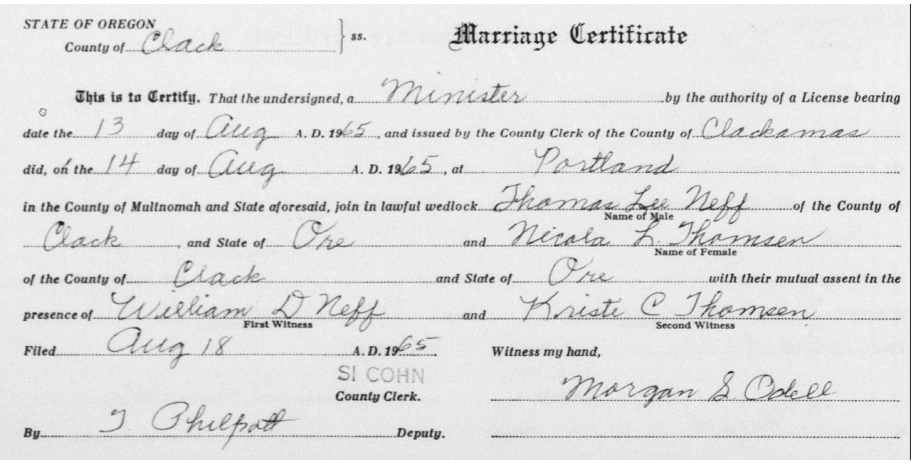
1963 - Graduate Lake Oswego High School, Oregon

Full page : [HE0009][GDrive]



[HE000A][GDrive]

1965 (August) - Marriage of brother Thomas L Neff - William attends



STATE OF OREGON
County of Clack } ss.

Marriage Certificate

This is to Certify. That the undersigned, a Minister by the authority of a License bearing date the 13 day of Aug A. D. 1965, and issued by the County Clerk of the County of Clackamas did, on the 14 day of Aug A. D. 1965, at Portland in the County of Multnomah and State aforesaid, join in lawful wedlock Thomas Lee Neff (Name of Male) of the County of Clack, and State of Ore and Nicola L. Thomsen (Name of Female) of the County of Clack and State of Ore with their mutual assent in the presence of William D Neff (First Witness) and Kristi C Thomsen (Second Witness)

Filed Aug 18 A. D. 1965
SI COHN
County Clerk.
By J Philpott Deputy.

Witness my hand,
Morgan L Odell

[HG000R][GDrive]

His son (and nephew of Thomas Lee Neff) -

https://www.colorado.edu/menv/people/jason-neff

"Jason Neff is an Associate Professor in the Environmental Studies program at CU Boulder where he also directs the undergraduate program in Environmental Studies. His research area is in biogeochemistry with a focus on a diverse array of subjects ranging from studies of the carbon cycle to atmospheric mineral aerosols. Through all these areas, Neff's primary interest is in how human activities influence the movement of nutrients and material through the Earth System and the impacts of changing biogeochemical cycles on both natural ecosystems and human society. He has served in a wide variety of roles at the University of Colorado and nationally and has authored over 80 scientific publications and a forthcoming introductory environmental science digital text titled 'A Changing Planet: the Science of Sustainability'. Neff speaks frequently to the media and public on the topic of land use change and dust storms in the deserts of the western US and has served on advisory panels for a wide variety of organizations including the US DOE, NASA, NSF, NCEAS, and other international science agencies. Professor Neff received his BA in Biology from The University of Colorado at Boulder (1993) and a Ph.D. in Biology from Stanford University (1999). "

CV - WILLIAM D. NEFF (made in 2015?)

"William David Neff" - HAS TO BE THE BROTHER - SAME SMALL COLLEGE in Oregon - See **Full Resume (PDF format)** - [HX0007][GDrive]

Education

- Ph.D., AstroGeophysics, 1980, University of Colorado, Boulder, Colorado 80303. Thesis: An Observational and Numerical Study of the Atmospheric Boundary Layer Overlying the East Antarctic Ice Sheet (Advisors: Hart, Benton, Wyngaard, and Hooke)
- M.S., Physics, 1968, University of Washington, Seattle, Washington
- B.A., Physics and Mathematics, 1967, Lewis and Clark College, Portland, Oregon

Professional Societies

- American Meteorological Society:
- (Committee on Meteorological Aspects of Air Pollution, 1987-1990)
- (Committee on Mountain Meteorology, 1991-1998; Chair, 1993-1994)
- American Geophysical Union (1990-present)
- European Geosciences Union (2007-present)
  - Initiated new ongoing session (2006-2014) on Boundary Layers in High Latitudes: Physical and Chemical Processes
- International Society for Acoustic Remote Sensing of the Oceans and Atmosphere: (Executive Committee, 1983-2000, Chair: 1992-1994, 2012)
- Front-Range Chapter, American Geophysical Union
- (Executive Committee, 1990-1993; Chair, 1992)

Employment

- Research Assistant, Department of Physics, University of Washington, 1967-1968
- Commissioned Officer, U.S. Coast and Geodetic Survey (ESSA – NOAA), 1968-1972

- Commissioned Officer, U.S. Coast and Geodetic Survey (ESSA→NOAA), 1968-1973
- Physicist, Environmental Technology Laboratory, Boulder, CO, 1973-1990
- Fellow, Cooperative Institute for Research in the Environmental Sciences, University of Colorado, Boulder, CO, 1991-Present
- Chief, Regional Weather and Climate Applications Division, Environmental Technology Laboratory, Boulder CO, 1990-2001
- Director, Environmental Technology Laboratory, NOAA, Boulder CO, 2001-2005
- Director, Physical Sciences Division, Earth System Research Laboratory, 2005-2013
- Senior Research Scientist, Cooperative Institute for Research in the Environmental Sciences, University of Colorado, Boulder CO

NOAA and University Service:

- Member, NOAA Seasonal-to-Interannual Strategic Planning Team, 1990s
- Member, NOAA Decadal-to-Centennial Strategic Planning Team, 1990s
- Federal Project Officer, Central California Ozone Study Congressional Earmark, 2001
- Host Laboratory Liaison, Federal Project Offcier, Joint Institute for Marine Observations, Scripps, Cooperative Agreement, 2001-2004
- University of Colorado, CIRES Committee for reappointment of the Director, 1999
- University of Colorado, Chair, CIRES Visiting Fellows Committee, 1998
- University of Colorado, CIRES Executive Committee, 1999-2003
- University of Colorado, CIRES Fellows Reappointment Committee, 2006
- University of Colorado, CIRES Career Track Committee (2015)
- University of Colorado, CIRES Innovative Research Committee, 2007
- University of Colorado, CIRES Visiting Fellows Committee, 2008
- University of Colorado, Chair, CIRES Distinguished Lectureship series, 2012-2013
- University of Colorado, Chair, CIRES Career Track committee, 2015

Committee member:

- DuVivier A., 2015 PhD, Department of Atmospheric and Oceanic Sciences, University of Colorado, Atmosphere-ocean interactions around Greenland during high wind events
- Strehz A. 2015 Ph.D: Department of Physics, University of Auckland A Scanning Bi-static SODAR (External Examiner)
- Van Dam, B. 2013 PhD, Department of Atmospheric and Oceanic Sciences, University of Colorado Greenland ice-atmosphere chemical interactions
- Behrens, P. 2010 Ph.D: Department of Physics, University of Auckland, The Remote Sensing of Wind in Complex Terrain (External Examiner)
- Cohen, L., 2006 M.S., Program in Atmospheric and Ocean Science, University of Colorado, Boundary Layer Characteristics and Ozone Fluxes at Summit, Greenland
- Rucker, M., 2003 Ph.D., University of British Columbia, Observational and numerical study of daytime flows in an alpine valley (External Examiner)
- Gottas, D., 1998 M.S. Land, Air, and Water Resources, U.C. Davis: Application of a 915-Mhz Radar Wind Profiler to Studies of the Boundary Layer at the South Pole.
- Russell, C.A., 1997 M.S. Geography, University of Colorado: A Study of Temperature Anomalies at the South Pole and Associated Synoptic Scale Processes over Antarctica
- Sutton, C., 1997 Ph.D., Department of Physics, University of Auckland, Numerical modelling of sea breezes and pollutant dispersion (External Examiner)

Awards:

- 2013: NOAA Distinguished Career Award
- 2008: AMS, Walter Orr Roberts Lecturer in Interdisciplinary Sciences
- 1998: Department of Commerce Silver Metal to the Meteorological Applications and Assessment Division
- 1998: NOAA Distinguished Authorship Award
- 1993: Federal Laboratory Consortium Award for Excellence in Technology Transfer
- 1991: NOAA Distinguished Authorship Award
- 1989: PLAN Boulder County Annual Environmentalist Award

Invited Lectures:

- August 2010, SCAR Meeting, Buenos Aires, Argentina, Is the Southern Annular Mode (SAM) in the troposphere primarily an Antarctica Coastal/Mid-Latitude Phenomena?
- Invited Talk, August 2007, IUGG, Perugia, High Latitude Modes of Climate Variability, Distinguishing trends from multi-decadal variability in the Antarctica circulation: A view from the South Pole with recent climate model insights. (with J. Perlwitz and M. Hoerling)
- August 2005, Invited Talk, IAMAS, Bejing, Climate Variability and Change in the Polar Regions: Causality and Prediction: Decadal Trends and Variability over Antarctica: Linkages to Indian Ocean Warming? (with M . Hoerling)
- July 2001, Invited Talk: "The Northern Front Range Air Quality Experiment" in Exporting and Importing Air Polution: Local to Global Scales, MIT Energy Lab-Endicott House Summer Symposium, Denham MA.
- December 2000: Closing Address on the Future of Acoustic Remote Sensing at the Tenth Symposium on Acoustic Remote Sensing of the Oceans and Atmosopheres and Associated Techniques, Auckland New Zealand
- May 2000: Remote Sensing in the Polar Regions, NSF Workshop on Weather Forecasting in Antarctica, Byrd Polar Research Center, Columbus Ohio.
- January 1998 AMS Annual Meeting: Invited Joint Lecture Remote Sensing Technologies for Air Quality – and Associated Techniques, Short Courses on Applications of Mountain Meteorology and Air Pollution Meteorology; and

- January 1998 AMS Annual Meeting: Short-Course Luncheon Speaker on “Decadal Variability of the Tropospheric Circulation over Antarctica”

Research and Management Experience

- 1968-1970: Oceanographic and hydrographic surveys, Gulf of Alaska.
- 1971-Studies of acoustic scattering in real atmospheres and meteorological applications:
  - --Carried out first verification of turbulent backscattering theory for acoustic sounders.
  - --Identified excess attenuation effects on quantitative interpretation of sodar data.
  - --Verified effect of turbulence-induced beam-wander on sodar Doppler turbulence measurements.
- 1975-Present: Remote sensing of the Polar Regions:
  - --Developed and deployed first Doppler sodar in Antarctica, at South Pole Station.
    - --Carried out first numerical simulations and comparisons with sodar-derived wind and turbulence data obtained over a semi-infinite slope in the absence of a diurnal heating cycle.
  - --Initiated new program in Arctic boundary layer research using acoustic and radar remote sensing.
  - --PI:NSF/ Grant (1991-1995, OPP 91-18961) to observe and model transitory meso- and synoptic scale phenomena over the interior slopes of Antarctica using the first radar wind profiler on the continent of Antarctica.
  - --Published analysis of 40 years of data from the South Pole showing that ozone depletion has affected tropospheric weather processes over Antarctica, delaying the spring transition by one month.
- 1979-Present: Remote sensing of complex terrain flows:
  - --Introduced first Doppler sodars and lidar in the DOE ASCOT program.
- --Documented significant effect of marine air intrusions on drainage flow structure in the Coastal Mountains of California.
  - --Quantified internal wave contributions to measurements in EPA CTMD program.
- --Calculated with a 1-D numerical model, the effect of grid resolution on the prediction of radiative cooling of air over slopes and the generation of drainage winds.
- 1986-Present: Applications of remote sensing to air quality:
  - --Designed and directed the meteorological program for the 1987-1988 Denver Brown Cloud Study and the 1996-1997 Northern Front Range Air Quality Study.
  - --Initiated cooperative research program with the Colorado Department of Health for improvements in high pollution day forecasts and modeling of urban energy budgets.
  - --Used minisodars, for the first time, to detect shallow inversions in dense urban areas created by building shadows.
  - --Used sodars and Doppler lidars to verify the structure of shallow circulations produced by mesoscale lee troughs that in turn cause Denver's high pollution episodes.
  - --Developed and applied networks of 915-MHz profilers to mesoscale air quality transport problems including Grand Canyon Visibility, San Joaquin Valley and Southern California ozone episodes, and model validation for emergency response at the DOE Rocky Flats facility.
- 1988-1989: Deputy Chief, Atmospheric Studies Program Area
- 1989-1990: Acting Chief, Atmospheric Studies Program Area:
  - --Initiated program to develop integrated lower tropospheric profiling systems centered on the use of 915-MHz profilers.
- 1990-2001: Chief, Meteorological Applications and Assessment Division (later the Weather and Climate Applications Division)
  - --PI for several multi-year joint research projects with the State of California to study mesoscale pollution transport using 915-MHz radar wind profilers.
  - --PI:ONR Grant to study transitory coastal disturbances trapped by topography.
  - --Maintained strong polar research program in both the Arctic and Antarctic.
  - --Initiated new program for coastal weather research.
  - --Led the ETL contribution to development and renewals of the 915-MHz Cooperative Research and Development Agreement.
  - --Member of the Prospectus Development Team Number 2 of the US Weather Research Program
  - --Member of the Test and Evaluation Working Group of NAOS
  - --Initiated development program to deploy radar wind profilers on buoys and in highly cluttered environments.
  - --Developed, with CDC, a new program called the Climate-Weather Connection focused on the integrated use of observations, diagnosis, and prediction methods
  - --Published first paper documenting the effect of stratospheric ozone depletion on the seasonal cycle of tropospheric weather over the interior of Antarctic
- 2001-2005 Director, Environmental Technology Laboratory
  - --Restructured ETL to better financial management and to better meet NOAA programmatic needs.
  - --Provided stable boundary layer expertise to interpreting behavior of the surface chemistry over the interior of Antarctica (NSF: Antarctic Tropospheric Chemistry Investigation)
- 2005-2013 Director, Physical Sciences Division (PSD), NOAA Earth System Research Laboratory
  - --Created new laboratory from portions of ETL and the former Aeronomy Laboratory and the Climate Diagnostics Center based on previous initiative with CDC called the Weather-Climate Connection
  - --Carried out PSD’s first formal Laboratory Review (http://www.esrl.noaa.gov/research/review/2010/)

- --2006-present Initiated an ongoing session at the European Geosciences Union to bring together boundary layer physics and chemistry scientists in the polar regions
- 2014-present, CIRES Senior Research Scientist
  - --Published first paper using observations from Summit Station Greenland and the Twentieth Century Reanlysis to identify key processes responsible for the melting of the dry snow zone of Greenland in 2012 and 1889

Papers: (Google Scholar: http://scholar.google.com/citations?user=_R6iVvgAAAAJ&hl=en)

- 2013 Van Dam, B., D. Helmig, W. Neff, and L. Kramer (2013), Evaluation of Boundary Layer Depth Estimates at Summit Station, Greenland, Journal of Applied Meteorology and Climatology, 52(10), 2356-2362.
- 2013 Shupe, M. D., et al. (2013), HIGH AND DRY New Observations of Tropospheric and Cloud Properties above the Greenland Ice Sheet, Bulletin of the American Meteorological Society, 94(2), 169-+.
- 2013 LaFranchi, B. W., et al. (2013), Constraints on emissions of carbon monoxide, methane, and a suite of hydrocarbons in the Colorado Front Range using observations of (CO2)-C-14, Atmospheric Chemistry and Physics, 13(21), 11101-11120.
- 2012 Petron, G., et al. (2012), Hydrocarbon emissions characterization in the Colorado Front Range: A pilot study, J. Geophys. Res.-Atmos., 117.
- 2010 Slusher, D. L., W. D. Neff, S. Kim, L. G. Huey, Y. Wang, T. Zeng, D. J. Tanner, D. R. Blake, A. Beyersdorf, B. Lefer, J. H. Crawford, F. L. Eisele, R. L. Mauldin, E. Kosciuch, M. P. Buhr, H. W. Wallace, and D. D. Davis (2010), Atmospheric chemistry results from the ANTCI 2005 Antarctic plateau airborne study, J. Geophys. Res., doi:10.1029/2009JD012605.
- 2009 Helmig, D., L. D. Cohen, F. Bocquet, S. Oltmans, A. Grachev, and W. Neff, Spring and summertime diurnal surface ozone fluxes over the polar snow at Summit, Greenland, Geophysical Research Letters, 36.
- 2014 Neff, W, GP Compo, FM Ralph and MD Shupe, (2014), Continental heat anomalies and the extreme melting of the Greenland ice surface in 2012 and 1889 J. Geophys. Res.-Atmos., 119, (11), 6520 - 6536, issn: 2169-897X, ids: AJ8RK, doi: 10.1002/2014JD021470 , Published 16-Jun 2014
- 2014 Boylan, P, D Helmig, R Staebler, A Turnipseed, C Fairall and W Neff, (2014), Boundary layer dynamics during the Ocean-Atmosphere-Sea-Ice-Snow (OASIS) 2009 experiment at Barrow, AK J. Geophys. Res.-Atmos., 119, (5), 2261 - 2278, issn: 2169-897X, ids: AE3OL, doi: 10.1002/2013JD020299 , Published 16-Mar 2014
- 2014 Gorodetskaya, IV, M Tsukernik, K Claes, MF Ralph, WD Neff and NPM Van Lipzig, The role of atmospheric rivers in anomalous snow accumulation in East Antarctica Geophys. Res. Lett., 41, (17), 6199 - 6206, Art. No. 10.1002/2014GL060881, issn: 0094-8276, ids: AQ4IH, doi: 10.1002/2014GL060881 , Published 16-Sep 2014
- 2008 Neff, W., J. Perlwitz, and M. Hoerling, Observational evidence for asymmetric changes in tropospheric heights over Antarctica on decadal time scales, Geophysical Research Letters, 35(18).
- 2008 Anderson, P. S., and W. D. Neff, Boundary layer physics over snow and ice, Atmospheric Chemistry and Physics, 8(13), 3563-3582.
- 2008 Perlwitz, J., S. Pawson, R. L. Fogt, J. E. Nielsen, and W. D. Neff, Impact of stratospheric ozone hole recovery on Antarctic climate, Geophysical Research Letters, 35(8).
- 2008 Neff, W., Helmig, D., Grachev, A., Davis, D., "A Study of Boundary Layer Behavior Associated with High Surface NO Concentrations at the South Pole Using a MiniSodar, Tethered Balloon, and Sonic Anemometer," Atmos. Env., 42, 2762-2779.
- 2008 Eisele, F., D. Davis, D. Helmig, S. Oltmans, W. Neff, G. Huey, G. Chen, J. Crawford, R. Arimoto, B. Buhr, L. Mauldin, M. Hutterli, J. Dibb, D. Blake, Brooks, J. Roberts, Y. Wang, D. Tan, and F. Flocke: ANTCI 2003 Overview paper. Atmos. Env. 42, 2749-2761.
- 2008 Helmig, D., B. Johnson, S. J. Oltmans, W. D. Neff, F. Eisele, and D. Davis: Elevated ozone in the boundary layer at the South Pole. Atmos. Env., 42, 2788-2803.
- 2008 Helmig, D., B. Johnson, M. Warshawsky, T. Morse, W. Neff, F. Eisele, and D. Davis: Nitric oxide in the boundary layer at the South Pole during the 2003 Antarctic Tropospheric Chemistry Investigation. Atmos. Env., 42, 2817-2830.
- 2008 Davis D., Seelig, J., Huey, G., Crawford, J., Chen, G., Wang, Y., Buhr, M., Helmig, D., Neff, W., Blake, D., Arimoto R., and F. Eisele, "A reassessment of Antarctic plateau reactive nitrogen based on ANTCI 2003 airborne and ground based measurements," Atmos. Env., 42, 2831-2848.
- 2007 Cohen, L., Helmig, D., Grachev, A., Neff, W., Fairall, C., "Boundary-Layer Dynamics and Its Influence on Atmospheric Chemistry at Summit, Greenland", Atmos. Env., 41 (24), 5044-5060.
- 2007 Simpson, W. R., von Glasow, R., Riedel, K., Anderson, P., Ariya, P., Bottenheim, J., Burrows, J., Carpenter, L. J., Frieß, U., Goodsite, M. E., Heard, D., Hutterli, M., Jacobi, H.- W., Kaleschke, L., Neff, B., Plane, J., Platt, U., Richter, A., Roscoe, H., Sander, R., Shepson, P., Sodeau, J., Steffen, A., Wagner, T., and Wolff, E.: Halogens and their role in polar boundary-layer ozone depletion, Atmos. Chem. Phys., 7, 4375-4418.
- 2007 Wang, Y., Y. Choi, T. Zeng, D. Davis, M. Buhr, G. Huey, and W. Neff: Assessing the photochemical impact of snow NOx emissions over Antarctica during ANTCI 2003. Atmos. Env., 41(19), 3944-3958.
- 2007 Dibb, J., M. Albert, C. Anastasioc, E. Atlas, A. Beyersdorfe, N. B. Blakee, F. Bocquetf, J. Burkhartg, G. Chen, L. Cohen, T. Conway, Z. Courville, M. Frey, D. Friel, E. Galbavy, S. Hall, M. Hastings, D. Helmig, G. Huey, M. Hutterli, J. Jarvis, B. Lefer, S. Meinardi, W. Neff, S. Oltmans, F. Rowland, S. Sjostedt, E. Steig, A. Swansone, and D. Tanner, An overview of air-snow exchange at Summit, Greenland: Recent experiments and findings Atmos. Env. (41), 4995-5006.
- 2006 Dabberdt WF, Carroll MA, Appleby W, Baumgardner D, Carmichael G, Davidson P, Doran JC, Dye TS, Grimmond S, Middleton P, Neff W, Zhang Y, USWRP workshop on air quality forecasting, Bull. Amet. Soc., 87(2), 215-221
- 2002 Darby, L. S., R. M. Banta, W. A. Brewer, W. D. Neff, R. D. Marchbanks, B. J. McCarty, C. J. Senff, A. B. White, W. M. Angevine, and E. J. Williams (2002), Vertical variations in O3 concentrations before and after a gust front passage, J. Geophys. Res., 107(D13), 4176, doi:10.1029/2001JD000996.
- 1999 Neff, W.D. Decadal-time-scale trends and variability in the tropospheric circulation over the South Pole. J. Geophys. Res., 104, D22, 27,217-27,251.
- 1999 Edgerton, S.A., et al., Particulate Air Pollution in Mexico city: A Collaborative Research Project, J. Air & Waste Management, 49, 1221-1229.
- 1999 Darby, L.D., W.D. Neff, R. Banta, Multiscale analysis of a meso-frontal passage in the complex terrain of the Colorado Front Range, Mon. Wea. Rev., 127, 2062-2081.
- 1998 Ralph, F.M., L. Armi, J.M. Bane, C. Dorman, W.D. Neff, P.J. Neiman, W. Nuss, P.O.G. Persson, Observations and analysis of the 10-11 June 1994 coastally trapped disturbance. Mon. Wea. Rev., 126, 2435-2465.

- 1998 Davis, D., G. Chen, P. Kasibhatla, A. Jefferson, D. Tanner, F. Eisele, D. Lenshow, W. Neff, H. Berresheim, DMS oxidation in the Antarctic marine boundary layer: Comparison of model simulations and field observations of DMS, DMSO, DMSO2, H2SO4(g),MSA(g), and MSA(p), J. Geophys. Res., 103, 1657-1678.
- 1997 Neff, W.D., The Denver brown cloud studies from the perspective of model assessment needs and the role of meteorology. Journal of Air and Waste Management, 47, 269-285.
- 1997 Bond, N.A., C.F. Mass, Smull, B.F., R.A.Houze, M.J. Yang, B.A. Colle, S.A. Braun, M.A. Shapiro, B.R. Colman, P.J. Neiman, J.E. Overland, W.D. Neff, J.D. Doyle, The coastal observation and simulation with topography (COAST) experiment, Bull. Amer. Meteor. Soc., 78, 1941-1955.
- 1996 Wilczak, J.M., E.E. Gossard, W.D. Neff, W.L. Eberhard, Ground-based remote sensing of the atmospheric boundary layer: 25 years of progress. Bound.-Layer Meteor., 78, 321-349.
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- 1995 Banta, R.M., L.D. Olivier, W.D. Neff, D.H. Levinson, D. Ruffieux, Influence of canyon jets and katabatic flows on flow and dispersion over adjacent plains. Theoretical and Applied Climatology, 52, 27-42.
- 1994 Neff, W.D., Mesoscale air quality studies using suites of remote sensors. I. Journ. of Remote Sensing, 15(2), 393-426.
- 1994 Neff, W.D., Studies of variability in the troposphere and atmospheric boundary layer over the South Pole: 1993 experiment design and preliminary results. Antarctic Journal of the U.S. (5), 302-304.
- 1994 Neff, W.D., Decadal change in the troposphere and atmospheric boundary layer over the South Pole. Antarctic Journal of the U.S. (5), 304-306.
- 1994 Mursch-Radlgruber, E., D.E. Wolfe, D.W. Gregg, C.W. King, W.D. Neff, K.A. Sharp, and D. Ruffieux, NOAA's portable high-freequency mini-SODAR and its potential for boundary-layer stuides. I. Journ. of Remote Sensing.,15, 325-332
- 1993 Carroll, J.J., and W.D. Neff. Observations and modeling studies of episodic events in the Antarctic atmospheric boundary layer (short communication). Antarctic Journal of the United States, 28(5), 273-274.
- 1992 Gudiksen, P.H., J.M. Leone, C.W. King, D. Ruffieux, and W.D. Neff. A study of nocturnal drainage flows within the Mesa Creek Basin in western Colorado and their interactions with the ambient meteorology. J. Appl. Meteor., 31, 1023-1032.
- 1991 Neff, W.D. and C.W. King, The Representativeness of Short-Term Air Quality Studies, Paper 91-78.8, Proceedings of the 84th Annual Meeting of the Air and Waste Management Association, 91-78.8:1-15.
- 1990 Mueller, P.K., R.C. Henry, W.E. Balson, L.W. Richards, M. Pitchford, J.G. Watson, W. Neff, P. Saxena, and W.E. Wilson: Future research on visibility and fine particles: Report from a panel discussion. Transactions: Visibility and Fine Particles. C.V. Mathai (ed.), American Waste Management Association, Pittsburgh, PA., 972-989.
- 1990 Neff, W.D., and J.G. Watson: Evaluation of the fuel-switching scenario used in the Denver Brown Cloud Study In: Transactions: Visibility and Fine Particles, C.V. Mathai, Ed. AWMA, Pittsburgh, PA., 410-421.
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- 1989 Doran, J.C., M.L. Wesely, R.T. McMillen, and W.D. Neff: Measurement of turbulent heat and momentum fluxes in a mountain valley. J. Appl. Meteor., 28, 438-444.
- 1989 Porch, W.M., S. Barr, W.E. Clements, J.A. Archuleta, A.B. Fernandex, C.W. King, W.D. Neff, and R.P. Hosker: Smoke flow visualization in a tributary of a deep valley. Bull. Amer. Meteor. Soc., 70(1), 30-35.
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- 1988 Neff, W.D.: Observations of complex terrain flows using acoustic sounders: Echo interpretation. Bound.-Layer Meteor. 42, 207-228.
- 1988 Neff, W.D. and C.W. King: Observations of complex terrain flows using acoustic sounders: Drainage flow structure and evolution. Bound.-Layer Meteor. 43, 15-41.
- 1988 Porch, W.M., W.D. Neff, and C.W. King: Comparison of meteorological structure parameters in complex terrain using optical and acoustical techniques. J. Appl. Optics. 27(1), 2222-2228.
- 1987 Neff, W.D. and C.W. King: Observations of complex terrain flows using acoustic sounders: Experiments, topography, and winds. Bound.-Layer Meteor. 40, 363-392.
- 1986 Neff, W.D.: On the use of sodars to study stably stratified flow influenced by terrain. Atmos. Res., 20, 279-308.
- 1986 Neff, W.D. and R.L. Coulter: Acoustic remote sensing. Chapter 10: Probing the Atmospheric Boundary Layer. (D. Lenshow, ed.) American Meteorological Society, Boston, MA, 201-236.
- 1986 Post, M.J. and W.D. Neff: Doppler lidar measurements of winds in a narrow mountain valley. Bull. Amer. Meteor. Soc., 64(3), 274-281.
- 1985 Gossard, E.E. , J.E. Gaynor, R.J. Zamora, and W.D. Neff: Finestructure of elevated stable layers observed by sounder and in situ tower sensors. J. Atmos. Sci. 42 (20), 2156- 2169.
- 1984 Gossard, E.E. , W.D. Neff, R.J. Zamora, and J.E. Gaynor: Finestructure of atmospheric refractive layers and implications for over-the-horizon propagation and radar sounding systems. Radio Sci. , 19, 1523-1533.
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William Horlick Neukom (born 1942)

Wikipedia Bill Neukom

Associations :

- William Henry Gates II (born 1925)
- William Henry Gates III (born 1955)

Saved Wikipedia (Oct 21 2020) - Bill Neukom

See [HK003U][GDrive] (Note - Nov 23 3030 version here : [HK003T][GDrive])

Born

1942 (age 77–78)

San Mateo, California

Education

Dartmouth College, 1964 B.A.

Stanford Law School, 1967 L.L.B

William Horlick Neukom (born 1942) is an American former managing general partner of the San Francisco Giants baseball team ownership group. He held this position from May 2008 to December 31, 2011 and he was the managing partner when the Giants won the World Series in 2010, the first World Series win since the team had moved to California in 1958. Prior to holding this position, he was President of the American Bar Association in 2007–08.[1] He was the principal legal counsel for Microsoft for almost 25 years. He was also the Chairman of the law firm of Preston Gates & Ellis, LLP in Seattle, now part of K&L Gates. He is a member of the Board of Directors of the Pacific Council on International Policy[2] and spends the majority of his time focused on his role as Founder & CEO of the World Justice Project.[3]

Early life and education[edit]

Neukom was born in 1942, seven years before his brother, Daniel Neukom, who is a history teacher at Sacramento Country Day School.[4] He was raised in the Bay Area community of San Mateo, California. He was living in the Bay Area when the Giants moved to San Francisco in 1958. He graduated from San Mateo High School in 1960.

After receiving an undergraduate degree from **Dartmouth College** in 1964,[5] Neukom returned to the Bay Area where he received a law degree from Stanford Law School in 1967.[6]

Legal career and Microsoft[edit]

After completing his law degree, Neukom served as a clerk for Judge Theodore S. Turner of the King County Superior Court in Seattle in the years 1967–68.[7]

By 1977, he had joined the Seattle law firm Shidler, McBroom, Gates & Lucas (later Preston Gates & Ellis). Neukom's relationship with Microsoft began in 1978 when managing partner Bill Gates Sr. asked him to advise his son's fledgling software business.[5] Neukom started doing legal work for Microsoft when the company had just 12 employees. He would continue to be Microsoft's lead legal counsel for nearly 25 years.[8]

Neukom joined Microsoft as an employee in 1985 and thereafter built its corporate law department from an initial staff of five to more than 600 attorneys and support personnel.[9] He became an Executive Vice President at Microsoft. He spent 17 years as Microsoft's general counsel and chief legal officer, managing the company's legal, governmental affairs and philanthropic activities.[9]

Neukom during the 2010 Giants World Series victory parade, sporting trademark bow tie[10]

He was actively involved in legally defending Microsoft's intellectual property in several countries, most notably in Apple v. Microsoft.[7] He also was involved in defending Microsoft from a series of complex antitrust suits (i.e. United States v. Microsoft).[7] Neukom presided over Microsoft's defeat by the U.S. Department of Justice in a case that was referred to as the "trial of the century." [11] While at Microsoft, Neukom also directed the company's community affairs program, which initiated corporate giving programs including the Microsoft Giving Campaign, the Microsoft Matching Gifts Program, and the Microsoft Volunteer Program. In 2002 Neukom retired from Microsoft as Executive Vice President, Law & Corporate Affairs.[7]

After Microsoft, Neukom returned to Preston Gates & Ellis as a partner in the firm's business law practice.[9] In January 2004 he was named chair of that firm. **In 2007 Preston Gates & Ellis merged with Kirkpatrick and Lockhart of Pittsburgh to form the large law firm now named K&L Gates**.[9] Neukom no longer is affiliated with the firm.

Neukom served as president of the American Bar Association for a one-year term from August 2007 to August 2008.[12]

San Francisco Giants[edit]

Neukom had been an investor in the Giants since 1995 and on May 16, 2008 was named the new Managing General Partner for the Giants.[10] He succeeded Peter Magowan, who retired at the end of the 2008 season at the age of 66.[13] Neukom and other investors purchased a portion of Peter Magowan's ownership interest in the team. Neukom became the lead active investor of the team following the reduction of Magowan's ownership interest, the death of Harmon Burns (a leading investor who died in 2006) and the death of Sue Burns, who died in 2009.

On September 14, 2011, Bill Neukom announced he was retiring as the Managing General Partner and CEO of the San Francisco Giants effective January 1, 2012, and he would be succeeded by Giants executive Larry Baer.[14] The *San Jose Mercury* reported anonymous sources saying that Neukom was forced out due to differences in the ownership group on how to divide up the additional money earned after the Giants won the 2010 World Series.[15] The *Mercury* also reported Giants shareholder Charles Bartlett Johnson purchased additional interests in the team, becoming the largest individual shareholder at 25%.[16]

Philanthropic work[edit]

Between 1996 and 2007, Neukom was a member of the Board of Trustees of Dartmouth College, and he served as chair of the board from 2004 to 2007. Three of his children have attended Dartmouth. He is the founding donor of the Neukom Institute for Computational Science at Dartmouth College, which aims to advance computing resources and applications in multiple aspects of the Dartmouth curriculum.[9][17]

In 2006 Neukom committed to a gift of $20 million for the planned construction of a new academic building at Stanford University's law school.[6] The structure, named the William H. Neukom Building and opened in 2011, is 65,000 square feet (6,000 m^2) and is situated on the existing law school complex.[18]

World Justice Project[edit]

Neukom is the founder, president, and CEO of the World Justice Project, which works internationally to strengthen the rule of law, aiming to promote the development of communities of opportunity and equity.[12]

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Housatonic

USS Neunzer (DE-150)

Wikipedia USS Neunzer (DE-150)

"USS *Neunzer* (DE-150) was an Edsall-class destroyer escort in service with the United States Navy from 1943 to 1947. After spending several decades in reserve, she was sold for scrap in 1973. " Wikipedia : (Sep 22 2019) : [HK001N][GDrive]

USS Neunzer History - from Wikipedia

Wikipedia : (Sep 22 2019) : [HK001N][GDrive]

Neunzer was named in honor of Machinist Weimar Edmund Neunzer, who was killed in action 2 July 1942 during the Aleutian Islands Campaign and was posthumously awarded the Air Medal. She was laid down by the Consolidated Steel Corp., Orange, Texas, 29 January 1943; launched 1 June 1943; sponsored by Mrs. Weimar E. Neunzer, widow of *Machinist Neunzer*; and commissioned 27 September 1943, Lt. John E. Greenbacker in command.

North Atlantic operations

Neunzer steamed to Galveston, Texas, and then to New Orleans, Louisiana, for fitting out. During October and November 1943 she went through shakedown off Bermuda. The new destroyer escort next visited Charleston, South Carolina, en route Quonset Point, Rhode Island. For 4 weeks she operated with an Atlantic Fleet research group, developing new equipment for antisubmarine warfare.

After escorting a group of troop transports from Boston, Massachusetts, to join a large convoy bound for England from New York City *Neunzer* proceeded to Norfolk, Virginia, joining TF 62 on 1 January 1944. With this group she escorted a large convoy to the Mediterranean, spending 8 days at Gibraltar before sailing for home.

Escorting Italian submarines

On her homeward voyage, she shepherded five Italian submarines to Bermuda for training purposes. During this trip, *Neunzer* carried out an operation which is believed to be unique for a destroyer escort. She refueled two Italian subs at sea, pumping 12,000 gallons of fuel through a fire plug and 200 feet of fire hose to the submarine.

In May 1944 Lt. Commander Virgil E. Gex became the skipper of the *Neunzer*. After two more voyages escorting convoys to the Mediterranean, *Neunzer* was detached from TF 62 to join escort aircraft carrier USS *Guadalcanal* (CVE-60) in a hunter-killer group. Following training at Casco Bay, Maine, and Bermuda, the task group made two search patrols for submarines in the Middle Atlantic, refueling in Bermuda. Neither of these patrols uncovered any submarines, and *Neunzer* returned to New York in late August.

During October the group put to sea again, this time searching for submarines in the North Atlantic. Although no submarines were discovered, the force ran through a very severe storm which damaged some of the ships. The patrol was finally broken off; the task group refueled at Ponta Delgada, Azores, before returning home early in November.

The antisubmarine group sailed from Norfolk 1 December for brief training in Bermuda en route Jacksonville, Florida, where for 5 weeks the carrier trained student pilots. The group proceeded to Guantanamo Bay, Cuba, late in January 1945 for 2 weeks of exercises; then *Neunzer* returned to New York for a brief overhaul.

After returning to Cuba for exercises in early March, the destroyer escort went to Miami, Florida, for 3 weeks as training ship for student officers of the Naval Training Center there.

But now the Germans were ready for their final push, sending their new snorkel-equipped subs across the Atlantic to attack the east coast. *Neunzer* suddenly received a message at midnight 8 April to get underway 6 hours later for Newfoundland. After refueling and provisioning in Argentia, she left on the 19th and rendezvoused in mid-ocean with one of several carrier task groups strung out across the Atlantic between St. John's, Newfoundland, and Fayal in the Azores as a net to trap the snorkels.

Battling German submarine U-546

USS *Frederick C. Davis* (DE-136) made contact with *U-546* on 24 April and was proceeding to attack when the submarine fired a stern shot which tore the DE apart and sent her down with heavy loss of life.

Eight destroyer escorts immediately joined the action. *Neunzer* and USS *Hayter* (DE-212) conducted a search while USS *Pillsbury* (DE-133) circled the area and USS *Flaherty* (DE-135) picked up survivors. *Flaherty* made contact in less than an hour and with *Pillsbury* proceeded to attack. The U-boat went to 600 feet. Contact was lost from 1045 until 1201 when USS *Varian* (DE-798), USS *Janssen* (DE-396), and USS *Hubbard* (DE-211) began another attack.

Neunzer got into the fight after several attacks by the other DE's, delivering a creeping attack with Varian and Hubbard while USS *Chatelain* (DE-149) directed. Contact was lost once more at about 1600, and *Chatelain* and *Neunzer* were ordered to return to the scouting line.

The line was expanded, and the ships began a sweep through the area, determined to prevent the submarine's escape. *Varian* made contact once more at 1731 and *Flaherty* was ordered to attack. She fired at 1810. Four minutes later a small oil slick began coming to the surface. *Flaherty* made another hedgehog attack at 1828, and at 1838 the U-boat broke surface.

Every ship in the line within range began firing. At 1844, after more than ten and a half hours of attacks, *U-546* rolled under for her last dive. Thirty-three of her crew, including the captain, were taken prisoner.

V-E Day

After V-E Day, *Neunzer* returned to New York for 2 weeks and left on 25 May to escort the last Atlantic convoy of World War II from New York to Southampton, England. She returned without a convoy, and remained in New York harbor from 15 June until 6 July.

In July the ship trained at Casco Bay, Maine, and served as target for the Motor Torpedo Boat Training Center, Melville, Rhode Island. On 1 August she sailed to New London, Connecticut, to escort *U-505*, captured by Guadalcanal's task group in June 1944. The sub was exhibited along the east coast and the Gulf Coast throughout the end of 1945 in a drive to sell War Bonds.

Post-War decommissioning

After operations along the Atlantic coast, *Neunzer* decommissioned in January 1947 and entered the Atlantic Reserve Fleet. Into 1970 she remained berthed at Philadelphia, Pennsylvania. On 1 July 1972 she was struck from the Navy list, and she was sold 1 November 1973, and scrapped.

Neunzer Newspaper articles

1942 (August)

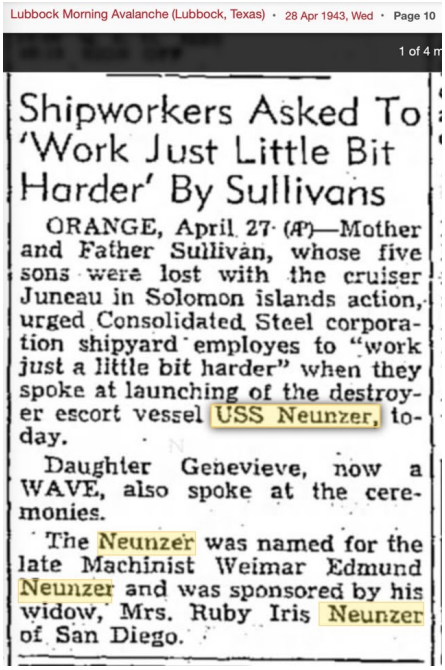
Weimer E Neunzer - https://www.newspapers.com/image/353036555/?terms=Neunzer

1943 (Feb 07) - Lt. Gex

https://www.newspapers.com/image/31071329/?clipping_id=36046166

1943 (April 28)

Full page : [HN00P7][GDrive]



Lubbock Morning Avalanche (Lubbock, Texas) · 28 Apr 1943, Wed · Page 10

1 of 4

Shipworkers Asked To 'Work Just Little Bit Harder' By Sullivans

ORANGE, April 27 (AP)—Mother and Father Sullivan, whose five sons were lost with the cruiser Juneau in Solomon islands action, urged Consolidated Steel corporation shipyard employes to "work just a little bit harder" when they spoke at launching of the destroyer escort vessel USS Neunzer, today.

Daughter Genevieve, now a WAVE, also spoke at the ceremonies.

The Neunzer was named for the late Machinist Weimar Edmund Neunzer and was sponsored by his widow, Mrs. Ruby Iris Neunzer of San Diego.

[HN00P8][GDrive]

1943 (June 6)

Full page - [HN00P9][GDrive]

Christens Vessel

Mrs. Ruby Irish Neunzer (above) formerly Miss Ruby Blalock of Pensacola, widow of the late Machinist Weimar Edmund Neunzer, USN, had the honor of christening the escort vessel USS Neunzer, which was named in honor of her husband, termed one of America's naval flying heroes.

The vessel was recently launched at the yards of the Consolidated Steel corporation in Orange, Tex.

Neunzer, who was born in Lynn, Mass., was killed in July, 1942, while serving with a patrol squadron in the Aleutians campaign. He was awarded the Air Medal posthumously.

Second pilot in a patrol plane, Neunzer was cited for skillfully assisting in dive-bombing and straffing attacks against Jap ships in Kiska harbor despite severe Alaskan weather and low ceiling.

"Pulling out in the clear at a very low altitude," the citation read, "his plane was subjected to withering anti-aircraft fire from enemy ship and shore batteries and pierced by lighter calibre projectiles.

"By his courage and competent assistance in fulfilling a dangerous mission, he displayed fortitude and gallant devotion to duty."

Neunzer trained at the Pensacola Naval station in 1940. Mrs. Neunzer is residing at 417 Marine View drive, San Diego, Cal.

[HN00PA][GDrive]

1995 Reunion dinner in Albuquerque

Full page : [HN00P5][GDrive]

1944 -(Oct 16) Virgil E. Gex of USS Neunzer is 1 of 5 brothers serving in the U.S. Navy

https://www.newspapers.com/clip/36153394/virgil-e-gex-of-uss-neunzer-is-1-of-5/

1945

Feb 21 - https://www.newspapers.com/image/533129558/?terms=Neunzer

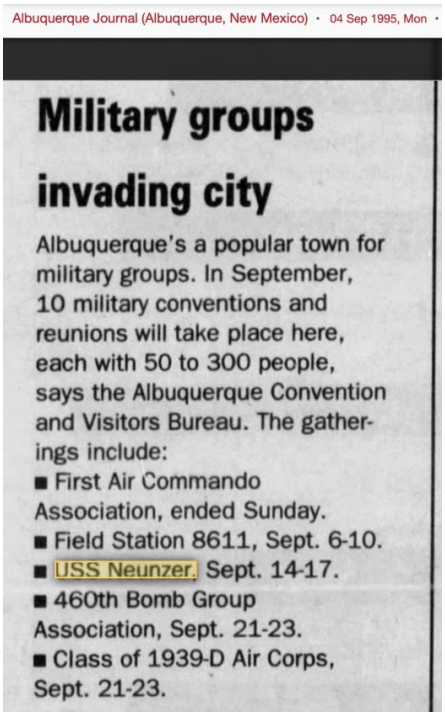
Nov 23 - https://www.newspapers.com/image/617048574/?terms=Neunzer

Dec 6 - https://www.newspapers.com/image/332856595/?clipping_id=36359255

Dec 7 - https://www.newspapers.com/image/332856620/?terms=Neunzer

Dec 8 - https://www.newspapers.com/image/327554373/?terms=Neunzer

Dec 16 - https://www.newspapers.com/image/315210724/?terms=Neunzer



Albuquerque Journal (Albuquerque, New Mexico) · 04 Sep 1995, Mon ·

Military groups invading city

Albuquerque's a popular town for military groups. In September, 10 military conventions and reunions will take place here, each with 50 to 300 people, says the Albuquerque Convention and Visitors Bureau. The gatherings include:

- First Air Commando Association, ended Sunday.
- Field Station 8611, Sept. 6-10.
- USS Neunzer, Sept. 14-17.
- 460th Bomb Group Association, Sept. 21-23.
- Class of 1939-D Air Corps, Sept. 21-23.

[HN00P6][GDrive]

2011 (Jan 31)

Full pages : Page 1 at [HN00PB][GDrive] , Page 5 at [HN00PD][GDrive]

Palm Beach Daily News (Palm Beach, Florida) · 31 Jan 2011, Mon · Page 1 FIND CLIP PRINT/SAVE SHARE

Peril in the Atlantic: Author recalls WWII battle

Daily News Photo by Jeffrey Langlois

Richard Snow, author of 'A Measureless Peril: America in the Fight for the Atlantic — The Longest Battle of WWII,' talked Tuesday about his father's fight with a German submarine.

By MICHELE DARGAN
Daily News Staff Writer

'Longest battle' killed 80,000 people, Richard Snow tells Prologue Society.

Richard Snow remembers his mother telling the superintendent of their apartment building that she was "so grateful" her husband didn't see active duty in World War II.

Snow's father reminded his mother that he was involved in battle while serving as a lieutenant on the USS Neunzer. The Neunzer chased down and helped sink the German submarine that had destroyed the Neunzer's sister ship.

"My mother knew perfectly well my father had been in a fight with a submarine," Snow said. "And yet her comment wasn't ludicrous. And that's because the kind of battle ... it was the battle of the Atlantic ... the longest battle of World War II, killed 80,000 people ... and yet it's not remembered as much as it should be because it didn't take the form of a proper naval battle."

Snow, author of *A Measureless Peril: America in the Fight for the Atlantic — The Longest Battle of WWII,* spoke Tuesday to the Palm Beach Prologue Society at Northern Trust Bank.

Prologue Society chairman Nicholas Pollard, a native of Great Britain, introduced Snow.

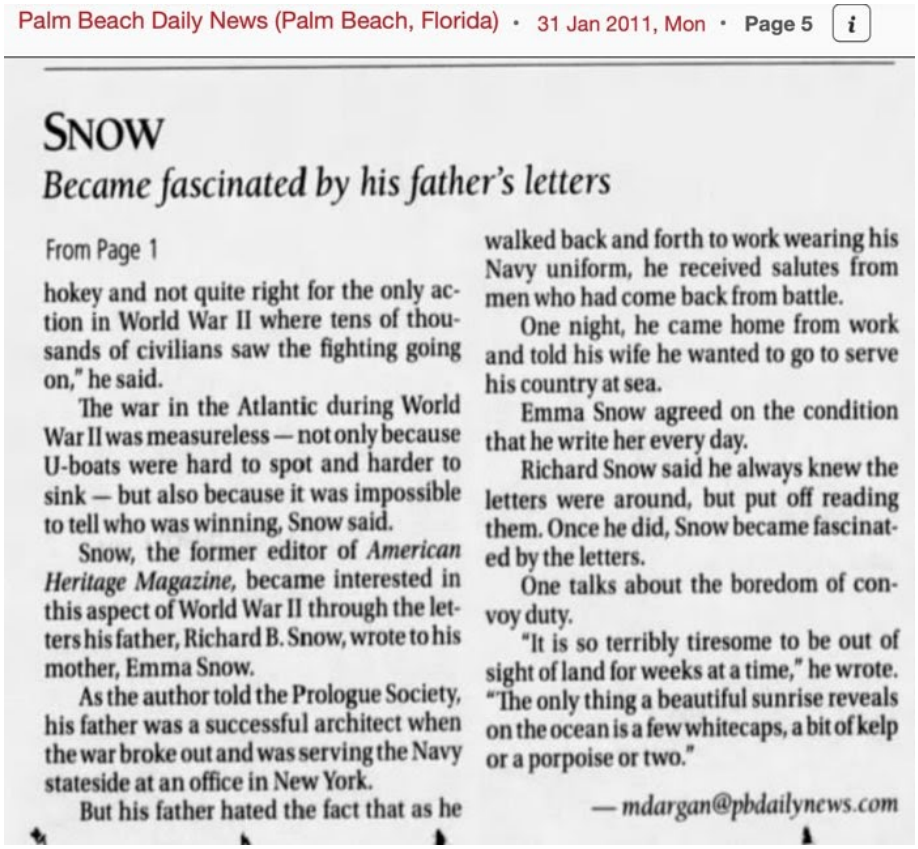
"As a British national, I fully understand the sacrifices that were made by countless thousands who helped keep the British Isles figuratively and literally afloat during the darkest hours of the second World War, many of whom made the ultimate sacrifice," said Pollard, a vice president at Northern Trust. "And I would be remiss if I didn't pay homage to those who sacrificed so much for me and my country. It is a debt that can never be repaid, but thank you."

Snow said he almost titled the book The Forgotten War.

"But that seemed a little

Please see SNOW, Page 5

[HN00PC][GDrive]



Palm Beach Daily News (Palm Beach, Florida) · 31 Jan 2011, Mon · Page 5

SNOW

Became fascinated by his father's letters

From Page 1

hokey and not quite right for the only action in World War II where tens of thousands of civilians saw the fighting going on," he said.

The war in the Atlantic during World War II was measureless — not only because U-boats were hard to spot and harder to sink — but also because it was impossible to tell who was winning, Snow said.

Snow, the former editor of *American Heritage Magazine*, became interested in this aspect of World War II through the letters his father, Richard B. Snow, wrote to his mother, Emma Snow.

As the author told the Prologue Society, his father was a successful architect when the war broke out and was serving the Navy stateside at an office in New York.

But his father hated the fact that as he walked back and forth to work wearing his Navy uniform, he received salutes from men who had come back from battle.

One night, he came home from work and told his wife he wanted to go to serve his country at sea.

Emma Snow agreed on the condition that he write her every day.

Richard Snow said he always knew the letters were around, but put off reading them. Once he did, Snow became fascinated by the letters.

One talks about the boredom of convoy duty.

"It is so terribly tiresome to be out of sight of land for weeks at a time," he wrote. "The only thing a beautiful sunrise reveals on the ocean is a few whitecaps, a bit of kelp or a porpoise or two."

— *mdargan@pbdailynews.com*

[HN00PE][GDrive]

Notable Crew

1. Sep 1943 to June1944 : Lt. (jg) **Lawrence Preston Gise** (born 1915) , who became AEC director, and who is the maternal grandfather of **Jeffrey Preston Bezos** .
2. (captain) Virgil Gex Obituary - https://www.newspapers.com/image/102535763/?terms=USS%2Bneunzer

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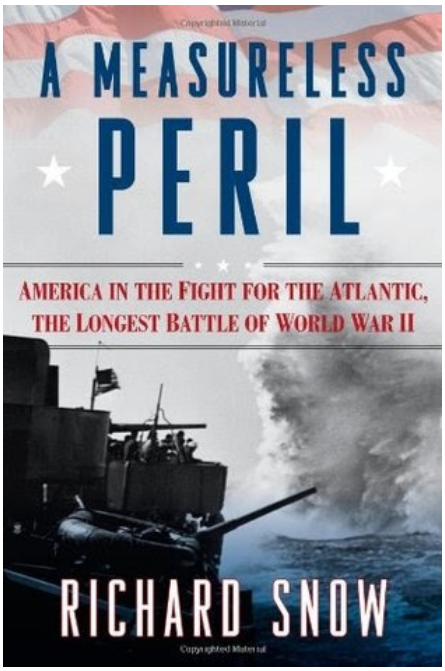
2010 Book - "A Measureless Peril - America in the Fight for the Atlantic" by Richard Snow

PDF (recorded) with OCR : [HB002M][GDrive]



[HB002N][GDrive]

From the book - this is just one section. Lots of history about the Neunzer in here.

"Set the Watch"

The birth of a warship, 1943

t ' k ' k

Most destroyer escorts were namedfor menwho hadalready died in the war the ships were goingto help fight.

Machinist Weimar Edmund Neunzer was killed in July 1942 while dive-bombing a Japanese submarine. The ship that would carry his name was built by Consolidated - my father saw it taking shape while he was trying to get to sea - and on April 27, 1943, Ruby Iris Neunzer, the flier's widow, broke a champagne bottle against the newborn's bow. The Neunzer slid backward into the Sabine River and bobbed and steadied, riding very high in the water because she was still just a hull, not yet both a working town and an engine of destruction. Accomplishing that meant not only adding the guns, but typewriters, filing cabinets, staplers and mimeograph machines, radios and anchor chains and blowers, soup pots and soup bowls, fire hoses and life jackets, signal flags and elegant, hand-wound chronometers that kept time at sea just as their forebears had when our new heavy frigates were alarming Englandin theWar of 1812.

The start of this familiar process on DE 150 would have had no special significance for my father, but then his superior, who liked him, hinted he might be assigned to the Neunzer. The moment it happened, he was sent up to firefighting school in Norfolk, Virginia. This was a serious and spectacular course: "Today we put out great big oil and gasoline fires and got hot wet and dirty during it. The instructors are fine, all experienced firemen from various big metropolitan fire departments, and they are eager to help and advise."

Then he brought his singed eyebrows to New York for three weeks' leave with my mother - Oklahoma!was a particularly bright moment of

it - before heading back to Orange, where he found the Neunzer the brief center of attention in that whole great forcing-bed of warships. She was still enmeshed, as she had been for months, in hoses and cables, but the tempo of the work had increased and engineers and officers with clipboards and flashlights moved among the welders andpainters.

On September 26, my father wrote, "Our crew arrived today and we were busy all day loading the ship. I have a very young skipper, Lt. Greenbacker, U.S.N., and I amvery nervous about satisfying him."And everything else, too: "I am nervous as a cat about the way things are going to go. There is so much that only experience afloat can teach me, andI amshy onthat."

Sowere most of his shipmates. Of the 209 officers and men who had just arrived aboard, perhaps 30 had seen sea duty. John Greenbacker most definitely had.The son of aConnecticut dairy farmer, he had been so eager to join the navy that as early asjunior high school his friends were calling himAnnapolis. He got to the academy in 1936 and, assoon as he graduated, was posted to the carrier Yorktown. The ship ran convoys in the Atlantic before Pearl Harbor, then went to the Pacific and the Battle of the Coral Sea, where a near miss ruptured a fuel tank, and to Midway,where Japanese torpedo planes sank her.

Greenbacker, one of the last men off, was ordered to the new subchasing school in Miami and eventually transferred to the Stewart, becoming executive officer of the first destroyer escort built by Brown Brothers of Houston. Brown Brothers was a good example of the pressure of war measures at the time: before the company bid its way into the DE program, the closest it had come to building a ship was winning the contract to put the concrete capping on the locks of the Panama Canal. The neophyte builders took a while to get the hang of it.

"I went to Houston," said Greenbacker, "and got there in February of 1943 and the ship didn't go into commission until something like the first of June." After a Shakedown cruise, he was ordered back to Texas, this time to Orange, to take over another brand-new DE. Consolidated made a faster job of finishing its ship than its Houston rivals had theirs:

"I was only there for four weeks beforewewent in commission."

By the early afternoon of Monday,September 27, 1943,the last of the hoses and welders and men with clipboards had left the ship. A theaterful of folding chairs hadsprouted on the dock by her stern. They were occupied largely by friends and family of the crew, and by a band.

Behindthe chairs stood the workers who hadput the ship together. The crewwas gathered onher fantail, andher officers stood at attentionby a podium set up there. The band played in the cool September sunshine, and my father was surprised to realize that he would miss Orange - or, he hastily modified this extravagant reaction, the friends he had made working on the shore detail there. A little after two o'clock the band subsided. A Consolidated official approached the podium and turned over the ship to the US. navy in the form of Captain J. M. Schelling, USN, representing the commandant, Eighth Naval District. Captain Schelling read aloud the orders authorizing himto accept i t , did so, and said, "Hoist the colors."

At the how the UnionJack blossomed - white stars, navy blue fieldwhile aft a sailor ran the American flag up the staff. Amidships, the commissioning pennant, a long ribbon with one red stripe, one white one, and a narrow blue field with seven bars, broke from the mast. In that moment the Neunzer became the USSNeunzer. Captain Schelling turned her over to Captain Greenbacker, who gave his first order as commanding officer: "Set the watch."

"Set all regular port watches," begins the DE 150's log, which would be kept hour by hour, day by day, all the years she was in commission.

But even before that the first entry reads, "The following men were received on board for duty (see attached list)." The roster of those who were to give a soul to the machinery begins, "ADAMOVICH, John 646 40 49 [the serial number of the "name, rank, and serial number" that is all the information you're supposed to give your captors], USNR; ADAMS, Trenouth A., 875 49 20, FC3c, USNR"; and right on through two hundred names until "WHITMAN, Arthur R., 245 03 59 Szc, USNR; WINIEWSKI, Louis E, 224 10 80, SF2c, USN [a valuable man: that USNasopposed to USNRmeans he is regular navy, not just called up aspart of the naval reserve; so is his successor]; ZONFRELLO, Peter, 376 58 15, 82c, USN."

The logmakes the next day sound awfully quiet, although it hadto be one of constant tumult as people were set to newjobs and put into new accommodations. But the whole entry, under the frowning "CONFIDENTIAL" that will head every page for the rest of the war, begins, "0000 - 0400. Moored stbd side to dock at City Docks, Orange."

At four-hour intervals this is followed by the stolid phrase "Moored as before." It concludes with the final watch report of the twenty-four-hour day: "2000 -

2400. Moored asbefore." This is signed bymyfather, and it is a thrilling surprise for me to see his handwriting, which would change not a bit for the rest of his life, fresh, black, immediate, put down there on his spanking new ship, with the familiar glare and clamor of all-night Orange already part of another existence. He had a sense of the occasion. In the months ahead he would sign all the hundreds of logentries he made "R.B. Snow Lt USNR." But for this, the last watch of the ship's first full day in commission, he is "Richard BoringSnow Lieutenant USNR."

Everyone from Adamovich to Zonfrello was busy the next day asthe ship absorbed all the proteins of war. The log's sparse report says, "0822 commenced loading ammunition; 0947 commenced fueling ship."

With the ammunition they would likely have started with the 20mm rounds,which came in olive-colored magazines.Once they were stowed, sailors carried aboard shells for the three-inch guns, each man cradling a single tall, brass-jacketed cartridge while constantly being instructed to "keep those noses up now, goddamn it." Whenthe ready ammunition had been housed near the guns, the rest came aboard in wooden crates, the 20mm magazines in square boxes, the three - inch rounds in long, coffin-like ones.

The job took a little less than three hours. Meanwhile a thick black hose came aboard and the DEsucked in diesel oil, eighty-two thousand gallons of it in four hours.

Then came the first of what would be many hundreds of generalquarters drills: the alarm agitating in shrill bursts, sailors punching their arms into life jackets, running past each other to their battle stations, putting on helmets, while, on the bridge, the telephone talker relayed reports from the stations - "Condition Able set forward. Depth charge manned and ready. Engine room manned and ready" - until the ship abruptly fell silent, and the perpetual noise of the Consolidated yard insinuated itself again, and the talker said, "All stations manned and ready."

The ship secured from the drill forty-five minutes later and hurried on toward another milestone. "Made all preparations for getting underway," the log records.

"Now go to your stations, all the special sea details." This was a bosun's mate, over the ship's loudspeakers. Once again men swarmed the decks; once again, the bridge talker passed along reports. "Fo'c'sle manned and ready, sir. Fantail manned and ready. Engineering spaces manned and ready." When everything was manned and ready, Captain Greenbacker gave the order: "Single up your lines."

Twelve paired lines held the ship to six bollards along the dock.

Consolidated-yardmenthrew offone from each mooringpost. "All lines singled up, sir," said the bridge talker. Greenbacker spoke again, the remaining lines fell from the dock into the Sabine to be quickly pulled aboard, and the log reported, with "Captain conning and Navigator on the bridge," as the Neunzer moved out from the dock.

It wasn't much of a voyage, just a few hundred yards to tie up alongside another DE, the Peterson, still at the capacious City Docks, but the ship had been under her own power and worked by her own crew.

Nobody spent any time celebrating the maneuver. My father went back to his endless tasks. On the twenty-ninth he spoke of the routine in the first letter my mother received whose envelope carried the return address "USS Neunzer (DE 150) Fleet Postmaster NY." It was also the first to bear the rubber-stamped passed bynaval censor circling the initials of the censoring officer.*

His inaugural shipboard letter was brief and far from happy.

"Another very busy day! Not as much accomplished on the ship as I should have liked but will have a crack at it tomorrow. My gear is all crammed into various drawers in an ungodly fashion. When the ship gets straightened out I hope to do likewise but I'm afraid it will be not until!

"What astupid letter. I guess I AM tired."

A few days later he was just as busy, but more cheerful about it: "There must be something very dire impending - because it isn't normal for me to have twenty minutes to myself - Ever since I talked with you on the phone from Orange we have been on the run - myself perhaps more than some of the others, for there have been so many small hull items to design, rip out, or finish up which involved telling somebody how long or how wide at all hours of the day and night. I have a splendid chief boatswain mate who runs things admirably from the seamanship point of view and of course I'd be making a monkey out of myself without someone like that to help out. Among other pedestrian jobs which have fallen to my lot is that of sorting and distributing about 500 keys, something that would try the patience of the most hardened shipping clerk. Other items which weigh very heavily on me are a leaky toilet, a leaky steam valve, more shelving, less heat etc. etc. So you can see the life of a First Lieutenant is in some respects not very different from that of an architect. However - a watch on the flying bridge is another story. Our executive officer is an ideal person to have charge of the shaping up of such a motley crew of officers and men as are in his charge - patient, experienced and tactful. I feel be fully appreciates whatever capabilities his officers already have and is very willing to work to develop those which come only with experience."

This exemplary officer was Virgil Gex, andmy father's regard for him did not wane during the war, or for the rest of his life. The son of a Missouri farmer, Gex was appointed to the NavalAcademy, but a failed eye exam put him into the Naval Reserve. He took ajob at Procter and Gamble, but by December 1940 the increasingly hard-pressed navy decided his eyesight wasn't sobad after all, andhe was sent asan ensign to the four-stacker Chew. December 7, 1941, found the Chew in Pearl Harbor moored four hundred yards away from the Arizona. Gex saw

the bomb that exploded the battleship's magazine pierce her deck. The Japanese aim was all too good, and they weren't interested in World War I destroyers, so the Chew survived to operate out of Pearl for the rest of the war. Virgil Gex, risen to a gunnery and senior watch officer, was detached in May1943to help puttheNeunzerin commission.

"Our Captain and Executive Officer beingboth absolutely of the first rank in experience and ability (althoughboth are only slightly too old to be my nephews!) the ship's organization should develop very satisfactorily."

Quickly, too, because when my father wasn't occupied with the familiar tasks of formulating measurements and attending to plumbing, he found himself put into the swim of naval life with unusual speed.

Reminiscing years later, Captain Greenbacker said he and Lieutenant Gex "and, I think, the chief engineer, were the only [officers] that had ever been to sea at all. I knew that in some of these cases the captain and the exec would stand off-and-on watches" - that is,one relievingthe other in four - hour rotation. "I didn't do that. I said, 'You get on out there, you be officer of the deck. Call me if there are any questions. Call meif you sight anything."

It was a new world, and not a simple one to my father. "The ship organization is hardly less complicated than the social structure of India, and castes among

the petty officers must be as strictly observed.

Any deviation from the proper chain of authority causes ripples which eventually rock the whole ship - and it is of great importance to learn the proper channels of activity assoon aspossible."

A couple of weeks later, in aletter hehopedwas "not too expository," he gave his wife an admirably clear account of shipboard routine. "We have had a good deal of steaming since I last wrote you, and all of us have had to stand deck watches night and day, as our turn comes up.

The officers are divided up into groups of two, an Officer of the Deck and a Junior Officer of the Deck, and watches are usually four hours, during which the normaloperation of the ship is in charge of the GOD.

The Captain and the Executive Officer come to the bridge from time to time and are always there in any unusual situation, but in normal steaming the COD has charge of the handling of the ship and her routine. Of course this is intensely interesting - always a grave responsibility and a job in which experience counts for almost everything, andwith the constantly recurring watches, experience is the one thing of which there is plenty to be had. Off watch all the officers are busy with organizational and administrative affairs. My departments are Construction 8:Repair (C&R) and damage control, and I am Division Officer of the First Division - in general the Deck ratings forward. What a lot of detail there is to be straightened out in all that! I am fortunate in having a seasoned and very able Chief Boatswain's Mate, who has the happy faculty of instructing me under the guise of conferring with me. He has never even so much as hinted that he has forgotten more seamanship than I've ever known, which I think indicates great good feeling, and is probably more than I could manage under reversed circumstances. He is well satisfied with the assortment of green but willing seamen under his charge - and the boys are all coming along extremely well in their line handling, and chores about the ship."

He concluded, "Good night, my dearest - I love you and think of you 'at all times' - which is the Navyway of saying 'Always.'"

Despite this authoritative summary, hewrote afew days later, "Time certainly rolls along - but I don't feel my age as I should. Just when I might begin to feel a certain degree of achievement and settledness (no such word I presume) I wander into an entirely newtrade, start in at the bottom of the ladder in competence, if not in rank, and spend my waking hours (and they are many) with youths in their early twenties.

However, any doubts I may have held as to whether I am growing old were dispelled by a glimpse of the commissioning picture of the USS Neunzer, in which I look like a not too able character actor of 50, surrounded by ruddy and unlined adolescents not yet approaching the prime of life."

Still, there were compensations: "I have a very snug little cabin forward of the wardroom. My cabin mate is a very long and attractive young man, who has to fold up like a jackknife to get in the upper bunk, but as he is junior to me, that's where he goes (the advantage of my great age)."

My father had finally got his belongings - shirts, shoes-"put away in a magnificently orderly fashion." He was in good company: "Mr. Gex is extremely attractive and so are the other officers. I don't know whether it is just because they are my shipmates or whether they actually are as a group superior to some of the others I've seen. In any case, they all seem 0.81. to me." And "our food continues to be excellent and plentiful."

The food was good. The first supplies to come aboard the freshly commissioned Neunzer - before ammunition, before fuel - were, the log records, 210 pounds of bread "received from the Fehr Baking Co inspected asto quantity by RM.Turner, Jr. , Lieut, and asto quality by Y.R. Tate, PhM 1/c [pharmacist's mate first class]." Three hours later Turner and Tate were called upon to inspect "8 gal ice cream from Stewart Dairy Co." The navy had long had the reputation of being the best-fed service, and meals improvedthroughout the war.

The 1940 edition of The Cook Book of the United States Navy is a skinny 164 pages. Although it reflects a diet far better than many Americans were enjoying in the final years of the Great Depression, the recipes - "ALL FOR 100 MEN" - are workmanlike to the point of drabness: "Cut 60 pounds of mutton into 5-pound pieces and wipe with a clean damp cloth. Place in boiling water and boil for five minutes.

Then reduce to a simmering temperature and let cook until tender.

When about halfdone season with salt." In fairness to the Supply Corps officers who assembled the book, the result should be "serve[d] with caper sauce," but this is also pretty rudimentary: "2 pounds flour. 3 pounds chopped pickles or capers. 2 pounds butter or shortening. Salt and pepper to taste." Manyof the recipes are even less inspiring - "Lima Bean Loaf - and some are actually dire: "Canned Creamed Codfish" (which employs the only fish mentioned by name other than "Canned Salmon"; the rest of the piscine world is covered by the twin entries "Baked Fish" and "Fried Fish"). One of the seven sandwiches recommended is this imaginative confection: "Put between these slices [ofbread] three slices of crisp lettuce leaves."

The Cook Book of 1944 has grown to 430 pages, nine of them devoted to dozens of sandwiches. The lettuce filling has been augmented with tomatoes and bacon; the mutton recipe has disappeared. There are fifty pages of desserts. Fish are cited by species:

"Fillet of Flounder," "Baked Halibut and Tomatoes." The creamed codfish remains among the manifold hardships of war, but a typical "winter menu" runs:

- Navy Bean Soup
- Fried Pork Chop Gravy
- Hominy Spoonbread
- Buttered Green Peas
- Apple Cole SlawSalad
- LemonCream LayerCake
- BreadButter Coffee

Among the Neunzer's crew were hill-country boys who had got the worst of the Depression since they had been three or four years old. My father rememberedthem ballooning under the impact of their new diet, giving the ship a population of fat men for a few weeks until their young metabolisms caught up.

A month after Consolidated turned the Neunzer over to the navy, Lieutenant Snow described a scene in which food and shipmates and growing competence had combined to produce, for the moment at least, an obviously contented man: "Last night I had the mid watch with Lt. Gear - midnight to 4AM - or 0000 - 0400 in navy figures It was a long watch, but uneventful, and we stood all the way topside on the ship under the stars. It was most impressive to look back occasionally and see the tall mast swaying back and forth against the dark star-lighted sky. When I came down offwatch I found the steward had left steak and potatoes in the pantry oven, sol hadavery early breakfast before I went to bed for two or three hours sleep."

The Heartbeatof the Pings : The importance of sonar, 1941 - 45

The Neunzer's sea career had begun on October 1, when she left the Orange City Docks, bound for Galveston: down the Sabine River, past Port Arthur, shimmering in the perpetual stink of its oil refineries, and out into the Gulf of Mexico, where for the first time the ocean swell lifted the new ship. The sea was not running high that day, but those who were going to get seasick began to. My father could report with satisfaction to my mother, "It appears that whatever other limitations I may have to contend with (and they are legion) sea sickness will probably not beone of them."

The men went to general quarters, and for two hours the ship steamed through a racket of its own making as all the guns were tested and the torpedo tubes swiveled this way and that. By late afternoon the DE was moored at Galveston, and the next day she ventured into the mawof the Todd construction company's Floating Drydock 3, a topless, steel shoebox hundreds of feet long and halffull of water. The Neunzer inched in amid an ecstasy of shouted instructions and orders between dock and ship. Tall steel gates closed behind her stem, and pumps began to empty the dock, gentling the ship down to rest on keel blocks and cradles. In less than half an hour the Neunzer was standing like a model on a mantelpiece.

For two days it was like Orange again, with workers everywhere and the ship drawing its power and water from shore while final adjustments were made and weaknesses disclosed by the brief voyage set aright. Then the DE was refloated and put to sea, bound for Bermuda andher Shakedown cruise.

At 2 2 0 2 on October 15, with supper already hours in the past and taps just sounded, the sonar man made a sound contact.

The navy had been trying to listen for submarines underwater since World War I, when operators strained to make sense of the noises picked up by an "S.C. [sub-chaser] tube," which was more advanced than atin-can-and - string telephone, but not by much. Betweenthe wars the British and American navies developed what they called asdic and we called sonar (for "sound navigation and ranging"). This could passively listen for engine noises, but it also had the capacity to hunt a submarine by emitting a sharp ping from a retractable dome in the ship's hull. If this pulse of noise hit an object, it would bounce back an echo, which the gear amplified and transmitted to the sound shack up near the bridge. The man listening to the echo could tell from its pitch where and how far away the object was. That is, he could tell if he had an exceptional ear and alot of training.

By the late 19305 our old four-stackers were being fitted with sonar, and two schools had been established to train operators. The first students helped develop the technique even as they learned it:

"Everybody in antisubmarine warfare at that time was an inventor," one of them remembered happily. This was surely what my father was referring to when, during his training days in Florida, he had written my mother cryptically, "In one of the courses my accurate sense of relative pitch (not to be confused with my intonation when performing on the violin) is going to be a great help. Isn't that a surprise!"

The electronic chirp became as much a shipboard constant as the engines or the sea itself. Wirt Williams, who served in the North Atlantic aboard a four-stacker and wrote a novel about it called The Enemy, remembered, "Each ping was like the sound a rock makes dropped into a lake, silvery, searching, and finally vanishing but never dying. The pings were seconds apart, like a dead-slow heartbeat. They were our eyes, and ears, and nose, under the sea." To Williams, the sonar was the most important piece of equipment on his destroyer:

"The heartbeat of the pings was her reason for existence. When they stopped, she was nothing."

Now the pings had told the Neunzer, on her nineteenth day in commission, that a submarine might be out ahead of her under the night waters. The alarm began its clamor and sailors rushed to their stations.

When hewas still outfitting destroyer escorts my father had written his wife that "the DEwhichjust left hadonboardtwo of the tiniest most appealing little kittensyou ever saw. They were not fluffy ones, but thin wistful little things with large ears and beautiful ascetic faces - they are very tiny, and very calm, don't scamper about, but walk around deliberately or lie in what shade they can find. There was something delicious in seeing one of them carefully select the shade of a 300 lb. cylinder of TNT to lie down for a little rest. Somehow the kitten looked normal and made all the rest of the show look alittle absurd - but don't say I said it."

I'll bet the cylinder of TNT didn't look absurd to him that night. The kitten had been taking its ease beneath the DES main antisubmarine weapon, the depth charge. A sailor would have referred to it asan ash can, and compared with other fixtures on the ship - the sonar, for instance - it was asprimitive asthe nickname makes it sound. For the first years of the war our ships had been outfitted with the Mark 6, which, unlike the sound gear, had changed scarcely at all since Armistice Day 1918. Rolled off racks at the stern of the ship, or shot out from its sides with K-guns, it would tumble down to a preset depth, where water pressure ignited it.

If simple, the weapon was far from feeble. E. J. Jernigan had received a vivid demonstration of its potency while he was still aboard his new battleship Washington in the North Atlantic. His ship was sailing through heavy fog in company with four British destroyers some two hundred yards astem of the battleship King George V. One of the destroyers blundered across the bows of the George V and, said Jemigan, "the huge battleship cut her completely in two." As the Washington steamed between the two halves, the destroyer's depth charges began to explode. Their effect on the accidental and un-submerged target - one of the largest and heaviest warships afloat was that "all 1900 tons of the number 2 turret jumped the track. The range finder went out and two-thirds of all the light bulbs were broken.

The after-steering engine room crew was so badly shaken that they got out in a hurry thinking we had been torpedoed. The screws came out of the water while exploding depth charges drove us high in the air.

We finally began to settle by the stem and felt like we were falling. The screws ran away until they bit into the water again."

By the time the Neunzer put to sea the Mark 6 depth charge had been replaced by the Mark 9, which was streamlined (i t looked like the atomic bomb envisioned by newspaper cartoonists in the 19503), sank faster than its predecessor, and ignited with a far greater concussion.

The Mark 9 was said to be lethal to a submarine if it exploded within thirty feet, but nobody knew this for sure, and there were other problems.Throughout the war, sonar could tell where asubmarine bore on the pursuing ship, but not how deep it lay, so setting the proper depth on a charge was largely a matter of instinct; sonar lost contact when it got within 150 feet of its target; and when the charge burst, it deafened the equipment for long enough to allow a good U-boat commander - and they were all good - to pivot and sneak off in another direction while the shattered water gave the listeners only scuffling, sterile noise.

So the Neunzer went into its first attack with hedgehogs. As the homey descriptive name might suggest, the British had developed this weapon, an odd,

busy-looking machine. Wenty-four steel “spigots” reached up from the cradle in which it was mounted, each one topped with a projectile that carried thirty pounds of explosive. That was a tenth asmuch asa depth charge packed, but still enough to crack open a submarine with a direct hit. Contact-fused, unlike the depth charge, it would explode only if there was a direct hit. Because of this, and because the bombs fired forward, throwing their projectiles in a semicircle 250 yards ahead of the ship, sonarmen could keep contact with the target while it was under attack.

The Neunzer had all her battle stations manned and ready eight minutes after the alarm and began her first run. The hedgehog projectiles went off in pairs, quickly, throwing a lariat of twenty-four splashes. That was all they accomplished. The contact remained strong.

Another twenty-four rounds went out into the dark. They, too, failed to disturb whatever they were fired at, and the Neunzer made one more unrewardedhedgehogrunfour minutes later.

Captain Greenbacker decided to shift to the depth charges and dropped eight of them. The sea bulged and then broke into hundredfoot- tal] spars of foam behindthe ship. The contact disappeared but, the log says, "with no evidence of damage to target.”

Sonar was a highly exacting discipline. The Neunzer could have been attacking a shoal of fish, or a stream of colder water flowing beneath the surface, or any number of the other bounteous distractions the ocean had to offer (among them “snapping shrimp,” whose conversations produced a noise that could confound the inexperienced operator).

“There was a lot of activity with whales,” Greenbacker said of those early days aboard. “The whales took alot of beating, I’msure.”

The Neunzer secured from general quarters half an hour after midnight and steamed on, if unvictorious also unharmed, to learn its business in Bermuda waters.

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Nipah Virus

Wikipedia Nipah virus

Saved Wikipedia (April 28, 2021) : "Nipah virus"

2021-04-27-wikipedia-org-nipah-virus.pdf

https://en.wikipedia.org/wiki/Nipah_virus

Virus classification

- (unranked): Virus
- Realm: Riboviria
- Kingdom: Orthornavirae
- Phylum: Negarnaviricota
- Class: Monjiviricetes
- Order: Mononegavirales
- Family: Paramyxoviridae
- Genus: Henipavirus
- Species: Nipah henipavirus

Nipah virus, scientific name Nipah henipavirus, is a bat-borne virus that causes Nipah virus infection in humans and other animals, a disease with a high mortality rate. Numerous disease outbreaks caused by Nipah virus have occurred in South and Southeast Asia. Nipah virus belongs to the genus Henipavirus along with the Hendra virus, which has also caused disease outbreaks.

[..]

Virology

Like other henipaviruses, the Nipah virus genome is a single (nonsegmented) negative-sense, single-stranded RNA of over 18 kb, which is substantially longer than that of other paramyxoviruses.[1][2] The enveloped virus particles are variable in shape, and can be filamentous or spherical; they contain a helical nucleocapsid.[1] Six structural proteins are generated: N (nucleocapsid), P (phosphoprotein), M (matrix), F (fusion), G (glycoprotein) and L (RNA polymerase). The P open reading frame also encodes three nonstructural proteins, C, V and W. There are two envelope glycoproteins. The G glycoprotein assembles as a tetramer to form the viral anti-receptor or attachment protein, which binds to the receptor on the host cell. The F glycoprotein forms a trimer, which mediates membrane fusion.[1][2]

Tropism

Ephrins B2 and B3 have been identified as the main receptors for Nipah virus.[1][2][3] Ephrin subtypes have a complex distribution of expression throughout the body, where the B3 is noted to have particularly high expression in some forebrain subregions.[4]

Evolution

The most likely origin of this virus was in 1947 (95% credible interval: 1888–1988).[5] There are two clades of this virus—one with its origin in 1995 (95% credible interval: 1985–2002) and a second with its origin in 1985 (95% credible interval: 1971–1996). The mutation rate was estimated to be 6.5×10^{-4} substitution/site/year (95% credible interval: 2.3×10^{-4} –1.18×10^{-3}), similar to other RNA viruses.

Pteropus vampyrus (large flying fox), one of the natural reservoirs of Nipah virus

Geographic distribution

Nipah virus has been isolated from Lyle's flying fox (Pteropus lylei) in Cambodia[6] and viral RNA found in urine and saliva from P. lylei and Horsfield's roundleaf bat (Hipposideros larvatus) in Thailand.[7] Infective virus has also been isolated from environmental samples of bat urine and partially eaten fruit

in Malaysia.[8] Antibodies to henipaviruses have also been found in fruit bats in Madagascar (Pteropus rufus, Eidolon dupreanum)[9] and Ghana (Eidolon helvum)[10] indicating a wide geographic distribution of the viruses. No infection of humans or other species have been observed in Cambodia, Thailand or Africa as of May 2018.

History : Emergence

The first cases of Nipah virus infection were identified in 1998, when an outbreak of neurological and respiratory disease on pig farms in peninsular Malaysia caused 265 human cases, with 105 deaths.[11][12][13] The virus itself was isolated the following year in 1999.[14] This outbreak resulted in the culling of one million pigs. In Singapore, 11 cases, including one death, occurred in abattoir workers exposed to pigs imported from the affected Malaysian farms. The Nipah virus has been classified by the Centers for Disease Control and Prevention as a Category C agent.[15] The name "Nipah" refers to the place, Sungai Nipah in Port Dickson, Negeri Sembilan, the source of the human case from which Nipah virus was first isolated.[16][17] Nipah virus is one of several viruses identified by WHO as a likely cause of a future epidemic in a new plan developed after the Ebola epidemic for urgent research and development before and during an epidemic toward new diagnostic tests, vaccines and medicines.[18][19]

The outbreak was originally mistaken for Japanese encephalitis, but physicians in the area noted that persons who had been vaccinated against Japanese encephalitis were not protected in the epidemic, and the number of cases among adults was unusual.[20] Although these observations were recorded in the first month of the outbreak, the Ministry of Health failed to take them into account, and launched a nationwide campaign to educate people on the dangers of Japanese encephalitis and its vector, Culex mosquitoes.

Symptoms of infection from the Malaysian outbreak were primarily encephalitic in humans and respiratory in pigs. Later outbreaks have caused respiratory illness in humans, increasing the likelihood of human-to-human transmission and indicating the existence of more dangerous strains of the virus.

Based on seroprevalence data and virus isolations, the primary reservoir for Nipah virus was identified as Pteropid fruit bats, including Pteropus vampyrus (large flying fox), and Pteropus hypomelanus (small flying fox), both found in Malaysia.

Locations of henipavirus outbreaks (red stars–Hendra virus; blue stars–Nipah virus) and distribution of henipavirus flying fox reservoirs (red shading–Hendra virus; blue shading–Nipah virus)

The transmission of Nipah virus from flying foxes to pigs is thought to be due to an increasing overlap between bat habitats and piggeries in peninsular Malaysia. At the index farm, fruit orchards were in close proximity to the piggery, allowing the spillage of urine, faeces and partially eaten fruit onto the pigs.[21] Retrospective studies demonstrate that viral spillover into pigs may have been occurring, undetected, in Malaysia since 1996.[11] During 1998, viral spread was aided by the transfer of infected pigs to other farms, where new outbreaks occurred.

History : Outbreaks of disease

Main article: Nipah virus infection (includes list of outbreaks)

Nipah virus infection outbreaks have been reported in Malaysia, Singapore, Bangladesh and India. The highest mortality due to Nipah virus infection has occurred in Bangladesh, where outbreaks are typically seen in winter.[22] Nipah virus first appeared in 1998, in peninsular Malaysia in pigs and pig farmers. By mid-1999, more than 265 human cases of encephalitis, including 105 deaths, had been reported in Malaysia, and 11 cases of either encephalitis or respiratory illness with one fatality were reported in Singapore.[23] In 2001, Nipah virus was reported from Meherpur District, Bangladesh[24][25] and Siliguri, India.[24] The outbreak again appeared in 2003, 2004 and 2005 in Naogaon District, Manikganj District, Rajbari District, Faridpur District and Tangail District.[25] In Bangladesh there were also outbreaks in subsequent years.[26]

See also[edit]

- Viruses portal
- 1998–1999 Malaysia Nipah virus outbreak
- 2018 Nipah virus outbreak in Kerala

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Nipah virus: epidemiology, pathology,

immunobiology and advances in diagnosis, vaccine designing and control strategies – a comprehensive review

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Abstract

Nipah (Nee-pa) viral disease is a zoonotic infection caused by Nipah virus (NiV), a paramyxovirus belonging to the genus *Henipavirus* of the family Paramyxoviridae. It is a biosafety level-4 pathogen, which is transmitted by specific types of fruit bats, mainly *Pteropus* spp. which are natural reservoir host. The disease was reported for the first time from the Kampung Sungai Nipah village of Malaysia in 1998. Human-to-human transmission also occurs. Outbreaks have been reported also from other countries in South and Southeast Asia. Phylogenetic analysis affirmed the circulation of two major clades of NiV as based on currently available complete N and G gene sequences. NiV isolates from Malaysia and Cambodia clustered together in NiV-MY clade, whereas isolates from Bangladesh and India clusterered within NiV-BD clade. NiV isolates from Thailand harboured mixed population of sequences. In humans, the virus is responsible for causing rapidly progressing severe illness which might be characterized by severe respiratory illness and/or deadly encephalitis. In pigs below six months of age, respiratory illness along with nervous symptoms may develop. Different types of enzyme-linked immunosorbent assays along with molecular methods based on polymerase chain reaction have been developed for diagnostic purposes. Due to the expensive nature of the antibody drugs, identification of broad-spectrum antivirals is essential along with focusing on small interfering RNAs (siRNAs). High pathogenicity of NiV in humans, and lack of vaccines or therapeutics to counter this disease have attracted attention of researchers worldwide for developing effective NiV vaccine and treatment regimens.

Keywords: Nipah virus (NiV), bats, diagnosis, encephalitis, epidemiology, pathology, prevention, control, vaccines, therapeutics, zoonosis

Introduction

Viral diseases like Avian/bird flu, Swine flu, Middle East respiratory syndrome coronavirus (MERS-CoV), Severe acute respiratory syndrome (SARS), Crimean-Congo haemorrhagic fever (CCHF), Lassa fever, Rift Valley fever (RVF), Marburg virus disease, Ebola, Zika, Nipah and Henipaviral diseases pose considerable risk of an international public health emergency, when these spread rapidly (Rizzardini et al. 2018). After the recent emergency situations created by Ebola and Zika virus during past five years (Singh et al. 2016, 2017), now Nipah virus disease outbreaks have created panic in the public. Ebola virus disease (EVD) outbreaks and epidemics (2014–2016) led a massive mobilization of researchers to seek new technologies in terms of developing efficient and rapid diagnostics, vaccines, therapies and drug targets to combat EVD and save lives of large human population across the globe. Like Zika, scientists are on the way to counter Nipah virus.

Nipah (Nee-pa) viral disease is a zoonotic infection and an emerging disease caused by Nipah virus (NiV), an RNA virus of the genus *Henipavirus,* family Paramyxoviridae, which is transmitted by specific types of fruit bats, mainly *Pteropus* spp. (Halpin et al. 2000; Vandali and Biradar, 2018). NiV is a highly fatal virus posing potential threat to global health security. The *Pteropus* bats, *viz*., *P. vampyrus, P. hypomelanus, P. lylei* and *P. giganteu,* were associated with outbreaks of the Nipah viral disease in various countries of South and Southeast Asia, including Bangladesh, Cambodia, East Timor, Indonesia, India, Malaysia, Papua New Guinea, Vietnam and Thailand (Hayman et al. 2008; Sendow et al. 2010; Wacharapluesadee et al. 2010; Halpin et al. 2011; Hasebe et al. 2012; Yadav et al. 2012; Field et al. 2013; de Wit and Munster, 2015a; Majid and Majid Warsi 2018). Fruit bats are the major reservoirs of the virus and it is the contact with such bats (infected) or intermediate hosts like pigs which are responsible for infection in man. It is to be remembered that various biologic as well as genetic features of various paramyxoviruses are retained by Nipah virus (Bellini et al. 2005). Dependence on animal rearing as a source of additional income in many Asian countries is a predisposing factor for emergence of novel zoonoses like Nipah (Bhatia and Narain 2010). Various studies reported that major factor responsible for emergence of NiV was thorough interaction between wildlife reservoir particularly fruit bats of the *Pteropus* spp. with animal population reared and managed under intensive conditions (Daszak et al. 2013). The high fatality rate associated with Nipah disease and the lack of efficacious treatment and vaccines against it, classify it as a global threat (Epstein et al. 2006; Rahman and Chakraborty 2012). The disease was recognized for the first time in 1998 in Kampung Sungai Nipah village, state of Perak, Malaysia. The causative agent was characterized and since then has been named as “Nipah virus (NiV)”. The zoonotic potential of NiV was unknown before 1999 till Malaysia experienced Nipah viral outbreak. Such an outbreak had created alarming situation in the public health community globally as far as the potential of severe pathogenicity as well as viral distribution in widespread fashion are concerned (Chua 2012). Considerable uncertainty exists about the patterns of Nipah virus circulation in bats and the epidemiological factors associated with its spill-over into pigs and horses (McCormack 2005).

Encephalitis (acute) along with high mortality is the main manifestation of infection due to NiV. Apart from this there may be development of pulmonary illness and sometimes the infection may be asymptomatic in nature (Kitsutani and Ohta 2005). Myoclonus (segmental) along with tachycardia may become evident. The involvement of brain stem, which locates the major vital centres, is probably responsible for death and mortality may vary between 32% and 92%. From a diagnostic point of view serology is quite helpful but discrete, high signal lesions can be visualized best by fluid-attenuated inversion recovery (FLAIR) where the effect of cerebrospinal fluid (CSF) is reduced, so that an enhanced MRI image can be obtained (Arif et al. 2012). Nipah virus was first isolated in 1999 (Farrar 1999; Rahman et al. 2012). Gene sequencing of the isolates showed that the outbreak involved two different NiV strains, probably with different origins (AbuBakar et al. 2004). The clinical signs and symptoms of the NiV disease include fever along with laboured breathing, cough and headache. Encephalitis along with seizures are the complications involved (Broder et al. 2013). Survivors of NiV infection develop symptoms of neurological malfunction such as encephalopathy, cerebral atrophy, change in behavior, ocular motor palsies, cervical dystonia, weakness and facial paralysis, which remain for several years (Sejvar et al. 2007). Despite an increasing risk, rigorous studies that collate data from Nipah infections of pigs, bats and humans have been scarce (Hsu et al. 2004; Chadha et al. 2006; Pulliam et al. 2012). Serosurveillance studies in multiple host species may yield important insights into NiV

epidemiology (Weingartl et al. 2009; Li et al. 2010; Rockx et al. 2010; Pallister et al. 2011; Fischer et al. 2018).

The NiV belongs to the *Henipavirus* genus under the family Paramyxoviridae. This genus alsocontains Cedar virus (CedPV) and Hendra virus (HeV). Molecular studies have significantly improved our understanding of the genetic diversity of Henipaviruses (Wang et al. 2001; Rockx et al. 2012).The almost annual occurrence of Henipaviruses in South-Eastern Asia and Australia since the mid 1990s is noteworthy. In Australia alone 48 cases of Hendra viruses and in south eastern parts of Asia 12 outbreaks of Nipah viruses have been reported which not only hit the health sector but also the economic stability of these nations (Aljofan, 2013). There have been a total 639 human cases of NiV infection reported from Bangladesh (261 cases), India (85 cases), Singapore (11 cases), Philippines (17 cases) and Malaysia (265 cases), with a mortality rate of about 59% (Ang et al. 2018). This points to the survival efficiency of NiV in nature and the history on its species jumping/host adaptation pattern adds to the public health concerns posed by this virus. Detailed studies and clinical therapeutic trials on various animal models such as guinea pigs, hamsters, ferrets, cats, pigs and African green monkeys are being investigated for Henipaviruses (Geisbert et al. 2012). The Nipah disease outbreak in 2001 in Siliguri and latest in Kerala have emphazised the need for an efficacious vaccine against it. Moreover the virus imposes threat to health of public (Sharma et al. 2018). Enhanced monitoring and surveillance for Nipah infection and the development of an efficacious vaccine are the needs of the hour.

This review discusses in detail the NiV biology, its transmission and epidemiology, pathology, and advances in diagnosis, vaccine designing, and suitable prevention and control studies to be adopted to counter this emerging pathogen.

Go to:

2. Nipah virus

Nipah virus (NiV) is a paramyxovirus (*Henipavirus* genus, *Paramyxovirinae* subfamily, *Paramyxoviridae* family, order *Mononegavirales*), an emerging virus that can cause severe respiratory illness and deadly encephalitis in humans. It is a negative sense, single-stranded, nonsegmented, enveloped RNA virus possessing helical symmetry. The RNA genome, from the 3′-5′, contains consecutive arrangement of six genes, *viz*., nucleocapsid (N), phosphoprotein (P), matrix (M), fusion glycoprotein (F), attachment glycoprotein (G) and long polymerase (L). The N, P and L attached to the viral RNA forming the virus ribonucleoprotein (vRNP). F and G proteins are responsible for cellular attachment of the virion and subsequent host cell entry (Ternhag and Penttinen 2005; Ciancanelli and Basler 2006; Bossart et al. 2007). The newly produced precursor F protein (F0) is cleaved into two subunits, *viz*., F1 and F2, by host protease. The fusion peptide of the virus contained in the F1 subunit drives the viral and host cellular membrane fusion for the virus entry (Eaton et al. 2006). The virus M protein mediates morphogenesis and budding. Antibody to the G protein is essential for neutralization of the NiV infectivity (Bossart et al. 2005; White et al. 2005). It is quite noteworthy that through the coordinated efforts of the fusion (F) (class I) and attachment (G) glycoproteins the target cell (i.e. host cell) is entered upon after binding by the enveloped Henipaviruses including NiV. Interactions between Class B ephrins (viral receptors) on host cells and the NiV glycoprotein (G) trigger conformational changes in the latter, leading to activation of F glycoprotein and membrane fusion (Steffen et al. 2012). It is believed that the strategies of replication as well as fusion of the ephrin receptors are responsible for greater pathogenicity of these viruses. Multiple accessory proteins encoded by Henipaviruses aid in host immune evasion(Marsh and Wang 2012).

NiV infects its host cells *via* two glycoproteins, i.e. G and F proteins. The G glycoprotein mediates attachment to host cell surface receptors and the fusion (F) protein makes fusion of virus-cell membranes for cellular entry. The G protein of NiV binds to host ephrin B2/3 receptors and induces conformational changes in G protein that trigger the F protein refolding (Liu et al. 2015). Wong et al. (2017) have demonstrated that monomeric ephrinB2 binding leads to allosteric changes in NiV G protein that pave the way to its full activation and receptor-activated virus entry into the host cells. Recently, viral regulation of host cell machinery has been revealed to target nucleolar DNA-damage response (DDR) pathway by causing inhibition of nucleolar Treacle protein that increases *Henipavirus* (Hendra and Nipha virus) production (Rawlinson et al. 2018). A diagrammatic structure of Nipah virus is depicted in Figure 1.

[...]

Saved Wikipedia (April 28, 2021) : "Nipah virus"

https://en.wikipedia.org/wiki/1998%E2%80%931999_Malaysia_Nipah_virus_outbreak

2021-04-27-wikipedia-org-1998-1999-malaysia-nipah-virus-outbreak.pdf

NOTE HOW CLOSE THIS HAPPENED TO MAJOR SHIPPING ROUTE - Strait of Malacca

1998–1999 Malaysia Nipah virus outbreak

The first site of the virus in Ipoh in 1998 and later occurrence to other places with the virus extent in blue while Hendra virus in red, both belong to the Paramyxoviridae family.

The 1998–1999 Nipah virus outbreak areas in West Malaysia, blue is the origin source of the virus while the red are further affected areas.

Disease

Nipah virus infection

Virus strain

Nipah virus

First outbreak

Ipoh, Perak

Index case

September 1998

Confirmed cases

265

Deaths

105

The 1998–1999 Malaysia Nipah virus outbreak was a Nipah virus outbreak occurred from September 1998 to May 1999 in the states of Perak, Negeri Sembilan and Selangor in Malaysia. A total of 265 cases of acute encephalitis with 105 deaths caused by the virus were reported in the three states throughout the outbreak.[1] The Malaysian health authorities at the first thought Japanese encephalitis (JE) was the cause of infection which hampered the deployment of effective measures to prevent the spread before being finally identified by a local virologist from the Faculty of Medicine, University of Malaya that it was a newly discovered agent named Nipah virus (NiV). The disease was as deadly as the Ebola virus disease (EVD), but attacked the brain system instead of the blood vessels.[1][2] University of Malaya's Faculty of Medicine and the University of Malaya Medical Centre played a major role in serving as a major referral centre for the outbreak, treating majority of the Nipah patients and was instrumental in isolating the novel virus and researched on its features.

This emerging diseases where it caused major losses to both animal and human lives, affecting livestock trade and created a significant setback to the swine sector of the animal industry in Malaysia.[3] The country also became the origin of the virus where it had no more cases since 1999 but further outbreaks continue to occur in Bangladesh and India.[4][5]

[...]

Background[edit]

The virus firstly struck pig-farms in the suburb of Ipoh in Perak with the occurrence of respiratory illness and encephalitis among the pigs where it is firstly thought to be caused by Japanese encephalitis (JE) due to 4 serum samples from 28 infected humans in the area tested positive for JE-specific Immunoglobulin M (IgM) which is also confirmed by the findings of World Health Organization (WHO) Collaborating Centre for Tropical Disease at the Nagasaki University.[1] A total of 15 infected people died during the ensuing outbreak before the virus began to spread into Sikamat, Nipah River Village and Pelandok Hill in Negeri Sembilan when farmers affected by the control measures began to sell their infected pigs to these areas.[1] This resulted 180 patients infected by the virus and 89 deaths. With further movement of the infected pigs, more cases emerged from around Sepang District and Sungai Buloh in Selangor with 11 cases and 1 death reported among abattoir workers in Singapore who had handled the infected pigs imported from Malaysia.[1]

Authorities response and further investigation[edit]

Since the cause was firstly wrongly identified, early control measures such as mosquito foggings and vaccination of pigs against JE were deployed to the affected area which proved to be ineffective since more cases emerged despite the early measures.[1] With the increasing deaths reported from the outbreak, this caused nationwide fear from the public and the near collapse of local pig-farming industry.[1] Most healthcare workers who were taking care of their infected patients had been convinced that the outbreak was not caused by JE since the disease affected more adults than children, including those who had been vaccinated earlier against JE.[1] Through further autopsies on the deceased, the findings were inconsistent from the earlier results where they suggest it may come from another agent.[1] This was supported with several reasons such as all of the infected victims had direct physical contacts with pigs and all of the infected pigs had developed severe symptoms of barking cough before dying.[1] Despite the evidence gathered from autopsies results with new findings among local researchers, the federal government especially the health authorities insisted that it was solely caused by JE which delayed further appropriate action taken for the outbreak control.[1]

Identification of the source of infection[edit]

In early March 1999, a local medical virologist at the University of Malaya named Dr Chua Kaw Beng finally found the root cause of the infection.[2] Through his findings, the infection was indeed caused by a new agent named Nipah virus (NiV), taken from the investigation area name of Nipah River Village (Malay: Kampung Sungai Nipah),[6] where it is still unknown to available science records at the time.[1][7] The virus origin is identified from a native fruit bat species.[8] Together with the Hendra virus (HeV), the novel virus is subsequently recognised as a new genus, Henipavirus (Hendra + Nipah) in the Paramyxoviridae family.[1] He found that NiV and HeV shared enough epitopes for HeV antigens to be used in a prototype serological test for NiV antibodies which helped in the subsequent screening and diagnosis of NiV infection.[1] Following the findings, widespread surveillance of pig populations together with the culling of over a million pigs was undertaken and the last human fatality occurred on 27 May 1999.[1] The outbreak in neighbouring Singapore also ended with immediate prohibition of pigs importation to the country and their subsequent closure of abattoirs.[1] The virus discovery received the attention from the American Centers for Disease Control and Prevention (CDC), Commonwealth Scientific and Industrial Research Organisation (CSIRO) and Singapore General Hospital (SGH) who giving swift assistance towards the characterisation of the virus and the development of surveillance and control measures.[1]

Aftermath[edit]

Until 2010s, the pig farming ban on Pelandok Hill was still in force to prevent the recurrence of the outbreak despite some people had quietly restarted the business after being instigated by community leaders.[9] Most of the surviving pig farmers have turned to palm oil and Artocarpus integer (cempedak) cultivation.[10] Since the virus has been named Nipah from the sample taken in Nipah River Village of Pelandok Hill, the latter area has become synonyms with the deadly virus.[11]

Memorials[edit]

In 2018, the outbreak are being memorialised in a newly constructed museum named Nipah River Time Tunnel Museum in the Nipah River Village with several of the surviving victims stories have been filmed in a documentary which will be featured at the museum.[10]

See also[edit]

- Paramyxoviridae
- Asia portal
- Biology portal
- Malaysia portal
- Medicine portal
- Viruses portal

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- Jump up to:
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ABC Australia - The New Virus Plaguing Malaysia (1999) (" Nipah Virus ")

Nipah: A New Plague? (1999): A look at the frightening, species-hopping Nipah virus, which devastated Malaysia, killing hundreds and decimating their lucrative pig industry.

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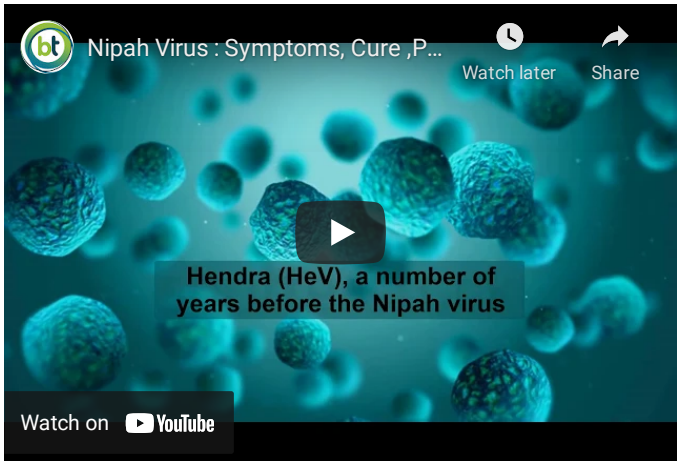

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Emerging Viruses: Coming in on a Wrinkled Wing and a Prayer

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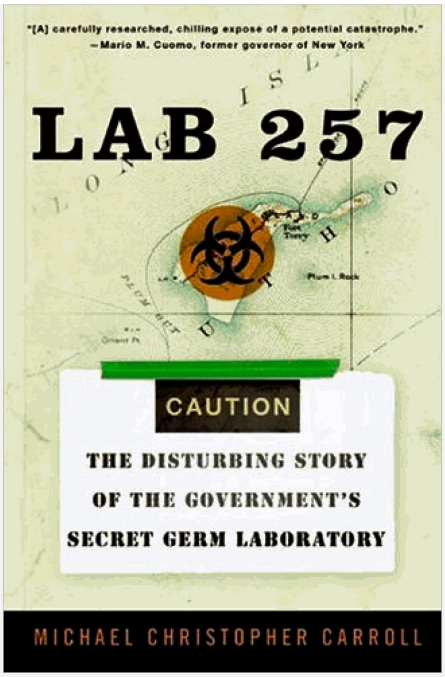
2003 Book - "Lab 257" - Select section referring to "Nipah"

Book by Michael Carroll - [HB0033][GDrive] / See **Plum Island Animal Disease Center**



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The New York Times revealed in late 1999 that the USDA was quietly upgrading [Plum Island Animal Disease Center] from a biosafety level three to a biosafety level four laboratory. The story provoked a howl of protest from Long Island's east end communities. The structural difference between BSL-3 and -4 is minimal—face respirators are worn while working with "hot" agents in a level three facility, while level four requires full-body spacesuits. Here's the important difference: the level four germs. Once upgraded, Plum Island joins charter members CDC and Fort Detrick in an exclusive club whose membership benefits include working with agents, lethal ones that have no vaccine and no cure. These include mad cow disease, the **Nipah pig virus** (that killed a million pigs and 265 people in Malaysia in 1999), and the Ebola, Marburg, and Machupo hemorrhagic fever viruses (all related to Rift Valley fever virus). Biosafety level distinctions, however, never deterred Plum Island research in the past. For example, Rift Valley fever virus and glanders bacteria are classified borderline germs, lying between biosafety levels three and four. Both are biological warfare agents and have been studied intensively at Plum Island. Some literature classifies glanders, the bacteria used by Germany in World War I, as level three, yet a federal government document relating to 1989 Plum Island research is titled "Biosafety for Animal Rooms with Glanders—Biosafety Level 4."

Despite the USDA's secret efforts, Congressman Mike Forbes, Hochbrueckner's successor, who had eyed Plum Island skeptically since his surprise visit with Karl Grossman, intervened and killed the BSL upgrade line item in the 2001 federal budget. For the first time, the local community triumphed over the USDA's designs for Plum Island. The USDA again pushed to upgrade Plum Island after September 11, 2001, but it has been fought off thus far by Forbes's two successors.

When news of the BSL-4 upgrade came out on the heels of the 1999 West Nile virus outbreak, former employees and local environmental groups bombarded local officials—including New York State Assemblywoman Patricia Acampora—with phone calls. [..]

1999 (May 25) - NYTimes : "THE DOCTOR'S WORLD; Killer Smallpox Gets a New Lease on Life"

By Lawrence K. Altman, M.d. / May 25, 1999

https://www.nytimes.com/1999/05/25/science/the-doctor-s-world-killer-smallpox-gets-a-new-lease-on-life.html?searchResultPosition=77

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Smallpox, the ancient disease, was eradicated 20 years ago. Smallpox, the virus, is on death row, frozen in two highly protected laboratories in the United States and Russia. Like lawyers filing last-minute briefs, American scientists have come up with new arguments for reprieve.

Yesterday, with the backing of Russia and other governments, the World Health Organization formally bowed to their wishes and granted the virus yet another stay. In keeping with action taken last week, the United Nations subagency in Geneva said it would appoint another committee to study the arguments and help decide the virus's fate. It has now been put off until June 2002.

By then, the Geneva-based organization hopes, the committee may have figured out whether there is any reason to keep stocks on hand.

For example, research using the virus might yield drugs against the disease, or improved vaccines to prevent it. These would be of no use, in effect, unless some rogue nation unleashed hidden stores of **smallpox virus in a biological terror attack, a prospect no longer regarded as outlandish.** Or use of new techniques might decipher some of smallpox's distinctive features, providing clues to help fight other diseases.

Ordinarily, such broad research goals would attract little attention until they produced important findings. But there is nothing ordinary about smallpox. It was one of the deadliest scourges, killing one in three victims, peasants and monarchs alike. The virus, known as variola, usually left survivors with deep, pitting scars on the face and body, and often blinded them.

Smallpox was the first disease prevented by a vaccine, one developed by Edward Jenner in 1798, and **it was the first and only disease to be wiped out, by the World Health Organization in 1979.** Variola lives only in people. After epidemiologists tracked down the last cases and focused vaccinations on areas where they occurred, they broke the human-to-human chain of infection. The virus came to a dead end. Only the research stocks remained. Few opposed the health organization's proposal that they be destroyed, in what would be the first deliberate extinction of a life form.

But attitudes began to change in recent years when a shocked world learned that Russia had secretly stockpiled tons of smallpox virus and manipulated it for use as a possible weapon. During that period, Moscow supported the disease's eradication. North Korea and other countries are believed to have clandestine supplies of smallpox virus as well.

Until Russia's duplicity and secret stores were exposed, scientists elsewhere had virtually abandoned smallpox research largely because the disease was gone.

Scientists are the people most knowledgeable about smallpox and presumably have the most at stake in the decision. Astonishingly, with rare exception, scientists have had little to say about the proposed action.

"The sense was that it was out of our hands, that it was a done deal between W.H.O. and the C.D.C.," said Dr. Ronald Luftig of Louisiana State University, referring to the World Health Organization and the Centers for Disease Control and Prevention in Atlanta. Dr. Luftig is an official of the American Society for Virology and American Society for Microbiology, both of which officially support destruction of variola.

But the potential use of hidden stores of virus as a weapon are changing that picture. First, the release of the virus among the world's largely unvaccinated population could kill millions of people. Second, the Clinton Administration's pledge to spend millions of dollars on bioterrorism defenses makes smallpox research a potential source of money for interested scientists.

Scientists in the United States, Russia and elsewhere have begun to debate, often bitterly, why W.H.O. should insist on destroying a virus that might still exist secretly in other countries.

A crucial point in the debate is that irrevocable destruction of the virus would deprive future generations of the opportunity to use new knowledge and research tools to solve the many mysteries of smallpox, and thereby unravel mysteries of other ailments as well.

''Everyone can envision situations in which you might want to take the virus from the freezer,'' said Dr. Harold E. Varmus, who heads the National Institutes of Health.

Dr. Clarence J. Peters, an international leader in virology who works with smallpox and other lethal viruses at the Centers for Disease Control, said, ''I have been on both sides of the argument at different times.''

But several factors make variola studies difficult.

One is that such work must take place in a laboratory with the highest biosecurity standards. Scientists must wear a protective spacesuit, isolating them from the laboratory. They wear gloves that increase the difficulty of handling small vials. The air they breathe is filtered. On leaving the laboratory, they must take two showers, the first with a disinfectant. The aim is to protect themselves and the community.

"It's a nuisance to do experiments in that environment," said Dr. Frank Fenner of Canberra, Australia, a top expert on the pox family of viruses and a leader in the eradication effort.

There are few high security laboratories, and W.H.O. wants work on smallpox to be limited to two sites: the C.D.C. in Atlanta and Russia's State Research Center of Virology and Technology, better known as Vector.

Competition among scientists for time in the Atlanta laboratory is intense. Investigations of other deadly viruses, like the newly discovered Nipah virus, which has recently killed more than 100 people in Malaysia, have highest priority.

Responding to a W.H.O. request, scientists will soon pull variola from a freezer at the centers in Atlanta for the first time in four years, said Dr. Brian W. J. Mahy, who oversees the agency's smallpox work. For about a month they will grow the virus, inactivate it with radiation, and prepare viral proteins that might be used in standard laboratories to develop more rapid tests to help doctors detect smallpox, since so few have ever seen it.

Experts who favor destroying variola say that most important research questions about smallpox could be answered from work conducted in less secure laboratories. Such work would involve different viruses belonging to the pox family that affect monkeys, camels and other species.

The most compelling reason for keeping variola is to discover potentially lifesaving drugs in case the virus ever reappears, either naturally or as an act of war or terrorism. A report on these research needs, issued in March by the Institute of Medicine, the medical arm of the National Academy of Sciences, was pivotal in President Clinton's decision to reverse course and advocate retaining the virus.

Few potential anti-variola drugs exist, and scientists are handicapped in developing new ones because the virus naturally infects only humans and so there is no animal model for drug tests. "That's where we are stuck with smallpox," Dr. Mahy said.

Nevertheless, Food and Drug Administration approval of 20 antiviral drugs in the last 10 years offers hope of eventually discovering other drugs that would be effective against variola, said Dr. Martin S. Hirsch, a virologist at Harvard University who is a member of the Institute of Medicine committee.

Variola is one of the biggest viruses, with about 200 genes compared with 9 for the AIDS virus and 3 for the Rift Valley fever virus. Thus variola offers many targets for drugs.

Dr. Mahy said C.D.C. scientists were looking at new ways to develop potential anti-variola drugs.

Dr. Stanley Falkow of Stanford University, a former president of the American Society for Microbiology, said "epidemic diseases of humans are quite recent in the evolutionary sense because human populations were not big enough to sustain epidemics until about 5,000 years ago, and we don't know" how best to study them now.

Among smallpox's many unusual features is that a different virus is used to prevent it. Most vaccines are derived from weakened or killed strains of the same virus that they prevent.

Only two other diseases are fought with vaccines derived from different viruses. One is a new rotavirus vaccine made from a monkey strain to protect humans against the diarrheal illness. Veterinarians use a vaccine prepared from turkey herpes virus to protect chickens against Marek's disease, which is caused by a different herpes virus.

If scientists understood the small differences in genetic makeup between smallpox and the vaccinia viruses that protect against it, smallpox might serve as a model to develop immunizations for diseases, like dengue fever and AIDS, for which vaccines are needed.

The eradication of smallpox documents the effectiveness of the standard vaccine, but the remaining supplies are dwindling as many vials lose potency. If scientists tried to replace the vaccine with a safer one, particularly for people with immune deficiencies from AIDS or treatment for cancer, live variola might be needed for such research, said the Institute of Medicine committee, which was headed by Dr. Charles C. J. Carpenter of Brown University.

But Dr. Donald A. Henderson, who led the smallpox eradication program, said lack of human cases and an animal model made it impossible to test safety and effectiveness of new drugs and vaccines against variola. ''One could never be certain that they were protective until actually used,'' said Dr. Henderson, a former deputy White House science adviser.

- **NOTE : "Donald A Henderson ..** Henderson served as Chief of the CDC virus disease surveillance programs from 1960 to 1965, working closely with epidemiologist Alexander Langmuir. Du "
- https://en.wikipedia.org/wiki/Donald_Henderson
- https://en.wikipedia.org/wiki/Alexander_Langmuir

Also, scientists know very little about what makes some viruses more virulent than others. Dr. Varmus of N.I.H. and Dr. Anthony S. Fauci, who heads the National Institute of Allergy and Infectious Diseases, expressed hope that future studies of variola's genes and the way the virus kills cells would help unravel mysteries about the more general nature of why many infectious agents harm humans.

Scientists can use newer techniques to make mutations in viruses in the laboratory to study the effects of different genes in new ways.

In advocating retention of variola, Dr. Varmus said that as scientists learned more about how viruses harmed humans, the virus that was such a scourge ''ought to be available for study if we had an important experiment to test.''

At W.H.O.'s request, Russian and American scientists mapped the complete DNA sequences of three strains of variola. W.H.O. believed that such information would be a sufficient knowledge base for future research and for comparing viruses released by terrorists or somehow emerging from nature.

But a number of scientists challenged that view, saying that sequences alone could not determine a virus's vulnerability to a drug.

Speaking of the unpredictability of research, Dr. Fauci said, ''You might never take the virus from the freezer, but at least you have it.''

1999 (June 9) - NYTimes : "Amid Scare, Asians Extend Bans on Food From Europe"

https://www.nytimes.com/1999/06/09/news/amid-scare-asians-extend-bans-on-food-from-europe.html?searchResultPosition=34

1999-06-09-nytimes-amid-scare-asians-extend-bans-on-food.pdf

https://drive.google.com/file/d/1XfZgMHG4fdhZhg94PK-_vscEyGwjAsw1/view?usp=sharing

By Philip Segal, International Herald Tribune

HONG KONG— The European Union sought Tuesday to prevent its growing food scandal from turning into a trade dispute with Asia as countries across the region imposed or extended bans on the import of European food.

South Korean officials in Brussels received complaints from France and the Netherlands that Seoul's ban on pork from the two countries was "draconian," according to an Agence France-Presse report citing the South Korean news agency Yonhap.

Although Belgium is the source of the food scare in Europe, animal feed from Belgium containing a cancer-causing chemical, dioxin, may have been used in several other European countries.

"In this case the proof in the pudding is not in eating it, but in testing it," said Etienne Reuter, head of the office of the European Commission in Hong Kong. "But if there's a doubt, one has to accept that people take these measures to protect their consumers.

"I certainly would not wish to see this in terms of a trade war. You have to see this uniquely in terms of protecting the consumer and restoring confidence."

he list of places in Asia banning products grew Tuesday as Taiwan suspended imports of 77 kinds of Belgian egg, dairy and meat-based farm products.

The Philippines banned all poultry, beef and pork products from Belgium, the Netherlands, France and Germany, and Thailand said it had banned Belgian meat, poultry and dairy products as of Monday. Malaysia, South Korea, Hong Kong and Singapore have already announced bans on various European food imports.

Part of what is making the bans on European food so sweeping is the dearth of information coming out of Belgium about the possible extent of the contamination, a source of considerable tension within the European Community.

As stores in Hong Kong moved to clear their shelves of six brands of European infant formula, a Hong Kong government spokesman said the ban "was taken as a precautionary measure and mothers do not have to be over anxious," but that "it will be safer to avoid these milk formulas until clarification and assurance can be obtained" from the countries concerned.

For some Asian countries, the bans have a considerable impact, but not critical to maintaining sufficient food supplies. In Hong Kong, which has now extended the ban on pork and poultry to include beef and dairy products from Belgium, the Netherlands, France and Germany, the import restrictions will affect 30 percent of the baby formula market, 18 percent of the market for fresh eggs, and 10 percent for poultry, according to European Community figures.

Food scares are nothing new to Asia. The Belgian scandal has led to the worst one in Europe since the bovine spongiform encephalopathy — or "mad cow"— crisis over British beef in 1996, but since that time Asia has had several of its own food crises at least as serious as the one in Europe.

This year, Malaysia has slaughtered more than 900,000 pigs to contain outbreaks of two viruses, Japanese encephalitis and Nipah.

1999 (Sep 22) - NYTimes : "Long Island Lab May Do Studies Of Bioterrorism"

By Judith Miller / Sept. 22, 1999 / Source : [HN01LG][GDrive] / See **Plum Island Animal Disease Center**

Alarmed at what the Clinton Administration views as the growing threat of biological terrorism to America's food supply, the Agriculture Department is seeking money to turn the Plum Island Animal Disease Center, one mile off Long Island, into a top security laboratory where some of the most dangerous diseases known to man or beast can be studied.

The Agriculture Department already operates here at Plum Island, just across Gardiners Bay from the wealthy Hamptons, a laboratory where such dreaded foreign animal diseases as foot-and-mouth and African swine fever are examined. But the department is seeking $75 million this year and $140 million over the next two years to upgrade the center to handle even more dangerous animal diseases that can affect humans.

While there are four civilian and military laboratories in America equipped to study such diseases -- technically known as Biosafety Level Four facilities -- their work is focused on germs that primarily affect humans, not domestic animals or plants.

[...]

Plum Island, which was once operated by the United States Army Chemical Corps, was designated as an animal-disease research center and transferred to the Agriculture Department in the early 1950's. It is already what scientists call an agricultural ''Biosafety Level Three'' center, which means that its containment areas, which hold germs dangerous to animals, have filtered air, sealed doors and negative air pressure that prevents germs from leaking out of the labs. Liquid waste is decontaminated.

All who enter the labs wear white lab coats and slippers. After leaving the containment areas, they are required to shower, shampoo their hair, scrub their nails and rinse their mouths, since lethal germs can live in human throats and infect animals up to two days later. To stop viruses or microbes from escaping to the mainland, no clothing or articles, even eyeglasses, are permitted to leave the labs without being soaked in disinfectant, said Dr. Alfonso Torres, the deputy administrator of the Agriculture Department's Veterinary Services Division and former director of the center, who conducted this reporter on a tour.

[...]

Moving to the next level of bio safety would require that scientists working with dangerous pathogens wear the protective decontaminated suits portrayed in movies like ''Outbreak,'' and breathe only filtered air pumped into their hoods. Such precautions would allow scientists to work with even more dangerous animal pathogens that can affect humans, like the Hendra virus, which afflicts horses, and the Nipah pig virus, named for the Malaysian village in which it was first isolated this year. The virus has already killed more than 100 people.

''We intend to work closely with local officials and community groups to allay any concerns about safety,'' said Dr. Horn, who acknowledges that Plum Island has long been shrouded in mystery and plagued by what he and Dr. Torres call unfounded rumors and fears.

The 850-acre island was opened to news organizations only in 1992 in response to concerns about safety at the center. **In 1995, the Department of Agriculture was fined $111,000 for illegally storing hazardous chemicals here. Since then, the agency has changed the contractor who operates the island, and there have been no violations.**

The extent of the threat posed by agro-terrorism remains in dispute, even within the Clinton Administration. Some scientists and terrorism analysts argue that there is little reason to believe that terrorists would attack American agriculture or livestock.

But intelligence reports increasingly conclude that several countries, including Iraq, have developed germs to attack the food supplies of their adversaries. And senior American officials now believe that an outbreak of screwworm, a parasite that afflicts animals and people, was spread deliberately 14 years ago in Mexico less than 50 miles from the Texas border by workers who were employed in a screwworm eradication program and feared the loss of their jobs.

[...]

Fueled by growing concern about the proliferation of such expertise and such dangerous germs, President Clinton ordered the Government last year to prepare defenses against germ and other unconventional attacks on the nation's plants and animals. In January, Dr. Horn recruited four former Pentagon intelligence analysts and terrorism experts to form the Agricultural Research Services' first unit to evaluate such threats. In April, the White House formally included the Agriculture Department in the group of agencies that meet regularly under National Security Council aegis to weigh plans to deter or respond to unconventional terrorism, a $2.8 billion effort.

[...] **Senator Pat Roberts, Republican of Kansas, who is chairman of the Senate Armed Services Subcommittee on Emerging Threats and Capabilities, plans to hold hearings on agro-terrorism in October that will explore the Administration's plans for Plum Island. [...]**

1999 (Nov 28) - NYTimes : "Microscopic Guests On a Small Island Raise Big Fears; A Tour of Plum Island, a Center for Study of Viruses That's Being Considered for Even More Deadly Bugs"

NOTE - WHY MENTION NIPAH HERE ?

By John Rather / Nov. 28, 1999 / Source : [HN01LH][GDrive] / See **Plum Island Animal Disease Center**

[...]

As the federal Agriculture Department considers whether to seek congressional approval to make the 45-year-old Plum Island center the **only government laboratory in the country to study extremely virulent animal diseases that can also kill humans**, questions of safety and security are suddenly looming large.

The department and its highest-ranking experts have said that an animal disease center with labs that have the highest security rating, biosafety level four, are an absolute necessity for combating viruses that could attack cattle, pigs, sheep and other domestic herds, with the potential to devastate the country's $90 billion livestock industry.

Some of the diseases -- the kind scientists call zoonotic -- can also spread to humans with lethal effects, making them a double threat if they were used in a bioterrorist assault.

Fears of bioterrorism prompted the Clinton Administration to direct the Agricultural Department and other agencies to take steps to protect the country, and changes at Plum island could be part of the response.

Because Plum Island is now rated at biosafety level three for studying foreign animal viruses, the department has made no secret that the island is its first choice for the level four labs.

As the wheels begin turning, critics are already questioning the wisdom of importing viruses for which there are no known cures to an island off crowded Long Island and 95 miles from Manhattan.

[...]

In a spacious conference room, Wilda Martinez, the area director for the Animal Research Service, one of two Agriculture Department agencies at Plum Island, extended a welcome but minced no words.

Recent news reports, she said, have been inaccurate in their details, and have blurred the reasons the level four labs are needed. "Bioterrorism aside," she said, "it is apparent that the protection afforded by ocean barriers and geographic separation will no longer prevent the introduction of foreign animal diseases."

Dr. Alfonso Torres, a native of Colombia and the deputy administrator of the Animal and Plant Health Inspection Service, the other Agriculture Department agency at Plum Island, followed with a slide lecture intended to leave no doubt about the importance of the lab in protecting agriculture, the county's largest industry.

[Dr. Peter Keith Murray (born 1946)], the director of the Animal Research Service national animal disease center in Ames, Iowa, said Plum Island was already equipped to protect the public from exposure from even so dangerous a virus as the Nipah virus. That virus, hitherto unknown, spread among domestic swine in Malaysia, and then to farmers and farm workers. More than 250 people died and millions of swine were slaughtered to eradicate the outbreak, he said.

[Dr. Peter Keith Murray (born 1946)], a former head of what is now the world's only level four animal disease lab near the Australian city of Geelong, said the Nipah virus could be studied now in level three labs at Plum Island without endangering the public because lab safety systems would prevent the virus from ''escaping into the environment.''

But safety level three was ''not good enough,'' he said, to protect the laboratory's staff of 14 research scientists and more than 160 other employees, and therein lay the need for the upgrade to level four.

Researchers and others working with viruses in level four labs wear so-called ''space suits'' that are connected to external air supplies. The suits are not required in level three labs.

[Dr. Peter Keith Murray (born 1946)] and others said the need for the level four labs had been urgent and obvious for some time. ''Nobody is sure why, and there's a lot of speculation, but we are encountering more and more of these new diseases over the past 15 years,'' said Dr. Murray, citing the Nipah virus and mad cow disease in England as examples.

''Frankly, given the nature of emerging threats from around the world and here at home, it is very clear that U.S.D.A. must have access to BSL4 facilities,'' he said. ''We're all here today because of the talk Plum Island might be that site.''

[...]

On the tour Carmen Farrugia, a lab employee involved with shipping and receiving, demonstrated how viruses are shipped. First, a small amount of virus contained in a small vial was placed in a slightly larger vial with absorbent material, which in turn was placed in another container with more absorbent material.

The container was then packed in a box with a hard plastic liner, and capped with a spongelike material and often with dry ice. The box, she said, was designed to withstand a fall of 27 feet. The boxes, which bear labels warning of an infectious substance inside, are shipped by air.

''This gets shipped like cargo, like you were sending a package to grandma or something,'' Ms. Farrugia said.

In this way, viruses collected from other parts of the world were transported to Kennedy International Airport, where they are met by couriers with cell phones, decontamination kits and training in cleanup. The couriers then drove east on the Long Island Expressway ''except when there are traffic jams,'' Ms. Farrugia said, eventually taking Route 25 down the North Fork to Orient Point; the packages then traveled by boat to Plum Island.

Dr. Michael Kiley, the Animal Research Service safety officer at the lab, said the packages were designed to withstand a plane crash. Dr. Kiley also said that other government agencies, including the Federal Bureau of Investigation, would be involved in assuring shipment and lab security if Plum Island was upgraded to a level four center.

[...]

1999 (Oct 03) - NYTimes : "Could This Pig Save Your Life?"

https://www.nytimes.com/1999/10/03/magazine/could-this-pig-save-your-life.html?searchResultPosition=82

1999-10-03-nytimes-could-this-pig-save-your-life.pdf

https://drive.google.com/file/d/170BT18__jTUd74LXK1mruEPCP_FGKZj8/view?usp=sharing

By Sheryl Gay Stolberg / Oct. 3, 1999

In an unmarked warehouse in the middle of a wheat field in central Ohio, a hulking 300-pound pig lies on her back, her legs tethered to a crude iron gurney in a bare, well-lighted room. The animal has been sedated into a light state of sleep, and the pale pink expanse of her belly rises and falls rhythmically with each breath. A young man in green hospital garb has just sliced a six-inch incision between the sow's nipples; now he pokes around her innards with latex-gloved hands.

The pig on the table is pregnant. The young man, a veterinary technician named Bruce Close, **is about to remove her newly fertilized eggs**. At 26, Close is an old hand at pig surgery; **he has performed this operation more than 600 times in the two years he has been employed by Nextran, the Princeton, N.J., biotechnology company that runs this warehouse as a breeding center**. **This, however, is no ordinary pig farm. For the past decade, Nextran has been locked in a high-stakes race to build the perfect pig: an animal with human genes, whose organs can be transplanted into people**. In the medical lexicon, this is known as **xenotransplantation**, and it has been an elusive dream of scientists for nearly 100 years.

Today, despite fears that pig-to-human transplants could unleash a deadly new virus, the dream is closer than ever to reality. In August, a long-awaited safety study conducted by Nextran's chief competitor, Imutran Ltd., of Cambridge, England, **found no evidence of active infection in 160 people who had been treated with pig tissue for a variety of conditions**. The findings come as the companies are laying the groundwork to begin testing transplanted organs in people. Sometime within the next few years, and possibly as soon as the end of next year, either the British or the Americans will grab the brass ring: approval from a regulatory agency, either the United States Food and Drug Administration or its equivalent in Britain, to perform the world's first animal-to-human transplant using a heart or a kidney from a genetically engineered pig.

Nobody expects cross-species transplants to be successful overnight. But with time, xenotransplantation could solve the most pressing crisis in medicine -- the organ shortage. It could also make the companies very rich. Unlike human organs, which are donated, pig organs will be sold, and in a climate in which demand far outstrips supply, the seller will name the price. By greatly expanding the donor pool, pigs could make transplants possible for tens of thousands of people who, because of the current rationing system, never even make the list, not to mention those in some Asian nations, where taking organs from the dead is culturally taboo. Imagine a therapy as revolutionary as penicillin and as lucrative as Viagra rolled into one.

In Ohio, Bruce Close is working toward that day. Moving quickly and in silence, he tears at layers of pig fat until he can feel the pig's uterus. Gently, he extracts the slippery pink-and-purple mass, palpating it until his fingers reach a cluster of 10 blood-rich pustules -- the ovulation points.'' **Each contains a single egg so recently joined with a sperm, through artificial insemination, that it has not yet divided from one cell into two. This is the optimal moment for creating ''transgenic'' piglets -- animals that, at least in a genetic sense, look ever so slightly like people.**

It is a bizarre, almost creepy sight, this big, fat pig upside down on an operating table, her head dangling backward over a bucket in case she vomits, her insides splayed out on a blue-paper surgical drape as a scientist rearranges the DNA of her unborn young. In a moment, the animal's eggs will be flushed out of the ovaries, collected in a tiny vial and smeared onto a glass slide; then a ''microinjectionist'' will examine them under a high-powered microscope and, with a needle finer than a strand of hair, insert a single human gene into each.

Later this afternoon, Close will return to the operating room to implant the growing embryos into a foster mother sow. In roughly 114 days, if all goes as Nextran hopes, she will deliver a litter that includes at least one transgenic piglet. Yet if Close sees anything Frankensteinian in this, he does not admit it. ''What I'm doing right now,'' he says, ''may someday save people's lives.''

Across the Atlantic Ocean, at an undisclosed location in the English countryside, Imutran is running its own transgenic pig farm. Like Nextran, which was purchased several years ago by Baxter International, one of the world's largest medical-products manufacturers, Imutran is owned by a drug-industry powerhouse, the Swiss-based Novartis Pharma AG, a company with three times the annual revenue and nearly seven times the research budget that Baxter has. While Nextran has been testing its pig hearts and kidneys in baboons, Imutran has been running tests in monkeys and baboons, and reporting longer survival times. Like Nextran, Imutran is facing mounting criticism as it moves closer to testing its organs in people.

Animal rights advocates, predictably, lament the fate of the poor pigs that will be used as spare-parts factories, a charge the companies shrug off by pointing to refrigerators stuffed with bacon and pork chops. What they cannot shrug off, however, are the very real safety concerns. The Campaign for Responsible Transplantation, a coalition of scientists and public-health professionals, has asked for a ban on cross-species transplant research. And one prominent xenotransplant expert, Dr. Fritz Bach, of Harvard University, who is a paid consultant to Novartis, has called for a national commission to study the risks.

And so the companies are proceeding quietly, insisting that there is no rush to the clinic. ''I don't believe that there is a race in the sense of, 'Oh, let's be first,''' says David White, Imutran's chief scientist. Says John S. Logan, Nextran's scientific director, ''What we all want to be is the first to be successful.''

But there is a race, and in science, as in life, being first counts. ''Clearly,'' says Jeffrey L. Platt, a transplant immunologist at the Mayo Clinic, in Rochester, Minn., ''there is a competition between the two companies to enter the clinical arena.'' The first ''whole organ'' xenotransplant will attract intense press coverage, giving whoever conducts it free publicity, not to mention a spot in the medical history books. And if being first means earning the confidence of regulators and the public, then being first may well be tantamount to being successful.

Platt, for one, says that if xenotransplants could be made as safe and effective as human transplants, they would replace them. ''Metaphorically speaking,'' he says, ''it will be like the automobile repair industry. Nobody makes much effort to rebuild parts, because it is cheaper and better for your car to have a brand-new part.''

If it sounds like science pushing itself to the edge of science fiction, it is. And like all good science-fiction stories, this one has the potential to end in disaster.

It is not easy to find ''the pig farm,'' as Nextran obliquely calls its breeding warehouse. The building sits at the end of a long gravel road on a slight knoll in the middle of a 200-acre lot in the little farming hamlet of Albany, Ohio. There are no signs outside, which is by design. ''We're not big on signs,'' Logan, the

Nextran scientist, explains. On the rare occasion when uninvited guests drop in with nosy questions, a supervisor dismisses them with a simple, if less than completely truthful, explanation: "We breed pigs."

With a shock of auburn hair draped across his forehead, and a reddish-brown beard covering his chin, Logan, 44, looks more like a lumberjack than a microbiologist. Born in Scotland, he still speaks with a strong accent after nearly two decades in this country, and he has the impatient manner of someone who is always hurrying to catch the next train. Where White, the Imutran scientist, is a master of public relations and charm, Logan is cautious and reserved. He is confident enough never to confess to being the underdog, but not cocky enough to make any grand predictions about success. "When we get to the day when we are sitting here and it really works," he says, "that's the day pronouncements will be worthwhile. That's the day you have to drive for. And that's what keeps me going."

Outsiders are rarely allowed at the Nextran farm. **The company line is that visitors are dangerous for the pigs; nobody sees the animals without showering first and donning company-issued, disinfected clothing, plus a surgical mask and gloves. But the policy, which includes a ban on photography, also suits Nextran's penchant for privacy, so as not to rile up animal rights advocates and antibiotech groups that oppose its work.** The Nextran warehouse looks more like a pig dormitory than a pig farm, with animals housed in various rooms that run along dimly lighted, narrow corridors. There is no mud. The water is tested several times a week. **The pigs are strict vegetarians; meat poses the risk of bovine spongiform encephalopathy, mad cow disease.**

On this particular morning, as is the case two or three mornings each week, the miracle of birth has come to the Ohio farm. In the farrowing room, where expectant sows are kept, more than two dozen newborn piglets scamper about in their stalls, their skin a translucent pink, their umbilical cords still dangling from their bellies. In 24 hours, the piglets will be tagged and numbered, and a Nextran animal handler will snip off a tiny bit of their tails; the snippets will be shipped to the company's laboratory in Princeton, where their genetic makeup will be analyzed to see if they contain the crucial gene, or in certain cases two genes, that Nextran believes will trick the human immune system into accepting pig organs.

The breeding process is ''horribly inefficient,'' Logan says. Typically, 20 pigs are born from every 100 gene-altered eggs, but only one is transgenic. The 19 less fortunate animals meet an untimely demise. So while there is something peculiarly endearing about the sight of these little pink critters, rooting for their first taste of mother's milk, Logan has no idea at this point if the animals are of any use to him. When I ask him what he sees, expecting perhaps some philosophical answer about the wonders of molecular biology, or the future health of mankind, he replies: ''I see a bunch of little pigs. That's all I see.''

At a time when biological tinkering has invaded every aspect of modern life, the sight of swine with human DNA should probably not seem alarming. Still, it is difficult to look at Nextran's pigs without wondering if there is an element of hubris to Logan's work, if porcine-people aren't better left to Greek mythology, or at least George Orwell, than to modern medicine. Clearly, in 1999, some pigs really are more equal than others.

Harold Vanderpool, a medical ethicist at the University of Texas Medical Branch, in Galveston, has a term for the visceral reaction these pigs evoke. "I call it 'the gag factor,'" he says. "We are thinking across a barrier that should never be crossed." And in point of fact, there may be a very good reason -- the viruses -- it should not be. Pigs have become the animal of choice in xenotransplant research for a variety of reasons. They are plentiful, and they breed easily. They are physiologically similar enough to humans. And pigs and people have lived side by side, in relative health and harmony, for centuries**. Virologists say most disease-causing germs can be eliminated through careful selection and breeding. But over the past two years, they have focused their attention on one obscure organism that cannot be bred out, the porcine endogenous retrovirus, abbreviated in the medical literature as PERV.**

Of all viruses, retroviruses are the most feared. They integrate their genetic code into the cells they infect, which means they multiply along with the cells. Retroviruses last for life. They are typically spread through blood or sexual contact, and they can lurk in the body for years, even decades, before causing any symptoms. ''It's like a ghost virus, a stealth virus,'' says Jonathan S. Allan, a virologist at the Southwest Foundation for Biomedical Research, in San Antonio. ''Once it splices itself into the host genome, it is virtually impossible to get it back out.''

If this scenario sounds familiar, it's because over the past two decades, another retrovirus, H.I.V., believed to have originated in apes, has cut a devastating swath around the world. Most scientists, Allan included, do not believe that xenotransplants will unleash the next AIDS epidemic. But no one, not even the companies, argues that the transplants will be risk-free. While there is thus far no evidence that PERV makes people sick, it can infect human cells in the test tube. And some experts theorize that the virus could mutate into a deadly form, as H.I.V. did, and then spread through sexual contact, infecting untold numbers before causing any symptoms. While the recent Imutran study is a comfort, it looked at only 160 patients, who had been treated in hospitals around the world and were later tracked down by Novartis. What will happen when people are getting xenotransplants by the tens of thousands?

The danger may not be limited to PERV. In January 1997, a pig farmer in Ipoh, a Malaysian village about 200 miles north of Kuala Lampur, became ill with what appeared to be encephalitis. The following year, 258 Malaysian pig farmers became sick; 101 of them died. It took until March of this year for the Centers for Disease Control and Prevention to identify the cause: a brand-new virus named Nipah.

This is a point that Allan, who serves on a panel of scientific experts convened by the Food and Drug Administration to plan for its first xenotransplant clinical trial, has made repeatedly. For all the focus on PERV, he says, there may be other viruses, about which much less is known, that in the end will pose a greater danger to the public health. To justify any human experiment, the scientists conducting it must show that the benefits to the patient outweigh the risk. But xenotransplants defy that calculation: the patient benefits while society takes the risk. "The individual," Allan warns, "can sign a consent form and say, 'I'll take the risk because I'm going to die anyway.' But that person is signing a consent form for the whole population, the whole human race."

Still, there are good reasons to proceed. More than 62,000 Americans are now waiting to receive donated hearts, lungs, livers, kidneys and pancreases, according to the United Network for Organ Sharing. A new name is added to the list every 16 minutes, and every day 11 people die waiting. Increasing donations will not solve the problem; surgeons need young, healthy organs for transplants, so even if every dead person donated, there would still not be enough.

There is another reason, of course: money. In 1996, Salomon Brothers predicted that the global market for transgenic organs could reach $6 billion by the year 2010, a figure that explains why big pharmaceutical companies are involved. Novartis manufactures cyclosporine, an antirejection drug; the market for it would skyrocket if xenotransplants became common. Baxter's interest is self-preservation; it makes dialysis machines, which would be relegated to the medical junk heap if people with failing kidneys were given pig organs instead.

Hospitals and surgeons stand to gain as well. Transplants are expensive, and they make a good living for those who perform them. Three years ago, the Institute of Medicine calculated that if animal organs made it possible to offer a transplant to everyone in the United States who needed one, annual expenditures would rise to $20.3 billion, from $2.9 billion. Already, the Mayo Clinic has entered into what its director of heart and lung transplantation, Dr.

Christopher McGregor, calls a "strategic alliance" with Nextran. McGregor is busy testing pig hearts in baboons, and the company has built a state-of-the-art breeding facility not far from the clinic so Mayo doctors can have a ready supply of pigs in the event that xenotransplantation takes off.

While the medical world is gearing up, so, too, is the Government. Donna E. Shalala, the Secretary of Health and Human Services, will soon appoint a special committee to advise her on medical, ethical and social issues surrounding xenotransplants. As the infrastructure grows, so does critics' frustration. The Campaign for Responsible Transplantation, the group pressing for a research ban, has lately been threatening to sue Shalala if she does not respond to its petition. ''The prospect of a global health pandemic doesn't seem to be concerning anybody,'' warns Alix Fano, the campaign's director. ''And the people that are voicing their concerns are either being silenced or ignored.''

For a freckle-faced 19-year-old named Robert Pennington, the issue is of more than academic interest. Exactly two years ago today, a Nextran pig saved his life. With a fake diamond stud in his left ear, a silver bracelet encircling his wrist and a scrawny tuft of reddish-brown hair decorating his chin, Pennington, clad in a black T-shirt and blue jeans, looks more like an up-and-coming rock star than someone who has been at the brink of death. The vast scar that creeps along his chest and abdomen, in the shape of an upside-down Y, tells a different story, one that began in the fall of 1997, in Garland, Tex., a suburb of Dallas where Pennington was reared by his paternal grandparents, Charlotte and Ray.

Pennington was working at a family-owned carpet store when he came down with what he thought was the flu. Three weeks later, still feeling poorly, he looked in the mirror and saw that the whites of his blue eyes had turned yellow. He went to a local medical clinic, where a doctor asked for a urine sample. When Pennington handed the cup back, he noticed the liquid inside was a coffee-colored brown.

The clinic doctor, mystified, sent him home with orders to come back in two weeks to see a specialist. Four days later, he was admitted to Baylor University Medical Center, in Dallas, with what Dr. Marlon Levy, a transplant surgeon there, describes as ''fulminate hepatic failure'' -- a sudden, overwhelming death of the liver. Without a transplant, Levy knew, the young man would be dead in a few days.

The liver's job is to clean toxins from the blood. When it stops working, ammonia and other poisons accumulate in the bloodstream and travel to the brain, which swells until the patient becomes comatose and dies. Within 24 hours of his arrival at Baylor, Pennington was showing signs of acute ammonia poisoning: hallucinations and aggression. At one point, nurses were forced to tie him to his bed. Charlotte Pennington, a gray-haired matronly woman with an abiding faith in God, was terrified. ''We were praying for him,'' she says. ''We told him to just rest and hold on to Jesus.''

Pennington was placed at the top of the transplant list, but there were no livers available. In the back of his mind, Levy was already weighing another option: a highly experimental procedure, ''extracorporeal perfusion,'' in which Pennington would be hooked up to a Nextran pig liver and his blood would be circulated through it. The idea was to use the pig liver outside the body as a bridge, in the hope that it would keep Pennington alive until a human liver could be found. The procedure had been approved by the F.D.A. for testing at Baylor. Pennington was the first candidate.

In the eight years he has been performing liver transplants at Baylor, Levy, a stocky man with slicked-down black hair and a boyish face, has watched more patients than he can remember die for lack of organs. Because of the liver's complex physiology, liver xenotransplants are a long way off; hearts or kidneys will probably be tested first. But the perfusion experiment offered Nextran a halfway step, a chance to see how the immune system responded when exposed to its organs. And it gave Levy a chance to help a patient. On Sept. 3, 1997, the first batch of Nextran pigs was trucked from Ohio to the Baylor campus.

On Oct. 2, Robert Pennington's condition took a turn for the worse. In a deep coma, and no longer able to eat or breathe on his own, he was placed on full life support. His grandmother remembers watching the sun go down that evening and wondering whether the boy she had reared practically from birth would be alive when it came up in the morning. That night at about 11, Levy called Charlotte Pennington, awakening her from a deep sleep for a hasty meeting in the intensive-care unit. They sat at Robert's bedside and talked about the pigs. In the blue spiral notebook in which she recorded her thoughts, Robert's frightened grandmother jotted these words: ''uncharted territory. Not done at Baylor before.'' Levy told her she would need to make a decision by 8 the next morning.

The following morning, a 15-week-old, 118-pound pig was readied for surgery in the simple brick building that houses Baylor's animal lab; while Levy removed the animal's liver, an anesthesiologist inserted a line of plastic tubing in Robert's neck. Later, a second line of tubing was inserted into his groin, and the two-pound pig liver, covered by a surgical towel, was brought to Robert's bedside. The perfusion officially began at 4:10 P.M.; Robert's blood was pumped first through a heater and an oxygenator, then through the liver and then back into his body, at the rate of two quarts per minute.

Levy could see right away that it was working. ''The liver had good color and texture,'' he says, ''and it was taking up oxygen from the bloodstream.'' It was still cleaning Robert's blood six and a half hours later when a human liver was found in Houston, 250 miles away. In her scrapbook, Charlotte Pennington keeps a snapshot of ''the pig that was sacrificed to save Robert,'' a Polaroid photograph given to her by one of Baylor's animal handlers, who had named the pig Sweetie Pie.

Three weeks later, the F.D.A. shut down the perfusion trial. A team of virologists in England, who had already reported that PERV could infect human cells in the test tube, had now documented two separate strains of the virus and discovered that the genes for both appeared in a wide variety of pigs, suggesting that it would be difficult to breed them out. ''We were very concerned,'' **says Dr. Philip Noguchi, the F.D.A. official who oversees xenotransplant research**. ''It was sufficiently worrisome that we felt it would be better to stop.''

- Note- 2003 , LA TImes : "Citing Illnesses, FDA Halts Gene Therapy Trials
- 2003-01-15-the-los-angeles-times-citing-illnesses-fda-halts-gene-therapy-trials.pdf
- https://www.latimes.com/archives/la-xpm-2003-jan-15-sci-gene15-story.html
- By THOMAS H. MAUGH II
- JAN. 15, 2003 12 AM PT
- TIMES STAFF WRITER
- The Food and Drug Administration on Tuesday suspended 27 gene therapy trials -- nearly half of those now underway in the United States -- after the agency learned that a second French child had developed leukemia after receiving the promising, yet highly experimental, treatment.
- The agency had halted three trials in October following the revelation that one child had developed the potentially fatal form of cancer. The suspension was broadened Tuesday “because of unanswered questions about what is going on,” said Dr. Philip Noguchi, in charge of gene therapy issues at the FDA."

The ''clinical hold,'' which applied not only to Nextran but also to a number of other companies using live pig tissue in experiments, was lifted once the companies developed tests to screen both pigs and patients for evidence of PERV. While the tests indicate that the Nextran and Imutran herds showed no

evidence of active infection, Noguchi acknowledges that there are no guarantees. "We can only give assurance to the sensitivity of the assay as it currently stands," he says, lapsing into the kind of technotalk that bureaucrats use when they don't want to sound alarmist. In plain English: the virus may well be there; current tests may not be sensitive enough to detect it. Robert Pennington still undergoes regular tests for PERV infection; so far all have been negative.

When most Americans think of animal-to-human transplants, they remember the ill-fated 1984 attempt by Dr. Leonard Bailey, a Loma Linda, Calif., surgeon, to put a baboon heart in a baby the world came to know only as Fae. Baby Fae died after 20 days, but hers was only the most publicized of a long string of xenotransplant failures, starting with the earliest animal-to-human organ transplants at the beginning of the century. By 1985, the year after Baby Fae got her heart, many doctors had concluded that animals and humans were simply too dissimilar for cross-species transplants to work. In the Journal of the American Medical Association, Bailey was condemned for having succumbed to ''wishful thinking.''

Microbiology changed all that. While Bailey was being ridiculed in the popular press, scientists were perfecting the creation of transgenic mice for the study of cancer. By the late 1980's, companies like Nextran and Imutran were trying to figure out how to use transgenic technology for commercial gain. Pigs as organ donors seemed an obvious choice, but first the companies would have to understand the genetic underpinnings of a process known as ''hyperacute rejection,'' in which the human immune system rejects animal organs minutes to hours after transplant. Most immunologists, including Platt, of the Mayo Clinic, believe that the human complement system, a collection of proteins that attack and destroy foreign cells, is responsible for hyperacute rejection. In the early 1990's, Platt, then at Duke University, teamed up with Logan to introduce genes to suppress these proteins. In 1995, in a study that turned the xenotransplant world on its head, they reported their results: Nextran's pig hearts survived for as long as 30 hours inside baboons. The problem of hyperacute rejection, it seemed, could be solved. In England, Imutran was proceeding on a similar track.

"There was an amazing amount of excitement in the field," White, of Imutran, says. "Before that time, people measured the survival of organs transplanted from pigs to monkeys in minutes. And then you suddenly went from minutes to days. It doesn't seem very long, but it was an absolutely major breakthrough."

White sensed early on that this was the stuff of which scientific legends are made. In 1995, he boldly predicted that human experiments would begin within two years, a prediction that generated a backlash in England and spawned a spate of ethics reviews. And though it did not come true, he is not shy about tooting his own horn. "I always like to tell my story that the first transgenic pig was born in a stable on Christmas Eve," he says, only partly tongue-in-cheek. "It's a slight stretch," he says, "because, in fact, the first litter was born on the evening of the 23d but going over into midnight, on the 24th." He also had the presence of mind to give the animal a name: Astrid.

Nextran, on the other hand, gives its pigs numbers. "They still tell that story?" Logan asks, eyebrows raised. "The day before Christmas Astrid story?" He pauses a moment, then lets out a little sigh. "Well," he says finally, "I guess a good story endures."

Today, four years after their big breakthrough in hyperacute rejection, the companies are trying to understand other forms of rejection that prevent their organs from surviving for more than a few months in baboons. Regulators will not approve human experiments until the companies can demonstrate longer survival times; Noguchi, of the F.D.A., says some experts have called for a minimum of six months. **So far, Imutran has come closest; it has kept pig hearts alive in baboons for as long as 99 days, as opposed to 39 days for Nextran.** The difference is a sore point between the companies. Logan says that Imutran is using antirejection drugs in such high doses that a patient could die from a weakened immune system. White says Logan is wrong. Both men, however, say one thing is clear: victory in this race will be dictated as much by progress in the laboratory as by regulatory politics and concerns about public health.

"There's an old story in science," Logan says, "about climbing a hill. The question is, Once you get to the top of the hill, is it a whole series of mountains, or just this one hill? And you don't know until you get there. We are right at that stage, close to the top of the hill.

2019 (Dec) - Nipah Conference in Singapore

Conference proceedings : [HI0025][GDrive]

Attendees include : **Dr. Peter Daszak (born 1965)** ; **Dr. Lin-Fa Wang (born 1960)** ; **Dr. John S. MacKenzie (born 1943(est.))** ; **Dr. Emmie de Wit (born 1980(est.))** (works for **Dr. Heinz Ulrich Feldmann (born 1959)**)

[HI0023][GDrive]

[HI0024][GDrive]

2019 (Dec) - Nipah Conference in Singapore - "20th anniversary" - Peter Daszak on This Week in Virology

Live link - https://www.youtube.com/watch?v=IdYDL_RK--w / Download a saved copy here : [HV003W][GDrive]

Nipah Virus at 20 - This Week in Virology

Saved copy : [HV00GW][GDrive]

2019 (Dec 8/9) - New conference to explore innovative solutions to combat global health threat posed by Nipah virus

Inaugural Nipah virus conference convenes leading experts to strengthen global collaboration, improve efforts to combat deadly virus ; Source : [HI0026] [GDrive]

DUKE-NUS MEDICAL SCHOOL

Singapore, 09 December 2019 - The threat of infectious diseases, such as Nipah virus, spreading across borders has increased substantially as a result of the ease of global travel. Nipah virus experts and stakeholders gather at the first international conference to commemorate the 20th anniversary of the virus' discovery and to discuss innovative and effective solutions to combat the threat to global health security posed by Nipah virus.

Duke-NUS Medical School (Duke-NUS) and the Coalition for Epidemic Preparedness Innovations (CEPI) are co-hosting The Nipah Virus International Conference 2019 on December 9 and 10. The conference brings together Nipah experts and global health stakeholders to review past Nipah outbreaks, discuss the latest developments in diagnostics, vaccines and therapeutics, and foster greater international collaboration.

Guest-of-honour Dr Lam Pin Min, Senior Minister of State, Ministry of Transport and Ministry of Health, Singapore, will deliver the opening address. The conference guests include leaders and representatives from the Ministry of Health (Singapore), the World Health Organisation (WHO), Ministry of Health (Malaysia), the U.S. National Institutes of Health (NIH), Ministry of Social and Family Development (Singapore), Duke-NUS, CEPI, SingHealth and other key stakeholders from the healthcare and biomedical ecosystem in Singapore.

A growing threat to global health security

Nipah virus was first identified in 1999 during a large outbreak affecting Malaysia and Singapore. The virus is one of eight categories of diseases that the WHO has identified as epidemic threats in need of prioritisation. Over the past 20 years, the virus has continued to spread over thousands of kilometres to Bangladesh and India.

Nipah is a zoonotic virus, which means that it can be spread to humans from animals. It is spread primarily by bats (specifically Pteropus fruit bats) and pigs. It can also be transmitted through contaminated food and directly from person to person.

The virus causes severe disease, with recorded mortality rates in Malaysia, Bangladesh and India of between 40 and 90 percent. In 2001, the virus was detected in Bangladesh and since then, frequent outbreaks have occurred in the country. An outbreak in Kerala, India, in 2018 claimed 17 lives.

"There are currently no specific drugs or vaccines for Nipah virus infection, even though the WHO has identified Nipah as a priority disease for the WHO Research and Development Blueprint. Through the conference, we aim to stimulate dialogue between experts and stakeholders to bring about innovative and effective solutions to boost efforts in fighting Nipah virus," said Professor Wang Linfa, Director of Duke-NUS' Emerging Infectious Diseases Programme and Co-Chairman of the conference's organising committee.

With global travel being more prevalent than ever, infectious diseases, especially those that can be transmitted from animals to people, can be rapidly spread across borders. Therefore, it is crucial to strengthen outbreak preparedness and response against infectious diseases such as Nipah.

One of the ways the conference aims to achieve that is by facilitating interaction between clinicians, veterinarians, scientists and public health experts from the region and beyond. Discussions such as these would help enormously in the communication, cooperation and collaboration between animal and human public health agencies to ensure that Nipah never becomes a global pandemic.

"Outbreaks of Nipah virus have so far been confined to South and Southeast Asia, but the virus has serious epidemic potential, because Pteropus fruit bats that carry the virus are found throughout the tropics and sub-tropics, which are home to more than two billion people. Nipah virus can also be transmitted from person to person, so in theory it could spread into densely populated temperate areas too," said Richard Hatchett, CEO of CEPI.

"Twenty years have passed since its discovery, but the world is still not adequately equipped to tackle the global health threat posed by Nipah virus. This needs to change. Strengthening collaboration and knowledge sharing between Nipah virus experts, industry and key public-health stakeholders is crucial to the development of novel interventions against Nipah. As a co-host of the Nipah Virus International Conference 2019, CEPI is pleased to be able to foster such global collaboration," he added.

WHO and the National Institute of Allergy and Infectious Diseases, one of the U.S. National Institutes of Health, are also key sponsors of this conference.

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Dr. Hideyo Noguchi (born 1876)

Wikipedia Hideyo Noguchi

Associations

- **Dr. Paul Adin Lewis (born 1879)** (Rockefeller Institute peer, also interested in studying Yellow Fever. While Noguchi died in 1938 in Asia, Dr. Lewis died in 1939 in Brazil)
- **Dr. Simon Flexner (born 1863)** (Dr. Noguchi was a lab assistant for Dr. Simon Flexner)
- **Prof. Adrian Stokes (born 1887)** (Also a Rockefeller Institute peer, also died of Yellow Fever but one year earlier in 1927)

Saved Wikipedia (March 07, 2021) - "Hideyo Noguchi"

2021-03-07-wikipedia-org-hideyo-noguchi.pdf

https://en.wikipedia.org/wiki/Hideyo_Noguchi

Born

November 9, 1876

Inawashiro, Fukushima,

Japan

Died

May 21, 1928 (aged 51)

Accra, Gold Coast

Resting place

Woodlawn Cemetery, New York City, USA

Nationality

Japan

Known for

syphilis

Treponema pallidum

Scientific career

Fields

bacteriology

Japanese name

Japanese name

Kanji

野口 英世

Hiragana

のぐち ひでよ

showTranscriptions

Hideyo Noguchi (野口 英世, Noguchi Hideyo, November 9, 1876 – May 21, 1928), also known as Seisaku Noguchi (野口 清作, Noguchi Seisaku), was a prominent Japanese bacteriologist who in 1911 discovered the agent of syphilis as the cause of progressive paralytic disease.

Early life[edit]

Noguchi Hideyo whose childhood name was Seisaku Noguchi[1] was born to a family of farmers for generations[1] in Inawashiro, Fukushima prefecture in 1876. When he was one and a half years old, he fell into a fireplace and suffered a burn injury on his left hand. There was no doctor in the small village, but one of the men examined the boy. "The fingers of the left hand are mostly gone," he said, "and the left arm, the left foot, and the right hand are burned; I don't know how badly."[2]

[...]

In 1883, Noguchi entered Mitsuwa elementary school. Thanks to generous contributions from his teacher Kobayashi and his friends, he was able to receive surgery on his badly burned hand. He recovered about 70% mobility and functionality in his left hand through the operation.

Noguchi decided to become a doctor to help those in need. He apprenticed himself to Dr. Kanae Watanabe (渡部 鼎, Watanabe Kanae), the same doctor who had performed the surgery. He entered Saisei Gakusha, which later became Nippon Medical School. He passed the examinations to practice medicine when he was twenty years old in 1897. He showed signs of great talent and was supported in his studies by Dr. Morinosuke Chiwaki. In 1898, he changed his first name to Hideyo after reading a Tsubouchi Shōyō novel of college students whose character had the same name—Seisaku—as him. The character in the story was an intelligent medical student like Noguchi but became lazy and ruined his life.[3]

Career[edit]

In 1900 Noguchi travelled on the America Maru to the United States, where he obtained a job as a research assistant with Dr. Simon Flexner at the University of Pennsylvania and later at the Rockefeller Institute of Medical Research. He thrived in this environment.[4] At this time his work concerned venomous snakes. In part, his move was motivated by difficulties in obtaining a medical position in Japan, as prospective employers were concerned that his hand deformity would discourage potential patients. In a research setting, he did not have a handicap. He and his peers learned from their work and from each other. In this period, a fellow research assistant in Flexner's lab was Frenchman Alexis Carrel, who would go on to win a Nobel Prize in 1912.[5]

Noguchi's work later attracted the Prize committee's scrutiny.[6] In the 21st century, the Nobel Foundation archives were opened for public inspection and research. Historians found that Noguchi was nominated several times for the Nobel Prize in Physiology or Medicine: in 1913–1915, 1920, 1921 and 1924–1927.[7] During the 1920s, his work was being increasingly criticized for inaccuracies.[citation needed]

While working at the Rockefeller Institute of Medical Research in 1911, he was accused of inoculating orphan children with syphilis in the course of a clinical study.[8] He was acquitted of any wrongdoing at the time but, since the late 20th century, his conduct of the study has come to be considered an early instance of unethical human experimentation. At the time, society had not developed a consensus about how to conduct human experimentation and feelings varied about the medical research community. Antivivisectionists linked their concerns for animals with concerns about humans.[9] The American Society for the Prevention of Cruelty to Children was founded in the late 19th century after the American Society for the Prevention of Cruelty to Animals.

In 1913, Noguchi demonstrated the presence of Treponema pallidum (syphilitic spirochete) in the brain of a progressive paralysis patient, proving that the spirochete was the cause of the disease.[10] Dr. Noguchi's name is remembered in the binomial attached to another spirochete, Leptospira noguchii.[11]

In 1918, Noguchi traveled extensively in Central America and South America working with the International Health Board to conduct research to develop a vaccine for yellow fever, and to research Oroya fever, poliomyelitis and trachoma. He believed that yellow fever was caused by spirochaete bacteria instead of a virus. He worked for much of the next ten years trying to prove this theory. His work on yellow fever was widely criticized as taking an inaccurate approach that was contradictory to contemporary research, and confusing yellow fever with other pathogens. In 1927-28 three different papers appeared in medical journals that discredited his theories.[12] It turned out he had confused yellow fever with leptospirosis. The vaccine he developed against "yellow fever" was successfully used to treat the latter disease.

Human experimentation scandal[edit]

In 1911 and 1912 at the Rockefeller Institute in New York City, Noguchi was working to develop a syphilis skin test similar to the tuberculin skin test. The subjects were recruited from clinics and hospitals in New York. In the experiment, Noguchi injected an extract of syphilis, called luetin, under the subjects' upper arm skin. Skin reactions were studied, as they varied among healthy subjects and syphilis patients, based on the disease's stage and its treatment. Of the 571 subjects, 315 had syphilis. The remaining subjects were "controls;" they were orphans or hospital patients who did not have syphilis. The hospital patients were already being treated for various non-syphilitic diseases, such as malaria, leprosy, tuberculosis, and pneumonia. Finally, the controls were normal individuals, mostly children between the ages of 2 and 18 years.[13] Critics at the time, mainly from the anti-vivisectionist movement, noted that

Noguchi violated the rights of vulnerable orphans and hospital patients. There was concern on the part of anti-vivisectionists that the children would get syphilis from Noguchi's experiments.[14][15]

It became a public scandal and the media discussed it. The editor of Life pointed out:

If the researcher had said to these patients: "Have I your permission to inject into your system a concoction more or less related to a hideous disease?"—the invalids might have declined.[16]

In Noguchi's defense, Rockefeller Institute business manager Jerome D. Greene wrote a letter to the anti-vivisection society, which had protested the experiment. Greene pointed out that Noguchi had tested the extract on himself before administering it to subjects, and his fellow researchers had done the same, so it was impossible that the injections could cause syphilis. However, Noguchi himself was diagnosed with untreated syphilis in 1913, for which he refused treatment from Rockefeller Hospital.[15] At the time, Greene's explanation was considered a demonstration of the importance of the studies and care the doctors were taking in research. In May 1912 the New York Society for the Prevention for Cruelty to Children asked the New York district attorney to press charges against Noguchi; he declined.[17]

In the United States, it was not until the late 20th century that sufficient consensus developed about human experimentation to gain passage of laws to protect subjects. Along the way, more protocols were developed about informed consent and rights of patients/subjects.[15]

Death[edit]

Following the death of British pathologist [**Prof. Adrian Stokes (born 1887)**] of yellow fever in **September 1927**,[18] it became increasingly evident that yellow fever was caused by a virus, not by the bacillus Leptospira icteroides, as Noguchi believed.[citation needed]

Feeling his reputation was at stake, Noguchi hastened to Lagos to carry out additional research. However, he found the working conditions in Lagos did not suit him. At the invitation of Dr. William Alexander Young, the young director of the British Medical Research Institute, Accra, Gold Coast (modern-day Ghana), he moved to Accra and made this his base in 1927.

However, Noguchi proved a very difficult guest and by May 1928 Young regretted his invitation. Noguchi was secretive and volatile, working almost entirely at night to avoid contact with fellow researchers. The diaries of Oskar Klotz, another researcher with the Rockefeller Foundation,[19] describe Noguchi's temper and behavior as erratic and bordering on the paranoid. His methods were haphazard.

According to Klotz, he inoculated huge numbers of monkeys with yellow fever, but failed to keep proper records. He may have believed himself immune to yellow fever, having been inoculated with a vaccine of his own development. Possibly his erratic and irresponsible behavior was caused by the untreated syphilis with which he was diagnosed in 1913, and which may have progressed to neurosyphilis.[citation needed]

Despite repeated promises to Young, Noguchi failed to keep infected mosquitoes in their specially designed secure housing. In May 1928, having failed to find evidence for his theories, Noguchi was set to return to New York, but was taken ill in Lagos.

He boarded his ship to sail home, but on 12 May was put ashore at Accra and taken to a hospital with yellow fever. After lingering for some days, he died on 21 May.[20]

In a letter home, Young states, "He died suddenly noon Monday. I saw him Sunday afternoon – he smiled – and amongst other things, said, “Are you sure you are quite well?" "Quite." I said, and then he said "I don’t understand."[21]

Seven days later, despite exhaustive sterilisation of the site and most particularly of Noguchi's laboratory, Young himself died of yellow fever.[citation needed]

Legacy[edit]

Statue of Hideyo Noguchi in Ueno Park

Hideyo Noguchi Memorial Museum

While Noguchi was influential during his lifetime, later research was not able to reproduce many of his claims, including having discovered the causes of polio, rabies, syphilis, trachoma, and yellow fever.[22] His finding that Noguchia granulosis causes trachoma was questioned within a year of his death, and overturned shortly thereafter.[23][24] His identification of the rabies pathogen was wrong,[25] because the medium he invented to cultivate bacteria was seriously prone to contamination.[26] A fellow Rockefeller Institute researcher said that Noguchi "knew nothing about the pathology of yellow fever" and criticized him for being unwilling to issue retractions for false claims, saying, "I don't think that Noguchi was an honest scientist".[27] Noguchi's failures have often been attributed to his tendency to work in isolation without the skeptical eye of fellow researchers.[12][28] What are considered flaws in the Rockefeller Institute's system of peer review is also a frequent subject of criticism.[29]

Noguchi's most famous contribution is his identification of the causative agent of syphilis (the bacteria Treponema pallidum) in the brain tissues of patients suffering from partial paralysis due to meningoencephalitis. Other lasting contributions include the use of snake venom in serums, the identification of the leishmaniasis pathogen and of Carrion's disease with Oroya fever. His claim to have grown a culture of syphilis has proven irreproducible.[30]

Selected works[edit]

- 1904: The Action of Snake Venom Upon Cold-blooded Animals.

Washington, D.C.: Carnegie Institution. [OCLC 2377892]

- 1909: Snake Venoms: An Investigation of Venomous Snakes with Special Reference to the Phenomena of Their Venoms.

Washington, D.C.: Carnegie Institution. [OCLC 14796920]

- 1911: Serum Diagnosis of Syphilis and the Butyric Acid Test for Syphilis.

Philadelphia: J. B. Lippincott. [OCLC 3201239]

- 1923: Laboratory Diagnosis of Syphilis: A Manual for Students and Physicians.

New York: P. B. Hoeber. [OCLC 14783533]

Honors during Noguchi's lifetime[edit]

Noguchi was honored with Japanese and foreign decorations. He received honorary degrees from a number of universities.

He was self-effacing in his public life, and he often referred to himself as "funny Noguchi." Those who knew him well said that he "gloated in honors."[31] When Noguchi was awarded an honorary doctorate at Yale, William Lyon Phelps observed that the kings of Spain, Denmark and Sweden had conferred awards, but "perhaps he appreciates even more than royal honors the admiration and the gratitude of the people."[32]

- Kyoto Imperial University, Doctor of Medicine, 1909.[33]
- Knight of the Order of Dannebrog, 1913 (Denmark).[34]
- Commander of the Order of Isabella the Catholic, 1913 (Spain).[35]
- Commander of the Order of the Polar Star, 1914 (Sweden).[36]
- Tokyo Imperial University, Doctor of Science, 1914.[36]
- Order of the Rising Sun, Gold Rays with Rosette, 1915.[37]
- Imperial Award, Imperial Academy (Japan), 1915.[38]
- Central University of Ecuador, 1919, (Ecuador).[39]
- National University of San Marcos, 1920, (Peru)
- Medicine School of Merida, "Doctor Honoris Causa en Medicina y Cirugía", 1920 (México)
- University of Guayaquil, 1919, Ecuador.[39]
- Yale University, 1921, (United States).[32]
- Knight of the Legion of Honour of France, 1924[40]
- Senior fifth rank in the order of precedence, Japanese government, 1925[40]

Posthumous honors[edit]

Hideyo Noguchi on the ¥1,000 banknote

The grave of Hideyo Noguchi in Woodlawn Cemetery

Noguchi's remains were returned to the United States and buried in Woodlawn Cemetery in the Bronx, New York City.[41]

In 1928, the Japanese government awarded Noguchi the Order of the Rising Sun, Gold and Silver Star, which represents the second highest of eight classes associated with the award.[42]

In 1979, the Noguchi Memorial Institute of Medical Research (NMIMR) was founded with funds donated by the Japanese government[43] at the University of Ghana in Legon, a suburb north of Accra.[44]

In 1981, the Instituto Nacional de Salud Mental (National Institute of Mental Health) "Honorio Delgado - Hideyo Noguchi" was founded with founds of the Peruvian Government and the JICA (Japan International Cooperation Agency) in Lima - Perú.[45]

Dr. Noguchi's portrait has been printed on Japanese 1000-yen banknotes since 2004.[46] In addition, the house near Inawashiro where he was born and brought up is preserved. It is operated as part of a museum to his life and achievements.

Noguchi's name is honored at the Centro de Investigaciones Regionales Dr. Hideyo Noguchi at the Universidad Autónoma de Yucatán.[47]

A 2.1 km street in Guayaquil, Ecuador downtown is named after Dr. Hideyo Noguchi.

Hideyo Noguchi Africa Prize[edit]

The footstone of Hideyo Noguchi in Woodlawn Cemetery, New York City

The Japanese Government established the Hideyo Noguchi Africa Prize in July 2006 as a new international medical research and services award to mark the official visit by Prime Minister Jun'ichirō Koizumi to Africa in May 2006 and the 80th anniversary of Dr. Noguchi's death.[48] The Prize is awarded to individuals with outstanding achievements in combating various infectious diseases in Africa or in establishing innovative medical service systems.[49] The presentation ceremony and laureate lectures coincided with the Fourth Tokyo International Conference on African Development in late April 2008.[50] In 2009, the conference venue was moved from Tokyo to Yokohama as another way of honoring the man after whom the prize was named. In 1899, Dr. Noguchi worked at the Yokohama Port Quarantine Office as an assistant quarantine doctor.[51]

The Prize is expected to be awarded every five years.[52] The prize has been made possible through a combination of government funding and private donations.[53]

See also[edit]

- Japan portal
- Medicine portal
- List of medicine awards
- Max Theiler - completed Noguchi's work, yellow fever vaccine (1926)
- Human experimentation in the United States
- Tōki Rakujitsu - Japanese film

Notes[edit]

Notes[edit]

- ^
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External links[edit]

Wikimedia Commons has media related to Noguchi Hideyo.

- Hideyo Noguchi at Find a Grave
- Noguchi Memorial Institute for Medical Research, University of Ghana, Legon
- Japanese Government Internet TV: streaming video, "Hideyo Noguchi Africa Prize," 2007/04/26 (5 mins.)
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BITCHUTE @Housatonic YOUTUBE @HousatonicLive ODYSEE @Housatonic BRIGHTEON @Housatonic

Maximilian Irving Nowinski (born 1920)

Born 1920

Father of **Dr. Robert Charles Nowinski (born 1945)**

Married - alice nowinski

geni :

https://www.geni.com/people/Alice-Nowinski/6000000007991621443

Alice Nowinski

‹ Back to Nowinski surname

Alice Nowinski (Leichtman)

Birthdate: 1921

Death: 2002 (80-81)

Immediate Family:

Daughter of Charles Leichtman and Tessie Benjamin Leichtman

Wife of Max Nowinski

Mother of Private; Private; Karen Nowinski and Private

Sister of Adolph Leichtman and Geri

Managed by: Ellen Claire Leichtman

Last Updated: December 14, 2014

Max Nowinski - FATHER of Robert

Father was living at 540 west 122 st. in manhattan as of 1940 census - looks like a Columbia U address...

https://www.ancestry.com/imageviewer/collections/2442/images/m-t0627-02652-00283?usePUB=true&_phsrc=BoV55&_phstart=successSource&usePUBJs=true&pId=5874911

https://www.newspapers.com/image/319869665/?terms=%22max%20nowinski%22&match=1

age 83...

having heart surgery in 2004

this says he was born in New york !!!

https://www.ancestry.com/imageviewer/collections/2238/images/44027_09_00269-01809?treeid=&personid=&hintid=&queryId=ed8336d07002960e7a86b956dd9a013d&usePUB=true&_phsrc=BoV53&_phstart=successSource&usePUBJs=true&_ga=2.30495167.1851241754.1615991515-1461832356.1615217983&pId=194617245

https://search.ancestry.com/cgi-bin/sse.dll?indiv=1&dbid=3693&h=73558739&tid=&pid=&queryId=ed8336d07002960e7a86b956dd9a013d&usePUB=true&_phsrc=BoV54&_phstart=successSource

Max Nowinski

Social Security Number: 052-14-0051

Birth Date: 21 Jul 1920

Issue Year: Before 1951

Issue State: New York

Last Residence: 08831, Jamesburg, Middlesex, New Jersey, USA

Death Date: 28 Jun 2004

1938 - Pythagorean societyy...

https://www.ancestry.com/imageviewer/collections/1265/images/43134_b203804-00051?usePUB=true&_phsrc=BoV55&_phstart=successSource&usePUBJs=true&pId=363475003

brohters -

William Nowinski 1917

WIlliam was a violinist with the NYC Philharmonic

https://www.nytimes.com/1982/09/13/obituaries/william-nowinski-violinist-with-the-philharmonic-64.html

Jack nowinski 1931

daughter Sonia Nowinski

https://www.ancestry.com/imageviewer/collections/2442/images/m-t0627-02652-00283?usePUB=true&_phsrc=BoV55&_phstart=successSource&usePUBJs=true&pId=5874911

he is in college

father is a "radio annoincer" as of 1940

1925 census

https://www.ancestry.com/imageviewer/collections/2704/images/32849_b094195-00162?treeid=&personid=&rc=&usePUB=true&_phsrc=BoV59&_phstart=successSource&pId=19307624

1958

living in new rochelle

https://www.ancestry.com/imageviewer/collections/2469/images/2029143?usePUB=true&_phsrc=BoV60&_phstart=successSource&usePUBJs=true&pId=101602091

wife - Alice

Engineer "NYC"

cole terrace, new rochelle - very nice houses

https://www.legacy.com/obituaries/trenton/obituary.aspx?n=max-nowinski&pid=2380081&ua=

Max Nowinski

Send Flowers Share

MONROE TOWNSHIP -- Max Nowinski, 83, of Monroe Township, formerly of New Rochelle, NY, died.

Mr. Nowinski was a mechanical engineer in the construction industry for over 40 years.

He was predeceased by his beloved wife Alice and his daughter Karen. He is survived by his sons Ira, Robert and Charles. Brother of Jack and Sonia, and seven grandchildren.

Services were held noon Wednesday at Robert Schoem's Menorah Chapel, W-150 Rt. 4, Paramus.

Published in "The Times, Trenton," on Jul. 1, 2004.

https://www.nytimes.com/2004/06/30/classified/paid-notice-deaths-nowinski-max.html?searchResultPosition=1

Paid Notice: Deaths NOWINSKI, MAX

June 30, 2004

NOWINSKI--Max, 83, of Monroe Township, NJ, formerly of New Rochelle, NY. A Mechanical Engineer in construction industry over forty years. Predeceased by his beloved Alice and his daughter Karen. Survived by his sons Ira, Robert and Charles. Brother of Jack and Sonia, & seven grandchildren. Services today, 12 Noon at Robert Schoem's Menorah Chapel, W-150 Rt. 4, Paramus, NJ.

Charles Nowinski ...

Born .. 1958 ????

View Tree for Charles NowinskiCharles Nowinski (b. 1958)

Charles Nowinski (son of Maximillian Nowinski and Alice Leichtman)5982, 5983 was born 1958 in New York.He married Nancy Diamond on June 1983.

More About Charles Nowinski and Nancy Diamond:

Marriage: June 1983

Children of Charles Nowinski and Nancy Diamond are:

Living Nowinski.

Living Nowinski.

http://www.otrr.org/FILES/Magz_pdf/Radio%20Guide/Radio%20Guide%2034-05-19.pdf

WIND — Polish Music with Edward Nowinski

Max was living with his Father at 540 west 122 st. in manhattan as of 1940 census - looks like a Columbia U address.??

https://www.ancestry.com/imageviewer/collections/2442/images/m-t0627-02652-00283?usePUB=true&_phsrc=BoV55&_phstart=successSource&usePUBJs=true&pId=5874911

Saved Wikipedia (March 19, 2021) for "Ira Nowinski"

Source : [HK0063][GDrive]

Ira Nowinski is a photographer. Nowinski earned a Master of Fine Art's degree from the San Francisco Art Institute in 1973. From the late 1970s through the early 1980s, Nowinski served as the official photographer of the San Francisco Opera.[1] His photographs have been collected extensively by the University of California, Berkeley's Bancroft Library; Stanford University Libraries' Department of Special Collections; Bibliothèque Nationale in Paris; the Museum of Modern Art, New York, and the National Museum of Photography, Bradford, England.[2][3]

He has worked on three major photographic projects documenting various aspects of the Jewish experience in the 20th Century: *In Fitting Memory: The Art and Politics of Holocaust Memorials*; *Karaite Jews in Egypt, Israel, and the San Francisco Bay Area*; and *Soviet Jews in San Francisco.* [4]

His current projects include a photographic exploration of the Galapagos Islands.[3]

He has had major exhibitions of his photography at the Stanford University Libraries' Peterson Gallery in 2004[1] and the Judah L. Magnes Museum in 2007.[2]

Biography[edit]

Ira Nowinski, an American photographer of Polish and Hungarian Jewish descent, was born in 1942 in New York City and raised in New Rochelle, NY. At the age of 42, he was prodded by opera singer Regina Resnick to do a photo essay around the Jewish milieu. He had previously done photo essays of the North Beach, San Francisco, area, of the evacuation of elderly citizens from hotels in the South of Market area of San Francisco, and of the Southeast Asian Community in the same city. In addition, he had been the staff photographer of the San Francisco Opera since 1978.[5][*failed verification*]

Working first with Resnick and then with Seymour Fromer of the Judah L. Magnes Museum, Rhonda Abrams of the Anti-Defamation League, Anita Friedman

of Jewish Family & Children's Services, and the Northern California Board of Rabbis, Nowinski began documenting the Jewish experience in the San Francisco Bay Area. One of his first projects was to document Soviet Jews who had immigrated during the 1970s and 1980s.[5][*failed verification*]

He also photographed the Karaite Jewish Community in Foster City. The Karaites were a Jewish community that had lived for nearly 500 years in Egypt. The Arab-Israeli war resulted in the expulsion of the Jews from Egypt at the conclusion of that conflict. Many subsequently immigrated first to Israel and then to Northern California. Nowinski retraced their migration route in reverse, first photographing Karaites in Foster City, California, then in Israel, and finally in Egypt.[5][*failed verification*]

Nowinski and Sybil Milton of the U.S. Holocaust Museum did a joint work on the Holocaust Memorials throughout Europe, Israel, and in the United States. This work, entitled "In fitting memory : the art and politics of Holocaust memorials" combined text provided by Milton with Nowinski's photographic essay of the monuments documenting the millions of Jews who lost their lives under the Nazi regime.[5][*failed verification*]

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3. **a b** Ira Nowinski: the Photographer as Witness. Exhibit Home page. Stanford University Libraries. Retrieved 2011-01-30
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10. **^** Ira Nowinski: the Photographer as Witness. Online Exhibit. Introduction. Stanford University Libraries, retrieved 2011-01-30
11. ^
12. Jump up to:
13. **a b c d** Guide to the Ira Nowinski Collection, ca. 1965-2000, Stanford University Libraries, retrieved 2011-01-30

Further reading[edit]

Research Resources[edit]

- Ira Nowinski collection, ca. 1965-2000 (10 linear ft.; ca. 15,000 photographs and negatives) are housed in the Department of Special Collections and University Archives at Stanford University Libraries

External links[edit]

- Guide to the Ira Nowinski collection, ca. 1965-2000. Stanford University Libraries, 2003.
- Ira Nowinski - Photographer. Artist's website, retrieved 2011-01-30.
- Ira Nowinski: the Photographer as Witness. Online exhibit, Stanford University Libraries.
- Ira Nowinski Photograph Set from the Judah L. Magnes Museum Jewish Art Collection on flikr. Retrieved 2012-11-17.

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Dr. Robert Charles Nowinski (born 1945)

1987 - MIT Enterprise Foundation Tech Event
[HI002O][GDrive]

Wikipedia NONE

Born Nov 27. 1945 [HL006R][GDrive]

Father - **Maximilian Irving Nowinski (born 1920)**

Associations

- **Genetic Systems Corporation** (...)
- **VaxGen, Incorporated** (...)
- **Dr. Edward Donnall "Don" Thomas (born 1920)**
- **David Abraham Blech (born 1955)** (at **Genetic Systems Corporation**)
- In 1971, his research is mentioned in the **Special Virus-Cancer Program** - what was his role (if any) with the SVCP ?

Robert Nowinski bio, from Google Sites (2013 March 18 capture)

Source : [HW0063][GDrive]

Dr. Robert Nowinski has founded six biotechnology companies. He subsequently brought four of these companies public through an IPO financing. He was the first employee in each company and also held the executive position(s) of CEO and/or the Chairman of the Board. In each business he set the direction, acquired the initial technology, recruited key management and provided oversight for the research programs. Dr. Robert Nowinski also conducted private and public financings of up to $130 million for each company.

Three of the public companies have been acquired by major pharmaceutical companies; Genetic Systems in 1987 for $310 million by Bristol-Myers; PathoGenesis in 2000 for $660 million by Chiron/Novartis; and Icos in 2006 for $2.2 billion by Eli Lilly. The fourth public company, [**VaxGen, Incorporated**], is traded on NASDAQ. Collectively, these companies have developed and marketed eight diagnostic tests and two therapeutic drugs with annual sales exceeding $2.0 billion.

Robert Nowinski received his Ph.D. in immunology from the Sloan-Kettering Institute in 1971. From 1971 to 1975 he was an assistant professor of oncology at the University of Wisconsin. **From 1975 through 1981, he was an associate professor of microbiology and immunology at the University of Washington.** He also was a founding scientist and head of the Virology Program of the Fred Hutchinson Cancer Research Center in Seattle. From 1981 through 1982, Robert Nowinski was a professor of microbiology at the UW and a member of the FHCRC. His academic research concerned cancer-causing retroviruses, as well as antibody treatments for cancer and antibodies for the diagnosis of sexually-transmitted diseases.

In 1981, Dr. Robert Nowinski began a second career in the biotechnology industry when he founded Genetic Systems Corp. in Seattle. Genetic Systems conducted an IPO financing within one month of its formation. The company developed diagnostic products and treatments for infectious diseases and cancer. From 1981 through 1985,Robert Nowinski was the company's chairman and CEO.

Genetic Systems developed the first rapid test for Chlamydia, the most prevalent sexually-transmitted disease in humans. This test decreased the average time of diagnosis from 21 days to 45 minutes, lowered the cost of diagnosis from $150 to $4.50 and expanded the U.S. market from 150,000 tests per year to an estimated 20 million. In collaboration with the Institut Pasteur, Genetic Systems then developed the most accurate blood test for HIV within the first generation of HIV diagnostics.

In 1983, within the structure of Genetic Systems, Dr. Robert Nowinski founded the subsidiary Oncogen LP, dedicated solely to cancer diagnostics. Oncogen, located in the Genetic Systems Building, was co-owned and solely financed by Syntex Corp. In 1985, Genetic Systems and Syntex each sold one-third of their interests to Bristol-Myers Corp. and the mandate of Oncogen was expanded to include cancer therapeutics

In 1986, Dr. Robert Nowinski initiated and managed the merger of Genetic Systems and Oncogen LP into Bristol-Myers through a pooling of interests valued at $310 million. Dr. Robert Nowinski was appointed corporate vice president for New Technology at Bristol-Myers and chairman of the new Genetic Systems Division. At that time he relocated from Seattle to the corporate headquarters of Bristol-Myers in New York.

In 1989, Dr. Robert Nowinski returned to Seattle and founded Icos Corp. Dr. Robert Nowinski served as CEO of Icos from 1989 to 1991. In 1991, he brought Icos public. The company focused on inflammation and novel methods for drug discovery. Icos developed the drug Cialis for treating erectile dysfunction. Eli Lilly markets Cialis, with annual sales exceeding $1.2 billion. In 2006, Icos was acquired by E. Lilly for $2.2 billion.

In 1992, Dr. Robert Nowinski founded PathoGenesis. The company focused on the cause and treatment of chronic illnesses. Dr. Robert Nowinski served as chairman of PathoGenesis from 1992 to 1995 and as chairman emeritus for several years thereafter. In 1993, he brought PathoGenesis public. In 1997, PathoGenesis received FDA approval to market an aerosolized form of tobramycin, or TOBI, for treating cystic fibrosis. In addition, research within PathoGenesis identified HerpesVirus 6 as a primary causative agent of multiple sclerosis. In August 2000, PathoGenesis was acquired by Chiron Corp. for $660 million. TOBI is now the leading treatment for cystic fibrosis; annual sales exceed $600 million. Chiron was subsequently acquired by Novartis.

In 1995, Dr. Robert Nowinski founded [**VaxGen, Incorporated**]. VaxGen develops preventive vaccines for infectious diseases. He served as VaxGen's chairman and CEO until 2000. Dr. Robert Nowinski brought VaxGen public in 1998. [**VaxGen, Incorporated**] completed the first Phase 3 trial of an HIV vaccine, or AIDSVAX. AIDSVAX was tested in 8,500 volunteers on three continents. The trial, completed in January 2003, reported that the vaccine was ineffective. Although 100% of vaccine-recipients developed antibodies, the rate of HIV infection was similar in the vaccinated and placebo groups. VaxGen has since developed vaccines against anthrax and smallpox.

In 2000, Dr. Robert Nowinski founded and became chairman and CEO of Primal Inc. Primal, based in Seattle, develops products for behavioral disorders, including those that address disorders in appetite, sexuality, mood, pain and addiction. The company focuses on gene knock-out technology in mice and the biology of G-protein coupled receptors (GPCRs), the targets for over 45% of today's pharmaceuticals. Primal was co-founded with Dr. Linda Buck, the winner of the 2005 Nobel Prize for Medicine. Primal was the first to describe the full complement of 475 GPCR genes in humans and has within its patent portfolio claims for the entire family of GPCRs as potential drug targets. Primal is currently in the business of developing new drugs to GPCRs.

In 2008, Dr. Robert Nowinski moved to New York and founded ContraFect Corporation.

Founder of "**PathoGenesis Corp**"

Source : [HW0062][GDrive] : "***Brown, previously at Bristol-Myers Squibb in Seattle, in 1992 became PathoGenesis Corp.'s first employee after founder [Dr. Robert Charles Nowinski (born 1945)].*** *Burmer was the first program director at PathoGenesis, and managed its pathogen discovery program.* "

Was it all about Pathogenic Priming? This has been considered risky - https://pubmed.ncbi.nlm.nih.gov/32292901/

"**Abstract**

Homology between human and viral proteins is an established factor in viral- or vaccine-induced autoimmunity. Failure of SARS and MERS vaccines in animal trials involved pathogenesis consistent with an immunological priming that could involve autoimmunity in lung tissues due to previous exposure to the SARS and MERS spike protein. Exposure pathogenesis to SARS-CoV-2 in COVID-19 likely will lead to similar outcomes. Immunogenic peptides in viruses or bacteria that match human proteins are good candidates for pathogenic priming peptides (similar to the more diffuse idea of "immune enhancement"). Here I provide an assessment of potential for human **pathogenesis** via autoimmunity via exposure, via infection or injection. SAR-CoV-2 spike proteins, and all other SARS-CoV-2 proteins, immunogenic epitopes in each SARS-CoV-2 protein were compared to human proteins in search of high local homologous matching. Only one immunogenic epitope in a SARS-CoV-2 had no homology to human proteins. If all of the parts of the epitopes that are homologous to human proteins are excluded from consideration due to risk of pathogenic priming, the remaining immunogenic parts of the epitopes may be still immunogenic and remain as potentially viable candidates for vaccine development. Mapping of the genes encoding human protein matches to pathways point to targets that could explain the observed presentation of symptoms in COVID-19 disease. It also strongly points to a large number of opportunities for expected disturbances in the immune system itself, targeting elements of MHC Class I and Class II antigen presentation, PD-1 signaling, cross-presentation of soluble exogenous antigens and the ER-Phagosome pathway. Translational consequences of these findings are explored.

Keywords: Autoimmunity; COVID-19; Immune Enhancement; Pathogenic priming; SARS-CoV-2."

Where Nowinski is now - https://www.contrafect.com

https://www.scientificamerican.com/article/the-virtuous-side-of-viruses/

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second marriage -

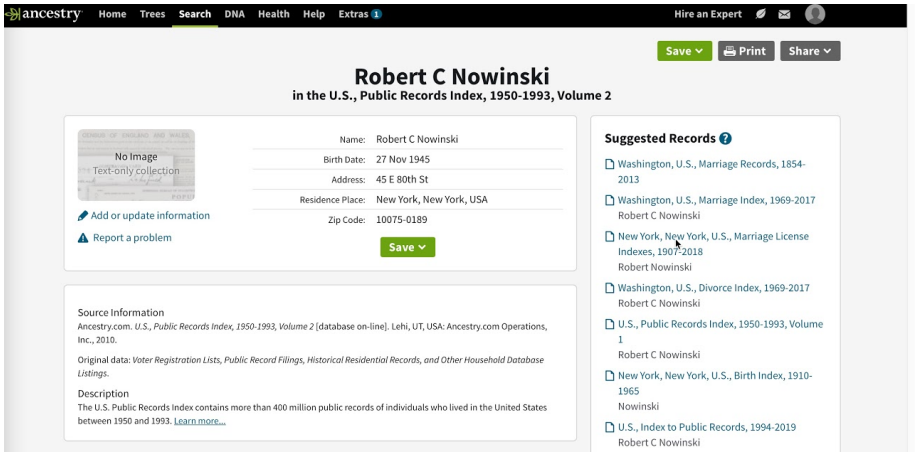
https://www.ancestry.com/imageviewer/collections/2378/images/92423092_3eaae05f-4ddc-48e1-83c1-0b5f2a1d2477?treeid=&personid=&hintid=&queryId=9fb06832f6b26188bf7e34c65a1854ae&usePUB=true&_phsrc=BoV29&_phstart=successSource&usePUBJs=true&_ga=2.132299278.1851241754.1615991515-1461832356.1615217983&pId=1407393

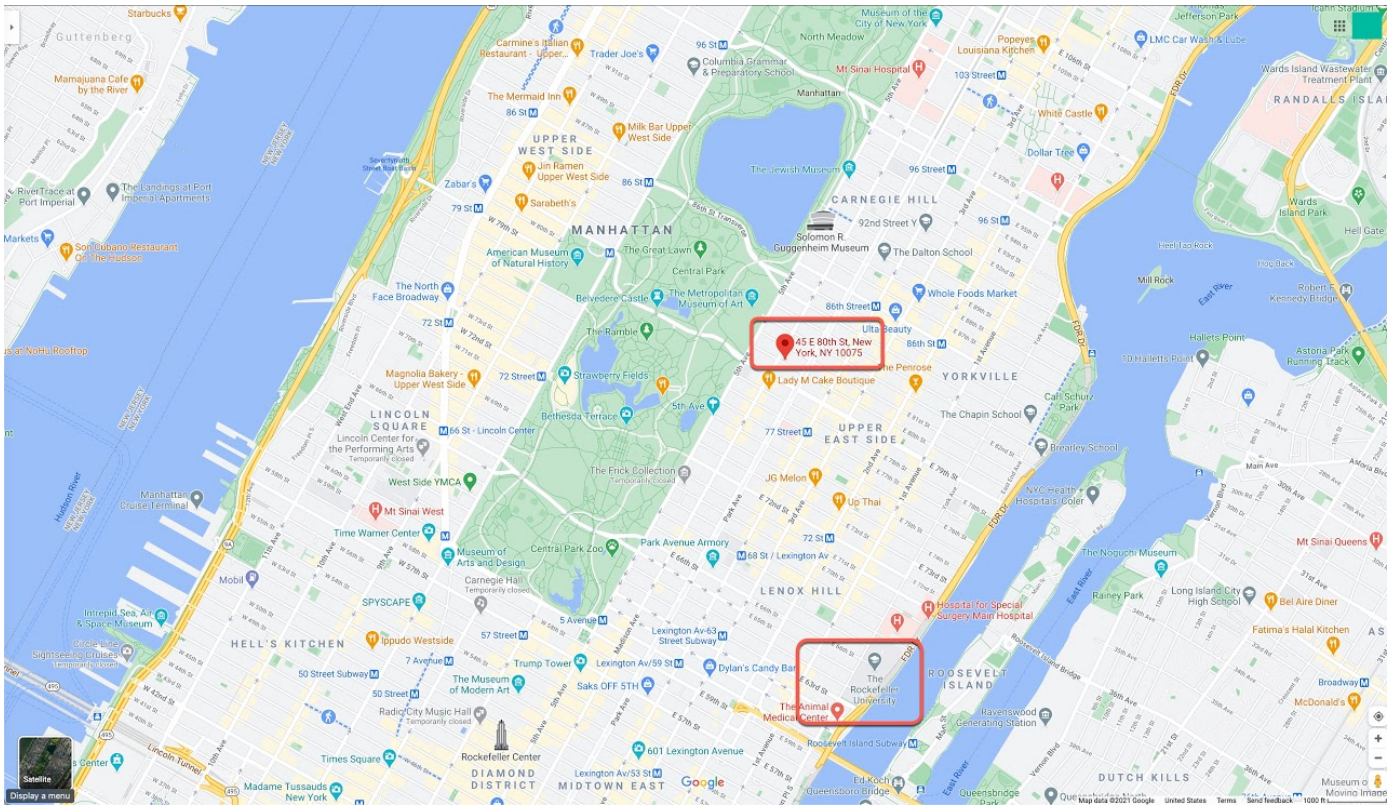
EVIDENCE TIMELINE

1945 (Nov 27) - Born in New York City, resides in Manhattan

Source is Ancestry.com : (Image is below) .. [HL006R][GDrive]

Robert C Nowinski, **Birth Date:** 27 Nov 1945 / **Address:** 45 E 80th St, New York, New York, USA



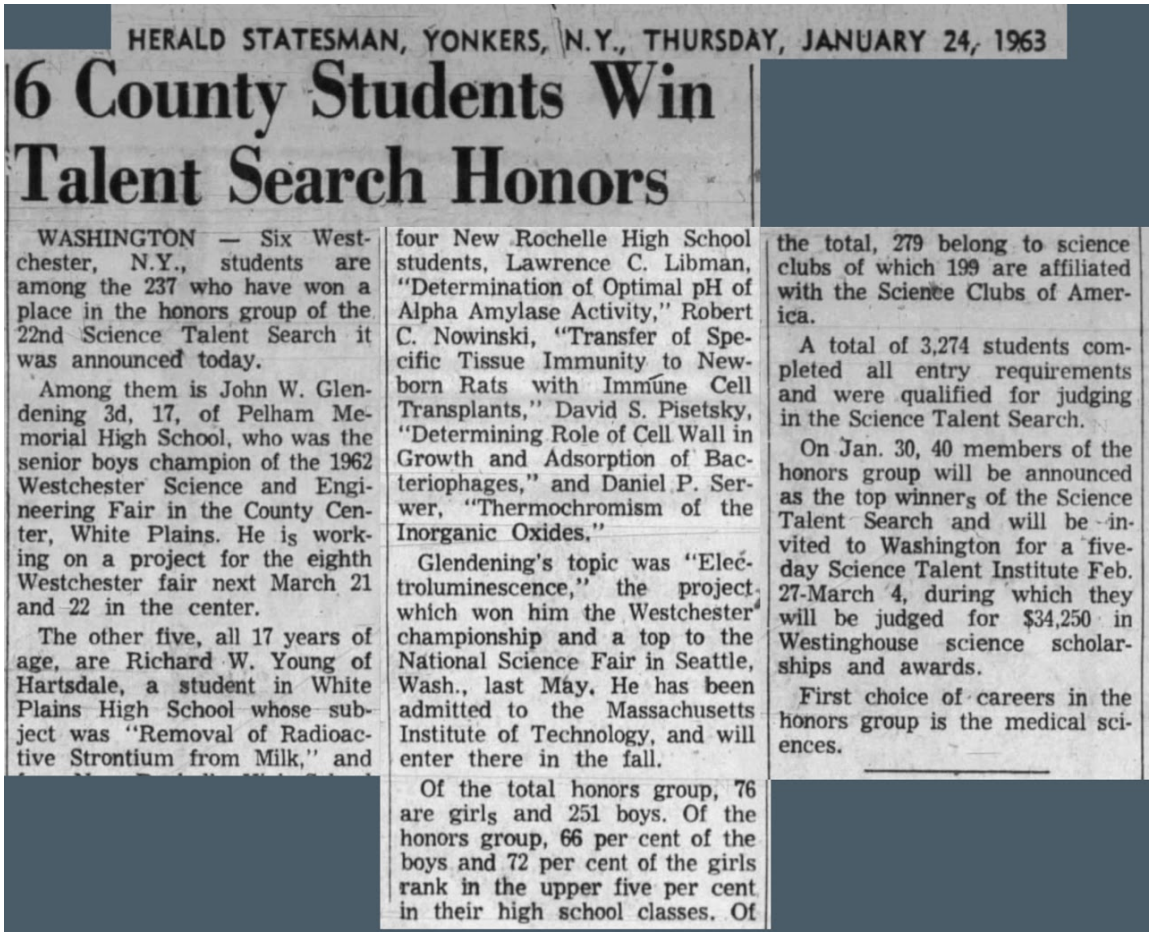


1963 (Jan) - Robert C. Nowinski - A graduating high school student

NOTE : High-school research titled "Transfer of Specific Tissue Immunity to Newborn Rats with Immune Cell Transplants" ... per yearbook, it can be asserted that this was at the Memorial Sloan Kettering Institute

Jan 24 1963,,.. with a birthday of Nov 27. 1945 , Robert C. Nowinski would have turned 17 years old on Nov 1962 (and be 17 for Jan of 1963)

Full newspaper page : [HN01JA][GDrive]



HERALD STATESMAN, YONKERS, N.Y., THURSDAY, JANUARY 24, 1963

6 County Students Win Talent Search Honors

WASHINGTON — Six Westchester, N.Y., students are among the 237 who have won a place in the honors group of the 22nd Science Talent Search it was announced today.

Among them is John W. Glendening 3d, 17, of Pelham Memorial High School, who was the senior boys champion of the 1962 Westchester Science and Engineering Fair in the County Center, White Plains. He is working on a project for the eighth Westchester fair next March 21 and 22 in the center.

The other five, all 17 years of age, are Richard W. Young of Hartsdale, a student in White Plains High School whose subject was "Removal of Radioactive Strontium from Milk," and four New Rochelle High School students, Lawrence C. Libman, "Determination of Optimal pH of Alpha Amylase Activity," Robert C. Nowinski, "Transfer of Specific Tissue Immunity to Newborn Rats with Immune Cell Transplants," David S. Pisetsky, "Determining Role of Cell Wall in Growth and Adsorption of Bacteriophages," and Daniel P. Serwer, "Thermochromism of the Inorganic Oxides."

Glendening's topic was "Electroluminescence," the project which won him the Westchester championship and a top to the National Science Fair in Seattle, Wash., last May. He has been admitted to the Massachusetts Institute of Technology, and will enter there in the fall.

Of the total honors group, 76 are girls and 251 boys. Of the honors group, 66 per cent of the boys and 72 per cent of the girls rank in the upper five per cent in their high school classes. Of the total, 279 belong to science clubs of which 199 are affiliated with the Science Clubs of America.

A total of 3,274 students completed all entry requirements and were qualified for judging in the Science Talent Search.

On Jan. 30, 40 members of the honors group will be announced as the top winners of the Science Talent Search and will be invited to Washington for a five-day Science Talent Institute Feb. 27-March 4, during which they will be judged for $34,250 in Westinghouse science scholarships and awards.

First choice of careers in the honors group is the medical sciences.

[HN01JB][GDrive]

1963 (January to June) - Graduation from high school - Has worked in the lab at Memorial Sloan-Kettering Institute while in high school

https://www.ancestry.com/imageviewer/collections/1265/images/sid_2159_1963_0001?usePUB=true&_phsrc=BoV32&_phstart=successSource&usePUBJs=true&pId=571705706
1963-new-rochelle-ny-high-school-yearbook-img-cover
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https://www.ancestry.com/imageviewer/collections/1265/images/sid_2159_1963_0002?usePUB=true&_phsrc=BoV32&_phstart=successSource&usePUBJs=true&pId=571705706
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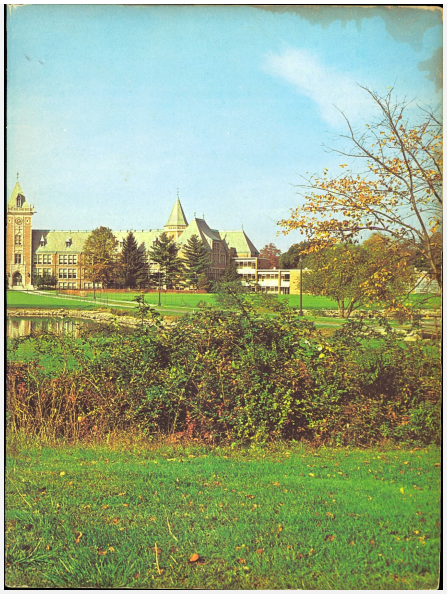
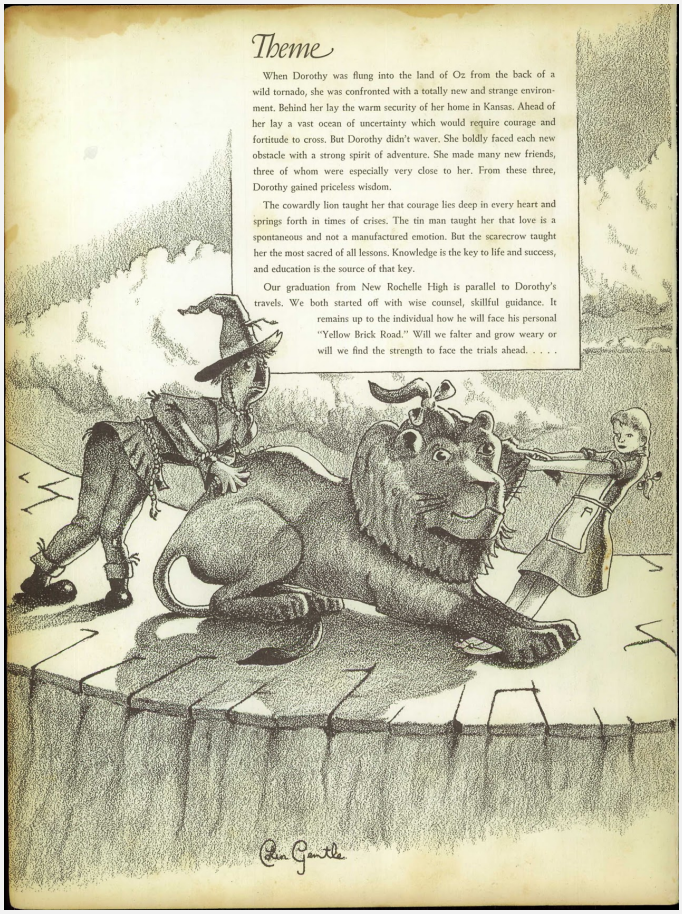


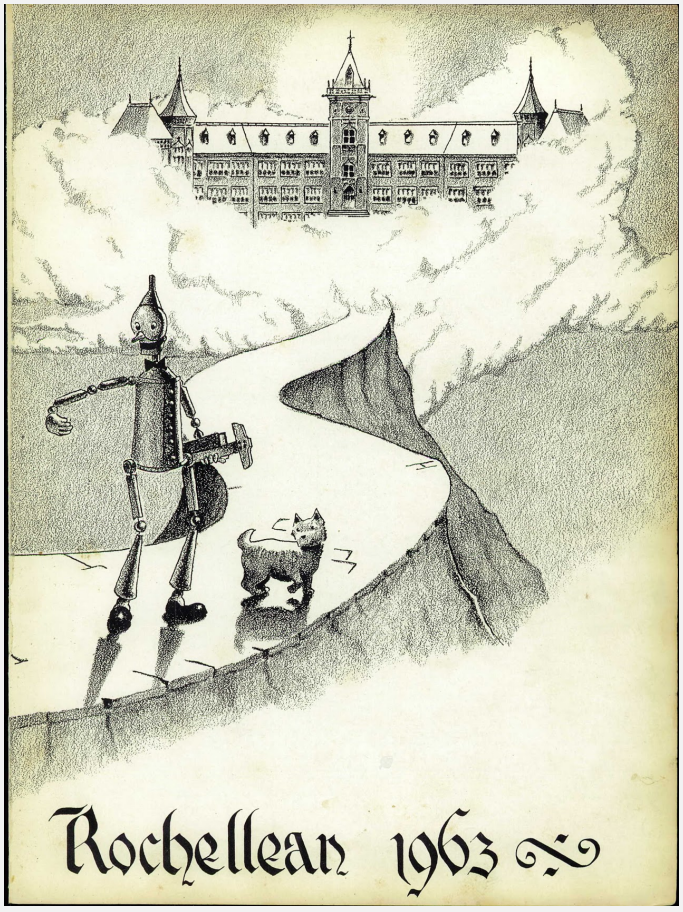
Theme

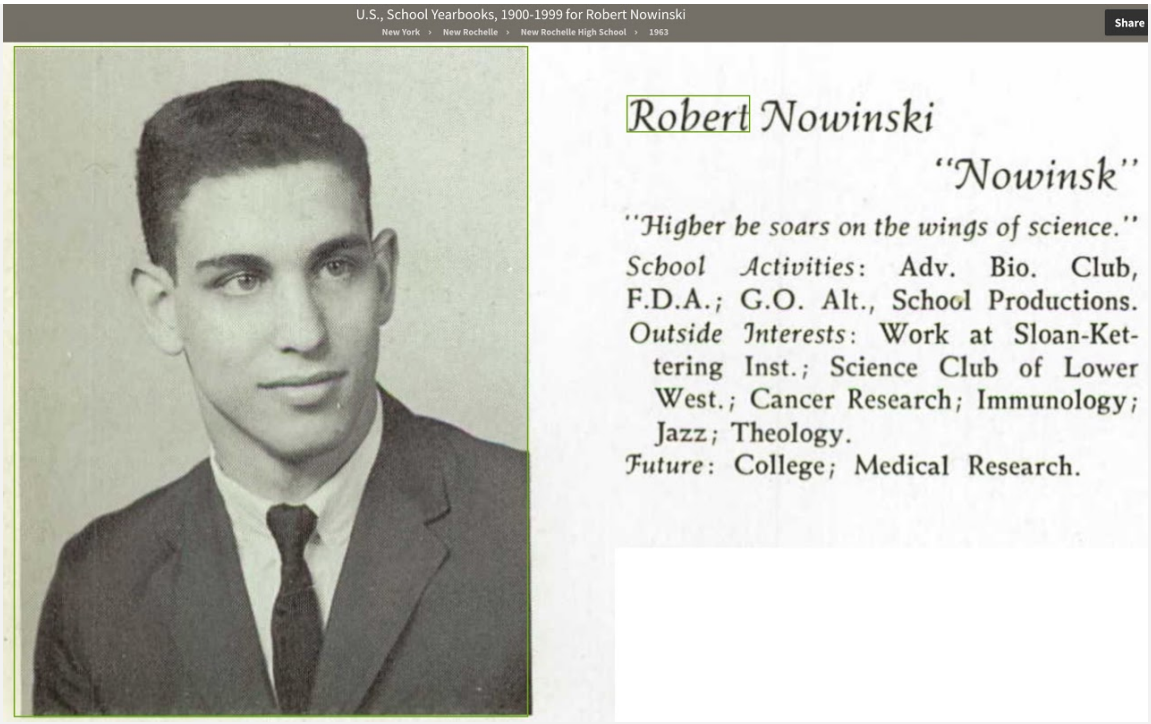
When Dorothy was flung into the land of Oz from the back of a wild tornado, she was confronted with a totally new and strange environment. Behind her lay the warm security of her home in Kansas. Ahead of her lay a vast ocean of uncertainty which would require courage and fortitude to cross. But Dorothy didn't waver. She boldly faced each new obstacle with a strong spirit of adventure. She made many new friends, three of whom were especially very close to her. From these three, Dorothy gained priceless wisdom.

The cowardly lion taught her that courage lies deep in every heart and springs forth in times of crises. The tin man taught her that love is a spontaneous and not a manufactured emotion. But the scarecrow taught her the most sacred of all lessons. Knowledge is the key to life and success, and education is the source of that key.

Our graduation from New Rochelle High is parallel to Dorothy's travels. We both started off with wise counsel, skillful guidance. It remains up to the individual how he will face his personal "Yellow Brick Road." Will we falter and grow weary or will we find the strength to face the trials ahead. . . . .







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https://drive.google.com/file/d/1eAq4Nr0_iALU-QHIkPwyRMz5kixNIpK8/view?usp=sharing

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1963 (September/August) - Start of College (B.S.) at Beloit (liberal arts college in Wisconsin)

1966 (Dec) / 1967 (Jan) - Research - "A soluble antigen of the mammary tumor virus."

https://europepmc.org/article/MED/4289349

1967-01-virology-vol-31-issue-1-a-soluble-antigen-of-the-memmary-tumor-virus-nowinski-old-moore-geering-boyse-pmid-4289349

Nowinski RC, Old LJ, Moore DH, Geering G, Boyse EA

Virology, 31 Dec 1966, 31(1):1-14

DOI: 10.1016/0042-6822(67)90002-5 PMID: 4289349

https://sci-hub.se/https://doi.org/10.1016/0042-6822(67)90002-5

accepted 1966 ??

NOTE the names on this research : Dr. Lloyd Old and D. Dan H. Moore are both editors for Cancer Research, and both report to the President of the American Cancer Research Institute Dr. Chester Milton Southam (born 1919) in 1968/1969 (see [HP005M][GDrive])

1967 (spring?) - Graduation, B.S: Graduated from Beloit in 1967

Beloit is a liberal arts college in Wisconsin : See [HN01JC][GDrive]

and https://ecommons.cornell.edu/bitstream/handle/1813/37686/CUA_v60_1968_69_11X.pdf?sequence=1&isAllowed=y

Yearbook - https://dcms.beloit.edu/digital/collection/magazine/id/5406/

cum laude - (graduated with HONORS) - https://dcms.beloit.edu/digital/collection/magazine/id/5401/rec/6

1967 (Dec) - "Influence of mammary tumor virus infection on the acceptance or rejection of transplanted ML+ leukemias."

https://europepmc.org/article/MED/4296245

1967-12-proceedings-society-for-experimental-biology-and-medicine-pmid-4296245-influence-mammary-tumor-virus-infection.pdf

Nowinski RC, Boyse EA, Old LJ, Carswell EA

Proceedings of the Society for Experimental Biology and Medicine. Society for Experimental Biology and Medicine (New York, N.Y.), 31 Dec 1967, 127(1):20-25

DOI: 10.3181/00379727-127-32611 PMID: 4296245

1970 - Marriage (barbara perez)

Robert Nowinski

Gender: Male

Marriage License Date: 1970

Marriage License Place: Manhattan, New York City, New York, USA

Spouse:

Barbara Perez

License Number: 19404

1971 (July) - Research : "Purification of IMP:Pyrophosphate Phosphoribosyltransferases, Catalytically Incompetent Enzymes in Lesch-Nyhan Disease"

https://www.pnas.org/content/68/7/1461

https://sci-hub.se/https://doi.org/10.1073/pnas.68.7.1461#

1971-07-proceedings-of-national-academy-of-sciences-rubin1971.pdf

Charles S. Rubin, Joseph Dancis, Lily C. Yip, Robert C. Nowinski, and M. Earl Balis

1. [1]Sloan-Kettering Division of Cornell University Graduate School of Medical Science, Division of Cell Metabolism, Sloan-Kettering Institute for Cancer Research, New York, N.Y. 10021
2. [†]Department of Pediatrics, New York University School of Medicine, New York, N.Y. 10016

PNAS July 1, 1971 68 (7) 1461-1464; https://doi.org/10.1073/pnas.68.7.1461

Abstract

IMP:pyrophosphate phosphoribosyltransferase (IPPase) (EC 2.4.2.8) has been purified over 7000-fold from human erythrocytes. The purified enzyme moved as a single band on disc electrophoresis. Antisera prepared in rabbits and rats against the purified enzyme precipitated and neutralized the enzyme, but had no effect on AMP-pyrophosphate phosphoribosyltransferase (EC 2.4.2.7) activity. Evidence was found for isozymes (enzyme variants) of IPPase in normal erythrocytes.

Erythrocyte lysates of five patients with Lesch-Nyhan disease reacted with antisera against normal IPPase. Lysates from LN erythrocytes blocked the inactivation of normal enzyme by the antibody. LN erythrocytes had about the same concentration of enzyme protein as normal erythrocytes.

The genetic defect in LN results in the production of essentially normal amounts of an immunologically identifiable but catalytically incompetent enzyme. Thus LN is apparently the result of a mutation in a structural gene and is not due to deletion of a structural gene or defect in a regulatory gene.

1971 (June) - Research - "Serological and structural properties of Mason-Pfizer monkey virus isolated from the mammary tumor of a Rhesus monkey."

https://europepmc.org/article/med/4997759

Nowinski RC, Edynak E, Sarkar NH

Proceedings of the National Academy of Sciences of the United States of America, 30 Jun 1971, 68(7):1608-1612

DOI: 10.1073/pnas.68.7.1608 PMID: 4997759 PMCID: PMC389251

Abstract

We describe here serological and structural properties of a virus, Mason-Pfizer Monkey Virus (M-PMV), isolated from a simian mammary tumor. This virus is morphologically similar to the known oncogenic RNA viruses (oncornaviruses). It has a 60-70S RNA, and its replication is inhibited by actinomycin. Antisera prepared against the virus isolated by density-gradient centrifugation identify at least two viral structural antigens. Immunodiffusion studies show that this virus is serologically unrelated to three types of simian foamy viruses, visna virus, and the known oncornaviruses. Immunofluorescence reveals that the structural proteins of the virus are synthesized cytoplasmically. Although M-PMV productively infects human cells in vitro, serological analysis does not show the presence of M-PMV antigens in human neoplasia.

Also see https://en.wikipedia.org/wiki/Mason-Pfizer_monkey_virus

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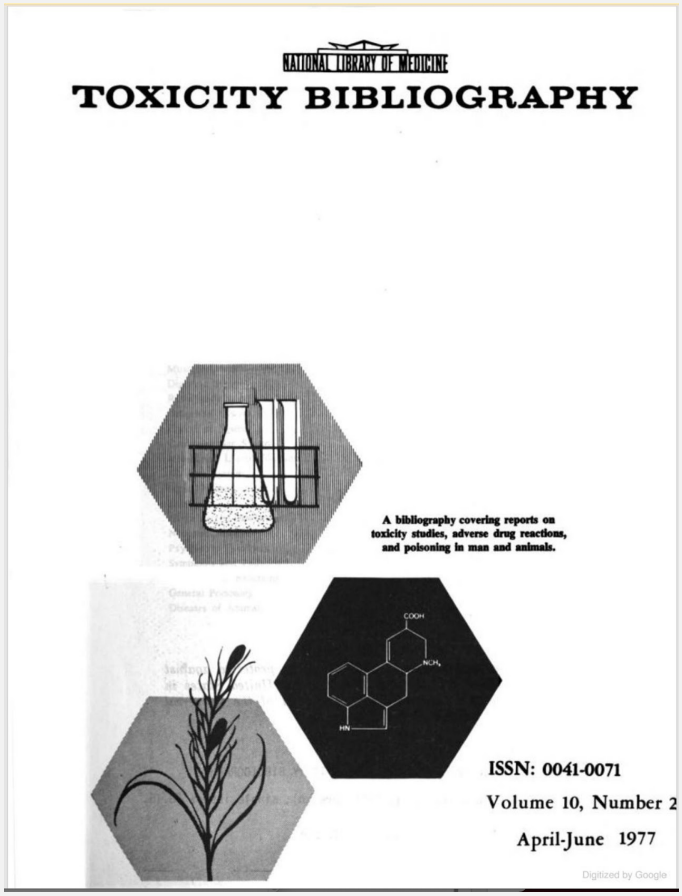
1960/1970s - Was Nowinski taught/mentored by Dr. Chester Southam at the Memorial Sloan Kettering Institute ?

Only a few name under "EXPERIMENTAL SARCOMA .. CHEMICALLY INDUCED" .. and it includes both Dr. Nowinski and **Dr. Chester Milton Southam (born 1919)** .


NATIONAL LIBRARY OF MEDICINE

TOXICITY BIBLIOGRAPHY

A bibliography covering reports on toxicity studies, adverse drug reactions, and poisoning in man and animals.

ISSN: 0041-0071

Volume 10, Number 2

April-June 1977

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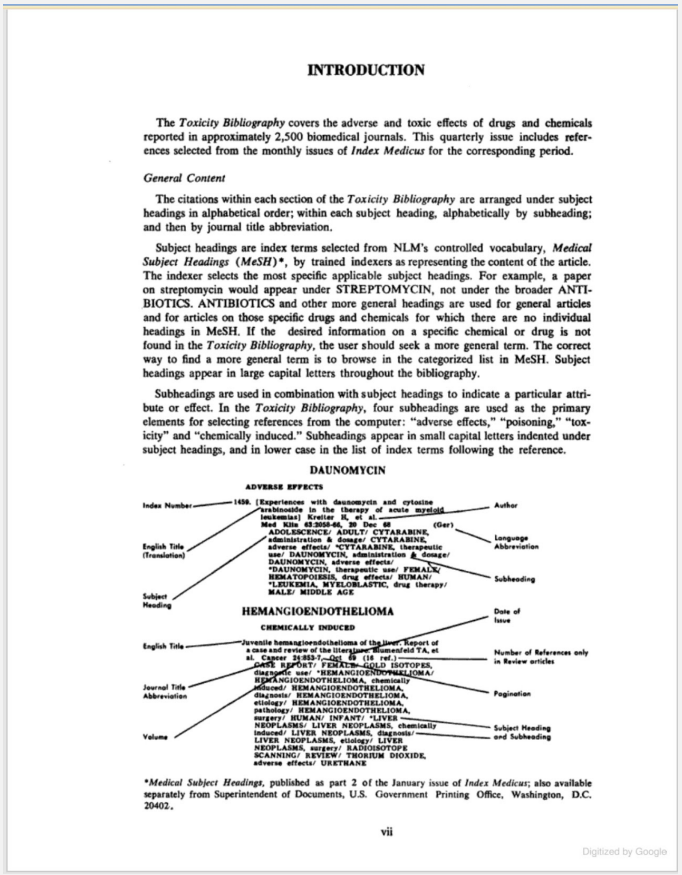
[HG00C1][GDrive]


INTRODUCTION

The *Toxicity Bibliography* covers the adverse and toxic effects of drugs and chemicals reported in approximately 2,500 biomedical journals. This quarterly issue includes references selected from the monthly issues of *Index Medicus* for the corresponding period.

General Content

The citations within each section of the *Toxicity Bibliography* are arranged under subject headings in alphabetical order; within each subject heading, alphabetically by subheading; and then by journal title abbreviation.

Subject headings are index terms selected from NLM's controlled vocabulary, *Medical Subject Headings (MeSH)**, by trained indexers as representing the content of the article. The indexer selects the most specific applicable subject headings. For example, a paper on streptomycin would appear under STREPTOMYCIN, not under the broader ANTIBIOTICS. ANTIBIOTICS and other more general headings are used for general articles and for articles on those specific drugs and chemicals for which there are no individual headings in MeSH. If the desired information on a specific chemical or drug is not found in the *Toxicity Bibliography*, the user should seek a more general term. The correct way to find a more general term is to browse in the categorized list in MeSH. Subject headings appear in large capital letters throughout the bibliography.

Subheadings are used in combination with subject headings to indicate a particular attribute or effect. In the *Toxicity Bibliography*, four subheadings are used as the primary elements for selecting references from the computer: "adverse effects," "poisoning," "toxicity" and "chemically induced." Subheadings appear in small capital letters indented under subject headings, and in lower case in the list of index terms following the reference.

DAUNOMYCIN

ADVERSE EFFECTS

Index Number — Author — English Title (Translation) — Language Abbreviation — Subject Heading — Subheading

HEMANGIOENDOTHELIOMA

CHEMICALLY INDUCED

Date of Issue — English Title — Number of References only in Review articles — Journal Title Abbreviation — Pagination — Volume — Subject Heading and Subheading

**Medical Subject Headings*, published as part 2 of the January issue of *Index Medicus*; also available separately from Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402.

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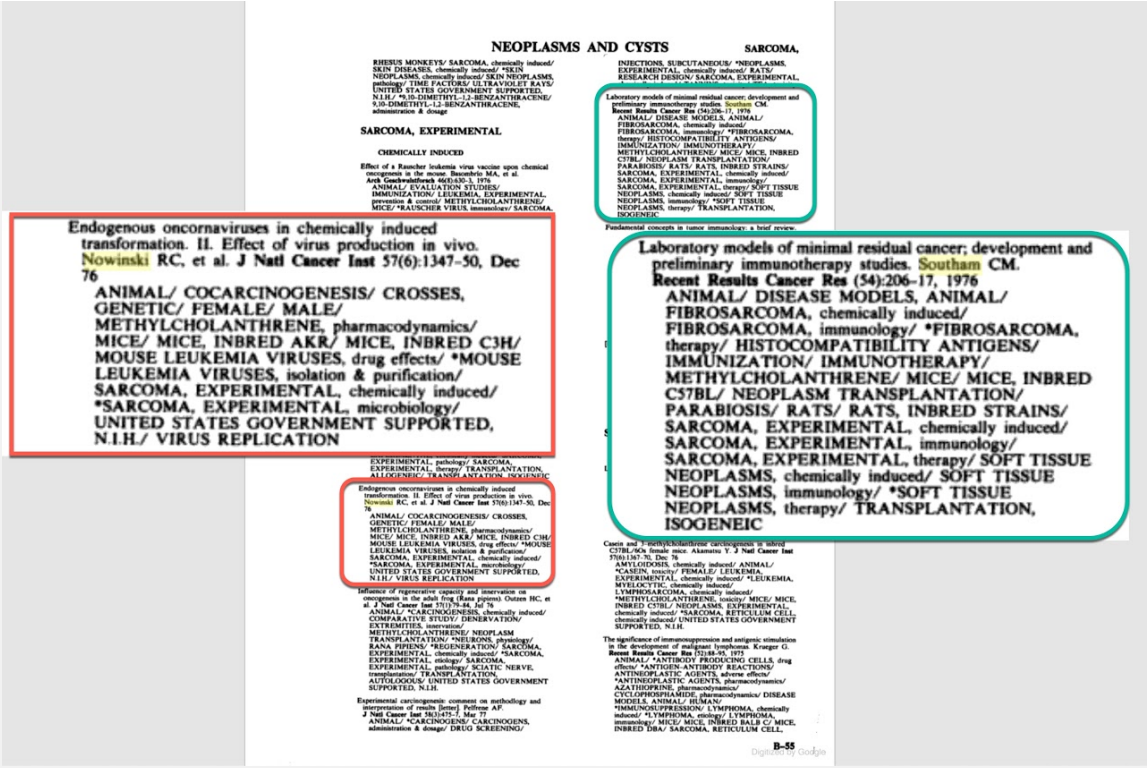
[HG00C2][GDrive]



[HG00C4][GDrive]

1973 - viruses/... oncology

https://www.newspapers.com/image/519290334/?terms=%22robert%20nowinski%22&match=1

1973 (July 14)

https://newspaperarchive.com/madison-capital-times-jul-14-1973-p-9/

1974 (Jan 30) -

https://www.newspapers.com/image/243005730/?terms=%22robert%20nowinski%22&match=1

1974-01-30-the-sheboygan-press-pg-2

https://drive.google.com/file/d/1SDoRyyOnfKxdh63iJEPn9zeem5Rvjj46/view?usp=sharing

1974-01-30-the-sheboygan-press-pg-2-clip-leukemia-controls.jpg

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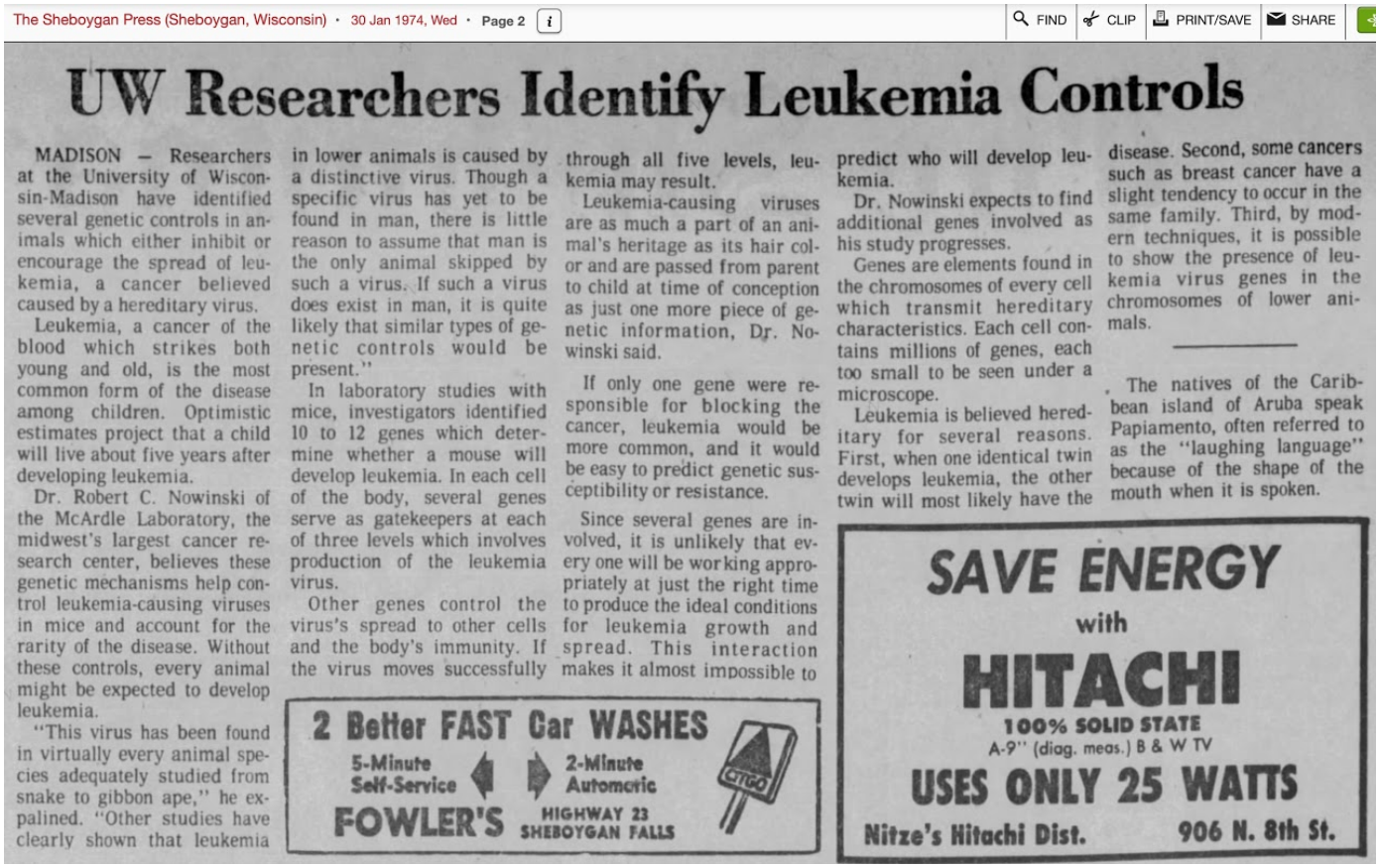

The Sheboygan Press (Sheboygan, Wisconsin) · 30 Jan 1974, Wed · Page 2

UW Researchers Identify Leukemia Controls

MADISON — Researchers at the University of Wisconsin-Madison have identified several genetic controls in animals which either inhibit or encourage the spread of leukemia, a cancer believed caused by a hereditary virus.

Leukemia, a cancer of the blood which strikes both young and old, is the most common form of the disease among children. Optimistic estimates project that a child will live about five years after developing leukemia.

Dr. Robert C. Nowinski of the McArdle Laboratory, the midwest's largest cancer research center, believes these genetic mechanisms help control leukemia-causing viruses in mice and account for the rarity of the disease. Without these controls, every animal might be expected to develop leukemia.

"This virus has been found in virtually every animal species adequately studied from snake to gibbon ape," he explained. "Other studies have clearly shown that leukemia in lower animals is caused by a distinctive virus. Though a specific virus has yet to be found in man, there is little reason to assume that man is the only animal skipped by such a virus. If such a virus does exist in man, it is quite likely that similar types of genetic controls would be present."

In laboratory studies with mice, investigators identified 10 to 12 genes which determine whether a mouse will develop leukemia. In each cell of the body, several genes serve as gatekeepers at each of three levels which involves production of the leukemia virus.

Other genes control the virus's spread to other cells and the body's immunity. If the virus moves successfully through all five levels, leukemia may result.

Leukemia-causing viruses are as much a part of an animal's heritage as its hair color and are passed from parent to child at time of conception as just one more piece of genetic information, Dr. Nowinski said.

If only one gene were responsible for blocking the cancer, leukemia would be more common, and it would be easy to predict genetic susceptibility or resistance.

Since several genes are involved, it is unlikely that every one will be working appropriately at just the right time to produce the ideal conditions for leukemia growth and spread. This interaction makes it almost impossible to predict who will develop leukemia.

Dr. Nowinski expects to find additional genes involved as his study progresses.

Genes are elements found in the chromosomes of every cell which transmit hereditary characteristics. Each cell contains millions of genes, each too small to be seen under a microscope.

Leukemia is believed hereditary for several reasons. First, when one identical twin develops leukemia, the other twin will most likely have the disease. Second, some cancers such as breast cancer have a slight tendency to occur in the same family. Third, by modern techniques, it is possible to show the presence of leukemia virus genes in the chromosomes of lower animals.

The natives of the Caribbean island of Aruba speak Papiamento, often referred to as the "laughing language" because of the shape of the mouth when it is spoken.

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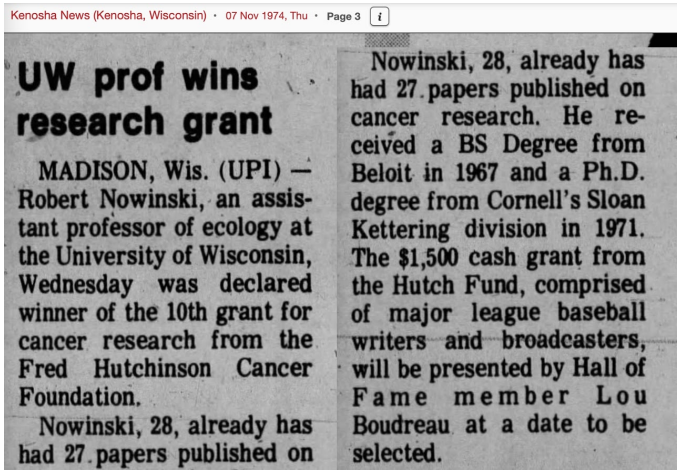
1974 (Nov) - He went to sloan kettering, wins grants to go to Univ. of Washington

Full newspaper page : [HN01JC][GDrive]



Kenosha News (Kenosha, Wisconsin) · 07 Nov 1974, Thu · Page 3

UW prof wins research grant

MADISON, Wis. (UPI) — Robert Nowinski, an assistant professor of ecology at the University of Wisconsin, Wednesday was declared winner of the 10th grant for cancer research from the Fred Hutchinson Cancer Foundation.

Nowinski, 28, already has had 27 papers published on cancer research. He received a BS Degree from Beloit in 1967 and a Ph.D. degree from Cornell's Sloan Kettering division in 1971. The $1,500 cash grant from the Hutch Fund, comprised of major league baseball writers and broadcasters, will be presented by Hall of Fame member Lou Boudreau at a date to be selected.

[HN01JD][GDrive]

1975 (July 7) - Divorcing

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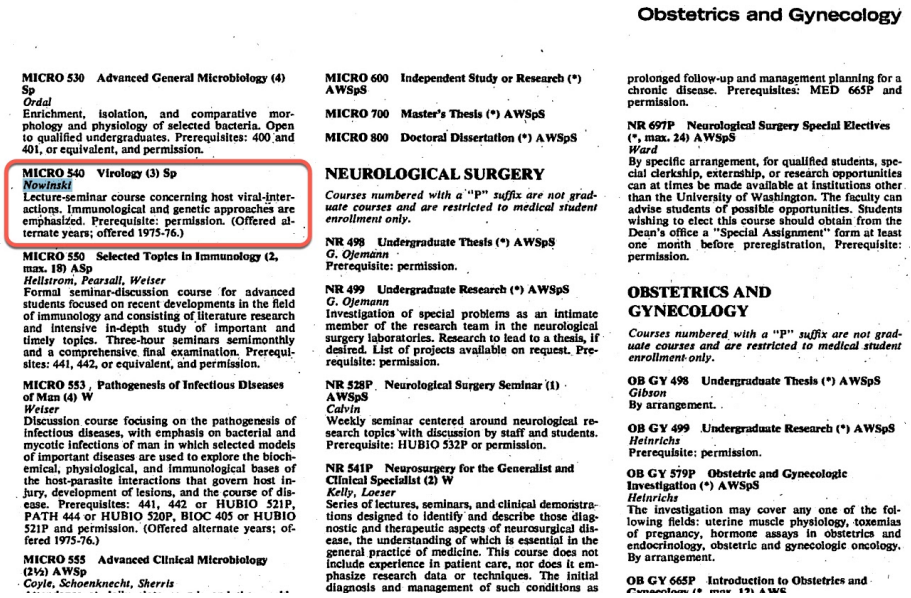
1976 - Nowinski... Teaching THE only virology class (MICRO 540) at University of Washington

Source : 1976-1978 University of Washington General Catalog : [HE003M][GDrive] / See clip at [HE0042][GDrive] , or **Dr. Robert Charles Nowinski (born 1945)**



Obstetrics and Gynecology

MICRO 530 Advanced General Microbiology (4) Sp
Ordal
Enrichment, isolation, and comparative morphology and physiology of selected bacteria. Open to qualified undergraduates. Prerequisites: 400 and 401, or equivalent, and permission.

MICRO 540 Virology (3) Sp
Nowinski
Lecture-seminar course concerning host viral-interactions. Immunological and genetic approaches are emphasized. Prerequisite: permission. (Offered alternate years; offered 1975-76.)

MICRO 550 Selected Topics in Immunology (2, max. 18) ASp
Hellstrom, Pearsall, Weiser
Formal seminar-discussion course for advanced students focused on recent developments in the field of immunology and consisting of literature research and intensive in-depth study of important and timely topics. Three-hour seminars semimonthly and a comprehensive final examination. Prerequisites: 441, 442, or equivalent, and permission.

MICRO 553 Pathogenesis of Infectious Diseases of Man (4) W
Weiser
Discussion course focusing on the pathogenesis of infectious diseases, with emphasis on bacterial and mycotic infections of man in which selected models of important diseases are used to explore the biochemical, physiological, and immunological bases of the host-parasite interactions that govern host injury, development of lesions, and the course of disease. Prerequisites: 441, 442 or HUBIO 521P, PATH 444 or HUBIO 520P, BIOC 405 or HUBIO 521P and permission. (Offered alternate years; offered 1975-76.)

MICRO 555 Advanced Clinical Microbiology (2½) AWSp
Coyle, Schoenknecht, Sherris

MICRO 600 Independent Study or Research (*) AWSpS

MICRO 700 Master's Thesis (*) AWSpS

MICRO 800 Doctoral Dissertation (*) AWSpS

NEUROLOGICAL SURGERY

Courses numbered with a "P" suffix are not graduate courses and are restricted to medical student enrollment only.

NR 498 Undergraduate Thesis (*) AWSpS
G. Ojemann
Prerequisite: permission.

NR 499 Undergraduate Research (*) AWSpS
G. Ojemann
Investigation of special problems as an intimate member of the research team in the neurological surgery laboratories. Research to lead to a thesis, if desired. List of projects available on request. Prerequisite: permission.

NR 528P Neurological Surgery Seminar (1) AWSpS
Calvin
Weekly seminar centered around neurological research topics with discussion by staff and students. Prerequisite: HUBIO 532P or permission.

NR 541P Neurosurgery for the Generalist and Clinical Specialist (2) W
Kelly, Loeser
Series of lectures, seminars, and clinical demonstrations designed to identify and describe those diagnostic and therapeutic aspects of neurosurgical disease, the understanding of which is essential in the general practice of medicine. This course does not include experience in patient care, nor does it emphasize research data or techniques. The initial diagnosis and management of such conditions as prolonged follow-up and management planning for a chronic disease. Prerequisites: MED 665P and permission.

NR 697P Neurological Surgery Special Electives (*, max. 24) AWSpS
Ward
By specific arrangement, for qualified students, special clerkship, externship, or research opportunities can at times be made available at institutions other than the University of Washington. The faculty can advise students of possible opportunities. Students wishing to elect this course should obtain from the Dean's office a "Special Assignment" form at least one month before preregistration. Prerequisite: permission.

OBSTETRICS AND GYNECOLOGY

Courses numbered with a "P" suffix are not graduate courses and are restricted to medical student enrollment only.

OB GY 498 Undergraduate Thesis (*) AWSpS
Gibson
By arrangement.

OB GY 499 Undergraduate Research (*) AWSpS
Heinrichs
Prerequisite: permission.

OB GY 579P Obstetric and Gynecologic Investigation (*) AWSpS
Heinrichs
The investigation may cover any one of the following fields: uterine muscle physiology, toxemias of pregnancy, hormone assays in obstetrics and endocrinology, obstetric and gynecologic oncology. By arrangement.

OB GY 665P Introduction to Obstetrics and

[HE0042][GDrive]

1980 (Jan 11) - Collaboration w/ Dr. Peter Wright on cloning technology at the Fred Hutchinson Cancer Research Center

No full page copy ..

Daily News-Miner, Fairbanks, Alaska, Friday, January 11, 1980—9

Cloning technology opens frontier in cancer research

HOT ON THE TRAIL—Dr. Peter Wright of the Fred Hutchison Research Center is part of a research team using cloning technology in cancer studies. Wright and his colleagues are finding out which types of antibodies fight a cancerous tumor. They could then use cloning to mass-produce the antibody which would be administered to a patient to increase a natural attack on a cancer.

(Science News Service photo)

By GRANT FJERMEDAL
Science News Service

SEATTLE—Some very exciting things are happening in cancer research thanks to cloning technology.

Researchers at the Fred Hutchinson Cancer Research Center downplay their work for fear of raising unfulfilled hopes. But even the researchers seem excited about what cloning techniques are allowing them to do.

Their work may result in cancer treatments that are much more effective and specific than many of the methods used today.

Looking into the future, one can see that such cloning work could at least raise the possibility of developing vaccines that could prevent certain types of cancer.

The work has to do with being able to mass-produce specific kinds of antibodies that will attack cancer cells—no matter where they might be hiding in the body. Antibodies are the soldiers of the body—attacking anything that is marked as being foreign.

It is as if everything that is supposed to be in the body has a name tag. And anything that isn't supposed to be in the body also has a tag—only a different one. These different tags for foreigners are called antigens, and they trigger the antibodies into action.

It appears that when normal cells become cancerous they develop antigens as part of their change. These antigens could be very important flags.

There is great irony in the clone the researchers are creating—joining a cancerous tumor cell with a normal cell capable of producing the precise kind of antibody needed to kill the tumor cells.

This is done because cancer cells are comparatively easy to grow outside the body. Tumor cells have been kept alive in labs for decades. But the normal cells that produce antibodies have proven much more difficult to grow in the lab.

By cloning the two together you get a hybrid cell that is easy to keep alive in the lab and that produces antibodies.

This allows for the mass production of antibodies. Animal studies have found that these antibodies can then be injected into the body to fight the very cancer that triggered their creation.

Because antibodies attack only the cells flagged with antigens, they travel to the cancerous tumors and work specifically against them.

At the Fred Hutchinson Cancer Research Center, Dr. Peter Wright and Dr. Robert Nowinski and their colleagues are using cloning to first find out exactly which of the many types of antibodies is fighting the tumor. They then turn to mass producing this antibody in the lab so that they can inject them into the patient to greatly increase this natural attack on the cancer.

Limited experimental work with volunteer cancer patients has only recently begun and it will be some time before it is known exactly how well the approach works in humans.

Wright said that if such tumor-specific antibodies can be mass produced outside the body and then injected, they may prove to be quite effective in dealing with the problem of metastasized tumors.

Metastasis is the term used to describe the spread of cancer tumors from the area of origin to other parts of the body. Tumor-specific antibodies should be able to flow through the blood stream and fight the cancer cells wherever they detect them.

Without such outside help, it appears that the body probably wouldn't be able to produce enough of the proper antibody quickly enough to successfully deal with the cancer.

"In the body there is a limit to how much antibody can be made," said Nowinski. "It is regulated. In a mouse the limit might be 1,000 units of active antibody. But in a test-tube we can create 30 million."

Wright said another treatment possibility may be in combining the antibodies with toxic substances. In this way you could piggyback poisons directly to tumor cells.

This would be a tremendous refinement of current chemotherapy which works with a much broader approach, poisoning many normal fast-growing cells as well as the cancerous ones.

It may also become possible to combine the antibodies with tiny radioactive particles that would be delivered only to the tumor cells. This would be a great refinement on the radiation treatments that now take a toll in normal cells while in pursuit of the cancerous ones.

From work in animals it appears that cancerous cells have antigens marking them as targets for antibodies regardless of how the cancer was started.

A big question in humans will be whether the antigens change significantly from person to person and from one type of cancer to another.

If all cancers that began in the lungs had the same type of antigen, it might be possible to use the antigens to make a vaccine to prevent lung cancer.

"If there were antigens common to lung tumors or colon tumors, then a vaccine program may very well be feasible," said Wright. "We don't know the answer, but the important thing is we should be able to know a lot more very soon by using this hybrid technology."

Wright said the technique of cloning cells to produce antibodies was developed in England by Dr. Cesar Milstein in 1975. It was his work that has opened up so many of the possibilities that researchers like Wright and Nowinski are trying to nail down.

The possibilities of cancer vaccines may still be far off, but this new technology may soon lead to treatments that are far more specific and effective than the much broader approaches we must now take toward treating cancer.

"It is the kind of advance that probably comes along once in a lifetime," Wright said of the Milstein work. "We aren't the only ones working in this area, and we aren't the only ones to see the tremendous potential. You have to be a dummy not to see the enormous potential for this. It has revolutionized what we could do."

Northern Life

1979 Science News Service

[HN01IZ][GDrive]

1980 (July 31)

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1980-07-31-anderson-daily-bulletin-indiana-pg-18.jpg

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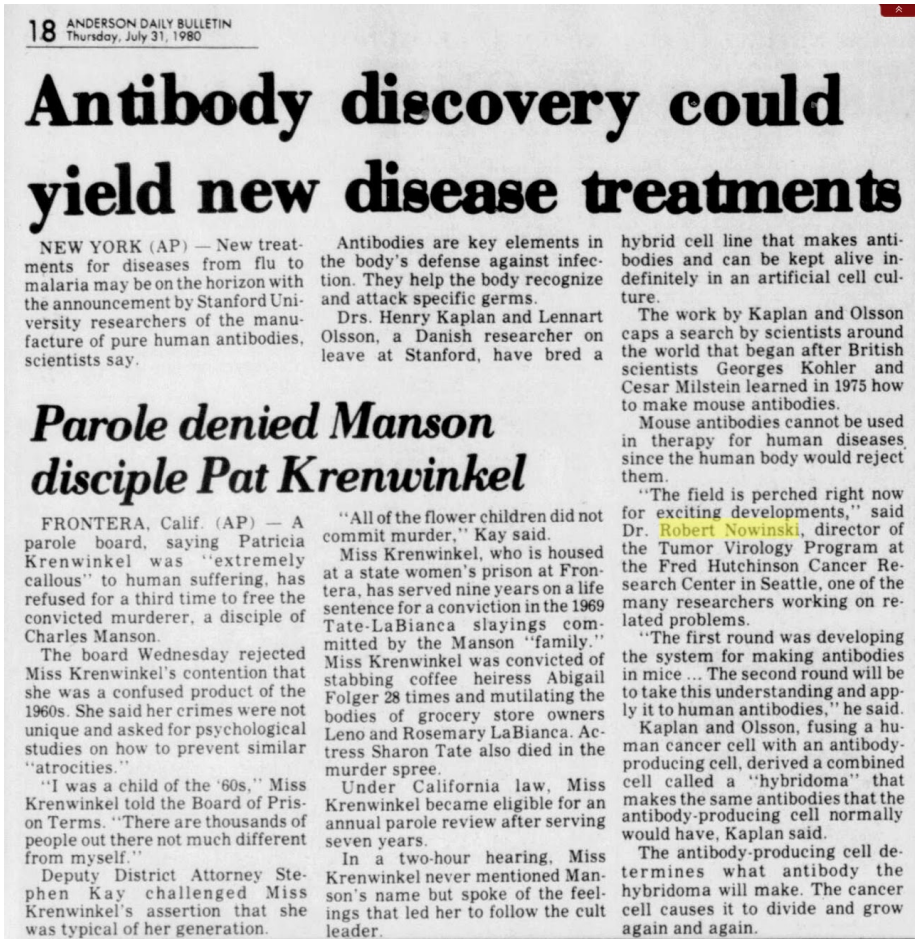

18 ANDERSON DAILY BULLETIN Thursday, July 31, 1980

Antibody discovery could yield new disease treatments

NEW YORK (AP) — New treatments for diseases from flu to malaria may be on the horizon with the announcement by Stanford University researchers of the manufacture of pure human antibodies, scientists say.

Antibodies are key elements in the body's defense against infection. They help the body recognize and attack specific germs.

Drs. Henry Kaplan and Lennart Olsson, a Danish researcher on leave at Stanford, have bred a hybrid cell line that makes antibodies and can be kept alive indefinitely in an artificial cell culture.

The work by Kaplan and Olsson caps a search by scientists around the world that began after British scientists Georges Kohler and Cesar Milstein learned in 1975 how to make mouse antibodies.

Mouse antibodies cannot be used in therapy for human diseases since the human body would reject them.

"The field is perched right now for exciting developments," said Dr. Robert Nowinski, director of the Tumor Virology Program at the Fred Hutchinson Cancer Research Center in Seattle, one of the many researchers working on related problems.

"The first round was developing the system for making antibodies in mice ... The second round will be to take this understanding and apply it to human antibodies," he said.

Kaplan and Olsson, fusing a human cancer cell with an antibody-producing cell, derived a combined cell called a "hybridoma" that makes the same antibodies that the antibody-producing cell normally would have, Kaplan said.

The antibody-producing cell determines what antibody the hybridoma will make. The cancer cell causes it to divide and grow again and again.

Parole denied Manson disciple Pat Krenwinkel

FRONTERA, Calif. (AP) — A parole board, saying Patricia Krenwinkel was "extremely callous" to human suffering, has refused for a third time to free the convicted murderer, a disciple of Charles Manson.

The board Wednesday rejected Miss Krenwinkel's contention that she was a confused product of the 1960s. She said her crimes were not unique and asked for psychological studies on how to prevent similar "atrocities."

"I was a child of the '60s," Miss Krenwinkel told the Board of Prison Terms. "There are thousands of people out there not much different from myself."

Deputy District Attorney Stephen Kay challenged Miss Krenwinkel's assertion that she was typical of her generation.

"All of the flower children did not commit murder," Kay said.

Miss Krenwinkel, who is housed at a state women's prison at Frontera, has served nine years on a life sentence for a conviction in the 1969 Tate-LaBianca slayings committed by the Manson "family." Miss Krenwinkel was convicted of stabbing coffee heiress Abigail Folger 28 times and mutilating the bodies of grocery store owners Leno and Rosemary LaBianca. Actress Sharon Tate also died in the murder spree.

Under California law, Miss Krenwinkel became eligible for an annual parole review after serving seven years.

In a two-hour hearing, Miss Krenwinkel never mentioned Manson's name but spoke of the feelings that led her to follow the cult leader.

1982 (May 01)

Full newspaper page : [HN01J6][GDrive]

Genetics for profit

Scientist mixes business with research

By BILL DIXON
Of the Statesman-Journal

It's one thing to be a pioneer in science and quite another to be a pioneer in business.

Robert Nowinski is trying to be both.

"The mix of my life has changed substantially," Nowinski said, "from being a pure scientist to being a business scientist. It's a very enjoyable mix."

Nowinski was in Salem on Friday to tell physicians at Salem Hospital Memorial Unit about the promise he sees for biotechnology in general and his company, Genetic Systems Corp. of Seattle, in particular.

Biotechnology makes it possible for man to replicate or enhance life processes. In Nowinski's case, that has meant the discovery and mass production of a kind of police force against disease.

Two years ago, Nowinski never would have made the trip to Salem — at least not as a salesman. Then, at the age of 34, he was a leader in antibody research with a professorship at the University of Washington and a budget of more than $600,000 a year.

That was before Nowinski helped found Genetic Systems in November 1980. Now he is the scientific director and executive vice president of an $8 million operation that has yet to sell a product on the open market.

The first Genetic Systems product, a diagnostic antibody for a venereal disease called chlamydia, will be out near the end of this year, Nowinski said. Starting next year the company will market a test for herpes that is faster and more accurate than current methods, he said.

And the company is working with Cutter Laboratories Inc. in Berkeley, Calif., to develop a treatment for pseudonomas, an antibiotic-resistant bacteria that is a major cause of death among burn and cancer victims.

In order for Genetic Systems to survive, Nowinski said, he has to split his time between research and business.

Nowinski's work revolves around monoclonal antibodies, one of the offshoots of a biotechnology revolution that began in the mid-1970s.

"Antibodies are natural molecules that our bodies make for defense," Nowkinski said. "They bind to the substances they are made against, so they can be used for identification. And they can inactivate the substances that they bind to."

The problem with antibody production, Nowinski said, is that each antibody works against only one substance, or antigen. But animals and humans, who are the breeding ground for the antibodies used by science, produce many antibodies at once. Until recently, there was no way to extract a specific antibody or mass produce it.

Since the antibodies had to come from living subjects, there was an inherent limit on how long any antibody might be available. Once the host died, you had to start all over again.

But in 1975, Nowinski said, two British researchers took a giant step toward solving those problems.

With their method, as in the past, a living host receives an injection of an antigen and responds by growing cells to produce antibodies. There the two paths separate.

Using the new method, cells are removed from the host's spleen and separated to obtain a batch of the specific antibody producers. Then those cells are fused with cancer cells in a mixture that contains polyethylene glycol, an ingredient of anti-freeze.

Nowinski said cancer cells are used because they are "immortal" — that is, unlike other cells, cancer cells will continue to grow indefinitely given the proper living conditions.

The spleen-cancer hybrid cells are selected and put into test tubes, where they reproduce without changing, or clone. If all goes well, the hybrid cells are then used to produce a single antibody. Hence the name monoclonal antibody.

So far, that part of Nowinski's work has gone well. In 1980 he and his research team at the Fred Hutchinson Cancer Research Center in Seattle were the first to use monoclonal antibodies to treat cancer in mice. Last year, the same team was among the first three in the world to demonstrate production of human monoclonal antibodies.

Making Genetic Systems profitable hasn't been an automatic process, but Nowinski said the signs are encouraging.

Despite a $400,000 loss its first year and a predicted loss of somewhere between $500,000 and $1 million this year, the company's policy of obtaining support before it starts to develop a product should stand it in good stead, Nowinski said.

The potential for developing products is tremendous, Nowinski said. Within 20 years, he said, biotechnology and genetic engineering will produce big advancements not only in medicine but also in agriculture and industry.

ROBERT NOWINSKI

But for now, a company like Genetic Systems still has to sell itself.

"We don't have a track record right now," Nowinski said, "but we're an exciting possibility."

[HN01J7][GDrive]

1993 (May 20) - Art collection? OMG

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1993-05-20-the-philadelphia-inquirer-pg-d-3.jpg

1993-05-20-the-philadelphia-inquirer-pg-d-3-clip-art-museum.jpg

Thursday, May 20, 1993 THE PHILADELPHIA INQUIRER

Review: *Art*

A class act at Princeton art museum

By Edward J. Sozanski
INQUIRER ART CRITIC

PRINCETON, N.J. — Aside from being the author of a kiss-and-tell memoir about his years as director of the Metropolitan Museum of Art, Thomas P.F. Hoving is a 1953 graduate of Princeton University.

Hoving has called on his skills as a former curator to put together a small exhibition of American art selected from the collections of some of his college classmates. It continues at Princeton's art museum through July 3.

The show, which celebrates the 40th reunion of Hoving's class, was proposed by Leonard L. Milberg, one of the more prominent collectors among the lenders. Hoving, who also contributed several works, surveyed the possibilities and decided to focus on American art.

His decision at least gives the show of 49 works, mostly paintings, some thematic consistency, which isn't usually the case with exhibitions of this kind. The museum has done alumni exhibitions before, but never one devoted to a single class.

"Ship in Fog, Gloucester Harbor" *by Fitz Hugh Lane is in the "Class of 1953" exhibition at Princeton through July 3.*

Hoving's classmates appear to have collected judiciously, particularly in the 19th century. That half of the show includes a fine *Orchid and Hummingbird* by Martin Johnson Heade, an evocative harbor scene by Fitz Hugh Lane, a sensitive portrait of a woman by Samuel F.B. Morse and a caricature by Thomas Nast of William Marcy "Boss" Tweed.

Hoving's two contributions are among the more distinguished in the 20th-century section, which includes a painting by Jonathan Borofsky and collage of woven newsprint by Laurie Anderson. Hoving lent a vividly colored monotype by Wendy Mark and a small welded steel horse by Judy Brown.

The collage came from W. Loeber Landau, along with two photographs by William Wegman. The Borofsky belongs to Wellington S. Henderson, who is further represented by Jasper Johns and David Hockney lithographs.

The most unusual piece in the show is a silk quilt that was owned by Hawaii's last monarch, Queen Liliuokalani, who was deposed in 1893. The quilt features crossed Hawaiian flags under a crown in the center and Union Jacks in the corners. It was lent by Alexander Brody.

The museum's other current exhibition, which runs through July 17, features a selection of European modern art from the collection of Robert Nowinski and his wife, Connie, of Seattle. The show comprises 29 individual works on paper, a suite of 20 prints by Matisse and four sculptures.

Although their collection is only nine years old, the Nowinskis have managed to acquire a number of strong works. Their taste is conventional. Except for two drawings by Balthus, another by Egon Schiele, an abstract watercolor by Wassily Kandinsky and a mixed-media drawing by Francis Picabia, they have followed a well-worn path.

If You Go

■ "American Art from the Class of 1953 Collections" continues at the Princeton University Art Museum through July 3. "Twentieth-Century Masterworks on Paper and Sculpture from the Nowinski Collection" runs through July 17. The museum is in the middle of the campus; a large sculpture by Picasso, *Head of a Woman*, stands in front. Hours: 10 a.m. to 5 p.m. Tuesdays through Saturdays, 1 to 5 p.m. Sundays. Telephone: 609-258-3787.

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mar 1994

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dec 1993

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aug 1995

https://www.newspapers.com/image/297555041/?terms=%22Pathogenesis%20Corp%22&match=1

2002 (July) - Marriage (3rd or 4th?)

Name: Robert Charles Nowinski

Marriage License Date: 6 Jul 2002

Marriage License Place: Manhattan, New York City, New York, USA

Spouse: Cinthia Therezinha Menutole

2005 (Dec) - SeattleTimes : ' One of biotech's early superstars accused of being a "deadbeat dad" '

2005-12-14-seattle-times-early-biotech-superstar-accused-of-being-deadbeat-dad.pdf

https://www.seattletimes.com/seattle-news/one-of-biotechs-early-superstars-accused-of-being-a-deadbeat-dad/

By Maureen O'Hagan and Sheila Farr

At one time, he was a high-flying CEO whose companies promised help for cancer patients. He had a Picasso hanging in his Edmonds home and owned one of Seattle's swankiest art galleries.

The day before Thanksgiving, Robert Nowinski was arrested on federal charges of failing to pay child support. Once among the most important players in the Seattle biotech world, Nowinski has allegedly become, in the parlance of child-welfare workers, a "deadbeat dad."

Federal prosecutors say he fell nearly $125,000 behind on his child-support payments, and have charged him in a two-count criminal complaint.

Nowinski says he's broke.

If Nowinski's fall appears abrupt, his rise to the top was just as dramatic.

It was clear from his arrival in Seattle in 1975, as a brash young scientist at the Fred Hutchison Cancer Research Center, that he had a rare combination of skills: the mind of a scientist but the instincts of a businessman.

"He was able to articulate the dream and get people to put money into it," said Bruce Montgomery, CEO of Corus Pharma, who used to work at one of Nowinski's companies.

After just a few years, he helped found a new biotech company, a field that was in its infancy.

In all, he founded four publicly traded biotech companies over the course of about a decade: Genetic Systems, which worked to develop antibodies for use in cancer treatment, Icos, PathoGenesis and [**VaxGen, Incorporated**]. He also helped found another biotech company, Primal.

Bill Gates put millions into Nowinski's dream, as did Paul Allen. Even outside investors, who at that time shunned the unproven field of biotech, were won over by Nowinski's vision.

"If you took the 15 largest biotechnology companies of the 1980s, we founded three of them," he bragged to a Seattle Times reporter in 1990.

In each case, however, he got out rather quickly — often winding up with millions. Genetic Systems, for example, was bought by Bristol-Myers Squibb, making Nowinski's stock options worth $10 million.

Nowinski's knack for coming out on top earned him the nickname "No-lose-ski."

In the mid-1990s, Nowinski dove into the art world, renting a 5,000-square-foot space in Pioneer Square, doing an elegant remodel and installing a high-tech interactive "virtual gallery" so clients could project big-screen images of available artworks.

The opening show at Meyerson & Nowinski was called "Picasso and Friends." His partner was Ronnie Meyerson, a New York art dealer.

Nowinski spoke enthusiastically to reporters about his plans to bring the work of internationally acclaimed artists to Seattle and his expectations for becoming a nationally recognized gallery. Less than three years later, the gallery closed, leaving many Seattle-area artists without representation.

Around the time of his art adventure, Nowinski's marriage was dissolving. In 1996, Connie Nowinski filed for divorce. The pair had a prenuptial agreement in which Connie was to get 70 percent of communal property and Robert was to get all of the property he brought into the marriage, court documents say.

Under the terms of the settlement, Robert was to pay Connie $9,200 per month for two years. He also agreed to give her $2.25 million broken into several lump-sum payments. Meanwhile, Robert kept various investments; stock accounts in his name; their fine-art collection, which included a Picasso worth nearly $1 million; and other items.

Within four years, Connie filed suit, claiming he had hidden certain assets from her during the divorce. A judge determined he owed her 180,000 shares of VaxGen stock.

In 2003, Nowinski was hit with another lawsuit. This one claimed he had raided a trust fund he had set up for his three children, ages 15, 14 and 11. He admitted in a deposition to "borrowing" from the fund, which contained $500,000 worth of biotech stock, and selling it, court documents state.

"At no time since taking this 'loan' have the funds ever been repaid, although Mr. Nowinski testified that he has been in possession of funds in excess of several million dollars in the intervening period," a guardian appointed to safeguard the children's financial interests wrote in a report to the court.

A judgment of $1.2 million was entered against him in connection with the trust-fund case. He told the guardian that before the divorce, he had "$20 million" and "now I have nothing."

Nowinski, who is on pretrial release, couldn't be reached to comment for this story. His defense lawyer in New York declined to comment.

About the time of Connie Nowinski's lawsuit, Robert Nowinski left Washington abruptly without telling the family, essentially disappearing for several months, the guardian's report said. It turned out he had moved to New York and subsequently filed for bankruptcy. As part of the bankruptcy, his fine-art collection — which included works by Picasso and Matisse, among other noted artists — was liquidated.

This fall, Nowinski told The Seattle Times he had been trying to broker a billion-dollar deal with a local biotech company on behalf of some major investors. He said he had designs on taking over the company as well.

The old Nowinski, the media-savvy deal-maker, appeared to be back.

But in October, he was accused of failing to make his $5,300-a-month child-support payments. According to the charging documents, Nowinski stopped paying in 2003, about the time his ex-wife remarried.

By August 2005, he was nearly $125,000 in arrears. And yet "From (Connie Nowinski's) observations, he never seems to have a lack of money," the investigating agent, Michael Nichols, wrote.

Jeff Sullivan, chief of the criminal division of the U.S. Attorney's Office, said federal prosecutors here file only about a half-dozen child-support cases a year, and then only when there's a good chance of collecting.

He noted that while Nowinski could face jail time if convicted, their foremost concern is getting the delinquent child support.

Seattle Times staff reporters Christopher Schwarzen and Ben Romano and news researcher Miyoko Wolf contributed to this report.

https://www.latimes.com/archives/la-xpm-2008-aug-02-na-anthrax2-story.html

2008-08-02-los-angeles-times-suspect-stood-to-gain-from-anthrax-panic.pdf

Suspect stood to gain from anthrax panic

By DAVID WILLMAN

AUG. 2, 2008 12 AM PT

TIMES STAFF WRITER

Bruce E. Ivins, the government biodefense scientist linked to the deadly anthrax mailings of 2001, stood to gain financially from massive federal spending in the fear-filled aftermath of those killings, the Los Angeles Times has learned.

Ivins is listed as a co-inventor on two patents for a genetically engineered anthrax vaccine, federal records show. Separately, Ivins also is listed as a co-inventor on an application to patent an additive for various biodefense vaccines.

Ivins, 62, died Tuesday in an apparent suicide in Maryland. Federal authorities had informed his lawyer that criminal charges related to the mailings would be filed

As a co-inventor of a new anthrax vaccine, Ivins was among those in line to collect patent royalties if the product had come to market, according to an executive familiar with the matter.

The product had languished on laboratory shelves until the Sept. 11 attacks and the anthrax mailings, after which federal officials raced to stockpile vaccines and antidotes against potential biological terrorism.

A San Francisco-area biotechnology company, [**VaxGen, Incorporated**], won a federal contract worth $877.5 million to provide batches of the new vaccine. The contract was the first awarded under legislation promoted by President Bush, called Project BioShield.

One executive who was familiar with the matter said that, as a condition of its purchasing the vaccine from the Army, [**VaxGen, Incorporated**] had agreed to share sales-related proceeds with the inventors.

“Some proportion would have been shared with the inventors,” said the executive, who spoke anonymously because of contractual confidentiality. “Ivins would have stood to make tens of thousands of dollars, but not millions.”

Two years after the contract was awarded to VaxGen, the pact was terminated when the company could not deliver its batches on schedule. The termination meant that VaxGen was not paid, nor were Ivins and his co-inventors.

Ivins also was listed as one of two inventors of another biodefense-related product that has won federal sponsorship.

According to their still-pending application for a U.S. patent, the inventors hoped the additive would bolster certain vaccines’ capacity to prevent infections “from bioterrorism agents.”

From December 2002 to December 2003, the Pentagon’s Defense Advanced Research Projects Agency committed $12 million for additional testing of the experimental additive. That research money was designated for Coley Pharmaceutical Group, which was developing the additive. The company was acquired last fall by Pfizer Corp.

Samuel C. Miller, a Georgetown Law Center professor who is a patent-law expert, said that the extent to which Ivins stood to gain from the two issued patents or the one that remains pending hinges on the terms of the related contracts.

“It will depend on the business arrangements that are in place,” Miller said.

On Friday, colleagues and critics of Ivins pondered the mystery within the mystery: If Ivins did it, why?

One former senior official with Ivins’ employer, the U.S. Army Medical Research Institute of Infectious Diseases, whom the FBI questioned at length about Ivins, said he believed his former colleague wanted more attention -- and resources -- shifted to biological defense.

“It had to have been a motive,” said the former official, who suspects that Ivins was the culprit. “I don’t think he ever intended to kill anybody. He just wanted to prove ‘Look, this is possible.’ He probably had no clue that it would aerosolize through those envelopes and kill those postal workers.”

Of the five people killed by the mailings, two worked for the U.S. Postal Service in the Washington, D.C., area; one was a photo editor in Palm Beach County, Fla.; another was a hospital supply provider in New York City; and the last known victim was a 94-year-old woman in Connecticut.

Several letters were addressed to prominent people -- two U.S. senators and NBC news anchor Tom Brokaw, for example.

For nearly 30 years, Ivins served far from the limelight, a PhD microbiologist who drew a civil servant’s pay while handling some of the most deadly

pathogens on Earth -- five spores of anthrax.

The deadly mailings of anthrax-tainted envelopes transported Ivins from the backwater of government scientific research at Ft. Detrick, Md., to the center of the nation's fledgling war on terrorism. It also spurred multibillion-dollar national security initiatives.

Ivins was thrust into the federal investigation of the mailings as well. He helped the FBI analyze anthrax recovered from a letter addressed to then-Senate Majority Leader Tom Daschle (D-S.D.).

He also played a lead role in helping a private company, BioPort, win regulatory approval to continue making the vaccine required for U.S. service personnel deployed to Iraq, Afghanistan and other regions.

From 2000 to early 2002, Ivins and two colleagues from USAMRIID helped BioPort resolve problems related to the potency of the vaccine. Because of those and other manufacturing difficulties, production had been suspended. The efforts of Ivins and his colleagues helped BioPort win FDA approval to resume production.

At a Pentagon ceremony on March 14, 2003, Ivins and two colleagues from USAMRIID were bestowed the Decoration of Exceptional Civilian Service, the highest honor given to nonmilitary employees of the Defense Department.

"Awards are nice," Ivins said in accepting the honor. "But the real satisfaction is knowing the vaccine is back on line."

The Times sought earlier this year to obtain annual financial disclosure statements filed by Ivins with his employer. USAMRIID spokeswoman Caree Vander Linden said last month that Ivins had filed financial reports exempt from disclosure under the Freedom of Information Act.

Ivins' apparent suicide and the Justice Department's decision to bring criminal charges against him were first reported Thursday night by The Times. On Friday, Ivins' lawyer, Paul F. Kemp, defended his client and said that Ivins had cooperated fully with the FBI.

"We assert his innocence in these killings, and would have established that at trial," Kemp said, implicitly confirming that Ivins had been about to be formally charged. "The relentless pressure of accusation and innuendo takes its toll in different ways on different people. . . . In Dr. Ivins' case, it led to his untimely death."

Kemp did not respond to telephone calls and e-mails for this article.

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david.willman@latimes.com

Times researcher Janet Lundblad contributed to this report.

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(BEGIN TEXT OF INFOBOX)

Key dates in the investigation of the anthrax attacks

2001

September-October: Anthrax is mailed to lawmakers on Capitol Hill and members of the news media in New York and Florida. By late November, five people are dead and 17 sickened. The victims include postal workers and others who came into contact with the anthrax.

2002

January: The Senate office building where anthrax- tainted letters were sent reopens after three months and fumigation. FBI doubles the reward for helping solve the case to $2.5 million.

June: The FBI is scrutinizing 20 to 30 scientists who might have had the knowledge and opportunity to send the anthrax letters, a U.S. official says.

August: Law enforcement officials and Atty. Gen. John D. Ashcroft call Steven J. Hatfill, a biowarfare expert, a "person of interest" in the investigation.

2003

June: The FBI drains a pond in Frederick, Md., in search of evidence. Frederick is the home of the Army Medical Research Institute of Infectious Diseases, one of the nation's main anthrax research centers. Nothing suspicious is found.

August: Hatfill sues Ashcroft and other government officials, accusing them of using him as a scapegoat and demanding that they clear his name.

December: Postal workers begin moving back into Washington's main mail center, more than two years after anthrax-laced letters killed two employees. The Brentwood facility underwent more than $130 million worth of decontamination and renovation.

2004

August: FBI searches homes of Dr. Kenneth M. Berry, who founded a group to train medical staffers to respond to biological disasters, as part of the anthrax investigation. No charges are filed.

July 11: Bio-ONE, a company founded by former New York City Mayor Rudolph W. Giuliani, fumigates the former headquarters of the Sun, the Florida supermarket tabloid that was the first target in the anthrax attacks.

July 13: Hatfill sues the New York Times for defamation, claiming the newspaper ruined his reputation after it published a series of columns pointing to him as the culprit.

2005

March 10: Sensor at Pentagon mail room indicates the possible presence of anthrax.

March 14: Alarm at a second Pentagon mail facility also signals a possible anthrax presence. The post office in Hamilton, N.J., that handled anthrax-laced letters in 2001 reopens. Further testing determines no anthrax in Pentagon mail rooms.

2006

April 11: It is reported that Hatfill's lawyers have questioned at least two journalists and are subpoenaing others, seeking identities of their confidential government sources.

Oct. 23: A federal judge orders the New York Times to disclose a columnist's confidential sources.

2007

Jan. 12: A federal judge dismisses Hatfill's libel lawsuit against the New York Times.

Aug. 13: A federal judge says five journalists must identify the government officials who leaked details about Hatfill to them.

Oct. 2: Hatfill asks a federal judge to hold two journalists in contempt for refusing to identify their sources.

2008

March 7: A federal judge holds a former USA Today reporter in contempt and orders her to pay up to $5,000 a day if she refuses to identify her sources for stories about Hatfill.

March 11: A federal appeals court blocks the fines.

June 27: The government awards Hatfill $5.8 million to settle his violation of privacy lawsuit against the Justice Department.

July 29: Bruce E. Ivins, 62, dies of an apparent suicide at a hospital in Frederick, Md., after being informed by the FBI that charges probably were going to be brought against him in connection with the 2001 anthrax attacks.

Source: Associated Press--

(BEGIN TEXT OF INFOBOX)

A killer bacterium

The spores that cause anthrax -- Bacillus anthracis -- occur widely in soil, and the skin form of the infection used to be common, especially among livestock and people who work with the animals. It can be treated with antibiotics.

But once the spores are inhaled and settle in the lungs, they cause a hard-to-diagnose infection that is almost impossible to cure -- and nearly always fatal -- once symptoms start.

Experts estimate that 8,000 to 10,000 spores taken into the lungs can cause inhaled anthrax. The infection is not contagious.

Infection with the skin form of the disease can result from substantially fewer spores. On the skin, the ailment starts after three to five days with a small, painless blister that is red around the edges. A day or two later, this becomes an open sore that is especially recognizable because it is black. Eventually, this dries up and leaves a black scab, which falls off after a week or two.

The usual treatment is a common antibiotic, such as penicillin, doxycycline or Cipro, which are extremely effective

Left untreated, perhaps 5% of skin cases progress to a dangerous bloodstream infection, which also is almost always fatal, according to medical experts.

-- Source: Associated Press

2011 (Dec) - SiteSelection.com : "Going Up : A biotech firm finds space in a former elevator factory."

https://siteselection.com/LifeSciences/2011/dec/biotech.cfm

by JOHN W. McCURRY

ContraFect is a biotech company pioneering the use of monoclonal antibodies and lysins (enzymes that digest the key component of bacteria, the cell wall) to treat life-threatening infectious diseases including MRSA and viruses such as influenza. The fledgling company, which moved to Yonkers, N.Y., in late 2010, has ambitious expansion plans at its new headquarters, which formerly housed Otis Elevator's manufacturing operations.

"We started as a virtual company in a small office in Manhattan with a couple of people," says Dr. Robert Nowinski, ContraFect's founder, chairman and CEO. Nowinski previously founded four biotech companies in the Seattle area which were ultimately acquired by large pharmaceutical companies.

Nowinski says while he is pleased with ContraFect's location, the company nearly wound up in Virginia.

"At the same time we looked at Yonkers, we were talking with a colleague in Virginia and were invited to come to Virginia to discuss our company," Nowinski says. "They were associated with George Mason University. The university became interested in offering us an opportunity for some space if we were willing to move the research elements of our company to Virginia. The initial plan was to create a research institute in Virginia, which would have had our company within that as one of the founders of a public-private institute on the George Mason campus."

The Virginia Legislature subsequently allocated funds for the institute, but the proposal evolved into something larger than originally planned. That caused ContraFect to re-think its position.

"The money was approved in Virginia, but as we began to put together a program, a desire developed in the Virginia Legislature to diversify the institute into not just ourselves and George Mason, but several other universities," Nowinski says. "As this became more complex, we began to see this as not as easy a task as we had anticipated."

At that point, ContraFect began reconsidering the issue of space in New York. Nowinksi returned to Yonkers to meet with Joe Cotter, founder and president of National RE/sources Group, which includes the i.park portfolio of redeveloped industrial properties. The Hudson i.park is a 24-acre (2.2-hectare) technology park in the Yonkers Waterfront District at the Yonkers Train Station. Discussions focused on the cost to build there, rent and tenant improvements.

"We are in a building that is the former Otis Elevator manufacturing plant, which is almost 100 years old," Nowinksi says. "It's a brick building that is scooped out and stands as the basic structure. As things became more complicated in Virginia, we became more interested in Yonkers, and we eventually worked out a plan with the landlord. We also completed a financing arrangement that enabled us to go forward with a larger facility than expected. We simultaneously formed other alliances in New York that suggested we would need larger lab space than initially anticipated."

Nowinski says the combination of a good arrangement with i.park and the opportunity for extensive collaboration with a New York City medical school brought Yonkers back into serious consideration. Another plus was that the building was already home to another life sciences company, Aureon Biosciences.

"We were introduced to the Yonkers economic development group and then the mayor, and in a short period of time, they began to offer various indications of assisting us," Nowinski says. "We made our decision to keep the company intact and that Yonkers would be where we would come."

ContraFect currently occupies 15,000 sq. ft (1,393 sq. m.) and employs 30. Nowinksi anticipates leasing another 22,000 sq. ft. (2,043 sq. m.) within the next several weeks. That space comes from Aureon, which filed for bankruptcy and closed in October. ContraFect also has an option on 17,500 sq. ft. (1,625 sq. m.). Nowinski expects employment to be around 45 by the end of 2012.

Nowinski says ContraFect, which was formed in late 2008, will soon be going into FDA trials with its first product. Manufacturing will initially be outsourced, but he plans to bring that process in house as the first product or two comes to market.

"The biotech industry in New York has developed relatively late," Nowinski says. "We are starting to see some growth here. Space is opening up in Manhattan with some of the large pharmaceuticals taking space to do biotech research in association with the universities there. Most of the smaller companies appear to be going into Westchester County or other areas surrounding Manhattan. We are very pleased to be in Yonkers. Ultimately we were able to get the type of space we needed, we were able to get the personnel we needed from the New York City area, which is an enormous recruiting location, and we have access to our collaborators in Manhattan."

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http://bitesizebio.s3.amazonaws.com/wp-content/uploads/2017/10/11153535/Curious-Tales-from-the-History-of-Biology-.pdf

Western blot ...named after Nowinski lab ..l.. http://bitesizebio.s3.amazonaws.com/wp-content/uploads/2017/10/11153535/Curious-Tales-from-the-History-of-Biology-.pdf

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NSFNET

Wikipedia National Science Foundation Network

2013-nsf-gov-a-brief-history-of-nsf-and-the-internet.pdf

https://www.nsf.gov/news/news_summ.jsp?cntn_id=103050

Fact Sheet

A Brief History of NSF and the Internet

August 13, 2003

This material is available primarily for archival purposes. Telephone numbers or other contact information may be out of date; please see current contact information at media contacts.

Early Years: 1960s-1994. The Internet that many of us take for granted today arose from a series of government-funded computer networking efforts. In 1969, the precursor to the Internet began with the U.S. Defense Department's ARPAnet. ARPA-funded researchers developed many of the protocols still used for most Internet communication. Several other agencies also developed networks so their researchers could communicate and share data. In 1981, for example, the National Science Foundation (NSF) provided a grant to establish the Computer Science Network (CSNET) to provide networking services to all university computer scientists.

In 1985, NSF considered how it could provide greater access to the high-end computing resources at its recently established supercomputer centers. Because NSF intended the supercomputers to be shared by scientists and engineers around the country, any viable solution had to link many research universities to the centers.

NSFNET went online in 1986 and connected the supercomputer centers at 56,000 bits per second—the speed of a typical computer modem today. In a short time, the network became congested and, by 1988, its links were upgraded to 1.5 megabits per second. A variety of regional research and education networks, supported in part by NSF, were connected to the NSFNET backbone, thus extending the Internet's reach throughout the United States.

Creation of NSFNET was an intellectual leap. It was the first large-scale implementation of Internet technologies in a complex environment of many independently operated networks. NSFNET forced the Internet community to iron out technical issues arising from the rapidly increasing number of computers and address many practical details of operations, management and conformance.

Throughout its existence, NSFNET carried, at no cost to institutions, any U.S. research and education traffic that could reach it. At the same time, the number of Internet-connected computers grew from 2,000 in 1985 to more than 2 million in 1993. To handle the increasing data traffic, the NSFNET backbone became the first national 45-megabits-per-second Internet network in 1991.

The history of NSFNET and NSF's supercomputing centers also overlapped with the rise of personal computers and the launch of the World Wide Web in 1991 by Tim Berners-Lee and colleagues at CERN, the European Organisation for Nuclear Research, in Geneva, Switzerland. The NSF centers developed many tools for organizing, locating and navigating through information, including one of the first widely used Web server applications. But perhaps the most spectacular success was Mosaic, the first freely available Web browser to allow Web pages to include both graphics and text, which was developed in 1993 by students and staff working at the NSF-supported National Center for Supercomputing Applications (NCSA) at the University of Illinois, Urbana-Champaign. In less than 18 months, NCSA Mosaic became the Web "browser of choice" for more than a million users and set off an exponential growth in the number of Web servers as well as Web surfers. Mosaic was the progenitor of modern browsers such as Microsoft Internet Explorer and Netscape Navigator.

Privatization: 1993-1998. Commercial firms noted the popularity and effectiveness of the growing Internet and built their own networks. The proliferation of private suppliers led to an NSF solicitation in 1993 that outlined a new Internet architecture that largely remains in place today.

From that solicitation, NSF awarded contracts in 1995 for three network access points, to provide connection points between commercial networks, and one routing arbiter, to ensure an orderly exchange of traffic across the Internet. In addition, NSF signed a cooperative agreement to establish the next-generation very-high-performance Backbone Network Service. A more prominent milestone was the decommissioning of the NSFNET backbone in April 1995.

In the years following NSFNET, NSF helped navigate the road to a self-governing and commercially viable Internet during a period of remarkable growth. The most visible, and most contentious, component of the Internet transition was the registration of domain names. Domain name registration associates a human-readable character string (such as "nsf.gov") with Internet Protocol (IP) addresses, which computers use to locate one another.

The Department of Defense funded early registration efforts because most registrants were military users and awardees. By the early 1990s, academic institutions comprised the majority of new registrations, so the Federal Networking Council (a group of government agencies involved in networking) asked NSF to assume responsibility for non-military Internet registration. When NSF awarded a five-year agreement for this service to Network Solutions, Inc. (NSI), in 1993, there were 7,500 domain names.

In September 1995, as the demand for Internet registration became largely commercial (97 percent) and grew by orders of magnitude, the NSF authorized NSI to charge a fee for domain name registration. Previously, NSF had subsidized the cost of registering all domain names. At that time, there were 120,000 registered domain names. In September 1998, when NSF's agreement with NSI expired, the number of registered domain names had passed 2 million.

The year 1998 marked the end of NSF's direct role in the Internet. That year, the network access points and routing arbiter functions were transferred to the commercial sector. And after much debate, the Department of Commerce's National Telecommunications and Information Administration formalized an agreement with the non-profit Internet Corporation for Assigned Numbers and Names (ICANN) for oversight of domain name registration. Today, anyone can register a domain name through a number of ICANN-accredited registrars.

NSF after NSFNET. The decommissioning of NSFNET and privatization of the Internet did not mark the end of NSF's involvement in networking. NSF continues to support many research projects to develop new networking tools, educational uses of the Internet and network-based applications.

Through its programs, NSF helps research and education institutions—including those serving underrepresented minorities, rural areas, and Native American reservations—make and enhance their connections to the Internet. NSF has also been instrumental in providing international connections services that have bridged the U.S. network infrastructure with countries and regions including Europe, Mongolia, Africa, Latin America, Russia and the Pacific Rim. In addition, NSF has continued to extend the reach of the highest-performance U.S. research and education networks by supporting connectivity and collaborations with their counterparts in Canada, Europe and Asia.

NSF Internet Experts

Thomas Greene, senior program director in the CISE Advanced Networking Infrastructure and Research division, oversees a number of NSF's post-NSFNET Internet efforts, including national and international connections programs. tgreene@nsf.gov, 703-292-8948.

Larry Landweber, CISE senior advisor on networking, proposed the CSNET concept in 1979 and organized the workshops that led to its creation in 1981. He was an advisor to NSF during the development of NSFNET and helped establish the first Internet gateways between the United States and countries in Europe, Asia and Latin America. llandweb@nsf.gov, 703-292-8900.

George Strawn, currently NSF's Chief Information Officer, was the NSFNET program director from 1991 to 1993. From 1993 to 1995, he was involved with defining and deploying the privatized Internet architecture, and from 1995 to 1998 as networking division director, he led NSF's efforts in the Next Generation Internet Initiative. gstrawn@nsf.gov, 703-292-8102.

-NSF-

Saved Wikipedia (Jan 11 2021) for National Science Foundation Network

[HK004T][GDrive]

Type

Data

Location

USA

Protocols

TCP/IP and OSI

Operator

Merit Network with IBM, MCI, the State of Michigan, and later ANS

Established

1985; 36 years ago

Current status

Decommissioned April 30, 1995, superseded by the commercial Internet

Commercial?

No

Funding

National Science Foundation

Website

NSFNET history

The **National Science Foundation Network** (**NSFNET**) was a program of coordinated, evolving projects sponsored by the National Science Foundation (NSF) from 1985 to 1995 to promote advanced research and education networking in the United States.[1] The program created several nationwide backbone computer networks in support of these initiatives. Initially created to link researchers to the NSF-funded supercomputing centers, through further public funding and private industry partnerships it developed into a major part of the Internet backbone.

The National Science Foundation permitted only government agencies and universities to use the network until 1989 when the first commercial Internet service provider emerged. By 1991, the NSF removed restrictions on access and the commercial ISP business grew rapidly.[2]

History[edit]

See also: History of the Internet

Following the deployment of the Computer Science Network (CSNET), a network that provided Internet services to academic computer science departments, in 1981, the U.S. National Science Foundation (NSF) aimed to create an academic research network facilitating access by researchers to the supercomputing centers funded by NSF in the United States.[3]

In 1985, NSF began funding the creation of five new supercomputing centers:

- John von Neumann Center at Princeton University
- San Diego Supercomputer Center (SDSC) on the campus of the University of California, San Diego (UCSD)
- National Center for Supercomputing Applications (NCSA) at the University of Illinois at Urbana–Champaign
- Cornell Theory Center at Cornell University
- Pittsburgh Supercomputing Center (PSC), a joint effort of Carnegie Mellon University, the University of Pittsburgh, and Westinghouse

NSF's three tiered network architecture

Also in 1985, under the leadership of Dennis Jennings, the NSF established the National Science Foundation Network (NSFNET). NSFNET was to be a general-purpose research network, a hub to connect the five supercomputing centers along with the NSF-funded National Center for Atmospheric Research (NCAR) to each other and to the regional research and education networks that would in turn connect campus networks. Using this three tier network architecture NSFNET would provide access between the supercomputer centers and other sites over the backbone network at no cost to the centers or to the regional networks using the open TCP/IP protocols initially deployed successfully on the ARPANET.

56 kbit/s backbone[edit]

56K NSFNET Backbone, c. 1988

T1 NSFNET Backbone, c. 1991

T3 NSFNET Backbone, c. 1992

NSFNET Traffic 1991, NSFNET backbone nodes are shown at the top, regional networks below, traffic volume is depicted from purple (zero bytes) to white (100 billion bytes), visualization by NCSA using traffic data provided by the Merit Network.

The NSFNET initiated operations in 1986 using TCP/IP. Its six backbone sites were interconnected with leased 56-kbit/s links, built by a group including the University of Illinois National Center for Supercomputing Applications (NCSA), Cornell University Theory Center, University of Delaware, and Merit Network. PDP-11/73 minicomputers with routing and management software, called Fuzzballs, served as the network routers since they already implemented the TCP/IP standard.

This original 56 kbit/s backbone was overseen by the supercomputer centers themselves with the lead taken by Ed Krol at the University of Illinois at Urbana–Champaign. PDP-11/73 Fuzzball routers were configured and run by Hans-Werner Braun at the Merit Network[4] and statistics were collected by Cornell University.

Support for NSFNET end-users was provided by the NSF Network Service Center (NNSC), located at BBN Technologies and included publishing the softbound "Internet Manager's Phonebook" which listed the contact information for every issued domain name and IP address in 1990.[5] Incidentally, Ed Krol also authored the *Hitchhiker's Guide to the Internet* to help users of the NSFNET understand its capabilities.[6] The Hitchhiker's Guide became one of the first help manuals for the Internet.

As regional networks grew the 56 kbit/s NSFNET backbone experienced rapid increases in network traffic and became seriously congested. In June 1987 NSF issued a new solicitation to upgrade and expand NSFNET.[7]

1.5 Mbit/s (T-1) backbone[edit]

As a result of a November 1987 NSF award to the Merit Network, a networking consortium by public universities in Michigan, the original 56 kbit/s network was expanded to include 13 nodes interconnected at 1.5 Mbit/s (T-1) by July 1988. Additional links were added to form a multi-path network, and a node located in Atlanta was added. Each of the backbone nodes was a router called the Nodal Switching System (NSS). The NSSes were a collection of multiple (typically nine) IBM RT PC systems connected by a Token Ring local area network. The RT PCs ran AOS, IBM's version of Berkeley UNIX, and was dedicated to a particular packet processing task.[8]

Under its cooperative agreement with NSF the Merit Network was the lead organization in a partnership that included IBM, MCI, and the State of Michigan. Merit provided overall project coordination, network design and engineering, a Network Operations Center (NOC), and information services to assist the regional networks. IBM provided equipment, software development, installation, maintenance and operations support. MCI provided the T-1 data circuits at reduced rates. The state of Michigan provided funding for facilities and personnel. Eric M. Aupperle, Merit's President, was the NSFNET Project Director, and Hans-Werner Braun was Co-Principal Investigator.

From 1987 to 1994, Merit organized a series of "Regional-Techs" meetings, where technical staff from the regional networks met to discuss operational issues of common concern with each other and the Merit engineering staff.

During this period, but separate from its support for the NSFNET backbone, NSF funded:

- the NSF Connections Program that helped colleges and universities obtain or upgrade connections to regional networks;
- regional networks to obtain or upgrade equipment and data communications circuits;
- the NNSC, and successor Network Information Services Manager (aka InterNIC) information help desks;[9]
- the International Connections Manager (ICM), a task performed by Sprint, that encouraged connections between the NSFNET backbone and international research and education networks; and
- various ad hoc grants to organizations such as the Federation of American Research Networks (FARNET).

The NSFNET became the principal Internet backbone starting in the Summer of 1986, when MIDnet, the first NSFNET regional backbone network became operational. By 1988, in addition to the five NSF supercomputer centers, NSFNET included connectivity to the regional networks BARRNet, JVNCNet, Merit/MichNet, MIDnet, NCAR, NorthWestNet, NYSERNet, SESQUINET, SURAnet, and Westnet, which in turn connected about 170 additional networks to the NSFNET.[10] Three new nodes were added as part of the upgrade to T-3: NEARNET in Cambridge, Massachusetts; Argone National Laboratory outside of Chicago; and SURAnet in Atlanta, Georgia.[11] NSFNET connected to other federal government networks including the NASA Science Internet, the Energy Science Network (ESnet), and others. Connections were also established to international research and education networks starting in 1988 to Canada, France,[12][13] the Netherlands,[14] then to NORDUnet (serving Denmark, Finland, Iceland, Norway, and Sweden),[15] and later to many others.[16][17]

Two Federal Internet Exchanges (FIXes) were established in June 1989[18] under the auspices of the Federal Engineering Planning Group (FEPG). FIX East, at the University of Maryland in College Park and FIX West, at the NASA Ames Research Center in Mountain View, California. The existence of NSFNET and the FIXes allowed the ARPANET to be phased out in mid-1990.[19]

Starting in August 1990 the NSFNET backbone supported the OSI Connectionless Network Protocol (CLNP) in addition to TCP/IP.[20] However, CLNP usage remained low when compared to TCP/IP.

Traffic on the network continued its rapid growth, doubling every seven months. Projections indicated that the T-1 backbone would become overloaded sometime in 1990.

A critical routing technology, Border Gateway Protocol (BGP), originated during this period of Internet history. BGP allowed routers on the NSFNET backbone to differentiate routes originally learned via multiple paths. Prior to BGP, interconnection between IP network was inherently hierarchical, and careful planning was needed to avoid routing loops.[21] BGP turned the Internet into a meshed topology, moving away from the centric architecture which the ARPANET emphasized.

45 Mbit/s (T-3) backbone[edit]

Packet Traffic on the NSFNET Backbone, January 1988 to June 1994

During 1991, an upgraded backbone built with 45 Mbit/s (T-3) transmission circuits was deployed to interconnect 16 nodes. The routers on the upgraded backbone were IBM RS/6000 servers running AIX UNIX. Core nodes were located at MCI facilities with end nodes at the connected regional networks and supercomputing centers. Completed in November 1991, the transition from T-1 to T-3 did not go as smoothly as the previous transition from 56 kbit/s DDS to 1.5 mbit/s T-1, as it took longer than planned. As a result, there was at times serious congestion on the overloaded T-1 backbone. Following the transition to T-3, portions of the T-1 backbone were left in place to act as a backup for the new T-3 backbone.

In anticipation of the T-3 upgrade and the approaching end of the 5-year NSFNET cooperative agreement, in September 1990 Merit, IBM, and MCI formed Advanced Network and Services (ANS), a new non-profit corporation with a more broadly based Board of Directors than the Michigan-based Merit Network. Under its cooperative agreement with NSF, Merit remained ultimately responsible for the operation of NSFNET, but subcontracted much of the engineering and operations work to ANS. Both IBM and MCI made substantial new financial and other commitments to help support the new venture. Allan Weis left IBM to become ANS's first President and Managing Director. Douglas Van Houweling, former Chair of the Merit Network Board and Vice Provost for Information Technology at the University of Michigan, was Chairman of the ANS Board of Directors.

The new T-3 backbone was named ANSNet and provided the physical infrastructure used by Merit to deliver the NSFNET Backbone Service.

Regional networks[edit]

This section **needs expansion** with: more detailed descriptions of the regional networks, the regions and organizations they served, and what happened to them. You can help by adding to it. *(September 2011)*

In addition to the five NSF supercomputer centers, NSFNET provided connectivity to eleven regional networks and through these networks to many smaller regional and campus networks. The NSFNET regional networks were:[11][22]

- BARRNet, the Bay Area Regional Research Network in Palo Alto, California;
- [CERFnet], California Education and Research Federation Network in San Diego, California, serving California and Nevada;
- CICNet, the Committee on Institutional Cooperation Network via the Merit Network in Ann Arbor, Michigan and later as part of the T-3 upgrade via Argonne National Laboratory outside of Chicago, serving the Big Ten Universities and the University of Chicago in Illinois, Indiana, Iowa, Michigan, Minnesota, Ohio, and Wisconsin;

- JVNCNet, the John von Neumann National Supercomputer Center Network in Princeton, New Jersey, connected the universities that made up the Consortium for Scientific Computing as well as a few New Jersey Universities. There were 1.5 Mbit/s (T-1) links to Princeton University, Rutgers University, Massachusetts Institute of Technology, Harvard University, Brown University, University of Pennsylvania, University of Pittsburgh, Yale University, The Institute for Advanced Study, Pennsylvania State University, Rochester Institute of Technology, New York University, The University of Colorado and The University of Arizona.[23]
- Merit/MichNet in Ann Arbor, Michigan serving Michigan, formed in 1966, still in operation as of 2013;[24]
- MIDnet in Lincoln, Nebraska the first NSFNET regional backbone to become operational in the Summer of 1986, serving Arkansas, Iowa, Kansas, Missouri, Nebraska, Oklahoma, and South Dakota, later acquired by Global Internet, which was acquired by Verio, Inc.;
- NEARNET, the New England Academic and Research Network in Cambridge, Massachusetts, added as part of the upgrade to T-3, serving Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, and Vermont, established in late 1988, operated by BBN under contract to MIT, BBN assumed responsibility for NEARNET on 1 July 1993;[25]
- NorthWestNet in Seattle, Washington, serving Alaska, Idaho, Montana, North Dakota, Oregon, and Washington, founded in 1987;[26]
- NYSERNet, New York State Education and Research Network in Ithaca, New York;
- SESQUINET, the Sesquicentennial Network in Houston, Texas, founded during the 150th anniversary of the State of Texas;
- SURAnet, the Southeastern Universities Research Association network in College Park, Maryland and later as part of the T-3 upgrade in Atlanta, Georgia serving Alabama, Florida, Georgia, Kentucky, Louisiana, Maryland, Mississippi, North Carolina, South Carolina, Tennessee, Virginia, and West Virginia, sold to BBN in 1994; and
- Westnet in Salt Lake City, Utah and Boulder, Colorado, serving Arizona, Colorado, New Mexico, Utah, and Wyoming.

Commercial traffic[edit]

The NSF's appropriations act authorized NSF to "foster and support the development and use of computer and other scientific and engineering methods and technologies, primarily for research and education in the sciences and engineering." This allowed NSF to support NSFNET and related networking initiatives, but only to the extent that that support was "*primarily for research and education in the sciences and engineering.*"[27] And this in turn was taken to mean that use of NSFNET for commercial purposes was *not* allowed.

The NSFNET Backbone Services Acceptable Use Policy

June 1992[28]

General Principle

1. NSFNET Backbone services are provided to support open research and education in and among US research and instructional institutions, plus research arms of for-profit firms when engaged in open scholarly communication and research. Use for other purposes is not acceptable.

Specifically Acceptable Uses

2. Communication with foreign researchers and educators in connection with research or instruction, as long as any network that the foreign user employs for such communication provides reciprocal access to US researchers and educators.
3. Communication and exchange for professional development, to maintain currency, or to debate issues in a field or subfield of knowledge.
4. Use for disciplinary-society, university-association, government-advisory, or standards activities related to the user's research and instructional activities.
5. Use in applying for or administering grants or contracts for research or instruction, but not for other fundraising or public relations activities.
6. Any other administrative communications or activities in direct support of research and instruction.
7. Announcements of new products or services for use in research or instruction, but not advertising of any kind.
8. Any traffic originating from a network of another member agency of the Federal Networking Council if the traffic meets the acceptable use policy of that agency.
9. Communication incidental to otherwise acceptable use, except for illegal or specifically unacceptable use.

Unacceptable Uses

10. Use for for-profit activities, unless covered by the General Principle or as a specifically acceptable use.
11. Extensive use for private or personal business.

This statement applies to use of the NSFNET Backbone only. NSF expects that connecting networks will formulate their own use policies. The NSF Division of Networking and Communications Research and Infrastructure will resolve any questions about this Policy or its interpretation.

Acceptable Use Policy (AUP)[edit]

To ensure that NSF support was used appropriately, NSF developed an *NSFNET Acceptable Use Policy* (AUP) that outlined in broad terms the uses of NSFNET that were and were not allowed.[28] The AUP was revised several times to make it clearer and to allow the broadest possible use of NSFNET, consistent with Congress' wishes as expressed in the appropriations act.

A notable feature of the AUP is that it talks about acceptable uses of the network that are not directly related to who or what type of organization is making that use. Use from for-profit organizations is acceptable when it is in support of open research and education. And some uses such as fundraising, advertising, public relations activities, extensive personal or private use, for-profit consulting, and all illegal activities are never acceptable, even when that use is by a non-profit college, university, K-12 school, or library. And while these AUP provisions seem quite reasonable, in specific cases they often proved difficult to interpret and enforce. NSF did not monitor the content of traffic that was sent over NSFNET or actively police the use of the network. And it did not require Merit or the regional networks to do so. NSF, Merit, and the regional networks did investigate possible cases of inappropriate use, when such use was brought to their attention.[29]

An example may help to illustrate the problem. Is it acceptable for a parent to exchange e-mail with a child enrolled at a college or university, if that

exchange uses the NSFNET backbone? It would be acceptable, if the subject of the e-mail was the student's instruction or a research project. Even if the subject was not instruction or research, the e-mail still might be acceptable as private or personal business as long as the use was not extensive.[30]

The prohibition on commercial use of the NSFNET backbone[31] meant that some organizations could not connect to the Internet via regional networks that were connected to the NSFNET backbone, while to be fully connected other organizations (or regional networks on their behalf), including some non-profit research and educational institutions, would need to obtain two connections, one to an NSFNET attached regional network and one to a non-NSFNET attached network provider. In either case the situation was confusing and inefficient. It prevented economies of scale, increased costs, or both. And this slowed the growth of the Internet and its adoption by new classes of users, something no one was happy about.

In 1988, Vint Cerf, then at the Corporation for National Research Initiatives (CNRI), proposed to the Federal Networking Council (FNC) and to MCI to interconnect the commercial MCI Mail system to NSFNET. MCI provided funding and FNC provided permission and in the summer of 1989, this linkage was made. In effect, the FNC permitted experimental use of the NSFNET backbone to carry commercial email traffic into and out of the NSFNET. Other email providers such as Telenet's Telemail, Tymnet's OnTyme and CompuServe also obtained permission to establish experimental gateways for the same purpose at about the same time. The interesting side effect of these links to NSFNET was that the users of the heretofore disconnected commercial email services were able to exchange email with one another via the Internet. Coincidentally, three commercial Internet service providers emerged in the same general time period: AlterNet (built by UUNET), PSINet and CERFnet.

Commercial ISPs, ANS CO+RE, and the CIX[edit]

During the period when NSFNET was being established, Internet service providers that allowed commercial traffic began to emerge, such as Alternet, PSINet, CERFNet, and others. The commercial networks in many cases were interconnected to the NSFNET and routed traffic over the NSFNET nominally accordingly to the NSFNET acceptable use policy[32] Additionally, these early commercial networks often directly interconnected with each other as well as, on a limited basis, with some of the regional Internet networks.

In 1991, the Commercial Internet eXchange (CIX, pronounced "kicks") was created by PSINet, UUNET and CERFnet to provide a location at which multiple networks could exchange traffic free from traffic-based settlements and restrictions imposed by an acceptable use policy.[33]

In 1991 a new ISP, ANS CO+RE (commercial plus research), raised concerns and unique questions regarding commercial and non-commercial interoperability policies. ANS CO+RE was the for-profit subsidiary of the non-profit Advanced Network and Services (ANS) that had been created earlier by the NSFNET partners, Merit, IBM, and MCI.[34] ANS CO+RE was created specifically to allow commercial traffic on ANSNet without jeopardizing its parent's non-profit status or violating any tax laws. The NSFNET Backbone Service and ANS CO+RE both used and shared the common ANSNet infrastructure. NSF agreed to allow ANS CO+RE to carry commercial traffic subject to several conditions:

- that the NSFNET Backbone Service was not diminished;
- that ANS CO+RE recovered at least the average cost of the commercial traffic traversing the network; and
- that any excess revenues recovered above the cost of carrying the commercial traffic would be placed into an infrastructure pool to be distributed by an allocation committee broadly representative of the networking community to enhance and extend national and regional networking infrastructure and support.

For a time ANS CO+RE refused to connect to the CIX and the CIX refused to purchase a connection to ANS CO+RE. In May 1992 Mitch Kapor and Al Weis forged an agreement where ANS would connect to the CIX as a "trial" with the ability to disconnect at a moment's notice and without the need to join the CIX as a member.[35] This compromise resolved things for a time, but later the CIX started to block access from regional networks that had not paid the $10,000 fee to become members of the CIX.[36]

Meanwhile, Congress passed its Scientific and Advanced-Technology Act of 1992 [37] that formally permitted NSF to connect to commercial networks in support of research and education.

An unfortunate state of affairs[edit]

The creation of ANS CO+RE and its initial refusal to connect to the CIX was one of the factors that lead to the controversy described later in this article.[38] Other issues had to do with:

- differences in the cultures of the non-profit research and education community and the for-profit community with ANS trying to be a member of both camps and not being fully accepted by either;
- differences of opinion about the best approach to take to open the Internet to commercial use and to maintain and encourage a fully interconnected Internet; and
- differences of opinion about the correct type and level of involvement in Internet networking initiatives by the public and the private sectors.

For a time this state of affairs kept the networking community as a whole from fully implementing the vision for the Internet as a worldwide network of fully interconnected TCP/IP networks allowing any connected site to communicate with any other connected site. These issues would not be fully resolved until a new network architecture was developed and the NSFNET Backbone Service was turned off in 1995.[11]

Privatization and a new network architecture[edit]

The NSFNET Backbone Service was primarily used by academic and educational entities, and was a transitional network bridging the era of the ARPANET and CSNET into the modern Internet of today. With its success, the "federally-funded backbone" model gave way to a vision of commercially operated networks operating together to which the users purchased access.[39]

New network architecture, c. 1995

On April 30, 1995, the NSFNET Backbone Service had been successfully transitioned to a new architecture[40] and the NSFNET backbone was decommissioned.[41] At this point the NSFNET regional backbone networks were still central to the infrastructure of the expanding Internet, and there were still other NSFNET programs, but there was no longer a central NSFNET backbone or network service.

After the transition, network traffic was carried on the NSFNET regional backbone networks and any of several commercial backbone networks, internetMCI, PSINet, SprintLink, ANSNet, and others. Traffic between networks was exchanged at four Network Access Points or NAPs. Competitively

established, and initially funded by NSF, the NAPs were located in New York (actually New Jersey), Washington, D.C., Chicago, and San Jose and run by Sprint, MFS Datanet, Ameritech, and Pacific Bell.[42] The NAPs were the forerunners of modern Internet exchange points.

The NSFNET regional backbone networks could connect to any of their newer peer commercial backbone networks or directly to the NAPs, but in either case they would need to pay for their own connection infrastructure. NSF provided some funding for the NAPs and interim funding to help the regional networks make the transition, but did not fund the new commercial backbone networks directly.

To help ensure the stability of the Internet during and immediately after the transition from NSFNET, NSF conducted a solicitation to select a Routing Arbiter (RA) and ultimately made a joint award to the Merit Network and USC's Information Science Institute to act as the RA.

To continue its promotion of advanced networking technology the NSF conducted a solicitation to create a very high-speed Backbone Network Service (vBNS) which, like NSFNET before it, would focus on providing service to the research and education community. MCI won this award and created a 155 Mbit/s (OC3c) and later a 622 Mbit/s (OC12c) and 2.5 Gbit/s (OC48c) ATM network to carry TCP/IP traffic primarily between the supercomputing centers and their users. NSF support[43] was available to organizations that could demonstrate a need for very high speed networking capabilities and wished to connect to the vBNS or to the Abilene Network, the high speed network operated by the University Corporation for Advanced Internet Development (UCAID, aka Internet2).[44]

At the February 1994 regional techs meeting in San Diego, the group revised its charter[45] to include a broader base of network service providers, and subsequently adopted North American Network Operators' Group (NANOG) as its new name. Elise Gerich and Mark Knopper were the founders of NANOG and its first coordinators, followed by Bill Norton, Craig Labovitz, and Susan Harris.[46]

Controversy[edit]

For much of the period from 1987 to 1995, following the opening up of the Internet through NSFNET and in particular after the creation of the for-profit ANS CO+RE in May 1991, some Internet stakeholders[47] were concerned over the effects of privatization and the manner in which ANS, IBM, and MCI received a perceived competitive advantage in leveraging federal research money to gain ground in fields in which other companies allegedly were more competitive. *The Cook Report on the Internet*,[48] which still exists, evolved as one of its largest critics. Other writers, such as Chetly Zarko, a University of Michigan alumnus and freelance investigative writer, offered their own critiques.[49]

On March 12, 1992 the Subcommittee on Science of the Committee on Science, Space, and Technology, U.S. House of Representatives, held a hearing to review the management of NSFNET.[29] Witnesses at the hearing were asked to focus on the agreement(s) that NSF put in place for the operation of the NSFNET backbone, the foundation's plan for recompetition of those agreements, and to help the subcommittee explore whether the NSF's policies provided a level playing field for network service providers, ensured that the network was responsive to user needs, and provided for effective network management. The subcommittee heard from seven witnesses, asked them a number of questions, and received written statements from all seven as well as from three others. At the end of the hearing, speaking to the two witnesses from NSF, Dr. Nico Habermann, Assistant NSF Director for the Computer and Information Science and Engineering Directorate (CISE), and Dr. Stephen Wolff, Director of NSF's Division of Networking & Communications Research & Infrastructure (DNCRI), Representative Boucher, Chairman of the subcommittee, said:

> … I think you should be very proud of what you have accomplished. Even those who have some constructive criticism of the way that the network is presently managed acknowledge at the outset that you have done a terrific job in accomplishing the goal of this NSFNET, and its user-ship is enormously up, its cost to the users has come down, and you certainly have our congratulations for that excellent success.

Subsequently, the subcommittee drafted legislation, becoming law on October 23, 1992, which authorized the National Science Foundation

> … to foster and support access by the research and education communities to computer networks which may be used substantially for purposes in addition to research and education in the sciences and engineering, if the additional uses will tend to increase the overall capabilities of the networks to support such research and education activities (that is to say, commercial traffic).[50]

This legislation allowed, but did not require, NSF to repeal or modify its existing NSFNET Acceptable Use Policy (AUP)[28] which restricted network use to activities in support of research and education.[31]

The hearing also led to a request from Rep. Boucher asking the NSF Inspector General to conduct a review of NSF's administration of NSFNET. The NSF Office of the Inspector General released its report on March 23, 1993.[34] The report concluded by:

- stating that "[i]n general we were favorably impressed with the NSFNET program and staff";
- finding no serious problems with the administration, management, and use of the NSFNET Backbone Service;
- complimenting the NSFNET partners, saying that "the exchange of views among NSF, the NSFNET provider (Merit/ANS), and the users of NSFNET [via a bulletin board system], is truly remarkable in a program of the federal government"; and
- making 17 "recommendations to correct certain deficiencies and strengthen the upcoming re-solicitation."

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Nuclear Fuel Services, Inc. (NFS)

Wikipedia 🌐 Nuclear Fuel Services

Draft... just links to info ...

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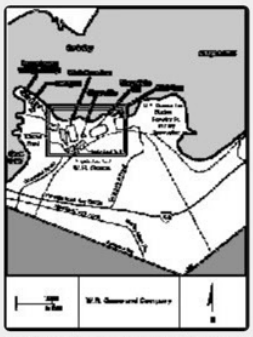
See https://www.nukeworker.com/pictures/index-10.html

(2019-04-nukeworker-com-nuclear-facilities-na-usa-region1-northeast-nuclear-pictures.pdf / https://drive.google.com/open?id=1tpYd14Hf6HsQFybDPkMQYK_FoID5MH8C)

W. R. Grace & Co.



W. R. Grace and Company (FUSRAP Site) in Curtis Bay, Maryland

The W.R. Grace and Company is located on an industrialized peninsula in south Baltimore, Maryland. In the 1950's the W.R. Grace and Company milled thorium for the Atomic Energy Commission (AEC), a predecessor agency for the US Department of Energy. W.R. Grace began processing radioactive materials at the site in the 1950s, when Rare Earths, Inc. (W.R. Grace's predecessor) entered into a contract with AEC to extract thorium and rare earths from naturally-occurring monazite sands. Rare Earths' contract with AEC and its license to possess, transfer and use radioactive thorium were transferred to W.R. Grace and Company. Building 23, where the thorium processing took place, was open until the late 1950s when the contract was terminated. The wastes were buried in a landfill area. Thorium processing resulted in low-level waste that was buried on the property. Radiation surveys have shown that radioactive contamination still persists in the waste burial area, the waste management area which surrounds the waste burial plot, surfaces surrounding vats and hoppers in Building 23 and alpha-radiation surface contamination in the whole of Building 23. The site was designated by DOE for remedial action under the Formerly Utilized Sites Remedial Action Program (FUSRAP) in 1984. This site was one of the 21 Formerly Utilized Sites Remedial Action Program (FUSRAP) sites where cleanup responsibility was transferred to the US Army Corps of Engineers in 1997 in accordance with the Energy and Water Development Appropriations Act for FY 1998. Cleanup responsibilities transferred at that time from DOE-EM to the USACE.

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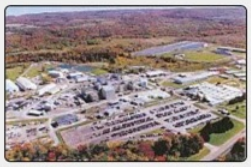
West Valley



1961 While industrial interests explore the viability of commercial reprocessing, the state of New York moves to acquire land in the town of Ashford, near West Valley, for an atomic industrial area. The state Office of Atomic Development establishes the Western New York Nuclear Service Center (WNYNSC) on the 3,345 acres of land it has taken title to.

1962 Davison Chemical Company establishes Nuclear Fuels Services, Inc. (NFS) as a reprocessing company. It reaches an agreement with the state to lease the WNYNSC.

1966 Nuclear Fuels Services develops and operates 200 acres of the WNYNSC. It operates the site as a nuclear fuel reprocessing center from 1966 to 1972, and accepts radioactive waste for disposal until 1975. During the operation of the plant, 640 metric tons of spent reactor fuel are processed, resulting in 660,000 gallons of highly radioactive liquid waste. The liquid waste is stored in an underground waste tank. NFS also utilizes a 15-acre area for the disposal of radioactive waste from commercial waste generators, and another seven-acre landfill is used to dispose of radioactive waste generated from reprocessing.

1976 Following four years of pursuing modifications to the plant, NFS decides the costs and regulatory requirements of reprocessing make the venture impractical. The company decides to exercise its right to leave the site after its lease expires on December 31, 1980, transferring ownership and responsibility for the waste and facility to the state of New York. The state initiates talks with the Federal Energy Research and Development Administration to sort out ownership of the waste and environmental remediation responsibility.

1980 Congress passes the West Valley Demonstration Project Act, Public Law 96-368, directing the U.S. Department of Energy (DOE) to take the lead role in solidifying the liquid high-level waste and decontaminating and decommissioning the facilities at West Valley.

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History

See 2007-04-07-tn-times-news-nuclear-fuel-services-celebrates-50th-birthday.pdf / https://drive.google.com/open?id=1tsW8c4gjhyJcgf38aWC5aJ30hh7pUNjc

ERWIN - Much of the activity in its production plant is shrouded in secrecy, but Unicoi County's largest employer doesn't want one piece of news to be classified: It has turned 50 this year.

Nuclear Fuel Services, which manufactures fuel for the Navy and converts highly enriched uranium into fuel used at the Tennessee Valley Authority's Browns Ferry nuclear power plant, has hit the half-century mark.

The industry plans to celebrate the anniversary in July, but it briefly commemorated the event at the Unicoi County Chamber of Commerce dinner last month.

NFS was born in 1957 in Baltimore when T.C. Runion, Charlie Taylor, Stan Reese and Ed Johnson hooked up with companies W.R. Grace and Davison Chemical, fueled in part by a desire by Congress to have commercial nuclear power plants.

W.R. Grace bought Davison in 1954, NFS spokesman Tony Treadway said.

"We've made a real contribution to society and the business world," said Taylor, who remained active in company affairs until he resigned from the board of directors in February.

According to a company brochure, the four men were working for National Lead Co. in Fernald, Ohio, when their lives intersected.

"We knew that W.R. Grace was wanting to grow into the nuclear business and that Davison Chemical made a lot of specialty chemicals, so we went to them for financial backing," Johnson said.

The choice of building NFS in Erwin was a matter of logic and personal feelings. Runion said the town was close to Oak Ridge and Savannah River, a Department of Energy site close to Aiken, S.C., and a railroad siding could be obtained for the Erwin property. Plus, Erwin was his hometown.

Taylor said the early years consisted of processing highly enriched uranium, low-enriched uranium and thorium metal. During down times, NFS made specialty chemicals. Later, NFS manufactured material for Consolidated Edison's first commercial nuclear reactor.

The company's most well-known role with the military evolved from the Navy's wishes to have a fleet of nuclear powered ships. NFS has been the sole provider of Navy fuel since 1966, and the first batch arrived at an aircraft carrier in 1969.

"We wanted to penetrate the Navy business, so NFS and W.R. Grace went to work on a better type of fuel completely on our own and without government support," Johnson said. "It was a really gutsy thing to do."

Runion recalled that he worked at the Erwin plant for 10 years, all of which he believed were profitable. He said that is unusual in the nuclear industry.

"Most of all the companies took a beating the first two or three years," said Runion, who noted that everyone involved in establishing NFS believed that nuclear business "was going to be the way to go."

He said NFS was one of the first plants to produce uranium oxide as part of the fuel that nuclear power electric generating plants needed. The material used in Erwin was manufactured at a government plant in Oak Ridge, Runion said.

At the moment, NFS has about 540 employees, with more than 340 on salary and the rest being hourly, union employees.

Other union members are gradually returning to work after last year's strike ended. Employment was at its highest about 1,200 in the late 1980s and early 1990s.

Despite a connection to the U.S. government that keeps many aspects of its operation top secret, NFS has found itself regularly in the news over the years.

Sometimes, it's been the result of labor unrest. Occasionally, the union has gone on strike, the last one coming in 2006 and lasting five months. In 1985 and 1986, a strike lasted nearly a year. Taylor said NFS has probably had more problems with its union than other companies have encountered.

Roger Birchfield, who worked for NFS for 40 years before retiring in 2006 and was union president during the recent strike, said he believes unions are good for a company and employees because it provides a structure by which both can work. He said it is important, especially in a nuclear plant, to have an organization to follow up on safety issues.

Periodically, NFS has found itself in trouble with the Nuclear Regulatory Commission. The federal agency fined NFS $10,000 in 1985 for what was called a "dangerous buildup of uranium" in the plant's air vents.

The NRC shut down the plant in 1979 when NFS could not account for 19.8 pounds of uranium. After the company was able to document most of the uranium, the NRC allowed the plant to reopen.

In 1996, an NFS incinerator caught fire, but it caused no injuries or radiation contamination, company officials said.

One of the toughest periods for the company began in 1992 when the Navy canceled its contract with NFS because its fuel needs dropped as the Cold War ended. Taylor recalled that as one of the dark periods for the company as employment plummeted by more than half from 800. NFS regained the contract in 1996.

When NFS lost its contract with the Navy, the company did not think it was on its last legs because it knew that branch of the military would need fuel again, Treadway said. But he said the company realized it "needed to be more aggressive in new business development."

DOE Western NY Nuclear Service Center

See 1978-11-us-doe-western-ny-nuclear-service-center-report-vol1 / https://drive.google.com/open?id=1u2oFRSwcQvei0LPCue9gYzw3A_z0O61Q

1.1 HISTORY

A stated purpose of the Atomic Energy Act of 1954 was to promote "wide spread participation in the development and utilization of atomic energy for peaceful purposes." The Atomic Energy Commission (AEC) actively encouraged private industry to enter the field of nuclear power. By the end of 1955, the AEC concluded agreements for the first few demonstration power reactors.

In 1954, the AEC began a program to encourage private participation in the reprocessing of irradiated nuclear fuel as part of its program to commercialize the entire nuclear fuel cycle. To have commercial reprocessing services available for the first irradiated fuel in 1961, the AEC offered to make available the reprocessing technology developed for the defense program.

In 1959, New York State's interest in attracting atomic development culminated in the formation of the Office of Atomic Development (OAD) as an independent agency responsible for coordination of atomic regulatory and development functions within the State. To encourage nuclear development, the OAD acquired the West Valley site in 1961, which became designated the Western New York Nuclear Service Center (WNYNSC). The purpose of the Center was to store nuclear fuels and radioactive wastes and to be available for related industrial development.

The **Davison Chemical Co.** was sufficiently encouraged by the developments in the late 1950's to consider the feasibility of constructing a reprocessing facility. In 1961, Davison expressed interest in operating the WNYNSC. January 1962, Davison outlined its plans to the AEC for constructing a In private reprocessing plant. To pursue the reprocessing venture, Davison set up Nuclear Fuel Services, Inc. (NFS), whose stock was owned by the W. R. Grace Co. (78%) and American Machine and Foundry (22%). NFS, in its proposal, indicated its willingness to provide and maintain storage for a limited period of time for the high-level liquid wastes (HLLW)t resulting from the reprocessing operations. Subsequently, the wastes would become the responsibility of the AEC. NFS also said it was willing to collect and return to the AEC an amount calculated to provide the estimated full costs for perpetual storage at the point of turnover. NFS was simultaneously negotiating to make New York State responsible for perpetual care of the was tes. The proposed, and eventually approved, method of waste disposition was to store them in liquid form in underground storage tanks, similar to the method being used at AEC production facilities.

HISTORY OF WEST WALLEY

See 1979-us-doe-western-ny-nuclear-service-center-companiion-report-vol2.pdf / https://drive.google.com/open?id=1u94lpBjuojDHVlTaqgNtJwm_avkOvsyy

1. 1

A stated purpose of the Atomic Energy Act of 1954 was to promote "wide-spread participation in the development and utilization of atomic energy for peaceful purposes." The Atomic Energy Commission (AEC) actively encouraged private industry to enter the field of nuclear power. By the end of 1955, the AEC concluded agreements for the first few demonstration nuclear power reactors.

In 1954, the AEC began a program to encourage private reprocessing of irradiated nuclear fuel as part of its program to commercialize the entire nuclear fuel cycle. By January 1956 this program resulted in an announcement by the AEC that:

• The AEC would make available to industry AEC technology on reprocessing and the description of fuels available for reprocessing

• The AEC invited proposals by industry to design, reprocessing plants construct, and operate

• The AEC would provide assistance in the form of a baseload and allow the use of AEC facilities for development work and training.

During discussions of this program with industry, three predominant issues were raised. The first was the lack of adequate demand to make a commercial reprocessing plant economically viable. The AEC offered to provide a baseload of fuel from its production reactors to support the plant until adequate demand developed.

The second predominant issue was the lack of a basis for establishing reason able charges for services. In 1957, the AEC announced a policy to assure that reprocessing services would be available for the first commercial irradiated fuel in 1961. Under this policy, the AEC would provide fuel reprocessing services in AEC facilities until services were available commercially at reasonable prices or until June 30, 1976. To establish charges for those services, the AEC designed a hypothetical reprocessing plant. The reasonableness of commercial charges was to be based on comparison with these hypothetical plant charges.

The third predominant issue was responsibility for the high-level radioactive wastes resulting from commercial reprocessing. The AEC policy was to encourage the maximum participation of industry in the management of these wastes. It was recognized that industrial longevity was insufficient to assume ultimate responsibility for these wastes. For West Valley, this factor was overcome by having ownership of the land reside with the State.

Perceiving an opportunity to promote industrial development within the State, New York, in 1956, had created a State Council on the Development of Atomic Energy, followed by the formation of the Office of Atomic Development (OAD) in 1959. In 1961, OAD acquired a 1350-hectare (ha) (3345-acre) site near the hamlet of West Valley in the Town of Ashford, Cattaraugus County, about 48 km (30 miles) south of Buffalo. The site was judged to be favorable for a nuclear fuel reprocessing plant and attendant waste facilities. It was favorably located with respect to projected nuclear reactor development in the north eastern and mid-Atlantic United States. In addition, the silty till in the West Valley area was relatively impermeable to water and would, therefore, provide protection against migration of waterborne radioactivity through the ground. Further advantages of the site were a low population density in the area and meteorological conditions favorable for atmospheric dilution of any radioactivity released. The site was named the Western New York Nuclear Service Center (WNYNSC); it is also referred to as West Valley or the Center.

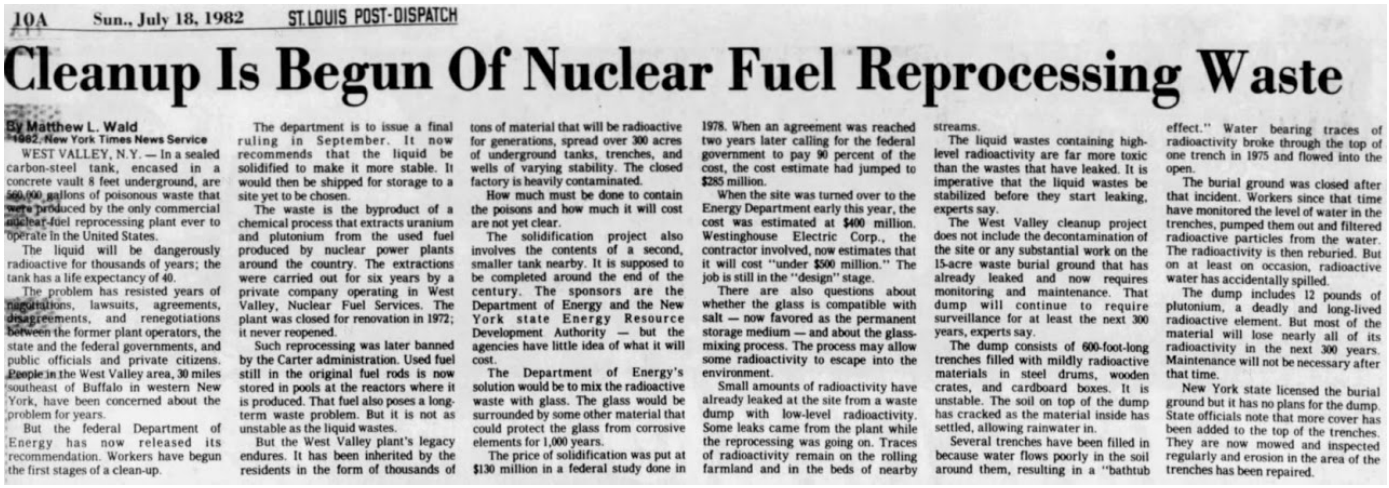
The developments of the late 1950s were sufficiently encouraging for utility and industrial concerns to form the Industrial Reprocessing Group (IRG). The IRG, composed of Davison Chemical, Consolidated Edison, Commonwealth Electric, and Northern States Power, in 1ate 1959 initiated a technical and economic feasibility study of reprocessing. As a result of IRG's interest, the AEC delayed indefinitely the modification of facilities planned for processing commercial fuel, but would continue to receive fuels for which reprocessing capability did not exist or charges were not reasonable.

In 1961, the Davison Chemical Company expressed interest in the West Valley site. In January 1962, Davison outlined its plans to the AEC for constructing a private reprocessing plant. To pursue the reprocessing venture, Davison (which was acquired by W. R. Grace and Company) set up Nuclear Fuel Services, Inc. (NFS). W. R. Grace owned 78% of the NFS stock and American Machine and Foundry owned the rest.

NFS indicated its willingness to provide and maintain storage for a limited period of time for the high-level 11quid wastes resulting from the reprocessing operations. Subsequently, the wastes would become the responsibility of the AEC. NFS also said it was willing to collect and return to the AEC an amount of money calculated to provide the estimated full costs for perpetual storage at the point of turnover. NFS was simultaneously negotiating to make New York State responsible for perpetual care of the wastes. The proposed, and eventu ally approved, method of waste disposition was to store the wastes in liquid form in underground storage tanks, similar to the method being used at AEC production facilities

1982 (July 18)

Full page : 1982-07-18-st-louis-post-dispatch-pg-10.jpg / https://drive.google.com/open?id=12dH_UWRqWvSuVsqQ3JVOWanJnm1S4sTV



10A Sun., July 18, 1982 ST LOUIS POST-DISPATCH

Cleanup Is Begun Of Nuclear Fuel Reprocessing Waste

By Matthew L. Wald
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WEST VALLEY, N.Y. — In a sealed carbon-steel tank, encased in a concrete vault 8 feet underground, are 660,000 gallons of poisonous waste that were produced by the only commercial nuclear-fuel reprocessing plant ever to operate in the United States.

The liquid will be dangerously radioactive for thousands of years; the tank has a life expectancy of 40.

The problem has resisted years of negotiations, lawsuits, agreements, disagreements, and renegotiations between the former plant operators, the state and the federal governments, and public officials and private citizens. People in the West Valley area, 30 miles southeast of Buffalo in western New York, have been concerned about the problem for years.

But the federal Department of Energy has now released its recommendation. Workers have begun the first stages of a clean-up.

The department is to issue a final ruling in September. It now recommends that the liquid be solidified to make it more stable. It would then be shipped for storage to a site yet to be chosen.

The waste is the byproduct of a chemical process that extracts uranium and plutonium from the used fuel produced by nuclear power plants around the country. The extractions were carried out for six years by a private company operating in West Valley, Nuclear Fuel Services. The plant was closed for renovation in 1972; it never reopened.

Such reprocessing was later banned by the Carter administration. Used fuel still in the original fuel rods is now stored in pools at the reactors where it is produced. That fuel also poses a long-term waste problem. But it is not as unstable as the liquid wastes.

But the West Valley plant's legacy endures. It has been inherited by the residents in the form of thousands of tons of material that will be radioactive for generations, spread over 300 acres of underground tanks, trenches, and wells of varying stability. The closed factory is heavily contaminated.

How much must be done to contain the poisons and how much it will cost are not yet clear.

The solidification project also involves the contents of a second, smaller tank nearby. It is supposed to be completed around the end of the century. The sponsors are the Department of Energy and the New York state Energy Resource Development Authority — but the agencies have little idea of what it will cost.

The Department of Energy's solution would be to mix the radioactive waste with glass. The glass would be surrounded by some other material that could protect the glass from corrosive elements for 1,000 years.

The price of solidification was put at $130 million in a federal study done in 1978. When an agreement was reached two years later calling for the federal government to pay 90 percent of the cost, the cost estimate had jumped to $285 million.

When the site was turned over to the Energy Department early this year, the cost was estimated at $400 million. Westinghouse Electric Corp., the contractor involved, now estimates that it will cost "under $500 million." The job is still in the "design" stage.

There are also questions about whether the glass is compatible with salt — now favored as the permanent storage medium — and about the glass-mixing process. The process may allow some radioactivity to escape into the environment.

Small amounts of radioactivity have already leaked at the site from a waste dump with low-level radioactivity. Some leaks came from the plant while the reprocessing was going on. Traces of radioactivity remain on the rolling farmland and in the beds of nearby streams.

The liquid wastes containing high-level radioactivity are far more toxic than the wastes that have leaked. It is imperative that the liquid wastes be stabilized before they start leaking, experts say.

The West Valley cleanup project does not include the decontamination of the site or any substantial work on the 15-acre waste burial ground that has already leaked and now requires monitoring and maintenance. That dump will continue to require surveillance for at least the next 300 years, experts say.

The dump consists of 600-foot-long trenches filled with mildly radioactive materials in steel drums, wooden crates, and cardboard boxes. It is unstable. The soil on top of the dump has cracked as the material inside has settled, allowing rainwater in.

Several trenches have been filled in because water flows poorly in the soil around them, resulting in a "bathtub effect." Water bearing traces of radioactivity broke through the top of one trench in 1975 and flowed into the open.

The burial ground was closed after that incident. Workers since that time have monitored the level of water in the trenches, pumped them out and filtered radioactive particles from the water. The radioactivity is then reburied. But on at least on occasion, radioactive water has accidentally spilled.

The dump includes 12 pounds of plutonium, a deadly and long-lived radioactive element. But most of the material will lose nearly all of its radioactivity in the next 300 years. Maintenance will not be necessary after that time.

New York state licensed the burial ground but it has no plans for the dump. State officials note that more cover has been added to the top of the trenches. They are now mowed and inspected regularly and erosion in the area of the trenches has been repaired.

1982-07-18-st-louis-post-dispatch-pg-10-clip-nuclear-fuel-services.jpg / https://drive.google.com/open?id=12Yc64-RCtqGvpk80vYyNw9grZmkkoTMs

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Source : [HK0068][GDrive]

Nuclear Fuel Services

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Nuclear Fuel Services Inc. (NFS) is an American company that has been a major supplier of fuel for the United States Navy's fleet of nuclear-powered vessels since the 1960s. In recent years it has also reprocessed weapons-grade uranium into nuclear reactor fuel. It operates a 65-acre (260,000 m^2) gated complex in Erwin, Tennessee.[1] NFS is a subsidiary of BWX Technologies, Inc.

The company has emerged as America's leader in converting surplus weapons-grade uranium from U.S. Cold War stockpiles into valuable low-enriched uranium fuel material to power commercial nuclear power plants. Known as downblending, the proprietary NFS process is currently being used to convert about 40 metric tons of highly enriched uranium (HEU) into fuel material for the Tennessee Valley Authority. In 2007, the company was also awarded a contract by the U.S. Department of Energy's (DOE) National Nuclear Security Administration to convert 17.4 metric tons of HEU into material for America's Reliable Fuel Supply Program.

The company's downblending is also an important resource for the round up of other nuclear materials around the world to reduce the chance of proliferation by rogue nations or terrorists. NFS is also engaged as a team member at important nuclear projects at other DOE sites, such as the Mixed Oxide (MOX) Fuel Fabrication Facility at Savannah River and the cleanup of an old laboratory at the Oak Ridge National Laboratory.

Recent NRC Events[edit]

On May 11, 2008, the Nuclear Regulatory Commission released information on emergency notification of two 2006 incidents at the Erwin plant. The first incident involved a leak of liquid containing highly enriched uranium, which could have resulted in a criticality incident.[2]

The second incident involved an unmanaged 'accumulation point' - where a critical mass of uranium could have accumulated - was discovered while reacting to the first incident. In other words, no system protections were in place to prevent a solution leak from entering the bottom of an elevator shaft in the plant. The result of material accumulated in a confined space could be a criticality incident [3]

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- ^ Nuclear Regulatory Commission, United States (May 12, 2008). "NRC Event Notification Report 42393 for May 12, 2008". Retrieved 2009-06-07.
- ^ Nuclear Regulatory Commission, United States (May 12, 2008). "NRC Event Notification Report 42411 for May 12, 2008". Retrieved 2009-06-07.

External links[edit]

- Nuclear Fuel Services company website

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A B C D E F G H I J K L M N O P Q R S T U V W X Y Z

PEOPLE (by last name / then D.o.B.)

- Thomas Johannes **Obenhuber** (born 1955)
- Dr. Lloyd John **Old** (born 1933)
- Kevin James **Olival** (born 1975)
- Lionel Herbert **Olmer** (born 1934)
- Kenneth Harry **Olsen** (born 1926)
- Tara O'Toole

PLACES / COMPANIES / OTHER

- USS **O'Bannon** (DD-450)
- **One Health**
- **One Health Commission**

USS O'Bannon (DD-450)

Wikipedia USS O'Bannon (DD-450)

2019-10-29-wikipedia-org-uss-o-bannon-dd-450.pdf

https://en.wikipedia.org/wiki/USS_O%27Bannon_%28DD-450%29

History United States

Name:

O'Bannon

Namesake:

First lieutenant Presley O'Bannon

Builder:

Bath Iron Works

Laid down:

3 March 1941

Launched:

19 February 1942

Commissioned:

26 June 1942

Decommissioned:

30 January 1970

Struck:

30 January 1970

Fate:

Sold for scrap, 6 June 1970

General characteristics

Class and type:

Fletcher-class destroyer

Displacement:

2,050 tons

Length:

376 ft 6 in (114.7 m)

Beam:

39 ft 8 in (12.1 m)

Draft:

17 ft 9 in (5.4 m)

Propulsion:

60,000 shp (45 MW); 2 propellers

Speed:

35 knots (65 km/h; 40 mph)

Range:

6500 nmi. (12,000 km) at 15 kt

Complement:

329

Armament:

- 5 × 5 in (127 mm)/38 cal. guns
- 10 × 40 mm AA guns
- 7 × 20 mm AA guns
- 10 × 21 in (533 mm) torpedo tubes
- 6 × depth charge projectors
- 2 × depth charge tracks

USS *O'Bannon* (DD/DDE-450), a *Fletcher*-class destroyer, was the second ship of the United States Navy to be named for Lieutenant Presley O'Bannon (1784–1850), the Marine Corps's "hero of Derna".

O'Bannon was laid down by Bath Iron Works Corp. in Bath, Maine on 3 March 1941, and launched 19 February 1942, sponsored by Mrs. E. F. Kennedy, descendant of Lieutenant O'Bannon. *O'Bannon* and her sister ship *Nicholas* (DD-449) were the first two *Fletcher*s to be launched. *O'Bannon* was commissioned at Boston on 26 June 1942, Commander Edwin R. Wilkinson in command.[1]

O'Bannon was the US Navy's most decorated destroyer during World War II, earning 17 battle stars and a Presidential Unit Citation.

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1942

O'Bannon briefly trained for war in the Caribbean and sailed from Boston on 29 August 1942 for the Southwest Pacific, where the long and arduous Guadalcanal campaign had just begun. For over a year, the Navy—stretched thin to cover its worldwide commitments at a period when new ships were just beginning to join the fleet in any number—was to fight and fight again in the Solomon Islands in one of the most bitterly contested campaigns of history, wresting air and sea control from the Japanese and providing the Marine Corps and the Army with every possible support as they gained ground inch by inch on the myriad islands. Assigned the Destroyer Squadron 21 (DesRon 21), *O'Bannon* played a valiant part in these endeavors, winning a Presidential Unit Citation.[1]

Based at Nouméa, New Caledonia, *O'Bannon* first escorted the escort carrier *Copahee* on a run to Guadalcanal, where on 9 October, twenty Marines flew their Grumman F4F Wildcats off *Copahee*'s decks, desperately needed as reinforcements at beleaguered Henderson Field. Through the remainder of the month, *O'Bannon* sailed the New Hebrides and southern Solomons on escort duty. On 7 November at Nouméa, she joined Rear Admiral Daniel J. Callaghan's Support Group, ready to sail with a convoy carrying critical reinforcements, replacements, food, ammunition, and aviation material.[1]

On the approach to Guadalcanal, *O'Bannon* sighted and fired on a surfaced enemy submarine, holding it down while the convoy passed safely. On the afternoon of 12 November, the partially unladen transports were attacked by sixteen enemy torpedo bombers; eleven were shot down. *O'Bannon* fired on four of the enemy planes.[1]

Now came word that the Japanese were moving south in force. Two battleships, a light cruiser, and 14 destroyers were bound to destroy Henderson Field by bombardment, to break up the American reinforcement mission, and to cover reinforcement movements of their own. *O'Bannon* and the other ships of the Support Force, two heavy and three light cruisers and eight destroyers, confronted the greatly superior enemy early on 13 November in Ironbottom Sound, so named for the number of ships on both sides sunk there during the Guadalcanal campaign. *O'Bannon* boldly attacked the Japanese battleship *Hiei*, closing so near, the battleship could not depress her main battery far enough to fire on the destroyer. *O'Bannon*'s gunfire, in combination with the attacks of the rest of the force, damaged *Hiei* so badly that she was a sitting duck for the air attack, which forced her scuttling the next day.[1]

This first engagement of the Naval Battle of Guadalcanal was short but furious; two American light cruisers, in one of which Rear Admiral Norman Scott lost his life, and four destroyers were lost, while two Japanese destroyers were sunk, and *Hiei* prepared for her doom. Above all, the Japanese were turned back, and Henderson Field was saved from destruction. The importance of this success is illustrated by the fact that the next day, Henderson aviators sank eleven enemy troop transports attempting to reinforce the island.[1]

Through October 1942, *O'Bannon* protected landings, carried out escort duties from Nouméa and Espiritu Santo to Guadalcanal and Tulagi, joined in bombardments at Guadalcanal, Munda, and Kolombangara, and shouldered her share of the nightly patrols up "the Slot", guarding against Japanese reinforcements.[1]

1943

Plaque commemorating the Potato incident

A Navy legend holds that in April *O'Bannon* sighted a Japanese submarine on the surface and opened fire. The submarine pulled alongside the destroyer close enough that the destroyer's guns could not hit it. Several different versions of the story say that the sailors on the destroyer pelted the submarine crew with potatoes.[2] Commander Donald MacDonald only said that the submarine was so close, the destroyer's cook believed that he could throw a potato at it. Although MacDonald has repeatedly claimed that no potatoes were actually thrown, the story of an American destroyer sinking a Japanese submarine with potatoes was picked up by the media and was so quickly spread throughout navy lore that many still believe it to this day.[3] A plaque commemorating the incident was on display at the Maine Maritime Museum until the 1970s but then went missing.[2]

War duty was tense and demanded the best of men and their ships. In-port time was minimal; a few hours to fuel and reprovision, and the ships were off again. *O'Bannon* fought in many surface actions. The Battle of Kula Gulf (6 July), in which *O'Bannon* fought with three cruisers and three other destroyers against ten Japanese destroyers, swept the enemy from the area, though an American cruiser was lost. A week later, the Battle of Kolombangara had to be fought in the same waters against a Japanese cruiser, five destroyers and four destroyer escorts. The same American force sank the Japanese cruiser *Jintsu* and turned the smaller ships away,[1] losing one destroyer themselves and having three cruisers damaged.[4]

O'Bannon (right) and *Selfridge* after the Battle of Vella Lavella, 1943

For the next two months, *O'Bannon* spent most of her time in Vella Gulf, guarding landings, intercepting Japanese troop convoys and their covering escorts, and fighting off air attacks. With the aid of sister destroyers, she sank a number of barges, two submarine chasers, an armed boat, and a gunboat on various patrols. The climax of operations in the area was the Battle of Vella Lavella on 6 October, brought on by Japanese attempts to evacuate their troops from that island. With the destroyers *Selfridge* and *Chevalier*, *O'Bannon* made the first attack on the evacuation force, a group of nine or ten destroyers and smaller armed craft. The three American ships contacted six enemy destroyers, shrugged at the odds, and raced at 33 knots (61 km/h) to launch torpedoes and open gunfire. The Japanese destroyer *Yūgumo* was turned into a blazing hulk, but both *Selfridge* and *Chevalier* took torpedo hits. *O'Bannon* was close on *Chevalier*'s stern when the latter was struck, and the most radical maneuvers could not keep her from swinging into her sister's side. The enemy retired with three newly arrived American destroyers in pursuit, while *O'Bannon* guarded her stricken sisters, rescuing the survivors of *Chevalier*.[1]

1944

O'Bannon made battle repairs at Tulagi, then sailed to the west coast for overhaul. By 18 March 1944, she was back in the Solomons, ready for her part in the series of westward-moving amphibious assaults that won New Guinea. Again, it was escort and bombardment repeatedly until 18 October, when *O'Bannon* cleared Hollandia to escort reinforcements for the invasion of Leyte. The convoy was brought in safely on 24 October, the eve of the Battle for Leyte Gulf. *O'Bannon* guarded the Northern Transport area and patrolled the entrances to Leyte Gulf during the battle, coming under air attack. Thus, she played her part in the definitive destruction of the Japanese Navy.[1]

1945

Through June 1945 *O'Bannon* operated primarily in the Philippines, serving in the escort or assault force for the long roll call of invasions: Ormoc Bay, Mindoro, Lingayen Gulf, Bataan, Corregidor, Palawan, Zamboanga, Cebu, and Caraboa. Air attacks were frequent in the early period, and *O'Bannon* splashed several raiders. During the Lingayen offensive on 31 January 1945, *O'Bannon*, with three other destroyers, attacked and sank an enemy submarine; Japanese records studied after the war indicate it was most likely *Ro-115*. At the end of April and early in May, *O'Bannon* interrupted her Philippine operations to give fire support at Tarakan, Borneo, and cover minesweeping operations there.[1]

O'Bannon rendezvoused with a group of escort carriers off Okinawa on 17 June and guarded them as they struck against Sakishima Gunto. In July, she protected the large carriers as they flew strikes on northern Honshū and Hokkaidō. With the close of the war, *O'Bannon* patrolled the coast of Honshū until 27 August, when she joined the destroyers *Nicholas* and *Taylor* to escort the battleship *Missouri* into Tokyo Bay, by order of Admiral William Halsey, "because of their valorous fight up the long road from the South Pacific to the very end." There, she patrolled until 1 September. She then sailed to San Francisco and San Diego, where she was decommissioned after overhaul on 21 May 1946.[1]

1949–1962

O'Bannon leads *Chevalier* and *Taylor*, August 1943

Between 17 January 1949 and 10 February 1950, *O'Bannon* was converted to an escort destroyer at Long Beach Naval Shipyard. She was redesignated **DDE-450** on 26 March 1949.[1]

O'Bannon was recommissioned on 19 February 1951 to serve out of Pearl Harbor. She sailed for her first tour of duty with the United Nations forces repelling Communist aggression in Korea on 19 November, and, during the next seven months, she guarded carriers at sea as their air groups struck targets in Korea; served as flagship for the Wonsan Element, East Coast Blockade and Escort Group; fired on enemy gun emplacements, road and rail supply routes, ammunition depots, and troop concentrations; and protected convoys moving between Korea and Japan.[1]

A training period out of Pearl Harbor began upon her return home on 20 June 1952, and she took part in U.S. Atomic Energy Commission operations off Eniwetok. *O'Bannon* cleared Pearl Harbor late in April 1953 for the Far East, where her primary mission was screening carriers. Thereafter, she served on the Taiwan Patrol and in exercises off Japan and Okinawa.[1]

Between the Korean War and the Vietnam War, *O'Bannon* took her part in the intricately planned schedule that assured the United States that its 7th Fleet was always composed of ships and men whose readiness for any emergency was at its keenest. For *O'Bannon*, this meant an alternation of roughly six-month deployments to the Far East and periods spent in training operations and necessary overhauls at Pearl Harbor. While in the Far East, she visited ports in Japan, the Philippines, Taiwan, Australia and New Zealand, with brief welcome recreation calls at Hong Kong. She was often in either New Zealand or

Japan, the Philippines, Taiwan, Australia and New Zealand, with brief, welcome recreation calls at Hong Kong. She was often in either New Zealand or Australia for the annual commemoration of the Battle of the Coral Sea, a time of national rejoicing in those countries at which Americans are particularly welcome. She conducted combined operations training with the SEATO allies as well as exercising with Marines at Okinawa and taking part in exercises preparing for any conceivable demand that might be made on the 7th Fleet. While at Pearl Harbor, she often aided in training reservists in addition to her own training and, at various times, sailed down-range for space orbits and missile shots. In the summer and fall of 1962, she took part in atomic tests at Johnston Island.[1]

1964–1970

In 1964, *O'Bannon* took part in the 1965 film *In Harm's Way*.

O'Bannon first closed the coast of Vietnam during her 1964–65 deployment, when, on 26 December, she left Hong Kong to patrol and conduct hydrographic surveys. Much of her 1966 tour was spent as plane guard for the aircraft carrier *Kitty Hawk*, while the carrier's jets struck targets in South and North Vietnam to lessen Communist ability to wage war in the South. For a week each in May and June, *O'Bannon* fired shore bombardments, destroying Vietcong base camps, troop concentrations, and small craft.[1]

The veteran destroyer returned via Yokosuka to Pearl Harbor on 30 July. During operations out of home port, she trained for Apollo space craft recovery operations in August and was a member of the contingency recovery force for the Gemini 11 space flight early in September. She visited Guam in the spring of 1967 and returned home early in July to prepare for another Far Eastern deployment.[1]

O'Bannon (right) as part of TG 76.5 off Vietnam in March 1965

O'Bannon got under way for Japan on 28 September and reached Yokosuka on 7 October and Subic Bay on the 15th. She returned to the war zone with the carrier *Constellation* and operated as plane guard on Yankee Station through 4 November. After a fortnight's respite at Subic Bay and Hong Kong, *O'Bannon* sailed to Da Nang for shore bombardment. She visited Taiwan early in December but returned to the fighting on the 15th to provide gunfire support just south of the DMZ. Two days later, she helped to rescue the crew of an American plane that had been hit over the DMZ and had managed to crash just off shore. An enemy battery shelled the destroyer during the operation but failed to score. As 1967 ended, *O'Bannon* was still on the gun line supporting allied ground forces.[1]

On 30 January 1970, *O'Bannon* was decommissioned in a ceremony at Pearl Harbor (side-by-side with her sister *Nicholas*, as at their launching)[*citation needed*] and stricken from the Navy List. She was sold for scrap on 6 June 1970 and broken up two years later.[5]

O'Bannon received the Presidential Unit Citation and 17 battle stars for World War II service, placing her among the most decorated US ships of World War II. She also received three more battle stars for service during the Korean War.[1] Nicknamed the "*Lucky O*", none of her crew was awarded the Purple Heart.[*citation needed*]

Quotes

The history of the Pacific war can never be written without telling the story of the U.S.S. *O'Bannon*. Time after time the *O'Bannon* and her gallant little sisters were called upon to turn back the enemy. They never disappointed me.

— Admiral William F. Halsey.[6]

See also

- CDR George Philip Jr., served on *O'Bannon* (1942–43), as the Executive officer, Navigator and Combat Intelligence Officer. Received the Silver Star for service 10 January 1943 to 6 April 1943 aboard *O'Bannon*.

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Housatonic

Thomas Johannes Obenhuber (born 1955)

Born - 1955 (May 20) in Regenberg, Germany (Source - [HL0061][GDrive])

Died - 2003 (Dec 15), auto accident in California

Employers include :

- Sun Microsystems
- Internet Media Network Incorporated
- Genuity Incorporated
- Telocity Inc.
- DirectTV

Associations

- **Rodney Lance Joffe (born 1954)** (Founder of **Internet Media Network Incorporated** / **Genuity Incorporated**)

EVIDENCE TIMELINE

1955 (May) - Born in Regenberg, Germany

Source - [HL0061][GDrive]

1980 - Still residing in Germany

https://search.ancestry.com/cgi-bin/sse.dll?indiv=1&dbid=60654&h=29009015&tid=&pid=&queryId=0bc558e35b69bf66faf31ff7b46c98c4&usePUB=true&_phsrc=bis17&_phstart=successSource

1990 (July) - Thomas Obenhuber works at Sun Microsystems as Director, System Architecture

Source : 2001 (April 02) - UNITED STATES SECURITIES AND EXCHANGE COMMISSION ; FORM 10-K ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934 FOR THE YEAR ENDED DECEMBER 31, 2000 : TELOCITY DELAWARE, INC. / PDF of Report - [HC004X][GDrive] ; **The important text (background for Thomas Obenhuber) is on Page 38 ([HC005J][GDrive]) and Page 39 ([HC005K][GDrive])**

Note - No record of Thomas Obenhuber can be located at Sun Microsystems, aside from the 2001 Telocity SEC form

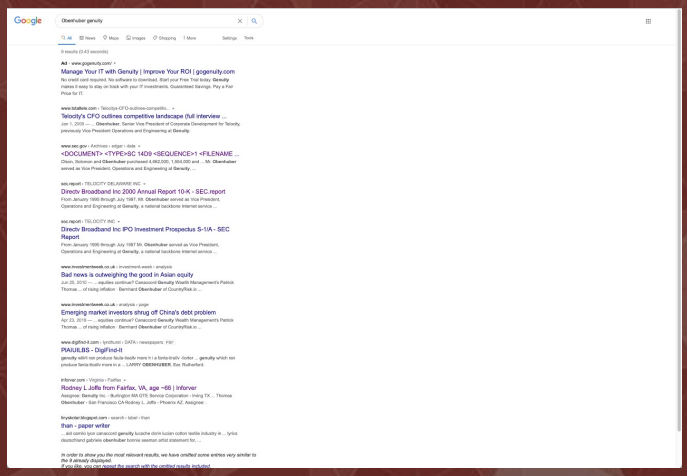
1995 (Jan) - Thomas Obenhuber joins Genuity (known then as IMN / Internet Media Network)

Source : 2001 (April 02) - UNITED STATES SECURITIES AND EXCHANGE COMMISSION ; FORM 10-K ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934 FOR THE YEAR ENDED DECEMBER 31, 2000 : TELOCITY DELAWARE, INC. / PDF of Report - [HC004X][GDrive] ; **The important text (background for Thomas Obenhuber) is on Page 38 ([HC005J][GDrive]) and Page 39 ([HC005K][GDrive])**

*"[...] **From January 1995 through July 1997, [Thomas Johannes Obenhuber (born 1955)] served as Vice President, Operations and Engineering at [Genuity Incorporated], a national backbone Internet service provider that he co-started.** From July 1990 through January 1995, Mr. Obenhuber worked at Sun Microsystems where he most recently served as Director, System Architecture."*

Note - No information available in the internet of Thomas Obenhuber's time with IMN or Genuity

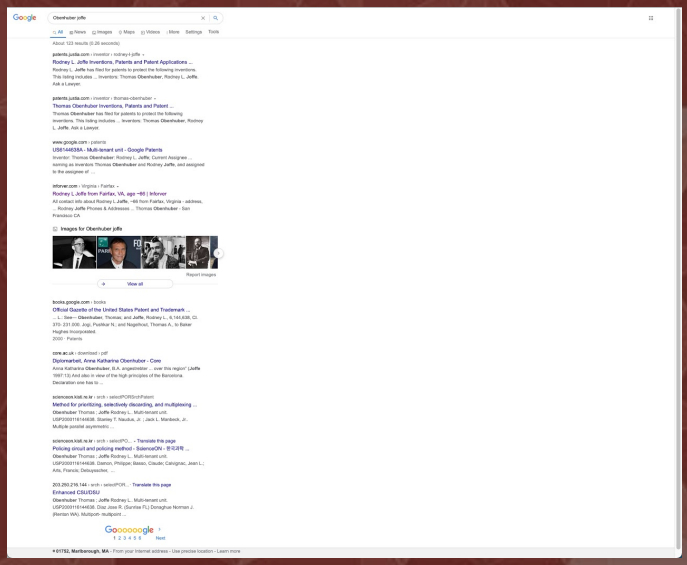
Appears to have been scrubbed. 2021 Google Search results for "Obenuber" + "Genuity".



[HW005M][GDrive]

Note - Lmited information of collaboration between Thomas Obenuber and Rodney Joffe , even though they were both key founders of the company that became Genuity

2021 Google Search results for "Obenuber" + "Joffe".



[HW005N][GDrive]

1997 (May 7) - Patent Application for 61144638 - Multi-Tenant Unit

Primary inventors are **Thomas Johannes Obenhuber (born 1955)** and **Rodney Lance Joffe (born 1954)** .

PDF of patent -[HG00B3][GDrive]

Description

This application claims priority from U.S. Provisional Patent Application Ser. No. 60/019,089, filed May 14, 1996, naming as inventors Thomas Obenhuber and Rodney Joffe, and assigned to the assignee of the instant application. U.S. Provisional Patent Application Ser. No. 60/019,089 is incorporated by reference herein in its entirety for all purposes.

BACKGROUND OF THE INVENTION

The present invention relates to computer networking systems and, more particularly, to systems and methods of providing Internet access to multiple users at a single location.

The Internet is a collection of thousands of computer networks around the globe. Internet usage has grown exponentially since 1993, mainly due to the world wide web (Web) and its electronic mail (e-mail) and web page capabilities. This interconnection of computers is possible because the Internet has adopted a communication standard (Transmission Control Protocol/Internet Protocol or TCP/IP) which allows computers with different operating systems to communicate with each other over a network of networks (an "internetwork").

By one estimation, over 8 million computers currently attach to the Internet. An estimated 40 million users worldwide access these computers ("hosts").

Corporations and private users increasingly demand easy, cost-effective, and high-speed (e.g., greater than 1 megabits per second or Mbps) access to public interoperable networks such as the Internet. Around the world, the demand for a technical infrastructure for building private networks on top of public networks also is increasing.

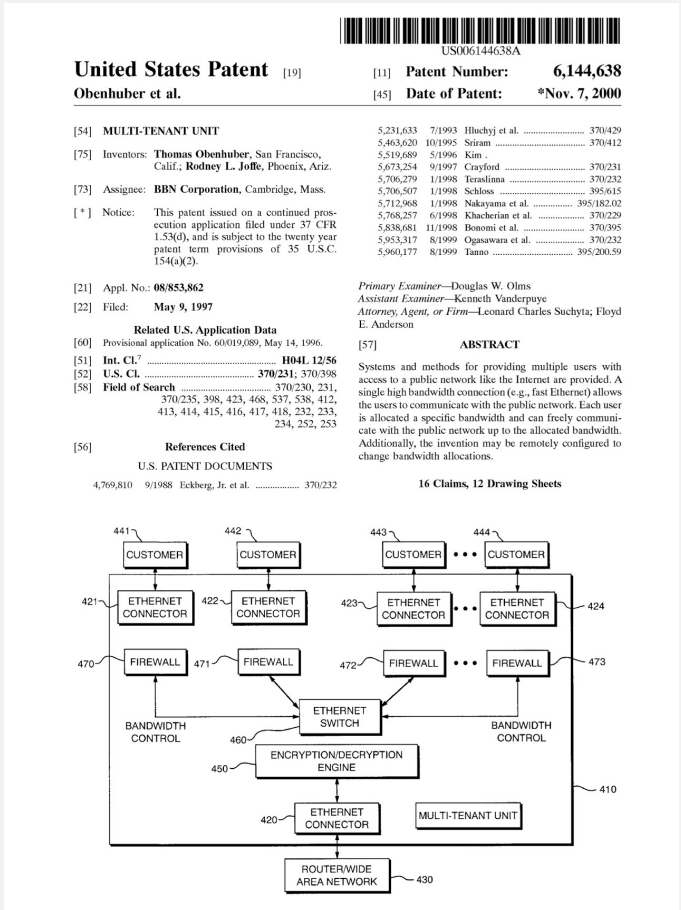
As the number of users on the Internet increases, so too do the users grow more sophisticated. Users are demanding greater bandwidth to support this sophistication.

In conventional systems a user might use several different suppliers and components to achieve connectivity and security. The user then has to change equipment and software protocols during his migration from a lower bandwidth (e.g., 56 kilobits per second or kbps) to a higher bandwidth (e.g., 1 Mbps or higher).

Accordingly, there is a need for a substantially simplified infrastructure to access public networks with a reduced number of components, a reduced number of software protocols, enhanced management capabilities for network components, and secure access to the public network.

SUMMARY OF THE INVENTION

The present invention provides systems and methods for providing multiple users with access to a public network like the Internet. A single high-bandwidth connection (e.g., fast Ethernet) allows the multiple users to communicate with the public network. Each user is allocated a specific bandwidth, and the user is able to freely communicate with the public network up to the allocated bandwidth. Additionally, the invention may be remotely configured to change bandwidth allocations. [...]



US006144638A

United States Patent [19]
Obenhuber et al.

[11] **Patent Number: 6,144,638**
[45] **Date of Patent: *Nov. 7, 2000**

[54] **MULTI-TENANT UNIT**

[75] Inventors: **Thomas Obenhuber**, San Francisco, Calif.; **Rodney L. Joffe**, Phoenix, Ariz.

[73] Assignee: **BBN Corporation**, Cambridge, Mass.

[*] Notice: This patent issued on a continued prosecution application filed under 37 CFR 1.53(d), and is subject to the twenty year patent term provisions of 35 U.S.C. 154(a)(2).

[21] Appl. No.: **08/853,862**

[22] Filed: **May 9, 1997**

Related U.S. Application Data

[60] Provisional application No. 60/019,089, May 14, 1996.

[51] **Int. Cl.**[7] **H04L 12/56**
[52] **U.S. Cl.** **370/231**; 370/398
[58] **Field of Search** 370/230, 231, 370/235, 398, 423, 468, 537, 538, 412, 413, 414, 415, 416, 417, 418, 232, 233, 234, 252, 253

[56] **References Cited**

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Primary Examiner—Douglas W. Olms
Assistant Examiner—Kenneth Vanderpuye
Attorney, Agent, or Firm—Leonard Charles Suchyta; Floyd E. Anderson

[57] **ABSTRACT**

Systems and methods for providing multiple users with access to a public network like the Internet are provided. A single high bandwidth connection (e.g., fast Ethernet) allows the users to communicate with the public network. Each user is allocated a specific bandwidth and can freely communicate with the public network up to the allocated bandwidth. Additionally, the invention may be remotely configured to change bandwidth allocations.

16 Claims, 12 Drawing Sheets

MULTI-TENANT UNIT

This application claims priority from U.S. Provisional Patent Application Ser. No. 60/019,089, filed May 14, 1996, naming as inventors Thomas Obenhuber and Rodney Joffe, and assigned to the assignee of the instant application. U.S. Provisional Patent Application Ser. No. 60/019,089 is incorporated by reference herein in its entirety for all purposes.

BACKGROUND OF THE INVENTION

The present invention relates to computer networking systems and, more particularly, to systems and methods of providing Internet access to multiple users at a single location.

The Internet is a collection of thousands of computer networks around the globe. Internet usage has grown exponentially since 1993, mainly due to the world wide web (Web) and its electronic mail (e-mail) and web page capabilities. This interconnection of computers is possible because the Internet has adopted a communication standard (Transmission Control Protocol/Internet Protocol or TCP/IP) which allows computers with different operating systems to communicate with each other over a network of networks (an "internetwork").

By one estimation, over 8 million computers currently attach to the Internet. An estimated 40 million users worldwide access these computers ("hosts").

Corporations and private users increasingly demand easy, cost-effective, and high-speed (e.g., greater than **1** megabits per second or Mbps) access to public interoperable networks such as the Internet. Around the world, the demand for a technical infrastructure for building private networks on top of public networks also is increasing.

As the number of users on the Internet increases, so too do the users grow more sophisticated. Users are demanding greater bandwidth to support this sophistication.

In conventional systems a user might use several different suppliers and components to achieve connectivity and security. The user then has to change equipment and software protocols during his migration from a lower bandwidth (e.g., 56 kilobits per second or kbps) to a higher bandwidth (e.g., 1 Mbps or higher).

Accordingly, there is a need for a substantially simplified infrastructure to access public networks with a reduced number of components, a reduced number of software protocols, enhanced management capabilities for network components, and secure access to the public network.

SUMMARY OF THE INVENTION

The present invention provides systems and methods for providing multiple users with access to a public network like the Internet. A single high-bandwidth connection (e.g., fast Ethernet) allows the multiple users to communicate with the public network. Each user is allocated a specific bandwidth, and the user is able to freely communicate with the public network up to the allocated bandwidth. Additionally, the invention may be remotely configured to change bandwidth allocations.

In a preferred embodiment, the present invention provides an apparatus for communicating information packets between each of a plurality of ports (referred to as "user ports") and an additional port (referred to as the "network port"). The apparatus includes a switch for establishing communication paths between each of the user ports and the network port; storage for configuration information regarding the user ports; and a controller, responsive to the configuration information for a given user port, for limiting the flow of information packets between the given user port and the network port.

Additionally, the present invention provides a method for distributing data between a network port and multiple user ports. The method includes for each of the user ports, storing configuration information indicating the data bandwidth allocated to the port; receiving a request to send data between the network port and a selected user port; determining if the current data bandwidth of the selected user port exceeds the allocated data bandwidth; and sending the data between the network port and the selected user port if the current data bandwidth does not exceed the allocated data bandwidth.

Also, the present invention provides a method of establishing respective network connections between a wide area network (WAN) and each of multiple tenant sites at a single location to allow information packets to be communicated between each tenant site and the WAN. The method includes providing a central switching apparatus at the location, including a plurality of tenant ports and an additional network port; coupling the WAN to the network port; coupling at least one computer or a local area network (LAN) at each tenant site to a respective tenant port; and establishing, with the central switching apparatus, communication paths between each tenant port and the network port to provide each tenant with access to the WAN.

Further aspects and features of the present invention will become readily apparent to one of ordinary skill in the art on reading the background above and the description below.

BRIEF DESCRIPTION OF THE DRAWINGS

FIG. **1** shows several hardware components and connection mechanisms to access an internetwork;

FIG. **2** shows the present invention combining several OSI network layers;

FIG. **3** shows differences in connection mechanisms between the invention and a conventional system;

FIG. **4** illustrates a functional block diagram of an embodiment of the invention;

FIG. **5** illustrates a hardware block diagram of an embodiment of the invention;

FIG. **6** illustrates a software block diagram of an embodiment of the invention;

FIG. **7** is a flowchart of a software packet filtering process according to an embodiment of the invention; and

FIGS. **8**A and **8**B are flowcharts of a process for forwarding packets through the system according to an embodiment of the invention.

DETAILED DESCRIPTION OF SPECIFIC EMBODIMENTS

The following description uses the Internet as an example to describe in detail the current art of public network access. The invention, however, is not restricted to the Internet and is applicable to other commercially or publicly available networks.

Introduction

Internet access can be gained conventionally through two methods:

Dial-up service through an access provider such as AOL® or Compuserve® geared to the individual occasional user. However, the low capacity of such a dial-up

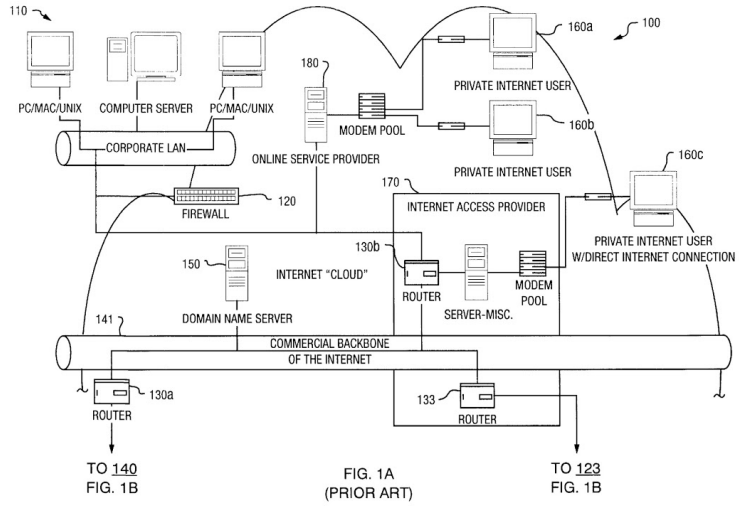

FIG. 1A
(PRIOR ART)

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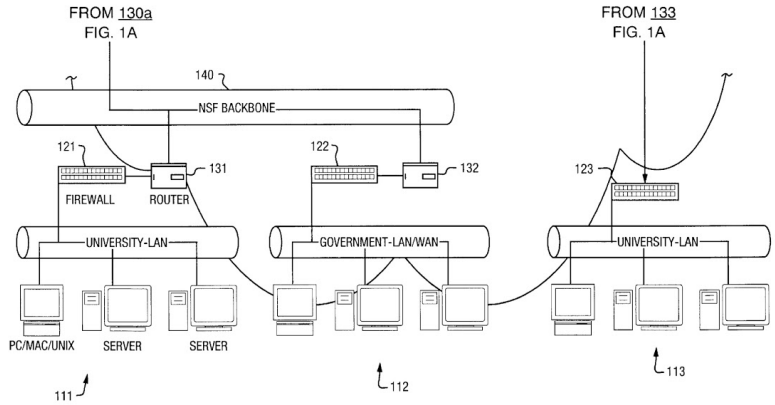

FIG. 1B
(PRIOR ART)

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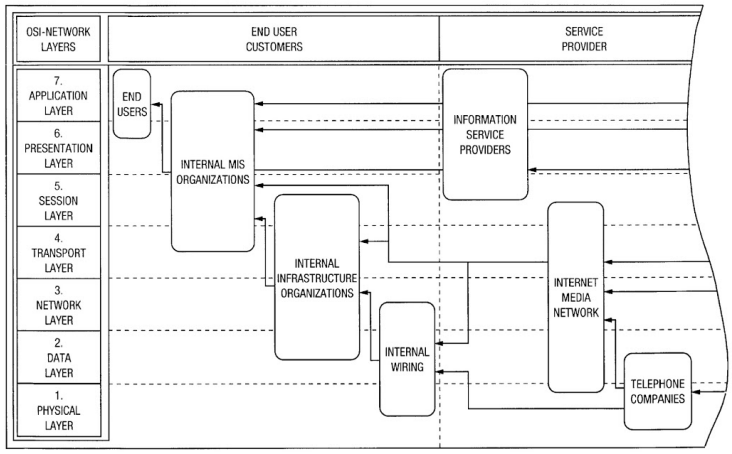


FIG. 2A

U.S. Patent Nov. 7, 2000 Sheet 3 of 12 6,144,638

Page 04 of PDF (rotated)
[HG00BA][GDrive]

1997 (July) - Thomas Obenhuber leaves Genuity, joins MachOne Communications (which later becomes Telocity Inc.) in August 1997

Source : 2001 (April 02) - UNITED STATES SECURITIES AND EXCHANGE COMMISSION ; FORM 10-K ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934 FOR THE YEAR ENDED DECEMBER 31, 2000 : TELOCITY DELAWARE, INC. / PDF of Report - [HC004X][GDrive] ; **The important text (background for Thomas Obenhuber) is on Page 38 ([HC005J][GDrive]) and Page 39 ([HC005K][GDrive])**

NOTE that Genuity Incorporated is not purchased by GTE Corporation until November of 1997. Source - [HC004M][GDrive]

Offer paperwork - https://www.uslegalforms.com/us/US-EG-9111.htm?auslf=cuscom

*"[**Thomas Johannes Obenhuber (born 1955)**], one of our founders, has served [at Telocity, Inc.] as our Senior Vice President, Corporate Development since February 2000. From August 1997 to February 2000, Mr. Obenhuber served [at Telocity, Inc.]as Senior Vice President, Business and Product Planning. **From January 1995 through July 1997, Mr. Obenhuber served as Vice President, Operations and Engineering at [Genuity Incorporated], a national backbone Internet service provider that he co-started.** [...]"*

1997 (Nov 13) - GTE Press Release (archived with Verizon) - "GTE Corp. to acquire Genuity, Inc."

Source - [HC004M][GDrive] / See **Genuity Incorporated** .

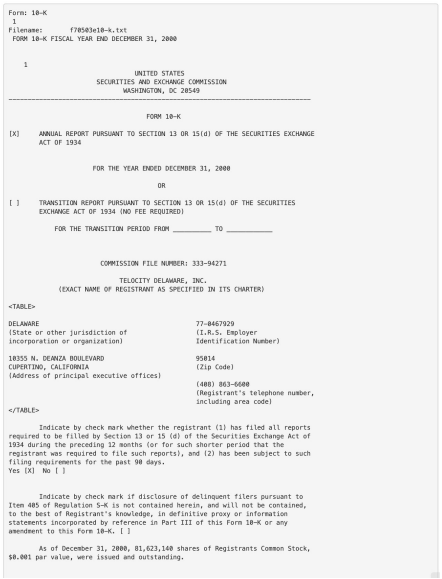
1998 (June) - Stock of MachOne Communications

https://www.lawinsider.com/contracts/hD8vI8D3iCJ

2000 (Feb) - Thomas Obenhuber promoted to Vice President of Telocity Inc.

Source : 2001 (April 02) - UNITED STATES SECURITIES AND EXCHANGE COMMISSION ; FORM 10-K ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934 FOR THE YEAR ENDED DECEMBER 31, 2000 : TELOCITY DELAWARE, INC. / PDF of Report - [HC004X][GDrive] ; **The important text (background for Thomas Obenhuber) is on Page 38 ([HC005J][GDrive]) and Page 39 ([HC005K][GDrive])**

"[Thomas Johannes Obenhuber (born 1955)], one of our founders, has served [at Telocity, Inc.] as our Senior Vice President, Corporate Development since February 2000. From August 1997 to February 2000, Mr. Obenhuber served [at Telocity, Inc.]as Senior Vice President, Business and Product Planning. ***From January 1995 through July 1997, Mr. Obenhuber served as Vice President, Operations and Engineering at [Genuity Incorporated], a national backbone Internet service provider that he co-started.*** *From July 1990 through January 1995, Mr. Obenhuber worked at Sun Microsystems where he most recently served as Director, System Architecture."*



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FORM 10-K FISCAL YEAR END DECEMBER 31, 2000

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UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
WASHINGTON, DC 20549

FORM 10-K

[X] ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934

FOR THE YEAR ENDED DECEMBER 31, 2000

OR

[ ] TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934 (NO FEE REQUIRED)

FOR THE TRANSITION PERIOD FROM _____ TO _____

COMMISSION FILE NUMBER: 333-94271

TELOCITY DELAWARE, INC.
(EXACT NAME OF REGISTRANT AS SPECIFIED IN ITS CHARTER)

<TABLE>

DELAWARE	77-0467929
(State or other jurisdiction of incorporation or organization)	(I.R.S. Employer Identification Number)
10355 N. DEANZA BOULEVARD CUPERTINO, CALIFORNIA (Address of principal executive offices)	95014 (Zip Code)
	(408) 863-6600 (Registrant's telephone number, including area code)

</TABLE>

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15 (d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days.
Yes [X] No [ ]

Indicate by check mark if disclosure of delinquent filers pursuant to Item 405 of Regulation S-K is not contained herein, and will not be contained, to the best of Registrant's knowledge, in definitive proxy or information statements incorporated by reference in Part III of this Form 10-K or any amendment to this Form 10-K. [ ]

As of December 31, 2000, 81,623,140 shares of Registrants Common Stock, $0.001 par value, were issued and outstanding.

Page 00
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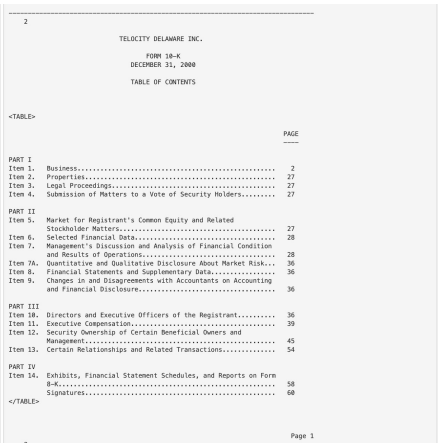

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TELOCITY DELAWARE INC.

FORM 10-K
DECEMBER 31, 2000

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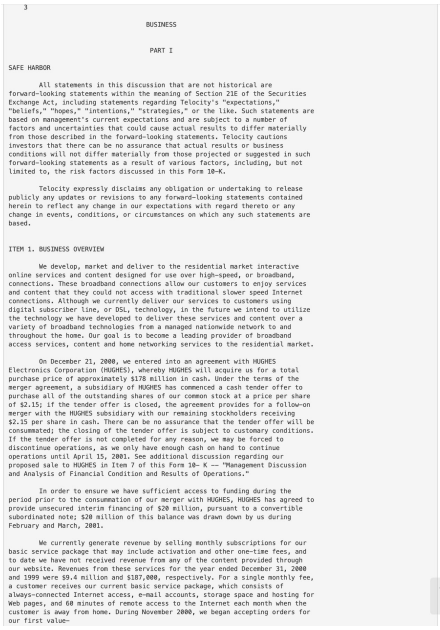

3

BUSINESS

PART I

SAFE HARBOR

All statements in this discussion that are not historical are forward-looking statements within the meaning of Section 21E of the Securities Exchange Act, including statements regarding Telocity's "expectations," "beliefs," "hopes," "intentions," "strategies," or the like. Such statements are based on management's current expectations and are subject to a number of factors and uncertainties that could cause actual results to differ materially from those described in the forward-looking statements. Telocity cautions investors that there can be no assurance that actual results or business conditions will not differ materially from those projected or suggested in such forward-looking statements as a result of various factors, including, but not limited to, the risk factors discussed in this Form 10-K.

Telocity expressly disclaims any obligation or undertaking to release publicly any updates or revisions to any forward-looking statements contained herein to reflect any change in our expectations with regard thereto or any change in events, conditions, or circumstances on which any such statements are based.

ITEM 1. BUSINESS OVERVIEW

We develop, market and deliver to the residential market interactive online services and content designed for use over high-speed, or broadband, connections. These broadband connections allow our customers to enjoy services and content that they could not access with traditional slower speed Internet connections. Although we currently deliver our services to customers using digital subscriber line, or DSL, technology, in the future we intend to utilize the technology we have developed to deliver these services and content over a variety of broadband technologies from a managed nationwide network to and throughout the home. Our goal is to become a leading provider of broadband access services, content and home networking services to the residential market.

On December 21, 2000, we entered into an agreement with HUGHES Electronics Corporation (HUGHES), whereby HUGHES will acquire us for a total purchase price of approximately $178 million in cash. Under the terms of the merger agreement, a subsidiary of HUGHES has commenced a cash tender offer to purchase all of the outstanding shares of our common stock at a price per share of $2.15; if the tender offer is closed, the agreement provides for a follow-on merger with the HUGHES subsidiary with our remaining stockholders receiving $2.15 per share in cash. There can be no assurance that the tender offer will be consummated; the closing of the tender offer is subject to customary conditions. If the tender offer is not completed for any reason, we may be forced to discontinue operations, as we only have enough cash on hand to continue operations until April 15, 2001. See additional discussion regarding our proposed sale to HUGHES in Item 7 of this Form 10- K -- "Management Discussion and Analysis of Financial Condition and Results of Operations."

In order to ensure we have sufficient access to funding during the period prior to the consummation of our merger with HUGHES, HUGHES has agreed to provide unsecured interim financing of $20 million, pursuant to a convertible subordinated note; $20 million of this balance was drawn down by us during February and March, 2001.

We currently generate revenue by selling monthly subscriptions for our basic service package that may include activation and other one-time fees, and to date we have not received revenue from any of the content provided through our website. Revenues from these services for the year ended December 31, 2000 and 1999 were $9.4 million and $187,000, respectively. For a single monthly fee, a customer receives our current basic service package, which consists of always-connected Internet access, e-mail accounts, storage space and hosting for Web pages, and 60 minutes of remote access to the Internet each month when the customer is away from home. During November 2000, we began accepting orders for our first value-

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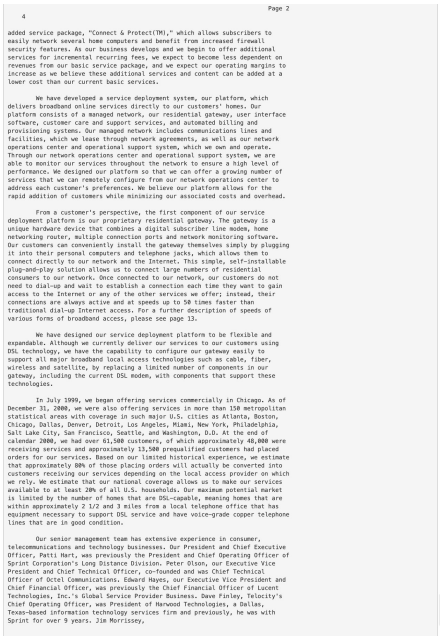

Page 2
4

added service package, "Connect & Protect(TM)," which allows subscribers to easily network several home computers and benefit from increased firewall security features. As our business develops and we begin to offer additional services for incremental recurring fees, we expect to become less dependent on revenues from our basic service package, and we expect our operating margins to increase as we believe these additional services and content can be added at a lower cost than our current basic services.

We have developed a service deployment system, our platform, which delivers broadband online services directly to our customers' homes. Our platform consists of a managed network, our residential gateway, user interface software, customer care and support services, and automated billing and provisioning systems. Our managed network includes communications lines and facilities, which we lease through network agreements, as well as our network operations center and operational support system, which we own and operate. Through our network operations center and operational support system, we are able to monitor our services throughout the network to ensure a high level of performance. We designed our platform so that we can offer a growing number of services that we can remotely configure from our network operations center to address each customer's preferences. We believe our platform allows for the rapid addition of customers while minimizing our associated costs and overhead.

From a customer's perspective, the first component of our service deployment platform is our proprietary residential gateway. The gateway is a unique hardware device that combines a digital subscriber line modem, home networking router, multiple connection ports and network monitoring software. Our customers can conveniently install the gateway themselves simply by plugging it into their personal computers and telephone jacks, which allows them to connect directly to our network and the Internet. This simple, self-installable plug-and-play solution allows us to connect large numbers of residential consumers to our network. Once connected to our network, our customers do not need to dial-up and wait to establish a connection each time they want to gain access to the Internet or any of the other services we offer; instead, their connections are always active and at speeds up to 50 times faster than traditional dial-up Internet access. For a further description of speeds of various forms of broadband access, please see page 13.

We have designed our service deployment platform to be flexible and expandable. Although we currently deliver our services to our customers using DSL technology, we have the capability to configure our gateway easily to support all major broadband local access technologies such as cable, fiber, wireless and satellite, by replacing a limited number of components in our gateway, including the current DSL modem, with components that support these technologies.

In July 1999, we began offering services commercially in Chicago. As of December 31, 2000, we were also offering services in more than 150 metropolitan statistical areas with coverage in such major U.S. cities as Atlanta, Boston, Chicago, Dallas, Denver, Detroit, Los Angeles, Miami, New York, Philadelphia, Salt Lake City, San Francisco, Seattle, and Washington, D.D. At the end of calendar 2000, we had over 61,500 customers, of which approximately 48,000 were receiving services and approximately 13,500 prequalified customers had placed orders for our services. Based on our limited historical experience, we estimate that approximately 80% of those placing orders will actually be converted into customers receiving our services depending on the local access provider on which we rely. We estimate that our national coverage allows us to make our services available to at least 20% of all U.S. households. Our maximum potential market is limited by the number of homes that are DSL-capable, meaning homes that are within approximately 2 1/2 and 3 miles from a local telephone office that has equipment necessary to support DSL service and have voice-grade copper telephone lines that are in good condition.

Our senior management team has extensive experience in consumer, telecommunications and technology businesses. Our President and Chief Executive Officer, Patti Hart, was previously the President and Chief Operating Officer of Sprint Corporation's Long Distance Division. Peter Olson, our Executive Vice President and Chief Technical Officer, co-founded and was Chief Technical Officer of Octel Communications. Edward Hayes, our Executive Vice President and Chief Financial Officer, was previously the Chief Financial Officer of Lucent Technologies, Inc.'s Global Service Provider Business. Dave Finley, Telocity's Chief Operating Officer, was President of Harwood Technologies, a Dallas, Texas-based information technology services firm and previously, he was with Sprint for over 9 years. Jim Morrissey,

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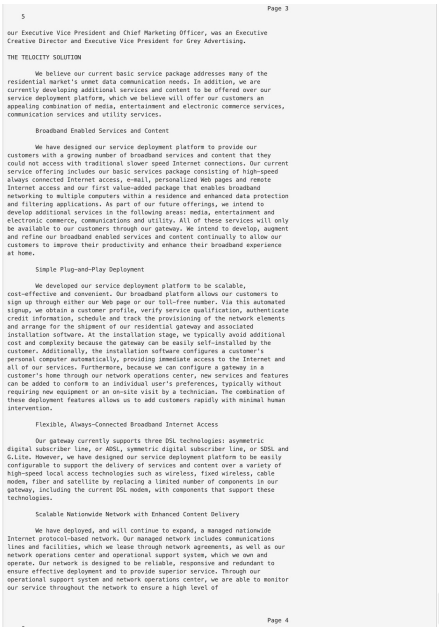

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our Executive Vice President and Chief Marketing Officer, was an Executive Creative Director and Executive Vice President for Grey Advertising.

THE TELOCITY SOLUTION

We believe our current basic service package addresses many of the residential market's unmet data communication needs. In addition, we are currently developing additional services and content to be offered over our service deployment platform, which we believe will offer our customers an appealing combination of media, entertainment and electronic commerce services, communication services and utility services.

Broadband Enabled Services and Content

We have designed our service deployment platform to provide our customers with a growing number of broadband services and content that they could not access with traditional slower speed Internet connections. Our current service offering includes our basic services package consisting of high-speed always connected Internet access, e-mail, personalized Web pages and remote Internet access and our first value-added package that enables broadband networking to multiple computers within a residence and enhanced data protection and filtering applications. As part of our future offerings, we intend to develop additional services in the following areas: media, entertainment and electronic commerce, communications and utility. All of these services will only be available to our customers through our gateway. We intend to develop, augment and refine our broadband enabled services and content continually to allow our customers to improve their productivity and enhance their broadband experience at home.

Simple Plug-and-Play Deployment

We developed our service deployment platform to be scalable, cost-effective and convenient. Our broadband platform allows our customers to sign up through either our Web page or our toll-free number. Via this automated signup, we obtain a customer profile, verify service qualification, authenticate credit information, schedule and track the provisioning of the network elements and arrange for the shipment of our residential gateway and associated installation software. At the installation stage, we typically avoid additional cost and complexity because the gateway can be easily self-installed by the customer. Additionally, the installation software configures a customer's personal computer automatically, providing immediate access to the Internet and all of our services. Furthermore, because we can configure a gateway in a customer's home through our network operations center, new services and features can be added to conform to an individual user's preferences, typically without requiring new equipment or an on-site visit by a technician. The combination of these deployment features allows us to add customers rapidly with minimal human intervention.

Flexible, Always-Connected Broadband Internet Access

Our gateway currently supports three DSL technologies: asymmetric digital subscriber line, or ADSL, symmetric digital subscriber line, or SDSL and G.Lite. However, we have designed our service deployment platform to be easily configurable to support the delivery of services and content over a variety of high-speed local access technologies such as wireless, fixed wireless, cable modem, fiber and satellite by replacing a limited number of components in our gateway, including the current DSL modem, with components that support these technologies.

Scalable Nationwide Network with Enhanced Content Delivery

We have deployed, and will continue to expand, a managed nationwide Internet protocol-based network. Our managed network includes communications lines and facilities, which we lease through network agreements, as well as our network operations center and operational support system, which we own and operate. Our network is designed to be reliable, responsive and redundant to ensure effective deployment and to provide superior service. Through our operational support system and network operations center, we are able to monitor our service throughout the network to ensure a high level of

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support. We intend to implement a differentiated-services protocol throughout this network which will allow either us or our customers to prioritize the use of available bandwidth among the services we provide. For example, a customer will be able to prioritize the viewing of video streams over the downloading of less time-sensitive data. Additionally, we reduce redundant data traffic on the network and speed data delivery to our customers, by duplicating and storing frequently accessed content locally at network hubs via satellite communications. This system distributes content rapidly and cost-effectively throughout our nationwide network.

Service Flexibility and Ease-of-Use

We designed our service deployment platform to be adaptable and responsive to the needs of our customers. For example, the deployment, configuration and management of each customer feature and application is fully automated, allowing for ease of installation and use. This ease-of-use, along with our remote configuration capabilities, enhances our ability to provide flexible service and high quality customer care. Additionally, because the residential gateway remains connected to our network at all times, we can directly monitor and address service needs in a timely fashion. Finally, we have implemented comprehensive customer care and support systems to address customers' needs that cannot be resolved remotely.

BUSINESS STRATEGY

Our goal is to exploit our advantage as both one of the first companies to provide residential broadband services and in our proprietary technology in order to become a provider of choice for broadband enabled services and content both to and throughout the home. Our ability to achieve these goals and execute upon the strategies described below is dependent upon our ability to either close the tender offer and merger with the HUGHES subsidiary or immediately obtain a substantial amount of additional financing. If we are able to close the tender offer and merger or obtain that financing, we intend to implement the following strategies to achieve our goal:

Capture Our Early Market Entrant and Proprietary Technology Advantage

Currently, most consumers who have Internet connections experience slow dial-up access, non-customized narrowband content and limited customer service. The deployment of broadband access technology and content addresses those limitations. However, most broadband providers must invest significant time and capital to extend or upgrade their network in order to provide this access technology and content to consumers. We believe that we have a significant time-to-market advantage over those broadband providers because our service deployment platform is designed to be easily configurable to support any currently available broadband access technology. We designed our proprietary gateway device to be self-installable, interoperable with multiple technologies and easily upgradeable. In addition, because our customers can easily install our residential gateway and because our service deployment platform is flexible, we can add new customers rapidly on a nationwide basis.

Deliver Quality Broadband Services Both to and throughout the Home

We have designed our service deployment platform to deliver high-speed, always-connected Internet access along with associated broadband services and content such as online gaming, streaming audio and video, interactive shopping, chat facilities and enhanced voice messaging services. In addition, we intend to extend our services and content to devices throughout the home. For example, we designed the next-generation residential gateway to provide home networking capabilities by allowing a customer's personal computer and other home appliances to connect with the gateway through wireless technology or through the existing home phone wiring. This functionality allows us to provide our customers with additional services, including home monitoring and data security features, and allows our customers to access services from multiple computers within the home.

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Deliver High-Quality Customer Service and Support

We have established a network operations center and a customer support system in order to provide our customers with high quality service, support and care. From our network operations center, we are able to install or upgrade remotely a customer's desired service and to address any performance inquiries. Our customer support system provides technical support through an automated interactive voice response system, a live telephone support line, direct chat system, online instructions for our product features and e-mail. These systems enable 24-hour-a-day, 7-day-a-week proactive monitoring and management of our entire network as well as customer service and technical support. All of these systems have been designed with significant flexibility and scalability. We believe that by providing high quality customer service and support, we will enhance the overall customer experience and foster customer loyalty.

SERVICES

Our service deployment platform is capable of delivering a comprehensive suite of broadband services, including high-speed Internet connections and additional related services to residential customers through a variety of local access technologies.

We seek to price our services competitively in each of our markets. We typically enter into a customer service agreement and charge a monthly fee for our basic service package with no additional per-minute charges. The customer service agreement also provides information on commencement of the service, billing, payments, pricing, system requirements and service termination. As our business has developed, and we have begun to offer additional services for incremental recurring fees, we expect to become less dependent on revenues from our basic service package and we expect our operating margins to increase as we believe these additional services and content can be added at a lower cost than our current basic services.

Our service currently provides data transfer speeds ranging from 144 kilobits per second to 1.5 megabits per second; however, we are capable of providing service at data transfer speeds up to 7.5 megabits per second. The speeds we offer in any given market are based upon the speed of connectivity we purchase from our local access provider. Additionally, our platform allows our ADSL customers to use a single phone line for multiple purposes at once, so that a customer may have a voice conversation, browse the Internet and download information simultaneously, thereby eliminating the need for a second phone line.

A customer who subscribes to our service receives our residential gateway device that, in addition to providing high-speed Internet access, allows us to provide our basic service package, which consists of:

- Always Connected Broadband Access. This feature eliminates many disadvantages of dial-up connections, including busy signals and the slow dial-up process. Always connected broadband access to the home significantly enhance various customer-configured information services, such as instant messaging, e-mail and content related services featuring information such as stock quotes, real time news, sports and weather.
- Unlimited Access. We provide our customers unlimited access to the Internet and our services with no per-minute usage charges.
- E-Mail Accounts. We provide our customers three e-mail accounts as part of our service. If our customers require additional e-mail accounts, we can provide them for a minimal additional charge.
- Personalized Web Pages. Our service provides up to 10 megabytes of storage space for each customer to store e-mails or design and host individual Web pages.

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- Remote Access. Our service allows our customers to access the Internet, their e-mail accounts and other services remotely by using a toll-free dial-up connection. We provide this service to our customers at no additional charge for the first 60 minutes of use each month and charge an incremental fee for each additional minute. This remote access feature ensures that our customers will be able to connect to the Internet away from home.
- The flexible architecture of our platform enables us to add new functions and features. Some of these new functions and features will be offered through upgrades or the addition of new technology to our networks. During the fourth quarter of 2000, we began marketing our first value-added service package, Connect & Protect(TM). This value-added service allows subscribers to network up to five PCs thereby enabling different members of the same family to browse the internet simultaneously at different personal computers in their home. We also have embedded data access intrusion detection and prevention technology that enables us to configure and monitor a customer's firewall through our operational support system. This process can be accomplished without any intervention required on the part of a customer. As a result, a customer without technical expertise is able to request protection through our advanced security and firewall services.

THE TELOCITY/NBCI PORTAL

Through our agreements with NBC Internet, Inc.(NBCi), we provide dynamic multimedia broadband content for our customers. Customers are able to access this content through the Website we have developed with NBCi, the Telocity/NBCi portal. The Telocity/NBCi portal, located at http://telocity.snap.com, is the first Web page a customer views when accessing our services. From this page, a customer can access the Internet as well as some of the services provided by us and NBCi. The Web portal currently offers media, entertainment and electronic commerce services provided exclusively by NBCi, such as interactive shopping, a limited selection of streaming audio and video, financial information, sports, news and weather. Through the Telocity/NBCi portal, our customers have been able to access the full suite of NBCi's entertainment offerings, which included live streaming video of the 2000 Olympics in Sydney, Australia.

On December 21, 2000, we entered into an Amendment Agreement (the "Amendment") with NBCi pursuant to which it was mutually agreed to terminate the NBCi/Telocity Operating Agreement dated December 10, 1999 and concurrently amended our Advertising Agreement dated December 14, 1999 with NBCi (the "Advertising Agreement"). The Amendment provided, among other things, that upon the consummation of our merger with HUGHES, the Operating Agreement will terminate, provided that, however, certain provisions of the Operating Agreement will survive. The Advertising Agreement was amended to include an additional $3.6 million in online, television, and radio advertising through December 31, 2002. The Amendment also requires that we conduct good faith discussions with NBCi regarding the possibility of an ongoing commercial relationship.

OUR BROADBAND SERVICE DEPLOYMENT PLATFORM

We designed our broadband service deployment platform to provide reliable, high-performance Internet access and to alleviate Internet bottlenecks through an easily deployed scalable architecture with end-to-end network management capabilities. Through our platform, we will continue to offer a growing number of services and content offering that we can remotely configure to each customer's needs. Our broadband service deployment platform consists of the proprietary residential gateway device, our managed network, our user interface software, our customer care and support services, and our automated billing and provisioning systems.

Our Residential Gateway

We believe that customers find our broadband service easy to use primarily because of the proprietary device we refer to as our residential gateway. The gateway combines a DSL modem, a home networking router, multiple connection ports, and network monitoring software in a device that simplifies

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installation, customer support, and service upgrades. The residential gateway is a standalone unit that operates independently of the computer's operating system and does not require a network interface card to be installed in the computer.

Our Managed Network

Our managed network includes communications lines and facilities, which we lease through network agreements, as well as our network operations center and operational support system, which we own and operate. We have based our network architecture on the operational goals of responsiveness, reliability and redundancy. Our network begins with the connection of a customer's personal computer, or home network of computers, to our residential gateway. In our current markets, the connection to the customer is routed to DSL equipment owned either by the local telephone company or by a competitive local exchange carrier and located in the local central office which we lease through network agreements. In the future, we expect our local access connectivity to utilize a variety of local access technologies in addition to DSL, including satellite, wireless and cable solutions. We aggregate our customer traffic through dedicated circuits into our leased local metropolitan hubs currently located in: Atlanta, Miami, Orlando, Los Angeles, Dallas, McLean (Virginia), New York City, Chicago, Denver, Philadelphia, Boston and Cupertino. These dedicated circuits are located in secure data-centers where we lease facilities. Between metropolitan hubs, our customer traffic travels on a leased high-capacity fiber network which is interconnected to the Internet and to other network providers at Internet exchange points via private and public peering arrangements. Network peering is the process of connecting to other networks at the closest point, thereby ensuring the least number of connection points in the delivery of data.

Our managed network has been designed to be secure and reliable. We provide network monitoring and management 24-hours-a-day, 7-days-a-week from our network operations center in Cupertino, California. We have engineered our network to minimize the likelihood of service interruptions via our redundant leased optical carrier 3 network. This secure, high-capacity fiber link has the capacity to transmit 145 megabits of data per second in two directions throughout the network. We have upgraded and will continue to upgrade the transmission capacity of this backbone as dictated by our customers' requirements to ensure that we continue to provide best-in-class service. If a failure occurs in either of these fiber links, the other link will transmit the data with no service loss to our customers. In addition, we have configured our network to have two domain name system servers and two e-mail servers in each metropolitan hub. If any of these servers are down, our network will automatically deliver data to the closest server that is functioning. Furthermore, we place the Internet protocol addresses for domain name system servers and e-mail servers on switches that redirect traffic to the nearest available server.

In order to improve network performance and minimize both delays and bandwidth availability problems, we move data closer to our customers. We have implemented this strategy by developing a network architecture that uses Inktomi technology and CacheFlow caching servers customized for use with our network. These caching servers are connected not only via the Internet but also via our satellite content feeds. Additionally, our network directs each customer's data request to the closest available server containing the requested content, service or application. This close proximity enhances the delivery of data to our customers.

We sometimes use satellite content feeds to supply data to our caching servers because transmission of data by satellite is often more cost effective and efficient than transmission of data over our leased land-based network. We lease satellite dishes located on the roofs of buildings that are connected to our leased land-based network, from which we receive content from a satellite owned by Cidera, Inc., a satellite caching company. Cidera transmits web-based content that our customers frequently access to this satellite throughout the day. Once transmitted to the satellite, this content is periodically retransmitted to our satellite dishes to help prevent data traffic congestion on our leased land-based network.

Our network design anticipates that not all data is equally important to a customer or requires the same urgency for delivery. In most cases, data is transmitted across the Internet on a first in, first out basis. However, to prioritize time-sensitive or other high priority data traffic our managed network will implement a differentiated services protocol from the customer's gateway across our nationwide network.

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This differentiated services protocol will allow either us or our customers to prioritize the use of available bandwidth among the services we provide. For example, our managed network will identify less time-sensitive traffic, such as file transfer protocol, and then prioritize this data delivery based upon a customer's, or content provider's, preference.

Our Customer Care and Support Services

A high level of continuing service and support is critical to our objective of developing long-term customer relationships. We emphasize customer service and technical support to provide our customers with the knowledge and resources to utilize our online services and content successfully.

We offer customer support 24-hours-a-day, 7-days-a-week. We believe it is critical to our success to have available the resources necessary to support our customers through the entire enrollment and fulfillment process, a vital formative period in each customer's relationship with us. We focus on pre-sales, loop qualification, technical assistance, phone company provisioning, gateway shipment and billing to address our customers' needs. Our objective in serving our customers is to have enough customer service consultants to ensure that our customers are not placed on hold when they need assistance.

We employ Sutherland, a technical customer support organization, to respond to and assist our customers with technical issues. Sutherland's call center processes, technical expertise and scalability help us to provide our customers with real-time assistance.

In addition to supporting our customers, Sutherland also assists us in actively monitoring and reviewing customer calls. We combine this feedback with comments we receive directly, including through our Website, to address and prevent the recurrence of problems experienced by our customers. We have our own in-house customer care staff that helps to service the more complex needs of our customers. We also have a customer recovery unit to address critical complaints that cannot be solved by Sutherland. We believe these initiatives will help reduce customer turnover and help increase customer satisfaction. We actively monitor comments by customers and respond by incorporating their suggestions into our customer care policies.

Our Automated Billing and Provisioning Systems

We have built our service deployment platform to perform metering and billing tasks in the gateway. This functionality allows us to automate, monitor and conveniently bill for each customer's services and products with minimal human intervention. This functionality and minimal human intervention also provides us with scalability for a number of services. We intend to expand the metering and billing functionality.

We developed our billing and provisioning system as a customer focused, Web-enabled process that ties together all of our customer-related processes, including sales, customer service, marketing, billing, accounting, loop qualification and order fulfillment. Using our automated back office process, customers can subscribe to a service without the intervention of a service representative. Once an order has been placed, the customer information is disseminated in real-time to all of our key information technology systems. This reduces costs and helps eliminate service errors. In addition, this real-time information system provides us with a significant competitive advantage because it helps us offer new services quickly and respond to changes in our market.

SALES AND MARKETING

Our key sales and marketing objective is to be a leading provider of broadband services and content to residential customers.

We are leveraging our platform to capitalize on multiple methods to attract customers. We continue to undertake targeted direct marketing efforts, and in September 2000 we launched a nationwide television and radio campaign, financed by the utilization of advertising credits received from NBC and

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NBCi in exchange for Series C Mandatorily Redeemable Preferred Stock, coincident with our nationwide network deployment. We established and are now expanding our channel programs, wherein companies market and sell our services. We also continue to enter into agreements with channel partners to establish affinity marketing programs, through which companies market and sell our services through their own sales or distribution channels to their own existing or prospective customers with special promotional or bundled offers. In addition, we have entered into agreements with other channel partners to establish employee and telecommuter programs, through which companies may provide our services to their workers who have a business need for high-speed Internet access at home.

Our targeted direct marketing and branding effort uses a mix of print, direct mail, radio, television and online advertising media specifically tailored for each local market. We do not employ a sales force in this marketing effort.

SUPPLIERS AND VENDORS

Our engineers are responsible for prototype development of our residential gateway. However, we outsource the manufacturing of the gateway. Our manufacturing partner provides materials planning and procurement, final assembly, testing and quality control under our supervision. Our manufacturing process enables us to configure our products to meet a wide variety of customer requirements and respond to future technological and industry developments. We currently employ Wellex Corporation as the sole contract manufacturer of our gateway.

COMPETITION

The business of broadband and Internet services is highly competitive with frequent new market entrants, many of whom may be rivals. The principal bases of competition in our markets include:

- price;
- performance, including breadth of service availability, reliability of service;
- ease of access and use;
- network security;
- availability and desirability of content;
- customer support;
- brand recognition and market penetration; and
- capital resources.

We anticipate that over the next few years the high-speed broadband market will become increasingly commoditized, thereby standardizing the price of broadband access. We believe that those providers who will differentiate themselves will do so on the basis of value-added services.

We believe America Online/TimeWarner, At Home Corporation, Earthlink, and AT&T Broadband represent our most direct source of competition and that we will face direct and indirect competition from:

- providers of online services;
- Internet service providers;
- cable modem service providers;

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- interactive television providers;
- Internet portal or content sites;
- telecommunications service providers;
- wireless and satellite service providers; and
- consumer electronics and appliance manufacturers.

Although many companies offer broadband access and content, we believe that we are currently the only company that combines all of the following features into a unified service offering tailored for the residential market:

- we manage data traffic over the network, lease and utilize telecommunications lines and facilities and operate our own network operations center;
- we have designed and supply our own proprietary gateway device, which we have customized to provide our current services and which will enable us to provide our future services;
- we provide content and services to our subscribers, many of which we have customized for high-speed Internet access; and
- our service delivery system, or platform, allows us to provision customers quickly and cost-effectively, as does our simple plug-and-play residential gateway device.

The unique combination of all of these features provides us with flexibility and scalability. The most significant feature unique to our service offering is our plug-and-play residential gateway device. Our proprietary gateway combines a DSL modem, a home networking router, multiple connection ports and network monitoring software. Because our gateway simplifies installation, customer support and service upgrades, we can deploy our services to customers nationwide more rapidly at a lower cost than competitors who do not have a similar device. For a more complete discussion of our gateway, please refer to "-- Our Broadband Service Deployment Platform -- Our Residential Gateway." And, unlike some of our competitors, we are not dependent upon a single local access technology to deliver our services, but have designed our platform to be configured to support technologies other than DSL.

Online Service Providers

Online service providers include companies such as AOL, At Home Corporation, and MSN. These companies provide services and content over the Internet and on proprietary online services ranging from news and sports to video conferencing. In addition, these companies provide Internet connectivity, ease-of-use and consistency of environment, especially through the development of their own access networks. After its merger with Time Warner, AOL will have access to content for its broadband access customers similar to the services we will provide.

Internet Service Providers

Internet service providers include both national and regional providers, independent Internet service providers and Internet service providers affiliated with a telecommunications carrier or a data-centric competitive carrier. Internet service providers such as Earthlink Networks provides Internet access to residential customers, generally using the existing telephone network. Many Internet service providers have begun offering DSL-based services.

hese competitors have traditionally distinguished themselves from the online service companies because they provide only Internet access rather than a collection of proprietary content and services. This

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distinction has diminished because major online services companies also offer access while many portal sites actively compete for the chance to provide proprietary content services to the subscribers of major Internet service providers. Of the thousands of Internet service providers in the United States, the majority are relatively small, localized providers.

Cable Modem Service Providers

Providers such as At Home Corporation, AOL/Time Warner, AT&T Broadband, High Speed Access, SoftNet and RoadRunner and their respective cable partners are deploying high-speed Internet access services over hybrid fiber coaxial cable networks. Where deployed, these networks provide similar speed, and when handling a limited amount of traffic, provide higher-speed Internet access than we provide through DSL. A number of cable modem service providers have existing local and regional monopolies in their service markets. In addition, cable modem service providers and their partners have more direct ties to desirable traditional media and entertainment content, as well as the size and financial resources to execute exclusive deals for content.

Interactive Television Providers

Several companies are developing technologies relevant to interactive television. For example, Wink and Liberate are software developers that are working to create interactive television solutions. Microsoft has been active in many areas of interactive television. Microsoft's wholly-owned subsidiary, WebTV, offers set-top boxes with Internet access, interactive program listings, and simultaneous television and Internet usage. EchoStar offers WebTV to its subscribers. Microsoft has also acquired equity interests in several network operators. These investments give Microsoft influence in the network operator's choice of interactive software. With its financial, technical and marketing resources, Microsoft will be a strong competitor in the market for interactive television operating systems.

Internet Portal Sites

Internet portal sites such as Yahoo! and Lycos are specialized Websites that offer an aggregation of content and services either directly or through hyperlinks to other sites. Internet portal sites typically offer search engines, navigational aids, directories, chat facilities, classified ads, message boards, e-mail and other customized content and services. Many sites derive a majority of their revenues from the display of advertising on the site, but may also generate revenue from product promotions or redirection of Internet traffic from the portal to specific sites.

Wireline Telecommunications Service Providers

Telecommunications service providers, including new competitive telecommunications companies, traditional telephone companies, and traditional and new long-distance carriers all pose competition to us because many currently offer DSL services.

- Traditional Telephone Companies. All of the largest traditional telephone companies in our target markets have begun offering DSL services or have announced their intention to provide DSL services in the near term. The traditional telephone companies have an established brand name in their service areas, possess sufficient capital to deploy DSL equipment rapidly, own the local lines themselves and can bundle digital data services with their existing voice services to achieve economies of scale in serving their customers. Certain of the traditional telephone companies have aggressively priced their consumer DSL services as low as $30-$40 per month, placing pricing pressure on our service.

- New Competitive Telecommunications Companies. Many competitive carriers such as Covad, Rhythms NetConnections and NorthPoint Communications offer high-speed DSL-based services. Companies such as RCN, MicroDUSA, and some subsidiaries of utility companies currently offer or are beginning to offer voice and data service to the residential market.

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- National Long Distance Carriers. Interexchange carriers, such as AT&T, Sprint, MCI WorldCom, GTE, and Qwest sell connectivity to businesses and residential customers, and they have brand recognition. They also have interconnection agreements with many of the traditional telephone companies and a number of spaces in central offices from which they are currently offering or could begin to offer competitive DSL services.

Wireless and Satellite Telecommunications Service Providers

Wireless and satellite telecommunications service providers utilize wireless and satellite-based networks to provide Internet connectivity. We may face increasing competition from terrestrial wireless services, including 2 Gigahertz (Ghz) and 28 Ghz wireless cable systems (multi-channel multipoint distribution system and local multipoint distribution system), and 24 Ghz and 38 Ghz point-to-point microwave systems. For example, the FCC has adopted new rules to permit multi-channel multipoint distribution system licensees to use their systems to offer two-way services, including high-speed data, rather than solely to provide one-way video services. The FCC also recently auctioned spectrum for local multipoint distribution system services in all markets. This spectrum is expected to be used for wireless cable and telephony services, including high-speed digital services. The FCC has announced that it plans to auction off additional spectrum from time to time for other wireless services. In addition, companies such as Teligent Inc., Advanced Radio Telecom Corp. and WinStar Communications, Inc., which are targeted to the business market, hold point-to-point microwave licenses to provide fixed wireless services such as voice, data and videoconferencing. We also may face increasing competition from satellite-based systems. Motorola Satellite Systems, Inc., Teledesic and others have filed applications with the FCC for global satellite networks which can be used to provide broadband voice and data services, and the FCC has authorized several of these applicants to operate their proposed networks.

Consumer Electronics and Appliance Manufacturers

Our service deployment platform will support a number of consumer electronic devices and appliances, including cellular phones, flat panel displays and personal digital assistants. Consumer electronics companies and manufacturers of appliances may, in the future, decide to compete with us by bundling their own software with their hardware products, or by entering into exclusive alliances with a competitor. In both instances, they might create products that are incompatible with our systems.

COMPARISON OF DIAL-UP AND BROADBAND TECHNOLOGIES

For our local access connections, the speed and effectiveness of the DSL connection we utilize varies based on a number of factors. In the future, we intend to examine utilizing a variety of high-speed local access technologies as they gain popularity. The chart below together with the footnotes compares the performance and range for traditional dial-up service with those of broadband technologies.

<TABLE>

	Dial-up	ADSL	SDSL	IDSL	Cable	Satellite
Speed to End Users	28-56Kbps	144Kpbs-8Mpbs(2)	128Kbps-2Mbps(3)	144Kbps(4)	4Mbps-10Mpbs	384Kbps-400Kbsp(6)
Speed from End Users	14-33Kbps	64Kbps-1Mbps	64Kbps-1.5Mbps	144Kbps	1Mbps-4Mbps(5)	14Kbps-33Kbps(7)
Distance Limitations	None(1)	17,500 ft	29,000 ft	30,000 ft	None	None

</TABLE>

Key: Kbps = kilobits per second
Mbps = megabits per second (1000 Kbps = 1 Mbps)

(1) Speed is limited by line condition.

(2) The following table sets forth estimated distance limitations and speeds for ADSL:

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<TABLE>

NUMBER OF FEET	SPEED TO END USER	SPEED FROM END USER
15,000	384 Kbps	384 Kbps
14,000	512 Kbps	512 Kbps
12,000	768 Kbps	768 Kbps
12,000	1 Mbps	1 Mbps
10,700	3 Mbps	1 Mbps
9,000	5 Mbps	1 Mbps
7,000	7.1 Mbps	1 Mbps

</TABLE>

These numbers vary by the telecommunications service provider of the ADSL connection. ADSL speed is also affected by the distance of the end user from the local telephone office and the condition of the copper telephone line that connects the end user to the local telephone office.

(3) The following table sets forth estimated distance limitations and speeds for SDSL:

<TABLE>

NUMBER OF FEET	SPEED TO END USER	SPEED FROM END USER
18,000	256 Kbps	256 Kbps
8,000	1.5 Mbps	1.5 Mbps

</TABLE>

These numbers vary by the telecommunications service provider of the SDSL connection. SDSL technology allows end users to achieve up to 1.5 Mbps speeds both to and from the end user. Depending on the quality of the copper telephone line, 1.5 Mbps can typically be achieved if the end user is within 8,000 feet, or approximately 1.5 miles, from the local telephone office.

(4) The following table sets forth the estimated distance limitation and speed for IDSL:

<TABLE>

NUMBER OF FEET	SPEED TO END USER	SPEED FROM END USER
Unlimited	144 Kbps	144 Kbps

</TABLE>

These numbers vary by the telecommunications service provider of the IDSL connection. IDSL technology may reach all end users within a telephone office serving area irrespective of the end user's distance from the telephone office. IDSL service operates at up to 144 Kbps in each direction and can use existing integrated services digital network equipment at the end user site. IDSL may be offered to end users that have lines that do not consist of continuous copper, such as digital line carrier equipped lines that are partially copper and partially fiber. Speeds are 128 Kbps under certain circumstances.

(5) Bandwidth is generally shared between individuals in a particular neighborhood so that service may be degraded if a number of users attempt to utilize the service over shared bandwidth at the same time. The connection from the end user may be analog for some cable system providers limiting speed from the end user to 33Kbps.

(6) Requires a line of sight view to receive the satellite signal.

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(7) Speeds from the end user are limited by a analog connection to 33Kbps.

NATIONWIDE NETWORK ROLLOUT

At the end of 2000, we offered services in more than 150 of the nation's 349 metropolitan statistical areas. We identified markets in which to offer our services based upon a number of criteria, including the following:

- The total number of potential customers and the anticipated consumer response to our service offering in a market;

- the technical compatibility of our equipment with the equipment of traditional telephone companies and competitive telephone companies in a market;

- our ability to negotiate agreements with and receive cooperation from traditional telephone companies and competitive telephone companies in specific regions of the nation as well as within a single market for network connections and other infrastructure needs;

- the number of households of potential customers that are DSL-capable in a market;

- the existence of competitors as well as the services and prices offered by those competitors in a market; and

- our anticipated return on investment from expanding our network to a market.

Once we have determined that we would like to begin offering our services in a market, we put in place the components of our managed network necessary to deliver our services. In particular, we lease additional communication lines to ensure that we have sufficient capacity on our managed network and we purchase number of dedicated circuits to meet the projected demand for our services in a market. We also lease communications facilities, and, as necessary, facilities space for new metropolitan hubs, which are data distribution centers in metropolitan areas. Once we have configured and tested our network and equipment, we are ready to begin provisioning services to new customers in the market.

NETWORK AGREEMENTS

The gateway used by our customers is connected to a telephone line and from there to DSL equipment. This equipment is owned by the traditional telephone company or the new competitive carrier and is located in the local central office. We currently have agreements for DSL connectivity with Rhythms Links Inc., a subsidiary of Rhythms NetConnections, Inc., NorthPoint, Inc., BellSouth, Bell Atlantic Network Services, Southwestern Bell, Pacific Bell, and Nevada Bell.

In September and October 1999, we entered into a number of non-exclusive agreements with BellSouth. We entered into a market development agreement with BellSouth Business Systems, Inc. in which we agreed to market asymmetrical digital subscriber line service in areas in which BellSouth has asymmetrical digital subscriber line service available. We also entered into a series of agreements with BellSouth Telecommunications, Inc. in which we agreed to purchase asymmetrical digital subscriber line and related telecommunications services from BellSouth pursuant to its FCC tariffs. The commitments and terms of our agreements for telecommunications services are for 36 months.

In September 1999, we entered into a five-year agreement with Bell Atlantic Network Services, Inc. to purchase asymmetrical digital subscriber line services pursuant to Bell Atlantic's FCC tariffs. In October 1999, we entered into a 54-month agreement to purchase asymmetrical digital subscriber line services from Southwestern Bell, Pacific Bell and Nevada Bell pursuant to applicable FCC tariffs.

In March 2000, we entered into an amended one-year provisioning agreement with Rhythms Links Inc. for DSL lines and connections between our points of presence and Rhythms Links Inc. This

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agreement is non-exclusive and gives us the right to purchase services or products from other providers. The agreement provides that we may purchase up to 10,000 lines at costs fixed in the agreement.

In April 2000, we entered into a two-year provisioning agreement with NorthPoint Communications Inc. for DSL lines and connections between our points of presence and NorthPoint Communications Inc. This agreement is non-exclusive and gives us the right to purchase services or products from other providers. The agreement provides that we may purchase up to 20,000 lines at costs fixed in the agreement.

In each of the metropolitan hubs of our networks, we aggregate our customer traffic through dedicated circuits. We have agreements for dedicated circuits, collocation, backbone and peering agreements with Level 3 Communications, LLC and MCI WorldCom. In October 1999, we entered into agreements with Level 3 terminating in September 2002 that provide us with optical carrier 3, digital signal, level 1, digital signal, level 3 and other circuits, collocation throughout the country at Level 3's facilities, roof rights for the location of our caching satellite dishes, remote hands services and peering arrangements. Through Level 3, we currently have collocation space in Atlanta, Miami, Orlando, Los Angeles, Dallas, McLean (Virginia), New York City, Chicago, Denver, Philadelphia, Boston and Cupertino. In October 1999, we entered into agreements with MCI WorldCom terminating in September 2002 that provide us with optical carrier 3, digital signal, level 1, digital signal, level 3 and other circuits as well as collocation space and peering arrangements. In 2000, we added collocation space through both Level 3 and MCI WorldCom.

GOVERNMENT REGULATION

Many of the services and content that we offer are subject to varying degrees of federal, state and local regulation. Future regulations and legislation may be less favorable to us than current regulation and legislation.

In addition, we may expend significant financial and managerial resources to participate in proceedings setting rules at either the federal or state level, without achieving a favorable result.

Communications Regulation

The Telecommunications Act of 1996 substantially departs from prior legislation in the telecommunications industry by establishing local telecommunications competition as a national policy. The Telecommunications Act removes state regulatory barriers to competition and overrules state and local laws restricting competition for telecommunications services, in part, by accelerating competitive entry into the telecommunications market, including new DSL services offered by competitive carriers. The Telecommunications Act establishes a market structure in which the network infrastructure and services we purchase are now available from a variety of providers in addition to traditional telephone companies. As a result, our business options and choice of vendors, along with the quality and price of facilities and services we buy from telecommunications carriers, should become more favorable over time. Nevertheless, our business is substantially dependent on successful implementation of the Telecommunications Act by the FCC and other regulatory agencies and it impact on competition among our vendors.

Recently, the viability of several Competitive Local Exchange Carriers (CLECs) has been brought into question because, among other things, of the significant capital requirements for their businesses and market conditions that suggest they will have difficulty in raising sufficient capital to meet their needs. Several of these CLECs provide last-mile DSL connectivity to companies like ours in competition with the former Bell Companies. Their viability maintains competition among our suppliers. If one or more of the CLECs with whom we do business, or with whom we may do business in the future, were to leave the marketplace, it may adversely impact our business and financial prospects.

Although some of the Telecommunications Act is self-executing, the FCC has issued a variety of regulations upon which we and other broadband competitors rely. We believe that the FCC's regulations and decisions have generally favored competition and the wide availability of DSL connectivity which we

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purchase in order to provide broadband services to our customers. However, these regulations and decisions have been and may continue to be appealed by one or more traditional telephone companies or other parties, which may lead to uncertainty and delays in implementation of regulations favorable to us, or which may adversely affect our business and financial prospects.

Broadband issues are also the subject of a number of proposed bills introduced in the U.S. Congress. To varying degrees, proposed legislation could either reduce or increase open access to the traditional Bell carrier networks as well as to the cable networks which have yet to be opened to the type of competition that exists in the telephone network. Many of the largest providers of broadband and Internet services, including AOL/TimeWarner, AT&T and the Bell companies, have been significantly involved in lobbying for and against this sort of legislation, which, if enacted, may affect our business and financial prospects.

For several years, traditional telecommunications carriers have argued that the FCC should repeal rules treating Internet service providers as unregulated providers of enhanced information services. Under this regulatory paradigm, Internet service providers have been subject to a lesser degree of regulation and taxation than traditional telephone service providers which is favorable to us. The FCC has to date resisted all efforts to modify the unregulated treatment of Internet service providers. However, there may be increased legal and political pressure on the FCC to modify these policies. While there is no indication that a major change in the FCC's policies is imminent, the imposition of access charges, universal service fees and other elements of traditional telecommunications regulation on Internet service providers would require us to review and possibly change our financial and business models.

Internet Content Regulation

Government regulation of communications and commerce on the Internet varies greatly from country to country. The United States has not adopted many laws and regulations applicable to online communications and commerce. However, it is possible that a number of laws and regulations may be adopted covering issues such as user privacy, freedom of expression, pricing, content and quality of products and services, taxation, advertising, gaming, intellectual property rights, enforceability of contracts and information security.

While sections of the Communications Decency Act of 1996, or the CDA, that proposed criminal penalties for distributing indecent material to minors over the Internet were held to be unconstitutional, other provisions of the CDA remain in effect. Congress has since passed the Child Online Protection Act, or COPA, in an effort to remedy the deficiencies the Supreme Court identified in the CDA. It is unclear whether COPA will survive constitutional challenges that have been raised. However, indirect legislation and other government efforts to regulate Internet content could subject us or our customers to potential liability, which in turn could affect our business. The adoption of these laws or regulations might also decrease the rate of growth of Internet use, which in turn could decrease the demand for our services or increase the cost of doing business or otherwise harm, results of operations, and financial condition. Likewise, the applicability to the Internet of traditional property ownership, copyright, taxation, libel and obscenity law is uncertain.

Likewise, the impact of ongoing discussions of privacy issues and the Internet remains uncertain. Several U.S. states have proposed, and the European Union has adopted, limitations on the use of personal information gathered online. Pursuant to negotiations with the European Union and the United States, the United States may decide to adopt restrictive laws on the subject of privacy. The Federal Trade Commission, or FTC, has initiated action and obtained a consent decree against at least one online service provider regarding the manner in which personal information is collected from users and provided to third parties. In 1998, Congress enacted the Child Online Privacy Protection Act (COPPA) protecting the privacy of children on the Internet and limiting the information that can be collected from and disseminated to children over the Internet without parental consent. The FTC promulgated broad new rules implementing COPPA in late 1999. Changes to existing laws or the passage of new laws intended to address online privacy and related issues may create uncertainty in the marketplace or could affect the manner in which we do business.

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We may also be subject to claims for defamation, negligence, copyright or trademark infringement (including contributory infringement) based upon information available through our Internet sites, including content created by third parties. Although recent federal legislation protects online services from some claims, the law in this area remains in flux and varies by jurisdiction. It is not possible to develop a business plan that can definitively protect us against liability for our Internet content, including content on our sites that we have not written or created. This uncertainty is likely to prevail for some time, as the laws continue to develop.

RISK FACTORS

You should carefully consider the risks described below before making an investment decision. The risks and uncertainties described below are not the only one that we face. Any of the following risks could harm our business, financial condition or results of operations. In such case, the trading price of our common stock could decline, and you may lose all or part of your investment. This Form 10-K also contains forward-looking statements that involve risks and uncertainties. Our actual results could differ materially from those anticipated in the forward-looking statements as a result of factors that are described below and elsewhere in this Form 10-K.

IF WE FAIL TO COMPLETE THE MERGER WITH HUGHES AND DIRECTV BROADBAND INC., OUR STOCK PRICE AND FUTURE BUSINESS OPERATIONS COULD BE HARMED.

On December 21, 2000, we signed a merger agreement with HUGHES Electronics Corporation and its wholly owned subsidiary, DIRECTV Broadband Inc. Under the terms of the merger agreement, DIRECTV Broadband Inc. has commenced a cash tender offer to purchase all of the outstanding shares of our common stock at a price per share of $2.15; if the tender offer is closed, the agreement provides for a follow-on merger with a subsidiary of HUGHES with our remaining stockholders receiving $2.15 per share in cash. There can be no assurance that the tender offer will be consummated; the closing of the tender offer is subject to customary conditions. If the tender offer is not completed for any reason, we may be forced to discontinue operations, as we only have enough cash on hand to continue operations until April 15, 2001, and we would have substantial additional expenses arising from the termination of the merger with HUGHES.

Further, the current price of our common stock could decline, particularly to the extent that it reflects a market assumption that the tender offer will not be completed. In addition, we are required to pay substantial fees related to the negotiation of the merger agreement, including legal and accounting fees, and the expenses and fairness opinion fee of our financial advisor; these must be paid even if the tender offer or the follow-on merger is not completed. We may be required to pay HUGHES a termination fee up to $8.1 million if the merger agreement is terminated under some circumstances as outlined in the merger agreement. The payment of these substantial fees would have a material and adverse effect on our cash position, which could harm our business and results of operations.

In addition, our customers may, in response to the announcement of the tender offer, delay or defer decisions concerning purchasing our products. Any delay or deferral in those decisions by our customers or suppliers could have a material adverse effect on our business, regardless of whether the merger is ultimately completed. Similarly, current and prospective employees may experience uncertainty about their future roles with HUGHES until HUGHES' strategies with regard to Telocity are announced or executed. This may adversely affect our ability to attract and retain key management, sales, marketing and technical personnel.

Furthermore, if the merger is terminated and our board of directors determines to seek another merger or business combination or other financing options, there can be no assurance that it will be able to find a partner willing to pay an equivalent or more attractive price than the price to be paid in the merger.

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AT PRESENT, WE CANNOT PROVIDE OUR SERVICES UNLESS DSL ACCESS PROVIDERS SUPPLY US WITH DSL CONNECTIONS AND COOPERATE WITH US FOR THE TIMELY PROVISION OF DSL CONNECTIONS FOR OUR CUSTOMERS.

We must obtain DSL connections from traditional telephone companies and new competitive carriers and have their continuing cooperation for the timely provision of DSL connections for our customers in order for us to provide our services. DSL operates over local telephone lines, which are under the control of traditional telephone companies and new competitive carriers and requires a special connection from our network to the telephone lines. We rely on them to provide us with these DSL connections, and if we were unable to use these connections, we would not be able to provide our services. In addition, we depend on traditional telephone companies and new competitive carriers to test and maintain the quality of the DSL connections that we use. An inability to obtain adequate and timely access to DSL connections on acceptable terms and conditions from traditional telephone companies and competitive carriers and to gain their cooperation in the timely provision of DSL connections for our customers could harm our business, as could their failure to properly maintain the DSL connection we use.

MANY OF OUR VENDORS OR SUPPLIERS MAY NOT HAVE THE RESOURCES TO SUSTAIN THEIR BUSINESSES AND MAY NOT BE ABLE TO PROVIDE COMPONENT PARTS FOR OUR INFRASTRUCTURE OR DSL CONNECTIONS FOR OUR CUSTOMERS

Many of our vendors or suppliers, including our DSL access providers, are facing serious financial difficulty. With the recent economic slow down and the down turn in the DSL market, many of these vendors or suppliers are forecasting that their revenue for the foreseeable future will be lower than anticipated, and some of these vendors and suppliers are experiencing, or are likely to experience, serious cash flow problems, even bankruptcy. If some of these vendors or suppliers are not successful in generating sufficient revenue or securing alternate financing arrangements in order to sustain their operations, they may not be able to supply us with components for our infrastructure or DSL connections for our customers. If any of these failures occur, we may not be able to provide continued service to existing customers or install our service for new customers and further, we may be exposed to technical obsolescence for certain types of our gateway. For example, Northpoint Communications, Inc., one of our DSL access providers, recently filed for bankruptcy and is shutting down most of its DSL networks. Telocity will likely be forced to interrupt service to approximately 19,700 customers delivered service through Northpoint. We are diligently seeking to reprovision the affected customers; however, it is likely that a substantial number of these customers may choose to terminate their relationship with Telocity. The failure of our vendors or suppliers to provide us with component parts for our infrastructure or DSL connections for our customers will harm our business and will adversely affect our operating results.

WE WILL COMPETE WITH OUR DSL ACCESS PROVIDERS IN PROVIDING BROADBAND INTERNET ACCESS, WHICH MAY CAUSE DELAYS, INCREASE EXPENSES, OR ADVERSELY IMPACT OUR MARGINS.

Because in some instance our DSL access providers will also provide broadband Internet access and other services, we compete with them. Although our DSL access providers are required to provide DSL connections to us on a non-discriminatory basis under the Telecommunications Act of 1996, they may nevertheless be reluctant to cooperate with us. Compelling these DSL access providers to meet the regulatory requirements may be expensive and time-consuming and could result in delays and increased expenses associated with providing our services and content on a wider scale, which in turn could harm our business. In view of the comparative size of the traditional telephone companies, we may also be vulnerable to predatory pricing which could force us to either forgo orders because we operate at a comparative price disadvantage, or reduce our prices, thereby adversely impacting our margins and our long-term profitability.

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OUR FAILURE TO MANAGE OUR GROWTH COULD HARM OUR ABILITY TO RETAIN AND GROW OUR CUSTOMER BASE AND EXPAND OUR SERVICE OFFERINGS.

We may not be able to install management information and control systems in an efficient and timely manner, and our current or planned personnel, systems, procedures and controls may not be adequate to support our future operations. Failure to manage our future growth effectively could harm our ability to retain and grow our customer base and expand our service offerings which would materially and adversely affect our business, prospects, operating results and financial condition.

CUSTOMERS MAY NOT ACCEPT THE VALUE ADDED SERVICES WE ARE CURRENTLY DEVELOPING. IF THESE SERVICES DO NOT GAIN BROAD MARKET ACCEPTANCE, WE WILL NOT BE ABLE TO INCREASE OUR REVENUES AND BUILD OUR BUSINESS AS ANTICIPATED.

We are currently developing a range of value-added services which include firewall and other internet safety features; multiple computer support; unified messaging; and consumer related content and voice services. Broadband services are a new and emerging business, and we cannot guarantee that these services will attract widespread demand or market acceptance. If this market fails to develop or develops more slowly than anticipated, we will not be able to increase our revenues, build our business, or improve our margins as anticipated.

BECAUSE OUR CUSTOMER ACQUISITION COSTS ARE HIGH, IF WE FAIL TO RETAIN CUSTOMERS LONG ENOUGH TO PAY BACK OUR UP FRONT INVESTMENT, WE MAY NOT ACHIEVE PROFITABILITY.

Our customer acquisition costs comprise a significant portion of our operating costs, including advertising, order fulfillment, installation, customer care, and the cost of our residential gateway. Because of our significant up-front investment in each customer, if our customers terminate their relationships with us before we recover our up front costs, we may fail to generate a profit. In addition, if we fail to reduce our customer acquisition costs, including by increasing the efficiency of our customer care organization and reducing the costs associated with the development and production of our gateways, our operating results will suffer.

OUR ABILITY TO REDUCE THE COST OF RESIDENTIAL GATEWAY IS DEPENDENT UPON ACHIEVING A SUFFICIENT VOLUME OF PRODUCTION, IF WE FAIL TO ACHIEVE THE REQUIRED LEVEL OF PRODUCTION THEN WE MAY BE UNABLE TO REALIZE THE COST REDUCTIONS THAT WE ARE ANTICIPATING, THEREBY REDUCING OUR FUTURE PROFITABILITY.

Anticipated reductions in the cost of our residential gateway are largely dependent upon our ability to continue to grow our subscriber base at current rates. If we are unable to grow our subscriber base at current rates then we will be unable to secure the forecast cost reductions in our gateway, thereby adversely impacting our future anticipated operating results.

OUR GROWTH DEPENDS ON OUR ABILITY TO HIRE AND RETAIN HIGHLY QUALIFIED EMPLOYEES AND SENIOR EXECUTIVES.

The loss of the services of any of our senior management team, all but one of whom are at-will employees, the failure to attract and retain additional key employees, or the ability to maintain the morale and enthusiasm of our employees could harm the continued deployment of our services and content, the marketing of our services and the development of new services, our brand and our strategy. Our future growth and ability to sustain this growth depend upon the continued service, morale and enthusiasm of our executive officers and other key engineering, sales, operations, marketing and support personnel.

OUR OPERATING RESULTS ARE LIKELY TO FLUCTUATE SIGNIFICANTLY FROM PERIOD TO PERIOD, WHICH MAY CAUSE OUR STOCK PRICE TO BE EXTREMELY VOLATILE. WE MAY

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EXECUTIVE OFFICERS AND DIRECTORS

The following table sets forth certain information with respect to our directors, executive officers and other key employees as of December 31, 2000.

<TABLE>

NAME	AGE	POSITION
Patti Hart	44	President, Chief Executive Officer and Director
Peter Olson	58	Executive Vice President, Chief Technical Officer and Director
David Finley	35	Chief Operating Officer
Edward Hayes	45	Executive Vice President and Chief Financial Officer
Scott Martin	44	Executive Vice President, Chief Administrative Officer and Corporate Secretary
Jim Morrissey	51	Executive Vice President and Chief Marketing Officer
Kevin Grundy	43	Senior Vice President, Engineering
Thomas Obenhuber	45	Senior Vice President, Corporate Development
Regina Wiedemann	39	Senior Vice President, Business Development
Vicki Foshee	43	Senior Vice President, Service Delivery & Support
Robert Sandor	47	Senior Vice President, Operations
David Wilson	33	Vice President, Financial Services
David Cowan	34	Director
Christie Hefner	48	Director
Andrew Rappaport	43	Director
Elisabeth Sami	32	Director
James Scheinman	34	Director
Michael Solomon	48	Director
Randall Strahan	48	Director

</TABLE>

Patti Hart has served as President, Chief Executive Officer and as a member of the Company's Board of Directors since June 1999. From February 1994 through April 1999, Ms. Hart was at Sprint Corporation, where she most recently served as President and Chief Operating Officer of Sprint Corporation's Long Distance Division. At Sprint, Ms. Hart also served as President of Sprint Business, President of Sales and Marketing, and President of the Business Services Group. Ms. Hart is a member of the board of directors of Vantive Corp., which was acquired by PeopleSoft, and Premisys Corp.

Peter Olson, one of our founders, has served as our Executive Vice President and Chief Technical Officer since July 1998. Previously, Mr. Olson served as our President and Chief Executive Officer from our incorporation in August 1997 until July 1998. Mr. Olson has served on our Board of Directors since August 1997. From June 1982 through December 1994, Mr. Olson served as Chief Technical Officer of Octel Communications Corporation, a company he co-founded. Mr. Olson is a member of the board of directors of Flycast Communications Corp., IMP, Inc. and Netpulse Communications, Inc.

Edward Hayes has served as our Executive Vice President and Chief Financial Officer since January 2000. From July 1996 through December 1999, Mr. Hayes worked at Lucent Technologies Inc., where from July 1997 he served as Financial Vice President and Chief Financial Officer of Lucent's Global Service Provider Business. From July 1995 through July 1996, Mr. Hayes worked at Unisys Corporation, where from November 1995 he served as Vice President, Chief Financial Officer and Chief Information Officer of Unisys' Global Professional Services Division. From April 1990 through July 1995, Mr. Hayes worked at ASEA Brown Boveri (ABB), Inc. the U.S. subsidiary of the joint venture between ASEA and BBC Brown Boveri, where from September 1993 he served at Vice President, Chief Financial Officer and Chief Information Officer of ABB Nuclear Operations.

Scott Martin has served as our Executive Vice President, Chief Administrative Officer and Corporate Secretary since December 1999. From October 1982 through August 1999, Mr. Martin held various positions at Van Kampen Investments Inc., including Senior Vice President and Deputy General Counsel from January 1995.

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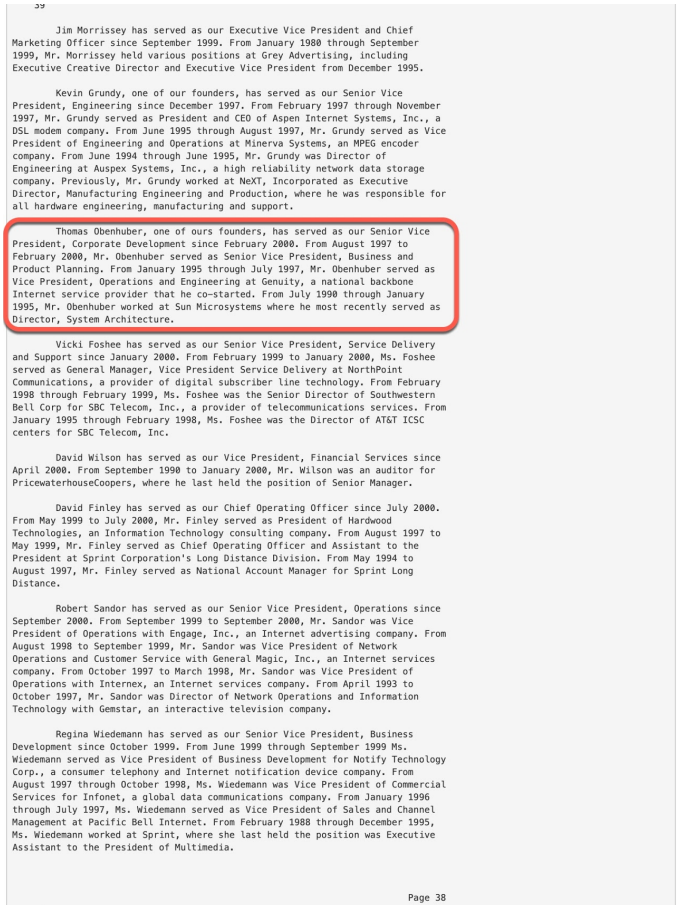

Jim Morrissey has served as our Executive Vice President and Chief Marketing Officer since September 1999. From January 1980 through September 1999, Mr. Morrissey held various positions at Grey Advertising, including Executive Creative Director and Executive Vice President from December 1995.

Kevin Grundy, one of our founders, has served as our Senior Vice President, Engineering since December 1997. From February 1997 through November 1997, Mr. Grundy served as President and CEO of Aspen Internet Systems, Inc., a DSL modem company. From June 1995 through August 1997, Mr. Grundy served as Vice President of Engineering and Operations at Minerva Systems, an MPEG encoder company. From June 1994 through June 1995, Mr. Grundy was Director of Engineering at Auspex Systems, Inc., a high reliability network data storage company. Previously, Mr. Grundy worked at NeXT, Incorporated as Executive Director, Manufacturing Engineering and Production, where he was responsible for all hardware engineering, manufacturing and support.

Thomas Obenhuber, one of ours founders, has served as our Senior Vice President, Corporate Development since February 2000. From August 1997 to February 2000, Mr. Obenhuber served as Senior Vice President, Business and Product Planning. From January 1995 through July 1997, Mr. Obenhuber served as Vice President, Operations and Engineering at Genuity, a national backbone Internet service provider that he co-started. From July 1990 through January 1995, Mr. Obenhuber worked at Sun Microsystems where he most recently served as Director, System Architecture.

Vicki Foshee has served as our Senior Vice President, Service Delivery and Support since January 2000. From February 1999 to January 2000, Ms. Foshee served as General Manager, Vice President Service Delivery at NorthPoint Communications, a provider of digital subscriber line technology. From February 1998 through February 1999, Ms. Foshee was the Senior Director of Southwestern Bell Corp for SBC Telecom, Inc., a provider of telecommunications services. From January 1995 through February 1998, Ms. Foshee was the Director of AT&T ICSC centers for SBC Telecom, Inc.

David Wilson has served as our Vice President, Financial Services since April 2000. From September 1990 to January 2000, Mr. Wilson was an auditor for PricewaterhouseCoopers, where he last held the position of Senior Manager.

David Finley has served as our Chief Operating Officer since July 2000. From May 1999 to July 2000, Mr. Finley served as President of Hardwood Technologies, an Information Technology consulting company. From August 1997 to May 1999, Mr. Finley served as Chief Operating Officer and Assistant to the President at Sprint Corporation's Long Distance Division. From May 1994 to August 1997, Mr. Finley served as National Account Manager for Sprint Long Distance.

Robert Sandor has served as our Senior Vice President, Operations since September 2000. From September 1999 to September 2000, Mr. Sandor was Vice President of Operations with Engage, Inc., an Internet advertising company. From August 1998 to September 1999, Mr. Sandor was Vice President of Network Operations and Customer Service with General Magic, Inc., an Internet services company. From October 1997 to March 1998, Mr. Sandor was Vice President of Operations with Internex, an Internet services company. From April 1993 to October 1997, Mr. Sandor was Director of Network Operations and Information Technology with Gemstar, an interactive television company.

Regina Wiedemann has served as our Senior Vice President, Business Development since October 1999. From June 1999 through September 1999 Ms. Wiedemann served as Vice President of Business Development for Notify Technology Corp., a consumer telephony and Internet notification device company. From August 1997 through October 1998, Ms. Wiedemann was Vice President of Commercial Services for Infonet, a global data communications company. From January 1996 through July 1997, Ms. Wiedemann served as Vice President of Sales and Channel Management at Pacific Bell Internet. From February 1988 through December 1995, Ms. Wiedemann worked at Sprint, where she last held the position was Executive Assistant to the President of Multimedia.

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2001 (Jan 05) - Telocity's CFO outlines competitive landscape (full interview) - Edward Hayes, Executive Vice President And CFO, Telocity

https://www.totaltele.com/373086/Telocitys-CFO-outlines-competitive-landscape-full-interview

2001-01-05-total-tele-com-telocity-cfo-outlines-competitive-landscape.pdf

EDWARD (NED) HAYES is Executive Vice President and Chief Financial Officer of Telocity, Inc. Mr. Hayes brings 20 years of financial management and business decision support experience to Telocity. He is the company's first Chief Financial Officer and has held that position since January 2000. He joined Telocity's management team from Lucent Technologies, where he was most recently Financial Vice President and Chief Financial Officer for the Global Service Provider Business - Lucent's sales, marketing and execution arm, responsible for supplying incumbent and emerging telecommunication and data networking carriers around the globe, generating approximately $20 billion in annual sales. Prior to joining Lucent, Mr. Hayes held Senior Financial Management positions with such diverse multinationals as Unisys Corporation, Asea Brown Boveri (ABB), and Credit Suisse First Boston. He received his undergraduate degree from Colgate University and conducted his graduate studies in Accounting and Finance at New York University's Graduate School of Business. TWST: Start us off with a short overview and profile of Telocity.Mr. Hayes: Telocity was formed based on a belief that high-speed communications and multimedia-rich content would become more widely available to residential customers, similar to the way businesses currently enjoy intelligent, high-speed delivery of voice, video and data over their corporate networks. This vision was that of founders Peter Olson, a communications industry veteran and co-founder of voice-messaging leader, Octel; Kevin Grundy, Telocity's Senior Vice President in charge of Engineering, formerly a senior executive with Next Computer and Minerva Systems; and **Thomas Obenhuber, Senior Vice President of Corporate Development for Telocity, previously Vice President Operations and Engineering at Genuity. In 1997 Peter, Kevin and Thomas began work on an intelligent residential gateway. It was envisioned at the time that this device would be a residential hub that would enable secure, high-speed communications and commerce to the home**...

2001 (June 12) - Telocity became DirectTV

nexttv.com/news/telocity-changes-name-directv-dsl-158877

Telocity Changes Name to DirecTV DSL

By MONICA HOGAN June 12, 2001

Digital-subscriber-line service provider Telocity Inc. officially announced its new service name Tuesday, DirecTV DSL. Telocity is also changing its company name to DirecTV Broadband Inc.

DirecTV Inc. parent Hughes Electronics Corp. closed its purchase of Telocity in April, and it has promoted the new brand on a limited basis through direct mail and on DirecTV's Web site.

Ned Hayes, president and CEO of DirecTV Broadband, said DirecTV DSL is just the first of many DirecTV-tagged names that will be introduced as the company unveils new features to take advantage of the broadband service, such as home networking.

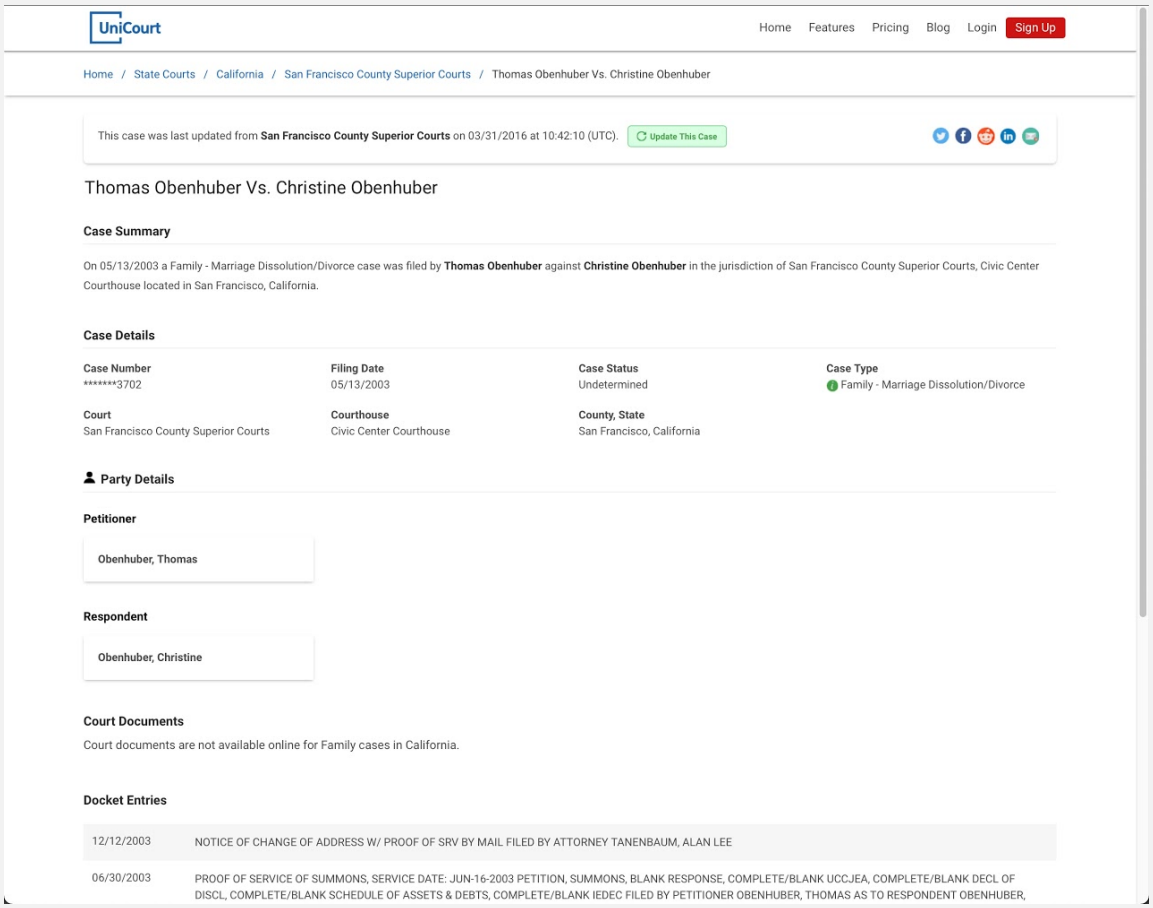
The company plans first to introduce the new DirecTV DSL brand to its high-speed Internet customers, as well as to its video customers, through electronic-mail and direct-mail campaigns. DirecTV DSL also plans radio campaigns in key markets within the next few weeks, and the company is working with DirecTV on an infomercial for its satellite-TV customers.

Next month, the company hopes to test its first retail introduction of DirecTV DSL. While Hayes said the specific retailer had not yet been signed, he added that it was likely to be one of the existing DirecTV retailers, such as Best Buy Co. Inc., RadioShack Corp. and Circuit City Stores Inc.

2003 (May) - Divorce Filing, Thomas Obenhuber vs Christine Obenhuber

https://unicourt.com/case/ca-sfc-thomas-obenhuber-vs-christine-obenhuber-186247

2003-05-13-unicourt-thomas-obenhuber-vs-christine-obenhuber.jpg



2003 (Oct 13) - EDN : Board design revamped

https://www.edn.com/board-design-revamped/

San Jose, Calif. – A 19-person startup is pitching concepts for revamping high-end printed-circuit-board and chip-packaging design to hit board-level data rates up to 40 Gbits/second at the cost of current 2.5-Gbit/s interconnects. **SiliconPipe Inc.,** based here, hopes to sell its intellectual property to a key OEM or contract manufacturer within the next six months.

SiliconPipe takes the radical notion of using twinax and coax cables to create a clean channel for a backplane that delivers twice to five times the data rate of pc-board traces over existing connectors.

At the line card level, the two-year-old startup says that it is developing four chip packages that can deliver data rates of as much as 20 Gbits/s using flex circuits, direct die attach and other techniques that the company has not yet fully disclosed

The new physical channels allow board designs to run high-speed signals, generally using existing techniques such as common-mode logic in current power envelopes of 60 to 100 milliwatts.

“Today, a Cisco router might use a 50- or 60-layer pcb costing as much as $20,000 for the backplane and requiring sophisticated counterboring techniques that only five or six companies in the world can handle,” said Para Segaram, chairman and chief technology officer of SiliconPipe. “We think we know how to make such boards at a fraction of the cost. If you are the purchasing person at Cisco, you will love this because you will be able to go to 300 companies who could make your backplane board.

The new approach also could eliminate months of engineering work that communications OEMs spend checking bit error rates and signal integrity on each trace of their backplane boards.

The trick for SiliconPipe is to convince a large OEM or contract manufacturer to invest in gearing up for its relatively simple but radically different way of making such high-end boards. Indeed, one senior engineering manager at Cisco Systems Inc. said native 10-Gbit/s backplanes were not a top design priority at this point.

“Over a decade ago, people were embedding coax cable into pcb fabrication processes for specialized government contracts. There might be a way to commercialize something like this, but I don't see us using it for a long time,” said Bill Jennings, a senior engineer in Cisco's networking group.

While most of the backplanes in Cisco's products now run at 3.125 Gbits/s, the company hits 40-Gbit rates in some line cards by aggregating the signals. Moving to a native 10-Gbit backplane is less important than getting Layer 3 switching silicon up to 10-Gbit rates and providing thermal management for high-end systems, Jennings said.

Inside the pipe

SiliconPipe has developed connectors that mate with Teradyne Inc.'s HSD and GSD backplane connectors. The Silicion Pipe connectors provide leads to which third-party manufacturers can attach conventional twinax cables. The cables can be bundled and shielded in what finally appears to be a pipe about the diameter of a penny. The resulting channel can deliver 15 to 20 Gbits/s.

The startup has also developed a method for attaching coax cables to its own backplane connector design to create backplanes that could hit 40-Gbit/s data rates.

To adopt the SiliconPipe technique, OEMs would lay out just power and ground signals on a 10- to 15-layer pc board, have a third party create the cable and backplane connector assembly based on the OEM's Gerber files, and then have the cables assembled onto the board.

Though the process steps are simple, they are not currently handled on high-volume production lines. Thus, SiliconPipe is talking with large OEMs and contract manufacturers about acquiring its intellectual property in preparation for offering such a service.

“All the things we do are standard manufacturing techniques; there's no tricks or specialty processes here,” said Thomas Obenhuber, vice president of product development for SiliconPipe.

Cabling the backplane traces gets users about 60 percent better system throughput, the company said. To get the other 40 percent, new packaging techniques would need to be employed to route signals from a line card's connector at least to the card's main ASIC.

SiliconPipe claims to have four such packages in development, though it is cagey about discussing them while some patents are still in the application process. One of the packages involves extending a flex-circuit lead from the line card connector to lead frames that extend from the ASIC's die right to the outside of the package, essentially avoiding the package substrate.

Segaram claimed that a 130-nanometer die typically provides up to 10-Gbit/s throughput, but chip packaging typically slows that rate significantly.

“If you put a probe right on a ball connection at the base of a chip, you will see about 30 percent of the signal eye is already closed,” Obenhuber said.

2003 (Dec 15) - Los Altos Town Crier : "I-280 car crash claims one life off Magdalena"

Published: 23 December 2003 Written by Tim Seyfert - Town Crier Staff Writer / Source : [HN01G5][GDrive]

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NEWS

I-280 car crash claims one life off Magdalena

Published: 23 December 2003 Written by Tim Seyfert - Town Crier Staff Writer

A fiery one-car crash on Interstate 280 in Los Altos Hills last week claimed the life of a San Francisco resident, marking the second fatal accident to occur on that particular stretch of highway in just over a month.

Thomas Obenhuber, 48, was driving a 1998 Toyota Dec. 15 when he apparently lost control of the vehicle at around 6:45 p.m. while traveling north on I-280 near Magdalena Ave.

For unknown reasons, the vehicle veered down a grassy embankment and hit a tree, where it caught fire with Obenhuber still inside, the California Highway Patrol reported.

Prior to the collision, witnesses said, the car was traveling in the middle lane at a speed of about 80 mph when it suddenly crossed over onto the right-hand shoulder and turned into the embankment, according to an official report.

Responding firefighters declared the driver dead at the scene. Investigators were still looking into the cause of the accident.

The tragedy was preceded by a similar incident on the I-280 Nov. 13, involving an Isuzu Rodeo that overturned just south of El Monte Road, killing driver Hanh Do, 19, and passenger Amber Bazan, 16, both of San Jose. Do was apparently trying to change lanes to avoid a collision,

LOS ALTOS/LOS ALTOS HILLS HOLIDAY HOMAGE

Homage to the Holidays

We can't gather at civic events in person this year, but grab a latke or some gingerbread and take a tour of this year's quieter holiday scenes.

Ghostwood Beer turns to cranberry, local fests under ongoing lockdown

Kuzak's Closet: How to store and organize holiday decorations

COTOSEN

[HN01G6][GDrive]

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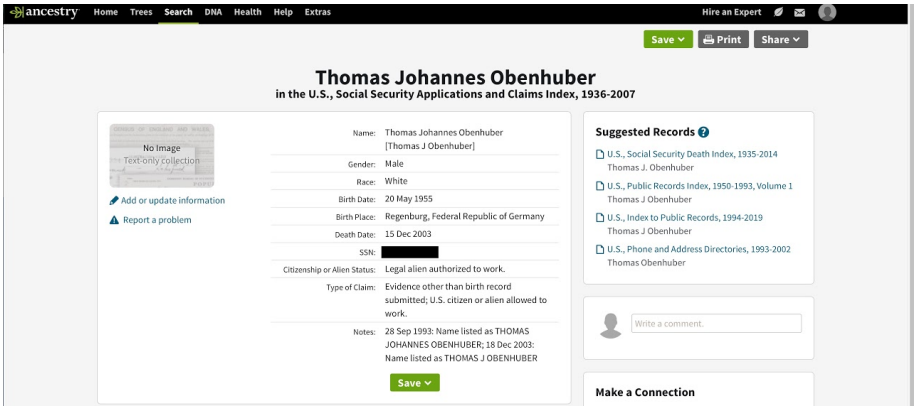
Anyone with information on either accident is asked to contact the Redwood City California Highway Patrol office at 369-6261.

December 2003

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30	31			

www.oldcalendars.com

Dec 15, 2003, is a Monday



ancestry Home Trees Search DNA Health Help Extras Hire an Expert

Save Print Share

Thomas Johannes Obenhuber
in the U.S., Social Security Applications and Claims Index, 1936-2007

No Image Text-only collection

Add or update information

Report a problem

Name:	Thomas Johannes Obenhuber [Thomas J Obenhuber]
Gender:	Male
Race:	White
Birth Date:	20 May 1955
Birth Place:	Regenburg, Federal Republic of Germany
Death Date:	15 Dec 2003
SSN:	[redacted]
Citizenship or Alien Status:	Legal alien authorized to work.
Type of Claim:	Evidence other than birth record submitted; U.S. citizen or alien allowed to work.
Notes:	28 Sep 1993: Name listed as THOMAS JOHANNES OBENHUBER; 18 Dec 2003: Name listed as THOMAS J OBENHUBER

Save

Suggested Records

U.S., Social Security Death Index, 1935-2014
Thomas J. Obenhuber

U.S., Public Records Index, 1950-1993, Volume 1
Thomas J Obenhuber

U.S., Index to Public Records, 1994-2019
Thomas J Obenhuber

U.S., Phone and Address Directories, 1993-2002
Thomas Obenhuber

Write a comment.

Make a Connection

2003 (SS info) for Thomas Obenhuber
[HL0061][GDrive]

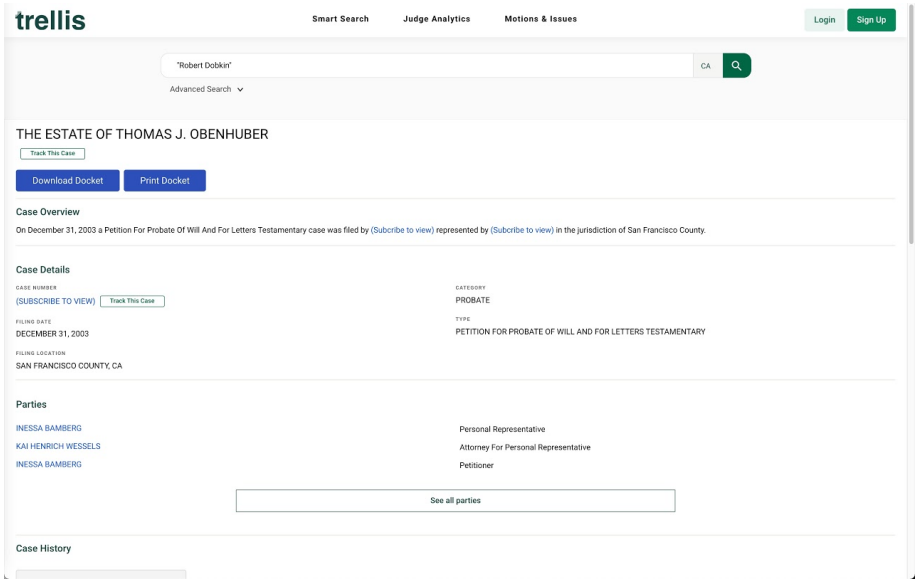
Notes on accident - (from 2015 MercuryNews comments board)

Source - [HN01G7][GDrive] ... Webpage image captures : [HN01G8][GDrive] / [HN01G9][GDrive] / [HN01GA][GDrive] / [HN01GB][GDrive]

- *Q Years ago, a dear friend of mine named Thomas Obenhuber perished a few days before his wedding while trying to avoid one of those deer running across Interstate 280. He was on his way home to San Francisco after work when he lost control and hit a tree on the side of the road. Hans [...], Palo Alto*
- *A Thomas was killed near Magdalena Avenue in 2003. Caltrans is considering installing a fence to reduce crashes involving deer along 280. There are about 50 such incidents a year and most occur during the fall mating season.*

Newspapers.com - Not one "Obenhuber" mention anywhere in North America, in 2003 or 2004 . No mention of accident.

2003 (Dec 31) - Estate request filed from Inessa Obenhuber



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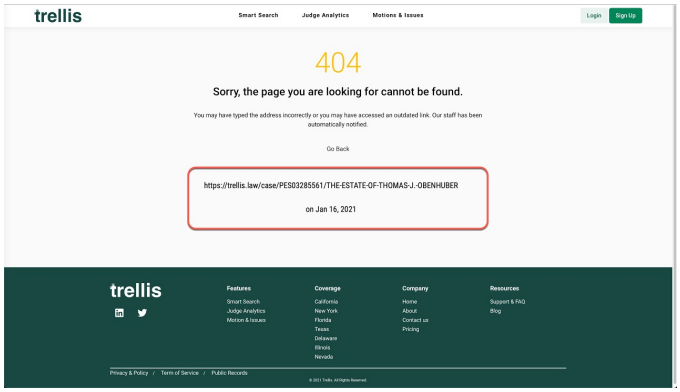


Looks like the page was no longer visible, 4 days later
[HX0010][GDrive]

2014 (Feb) - Tribute video to Thomas Obenhuber

"Scales" by Jeff Sidlosky

Live version on Youtube : https://www.youtube.com/watch?v=Avs5jkQ38iQ / Image : [HV00EG][GDrive] / Download the video : [HV00EH][GDrive]

"Playing my song "Scales", the first and only song I've written. I dedicate it to Thomas Obenhuber, of whoms passing inspired me to create it and to Rachel Lofthouse, my cousin of which growing up as a child always inspired me to play."

INESSA OBENHUBER (future bride)

[HW005O][GDrive]

BIOGRAPHY

Inessa is a serial entrepreneur, business advisor, executive trainer, and angel investor who has spent many years identifying and connecting innovative companies and executives around the globe. As CEO and founder of Global Privat, Inessa drives technology investment and growth through a system designed for success. Global Privat is a boutique economic development firm focused on creating a global ecosystem among investors, universities, corporations and the innovative companies around the world. Founded in 2012 by Inessa, Global Privat educates and empowers board directors and executives of both public and private companies to create stable and scalable companies. Global Privat's experts identify, invest in and grow innovative companies. The team provides the professional development, advice and expertise investors, executives and entrepreneurs need to ensure their companies grow and thrive. The firm delivers educational programs, mentoring, board development, and investment opportunities on 3 continents for more than 600 companies, individuals and economic development agencies.

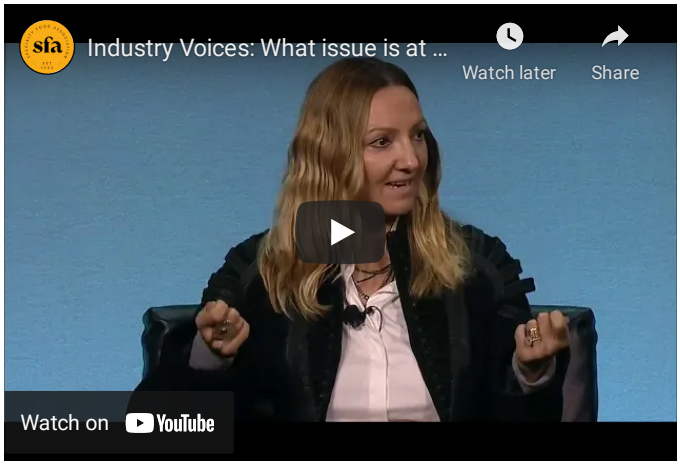
In addition to leading Global Privat, Inessa holds investments with Seraph Group, Astia Angels and Keiretsu Forum. She also serves on the board of several companies in both the arts and technology. In the past, Inessa was one of founding members of PC Magazine in Russia and Ambassador of the Media Institute for Social Change at the USC Cinematic School. She also holds several global patents. A graduate of Moscow University, her personal passion is to increase diversity within companies and in the corporate boardroom. Leveraging her experiences, Inessa coaches, advises and frequently speaks about ways women and minority executives can play key roles as investors and board executives. To learn more about Inessa visit iobenhuber.com/globalprivat

https://www.youtube.com/watch?v=KINUrdo5znI

Industry Voices: What issue is at the heart of the work you're doing? Part 2

11 views•Apr 23, 2019

Specialty Food AssociationInessa O-Childs, Treasure8



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https://www.prweb.com/releases/2012/8/prweb9766646.htm

LOS ANGELES, CA (PRWEB) AUGUST 06, 2012

P3R Publicity, a full service public relations firm is pleased to announce a new client relationship with investment capital professional, Inessa Obenhuber. P3R Publicity will be responsible for all of Inessa Obenhuber's publicity initiatives.

“We are very excited about beginning this new relationship with business industry leader Inessa Obenhuber,” says Ola Danilina, CEO/Owner of P3R Publicity. “We look forward to enhancing her brand initiatives while demonstrating our commitment to excellent service.”

Inessa Obenhuber is an angel investor and international business expert. She is a member and investor at Seraph Group, a growing global investment angel boutique fund and co-founder Kiventures, a company that assists U.S. and Russian tech companies with operations, outsourcing and fundraising. Ms. Obenhuber is a native Russian who lives and works in Silicon Valley for more than 20 years, and who supports technology companies in Silicon Valley and Russia. She served as one of the founding members of the Russian Language edition of PC Magazine, and currently is an expert in the IT cluster at Skolkovo (Russian Silicon Valley).

[...]

2010

http://sfluxe.net/the-manus-salzman-valentines-ball-2010/

Gabriel Perez, Inessa Obenhuber

http://jeannelawrence.com/wordpress1/2008/10/14/san-francisco-social-diary-86th-opera-gala-opening/

https://www.sfgate.com/entertainment/article/A-night-of-trains-one-in-vain-The-ultimate-2725903.php#photo-2178110

A night of trains -- one in vain / The ultimate in elegance accentuates opera opening

Photo of Catherine Bigelow

Catherine Bigelow

,

Chronicle Staff Writers

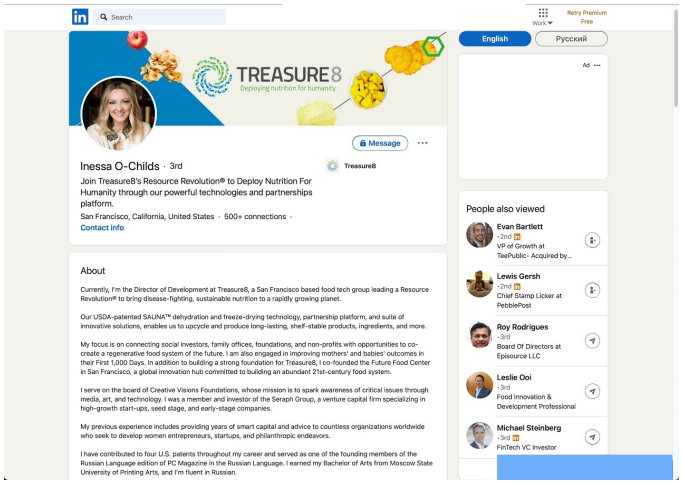
Sep. 13, 2004

Updated: Jan. 26, 2012 10:47 a.m.

Another version of the train came on the back of a buttery black leather skirt worn by Inessa Obenhuber, who paired it with a fitted crisscross tulle top, both by Trussardi.

NOT ONE HIT ON NEWSPAPERS - "Inessa Obenhuber" (with or without quotes)

LinkedIN - Inessa O'Childs (Obenhuber)



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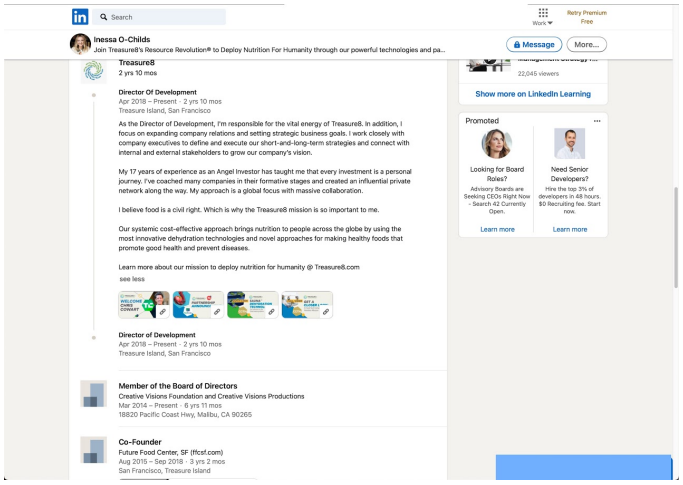

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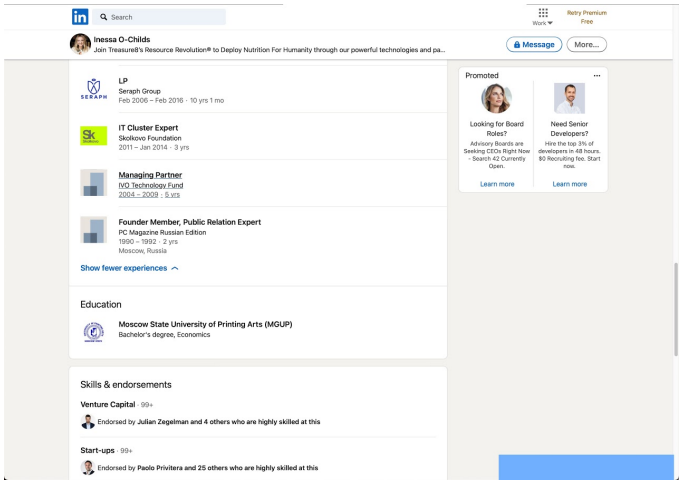

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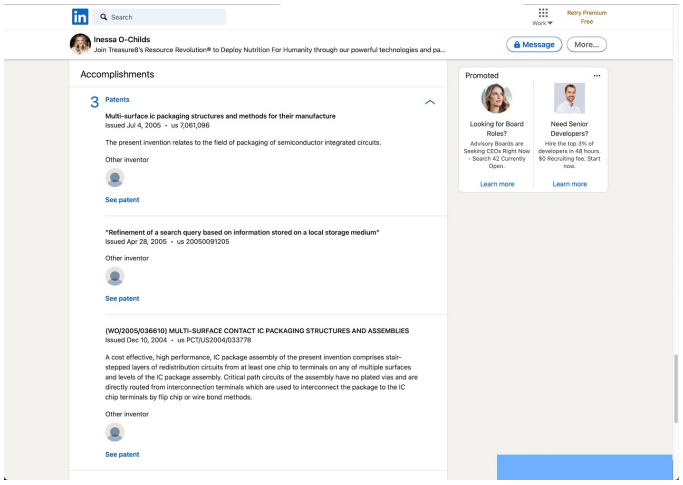

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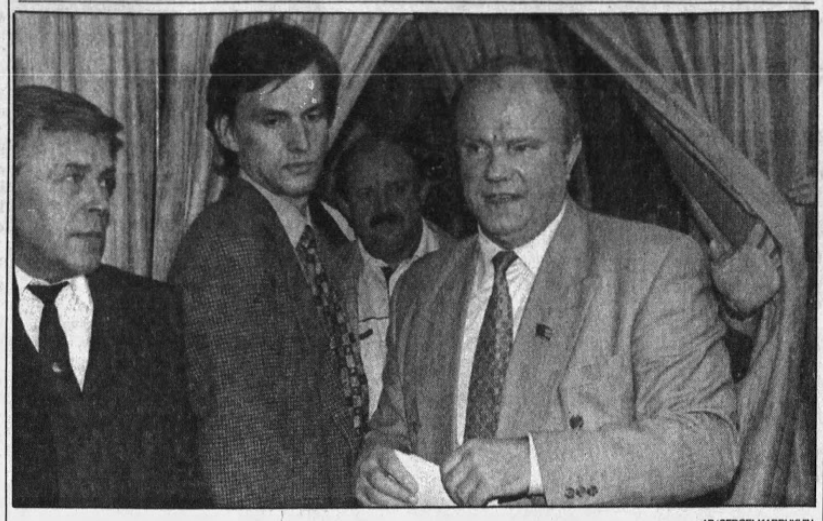
1996 (June 17) - working in sales dept at Nordstrom ?

Full newspaper page - [HN01G0][GDrive]

Bay Area Russians vote with fervor



AP/SERGEI KARPUKHIN

Communist leader *Gennady Zyuganov, right, emerges Sunday from polling booth. He received 32% of the vote.*

◆ *RUSSIA from A-1*

Yeltsin, Zyuganov must slug it out

for June 30.

Yeltsin met with aides to work out how to woo Lebed. Zyuganov has hinted that Lebed could be his prime minister in a future government, and suggested that the former paratrooper and Afghan war hero would suffer if he did not accept.

With 89 percent of the vote counted, 35 percent of voters were backing Yeltsin, whose democratic reforms have also spawned crime and corruption. Zyuganov, who promises a Russia with global might and the controlled economy of the Soviet era, got 32 percent, the Central Election Commission reported.

A visibly satisfied Lebed told Russian Television his strong performance was a personal victory and that he would disclose soon whether Yeltsin could count on his support. Some Yeltsin aides suggested Lebed could be the president's eventual successor.

Kremlin meeting

Yeltsin's strategists reportedly arranged a meeting at the Kremlin Monday between the president and Lebed, who could possibly be offered the defense ministry or a job as deputy prime minister with control of all security forces.

Yeltsin aide Alexander Shokhin suggested that Lebed could get a job specially created for him.

Zyuganov, who has long had his eye on Lebed, moved quickly to try to secure his support.

Communist ally Mikhail Lapshin, head of the Agrarian Party, said Zyuganov would offer the gruff ex-general the prime minister's job in the event of a Communist victory in the runoff.

Zyuganov said no formal offer had been made and warned that Lebed's political career would be seriously damaged if he joined the Yeltsin government.

Yeltsin's presidency — and Russia's free-market reforms — may be riding on whether he can coax an endorsement out of Lebed that could help deliver his projected 10 million-plus votes.

"Victory in the second round will happen only if a coalition (with Lebed) actually happens and if turnout stays the same or goes up," Vyacheslav Nikonov, Yeltsin's chief campaign analyst, told Russian Public Television.

By law, a runoff must be held within 15 days of the release of final results. Alexander Ivanchenko, deputy head of the Central Election Commission, said the runoff was tentatively set for June 30.

Courting the also-rans

Yavlinsky, who stood fourth with 7 percent, also will be courted by Yeltsin although many of his supporters are all but certain to vote for the reform-minded president.

Zhirinovsky, who finished third behind Yeltsin in the 1991 presidential election, stood fifth with 6 percent. Many of his backers are likely to shift to Zyuganov.

None of the other five candidates got even 1 percent. Former Soviet President Mikhail Gorbachev got only 0.52 percent.

About 70 percent of Russia's 106 million voters cast ballots; Yeltsin's backers had hoped for more, believing a high turnout would help them against the better-organized Communists.

In the Moscow mayoral race, Yeltsin ally Yuri Luzhkov, who has presided over a construction boom that has transformed Russia's capital, was re-elected with nearly 90 percent of the vote.

In a television address to the nation Monday morning, Yeltsin said the choice in the next round was crystal clear and urged voters to unite behind him.

"Either backwards to revolutions and shocks, or forward to stability and well-being. Today as never before, we must be united," said Yeltsin, speaking in a strong, clear voice.

Sunday's voting followed a bitter campaign, offering what many voters found to be only unpleasant choices. But election day passed without riots, coups, widespread voter fraud or violence.

The dramatic changes that have taken place in Russia since the Soviet collapse in 1991 have created a new wealthy class, but have driven many into poverty.

Crime and corruption have flourished, and Yeltsin has been unable to end an 18-month-old bloody war in breakaway Chechnya.

Zyuganov appealed to those dispossessed by the reforms and those yearning for order.

"I am a pensioner, and it is a hard life," Nina Yesimova, 62, said after casting her vote for Zyuganov. "My pension is 400,000 rubles ($80) a month. I can't live on it."

Others disagreed.

"If the Communists win, it will be all the horror of before," said Alexandra Milyana, 70, describing her father's arrest and disappearance in Stalin's purges of the 1930s. "I'm old, but I can't go back."

'Just and honest'

Andras Barsony, the head of an observer delegation from the Organization for Security and Cooperation in Europe, said Monday that no serious violations were reported.

"The first round of the election took place in a just and honest atmosphere on the whole," he said, according to the Interfax news agency.

U.S. Sen. John McCain, R-Ariz., said the observer team from the International Republican Institute saw no pattern that would indicate widespread problems with the voting.

But campaign financing and spending, and the favoritism of the media toward Yeltsin during the campaign were troubling, he said.

"Both the election and the runoff will be the litmus test as to the true function of democracy in Russia," McCain said.

Yeltsin wins easily among local émigrés; Zyuganov is 3rd

By Keay Davidson
OF THE EXAMINER STAFF

Boris Yeltsin was a landslide winner — in San Francisco, anyway.

More than 1,700 Russians who live in the Bay Area jammed the Russian Consulate on Green Street Sunday. There they voted in their native land's anxiously watched election — an election that some feared would restore the communists to power or trigger a civil war.

"So many people!" Deputy Consul General Vladimir Golubkov declared, raising his hands in amazement as people flooded up the consulate steps. "We didn't expect so many people."

A final unofficial vote total showed 1,403 for Yeltsin, 164 for liberal reformer Grigory Yavlinsky, 73 for communist Gennady Zyuganov and 64 for Gen. Alexander Lebed. Flamboyant nationalist Vladimir Zhirinovsky failed to win a single vote, according to Sergei Gritsai, press attaché and vice consul in San Francisco.

Gritsai said the ballots are being flown to Moscow for double-checking before they are counted among the results. Only persons with confirmed Russian citizenship were eligible to vote in the election.

The Russian émigré community in the greater Bay Area is about 35,000, according to Lisa Greenberg of the Jewish Family Center in San Francisco.

"Who shall I vote for? Who else *except* Yeltsin?" asked an elegantly dressed young woman, Inessa Bamberg, a former resident of Russia who works in the sales department at Nordstrom in Corte Madera. "This election is going to be a big step toward a really big democracy."

All day Sunday the throng crept toward the voting booths — past lemon-yellow walls previously decorated with paintings of Lenin, paintings removed after the Soviet Union collapsed in 1991.

Yeltsin was their overwhelming choice, saying they deplored the possibility of a return to Communist rule.

By Monday, Yeltsin and his Communist opponent Gennady Zyuganov appeared headed for a June runoff election, neither candidate having won more than 50 percent of the vote.

Bay Area Russian voters also dismissed presidential candidate Vladimir Zhirinovsky — whom Western news media have portrayed as a flamboyant anti-Semite — as a trivial fringe candidate.

"Zhirinovsky doesn't have a chance, like (U.S. presidential candidate Pat) Buchanan didn't have a chance over here," said Mikhail Utkin of Reno, who drove to San Francisco for the election.

Why did he undertake such a long drive just to vote?

"Because when I go back home, I want to go home to a nice place, free and wealthy," insisted Utkin, 24, a computer science student at the University of Nevada at Reno. "I don't want to go back to a large prison."

For now, many grumbled, the "inmates" appear to be running the "prison."

While living in Russia, Bamberg was twice beaten by agents of the so-called Russian Mafia because her husband refused to pay them 30 percent of his profits, she said.

Disgusted, the Bambergs moved to the Bay Area three years ago.

The ultimate election of Zyuganov would be bad news, said Andrew Bamberg, who sells Toyotas in San Rafael.

'No way to re-establish socialism'

It also would be pointless, he added.

"There's no way to re-establish socialism because all the old (societal) connections are broken and all the (Soviet Union's client states) are independent countries now."

"It is important that a democrat win — important for the whole world," said Lubov-Pitina Vcherashny, who with her husband, Boris, and daughter Julia came to vote. The Outer Richmond District residents have lived in San Francisco for about 18 months.

Julia, a student at San Francisco City College, said Zhirinovsky "is not a serious man. He has some fascist mentality."

A very unusual band of voters arrived at the consulate around noon, courtesy of a U.S. government chauffeur. They were Russian military inspectors and weapons scientists who — with the full permission of the U.S. government — lurk around U.S. military bases to be sure that the Americans aren't violating arms control treaties. Their U.S. counterparts lurk around Russian bases.

No longer secretive

Meanwhile, several feet away, officials of the once-super-secretive Russian Consulate — where, even today, no one ever seems to answer the telephone — readily opened their doors to the media. The lobby and hallway were so jammed with voters, though, that reporters and photographers had trouble making headway to the voting room.

There, before a big picture window with a view of the Golden Gate Bridge and Alcatraz Island, voters showed their passports to Russian officials. Then they retreated to a private booth to vote.

Doomsayers back home warned the election would trigger a civil war, perhaps akin to the famine-and-firestorm bloodbath that followed the Bolshevik Revolution of the late 1910s.

Such talk, Golubkov says, makes him very angry. "Maybe some minor clashes" will occur, but talk of a bigger conflict is "just putting oil on fire," the deputy consul general said, tapping a cigarette on a cigarette package.

"I never saw so much interest in voting," Golubkov said. "Today, the people will decide the political future of Russia."

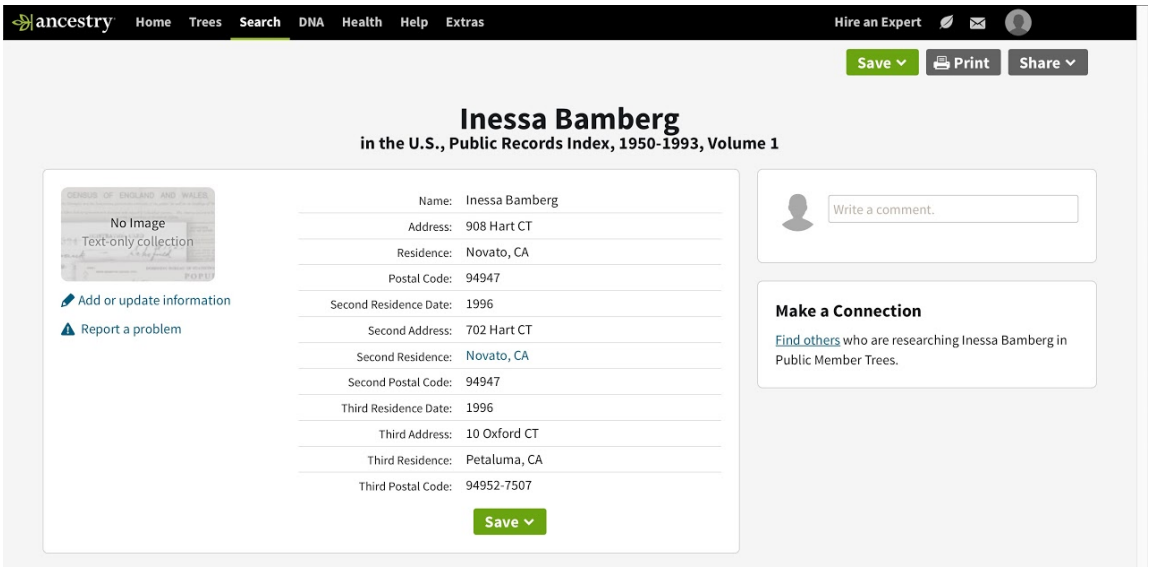
Eric Brazil of The Examiner staff contributed to this report.

[HN01G1][GDrive]

2021-01-11-ancestry-com-us-public-records-inessa-bamberg-1990s-addr-img-1.jpg

https://www.ancestry.com/discoveryui-content/view/48395548:1788?indiv=1&tid=&pid=&queryId=2d436be2c8e79796863331b60e7ff0db&usePUB=true&_phsrc=bis7&_phstart=successSource

Inessa Bamberg in the U.S., Public Records Index, 1950-1993, Volume 1



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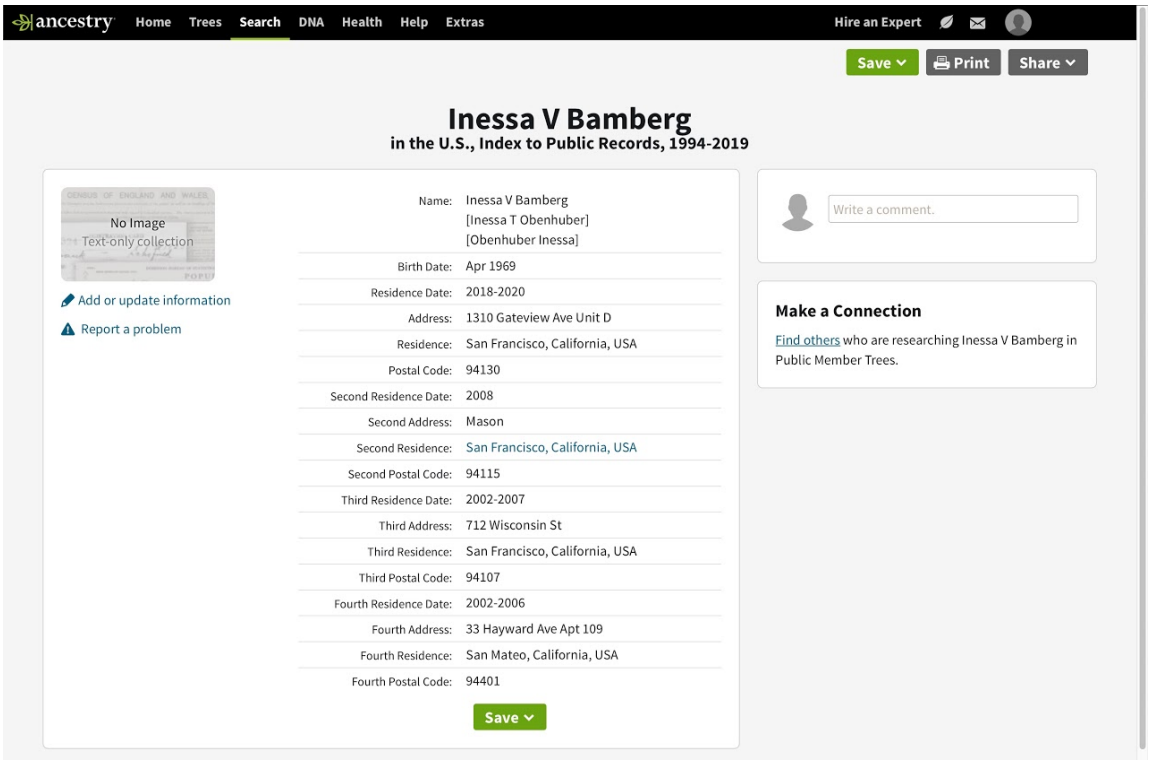
Inessa V Bamberg in the U.S., Index to Public Records, 1994-2019



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https://www.justice.gov/usao-ndca/pr/former-securities-lawyer-sentenced-six-years-imprisonment-securities-fraud

Former Securities Lawyer Sentenced To Six Years Of Imprisonment For Securities Fraud

Disbarred Marin attorney also ordered to pay more than $4.5 million in restitution to defrauded investors

SAN JOSE – James Seltzer, a former attorney and resident of Marin County, was sentenced to 72 months' imprisonment for securities fraud, announced United States Attorney Brian J. Stretch, FBI Special Agent in Charge John F. Bennett, and Internal Revenue Service, Criminal Investigation, Special Agent in Charge Michael T. Batdorf. The sentence, issued today by U.S. District Judge Lucy H. Koh, follows a guilty plea entered September 14, 2016.

According to his plea agreement, beginning no later than October of 2007 through at least May of 2011, Seltzer, 69, formerly of Belvedere, defrauded and deceived multiple individuals in connection with the purchase and sale of securities. Seltzer admitted he misrepresented to the investors that he would use their money to make certain investments for their exclusive benefit but instead diverted the funds to other uses. Seltzer acknowledged that in many cases, he diverted all or virtually all of the monies he had obtained from his investors and spent the monies on his own personal and business expenses after depositing the funds into his own personal bank accounts. The court found Seltzer defrauded 16 investors of more than $4.5 million and ordered Seltzer to pay restitution to his victims in the amount of $4,646,555.

According to papers filed by the government, Seltzer's victims included several women with whom he conducted personal relationships in order to gain their trust as a precursor to stealing from them. During today's sentencing proceedings, after hearing from several of Seltzer's victims, Judge Koh described Seltzer's conduct as "callous." Furthermore, in addition to the victims in his criminal case, bankruptcy filings reveal Seltzer accumulated a debt of well over $20 million to numerous other individuals. Seltzer fled the country in 2010 and remained overseas for 5 years.

On June 18, 2015, a federal grand jury indicted Seltzer charging him with five counts of securities fraud, in violation of 15 U.S.C. § 78; one count of mail fraud, in violation of 18 U.S.C. § 1341; and three counts of money laundering, in violation of 18 U.S.C. § 1957. He was apprehended in Hawaii in September 2015, and, pursuant to the plea agreement, pleaded guilty to one count of securities fraud. The remaining counts were dismissed.

In addition to the prison term and restitution, Judge Koh also sentenced Seltzer to serve a three-year period of supervised release. Judge Koh ordered Seltzer to surrender no later than April 19, 2017, to begin serving his sentence.

Assistant U.S. Attorneys Timothy Lucey and Arvon Perteet are prosecuting the case with the assistance of Laurie Worthen. The prosecution is the result of an investigation by the IRS-Criminal Investigation and the Federal Bureau of Investigation.

2015 (Sep) - At the NASDAQ 25th anniversary

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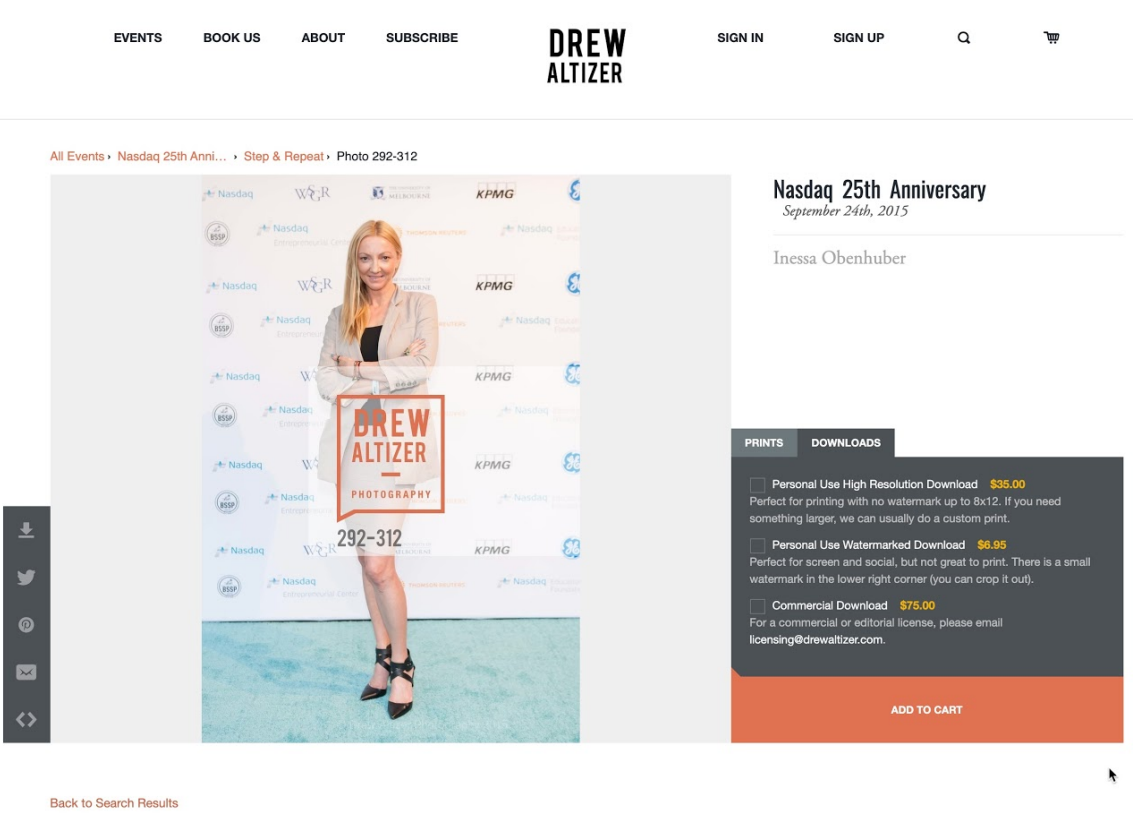

Remarried

married to - https://www.linkedin.com/in/timothy-childs-51848

wedding - July 7,8,9 and 10th of 2016. http://www.alwaystravelsf.com/inessatimothywedding.html

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Housatonic

Dr. Lloyd John Old (born 1933)

Wikipedia Lloyd J. Old

Associated with

- **Dr. Chester Milton Southam (born 1919)** (…)
- [...]

Saved Wikipedia (March 19, 2010) : "Lloyd J. Old"

https://en.wikipedia.org/wiki/Lloyd_J._Old

2021-03-19-wikipedia-org-lloyd-j-old.pdf

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Dr. Lloyd J. Old, M.D., c. 1995

Lloyd John Old (September 23, 1933 – November 28, 2011) was one of the founders and standard-bearers of the field of cancer immunology.[1] When Old began his career in 1958, tumor immunology was in its infancy. Today, cancer immunotherapies are emerging as a significant advance in cancer therapy.[2]

Old's contributions to research established many of the principles and priorities of modern tumor immunology. In earlier work, he and his colleagues introduced Bacillus Calmette-Guérin (BCG) to tumor immunotherapy; discovered the first link between the major histocompatibility complex (MHC) and disease (leukemia); found the unexpected association between Epstein-Barr virus (EBV) and nasopharyngeal carcinoma; discovered Tumor necrosis factors (TNF); defined the concept of cell-surface differentiation antigens with the discovery of TL, Lyt (CD8), and a range of other mouse antigenic systems; discovered p53, independently with two other groups; and identified the tumor immunogenicity of heat shock proteins. Old is the author or co-author of more than 800 research publications. He was also a teacher helping young scientist as they began their career.

He held the William E. Snee Chair of Cancer Immunology at Memorial Sloan-Kettering Cancer Center (MSKCC), where he was director of the Ludwig Cancer Research New York Branch (then known as Ludwig Institute for Cancer Research, or LICR).[3] He was also a trustee of the LICR Charitable Trust, and a trustee of the Virginia & D.K. Ludwig Fund for Cancer Research.6. From 1971 to 2011, he served as the founding scientific and medical director of the Cancer Research Institute (CRI), where from 2001 to 2011 he also served as director of the CRI/LICR Cancer Vaccine Collaborative (CVC), an international network dedicated to testing and optimizing therapeutic cancer vaccines. Old's previous appointments included chairman of the LICR board of directors (2006–2009), LICR scientific director (1988 to 2005), member of the Emeritus LICR Scientific Committee (1971–86), LICR chief executive officer (1995–2004), and associate director of research at MSKCC (1973–83).

Old served as a member of scientific advisory boards and committees including the Public Health Research Institute of the City of New York, the National Cancer Institute, and the American Association for Cancer Research. Old was also a member of the American Association for Cancer Research, New York Academy of Sciences, Reticuloendothelial Society, Society of Experimental Biology and Medicine, American Association for the Advancement of Science, American Association of Immunologists, National Academy of Sciences, the Academy of Cancer Immunology, and the American Academy of Arts and Sciences. He had also received honorary doctor of medicine degrees from Karolinska Institute, the University of Lausanne, and the University College London. He graduated from the University of California, Berkeley with a B.A. in biology and earned a medical degree from the University of California, San Francisco.

Old died November 28, 2011, in his New York City home, after several years battling advanced prostate cancer.[1]

Contents

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Major discoveries[edit]

This article **is in list format, but may read better as prose**. You can help by converting this article, if appropriate. Editing help is available. *(December 2019)*

- Introduced Bacille Calmette-Guérin (BCG), the tuberculosis vaccine, into experimental cancer research as a way to stimulate non-specific resistance to tumor growth. BCG was FDA-approved in 1991 and is now widely used as a first line treatment for superficial bladder cancer (1959).[4]
- Discovered the first linkage between the major histocompatibility complex (MHC) and disease—mouse leukemia—opening the way for the recognition of the importance of the MHC in the immune response (1964).[5]
- Identified the first cell surface antigens distinguishing cells of different lineages, introducing the concept of cell surface antigens that could differentiate different cell types. First coined TL (for "thymus-leukemia" antigen in mice) then later as the Ly series (originally named Ly-A and Ly-B and later called Ly-1, Ly-2, and Ly-3), this discovery led directly to the wide use of cell surface markers to distinguish and classify normal and malignant cells and the development of CD classification (for "clusters of differentiation"). Most notably, Dr. Old discovered the LY-B antigen, later renamed CD8 in humans. CD8 cells, often referred to as "killer" T cells, are one of the major cells of the adaptive immune response, and are capable of directly killing dangerous or foreign cells (1964–1968).[6][7][8][9][10]
- Discovery of the association between Epstein-Barr Virus (EBV) and nasopharyngeal cancer (1966).[11]
- Discovery of tumor necrosis factor (TNF), a key immune signaling molecule (cytokine) that, in addition to its promise for the treatment of cancer and other diseases, has provided a powerful research tool in biomedicine (nearly 88,000 articles in PubMed as of May 25, 2011) (1975).[12][13]
- Identification (independently, along with two other groups) of the p53 protein, the gene for which is mutated in approximately 50 percent of cancers (1979).[14]
- Conducting of the most comprehensive dissection of the cell surface of human cancers using monoclonal antibodies, with the identification of an array of cell surface antigens as targets for antibody-based therapies of human cancer. Of the monoclonal antibodies developed in Dr. Old's laboratory, thirteen have been licensed and seven are in clinical trials. These include:
  - MORAb-003 (farletuzumab), currently in a phase III trial for ovarian cancer sponsored by Morphotek, which licensed the antibody from LICR. MORAb-003 targets the folate receptor alpha, which is overexpressed on a number of epithelial cancers, including ovarian, breast, renal, lung, colorectal and brain cancers.
  - the anti-EGFr antibody Hu806, which Abbott Laboratories acquired exclusive world-wide rights to develop in a major licensing deal in 2008. Hu806 targets the overexpressed form of the epidermal growth factor receptor (EGFr) present in 50 percent of all cancers of epithelial origin.[15]
  - cG250 (girentuximab, Rencarex®/Redectane®), which targets the CA-IX molecule/G250 antigen, expressed on over 90 percent of clear cells renal cell carcinomas (RCC, kidney cancer), and is in phase III clinical trials as a diagnostic tool and as a therapeutic modality (also iodine-131-G250).
  - hu3S193, which targets the LeY antigen, an oligosaccharide epitope expressed on glycolipids and glycoproteins by a wide range of epithelial cancers, is in phase II clinical trials being conducted by LICR spin-off company Recepta Biopharma.
  - huA33, which targets the A33 antigen present on colorectal cancer cells. The antibody has been licensed to LICR spin-off company Life Sciences Pharmaceuticals, and the mAb's therapeutic potential is being tested as a stand-alone antibody, as a radioimmunotherapy agent, and in combination with chemotherapy.[16]
- Establishment of the autologous typing system as the methodology leading to the identification of the first specific human tumor antigens recognized by antibodies and T cells, created 150 separate cancer cell lines, and laid the groundwork for the development of SEREX by Pfreundschuh in 1995.[17]
- Discovery and naming of several members of the CT (cancer/testis) family of human tumor antigens, including New York-ESO-1 (NY-ESO-1). NY-ESO-1 is one of the most immunogenic human tumor antigens discovered to date and is expressed in approximately 35 percent of melanomas, 30 percent of breast cancers, 30 percent of liver cancers, 25 percent of lung cancers, less than five percent of colon cancers.[*citation needed*]
- Contribution to the resurrection of the cancer immunosurveillance hypothesis and to the development of the expanded model of cancer immunoediting.[18][19][20]
- Establishment in 2001 of the Cancer Vaccine Collaborative (CVC), the world's first network of clinical trial sites closely linked with immunological monitoring laboratories with the goal to develop effective therapeutic cancer vaccines by first understanding the fundamental immunological implications of vaccination and applying that knowledge toward the rational design of optimal vaccine formulations. A joint program of the Cancer Research Institute and Ludwig Cancer Research, the CVC conducts parallel, early phase, single variable clinical trials of various cancer vaccine formulations and combinations composed of cancer-specific antigen, immunological adjuvant, vaccine delivery platforms, and modulators of immune suppression.

- Founder of "The Academy of Cancer Immunology [which] was established in 1998 to advance understanding of the role of immunity in cancer and to recognize outstanding achievements in the field of cancer immunology. The Academy currently has 53 members from 11 countries and holds annual elections for Academy membership." [21]

Leadership[edit]

As director of the international Ludwig Institute for Cancer Research for 17 years, scientific director of the Cancer Research Institute for 40 years, and his previous appointment as associate director of research at Memorial Sloan-Kettering Cancer Center for 10 years, Dr. Old guided the scientific vision of several institutions and the training and development of generations of young scientists in many fields.[22]

Lloyd J. Old, M.D., c. 1974

Memorial Sloan-Kettering Cancer Center (MSKCC)

- Memorial Hospital for Cancer and Allied Diseases
  - 1973-1976: Vice president and associate director
  - 1976-1986: Vice president and associate director for scientific development
- Memorial Sloan-Kettering Cancer Center
  - 1973-1983: Associate director of research
- Ludwig Institute for Cancer Research, New York Branch at MSKCC
  - Director, 1990–2011

Ludwig Institute for Cancer Research (Ludwig Cancer Research)

- 1988-2005: Director
- 1989–present: Member, board of directors
- 1995-2004: Chief executive officer
- 2006-2008: Chairman, board of directors

Virginia and Daniel K. Ludwig Trust

Lloyd J. Old, M.D., with Cancer Research Institute founder Helen Coley Nauts, Cancer Research Institute (CRI)

- 1968-1971: Scientific advisor
- 1971-2011: Scientific director

CRI/LICR Cancer Vaccine Collaborative (CVC)

- 2001-2011: Director

Awards[edit]

- 1957: Roche Award from Roche Pharmaceuticals
- 1958: Alpha Omega Alpha
- 1970: Lucy Wortham James Award, James Ewing Society
- 1972: Lecturer, The Harvey Society of New York
- 1972: Louis Gross Award
- 1974: Member, Institute of Medicine, U.S. National Academy of Sciences
- 1975: Cancer Research Institute William B. Coley Award for Discoveries in Basic and Tumor Immunology (honored as one of the "Founders of Tumor Immunology")
- 1976: Member, American Academy of Arts and Sciences
- 1976: Rabbi Shai Shacknai Memorial Prize in Immunology and Cancer Research, Hebrew University of Jerusalem
- 1978: Member, National Academy of Sciences
- 1978: Research Recognition Award, Noble Assembly
- 1980: G.H.A. Clowes Memorial Award, the American Association for Cancer Research
- 1981: Robert Roesler de Villiers Award, Leukemia Society of America
- 1985: New York Academy of Medicine Medal for Distinguished Contributions in Biomedical Science
- 1986: Honorary member, Japanese Cancer Association
- 1990: Robert Koch Prize, Robert Koch Foundation
- 1994: Honorary Doctor of Medicine, Karolinska Institute
- 1995: Honorary Doctor of Medicine, University of Lausanne
- 1997: Honorary Doctor of Sciences (Medicine), University College London
- 2004: President's Medal, Johns Hopkins University
- 2004: Dean's Award, Stanford University School of Medicine
- 2004: Honorary professor, Peking University
- 2007: Charles Rodolphe Brupbacher Prize for Cancer Research, the Charles Rodolphe Brupbacher Foundation, Berlin
- 2011: C. Chester Stock Award Lectureship, Memorial Sloan-Kettering Cancer Center

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- ^
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- ^ http://www.academycancerimmunology.org/index.htm
- ^ http://www.cancertherapyadvisor.com/general-oncology/immunotherapy-in-the-twentieth-century/article/644117/2/

External links[edit]

- Ludwig Cancer Research
- Cancer Research Institute
- Old interviewed in *American Scientist* May 2009
- Obituary announcement from the Cancer Research Institute

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Kevin James Olival (born 1975)

Born - August 10, 1975 (See [HD0012][GDrive])

HousatonicITS Research Pages :

- **Professional relations:**
  - Peer at Eco Health Alliance of Dr. Peter Daszak (born 1965)
- **Employers**
- **Other**

2020-05-ecohealthallience-org-personnel-dr-kevin-olival.pdf

https://www.ecohealthalliance.org/personnel/dr-kevin-j-olival

Dr. Kevin Olival

Vice President for Research

@nycbat

"Our activities take us to the farthest reaches of the planet to monitor wildlife health and draw linkages between humans, animals, and ecosystems. My work with bats strives to both conserve these ecologically beneficial animals and understand their role in the emergence of human diseases - with the ultimate goal of preventing the next pandemic."

Scientists Bio

Dr. Kevin Olival is an ecologist and evolutionary biologist who has been researching emerging infectious diseases for over a decade. He has been at the forefront of recent international investigations to understand the origins and transmission pathways of: Middle East Respiratory Syndrome coronavirus (MERS-CoV) in Saudi Arabia; Ebola Reston virus in the Philippines; and Nipah virus in Bangladesh and Malaysia. He has managed wildlife conservation and disease research projects across Southeast Asia for over 10 years, with a strong focus on bat research. Dr. Olival's role as Senior Research Scientist at EcoHealth Alliance involves coordinating the modeling and analytics research; integrating evolutionary and ecological theories to understand the drivers of disease emergence; and managing zoonotic disease surveillance efforts in Thailand and Indonesia under the USAID PREDICT project.

Some highlights from Kevin Olival's research include detecting the first evidence for Ebola virus from bats in mainland Southeast Asia (Bangladesh); detecting MERS-CoV and related viruses in bats and advising the Institute of Medicine's Forum on Microbial Threats on this disease; understanding the circulation of Nipah virus in its natural fruit bat reservoirs; estimating viral diversity in mammals globally; and building models to predict zoonotic disease emergence. Dr. Olival has a unique blend of skills from the field, laboratory, and behind a computer that include ecological techniques to capture and survey bats, satellite telemetry of wildlife, field training courses in safe specimen handling and personal protective equipment (PPE), molecular biology techniques, phylogenetic analyses, and ecological modeling.

Dr. Olival graduated with distinction from Columbia University in 2008 with a Ph.D. in Ecology and Evolutionary Biology and a M.A. in Conservation Biology. His dissertation research focused on the population genetics and geographic distributions of large fruit bats in Southeast Asia, with implications for Nipah virus dynamics and emergence. He has conducted month-long expeditions to Southeast Asia doing fieldwork and managing projects working with local scientists and NGOs.

Dr. Olival completed a prestigious two-year NIH Fogarty U.S. Global Health Postdoctoral fellowship expanding EcoHealth Alliance's work on the ecology of Nipah virus in Bangladesh. Dr. Olival has a passion for turning rigorous science into effective public policy, and aims to keep this as a central goal of his career path.

His research has been highlighted in *The New York Times*, *The Economist*, *The Wall Street Journal*, *TIME* magazine, *Toronto Star*, *Wired*, and *National Geographic*.

Dec 14, 2017 Tweet

Tweet [HT004Y][GDrive] - *"Excited to work with the amazing team at NCDC/Lugar Center for our new @doddtra #bat project. Had a productive few days of meetings here in Tbilisi, Georgia. Beautiful city, wonderful team! "*

[HT004Y][GDrive]

[HT004Y][GDrive]

[HT0050][GDrive]

2017 (February) - Zika Virus publication

Full PDF - [HI000Y][GDrive]

Incubus

Kevin J. Olival

EcoHealth Alliance, 460 West 34th Street, 17th Floor, New York, NY 10001

Zika is insidious. Its symptoms are overwhelmingly mild, inconspicuous, and even go unnoticed—a rash, a fever, a headache—sequela that could result from any number of causative agents. Yet, on rare occasion its impact can be disastrous—deforming and depriving the unborn. Because of this, Zika strikes a deep chord of terror in many millions more than it infects. Like HIV in the 1980s, it is changing societal behavior—how we engage in love, where we travel, when we travel, and, now, whether we reproduce. Zika virus oppresses our most primitive and instinctual biological desire—procreation.

Zika is an incubus. A nasty demon who preys on unexpecting young women in their sleep. Zika is an incubus. A nightmare—a horrific, tropical nightmare where mosquito bites beget babies with shrunken heads.

Zika is sexist. Zika is ageist. It disproportionately impacts women of child-bearing age, and young couples ready to start a family. It's one of few vector-borne diseases that is also transmitted sexually. The fear and uncertainty are much worse than the odds suggest. Microcephaly, blindness, developmental abnormalities, arthrogryposis, and Guillain-Barré each may be exceedingly rare, but the unknown terrifies us. Will I draw the unlucky card? What will we discover next about this disease? The wave of knowledge about this old viral foe is just beginning to swell, and, just ahead of it crests another wave—the Zika epidemic itself.

Mark Olival-Bartley's small and beautifully crafted poem, "Microcephaly," reminds us of all of this. In nine undulating lines of iambic pentameter, replete with imagery of biblical floods and oceanic depths, he conjures up the terror of a birthing woman who drew that unlucky card. In three short stanzas, the reader is taken on an epic journey from terror to grief to respite. It's the third and final stanza that is most interesting to me. We are left with, if only briefly, a feeling of hope. Some may interpret the reference to "adamantine faith" as the religious faith of the birthing woman; I interpret the reference as a faith in science. In less than two years, we have learned infinitely more about Zika virus than we knew in the 70 years since its discovery. We must have faith, that with science as our tool, we will knock this epidemic down. It seems a vaccine is around the corner; we've developed them for Zika's cousins—Yellow fever, Japanese encephalitis, and Dengue. Yet we need more than vaccines.

In the penultimate line of "Microcephaly," "the race of knowledge toward what lies ahead," we are reminded that this virus, like all emerging infectious diseases, will continue to surprise and challenge us. The virus has already spurred a large and growing scientific body of knowledge. The final line of the poem leaves us with further hope. As with other past epidemics, society will walk away damaged from Zika, "limping," but ultimately we will walk away and the dance (between pathogen and host?) will continue. Zika will make us smarter as a scientific community and better prepared as a society to deal with the next one. This too shall pass.

On this Issue's cover, Kuniteru Utagawa's 1885 woodblock print "Ten Realms within the Body" visually reminds us that both the hope and peril of society already lie in the hands of the unborn generation. A reclining woman points to her pregnant belly, cross-sectioned into 10 panels, each representing the ten spiritual realms of humanity. These are represented through the trials and joys of everyday life: transporting goods (humanity), teaching children in a classroom (learning), engaging in a fierce battle (hell), pulling a frail figure in a wagon (hunger), and gathering in a community circle (Buddhahood). In the center of all of this, appears her baby in utero. I can't help but see in this artist's rendition of baby a head too small, a sloping, and lowered braincase that differs from the other children depicted in the print. This is most likely an unintended artistic consequence—maybe Utagawa wanted the shape of the fetus to

Correspondence to: Kevin J. Olival, e-mail: olival@ecohealthalliance.org

[HI000Z][GDrive]

Research papers -

https://link.springer.com/article/10.1007/s10393-020-01471-2

https://onlinelibrary.wiley.com/doi/abs/10.1111/mec.15288

https://dash.harvard.edu/handle/1/12064417

https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7144510/

Source :

https://www.linkedin.com/in/kevin-olival-4986237/

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Vice President for Research at EcoHealth Alliance

EcoHealth Alliance

Columbia University in the City of New York

About

Vice President for Research at EcoHealth Alliance -- developing and leading cutting-edge science to shape public policy in emerging infectious diseases and conservation.

Activity

See all

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Check out our new paper and press about it here. ~700 new bat CoV sequences from China and analyses of host and geographic origins for Coronaviruses.

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Spoke to WGN Radio AM 720 yesterday about all aspects of #covid19, thanks Roe Conn for the great questions and giving me time to reply! Nice to have a longer format, rather than just quick soundbites. https://lnkd.in/dsMWeSA

Kevin shared this

16 Reactions

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Tune in live for EcoHealth Alliance's annual (and now virtual) benefit TONIGHT 8pm EST!

Kevin shared this

4 Reactions

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Interested in #bats #conservation #coronaviruses #globalhealth and how all these things can successfully work together? With our team at EcoHealth Alliance, I've spent the last few years helping to build a network of bat ecologists, conservationists, virologists, and #onehealth researchers in Western Asia and proud to announce our new website launched today! Thanks to a generous grant from the Defense Threat Reduction Agency for allowing us to build this collaborative network. Check it out:

Kevin shared this

62 Reactions 5 Comments

Experience

EcoHealth Alliance

Company NameEcoHealth Alliance

Total Duration10 yrs 10 mos

TitleVice President for Research

Dates EmployedJul 2015 – Present

Employment Duration5 yrs

LocationGreater New York City Area

Leading a research team to understand the ecological and evolutionary drivers of zoonotic disease emergence. Modeling and Analytics coordinator for the global USAID PREDICT-2 project. Additionally, oversee field projects, primarily in Asia, including capacity building for wildlife disease surveillance and pathogen detection in Southeast and Western Asia.

TitleSenior Research Scientist

Dates EmployedSep 2009 – Jul 2015

Employment Duration5 yrs 11 mos

LocationGreater New York City Area

My research focuses on understanding the drivers of zoonotic disease emergence, and the ecology and evolution of mammals and their associated pathogens. I manage several projects, mostly with activities in Asia, including capacity building for wildlife disease surveillance in our partner countries.

American Museum of Natural History

Company NameAmerican Museum of Natural History

Total Duration12 yrs

TitleVisiting Research Scientist

Dates EmployedSep 2009 – Present

Employment Duration10 yrs 10 mos

Oversee work of lab technician and manage projects including DNA barcoding and host genotyping.

TitlePost doc

Dates Employed2008 – Nov 2009

Employment Duration1 yr

Evolution and phylogenetics of fruit bats and their parasites, including malaria parasites.

Columbia University

Company NameColumbia University

Total Duration18 yrs

TitleAdjunct Research Scientist, Earth Institute

Dates EmployedNov 2009 – Present

Employment Duration10 yrs 8 mos

EcoHealth Alliance representative for the Earth Institute Center for Environmental Sustainability (EICES) steering committee. Advise students through Columbia University's Department of Ecology, Evolution, and Environmental Biology.

TitleInstructor, Secondary Schools Summer Program

Dates EmployedJul 2005 – Aug 2013

Employment Duration8 yrs 2 mos

Instructor for Issues in Biological Conservation summer course.

TitlePhD Student

Dates Employed2002 – 2008

Employment Duration6 yrs

Dissertation on the phylogeography of flying foxes (Genus Pteropus) in Southeast Asia. Implications for conservation and Nipah virus ecology.

Show fewer roles

Education

Columbia University in the City of New York

Columbia University in the City of New York

Degree NamePh.D. Field Of StudyEcology, Evolution, Environmental Biology

Dates attended or expected graduation 2003 – 2008

Columbia University in the City of New York

Columbia University in the City of New York

Degree NameMaster of Arts (M.A.) Field Of StudyConservation Biology

Dates attended or expected graduation 2002 – 2003

Colorado State University

Colorado State University

Degree NameBachelor of Science (BS) Field Of StudyBiology/Biological Sciences, General

Dates attended or expected graduation 1993 – 1997

Show 1 more education

- **Kalaheo High School**
- Dates attended or expected graduation1989 – 1993

Show fewer education

1991 (Dec 05) - Producing the high school play about the "plague"

Full page - [HN00SX][GDrive]

[HN00SY][GDrive]

January 26 2020 newspaper - https://www.newspapers.com/image/631903013/?terms=%22kevin%2Bj%2Bolival%22

March 24 1998 -

https://www.newspapers.com/image/273639769/?terms=%22kevin%2Bolival%22

2018 (Sep 20)

Tweet - [HT0059][GDrive] : *"Here we are! The 1st Annual Western Asia Bat Research Network workshop. Tbilisi, Georgia Sept 17-19, 2018. What an impressive, collaborative, and friendly bunch of #bat and #OneHealth scientists! #WABNet "*

[HT0059][GDrive]

[HT005A][GDrive]

... and the EcoHealth Alliance Reply ...

[HT005B][GDrive]

[HT005C][GDrive]

https://www.iucn.org/sites/dev/files/2018_bat_sg_report_-_publication.pdf

2018_bat_sg_report-publication.pdf

"Funding for the Mauritius Fruit Bat Research Strategy Workshop generously received from Chester Zoo, Mauritian Wildlife Foundation, Government of Mauritius, Lubee Bat Conser-vancy, and Bat Conservation International. WABNet is supported by a grant to EcoHealth Alliance (PI Kevin Olival) from the US Defense Threat Reduction Agency (DTRA). The South-east Asian Bat Conservation Research Unit, supported by the US National Science Founda-tion, supported the Red Listing workshop at the 4th International Southeast Asian Bat Confer-ence. Bats of the World: A Taxonomic and Geographic Database is supported by the Amer-ican Museum of Natural History Taxonomic Mammalogy Fund. RELCOM and the AICOMs and SICOMs Thematic Network is supported by the Programa Iberoamericano de Ciencia y Tecnología para el Desarrollo (CYTED)"

https://www.wabnet.org/2020/04/17/wab-net-scientists-assess-the-risk-of-sars-cov-2-spill-back-into-bat-populations-from-people/

"

WAB-Net scientists participate in risk assessment of SARS-CoV-2 'spill-back' into bat populations from people

Summary: Two WAB-Net scientists, Dr. Kevin Olival (EcoHealth Alliance) and Dr. Tigga Kingston (Texas Tech University, and a member of the WAB-Net Scientific Advisory Board) recently participated in a risk assessment led by the US Fish and Wildlife Service, to determine the threat of SARS-COV-2 'spill back' from humans into bat populations. Researchers who capture and handle bats as part of their fieldwork could infect bat populations with the virus if they themselves are infected. The concern is twofold: Firstly, SARS-CoV-2 could negatively affect the health of North American bat populations – a significant concern, especially for those species already being decimated by the fungus causing white-nose syndrome. Secondly, if SARS-CoV-2 becomes established in North American bat populations, it would be difficult to eradicate the virus, and the bats could serve as a new reservoir for continued spillover into human populations."

https://www.washingtonpost.com/national/health-science/us-advises-suspending-bat-research-over-concerns-coronavirus-could-infect-north-american-species/2020/04/09/1aabcf52-7a8e-11ea-9bee-c5bf9d2e3288_story.html

TWEETS

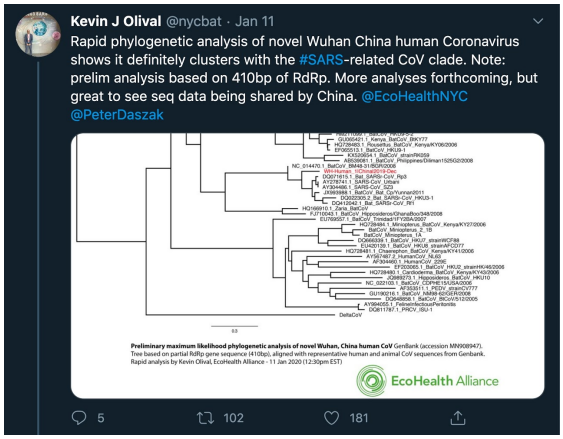
[HT0051][GDrive]

2020 (Apri 24) - Check out Wabnet !

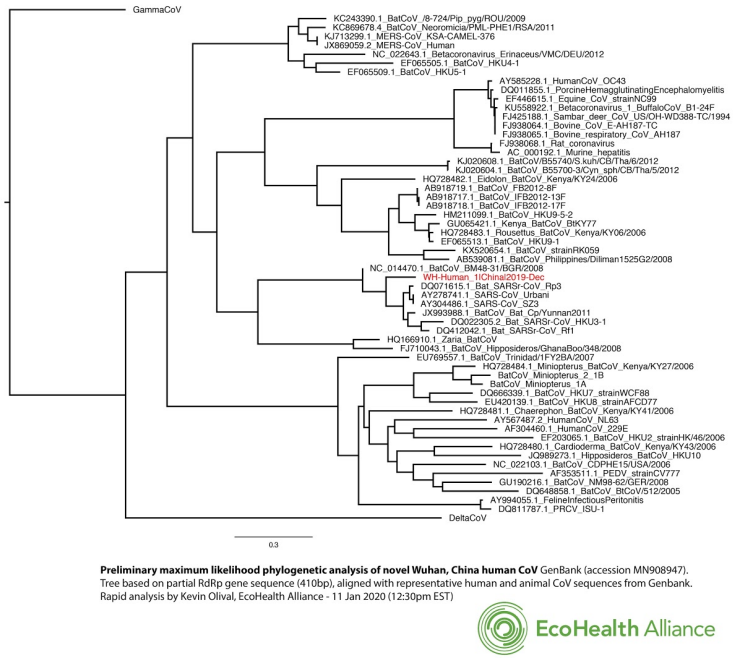
[HT005D][GDrive]

2020 - Jan 11

Tweet [HT005E][GDrive] - *"Rapid phylogenetic analysis of novel Wuhan China human Coronavirus shows it definitely clusters with the #SARS-related CoV clade. Note: prelim analysis based on 410bp of RdRp. More analyses forthcoming, but great to see seq data being shared by China. } "*



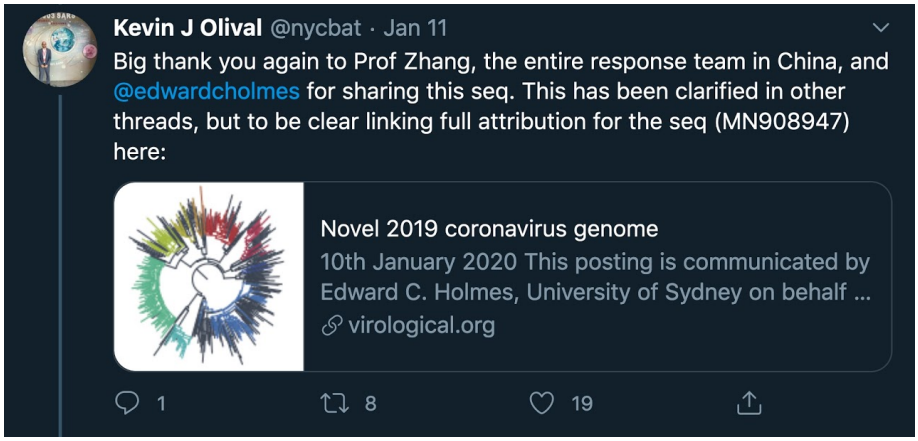
[HT005E][GDrive]



[HT005F][GDrive]

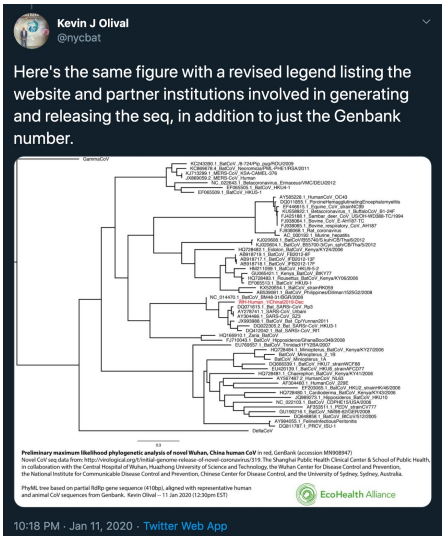
2020 (Jan 11)

Tweet [HT005G][GDrive] - Link is to - https://virological.org/t/novel-2019-coronavirus-genome/319



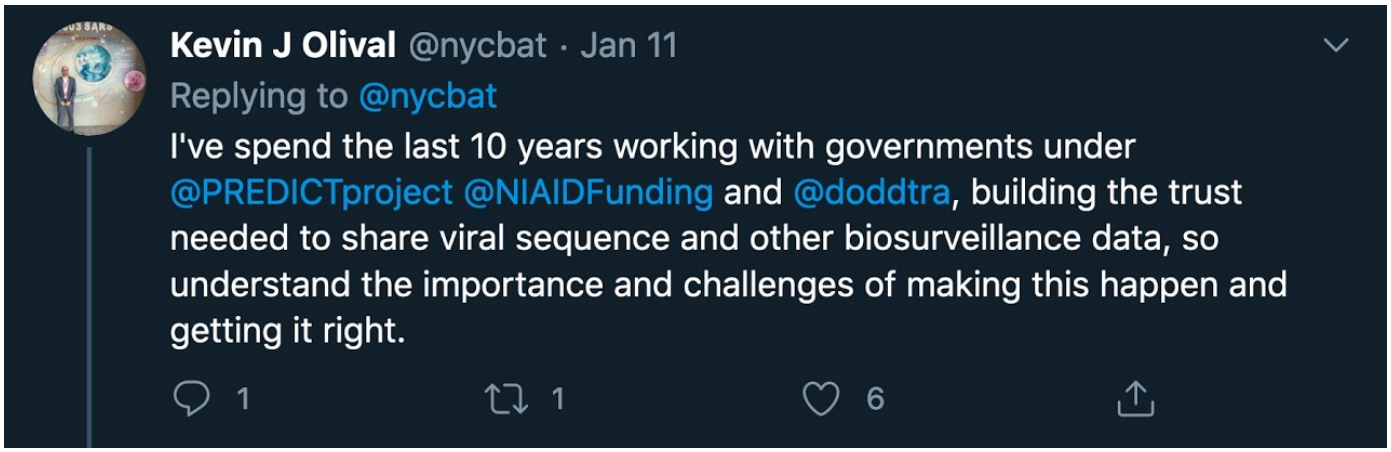
[HT005G][GDrive]

Tweet [HT005H][GDrive] - *"Here's the same figure with a revised legend listing the website and partner institutions involved in generating and releasing the seq, in addition to just the Genbank number."*



[HT005H][GDrive]

Tweet [HT005I][GDrive] - *"I've spend the last 10 years working with governments under @PREDICTproject @NIAIDFunding and @doddtra, building the trust needed to share viral sequence and other biosurveillance data, so understand the importance and challenges of making this happen and getting it right."*



[HT005I][GDrive]

2019 (Dec 11)

https://twitter.com/nycbat/status/1204733324767506432?s=20

2019-12-11-twitter-com-nycbat-1204733324767506432

Dec 11, 2019

The #WABNet workshop has come to a close. Huge thank you to the teams at @EcoHealthNYC

@RSSJor

and @doddtra

for making this a success!!

Dec 11, 2019

So honored to have United Arab Emirates

Flag of United Arab Emirates

represented at #WABNet for the first time! Dr. Rashed Al Zaabi presenting results from our rapid grant writing breakout group.

https://twitter.com/nycbat/status/1204666075742375936?s=20

2019-12-11-twitter-com-nycbat-1204666075742375936

Dec 11, 2019

Dr Billy Karesh @Dr_Wildlife

up at #WABNet. How to turn our research in to effective policy! @EcoHealthNYC

https://twitter.com/nycbat/status/1204665079955939329?s=20

2019-12-11-twitter-com-nycbat-1204665079955939329

https://twitter.com/nycbat/status/1199695453761212416?s=20

2019-11-27-twitter-com-nycbat-1199695453761212416

Kevin J Olival

@nycbat

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Nov 27, 2019

And here's my selfie w @KennedyNation

. Yes, 1990s @MTV

fans, that's VJ Kennedy, now on @FoxBusiness

. So much fun hanging out with her, makes me want to convert to #libertarianism!

Nerd face

Oct 26, 2019

Tweet [HT005O][GDrive] - *"Moon Bear rescue center, Chengdu, China. @AnimalsAsia There was a bear named Kevin, saved from bile farming, this is his friend. Beautiful animals, nice to see them living out happier days. "*

[HT005O][GDrive]

Sep 14, 2019

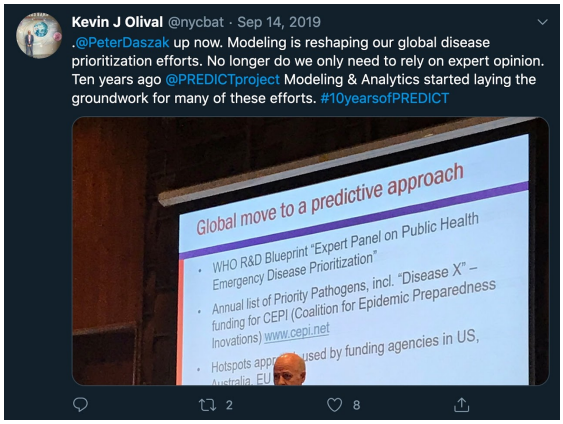
Tweet [HT005P][GDrive] = *"Dr Billy Karesh @Dr_Wildlife highlighting some of the many broader impacts of the @PREDICTproject in changing global policies and sharing best practices across countries and IGOs! Terima kasih to @cmachalaba for pushing a lot of this forward! #10yearsofPREDICT"*

[HT005P][GDrive]

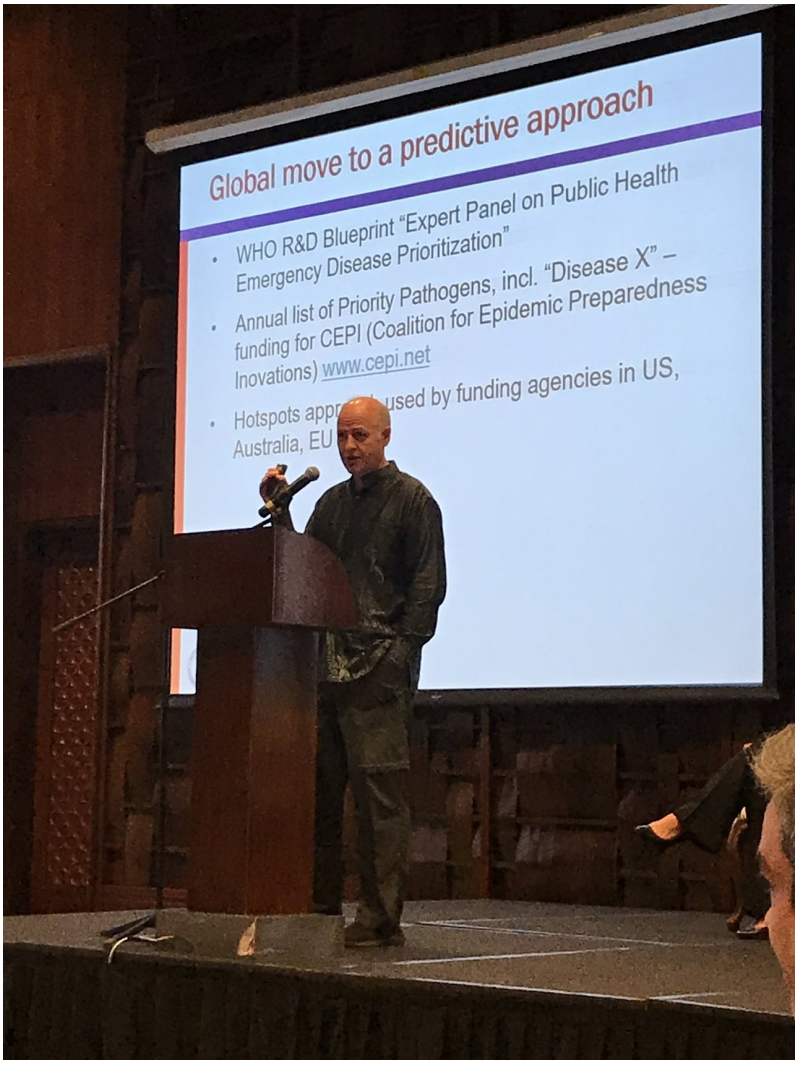
[HT005Q][GDrive]

Sep 14, 2019

Tweet [HT005R][GDrive] = *" .@PeterDaszak up now. Modeling is reshaping our global disease prioritization efforts. No longer do we only need to rely on expert opinion. Ten years ago @PREDICTproject Modeling & Analytics started laying the groundwork for many of these efforts. #10yearsofPREDICT "*



[HT005R][GDrive]



[HT005S][GDrive]

https://twitter.com/nycbat/status/1113943551493246976?s=20

2019-04-04-twitter-com-nycbat-1113943551493246976

Kevin J Olival

@nycbat

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Apr 4, 2019

Full house here at the Cosmos Club in DC for @EcoHealthNYC

's event on biothreats and biosecurity. Here @PeterDaszak

introduces Drs. Ellen Carlin and Bob Kadlec

https://twitter.com/nycbat/status/1073374231495368709?s=20

2018-12-13-twitter-com-nycbat-1073374231495368709

Kevin J Olival

@nycbat

.

Dec 13, 2018

Big shout out to @cmachalaba

who won the @EcoHealthNYC

Harvey Kasdan award this year! Her positive spirit and hard work are infectious (in a good way)!

https://twitter.com/nycbat/status/1073374231495368709/photo/1

2018-12-13-twitter-com-nycbat-1073374231495368709-DuVkKjOUUAAQZyF

https://twitter.com/nycbat/status/1073006935769788416?s=20

2018-12-13-twitter-com-nycbat-1073006935769788416

Kevin J Olival

@nycbat

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Dec 12, 2018

Full house here at @EcoHealthNYC

's Cosmos Club event on Rift Valley Fever Virus in S. Africa. @doddtra

funded #OneHealth #DiseaseEcology research.

https://twitter.com/nycbat/status/1073006935769788416/photo/1

2018-12-13-twitter-com-nycbat-1073006935769788416-DuQWHbkUUAAmdKD

https://twitter.com/nycbat/status/1042780837102669824?s=20

2018-09-20-twitter-com-nycbat-1042780837102669824

Kevin J Olival

@nycbat

.

Sep 20, 2018

And more amazing collaboration in #OneHealth and #bat research happening at the 1st Annual #WABNet workshop. This table: UK, Georgia, Kazakhstan, and Pakistan.

Flag of United Kingdom

Flag of Georgia

Flag of Kazakhstan

Flag of Pakistan

2018 (May 17)

Tweet [HT005N][GDrive] - *"One day hope to grow up to be a famous bat disease ecologist too! #lifegoals Winking face A selfie here at the #Outbreak exhibit with this great pic of @EpsteinJon . @NMNH @EcoHealthNYC "*

[HT005N][GDrive]

2018 (May 16)

Tweet [HT005L][GDrive] - *"#Outbreak exhibit opening ceremony @NMNH tonight with @EpsteinJon . Spectacular event and crowd!"*

[HT005L][GDrive]

[HT005M][GDrive]

2017 (Oct 03)

Tweet - [HT005K][GDrive] - *" Full house at @EcoHealthNYC #biosecurity event here in DC. @PeterDaszak kicking it off. @BiodefenseStudy Ellen Carlin + @TomDaschle up now."*

[HT005K][GDrive]

2020 (Feb 27)

KennedyNation Tweet - [HT005J][GDrive] - *"Are you hungry for a #hotfreedom #MANWICH?! #Kennedy tonight w @KevinPWalling @jason_meister @realdonjamieson @nycbat @normative @SteveHiltonx talking #coronavirus #ByeByeBiden #FISAabuse & #purell 9pET/6PT only on @FoxBusiness "*

[HT005J][GDrive]

Lionel Herbert Olmer (born 1934)

Born 11-11-1934

1940 US Census - New Haven, Connecticut

Full Census sheet : [HS0037][GDrive]

Lionel Olmer - Age at Time of Census: 5 / Gender: Male / Race: White / Est. Birth Year: 1935

Residence: Ward 3, New Haven, New Haven Town, New Haven, CT Map

Other People in Household:

- Father **Abraham Olmer** 50 yrs, Male (born in POLAND)
- Mother **Gussie Olmer** 45 yrs, Female(born in POLAND)
- Brother **Philip Olmer** 16 yrs, Male(born in POLAND)

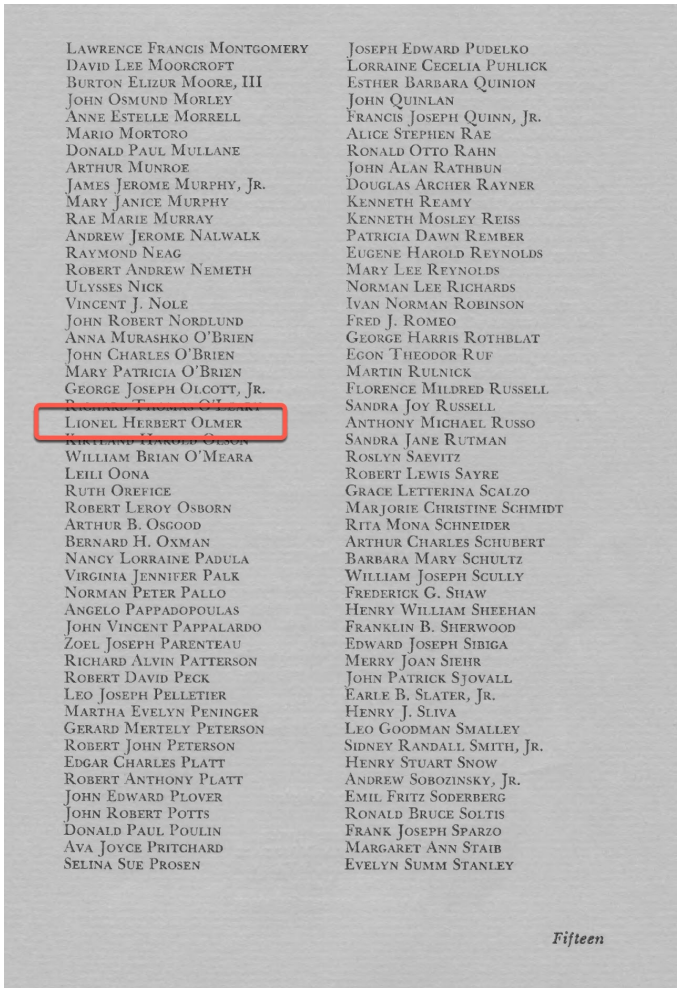
Note:

Bernice Zolot (Sister?)

https://www.legacy.com/obituaries/nhregister/obituary.aspx?n=bernice-zolot&pid=153301736&fhid=4186

1957 - Graduates college (UConn)

June 1957 UConn Commencement Program (PDF) - [HE000C][GDrive]



LAWRENCE FRANCIS MONTGOMERY
DAVID LEE MOORCROFT
BURTON ELIZUR MOORE, III
JOHN OSMUND MORLEY
ANNE ESTELLE MORRELL
MARIO MORTORO
DONALD PAUL MULLANE
ARTHUR MUNROE
JAMES JEROME MURPHY, JR.
MARY JANICE MURPHY
RAE MARIE MURRAY
ANDREW JEROME NALWALK
RAYMOND NEAG
ROBERT ANDREW NEMETH
ULYSSES NICK
VINCENT J. NOLE
JOHN ROBERT NORDLUND
ANNA MURASHKO O'BRIEN
JOHN CHARLES O'BRIEN
MARY PATRICIA O'BRIEN
GEORGE JOSEPH OLCOTT, JR.
[redacted]
LIONEL HERBERT OLMER
[redacted]
WILLIAM BRIAN O'MEARA
LEILI OONA
RUTH OREFICE
ROBERT LEROY OSBORN
ARTHUR B. OSGOOD
BERNARD H. OXMAN
NANCY LORRAINE PADULA
VIRGINIA JENNIFER PALK
NORMAN PETER PALLO
ANGELO PAPPADOPOULAS
JOHN VINCENT PAPPALARDO
ZOEL JOSEPH PARENTEAU
RICHARD ALVIN PATTERSON
ROBERT DAVID PECK
LEO JOSEPH PELLETIER
MARTHA EVELYN PENINGER
GERARD MERTELY PETERSON
ROBERT JOHN PETERSON
EDGAR CHARLES PLATT
ROBERT ANTHONY PLATT
JOHN EDWARD PLOVER
JOHN ROBERT POTTS
DONALD PAUL POULIN
AVA JOYCE PRITCHARD
SELINA SUE PROSEN

JOSEPH EDWARD PUDELKO
LORRAINE CECELIA PUHLICK
ESTHER BARBARA QUINION
JOHN QUINLAN
FRANCIS JOSEPH QUINN, JR.
ALICE STEPHEN RAE
RONALD OTTO RAHN
JOHN ALAN RATHBUN
DOUGLAS ARCHER RAYNER
KENNETH REAMY
KENNETH MOSLEY REISS
PATRICIA DAWN REMBER
EUGENE HAROLD REYNOLDS
MARY LEE REYNOLDS
NORMAN LEE RICHARDS
IVAN NORMAN ROBINSON
FRED J. ROMEO
GEORGE HARRIS ROTHBLAT
EGON THEODOR RUF
MARTIN RULNICK
FLORENCE MILDRED RUSSELL
SANDRA JOY RUSSELL
ANTHONY MICHAEL RUSSO
SANDRA JANE RUTMAN
ROSLYN SAEVITZ
ROBERT LEWIS SAYRE
GRACE LETTERINA SCALZO
MARJORIE CHRISTINE SCHMIDT
RITA MONA SCHNEIDER
ARTHUR CHARLES SCHUBERT
BARBARA MARY SCHULTZ
WILLIAM JOSEPH SCULLY
FREDERICK G. SHAW
HENRY WILLIAM SHEEHAN
FRANKLIN B. SHERWOOD
EDWARD JOSEPH SIBIGA
MERRY JOAN SIEHR
JOHN PATRICK SJOVALL
EARLE B. SLATER, JR.
HENRY J. SLIVA
LEO GOODMAN SMALLEY
SIDNEY RANDALL SMITH, JR.
HENRY STUART SNOW
ANDREW SOBOZINSKY, JR.
EMIL FRITZ SODERBERG
RONALD BRUCE SOLTIS
FRANK JOSEPH SPARZO
MARGARET ANN STAIB
EVELYN SUMM STANLEY

Fifteen

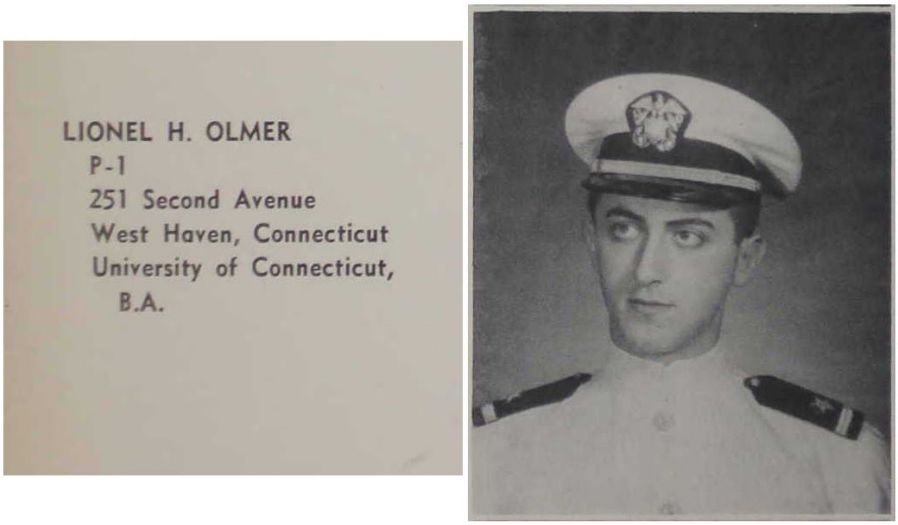
[HE000D][GDrive]

1957 - US Navy

Full page, 1957 US Navy Support Book, Newport Rhode Island Patrol Squadron 19 : [HG000W][GDrive]

251 second ave

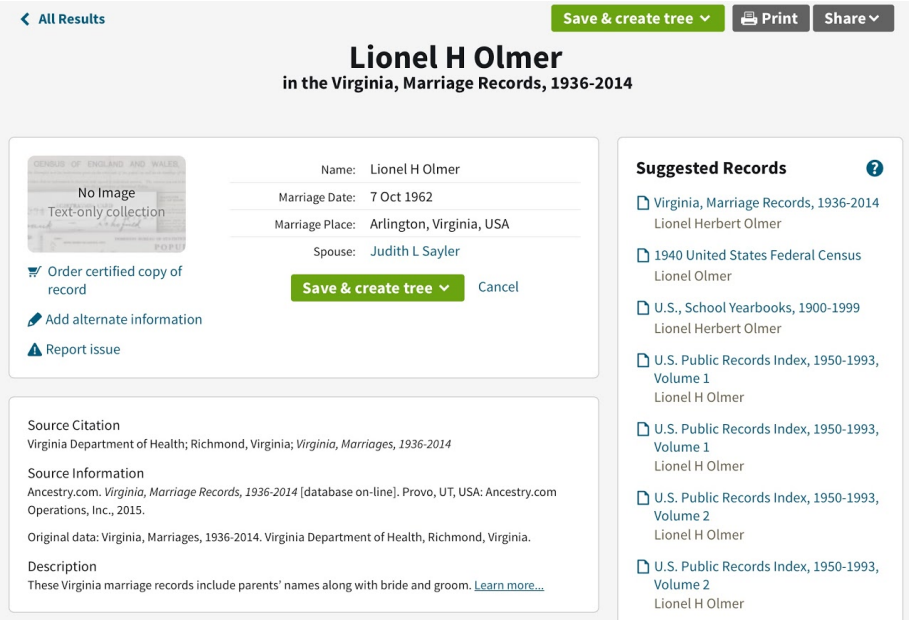
west haven, connecticut



[HG000X][GDrive]

1962 - Wedding (Oct 7) to Judith Sayler

Did Judith Sayler Olmer subsequently also work for the state Dept? (see https://books.google.com/books?id=nG7-mwKF_0C&pg=PA41&lpg=PA41&dq=judith+sayler+olmer&source=bl&ots=hoRwnAfTZM&sig=ACfU3U3_s62iEk66TJ4TDRJIwQm_ydqIog&hl=en&sa=X&ved=2ahUKEwjAiNfy-4noAhWbl3IEHUPTAFcQ6AEwAXoECAsQAQ#v=onepage&q=judith%20sayler%20olmer&f=false)



[HL0016][GDrive]

1967 (Dec) - Vietnam

Left to right: **LCDR Lionel H. Olmer,** CTR2 William F. Erhardt, CT3 S.P. Renken, CTR3 Jackie P. Judice, LT(jg) Robert A. Cavaluchi, LT(jg) Shaun M. Byrnes. (Photo courtesy of Rich Ellis via Bill Erhardt – taken circa Dec. 1967)
image - [HW001E][GDrive]

1976 (Sep 16) - U.S. Investigating Loss of Notebook With Security Data

PDF content : [HN00DH][htGDrive]

THE NEW YORK TIMES, THURSDAY, SEPTEMBER 16, 1976

U.S. Investigating Loss of Notebook With Security Data

By NICHOLAS M. HORROCK
Special to The New York Times

WASHINGTON, Sept. 15—The Department of Justice is conducting an investigation to determine how a notebook, which contained national security information gathered on a foreign trip by one of President Ford's key intelligence advisers, was lost and fell into the hands of an ex-convict and self-styled journalist, Government officials said today.

The notebook, a three-by-five inch Government-issue tablet, was used by Cmdr. Lionel Herbert Olmer of the Navy to keep notes of the conversations of Leg Cherne, a member of the President's Foreign Intelligence Advisory Board, during a fact-finding mission in March 1975.

Mr. Cherne, who is now chairman of the board, said in an interview that he had been assigned to make the trip by the board's former chairman, Admiral George W. Anderson. A high Administration source said, however, that the trip had been ordered by Secretary of State Henry A. Kissinger, who then was also Mr. Ford's chief adviser for national security affairs.

Three Main Problems to Study

Mr. Cherne said that he was to study three main problems on the mission: the growing international energy crisis; the heavy unemployment being suffered by Western nations and the sharp shift of economic power to the oil producing nations.

As a "corollary matter," he said, he had been asked to determine whether disclosures about domestic activity by the Central Intelligence Agency raised by The New York Times in December 1974 had affected the ability of the United States to gather foreign intelligence.

Commander Olmer said in an interview that he had tried to keep careful and complete notes of what was said at each session during the trip, which occurred March 14-29, 1975. He is an intelligence officer and a specialiast in cryptology, or secret language.

Commander Olmer said he was sure the notebook was in his possession the entire time until at least 30 minutes before the Trans World Airlines flight he and Mr. Cherne were aboard on their return trip landed at Kennedy International Airport in New York.

Commander Olmer said he realized the book was missing when he arrived at his home in suburban Maryland the same day. After a search of his house, he immediately reported the loss to Wheaton Byers, executive secretary of the foreign advisory board.

Mr. Byers and Commander Olmer said that they tried unsuccessfully to locate the book through the airlines and other means. Mr. Byers said the loss was then reported to Admiral Anderson and to the Central Intelligence Agency, which determined that the contents were "classified" and that their publication "would be injurious to the national security of the United States."

Call from a Journalist

Mr. Cherne and Commander Olmer said in separate interviews that the contents might also be "embarrassing," as Mr. Cherne put it, since they included candid assessments by American officials of their superiors and foreign officials.

On July 24, 1975, Mr. Cherne said he received a call from Michael Casey, who identified himself as a free-lance journalist and who said he had the notebook.

Mr. Cherne said he had received "guidance" from Federal authorities he would not name (reportedly the F.B.I.) to "string him along, maintain contact, not to set too much value on the bock, to see if it could be recovered."

Mr. Casey, 32 years old, said in an interview that he had served time at Soledad penitentiary in California for passing forged checks and had been in prison for juvenile violations.

He said that he received the notebook from a man he would not identify aboard an Air Vietnam flight between Saigon and Hong Kong on April 23, 1975.

Mr. Casey has a record of helping Vietnamese refugees that has been confirmed by State Department and news officials. Because of this, he was retained by the International Rescue Committee in its Los Angeles office on August 18, 1975, according to Robert deVecchi, an official of the committee.

Mr. Cherne was chairman of the committee's board of directors at the time, but Mr. Casey said he did not realize that.

Mr. Casey pledged to return the notebook and on August 26, 1975, Mr. Cherne received the book by registered mail. It was at this time that the matter came under F.B.I. scrutiny.

Meanwhile, Mr. Cherne said, he had checked Mr. Casey's background with an official of the rescue committee in Hong Kong and was advised to "sever connections" with Mr. Casey immediately. He recommended that Mr. Casey be dismissed, and he was on September 18, 1975.

Mr. Casey said he met voluntarily with an assistant United States Attorney in New York in April and turned over some copies of portions of the book. He said he still possessed a copy, which he said was hidden. Mr. Casey offered to turn the copy over to The New York Times on the condition that he be retained to investigate its contents. No copy was ever made available to The Times.

Mr. Casey also said he had been interviewed by F.B.I. agents who are seeking the return of any and all copies of the book and the names of any journalists who may have seen the contents.

Reporter Given Documents

In September 1975 after returning the original copy of the notebook to Mr. Cherne, Mr. Casey showed Robert Dietrich, a reporter for The San Diego Evening Tribune, what he described as typewritten copies of the book's contents along with other purportedly secret documents allegedly obtained from the C.I.A.'s Air America office in Saigon.

Mr. Dietrich said he had a copy of the typewritten version but declined to discuss the contents in detail.

Mr. Casey said he and Mr. Dietrich set out to investigate the contents and that a series of threatening incidents ensued, including the burglary of his home in Los Angeles.

Casey Tells of Robbery

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On Sept. 2, while staying at Washington's Mayflower Hotel, Mr. Casey reported to the police that he had been robbed at gunpoint of "about $850" and a tape-recording of a telephone conversation between himself and Mr. Cherne made in August 1976.

Both the Washington police and the major crimes unit of the United States Attorney's office here are investigating Mr. Casey's allegations.

[HN00DI][GDrive]

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Mr. Cherne said that he was to study three main problems on the mission the growing international energy crisis; the heavy unemployment being suffered by Western nations and the sharp shift of economic power to the oil producing nations.

As a “corollary matter,” he said, he had been asked to determine whether disclosures about domestic activity by the Central Intelligence Agency raised by The New York Times in December 1974 had affected the ability of the United States to gather foreign intelligence.

Commander Omer said in an interview that he had tried to keep careful and complete notes of what was said at each session during the trip, which occurred March 14 - 29, 1975. He is an intelligence officer and a specialist in cryptology, or secret language.

Commander Olmer said he was sure the notebook was in his possession the entire time until at least 30 minutes before the Trans World Airlines flight he and Mr. Cherne were aboard on their return trip landed at Kennedy International Airport in New York.

Commander Olmer said he realized the book was missing when he arrived at his home in suburban Maryland the same day. After a search of his house, he immediately reported the loss to Wheaton Byers, executive secretary of the foreign advisory board.

Mr. Byers and Commander Olmer said that they tried unsuccessfully to locate the book through the airlines and other means. Mr. Byers said the loss was then reported to Admiral Anderson and to the. Central Intelligence Agency, which determined that the contents were “classified” and that their publication “would be injuries to the national security of the United States.

Call from a Journalist

Mr. Cherne and Commander Olmer said in separate interviews that the contents might also be “embarrassing,” as Mr. Cherne put it, since they included candid assessments by American officials of their superiors and foreign officials.

On July 24, 1975, Mr. Cherne said he received a call from Michael Casey, who identified himself as a free - lance journalist and who said he had the notebook.

Mr. Cherne said he had received “guidance” from Federal authorities he would not name (reportedly the F.B.I.) to “string him along, maintain contact, not to set too much value on the book, to see if could be recovered.

Mr. ‘Casey, 32 years old, said in an interview that he had served time at Soledad penitentiary in California for passing forged checks and had been in prison for juvenile violations.

He said that he received the notebook from a man he would not identify aboard an Air - Vietnam flight between Saigon and Hong Kong on April 23, 1975.

Mr. Casey has a record of helping Vietnamese refugees that has been confirmed by State Department and news officials. Because of this, he was retained by the International Rescue Committee in its Los Angeles office on August 18, 1975, according to Robert devecchi, an official of the committee.

Mr. Cherne was chairman of the'committee's board of directors at the time, but Mr. Casey said he did not realize that.

Mr. Casey pledged to return the notebook and on August 26, 1975, Mr. Cherne received the book by registered mail was at this time that the matter came under F.B.I. scrutiny.

Meanwhile, Mr. Cherne said, he had checked Mr. Casey's background with an official of the rescue committee in Hong Kong and was advised to “sever connections” with Mr. Casey immediately. He recommended that Mr. Casey be dismissed, and he was on September 18, 1975.

Mr. Casey said he met voluntarily with an assistant United States Attorney in New York in April and turned over some copies of portions of the book. He said he still possessed a copy, which he said was hidden. Mr. Casey offered to turn the copy over to The New York Times on the condition that he be retained to investigate its contents. No copy was ever made available to The Times.

Mr. Casey also said he had been interviewed by F.B.I. agents who are seeking the return of any and all copies of the book and the names of any journalists who may have seen the contents.

Reporter Given Documents

In September 1975 after returning the original copy of the notebook to Mr. Cherne, Mr. Casey showed Robert Dietrich, a reporter for The San Diego Evening Tribune, what he described as typewritten copies of the book's contents along with other purportedly secret documents allegedly obtained from the C.I.A.'s Air America office in Saigon.

Mr. Dietrich said he had a copy of the typewritten version, but declined to discuss the contents in detail.

Mr. Casey said he and Mr. Dietrich set out to investigate the contents and that a series of threatening incidents ensued, including the burglary of his home in Los Angeles.

Casey Tells of Robbery

Mr. Casey said he met voluntarily with an assistant United States Attorney in New York in April and turned over some copies of portions of the book. He also said he had been interviewed by F.B.I. agents who are seeking the return of any and all copies of the book and the names of any journalists who may have seen the contents.

On Sept 2, while staying at Washington's Mayflower Hotel, Mr. Casey reported to the police that he had been robbed at gunpoint of “about $850” and a taperecording of a telephone conversation between himself and Mr. Cherne made in August 1976.

Both the Washington police and the major crimes unit of the United States Attcrney's office here are investigating Mr. Casey's allegations.

1976 (Sep 16)

Full page : [HN00DJ][GDrive]

The Gazette (Cedar Rapids, Iowa) • 16 Sep 1976, Thu • Page 27

Secret U.S. Notebook Returned From 'Sympathizers of Hearst'

WASHINGTON (AP) — The justice department is investigating the strange case of a missing notebook containing classified information that was returned to a top-ranking Ford administration intelligence adviser by an ex-convict who said he got it from sympathizers of Patty Hearst, the Washington Post said Thursday.

The adviser, Leo Cherne, reported the notebook missing after he returned from European meetings with diplomats and intelligence officers in March, 1975, the Post said.

The green government notebook was used by Cherne's aide, Cmdr. Lionel Olmer, a naval intelligence officer, to record briefings of Cherne's official meetings.

Involved in Hoax

Cherne is chairman of President Ford's foreign intelligence advisory board and a member of the new three-member intelligence oversight board.

Olmer said he has no idea how the notebook was lost or stolen, the Post said.

According to the newspaper account, the pad was recovered after Cherne received a call on July 24, 1975, from Michael Casey, a former inmate at Soledad prison near San Francisco, who said he got the notebook from sympathizers of Miss Hearst, the newspaper heiress convicted earlier this year of bank robbery.

Casey received notoriety in another connection with the Hearst case last year when the Los Angeles Times paid him $15,000 for a promised meeting with the heiress when she was still at large. The newspaper has since described Casey's offer as a hoax.

Petrodollar Information

The Post reported that Cherne notified intelligence officials as soon as he got Casey's call and was advised to play down the importance of the notebook.

The newspaper said the document contained sensitive information from briefings with the CIA, including reactions to news stories about the CIA and the flow of petrodollars from the West to Arab nations.

The Post reported that somewhere along the line the notebook was given higher priority by the CIA's office of security and the justice department started investigating how it was lost or stolen.

The newspaper said Cherne asked for the investigation.

Olmer said he still can't figure out how the document was misplaced.

[HN00DK][GDrive]

1976 (Sep 17)

Full newspaper page - [HN011A][GDrive]

THE ARGUS
Fremont - Newark, Calif.
Friday, September 17, 1976

UPI Telephoto

MICHAEL JAMES CASEY, LEFT, CLAIMS TO HAVE RECOVERED BOOK
Leo Cherne, right, recorded secret data on trip to Europe in 1975

Top secret book 'found,' linked to Patty Hearst

WASHINGTON (UPI) — The Justice Department is investigating the temporary loss of a top secret notebook in which Leo Cherne, chairman of the President's Foreign Intelligence Advisory Board, had data recorded on a trip to Europe in 1975, the White House said yesterday.

Press Secretary Ron Nessen told reporters President Ford learned several months ago the "green book" containing intelligence briefing material had been missing for 14 months, then was reported "found" by a convict who said he got it from sympathizers of Patty Hearst.

"As I understand the whole matter is being reviewed by the Justice Department," Nessen said, adding the President was being kept "apprised" of the matter.

The notebook, described as carrying classified information "injurious to the national security of the United States," is a government note pad in which a staff aide to Cherne recorded briefings with diplomatic and intelligence officers during a trip to Europe in March of 1975.

Cherne is chairman of the President's board and a member of the new, three-member Intelligence Oversight Board.

The aide is Cmdr. Lionel H. Olmer, an intelligence officer with a 19-year Navy career, said to be a meticulous man used to handling top-secret material. According to a report in the Washington Post, Olmer could not find the notebook upon arriving at his home in Rockville, Md., and notified his superiors.

After a "14-month ordeal," Cherne received a phone call from Michael James Casey of Los Angeles, a convict who said "I have your notebook" and told him he recovered it from sympathizers of Miss Hearst, then at large.

Casey, who served two years at Soledad prison near San Francisco, said the finders of the notebook hoped it "might be exchanged for considerations," a deal which Cherne said he rejected.

Casey, 32, who was acquited Wednesday in Omaha, Neb., on a "felonious entry" charge, worked for a time for the International Rescue Committee, of which Cherne was chairman.

[HN011B][GDrive]

1976 (Sep 22)

Full newspaper page : [HN0126][GDrive]

Green Book Affair'

Ford Adviser Central to Security Drama

By LAURENCE STERN
The Washington Post

WASHINGTON — Leo Cherne, one of President Ford's chief intelligence advisers, is a central figure in a Justice Department national security investigation being described by federal officials as "the green book affair."

The green book is a government note pad in which a staff aide to Cherne recorded briefings with diplomatic and intelligence officers during a trip to Europe in March of last year.

Cherne is chairman of the President's Foreign Intelligence Advisory Board and a member of the newly formed three-member Intelligence Oversight Board.

The notebook, officially described as having contained "classified information ...injurious to the ational security of the United States," disappeared immediately after Cherne and his aide, Cmdr. Lionel H. Olmer, returned from the European trip.

Olmer, an intelligence officer during his entire 19-year naval career, said he has no idea how the notebook got out of his possession. He is described by associates as an extremely meticulous professional experienced in the handling of classified material.

Within several hours after his arrival at his Rockville, Md., home he called Wheaton Byers, executive secretary of the Foreign Intelligence Advisory Board and told him of the notebook's disappearance, Olmer said. An investigation was conducted, and the notebook was presumed lost when the cabin of the aircraft used for the European trip was cleaned.

The mystery was solved, to the greater consternation of Cherne and Olmer, on July 24, 1975, when the intelligence adviser received a phone call from Michael James Casey of Los Angeles.

"He said, 'I have your notebook'," Cherne recounted Wednesday in describing what he called a "14-month ordeal."

It was during this and subsequent phone conversations that Cherne learned Casey had served two years at Soledad prison. Casey further explained that he had recovered the notebook from sympathizers with Patty Hearst, who was then at large.

Casey contended that the discoverers of the notebook had hoped that it "might be exchanged for considerations in their behalf, and I told him that I wouldn't do it even if I could," Cherne said.

Casey, in a telephone interview from Omaha, where he was acquitted Wednesday of a felonious-entry charge, insisted: "I was not trying to burn Cherne. I told him how I got the book and the interest of the people who had found it."

Casey is a 32-year-old Californian who prides himself on his work in resettlement of Vietnamese refugees, who sought to appear as a witness in behalf of Patty Hearst and who wound up, in an ironic turn of the story, working briefly for the International Rescue Committee, of which Cherne was chairman of the board.

Early last year Casey persuaded the Los Angeles Times to send him along with two staff reporters to Hong Kong at a reported cost of $15,000 for a promised rendezvous with Patty Hearst. The newspaper subsequently described the episode as a hoax. Casey acknowledged that the Hearst trip "bummed out."

Casey's career also encompassed a nine-month period as director of special projects for Boys Town, the community started by Father Flanagan, from which Casey was fired in a dispute with the administration over the alleged theft of 31 files for an MGM television production. ("One of my jobs," he said, "was to get them publicity.")

When Cherne found out who had turned up with his notebook, he notified the intelligence staff and was advised "to play it down and not make it appear to be important." The initial judgment was that the loss was not of great security significance.

Cherne maintained that he first learned that Casey was employed in the Los Angeles office of the International Rescue Committee as a consultant during an Aug. 22, 1975, phone conversation with Casey.

"I said, 'I don't think terribly much about your association with IRC and when I decide finally, I'll ask for your resignation'."

The green notebook was returned on Aug. 26, 1975, and Cherne turned it over to the intelligence staff. Three weeks later he called Casey and asked for his resignation. "He submitted cheerfully, always cheerfully," Cherne recalled.

On Sept. 22 Casey sent a mailgram to the presiding judge in the Patty Hearst case, Oliver J. Carter, in the name of the International Rescue Committee.

"We prayerfully request that Patricia Hearst be admitted to bail," the telegram said. "Please consider that Patty Hearst was directly and indirectly responsible for the safe evacuation of 390 men, women and children without regard to her own safety during the last week of April 1975 at Saigon, South Vietnam."

The telegram was immediately repudiated by the IRC on Cherne's instructions.

In February of this year Cherne was appointed to the Intelligence Oversight Board by President Ford and also was named chairman of the Foreign Intelligence Advisory Board, a position to which he commutes from New York on an average of twice a week. His offices here are in the Executive Office Building.

In March a reporter from the San Diego Evening Tribune, Robert Dietrich, called Cherne, explaining that Casey had showed Dietrich contents of the notebook.

The notebook, according to informed sources, contained notes on briefings with embassy and CIA officials about a varied number of issues, including reactions to news stories about the CIA, the impact of the massive flow of petrodollars from the West to the Arab states as well as "unprecedented unemployment and catastrophic inflation" in European countries.

There was an early reference in the notebook, both Cherne and Casey acknowledged, to New York Times reporter Terry Robards. Casey found Robards in New York, he said, and it was the Times reporter who speculated that the initials "L.C." in the book must have referred to Cherne.

This, Casey said, is how he concluded that the notebook belonged to Cherne.

[HN0127][GDrive]

1980

pg C1 - https://www.newspapers.com/image/160858230

pg C2 - https://www.newspapers.com/image/160858303/?terms=%22lionel%2Bolmer%22

1981 (feb 23)

https://www.newspapers.com/image/284356100/?terms=%22lionel%2Bolmer%22

1981-02-23-the-jackson-tennessee-sun-pg-1-clip-morris

1981-02-23-the-jackson-tennessee-sun-pg-1-clip-morris

The Jackson Sun (Jackson, Tennessee) • 23 Feb 1981, Mon • Page 1

Morris wins export job in Commerce Department

By LISA FRYE
Sun Reporter

Jacksonian William H. Morris Jr. has been nominated by President Ronald Reagan to be assistant secretary for trade development in the Commerce Department.

The post, which pays $52,750 a year, falls just below the office of Undersecretary Lionel Olmer in the Commerce Department hierarchy and deals primarily with export trade development, Morris said Sunday night from his residence in Arlington, Va., where he has been living since joining the Reagan national campaign last August.

If his appointment is confirmed by the Senate, Morris will be the second Tennessean named to the Commerce Department. He will join Bill Brock, former U.S. Senator from Tennessee and more recently chairman of the Republican National Committee, who is U.S. trade representative.

Morris said he will be working closely with Brock, a longtime ally, in the Commerce Department job. Morris was Brock's administrative assistant when Brock was a senator.

As assistant secretary of commerce, Morris' responsibilities would include the U.S. Commercial Service, comprising 47 field offices around the country set up to encourage exporting, and the Foreign Commercial Service, which includes the commercial attaches at U.S. embassies abroad.

He also would be responsible for the Bureau of East-West Trade, set up to encourage investment in and exporting to mainland China and "behind the Iron Curtain," he said.

Morris said both President Reagan and Commerce Department Secretary Malcolm Baldrige have said exporting will be a "top priority" in this administration. "We have to lower our balance-of-trade deficit."

The position is "an awesome responsibility," he said. "But I know it's something I'm going to enjoy doing."

Senate confirmation hearings haven't been scheduled, but they probably will be within the next three weeks, he said.

Morris formerly worked in export development in Tennessee as deputy commissioner of the Department of Economic and Community Development in Gov. Lamar Alexander's administration.

Morris resigned from that position last August to join the Reagan campaign team. The resignation came three months after a state audit of Morris' expenses that resulted in his repaying the state $378 in travel and telephone expenses.

Questions also were raised about a short-lived export lobbying firm Morris started in Washington, D.C., in late 1979. The audit said Morris could have used his state job to benefit the private firm, but stopped short of calling the enterprise a conflict of interest, noting that the firm had been disbanded.

When the Economic and Community Development budget officer who raised questions about Morris' expenses and business venture was fired last July, the budget officer charged the firing was political. E&CD Commissioner James Cotham, who strongly defended Morris through the audit, denied the firing was related to that incident.

After working in the Reagan campaign, Morris joined the president-elect's transition team in the Commerce Department. Since soon after Reagan's inauguration, he has worked at the department as a consultant.

1 of 18

1981

https://www.newspapers.com/image/63519407/

1981 (April 03)

https://www.newspapers.com/image/377623054/?terms=%22lionel%2Bolmer%22

1981 (May 11)

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1981 (June 19)

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june 27

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july 26

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1981 (Oct 2)

Full newspaper page : [HN0128][GDrive]

New Mexico

Immigration Plans May Stir Debate at Border Parley

By JOE SMITH
Of the Journal's
Las Cruces Bureau

EL PASO — Gov. Bruce King is expected to discuss problems with President Reagan's proposed immigration policy when he meets with nine other executives in the Second International Border Governors Conference here Monday and Tuesday.

The New Mexico Border Commission, which met in Las Cruces last month, took a strong stand against Reagan's plan to give resident status to alien workers who can prove they were in the United States before 1980.

Under the plan, those aliens would be permitted to legally stay in the U.S. without voting rights, and would be given an opportunity to apply for permanent U.S. citizenship.

However, the alien's family would not be included under the president's proposal.

The state commission also voted against a guest-worker program, similar to the old Bracero program, that the president has proposed for a two-year trial.

But the commission voted to back Reagan's plan to beef up patrols along the border between the U.S. and Mexico.

A spokesman from King's office said those topics first would be discussed during private meetings with King's fellow U.S. and Mexican governors during the two-day meeting.

The second international meeting will begin at 2 p.m. Monday in the El Paso Civic Center following a closed buncheon of the 10 governors.

At 3 p.m., reports will be given by chairmen of committees on agriculture, cultural exchange, ecology and environment, energy and commerce, twin plants and industrial development and tourism.

Reports will be given by both the U.S. chairmen and their Mexican counterparts, and the report on agriculture will be delivered by Dr. William Stephens, New Mexico's secretary of agriculture.

Private sessions will open Tuesday's agenda, followed by panel discussions on transportation, investments and border crossing and ports of entry.

A second general session will close the conference, starting at 2 p.m. Tuesday.

All 10 governors have confirmed they will attend, said a spokesman from the office of Texas Gov. Bill Clements, who is host for the meeting.

At the First International Border Governors Conference last year in Juarez, Mexico, Gov. Edmund Brown Jr. of California was the only chief executive who failed to attend. He sent Tom Hayden, his chief assistant as his representative.

In addition to King, Clements and Brown, Gov. Bruce Babbitt of Arizona also will be at the El Paso meeting.

From Mexico, the governors who will be attending are Oscar Ornelas of Chihuahua, Emilio Martinez Manautau of Tamaulitas, Alfonso Martinez Dominguez of Nuevo Leon, Francisco Jose Madero of Coahuila, Samuel Ocana A. Garcia of Sonora and Roberto de la Madrid of Baja, California.

Clements said several federal officials, including Frank Crigler, director of the Office of Mexican Affairs of the Department of State, and Lionel Olmer, undersecretary of the International Trade Administration, will be at the conference.

[HN0129][GDrive]

1981 (Oct 18)

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1981-10-18-the-odessa-american-pg-2d-clip-siberian-gas-line

Congressmen discuss Siberian gas line

By WILLIAM HINES
Chicago Sun-Times

WASHINGTON — A pipeline through Europe and Asia that could increase European dependence on the Soviet Union, but also could enrich U.S. firms came under brief congressional scrutiny last week.

The undertaking is a 4-to-7-year construction project to take natural gas from the Siberian Arctic to energy-hungry countries of western Europe. West Germany is expected to assume a major role in financing the $10 billion project.

At a hearing, Sen. Charles H. Percy (R-Ill.), chairman, spoke with concern about the "very real possibility that quite unwelcome political leverage could flow through the pipeline."

But looking at a brighter side, Percy noted that if the Yamal pipeline project goes ahead as planned, "the Caterpillar Tractor Co. and other American companies can and should share in whatever business is generated."

Caterpillar is the world's leading producer of very large, heavy-duty pipe layers. It recently got a license to export 100 such machines to the Soviet Union in a surprise move that the Japanese are said to be angry about. The Peoria (Ill.)-based company probably would sell hundreds more if U.S. businesses are permitted to take part in the project.

Percy also commented that if the United States pushes coal as an alternative to natural gas in Western Europe, mine operators will stand to profit — provided ports and railroads in this country can be upgraded to handle the increased traffic.

Percy's remarks came at the opening of a hearing that featured testimony by three sub-Cabinet officials from the departments of State, Energy and Commerce and brought Sen. John Glenn (D-Ohio), a possible 1984 presidential candidate, into conflict with the witnesses over the licensing of Caterpillar pipe-layers last month.

As Glenn recounted it, President Reagan persuaded Japanese Premier Zenko Suzuki at September's Ottawa summit meeting not to permit Japanese export of pipe-layers to the Soviet Union. Then, 10 days later and without notifying the Japanese, the Reagan administration issued Caterpillar's export license.

Assistant Secretary of State Robert L. Hormats and Under Secretary of Commerce Lionel H. Olmer both denied knowledge of what Reagan might have said to Suzuki, but Glenn insisted that the account must be correct because it was reported in the media and never refuted.

The administration officials said they were satisfied that the 100 pipe layers would not be used on the Yamal project, drawing from Glenn the retort that their existence in the Soviet Union would free other machinery for use on the northern pipeline.

The switch in signals, Glenn said, was typical of recent Reagan administration moves.

He cited as another example the assurances given to West Germany on the defense of the Persian Gulf oil region and the almost-simultaneous revelation by Defense Secretary Caspar W. Weinberger that a naval task force in the area would be reduced in strength.

Glenn also mentioned the on-again, off-again grain embargo in which, as he phrased it, "we put it on because they (the U.S.S.R.) went into Afghanistan and took it off because they didn't go into Poland."

The rest of the world, and particularly the Western allies, are getting "a lot of mixed signals," Glenn contended.

Hormats, Olmer and Deputy Energy Secretary W. Kenneth Davis spoke of the administration's intention to explore with the west Europeans "alternative sources of energy" (meaning, principally, coal) but did not rule out the likelihood that if the chips go down and the Yamal project is started, American firms will be allowed to participate.

Olmer said that only the U.S. has "actual, hands-on experience" in building pipelines under the vicious climatic conditions that prevail in the Far North. Denying this know-how to the Soviets could delay the Yamal project, but would not kill it, he added.

1981-10-18-the-odessa-american-pg-2d-clip-siberian-gas-line

1981 (Nov 20)

https://www.newspapers.com/image/262366331/?terms=%22lionel%2Bolmer%22

1981 (Nov 28)

Full newspaper page : [HN0118][GDrive]

Page 2—Palm Beach Daily News, Saturday, November 28, 1981

Archduke To Marry Princess Marie Astrid

By BARONESS GARNETT STACKELBERG
Special Correspondent

WASHINGTON — "**Archduke Charles Christian** of Hapsburg will marry **Princess Marie Astrid** of Luxembourg." That was the word from **Betty Lu Ourisman** at a fascinating dinner at the Portuguese Embassy last week. She and **Mandell Ourisman** had just returned from spending the weekend in London.

Ambassador Vasco Futscher-Pereira and his chic Brazilian wife **Maria Lucia**, a talented interior decorator, came to Washington last spring from his post at the U.N. The dinner was in honor of their deputy foreign minister, **Leonard Mathias** and his chief of cabinet **Fernando Neves**. It was a gourmet affair of mousse of sole, duck with baked pears, and a Grand Marnier Souffle. The Ambassador, who is a gourmet, supervised it himself.

Marion Javits, who knew the

Rosemarie Bogley
... beauteous guest

Futscher-Pereiras in New York City, flew down. She's still trying to rent her Watergate apartment. **Lawrence Eagleburger**, assistant secretary of state for Europe and his wife, the **Archibald Roosevelts, Mme Paul Henri**, wife of the French Ambassador to Lebanon, also came. She is the sister of **Peggy Donovan**, wife of **General Donovan**, our former military attache in Spain.

The formerly dreary embassy, which is next door to that of France, has achieved new distinction with the imagination of its chatelaine. Marvelous museum-worthy Buddhas — one life size — which they collected when en poste in Karachi, and striking modern paintings add to the more mundane furnishings. Several of the paintings were done by the Ambassador who, according to his counselor **Ribeiro de Menezes**, took up art at the late age of 57.

Since flowers are profuse in Palm Beach, hostesses might find it appealing to replace massive bouquets with Mme. Pereira's original simpler arrangements. Side tables here and there held 8 or 9 single smokey

Garnett Stackelberg

crystal vases, each holding a long branch of orchids, white lilacs, tiger lilies or anemones. The effect is especially attractive with a vigil light here and there.

To go back to **Princess Marie Astrid**, the future bride of the Archduke, she made many friends in Washington while studying at Johns Hopkins School of Advanced Studies. **Abigail McCarthy** was among them, and she occasionally dated Mississippi congressman **David Bowen**. The Princess is 27, tall and lovely with gold glinting brown hair and blue eyes. According to her friend **Ymelda Dixon**: "She was the last eligible Princess whose name was linked with that of Prince Charles, but because she was a Roman Catholic, nothing came of it." She is the daughter of the reigning **Grand Duke Jean of Luxembourg**.

Archduke Charles Christian, the groom to be, and his sister **Archduchess Alexandra of Hapsburg**, were in Washington last spring. They were houseguests of **Lillian Giberga**. While here they were widely entertained — one of the best parties being given by the aforementioned Mandell Ourismans.

Limousines of diplomats, officials and society snaked up the long driveway to the German Chancery last week. There in the vast ballroom German ambassador **Peter Hermes** and wife **Maria** received 200, all of whom were to sample imported German specialties arranged by the German Agricultural Marketing Board.

Chief of Protocol **Lee Annenberg** commented as she departed: "One of the most delectable spreads of food I have ever seen in my entire life, and I have seen some." An unbelievable feast of filet of beef with truffle sauce, fresh wild pheasant with wine sauce, ragout of veal and white and brown wieners with sweet mustard were on one table. And on another were platters of smoked salmon and eel, five feet across as well as every imaginable cold cut and excellent cheeses. Then there were raspberry desserts, apple strudel, marzipan and cookies, and excellent wines and beers as well as Asbach and pear brandy and Kirsch to wash everything down.

Earlier when Lee Annenberg was asked about her reported retirement she told the **Nicolas Salgos** and **Marshall Coyne**: "It is for the White House to make

Helen Boehm
... wedding bells?

any announcement. I love my job, but my husband comes first. We thought he would live in Washington, but business requires him to stay in Philadelphia except for weekends. He arrives tomorrow and we will talk it over."

Ken Crosby and stunning wife **Peggy**, sister of **Countess Romanones**, hosted a luncheon for **Thibaut de Saint Phalle** to launch his book "Trade, Inflation, and the Dollar." He ought to know about all that as he recently retired as one of five directors of the Export-Import Bank. He recently joined Crosby's new firm, Crosby International Group.

At the luncheon were **Paul Volcker**, chairman of the Federal Reserve Board, **Lionel Olmer**, under secretary of commerce for International Affairs, **Claire Boothe Luce, Wyatt Dickerson** and **Rosemarie Bogley**.

Heard that night that **Helen Boehm** soon will be on her way to the altar. And that **Ginnie Wilcox**, who is recovering splendidly from a double hip operation, will be coming with husband **Francis** and **Mrs. W.S. Gould** to take an apartment in Palm Beach in February.

[HN0119][GDrive]

1982 (June 26)

https://www.newspapers.com/image/533330488/?terms=lionel%2Bolmer%2Batomic

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1982 (Sep 03) - NYTimes - "Trade talk specialist"

Source : [HN0117][GDrive]

1983 (Feb 3)

https://www.newspapers.com/image/14676507/?terms=lionel%2Bolmer%2Batomic

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1984 (Feb) - Speaking in Balitmore

Recording - Watch downloaded recording at [HV000X][GDrive] (image = [HV000Y][GDrive])

Live - below :

1985 (April 2)

https://www.newspapers.com/image/610057195/?terms=lionel%2Bolmer%2Buranium

2

brother Moris Olmer ? Yes that is him !!!!! LOL ... hint is here ... https://www.legacy.com/obituaries/nhregister/obituary.aspx?n=bernice-zolot&pid=153301736&fhid=4186

https://www.courant.com/politics/capitol-watch/hc-xpm-2011-09-26-hc-morris-olmer-mortgage-fraud-ring-0926-story.html

Former State Rep Among the Notables Caught in Mortgage Fraud Ring

EDMUND H. MAHONY

Sep 26 2011

An 83-year old former state representative, who lost his law license years ago for misconduct, was sentenced to 5 years in prison Monday for handling closings for a group of conspirators who concocted phony real estate deals in order to swindle more than $4.4 million from banks.

Morris Olmer, a Democrat who represented New Haven in 1967 and '69 and a former member of New Haven's Board of Alderman, was convicted by a jury in April of conspiring to defraud the government, eight counts of fraud involving money transfers and four counts of making false statement to investigators.

Federal prosecutors said Olmer was one of a 14 conspirators who obtained $10 million in residential real estate loans through "sham sales contracts, false loan applications and fraudulent property appraisals." The conspirators are accused of dividing nearly half the money among themselves.

Olmer and three other members of the ring were convicted by a jury earlier this year. Seven others pleaded guilty to a variety of fraud-related charges, including the man prosecutors call **the leader of the ring, Syed Babar, 2**8, of New London. Babar agreed to cooperate with authorities and became the government's star witness.

The jury deadlocked on a verdict against a 14th alleged member, Rabbi David Avigdor, 57, who presides over New Haven's Congregation Bikur Cholim Sheveth. Avigdor, a lawyer, worked for worked for Olmer, who maintained a law office in New Haven after his license to practice was revoked following a fraud complaint about four years ago. Prosecutors have said they will retry Avigdor

Another conspirator, 68-year old Thomas Gallagher of West Haven - former grand marshal of the New Haven St. Patrick's Day parade and a member of the West Haven police commission - plead guilty to a charge of making a false statement midway through the trial. In return, prosecutors dropped more than a dozen other charges against him. He was given a five year sentence.

Gallagher was accused of manufacturing appraisals that inflated the value of the dilapidated homes the conspirators financed and transferred among themselves in distressed areas of New Haven, New London and other locations, mostly in eastern Connecticut.

Federal prosecutors said Babar arranged for straw buyers to finance and buy - at inflated prices - homes they had no intention of living in or paying for. When the deals closed, the conspirators split the loan amounts in excess of sale prices and walked away from about 30 properties, creating more blight in already struggling neighborhoods.

The conspirators created a paper contraction company called Sheda Telle Construction to launder money and justify home prices by with false claims of renovation work. Prosecutors said about $1 million in cash flowed into the company's bank account, without any work ever being done.

Prosecutors said the ring operated between 2006 and 2010.

Five conspirators. Including Olmer, have received prison sentences of from four to 7 1/2 years in prison, Syed and seven others await sentencing. Babar is scheduled to be sentenced in November 28.

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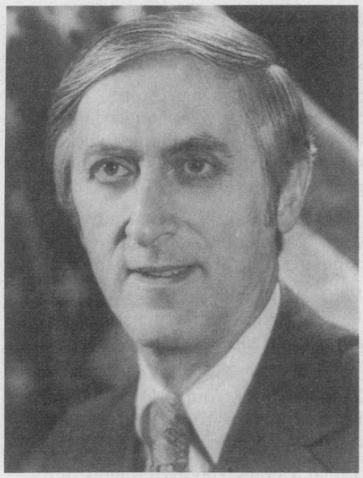
White House computer briefing reveals Commerce-Defense rift

Commerce Department efforts to foster trade in electronics are being thwarted by Defense Department hopes to halt technology and science leaks to Eastern Bloc countries. This opposition surfaced during a recent briefing held in the Executive Office Building for computer industry journalists.

Citing the country's technological expansion and the increasing trade imbalance, Lionel H. Olmer, Commerce Undersecretary for International Trade, spoke of electronics as a major trade commodity. High-tech electronics industries showed a greater growth rate and provided more new jobs than any other segment of the economy, he observed.

Although military purchases stimulated early electronic development, only three weapons systems now use technologies as sophisticated as the 64K RAM chip, according to Olmer. From this observation, he concluded that industry growth is the product of free market exchange and owes little to defense sources. America's economic interest are best served when markets for its technologies are available to producers, he added.

The Department of Commerce has sought to open overseas markets through multilateral trade agreements with Japan and Western European trading partners. However, a major obstacle to international trade in electronics has been the Department of Defense, which has adopted a policy of restricting the flow of technology to Eastern European countries, Olmer stated. (The DoD retains the right to review trade export licenses.)



Undersecretary of Commerce Lionel H. Olmer identified the DoD-Commerce trade impasse at White House press briefing.

Acknowledging the security requirement to maintain a military edge over Iron Curtain countries, Olmer noted that the DoD has identified over 200,000 control items, at least half of which have no strategic value. He also estimated that less than 10 percent of Soviet strategic intelligence comes from the back-engineering of technology in international trade. The remainder comes from espionage and the scientific data openly disseminated through science seminars and through provisions of the Freedom of Information Act—areas that *can* be controlled without restricting commerce.

Following Olmer to the rostrum, Assistant Defense Secretary Richard N. Perle defended DoD trade control. Admitting that back-engineering of items in international trade provided only limited strategic intelligence, Perle insisted that, in the interests of national security, all technology and science leaks should be plugged. He advocated greater controls on visas to identified Eastern Bloc scientists and agents and expressed the hope for more voluntary restraint on the part American researchers working in sensitive technologies.

Perle also indicated his intention to impose further restictions on trade with the East and to enlist the assistance of the customs service. He added that, over a year ago, he and Olmer had shaken hands on an informal agreement to extend DoD control on sensitive technology. According to Perle, Secretary of Commerce Malcolm Baldridge rejected the agreement in favor of extending international trade. In Perle's view, the goals of the two departments are clearly in opposition, and only the president can set the priorities to resolve the conflict.

During a luncheon talk to journalists at the Department of Commerce, Baldridge endorsed Olmer's view on the primacy of expanded international trade and expressed his own resentment of DoD contols of technological exchange. He added that the conflict with the DoD dates from over two years ago and that interdepartmental negotiations have led to a stalemate. The president is now aware of the impasse, Baldridge explained, and is expected to resolve the issue shortly.

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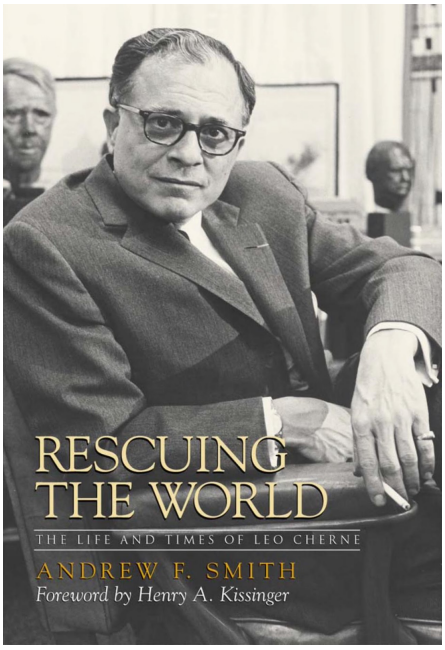
Sections from the 2002 book "Rescuing the World : The Life and Times of Leo Cherne (by Andrew F. Smith)



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President's Foreign Intelligence Advisory Board

President Eisenhower established a Board of Consultants on Foreign Intelligence Activities in 1956. It was created at the recommendation of the Hoover Commission on the Reorganization of the Government. Its purpose was to offer the president independent, objective, and expert advice on the effectiveness of the conduct of U.S. foreign intelligence. It was also created to head off an attempt by Senator Mike Mansfield to create a Joint Congressional Committee on Intelligence.14

Appointed to the board were prominent Americans who tried to per- form their part-time function in an unbiased, objective manner. Independent of the intelligence community and free from any day-to-day management or operational responsibilities, the board rendered its advice directly to President Eisenhower.When Kennedy was elected, Eisenhower did not discuss the im- portance of the board, and Kennedy considered eliminating it. But after the Bay of Pigs fiasco, Kennedy reconstituted the board and renamed it the Pres- ident's Foreign Intelligence Advisory Board (PFIAB). Kennedy later claimed that PFIAB was one of his most useful advisory boards.15

Over the years, PFIAB members met with leaders of intelligence agencies, examined reports, and visited intelligence installations to identify deficiencies in the collection, analysis, and reporting of intelligence. The board tried to eliminate unnecessary duplication and functional overlaps. Its recommendations influenced the composition and structure of the intelli- gence community, the development of major intelligence systems, and the degree of collection and analytic emphasis. In carrying out its mandate, board members had access to all the information related to foreign intelli- gence that they needed to fulfill their vital advisory role.16

When he was appointed to PFIAB, Cherne had no background in government service or foreign intelligence. His appointment was made at the urging of Casey, in return for Cherne's participation in Democrats for Nixon.Whatever the reason, Cherne was an excellent choice. In the fall of 1973, economic intelligence was not a high priority within the intelligence community. But the OctoberYom KippurWar in the Middle East, coupled with the shock in the United States over the Arab oil embargo, moved eco- nomic intelligence to the forefront of PFIAB's agenda. Few people in the the 1930s. Cherne was once again in the right place at the right time.

Cherne came onto the Board knowing some of its members. For years, he had known Edward Teller, the father of the H-bomb. In 1959, the IRC had given Teller the "William J. Donovan Memorial Award," which was Cherne's bronze bust of Donovan. Teller often offered Cherne advice. Cherne also knew Clare Boothe Luce, the former U.S. ambassador to Italy and congresswoman from Connecticut. Luce was the first woman appointed to PFIAB. Cherne and Luce had communicated during the 1940s and had co-authored three publications on Hungary. Other members of the board were new to him, for example, Nelson Rockefeller, who regarded his membership on the board as the single most important service he had ever performed for the U.S. government. Cherne and Rockefeller became close friends.18

Lionel Olmer, a U.S. Navy commander with a specialty in cryptology and Soviet naval communications, was the PFIAB staff member assigned to introduce Cherne to the work of the board. According to Olmer, Cherne was like "a kid in a candy store." Cherne wanted to know about everything, so Olmer made available to him dozens of secret studies on all manner of subjects, people, and places. Olmer communicated with Cherne daily, pass- ing on the latest news and offering suggestions for further study. Cherne soaked up the vast amount of information and still wanted more. He had a compulsion to know more than anyone else about every economic matter that came before PFIAB and possessed an insatiable curiosity about the more exotic aspects of the intelligence system.19

After several weeks, Olmer recommended that Cherne write up his findings as a way of drawing attention to the importance of economic in- telligence. For seven days Cherne dictated his report, which ended as a forty-page document. Olmer believed that the result was an artful, literate, but verbose critique of several intelligence agencies' programs. With some trepidation as to how Cherne would respond, Olmer told him that the re- port had great content, but that its style was off base considering its audi- ence: it lacked the appropriate "bureaucratese" essential for government reports. Much to Olmer's surprise, Cherne was open to frank criticism, al- though Cherne cringed when Olmer red-lined some of his favorite ex- pressions.They worked over the weekend, and in the end, Cherne mastered governmentese while losing nothing of what he believed was really impor- tant for the president of the United States to understand.

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According to Olmer, Cherne's revised report was a huge success: it changed the future course of economic intelligence collection, analysis, and reporting. Equally important, it drew the attention of senior government policymakers to the enormous significance of economic intelligence and the array of resources that could be directed to answering their needs.20

Cherne's specific expertise was economic intelligence; but he par- ticipated actively in all PFIAB's activities. Throughout the late 1960s and early 1970s, the Soviet Union was building up its military forces. Several observers had begun to express dissatisfaction with the National Intelli- gence Estimates, particularly those related to the military power of the Soviet Union. PFIAB chairman, Admiral George W. Anderson, a retired four-star admiral and chief of naval operations at the time of the Cuban missile crisis, and PFIAB board member John S. Foster, a former deputy secretary of defense for development, research and engineering, sug- gested the development of an outside competitive analysis using the same information as that available to the CIA. President Nixon did not sup- port the recommendation, mainly because the director of the CIA, William Colby, opposed it. When Ford became president, Anderson re- stated his concerns and recommended that the competitive analysis be conducted through the National Security Council. Colby demurred. When George Bush took over from Colby, things changed. Bush was receptive to PFIAB's proposal.

PFIAB established "Team B" as an experiment in competitive analysis. The idea was to use nongovernment experts on the Soviet Union to second-guess the CIA's estimates of Soviet intentions and ca- pabilities. The PFIAB Board and staff involved were: Edward Teller, William Baker, Edwin Land, Robert Galvin (chairman of Motorola), Bill Casey, and Lionel Olmer. Many more private sector experts were re- cruited to this project, and they reported their findings to PFIAB.

The "Team B" conclusions projected a more powerful and dangerous Soviet threat than the intelligence establishment had reported to the presi- dent. Perhaps the most significant conclusion was that the accuracy and power of Soviet strategic missiles could potentially overwhelm U.S. missile forces and thereby negate the fundamental premise of America's nuclear de terrent: that enough would be left, even after a first-strike, to retaliate and destroy the Soviet Union.21

At this time, the nation as well as the intelligence community were in disarray. The Watergate scandal had engulfed the Nixon administration. Congressional investigations uncovered a variety of unsavory practices, up- setting many Americans, including Cherne. President Nixon resigned in his vice president Nelson Rockefeller, a member of PFIAB.

Coming on top of the Watergate scandals, the American defeat in Vietnam led to public cynicism and distrust of the government. Watergate also led to increased scrutiny of the American intelligence community, which was tangentially connected through Nixon's effort to blame the CIA to cover his misdeeds. Most Congressmen were unfamiliar with the Amer- ican intelligence operations. Like all large bureaucracies, the intelligence community had made its share of mistakes; though unlike other large bu- reaucracies, the intelligence community's mistakes had been hidden. When Congressional committees examined and critiqued intelligence practices, mistakes were exposed. Senator Frank Church's committee focused on in- telligence abuses. Otis Pike's House Select Committee on Intelligence ex- amined and reported on intelligence failure in the Middle East. President Ford attempted to head off these investigations by creating a blue-ribbon commission chaired byVice President Nelson Rockefeller. One member of the Rockefeller Commission was the ex-Governor of California, Ronald Reagan.22

Shortly after Gerald Ford became president, several White House staff members solicited Cherne's advice. During this difficult period for the intel- ligence community, President Ford appointed Cherne chairman of PFIAB. At the time, Cherne was a registered Democrat, and he asked why he had been appointed chair. Ford's response was: "I worked with you and watched you for some time, and I reached the conclusion that you would be the one most likely to tell me what I might not wish to hear."23As chairman, Cherne con- tinued to meet with the White House aides concerned with intelligence, and he met several times with the president. Through these meetings, Cherne shaped the board agenda. PFIAB met on the first Thursday and Friday of every other month, with ad hoc committee meetings as required. Intelligence agency leaders, Cabinet officers, and others were invited to attend as necessary.

On the same day that Cherne became chairman of PFIAB, President Ford expanded the board from ten members to seventeen. PFIAB increased in importance when, as a result of the Rockefeller Commission report, it was given responsibility for policing the intelligence community.24 Most PFIAB members contributed actively during meetings and offered advice outside of meetings as their schedules permitted. Cherne saw PFIAB as his primaryjob. He estimated that he worked the equivalent of 94 days on PFIAB business during the first half of 1976.25

By all accounts, Cherne was an excellent chairman. He possessed great skill in running the meetings of this board composed of individuals of great distinction. Cherne skillfully organized presentations of complicated and diverse material outside his own area of expertise, then involved mem- bers and staff in their areas of expertise or responsibility. Cherne did not himself pontificate, but led the meeting to ensure that PFIAB's busy agenda was met. He had the ability to listen and comment without hurting feelings or egos. Edward Bennett Williams, one of the top lawyers in Washington, said at the end of the first one-and-a-half day meeting Cherne chaired: "That's the best meeting I've ever been to in my life."26

Although the "Team B" work had been launched by the previous PFIAB chairman, Admiral George W. Anderson, its work became public during the time that Cherne chaired the board. This publicity upset the new director of the Central Intelligence Agency, George Bush.27 Subse- quently the concept of a competitive analysis was discontinued. However, the "Team B" concept reemerged in 1986, when SenatorJesse Helms raised the issue in the Senate for a competitive analysis focused upon the Soviet Union. Helms's views were adopted by a Senate resolution, but PFIAB did not conduct further competitive analyses.28

In the days before George Bush left the position of director of the Central Intelligence Agency, he wrote to Cherne reporting that the year 1976 had been a good one for the U.S. foreign intelligence community.The CIA and other intelligence agencies introduced innovations and restored confidence in the integrity of their foreign intelligence function. Bush be- lieved that PFIAB under Cherne's leadership had contributed significantly to these changes. Handwritten at the bottom of Bush's note to Cherne was, "I hope our paths cross in the future."29

Chapter 11 : The Falling Curtain

In addition to being a humanitarian, Leo has been an economist, political scientist, sculptor, and advisor to presidents for over 40 years. His extra- ordinary service to his country and to mankind are inspiring and deserv- ing of recognition from his fellow citizens. . . . Although he has never held elected office, Leo Cherne has had more influence on governmental pol- icy than many members in Congress. Since the late 1930s, Leo Cherne has stepped forward and with brilliance, energy, and moral passion to help this nation overcome countless challenges.

—Citation for the Presidential Medal of Freedom, given to Leo Cherne by President Ronald Reagan, 1984

Throughout most of his adult life, Cherne worked full-time at the Research Institute of America. The Institute was a privately owned corporation, with Carl Hovgard the majority stockholder, and Cherne plus another employee minority stockholders. In 1964, the owners sold the Institute to the Lawyers Cooperative Publishing Company in Buf- falo. Cherne became vice chairman of the Lawyers Cooperative Board of Directors, and the following year, chairman.1This role permitted Cherne's active participation in the International Rescue Committee, Freedom House, and the President's Foreign Intelligence Advisory Board, with a bit of time left over for his other interests.The Lawyers Cooperative eventually sold the Research Institute to Thompson International. Cherne's relation- ship with the Institute ended in 1990, after 54 years of service.2

Awarding Medals

By the early 1980s, Cherne's life had reached a peak. His office walls had for decades been covered with awards and photographs testifying to his extraor- dinary achievements.They included many decorations from foreign govern- ments. Friends and colleagues thought Cherne deserved public recognition from the United States—specifically, that he should be awarded the Presi- dential Medal of Freedom.

President Truman had initiated the Medal of Freedom, which was awarded for meritorious war-connected acts or services. General Lucius Clay had first proposed this distinction for Cherne to President Eisenhower, citing Cherne's postwar work in Europe, Japan, and Hungary. Clay's proposal did not succeed, but sporadic attempts were made to place Cherne's name in nomina tion. President Kennedy replaced Truman's award with the Presidential Medal of Freedom, the nation's highest civilian honor given in the United States. It was awarded for meritorious contributions to security or national interest, world peace, or cultural or other significant public or private endeavors.3

When Ronald Reagan was elected president, renewed efforts were made to obtain the Medal of Freedom for Cherne, but the campaign was blocked by Michael K. Deaver, Reagan's Deputy Chief of Staff in theWhite House, who believed the award should go to individuals who had greater visibility and public recognition than did Cherne.4 Then fate intervened. Fred Demech, a naval lieutenant commander who was assigned to the White House and who had known Cherne when he was appointed to PFIAB, was asked to write President Reagan's speech for the IRC's fiftieth anniversary celebration, scheduled for November 15, 1983. Demech wrote into Rea- gan's speech the following announcement: Cherne's "extraordinary service to his country and to mankind are inspiring and deserving of recognition from his fellow citizens. It is with great pleasure that I announce tonight that I am awarding the Presidential Medal of Freedom, our nation's highest civil- ian award, to Leo Cherne. Congratulations, Leo, on a well-deserved honor." Unable to attend the ceremony, Reagan videotaped his speech, which had been cleared by his staff. It was played for an enthusiastic audience at the IRC's fiftieth anniversary ceremony at the Waldorf in NewYork.When the list of recipients for the Presidential Medal of Freedom was drawn up in February 1984, Demech made sure that Cherne's name was on the list. Deaver again objected. Demech pointed out that President Reagan had al- ready announced that Cherne would receive the award. Deaver was furious with Demech, but could do nothing.5 On March 26, 1984, President Rea- gan delightedly conferred upon Cherne the Medal of Freedom in the White House; some of the others who received the same honor on that day were Reverend NormanVincent Peale, Louis L'Amour, and James Cagney.

Predicting the Future

Before the concept of "futurist" was born, Cherne was one. For over fifty years he publicly projected what would happen—economically, politically, and socially—during the upcoming year. His first speech to forecast the future was given at the Sales Executive Club of NewYork in 1940.The club had been started by ThomasWatson, Sr., the founder of IBM, in 1932.Wat- son required all his top sales executives to belong. His idea, at the height of the Depression, was to get the economy rolling again by starting a selling crusade. The club focused on improving salesmen's methods and morale. The club published newsletters, held seminars, and invited big-name speak- ers for its events. Over the years five presidents, Wendell Willkie, Henry Ford II, Bob Hope, Eddie Cantor, Alan King, NormanVincent Peale, and Ann Landers addressed the club.6

Cherne was one of the club's speakers in January 1940. His talk was such a success that the club invited him back.This continued annually for the next fifty years. His speeches were often given in the grand ballroom at the Waldorf-Astoria, which would be packed with thousands of executives. Cherne used these occasions to predict what was going to happen during the upcoming year. His presentations started with his predictions of the previous year, which he graded for accuracy. He usually gave himself a grade of 90 percent or higher and few participants disagreed with his self-assessment. Then he proceeded into what he projected for the upcoming year. His speeches were widely attended by a broad segment of America's political and business leaders.7 In addition, newspaper and magazine reporters often covered his predictions.

Cherne's fiftieth "Consecutive and Final First-of-the-Year Forecast Luncheon Program" was titled: "Millennium: A Reach into the Future," and was attended by more than 2,000 executives in the ballroom at the Wal- dorf. The program co-chairs included Alan Greenspan, Henry A. Kissinger, Happy Rockefeller, and Liv Ullmann. Malcolm Forbes, Jr., and Nelson A. Rockefeller, Jr., gave special introductions.8 Kissinger uttered admiring ac- colades: "What courage it has taken each year for fifty years to polish your crystal ball before a roomful of the country's brightest and best-informed leaders. Surely the entire world pauses early each January to learn from you what is expected of it!"9

Retiring Chairman

Cherne prodded the IRC to seize new opportunities for assisting refugees. He advocated for new programs during the 1980s and early 1990s. For in- stance, he encouraged the IRC to become involved in Africa; after pro- grams were launched, he traveled to inspect them.

Cherne was also deeply worried by the plight of the Afghan refugees. Tens of thousands had fled the country when the Soviet invaded Afghanistan in 1979, Throughout the 1980s, more refugees poured into Pakistan. During the Cold War, the United States supported the refugees and those groups who opposed the Soviet forces in Afghanistan. When the Soviet Union agreed to withdraw its forces from Afghanistan ten years later, about 3.5 mil- lion Afghan refugees lived in Pakistan. With Soviet forces no longer in Afghanistan, Cherne was worried that the United States would give signifi- cantly reduced attention to their refugees in Pakistan.The U.N. High Com- missioner for Refugees (UNHCR) at the time, Saddrudin Aga Khan, issued statements to this effect, urging

continued attention to the refugee situation.

During an IRC Board trip to Pakistan led by Olmer, which included meetings with the president of Pakistan and with the UNHCR, these mat- ters were discussed. On return to the United States, Cherne urged that a Citizens Commission be created to sustain a worldwide focus on the Afghan refugees, notwithstanding the apparent end of military conflict. As a result of the commission's work, the IRC was the first foreign operation to assist Afghan refugees.

The IRC's Citizens Commission had unintended positive conse- quences for the IRC. While trying to select commissioners, Olmer met Sadako Ogata, then the director of the Institute of International Relations at Sophia University in Tokyo. She previously represented Japan on the United Nations Commission on Human Rights, and in 1990 was selected as the independent expert of the United Nations Commission on Human Rights on the human rights situation in Myanmar. She declined Olmer's invitation to join the commission when the General Assembly elected her to the position of United Nations High Commissioner for Refugees. How- ever, she worked closely with the IRC for the following ten years on many refugee matters including those connected withYugoslavia. In 2001, after her retirement as UNHCR, she became an IRC board member.

By 1990, IRC programs operated on five continents and was the largest nonsectarian, nongovernmental refugee operation in the world. Much of IRC's success can be attributed to Cherne's work. It was notjust his promotional activities or his fundraising prowess. This phenomenal suc- cess derived from the board and staff he recruited, encouraged, and men tored. John Whitehead, who Cherne brought on to the IRC's board after the Hungarian uprising in 1956, had risen to the top of the investment banking profession and then served as deputy secretary of state. He was the obvious choice to succeed Cherne when the infirmities of age made him realize in 1991 that it was time to step down.

Tributes flowed in from Presidents Nixon, Ford, Carter, Reagan, and Bush and from many others. In his tribute to Cherne, Henry Kissinger remarked that it had always "meant a great deal to me to know there was a Leo Cherne in this world, always ready with advice, always ready to give his time and his compassion in difficult circumstances." He continued: "Any- body can project the familiar into the future. But the greatest role of a leader is to take a people from where they are to where they have never been.That is ajourney that requires faith and dedication and we honor Leo Cherne, above all, for the faith and dedication he has always shown in our journey towards a world in which the just can be free and the weak, se- cure."10 Characteristically, it didn't occur to Cherne, in his new role as chairman emeritus, to stop working. Flashes of the old eloquence, the old brilliance, the old fire, still continued to inspire, move, and persuade his board, staff, and colleagues.

Emerging Refugee Emergencies

Throughout most of its history, the IRC has had limited private funds, and has been forced to rely heavily on U.S. government funds and those of the U.N. High Commissioner for Refugees. In refugee emergencies, some- times hours and days were lost while funding was sought.Yet refugee emer- gencies required quick and effective responses. Mobilizing at the first sign of a serious refugee problem saves lives and enhances the ability of the refugees to survive in the long term. Failure to take quick and effective action in such crises often results in social turmoil and political instability within the country to which refugees have fled, and sometimes the strife spreads to neighboring countries, exacerbating unstable and chaotic situations.

When Yugoslavia imploded in 1991, the IRC was one of the first agencies to respond; quickly it was heavily committed, assisting tens of thousands of Bosnian, Serbian, and Croatian refugees, who struggled for survival in the heart of Europe. Hence, when Kurds fled into northern Iraq after the GulfWar, the IRC had no reserves to assist the refugees who were fleeing Iraqi military forces. Still, the IRC sent a team to help and was the first voluntary organization to arrive to help these refugees.

IRC Board members Lionel Olmer and Jim Strickler went to Turkey and northern Iraq to review the IRC's efforts. The person running IRC's program was doing wonderful work alongside the U.S. and other NATO military forces that were engaged for almost the first time in a major human- itarian effort. The trouble with the IRC's effort was that it lacked money, communications equipment, shovels, and supplies. Eventually, the IRC was able to provide shelter and bring medical, public health, and sanitation specialists into the situation, professionals drown from the IRC's worldwide pool of refugee emergency experts and volunteers. But the time lost early in the crisis meant that many Kurds died or became ill due to exposure and the lack of water, food, and proper sanitation.11

While in Turkey, Olmer phoned Cherne, who was delighted with the on-the-spot report and was only saddened by the fact that he could not be there with them. On the return trip, Olmer and Strickler discussed what the IRC could do in the future to be better prepared for emergencies. Olmer suggested that the IRC pre-position kits of supplies for future emer- gencies. This led to the thought that U.S. companies might be cajoled into donating an emergency radio system to the IRC.While this would be use- ful, better still, they concluded, would be an emergency rescue fund that could meet whatever the next critical situation required.12

Upon his return to the United States, Olmer asked Cherne if he would mount a major effort to help deliver the IRC from its dependence on governmental funding sources by putting together a fund to be used only in emergencies. Cherne approved the concept, as did the IRC board. Cherne agreed to begin contacting individuals in hopes of establishing a $1 million fund—which everyone thought was very ambitious.13

With a $1 million corpus, the emergency fund was expected to gen- erate an annual income of $50,000, enabling the IRC to take immediate action in one or two emergency situations should they arise. Decisions to draw on the fund were to be made by the IRC Executive Committee, which must declare that a refugee emergency had arisen.The fund's princi- pal could be invaded only by a decision of the IRC board, and only when the severity of the emergency required such action.The principal would be then replenished as expeditiously as possible following any withdrawal.14

Cherne was delighted to help raise money for the fund, which was named in his honor, "The Leo Cherne Emergency Refugee Fund." The IRC board and staff worked out the details. Cherne approached Peter Drucker, who agreed to chair the fund. Drucker had worked as a volunteer with the International Relief Association during the late 1930s. Drucker had worked at the Research Institute as a consulting editor to their associate member's program from 1950 to 1953.15 Drucker and Cherne had stayed in touch and Cherne had involved Drucker in IRC activities. Much to every- one's surprise, the fund exceeded $1 million within six months and doubled again a few years later.16This was the crucial first step toward financial stabil- ity as well as an assured capability for rapid and effective response to refugee emergencies.When refugees fled Kosovo a few months after Cherne's death, the Leo Cherne Emergency Fund helped them survive.

Dying and Remembering

Although Cherne was active in many Jewish groups, he was not an observant Jew. Cherne had not had a Bar Mitzvah ceremony. He was not a Zionist, much to the chagrin of some of his Jewish friends. Yet, Cherne reflected the best values and traditions of Judaism in his forceful and successful public life. Said Lionel Olmer: "Although he was not a religious man in a conventional sense, as he came closer to the end of his life, he seemed more drawn to the meaning of his Jewish heritage and its traditions."[17]

Following in his parents' footsteps, Cherne rarely was seen in a synagogue, but he always considered himself a Jew. He celebrated Jewish holidays, and he particularly enjoyed Passover, which marks the deliverance of Jews from Egypt and slavery. Passover celebrated freedom. According to his friend Henry Denker, Cherne "always took special pleasure in that part of the service where it is recalled the various works by which God brought forth the Jews out of slavery, inflicting the plagues to force Pharaoh to let the Jews go free, sparing the first-born of each Jewish family, parting the Red Sea, providing manna to sustain the Jews in the desert, bringing the Jews to Mount Sinai, giving us the Ten Commandments, and finally bringing us to the Holy Land."[18]

Cherne died at 9:30 A.M. on January 12, 1999. He had chosen to be buried in a Jewish cemetery on the easternmost reaches of Long Island. As prescribed by Jewish tradition, Cherne was buried the day following his death. The service had been scheduled for 11:00 A.M. but it had to be delayed due to the bad weather. The service began at 11:30 and lasted about half an hour. "The Rabbi's sermon was brief and crisp, but it captured Cherne's commitment to the cause of freedom in behalf of refugees," reported Olmer.[19]

The burial site was in a brand new cemetery a forty-five-minute drive from the temple. His grave site was located on a small hill difficult to climb due to the ice on the ground and the bitter cold wind. Cherne's casket was draped with an American flag in honor of his many years of service to the U.S. government. An honor guard folded the flag and presented it to his daughter. The few words required for the dead under Jewish law were spoken by the Rabbi, and Cherne's body was lowered into the grave wrapped in a shroud enclosed in a plain pine box. According to custom, each of the mourners threw a handful of dirt into the grave onto the casket.[20]

Henry A. Kissinger, Liv Ullmann, Henry Denker, and many other prominent Americans. Many more wanted to attend, but the space in the hall was limited.

To John Richardson, who had known Cherne since the Hungarian Revolution in 1956, Cherne epitomized the American dream. Cherne possessed "extraordinary skills as a team builder, organizational leader, public speaker, public relations expert, and sculptor." As important, Richardson revered him for his "unlimited commitment to the causes he believed in," admired him "for his penetrating political analysis," and "loved him for his capacity for unlimited friendship, can-do spirit, human foibles, boyish enthusiasms, unvarnished patriotism, devotion to freedom, and for his warmth and charm."[21]

Lionel Olmer, Cherne's friend since 1973, recalled that Cherne "was the soul of the IRC. He gave it a philosophy and mission, a raison d'etre, rather than analytically sound business objectives, and this motivated its volunteers to an extraordinary degree. The people he was attracted to and who were attracted to him knew that he stood for 'values' such as freedom and dignity more than anything else, and they, particularly the youngsters, held him in awe. Leo was not one to be locked into formal job descriptions and annual performance reviews. He knew—and they knew—what was expected, and most would do anything to earn his praise. Leo was admired around the world for what he had done with his life and what he had done for others." For Olmer, "Leo was an inspirational leader, who knew what was right and did it, and whose personality and image made others follow him, convinced of their humanitarian purposes and of the transcendent value of what they were doing."[22]

Elie Wiesel said in his tribute that Cherne "gave homes to the homeless and hopes to the hopeless." Senator Daniel Patrick Moynihan concluded in the *Congressional Record*, "I think it is safe to say Leo Cherne's life helped to redeem the 20th century."[23]

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He likes to tinker - with the ancient, luminous, fire-engine-red Austin-Healy in his garage or with the odd chair made out of driftwood or with the lamp made out of a wine bottle in the den.

But at the Commerce Department, where he is Under Secretary for International Trade Administration, Lionel Herbert Olmer does not have such a free hand. As the point man in the disputes with Europe over steel and the Soviet gas pipeline and in the quarrels with Japan over general trade policy, the 47-year-old Mr. Olmer has to balance competing interests in one of the toughest jobs in Washington.

Making the balancing act all the more difficult is the keen interest that trade issues have generated in the other major departments such as State and Defense, with their own special constituencies, and the constant pressure applied by these departments in shaping final policy.

Many Trips Across Pacific

Europe has not been Mr. Olmer's main area of expertise. As director for international programs at Motorola Inc. before joining the Reagan Administration, he led one of the rare successful forays by an American electronics company into the Japanese market, and he was brought in by the Administration to talk tough to Tokyo.

Tough talk has marked frequent negotiating trips across the Pacific in his effort to get Japan to buy more goods from the United States and thus reduce the American deficit in trade with Japan.

But, even after Japan adopted a series of market liberalization packages, the trade gap has widened. Last year Americans bought $18.1 billion more goods from the Japanese than it sold to them. This year the deficit will be more than $20 billion.

"The growing size of that deficit doesn't bespeak success for our policies," commented one Olmer critic in another agency. 'As Tough As They Come'

A European official who has been one of Mr. Olmer's adversaries commented: "He strikes me as extremely courteous but also somebody who, when it comes down to brass tacks, is as tough as they come. He has a reputation among my colleagues of being anti-European. But that doesn't bother me much because he knows his dossier and is fair." The European official asked not to be identified.

"In light of all the circumstances, Mr. Olmer has done a reasonably good job," said Stanley J. Marcuss, who held a roughly equivalent position in the Carter Administration. "He has been remarkably even-handed," added Mr. Marcuss, now a partner at the Washington law firm of Milbank, Tweed, Hadley & McCloy.

On the pipeline issue, Mr. Olmer has been a moderating influences within the Reagan Administration. He has opposed officials at the Defense Department and the National Security Council who believe the Soviet Union can be forced to change policy objectives through economic pressure.

And Mr. Olmer joined his boss, Commerce Secretary Malcolm Baldrige, along with Treasury Secretary Donald T. Regan and Secretary of State George P. Shultz, in urging President Reagan to relax his sanctions against European companies that violate the embargo on shipments of American-produced or American-designed equipment for the 3,700-mile pipeline that will link the gas fields of Siberia and Western Europe.

In the trade dispute over shipments of European steel to this country, Mr. Olmer labored in the background to carpenter an import quota arrangement, only to have it rejected by the American steel industry. But talks between the Commerce Department and the Europeans will get under way again next week, raising hopes that perhaps some modified version can form the basis of an agreement. Workmanlike Approach Noted

"He's a very pragmatic and sensible fellow," said Thomas L. Farmer, who as director of President Carter's Intelligence Oversight Board retained Mr. Olmer as its principal consultant. "He's a workmanlike, reliable guy, definitely not ideological."

Mr. Olmer served five years in the Nixon and Ford Administrations on the President's Foreign Intelligence Advisory Board, finally becoming staff director. The board, established by President Dwight D. Eisenhower in 1956, consisted of private citizens who offered advice on the adequacy of this country's foreign intelligence.

Mr. Olmer was born in New Haven on Nov. 11, 1934. After earning a bachelor's degree from the University of Connecticut and a law degree from American University in Washington, he specialized in trade law. He also was an officer in the Navy, rising to captain. One of his assignments was with the staff of the Chief of Naval Operations during the late 1960's.

He is married to the former Judith Sayler of Portland, Ore., a military analyst at the Central Intelligence Agency. They have two children.

Besides tinkering at home, Mr. Olmer likes to jog. Sometimes he wears a T-shirt emblazoned "U.S. Exports Mean Jobs."

govinfo.library.unt.edu/

https://govinfo.library.unt.edu/nssg/About_Us/People/Commissioners/Lionel_Olmer/lionel_olmer.htm

Atlantic council

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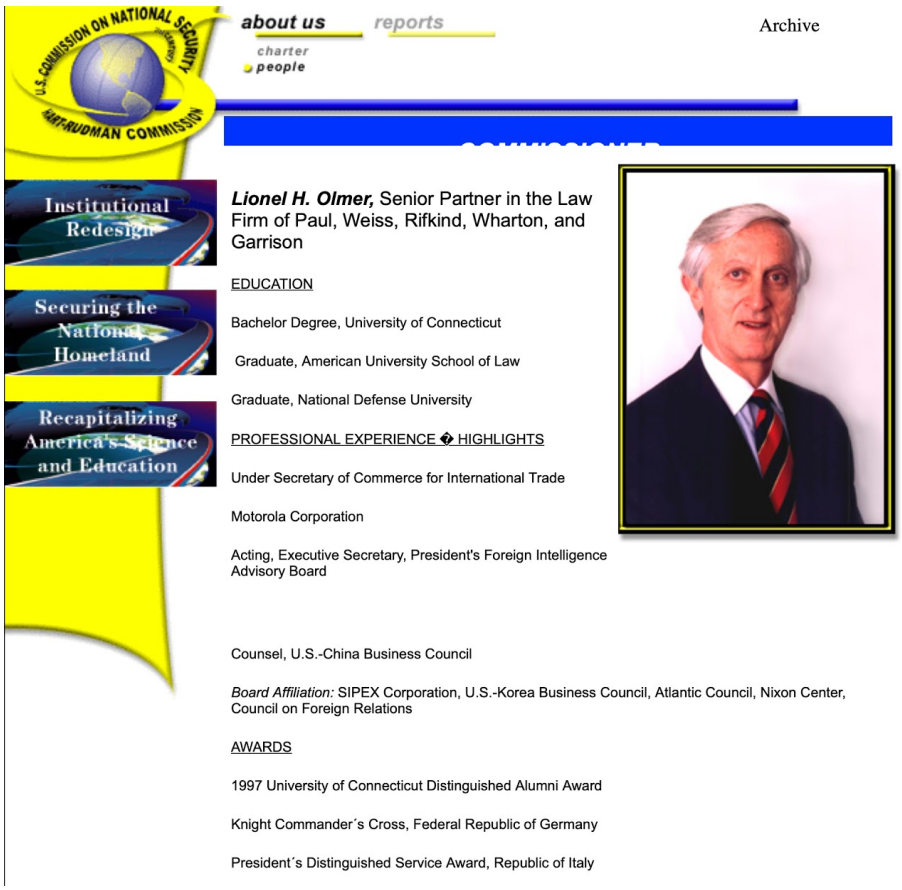

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Nominations of Roger W. Mehle, Jr., Marc E. Leland, Lionel H. Olmer, Raymond J. Waldmann, John A. Svahn, and Dorcas R. Hardy: hearings before the Committee on Finance, United States Senate, Ninety-seventh Congress, first session, on nominations of Roger W. Mehle, Jr., to be assistant secretary of the treasury, Marc E. Leland to be deputy under secretary of the treasury, Lionel H. Olmer to be under secretary of commerce, Raymond J.Waldmann to be assistant secretary of commerce, John A. Svahn to be commissioner of social security, and Dorcas R. Hardy to be assistant secretary of health and human services, April 23 and 28, 1981

1981-04-us-senate-finance-committee-nominations-melhe-leland-olmer.pdf

STATEMENT OF LIONEL H. OLMER, UNDER SECRETARY FOR INTERNATIONAL 'fRADEDESIGNATE, U.S. DEPARTMENT OF CoMMERCE

Mr. Chairman, Senators, I am deeply honored to appear before you today to solicit your confirmation of me as President Reagan's selection to be Under Secretary of Commerce for International Trade.

Having read the legislative history associated with the establishment of this position; having worked with people in and out of government during the time the reorganization plan which created the post was being written; and having had numerous occasions in the past four years to call upon the Department of Commerce for assistance, I am properly respectful of the enormity of the tasks which lie ahead if I am confirmed by the Senate for this job.

You have been provided with my detailed biography and so I propose to simply outline my recent experience which I believe contributes most directly to my qualifications for this assignment.

From 1977 until two month ago, I worked for Motorola Inc., a leading U.S. manufacturer and exporter of communications and electronic equipment. My responsibilities as Director of International Programs involved the development and implementation of trading opportunities primarily with Japan, and to a subordinate degree in West Africa and Latin America. This involved frequent travel and discussions with U.S. Foreign and Commercial Service, and foreign government as well as private sector representatives. I also participated in the process of advising U.S. Government officials relative to the Multilateral Trade Negotiations and provided legal advice relative to industry efforts to seek relief from injury due to imports. I analyzed and wrote for the corporate leadership my assessments of business opportunities vs. risks in many countries of the world and was privileged to lead the Company's efforts over a 2-year period to penetrate the Japanese public telecommunications market-to the best of my knowledge the first major such achievement by a non.Japanese company.

I believe that these experiences in the immediate past four years, coupled with the dedication to hard work that I know has been part of my entire professional life, will make it possible for me to advance the objectives of the International Trade Administration.

The data is well known and I believe argues persuasively for a concerted U.S. Government supported major effort to do a better job at exporting U.S. goods and services and to watch carefully lest our open market system, which is so attractive and indeed essential to our competitors, be abused. Starkly put, many of our industries have become less competitive relative to some of our significant trading partners. By "competitive" I mean price, technological uniqueness, service, quality, marketing ag□essiveness and terms of finance.

Most especially, by way of contrast, in Japan there is a clear recognition that control of major, future world markets will be heavily dependent on supremacy in high technology and as a consequence there has developed a consensus, a "comity" if you will, between government, business, labor and academia that a program be implemented to assure preeminence within the next decade in the knowledge intensive sectors.

The President's entire economic program is directed towards increasing investment and accordingly, our competitiveness. Implementation of this program will go far to improve our trade performance. But there are barriers to exporting even highly competitive goods, and unfair trade practices can threaten even competitive U.S. industries.

If confirmed, my program for ITA would involve five major areas.

1. Vigorous implementation of the various codes under the multilateral treaty negotiations which, I believe, represent a commitment by the government to the private sector.

2. Creative promotion of exports, especially greater efforts to involve small and medium size businesses in these opportunities.

3. Careful monitoring of imports relative to enforcement of our trade laws.

4. Identification of industrial sectors of critical importance whose real or threatened decline should spark imaginative counter efforts by business working in concert with the government.

Effective management of export control policy.

The fifth program area, that of proper administration of our export control system, will not in the short run contribute to improving our trade imbalance but it is essential for our national security, on which all else ultimately depends, and I would intend to pursue this with equivalent vigor.

I welcome your questions

BIOGRAPHY OF LIONEL H. OLMER, NOMINEE FOR UNDER SECRETARY FOR INTERNA

TIONAL TRADE, INTERNATIONAL TRADE ADMINISTRATION, U.S. DEPARTMENT OF CoMMERCE

Lionel H. Olmer was nominated by President Reagan as Under Secretary of Commerce for International Trade on February 12, 1981.

From 1977 until his nomination, Olmer was Director of International Programs for Motorola, Incorporated. At Motorola he was responsible for development and implementaion of international trade strategies; he devoted particular attention to the trade opportunities created by the Multilateral Trade Negotiation Agreements. Partly as a result of his efforts, Motorola has become the first major U.S. high technology manufacturer to penetrate the highly competitive Japanese public telecommunications market. In Africa, Olmer assisted Motorola to succeed in markets long domihated by French telephone equipment manufacturers.

Before joining Motorola, Olmer served for nearly five years on the President's Foreign Intelligence Advisory Board, ultimately as staff director. The Board, estab lished by President Eisenhower in 1956, consisted of private citizens who advised the President on the adequacy of U.S. foreign intelligence, including economic intelligence.

Olmer holds a bachelor's degree from the University of Connecticut and a law degree from the American University in Washington, D.C. He is a member of the Connecticut and District of Columbia bars.

Olmer served as an officer in the U.S. Navy in assignments which included the staff of the Chief of Naval Operations during the late 1960's. He is a graduate of the National Defense University. Olmer is a member of the Board of Directors of the International Rescue Committee and Chairman of its Washington Advisory Group. The IRC is a voluntary agency whose purpose is to aid in the relief and resettlement of refugees.

A native of Connecticut, Olmer and his wife, the former Judith Sayler of Portland, Oregon, live in Rockville, Maryland, with their two children.

U.S. DEPARTMENT OF CoMMERCE,

THE UNDER SECRETARY FOR INTERNATIONAL TRADE

Washington, D.C., April 27, 1981

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Blog at StationHypo.com : How VQ-1 Supported Military Actions with SIGINT during Vietnam (Part 4 of 7) Guest Post

See : [HW001D][GDrive]

1967-1968

Da Nang Air Base Under Attacked

By 1967, the BIG LOOK operations tempo was well established.

At least one Big Bird mission (EC-121) flew daily, supplemented by Whales (EA-3B), and/or a second Big Bird as needed. By March 1967, 54 enlisted personnel were assigned on TAD from NCSP, over half of which were designated crew. Additional personnel were TAD from Kamiseya. Living conditions were improving as well, with new barracks and other facilities under construction. Government messing became available effective 25 May 1967, and somewhere about that time NCSP Det Bravo was inaugurated, with LCDR Donald R. Larson as Officer-in-Charge. However, much of this "forward movement" came to an abrupt halt the night of July 15.

"Shortly after midnight on 15 July, the Da Nang Air Base was struck by enemy rockets. Eight military personnel were killed during the attack and 155 others were wounded. The enemy barrage, which lasted approximately 45 minutes, started numerous fires and resulted in extensive structural damage to U.S. Navy, Marine and Air Force facilities. In addition, eight aircraft were destroyed and 45 were damaged during the attack." (NAVFOR Command History, July 1967, p. 45)

Note: the featured Image is a photo of the attack.

Major Casualties, but None Were CT Spooks

This rocket attack was the most extreme experienced during life of the detachment. Out of a total of 163 casualties, 44 were VQ-1 and NSG Det Bravo personnel, but none were spooks. Luckily no one was killed, but all three VQ-1/NSG Detachment barracks were destroyed. This was not due to a direct hit on the barracks, but rather to a hit on a nearby ammo dump. The dump exploded and rained shrapnel down onto recently constructed bunkers, which at the time, did not have roofs. Additional damage/injuries were caused by the shock waves of the exploding ammo. The fires from this attack were so intense that former BLS CTR2 Gary Hughes, then stationed 40 some miles away at Phu Bai, could see the glow on the horizon. Most of the detachment was evacuated from Da Nang, with only a skeleton crew remaining behind. When they returned, det personnel were temporarily billeted at Camp Tien Sha, located at the base of Monkey Mountain, east of the base, until new barracks could be built. In addition to the destruction of the barracks, all the aircraft were damaged to some extent, and VQ-2 had to temporarily supply EC-121M aircraft from Rota, Spain, so that operations could continue. Two people enroute to the det from the Philippines, Sgt G.R. Wright, USMC and CTRSN Lowell "Wilkie" Wilks, were at Clark Air Base waiting for a flight when they were told their orders were on hold. They finally arrived in Da Nang two weeks later.

In the fall of 1967, LT(jg) Ike Cole joined the detachment as an evaluator, TAD from San Miguel for several months. Ike remembers flying a lot, almost every day, and the highly-skilled enlisted operators.

The Tet Offensive

January 30, 1968, marked the start of the Tet offensive by the North Vietnamese. LCDR Carl Strobel, Det OIC at the time, recalls the planes being sent to Udorn Air Base in Thailand because of the increased rocket attacks. Flights continued over the GOT as usual, though, staged from Thailand. As always, a core team stayed behind in Da Nang. CTR3 Bill Erhardt, recognizing a deficiency in the det's supply of weapons, took the initiative in true Spook fashion. According to his own account, Bill "…took a couple cases of booze up to Hill 327 and brought back a jeep load of rifles, ammo, and hand grenades. The Chief wanted to kill me!"

New crypto systems installed April – June 1968 further improved the capabilities of the detachment.

Two Spooks Who Made Extraordinary Contributions

Late 1968 marked the departure of two experienced operators, Chuck Dibble and Joe Wagner. Both had flown in Da Nang for over two years, and their contributions were significant. In a personal message to Commander Johnson, the NSG Department head at NCSP, Captain De Lorenzi, Commanding Officer of VQ-1, cited both Petty Officers, stating in part,

"Both of these outstanding Petty Officers have made extraordinary contributions to the detachment operation over a sustained period of time. Their professionalism, devotion to duty and perseverance has on numerous occasions resulted in the development of extremely valuable intelligence, which under other circumstances could have gone unnoticed."

He then added in a later paragraph,

"Regret that I did not personally have the opportunity to speak with CT2 Dibble and

Wagner prior to their departure from Da Nang. Would be most appreciative if you would convey to each of them, on behalf of myself and all VQ-1 squadron members who have served with them a sincere 'Well Done' and best wishes for every success in the future."

Thus, despite the belief of some, VQ-1 recognized the efforts of the Spooks as a vital part of its mission, and was appreciative of what we did.

VQ-1 wasn't the only group who appreciated our work. Joseph A. Haran, Jr., a radio intercept analysis specialist with the 6924th Security Squadron (USAFSS) at Da Nang from 1968 to 1969, stated "*…the NSG linguists with whom I worked while at the 6924th Security Squadron were much more receptive to my efforts and were at the same time of immense help: "Mr. Dibble" and Ed Dobarro come to mind. The NSG guys were much more laid back and more job-as-top-priority oriented than the USAFSS turfdefenders. But, we were all in the same bunker (or roadside ditch) when the bad guys' rocket artillery and mortars said hello.*"

By LCDR Robert E. Morrison, USN (ret.)

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Left to right: LCDR Lionel H. Olmer, CTR2 William F. Erhardt, CT3 S.P. Renken, CTR3 Jackie P. Judice, LT(jg) Robert A. Cavaluchi, LT(jg) Shaun M. Byrnes. (Photo courtesy of Rich Ellis via Bill Erhardt – taken circa Dec. 1967)
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EXPERIENCE

Of counsel in the Corporate Department, Lionel H. Olmer has represented a broad range of American and foreign companies. He has been successful in gaining access to markets for both foreign and domestic clients, in securing increased protection for clients' intellectual property rights; in advising regarding telecommunications policies; and in helping establish internal compliance programs to facilitate the licensing of sophisticated products for export.

He served as undersecretary of commerce for international trade beginning in February 1981. As head of the 2,300-person International Trade Administration (ITA), with offices throughout the United States and in more than 100 countries, he managed the trade promotion, export control regulations and trade law remedies of the U.S. government and negotiated trade agreements covering telecommunications, semiconductors, computers, medical equipment, steel and commercial aircrafts.

Before serving as undersecretary of commerce, Mr. Olmer worked for the Motorola Corporation. He coordinated that company's successful effort to become the first American exporter of communications products to Nippon Telegraph and Telephone Public Corporation, which at the time was a Japanese government-owned monopoly.

Mr. Olmer served for 12 years as a director of Dresser Industries, until its takeover by Halliburton Corporation and for 17 years was a director of SIPEX Corporation.

[Note : "In 1998, Dresser merged with its main rival Halliburton,[1] " ... meaning Olmer worked at Dresser from 1986 to 1998]

In 1999, he was appointed one of 14 commissioners on the U.S. National Security Commission for the 21st Century, which reported to the President as to the policies and organization for the pursuit of U.S. national security interests over the next quarter century. It led to the creation of the Department of Homeland Security.

Mr. Olmer received a Distinguished Alumni Award in 1998 and an honorary Doctor of Laws degree in May 2000 from the University of Connecticut. He is also a graduate of the National Defense University and serves on the board of directors of the University of Connecticut Foundation and the Nixon Center.

1955

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Housatonic

Kenneth Harry Olsen (born 1926)

Wikipedia Ken Olsen

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Born

February 20, 1926

Bridgeport, Connecticut

Died

February 6, 2011 (aged 84)[1]

Indianapolis, Indiana

Nationality

American

Alma mater

Massachusetts Institute of Technology (B.S., 1950; M.S., 1952)

Occupation

Engineer

Known for

Founding Digital Equipment Corporation with Harlan Anderson

Spouse(s)

Eeva-Liisa Aulikki Olsen

(m. 1950; died 2009)

Children

3

Kenneth Harry "Ken" Olsen (February 20, 1926[2] – February 6, 2011[3]) was an American engineer who co-founded Digital Equipment Corporation (DEC) in 1957 with colleague Harlan Anderson and his brother Stan Olsen.[4][5]

Background

Kenneth Harry Olsen was born in Bridgeport, Connecticut and grew up in the neighboring town of Stratford, Connecticut. His father's parents came from Norway and his mother's parents from Sweden. Olsen began his career working summers in a machine shop. Fixing radios in his basement gave him the reputation of a neighborhood inventor.

After serving in the United States Navy between 1944 and 1946, Olsen attended the Massachusetts Institute of Technology, where he earned both a BS (1950) and an MS (1952) degree in Electrical engineering.[6]

Career

pre-DEC

During his studies at MIT, the Office of Naval Research of the United States Department of the Navy recruited Olsen to help build a computerized flight simulator.[citation needed] Also while at MIT he directed the building of the first transistorized research computer. Olsen was an engineer who had been working at MIT Lincoln Laboratory on the TX-2 project.[7]

Olsen's most important connection to Project Whirlwind was his work on the *Memory Test Computer* (MTC), described as "a special purpose computer built to test core memory for the Whirlwind."[8] Unlike the 18-bit TX-0, which was "designed to be a predecessor for a larger 36 bit machine, the TX-2," Whirlwind and the MTC used 16 bits.[8]

Digital Equipment Corporation

In 1957, Olsen and an MIT colleague, Harlan Anderson, decided to start their own firm. They approached American Research and Development Corporation, an early venture capital firm, which had been founded by Georges Doriot, and founded Digital Equipment Corporation (DEC) after receiving $70,000 for a 70% share. In the 1960s, Olsen received patents for a saturable switch, a diode transformer gate circuit, an improved version of magnetic core memory, and the line printer buffer.[citation needed] (Note that MIT professor Jay W. Forrester is generally credited with inventing the first practical magnetic core memory).

Olsen was known throughout his career for his management style and his fostering of engineering innovation. Olsen's valuing of innovation and technical excellence spawned and popularized techniques such as engineering matrix management, that are broadly employed today throughout many industries.[9] Olsen valued humility, he drove an economy car and kept a simple office in an old mill building. He also was an accomplished pilot and flew his own plane.[10]

In 1977, referring to computers used in home automation at the dawn of the home computer era, Olsen is quoted as saying "There is no reason for any individual to have a computer in his home."[11][12][13][14][15] Olsen admitted to making the remark, even though he says his words were taken out of context and he was referring to computers set up to control houses, not PCs.[13] According to Snopes.com, "the out-of-context misinterpretation of Olsen's comments is considered much more amusing and entertaining than what he really meant, so that is the version that has been promulgated for decades now".[16]

In 1986, Fortune Magazine named Olsen "America's most successful entrepreneur",[17] and the same year he received the IEEE Engineering Leadership Recognition Award.[18] Olsen was the subject of a 1988 biography, *The Ultimate Entrepreneur: The Story of Ken Olsen and Digital Equipment Corporation* written by Glenn Rifkin and George Harrar.

In 1993, the Institute of Electrical and Electronics Engineers awarded Olsen their IEEE Founders Medal.[citation needed]

He was inducted as a Fellow of the Computer History Museum in 1996. He was awarded the Vermilye Medal in 1980. He was inducted as an Honorary Member of UPE (the International Honor Society for the Computing and Information Sciences) on October 8, 1975.[citation needed]

In 2011, he was listed at #6 on the MIT150 list of the top 150 innovators and ideas from MIT for his work on the minicomputer.[19]

Later career history

Commencing in 1987 Olsen in public appearances described UNIX as "snake oil".[20] Some believed he was making a general characterization of UNIX, while others believed he was specifically referring to its marketing exaggerating its benefits.[21] While Olsen believed VMS was a better solution for DEC customers and often talked of the strengths of the system, he did approve and encourage an internal effort to produce a native BSD-based UNIX product on the VAX line of computers called Ultrix. However, this line never got enthusiastic comprehensive support at DEC.[citation needed]

Olsen was forced to retire from DEC, stepping down as president in 1992.[22][23] He subsequently became the chairman of Advanced Modular Solutions. Olsen was also a major contributor to The Family, a religious and political organization.[24]

Olsen was a trustee of Gordon College in Wenham, Massachusetts.[25] There, the **Ken Olsen Science Center** was named after him in 2006,[26] and dedicated on 27 September 2008. Its lobby features a *Digital Loggia of Technology*, documenting Digital's technology and history, and an interactive kiosk to which former employees have submitted their stories.

Death

Olsen died while in hospice care in Indianapolis, Indiana on February 6, 2011, aged 84. Gordon College, where he was a trustee and board member, announced his death, but did not reveal the cause.[3][27] His family also did not comment on any details surrounding his death.[2]

Awards

- 1993: Institute of Electrical and Electronics Engineers in 1993 awarded Olsen the IEEE Founders Medal.[citation needed]
- 1996: The Computer History Museum in 1996 named Olsen a Museum Fellow "for his introduction of the minicomputer and co-founding of Digital Equipment Corporation (DEC)."[28]

1988 Book - The Ultimate Entrepreneur - The Story of Ken Olsen and Digital Equipment Corporation

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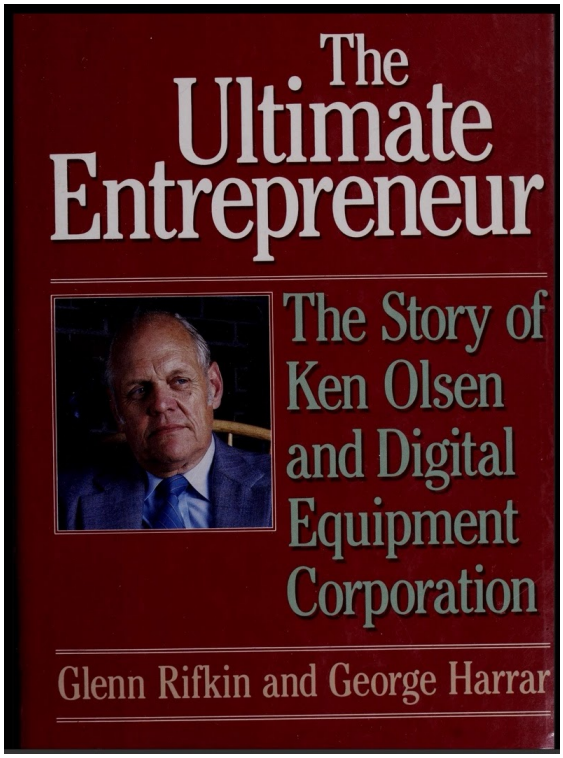

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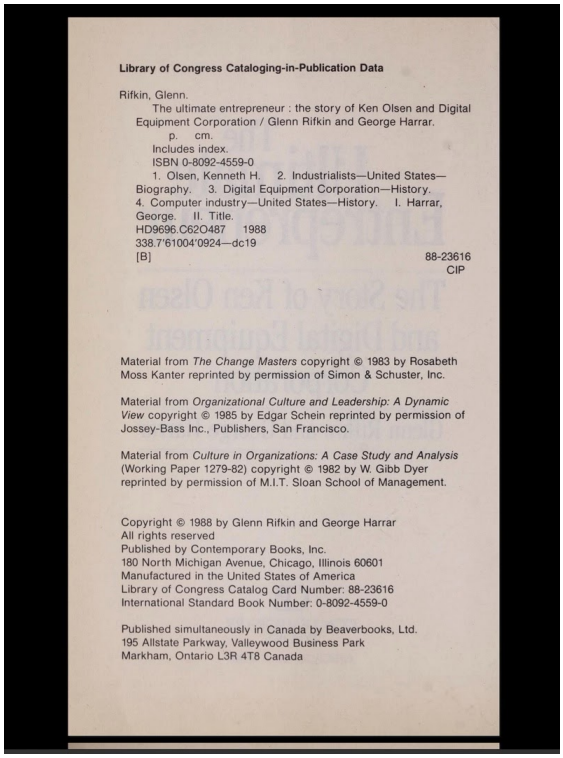

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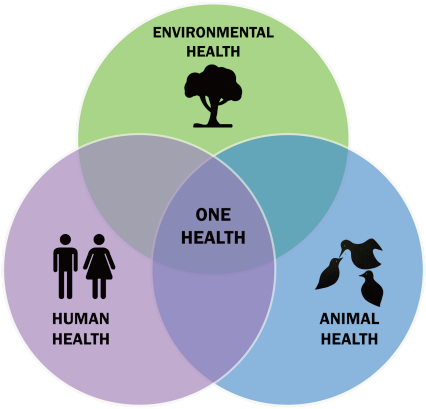
One Health



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Wikipedia One Health

The **One Health** initiative is overseen by the One Health Commission (a**a globally focused organization dedicated to implementing One Health and One Health actions around the world)**

Associations

- Vision of what "One Health" is was based on the life work of these scientists
  - **Dr. James Hahn Steele (born 1913)**
  - **Dr. Calvin Walter Schwabe (born 1927)** <- Note.. no mention of climate or environment

https://www.cdc.gov/onehealth/basics/history/index.html

Saved Wikipedia (Feb 11, 2021) - One Health

Source - [HK004Y][GDrive]

One Health is at the intersection of human health, animal health, and environmental health.

One Health is "the collaborative efforts of multiple disciplines working locally, nationally, and globally, to attain optimal health for people, animals and our environment", as defined by the One Health Initiative Task Force (OHITF).[1]

History

[The] Greek physician Hippocrates (c. 460 BCE – c. 370 BCE) in his text "On Airs, Waters, and Places"[,] promoted the concept that public health depended on a clean environment.[3] In the mid-1800s, Rudolf Virchow, a physician, recognized the link between animal and human medicine, came up with the term zoonosis to describe a disease that can be passed from animals to humans, and actively advocated for veterinary medical education.[4] **The founding of the Veterinary Public Health Division at the Centers for Disease Control and Prevention (CDC) in 1947 by [Dr. James Hahn Steele (born 1913)], a veterinarian trained in public health, contributed to the understanding of how diseases are spread between animals and humans, or the epidemiology of zoonotic diseases.[4] [Dr. Calvin Walter Schwabe (born 1927)], another veterinarian trained in public health, coined the term One Medicine in a veterinary medical textbook in 1964, which reflects the similarities between animal and human medicine and stresses the importance of collaboration between veterinarians and physicians to help solve global health problems.[4] In 2004, The Wildlife Conservation Society held a conference at Rockefeller University in New York called One World, One Health, out of which the twelve Manhattan Principles were created.[5][6]** These principles highlighted links between humans, animals, and the environment, how these links are integral to understanding disease dynamics, and the importance of interdisciplinary approaches to prevention, education, investment, and policy development.[4]

interdisciplinary approaches to prevention, education, investment, and policy development.[9]

Due to global scares surrounding the H5N1 influenza outbreaks of the early-mid 2000s, the American Veterinary Medical Association established a One Health Initiative Task Force in 2006, the American Medical Association passed a One Health resolution to promote partnering between veterinary and human medical organizations in 2007, and a One Health approach was recommended for responses to global disease outbreaks in 2007.[5][4] Building on these initiatives, the Food and Agriculture Organization (FAO), World Organization for Animal Health (OIE), and World Health Organization (WHO) came together with the United Nations Children's Fund (UNICEF), United Nations System Influenza Coordination, and the World Bank to develop a framework entitled "Contributing to One World, One Health-A Strategic Framework for Reducing Risks of Infectious Diseases at the Animal-Human-Ecosystems Interface" in 2008, reiterating recommendations for a One Health approach to global health.[5][4] This framework was expanded and the aforementioned organizations moved into developing implementable policies surrounding One Health at the Stone Mountain Meeting, which was held in May 2010 in Georgia.[5][4]

The first international meetings with the topic of One Health were held in 2011 in both Africa and Australia.[5][4] In 2012, Barbara Natterson-Horowitz, a physician, and Kathryn Bowers, a science journalist, published the book Zoobiquity, which highlights case studies of parallels between animal and human health.[7] This book has spear-headed interdisciplinary research initiatives as well as a Zoobiquity conference series which have been held both in the United States and internationally.[8][9] In 2016, The [**One Health Commission**], One Health Platform, and One Health Initiative Team deemed International One Health Day to be November 3.[10] Organizations can submit event details for One Health Day through the One Health Commission's website for global recognition.[11]

In 2019, Senator Tina Smith and Representative Kurt Schrader introduced the Advancing Emergency Preparedness Through One Health Act into the United States Senate and House of Representatives, respectively.[12][13] This bi-partisan piece of legislation would require that the Department of Health and Human Services, Department of Agriculture, and other federal agencies develop a coordinated plan to create a One Health Framework to help prepare responses to zoonotic disease and prevent disease outbreaks.[14]

Leading organizations

The [**One Health Commission**] is a 501(c)3 non-profit organization with the mission to connect individuals and create relationships across human, animal, and environmental health sectors, as well as to educate the public about these issues with the intent to improve global health.[15][16] In 2007, Roger K. Mahr from the American Veterinary Medical Association, Jay H. Glasser from the American Public Health Association, and Ronald M. Davis from the American Medical Association came together as liaisons with other health science professionals, academics, students, government workers, and industry scientists to create a task force and have teleconferences to discuss One Health.[17][18] This One Health Initiative Task Force created a report in 2008 which outlined recommendations to create a joint steering committee, implement improved communications efforts, plan national One Health studies, develop a One Health Commission, create advisory teams, establish national meetings, and engage medical, veterinary, and public health students.[19][20] The One Health Commission was officially chartered in Washington D.C. in 2009, with Roger Mahr as the founding CEO.[17] A request for proposal for an institutional partner was put forth in 2010, and Iowa State University was selected to be the main site for operations.[17] In 2013, Roger Mahr retired from the commission and the operations site moved to the Research Triangle of North Carolina, where it currently resides.[17] The current executive director is Cheryl Stroud, a veterinarian, who has held the position since 2013.[21]

The **One Health Initiative** is an interdisciplinary movement to create collaborations between animal, human, and environmental health organizations including the American Veterinary Medical Association, American Medical Association, Centers for Disease Control and Prevention, United States Department of Agriculture, and the United States National Environmental Health Association, among others.[22] The website was created by a pro bono team of Laura H. Kahn, Bruce Kaplan, [**Dr. Thomas Patrick Monath (born 1940)**], Jack Woodall, and Lisa A. Conti to create an email distribution list as well as a repository for news and information pertaining to One Health.[23] Currently, 1,252 individuals from 76 countries are on the email list, and 972 individuals are on their initiative supporter list.[23]

The **One Health Platform** is a scientific reference network which unites researchers and experts of One Health to better understand and prepare for zoonotic disease outbreaks from animals to humans and antimicrobial resistance, including a better understanding of environmental factors that impact disease dynamics.[24] The organization has nine objectives, which include disseminating research results at biennial meetings, identifying knowledge gaps in the field, engaging policy makers, establishing a Bio Threats Scanning Group to connect One Health and global health security, share data, serve as a reference network to the government, foster collaborations, and implement policies, and increase awareness during One Health Day.[25] The management board is made up of Ab Osterhaus, John Mackenzie and Chris Vanlangendonck.[26] The One Health Platform is responsible for organizing the World One Health Congress meeting each year.[27]

The World Health Organization (WHO) was created on April 7, 1948 and has since expanded to include 150 country offices and six regional offices in addition to its headquarters in Geneva, Switzerland.[28] The WHO is the main authority for global health within the United Nations.[29] The WHO was a partner in the 2008 establishment of a strategic One Health framework for approaching global health problems.[5][4] In September 2017, a feature page for One Health was included on the WHO website, defining One Health and highlighting important topic areas such as food safety, zoonotic disease, and antimicrobial resistance.[30]

The World Organization for Animal Health was created as the Office International des Epizooties (OIE) via an international agreement signed on January 25, 1924 out of a need to combat animal disease outbreaks.[31] It officially became the World Organization for Animal Health in 2003, but retained its old acronym, and is headquartered in Paris, France.[31] The OIE has 182 member countries as of 2018 and is managed by a World Assembly of Delegates which includes representatives of each member country.[31] It was also a partner in establishing a strategic One Health framework in 2008.[5][4] The OIE works to maintain transparency surrounding global animal disease, collect and distribute veterinary information, publish international trade standards for animals/animal products, improve veterinary services globally, and to promote animal welfare and food safety.[32] Along with the WHO, the OIE hosts workshops about how to implement One Health networks and practices to improve health services in member countries.[33]

The Food and Agriculture Organization of the United Nations (FAO) is an agency of the United Nations, founded in 1945, to address global food security needs.[34] It is an organization that represents 194 member countries.[35] In 2011, the FAO put forth a strategic action plan for One Health, which had the objective to strengthen food security by improving animal production systems and veterinary services and called for action in improving collaborations between animal, human, and environmental health sectors.[36] The FAO works closely with the OIE and WHO, referred to all together as the Tripartite organizations, and published a new guide to approaching zoonotic disease with a One Health framework in 2019.[37]

The Centers for Disease Control and Prevention (CDC), located in Atlanta, Georgia, is an agency within the United States Department of Health and Human Services. The CDC was founded in 1946 by Joseph Mountin to prevent the spread of malaria.[38] The CDC created a One Health Office in 2009, becoming the

Services. The CDC was founded in 1946 by Joseph Mountin to prevent the spread of malaria.[38] The CDC created a One Health Office in 2009, becoming the first United States federal agency to have an office dedicated to this field.[39] This office works alongside other animal, human, and environmental health organizations both within the United States and across the world in order to increase the awareness of One Health and develop tools to help strengthen One Health movements.[39] The CDC One Health Office is involved with multiple initiatives, including working to implement a Zoonotic Disease Prioritization process, creating Global Health Security Agenda Action Packages, overseeing the Zoonoses Education Coalition, developing guidelines with the National Association of State Public Health Veterinarians, and helping educate youth involved with agriculture about influenza.[40] Additionally, the CDC One Health Office hosts monthly webinars, entitled the Zoonoses and One Health Updates Calls, to educate audiences about One Health issues including food safety, antimicrobial resistance, and recent disease outbreaks.[40]

International efforts

The One Health Zoonotic Disease Prioritization process is led by the CDC, holding workshops internationally to prioritize which zoonotic diseases are of the most concern and helping countries develop action plans to address those diseases.[41] The process involves 3-6 neutral facilitators representing human, animal, and environmental health sectors, up to 12 voting members which represent human health/public health, agriculture/livestock, wildlife/fisheries, the environment and other relevant government sectors, and 10-15 advisors from international organizations such as the CDC, WHO, FAO or OIE, academic partners, NGOs or other government sectors not directly involved in zoonotic diseases.[41] The CDC One Health Office trains facilitators and it takes months to prepare for a workshop to acquire resources, identify participants, review zoonotic diseases and confirm logistics.[41] Completed workshops have been held in a variety of countries including Pakistan, Tanzania, Thailand, Uzbekistan, China, and the United States with more workshops upcoming.[42] Diseases most commonly prioritized worldwide include rabies, brucellosis, influenza, Ebola virus, and Rift Valley fever.[42]

Additional organizations promoting international One Health efforts include the World Health Organization, Food and Agriculture Organization, World Organization for Animal Health,[43] The International Federation for Animal Health,[44] Global Alliance for Rabies Control,[45] New Zealand Centre for Conservation Medicine (NZCCM),[46] Hubnet in Asia[47] the One Health Global Network,[48] the University of California One Health Center,[49] Academic Hospital Utrecht and Utrecht Life Sciences [50] and the Infection Ecology and Epidemiology Network, Uppsala, Sweden.[51]

https://www.onehealthcommission.org/

https://www.onehealthcommission.org/documents/filelibrary/sponsors/OHC_2Pager__102819_F5CEFD30DB183.pdf

b asically - we need to get serious about Lyme, but not admit it is a lab leak, nor allow people to talk antibiotics

https://www.archive.onehealthinitiative.com/taskForce.php

https://www.avma.org/resources-tools/one-health

https://avmajournals.avma.org/doi/pdfplus/10.2460/javma.233.2.259

task report PDF - wow, sounds like one health was hijacked if you ask me

https://www.cabi.org/cabreviews/FullTextPDF/2017/20173134856.pdf

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http://entnemdept.ufl.edu/Hodges/als4161/Secure/PDF%20Files/Articles/EmergingInfections.pdf

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https://drive.google.com/file/d/1cVtEEqytFvKELeMo263inEf3W_R6Lc4m/view?usp=sharing

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Zoonoses and Public Health

MEETING REPORT

Emerging Infections: A Tribute to the One Medicine, One Health Concept

R. E. Kahn[1], D. F. Clouser[2] and J. A. Richt[2]

[1] Avian Flu Action, Warrington, Cheshire, UK
[2] Diagnostic Medicine/Pathobiology Department, College of Veterinary Medicine, Kansas State University, Manhattan, KS, USA

Impacts

- A symposium on 'Emerging Infections: A Tribute to the One Medicine, One Health Concept' was held on 13 and 14 November 2008 at Kansas State University, Manhattan, Kansas, USA. Kansas State is part of the 'Kansas City Animal Health Corridor', with its universities and some 130 companies controlling one-third of the expenditure on animal health in the world.
- This Meeting Report with summaries of all 32 presentations stresses how human and veterinary medicine are evolving together, sharing research models for emerging pathogens, prion diseases, bunya and influenza viruses and emerging/re-emerging diseases.
- Mitigating zoonoses will require an integrated approach linking effective surveillance with environmental awareness and research to develop antiviral therapy and new vaccines, often within a perspective of systems biology.

Keywords:
Zoonotic disease; pathogens; prions; bunya viruses; influenza viruses; zoonotic infections

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Summary

Events in the last decade have taught us that we are now, more than ever, vulnerable to fatal zoonotic diseases such as those caused by haemorrhagic fever viruses, influenza, rabies and BSE/vCJD. Future research activities should focus on solutions to these problems arising at the interface between animals and humans. A 4-fold classification of emerging zoonoses was proposed: Type 1: from wild animals to humans (Hanta); Type 1 plus: from wild animals to humans with further human-to-human transmission (AIDS); Type 2: from wild animals to domestic animals to humans (Avian flu) and Type 2 plus: from wild animals to domestic animals to humans, with further human-to-human transmission (Severe Acute Respiratory Syndrome, SARS). The resulting holistic approach to emerging infections links microbiology, veterinary medicine, human medicine, ecology, public health and epidemiology. As emerging 'new' respiratory viruses are identified in many wild and domestic animals, issues of interspecies transmission have become of increasing concern. The development of safe and effective human and veterinary vaccines is a priority. For example, the spread of different influenza viruses has stimulated influenza vaccine development, just as the spread of Ebola and Marburg viruses has led to new approaches to filovirus vaccines. Interdisciplinary collaboration has become essential because of the convergence of human disease, animal disease and a common approach to biosecurity. High containment pathogens pose a significant threat to public health systems, as well as a major research challenge, because of limited experience in case management, lack of appropriate resources in affected areas and a limited number of animal research facilities in developed countries. Animal models that mimic certain diseases are key elements for understanding the underlying mechanisms of disease pathogenesis, as well as for the development and efficacy testing of therapeutics and vaccines. An updated veterinary curriculum is essential to empower future graduates to work in an international environment, applying international standards for disease surveillance, veterinary public health, food safety and animal welfare.

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Provost's Lecture on Excellence in Scholarship

Dr Webster first pointed out that among the known 16 haemagglutinin (HA) and nine neuraminidase (NA) subtypes of influenza A virus, the HA and NA subtypes were equally important and that the spikes that attach the virus to the respiratory tract were constantly changing. One mating of two different influenza A viruses could lead to 256 different influenza viruses. Inter-pandemic influenza based on H3N2 and H1N1 subtypes together led to 35 000 deaths a year in the United States (Horimoto and Kawaoka, 2005; Salomon and Webster, 2009). Therefore, it was important to prepare, manufacture and utilize effective annual vaccines for influenza. Although last year's vaccine had not been very effective because of the late emergence of a new strain, it was hoped that changes would make this year's vaccine more effective. In seeking to identify and counteract influenza viruses, extra effort needed to be put into surveillance, as demonstrated in Derek Smith's maps of viral evolution (Enserink, 2008; Russell et al., 2008).

The human dimension of an influenza pandemic was evident in the New Zealand experience in 1918, when the Minister of Health declined to quarantine the SS Niagara because it was carrying the Prime Minister and the result was that Auckland became a 'City of the Dead' (Rice, 2005). The origin of that world-wide 1918–1919 influenza pandemic, which probably began at Fort Riley, near Manhattan, Kansas (Barry, 2006), is now better understood because of the work of Taubenberger et al. (2005) who had sequenced the virus. It was found to be closely related to classical swine influenza isolated by Shope. This complete sequencing of the original 1918 virus had been greatly assisted by the retired pathologist, Johan Hultin, who recovered tissues frozen in permafrost in Brevig, Alaska, from the mummified corpse of a woman who had died from influenza and sent them to Taubenberger's team at the Armed Forces Institute of Pathology in Rockville, Maryland (Rozell, 1999/2005). Kobasa et al. (2007) have demonstrated from their work with macaques that atypical host innate immune responses may have contributed significantly to the lethality of that virus.

Figure 1 below describes the ecology of influenza viruses, which begins in the intestinal and respiratory tracts of shorebirds and wild ducks, before spreading to other species. The Ruddy Turnstone is a key bird spreading the virus to other avian species, in the midst of its annual migration from South America to Northern Canada. The complexities of the transmission of influenza viruses requires special consideration not only of H5 which has evolved into 10 different families or 'clades', but also of the global spread of H7, H2N3 and especially of H9N2, 'the sleeper in Asia', which donates six of the eight genes for H5N1. The spread of these different influenza viruses has stimulated influenza vaccine development, which currently indicates that inactivated oil emulsion vaccines are best in poultry while cold-adopted live vaccines and inactivated vaccines are about equally efficacious in humans; however, numerous issues remain to be resolved in the context of MDCK cells, tissue culture vaccines, adjuvants and for novel vaccine formulation (Hoffmann et al., 2000; Belshe, 2007).

The pros and cons for stockpiling human vaccines are finely balanced. The opposition to stockpiling is based on the awareness that any 'pre-pandemic' vaccine is unlikely to match the dominant strain that emerges to cause a pandemic. Furthermore, because of immune potentiation (an aberrant antibody response that increases virus uptake by cells), there is the possibility that a 'pre-pandemic' vaccination could lead to more serious disease signs. In addition, as the first infection in childhood with influenza virus leaves a lifelong immunological imprint (called 'antigenic sin'), later infection with antigenically related viruses can cause recall of immune responses to the original virus rather than to subsequent drift variants. There are also manufacturing issues linked to both the scale of

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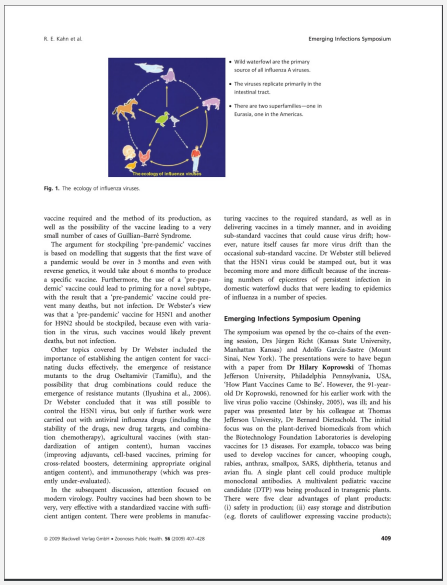

Fig. 1. The ecology of influenza viruses.

vaccine required and the method of its production, as well as the possibility of the vaccine leading to a very small number of cases of Guillian–Barré Syndrome.

The argument for stockpiling 'pre-pandemic' vaccines is based on modelling that suggests that the first wave of a pandemic would be over in 3 months and even with reverse genetics, it would take about 6 months to produce a specific vaccine. Furthermore, the use of a 'pre-pandemic' vaccine could lead to priming for a novel subtype, with the result that a 'pre-pandemic' vaccine could prevent many deaths, but not infection. Dr Webster's view was that a 'pre-pandemic' vaccine for H5N1 and another for H9N2 should be stockpiled, because even with variation in the virus, such vaccines would likely prevent deaths, but not infection.

Other topics covered by Dr Webster included the importance of establishing the antigen content for vaccinating ducks effectively, the emergence of resistance mutants to the drug Oseltamivir (Tamiflu), and the possibility that drug combinations could reduce the emergence of resistance mutants (Hyushina et al., 2006). Dr Webster concluded that it was still possible to control the H5N1 virus, but only if further work were carried out with antiviral influenza drugs (including the stability of the drugs, new drug targets, and combination chemotherapy), agricultural vaccines (with standardization of antigen content), human vaccines (improving adjuvants, cell-based vaccines, priming for cross-related boosters, determining appropriate original antigen content), and immunotherapy (which was presently under-evaluated).

In the subsequent discussion, attention focused on modern virology. Poultry vaccines had been shown to be very, very effective with a standardized vaccine with sufficient antigen content. There were problems in manufacturing vaccines to the required standard, as well as in delivering vaccines in a timely manner, and in avoiding sub-standard vaccines that could cause virus drift; however, nature itself causes far more virus drift than the occasional sub-standard vaccine. Dr Webster still believed that the H5N1 virus could be stamped out, but it was becoming more and more difficult because of the increasing numbers of epicentres of persistent infection in domestic waterfowl ducks that were leading to epidemics of influenza in a number of species.

Emerging Infections Symposium Opening

The symposium was opened by the co-chairs of the evening session, Drs Jürgen Richt (Kansas State University, Manhattan Kansas) and Adolfo García-Sastre (Mount Sinai, New York). The presentations were to have begun with a paper from **Dr Hilary Koprowski** of Thomas Jefferson University, Philadelphia Pennsylvania, USA, 'How Plant Vaccines Came to Be'. However, the 91-year-old Dr Koprowski, renowned for his earlier work with the live virus polio vaccine (Oshinsky, 2005), was ill; and his paper was presented later by his colleague at Thomas Jefferson University, Dr Bernard Dietzschold. The initial focus was on the plant-derived biomedicals from which the Biotechnology Foundation Laboratories is developing vaccines for 13 diseases. For example, tobacco was being used to develop vaccines for cancer, whooping cough, rabies, anthrax, smallpox, SARS, diphtheria, tetanus and avian flu. A single plant cell could produce multiple monoclonal antibodies. A multivalent pediatric vaccine candidate (DTP) was being produced in transgenic plants. There were five clear advantages of plant products: (i) safety in production; (ii) easy storage and distribution (e.g. florets of cauliflower expressing vaccine products);

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Dr Webster first pointed out that among the known 16 haemagglutinin (HA) and nine neuraminidase (NA) subtypes of influenza A virus, the HA and NA subtypes were equally important and that the spikes that attach the virus to the respiratory tract were constantly changing. One mating of two different influenza A viruses could lead to 256 different influenza viruses. Inter-pandemic influenza based on H3N2 and H1N1 subtypes together led to 35 000 deaths a year in the United States (Horimoto and Kawaoka, 2005; Salomon and Webster, 2009). Therefore, it was important to prepare, manufacture and utilize effective annual vaccines for influenza. Although last year's vaccine had not been very effective because of the late emergence of a new strain, it was hoped that changes would make this year's vaccine more effective. In seeking to identify and counteract influenza viruses, extra effort needed to be put into surveillance, as demonstrated in Derek Smith's maps of viral evolution (Enserink, 2008; Russell et al., 2008).

The human dimension of an influenza pandemic was evident in the New Zealand experience in 1918, when the Minister of Health declined to quarantine the SS Niagara because it was carrying the Prime Minister and the result was that Auckland became a 'City of the Dead' (Rice, 2005). **The origin of that world-**

wide 1918–1919 influenza pandemic, which probably began at Fort Riley, near Manhattan, Kansas (Barry, 2006), is now better understood because of the work of Taubenberger et al. (2005) who had sequenced the virus. It was found to be closely related to classical swine influenza isolated by Shope. This complete sequencing of the original 1918 virus had been greatly assisted by the retired pathologist, Johan Hultin, who recovered tissues frozen in permafrost in Brevig, Alaska, from the mummified corpse of a woman who had died from influenza and sent them to Taubenberger's team at the Armed Forces Institute of Pathology in Rockville, Maryland (Rozell, 1999/2005). Kobasa et al. (2007) have demonstrated from their work with macaques that atypical host innate immune responses may have contributed significantly to the lethality of that virus.

Figure 1 below describes the ecology of influenza viruses, which begins in the intestinal and respiratory tracts of shorebirds and wild ducks, before spreading to other species. The Ruddy Turnstone is a key bird spreading the virus to other avian species, in the midst of its annual migration from South America to Northern Canada. The complexities of the transmission of influenza viruses requires special consideration not only of H5 which has evolved into 10 different families or 'clades', but also of the global spread of H7, H2N3 and especially of H9N2, 'the sleeper in Asia', which donates six of the eight genes for H5N1. The spread of these different influenza viruses has stimulated influenza vaccine development, which currently indicates that inactivated oil emulsion vaccines are best in poultry while cold-adopted live vaccines and inactivated vaccines are about equally efficacious in humans; however, numerous issues remain to be resolved in the context of MDCK cells, tissue culture vaccines, adjuvants and for novel vaccine formulation (Hoffmann et al., 2000; Belshe, 2007).

The pros and cons for stockpiling human vaccines are finely balanced. The opposition to stockpiling is based on the awareness that any 'pre-pandemic' vaccine is unlikely to match the dominant strain that emerges to cause a pandemic. Furthermore, because of immune potentiation (an aberrant antibody response that increases virus uptake by cells), there is the possibility that a 'pre-pandemic' vaccination could lead to more serious disease signs. In addition, as the first infection in childhood with influenza virus leaves a lifelong immunological imprint (called 'antigenic sin'), later infection with antigenically related viruses can cause recall of immune responses to the original virus rather than to subsequent drift variants. There are also manufacturing issues linked to both the scale of vaccine required and the method of its production, as well as the possibility of the vaccine leading to a very small number of cases of Guillian–Barre´ Syndrome.

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The argument for stockpiling 'pre-pandemic' vaccines is based on modelling that suggests that the first wave of a pandemic would be over in 3 months and even with reverse genetics, it would take about 6 months to produce a specific vaccine. Furthermore, the use of a 'pre-pandemic' vaccine could lead to priming for a novel subtype, with the result that a 'pre-pandemic' vaccine could prevent many deaths, but not infection. Dr Webster's view was that a 'pre-pandemic' vaccine for H5N1 and another for H9N2 should be stockpiled, because even with variation in the virus, such vaccines would likely prevent deaths, but not infection.

Other topics covered by Dr Webster included the importance of establishing the antigen content for vaccinating ducks effectively, the emergence of resistance mutants to the drug Oseltamivir (Tamiflu), and the possibility that drug combinations could reduce the emergence of resistance mutants (Ilyushina et al., 2006). Dr Webster concluded that it was still possible to control the H5N1 virus, but only if further work were carried out with antiviral influenza drugs (including the stability of the drugs, new drug targets, and combination chemotherapy), agricultural vaccines (with standardization of antigen content), human vaccines (improving adjuvants, cell-based vaccines, priming for cross-related boosters, determining appropriate original antigen content), and immunotherapy (which was presently under-evaluated).

In the subsequent discussion, attention focused on modern virology. Poultry vaccines had been shown to be very, very effective with a standardized vaccine with sufficient antigen content. There were problems in manufacturing vaccines to the required standard, as well as in delivering vaccines in a timely manner, and in avoiding sub-standard vaccines that could cause virus drift; however, nature itself causes far more virus drift than the occasional sub-standard vaccine. Dr Webster still believed that the H5N1 virus could be stamped out, but it was becoming more and more difficult because of the increasing numbers of epicentres of persistent infection in domestic waterfowl ducks that were leading to epidemics of influenza in a number of species.

Emerging Infections Symposium Opening

The symposium was opened by the co-chairs of the evening session, Drs Ju¨rgen Richt (Kansas State University, Manhattan Kansas) and Adolfo Garcı´a-Sastre (Mount Sinai, New York). The presentations were to have begun with a paper from Dr Hilary Koprowski of Thomas Jefferson University, Philadelphia Pennsylvania, USA, 'How Plant Vaccines Came to Be'. However, the 91-yearold Dr Koprowski, renowned for his earlier work with the live virus polio vaccine (Oshinsky, 2005), was ill; and his paper was presented later by his colleague at Thomas Jefferson University, Dr Bernard Dietzschold. The initial focus was on the plant-derived biomedicals from which the Biotechnology Foundation Laboratories is developing vaccines for 13 diseases. For example, tobacco was being used to develop vaccines for cancer, whooping cough, rabies, anthrax, smallpox, SARS, diphtheria, tetanus and avian flu. A single plant cell could produce multiple monoclonal antibodies. A multivalent pediatric vaccine candidate (DTP) was being produced in transgenic plants. There were five clear advantages of plant products: (i) safety in production; (ii) easy storage and distribution (e.g. florets of cauliflower expressing vaccine products); (iii) needle-free ease of administering to humans and animals through various orifices; (iv) expression of multiple antigens in one plant; and (v) low cost and speed of production.

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Dr Robert G. Webster then tackled the question, 'H5N1 Avian Influenza: Has the Threat Been Overblown?' His basic answer was 'No', although the virus is now off the front pages of news reports. Avian influenza (AI) is caused by a negative sense RNA virus that possesses a segmented genome and since it has no proofreading mechanisms, replication is error-prone, resulting in antigenic variation. Among the HA subtypes, H5 is currently considered to have the highest capacity to cause pandemic influenza. The currently circulating highly pathogenic (HP) H5N1 virus emerged in Southern China in 1996 and was first detected on a goose farm in Guangzhou Province. In May 1997, the H5N1 virus killed six people in Hong Kong and was detected in wet markets in Hong Kong. The avian virus in its highly pathogenic form has now spread to multiple epicentres in over 60 countries and over 500 million poultry have died or been slaughtered.

It would appear that migratory birds are capable of spreading the virus, but are not the primary cause of the spread, and that 10 distinguishable clades are now being detected, largely in infected domestic poultry. However, it should be noted that domestic waterfowl appear to be the primary source of infection for poultry, although unhygienic conditions in commercial poultry farms and within wet markets are also playing an important role in the global spread of the virus. There is considerable dispute about the causes of the spread of the virus, but its high virulence is clear. While the virus is killing chickens often in less than a day, as well as ducks in 1–2 days, large numbers of people are not being killed because the virus does not at this time have the capacity to spread from human to human due in part to failure to reach the lower human respiratory tract (Van Riel et al., 2006; Shinya et al., 2006).

There are many different views, but key issues remain unresolved: What is the reservoir? Who are the spreaders? What is driving the antigenic diversity?

Ducks, especially domestic ducks placed in rice fields and then moved to other areas, have become a Trojan horse, carrying influenza viruses, but not being harmed by them, while transferring viruses in a form that is virulent in other species (Gilbert et al., 2008). Finkelstein et al. (2007) examined the common amino acids found in the Spanish 1918, Asian 1957 and Hong Kong 1968 pandemic viruses. There were 13 common amino acids, but only one of them has been found in the PB2 in the Asian H5N1 viruses. However, it should be noted that Finkelstein and his colleagues found changes in PB2, PA, NP, M1 and NS1. So far the H5N1 viruses have not yet acquired the amino acids associated with the past three pandemics.

The Asian H5N1 HPAI virus will probably transmit to poultry in the Americas soon, but the precise date and method of transmission cannot be predicted. There is a low probability that the means of transmission will be migratory birds, some probability from frozen meat, but a high probability of the spread of the avian virus from smuggled birds (including fighting cocks).

Malik Peiris (personal communication) has noted that there is currently a low probability of a highly lethal H5N1 human pandemic, but if it does occur its impact will be catastrophic if over 60% of infected people die, as is currently the situation for the limited number of human cases (Salomon and Webster, 2009).

Silvio Pitlik, MD (Rabin Medical Center, Beilinson Hospital, Petah Tikva, Israel) presenting 'One Health, One Medicine – A Clinician's Perspective', pointed out that prior to 1981, in the pre-AIDS era, there were only four papers listed in PubMed on emerging infections. However, there were now more than 1000 per year. The AIDS epidemic is the leading paradigm of emerging infections. Based on old literature data and more recently, on viral archaeology, the primal detection and immediate response to the epidemic was delayed by several decades. With the recent endorsement of the American Veterinary Medical Association of the 'One Health' initiative, the time had come for veterinarians, physicians and scientists to work together on many emerging zoonoses, especially HIV/AIDS (AVMA, 2008).

Dr Pitlik proposed a 4-fold classification of emerging zoonoses: Type 1: from wild animals to humans (Hanta); Type 1+: from wild animals to humans, with further human-to-human transmission (AIDS); Type 2: from wild animals to domestic animals to humans (Avian flu); and Type 2+: from wild animals to domestic animals to humans, with further human-to-human transmission (SARS). The resulting holistic approach to emerging infections links microbiology, veterinary medicine, human medicine, ecology, public health and epidemiology. All of these disciplines were important to understand how wild animals could transmit disease to both domestic animals and humans, as well as how domestic animals could transmit disease to humans.

The recently revived concept of 'one medicine, one health' implicates a multidisciplinary and co-ordinated response which promises to improve our capacity to deal more effectively with new emerging infections. Veterinarians and physicians can increasingly co-ordinate their efforts to cope with zoonotic threats. For example, during the large outbreak of West-Nile virus infections in Israel in 2000, a multidisciplinary team of public health specialists, veterinarians and physicians acted in a co-ordinated way to cope effectively with the outbreak. Also, in many sporadic cases of various zoonotic infections, a multidisciplinary approach resulted in a successful management of the clinical cases.

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In an overview, 'In Vivo Disease Modeling of High Containment Pathogens' Dr Heinz Feldmann (Rocky Mountain Laboratories, Division of Intramural Research Labs, National Institute of Allergies and Infectious Diseases, National Institutes of Health, Hamilton, Montana, USA) pointed out that high containment pathogens posed a significant threat to public health systems, as well as a major research challenge, because of limited experience in case management and a lack of appropriate resources. Dr Feldmann had recently moved from the Special Pathogens Program of the National Microbiology Laboratory of the Public Health Agency of Canada to become Laboratory Chief at the new biosafety level 4 laboratory at Rocky Mountain Laboratories (Backus, 2008). He explained that animal models which mimic disease are key elements for the understanding of the underlying mechanisms of disease pathology, as well as for the development and efficacy testing of therapeutics and vaccines. Studies in reservoir species are rare; and animal models which mimic the reservoir host and the transmission of the pathogen to humans are limited.

Small animal models, in particular the mouse, are the most feasible in high containment and they offer the most options for research due to greater access of immunological and genetic tools. However, their mimicry of human disease as well as their predictive value for therapeutic efficacy is often limited thereby making them, at best, valuable initial screening tools for pathophysiology, treatment and vaccine studies.

Future efforts need to focus on finding more relevant small animal models through pathogen adaptation or by the use of genetically altered host or pathogen species. In parallel, much needed immunological and genetic tools for new animal models should be developed. This would help reduce the numbers and use of large animal models in high containment which is associated with ethical issues, as well as higher exposure risks and higher expenses.

Recent research into the highly pathogenic Marburg and Ebola viruses suggests that fruit bats are a reservoir species (Leroy et al., 2005) carrying these viruses at a subclinical level, which with the appropriate stimulation (e.g. pregnancy, starvation or co-infection) could be reactivated and transmitted (Strong et al., 2008). Considerable progress has been made in developing a live, attenuated recombinant vaccine, making use of Cynomolgus macaques as animal models (Jones et al., 2005). Assessment of the recently reconstituted 1918 influenza virus resulted in high virulence for Cynomolgus macaques. Infected animals mounted an immune response, characterized by disregulation of the antiviral response that was insufficient for protection, indicating that atypical host innate immune responses may contribute to lethality (Kobasa et al., 2007).

Dr Albert Osterhaus (Erasmus University, Rotterdam, the Netherlands), presented a virological overview of 'Research on Respiratory Viruses'. As Morens et al. (2004) had pointed out, respiratory diseases and HIV/ AIDS were the two most significant causes of deaths from infectious diseases. It would require 'the ultimate virologist' to summarize the many new human respiratory viruses and consider how to control them. As emerging 'new' respiratory viruses are identified with increasing frequency in many wild and domestic animals, issues of interspecies transmission have become of increasing concern. For example, replication of highly pathogenic H5N1 AI virus associated with more or less severe signs and death has been has been documented in several species of wild ducks (Keawcharoen et al., 2008), domestic cats (Kuiken et al., 2006), red foxes (Reperant et al., 2008) and tigers and leopards (Keawcharoen et al., 2004). The development of safe and effective vaccines for humans and animals has become a priority and besides adjuvanted vaccines, recombinant modified vaccinia virus (Ankarastrains) vaccine proved to be a promising alternative vaccine candidate that could be used for the induction of protective immunity against various H5N1 influenza strains (Kreijtz et al., 2007). International collaboration and co-ordination of all stakeholders are essential for the future control of many emerging infections that cross the species barrier.

In a subsequent morning welcome to participants, Dr Jon Wefald, President of Kansas State University expressed his belief that the 'One Health, One Medicine, One World' theme is beginning to resonate around the world and that emerging problems require extensive collaboration between individuals and disciplines. Dr M. Duane Nellis, Provost of Kansas State University, praised the work of the Homeland Defense Food Safety and Security Team (Brown and King, 2008; Rhodes, 2008) and stressed the university-wide mission of Kansas State University to address the global food security crisis. Dr Ralph Richardson, Dean of the College of Veterinary Medicine, Kansas State University, spoke of the convergence of human disease, animal disease and

Richardson, Dean of the College of Veterinary Medicine, Kansas State University, spoke of the convergence of human disease, animal disease and biosecurity, focusing on the 'Kansas City Animal Health Corridor' between Manhattan, Kansas, Kansas City and Columbia, Missouri with its universities and some 130 companies controlling one-third of the expenditure on animal health in the world. The aim of the College of Veterinary Medicine was 'to reach excellent people, to collaborate and to do things of significance' (see http://www.vet.k-state.edu).

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Thomas Thornton, President of Kansas Bioscience Authority concluded the welcomes with a challenge to participants to work together on bioscience work, noting that funding for collaboration was available to those who were ready to 'walk the talk'. In his view, research was the foundation of a bioscience economy, especially as we have much to lose from an incident and much to gain from research. Manhattan, Kansas, with its new Biosecurity Research Institute, was on the final short list for the possible relocation of the National Bio and Agro-Defense Facility from Plum Island NY (Jolley, 2008). (Note: Manhattan, Kansas was selected in December 2008 by the Department of Homeland Security as the location of the new Bio and Agro-Defense Facility).

Dr Paul-Pierre Pastoret [World Organisation for Animal Health (OIE), Paris] concluded the Symposium Opening with a presentation, 'One World, One Health: An OIE Perspective'. Dr Pastoret expressed his strong support for the symposium and congratulated Dr Richt on the opening of his new laboratory. However, both OIE and the Food and Agricultural Organization (FAO) preferred the term 'One World, One Health' to 'One Medicine, One Health', because even though human and veterinary medicines are evolving hand-in-hand, there would always remain differences between them, due to philosophical and economic reasons. Two recent joint OIE/FAO publications set out the OIE/FAO vision (Vallat and Mallet, 2006; New Delhi, 2007). Earlier thematic issues of the OIE's Scientific and Technical Review have been devoted to zoonoses and wildlife (Brown, 2004; Hugh-Jones, 2006), as well as climate change (de la Rocque, 2008).

The OIE was created in 1924, with the aim of controlling the international spread of infectious animal diseases. From this original mission, a new mandate has emerged, to improve animal health worldwide, in 172 member countries and territories. This mandate can only be fulfilled if new institutional and technical mechanisms are developed at global, regional and national levels. To succeed, the OIE must now provide policy makers with the right information, arguments and tools in order for political will and good governance to be exercised effectively and in a sustainable manner.

Both food-borne and non-food-borne zoonoses are economically significant, as veterinary medicine works increasingly at the interface between human and animal health. A comprehensive review made at the beginning of this century identified 1415 species of infectious organisms known to be pathogenic to humans, including 538 bacteria and rickettsia, 307 fungi, 287 helminths, 217 viruses and prions and 66 protozoa (Cleaveland et al., 2001). Of these infectious organisms, 868 (61%) were classified as zoonotic; and 175 pathogenic species, of which 75% were zoonotic, were considered to be associated with emerging diseases, the vast majority coming from wildlife. In Dr Pastoret's view, the prevention and control of zoonoses would only be possible with effective implementation of OIE standards and guidelines linked to the World Trade Organization (2008) Agreement on Sanitary and PhytoSanitary measures.

Dr Pastoret reflected that even if animal medicine in the developed world seems nowadays more interested in food safety than food security, we should never forget that there are still developing countries where food security is a major problem. With regard to livestock production, world demand for animal protein (milk, eggs, meat) is expected to rise by 50% by 2020. This growing demand for animal protein will be fuelled by both an increase in the world's human population from 7 to 9 billions by 2050, as well as changing dietary habits for hundreds of millions of poor households in emerging countries who are joining the middle classes. Furthermore, livestock production, often threatened by diseases, plays a considerable role in the survival of poor rural communities in developing countries, where a large percentage of human population still depends on livestock breeding to survive. Effective control of animal diseases in developing countries would help provide access to valuable markets, which are currently closed to those countries not yet able to control or eliminate important so-called 'foreign animal' diseases.

Workshop I: Research Models for Emerging Pathogens

Dr James Swearengen (Association for Assessment and Accreditation of Laboratory Animal Care International, Frederick, Maryland, USA) began the workshop with a presentation entitled 'Animal Models of Infectious Disease: Challenges in Biocontainment'. He considered four challenges: (i) oversight of animal care and use; (ii) veterinary care; (iii) handling potential exposures; and (iv) risk assessment. Facing the first challenge begins with obtaining the necessary membership for the Institutional Animal Care and Use Committee (IACUC). The most problematic issue regarding IACUC membership is identifying a non-affiliated member with the necessary security clearances needed to review classified research proposals should the need arise. From a safety perspective, the IACUC can assist in identifying safety concerns during the protocol review process, especially when animals are expected to become ill and require more frequent handling. Furthermore, it is often difficult to define endpoint criteria, especially when clinical signs progress rapidly. Establishing effective endpoint criteria which do not rigidly confine the investigator should be the goal. Pilot studies may be a useful tool in collecting the information necessary for this purpose. Infectious diseases often result in pain or distress in animals that must be relieved. If analgesics are withheld, there must be a detailed justification for doing so. This justification should provide specific reasons why the analgesics would prevent the necessary data from being collected and the mechanism of their interference. The IACUC should scrutinize these justifications to ensure they have the information necessary to make an informed, science-based decision.

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Second, the strict entry and exit requirements of high containment make veterinary care and health monitoring very labor-intensive. Telemetry and video surveillance are often useful adjuncts to direct observations of animals. Extensive training and mentoring are critical to assuring good veterinary care can be provided safely and in a timely manner. Many times, financial incentives are necessary to obtain the highly trained staff needed to work in a high containment environment.

Third, historical data have shown that the two most significant routes of exposure of personnel to infectious agents in a laboratory setting are by aerosol and percutaneous inoculation (Rusnak et al., 2004a). Special attention should be given to the use of sharps (e.g. needles), sharp edges on equipment and caging and bites and scratches from animals. Risk categories and treatment options need to be established in extensive pre-exposure planning. One described method for pre-exposure planning involves developing categories of exposure risk (e.g. negligible to high) and then applying them in context of the route of exposure (Rusnak et al., 2004b). Animal studies bring with them a whole new set of risk factors when dealing with infectious organisms; and exposures to these organisms must be anticipated.

Fourth, risk assessment needs to be conducted frequently, in some cases daily, with recognition that new safety precautions might be required to face unexpected situations. For example, an animal's disposition can change quickly with the onset of clinical signs, requiring daily risk assessment and development of ways to mitigate new risks as they occur.

While new challenges and risks may occur in a highlevel biocontainment environment, diligent planning and forethought can substantially reduce these risks, as well as provide assurance of meeting regulatory requirements for using animals in research.

Dr Michael Katze (Department of Microbiology, Washington National Primate Center, University of Washington, Seattle, Washington, USA) asked 'Can Systems Biology and the Computer Save the World from the Next Pandemic' and responded 'Yes, but it better happen soon'. The viruses being investigated in Dr Katze's laboratories are influenza, Ebola, Marburg, Vaccinia, Herpes Simplex, Hepatitis C, SARS, measles, West Nile Virus (WNV), HIV-1, HIV-2, SIV (Simian immunodeficiency virus) and Lassa. A central question that Dr Katze raised was: 'Can we take advantage of systems biology, computational tools and mathematical models to help the world develop an AIDS vaccine, one quarter of a century after the emergence of HIV?' In his view, the failure to defeat AIDS was significant evidence that virologists were not doing a good job developing effective drugs and vaccines.

Admittedly, the host response to any virus infection is highly complex. Systems biology, when properly understood and practised, could tackle that complexity. A helpful definition of systems biology had been given by Denis Noble (2008): 'Systems biology...is about putting together rather than taking apart, integration rather than reduction. It requires that we develop ways of thinking about integration that are as rigorous as our reductionist programs, but different.... It means changing our philosophy, in the full sense of the term'. In Dr Katze's view, virologists could use systems biology and genomics to: (i) study the global impact of virus infection on host gene expression; (ii) discover cellular regulatory pathways targeted by viruses; (iii) identify new cellular targets for antiviral therapy; (iv) develop new vaccines; and (v) make new discoveries (Tan et al., 2007). In his own laboratory, a long range goal was to develop an 'Influenza and Respiratory Virus Compendium', which would ensure the creation of a centralized data base to catalogue all transcriptional events in cells and organs infected by influenza and other virulent respiratory viruses.

A systems biological tool box should contain four key tools: (i) sequencing of genomes (i.e. the complete set of genetic material in the cell of a living organism); (ii) the use of microarrays (i.e. a high throughput technique to examine global gene expression in cells and tissues at the RNA level; (iii) the use of proteomics (i.e. a high throughput technique to examine global gene expression in cells and tissues at the protein level); and (iv) the use of bioinformatics (i.e. computational biology to help make sense of massive data sets). At times, the challenge could appear overwhelming, but it was now clear that an integrated approach to viral respiratory disease is a complex three-step process: (i) the use of cell culture, mouse and other animal models to study viral infection; (ii) the combination of traditional histophathological, virological and biochemical approaches with functional genomics and proteomics; and (iii) obtaining the signatures of virulence and insights into mechanisms of host defence response, viral evasion and pathogenesis (Katze et al., 2008).

Much had been achieved. We can indeed identify molecular signatures of disease progression. In select cases, we can predict disease progression and identify prognostic biomarkers. We can distinguish between infections by highly pathogenic and low pathogenic viruses. We can define distinct mechanisms by which viruses evade the host defences.

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Much remains to be achieved. The limitations of classical hypothesis-driven approaches should be recognized. The computer needs to be used for data analysis, not just e-mail and PowerPoint. Our work is not simply about the virus and virus replication and viral encoded inhibition of host signalling. We need to recognize that a very early and uncontrolled innate and inflammatory host response often causes the pathology associated with virus infection (even in AIDS): kinetics is vital. To develop effective antiviral therapies and vaccines, we should be targeting host pathways rather than viral enzymes. It is important that more computer biologists work together with biologists, as virologists and computational types learn to trust each other.

Opening the symposium in place of Dr Koprowski, Dr Adolfo Garcı´a-Sastre (Department of Microbiology, Department of Medicine, and Emerging Pathogens Institute, Mount Sinai School of Medicine, New York, USA) explained his current research on the 'Inhibition of Type 1 IFN Responses by RNA Viruses'. The type I interferon (IFN) system is one powerful first line of innate immune defence against virus infections. However, many, if not all, viruses, have acquired during evolution IFN antagonist proteins that overcome this host antiviral response. For influenza viruses, the viral non-structural NS1 protein prevents IFN production, while for dengue virus and for nairoviruses, the viral polymerase proteins have acquired domains responsible for inhibition of the IFN system. Interestingly, although all three viruses inhibit the IFN system by diverse and distinct mechanisms, all of them target components of the ubiquitination machinery to achieve IFN antagonism. Subversion of ubiquitination pathways appears to be a general means by which RNA viruses can evade innate immunity.

Dr Thomas Geisbert (Boston University Medical School of Medicine, Boston Massachusetts, USA) presented 'Progress in the Development of VSV-Based Vaccines to Prevent and Treat Ebola and Marburg Hemmorhagic Fever'. He explained that there were currently at least five different vaccine systems showing promise in protecting non-human primates against Ebola and Marburg viruses. These five approaches to filovirus vaccines were based on virus-like particles, DNA, two replication-defective viral vector systems and a replicating virus vector. In the context of replicating virus vectors, a vaccine based on recombinant vesicular stomatitis virus (rVSV) has been shown to protect nonhuman primates against Ebola and Marburg vaccines, eliciting completely protective immune responses, as well as being effective when the vaccine was administered as a post-exposure treatment (Jones et al., 2005; Daddario-DiCaprio et al., 2006a, Daddario-DiCaprio et al., 2006b).

There were specific advantages to using a rVSV as a vaccine vector: (i) Vaccination with a live virus characteristically elicits strong humoral and cellular responses and results in production of long-lasting memory B cells and T cells; (ii) VSVs are able to accommodate large gene inserts and multiple genes in their genomes without dramatically affecting virus growth; no upward limit to the amount of foreign sequence inserted in the VSV genome has been identified; (iii) VSV's singlestranded RNA genome does not undergo reassortment and therefore lacks the potential of reassorting with wild type viruses in vivo; (iv) VSV replicates within the cytoplasm of infected cells and does not undergo genetic recombination; and (v) the seroprevalence of VSV antibodies within the general human population is extremely low and there is a lack of serious pathogenicity in humans.

In the midst of this encouraging initial research, certain questions now need to be investigated: Is there interference between vaccine components? What dose confers protection? What is the mechanism of protection? In the context of safety, what happens with individuals with altered immune systems? Regarding post-exposure treatment, what combination approaches would improve protection and extend the therapeutic window?

Dr Chieko Kai (Institute of Medical Science, University of Tokyo, Japan) outlined the 'Molecular Determinants of Nipah Virus Pathogenicity'. Nipah virus (NiV) is a paramyxovirus that was first discovered in 1999 as a zoonotic virus during an outbreak of infection in pigs and humans in Malaysia. More than a million pigs died or were killed. The biological property of NiV to infect a wide range of hosts and to produce a disease causing significant mortality in humans has made NiV infections a public heath concern.

However, the molecular mechanisms for the high pathogenicity have not yet been fully clarified. Dr Kai and her colleagues have established a reverse genetic system that enabled the rescue of replicating recombinant NiVs from a cloned cDNA, and showed that the rescued rNiV retained the severe pathogenicity in an animal model by experimental infection. By generating a recombinant NiV expressing EGFP they suggested that additional factors

pathogenicity in an animal model by experimental infection. By generating a recombinant NiV expressing EGFP, they suggested that additional factors besides the cellular receptor are required for full NiV replication (Yoneda et al., 2006).

They further investigated accessory proteins of NiV (V, W and C). These accessory proteins of paramyxoviruses have been suggested to be involved in pathogenicity; and the P, V and W proteins of NiV have been shown to function as inhibitors of IFN signalling. To study the role of these accessory proteins in NiV infection, they generated recombinant NiV lacking V, W or C protein by the reverse genetics system. All the recombinant viruses replicated well in cell culture, although the maximum titres of them were slightly different compared with the parental rNiV. The virulence of the recombinant viruses in a hamster model is now under investigation. She concluded that the reverse genetics for NiV provides a powerful tool for the analysis of the molecular mechanisms of pathogenicity and cross-species infection.

Dr James Robl (Hematech Inc, Sioux Falls, South Dakota, USA), with his colleagues Yoshimi Kuroiwa and Poothapillai Kasinathan, presented 'Production of Recombinant Human Polyclonals in Transchromosomic Cattle'. They explained how a genetically modified bovine system had been created for the production of hyperimmune human polyclonal antibodies. Because of respective limitations associated with using humans as donors, many potential applications of human polyclonal antibodies have not previously been realized. Therefore, it was necessary to incorporate into the cow genome the entire unrearranged human heavy and light chain immunoglobulin loci, as well as inactivate the bovine immunoglobulin genes. A cloned embryo was transplanted into a surrogate cow; transgenic calves were born; the genetically modified cows were immunized; and bulk material was collected.

The detailed process for the production of fully human polyclonal antibodies in cows has a number of important steps. The human immunoglobulin genes are introduced into the bovine genome using a human artificial chromosome (HAC) vector constructed from fragments of hChr14 (heavy chain) and hChr 22 (lambda light chain). The HAC vector is introduced into fetal bovine fibroblast cells using a microcell-mediated chromosome transfer approach. Modified cells are used for embryonic cloning to produce live transchromosomic calves. In this process, the HAC is retained at a high rate and immunoglobulin genes undergo rearrangement and express human antibody. Gene inactivation is performed using a sequential targeting system for fetal fibroblast cells to knock out both alleles of the bovine gene encoding immunoglobulin.

In a more general context, it is useful to note that with genetic modification technologies, multiple genetic modifications can be made without breeding. Genes can be targeted (e.g. bovine genes can be knocked out) and microchromosome transfers can be used to transfer large sequences of DNA (Kuriowa et al., 2004). Thus, the prion gene can be knocked out of cattle, eliminating BSE susceptibility and potential transmittance (Richt et al., 2007). The immunogloblulin heavy chain gene can also be knocked out of cattle, eliminating competition with human antibody production (Kuriowa et al., 2002).

The practicalities of gene modification are straightforward. The gene targeting approach requires two and a half months for one targeting. There is successful targeting of both active and silent genes, with allele-specific targeting. Calves are successfully produced following three rounds of sequential cloning and there is rapid generation of multiple targeting events without germ line transmission. A full health evaluation of each cow is made at planned intervals covering growth rate and a physical examination, blood chemistry, haematology, histopathology, immune system function, brain function and reproduction. It takes about 18 months to produce a live calf.

The HAC vectors used in this process are autonomous replicating vectors, which can carry Mb of DNA and there is no requirement for integration into endogenous chromosomes. The three essential components are a centromere, two telomeres and origins of replication.

The outcome of this on-going research has been that live homozygous knockout calves have been produced by embryonic cloning. Successful application of these technologies will be critical for the development of a bovine system for production of hyperimmune human polyclonal antibodies. These bovine-derived human polyclonal antibodies have therapeutic applications for infectious disease, immune deficiency, organ rejection, toxin/venom neutralization, autoimmune diseases, cancer and biodefense.

Workshop II: Prion Diseases

Dr Cristina Casalone (National Reference Centre of BSE, Istituto Zooprofilattico di Piemonte, Liguria e valle d'Aosta, Italy) presented 'BSE and BASE: An Update', based on her research with her colleagues Maria Caramelli, Cristiano Corona and Chiara Porcario. Bovine spongiform encephalopathy (BSE or Mad Cow Disease) had long been thought to be caused by a single prion strain. Starting from 2004, however, approximately 40 atypical BSE cases, referable to two different strains, defined as H- and L-type, were identified worldwide. Dr Casalone described the two types of surveillance that the Reference Centre in Italy conducts: passive and active. To date, Italy has reported 142 positive cases of BSE from 5 million tested cases with most cases being reported before 2003. In 2004, Dr Casalone's group in collaboration with Dr Gianluigi Zanusso (Department of Neurological and Visual Science, Verona) and Dr Fabrizio Tagliavini (Istituto Neurologico 'Carlo Besta') discovered a different type of BSE very unlike previously reported classical BSE (cBSE) cases. The 'new' BSE was termed Bovine Amyloidotic Spongiform Encephalopathy (BASE) and described as an L-type since the unglycosylated protein part migrated lower. Dr Casalone noted that BASE localizes in the forebrain, whereas cBSE appears to affect mainly brainstem. (Casalone et al., 2004).

In vivo studies indicate low transmission rates for BASE in wild-type mice. C57/BL mice only became infected after a second passage and then the infection appears to be cBSE-like (Capobianco et al., 2007). In cattle, BASE is transmissible after the first passage and shorter incubation times were reported, suggesting that BASE may be more virulent than cBSE in the natural host (Lombardi et al., 2008). Dr Casalone concluded that BASE is either a sporadic disease or a totally different form of BSE. Distinct molecular phenotypes have been identified in bovine prion diseases (Biacabe et al., 2004) leading to the description of C- and H-type.

In more recent studies, it has been shown that BASE is transmissible to humanized transgenic mice (Kong et al., 2008), whereas Comoy and colleagues (2008) used macaques to illustrate the point. Dr Casalone concluded that BASE has at least the same human health implications as those of cBSE. The good news is that presently both the Italian and US protocols are able to detect/identify both cBSE and atypical cases. As of 30 October 2008, there were 41 atypical BSE cases identified worldwide; 21 L-type, 3 BASE and 17 H-type. Therefore, the preventive measures currently in place for human and animal health protection should be maintained indefinitely.

Dr Michael Clawson (US Department of Agriculture, Agricultural Research Service, US Meat Animal Research Center, Clay Center, Nebraska) discussed the 'Association of a Bovine Prion Gene Haplotype with Atypical BSE' on the basis of his research with various colleagues (Clawson et al., 2008). Transmissible spongiform encephalopathies (TSEs), also known as prion diseases, are a class of fatal neurodegenerative disorders that occur in humans, ruminants, cats and mink. Three distinct TSEs afflict cattle: cBSE, atypical H-type BSE and atypical L-type BSE. Classical BSE was identified in the 1980s and is acquired by cattle through the consumption of feed contaminated with the infectious prion agent. As noted in the previous presentation, atypical BSEs have only recently been recognized as distinct cattle prion diseases and are extremely rare. The full extent of genetic susceptibilities to atypical BSEs remains unknown; however, one atypical H-type case identified in the United States in Alabama in 2006 was most likely caused by a genetic mutation in the prion gene, E211K (Richt and Hall, 2008).

Dr Clawson's group has recently sequenced the prion gene (PRNP) of 192 cattle (including 96 beef and 96 dairy cattle), first, to identify polymorphisms and secondly, to test PRNP variation for an association with BSE (Clawson et al., 2006). They identified 382 polymorphisms in beef cattle and 158 in dairy cattle and subsequently identified an association of a bovine prion DNA sequence (haplotype) with atypical BSE that is independent of E211K. Despite the low frequency of this haplotype among general cattle populations, it was present in a majority of H- and L-type atypical BSE cases from Canada, France and the United States. This result indicates that there is a genetic component to atypical BSE susceptibility in addition to E211K. Dr Clawson concluded that cattle PRNP variation is complex, that there are distinct bovine PRNP alleles associated with both classical and atypical BSE susceptibility and that a portion of BSE can be managed through genetics.

Dr Qingzhong Kong (Department of Pathology, Case Western Reserve University, Cleveland, Ohio, USA) presented 'Chronic Wasting Disease (CWD) and Bovine Spongiform Encephalopathy (BSE): Public Health Risk Assessment' in the light of his research with 18 colleagues. Transmissible spongiform encephalopathy is a family of fatal, transmissible neurodegenerative diseases that affect humans and a variety of animals. The human forms of the disease include Creutzfeldt–Jacob disease (CJD), Gerstmann-Straussler-Scheinker disease, Fatal Familial Insomnia and Kuru. Among animals, the disease takes the form of BSE in cattle, scrapie in sheep and goats and CWD in deer, elk and moose (Collinge, 2001).

It has been shown that TSE results from the misfolding of the highly conserved prion protein (PrP) and that the cellular PrP (PrPc) is essential for both prion replication and prion pathogenesis. However, the detailed mechanisms of prion replication and pathogenesis remain to be solved. There are neither treatments for prion diseases nor reliable diagnostic tests for early-stage TSE.

Chronic Wasting disease was first discovered in Colorado in 1967 and is endemic in 14 US States and two provinces in Canada. CWD has been experimentally transmitted to other animals, including cattle, sheep, ferrets, mice, hamsters and squirrel monkeys; however, the transmissibility of CWD to humans was unknown. The species barrier for prion transmission is determined by the PrP sequence homology between the donor and the recipient as well as the prion strain. The research by Kong and his colleagues with humanized and cervidized transgenic mouse models indicates the current natural CWD strain has a very low possibility of direct transmission to humans with PrP-129MM; however, novel cervid strains highly infectious to humans could emerge.

Dr Kong then explained his studies with both cBSE and atypical BSE (BASE) cases (Kong et al., 2008). Atypical BSE has been found in eight European countries, as well as in the USA, Canada and Japan. His on-going research with humanized Tg mice demonstrates that both L- and H-type atypical BSE strains are transmissible to humans and the L-type seems to be much more virulent than the cBSE strain in humans. No transmission of the E211K mutant BSE has been observed thus far.

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Dr Alan Young (Department of Veterinary Science, South Dakota State University, Brookings, South Dakota, USA), supported by six collaborators, continued the study of TSEs in Workshop II with his study, 'Fixed and Migratory Leukocytes in the Pathogenesis of TSEs'. To better understand the role of the immune system with regard to prions, they sought to answer three questions: (i) By what mechanism is PrPres delivered to the germinal centres? (ii) What are the molecular events occurring in PrPresinfected germinal centers? and (iii) How is PrPres disseminated systemically throughout the lymphoid system?

In their initial experiment, Dr Young and his lab team cannulated sheep afferent lymphatic vessels to define the transport of PrPSc from the local tissue to the regional lymph node. They demonstrated that prion entry is via the afferent lymphatics within 24 h of injection. Transport was achieved through cell-free delivery in the first 15 min and through cell associated delivery pathway peaking 12–24 h following injection. In the second set of experiments, Dr Young's group cannulated the efferent lymphatics of lymph nodes infected with sheep scrapie prions to determine the potential role(s) of circulating lymphocytes in prion pathogenesis (Young et al., 1997). Lymph was collected from the efferent duct, and changes in the leucocyte subsets were monitored. They concluded that measurable changes in the output of B cell subsets following a scrapie infection suggested a specific local response to prion infection.

In the final series of experiments, Dr Young's group tracked the kinetics of PrPSc appearance in the lymph node germinal centres following injection. They observed the immediate localization of PrPSc in the germinal centers within 30 min of inoculation. Interestingly, highly susceptible sheep (Q171Q genotype) could maintain PrPres in the node for up to 2 months post-injection, whereas sheep with a Q171R genotype only maintained the PrPres in the node for 1–2 weeks. This result points towards susceptibility and resistance to scrapie.

Dr Young concluded that the data from these experiments suggest a two-phase pathogenesis for prion disorders. In the first phase, prions are transported to regional germinal centers similar to other antigens; and in the second phase, prions appear to replicate within the lymphatic tissue of susceptible but not resistant animals, thus establishing long-term infection of affected lymph nodes (Catron et al., 2004; Pape et al., 2007).

Dr Anumantha Kanthasamy (Department of Biomedical Sciences, Iowa Center for Advanced Neurotoxicology, Iowa State University, Ames, Iowa, USA) ended the Workshop II presentations with a study supported by six colleagues, 'Divalent Metals Stabilize Cellular Prion Proteins and Alter the Rate of Proteinase-K Dependent Limited Proteolysis' (Kanthasamy et al., 2008). The key biochemical event in the pathogenesis of prion diseases is the conversion of normal cellular prion proteins (PrPc) to the proteinase K (PK) resistant, abnormal form (PrPsc); however, the cellular mechanisms underlying the conversion remain enigmatic. Binding of divalent cations such as copper to the octapeptide repeat regions of PrP has been shown to be important for the stability of the protein (Choi et al., 2006). Nevertheless, the roles of other divalent cations in the normal processing of cellular PrPc are not well understood.

Dr Kanthasamy and his team examined the role of divalent metals (Mn^{2+} and Cu^{2+}) on PrPc expression and degradation in cell culture and brain slice models. Neuronal cells expressing mouse prion proteins with a genetically altered novel epitope (mAb 3F4) and brain slices were exposed to Mn^{2+} and Cu^{2+} over 24 h. Levels of PrPc protein and mRNA were measured. Limited proteolysis, mRNA stability, proteasomal activity and pulse-chase experiments were conducted. The objectives of these experiments were: (i) to determine the effect of cellular prion on mitochondrial dysfunction and oxidative damage, (ii) to evaluate whether or not divalent metals influence the stability of the prion protein, and (iii) to understand the role of such metals in the pathogenesis of prion diseases.

Interestingly, his studies concluded that manganese enhances the stability of the prion protein. During metal exposures, cellular prion protein levels increase without an increase in mRNA levels or a decrease in protein degradation. The effect of manganese on the prion protein is different from other metals such as cadmium. Additionally, the normal prion protein protects neuronal cells against manganese induced acute neurotoxic response. These experiments support the hypotheses that certain divalent metals may play a critical role in the pathogenesis and progression of prion diseases.

Workshop III: Bunya and Influenza Viruses

Dr Richard Elliott, working with his colleague Dr Xiaohong Shi, both of the Centre for Biomolecular Sciences, University of St. Andrews, of St. Andrews, Scotland presented 'Engineering the Bunyavirus Genome'. Bunyaviruses are characterized by a tripartite, negative sense RNA genome and impinge on (i)

human health by causing diseases such as encephalitis (e.g. La Crosse virus) and haemorrhagic fever [e.g. Crimean–Congo haemorrhagic fever virus and Rift Valley fever (RVF) virus]; (ii) animal health by causing diseases such as RVF, Cache Valley and Akabane viruses or (iii) crop plants by causing diseases such as tomato spotted wilt virus. This family contains prime examples of emerging and re-emerging viruses, including the hanta viruses presented next.

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Dr Ellott's group developed a highly efficient reverse genetics system to recover the prototype bunyavirus, Bunyamwera (BUNV), from cloned cDNA (Lowen et al., 2004) and this system was subsequently adopted by others to recover La Crosse and RVF viruses. They exploited this technology to engineer the BUNV genome to create viruses carrying specific marker tags in different viral proteins. Thus far they have recovered recombinant BUNV expressing epitope-tagged L protein (Shi and Elliott, 2009) and NSm (Shi et al., 2006) and Gc proteins (X. Shi, J. van Mierlo, A. French and R.M. Elliott, unpublished) fused to green fluorescent proteins. These recombinant viruses are useful tools to monitor the time course of BUNV infections, as well as illustrating the plasticity of the Bunyamwera virus genome.

Dr Ramon Flick, Chief Scientific Officer of the BioProtection System Corporation, Ames, Iowa and formally the Director of the BioScience Level 4 Facility of University of Texas Medical Branch, Galveston, Texas, explained how 'Hantavirus Reverse Genetics Challenges Replication Dogma'. Hantaviruses belong to the Bunyaviridae family of viruses, are transmitted by aerosolized rodent excreta or rodent bites and are a major international public health concern. Their ability to produce serious, often fatal, human disease underlines the possible use of these viruses as biological weapons and the need for a system that allows manipulation of the viruses. Basic research empowers the identification of antiviral targets, the screening of relevant antiviral compounds and the creation of subunit vaccines. Furthermore, as set out in the first three presentations of Workshop III, the advent of reverse genetics of negative-stranded RNA viruses has made it possible to manipulate these viruses at will and to evaluate the effects of these changes on the biology and pathogenesis of many viruses, as well as the efficacy of antiviral and prophylactic measures (Walpita and Flick, 2006).

A reverse genetics technology for Hantaan (HTN) virus, the prototype of the genus Hantavirus, has now been established (Flick et al., 2003). This system consists of HTNV genome segment-based minigenomes containing different reporter genes. The viral proteins necessary for minigenome replication are provided by either HTNV-superinfection (helper virus-driven system) or by co-transfected HTN-L/N expression plasmids (plasmiddriven system). Overall, the surprising results question previously accepted dogmas in the negative strand RNA virus field: (i) the highly conserved parts of the genome segment ends are described as the putative promoter region for segmented negative-stranded RNA viruses; however, minigenomes lacking these regions are still able to serve as a template for efficient viral replication and (ii) the viral nucleoproteins described as absolutely essential for viral replication processes (the naked RNA genome cannot serve as a template for the viral RNA polymerase) are not required as trans-acting factors for efficient minigenome transcription and replication. This knowledge is an important step towards the understanding of the special features of the hantaviral replication cycle and for the development of targeted antiviral drug strategies.

Dr Stuart T. Nichol, Chief of the Molecular Biology Laboratory, Special Pathogens Branch, National Center for Zoonotic, Vector-borne and Enteric Diseases, Centers for Disease Control and Prevention (CDC) Atlanta, Georgia, USA set out a study of 'Rift Valley Outbreak Dynamics and Reverse-Genetics Generated Vaccine' in which he and 18 colleagues had collaborated (Bird et al., 2008a,b). Rift Valley fever virus is a mosquito-borne human and veterinary pathogen associated with large disease outbreaks throughout Africa, Madagascar and the Arabian Peninsula. Infection of livestock can result in sweeping 'abortion storms' and high mortality among young animals. Human infection results in self-limiting febrile disease that in 1–2% of patients progress to more serious complications including hepatitis, encephalitis, retinitis or a haemorrhagic syndrome with high fatality.

The most recent large RVF outbreak occurred in eastern Africa in 2006–2007, particularly Kenya, southern Somalia and Tanzania. Following initial RVF virus laboratory confirmation, a high-throughput RVF diagnostic facility was established at the Kenyan Central Veterinary Laboratories in Kabete, Kenya, to support the real-time identification of infected livestock and to facilitate outbreak response and control activities. Detailed analysis of 3250 livestock and wildlife specimens in Kenya showed evidence of RVF infection in almost 10% of animals tested across 23 Districts. The complete S, M and/or L genome segment sequence was obtained from 31 representative RVF virus specimens. Analyses revealed the concurrent circulation of multiple virus lineages, gene segment reassortment and common ancestry of the 2006– 2007 outbreak viruses with those from the 1997–1998 eastern Africa RVF outbreak. Evidence of recent increases in virus genomic diversity and gene pool size 2–4 years prior to the 2006–2007 outbreak was also found, indicating ongoing RVF virus activity and evolution during the inter-epizootic/epidemic period.

Such findings highlight the need for safe and effective vaccines. Reverse-genetically produced double-deleted vaccine was tested. All vaccinated animals subsequently challenged with a high dose of virulent RVF virus survived infection and could be serologically differentiated from naive experimentally infected animals by the lack of NSs antibodies. These rationally designed marker RVF vaccine viruses show great promise for use in combating this significant veterinary and public health threat.

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Dr Ruben Donis of the Molecular Virology and Vaccines Branch, Influenza Division, Center for Disease Control (CDC) Atlanta, Georgia, USA presented an analysis of 'Influenza Pandemic Preparedness: Early Detection and Vaccination'. He began by underscoring the possibly catastrophic impact of a severe and unmitigated pandemic in the United States: 1.9 million deaths, 9.9 million hospitalizations, 40 million people in outpatient care and a total of 90 million people infected (33% of the US population). Worldwide, between 175 and 350 million deaths are possible (Meltzer et al., 1999; Fedson, 2005). Seven steps could help mitigate such a pandemic: (i) medical care; (ii) community intervention; (iii) social distancing; (iv) personal protective equipment; (v) targeted use of antiviral drugs; (vi) pre-pandemic vaccine; and (vii) pandemic vaccine. Within this framework of possible mortality mitigation programmes, the CDC has set out five influenza pandemic preparedness goals and objectives: (i) prevent or delay a pandemic; (ii) detect and report a pandemic, seeking to decrease the time needed for detection; (iii) investigate the course of a pandemic, seeking to decrease the time needed to determine risk factors and appropriate interventions; (iv) control a pandemic, decreasing the time needed to provide countermeasures; and (v) recover from a pandemic (CDC, 2008).

The two inherent viral risk factors that might cause a pandemic are influenza virus reassortment and genetic drift. Genetic changes caused by either reassortment of a particular virus or mutations in the HA or other genes could lead to increased pathogenicity and the possibility of sustained human-to-human transmission. Of particular concern is the possible reassortment of human H3N2 viruses with avian H5N1 viruses (Chen et al., 2008). Mutations in HA adapt the avian virus to bind sialic acid receptors in human respiratory cells (Stevens et al., 2006). Structural differences near the HA receptor binding pocket alter the effect of mutations in receptor binding specificity. For example, when comparing A/Vietnam/ 1203/2004 with A/Indonesia/05/2005 viruses, there are multiple amino acid differences near the pocket that may affect receptor binding. Research is continuing, but there is some evidence that recent avian H5N1 viruses are exhibiting an increased propensity for acquiring human receptor specificity by mutations in the receptor binding site (Stevens et al., 2008).

The evolution of influenza A viruses has considerable impact on vaccine production and distribution. Protection for both human and animal hosts is mediated

The evolution of influenza A viruses has considerable impact on vaccine production and distribution. Protection for both human and animal hosts is mediated by neutralizing antibodies to HA. Protective immunity is strain-specific and the vaccine antigen must match circulating virus strains. The efficacy of pre-pandemic stockpile is compromised by the rapid change in the antigenic properties of the viruses (antigenic drift). Three H5N1 candidate vaccines for Clades 1, 2.1 and 2.3 have been distributed by CDC to manufacturers; some clinical trials have been completed; others are underway to determine their efficacy. Multiple genetically distinct H5N1 clades co-circulate in birds and any of them could emerge as a pandemic, especially as the H5 evolution in birds leads to rapid diversification of these viruses. Therefore, permanent surveillance and updating of the CDC vaccine seed library is necessary to maximize antigenic match and the efficacy of an eventual pandemic vaccine.

Dr Hana Weingartl of the National Centre for Foreign Animal Disease (NCFAD) of the Canadian Food Inspection Agency and the Department of Medical Microbiology, University of Manitoba, Winnipeg, Manitoba, Canada presented a paper on 'Human 1918 Pandemic Influenza in Experimentally Infected Swine' (Weingartl et al., 2009). The aim of the paper was to increase understanding of the natural history of the pandemic influenza virus during the twentieth century and its interspecies transmission. A better understanding of the biology of the 1918 virus will encourage recognition of the risk potential of circulating animal viruses to initiate human pandemics, leading to novel targets for therapeutic and prophylactic intervention.

It was only in the early 1930s that the 1918 influenza virus was clearly identified as a viral disease in both people and swine (Shope, 1931; Smith et al., 1933; Laidlaw, 1935). Genomic sequence data suggest that 1918 genes are all avian-like and that a change of receptor specificity in 1918 from avian to mammalian required only a few amino acid changes in the HA. Speaking on behalf of the 11 co-authors, Dr Weingartl explained the methodology of determining the virulence of the rescued 1918 (r1918) pandemic human influenza H1N1 virus, which was related to the A/swine/Iowa/15/1930 rescued virus (r1930). Both above viruses were rescued using the plasmid-derived reverse genetic technology. Mice, ferrets and macaques infected with the r1918 virus died, but pigs did not develop severe respiratory distress or become moribund. All work with the 1918 pandemic influenza virus was performed in the NCFAD biosafety level 4 facility. The clinical disease of r1918 was similar to the disease introduced by the r1930 H 1N1 virus.

The resulting data support the hypothesis based on phylogenetic analysis that the human pandemic influenza virus which began in the spring of 1918 is likely an ancestor of the classical swine H 1N1 influenza virus. The human 1918 pandemic influenza virus might have originated directly from an unknown avian or another source (e.g. via swine), rapidly acquiring the minimal adaptive changes required to start a pandemic, possibly just before or quickly after the cross over to humans. Precisely how and when the human virus went into swine, or the swine virus went into humans, is not fully understood. However, it is clear that improved virus surveillance in humans, other mammals and birds is critical to prevent inter-species transmission in the future

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Dr Gregory Gray MD of the Center for Emerging Infectious Diseases, University of Iowa College of Public Health, Department of Epidemiology, Iowa City, Iowa, USA set out 'Evidence for Swine, Avian and Equine Influenza Virus Infections in Man'. In a series of epidemiological studies among workers with intense exposure to animals (Gray et al., 2008), Dr Gray and his colleagues found considerable evidence that swine workers (Myers et al., 2006; Gray et al., 2007), poultry workers (Ortiz et al., 2007), hunters (Gill et al., 2006) and veterinarians (Myers et al., 2007) have experienced zoonotic influenza A virus infections. While a majority of these infections were either mild or subclinical, these epidemiological data suggest that animal workers have the potential to contribute to the generation of novel viruses and serve as a bridging population for influenza virus between animals and humans.

Mathematical modelling has demonstrated that such workers may accelerate the spread of pandemic viruses (Capuano et al., 2007). The body of research indicates that public health interventions are essential to mitigate the public health risks. The highest priority is to focus resources on country-specific epidemiological studies targeted at understanding both disease and transmission in animals and humans. Studies are required to identify risk for humans, linked with surveillance in industrial settings, village farms and markets (Planning Group, 2005). Crossspecies virus transmission has clearly caused the emergence of new epidemic diseases (Parrish et al., 2008). The transfer of viruses to new hosts may take many years, but is of great significance, as, for example, in the recent efficient transmission of equine influenza virus to dogs (Crawford et al., 2005; Enserink, 2005).

Dr Wolfgang Garten of the Institute of Virology, Phillips-Marburg University, Marburg, Germany spoke of 'Viral Glycoproteins Cleaved by Cellular Proteases'. Dr Garten's presentation focused on glycoproteins of viruses that are contained within lipid envelopes of enveloped viruses (Klenk et al., 1984). He began by pointing out that glycoproteins of many lipid-enveloped viruses are proteolytically cleaved by host cell proteases (i.e. proteolytic enzymes) to gain their biological functionality. Most viral glycoproteins are cleaved at a single distinct peptide motif within the ectodomain to attain fusion capacity. For example, in the context of the influenza virus, the level of receptor-dependent restriction of an AI virus in the human airway epithelium can be estimated; and these estimates support a theory that alteration of the receptor specificity of an avian virus could facilitate its human-to-human transmission (Matrosovich et al., 2007). Some viral proteins acquire additional properties, for example, a selective incorporation into the virus envelope.

Within this framework of how viral proteins acquire additional properties, Dr Garten explained that additional cleavages may also occur. Therefore, it is necessary to investigate further the cleavage sites of viral glycoproteins, the responsible cellular proteases, the localization of the cleavage events, the roles of glycoprotein cleavage and the inhibition of cleavage. It is essential to understand how the different protease inhibitors interfere with the proteolytic processing of viral glycoproteins and thus with virus replication. For HIV-1, the role of furin and PC/LPC (a serine endoprotease of the subtilisin family, expressed in most mammalian cells) is of particular importance in initiating infection (Hallenberger et al., 1992, 1997).

Further work at the Institute of Virology by Dr Garten and his colleagues considered influenza virus pathogenicity (Garten and Klenk, 1999, 2008), proteolytic processing of Marburg virus glycoprotein (Volchkov et al., 2000) and how the Lassa virus matrix protein is the driving force for virus particle release (Strecker et al., 2003). Much of this basic research has considerable practical implications in developing new strategies to combat virus infection (Boettcher et al., 2009). Dr Garten reported the tree-dimensional structure of the matrix protein of Borna disease virus (BDV), which is a tetramer and possesses the capacity for binding of an RNA of about 16 nucleotide length as well as lipid (Neumann et al., 2009).

Workshop IV: Emerging/Reemerging Diseases

Dr Bernhard Dietzschold of the Department of Microbiology and Immunology at Thomas Jefferson University, Philadelphia, Pennsylvania, USA, presented 'Borna Disease and Rabies: Two Old Reemerging Zoonotic Virus Infections' about two of the oldest infectious diseases on record that are now reemerging in many parts of the world. BDV or a BD-like virus was recently detected in both wild and domesticated psittacine birds (Honkavuori et al., 2008, Kistler et al., 2008), while canine rabies is rapidly spreading throughout Southern and Eastern Africa with devastating effects on public and animal health. Both BDV and rabies virus (RV) are highly neurotropic in nature, negative strand viruses and are able to infect a large variety of mammals, probably including birds.

Professor Dietzschold pointed out that BDV and RV have huge differences in their respective pathogenesis even though these two diseases share many common features. For example, RV replicates in the cytoplasm, whereas BDV replicates in the nucleus. [...]

2011 (March 23) - One Health and the Lessons Learned from the 1999 West Nile Virus Outbreak (MWV46)

Live Youtube Link : https://www.youtube.com/watch?v=D0kicnRNx64 / Full video copy : [HV00FR][GDrive] / Image of Youtube download page : [HV00FS] [GDrive]

Mar 23, 2011 / MicrobeWorld

Also see : Dr. Tracey S. McNamara (born 1954)

In episode 46 of MicrobeWorld Video, filmed at the American Association for the Advancement of Science Meeting in Washington, D.C., Dr. Stan Maloy talks with Tracey McNamara, professor of pathology at Western University of Health Sciences College of Veterinary Medicine, about her role as the head pathologist at the Bronx Zoo during the 1999 West Nile virus outbreak in New York City. As several local residents were hospitalized with encephalitis of unknown origin, many crows and exotic zoo birds were dying off. It was determined that the patients had St. Louis encephalitis (SLE) which is transmitted to humans by mosquitoes that got the virus from infected birds. However, birds with SLE do not get sick and a possible connection between the dying crows and human cases was dismissed by many experts.

McNamara suspected there was more to this story because of the large number of birds that were also contracting encephalitis and struggled to make her voice and preliminary research heard that suggested a new disease may be emerging in North America. It wasn't until she connected with researchers at the US Army Medical Research Institute in Infectious Diseases (USAMRIID) in Ft. Detrick, Maryland, who quickly confirmed that the virus that was killing the crows and her birds at the Bronx Zoo was West Nile virus, a disease endemic to Africa and parts of Europe that also infects people.

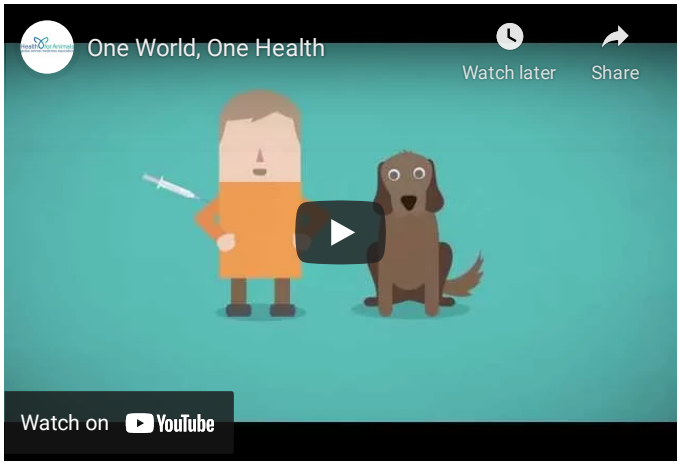
McNamara's experience has made her a champion of One Health -- "a call to action for collaboration and cooperation among health science professions, academic institutions, governmental agencies, non-governmental organizations, and industries towards improved assessment, treatment, and prevention of cross-species disease transmission and mutually prevalent, but non-transmitted, human and animal diseases and medical conditions."

2015 (July) - Video : "One World, One Health"

Live Youtube Link : https://www.youtube.com/watch?v=xD0dzYeFYy8 / Full video copy : [HV00FJ][GDrive] / Image of Youtube download page : [HV00FK] [GDrive]

Jul 22, 2015 / HealthforAnimals

This animation video celebrates the One Health initiative and highlights its key achievements to date.



2016 (June) - The One Health Movement; Animals, Environment, and Us | Ralph Richardson | TEDxICC

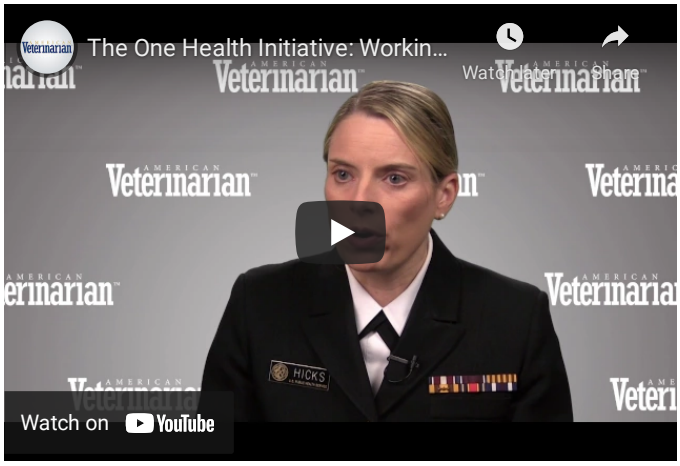
Jun 16, 2016 / TEDx Talks / Live Youtube Link : https://www.youtube.com/watch?v=_xMbxLjn37w / Full video copy : [HV00FN][GDrive] / Image of Youtube download page : [HV00FO][GDrive]

This talk takes a holistic approach to health by tying humans to the environment and animals. Dr. Ralph Richardson became dean and CEO of the K-State Olathe campus in August 2015 after serving for 17 years as dean of the College of Veterinary Medicine at Kansas State University. He is a Diplomat of the American College of Veterinary Internal Medicine (Specialty of Internal Medicine) and a Charter Diplomat in the American College of Veterinary Internal Medicine (Specialty of Oncology). He graduated from Kansas State University's College of Veterinary Medicine in 1970 and served as a captain in the United States Army Veterinary Corps from 1970 to 1972. He completed an Internship at Purdue University in Small Animal Medicine and Surgery in 1973 and a Residency at the University of Missouri-Columbia in Small Animal Internal Medicine in 1975. In 1978 Dr. Richardson completed a Training Program in Clinical Oncology at the University of Kansas Medical Center-Kansas City. This talk was given at a TEDx event using the TED conference format but independently organized by a local community. Learn more at http://ted.com/tedx

2016 (Nov 18) - The One Health Initiative: Working Together to Fight Antibiotic Resistance

Live Youtube Link : https://www.youtube.com/watch?v=ZJWHOxz1QgY / Full video copy : [HV00FY][GDrive] / Image of Youtube download page : [HV00FZ][GDrive]

Nov 18, 2016 - American Veterinarian - "Lauri A. Hicks, DO, captain, US Public Health Service, director, Office of Antibiotic Stewardship, medical director, Get Smart: Know When Antibiotics Work, Division of Healthcare Quality Promotion, Centers for Disease Control and Prevention, explains how the fight against antibiotic resistance is part of the One Health initiative."



2017 (Oct 26) - What is One Health?

Live Youtube Link : https://www.youtube.com/watch?v=kfluP-tFC2k / Full video copy : [HV00FL][GDrive] / Image of Youtube download page : [HV00FM] [GDrive]

simpleshow foundation : Explained in cooperation with Expert Advisor Dr. Aileen Marty, learn about One Health: how the health of humans, animals, and plants are interconnected.

2019 (Nov 05) - One Health in addressing antimicrobial resistance

Live Youtube Link : https://www.youtube.com/watch?v=dDia7xWQRog / Full video copy : [HV00FW][GDrive] / Image of Youtube download page : [HV00FX] [GDrive]

Nov 5, 2019 - International Livestock Research Institute (ILRI) - "Hung Nguyen, ILRI regional representative for East and Southeast Asia, explains the use of One Health approaches in tackling antibiotic resistance."

2020 (March 16) - How can we solve the antibiotic resistance crisis? - Gerry Wright

Live Youtube Link : https://www.youtube.com/watch?v=ZvhFeGEDFC8 / Full video copy : [HV00FU][GDrive] / Image of Youtube download page : [HV00FV] [GDrive]

Mar 16, 2020 - TED-Ed - Take a closer look at the challenges of antibiotic resistance and what we can do to prevent losing this vital medicine.

Antibiotics: behind the scenes, they enable much of modern medicine. We use them to cure infectious diseases, and to safely facilitate everything from surgery to chemotherapy to organ transplants. But we've stopped discovering new ones and we're at risk of losing them forever. How did we get into this situation? Gerry Wright shares what we can do about antibiotic resistance.

NOTES : https://research.ucalgary.ca/amr/people/scientific-advisory-council/gerry-wright : Role with AMR - One Health Consortium: Scientific Advisory Council Member / https://en.wikipedia.org/wiki/Gerry_Wright

2020 (June 28) - How a One Health approach can prevent and mitigate future pandemics

Live Youtube Link : https://www.youtube.com/watch?v=q9096IKudiM / Full video copy : [HV00FT][GDrive]

Global Landscapes Forum - GLF - Several years ago, a scientific assessment declared that the future costs of disease pandemics could be in the same order as those of climate change. As the ongoing novel coronavirus pandemic continues to upend lives and economies, those costs are becoming clearer by the day. Yet funding and policy leadership

2020 (Oct) - One Health in an Age of Climate Change, Extinctions, and a Pandemic | Sharon Deem | TEDxStLouis

Live Youtube Link : https://www.youtube.com/watch?v=l5vqmyS6aTw / Full video copy : [HV00FP][GDrive] / Image of Youtube download page : [HV00FQ] [GDrive]

Oct 22, 2020 / TEDx Talks : Sharon L. Deem, DVM, PhD, Dipl ACZM is currently the Director of the Saint Louis Zoo Institute for Conservation Medicine (ICM), a role she has held since the ICM was founded in 2011. Sharon uses a One Health holistic approach for wildlife conservation, public health, and sustainable ecosystems to ensure

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One Health Commission

The One Health Commission is a globally focused organization dedicated to implementing One Health and One Health actions around the world. As a 501(c)(3) organization, chartered in Washington, D.C**. in 2009,** it is dedicated to raising awareness and educating all audiences about the importance of transcending institutional and disciplinary boundaries to transform the way that human, animal, plant, and ecosystem health professionals work together.

The Commission seeks to 'Connect' One Health Advocates and Stakeholders, to 'Create' networks and teams that work together across disciplines to 'Educate' about One Health and One Health issues.

- **'Connect'** those working for One Health around the world to facilitate needed synergistic relationships and collaborations at all levels of academia, government, policy and research. See organizational 'Who's Who in One Health'.
- **'Create'** opportunities for human, animal, plant and ecosystem health-related disciplines and institutions to work together in transformative collaborations .
- **'Educate'** the public about the importance of and urgent need for the One Health approach. This includes established professionals and students from all disciplines (from Anthropology to Architectural Design to Biology/Chemistry to Food Scientists to Medicine to Psychology to Sociology to Zoology, etc), agricultural and food production sectors, health care providers from human and animal domains, policy and law makers, 'everyone'.
  - (See Online One Health Library and Webinars led by or supported by the Commission and its Action Teams)
  - Preparing the Next Generation of One Health leaders and professionals by supporting Students for One Health and facilitating their efforts to further the One Health paradigm shift. (See Students for One Health webpage)

Donor / Sponsor opportunities are available for non-profit organizations (Institutions), corporations, and individuals who would like to help further the One Health paradigm shift.

The Commission is headquartered in the Research Triangle Park region of central North Carolina at

P.O. Box 972, Apex, NC 27502,

Telephone: 984-500-8093

https://www.onehealthcommission.org/index.cfm/83391/76876/program_assistant_at_ecohealth_alliance

Tara O'Toole

Wikipedia Tara O'Toole

Born -

Father -

Mother - Jeanne (Whalen) O'Toole

Tara O'Toole, MD, MPH - Professional Biography (from 2006 Infectious Diseases Conference)

Source - [HI000E][GDrive]

Dr. O'Toole is the CEO and Director of the Center for Biosecurity , and a Professor of Medicine and of Public Health at the University of Pittsburgh. The Center for Biosecurity is an independent organization dedicated to improving the country's resilience to major biological threats.

Dr. O'Toole is internationally known for her work on biosecurity and on health and safety issues related to the U.S. nuclear weapons complex. Her publications in the biodefense field include articles on the response to anthrax, smallpox, and plague biological attacks; containment of contagious disease epidemics; biodefense research and development strategies; and hospital preparedness. She is a Coeditor-in-Chief of the journal *Biosecurity and Bioterrorism: Biodefense Strategy, Practice, and Science*. She was a principal author and producer of *Dark Winter*, an influential exercise conducted in June 2001 to alert national leaders to the dangers of bioterrorist attacks. She was also a principal writer and producer of *Atlantic Storm*, an international ministerial-level biosecurity exercise held in January 2005. Prior to founding the UPMC Center in 2003, Dr. O'Toole was one of the original members of the Johns Hopkins Center for Civilian Biodefense Strategies and served as its Director from 2001 to 2003.

She has served on numerous government and expert advisory committees dealing with biodefense, including panels of the Defense Science Board; the National Academy of Engineering Committee on Combating Terrorism; and the National Academy of Sciences Working Group on Biological Weapons. She served as the Chair of the Board of the Federation of American Scientists from 2006-07, and in 2006 she was appointed to the Board of the Google Foundation's International Networked System for Total Early Disease Detection (INSTEDD).

From 1993 to 1997, Dr. O'Toole served as the Assistant Secretary of Energy for Environment Safety and Health. In this position, she was principal advisor to the Secretary of Energy on environmental protection and on the health and safety of the approximately 100,000 workers in the U.S. nuclear weapons complex and Department of Energy (DOE) laboratories. She developed the first overall management and safety plan for dealing with the highly enriched uranium, plutonium, spent fuel, and radioactive waste left in place when nuclear weapons production was stopped in the early 1990s. She ran the multi-agency, multimillion dollar task force that oversaw the government's investigations into human radiation experiments conducted during the Cold War. And she led the U.S. delegation to Russia to establish the U.S./Russia cooperative effort to study radiation exposure and environmental hazards of the Russian nuclear weapons complex.

Prior to her work at DOE, Dr. O'Toole was a Senior Analyst at the Congressional Office of Technology Assessment (OTA), where she directed studies of the health impact of pollution resulting from nuclear weapons production, among other projects. She also served as a consultant to industry and government in matters related to occupational and environmental health, worker participation in workplace safety protection, and organizational change. Dr. O'Toole practiced general internal medicine in community health centers in Baltimore from 1984 to 1988. She is board certified in Internal Medicine and in Occupational and Environmental Health.

She has a Bachelor's degree from Vassar College, an MD from the George Washington University, and a Master of Public Health degree from Johns Hopkins University. She completed Internal Medicine Residency training at Yale and a Fellowship in Occupational and Environmental Medicine at Johns Hopkins University.

Wired Magazine, 2009 : DHS' New Chief Geek is a Bioterror 'Disaster,' Critics Charge

Source - [HP002B][GDrive] -

Depending on who you ask, the Obama administration's controversial pick to be the Department of Homeland Security's geek-in-chief is either a leading authority on the deadliest terror threats – or a biowar chicken little, dangerously out of touch with reality.

At first glance, Dr. Tara O'Toole is a dream candidate to take over the position of DHS under secretary for science and technology. She's a doctor, the CEO of the University of Pittburgh's Center for Biosecurity, the former chairwoman of the Federation of American Scientists, and the brains behind a series of influential disaster response exercises that woke Washington up to the threat of terrorists with weapons of massive destruction. Who better to take over DHS' nearly billion-dollar research portfolio – about 45 percent of which goes towards chemical and biological defense?

But the outcry over O'Toole's nomination began just moments after the White House announced its intent late Tuesday to name her to the job. To her critics, O'Toole has dangerously overhyped the bioterror threat – leading to a huge increase of the number of research labs and researchers handling deadly agents. Ironically, it's these very facilities that are now these most likely sources for a deadly outbreak or bioattack; the 2001 anthrax strikes, for instance, were an inside job.

"This is a disastrous nomination. O'Toole supported every flawed decision and counterproductive policy on biodefense, biosafety, and biosecurity during the Bush Administration," Rutgers University microbiologist and homeland security policy critic Richard Ebright tells Danger Room. "O'Toole is as out of touch with reality, and as paranoiac, as former Vice President Cheney. It would be hard to think of a person less well suited for the position."

"She was the single most extreme person, either in or out of government, advocating for a massive biodefense expansion and relaxation of provisions for safety and security," he adds. "She makes Dr. Strangelove look sane."

O'Toole rose to prominence in biodefense circles after producing *Dark Winter*, a June 2001 exercise that explored how a single smallpox outbreak could threaten millions of lives in 15 countries. An Army War College report later found that the exercise tripled the normal transmission rate for smallpox – "mak[ing] it next to impossible for the game players to do very much to contain the outbreak, and assur[ing] a disastrous outcome irrespective of whatever control measures the players may attempt to carry out." *Atlantic Storm*, a 2005 exercise also produced by O'Toole, had similar issues. According to the report, it made "grossly misleading assumptions" about the ease of creation and dispersion of the same biological agent – assuming bioterrorists would enjoy a capability that neither the Americans nor Soviets could achieve at the heights of the Cold War.

To George Smith, a protein chemist and senior fellow at GlobalSecurity.org, these exercsies show O'Toole to be "the top academic/salesperson for the coming of apocalyptic bioterrorism which has never quite arrived. [She's] most prominent for always lobbying for more money for biodefense, conducting tabletop exercises on bioterrorism for easily overawed public officials, exercises tweaked to be horrifying. [And she] has never obviously appeared to examine what current terrorist capabilities have been... in favor of extrapolating how easy it would be to launch bioterror attacks if one had potentially unlimited resources and scientific know-how."It's a "superb appointment if you're in the biodefense industry and interested in further opportunity and growth," he tells Danger Room. "Alternatively, a disaster if threat assessment and prevention ought to have some basis in reality." If confirmed, O'Toole would succeed the widely-respected Jay Cohen, a retired admiral.

Wikipedia - Tara O'Toole

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Tara O'Toole served as the Under Secretary of Homeland Security for Science and Technology from 2009 to 2013. She is currently a senior fellow and executive vice president at In-Q-Tel.[1]

Background

Prior to her confirmation as Under Secretary (November 4, 2009), O'Toole founded, and served as chief executive officer and director of, the Center for Biosecurity at the University of Pittsburgh Medical Center. Concurrently, she was a Professor of Medicine and of Public Health at the University of Pittsburgh. She stepped down from her position as Under Secretary on September 23, 2013

From 2006 to 2007, she chaired the board of the Federation of American Scientists. In 2006, she was appointed to the board of the Google Foundation's International Networked System for Total Early Disease Detection. From 2001 to 2003, she directed the Johns Hopkins Center for Civilian Biodefense Strategies. From 1993 to 1997, she served as the Assistant Secretary for Environment Safety and Health in the Department of Energy. From 1984 to 1988, she practiced general internal medicine in community health centers in Baltimore.

Disaster response exercises

O'Toole is best known for her disaster response exercises. She was a principal author and producer of Dark Winter (2001) and Atlantic Storm[2] (2005), both of which simulated a covert outbreak of smallpox in the United States. Many experts applauded these exercises for publicizing the country's surprising vulnerabilities, including a vaccine shortage.[3] Critics charged that these exercises exaggerated the bioterror threat, leading to an unnecessary increase in the number of research labs.[4]

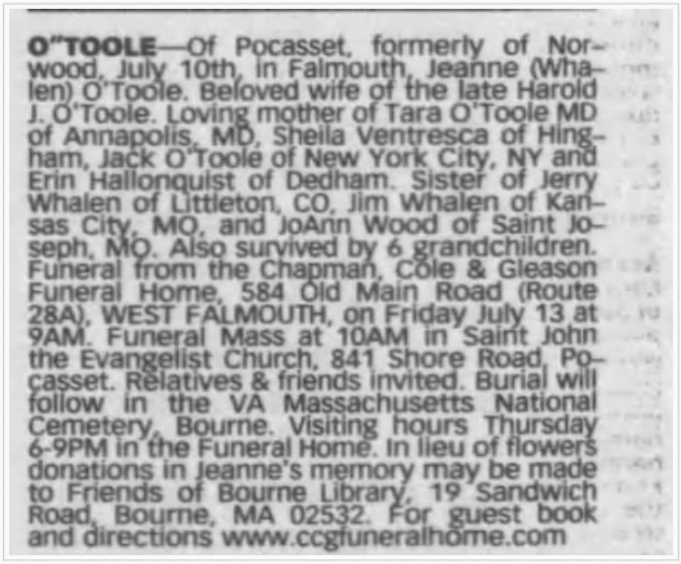
In her nomination hearing, O'Toole said that this controversy stemmed from her estimated "secondary transmission rate"; that is, the number of smallpox infections caused as a result of the initial infections. O'Toole claimed that her rate of 10 derived from "the available empirical data"[5] and coincided with data from a 2001 article in the peer-reviewed journal, *Nature*.[6]

Education

O'Toole holds a bachelor's degree from Vassar College, an MD from George Washington University, and a Master of Public Health degree from Johns Hopkins University.

Mother Jeanne (Whalen) O'Toole

Obituary for Jeanne OTOOLE



O"TOOLE—Of Pocasset, formerly of Norwood, July 10th, in Falmouth, Jeanne (Whalen) O'Toole. Beloved wife of the late Harold J. O'Toole. Loving mother of Tara O'Toole MD of Annapolis, MD, Sheila Ventresca of Hingham, Jack O'Toole of New York City, NY and Erin Hallonquist of Dedham. Sister of Jerry Whalen of Littleton, CO, Jim Whalen of Kansas City, MO, and JoAnn Wood of Saint Joseph, MO. Also survived by 6 grandchildren. Funeral from the Chapman, Cole & Gleason Funeral Home, 584 Old Main Road (Route 28A), WEST FALMOUTH, on Friday July 13 at 9AM. Funeral Mass at 10AM in Saint John the Evangelist Church, 841 Shore Road, Pocasset. Relatives & friends invited. Burial will follow in the VA Massachusetts National Cemetery, Bourne. Visiting hours Thursday 6-9PM in the Funeral Home. In lieu of flowers donations in Jeanne's memory may be made to Friends of Bourne Library, 19 Sandwich Road, Bourne, MA 02532. For guest book and directions www.ccgfuneralhome.com

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The Boston Globe
Boston, Massachusetts
12 Jul 2001, Thu • Page 30

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Father - Harold J. O'Toole

Mar 3, 1999 - Cape Cod Times : "Harold J. O'Toole, 74 : Award-winning insurance agent WWII veteran"

Source = [HN01GV][GDrive]

POCASSET - Harold Joseph O'Toole, 74, died Friday at Newton-Wellesley Hospital.

He was the husband of Jeanne W. (Whalen) O'Toole.

Born in Newton, Mr. O'Toole graduated from Newton High School and attended Northeastern University. In 1943, he joined the Arm served in World War II.

After marrying in Missouri in 1948, he returned to Newton. The couple later moved to Norwood, where they spent 25 years. In 1976, they moved to Pocasset.

Mr. O'Toole was a general agent for the Union Mutual Life Insurance Co. for more than 30 years. He won many awards in the insurance business and was a mentor to many business associates.

He was a member of Tahanto Yacht Club and the founder of the Peppy Parent Race series. An avid fisherman, he enjoyed an annual trip with his wife down the inter-coastal waterway to Florida and the Bahamas.

Surviving besides his wife are a son, Jack O'Toole of Boston three daughters, Erin Hallonquist of Dedham, **Tara O'Toole of Annapolis, Md.**, and Sheila Venteresca of Hingham two sisters, Elizabeth Hennessey of Needham and Mary Quigley of Burke, Va. a brother, Mortimer O'Toole of Winchester and six grandchildren.

A funeral Mass will be held at 10 a.m. Tuesday at St. John the Evangelist Church, Shore Road, Pocasset. Burial will be at the Massachusetts National Cemetery, Bourne.

Visiting hours are 6 to 8 p.m. tomorrow at Nickerson-Bourne Funeral Home, 40 MacArthur Blvd. (Route 28), Bourne.

Memorial donations may be made to Habitat for Humanity of Cape Cod, 121 Habitat St., Americus, GA 31709-3498.

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P

PEOPLE (by last name / then D.o.B.)

- Carter William **Page** (born 1971)
- Melvyn Robert **Paisley** (born 1924)
- Wolfgang Kurt Hermann **Panofsky** (born 1919)
- Bud Ray **Pembroke** (born 1931)
- Richard Norman **Perle** (born 1941)
- Dr. Clarence James **Peters** (born 1940)
- Dr. Peter Karel **Piot** (born 1949)
- Francis Allan **Plummer** (born 1952)
- Ben Telfer **Plymale** (born 1926)
- Jon Bruce **Postel** (born 1943)
- Richard McCann **Preston** (born 1954)

PLACES / COMPANIES / OTHER

- **Pathfinder** (Time Warner)
- Pathfire, Inc.
- The President's Commission on Critical Infrastructure Protection (**PCCIP**)
- Peripheral Equipment Corporation
- Pertec Computer Corporation
- Philipp Brothers Incorporated
- **Physio**-Control Corporation
- The Pillsbury, Madison, and Sutro law firm
- **Plum Island Animal Disease Center**
- US AEC Project **Plowshare**
- **Portsmouth** Gaseous Diffusion Plant

Carter William Page (born 1971)

Wikipedia Carter William Page

Current Wiki - https://en.wikipedia.org/wiki/Carter_Page

2019-06-12-wikipedia-carter-page.pdf

Life and career

Carter Page was born in Minneapolis, Minnesota, on June 3, 1971,[6] the son of Allan Robert Page and Rachel (Greenstein) Page.[7][8] His father was from Galway, New York, and his mother was from Minneapolis.[9] His father was a manager and executive with the Central Hudson Gas & Electric Company.[10] Page was raised in Poughkeepsie, New York, and graduated from Poughkeepsie's Our Lady of Lourdes High School in 1989.[7]

Page graduated with a BS degree from the United States Naval Academy in 1993; he graduated with distinction (top 10% of his class) and was **chosen for the Navy's Trident Scholar program, which gives selected officers the opportunity for independent academic research and study**.[11][12][13] During his senior year at the Naval Academy, he worked in the office of Les Aspin as a researcher for the House Armed Services Committee.[14] **He served in the U.S. Navy for five years, including a tour in western Morocco as an intelligence officer for a United Nations peacekeeping mission, and attained the rank of lieutenant**.[14][15] In 1994, he completed an MA degree in National Security Studies at Georgetown University.[14] After leaving active duty in 1998, Page was a member of the Navy's inactive reserve until 2004.[15]

Education and business

After leaving the Navy, Page completed a fellowship at the Council on Foreign Relations, and in 2001 he received an MBA degree from New York University.[11][16] In 2000, he began work as an investment banker with Merrill Lynch in the firm's London office, was a vice president in the company's Moscow office,[3] and later served as COO for Merrill Lynch's energy and power department in New York.[12] Page has stated that he worked on transactions involving Gazprom and other leading Russian energy companies. According to business people interviewed by *Politico* in 2016, Page's work in Moscow was at a subordinate level, and he himself remained largely unknown to decision-makers.[3]

After leaving Merrill Lynch in 2008, Page founded his own investment fund, Global Energy Capital, with partner James Richard and a former midlevel Gazprom executive, Sergei Yatsenko.[3][17] The fund operates out of a Manhattan co-working space shared with a booking agency for wedding bands, and as of late 2017, Page was the firm's sole employee.[2] Other businesspeople working in the Russian energy sector said in 2016 that the fund had yet to actually realize a project.[2][3]

Page received a PhD degree from SOAS, University of London in 2012, where he was supervised by Shirin Akiner.[2][11] His doctoral dissertation on the transition of Asian countries from communism to capitalism was rejected twice before ultimately being accepted by new examiners.[18] One of his original examiners later said Page "knew next to nothing" about the subject matter and was unfamiliar with "basic concepts" such as Marxism and state capitalism.[19] He sought unsuccessfully to publish his dissertation as a book; a reviewer described it as "very analytically confused, just throwing a lot of stuff out there without any real kind of argument."[2] Page blamed the rejection on anti-Russian and anti-American bias.[19] He later ran an international affairs program at Bard College and taught a course on energy and politics at New York University.[20][21] In more recent years, he has written columns in *Global Policy Journal*, a publication of Durham University.[3]

https://www.politico.com/magazine/story/2018/02/03/carter-page-nunes-memo-216934

2018-02-03-politico-com-why-carter-page-was-worth-watching.pdf

On Friday, Washington was convulsed by a contentious four-page document: the Nunes memo. The memo, according to its putative author, House Intelligence Committee Chairman Rep. Devin Nunes, revealed unprecedented abuses by the FBI and Justice Department. The counterview: That Nunes' memo was a misleading, partisan and shoddy piece of work. In this second reading, the purpose of the memo was to offer succor to President Donald Trump and to discredit the investigation into Trump, Russia and collusion led by special counsel Robert Mueller.

Most remarkable was the unlikely hero at the center of this national row: Carter Page. The memo alleged that the bureau bugged his

Most remarkable was the unlikely hero at the center of this national row, Carter Page. The memo alleged that the bureau bugged his communications after deliberately duping the Foreign Intelligence Surveillance Court. Not only that but using supposedly flawed material supplied by Christopher Steele, the former British intelligence officer whose dossier accused Trump of consorting with Russian president and former KGB operative Vladimir Putin. But who exactly was Carter Page? And were there, in fact, genuine reasons why the FBI might have ground for suspecting him?

To answer that question meaningfully it is necessary to go back—to 2013, and to a group of jaded Putin spies working deep undercover in downtown Manhattan. One of them was Viktor Podobnyy. Moscow had dispatched Podobnyy to the United States under his own name. He worked in New York under official "cover": attaché to Russia's delegation to the United Nations.

In reality, Podobnyy was employed by Russia's foreign intelligence service, the SVR. Putin was the former head of the SVR's domestic counterpart, the FSB. Podobnyy's mission was to recruit Americans and to collect economic intelligence. One of his SVR colleagues was Igor Sporyshev, who was working covertly as a "trade representative." Neither man was aware that the FBI had a bug inside their SVR office. The Bureau was secretly listening to their conversations.

One of their tasks was to liaise with another SVR officer, Evgeny Buryakov. Buryakov's position was somewhat precarious. He didn't have diplomatic immunity, which meant if he was caught he could go to jail. His official day job was at a branch of a Russian state bank in Manhattan, VEB.

As FBI wiretaps showed, the techniques for meeting with Buryakov were distinctly old-school. Typically, Sporyshev would ring Buryakov and tell him he had to give him "something"—a ticket, a book, a hat, an umbrella. The two would meet outdoors. This sometimes happened outside Buryakov's bank office on Third Avenue—an inconspicuous brown tower with a 1960s abstract sculpture at street level opposite the foyer. They would exchange documents.

ADVERTISING

Sporyshev's biggest headache was finding Americans willing to become intelligence sources for Russia. This was tough. He had approached two young women working in financial consultancy who had recently graduated from a New York university. Sporyshev told Podobnyy he was skeptical anything would come of it. Or, as he put it in chauvinist terms: "In order to be close you need to either fuck them or use other levers to execute my requests."

The Russian spies, however, had one promising lead. This was a guy—an energy consultant based in New York City. Unlike the women, he was eager to help. And, it appeared, keen to make money in Moscow. There was a drawback: The source—whom the FBI called "Male-1"—was something of a dimwit.

The FBI intercepts record:

PODOBNYY: [Male-1] wrote that he is sorry, he went to Moscow and forgot to check his inbox, but he wants to meet when he gets back. I think he is an idiot and forgot who I am. Plus he writes to me in Russian [to] practise the language. He flies to Moscow more often than I do. He got hooked on [the Russian state energy company] Gazprom, thinking that if they have a project, he could rise up. Maybe he can. I don't know, but it's obvious he wants to earn loads of money.

SPORYSHEV: Without a doubt.

Podobnyy explained he intended to string Male-1 along. That meant feeding him "empty promises." Podobnyy would play up his connections to Russia's trade delegation, to Sporyshev, and pretend his SVR colleague might "push contracts" the American's way.

PODOBNYY: This is intelligence method to cheat! How else to work with foreigners? You promise a favour for a favour. You get the documents from him and go tell him to fuck himself. But not to upset you I will take you to a restaurant and give you an expensive gift. You just need to sign for it. That is ideal working method.

These tactics may have been crude. In this instance they worked. Podobnyy approached the consultant at an energy symposium in New York. According to FBI court documents, the two swapped contacts. They emailed for several months. Male-1 co-operated, although he says he did not know the Russian was a spy. He even handed him documents about the energy world.

This was a strange business—Kremlin officers careening around Manhattan, spycraft involving fake umbrellas, and an American intelligence source who spent more time in Moscow than his Russian handlers. Plus espionage professionals who turned out to be suffering from ennui.

The American willing to provide information to Putin's foreign intelligence officers rented a working space at 590 Madison Avenue. The building was linked by a glass atrium to a well-known New York landmark, Trump Tower. The atrium had a pleasant courtyard, with bamboo trees, where you could sit and drink coffee. Next door was a franchise of Niketown.

From the atrium you could take the elevator up to the Trump Tower public garden on the fourth floor, with its sparrows and maple trees. The din from West 57th Street meant the garden wasn't exactly tranquil. Or you could queue up with Japanese and German tourists at the Trump Tower basement restaurant and salad bar. Failing that, there was Starbucks on the first floor.

Male-1 had a name. At this point few had heard of him. He was Carter Page.

***

Page is a balding figure in his mid-forties, with buzz-cut hair and the super-lean physique of a cyclist or fitness fanatic. When not on his Cannondale mountain bike, he is typically dressed in a suit and tie. When he is nervous, he grins. One person who met him around this period described the encounter as "excruciating." Page was "awkward" and "uncomfortable" and "broke into a sweat."

Page's résumé was curious, too. He spent five years in the navy and served as a Marine intelligence officer in the western Sahara. During his navy days, he spent lavishly and drove a black Mercedes, according to a friend from his academy class, Richard Guerin.

He was smart enough to get academic qualifications: fellow at the Council on Foreign Relations, master's from Georgetown University, a degree from New York University's business school. And a PhD from the School of Oriental and African Studies at the University of London.

This, it transpired, was hard won. Page's British academic supervisors failed his doctoral thesis twice, an unusual move. In a report they described his work as "verbose" and "vague". Page responded by angrily accusing his examiners of "anti-Russian bias".

Page's apparent Russian sympathies were evident from much earlier. In 1998 Page spent three months working for the Eurasia Group, a strategy consulting firm. Its founder, Ian Bremmer, later described Page as his "most wackadoodle alumnus." Page's vehemently pro-Kremlin views meant that "he wasn't a good fit," Bremmer said.

In 2004 Page moved to Moscow, where he became an energy consultant with Merrill Lynch. As Page tells it, it was while working as an investment banker that he struck up a relationship with Gazprom. He advised Gazprom on transactions, including a deal to buy a stake in an oil and gas eld near Sakhalin, the desolate island on Russia's Pacific coast. He bought Gazprom shares.

According to Politico, few people in Moscow's foreign business community knew of him. Those who did were underwhelmed. "He wasn't great and he wasn't terrible," his former boss, Sergei Aleksashenko, said, adding that Page was "without any special talents or accomplishments," "in no way exceptional," and "a gray spot."

Three years later, Page returned to New York and to his new office next to Trump Tower. From there he set up a private equity business, Global Energy Capital LLC. His partner was Russian—a wealthy former Gazprom manager called Sergei Yatsenko. Did Yatsenko know Podobnyy and Sporyshev? Or indeed other members of Russia's underground espionage community?

In the worsening dispute between Putin and the Obama administration, Page sided with Moscow. He was against US sanctions imposed by Obama on Russia in the wake of Crimea. In a blog post for Global Policy, an online journal, he wrote that Putin wasn't to blame for the 2014 Ukraine conflict. The White House's superior "smack-down" approach had "started the crisis in the first place," he wrote.

Page's rampant pro-Moscow views were at odds with the US State Department under Clinton and with almost all American scholars of Russia. After all, it was Putin who had smuggled tanks across the border into eastern Ukraine. Not that Page's opinions counted for much. Global Policy had a small circulation. It was edited out of Durham University in the north of England.

His relationship with the journal fizzled out when he wrote an opinion piece lavishly praising a pro-Russian candidate ahead of the U.S. presidential election—Trump.

And then something odd happened.

In March 2016 candidate Trump met with the Washington Post's editorial board. At this point it seemed likely that Trump would clinch the Republican nomination. Foreign affairs came up. Who were the candidate's foreign policy advisers? Trump read five names. The second was "Carter Page, PhD." Given Trump's obvious lack of experience of world affairs, this was a pivotal job.

One former Eurasia Group colleague said he was stunned when he discovered Page had mysteriously become one of Trump's foreign policy advisers. "I nearly dropped my coffee," he told me. The colleague added: "We had wanted people who could engage in critical analysis of what's going on. This is a guy who has no critical insight into the situation. He wasn't a smart person."

Page's real qualification for the role, it appeared, had little to do with his restless CV. What appeared to recommend him to Trump was his boundless enthusiasm for Putin and his corresponding loathing of Obama and Clinton. Page's view of the world was not unlike the Kremlin's. Boiled down: the United States' attempts to spread democracy had brought chaos and disaster.

Podobnyy and Sporyshev approached their duties with a certain cynicism laced with boredom and a shot of homesickness, the FBI tapes revealed. Page, by contrast, was the rarest of things: an American who apparently believed that Putin was wise and virtuous and kind.

By this point, the Russian spies had been spirited out of the United States. In 2015 their ring was broken up. As accredited diplomats, they were entitled to fly home. Buryakov was less fortunate. At the time that Page joined Trump's campaign, Buryakov pleaded guilty to acting as an unregistered foreign agent. He got two and a half years in a US jail.

In July 2016 Page went back to Russia, in a trip approved by the Trump campaign. There was keen interest. Page was someone who might give sharper definition to the candidate's views on future US–Russian relations. Moscow sources suggest that certain people in the Russian government arranged Page's visit. "We were told: 'Can you bring this guy over?'" one source said, speaking on condition of anonymity.

One of Russia's top private universities, the New Economics School, invited Page to give a public lecture. This was no ordinary event but the prestigious commencement address to its class of graduating students. The venue was Moscow's World Trade Center

Russia's media hailed Page as a "celebrated American economist." This, despite the fact that Page's lecture was distinctly strange—a content-free ramble verging on the bizarre. Page, it seemed, was criticizing U.-.S-led attempts at "regime change" in the former Soviet world. Nobody could be sure. His audience included students and local Trump fans, some of whom were visibly nodding off by the end.

Shaun Walker, the Guardian's Russia correspondent, had attended an event given by Page the previous evening. He described Page's PowerPoint presentation as "really weird." "It looked as if it had been done for a Kazakhstan gas conference," Walker said. "He was talking about the United States' attempts to spread democracy, and how disgraceful they were."

Page was Trump's leading Russia expert. And yet in the question-and-answer session it emerged that Page couldn't really understand or speak Russian. Those seeking answers on Trump's view of sanctions were disappointed. "I'm not here at all talking about my work outside of my academic endeavor," Page said. At the end, Walker said, Page was "spirited off."

Clearly, Page was reluctant to give any clues about a Trump administration's Russia policy or how Trump might succeed in strengthening ties where Obama and George W. Bush had both failed.

So what was he doing in Moscow?

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According to the Steele dossier —vehemently disputed by Page and subsequently rubbished by Nunes, and Republicans —the real purpose of Page's trip was clandestine. He had come to meet with the Kremlin. And in particular with Igor Sechin. Sechin was a former spy and, more

importantly, someone who commanded Putin's absolute confidence. He was in effect Russia's second most powerful official, its de facto deputy leader.

By this point Sechin had been at Putin's side for more than three decades. He had begun his career in the KGB and served as a military translator in Mozambique. In the 1990s he worked with Putin in the mayor's offce in St Petersburg. Sechin functioned as Putin's scowling gatekeeper. He carried the boss's briefcase and lurked outside Putin's ground-floor office in St Petersburg's city hall.

His appearance was lugubrious. Sechin had a rubbery face, narrow-set eyes, and a boxer's squishy nose. When Putin was elected president, Sechin became his deputy chief of staff and, from 2004, executive chairman of the Russian state oil firm Rosneft, the country's biggest oil producer. A stint as deputy prime minister was not successful. "He's clever, despite looking like a dummy. But he can't speak or do public politics," Sergei Sokolov, deputy editor of the liberal Novaya Gazeta newspaper, said of Sechin.

In private Sechin impressed. Chris Barter—the former CEO of Goldman Sachs Moscow—described him as an "extremely charming and smart guy, on top of his numbers operationally." It was clear that Sechin had Russia's entire security services at his disposal. He would be willing to personally reward anyone who advanced the objectives of the Russian state, Barter added.

In 2014 Page had written a sycophantic piece that lauded Sechin for his "great accomplishments." In a blog for Global Policy, Page wrote that Sechin had done more to advance U..S.-Russian relations than anybody in decades. Sechin was a wronged Russian statesman, in Page's view, unfairly punished and sanctioned by the Obama White House.

This was the backdrop to Page's Moscow trip.

Eleven days after Page flew back from Russia to New York, Steele filed a memo to Fusion GPS, the business intelligence firm headed by former Wall Street Journal reporter Glenn Simpson. Simpson had initially begun investigating Trump and Russia at the behest of the Washington Free Beacon, a conservative website. Only later— once Trump had all but secured the nomination—did a law firm employed by the Democrats take over the Trump contract. The fact that Republicans opposed to Trump had begun the inquiry was nowhere to be found in Nunes' memo.

Dated July 19, 2016, Steele's field memorandum was titled: "Russia: Secret Kremlin meetings attended by Trump advisor Carter Page in Moscow."

Steele's information came from anonymous sources. In this case that was someone described as "close" to Sechin. Seemingly, there was a mole deep inside Rosneft—a person who discussed sensitive matters with other Russians. The mole may have been unaware its information was being telegraphed to Steele.

In Moscow, Page had held two secret meetings, Steele wrote. The first was with Sechin. It's unclear where this meeting, if it happened, took place. The second was with Igor Diveykin, a senior official from Putin's presidential administration and its internal political department.

Based on his own Moscow experience, Barter said that meetings with Sechin came about at short notice. Typically, Sechin's chief of staff would call up and order a meeting forty minutes later. "It was always off the cuff, last minute. It was, boom: 'Can you come now?'" Barter said. He personally met with Sechin six times, he added.

Sometimes these meetings took place in the White House, the Russian seat of government. On other occasions they were in Rosneft's tower HQ, overlooking the Moskva River. Of the Steele dossier, Barter told me: "Everything is believable."

According to Steele, Sechin raised with Page the Kremlin's desire for the United States to lift sanctions on Russia. This was Moscow's strategic priority. Sechin offered the outlines of a deal. If a future Trump administration dropped "Ukraine-related sanctions," there could be an "associated move" in the area of "bilateral energy co-operation." In other words, lucrative contracts for U.S. energy firms. Page's reaction to this offer was positive, Steele wrote, adding that Page was "generally non-committal in response."

Steele obtained further information from his high-placed source, which said that the Sechin meeting had taken place on either July 7 or 8—the same day as or the day after Page's graduate lecture.

According to an "associate," Sechin was so keen to lift personal and corporate Western sanctions that he offered Page an unusual bribe. This was "the brokerage of up to a 19 per cent (privatized) stake in Rosneft in return." In other words, a chunk of Rosneft was being sold off.

No sums were mentioned. But a privatization on this scale would be the biggest in Russia for years. Any brokerage fee would be substantial, in the region of tens and possibly hundreds of millions of dollars. Page "expressed interest" and confirmed that were Trump to become US president, "then sanctions on Russia would be lifted," Steele wrote.

Sechin's offer was the carrot.

There was also a stick.

The stick was flourished during Page's alleged second meeting, with Diveykin. The official reportedly told Page that the Kremlin had assembled a dossier of compromising materal on Clinton. And might possibly give it to Trump's campaign. However, according to Steele, Diveykin also delivered an ominous warning. He hinted—or even "indicated more strongly"—that the Russian leadership had damaging material on Trump, too. Trump "should bear this in mind" in his dealings with Moscow, Diveykin said.

This was blackmail, clear and simple.

Page was the go-between meant to relay this blunt message to Trump. He was part of a chain of cultivation and conspiracy that stretched from Moscow to Fifth Avenue. Allegedly, that is. Over the coming months, Page would vehemently deny any wrongdoing. He would assert that he was a victim. He said he didn't meet Sechin.

However, in testimony to Nunes' House Intelligence committee last November Page admitted meeting Andrey Baranov, Rosneft's head of investor relations. Did sanctions come up? "Not directly," Page replied. Did Baranov talk about privatization? He "may briefly have mentioned it," Page admitted. Was Baranov relaying Sechin's wishes? Almost certainly.

Page's problem, then, was that he had an unfortunate habit of seeking out Russian spies—ones in their twenties like Podobnyy and older ones like Sechin, either directly or via underlings. And Russian ambassadors like Sergei Kislyak, whom Page met in summer 2016 at the Republican

national convention.

***

Page's multiple interactions with senior Russians were a matter of growing concern to US intelligence. In the coming months, the FBI seemed to grow suspicious that Page might be a Russian agent. That summer the bureau decided it was going to bug Page's phone calls. This was no easy matter. To do this lawfully, federal agents had to obtain a warrant. Any application of this kind was voluminous—as then FBI Director James Comey put it, these were often thicker than his wrists.

The application included Page's earlier testimony to the FBI. In June 2013 counter-intelligence agent Gregory Monaghan interviewed Page in connection with the Podobnyy–SVR spy ring. Page said he'd done nothing wrong. Since then, Page had held further meetings with Russian operatives that had not been publicly disclosed, the application said.

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The FBI presented its evidence before a secret tribunal— the Foreign Intelligence Surveillance, or FISA, court, which handles sensitive national security cases. The bureau argued that there were strong grounds to believe that Page was acting as a Russian agent. The judge agreed. From this point on, the FBI was able to access Page's electronic communications. An initial ninety-day warrant was later renewed.

As the Wall Street Journal reported on Friday, Steele's research formed only part of the application. Four separate federal judges approved these renewals. All were appointed by Republican presidents.

Meanwhile, Page's career as a Trump adviser was entering its terminal phase. His speech in Moscow had provoked comment, much of it adverse. The campaign's ties with Russia were becoming a source of controversy. According to the Washington Post, quoting a campaign manager, Page wrote policy memos and attended three dinners in Washington for Trump's foreign advisory team. He sat in on meetings with Trump. Apparently, his attempts to meet Trump personally failed.

In the classified briefing to congressional leaders in late August 2016 Page's name figured prominently. The CIA and FBI were sifting through a mound of intercept material featuring Page, much of it "Russians talking to Russians," according to one former National Security Council member. When Senate minority leader Harry Reid wrote to Comey in early autumn, he cited "disturbing" contacts between a Trump adviser and "high-ranking sanctioned individuals." That was Page. And Sechin.

These embarrassing details surfaced in a report by Yahoo! News. Within hours, the Trump campaign had disavowed Page—casting him out as a nobody who had exaggerated his links to Trump. All of which made his subsequent rehabilitation by Nunes more bizarre. Page exited the campaign in late September. It was an inglorious end, and his troubles were just beginning. Steele's Rosneft source was right. In early December—less than a month after Trump won the White House—Rosneft announced it was selling 19.5 percent of its stock. This was one of the biggest privatizations since the 1990s and, on the face of it, a vote of confidence in the Russian economy.

Steele's mole had known about the plan months before Rosneft's management board was informed. The board only discovered the deal on December 7, hours after Sechin had already recorded his TV meeting with Putin revealing it. Even the Russian cabinet had been kept in the dark. "Sechin did it all on his own—the government did not take part in this," one source told Reuters.

In the weeks to come, US and other Western intelligence agencies would examine this deal closely. Where did the money go? Russian journalists were sceptical that it had ended up with Trump; it was more probable, they reasoned, that it would have travelled to Putin and Sechin. There was no proof of this, and neither the Kremlin nor other parties would offer comment.

A day after the Rosneft deal was unveiled, Page flew back to Moscow. During his previous July visit he'd been feted. Since then, however, Page had become a liability to the Trump campaign—and therefore to Russia, too. This time Page was an unperson, a toxic figure, at least officially. Dmitry Peskov, Putin's press spokesman, said government leaders had no plans to meet with him.

Page's own explanation for his visit was vague. He had come to see "business leaders and thought leaders," he told RIA Novosti, the Russian state news agency. He would be in Moscow for six days, he said.

In the months to come, Page would vehemently deny the allegations against him. He portrayed himself as a "peace-seeker." He even expressed sympathy for Podobnyy, the spy— whom he described as a "junior Russian diplomat." In an email to the Guardian, Page complained that Obama had persecuted Podobnyy, Sporyshev, and him "in accordance with Cold War traditions."

He wrote: "The time has come to break out of this Cold War mentality and start focusing on real threats, rather than obsolete and imagined bogeymen in Russia."

Page's loyalty to the SVR was breathtaking. Podobnyy wasn't an "imagined bogeyman" but a career operative working against the interests of the United States. And, moreover, one who had bad-mouthed Page behind his back, calling him "a bit of an idiot".

Whatever Page's motives were for helping Russian intelligence—greed, naivety, stupidity—his actions surely justified the FBI's interest in him. There was a simple way of avoiding U.S. surveillance and a FISA court warrant. It could be summed up like this: Don't hang out with Russian spies.

Andrusz said he had expected it would be "easy" to pass Page, a student at the School of Oriental and African Studies (Soas). He said it actually took "days and days" to wade through Page's work. Page "knew next to nothing" about social science and seemed "unfamiliar with basic concepts like Marxism or state capitalism," the professor said.

"September 20, 2018 : Trump's declassification will aid Eurasian Mafia (By Wayne Madsen)"

Source : [HM000U][GDrive]

Carter Page may have been under U.S. intelligence surveillance for some time. A 1993 graduate of the U.S. Naval Academy, **Page was selected for the Navy's Trident Scholar program, which allowed him to avoid ship duty and enter directly into independent academic research and study. In his senior year at the academy, he was detailed to work in the House Armed Services Committee office of chairman Les Aspin. While in the Navy, he served as an intelligence officer for the United Nations Mission for the Referendum in Western Sahara (MINURSO), the peacekeeping force established to ensure an independence plebiscite for the people of Western Sahara, a former Spanish colony illegally occupied by Morocco**.

In 2000, Page became an investment officer at the Moscow office of Merrill Lynch. There, he became involved with major Russian energy firms owned by criminal syndicate-linked oligarchs, including Deripaska. After leaving Moscow for New York, Page established his own firm Global Energy Capital, with the assistance of Gazprom executive Sergei Yatsenko. However, Page's involvement with Russian energy companies may have begun earlier.

Little is known about Page's "intelligence" work for MINURSO in Western Sahara, Morocco, and the camps of the Western Saharan POLISARIO government-in-exile in Algeria. However, Western Sahara and its border region with Algeria is known to be rich in natural gas resources, something that would be of great interest to the Russian natural gas giant Gazprom. Russia's interest in the region was capped in 2001 by the signing of a strategic partnership between Russia and Algeria.

MINURSO (https://peacekeeping.un.org/en/mission/minurso)

Location:

Western Sahara

Headquarters:

Laayoune

Established: April 1991

Local time:

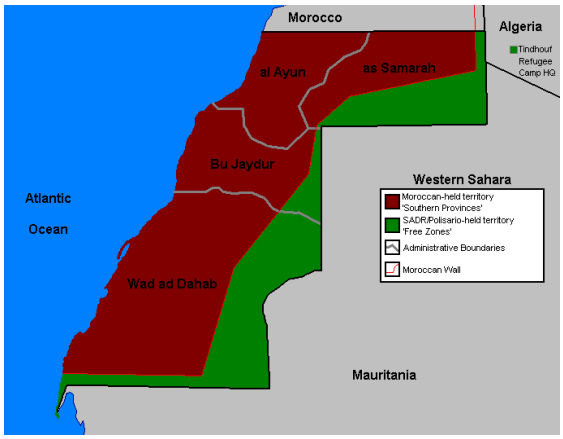
12 June 2019 - 23:06 +01

Preparing for a choice

The United Nations Mission for the Referendum in Western Sahara (MINURSO) was established by Security Council resolution 690 of 29 April 1991 in accordance with settlement proposals accepted on 30 August 1988 by Morocco and the Frente Popular para la Liberación de Saguia el-Hamra y de Río de Oro (Frente POLISARIO).

The settlement plan, as approved by the Security Council, provided for a transitional period for the preparation of a referendum in which the people of Western Sahara would choose between independence and integration with Morocco. The Special Representative of the Secretary-General was to have sole and exclusive responsibility over matters relating to the referendum and was to be assisted in his tasks by an integrated group of civilian, military and civilian police personnel, to be known as the United Nations Mission for the Referendum in Western Sahara.

On 29 April 2016, the Security Council adopted resolution 2285, calling upon the parties to the conflict to continue to show political will in order to enter into a more intensive and substantive phase of negotiations.



Moroccan-controlled territories (red) vs POLISARIO front (see https://en.wikipedia.org/wiki/Polisario_Front)

See https://en.wikipedia.org/wiki/United_Nations_Mission_for_the_Referendum_in_Western_Sahara

Chair of the President's Intelligence Advisory Board

In office

May 26, 1994 – May 21, 1995

President Bill Clinton

Carter Page, if he served with the House Armed Services Committee in his senior year at the Naval academy, and he graduated in 1993, that would be servicing in 1992-1993 .

https://www.mcclatchydc.com/news/politics-government/white-house/article144722444.html

"At the Naval Academy, Page was a Trident Scholar, a prestigious designation that allowed him to serve as a researcher his senior year on the House Armed Services Committee. The scholarship put him in the office of Rep. Les Aspin, D-Wis., shortly before the congressman became Clinton's defense secretary. Page also said he had served multiple tours in the Middle East and Europe as a surface warfare officer, and that he had later worked in the Pentagon on nuclear nonproliferation matters.

Read more here: https://www.mcclatchydc.com/news/politics-government/white-house/article144722444.html#storylink=cpy"

http://www.apageassociates.com/about.html

2019-allan-page-and-associates-website-about.pdf /

About Us

Allan R. Page founded A. Page & Associates, LLC, after a 32-year career with the CH Energy Group. During his career, Mr. Page worked in customer service, engineering, direct supervision, district and division level operating management. Mr. Page held executive and board level positions including membership on affiliate boards and the position of Group President. For many affiliates, Mr. Page served as COO and CEO. Mr. Page has been directly responsible for developing new business ventures such as electric generation companies, energy services companies, retail energy supply businesses (gas, electric, oil, propane) and energy trading organizations.

Mr. Page has extensive experience in business analysis, building teams, managing people, and organizational development. In his graduate work in Industrial Administration, he was fascinated by the study of human motivation, and has devoted much of his career to understanding and applying the practical aspects of motivating and developing people, teams, and organizations. He has extensive experience in settling union grievances and in negotiating union contracts.

Since its founding in 2002, A. Page & Associates has provided consulting, advisory, and development services for local and state governments, colleges, banks, engineering consultants, utilities, energy services companies, and manufacturers. We work with clients throughout the United States, the Dominican Republic, the Bahamas, Africa, Great Britain, the UAE, China, India and Russia.

Mr. Page serves

on a number of Boards

including:

Gilman Ciocia

Hudson Valley Board

of the Boy Scouts

of America

Cunneen-Hackett

Hudson Valley Board

of the World Affairs Council

Past Chairman of

MetroPool

Chairman and co-founder

of The Hudson Renewable

Energy Institute

Mr. Page has engineering degrees and a master's in Industrial Administration from Union College in Schenectady, New York. Mr. Page graduated from executive programs in management at the Edison Electric Institute and at the University of Michigan. He is a licensed professional engineer in the State of New Yor

https://twitter.com/HousatonicITS/status/1138637996700459012?s=20

[1] The parents of #CarterPage (Allan R Page) married in 1970. it appears that only the grandmother "Dr. Joan page" showed, and not the grandfather (sick? missing?). The "John Page"... is this an uncle of Carter Page?

Miss Greenstein weds Mr. Page

Rachel Elizabeth Greenstein and Allan Robert Page were married June 20 in Church of St. Philip.

Attendants were Dr. Joan Page, Mrs. Jeffrey Piehler, Ann Kruk, Joline Gitis, Roger Miller, Larry Greenstein, John Page, John Ellerton and Larry Giamicheal.

The bride is the daughter of Mr. and Mrs. Joseph Greenstein, 2741 Upton Av. N. Mr. Greenstein is alderman of the 5th Ward. The groom is the son of Mr. and Mrs. Andrew Page, Galway, N.Y.

After a wedding trip to Nova Scotia and Maine, the couple is at home in Kingston, N.Y.

The bride is a graduate of Skidmore College, Saratoga Springs, N.Y. The groom is a graduate of Union College, Schenectady, N.Y., and is a civil engineer.

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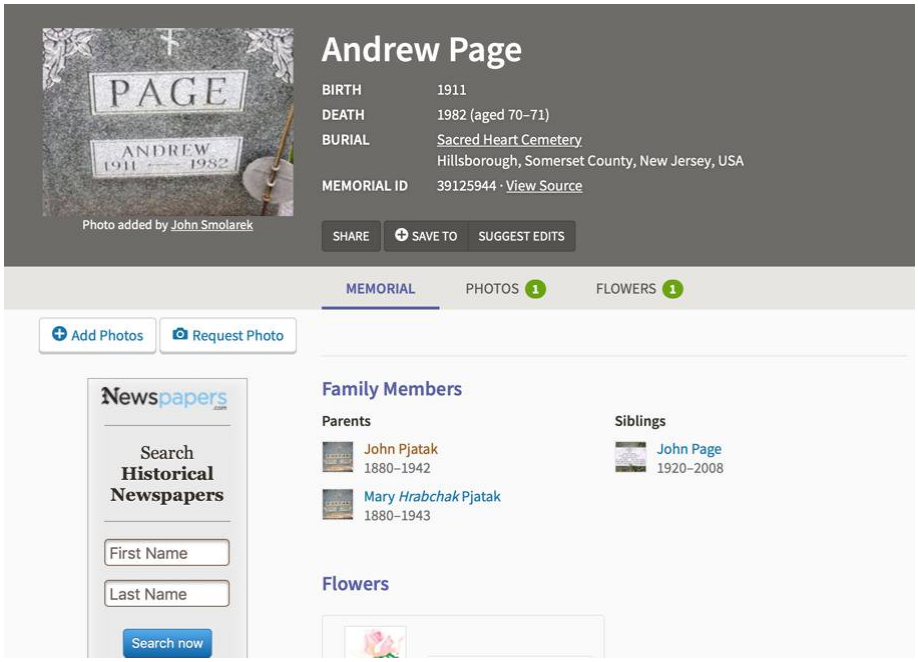
https://twitter.com/HousatonicITS/status/1138638705193676801?s=20

[2] If the grandfather is Andrew Page , this might be a match. Andrew Page (1911 - 1982) had a brother John Page.

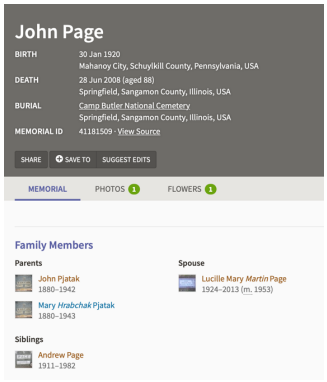


https://twitter.com/HousatonicITS/status/1138638957858762753?s=20

[3] Making his great grandfather Slovokian ... "Pjatak", which became "Page"

https://www.findagrave.com/memorial/83598901/john-pjatak

[4] Carter Page's uncle, John Page . US Air Force Captain. Married to Lucille Mary Page.



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Melvyn Robert Paisley (born 1924)

Wikipedia Melvyn R. Paisley

Bio info https://www.ancestry.com/family-tree/person/tree/26367534/person/340044832449/facts?_phsrc=fEm97&_phstart=successSource

Associations

- **Ben Telfer Plymale (born 1926)** (best friend, and colleague and fellow executive at Boeing - Source is [HW005F][GDrive])

Projects / Employment

- **Operation Ill Wind**

Saved Wikipedia (Dec 24 2020) - Melvyn R. Paisley

See [HK004D][GDrive]

Assistant Secretary of the Navy (Research, Engineering and Systems) , **In office** December 1981 – March 1987

President Ronald Reagan

Preceded by Gerald A. Cann

Succeeded by Office abolished

Personal details

Born Melvin Robert Paisley on October 9, 1924 , Portland, Oregon

Died December 19, 2001 (aged 77)

Nationality United States

Political party Republican

Alma mater Massachusetts Institute of Technology

Occupation engineer / consultant

Awards Distinguished Service Cross / Silver Star (2) / Distinguished Flying Cross

Military service

Allegiance United States

Branch/service United States Army Air Corps

Rank Captain

Battles/wars World War II

Melvyn R. Paisley (October 9, 1924 – December 19, 2001) was appointed United States Assistant Secretary of the Navy (Research, Engineering and Systems) by President Ronald Reagan from 1981 to 1987.[2] He was prosecuted in Operation Ill Wind in which he, numerous other government employees and 60 private citizens were arrested.[3] In 1991, he admitted that while in office he had accepted hundreds of thousands of dollars of bribes and was sentenced to four years in prison.

Biography

Melvyn R. Paisley was born on October 9, 1924, in Portland, Oregon. He grew up in a logging camp where his father was a lumberjack and his mother was a cook. During World War II, Paisley enlisted in the United States Army Air Corps and became a distinguished pilot. He flew the P-47 Thunderbolt in the 9th Air Force, downed six enemy airplanes and was subsequently awarded the Distinguished Service Cross, two Silver Stars[1][4][5] and the Distinguished Flying Cross.[6]

After the war, Paisley studied engineering and received a bachelor's degree from the American Institute of Technology in 1953 and a master's degree from the Massachusetts Institute of Technology in 1954.

Career

In 1954, Paisley joined Boeing. His first job was working as an engineer on the CIM-10 Bomarc. In 1959, he became head of the electronics staff for the LGM-30 Minuteman, focused on the development of a radio launch system. In 1961, he became engineering manager of the Minuteman missile facility at Great Falls, Montana. He later headed Boeing's efforts on the Safeguard Program and later as electronics proposal manager for the B-1 Lancer. In 1971, he became head of Boeing's Evergreen 747 Supertanker program. Finally, he was promoted to the role of Boeing's Director of Planning.

Paisley was close to John Lehman. When Lehman became United States Secretary of the Navy in 1981, Lehman convinced President of the United States Ronald Reagan to nominate Paisley as Assistant Secretary of the Navy (Research, Engineering and Systems). He held this office from December 1981 until March 1987. Lehman and Paisley gained a reputation as being somewhat heavy-handed as managers, but effective at slashing red tape.

Operation Ill Wind

In 1986, federal prosecutors sued Paisley, arguing that a $183,000 severance package Paisley received upon leaving Boeing compromised his objectivity as Assistant Secretary of the Navy (Research, Engineering and Systems). The Supreme Court of the United States later ruled that such severance packages were not illegal.

Upon leaving government in 1987, Paisley worked as a consultant, guiding companies like Martin Marietta and United Technologies Corporation through the procurement process.

In 1991, federal prosecutors indicted Paisley for receiving bribes during his time as Assistant Secretary of the Navy (Research, Engineering and Systems). In the course of pleading guilty, Paisley admitted that he had received hundreds of thousands of dollars in bribes from an Israeli manufacturer of pilotless reconnaissance planes (Mazlat, which was a joint venture of two Israeli firms, Israel Aircraft Industries and Tadiran Ltd) and for providing confidential information to allow the Sperry Corporation to enable them to win a bid for the Aegis Combat System. Paisley was sentenced to four years in prison and fined $50,000.

Retirement

Paisley was released from prison in 1995. He spent the rest of his time painting and collecting World War II films. Shortly before his death, Paisley was a consultant for *Shooting War*, a two-hour documentary about World War II narrated by Tom Hanks.

Paisley died of cancer on December 19, 2001. He was buried in Arlington National Cemetery.[6]

1988 (June 27) - LA Times - "Scandal Figure Had Right Stuff : For Paisley, Shadows Overtook Hero Image"

Source : [HN01D7][GDrive] / By WILLIAM C. REMPEL AND DOUGLAS JEHL

WASHINGTON — In a corner of history far from the Pentagon fraud scandal that is now consuming his life, Melvyn R. Paisley was a hero--a World War II ace fighter pilot with a reputation for daring and a raft of medals to prove it.

Like every other fighter pilot of that time, the young Paisley lived by his wits and flew by the seat of his pants. In defense of his country he suffered permanent ear damage, but when the dogfights were over, Paisley was always the victor.

Friends call him “a survivor,” but Paisley was far more than that. His drive for success followed him into private life, where he rose to a prominent marketing position and helped win billions of dollars in military defense contracts for the Boeing Co.

And when Paisley reached the apex of his career, it was right back where he started, in the military arena--appointed in 1981 to one of the most powerful jobs in the Pentagon, assistant secretary of the Navy.

Along the way, however, Paisley’s glow of success was shadowed by rumors and allegations, much of it, according to a wide range of sources, fostered by his own boastful accounts, of purported scandals ranging from paying bribes to putting prostitutes on his company expense accounts.

Earlier this month, those shadows overtook the hero’s reputation. What emerged was a portrait of a man who had a lot of the right stuff but who investigators suspect did not always do the right thing.

It was this side of Melvyn Paisley that has led to a federal investigation of what is being described as a central role in the expanding case involving widespread fraud in the Pentagon’s weapons procurement system, the worst scandal of its kind in Defense Department history. Paisley has been linked to a variety of allegations, including bribery and the misuse of classified documents--all of it on a grand scale.

“He’s never changed,” said one former colleague who knew him well. “Paisley’s a World War II fighter ace who never grew up.”

At the base of a basketball pole in the Kent, Wash., home where Paisley lived before moving to the nation’s capital, another moment in Paisley family history is preserved in concrete--an array of hand prints, circa 1975. Mel’s is next to then-wife Millie’s and those of the four children: Chip, Frank, Debbie and Beau.

Conflict, Tragedy

The little cement tableau suggests a successful family life for Paisley. But that image, too, is shadowed by conflict and tragedy spelled out in legal documents in the courts and the coroner’s office. He has been divorced twice, and another wife died in an accident.

Paisley’s current wife, the former Vicki Ann McKim, a Boeing computer consultant with whom sources say he had a lengthy affair while still married to Millie, has been linked to the Pentagon fraud scandal. Government sources told The Times last week that Vicki Paisley allegedly assisted her husband in copying classified documents smuggled from the Pentagon and that she had been paid up to $50,000 by a private defense consultant while Paisley was still overseeing Navy weapons procurement.

Paisley’s Boeing career gave every appearance of success.

He joined the company as an engineer in 1954 and worked on a number of projects, including the BOMARC and Minuteman missiles. Subsequently, he moved through a number of management jobs and in 1971 became the program manager of the 747 tanker project, a military program. By 1981 he was manager for international operations with the Space and Information Systems Division of Boeing Aerospace and vice president of Boeing International Corp.

Masked Controversy

But his impressive corporate resume did not reveal the controversy that marked his career.

His own colleagues accused him of bribing foreign military officials, bugging the offices of competitors and billing fees for prostitutes to the company on his expense accounts. At least two former Boeing executives had sought to get Paisley fired from his job 10 years ago because they were alarmed about his conduct, retired officials have said.

According to former Boeing executive James Durst, Paisley did “dirty business.” Boeing officials said they would not answer any questions about Paisley this weekend.

Paisley lived well during his tenure at Boeing. There were European vacations, ski trips to a condo in Sun Valley, tennis and season football tickets.

He hosted lavish company Christmas parties on the 13-acre Kent estate where he often kept a couple of head of cattle in a nearby corral. He sold the house late last year for $182,000, according to county records.

Yet the Paisleys were not ostentatious. He didn’t drive fancy cars. Friends called him “a pickup truck kinda guy.” He tinkered at converting a bus into a motor home in his back yard and served inexpensive beef ribs when colleagues were invited for dinner.

Served Guests 4-Star Meals

Paisley was generous, a back-slapper with an unlimited expense account for his guests’ four-star meals and nightclubs at the annual Paris Air Show, when Boeing would send 400 people.

"When Mel wants to turn on the charm, he can be the most charming, humorous, delightful guy you'd ever want to meet," retired Boeing executive and Air Force Col. Harlan Wilder said. "But he could turn it on and off like a switch.

"When he set out to do the job, if he couldn't do it one way, he'd do it another," Wilder added. "But, by God, he got the job done."

Wilder, who directed Boeing's international government sales for the Pacific and the Far East, said Paisley's "brassy" style sometimes irked his colleagues.

Another colleague, Orvil M. Roetman, now vice president of government and international affairs for Boeing Co., said he is "still surprised" that Paisley got his high Pentagon post, given his flamboyant personality.

"Since I'm retired Navy, you tend to put the top Pentagon guys on a pedestal," he said. "Mel wasn't a guy you put on a pedestal."

It was late in his Boeing career that Paisley's friendship with former Navy Secretary John F. Lehman Jr. flourished. Paisley hired Lehman as a Boeing consultant, worked closely with him and had him over to the house a number of times. When Paisley "started angling for the Pentagon job," he went fishing with Lehman, recalls Paisley's ex-wife, Mildred McGetrick.

Start of New Career

He got the job. It was the beginning of a new career for Paisley.

At his confirmation hearing before the Senate Armed Services Committee, he quoted George Washington when asked why he wanted the job as assistant secretary of the Navy:

"Every citizen who enjoys the protection of a free government, owes not only a portion of his property, but even of his personal service to the defense of it."

A photograph of Paisley taken in September, 1986, provides a telling indication of the way the former fighter pilot plied his trade after getting his key job at the Pentagon.

He and his wife are standing, smiling, on the deck of the Queen Elizabeth 2, sailing home to the States after a visit to an air show in Farnborough, England.

Beside them, with his wife, is William M. Galvin, the defense consultant who investigators suspect was Paisley's conduit of valuable information to contractors in an arrangement that was central to the Pentagon fraud scheme.

The lavish cruise was but half of the foursome's joint voyage. On the way to England, said a former Pentagon official familiar with the trip, the Paisleys and the Galvins--Mel Paisley responsible for awarding Navy research contracts, Bill Galvin responsible for winning those contracts for his clients--had flown the supersonic Concorde.

Defense Industry Lore

Paisley's ties to Galvin had already become defense industry lore. "The understanding was that you want to see Paisley, you ask Bill Galvin," the former Pentagon official said. "He makes it happen."

That Galvin was a powerful influence on the assistant Navy secretary was also widely believed among Paisley's deputies. What few apparently knew was how tight the ties were. In the year of the Atlantic crossing, Vicki Paisley received the payment from VAMO, the company formed by the Galvins. About the same time, sources close to the investigation say, she was allegedly helping her husband copy Pentagon documents that, when passed on to a defense contractor, would provide an almost unbeatable advantage over its competitors.

Even before those allegations emerged, however, Paisley's expansive, free-wheeling style had kindled skepticism and distrust among some of his Pentagon colleagues. They say he inexplicably embellished what was already impressive, boasting that he shot down nine enemy aircraft when in fact he shot down five, and claiming to have won 16 air medals when in fact he won 12.

His colleagues said he lied about his academic record too, passing himself off as a graduate of the Massachusetts Institute of Technology, when in fact he received his degree from the unaccredited American Institute of Technology, and attended MIT only for a few months.

Enamored of His Style

But others, weary of bureaucratic caution, grew enamored of the fiery, blustery style of the man many refer to as the "the fighter pilot."

"He's colorful," said retired Marine Col. R. N. Patrick Jr. "He lives life as full as he can. . . . The whole time I worked for him, I never saw him do anything that wasn't to the benefit of the Navy and the Marine Corps."

"He was what that office needed," a former Paisley colleague said. "He took charge from the first."

Paisley's critics, however, had no patience for a broad-swath style that left little time for the details they thought important for a procurement chief to master. "There was no substance to him," said the former Paisley deputy, who told of preparing a slide presentation to brief his boss on a vital program only to find that Paisley fell asleep as soon as the lights were turned out.

"I could tell I was not getting through to him," the deputy said.

Others felt similarly powerless. At a secluded Navy base in the California desert, missile and bomb designers grew furious in the spring of 1986 at what they regarded as Paisley's capricious decision to force their boss to resign from his job as technical director of the China Lake Naval Weapons Center.

Appeal to No Avail

They appealed over Paisley's head, but to no avail. Finally, they resorted to donning buttons of protest: a circle with a red bar slashed diagonally across a paisley patterned background.

In international parlance, the message was clear: No Paisley. But, for the time being, the assistant secretary was to remain beyond challenge.

Paisley is still surrounded by symbols of the success he fashioned in business and government--a big house in exclusive McLean, Va.; matching Jaguar luxury cars in the garage, an office in the Watergate complex.

But by Sunday afternoon, two weeks after being implicated in the massive fraud scandal, Paisley's world was falling in on him.

His phone conversations, he learned, had been monitored for months. His dealings with contractors might have been videotaped. His offices in Washington and Virginia had been picked through by the FBI under search warrants seeking information that might tie him more closely to the allegations of corruption.

Having become a public target, Paisley had turned reclusive. He and his wife parked their matching Jaguars in the garage, renting a Chevy instead. But, for the most part, they have shuttered themselves in. When a reporter rang the doorbell, it went unanswered, though barbecue smoke could be seen wafting from the backyard. [...]

2016 (Nov 02) Blog - "National Security Violations, Murder Cover-Ups, Secret Families and Corruption"

Source - [HW005F][GDrive]

Much of the above comes from the **1995 book When the Pentagon Was For Sale by Andy Pasztor**, in which Ben features prominently.

https://archive.org/details/whenpentagonwasf00pasz/page/n5/mode/2up

[Ben Telfer Plymale (born 1926)] best friend was **Melvyn R. Paisley,** a colleague and fellow executive at Boeing. In the late 1960s, Melvyn lived on a farm in Kent, Washington and was married to his second wife, a younger woman named **Mary Lou** who enjoyed painting as a hobby. **Then on May 8, 1968, Mary Lou's dead body was discovered in their home in suspicious circumstances. She was found in the bathroom, lying face down and her head was surrounded by towels laced with carbon tetrachloride, a toxic cleaning fluid that she used to clean her paint brushes. The story that Melvyn gave was that she had gotten drunk and she took sleeping pills the night before and then accidentally asphyxiated herself with the cleaning fluid.** There was a police investigation and an investigation by the coroner. Her death was officially ruled an accident and the matter was officially dropped.

Despite the cause of death ruling, the matter was not dropped entirely; mostly because Mary Lou's sister didn't believe the official version of events. It became clear that there was more to the story, and the possibility of a cover-up and a murder became plausible. Twenty years later, when Melvyn was being investigated for separate corruption charges while working in the Pentagon, the case was reopened by King County. **It became clear that there were many inconsistencies and inaccuracies with the autopsy report, including the fact that the report found no traces of alcohol or sleeping pills in her system and the fact that the coroner who performed the report also worked for Boeing and somehow kept the report from review by his boss, the head coroner. There was also the revelation that not long before her death, Mary Lou had discovered or speculated that Melvyn was having an affair and had hired a private investigator to follow her husband. (Seven months later, Melvyn married the woman he was having an affair with.)**

Also damning was that – according to phone records – after Melvyn discovered his wife's body, the police was not the first number he called. The first number he called was his attorney and the second was his best friend, Ben Plymale. Then that morning, my grandfather's wife Susan went over to their house to clean it before the county authorities arrived. Susan apparently cleaned or threw away what the investigators assumed was vital evidence. That afternoon the investigators also noted that a fire was burning in the fireplace, which they remarked as unusual because it was May and not cold outside. The inference was that some evidence was probably incinerated in the fire.

Although the investigation was reopened in 1988, no additional charges were ever filed and Mary Lou's death still remains classified as an accident. However, given the circumstantial evidence, it is likely that there was more to the story. Was Mary Lou Paisley was murdered? If so, my grandfather and his wife were directly involved with covering up the crime. Interestingly, for decades after the fact, the case of Mary Lou Paisley was used an example by the King County Sheriff's Office as an example of how *not* to investigate a crime scene. [...]

Wolfgang Kurt Hermann Panofsky (born 1919)

Wikipedia Wolfgang K. H. Panofsky

Captured wikipedia article - [HK000O][GDrive]

Wolfgang Kurt Hermann "Pief" Panofsky (April 24, 1919 – September 24, 2007), was a German-American physicist who won many awards including the National Medal of Science.

Early life

Panofsky was the son of renowned Jewish art historian Erwin Panofsky in Berlin, Germany. He spent much of his early life in Hamburg, where his father was a Professor of Art History. At the age of 15, he moved with his family to the United States and entered Princeton University. He received his bachelor's degree from Princeton University in 1938 and earned his Ph.D. in physics from the California Institute of Technology in 1942. In April 1942 he was naturalized as a U.S. citizen.

Academic career

From 1945 to 1951, Panofsky held an assistant and then associate professorship at the University of California, Berkeley, before permanently establishing himself as Professor of Physics at Stanford University. **Between 1961 and 1984, he was the director of the Stanford Linear Accelerator Center** and continued to serve as director emeritus. He was also on the Board of Directors of the Arms Control Association from 1996 until 1999 and remained a director emeritus until his death.[*citation needed*]

Panofsky was a member of the Board of Sponsors of The Bulletin of the Atomic Scientists and won the Matteucci Medal in 1996 for his fundamental contributions to physics. He was also a recipient of the National Medal of Science, the Franklin Medal (1970), the Ernest O. Lawrence Medal, the Leo Szilard Award and the Enrico Fermi Award.

During his college days, Panofsky was called "Pief" by fellow students who found his full name unpronounceable. The childhood nickname seemed to suit the ebullient physicist, and it stayed with him throughout his long life. His elder brother, Hans A. Panofsky, was "an atmospheric scientist who taught at Pennsylvania State University for 30 years and who was credited with several advances in the study of meteorology". Their father, Erwin Panofsky, had been a "highly distinguished" professor at the Institute for Advanced Study, Princeton, New Jersey. In 1999, the new "Panofsky Lane", in that Institute's faculty housing complex, was named in Erwin Panofsky's honor.

Pathfire, Inc.

1997

https://www.bizjournals.com/atlanta/stories/1997/01/27/story2.html

Tom Engdahl is a rare bird in these parts, and he almost migrated to California.

The CEO of 8-week-old Video Networks Inc. is a veteran entrepreneur, with two successful start-ups on his resume. West Coast venture capitalists, who love backing a proven commodity, wanted to back VNI, but only if he relocated to his native California.

That didn't sit well with the locals here, not to mention Engdahl and his family, comfortably ensconced in Atlanta since 1983. So Engdahl and venture capitalist Stephen Fleming, with the help of several institutions, convinced the investors -- two prestigious West Coast venture funds -- through cajoling and cash that Atlanta could profitably house VNI.

Though his North Atlanta office has little furniture and personnel (the sign outside still reads "Commonwealth Insurance," the previous tenant), Engdahl has secured investments from Fleming's Atlanta-based Alliance Technology Ventures, as well as Institutional Venture Partners (IVP) and U.S. Venture Partners (USVP), both based in Palo Alto, Calif. Rosemont, Ill.-based Comdisco Inc., whose network VNI will use, also has an equity stake in the company. The total investment is worth about $4.3 million. VNI wants to transmit video digitally through an electronic infrastructure -- not a new idea, but one no one has successfully executed.

After Engdahl left Digital Video Inc. -- his second successful start-up -- in 1995, IVP general partner Geoff Yang offered him a slot as an "entrepreneur in residence" at IVP. Engdahl commuted between Atlanta and Palo Alto for a year, advising potential investors and researching his next opportunity.

11/14/2000 - Video Network, Inc. Closes $66 Million Financing Round,Announces Plans to Change Company Name to Pathfire

http://www.quadranglegroup.com/News/NewsItem.aspx?id=42

Key Strategic Investors Include Enron Broadband Services, Reuters and PanAmSat

New Pathfire Name Reflects Company's Pioneering Applications for Distribution and Management of Digital Media Across Numerous Industries

ATLANTA, GEORGIA, and NEW YORK, NEW YORK, November 14, 2000

Video Networks Inc. (VNI), a leading business-to-business provider of digitized video and related e-commerce applications for the media industry, announced today that it has closed on a $66 million round of private financing led by Quadrangle Group LLC, a private equity firm specializing in the media and communications industries.

Quadrangle's $20 million investment was the cornerstone of a round of financing that also included several key strategic and financial investors, such as Enron Broadband Services, a subsidiary of Enron Corp. (NYSE: ENE); Halpern Denny & Company; PanAmSat (NASDAQ: SPOT); Reuters; Riggs Capital Partners; and Sand Hill Capital. VNI said that it expects to announce business partnerships with several of its new strategic investors in the near future.

This round of financing included participation by existing high-quality VNI investors, such as Alliance Technology Ventures, AT&T Ventures, Bank of America Capital Investors, Institutional Venture Partners (IVP), Kinetic Ventures, Monarch Capital Partners, Noro-Moseley Partners, UPS Strategic Enterprise Fund and U.S. Venture Partners. Robertson Stephens functioned as VNI's agent for this significant round of financing.

Michael J. Eckert, president and CEO of VNI, said, "We are pleased and gratified that such a large number of blue-chip companies and firms have joined our existing investors in supporting VNI's vision and direction, and we are quite enthusiastic about the significant strategic value they bring. Our ability to secure a lead investor of Quadrangle's stature represents a strong vote of confidence in our employees, and of course in our groundbreaking technology. Through its deep relationships and high regard within the media and communication industries, Quadrangle will be a valuable partner as we continue to build this company."

Joshua L. Steiner, managing principal of Quadrangle, said, "We believe that VNI offers its customers superior service and significant cost-savings. The fact that leading media companies like NBC and Charter Communications rely on VNI for mission-critical solutions gives us great confidence in the company's prospects."

Steven Rattner, managing principal of Quadrangle, said, "Quadrangle's strategy is to focus on high-quality investments in the media and communications industries, and to invest in companies where we can make a difference. We are very excited about this company and its management team, and we look forward to helping VNI increase its product offerings and expand its customer base."

Quadrangle will receive one seat on the VNI Board of Directors and has the right to nominate a second board member, subject to the approval of the other shareholders in this round of financing.

VNI is a leading business-to-business provider of digital media content distribution and management services to the broadcasting and cable industries, with emerging operations in the areas of radio, digital cinema, syndication and streaming content on the Internet. VNI provides a distribution platform and software applications for the delivery and management of digitized video content and has developed unique e-commerce solutions that improve the efficiency of related billing and processing transactions. VNI's customers include major broadcast networks, cable companies, advertising agencies and other leading media companies.

Company to Change Name to "Pathfire," Reflecting Its Continuing Evolution

VNI's decision to change its name to Pathfire reflects a new stage of its development and its unique ability to distribute and manage digital media across numerous segments of the media industry.

The name is meant to evoke the speed and efficiency the company's leading-edge software applications and related networking capabilities bring to the management and exchange of digitized media assets in the cable, broadcast, media and entertainment industries. The company will officially adopt the Pathfire name and will launch an extensive rebranding campaign during the first quarter of 2001.

"We wanted a name that evoked the things we do as a company as well as the unique and dynamic way in which we do them," Eckert said. "Pathfire speaks to our ability to distribute content and also to our ability to surround that content with applications and services that make it more valuable."

Quadrangle Group LLC is an investment firm specializing in the media and communications industries. It was founded in March 2000 by four Managing Directors of Lazard Frères & Co. LLC who have more than 50 years of combined experience in private equity and in media and communications. The firm's advisory board and other investors include many prominent executives of leading media and communications companies.

[...]

https://www.businesswire.com/news/home/20070605005456/en/DG-FastChannel-TM-Completes-Acquisition-Pathfire

DG FastChannel™ Completes Acquisition of Pathfire, Inc.

- Acquisition Further Diversifies DG FastChannel's Client Base and Revenues -

- Combined Entity to Realize Operational Synergies -

June 05, 2007 07:00 AM Eastern Daylight Time

DALLAS--(BUSINESS WIRE)--**DG FastChannel, Inc.** (NASDAQ: DGIT), the leading provider of digital media services to the advertising and broadcast industries, announced today that it has completed its previously announced acquisition of privately-held Pathfire, Inc., for $30 million. **DG FastChannel** financed the transaction with cash on hand and through borrowings under its existing credit facility.

Pathfire distributes third-party long-form content, primarily news and syndicated programming, through a proprietary server-based network via satellite and Internet channels. Pathfire is the primary distribution method for the majority of syndicated programming, including shows such as "Jeopardy," "Friends," and "Wheel of Fortune." In addition, ABC and CNN rely on the Pathfire network to distribute thousands of news stories to hundreds of television affiliates throughout the United States. Pathfire technology is installed in approximately 1,400 U.S. television stations.

Pathfire's digital media platform supports a suite of applications tailored to the needs of news, syndication, video news feeds and broadcasters. Pathfire software applications reside on over 10,000 desktops in virtually every U.S. television station. Like **DG FastChannel**, Pathfire delivers integrated digital solutions that automate media distribution and workflow management solutions enabling both content providers and broadcasters to maximize efficiency while reducing costs. The combined **DG FastChannel** and Pathfire networks provide a one-stop source for all video forms including ads, news, syndicated programming, movies and video news releases and electronic press kits. Scott K. Ginsburg, Chairman and CEO of **DG FastChannel**, and Omar Choucair, Chief Financial Officer of **DG FastChannel** will lead the combined operations.

About DG FastChannel, Inc.

DG FastChannel delivers the standard in digital media services to the advertising, broadcast and publishing industries. **DG FastChannel's** innovative technology solutions help advertisers and agencies work faster, smarter and more competitively.

Offering both the ubiquitous reach of multicast satellite transmissions and the targeted capabilities of Internet technologies, **DG FastChannel** has deployed a suite of business intelligence and asset management tools and creative and production resources designed specifically for the advertising community. **DG FastChannel's** next generation distribution platform includes high definition electronic video distribution capabilities that streamline the advertising process from point of ingest via digital distribution to its edge-servers located at TV, cable and network broadcasters. **DG FastChannel's** online media distribution network and suite of products and services are relied upon by more than 5,000 advertisers and agencies, and over 21,000 online radio, television, cable, network and print publishing destinations. **DG FastChannel** recently agreed to acquire the advertising distribution operations of Point.360 (NASDAQ: PTSX) with the transaction expected to be completed during the third quarter of 2007. For more information visit www.dgfastchannel.com.

About Pathfire (www.pathfire.com)

Pathfire, headquartered in Atlanta, is the leading provider of digital content distribution and management solutions for the broadcast, media and entertainment industries, supplying innovative digital solutions, from distribution to air, for broadcasters, news organizations, television networks, Hollywood studios and other media companies. Pathfire's Digital Media Gateway™ (DMG) is an advanced digital IP store-and-forward platform, delivering news stories, syndicated programming, advertising spots, and video news releases to more than 1,400 broadcasters. Pathfire DMG and the associated workflow tools are available on over 10,000 PC desktops throughout the world.

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Housatonic

Pathfinder (Time Warner)

Wikipedia Pathfinder (website)

Saved Wikipedia (Jan 18, 2020) : Pathfinder (website)

[HK005B][GDrive]

Type of site

Web portal

Available in

English

Owner

Time Inc. (Time Warner)

URL

www.pathfinder.com

Launched

1994; 27 years ago

Current status

Closed in April 1999

(redirects to 'timeinc.com/brands')

Pathfinder was a landing page with links to various Time Inc. websites. In its initial form, Pathfinder was one of the first Internet portals, created as Time Warner's entry onto the Internet. The objective of Pathfinder was to be an all-encompassing site that brought the best content from all of Time Warner under one banner.

History[edit]

The site opened on October 24, 1994,[1] with a small content team led by James Kinsella, Bruce Judson, Craig Bromberg, Oliver Knowlton, and Curt Viebranz.[2] [3]The team grew rapidly to service a growing list of internal "content partners" - at its highest point, these "content partners" numbered 80. Most of these content partners were Time Inc. magazines such as Time, People, Fortune and others, but others came from the widely distributed Time Warner corporate empire.

Pathfinder.com was controversial within Time Warner. Many content partners were unhappy with the fact Pathfinder's existence prevented them from using their own URLs. For example, People Magazine was not allowed to use the domain "people.com," but was instead restricted to a directory on Pathfinder (pathfinder.com/people/). Pathfinder's own staff were shocked when Time Inc. senior manager Don Logan publicly derided Pathfinder.com at an external analyst's meeting as a "black hole" of unprofitability.

Pathfinder went through many managers and editors in its short life, and suffered from high staff turnover rates, especially after it became clear to many that its future was highly uncertain. Many early tech journalists and writers passed through its doors, including Walter Isaacson, James Kinsella (MSNBC), Daniel Okrent, John R. Quain (CBS News Up to the Minute and J-Q on Technology), John Voelcker (GreenCarReports.com), Josh Quittner, Lev Grossman, Maura Johnston and Steven Petrow.

The site was closed in April 1999, and was widely considered to be an expensive failure. Some claim that Pathfinder cost Time Inc. between $100 and $120 million.

Some analysts believe that Pathfinder's failure led Time Warner's senior managers to conclude that it was impossible to run a successful Internet portal, and this judgement led directly to Time Warner pursuing its eventual merger with AOL, a merger which unsuccessfully sought to generate "synergy" between the two corporate giants.

Pathfinder.com transitioned to a landing page, with links to Time Inc.'s other sites.[4]

References[edit]

1. ^ "THE MEDIA BUSINESS; Time Inc. Raises Its Multimedia Profile With an Internet Test, The New York Times, October 24, 1994".
2. ^ Kalakota, Ravi (1997). *Electronic Commerce and Online Publishing*. *Internet Archive*. Addison-Wesley Professional. p. 269. james kinsella pathfinder.
3. ^ John., Motavalli (2004) [2002]. *Bamboozled at the revolution : how big media lost billions in the battle for the Internet*. New York: Penguin. ISBN 0142002895. OCLC 55017340.
4. ^ Time Warner to shutter Pathfinder Cnet News, April 26, 1999

External links[edit]

- Archive of front pages (only entries from April 1999 and earlier show Pathfinder)
- Ghost Sites' The Pathfinder.com Museum
- In The Pathfinder Basement

1996 (March 01) - Wired magazine - "Time's Pathfinder"

[HP0050][GDrive]

At a time when scores of top journalists are bailing out of traditional media and leaping on thedigital train, Walter Isaacson is one of the few who can say, "Been there, done that." A Rhodesscholar, Isaacson established a career in newspapers before joining Time magazine in 1978,where he worked his way up […]

__ AT A time when scores of top journalists are bailing out of traditional media and leaping on the digital train, WalterIsaacson is one of the few who can say, "Been there, done that." A Rhodes scholar, Isaacson established a career innewspapers before joining Time magazine in 1978, where he worked his way up to assistant managing editor. His well-received 1992 book Kissinger: A Biography was adapted for a cable-TV movie. In 1993, he left Time to become editor ofTime Warner's New Media business. That didn't last long. We caught up with Isaacson on his final Friday afternoon wayup on the executive's floor of the Time & Life building in New York. He was tossing out papers and other leftovers fromhis two-year New Media stint. Come Monday morning, he was to report 10 floors below as Time's new managing editor.__

Wired: You got a round-trip ticket to the world of digital media. Now that the trip's over, I'm guessing you're glad to begoing home.

Isaacson

: I'm not getting away from new media. Time has got to be on the forefront of the digital revolution.

Your Kissinger book shows a lot of personal style; it's written with a strong voice and a sharp point of view. But evensome of Time's writers have said the magazine muddies their point of view, kills opinions, and panders to the lowestcommon denominator. Lack of opinion and pandering do not win in the digital age. Do you aim to tackle these problemsas managing editor?

Time has to be a sharply intelligent magazine, with analysis and opinions based on common sense, not politicalprejudices. I'm in the process of hiring writers who have sharp voices and editors who know how to encourage analysis.Avoiding the muddle of group journalism is also a challenge. And it's going to be a high priority. I'm eliminating a layer ofediting. Most front-of-the-book news stories will now have just one editor.

As a journalist, how do you view the fact that Time Warner may be getting too big to be understood?

Now that I've moved to Time, I view Time Warner as a news story that I'm going to cover, not as a company I speak for.Time covered the Turner deal in a cold and sharp way. And its coverage of the Warner Music rap lyrics controversy wastough as well.

Is there a danger that Time Warner will treat you as just another business? Are you wary of media concentration in yourown back yard?

All media are becoming more diverse; and the Net assures that concentration is the least of all worries. There is nomonopoly on voice. And we at Time are very well shielded from interference from the business side of the company.Time is very healthy economically and journalistically.

What did you think of Time's coverage of the "porn on the Net" issue, where the magazine based a rather sensationalcover story on an erroneous study?

The method of the study was flawed and should have been put into better perspective.

What is the role of a general-interest weekly in a country glutted with news - one that will soon have up to four 24-hourcable news channels?

When Henry Luce invented the news magazine, his prospectus said: "At a time when people are being bombarded dailywith more and more headlines and more and more information, they are, ironically, becoming less informed." That's evenmore true in the digital age. When you're swamped with information and you have 1,000 different sources for each pieceof data, you look to certain brand names and a certain type of journalism you trust to make sense of it, to be yourintelligent agent, to sort it out.

What was the original vision behind Pathfinder, and is it succeeding?Pathf

Pathfinder began as an umbrella for a variety of Web services we wanted to create. In the end, what we have is just likePathfwhat's in any of the popular online services: a great package of material put together in a coherent way, with old and newbrand names. The big difference is that it happens to be on the Web rather than on some proprietary technology.

With 60 to 70 employees, is Pathfinder's cost structure too cumbersome for a start-up? Will there be a break-even pointPathfany time soon?

It's easy to see how these services will make money. Already, there are lots of advertising dollars. But I believe we notonly can but should create premium services that users will pay to use. If you are not creating a product users value, thenyou're not creating any value.

Let's talk about Time Warner's interactive TV service in Orlando. I went down there (see "People Are Supposed to Pay forThis Stuff?"Wired, 3.07) and concluded that people don't really want to interact with their TV in a meaningful way.

We're a content company at heart. It doesn't matter to me if the content is used on a TV, a PC, a toaster oven, or apersonal digital assistant.

Why did you take the New Media job in the first place?

The digital revolution offers the most exciting chall- enge to journalism since the invention of television. Because sincethen, everything has been broadcast. Now it's no longer mass media; it's personal.

What specifically are you doing to make sure that Time leads this digital revolution in journalism?

You'll see Time working on new projects that will provide daily, up-to-the-minute journalism using the Net as amechanism. On Pathfinder and in the news area on CompuServe, it won't be just the magazine dumped online everyPathfSunday night. You'll see Time Daily use wire feeds and news analysis from our reporters. We're hiring additional peopleto do that.

Isn't it true that paper, to journalists, is more prestigious than bits?

Online journalism is in its infancy. We started doing it at Time Warner three years ago. We started printing the magazine73 years ago. I assume it won't take another 70 years for digital journalism to have the same impact.

Housatonic

The President's Commission on Critical Infrastructure Protection (PCCIP)

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pcipp - https://fas.org/sgp/library/pccip.pdf

1997-06-pccip-overview-briefing

https://drive.google.com/file/d/1tf2DGAOSP5bz0xMVxVvMVjl_eU6Af8mJ/view?usp=sharing

Homeland Security Digital Library

1997-06 - This document presents an overview of the President's Commission on Critical Infrastructure Protection. "The President's Commission on Critical Infrastructure Protection (PCCIP) was created by Executive Order 13010, signed by the President on July 15, 1996. The Executive Order originally stated that the Commission would terminate after one year; however, the order has since been amended to extend the life of the Commission by three months, to October 13, 1997. The Commission is therefore well along in its fifteen-month task of assessing physical and cyber threats to our vital infrastructures and developing policies and strategies to protect them. This overview briefing reports on the status of our work to those elements of the public and private sectors that have an interest in infrastructure assurance issues. We invite your participation as our work continues. Infrastructure protection is a broad subject of great complexity. At the outset we devised an approach to the task, and as work has progressed we have begun to form some general, preliminary impressions. Our outreach program has been extensive, but there are many knowledgeable sources we have not yet explored, and others yet to be discovered. We are by no means certain of our final findings and recommendations. What follows is intended to provide a sense of some of the issues we are exploring in the quest to find workable solutions to a serious problem."

https://www.hsdl.org/?view&did=487492

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http://www.iwar.org.uk/cip/resources/pccip/marshbio.html

2020-iwar-org-uk-robert-t-marsh-bio-sketch.pdf

https://drive.google.com/file/d/1bcOwb97IahTnxPpFg7cbU0_lokQd3imj/view?usp=sharing

President's Commission on Critical Infrastructure Protection

Robert T. Marsh

Chairman, PCCIP

"Tom" Marsh was the chairman of the President's Commission on Critical Infrastructure Protection. He was tasked with bringing together the combined forces of the government and private sector to advise and assist the President by developing a strategy for protecting and assuring the continued operation of this nation's critical infrastructures. These critical infrastructures include telecommunications, electrical power systems, gas and oil transportation and storage, banking and finance, transportation, water supply systems, emergency services (medical, police, fire, and rescue) and continuity of government services.

Quick Facts About Mr. Marsh

- **Born January 3, 1925 in Logansport, Indiana**
- **Graduated from the U.S. Military Academy, West Point, N.Y.**
- **Earned Master of Science degrees from the University of Michigan in Instrumentation Engineering and Aeronautical Engineering.**
- **First Chairman of Thiokol Corporation 1989-1991.**

Mr. Marsh has an extensive background as an aerospace consultant. He serves as the chairman of the Board of CAE Electronics, Inc. and Comverse Government Systems Corporation. He is a director of Teknowledge Corporation and a Trustee of the MITRE Corporation. He is also the director of the Air Force Aid Society. Mr. Marsh is a member of the Board of Visitors of the Carnegie-Mellon Software Engineering Institute and was chairman of the Board of Visitors of the U.S. Air Force Institute of Technology.

From 1989 to 1991 he served as the first chairman of Thiokol Corporation as it transitioned from Morton-Thiokol to separate company status. Mr. Marsh is a retired Air Force general. His last assignment was serving as the commander of the Air Force Systems Command, where he directed the research, development, testing and acquisition of aerospace systems for the Air Force.

With his vast experience in both commercial industry and the military, Mr. Marsh brings a unique understanding of both government and industry needs in the area of critical infrastructure protection to his position as Chairman of the Commission.

1997 (Oct) - The Report - The PCCIP - "CRITICAL FOUNDATIONS PROTECTING AMERICA'S INFRASTRUCTURES"

http://www.iwar.org.uk/cip/resources/pccip/report.pdf

1997-10-report-of-pccip-critical-foundations-protecting-americas-infrastructures.pdf

https://drive.google.com/file/d/1zi_Z8DDMUaRGVPL0DStG0kQvTWSZ_-PR/view?usp=sharing

Critical Foundations: Protecting America's Infrastructures

The Report of the President's Commission on Critical Infrastructure Protection -

1997 (Aug 25) - GCN : "Former senator to join IT security team"

https://gcn.com/articles/1997/08/25/former-senator-to-join-it-security-team.aspx

1997-08-25-gcn-com-former-senator-to-join-it-security-team.pdf

https://drive.google.com/file/d/1bzVdjwLGeHeEsMK-xnK3CbQG0x5nV1Ve/view?usp=sharing

BY KEVIN POWERS / AUG 25, 1997

President Clinton has named Sam Nunn, the former Georgia U.S. senator, as co-chairman of the advisory team to the White House commission established to assess threats to the nation's computer infrastructure.

Clinton also appointed Charles R. Lee, chief executive officer of GTE Corp. of Stamford, Conn., David N. Campbell, president of BBN Technologies of Cambridge, Mass., and Elvin Moon, president of E.W. Moon Engineering & Construction Management Industries of Los Angeles, to serve on the team advising the President's Commission on Critical Infrastructure Protection (PCCIP).

Clinton created the PCCIP in July 1996 to identify and analyze cyberthreats to the nation's critical resources and systems, including the telecommunications infrastructure, banking systems and emergency services systems. The group is working with industry and government officials at the federal, state and local levels to evaluate diverse threats such as hackers, insider criminals and information warfare attacks.

Tom Marsh--a retired Air Force general and chairman of the board of CAE Electronics Inc. in Arlington, Va., and Comverse Government Systems Corp. in Woodbury, N.Y.--heads the PCCI. The commission's full-time federal members include representatives from the departments of Commerce, Defense, Energy, Justice, Transportation and Treasury, along with the FBI, CIA, National Security Agency and Federal Emergency Management Agency.

As the advisory committee co-chairman, Nunn joins Jamie Gorelick, former deputy attorney general, in leading the commission's private sector consulting team.

Some industry groups, such as the Computer and Communications Industry Association, have questioned whether the White House is using the commission to push its controversial key escrow encryption plan. But PCCIP officials said they will not prescribe any mandatory security policies or technical solutions.

Since his January appointment, Marsh has said in public speeches that the commission's primary challenge is to create a partnership with the private sector, heeding the technical advise from industry experts. Nunn and Gorelick are expected to represent industry's concerns about reinforcing privacy policies and limiting efforts to establish new federal security regulations on encryption products.

The commission's final product will be a set of policy, legislation and program recommendations for bolstering security in all essential infrastructure systems. The group has set up its own World Wide Web site at http://www.pccip.gov/pccip.

---

https://www.youtube.com/watch?v=YcmICVLUPoA

President's Commission on Critical Infrastructure Protection (PCCIP) Summary (FOIA)

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Bud Ray Pembroke (born 1931)

1956 - OSU graduation https://www.newspapers.com/clip/18580391/bud-ray-pembroke-bachelors-of/

1958 - A Driving instructor in state of washington https://www.newspapers.com/image/576845922/?terms=%22bud%2Bpembroke%22

1967 - "The Computer Instruction NETWORK" in US Senate Hearings

1967-usa-senate-education-legislation-hearings-committee-on-labor-and-public-welfare.pdf [HG005Z][GDrive]

Just s-1125-hr-7819 - [HG0060][GDrive]

page 3 - title

page 4 - attendance

Note -

SUBCOMMITTEE on Education

WAYNE MORSE, Oregon, Chairman

pg 477

Senator Herbert Lehman offered Morse his seat on the Labor Committee, which Morse ultimately accepted.[43]

https://en.wikipedia.org/wiki/Wayne_Morse

CI network 478 to 481

482 to 485

HEARINGS

BEFORE THE

SUBCOMMITTEE ON EDUCATION

OF THE

COMMITTEE ON LABOR AND PUBLIC WELFARE UNITED STATES SENATE

NINETIETH CONGRESS

FIRST SESSION

ON

S. 1125 and H.R. 7819

TO STRENGTHEN AND IMPROVE PROGRAMS OF ASSISTANCE FOR ELEMENTARY AND SECONDARY EDUCATION BY EXTENDING AUTHORITY FOR ALLOCATION OF FUNDS TO BE USED FOR EDUCATION OF INDIAN CHILDREN AND CHILDREN IN OVERSEAS DEPENDENTS SCHOOLS OF THE DEPARTMENT OF DEFENSE, BY EXTENDING AND AMENDING THE NATIONAL TEACHER CORPS PROGRAM, BY PROVIDING ASSISTANCE FOR COMPREHENSIVE EDUCATIONAL PLANNING, AND BY IMPROVING PROGRAMS OF EDUCATION FOR THE HANDICAPPED; TO IMPROVE PROGRAMS OF VOCATIONAL EDUCATION; TO IMPROVE AUTHORITY FOR ASSISTANCE TO SCHOOLS IN FEDERALLY IMPACTED AREAS AND AREAS SUFFERING A MAJOR DISASTER; AND FOR OTHER PURPOSES

AND RELATED BILLS

APPENDIX A

Part 8

Printed for the use of the Committee on Labor and Public Welfare

85-026 O U.S. GOVERNMENT PRINTING OFFICE
WASHINGTON : 1967

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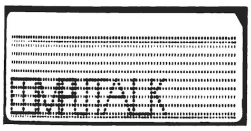

A NEWSLETTER for the Computer Instruction Project
sponsored by Title III, ESEA
A PACE Project

"PROJECTS to ADVANCE CREATIVITY in EDUCATION"

Edited by
Judith B. Edwards, Project Director and
Marvin L. Cross, Consultant, Federal & State Programs

Published by the Marion County
Intermediate Education District
M. L. Morey, Superintendent

Vol. I No. 4 Salem, Oregon March 31, 1967

President's Message to Congress Calls for Computer Programs

President Lyndon B. Johnson's Message on Education and Health in America delivered to the Congress on February 28, 1967, called attention to the need for finding ways of developing the potential of the computer as it might be used for educational purposes. In his statement about computers in education he said:

> "In my 1968 Budget, I propose that the National Science Foundation be given new resources to advance man's knowledge and serve the nation. Its endeavors will help our scholars better to understand the atmosphere, exploit the ocean's riches, probe the behavior and the nature of man.
>
> "The Foundation will also step up its pioneer work to develop new teaching materials for our schools and colleges. The 'new math' and the 'new science' are only the first fruits of this innovative work.
>
> "One educational resource holds exciting promise for America's classrooms: the electronic computer. Computers are already at work in educational institutions, primarily to assist the most advanced research. The computer can serve other educational purposes -- if we find ways to employ it effectively and economically and if we develop practical courses to teach students how to use it.
>
> "I have directed the National Science Foundation working with the U.S. Office of Education to establish an experimental program for developing the potential of computers in education."

* *

Computer Instruction Project Planning Phase Completed

The Computer Instruction Project officially completed its tasks on February 1, 1967, after seven months of intensive activity and planning by dozens of teachers and administrators in six western Oregon counties. This planning project culminated in the preparation and submission of an operational proposal to establish a Computer Instruction NETWORK. At the operational level, this C. I. NETWORK will become the first of its kind in the nation. On the following pages is an excellent non - technical summary of the proposal as viewed by a teacher who participated in the planning phase.

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WHAT IS THE C. I. NETWORK?

by

Mary Ann Sloan *

The Computer Instruction NETWORK is a proposal prepared under a planning grant from the U.S. Office of Education and it involves schools in the Mid-Willamette and Coast regions of Oregon. This proposal has been submitted to the U.S. Office of Education, and if it is approved, the project will get underway in the summer of 1967. Public and private secondary schools in Marion, Polk, Lincoln, Yamhill and portions of Clackamas and Linn counties would be participating as well as several state institution schools and one Federal (secondary) Indian School.

The objectives of the C. I. NETWORK are such that, following the learning experiences in computer concepts as proposed in the project, students should be able to:

1. Demonstrate through verbal and written responses, and through actual practice, a working knowledge of the importance and influence of computers on present society.
2. Demonstrate comprehension of basic computer concepts through actual operation of available equipment.
3. Demonstrate through actual problem-solving activities an increased facility in logical thinking.
4. Demonstrate an awareness of advanced computer technology through listing and describing some of these techniques.
5. Demonstrate an understanding of computer vocabulary through definition and use.
6. Demonstrate through verbal, written and working knowledge, an awareness of computer operation enabling him to make wise decisions concerning career opportunities in the computer area of technology.
7. Demonstrate through ability and skills a vocational potential in computer fields of employment.

Other objectives of the Project include:

1. Providing through computer instruction courses a demonstration of a means whereby potential dropouts, underachievers, and culturally deprived students can find motivation for training in saleable skills.

* Mrs. Sloan is a High School Office Occupations Teacher at Toledo High School, Toledo, Oregon. She was district representative from Lincoln County to the Computer Instruction Advisory Committee. Mrs. Sloan wrote this summary of the C. I. NETWORK at the request of Mr. Donald E. Egge, Assistant Superintendent of Lincoln County Schools who has given wide circulation to the information concerning the computer project.

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If the proposal for the C. I. NETWORK is approved as submitted, the following would be available during the next school year to all participating schools in the area:

EQUIPMENT

1. Teletypes installed for a full school year in twenty-five schools.

   These will provide, over a Teletypewriter Exchange line, access to the three computer systems in the NETWORK, as well as communication between schools. They will also serve as off-line punch devices for preparation of program tapes.

2. Six small, portable computers for classroom instruction and hands-on student use.

   These computers have their own on-line Teletype and paper tape input-output, and will be rotated through the schools participating in the Project. Programming instruction will be in machine language and assembly language.

3. One IBM 1130 installed permanently in Mobile Computer Lab.

   This more sophisticated computer, which will use paper tape input-output, will allow instruction in machine language, assembly language, and FORTRAN. The Mobile Lab will be on the road, traveling from school to school, for the duration of the project. A computer specialist will travel with the Lab to give instruction and assistance.

4. Access, via TWX line, to a highly sophisticated GE 235 computer system in Phoenix, Arizona.

   This system, besides giving students experience in the concept of "time-sharing", will have three high-level languages available: BASIC, FORTRAN and ALGOL.

5. Time available on computers in some local businesses and colleges.

6. Four logic trainers.

   These will provide classroom instruction in computer logic and circuitry.

MATERIALS

1. Simulators for demonstration.
2. Films on computer history, theory, and operation.
3. Filmstrips with sound presentation.
4. Testing materials and information.
5. Materials for classroom units of various time durations.
6. Programs for computers.

CURRICULUM UNITS

Several possible units of computer instruction will be available. Project staff will provide all materials, services, and assistance requested, but it is hoped that individual schools and teachers will experiment

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and develop their own units and courses of study. Some of the units of information available will include:

1. Demonstration (1 hour minimum) by Project staff specialists.
2. One-to-three week units incorporated in a business, math, or science course.
3. A one-month unit incorporated in an existing course.
4. A one-semester course--may be an elective or be incorporated in an existing course.
5. A one-year course.
6. The social studies curriculum planning group recommended a basic introductory unit in the eighth grade of all schools, and a unit in eleventh and/or twelfth grade expanding on the implications of automation.

IN-SERVICE

1. Two identical summer workshops for twenty teachers each time.

   These workshops will include instruction in basic computer concepts and special sessions for teachers in the areas of mathematics, science, business education, and social studies. This will include curriculum development by the participating teachers. They will develop units of work which can be integrated into their special fields.
   Stipends will be offered to the forty teachers at the rate of $75 per week plus $15 per dependent per week (2 dependents).

2. Beginning in-service during the school year.

   Courses with content similar to the summer workshops will be offered free of charge during the school year. It is expected that two courses will be available each term, for ten teachers each time.

CONSULTING STAFF

The consulting staff would consist of three people -- the director, a coordinator and a computer specialist. They would offer the following services:

1. Advising, and assisting teachers and administrators on technical matters, programming, operation, and methods of teaching.
2. Assisting teachers with classroom instruction.
3. Giving demonstrations for pupils, teachers and parents.
4. Teaching class for up to three weeks (where present teacher is not yet qualified).
5. Giving assistance to teachers on curriculum planning and evaluation.
6. Scheduling, delivering and picking up loan equipment and materials.

* * * \

exciting to contemplate. There are several fundamental avenues in computer education at present. One phase of computer education involves basic instruction in the use, function and operation of the computer. A second phase involves the business, scientific and technical applications of the computer. A third phase encompasses the technology of the computer, i.e., computer theory, electronics, circuitry, maintenance and repair. A fourth phase, computer assisted instruction, is by far the most complex and relatively unexplored.

Phase one, basic computer instruction in the use, function and operation of the computer, has been successfully introduced and experimented with in school districts such as Salem and Lake Oswego here in Oregon. Usually it has been under the care and cultivation of the mathematics department, and the instruction has been confined largely to students in senior and educationally advanced mathematics. However, computer education is a broad and inclusive term and the emphasis on phase one should shift to include students from all areas of the curriculum. A probable sequence of instruction would be a one-semester course designed to accomplish phase one as described above. The second semester, as now contemplated, would launch phase two, computer applications, which would involve activities where the student would use his basic knowledge of the computer to solve problems arising in areas of business education, industrial arts, science, mathematics, etc. The instruction in phase one and in parts of phase two would use small portable computers.

As students become more sophisticated and are ready to solve problems related to other areas of the curriculum large computers can be used. One possibility is the use of a teletypewriter exchange line TWX whereby the teletype is connected to a large central computer which can be as far distant as Phoenix, Arizona, or Los Angeles, California. Using a TWX line and a time shared computer, the computer can be rented for a given amount of on-line time. This system uses different computer languages such as FORTRAN, ALGOL, or BASIC, which is a combination of the best features of the first two.

Phase three, learning about the technology of the computer, will be an outgrowth of the industrial arts-science electronics program and would occur in the more advanced electronics courses. This would include instruction on computer theory, electronics, circuitry, maintenance and repair.

Phase four, computer assisted instruction C.A.I. is under going research in different parts of the county. The Portland Public Schools System is experimenting with C.A.I. in conjunction with the A.A.A.S. elementary science program. Dr. Suppes is experimenting with a symbolic logic course for first through sixth graders and Stanford University freshmen. Computer assisted instruction will ultimately aid the classroom teacher and the individual student by providing an immediate one-to-one response and feedback to the learner while maintaining a continuous up-to-date profile chart on such things as the learner's response time, skill development, and concept development. A teletype and video display placed in the home con make such instruction available to any member of the family at any time, or if placed in a public library available to the general public.

The future is exciting; the possibilities almost unlimited!

* Mr. Bell is a science and mathematics consultant, with the Salem Public Schools, Salem, Oregon. He has had extensive teaching and administrative experience at all levels from elementary through college. He is as much at home discussing the social implications of automation as he is in coping with the scientific and technological side.

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A Newsletter for the Computer Instruction Network

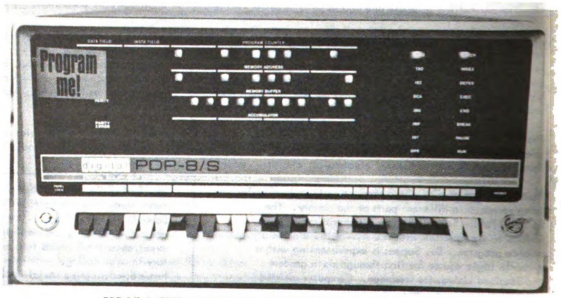
COMPUTALK

A PACE Project . . . Projects to Advance Creativity in Education

Edited by Bud Pembroke, Project Coordinator

Published by The C. I. Network / 607 Chemeketa Street / Salem, Oregon 97301

VOLUME 2, NUMBER 1 SALEM, OREGON SEPTEMBER, 1967



PDP-8/S LATEST ADDITION AND "LITTLE GIANT" OF THE C.I. NETWORK

New Computer Makes Debut at C.I. Network

By BUD PEMBROKE

A new computer has been added to the ranks of those already available to the schools of the C. I. NETWORK. The rather nondescript name given to this newcomer is the PDP-8/S. The manufacturer, Digital Equipment Corporation, places the "S" on the end of the name to denote "slow". But don't let this fool you, it is slow only in relation to its big brother, the PDP-8. For most short programs written in high school, the students won't even have the pleasure of seeing the lights blink. The cycle time for the 4096-word ("4K") magnetic core memory is 8 microseconds. This means that this "little giant" will be doing somewhere between 10,000 and 100,000 operations per second.

ONLY 10-1/2 INCHES HIGH

"Little Giant" is an apt nickname for the PDP-8/S. This computer stands only 10-1/2 inches high, 19 inches wide, and 28 inches long. However, once again, we must be careful not to

(CONTINUED on Page 4)

Programming Contest

The National Association for Educational Data Systems announces its fifth annual programming contest for high school students, with $150 and $50 prizes, plus expense-paid trip to the national convention for student and teacher. Details will be announced later.

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The Staff of The C. I. Network

MRS. JUDY EDWARDS, Project Director, who has just completed a classroom guide for this portable computer, the ECP-18, is now in the process of planning curriculum guides and materials for each of the computers to be used in the C.I.NETWORK. Not only does she edit books, but she also writes script for, directs, and acts in a series of video tape recordings to be used in some high school classes this fall.

Video Tapes for Schools

Work is in progress at C.I.N. on the production of a series of 20-minute video tapes, each presenting a beginning concept of computers and programming. These tapes should be available to teachers in the fall. (With necessary equipment to play back the tapes in the classroom, if the school does not have such equipment.)

BUD PEMBROKE, Project Coordinator, in addition to writing programs (some of which work as you can see above), has been: scheduling the various computers for the coming school year, working on the video tapes for classroom use, and working with the teachers that have been coming in this summer.

DAVE GILLETTE, computer specialist, is getting accustomed to a van like the one which he will drive, as the mobile 1130 compute-lab is set up in December. Until that time, he will be helping with the portable computers, concentrating on the PDP-8/S.

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Hippies, Heuristics, And Only Incidentally, Holes

By "NIC"

The recent rash of magazine articles devoted to the exploration of "The Hippie Mystique" has convinced me that if one is publishing even a newsletter, one must include an article about hippies. ("What does that have to do with computers?" I hear you say. Read on --- there's sure to be a connection!)

As food for thought, or grist for an argument, I propose that if hippies are a most disturbing form of social revolt, perhaps a disturbing change in society can be examined as a contributing factor.

Automation. No, not just automation, but computerization. The celebrated Professor S. I. Hayakawa of San Francisco State College, who led the losing campaign against digit-dialing in California, took a computer course last summer. Why? Because "it's like fighting the electric light. I don't want to find myself obsolete." Some are resigned to the inevitable defeat of personal identity, warmth, response to beauty, sensitivity, creativity, and human understanding, which they are sure suffer greatly from the increasing computerization of everyday life. And it does appear, whether or not computers are responsible, that humanism is on the decline. Human interaction does appear to be more and more replaced by machine interaction, or machine-human interaction.

Telecommunication, so vital in the emerging world of mass data storage and remote retrieval of information, ultimately means

(CONTINUED on Page 4)

DOROTHY SCOTT, our friendly secretary, is kept busy setting up appointments for the staff, with teachers who are anxious to complete their planning for the use of computer instruction in their classes this fall.

Computalk Policy

There are almost as many types of approaches to computer instruction within the project area of the C. I. NETWORK as there are schools involved. As a result, COMPUTALK plans to give its readers a chance to look at what some of the other schools are doing by featuring a different school each issue.

Computer Instruction Plans at Lake Oswego High

By CHUCK GELDAKER

I thought that I might share with the Computer Instruction NETWORK some of the plans which we at Lake Oswego High School are making for the coming year. We have had a unit on computers in our Intermediate Algebra classes for three years now and these students, even though they are not the best math students, have a tremendous amount of interest in computers. We feel that this instruction really gives them an advantage in developing a better understanding of what computers can and cannot do in our technological society. We will continue this phase of our computer instruction for the coming year. Last year, the students in Advanced Math were given a two-week unit on the computer and this will be continued also.

FULL-YEAR COURSE

A very exciting new part of our computer instruction is the full-year course called Computer Science. Although we had enrollment for two classes, we will have just one class this first year because of the experimental nature of the course. Computer Science will look at the computer from many viewpoints --- the mathematical, the technological, the cultural and the business aspects will be explored. Students in this class will get "hands on" experience on the ECP-18, and through the teletype to be installed at Lake Oswego, will get experience with the time-sharing aspect of computers. The students will be in the 10th or 11th grade, so they will be expected to apply their knowledge of computers to advantage in other courses in mathematics, science, business, etc., in the following years of their high school education.

The students in our advanced placement program learned to program the ECP-18 last year in Advanced Math class. They will use this knowledge whenever applicable in the study of the calculus.

We also intend to experiment with some of the slower students in mathematics in an effort to see what they can do in learning to write programs, etc. Since computers affect all of society, we feel that these students might also benefit from some instruction.

TEACHER IN-SERVICE

The last aspect of the computer instruction program will be an in-service course for the teachers in the district. This course will help teachers to understand the impact of computers of our society and will, in turn, help their students understand this tool which has and will continue to affect their lives in very dramatic ways. This class will be taught by a team (three teachers) from the high school and will be open to all teachers in our district. It will be a two-hour class for thirteen sessions. We hope that these teachers might be able to see how the knowledge of the

(CONTINUED on Page 6)

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New Computer. . .

(CONTINUED from Page 1)

be misled by appearances. With a memory size of 4K it will not only be possible to program in a machine language, but also in high level compiler languages, such as BASIC and FORTRAN, and because of its small physical size the PDP-8/S can be easily carried right into the classroom. This computer, like all others in the C. I. NETWORK, will use a paper tape input-output.

YOU ADD TO SUBTRACT

Another interesting facet of this computer is that you do not have a "subtract" instruction as such. The PDP-8/S uses a two's complement arithmetic which means that subtraction is accomplished by adding the complement of a number. This might be best explained by taking an example in base ten. Suppose we agreed to use only the units place and any carry into the tens place is lost. This means that if we wish to subtract 3 from 9 we could do it in the conventional way:

$$\begin{array}{r} 9 \\ -3 \\ \hline 6 \end{array}$$

Or we could add the complement of 3, which is 7, to the 9:

$$\begin{array}{r} 9 \\ +7 \\ \hline 6 \end{array}$$

Because we did agree to ignore any carry into the 10's place, the result is the same. Of course the computer does not work in a one place base 10. It uses binary arithmetic with a twelve-bit word length. However, the principle is the same.

In the author's opinion, there are only two things that keep the PDP-8/S from being the ideal classroom computer. The first is the limit on the number of students that can conveniently see the lights on the registers. The second is that the PDP-8/S uses indirect addressing. This means that at times, two addresses or words must be used to refer to a third address in the memory. However, neither of these problems is insurmountable.

If the reception accorded the "Little Giant" by the staff of the C.I. NETWORK can be used as a guide, it looks as if the teachers and students of the project area may look forward to an enjoyable year with the PDP-8/S.

Lake Oswego School. . .

(From Page 3)

computer might be utilized in the subject that he teaches. We hope that teachers from every department in our school district will participate in this class.

340 STUDENTS TO USE COMPUTER

This past year, about 200 students learned to operate the ECP-18 with about 450 programs written. It is our hope that we can do even better than that this coming year. To summarize, the following chart will show the magnitude of our program for the '67-'68 school year.

Intermediate Algebra - 80 students for one month
Advanced Math - 85 students for two weeks
Computer Science - 28 students for one year
Calculus - 17 students for selected topics as needed.
Intermediate Math - 60 students for two to four weeks
Geometry - Algebra II - 45 students for two weeks
In-service Course - 25 teachers for one quarter
TOTAL 340 using five instructors

Hippies . . .

(From Page 3)

a decrease in personal communication as data communication becomes mechanical and automatic.

As these seemingly inevitable changes take place, great gaps --- holes --- are left in the fabric of society.

Perhaps hippies are using the heuristic approach to the problem. Heuristic is a beautiful word used in programming computers, "pertaining to exploratory methods of problem-solving in which solutions are discovered by evaluation of the progress toward the final result". (Like a computer program which requires that the computer LEARN to win at chess by actually playing the game and examining its opponent's plays.) The heuristic approach to a problem is one that encourages further investigation and experimentation.

Perhaps in the land of no watches and no walls, the Haight-Ashbury district, solutions are being experimented with.

How do human beings relate to each other in the new age of the automobile, the jet plane, the impersonal "national data bank"? How do they adjust to increased leisure, increased emphasis on intellectual rather than manipulative skills? Are there answers? Is anyone looking for them?

There seems to be another "hole" --- in computer instruction. At all levels, people are being trained to operate and program computers, provide them with data, make them increasingly sophisticated and increasingly able to assume more and more of man's duties. But does anyone look ahead ten or twenty years to the world today's teenagers will live in? Is anyone stimulating young minds to consider the human problems created by automation?

And there will be problems! More problems than we today can even conceive of existing. For instance, in the past, the rule --- rather than the exception --- has been for a man (like his father before him) to devote his life to one line of endeavor. This will no longer be true. Even now there are occupations that did not exist fifteen or twenty years ago.

What about privacy of information? Right now, today, by typing your name and driver license number on a terminal at the Department of Motor Vehicles, your complete driving record is displayed on a screen. What happens when not only your driving record is readily available but school, financial, social, vocational and political data is at a moment's call? Who do YOU feel should have access to such files --- files that in the past have been so spread out and so deeply buried that few people would bother even to try to find them. And, what emotional problems do YOU think this "Big-brother-is-watching-you" effect will have on today's youth?

If the Haight-Ashburyites are trying to tell us that something is wrong now, and if we don't change and really train for the future, what will they tell us about tomorrow? It seems to me that the only way we can help today's youth cope with tomorrow is to assist them in developing some personal strength of character and a belief in themselves. What do YOU think should be done, and how should WE do it?

COMPUTALK Invites Reaction

COMPUTALK solicits reactions to the above, ideas, anecdotes, or personal opinions relating to computers and/or computer instruction. Please mail contributions to COMPUTALK; 607 Chemeketa N.E.; Salem, Oregon 97301.

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1968 (March 21)

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1968-03-21-the-oregon-statesman-journal-pg-i-5.jpg

Statesman, Salem, Ore., Thur., Mar. 21, '68 (Sec. I)—5

Education to Prepare for Computer Age Urged

By CONRAD PRANGE
Staff Writer, The Statesman

The coming age of computers is not to be regarded as tragic, but America's failure to prepare her citizens for it can have disastrous results.

"We must instruct our high school age youngsters, who will be adults soon, how to cope with an electronic society and how to control it intelligently for man's good," Mrs. Judith Edwards told a conference of educators in Salem Wednesday.

To dramatize the effect computers may have on society soon she said it may be possible for the United Nations to predict the outcome of all future wars before they start. Computers also could help plan and predict costs and results in such major problems areas as crime prevention, air and water pollution, poverty and racial issues.

Mrs. Edwards is director of the Salem - based Computer Instruction Newtork, a federally financed project to acquaint mid - Willamette Valley high school students with the concept of computers.

She was the kickoff speaker at a two - day conference of about 250 Oregon high school teachers and administrators who are here to learn about computer instruction in schools.

"The experts are saying that the advent of computers is bringing a turning point in our history," she said. "So I think it behooves us to attempt to instruct students how these awesome machines can be controlled for the good of mankind and used intelligently and wisely."

Too many people, she said, now think of a computer mostly as a "black magic box with flashing lights that can do incredible things with tremendous speed, without really understanding its potential for good and evil."

She suggested that students not use computers only in their math classes as a problem solving machine, but that computers be worked into social studies programs.

"Students need to know not just how a computer works, but also the cncept of computer use in a new realm of social responsibility."

She said it was best if a school assigned a team of teachers to instruct students on computers. They should represent a cross-section of the curriculum.

Computers Studied Mrs. Dorothy Scott sits at console of computer on display at state conference of educators studying computer instruction in schools. Observing are Olen Morain (left), Portland, Hewlett-Packard Co. representative, and Bud R. Pembroke, project coordinator of computer instruction program. Mrs. Scott is program secretary. (Statesman Photo)

1968-03-21-the-oregon-statesman-journal-pg-i-5-clip-computer-instruction

1968-03-21-the-oregon-statesman-journal-pg-i-5-clip-computer-instruction.jpg

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1968 (April) - DEC User's Society - Papers

http://bitsavers.trailing-edge.com/pdf/dec/decus/confProceedings/DECUS_1968_Spring.pdf

1968-04-dec-users-society-spring-1968-papers-and-presentations.pdf

1968-04-dec-users-society-spring-1968-papers-and-presentations-pg-49-img-1 to 1968-04-dec-users-society-spring-1968-papers-and-presentations-pg-53-img-1

"CINET-BASIC'" = "Computer Instruction NETWORK - BASIC "

ABSTRACT

The presentation will cover the present use of the PDP-Sis as a portable computer in several curricular areas in schools within the Computer Instruction NETWORK. The use of machine language will be discussed along with the use of CINIC as a "Load and Go" conversational compiler. CINIC "Computer Instruction NETWORK Instructional Compiler" was patterned after a subset of BASIC for the 4K core memory of the PDP-Sis.

The authors will include a description of the instructions, examples of programs, and a candid explanation of advantages and limitations of this language.

The Computer Instruction NETWORK is an ESEA Title III Federal Project, covering a four-county area in Oregon. Our purpose is to assist high school students in the learning of computer concepts. Computers as an area of study, is our main goal, rather than using computers to assist the student in problem-solving in other phases of the curriculum. We feel that in order ~o fulfill our objectives, a student must have hands-on experience. Each pupil should be able to press the buttons in running his own program. Computers are supplied for each of the schools cooperating in the C. I. NETWORK. **We have been using the least expensive general-purpose PDP-BIs and other similar machines. These are portable enough to allow a sharing of machinery among several schools.**

We strive to make effective use of classroom time.

In addition to the computer and the on-line teletype, each classroom also has another teletype leased from the telephone company. Thus, one student can be pre-punching programs on tape, while another is running or debugging his program.

Also, to conserve machine time during the class period, we use what we call load-and-go preparation programs. These allow the student to pre-punch an appropriate tape on the off-line teletype, and read it into the computer. As the tape is being read, the preparation program is translating the teletype codes into machine language instructions which are immediately stored in the computer's memory. Now as soon as the tape has been read, the program is ready to be run. There is no waiting for intermediate tapes to be punched or processed. Operational at the present time are the Machine Language Loader (MALL) and C. I. NETWORK's Instructional Compiler (CINIC). Assembly Loader of C. I. NETWORK (ALCIN) is still in the developmental stage.

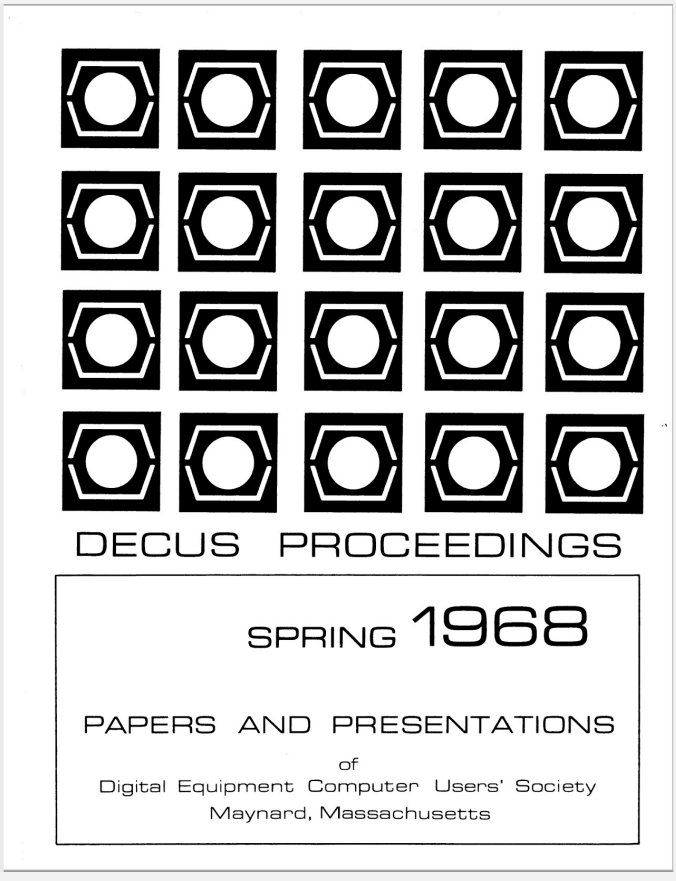
The Machine Language Loader program allows the programmer to type the first address of a block of computer storage, and then type the instructions or data to be deposited in that block. The MALL program translates the octal teletype codes into machine binary configuration and deposits each word in successive storage locations. A new block may be started at any time, by typing the first address of that block. When using this procedure, the only storage locations not available to the programmer are the page and a half containing the RIM, BIN, and MALL loading programs.

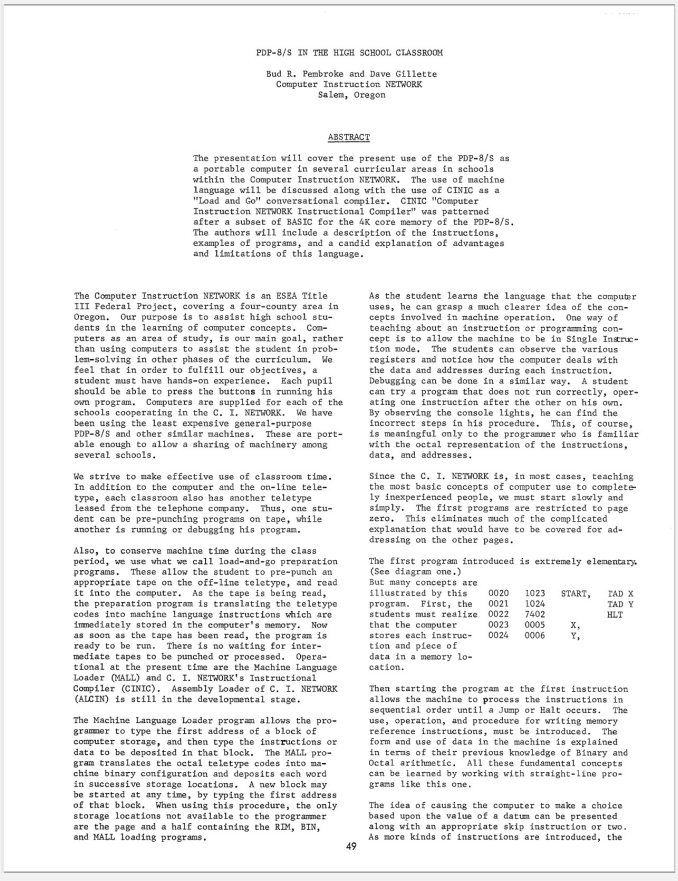
As the student learns the language that the computer uses, he can grasp a much clearer idea of the concepts involved in machine operation. One way of teaching about an instruction or programming concept is to allow the machine to be in Single In~ruction mode. The students can observe the various registers and notice how the computer deals with the data and addresses during each instruction.

Debugging can be done in a similar way. A student can try a program that does not run correctly, operating one instruction after the other on his own.

By observing the console lights, he can find the incorrect steps in his procedure. This, of course, is meaningful only to the programmer who is familiar with the octal representation of the instructions, data, and addresses.

Since the C. I. NETWORK is, in most cases, teaching the most basic concepts of computer use to completly inexperienced people, we must start slowly and simply. The first programs are restricted to page zero. This eliminates much of the complicated explanation that would have to





PDP-8/S IN THE HIGH SCHOOL CLASSROOM

Bud R. Pembroke and Dave Gillette
Computer Instruction NETWORK
Salem, Oregon

ABSTRACT

The presentation will cover the present use of the PDP-8/S as a portable computer in several curricular areas in schools within the Computer Instruction NETWORK. The use of machine language will be discussed along with the use of CINIC as a "Load and Go" conversational compiler. CINIC "Computer Instruction NETWORK Instructional Compiler" was patterned after a subset of BASIC for the 4K core memory of the PDP-8/S. The authors will include a description of the instructions, examples of programs, and a candid explanation of advantages and limitations of this language.

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Also, to conserve machine time during the class period, we use what we call load-and-go preparation programs. These allow the student to pre-punch an appropriate tape on the off-line teletype, and read it into the computer. As the tape is being read, the preparation program is translating the teletype codes into machine language instructions which are immediately stored in the computer's memory. Now as soon as the tape has been read, the program is ready to be run. There is no waiting for intermediate tapes to be punched or processed. Operational at the present time are the Machine Language Loader (MALL) and C. I. NETWORK's Instructional Compiler (CINIC). Assembly Loader of C. I. NETWORK (ALCIN) is still in the developmental stage.

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As the student learns the language that the computer uses, he can grasp a much clearer idea of the concepts involved in machine operation. One way of teaching about an instruction or programming concept is to allow the machine to be in Single Instruction mode. The students can observe the various registers and notice how the computer deals with the data and addresses during each instruction. Debugging can be done in a similar way. A student can try a program that does not run correctly, operating one instruction after the other on his own. By observing the console lights, he can find the incorrect steps in his procedure. This, of course, is meaningful only to the programmer who is familiar with the octal representation of the instructions, data, and addresses.

Since the C. I. NETWORK is, in most cases, teaching the most basic concepts of computer use to completely inexperienced people, we must start slowly and simply. The first programs are restricted to page zero. This eliminates much of the complicated explanation that would have to be covered for addressing on the other pages.

The first program introduced is extremely elementary. (See diagram one.)
But many concepts are illustrated by this program. First, the students must realize that the computer stores each instruction and piece of data in a memory location.

```
0020   1023   START,   TAD X
0021   1024            TAD Y
0022   7402            HLT
0023   0005     X,
0024   0006     Y,
```

Then starting the program at the first instruction allows the machine to process the instructions in sequential order until a Jump or Halt occurs. The use, operation, and procedure for writing memory reference instructions, must be introduced. The form and use of data in the machine is explained in terms of their previous knowledge of Binary and Octal arithmetic. All these fundamental concepts can be learned by working with straight-line programs like this one.

The idea of causing the computer to make a choice based upon the value of a datum can be presented along with an appropriate skip instruction or two. As more kinds of instructions are introduced, the

concept of looping is needed. One of the simplest loops to explain is a multiplication by repeated addition. The use of a counter as an end of loop decision is given in this type of loop. Print-out loops give a variety to the loop concept. Teaching the needed IOT instructions, and showing the process of the modification of instructions, allows students to have the computer type messages. Another basic concept that is introduced at this time is the use of the comparison of teletype codes as an end-check on the loop. Additional concepts that we feel are basic are the initialization of variables and the use of subroutines.

If time allows, other more sophisticated programming ideas can be presented to the class. But all additional programming concepts would simply be combinations of the above-mentioned basic concepts. Of course the hardware features of the particular machine in use, such as the increment and skip instruction, indirect addressing, auto-indexing, interrupt, etc., can also be learned if the computer is to be available for an extended period of time.

The third and final phase of our computer language requirements was that of a compiler language. We felt that this language should satisfy the following requirements:

The language should give an understanding and reflect recent developments in computers and compilers.

It should be a language that would simplify the teaching of fundamental programming techniques with a minimum of extraneous and superfluous compiler requirements.

Third, it should be a language that would allow high school students to use the compiler as a tool in math, science, and social studies classes.

There should be a minimum turnaround time and not use up valuable class time compiling the programs.

And finally, we felt that hands-on experience is valuable and would prefer on-line debugging.

The model we picked to pattern our language after was the compiler language "BASIC". This is a time-sharing language with a wide-spread and growing usage, and, as a result, would be a "living language" satisfying our requirements.

Our language, "CINIC", Computer Instruction NETWORK's Instructional Compiler, is a subset of BASIC. It is a "load and go" conversational compiler on a standard PDP-8/S with a 4K memory and a model 33 A.S.R. teletype input and output.

The following is a description of CINIC's instruction and command repertory:

Writing the Program

Below is a sample program written in CINIC. The program computes the total amount paid back in a year for a given principal and rate of interest.

```
10 PRINT"PLEASE TYPE THE PRINCIPAL AND INTEREST RATE"
20 INPUT P, I
30 LET A = P*I+P
40 PRINT "AMOUNT IS" A
50 GO TO 10
60 END
```


Explanation of program:

Statement 10:
The computer will type on the Teletype:

PLEASE TYPE THE PRINCIPAL AND INTEREST RATE

Statement 20:
The computer will type a "?" and wait while you type the principal and then the interest rate.

Statement 30:
(P times I) plus P will be computed.

Statement 40:
The computer will type out

AMOUNT IS (and the value for the amount)

Statement 50:
The computer will then "loop" back to statement 10 and repeat the above operations.

Statement 60 indicates the last instruction.

Statement Numbers

Each statement must be preceded by a two-digit number (10 through 99). You may type statement numbers in any order. The program will run in numerical order.

Instructions

Following each statement number is an instruction. The instructions possible are:

a. PRINT
b. INPUT
c. LET
d. GO TO
e. IF, THEN
f. END

a. PRINT

The PRINT instruction commands the computer to type. If PRINT is followed by a letter or series of letters, the values assigned to these variables will be typed. If a comma is used to separate the variables, five spaces will be output between the numerical values. If PRINT is followed by any series of characters enclosed within quotation marks, the enclosed characters will be reproduced exactly. Examples:

```
27 PRINT A
   The Tty would print the value for A in expo-
   nential form.  If A were equal to 25, then
   +0.2500000E+02 would be typed.  (See explana-
   tion of exponential form.)

35 PRINT "AMOUNT IS"
   The Tty would type
   AMOUNT IS

41 PRINT
   The above statement is interpreted by the com-
   puter as a wish for a blank line.
```

b. INPUT

The input instruction should be followed by a letter or series of letters separated by commas. When the instruction is executed, the computer will type a "?", stop, and wait for you to type the values you wish assigned to each variable.
Example:

```
21 INPUT A, B
   On executing this instruction, the computer
   would give the following results if you typed
   a "5," and a "7,"
? 5,
? 7,
```

c. LET

The LET instruction is used to define a value for a variable. This assigned value may be a single number or an algebraic expression involving some arithmetic operations. The arithmetic operations possible are:

sign	operation	example
+	add	A + Z
-	subtract	3 - 5.03
*	multiplication	B * C
/	divide	12/3
↑	exponentiation (exponents may be integer constants only)	A↑2 (means A^2)
( )	parentheses may be used in pairs to clarify any algebraic expression.	

Order of priority of operations:

1. Values inside parentheses
2. Powers or exponents
3. Multiplication and division
4. Addition and subtraction

Operations are performed from left to right for all operations with equal priorities. In the absence of parentheses in a formula involving only multiplication and division, the operations are performed from left to right. This means that A/B*C gives a value for (A/B)*C.

```
32 LET S = 5
   Defines the variable S as equal to 5.

40 LET Y = 4*A*X↑2+X
   Defines Y to equal 4AX^2+X

55 LET Y = 2^(2*A-B)/3
   Defines Y to equal 2(2A-B)/3
```

d. GO TO

A GO TO instruction is always followed by a statement number, directing the computer to go to another statement. The computer will execute instructions in numerical order unless re-directed by a GO TO statement or an IF, THEN statement.

```
23 GO TO 14
   This statement redirects the computer to take
   statement 14 as its next instruction.
```

e. IF, THEN

This statement allows the computer to make a decision.

```
20 IF X = 0 THEN 85
   The computer will go to statement 85 if X = 0;
   otherwise, it will execute the next statement
   after 20.

34 IF X < N THEN 97
   If X is less than N, statement 97 will be exe-
   cuted.  If not, the next statement after 34 will
   be executed.
```

f. END

The END statement must be the last statement in the program, and must contain the largest statement number used in the program. END signals the computer that the entire program has been loaded.

Commands

When the computer types "READY", it is indicating that it is waiting for a command or instruction. It will type "READY" after:

You type an END statement indicating the program is complete.
It has executed the program.
It receives a stop command, "S", from the keyboard.

If at this time you type:

NEW the computer clears the memory of an old program and waits for your new program.

RUN the computer will execute your program.

A statement number and statement the computer will add this new instruction to the existing program.

S If, while the computer is running a program, you wish it to stop, type "S". It will stop and type READY. (This will not operate during an input statement.)

STORED PROGRAM

Computers are unable to solve a problem unless a "program", or list of instructions, has been stored in the computer memory. To solve a problem, then, the programmer must follow a sequence of three steps:

1. Write the program. Using the CINIC language, write a list of instructions which will solve the given problem.

2. Load the program. Load the list of instructions into the computer memory. This is usually done by simply typing the program on the Teletype keyboard.

If someone else is using the computer, you may punch a program tape by typing your program on a separate, off-line Teletype with the tape punch ON. Then carry your program tape to the computer's Teletype and insert the tape in the tape reader. After the computer types READY, type "NEW", a Carriage Return, and place the tape reader switch in START position. The program will be quickly loaded into memory. After the tape has loaded, place the tape reader switch in STOP position.

3. Run the program. Loading a program is like loading a gun: You are only prepared for action; nothing happens until you pull the trigger. After a program has been loaded, you execute or run the program by typing "RUN" and a Carriage Return on the Teletype.

Numbers

All numbers are limited to seven digits. Decimal points may be used if preceded by a number. If a

number larger than seven digits is desired, exponential form may be used.

Exponential Form

Numbers written in exponential form (or "scientific nation") consist of two parts separated by the letter "E": the significant digits of the number, followed by a power of ten. To find the true number, multiply the indicated number by the indicated power of ten. For example:

```
    0.5120000E+03
```

would be interpreted as 0.512 X 10^3, or 512. (The "E" stands for "Exponent".) Similarly, 0.1000000E-09 would be the same as 0.1 X 10^{-9} or 0.0000000001. All numbers output from the computer will be normalized and printed in exponential form. Thus:

```
    0.8357210E+03
```

would be interpreted as 835.721

Variables

A variable may be defined as any single alphabetic character, A through Z.

Legal Characters

Any numeric or alphabetic character may be used in a program. All other characters and punctuation marks are illegal, with the following exceptions:

1. Those operators defined in a LET statement.
2. Anything inside quotation marks in a PRINT statement.
3. Commas used outside quotation marks in a PRINT statement to generate five spaces or to separate variables in an INPUT statement.
4. =, >, < may be used in an IF, THEN statement.
5. Decimal points may be used if preceded by a number. (Example: 0.52)
6. Spaces may be used anywhere, as needed.
7. Carriage returns to indicate the completion of a statement or command.
8. Line feeds when necessary after a carriage return.

Error Messages

If a statement is incorrectly typed, an error message may be typed by the computer. All error messages start with an "E" and are followed by an error code letter and a statement number.

```
EA indicates a general format error.
   Correction:  Check your statement with descrip-
     tion of correct format under Instructions.
   Check also forms for Numbers, Variables, and
     Legal Characters

EB indicates a statement number error.
   Correction:  See Statement Numbers

EC indicates the length of statement exceeds
   acceptable limits for CINIC.  (about 65 char-
   acters)
   Correction:  Divide into two statements

ED indicates the total length of the program ex-
   ceeds acceptable limits for CINIC.
   Correction recompile and:
     1.  Omit errors
     2.  Omit any unnecessary groups of parentheses
         in LET statements
     3.  Reduce size of and/or omit PRINT state-
         ments

EE indicates the total number of constants exceeds
   the limits of CINIC (about 50)
   Correction:  Recompile and limit the number of
     constants
```

Example:

```
  you type        70 LET X-5
  Error message   EA 70 (Format error in statement 70)
```

Making Corrections in a Program (On-Line)

If an error is made while typing on-line (connected to the computer), simply type a semi-colon, carriage return, and re-type the statement.

After a program has been executed, if you wish to insert or change a statement, just type the desired statement or statements.

To delete an entire statement, type the same statement number followed by a carriage return.

To replace a statement, type the same statement number and the new statement.

To insert a new statement between two other statements, choose any previously unused statement number that falls numerically between the two other statements.

After all corrections are made, type "RUN" and a Carriage Return to execute the corrected program.

CINIC has some definite advantages in classroom instruction. As can be seen from the preceding paragraphs, corrections may be made easily on-line. There is no classroom time lost in compiling the programs; spacing is completely optional, and turnaround time is an immediate response. The following example requires no format statement.

```
60 PRINT "THE ANSWER IS" A
```

There are no fixed or floating point requirements as this let statement demonstrates.

```
35 LET A = 21*(X*I)↑3-(5.21*6.23E-3)
```

The concepts of looping can be taught readily as in the example below. Also, this gives a student the chance to study relationships between dependent variables. In this case, the radius is allowed to range and the area can be observed.

```
20 PRINT "RADIUS AREA"
30 LET R = 1
40 LET A = 3.1416*R↑2
50 PRINT R, A
60 LET R = R+1
70 GO TO 40
```

Given the mathematical background with only a few minutes' instruction, students can write programs such as the one below. Then, by experimenting, will discover more about programming and the mathematics involved as in this case we must consider those cases where "D" is zero.


```
    AX + BY = C
    GX + HY = I

10 INPUT A B C G H I
20 LET D = A*H-G*B
30 LET X = (C*H-I*B)/D
40 LET Y = (A*I-G*C)/D
50 PRINT "X=";X, "Y=";Y
```

CINIC does have limitations. The first of these is the necessity to keep programs short. Programs should be kept to less than 20 to 30 statements depending on the type of statement. The output mode is limited to exponential form. There are no functions available and lastly the student cannot list his program. In order to overcome these limitations we have attempted to supplement study by using time-sharing with a larger computer for those problems that require a stronger language.

With our multi-level language approach to computer science in the high school, we, of the C. I. NETWORK, feel that the students get a good, well-rounded exposure to computers and programming. Although we do not claim to train technologically-capable programmers, a student, upon finishing our introductory course, can more easily decide whether a profession in computers would appeal to him or not. If the desire is present, he can go on for more training that will finish preparing him for a job in the vast computer field. Our plan is to continue this procedure in the future, adding refinements as they are completed.

1968 (July 16) - NSF / federal funding

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CAPITAL JOURNAL, Salem, Oregon, Tuesday, July 16, 1968, Sec. 1, Page 3

She'll Head Project on Computers

Judith Edwards, head of the Computer Instruction Network in Salem, this fall will direct a new National Science Foundation program at Oregon State University.

The $200,000 grant was announced today by OSU President James H. Jensen.

Teachers in 15 Oregon high schools and community colleges will participate in a program to learn about computers.

D. D. Aufenkamp, OSU's computer center director, will participate in the project, as will Katherine Porter, a faculty member. Mrs. Edwards and her present staff — Bud Pembroke, Dave Gillette and Don Holznagel—all will join the OSU faculty temporarily to handle the project. All except Holznagel will continue to work part-time with Computer Instruction Network, a federally financed agency which teaches computer methods in mid-valley schools.

Mrs. Edwards, of Independence, is a former Parrish Junior High School teacher. She has just completed teaching a three-week National Science Foundation seminar in computers at Oregon College of Education.

1968 - DEC Users Society - CINET-BASIC - Papers presented by Bud Pembroke

http://www.bitsavers.org/pdf/dec/decus/decuscope/Decuscope_Vol07_1968.pdf

1968-vol-7-no-1-decuscope-dec-users-society.pdf

Papers -

CONVERSATIONAL BASIC ON THE PDP-8 LINE

Bud R. Pembroke and Dave Gillette, Computer Instruction NETWORK, Salem, Oregon

This paper will concern itself with the use of CINET -BASIC in the classroom. It will include sample problems and a discussion of the variations between this BAS IC and other existing BAS IC languages. CINET -BAS IC (Computer Instruction NETwork's BAS IC) was written using FOCAL's subroutines for the standard PDP-S series with 4K memory and ASR-33 Teletype.

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available module positions, a much greater range of support functions, a greatly expanded control panel, access to all standard PDP-8 I/O lines and "Micro-8" control lines.

The principal difference, however, is that all of these signals are mapped into a 34 by 66 pin patchboard receptacle. This allows for off-line wiring of several devices on removable patchboards and time sharing of the main facility for on-line debugging and demonstration.

Devices built using this facility are described, and an extension of the patchboard concept is discussed.

A LIMITED MULTI-TERMINAL SYSTEM FOR CAI

Daivd A. Ensor, Department of Computer Applications, The Ontario Institute for Studies in Education, Toronto, Ontario, Canada

The paper describes a suite of PDP-9 programs to provide a multi-terminal "CAI" facility for both laboratory experimental use and also to give interested school boards the opportunity for some on-line experience. The OISE configuration is briefly outlined, and both the author language and its processors are discussed in addition to the multi-access software and the batch-time system. It is hoped eventually to run up to 64 terminals through a line concentrator with the system as a foreground program under the Advanced Software System.

LOGO - A PROGRAMMING LANGUAGE FOR CHILDREN, TEACHERS, AND MATHEMATICIANS

Wallace Feurzeig, Bolt Beranek and Newman, Cambridge, Massachusetts

Logo was expressly designed as the starting point for a new kind of curriculum in which programming languages are used to provide a conceptual framework for the teaching of mathematics. The structure of Logo embodies mathematically important ideas with minimal interference from programming conventions. It permits the expression of mathematically rich non-numerical algorithms as well as numerical ones. It can be introduced to third-graders, for simple tasks, with relative ease. Carried forward, it may contribute markedly toward increasing literacy in the skills of logical thinking and expression.

PATTERN AND RATE OF CONVERGENCE OF THE PERTURBATION TECHNIQUE IN THE TREATMENT OF LINEAR AND NONLINEAR PLATE PROBLEMS

Dr. S. F. Ng, Department of Civil Engineering, University of Ottawa, Ottawa, Ontario, Canada

An approximate method based on the Perturbation technique is used to solve the small and large deflection problems of the bending of circular, elliptical and skewed plates resting on an elastic support. The influence of the variable parameters such as the plate aspect ratio, skew angle, poisson's ratio and foundation modulus on the pattern of convergence is investigated. The algorithm of the solutions and the manipulations of the matrix equations are programmed utilizing direct access devices. Results of this investigation indicate that the rate of convergence of the method decreases rather rapidly with increase in the number of variable parameters both in the linear and nonlinear theory of plates. Results showing the effect of each of the plate parameters on the rate and pattern of convergence are plotted graphically.

CONVERSATIONAL BASIC ON THE PDP-8 LINE

Bud R. Pembroke and Dave Gillette, Computer Instruction NETWORK, Salem, Oregon

This paper will concern itself with the use of CINET-BASIC in the classroom. It will include sample problems and a discussion of the variations between this BASIC and other existing BASIC languages. CINET-BASIC (Computer Instruction NETwork's BASIC) was written using FOCAL's subroutines for the standard PDP-8 series with 4K memory and ASR-33 Teletype.

Panel Discussion

TRAUMA INVOLVED IN STARTING A NEW COMPUTER SCIENCE PROGRAM AT A UNIVERSITY

Dr. Wayne A. Muth, Moderator
Southern Illinois University, Carbondale, Illinois

Discussion would include curriculum and program requirements; options and/or electives within a program; Ph.D. vs. M.S. vs. V.S. vs. two-year technical programs (trade-offs and considerations); staffing requirements; interaction with other departments; startup of a new program using available personnel, courses, and other resources.

1968-vol-7-no-1-decuscope-dec-users-society-pg-8-paper-basic-pdp-8-img-1

1968-vol-7-no-1-decuscope-dec-users-society-pg-8-paper-basic-pdp-8-img-1.jpg

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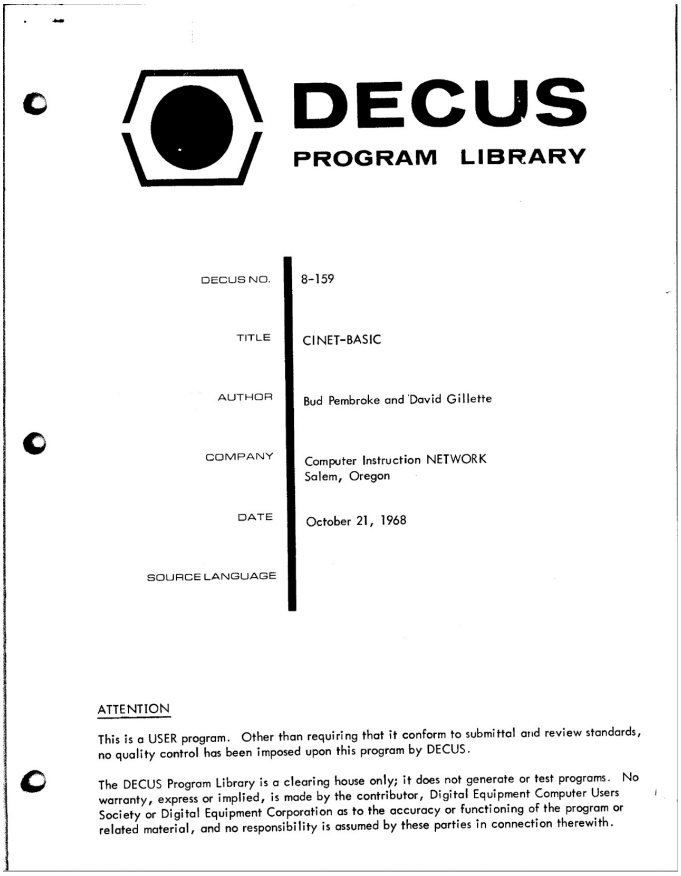
1968 (Oct 21) - FULL CINET-BASIC User Guide (catalog Number 8-159)

http://www.pdp8online.com/miscdocs/DECUS/Decus%208-159_CINET-BASIC.pdf

1968-10-21-dec-users-catalog-8-159-cinet-basic.pdf

1968-10-21-dec-users-catalog-8-159-cinet-basic-cover-img-1.jpg

1968-10-21-dec-users-catalog-8-159-cinet-basic-overview-img-1.jpg



DECUS
PROGRAM LIBRARY

DECUS NO. 8-159

TITLE CINET-BASIC

AUTHOR Bud Pembroke and David Gillette

COMPANY Computer Instruction NETWORK
Salem, Oregon

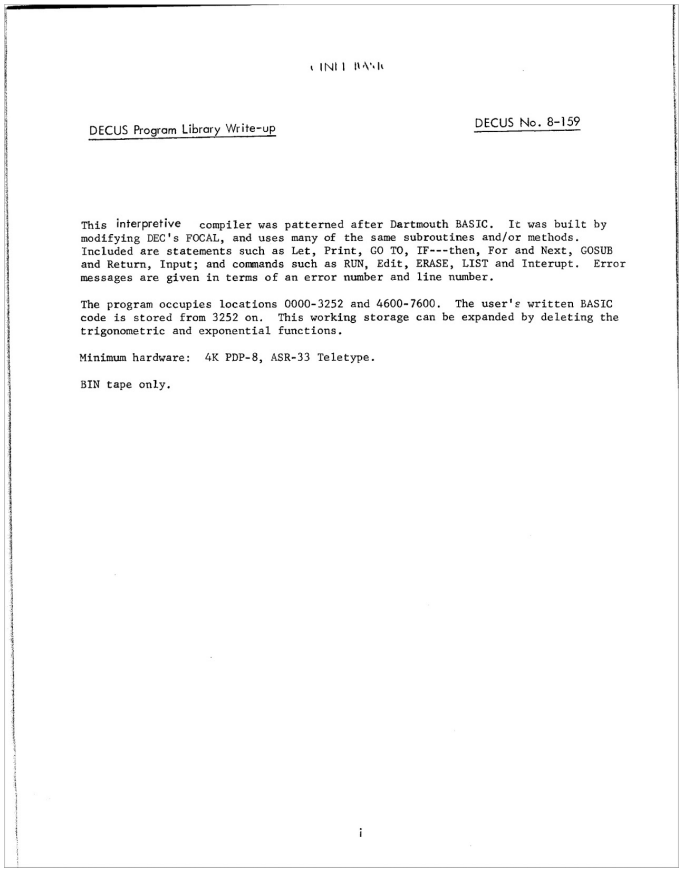
DATE October 21, 1968

SOURCE LANGUAGE

ATTENTION

This is a USER program. Other than requiring that it conform to submittal and review standards, no quality control has been imposed upon this program by DECUS.

The DECUS Program Library is a clearing house only; it does not generate or test programs. No warranty, express or implied, is made by the contributor, Digital Equipment Computer Users Society or Digital Equipment Corporation as to the accuracy or functioning of the program or related material, and no responsibility is assumed by these parties in connection therewith.



CINET-BASIC

DECUS Program Library Write-up DECUS No. 8-159

This interpretive compiler was patterned after Dartmouth BASIC. It was built by modifying DEC's FOCAL, and uses many of the same subroutines and/or methods. Included are statements such as Let, Print, GO TO, IF---then, For and Next, GOSUB and Return, Input; and commands such as RUN, Edit, ERASE, LIST and Interupt. Error messages are given in terms of an error number and line number.

The program occupies locations 0000-3252 and 4600-7600. The user's written BASIC code is stored from 3252 on. This working storage can be expanded by deleting the trigonometric and exponential functions.

Minimum hardware: 4K PDP-8, ASR-33 Teletype.

BIN tape only.

i

1969 (Sep) - Mentioned in book by Judith B. Edwards

1969-09-document-resume-computer-instruction-planning-practice-with-book-included-judith-b-edwards.pdf

Source - [HB004D][GDrive]

PREFACE

In 1962 two teachers in Oregonschools 30 miles apart began experi-menting with teaching about computers.During the next three years, Mrs.Marian Putnam at North Salem HighSchool and Mr. Bud Pembroke at LakeOswego High School successfullyincorporated one-month units in computerconcepts into existing mathematics courses.

Students in these classes learned about computersby actually programmingand operating a simple digital computer.The classroom computer had beendeveloped several years earlier at OregonCollege of Education with a grantfrom the National Science Foundation.

The Salem School District and the StateDepartment of Education,

together with the Marion County IntermediateEducation

VI

'strict, decided in1965 the good things happening in thesetwo schools should be studiedandexpanded to other districts.

A proposal for a planning grant waswritten and funded under TitleIIIof the Elementary and Secondary EducationAct.Forty secondary schools ina four-county areaparticipated in the eight-month planningphase which began!n the summer of 1966.It resulted in an operational grantfor a program,which began in the summer of1967.The, Title III` ;project, called ComputerInstruction NETWORK, has operatedthrough the Marion County IEDand has received some $100,000 per year foreach of three years.

Several new procedures for computer instruction have been tried andevaluated.The results of these experiences are reported in this monographto help other schools plan and implement programs for teaching with and about computers.

[...]

William Sharpe - See **William Forsythe Sharpe (born 1934)**

[...]

Sharpe, William F.BASIC:An Introduction to Computer ProgrammingUsing the BASIC Language.New York, N. Y.:The Free Press, 1967.

The first half of the book describes BASIC and its useand containsa set of problems andsolutions for each chapter.The last halfhas four appe dices, two explaining the Dartmouthand Universityof Washington systems, one containing a shortlibrary of BASICprograms and one being a summaryof the language.Some previousknowledge ofowcharting would be helpful to a reader sincethere is none included.The problems and library programs aregenerally oriented to economics and the social scie cesrather thanphysical sciences.

[...]

1969 (November) - DEC User's Society Catalog - Mentioning of CINET-BASIC and Bud Pembroke

https://ia801901.us.archive.org/23/items/bitsavers_decdecuspratalogNov69_6809707/DECUS_Catalog_Nov69.pdf

1969-11-decus-dec-users-society-program-library-catalog.pdf

DECUS No. 8-159

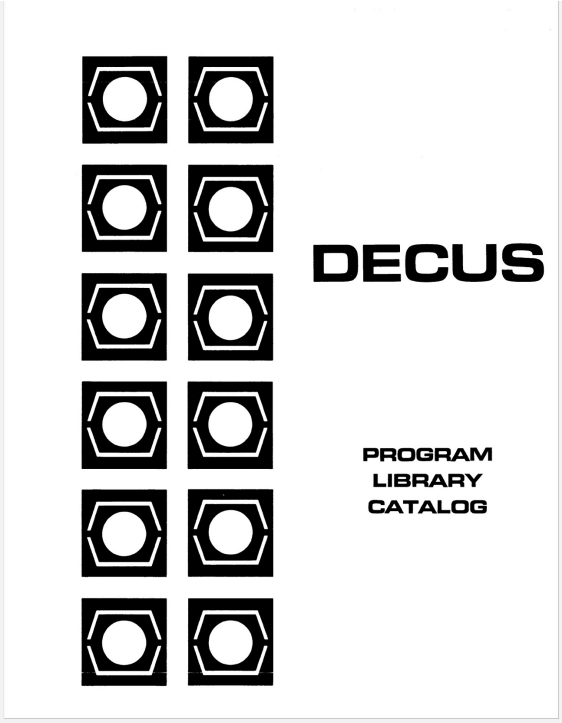
CINET-BASIC

Bud Pembroke and David Gillette, Computer Instruction NETWORK, Salem, Oregon

This interpretive compiler was patterned after Dartmouth's BASIC. It was built by modifying DEC'S FOCAL, and uses many of the same subroutines and/or methods. Error messages are given in terms of an error number and line number.

Storage Requirement: Main program locations 0000-3252 and 4600-7600 and user's code from 3252 on.

Minimum Hardware; A PDP-8 with 4K and an ASR-33



COVER

1969-11-decus-dec-users-society-program-library-catalog-cover-img-1

DECUS No. 8-158 (Continued)

Source Language: PAL

Storage Requirement: 223_{10} locations

DECUS No. 8-159

CINET-BASIC

Bud Pembroke and David Gillette, Computer Instruction NETWORK, Salem, Oregon

This interpretive compiler was patterned after Dartmouth's BASIC. It was built by modifying DEC's FOCAL, and uses many of the same subroutines and/or methods. Error messages are given in terms of an error number and line number.

Storage Requirement: Main program locations 0000-3252 and 4600-7600 and user's code from 3252 on.

Minimum Hardware: A PDP-8 with 4K and an ASR-33

DECUS No. 8-160

FASTLOAD

Doug Dyment, Digital Equipment of Canada, Ltd., Carleton Place, Ontario, Canada

FASTLOAD is a minimal bootstrap loader for the PDP-8, requiring only eight instructions to load in the upper page of memory.

DECUS No. 8-161

EXPO: A Flexible PDP-8 Data-Acquisition Program

Bruce Arne Sherwood, California Institute of Technology, Pasadena, California

EXPO is a PDP-8 program which reads various kinds of data from experimental apparatus, optionally logs data on magnetic tape, and accumulates one - or two-dimensional histograms of selected variables. These histograms may be displayed on the Teletype or scope, simultaneously with data-acquisition. From the keyboard the user defines what variables are to be histogrammed and under what conditions; variable names are symbolic and numerical parameters are decimal. Also from the keyboard, the user may call for Teletype or scope output with some control of format. Because of its flexible user-oriented input-output, EXPO has proven to be very useful in debugging and utilizing complex apparatus in a high-energy physics experiment; it is likely to be useful in similar experimental situations in science or engineering. The write-up includes a useful general discussion of interrupt handling on the PDP-8.

Minimum Hardware: 4K PDP-8 with EAE, Magtape, Scope Display, and Plotter optional

DECUS No. 8-161 (Continued)

Source Language: LRL Assembler (DECUS No. 5-13) on cards

Storage Requirement: 0-7177 if all options used

DECUS No. 8-162

Demonstration Programs for the PDP-8

1. World War I - Snoopy (338 Display)
2. PDP-8 Music
3. Night Watchman's Clock (338 Display)
4. Matching Pennies

DECUS No. 8-163

See FOCAL Section

DECUS No. 8-164

Prime Number Determination

Richard D. Cherrington, U. K. Atomic Energy Authority, Springfield Works, Salwick, Preston, England

This program types out by successive division all previously determined primes which are less than or equal to square roots of the numbers being evaluated.

Short additional programs cause additional type out of all nonprime numbers as a product of two integers.

Other Programs Needed: Floating Point Interpretive Package (DEC-8-5-S)

Storage Requirement: 4K

DECUS No. 8-165

The PDP-8 Simulator System for Philco 212

Neal Laurance, Ford Motor Company, Dearborn, Michigan

A program has been developed which provides the facility to simulate the operation of a PDP-8 computer within a Philco 212 computer. The system includes the ability to assemble PDP-8 programs in assembly language, produce paper tapes suitable for running on a PDP-8 and to simulate the execution of a PDP-8 program completely within the Philco 212. The simulation facility should be of use to people who are anticipating the delivery of a PDP-8 computer, and who wish to do program development before its arrival. The simulator portion is written in Philco 212 assembly language (it is not 211 compatible), and the remainder of the system is written in the MAD language.

Write-up only available.

16-BB

1969-11-decus-dec-users-society-program-library-catalog-pg-16-bb-cinet-basic-img-1

1969-11-decus-dec-users-society-program-library-catalog-pg-16-bb-cinet-basic-img-1.jpg

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CINET-BASIC

http://bitsavers.informatik.uni-stuttgart.de/pdf//pcm/PCM-12A_4k_Basic_Manual_Dec75.pdf

1975-12-pcm-inc-12a-4k-basic-manual.pdf

SECTION1. 0

INTRODUCTION

CINET-BASIiCs a binary-fotmat program originally written for DEC's PDP-8 computer by Bud Pembroke and David Gillette of the Computer Instruction Network, Salem, Oregon. The program is fully compatible with the PCM-12 computer manufactured by PCM, Inc., San Ramon, California. While not as powerful as the other BASIC language interpreters available from DEC for the PDP-8 series computers, CINET-BASIiCs nonetheless a powerful programming tool in the hands of an experienced programmer. For the beginner, it is perhaps easier to learn than most forms of BASIC, due to the abbreviated list of available instructions. The interpreter requires a PCM-12w ith 4096 words of memory and a Model 33 or 35 Teletype or CRT terminal as a minimum system configuration. The Teletype machine wi 11 a 11 ow use of paper tape; a CRT terminal used for input/output will require use of a separate paper tape reader for program entry, or optionally, an audio cassette recorder with the cassette form of the interpreter. No listing of the interpreter is available.

The CINET-BASIiCn terpreter is available to members of the Digital Equipment Corporation User's Society (DECUSi)n paper-tape form. Ordered from DECUS,

CINET-BASIcCo mes with a PDP-8 oriented write-up. The DECUSca talog number is

#8-159.

This BASIC-language interpreter has been successfully checked out by PCM, Inc. on the PCM-12 computer. However, PCM makes no representation of any kind as to the accuracy, reliability or performance of this software,, and assumes no responsibility for the use of CINET-BASIiCn the user's equipment or system.

PCM reserves the right to change, modify, delete or add to the information given in this manual, and to the binary paper tape, at any time without notice.

NOTE: DEC, PDP, FOCAaLn d DECUSar e registered trademar~s of Digital Equipment Corporation, Maynard, MA. Teletype is a registered trademark of the Teletype Corporation, Skokie, IL.

OTHER REFERENCES - CINET-BASIC

https://groups.google.com/g/pidp-8/c/q4eEMXGPRa0

clasy...@gmail.com

unread,

Jul 12, 2018, 11:28:04 AM

to ed.sp...@gmail.com, AndyB, PiDP-8

From what I have heard, the TSS8 BASIC is ghastly compared to all of the other PDP-8 BASIC implementations, not that they are all that equal in capability either, but they occupy different corners of the same "universe" at least whereas the TSS8 one is in "uncharted space".

Many of the implementations of **PDP-8 BASIC [the rest of them!] are the product of a small number of people,** all my long-term friends.and colleges from Brookllyn Poly. They all bounced ideas off of each other, and thus they have common "roots" in many ways.

There is also an effect of "perfecting" their craft, thus the newer ones in certain ways exceed the previous ones [but not necessarily and of course there are steps backwards]..

There is actually one additional "BASIC" that is definitely worse: So-called CINET "BASIC".

This is a sham program. It is nothing more than patched FOCAL so the command names seem to be somewhat more BASIC-like. That said, FOCAL is not written to flow the same way as BASIC, thus even if you state some code within it somewhat successfully, it won't work the same way! In fact, FOCAL shares some of the same limitations of later languages such as PASCAL that are incapable of breaking out of loops because there is no proper stack manipulation. You seem to break out, yet it continues to execute from the top anyway!

[Note: FOCAL is more of a "structured" language because it really doesn't implement unconditional GOTO; in loops it just can make "local" changes and the statements are all performed with a DO statement, etc.

BASIC to be faithful must be able to purge any stack in place so that when you leave an interative loop, you really leave it. This is taken for granted in languages such as FORTRAN and PL/I where the stacks are either non-existent or carefully defined.

A different project at Brooklyn Poly [some of the same people worked on that as well] was based on a descriptor language, etc. where the following two key elements were implemented:

a) Mark the stack. This means that if necessary, this is the one you will want to reference. Each marked position has a unique number.

b) Purrge to mark. Any and all stack elements are removed all the way back to the proper marked stack element. Thus, the stack is always properly cleaned up.

When such language elements are allowed to be handled without regard to standards, ineveitably code written in one cannot run in another, etc.

cjl

http://www.rsp-italy.it/IT/Magazines/Byte/_contents/BYTE%20Vol%2003-05%201978-May%20-%20Graphics%20In%20Depth.pdf

PCM-12 computer

Floppy Interface for PCM-12 Computer

Users of the PDP-8 compatible

PCM-12 microcomputer can attach the

Data Systems Design Model 210 floppy disk system to their computers through this interface module. The 12440 module enables users to execute all PDP-8 floppy disk diagnostics and makes the PCM-12 compatible with the mass storage operating systems developed for the PDP-8. The PCM-12, built around the Intersil IM6100 microprocessor, can be used as a direct replacement for PDP-8s in many applications. The 12440 interface module sells for $259 assembled and $169 in kit form, with volume discounts of 10 to 25 percent, from Pacific Cyber/Metrix Inc, 3120 Crow Canyon Rd, San Ramon CA 94583,(415)837-5400.•

Circle 636 on inquiry card.

https://datasheet.datasheetarchive.com/originals/library/Datasheets-UD4/DSAUD0069697.pdf

https://dt01-s1.123dok.com/pdf/123dok_us/pdf/2020/03_31/mmvqld1585592697.pdf?X-Amz-Content-Sha256=UNSIGNED-PAYLOAD&X-Amz-Algorithm=AWS4-HMAC-SHA256&X-Amz-Credential=94NFDWF3B17T3R35S85K%2F20200827%2F%2Fs3%2Faws4_request&X-Amz-Date=20200827T012153Z&X-Amz-SignedHeaders=host&X-Amz-Expires=600&X-Amz-Signature=b947bf6806ce2185da441916812aed24d9fecff849f942d5a01fbc58993b3fbc

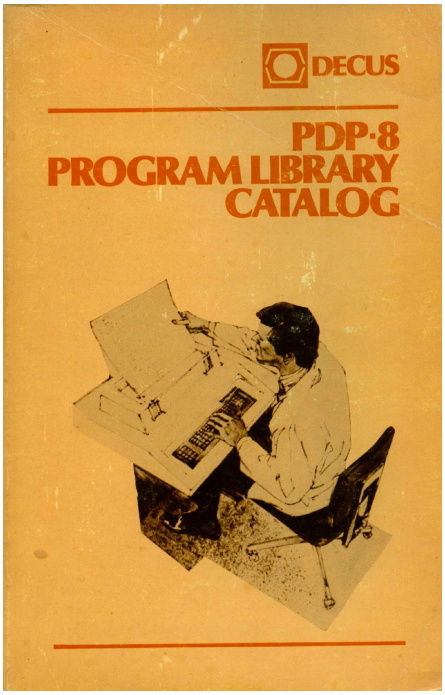
http://www.bitsavers.org/pdf/dec/decus/programCatalogs/DECUS_Catalog_PDP-8_Aug78.pdf

CINET-BASIC 8-655 Revised: 2 February 1978 Author: Bud Pembroke and David Gillette Computer Instruction Network Revised by: G. Chase, OSB Portsmouth Abbey School, RI Operating System: Paper Tape Source Language: PAL-III,ODT Memory Required: 4K Special Hardware Required: Teletype with reader/punch recom-mended Abstract: CINET·BASIC is an interpretive compiler patterned after the original Dartmouth BASIC. It was built by modifying FOCAL-69, and uses many of the same subroutines and/or methods. Included are statements such as Let, Print, GO TO, IF-then, For and Next, GOSUB and Return, Input; and commands such as RUN, Edit, ERASE, LIST and Interrupt. Error messages are given in terms of an error number and line number. The program occupies locations 0000-3252 and 4600-7600. The user's written BASIC code is stored from 3252 on. This working storage can be expanded by deleting the trigonometric and exponential functions. Revisions included with this tape include new versions of the internal 'ALIGN' and 'FIX' routines. The "INT (X)" function now yields the correct result regardless of the value of the argument. A second patch implements the "SGN (X)" function with the restriction that it yields a + I result if X = 0, and it requires the use of core locations 7600-7610. DECUS 8-655 includes a revised binary tape of CINET-BASIC, and can be loaded without a checksum error. Note: Sources and listings of CINET-BASIC are not available. Media Price Code: A2, F6

1979-06-digital-equiptment-computer-users-society-pdp-8-program-library-catalog

Source : [HC003W][GDrive]

18 PDP-8 Abstracts CINET-BASIC and Patches, Version: February 1978 Author: Bud Pembroke and David Gillette, Computer Instruction NETWORK, Salem, OR Revised by: (Rev Dom) Geoffrey Chase, Portsmouth Abbey School, Portsmouth, RI Operating System: Paper Tape Snun:e Language: PAL-III, Memory Required: 4K 8-655 Abstract: CINET-BASIC is an interpretive compiler patterned after the original Dartmouth BASIC. It was built by modifying FOCAL-69, and uses many of the same subroutines and/or methods. Included are statements such as Let, Print, GO TO, IF-THEN, For and Next, GOSUB and Return, Input; and commands such as RUN, EDIT, ERASE, LIST and Interrupt. Error messages are given in terms of an error number and line number. The program occupies locations 0000-3252 and 4600-7600. The user's written BASIC code is stored from 3252 on. This working storage can be expanded by deleting the trigonometric and exponential functions. Revisions included with this tape include new versions of the internal 'ALIGN' and 'FIX' routines. The "INT (X)" function now yields the correct result regardless of the value of the argument. A second patch implements the "SGN (X)" function with the restriction that it yields a + I result if X = 0, and it requires the use of core locations 7600-7610. Note: DECUS No. 8-655 includes a revised binary tape of CINET-BASIC, and can be loaded without a checksum error. It replaces DECUS No. 8-159, CINET-BASIC which is now obsolete. No Source Available. Media PrIce Code: A3, F7



[HC003X][GDrive]

Google search for "Computer Instruction NETWORK"

omg

https://lookingthroughwater.wordpress.com/2012/06/02/memoir-chapter-seven-bread-trucks-and-computers/

https://www.who2.com/bread-trucks-and-breakthroughs-notes-from-the-early-days-of-educational-computing/

Bread Trucks and Breakthroughs: Notes from the Early Days of Educational Computing

August 5, 2013 | By Fritz Holznagel

A photo of an old van with students lined up at the back and the words 'Computer Instruction Network' on the sideBread truck computing in Oregon, circa 1968. (Photo via Judy Allens' online memoirs)

My uncle Don Holznagel recently surprised us with an email about Douglas Engelbart, the computer scientist who invented the mouse and other key features of modern computing:

"Jean alerted me to your item on Douglas Engelbart. I attended the Engelbart session referenced in all the recent news accounts of his death — the 'mother of all demos' where he demonstrated the mouse in text editing, hypertext, etc."

Wow!

Don spent much of his career in computer education. I remember visiting him in Minnesota in 1971 and playing a Civil War game on their huge mainframe computer there. It would print out the situation on paper: "You have 100 cannonballs, 1000 musket rounds," and so forth. Then it would ask something like: "Attack or retreat?" You'd type in a response and then it would print out the new set of changed circumstances to deal with. It was a big deal for a kid in those days.

I asked Don if he'd share with our readers his impressions of the Engelbart presentation and other details of that era in computing. Our interview is below.

* * *

Who2: How did you get started with computing?

Don: I was introduced to Fortran programming in a summer math workshop in 1965. At the time I was teaching math to grades 10-12 in Parkrose, Oregon. I began to teach a unit on Fortran in an advanced math course, a 12th-grade Analysis class. We didn't have computers in the schools at the time: I took the kids to the county data processing office on Saturdays so they could punch the cards and run the programs.

In 1967 I attended a workshop Judy Allen taught about the BASIC language, and became highly interested in the promise of computers in math and science. Judy was a pioneer in her own right in the introduction of computers to secondary school students.

Who2: How did you end up at the Engelbart presentation?

Don: Judy Allen was running a pioneering project in computers in education at the Marion County Education Service District in Salem, Oregon. She and I became acquainted and in June of 1968 she hired me into the project. She decided to send me to the Fall Joint Computer Conference in December 1968 to soak up the latest in computing.

A poster with Douglas Englebart's face and notes on his presentationA poster for Douglas Engelbart's 1968 presentation. Image courtesy of the Bootstrap Institute.

The conference was at the San Francisco Convention Center, and the huge attendance was a mixture of computer science people and data processing types. Most were still using punched cards on batch processing computers, but many also were beginning to use interactive timesharing systems from terminals, which our project was also using in schools. I didn't have a clue about Engelbart, but many in the audience were familiar with his research. However, all of us including the computer science types were blown away with his presentation and demonstration.

The detail that has stayed with me these 45 years is the image of Engelbart's mouse demo, in which he used a common grocery list to show moving items around to reorder the list in categories, using only the mouse. I've remembered that image on many occasions, such as when the mouse was overshadowed by pressure pads in laptops. Even though the mouse was a research model, it worked almost flawlessly as did all of his demos.

You can actually see his presentation in a series of video clips online here. The grocery list is the substance of clip 5. In those days, this was astounding. In fact, the first 5 clips show how he grabbed everyone's attention right from the start.

The news accounts say that the audience was awestruck, and I've used the word astounding to describe the event. You didn't dare whisper to your neighbor for fear of missing something. Everyone there knew this was a turning point, that things in the field of human interaction with computers would never be the same. There was deafening applause at the end. I returned to the hotel and couldn't adequately describe what I'd seen to my wife, Jean. I knew though that our use of interactive timesharing in schools was on the right track.

Who2: What was the general attitude toward computers in schools at the time?

Don: Essentially, few teachers and administrators envisioned them as useful in the classroom. They all knew that the payroll and class scheduling were done on a computer. The purpose of our project and a few others around the country funded at the same time was to explore and demonstrate other possibilities.

The first application that most teachers and administrators thought of was teaching kids to write programs. Their thought was that if computers are the future, we need to be preparing kids to use them. It seemed obvious then to parents and educators that an actual computer programming skill was what would give their kids a leg up on the future.

Nobody knew how computers could assist in teaching history or chemistry, and there was no software to help. Development of software, teacher guides, and teacher training was the work of the 1970s and '80s.

Who2: It's hard to remember, in these days of smart phones, that getting your hands on an actual computer used to be difficult.

Don: Yes. Developing microcomputers the size of typewriters came to fruition in the late '70s, and into schools through the '80s. Of course, you now hold in

Don: Yes. Developing mini-computers the size of typewriters came to fruition in the late '70s, and into schools through the '80s. Of course, you now hold in your hand computer power exceeding those by a huge margin.

Who2: How soon did you start to see any of the ideas Douglas Engelbart presented in actual working computers?

Don: It was a long time. I think the mouse was first marketed with the original Mac in 1984, but Apple had licensed it earlier in the development. In any case, it was 16 years from the Engelbart demo until it could be bought by any average person.

An IBM 1130 photo, with old-fashioned keyboard and a big ol' mainframeAn IBM 1130 computer console. Photo by Martin Skott, via Wikipedia.

Who2: What was your career with Judy Allen like?

Don: Judy's project in Marion County was a federally-funded project called the Computer Instruction Network. The CIN project was based on three systems.

The "bread truck" — so-called because it was a delivery van of that style — housed an IBM 1130 computer with paper tape input. It was scheduled to visit about 16 or so high schools over 4 counties, about 2 a day if they weren't far apart. Kids would write Fortran programs during the week, usually in a math class, and process them whenever the van showed up. We would drive it up to a school, trail 100 feet of cable to the nearest electric outlet, and plug in. The 3 others of us on the staff also drove that truck over four counties. Fun stuff!

The second method was to place teletype terminals with phone modems for several months in a number of schools (I don't remember how many). We provided subscription access to GE Timesharing Systems which offered a version of the interactive BASIC language. Again usually in math classes, kids could write programs, but unlike the truck, they could go to the terminal and enter the programs when they were ready without waiting, and BASIC was easier to teach and use so you could focus on the problem to solve and not the language.

Photo of a boxy old computer, all metal and plugs, with 'Digital Equipment Corporation' written on topA PDP-8 computer, now on display at the Smithsonian. Photo by Wikipedia user Alkivar.

The third system was highly experimental. It was based on DEC PDP-8 mini-computers, which would fit on a card table and were about 10 inches high, with a teletype terminal. When I got to the project at the end of its first year, Judy and the two others had been writing their own version of interactive BASIC to fit in 8K storage. I couldn't believe what they had accomplished. This meant that we could take an inexpensive computer to a school and leave it for awhile, and the kids could run as many programs as they wished without limited timeshare minutes or waiting on the truck schedule.

We used a small van to deliver it to a number of schools on a six-week schedule. This system was the wave of the future, and delivering it, doing teacher workshops, and writing teaching materials took most of my time. A neat aspect of the project was that we served small rural schools as well as the larger ones in Salem and Newberg.

Judy Allen also died in June, as it happens. Two pioneers in different parts of the field gone in a month. She was instrumental in my career in educational technology, twice hiring me for jobs: the first one in Salem and the next at the Northwest Regional Educational Lab in Portland (now Education Northwest).

Who2: What was the rest of your career like?

Don: After CIN in Salem, I worked for 10 years at TIES, a large school district cooperative in Minnesota, and then returned to Oregon to the Northwest Regional Educational Labs for 16 years. I finished my career in 1998 with 2 years at the Southeast Regional Lab in Greensboro, NC. It was an exciting time to work in educational technology, ranging from minicomputers to microcomputers to the Internet and two-way interactive video over 30 years. The most significant aspect over that time was that although many people were enamored of each new technical item, my work was focused on the improvement of instruction and the curriculum through software, which was the most important thing from my standpoint and in each of the places I worked.

Who2: You don't happen to have any snapshots of you from the old days, do you? Bonus points if you're wearing a pocket protector.

Don: Unfortunately, no. We did make a videotape in the last year of the CIN project which showed the 2 vans and some of the school locations. When I got back to Oregon, I contacted the County ESD video librarian and she said they had tossed it along with the other project materials after 10 years. In the 1970s in Minnesota and the 80s in Portland, we took some set-up shots with children of staff, but not in schools because you couldn't take random classroom pics without getting parental permission for any kids that showed up. I don't have any of the set-ups. I actually did use a pocket protector all the time in Minnesota!

* * *

Great stuff, and thanks to Don Holznagel for those fascinating details.

It's worth pointing out that both Uncle Don and Douglas Engelbart were products of the Oregon public educational system — Don at Eastern Oregon College, and Engelbart at Oregon State. That's the same public college system that produced Nobel-winner Linus Pauling (Oregon State) and so many other scientists and thinkers. Let us never stop funding public education.

http://www.retro.co.za/ccc/8080/SDK-80/MCS-80%20System%20Design%20Kit%20Users%20Guide.pdf

Wedding? https://www.newspapers.com/image/198893603/?terms=%22bud%2Bpembroke%22

1977 - marriage - Bud R Pembroke to Ellen Fewick

https://www.ancestry.com/imageviewer/collections/2378/images/45654_B281314-00011?treeid=&personid=&hintid=&queryId=4a288756a8812c7b7b6270551c0a329b&usePUB=true&_phsrc=Unm1&_phstart=successSource&usePUBJs=true&_ga=2.186272041.1683773568.1598563540-287036158.1597098143&pId=6317513

Bud R Pembroke

Gender:

Male

Application Age:

46

Birth Date:

17 Jul 1931

Birth Place:

San Diego, California, USA

1969 - Gillette and Pembroke at the same wedding ..

https://www.newspapers.com/image/316225018/?terms=%22bud%2Bpembroke%22

Birth of Basic

https://www.youtube.com/watch?v=WYPNjSoDrqw

Peripheral Equipment Corporation

See Pertec Computer Corporation

Richard Norman Perle (born 1941)

Wikipedia Richard Perle

Associations :

- Henry Martin "Scoop" Jackson (born 1912) (Richard Perle began his political career as a senior staff member to Senator Henry "Scoop" Jackson , and was thus inspired to join Neoconservative movement)

Saved Wikipedia (Nov 21 2020) for Richard Perle

See [HK003K][GDrive]

Chairman of the Defense Policy Board Advisory Committee

In office

2001–2003

President

George W. Bush

1st Assistant Secretary of Defense for Global Strategic Affairs

In office

August 5, 1981 – May 8, 1987

President

Ronald Reagan

Preceded by

Office Created

Succeeded by

Ronald F. Lehman

Personal details

Born

Richard Norman Perle

September 16, 1941 (age 79)

New York City, New York

Political party

Republican

Spouse(s)

Leslie Joan Barr (m. 1977)[1]

Children

1

Alma mater

University of Southern California (BA)

Princeton University (MA)

Profession

Political scientist

Richard Norman Perle (born September 16, 1941) is an American political advisor who served as the Assistant Secretary of Defense for Global Strategic Affairs under President Ronald Reagan. He began his political career as a senior staff member to Senator Henry "Scoop" Jackson on the Senate Armed Services Committee in the 1970s.[2] He served on the Defense Policy Board Advisory Committee from 1987 to 2004 where he served as chairman from 2001 to 2003 under the Bush Administration before resigning due to conflict of interests.

A key advisor to Secretary of Defense Donald Rumsfeld in the Bush administration, Perle was an architect of the Iraq War.[3][4] In March 2001, he claimed that the Saddam Hussein regime possessed weapons of mass destruction.[5][6] He has been described as a neoconservative hawk on foreign policy issues.[5]

He has been involved with several think-tanks, including the Washington Institute for Near East Policy, the Center for Security Policy, the American Enterprise Institute, Project for the New American Century , and the Jewish Institute for National Security Affairs.

Early life and education[edit]

Perle was born in New York City, New York. As a child, he moved to California, where he attended Hollywood High School in Los Angeles; his classmates including actor Mike Farrell, singer Ricky Nelson, and Joan Wohlstetter (the daughter of Albert and Roberta Wohlstetter of the Rand Corporation).

Perle earned a B.A. in International Politics in 1964 from the University of Southern California. As an undergraduate he studied in Copenhagen at Denmark's International Study Program. He also studied at the London School of Economics and obtained a M.A. in political science from Princeton University in 1967.

Career[edit]

Office of Senator Henry Jackson[edit]

From 1969 to 1980, Perle worked as a staffer for Democratic Senator Henry M. Jackson of Washington whom he met through Albert Wohlstetter. Perle recalls his early involvement with Wohlstetter:

"Albert Wohlstetter phoned me one day. I was still a graduate student at Princeton ... and he said, could you come to Washington for a few days and interview some people and draft a report on the current debate shaping up in the Senate over ballistic missile defense, which was a hot issue ... And he said, I've asked somebody else to do this too, and maybe the two of you could work together. The someone else was Paul Wolfowitz. So Paul and I came to Washington as volunteers for a few days, to interview people, and one of the people we interviewed was Scoop Jackson and it was love at first sight ... I was there for eleven years." [2]

As a staffer, Perle drafted the Jackson–Vanik amendment to the 1972 International Grains Agreement (IGA), or "Russian Wheat Deal" negotiated by Richard Nixon and the Soviet Union which made for the first time by law a trade agreement contingent upon the fundamental human right of Soviet Jews to emigrate.[7] He was considered[*by whom?*] an extremely knowledgeable and influential person in the Senate debates on arms control. By his own admission, Perle acquired the reputation of an influential figure who preferred to work in the background, a reputation that has followed him through the years in both the public and the private sectors. At some point (usually said to be during his time in the Reagan Administration) Perle acquired the nickname "The Prince of Darkness", which has been used both as a slur by his critics and as a joke by supporters. (*Time*, 23 March 1987, "Farewell Dark Prince") However, he has been quoted: "I really resent being depicted as some sort of dark mystic or some demonic power. ... All I can do is sit down and talk to someone. ..." (*The New York Times*, 4 December 1977, *Jackson Aide Stirs Criticism in Arms Debate*, Richard L. Madden)

Opposition to nuclear arms reduction[edit]

Perle was considered a hardliner in arms reduction negotiations with the Soviet Union and has stated that his opposition to arms control under the Carter administration had to do with his view that the U.S. was giving up too much at the negotiation table and not receiving nearly enough concessions from the Soviets. Perle called the arms talks under negotiation in the late 1970s "the rawest deal of the century".

Perle's objection to the arms talks between the Carter administration and the Soviet Union revolved primarily around Carter's agreement to halt all cruise missile development. Perle is widely credited for spearheading opposition to the treaty, which was never ratified by the Senate.

Perle, with fellow neoconservative Paul Wolfowitz, played a supporting role in the ballistic missile defense project that was launched in the 1980s called the Strategic Defense Initiative.("Star Wars") [2] Perle was influential in creating several organizations and think-tanks in order to pressure public opinion and sway policy makers on ballistic missile defense.[2] During the second Bush administration missile defense programs saw dramatic budget increases under the

direction of Perle as chair of the Defense Policy Board.[2]

In 2010, Perle voiced opposition to the Obama administration's New START Treaty, comparing it unfavorably to the "watershed" 1987 INF Treaty signed by Ronald Reagan.[8] However, Jonathan Chait has pointed out that Perle vehemently opposed the INF Treaty when it was initially signed, calling it "flawed enough to require renegotiation with the Soviets" and arguing that "the treaty does not do many of the key things the Administration says it does."[8]

Transition into neoconservatism[edit]

Perle is a self-described neoconservative, like several around Henry M. "Scoop" Jackson, as he told Ben Wattenberg in an interview specifically about him becoming a neoconservative.[9]

> Ben Wattenberg: Now, Scoop was surrounded by people who then and certainly now are called neoconservatives. It's become a fashionable word now thanks to you and your colleagues because you're all categorized that way. How did that come into your life, that whole school of thought?
>
> Richard Perle: Well, I think the term has something to do with the sense that those of us who are now called neo-conservatives were at one time liberals, and in this ...
>
> Ben Wattenberg: Irving Kristol said a neoconservative is a liberal who's been mugged by reality.
>
> Richard Perle: Right. And I think that's a fair description, and I suppose all of us were liberal at one time. I was liberal in high school and a little bit into college. But reality and rigor are important tonics, and if you got into the world of international affairs and you looked with some rigor at what was going on in the world, it was really hard to be liberal and naïve.

Perle's book *An End to Evil: How to Win the War on Terror* which he coauthored with fellow neoconservative David Frum in 2004 criticizes American bureaucracy, civil service, and law. The book suggests that Americans must "overhaul the institutions of our government to ready them for a new kind of war against a new kind of enemy" including the FBI, CIA, armed forces, and State Department.[2] The book is also used as a defense of the 2003 invasion of Iraq and outlines important neoconservative ideas, including ways to abandon all Israeli-Palestinian peace processes, invade Syria, and implement strict US domestic surveillance with biometric identity cards and public vigilance to hinder potential terrorist immigrant or terrorist sympathizer threats.[10] Perle and Frum conclude: "For us, terrorism remains the great evil of our time, and the war against this evil, our generation's great cause ... There is no middle way for Americans: it is victory or holocaust." [2] These ideas are foundational elements of neoconservatism.

Neoconservative leadership[edit]

> Appearing on British television discussion programme *After Dark* on 10 June 1989

Over the past few decades, a tight-knit group of neo-conservatives have had a significant impact in the carving out of American foreign policies, especially those concerning the Middle East. Arguably at the helm of the neoconservative movement is Richard Perle. He has been aided by other prominent neoconservatives, including Paul Wolfowitz and Douglas Feith.

Members of the Neocon core have been interrelated for decades through positions in government, think-tanks, business corporations, and even family ties. As journalist and writer of neoconservative ideology Jacob Heilbrunn states: "neo-conservatism was turned into an actual movement by Irving Kristol and Norman Podhoretz. Even today, the neoconservative movement is best described as an extended family based largely on the informal social networks patiently forged by these two patriarchs."[2]

Members of the neoconservative movement are also leaders of many influential "letterhead organizations" (LHO's) and think-tanks such as the American Enterprise Institute, Project for the New American Century, Committee for Peace and Security in the Gulf, Committee for the Liberation of Iraq, and the U.S. Committee for a Free Lebanon.[2] These organizations act as a support system for many neoconservative beliefs and help members of the movement draft policy papers, raise money and media attention, and lobby policymakers in order to protect their own political and personal agendas. A sociologist who examined the memberships of such neoconservative organizations ultimately concluded that "the activities of fourteen organizations were coordinated by individuals who comprised a web of interlocking memberships."[2]

From 1981 to 1982 Wolfowitz was appointed head of the policy planning staff in the State Department.[2] In the same year Perle, who was an assistant secretary for international security policy in President Reagan's defense department hired and promoted Douglas Feith after he had been fired from his position as a Middle East analyst at the National Security Council.[2] Later it was found out that Feith was fired due to an FBI investigation suspecting that he had distributed confidential materials to an Israeli embassy official.[2] With the right connections and the support of his close allies Wolfowitz and Perle, Feith was able to attain his position as undersecretary for policy in the Pentagon in 2001, from which he resigned in 2005. In return, he appointed Perle as chairman of the Defense Policy Board.[2] This friendship was mutually beneficial for both Perle and Feith, who used their overlapping positions of power to help promote the other and bail each other out of trouble. Perle is nonetheless an inspiration and mentor to Feith who describes him as a "godfather" and trusts that "He would actively work to help anybody he had worked with and liked and admired and who he thought was useful to the overall cause of U.S. national security as he saw it."[2] Both Wolfowitz and Feith would eventually join forces and work closely together to promote the War in Iraq after 9/11, including heading the Office of Special Plans.

War with Iraq[edit]

Pre-2003 invasion[edit]

Like many in the neoconservative movement, Perle had long been an advocate of regime change in Iraq. In 1998 Perle led an effort known as the Project for the New American Century with close neoconservative allies Wolfowitz, Woolsey, Elliott Abrams, and John Bolton. The Project culminated in a letter sent to US President Bill Clinton calling for the military overthrow of Saddam Hussein's regime.[2] Prior to and after the 2003 invasion of Iraq, Perle held several exclusive meetings in his home where he discussed issues regarding American foreign policy on Iraq.[2] In an effort to help fund their goals, Ahmed Chalabi an Iraqi-born businessman and founder of the Iraqi National Congress, helped Perle secure millions of dollars from the U.S. government in 1990.[2] Chalabi was one of the key figures driving the war in Iraq and helped transmit important "information" to U.S. Congress and the public that would successfully help sell the war effort.[2] Moreover, Perle and Chalabi also had very similar motives: they both wanted the Hussein regime deposed and Chalabi elected president.[2] In 2004, the FBI investigated Chalabi after U.S. intelligence sources revealed that he was working as a double agent for Iran.[2] Perle was also involved in efforts to develop alternative intelligence estimates to help justify the decision to go to war in Iraq. He and other neoconservative leaders claimed that the intelligence community had grossly underestimated threats to the national security of the U.S.[2] Thus, they established two secret offices in the Pentagon

after September 11 – the Counter Terrorism Evaluation Group and the Office of Special Plans.[2] Nonetheless, Perle helped manage and hire neoconservative affiliated staff for both these organizations that created their own policies and intelligence reports by dodging existing government entities.[2] Perle's reasoning for implementing the Office of Special Plans was essentially to "bring in people with fresh eyes to review the intelligence that the CIA and other agencies had collected."[2] In an interview with CNN on September 16, 2001 Perle announced "Even if we cannot prove to the standards that we enjoy in our own civil society that they were involved, we do know, for example, that Saddam Hussein has ties to Osama Bin Laden ..."[11] Flynt Leverett, a senior staff member of the Bush National Security Council states: "There were constant efforts to pressure the intelligence community to provide assessments that would support their views. If they couldn't get what they wanted out of the intelligence community, they simply created their own intelligence."[2] Moreover, Perle allegedly gave several speeches and talks throughout Europe trying to promote the war effort abroad. He allegedly told the British House of Commons that the U.S. would attack Iraq even if UN weapons inspectors didn't find anything.[2] Lawrence Wilkerson, former chief of staff to Secretary of State Colin Powell announced that Perle was "making remarks as if he were an official inside the U.S. government."[2] In countries like Germany, France, Britain, and Japan, people perceived him as a government authority whose knowledge and clout on U.S. policy appeared legitimate.[2]

Perle argued that what he referred to as terrorist Abu Nidal's "sanctuary" in Saddam Hussein's Iraq was justification for the U.S. military invasion of Iraq. Perle states this in the recent PBS documentary series "America At A Crossroads", and refers to President Bush's 9/11 speech in which Bush stated: "We will make no distinction between the terrorists who committed these acts and those who harbor them."

In an interview for "Saddam's Ultimate Solution", the 11 July 2002 episode of the PBS series *Wide Angle*, he said:

"Saddam is much weaker than we think he is. He's weaker militarily. We know he's got about a third of what he had in 1991. But it's a house of cards. He rules by fear because he knows there is no underlying support. Support for Saddam, including within his military organization, will collapse at the first whiff of gunpowder. Now, it isn't going to be over in 24 hours, but it isn't going to be months either."

Perle advocated invading Iraq with only 40,000 troops, and complained about the calls by then Gen. Eric Shinseki to use 660,000 troops. He preferred a strategy similar to that used in the Afghan war, in which the U.S. would insert SOF (Special Operations Forces), along with some two divisions, to assist native Kurdish and Shi'ite rebels, much as the United States had done with the Northern Alliance against the Taliban.[12]

Iraq policy and Bush criticism[edit]

The Senate Intelligence Committee eventually discovered that President Bush and his advisers heavily exaggerated[*citation needed*]the claims of weapons of mass destruction in Iraq and terrorist ties to Al Qaeda which were not validated by U.S. intelligence units.[2] Since this scandal, Perle has made several attempts to reduce his alleged involvement in the war efforts stating: "Huge mistakes were made, and I want to be very clear on this: They were not made by neoconservatives, who had almost no voice in what happened ..."[2] In an interview he gave *Vanity Fair* that was excerpted in an article appearing in the 4 November 2006 *Los Angeles Times*, he denied having a role in the planning of the war. He is reported to have told *Vanity Fair*, "I'm getting damn tired of being described as an architect of the war." This is not congruent with his signing of the PNAC letter in 1998. "I was in favor of bringing down Saddam. Nobody said, 'Go design the campaign to do that.' I had no responsibility for that." The same *Los Angeles Times* article reports that Perle now believes that his advocacy of the Iraq war was wrong.

Perle expressed regret of his support of the invasion and faulted the "dysfunction" in the Bush administration for the troubled occupation. "I think now I probably would have said, 'Let's consider other strategies for dealing with the thing that concerns us most, which is Saddam supplying weapons of mass destruction to terrorists'. The decisions did not get made that should have been. They didn't get made in a timely fashion, and the differences were argued out endlessly. At the end of the day, you have to hold the president responsible."[13][14][15] Nevertheless, Perle vociferously defended the war in Iraq, arguing to the wife of a deployed soldier in a 2007 PBS film that to end the war now would be to dishonor those who had already died in the cause.[16]

Disputed role in Bush Administration[edit]

Conservative commentator David Brooks has said that, in his opinion, Perle's influence in the Bush administration is exaggerated. In a 2004 *New York Times* article, Brooks wrote that; "There have been hundreds of references ... to Richard Perle's insidious power over administration policy, but I've been told by senior administration officials that he has had no significant meetings with Bush or Cheney since they assumed office. If he's shaping their decisions, he must be microwaving his ideas into their fillings".[17]

On Iraq Study Group proposals[edit]

In a December 2006 interview with *Die Zeit*, Perle strongly criticized the Iraq Study Group proposals, saying: "I have never seen such a foolish report. ... A report that begins with false premises ends with nothing."[18]

Other views on foreign policy[edit]

United Nations[edit]

Perle is a frequent critic of the United Nations, stating that it is an embodiment of "... the liberal conceit of safety through international law administered by international institutions. ... "[19] He has also attacked the United Nations Security Council veto power as a flawed concept, arguing that the only time the U.N. utilized force during the Cold War was when "... the Soviets were not in the chamber to veto it".[19]

Furthermore, shortly after the invasion of Iraq, Perle stated that; "in this case international law stood in the way of doing the right thing".[20] He also argued that there was "no practical mechanism consistent with the rules of the UN for dealing with Saddam Hussein". At the time, these comments provoked controversy among critics of the war, who argued that they contradicted the U.S.'s official stance on the legality of the invasion.[20]

Israel[edit]

In 1996 during the Clinton administration, Perle lead a study group with David Wurmser that produced a report on balancing power in the Middle East, specifically in Israel's favor.[2] The report, "A Clean Break: A New Strategy for Securing the Realm" made clear recommendations about steering Israel away from Socialist principles, making efforts to become more self-reliant, "nurturing alternatives to Arafat's exclusive grip on Palestinian society", and working more closely with countries such as Jordan and Turkey. It also stated the removal of Saddam Hussein from power in Iraq should be a key objective for the Israeli state, advocated armed incursions into Lebanon, and suggested Arab states should be challenged as undemocratic. Moreover, Perle personally delivered the report to the incoming Likud-led government in hopes of influencing the new Prime Minister Benjamin Netanyahu.

Defense[edit]

Perle advocates pre-emptive strikes, such as in Iraq, as an extension of America's right to self-defense. For example, Perle has expressed support for a theoretical first strike on North Korean and Iranian nuclear facilities.[21]

Business interests and controversies[edit]

Bribery accusations and alleged conflicts of interest[edit]

Perle has on occasion been accused of being an Israeli agent of influence. It has been reported that, while he was working for Jackson, "An FBI summary of a 1970 wiretap recorded Perle discussing classified information with someone at the Israeli embassy. He came under fire in 1983 when newspapers reported he received substantial payments to represent the interests of an Israeli weapons company. Perle denied conflict of interest, insisting that, although he received payment for these services after he had assumed his position in the Defense Department, he was between government jobs when he worked for the Israeli firm."[22]

From 1981 to 1987, Perle was Assistant Secretary of Defense for international security policy in the Reagan administration. In a *New York Times* article, Perle was criticized for recommending that the Army purchase an armaments system from an Israeli company that a year earlier had paid him $50,000 in consulting fees. Perle acknowledged receiving the payment the same month he joined the Reagan administration, but said the payment was for work done before joining the government and that he had informed the Army of this prior consulting work. Perle was never indicted for anything related to the incident.[23][24]

In March 2004, another *New York Times* article reported that, while chairman of the Defense Policy Board, Perle had contracted with the troubled telecommunications giant Global Crossing to help overcome opposition from the FBI and the Pentagon to the sale of its assets to Hong Kong-based Hutchison Whampoa. Since the military employed the company's fiber optics network for communications, the brass argued that sale to a foreign-owned, especially Chinese, corporation would compromise national security. Perle was to be paid $125,000 to promote the deal, with an extra $600,000 contingent fee on its approval.[25] This controversy led to accusations of bribery, and Perle resigned as chairman on March 27, 2003, though he remained on the board.[26]

Perle is also known to have demanded payment for press interviews[27] while he was the chairman of the Defense Policy Board, a practice that has raised accusations of not only ethical but legal impropriety.[28]

Unresolved legal issues[edit]

In 1978, while working with the Senate Armed Services Committee, Perle was caught in a security breach[*citation needed*] by CIA director Stansfield Turner.[2] Although Turner urged Senator Jackson to fire him, Perle received a warning and was kept on staff according to the *Washington Post*.

Perle has served as a Director of Hollinger International since June 1994. He is also Co-Chairman of Hollinger Digital Inc. and a Director of Jerusalem Post, both of which are subsidiaries of the company. He has served as a director of GeoBiotics. On August 31, 2004, a special committee of the Board of Directors investigating the alleged misconduct of the controlling shareholders of Hollinger International submitted the 512-page Breeden Report to the U.S. Securities and Exchange Commission (SEC). In the report, Perle is singled out as having breached his fiduciary responsibilities as a company director by authorizing several controversial transactions which diverted the company's net profit from the shareholders to the accounts of various executives. Perle received over $3 million in bonuses on top of his salary, bringing the total to $5.4 million, and the investigating committee called for him to return the money.

Top Hollinger executives dismissed the report and have filed a defamation lawsuit against the head of the investigating committee, former SEC chairman Richard C. Breeden. However, in 2005, Perle publicly acknowledged he had been served a 'Wells notice',[29] a formal warning that the S.E.C.'s enforcement staff had found sufficient evidence of wrongdoing to bring a civil lawsuit.

Seymour Hersh and "Lunch with the Chairman"[edit]

In July 2001, George W. Bush appointed Perle chairman of the Defense Policy Board Advisory Committee, which advises the Department of Defense. Two years later a newspaper article accused Perle of a conflict of interest, claiming Perle stood to profit financially by influencing government policy. The article alleged that Perle had business dealings with Saudi investors and linked him to the intelligence-related computer firm Trireme Partners LLP, which he claimed stood to profit from the war in Iraq.[30]

That same day, Perle was being interviewed on the issue of Iraq by CNN's Wolf Blitzer. Shortly before the interview ended, Blitzer quoted the aforementioned news article and asked for Perle's response. Perle dismissed the premise of the article and argued that it lacked "any consistent theme". Added Perle: "Sy Hersh is the closest thing American journalism has to a terrorist, frankly."[31]

On March 11, Perle told the *New York Sun* as regards Hersh's article that "I intend to launch legal action in the United Kingdom. I'm talking to Queen's Counsel right now".[32] He claimed it was easier to win libel cases in England, and that therefore made it a better location. In the end, Perle did not file any legal case. Instead, on March 27, 2003, he resigned as chairman of the Defense Policy Board, although he still remained a member of the board.[*citation needed*]

Adviser to Muammar al-Gaddafi[edit]

As a member of the Cambridge, Massachusetts-based consulting firm Monitor Group, Perle was an advisor to Libyan dictator Muammar al-Gaddafi in 2006.[33] "Perle traveled to Libya twice in 2006 and met with Vice President Dick Cheney after the trips."[34] According to Monitor documents, Perle traveled to Libya with several other advisers to hold lectures and workshops, and promote the image of Libya and its ruler.[33]

Iraq oil deal[edit]

In July 2008, *The Wall Street Journal* reported that Perle had made plans to invest in oil interests in Iraq, in collaboration with Iraqi Kurdish leaders in northern Iraq (Iraqi Kurdistan).[35]

Works[edit]

Perle is author of many articles and three books:

- *An End to Evil: How to Win the War on Terror* (with David Frum, 2003) ISBN 1-4000-6194-6
- *Hard Line* (1992) (ISBN 0-394-56552-5)
- *Reshaping Western Security* (ed.) (1991) (ISBN 0-8447-3790-9)

In 1992 he produced the PBS feature *The Gulf Crisis: The Road to War*.

In 2007, Perle presented the documentary "The Case for War: In Defense of Freedom", articulating his view of the challenges facing the U.S. after 9/11, and debating with his critics including Richard Holbrooke, Simon Jenkins, and Abdel Bari Atwan. The film was broadcast by PBS in their series *America at a Crossroads*, which generated considerable controversy.[36]

Source - Militarist Monitor Website - Richard Perle

Source : [HW0056][GDrive]

last updated: September 1, 2015

Please note: The Militarist Monitor neither represents nor endorses any of the individuals or groups profiled on this site.

Affiliations

- **American Enterprise Institute:** Former Resident Fellow
- **Washington Institute for Near East Policy:** Member, Board of Advisors
- **Center for Security Policy:** Member, Board of Advisors
- **Foundation for the Defense of Democracies**: Former Member, Board of Advisers
- **Jewish Institute for National Security Affairs**: Former Member, Board of Advisers
- **Hudson Institute**: Member, Board of Trustees
- **Center for Security Policy**: Member, National Security Advisory Council
- **U.S. Committee for a Free Lebanon**: Golden Circle Supporter
- **Council on Foreign Relations**: Chairman, Study Group on Nonlethal Options in Overseas Contingencies (report published in 1995)
- **Project for the New American Century**: Letter Signatory
- **Committee for the Liberation of Iraq**: Member
- **Committee on the Present Danger**: Member
- **Middle East Forum/U.S. Committee for a Free Lebanon**: Signed 2000 document sponsored by both groups calling on the United States to force Syria from Lebanon
- **American Committee for Peace in Chechnya**: Member

Government

- **Department of Defense**: Former member, Defense Policy Board (Chairman until 2003); Assistant Secretary of Defense (1981-1987)
- **U.S. Senate**: Staff (1969-1980); served on the staffs of Sen. Henry M. "Scoop" Jackson, the Senate Committee on Government Operations, the Committee on Armed Services, and the Arms Control Subcommittee

Business

- **Monitor Group:** Senior adviser
- **Hollinger International**: Former Co-Chairman
- **Trireme Partners L.P.**: Managing Partner
- **Global Crossings**: Consultant
- **Morgan Crucible**: Co-Chairman
- **Jerusalem Post**: Former Co-Chairman

Education

- **London School of Economics**: Honors Examinations, 1962-1963
- **University of Southern California**: B.A. in International Relations, 1964
- **Princeton University**: M.A. in Political Science, 1967

Related:

- Bush's Messes in Somalia, Iraq, and Afghanistan; Plus NGOWatch, Richard Perle, and more
- Richard Pipes

- Richard Allen
- The Disappearing Prince of Darkness
- Zalmay Khalilzad
- 1992 Draft Defense Planning Guidance
- Foundation for Defense of Democracies
- Robert Joseph
- Charles M. Kupperman
- Project for the New American Century

Richard Perle, a former resident fellow at the American Enterprise Institute and adviser to various Republican administrations, is widely considered a core representative of the neoconservative political faction. He has played a key role promoting militaristic U.S. foreign policies since the 1970s, first as an adviser to the late Sen. Henry Jackson, later as a Defense Department official in the Reagan administration, and then as head of the George W. Bush administration's Defense Policy Board during the launching of the "war on terror." More recently he has been a high-profile advocate of using military force to halt Iran's alleged nuclear weapons program and has opposed the nuclear deal reached between Iran and world powers in July 2015.

From Iraq to Iran

Since stepping down from his post as chair of the Bush administration's Defense Policy Board in 2003, Perle has generally kept a low public profile, while at times offering contradictory public evaluations of the Iraq War and urging U.S. military action in other Middle Eastern countries.

In early 2013, Perle served as a representative of the Clarion Project—a controversial advocacy group that has produced several Islamophobic and anti-Iranian films—in its efforts to capitalize on the Boston marathon bombings to promote its political agenda. Claiming that "jihadist ideology continues to motivate a sophisticated worldwide terror network and that America remains a target," Clarion urged the public to view its 2008 film, *The Third Jihad*, and offered Perle and Clare Lopezfor interviews.[1] The press release, according to the Inter Press Service, appeared to suggest that "Perle, a long-time member of the strongly pro-Chechen, anti-Russian American Committee for Peace in the Caucasus (formerly the American Committee for Peace in Chechnya) and many, many other neo-con letterhead organizations, has now associated himself in some way with the ultra-Islamophobic Clarion Project."[2]

Previously, Perle broke with many of his fellow neoconservatives in expressing regret about the U.S. occupation of Iraq. However, since the election of President Barack Obama, Perle has become an increasingly vocal critic of the U.S. foreign policy and become a high profile proponent of attacking Iran.

In a 2011 interview with the conservative outlet Newsmax.com, Perle said: "The Iranians are killing Americans at every opportunity in the places where we're now fighting. They support terrorism around the world, and they're headed toward nuclear weapons. … I think Obama believes wrongly that he can talk the Iranians out of their nuclear weapons program. He's been trying to do that since he became president. The previous administration tried it too. It isn't going to work."[3]

Perle was strongly critical of the Obama administration's diplomatic efforts to resolve the Iranian nuclear crisis and claimed after an agreement was struck between Iran and six world powers in July 2015: "[T]he likelihood of a crash landing is significant."[4]

In the months preceding the deal, Perle voiced support for Israeli Prime Minister Benjamin Netanyahu's stance on the negotiations and praised his controversial March 2015 address to the U.S. Congress criticizing the Obama White House's diplomacy. "He made a compelling case for not rushing into an agreement that is flawed in so many ways," Perle said of Netanyahu after the speech.[5]

Perle has also echoed Netanyahu's hyper-alarmist rhetoric that the nuclear deal with Iran could lead to genocide, telling *Newsmax* in March 2015: "Never again should the potential for genocide be allowed and that means taking action before for it's too late. And that means not entering into an agreements that predictably will place the most lethal weapons in the hands of the most dangerous enemies."[6]

In May 2013, Perle argued that instead of Obama's diplomatic approach to resolving the Iran nuclear dispute, the United States should have pushed for regime change in Iran and fostered unrest in the country. "I see no conflict between the two objectives of halting Iran's nuclear weapon ambitions and greater individual freedom for the Iranian people: both objectives can be achieved only when the current regime is removed, and it is that removal that should be the principal purpose of our policies, including sanctions. Sanctions that aim to change the minds of the mullahs will not work but sanctions that aim to undermine the power of the mullahs by encouraging the internal opposition just might," he said in an interview with *Open Canada*.[7]

Perle added: "[T]he sanctions would have to be far more onerous than those in effect today. And we would have to find ways, overt and covert, to support the opposition. The Obama administration shows no interest in such a strategy – or any strategy."[8]

When asked during an interview with Russia Today whether his views on Iran should be considered legitimate given the errors in judgment on Iraq, Perle responded defensively, stating: "What are you suggesting? That we stop trying to figure out whether Iran has nuclear weapons, because there were intelligence errors with respect to Iraq? Should the U.S. dismantle its intelligence organizations? Of course not!"[9]

Like many of his colleagues in the rightwing "pro-Israel" community, Perle has expressed concern about the emergence of conservative Muslim parties since the "Arab Spring," particularly the Muslim Brotherhood in Egypt. He told Newsmax in 2011: "The Muslim Brotherhood is potentially a very serious problem, since it is committed to the global expansion of an extreme approach to Islam, which is strict shariah law. And it will be very difficult if the Muslim Brotherhood comes to power."[10]

Reviving arguments he used during the 1970s and 1980s to promote extravagant weapons programs to deter the Soviet Union, Perle has criticized the Obama administration's arms control negotiations with Russia. In a 2010 op-ed for the *American Interest*, he wrote: "Obama's approach to Moscow smacks of appeasement, an eagerness to accommodate unreasonable Russian positions made worse by an exaggerated focus on refurbishing the antique arms control arrangements of the Cold War while embracing a utopian vision of a world without nuclear weapons."[11]

Perle has characterized the Obama administration's foreign policy as naïve and ill-informed, while at the same time using right-wing scare tactics in an effort to delegitimize the president. "What if," Perle wondered, "we are witnessing the deliberate, measured implementation of a deeply entrenched ideology reflecting such influences as the scarcely acknowledged Bill Ayers and the once inconveniently visible Reverend Jeremiah Wright? What if they shaped Obama's worldview in the years when they were ministering to and counseling a young, charismatic politician? Americans have never been tempted to elect a 'blame America first' President,' and now they are 'not so sure' about Obama."[12]

Iraq War Advocacy and Reversal

Iraq War Advocacy and Reversal

Perle's role in promoting the invasion of Iraq centered largely on his capacity as chair of the Pentagon's Defense Policy Board, which serves as a quasi-idea factory for the Defense Department. Paralleling the efforts of the Project for the New American Century (PNAC), a leading neoconservative advocacy group with which Perle was associated, as well as those of then-Pentagon number two Paul Wolfowitz, Perle convened a meeting of the DPB shortly after the attacks to produce policy responses for the administration. Perle invited as a guest to one of the board's classified meeting Ahmed Chalabi, the Iraqi exile and longtime confidant of Perle who served as the head of the Iraqi National Congress, which had for years been pushing for regime change in Iraq.

Although the DPB typically has little or no influence in setting policy, many commentators saw Perle's efforts as part of a larger, neoconservative-led initiative to coordinate public pressure from both inside and outside the administration. Commenting on this apparent coordination, Jim Lobe and Michael Flynn wrote: "It appears that after 9/11, the network of hawks and neoconservatives that had coalesced around PNAC's founding agenda had mobilized in a highly coordinated way to fashion the administration's response to the terrorist attacks and rally the public behind their new agenda" (see the Right Web special report, "The Rise and Decline of the Neoconservatives," November 17, 2006).

In late 2006, as the U.S.-led war in Iraq devolved into an increasingly bloody counterinsurgency campaign, Perle became a high profile turncoat with respect to the decision to invade Iraq. In a widely noted interview with *Vanity Fair* that year, Perle argued that the war in Iraq had turned out to be a mistake. He said: "I think if I had been delphic, and had seen where we are today, and people had said, 'Should we go into Iraq?,' I think now I probably would have said, 'No, let's consider other strategies for dealing with the thing that concerns us most, which is Saddam supplying weapons of mass destruction to terrorists.' … I don't say that because I no longer believe that Saddam had the capability to produce weapons of mass destruction, or that he was not in contact with terrorists. I believe those two premises were both correct. Could we have managed that threat by means other than a direct military intervention? Well, maybe we could have."[13]

Responding to Perle's change of heart, Gary Schmitt, a founder of PNAC and Perle's colleague at the American Enterprise Institute (AEI), told the BBC: "I do not agree with Richard Perle that we should never have gone in. I do argue that the execution should have been better. In fact, I argued in late 2003 that we needed more troops and a proper counterinsurgency policy."[14]

Also in seeming opposition to other neoconservatives, Perle gave an equivocal reaction to the controversial decision by President George W. Bush in early 2007 to "surge" the number of troops in Iraq. While most neoconservatives were supportive of the surge plan, even eager for a larger commitment than 20,000 additional troops proposed, Perle expressed doubt that sending more troops was the answer. He told the *New York Sun*, "I don't think the additional troops are the key to the strategy [Bush] has announced, it is how effectively those troops are managed." He added: "The big question in my mind is whether we can implement some practical and prudent measures. I don't know if we can. It will depend significantly on the command in the country."[15]

Perle later claimed that his remarks about the invasion had been taken out of context, insisting that he had actually meant to criticize the U.S. occupation and administration of the country. "The mistake in my view—and I can't prove this; nobody can prove this—the seminal mistake was getting into an occupation and not turning things over to the Iraqis," he said. "I doubt that they would have handled the postwar situation as badly as we did. We sent thousands of Americans over there to run a country they knew nothing about." He added, " I think the decision that was made to remove Saddam was right." [16]

In June 2014, Perle blamed the Iraq War on faulty intelligence about Saddam Hussein's alleged weapons of mass destruction. "We were not doing it to bring democracy to Iraq, we were not doing it as he has sometimes suggested on behalf of any other government. We believed the intelligence that was available at the time that the CIA and other intelligence organizations . . . that Saddam [Hussein] had weapons of mass destruction and there was a danger after 9/11 that he would share those weapons," he stated.[17]

One commentator said in response: "Perle, who was known for his nickname 'Prince of Darkness,' is slyly presenting himself as an innocent, if not gullible average American who too was misled by false intelligence."[18]

After the conquest of large parts of Iraq by the self-proclaimed "Islamic State" group (ISIS) in 2014, Perle argued that Chalabi should have replaced Nouri al-Maliki as Iraq's prime minister. He told the *National Review* in July 2014: "Chalabi is far and away the most competent and the most capable of salvaging this situation. I think he's got the best chance. It would be foolish if we expressed a preference for somebody less competent, which we've done before."[19]

Worldview

Perle's pessimism on Iraq stood in stark contrast to his trademark hard-nosed militarism, which has been a staple of his rhetoric for more than two decades. Reflecting core aspects of what many regard as the neoconservative worldview, Perle's discourse typically reflects a combination of warrior worship, existential conflict, and extreme moral righteousness. As the Australian journalist John Pilger reported shortly before the war in Iraq: "One of George W. Bush's 'thinkers' is Richard Perle. I interviewed Perle when he was advising Reagan; and when he spoke about 'total war,' I mistakenly dismissed him as mad. He recently used the term again in describing America's 'war on terror.' 'No stages,' he said. 'This is total war. We are fighting a variety of enemies. There are lots of them out there. All this talk about first we are going to do Afghanistan, then we will do Iraq … this is entirely the wrong way to go about it. If we just let our vision of the world go forth, and we embrace it entirely and we don't try to piece together clever diplomacy, but just wage a total war … our children will sing great songs about us years from now.'"[20]

Like many neoconservatives, Perle seems to have been particularly influenced by his views of the Holocaust, a theme that has repeatedly popped up in his rhetoric. Said Perle in a 2003 interview with BBC: "For those of us who are involved in foreign and defense policy today, my generation, the defining moment of our history was certainly the Holocaust. It was the destruction, the genocide of a whole people, and it was the failure to respond in a timely fashion to a threat that was clearly gathering. We don't want that to happen again; when we have the ability to stop totalitarian regimes we should do so, because when we fail to do so, the results are catastrophic."[21] Similarly, in his 2004 book *An End to Evil*, he and coauthor David Frum argued: "For us, terrorism remains the great evil of our time, and the war against this evil, our generation's great cause … There is no middle way for Americans: It is victory or holocaust."[22]

Perle has denounced the use of the term "neoconservative" and has claimed that it is used by "hateful critics" to refer to Jewish Americans. "It's often used to describe Jewish Americans because, as it happens, some of the original thinkers whose ideas have now been characterized by this general term 'neoconservative' were in fact Jewish, and it often carries conspiratorial tones on the part of people who throw the term around," he told *Newsmax* June 2014.[23]

Prescriptions on the Middle East

This radical outlook on foreign affairs deeply influenced both Perle's reaction to 9/11 and his initial response to the growing turmoil in the Middle East in the wake of the U.S. invasion of Iraq. For example, despite the growing violence in Iraq by late 2005, Perle remained committed to a larger "regime change"

strategy for the Middle East that included both Syria and Iran. On Syria, Perle hosted meetings in late 2005 between Chalabi and Syrian exile Farid Ghadry, who was head of the Syrian Reform Party. Ghadry told the Wall Street Journal: "[Chalabi] paved the way in Iraq for what we want to do in Syria." Said Perle: "There's no reason to think engagement with Syria will bring about any change," adding that Syrian President Bashar al-Assad "has never been weaker, and we should take advantage of that."[24]

On Iran, Perle lambasted the State Department and then-Secretary of State Condoleezza Rice for being weak on the "mullahs." In a July 21, 2006 piece for AEI, Perle contended that the offer of negotiations with Iran over its nuclear program amounted to "appeasement." He wrote: "Proximity is critical in politics and policy. And the geography of this administration has changed. Condoleezza Rice has moved from the White House to Foggy Bottom, a mere mile or so away. What matters is not that she is further removed from the Oval Office; Rice's influence on the president is undiminished. It is, rather, that she is now in the midst of—and increasingly represents—a diplomatic establishment that is driven to accommodate its allies even when (or, it seems, especially when) such allies counsel the appeasement of our adversaries."[25]

During the summer 2006 conflict in Lebanon, Perle also remained on message, arguing that Israel was involved in an "existential struggle" with Hezbollah. In an op-ed for the *New York Times*, Perle wrote: "Israel must now deal a blow of such magnitude to those who would destroy it as to leave no doubt that its earlier policy of acquiescence is over. This means precise military action against Hezbollah and its infrastructure in Lebanon and Syria, for as long as it takes and without regard to mindless diplomatic blather about proportionality. For what appears to some to be a disproportionate response to small incursions and kidnappings is, in fact, an entirely appropriate response to the existential struggle in which Israel is now engaged."[26]

Perle has for decades supported the work of a number of hardline think tanks and advocacy groups, including the Committee on the Present Danger, PNAC, EI, the Jewish Institute for National Security Affairs, and the Hudson Institute. As of 2015, he is a member of the board of advisors of the Center for Security Policy and the Washington Institute for Near East Policy.[27]

In 1996, Perle participated in a study group that produced a report for the incoming Likud-led government of Israeli Prime Minister Benjamin Netanyahu that urged the country to break off then-ongoing peace initiatives and suggested strategies for reshaping the Middle East. Among the group's arguments was the idea that "removing Saddam Hussein from power in Iraq [was] an important Israeli strategic objective in its own right." The report—titled "A Clean Break: A New Strategy for Securing the Realm" and coauthored by Douglas Feith, David Wurmser, and Meyrav Wurmser—also recommended working closely with "Turkey and Jordan to contain, destabilize, and roll back" regional threats and using "Israeli proxy forces" based in Lebanon for "striking Syrian military targets in Lebanon." If that should "prove insufficient, [Israel should strike] at select targets in Syria proper." Further, "Israel can shape its strategic environment, in cooperation with Turkey and Jordan, by weakening, containing, even rolling back Syria." This would create a "natural axis" between Israel, Jordan, a Hashemite Iraq, and Turkey that "would squeeze and detach Syria from the Saudi Peninsula." This "could be the prelude to a redrawing of the map of the Middle East, which could threaten Syria's territorial integrity."[28]

In 1998, Perle signed a PNAC letter to President Bill Clinton that argued, "Current American policy toward Iraq is not succeeding, and that we may soon face a threat in the Middle East more serious than any we have known since the end of the Cold War." The threat from Iraq was characterized as being of such a magnitude that the "only acceptable strategy is one that eliminates the possibility that Iraq will be able to use or threaten to use weapons of mass destruction. In the near term, this means a willingness to undertake military action as diplomacy is clearly failing. In the long term, it means removing Saddam Hussein and his regime from power." Other signatories included future Bush administration officials Elliott Abrams, Richard Armitage, John Bolton, Zalmay Khalilzad, Peter Rodman, Robert Zoellick, Donald Rumsfeld, and Wolfowitz.

In 2001, Perle also signed the now notorious post-9/11 PNAC letter to President Bush arguing that "even if evidence does not link Iraq directly to the attack, any strategy aiming at the eradication of terrorism and its sponsors must include a determined effort to remove Saddam Hussein from power in Iraq. Failure to undertake such an effort will constitute an early and perhaps decisive surrender in the war on international terrorism. The United States must therefore provide full military and financial support to the Iraqi opposition. American military force should be used to provide a 'safe zone' in Iraq from which the opposition can operate. And American forces must be prepared to back up our commitment to the Iraqi opposition by all necessary means."

Private-Sector Controversies

Perle has been heavily criticized for his sometimes-questionable business interests, which have been the focus of several investigative reports by journalists. When the *New Yorker*'s Seymour Hersh documented Perle's business dealings in the Middle East with the venture capital firm Trireme, Perle threatened to sue the journalist, saying that he was the "the closest thing American journalism has to a terrorist."[29]

Hersh's article, "Lunch with the Chairman," discussed possible conflicts of interest resulting from Perle's dual role as chairman of the Defense Policy Board and as a partner for Trireme, a company that invests in homeland security and defense-related industries. Hersh recounted how Perle met with Adnan Khashoggi, a Saudi arms dealer, and another Saudi businessman in early 2003. Various people interviewed by Hersh, including Khashoggi, indicated that Perle and Trireme seemed to be sending the message that in return for Saudi investment backing, the "Chairman" would use his Pentagon connections to influence U.S. policy.[30]

Soon after the Hersh piece was published, columnist Maureen Dowd and other journalists documented Perle's relationship to Global Crossings, a bankrupt communications giant and defense contractor that was seeking Pentagon permission to be sold to the Asian company Hutchinson Wampoa (the same Hutchinson Wampoa whose interests in Panama sparked an anguished round of right-wing hand-wringing about a Chinese attempt to take control of the Panama Canal). Although Perle denied any wrongdoing, he admitted through his attorney that he was hired by Global Crossings to consult with a reluctant Department of Defense about the deal.[31]

In late March 2003, Perle announced that he was stepping down from his post as chairman of the Defense Policy Board, writing in his resignation letter to Rumsfeld: "I have seen controversies like this before and I know that this one will inevitably distract from the urgent challenge in which you are now engaged. I would not wish to cause even a moment's distraction from that challenge. As I cannot quickly or easily quell criticism of me based on errors of fact concerning my activities, the least I can do under these circumstances is to ask you to accept my resignation as chairman of the Defense Policy Board."[32]

Apparently undeterred, however, Perle continued to make eyebrow-raising business arrangements, particularly in the Middle East. In 2008, the *Wall Street Journal* reported that Perle was exploring investing in oil interests in Iraq and Kazakhstan, a curious decision given the salient claims by Iraq war opponents that the war was waged over access to Iraq's oil.[33] Perhaps more surprisingly, *Politico* reported in 2011 that Perle also twice traveled to Libya with the Monitor Group, a consulting firm that named Perle a senior adviser in 2006, as part of an effort to "burnish Libya's and [then-dictator Muammar] Qadhafi's image" in the United States.[34]

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Pertec Computer Corporation (**PCC**), formerly **Peripheral Equipment Corporation** (**PEC**), was a computer company based in Chatsworth, California which originally designed and manufactured peripherals such as floppy drives, tape drives, instrumentation control and other hardware for computers.[1]

Pertec's most successful products were hard disk drives and tape drives, which were sold as OEM to the top computer manufacturers, including IBM, Siemens and DEC. Pertec manufactured multiple models of seven and nine track half-inch tape drives with densities 800CPI (NRZI) and 1600CPI (PE) and phase-encoding formatters, which were used by a myriad of original equipment manufacturers as I/O devices for their product lines.

In the 1970s, Pertec entered the computer industry through several acquisitions of computer producers and started manufacturing and marketing mostly minicomputers for data processing and pre-processing. This split up Pertec into two companies. Pertec Peripherals Corporation (PPC), which remained based in Chatsworth, California, and Pertec Computer Corporation (PCC), which was located at 17112 Armstrong Avenue, in Irvine, California.

Pertec and MITS[edit]

Close up of the Altair 8800B. Currently on display at the Living Computer Museum in Seattle, Washington.

Pertec bought MITS, the manufacturers of the MITS Altair computer, for US$6.5 million in 1976. This purchase was motivated mainly by the ownership of the Microsoft BASIC sources and general license that Pertec erroneously assumed to be included in the deal. They also acquired iCOM, makers of micro peripherals, in the same year. They believed that these acquisitions would change them from selling computers mostly for hobbyists, to selling them for small businesses.[2]

Pertec changed their name, after the acquisition of MITS, from Pertec Corporation to Pertec Computer Corporation to "be more reflective of the company's present position and to clearly state our future direction".[3]

As a result of the acquisition, Pertec became involved in the manufacturing of microprocessor-based computers. Their first models were expanded versions of the Altair models, typically coupled to the existing disk-drive range.[4] Despite initially good sales, the Altair's 8080CPU was becoming increasingly outdated, so Pertec decided to retire the Altair as well as the MITS name itself.

In 1978, the company launched the first of its own designs, the PCC-2000.[5] This was based on two Intel 8085 series microprocessors: one of which was given over to I/O control. Being a high end machine, it was intended to be the core of what would now be described as a workgroup. The machine was

intended to support four "dumb" terminals connected via RS-232 serial lines, in addition to its internal console. The basic machine had twin 8-inch floppy drives, each capable of storing 1.2 megabytes and could link to two Pertec twin 14-inch disk drives, giving a total of 22.4 megabytes of storage, which was a very large amount for the time. The system was generally supplied with a multi-user operating system called MTX, which included a BASIC interpreter that was similar to Business Basic. The PCC-2000 was also available with MITS DOS or CP/M. In the UK, several systems were run under BOS. Unfortunately, the PCC-2000 was too expensive for the market and was never a great success.

Pertec Business Systems[edit]

Pertec/MITS 300[edit]

Pertec/MITS 300/55 Business System. Currently on display at the Living Computer Museum in Seattle, Washington.

The MITS 300 was the first product built and released by the Pertec after their acquisition of MITS in 1977. They produced the 300/25 and the 300/55.[6] Both were fully integrated systems that included both hardware and software in one package.[7] The 300/25 used Pertec floppy diskette drives and the 300/55 added Pertec DC-3000 14-inch hard disk.[8] The system consists of the MITS 2nd generation Altair 8800 (or Altair 8800b) computer with hard drive controller and MITS datakeeper storage system. The complete 300/55 business system sold for $15,950 and included the Altair 8800b with 64k of dynamic RAM, a CRT terminal and a desk.[9] The system was designed to handle a variety of business applications including word processing, inventory control and accounting. This system was prone to overheating and had a very short life span.[10]

The new system allowed for MITS peripherals including Altair Floppy Disc, Altair Line Printer, Teletypewriter, and the Altair CRT terminal.[11] The printer was a bidirectional Mits/Altair C-700 that could print 60 characters/second and 26 lines/minute.[12]

Pertec PCC-2100[edit]

Pertec's primary line of computer products was aimed at the key-to-disk minicomputer systems that were used as front-end data processors for the IBM 360/370 and similar systems. This line was opened in the first half of the 1970s by the Pertec PCC-2100 data entry system, which was essentially different from the PCC-2000 mentioned above. The system was able to serve up to 16 coaxial terminals, two D3000 disk drives and one T1640 tape drive.

Pertec XL-40[edit]

Pertec XL-40, introduced in 1977, was a more successful successor of Pertec PCC-2100.[13] The XL-40 machine used custom 16-bit processors built from the TI3000 or AMD2900 slices, up to 512 KB operating memory and dedicated master-capable DMA controllers for tape units, floppy and rigid disk units, printers, card reader and terminals.

The maximum configuration came in two different versions. One featured four T1600 / T1800 tape units (manufactured by Pertec), two floppy disk units (manufactured by IBM or Pertec) and four D1400 / D3400 rigid disk units (4.4, 8.8, 17.6 MB formatted capacity, manufactured by Pertec or Kennedy). The other one featured two large capacity disk units (up to 70 MB formatted capacity, manufactured by Kennedy or NEC), one line printer connected through long-line interface (DataProducts LP600, LP1200, B300, Printronix P300, P600), four station printers connected through coaxial cable (Centronics), one card reader (Pertec), four SDLC communication channels and 30 proprietary coax terminals (Model 4141 with 40x12 characters or Model 4143 with 80x25 characters).

The system was mainly used for key-to-disk operations to replace the previously popular IBM card punches and more advanced key-to-tape systems manufactured for example by Mohawk Data Sciences (MDS) or Singer. In addition to the basic key-to-disk function, the proprietary operating system, called XLOS, supported indexed file operations for on-line transaction processing even with data journaling. The system was programmed in two different ways. The data entry was either described in several tables that specified the format of the input record with optional automatic data validation procedures or the indexed file operations were programmed in a special COBOL dialect with IDX and SEQ file support.

System maintenance operations were performed in a protected supervisor mode; the system supported batched operations in the supervisor mode through the use of batch files that specified operator selections. The operating system interacted with the user through a series of prompts with automatic on-screen explanations and default selections, probably the ultimate user-friendliness achievable in text-only human-computer interaction. The XL-40 was also marketed by Triumph-Adler in Europe as TA1540, the beginning of a relationship that would eventually see a merger of the two companies.

Pertec 3200[edit]

Pertec's final in-house computer design was a complete departure, the MC68000-based Series 3200.[14] The primary operating system was an in-house developed multi-tasking, multi-user operating system, but it could also run Unix. As with the XL40, Triumph-Adler marketed the system in Europe under their own brand with the model name MSX 3200 (There were four models, eventually, in the Triumph-Adler series: 3200, 3220, 3230 and 3240). The key to disk application from the XL40 was re-implemented on the 3200. The other main application was a BASIC language driven database, similar to the ones used by MAI Basic Four or Pick operating system. These BASIC database business systems would be purchased by outside companies that bundled the PCC 3200 with their software to provide a complete small business package (accounts payable, accounts receivable, payroll, inventory, sales tracking, taxes, etc.) customized for specific businesses.

The 3200 was extremely advanced for the time, being intended to support up to 32 users, all using intelligent Z80-based terminals, each of which could optionally run CP/M attached to the 3200's high speed coax cable. Later an ISA bus to 3200 coax interface was made for the PC, and this allowed the usage of PC's as smart terminals for the 3200 or as networked systems running MS-DOS. It was the first Pertec product to support the emerging "Winchester" standard for miniature hard disks.

Eventual fate[edit]

Soon after the introduction of the 3200, Pertec Computer Corporation was purchased by Triumph-Adler. Later PCC was acquired by Scan-Optics in February 1987.[15] During the transition from systems based on custom-made CPUs to CPUs made by Intel and Motorola, prices for these systems dropped dramatically, but without an offsetting increase in demand, and eventually companies such as PCC slowly dwindled away to small remnants of their peak days in the mid-1980s, or were bought out by larger companies.

Pertec's PPC magnetic tape interface standard of the early 1970s rapidly became an industry-wide standard and is still in use by tape drive manufacturers today.[16] Similarly, its PERTEC disk interface was an industry standard for pre-Winchester disk drives of the 1970s.

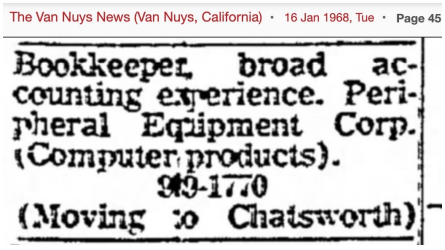
Evidence Timeline

1968 (Jan 16)

https://www.newspapers.com/image/24086165/?terms=%22Peripheral%2BEquipment%2Bcorp%22

1968-01-16-the-van-nuys-news-classifieds-pg-16.jpg

1968-01-16-the-van-nuys-news-classifieds-pg-16-clip-peripheral-eq-corp

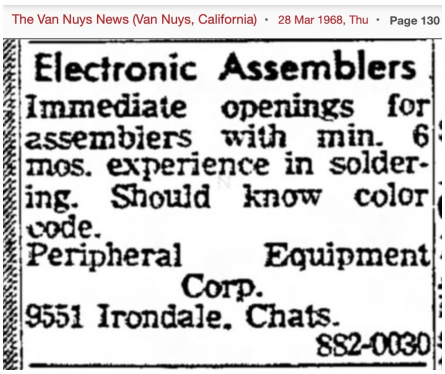

The Van Nuys News (Van Nuys, California) · 16 Jan 1968, Tue · Page 45

Bookkeeper, broad accounting experience. Peripheral Equipment Corp. (Computer products).
[illegible]9-1770
(Moving to Chatsworth)

1968 (Mar 28)

https://www.newspapers.com/image/24168053/?terms=%22Peripheral%2BEquipment%2Bcorp%22

1968-03-28-the-van-nuys-news-classifieds-pg-16-clip-peripheral-eq-corp


The Van Nuys News (Van Nuys, California) · 28 Mar 1968, Thu · Page 130

Electronic Assemblers
Immediate openings for assemblers with min. 6 mos. experience in soldering. Should know color code.
Peripheral Equipment Corp.
9551 Irondale, Chats.
882-0030

1968 (June 2)

https://www.newspapers.com/image/382563023/?terms=%22Peripheral%2BEquipment%2Bcorp%22

1968-06-02-the-los-angeles-times-sec-f-pg-10-clip-peripheral-eq-corp

1969 (Feb 02)

https://www.newspapers.com/image/30257538/?terms=%22Peripheral%2BEquipment%22

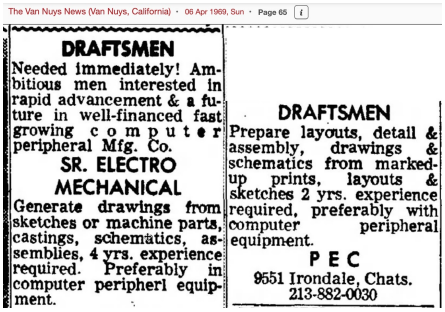
1969-02-02-the-van-nuys-news-classifieds-pg-16-clip-peripheral-eq-corp

1969 (April 6)

https://www.newspapers.com/image/7274415/?terms=%22Peripheral%2BEquipment%22

1969-04-06-the-van-nuys-news-classifieds-pg-19-clip-peripheral-eq-corp

(Similar - may 22, 1969 - https://www.newspapers.com/image/7333602/?terms=%22Peripheral%2BEquipment%22)



The Van Nuys News (Van Nuys, California) · 06 Apr 1969, Sun · Page 65

DRAFTSMEN

Needed immediately! Ambitious men interested in rapid advancement & a future in well-financed fast growing computer peripheral Mfg. Co.

SR. ELECTRO MECHANICAL

Generate drawings from sketches or machine parts, castings, schematics, assemblies, 4 yrs. experience required. Preferably in computer peripherl equipment.

DRAFTSMEN

Prepare layouts, detail & assembly, drawings & schematics from marked-up prints, layouts & sketches 2 yrs. experience required, preferably with computer peripheral equipment.

PEC

9551 Irondale, Chats.
213-882-0030

1969 (june 12)

https://www.newspapers.com/image/7376458/?terms=%22Peripheral%2BEquipment%22

1969-06-12-the-van-nuys-news-classifieds-pg-16-clip-peripheral-eq-corp

The Van Nuys News (Van Nuys, California) · 12 Jun 1969, Thu · Page 118

Accounting Clerk (Sr.)

Expanding computer peripheral manufacturing company needs sharp gal for complete responsibility of accounts payable. Match, code, voucher & balance accounts payable; post & balance general ledger, plus other related duties, 2 years applicable accounting experience. Skilled in operation of 10 key adding machine/calculator & type. NCR machine experience preferred.

PEC

Peripheral Equipment Corp.
9551 Irondale, Chats.
213-882-0030 an equal opportunity employer
Interviews 8 a.m. to 1 p.m.

1969 (june 22)

https://www.newspapers.com/image/7387870/?terms=%22Peripheral%2BEquipment%22

1969-06-22-the-van-nuys-news-classifieds-pg-20-clip-peripheral-eq-corp

Van Nuys (Calif.)—Sunday, June 22, 1969

47-Help Wanted MALE 47-Help Wanted MALE 47-Help Wanted MALE

1969-06-22-the-van-nuys-news-classifieds-pg-20-clip-peripheral-eq-corp

ELECTRONICS M/F

PEC

Expanding computer peripheral mfg. co. has immediate openings for qualified men and women. XInt benefits.

• MARKETING OPPORTUNITIES

APPLICATION ENGINEER

Opportunity for aggressive engineer desiring to get into marketing. Direct contact with customers, technical staff, to attain maximum utilization of equipment communicate customer requirements to our sales, engineering & development staff. Conduct application seminars for users personnel & sales reps. Moderate travel applicant must have BSEE & 2 yrs. in logic design & computer peripheral interface experience.

SALES ENGINEER

Establish & maintain contact with prospective & existing digital tape unit customers within an assigned sales territory in Orange County. Applicant should possess a BSEE, ME, math or physics + 4 years directly applicable experience.

INSIDE SALES ENGINEER

Provide administrative support to field engineers & serve as the focal point between field sales, customer request & the engineering & manufacturing staffs. Review customer orders, assist on quotations, contracts & delivery schedules. BS + 3 years computer peripheral experience.

FIELD SERVICE MANAGER

Establish the field service programs required for the installations, repair & maintenance of digital tape units thruout the domestic & international markets. BS + 2 years directly related experience or 2 years College + 4 years directly applicable experience.

• ENGINEERING OPPORTUNITIES

LAYOUT DRAFTSMAN

Prepare detail assembly & layout drawings & drawing list from other layouts, rough sketches & notes. Some PCB layout experience desired. Position will lead to PCB layout designer. Applicant should possess H.S. + 1 yr. technical training + 3 years directly related experience.

• MANUFACTURING OPPORTUNITIES

TEST TECHNICIAN

Perform functional & operational tests & trouble shoot computer peripheral equipment. Extensive working knowledge of digital electronics. H.S. + at least 2 years specialized technical training & 2 years directly applicable testing experience.

PERIPHERAL EQUIPMENT CORP.

9551 IRONDALE, CHATSWORTH 213-882-0030

An equal opportunity employer M/F

Interviews 8 a.m. - 1 p.m.

1969 (Oct 5)

https://www.newspapers.com/image/386325562/?terms=%22Peripheral%2BEquipment%22

1969-10-05-the-los-angeles-times-sec-j-pg-14

1969-10-05-the-los-angeles-times-sec-j-pg-14-clip-new-construction

The Los Angeles Times (Los Angeles, California) · 05 Oct 1969, Sun · Page 160

1969-10-05-the-los-angeles-times-sec-j-pg-14-clip-new-construction

NEW CONSTRUCTION

West Valley Park Project Under Way

Construction has begun on two large industrial buildings at the 40-acre West Valley Industrial Park in Chatsworth.

A 36,000-square-foot building is being built for the Peripheral Equipment Corp. The second, 37,000-square-foot building is available for lease.

Jim McDonald of S. D. Herman Co., Inc., agents for the development, said the industrial park is expected to be fully constructed in about three years. A total of 675,000 square feet of manufacturing and warehouse space will be built at a projected cost of $5.4 million. The total value of land and buildings will exceed $8 million, he said.

It is expected that 25 to 30 industrial firms will locate in the project, resulting in the creation of 3,300 new jobs for the area. The projected annual payroll is expected to exceed $35 million annually.

West Valley Industrial Park faces De Soto Ave. and Lassen St., extending east of De Soto to Lurline Ave.

★

Acme General Corp. of Monrovia has completed negotiations for a new principal office and expanded manufacturing and warehouse facilities to be located on a 17-acre site in San Dimas.

The O.K. Earl Corp. of Pasadena assisted in locating and acquiring the site and has been selected to design, engineer and construct the project.

The first phase of the project will be a building of 130,000 square feet costing $2 million. The facility will be located at Arrow Highway and Walnut Ave. north of the Puddingstone recreational area.

Acme General is engaged in the design, manufacture and sale of sliding and folding door hardware system and accessories for the mobile home, residential and commercial construction industries.

★

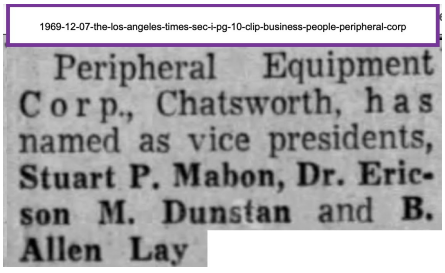
Charterhouse Investment Co. has joined with Jack Randall and Victor Palmieri to build for lease a 126,000-square-foot industrial building at Conejo Blvd. and Teller Road in Conejo.

The structure will be divisible for multitenant or single-tenant occupancy. The contractor is Randall Engineering Co. Total cost of the project is estimated at $1.5 million.

1969 (Dec 7)

https://www.newspapers.com/image/385876255/?terms=%22Peripheral%2BEquipment%22

1969-12-07-the-los-angeles-times-sec-i-pg-10-clip-business-people-peripheral-corp



1969-12-07-the-los-angeles-times-sec-i-pg-10-clip-business-people-peripheral-corp

Peripheral Equipment Corp., Chatsworth, has named as vice presidents, Stuart P. Mabon, Dr. Ericson M. Dunstan and B. Allen Lay

1970 (mar 22)

https://www.newspapers.com/image/166045525/?terms=%22Peripheral%2BEquipment%2BCorporation%22

1970-03-22-the-los-angeles-times-sec-i-pg-13-clip-pec

1970 (May 7)

https://www.newspapers.com/image/32648582/?terms=%22Peripheral%2BEquipment%2BCorporation%22

1970-05-07-the-van-nuys-news-classifieds-pg-9-clip-peripheral-eq-corp

1970 (Aug 30)

https://www.newspapers.com/image/386057343/?terms=%22Peripheral%2BEquipment%2Bcorp%22

1970-08-30-the-los-angeles-times-sec-i-pg-20-clip-peripheral-eq-corp

Peripheral Equipment Corp., maker of computer tape transports, has signed a long-term lease with West Valley Industrial Park on property at 9600 Irondale in Chatsworth, for considerations exceeding $620,000. Negotiations were handled by James McDonald of the S. D. Herman Co.

1970-08-30-the-los-angeles-times-sec-i-pg-20-clip-peripheral-eq-corp

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1971 (Feb 9)

https://www.newspapers.com/image/30280819/?terms=%22Peripheral%2BEquipment%2Bcorp%22

1971-02-09-the-van-nuys-news-pg-5

1971-02-09-the-van-nuys-news-pg-5-clip-peripheral-corp

1971-02-09-the-van-nuys-news-pg-5-clip-peripheral-corp

Peripheral Corp. Wins Contract

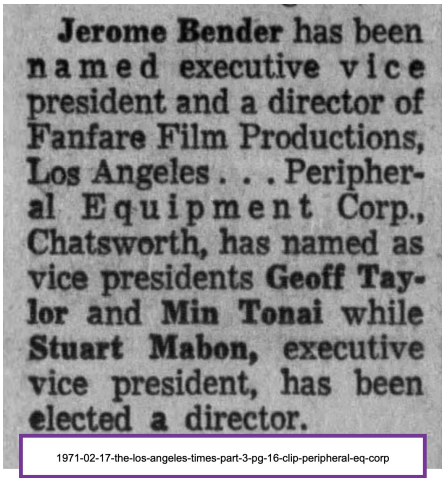
CHATSWORTH — Peripheral Equipment Corp., 9600 Irondale Ave., has received a $750,000 contract from Consolidated Computer.

The contract includes 250 PEC 6000 Series tape transports for CCL's new KEY-EDIT data preparation system.

1971 (feb 17)

https://www.newspapers.com/image/384775139/?terms=%22Peripheral%2BEquipment%2Bcorp%22

1971-02-17-the-los-angeles-times-part-3-pg-16-clip-peripheral-eq-corp



Jerome Bender has been named executive vice president and a director of Fanfare Film Productions, Los Angeles . . . Peripheral Equipment Corp., Chatsworth, has named as vice presidents **Geoff Taylor** and **Min Tonai** while **Stuart Mabon**, executive vice president, has been elected a director.

1971-02-17-the-los-angeles-times-part-3-pg-16-clip-peripheral-eq-corp

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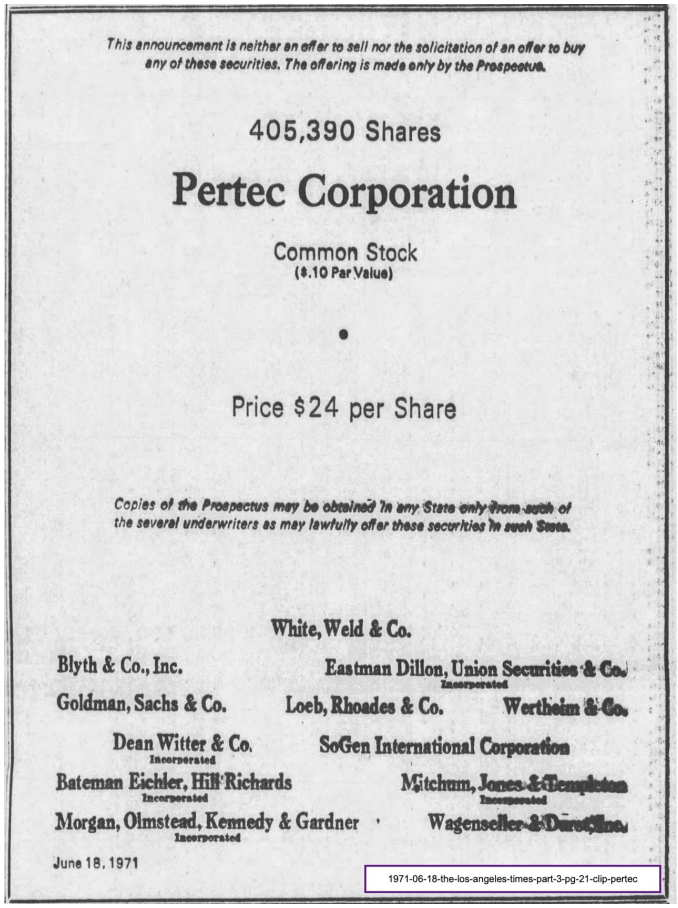
1971 (June 18) - stock offering

https://www.newspapers.com/image/384893193/?terms=pertec

1971-06-18-the-los-angeles-times-part-3-pg-21

1971-06-18-the-los-angeles-times-part-3-pg-21-clip-pertec



This announcement is neither an offer to sell nor the solicitation of an offer to buy any of these securities. The offering is made only by the Prospectus.

405,390 Shares

Pertec Corporation

Common Stock
($.10 Par Value)

•

Price $24 per Share

Copies of the Prospectus may be obtained in any State only from such of the several underwriters as may lawfully offer these securities in such State.

White, Weld & Co.

Blyth & Co., Inc. — Eastman Dillon, Union Securities & Co. Incorporated

Goldman, Sachs & Co. — Loeb, Rhoades & Co. — Wertheim & Co.

Dean Witter & Co. Incorporated — SoGen International Corporation

Bateman Eichler, Hill Richards Incorporated — Mitchum, Jones & Templeton Incorporated

Morgan, Olmstead, Kennedy & Gardner Incorporated — Wagenseller & Durst, Inc.

June 18, 1971

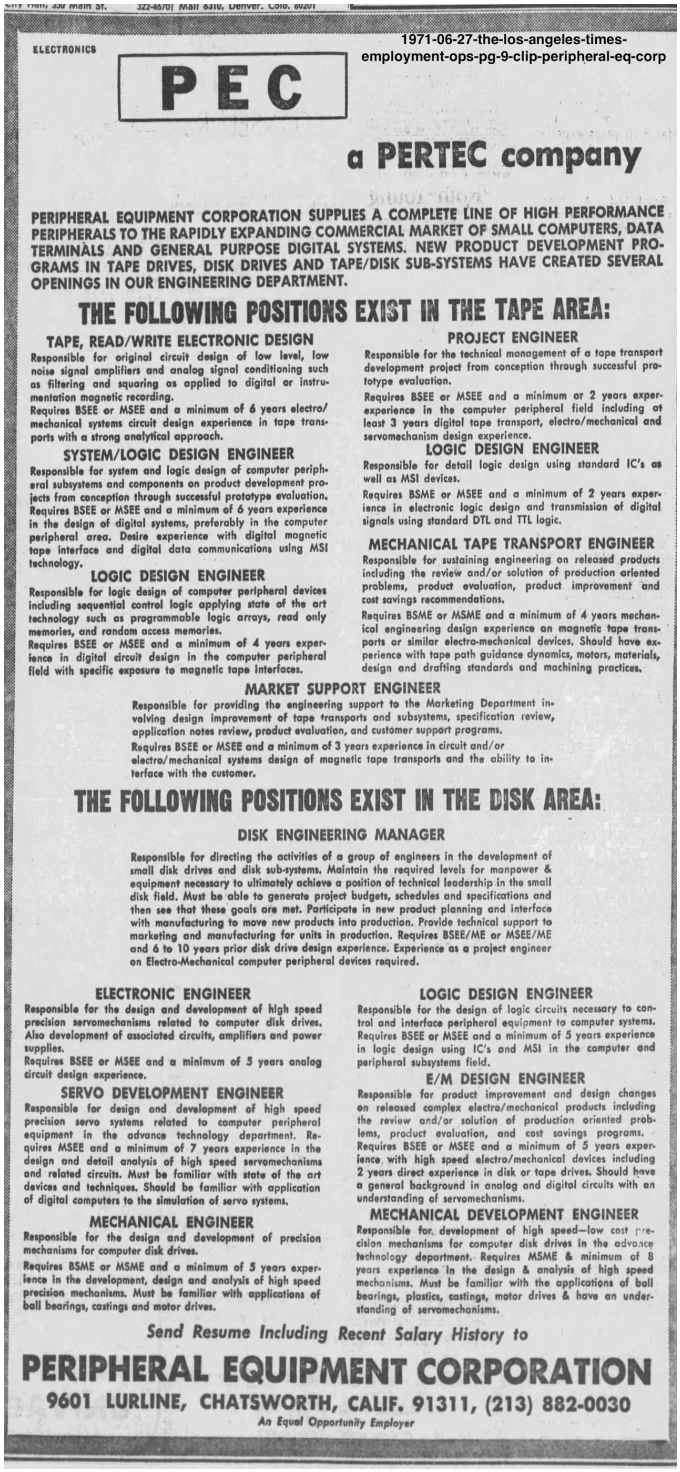
1971-06-18-the-los-angeles-times-part-3-pg-21-clip-pertec

1971 (june 27)

https://www.newspapers.com/image/385422090/?terms=%22Peripheral%2BEquipment%2BCorporation%22

1971-06-27-the-los-angeles-times-employment-ops-pg-9

1971-06-27-the-los-angeles-times-employment-ops-pg-9-clip-peripheral-eq-corp



ELECTRONICS

1971-06-27-the-los-angeles-times-employment-ops-pg-9-clip-peripheral-eq-corp

PEC

a PERTEC company

PERIPHERAL EQUIPMENT CORPORATION SUPPLIES A COMPLETE LINE OF HIGH PERFORMANCE PERIPHERALS TO THE RAPIDLY EXPANDING COMMERCIAL MARKET OF SMALL COMPUTERS, DATA TERMINALS AND GENERAL PURPOSE DIGITAL SYSTEMS. NEW PRODUCT DEVELOPMENT PROGRAMS IN TAPE DRIVES, DISK DRIVES AND TAPE/DISK SUB-SYSTEMS HAVE CREATED SEVERAL OPENINGS IN OUR ENGINEERING DEPARTMENT.

THE FOLLOWING POSITIONS EXIST IN THE TAPE AREA:

TAPE, READ/WRITE ELECTRONIC DESIGN

Responsible for original circuit design of low level, low noise signal amplifiers and analog signal conditioning such as filtering and squaring as applied to digital or instrumentation magnetic recording.

Requires BSEE or MSEE and a minimum of 6 years electro/mechanical systems circuit design experience in tape transports with a strong analytical approach.

SYSTEM/LOGIC DESIGN ENGINEER

Responsible for system and logic design of computer peripheral subsystems and components on product development projects from conception through successful prototype evaluation.

Requires BSEE or MSEE and a minimum of 6 years experience in the design of digital systems, preferably in the computer peripheral area. Desire experience with digital magnetic tape interface and digital data communications using MSI technology.

LOGIC DESIGN ENGINEER

Responsible for logic design of computer peripheral devices including sequential control logic applying state of the art technology such as programmable logic arrays, read only memories, and random access memories.

Requires BSEE or MSEE and a minimum of 4 years experience in digital circuit design in the computer peripheral field with specific exposure to magnetic tape interfaces.

PROJECT ENGINEER

Responsible for the technical management of a tape transport development project from conception through successful prototype evaluation.

Requires BSEE or MSEE and a minimum or 2 years experience in the computer peripheral field including at least 3 years digital tape transport, electro/mechanical and servomechanism design experience.

LOGIC DESIGN ENGINEER

Responsible for detail logic design using standard IC's as well as MSI devices.

Requires BSME or MSEE and a minimum of 2 years experience in electronic logic design and transmission of digital signals using standard DTL and TTL logic.

MECHANICAL TAPE TRANSPORT ENGINEER

Responsible for sustaining engineering on released products including the review and/or solution of production oriented problems, product evaluation, product improvement and cost savings recommendations.

Requires BSME or MSME and a minimum of 4 years mechanical engineering design experience on magnetic tape transports or similar electro-mechanical devices. Should have experience with tape path guidance dynamics, motors, materials, design and drafting standards and machining practices.

MARKET SUPPORT ENGINEER

Responsible for providing the engineering support to the Marketing Department involving design improvement of tape transports and subsystems, specification review, application notes review, product evaluation, and customer support programs.

Requires BSEE or MSEE and a minimum of 3 years experience in circuit and/or electro/mechanical systems design of magnetic tape transports and the ability to interface with the customer.

THE FOLLOWING POSITIONS EXIST IN THE DISK AREA:

DISK ENGINEERING MANAGER

Responsible for directing the activities of a group of engineers in the development of small disk drives and disk sub-systems. Maintain the required levels for manpower & equipment necessary to ultimately achieve a position of technical leadership in the small disk field. Must be able to generate project budgets, schedules and specifications and then see that these goals are met. Participate in new product planning and interface with manufacturing to move new products into production. Provide technical support to marketing and manufacturing for units in production. Requires BSEE/ME or MSEE/ME and 6 to 10 years prior disk drive design experience. Experience as a project engineer on Electro-Mechanical computer peripheral devices required.

ELECTRONIC ENGINEER

Responsible for the design and development of high speed precision servomechanisms related to computer disk drives. Also development of associated circuits, amplifiers and power supplies.

Requires BSEE or MSEE and a minimum of 5 years analog circuit design experience.

SERVO DEVELOPMENT ENGINEER

Responsible for design and development of high speed precision servo systems related to computer peripheral equipment in the advance technology department. Requires MSEE and a minimum of 7 years experience in the design and detail analysis of high speed servomechanisms and related circuits. Must be familiar with state of the art devices and techniques. Should be familiar with application of digital computers to the simulation of servo systems.

MECHANICAL ENGINEER

Responsible for the design and development of precision mechanisms for computer disk drives.

Requires BSME or MSME and a minimum of 5 years experience in the development, design and analysis of high speed precision mechanisms. Must be familiar with applications of ball bearings, castings and motor drives.

LOGIC DESIGN ENGINEER

Responsible for the design of logic circuits necessary to control and interface peripheral equipment to computer systems. Requires BSEE or MSEE and a minimum of 5 years experience in logic design using IC's and MSI in the computer and peripheral subsystems field.

E/M DESIGN ENGINEER

Responsible for product improvement and design changes on released complex electro/mechanical products including the review and/or solution of production oriented problems, product evaluation, and cost savings programs.

Requires BSEE or MSEE and a minimum of 5 years experience with high speed electro/mechanical devices including 2 years direct experience in disk or tape drives. Should have a general background in analog and digital circuits with an understanding of servomechanisms.

MECHANICAL DEVELOPMENT ENGINEER

Responsible for development of high speed—low cost precision mechanisms for computer disk drives in the advance technology department. Requires MSME & minimum of 8 years experience in the design & analysis of high speed mechanisms. Must be familiar with the applications of ball bearings, plastics, castings, motor drives & have an understanding of servomechanisms.

Send Resume Including Recent Salary History to

PERIPHERAL EQUIPMENT CORPORATION

9601 LURLINE, CHATSWORTH, CALIF. 91311, (213) 882-0030

An Equal Opportunity Employer

1971 (oct 22)

https://www.newspapers.com/image/333583292/?terms=%22Peripheral%2BEquipment%2BCorporation%22

1971-10-22-the-signal-santa-clarita-california-pg-5

1971-10-22-the-signal-santa-clarita-california-pg-5-clip-kurth-honored

Kurth Is Honored

To be honored at a banquet is Harold Kurth, 27310 Circle G Drive, Saugus, for having been named the Distinguished Alumnus for 1971 for the School of Science and Mathematics at California State Polytechnic College in San Luis Obispo.

Kurth is president of Peripheral Equipment Corporation of Chatsworth. The firm is a supplier to the computer science industry. Since obtaining a bachelor of science degree in physical science in 1959 at Cal Poly, Kurth has been involved in the development of data processing with a number of major concerns in the field.

In addition to being honored at a banquet hosted by Dr. Robert Kennedy, Cal Poly President, Kurth will be honored guest at the homecoming parade held next Saturday.

1971-10-22-the-signal-santa-clarita-california-pg-5-cip-kurth-honored

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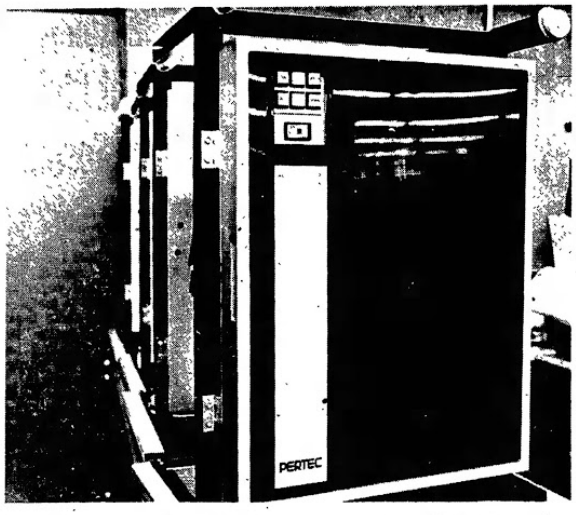
1973 (feb 03) - gets bigger (they were founded in 1967 ??)

https://www.newspapers.com/image/23653725/?terms=%22Peripheral%2BEquipment%2BCorporation%22

1973-02-06-the-van-nuys-news-pg-20-clip-pertec

1973-02-06-the-van-nuys-news-pg-20-clip-pertec



NEW synchronous digital magnetic tape transport by PERTEC, T8000, has proven success and is already back ordered, company spokesman said. Company has become major computer equipment supplier, he said.

PERTEC Established as Major Computer Supplier

PERTEC has established itself as a major supplier of computer related equipment throughout the world, a spokesman said.

The company's products are designed for use with low-cost computers, data entry and data output systems and do not compete for the IBM plug-to-plug compatible peripheral market.

PERTEC is the largest independent manufacturer of digital tape transports, the second largest manufacturer of key-to-tape data entry systems, and a significant factor in the computer output microfilm market, the spokesman said.

Company Expanded

Approximately one-half of PERTEC's products are being shipped to international markets.

PERTEC was formed in 1967 as Peripheral Equipment Corporation to design, manufacture and market low-cost computer peripheral equipment. Through development program, combined with a series of acquisitions, the company expanded its manufacturing and marketing capabilities.

The company had its first public stock offering in 1971, and at that time changed its name to PERTEC CORPORATION and reorganized into two divisions. Peripheral Equipment division, located in Chatsworth, and Business Systems division, located in Santa Ana.

During the last year, PERTEC has started production on two new major products: the T8000 series synchronous digital magnetic tape transport, and the D3000 series disk memory drive.

These products include the latest features in the industry and are already backlog ordered.

In two Chatsworth facilities approximately 450 employes design and manufacture of digital tape transports, disk drives, and impact printers.

At Santa Ana, approximately 250 employes design and manufacture data entry equipment and COM systems.

The company has a network of sales and service offices throughout the world.

PERTEC

PERTEC CORPORATION, headquartered in Los Angeles, with major manufacturing facilities in Chatsworth and Santa Ana, is the largest independent supplier of digital magnetic tape recorders, the second largest supplier of key-to-tape data entry systems, and an important factor in the disk drive and computer output microfilm markets.

Production was recently started on several new product lines. Other new products are expected to go into production by mid-year 1973.

PERTEC CORPORATION
10880 Wilshire Boulevard,
Los Angeles, California 90024

PERTEC Peripheral Equipment
9600 Irondale Avenue,
Chatsworth, California 91311

PERTEC Business Systems
17112 Armstrong Avenue,
Santa Ana, California 92705

1973 (may 1)

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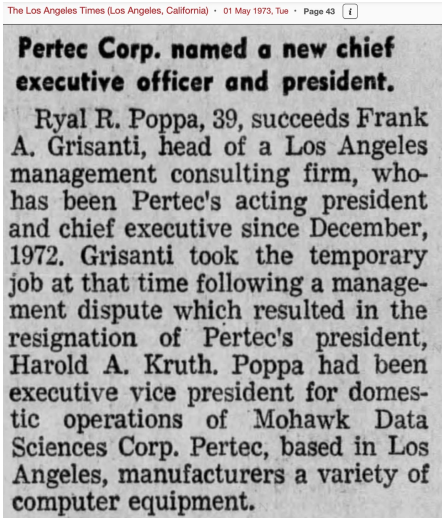
1973-05-01-the-los-angeles-times-part-3-pg-7-clip-pertec



The Los Angeles Times (Los Angeles, California) · 01 May 1973, Tue · Page 43

Pertec Corp. named a new chief executive officer and president.

Ryal R. Poppa, 39, succeeds Frank A. Grisanti, head of a Los Angeles management consulting firm, who-has been Pertec's acting president and chief executive since December, 1972. Grisanti took the temporary job at that time following a management dispute which resulted in the resignation of Pertec's president, Harold A. Kruth. Poppa had been executive vice president for domestic operations of Mohawk Data Sciences Corp. Pertec, based in Los Angeles, manufacturers a variety of computer equipment.

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grisanti

https://www.nytimes.com/1987/12/31/obituaries/frank-a-grisanti-management-consultant-67.html

ryal poppa

https://greensboro.com/ceo-guides-company-from-rags-to-riches/article_854ea741-cc32-547d-9c04-19efe1723b05.html

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http://bitsavers.org/magazines/Datamation/197808.pdf

http://bitsavers.org/magazines/Datamation/197303.pdf

THE AGE OF ALTAIR (DAVID BUNNELL & EDDIE CURRIE) - The Grand and Glorious Crusade - Part 4

NOTE : It was Poppa of Pertec that decided to buy MITS

"The personal computer traces its roots back to the Altair computer, first manufactured in January 1975 by MITS, Inc., a small company that came from the desert sands of Albuquerque, New Mexico. For the next 2½ years, MITS, Inc. so dominated this new-found market that the company literally defined personal computing. David Bunnell and Eddie Currie were both uniquely involved in the beginning of personal computing as MITS vice presidents. Together in this exclusive PC series they tell the story of The Age of Altair."

1982-08-pc-magazine-vol-1-no-4-mits-pertec-article-219.jpg

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Aug-Oct 1982

970 pages

Vol. 1, No. 4

1982-08-pc-magazine-vol-1-no-4-mits-pertec-article-cvr.jpg / https://drive.google.com/file/d/1AUbyuYAmkc7LsRSsZGQMJzL0q1O9c0rA/view?usp=sharing

While taking on all the characteristics of a classic crusade, the early days of Altair were nerve-racking, hectic, and frustrating. MITS was bringing computers to the masses, and the demand for microcomputers seemed unquenchable. The staff worked long hours, 7 days a week, of ten for no more than minimum wage. It wasn't at all unusual to find 20 or 30 people at MITS any hiur of the day or night. While conducting atour of MITS, President Ed Roberts found himself stepping over the sleeping body of a staff member in the software department. The body was that of Bill Gates, co-founder of Microsoft.

What's It Called?

When the first Altair was completed. it was packed up and shipped off to New York to Popular Electronics Technical editor Les Solomon. Les was to use it in preparing a feature article for the January 1975 issue. The first Altair was lost in transit, and a second machine had to be frantically configured and rapidly dispatched northeast. A contest at MITS had failed to produce a suitable name for this machine, Les Solomon was given the task of arriving at an appropriate appelation. While discu1ssing possibilities with family over dinner. his daughter suggested "Altair." It [--??-] that the good ship Enterprise, beloved among Trekies, was winging its way to the star Altair on television that night.

After considerable confusion, Altair became more well known than MITS. Many people assumed that the Altair was produced by an Albuquerque company named Altair. Almost no one knew what MITS stood for. Rumors indicated it meant "man in the street," which had some credibility because MITS had made it possible for many to own their own computers. MITS was actually a mnemonic for Micro Instrumentation and Telemetry Systems. It was the remaining artifact of an earlier Roberts' venture to produce telemetry equipment for model rockets.

The Age of Altair ushered in an information hunger explosion. Microcomputer clubs formed rapidly. It was not unusual to encounter groups without computers of any kind. They met regularly to discuss magazine articles, advertisements, and friends of friends who had ordered their own micros. The Southern California Computer Society (SCCS) grew so fast it once predicted that within 2 years every man, woman, and child on the face of the earth would be an SCCS member.

Books, magazines, and pamphlets sold out the instant they appeared at computer stores. One of the most interesting early publications was Computer Liberation by Ted Nelson. A collection of letters, articles, and drawings, it is a fascinating compendium of the state of computerdom in the mid-1970s. MITS produced its own publication, Computer ores, with David Bunnell as editor. The first issue appeared in April 1975 and was soon to develop a large following. Ultimately it came to an abrupt and ignoble end.

The MITS-Mobile, a van equipped with a complete Altair system was pressed into service as a traveling road show. It was an instant success, beginning with a trip to Texas in late April and then the rest of the United States. Response was overwhelming. People would often foil ow the van from one site to another to attend the computer seminar given by the "MITS-Boys," in spite of the fact that seminars were often several hundred miles apart. Although seminar admission was $9.75, the program was such a success devotees paid the expenses. Taken to the National Computer Conference (NCC) in May 1975, the van was presented as the .. ultimate recreational vehicle."

Altairs For Sale

The first retail computer store, an Altair store, was an offshoot of Arrowhead Computer, started by Dick Heiser in West Los Angeles. This new venture, dubbed .. The Computer Store," offered the Altair for a kit price of $439 while Intel offered the 8080 microcomputer chip for $350 in single quantities.

Ed Roberts, creator of the Altair, felt computer stores were an "interesting experiment," but he was uncertain about their future. Some people thought it was sacrilegious to sell technology as sophisticated as computers in a storefront environment. Heiser's initial order was for $5,000 worth of Altair equipment. Everyone at MITS was astounded when, a few days later, a second order appeared from Arrowhead. Paul Terrel soon started a second store in Northern California, which beecame the first Byte Shop.

Bruce Seals arrived in New Mexico to sign up as an Altair dealer in Knoxville, Tennessee. Later he started Seals Electronics, which provided reliable memory for the early Altair systems.

Richard Stafford and Jim Dunion appeared at the MITS-Mobile seminar in Atlanta. Their arrival was to cause the local MITS representative anxiety. He quickly pointed out that trouble would undoubtedly ensue at the seminar since Stafford and Dunion had purchased two 4K dynamic memory boards; although they were assembled by different technicians, either could be made to work. During intermission they were invited to make their case. Curiously enough, this initial encounter ended on a friendly but firm note that either they receive satisfaction or they would make trouble.

Shortly thereafter, Stafford, Dunion, and others formed The Computer Systems Center, an Altair store in Atlanta, Georgia. They were joined by Ben Dyer, who was to become the store manager. This eventually led to the formation of Peachtree Software and Retail Sciences. Today The Computer Systems Center has been shorted to TCS and is a software company arriving in Houston, Texas.

In the midst of this flurry, Motorola announced the 6800 microprocessor, its entry the microcomputer race. This chip was believed by many to be a substantial threat the Intel 8080. As a hedge against this theat MITS engaged in a crash program produce an Altair with a 6800 chip, calied the Altair 680. BASIC was soon under development for this machine by Ric Weiland of Microsoft. It was sold to MITS for $32,000, in contrast to arrangements MITS had made with Microsoft for 8080 BASIC under an exclusive license agreement. The subtle distinctions in an exclusive license can prove crucial; BASIC is woven into many aspects of our story.

The 680 was to prove an inappropriate use of MITS' resources, and although perhaps 1,000 machines were shipped to enthusiastic hobbyists, today they are virtually nowhere to be found.

We're Number One

An early discussion at MITS evidenced concern that the world be told MITS was number one in the microcomputer field. One faction held that the general public needn't be told what they already knew, while the opposing view contended that an open statement to the market would have a number of beneficial effects. The advertising department soon provided what was to become known at MITS as the "number-one ad."

Every periodical on microcomputers would invariably make references to MITS/ Altair. The number-one ad soon appeared in many publications. Phone calls, letters, and visitors flooded into an otherwise dry Albuquerque.

Opportunists Hang On

Most entrepreneurs have certain common characteristics: They are extremely interested in money, have short attention spans, are sometimes paranoid, are poor at details, are unable to carry projects through to logical conclusions, change their minds frequently, bore easily, and will seldom talk of anything other than business. They are fundamentally opportunistic and will jump at any and all deals and roads to fame and financial success. Paradoxically, they are often unwilling or unable to turn over their business to outsiders, or anyone else for that matter.

The many opportunities that were brought to Albuquerque and to MITS' front door were viewed with a jaundiced, though not totally indifferent, eye. The number-one ad and the vast exposure of the MITS/ Altair name in the trade press stimulated many offers of acquisition. One such offer was presented by representatives of Pertec Computer Corporation. It appeared at the outset to be the most serious and substantial offer to date. This occurred against an increasing proliferation of competitive machines and a nagging fear that Texas Instruments (TI) would soon enter and immediately dominate the microcomputer market.

TI had approached MITS to determine whether an Altair-like product was of interest to MITS and its marketplace. The technology of the 9900 plus a lack of software was considered too severe to warrant such an effort. Nonetheless. when MITS had 6 million in sales and TI dropped 12 million into the calculator market in an apparent effort to dominate the market, it was very intimidating.

market in an apparent effort to dominate the market.It was very intimidating.

The Pertec overture was viewed with cautious optimism. The first, somewhat mysterious visit was fallowed by additional visits and a formal off er. Apparently the president of Pertec, Ryal Poppa, had become intrigued with the microcomputer market and realized the fact that Pertec produced the floppy and hard disks used in the MITS systems would provide a captive customer for Pertec products and afford entry into the microcomputer market for small-business systems.

In an enthusiastic determination to enter this new market, Poppa made a recommendation to the board that Pertec acquire MITS. The board responded with a number of pointed questions, which in turn resulted in a number of staff members being sent to Albuquerque to verify that the president had used sound business judgment The staff stayed long enough to gather the information needed to support Poppa's position and, without further investigation, departed.

Pertec was then negotiating the purchase of ICOM, a California-based company that was also a substantial customer for Pertec floppy disk drives. ICOM and Shugart were negotiating to meet future drive requirements with Shugart products. The ICOM acquisition by Pertec would provide a second captive customer for Pertec floppy drives.

Although unwittingly, ICOM was also to play a role in the eventual demise of MITS.

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more -

page 16 - intrview with Gates

page 88 - part 2

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Feb - Mar

Fev : pg a88 - part 1

Mar - pge 188 (part 2)

Dr. Clarence James Peters (born 1940)

Wikipedia C. J. Peters

born September 23, 1940, Midland, Texas [HK006T][GDrive]

Associations

- **Dr. Duane J. Gubler (born 1939)** (Nipah virus outbreak, 1999 - See [HN01LD][GDrive])
-
-

Saved Wikipedia (March 3, 2021) - C. J. Peters

Source : [HK006T][GDrive]

Clarence James Peters, Jr [...] is a physician, field virologist and former U.S. Army colonel. He is noted for his efforts in trying to stem epidemics of exotic infectious diseases such as the Ebola virus, Hanta virus and Rift Valley fever (RVF). He is an eminent authority on the virology, pathogenesis and epidemiology of hemorrhagic fever viruses.

Biography

Peters grew up in Odessa, Texas. At Rice University, he initially majored in chemical engineering, but switched to chemistry his junior year after taking courses with Thomas Brackett. He obtained his medical degree at Johns Hopkins School of Medicine and served his residency in internal medicine at the University of Texas Southwestern Medical School. He developed an interest in tropical medicine and virology while serving five years as a research associate at the National Institute of Allergy and Infectious Disease intramural laboratory in Panama. Upon returning Stateside, he completed his fellowship in immunology at the Scripps Clinic and Research Foundation.

He entered active duty in the U.S. Army and from 1977 through 1992 held several positions at the U.S. Army Medical Research Institute of Infectious Diseases (USAMRIID), Fort Detrick, Maryland, where he worked on biodefense and hazardous virus research. His positions there ranged from research scientist and Medical Division chief to Disease Assessment Division chief. **He led the team that controlled a 1989 Ebola introduction into a monkey facility in Reston, Virginia** (a story recounted in [**Richard McCann Preston (born 1954)**]'s best-selling book [**"The Hot Zone" (book, 1994)**]).

From 1992 to 2000 Peters was head of the Special Pathogens Branch at the Centers for Disease Control where he investigated hazardous emerging viruses. These included the agent causing the new disease hantavirus pulmonary syndrome in the southwestern US, which he discovered and named. He also led efforts in Africa (Ebola, Marburg, Lassa, Rift Valley fever), Asia (Nipah virus in Malaysia), and South America (Bolivian hemorrhagic fever, hantavirus pulmonary syndrome, Venezuelan equine encephalitis) to control outbreaks. [Note: Also see **1967 Marburg virus outbreak in West Germany**, regarding the leak where the virus was first seen/identified.]

Since 2000, Peters has been the John Sealy Distinguished University Professor of Tropical and Emerging Virology at the University of Texas Medical Branch (UTMB) at Galveston, where he has an active research program in SARS, Rift Valley fever, and other human pathogens. He is a professor in the department of pathology and in the department of microbiology and immunology. He is a member of the World Health Organization Collaborating Center for Tropical Diseases. He is also director for biodefense at the UTMB Center for Biodefense and Emerging Infectious Diseases.

Peters has published more than 300 papers on research and control of viral diseases including more than 70 publications on Rift Valley fever virus and more than 60 publications on arenaviruses. He has served on numerous committees dealing with disease problems worldwide and has been called back as a consultant to CDC and USAMRIID on influenza, vaccines, and other issues after his departure. He consulted with Taiwan on SARS control.

Current work

Most of Peters' current work in the laboratory deals with Bunyaviridae (including the phylogeny of phleboviruses such as Rift Valley fever (RVF), Arenaviridae (Lassa fever, South American hemorrhagic fevers) and SARS CoV. He runs an active program of human and animal vaccine development for RVF using reverse genetics. He and his colleague Ilya Frolov are developing alphavirus replicon vectored RVF vaccines for use in livestock and ultimately in humans. His arenavirus research concentrates on the effects of infection on cellular function, particularly those molecular interactions related to vascular permeability. SARS-CoV work includes antiviral drug development, model characterization, and interferon interactions. The Galveston National Laboratory, a Biosafety Level 4 laboratory, opened in 2008 at the University of Texas Medical Branch to allow scientists there to work safely with any pathologic agent. Peters expects to transition some projects to higher hazard viral hemorrhagic fevers and to develop projects on other viruses such as tick-borne flaviviruses, highly virulent avian influenza strains, and Nipah virus, a new, highly virulent paramyxovirus.

References

- Peters, C. J. and Mark Olshaker (1998), Virus Hunter: Thirty Years of Battling Hot Viruses Around the World, Random House.

Further reading

- Peters, C.J. (2014). "Forty Years with Emerging Viruses". Annual Review of Virology. 1 (1): 1–23. doi:10.1146/annurev-virology-031413-085401. PMID 26958712.

1999 (May 04) - CJ Peters, Gubler assigned to what is called "Nipah" (Wasnt Peter Daszak working on this too ?)

See : Dr. Clarence James Peters (born 1940) / Dr. Peter Daszak (born 1965)

Full newspaper page : [HN01LC][GDrive]

Disease experts are stumped by killer virus from Malaysia

By Patricia J. Mays
ASSOCIATED PRESS

ATLANTA — In a quarantined laboratory, U.S. scientists outfitted in biohazard spacesuits are probing a killer that has struck on the other side of the world.

The mysterious microscopic enemy has killed more than 100 people in Malaysia in seven months, and scientists are baffled about its origin and mode of transmission.

"Every couple of years something like this comes along," says Dr. C.J. Peters, head of the special pathogens branch at the Centers for Disease Control and Prevention. "We don't know how this stuff spreads, how far it's going to go. We really don't know what's at the end of the tunnel."

The rare form of viral encephalitis, which spread from pigs to humans, first surfaced last year. It has since sickened more than 250 Malaysians, mostly pig farmers. Many of their herds fell ill, and some pigs died. A similar illness afflicted 11 slaughterhouse workers in Singapore, one fatally, who killed pigs imported from Malaysia.

Soldiers have killed almost 1 million pigs and some stray dogs to try to curb the virus. On Monday, pet owners in Malaysia's high-risk areas were told to get their animals checked immediately after new tests confirmed house pets could transmit the disease to humans.

Medical authorities named the new virus Nipah, for the village where it first was isolated.

As remote as the Nipah virus might seem, controlling and understanding it are a concern of epidemiologists around the globe because of fear it could spread quickly.

"In today's world, it's not unrealistic to think of the possibility that someone could get on a plane and land in San Francisco with it," says Dr. Duane Gubler, director of the CDC's Division of Vector-Borne Infectious Diseases at Fort Collins, Colo.

"In today's world, it's not unrealistic to think of the possibility that someone could get on a plane and land in San Francisco with it."

Dr. Duane Gubler
infectious disease specialist

For months, Malaysian health officials were certain the killer was Japanese encephalitis, a mosquito-borne virus common to the area. The two pathogens cause similar symptoms — high fever, aches, eventual coma and, often, death.

But most people in the region had been vaccinated for Japanese encephalitis as children. Also, it doesn't usually kill adult pigs.

The government declared a state of emergency in three Malaysian states and launched fogging and vaccination campaigns, to no avail. The Nipah virus raged on. And despite no proof that Nipah can infect people who eat or handle pork, the epidemic has wreaked havoc on Malaysia's nearly $400 million pork industry.

On March 7, baffled Malaysian researchers sought help from their counterparts at Gubler's CDC office in Fort Collins.

Six days later, a Malaysian researcher arrived in Fort Collins with slides of cells infected with the virus. The researchers worked through the weekend, screening the sample against dozens of known viruses. All were negative.

When they tried to isolate Nipah, it formed giant cells with multiple nuclei — epidemiological patterns not at all like Japanese encephalitis. By Sunday, a red flag had gone up: The Nipah virus fit in none of the three virus families studied at Fort Collins and was actually a previously unknown paramyxovirus. This family includes measles and mumps, but one of the last new paramyxoviruses discovered was the especially virulent Hendra virus.

"That was when we . . . sent it to Atlanta," Gubler said.

The samples were taken to a special CDC lab that houses deadly microbes that have no vaccine or cure, such as the Ebola virus that killed 245 Zaireans in 1995.

The CDC's medical detectives quickly identified the culprit as related to but far deadlier than the very rare Hendra virus. Hendra was first detected in 1994 in Australia, where it killed 15 racehorses and two trainers.

But they know little else.

[HN01LD][GDrive]

BITCHUTE @Housatonic YOUTUBE @HousatonicLive ODYSEE @Housatonic BRIGHTEON @Housatonic

Philipp Brothers Incorporated

Wikipedia Philbro

"Phillip Brothers" vs "Philipps Brothers"

Any spelling such as "Phillips Brothers" is a typo.

Example from AP news - they spell it once incorrectly - https://www.apnews.com/db2a8ae69631fce3e44d8dc7d905ddb6

Example #2 - One typo as "phillips", but the rest are "phillip" - https://wherethegoldis.blogspot.com/2012/12/sophists-and-other-scoundrels-part-two.html

History

History (See [aa1][GDrive])

Timeline

- *1901* *Founded by Julius Philipp in Hamburg, Germany*
- *1909* *Julius and Oscar Philipp open the London office at 118 Leadenhall Street*
- *1915* *Philipp Brothers open NY office at 29 Broadway*
- *1942* *Retained by the US government to assist in the acquisition and development of strategic mineral reserve*
- *1960* *Phillip Brothers merged with Minerals and Chemicals Corporation of America (MCCA) and becomes publicly traded*
- *1967* *Philipp Brothers/MCCA merged with Engelhard Minerals and Chemicals (EMC)*
- *1969* *Anglo American purchases a controlling interest in EMC*
- *1981* *Phibro acquired Salomon Brothers for $550MM*
- *1988* *Phibro becomes the largest independent oil refiner in the US*
- *1998* *Through the Citigroup / Travellers Merger, Phibro became the commodity trading subsidiary of Citigroup*
- *2009* *Phibro is sold to Occidential Petroleum*
- *2016* *Phibro is purchased by Energy Arbitrage Partners, a firm founded and controlled by Simon Greenshields*

From its humble origins in Hamburg Germany through its first incorporation and opening of Philpp Brothers London in 1909, Phibro (as it became known) expanded rapidly. The business established itself as the prototypical London commodities trading house and developed a flexible and entrepreneurial business model that evolved to capitalize on the opportunities that existed at the time.

The firm was an early pioneer in the development of liquidity and price transparency of the global commodities markets. Recognized as such, in 1942, the US government retained Phibro to assist it in the acquisition and development of a strategic metals reserve. In the early years the majority of the Firm's activity involved the trading marketing and processing of metal ores and concentrates.

Phibro also expanded aggressively into other products including oil, refined products, chemicals and fertilizer. The Firm subsequently developed a related asset strategy designed to strengthen its increasingly important role as the world's largest Commodities trading company. In 1988 Phibro became the largest independent oil refiner in the US.

In 1981, Phibro aquired Salmon Brothers and in 1998 the Firm became a subsidiary of Citigroup.

In January 2016 Phibro was acquired by Energy Arbitrage Partners (EAP). Today, Phibro is an independent firm headed by Simon Greenshields (CEO).

1960

1960-07-23-the-titusville-herald-pg-11 / https://drive.google.com/open?id=16emUhlOP7wGiVx8GsszrmB48X_Mx7NJ4

MENLO PARK, N. J. (AP) — Stockholders of Minerals & Chemicals Corp. of America have ratified a merger with Philipps Bros. Inc. and Philipp Bros. Ore Corp. of New York City. Stockholders of the Philipp concerns approved the proposal previously.

The new concern will be called Minerals & Chemicals Philipp Corp. and Charles A. Specht will be president. Headquarters will remain in Menlo Park. Philipp Bros. will be a division of the new company. Financial details of the transaction were not disclosed.

1960-07-23-the-titusville-herald-pg-11-clip1 / https://drive.google.com/open?id=16ghu9xG1O2aqS56eZktLC6fE9ntYDVNF

1967

1967-06-11-the-independent-press-telegram-long-beach-ca-pg63.jpg / https://drive.google.com/open?id=171ud0f3GMxQfmiY5hVc4c1I2RDDPge9q

NEW YORK (UPI) — Englehard Industries, Inc., and Minerals & Chemicals Philipp Corp. have agreed in principle to merge Philipp into Englehard. It is proposed to split Englehard stock two-for-one, then to exchange for each Philipp share 1.094 share of Englehard common plus 0.177 share of a New Englehard $4.25 annual dividend preferred convertible into New Englehard common at three for one.

1967-06-11-the-independent-press-telegram-long-beach-ca-pg63-clip1.jpg / https://drive.google.com/open?id=17ErjfIzTUmpFfWQ8zgaZc1n1aW2ald5P

Article : Rise and Fall of a Commodities Powerhouse

See https://www.ft.com/content/92f86602-a7f1-11e4-be63-00144feab7de

Rise and fall of a commodities powerhouse

Phibro, the former trading house that once owned a Wall Street bank, to close after 114 years

Phibro is to be dismantled, ending a 114-year-long run for a former giant of the commodities markets that started in a Hamburg living room and became rich enough to take over a Wall Street investment bank.

The trading house's business will be wound down in the first quarter, owner Occidental Petroleum said last week. Occidental had bought the former Philipp Brothers in 2009 from Citigroup.

The decision to close comes as crude and other commodities scrape multiyear lows. Andrew Hall, Phibro chief, is an inveterate oil bull, renowned for making huge gains on bold bets that prices will rise. "He never goes short," Stephen Chazen, Occidental chief executive, once said.

Under Citi, Phibro was a profit engine that never suffered a losing year. But under Occidental it became a victim of listless oil markets followed by what Chris Stavros, chief financial officer, called "sharp commodity price movements" as crude plummeted to below $50 per barrel.

At its pinnacle in 1980, Phibro had $23.7bn in revenue, which ranked it the 15th largest US company at the time and was more than Occidental's net sales last year. In 1981, it acquired Salomon Brothers, the bond trading powerhouse.

The Salomon deal generated unaccustomed headlines for the powerful company. Phibro used a combination of discretion and aggressiveness to move "beach sands from Australia to Rotterdam, copper concentrates from the Philippines to Japan, cocoa from Brazil to Germany" and some 150 other commodities from tungsten to wax on any given day, according to a company history by Helmut Waszkis.

Phibro was a template for companies such as Glencore and Vitol that today dominate the commodities trade. It was an early adopter of oil swap derivatives, said Paul Newman of the broker ICAP. It pioneered lending to producers in exchange for the right to market their output.

"They were an extremely well organised and powerful enterprise," said David Messer, chief executive of Freepoint Commodities, a US-based trading house.

Julius Philipp started as a metal merchant in 1901 from his family's Hamburg flat. In 1909, his brother Oscar moved to London where he founded the first company named "Philipp Brothers" at 118 Leadenhall Street. In 1914, one of Oscar's apprentices opened an office in New York. Julius Philipp remained in Hamburg until the rise of the Nazis forced his family to move to Amsterdam. He died in the Bergen-Belsen concentration camp in 1944, according to the Waszkis company history.

> *He never goes short*
>
> *Stephen Chazen, Occidental chief executive, said of oil bull Andrew Hall*

The New York office eventually became Philipp Brothers headquarters. For decades it was run by German-Jewish immigrants who cultivated talent by hiring lehrlings, or apprentices. "A trader lives by his wits," Ludwig Jesselson, Phibro's longtime chief, used to say.

The inflationary 1970s were go-go years for Phibro. With access to oil from places such as Iran and Nigeria and relationships with refiners, the company increased profits more than tenfold. It helped create the petroleum spot market, where tankers change hands at a moment's notice. "They knew twice as much as you did about anything. They knew about where any drop of oil was at any point in time," said Michael Cosgrove, who brokered oil deals for the company.

Marc Rich, former senior figure at Phibro, left the company in 1974 and set up the foundation of Glencore

In 1979-80, when crude prices doubled following the fall of the Shah of Iran, Phibro made $1bn trading oil, said Al Kaplan, former president of Phibro's energy unit.

"We basically controlled the oil world," said Mr Kaplan. "It was quite amazing. We had very good people. There was no price dissemination, so we used to tell people what the price was."

Phibro became a proving ground for senior figures in the commodities industry including the late Marc Rich, the trader and pardoned fugitive who made a stormy exit in 1974. The company Rich founded became Phibro's bitterest rival and the foundation of Glencore.

Mr Hall joined Phibro from BP in 1982. In his bullishness he clashed with Mr Kaplan. One afternoon in the 1980s, Phibro sold millions of barrels of Brent crude in a large flurry of transactions, recalled Mr Cosgrove, the former broker. In the same phone call in which Phibro had sold the barrels, its trader suddenly said he now wanted to buy multiple cargoes instead.

Andrew Hall, Phibro chief

"Al just sold six cargoes short and went home and Andy walked in and decided to flip the book long," the trader told a stunned Mr Cosgrove.

Commodities slumped in mid-1980s and so did Phibro's profits. Soon Salomon executives grabbed control of the combined company and stripped Phibro from the parent's name.

"The acquirer never knew what hit it. The acquiree dominated almost from day one. A total mismatch," Michael Bloomberg, the former Salomon partner who became a financial technology mogul and New York mayor, wrote in a memoir.

Andrew Hall bought Derneburg Schloss, near Astenbeck in Germany

After Mr Hall took charge of Phibro's energy unit in 1991, the company shifted away from moving physical cargoes and into trading paper derivatives. With his wealth he bought troves of contemporary art and a castle in Germany located near a settlement called Astenbeck, after which he named his $4bn hedge fund. Controversy over a potential $100m pay award to Mr Hall after Citi had been bailed out by taxpayers prompted Phibro's sale to Occidental.

Mr Hall carries on with the hedge fund and remains a stubborn bull. In a recent letter to investors he acknowledged oil's dive but predicted prices in the $70-$80 per barrel range over the longer term.

"There have been two constants of the oil market," he wrote. "The first is that demand always grows. The second is that supply from existing resources always falls because of depletion."

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I had graduated from college in June 1949, and I started at Philipp Brothers on July 5.

My first "office" consisted of a semi-automatic calculator on a small two foot by one foot adding machine stand, located in the office of the traffic manager, Mr. Fischmann. Consequently, I was always under observation and Mr. Fischmann had a habit, once in a while, when he was passing me, of throwing a question at me about the particular transaction that I was working on. He wanted to find out whether I knew and understood what I was doing or whether I was just doing it mechanically. It was a good way of keeping me on my toes, but I was exhausted by the end of the day from the strain. This lasted for some months, until, I guess, he was convinced that I would make it. My work during these months consisted strictly of calculations (preparing invoices and accountings), adding, subtracting, multiplying, dividing, percentages, decimal places etc. No higher math, but pages and pages and hours of work, just to calculate the value of all the parts of just one shipment.

PB, in those early years, was primarily a merchant dealing mostly in ores and concentrates, as well as metals and scrap. The company had its origin in Europe, mostly Germany, and had been founded by several German Jews who had come to the US with experience in metals and ores.

Philipp Brothers would, in its prime, be the world's largest metal merchant dealing not only in metals but also many other raw materials such as sugar and oil. No, we never handled flour, otherwise we could have baked a cake.

[...]

***Originally PB also had a chemicals division. In July 1936 that original company split into two parts**. The chemicals division became **Philipp Brothers Chemicals**, headed by **Siegfried Bendheim**, and the metals division became **Philipp Brothers Inc.**, headed by **Siegfried Ullmann**. **PB Chemicals** continued to exist until very recently, with its last headquarters in Fort Lee, New Jersey.*

*PB had started out as a private company, owned by the four senior officers. The company then changed its structure and became **Philipp Brothers Ore Corporation**, with a modest number of shares being made available for purchase to some senior employees. Eventually PBO merged into **Minerals and Chemicals Corporation of America**, a New Jersey company listed on the NYSE. This, for the first time, enabled senior officers to cash out and solved the problem of settling with estates.*

*Later, that entity, then known as **Minerals and Chemicals Philipp Corporation**, merged with Engelhard Corporation, also a New Jersey corporation. That company, headed by Mr. Engelhard, dealt primarily in precious metals, and it is said that he personally was the model for the book and movie "Goldfinger."*

When the company grew in size by leaps and bounds, management appointed officers from among the employees. I was appointed at first assistant vice president, later vice president, and subsequently, group vice president, which was one level below senior vice president.

An interesting occurrence happened in the 1960s. It involved the US Customs assessing an import duty on a Norwegian artificial Columbite, claiming it was a chemical and not a mineral. Since PB was the agent for the manufacturer Norsk Bergverk, and since the assessment of the import duty would make the importation uneconomical, we felt it our obligation to object to this assessment. Since importation and import duty was part of traffic responsibility, I was requested by management to handle it. I did a lot of home reading and talking to attorneys and finally thought I was ready for the fight. A meeting was arranged in an office of the Department of Commerce in DC. When I got there, I got a sinking feeling in my stomach since I was facing a battery of lawyers both from the Department of Commerce and the Treasury Department. They all sat on one side of the table and I, together with me and myself, sat on the other side. I presented my case and fortunately, since it was an informal rather than a court hearing, there was no need for formalities. I argued that in 1933, when Congress passed the act establishing import duties, there existed no such thing as artificial Columbite. Consequently, Congress could not have had this material in mind when establishing that the mineral Columbite was duty free. Therefore, if it cannot be classified as a chemical, it must be a mineral and be duty exempt. Lawyers call that Congressional Intent. I won and the material was declared duty free.

[...]

The company had annual management retreats to which managers from all over the world came to give reports and to discuss policy. Frequently one of these meetings would be held in Holland due to its central location. The company leased a small hotel in Schreveningen, near Amsterdam, for a few days to put everyone up. All meals were kosher and catered from Amsterdam. I attended a few of these meetings.

***The company eventually split off the minerals and chemicals division**, and later also the Engelhard portions, and then purchased the famous Wall Street firm of **Salomon Brothers**. As the company continued to grow, the Salomon portion became dominant, until, in the 1980s, the breakup of what once was the world's largest metal trading firm began. There are many reasons and theories for this breakup, but that is the subject of a different story.*

In 1982, due to the changes taking place in the conduct of the business, management decided to decentralize traffic, and to have each trader handle traffic under his own jurisdiction. With no traffic department, there was no need for a department manager anymore. I transferred to the steel trading department, where I supervised the trading activities of a new commodity for PB, namely, Oil Well Steel Drilling Pipe. During those boom years for oil drilling in the early 1980s, it had become a new section in the steel department, at the time managed by my friend Menno Ratzker. It was eventually, like so many other new PB ventures, a disaster, and when the drilling boom died out, everybody was stuck with huge inventories. But while it lasted it gave me the opportunity to learn something new, to trade for the first time and to travel to Houston many times as well as to other places in the US and to Mexico, Venezuela, Spain, France, Italy, Greece, and Romania, among others.

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[aa1] See 2019-05-12-phibro-com-history-of-phibro.pdf / https://drive.google.com/open?id=1AcKr4MjC18mtEHOW1YGhSAsE5Nn5EspE

WIKIPEDIA

https://en.wikipedia.org/wiki/Phibro

Physio-Control Corporation

Wikipedia Physio-Control

Associations:

- William Hunter Simpson (born 1926) - Long-time president of Physio-Control, 1966 to 1985
-

Saved Wikipedia (Nov 23 2020) - Physio-Control

See [HK003X][GDrive]

Industry Medical equipment

Headquarters Redmond, WA, U.S.

Key people Anne Mullally, GM and VP

Products Medical equipment for use in prehospital, hospital emergency and military settings in treatment of cardiac emergencies

Parent Stryker Corporation

Website www.physio-control.com

Physio-Control Corporation was **founded in 1955 by Dr. Karl William Edmark** as a pioneering company in the field of portable defibrillation. Physio-Control manufactured and distributed of emergency defibrillation and automated CPR medical equipment. The company was most recently acquired in 2016 by Stryker Corporation and is now part of Stryker's Emergency Care division.

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History

This section **is in list format, but may read better as prose**. You can help by converting this section, if appropriate. Editing help is available. *(June 2019)*

- 1955 - Founded by Karl William Edmark
- 1980 - Acquired by Eli Lilly and Company[1]
- 1994 - Acquired by Bain Capital
- 1998 - Acquired by Medtronic for $538 million[2]
- 2006 - Medtronic announces Physio-Control's spin-off[3]
- 2011 - Company taken private in 2011 via a $487 million acquisition by Bain Capital[4]
- 2016 – Stryker Corporation announces agreement to acquire Physio-Control International, Inc. for $1.28 Billion[5][*self-published source?*]

Products

The company's products are primarily for the emergency treatment of Sudden Cardiac Arrest (SCA) Events. The LIFEPAK line of defibrillators includes both advanced units for ACLS trained personnel, as well as Automated External Defibrillators (AEDs) for use by First Responders and the general public. Additionally, the company produces an automated chest compression system called the LUCAS 2. While this system may be used in the field, it has also been used in the hospital setting to prolong human life while surgical or other procedures are accomplished.[6]

FundingUniverse (1997 article) : Physio-Control International Corp. History

See [HW005A][GDrive]

Address: 11811 Willows Road N.E., Redmond, Washington 98052, U.S.A.

Public Company

Incorporated: 1955 as Physio-Control Co.

Employees: 905

Sales: $173.16 million (1996)

Stock Exchanges: NASDAQ

SICs: 3845 Electromedical Apparatus; 7372 Prepackaged Software

Company Perspectives:

We make lifesaving tools for lifesaving teams ... unique medical devices of the highest quality, which predict or urgently intervene in life-threatening, cardiorespiratory events.

Company History:

Physio-Control International Corp. is the world's leading manufacturer of external defibrillators, medical devices that apply an electrical shock to victims of sudden cardiac arrest or ventricular fibrillation, in which the heart begins to flutter or beat irregularly, to restore a normal heart rhythm.

Physio-Control defibrillators account for half of all those sold to hospitals in the United States. In addition, the company has a commanding 85 percent to 90 percent share of the advanced life support market in the United States, consisting primarily of paramedic and fire-rescue vehicles, and was an early leader in the developing "first-responder" market for automatic external defibrillators (AEDs). AEDs were designed to be used by police officers, firefighters, security guards, and others with limited medical training who often arrive first at the scene of an emergency.

Physio-Control, which went public in 1995 after being sold to an investment group by Eli Lily & Co. the year before, had sales of $173.16 million for fiscal 1996. The company, whose products are sold in 70 countries, was traded on the NASDAQ exchange under the symbol PHYS.

The 1950s-60s and Dr. Karl Edmark

Dr. Karl William Edmark (1924-94) was in his last year of residency at Lahey Clinic in Boston in 1954 when he built his first electronic monitor, a boxy-looking device with a light that flashed every time a patient's heart beat and set off an alarm if the beat faltered during surgery. He patented the device, which he called a Heartbeat Indicator, and in 1955, set up a corporation, the Physio-Control Co., to handle any income from his invention.

Later that year, Edmark moved to Seattle, where he became one of the city's leading cardiovascular surgeons, performing the first open-heart surgery at Swedish Hospital and, later, establishing the Cardiovascular Associates Laboratory at Providence Hospital. He also continued to experiment with electronics, developing the Pressure Pulsometer, which monitored a patient's blood pressure during surgery.

In 1961, Edmark unveiled a defibrillator that operated on direct current. When a heart goes into fibrillation, it begins to flutter and is unable to pump blood through the body. Defibrillators administer an electrical shock, which momentarily stuns the heart and allows it to return to a regular heartbeat. Until Edmark introduced his DC Pulse Defibrillator, medical defibrillators used AC, or alternating current, which caused patients to spasm violently because of the high voltage. The DC defibrillator allowed surgeons to administer a more-controlled, low-voltage shock that restored the heartbeat without causing additional trauma.

Edmark licensed manufacturing and distribution rights to the DC Pulse Defibrillator and the Pressure Pulsometer to American Optical, one of the first big companies to enter the electronic medical-instruments industry. Over the next few years, Physio-Control, which had been bankrolled by Edmark and a few personal friends, received about $10,000 annually in royalties, which was plowed back into research.

Then in 1965, American Optical announced that it had refined Edmark's inventions to the point where it no longer felt it needed a licensing agreement with Physio-Control to manufacture and sell the devices. Without a source of revenue, Edmark faced a decision: either he could shut down Physio-Control or begin running it as a business instead of a research laboratory. He chose the later. He also asked [William Hunter Simpson (born 1926)], then Northwest district manager for IBM Corp. in Seattle, if he was interested in becoming Physio-Control's first full-time president.

[William Hunter Simpson (born 1926)] had known Edmark since 1963, when he had hired the cardiologist as a consultant. At the time, IBM, which designed the first heart-lung machine for the Mayo Clinic, had been interested in further exploring the medical instruments industry. Although it meant giving up a secure position and taking a cut in pay, Simpson accepted Edmark's offer, starting his new job in January 1966.

A graduate of the School of Business at the University of Washington, who also had studied pre-med, [William Hunter Simpson (born 1926)] spent his first year at Physio-Control raising $300,000 in venture capital, attracting local investors such as Bagley Wright, whose company, Pentagram Corp., built the Space Needle for the Seattle World's Fair. He also changed the name of the company to Physio-Control Corporation, and more narrowly defined the company's market niche. According to Harriet and Terry King in *The Team*, a book published by Physio-Control detailing its first 25 years, Simpson told the company's five employees, "Our immediate goal is to install coronary care systems in Puget Sound hospitals and smother them with love, attention and service. After that, when the time is right, we can think about marketing nationally."

Lifepak/33, 1968

It did not take long. Physio-Control manufactured its 100th patient monitor and defibrillator in the fall of 1967, and reported revenues that year of more than $500,000. Financially, Physio-Control was near the break-even point, and **[William Hunter Simpson (born 1926)]** told stockholders at the annual meeting in the spring of 1968, "The name of the game is now marketing." About the same time, Physio-Control learned that Zenith Corp. was developing a bulky--but portable--56-pound monitor/defibrillator. Simpson faced the challenge head-on, assigning Stanley Seiffert, Physio-Control's manager of technical

operations, the task of designing a portable monitor-defibrillator that would be more than 20 pounds lighter. Physio-Control named the yet-to-be-built device the Lifepak/33.

Physio-Control introduced the Lifepak/33--which ended up weighing 34 pounds--at the annual American Heart Association meeting in November 1968, but not without some last-minute difficulty. The night before the show opened, someone tried to smash two of the units. The devices were also left on, draining the batteries. But if a competitor was behind the vandalism, as many believed at the time, the publicity surrounding the "sabotage" made the Lifepak/33 the star of the show.

Soon afterwards, Physio-Control was able to raise another $600,000 in venture capital, and commercial production of the Lifepak/33 began in February 1969. The 15th and 45th units were sold to the U.S. Navy, which installed them aboard Air Force One and Air Force Two, the aircraft assigned to carry the president and vice president of the United States. That same year, Jacksonville, Florida, became the first city to install portable defibrillators in all 10 of its fire department emergency vehicles. Physio-Control closed out its fiscal year, at the end of September 1969, with more than $1 million in sales for the first time, although still posting a loss for the year of $35,000 because of production start-up costs.

Physio-Control went public in 1971, selling 20,000 shares of stock at $25 each. All but 7,000 shares were purchased by original investors in the company. Physio-Control also launched a national advertising program built around the success of innovative Seattle's Medic 1 program, which equipped emergency vehicles with sophisticated medical equipment, including a Lifepak/33. Sales increased that year to $2.4 million, with net earnings of $266,000.

Two years later, in 1973, Physio-Control introduced the Lifepak 3, a third generation of its portable external defibrillator. The company also began construction of a $2 million headquarters and research center on 11 acres overlooking the Sammamish River in rural Redmond, Washington, later to become the home of Microsoft Corp. In 1974, Physio-Control added the Lifepak 4, which featured an electrocardiogram strip-chart recorder to provide a permanent record of a patient's heartbeat, to its growing family of portable Lifepak defibrillators. Revenues that year topped $10 million, and Physio-Control posted earnings of $1.05 million.

For several years, Physio-Control products had been distributed primarily by Minneapolis-based Medtronic, Inc. But in 1975, inventory began to accumulate in Medtronic's warehouses. Physio-Control was worried that Medtronic eventually would be forced to slash prices on more than $5 million worth of defibrillators and dialysis machines, seriously upsetting the company's long-term marketing plans, When Medtronic suggested that it might be interested in acquiring the much smaller Physio-Control, [**William Hunter Simpson (born 1926)**] turned the offer around. Betting that he would be able to sell the stockpiled inventory in an orderly manner--and finance the acquisition with the proceeds--Simpson offered instead to purchase Medtronic's instrument-sales division. The gamble paid off with Physio-Control posting records sales that year of $12.9 million, although earnings were down.

Meanwhile, the company was also facing another challenge. Physio-Control learned that a United Kingdom company was developing a defibrillator designed specifically to be used by paramedics in the fast-growing emergency medical market. The small, portable units were expected to weigh half as much as Physio-Control's newest model, the Lifepak 4. John Gallagher, then vice president of engineering at Physio-Control, was assigned the task of pulling together a design team to rebuff the challenge with a radically different Lifepak 5.

Initially, the design team considered packing the components of the defibrillator into a bright orange belt that could be worn by the paramedics. But feedback from Seattle's Medic 1 staff indicated that was unworkable because the bulky belt design would interfere with wearing seat belts in the emergency-response van. Physio-Control eventually settled on a more conventional design, and the Lifepak 5--weighing just 18 pounds--was introduced at the annual meeting of the American College of Cardiology in February 1976.

Physio-Control's sales that year rose by more than 20 percent, to $15.7 million, although net income, still affected by the Medtronic acquisition and inventory glut, remained below $1 million. The following year, 1977, sales topped $21 million and net income almost doubled to $1.7 million. Physio-Control, which received a Presidential "E" Award from the U.S. Department of Commerce, had become the largest manufacturer of defibrillator/monitors in the world, exporting medical devices to 33 countries.

Acquisition by Eli Lilly, 1980

In 1979, Physio-Control acquired Biomega Corp., in Gainesville, Florida, which made semi-automatic blood-pressure monitors for use in emergency vehicles. The company also formed a joint venture with Valleylab Inc. in Boulder, Colorado, to develop and market pacemakers and other implantable medical devices. Revenues continued to grow, surpassing $41 million, while net income that year was more than $3.9 million. Physio-Control had also grown to more than 700 employees.

In addition, the company had begun attracting considerable interest from much larger corporations looking to expand their medical-device divisions. In early 1980, Physio-Control announced that it was being acquired by pharmaceutical giant Eli Lilly & Co. in a stock deal worth about $145 million, returning $170,000 for every $1,000 the original investors had put into the company in 1966. At Physio-Control's annual meeting, Hunter told shareholders, "The fit is quite magnificent, almost designed, because of the attitudes and philosophies of the two companies." In prescient fashion, [**William Hunter Simpson (born 1926)**] also noted, "The stability of size (offered by Eli Lilly) is also important. I don't care how good a company is in this day and age, there is always the possibility of recall (of a product). It could be disastrous for a small company."

In 1985, Physio-Control introduced the world's first automatic external defibrillator. The Lifepak 300, designed for use by police, firefighters, security guards, and other "first responders," was a battery-powered defibrillator about the size of a shoe box and weighing just six pounds. The computer-controlled defibrillator automatically interpreted a victim's heartbeat and determined if a defibrillating shock was indicated. The device also was designed not to allow a shock to be administered if it was not indicated.

The same year, Physio-Control, which had pioneered profit-sharing and the 10-hour, four-day work week for its employees, was included in an annual listing of "The 100 best companies to work for in America." Simpson also retired at the end of 1985, ending 20 years at the helm of Physio-Control. He was succeeded as president and chief executive by Gilbert W. Anderson, then 57, Physio-Control's executive vice president. A graduate of the University of Washington, Anderson previously had been chief executive at Stetson-Ross, a manufacturer of heavy equipment and electronics products.

Sales of the Lifepak 300--despite its innovative design--were sluggish until 1988, when researchers from the University of Washington published a report in the *Journal of the American Medical Association* that documented in-flight deaths of airline passengers and called for airlines to carry automatic defibrillators on board. The university study--funded by Physio-Control, the Laerdal Medical Group, a Swedish competitor, and the National Center for Health Services Research, a federal agency--found that 60 percent of nearly 600 in-flight deaths reported during the period, were related to heart attacks. The American Heart Association later endorsed the study in calling for automatic defibrillators to be carried aboard commercial passenger flights. In 1990, Virgin Atlantic Airways became the first airline to carry automatic defibrillators aboard its overseas flights, purchasing them from Physio-Control.

FDA Shutdown in 1992

In 1992, Physio-Control voluntarily shut down production of its defibrillators and patient monitors after a review by the U.S. Food and Drug Administration found the company had failed to follow "good manufacturing practices," including inadequate failure investigations, not properly inspecting critical components of its products, and failing to adequately document manufacturing and testing procedures in writing.

Although the FDA never claimed that patients had been harmed by malfunctions of the medical equipment, and no recalls were ordered, Physio-Control signed a consent decree outlining steps it would take before resuming production. Richard O. Martin, former vice president of business development who had succeeded Anderson as president and chief executive in 1991, later told the *Puget Sound Business Journal* that Physio-Control "truly, fundamentally believed" that it was in compliance with all FDA requirements. He blamed the sanctions on political pressure then being brought to bear on the FDA to become more forceful in its interpretation of the rules.

In a newspaper column, Martin would later write, "Perhaps the FDA needed to flex some muscle; the agency's reputation was besmirched due to the controversy over its generic drug scandal, the recall of the Dalkon shield IUD, and silicone gel breast implants. If that is the case, then it seems to me the FDA is guilty of shooting itself in the foot. Our government is not only crippling the medical community but maiming the entrepreneurial companies that are the backbone of American business."

Whatever the reason for the FDA's action, the shutdown contributed to the first-ever loss reported by Eli Lilly, for the third quarter of 1992. Eli Lilly did not disclose how much of its $268 million loss stemmed from the problems at Physio-Control, which kept all 1,000 employees on the payroll. But the company's Medical Devices and Diagnostics Division, which included Physio-Control, took a pretax charge of $180 million "responding to regulatory initiatives, including actions to strengthen ... good manufacturing practices and procedures." Sales at Physio-Control fell from a high of $158 million in 1991 to less than $80 million in 1992.

The shutdown, which only affected production for domestic sales, also lasted much longer than anyone expected. Physio-Control, which predicted it would resume full production within six months, finally was allowed to resume production of the Lifepak 10, an in-field model representing about 40 percent of the company's pre-shutdown revenues, 12 months later. The company was not allowed to resume full production of all lines until June 1994, 753 days after the shutdown began.

By then, Eli Lilly & Co. had pumped an estimated $140 million into Physio-Control to keep it going. Simpson, then retired, told the *Journal American*, "Physio is a precious thing, and if it hadn't been for Lilly, it would have disappeared a year ago." Although Eli Lilly said it was unrelated to the difficulties at Physio-Control, the pharmaceutical company also announced at the start of the year that it would sell three of the companies in its medical devices division, including Physio-Control, and spin off the others in a public offering. In July, Physio-Control was sold to Bain Capital Corp., a Boston investment group, for $23.3 million. Steve Pagliuca, managing director at Bain Capital, was named chairman of Physio-Control.

Recovery and Outlook

Despite the long shutdown, Physio-Control recovered quickly because of its strong market presence. During the shutdown, the company had developed a backlog of more than $70 million in orders from hospitals and emergency medical services. Incredibly, the company eventually filled more than 80 percent of those orders. Martin told the *Puget Sound Business Journal*, "That, more than anything else, speaks to what the customer thought of Physio-Control. People actually waited until they could get the Physio product."

In December 1995, less than 18 months after buying Physio-Control, Bain Capital sold 90 percent of the company in an initial public offering for $172 million. That year, the company reported sales of $148.7 million, nearly 95 percent of its pre-shutdown sales. In 1996, sales reached a record high $173.16 million.

Capping its comeback, in 1996 Physio-Control was named one of the best manufacturing facilities in the United States by *Industry Week*, which noted that the company's portable defibrillators "have to be particularly rugged to withstand the harsh treatment they are often subjected to in the field. In product demonstrations (sales representatives) have been known to pick up the instruments and heave them onto the floor as if they were bowling balls--a maneuver known as 'the salesmen's toss.' As in the old Timex watch commercials, they then proceed to show that the products still work."

In 1996, Physio-Control also received FDA approval to market the Lifepak 500, a lightweight, automatic external defibrillator (AED) designed for use by "first responders," who often arrive first at the scene of an accident or medical emergency. The battery-operated, computer-controlled Lifepak 500, which sold for less than $4,000, automatically analyzed a victim's heartbeat and indicated, through voice prompts and visual readouts, whether a defibrillating shock was necessary. The shock was applied by pushing a button.

One of Physio-Control's competitors in the first-responder market was Heartstream Inc., a company formed in 1992 by five former Physio-Control employees, which also introduced a lightweight AED in 1996. Physio-Control sued Heartstream in 1995, alleging the theft of trade secrets, and Heartstream countersued, alleging unfair business practices. The lawsuits were still pending in early 1997. Other competitors in the emerging market included Zoll Medical, SurVivaLink, and Laerdal Medical.

Analysts indicated there was an enormous, potential market for AEDs, including sports stadia, high-rise office buildings, doctors' offices, public swimming pools and beaches, health clubs, retirement homes, and community centers. An estimated half million Americans suffer sudden cardiac arrest every year and only about 5 percent survive, in part because defibrillation needs to be administered within the first 10 minutes to be most effective. In the mid-1990s, the American Heart Association, the American College of Cardiology, and the International Association of Fire Chiefs were among the organizations calling for widespread access to early defibrillation. At Physio-Control, Martin, who was elected chairman in 1997, liked to say that one day AEDs would be as common as fire extinguishers.

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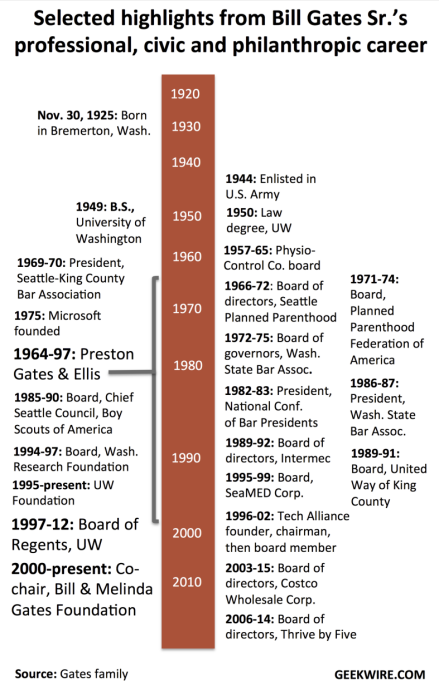
See **Physio-Control Corporation** ; Article reference : [HM000F][GDrive] - BY LISA STIFFLER on November 25, 2015



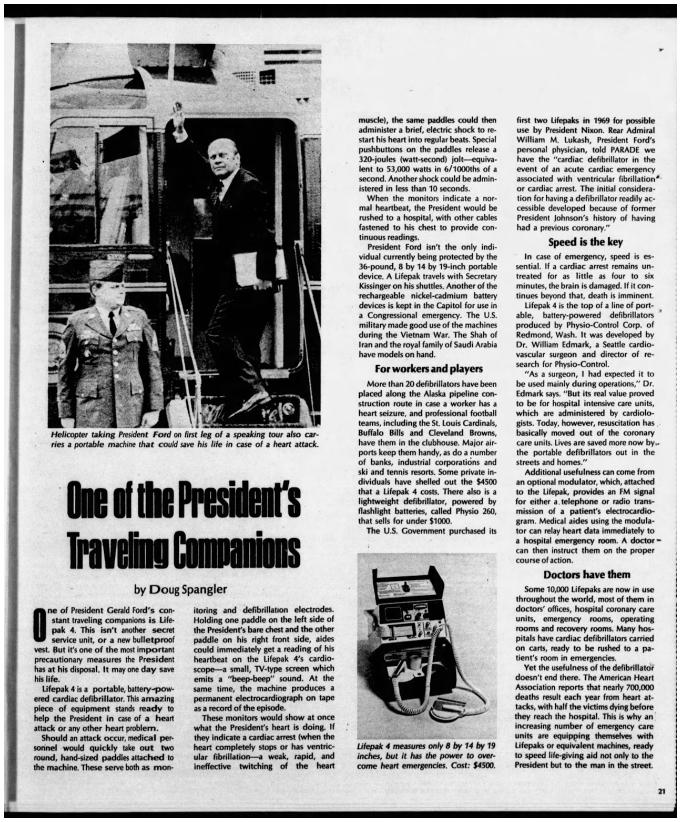
[HM000G][GDrive]

1965 - William Henry Gates II last year on board of Directors for Physio-Control Co.

See **Physio-Control Corporation** ; Article reference : [HM000F][GDrive] - BY LISA STIFFLER on November 25, 2015

1975 - Physio-Control advertisement - Advertising it's support of President Ford?

See **Physio-Control Corporation**



Helicopter taking President Ford on first leg of a speaking tour also carries a portable machine that could save his life in case of a heart attack.

One of the President's Traveling Companions

by Doug Spangler

One of President Gerald Ford's constant traveling companions is Lifepak 4. This isn't another secret service unit, or a new bulletproof vest. But it's one of the most important precautionary measures the President has at his disposal. It may one day save his life.

Lifepak 4 is a portable, battery-powered cardiac defibrillator. This amazing piece of equipment stands ready to help the President in case of a heart attack or any other heart problem.

Should an attack occur, medical personnel would quickly take out two round, hand-sized paddles attached to the machine. These serve both as monitoring and defibrillation electrodes. Holding one paddle on the left side of the President's bare chest and the other paddle on his right front side, aides could immediately get a reading of his heartbeat on the Lifepak 4's cardioscope—a small, TV-type screen which emits a "beep-beep" sound. At the same time, the machine produces a permanent electrocardiograph on tape as a record of the episode.

These monitors would show at once what the President's heart is doing. If they indicate a cardiac arrest (when the heart completely stops or has ventricular fibrillation—a weak, rapid, and ineffective twitching of the heart muscle), the same paddles could then administer a brief, electric shock to restart his heart into regular beats. Special pushbuttons on the paddles release a 320-joules (watt-second) jolt—equivalent to 53,000 watts in 6/1000ths of a second. Another shock could be administered in less than 10 seconds.

When the monitors indicate a normal heartbeat, the President would be rushed to a hospital, with other cables fastened to his chest to provide continuous readings.

President Ford isn't the only individual currently being protected by the 36-pound, 8 by 14 by 19-inch portable device. A Lifepak travels with Secretary Kissinger on his shuttles. Another of the rechargeable nickel-cadmium battery devices is kept in the Capitol for use in a Congressional emergency. The U.S. military made good use of the machines during the Vietnam War. The Shah of Iran and the royal family of Saudi Arabia have models on hand.

For workers and players

More than 20 defibrillators have been placed along the Alaska pipeline construction route in case a worker has a heart seizure, and professional football teams, including the St. Louis Cardinals, Buffalo Bills and Cleveland Browns, have them in the clubhouse. Major airports keep them handy, as do a number of banks, industrial corporations and ski and tennis resorts. Some private individuals have shelled out the $4500 that a Lifepak 4 costs. There also is a lightweight defibrillator, powered by flashlight batteries, called Physio 260, that sells for under $1000.

The U.S. Government purchased its first two Lifepaks in 1969 for possible use by President Nixon. Rear Admiral William M. Lukash, President Ford's personal physician, told PARADE we have the "cardiac defibrillator in the event of an acute cardiac emergency associated with ventricular fibrillation or cardiac arrest. The initial consideration for having a defibrillator readily accessible developed because of former President Johnson's history of having had a previous coronary."

Lifepak 4 measures only 8 by 14 by 19 inches, but it has the power to overcome heart emergencies. Cost: $4500.

Speed is the key

In case of emergency, speed is essential. If a cardiac arrest remains untreated for as little as four to six minutes, the brain is damaged. If it continues beyond that, death is imminent.

Lifepak 4 is the top of a line of portable, battery-powered defibrillators produced by Physio-Control Corp. of Redmond, Wash. It was developed by Dr. William Edmark, a Seattle cardiovascular surgeon and director of research for Physio-Control.

"As a surgeon, I had expected it to be used mainly during operations," Dr. Edmark says. "But its real value proved to be for hospital intensive care units, which are administered by cardiologists. Today, however, resuscitation has basically moved out of the coronary care units. Lives are saved more now by the portable defibrillators out in the streets and homes."

Additional usefulness can come from an optional modulator, which, attached to the Lifepak, provides an FM signal for either a telephone or radio transmission of a patient's electrocardiogram. Medical aides using the modulator can relay heart data immediately to a hospital emergency room. A doctor can then instruct them on the proper course of action.

Doctors have them

Some 10,000 Lifepaks are now in use throughout the world, most of them in doctors' offices, hospital coronary care units, emergency rooms, operating rooms and recovery rooms. Many hospitals have cardiac defibrillators carried on carts, ready to be rushed to a patient's room in emergencies.

Yet the usefulness of the defibrillator doesn't end there. The American Heart Association reports that nearly 700,000 deaths result each year from heart attacks, with half the victims dying before they reach the hospital. This is why an increasing number of emergency care units are equipping themselves with Lifepaks or equivalent machines, ready to speed life-giving aid not only to the President but to the man in the street.

[HN01BW][GDrive]

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The Pillsbury, Madison, and Sutro law firm

see - http://www.company-histories.com/Pillsbury-Madison-Sutro-LLP-Company-History.html

Dr. Peter Karel Piot (born 1949)

Wikipedia Peter Piot

Associated with

- **Dr. Thomas William Geisbert (born 1962)** (Ebola response / Time magazine, 2014)

2021-03-05-wikipedia-org-peter-piot.pdf

https://en.wikipedia.org/wiki/Peter_Piot

https://drive.google.com/file/d/1SD23hbg53oltRoai16VjO0hK4Igpstbz/view?usp=sharing

Peter Piot

From Wikipedia, the free encyclopedia

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Baron

Peter Piot

Piot in 2006

Born

17 February 1949 (age 72)

Leuven, Belgium

Nationality

Belgian

Alma mater

Ghent University

University of Antwerp

Spouse(s)

Heidi Larson

Awards

- Calderone Prize (2003)
- Vlerick Award (2004)
- Flanders-America Award (2008)
- Prince Mahidol Award (2013)

- Prix International de l'INSERM (2015)
- John Dirks Canada Gairdner Global Health Award (2015)
- Manson Medal (2016)

Scientific career

Institutions

London School of Hygiene & Tropical Medicine

Institute of Tropical Medicine Antwerp

Imperial College London

Website

lshtm.ac.uk/aboutus/people/piot.peter

Peter Karel Piot, Baron Piot, KCMG, FRCP, FMedSci (born 17 February 1949)[1] is a Belgian microbiologist known for his research into Ebola and AIDS. Piot is the director of the London School of Hygiene and Tropical Medicine.[2]

After helping discover the Ebola virus in 1976 and leading efforts to contain the first-ever recorded Ebola epidemic that same year, Piot became a pioneering researcher into AIDS. He has held key positions in the United Nations and World Health Organization involving AIDS research and management. He has also served as a professor at several universities worldwide. He is the author of 16 books and over 600 scientific articles.

Early life and education[edit]

Piot was born in Leuven, Belgium.[1] His father was a civil servant who worked with agricultural exports and his mother ran a construction company. Piot is the oldest of two brothers and a sister.[1]

After beginning in the school of engineering and physics at Ghent University studying physics, Piot changed to medicine. During medical school, Piot received a Diploma in Tropical Medicine from the Institute of Tropical Medicine Antwerp in Antwerp. In 1974, he received a M.D. from Ghent University.[1]

In 1980, Piot received a PhD in clinical microbiology from the University of Antwerp.[1][3]

Career[edit]

In 1976, while working at the Institute of Tropical Medicine, Piot was part of a team that observed a Marburg-like virus in a sample of blood taken from a sick nun working in Zaire.[4][5] Piot and his colleagues subsequently traveled to Zaire as part of an International Commission set up by the Government of Zaire to help quell the outbreak.[1] The International Commission made key discoveries into how the virus spread, and traveled from village to village, spreading information and putting the ill and those who had come into contact with them into quarantine. The epidemic was already waning when the International Commission arrived, thanks to measures taken by local and national authorities, and it finally stopped in three months, after it had killed almost 300 people.[6] The events were dramatised by Mike Walker on BBC Radio 4 in December 2014 in a production by David Morley. Piot narrated the programme.[7]

Piot has received the majority of the credit for discovering Ebola, since in 1976, it was claimed he was the one to receive blood samples while working in a lab at the Institute for Tropical Medicine in Antwerp, Belgium.[3] The samples were once claimed to be originally sent by Dr. Jean-Jacques Muyembe-Tamfum, a Congolese doctor who obtained the blood samples from those sickened with a mysterious disease in then-Zaire, later discovered to be Ebola. In 2012, Piot published a memoir entitled No Time to Lose which chronicles his professional work, including the discovery of the Ebolavirus; he mentions Muyembe in passing rather than as a co-discoverer.[8] In a 2016 Journal of Infectious Disease article, co-signed by most of the actors from that first outbreak, including Peter Piot and Jean-Jacques Muyembe, the claims by both Piot and Muyembe to have played a significant role in the early discovery of Ebola have been refuted.[9] Piot stated in 2019 that "my book was not an attempt to write the history of Ebola, but more my personal experience".[10]

In the 1980s, Piot participated in a series of collaborative projects in Burundi, Côte d'Ivoire, Kenya, Tanzania, and Zaire. Project SIDA in Kinshasa, Zaire was the first international project on AIDS in Africa and is widely acknowledged as having provided the foundations of science's understanding of HIV infection in Africa. He was a professor of microbiology, and of public health at the Prince Leopold Institute of Tropical Medicine, in Antwerp, and at the University of Nairobi, Vrije Universiteit Brussel, the Lausanne, and a visiting professor at the London School of Economics. He was also a Senior Fellow at the University of Washington in Seattle, a Scholar in Residence at the Ford Foundation, and a Senior Fellow at the Bill & Melinda Gates Foundation.[3]

From 1991 to 1994, Piot was president of the International AIDS Society. In 1992, he became Assistant Director of the World Health Organization's Global Programme on HIV/AIDS. On 12 December 1994, he was appointed Executive Director of the Joint United Nations Programme on HIV/AIDS (UNAIDS) and Assistant-Secretary-General of the United Nations.[11]

From 2009 to 2010, Piot served as director of the Institute for Global Health at Imperial College London.[3]

London School of Hygiene & Tropical Medicine[edit]

In October 2010, Piot became the director of the London School of Hygiene & Tropical Medicine.[12]

In addition to his work at LSHTM, Piot is a member of the Institute of Medicine of the National Academy of Sciences of the United States and the Royal Academy of Medicine of Belgium, a Fellow of the Royal College of Physicians of London, UK and a Fellow of the Academy of Medical Sciences. In 2011, Amy Gutmann appointed him to serve on the International Research Panel at the Presidential Commission for the Study of Bioethical Issues.

In 2014, in the face of an unprecedented Ebola epidemic in western Africa, Piot and other scientists called for the emergency release of the experimental ZMapp vaccine for use on humans before it had undergone clinical testing on humans.[13] That year, he was appointed by Director General Margaret Chan to the World Health Organization's Advisory Group on the Ebola Virus Disease Response, co-chaired by Sam Zaramba and David L. Heymann.[14] He also chaired an independent panel convened by Harvard Global Health Institute and the London School of Hygiene & Tropical Medicine into the national and

chaired an independent panel convened by Harvard Global Health Institute and the London School of Hygiene & Tropical Medicine into the national and international response to the epidemic, which sharply criticised the response of the WHO and put forward ten recommendations for the body's reorganisation.[15] In February 2020, he criticised the delay in declaring the 2019–20 novel coronavirus outbreak focused on Hubei, China, a Public Health Emergency of International Concern, and advocated a five-point scale for outbreaks, rather the current binary (emergency/no emergency) system.[16]

In 2020, Piot was appointed to the European Commission's advisory panel on COVID-19, co-chaired by Ursula von der Leyen and Stella Kyriakides.[17]

Personal life[edit]

In May 2020, Piot disclosed that he had had COVID-19.[18]

Piot is fluent in English, French, and Dutch.[3]

Other activities[edit]

- Centre for International Health Protection (ZIG), Robert Koch Institute (RKI), Member of the Scientific Advisory Board (since 2020)[19]
- Exemplars in Global Health, Member of the Senior Advisory Board (since 2020)[20]
- Coalition for Epidemic Preparedness Innovations (CEPI), Member of the Board (since 2018)[21][22]
- The Lancet Public Health, Member of the Editorial Advisory Board (since 2016)[23]
- Africa Health Research Institute (AHRI), Chair of the Board of Directors (since 2017)[24][25]
- UK Collaborative on Development Research (UKCDR), Chair of the Strategic Coherence of ODA-funded Research (since 2017)[26][27]
- Africa Research Excellence Fund (AREF), Member of the Advisory Panel (since 2015)[28]
- Novartis Foundation, Member of the Board of Trustees (since 2015)[29][30]
- Antwerp Management School, Member of the International Advisory Board[31]
- Centre Virchow-Villermé, Member of the International Advisory Board[32]
- Global Health Corps, Member of the Board of Advisors[33]
- Global Health Innovative Technology Fund (GHIT), Member of the Board of Directors[34]
- The Lancet, Member of the International Advisory Board[35]
- University of Washington, External Member of the Advisory Board at the Department of Global Health[36]
- World Health Summit, Member of the Council[37]

Awards[edit]

- 2003: Calderone Prize[38]
- 2004: Vlerick Award
- 2008: America-Flanders Award[39]
- 2013: Hideyo Noguchi Africa Prize[40]
- 2013: Prince Mahidol Award[41]
- 2015: Prix International de l'INSERM[42]
- 2015: Canada Gairdner Global Health Award[43]
- 2016: Manson Medal[44]

Honours[edit]

National honours[edit]

- Belgium:
  - Appointed as Baron by King Albert II of Belgium (1995)

Foreign honours[edit]

- Zaire:
  - Officer of the National Order of the Leopard (1976)
- Senegal:
  - Officer of the National Order of the Lion
- United Kingdom:
  - Honorary Knight Commander of the Order of St Michael and St George (2016)[45]
- Japan:
  - Grand Cordon of the Order of the Rising Sun (2018)

Selected filmography[edit]

- 2002: Jonathan Dimbleby (TV series) – episode: "The AIDS Crisis in Africa"
- 2006: Frontline (TV series documentary) – episode: "The Age of AIDS"
- 2006: 60 Minutes (TV series documentary) – episode: "The New Space Race/Fighting AIDS/Immortality"
- 2009: House of Numbers: Anatomy of an Epidemic (Documentary)

- 2014: Horizon: Ebola: The Search for a Cure (TV series documentary)
- 2017: Heart of the Matter (documentary short)
- 2017: Unseen Enemy (documentary)

Selected works and publications[edit]

Scholia has an author profile for Peter Piot.

Selected works[edit]

- Piot, Peter (2013). No Time to Lose: A Life in Pursuit of Deadly Viruses. New York; London: W.W. Norton. ISBN 978-0-393-08411-5. OCLC 916025971.
- Piot, Peter (2015). AIDS: Between Science and Politics. New York: Columbia University Press. ISBN 978-0-231-16626-3. OCLC 946549752.

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- Members of the International Commission (1978). "Ebola haemorrhagic fever in Zaire, 1976". Bulletin of the World Health Organization. 56 (2): 271–93. PMC 2395567. PMID 307456. Wikidata ()
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(2014, Dec) - Time Magazine - Person(s) of the Year ... The Ebola Scientists

Dr. Peter Piot, 65 : Co-discoverer of Ebola

Source - [HP0055][GDrive]

In our lab at the Institute of Tropical Medicine in Antwerp we saw the Ebola virus for the first time on the 10th of October in 1976. We received one of those shiny blue thermoses that you use to keep coffee or whatever. This [contained] blood from a Catholic nun who had died of hemorrhagic symptoms, which, retrospectively, should have triggered alarm bells.

It was my colleague Guido Van Der Groen who opened it. We just wore latex gloves, opened it under laminar flow, which is negative pressure so the air is sucked up and doesn't blow into your face. What we saw was one intact vial swimming in half water, half ice. Another vial had broken. There was some blood, and therefore virus swimming in that thermos, but we didn't know then.

We had no clue this was so dangerous. What we did was good lab practice in terms of how to manipulate the samples. In theory that was enough for Ebola, but the problem is you don't want to use this regular infection control for Ebola because the slightest mistake can be fatal. That we didn't know.

Those days, isolating a virus was very artisanal, more like cooking than anything else. You bring the blood, which we diluted, in tubes and flasks with VERO cell lines, and you inoculate it into baby mice and a guinea pig. It took a few days before we saw the effect on the cells. Basically the virus kills cells—instead of a nice carpet of intact cells you see holes appearing because the cells with infected virus are dying off. Then some mice started dying.

That's when we got really excited. My colleague had prepared the fluid from the VERO cells for taking pictures on the electron microscope. We saw these pictures of a wormlike structure, which we really had never seen. This was pre-Google, so we had to go to the library to look at an atlas of viruses and confirm that there was only one known virus that had that kind of structure. Most viruses are kind of spheres or squares. This was like a worm type. The only one that it looked like was Marburg. That had been discovered a few years before.

That was the aha moment. We said "Wow, is this new, or this is Marburg"—which had never been shown to cause an epidemic before. In the meantime there was news of a very bad epidemic going on with lots of people dying in what was then Zaire. We got news to stop working on the virus from the WHO. It was too dangerous, a hemorrhagic fever.

To be honest, we continued for 24 hours to work with the virus. But we packed it all, sent it to Proton Down in the U.K., which is a military lab equipped for working with highly dangerous pathogens. I wanted to go to Africa to see what was going on there, how [the virus] was transmitted, how many people were dying. That was a very unique opportunity to figure out how the pathogen is spread in a community.

The rest is history. It changed my life. It was a kind of dream come true because I always wanted to work in Africa dealing with epidemics. Our protective gear was a surgical mask, motorbike goggles, gloves and a paper surgical gown—that's all. We didn't have more than that.

Before leaving for the epidemic zone in Yambuku, I met a woman in a hospital in Kinshasa who was not yet terminal but was in a very poor state. I felt a mixture of curiosity and then sadness to see this was a young woman around my age. She was a nurse so she was also getting ready to go to the U.S. She had gotten a fellowship to further train in the U.S. She had this look in her eyes, which I later saw a lot when I went to the epidemic zone. These people know they are going to die. I also found this later in the Congo and Kinshasa, when I started working with AIDS—this empty look of starting into infinitum.

I drew her blood and I examined it under a microscope. What I remember was that this woman had basically no platelets. There was clearly a major problem with her blood coagulation. But it all came too late. We didn't know what to do.

I returned from our first visit to Yambuku while the epidemic was still going on. One night in Kinshasa we had a late-night meeting, and we said this virus needs a name. [CDC researcher and team leader] Karl Johnson said, 'If you name it after the place where the epidemic first occurred, you really stigmatize the place. Imagine you introduce yourself, say, "Hi, I'm from Lassa." That's not a safe introduction.'

So he said, "Let's take a river." We had a fairly small map of Zaire—Zaire is about the size of all of Europe. We were looking at rivers close to Yambuku, and that was Ebola. In the end it was not the nearest river, but still, it's a beautiful name. You remember it. —as told to Alice Park

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US AEC Project Plowshare

Wikipedia AEC Project Plowshare (United States Atomic Energy Commission)

US Operation Plowshare

Wikipedia Page -

https://en.wikipedia.org/wiki/Operation_Plowshare

2019-06-06-wikipedia-project-plowshare.pdf

https://drive.google.com/open?id=1GZAUzu2_oXvrMZcQsHenYKWjgPrtlMMl

Project Plowshare

From Wikipedia, the free encyclopedia

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This article is about proposed peaceful uses of nuclear weapons. For the serialized Philip K. Dick novel with the same name, see The Zap Gun. For the Christian anti-nuclear protest movement, see Plowshares Movement.

The 1962 "Sedan" plowshares shot displaced 12 million tons of earth and created a crater 320 feet (100 m) deep and 1,280 feet (390 m) wide

Project Plowshare was the overall United States program for the development of techniques to use nuclear explosives for peaceful construction purposes. As part of the program, 31 nuclear warheads were detonated in 27 separate tests. Plowshare was the US portion of what are called Peaceful Nuclear Explosions (PNE); a similar Soviet program was carried out under the name Nuclear Explosions for the National Economy.

Successful demonstrations of non-combat uses for nuclear explosives include rock blasting, stimulation of tight gas, chemical element manufacture,[a] unlocking some of the mysteries of the R-process of stellar nucleosynthesis and probing the composition of the Earth's deep crust, creating reflection seismology Vibroseis data which has helped geologists and follow-on mining company prospecting.[1][2][3]

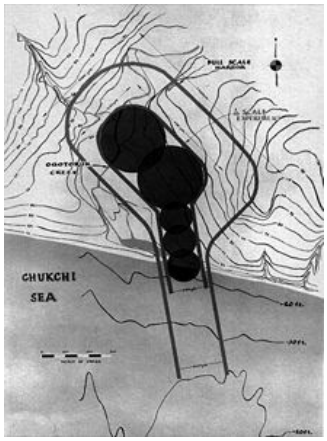
The project's uncharacteristically large and atmospherically vented Sedan nuclear test also led geologists to determine that Barringer crater was formed as a result of a meteor impact and not from a volcanic eruption, as had earlier been assumed. This became the first crater on Earth definitely proven to be from an impact event.[4]

Negative impacts from Project Plowshare's tests generated significant public opposition, which eventually led to the program's termination in 1977.[5] These consequences included Tritiated water (projected to increase by CER Geonuclear Corporation to a level of 2% of the then-maximum level for drinking water) [6] and the deposition of fallout from radioactive material being injected into the atmosphere before underground testing was mandated by treaty.

Rationale

By exploiting the peaceful uses of the "friendly atom" in medical applications, earth removal, and later in nuclear power plants, the nuclear industry and government sought to allay public fears about nuclear technology and promote the acceptance of nuclear weapons.[7] At the peak of the Atomic Age, the United States Federal government initiated Project Plowshare, involving "peaceful nuclear explosions". The United States Atomic Energy Commission chairman at the time, Lewis Strauss, announced that the Plowshares project was intended to "highlight the peaceful applications of nuclear explosive devices and thereby create a climate of world opinion that is more favorable to weapons development and tests".[8][9][*need quotation to verify*]

Proposals



One of the *Chariot* schemes involved chaining five thermonuclear devices to create the artificial harbor.

Proposed uses for nuclear explosives under Project Plowshare included widening the Panama Canal, constructing a new sea-level waterway through Nicaragua nicknamed the Pan-Atomic Canal, cutting paths through mountainous areas for highways, and connecting inland river systems. Other proposals involved blasting underground caverns for water, natural gas, and petroleum storage. Serious consideration was also given to using these explosives for various mining operations. One proposal suggested using nuclear blasts to connect underground aquifers in Arizona. Another plan involved surface blasting on the western slope of California's Sacramento Valley for a water transport project.[5]

One of the first serious cratering proposals that came close to being carried out was Project Chariot, which would have used several hydrogen bombs to create an artificial harbor at Cape Thompson, Alaska. It was never carried out due to concerns for the native populations and the fact that there was little potential use for the harbor to justify its risk and expense.[10]

Project Carryall,[11] proposed in 1963 by the Atomic Energy Commission, the California Division of Highways (now Caltrans), and the Santa Fe Railway, would have used 22 nuclear explosions to excavate a massive roadcut through the Bristol Mountains in the Mojave Desert, to accommodate construction of Interstate 40 and a new rail line.[5]

At the end of the program, a major objective was to develop nuclear explosives, and blast techniques, for stimulating the flow of natural gas in "tight" underground reservoir formations. In the 1960s, a proposal was suggested for a modified *in situ* shale oil extraction process which involved creation of a rubble chimney (a zone in the oil shale formation created by breaking the rock into fragments) using a nuclear explosive.[12] However, this approach was abandoned for a number of technical reasons.

Plowshare testing

The first PNE blast was Project Gnome, conducted on December 10, 1961 in a salt bed 24 mi (39 km) southeast of Carlsbad, New Mexico. The explosion released 3.1 kilotons (13 TJ) of energy yield at a depth of 361 meters (1,184 ft) which resulted in the formation of a 170 ft (52 m) diameter, 80 ft (24 m) high cavity. The test had many objectives. The most public of these involved the generation of steam which could then be used to generate electricity. Another objective was the production of useful radioisotopes and their recovery. Another experiment involved neutron time-of-flight physics. A fourth experiment involved geophysical studies based upon the timed seismic source. Only the last objective was considered a complete success. The blast unintentionally vented radioactive steam while the press watched. The partly developed Project Coach detonation experiment that was to follow adjacent to the Gnome test was then canceled.

A number of proof-of-concept cratering blasts were conducted; including the Buggy shot of 5 1 kt devices for a channel/trench in Area 30 and the largest being 104 kiloton (435 terajoule) on July 6, 1962 at the north end of Yucca Flats, within the Atomic Energy Commission's Nevada Test Site (NTS) in southern Nevada. The shot, "Sedan", displaced more than 12 million short tons (11 teragrams) of soil and resulted in a radioactive cloud that rose to an altitude of 12,000 ft (3.7 km). The radioactive dust plume headed northeast and then east towards the Mississippi River[*citation needed*].

Over the next 11 years 26 more nuclear explosion tests were conducted under the U.S. PNE program. The radioactive blast debris from 839 U.S. underground nuclear test explosions remains buried in-place and has been judged impractical to remove by the DOE's Nevada Site Office. Funding quietly ended in 1977. Costs for the program have been estimated at more than (US) $770 million.[5]

Natural gas stimulation experiment

Three nuclear explosion experiments were intended to stimulate the flow of natural gas from "tight" formation gas fields. Industrial participants included El Paso Natural Gas Company for the Gasbuggy test; CER Geonuclear Corporation and Austral Oil Company for the Rulison test;[13] and CER Geonuclear Corporation for the Rio Blanco test.

The final PNE blast took place on May 17, 1973, under Fawn Creek, 76.4 km north of Grand Junction, Colorado. Three 30-kiloton detonations took place simultaneously at depths of 1,758, 1,875, and 2,015 meters. If it had been successful, plans called for the use of hundreds of specialized nuclear explosives in the western Rockies gas fields. The previous two tests had indicated that the produced natural gas would be too radioactive for safe use; the Rio Blanco test found that the three blast cavities had not connected as hoped, and the resulting gas still contained unacceptable levels of radionuclides.[14]

By 1974, approximately $82 million had been invested in the nuclear gas stimulation technology program. It was estimated that even after 25 years of production of all the natural gas deemed recoverable, only 15 to 40 percent of the investment would be recouped. Also, the concept that stove burners in California might soon emit trace amounts of blast radionuclides into family homes did not sit well with the general public. The contaminated gas was never channeled into commercial supply lines.

The situation remained so for the next three decades, but a resurgence in Colorado Western slope natural gas drilling has brought resource development closer and closer to the original underground detonations. By mid-2009, 84 drilling permits had been issued within a 3-mile radius, with 11 permits within one mile of the site.[15]

Impacts, opposition and economics

Operation Plowshare "started with great expectations and high hopes". Planners believed that the projects could be completed safely, but there was less confidence that they could be completed more economically than conventional methods. Moreover, there was insufficient public and Congressional support for the projects. Projects Chariot and Coach were two examples where technical problems and environmental concerns prompted further feasibility studies which took several years, and each project was eventually canceled.[1]

The 104 kiloton, 1962 Sedan nuclear test formed a crater 100 m (330 ft) deep with a diameter of about 390 m (1,300 ft), as a means of investigating the possibilities of using peaceful nuclear explosions for large-scale earth moving. If this test was conducted in 1965+, when improvements in device design were realized, a "100-fold" reduction in radiation release was considered feasible.[16] The 140 kiloton Soviet Chagan (nuclear test), comparable in yield to the Sedan test of 104 kt, formed Lake Chagan, reportedly used as a watering hole for cattle and human swimming.[17][18][19]

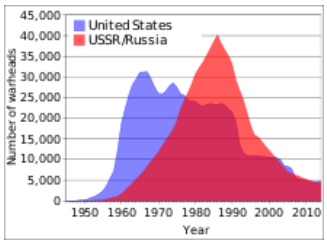
Citizen groups voiced concerns and opposition to some of the Plowshare tests. There were concerns that the blast effects from the Schooner explosion could dry up active wells or trigger an earthquake. There was opposition to both Rulison and Rio Blanco tests because of possible radioactive gas flaring operations and other environmental hazards.[1] In a 1973 article, *Time* used the term "Project Dubious" to describe Operation Plowshare.[14]

There were negative impacts from a select few of Project Plowshare's 27 nuclear explosions, primarily those conducted in the project's infancy and those that were very high in explosive yield.

On Project Gnome and the Sedan test:[5]

> Project Gnome vented radioactive steam over the very press gallery that was called to confirm its safety. The next blast, a 104-kiloton detonation at Yucca Flat, Nevada, displaced 12 million tons of soil and resulted in a radioactive dust cloud that rose 12,000 feet [3,700 m] and plumed toward the Mississippi River. Other consequences – blighted land, relocated communities, tritium-contaminated water, radioactivity, and fallout from debris being hurled high into the atmosphere – were ignored and downplayed until the program was terminated in 1977, due in large part to public opposition.[5]

Project Plowshare shows how something intended to improve national security can unwittingly do the opposite if it fails to fully consider the social, political, and environmental consequences. It also "underscores that public resentment and opposition can stop projects in their tracks".[5]



United States and Soviet Union/Russia nuclear stockpiles. The slow down in the production of nuclear weapons, beginning in the late 1970s in the US, greatly impacted on the economic calculations of peaceful uses of nuclear detonations.

While the above social scientist, Benjamin Sovacool, contends that the main problem with oil and gas stimulation, which many considered the most promising economic use of nuclear detonations, was that the produced oil and gas was radioactive, which caused consumers to reject it and this was ultimately the program's downfall.[5] In contrast, Oil and gas are sometimes considerably *naturally* radioactive to begin with and the industry is set up to deal with oil and gas that contain radioactive contaminants; moreover in contrast to earlier stimulation efforts,[20] contamination from many *later* tests was not a show-stopping issue, historian Dr. Michael Payne notes that it was primarily changing public opinion due to the societal perception shift, to one fearing all nuclear detonations, caused by events such as the Cuban Missile Crisis, that resulted in protests,[21] court cases and general hostility that ended the oil and gas stimulation efforts. Furthermore, as the years went by without further development and the closing/curtailment in output of nuclear weapons factories, this evaporated the existing economies of scale advantage of operation Plowshare that had earlier been present in the United States in the 1950s-60s. It was increasingly found in the following decades that most US fields could instead be stimulated by non-nuclear techniques which were found to be likely cheaper.[22][23]

As a point of comparison, the most successful and profitable nuclear stimulation effort that did not result in customer product contamination issues was the 1976 Project Neva on the Sredne-Botuobinsk gas field in the Soviet Union, made possible by multiple cleaner stimulation explosives, favorable rock strata and the possible creation of an underground contaminant storage cavity.[24][25] The Soviet Union retains the record for the cleanest/lowest fission-fraction nuclear devices so far demonstrated.

The public records for devices that produced the highest proportion of their yield via fusion-only reactions, and therefore created orders of magnitude smaller amounts of long-lived fission products as a result, are the USSR's Peaceful nuclear explosions of the 1970s, with the three detonations that excavated part of Pechora–Kama Canal, being cited as 98% fusion each in the *Taiga* test's three 15-kiloton explosive yield devices, that is, a total fission fraction of 0.3 kilotons in a 15 kt device.[26] In comparison, the next three high fusion-yielding devices were all much too high in total explosive yield for oil and gas stimulation: the 50-megaton Tsar Bomba achieved a yield 97% derived from fusion,[27] while in the US, the 9.3-megaton Hardtack Poplar test is reported as 95.2%,[28] and the 4.5-megaton Redwing Navajo test as 95% derived from fusion.[29]

Source material

1966-08-05-us-aec-plowshare-program-project-sulkey-nevada-test-site-dec-18-1964-radiological-safety-reynolds-electric.pdf / https://drive.google.com/open?id=1GYm0Bc9SN09YcJaVjWZr1A5Gr3v9R46e

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Plum Island Animal Disease Center

Wikipedia Plum Island Animal Disease Center

Jul 8, 2007 (July 8) - VVH-TV News Special Report on PLUM ISLAND

VVHTV / https://youtu.be/3wDyHJWLqyk

VVH-TV News Chief Investigative Reporter Karl Grossman interviews author Long Island native and lawyer Michael Christopher Carroll about his work "Lab 257".

VVH-TV News Chief Investigative Reporter Karl Grossman interviews author Long Island native and lawyer Michael Christopher Carroll about his work "Lab 257". This work takes us on a shocking journey inside the notorious Plum Island biological research facility. Carroll spent five years researching this highly detailed and powerful account of the secretive government installation that sits just off the coast of some of New York's prime real estate, an installation that has had its share of meltdowns, mishaps and downright scary security breaches, including two known releases of deadly viruses into the air.

Owned by the U.S. Department of Agriculture, Plum Island lies just off the coast of the North Fork of Long Island. This otherwise uninhabited, woodsy island has a long history of controversy and secrecy, as Carroll so intricately details, and just may have put the millions of residents of the Tri-State area in utter danger of exposure to fatal animal diseases, including Rift Valley fever, West Nile virus, and even anthrax, time and time again.

Lab 257 is a wake-up call to people to be more aware of what goes on in their own backyards. Labs like these exist all over the country, some more visible than others. Shoring up our crumbling biological research labs and accounting for the hundreds of vials of deadly viruses and microbes might be a better use of our time, our taxes and our energy. Plum Island, and its history of danger to millions of citizens, is proof of that indeed.

VVH-TV News attempted to have an interview with officials from the Department of Homeland Security but were denied.

HV00GH 2007-07-08-youtube-vvhtv-vvh-tv-news-special-report-on-plum-island.mp4

https://drive.google.com/file/d/1dFNF8t6Sb_MDpj8fmjMIbgyBc0GonMVU/view?usp=sharing

image : HV00GI https://drive.google.com/file/d/1JLU7nxjJFpLhz-x46IN2EtiWivVJU0Xv/view?usp=sharing

Also see on Housatonic.Live on Bitchute [https://www.bitchute.com/video/9Dyuca5zW0MO/] and Housatonic.Live on Odysee : https://open.lbry.com/@Housatonic:0/hv00gh

Saved wikipedia (2021-02-23) - Plum Island Animal Disease Center

[HK0051][GDrive]

For Plum Island, see Plum Island (New York).

DHS logo

Buildings 100 and 101 on Plum Island

Established 1954

Budget $16.5 million

Field of research

Foreign animal diseases

biological warfare (until 1969)

Director Dr. Larry Barrett

Location

Plum Island, New York, U.S.

Operating agency United States Department of Homeland Security

Plum Island Animal Disease Center (PIADC) is a United States federal research facility dedicated to the study of foreign animal diseases of livestock. It is part of the Department of Homeland Security Directorate for Science and Technology, and operates as a partnership with the U.S. Department of Agriculture.[1] The facility's director is Dr. Larry Barrett.[2]

Since 1954, the center has been tasked with protecting America's livestock from animal diseases. During the Cold War, a secret biological weapons program targeting livestock was conducted at the site, which ended in 1969 when President Nixon declared an end to the United States' offensive bioweapons program. Today the facility maintains laboratories up to biosafety level 3, but has remained controversial as a result of its high risk work and proximity to the New York metropolitan area.

The facility is slated for closure in 2023, with work moving to the National Bio and Agro-Defense Facility under construction in Manhattan, Kansas.

Location[edit]

See also: Plum Island (New York)

The center is located on Plum Island near the northeast coast of Long Island in New York state. During the Spanish–American War, the island was purchased by the government for the construction of Fort Terry, which was later deactivated after World War II and then reactivated in 1952 for the Army Chemical Corps. The center comprises 70 buildings (many of them dilapidated) on 840 acres (3.4 km²).[3][4] Plum Island has its own fire department, power plant, water treatment plant and security.[3][4] Any wild mammal seen on the island is killed to prevent the possible transmission of foot and mouth disease.[3] However, as Plum Island was named an important bird area by the New York Audubon Society, it has attracted different birds. Plum Island has placed osprey nests and bluebird boxes throughout the island. As of 2008, new kestrelhouses were planned to be added.[5]

History[edit]

In response to disease outbreaks in Mexico and Canada in 1954, the US Army gave the island to the Agriculture Department to establish a research center dedicated to the study of foot-and-mouth disease in cattle.[3]

The island was opened to news media for the first time in 1992.[4] In 1995, the Department of Agriculture was issued a $111,000 fine for storing hazardous chemicals on the island.[4]

Local Long Island activists prevented the center from expanding to include diseases that affect humans in 2000, which would require a Biosafety Level 4 designation; in 2002, the US Congress again considered the plan.[3]

The Wall Street Journal reported in January 2002 that many scientists and government officials wanted the lab to close, believing that the threat of foot-and-mouth disease was so remote that the center did not merit its $16.5 million annual budget.[3] In 2002, the Plum Island Animal Disease Center was transferred from the United States Department of Agriculture to the United States Department of Homeland Security.

In 2003, a whistleblower who voiced concerns about safety at the facility was fired by the contractor he worked for. He had discussed his concerns with aides to Senator Hillary Clinton.[6] A National Labor Relations Board judge found that the contractor, North Fork Services, had discriminated against the whistleblower.[6]

In 2020, the Department of Homeland Security plan to put the island up for auction after the conclusion of laboratory activities in 2023 was blocked by Congress. As part of ongoing COVID-19 pandemic relief legislation, Senator Chuck Schumer of New York negotiated a provision in the CARES Act that protects the island from being sold. Environmentalists had opposed the sale of the island because of its extensive wildlife habitats. After the final draft of the legislation was announced, Schumer said “It would have been a grave mistake to sell and develop Plum Island’s 840-acres of habitat, which is home to many endangered species, that’s why preventing the unnecessary sale requirement was a top priority of these negotiations."[7]

Replacement facility[edit]

See also: National Bio and Agro-Defense Facility

On September 11, 2005, DHS announced that the Plum Island Animal Disease Research Center will be replaced by a new federal facility. The location of the new high-security animal disease lab, called the National Bio and Agro-Defense Facility (NBAF), is being built in Manhattan, Kansas.[8]

NBAF site development before construction in 2013

The plan was controversial almost immediately when it was unveiled, following a cost assessment by DHS and prime contractor Booz Allen Hamilton in which the agency determined that the cost of maintaining or moving the facility would be comparable.

Those conclusions, as well as claims about the safety of the facility proposed were called into question several times, first by a 2009 Government Accountability Office study, which stated that claims by DHS that the work on foot and mouth disease performed on Plum Island can be performed "as safely on the mainland" is "not supported" by evidence.[9]

In 2012, DHS completed a risk assessment of the Kansas site that called the proposed facility "safe and secure".[10] In response, a 2012 review of the risk assessment by the National Research Council called it "seriously flawed".[11]

Despite controversy, the new facility is nearing completion, and transfer of laboratory contents from Plum Island to NBAF is to be complete by 2023. The USDA has named former director of Canada's Centers for Animal Disease Dr. Alfonso Clavijo as the director of the new facility.

Activities[edit]

PIADC's mission can be grouped into three main categories: diagnosis, research, and education.[citation needed]

Since 1971, PIADC has been educating veterinarians in foreign animal diseases. The center hosts several Foreign Animal Disease Diagnostic schools each year to train federal and state veterinarians and laboratory diagnostic staff, military veterinarians and veterinary school faculty.

At PIADC, the U.S. Department of Homeland Security (DHS) and U.S. Department of Agriculture (USDA) work together; DHS' Targeted Advanced Development unit partners with USDA, academia and industry scientists to deliver vaccines and antivirals to the USDA for licensure and inclusion in the USDA National Veterinary Vaccine Stockpile.[citation needed]

USDA Agricultural Research Service (ARS) performs basic and applied research to better formulate countermeasures against foreign animal diseases, including strategies for prevention, control and recovery. ARS focuses on developing faster-acting vaccines and antivirals to be used during outbreaks to limit or stop transmission. Antivirals prevent infection while vaccine immunity develops. The principal diseases studied are foot-and-mouth disease, classical swine fever, and vesicular stomatitis virus.

USDA Animal and Plant Health Inspection Services (APHIS) operates the Foreign Animal Disease Diagnostic Laboratory, an internationally recognized[citation needed] facility performing diagnostic testing of samples collected from U.S. livestock. APHIS also tests animals and animal products being imported into the U.S. APHIS maintains the North American Foot-and-Mouth Disease Vaccine Bank at PIADC and hosts the Foreign Animal Disease Diagnosticians training program, offering several classes per year to train veterinarians to recognize foreign animal diseases.

Research on biological weapons at PIADC ceased when the United States Biological Warfare program was ended in 1969 by President Richard Nixon.[12]

Biological weapons research[edit]

The original anti-animal biological weapons mission was "to establish and pursue a program of research and development of certain anti-animal (BW) agents".[13] By August 1954 animals occupied holding areas at Plum Island and research was ongoing within Building 257.[14] The USDA facility, known as the Plum Island Animal Disease Center, continued work on biological warfare research until the U.S. program was ended by Richard Nixon in 1969.[12] The bio-weapons research at Building 257 and Fort Terry was shrouded in aura of mystery and secrecy.[15][16] The existence of biological warfare experiments on Plum Island during the Cold War era was denied for decades by the U.S. government. In 1993 Newsday unearthed documents proving otherwise and in 1994, Russian scientists inspected the Plum Island research facility to verify that these experiments had indeed ended.[16]

Diseases studied and outbreaks[edit]

As a diagnostic facility, PIADC scientists study more than 40 foreign animal diseases, including classical swine fever and African swine fever.[3] PIADC runs about 30,000 diagnostic tests each year. PIADC operates Biosafety Level 3 Agriculture (BSL-3Ag), BSL-3 and BSL-2 laboratory facilities. The facility's research program includes developing diagnostic tools and biologicals for foot-and-mouth disease and other diseases of livestock.[3]

Because federal law stipulates that live foot-and-mouth disease virus cannot be studied on the mainland, PIADC is unique in that it is currently the only laboratory in the U.S. equipped with research facilities that permit the study of foot-and-mouth disease.[17]

Foot-and-mouth disease is extremely contagious among cloven-hooved animals, and people who have come in contact with it can carry it to animals.[6] Accidental outbreaks of the virus have caused catastrophic livestock and economic losses in many countries throughout the world. Plum Island has experienced outbreaks of its own, including one in 1978 in which the disease was released to animals outside the center, and two incidents in 2004 in which foot-and-mouth disease was released within the center.[6] Foot-and-mouth disease was eradicated from the U.S. in 1929 (with the exception of the stocks within the Plum Island center)[3] but is currently endemic to many parts of the world.

In response to the two 2004 incidents, New York Senator Hillary Clinton and Congressman Tim Bishop wrote a letter to the Department of Homeland Security regarding their concerns about the center's safety: "We urge you to immediately investigate these alarming breaches at the highest levels, and to keep us apprised of all developments."[6]

In 2012, two researchers at the facility, Dr. John Neilan and Dr. Michael Puckette, developed the first Foot-and-mouth disease vaccine which does not require live virus cultures in the manufacturing process, allowing vaccine development to occur safely and legally on U.S. mainland for the first time.[18]

Historic buildings[edit]

Building 257[edit]

Main article: Building 257

Building 257, located at Fort Terry, was completed around 1911. The original purpose of the building was to store weapons, such as mines, and the structure was designated as the Combined Torpedo Storehouse and Cable Tanks building.[19] Fort Terry went through a period of activations and deactivations through World War II until the U.S. Army Chemical Corps took over the facility in 1952 for use in anti-animal biological warfare (BW) research. The conversion of Fort Terry to a BW facility required the remodeling of Building 257 and other structures.[12] As work neared completion on the lab and other facilities in the spring of 1954, the mission of Fort Terry changed.[14] Construction was completed on the facilities on May 26, 1954, but Fort Terry was officially transferred to the USDA on July 1, 1954. At the time, scientists from the Bureau of Animal Industry were already working in Building 257.

Building 101[edit]

The structure is a 164,000-square-foot (15,200 m^2) T-shaped white building.[14] It is situated on Plum Island's northwest plateau on a 10-acre (40,000 m^2) site where it is buttressed by a steep cliff which leads into the ocean.[14] To the east of the building's site is the old Plum Island Lighthouse.[14]

Construction on Plum Island's new laboratory Building 101 began around July 1, 1954, around the same time that the Army's anti-animal bio-warfare (BW) facilities at Fort Terry were transferred to the U.S. Department of Agriculture.[19] Following the transfer, the facilities on Plum Island became known as the Plum Island Animal Disease Center.[19] The USDA's $7.7. million[14] Building 101 laboratory facility was dedicated on September 26, 1956.[19] Prior to the building's opening the area around it was sprayed with chemicals to deter insect or animal life from approaching the facility.[14] Upon its opening a variety of tests using pathogens and vectors were conducted on animals in the building.[14] Research on biological weapons at PIADC did not cease until the entire program was canceled in 1969 by Richard Nixon.[12]

A modernization program in 1977 aimed to update both Building 101 and another laboratory, Building 257, but the program was canceled in 1979 because of construction contract irregularities.[19] PIADC facilities were essentially unchanged until a new modernization began in 1990.[19] Two-thirds of the laboratory facilities inside Building 101 were renovated and operations from Building 257 were consolidated into Building 101.[19] Building 257 was closed, and a major expansion, known as Building 100, was completed on Building 101 in 1995.[19] According to the Department of Homeland Security (DHS), Building 257 currently poses no health hazard.[15]

Controversy[edit]

Conspiracy theories[edit]

Prolific but unfounded conspiracy theories have alleged that Lyme disease, first documented in nearby Lyme, Connecticut, was a biological weapon which originated in the Plum Island laboratory.[20] A discredited 2004 book entitled Lab 257: The Disturbing Story of the Government's Secret Plum Island Germ Laboratory fueled the conspiracy theories.[15][21] Archived specimens show that Lyme disease was endemic well before the establishment of Plum Island laboratory.[20] Additionally, Lyme disease was never a topic of research at Plum Island, according to the US Department of Homeland Security and Department of Agriculture. [22][15]

On July 12, 2008, a creature dubbed the Montauk Monster washed ashore at Ditch Plains Beach near the business district of Montauk, New York. The creature, a quadruped of indeterminate size, was dead when discovered, and was assumed by some to have come from Plum Island as a result of the currents and proximity to the mainland. Palaeozoologist Darren Naish studied the photograph and concluded from visible dentition and the front paws that the creature may have been a raccoon.[23] This was also the opinion of Larry Penny, the East Hampton Natural Resources Director.[24]

Terrorism[edit]

When American educated Pakistani neuroscientist Aafia Siddiqui, a suspected al-Qaeda member, was captured in Afghanistan in July 2008, she had in her handbag handwritten notes referring to a "mass casualty attack" that listed various U.S. locations, including the Plum Island Animal Disease Center.[25] In February 2010, she was convicted of assault with a deadly weapon and attempting to kill U.S. servicemembers and FBI agents who sought to interrogate her.

In popular culture[edit]

- Plum Island and PIADC are the subject of a fictional murder-mystery novel, Plum Island, by Nelson DeMille. DeMille has said, "How could anthrax not be studied there? Every animal has it." While addressing popular culture fears of a germ warfare lab at Plum Island, overall, the facility is presented as doing the job described by the Federal Government—research into animal diseases that would either decimate our national livestock or jump to humans and decimate us. The novel portrays the investigation into the murder of two Plum Island scientists. The motive, initially thought to be germs for terrorists or germs for a biotech company, is really the search for the lost treasure of Captain Kidd, who sailed the waters around Long Island prior to his capture. Kidd's treasure has never been found.
- Plum Island is also referred to in the 1991 psychological thriller The Silence of the Lambs, when the character of Hannibal Lecter is offered a transfer to a different psychiatric institution, as well as the promise of annual week-long supervised furlough to Plum Island, in exchange for his assistance in helping the FBI locate the whereabouts of the missing daughter of a prominent US Senator. It is later revealed in the film that the offer is bogus in the first place, used only as a ruse to elicit Lecter's cooperation.
- The Plum Island facility served as the inspiration for the Mount Dragon research facility in the 1996 techno-thriller Mount Dragon, written by Douglas Preston and Lincoln Child.
- The testing facility at Plum Island is the subject of a novel, The Poison Plum, by author Les Roberts.[26]
- Plum Island and the facility there figure prominently in the 2014 horror novel, The Montauk Monster, by Hunter Shea, in which a bizarre carcass found on a beach in 2008 is an early version of vicious creatures now terrifying the Montauk community.
- The Plum Island facility is mentioned in the television show Emergence as the take off point for a flight that crashes in Southold, New York. This is impossible, as there are no airstrips on Plum Island.

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https://www.youtube.com/watch?v=YhU61f4SYPk

2015 (April) Motherboard video : Inside America's Only Foreign Animal Disease Laboratory: Plum Island

340,098 views•Apr 15, 2016

2016-04-15-youtube-motherboard-inside-plum-island.mp4

Motherboard

About the size of Central Park and a few miles off the coast of Long Island, Plum Island houses the nation's only laboratory that is capable of conducting live research of foot-and-mouth disease, a highly contagious animal disease that hasn't struck the US with an outbreak since 1929.

Because of this, visitors are strictly forbidden unless they've received security protocol from the Department of Homeland Security.

The lab's very location on an island was intentional when it was built in 1954: so nothing reaches its shore, and nothing leaves.

Motherboard gets a rare peek inside the Plum Island Animal Disease Center, and speaks to the scientists tasked with developing foot-and-mouth disease vaccines at one of the most protected labs in the world.

1999 (Sep 22) - NYTimes : "Long Island Lab May Do Studies Of Bioterrorism"

By Judith Miller / Sept. 22, 1999 / Source : [HN01LG][GDrive]

Alarmed at what the Clinton Administration views as the growing threat of biological terrorism to America's food supply, the Agriculture Department is seeking money to turn the Plum Island Animal Disease Center, one mile off Long Island, into a top security laboratory where some of the most dangerous diseases known to man or beast can be studied.

The Agriculture Department already operates here at Plum Island, just across Gardiners Bay from the wealthy Hamptons, a laboratory where such dreaded foreign animal diseases as foot-and-mouth and African swine fever are examined. But the department is seeking $75 million this year and $140 million over

the next two years to upgrade the center to handle even more dangerous animal diseases that can affect humans.

While there are four civilian and military laboratories in America equipped to study such diseases -- technically known as Biosafety Level Four facilities -- their work is focused on germs that primarily affect humans, not domestic animals or plants.

Officials say the proposed expansion and upgrading of Plum Island is part of a new effort by the Clinton Administration to deter terrorists who might spread germs to destroy American crops or livestock for political purposes or financial gain, a threat they now see as equal to that of terrorist attacks aimed at people.

"Given the contribution of crop and animal exports to the nation's prosperity, we must do far more to protect our plant and animal resources," said Senator Richard G. Lugar, the Indiana Republican and co-author of legislation in 1991 and 1996 that provided money to bolster defenses against unconventional terrorism and stop the proliferation of such weapons.

"This is not about food per se; Americans would not go hungry if we were attacked," said Floyd P. Horn, the administrator of the Agricultural Research Service, who helped persuade the Administration to include his agency in January in its counter-terrorism plans and programs. "But such an attack, or even a credible threat, would severely disrupt America's economic and social infrastructure for weeks, if not months or years."

Plum Island, which was once operated by the United States Army Chemical Corps, was designated as an animal-disease research center and transferred to the Agriculture Department in the early 1950's. It is already what scientists call an agricultural "Biosafety Level Three" center, which means that its containment areas, which hold germs dangerous to animals, have filtered air, sealed doors and negative air pressure that prevents germs from leaking out of the labs. Liquid waste is decontaminated.

All who enter the labs wear white lab coats and slippers. After leaving the containment areas, they are required to shower, shampoo their hair, scrub their nails and rinse their mouths, since lethal germs can live in human throats and infect animals up to two days later. To stop viruses or microbes from escaping to the mainland, no clothing or articles, even eyeglasses, are permitted to leave the labs without being soaked in disinfectant, said Dr. Alfonso Torres, the deputy administrator of the Agriculture Department's Veterinary Services Division and former director of the center, who conducted this reporter on a tour.

The building's perimeter is also tightly guarded. While Dr. Torres declined to discuss specific security measures, the shores of this pork-chop-shaped, 840-acre island are said by Federal officials to be monitored by electronic sensors and patrolled by boats and helicopters. **Once a year, deer and other animals that have swum across to the island are killed in what island officials call a controlled hunt.**

Despite an outbreak of foot-and-mouth disease on the island in 1978, which led Plum scientists to abandon their holding areas for large animals, "there has never been a leak of a dangerous pathogens to the mainland from Plum Island," Dr. Torres said.

Moving to the next level of bio safety would require that scientists working with dangerous pathogens wear the protective decontaminated suits portrayed in movies like "Outbreak," and breathe only filtered air pumped into their hoods. Such precautions would allow scientists to work with even more dangerous animal pathogens that can affect humans, like the Hendra virus, which afflicts horses, and the Nipah pig virus, named for the Malaysian village in which it was first isolated this year. The virus has already killed more than 100 people.

"We intend to work closely with local officials and community groups to allay any concerns about safety," said Dr. Horn, who acknowledges that Plum Island has long been shrouded in mystery and plagued by what he and Dr. Torres call unfounded rumors and fears.

The 850-acre island was opened to news organizations only in 1992 in response to concerns about safety at the center. In 1995, the Department of Agriculture was fined $111,000 for illegally storing hazardous chemicals here. Since then, the agency has changed the contractor who operates the island, and there have been no violations.

The extent of the threat posed by agro-terrorism remains in dispute, even within the Clinton Administration. Some scientists and terrorism analysts argue that there is little reason to believe that terrorists would attack American agriculture or livestock.

But intelligence reports increasingly conclude that several countries, including Iraq, have developed germs to attack the food supplies of their adversaries. And senior American officials now believe that an outbreak of screwworm, a parasite that afflicts animals and people, was spread deliberately 14 years ago in Mexico less than 50 miles from the Texas border by workers who were employed in a screwworm eradication program and feared the loss of their jobs.

Although no one was ever arrested or charged in the incident, John Wyss, an Agriculture Department veteran of 25 years who supervised the project from Washington, said that the agency's investigations showed that the outbreak, given its nature and location, had to have been deliberate.

In recent interviews in Russia and Kazakhstan, former Soviet scientists also disclosed that they had developed weapons specifically aimed at crops and livestock. Sadigappar Mamadaliyev, the director of the Scientific Agricultural Research Institute, now in the Republic of Kazakhstan, said that in Soviet times, his was one of four centers dedicated to developing lethal germs as weapons against foreign crops and animals.

"The Soviets here concentrated on cow and sheep pox and blue tongue," he said. "We also cooperated closely with the All-Russian Institute of Animal Health in Vladimir, Russia, which worked on foot-and-mouth disease, and with the Pokrov Institute of Veterinary Virology, which specialized in African swine and horse fevers."

Dr. Mamadaliyev said he had more than 200 strains of dangerous animal pathogens at his institute, whose former scientific staff of 150 has shrunk by half from budget cuts and which is struggling to survive.

There were more than 10,000 Russians working on plant and animal pathogens in the former Soviet germ warfare program, said Ken Alibek, a senior germ researcher who defected to the United States in 1992 and who recently wrote a book, "BioHazard" (Random House), in which he describes the vast scale and depth of the Soviet Union's illegal germ offensive warfare program. Many of those scientists are now without jobs.

Several Russian scientists said that Iranians had recently visited their institutes, some offering huge salaries to work in Teheran and specifically expressing interest in research on animal and plant microbes.

Fueled by growing concern about the proliferation of such expertise and such dangerous germs, President Clinton ordered the Government last year to prepare defenses against germ and other unconventional attacks on the nation's plants and animals. In January, Dr. Horn recruited four former Pentagon intelligence analysts and terrorism experts to form the Agricultural Research Services' first unit to evaluate such threats. In April, the White House formally included the Agriculture Department in the group of agencies that meet regularly under National Security Council aegis to weigh plans to deter or respond to unconventional terrorism, a $2.8 billion effort.

At a public meeting in September in Washington, Dr. Horn discussed his concern about the nation's growing vulnerability to agro-terrorism, mentioning his desire to upgrade Plum Island and make it a centerpiece of the Government's effort to protect the nation's food supply.

Senator Pat Roberts, Republican of Kansas, who is chairman of the Senate Armed Services Subcommittee on Emerging Threats and Capabilities, plans to hold hearings on agro-terrorism in October that will explore the Administration's plans for Plum Island.

Plum Island has 300 employees, 60 of whom are scientists, 70 buildings, many of them closed or deteriorating, independent power and water treatment plants, and a fleet of four boats. Dr. Torres calls the $14.5 million that the Government spends a year on Plum Island a "small investment" in the nation's food security given the $140 billion earned from commodities exports.

As disease after disease has been eradicated, Dr. Torres said, Washington has reduced the budget for veterinary services, which now stands at $116 million a year. Yet demand keeps growing. Agriculture scientists now conduct about 500 investigations of foreign animal diseases a year, more than half of them in birds brought back to the country by the millions of American travelers each year. "Our emergency response systems are becoming very, very thin," Dr. Torres said.

David R. Franz, a vice president of the Southern Research Institute and former director of the United States Army Medical Research Institute of Infectious Diseases, a Biosafety Level Four center, maintains that recent changes in the structure of American agriculture have heightened vulnerability. Increased trade and international travel, reduced genetic diversity in farm animals and the high concentration of animals in yards have increased the risk that highly infectious diseases will emerge and spread, "be they naturally or deliberately introduced, " Dr. Franz said.

The changing nature of terrorism also heightens the threat, says Thomas W. Frazier, president of a consortium of private companies called GenCon.

"There are now hundreds of attacks a year on agricultural targets in the United States, Canada and Britain as a form of violent protest by extremist environmental protection or animal rights groups," he said. Plus, the nation's intelligence analysts expect increased assaults by state-sponsored bioterrorists, militant religious cults and other extremist groups on such targets as food and agriculture.

The largest animal disease outbreak in America in recent history, wrote Corrie Brown, the head of the pathology department at the University of Georgia's College of Veterinary Medicine, was one caused by avian influenza that erupted in Pennsylvania some 15 years ago. A deadly viral variant spread quickly, prompting Agriculture officials to kill all exposed chickens at a cost of $63 million to the Federal Government. Economists estimated that had they not been killed, the cost to United States agriculture would have been as high as $5.6 billion. Even so, Dr. Brown concluded, the six-month outbreak caused poultry prices to rise by $349 million.

1999 (Nov 28) - NYTimes : "Microscopic Guests On a Small Island Raise Big Fears; A Tour of Plum Island, a Center for Study of Viruses That's Being Considered for Even More Deadly Bugs"

NOTE - WHY MENTION NIPAH HERE ?

By John Rather / Nov. 28, 1999 / Source : [HN01LH][GDrive]

IN a high-security laboratory suite at the Plum Island Animal Disease Center, Dr. Luis Rodriguez, a microbiologist, was explaining the "layer upon layer of precautions" that researchers took to contain the highly infectious animal viruses they study.

After samples of infected animal tissue arrive inside air-tight transfer boxes, Dr. Rodriguez explained, they go into a specially designed cabinet with an elaborate air-filtering system.

Donning a surgical smock and snapping on protective gloves, Dr. Rodriguez reached inside the cabinet, moving with all the care of an explosives expert disarming a bomb.

Every instrument, cleanser and container he would need was meticulously laid out so his hands could stay inside until he was done working with vials and bottles that might have contained virus samples. "Everything you do requires planning," he said.

And then, as he walked away from the cabinet, he dropped one of the bottles.

There was no harm done. The bottle was closed and empty, and should have withstood the short fall in any case. Even if a virus had escaped, the negative pressure in the room, and indeed throughout the entire biocontainment area of the Plum Island center, would have captured any contaminated air and routed it into the lab's air-filtering system.

But still, as the bottle clattered to the floor it sounded a reminder that even in the most careful hands, accidents do happen, and that even in the most controlled environment, uncontrollable events may occur.

As the federal Agriculture Department considers whether to seek congressional approval to make the 45-year-old Plum Island center the only government laboratory in the country to study extremely virulent animal diseases that can also kill humans, questions of safety and security are suddenly looming large.

The department and its highest-ranking experts have said that an animal disease center with labs that have the highest security rating, biosafety level four, are an absolute necessity for combating viruses that could attack cattle, pigs, sheep and other domestic herds, with the potential to devastate the country's $90 billion livestock industry.

Some of the diseases -- the kind scientists call zoonotic -- can also spread to humans with lethal effects, making them a double threat if they were used in a bioterrorist assault.

Fears of bioterrorism prompted the Clinton Administration to direct the Agricultural Department and other agencies to take steps to protect the country,

and changes at Plum island could be part of the response.

Because Plum Island is now rated at biosafety level three for studying foreign animal viruses, the department has made no secret that the island is its first choice for the level four labs.

As the wheels begin turning, critics are already questioning the wisdom of importing viruses for which there are no known cures to an island off crowded Long Island and 95 miles from Manhattan.

Robert S. DeLuca, the president of the Group for the South Fork, said the level four labs were a remarkably bad idea for an island less than 15 miles from the Millstone nuclear power complex in Waterford, Conn., in the path of hurricanes and in an area of Long Island that could not be evacuated in an emergency.

"Short of being on a geological fault, I don't think you could find a worse place," he said.

In anticipation of such criticism, the seldom-visited laboratory invited local officials and members of the news media for a tour earlier this month to learn more about the 840-acre island fortress, which is ringed with signs warning away intruders. Even before arriving on one of the laboratory's boats, from Orient Point or Old Saybrook, Conn., the visitors had been told they had to be prepared to strip naked before entering a realm of inner-sanctum labs and animal pens, to shower thoroughly upon exiting and to sign an oath promising to avoid all animals except domestic dogs and cats for five days.

In the lobby of the lab's main research building, displays posted on the crisp white walls told, among other things, of the center's genesis in the 1950's as the country's front line against foot-and-mouth disease, a disaster for American cattle herds in the 1920's and still a problem in the world today.

In a spacious conference room, Wilda Martinez, the area director for the Animal Research Service, one of two Agriculture Department agencies at Plum Island, extended a welcome but minced no words.

Recent news reports, she said, have been inaccurate in their details, and have blurred the reasons the level four labs are needed. "Bioterrorism aside," she said, "it is apparent that the protection afforded by ocean barriers and geographic separation will no longer prevent the introduction of foreign animal diseases."

Dr. Alfonso Torres, a native of Colombia and the deputy administrator of the Animal and Plant Health Inspection Service, the other Agriculture Department agency at Plum Island, followed with a slide lecture intended to leave no doubt about the importance of the lab in protecting agriculture, the county's largest industry.

[Dr. Peter Keith Murray (born 1946)], the director of the Animal Research Service national animal disease center in Ames, Iowa, said Plum Island was already equipped to protect the public from exposure from even so dangerous a virus as the Nipah virus. That virus, hitherto unknown, spread among domestic swine in Malaysia, and then to farmers and farm workers. More than 250 people died and millions of swine were slaughtered to eradicate the outbreak, he said.

[Dr. Peter Keith Murray (born 1946)], a former head of what is now the world's only level four animal disease lab near the Australian city of Geelong, said the Nipah virus could be studied now in level three labs at Plum Island without endangering the public because lab safety systems would prevent the virus from "escaping into the environment."

But safety level three was "not good enough," he said, to protect the laboratory's staff of 14 research scientists and more than 160 other employees, and therein lay the need for the upgrade to level four.

Researchers and others working with viruses in level four labs wear so-called "space suits" that are connected to external air supplies. The suits are not required in level three labs.

[Dr. Peter Keith Murray (born 1946)] and others said the need for the level four labs had been urgent and obvious for some time. "Nobody is sure why, and there's a lot of speculation, but we are encountering more and more of these new diseases over the past 15 years," said Dr. Murray, citing the Nipah virus and mad cow disease in England as examples.

"Frankly, given the nature of emerging threats from around the world and here at home, it is very clear that U.S.D.A. must have access to BSL4 facilities," he said. "We're all here today because of the talk Plum Island might be that site."

With that, and following a safety lecture by a Plum Island safety officer, Thomas Sawicki, men and women on the tour entered separate locker rooms to strip down for a naked walk into the biocontainment area.

There, the visitors were issued underwear, socks, Nike footwear and one-time-use filmy white Tyvek suits. Scientists and staff, who had been clad in jackets and ties or skirts and pant suits in the conference room, reappeared in informal attire including mechanic's jump suits and hospital-style tunics.

Group by group, the press contingent made the rounds through rooms and corridors that few outsiders ever see.

Among the most jarring were the pens where horses, hogs and sheep that arrived disease-free on the island are infected with viruses to study the result. A forlorn pig foraged behind a thick glass window in one of the sealed pens.

The animal supervisor, Jeff Babcock, ushered visitors into an empty pen with a floor drain. The metal door opened with a hiss as an air gasket sealing it deflated, revealing a barren, perfectly spotless cement room. A pair of ear plugs on a table told of conditions when the pen was occupied. About 250 large animals are brought to the lab each year. None leave.

Mr. Babcock said the animals met a common end: Death by a pistol bullet or drug overdose. Carcasses, dung and bedding are burned, and the ashes burned again, in specially designed double-chamber incinerators that vent, ultimately, to the atmosphere after extensive filtering.

Dr. Douglas Moore, a tour group leader and microbiologist, said there was no risk to the public from air emissions. "If anything escaped, it would be diluted to such an extent that it would not be considered a risk," he said.

The lab has its own drinking wells, oil storage tanks and sewer treatment plant. Under a state permit, it can dump 60,000 gallons of effluent into Long Island Sound each day. Now the lab is planning to build a five-megawatt power plant to rid itself of dependence on mainland power and its backup generators.

In an eerie birth-and-death sequence, visitors enter the biocontainment area naked and empty-handed and depart the same way. Even notes are left, to be faxed out from within.

All else that is to be removed or disposed of is baked in autoclaves or incinerated, treated in caustic baths, fumigated with formaldehyde or otherwise

All else that is to be removed or disposed of is baked in autoclaves or incinerated, treated in caustic baths, fumigated with formaldehyde or otherwise scoured or disinfected to kill any living cell.

The lab also says it pays close attention to what comes into the lab, and how.

On the tour Carmen Farrugia, a lab employee involved with shipping and receiving, demonstrated how viruses are shipped. First, a small amount of virus contained in a small vial was placed in a slightly larger vial with absorbent material, which in turn was placed in another container with more absorbent material.

The container was then packed in a box with a hard plastic liner, and capped with a spongelike material and often with dry ice. The box, she said, was designed to withstand a fall of 27 feet. The boxes, which bear labels warning of an infectious substance inside, are shipped by air.

"This gets shipped like cargo, like you were sending a package to grandma or something," Ms. Farrugia said.

In this way, viruses collected from other parts of the world were transported to Kennedy International Airport, where they are met by couriers with cell phones, decontamination kits and training in cleanup. The couriers then drove east on the Long Island Expressway "except when there are traffic jams," Ms. Farrugia said, eventually taking Route 25 down the North Fork to Orient Point; the packages then traveled by boat to Plum Island.

Dr. Michael Kiley, the Animal Research Service safety officer at the lab, said the packages were designed to withstand a plane crash. Dr. Kiley also said that other government agencies, including the Federal Bureau of Investigation, would be involved in assuring shipment and lab security if Plum Island was upgraded to a level four center.

At the conclusion of the tour, a young staff employee directed visitors to strip again, blow their noses, scrub under their nails and spit. Most managed the last step no better than Rose in the movie "Titanic."

After a minimum three-minute shower and hair washing under strong water pressure, visitors at last emerged from the biocontainment area.

Then, after a short tour of the island and its now crumbling gun emplacements and unused barracks and buildings -- including one building for the island's only fire truck -- the visitors boarded the boat back to the mainland, impressed by the island's raw beauty and sweeping views of Gardiners Island, Little Gull Island, Great Gull Island, Montauk Point, the North Fork and, on the Connecticut shore lighted up by the late afternoon sun, the Millstone nuclear power plants.

The surf had grown far rougher as the sun set, and the boat back to Orient Point rose and fell like a bucking bronco in slow motion, sending out huge billows of salt spray.

It was a cold comfort to know any virus aboard would perish along with the passengers if the boat sank.

BITCHUTE @Housatonic **YOUTUBE** @HousatonicLive **ODYSEE** @Housatonic **BRIGHTEON** @Housatonic

Francis Allan Plummer (born 1952)

Wikipedia Frank Plummer

ASSOCIATIONS

- Dr. Gary Pignac Kobinger (born 1969)

Born 2 December 1952 - [HK001T][GDrive]

Saved Wikipedia - See [HK001T][GDrive]

Francis Allan Plummer OC OM FRSC (2 December 1952 – 4 February 2020) was a Canadian scientist, academic and HIV/AIDS researcher. He was "a recognized specialist in infectious diseases whose work influenced public health policy in Canada and abroad".[1] He was Distinguished Professor Emeritus of Medicine and Medical Microbiology at the University of Manitoba and Scientific Director General, National Microbiology Laboratory, Public Health Agency of Canada. From 1984 until 2000 he worked in Nairobi, Kenya studying sexually transmitted infections. During his time in Kenya, his research described the heterosexual epidemiology of HIV and the role of male circumcision in reducing HIV infection risk in men. While at the National Microbiology Laboratory, he led the Canadian laboratory response to SARS, the H1N1 pandemic and oversaw the development of the successful VSV EBOV vaccine for Ebola viral hemorrhagic fever. Dr. Plummer was working to develop an HIV vaccine[2] at the time of his death, and was believed to be the first recipient in North America to receive **DBS** (deep brain stimulation) to treat alcohol-use disorder, in an experimental trial.[3][4][5]

Honours

In 2006, he was made an Officer of the Order of Canada.[1] In 2009, he was made a Member of the Order of Manitoba in recognition for being "an internationally renowned physician-scientist and expert in infectious diseases who has significantly contributed to global health".[6] In 2014, he was awarded the Killam Prize for AIDS research.[7] In 2012, he was awarded the Royal Society of Canada's McLaughlin Medal, awarded "for important research of sustained excellence in medical science".[8] He was the recipient of the Canada Gairdner Wightman Award in 2016. As well as many other awards,[specify] Dr. Plummer has honorary degrees from the University of Calgary, McMaster University and the University of Windsor.

2015 (April 7) - Dr Plummer: INNOVATOR - Part 1

https://www.youtube.com/watch?v=hunfhwNPJbU

Apr 7, 2015

Canada Science and Technology Museum

Innovation All-Stars

A new series featuring inspiring Canadian innovators.

2015-04-07-youtube-canada-science-and-technology-museum-innovation-stars-dr-plummer-pt-1

2015-04-07-youtube-canada-science-and-technology-museum-innovation-stars-dr-plummer-pt-1-img-1

2016 (Oct) - A Tribute to Manitoba's Dr. Frank Plummer

https://www.youtube.com/watch?v=crZOPhv7jx8

356 views • Oct 27, 2016

Canadian Friends of Hebrew University

2016-10-27-youtube-canadian-friends-of-hebrew-university-dr-plummer-tribute

2016-10-27-youtube-canadian-friends-of-hebrew-university-dr-plummer-tribute-img-1

2020 (May 2) - Dr Francis A. Plummer Tribute

Watch on youtube : https://www.youtube.com/watch?v=stCFAF3mzi8 / Downloaded copy : [HV00GU][GDrive] / CAHRACRV

Plummer

https://globalnews.ca/news/1300589/search-for-new-winnipeg-microbiology-lab-leader-worries-scientists/

EVIDENCE TIMELINE

2001 (Feb 13) - Feldmann with Plummer in Winnipeg

See **Dr. Heinz Ulrich Feldmann (born 1959)** / Full newspaper page : [HN01IJ][GDrive]

2001-02-13-the-brandon-sun-manitoba-canada-pg-a-3-clip-virus

Virus lab kept busy

BY SCOTT EDMONDS
Canadian Press

WINNIPEG — Canada's only lab capable of handling the world's deadliest viruses has been mightily tested in the last few weeks, but its officials say it has passed with flying colours.

"It's been an incredibly hectic time," said Dr. Frank Plummer, head of the microbiology laboratory at the Canadian Centre for Human and Animal Health.

Scientists at the high-tech, high-security centre in Winnipeg have been working virtually around the clock, most recently to see if a woman visitor from Africa brought the dreaded Ebola virus into the country.

The woman remains critically ill in a Hamilton hospital, but health authorities no longer fear she may have carried Ebola or a similar disease to North America.

"There's never been an incident like this woman from Congo before," Plummer said Monday.

"There are contingency plans in place to deal with these kinds of things and I think we dealt with it well this time. I'm particularly proud of the job the Level 4 program did here."

The most deadly pathogens, such as Ebola, are classified as Level 4 viruses. They must be handled in special facilities that have the ultimate in safeguards to prevent accidental contamination.

About 16 Level 4 viruses have been identified worldwide so far, most originating in Africa or South America.

The Winnipeg centre, which opened in 1999, is one of only about 15 in the world.

"We were ready for this," said Dr. Heinz Feldmann, head of the special pathogens section.

"We hope it's not going to happen often or soon again."

The Hamilton incident followed on the heels of health scares in Toronto, Ottawa and Victoria posed by feared bioterrorist attacks.

Packages containing mysterious substances were sent to government offices in Toronto and Ottawa, and to a Wal-Mart in the Victoria area. In all three cases, the substances were examined at the Winnipeg lab and turned out to be harmless.

"Most of our colleagues in the United States . . . have handled many hoaxes," said Kathryn Bernard, the head of the special bacteriology section. "They're not very common in this country."

[HN01IK][GDrive]

2011 (March) - TEDxManitoba - Frank Plummer - Is There Natural Immunity to HIV?

2011-03-11-youtube-tedx-talks-manitoba-frank-plummer-is-there-natural-immunity-to-hiv

2011-03-11-youtube-tedx-talks-manitoba-frank-plummer-is-there-natural-immunity-to-hiv-img-1

https://www.youtube.com/watch?v=zGiJZwBXJ6Y

Mar 11, 2011 / TEDx Talks

Regarded internationally as a world- leading HIV/AIDS researcher and specialist in infectious diseases, Dr. Frank Plummer's work has influenced public health policy in Canada and around the world. He received his medical degree from the University of Manitoba in 1976 and studied internal medicine and infectious diseases at the University of Southern California, the University of Manitoba, the University of Nairobi, and the Centers for Disease Control in Atlanta. In 1984, Dr. Plummer took on a health research post in Nairobi, Kenya for over 17 years where his work led to some of the research fundamental to documenting the emerging HIV epidemic in Africa. Dr. Plummer's ground-breaking HIV/AIDS research, particularly on understanding natural immunities to the virus, is now the basis of work toward developing an HIV vaccine. He is currently the Chief Science Advisor and Scientific Director of the Public Health Agency of Canada's National Microbiology Laboratory in Winnipeg, Manitoba.

2016 (Nov) - Two of the world's leading HIV/AIDS experts are among the 2016 Gairdner Award recipients.

Saved video - [HV0023][GDrive]

Dr Frank Plummer received the 2016 Canada Gairdner Wightman Award for his groundbreaking research in HIV transmission in Africa and his leadership at the Canadian National Microbiological Laboratory, with pivotal roles in SARS, influenza, and Ebola epidemics.

Dr Anthony Fauci received the 2016 Canada Gairdner Global Health Award for his many pioneering contributions to our understanding of HIV infections and his extraordinary leadership in bringing successful treatment to the developing world.

2016 (Nov) - Untold Story of The National Microbiology Laboratory-Frank Plummer (with Dr. Fauci)

Video - [HV001Y][GDrive]

Our 2016 Canada Gairdner Wightman Awardee presents the work that won the prize at the Annual Awardees Symposium in Toronto, Canada.

https://www.youtube.com/watch?v=pqIBTj8XyBM

https://www.mcponline.org/content/2/5/346.short

Mass Spectrometric Characterization of Proteins from the SARS Virus

A Preliminary Report

Oleg Krokhin, Yan Li, Anton Andonov, Heinz Feldmann, Ramon Flick, Steven Jones, Ute Stroeher, Nathalie Bastien, Kumar V. N. Dasuri, Keding Cheng, J. Neil Simonsen, Hélène Perreault, John Wilkins, Werner Ens, Frank Plummer and Kenneth G. Standing

Molecular & Cellular Proteomics May 1, 2003, First published on May 29, 2003, 2 (5) 346-356; https://doi.org/10.1074/mcp.M300048-MCP200

ArticleFigures & DataInfo & MetricseLetters PDF

Abstract

A new coronavirus has been implicated as the causative agent of severe acute respiratory syndrome (SARS). We have used convalescent sera from several SARS patients to detect proteins in the culture supernatants from cells exposed to lavage another SARS patient. The most prominent protein in the supernatant was identified by matrix-assisted laser desorption/ionization time-of-flight mass spectrometry (MALDI-TOF MS) as a ~46-kDa species. This was found to be a novel nucleocapsid protein that matched almost exactly one predicted by an open reading frame in the recently published nucleotide sequence of the same virus isolate (>96% coverage). A second viral protein corresponding to the predicted ~139-kDa spike glycoprotein has also been examined by MALDI-TOF MS (42% coverage). After peptide N-glycosidase F digestion, 12 glycosylation sites in this protein were confirmed. The sugars attached to four of the sites were also identified. These results suggest that the nucleocapsid protein is a major immunogen that may be useful for early diagnostics, and that the spike glycoprotein may present a particularly attractive target for prophylactic intervention in combating SARS.

https://www.mcponline.org/content/mcprot/2/5/346.full.pdf

2020 (Feb 04) Renowned Canadian scientist Frank Plummer dies in Kenya, where he led HIV breakthroughs

Plummer, 67, was infectious disease specialist who achieved international influence

CBC News · Posted: Feb 04, 2020 1:26 PM CT / Source - [HM0009][GDrive]

video - [HM000B][GDrive] <--- 1987 video , 5 minutes long

World-renowned scientist Dr. Frank Plummer of Winnipeg has died.

PHOTO - Frank Plummer was recently reunited with a group of women he worked with in the past on his last visit to Kenya in 2020.
[HM000A][GDrive]

Plummer, 67, was in Kenya, where he was a keynote speaker at the annual meeting of the University of Nairobi's collaborative centre for research and training in HIV/AIDS/STIs.

Dr. Larry Gelmon, who helped set up that meeting, said Plummer collapsed and was taken to hospital in Nairobi, where he was pronounced dead on arrival.

No confirmed cause of death has yet been released.

Plummer was born and raised in Winnipeg, where he headed up Canada's National Microbiology Laboratory for several years.

He was also involved in an innovative research partnership between the University of Manitoba and the University of Nairobi, established before the world was very aware of HIV/AIDS.

"He helped to identify a lot of the key factors that are involved in HIV transmission in the early days," said Keith Fowke, a professor in the medical microbiology and infectious diseases department at the University of Manitoba.

Before that partnership, scientists didn't know HIV could be passed on to women or to babies through breast milk.

"He developed a lot of interventions that helped save hundreds of thousands of lives across the world," Fowke added. "Frank was definitely a brilliant mind."

As a specialist in infectious diseases, Plummer's work influenced international public health policies.

"Frank dedicated decades of his time to Africa and led world-changing breakthroughs in HIV prevention," Matthew Gilmour, director general of the National Microbiology Lab, wrote in an internal email to staff of the Public Health Agency of Canada on Tuesday.

"Of course, the most noteworthy breakthrough that he and his team made was the finding of female sex-workers who were resistant to HIV. The gift these women have given science in the years since has been unparalleled.

"Frank had just had a joyful reunion with many of them a couple days before his passing."

Another colleague, Dr. Allan Ronald, said Plummer's death is tragic and a loss for science.

"He was so hopeful that he was on the path that would end with discovery of the HIV vaccine — the road he had started down almost 30 years ago," Ronald said.

University of Manitoba president and vice-chancellor Dr. David Barnard said Plummer had a great impact on global public health.

"He was admired and regarded highly by academics and researchers around the world, and his legacy of seeking to develop an HIV vaccine remains one of the landmarks of infectious disease prevention," Barnard said.

Dr. Theresa Tam, Canada's chief public health officer, took to Twitter to remember Plummer.

Plummer was most recently living in Toronto, where he underwent experimental brain surgery to fight alcohol addiction.

He was believed to be the first person in North America to undergo deep brain stimulation for that purpose.

"Frank was bigger than life. His physical presence and intelligence contradicted the fact that he was actually a fairly quiet and shy guy," Gilmour's memo says.

"Science will continue to build on his accomplishments and improve public health in the world for many years to come."

Plummer was in Kenya with his wife, Jo Kennelly, and his stepdaughter Imogen, and the family had just enjoyed time on safari, Gilmour's memo says.

2019 (Dec 15) Canadian scientist undergoes novel brain stimulation treatment for alcoholism

Article - [HM0006][GDrive] / Video - [HM0008][GDrive] <--- Great video !

Published Sunday, December 15, 2019 10:00PM EST

[HM0007][GDrive]

TORONTO -- Like millions of Canadians, Dr. Frank Plummer used alcohol simply to relax after work. Or so he told himself.

Only after he became ill with liver failure was he forced to confront a painful reality: he suffered from alcohol-use disorder.

“I guess I was in denial,” Plummer told CTV News. “It’s pretty obvious now that I look back that I had a problem.”

Plummer had an illustrious career as a physician, researcher and the scientific director of Canada’s National Microbiology Lab in Winnipeg. He worked on the front lines of medical crises such as the AIDS epidemic. His groundbreaking work studying HIV/AIDS in Nairobi revealed that the disease did not only affect gay men, as was thought at the time, but could impact heterosexuals and women. He guided Canadian public health through Ebola scares, SARS and the arrival of the pandemic swine flu strain, H1N1, in 2009. As a result of his decades of work the 67 year old has won multiple awards, including the Order of Canada.

But while he was working tirelessly to improve the lives of others, Plummer was also using whiskey -- up to 20 ounces a night -- to deal with the resulting stress.

“I used to think about alcohol all the time,” he said, admitting that part of his brain used to be constantly planning how he’d get more. He thought he was managing it because he never drank on the job.

“I think I was a high-functioning person with a problem with alcohol,” he said.

In 2012, he suddenly became sick: “My belly blew up, and I found I had cirrhosis and end-stage liver disease.”

He was given a liver transplant in 2014. The new organ was “magical,” he said, but the then-retired scientist soon discovered that without “that adrenaline from responding to some pandemic somewhere,” to distract him, he couldn’t stop himself from returning to drinking. And the problem simply became worse and worse from there.

His wife Jo Kennely told CTV News that at first she couldn’t comprehend it.

“I kept on thinking as we went through this, you know, he’s the smartest man in Canada,” she said. “He’ll be able to figure this out, we’ll get through this, he’ll want to survive, he’ll want to stop, he’ll want to do these things.”

Eventually, she realized “it doesn’t matter how smart you are, doesn’t matter how educated you are. It affects everyone. No one is immune from this disease.”

Plummer underwent therapy, alcohol treatment programs, AA meetings. Nothing, he says, worked for long, and he was not a candidate for a second liver.

“If I didn’t get the drinking under control, I was going to die,” Plummer said. “And I didn’t want to die.”

With his options running out, Plummer agreed to be the first person in North America to test an entirely new way of stopping alcohol addiction -- by treating it with deep brain stimulation.

THE TREATMENT

In December of 2018, doctors at Sunnybrook Health Sciences Centre implanted two electrodes into Plummer’s brain while he was still awake. He was able to talk and answer questions during the surgery.

The electrodes are connected to a device similar to a pacemaker in the upper right side of his chest. It sends electrical impulses deep into the brain to an area called the nucleus accumbens, which is linked to addiction and alcoholism and plays a central role in the brain's reward circuitry.

“So we’re inserting electrodes directly into that region of the brain in an effort to reset its activity, to recalibrate it in some way,” Lipsman said. The device is controlled by an external monitor that Plummer and his doctors can adjust and turn on and off.

The study’s goal, Lipsman says, is to raise awareness of the disease, and to validate the growing awareness that alcohol addiction is likely “a brain-based illness.

“And there should be no better way to treat a brain-based illness than a brain-based intervention.”

According to Lipsman, the pilot study now underway will test six patients like Plummer who have treatment resistant alcohol-use disorder, and for whom all other therapies have failed. [...]

It’s also the top cause for hospitalization linked to substance abuse across the entire country, accounting for more than half of hospital stays caused by

substance abuse. Ten Canadians die in hospitals per day due to substance abuse -- and three out of four of those deaths are due to alcohol, according to figures from the Canadian Institute for Health Information.

For Plummer, this new trial didn't just mean a chance to get help for himself, but a chance to contribute to the science aimed at minimizing those deaths.

"I spent my whole life doing research, and here's a different way of doing research," he said. "Be a participant, rather than the study director."

THE IMPACT

A year later, the stimulator is on 24-7 and Plummer reports that he no longer is obsessed with thoughts of drinking.

"It's given me my life back," he said.

His wife said that while the treatment may not be a "cure," it has acted as one for the family as a whole.

"It's a cure for us," she said.

Before, she said, the need for alcohol was like "an itch," that Plummer was compelled to scratch at, and had to address before he could think about anything else, but "now … that itch is gone.

"It's like night and day."

Lipsman said that their test trial only sought out subjects whose alcohol addiction had gotten so bad that it was verging on fatal.

"Frank is really a typical example," he said. "Somebody that has been through a transplant, been through medical treatment and despite that is still affected by his addiction. So those are the kind of patients that we enroll for this particular trial."

There are risks of infection and bleeding with brain surgery, but so far researchers say the treatment seems to be relatively safe and the first three patients treated are doing well.

"There are encouraging signs that we're having a meaningful impact on their drinking behavior and on their mood as well," Lipsman said.

Currently, Sunnybrook is the only centre in the world actively performing deep brain stimulation on patients with treatment-resistant alcohol-use disorder. As the study continues, researchers will also be monitoring changes in brain structures and activity. The study is currently being funded by philanthropic grants, which cover the cost of medical care and follow-up as well as the cost of the equipment. The stimulator alone can run anywhere from $15,000 to $20,000.

Deep brain stimulation is widely used to treat Parkinson's disease and also depression. It's also being tested for eating disorders, obsessive compulsive disorders and Alzheimers. Dr. Lipsman says there may soon be attempts to try DBS as a treatment for other forms of addiction outside of alcohol use disorder.

Plummer is a prime example that addiction can strike anywhere -- it targets not only those who are visibly struggling, but also those who appear to be successful in all avenues of their lives. The misconceptions surrounding who is affected by addiction are just one of the reasons that Plummer says "it's important to talk about alcohol-use disorder."

He told CTV News that there is "a stigma," surrounding the illness.

"Training as a medical doctor, I didn't think much of people that had problems with alcohol," he said. "And I never thought of myself like that."

Although he admitted to judging those who struggled with addiction in the past, he said his experience was eye-opening.

"[Alcohol addiction] will ultimately kill you if you don't deal with it," he said. "It just about killed me." He added that he thought long and hard about taking his story public, but decided to talk about his struggle with alcohol-use disorder, "to try to destigmatize it."

These days, Plummer, who now lives in Toronto, says he has a new zest for life. He has reconnected with family and -- most importantly -- is diving back into his passion: infectious diseases.

He is preparing to push ahead with an experimental vaccine against HIV infection, and is working on writing a memoir.

"I'm happier than I've been in many, many years," he said.

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Housatonic

Ben Telfer Plymale (born 1926)

Ancestry.com page ;; https://www.ancestry.com/family-tree/person/tree/14325299/person/212076073192/facts?_phsrc=MOW100&_phstart=successSource

Associations

- **Melvyn Robert Paisley (born 1924)** (best friend, and colleague and fellow executive at Boeing - Source is [HW005F][GDrive])
- **Thomas Paul Rona (born 1923)** (Plymale mentored Thomas Rona while at Boeing in the 1970s)
- **William Robert Van Cleave (born 1935)** (A peer of Plymale with the Reagan administration transition)
- **Dr. John Stuart Foster Jr. (born 1922)** (Plymale worked directly under Dr. John Stuart Foster Jr. in 1972 in the US Department of Defense)

1981 (Aug 15) - From Washington Post - "**Ben T. Plymale, 55, Official With Boeing Company, Dies"**

Source - [HN01B3][GDrive]

Ben T. Plymale, 55, a **vice president of the Boeing Aerospace Co.** and a former Pentagon official who was deputy head of the Reagan transition team at the Defense Department, died Aug. 8 in a hospital in Rivers Inlet, British Columbia, after a heart attack.

A resident of Seattle, Mr. Plymale was on a fishing trip in Canada when he was stricken.

He was deputy director for research and engineering for strategic and space systems at the Defense Department from 1968 to 1972. In addition to serving as deputy team leader of transition at the Pentagon, following Reagan's election as president in November 1980, he was also cochairman of Reagan's Defense Budget Committee.

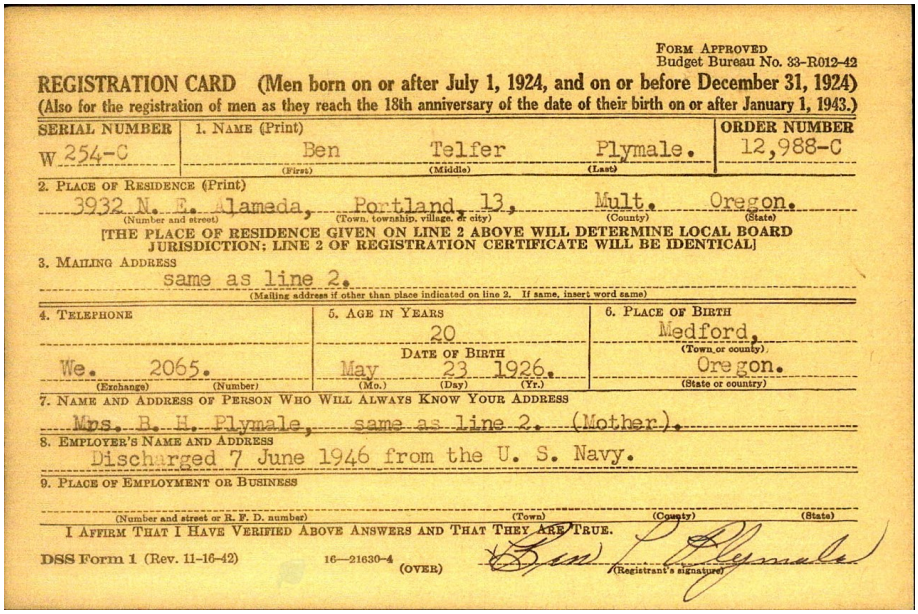
Mr. Plymale joined the Boeing Co. in 1950 and became an authority in strategic defense systems. He was one of the Boeing managers who developed the Minuteman missile program. He was the author of technical works, dealing with gyro-dynamics and navigation systems of missiles, many of which are still used in university instruction.

After leaving the Pentagon in 1972, he returned to Boeing as space systems division vice president. From 1974 to 1979, he was vice president for business development, and was Boeing's vice president for advanced missile programs at the time of his death.

He was reared in Oregon and earned a bachelor's degree in physics and mathematics at the University of Portland. He served in the Navy during World War II.

Survivors include his wife, Susan, a sister, and 10 children, all of Seattle. [...]

1946 (June) Military Draft enrollment for Ben Telfer Plymale



FORM APPROVED
Budget Bureau No. 33-R012-42

REGISTRATION CARD (Men born on or after July 1, 1924, and on or before December 31, 1924)
(Also for the registration of men as they reach the 18th anniversary of the date of their birth on or after January 1, 1943.)

SERIAL NUMBER	1. NAME (Print)			ORDER NUMBER
W 254-C	Ben (First)	Telfer (Middle)	Plymale. (Last)	12,988-C

2. PLACE OF RESIDENCE (Print)
3932 N. E. Alameda, (Number and street) Portland, 13, (Town, township, village, or city) Mult. (County) Oregon. (State)
[THE PLACE OF RESIDENCE GIVEN ON LINE 2 ABOVE WILL DETERMINE LOCAL BOARD JURISDICTION; LINE 2 OF REGISTRATION CERTIFICATE WILL BE IDENTICAL]

3. MAILING ADDRESS
same as line 2.
(Mailing address if other than place indicated on line 2. If same, insert word same)

4. TELEPHONE	5. AGE IN YEARS	6. PLACE OF BIRTH
We. 2065. (Exchange) (Number)	20 DATE OF BIRTH May (Mo.) 23 (Day) 1926. (Yr.)	Medford, (Town or county) Oregon. (State or country)

7. NAME AND ADDRESS OF PERSON WHO WILL ALWAYS KNOW YOUR ADDRESS
Mrs. B. H. Plymale, same as line 2. (Mother).

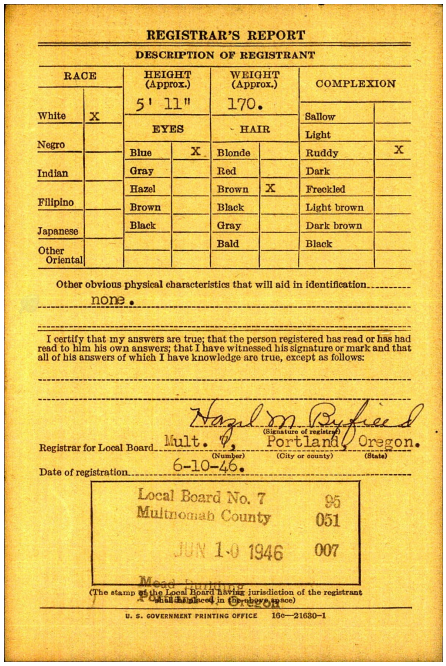
8. EMPLOYER'S NAME AND ADDRESS
Discharged 7 June 1946 from the U. S. Navy.

9. PLACE OF EMPLOYMENT OR BUSINESS
(Number and street or R. F. D. number) (Town) (County) (State)

I AFFIRM THAT I HAVE VERIFIED ABOVE ANSWERS AND THAT THEY ARE TRUE.
(Registrant's signature) Ben P. Plymale

DSS Form 1 (Rev. 11-16-42) 16—21630-4 (OVER)

[HG00BC][GDrive]



REGISTRAR'S REPORT

DESCRIPTION OF REGISTRANT

RACE		HEIGHT (Approx.)	WEIGHT (Approx.)	COMPLEXION	
White	X	5' 11"	170.	Sallow	
Negro		EYES	HAIR	Light	
Indian		Blue X	Blonde	Ruddy	X
Filipino		Gray	Red	Dark	
Japanese		Hazel	Brown X	Freckled	
Other Oriental		Brown	Black	Light brown	
		Black	Gray	Dark brown	
			Bald	Black	

Other obvious physical characteristics that will aid in identification: none.

I certify that my answers are true; that the person registered has read or has had read to him his own answers; that I have witnessed his signature or mark and that all of his answers of which I have knowledge are true, except as follows:

Hazel M Byfield (Signature of registrar)

Registrar for Local Board Mult. (Number) Portland, (City or county) Oregon. (State)

Date of registration 6-10-46.

Local Board No. 7 95
Multnomah County 051
JUN 10 1946 007

(The stamp of the Local Board having jurisdiction of the registrant is affixed in the space above)

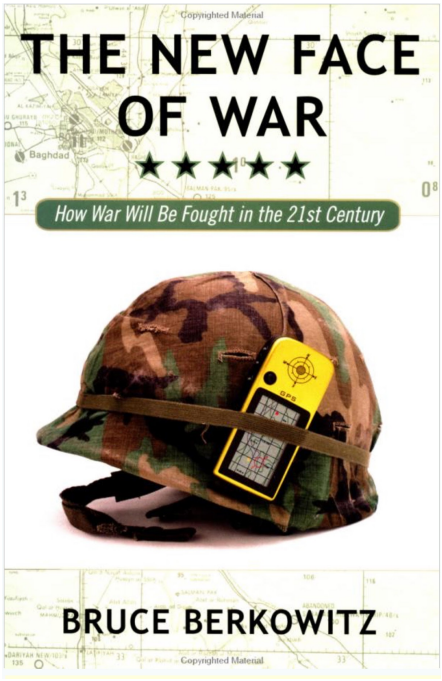
U. S. GOVERNMENT PRINTING OFFICE 16—21630-1

[HG00BD][GDrive]

The New Face of War: How War Will Be Fought in the 21st Century Paperback – October 26, 2007

By Bruce D. Berkowitz

- Amazon purchase : https://www.amazon.com/New-Face-War-Fought-Century/dp/1416584528
- 2003 version : https://archive.org/details/newfaceofwarhoww00berk
- My purchase, 2007 version, text) Chapter 4 (of The New Face of War: How War Will Be Fought in the 21st Century Paperback – October 26, 2007 by Bruce D Berkowitz) below - [HB0052][GDrive]



[HB004X][GDrive]

Chapter 4 THE ASYMMETRIC WARRIOR

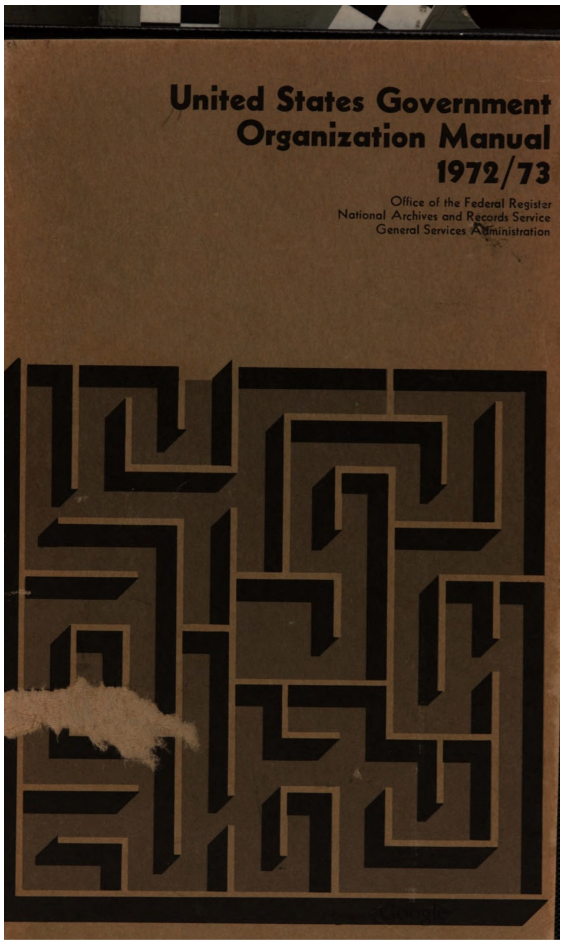
[...]

As one connection led to another, [Thomas P] Rona himself came to Washington a few years later**. Ben Plymale, a vice president at Boeing and former defense official from the Nixon administration, was Rona's friend and mentor.** Plymale introduced Rona to William van Cleve, a professor at the University of Southern California. Van Cleve had been an adviser to Ronald Reagan during the 1980 campaign and was directing the Defense Department transition team for the new administration. Rona started working for van Cleve, and soon caught the eye of [**William Robert Graham (born 1937)**], who was also working on the transition and was about to become Reagan's new director of the White House Office of Science and Technology Policy. Graham offered Rona a job as deputy director. [...]

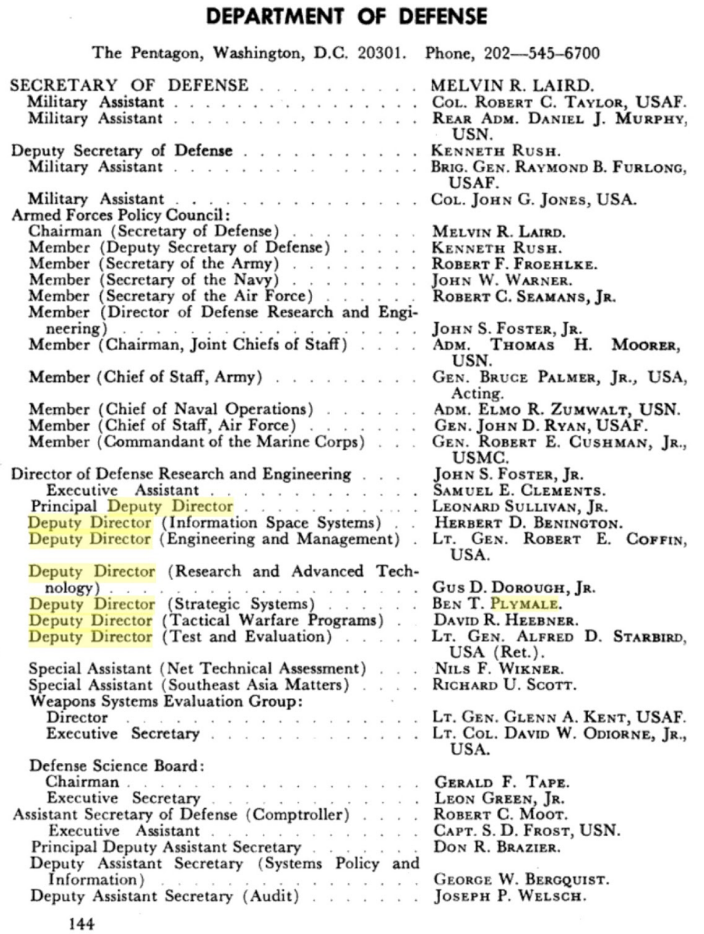
1972 US Federal Register

PDF : [HG008T][GDrive]

Plymale worked for **Dr. John Stuart Foster Jr. (born 1922)** : "***John Stuart Foster Jr.*** *(born September 18, 1922) is an American physicist, best known as the fourth director of Lawrence Livermore National Laboratory and as Director, Defense Research and Engineering under four Secretaries of Defense and two Presidents."*



[HG008U][GDrive]



DEPARTMENT OF DEFENSE

The Pentagon, Washington, D.C. 20301. Phone, 202—545–6700

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Military Assistant	REAR ADM. DANIEL J. MURPHY, USN.
Deputy Secretary of Defense	KENNETH RUSH.
Military Assistant	BRIG. GEN. RAYMOND B. FURLONG, USAF.
Military Assistant	COL. JOHN G. JONES, USA.
Armed Forces Policy Council:	
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Executive Secretary	LT. COL. DAVID W. ODIORNE, JR., USA.
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Deputy Assistant Secretary (Audit)	JOSEPH P. WELSCH.

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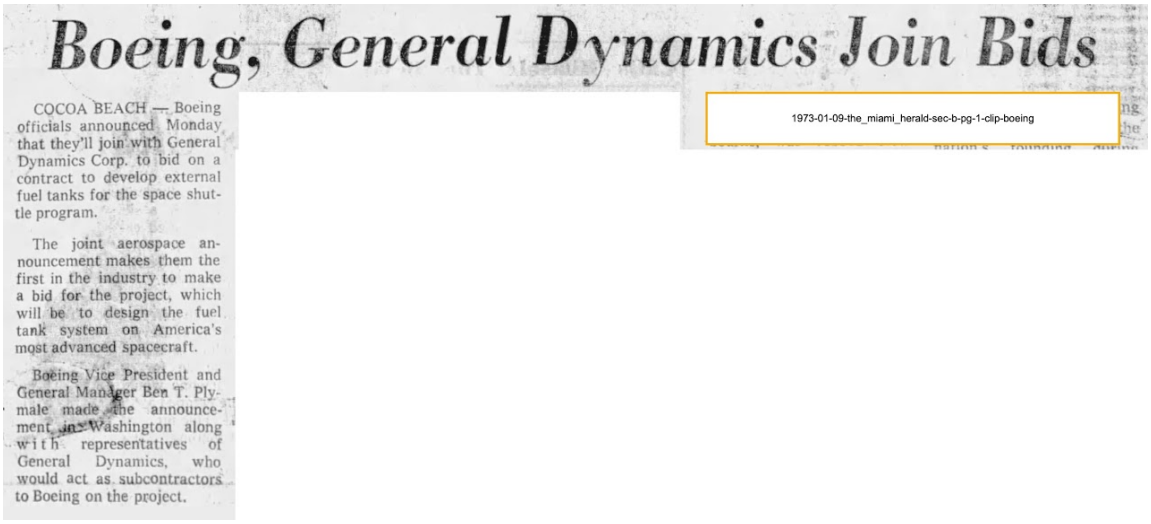
1973 (Jan 09)

Full newspaper page : [HN01H6][GDrive]



Boeing, General Dynamics Join Bids

1973-01-09-the_miami_herald-sec-b-pg-1-clip-boeing

COCOA BEACH — Boeing officials announced Monday that they'll join with General Dynamics Corp. to bid on a contract to develop external fuel tanks for the space shuttle program.

The joint aerospace announcement makes them the first in the industry to make a bid for the project, which will be to design the fuel tank system on America's most advanced spacecraft.

Boeing Vice President and General Manager Ben T. Plymale made the announcement in Washington along with representatives of General Dynamics, who would act as subcontractors to Boeing on the project.

[HN01H7][GDrive]

1974 (Sep 26)

Full newspaper page : [HN01H8][GDrive]

Spokane Chronicle (Spokane, Washington) · 26 Sep 1974, Thu · Page 41

Ex-Test Pilot Gets New Job

SEATTLE (AP) — A former Boeing test pilot has been named vice president-general manager of the Boeing Aerospace Company's Strategic Systems Group.

Lionel D. Alford succeeds Ben T. Plymale, who will head a newly established Boeing unit, Requirements and Market Analysis.

Alford will head programs involving the Minuteman short range missile, air launch cruise missiles, Advanced Systems Development and Spacecraft Branch.

[HN01H9][GDrive]

1979 (March 02)

Full newspaper page : [HN01HA][GDrive]

Boeing confirms Pentagon probe

SEATTLE (AP) — The security classifications of six Boeing Co. employees have been suspended pending a Pentagon probe of possible security leaks, the airplane manufacturer has confirmed.

Boeing spokesman Pete Bush said Thursday the firm was cooperating fully with the government's investigation, "but we aren't prejudging our employees because we question whether any criminal laws have been broken."

He confirmed that six Boeing employees, including a vice president, had lost their security clearances pending the investigation.

The Boeing vice president was identified as Benjamin T. Plymale, aerospace marketing chief and a former deputy assistant secretary of defense for strategic and space systems.

The Wall Street Journal on Thursday identified three other Boeing officials involved as William H. Jacaway, a Plymale assistant; Charles Welling, manager of Boeing's aerospace office in Washington, D.C., and James L. O'Rourke, a marketing representative in the Washington office.

1979-03-02-longview-daily-news-longview-washington-pg-9-clip-boeing-pentagon-probe

The Pentagon is referring the case to the Justice Department for possible criminal prosecution, the Journal said.

Boeing officials refused to confirm the names, but Bush said two of those involved were secretaries.

Jacaway was working in Boeing's Kent offices Thursday but couldn't be reached for comment. Welling and O'Rourke were on "administrative leave," said a Boeing spokesman in Washington, D.C.

Richard Albrecht, Boeing vice president and general counsel, issued a written statement saying the firm always demanded strict adherence to security regulations and that Boeing had "cooperated as fully as possible" with the probe.

"The investigation does not involve an attempt by Boeing to gain a competitive advantage in any overpayment program," and no classified information, to the best of the company's knowledge, was conveyed "to any unauthorized person," Albrecht added.

The Journal quoted unnamed investigators as saying the Boeing employees handled the classified information in such a way — transmitting it over a normal telephone line — that "Pentagon officials believe it probably was intercepted by Soviet intelligence agents."

The Journal also said the information involved came from a document the Pentagon was preparing last March for President Carter on whether the administration should build a new land-based intercontinental ballistic missile. Billions of dollars in potential business for Boeing hinges on the administration's ultimate decision.

The administration is still trying to decide whether to build a new missile, called the MX, or proceed with some cheaper alternative to modernizing the nation's strategic arsenal. The Air Force wants to deploy the MX and make it mobile.

At the time of the reported security breach, Boeing was competing to become the prime contractor for the MX contract. Another company later was chosen, but Boeing could still gain large contracts if the administration goes ahead with the mobile deployment program.

The Journal said that earlier this year, O'Rourke, testifying under a grant of limited immunity from criminal prosecution, told investigators he had read the secret draft of the document destined for President Carter, made notes and prepared a summary which was sent by telecopier from Boeing's Washington office to its Seattle headquarters.

Pentagon sources presume, according to the Journal, that the information "was routinely collected by Soviet agents, who, they say, monitor telephone lines to and from defense contractors."

The information in the memo seen by O'Rourke included a suggestion that involved placing the Lockheed Corp.'s Trident missile, designed for launch from submarines, into existing Minutemen silos. Such a move would reduce Boeing's opportunities to participate in the program.

[HN01HB][GDrive]

1979 (March 12)

Full newspaper page : [HN01HE][GDrive]

12-AW ○○○○ THE MIAMI HERALD Monday, March 12, 1979

Missile-X Data Available for the Asking, General Says

By ARNOLD MARKOWITZ
Herald Staff Writer

The Boeing Co. might have been able to use normal channels to get top-secret missile information that the Defense Department accuses it of obtaining and transmitting by unauthorized means, an Air Force general said.

The way a Boeing representative got the information and sent it to his office in Seattle has caused an investigation and the suspension of six Boeing officials' security clearances. It also has made the giant aerospace company vulnerable to possible criminal prosecution.

ACCORDING to the New York Times and the Wall Street Journal, the Defense Department believes the unauthorized transmission of the information by normal telephone lines probably permitted it to fall into Soviet hands.

All the same, Brig. Gen. Guy Hecker said his Pentagon office is, "not worried about it."

Hecker, in Homestead Wednesday for a speech, is the Air Force special assistant for Missile X matters.

Missile X, better known as the M-X missile, is planned as a potential replacement for Minuteman III.

A Pentagon investigative report described last Friday by The New York Times said Boeing marketing representative James O'Rourke learned a top-secret Defense Department memo about the M-X system was being prepared. He is said to have tipped off his boss, Benjamin T. Plymale.

AT THE time, Boeing hoped to become the missile system's prime contractor, a job later awarded to Martin-Marietta. O'Rourke persuaded an Air Force lieutenant colonel to let him see a copy of the memo, and to let him make notes.

O'Rourke, cooperating with investigators under a grant of limited immunity, said he wrote a summary of the memo and sent it to Boeing headquarters by telecopier. The Defense Department believes the Soviet Union is able to monitor microwave relays over which such messages are sent, and that the Soviets probably learned about the memo.

Last March 28, Deputy Undersecretary of Defense Seymour L. Zeiberg is reported to have talked with Boeing's Plymale. Plymale's statements made Zeiberg suspicious that Plymale had seen the secret memo. When Zeiberg asked him how he knew so much, Plymale reportedly replied that his information came from a brown envelope sent to Boeing by an unknown source.

ZEIBERG'sS suspicions about Plymale's story led to the investigation. According to The Times, the investigators charged Boeing employes tried to stymie them by destroying real documents and creating fakes. The report said the truth came out only when O'Rourke, Boeing's man in Washington, agreed to tell it.

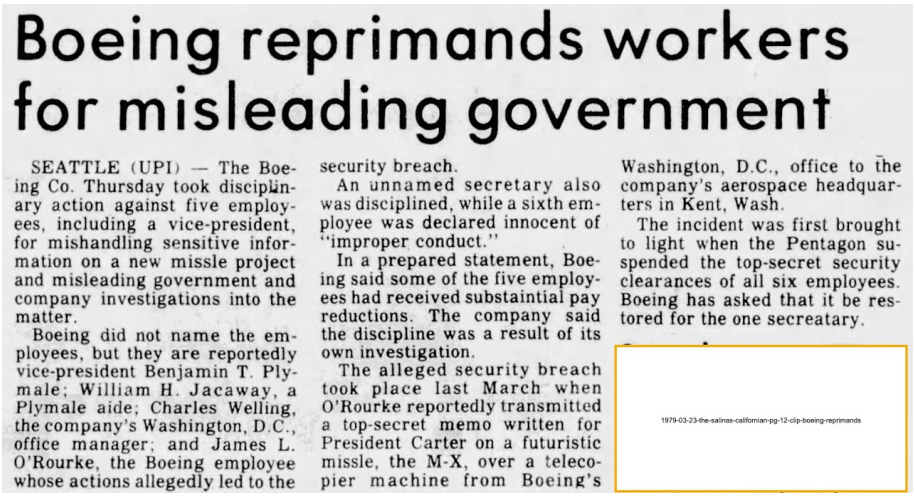
Gen. Hecker said Boeing could have obtained information on the missile system through official channels.

He said there is a regulation outlining "how all information is treated. It outlines what the accessibility is, who has clearance and so on. It prescribes the proper way to give information to contractors. They have a right and a need to know what we're doing and the mechnanism allows that flow of information to exist."

[HN01HF][GDrive]

1979 (March 23)

full newspaper page : [HN01HC][GDrive]



Boeing reprimands workers for misleading government

SEATTLE (UPI) — The Boeing Co. Thursday took disciplinary action against five employees, including a vice-president, for mishandling sensitive information on a new missle project and misleading government and company investigations into the matter.

Boeing did not name the employees, but they are reportedly vice-president Benjamin T. Plymale; William H. Jacaway, a Plymale aide; Charles Welling, the company's Washington, D.C., office manager; and James L. O'Rourke, the Boeing employee whose actions allegedly led to the security breach.

An unnamed secretary also was disciplined, while a sixth employee was declared innocent of "improper conduct."

In a prepared statement, Boeing said some of the five employees had received substaintial pay reductions. The company said the discipline was a result of its own investigation.

The alleged security breach took place last March when O'Rourke reportedly transmitted a top-secret memo written for President Carter on a futuristic missle, the M-X, over a telecopier machine from Boeing's Washington, D.C., office to the company's aerospace headquarters in Kent, Wash.

The incident was first brought to light when the Pentagon suspended the top-secret security clearances of all six employees. Boeing has asked that it be restored for the one secreatary.

1979-03-23-the-salinas-californian-pg-12-clip-boeing-reprimands

[HN01HD][GDrive]

1980 (Nov 27)

Full newspaper page : [HN01BZ][GDrive]

Reagan aide temporarily lost security clearance at Boeing

SEATTLE (AP) — A Boeing executive who is serving as a defense adviser to President-elect Reagan was once disciplined for breaching national security on a top-secret report on the MX missile system, a Reagan aide has acknowledged.

Ben T. Plymale, adviser on Reagan's Defense Department transition team, was demoted and temporarily lost security clearance in 1979 while serving as marketing vice president of the Boeing Aerospace Co. He improperly acquired and handled a top-secret report on the MX prepared by the Pentagon for President Carter.

The security leak was revealed in March 1979. A year-long Defense Department investigation showed that Boeing's Washington, D.C., representatives obtained a copy of the secret memo from Pentagon officials. The memo was sent by telecopier from Washington, D.C., to Seattle on an "open" rather than a "secure" phone line.

Results of the Defense Department probe were turned over to the Justice Department, but no criminal charges were filed.

Boeing spokesman Pete Bush said Tuesday that Plymale's security clearance was later reinstated by the Defense Department.

"Once it's restored, you're back where you were," Bush said.

Plymale was unavailable for immediate comment. He is on paid leave from Boeing, where he coordinates the development of flight instrumentation for the new 757 and 767 aircraft.

Plymale was deputy director for strategic and space systems in the Office of the Director of Defense, Research and Engineering, from 1968 to 1972 in the Nixon administration.

Charles Kupperman, assistant leader of Reagan's Defense Department 13-member transition team, said officials were aware of Plymale's involvement in the security breach, but "he's been fully exonerated of all that."

Kupperman said Plymale is a good engineer who knows defesne strategy and production. "If we're serious about this, then that's the kind of people we need," he said.

1980-11-27-pensacola-news-journal-pg-19a-clip-boeing

[HN01C0][GDrive]

1981 (Jan 15)

Also mentioned - **William Robert Van Cleave (born 1935)** .

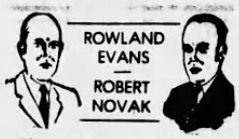
Full newspaper page : [HN01BX][GDrive]

1981-01-15-the-marion-star-pg-4-clip-weinberger

Inside Report

Weinberger Makes It Clear Who Is Boss

WASHINGTON — Unease within the defense community over Caspar (Cap) Weinberger has blossomed into panic now that the secretary of defense-designate has booted out "Reaganaut" military advisers, trashed their recommendations and at least opened the door for soft-liners.



The certain appointment of Frank Carlucci, the Carter administration's deputy CIA director, as deputy secretary of defense is the visible tip of concealed events. In a Dec. 20 shouting match, Cap the Knife fired defense expert William Van Cleave as transition chief, blackballed him and his team from Pentagon posts and consigned their reports to ash cans. Since then, a collection of personalities never connected with strong defense have been edging into the Reagan transition.

The most charitable explanation is that this is no conspiracy but the product of Weinberger's nearly total ignorance on defense questions, which was fully revealed in his Senate confirmation hearing. But assuming Weinberger finally learns the names and issues involved, he has lost valuable time in revising defense spending and lost invaluable experts he badly needs.

In this as in other transition wars these past two months, Ronald Reagan's presence is barely felt. There has been no gesture from either the president-elect or his chief aide, Ed Meese, that they regard a radical reconstruction of the nation's depleted defenses as top priority.

Consider the Reagan-Meese view toward Weinberger's insistence on Carlucci, a civil servant with no Defense Department background, as deputy secretary. Reagan's "kitchen cabinet" unanimously recommended against it, as did his defense transition team. The president-elect might then have suggested saving the deputy secretary's spot for an expert. Instead, Reagan acquiesced.

That was the situation when Van Cleave, Reagan's defense adviser throughout the campaign, went to California Dec. 20 to brief Weinberger. The secretary-designate was in an ugly mood. He unjustly believed Van Cleave was responsible for a press campaign against Carlucci.

An icy Weinberger informed Van Cleave that he and his team's services were terminated forthwith. The hot-tempered Van Cleave shouted that his responsiblity was to advise Reagan himself and Weinberger could not fire him. Weinberger shouted back that Van Cleave was deceiving himself; he was gone.

Weinberger was correct. Early in the transition period when Van Cleave crossed swords with transition overseer William Timmons, a Timmons aide asked Meese whether Van Cleave was under the president-elect's protection. No, replied Meese, fire him if you want. The trouble blew over temporarily, but Reagan has not come to his defense adviser's aid.

Van Cleave was not the only victim. His team's members, including some of the nation's leading military experts, are blackballed. That includes the highly-esteemed Ben Plymale of Boeing, who made the disastrous Dec. 20 trip west with Van Cleave. Plymale had been expected to be an adornment of the Reagan Pentagon as under secretary for research.

The defense plans fastidiously prepared by Van Cleave, Plymale and associates will never be read by Weinberger. That may well prevent any Reagan hurry-up plans for accelerated spending in the current fiscal year.

Pentagon offices formerly occupied by the Van Cleave team are now mostly empty. In charge of the skeleton crew there is an old Weinberger-Carlucci comrade from HEW days in the Nixon administration: William Howard Taft III, a Washington lawyer who knows even less about defense than Weinberger and Carlucci. Yet, incredibly, Taft has wound up on the list for the department's No. 3 post; under secretary for policy.

Taft has been conferring on defense matters with Richard Stubbing, a Carter administration anti-defense expert at the Office of Management and Budget (OMB) whose views generally coincide with Sen. George McGovern's. With Reaganauts exiled to oblivion, among those briefing Weinberger for his confirmation hearing were two Carter officials; Jack Stempler, assistant defense secretary for legislative affairs, and Brig. Gen. Carl Smith, military assistant to Defense Secretary Harold Brown.

Carlucci has been consulting with his close friend (another HEW old hand), John Rhinelander — who was a passionate arms-controller as a State Department lawyer. Carlucci told us Rhinelander will not go into the Reagan administration and denied he even knows Barry Blechman, a former Carter administration arms-controller now at the Carnegie Endowment. But a memo circulating on Capitol Hill lists Blechman as a possible assistant secretary of defense.

There are antidotes. Secretary-designate Alexander Haig has moved quickly to install a Reaganaut staff at the State Department. The National Securtiy Council (NSC) staff will be filled with Reaganauts, possibly including Van Cleave. Despite his less-than-reassuring confirmation testimony, Weinberger may soon learn enough to reflect Reagan's philosophy in personnel and policy. But for now, one Senate conservative is calling Weinberger "another Harold Brown with one difference — Brown knows something about defense."

Bible Digest

"A man's pride shall bring him low: but honor shall uphold the humble spirit." Proverbs 29:23 Pride is a killer that has slain many spiritual giants. When a person gets wrapped up in himself he makes a pretty small package.

"I am the bread of life." John 6:48 In an age of miracles and mechanism, it is a sad report that half of the world goes to bed with empty stomachs, because the other half retires with empty hearts.

[HN01BY][GDrive]

2016 (Nov 02) Blog - "National Security Violations, Murder Cover-Ups, Secret Families and Corruption"

Source - [HW005F][GDrive]

Much of the above comes from the **1995 book When the Pentagon Was For Sale by Andy Pasztor**, in which Ben features prominently.

https://archive.org/details/whenpentagonwasf00pasz/page/n5/mode/2up

Ben [Playmale's] best friend was [Melvyn Robert Paisley (born 1924)], a colleague and fellow executive at Boeing. In the late 1960s, Melvyn lived on a farm in Kent, Washington and was married to his second wife, a younger woman named **Mary Lou** who enjoyed painting as a hobby. **Then on May 8, 1968, Mary Lou's dead body was discovered in their home in suspicious circumstances. She was found in the bathroom, lying face down and her head was surrounded by towels laced with carbon tetrachloride, a toxic cleaning fluid that she used to clean her paint brushes. The story that Melvyn gave was that she had gotten drunk and she took sleeping pills the night before and then accidentally asphyxiated herself with the cleaning fluid.** There was a police investigation and an investigation by the coroner. Her death was officially ruled an accident and the matter was officially dropped.

Despite the cause of death ruling, the matter was not dropped entirely; mostly because Mary Lou's sister didn't believe the official version of events. It became clear that there was more to the story, and the possibility of a cover-up and a murder became plausible. Twenty years later, when Melvyn was being investigated for separate corruption charges while working in the Pentagon, the case was reopened by King County. **It became clear that there were many inconsistencies and inaccuracies with the autopsy report, including the fact that the report found no traces of alcohol or sleeping pills in her system and the fact that the coroner who performed the report also worked for Boeing and somehow kept the report from review by his boss, the head coroner. There was also the revelation that not long before her death, Mary Lou had discovered or speculated that Melvyn was having an affair and had hired a private investigator to follow her husband. (Seven months later, Melvyn married the woman he was having an affair with.)**

Also damning was that – according to phone records – after Melvyn discovered his wife's body, the police was not the first number he called. The first number he called was his attorney and the second was his best friend, Ben Plymale. Then that morning, my grandfather's wife Susan went over to their house to clean it before the county authorities arrived. Susan apparently cleaned or threw away what the investigators assumed was vital evidence. That afternoon the investigators also noted that a fire was burning in the fireplace, which they remarked as unusual because it was May and not cold outside. The inference was that some evidence was probably incinerated in the fire.

Although the investigation was reopened in 1988, no additional charges were ever filed and Mary Lou's death still remains classified as an accident. However, given the circumstantial evidence, it is likely that there was more to the story. Was Mary Lou Paisley was murdered? If so, my grandfather and his wife were directly involved with covering up the crime. Interestingly, for decades after the fact, the case of Mary Lou Paisley was used an example by the King County Sheriff's Office as an example of how *not* to investigate a crime scene. [...]

Sep 10 1981 - Congressional Records

GRATEFUL TRIBUTE TO BEN T. PLYMALE by HON. JACK F. KEMP OF NEW YORK IN THE HOUSE OF REPRESENTATIVES

PDF : [HG008Q][GDrive] / Text of this speech : [HG008R][GDrive]

September 10, 1981 EXTENSIONS OF REMARKS 20245

ROY WILKINS

HON. CARDISS COLLINS

IN THE HOUSE OF REPRESENTATIVES

Thursday, September 10, 1981

GRATEFUL TRIBUTE TO BEN T. PLYMALE

HON. JACK F. KEMP

IN THE HOUSE OF REPRESENTATIVES

Thursday, September 10, 1981

[HG008S][GDrive]

Mr. KEMP.

Mr. Speaker, on August 8, I lost a friend-and the United States lost a patriot. His name was **Dr. Ben T. Plymale**, a brilliant defense strategist and engineer. Ben's formidable talents were placed in service of the Nation on many occasions: From 1968-72, when he served as Deputy Director of Defense Research and Engineering, and most recently as second in command of the Defense transition team.

Ben's judgment in matters of national security was held in highest regard by his professional colleagues, bringing distinction to the Boeing Corp., which he served with singular dignity and loyalty for 30 years. But his friends will remember him best for his forthright honesty; his knack for seeing the essence of any issue or individual, and stating his opinions without hesitation or equivocation; and the special touches of humor that could come only from him,

reflecting both his sense of realism and the uncompromising principles by which he lived.

While critically ill from cancer and a failing heart, Ben devoted countless hours and bottomless energy to the campaign and transition work for Ronald Reagan. A leading candidateand my personal choice-for Undersecretary of Defense for Research and Engineering, Ben withdrew his name from consideration for the office because he feared that his poor health might impinge upon his ability to continue to serve in an official capacity. But his advancing illness did not detract from his unofficial, uncompensated service to the Nation, as he completed work on the alternative defense budget President Reagan commissioned his campaign task forces on defense to prepare, and he actively participated in internal debates over the future of U.S. strategic forces. With this, and much more, how can we begin to measure the contributions Ben has made to the security of our Nation?

I am proud to have known Ben Plymale, and to offer this tribute as a token of my gratitude for his advice and friendship and for the high service he rendered the United States.

At my request, just a week before his death, Ben prepared discussion papers on several key issues in the MX-ICBM debate. Now I believe it only fitting that I share this work with my colleagues, that the country might have the benefit of his counsel one more time:

ISSUE PAPERS BY DR. BEN T. PLYMALE

I. LAUNCH ON WARNING OF ICBM'S

"Launch on Warning" is being discussed as one of the possible options to ensure survivability of ICBM's against preemptive enemy arguments related to this option.

The Launch on Warning concept calls for launching our ICBM's following warning information to the effect that enemy missiles are actually on their way, and are aimed at our ICBM launch sites. In this sense, Launch on Warning <LOW) is not preemptive, since it will only take place upon reliable evidence that the enemy has actually fired its first strike.

On the pro side of the LOW issue, one must recognize that if our ICBM's are launched on warning, they will "survive", in the sense that they will destroy the intended targets (subject to the usual attrition factors due to reliability and penetration). It is also possible, although by no means proven, that the improvements in the warning and command and control systems which could make the Launch on Warning concept technically acceptable would result in somewhat lesser overall cost than looking to completely new systems to ensure survivability.

The arguments against the attractiveness of the LOW concept are many and interacting. For reasons of clarity, they are grouped here into four categories: Technical, Military, Policy and Cultural.

1. Technical

The LOW concept depends on sensors to detect that an attack is in progress, on communication links to relay the sensed information, on data processing equipment where sensed information is combined to gain increased confidence, and requires an override <or veto> function, to give the President or National Command Authority the option of circumventing automatic response.

Under many situations, many different types of sensors can be used to enhance strategic warning and increase system confidence. However, we must provide protection against a totally unexpected <surprise> attack or be vulnerable to its consequences. Only satellite sensors and early warning radars are useful in this context. In the LOW context, false alarms, due to equipment failures that report an attack are catastrophic in that they result in an unwarranted nuclear war, so a high degree of equipment redundancy is absolutely required. Failures that result in not reporting an attack when one is in progress are also catastrophic. When the attacker can cause such failure he is motivated to attack rather than be deterred. When these are not caused by the attacker, he may be deterred to some extent, but the survivability feature of LOW has, nonetheless, failed.

In any redundant systems, some form of "voting" mechanism is needed to reject or accept the inputs received from the sensors. While the sensors and communication networks can be made highly redundant, in the end the "voting" mechanism will be the weakest link in the confidence building chain. Within our ability to forecast and plan, the technology state of the art will not support a data processing mechanism with sufficient confidence to chance a nuclear war when one is not called for.

The LOW veto power given to the NCA is more cosmetic than real and may indeed be counterproductive as discussed below. If the NCA had any independent basis on which to execute a veto, such basis would be incompatible with the LOW mechanization to increase its reliability and confidence.

Even though the performance of the warning, command and control system can be tested to a certain degree in the field, the possible destruction by means of enemy attacks on key elements, or the possible degradation by means of enemy countermeasures cannot be accurately predicted or essentially precluded. This introduces a further element of uncertainty in the decision process implied in LOW approach to survivability.

2. Strategic

Our deterrent capability against the Soviet Union is further weakened by allowing the Soviet decision makers any room for doubt about the reliability of our retaliatory strikes. If it is possible for the Soviets to interfere with our warning, command and control systems even for the short time span required for the LOW to offer its alleged advantages, then such doubt becomes possible with possibly catastrophic consequences.

The short period preceding the irrevocable commitment of our missiles in the LOW mode precludes retargeting, i.e., changing the targeted aimpoints prior to launch. This, of course, deprives the ICBM force of one of its most attractive attributes, flexibility coupled to accuracy.

Retention of a secure reserve force, capa-· ble of supporting our national objectives over long protracted periods of nuclear warfare, is considered as a paramount requirement of our strategic posture. To various degrees, the other elements of our strategic TRIAD exhibit deficiencies in regard to this essential characteristic of endurance. Making the ICBMs dependent on LOW for survival would in effect deprive this segment of the TRIAD from any degree of enduring survival.

3. Policy

Our policy is, and is expected to remain, to endure any conceivable attack on our strategic nuclear forces and to decide the appropriate response following careful assessment of our then apparent national interests and objectives. Under no circumstances should the President be faced with the dilemma of either losing significant fraction of all strategic nuclear forces, or launching them against a previously established target set which may not at that time be consistent with our national interest. If for instance our ICBMs are targeted in the "counterforce" mode, they may be simply wasted on empty enemy

launchers. If our LOW salvo is even partially aimed at Soviet urban/industrial targets, we may precipitate a Soviet retaliatory strike against our own cities. This could result in excess of 100 million U.S. fatalities. If the original attack was limited to our ICBM force and we survived the attack, assessed damage and limited our response to a counterforce attack we might well be able to terminate hostilities with as little as 10 million fatalities. An automatic LOW response almost guarantees the deaths of half or more of our population.

The LOW concept implies that the President has the capability to effect a massive ICBM launch against Soviet targets by simply not exercising his veto power to stop and otherwise irrevocable LOW process. In effect then, the President can, by default, start a nuclear war on the basis of the (possibly automated) command and control decision process, overlaid by his personal judgment in regard to a matter of such momentous consequences. He may, if there is time, consult his personal advisers, but he is more likely to make the ultimate decision on the basis of his own deeply held standards, convictions and prejudices. The Cabinet may not be at hand on short notice; but consultation with Congress, as required by law in matters of exercising war powers, is certainly out of the question.

4. Cultural

Irrespective of the formally prescribed process for leasing nuclear weapons, the individual exercising the functions of the National Command Authority <NCA) faces a problem of unprecedented nature and magnitude when it comes to commit, or not to veto, the massive use of nuclear weapons. When the decision must be taken in a matter of minutes, when the views of the advisors are confused or conflicting, and when the outcome would result in certain death for tens of millions of human beings, it is almost certain that the NCA's decision will be against the launch of our weapons. This simple fact deeply rooted in our cultural background, is largely independent of the political persuasion of the individuals involved and cannot be changed by additional refinement in equipment or procedures. It is a massive argument against the alleged survivability afforded by the Launch on Warning concept.

II. BALLASTIC MISSILE DEFENSE OF ICBM'S

Introduction

Solutions to the ICBM survivability question, with major emphasis on basing alternatives, have been studied by the past four administrations, examined in depth by innumerable expert panels and committees, and further reviewed extensively by the Congress. Alternative survivable ICBM deployments were analyzed based on proposals from basement inventors, universities, "think tanks", major defense contractors, and the Armed services.

As a result of this exhaustive public review and the ongoing R&D program, the MX MPS system advantages and disadvantages are well understood. However, an uneasiness still persists with respect to some perceived disadvantages of MX MPS basing-such as the environmental impact. This continuing uneasiness has led to a compulsion to discover a quick and easy answer. An active defensive system or ABM is now a candidate to solve the ICBM survivability problem. But is the ABM technology ready and can the proposed ABM concept do the job? ABM systems have not been given serious consideration in recent years because of concern over < 1) adequacy of ABM technology in the nuclear environment, (2) effectiveness against a reactive threat, (3) MPS shelter proliferation cost advantage over ABM total costs, and (4) ABM treaty constraints.

LoAD's ability to improve MX survivability is doubtful

The LoAD system, proposed to defend MX MPS, may cause MX to fail catastrophically by contributing to compromise in Position Location Uncertainty <PLU) before an initial attack. LoAD also could cause MX to fail catastrophically if a low level "spoof" attack forces LoAD to reveal the MX location, even if pre-attack PLU is not compromised. LoAD was not designed to engage a responsive Soviet threat, which might include maneuvering RV's, anti-radiation homing RV's, jammers, decoys, or a myriad of other potential countermeasures.

The ability of ABM's to protect ICBM's launchers in known locations has not been proven adequately

An ICBM, in a silo of known location, will be subject to saturation attack, not only on itself, but also on any defensive system designed to protect it. The reason that no U.S. operational ABM system exists today is that no one has been able to show cost effectiveness and technological feasibility for such a system.

Abrogation or modification of the ABM Treaty will be done deliberately, not by default

There exists in Congress a significant number of members who look to SALT type treaties to guarantee a stable strategic balance with the Soviets. If the current ABM treaty is to be modified or abrogated, Congress will insist that such action be weighed and argued on its own "arms control" merits rather than backing into such a decision by committing ABM for the defense of our ICBM's.

Conclusion

At this point, it is premature to make a major commitment to ABM defense of ICBM's. However, ABM systems show sufficient promise to warrant aggressive R&D, within the confines of the existing treaty, to resolve the critical technical questions while the larger national security issues related to ABM undergo the test of public debate.

III. AIR LAUNCHED MX IN THE CONTINUOUS AIRBORNE ALERT BASING MODE ("BIG BIRD")

1. The continuous airborne alert basing mode for the air launched MX does not satisfy the major mission requirements

The continuous airborne alert basing concept calls for deployment areas over the oceans. Such deployment is, to a considerable extent, vulnerable to surprise attack. The Soviets are in position to develop specifically tailored "reactive threats," including surveillance and weapon delivery, which could in a time frame well within our planning horizon, preempt the MX force. Typical surveillance systems might be based on land or ship-based over-the-horizon <OTH> radars or satellite radars: weapons could be delivered by long-range strike aircraft equipped with terminally guided air-to-air semi-ballistic or cruise missiles.

The potential Soviet threat to the MX carrier aircraft over international waters does not require the use of nuclear weapons to be effective. Individually targeted air-toair or surface-to-air interceptor missiles have at present operationally demonstrated short miss distances which result in very high aircraft kill probabilities while using conventional warheads. The potential for attrition and even preemption is a destabilizing factor in the strategic balance.

The continuous airborne alert based aircraft are severely limited in postattack endurance. The airborne endurance of the currently contemplated carrier aircraft is, at best, six to eight days. With less than ten nuclear weapons the enemy can destroy the main operating bases provided for recovery; with a few hundred weapons the enemy can destroy dispersed emergency recovery airfields as well. In both instances, this is a very small price for him to pay to force us either to launch the MX missiles <which may result in immediate escalation to uncontrolled levels of general nuclear warfare, including attacks against

our cities), or to lose the whole MX system for lack of usable recovery bases.

Airborne deployment, especially when constrained to slow, low-flying (propeller) aircraft in the interest of fuel economy, has all the disadvantages of placing major nuclear assets over broad ocean areas not under sovereign U.S. control. In this sense, airborne deployment has the disadvantages of submarine basing without the corresponding unique benefits of submarines: relatively long on-station endurance <up to 60 days) and being essentially unaccessible to wide-area surveillance.

2. The effectiveness of the proposed implementation concept<s> is open to question

The current configuration of the MX missile has not been defined in keeping with the requirements for air launch. Its size, range, and_payload capability are not even close to that -needed for an air launch role. There is no evidence based on test programs to show that an MX-size missile can be launched from the proposed aircraft. No commitment to such a system should be made until this capability is verified by tests.

It is possible, and indeed likely, that other missile configurations <two Minuteman III missiles or several small, single reentry-vehicle missiles in the 20 to 25,000 lb. gross weight range) may be more suitable for the air launch deployment role.

In order to ensure even a minimal level of protection against surprise attacks, major defense assets (sea/air based air and antimissile defense) would have to be diverted from the U.S. general purpose forces. The cost of these defensive assets must be included when assessing the effectiveness of the airborne alert type deployment. Defensive assets will have to be provided from our heavily committed general-purpose forces inventory, if the enemy chooses to increase his preemptive threat against the MX airborne deployment.

The cost for the enemy to preempt an airborne alert based weapon system is considered to be much smaller than the resources required to preempt the MX in their landbased multiple shelter mode. The latter, for sake of comparison, imply the expenditure of 4,600 high-accuracy warheads or, alternatively, remarkably sophisticated intelligence/ surveillance, retargeting capabilities.

Air-deployed intercontinental missiles not having access to accurate azimuth references will have delivery accuracy significantly inferior to those associated with land-based ICBM's. This can be remedied at the additional cost of radio beacon based inflight updating, which in tum introduces its own vulnerability risks.

Relatively low altitude, fuel efficient flight profiles (5,000 to 15,000 ft.) and propulsion techniques are required in order to give a minimum level of airborne endurance (six days). Such flight profiles imply accident rates far exceeding those normally associated with modern jet aircraft, and certainly far in excess of those associated with land basing. Extended deployment ranges may require flight through turbulent atmospheric regions where the accident rate would be higher still.

The MX missile design is not best suited for airborne carriage. In point of fact, the specially developed airplane which is being proposed may not be necessary. It is an open question whether one should design the carrier aircraft for one large missile with ten warheads or for two or three Minuteman III's with three warheads each, or perhaps for several small missiles each carrying a single warhead.

The number of trained crews is significantly larger than the number of airplanes in the air all the time. Six-day continuous airborne missions are beyond the experience to date.

3. The continuous airborne alert basing has a number of undesirable side effects

The number of peacetime takeoffs and landings with the associated risk of crashes involving live nuclear weapons raises the question of environmental impact due to plutonium contamination. The problem could be partially solved by redesigning and procuring oralloy based warheads, but such designs and weapons are not now available in stockpile.

Attacks against the main operating bases or against the emergency recovery bases, aimed at destroying the endurance of the airborne deployment could result in several tens, and possibly hundred, million casualties.

4. A number of technical, schedule, and cost risks are associated with the continuous airborne alert basing

Nuclear hardening of MX-carrier aircraft.

Ejection of missile from aircraft, postlaunch stresses and flight dynamics.

New navigation/ guidance initialization system.

New, dedicated special-purpose missile carrier aircraft.

Design of all-oralloy nuclear warheads.

All these put an early IOC date at considerable risk.

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https://minutemanmissile.com/documents/EchoesThatNeverWereMobileIntercontinentalBallisticMissiles1956-1983.pdf

ECHOES THAT NEVER WERE: AMERICAN MOBILE INTERCONTINENTAL BALLISTIC MISSILES, 1956-1983

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Steven Anthony Pomeroy

The Seattle Times (Jan 14, 1990) - `The Fall Guy' Speaks Out -- But Convicted Ex-Boeing Official Refuses To Name Sources

[HN01C1][GDrive]

By Duff Wilson / COPYRIGHT, 1990, Seattle Times Company

CUTLINE: DON PREISLER: ON THE WALLS OF HIS HOME IN SPRINGFIELD, VA., RICHARD FOWLER KEEPS NUMEROUS MEMENTOS FROM HIS DAYS OF DEALING WITH PENTAGON OFFICIALS AS MARKETING ANALYST FOR THE BOEING CO., AMONG THEM THIS PLAQUE SIGNED BY FRIENDS IN THE PENTAGON.

A few days before he was sentenced to prison for his part in what prosecutors called a black market in classified Pentagon budget documents, former Boeing official Richard Fowler spoke on the record for the first time about his work, his case and the reasons he chose to go to jail rather than reveal his sources. He talked for more than 20 hours with Seattle Times reporter Duff Wilson, on condition his remarks not be published before his sentencing last Friday.

SPRINGFIELD, Va. - In a rented brick townhouse on a quiet street here last week, **Richard L. Fowler**'s friends and relatives phoned to wonder why he didn't just tell authorities what they wanted to know.

Had he talked, he might not be in jail today.

For more than four years, federal investigators had zeroed in on the man they would call the defense industry's mother lode of classified Pentagon documents. It ended with the shutting of a cell door Wednesday morning, when Fowler went to jail for refusing to say who gave him the secret budget documents. On Friday, he received a two-year prison sentence for passing them on to The Boeing Co. and other major defense contractors.

All along, Fowler has insisted it was the job that a Boeing vice president had specifically hired him to do.

He thought it was legal. He said everybody was doing it. It was ``as common as trading baseball cards.''

Now Fowler, 64, describes himself as ``the fall guy'' in a government ``witch hunt'' to plug the Pentagon leaks. But he refuses to name the sources, despite the pleas of lawyers and family members.

``Yeah, I know I make you mad,'' Fowler told a friend on the telephone a few days before he went to jail. ``I've made a lot of people angry, and a lot of people don't understand, and I'm not asking that people understand. But if I talked, I wouldn't be able to face myself in the mirror.''

Fowler, a senior marketing analyst for Boeing between 1978 and 1986, is the first person to be convicted in what prosecutors said was a far-reaching conspiracy among employees at Boeing and other defense contractors with whom he shared and traded the documents.

On Dec. 7 Fowler was convicted of one count of conspiracy to defraud the government, 18 counts of conveying government documents without authority, five counts of converting the documents to his use and 15 counts of mail fraud for having them sent to Boeing.

But his own view is that the investigation and prosecution of him boiled down to a test of ``my integrity, trustworthiness and loyalty.''

In one of a stack of ``position papers'' he has painstakingly hand-written over these past many months, Fowler says, ``I am here today not for what I did; I'm here for what I did not do'' - name his sources. Fowler says he was offered immunity in March 1987 if he would cooperate. The chief investigator on the case said his office checked with prosecutors and they could not recall any such offer. But no one disputes that Fowler's sources are the ultimate goal of the continuing federal probe.

``Good, patriotic, honest government employees who had no idea what they were doing was wrong,'' Fowler calls them, his voice rising with emotion.

He shuffles through his piles of notes to remind himself of all that has happened. He has lost weight and developed a skin condition from nerves, he says.

Though his lawyer advised him against giving any interviews, he is talking, he says, because he feels the public might understand what the justice system did not.

The Pentagon classifies its spending projections for weapons systems largely to keep them out of the hands of meddlesome members of Congress before they are finalized and presented by the president, according to Fowler and two other former Pentagon workers who knew him. They said the plans were often informally released to companies in the defense-contracting business so they could do a better job of using research money and preparing to compete for contracts.

Fowler's job was to obtain Pentagon financial and budgetary information for Boeing. From years of work inside the Pentagon, he had the best Air Force sources. He swapped ``secret'' documents with industry representatives who had better sources in the Army, Navy and Office of the Secretary of Defense. Fowler, who had government clearance to handle ``secret'' documents legally given to him, entered the documents in a Boeing log book and assumed the practice was legal because Pentagon inspectors checked the log every six months.

Boeing officials have admitted that the company acquired and used the documents, but stopped five years ago. Boeing spokesman Paul Binder says the company will have no other comment on the Fowler case. And Fowler has taken on the singular responsibility of protecting the sources who made him a success at Boeing.

His sources' jobs, their pensions, perhaps even their freedom, are at stake, Fowler says. He knows the experience of personal ruin.

After 25 years of government work and eight years at Boeing, Fowler is nearly broke. He and Muriel, his wife of 35 years, owe back taxes. They rent their

After 35 years of government work and eight years at Boeing, Fowler is nearly broke. He and Muriel, his wife of 35 years, owe back taxes. They rent their house, lease their cars. They are getting by on Muriel's job with a real-estate office and his $231-a-month Boeing pension. Their federal pension went down the drain with the felony conviction.

``There isn't a soul out there who can put themselves in our shoes,'' says Muriel Fowler, 62. ``And I'm not talking hardened criminals - I'm talking patriotic, law-abiding citizens. Right now I am very bitter, and I'm not through fighting yet. That's all I'm going to say.''``Of course my family has some reservations,'' Richard Fowler says of his decision to protect his Pentagon sources. ``They'd have to. Like my daughter, at the beginning, the very beginning, said `Dad, I'd rather have a snitch for a father than a jailbird.' And then she's turned completely around, and now she's saying `My father's a hero.' ''

``I have to admire him,'' Muriel Fowler admits. ``But I don't always understand it.''

Fowler said the sources didn't need to ask him to assure their anonymity when he was getting several hundred classified budget documents over the years. They didn't imagine they were doing anything criminal. And the sources haven't needed to beg him - or even thank him - for keeping the secret since.

In fact, Fowler said, he hasn't heard a word from any of his old sources in nearly two years.

``I don't care what they expect or don't expect,'' Fowler says with the kind of resignation acquired from years of preparing to go to prison. ``I'm doing this out of my own - what do I say? compassion? - my own self-respect.''

He thinks his sources are ``smart enough to just stay away and have no contact. I mean, these are not people who are inconsiderate, but they know enough to keep a respectful distance.''

Boeing has kept its distance, too. Nobody from Boeing telephoned Fowler for a year and a half until last week. Then three employees called to wish him well. One said he had gotten his supervisor's permission to phone

``Well, I can understand why I haven't gotten a lot of calls from people,'' Fowler said. ``They don't know what to say. All I can say is, hell, I can take it, because I can hold my head up high.''

Why is Fowler so steadfastly protecting his sources?

``We wonder about it all the time,'' an in-law said.

The price Fowler is paying also causes people to wonder if he has hidden motives.

Is he being paid off? Investigators have never suggested that Fowler, his sources or Boeing was involved in payoffs or bribery of any form. The only money involved was Fowler's salary, which rose from $29,500 to $56,200 during eight his years with Boeing.

So, is he protecting some military brass or Boeing executive? Again, nobody connected to the case has alleged that. Fowler was a middle-level worker with a high-school education. He said he kept his nose to his work and stayed out of company politics. Fowler's concerns are with smaller, more personal things, like his old friends' pensions.

Is it possible he is making the sources up? Did he sneak into the Pentagon and steal the documents to impress Boeing? ``Absolutely not,'' says the chief of the investigation, Michael Costello of the Defense Criminal Investigative Service, a Pentagon watchdog.

There is simply no explanation to rival the one that Fowler gives - that he got the documents from old friends, whom he will not betray.

``If you're in trouble, why pull somebody else in with you?'' Fowler asks.

Costello wants the leakers punished to send a message to other people who might give away classified documents.

``They were put in a position of trust, and they violated that,'' Costello said in a recent interview. ``They independently and capriciously made decisions to give this information to an individual who was not entitled to it by any stretch. There are a lot of reasons these people should be slam-dunked.''

But so far, Fowler is the only one convicted in the case. And so far, he's taken his punishment with equanimity. He stood erect before the jurors who found him guilty, and looked them calmly in the eye.

For now, Fowler is willing to go to jail for his Pentagon sources, though he sees a point when he might name them. In nine months, it will have been five years since he received his last classified document from one of them. The statute of limitations on criminal charges will expire.

Costello agreed that the statute of limitations was ``the controlling factor'' in the investigation of the leaks. He said the government has a good idea who the sources are, but not enough to prosecute.

``We need a little bit to put this thing over the edge, and Fowler could be that,'' he said. ``We'll see how long he can sit in jail.''

The case has national importance. With or without his sources, Fowler set the precedent in what Costello says will be similar prosecutions this year of ``a lot of people and a lot of companies'' that were involved in unauthorized use of Pentagon budget documents.

Fowler says he has handled classified documents since he was a 16-year-old messenger for the War Department. His father was a civil engineer who helped build one side of the Pentagon. During World War II as a gunner, the younger Fowler suffered a broken neck when a B-29 went down in the ocean during a training exercise.

Fowler missed action because of the accident, but he did report to the Philippines and flew over Hiroshima and Nagasaki four days after the atomic bombs hit.

Fowler went to work as a civilian in the Pentagon the next year. He progressed through the ranks until he reached a job in the Air Force Research and Development office.

``The job was challenging. I had established myself. I had a good name.''

And there he stayed for 18 years. As a budget officer for missile programs, Fowler had frequent contact with Boeing and other contractors. He received the Award for Meritorious Civilian Service, the Pentagon's top award for a civilian.

At home, Fowler took pride in his principles. He picketed a local car dealer for two days when the dealer wouldn't fix a problem on his teen-age son's new car.

Fowler quit the Pentagon in 1978. He said President Jimmy Carter's zero-based budgeting was a paperwork nightmare. Shortly after that, Boeing offered him a job. Fowler said he was hired by Ben Plymale, then vice president for marketing. (Plymale died in 1981.)

Fowler says Boeing had scores of marketing analysts who were all trying to get inside information, including budget projections, at the Pentagon. Fowler's job was to get those budget documents, freeing up his fellow analysts for other areas.

Fowler says Plymale told him his sources were nobody's business, and Boeing's security chief told him it was legal as long as he entered the documents into Boeing's classified-documents security system.

Financial intelligence-gathering was nothing new at Boeing. When Fowler joined Boeing in 1978, a woman named Gloria Mahaffey was operating a secret library in the company's office in Kent. Boeing kept its cache of classified Pentagon budget documents there for review by select marketing officials, Mahaffey said at Fowler's trial.

In 1979, for reasons that are unclear, Boeing began handling the classified documents with tighter security. They were all logged into the company's classified documents accountability system in Rosslyn, Va. Inspectors for the Defense Investigative Service checked the log twice a year, and they didn't raise questions until 1986.

Fowler said the log was one reason his Pentagon sources trusted him so much. They knew Boeing was handling the documents carefully. He said it was also a reason the government targeted Boeing. They had a road map to the evidence.

The worst mistake Fowler will admit to is putting some of the classified information in his weekly activity reports. Those were not classified. In some cases, his superior repeated the information in his own report, which was circulated to 268 Boeing employees.

Fowler says Boeing wanted the documents for many reasons. The company could direct its research money to areas the Pentagon was planning to finance. It could look for opportunities to compete.

Fowler was named one of Boeing's Marketing Employees of the Quarter in June 1986. Everything was going along fine - fine, that is, until the Pentagon's Defense Investigative Service started raising questions.

Behind the scenes in the early 1980s, Defense Department investigators and the Department of Justice had been trying to decide whether to crack down on the bootlegging. It was part of a broader move to plug leaks.

One former head of the Defense Procurement Fraud Unit of the Justice Department argued that the cases were not conspiracies. A Defense Department inspector general appealed to higher-ups to pressure the Justice Department to bring a case.

In October 1985, Bernie Zettl, a consultant for the Connecticut-based GTE Corp., was indicted.

Fowler says Boeing speeded up its usual schedule of destroying out-of-date documents after he heard a warning that contractors should get rid of their classified Pentagon documents.

Push came to shove over Fowler's sources in 1986. The Defense Investigative Service challenged Boeing's possession of 59 classified budget documents.

Fowler told a company investigator that he had obtained the reports from five friends in the Air Force Research and Development office. He says he was conned into identifying one of them, who had retired, on the promise that investigators would be satisfied the leak was plugged.

But that was not enough, he says. And after he saw the ``devastated look'' on that source's face when he told him the news, Fowler resolved never to reveal another source.

Boeing fired Fowler in September 1986. He says he is not bitter.

``They had no choice but to fire me,'' Fowler explains. ``I violated the industrial security manual by not cooperating with the investigation. Boeing was facing suspension from government contracts if they didn't do something.''

Boeing, he says, is the best company he ever worked for.

Muriel Fowler scoffs at the idea. ``You got screwed, and you didn't even get a kiss!''

Fowler, sipping a mai tai, shrugs. ``I can't do nothin' about it.''

Last year, Fowler says, the government twice offered him plea bargains on crimes with a maximum penalty of 15 years in prison if he gave up his sources. He says he rejected those offers, too.

Fowler's stubbornness grew as his trial approached last month. He was hoping to get off. He lost the gamble.

Six officials with other companies and 10 current and former Boeing workers were granted immunity as part of the Fowler prosecution. Former Defense Secretary Frank Carlucci and a number of generals testified that the classified reports should never have been released; Fowler responds that they were out of touch with the reality at the working level.

The jury deliberated just two hours. One juror later said many of the jurors had believed Fowler was a scapegoat but had no choice but to convict him.

Fowler's insistence on protecting sources had influenced the trial strategy. He says one of the main reasons he did not testify on his own behalf was that he believed he would have been asked once again to name his sources. When he refused, he could have been held in contempt of court. That would have meant going to jail and missing Christmas at home with his family.

Last Monday, Fowler's lawyer sent him one more appeal to name the sources. The lawyer, Cary Feldman, wrote Fowler that investigators already had a good idea who the sources were. He argued that Fowler's cooperation with a grand jury probe would not hurt the sources much, if he didn't tie them to specific documents.

Refusal, Feldman warned, would mean certain jail time and possibly a longer prison sentence.

Fowler didn't budge. On Tuesday, he says, he told the federal grand jury he could only reveal the sources for documents named in 162 of the 334 ``overt acts'' cited in his indictment. Those sources were dead or had been granted immunity. They were employees of Boeing or other contractors.

Fowler says he feels free to speak about Boeing because the company obtained immunity for its employees' acts as part of a corporate plea agreement last

November.

Boeing itself, unscathed by other recent contracting scandals, admitted guilt to one felony for receiving classified budget reports and agreed in a negotiated plea bargain to pay $5.2 million restitution and fines.

Boeing made nearly $3 million per working day in profits last year.

``The Boeing Company's fine, in exchange for total immunity, was a bargain, but appears to have sacrificed a single participant,'' retired Air Force Lt. Col. Richard C. Coupland Jr. wrote in a letter to U.S. District Judge Albert Bryan Jr. before Fowler's sentencing.

Boeing's field office in Rosslyn is applying for reinstatement from a suspension action that has prevented its estimated 100 employees from having contact with government contract officers.''

Meanwhile, Boeing's work can be done from its other offices - ``as if nothing had happened,'' says Charles H. Welling Jr., manager of Boeing Aerospace Company's field marketing offices from 1974 to 1979, who also wrote the judge on Fowler's behalf.

``Although Dick broke the law, he never derived any personal gain from his actions but was always motivated by a desire to benefit the company,'' wrote Welling, who had helped hire Fowler.

At a Christmas party last month, a group of Pentagon and industry people were talking about the Fowler case and agreed they had let him down, according to one industry consultant who used to work with Fowler at the Pentagon.

``Everybody in the industry is scared,'' he said. ``What could we do? Speak up for Dick? If we did, we'd probably be targeted.''

Anthony Asterita of Mount Vernon, Va., worked with Fowler in the Pentagon between 1974 and 1978, then retired at the rank of lieutenant colonel and went to work in the industry. He said the ``secret'' budget information actually had little value and was widely shared through the early 1980s.

``The value to a contractor like Boeing is to structure long-range planning,'' Asterita said. ``And who benefits from it? The military benefits from it, because you have a more informed industrial base.''

Asterita said he had to admire what Fowler has done in protecting his sources from harm.

``The guy has made a lot of thought about it, I'm sure,'' he said. ``He is sacrificing family life at his age, which is children and grandchildren, in order to stick to what he believes.''

1983 (March 16) - NY Times - "BIG SEVERANCE PAYMENTS BY BOEING TO 3 PENTAGON AIDES UNDER INQUIRY"

[HN01C2][GDrive]

By Jeff Gerth, (March 16, 1983)

A Federal grand jury is investigating the cases of three Boeing Company executives who received at total of $400,000 in severance payments when they left the company in 1981 to take high-level Defense Department positions in the Reagan Administration, according to officials in the Government and the company.

The investigation, which began last summer, according to law enforcement officials, is to determine whether the severance payments were larger than or different from those normally paid by Boeing to executives who resign, whether they constituted a conflict of interest and whether the officials reported the payments properly on the public financial statements Government officials must file.

It is against the law for companies to pay extra compensation to employees who enter the Government. The officials under investigation are [Melvyn Robert Paisley (born 1924)], Assistant Secretary of the Navy for research, systems and engineering; T.K. Jones, Deputy Under Secretary of Defense for strategic theater nuclear forces, and Herbert A. Reynolds, Deputy Director of the Defense Department's Office of Intelligence and Space Policy.

Mr. Jones and Mr. Paisley declined numerous requests for interviews and did not respond to written inquiries left with them last week. But, according to Government officials, they denied any wrongdoing when questioned by Federal investigators.

Mr. Reynolds said that whatever he received from Boeing was "perfectly proper." "I haven't done anything wrong," Mr. Reynolds said. "Boeing is not going to gain from what I do. If I have any residual loyalty it's to the Government, where I served 27 years, not to a company where I spent five years." Mr. Reynolds was for 27 years an Air Force officer before retiring as a lieutenant colonel and going to work for Boeing.

The Defense Department declined to comment on the investigation. Boeing, in a statement, said that it was fully cooperating with the Government's requests for information and that the company "has done nothing unlawful, unethical or otherwise improper."

The so-called revolving door between the Defense Department and military contractors has often been studied, but, according to authorities in the area, this may be the first time that a criminal investigation has focused on payments to aerospace executives entering the Pentagon.

Boeing was the nation's sixth largest defense contractor last year, receiving $3.2 billion in fiscal year 1982, up from $2.6 billion in 1981 and $2.3 billion in 1980, Defense Department figures show. Last year, the head of Boeing's aerospace divisions predicted that further gains could be expected over the next few years, in part because of more than a billion dollars in expected new contracts with the Navy.

The Secretary of the Navy, John F. Lehman Jr., who was a consultant to Boeing before taking office in 1981, is also under investigation by the Justice Department, according to Government officials. Mr. Lehman has denied any wrongdoing.

Consulting Company Involved

The Lehman inquiry is separate from the Boeing investigation. It involves the Abington Corporation, a defense-related consulting company owned by Mr. Lehman, the officials said. Before 1981, Abington earned $350,000 a year from Boeing, and Mr. Paisley was the main point of contact between Boeing and Abington, according to a former Abington employee. The issue in the Lehman investigation, according to authorities, is Mr. Lehman's handling of his interest in Abington after he entered the Government.

After taking office in 1981, Mr. Lehman retained his ownership of Abington and, for $60,000, gave the use of Abington's name abroad temporarily to Lord Chalfont of Britain. Lord Chalfont said he had retained some of Abington's clients, including Boeing.

Boeing declined to disclose the size of the severance payments and other compensation to Mr. Paisley, Mr. Jones and Mr. Reynolds or to say how they compared with those of other employees of comparable rank. Government officials said the payments to the three men totaled $400,000, but the officials did not provide a breakdown. Public records and other documents show these figures:

Mr. Paisley earned a total of $180,000 in salary from Boeing in 1980 and the first part of 1981, according to a financial disclosure statement dated June 1981, three months before he left the company. The statement also showed holdings of $100,001 to $250,000 in Boeing's Voluntary Investment Plan. Mr. Paisley and Boeing had contributed to this.

Records from a 1980 divorce case show much lower income in previous years and an investment plan value of only $68,000 as of September 1979. The supervisor of Boeing trust funds' accounting department said she was puzzled how the value of Mr. Paisley's investment program holdings could rise so much in 21 months.

Mr. Jones, in a June 1981, financial disclosure statement, listed a 1980 salary from Boeing of $68,200. For 1981, he originally showed income of $176,900, but that figure was crossed out and changed to $200,300, which included "income from company sponsored investment plans."

Mr. Reynolds's disclosure statement, dated July 1981, listed no income or payments from Boeing, where he was employed from 1976 until Aug. 1, 1981. Mr. Reynolds said that his income from Boeing was a private matter and that Defense Department officials had told him he was not required to disclose his Boeing salary.

David R. Scott, acting head of the Office of Government Ethics, said that incoming Government officials like Mr. Reynolds were required under the law to disclose any income they received in the previous two years. Mr. Reynolds said he would disclose his compensation if asked by the Defense Department. A Defense Department lawyer said today that Mr. Reynolds was asked to amend his original disclosure statement after investigators learned of his severance payment. The lawyer said that the Justice Department took jurisdiction of the case away from the Pentagon before Mr. Reynolds fully complied with the request.

No Direct Involvement Seen

After the investigation began, the three men, at the request of the Defense Department, disqualified themselves from dealing with matters involving Boeing, according to a Pentagon lawyer. The lawyer said that he did not know whether they had dealt with Boeing before they disqualified themselves.

From 1970 to 1979, 388 officials moved back and forth between Boeing and the Pentagon, the largest for any military contractor, according to a 1981 study by the Council on Economic Priorities, a nonprofit research group.

There are many ties between Boeing and the Reagan Administration. They date from the transition period, when the deputy head of the Reagan transition team for the Defense Department was a Boeing vice president, Benjamin T. Plymale. Mr. Reynolds said he served with Mr. Plymale on the transition team. Mr. Plymale, who died in August 1981, supported the choice of Mr. Lehman and Mr. Paisley for their Government positions, according to Administration sources and former Boeing employees.

Mr. Plymale also helped introduce Mr. Lehman and Mr. Paisley, according to former associates. Other Administration officials with ties to Boeing include Richard N. Perle, Assistant Secretary of Defense for international security policy, who worked for Mr. Lehman's Abington Corporation and did consulting work for Boeing, according to public documents, and Ronald M. Mann, who left Boeing for the White House, where he is associate director for Presidential personnel in the national security area.

One Finds Severance Small

Neither Mr. Perle nor Mr. Mann is under investigation. Mr. Mann said that Boeing's 1981 severance payments to him, $13,000 according to Mr. Mann's financial disclosure statement, were less than generous. Mr. Mann, whose salary at Boeing for 1980 and part of 1981 was $65,000, said he did not participate in Boeing's voluntary investment plan.

The investigation of Boeing's severance payments was referred to the Justice Department from the Defense Department after the Defense Contract Audit Agency came across the payments, according to Government officials. The audit agency examines the books of military contractors and evaulates the acceptability of costs claimed or proposed.

According to Government officials, the three Defense Department officials denied any wrongdoing in interviews with the Federal Bureau of Investigation, which is assisting in the investigation. The bureau also interviewed Boeing officials, the officials said.

One Federal law on conflict of interest at issue in the investigation is Title 18 Section 209, which makes it a crime for the salary of Government officials to be supplemented by non-Government sources.

Lawyers for Boeing said they could not find record of any criminal prosecutions under this staute in the last 65 years. The statute became an issue last year when, after news accounts of the matter, Attorney General William French Smith returned a $50,000 severance payment he had received from a company upon entering the Government.

Norms for Severance Involved

According to Government lawyers, a key factor in any prosecution under Section 209 would be whether the severance payments to an person who resigned to enter the Government differed from severance payments to other employees.

Boeing has several programs under which employees receive compensation upon leaving. The basic terms are detailed in the company's proxy statement.

In a statement, Boeing says it had "as is commonplace in industry, paid severance compensation to employees who left the company to enter Government

In a statement, Boeing says it had, "as is commonplace in industry, paid severance compensation to employees who left the company to enter Government service." The statement did not address the question of how payments to Mr. Paisley, Mr. Reynolds and Mr. Jones compared with compensation paid other employees who left Boeing.

Details about some of Mr. Paisley's compensation from Boeing came out in the divorce trial in Seattle in 1980. According to court records of the proceeding between Mr. Paisley and Mildred, his third wife, and his income tax returns, his average income from 1974 and 1979 was $60,000 a year. By contrast, for 1980 and part of 1981, Mr. Paisley earned a total of $180,000 from Boeing, according to his financial disclosure statement.

Value of Investments at Issue

In October 1979, in response to a subpoena, Boeing told Mrs. Paisley's lawyer that as of Sept. 1, 1979, Mr. Paisley's Voluntary Investment Plan was valued at $68,000. In the June 1981 financial statement, Mr. Paisley placed his holdings in the $100,001-to$250,000 bracket.

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Portsmouth Gaseous Diffusion Plant

Wikipedia Portsmouth Gaseous Diffusion Plant

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[HK005A][GDrive]

The **Portsmouth Gaseous Diffusion Plant** is a facility located in Scioto Township, Pike County, Ohio, just south of Piketon, Ohio that previously produced enriched uranium, including weapons-grade uranium, for the United States Atomic Energy program and U.S. nuclear weapons program. The plant is in shutdown status and is in preparation for decontamination and decommissioning (D&D), with some facilities overseen by the United States Enrichment Corporation, a subsidiary of USEC Incorporated, a publicly traded corporation (NYSE: USU). The D&D work on the older facilities to prepare the site for future use is expected to continue through 2024 and is being conducted by Fluor-B&W Portsmouth LLC.

The Portsmouth plant, so named because of its proximity to the city of Portsmouth, Ohio, was one of three gaseous diffusion plants in the United States, alongside the K-25 plant in Oak Ridge, Tennessee and the Paducah Gaseous Diffusion Plant in Kentucky. The plant was constructed from 1952–1956, with the first enrichment cells going online in 1954. The plant was operated by the Goodyear Tire and Rubber Company from its startup to 1986, when the contract was taken over by Martin Marietta. In 1993, the USEC took overall responsibility for the Paducah and Portsmouth enrichment plants, continuing the operating contract with Martin Marietta. In 1995, the operator became Lockheed Martin with the merger of Martin Marietta and Lockheed. In May 2001, the Piketon plant ceased operations and was placed in cold standby. In 2006, the site work shifted into cold shutdown transition in preparation for future Decontamination and Decommissioning (D&D).

The former gaseous diffusion plant covers 640 acres (260 ha) of the 3,777-acre (1,528 ha) site. The largest buildings, the process buildings, have a combined length of approximately one and a half miles (2.4 km), and cover about 93 acres (38 ha) and contain 10 million square feet (0.93 km^2) of space. In use, the plant consumed a peak electrical demand of 2,100 megawatts.[1]

A commercial centrifuge plant at the Portsmouth site began construction in May 2007 for the production of commercial nuclear fuel for power reactors. Once completed, the commercial plant will use approximately 11,500 centrifuge machines to generate 3.8 million separative work units(SWU) a year.[2]

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History – The Portsmouth Project[edit]

In August 1952, the U.S. Atomic Energy Commission (AEC) selected Scioto Township, a rural area occupied by family-owned farms, as the site for a new gaseous diffusion plant to produce highly enriched uranium, U-235, for use in military reactors and nuclear weapons production. Located near the junction of

the Scioto and Ohio rivers, the site was chosen due to the economic availability of electric energy, availability of water for plant operation, adequate potential labor, suitable transportation facilities, geographic traits, and relative flatness of the topography.[3]

The project was given expedited priority. **Due to this prioritization, construction of the site had to start before all the architectural drawings for the site were completed. The Oak Ridge operations of the AEC set up an organization designated "The Portsmouth Area" to direct construction and operation of the plant, select engineers, construction contractors, schedule delivery of critical materials, and any other contingency.** Uniform agreements were set up between labor and management to minimize the number of stoppages. Early planning and organization took place in improvised offices in city buildings of Portsmouth, including the National Guard Armory, the Elks City Club, and the old farmhouses on the site itself. Nine architect engineer firms shared in the design of the plant, producing 12,000 design drawings, 40,000 construction drawings, and 16,000 shop drawings. Advanced planning and scheduling were extremely important because the plant was designed to go into operation, or "on stream," as soon as each unit or segment in a process building was completed while construction continued in other parts of the building.

Groundbreaking for the plant was November 18, 1952. Earthmovers began leveling the rolling farmland for the building foundations on the same day. One hundred thousand short tons (91,000 t) of structural steel, 14,500 short tons (13,200 t) of reinforcing steel in the concrete floors, 600 miles (970 km) of process piping and 1,000 miles (1,600 km) of copper tubing were used in the construction of the three process buildings. An additional 1,000 miles (1,600 km) of tubing ran through the rest of the plant and into the control rooms. Five hundred thousand cubic yards (380,000 m^3) of concrete were required to complete the project. To support this, a separate concrete batching plant was constructed on plant site to serve all contractors. It produced 200 cubic yards (150 m^3) of concrete per hour. It took 70 million man hours for construction.

Two railroad lines, financing their own work, built spurs into the area to haul in building materials and heavy equipment including 22 miles (35 km) of track on site. Twenty-five miles (40 km) of roads were laid in the plant area as well as a seven-mile (11 km) perimeter road that encircles the plant.

The original estimate for construction was four years at a cost of $1.2 billion. Construction was carried out by Peter Kiewit and Sons of Nebraska at a cost of $750 million. The site was completed several months ahead of schedule at 34 percent below the original cost estimate at a $400 million savings.

Operation[edit]

Operations began in 1954 while construction was ongoing with the plant coming fully online in early 1956, several months ahead of schedule.

The primary mode of enrichment was the gaseous diffusion of uranium hexafluoride to separate the lighter fissile isotope, U-235, from the heavier non-fissile isotope, U-238. The plant initially produced material for the U.S. nuclear weapons program. In the mid-1960s, the plant converted to fuel production for commercial nuclear power plants. Portsmouth took material from Paducah that was enriched to 2.75% U-235 and further enriched it to approximately 4% and 5%.[4][5]

The Portsmouth plant had a capacity of 8.3 million separative work units per year (SWU/year) in 1984 in 4,080 stages. Three buildings, X-326, X-330 and X-333, housed gaseous diffusion equipment.[6] Three cooling tower complexes, X-626, X-630, and X-633, were used to remove process heat. Six hundred eighty-nine million US gal (2,610 million l) of water went through the 11 cooling towers daily, of which 20 million US gal (0.076 billion l) evaporated into the air. Water came from well fields installed at the Scioto River supplying 40 million gallons per day when operating at full capacity.

To support operations, the AEC entered into the largest contract for a single customer in the history of the electrical utility industry for power at that time. Power usage was equal to the all-time high voltage requirements in the United States, more than 2,000 megawatts - 18 billion kilowatt hours yearly. To handle the power requirements, two large switchyards were constructed on site. Two large steam electric generating stations were built to supply power at Clifty Creek in Madison, Indiana and Kyger Creek in Gallipolis, Ohio. At the time, they were the largest power plants built by private industry as well as the most efficient, producing 1 kilowatt hour of electricity for 0.7 pounds (0.32 kg) of coal. The power plants used 7.5 million short tons (6.8 million t) of coal annually to support operations.

In May 2001, USEC ceased uranium enrichment operations at the Piketon plant and consolidated operations in Paducah. The following year, transfer and shipping operations were also consolidated in Paducah.[2][3] Although USEC had nine years time and had received the funding, USEC ceased the Portsmouth enrichment cascade in a dirty power down, without purging the diffusion cells.[7] Geoffrey Sea wrote in September 2013 that USEC's demise will be either by creditors (by October 2014 loan repayment deadline), "regulators who find their spines", or by "repeal of the USEC Privatization Act by Congress."[8]

DUF6[edit]

DUF6 Conversion facilities are located at the Paducah Gaseous Diffusion Plant near Paducah, KY and the Portsmouth Gaseous Diffusion Plant near Piketon, OH. Each facility consists of four buildings- a conversion building, an administration building, a warehouse and a KOH Regeneration building, as well as rail heads, five large acid storage tanks and lay-down areas for DUF6 steel cylinders. In 2002, DOE awarded Uranium Disposition Services, LLC (UDS) a contract to design, build and operate the DUF6 conversion plants to convert the DUF6 to uranium oxide and hydrofluoric acid. In December 2010, DOE awarded B&W Conversion Services, LLC (BWCS) a contract to operate the DUF6 Conversion Plants through March 2016. Babcock & Wilcox Conversion Services (BWCS) completed the transition of the contract for initial operations of the DUF6 Project in March 2011. Both plants are expected to be fully operational in fall 2011.[9][10]

Centrifuge separation[edit]

USEC ceased enrichment operations at the Portsmouth Gaseous Diffusion Plant in May 2001 after it consolidated operations at the Paducah Gaseous Diffusion Plant in Kentucky. USEC began working with the U.S. Department of Energy (DOE) in 2000 to resume gas centrifuge enrichment operation activities, which DOE originally began developing in the early 1960s. During the 1980s, DOE had begun construction of a centrifuge enrichment plant at the Portsmouth site before abandoning the project in June 1985 after spending $3 billion. USEC sited its Lead Cascade Test Program at Piketon in late 2002. The Nuclear Regulatory Commission (NRC) licensed this demonstration facility in 2004. Lead Cascade operations using prototype machines commenced in August 2007.

In March 2010, USEC began operating a new test cascade of commercial-ready AC100 centrifuge machines. USEC has been demonstrating AC100 cascade operations since then. USEC's prototype and AC100 centrifuge machines have accumulated hundreds of thousands of hour of runtime since August 2007. Performance of the Lead Cascade has been confirmed under a variety of operating conditions with product assays consistent with industry standards for the

production of commercial nuclear fuel for power reactors. The NRC licensed USEC to construct and operate the commercial American Centrifuge Plant at the Portsmouth site in April 2007, and construction began in May 2007. Construction was demobilized in August 2009 due to the delay in receiving a loan guarantee from the U.S. Department of Energy. USEC currently awaits approval of this $2 billion loan guarantee before it can remobilize the construction, which will create nearly 8,000 jobs in the United States. Once completed, the commercial plant will use approximately 11,500 centrifuge machines to generate 3.8 million separative work units (SWU) a year.[2]

Decontamination and ongoing cleanup[edit]

During its nearly 60 years of operations, the cleaning, maintenance, and change out of process equipment at the site generated spent solvents and other contaminants that were disposed of in onsite landfills and surface storage buildings. To date, contamination has been found in various locations on site including the process buildings, the former cooling towers, landfills, waste water ponds, and other buildings. There are also groundwater plumes from the landfills. The Ohio EPA is monitoring cleanup operations, pursuant to a 1989 consent decree.[11]

On June 27, 2005, the Department of Energy awarded a contract to LATA/Parallax Portsmouth, LLC (LPP). This was the first small business contract by DOE at the Portsmouth site. As part of the environmental remediation of the site, LPP removed 31 facilities; an 18-acre switchyard complex which included 160 towers, 18 large transformers, 10 synchronous condensers, 2 switch houses, 1 2-story control room and numerous other structures. LPP's contract was extended as part of the American Recovery and Reinvestment Act of 2009 (ARRA) stimulus project with their contract ending on March 29, 2011.

In 2008, a large project was completed to remove 7,640 short tons (6,930 t) of scrap material by shearing and disposing of 382 old process equipment converter shells. Between 2003 and 2010, more than 2.10 million cubic feet (59,500 m^3) of legacy waste was removed from the site.

In September 2010, the DOE awarded the $1.2 billion follow up contract to Fluor-B&W Portsmouth LLC. Fluor-B&W transitioned the remaining LPP scope and workforce on March 29, 2010 and is currently working with USEC to transition remaining personnel and responsibilities for the site.

Nuclear power[edit]

The site was evaluated for a potential nuclear power plant by a consortium including Areva, Duke Energy, USEC and UniStar Nuclear Energy, with no proposal as of 2011.[12]

The future of the site[edit]

The DOE, in partnership with the counties of Pike, Jackson, Ross, and Scioto and the D&D contractor, Fluor-B&W Portsmouth, are working on preparing the site for future use.

Site reopening[edit]

On January 7, 2019, US Senator from Ohio Rob Portman announced that the Trump Administration has earmarked $115 million to open the facility again, employing 60 people which would house a cascade of 16 centrifuges for uranium enrichment, subject to EPA final approval.[13]

May 2019 Event[edit]

On May 13, 2019, enriched uranium was detected inside the Zahn's Corner Middle School, in Piketon, Ohio, just two miles (3.2 km) from the plant. The U.S. Department of Energy air monitor adjacent to the middle school also detected neptunium 237 -- a byproduct of nuclear reactors and plutonium production. It was determined by leaders to close the school for the rest of the school year. Area businesses, homes, ground and groundwater were also undergoing further testing. [14] This event has resulted in a Class Action Lawsuit filed on behalf of area residents by a group of attorneys led by toxic tort specialist Stuart Smith.[15]

See also[edit]

- Nuclear fuel cycle
- Nuclear power
- Paducah Gaseous Diffusion Plant
- Privatization
- United States Enrichment Corporation
- National Enrichment Facility

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External links[edit]

- Portsmouth Gaseous Diffusion Plant at USEC
- Current Decommissioning & Decontamination Company at FBP
- Previous Environmental Remediation at LPP

https://www.youtube.com/watch?v=R7jUBak6mgI

The Portsmouth Story PART 1 of 2

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The Atomic Energy Commission presents the story of the Portsmouth Gaseous Diffusion Plant in Piketon, Ohio. Part 1 of 2

https://www.youtube.com/watch?v=GBk8YZKCEMQ

The Portsmouth Story PART 2 of 2

7,605 views

•Nov 15, 2010

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The Atomic Energy Commission presents the story of the Portsmouth Gaseous Diffusion Plant in Piketon, Ohio. Part 2 of 2

https://www.youtube.com/watch?v=gqtv0umNI1U

Department of Energy gets NAILED! at Portsmouth Gaseous Diffusion Plant Public Health Forum

1,443 views

•Apr 28, 2019

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A Call To Actions

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Whistleblowers and the public deliver a knock-out punch to the Department of Energy, Ohio EPA and plant contractors at this Pike County General Health District forum regarding Portsmouth Gaseous Diffusion Plant, the proposed on-site nuclear waste disposal facility and neptunium discovered at a local school.

SHOW LESS

Even recently - Kiewit still involved with Portsmouth ..

https://www.emcbc.doe.gov/SEB/PortsmouthISS/Documents/Document%20Library/Site%20Integrated%20Groundwater%20Monitoring%20Plan.pdf

http://www.fbportsmouth.com/docs/stakeholder-docs/May%202012%20Consulting%20Party%20Meeting%20Presentation.pdf

2000 (June 23)

https://www.newspapers.com/image/304195968/?terms=%22Portsmouth%2BGaseous%2BDiffusion%2BPlant%22

May 1999 - Welcome!

https://www.newspapers.com/image/290039860/?terms=%22Portsmouth%2BGaseous%2BDiffusion%2BPlant%22

https://www.newspapers.com/image/102541825/?terms=%22Portsmouth%2BGaseous%2BDiffusion%2BPlant%22

Dec 1999 - health issues

https://www.newspapers.com/image/290082748/?terms=%22Portsmouth%2BGaseous%2BDiffusion%2BPlant%22

https://www.newspapers.com/image/519643323/?terms=%22Portsmouth%2BGaseous%2BDiffusion%2BPlant%22

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https://www.newspapers.com/image/212421047/?terms=%22Portsmouth%2BGaseous%2BDiffusion%2BPlant%22

https://www.newspapers.com/image/142568683/?terms=%22Portsmouth%2BGaseous%2BDiffusion%2BPlant%22

Jon Bruce Postel (born 1943)

[HK004O][GDrive]

Wikipedia Jon Postel

Associations

- Steve Michael Hotz (born 1963) (Steve Hotz was a top research assistant for Postel at ISI ; Steve Hotz went on to have a leading role with Genuity Incorporated)
- Rodney Lance Joffe (born 1954) (Rodney Joffe invited Jon Postel onto the board of Genuity Incorporated in 1997)

Employment

- Genuity Incorporated (1997)

Saved Wikipedia (Jan 10, 2021) for Jon Postel

See [HK004P][GDrive]

Born August 6, 1943 , Altadena, California, U.S.

Died October 16, 1998 (aged 55) , Santa Monica, California, U.S.

Nationality American

Nationality American

Alma mater UCLA

Known for

- Request for Comment
- Internet Assigned Numbers Authority
- Postel's Law

Scientific career

Fields Computer science

Doctoral advisor Dave Farber

Influenced Tim Berners-Lee[1]

Jonathan Bruce Postel (/pɑːl stɛl/; August 6, 1943 – October 16, 1998) was an American computer scientist who made many significant contributions to the development of the Internet, particularly with respect to standards. He is known principally for being the Editor of the Request for Comment (RFC) document series, for Simple Mail Transfer Protocol (SMTP), and for administering the Internet Assigned Numbers Authority (IANA) until his death. In his lifetime he was known as the "god[2] of the Internet" for his comprehensive influence on the medium, although Postel himself noted that this "compliment" came with a barb — with the article that introduced it also suggesting that he should be replaced by a "Professional."

The Internet Society's Postel Award is named in his honor, as is the Postel Center at Information Sciences Institute, University of Southern California. His obituary was written by Vint Cerf and published as RFC 2468 in remembrance of Postel and his work. In 2012, Postel was inducted into the Internet Hall of Fame by the Internet Society.[3] The Channel Islands' Domain Registry building was named after him in early 2016.[4][5]

Career

Postel attended Van Nuys High School,[6] and then UCLA where he earned his B.S. (1966) as well as his M.S. (1968) in Engineering. He then went on to complete his Ph.D. there in Computer Science in 1974, with Dave Farber as his thesis advisor.

Map of the Internet, created by Jon Postel in 1982

Postel started work at UCLA on 23 December 1969 as a Postgraduate Research Engineer (I) where he was involved in early work on the ARPANET. He was involved in the development of the Internet domain system and, at his instigation, Vint Cerf and Bob Kahn developed a second set of protocols for handling data between networks, which is now known as Internet Protocol (IP).[7] Together with Cerf and Steve Crocker, Postel worked on implementing most of the ARPANET protocols.[8] Cerf would later become one of the principal designers of the TCP/IP standard,[8] which works because of the sentence known as Postel's Law.[9]

Postel worked with ARPANET until 24 August 1973 when he left to join MITRE Corporation. He assisted with Network Information Center which was being set up at SRI by Elizabeth Feinler. In March 1977, he joined the Information Sciences Institute at the University of Southern California as a research scientist.[10]

Postel was the RFC Editor from 1969 until his death, and wrote and edited many important RFCs, including RFC 791, RFC 792 and RFC 793, which define the basic protocols of the Internet protocol suite, and RFC 2223, *Instructions to RFC Authors*. Between 1982 and 1984 Postel co-authored the RFCs which became the foundation of today's DNS (RFC 819, RFC 881, RFC 882 and RFC 920) which were joined in 1995 by RFC 1591 which he also co-wrote. In total, he wrote or co-authored more than 200 RFCs.

Postel served on the Internet Architecture Board and its predecessors for many years. He was the Director of the names and number assignment clearinghouse, the Internet Assigned Numbers Authority (IANA), from its inception. He was the first member of the Internet Society, and was on its Board of Trustees. He was the original and long-time .us Top-Level Domain administrator. He also managed the Los Nettos Network.

All of the above were part-time activities he assumed in conjunction with his primary position as Director of the Computer Networks Division, Division 7, of the Information Sciences Institute at the University of Southern California.[11]

DNS Root Authority test, U.S. response

On January 28, 1998, Postel, as a test, emailed eight of the twelve operators of Internet's regional root nameservers on his own authority and instructed them to reconfigure their servers,[12] changing the root zone server from then SAIC subsidiary Network Solutions (NSI)'s A.ROOT-SERVERS.NET (198.41.0.4) to IANA's DNSROOT.IANA.ORG (198.32.1.98). The operators complied with Postel's instructions, thus dividing control of Internet naming between the non-government operators with IANA and the 4 remaining U.S. Government roots at NASA, DoD, and BRL with NSI. Though usage of the Internet was not interrupted, he soon received orders from senior government officials to undo this change,[13] which he did.[14] Within a week, the US NTIA issued *A proposal to improve technical management of Internet names and addresses*, including changes to authority over the Internet DNS root zone,[15] which ultimately, and controversially,[16] increased U.S. control.[17]

Legacy

On October 16, 1998, Postel died of complications from heart surgery in Los Angeles, nine months after the DNS Root Authority incident. He was recovering from a surgery to replace a leaking heart valve.[18]

The significance of Jon Postel's contributions to building the Internet, both technical and personal, were such that a memorial recollection of his life forms part of the core technical literature sequence of the Internet in the form of RFC 2468 "I Remember IANA", written by Vinton Cerf.

Another tribute "Working with Jon Tribute delivered at UCLA, October 30, 1998" RFC2441 , was written by D. Cohen.

Postel's law

Main article: Postel's law

Perhaps his most famous legacy is from RFC 760, which includes a robustness principle often called *Postel's law*: "an implementation should be

Perhaps his most famous legacy is from RFC 760, which includes a robustness principle often called Postel's law: "an implementation should be conservative in its sending behavior, and liberal in its receiving behavior" (reworded in RFC 1122 as "Be liberal in what you accept, and conservative in what you send").

See also

- ARPANET
- *Computer Networks: The Heralds of Resource Sharing* (1972 documentary w/Postel cameo)
- History of the Internet
- Jonathan B. Postel Service Award
- STD 8

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https://www.washingtonpost.com/archive/local/1998/10/18/jon-postel-internet-pioneer-dies-at-55-after-heart-surgery/75b75d28-95c1-4a6b-9a0b-2b7f08533fbc/

1998-10-18-the-washington-post-jon-postel-internet-pioneer-55-dies-after-heart-surgery.pdf

JON POSTEL, INTERNET PIONEER, DIES AT 55 AFTER HEART SURGERY

Jon Postel, an Internet pioneer who wielded enormous influence managing technical details of the global computer network, died Oct. 16 in Los Angeles of complications from heart surgery. He was 55.

Postel, considered by the Clinton administration to be a crucial player in the future of the Internet, died while recovering from surgery to replace a leaking heart valve, said Vinton Cerf, a senior vice president for MCI Worldcom Inc., who worked closely with Postel.

Postel's death comes at a critical juncture for the Internet, with the federal government in the midst of largely turning over management of the worldwide network to a nonprofit group that Postel helped organize.

Although Postel was hardly known outside high-tech circles, his role as director of the Internet Assigned Numbers Authority allowed the Internet to match unique numerical addresses for computers on the global network with its millions of Web addresses.

The British magazine The Economist once dubbed Postel "god" of the Internet.

Earlier this year, Postel drew sharp criticism but demonstrated his influence when he redirected half the Internet's 12 directory-information computers to his own system. He told federal officials afterward he was running a test to see how smoothly such a transition could be made.

A researcher at the University of Maryland at College Park, which controls one of those computers, told The Washington Post: "If Jon asks us to point somewhere else, we'll do it. He is the authority here."

Cerf said Postel underwent a heart-valve replacement in 1991, but the replacement value started to leak about 10 days ago. He was hospitalized for surgery and was recovering when he died.

Cerf said Postel is survived by a brother.

RFC2468

https://tools.ietf.org/html/rfc2468

Network Working Group V. Cerf

Request for Comments: 2468 MCI

Category: Informational October 1998

I REMEMBER IANA

October 17, 1998

Status of this Memo

This memo provides information for the Internet community. It does not specify an Internet standard of any kind. Distribution of this memo is unlimited.

Copyright Notice

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Remembrance

A long time ago, in a network, far far away, a great adventure took place!

Out of the chaos of new ideas for communication, the experiments, the tentative designs, and crucible of testing, there emerged a cornucopia of networks. Beginning with the ARPANET, an endless stream of networks evolved, and ultimately were interlinked to become the Internet. Someone had to keep track of all the protocols, the identifiers, networks and addresses and ultimately the names of all the things in the networked universe. And someone had to keep track of all the information that erupted with volcanic force from the intensity of the debates and discussions and endless invention that has continued unabated for 30 years. That someone was Jonathan B. Postel, our Internet Assigned Numbers Authority, friend, engineer, confidant, leader, icon, and now, first of the giants to depart from our midst.

Jon, our beloved IANA, is gone. Even as I write these words I cannot quite grasp this stark fact. We had almost lost him once before in 1991. Surely we knew he was at risk as are we all. But he had been our rock, the foundation on which our every web search and email was built, always there to mediate the random dispute, to remind us when our documentation did not do justice to its subject, to make difficult decisions with apparent ease, and to consult when careful consideration was needed. We will survive our loss and we will remember. He has left a monumental legacy for all Internauts to

contemplate. Steadfast service for decades, moving when others seemed paralyzed, always finding the right course in a complex minefield of technical and sometimes political obstacles.

Jon and I went to the same high school, Van Nuys High, in the San Fernando Valley north of Los Angeles. But we were in different classes and I really didn't know him then. Our real meeting came at UCLA when we became a part of a group of graduate students working for Professor Leonard Kleinrock on the ARPANET project. Steve Crocker was another of the Van Nuys crowd who was part of the team and led the development of the first host-host protocols for the ARPANET. When Steve invented the idea of the Request for Comments series, Jon became the instant editor. When we needed to keep track of all the hosts and protocol identifiers, Jon volunteered to be the Numbers Czar and later the IANA once the Internet was in place.

Jon was a founding member of the Internet Architecture Board and served continuously from its founding to the present. He was the FIRST individual member of the Internet Society I know, because he and Steve Wolff raced to see who could fill out the application forms and make payment first and Jon won. He served as a trustee of the Internet Society. He was the custodian of the .US domain, a founder of the Los Nettos Internet service, and, by the way, managed the networking research division of USC Information Sciences Institute.

Jon loved the outdoors. I know he used to enjoy backpacking in the high Sierras around Yosemite. Bearded and sandaled, Jon was our resident hippie-patriarch at UCLA. He was a private person but fully capable of engaging photon torpedoes and going to battle stations in a good engineering argument. And he could be stubborn beyond all expectation. He could have outwaited the Sphinx in a staring contest, I think.

Jon inspired loyalty and steadfast devotion among his friends and his colleagues. For me, he personified the words "selfless service". For nearly 30 years, Jon has served us all, taken little in return, indeed sometimes receiving abuse when he should have received our deepest appreciation. It was particularly gratifying at the last

Internet Society meeting in Geneva to see Jon receive the Silver Medal of the International Telecommunications Union. It is an award generally reserved for Heads of State, but I can think of no one more deserving of global recognition for his contributions.

While it seems almost impossible to avoid feeling an enormous sense of loss, as if a yawning gap in our networked universe had opened up and swallowed our friend, I must tell you that I am comforted as I contemplate what Jon has wrought. He leaves a legacy of edited documents that tell our collective Internet story, including not only

the technical but also the poetic and whimsical as well. He completed the incorporation of a successor to his service as IANA and leaves a lasting legacy of service to the community in that role. His memory is rich and vibrant and will not fade from our collective consciousness. "What would Jon have done?", we will think, as we wrestle in the days ahead with the problems Jon kept so well tamed for so many years.

There will almost surely be many memorials to Jon's monumental service to the Internet Community. As current chairman of the Internet Society, I pledge to establish an award in Jon's name to recognize long-standing service to the community, the Jonathan B. Postel Service Award, which will be awarded to Jon posthumously as its first recipient.

If Jon were here, I am sure he would urge us not to mourn his passing but to celebrate his life and his contributions. He would remind us that there is still much work to be done and that we now have the responsibility and the opportunity to do our part. I doubt that anyone could possibly duplicate his record, but it stands as a measure of one man's astonishing contribution to a community he knew and loved.

Security Considerations

Security issues are not relevant to this Remembrance.

Author's Address

Vinton G. Cerf

MCI

EMail: vcerf@mci.net

https://www.isi.edu/news/story/2

The announcement was made November 30 by Joseph Bannister, Ph.D., Director of the Computer Networks Division at the University of Southern Californiaís Information Sciences Institute and a longtime collaborator with Internet pioneer Dr. Postel. Bannister has served as interim director of **the center since it opened April 20, 1999, six months after Postelís death October 16, 1998.**

2000-12-11-usc-news-touch-named-director-of-isi-postel-center.pdf

https://news.usc.edu/6255/Touch-Named-Director-of-ISI-s-Postel-Center/

2000-12-11-usc-news-touch-named-director-of-isi-postel-center-img-1.jpg

See **Jon Bruce Postel (born 1943)** .

Touch Named Director of ISI’s Postel Center

DECEMBER 11, 2000

Joseph D. Touch

Joseph D. Touch has been named the director of the Postel Center for Experimental Networking at the School of Engineering’s Information Sciences Institute (ISI). Touch will be responsible for the daily operation and long-range direction of the center. He will set up the center’s laboratory, work with industrial and individual sponsors, chair the scholar selection committees and determine policy and direction. Touch, who has been at ISI since 1992, is a project leader and research assistant professor of computer science. He has also worked at Bellcore, GTE Labs and SEI. His research interests include virtual networks, network architecture, optical networks and protocol performance.

The Postel Center for Experimental Networking was established in 1999 to commemorate Jon Postel’s pioneering contributions to the development of the Internet. Postel, who died in 1998, was the director of ISI’s computer networks division and created the Internet’s address system. For three decades he played a pivotal role in the technical management and administration of the Internet as director of the Assigned Numbers Authority. **The center has been endowed by Cisco Systems, Centergate and Sun Microsystems, as well as a number of private individuals**. Its mission is to promote Postel’s tradition of applied research in service to the Internet community, including providing facilities, funding and support for distinguished visiting scholars and graduate fellows to collaborate with ISI researchers.

USC News

USC University of Southern California

MENU SEARCH

Touch Named Director of ISI's Postel Center

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1998 (Oct 18) - Washington Post - JON POSTEL, INTERNET PIONEER, DIES AT 55 AFTER HEART SURGERY

[HN01GN][GDrive]

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Postel, considered by the Clinton administration to be a crucial player in the future of the Internet, died while recovering from surgery to replace a leaking heart valve, said Vinton Cerf, a senior vice president for MCI Worldcom Inc., who worked closely with Postel.

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Great video -

MP4 - [HV00EI][GDrive] / PDF - [HV00EN][GDrive]

https://www.youtube.com/watch?v=UYHmIXGzsiU

NANOG 68 Keynote IANA Transition

Oct 18, 2016

TeamNANOG

Housatonic

Richard McCann Preston (born 1954)

Wikipedia Richard Preston

[Richard McCann Preston (born 1954)] / [richard-mccann-preston-b1954]

Saved Wikipedia (Feb 24, 2021) - Richard Preston

[HK005E][GDrive]

Born

Richard Preston

August 5, 1954 (age 66)

Cambridge, Massachusetts

Alma mater

Pomona College

Occupation

Non-fiction writer, journalist

Years active

1954–present

Notable work

- The Hot Zone (1994)
- The Cobra Event (1998)
- The Demon in the Freezer(2002)
- Micro (2011)

Richard Preston (born August 5, 1954) is a writer for The New Yorker and bestselling author who has written books about infectious disease, bioterrorism, redwoods and other subjects, as well as fiction. Whether journalistic or fictional, his writings are based on extensive background research and interviews.

[Research on name ... Middle initial is "M" : as in "richard m preston" ...

https://www.ancestry.com/discoveryui-content/view/65024450:62209?tid=&pid=&queryId=b8c0ebc31e6ce41080396879fd3231be&_phsrc=ITg4&_phstart=successSource

? mom? https://www.newspapers.com/image/114301007/?terms=%22Richard%20M.%20Preston%22&match=1]

Biography

Preston was born in Cambridge, Massachusetts. He graduated Wellesley High School in Massachusetts in 1972 and attended Pomona College in Claremont, California. He earned a Ph.D. in English from Princeton University in 1983.

His 1992 New Yorker article "Crisis in the Hot Zone" was expanded into his breakout book, The Hot Zone (1994). It is classified as a "non-fiction thriller" about ebolaviruses. He came to know about ebola through such contacts as U.S. Army researchers [**Dr. Clarence James Peters (born 1940)**] and [Dr.] Nancy Jaax. His fascination began during a visit to Africa where he was an eyewitness to epidemics. **The book served as the (very loose) basis of the Hollywood movie Outbreak(1995) about military machinations surrounding a fictional "Motaba virus".**

Preston's novel The Cobra Event (1998), about a terrorism release of a fictional virus combining various qualities of different diseases upon New York City, alarmed even then-President Bill Clinton who, shortly after reading it, instigated a review of bio-terror threats to the U.S.[1] The book strove to tell a fast-paced thriller narrative within the bounds of well-researched bio-terrorism possibility, and was reportedly pressed upon Clinton by a molecular biologist when he was attending a Renaissance Weekend event.[2]

The Demon in the Freezer (2002) covers the story of the eradication of smallpox, perhaps the most destructive virus to have plagued mankind. It details the survival of the virus in research labs and bio-weapon programs of Russia and other nations, despite its eradication in the human population. The narrative continues with anthrax, a bacterial disease of cattle and humans, used in the 2001 anthrax attacks.

First Light and American Steel are non-fiction books addressing astrophysics and the steel industry. First Light centers around the history of the Hale telescope on Palomar Mountain, and the astronomers who work there. American Steel chronicles the history of the Nucor steel company, and focuses on its newest steel plant in Indiana, whose success depends on a new steel-sheet making machine engineered in West Germany.

Preston's personal hobby of recreational tree climbing is introduced in The Wild Trees (2007).[3] His climbing experience likely led him to write about the largest known redwoods like Lost Monarch in the Grove of Titans, or Iluvatar, described in that book along with delicate forest canopy ecosystems.

Preston's Panic in Level 4: Cannibals, Killer Viruses, and Other Journeys to the Edge of Science is a collection of essays related to his experiences researching his previous books.

In November 2009, Preston was selected by Harper-Collins and the Michael Crichton estate to complete his unfinished novel Micro after Crichton's death in November 2008. The book was released on November 22, 2011. Approximately a third of Micro was completed by Crichton. Preston completed the book according to the author's remaining outline, notes, and research.[4]

In 2016, Preston served as the Bedell Distinguished Visiting Professor at the University of Iowa's Nonfiction Writing Program[5] where he judged the prestigious Iowa Prize in Literary Nonfiction.

Preston resides in Hopewell, New Jersey with his wife, Michelle, and their two daughters and one son.[6] He is also the brother of best-selling author Douglas Preston.

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THE smallpox virus first became entangled with the human species somewhere between three thousand and twelve thousand years ago -- possibly in Egypt at the time of the Pharaohs. Somewhere on earth at roughly that time, the virus jumped out of an unknown animal into its first human victim, and began to spread. Viruses are parasites that multiply inside the cells of their hosts, and they are the smallest life forms. Smallpox developed a deep affinity for human beings. It is thought to have killed more people than any other infectious disease, including the Black Death of the Middle Ages. It was declared eradicated

from the human species in 1979, after a twelve-year effort by a team of doctors and health workers from the World Health Organization. Smallpox now exists only in laboratories.

Smallpox is explosively contagious, and it travels through the air. Virus particles in the mouth become airborne when the host talks. If you inhale a single particle of smallpox, you can come down with the disease. After you've been infected, there is a typical incubation period of ten days. During that time, you feel normal. Then the illness hits with a spike of fever, a backache, and vomiting, and a bit later tiny red spots appear all over the body. The spots turn into blisters, called pustules, and the pustules enlarge, filling with pressurized opalescent pus. The eruption of pustules is sometimes called the splitting of the dermis. The skin doesn't break, but splits horizontally, tearing away from its underlayers. The pustules become hard, bloated sacs the size of peas, encasing the body with pus, and the skin resembles a cobbled stone street.

The pain of the splitting is extraordinary. People lose the ability to speak, and their eyes can squeeze shut with pustules, but they remain alert. Death comes with a breathing arrest or a heart attack or shock or an immune-system storm, though exactly how smallpox kills a person is not known. There are many mysteries about the smallpox virus. Since the seventeenth century, doctors have understood that if the pustules merge into sheets across the body the victim will usually die: the virus has split the whole skin. If the victim survives, the pustules turn into scabs and fall off, leaving scars. This is known as ordinary smallpox.

Some people develop extreme smallpox, which is loosely called black pox. Doctors separate black pox into two forms -- flat smallpox and hemorrhagic smallpox. In a case of flat smallpox, the skin remains smooth and doesn't pustulate, but it darkens until it looks charred, and it can slip off the body in sheets. In hemorrhagic smallpox, black, unclotted blood oozes or runs from the mouth and other body orifices. Black pox is close to a hundred per cent fatal. If any sign of it appears in the body, the victim will almost certainly die. In the bloody cases, the virus destroys the linings of the throat, the stomach, the intestines, the rectum, and the vagina, and these membranes disintegrate. Fatal smallpox can destroy the body's entire skin -- both the exterior skin and the interior skin that lines the passages of the body.

Smallpox virus's scientific name is variola. It means "spotted" in Latin, and it was given to the disease by a medieval bishop. The virus, as a life form, comes in two subspecies: Variola minor and Variola major. Minor is a weak mutant, and was first described in 1863 by doctors in Jamaica. People usually survive it. Classic major kills one out of three people if they haven't been vaccinated or if they've lost their immunity. The death rate with major can go higher -- how much higher no one knows. Variola major killed half of its victims in an outbreak in Canada in 1924, and presumably many of them developed black pox. Smallpox is less contagious than measles but more contagious than mumps. It tends to go around until it has infected nearly everyone.

Most people today have no immunity to smallpox. The vaccine begins to wear off in many people after ten years. Mass vaccination for smallpox came to a worldwide halt around twenty-five years ago. There is now very little smallpox vaccine on hand in the United States or anywhere else in the world. The World Health Organization once had ten million doses of the vaccine in storage in Geneva, Switzerland, but in 1990 an advisory committee recommended that most of it be destroyed, feeling that smallpox was longer a threat. Nine and a half million doses are assumed to have been cooked in an oven, leaving the W.H.O. with a total supply of half a million doses -- one dose of smallpox vaccine for every twelve thousand people on earth. A recent survey by the W.H.O. revealed that there is only one factory in the world that has recently made even a small quantity of the vaccine, and there may be no factory capable of making sizable amounts. The vaccine was discovered in the age of Thomas Jefferson, and making a lot of it would seem simple, but so far the United States government has been unable to get any made at all. Variola virus is now classified as a Biosafety Level 4 hot agent -- the most dangerous kind of virus -- because it is lethal, airborne, and highly contagious, and is now exotic to the human species, and there is not enough vaccine to stop an outbreak. Experts feel that the appearance of a single case of smallpox anywhere on earth would be a global medical emergency.

At the present time, smallpox lives officially in only two repositories on the planet. One repository is in the United States, in a freezer at the headquarters of the federal Centers for Disease Control and Prevention, in Atlanta -- the C.D.C. The other official smallpox repository is in a freezer at a Russian virology institute called Vector, also known as the State Research Institute of Virology and Biotechnology, which is situated outside the city of Novosibirsk, in Siberia. Vector is a huge, financially troubled former virus-weapons-development facility -- a kind of decayed Los Alamos of viruses -- which is trying to convert to peaceful enterprises.

There is a growing suspicion among experts that the smallpox virus may also live unofficially in clandestine biowarfare laboratories in a number of countries around the world, including labs on military bases in Russia that are closed to outside observers. The Central Intelligence Agency has become deeply alarmed about smallpox. Since 1995, a number of leading American biologists and public-health doctors have been given classified national-security briefings on smallpox. They have been shown classified evidence that as recently as 1992 Russia had the apparent capability of launching strategic-weapons-grade smallpox in special biological warheads on giant SS-18 intercontinental missiles that were targeted on the major cities of the United States. In the summer of last year, North Korea fired a ballistic missile over Japan in a test, and the missile fell into the sea. Some knowledgeable observers thought that the missile could have been designed to carry a biologic warhead. If it had carried smallpox and landed in Japan, it could have devastated Japan's population: Japan has almost no smallpox vaccine on hand and its government seems to have no ability to deal with a biological attack. The United States government keeps a list of nations and groups that it suspects either have clandestine stocks of smallpox or seem to be trying to buy or steal the virus. The list is classified, but it is said to include Russia, China, India, Pakistan, Israel, North Korea, Iraq, Iran, Cuba, and Serbia. The list may also include the terrorist organization of Osama bin Laden and, possibly, the Aum Shinrikyo sect of Japan -- a quasi-religious group that had Ph.D. biologists as members and a belief that an apocalyptic war will bring them worldwide power. Aum members released nerve gas in the Tokyo subway in 1995, and, as the year 2000 approaches, the group is still active in Japan and in Russia. In any case, the idea that smallpox lives in only two freezers was never anything more than a comfortable fiction. No one knows exactly who has smallpox today, or where they keep the virus, or what they intend to do with it.

THE man who is most widely credited with the eradication of smallpox from the human species is a doctor named Donald Ainslie Henderson. Everyone calls him D. A. Henderson. He was the director of the World Health Organization's Smallpox Eradication Unit from its inception, in 1966, to 1977, just before the last case occurred. "I'm one of many in the eradication," Henderson said to me once. "There's Frank Fenner, there's Isao Arita, Bill Foege, Nicole Grasset, Zdenek Jezek, Jock Copland, John Wickett -- I could come up with fifty names. Let alone the tens of thousands who worked in the infected countries." Nevertheless, Henderson ran it. Smallpox killed at least three hundred million people in the twentieth century. During that time, humanity was largely immune to smallpox, which is not the case today. When D. A. Henderson arrived on the scene in 1966, two million people a year were dying of smallpox. In the years since the eradication effort began, Henderson and his team have effectively saved more than fifty million lives. This could be the most impressive achievement in the history of medicine. Henderson and his colleagues, however, have never received the Nobel Prize for their work.

D. A. Henderson is now a professor at the Johns Hopkins School of Public Health. He is the founder and the director of the Johns Hopkins Center for Civilian Biodefense Studies, a think tank that considers what might be done to protect the American population during a biological event. The term "biological event" hardly existed two years ago, but it is now used by emergency planners and by the F.B.I. to mean a terrorist attack with a bioweapon -- an unnatural event, caused by human intent.

Henderson lives with his wife in a large brick house in Baltimore. I arrived there on a cold, drizzly Saturday, and he ambled to the door. Henderson is an imposing man, six feet two inches tall. He is seventy years old. He has broad shoulders and a broad, seamed, angular face, pointed ears that stick out at angles from his head, a brush of gray hair, metal-framed eyeglasses, sharp blue eyes, and an easygoing voice that can flash with calculation. He was wearing a red checked shirt, with suspenders that held up Saturday slacks.

"In the last ten days, we've had fourteen different anthrax scares," he remarked in an offhand way as we stood in the front hallway of his house and he loomed over me. He has a top-secret-level national-security clearance, and he hears about little bioterror events that don't get noticed by the media. He went on to say, "Everybody and his brother is threatening to use anthrax. This week, it happened in Atlanta, in Washington, D.C., in Michigan, and in California. It's largely hoaxes. Of course, a real bioterror event is going to happen one of these days."

We settled into easy chairs in the family room. The walls and shelves of the room were crowded with African and Asian sculptures and wooden Ethiopian crosses, which he had picked up in his global hunt for smallpox. A Japanese garden was visible through sliding-glass doors.

We ate ham and roast-beef sandwiches, and drank Molson Ice beers. Henderson bit into a sandwich and chewed thoughtfully. Then he said, "Often, you get a worried look on your face, with the first signs of rash. We speak of the 'worried face' of smallpox. That face is a diagnostic sign. The rash comes up all at once. It's more dense on the face and the extremities. That's how you can tell smallpox from chicken pox. With chicken pox, the rash crops up over a period of days, and it's more dense on the chest and trunk of the body. Smallpox pustules have a dimple, a dent in the center. Doctors say that the pustules have a 'shotty' feel, like shotgun pellets. You can roll them between your fingertips under the skin."

"How many doctors could recognize smallpox today?" I asked.

"Virtually none. Smallpox takes forms that even I can't diagnose. And I wrote the textbook." He is a co-author of "Smallpox and Its Eradication," a large book in red covers, which experts call the Big Red Book of Smallpox. It was supposed to be the final word on smallpox-the tombstone of the virus.

ON February 15,1972, a thirty-eight-year-old Muslim clergyman returned to his home town of Damnjane, in Kosovo, Yugoslavia, after he'd been on a pilgrimage to Mecca, stopping at holy sites in Iraq. I will call him the Pilgrim. A photograph of the Pilgrim shows a man who looks well educated, has an intelligent face, and is wearing a clipped mustache and a beret. He had travelled by bus for his entire journey. The morning after his return home, he woke up feeling achy. At first, he thought he was tired from the long bus ride, but then he realized that he had caught a bug. He shivered for a day or two, and developed a red rash brought on by his fever, but quickly recovered. He had been vaccinated for smallpox two months earlier. Indeed, the Yugoslav medical authorities had been vaccinating the population of Yugoslavia relentlessly for more than fifty years, and the country was considered to be thoroughly immunized. The last case of smallpox in Yugoslavia had occurred in 1930.

The Pilgrim's family members and friends came to visit him. They wanted to hear about his trip, and he enjoyed telling them about it. Meanwhile, variola particles were leaking out of raw spots in the back of his throat and mixing with his saliva. When he spoke, tiny droplets of saliva, too small to be seen, drifted around him in a droplet cloud. If the person is throwing off a lethal virus, the cloud becomes a hot zone that can extend ten feet in all directions. Although the raw spots in the Pilgrim's throat amounted to a tiny surface of virus emission, smaller than a postage stamp, in a biological sense it was as hot as the surface of the sun, and it put enough smallpox into the air to paralyze Yugoslavia.

Variola particles are built to survive in the air. They are rounded-off rectangles that have a knobby, patterned surface-a gnarly hand-grenade look. Some experts call the particles bricks. The whole brick is made of a hundred different proteins, assembled and interlocked in a three-dimensional puzzle, which nobody has ever figured out. Virus experts feel that the structure of a smallpox particle is almost breathtakingly beautiful and deeply mathematical-one of the unexplored wonders of the viral universe. The structure protects the virus's genetic material: a long strand of DNA coiled in the center of the brick.

Pox bricks are the largest viruses. If a smallpox brick were the size of a real brick then a cold-virus particle would be a blueberry sitting on the brick. But smallpox particles are still extremely small; about three million smallpox bricks laid down in rows would pave the period at the end of this sentence. A smallpox victim emits several bricks in each invisible droplet of saliva that spews into the air when the person speaks or coughs. When an airborne smallpox particle lands on a mucus membrane in someone's throat or lung, it sticks. It enters a cell and begins to make copies of itself. For one to three weeks, the virus spreads from cell to cell, amplifying silently in the body. No one has discovered exactly where the virus z hides during its incubation phase. Probably it gets into the lymph cells, confusing the immune system, and victims are said to experience terrible dreams.

On February 21st, when the Pilgrim had been feeling achy for almost a week, a thirty-year-old man, a schoolteacher, who is known to experts as Ljatif M., arrived in Djakovica, a few miles from the Pilgrim's town, to enroll in the Higher Institute of Education. Doctors who later investigated the schoolteacher's case never found out how he had come in contact with the Pilgrim. One of them must have ended up in the other's town. Possibly they stood next to each other in a shop-something like that.

On March 3rd, Ljatif developed a fever. Two days later, he went to a local medical center, where doctors gave him penicillin for his fever. Antibiotics have no effect on a virus. Then his skin broke with dark spots, and he may have developed a worried face. He felt worse, and a few days later his brother took him by bus to a hospital in the town of Cacak, about a hundred miles away. The dark spots were by this time merging into blackened, mottled splashes, which the doctors in Cacak didn't recognize. Ljatif became sicker. Finally, he was transferred by ambulance to Belgrade, where he was admitted to the Dermatology and Venereal Diseases Department of the city's main hospital. By then, his skin may have turned almost black in patches. We don't have access to his clinical reports, so I am describing a generalized extreme smallpox of the kind Ljatif had.

Inside the cells of the host, smallpox bricks pile up as if they were coming off a production line. Some of the particles develop tails. The tails are pieces of the cell's protein, which the virus steals from the cell for its own use. The tailed smallpox particles look like comets or spermatozoa. They begin to twist and wriggle, and they corkscrew through the cell, propelled by their tails toward the cell's outer membrane. You can see them with a microscope, thrashing with the same furious drive as sperm. They bump up against the inside of the cell membrane, and their heads make lumps, and the cell horripilates. Then something wonderful happens. Finger tubes begin to extend from the cell. The tubes grow longer. The cell turns into a Koosh ball. Inside each finger tube is a smallpox comet. The fingers lengthen until they touch and join nearby cells, and the smallpox comets squirm through the finger tubes into the next cell. The comets are protected from attack by the immune system, because they stay inside the finger tubes, where antibodies and killer white blood cells can't reach them. Then the Koosh ball explodes. Out pour heaps of bricks that don't have tails. These smallpox particles are wrapped in a special armor, like hand grenades. They float away, still protected by their armor, and they stick to other cells and go inside them, and those cells turn into Koosh balls. Each infected cell releases up to a hundred thousand virus particles, and they are added to the quadrillions of particles replicating in the universe of the ruined host.

Ljatif's skin had become blackened, mottled, and silky to the touch, and sheets of small blood blisters may have peppered his face. In a case of black pox, variola shocks the immune system so that it can't produce pus. Small blood vessels were leaking and breaking in his skin, and blood was seeping under the

variola shocks the immune system so that it can't produce pus. Small blood vessels were leaking and breaking in his skin, and blood was seeping under the surface. His skin had developed large areas of continuous bruises.

On March 9th, the Belgrade doctors showed Ljatif to students and staff as a case that demonstrated an unusual reaction to penicillin. (In fact, a very bad reaction to penicillin can look like this.) Ljatif's eyes may have turned dark red. In hemorrhagic smallpox, one or two large hemorrhages appear in each eye, in the white encircling the iris, making the eyes look as if they could sag or leak blood. The eyes never do leak, but the blood in the eyes darkens, until the whites can sometimes seem almost black.

During the day of March 10th, Ljatif suffered catastrophic hemorrhages into the intestines. His intestines filled up with blood, and he expelled quarts of it, staining the sheets black, and he developed grave anemia from blood loss. For some unknown reason, black-pox patients remain conscious, in a kind of paralyzed shock, and they seem acutely aware of what is happening nearly up to the point of death -- "a peculiar state of apprehension and mental alertness that were said to be unlike the manifestations of any other infectious disease," in the words of the Big Red Book of Smallpox. We can imagine that Ljatif was extremely frightened and witnessed his hemorrhages with a sense that his insides were coming apart. During the final phase of a smallpox intestinal bleedout, the lining of the intestines or the rectum can slip off. The lining is expelled through the anus, coming out in pieces or in lengths of tube. This bloody tissue is known as a tubular cast. When a smallpox patient throws a tubular cast, death is imminent. Al1 we know about Ljatif is that his bleeds were unstoppable, that he was rushed to the Surgical Clinic of the Belgrade hospital, and that he died in the evening. The duty physician listed the cause of death as a bad reaction to penicillin.

"These hemorrhagic smallpox cases put an incredible amount of virus into the air," D. A. Henderson said. Some of the doctors and nurses who treated Ljatif were doomed. Indeed, Ljatif had seeded smallpox across Yugoslavia. Investigators later found that while he was in the hospital in Cacak he infected eight other patients and a nurse. The nurse died. One of the patients was a schoolboy, and he was sent home, where he broke with smallpox and infected his mother, and she died. In the Belgrade hospital, Ljatif infected twenty-seven more people, including seven nurses and doctors. Those victims infected five more people. Ljatif directly infected a total of thirty-eight people. They caught the virus by breathing the air near him. Eight of them died.

Meanwhile, the Pilgrim's smallpox travelled in waves through Yugoslavia. A rising tide of smallpox typically comes in fourteen-day waves -- a wave of cases, a lull down to zero, and then a much bigger wave, another lull down to zero, then a huge and terrifying wave. The waves reflect the incubation periods, or generations, of the virus. Each wave or generation is anywhere from ten to twenty times as large as the last, so the virus grows exponentially and explosively, gathering strength like some kind of biological tsunami. This is because each infected person infects an average of ten to twenty more people. By the end of March, 1972, more than a hundred and fifty cases had occurred.

The Pilgrim had long since recovered. He didn't even know that he had started the outbreak. By then, however, Yugoslav doctors knew that they were dealing with smallpox, and they sent an urgent cable to the World Health Organization, asking for help.

Luckily, Yugoslavia had an authoritarian Communist government, under Josip Broz Tito, and he exercised full emergency powers. His government mobilized the Army and imposed strong measures to stop people from travelling and spreading the virus. Villages were closed by the Army, roadblocks were thrown up, public meetings were prohibited, and hotels and apartment buildings were made into quarantine wards to hold people who had had contact with smallpox cases. Ten thousand people were locked up in these buildings by the Yugoslav military. The daily life of the country came to a shocked halt. At the same time, all the countries surrounding Yugoslavia closed their borders with it, to prevent any travellers from coming out. Yugoslavia was cut off from the world. There were twenty-five foci of smallpox in the country. The virus had leapfrogged from town to town, even though the population had been heavily vaccinated. The Yugoslav authorities, helped by the W.H.O., began a massive campaign to revaccinate every person in Yugoslavia against smallpox; the population was twenty-one million. "They gave eighteen million doses in ten days," D. A. Henderson said. A person's immunity begins to grow immediately after the vaccination; it takes full effect within a week.

At the beginning of April, Henderson flew to Belgrade, where he found government officials in a state of deep alarm. The officials expected to see thousands of blistered, dying, contagious people streaming into hospitals any day. Henderson sat down with the Minister of Health and examined the statistics. He plotted the cases on a time line, and now he could see the generations of smallpox -- one, two, three waves, each far larger than the previous one. Henderson had seen such waves appear many times before as smallpox rippled and amplified through human populations. Reading the viral surf with a practiced eye, he could see the start of the fourth wave. It was not climbing as steeply as he had expected. This meant that the waves had peaked. The outbreak was declining. Because of the military roadblocks, people weren't travelling, and the government was vaccinating everyone as fast as possible. "The outbreak is near an end," he declared to the Minister of Health. "I don't think you'll have more than ten additional cases." There were about a dozen: Henderson was right -- the fourth wave never really materialized. The outbreak had been started by one man with the shivers. It was ended by a military crackdown and vaccination for every citizen.

AT the present time, the United States' national stockpile of smallpox vaccine is a collection of four cardboard boxes that sit on a single pallet behind a chain-link fence inside a walk-in freezer in a warehouse in Lancaster County, Pennsylvania, near the Susquehanna River, at a facility owned by Wyeth-Ayerst Laboratories. The vaccine is slowly deteriorating. The Food and Drug Administration has put a hold on the smallpox vaccine, and right now no one can use it -- not even emergency personnel or key government leaders.

The vaccine is owned by the federal government and is managed by Wyeth-Ayerst, which is the company that made it, twenty-five to thirty years ago. It is stored in glass vials. The vials contain freeze-dried nuggets of live vaccinia virus. Vaccinia is a mild virus. When you are infected with it by vaccination, it causes a pustule to appear, and afterward you are immune to smallpox for some years. People who have been vaccinated have a circular scar the size of a nickel on their upper arm, left by the vaccinia-virus pustule they had in childhood after vaccination. Some adults can remember how much the pustule hurt.

People from Wyeth periodically open the boxes and send some of the vials out for testing, to see how the vaccine is doing. The vials once held fifteen million good doses, but now moisture has invaded some of them. The nuggets are normally dry and white in color, but when moisture invades they turn brown and look sticky, and the vaccine may be weakened. The vaccine was made by a traditional method: the manufacturer had a farm where calves were raised. The calves' bellies were scratched with vaccinia virus, and their bellies developed pustules. Then the calves were killed and hung up on hooks, the blood was drained out of them, and the pustules were scraped with a knife. The resulting pus was freeze-dried. The vaccine is dried calf pus. According to one virologist who examined it under a microscope, "It looks like nose snot. It's all hair and wads of crap." It was a good vaccine for its time, but the F.D.A. would never clear it for general use today except in a national emergency. Furthermore, some people have bad or fatal reactions to the vaccine. There is an antidote, but the supplies of it have turned strangely pink, and the F.D.A. has put a hold on the use of these supplies, too.

D. A. Henderson believes that in practice doctors could obtain about seven million doses of vaccine from the vials. Unaccountably, most of the vaccine has not recently been tested for potency, so it has not been absolutely proved to work. The experts believe that it would work, but there still isn't enough.

Henderson explained the problem this way: "If there's a bioterror event, and someone releases enough smallpox to create a hundred cases -- let's say in the Baltimore area -- it would be a national emergency. The demand for vaccine would be beyond all belief." In Yugoslavia in 1972, the outbreak was started by one man, and eighteen million doses of vaccine were needed -- one for almost every person in the country.

"That first wave after the bioterror event could be a hundred people with smallpox," Henderson said. "It takes two weeks after exposure before doctors can diagnose smallpox. Meanwhile, those hundred people will give smallpox to a thousand or two thousand people. That's the second wave. Some of those first hundred people will go to other cities -- to Washington, to New York, all over. So the second wave will include cases in other American cities, and probably in foreign countries. By then, it'll be too late to treat them, and we'll lose the second wave. We'll be well into the third wave -- ten to twenty thousand people with smallpox -- before we can really start vaccinating people. By then, we'll begin to pick up so many cases in the Baltimore area that we won't be able to track cases, and we'll just have to vaccinate everybody around Baltimore. A lot of people in Baltimore work in Washington. And so you're going to have a whole lot of people in Washington with smallpox. You can see the deal. Immediately, you would have to vaccinate Washington." Henderson thinks that a hundred million doses of vaccine would be needed in the United States alone to stop a surging outbreak triggered by a hundred initial cases of smallpox from a bioterror event. That much vaccine could be stored in the space occupied by a one-car garage.

Raindrops splattered on a wooden deck in Henderson's garden, and the room grew dark, until it was a pool of shadows full of African masks. Henderson's voice came out of the gloom. He didn't bother to get up and turn on the lights. He said, "The way air travel is now, about six weeks would be enough time to seed cases around the world. Dropping an atomic bomb could cause casualties in a specific area, but dropping smallpox could engulf the world."

Henderson passionately wants to get rid of the virus. "What we need to do is create a general moral climate where smallpox is considered too morally reprehensible to be used as a weapon. That would make the possession of smallpox in a laboratory, anywhere, effectively a crime against humanity. The likelihood that it would be used as a weapon is diminished by a global commitment to destroy it. How much it is diminished I don't know. But it adds a level of safety."

IN the late seventeen-hundreds, the English country doctor Edward Jenner noticed that dairymaids who had contracted cowpox from cows seemed to be protected from catching smallpox, and he thought he would do an experiment. Cowpox (it probably lives in rodents, and only occasionally infects cows) produced a mild disease. On May 14, 1796, Jenner scratched the arm of a boy named James Phipps, introducing into the boy's arm a droplet of cowpox pus that he'd taken from a blister on the hand of a dairy worker named Sarah Nelmes. A few months later, he scratched the boy's arm with deadly pus he had taken from a smallpox patient, and the boy didn't come down with smallpox. The boy had become immune. Jenner had discovered what he called vaccination, after the Latin word for cow. He saw the road to eradication clearly. In 1801, he wrote, "It now becomes too manifest to admit of controversy, that the annihilation of the Small Pox, the most dreadful scourge of the human species, must be the final result of this practice."

A Soviet epidemiologist, Viktor Zhdanov, deserves credit for kick-starting the modern effort. At the 1958 annual meeting of the World Health Assembly, in Minneapolis, he called for the global eradication of smallpox. He spoke passionately and logically, but the scientific community was skeptical. Many biologists held a common view that it was impossible to separate a wild microorganism from the ecological web it lived in. In 1965, President Lyndon Johnson endorsed the idea of smallpox eradication. It was a political move to help improve American-Soviet relations. D. A. Henderson was then the head of disease surveillance at the C.D.C. He was given an order to report to Geneva to head the W.H.O.'s new Smallpox Eradication Unit. He didn't want the job, but he was told that if he didn't take it he would have to resign from government service. He went to Geneva, where he formed a hand-picked team. "The World Health Assembly proposed a ten-year program, because Kennedy had said we could land a man on the moon in ten years," he recalled.

The team set a goal of vaccinating eighty per cent of the population of countries that harbored smallpox. Henderson says that from the beginning they had another idea as well, and it proved to be the key. The idea was to track smallpox outbreaks and vaccinate people in a ring around any outbreak. This is known as surveillance and ring vaccination. In order to throw a ring around smallpox, they had to know where the demon was moving at all times, and they started showing villagers photographs of a baby with smallpox, so that the villagers could recognize and report cases to the authorities.

Henderson's team needed a way of vaccinating people fast. They tried a machine called the Ped-o-Jet, which was operated by foot pedal. It could shoot jets of vaccine into the arms of thousands of people in a day, but it broke down. Then they tried a needle with two points. It was known as the bifurcated needle, and it looked like a tiny two-pronged fork. The points of the fork held a droplet of vaccine, and the needle was to be jabbed repeatedly into a person's arm. It could be used by a volunteer who had no medical training.

They discovered that the virus rose and fell in seasonal waves, like flu. This led to an idea to attack the virus with a ring assault when it was at its ebb. The virus was a wild organism that lived only in humans. It needed to find and invade a susceptible human every fourteen days or it would die. If each outbreak of the virus could be surrounded by a ring of immune people during the virus's low season, the virus would not be able to complete its fourteen-day life cycle. It would be cut off, unable to move to the next human host, and its chain of infection would be broken.

The ring had to be tight. If it developed a leak, smallpox would blow out. In January, 1975, smallpox blew out in Bangladesh, after the eradicators thought they were on the verge of stopping it everywhere in Asia. Variola major swept through more than five hundred towns and villages. Henderson began shuttling between Geneva and Bangladesh, and in April of that year, when things were still not under control, he visited the Infectious Disease Hospital in Dacca, the nation's capital. He wanted to do rounds in a smallpox ward. "I went down the rows of beds," he told me. There were seventy or eighty people, and half of them were dying. "There is nothing you can do for any of these patients. They were afraid to move. There were a lot of flies crawling all over the place. My God, they talk about the odor of smallpox. It is an odd smell, not like anything else."

The skin gives off gases. "It's a sickly odor, like rotting flesh, but it's not decay, because the skin remains sealed and the pus isn't leaking out," Henderson said. "That smell is one of the mysteries of smallpox. No one knows what it is. I was with this British guy, Nick Ward, M.D. He had worked in Africa -- he was a tough guy. At the end, he stood by a fence looking at the ground. Finally, he said to me, 'I don't know that I could go through another situation like that again."'

Nicholas Ward, who now lives in France, remembered that moment. "I've spent a fair amount of my life working with tropical diseases, and I can truly say there is nothing so awful as a case of smallpox, particularly the type where a person becomes a bloody mess," he said. He knew the odor. "I would have a shrewd idea of a diagnosis after walking into a home. I could smell it."

Henderson and his team mounted ring vaccinations across Bangladesh, and they traced cases and contacts, trying to surround the life form. Finally, in the fall of 1975, they cornered variola on an island off the coast of Bangladesh. It was a marshy, poor place called Bhola Island, and there, on October 16th, a three-year-old girl named Rahima Banu broke with the last case of naturally occurring Variola major anywhere on earth. She survived. Rahima Banu would be twenty-seven years old today; researchers have lost track of her. Doctors from the Smallpox Eradication Unit collected six of the girl's pustules after they had dried into scabs, peeling them off her skin gently, with tweezers. Two years later, on October 26, 1977, the last natural case of the mild type of smallpox, Variola minor, popped up in a cook in Somalia named Ali Maow Maalin. He survived, and the last ring tightened around variola, and its life cycle

stopped.

THE headquarters of the Centers for Disease Control, in Atlanta, is a jumble of old and new buildings, joined by elevated walkways, which give the place the feel of a maze. The buildings sit along Clifton Road, an artery that winds through green neighborhoods in the northeastern part of Atlanta. I arrived at the C.D.C. On a perfect day in spring. Changeable clouds marched across a deep sky, and oak trees were shedding green flowers. Across the street from the entrance, a blue jay screamed in a pine tree, and the branches glittered in the sun, throwing off a scent of pitch.

Joseph J. Esposito, Ph.D., who is the chief of the C.D.C.'s Poxvirus Section, led me along an outdoor walkway toward his laboratory and office. Esposito is a stocky man of moderate height, in his mid-fifties, who runs to keep his weight down, and he has a dark beard and wears eyeglasses over brown eyes that are perceptive and serious. I asked him if we could get closer to smallpox. We passed along an aerial walkway covered with a chain-link fence, and we turned onto another walkway. We stopped and leaned on a railing. We were facing the C.D.C.'s Level 4 biocontainment building. It contains the Level 4 hot suites-labs where researchers work with lethal viruses while wearing pressurized spacesuits. The building has a line of windows tinted blue-green, like fish tanks. "The variola is in there somewhere," Joe Esposito said, offering me a grave smile and nodding at the Level 4 building. "There is a kind of electricity in the air when we're working with smallpox. Everybody around here always seems to know -- 'Joe's got the smallpox out of the freezer.' "

The smallpox freezer may be encircled by alarms and motion detectors. It may or may not be wrapped in chains. It may be a stainless-steel cylinder. Or it may be a white box intended to look like any other freezer. Officials at the C.D.C. won't comment.

Inside the freezer, the entire collection of smallpox occupies a volume slightly larger than that of a basketball. It consists of approximately four hundred little plastic vials the size of pencil stubs, the residue of D. A. Henderson's war with variola. They're an inch long and they have plastic screw caps. They sit in seven little white cardboard boxes, in a rack inside the freezer, which keeps the virus not strictly alive, not exactly dead, but potent. Most of the vials contain milky ice or bloody ice. The virus has been cultured in flasks of live cells (milky ice) or in live chicken eggs (live eggs have a blood system). Around twenty-five of the vials contain human scabs-dried smallpox pustules. The scabs look like pencil erasers.

The six scabs that were collected from the girl in Bangladesh named Rahima Banu used to sit in a vial, but recently Esposito's group used the last of her scabs for research. The strain that came out of her scabs is known as Bangladesh 1975 -- or, informally, as the Rahima. Now that the scabs are gone, the Rahima exists in vials of milky ice.

Esposito sat hunched in his chair in front of his computer. His office is a windowless room with cinder-block walls. A troll with Shocking-pink hair stood on top of the computer, staring at him wide-eyed. "I like to think like a virus," Esposito said. "If you can think like a virus, then you can begin to understand why a virus does what it does. A smallpox particle gets into a person's body and, in a way, it's thinking, I'm this one particle sitting here surrounded by an angry immune system. I have to multiply fast. Then I have to get out of this host fast. It escapes into the air before the pustules develop." By the time the host feels sick, the virus has already moved on to its next host. The previous host has become a cast-off husk (and is now becoming saturated with virus), but whether the person lives or dies no longer matters to the virus. However, the dried scabs, when they fall off, contain live virus. The scabs are the virus's seeds. They preserve it for a long time, just in case it hasn't managed to reach a host in the air. The scabs give the virus a second chance.

POXVIRUSES move easily through the animal kingdom. Along with herds of animals or swarms of insects come poxviruses circulating among them like pickpockets at a fair. Esposito once classified what he and other virologists have glimpsed of the poxviruses in nature. He noted monkeypox, swinepox, buffalopox, skunkpox, raccoonpox, gerbilpox, a few deerpoxes, a sealpox, turkeypox, canarypox, pigeonpox, starlingpox, peacockpox, dolphinpox, Nile crocodilepox, penguinpox, two kangaroopoxes, and a quokkapox. (The quokka is an Australian wallaby.) Any attempt to get to the bottom of the butterflypoxes, mothpoxes, and beetlepoxes would be something like enumerating the nine billion names of God.

A caterpillar that has caught an insectpox dissolves into a liquefaction of insect guts mixed with pure crystals of poxvirus. This is known as a virus melt. The melt pours out of the dead caterpillar, and other caterpillars come along and accidentally eat the crystals lying on a leaf, and they melt, and so it goes for millions of years in the happy life of an insectpox. "It is a good thing no person has been known to catch an insectpox," Esposito remarked. (You might avoid eating melted caterpillars.) The yellow-fever mosquito, Aedes aegypti, suffers from a fatal mosquitopox. At least two midgepoxes torment midges. Grasshoppers are known to get at least six poxes. If a grasshopperpox breaks out in a swarm of African Locusts, it can wipe them out with a plague.

Viruses have an ability to move from one type of host to another in what is known as a trans-species jump. The virus changes during the course of a jump, adapting to its new host. The trans-species jump is the virus's most important means of long-term survival. Species go extinct; viruses move on. There is something impressive in the trans-species jump of a virus, like an unfurling of wings or a flash of stripes when a predator makes a rush. Some fifty years ago, in central Africa, the AIDS virus apparently moved out of chimpanzees into people. Chimpanzees are now endangered, while the AIDS virus is booming.

For most of human prehistory, people lived in small groups of hunter-gatherers. The poxviruses did not deign to notice Homo sapiens as long as the species consisted of scattered groups; there was no percentage in it for a pox. With the growth of agriculture, the human population of the earth swelled and became more tightly packed. Villages became towns and cities, and people were crowded together in river valleys.

Epidemiologists have done some mathematics on the spread of smallpox, and they find that the virus needs a population of about two hundred thousand people living within a fourteen-day travel time from one another or the virus can't keep its life cycle going, and it dies out. Those conditions didn't occur in history until the appearance of settled agricultural areas and cities. At that point -- roughly seven thousand years ago -- the human species became an accident with a poxvirus waiting to happen.

Smallpox could be described as the first urban virus. It is thought to have made a trans-species jump into humans in one of the early agricultural river valleys -- perhaps in the Nile Valley, or in Mesopotamia, or in the Indus River Valley. In the Cairo Museum, the mummy of the Pharaoh Ramses V, who died as a young man in 1157 B.C., is speckled with yellow blisters from face to scrotum.

In 1991, Joe Esposito and the molecular biologist Craig Venter, who was at the National Institutes of Health, sequenced the entire genome of the Rahima strain of smallpox; that is, they mapped all its DNA. They found that the virus contains a hundred and eighty-six thousand base pairs of DNA (each base pair being a step on the ladder of the molecule), and that the DNA contains about a hundred and eighty-seven genes-making smallpox one of the most complicated viruses known. (The AIDS virus has only ten genes.) A gene is a piece of DNA, which contains the recipe for making one protein. Esposito's team noticed that smallpox has a gene that is also found in the placenta of a mouse. Smallpox knows how to make a mouse protein. How did smallpox learn that? "The poxviruses are promiscuous at capturing genes from their hosts," Esposito said. "It tells you that smallpox was once inside a mouse or some other small rodent." D. A. Henderson speculates that the original host of smallpox may have been an African rodent that lived in a crescent of green forests along the southern Nile River. The forests disappeared, cut down by people, and possibly the rodent has gone extinct. This is only a guess. Smallpox moved on.

THE principal American biodefense laboratory is the United States Army Medical Research Institute of Infectious Diseases, or USAMRIID, in Fort Detrick,

Maryland -- an Army base that nestles against the eastern front of the Appalachian Mountains in the city of Frederick, an hour's drive northwest of Washington. There is no smallpox at USAMRIID, for only the two W.H.O. repositories are allowed to have it. The principal scientific adviser at USAMRIID is Peter Jahrling, a civilian in his fifties with gray-blond hair, PhotoGray glasses, and a craggy face. Jahrling was the primary scientist during the 1989 outbreak of Ebola virus in Reston, Virginia: he discovered and named the Ebola-Reston virus.

"I don't think there is any higher biological threat to this nation than smallpox," Jahrling said to me, in his office, a windowless retreat jammed with paper. His voice was croaking. "I was over in Geneva for a meeting on smallpox, and I came back with some flu strain," he said hoarsely. The flu strain had swept through the world's smallpox experts. "Shows how fast a virus can move. If we have some kind of bioterror emergency with smallpox, there will be no time to start stroking our beards. We'd better have vaccine pre-positioned on pallets and ready to go."

Jahrling opposes the destruction of the official stocks of smallpox. "If you really believe there's a bioterrorist threat out there, then you can't get rid of smallpox," he said. "If smallpox is outlawed, only outlaws will have smallpox." His group has been testing antiviral drugs that might work on smallpox, and he feels that in order to verify the effectiveness of a new drug it would be necessary to test it on live smallpox virus.

One of Jahrling's researchers, John Huggins, led me into the central areas of USAMRIID. Huggins is a chunky man with round Fiorucci eyeglasses. He turned into a corridor leading to the Level 4 spacesuit hot suites, or hot zones. The walls were cinder block, and the light turned bile green. A smoky reek drifted in the corridors, coming from huge autoclaves -- pressure cookers -- where contaminated equipment and waste were being heated and sterilized after being brought out of a hot zone. We stopped at a door that had a window of thick glass, looking into hot suite AA5, the Ebola hot zone.

I pressed my nose against the glass. It was cool, and there was a faint rumble of blowers, keeping the zone at negative pressure, so that no contaminated air would flow out through cracks. The suite was dark and drowned in shadows, illuminated only by light coming from lab equipment. I could see no one in there but white mice in racks of plastic boxes. They were scribble-scrabbling in pine shavings.

"These mice are all infected with Ebola," Huggins said. "They bleed when they die. Like humans."

The mice looked fine. I couldn't see any blood in the shavings.

"We're giving them an antiviral drug that saves their lives," Huggins explained. "They're kind of perky. It's called an S.A.H. drug. It's not ready for human testing. It could work in humans, but we don't know."

In 1995, Huggins spent time in a spacesuit at the C.D.C. Level 4 lab in Atlanta, testing drugs on live smallpox. He found that a drug called cidofovir can block smallpox replication. Cidofovir, which is normally used against a virus that infects AIDS patients, has drawbacks. It must be given to people by I.V. drip, and there is some concern that it might damage the kidneys. Huggins and Jahrling believe that within five years better smallpox drugs are likely to be discovered. They say they will need to test the drugs directly on the virus. They add that the drug must be tested on the live virus in order to receive F.D.A. approval.

In March, a committee of the highly respected Institute of Medicine, in Washington, D.C., concluded that one of the main reasons for retaining live smallpox virus would be to help develop drugs against it. D. A. Henderson, who was not a member of the Institute of Medicine committee and thoroughly disagrees with its conclusions, thought that Jahrling was being too optimistic. "To get a new antiviral drug against smallpox is going to cost three hundred million dollars," he said. "The money simply isn't there."

Jahrling stood his ground. "Ceremonial destruction of smallpox is the crown jewel in D. A. Henderson's career," he said. "He would like to throw the lever on smallpox himself. If I had spent my life tramping the planet to eradicate the virus, I would want to throw the lever, too. What he did was a great accomplishment, but he has become blinded by the last glittering crown jewel of total eradication."

KEN ALIBEK, who was once Kanatjan Alibekov, a leading Soviet bioweaponeer and the inventor of the world's most powerful anthrax, shocked the American intelligence community when he defected, in 1992, and revealed how far the Soviet Union had gone with bioweapons. In a new book of his, entitled "Biohazard," Alibek says that there were twenty tons of liquid smallpox kept on hand at Soviet military bases; it was kept ready for loading on biowarheads on missiles targeted on American cities. I contacted certain government sources and asked them if there was any evidence to corroborate Alibek's claims.

One person who asked not to be named said, "I really have to be careful what I say. Yeah, Alibek's claims have been corroborated in multiple ways. There's not a lot of evidence. There's some."

Another person who asked not to be named said that the Soviet Union had put the biowarheads on ICBM missiles and test launched them sometime before 1991 over the Pacific Ocean. The United States -- probably using spy satellites that orbited near the tests -- was able to monitor the missiles as they soared into space and then punched back through the atmosphere and landed in the sea. The warheads were spinning weirdly: they were unusually heavy, and they had a strange shape. The warhead was heavy because it had an active refrigeration system to keep its temperature near or below the boiling temperature of water during reentry. Nuclear warheads don't need to be actively cooled. Why would a warhead need to be cooled? Presumably, because it was designed to contain something alive. But what? The person said, "The warhead was built to carry a very small quantity of biological weapon. Anthrax wouldn't have worked too well, because you need to put a lot of anthrax in the air to kill people, and anthrax isn't contagious. With smallpox, you don't need much. If you use smallpox, you get around the most difficult technical problem of bioweapons -- the problem of dissemination. With smallpox, you use people as disseminators."

In 1989, a Soviet biologist named Vladimir Pasechnik defected to Britain. British intelligence agents spent a year debriefing him in a safe house. By the end, the British agents felt they had confirmed that the U.S.S.R. had biological missiles aimed at the United States. This information reached President George Bush and the British Prime Minister, Margaret Thatcher. Mrs. Thatcher then apparently telephoned the Soviet leader, Mikhail Gorbachev, and sternly confronted him. She was furious, and so was Bush. Gorbachev responded by allowing a small, secret team of American and British biological-weapons inspectors to tour Soviet biowarfare facilities. In January of 1991, the inspectors travelled across the U.S.S.R., getting whirlwind looks at some of the major clandestine bases of the Soviet biowarfare program, which was called Biopreparat. The inspectors were frightened by what they discovered. ("I would describe it as scary, and I feel a responsibility to tell the world medical community about what I saw, because doctors could face these diseases," an inspector, Frank Malinoski, M.D., Ph.D., said to me.) On January 14th, the team arrived at Vector, the main virology complex, in Siberia, and the next day, after being treated to vodka and piles of caviar, they were shown into a laboratory called Building 6, where one of the inspectors, David Kelly, took a technician aside and asked him what virus they had been working with. The technician said that they had been working with smallpox. Kelly repeated the question three times. Three times, he asked the technician, "You mean you were working with Variola major?" and he emphasized to the technician that his answer was very important. The technician responded emphatically that it was Variola major. Kelly says that his interpreter was the best Russian interpreter the British government has. "There was no ambiguity," Kelly says.

The inspectors were stunned. Vector was not supposed to have any smallpox at all, much less be working with it. All the Russian smallpox stocks were supposed to be kept in one freezer in Moscow, which was supposed to be under the control of the World Health Organization. For Vector to have smallpox would be a supreme violation of rules set down by the W.H.O.

Then they went upstairs into Building 6, and entered a long corridor. On one side was a line of glass windows looking in on a giant airtight steel chamber of a type known as a dynamic aerosol test chamber. The device is for testing bioweapons. Small explosives are detonated inside the chamber, throwing a biological agent into the air of the chamber. The chamber in Building 6 had an octopus-like structure of tubes coming out of it where sensors could be attached or monkeys could be clamped with their faces exposed to the chamber's air. An airborne bioweapon would get into the sensors or into the animals' lungs. On the other side of the corridor was a room that Frank Malinoski said "looked like a NASA control room," and video cameras provided views inside the chamber, so that Vector scientists could watch the release of a bioweapon.

Vector scientists later told the inspectors that the chamber was a Model UKZD-25-a bioweapons explosion-test chamber. It was the largest and most sophisticated modern bioweapons test chamber that has ever been found by inspectors in any country. It was used for testing smallpox.

The inspectors asked to put on spacesuits and to go inside. (They had brought along Q-Tip-like swab kits: they would have liked to swab the inner walls of the chamber, in the hope of collecting a virus.) The Russians refused. "They said our vaccines might not protect us," Malinoski says. "It suggested that they had developed viruses that were resistant to American vaccines." The Russians ordered the inspectors to leave Building 6.

At a large gathering that evening, three inspectors -- David Kelly, Frank Malinoski, and Christopher Davis -- publicly confronted the head of Vector, a virologist named Lev Sandakhchiev, about Vector's smallpox. (His name is pronounced "Sun-dock-chev.") He back-pedalled angrily. Davis, a medical doctor with a Ph.D. who was then with British intelligence, now recalls, "Lev is gnome-like, a short man with a wizened, weather-beaten, lined face, and black hair. He's very bright and capable, a tough individual, full of bonhomie, but he can be very nasty when he is upset." Sandakhchiev heatedly insisted that his technician had misspoken. He called on his deputy, Sergei Netesov, to support him. The two Vector leaders insisted that there had been no work with smallpox at Vector. They had been doing genetic engineering with smallpox genes, they said, but Vector didn't have any live smallpox, only the virus's DNA -- and the more they spoke the murkier their statements seemed. David Kelly remembers, "They were both lying, and it was a very, very tense moment. It seemed like an eternity, but it only lasted about fifteen minutes. And then there were so many other aspects of Vector we had to explore."

"The brazenness of these people!" one inspector later fumed. "They had been testing smallpox in their explosion chamber the week before we arrived."

Lev Sandakhchiev is still the head of Vector. He declined to be interviewed for this account but has steadfastly maintained that no offensive bioweapons research occurs now at Vector. In January of this year, at the Geneva meeting of smallpox experts, Sandakhchiev delivered a paper (and may have caught their flu). In his paper he claimed that Vector did not have any smallpox until 1994, when, he said, Vector had obtained it legally from Moscow. D. A. Henderson was also at that meeting. "It was quite elaborate and quite unbelievable," Henderson said. "I rolled my eyes, and saw other people rolling their eyes at me. We're sitting there, he's presenting us with all this horseshit, and he knows it's horseshit. Sandakhchiev is lying flagrantly."

Four sources have suggested to me that Lev Sandakhchiev was in charge of a Vector research group that in 1990 devised a more efficient way to grow weapons-grade smallpox in industrial-scale pharmaceutical tanks known as bioreactors. The Vector smallpox bioreactors had a capacity of six hundred and thirty litres -- virus tanks big enough for a microbrewery. Once the Vector scientists had worked out the details of variola manufacturing, the results were written up in master production protocols -- recipe books -- and these protocols ended up at the Russian Ministry of Defense, in Moscow. At the time, weapons-grade smallpox was being manufactured by two older methods at a top-secret virus-munitions production plant near the city of Sergiyev Posad, forty-five miles northeast of Moscow. At another virus-munitions plant, near Pokrov, about two hundred miles southeast of Moscow, military virus-production specialists converted the plant to the new Vector method of making smallpox in the large virus bioreactors, but apparently never started the reaction. When one considers that a single person infected with smallpox would be considered a global medical emergency, this is rather a lot of smallpox activity to have bubbling near Moscow. It means that live smallpox virus and the protocols for how to mass-produce it had spread to various places in Russia by the nineteen-nineties. Indeed, live smallpox could be bubbling in reactors now at Sergiyev Posad-no one in the United States government admits to having a clue, and no Russian journalists have seen the place. Peter Jahrling said, "I really think that Vector is out of the offensive BW [biowarfare] business. But Sergiyev Posad is the black hole. We have no contacts there, and the Russians won't allow us to visit the place."

These days, Lev Sandakhchiev has cordial relationships with Peter Jahrling and Joe Esposito. They are eager to draw their colleague into the circle of open international science. During their visits to Siberia, Sandakhchiev has come across to them as warm and human, and desperate for research money to support his institute. Sometimes, candid remarks slip out from the Russians. Jahrling put it this way: "There were tons of smallpox virus made in the Soviet Union. We know that. The Russians have admitted that to us. I was in a room with one of the Vector leaders when he said to us, 'Listen, we didn't account for every ampule of the virus. We had large quantities of it on hand. There were plenty of opportunities for staff members to walk away with an ampule. Although we think we know where our formerly employed scientists are, we can't account for all of them-we don't know where all of them are.' " Today, smallpox and its protocols could be anywhere in the world. A master seed strain of smallpox could be carried in a person's pocket. The seed itself could be a freeze-dried lump of virus the size of a jimmy on an ice-cream cone.

While I was sitting with D. A. Henderson in his house, I mentioned what seemed to me the great and tragic paradox of his life's work. The eradication caused the human species to lose its immunity to smallpox, and that was what made it possible for the Soviets to turn smallpox into a weapon rivalling the hydrogen bomb.

Henderson responded with silence, and then he said, thoughtfully, "I feel very sad about this. The eradication never would have succeeded without the Russians. Viktor Zhdanov started it, and they did so much. They were extremely proud of what they had done. I felt the virus was in good hands with the Russians. I never would have suspected. They made twenty tons -- twenty tons -- of smallpox. For us to have come so far with the disease, and now to have to deal with this human creation, when there are so many other problems in the world . . ." He was quiet again. "It's a great letdown," he said.

For years, the scientific community generally thought that biological weapons weren't effective as weapons, especially because it was thought that they're difficult to disperse in the air. This view persists, and one reason is that biologists know little or nothing about aerosol-particle technology. The silicon-chip industry is full of machines that can spread particles in the air. To learn more, I called a leading epidemiologist and bioterrorism expert, Michael Osterholm, who has been poking around companies and labs where these devices are invented. "I have a device the size of a credit card sitting on my desk," he said. "It makes an invisible mist of particles in the one-to-five-micron size range -- that size hangs in the air for hours, and gets into the lungs. You can run it on a camcorder battery. If you load it with two tablespoons of infectious fluid, it could fill a whole airport terminal with particles." Osterholm speculated that the device could create thousands of smallpox cases in the first wave. He feels that D. A. Henderson's estimate of how fast smallpox could balloon nationally is conservative. "D.A. is looking at Yugoslavia, where the population in 1972 had a lot of protective immunity," he said. "Those immune people are like control

rods in a nuclear reactor. The American population has little immunity, so it's a reactor with no control rods. We could have an uncontrolled smallpox chain reaction." This would be something that terrorism experts refer to as a "soft kill" of the United States of America.

The idea that a biological credit card could execute a soft kill of the United States has reached the White House. The chief terrorism expert on the National Security Council, Richard Clarke, has sent word through the federal government that getting national stockpiles of smallpox vaccine is a top priority.

The effort started four years ago. So far, the government has little to show except numerous meetings among agencies, with no hope of vaccine anytime soon. The Department of Defense has put all its vaccine efforts into something called the Joint Vaccine Acquisition Program, which is run by the Joint Program Office for Biological Defense. People inside the military don't want their names used when they talk about the Pentagon's efforts. "It's a fucking disaster," said one knowledgeable military officer who has had direct experience in the matter. Last year, the Pentagon hired a systems contractor called Dynport, headquartered in Reston, Virginia, to develop and make a number of different vaccines for troops. The smallpox-vaccine contract calls for three hundred thousand doses, at a cost of $22.4 million, or seventy-five dollars a dose, with delivery now scheduled for 2006. (The date has been pushed back at least once already.) This amount of vaccine could be made in about fifteen flasks the size of soda bottles. There are 2.3 million people in the armed forces, and they have several million more dependents. "Three hundred thousand doses is not enough vaccine to protect anyone -- not even our troops. It totally ignores the fact that smallpox is contagious," one military man said. "These guys ought to be buying tank treads and belt buckles. They know nothing about vaccines."

The Department of Health and Human Services (H.H.S.) has been given the responsibility by the White House for producing a stockpile of smallpox vaccine large enough to protect the American civilian population in case of a bioterror event; originally, the idea was for H.H.S. to consider hiring the military's contractor, Dynport, to make forty million extra doses, in addition to the three hundred thousand that Dynport was making for the Pentagon. (Any such initiative would require competitive bidding.)

At a series of meetings at H.H.S., a top Dynport executive said that forty million doses could be quite expensive. One scientist asked if a group of knowledgeable people could be drawn together to come up with an estimate of costs. The Dynport man answered, "Yes, we can do a study that will list the questions that need to be asked. It will cost two hundred and forty thousand dollars and will take six weeks."

Somebody then asked how much it would cost to answer the questions. The Dynport official responded, "That will be a different study. That study will cost two million dollars and will take six months."

With that, one scientist at the meeting burst out, "This is horseshit! We're asking an encyclopedia salesman if we need an encyclopedia!"

The C.E.O. of Dynport, Stephen Prior, said that the situation is more complicated:"The civilian population is very different from the military. There's an age spread from newborns to the elderly, there's more compromised immunity, with AIDS, chemotherapy, and organ transplants. And possibly thirty-five per cent of people have never been vaccinated. So it's not just scaling up the manufacturing."

Another knowledgeable observer is the retired Army General Philip K. Russell, M.D., who gave the order to send biohazard troops into Reston in 1989 to deal with a building full of monkeys infected with Ebola. Russell said to me, "Many of us are afraid that Dynport won't deliver the goods without wasting an inordinate amount of money."

However, H.H.S. has quietly opened talks with other potential contractors, preparing to solicit bids to make a civilian stockpile of smallpox vaccine, though there has been no announcement. "The effort at H.H.S. still isn't organized," D. A. Henderson said. General Russell said, "If smallpox really got going, people should be most concerned about a lack of effective leadership on the part of their government."

I WANTED to get closer to smallpox virus. In Joe Esposito's lab, at the Centers for Disease Control, there was a test going of a biosensor device for detecting smallpox. It was a machine in a black suitcase. It could detect a bioweapon using; the process called the polymerase chain reaction, or P.C.R. -- the same kind of molecular fingerprinting that police use to identify the DNA of a crime suspect. The suitcase thing was called a Cepheid Briefcase Smart Cycler, and it had been co-invented by M. Allen Northrup, a biomedical engineer who founded a company to make and sell biosensors. He was there, along with a cluster of other scientists.

Esposito, the official guardian of one half of the world's official supply of smallpox, handed a box of tubes to a scientist in the room. Two of the tubes contained the whole DNA of smallpox virus but not live smallpox. The DNA drifted in a drop of water; it was the Rahima strain. Two other tubes contained anthrax. The samples were snapped into slots in the machine.

Northrup turned his attention to a laptop computer that nestled in the machine. Northrup is a chunky man with a mustache and reddish-brown hair. He tapped on the keys.

We waited around, chatting. Meanwhile, the Cepheid was working silently. It showed colored lines on its screen. In fifteen minutes, the anthrax lines started going straight up, and someone said, "The anthrax is screaming." Finally, one of the smallpox lines crept upward, slowly. "That's a positive for smallpox, not so bad," a scientist said. Emergency-response teams could carry a Cepheid suitcase to the scene of a bioterror event and begin testing people immediately for anthrax or smallpox. The machine is priced at sixty thousand dollars.

Afterward, Joe Esposito went around collecting the used tubes. The smallpox-sample holder -- a plastic thing the size of a thumbnail-had been left on a counter. I picked it up.

Esposito wasn't about to let anyone walk off with smallpox. "Leave me that tube," he said. "You are not allowed to have more than twenty per cent of the DNA."

Before I handed it to him, I glanced at a little window in the tube. When I held it up to the light, the liquid looked like clear water. The water contained the whole molecules of life from variola, a parasite that had colonized us thousands of years ago. We had almost freed ourselves of it, but we found we had developed a strong affinity for smallpox. Some of us had made it into a weapon, and now we couldn't get rid of it. I wondered if we ever would, for the story of our entanglement with smallpox is not yet ended.

1999 (October 11) - The New Yorker, October 18 & 25, 1999, pp.90-107 - "West Nile Mystery" by RICHARD PRESTON

"WEST NILE MYSTERY : How did it get here? The C.I.A. would like to know."

http://cryptome.org/west-nile.htm / 1999-10-18-cryptome-org-new-yorker-west-nile-mystery.pdf / https://drive.google.com/file/d/1wFZnPQKnCmeleaFCoaxVLDomXkBrFyOO/view?usp=sharing

Last spring, long before the outbreak, an Iraqi defector declared Saddam Hussein had told him of plans to use the virus as a bioweapon.

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SINCE the end of August, a brain virus that is now believed to be a previously unknown variant of the West Nile virus has killed at least five people around New York City and its suburbs. This has created a stir in the national news media -- and a whiff of concern within the C.I.A. that the outbreak might have been an act of bioterrorism -- but the main effect of the outbreak in humans has been quiet: thousands of New Yorkers may have had West Nile virus replicating in their brains this summer without knowing it. In most people, the West Nile illness feels like a mild flu. Humans catch it from the bite of an infected mosquito. You might get a headache and a backache and the blahs; just another summer bug. Usually, the illness lasts from three to six days, and people recover quickly, without lasting effects. But in young children, the elderly, and people with weak immune systems West Nile can turn into encephalitis -- an inflammation of the brain. The brain becomes red and puffs up inside the skull. These victims may get tremors -- their muscles may become uncontrollably weak -- and they can have seizures, fall into a coma, stop breathing, and die.

The West Nile virus was first identified by virologists in 1937, in the West Nile district of Uganda, along the Albert Nile near the border with the Congo, where it was making people sick. West Nile virus is a traveller. Mosquitoes are its main carriers and birds are its main hosts; they are its deep reservoir in nature. It has been found all over east Africa, in western India, in Australia (where one of its close relations is known as Kunjin), and in Egypt and the Middle East. About forty per cent of the people who live in the Nile Delta in Egypt have been infected with West Nile at some point in their lives. Although the virus stages occasional outbreaks in people, the real outbreaks are happening in birds, and people are bystanders caught in the crossfire -- bitten by chance by an infected mosquito. The virus also gets into ticks. From the point of view of the West Nile virus, the human species is of less consequence than a tick. In a manner of speaking, West Nile doesn't even know we exist. But when West Nile moves with the birds there is splatter damage among humans. Birds occasionally carry West Nile into Eastern Europe during their annual migrations out of Africa. Right now, there is a major outbreak of what is believed to be the West Nile virus in southern Russia, around the cities of Volgograd and Rostov-on-Don. There are reports that some six hundred people have been taken ill, and at least thirty-two have died. American scientists have been trying to persuade Russian scientists to send them samples of tissue and blood from the Russian outbreak, so that they can compare the New York strain with the Russian strain. It might show that the New York strain somehow came from Russia, perhaps travelling by airplane in the bloodstream of an infected Russian who ended up in Queens and was bitten by a mosquito there, and the mosquito then passed it to a bird. So far, the Russians haven't sent any samples.

Until this summer, the West Nile virus had never been seen in the Western Hemisphere. Some virus experts think that the leap of West Nile virus into North America -- if this is indeed what has happened -- is one of the most important biological events to occur in the world of the viruses in this century. For one thing, until now the virus has generally not been fatal to its avian hosts. For another, the outbreak reveals the mobility of viruses and their propensity to cross continents. The experts have no idea how the virus got to New York and little idea where it's going. Possibly, an infected bird somehow flew across the ocean -- or hitched a ride on a ship, or was imported legally or illegally. Or perhaps an infected mosquito got here on a plane. The virus may now be headed down the eastern seaboard of the United States for the winter, travelling inside birds. In late June or early July, the virus apparently showed up in birds in the Whitestone area of northern Queens and in the South Bronx. The birds caught it from an urban mosquito, Culex pipiens -- Latin for "chirping bug" -- commonly known as the house mosquito. This mosquito breeds all over the world in polluted water. Where the mosquitoes of New York City got the West Nile virus is unknown.

IN mid-August, Dr. Tracey McNamara, a veterinary pathologist with the Wildlife Conservation Society, at the Bronx Zoo, began hearing reports of dead birds all around New York City. Then she noticed dozens of dead and sick crows around the zoo. "I'm sitting there saying, 'It's raining crows,' " she recalls. "The sick ones were neurologic -- they couldn't fly, they had trouble balancing. They were sitting there with tremors." Dr. McNamara performed necropsies, and when she opened the birds' skulls she found that they'd had brain hemorrhages; she also found lesions on their hearts. Then, the day after Labor Day, there was a big die-off of birds at the zoo. A number of South American flamingos and cormorants died, and a bald eagle developed head tremors and died. Dr. McNamara sensed that an unknown virus was killing the birds. She already suspected it was being passed by mosquitoes, and she feared that it could be lethal to humans. She began taking extra precautions: she handled the birds only with special equipment, and opened them up in a filtered-air safety cabinet. She notified health authorities and sent them samples for analysis.

At roughly the same time, Dr. Deborah Asnis, at the Flushing Hospital Medical Center, in Queens, was treating two elderly patients who were dying of an apparent encephalitis virus, but she couldn't diagnose it. Dr. Asnis brought it to the attention of doctors at the New York City Department of Health, who sent samples of human brain tissue to a laboratory of the federal Centers for Disease Control and Prevention in Fort Collins, Colorado, where Dr. Duane Gubler, the director of the Division of Vector-Borne Infectious Diseases, made a tentative identification of St. Louis encephalitis virus. That virus lives in birds and mosquitoes in the South and Midwest, and had never been seen in New York On Friday, September 3rd, city officials learned that the C.D.C. believed that the virus was St. Louis encephalitis, and just two hours later Mayor Rudolph Giuliani ordered trucks and a helicopter to begin spraying insecticides over neighborhoods in northern Queens. The spraying eventually involved five helicopters, and was carried out all over the city and in many suburbs. The chief of the Mayor's Office of Emergency Management, Jerome Hauer, bought half a million cans and bottles of Off! and other insect repellents on behalf of New York City. He ended up cornering nearly the entire supply of insect repellent in the United States. The city handed out the bug repellent for free. Hauer also is in charge of New York City's preparations for a bioterror event. A bioterror event is the deliberate release of a biological weapon, such as anthrax or smallpox, by a terrorist a possibility that has city officials very concerned, and they've been having planning sessions and staging simulated terror exercises. It may be that their preparations for a bioterror event fortuitously speeded up the city's response to the outbreak of the brain virus.

Then two groups of scientists almost simultaneously discovered that the virus wasn't St. Louis encephalitis virus but West Nile -- or something close to West Nile. One group was led by Dr. Ian Lipkin, of the Emerging Diseases Laboratory at the University of California at Irvine, who was studying bits of brain tissue from people who had died in New York. The other group was led by Duane Gubler, of the C.D.C. lab in Colorado. Both Lipkin and Gubler were

attempting to decode the DNA of the virus to determine exactly what the virus is. It might be given a new name, Lipkin told me early last week: "We could call it the Hudson River virus. We won't call it the Queens virus. People don't like to have viruses named after the places they live." Then, at the end of the week, Lipkin announced that he believed the virus was indeed a new strain, and that it is most closely related to the West Nile virus and its relative the Australian Kunjin virus.

THE mystery of how a West Nile-like virus got to New York City has been troubling the Central Intelligence Agency. At the headquarters of the C.I.A., in Langley, Virginia, there is a group of analysts and officers who concern themselves with biological weapons -- the C.I.A.'s bioweapons-analysis section. The section is run by a senior biologist who has had firsthand experience with some of the world's most dangerous viruses, including the Ebola virus. The scientist is said to be well respected by his peers, and he works with a team of analysts, mainly younger people fresh out of college. The analysts gather intelligence involving bioweapons and then try to assemble the big picture, fitting the data together with what they already know about bioweapons. After the New York diagnosis was changed to West Nile, on September 27th, the top officers in the bioweapons-analysis section suffered a lurch of uneasy recognition: they recalled a report that a self-described defector from Iraq had declared last April that Saddam Hussein was developing a strain of the West Nile virus as a biological weapon and was preparing to release it.

Someone in the analysis section apparently noticed that on April 6th a British tabloid, the Daily Mail of London, had published an excerpt from a book entitled "In the Shadow of Saddam," with a note that the account's credibility was "for the reader to judge." The author calls himself Mikhael Ramadan. That may or may not be his real name. Mikhael Ramadan is said to look a lot like Saddam Hussein. Purportedly, he served as one of Saddam's doubles, in order to help foil assassination attempts. There is a photograph, supposedly of him, on the back cover of the book, and he looks remarkably like Saddam except that he has more gray at the temples, and somehow he looks kindly. Eventually, Mikhael Ramadan managed to escape from Iraq. In his book he offers a wild-sounding account of his experiences working as Saddam's double, including such vignettes as a Kurdish rebel being lowered slowly into a vat of sulfuric acid. Mr. Ramadan also wrote, as the Daily Mail published it:

In 1997, on almost the last occasion we met, Saddam summoned me to his study. Seldom had I seen him so elated. Unlocking the top right-hand drawer of his desk, he produced a bulky, leather-bound dossier and read extracts from it.... The dossier holds details of his ultimate weapon, developed in secret laboratories outside Iraq.... Free of UN inspection, the laboratories would develop the SV1417 strain of the West Nile virus-capable of destroying 97 pc [per cent] of all life in an urban environment.... He said SV1417 was to be "operationally tested" on a Third World population centre.... The target had been selected, Saddam said, "but that is not for your innocent ears."

It sounded crazy. But why would a man presenting himself as an Iraqi defector predict that Saddam would unleash a virus just months before the same one broke out unexpectedly in New York? And, of all the thousands of viruses in the world, why West Nile? It was enough to make any bioweapons analyst at the C.I.A. feel uneasy. Adding another twist to the story, it turns out that in 1985 the Centers for Disease Control had sent samples of West Nile virus to a researcher in Iraq, which occasioned a controversy in the media five years later, on the eve of the Gulf War, when reports came out that Iraq had a biowarfare program. But the fatality rate for West Nile is not remotely near ninety-seven per cent, and "SV1417" is not a standard designation for any known strain of West Nile virus. It may be a code designation for some strain that Saddam's bioweaponeers might conceivably be working on, perhaps in a French-built virology facility near Baghdad that has been closed to inspectors from the United Nations for two years, ever since Saddam threw out all the U.N. inspectors. In the early nineteen-eighties, a French vaccine company, Institut Merieux, which is a division of the pharmaceutical giant Rhone-Poulenc, built a facility called the Foot and Mouth Vaccine Plant at a site now known as Al Manal. Institut Merieux helped the Iraqis operate Al Manal for a time, and trained the staff before departing. Al Manal was subsequently used for research into virus weapons. During the Gulf War, Al Manal and the Merieux equipment were used for making twenty thousand litres of botulinum toxin, or BTX -- one of the most lethal biotoxins known. In 1992, the United Nations tore down the buildings in which the BTX was made and destroyed that equipment, but it left standing eighty per cent of the facility, part of which was for virus research. (Some inspectors wanted the whole thing torn down.) Al Manal may be back in business developing virus weapons.

At the same time that the report about West Nile virus was being discussed in the C.I.A., Dr. Ken Alibek, the former deputy chief of research for Biopreparat, the Soviet Union's main biowarfare program -- he defected to the United States in 1992 -- spoke to various people on Capitol Hill, voicing his concern that the West Nile outbreak was suspicious. "I told them, 'It will not be possible to say whether or not it is terrorism unless we have a thorough study,' " he explained to me. "We need to take these situations with a high degree of seriousness."

Mikhael Ramadan is now apparently in hiding somewhere in Canada or the United States. At any rate, the C.I.A. people had an interest in finding him. Presumably, they would want to ask him more questions about the West Nile virus and whatever Saddam might have told him about any plans Iraq might have had for it and New York City. I don't know whether they succeeded in finding him.

Hoping to speak with Mikhael Ramadan myself, I called his publisher, a tiny outfit called GreeNZone Publishing, which has an office in the south of England. One of the firm's three directors, James Bartholomew, answered the telephone. "We don't know Mikhael Ramadan's whereabouts," he said. "We believe he was in Canada for a while. We have five employees here, and none of our people has ever met him. We were introduced to him through a third party. There was a woman, an American-Iraqi nurse, involved in bringing him forward. There was a verification meeting with him that took place in the fall of last year, in Canada, I guess. All of our communication with him has been by E-mail. His E-mail address is now defunct. His manuscript was physically delivered to us by a courier outfit. We tried to get him to change his mind and come forward for television interviews. We had inquiries from NBC and CBS. What is that show, '60 Minutes'? -- they were trying to find him. The book has sold well for a company our size. We want to pay him, but we can't find him."

"Is the book fiction?"

"We've taken his book as true, based on the evidence we have. But we don't know how much of it is true."

"What's the evidence?"

"I can't say. It would put him in danger," Mr. Bartholomew said. "True or not, it was a good story. We saw it as a commercial proposition. We weren't trying to educate the world."

I THEN spoke with the Secretary of the Navy, Richard Danzig. As early as 1993, Danzig had played a leading role in encouraging the government to plan for a possible bioterror event. He is a soft-spoken man with a thin face and spectacles, and he didn't sound alarmed. "A point I've been making to emergency planning groups is that, though we may know that a biological event has occurred, we may not know if it's an incident of bioterrorism," he said. "Even if you suspect biological terrorism, it's hard to prove. It's equally hard to disprove. This is more illuminating of my prediction that we won't necessarily know when bioterror has occurred than it is illuminating of Saddam Hussein."

I called a top scientist who advises the F.B.I., a person who has been deeply involved with bioterror planning. The F.B.I. is currently investigating more than two hundred threats, hoaxes, and attempts at bioterrorism that have occurred in the United States in just the past year -- it's got to the point where every

two hundred threats, hoaxes, and attempts at bioterrorism that have occurred in the United States in just the past year -- it's got to the point where every wanna-be terrorist is threatening to unleash a bug. This scientist seemed thoughtful, and said that West Nile might be a good one. He said, "If I was planning a bioterror event, I'd do things with subtle finesse, to make it look like a natural outbreak. That would delay the response and lock up the decisionmaking process."

An Army expert on bioweapons told me that the military has known for some time that Soviet biologists working for the U.S.S.R.'s biowarfare program had evaluated the West Nile virus for use as a biological weapon. "The Russians did this kind of crap back in the seventies -- they're admitting it to us now," he said. The Soviet scientists were interested in West Nile because it can be put into mosquitoes and the mosquitoes can be released into a city, where they will bite people. "They abandoned it because it didn't work very well," he said. "How many containers of West Nile-infested insects do you need to release in Queens to make it worth a shot?"

BY Friday, October 1st, the Mikhael Ramadan story had surfaced at the Centers for Disease Control, in Atlanta. Dr. Scott Lillibridge, who is the head of the C.D.C.'s Bioterrorism Preparedness and Response Program, alerted other scientists at the C.D.C. about the allegations and asked them to evaluate the evidence. I spoke with a person at the C.D.C., who said, "We're taking it seriously. We'll see where the data takes us. It could be done. You'd have to bring in a lot of mosquitoes." If the mosquito-filled containers were made of plastic, they would not show up in a metal detector at Kennedy International Airport. He went on, "But West Nile is not a great biological weapon, because it doesn't hurt most people very much."

An expert on insect viruses named Dr. Thomas Monath, who ran the C.D.C.'s Fort Collins lab, and later worked for the Army, and is now the chief scientist at a Massachusetts biotech firm called OraVax, took a longer perspective. He thought that the appearance of West Nile in North America was one of the most exciting things that he'd ever seen in his life. "My favorite hypothesis, at the moment, is that a human accidentally brought it here," he said. He thought it was quite possible for a single infected person to have passed through Kennedy International Airport, gone into Queens, and been bitten by a house mosquito, which in turn gave it to a bird. "Unlike most of its relatives, West Nile produces a lot of virus particles in the human bloodstream," Dr. Monath said. "Some people can develop about three thousand to ten thousand particles of the virus in every millilitre of their blood." A millilitre is roughly a quarter of an eyedropper. The particles of West Nile look like golf balls when photographed in an electron microscope. A Culex pipiens mosquito could suck multitudinous golf balls of West Nile into its gut while feeding on human blood.

"West Nile already knows Culex pipiens well, because that mosquito lives all over the world," Monath said. "But now the virus is encountering a whole new ecosystem in North America. Everything else will be unfamiliar to the virus -- the weather and climate, the ticks, many of the birds -- so it's got a job ahead of it in order to become established. Winter is coming on. In order to maintain itself and reproduce, it's got to find a suitable ecosystem. And it's got to find a mechanism for surviving the winter. Humans are just getting in the way. They have nothing to do with its survival. In Africa, it migrates with the birds. Right now, the birds of eastern North America are heading south for Florida and the Caribbean, and they will be going as far as Brazil and Argentina. We could see an outbreak of West Nile in Buenos Aires. It could also persist locally in the New York area, in hibernating mosquitoes. The virus may not be successful at overwintering, but if it is it will take us years to understand the impact and spread of West Nile in the New World."

On Wednesday, October 7th, a man in his twenties from Lakewood, New Jersey, reportedly became the first suspected case of West Nile-like encephalitis south of New York City. Last week, he was in critical condition. New Jersey health officials reported that they had picked up fifty dead crows around New Jersey; fifteen of them have tested positive for the virus. Tracey McNamara, at the Bronx Zoo, said, "I'm certain that the number of birds being reported dead is a gross understatement." A woman in Hopewell, New Jersey, found five dead blue jays and crows, but threw them away before health officials could pick them up.

AT sunrise a couple of days ago, I went up on a ridge overlooking the Hopewell Valley, near where I live. I walked to the top of a field. Trees stood in field lines all around. Birds were chirping, and I heard the squawking of a grackle. The trees were smoky and tinged with yellow. Cloud decks were moving in, and the sun had not yet risen. A fingernail of moon shone through breaks in the running clouds, and I picked out the morning star, Venus, a pinpoint of light near the moon. The sun rose, and Venus was washed away in the head of dawn. The birds started lifting off, and all were flying from north to south, except for two crows, who loitered in an ash tree at the bottom of the field like hoods on a corner, flapping around and looking for crow-excitement.

Three flycatchers wove for insects, weaving always southward. Two more flycatchers came by, going south, and three finches passed, going south, and a lone bird with sharp wings beat by, going south, and then three grackles humped along, keeping the rising sun on their leftward wings. Milkweed in the field was dying, its leaves turning brown at the edges. I broke open a milkweed pod, and two shockingly red beetles tumbled into my fingers. They'd been feeding on the milkweed and probably laying eggs. I tore out the milkweed seeds and threw them in the air. A few parachutes of milkweed deployed, and the seeds drifted across the field. Everything alive understood what was coming. What was coming, for many organisms, was death. For them, death was not what we think of as death but a means of survival. You die on purpose, to give your genes their best chance to spread out into the world and remain alive. This valley in New Jersey reminded me in a strange way of Kitum Cave, on Mt. Elgon, in East Africa, a haunting place I'd seen some years ago. Kitum Cave is suspected of harboring a type of the Ebola virus called Marburg, which is thought to carry on its life cycle inside some unknown animal that visits the cave or lives there. The natural host of the Ebola virus has never been identified. The cave in Africa and the field in New Jersey were two habitats bursting with life, and in them were viruses, active but unseen, carrying on their life cycles. I could not see Ebola in Kitum Cave any more than I could see West Nile pouring through the Hopewell Valley. However this biological event began, it has become something important in nature. In discovering the New World, West Nile has killed a few humans and managed to roil the C.I.A., but now it has more important business -- to find a way, somehow, to keep making copies of itself. If the virus continues migrating south with the birds, and if it finds a place to hide this winter, the only way we will know is if it comes back next year.

brother - https://en.wikipedia.org/wiki/Douglas_Preston

Life and early career[edit]

Preston was born in Cambridge, Massachusetts and grew up in Wellesley, Massachusetts. A graduate of the Cambridge School of Weston in Weston, Massachusetts, and Pomona College in Claremont, California, Preston began his writing career at the American Museum of Natural History in New York.

From 1978 to 1985, Preston worked for the American Museum of Natural History as a writer, editor, and manager of publications. He served as managing editor for the journal *Curator* and was a columnist for *Natural History*magazine.[1] In 1985 he published a history of the museum, *Dinosaurs In The Attic: An Excursion into the American Museum of Natural History*, which chronicled the explorers and expeditions of the museum's early days. The editor of that book at St. Martin's Press was his future writing partner, Lincoln Child.[2] They soon collaborated on a thriller set in the museum titled *Relic*. It was subsequently made into a motion picture by Paramount Picturesstarring Penelope Ann Miller, Tom Sizemore, and Linda Hunt.

In 1986, Preston moved to New Mexico and began to write full-time. Seeking an understanding of the first moment of contact between Europeans and Native Americans in America, he retraced on horseback Francisco Vásquez de Coronado's violent and unsuccessful search for the legendary Seven Cities of Gold. That thousand mile journey across the American Southwest resulted in the book *Cities of Gold: A Journey Across the American Southwest*. Since that time, Preston has undertaken many long horseback journeys retracing historic or prehistoric trails, for which he was inducted into the Long Riders' Guild.[3] He has also participated in expeditions in other parts of the world, including a journey deep into Khmer Rouge-held territory in the Cambodian jungle with a small army of soldiers, to become the first Westerner to visit a lost Angkor temple. He was the first person in 3,000 years to enter an ancient Egyptian burial chamber in a tomb known as KV5 in the Valley of the Kings.[4] Preston participated in an expedition that led to the discovery of an ancient city in an unexplored **valley in the Mosquitia mountains of Eastern Honduras,** which he chronicled in a nonfiction book, *The Lost City of the Monkey God: A True Story*.[5] O**n that expedition he and other expedition members contracted an incurable tropical disease known as mucocutaneous leishmaniasis, for which he received treatment at the National Institutes of Health. In 1989 and 1990 he taught nonfiction writing at Princeton University. He has been active in the International Thriller Writers organization.[6]**

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PEOPLE (by last name / then D.o.B.)

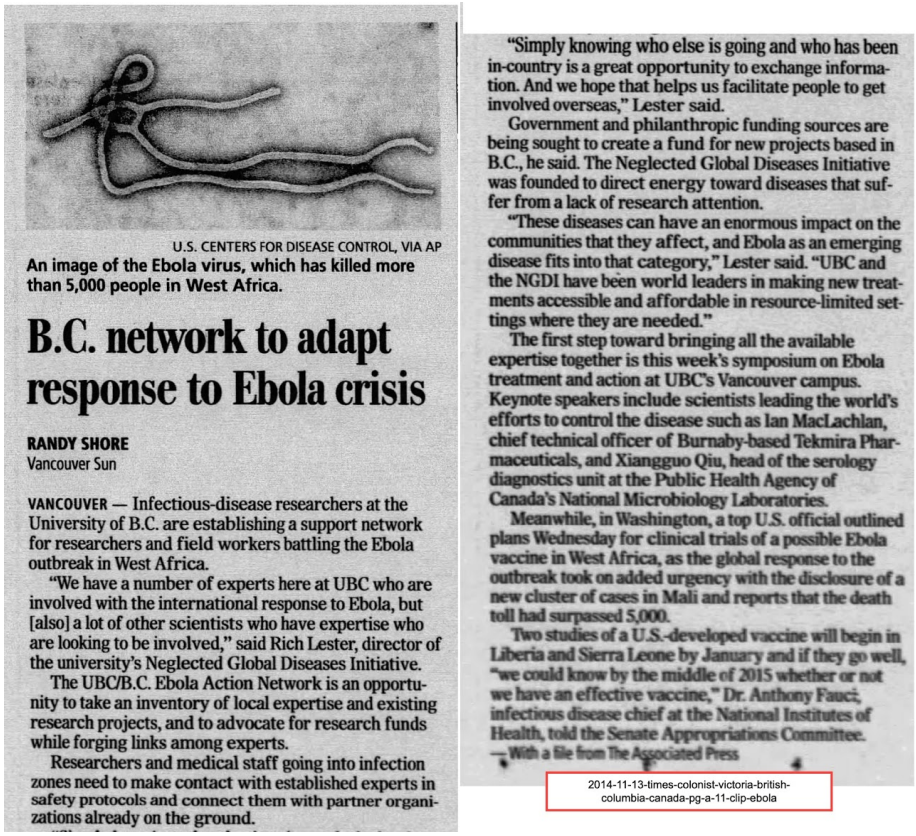
- Xiangguo **Qiu** (born 1964)

Xiangguo Qiu (born 1964)

Born - 1964 [HW002C][GDrive]

2014 (Nov 13)

Full newspaper page : [HN00QP][GDrive]



U.S. CENTERS FOR DISEASE CONTROL, VIA AP

An image of the Ebola virus, which has killed more than 5,000 people in West Africa.

B.C. network to adapt response to Ebola crisis

RANDY SHORE
Vancouver Sun

VANCOUVER — Infectious-disease researchers at the University of B.C. are establishing a support network for researchers and field workers battling the Ebola outbreak in West Africa.

"We have a number of experts here at UBC who are involved with the international response to Ebola, but [also] a lot of other scientists who have expertise who are looking to be involved," said Rich Lester, director of the university's Neglected Global Diseases Initiative.

The UBC/B.C. Ebola Action Network is an opportunity to take an inventory of local expertise and existing research projects, and to advocate for research funds while forging links among experts.

Researchers and medical staff going into infection zones need to make contact with established experts in safety protocols and connect them with partner organizations already on the ground.

"Simply knowing who else is going and who has been in-country is a great opportunity to exchange information. And we hope that helps us facilitate people to get involved overseas," Lester said.

Government and philanthropic funding sources are being sought to create a fund for new projects based in B.C., he said. The Neglected Global Diseases Initiative was founded to direct energy toward diseases that suffer from a lack of research attention.

"These diseases can have an enormous impact on the communities that they affect, and Ebola as an emerging disease fits into that category," Lester said. "UBC and the NGDI have been world leaders in making new treatments accessible and affordable in resource-limited settings where they are needed."

The first step toward bringing all the available expertise together is this week's symposium on Ebola treatment and action at UBC's Vancouver campus. Keynote speakers include scientists leading the world's efforts to control the disease such as Ian MacLachlan, chief technical officer of Burnaby-based Tekmira Pharmaceuticals, and Xiangguo Qiu, head of the serology diagnostics unit at the Public Health Agency of Canada's National Microbiology Laboratories.

Meanwhile, in Washington, a top U.S. official outlined plans Wednesday for clinical trials of a possible Ebola vaccine in West Africa, as the global response to the outbreak took on added urgency with the disclosure of a new cluster of cases in Mali and reports that the death toll had surpassed 5,000.

Two studies of a U.S.-developed vaccine will begin in Liberia and Sierra Leone by January and if they go well, "we could know by the middle of 2015 whether or not we have an effective vaccine," Dr. Anthony Fauci, infectious disease chief at the National Institutes of Health, told the Senate Appropriations Committee.

—With a file from The Associated Press

2014-11-13-times-colonist-victoria-british-columbia-canada-pg-a-11-clip-ebola

[HN00QQ][GDrive]

December 12, 2014 - Neglected Global Diseases Initiative - NGDI Ebola Symposium for Treatment and Action

PDF (Program) - [HI000L][GDrive]

"On November 13, 2014 UBC's Neglected Global Diseases Initiative at UBC (NGDI-UBC) in partnership with the Vancouver Coastal Health Research Institute and The Centre for Drug Research and Development (CDRD), Canada's national not-for-profit drug development and commercialization centre, brought together leading researchers from across the country to discuss Ebola Treatment and Action. The meeting focused on Canada's current contributions to potential therapeutics in response to the 2014 West African outbreak of Ebola Virus Disease (EVD) and the opinions of Canadian Public Health officials and researchers for the prevention, and control of infection domestically."

Keynote Speaker Biographies - Xiangguo Qiu, MD MSc :

*"**Dr. Xiangguo Qiu** received her M.D. degree in 1985 at Hebei Medical University and M.Sc. in immunology in 1990 at Tianjin Medical University. She went to MD Ander-son Cancer Center (USA) as a visi□ng Scien□st in 1996 and moved to Cancer Care Manitoba (Canada) in 1997 as a research associate. In 2003, she joined the Special Pathogens Program at the Na□onal Microbiology Laboratory at the Public Health Agency of Canada to start studying the most deadly viruses, such as Ebola/ Marburg/Lassa, in the only level 4 (highest containment level) laboratory in Cana-da. Her primary field is immunology with research emphasis on vaccine develop-ment, post-exposure therapeu□cs and rapid diagnos□c of haemorrhagic viruses. As a member of WHO expert team, she and her colleagues provided advises/technical support for biosafety in 2008 Beijing Olympics, 2010 Shanghai Expo, 2010 Asian games in Guangzhou, 2010 winter Olympics in Vancouver and G8/G20 in Toronto, Canada. Her group has first demonstrated that mAbs completely protect nonhu-man primates from Ebola virus infec□on in the filovirus field. Moreover, she and colleagues have developed ZMapp which has been compassionately used in several Ebola infected pa□ents and showed very promising outcomes. Currently, Dr. Qiu heads Serology Diagnos□cs Unit in Special Pathogens Program of Na□onal Microbi-ology Laboratory, Public Health Agency of Canada."*

0:00 – 0:05 Slide 1	**Opening Comments**
0:05 – 0:23 Slides 2-23	Bonnie Henry, MD MPH Deputy Provincial Health Officer, British Columbia Ministry of Health and Associate Professor, School of Population and Public Health Faculty of Medicine, UBC *Overview of the current Ebola situation in W. Africa and Medical Health Officer coordination efforts for Canadian preparations*
	Keynote Speakers
0:23 – 1:38 Slides 24-83	Xiangguo Qiu, MD MSc Head of Serology Diagnostics Unit in Special Pathogens National Microbiology Laboratory, Public Health Agency of Canada *Monoclonal antibodies contributing to ZMapp*
1:38 – 2:24.5 Slides 84-123	Ian MacLachlan, PhD Executive Vice President and Chief Technical Officer Tekmira Pharmaceuticals Corporation *Investigational TKM-Ebola Therapeutic*
	Panel Session
2:24.5 – 2:35 Slides 124-136	Christopher Lowe, MSc MD FRCPC Medical Microbiologist Infection Prevention and Control Physician, Providence Health Care *Infection control preparedness in BC*
2:35 – 2:42 Slides 137-148	Steve Kanters, PhD(c) MSc Research Associate, Centre for Clinical Epidemiology and Evaluation and Research Manager and Statistician, Global Evaluative Sciences *Methods of fast-tracking clinical trials for Ebola*
2:42 – 2:48 Slides 149-163	Jan Hajek, MD FRCPC Clinical Assistant Professor, Division of Infectious Diseases Department of Medicine, Faculty of Medicine, UBC *Physician experience in a treatment centre in Guinea*
2:48 – 2:54.5 Slides 164-193	Stephanie N Parent, BSc MPH(c) WHO Collaborating Centre for Occupational and Environmental Health School of Population and Public Health , Faculty of Medicine, UBC *Current Ebola projects in collaboration with WHO*
2:54.5 – 3:02 Slides 193-206	Srinivas Murthy, MD CM FAAP FRCPC Clinical Assistant Professor, Critical Care Department of Pediatrics, Faculty of Medicine, UBC *WHO National Lead, Liberia - coordination efforts*
3:02 – 3:31 Slides 207-217	Panel Question and Answer Session
3:31 – 3:37	**Closing comments**

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2014 (November 20) - Canadian Researchers Come Together to Combat the Ebola Outbreak (Vancouver, British Columbia, Canada)

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Last week, UBC's Neglected Global Diseases Initiative at UBC (NGDI-UBC) in partnership with the Vancouver Coastal Health Research Institute and The Centre for Drug Research and Development (CDRD), Canada's national not-for-profit drug development and commercialization centre, brought together leading researchers from across the country to discuss Ebola Treatment and Action. The meeting focused on Canada's current contributions to potential therapeutics in response to the 2014 West African outbreak of Ebola Virus Disease (EVD) and the opinions of Canadian Public Health officials and researchers for the prevention, and control of infection domestically.

NGDI logo2Dr. Richard Lester, Director of NGDI-UBC and Assistant Professor in Infectious Diseases and Global Health in the Department of Medicine states, "In this time of a health crisis in West Africa, we were really privileged to hear the scientific stories behind the development of these hopeful treatments for Ebola. There is still urgent work to be done on this crisis, and these Canadian scientists and practitioners are inspiring examples of how local expertise can contribute in the global context. We hope to encourage even more contributions, like those from CDRD, to close the gap in access to expert care and medicines for the world's most vulnerable, remote, or underserved populations."

NGDI-UBC is currently working closely with CDRD to identify how best to use the extensive capabilities of its biologics platform to employ a novel approach to developing the next generation of therapeutic monoclonal antibodies for the prevention and treatment of Ebola; bringing its industry partners, and combined 40-plus years of therapeutic antibody development experience in rapidly developing candidate antibodies with enhanced effector functions to the table.

CDRD newCDRD President and CEO, Karimah Es Sabar commented, "This timely symposium has focused the mindset of an expert panel of immunologists, public health clinicians, officials and drug developers to work collaboratively through NGDI to accelerate the development of safe, efficacious and affordable treatments for Ebola. It is a neglected disease which affects the most vulnerable people in the poorest communities on this planet. CDRD is committed to working with UBC's NGDI, and leveraging our vast network of industry and academic collaborators to determine how we can best contribute to developing the next generation of biologics treatments for this devastating disease."

Dr. Bonnie Henry, Deputy Provincial Health Officer, BC Ministry of Health and Associate Professor, School of Population and Public Health, Faculty of Medicine UBC opened the symposium with a detailed overview of the symptoms, transmission and mortality of EVD. To-date, 14,000 people have been infected with Ebola in the current outbreak which came to light in March 2014, but is thought to have originated in late 2013. From a public health perspective, Canada is well prepared to deal with patients who may present with symptoms and subsequently test positive for EVD. A Special Advisory Committee is in place, consisting of Public Health Experts from across the nation in addition to a BC Provincial Task Force on-hand to advise best practices if and when suspected cases arise.

From a treatment perspective, there are three Canadian contributions that are being fast-tracked through clinical trials but the challenge remains to find companies and researchers willing to translate their EVD research from bench to bedside. **The keynote speakers focused on two of these contributions; the National Microbiology Laboratory's therapeutic monoclonal antibody, ZMapp and Tekmira Pharmaceutical's TKM-Ebola lipid nanoparticle (LNP) therapeutic. Dr. Xiangguo Qiu of the National Microbiology Laboratory (NML), Public Health Agency of Canada said that the challenges associated with controlling the spread of the current outbreak are multi-factorial. Firstly, this outbreak occurred outside the traditional "hotspot" of Eastern Africa and therefore, local communities were poorly prepared for this event. This lack of preparedness and understanding has culminated in community resistance to foreign health workers and a local underestimation of the problem. Additionally, there is increased travel by West Africans and a greater number of inexperienced medical staff combating this outbreak.**

Ebola Audience 2The NML is responding in a three-pronged approach; they have set up a mobile diagnostic lab which has been based in Sierra Leone since June 2014; they have produced a vaccine with the vesicular stomatitis virus (VSV) vector and they have developed a monoclonal antibody (mAb) therapeutic. The VSV vaccine induces strong B- and T-cell responses. This vaccine has been tested as a post-exposure therapeutic and has been shown to provide 100% protection 28 days post-immunization. This vaccine is currently in Phase I trials and 1,000 doses have been donated for use in the current outbreak. Over the past 10 years, the NML has also been developing a mAb which targets Ebola virus glycoprotein (EBOV GP 1.2). This is the primary protein involved in the pathogenesis of EVD. It is produced using a hybridoma model followed by humanization of purified mAbs. ZMAb is a cocktail of these mAbs which was observed to be 100% efficacious in a study using rhesus monkeys. ZMapp; the chimeric combination of ZMAb also showed very high survival rates in in vivo models. Both have been used in the treatment of 9 Ebola patients during the current outbreak. Five out of 7 patients treated with ZMapp survived while both patients treated with ZMAb survived.

Dr. Ian MacLachlan, Executive Vice President and Chief Technical Officer of Vancouver-based Tekmira Pharmaceuticals spoke about their siRNA-based LNP therapeutic targeting the Kikwit strain of Ebola. These LNP formulations are highly uniform and highly stable. The siRNA targets V24, VP35 and LPol genes on the Ebola virus. The lyophilized formulation has shown increased potency and increased therapeutic index and appears to ameliorate pathology due to EVD such as coagulopathy. The Tekmira product has been used to treat an undisclosed number of patients in the current outbreak. There is ongoing development of this product to account for mismatched sequences between LPol and VP35 in the current strain. However, the LNP platform has allowed Tekmira to rapidly adjust the product configuration in response to the emergent virus.

By bringing Canada's vast health research resources to bear, we as a nation are already making a major global impact on this devastating disease, and by further fostering dialogue and collaboration, and sharing knowledge and resources, we now aim to amplify both our national efforts and impact

2015 (April 18)

Full newspaper page : [HN00QS][GDrive]

Doctors up for awards

WINNIPEG scientists who have developed an antibody-based treatment to treat Ebola, called ZMapp, are among the Manitoba nominees for the Manning Innovation Awards.

Dr. Gary Kobinger, head of special pathogens at Canada's National Microbiology Laboratory, and Canadian Public Health Agency biologist Dr. Xiangguo Qiu join fellow Manitobans Dr. Mark Torchia and Richard Tycm, co-founders of Monteris Medical Inc., as contenders for the $100,000 award.

Monteris has developed technology to destroy brain tumours

The ZMapp is the first experimental Ebola drug used in an outbreak. It's considered the most promising of experimental treatments.

The technology behind Monteris Medical originated from the St. Boniface General Hospital Research Centre. Called the NeuroBlate System, it enables MRI-guided vaporization of deep-seated brain tumours using minimally invasive entry into the target area.

2015-04-18-winnipeg-free-press-pg-46-clip-doc-awards

[HN00QT][GDrive]

2015 (May 9)

Full newspaper page : [HN00QU][GDrive]

SATURDAY, MAY 9, 2015 B6

BUSINESS

Winnipeg Free Press

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THE END OF EBOLA?

Vaccine co-creator sets his scientific sights on other deadly,

By Martin Cash

FOR much of April, Gary Kobinger lazily sailed a boat up the Big-tombee/Tennessee rivers from his wife's hometown of Mobile, Ala.

It was the first break Kobinger has had for some time, especially since the massive outbreak of Ebola in West Africa in early 2014.

Kobinger, 46, is the chief of special pathogens at Canada's National Microbiology Laboratory on Arlington Street in Winnipeg.

Since he was a post-doctoral scientist at the University of Pennsylvania in 2002 making regular trips to the lab in Winnipeg, he has been researching the Ebola virus.

He became a full-time employee at the lab in 2005.

Kobinger and Dr. Xiangguo Qiu, a Canadian Public Health Agency biologist at the lab, were recently nominated for the $100,000 Manning Innovation Award for their work on ZMapp, a promising antibody-based therapeutic to treat the Ebola virus disease.

A San Diego company called Mapp Biopharmaceuticals has licensed the intellectual property from the Public Health Agency of Canada for ZMapp.

Until now, there has been no licensed treatment or vaccine for Ebola.

As well, the team of Winnipeg scientists has developed a promising Ebola vaccine called VSV-EBOV that's been licensed to NewLink Genetics that is also in clinical trials in West Africa.

ZMapp is the first experimental Ebola drug used in an outbreak and considered the most promising of a number of experimental treatments. (FDA). Because of limited supply, only seven patients were treated, and five recovered fully. But since it is not a controlled environment, those results are not sufficient to allow widespread distribution.

The good news is the WHO said there have been only two new reported cases in Liberia since late February and none since the third week in March. And the number of new cases in Sierra Leone and Guinea was down to nine in each country in its most recent report for the seven-day period ending May 3.

But that may mean enrolment in the ZMapp trial will fall short.

"It is a good problem to have," Kobinger said.

Zeitlin said there are paths to get the drug approved by the FDA when sufficient clinical trials are not possible.

"It would be a wonderful public-health outcome," Zeitlin said in an interview from his San Diego office. "The sooner the outbreak is over, the better."

Kobinger believes ZMapp will not require a large patient set because of the excellent results in the small compassionate-use sample.

He does not want to jump the gun or compromise the scientific process that's required for widespread use of the treatment, but as one of the world's leading scientists in the field at the forefront of finding a treatment during this latest and worst outbreak, Kobinger's future plans are noteworthy.

"I HAVE told my group I want to work on something else now," he said. "I do not want to spend five years to improve this product by five per cent... when, for instance, we do not have a treatment equivalent for Marburg or Lassa fever or for Sudan Ebola. I think it would be a much better investment in time to go after those new targets."

And Kobinger will be making that move in the most satisfying way possible for a medical researcher.

"It was my dream — I think it is the dream of most scientists — to develop

incurable viruses

Two of the three antibodies in the ZMapp cocktail originated from the work of Kobinger, Qui and their team in Winnipeg. In February, the U.S. National Institute of Allergy and Infectious Diseases (NIAID) started clinical trials in Liberia, Africa, to obtain safety and efficacy data.

Additional sites are expected to start in Sierra Leone and Guinea.

It's not clear how long it will take or when the data results will be available, but Kobinger is going to come back from his Deep South boating excursion and start working on something other than Ebola for the first time in more than 10 years.

That's because he's convinced the ZMapp treatment will successfully treat those suffering from Ebola.

"We think it is done," said Kobinger on board his boat in northern Mississippi. "I am a very skeptical person and very careful before I say it works... and I have been waiting and waiting and waiting. I feel very strongly about how good this treatment is. I have no question about it."

Ebola has an average fatality rate of 50 per cent but it can be as high as 90 per cent. Up to the end of April, the latest Ebola outbreak — the worst in history — had caused 10,899 deaths, reported the World Health Organization (WHO).

Since last October when their article, *Reversion of advanced Ebola virus disease in non-human primates with ZMapp* appeared in *Nature*, Kobinger, Qui and their collaborators, especially Larry Zeitlin of Mapp Biopharmaceuticals in San Diego, have been at the forefront of efforts to produce the cocktail and get it into the field.

The typical process to work a new drug through the regulatory process can take months, usually years.

Approval for compassionate use of ZMapp was obtained from the U.S. Food and Drug Administration

something that can save lives... With each patient that recovered after treatment, for me and others in the lab, it has been magical."

Being at the epicentre of the cure for something as frightening and deadly as Ebola is a rare opportunity.

Some might also believe it is a chance to strike it rich.

But that is the antithesis of Kobinger's attitude. He sounds proud when declaring he does not have his name on any patents.

"I have no financial links," he said. "I am not interested. I am trying to make a contribution."

Matthew Gilmour, the newly installed scientific director general of the National Public Health Laboratories, responsible for the Winnipeg lab, said the work Kobinger and Qui have done is exactly what the lab is supposed to do.

"We are exceptionally proud of the work of our team," he said.

Among other assets, it is the only Level 4 bio-containment lab in the country that can handle dangerous pathogens such as the Ebola virus. Gilmour said the lab has had a great relationship with global organizations such as the WHO as well as provincial health labs.

He said the lab has put 17 two-person teams on the ground to assist with the Ebola outbreak.

"It certainly has brought profile to the capabilities we have always had here," he said. "It extends beyond just our special pathogens programs."

Mapp Biopharmaceuticals is in control of the development of the ZMapp, and that's fine with Kobinger.

"They are fantastic," he said. "I cannot tell you how impressed I have been with them."

Zeitlin said of his relationship with Kobinger, "We are like brothers now."

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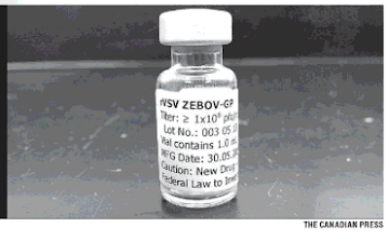
Gary Kobinger wants his next project at the National Microbiology Lab on Arlington Street to focus on diseases such as Marburg, Lassa fever or Sudan Ebola.

CHRISTOPHER BLACK / THE CANADIAN PRESS

Public sector funding for Ebola research and outreach

- On Nov. 3, 2014, the Canadian government committed $23.5 million to support research and development of the Ebola vaccine and monoclonal antibody treatments for Ebola.
- In total, Canada has committed more than $110 million to support health, humanitarian and security interventions to respond to the outbreak and for further research and development of Ebola medical countermeasures.
- The U.S. Biomedical Advanced Research and Development Authority will provide funding as well as access to subject-matter expertise and technical support for manufacturing, regulatory, and non-clinical activities through a $24.9-million, 18-month contract with Mapp Biopharmaceutical Inc. It can extend the contract up to a total of $42.3 million.



THE CANADIAN PRESS

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2016 (March 17)

Full newspaper page : [HN00QW][GDrive]

Manitobans show smarts

Among nominees for Manning Award

By Martin Cash

MANITOBA is punching above its weight again with three of the 28 final nominees for the $100,000 top prize in this year's Ernest C. Manning Innovation Awards.

The Manning Awards recognize Canadian innovators who improve the lives of Canadians and others around the world through their innovations. One criterium that separates these awards from other innovation or academic awards is there has to be evidence of commercialization.

Two Manitobans won the national award last year — Mark Torchia and Richard Tyc — for their work that has become the underlying technology used by Monteris Medical Inc., makers of the NeuroBlate, a device that allows surgeons to treat patients with deep-seated brain tumours.

Harry Schulz, a Manitoba trustee of the Manning Foundation, said the objective of the award is to draw attention to great Canadian innovation and encourage others.

"On a regional level, we want to promote excellence by Manitobans," he said.

"It can be a long road to success. To give recognition to people who are at this level is an important thing."

The three groups of Manitoba nominees are Gary Kobinger and Xiangguo Qiu from the National Microbiology Laboratory; Shane Yanke, Eric Himbeault and Andrew Winton for their work at Cogmation Robotics; and Brad Ross, founder of PTDial.

The nominees will be recognized by the Winnipeg Chamber of Commerce today. Schulz said the chamber recognizes the attributes the Manning Awards promote are compatible with its objectives of creating technology companies in Manitoba that go on to become job creators and wealth generators in the province.

Gary Kobinger and Xiangguo Qiu: Kobinger and Qiu have led a team of scientists at the National Microbiology Laboratory, at the Public health Agency of Canada, in Winnipeg in more than a decade's search to find a treatment against the Ebola virus infection. They discovered and developed highly specific monoclonal antibodies that targeted and neutralized Ebola within the body and determined a cocktail of three antibodies was effective in animal studies. The cocktail, called ZMapp, was successfully tested in trials in 2015 at the tail end of the last Ebola outbreak in West Africa. Ongoing development with commercial partners in Canada and the U.S. is hoped to lead to full licensure in 2016.

Shane Yanke, Eric Himbeault and Andrew Winton: The three designed the Virtual Robotics Toolkit for Cogmation Robotics. Yanke and Himbeault continue to be associated with Cogmation and Winton works there full time. Designed for use with Lego Mindstorms robots, the Virtual Robotics Toolkit allows students and teachers to program and control a simulated replica of the physical robot using the same tools that are used to program the real thing. Jack Peterson, the CEO of the company, said, "Initially, we had different customers. We did not find a big market until we met the president of Lego education in the U.S. who wanted us to do a simulator for his robot." Yanke, Himbeault and Winton developed that. So far, Peterson said, the biggest market is in China, but the tool kit is also being used in schools in Winnipeg, Toronto and elsewhere.

Brad Ross: Ross, the founder of PTDial is a physiotherapist who wanted to find a balance between protection and comfort when it comes to dealing with the pain and discomfort of tennis and golfer's elbow. But since the pain was always variable depending on what the patient was doing, it seemed clear to Ross adjusting the pressure on a brace was important. "The more pressure you have, the more protection you get, and the less pressure the more comfort," Ross said. "How can you manage the two and maximize both? The only way is to have adjustability." Ross started working on the PTDial, which includes a patented dial-adjusting feature, about nine years ago and has patents in Canada, the U.S. and several other countries and has been selling it for four years.

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JOE BRYKSA / WINNIPEG FREE PRESS FILES

Gary Kobinger helped lead a team that developed a cocktail to combat Ebola.

2016-05-17-winnipeg-free-press-pg-24-clip-manitobans-smart

[HN00QX][GDrive]

2017 (May 18)

Full newspaper page : [HN00QY][GDrive]

2017-05-18-winnipeg-free-press-pg-21-clip-manning-impact

JOE BRYKSA / WINNIPEG FREE PRESS FILES

Gary Kobinger (above), along with his colleague, Xiangguo Qiu, is up for the Manning Innovation Award for developing a treatment for the Ebola virus at the National Microbiology Lab in Winnipeg.

Local candidates for the $100,000 award have helped develop Ebola treatment, plant-growth enhancers

Manning nominees make big impact

BORIS MINKEVICH / WINNIPEG FREE PRESS FILES

Manning nominee Manas Banerjee, of XiteBio Technologies Inc., developed a new formulation of microbial inoculants to enhance plant growth and crop yields.

MARTIN CASH

THE stereotypical Canadian does not boast about achievements. That's probably why the annual $100,000 Manning Innovation Award is not more well known than it should be.

It has been around since 1980 and Manitobans have won it a couple of times, including two years ago when Mark Torchia and Richard Tyc won for their joint development of the NeuroBlate System, and in 2010 by Werner Ens and Ken Standing for their work in the field of mass spectrometry.

The award honours innovators who have developed and successfully marketed a new concept, process or procedure.

This year, there are two groups of Manitoba nominees for the $100,000 award: Gary Kobinger and Xiangguo Qiu for their work at the National Microbiology Lab on the development of a treatment for the Ebola virus, and Manas Banerjee, of XiteBio Technologies Inc., who developed a new formulation of microbial inoculants to enhance plant growth and crop yields.

This is the third time Kobinger and Qiu have been nominated. The timing of today's announcement (Qiu and Banerjee were to be on hand at a Winnipeg Chamber of Commerce event) is significant for Kobinger and Qiu because a brand-new outbreak of Ebola has just occurred.

The World Health Organization has confirmed three deaths earlier this week in a remote northeastern province of the Democratic Republic of Congo.

In an interview at his office at Université Laval in Quebec City, where he is now based, Kobinger said it would be hard to find anyone at the Level Four lab at Winnipeg's National Microbiology Lab who had not contributed to the Ebola research over the past 10 years.

The results of some of that work will quite likely come into play in the coming weeks in Congo. Kobinger said both the rVSV vaccine and ZMapp treatment — both of which include substantial contributions from Kobinger and Qiu's team — could be crucial in the current outbreak.

The rVSV vaccine has been through clinical trials and the ZMapp has had significant positive results in a trial in 2016. There was compassionate use of both with good results in the massive outbreak in West Africa in 2014-15.

Intense collaborations with partners in Canada, the U.S. and various agencies worldwide contributed to generate a stockpile of ZMapp for international public health security.

"The bottom line is that ZMapp reached 92 per cent success (in the small clinical trial in 2016) and as of today with an ongoing outbreak the one treatment that is up there first on the line is ZMapp," he said.

Kobinger continues to conduct research into the ecology of the virus and how it circulates in the species that carry it.

"We still don't understand why it appears in humans," he said. "We are always caught off guard."

He is indifferent to the commercial ramifications of the development of the treatment.

Some say because Ebola outbreaks are so rare and that those infected are, sadly, the poorest of the poor in the poorest countries, discovering treatments has not been a top priority for pharmaceutical companies.

That makes the work that Kobinger and Qiu's team undertook even more noteworthy.

Kobinger said what may be even more substantial about their work is that it has provided the foundation for the recent explosion of monoclonal antibody therapies as a new way to look at treatments of all sort of infectious diseases. He said so much work is being done around the world that he can't even keep up.

As for the Manning Award, he said. "It would be fantastic to win on the third try."

This is the first time Banerjee has been nominated for the award. But the Winnipeg scientist/entrepreneur is another classic example of dedicated scientific research done without being distracted by the demands of quarterly returns to shareholders.

In his case, Banerjee has been doing research in cell microbiology for about 25 years and has developed a sustainable business over the past six years with more than a dozen employees and a growing — and loyal — customer base across Canada and the U.S.

Banerjee works in the field of microbial inoculants and has competitors with names like Bayer, BASF and Dupont.

His innovative technology is called AGPT (Advanced Growth Promoting Technology). Whereas the product from the competition will try to supplant native soil microbes, XiteBio's inoculants are designed to work with the microbes that are already there.

"We came up with a formulation, AGPT, that creates a synergy," he said. "The inherent natural reaction for the existing microbes is to kick out the newly introduced bacteria (that will promote plant growth). Our product is the opposite. Rather than fight against them, we work with them."

Banerjee is aware of the challenges and demands agricultural producers face and does not want to be part of an exercise that does not produce actual benefits for the farmers.

Even though he has had many offers from the larger agricultural nutrient companies to buy his company, he said he has no desire to sell.

"When you work in a private company like mine, you have to innovate, you have to think outside the box," he said.

"Sometimes it is not that easy. Sometimes you have to take the path which the other guys might not take."

Banerjee said he is gratified by the growing number of repeat customers who not only use his product each year but double their order.

For someone whose work is appreciated by many, but does not have the high profile of the more well-known brands, being up for a Manning Award is a big deal.

"It is definitely an honour," he said.

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[HN00QZ][GDrive]

2017 (Nov 30)

Full newspaper page : [HN00R2][GDrive]

MANNING AWARDS PROVE ALBERTA BREEDS INNOVATION

Three of four winners this year come from province, and none are in energy sector

DEBORAH YEDLIN

If anyone needs proof that innovation and entrepreneurship are thriving in Alberta, they should look no further than the Manning Innovation Awards.

The brainchild of former Alberta Energy Company chief executive David Mitchell, the awards were presented for a 36th year Wednesday night in Toronto. Three of the four laureates call Alberta home: two from Calgary and one from Edmonton.

None are in the energy space.

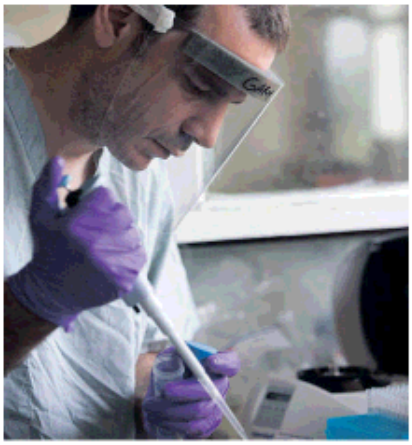
They instead inhabit the environmental, agricultural and tech spheres. The fourth laureate, receiving the Principal Award, was two individuals — doctors Gary Kobinger and Xiangguo Qiu, who developed the ZMApp antivirus for treatment of Ebola.

2017-11-30-calgary-herald-pg-a-13-clip-alberta-innnovation-zmapp

[HN00R3][GDrive]

2018 (May 15)

Full newspaper page : [HN00R0][GDrive]



Gary Kobinger

Ebola treatment creators to get innovation award

GARY Kobinger and Xiangguo Qiu, research scientists from the National Microbiology Lab, have been named to the group of six winners of the 2018 Governor General's Innovation Awards (GGIA).

The awards celebrate outstanding Canadian individuals, teams and organizations whose transformative work help shape our future and positively impact our quality of life.

Using unorthodox, cutting-edge technologies that went against prevailing scientific opinion, doctors Kobinger and Qiu created ZMapp to treat patients with the Ebola virus. ZMapp comprises a cocktail of monoclonal antibody therapies that act like missiles targeting the outer shell of the Ebola virus, preventing it from replicating. Its first human applications resulted in the full recovery of two medical missionaries and 25 first responders and residents during the 2014 Ebola outbreak in Liberia. Since then, ZMapp has been driving studies into the efficacy of monoclonal antibody therapies against HIV, Lassa, Marburg and other infectious illnesses.

With a recent outbreak of the disease in the Congo, the importance of Kobinger and Qiu's work will be further felt as the World Health Organization just announced its intention to bring in thousands of doses of an experimental vaccine — that Kobinger and Qiu contributed important work on — into the region.

Gov. Gen. Julie Payette will present the awards to the winners during a ceremony on May 23 at Rideau Hall in Ottawa.

[HN00R1][GDrive]

2018 (May) - Governor General's Innovation Award laureates: Gary Kobinger and Xiangguo Qiu

See - [HV0021][GDrive]

July 16 2019 (July 16)

Full pages :

- Page NP1 - [HN00R4][GDrive]
- Page NP3 - [HN00R6][GDrive]

Suspensions stun scientists

2019-07-16-times-colonist-victoria-british-columbia-canada-pg-np-1-clip-scientist

TOM BLACKWELL

RESPECTED WINNIPEG EBOLA-DRUG SCIENTIST AT CENTRE OF RCMP INVESTIGATION

Heinz Feldmann has known and worked with Xiangguo Qiu for years, and to this day says he has nothing but respect for his fellow microbiologist.

Indeed, Qiu won global accolades for her part in developing an experimental new drug for treating Ebola virus, most of the inquiry done at her high-security lab in Winnipeg.

So Feldmann says he was taken aback Monday to see a media report that the scientist and her entire research team, all from China, had been escorted out of the federal government's National Microbiology Laboratory (NML) last week and reported to the RCMP.

"I still hope that this is a big misunderstanding," said the former head of the lab's special pathogens program, where Qiu worked. "She is a great researcher, she has been a great collaborator, she has been a great interacter in the field. I can't say anything bad about her."

Feldmann, now chief of the U.S. National Institutes of Health laboratory of virology in Montana, stressed that he had no personal knowledge of the reported events.

See LAB on NP3

CBC-TV said that Qiu, as well as husband and NML scientist Keding Cheng and her students had been forcibly dispatched from the facility on July 5, a fact the National Post could not independently confirm.

Eric Morrissette, a spokesman for the Public Health Agency of Canada, would not comment on whether she had been dismissed, citing privacy concerns.

But he said the agency is looking into an "administrative matter," and advised the RCMP on May 24 of "possible policy breaches" at the lab.

The organization is "taking steps to resolve it expeditiously," said Morrissette in a statement. "There is no employee from the NML under arrest or confined to their home." He also said the public is not at risk and that the work of the lab continues.

An RCMP spokesman confirmed to Reuters news agency it had received a referral from the agency, but refused to comment on its investigation. A University of Manitoba spokesman told Reuters that Qiu's non-paying adjunct professorship had been suspended "pending an RCMP investigation."

With the government releasing so few details, it is unclear what might be behind the unusual episode.

But in the U.S., at least, security agencies have recently put a magnifying glass on researchers and students with ties to China, amid fears that Beijing is overseeing widespread theft of intellectual property and trade secrets.

A number scientists south of the border — and one now-retired professor at McGill University — have been charged under a controversial new "China Initiative" of the U.S. Justice Department, which critics call a racially biased witch hunt.

The Ebola drug partly discovered by Qiu is being developed by a California company, and three potentially competing medicines are also in the works.

But Feldmann said he doubts that treatments for an illness that afflicts relatively few people, with little pharmaceutical buying power, would be the subject of economic espionage.

"To make money off these rare diseases, there would be better things to do if you really wanted to make money," he said.

Regardless, there are few more high-profile figures still at the microbiology lab, whose level-four unit is one of a small number worldwide that work with the world's most dangerous pathogens, including Ebola and other hemorrhagic fevers.

Qiu worked with Gary Kobinger, who succeeded Feldmann as head of special pathogens but has since left the lab himself, on so-called monoclonal antibody treatments for Ebola, their findings coming to the fore internationally when the lethal virus swept through West Africa in 2014 and 2015.

Their discoveries make up two of three elements in the drug ZMapp, which has had promising results in limited trials and case-by-case in compassionate use, but has yet to receive approval.

According to a 2014 conference biography, Qiu obtained her Master's in immunology in 1990 at Tianjin Medical University.

She moved to Houston in 1996, then moved to Cancer Care Manitoba the next year as a research associate.

National Post

[HN00R5][GDrive]

2019 (July 19) - "Mystery surrounds ouster of Chinese researchers from Canadian laboratory" from AAAS (American Association for the Advancement of Science)

See [HP002G][GDrive]

Canadian researchers are reacting with puzzlement to the news that a "policy breach" has caused the nation's only high-containment disease laboratory to bar a prominent Chinese Canadian virologist, her biologist husband, and a number of students from the facility.

On 5 July, officials at the **National Microbiology Laboratory (NML) in Winnipeg, Canada**, escorted **Xiangguo Qiu**, biologist **Keding Cheng**, and an unknown number of her students from the lab and revoked their access rights, according to Canadian media reports. The Public Health Agency of Canada, which operates the lab, confirmed it had referred an "administrative matter" matter to the Royal Canadian Mounted Police, but said it would not provide additional details because of privacy concerns.

A number of observers have speculated that case involves concerns about the improper transfer of intellectual property to China. (All of the researchers involved are believed to be Asian.) **But Frank Plummer, a former scientific director of NML who left in 2015, says the lab isn't an obvious target for academic or industrial espionage**. ***"There is nothing highly secret there, and all the work gets published in the open literature," he says. "I don't know what anyone would hope to gain by spying."***

The lab works in a wide range of biomedical fields. **Qiu is known for helping develop ZMapp, a treatment for Ebola virus that was fast-tracked through development during the 2014–16 outbreak in West Africa.** She has repeatedly been honored for her work on that project, including with a Governor General's Innovation Award last year.

"While I was there [Qiu] was always highly regarded as a scientist," says Plummer, adding that he was "shocked and puzzled" when he heard she was being investigated. "She maintained connections with China, but as far as I knew she was a regular Canadian scientist."

Cheng, Qiu's husband, also worked as a biologist at NML. And both researchers held adjunct faculty positions at the University of Manitoba in Winnipeg. It says it has terminated their positions and reassigned their students as a result of the investigation.

Neither Qiu nor Cheng could be reached for comment.

The development comes at a sensitive time for relations between Canada and China. In December 2018, Canada arrested Chinese Huawei executive Meng Wanzhou at the request of the United States. In retaliation, China has arrested two Canadian men on espionage charges and sentenced a third to death for drug offenses.

It also comes as the U.S. National Institutes of Health (NIH) has raised concerns that some grantees have failed to disclose ties to China and other nations, or improperly shared confidential information. The concerns have led several universities to oust researchers who are ethnic Chinese and return grant funds to NIH. The crackdown has raised concerns among the Chinese American community of racial profiling. In Canada, the nation's Security Intelligence Service has long warned of state-sponsored espionage, and in 2014, the Canadian government alleged that China was behind a cyberattack on Canada's National Research Council.

2019 (Dec) - "China's Biological Warfare Programme and the Curious Case of Dr. Xiangguo Qiu" from "Manohar Parrikar Institute for Defence Studies and Analyses (MP-IDSA)"

[HI000K][GDrive]

In July 2019, a rare event occurred in Canada, whereby a group of Chinese virologists were forcibly dispatched from the Canadian National Microbiology Laboratory (NML) in Winnipeg, a facility they worked in, running parts of the Special Pathogen Programme of Canada's Public Health Agency.1 Experimental infections – including aerogenic ones – of monkeys with the most lethal viruses found on Planet Earth comprise nearly a routine therein. Four months earlier, a shipment of two exceptionally virulent viruses dealt with in the NML – Ebola and Nipah viruses – was on its way from NML, ended in China, and has thereafter been traced and regarded to be improper, specifically put as "possible policy breaches", or rather but an "administrative issue", ostensibly.2

Yet the scope of this incident is much wider, in actuality. The main culprit seems to be Dr. Xiangguo Qiu, an outstanding Chinese scientist, born in Tianjin. Heading until recently the Vaccine Development and Antiviral Therapies section of the Special Pathogens Programme, she primarily received her medical doctor degree from Hebei Medical University in China in 1985 and came to Canada for graduate studies in 1996.3 Later on, she was affiliated with the Institute of Cell Biology and the Department of Pediatrics and Child Health of the University of Manitoba, Winnipeg, not engaged with studying pathogens.4 **But a shift took place, somehow. Since 2006,5 she has been studying powerful viruses, Ebola virus foremost, in the NML.** The two viruses shipped from the NML to China – Ebola and Nipah – were studied by her in 2014, for instance (together with the viruses Machupo, Junin, Rift Valley Fever, Crimean-Congo Hemorrhagic Fever and Hendra).6 Yet utmost attention has been paid to Ebola, with the highly legitimate aim of developing effective prophylaxis and treatment for infected people. Inevitably, her works included a variety of Ebola wild strains – among them the most virulent one, with 80% lethality rate – and much relied on experimental infections of monkeys, including via the airways.7 Remarkable achievements were attained, indeed, and Dr. Qiu accepted the Governor General's Innovation Award in 2018.

So far so good, seemingly. But the collateral Chinese plexus cannot be ignored. Married to a Chinese scientist – Dr. Keding Cheng, also affiliated with the NML (specifically the "Science and Technology Core"), and primarily a bacteriologist who shifted to virology – Dr. Qiu frequently visited and maintained tight

bonds with China, generally speaking, and many Chinese students joined her works in the NML during the recent decade, coming from a notable range of Chinese scientific facilities. Nonetheless, among the latter there are four facilities that have been regarded to possess parts of the Chinese biological weapons alignment,[8] namely:

- Institute of Military Veterinary, Academy of Military Medical Sciences, Changchun[9].
- Center for Disease Control and Prevention, Chengdu Military Region[10].
- Wuhan Institute of Virology, Chinese Academy of Sciences, Hubei[11].
- Institute of Microbiology, Chinese Academy of Sciences, Beijing[12]

All of the four mentioned facilities collaborated with Dr. Qiu within the context of Ebola virus, yet the Institute of Military Veterinary joined a study on the Rift Valley fever virus too,[13] while the Institute of Microbiology joined a study on Marburg virus too.[14] Noticeably, the drug used in the latter study – Favipiravir – has been earlier tested successfully by the Chinese Academy of Military Medical Sciences, with the designation JK-05 (originally a Japanese patent registered in China already in 2006), against Ebola and additional viruses.[15]

However, the studies by Dr. Qiu are considerably more advanced and fruitful, in certain aspects. They are apparently vital for the Chinese biological weapons developing, in case Ebola, Nipah, Marburg or Rift Valley fever viruses are included therein, which is a plausible postulation; let alone the wild type viruses in themselves. And it is of note that only Nipah virus is naturally found in China or neighboring countries. Collectively, then, the interface between Dr. Qiu and China has a priori been highly suspicious. On top of it, the shipment of the two viruses from NML to China apparently generated an alarm, beyond its seeming inappropriateness. And an unavoidable question is whether previous shipments to China of other viruses or other essential preparations, took place from 2006 to 2018, one way or another.

At any rate, the controversial shipment brought about the entering of information technology specialists into Qiu's office after hours, for her computer. Consequent to the incident, security access for Dr. Qiu, her husband and the Chinese students was revoked. Her regular trips to China also started being denied.[16] Notably, Dr. Qiu made at least five trips over the school year 2017-18 to the above mentioned Wuhan National Biosafety Laboratory of the Chinese Academy of Sciences,[17]which was certified for BSL4 in January 2017. Moreover, in August 2017, the National Health Commission of China approved research activities involving Ebola, Nipah, and Crimean-Congo hemorrhagic fever viruses at the Wuhan facility, and in March 2019, the Chinese published their tour de force.[18]

Jens Stoltenberg, the secretary-general of NATO, said at a news conference he couldn't comment on this specific case but appeared to suggest the possibility of espionage. "What I can say in general is that we have seen increased efforts by the nations to spy on NATO allies in different ways," he noted.[19] Connectedly or not, Dr. Qiu collaborated in 2018 with three scientists from the US Army Medical Research Institute of Infectious Diseases, Maryland, studying post-exposure immunotherapy for two Ebola viruses and Marburg virus in monkeys; a study supported by the US Defense Threat Reduction Agency.[20]

Finally, the multiplicity of the Chinese grants – all of on a national level – supporting the works done under the leading of Dr. Qiu in the NML is rather intriguing; included are:

- National Key Program for Infectious Disease of China
- National Key Research and Development Program of China
- National Natural Science Foundation of China International Cooperation and Exchange Program
- Special Foundation of President for Ebola virus research from the Chinese Academy of Sciences.
- President's International Fellowship Initiative from the Chinese Academy of Sciences
- China National Key Subject of Drug Innovation
- Youth Innovation Promotion Association of the Chinese Academy of Sciences
- National Natural Science Foundation Award, Ministry of Science and Technology
- National Science and Technology Major Projects
- Beijing Advanced Innovation Center for Structure Biology
- Major Program of the National Natural Science Foundation of China.

Certainly an impressive list.

In sum, there is still a possibility that Dr. Qiu and her husband will return to work in the NML. Yet beyond the administrative dimension of this complicated affair, it is largely also a matter of intelligence analysis and assessment, which might constitute a 'gray area'. A challenge for the Canadian Security Intelligence Service. Time will tell, sooner or later.

Dr. Dany Shoham is a senior researcher at the Begin-Sadat Center for Strategic Studies, Bar Ilan University, Israel and specialises on biological and chemical warfare in the Middle East and worldwide.

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2020 (Jan 29) - "China and Viruses: The Case of Dr. Xiangguo Qiu" (Begin-Sadat Center for Strategic Studies)

See [HI000J][GDrive] / **By** Lt. Col. (res.) Dr. Dany Shoham

[HI000K][GDrive]

EXECUTIVE SUMMARY: In July 2019, a rare event occurred in Canada. Suspected of espionage for China, a group of Chinese virologists was forcibly evicted from the Canadian National Microbiology Laboratory (NML) in Winnipeg, where they had been running parts of the Special Pathogen Program of Canada's public health agency. One of the procedures conducted by the team was the infection of monkeys with the most lethal viruses found on Earth. Four months prior to the Chinese team's eviction, a shipment containing two exceptionally virulent viruses—Ebola and Nipah—was sent from the NML to China. When the shipment was traced, it was held to be improper and a "possible policy breach."

The scope of the 2019 incident involving the discovery of a possibly serious security breach at Canada's National Microbiology Laboratory (NML) in Winnipeg is much broader than the group of Chinese virologists who were summarily evicted from the lab. The main culprit behind the breach seems to have been Dr. Xiangguo Qiu, an outstanding Chinese scientist born in Tianjin.

Until recently the head of the Vaccine Development and Antiviral Therapies section of the Special Pathogens Program, Qiu received her MD degree from Hebei Medical University in China in 1985 and came to Canada for graduate studies in 1996. She was later affiliated with the Institute of Cell Biology and the Department of Pediatrics and Child Health at the University of Manitoba, Winnipeg. She was not engaged in the study of pathogens while at that institute.

But a shift took place in Qiu's research work. Ever since 2006, she has been studying powerful viruses—Ebola most of all—at the NML. Both of the viruses that were surreptitiously shipped from the NML to China were studied by Qiu in 2014 (as well as other viruses, including Machupo, Junin, Rift Valley Fever

that were surreptitiously shipped from the NML to China were studied by Qiu in 2014 (as well as other viruses, including Machupo, Junin, Rift Valley Fever, Crimean-Congo Hemorrhagic Fever, and Hendra). But she paid greatest attention to Ebola for the entirely legitimate aim of developing effective prophylaxis and treatment for the infected.

Inevitably, Qiu's work included a variety of Ebola wild strains—among them the most virulent, which has an 80% lethality rate—and relied heavily on experimental infection of monkeys, including via the airways. She made remarkable strides, and was granted the Governor General's Innovation Award in 2018.

So far so good—or so it seems.

Qiu is married to Chinese scientist Keding Cheng, a bacteriologist who shifted to virology and who is also affiliated with the NML. Qiu maintains a close bond with China and visits frequently, and many Chinese students from a notable range of Chinese scientific facilities have joined her at the NML over the past decade.

Of those facilities, four are believed to be involved in Chinese biological weapons development. They are:

- Institute of Military Veterinary, Academy of Military Medical Sciences, Changchun
- Center for Disease Control and Prevention, Chengdu Military Region
- Wuhan Institute of Virology, Chinese Academy of Sciences, Hubei
- Institute of Microbiology, Chinese Academy of Sciences, Beijing

All four facilities collaborated with Qiu on her Ebola research. The Institute of Military Veterinary also joined a study on the Rift Valley fever virus, while the Institute of Microbiology joined a study on the Marburg virus. Notably, the drug used in the latter study—Favipiravir—has been successfully tested by the Chinese Academy of Military Medical Sciences against Ebola and other viruses. (The drug has the designation JK-05; it is originally a Japanese patent registered in China in 2006.)

The Chinese interest in Ebola, Nipah, Marburg, and Rift Valley fever might possibly be beyond scientific and medical needs. Significantly, only the Nipah virus is naturally found in China or neighboring countries. That being the case, the interface between Qiu and China is a priori highly suspicious.

The shipment of the two viruses from NML to China is alarming unto itself, but it also raises the question of what other shipments of viruses or other items might have been made to China between 2006 and 2018.

Qiu made at least five trips over the academic year 2017-18 alone to the above-mentioned Wuhan National Biosafety Laboratory of the Chinese Academy of Sciences, which was certified for BSL4 in January 2017. In August 2017, the National Health Commission of China approved research activities involving the Ebola, Nipah, and Crimean-Congo hemorrhagic fever viruses at the Wuhan facility, and in March 2019, the Chinese published their tour de force.

When the shipment from Canada was uncovered, security access was revoked for Qiu, her husband, and the Chinese students. IT specialists entered Qiu's office after hours to gain access to her computer, and her regular trips to China were halted.

Jens Stoltenberg, the secretary-general of NATO, said at a news conference that he can't comment on the case, but appeared to suggest the possibility of espionage. "What I can say in general is that we have seen increased efforts by the nations to spy on NATO allies in different ways," he said.

Qiu's research has not only been conducted on behalf of Canada and China. In 2018, she collaborated with three scientists from the US Army Medical Research Institute of Infectious Diseases, Maryland, studying post-exposure immunotherapy for two Ebola viruses and Marburg virus in monkeys. Those activities were part of a study supported by the US Defense Threat Reduction Agency.

The multiplicity of Chinese grants, all on the national level, supporting the work done under Qiu's lead at the NML is impressive:

- National Key Program for Infectious Disease of China
- National Key Research and Development Program of China
- National Natural Science Foundation of China International Cooperation and Exchange Program
- Special Foundation of President for Ebola virus research from the Chinese Academy of Sciences
- President's International Fellowship Initiative from the Chinese Academy of Sciences
- China National Key Subject of Drug Innovation
- Youth Innovation Promotion Association of the Chinese Academy of Sciences
- National Natural Science Foundation Award, Ministry of Science and Technology
- National Science and Technology Major Projects
- Beijing Advanced Innovation Center for Structure Biology
- Major Program of the National Natural Science Foundation of China

It is still possible that Qiu and her husband will return to work at the NML, but a good deal of intelligence analysis and assessment will be required. The Canadian Security Intelligence Service has a serious challenge on its hands.

2020 (Jan 27) WUHAN VIROLOGY INSTITUTE, CHINESE BIOLOGICAL WARFARE AND CHINESE-CANADIAN SPY

See [HW002C][GDrive]

The CCP regards the intellectual property theft as a critical strategy for its rise becoming a great nation and its invasion of the world. Many Chinese researchers are either the CCP's spies or lacking moral consciousness. Some of them cannot resist the temptation of huge benefits provided by the CCP and some of them feel obligatory with the calling of patriotism. They use the convenience of their work and research in the West to steal technologies and stealthily, provide them to the CCP. In this incidence, two Chinese-Canadian scientists secretly stole biological viral samples, which provided valuable data and samples for viral research, to the CCP, and should be hold responsible for the outbreak of coronal virus in Wuhan.

Twitter 1:

Chinese Communist Party masters and develops deadly bacteria as a weapon of Biological warfare — (Israel Military Intelligence Agency). See how they have cultivated the export of "talent" to steal Western intellectual Property during decades.

In July 2019, the "spy" couple and their Chinese students were taken away from the **Manitoba National Microbiology Laboratory**. The University of Manitoba announced the dismissal of the Qiu couple.

Please look down at their relationship with this Wuhan Coronavirus.

Chinese bacterial thief Qiu Xiangguo and her husband Chen Keding

Twitter 2:

Qiu Xiangguo was taken out of a Canadian laboratory, former colleague said shocked

The National Microbiology Laboratory in which Qiu Xiangguo onced worked is the only Pathogen Level 4 laboratory in Canada. It is one of the few laboratories in North America that has the ability to handle pathogens such as Ebola virus which needs the highest level of seal. It is also one of the 15 laboratories of Pathogen Level 4 in the world and the only one in Canada.

Twitter 3:

- She was born in 1964
- In 1980, she was admitted to Hebei Medical College at the age of 16
- Graduated from Hebei Medical University in 1985
- Postgraduate Student of Immunology, Tianjin Medical University, in 1990
- In many materials, she covered up visiting at the MD Anderson Cancer Center in Houston in 1996 as a guest scientist
- In 1997, she was assistant research fellow in University of Manitoba Cancer Treatment Center
- In 2003, she joined Special Pathogen Project of the National Microbiology Laboratory

Twitter 4:

Her husband, Cheng Keding is also under investigation. He is a biologist and has even participated in the treatment and defense of Ebola virus. He has published papers about AIDS, SARS and coliform bacteria. The couple has been working with a team of Chinese students and cooperated with Wuhan Institute of Virology.

Twitter 5:

About MD Anderson and Yueyin venture capital and **Yueyin Datong (Tianjin) Asset Management Co., Ltd.** Look, these belong to **Wang Qishan**. The Qiu Xiangguo couple has always been in touch with Tianjin Medical College.

Twitter 6:

The latest Canadian media's investigation found that just two months before Dr. Qiu was taken away, Canada national microbiology laboratory she worked in sent live **Ebola** and **Henipavirus** to China with the via Air Canada. The destination was Beijing.

Before the incident, Qiu Xiangguo served as the leader of the laboratory's special virus project team-vaccine development and antiviral treatment group, and was responsible for research work related with Ebola virus.

Twitter 7:

The viruses were shipped to the Chinese Academy of Sciences bypassed the laboratory's procedure and protocols and without additional documentation to protect Canadian intellectual property. Researchers engaged in cutting-edge high-containment research at the National Microbiology Laboratory are not allowed to ship anything to other national laboratories without consulting with the Intellectual Property Office and reaching a material transfer agreement.

Twitter 8:

In 1996, she entered the United States as a member of Thousand Talents Program, and then moved to the Canadian laboratory. Over the years, Qiu Xiangguo has recruited a large number of Chinese students and visited to Chinese universities regularly. Look! The Ebola antibodies that she developed together with Tsinghua. The weird thing is **ZMapp** is a California company producing vaccines !! Check if it belongs to **Jiang Mianheng**? !!

Twitter 9:

According to travel documents obtained by the Canadian CBC, Qiu Xiangguo traveled to China at least five times in 2017-2018, including providing training program for science and technology personnel in a newly established P4 laboratory in China, which is engaged in the most deadly pathogen research.

Wuhan P4 Bio Lab ! ? !!

Twitter 10:

Look at here! Wuhan Virus Laboratory is accredited to conduct research on three types of viruses: Ebola, Congo-Crimea hemorrhagic fever and Henipavirus.

Isn't all smuggled out of Canadian laboratories by Qiu Xiangguo? !!

Twitter 11:

Wuhan Wuhan Wuhan

Wang Qishan, Meng Jianzhu

The Canadian Mounted Police investigated Qiu Xiangguo in July and took her away from the laboratory. Newly exposed documents show that Qiu Xiangguo was invited to the Wuhan National Biosafety Laboratory of the Chinese Academy of Sciences for two consecutive years, twice a year for up to two weeks at a time. Public Health Canada says Qiu's actions could be "violating policies."

Twitter 12:

The Chinese Communist Party's cover blows up.

The United States and Canada already have the intelligence.

The document obtained by the CBC showed that "Qiu's visit was funded by a third party", but the third party's name was erased from the document. **During her trip from September 19th to 30th, 2017, she also met with collaborators in Beijing, and the names of the participants in the meeting were also erased**.

Twitter 13:

When the Chinese government introduced Qiu, it misled people to believe that she invented the ZMapp's drug.

Police documents show that Xiangguo also visited some academic institutions such as the Chinese Academy of Sciences, Tsinghua University, and the Chinese Academy of Medical Sciences, and gave speeches at several conferences when she visited China.

Twitter 14:

This 4/5/2018 CCTV's report is the proof. Virus is flowing from Wuhan bio laboratory. And the Chinese Communist party has a vaccine. So why not give it to the patients? When are you going to "fight fires"?

Twitter 15:

In 2014, The Canadian government claims that China leads the cyber attack on the Canadian National Research Council.

In fact, the Qiu couple is just two examples in the Chinese Thousand Talents Program. There are more scientists there stealing intellectual properties for the CCP.

2020 (Feb) - Factcheck-AFP - Chinese 'spies' did not steal deadly coronavirus from Canada

See [HW002D][GDrive]

Websites and social media users claim that the new coronavirus discovered in the city of Wuhan may have been created in Canada and stolen by Chinese spies. This is false; Canadian health and federal police officials say it has no factual basis, and experts say evidence indicates the virus has a natural origin.

"Corona virus developed in Canada and stolen by China?" reads the headline of this article from January 22, 2020. It appears to be the first of a series of such claims about the novel coronavirus, which caused an outbreak in the central Chinese city of Wuhan before spreading elsewhere in the country and around the world.

Other social media users soon shared similar versions of the claim, referring to the investigation of two Chinese virologists in Canada in 2019. Kyle Bass, an American hedge fund manager who is currently shorting Hong Kong's currency, falsely claimed on Twitter that a "Chinese spy team" sent pathogens "to the Wuhan facility." He was retweeted 12,500 times, and screenshots of the tweet were shared on Facebook.

The claims appear to be based on a mischaracterization of August 2019 reports about a transfer of Ebola and Nipah viruses from a Canadian lab to Beijing, and an apparently separate issue involving two Chinese researchers at Canada's National Microbiology Laboratory (NML) in Winnipeg, in the central province of Manitoba.

The NML is part of the federal Public Health Agency of Canada (PHAC), whose senior media officer Tammy Jarbeau told AFP by email that "this is disinformation. (These) statements made on social networks have no factual basis."

The RCMP investigation

In July 2019, the Canadian Broadcasting Corporation (CBC) reportedthat two researchers with ties to China were removed from the NML in Winnipeg by the Royal Canadian Mounted Police (RCMP) for a possible "policy breach." The article did not mention the coronavirus.

Robert Cyrenne, spokesman for the RCMP in Manitoba, told AFP by email that "there is no connection between the outbreak in China and any RCMP investigation. Any reporting of such is misinformation."

Cyrenne confirmed to AFP that the investigation involving the researchers is still ongoing.

Dr Xiangguo Qiu, who helped develop a treatment for the Ebola virus, her husband Keding Cheng, a biologist who has published papers on coronavirus strains such as SARS-CoV, and Chinese students working under them had their security access revoked for Canada's only level-4 lab, a facility equipped for research on the deadliest diseases.

The virus transfer

Claims that the novel coronavirus was created in Canada refer to another report involving the NML. One month after Qiu, Cheng and the students were escorted off premises, CBC reported that live Ebola and Nipah viruses had been shipped to Beijing in March 2019 for research.

PHAC officials told CBC that all procedures were followed for the shipment of those level-4 pathogens, the deadliest. But the short interval between the Air Canada flight they were transported on and Qiu and Cheng's removal led to suspicion that the two events could be connected.

The RCMP declined to comment on any potential connection between the investigation and the virus shipment to Beijing.

Bass's tweet claims that Qiu was suspended for sending pathogens to Wuhan. In fact, the two pathogens were sent to Beijing, and were not coronaviruses.

The University of Manitoba, with which Qiu and Cheng were affiliated, has ended their non-salaried appointments and re-assigned the students working with them, a spokesperson told the Canadian Press.

Natural origin of virus

In a letter published on February 19, 2020 in The Lancet medical journal, a group of public health scientists made a statement about the origins of the novel coronavirus, which causes the COVID-19 disease. (https://www.thelancet.com/journals/lancet/article/PIIS0140-6736(20)30418-9/fulltext ... Note that one of the names is Peter

https://www.thelancet.com/action/showPdf?pii=S0140-6736%2820%2930418-9

"We stand together to strongly condemn conspiracy theories suggesting that COVID-19 does not have a natural origin. Scientists from multiple countries have published and analysed genomes of the causative agent, severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2), and they overwhelmingly conclude that this coronavirus originated in wildlife, as have so many other emerging pathogens," they said.

A team of scientists led by Shan-Lu Liu of The Ohio State University also concluded that there is no "credible evidence" that the virus -- officially known as SARS-CoV-2 -- was engineered in a laboratory, in research published on February 26, 2020.

According to the Canadian government, as of March 24, 2020, there were 1,959 confirmed cases of novel coronavirus infection across the country. Twenty-seven people have died.

2020 (Feb 18) - "Statement in support of the scientists, public health professionals, and medical professionals of China combatting COVID-19"

PDF [HW002E][GDrive]

Statement in support of the scientists, public health professionals, and medical professionals of China combatting COVID-19

We are public health scientists who have closely followed the emergence of 2019 novel coronavirus disease (COVID-19) and are deeply concerned about its impact on global health and wellbeing. We have watched as the scientists, public health professionals, and medical professionals of China, in particular, have worked diligently and effectively to rapidly identify the pathogen behind this outbreak, put in place significant measures to reduce its impact, and share their results transparently with the global health community. This effort has been remarkable.

We sign this statement in solidarity with all scientists and health professionals in China who continue to save lives and protect global health during the challenge of the COVID-19 outbreak. We are all in this together, with our Chinese counterparts in the forefront, against this new viral threat.

The rapid, open, and transparent sharing of data on this outbreak is now being threatened by rumours and misinformation around its origins. We stand together to strongly condemn conspiracy theories suggesting that COVID-19 does not have a natural origin. Scientists from multiple countries have published and analysed genomes of the causative agent, severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2),[1] and they overwhelmingly conclude that this coronavirus originated in wildlife,[2–10] as have so many other emerging pathogens.[11,12] This is further supported by a letter from the presidents of the US National Academies of Science, Engineering, and Medicine[13] and by the scientific communities they represent. Conspiracy theories do nothing but create fear, rumours, and prejudice that jeopardise our global collaboration in the fight against this virus. We support the call from the Director-General of WHO to promote scientific evidence and unity over misinformation and conjecture.[14] We want you, the science and health professionals of China, to know that we stand with you in your fight against this virus.

We invite others to join us in supporting the scientists, public health professionals, and medical professionals of Wuhan and across China. Stand with our colleagues on the frontline!

We speak in one voice. To add your support for this statement, sign our letter online. LM is editor of ProMED-mail. We declare no competing interests.

Charles Calisher, Dennis Carroll, Rita Colwell, Ronald B Corley, Peter Daszak, Christian Drosten, Luis Enjuanes, Jeremy Farrar, Hume Field, Josie Golding, Alexander Gorbalenya, Bart Haagmans, James M Hughes, William B Karesh, Gerald T Keusch, Sai Kit Lam, Juan Lubroth, John S Mackenzie, Larry Madoff, Jonna Mazet, Peter Palese, Stanley Perlman, Leo Poon, Bernard Roizman, Linda Saif, Kanta Subbarao, Mike Turner

COVID19statement@gmail.com

Colorado State University, Fort Collins, CO, USA (CC); Scowcroft Institute of International Affairs, Texas A&M, College Station, TX, USA (DC); University of Maryland, College Park, MD, USA (RC); NEIDL Institute (RBC), Boston University (GTK), Boston, MA, USA; EcoHealth Alliance, New York, NY, USA (PD); Charité – Universitatsmedizin Berlin, Berlin, Germany (CD); National Center of Biotechnology, Madrid, Spain (LE); The Wellcome Trust, London, UK (JF, JG, MT); School of Veterinary Science, The University of Queensland, Brisbane, QLD, Australia (HF); Leiden University Medical Center, Leiden, Netherlands (AG); Erasmus Medical Center, Rotterdam, Netherlands (BH); Emory University, Atlanta, GA, USA (JMH); World Organization for Animal Health (OIE) Working Group on Wildlife, New York, NY, USA (WBK); University of Malaya, Kuala Lumpur, Malaysia (SKL); Food and Agriculture Organization of the United Nations, Rome, Italy (JL); Curtin University, Perth, WA, Australia (JSM); Massachusetts Medical School, Worcester, MA, USA (LM); University of California at Davis, Davis, CA, USA (JM); Department of Microbiology, Icahn School of Medicine, Mt Sinai Hospital, New York, NY, USA (PP); University of Iowa, Roy J and Lucille A Carver College of Medicine, Iowa City, IA, USA (SP); The University of Hong Kong, Hong Kong (LP); University of Chicago, Chigaco, IL, USA (BR); The Ohio State University, Columbus, OH, USA (LS); and The University of Melbourne, Melboune, VIC, Australia (KS)

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Published Online February 18, 2020 https://doi.org/10.1016/S0140-6736(20)30418-9

For the Chinese translation see Online for appendix

To **register your support** see http://chng.it/SDpTB9Kf

For the **SARS-CoV-2 genome analysis** see https://www.gisaid.org/epiflu-applications/next-betacov-app/

Submissions should be made via our electronic submission system at http://ees.elsevier.com/thelancet/

[HW002F][GDrive]

https://www.cbc.ca/news/canada/manitoba/brantly-kobinger-ebola-1.4609586

2018-04-07-cbc-canada-brantly-kobinger-ebola.pdf

HM000C https://drive.google.com/open?id=1TIXObUKqYi6gZkTzzCdJKM8op1G4ynKf

Doctor who survived Ebola visits Winnipeg to thank ZMapp scientists

Social Sharing

Social Sharing

- Facebook
- Twitter
- Email
- Reddit
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Dr. Kent Brantly was 1st human given experimental treatment developed at National Microbiology Lab

CBC News · Posted: Apr 07, 2018 6:53 AM CT | Last Updated: April 9, 2018

A doctor who fought the Ebola outbreak in West Africa ended up being the successful guinea pig for an experimental treatment to fight the virus.

On Friday, he visited Winnipeg's National Microbiology Lab to thank the scientists who saved him, in person.

Dr. Kent Brantly, a family physician from Fort Worth, Texas, was part of the medical response to the Ebola outbreak in Liberia, where he was living and practising, in 2014. But while there, he contracted the deadly virus himself.

- **Dr. Kent Brantly, Ebola survivor, speaks of ending suffering in West Africa**
- **Ebola outbreak: Experimental treatment sparks who-you-know debate**

"I'm really glad to be able to meet you in person and tell you thank you," Brantly said to Dr. Gary Kobinger, a professor at the universities of Laval and Manitoba, who was involved in developing the treatment.

Brantly's recovery from what his doctors believed was death's doorstep was widely credited to the drug ZMapp, an antibody cocktail designed at Canada's National Microbiology Laboratory.

He reported feeling his fever break just 15 minutes after receiving the treatment.

"It's really a tremendous honour and privilege to meet him. I've seen your picture, I've watched interviews with you, but it is a great privilege to say thank you to someone who saved my life," Brantly said to Kobinger.

The treatment had never been used on a human being before, so when Brantly got sick, he was the first test subject.

- **Ebola 'cocktail' developed at Canadian and U.S. labs**
- **Ebola drugs can be tested on patients even if unproven, WHO says**
- **Canada offers experimental Ebola vaccine VSV-EBOV to West Africa**

"My story is just one of thousands," he said. But "through the attention that was given to my story, we saw a tremendous boost in support of the work that's required years and years in advance to have options available when an outbreak occurs."

Dr. Kent Brantly and Dr. Linda Mobula, assistant professor at John Hopkins School of Medicine and the physician who administered ZMapp to Dr. Brantly in Liberia. National Microbiology Lab scientists who created the Ebola treatment are also featured: Dr. Gary Kobinger, former chief of special pathogens, and Dr. Xiangguo Qiu, research scientist. (Submitted by Health Canada)

Kobinger, in return, thanked Brantly for his visit. He noted there was a huge team involved in both the treatment and in getting Brantly evacuated to a hospital in Atlanta, where he and another worker who had been exposed were treated.

"I would say that it's very humbling and very touching that he took the time to come and say thank you," Kobinger said.

Treating Brantly all happened so fast, he added.

"Despite the complexity of the environment, very important decisions can be made when people work together," he said. "Extraordinary achievements can be can be made also when we work together to resolve and solve problems and find solutions."

- **Post-Ebola Syndrome: Survivors continue to face mystery symptoms**
- **Ebola survivor from West Africa meets Winnipeg researchers who developed the drug that saved her life**

Before going to speak to a group at the University of Manitoba Friday, Brantly said he hopes what they take away from his visit is the importance of choosing compassion over fear.

"Choosing to do the right thing for your fellow human being rather than reacting out of fear and self preservation. That is not only true in my particular clinical story, but that's true of the work that happens in the lab every day — is setting aside the fear of working with deadly diseases to do good for others."

Brantly, who was the face of the Ebola fight on Time's 2014 Person of the Year cover, is speaking at a brunch Saturday morning at McDermot Avenue Baptist Church.

HM000D

[https://drive.google.com/open?id=1YNZ_-Jom4QE24vj4_6pd5-wPec4-Igjv][GDrive

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Housatonic

R

A B C D E F G H I J K L M N O P Q R S T UVWXYZ

PEOPLE (by last name / then D.o.B.)

- Gita **Ramjee** (born 1956)
- William Carlisle **Reeves** (born 1916)
- Dr. Alfred J. **Restaino** (born 1931)
- Dr. Cornelius Packard "Dusty" **Rhoads** (born 1898)
- Prof. Jürgen Albrecht **Richt** (born 1958)
- James Gerard **Roche** (born 1939)
- Nelson Aldrich **Rockefeller** (born 1908)
- Dr. John Timothy **Roehrig** (born 1952)
- Thomas Paul **Rona** (born 1923)
- Monique R **Rona** (born 1928)
- Dennis B. **Ross** (born 1948)
- Henry **Rothschild** (born 1920)
- Prof. Rudolf **Rott** (born 1926)
- Dr. Francis Peyton **Rous** (born 1879)
- Francis William **Ruscetti** (born 1943)
- Stephen **Russell** (born 1937)

PLACES / COMPANIES / OTHER

- Raytheon Intelligence, Information, and Services Business Unit
- **Rocky** Mountain Labs

Gita Ramjee (born 1956)

Wikipedia Gita Ramjee

Wikipedia for Gita Ramjee - Entry Saved from May 2020

[HK0021][GDrive]

Born Gita Parekh 8 April 1956 , in Kampala, Uganda Protectorate

Died 31 March 2020 (aged 63) (Umhlanga, outside Durban, South Africa)

Nationality South African

Alma mater

University of Sunderland

University of KwaZulu-Natal

Known for

HIV research

Microbicides

Spouse(s)

Pravin Ramjee[1]

Scientific career

Fields Medicine, Pediatrics, HIV

Institutions South African Medical Research Council

Gita Ramjee FRCPE (née **Parekh**; 8 April 1956 – 31 March 2020) was a Ugandan-South African scientist and researcher in HIV prevention. In 2018, she was awarded the 'Outstanding Female Scientist' award from the European and Developing Countries Clinical Trials Partnership.[2] She died in Umhlanga, Durban, South Africa, from COVID-19 related complications.[3]

Early life and education

Gita Parekh was born on 8 April 1956[1][4] and grew up in Colonial Uganda before her family were driven into exile under Idi Amin in the 1970s.[4] She attended high school in India before attending the University of Sunderland in England. She graduated in 1980 with a BSc (Hons) in Chemistry and Physiology. She married a South African-Indian fellow student, Praveen Ramjee, and moved to Durban where she began working in the Department of Paediatrics at the Medical School of the University of KwaZulu-Natal. After her two sons were born she completed her Masters, and subsequently a PhD in 1994.[5]

Career

After completing her PhD in kidney diseases of childhood, Ramjee joined the South African Medical Research Council as a scientist.[5] She rose rapidly through the ranks to head the largest unit of the Council, the HIV Prevention Research Unit. She helped expand the unit from 22 scientific staff to 350 and was instrumental in growing its international reputation.[5]

At the time of her death, Ramjee was the Chief Scientific Officer at the Aurum Institute, a not-for-profit AIDS/Tuberculosis research organisation,[6] as well as director of the South African Medical Research Council's Prevention Research Unit. She received the Lifetime Achievement Award at the International Microbicide Conference in 2012. She was an honorary professor at the London School of Hygiene & Tropical Medicine, the University of Washington in Seattle, and the University of Cape Town.[6] She was a member of a number of local and international committees including the Academy of Science of South Africa (ASSAf) and the South African National AIDS Council (SANAC).[7]

Research

Her specialisation in HIV prevention and treatment research led her to lead the expansion of phase I through phase III HIV prevention and treatment clinical trials in the greater Durban area as the Clinical Trials Unit Principal Investigator.[7] Ramjee was concerned that the focus should not only be on clinical trials but treatment accompanied by HIV prevention education and care. In an interview she stated, "Women are the hardest hit by HIV in this region, and there is

still a lot to do to address health issues in developing countries. There is a need for [a] more holistic approach to HIV prevention which should include reproductive health care for women."[5] Ramjee was one of the first South African scientists to work on developing microbicides.[8]

She received the 2017 MRC Scientific Merit Award gold medal.[8]

As an academic, she published more than 170 articles and was both a reviewer and editor of several scientific journals.[7]

Death

Ramjee was in London to deliver a lecture at the London School of Hygiene & Tropical Medicine on 17 March 2020, entitled 'HIV: diverse challenges among children and women in Asia and Africa'. On her return to South Africa she felt unwell and was hospitalised. She died from complications relating to COVID-19.[6]

David Mabuza, deputy president of South Africa, led the tributes calling her a "champion in the fight against the HIV epidemic." As the chairperson of the South African National AIDS Council, he stated: "The passing of Professor Ramjee comes as a huge blow to the entirety of the healthcare sector and the global fight against HIV/AIDS."[9] Salim Abdool Karim, director of the Centre for the Aids Programme of Research in South Africa, praised her work for women, saying "She was involved in almost every major HIV prevention trial on microbicide … and defined her niche in developing technologies for women."[8] The president of the South African Medical Research Centre, Glenda Gray, also paid tribute to her work "She tried to address the whole ecosystem that makes women vulnerable, from the biological to the political."[8]

GITA RAMJEE

- Clinical Professor, Global Health

HIV Prevention Research Unit

Medical Research Council

Durban

South Africa

Email:

gita.ramjee@mrc.ac.za

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BIOGRAPHY

Gita Ramjee PhD FRCPE is a Chief Specialist Scientist and Director of the South African Medical Research Council's HIV Prevention Research Unit. She holds an Honorary Professorship from the London School of Hygiene and Tropical Medicine, London.

Dr Ramjee is world renowned, specializing in HIV prevention and treatment research with integrated care programmes among women and men in communities around the greater Durban area in South Africa. As the Clinical Trials Unit Principal Investigator, she has had oversight of an expansive portfolio of phase I through phase III HIV prevention and treatment clinical trials. She has been acknowledged internationally for her expertise in the field of microbicide research, including a Lifetime Achievement Award for HIV Prevention in 2012. Dr Ramjee has published more than 170 research articles. She is a reviewer and editor of several scientific journals and a member of several local and international committees and advisory groups including the Academy of Science of South Africa (ASSAf) and the South African National AIDS Council (SANAC).

Dr Ramjee has contributed substantially to advancing HIV prevention science among women in South Africa and is considered a critical player in the field of HIV prevention clinical trials.

EDUCATION

- PhD (University of Natal)
- MSc (University of Natal)
- BSc (University of Sunderland)

COUNTRY AFFILIATIONS

- South Africa

LANGUAGES

- Gujarati
- Hindi

HEALTH TOPICS

- HIV/AIDS
- Infectious Diseases
- Sociobehavioral
- STDs (other than HIV)

DGH CENTERS, PROGRAMS AND INITIATIVES AND AFFILIATED ORGANIZATIONS

- HIV Vaccine Trials Network

Microbicides Trials Network

Baeten JM, Palanee-Phillips T, Brown ER et al. Use of a Vaginal Ring Containing Dapivirine for HIV-1 Prevention in Women. NEJM DOI: 10.1056/NEJMoa1506110

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Holly Janes, Lawrence Corey, Gita Ramjee, Lindsay N. Carpp, Myron S. Cohen, Peter B. Gilbert, and Glenda E. Gray. Weighing the Evidence of Efficacy of Oral PrEP for HIV Prevention in Women in Southern Africa. AIDS Research and Human Retroviruses. DOI: 10.1089/aid.2018.0031

2020-04-01-daily-maverick-professor-gita-ramjee-world-renowned-hiv-scientist

Source - The Daily Maverick (April 1, 2020) -

[HM000S][GDrive]

Professor Gita Ramjee, who recently returned from a trip to London, had been admitted to hospital with pneumonia. She was Chief Scientific Officer at the Aurum Institute and former chief specialist scientist and director of the South African Medical Research Council's (SAMRC) HIV Prevention Research Unit. She died in an Umhlanga hospital on Tuesday from Covid-19 related complications.

Professor Glenda Gray, president and CEO of the SAMRC, informed staff in an email of Ramjee's "tragic passing" due to "Covid-19 related complications".

The Aurum Institute said it was deeply saddened by the death of Ramjee whom they described as a "world-renowned scientist, who worked tirelessly to find HIV prevention solutions for women".

"The world has lost a bold and compassionate leader in the response to HIV," said Professor Gavin Churchyard, Group CEO of the Aurum Institute. "Gita Ramjee firmly believed in health as a fundamental human right. Her ground-breaking research in HIV prevention contributed to the global response to HIV and AIDS. Our thoughts during this difficult time are with her family, colleagues and the many people her life and work touched," he added.

Ramjee, recognised as a world-class scientist, spent her life focused on finding HIV prevention methods, which were conducive to the lifestyles, circumstances and perceived risk factors that South African women face. While at the SAMRC, Ramjee's KwaZulu-Natal based team was also at the forefront of attempts to find an effective HIV vaccine.

Ramjee held Honorary Professorships at the London School of Hygiene and Tropical Medicine, the University of Washington in Seattle and the University of Cape Town.

Ramjee was a critical player in the field of HIV prevention clinical trials and was acknowledged internationally for her expertise in the field of microbicide research, including a Lifetime Achievement Award for HIV Prevention. In 2018, she was honoured with the "Outstanding Female Scientist" Award by the European Development Clinical Trials Partnerships (EDCTP) for her life's work that has focused on finding new HIV prevention methods.

Ramjee has published more than 200 research articles. She was a reviewer and editor of several scientific journals and a member of several local and international committees and advisory groups including the Academy of Science of South Africa (ASSAf) and the South African National AIDS Council (SANAC).

"The Aurum Institute and the global HIV research community will mourn Gita Ramjee's passing and celebrate the huge contribution to the response to HIV she made in her life," said Churchyard.

Ramjee had been involved in the clinical trials of microbicides for over a decade. She collaborated with all the major sponsors involved in HIV prevention research, including UNAIDS, Population Council, the Bill and Melinda Gates Foundation, and the Wellcome Trust. **MC**

2007 (May 08) - (From The Guardian) Gita Ramjee: A passion for prevention

Source : [HM000R][GDrive]

The HIV researcher at the centre of a row over clinical trials tells Linda Nordling why she will never give up

Linda Nordling

Months have passed, but Professor Gita Ramjee still recoils at the memory of events that came close to robbing South Africa of one of its top scientists. "There came a point when I thought: is it worth my while? I have dedicated my life to finding an HIV prevention option for the women of Africa, and these recent attempts to tarnish my efforts have been very demotivating."

It is fitting that we meet on a day when freak waves and high winds are causing widespread damage along the Kwa-Zulu Natal coastline. A storm of a different kind rocked her research unit recently. A storm less forceful perhaps, but more damaging to those inside.

In January, Ramjee, director of the HIV prevention research unit in Durban, received the news that a routine inspection by an external team of experts had discovered anomalies in data from a study of a potential new microbicide to protect women against HIV/Aids. Alarmingly, more women receiving the vaginal preparation of cellulose sulphate appeared to have developed HIV, compared with the group not receiving the product. Although the numbers were very small, the external team decided to halt the trial for safety reasons.

A press release was issued explaining that the treatment "might" increase women's chances of HIV infection. Test products were recalled from the 1,333 women participating in South Africa, Benin, Uganda and India, and Conrad, the US-based sponsor of the trial, ordered a review to shed light on what had happened.

Press field day

Ramjee wished it could have stopped there. But it didn't. The press had a field day with what was incorrectly christened a "botched" trial. Some called the women testing the drug "guinea pigs", encouraged by the scientists to have unprotected sex using the gel as an aphrodisiac. "I think the whole world was horrified that certain South African press could stoop so low. That they could misunderstand an issue so much," says Ramjee

The articles were not just damaging to other HIV prevention efforts at the unit, but to clinical trials as a whole, she says. "Negative press such as this can destroy HIV prevention efforts. We need to have a united front, with civil society and scientists working together to address the problem and applauding volunteers who come forward to find solutions." But she admits her unit could have done more to prevent what happened. "In future, I would like to do it better, get the press involved, make them understand the science and interpretation of data."

In the aftermath, Ramjee received strong support from her colleagues, sponsors and even from participants in the trials. The last tried to put the record straight with the press. "Don't tell us that we are guinea pigs, we know exactly what we're doing, and can think for ourselves," they told the journalists. Did the press print their stories? "No."

But Ramjee's heart sank. It felt like the very people she had dedicated her life to help had turned against her. "At the time I was very, very depressed." But she did not give up. "A lot of people said to me: if you, one of the best clinical trialists in the world, don't continue with this fight against HIV/Aids, who will? So you have to motivate yourself again."

Such dedication to what she values most is a recurring phenomenon in Ramjee's life. Not for her the latte-sipping existence enjoyed by some of her contemporaries. "I'm not the type of woman who likes to spend hours at shopping centres with friends," she says. Instead, her life has revolved around her family and her career, with the former taking precedence.

Perhaps it was the many upheavals of her youth that taught her to hold on to what could always be counted on: close family and her own faculties. Growing up in Uganda, her first experience of exile came at the hands of Idi Amin, the dictator who forced all Asians out of the country in the 1970s. After a couple of years in a high school in India, the land of her ancestors, she relocated again, this time to the University of Sunderland in the north-east of England.

It was in here that she met her future husband - a South African of Indian descent. In 1981, on finishing her degree, she followed him to South Africa. It was a culture shock. In the early 80s the apartheid regime was weakening, but still held on to power, particularly in the Transvaal region, from where her husband's family came. "It was extremely difficult for somebody used to living in a multicultural, open society. As a student in England, you didn't look at colour. You looked at people as individuals."

In search of more liberal surroundings, the young couple moved to Durban. Here, Ramjee felt more at ease. She felt welcomed by people from a variety of backgrounds. "I think it was nice for them to meet somebody who wasn't thinking in the past. I felt very comfortable living in Durban at that time." She got a job in paediatrics at a local hospital. This put her in the way of a masters degree and, ultimately, a PhD on the kidney diseases of children, which she completed in 1994.

By that time she had two sons whom she tried - sometimes in vain - to shelter from the idiosyncrasies of South African society. "I was so determined, coming from a multicultural society, that I would never put my child in a single-race school." This was easier said than done, but in the end she succeeded.

The years of her doctorate saw Ramjee make superhuman efforts to stay on top of family and career. "I used to get up at six in the morning, prepare food, wake my children, send them off to school, do a half day of practical work, come back, pick my sons up from school, help them do their homework and send them to sleep." She would then herself go to sleep at 8pm only to get up again at two in the morning to write her thesis. She kept this up for a year. "I never gave up my responsibility as a parent. Although I wanted to excel in my career, I never wanted to compromise myself as a mother."

Nascent technology

The sacrifice paid off, but in a roundabout way. After her PhD, Ramjee wanted a break, but fearful of too much leisure time, she sought out a small project that would pass the time when her sons were at school. She found a small research project evaluating the acceptability of a vaginal microbicide, at that time a nascent technology in the armoury against HIV/Aids. This work put her in contact with local sex workers - a "reality check" as she calls it.

"It opened my eyes. These are good women, who are put in a position that people scorn." In the mid-90s, when Ramjee started working with sex workers in Kwa-Zulu Natal, 50% were HIV positive. "These women mostly aren't doing this out of choice. The stories they used to tell us were horrific. That's when I knew I wanted to be involved in the prevention of HIV infection in women."

What began as a short project evolved into a strong commitment. In the years to follow, Ramjee worked her way up through the ranks to finally head the Durban unit. She inherited a staff of 21, and quickly built this into a 300-strong organisation with an international reputation for excellence.

She is matter of fact about her success: "Because I did so well in clinical trials, I had offers pouring in for me to do clinical research. I think the key to success is my approach to capacity building, respecting each and every member of my staff, the community, and also the fact that I delivered on the contracts. It is my holistic approach to research, where I'm not just thinking science."

Today, Ramjee is looking ahead. The final results of a recently completed trial on a vaginal diaphragm will be out in the next couple of months and other trials are also nearing completion. There is a long way to go. "What people don't realise is that none of the current generation of microbicides or any other prevention technology is going to be 100% effective. So whether there are microbicides or a vaccine out there or not, there is nothing that will to allow you to go have unprotected sex without the risk of infection. Not for a long, long time."

Still, the recent crisis has taught her the importance of striking a new work-life balance. "In a way, I feel that while I'm passionate about my work, it is too consuming a passion. I need to find a more balanced situation, where I do things that I enjoy as well." But finding the time to do that will be difficult, she admits. "It's in my nature to want to excel. My calling is to find a solution. If I don't succeed in my lifetime, at least I've worked towards it."

Curriculum vitae

Age: 50

Job: Director of the HIV prevention research unit in Durban, South Africa

Lives: In Durban with her husband, a pharmacist

Likes: spas, exotic travels

2017/2018 annual report - SOUTH AFRICAN MEDICAL RESEARCH COUNCIL

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UNIT NAME:

HIV PREVENTION RESEARCH UNIT

UNIT DIRECTOR: Gita Ramjee

STRATEGIC PURPOSE OF UNIT

The HIV Prevention Research Unit (HPRU) is one of the largest units of the South African Medical Research Council and is located in Durban, KwaZulu-Natal. The Unit is uniquely placed to address the HIV burden of disease in South Africa.

KwaZulu-Natal is also the epicentre of the global HIV epidemic leading to an enormous global and national interest to address the high HIV infection rates seen among men, women and adolescents in this region. HPRU is involved in cutting-edge research to address the HIV epidemic in sub-Saharan Africa as part of the global initiative to curb the epidemic.

MAJOR RESEARCH PROJECTS IN THE REPORTING PERIOD

FUNDER	PROJECT /RESEARCH TITLE	PRINCIPAL INVESTIGATOR
MTN microbicide trials network	**MTN 025:** A Phase 3B Open-Label Follow-on Trial to Assess the Continued Safety of and Adherence to a Vaginal Ring Containing Dapivirine in Women. The project is a follow-up trial to the ASPIRE trial, which showed for the first time in the history of the HIV epidemic among women, that a intravaginal ring containing an antiretroviral agent called Dapivirine can reduce HIV acquisition by 29% among women at high risk of HIV. The data from the trial are currently under review by drug registration authorities to register the first product for HIV prevention controlled by women.	Prof Gita Ramjee

"MAJOR RESEARCH PROJECTS IN THE REPORTING PERIOD FUNDER PROJECT /RESEARCH TITLE PRINCIPAL INVESTIGATOR MTN 025: A Phase 3B Open-Label Follow-on Trial to Assess the Continued Safety of and Adherence to a Vaginal Ring Containing Dapivirine in Women. The project is a follow-up trial to the ASPIRE trial, which showed for the first time in the history of the HIV epidemic among women, that a intravaginal ring containing an antiretroviral agent called Dapivirine can reduce HIV acquisition by 29% among women at high risk of HIV. The data from the trial are currently under review by drug registration authorities to register the first product for HIV prevention controlled by women.

2020 (April 1) - Global health clinical professor Gita Ramjee dies from COVID-19

source : [HE0027][GDrive]

By Jake Goldstein-Street and Ash Shah The Daily / Apr 1, 2020 Updated Apr 6, 2020

World-renowned HIV researcher Dr. Gita Ramjee, who was a clinical professor in the UW's global health department, has died from COVID-19 complications, the department announced April 1.

"Words cannot express our sorrow for the passing of Dr. Gita Ramjee," the department wrote in a tweet. She "was a wonderful colleague and friend who made major contributions to HIV prevention. @UW Global Health were fortunate to have her as clinical faculty."

Ramjee's death Tuesday, March 31, in a South African hospital was first reported by the BBC.

Ramjee was the chief scientific officer for HIV prevention for the Aurum Institute, a healthcare organization battling HIV.

"The world has lost a bold and compassionate leader in the response to HIV," professor Gavin Churchyard said in a statement from the Aurum Institute. "Gita Ramjee firmly believed in health as a fundamental human right."

Ramjee, who was a chief specialist scientist and director of the South African Medical Research Council's HIV Prevention Unit, received the Outstanding Female Scientist Award in 2018 from the European & Developing Countries Clinical Trials Partnership for her research on HIV prevention among women.

"I was absolutely thrilled by this award, as it recognizes decades of my commitment to clinical research activities in HIV prevention," Ramjee told the HIV Trials Network after receiving the award. "What makes it more rewarding is that I now stand among the female giants who received this award in the past."

The Microbicide Trials Network's Sharon Hillier and Jared Baeten, who is also vice dean of the UW School of Public Health, wrote of her passion for addressing gender disparities in HIV incidence, quoting a recent email from Ramjee reading, "It has been a long road with many ups and downs but we have forged along with strong determination."

She also held an honorary professorship from the London School of Hygiene and Tropical Medicine. UW spokesperson Victor Balta said in an email that Ramjee worked closely with many of the university's faculty and her title as a clinical professor was an honorary one.

A spokesperson for the department didn't think she taught courses on campus, but rather collaborated on HIV prevention programs with other faculty.

"She was always ready to share her extensive expertise and experience generously. We send our condolences to her family in this exceptionally difficult time," the global health department posted on its Facebook.

Ramjee appears to be the second UW faculty member to die from COVID-19 after a longtime member of the pathology department was claimed by the disease caused by the novel coronavirus in mid-March.

Four faculty and other academic personnel have now tested positive for the virus, as of April 1. That's on top of 17 staff members and 20 students for a total of 41 cases in the Seattle campus community. One UW Bothell staff member has also tested positive.

A UW campus custodian also died Tuesday, March 31, and was found to be positive for COVID-19, according to UW spokesperson Victor Balta. The employee's last day on campus was March 20.

Any staff members who came into close contact with this employee have been notified and asked to isolate until Apr. 3, 14 days after the individual's last day on campus, Balta said in an email.

"We are in contact with the employee's family and, out of respect for their privacy and time to grieve, we are not identifying the employee at this time," he wrote.

Reach News Editor Jake Goldstein-Street and Science Editor Ash Shah at news@dailyuw.com. Twitter: @GoldsteinStreet @itsashshah

2020-05-university-of-washington-faculty-gita-ramjee.pdf

Sources - [HE0028][GDrive]

HIV Prevention Research Unit

Medical Research Council

Durban

South Africa

gita.ramjee@mrc.ac.za (mailto:gita.ramjee@mrc.ac.za)

Home (/) / Faculty and Sta! (/faculty) / Gita Ramjee

GITA RAMJEE

Clinical Professor, Global Health

ABOUT PROJECTS PUBLICATIONS

(http://uw.edu) Courses (/education-training/courses) Alumni (/our-impact/alumni)

Faculty & Staff, Fellows (/faculty/Core%20Faculty) Contact Us (/contact)

BIIOGRAPHY

Gita Ramjee PhD FRCPE is a Chief Specialist Scientist and Director of the South African Medical Research Council's HIV Prevention Research Unit. She holds an Honorary Professorship from the London School of Hygiene and Tropical Medicine, London.

Dr Ramjee is world renowned, specializing in HIV prevention and treatment research with integrated care programmes among women and men in communities around the greater Durban area in South Africa. As the Clinical Trials Unit Principal Investigator, she has had oversight of an expansive portfolio of phase I through phase III HIV prevention and treatment clinical trials. She has been acknowledged internationally for her expertise in the "eld of microbicide research, including a Lifetime Achievement Award for HIV Prevention in 2012. Dr Ramjee has published more than 170 research articles. She is a reviewer and editor of several scienti"c journals and a member of several local and international committees and advisory groups including the Academy of Science of South Africa (ASSAf) and the South African National AIDS Council (SANAC).

Dr Ramjee has contributed substantially to advancing HIV prevention science among women in South Africa and is considered a critical player in the "eld of HIV prevention clinical trials.

DGH CENTERS,, PROGRAMS AND IINIITIIATIIVES AND AFFIILIIATED

ORGANIIZATIIONS

HIV Vaccine Trials Network (/interactive-map/projects?organization=1047)

Microbicides Trials Network (/interactive-map/projects?organization=974)

BITCHUTE @Housatonic YOUTUBE @HousatonicLive ODYSEE @Housatonic BRIGHTEON @Housatonic

Housatonic

Raytheon Intelligence, Information and Services Business Unit

https://en.wikipedia.org/wiki/Raytheon_Intelligence,_Information_and_Services

Also see :

- **E-Systems, Incorporated** (In 1995, Raytheon Company acquired E-Systems, Inc. ; E-Systems was renamed Raytheon Intelligence and Information Systems.)

Saved Wikipedia (Sep 22, 2020)

See [HK0035][GDrive]

Industry

Intelligence and Surveillance

Predecessor

E-Systems, Inc.

Founded

1995; 25 years ago

Headquarters

Dulles, Virginia

,

United States

Parent

Raytheon Company

The Raytheon Intelligence, Information and Services headquarters in Dulles, Virginia

Raytheon Intelligence, Information and Services (**RIIS** or **IIS**) is a business unit of Raytheon Company headquartered in Dulles, Virginia.[1] IIS specializes in intelligence, surveillance and reconnaissance; advanced cybersecurity solutions[buzzword]; weather and environmental solutions[buzzword], and information-based solutions[buzzword] for homeland security. The company also provides training, logistics, engineering, product support, and operational support services and solutions[buzzword] for the mission support, homeland security, space, civil aviation, counter-proliferation and counter-terrorism markets.[2] IIS employs approximately 17,000 people at 551 sites in 100+ countries worldwide. In 2018, the company recorded $6.7 billion in sales and $538 million in operating income.[3] Dave Wajsgras is the President of IIS.[4]

History

In 1995, Raytheon Company acquired E-Systems, Inc. *[See **E-Systems, Incorporated**]* , a Texas-based company that designed, developed, produced and serviced high technology systems including surveillance, verification, and aircraft ground-land navigation equipment. The company also developed electronics programs and systems for business, industrial, and non-defense government programs and agencies.[6] E-Systems was renamed Raytheon Intelligence and Information Systems.

In 2013, Raytheon Company announced the consolidation of its six internal business units to four.[7] Intelligence and Information Systems was combined with Raytheon Technical Services Company and renamed Raytheon Intelligence, Information and Services.

Technologies and capabilities

- Data & Network Security[8]
- Big data Analytics, Processing and Dissemination[9]

- Big data Analytics, Processing and Dissemination[9]
- Command and Control of Air and Space Vehicles[10]
- Geospatial Intelligence (GEOINT)
- Automation and Machine Learning
- Signal and Image Processing
- Air Traffic Management Solutions[11]
- Mission Systems Integration[12]
- Training & Knowledge Management[13]
- Operations, Maintenance and Engineering[14]
- Logistics & Product Support[15]

Organization

Raytheon Intelligence, Information and Services is organized into five business units, known internally as Mission Areas:

Cybersecurity and Special Missions (CSM)

The Cybersecurity and Special Missions (CSM) mission area provides end-to-end cyber capabilities that address data and network security threats to governments and critical infrastructure. CSM provides customers with computer network defense, advanced persistent threat protection, and cyber hardening of military systems and critical infrastructure. In addition to advanced technologies, CSM develops integrated systems, tradecraft and support capabilities for a broad spectrum of special missions.

CSM Fast Facts

- In the last ten years, Raytheon has invested $3.6 billion to develop and acquire cyber capabilities[16]
- IIS develops self-healing technologies that can automatically detect and fix cyber vulnerabilities[17]
- Raytheon's CODE Center is a "cyber range" used to test and harden systems and system-of-systems[18]
- Raytheon's end-to-end CND capabilities include managed security services (MSS)[19] and virtual security operations centers (V-SOC) [20]
- Raytheon conducts 500 million+ vulnerability tests per week[*citation needed*]

Global Intelligence Solutions (GIS)

The Global Intelligence Solutions (GIS) mission area develops and integrates large-scale, high-performance signals intelligence (SIGINT,) geospatial intelligence (GEOINT) and Multi-INT systems. GIS provides commercial and intelligence customers with large-scale information processing, integration and visualization systems for intelligence, satellite and space-based programs. It also supports national security objectives by providing comprehensive technical, analytical and operational support to the intelligence community.

GIS Fast Facts

- Raytheon systems handle metadata tagging and sharing of up to 40,000 interagency transactions per second
- GIS employees and systems process 60 percent of all strategic intelligence missions
- 100 percent of Proforma collection from National Technical Means is performed by Raytheon

Global Training Solutions (GTS)

[...] The Global Training Solutions (GTS) mission area helps customers in high-consequence environments leverage training expertise and the latest technologies to align tailored learning and asset life-cycle solutions[*buzzword*] to their mission objectives. GTS solutions[*buzzword*] increase trainee proficiency, improve ROI and reduce costs for customers in defense and military organizations, civil agencies and commercial industries including healthcare, finance, oil & gas, and automotive.

GTS Fast Facts

- Raytheon trains personnel in 127 countries and 29 languages[13]
- Raytheon and General Motors are partnering to train U.S soldiers for civilian jobs as auto technicians[21]
- Since 2008, Raytheon has trained almost every deploying US Army soldier[22]

Mission Support and Modernization (MSM)

The Mission Support and Modernization (MSM) mission area provides full life-cycle mission operations, engineering, sustainment and modernization services for site and platform missions, as well as multi-intelligence (Multi-INT) ground systems, multi-domain command and control systems, commercial software integration, border security and unmanned systems technology.

MSM Fast Facts

- MSM is using modern, commercial software methods to develop new command and control applications for the U.S. Air Force[23]
- Raytheon is modernizing the Army's Distributed Common Ground System, replacing the existing mobile intelligence platform with a version that allows deployed soldiers to quickly collect and analyze intelligence data[24]
- The North American Aerospace Defense Command (NORAD) Cheyenne Mountain Complex is maintained and operated by Raytheon[25]
- Raytheon maintains and modernizes systems for NASA's Neutral Buoyancy Laboratory (NBL), a super-sized pool used to simulate microgravity conditions in space[26]
- NASA's Earth Observing System Data and Information System (EOSDIS), the world's largest repository of environmental data, was developed and is maintained by Raytheon[27]
- In partnership with the US Army, Raytheon is developing videogame-based virtual reality training technology[28]

Navigation, Weather and Services (NWS)

The Navigation, Weather and Services (NWS) mission area provides satellite-based mission planning and data processing to support civil and military missions, specializing in the ground systems needed to launch, operate and plan satellite missions. NWS also provides modernized air traffic management with a focus on cyber-hardened avionics, GPS-guided precision landing, and enhanced weather planning. NWS is building the control segment that will operate the next generation of Global Positioning System (GPS) satellites, known as GPS OCX.[29][30] It also provides environmental solutions for defense, civil, commercial and international customers.

NWS Fast Facts

- Raytheon systems supply 90% of space-based earth observation data used to generate two- to ten-day worldwide weather forecasts[31]
- The NWS team developed, operates and sustains primary National Weather Service forecasting tools at more than 120 offices in the U.S., Guam and Puerto Rico[32]
- NWS supports the U.S. Air Force's effort to modernize America's GPS enterprise[33]
- Raytheon technology and support provides safe transportation for more than two-thirds of the world's airspace[34]
- NWS develops satellite-based navigation systems that allow pilots to perform precision landings on any runway[35]
- Raytheon operates more than 360 tolling points across the globe and was a pioneer of electronic open road tolling[36]
- Raytheon operates the command and control systems of the James Webb Space Telescope[37]

Locations

Raytheon Intelligence, Information and Services operates out of several major locations in the US, including:

- Dulles, Virginia - Corporate Headquarters
- Richardson, Texas
- Aurora, Colorado
- Orlando, Florida
- Indianapolis, Indiana
- Linthicum, Maryland
- Riverdale Park, Maryland
- Omaha, Nebraska
- State College, Pennsylvania
- Burlington, Massachusetts

Former presidents

- David Wajsgras (2015-2020)[4]
- Lynn Dugle (2009-2015)[4]
- Mike Keebaugh (2002-2009)[38]

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Housatonic

William Carlisle Reeves (born 1916)

https://senate.universityofcalifornia.edu/_files/inmemoriam/html/williamreeves.htm

2004-universityofcalifornia-edu-files-in-memoriam-williamreeves.pdf

https://drive.google.com/file/d/15CZ9owSUB1KJEK18Ki2t23ZO1G0eBndF/view?usp=sharing

[HE0021]

William C. Reeves

Professor of Epidemiology, Emeritus

Berkeley

1916-2004

William Carlisle Reeves died of a cerebral hemorrhage, subsequent to a fall, on September 19, 2004. He was 87 years old. Though officially retired in 1987 from the University of California, Berkeley, he continued to serve actively until shortly before his death: advising students, presenting occasional lectures and seminars, participating in research, and consulting with federal state and local public health agencies. He vigorously took part in a departmental faculty meeting on the day of his fall, just four days before his death. Reeves' former student, now chief of epidemiology at the Arbovirus Disease Branch of the Centers for Disease Control and Prevention (CDC), Roy Campbell, described him as, "…a giant in the field of arbovirology. When he talks, people listen". Indeed, Bill Reeves was the preeminent pioneer and expert on the causes and transmission of mosquito-borne viral encephalitides in the world. In fact, he invented the term arbovirus to describe these arthropod-borne (transmitted) diseases.

Reeves grew up on a ranch outside Riverside, California, the only child of William Claude Reeves and Abie Bessie Harriet Brant. His father kept bees, but Bill did not attribute his lifelong interest in "bugs" to his father's vocation. In fact, he seems to have had an aversion to bees. However, he did get his lifelong interest in fishing and hunting from his father, who took him on month-long trips into the California mountains after the "honey harvest" was over in late summer. His interest in entomology was encouraged and guided by his junior high school biology teacher. His friends and schoolmates dubbed him "Billy Bugs," an appellation he seems to have savored. Although neither of his parents had been educated beyond grammar school, they were determined that their son would get a college education.

Reeves began his college career at Riverside Junior College. More importantly, during two summers he worked at the Citrus Experiment Station of the Riverside campus of the University of California. There he came in contact with dedicated research scientists and graduate students from the University of California, Los Angeles. So, after completing the junior college program at Riverside, he moved on to Berkeley, which had the best undergraduate and graduate program in entomology in the west. In a bizarre incident when Reeves was well into his thesis research on the treehole mosquito, investigators in another institution learned about a key finding by Reeves. When they incorporated this information into their research, it led to prior publication by them. Reeves was, therefore, forced to begin his research again, and building on his previous work, he moved his project to the Hooper Foundation at the University of California, San Francisco. There he came under the tutelage and direction of the world-renowned virologist K. F. Meyer and there also he began his collaboration with virologist/epidemiologist William M. Hammon. When an epidemic of Western Equine (WEE) and St. Louis Virus (SLE) encephalitis occurred in Yakima County, Washington in 1941, Meyer dispatched a team under Hammon's direction to investigate. Reeves played a major role in the investigation that resulted in the first isolation of viruses (WEE and SLE) from naturally infected mosquitoes (*Culex tarsalis*). The resulting publications and Reeves's thesis are classics. With these accomplishments, at age 26, Reeves's career was launched.

Reeves got his master of public health (M.P.H.) degree from the School of Public Health at Berkeley in 1949. He was one of the first graduates from the newly established school, a school which was created due to the efforts of people like K. F. Meyer and William M. Harmon. Even while pursuing the M.P.H., Reeves was lecturing on epidemiology. He was, in large part, responsible for the growth and development of the epidemiology program at Berkeley, now one of the preeminent academic epidemiology programs in the country.

Bill Reeves's scientific accomplishments were substantial. He identified several previously unidentified viral agents of disease and new species of arthropod vectors. His research was always "goal oriented". That is, he was concerned with the potential his findings would have with regard to disease prevention. And, though his investigations took him as far afield as Guam and the Murray Valley in Australia, his focus was always on the Central Valley of California. Nor was his research ever "esoteric". He was always sensitive to practical issues of methodology. Thus, he devised the first mosquito "live trap", invented a tracking method by marking mosquitoes with a fluorescent dye, and innovated the "sentinel chicken" monitoring system that has become a prime component of arbovirus surveillance worldwide.

Reeves was active in all the relevant professional organizations, governmental and nongovernmental. He received many prestigious awards, among them the UC Berkeley Distinguished Teaching Award, the Berkeley Citation, the John Snow Award from the American Public Health Association, a U.S. Army Medal for Distinguished Civilian Service, and the Walter Reed Medal from the American Society of Tropical Medicine and Hygiene.

He was an outstanding teacher both in the classroom and as an advisor of students engaged in doctoral research. Bill was a tough taskmaster, concerned with the smallest details, but stimulating and sensitive. He chose his doctoral students carefully and many now hold important positions in academia and governmental agencies around the world. He served on Berkeley's Graduate Council and as dean of the School of Public Health from 1967 until 1972.

With the appearance of West Nile Virus encephalitis in 1999, Reeves resumed an active role in planning research and control strategies for the disease, even though he had retired in 1987. He served as a member of the California West Nile Virus Steering Committee and as a participant in the CDC's weekly "conference call" to concerned agencies regarding the status and planning for the control of the epidemic. One of the regular participants in the weekly conference call remarked: "…The groundbreaking research that Bill and his colleagues did on the SLE virus – a close cousin to West Nile virus – gave us a roadmap for understanding West Nile virus, helping us to predict how it would behave in North America…".

When Bill Reeves was 12 years old he had a job delivering the *Saturday Evening Post*. One of his customers, a Mr. Moultin, resisted paying for the magazine, necessitating collection from his wife or daughter. That daughter, Mary Jane, later became Mrs. William C. Reeves. They had three sons; William C., Robert, and Terry.

Bill took great pride in his special California automobile license plate number: **"Culex T"**!

https://www.thelancet.com/journals/lancet/article/PIIS0140-6736(04)17175-4/fulltext

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A medical entomologist and leading figure in arbovirology. **He was born on Dec 2, 1916**, in Riverside, California, USA, and died aged 87 years from complications following a fall on Sept 19, 2004, at John Muir Medical Center in Walnut Creek, California.

On a Sunday afternoon some 35 years ago, William (Bill) Reeves was sitting in the back yard of his colleague Leonard Syme's house, chatting about work over a barbecue. Syme's 8-year-old son, David, was nearby, listening to the grown-ups talk. Reeves asked him, "Do you know what my job is?" "Sure", said David. "You're a psychologist who's interested in mosquitoes." In retrospect, Len Syme—now professor emeritus of epidemiology at the University of California, Berkeley—thinks his son somehow got it right. Although Reeves' scientific legacy is as a pre-eminent arbovirologist, those who knew him also recall a man whose gruff exterior hid a sensitive and insightful heart.

Together with William M Hammon, Reeves led a research team that in 1941 isolated both western equine and St Louis encephalitis viruses from the *Culex tarsalis* mosquito. Their work confirmed for the first time that the diseases, which had plagued the western USA throughout the 1930s, were transmitted by insects. He also invented the "sentinel chicken" disease-monitoring system, when he discovered that chickens develop antibodies after being bitten by infected mosquitoes, but do not become ill or carry enough virus to transmit the disease. The system was adopted by California's Encephalitis Surveillance Programme and has since been copied worldwide. It is still used today in some areas to monitor the spread of West Nile virus.

Reeves grew up on his family's farm in Riverside, California, and inherited a love of the outdoors from his father. His fascination with insects surfaced early. "My interest even led to a nickname in the rural neighbourhood of 'Billy Bugs Reeves', which didn't bother me any", he told the UC Berkeley Regional Oral History office in a 1990 interview. He went on to earn a bachelor's degree in entomology from Berkeley in 1938, and a doctorate in medical entomology and parasitology in 1943. During World War II, Reeves worked as a civilian adviser to the US military, investigating mosquito-borne viruses, including a 1945 outbreak of Japanese encephalitis in Okinawa. After the war, in 1949, he earned a master's in epidemiology.

Until his retirement in 1987, Reeves was a professor of epidemiology at Berkeley, and served as dean of its School of Public Health from 1967 to 1971. He never moved far from the Californian university, nor did his academic attention shift far from *Cx tarsalis*. "He was a giant in the field of arbovirology", said Roy Campbell, a graduate student of Reeves who now heads the surveillance and epidemiology activity of the Arboviral Diseases Branch at the US Centers for Disease Control and Prevention, in Fort Collins, Colorado. "But he was also extremely knowledgeable in the history of public health." His academic stature was matched by his imposing, six-foot-plus physique. "He reminded us all of John Wayne", said Campbell, and like Wayne's motion-picture cowboys, he could be taciturn, brusque, even rude.

"He would sometimes characterise people in a way that could be rude, but then a year later it would turn out to be exactly right", said Syme, a sociologist who Reeves hired at the school of epidemiology in the late 1960s. "Over the years, every time I would go to him for advice, I'd get 10 or 15 minutes of abuse about what I needed to fix and so on, but then he would switch gears and come up with the most sensitive, intuitive, reasonable advice ever."

After his retirement, Reeves came to the UC Berkeley campus 4 days a week, and continued teaching a few graduate students. "He was very direct. In an intellectual environment, you had to be on your toes", said Campbell. "But he was an extremely good academic advisor, and was respectful of his graduate students, giving each one a great deal of attention."

In 1999, when West Nile Virus emerged as a public-health threat, first in New York, and then further afield in the USA, health officials asked Reeves for his advice. "He was contacted very early on when the birds started to fall out of the sky", said Campbell. Already in his 80s, Reeves participated in conference calls that the CDC held during the virus transmission season, and his research on St Louis encephalitis provided a blueprint for understanding West Nile and predicting its behaviour. "It was all stuff Bill and his colleagues had described 40 years ago", Campbell said.

Reeves is survived by his wife Mary Jane; sons William Jr, Robert, and Terrence; four grandchildren; and a great-granddaughter.

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Housatonic

Dr. Alfred J. Restaino (born 1931)

1956 (Nov 18)

https://www.newspapers.com/image/375983188/?terms=%22Alfred%2Brestaino%22

1956-11-18-the-baltimore-sun-pg-a1

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SECTION A — BALTIMORE, SUNDAY MORNING, NOVEMBER 18, 1956 — SECTION A

Pool Of Knowledge

Atom Tests At Martin's

By WILLIAM B. HARWOOD

THERE'S a swimming pool at the Martin Company, but none of the aircraft firm's employés would think of using it.

For at the bottom of this inviting-looking pool is enough radioactive cobalt to kill a man.

The Martin Gamma Facility, as the pool is formally called, was designed for two purposes: (1) to test the effect of radiation on various substances, and (2) to provide Martin engineers and scientists with a fund of research information.

Although there are about fifteen such pools in the country—at such places as the Argonne National Laboratories, the Naval Research Laboratory, Oak Ridge and Brookhaven—Martin claims one of the first built by private industry, with private capital, for the exclusive use of industry.

Clear View To Bottom

Physically, the gamma facility is simple in appearance. The pool, flush with the floor but protected by a concrete curb and a waist-high iron railing, is a 6-by-6-foot square, 12 feet in depth and filled with water.

The still, blue-green water not only provides shielding for the radioactive source but it permits a clear view to the bottom of the tile pool. There, a 13-inch pipe, 2½ inches in diameter, protrudes from the center of a stainless-steel disk, about one yard in diameter. It looks like a huge turntable from an oversized record player.

Two removable iron grates stretched across the top of the pool permit technicians to stand directly above the radioactive source while lowering or raising samples by means of overhead pulleys and cranes.

The pipe protruding from the disk in the floor of the pool is an aluminum-clad cylinder of cobalt-60, the radioactive metallic element artificially produced by bombarding cobalt in its natural state (cobalt-59) with neutrons.

Circled With Cobalt Rods

Samples of test-tube size can be lowered into the core of the pipe in an aluminum cylinder.

Larger samples, pieces of equipment or other items may be placed around the pipe on the stainless-steel disk. They can be surrounded with cobalt rods in various patterns depending upon the amount of radiation desired.

The cobalt source in the central pipe alone consists of 1,500 curies of cobalt-60 (a curie being a unit of measure equal to 37,000,000,000 disintegrations per second) which emit 470,000 roentgens per hour. By adding cobalt rods around the perimeter of the disk, which increases the curies to 4,500, the radiation flux can be stepped up to between 500,000 and 800,000 roentgens per hour, depending upon the exact location of the sample being irradiated.

Test Effect On Materials

An idea of the amount of gamma ray dosage present in the pool was given by Harry Garabedian, chemist in charge of the facility. An exposure of 400 roentgens to the entire human body would be lethal to 50 per cent of the population, he explained. There is more than 100 times that lethal dosage emitted in the Martin pool every hour.

But the twelve feet of water over the radiocobalt provides biological shielding with a considerable margin of safety and, at the same time, allows complete visibility.

Housed In Lead Shield

In the past, Martin has had to confine its radiation research to cobalt-60 of about 800 curies activity, which is housed in a lead shield, called a pig, 20 inches in diameter. Nothing larger than test-tube samples could be tested in the pig, however.

With the manufacture of airplanes on the verge of nuclear propulsion, it is necessary to find out the amount of shielding required for an airborne reactor and the effect of radiation on near-by materials in the body of the plane.

For example, Martin has announced the organization of a team of engineers to push development of a nuclear-powered jet seaplane. The company had been working for three years on a Navy-sponsored program of engineering studies seeking an airframe for such a craft. And company officials admit the nuclear propulsion research program had "matured to the point" where the engineering team was set up from necessity.

Many Substances Tested

Martin made no reference to a nuclear-power plant for its P6M, huge four-jet engine SeaMaster seaplane which has been described by Secretary of the Navy Charles S. Thomas as an aircraft which may be capable of future atomic flight.

In its new swimming pool, however, Martin can submerge the entire sonar system from a P6M and test the effect of gamma radiation it would receive from a near-by nuclear reactor. Martin officials have no comment on such use of the pool. It has many other uses they do talk about, however.

Martin is testing the effect of radiation on lubricants, metals, plastics, woods and other substances.

Not only is it important to know the amount of radiation various materials will withstand—without changing their basic properties—but Martin engineers are equally interested in finding out exactly what structural change will take place when a given material is irradiated.

Split Into Two Sections

Consequently, the Radiation Effects Group, headed by Dr. Jerome Morse, is divided into two sections.

One is devoted to Martin's "moderator program" and has as its principal aim the finding of an organic moderator to replace water as the energy regulator and heat transferant in a nuclear reactor. This section also is devoted to "pure basic research" and development of a fund of information without regard to product application. Martin engineers feel their company is unusual in this respect.

On the other hand, Dr. Alfred J. Restaino, lead engineer in the plastics research program, is almost solely concerned with product application.

He has been working extensively on "graft coplymerization"—a process of combining by radiation two different materials to produce a third which contains the properties of both.

New Combinations Found

So far, Dr. Restaino and his staff have come up with fifteen new combinations, some quite startling which they are not ready to talk about.

In one unclassified case, for example, they took a well-known commercial insulating material which has exceptionally high resistance to heat but poor adhesive qualities. To this material, they added vinyl acetate which is used in the adhesive industry. It can tolerate little heat. Irradiation of the two materials produced a new substance which is both highly adhesive and able to withstand high temperatures.

Application of such a discovery to Martin's product is obvious. Not only does the company manufacture airplanes and rockets which fly at speeds greater than that of sound, it is building the three-stage rocket which it hopes will take the first earth satellite some 300 miles into upper space next year.

In such work, the need is basic for materials which can withstand the tremendous heats and pressures generated at the speeds and altitudes to be explored.

Limitations Of Water

Martin also has its own nuclear reactor program and has already developed a nuclear-packaged power plant which is portable to any part of the world.

That reactor, as do most, uses water to slow down the neutrons and moderate the energy and heat being produced. But water has its limitations. It corrodes metal, therefore shortening the life of reactor parts. It boils at 212 degrees Fahrenheit. It must be purified highly before it can be run through the reactor.

So Martin is looking for an organic moderator to replace water. Through the new gamma facility, it hopes to find one. The moderator sought must do double duty—slow down the neutrons sufficiently and at the same time carry off the heat. The compound must be able to withstand high temperatures and at the same time bear up under the stress of radiation.

Plastic Possibilities

Some of the plastics offer possibilities. They are more viscous, or syrupy, than water. Their boiling point is higher.

But can they withstand the stress of radiation? When exposed to radiation will their structure change? And if it changes, will it break down or cross link, becoming stronger?

These are some of the questions for which Martin engineers seek solutions. In some cases they already have found the answers. Through use of the new gamma facility, they hope to find many more.

Cutaway drawing of the Martin Gamma Facility where effect of radiation on various substances is tested. Water in pool shields scientists from deadly radioactivity yet permits clear view of bottom. Box on wall at right is meter which constantly records amount of radiation present in room and sounds warning if level becomes dangerously high.

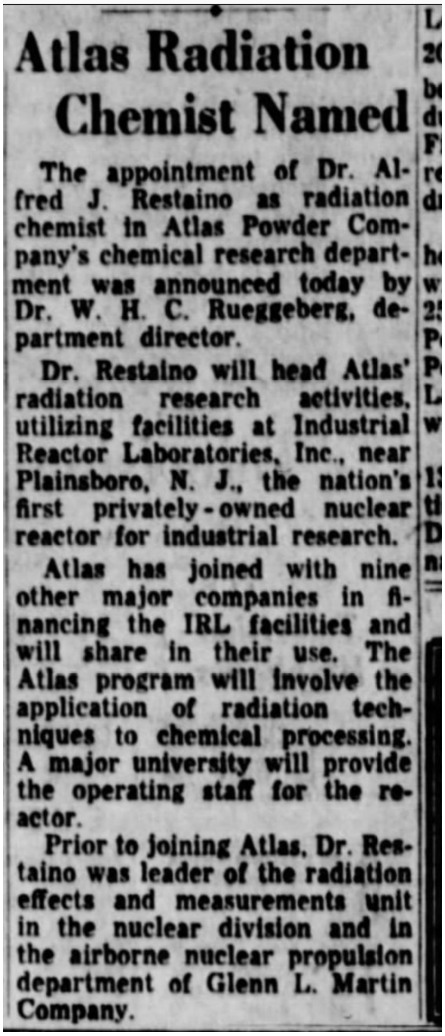
1956-11-18-the-baltimore-sun-pg-a1-clip-atoms

1958 (March 17)

https://www.newspapers.com/image/154365504/?terms=%22Alfred%2Brestaino%22

1958-03-17-the-news-journal-wilmington-pg-9

The News Journal (Wilmington, Delaware) • 17 Mar 1958



Atlas Radiation Chemist Named

The appointment of Dr. Alfred J. Restaino as radiation chemist in Atlas Powder Company's chemical research department was announced today by Dr. W. H. C. Rueggeberg, department director.

Dr. Restaino will head Atlas' radiation research activities, utilizing facilities at Industrial Reactor Laboratories, Inc., near Plainsboro, N. J., the nation's first privately-owned nuclear reactor for industrial research.

Atlas has joined with nine other major companies in financing the IRL facilities and will share in their use. The Atlas program will involve the application of radiation techniques to chemical processing. A major university will provide the operating staff for the reactor.

Prior to joining Atlas, Dr. Restaino was leader of the radiation effects and measurements unit in the nuclear division and in the airborne nuclear propulsion department of Glenn L. Martin Company.

1958-03-17-the-news-journal-wilmington-pg-9-clip-atlas

1959 (Feb 23)

https://www.newspapers.com/image/154429383/?terms=restaino%2Batomic

1959-02-23-the-news-journal-wilmington-pg-12

Journal-Every Evening, Wilmington,
Delaware, Monday, February 23, 1959

Engineers Week Speakers To Address 4 Service Clubs

Martin S. Blackman

Dr. Alfred J. Restaino

Edward M. Doyle

Engineers representing the Du Pont Company, Atlas Powder Company and Thiokol Chemical Corporation will help suburban service clubs observe National Engineers Week at dinner meetings tomorrow evening.

The Wilmington North Kiwanis Club, meeting at 6:30 in the Holiday Inn, will hear Martin S. Blackman, a project engineer in the propellant projects section of Thiokol's Elkton division. His topic will be "Solid Propellant Rocketry."

The Brandywine Hundred Lions Club, meeting at Fabian's on the Philadelphia Pike, will hear Edward M. Doyle, also of Thiokol in Elkton, on the same subject.

The New Castle Rotary Club, meeting at 6:30 in the Arsenal-on-the-Green Tea Room, will hear Dr. Alfred J. Restaino of Atlas' industrial reactor laboratories in Plainsboro, N. J., on "Radiation and the Age of Space."

The Kiwanis Club of Red Clay Valley, meeting at 6:30 in the Powder Mill, will hear Dr. John J. Cox of the Du Pont Experimental Station on "A New Engineer for the Space Age."

Blackman is concerned with the improvement of propulsion systems for air-to-air missiles. His talk will cover the history of rocketry, the composition of solid propellants, the application of solid propellants to past, present and future missile systems, and the organization of Thiokol. He has been associated with the Navaho missile while at North American Aviation.

Doyle has been engineering test suervisor for rocket engine development projects under Air Force contracts with Curtiss-Wright; propulsion engineer with the Glenn L. Martin Company for the Navy "Viking" missile, and project engineer on "Falcon" program with the Redstone Division of Thiokol in 1953. He has been head of the projects department at Elkton since December 1956.

Restaino was appointed research associate at Brooklyn Polytechnic Institute in 1955, under an Atomic Energy Commission contract with Brookhaven National Laboratories. He taught chemistry and physics as an adjunct professor at St. Francis College and physics as an adjunct professor in the Graduate School at Drexel Institute. He was supervisor of the radiation effects units in the airborne nuclear propulsion department at Glenn L. Martin Company of Baltimore. In 1958, he joined Atlas and is now supervisor of its radiation research.

Author of eight publications on radiation chemistry, he was recently co-author of a book, "Effects of Radiation on Materials."

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1959-02-23-the-news-journal-wilmington-pg-12-clip-engineers

1969 - International Atomic Energy Agency symposium - "iaec-vienna-large-radiation-sources-for-industrial-processes-proceedng"

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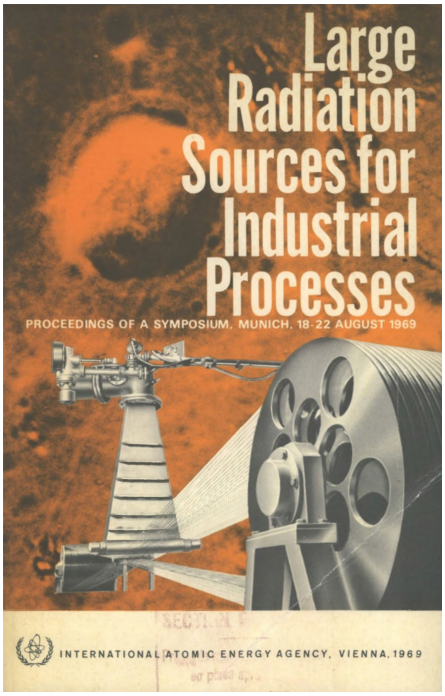

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1970 (July 17)

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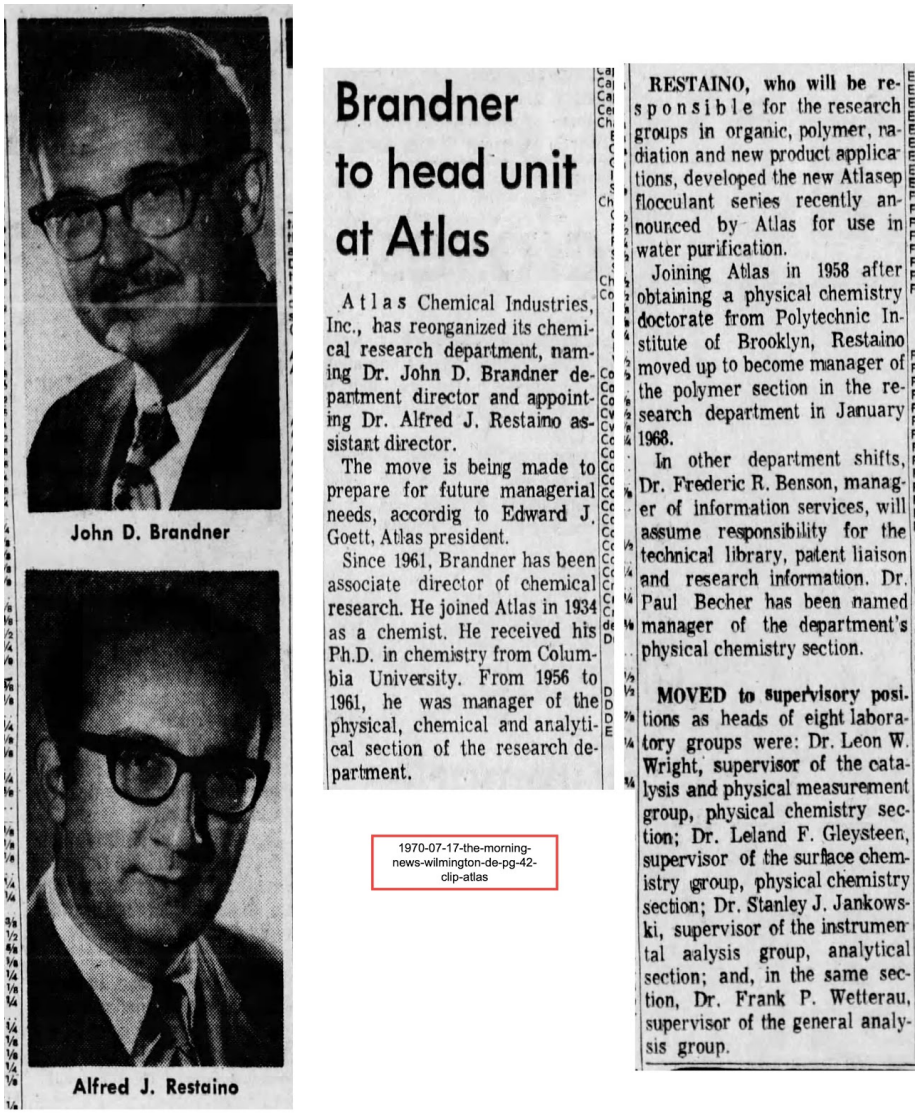
1970-07-17-the-morning-news-wilmington-de-pg-42 https://drive.google.com/file/d/1rTFzO3ZHuvIO9RAnA_OdkKpw5HDgEzuC/view?usp=sharing



John D. Brandner

Alfred J. Restaino

Brandner to head unit at Atlas

Atlas Chemical Industries, Inc., has reorganized its chemical research department, naming Dr. John D. Brandner department director and appointing Dr. Alfred J. Restaino assistant director.

The move is being made to prepare for future managerial needs, accordig to Edward J. Goett, Atlas president.

Since 1961, Brandner has been associate director of chemical research. He joined Atlas in 1934 as a chemist. He received his Ph.D. in chemistry from Columbia University. From 1956 to 1961, he was manager of the physical, chemical and analytical section of the research department.

1970-07-17-the-morning-news-wilmington-de-pg-42-clip-atlas

RESTAINO, who will be responsible for the research groups in organic, polymer, radiation and new product applications, developed the new Atlasep flocculant series recently announced by Atlas for use in water purification.

Joining Atlas in 1958 after obtaining a physical chemistry doctorate from Polytechnic Institute of Brooklyn, Restaino moved up to become manager of the polymer section in the research department in January 1968.

In other department shifts, Dr. Frederic R. Benson, manager of information services, will assume responsibility for the technical library, patent liaison and research information. Dr. Paul Becher has been named manager of the department's physical chemistry section.

MOVED to supervisory positions as heads of eight laboratory groups were: Dr. Leon W. Wright, supervisor of the catalysis and physical measurement group, physical chemistry section; Dr. Leland F. Gleysteen, supervisor of the surface chemistry group, physical chemistry section; Dr. Stanley J. Jankowski, supervisor of the instrumental aalysis group, analytical section; and, in the same section, Dr. Frank P. Wetterau, supervisor of the general analysis group.

1970-07-17-the-morning-news-wilmington-de-pg-42-clip-atlas
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1969 (Sep 16) - https://www.newspapers.com/image/154735827/?terms=alfred%2BJ%2Brestaino

1975 (August) - https://www.newspapers.com/image/163207786/?terms=alfred%2BJ%2Brestaino

1987 (Sep 7) - https://www.newspapers.com/image/159737840/?terms=alfred%2BJ%2Brestaino

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1980 (Oct 19)

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1980-10-19-the-morning-news-wilmington-de-pg-d-5 https://drive.google.com/file/d/1tpaJtkD0KjLtD48pRiL1rTRcfzTdEQNY/view?usp=sharing

Chemical industry looks eagerly to Detroit

Plastics shape up as the backbone of the future car, from radiators to fenders to pistons. Companies like Du Pont are reacting.

By TERRY BIVENS
Staff reporter

In a scene from the movie "The Graduate," the parents of a young man fresh from college in the East are throwing a cocktail party in his honor at their southern California home.

The graduate, played by Dustin Hoffman, is almost catatonic as he contemplates his "future." Standing awkwardly on the fringes of the party, he is approached by a business friend of his parents.

The man wraps his arm around Hoffman, riveting him with a meaningful look, and says he wants Hoffman to think about one word:

"Plastics."

Although plastics elicited nothing more than a hilarious blank stare from Hoffman, similar scenes are probably being re-enacted today at parties in posh Detroit suburbs like Bloomfield Hills and Grosse Point.

Merely substitute a chemical manufacturer for the businessman and an automaker for the anxious young man. And skip the laughter, because plastics and fibers — in ways far beyond the traditional uses as seat covers and upholstery — are shaping up as a major new, multimillion-dollar market for the chemical suppliers of the automotive industry.

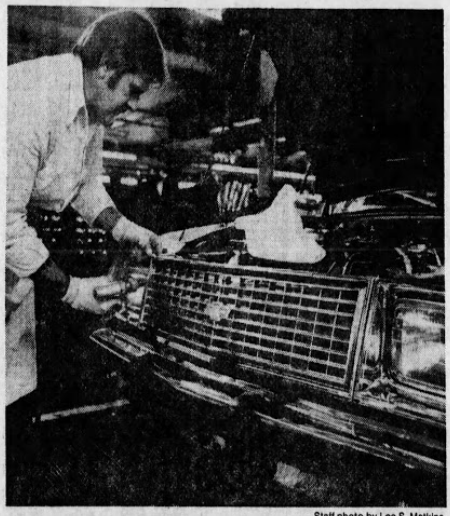
From radiator tanks to valve covers, from windows to fenders, from hoods and body panels to pistons, plastics may become the backbone of the car of the future.

"We see it as a major new opportunity," says Terrance N. Cressy, a spokesman for Du Pont Co.'s automotive market development offices in Detroit. "Almost every chemical company that produces plastics is looking at Detroit with a new eye."

Like most trends in the U.S. automotive industry, the push for new plastic parts is a reaction to the sharp increases in oil prices since the 1973 Arab oil embargo and fierce competition from smaller, more fuel-efficient foreign models.

By substituting plastics for heavier metal parts, U.S. automakers find they can reduce auto weights and increase fuel efficiency. Plastic parts, in many cases, can be made cheaper; and many of them can withstand the temperatures in today's smaller, hotter-running engines.

Chemical companies — Du Pont, Hercules Inc., ICI Americas Inc., Monsanto, Dow, Union Carbide, Allied and the oil companies' chemical subsidiaries, among others — are only too happy to oblige. New-product lines are an excellent hedge against sales declines that resulted from the recent slump in auto sales and a "downsizing" trend that has reduced the dimensions of existing products.



Staff photo by Leo S. Matkins

On the assembly line at General Motors' Boxwood Road plant, Thomas Radzius installs a plastic grille on a Chevette

Already the proportion of plastic in the modern American car has increased. According to Irvin E. Poston, a spokesman for General Motors Corp. in New York, plastic currently accounts for about 6 percent — roughly 200 pounds — of the weight of an average GM auto.

By the mid-1980s, Poston says, that portion may go as high as 10 percent. And because improving technology may result in lighter plastics, that percentage could be conservative since there could be more plastic to the pound.

"The potential is there for some really big new-product lines," Poston says.

Some chemical industry analysts, however, react cautiously to the new development. Like Hoffman's graduate, they say, the auto industry must be convinced.

"Detroit is going through some bad times," says Emily Plishner, a securities analyst for Oppenheimer & Co. in New York. "Since they are down, they must be persuaded that they are really looking at something good — and not something that will prove expensive to them.

"Right now, I think we're in a stage where the chemical companies are looking to present their ideas. And the company that presents the best idea first may come up with the big market share."

"Remember, the auto market only accounts for about 10 percent of chemical-industry sales," says Sano Shimoda, an analyst for the First Boston Corp. in New York. "I think the real question will be which plastics they will focus on."

Most chemical companies are purposefully vague about the direction of their development program for the auto industry. As R. Byron Pipes, an associate professor of mechanical and aerospace engineering at the University of Delaware and a Du Pont Co. consultant, points out:

"They are all after the same business, only from different perspectives. They don't really want their competitors to know where they are putting their dollars."

As a firm that once was the controlling stockholder in General Motors, Du Pont can obviously be expected to be a leader in developing new auto products. The company is already the leading chemical-products supplier to the auto industry, with worldwide auto-related sales last year of $1.5 billion.

"Du Pont is looking for every conceivable use," said Ms. Plishner. "I'm sure they think their market for new auto products will expand and become one of their fastest-growing areas."

According to Cressy, Du Pont has a virtual armada of new products that could double unit volume in a plastics division that accounted for $2.8 billion of sales last year.

The company is developing reinforced fibers and plastics for such under-the-hood applications as valve covers, mounting brackets and radiators. Acrylics are already in use on bus windows, and could replace glass on cars. There are new plastic bumper guards, steering columns, electronic parts, metal-reinforcing fibers for body parts, power window gears and emission-control components.

"We're looking at a really big material switch-over," says Cressy. "Plastics are joining steel as a primary material for the automotive industry."

At Hercules, the emphasis is on polypropylene, a lightweight, inexpensive plastic and fiber. Hercules is the world's largest producer of

See CHEMICAL — D-5

Chemical firms look to Detroit

Continued from D-1

polypropylene, with about 25 percent of the market capacity.

"Detroit is extremely receptive now to plastic applications," says A.D. "Jack" Veale, Hercules' product director for plastics. "And when they think of plastics, they think of polypropylene."

Polypropylene, Veale says, has excellent temperature resistance, which makes it promising for engine parts. Also, Hercules has major plans for body parts made of a "sandwich" of polypropylene and steel.

Veale said about 14 percent of Hercules' polypropylene sales goes to the automotive industry.

"We've about saturated the uses in the car compartment," he says. "Right now, the car exteriors are the big thing. We think it will be a dramatic growth area."

Hercules is also working on automotive uses for its graphite fibers, a light, strong material that could be used for engine and transmission brackets, bumpers and hoods.

However, the price of graphite fibers — which now sell for about $10 a pound for million-pound orders — may still be too much for Detroit.

"That may take awhile because the fiber is still expensive," says Ms. Plishner. "The company is using the fibers in military aircraft, but the consumer car is a different story."

ICI Americas, whose parent company, Imperial Chemical Industries Ltd. of London, is a major supplier of finished products for European automakers, is concentrating on polymer plastics that can be molded into bumpers and other body parts.

"At present we're supplying the basic chemicals that later turn up in cars," said Alfred J. Restaino, director of the company's corporate research department in Wilmington. "We're hoping to get into the auto business, especially with the hard plastics. But right now, it represents a big opportunity, but a difficult one."

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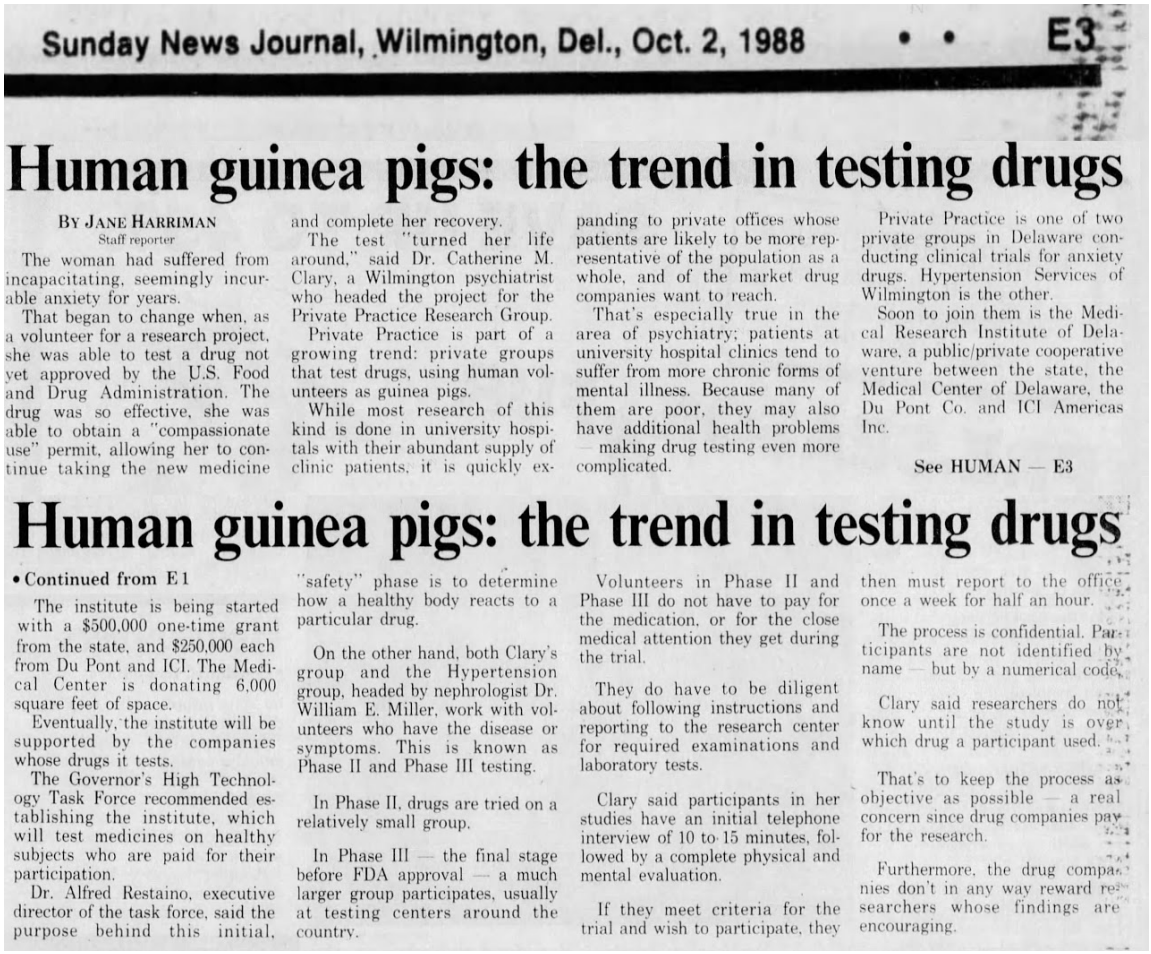

Sunday News Journal, Wilmington, Del., Oct. 2, 1988 • • E3

Human guinea pigs: the trend in testing drugs

By Jane Harriman
Staff reporter

The woman had suffered from incapacitating, seemingly incurable anxiety for years.

That began to change when, as a volunteer for a research project, she was able to test a drug not yet approved by the U.S. Food and Drug Administration. The drug was so effective, she was able to obtain a "compassionate use" permit, allowing her to continue taking the new medicine and complete her recovery.

The test "turned her life around," said Dr. Catherine M. Clary, a Wilmington psychiatrist who headed the project for the Private Practice Research Group.

Private Practice is part of a growing trend: private groups that test drugs, using human volunteers as guinea pigs.

While most research of this kind is done in university hospitals with their abundant supply of clinic patients, it is quickly expanding to private offices whose patients are likely to be more representative of the population as a whole, and of the market drug companies want to reach.

That's especially true in the area of psychiatry; patients at university hospital clinics tend to suffer from more chronic forms of mental illness. Because many of them are poor, they may also have additional health problems — making drug testing even more complicated.

Private Practice is one of two private groups in Delaware conducting clinical trials for anxiety drugs. Hypertension Services of Wilmington is the other.

Soon to join them is the Medical Research Institute of Delaware, a public/private cooperative venture between the state, the Medical Center of Delaware, the Du Pont Co. and ICI Americas Inc.

See HUMAN — E3

Human guinea pigs: the trend in testing drugs

• Continued from E 1

The institute is being started with a $500,000 one-time grant from the state, and $250,000 each from Du Pont and ICI. The Medical Center is donating 6,000 square feet of space.

Eventually, the institute will be supported by the companies whose drugs it tests.

The Governor's High Technology Task Force recommended establishing the institute, which will test medicines on healthy subjects who are paid for their participation.

Dr. Alfred Restaino, executive director of the task force, said the purpose behind this initial, "safety" phase is to determine how a healthy body reacts to a particular drug.

On the other hand, both Clary's group and the Hypertension group, headed by nephrologist Dr. William E. Miller, work with volunteers who have the disease or symptoms. This is known as Phase II and Phase III testing.

In Phase II, drugs are tried on a relatively small group.

In Phase III — the final stage before FDA approval — a much larger group participates, usually at testing centers around the country.

Volunteers in Phase II and Phase III do not have to pay for the medication, or for the close medical attention they get during the trial.

They do have to be diligent about following instructions and reporting to the research center for required examinations and laboratory tests.

Clary said participants in her studies have an initial telephone interview of 10 to 15 minutes, followed by a complete physical and mental evaluation.

If they meet criteria for the trial and wish to participate, they then must report to the office once a week for half an hour.

The process is confidential. Participants are not identified by name — but by a numerical code.

Clary said researchers do not know until the study is over which drug a participant used.

That's to keep the process as objective as possible — a real concern since drug companies pay for the research.

Furthermore, the drug companies don't in any way reward researchers whose findings are encouraging.

2002 - Also (obituary)

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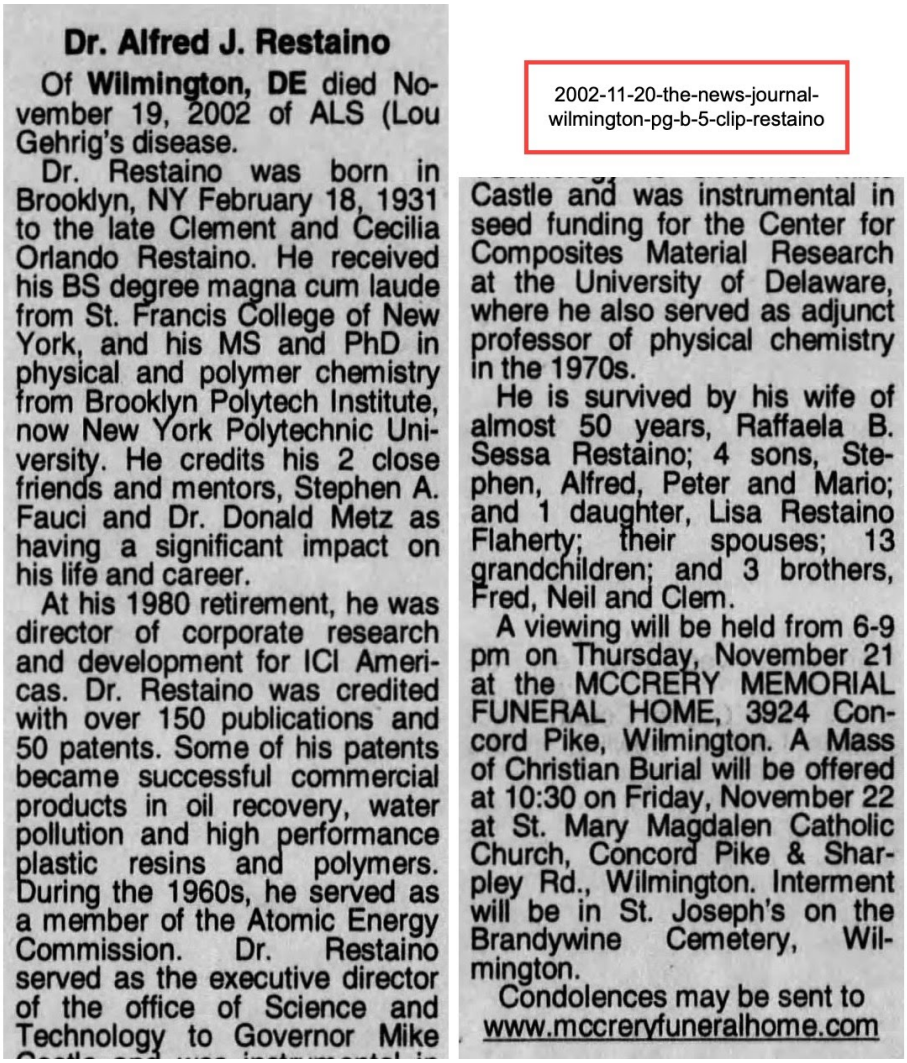
2002 (Nov 20)

Full page - [HN00RL][GDrive]



Dr. Alfred J. Restaino

Of **Wilmington, DE** died November 19, 2002 of ALS (Lou Gehrig's disease.

Dr. Restaino was born in Brooklyn, NY February 18, 1931 to the late Clement and Cecilia Orlando Restaino. He received his BS degree magna cum laude from St. Francis College of New York, and his MS and PhD in physical and polymer chemistry from Brooklyn Polytech Institute, now New York Polytechnic University. He credits his 2 close friends and mentors, Stephen A. Fauci and Dr. Donald Metz as having a significant impact on his life and career.

At his 1980 retirement, he was director of corporate research and development for ICI Americas. Dr. Restaino was credited with over 150 publications and 50 patents. Some of his patents became successful commercial products in oil recovery, water pollution and high performance plastic resins and polymers. During the 1960s, he served as a member of the Atomic Energy Commission. Dr. Restaino served as the executive director of the office of Science and Technology to Governor Mike Castle and was instrumental in seed funding for the Center for Composites Material Research at the University of Delaware, where he also served as adjunct professor of physical chemistry in the 1970s.

He is survived by his wife of almost 50 years, Raffaela B. Sessa Restaino; 4 sons, Stephen, Alfred, Peter and Mario; and 1 daughter, Lisa Restaino Flaherty; their spouses; 13 grandchildren; and 3 brothers, Fred, Neil and Clem.

A viewing will be held from 6-9 pm on Thursday, November 21 at the MCCRERY MEMORIAL FUNERAL HOME, 3924 Concord Pike, Wilmington. A Mass of Christian Burial will be offered at 10:30 on Friday, November 22 at St. Mary Magdalen Catholic Church, Concord Pike & Sharpley Rd., Wilmington. Interment will be in St. Joseph's on the Brandywine Cemetery, Wilmington.

Condolences may be sent to www.mccreryfuneralhome.com

2002-11-20-the-news-journal-wilmington-pg-b-5-clip-restaino

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Brother - Frederick A Restaino

https://www.legacy.com/obituaries/inquirer/obituary.aspx?n=frederick-a-restaino&pid=189330666&fhid=28334

Ferederick Restaino

RESTAINO

FREDERICK A., PhD

Age 83, retired Senior Director of Pharmaceutical Research & Development for Merck, passed away peacefully at his home on June 17, 2018, surrounded by his family. Devoted husband of 60 years to Camille (nee Giordano). Loving father to Fred Restaino (Eileen), Debbie Giovannone (John) and Denise Magill (Dave). Dear brother to Neil Restaino (Marie) and the late Alfred and Clement Restaino, also survived by 7 grand-children and one late grand-child. Relatives and friends are invited to his viewing Thursday, 9:30 A.M. until 10:45 A.M. at St. Alphonsus Church, 33 Conwell Dr., Maple Glen, followed by Funeral Mass 11:00 A.M. In lieu of flowers, memorial contributions can be made to Fox Chase Cancer Center (www.FoxChase.org).

Obituary for Frederick A. Restaino

https://obittree.com/obituary/us/pennsylvania/philadelphia/louis-a-digiacomo-funeral-home/frederick-restaino/3536552/index.php

FREDERICK A. RESTAINO, PhD, devoted husband, brother, loving father, and proud grandfather passed away peacefully in his home in Maple Glen, PA, on June 17, 2018, at the age of 83. He had spent 60 wonderful years with his soulmate --his "treasure" – Camille (nee Giordano), with whom he raised three beloved children, Fred Restaino (Eileen), Debbie Giovannone (John), and Denise Magill (Dave), and cherished grandchildren, John (Gen), Nicholas (Taylor), Charlie, Alaina, Ryan, David, and Kathryn. He was a dear brother to Neil (Marie) the late Alfred (Rae) and the late Clement (Rose), and an especially close brother-in-law to Marie Colasante (Richard) and Pat Giordano (Stella). He deeply loved all of his nieces, nephews, and great niece and great nephews.

Frederick, "Fred," was born in Brooklyn, New York, son of the late Clement and the late Celia (nee Orlando) Restaino. Though he raised his family in Horsham and later Maple Glen, PA, he never truly left behind his New York roots and remained a devout Yankees fan his whole life. He attended St. John's Preparatory High School and on June 29, 1958 married Camille, the love of his life, with whom he was inseparable for the next 60 years. A lifelong academic, Fred was a proud alumnus of St. John's College of Pharmacy in New York City; Rutgers University, where he obtained a Master of Science in Pharmaceutical Chemistry; and Purdue University, where he earned a PhD in Physical Pharmacy. He harbored a great love for research science and went on to work 34 fondly remembered years at Merck in West Point, PA, where he served as Senior Director of Research and Development for 13 years and made many lifelong friends. Few topics of conversation could light up his face like his time at Merck, with the important exception of his family, which always remained his one true joy.

Those who met Fred even for a short time will remember him as a man of great warmth, generosity, integrity, and faith. He enjoyed life's simple pleasures, including watching Wheel of Fortune every night, working on jigsaw puzzles, and above all, spending time with his family.

Family and friends of Fred are invited to attend his viewing Thursday, June 21, 2018, from 9:30am until 10:30am, followed by his funeral mass 11:00am at St. Alphonsus Church (33 Cornwell Drive, Maple Glen PA 19002), where Fred was a devout parishioner for over 30 years. His interment will be in St. John Neumann Cemetery, Chalfont, PA. In lieu of flowers, memorial contributions can be made to Fox Chase Cancer Center, 333 Cottman Ave., Phila., PA 19111 or www.FoxChase.org. Share memories at www.DiGiacomoFuneralHome.com.

Frederick Alfred Restaino Edit Profile

pharmacist

Frederick Alfred Restaino, American pharmacist. Achievements include patent in field. Member Rho Pi Xi, Rho Chi.

Background

Restaino, Frederick Alfred was born on December 9, 1934 in Brooklyn. Son of Clement and Cecilia (Orlando) Restaino.

Education

Bachelor of Science in Pharmacy, St. John's University, 1956. Master of Science in Pharmaceutical Chemistry, Rutgers University, 1959. Doctor of Philosophy in Physical Pharmacy, Purdue University, 1962.

Career

Senior research pharmacist, Merck, Sharp & Dohme, West Point, Pennsylvania, 1961-1966; research fellow, Merck, Sharp & Dohme, West Point, Pennsylvania, 1966-1972; senior research fellow, Merck, Sharp & Dohme, West Point, Pennsylvania, 1972-1982; director pharmaceutical development, Merck, Sharp & Dohme, West Point, Pennsylvania, 1982-1995.

Achievements

- Frederick Alfred Restaino has been listed as a noteworthy Pharmacist by Marquis Who's Who.

Membership

Member Rho Pi Xi, Rho Chi.

Connections

Married Camille M. Giordano, June 29, 1958. Children: Frederick J., Deborah Ann, Denise Marie.

Father:

Clement Restaino

Mother:

Cecilia (Orlando) Restaino

Spouse:

Camille M. Giordano

child:

Deborah Ann Restaino

child:

Denise Marie Restaino

child:

Frederick J. Restaino

Potential relative?

200 - son ?

Gencorp

https://www.newspapers.com/image/151558952/?terms=%22Alfred%2Brestaino%22

Housatonic

Dr. Cornelius Packard "Dusty" Rhoads (born 1898)

Photo of Rhoads taken by the U.S. Army, 1943
[HK006M][GDrive]

Wikipedia Cornelius P. Rhoads

- **Born** June 20, 1898 in Springfield, Massachusetts, U.S. [HK006L][GDrive]
- **Died** August 13, 1959 (aged 61) in Stonington, Connecticut, U.S. [HK006L][GDrive]

ASSOCIATIONS

- **Dr. Chester Milton Southam (born 1919)**
- **Dr. Alice E. Moore (born 1908)** **(...)**
- **Dr. Francis Peyton Rous (born 1879)** (Peyton Rous was a key mentor to a young Dr. Rhoads , when Rhoads joined the Rockefeller Institute in 1929)
- **Dr. Simon Flexner (born 1863)** **(** In 1929 Rhoads joined the staff of the Rockefeller Institute for Medical Research, now Rockefeller University, where he worked for [**Dr. Simon Flexner (born 1863)**]. He was also staff pathologist at Rockefeller Hospital.[11] His early research interests included hematology and poliomyelitis. He worked at Rockefeller until 1939.)
- **Dr. Charlotte Friend (born 1921)** ("As a post-doc, Dr. Charlotte Friend worked in the Sloan-Kettering Institute under the direction of [**Cornelius Packard "Dusty" Rhoads (born 1898)**]." ; See [HK005S][GDrive])
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Saved Wikipedia (March 11, 2021) "Cornelius P. Rhoads"

Source - [HK006L][GDrive]

- Citizenship United States

- Alma mater : Bowdoin College ; Harvard University
- Awards Legion of Merit ; Walker Prize ; Clement Cleveland Medal Katherine Berkin Judd Award
- Scientific career Fields : Oncology, pathology, hematology
- Institutions :
  - Rockefeller University
  - Worcester Foundation for Experimental Biology

Cornelius Packard "Dusty" Rhoads (June 9, 1898 – August 13, 1959) was an American pathologist, oncologist, and hospital administrator who was involved in a racism and unethical human experimentation scandal and subsequent whitewashing in the 1930s. Beginning in 1940, he served as director of Memorial Hospital for Cancer Research in New York, from 1945 was the first director of Sloan-Kettering Institute, and the first director of the combined Memorial Sloan–Kettering Cancer Center. For his contributions to cancer research, Rhoads was featured on the cover of the June 27, 1949 issue of Time magazine under the title "Cancer Fighter".[1]

During his early years with the Rockefeller Institute in the 1930s, Rhoads specialized in anemia and leukemia, working for six months in Puerto Rico in 1932 as part of the Rockefeller Foundation International Health Board contingent. During World War II, he worked for the United States Army helping to develop chemical weapons and set up research centers. Research on mustard gas led to developments for its use in chemotherapy at Sloan Kettering.

In early 1932, a letter Rhoads had written in November 1931, which disparaged Puerto Ricans and makes claims (which he referred to later as jokes) he had intentionally injected cancer cells into his patients, was given by a lab assistant to Puerto Rican nationalist leader Pedro Albizu Campos. He publicized the letter in the Puerto Rican and American media, which led to a scandal, an official investigation,[2] and a US whitewashing campaign to protect Rhoads and, by extension, Rockefeller interests.[3] In the ensuing investigation, Rhoads defended himself, saying he had written his comments in anger and as a joke to a New York colleague.[4] Neither Puerto Rico's Attorney General nor the medical community found evidence of his or the project's giving any inappropriate medical treatment, and the scandal was forgotten.[5][6]

In 2002, the controversy was revived. Alerted to the incident, American Association for Cancer Research (AACR), which had established the Cornelius P. Rhoads Memorial Award in 1979,[7] commissioned a new investigation.[8] It was led by Jay Katz, emeritus professor at Yale Law School and a specialist in medical ethics. He concluded there was no evidence of unethical human experimentation, but the letter was so offensive that the prize should be renamed. AACR concurred and stripped the honor from Rhoads because of his racism.[6]

Early life and education

Rhoads was born June 20, 1898, in Springfield, Massachusetts, as the son of an ophthalmologist, Dr. George H. Rhoads, and his wife.[9] He received his early education in Springfield, later attending Bowdoin College in Maine, where he graduated in 1920. He entered Harvard Medical School, where he became class president, and in 1924, he received his M.D., cum laude.[9] Rhoads became an intern at Peter Bent Brigham Hospital, and contracted pulmonary tuberculosis. During his treatment and recovery, he developed a lifelong interest in disease research.

Early career

After recovering from TB, Rhoads published a paper on the tuberculin reaction with Fred W. Stewart, who became his longtime colleague. Rhoads taught as a pathologist at Harvard and conducted research on disease processes.[10]

In 1929 Rhoads joined the staff of the Rockefeller Institute for Medical Research, now Rockefeller University, where he worked for [**Dr. Simon Flexner (born 1863)**]. He was also staff pathologist at Rockefeller Hospital.[11] His early research interests included hematology and poliomyelitis. He worked at Rockefeller until 1939.[12][13]

Puerto Rico

While working for the Rockefeller Institute, in 1931 Rhoads was invited by hematologist William B. Castle to join his Rockefeller Anemia Commission, to conduct clinical research at Presbyterian Hospital in San Juan, Puerto Rico.[11] This was part of the Rockefeller Foundation's sanitary commission on the island through the International Health Division.[14] Castle's research interest was pernicious iron deficiency anemia, specifically as caused by the parasitic hookworm, which was endemic on the island at rates of 80%, and tropical sprue.[3][6][11] An effective treatment for the latter had just been developed, although the disease's causes remained obscure.[11] As recently as 2010, medical journal Nieto Editores reported that these conditions continued to cause high mortality in Puerto Ricans.[15] The cause of tropical sprue has still not been identified, but since the 1940s, it can be treated with folic acid and a 3 to 6-month course of antibiotics.[16]

Rhoads was to assist Castle, and they established a base in San Juan at the Presbyterian Hospital. Rhoads corresponded often with Simon Flexner at the Rockefeller Institute in New York regarding his research and career interests. In Puerto Rico, the Rockefeller group had more than 200 patients; historian and ethicist Susan E. Lederer notes that, while referred to as patients, they were primarily clinical subjects whose conditions were studied to advance medical research. Because of the effects of anemia and the suspicion that tropical sprue was related to diet, Rhoads experimentally controlled patients' diets.[11] Lederer notes that in letters from this time, Rhoads referred to his patients as "experimental 'animals'." [11] He wrote: "If they don't develop something they certainly have the constitutions of oxen." Rhoads sought to experimentally induce the conditions he was studying in his patients rather than simply treat them. If they did develop tropical sprue, he could treat it with liver extract.[11]

Castle wanted to perform a similar study in Cidra, in conjunction with the School of Tropical Medicine, which was doing related research, but this was not approved. Rhoads also collected polio serum samples for his boss Flexner at the Rockefeller Institute, for which he was assisted by contacts at the university.

Scandal

On 10 November 1931, Rhoads was at a party at a Puerto Rican co-worker's house in Cidra. After having some drinks, he left, and found that his car had been vandalized and several items stolen. He went to his office, where he wrote and signed a letter addressed to "Ferdie" (Fred W. Stewart, a colleague from Boston, by then working at the Memorial Hospital for Cancer Research in New York).[11]

He wrote the following:

Dear Ferdie:

The more I think about the Larry Smith appointment the more disgusted I get. Have you heard any reason advanced for it? It certainly is odd that a man out with the entire Boston group, fired by Wallach, and as far as I know, absolutely devoid of any scientific reputation should be given the place. There is something wrong somewhere with our point of view.

The situation is settled in Boston. Parker and Nye are to run the laboratory together and either Kenneth or MacMahon to be assistant; the chief to stay on. As far as I can see, the chances of my getting a job in the next ten years are absolutely nil. One is certainly not encouraged to make scientific advances, when it is a handicap rather than an aid to advancement. I can get a damn fine job here and am tempted to take it. It would be ideal except for the Porto Ricans. They are beyond doubt the dirtiest, laziest, most degenerate and thievish race of men ever inhabiting this sphere. It makes you sick to inhabit the same island with them. They are even lower than Italians. What the island needs is not public health work but a tidal wave or something to totally exterminate the population. It might then be livable. I have done my best to further the process of extermination by killing off 8 and transplanting cancer into several more. The latter has not resulted in any fatalities so far... The matter of consideration for the patients' welfare plays no role here — in fact all physicians take delight in the abuse and torture of the unfortunate subjects.

Do let me know if you hear any more news.

Sincerely, "Dusty"[17][18]

His unmailed letter was found by one of his staff and circulated among workers at the Anemia Commission. When Rhoads learned of this, he quickly made a public apology at a meeting of all staff and doctors.[11] A while later, he was dismayed to hear that the letter was going to be discussed at a meeting of the Puerto Rico Medical Association. With relations having deteriorated locally, he returned to New York in December 1931.[11]

Publicity and investigations

Pedro Albizu Campos

At the end of December, Rhoads' former lab technician Luis Baldoni resigned; he later testified that he feared for his safety. In January 1932 he gave the Rhoads letter to Pedro Albizu Campos, president of the Puerto Rican Nationalist Party.[11] Albizu Campos sought publicity about the incident, sending copies of the letter to the League of Nations, the Pan American Union, the American Civil Liberties Union, newspapers, embassies, and the Vatican.[2]

In addition to distributing the letter to the media, Albizu wrote his own, charging that Rhoads was part of a US plot to exterminate Puerto Ricans. He linked the letter to other complaints about American imperialism, saying that the US governors in Puerto Rico encouraged labor emigration rather than improving employment, and promoted birth control, which was offensive to the majority Catholic residents.[17] Later that year Governor Beverley struggled with a greater political crisis than the Rhoads letter over his own remarks encouraging birth control use on the island. Residents were outraged and he was removed from office.[17]

A photograph of the Rhoads' letter was published on January 27, 1932 in La Democracia, the Unionist newspaper of Antonio Rafael Barceló, with a translation in Spanish of the entire letter. It did not support Albizu Campos' theory of a US conspiracy against Puerto Rico. On February 13, El Mundo published the entire letter, in both Spanish and English.[17]

The Rhoads' letter created one of the first crises for James R. Beverley, newly appointed as the acting Governor of Puerto Rico. He said the letter was a "confession of murder" and "a libel against the people of Puerto Rico", and ordered an investigation, one of his first acts.[17] Beverley said of Rhoads that "he was just a damned fool, ... a good doctor, but not very strong mentally on anything else."[17] Rhoads, already back in New York, released an official response to the media and the governor. He insisted that he was joking in his letter, which was intended to be confidential, calling it a "fantastic and playful composition written entirely for my own diversion and intended as a parody on supposed attitudes of some American minds in Porto Rico," explaining that nothing "was ever intended to mean other than the opposite of what was stated."[2] Rhoads offered to return to clear things up, but never did. The governor's inquiry concluded that Rhoads did not commit the acts included in his letter, nor any other crimes.[2]

Rhoads and his work were investigated by the Puerto Rican Attorney General Ramon Quinones, with review of medical aspects by Dr. P. Morales Otero, representative of the Puerto Rico Medical Association, and Dr. E. Garrido Morales, representing the Commissioner of Health. Sworn testimony was taken from several of Rhoads' patients as well as his colleagues, including Castle, William Galbreath, and George C. Payne. They reviewed the case files for the 257 patients treated by Rhoads and the Rockefeller Commission, including the 13 patients who died during this period. They found no evidence of the crimes described in Rhoads' unmailed letter. The Attorney General and medical community joined in absolving Rhoads of the Nationalist charges that he was part of a U.S. plot to exterminate Puerto Ricans.[5] Rhoads was subject to separate investigations ordered by the acting American governor of Puerto Rico, Beverley, and the Rockefeller Institute, and "neither...was able to uncover any evidence that Dr. Rhoads had exterminated any Puerto Ricans."[8]

Confirmed in Lederer's 21st century account, "records at Presbyterian Hospital in San Juan, Puerto Rico, where Rhoads had performed his research, revealed no patients in the young pathologist's care had died under suspicious circumstances."[4][11] Additionally, the investigators were "unable to confirm Rhoads's other claim (omitted in Time 's account) that he had 'transplanted cancer into several patients.'"[4][19]

During the investigations, Ivy Lee, who handled public relations for the Rockefeller family, and a team at the Institute began a campaign to defend Rhoads' reputation. He was seen as a promising researcher. The Rockefeller Foundation also wanted to protect its working relationship with medical organizations in Puerto Rico[11] and avoid problems with critics of human experimentation in the U.S. During the early 1930s, there was a revival of the anti-vivisectionist movement in the U.S., which also was concerned about the use of vulnerable populations as human subjects of experimentation: children (especially orphans), prisoners, and soldiers. As Lederer observed, "some members of the medical community...monitored the popular and medical press."[20] [**Dr. Francis Peyton Rous (born 1879)**] of the Rockefeller Institute was editor of the Journal of Experimental Medicine through the 1930s and 1940s. Although it accepted few articles on clinical research, he was careful about their wording in an effort to avoid criticism by the anti-vivisectionists.[21]

Lee was given access to pre-published versions of the articles on the controversy by both The New York Times and Time. He persuaded Time to eliminate the words "and transplanting cancer into several more," from its published version of the letter.[3] Also, based on the positive testimony of some patients, The New York Times headlined its article as "Patients Say Rhoads Saved Their Lives" and reported on this aspect as well.[22] Rhoads had returned to New York before the scandal broke in Puerto Rico. After the Attorney General's report[5] and that of the Rockefeller Institute in 1932, the controversy quickly faded in the United States.[11][23]

Reaction to the Rhoads scandal and controversy was mixed in the United States, in part due to the Rockefeller campaign. Starr says (in his 2003 article on the scandal) that Rhoads' colleagues did not believe the researcher's attempt to cast his letter as a "fantastic and playful composition...intended as a

parody."[2] Some were worried about Rhoads' mental health at the time. A superior dismissed the incident as a case of local ingratitude. Time magazine headlined the incident as "Porto Ricochet"; Starr suggests they meant that Rhoads's humanitarian work in Puerto Rico had come back to bite him.[2]

In Puerto Rico, Albizu Campos used the Rhoads scandal as part of his anti-colonial campaign, attracting followers to the Nationalist Party. In 1950, longtime Puerto Rican pro-independence activists Oscar Collazo and Griselio Torresola tried to assassinate President Truman to bring their cause to the world stage. When later interviewed, Collazo said that as a young man, in 1932 he heard Albizu Campos speak about the Rhoads letter and decided to devote his life to the Nationalist movement.[8][11][23]

Hematology

Following his study in Puerto Rico, in 1933 Rhoads was chosen to lead a special service at the Rockefeller Institute in clinical hematology, to study diseases of the blood-forming organs. He built on his research on anemia and tropical sprue.[24] In 1934 Rhoads and another researcher published results of the success in using liver extract therapy to treat tropical sprue (and relieve anemia).[25] Their work was recognized as contributing benefit in treatment of the disease by others in the field.[26]

Memorial Hospital and World War II

In 1940, Rhoads was selected as director of Memorial Hospital, which was devoted to cancer care and research, and had recently moved into a new building. Rhoads was selected for his interest in clinical investigation in addition to laboratory research, as the hospital did research as well as treatment.[27] He succeeded James Ewing, a noted oncologist. Ewing had written about cancer transplantation in 1931, a subject which Rhoads had referred to in his scandalous letter written in November of that year.[11] In 1941 Rhoads was studying the use of radiation to treat leukemia.[28]

During World War II, Rhoads was commissioned as a colonel and assigned as chief of medicine in the Chemical Weapons Division of the U.S. Army.[27] He established the U.S. Army chemical weapons laboratories in Utah, Maryland, and Panama. With his enthusiastic participation, secret experiments including race-based tests involving African Americans, Japanese Americans, and Puerto Ricans were performed on more than 60,000 U.S. soldiers. Many were left suffering from debilitating, lifelong aftereffects.[29] For this work, he won the Legion of Merit for "combating poison gas and other advances in chemical warfare" in 1945.[7][29]

Due to his casualty studies on mustard gas from an accident during the war in Italy, Rhoads became interested in its potential for cancer treatment. For the rest of his life, his research interest was in developing chemotherapy for cancer treatment,[27] but he served primarily as an administrator and scientific director at Memorial and Sloan-Kettering. From studies of mustard gas, he developed a drug called mechlorethamine or Mustargen. Its success in clinical trials during the war years was the basis for the development of the field of anti-cancer chemotherapy.[30] Rhoads also became interested in total body irradiation, which led to early work on chemotherapy.[31]

Post-war

In 1945 Sloan-Kettering Institute was founded as a cancer research center, in the hopes that an industrial approach to research would yield a cure.[27] It opened in 1948. While still director of Memorial, from 1945 until 1953 Rhoads also served as the first director of the Sloan-Kettering Institute.[8][27] He was "praised by Memorial for his 'essential role in the evolution of the hospital into a modern medical center.'"[8][27] **As director of Sloan-Kettering, he had oversight as well over research related to Department of Defense radiation experiments through 1954. For instance, that year, a Sloan-Kettering team began a multi-year study of "Post-Irradiation Syndrome in Humans."**[32]

In 1953, Rhoads stepped back slightly, becoming scientific director of the newly merged Memorial Sloan–Kettering Cancer Center.[27] He also continued as the scientific director of Sloan-Kettering operations.[33] He also was an adviser to the United States Atomic Energy Commission regarding nuclear medicine. Some AEC funding supported Sloan-Kettering research into the use of iodine to transport radiation to cancer tumors.[34]

Rhoads continued to serve as scientific director of the Memorial Sloan–Kettering Cancer Center until his death.[33] He died of a coronary occlusion on August 13, 1959, in Stonington, Connecticut.[10] [He was only 61 yers of age]... In 1979, on the 20th anniversary of his death, the American Association for Cancer Research established the Cornelius P. Rhoads Memorial Prize in his honor, as an annual award to a promising young researcher.[7]

Honors

- Legion of Merit in 1945 for Rhoads' work for the US Army during WWII.[7]
- Trustee of the Charles Kettering Foundation.[27]
- Awarded three honorary doctorates, two for science and one for law.[27]
- Posthumously awarded the Katherine Berkin Judd Award for outstanding contributions to oncology research.[10]
- The American Association for Cancer Research (AACR) established the Cornelius P. Rhoads Memorial Award posthumously in his honor in 1979.[7](In 2002, it renamed the award due to Rhoads' racism expressed in his 1932 letter.)[8]

Revival of controversy

In 1982, Puerto Rican social scientist and writer Pedro Aponte-Vázquez discovered new information at various archives which raised questions about the investigations conducted on Rhoads and Rockefeller Project. Most prominent among his findings was a 1932 letter written by Governor Beverly to the associate director of the Rockefeller Foundation, stating that Rhoads had written a second letter "even worse than the first" and which, according to Beverley, the [Puerto Rican] government had suppressed and destroyed.[23] In 1932 the Puerto Rican Attorney General, aided by top-ranking Puerto Rican doctors, had investigated all of the work of Rhoads and the Rockefeller Project, including 13 deaths that occurred among nearly 300 patients treated. They found no evidence of wrongdoing or crimes.[5] In addition, Rhoads' superior at the Rockefeller Project had conducted a close investigation of the 13 patients who died under Rhoads' tenure, but found no evidence of wrongdoing. But in 1982 Aponte-Vázquez urged the Puerto Rico Department of Justice to reopen the case. It refused as Rhoads had been dead for so long.[23]

In 2002, Edwin Vazquez, a biology professor at the University of Puerto Rico, came across Rhoads' 1932 letter and contacted the American Association for Cancer Research (AACR) about it. Given the letter's offensive nature, he demanded that Rhoads' name be removed from the AACR award. Others also contacted the AACR, including Puerto Rico's Secretary of State Ferdinand Mercado.[35] Revival of the issue generated a fresh wave of publicity. The AACR, which said it had not known of the 1932 controversy,[8] commissioned an investigation led by Jay Katz, a bioethicist from Yale University. Katz said although "there was no evidence of Dr. Rhoads' killing patients or transplanting cancer cells, the letter itself was reprehensible enough to remove his name from the

award." The AACR agreed with his conclusion.[8]

Eric Rosenthal of Oncology Times in 2003 characterized the case as the AACR having to "deal with the embarrassment of having history catch up to modern-day sensibilities."[8] He wrote,

The complicated legacy of Cornelius "Dusty" Rhoads, who died in 1959, should not cause society to promote nor deny his existence but should provide a perspective that neither condones what he wrote or thought—or the whitewashing of the incident by institutions and media of the 1930s—but that does give him due appropriate credit for his accomplishments as well as acknowledgement of his faults and sins."[8]

In 2003 the AACR renamed the award, stripping the honor from Rhoads posthumously. The AACR indicated that the new name would be retroactive and past awardees would receive updated plaques.[8][36]

Representation in other media

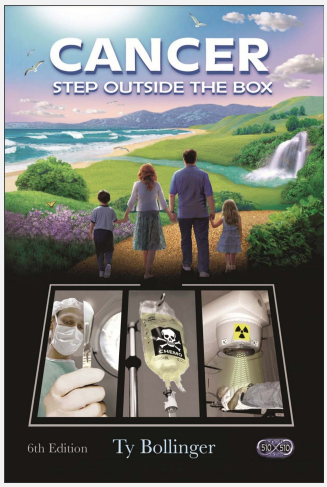
- Aponte-Vázquez self-published a book in 2005 entitled The Unsolved Case of Dr. Cornelius P. Rhoads: An Indictment; he writes on this topic via his blog and personal website.
- During the 1980s, the Puerto Rican political satire comedy group, Los Rayos Gamma, performed parodies of Rhoads with Jacobo Morales portraying a Cornelio Rodas as an insane, Frankenstein-like scientist bent on the elimination of Puerto Ricans.[37]
- Roberto Busó-García wrote and directed the dramatic film, The Condemned (2013), which he said was loosely based on the Rhoads' controversy in Puerto Rico.[38]

Nonconsensual testing on humans Southam, Rhoads (boss of Dr. Chester Southam), (Dr. Alice Moore also, but not mentioned)

SEE Dr. Robert Charles Nowinski (born 1945) / Genetic Systems Corporation for info on the testing at the Fred Hutchinson Cancer Research Center

See **Dr. Alice E. Moore (born 1908)**

PDF of book **"Cancer: Step outside the box"** : [HB006A][GDrive]



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I used to believe that the “cancer conspiracy” was an unintentional result of the love of money and that there were really no malicious intentions at its roots. However, due to stories like the three that follow, I believe that I was a bit naïve in my initial assessment of the situation.

In 1931, [**Dr. Cornelius Packard "Dusty" Rhoads (born 1898)**], a pathologist from the Rockefeller Institute for Medical Research, purposely infected human test subjects in Puerto Rico with cancer cells, and thirteen of them died. Despite the fact that Rhoads gave a written testimony stating he believed all Puerto Ricans should be killed, **he later established the U.S. Army Biological Warfare facilities in Maryland, Utah and Panama, and was named to the U.S. Atomic Energy Commission, where he began a series of radiation exposure experiments on American soldiers and civilian hospital patients**.

Then, in **1963, []Dr. Chester Milton Southam (born 1919)**] (who injected Ohio State Prison inmates with live cancer cells in 1952) performed the same procedure on twenty-two senile, African-American female patients at the Brooklyn Jewish Chronic Disease Hospital in order to watch their immunological response. He told the patients that they were receiving “some cells,” but conveniently left out the fact that they were cancer cells. Ironically, Southam eventually became president of the American Association for Cancer Research!

In 1981, the **Seattle-based Genetic Systems Corporation** began an ongoing medical experiment called “Protocol No. 126” in which cancer patients at the **Fred Hutchinson Cancer Research Center** in Seattle were given bone marrow transplants that contained eight experimental proteins made by Genetic Systems, rather than standard bone marrow transplants. As a result, 19 human “subjects” died from complications directly related to the experimental treatment. [**MORE on the research in Seattle that may possibly connect to Gates : See Genetic Systems Corporation**] [...]

1949 - Research at Sloan Kettering Institute for Cancer Research - "Inhibition of Development of Sarcoma 180 by 4-Amino-N^{10}-Methyl Pteroylglutamic Acid".

By : [Dr. Alice E. Moore (born 1908)], CC Stock, K Sugiura, [Cornelius Packard "Dusty" Rhoads (born 1898)]

Summary: The compound 4-Amino-N10-methyl pteroylglutamic acid, has shown the ability to inhibit the growth of the transplantable mouse Sarcoma 180 when administered intraperitoneally in concentrations of 1.5 mg/kg each day for 7 days. At this dosage very few ...

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from the blood into the spinal fluid in very small amounts.

Summary. After intravenous injection sucrose occurs in the spinal fluid in very low concentration. Even when hemorrhages into the central nervous system occur, the concentration does not approach that found in blood.

16939

Inhibition of Development of Sarcoma 180 by 4-Amino-N[10]-Methyl Pteroylglutamic Acid.*

ALICE E. MOORE, C. CHESTER STOCK, K. SUGIURA, AND C. P. RHOADS.

From the Division of Experimental Chemotherapy, Sloan-Kettering Institute for Cancer Research, New York City.

In view of the extensive developments among the anti-metabolites it was a natural consequence that cancer chemotherapy studies should be initiated with analogs of folic acid. Interest in the folic acid antagonists has been stimulated by reports of the effectiveness of Aminopterin in the treatment of leukemia (Farber).[1] In an intensive screening program during the past year a large number of analogs of folic acid and various related simple compounds have been studied against mouse leukemia[2] and various mouse and rat tumors with particular emphasis on the Crocker mouse Sarcoma 180. Thus far, one folic acid antagonist,[3] 4-Amino-N[10]-methyl pteroylglutamic acid (A-Methopterin),† has been outstanding in its ability to inhibit the growth of Sarcoma 180. The preliminary results of the study are presented.

Materials and methods. The material was tested for ability to inhibit the growth of the Sarcoma 180 and also for its ability to damage a well established tumor.

Carefully selected tumors were cut into 2 mm cubes and implanted subcutaneously into the axillary region of groups of 5 weighed and marked white mice. In the inhibition tests, intraperitoneal injections of 0.5 cc of different doses of A-Methopterin were begun 24 hours later. In the therapeutic test, injections were begun after 3 to 7 days of tumor growth. In all instances, injections were given twice daily at 6-hour intervals for 7 consecutive days. If the animals showed definite signs of a toxic effect of the drug, administration was omitted until recovery had taken place. At the higher dosage (2.5-2.0 mg/kg/day) 3 or 4 omissions were often necessary. Below this level the drug was well tolerated.

Following the period of injections the animals were weighed and the size of their tumors determined by measurement in 2 diameters with calipers. The size of the tumors was then compared with those of the untreated controls and tumor growth was graded according to the following scheme: 1) Inconclusive, in groups of animals where 3 or more died, 2) No effect, when the largest diameter was ¾ or more of the diameter of the control tumors, 3) Moderate effect, when the diameter was ¼ to ¾ of the diameter of the control tumors, 4) Marked inhibition when the diameter was ¼ or less of that of the control tumors; actually, the volume of such a tumor would be 1/64 or less of the control if tumors may be considered spherical.

The animals were again weighed and their tumors measured at the end of the second week.

Results. Groups of 5 mice implanted with the Sarcoma 180 one day previously were injected intraperitoneally with daily doses of A-Methopterin at the following levels: 2.5 mg, 2.0 mg, 1.5 mg, and 1 mg/kg. Deaths due to the toxicity of the material were recorded during the 7-day period of injection. Tumor measurements were made at the end of the period and the effect of the substance on the tumor was evaluated. These data are summarized in Table I.

It is clear that A-Methopterin has a definite inhibitory effect on the growth of Sarcoma 180 at all the levels of drug above 1 mg/kg/day. The drug killed 46% and 18%, respectively, in the groups of mice receiving 2.5 and 2.0 mg/kg/day. At the lower dosages 7% and 5% of the mice receiving 1.5 and 1.0 mg died during the treatment. Male mice appeared to tolerate the drug better than female mice. The best results were obtained at the 1.5 mg dose where a definite effect was noted in almost all instances with little evidence of toxicity. The average weight loss of this group was 1.0 g as contrasted to a gain of 0.5 g for the controls. Fig. 1 shows the typical inhibition effect on the tumor of the injection of A-Methopterin at the level of 1.5 mg/kg/day.

The tumors have never been completely destroyed. When the injections are stopped, the small tumors grow normally.

When the tumors were allowed to grow for 3 to 7 days before the injections were begun, inhibition of growth was apparent in practically all instances. Of the 15 groups of mice receiving 2 mg/kg/day, inhibition was marked in 3 groups, moderate in 11 groups and absent in one group. Of the 24 groups receiving 1.5 mg/kg/day, inhibition was marked in 7, moderate in 16, and absent in one. The death rates for the 2 dosages were 12% and 16%, respectively. It is doubtful that these figures represent true toxicity deaths, because many of the tumors were so large at the time injections were initiated, that some of the mice probably died from the effects of tumor growth. The effect of A-Methopterin was definite although not as marked as in the groups of mice injected 24 hours after implantation.

In a few experiments a single injection of 50 mg/kg was administered when the tumor had grown one day. An inhibitory effect was evident when the tumors were measured a week later. In one group implanted 24 hours previously which received one injection of 50 mg/kg, small doses (0.5 mg/kg/day) were administered for 7 days. When the tumors were measured, they were very small but grew when the injections were stopped. The development of 7-day-old tumors was not affected by the injection of the single large dose.

Discussion. A-Methopterin has been shown to have a definite and consistent inhibitory effect on the growth of the transplantable mouse Sarcoma 180. In another report (Sugiura, Moore, Stock)[4] the folic acid antagonist, Aminopterin, was shown to have a similar effect; however, marked inhibition could be demonstrated only when the drug was administered in amounts which killed a large per cent of the mice. A-Methopterin appears to exhibit a more favorable therapeutic index. It has been outstanding in its effect among numerous compounds which might interfere with the utilization of folic acid or possibly with the synthesis of nucleic acid. In fact, it has been the most effective compound of over 700 miscellaneous compounds that have been screened. It is therefore advanced as a compound worthy of further experimental study and for clinical trial in various types of cancer.

Summary. The compound 4-Amino-N[10]-methyl pteroylglutamic acid, has shown the ability to inhibit the growth of the transplantable mouse Sarcoma 180 when administered intraperitoneally in concentrations of 1.5 mg/kg each day for 7 days. At this dosage very few mice died from drug toxicity. The inhibition is most apparent when the compound is administered early in the development of the tumor.

* We wish to acknowledge support of this study by funds from the American Cancer Society.

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† A-Methopterin is the name given to the compound by Lederle Laboratories, to whom we are indebted for supplies. The Calco Division, American Cyanamid Company also has provided a supply of this compound.

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TABLE I.
Effect of Different Amounts of A-Methopterin on the Growth of the Sarcoma 180.

Dose in mg/kg/day	No. of groups of 5 mice	No. of mice	Deaths during inj. period		Effect on tumor*			
			No.	%	Inconclusive	Marked inhibition	Moderate effect	No effect
2.5	6	30	14	46.6	2*	4	0	0
2.0	15	75	14	18.6	2	9	4	0
1.5	31	155	11	7.1	0	16	11	4
1.0	8	40	2	5.0	0	1	4	3

* The tumor effects are expressed as the result obtained in each group of 5 mice. Thus, the numeral 2 indicates two groups of 5 mice each.

4 Sugiura, K., Moore, A., and Stock, C. C., *Cancer*, in press.

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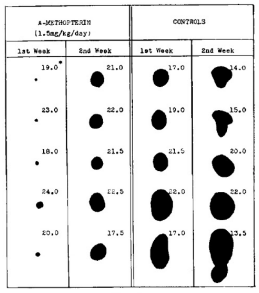

FIG. 1.
Area diagrams of tumors in mice treated with A-Methopterin compared with untreated controls.
* Weight of mouse in grams.

16940

Beneficial Effects of Liver on Growth and Survival in the Immature Hyperthyroid Mouse.*

B. H. ERSHOFF.

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Available data indicate that desiccated whole liver will prolong survival and counteract the growth retardation of immature rats fed massive doses of thyroactive materials.[1,2] The protective factor is distinct from any of the known nutrients and is retained in the water-insoluble fraction of liver.[3,4] The present experiment was undertaken to determine the effects of liver and liver fractions on growth and survival in the immature hyperthyroid mouse.

* This paper reports research undertaken in cooperation with the Quartermaster Food and Container Institute for the Armed Forces, and has been assigned number 241 in the series of papers approved for publication. The views or conclusions contained in this report are those of the author. They are not to be construed as necessarily reflecting the views or indorsement of the Department of the Army. Communication No. 204 from the Department of Biochemistry and Nutrition, University of Southern California.

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1949 (June 27) - Dr. Rhoads on the cover of Time Magazine as "Cancer-Fighter"

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Text of full article : [HP005X][GDrive]
Mentioned : Cornelius Packard "Dusty" Rhoads (born 1898) / Dr. Alice E. Moore (born 1908) /

Even as hospitals go, Manhattan's famed Memorial Hospital is not a light-hearted place. Its corridors never echo with the happy sounds of a maternity ward. No one is there because of minor ailments or for a good rest. Most of the patients know that their chances of recovery, though somewhat better every year, are poor indeed. Visitors passing through the lobby often look stunned by grief. Memorial is a tragic place because its patients are victims of cancer.

Room 1O2L, a short walk down an immaculate corridor, is one of the most cheerful-seeming places in the hospital. Divided by stiff brown curtains into examination booths, it rings on Friday mornings with the voices of children. A little boy with a Tommy gun shoots sparks at a white-coated doctor, and a plump little girl cradles her doll. In a corner, a nurse in a starched white uniform peers through a microscope and makes a click-click sound with a small, sharp-voiced machine. She is counting in some child's blood the deadly white cells of leukemia: cancer of the blood. All the children in 1O2L of a Friday morning have leukemia, for which no cure is known. All of them, as medicine's knowledge stands at present, will die of the disease.

Tower of Hope. Last week, as he does every week, a man with short-cropped, iron-grey hair, blue eyes and an easy smile stopped in at Room 102L. Dr.

Cornelius Packard Rhoads, director of Memorial, the world's biggest cancer hospital, is an outstanding symbol of medicine's determined campaign against a disease which causes one out of every seven deaths in the U.S. Dr. Rhoads also heads the Sloan-Kettering Institute for Cancer Research, whose 14 stories rise beside the hospital. In this tower of hope, the world's most ambitious cancer research laboratory, highly specialized scientists and technicians experiment endlessly in the war against cancer; from it have come strange new treatments that have, so far, kept many leukemic children alive.

"We can help only 25%," says Dr. Rhoads, "and they have remissions only. Their disease will recur and recur, perhaps in more violent form. Some people ask, 'Why keep them alive, if they must die eventually?' But we're moving faster now. Perhaps, before they exhaust their last remission, we'll have something really good. And you've seen how happy they are."

The Wartime Method. Dr. Rhoads's jobs as head of Memorial and of Sloan-Kettering allow him little time for his favorite recreation—sailing. Like most men named Rhoads, he is called "Dusty" by his friends. Born in Springfield. Mass. 51 years ago, he graduated from-Harvard Medical School in 1924. He has long been a successful medical scientist, and today he could be mistaken for the go-getting president of a big university.

In World War II, Dr. Rhoads was chief of the Medical Division of the Army's Chemical Warfare Service. The gas program turned out to be "preventive" only; the enemy did not use gas. But the experience made a lasting impression on him. He came away from war work with enormous respect for what can be accomplished when scientists, who are notoriously in dividualistic, get together. Driven by wartime urgency, the scientists abandoned their jealousies and rivalries, submerged their temperaments and attacked each problem cooperatively from every possible angle. High-pressure wartime science achieved in a few years what would have taken decades of sauntering peacetime effort. Why not, thought Rhoads, use the wartime method on cancer?

What Dr. Rhoads thinks he is apt to say —loudly, clearly and often to a great many people. His persuasive tongue, a rare gift among scientists, had some effect. In 1945 Alfred P. Sloan Jr., chairman of the board of General Motors, gave $4,000,000 to set up the Sloan-Kettering Institute, with Rhoads at its head. Other sources of funds promised lavish support. The impressive building was finished 18 months ago, and Rhoads began assembling a staff. "All I can do," he says, "is pick good men, give them opportunities and help them keep pointed at the target."

Among cancer men, who carry on their research work individually and in teams across the country, brisk Dr. Rhoads is not universally popular. A few worry because they think his position gives him too much power over cancer research. Rhoads himself knows that he runs the risk of being called highhanded and arbitrary, the head of a vast research organization that stamps out individualities. But he hopes that Memorial Hospital, with its pathetic patients, will supply some of the qualities of a wartime emergency.

"Some authorities," says Rhoads,"think that we cannot solve the cancer problem until we have made a great, basic, unexpected discovery, perhaps in some apparently unrelated field. I disagree. I think we know enough to go ahead now and make a frontal attack with all our forces. Anyway, that's what we are doing. We'll follow every promising lead, and we know a lot of them. If the ivory tower men solve the problem ahead of us, we won't feel we've wasted our time."

Gangster Cells. The "cancer problem," as pathologists call it, is one of the strangest and subtlest that medicine has faced. Cancer is not an outside enemy that can be fought in the open like a foreign invader. It is civil war among the body's own cells, and it runs through all of nature like a red fiber of ruin spun into the thread of life. All vertebrates, including frogs and fish, get cancer. In all probability, the experts say, invertebrates and plants have cancer too.

As a normal thing, the several hundred trillion cells in a human body cooperate loyally, subordinating themselves to the body's higher life. Their functioning and their usually slow rate of multiplication are controlled, most scientists believe, by the chemical hormones which are poured into the blood by a set of regulating glands.

Sometimes, for reasons which medicine does not yet understand, a cell turns out to be different from normal cells. Most such "mutations," less competent than the normal cells, die and are absorbed by the body. But occasionally a variant cell appears that is disastrously competent.

Something in its chemistry allows it to defy the hormones that regulate the growth of ordinary cells. It multiplies wildly, growing into a useless mass of disorderly tissue. The tumor pushes among the normal cells, presses on nerves, thrusts organs aside or invades them. Often the gangster cells get into the blood and spread around the body like seeds carried by the wind. Where they lodge they grow into "metastases"—secondary tumors as lawless as the first one.

That is cancer: war between the body and its rebel cells. But it is not a two, sided civil war, because the body has almost no defenses. The body creates no antibodies against cancer as it does against diphtheria or typhoid. It builds no tissue walls to confine the destructive cells. It feeds them well, allows them to grow unchecked, and dies helplessly when they disrupt some vital function.

"The Nazis were rather like cancer," says Rhoads, growing philosophical as all scientists are apt to do when they think about cancer. "Starting with a variant cell, Hitler, the Nazis multiplied throughout the German nation, bringing it to destruction. It took external forces to kill the Nazi cancer."

Knife & Radiation. "External forces" are the business of Sloan-Kettering Institute and all the other centers of cancer research, which are spending something like $50 million in the U.S. annually. At present the only known cure for cancer is destruction: the surgeon's knife or radiation (X rays and radium). Such methods work well with some forms of cancer. Skin cancer, for instance, can nearly always be removed so completely that it does not recur. Other accessible cancers can be dealt with too, and surgical methods are improving constantly. A recent advance saves many patients who have a vital artery that has been attacked. An "artery bank" supplied from such sources as amputation cases makes it possible for the surgeon to replace a cancerous artery almost as if he were a plumber replacing a rusted pipe.

Not long ago, Memorial's doctors noticed that cancer patients, often reacted well after a serious operation, but died a few days later for no apparent reason. Sloan-Kettering's research men went to work to find an explanation, found that in such cases the patients had died because of a deficiency of potassium in the blood. When potassium was added in new cases, the patients picked up quickly and survived the operation. Dr. Rhoads believes that such improved surgery and treatment, combined with sufficiently early diagnosis, may save from cancer one-third to one-half of the people who now die of it. That would mean saving the lives of 6,000,000 to 9,000,000 Americans now living who are destined, on the basis of present statistics, to die of cancer.

Differential Effect. Surgery cannot help the other 9,000,000. Many cancers involve vital organs that cannot be disturbed, or metastases which spread so quickly and widely throughout the body that the surgeon cannot find and remove them all. To deal with such cancers some agent is needed that has a strong "differential effect," i.e., that kills cancer cells without hurting normal tissue. A few such drugs are already known, but they are only a start, and not good enough.

The trouble is that cancer cells are very like normal cells. An agent that hurts one generally hurts the other. Still, the gangster cells have differences. The very fact that they grow rapidly in a chemical medium, the blood, in which normal cells grow slowly, is sufficient proof that they are different. To find and

exploit the differences is the chief goal of Sloan-Kettering Institute. The problem is being attacked at all levels—from simple testing of promising drugs to long-range exploration of the internal workings of cells.

Every week dozens of new chemicals come to Sloan-Kettering from commercial laboratories, chemical houses, university scientists and medical men. Each is catalogued and given a number (to head off charges of favoritism). The more interesting ones, thought to have strong biological effects, are tried on experimental cancers planted in white mice.

Girls & Mice. This testing is a mass-production process which would be impossible on such a scale in a smaller laboratory. Girls in white uniforms sit at a table with cages of mice before them and bits of mouse cancer in glass trays.

Deftly a girl picks up a cancer fragment with a trocar (a tubular needle with a plunger inside). She grabs a faintly squeaking mouse, holds it by the scruff of its neck, efficiently jabs the trocar into the skin of its belly and up under a front leg. She plants the cancer by pushing it out with the plunger. Then she reaches for another mouse.-

When the cancer has had time to "take," the mouse is injected with a just-under-killing dose of the chemical to be tested. After a week or so, a girl kills the mouse by crushing its fragile skull. Then she slits open its belly skin and measures the cancer, which is usually by this time a grey-pink, rounded mass as big as a thumbnail. If the tumor has disappeared or has not grown as much as expected, the chemical is listed as promising enough for further testing.

Eggs & Tubes. Another type of testing is done on eggs. A girl technician examines a fertile egg under a strong light, finds the developing embryo, and cuts a square hole in the shell above it. She plants a bit of cancer on the embryo, and seals the hole with a glass window stuck on with wax. The egg is put in an incubator. As the embryo grows, the cancer grows too. The embryo's blood vessels turn aside to supply the cancer, which frequently grows until it is nearly as big as the chick. Drugs are tested by injecting them into the egg yolk, and noting through the window what they do to the cancer.

Another method is tissue culture. Bits of cancer tissue are stuck to the side of a test tube. A nutrient solution (made of such unlikely ingredients as extract of human placentas) is added. The tube is sealed and put on a vertical merry-go-round in an incubator. As the merry-go-round revolves slowly, the solution washes over the cancer tissue, which grows vigorously just as if it were in a living body. Drugs can be tested against it simply by adding them to the solution.

Sloan-Kettering now has 2,300 chemical agents on file, and has already tested some 1,500. Six of them proved to have a good "differential effect" against one or more types of mouse cancer. A couple of dozen had some lesser effect. According to Dr. C. Chester Stock, head of the Division of Experimental Chemotherapy, this record is by no means discouraging. As the records and experience accumulate, the scientists are learning how to predict whether a compound is worth testing. If a new one has a slight effect, one of its close relatives may prove better. And each slightly successful drug sets biochemists to figuring out why it worked at all.

Cell City. Long-range figuring-out is the duty of such men as Dr. George B. Brown, head of the Protein Chemistry Division. Dr. Brown and his assistants are studying the chemistry of both normal and cancer cells, looking for differences that they may exploit.

Cell chemistry is a maddeningly complicated study. It is known that cells contain certain chemicals, but they are not mixed together haphazardly like dissolved salts in a chemist's beaker. Each cell is like a great, complex metropolis. The individual citizens (atoms) are organized into intricate groups like the people of the city. Some groupings (e.g., the three-atom molecule of water) are as small and tight as families. Others are larger, like all the workers in one factory. The various groups interact constantly, their links forming and dissolving as the cell lives and grows. Certain single large molecules (analogous to the city government) are thought to affect all the cells.

To get the most rudimentary understanding of the workings of the living, changing cell is enormously difficult. It would be even harder without a new tool: nitrogen 15, a stable (nonradioactive) isotope of nitrogen. Chemically, nitrogen 15 is exactly like the common nitrogen 14. The cells cannot tell the difference. But since it is slightly heavier, nitrogen 15 can be measured accurately by a balky and expensive instrument called a mass spectrometer. If compounds containing nitrogen 15 instead of ordinary nitrogen are fed to cells, the scientists can tell with the mass spectrometer whether the cells have accepted them as food.

Such work is slow and expensive: nitrogen 15 costs $1,000 for a single study. But already Dr. Brown's group have had one outstanding, success in their study of a cell's reproductive system. They used an artificial compound called 2,6-diaminopu-rine, not yet isolated in nature, which they thought had a momentary existence inside the cell. The organic chemists synthesized some of this compound and turned it over to the chemotherapists. They thought that it might have the sought-for "differential effect" on lawless cancer cells.

Sure enough, "2,6" prolonged the life of leukemic mice by 60%. It destroyed or controlled rat tumors. It killed other tumors in test-tube cultures. On human patients, it acted as a palliative, but not a cure. It has secured "remissions," for instance, for a few leukemic children.

Promising Molds. Dr. Rhoads and his associates believe that no possibility, even faintly promising, should be neglected. One long shot is to look for something in the secretions of molds. One such secretion, penicillin, has a differential effect on bacteria: it kills bacteria but leaves human tissue unharmed. Molds might conceivably produce something with a differential effect on cancer cells.

In a cold, air-conditioned room in Sloan-Kettering, various molds (green or white mats) are growing in flasks. The program is still young, but already one mold has been found that secretes a substance with a slight differential effect on mouse tumors. Dr. Rhoads does not even want to talk about it yet. He has no "cancer penicillin."

Behind a door marked "No Visitors" (no one may enter who has not been properly immunized), works attractive [Dr. Alice E. Moore (born 1908)], a leading virus fancier. "I'm a virus girl," she says, "so I thought I'd try 'em." She tried influenza virus on cancerous mice. No effect. She tried the virus of herpes (inflammation of the skin and mucous membranes). No effect.

Then she turned to the deadly virus of Russian spring-and-summer encephalitis, injected it into the abdominal cavity of cancerous mice. In about two days the firm, round tumors turned into blobs of pus. All the cancer cells apparently died. But the virus then went on and attacked the nerves and brain. Four days later the mice, apparently cured of cancer, died of encephalitis. Nonetheless, the virus had shown a dramatic differential effect. It went first to the tumor and thrived there before attacking the brain.

Try the Viruses. There is a long list of things that Dr. Alice can do now to exploit her discovery—so many things that Dr. Rhoads is enlarging her dangerous laboratory. One is to try the encephalitis virus on monkeys. The laboratory strain has lived so long in mouse brains that it may have lost its ability to attack primates. If it proves harmless to monkeys, it probably will not hurt humans. The final step will be to try it on human cancer patients to see if it attacks their tumors.

Another thing that Dr. Alice hopes to do is to grow her virus for a long time in mouse tumors, transferring it from mouse to mouse as the tumors die. When grown on new food, viruses often change their ways. Dr. Alice hopes that the encephalitis virus might be taught to give up its taste for brain tissue while increasing its appetite for tumors.

If all these methods fail, there are plenty of other viruses to try against cancer. Some of them, comparatively harmless to normal human tissue, may attack tumors. If some such virus could be found or developed, it would be an ideal anti-cancer drug. Circulating through the body like a ferret through rat holes, it could hunt down every gangster cell.

Search the Soil. One of the most interesting programs at Sloan-Kettering is concerned not with the cancer cells, but the "soil" (as Dr. Rhoads calls it) in which they grow. Normal human cells often look startlingly like small, one-celled animals. But they are not free agents. Their growth is controlled and limited by the hormones in the blood. The most important hormones come from the gonads (testes and ovaries) and from the adrenals (small glands attached to the kidneys).

It has been known for a long time that the steroid hormones (socalled because they contain the "steroid" nucleus in common) are closely connected with cancer. The administration of sex hormones can both cause and prevent certain cancers in mice. Some cancer researchers hold to the theory that a complete understanding of the steroid hormones might tell why cancer occurs, how to cure it, perhaps even how to prevent it. The difficulty is that there are a great many steroid hormones. Their study requires such special methods and special apparatus that steroid work has become a recognized sub-subdivision of biochemistry. At Sloan-Kettering the experts in this mysterious field sit together at luncheon, speaking a special language.

Leading steroid man at Sloan-Kettering is short, round, German-born Dr. Konrad Dobriner. The raw material of his science is human urine, in which are found steroid "metabolites" (breakdown products from the hormones that the body has used and passed on). Dobriner's assistants collect urine for months or even years from the people they intend to study. They extract the steroids by a long series of tedious techniques, and identify them by their characteristic absorption of infrared light.

Glandular Orchestra. Dobriner has already achieved startling results. The urine of each person has a different steroid pattern, but in healthy, normal males & females there is a general similarity. In cancer patients, however, there is a striking difference. A new steroid, 11 hydroxy-etiocholanolone, almost always absent in healthy persons, shows up in about two out of three cancer patients.

A remarkable discovery came when a woman from whom Dobriner had been collecting urine for several years suddenly developed cancer of the breast. Dobriner found, on examining the stored extract from her urine, that she had been excreting the uncommon steroid for at least three years before her cancer developed. The tumor was removed surgically and the woman is now apparently in perfect health. But she still excretes the cancer-pointing steroid.

It looks to Dobriner as if the presence of the uncommon steroid may indicate not only cancer but sometimes an abnormal hormone situation that leads to development of cancer. "The endocrine system," he says, "consists of a number of glands that should be in harmony, like a symphony orchestra. We want to prove that in cancer the orchestra is haywire."

Dobriner points out that steroid identification is not a good test for early cancer. It is not sure; it takes too long, and it costs too much ($10,000 for a complete job). But he is cutting down the time and cost. As he collects more records, other startling facts are showing up. For instance, people with hypertension (high blood pressure) generally excrete a special steroid. No one knows why, but Dobriner hopes to find out. The mysterious steroids from the glandular orchestra are apparently concerned with all the changes in the body's cells. "If you want to know about cancer," says Dobriner, "you must also know about old age, hypertension and degeneration." Thus, cancer research may discover, as a sort of byproduct, what makes people grow old.

Human Laboratory. The most important of Sloan-Kettering's laboratories is the great hospital next door, including the Strang Prevention Clinic. Dr. Rulon W. Rawson, head of the Division of Clinical Investigation, explains that, after all, human patients are the best source of information about human cancer. Clinical investigation is a two-way street. Observation of patients, especially their reaction to treatment, gives clues for researchers to follow. When the laboratories develop some new method applicable to human beings, the hospital is the only conclusive place to try it out.

A good example of the interaction of research and clinical study is the work of Rawson's group and of Dr. L. D. Marinelli on the treatment of thyroid cancer with radioactive iodine. Since the thyroid gland eagerly absorbs iodine (which it uses to make a hormone), doctors have hoped that a cancerous thyroid would absorb radioactive iodine 131 in sufficient quantity to kill the unruly cells. Unfortunately, this effort was none too successful. The normal thyroid took up nearly all the iodine. The cancerous thyroid cells, particularly the metastases in distant parts of the body, took up so little that they were hardly damaged by the iodine's radioactivity.

Trained Metastases. Dr. Marinelli and his associates worked out a neat method of dealing with this difficulty. First they removed the patient's normal thyroid and with it the original cancer. This left the metastases which, they found, often consisted of cancer cells that retained faint remnants of the normal function of the thyroid. With the normal thyroid gone, the degenerate cells awoke and began to act like thyroids. Stimulated by the proper drugs, they began taking up iodine and making it into thyroid hormones. Then Dr. Marinelli gave radioactive iodine to the patient. The tumors, acting as pinchhitting thyroid glands, absorbed it readily, and were in some cases destroyed by the iodine's radiation.

Some types of thyroid cancer do not respond to this treatment. The cells cannot be trained to take up iodine and kill themselves. But many patients have been helped to some extent. In four of them the disease has been definitely checked, though not wiped out entirely.

More important, Dr. Rawson believes, is the proof this method gives that cancer cells are not "autonomous"; that in some cases, at least, they can be trained to resume some of the functions of the normal cells from which they are descended. If they can be trained, perhaps they can eventually be trained to destroy themselves.

Dread Decision. The patients in Memorial Hospital are never used as experimental animals. Neither are they denied any treatment, however new, that might possibly do them good. Virtually all patients beyond the help of surgery are willing to have new drugs and treatments tried on them.

In each individual case, the doctors have to make a grim decision. Should they prolong a life that is sure to be "unsatisfactory?" Should they, by prolonging life, place a crushing burden on the patient's family? Should they, in desperate cases when everything else has been tried, use a drug so dangerous that it may kill the patient immediately? Such questions have no single answer. The doctors decide each case separately, considering such matters as the painfulness of the treatment and the patient's chance for happiness during his possible remission.

Some cancer doctors admit that they have almost cracked up thinking about such things, and about their utter helplessness in hundreds of cases. Dr. Rhoads, too, has his moments of depression. He is sure that his method of concerted frontal attack, submerging niceties of scientific temperament, is correct. But he also knows that neither he nor his men nor anyone else in the world has yet found a cancer cure.

also knows that neither he nor his men nor anyone else in the world has yet found a cancer cure.

Perhaps ... Sloan-Kettering is certainly trying hard. From his office on the 13th floor, Dr. Rhoads can review the work of the world's most impressive array of cancer-fighting weapons: the eggs with their little glass windows, the tubes of cancer tissue on their merry-go-rounds, the rows of deft-fingered girls with the squeaking, doomed white mice, the dangerous viruses, the green and white molds, the thousands upon thousands of chemical agents, the scholarly chemists, physicists, biologists, clinicians all working in unison to defeat the common enemy: cancer.

Perhaps at that moment in Memorial Hospital, a life frayed with pain and dimmed with morphine is flickering down to the cold. Dr. Rhoads is no callous technician. His confident eyes grow sad when he hears of this everyday event. He looks out the window at the cluttered roofs of New York and at a great bridge roaring with traffic. "It needn't be," he says, "not always."

*Asked if she would be afraid of a mouse in her own home, one of the girls replied: "Oh yes. Those are fierce, wild mice."

*This colony of cancer cells, which grew from a single cell in 31 days, has begun to spill out of a tiny glass tube. The cells are magnified about 70 times.

1957 (Jan) - Testing reports (noted in a Tweet)

Link to Tweet : [HT00C2][GDrive] / Jason Sheltzer / @JSheltzer

A dark paper from the history of cancer research: HeLa and other malignant cells were injected into terminally-ill patients and healthy prisoners, “with the cooperation of their warden”. Study author Chester Southam was *later* elected president of @AACR.

See - https://sci-hub.se/10.1126/science.125.3239.158#

See: **Dr. Alice E. Moore (born 1908)** / **Dr. Cornelius Packard "Dusty" Rhoads (born 1898)** / **Dr. Chester Milton Southam (born 1919)**

REPORTS

Homotransplantation of Human Cell Lines

+ See all authors and affiliations

Science 25 Jan 1957:
Vol. 125, Issue 3239, pp. 158-160
DOI: 10.1126/science.125.3239.158

[HT00C3][GDrive]

Studies to determine whether these homologous cancer cells had a similar capacity for propagation in normal healthy human beings were undertaken at the Ohio State Penitentiary in collaboration with Charles Doan and Richard Brooks and with the cooperation of John Porterfield and R. W. Alvis, warden. From a large group of volunteers, 14 were chosen for the initial study. Methods were identical with the aforementioned ones, except that only tissue cultures were used, and all studies were done simultaneously in June 1956.

[HT00C4][GDrive]

Table 1. Summary of homotransplantation studies with human cancer cells.

Implanted cells			Cancer patients		Normal volunteers	
Name	Type	Source	Positive/ total*	Latest day of positive biopsy	Positive/ total*	Latest day of positive biopsy
HeLa	Epid. Ca	TC	2/3	14, 18	0/2	
HEp#1	Epid. CA	TC	6/6	7, 19, 21, 34, 42, 77	2/3	14, 14
HEp#2	Epid. CA	TC	2/2	19, 19	1/3	14
HEp#3	Epid. CA	†	6/6	7, 7, 19, 42, 42, 57	1/4	14
HS#1	Fibro SA	Rat	1/1	57		
J-111	Leukemia	TC	3/4	6, 20, 42		
Deac 6	Adeno CA	Hamster	1/1	10		
Conjunctiva	‡	TC	3/6	9, 10, 10, 18, 60	0/3	
Liver	‡	TC	1/3	9		
Kidney	‡	TC	2/2	10, 12		
Appendix	‡	TC	0/1			
Fibroblast	Normal	TC	0/3			

* No. of recipients who had positive biopsies for the presence of the implanted cancer cells/No. of persons who were implanted with the same type of cell.
† HEp#3 in cancer patients includes one from tissue culture, 2 from cortisone-treated rats, and three from chick-embryo chorioallantoic membrane.
‡Cells isolated by Chang (*1*) from normal tissues but showing neoplastic changes in tissue culture (*6*).

[HT00C5][GDrive]

CHESTER M. SOUTHAM
ALICE E. MOORE
CORNELIUS P. RHOADS
Division of Experimental Pathology, Sloan-Kettering Institute for Cancer Research, New York, New York

[HT00C6][GDrive]

1959 - Award from (written by) C.P. Rhoads (director, Memorial Sloan Kettering)

Worked with Rhoads - https://www.ncbi.nlm.nih.gov/pmc/articles/PMC1806149/?page=1

1959-bull-ny-academy-medicine-pg-216-award-to-payton-rous-from-cprhoads-00349-0024.pdf

1959-bull-ny-academy-medicine-pg-216-award-to-payton-rous-from-cprhoads-00349-0024-pg-1 / 2

CITATION AND PRESENTATION OF THE ACADEMY MEDAL* TO F. PEYTON ROUS, M.D.

C. P. RHOADS
Director, the Sloan-Kettering Institute for Cancer Research, New York, N. Y.

As years pass it becomes more frequently in order for the somewhat younger individual to speak publicly, in tribute to a somewhat older one. To perform this function a pupil of the senior is usually selected, or at least one who has some direct scientific or other reason to be indebted to the recipient of the honor. To discharge his duties properly, moreover, the payer of tribute is expected to bring forward some unique twist of phrase which will distinguish or make memorable his comment.

Until recently I have never had the honor of working with Peyton Rous, and I have no gift of words adequate to discharge properly my responsibility on this occasion. My contact with this man has been, however, of such a peculiar, and to me inspiring, nature as to lead me to acquiesce with the suggestion that I refer to it publicly, in tribute to this notable recipient of the Academy Medal.

Since it is usual and useful to refer to biographical matters, I would remind you that Dr. Rous was graduated from Johns Hopkins University in 1900, and received his medical degree in 1905. He interned at the Hopkins Hospital in medicine, became interested in pathology and continued this interest at Michigan. He was called to the Rockefeller Institute in 1909 and has been there, and a leader there, since that time.

Recall, if you will, the role of Hopkins in the revolution in medical teaching and research under way then, the inspiration given to younger men by its very great faculty, and its unique point of view.

The problem of the control of cancer disease mounts steadily

* Presented at the Annual Meeting of The New York Academy of Medicine, January 8, 1959.

F. PEYTON ROUS, M.D.

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The problem of the control of cancer disease mounts steadily in importance. The major steps toward its solution have been made by a relatively small number of individuals. Among these Peyton Rous was, in 1911, one of the first. Our modern knowledge of the neoplastic process has been constructed to a large extent around his contributions.

His original demonstration of the cell-free transmission of fowl neoplasms was complete, and at the same time revolutionary. It remained a storm center of discussion among workers in cancer research for forty years. Its significance for an understanding of cancer has been fully appreciated only recently. This work remains a landmark not only in the field of its direct application, but also in virology as a whole.

But Peyton Rous saw beyond the circumscribed area of a single technique. When its possibilities were temporarily exhausted by the limited knowledge of the time, he turned, with similar skill, to other fields.

Modern hematology, replete with knowledge and procedures, gives little hint of how mysterious were the mechanisms of blood generation and destruction thirty years ago. Transfusion was a major surgical undertaking. The preservation of blood was inconceivable, its destruction little understood, and its production a mystery. "Anemia" was a diagnosis almost as useless as "fever" had been before our knowledge of the bacterial etiology of disease. Peyton Rous and his associates went far to illuminate these biological recesses.

Immunology was also the gainer by his work. New knowledge of the source of antibodies was made available. The discovery of hydrocarbon carcinogens and of a virus-induced cancer of the mammal by [Dr. Richard Edwin Shope (born 1901)] brought additional new tools to hand. The complementary actions of the carcinogens and tumor viruses became a major step forward in cancer research. It contributed much to our thinking on hidden or latent viruses that may spring into action under some apparently unrelated stimulus.

I have recounted, perhaps inadequately, some part of the formal record. May I now refer to a more personal and largely unrecorded aspect of his work. This was his contact with and influence on younger men.

***As a young pathologist just entering the field of investigative medicine, I had early contact with Dr. Rous in his capacity as editor of the Journal of Experimental Medicine. I am afraid that I was a brash young man at the time, distinctly overestimating the importance of the manuscript I had submitted.** In retrospect, this was not surprising since the work had no value whatever.*

Dr. Rous, gravely and patiently, reviewed my efforts with me, demolished my conclusions, refuted my claims and made clear the proper use of my native tongue. He then rebuilt on the ruins such a clear picture of the problem, and the procedure required to solve it, that my conceit was converted almost imperceptibly to inspiration, my enthusiasm to resolution. As I left the generous, patient, and kindly man, I was no longer the same individual. I was, however, wholly convinced that if I worked very assiduously, with the greatest vigor, for a very long time, perhaps I could make a real contribution.

Nothing, please be assured, could have turned me then from a life in medical science.

And realize, if you will, that the world of medical research is now strongly influenced by many, many individuals, much more deserving than I, who chose that career because of Dr. Rous' unique capacity for making inspiration stick and become an irrevocable resolution.

May I then, express my deep feeling and that of many others by the following words in appreciation of Dr. Peyton Rous:

- *DETERMINATION WITHOUT DOGMATISM*
- *CONSISTENCY WITH CONSIDERATION*
- *WISDOM WITH GENEROSITY*
- *A MOST BELOVED PHYSICIAN*
- *TO WHOM SCIENCE OWES SO MUCH*
- *TO WHOM THE CHARACTER OF SCIENTISTS OWES MORE*

And may I then, Peyton, present to you the Medal of The New York Academy of Medicine, a small recognition of what you have meant to so many.

1959 (Aug 14) - NYTimes : Obituary for Dr. Rhoads

The New York Times

Buy Reprints from

FRIDAY, AUGUST 14, 1959

◀ PAGE 2

DR. RHOADS DIES; LED CANCER UNIT

Director of Sloan-Kettering Since '45 — Set Up Army Research Center in War

Dr. Cornelius Packard Rhoads, director of the Sloan-Kettering Institute for Cancer Research here since 1945, died of a heart attack at his summer home in Stonington, Conn., last night. He was 61 years old.

Dr. Rhoads also was scientific director of the Memorial Center for Cancer and Allied Diseases here.

As the scientific director of Sloan-Kettering, research unit of the Memorial Center (Memorial Hospital), Dr. Rhoades was head of one of the largest concentrated programs for the study, treatment and cure of cancer in the world.

Predicted Cure in Ten Years

"Dusty" Rhoads, as he was called by his friends, had long been hopeful that a chemical control of cancer would be found, and three years ago he predicted it would come within a decade.

He was born in Springfield, Mass., on June 20, 1898. His father, Dr. George H. Rhoads, was an ophthalmologist. His mother was the former Harriet Carney.

In 1920 Dr. Rhoads graduated from Bowdoin College. He then went to the Harvard Medical School, where he was named class president and graduated cum laude in 1924.

After serving a year's interneship in surgery at the Peter Bent Brigham Hospital in Boston, Dr. Rhoads was appointed a fellow of the Trudeau Sanitarium in northern New York State. He returned to Massachusetts in 1927 as an instructor in pathology at the Harvard Medical School and assistant pathologist at Boston City Hospital.

Dr. Cornelius P. Rhoads

Joined Rockefeller Institute

Coming to New York the next year, Dr. Rhoads joined the staff of the Rockefeller Institute for Medical Research. He held various posts as a pathologist and associate in research.

Dr. Rhoads was named director of Memorial Hospital in 1940, and of the Sloan-Kettering Institute five years later. With the latter appointment, he assumed the leadership of a staff of several hundred technicians, chemists, librarians, statisticians and laboratory assistants, as well as scientists who come to the organization from many parts of the wolrd. The project has been called "the world's largest and most scientific effort to destroy cancer."

During World War II, Dr. Rhoads, who served as a colonel in the Army Medical Corps, was chief of the medical division of the Chemical Warfare Service. In this capacity he directed the establishment of the toxicological research laboratory at Edgewood Arsenal, Md., and the medical research laboratory at Dugway Proving Ground in Utah. He also set up medical testing stations in Florida and the Panama Canal Zone.

Held Legion of Merit

In awarding the Legion of Merit to him, the Army cited Dr. Rhoads as having "developed new methods of diagnosis and treatment for the relief of injuries due to toxic chemicals, and perfected a compound to counter the effects of blister gas. He also developed equipment for detecting gas in air, food and water."

Another of his activities during that period was as chairman of the blood-procurement program and vice chairman of the committe on treatment of gas casualties of the National Research Council.

After the war Dr. Rhoads was special consultant on cancer to the United States Public Health Service and consultant to the Brookhaven (L. I.) National Laboratories of the Atomic Energy Commission. He also served in other posts connected with government programs.

Dr. Rhoads belonged to more than thirty professional medical and scientific bodies. A leading member of the American Cancer Society, he also held membership in the Society of Medical Jurisprudence and the American Society of Tropical Medicine.

His articles in medical journals numbered more than 100, and included fields of poliomyelitis, renal physiology, anemia, clinical biochemistry of gastric cancers, steroid metastasis in cancer and chemotherapy of cancer.

Urged 'Frontal Attack'

"Some authorities," Dr. Rhoades once said in an interview, "think that we cannot solve the cancer problem until we have made a great, basic, unexpected discovery, perhaps in some apparently unrelated field. I disagree. I think we know enough to go ahead and make a frontal attack with all our forces. * * * We'll follow every promising lead, and we know a lot of them. If the ivory-tower men solve the problems ahead of us, we won't feel we've wasted our time."

This interview, as others, was given by the quiet-spoken man with the close-cropped, iron-gray hair and blue eyes in room 102L at the hospital, as he surveyed his "tower of hope" and the fourteen-story Sloan-Kettering Institute hard by.

Dr. Rhoads leaves his wife, the former Katherine Southwick Colman.

A spokesman for Sloan-Kettering said funeral arrangements would be announced here today.

[HN01L2][GDrive]

BITCHUTE @Housatonic YOUTUBE @HousatonicLive ODYSEE @Housatonic BRIGHTEON @Housatonic

Prof. Jürgen Albrecht Richt (born 1958)

Associations

- **Prof. Rudolf Rott (born 1926)** (Right co-wrote Rott's obituary with **Dr. Hans-Dieter Klenk (born 1938)**)
- **Dr. Hans-Dieter Klenk (born 1938)**
- Dr. Heinz Ulrich Feldmann (born 1959)

https://www.vet.k-state.edu/academics/dmp/faculty-staff/faculty/richt/

born 15 Nov 1958 (https://www.ancestry.com/discoveryui-content/view/287945330:1732?tid=&pid=&queryId=f21ecafabd0fdd9dc7d01d91bb4a2f64&_phsrc=TmZ18&_phstart=successSource)

middle name - https://search.ancestry.com/cgi-bin/sse.dll?indiv=1&dbid=8784&h=3256413&tid=&pid=&queryId=f21ecafabd0fdd9dc7d01d91bb4a2f64&usePUB=true&_phsrc=TmZ17&_phstart=successSource

2016 (Dec) - Jürgen Richt Bio, from "Faculté de Pharmacie Salle du Conseil"

https://pharmacie.edu.umontpellier.fr/files/2016/12/Prof-Richt-Talk-Emerging-disease-Mitigation-4hr30-PM-Dec-16-Friday.pdf

2014-12-prof-richt-talk-emerging-disease-mitigation-4hr30-pm-dec-16-friday.pdf

Prof Juergen Richt (Contact Francisco VEAS, Francisco.veas@ird.fr mobile:0681416506) : “Research and Infectious Diseases Mitigation Activities of the Center of Excellence for Emerging and Zoonotic Animal Diseases” - Department of Homeland Security in USA

Programs to control worldwide emerging zoonotic diseases are major challenges that one the most performing worldwide lab is doing with an outstanding network located around the World.

Professor Richt has created a huge scientific and technological platform generating solutions for emerging pathogens. This platform will be enlarged with the transfer to Kansas of the Plume Island lab in New York, which is the biggest lab in the World for dangerous emerging pathogens to create the National Bio and Agro-defense Facility (NBAF). The Laboratoire d'ImmunoPhysiopathologie Moléculaire Comparée

(IRD-UMR Ministère de la Défense) and its director Francisco Veas are proud to share with Montpellier's scientific, medical, veterinary and pharma community, an outstanding moment of basic and translational science.

Speaker Biography

Jurgen Richt, DVM, PhD is Regents Distinguished Professor of the Kansas State University, College of Veterinary Medicine Director, Department of Homeland Security Center of Excellence for Emerging and Zoonotic Animal Diseases

A deep fascination with the ability of an infectious agent to outsmart its host has been the driving force behind Jurgen Richt's expertise in diagnosing and treating zoonotic diseases -- those which can be transmitted from animals to humans or vice versa. Richt is a veterinary microbiologist who has worked with multiple agents of zoonotic potential, including bovine spongiform encephalopathy or mad cow disease, chronic wasting disease, animal influenza viruses, Rift Valley Fever virus, Borna virus and other emerging pathogens. Richt's career, which includes a seven-year assignment as lead scientist at the U.S. Department of Agriculture's National Animal Disease Center, has been spent developing novel testing methods and remedies for a number of animal and zoonotic diseases.

Richt joined Kansas State University in 2008 as Regents distinguished professor and Kansas Bioscience eminent scholar in the College of Veterinary Medicine's department of diagnostic medicine and pathobiology. Richt became the director of the Department of Homeland Security's Center of Excellence for Emerging and Zoonotic Animal Diseases, or CEEZAD, at Kansas State University in 2010.

As director, he leads an international network for scientific research involving 15 universities, various commercial firms and 25 principal investigators. In 2013 he was named a university distinguished professor, a lifelong title and the highest honor the university can bestow on its faculty.

Richt and colleagues were the first to generate prion protein-deficient cattle that are healthy and resistant to prion diseases. In his influenza research, Richt's laboratory was the first to establish a reverse genetics system for studying swine influenza virus pathogenesis in its natural host -- the pig. These studies led to the identification of influenza virulence factors and the development of a modified live virus vaccine based on a genetically engineered truncation within the NS1 gene. Richt and colleagues used the reconstructed 1918 influenza virus for experiments using the biosafety level-4 bio-containment facilities in Winnipeg, Canada.

At Kansas State University, Richt has established a research program that involves a multidisciplinary approach to solving both existing and emerging animal and zoonotic disease concerns. This includes the development of novel vaccines against threat diseases like Rift Valley Fever or avian flu as well as assays to rapidly detect these agents. Recently, Richt and colleagues developed a novel subunit vaccine for Rift Valley Fever.

Richt has authored or co-authored more than 170 peer-reviewed articles. His work has been published extensively, including in such prestigious journals as Nature Biotechnology, Science, Journal of Experimental Medicine, PNAS, Cell Host Microbe and Journal of Virology. He also holds a position on the prestigious scientific advisory board of the Scientific and Technical Review of the World Organization for Animal Health in Paris. In 2011, Richt received the Pfizer Animal Health Award for Research Excellence. Now, his aim has been to combine significant scientific research with the communication of results to both scientists and nonscientists.

2003 - Wrote obituary/memoriam for Rudolf Rott (1926-2003), with Hans-Dieter Klenk

Source is Virology Division News : [HP0051][GDrive] / Obituary/memoriam for **Prof. Rudolf Rott (born 1926)** , written with **Dr. Hans-Dieter Klenk (born 1938)** .

2009 - CO-authoring papers with Heinz Feldmann

https://europepmc.org/article/med/19614930

Emerging zoonoses: recent advances and future challenges.

Richt JA, Feldmann H

Zoonoses and Public Health, 31 Jul 2009, 56(6-7):257

DOI: 10.1111/j.1863-2378.2009.01288.x PMID: 19614930

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James Gerard Roche (born 1939)

Wikipedia James G. Roche

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See [HK003Q][GDrive]

20th United States Secretary of the Air Force

In office

June 1, 2001 – January 20, 2005

President

George W. Bush

Preceded by

F. Whitten Peters

Succeeded by

Peter B. Teets (Acting)

Personal details

Born

James Gerard Roche

December 16, 1939 (age 80)

New York City, New York, U.S.

Political party

Democratic

Education

Illinois Institute of Technology (BA)

Naval Postgraduate School (MS)

Harvard University (DBA)

Military service

Allegiance

United States

Branch/service

United States Navy

Years of service

1960–1983

James Gerard Roche (born December 16, 1939) is an American politician. He served as the 20th Secretary of the Air Force, serving from January 20, 2001 to January 20, 2005. Prior to serving as secretary, Roche served in the United States Navy for 23 years, and as an executive with Northrop Grumman.

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Background[edit]

Roche was born in Brooklyn, New York.[1] He served for 23 years in the United States Navy before retiring with the rank of Captain in 1983. As a naval officer, his assignments included Principal Deputy Director of the State Department's Policy Planning Staff; Senior Professional Staff Member of the Senate Select Committee on Intelligence; and assistant director for the Defense Department's Office of Net Assessment. He commanded USS *Buchanan*, a guided missile destroyer, and was awarded the Arleigh Burke Fleet Trophy for the Navy's most improved combat unit in the Pacific in 1974.

Prior to this appointment, Secretary Roche held several executive positions with Northrop Grumman Corp., including corporate vice president and president, Electronic Sensors and Systems Sector. Prior to joining Northrop Grumman in 1984, he was Democratic Staff Director of the U.S. Senate Armed Services Committee.

Secretary of the Air Force[edit]

Secretary Roche served as a member of the Secretary of Defense's Policy Board and was a member of the Council of Foreign Relations and the International Institute of Strategic Studies. Roche was awarded various campaign ribbons and military medals.

Ethics investigation[edit]

Roche was also cited for ethics violations regarding the Air Force's decision to lease KC-767 tanker aircraft.[2]

In 2003, during the Air Force's deliberations concerning the replacement of KC-135 aircraft, Ms. Robin Cleveland, Associate Director of National Security Programs, OMB, emailed Dr. Roche asking his assistance in gaining employment with Northrup Grumman Corporation (for which he had once been a senior executive) after she left her position with the government. Dr. Roche did so and replied to Ms. Cleveland telling her so. This was a DoD ethics violation. The investigation found that Roche had 'misused his office for public gain' and used government communications to do so, but made no recommendations for action.[3]

Secretary of Defense Donald Rumsfeld saw no reason to pursue the matter.

Education[edit]

Roche at a Pentagon briefing.

- 1960 Bachelor of Science degree in language, literature and philosophy, Illinois Institute of Technology, Chicago

- 1966 Master of Science degree with distinction in operations research, U.S. Naval Postgraduate School, Monterey, California
- 1972 Doctorate degree in business administration, Harvard Graduate School of Business Administration, Cambridge, Massachusetts
- 2002 Honorary Doctorate, Illinois Institute of Technology
- 2003 Honorary Doctorate, St. Thomas Aquinas College, Sparkill, New York

Career chronology[edit]

- 1960–1983, commissioned United States Navy officer, retiring with the rank of captain
- 1983–1984, Democratic Staff Director, Senate Armed Services Committee, Washington, D.C.
- 1984–1989, vice president and director, Analysis Center, Northrop Grumman Corp., Washington, D.C.
- 1989–1991, vice president and special assistant to the chairman, president and chief executive officer, Northrop Grumman Corp., Los Angeles, California
- 1991–1992, vice president of Advanced Development and Planning, Northrop Grumman Corp., Los Angeles, California
- 1992–1996, Chief Advanced Development, Planning, and Public Affairs Officer, Northrop Grumman Corp., Los Angeles, California
- 1996–2001, corporate vice president and president, Electronic Sensors & Systems Sector, Northrop Grumman Corp., Baltimore, Maryland
- 2001–2005, Secretary of the Air Force, Washington, D.C.

Awards and honors[edit]

- Defense Superior Service Medal
- Legion of Merit
- Navy Commendation Medal
- Navy Expeditionary Medal
- National Defense Service Medal
- Vietnam Service Medal
- United States Navy Distinguished Public Service Medal
- 2003 Department of the Army Distinguished Civilian Service Award
- 2003 Illinois Institute of Technology Professional Achievement Award
- 2003 U.S. Air Force Order of the Sword

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- ^ Smith, R. Jeffrey (February 10, 2005). "Roche Cited for 2 Ethics Violations". *The Washington Post*. Retrieved 2008-10-10.
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Nelson Aldrich Rockefeller (born 1908)

Wikipedia Nelson Rockefeller

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[HK006O][GDrive]

Nelson Rockefeller

Official portrait, 1975

41st Vice President of the United States

In office

December 19, 1974 – January 20, 1977

President

Gerald Ford

Preceded by

Gerald Ford

Succeeded by

Walter Mondale

49th Governor of New York

In office

January 1, 1959 – December 18, 1973

Lieutenant

Malcolm Wilson

Preceded by

W. Averell Harriman

Succeeded by

Malcolm Wilson

1st Under Secretary of Health, Education and Welfare

In office

June 11, 1953 – December 22, 1954

President

Dwight D. Eisenhower

Preceded by

Position established

Succeeded by

Herold Christian Hunt

1st Assistant Secretary of State for American Republic Affairs

In office

December 20, 1944 – August 17, 1945

President

Franklin D. Roosevelt

Harry S. Truman

Preceded by

Position established

Succeeded by

Spruille Braden

Personal details

Born

Nelson Aldrich Rockefeller

July 8, 1908

Bar Harbor, Maine, U.S.

Died

January 26, 1979 (aged 70)

New York City, New York, U.S.

Resting place

Rockefeller Family Cemetery

Sleepy Hollow, New York

Political party

Republican

Spouse(s)

Mary Todhunter Clark

(m. 1930; div. 1962)

Margaretta Large Fitler

(m. 1963)

Children

7, including Rodman, Steven, Michael, and Mark

Parents

John D. Rockefeller Jr.

Abby Aldrich

Education

Dartmouth College (BA)

Signature

Nelson Aldrich Rockefeller (July 8, 1908 – January 26, 1979) was an American businessman and politician who served as the 41st vice president of the United States from December 1974 to January 1977, and previously as the 49th governor of New York from 1959 to 1973. He also served as assistant secretary of State for American Republic Affairs for Presidents Franklin D. Roosevelt and Harry S. Truman (1944–1945) as well as under secretary of Health, Education and Welfare under Dwight D. Eisenhower from 1953 to 1954. A grandson of billionaire John D. Rockefeller and a member of the wealthy Rockefeller family, he was a noted art collector and served as administrator of Rockefeller Center in Manhattan, New York City.

Rockefeller was a Republican who was often considered to be liberal, progressive,[1] or moderate. In an agreement that was termed the Treaty of Fifth Avenue, Rockefeller persuaded Richard Nixon to alter the Republican Party platform just before the 1960 Republican Convention. In his time, liberals in the Republican Party were called "Rockefeller Republicans". As Governor of New York from 1959 to 1973, Rockefeller's achievements included the expansion of the State University of New York, efforts to protect the environment, the construction of the Governor Nelson A. Rockefeller Empire State Plaza in Albany, increased facilities and personnel for medical care, and the creation of the New York State Council on the Arts.

After unsuccessfully seeking the Republican presidential nomination in 1960, 1964, and 1968, Rockefeller was appointed vice president of the United States under President Gerald Ford, who ascended to the presidency following the August 1974 resignation of Richard Nixon. Rockefeller was the second vice president appointed to the position under the 25th Amendment, following Ford himself. Rockefeller was not placed on the 1976 Republican ticket with Ford. He retired from politics in 1977 and died two years later.

As a businessman, Rockefeller was president and later chair of Rockefeller Center, Inc., and he formed the International Basic Economy Corporation in 1947. Rockefeller assembled a significant art collection and promoted public access to the arts. He served as trustee, treasurer, and president of the Museum of Modern Art, and founded the Museum of Primitive Art in 1954. In the area of philanthropy, he founded the Rockefeller Brothers Fund in 1940 with his four brothers and established the American International Association for Economic and Social Development in 1946.

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Early life and education (1908–1930)

See also: Rockefeller family

Rockefeller was born on July 8, 1908 at 12:10 pm, in Bar Harbor, Maine.[2][3] Named Nelson Aldrich after his maternal grandfather Nelson W. Aldrich,[3] he was the second son and third child of financier and philanthropist John Davison Rockefeller Jr. and philanthropist and socialite Abigail "Abby" Aldrich.[2][3] He had two older siblings—Abby and John III—as well as three younger brothers: Laurance, Winthrop, and David.[4] Their father, John Jr., was the only son of Standard Oil co-founder John D. Rockefeller and schoolteacher Laura Spelman.[5] Their mother, Abby, was a daughter of Senator Nelson Wilmarth Aldrich and Abigail P. Greene.[6]

Rockefeller grew up in his family's homes in New York City (mainly at 10 West 54th Street), a country home in Pocantico Hills, New York, and a summer home in Seal Harbor, Maine.[4][7] The family also travelled widely.[8] He received his elementary, middle, and high school education at the Lincoln School in New York City, an experimental school administered by Teachers College of Columbia University and funded by the Rockefeller family.[4] Nelson was known to disappear on the way to school, and was once found exploring the cities sewer system. As a child, he was the "indisputable leader" of his brothers, becoming particularly close to Laurance.[9]

Although his parents saw potential for Nelson to be succeed in life, he was a poor student. Generally in the lower third of his class, he almost failed ninth grade and had undiagnosed Dyslexia. Nelson's biographer Joseph E. Persico wrote that as a child he "demonstrated a discipline that throughout life would serve him in lieu of brilliance." Although Nelson wasn't accepted into Princeton University, he got into Dartmouth College,[9] arriving on campus in 1926.[10] While in college, he met Mary Todhunter Clark at the summer home in Maine, and the two fell in love.[11] They were engaged in autumn 1929.[12] In 1930, he graduated cum laude with an A.B. degree in economics from Dartmouth College, where he was a member of Casque and Gauntlet (a senior society), Phi Beta Kappa, and Psi Upsilon.[13][14][15] Rockefeller and Mary were married after he graduated, on June 23, 1930, at Bala Cynwyd, Pennsylvania.[16]

Early career (1931–1939)

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Following his graduation, Rockefeller worked in a number of family-related businesses, including Chase National Bank; Rockefeller Center, Inc., joining the board of directors in 1931, serving as president, 1938–1945 and 1948–1951, and as chairman, 1945–1953 and 1956–1958; and Creole Petroleum Corporation, the Venezuelan subsidiary of Standard Oil of New Jersey, 1935–1940.

Rockefeller served as a member of the Westchester County Board of Health from 1933 to 1953. His service with Creole Petroleum led to his deep, lifelong interest in Latin America. He became fluent in the Spanish language.

Mid-career (1940–1958)

Coordinator of Inter-American Affairs (CIAA)

Nelson Rockefeller, Coordinator of Inter-American Affairs (1940)

In 1940, after he expressed his concern to President Franklin D. Roosevelt over Nazi influence in Latin America, the President appointed Rockfeller to the new position of Coordinator of Inter-American Affairs (CIAA) in the Office of the Coordinator of Inter-American Affairs (OCIAA).[17] Rockefeller was charged with overseeing a program of U.S. cooperation with the nations of Latin America to help raise the standard of living, to achieve better relations among the nations of the western hemisphere, and to counter rising Nazi influence in the region.[18] He facilitated this form of cultural diplomacy by collaborating with the Director of Latin American Relations at the CBS radio network Edmund A. Chester.[19]

Rockefeller (right) with Brazilian President Getúlio Vargas in 1942

The Roosevelt administration encouraged Hollywood to produce films to encourage positive relations with Latin America.[20] Rockefeller required changes in the movie Down Argentine Way (1940) because it was considered offensive to Argentines. It was much more popular in the United States than in Latin America. Charlie Chaplin's satirical The Great Dictator (1940) was banned in several countries.[21]

In the spring of 1943, Rockefeller supported extensive negotiations and mission of North American members of the Junior Chamber of Commerce to Latin America as Coordinator of Inter-American Affairs of the US State Department, establishing the Junior Chamber International after its first Inter-American Congress in December 1944 at Mexico City. After coming back from the Inter-American Congress, Rockefeller convinced his father, John D. Rockefeller Jr., to donate the land to the city of New York to build the foundations of what would later become the United Nations Headquarters.[22][23]

Assistant Secretary of State for American Republic Affairs

In 1944, President Roosevelt appointed Rockefeller Assistant Secretary of State for American Republic Affairs. As Assistant Secretary of State, he initiated the Inter-American Conference on Problems of War and Peace in 1945. The conference produced the Act of Chapultepec, which provided the framework for economic, social and defense cooperation among the nations of the Americas, and set the principle that an attack on one of these nations would be regarded as an attack on all and jointly resisted. Rockefeller signed the Act on behalf of the United States.[24]

Rockefeller was a member of the U.S. delegation at the United Nations Conference on International Organization at San Francisco in 1945; this gathering marked the UN's founding. At the Conference there was considerable opposition to the idea of permitting, within the UN charter, the formation of regional pacts such as the Act of Chapultepec. Rockefeller, who believed that the inclusion was essential, especially to U.S. policy in Latin America, successfully urged the need for regional pacts within the framework of the UN.[25] Rockefeller was also instrumental in persuading the UN to establish its headquarters in New York City.[22]

Nelson Rockefeller, Under Secretary of Health, Education and Welfare, makes a presentation on a proposed public/private health reinsurance program, 1954.

President Truman fired Rockefeller,[26] reversed his policies, and shut down the OCIAA.[27] Reich says that in official Washington, Rockefeller had become "a discredited figure, a pariah." He returned to New York.[28]

International Basic Economy Corporation (IBEC)

Rockefeller formed the International Basic Economy Corporation (IBEC) in 1947 to jointly continue the work he had begun as Coordinator of Inter-American Affairs. He intermittently served as president through 1958. IBEC was a for-profit business that established companies that would stimulate underdeveloped economies of certain countries. It was hoped that the success of these companies would encourage investors in those countries to set up competing or supporting businesses and further stimulate the local economy.[29] Rockefeller established model farms in Venezuela, Ecuador, and Brazil. He maintained a home at Monte Sacro, the farm in Venezuela.[30]

Chairman of the International Development Advisory Board

Rockefeller returned to public service in 1950 when President Harry S. Trumanappointed him Chairman of the International Development Advisory Board.[31] The Board was charged with developing a plan for implementing the President's Point IV program of providing foreign technical assistance. In 1952 President-Elect Dwight D. Eisenhower asked Rockefeller to Chair the President's Advisory Committee on Government Organization to recommend ways of improving efficiency and effectiveness of the executive branch of the federal government. Rockefeller recommended thirteen reorganization plans, all of which were implemented. The plans implemented organizational changes in the Department of Defense, the Office of Defense Mobilization and the Department of Agriculture. His recommendations also led to the creation of the Department of Health, Education and Welfare. Rockefeller was appointed Under-Secretary of this new department in 1953. Rockefeller was active in HEW's legislative program and implemented measures that added ten million people under the Social Security program.[32]

Special Assistant to the President for Foreign Affairs

In 1954, he was appointed Special Assistant to the President for Foreign Affairs (sometimes referred to as Special Assistant to the President for Psychological Warfare). He was tasked with providing the President with advice and assistance in developing programs by which the various departments of the government could counter Soviet foreign policy challenges. As part of this responsibility he was named as the President's representative on the Operations Coordinating Board, a committee of the National Security Council. The other members were the Undersecretary of State, the Deputy Secretary of Defense, the director of the Foreign Operations Administration, and the Central Intelligence Agency director. The OCB's purpose was to oversee coordinated execution of security policy and plans, including clandestine operations.[33]

Rockefeller broadly interpreted his directive and became an advocate for foreign economic aid as indispensable to national security. Most of Rockefeller's initiatives were blocked by Secretary of State John Foster Dulles and his Under Secretary, Herbert Hoover Jr., both traditionalists who resented what they perceived as outside interference from Rockefeller,[34] and by Treasury Secretary George M. Humphrey for financial reasons.[35] However, in June 1955 Rockefeller convened a week-long meeting of experts from various disciplines to assess the U.S. position in the psychological aspects of the Cold War and develop proposals that could give the U.S. the initiative at the upcoming Summit Conference in Geneva. The meeting was held at the Marine Corps school at Quantico, Virginia, and became known as the Quantico Study. The Quantico panel developed a proposal called "open skies" wherein the U.S. and the Soviet Union would exchange blueprints of military installations and agree to mutual aerial reconnaissance. Thus military buildups would be revealed and the danger of surprise attacks minimized. It was a counter proposal to the Soviet proposal of universal disarmament. The feeling was that the Soviets could not refuse the proposal if they were serious about disarmament.[36]

In March 1955, Rockefeller proposed the creation of the Planning Coordination Group, a small high level group that would plan and develop national security operations, both overt and covert.[37] The group consisted of the Undersecretary of State, the Deputy Secretary of Defense, the director the CIA, and Special Assistant Rockefeller as chairman. The group's purpose was to oversee CIA operation and other anti-communist actions. However, State Department officials and CIA Director Allen Dulles refused to cooperate with the group and its initiatives were stymied or ignored.[38] In September Rockefeller recommended the abolishment of the PCG, and in December he resigned as Special Assistant to the President.

Vice President Rockefeller (right) with Secretary of State Henry Kissinger, January 3, 1975.

In 1956, he created the Special Studies Project, a major seven-panel planning group directed by Henry Kissinger and funded by the Rockefeller Brothers Fund, of which he was then president. It was an ambitious study created to define the central problems and opportunities facing the U.S. in the future, and to clarify national purposes and objectives. The reports were published individually as they were released and were republished together in 1961 as Prospect for America: The Rockefeller Panel Reports.[39]

The Special Studies Project came into national prominence with the early release of its military subpanel's report, whose principal recommendation was a massive military buildup to counter a then-perceived military superiority threat posed by the USSR. The report was released two months after the October 1957 launch of Sputnik, and its recommendations were fully endorsed by Eisenhower in his January 1958 State of the Union address.[40]

This initial contact with Kissinger was to develop into a lifelong relationship; Kissinger was later to be described as his closest intellectual associate. From this period Rockefeller employed Kissinger as a personally funded part-time consultant, principally on foreign policy issues, until the appointment to his staff became full-time in late 1968. In 1969, when Kissinger entered Richard Nixon's administration, Rockefeller paid him $50,000 as a severance payment.[41]

Governor of New York (1959–1973)

Gov. Rockefeller meets with President Lyndon B. Johnson in 1968

Rockefeller resigned from the federal government in 1956 to focus on New York State and on national politics.[42] From September 1956 to April 1958, he chaired the Temporary State Commission on the Constitutional Convention.[43] That was followed by his chairmanship of the Special Legislative Committee on the Revision and Simplification of the Constitution.[43] In the state election of 1958, he was elected governor of New York by over 570,000 votes, defeating incumbent W. Averell Harriman, even though 1958 was a banner year for Democrats elsewhere in the nation.[44] Rockefeller was re-elected in the three subsequent elections in 1962, 1966 and 1970, increasing the state's role in education, environmental protection, transportation, housing, welfare, medical aid, civil rights, and the arts. To pay for the increased government spending, Rockefeller increased taxation - for example, a sales tax was introduced in New York in 1965.[45] He resigned three years into his fourth term and began to work at the Commission on Critical Choices for Americans.[46]

Abortion

Rockefeller supported reform of New York's abortion laws beginning around 1968. The proposals supported by his administration would not have repealed the long-standing prohibition, but would have expanded the exceptions allowed for the protection of the mother's health, or in circumstances of fetal abnormality. The reform bills did not pass. However, when an outright repeal of the prohibition managed to pass in 1970, Rockefeller signed it. In 1972, he vetoed another bill that would have restored the abortion ban. He said in his 1972 veto message, "I do not believe it right for one group to impose its vision of morality on an entire society."[47]

Arts and culture

Rockefeller created the first State Council on the Arts in the country, which became a model for the National Endowment for the Arts. He also oversaw the construction of the Saratoga Performing Arts Center in Saratoga Spa State Park.[48] He supported the bill, enacted in June 1966, which acquired Olana, home

of Hudson River School artist Frederic Edwin Church, as a state historic site.[49]

Buildings and public works

Rockefeller engaged in massive building projects that left a profound mark on the state of New York. (Some of his detractors claimed that he had an "Edifice Complex.")[50] He was personally interested in the planning, design, and construction of the many projects initiated during his administration, consistent with his interest in architecture. In addition, Rockefeller's construction programs included the US$2 billion South Mall in Albany, later renamed the Nelson A. Rockefeller Empire State Plaza by Gov. Hugh Carey in 1978. It is a 98-acre (40 ha) campus of skyscrapers housing state offices and public plazas punctuated by an egg-shaped arts center. Along with the Empire State Plaza, in 1966 Rockefeller proposed the construction of the Adam Clayton Powell Jr. State Office Building in Harlem. The building was ultimately completed in 1973. While in office he supported the construction of the World Trade Center.[51]

Civil rights

Rockefeller achieved virtual total prohibition of discrimination in housing and places of public accommodation. He outlawed job discrimination based on sex or age; increased by nearly 50% the number of African Americans and Hispanics holding state jobs; appointed women to head the largest number of state agencies in state history; prohibited discrimination against women in education, employment, housing and credit applications; admitted the first women to the State Police; initiated affirmative action programs for women in state government; and backed New York's ratification of the Equal Rights Amendment to the U.S. Constitution. He outlawed "block-busting" as a means of artificially depressing housing values and banned discrimination in the sale of all forms of insurance.[52]

Commission on Critical Choices for Americans

Rockefeller addresses a February 1975 meeting of the Commission on Critical Choices for Americans

In 1973, Rockefeller worked with former Delaware Governor Russell W. Peterson to establish the Commission on Critical Choices for Americans.[53] The Commission was a private study project on national and international policy similar to the Special Studies Project he led 15 years earlier.[54] It was made up of a nationally representative, bipartisan group of 42 prominent Americans drawn from far-ranging fields of interest who served on a voluntary basis. Members included the majority and minority leaders of both houses of Congress. The Commission gathered information and insights to better understand the problems facing America, and to present to the American public the "critical choices" to be made in facing those problems.[citation needed]

Rockefeller resigned as New York's governor in December 1973 in order to devote himself full-time to the commission's work as its chairman.[54] He continued in that position after being sworn in as vice president, serving until February 28, 1975.[55]

Conservation

Consistent with his personal interest in design and planning, Rockefeller began expansion of the New York State Parkssystem and improvement of park facilities. He persuaded voters to approve three major bond acts to raise more than $300 million for acquisition of park and forest preserve land[56] and he built or started 55 new state parks.[57] Rockefeller initiated studies of environmental issues, such as loss of agricultural land through development—an issue now characterized as "sprawl." In September 1968, Rockefeller appointed the Temporary Study Commission on the Future of the Adirondacks. This led to his introduction to the Legislature in 1971 of a bill to create the controversial Adirondack Park Agency,[58] which was designed to protect the Adirondack State Park from encroaching development. Also, he launched the Pure Waters Program, the first state bond issue to end water pollution; created the Department of Environmental Conservation; banned DDT and other pesticides; and established the Office of Parks and Recreation.[59]

Crime

During his 15 years as governor, Rockefeller doubled the size of the state police, established the New York State Police Academy, adopted the "stop and frisk" and "no-knock" laws to strengthen police powers, and authorized 228 additional state judgeships to reduce court congestion.[60] New York was the last state to have a mandatory death penalty for premeditated first degree murder. In 1963 Rockefeller signed legislation abandoning that and establishing a two-stage trial for murder cases with punishment determined in the second stage.[61] Rockefeller was a supporter of capital punishment and oversaw 14 executions by electrocution as governor.[62] The last execution, of Eddie Mays in 1963, remains to date the last execution in New York and was the last execution before Furman v. Georgia in the Northeast.[63] However, despite his personal support for capital punishment, Rockefeller signed a bill in 1965 to abolish the death penalty except in cases involving the murder of police officers.[64]

Rockefeller was also a supporter of the "law and order" platform.[65]

Attica prison riot

Main article: Attica Prison riot

On September 9, 1971, prisoners at the state penitentiary at Attica, NY, took control of a cell block and seized thirty-nine correctional officers as hostages. After four days of negotiations, Department of Correctional Services Commissioner Russell Oswald agreed to most of the inmates' demands for various reforms but refused to grant complete amnesty to the rioters, with passage out of the country and removal of the prison's superintendent. When negotiations stalled and the hostages appeared to be in imminent danger, Rockefeller ordered New York State Police and national guard troops to restore order and take back the prison on September 13. Thirty nine people died in the assault, including ten of the hostages, nine of which were killed by the State Police and National Guard soldiers. An additional eighty people were wounded in what was called "a turkey shoot" by state prosecutor Malcolm Bell.[66]

A later investigation showed all but three of the deaths were caused by the gunfire of the National Guard and police. The other three were inmates killed by other inmates at the beginning of the riot. Opponents blamed Rockefeller for these deaths in part because of his refusal to go to the prison and negotiate with the inmates, while his supporters, including many conservatives who had often vocally differed with him in the past, defended his actions as being necessary to the preservation of law and order. "I was trying to do the best I could to save the hostages, save the prisoners, restore order, and preserve our system without undertaking actions which could set a precedent which would go across this country like wildfire," Rockefeller later said.[67]

In a telephone call with President Nixon, Rockefeller explained the deaths by saying "that's life."[68]

Drugs

What became known as the "Rockefeller drug laws" were a product of Rockefeller's attempt to deal with the rapid increase in narcotics addiction and related crime. In 1962, he proposed a program of voluntary rehabilitation for addicted convicts rather than prison time. This was approved by the

legislature, but by 1966 it was evident that this program was not working, as most addicts chose short prison terms rather than three years of treatment. Rockefeller then turned to a program of compulsory treatment, rehabilitation, and aftercare for three years. While this program saw success in rehabilitating addicts, it did little to reduce the narcotics trade and associated crime. Rockefeller was also frustrated by his belief that the federal government was not doing anything significant to address the problem. Feeling that existing laws and the way they were being implemented did not solve the problem of the "drug pusher", and pressured by voters angry about the drug problem, Rockefeller proposed a hard-line approach. As approved by the legislature in 1973, the new drug laws included mandatory life sentences without the possibility of plea-bargaining or parole for all drug users, dealers, and those convicted of drug-related violent crimes; a $1,000 reward for information leading to the conviction of drug pushers; and removing less harsh penalties for youthful offenders. Public support for the measures was mixed, as were the results. They did not lead more addicts to seek rehabilitation as hoped, and ultimately did not solve the problem of drug trafficking. These were among the toughest drug laws in the United States when they were enacted and are still on the books, albeit in moderated form.[69] To carry out the rehabilitation program, Rockefeller created the State Narcotics Addiction Control Commission (later the State Drug Abuse Control Commission.) New York also provided the financial support for research in methadone maintenance and the administration of the largest methadone maintenance program in the US.[60]

Education

Rockefeller was the driving force in turning the State University of New York into the largest system of public higher education in the United States. Under his governorship it grew from 29 campuses and 38,000 full-time students to 72 campuses and 232,000 full-time students. Rockefeller championed the acquisition of the private University of Buffalo into the SUNY system, making the State University of New York at Buffalo, now the largest public university in New York.[70][71] In 1971, he championed the creation of Empire State College to provide higher education to adults by removing impediments to access such as time, location, and institutional processes.

Other accomplishments included more than quadrupling state aid to primary and secondary schools; providing the first state financial support for educational television; and requiring special education for children with disabilities in public schools.[72]

Housing

To create more low-income housing, Rockefeller created the New York State Urban Development Corporation (UDC), with unprecedented powers to override local zoning, condemn property, and create financing schemes to carry out desired development. The financing involved the creation of a new sort of bond—what came to be called "moral obligation" bonds. They were not backed by the full faith and credit of the State, but the quasi-public arrangements were meant to, and did, convey the impression that the State would not let them fail. Rockefeller is criticized in some quarters for having contributed to the "Too Big To Fail" phenomenon in U.S. finance in general.[73] (UDC is now called the Empire State Development Corporation.) By 1973, the Rockefeller administration had completed or started over 88,000 units of housing for limited income families and the aging.[74]

Miscellaneous programs

Rockefeller with labor leader David Dubinsky, Mayor Robert F. Wagner Jr., and Cardinal Spellman at the 1959 Labor Day Parade in New York City

Rockefeller worked with the legislature and unions to create generous pension programs for many public workers, such as teachers, professors, firefighters, police officers, and prison guards. He proposed the first statewide minimum wage law in the U.S. which was increased five times during his administration. Additional accomplishments of Rockefeller's fifteen years as governor of New York include initiating the state lottery and off-track betting; adopting modern treatment techniques in state mental hospitals to reduce the number of mentally ill patients by over 50%; creating the State Office of the Aging and constructing nearly 12,000 units of housing for the aging; the first mandatory seatbelt law in the US; and creating the State Consumer Protection Board.[75]

National Commission on Water Quality

In May 1973, President Richard Nixon appointed Rockefeller chairman of the National Commission on Water Quality. The Commission was charged with determining the technological, economic, social and environmental implications of meeting water quality standards mandated by the Federal Water Pollution Control Act Amendments of 1972. The Commission issued its report in March 1976 and he testified before Congress on its findings. Rockefeller served on the Commission until July 1, 1976.[citation needed]

Presidential Mission to Latin America

On February 17, 1969, President Nixon commissioned a study to assess the state of Latin America. Nixon appointed Rockefeller to direct the study. The poor relationship between the two politicians suggested that Nixon would not be that interested in the results of the study. There was a lack of interest for the region in the late 1960s to early 1970s.[76]

In April and May 1969, at the request of President Nixon, Rockefeller and a team of 23 advisors visited 20 American republics during four trips to solicit opinions of U.S. inter-American policies and to determine the needs and conditions of each country. Most of the trips turned out to be an embarrassment. Among the recommendations in Rockefeller's report to the President were preferential trade agreements with Latin American countries, refinancing the region's foreign debt, and removing bureaucratic impediments that prevented the efficient use of U.S. aid. The Nixon administration did little to implement the report's recommendations.[77] In his report preface, Rockefeller wrote the following:

There is general frustration over the failure to achieve a more rapid improvement in standards of living. The United States, because of its identification with the failure of the Alliance for Progress to live up to expectations, is blamed. People in the countries concerned also used our visit as an opportunity to demonstrate their frustrations with the failure of their own governments to meet their needs ... demonstrations that began over grievances were taken over and exacerbated by anti-US and subversive elements which sought to weaken the United States, and their own governments in the process.[76]

The major part of the Rockefeller report suggested a reduction of U.S. involvement, "we, in the United States, cannot determine the internal political structure of any other nation". Because there was little the United States should or could do toward changing the political atmosphere in other countries, there was no reason to attempt to use economic aid as a political tool. This was the justification to reduce economic aid in Latin America. The Rockefeller report called for some aid to continue, but the report recommended creating more effective aid programs.[76]

Transportation

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In 1967 Rockefeller won approval of the largest state bond issue at the time ($2.5 billion) for the coordinated development of mass transportation, highways and airports. He initiated the creation or expansion of over 22,000 miles (35,000 km) of highway[78] including the Long Island Expressway, the Southern Tier Expressway, the Adirondack Northway, and Interstate 81 which vastly improved road transportation in the state of New York. Rockefeller introduced the state's first support for mass transportation. He reformed the governance of New York City's transportation system, creating the New York Metropolitan Transportation Authority (MTA) in 1965. The MTA merged the New York City subway system with the publicly owned Triborough Bridge and Tunnel Authority, the Long Island Rail Road, Staten Island Rapid Transit, and operation of lines that would later become Metro-North Railroad, along with the newly created MTA Bus Company, which were purchased by the state from private owners in a massive public bailout of bankrupt railroads and struggling private bus companies located in Queens, NY. He also created the State Department of Transportation.

In taking over control of the Triborough Bridge and Tunnel Authority, Rockefeller shifted power away from Robert Moses, and in doing so became the first politician to win such a battle with the master builder Moses in decades. Under the New York MTA, toll revenue collected from the bridges and tunnels, which had previously been used to build more bridges, tunnels, and highways, now went to support mass transportation operations, thus shifting costs from general state funds to the motorist. In one controversial move, Rockefeller abandoned one of Moses's most desired projects, a Long Island Soundbridge from Rye to Oyster Bay, in 1973 due to environmental opposition.

Welfare and Medicaid

In the area of public assistance the Rockefeller administration carried out the largest state medical care program for the needy in the United States under Medicaid; achieved the first major decline in New York State's welfare rolls since World War II; required employable welfare recipients to take available jobs or job training; began the state breakfast program for children in low income areas; and established the first state loan fund for nonprofit groups to start day-care centers.[78]

Presidential campaigns

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Rockefeller sought the Republican presidential nomination in 1960, 1964, and 1968.

1960

His bid in the 1960 primary ended early when then-Vice President Richard Nixon surged ahead in the polls. After quitting the campaign, Rockefeller backed Nixon and concentrated his efforts on introducing more moderate planks into Nixon's platform, partially succeeding in the Treaty of Fifth Avenue.

1964

Rockefeller, as the leader of the Republicans' "Eastern Establishment," began as the front-runner for the 1964 nominationagainst conservative Senator Barry Goldwater of Arizona, who led the conservative wing of the Republican Party.[79][80] In 1963, a year after Rockefeller's divorce from his first wife, he married Margaretta "Happy" Murphy, a divorcee with four children, which alienated many Republican married women. The divorce was widely condemned by politicians, such as liberal Senator Prescott Bush of Connecticut, who condemned his infidelity, divorce, and remarriage. Rockefeller finished third in the New Hampshire primary in March, behind write-in Henry Cabot Lodge II (from neighboring Massachusetts) and Goldwater. He then endured poor showings in several more of the party primaries before winning an upset in Oregon in May. Rockefeller took a strong lead in the California primary, and his team seemed so assured of his victory that it cut advertising funds in the last days of his campaign. However, the birth of Rockefeller's child three days before the California primary put the divorce and remarriage issue back in the minds of voters, and on primary election day, Rockefeller narrowly lost the California primary and dropped out of the race. At a discouraging point in the 1964 California primary campaign against Goldwater, his top political aide Stuart Spencer called on Rockefeller to "summon that fabled nexus of money, influence, and condescension known as the Eastern Establishment. 'You are looking at it, buddy,' Rockefeller told Spencer, 'I am all that is left.'".[81] Rockefeller exaggerated, but the collapse of his wing of the party was underway.[82]

However, at the Republican National Convention in San Francisco in July, Rockefeller was given five minutes to speak before the convention in defense of five amendments to the party platform put forth by the moderate wing of the Republican Party[83] to counter the Goldwater plank. He was booed and heckled for sixteen minutes while he stood firmly at the podium insisting on his right to speak.[84] However, Goldwater supporters claimed that the booing was from not the convention floor but the gallery. Rockefeller was reluctant to support Goldwater in the general election.[85] The conflict between Rockefeller and Goldwater would have lasting effects, as Goldwater would subsequently vote against Rockefeller's confirmation for the Vice Presidency in 1974 and became a key player in blocking Rockefeller from being on the 1976 presidential ticket.[citation needed]

Rockefeller's stump speeches often used the phrase "the brotherhood of man, under the fatherhood of God"; reporters covering his campaign came to abbreviate the expression as BOMFOG.[86]

Rockefeller campaigning for the Republican presidential nomination in 1968

1968

Rockefeller again sought the presidential nomination in the 1968 primaries. His opponents were Nixon and Governor Ronald Reagan of California. In the contest, Rockefeller again represented the liberals, Reagan representing the conservatives, and Nixon representing moderates and conservatives. Rather than formally announce his candidacy and enter the state primaries, Rockefeller spent the first half of 1968, alternating between hints that he would run and pronouncements that he would not be a candidate.[citation needed] Shortly before the Republican convention, Rockefeller finally let it be known that he was available to be the nominee, and he sought to round up uncommitted delegates and woo reluctant Nixon delegates to his banner, armed with public opinion polls that showed him doing better among voters than either Nixon or Reagan against Democrat Hubert Humphrey. Despite Rockefeller's efforts, Nixon won the nomination on the first ballot.[87]

Rockefeller (front row, 5th from left) at the 1976 Republican National Convention along with (left to right) Robert Dole, Nancy Reagan, Ronald Reagan, President Gerald Ford, Susan Ford and Betty Ford.

President Gerald Ford, Susan Ford and Betty Ford.

Vice President (1974–1977)

See also: 1974 United States vice presidential confirmation

Upon President Nixon's resignation on August 9, 1974, Vice President Gerald Fordassumed the presidency. On August 20, Ford nominated Rockefeller to be the next Vice President of the United States. In considering potential nominees, Rockefeller was one of three primary candidates. The other two were then-United States Ambassador to NATO Donald Rumsfeld, whom Ford eventually chose as his Chief of Staff and later Secretary of Defense, and then-Republican National CommitteeChairman George H.W. Bush, who would eventually become Vice President in his own right for two terms and President for one term.[88]

While acknowledging that many conservatives opposed Rockefeller, Ford believed he would bring executive expertise to the administration and broaden the ticket's appeal if they ran in 1976, given Rockefeller's ability to attract support from constituencies that did not typically support Republicans, including organized labor, African Americans, Hispanics, and city dwellers. Ford also felt he could demonstrate his own self-confidence by selecting a strong personality like Rockefeller for the number two spot.[89] Although he had said he was "just not built for standby equipment",[90] Rockefeller accepted the President's request to serve as vice president:

It was entirely a question of there being a Constitutional crisis and a crisis of confidence on the part of the American people. ... . I felt there was a duty incumbent on any American who could do anything that would contribute to a restoration of confidence in the democratic process and in the integrity of government.

Rockefeller was also persuaded by Ford's promise to make him "a full partner" in his presidency, especially in domestic policy.[91]

Rockefeller underwent extended hearings before Congress, suffering embarrassment when it was revealed he made massive gifts to senior aides, such as Henry Kissinger, and used his personal fortune to finance a scurrilous biography of political opponent Arthur Goldberg.[92] He had also taken debatable deductions on his federal income taxes, and ultimately agreed to pay nearly one million dollars to settle the issue, but no illegalities were uncovered, and he was confirmed. Although conservative Republicans were not pleased that Rockefeller was picked, most of them voted for his confirmation anyway; nevertheless, a minority bloc (including Barry Goldwater, Jesse Helms and Trent Lott) voted against him.[93] Many conservative groups campaigned against Rockefeller's nomination, including the National Right to Life Committee, the American Conservative Union, and others. The New York Conservative Party also opposed his confirmation. On the left, Americans for Democratic Action opposed Rockefeller's confirmation because it said his wealth posed too much of a conflict of interest.[94]

The Senate had given its approval December 10, 1974, 90 to 7. The House confirmed his nomination 287 to 128 on December 19.[95] Beginning his service upon taking the oath of office on December 19, Rockefeller was the second person appointed vice president under the 25th Amendment—the first being Ford himself. Rockefeller often seemed concerned that Ford gave him little or no power, and few tasks, while he was vice president. Ford initially said he wanted Rockefeller to chair the Domestic Policy Council, but Ford's new White House staff had no intention of sharing power with the vice president and his staff.[96]

Vice President Rockefeller (right) and his wife Happy (second on left) entertain President Gerald R. Ford(left) his wife Betty (second on right) and their daughter Susan (center) at Number One Observatory Circle on September 7, 1975.

Rockefeller's attempt to take charge of domestic policy was thwarted by Chief of Staff Rumsfeld, who objected to policy makers reporting to the president through the vice president. When Rockefeller had one of his former aides, James Cannon, appointed executive director of the Domestic Council, Rumsfeld cut its budget. Rockefeller was excluded from the decision making process on many important issues. When he learned that Ford had proposed cuts in federal taxes and spending he responded: "This is the most important move the president has made, and I wasn't even consulted."[97] However, Ford appointed him to the Commission on the Organization of Government for the Conduct of Foreign Policy, and appointed him Chairman of the Commission on CIA Activities within the United States, the National Commission on Productivity, the Federal Compensation Committee, and the Committee on the Right to Privacy. Ford also put Rockefeller in charge of his "Whip Inflation Now" initiative.[citation needed]

While Rockefeller was Vice President, the official vice presidential residence was established at Number One Observatory Circle on the grounds of the United States Naval Observatory. This residence had previously been the residence of the Chief of Naval Operations. Previous vice presidents had been responsible for maintaining their own homes at their own expense, but the necessity of full-time Secret Service security had made this custom impractical. Rockefeller already had a well-secured Washington residence and never lived in the home as a principal residence, although he did host several official functions there. His wealth enabled him to donate millions of dollars of furnishings to the house.[citation needed]

Rockefeller was slow to make use of Air Force Two, the official vice-presidential aircraft. Instead, he continued to use his own Gulfstream (which had the callsign Executive Two as a private aircraft). Rockefeller felt he was saving taxpayer money this way. Finally the Secret Service convinced him it was costing more to fly agents around separately for his protective detail than it would for him to travel on Air Force Two with them.[98]

1976 election

With the moderate Ford facing continued difficulty in securing the support of conservative Republicans for the 1976 presidential nomination, and anticipating a challenge from the conservative Ronald Reagan, he considered the possibility of another running mate, and discussed it with Rockefeller. In November 1975, Rockefeller offered to withdraw. Ford eventually concurred, and in explaining his decision Rockefeller said that he "didn't come down (to Washington) to get caught up in party squabbles which only make it more difficult for the President in a very difficult time ..."[99][100]

After Ford was nominated at the 1976 Republican National Convention, Reagan, Barry Goldwater, and other prominent conservatives conditioned their support for Ford on his selection of a suitable vice presidential nominee. Ford considered several candidates, including moderate-to-liberal Republicans such as William Ruckelshaus, and moderate-to-conservative Republicans including Bob Dole, and eventually decided upon Dole as the most acceptable to conservatives.[citation needed]

As of 2020, Ford is the last incumbent president to not have his incumbent vice president as his running mate. Ford later said not choosing Rockefeller was one of his biggest mistakes,[101] and "one of the few cowardly things I did in my life."[102]

Rockefeller campaigned actively for the Republican ticket, and Ford lost narrowly to Jimmy Carter. In what would become an iconic photo of the 1976 campaign, Rockefeller famously responded to hecklers at a rally in Binghamton, New York, with a raised middle finger.[103] "At the time, Rockefeller's finger flashing was scandalous. Writing about the moment 20 years later, Michael Oricchio of the San Jose Mercury News said the action became known

euphemistically as 'the Rockefeller gesture.'"[103]

Political ideology

Main article: Rockefeller Republican

Reflecting his interdisciplinary approach to problem solving, Rockefeller took a pragmatic approach to governing. In their book Rockefeller of New York: Executive Power in the State House, Robert Connery and Gerald Benjamin state, "Rockefeller was not committed to any ideology. Rather, he considered himself a practical problem solver, much more interested in defining problems and finding solutions around which he could unite support sufficient to ensure their enactment in legislation than in following either a strictly liberal or strictly conservative course. Rockefeller's programs did not consistently follow either liberal or conservative ideology." Early fiscal policies were conservative while later ones were not so. In the later years of his administration "conservative decisions on social programs were paralleled by liberal ones on environmental issues."[104] Rockefeller was opposed by conservatives in the GOP such as Barry Goldwater and Ronald Reagan because of his liberal political views. As governor, Rockefeller spent more than his predecessors.[105] Rockefeller expanded the state's infrastructure, increased spending on education including a massive expansion of the State University of New York, and increased the state's involvement in environmental issues. Rockefeller had good relations with unions, especially the construction trades, which benefited from his extensive building programs.[citation needed]

In foreign affairs, Rockefeller supported U.S. involvement in the United Nations as well as U.S. foreign aid. He also supported the U.S.'s fight against communism and its membership in NATO. As a result of Rockefeller's policies, some conservatives sought to gain leverage by creating the Conservative Party of New York. The small party acted as a minor counterweight to the Liberal Party of New York.[106] The most common criticism of Rockefeller's governorship of New York is that he tried to do too much too fast, vastly increasing the level of state debt which later contributed to New York's fiscal crisis in 1975.[107] Rockefeller created some 230 public-benefit authorities like the Urban Development Corporation. They were often used to issue bonds in order to avoid the requirement of a vote of the people for the issuance of a bond; such authority-issued bonds bore higher interest than if they had been issued directly by the state. The state budget went from $2.04 billion in 1959–60 to $8.8 billion in his last year, 1973–74. "Rockefeller sought and obtained eight tax increases during his fifteen years in office."[108] "During his administration, the tax burden rose to a higher level than in any other state, and the incidence of taxation shifted, with a greater share being borne by the individual taxpayer."[109]

Philanthropy and art patronage

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Rockefeller served as Chairman of Rockefeller Center, Inc., (1945–53 and 1956–58) and began a program of physical expansion there. He and his four brothers established the Rockefeller Brothers Fund, a philanthropy, in 1940; he served as a trustee from 1940–1975 and 1977–1979 and as president in 1956. He established the American International Association for Economic and Social Development (AIA) in 1946. AIA was a philanthropy for the dissemination of technical and managerial expertise and equipment to underdeveloped countries to support grass-roots efforts in overcoming illiteracy, disease and poverty.[110]

Rockefeller served as a trustee of the Museum of Modern Art from 1932 to 1979. He also served as treasurer, 1935–1939, and president, 1939–1941 and 1946–1953. In 1933 Rockefeller was a member of the committee selecting art for the new Rockefeller Center. For the wall opposite the main entrance of 30 Rockefeller Plaza Nelson Rockefeller wanted Henri Matisse or Pablo Picasso to paint a mural because he favored their modern style, but neither was available. Diego Riverawas one of Nelson Rockefeller's mother's favorite artists and therefore was commissioned to create the huge mural. He was given a theme: New Frontiers. Rockefeller wanted the painting to make people pause and think. Rivera submitted a sketch for a mural entitled Man at the Crossroads Looking with Hope and High Vision to the Choosing of a New and Better Future. The sketch featured an anonymous man at the center. However, when it was painted the work caused great controversy due to the inclusion of a painting of Lenin (depicting communism) just off-center.[111] The Directors of Rockefeller Center objected and Rockefeller asked Rivera to change the face of Lenin to that of an unknown laborer's face as was originally intended, but the painter refused.

The work was paid for on May 22, 1933, and immediately draped. Rockefeller suggested that the fresco could be donated to the Museum of Modern Art, but the trustees of the museum were not interested.[112] People protested but it remained covered until the early weeks of 1934, when it was smashed by workers and hauled away in wheelbarrows. Rivera responded by saying that it was "cultural vandalism". At Rockefeller Center in its place is a mural by Jose Maria Sert which includes an image of Abraham Lincoln. The Rockefeller-Rivera dispute is covered in the films Cradle Will Rock and Frida.

Rockefeller was a noted collector of both modern and non-Western art. During his governorship, New York State acquired major works of art for the new Empire State Plaza in Albany. He continued his mother's work at the Museum of Modern Artas president, and turned the basement of his Kykuit mansion into a gallery while placing works of sculpture around the grounds (an activity he enjoyed personally supervising, frequently moving the pieces from place to place by helicopter). While he was overseeing construction of the State University of New York system, Rockefeller built, in collaboration with his lifelong friend Roy Neuberger, the Philip Johnson-designed Neuberger Museum on the campus of the State University of New York at Purchase.

He commissioned Master Santiago Martínez Delgado to make a canvas mural for the Bank of New York (City Bank) in Bogotá, Colombia; this ended up being the last work of the artist, as he died while finishing it.

Rockefeller's early visits to Mexico kindled a collecting interest in pre-Columbian and contemporary Mexican art, to which he added works of traditional African and Pacific Island art. In 1954 he established the Museum of Primitive Art devoted to the indigenous art of the Americas, Africa, Oceania and early Asia and Europe. His personal collection formed the core of the collection. "In 1956, Frederic Huntington Douglas was named honorary Curator of the American Indian section of the Nelson Rockefeller Museum of Native Arts in New York."[113] The museum opened to the public in 1957 in a townhouse on West 54th Street in New York City. In 1969 he gave the museum's collection to the Metropolitan Museum of Art where it became the Michael C. Rockefeller Collection.

In 1978, Alfred A. Knopf published a book on primitive art from Rockefeller's collection. Rockefeller, impressed with the work of photographer Lee Boltin and editor/publisher Paul Anbinder on the book, co-founded Nelson Rockefeller Publications, Inc. with them, with the goal of publishing fine art books of high quality. After Rockefeller's death less than a year later, the company continued as Hudson Hills Press, Inc.

In 1977 he founded Nelson Rockefeller Collection, Inc., (NRC) an art reproduction company that produced and sold licensed reproductions of selected works from Rockefeller's collection. In the introduction to the NRC catalog he stated he was motivated by his desire to share with others "the joy of living with these beautiful objects."

Personal life

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On June 23, 1930, Rockefeller married Mary Todhunter Clark.[16] They had five children: Rodman Clark Rockefeller, Ann Rockefeller, Steven Clark Rockefeller, and twins Michael Clark Rockefeller and Mary Rockefeller. Michael Rockefeller disappeared in New Guinea in November 1961. He is presumed to have drowned while trying to swim to shore after his dugout canoe capsized.

Nelson and Mary Rockefeller were divorced in 1962. On May 4, 1963, Rockefeller married Margaretta Large "Happy" Fitler. They had two sons together: Nelson Aldrich Rockefeller Jr. and Mark Fitler Rockefeller.

With his first wife, Rockefeller had lived at the three top floors at 810 Fifth Avenue. After his divorce and second marriage, Mary Rockefeller kept the two top floors of the triplex apartment.[114] The apartment was expanded by purchasing a floor of 812 Fifth Avenue. The two spaces connected via a flight of six steps.[115] Nelson and Happy Rockefeller used the entrance at 812 Fifth, while his first wife entered through 810 Fifth.[116] They remained married until his death.

Rockefeller engaged in numerous extramarital affairs during his marriages. His first wife resented his adultery, which was one of the main reasons for their divorce.[117] Rockefeller convinced his first wife early in the marriage that they should live separate lives but stay married for the sake of public appearances and the children.[118]

There has been speculation surrounding Malinda Fitler Murphy (b.1960), the youngest daughter of Happy Rockefeller and Dr. James Slater Murphy, with many in the Rockefeller inner circle believing her to be Nelson Rockefeller's daughter. In his diary, Rockefeller intimate Ken Riland used a tone of knowing irony when mentioning Malinda, putting the word stepfather in quotes. Ellen, the wife of Wally Harrison, the architect and Rockefeller confidant, claimed that Malinda's parentage was an open secret among Rockefeller associates.[118]

Rockefeller was a patient of famous psychic Edgar Cayce.[119]

Death

Rockefeller and President Jimmy Carter in October 1977

Rockefeller died on January 26, 1979 from a heart attack.[120] He was 70.[121] An initial report incorrectly stated that he died at his desk in his office at Rockefeller Center.[122][123] However, the report was soon corrected to state that Rockefeller actually had the fatal heart attack at another location: a townhouse he owned at 13 West 54th Street.[124] The heart attack occurred in the late evening in the presence of Megan Marshack, a 25-year-old aide.[125] After Rockefeller suffered the heart attack, Marshack called her friend, news reporter Ponchitta Pierce, to the townhouse; Pierce phoned an ambulance approximately an hour after the heart attack.[126]

Rockefeller's remains were cremated at Ferncliff Cemetery in nearby Hartsdale, New York. On January 29, 1979, family and close friends gathered to inter his ashes in the private Rockefeller family cemetery in Sleepy Hollow, New York.[127] A memorial service was held at Riverside Church in Upper Manhattan on February 2; the service was attended by 2,200 people. Attendees included President Jimmy Carter and former Secretary of State Henry Kissinger.[128]

Speculation surrounding death

The circumstances of Rockefeller's death led to widespread speculation regarding a possible adulterous relationship between Rockefeller and Marshack.[129][130][131][132] Marshack had worked for Rockefeller when he served as vice president, had relocated to New York and continued to work for him after his term as vice president ended, and had received financial assistance from Rockefeller in purchasing and furnishing a condominium several doors down from his Manhattan townhouse.[130]

In a PBS documentary about the Rockefeller family, longtime Rockefeller aide Joseph E. Persico said: "It became known that [Rockefeller] had been alone with a young woman who worked for him, in undeniably intimate circumstances, and in the course of that evening had died from a heart attack."[133] Rockefeller's four oldest children issued a statement saying that they had conducted their own review, that they believed their father could not have been saved, and that all those who tried to help had acted responsibly. Neither Marshack nor the family has ever commented publicly on the circumstances surrounding Rockefeller's death.[134] The family would not consent to an autopsy.[135] In 2017, the New York Daily Newsstated that following Rockefeller's death, "it wasn't long before Johnny Carson could start drawing laughs merely by uttering the words 'Megan Marshack.'"[130]

Electoral history

Main article: Electoral history of Nelson Rockefeller

Legacy

Awards named after Rockefeller

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- Nelson A. Rockefeller Award, Purchase College School of the Arts, presented annually to five individuals who have distinguished themselves through their contributions to the arts or the environment.

- Governor Nelson A. Rockefeller Award for Excellence in Public Service, State Academy for Public Administration.
- Nelson A. Rockefeller Distinguished Public Service Award, Nelson A. Rockefeller Center for the Social Sciences, Dartmouth College.
- Nelson A. Rockefeller Award, American Society for Public Administration, Empire State Capital Area Chapter, presented to an individual whose governmental career in New York State demonstrates exemplary leadership, performance and achievement in shaping public policy, developing and implementing major public programs, or resolving major public problems.
- Nelson A. Rockefeller Award, The New York Water Environment Association, Inc., awarded to an elected official at a city (population over 250,000), state or national level who has made a substantial and meaningful contribution to advancing effective environmental programs.
- Nelson A. Rockefeller Public Service Award, Rockefeller Institute of Government (1988–1994).

Awards received

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- Presidential Medal of Freedom, 1977
- Universal Brotherhood Medal, Jewish Theological Seminary of America, 1961
- Charles Evans Hughes Medal, National Conference of Christians and Jews, 1965
- Distinguished Service to Conservation Award, National Wildlife Federation/Sears Roebuck Foundation, 1966
- Gold Medal Award, National Institute of Social Sciences, 1967 (awarded to all five Rockefeller brothers)
- Award of Merit, American Institute of Architects, New York Chapter, 1968
- Distinguished Service Award, State University of New York, 1973
- Four Freedoms Foundation Award, 1974
- Order of Merit, Chile, 1945
- National Order of the Southern Cross, Brazil, 1946
- Order of the Aztec Eagle, Mexico, 1949
- Order of Ruben Dario, Nicaragua, 1953
- Medallion de los Andes, University of the Andes, Colombia, 1958
- Commandeur of the Ordre des Arts et des Lettres, France, 1958
- Grande Croix de l'Ordre de Leopold II of Belgium, 1959
- Ramon Magsaysay Award, Philippines, 1959
- Grand Cross of the Order of Orange-Nassau, Netherlands, 1960
- Prathamabhorn Knight Grand Cross of the Most Exalted Order of the White Elephant, Thailand, 1960
- Légion d'honneur, Commandeur, France, 1960
- Commander of the Order of Dannebrog, 1st Class, Denmark, 1960
- Grand Ufficials del Ordine al Merito della Repubblica Italiana, Italy, 1962
- Order of the White Rose, Commander 1st Class, Finland, 1962
- Agricultural Merit Award, Brazilian Rural Confederation, 1963
- Grand Cordon of the Order of the Brilliant Star, Nationalist China, 1969
- Nicholas Copernicus Award, Poland, 1972

Memorials

Nelson A. Rockefeller Park is an enclave within Battery Park City in New York City.

The following institutions and facilities have been named in honor of Nelson A. Rockefeller:

- The Nelson A. Rockefeller Center for Public Policy, Dartmouth College, a social science research center.[136]
- The Nelson A. Rockefeller Collegiate Center, Binghamton University, New York.[137]
- Rockefeller College of Public Affairs and Policy, University at Albany, State University of New York.[citation needed]
- The Governor Nelson A. Rockefeller Empire State Plaza.[138]
- Nelson A. Rockefeller Park, Battery Park City, New York City.[139]
- P.S. 121 in Brooklyn NY was renamed Nelson A. Rockefeller Elementary School[140] after his death in 1980.[citation needed]
- Rockefeller Institute of Government, the public policy research arm of the State University of New York.[citation needed]

See also

- GE Building (Room 5600 - The Rockefeller Family Office)
- Wallace Harrison

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External links

Wikimedia Commons has media related to Nelson Rockefeller.

- Rockefeller Archive Center: Nelson Rockefeller Contains details on the collection of public and private papers available to researchers at the Center.
- The Rocky Roll An extended portrait by Time Magazine of Rockefeller campaigning for Governor of New York in 1958.
- Rockefeller Archive Center: Archived papers of the Special Studies Project, 1956–1960.
- Rockefeller biography at Biographical Directory of the United States Congress.
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- Finding aid for the Nelson Rockefeller Oral History, Dwight D. Eisenhower Presidential Library.
- Newspaper clippings about Nelson Rockefeller in the 20th Century Press Archives of the ZBW.

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Rocky Mountain Labs

Wikipedia Rocky Mountain Laboratories

Saved Wikipedia (Feb 20, 2021) : Rocky Mountain Laboratories

[HK0053][GDrive]

- Agency overview
- Formed 1928[1]
- Preceding agency Hygienic Laboratory
- Headquarters Hamilton, Montana
- Employees 400[1]
- Parent agency National Institute of Allergy and Infectious Disease, National Institutes of Health, United States Department of Health & Human Services

Rocky Mountain Laboratories (RML) is part of the NIH Intramural Research Program and is located in Hamilton, Montana. Operated by the National Institute of Allergy and Infectious Diseases, RML conducts research on maximum containment pathogens such as Ebola as well as research on prions and intracellular pathogens such as Coxiella burnetti and Francisella tularensis.[2][3][4] RML operates one of the few Biosafety level 4 laboratories in the United States, as well as Biosafety level 3 and ABSL3/4 laboratories.[5]

In February 2020, electron microscope images of SARS-CoV-2 were collected at RML.[6]

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2020 (May) - NIAID website - History of Rocky Mountain Labs (RML)

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2020-06-www-niaid-nih-gov-about-rocky-mountain-history.pdf

Early map of the Bitterroot valley. Area in red shows where spotted fever infection occurred

Although the construction of the first building of The Rocky Mountain Labs was completed in 1928, RML evolved as a result of research on Rocky Mountain spotted fever that began around 1900, in the Bitterroot Valley of Western Montana. Early settlers of the valley were plagued with a deadly disease of unknown origin that seemed to be concentrated on the west side of the Bitterroot River.

The “black measles” rash characteristic of later stages of spotted fever infection.

It was known locally as "black measles" because of its severe dark rash, and folk wisdom of the day suggested that infection occurred from drinking the melted snow water that gushed out of the west side canyons during spring runoff. Fatal in nearly 4 out of 5 adult cases, local residents appealed to the state governor for help.

Montana had been granted statehood in 1889, and in 1901, the Montana State Board of Health was created. Its first priority was to bring health scientists to the Bitterroot Valley to investigate the cause, treatment and prevention of spotted fever. During the next three decades a memorable cast of characters was engaged in a drama that provided an interesting chapter in the annals of medical history.

Howard Taylor Ricketts, 1871-1910. Ricketts identified the causative agent of Rocky Mountain spotted fever.

Among the first was Dr. Howard Ricketts, a young pathologist from the University of Chicago, who in 1906, showed that the disease was transmitted by the bite of the Rocky Mountain wood tick (*Dermacentor andersoni*). Returning each summer to continue his work, by 1909, he had isolated the bacterial organism that was responsible for spotted fever, and that organism was later named *Rickettsia rickettsii* in his honor.

A state budget shortage made it questionable whether Montana could continue to fund Ricketts' research during the summer of 1910. Because of the uncertainty, he accepted funding to work on a typhus outbreak in Mexico City. Shortly before his work there was concluded, Ricketts himself contracted typhus and died soon after.

In front of the cabin that had been dubbed “Camp Venustus.” Clarence Birdseye of the U.S. Biological Survey stands in the doorway.

Clarence Birdseye was another interesting character to play a role in spotted fever research in the Bitterroot Valley. As part of an effort to understand the life cycle of the wood tick, Birdseye, a college student working for the US Biological Survey, spent the spring and early summer of 1910 shooting and trapping wild game and rodents to collect ticks. Reportedly, he bagged 717 small animals and collected nearly 4,500 ticks. After his work in Montana, Birdseye went to Labrador where he developed the concept of frozen foods and later established the company that bears his name.

Early Tick Research

In the years that followed, a number of state and federally funded researchers continued their investigations of spotted fever. The Montana State Board of Entomology under the direction of Dr. Robert Cooley developed a tick eradication program. Dipping vats were placed at several locations throughout the valley and ranchers were encouraged (by threat of quarantine) to drive their herds to the nearest station so that the cattle could swim through a trough of arsenic solution. However, preparing an arsenic solution strong enough to be effective, but not so strong as to burn the hides and udders of cattle, was accomplished by trial and error. This situation bolstered the resentment among local ranchers who already harbored a healthy distrust of government-imposed programs. In addition, two young brothers who had been helping at a dipping station on their family ranch both contracted the infection and died.

In June 1913, matters came to a head when the vat located near Florence was destroyed by dynamite and one outside of Hamilton was damaged with sledgehammers.

Dr. Roscoe Spencer, primarily responsible for the Spencer-Parker tick tissue vaccine.

Despite local hostility, work on spotted fever continued on several fronts. Within a few years Drs. Roscoe Spencer and Ralph Parker produced the first effective vaccine against the disease by emulsifying infected tick tissue and inactivating the rickettsiae with phenol.

The early facilities in which spotted fever research was conducted were makeshift at best. Ricketts worked in tents set up in the yard of the Northern Pacific Hospital north of the valley in **Missoula**.

Dr. Ralph Parker served as Director of the Rocky Mountain Labs from 1930, until his death in 1949.

Others worked out of cabins and farmhouses, and Parker for a time conducted his studies in a woodshed. Finally, in 1921, Parker found an abandoned schoolhouse on the west side of the valley and arranged to have it rented by the U.S. Public Health Service. The "Schoolhouse Lab," as it was known, was the facility where Spencer and Parker ground up tick tissue to produce their vaccine.

This deserted farmhouse in the Bitterroot foothills was rented in the spring of 1910, and converted to a laboratory for tick research. In 1909, several people in the vicinity had died of spotted fever.

Progress had been made toward controlling spotted fever, but much more awaited. In 1926, the Board of Entomology asked the state legislature to provide enough money to build a modern entomological laboratory. In the spring of 1927, the legislature appropriated $60,000 for the new building and a site in the town of Hamilton was chosen.

The woodshed used by Dr. Ralph Parker to perform tick research during the summer of 1920.

By this time, local sentiment toward medical investigators had softened considerably, but pockets of fear and distrust remained. Each spring newspapers reported new cases of the illness. While the annual number of deaths from spotted fever had fallen significantly from the record high of 17 in 1901, every year more victims succumbed to the disease. In addition, during the previous 16 years, 5 laboratory workers had become infected and perished.

The Lab is Built

When news hit the valley that a new laboratory would be built in Hamilton, a group of citizens immediately formed a coalition in opposition and it became clear that the facility would not be built without a fight. Unlike previous workstations, this site lay east of the river that bisects the valley.

Laboratory facilities at Victor, Montana, used from 1911-1916.

Since infection only occurred on the west side, residents worried that ticks might escape the facility and pose a danger to the town. To stop construction, homeowners in the neighborhood of the proposed site filed a lawsuit. At trial, plaintiffs argued that the location was particularly dangerous since it was only a block away from the high school. And, homeowners feared that property values in the area would plummet. Ultimately, the judge decided that construction could go forward, but in an effort to alleviate town fears, a small moat was built around the perimeter of the facility to be filled with water. Ticks, it was supposed, could not swim the moat.

The "schoolhouse lab" where Spencer and Parker produced the first effective vaccine against spotted fever. Extensively renovated over the years, this building has served as a museum and is currently the Hamilton Playhouse on Ricketts Road.

The building was completed in early 1928. It provided space for the state-administered control programs and rented space to the Public Health Service for Dr. Parker and his colleagues to continue research and vaccine production. By 1930, the laboratory employed four professionals and 22 support staff. In that year Parker was appointed scientific director, a role he continued in for the next 19 years. In February of 1932, the federal government purchased the facility from the state of Montana for $68,757 and several of the Board of Entomology employees were transferred to the Public Health Service.

Building 1 of the current RML campus was completed in 1928. Citizens filed an unsuccessful lawsuit to stop construction.

In 1937, RML became part of the National Institute of Health. During World War II, the laboratory joined in the war effort by becoming a "national vaccine

factory," producing vaccines to protect soldiers against spotted fever, typhus, and yellow fever. After the war, work at the lab returned to its primary mission of basic scientific research of infectious diseases. In 1948, the National Institute of Health was reorganized, and RML became part of what is now called the National Institute of Allergy and Infectious Diseases (NIAID).

Today, scientists at RML investigate a wide variety of infectious diseases. Supported by state-of-the-art genomics and electron microscopy units, current research includes the study of chronic wasting disease, chlamydia, Q-fever, tularemia, Salmonella, Staphylococcus, Lyme disease, relapsing fever, and plague. An Integrated Research Facility with maximum-containment laboratories allows scientists to use advanced technology in their quest to protect people from the emerging infectious diseases.

Three interesting reads on the story of early spotted fever research and the origins of the Rocky Mountain Laboratories are: Fighting Spotted Fever In the Rockies by Ester Gaskins Price, Naegele Printing Company, 1947; Rocky Mountain Spotted Fever, History of a Twentieth-Century Disease by Victoria A. Harden, Johns Hopkins University Press, 1990; Rocky Mountain Spotted Fever in Western Montana, Anatomy of a Pestilence by Robert N. Philip, Stoneydale Press, 2000.

Rocky Mountain Laboratories, NIAID, is a component of the National Institutes of Health (NIH). NIAID conducts and supports research—at NIH, throughout the United States, and worldwide—to study the causes of infectious and immune-mediated diseases, and to develop better means of preventing, diagnosing and treating these illnesses. News releases, fact sheets, and other NIAID-related materials are available on the NIAID website.

NIH, the nation's medical research agency, includes 27 Institutes and Centers and is a component of the U.S. Department of Health and Human Services. NIH is the primary federal agency conducting and supporting basic, clinical, and translational medical research, and is investigating the causes, treatments, and cures for both common and rare diseases. Visit NIH(link is external) for more information about its programs.

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Dr. John Timothy Roehrig (born 1952)

Wikipedia NONE

born - 24 Feb 1952 (https://www.ancestry.com/discoveryui-content/view/114717797:1788?tid=&pid=&queryId=b94a8044b3edb0d07a32cbf31130ae25&_phsrc=llt63&_phstart=successSource _)

full name - "John Timothy Roehrig" (https://www.ancestry.com/discoveryui-content/view/74566288:62209?tid=&pid=&queryId=b94a8044b3edb0d07a32cbf31130ae25&_phsrc=llt63&_phstart=successSource)

Associations

- **Dr. Robert Ellis Shope (born 1929)** (Research collaboration: West Nile (See PDF : [HP0067][GDrive]) and other published works)
- **Dr. Jonathan Seth Weissman (born 1966)** (...)
-

2006 - ANNALS NEW YORK ACADEMY OF SCIENCES : "Laboratory testing for West Nile virus: panel discussion"

Panel :

- GRANT L. CAMPBELL, Moderator ; Division of Vector-Borne Infectious Diseases, Centers for Disease Control and Prevention, Fort Collins, Colorado 80522, USA
- LEO J. GRADY, Moderator ; Division of Infectious Diseases, Griffin Laboratory, Wadsworth Center, New York State Department of Health, Slingerlands, New York 12159, USA
- CINNIA HUANG, Griffin Laboratory, Wadsworth Center, New York State Department of Health, Slingerlands, New York 12159, USA
- [**Dr. Robert Salvatore Lanciotti (born 1960)**], Arbovirus Diseases Branch, Centers for Disease Control and Prevention, Fort Collins, Colorado 80521, USA
- LAURA KRAMER, Griffin Laboratory, Wadsworth Center, New York State Department of Health, Slingerlands, New York 12203, USA
- [**Dr. John Timothy Roehrig (born 1952)**], Arbovirus Diseases Branch, Division of Vector-Borne Infectious Diseases, Centers for Disease Control and Prevention, Fort Collins, Colorado 80522, USA
- [**Dr. Robert Ellis Shope (born 1929)**], Department of Pathology, University of Texas Medical Branch, Galveston, Texas 77555-0609, USA

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Laboratory Testing for West Nile Virus

Panel Discussion

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Galveston, Texas 77555-0609, USA

GRANT L. CAMPBELL: This panel session is entitled Laboratory Testing for West Nile Virus. We have five excellent panelists with us today. My co-moderator, Dr. Leo Grady is from the New York State Department of Health. My name is Roy [Grant] Campbell from CDC in Fort Collins, Colorado.

LEO J. GRADY: Good morning. Sitting directly to my right is Dr. Cinnia Huang from the New York State Department of Health; to her right is Dr. Laura Kramer, also from the New York State Department of Health. Dr. Rob Lanciotti from the CDC, Fort Collins, is next, and then comes Dr. John Roehrig, also from the CDC. At the end is Dr. Bob Shope from the University of Texas Medical Branch in Galveston, Texas. Each of the panelists will make a few brief comments about their involvement in laboratory testing, and then we will open the floor for discussion. Dr. Huang begins this session.

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CINNIA HUANG: Our lab is involved in human testing. The new state experiments with RT-PCR for West Nile virus are similar to what has been done at Fort Collins. The only difference we find is that a two-step regular RT-PCR is as sensitive as Taq-Man. The two-step RT-PCR is the protein protocol used now for the encephalitis PCR panel. Our panel includes different viruses, and West Nile is one of them. Based on our data, there are cases other than West Nile virus, such as enterovirus and the herpes virus, and the enterovirus season overlaps with West Nile virus. For this reason, our lab will continue to perform tests using PCR batteries.

ROBERT LANCIOTTI: I want to run through the most commonly used diagnostic tests, both for serology and for virus detection. For human diagnostics, our gold standards are the IgM and IgG ELISAs, and we confirm those by plaque-reduction neutralization testing. The molecular amplification tests, such as RT-PCR and TaqMan have limited usefulness in human diagnostics, and I think it's important to emphasize that. There are some people with a misconception that those could be front-line tests for human diagnostics. We have data showing—and it's limited data from the 1999 epidemic—that a positive PCR certainly is diagnostic but a negative doesn't mean a whole lot. There are a lot of other reasons. We have serologically confirmed cases, where you can't detect viral RNA, and I think that has a lot to do with the duration and level of viremia. Many times we're looking for virus pretty far out beyond the febrile phase, so the molecular tests have been most useful in the fatal cases, less useful in CSF, and even less in serum. Again, the ELISA serological tests are really our gold standard for human diagnostic testing. Virus isolation also should be attempted, but in many cases, the virus samples that we're getting to test and isolate are, in the diagnostic lab, beyond the viremic stage in many cases. But I think they're still important tests and ought to be attempted. For the surveillance of mosquito pools and birds, this is an application where the molecular tests are very useful—the RT-PCR and TaqMan. NASBA is another amplification technology that works very well. Those are the most commonly used tests, not only in our lab, but also in other state health departments. There's also immunofluorescence and immunohistochemistry, and there was a poster here describing antigen capture ELISA for West Nile detection as well. I think Dr. Kramer is going to talk about the importance of having a confirmatory algorithm in the lab. I think for any one of these tests, whether serological or virological, there needs to be a way of confirming positives. The other issue that I'll just mention is the importance of standardization. You may be aware that the CDC has done a lot of training in the last few months. We've trained, at this point, representatives from almost every state health department in the country, and we are now initiating a huge proficiency panel program where we're sending out both molecular and serology samples to every state health department that chooses to participate. This will be a large undertaking, but we think it's very important for states that anticipate testing to participate in the standardization proficiency panel.

LAURA KRAMER: To follow up on Dr. Lanciotti's comment, I think proficiency testing is crucial, especially with all the new labs coming online now doing surveillance testing. I also think that there's got to be quality control to make sure that what is positive is really positive. Because PCR is such a powerful and sensitive tool, it's a double-edged sword, and it's very easy to pick up contaminating RNA, either by aerosol or on your glove when you open up a tube. It's just so sensitive. We know that it detects less than one plaque-forming unit. We diluted avian tissues out 10^{-6},

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over some viral material and think that you have a host of new positives. So if your water blank comes up positive, whether it's from the beginning or whether it's from the RNA extraction stage, you need to go back to the tissue and reextract and repeat the process to confirm that that tissue is truly positive. And as part of this, when labs are setting up new TaqMan or PCR assay rooms, they have to be fully knowledgeable about how the flow needs to go. There are many books on it, but if you're doing standard PCR and writing gels, you never take those pipe headers from that room after you clean your area, which is your pre-PCR area. For a confirmatory assay, just to reiterate what Dr. Lanciotti said, there needs to be an independent confirmatory assay.One set of primers may be more sensitive than the other, but we don't know what you're detecting if you keep on repeating that set of primers and saying, "Well we did two assays," when, in fact, it's really one assay repeated. It needs to be two totally independent assays. So, either two sets of primers or an RT-PCR and an IFA or a NASBA—some other totally separate assay. I think that while RT-PCR is wonderful and it's rapid and you can get the results out there, I don't think we should stop trying to isolate virus and cell culture. First of all, you can pick up viruses that the PCR is not specific for. PCR is a very specific assay because of the primers, and with the TaqMan probe, it's even more specific. But, it's important for research to understand the virus and for confirmation that this is an infectious virus to inoculate cell cultures. What does a PCR positive mean? I think we need to try to sort out what's happening with the mosquito pools and the bird tissues as well, where we do see RTPCR-positive tissues that we cannot get out in cell culture. And I think we need to determine how we're going to interpret these.

JOHN T. ROEHRIG: I have a few comments. It's come to our attention that some of you are setting up BSL-3 laboratories in which you want to do plaque assays for serology and also virus isolation. That can be a dangerous approach to take if you're trying to do isolation in the same place that's using standardized West Nile for plaque assays because you're liable to get cross-contamination. Last year when we talked in Fort Collins about the best approaches for RT-PCR, one of the suggestions that we had was that for the plaque assay it may be useful to use a prototype strain like Egypt 101. In our hands it looks as though the New York 1999 strain and the Egypt 101 strain are pretty interchangeable. If you were to use a strain like Egypt 101 in your plaque-reduction neutralization test and happen to get that cross-contaminated into a tissue that you were trying to do isolation from, you could actually tell those viruses apart by sequencing the amplimers by RT-PCR. Unfortunately, at the time, everybody demanded New York 1999, but now that we're a year and a half out, you may want to reconsider how you're doing that plaque assay and go over to something that's actually distinguishable from what you might get from isolates from the environment. My history in arbovirology has been less on nucleic acid and more on proteins and protein structure and function. I just want to remind you that there's another component to viruses besides nucleic acid and it's actually protein that can be used as a confirmatory test. Laura's laboratory uses IFAs on tissues and isolates. There are plenty of monoclonal antibodies available to you that will allow you to identify West Nile and other arboviruses that you may be isolating or seeing. Yesterday, there was a poster on an antigen detection assay that's been developed for West Nile that's as sensitive as the SLE assay. It's been out for a number of years and can be used in tandem either with mosquito pools, or, in this case, it was also shown in tissues of birds, where luckily the virus titers are even higher than in mosquitoes and a relatively good assay. It could be used either as a front-line assay or as a confirmatory assay for other tests. So, be aware that that's out there and should be available to you if that's what you desire to use as well. Later on today or tomorrow, Denise Martin will talk about some of the work she's done looking at the cross-reactivity of IgMs between SLE and West Nile. I'd like to remind you that there are other things out there besides PCR, although PCR is quite good. But, there are other things out there besides ELISAs that you can use to identify antibody reactivities in other species. But you have to be careful when you do things like hemagglutination inhibition assays on birds. The extraction protocols for the sera are a little different than what you may be used to as far as the other nonspecific inhibitors that may be in bird sera that are not removed by the standard sucrose acetone extraction. Bear in mind that there's a lot of literature out there and, you know, one of the implications that's come out of this meeting is that there's a lot of new information that's coming out that people haven't thought about. I think lots of people have thought about these issues for a long time before we've even thought about them. Nothing substitutes for going back and looking at what's been done in the past and seeing how you can apply it to the present and the future.

ROBERT E. SHOPE: Let me first agree completely about the use of Egypt 101 as a strain for neutralization tests for the reason that you're giving but also because I think you'll find that it produces much nicer plaques than the New York strain does. I don't know why, but that's a practical reason to use it. I'd like to make some comments about cross-reactions among flaviviruses. I first learned about the cross-reactions from Jordy Casals, who incidentally just lives down the road here in northern Manhattan, but he described the cross-reactions and flaviviruses using the hemagglutination inhibition test and later using the neutralization test. What happens is that in a primary infection the serological reaction is relatively specific during the first week or ten days postinfection, but then it broadens out and you can use any one of the serological tests against any one of the flaviviruses to show that the person has had a flavivirus infection. As in 1999, it was discovered, even with the capture IgM test, which is relatively specific, that you can misdiagnose closely related flaviviruses. What was called St. Louis encephalitis was really West Nile, and this isn't surprising. This is what one would have expected. I don't have the benefit of working with very many West Nile human sera, and I look forward to hearing the talk tomorrow, but in our animal models—we have an animal model of West Nile—Bob Tesh has developed a model in a hamster that, as far as the clinical syndromes go, is very close to the human picture. About 40% of these animals die following an interperitoneal inoculation. These animals develop a muscle weakness prior to death, and they also develop serological reactions by day six after inoculation; they have rela tively specific antibodies in the hemagglutination inhibition test, and they also start to get IgM. The IgM is gone by day 60, which I think is probably very close to the picture in humans. Is that right?

ROEHRIG: I should have mentioned that. Actually, it goes a little bit longer than that.

SHOPE: OK. But it certainly decreases rapidly just before that time. Regarding the secondary infections, if you inoculate a hamster with yellow fever or Japanese encephalitis virus, follow it and a month later or so inoculate with West Nile virus you get a very brisk anamnestic reaction, which is broadly cross-reacting in all of the tests that we use, so that you need to be careful how you interpret results. Bob Tesh and and his colleagues have been testing human serum in a study collaborating with the Department of Defense using recruit sera from the postal codes zones of the epicenter of the 1999 epidemic. There are no identifiers on these sera. Other than the fact that they're probably eighteen, nineteen, or twenty year olds, we don't know much about them. But we do know where they were recruited from. They're using an HI test, a hemagglutination inhibition test, and many of these sera have positives. Many of the reaction patterns when you test with multiple flavivirus antigens look either like dengue or like multiple reaction sera. These people were bled before they were vaccinated with yellow fever, but some of them may have had prior vaccinations also. So the message here is to be very careful about interpreting serological reactions. A positive with West Nile does not necessarily mean that that person has been infected with West Nile virus. This stimulated us to look at some of our dengue sera. We have four prototype sera that were supplied through Jim LaDuke from dengue patients. There's one from Malaysia, one from the Philippines, one from India, and I forget where the fourth one was from, but we went back and did both West Nile IgM ELISAs on those sera and they're positive, in addition to being positive for dengue. And Bob Tesh also went back and did neutralization tests. Three out of the four sera are positive in the West Nile neutralization test. He uses a 90% plaque reduction, so it's a very stringent test. So, the message is to be careful. In the hamster experiments, we've done a vaccination challenge. The vaccine that Bob Tesh used was the live attenuated Japanese encephalitis vaccine, the vaccine that has been given to millions of horses in China. Those hamsters did not get sick from the vaccination. They were challenged a month later with West Nile virus, and in the controls there was about 40% mortality. There was no mortality in the vaccination challenge test with West Nile virus. So here's an example of a vaccination challenge test that also shows more cross-reaction. There are other implications in the vaccination challenge experiment. I mean it must be obvious to you

that the vaccine for horses used in China probably would be a good vaccine to use for horses in the United States.

MIKE L. BUNNING (Centers for Disease Control and Prevention, Fort Collins, CO): Can I ask John to follow up on the IgM persistence?

ROEHRIG: Sorry, I didn't get that written down on my list. We've been collaborating with the New York City Health Department doing follow-up studies on the longevity of the IgM from some of the patients from the 1999 outbreak, and it's been pretty revealing, although not totally surprising about the longevity of the IgM in some of these patients. Clearly what Dr. Shope said is true: if you look at the IgM response early in infection, and some of these were pretty early infections in 1999, there's a clear spike of IgM activity. This is serum now we're talking about, not CSF. In the early serum infection after 30 to 60 days, it will drop down to lower levels. However, many of these patients carried IgM and continued to carry IgM in their serum specimens above the cutoff level for the IgM ELISA. Not many at this point. I think the last lead was around 500 days postinfection, and at this point the study has been terminated. But it was a very valuable study. What we were interested in looking at and why this was so important from a public health perspective was whether or not IgM could persist from one transmission season to the next at a level that if you happened to have an individual from outside the United States come in with encephalitis the following season, and you did an IgM on them, or something was suspicious of encephalitis, and the IgM was positive but at a lower level, is this truly a recent infection of West Nile or a past infection of West Nile? I think our conclusions are that you actually can be confused by that. That's why earlier on this season, we were recommending acute and convalescent specimens that could be tested as paired sera to actually sort out whether it's an active immune response or if it was a stable older immune response. So it's clear that some patients can carry IgM from one transmission season to the next. Up to this point I think that six months was about as long as this had been investigated, although never with West Nile. With Japanese encephalitis it had been looked at, and actually I guess with West Nile with some of the Romanian patients, Dr. Tsai looked at six-month specimens. So bear that in mind. As people who do serology will tell you, it's clearly always better to have acute and convalescent specimens that you can actually titer. This especially becomes important when West Nile travels into regions where there is more activity from St. Louis encephalitis and you may actually be looking at an SLE infection versus a West Nile infection.

CAMPBELL: So we know now that, at least in a few patients, that IgM would persist for up to a year, and that might have a couple of implications. It goes back to something that Dr. Shope and others have said and that's to be careful because you'd have to imagine a scenario. First of all, a couple of things: the seroprevalence rates in Queens and in Staten Island after the epidemic were quite low. Queens was higher at 2.6% and in Staten Island, less than 1%. So you'd have to imagine a scenario where a person was, say, subclinically infected in the year 2000 in Staten Island and in the next year was unlucky enough to get encephalitis from some other cause and then you test them for West Nile antibody and find IgM antibody. Well, we would not expect that outcome; that would be a very rare event. Second of all, we would not expect that the IgM would persist in the cerebrospinal fluid. Nobody's going to do those studies because they'd be unethical. But at that point when that patient comes into your laboratory like that this summer, you're going to test CSF for one thing and that will help you, but also acute and convalescent serum for development of IgG. So, you've got to look at the whole serological picture in that case. There should be no serious problem in sorting that kind of case out clinically. I think where it has more application or it causes more confusion is in seroprevalence studies where you might have only 1% of people who were infected the year before, and a smaller percentage of those are going to still have antibody later. So, I think it's more of a theoretical concern than a practical impediment. Bob?

SHOPE: From what I've heard this morning, I think there might be a possibility that IgM in the spinal fluid might persist. I have no basis other than seeing some of those pathology pictures.

CAMPBELL: Well, I guess it's theoretically possible, but from what I've heard, persistence of IgM and the CSF would imply that there is active plasma cell production due to ongoing infection of the cerebrospinal fluid. So, from what you saying—from everything we've been able to find in the literature, and Tony Marfin has done a lot of the literature review in this—there's not that much information available. But in the human IgM and CSF it's cleared very quickly, and unless you have active plasma cell production—unless there's a plasma cell that's being stimulated in that sequestered space—the IgM is cleared very quickly. So, that would imply persistent infection to most infectious disease physicians, I think. Maybe you're right. But we'll have to see. I don't know how we're ever going to figure that out, though, because nobody's going to do serial lumbar punctures on patients.

SHOPE: Changing the subject a little bit, I meant to mention that Dr. Hall is here from Australia, and he's developed a test for use in sentinel chickens, which might be more broadly applicable—I don't know. But it might be worth hearing comments from him as to what we really need is a specific serological test, and his approach might be something that's helpful.

CAMPBELL: At this point, we'd invite questions or comments from the audience.

LANCIOTTI: I want to make a quick comment about neutralization, and this is to build on what others, especially Dr. Shope, have had to say. In our lab, when I mention confirmation of the ELISA test by neutralization, that doesn't mean we do neutralization just with West Nile. It's important to do the whole panel of the flaviviruses that occur in North America. So last year we routinely did dengue, because of potential for travel, West Nile, SLE, and Powassan. In most cases when we can demonstrate specific sera conversion to West Nile, the titers to West Nile may have been 1 :512 or greater. There was an accompanying dengue and SLE neutralizing antibody titer much less—1:20 or 1 :40—but I would say in most cases we do see a cross-reactivity, and so I think it's very important when you do the neutralization tests to include the other flaviviruses.

SHOPE: I think it may be important also to test dengue patients, especially the other way around using that same panel against convalescent sera from a dengue patient. And you may find that some of these crosses are more one-way.

DALE L. MORSE (New York State Department of Health, Albany, NY): A number of panel members have mentioned the need for caution in interpreting human serological tests and the need for quality control in confirmatory testing. It wasn't well publicized, but a small number of the laboratories in New York State, New York City, and the CDC last year that had experience with this had some anxious moments as we followed up on screening tests on the serologic IgM that were low level titer or intermediate and as we tracked back to find out whether these really were going to be cases or not. Now as more laboratories are going to come on board, private and commercial, the potential testing that we'll presumably be doing will probably be just a screening test because they don't have BSL-3 or don't have the capability to do neutralization tests. There's a potential for a much larger concern and for following up all these tests or potential reporting of a potential case without confirmatory testing. New York has fairly strong regulations so we can try to have some quality control for those labs coming on, but a number of states don't have that ability to regulate, so I have three questions in this regard. What are the capabilities nationally for quality control of commercial labs that might come on during testing in the coming year? Number two: What is the capability for confirmatory testing for those labs that are going to start showing some potential positive tests on the screening test? And third: Should there be a requirement for a two-step testing before labs can be certified to test for West Nile?

LANCIOTTI: We strongly recommend confirmation by neutralization. Last year, there were a handful of specimens that we couldn't confirm by neutralization. And we're following up on some of those to see what they could have been. But clearly, you need to have a confirmatory test. We would

caution any state from reporting a result without confirmation. Now, if they don't have the ability to do that, that is one of the things that CDC certainly is offering. Many states made use of this where they got a positive IgM, ELISA result, and forwarded the specimens to us for confirmation. If you can't do that in your lab, I think you'd want to have the neutralization tests.

CAMPBELL: I want to ask when MRL [Materials Research Laboratory] may be going to release their test kit for general commercial use.

QUESTION: Well, in theory, they can't because it's not FDA approved, so they could only use a home brew at MRL. So they can't even pass it off as specialty.

LANCIOTTI: We are trying to establish a relationship with MRL so that when they receive specimens—and they have done this—they'll contact us for confirmatory testing. There's also a need for improved communication that's being set up between MRL and the states where the samples came from, because in some cases state health departments are bypassed, where samples are sent directly to MRL and the state epidemiologist is not even aware of it. So, we are trying as best we can to set up all that communication, but certainly MRL is aware, and we have received samples from them for confirmatory testing.

GRADY: I believe New York State also is going to require any laboratory that is permitted to do West Nile testing for New York residents to provide material for confirmation, either at the state laboratory or at CDC, Fort Collins.

ROEHRIG: I think that's a good point. I mean, I think it's kind of a double-edged sword here. It's not necessarily bad to have commercial testing for West Nile because you're casting a broader net to try to find these cases, but somehow the link has to be made for those laboratories to get confirmatory testing. I'm not sure the two-tier testing requirement is going to be the answer because if you do that, it's going to just close out those laboratories that will never do neutralization. The important part is to get the confirmatory testing done somewhere and to make the link back to the state or back to us at the CDC. We can probably do the confirmatory testing. I don't think that's an issue.

[Dr. Duane J. Gubler (born 1939)] **(Centers for Disease Control and Prevention, Fort Collins, CO):** New York is probably one of the few states around that has a system in place where they do actual proficiency testing of local laboratories before they can be certified. And, in fact, do we have a representative here from APHL [Association of Public Health Laboratories]? APHL is really the key to the answer. We went through this with Lyme disease testing, and CDC has no regulatory authority to enforce this kind of proficiency testing. It's really at the state level. We need to bring APHL into this discussion and develop a proficiency-testing scheme probably modeled after the New York program that certifies local laboratories that were testing. And, I agree with John that commercial tests are a good thing as long as they're controlled reasonably well so that there is some quality control. Another solution is to use regional laboratories to do the confirmatory testing. The CDC can't do it all, and New York can't do it all, so we really need to work with APHL to set up regional laboratories to do the quality control confirmatory testing.

THOMAS P. MONATH (Acambis Inc., Cambridge, MA): The requirement to use BL-3 for West Nile and St. Louis and other viruses you'd like to use in performing neutralization tests is an issue for many labs. I'd like to gauge the interest of this group, in particular, on the question of interest in the way of converting these viruses to BL-2 agents so that one could use them safely for neutralization virtually in a large number of labs. Now, the approach that we suggested is to use our chimeric yellow fever technology, which is being applied for attenuated vaccines, so that one would wind up with a family of BL-2 viruses, or basically yellow fever 17D vaccine. But the envelope genes of West Nile, St. Louis, Japanese encephalitis could be used then because they're specifically neutralized only by antibody against each of the respective flaviviruses. They could be used in the neutralization tests to distinguish sera that neutralized a specific virus of interest. So one could actually perform confirmatory neutralization tests in any BL-2 lab with a series of these chimeric flaviviruses that were specific for each of the virus types. Now we already have Japanese encephalitis and West Nile available, and St. Louis needs to be made, and we're willing to undertake that. We're actually working with Dr. Gubler's group now. But it would be useful to know whether this, in fact—if we're going the right direction with this— would be useful. Would it broaden the capability of labs to do confirmatory diagnosis? It might be very useful in the situation of surveillance of birds and other animals as well. It would be interesting to hear some comment from the panel or anybody else in the room to get a sense of how hard to push this, because it would take quite a bit of work to actually validate the technology.

ROEHRIG: For example, with Japanese encephalitis chimera, when you have it approved for human use as a vaccine, clearly at that point that chimera can be classified as a BSL-2 agent. How much characterization do you need to have as far as pathogenesis or virulence in humans before it really will go from a BSL-3 to a BSL-2?

MONATH: Well, we had classified the Japanese encephalitis construct to BL-2 long before human trials.

ROEHRIG: Yes, but that was a vaccine, vaccine chimera.

MONATH: Right.

ROEHRIG: But for West Nile, you're talking about taking a wild type and trying to attenuate.

MONATH: Well, we have mutants now too. They're even more attenuated than the wild-type construct. But, I think the answer is we need data, and there are very good animal models, both mouse and monkey, that can be used. The critical question: Is the chimera less neurovirulent than yellow fever 17D, which is a BL-2 human vaccine? We're testing the appropriate animal system. I think in the case of West Nile, we'll have those data, including monkey data, within a few months. And so at that point what we would do is currently BL-3; we would ask our biosafety, institutional biosafety committee and other collaborators to reevaluate this at BL-2. We might ask the subcommittee, Arbovirus Laboratory Safety, ACAB, to look at this question independently— or the CDC for that matter. But I think it's just a matter of providing the data.

ROEHRIG: So you think preclinical data in monkeys and mice will be enough to downgrade it?

MONATH: Yes.

SHOPE: With Japanese encephalitis virus, is it necessary to use the chimera? The parent of the chimera has been tested in literally millions of humans in China.

MONATH: Right. You could use a vaccine strain.

SHOPE: Yes, the SA14-14-2 strain.

MONATH: We don't have one for West Nile though. There are attenuated strains of St. Louis and you can make the same argument. But I think that the ideal thing is that the yellow fever backbone allows you then to use the yellow fever vaccine for comparison in assessing relative virulence. And so you have a very convincing story about attenuation. So I think for St. Louis and West Nile, that's going to be essential.

SHOPE: I think you make a good case, yes.

ROY A. HALL (University of Queensland, Brisbane, Queensland, Australia): I want to respond to Bob Shope's mention of the competitive assay that I briefly alluded to in my talk yesterday. Basically we designed it for animal surveillance that works quite well for primary infections. We have a batch of sera that CDC had sent to us from New York, and in the initial trial, samples came out positive in the ELISA—not all, but some. And we've yet to compare the data with neutralization tests, and Ann Hunt said she's got the data and we're going to compare them. But at this stage it's still a bit early. It's certainly worthwhile to evaluate it with West Nile.

NANCY HALPERN (New Jersey Department of Agriculture, Trenton, NJ): I have a question for Dr. Shope. You mentioned, I believe, a Japanese encephalitis vaccine for horses. I was wondering if you or anyone in the room might know the mechanism to allow its use while we're waiting for the vaccine's development in this country.

SHOPE: I don't know the proper mechanism, but a great deal is known about the vaccine itself.

HALPERN: I know. I know it's in use for horses, right.

SHOPE: It's also been tested for its ability to infect mosquitoes. Dr. Barry Beatty and Dr. Tenbo Chong did those experiments; they're published. It does not readily infect mosquitoes; since it's alive, the attenuated strains are one of the things you'd be worried about. Maybe someone else knows how veterinary vaccines are licensed.

ALEXANDER E. PLATONOV (Central Research Institute of Epidemiology, Moscow, Russia): What use are the specific ligands for West Nile, for example—not like a physical concentration, but a specific concentration of a sample.

LANCIOTTI: I'm not aware of anyone who has done that with West Nile. So you're saying concentration before one of the nucleic acid tests?

PLATONOV: Yes, for example, or before RT-PCR, before application of any diagnostic tools.

LANCIOTTI: Again, I'm not aware of anyone who has attempted that. I will say that when we use PCR or NASBA or any of those assays looking for West Nile in bird tissues, there is such a large amount of virus that in most cases it's not really a sensitivity issue. There are always going to be a handful of cases where you would like to concentrate before, and mosquito pools are pretty much the same. There's a large amount of virus, so that there are not too many ambiguous samples. It's really in human diagnostics that we run into, I think, an issue either of sensitivity of the test or as likely the timing of the specimen. We're looking at CSF or serum beyond the febrile phase. So there may not be any virus there at all, because we also didn't detect virus by isolation as well.

GUBLER: I want to come back to your point about persistence of IgM antibody in the cerebrospinal fluid, Roy. I know I've read this in Kuno's review of persistence on page nine—I just looked it up. On page nine he says—this is a reference paper published in 1983—monkeys inoculated with West Nile virus presented an asymptomatic infection, but the virus persisted in the brain for up to 5.5 months without viremia. So, in other words, they isolated virus five and a half months after, and so this would explain the persistence of the IgM if this is occurring in humans.

CAMPBELL: I don't remember.

GUBLER: We need to keep an open mind.

CAMPBELL: Did they test cerebral spinal fluid for IgM?

GUBLER: Yes, well they didn't test CSF, or at least he doesn't cover it in here, but it was brain. But indicating that there's virus in the brain meant it may be intrathecal production of antibodies.

ROEHRIG: Well, Duane, I don't think that's a problem, but I think that you're comparing apples to oranges even though monkeys are closer to humans than mice.

GUBLER: I think the point is that we should keep an open mind.

ROEHRIG: Well, I think we should keep an open mind about everything. I don't think that that's an issue. But the point of having cerebrospinal fluid taps, to actually answer the question, is going to be hard to get for humans.

DENISE MARTIN (Centers for Disease Control and Prevention, Fort Collins, CO): I'd like to bring up another point that hasn't been really driven home yet about confirmatory testing. There was a fair amount of concern last year about the length of time it takes to do a confirmatory test in several capacities. There was a lot—especially in states that were looking at the possibility of the first case in their state—of push for doing a neutralization on a very acute specimen last year. And a lot of these extremely acute specimens have not allowed for time for neutralizing antibody to be formed. I think we need to make the point that you can detect IgM by an ELISA test before you can detect IgM in a neutralization test. So, it's extremely important to do a classical neutralization test and see a rise and fall in antibody to get that convalescent specimen. In the push to identify West Nile in each new state, often it doesn't seem to be acceptable to wait for that convalescent specimen, and yet ruling out West Nile on a very acute specimen might be erroneous in the long run.

SHOPE: I think that one could make a case for having a diagnosis that's called a presumptive diagnosis: that's what you do I think. I guess I would be even more conservative, and even after you've done the neutralization test and confirmed the positive reaction that you still call it a presumptive diagnosis, unless you've actually identified the virus either by isolation or by sequencing, because of the cross-reactions that can occur in flaviviruses. I don't know, is anybody else with me on that wavelength? Probably not.

ROEHRIG: I think I missed that.

SHOPE: I don't think we ever have a definitive diagnosis on the basis of serology, and we should keep that in the back of our minds. I understand that the patient and the press demand that you tell them what they have, but we should always, as scientists, keep a little bit of doubt when we're basing our diagnosis solely on serology. That's a personal feeling.

ROEHRIG: So you would say if you had a patient that had presented with clinical encephalitis with muscle weakness, had a huge IgM response in the CSF, and in acute and convalescent specimens showed an 8- to 16-fold titer rise against West Nile encephalitis, and stable or no antibody against the rest of the cross-test as flaviviruses— this isn't a dead person, so you don't have autopsy specimens, and you can't get PCR or isolation positive—that you wouldn't be comfortable that that was a West Nile case?

SHOPE: I would be comfortable on a presumptive basis (general laughter). I think one of the keys to your statement is that you've tested it against all of the other flaviviruses. We continue to find new flaviviruses. In fact, New York City is a case in point; one did find a new flavivirus.

other flaviviruses. We continue to find new flaviviruses. In fact, New York City is a case in point; one did find a new flavivirus.

ROEHRIG: Yes, and as we did the neutralization tests, it became clear that it wasn't St. Louis (general laughter).

CAMPBELL: I want to say one thing: Earlier, Rob Lanciotti used the term "gold standard" in terms of serology, and I think, just to go back to basic principles, most of us would agree that if you're really a purist that the gold standard for the diagnosis of West Nile virus infection is isolation of the virus from the patient, and that's rarely possible. So we all realize that serology is not the same as viral isolation.

GRADY: I should throw in too that we had one case in New York that, based on the capture IgM, was suspect for West Nile, and it turned out to be dengue when the PCR was done on serum. When the folks followed it up, it turned out that it was a travel history; the patient had actually become ill while in Haiti, but didn't bother to seek medical attention until back in New York.

PATRICIA REPIK (Charles River Tektagen, Malvern, PA): This question is for Rob. Are you recommending a virus isolation by any standardized method, say, looking at it for over a period of however many days and doing subpasses, like one subpass or two subpasses? Or is it just plaque isolation? Are you allowing replication to proceed?

LANCIOTTI: There are two ways we do it. For the mosquito testing, we actually just do it with an overlay and look for plaques. But in the human, trying to isolate virus from the human cases, we went the extra mile and did multiple tests and liquid culture and multiple cell lines, and mice, as well. So, we tried everything that we had available to us besides direct mosquito inoculation. I don't think we ever tried that. So, for humans I think that's what we would recommend just because we try everything that is available, not just mammalain cells, but C6-36 cells as well.

ROEHRIG: There's a practical side to this. I mean, we can do that as a reference laboratory, but in the heat of trying to diagnose outbreak at a state laboratory, a local laboratory gets to be a bit tedious when you have a thousand other samples coming in and trying to deal with them. Duane, didn't Bruce do mosquito inoculation with some of those West Nile specimens?

GUBLER: No, unfortunately we didn't do mosquito inoculation, but I think Bruce did show that the fluid culture of Vero cells was probably the most sensitive of the systems. They were all fairly close. Laura and I were just talking about this yesterday. We should do mosquito inoculation in some of these samples. We haven't done them.

HELENE PAXTON: (PanBio InDx, Inc., Baltimore, MD): Rob, at the ASTMH meeting when we had our first West Nile meeting and Duane was chairing it, you talked a lot about using IFA and using slides that had all of the relevant viruses in the United States or outside the United States on your slides so that you could do cross reactivity studies. In the last two meetings, there's been very little said about the usefulness of indirect IFA. As a commercial company, we constantly get barraged with whether you're going to do an IFA titer. Is there any strength in doing, say, a 1:40 screen and a 1:320 screen for each of the viruses that might be circulating in the United States? Can you define any true seropositivity? From what Bob said it sounds like you probably can't, but we do get asked that question an awful lot. The other issue is whether or not, in animal models, if you're doing chickens or horses or some of the other mammals, whether or not the IFA would hold up better. Because most labs—and I'm getting ten or twelve phone calls a day—can't do the more sophisticated techniques, and they want to have a way of screening to see whether or not there's a possibility that West Nile is in the differential diagnosis.

KRAMER: I can answer for use of IFA for bird serology. Susan Wong can answer for the human serology, but we do indirect IFAs on all our ELISA-positive bird sera as the second test, and then if that still is positive we go on and do a plaque-reduction neutralization assay. And it's been very useful in cutting back the number of neutralization tests we need to do, so it's one more refined step after the ELISA. We also use an indirect IFA to confirm positivity in tissues and in cell culture after the cells are inoculated. If cytopathology is seen we spot slides with the infected cells and do IFA on that, and not just for West Nile but for other viruses that are active in New York State.

PAXTON: That's direct FA though, right?

KRAMER: No. Indirect.

PAXTON: You're doing an indirect on the tissues?

KRAMER: Yes. Those were the slides that I showed yesterday and that were in Alan Dupuis' poster.

PAXTON: So you're using positive sera against a substrain as your antigen that could possibly be infected?

KRAMER: We're using the antibody to make sure that what we're seeing is the virus.

PAXTON: I have one other comment. Duane knows this well: the issue of getting FDA clearance. I talked to Woody DuBois at length about this in the microbiology branch, and he is very aware that there is a tremendous need to get these tests cleared. You can't purchase IFA slides as analyte-specific reagents from various manufacturers, and the analyte-specific reagents statute requires that you make a disclaimer in your patient reports saying that this has not been cleared by the FDA. Whole kits have not been cleared and are more problematic, and so you may have a situation where you'll find components floating around where their "label" is ASR. That's really not the intent of the law. But Woody has strongly suggested that if you could get dengue cleared, then West Nile could be treated as a predicate against dengue. If the major problem of West Nile is getting enough samples to be able to do an FDA submission that would hold up, then let's keep that in the back of our minds as we're collecting samples, because a commercial company totally has their hands tied behind their back in trying to get a clearance for an assay without having the proper samples.

ROEHRIG: I think that's a good point. I forget these things, but positive control specimens are really difficult to come by, and luckily over the last couple of years we've had cooperative physicians and cooperative patients, like Dr. Asnis pointed out in her talk, that have been able to donate serum specimens for use as positive control. So for the physicians around, keep this in mind, because this'll be an ongoing need, and you'd be surprised how quickly you go through it. This doesn't include the needs of a commercial company where they need large amounts of these specimens banked.

SHOPE: Let me make a comment. We found that dengue convalescent sera worked beautifully in the capture IgM ELISA for West Nile, and you can get large quantities of that. I don't know whether that would be permitted as a positive control by the

FDA, but they work.

PAXTON: That's the problem, that the dengue is so cross-reactive.

SHOPE: You need to market the test as specific; your test could give you a flavivirus diagnosis, and that would be very useful I would think.

CAMPBELL: Dr. Bresnitz?

EDDY BRESNITZ (New Jersey Department of Health and Senior Services, Trenton, NJ): In the clinical setting where you have a patient who has the right clinical syndrome for encephalitis, and treatable infection has essentially been eliminated, nailing down the diagnosis, when you feel where it's no longer suspect or probable, really has no either clinical or public health practicality to it, to be honest with you. From a clinical perspective, once you nail down the diagnosis it really doesn't make a difference by then. And certainly from the control of mosquitoes it makes no difference either because it takes so many weeks. And I would argue that, in fact, it's what we will do in New Jersey as well: it's letting the mosquito control people know when you have an individual you suspect might have West Nile virus encephalitis—particularly if you're coming from an area where activity has been demonstrated in birds or mosquitoes or horses. That waiting for diagnosis, final diagnosis, or even a probable diagnosis is too late for enhancing mosquito control. So it's a nice theoretical discussion. From a practical perspective it really doesn't make a difference.

LANCIOTTI: We would agree that waiting is probably better, but I can't tell you how many times this year we've gotten calls that said we want you to confirm our ELISA result, and we have a press conference tonight at six. So, that's not uncommon.

SCOTT P. HENNIGAN (Massachusetts State Laboratories, Boston, MA): Is anybody looking into using the Western blot? We use the Western blot for HIV infection; we use it for Lyme in a two-tier method. Is it something that could be used as a quick three-hour—I don't like saying confirmation—but that type test. Instead of waiting for a couple of days for the neutralization, you can actually run a Western blot; you could probably do an IgM or IgG on it also.

ROEHRIG: I come from a laboratory that, before West Nile, dealt with Lyme disease. Where the Lyme disease test is, the Western blot is used as a confirmatory test for Lyme disease, which is, of course, a bacterial pathogen that has multiple antigens. Part of the differential for the Lyme disease Western blot is how many of these antigens are positive, how many are negative, and how many bands are seen. Flaviviruses are fairly simple organisms. There are really three proteins that you can see on a gel, one of which is the M protein, which is a very small membrane-bound protein that is immunogenic, but not overly immunogenic, so you're really looking at two bands on the blot that may actually elicit antibody responses. The nucleocapsid protein, for all viruses and including flaviviruses, is relatively conserved, and so you would get very little serospecificity out of a reactivity with a nucleocapsid. That also needs to be factored in with the nucleocapsid because it interacts with the nucleic acid. It's a highly charged protein and typically gives a very high background in a Western blot. So really you're talking about the envelope glycoprotein as being the most important antigen, and since you're really talking about one band, you can't separate out five or six bands' reactivity patterns. When you talk about the glycoprotein you're talking about other problems with the glycoprotein, which is the confirmational stability of epitopes, whether you run Western blots with mercaptomethanol sulphides or whether you leave it native. The problem is that the protein really isn't big enough to do a lot of differentiation from, let's say, a dengue serum from a West Nile serum from an SLE serum. So I don't think that the Western blot is going to help improve the specificity of the test. We've run a lot of Western blots over the years in my laboratory, and basically this is what you see. I could be wrong, and I want you to keep an open mind, but my best guess would be that a Western blot would not be specific for West Nile infection. A caveat could be that there are also nonstructural proteins that are synthesized by these viruses. A number of years ago, even before I came to CDC, Fort Collins, Dr. Dennis Trent and Ateef Qureshi looked at the immune response as five proteins, and their preliminary evidence was that this was a far more specific protein than the E glycoprotein. The problem with the NS5 protein is that not everybody makes antibody to NS5 to high enough levels that you can detect it on a Western blot. So if you did that sort of thing, you couldn't use virion E (protein); you'd probably have to use infected cells where you'd be looking at the nonstructural or structural proteins. I think that it's a thing that could be used, but we would have to do a lot more work with the specific virus to try to determine whether or not it would be useful. My initial take on it would be that it's probably not going to add much over what we already have.

MONATH: I think the future is going to be very interesting with respect to diagnosis, because, fortunately, so far, West Nile has invaded an area of the United States where other flaviviruses are not so active. But as and if it moves west, West Nile will infect people who previously have seen St. Louis encephalitis. In fact, in the Midwest, there were big epidemics in the mid-1970s. This is the elderly population now that is going to get sick, so the complexity of flavivirus serology, serological diagnosis, is really highest where you have multiple flaviviruses circulating and affecting human population. And the complexities of the patterns of antibodies with respect to cross-reactivity are going to really be problems when this virus appears in the St. Louis country. So I think—if you want to look into the future and prepare yourself for it—that's how that is going to affect our ability to make a specific serological diagnosis. It would be a worthwhile model. We really don't understand very well what happens in these sequential infections to see what happens in the St. Louis–infected animal that's later infected with West Nile. It's going to be a real headache when that happens.

ROEHRIG: Well, at least, Tom, from a public health perspective, if we diagnose it as a flaviviral encephalitis, they can use control and, we hope, try to get it under containment. But yes, actually trying to define exactly what the agent is could be problematic. It will be problematic.

CAMPBELL: It reminds me of something that Dr. Bill Reeves from the University of California-Berkeley reminded Duane and me of recently. Tom, you may know this, but there was some early work—and again, going back to John's point about looking at the early work and trying to appreciate what was already done and not reinventing the wheel; there was some laboratory work done by some scientists years ago, including Dr. Hammon, who is a pioneer in arbovirology—looking at cross-protection of dengue antibodies against West Nile virus in laboratory animals. And there is some cross-protectivity there, and I wonder what we know. I'm not familiar with any similar studies with SLE, but I would suspect there is some cross-protection at least.

SHOPE: There's a large literature on this. Dr. Winston Price did a whole series of experiments in primates. And, yes, there is cross-protection as Tom says.

CAMPBELL: It could be that those people that were infected in Chicago in 1975 are going to be the least likely to get West Nile encephalitis now that they're old.

GRADY: Before we end our panel, I'd like to throw out something else for your consideration: Although West Nile is new, it hasn't replaced the usual causes of viral encephalitis that one sees, particularly enteroviruses and herpes group viruses. And you've got to keep in mind that that has to be part of the differential diagnosis. We have data suggesting that in the same time period in the greater metropolitan and surrounding counties, that there were probably, at a minimum, as many cases due to other viruses as there were due to West Nile. And I say at a minimum because enteroviruses can be recovered by culture, and there are a substantial number of laboratories that have that capability. We don't know what their results were, and likewise more and more labs are coming on line able to do PCR for herpes group viruses. Again, we don't know what their results are. We only know the results of specimens that were tested in our laboratory. Before we leave, I'd like you to remind you to keep that in mind. The outbreak doesn't replace other viruses; it merely is superimposed on what is normally going on.

KRAMER: I wanted to add to that—Dr. Monath reminded me. I mentioned that we do cell culture because we don't want to miss other viruses that are there. And I think it's very important that as this virus moves into Florida, where there's St. Louis, and as it moves toward the West Coast where there's St. Louis, that if people use PCR to look for West Nile in mosquito pools, they might be missing St. Louis. So it's very important to do assays so that you don't miss the other viruses that are there on the mosquitoes as well, because you may not see human cases that will tell you there's another virus there, except that they may be spotty. We don't want to narrow down our focus on West Nile alone, even in the mosquitoes.

may be spotty. We don't want to narrow down our focus on West Nile alone, even in the mosquitoes.

CAMPBELL: OK, it's time to wrap it up. Thank you very much to our excellent= panel.

Work with Robert Shope :

https://pubmed.ncbi.nlm.nih.gov/12491112/

Arch Virol

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. 2002 Dec;147(12):2465-72. doi: 10.1007/s00705-002-0938-8.

Improved clarity of meaning from the use of both formal species names and common (vernacular) virus names in virological literature

M A Drebot, E Henchal, B Hjelle, J W LeDuc, P M Repik, J T Roehrig, C S Schmaljohn, R E Shope, R B Tesh, S C Weaver, C H Calisher, American Committee on Arthropod-borne Viruses, Subcommittee on InterRelationships Among Catalogued Arboviruses

- PMID: 12491112
- DOI: 10.1007/s00705-002-0938-8

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https://researchexperts.utmb.edu/en/publications/identification-of-arboviruses-and-certain-rodent-borne-viruses-re

Identification of arboviruses and certain rodent-borne viruses: Reevaluation of the paradigm

C. H. Calisher, C. D. Blair, M. D. Bowen, J. Casals, M. A. Drebot, E. A. Henchal, N. Karabatsos, J. W. LeDuc, P. M. Repik, J. T. Roehrig, C. S. Schmaljohn, R. E. Shope, R. B. Tesh, S. C. Weaver

- Pathology

No mention of samples inYale, testing by Southam, etc etc ...

2013-12-viruses-west-nile-virus-in-the-united-states-a-historical-perspective-john-roehrig.pdf

https://cyberleninka.org/article/n/235704

WEST NILE VIRUS IN THE UNITED STATES — A HISTORICAL PERSPECTIVE

Academic research paper on "Biological sciences"

- John Roehrig

BITCHUTE @Housatonic YOUTUBE @HousatonicLive ODYSEE @Housatonic BRIGHTEON @Housatonic

Thomas Paul Rona (born 1923)

Thomas Rona, 1990
[HP003X][GDrive]

Wikipedia Thomas P. Rona

Born Jan 17, 1925

Married to :

- Monique R Rona (born 1928)

Associations

- Norman Christian Dahl (born 1918) (Witness for Thomas Rona's immigration to the USA ; and colleague at MIT)
- Ben Telfer Plymale (born 1926) (colleague and mentor at Boeing in the 1970s)
- Andrew Walter Marshall (born 1921) (Recruited Thomas Rona into Washington DC roles, due to his work on the "information warfare" paper at Boeing.)
- William Robert Van Cleave (born 1935) (Colleague when Thomas Rona first moved to DC politics)
- Dr Jordan Jay Baruch (born 1923) - MIT Doctoral research reviewer
- David Friedman Epstein (born 1951) (peer on the **Future Security Environment Working Group**)
- Dr. Dov Solomon Zakheim (born 1948) (peer on the **Future Security Environment Working Group**)

Saved Wikipedia (Oct 21, 2020) - "Thomas P Rona"

See [HK003E][GDrive]

Acting Director of the Office of Science and Technology Policy **In office** June 1989 – August 1989

President George H.W. Bush

Preceded by [**William Robert Graham (born 1937)**]

Succeeded by William G. Wells

Born January 7, 1923 Budapest, Hungary

Died December 27, 1997 (aged 74) Bethesda, Maryland, US

Citizenship United States

Alma mater

- Ecole Superieure d'Electricite
- Massachusetts Institute of Technology

Thesis *Gas temperature measurements by ultrasonic pulse method* (1955)

Thomas P. Rona (1923–1997) was a 1980s era science advisor to the Defense Department and the White House under Presidents Reagan and Bush.

Born on January 7, 1923, in Budapest, Hungary.[1] Rona graduated from Ecole Superieure d'Electricite (M.E., 1943; E.E., 1945); and Massachusetts Institute of Technology (M.S. in E.E.; Sc.D. in E.E., 1955).[2] He received his license certificate in physical electronics at the Sorbonne in 1946. The author of several books and articles with his best known probably being *Our Changing Geo-Political Premises* published in 1982. Dr. Rona is also credited by some with coining the term of Information War or warfare which he used in a report entitled "Weapon Systems and Information War" delivered to Boeing in 1976. He worked in Seattle, Washington for the Boeing Company from 1959 to 1984. The actual originator of the term "information war" is Dale Minor, a news reporter, journalist and author of the book entitled "The Information War" published in 1970 by Hawthorne Books, Inc.

During the 1980s, Dr. Rona held various posts in the Executive Branch to include Special Assistant for Space Policy at the Department of Defense, 1984 to 1986 and Assistant Director for Government Programs in the Office of Science and Technology Policy at the White House, 1986 to 1987. On June 16, 1987, President Ronald Reagan announced Rona's nomination as Associate Director of the Office of Science and Technology Policy.

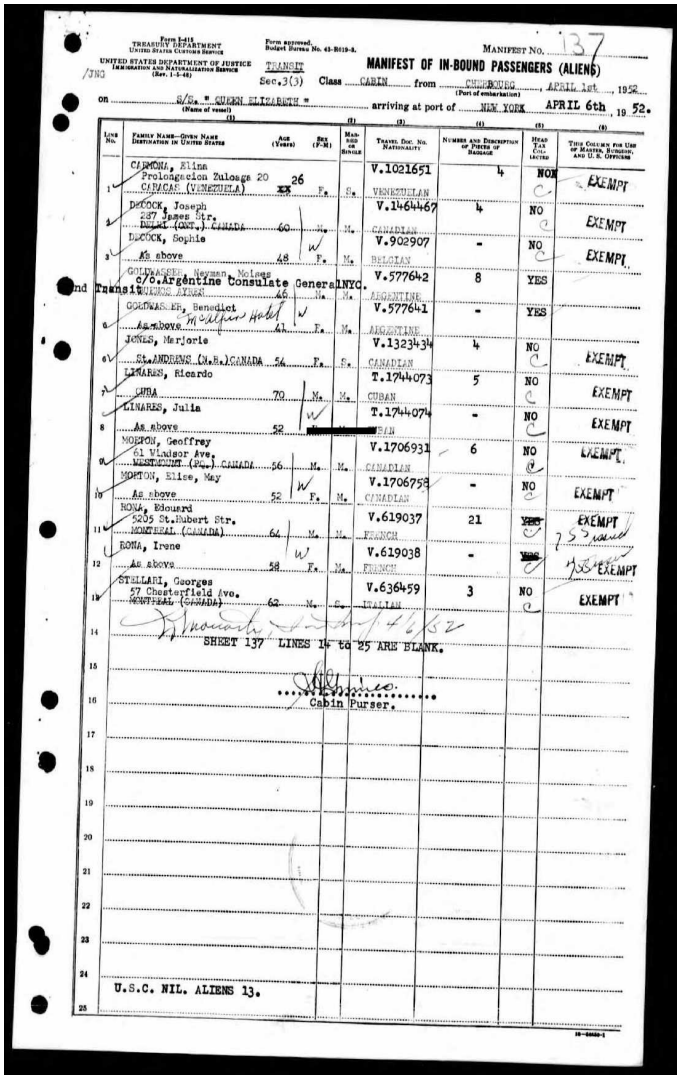
In June 1989 he briefly succeeded [**William Robert Graham (born 1937)**] by becoming Acting Science Advisor to President George H.W. Bush, a position he held until President Bush's choice was available in August of that year. When Rona left government service, he did private consulting work in the general area of Information Warfare for companies such as Aegis Research Corporation then headquartered in Rosslyn, Virginia.

Rona died at his home in Bethesda, Maryland, on December 27, 1997, from hypertensive cardiovascular disease.

Evidence Timeline

1952 (April 16) : Parents travel to the United States on the SS Queen Elizabeth

original -(before cropping) : [HJ000T][GDrive]



Form I-418
TREASURY DEPARTMENT
UNITED STATES CUSTOMS SERVICE
Form approved, Budget Bureau No. 41-R019.2.
MANIFEST NO. 137
UNITED STATES DEPARTMENT OF JUSTICE
IMMIGRATION AND NATURALIZATION SERVICE
(Rev. 1-5-48)
/JNG
TRANSIT
Sec. 3(3)
MANIFEST OF IN-BOUND PASSENGERS (ALIENS)
Class CABIN from CHERBOURG (Port of embarkation) APRIL 1st, 1952
on S/S "QUEEN ELIZABETH" (Name of vessel) arriving at port of NEW YORK APRIL 6th, 19 52.

Line No.	Family Name—Given Name Destination in United States	Age (Years)	Sex (F-M)	Married or Single	Travel Doc. No. Nationality	Number and Description of Pieces of Baggage	Head Tax (If Required)	This Column for Use of Master, Purser, and U.S. Officials
1	CAMPOS, Elina Prolongacion Zuloaga 20 CARACAS (VENEZUELA)	26	F.	S.	V.1021651 VENEZUELAN	4	NO	EXEMPT
2	DECOCK, Joseph 287 James Str. DUREL (ONT.) CANADA	60	M.	M.	V.1464467 CANADIAN	4	NO	EXEMPT
3	DECOCK, Sophie As above	48	F.	M.	V.902907 BELGIAN	-	NO	EXEMPT
and Transit	GOLDFARBER, Neyman, Moises c/o.Argentine Consulate General NYC.	46	M.	M.	V.577642 ARGENTINE	8	YES	
5	GOLDWARER, Benedict As above	47	F.	M.	V.577641 ARGENTINE	-	YES	
6	JONES, Marjorie St.ANDREWS (N.B.)CANADA	54	F.	S.	V.1323434 CANADIAN	4	NO	EXEMPT
7	LINARES, Ricardo CUBA	70	M.	M.	T.1744073 CUBAN	5	NO	EXEMPT
8	LINARES, Julia As above	52	[redacted]	M.	T.1744074 CUBAN	-	NO	EXEMPT
9	MORTON, Geoffrey 61 Windsor Ave. WESTMOUNT (P.Q.) CANADA	56	M.	M.	V.1706931 CANADIAN	6	NO	EXEMPT
10	MORTON, Elise, May As above	52	F.	M.	V.1706759 CANADIAN	-	NO	EXEMPT
11	RONA, Edouard 5205 St.Hubert Str. MONTREAL (CANADA)	64	M.	M.	V.619037 FRENCH	21	~~YES~~	EXEMPT 753 issued
12	RONA, Irene As above	58	F.	M.	V.619038 FRENCH	-	~~YES~~	753 EXEMPT
13	STELLARI, Georges 57 Chesterfield Ave. ~~MONTREAL (CANADA)~~	62	M.	S.	V.636459 ITALIAN	3	NO	EXEMPT
14	SHEET 137 LINES 14 to 25 ARE BLANK.							
15								
16	Cabin Purser.							
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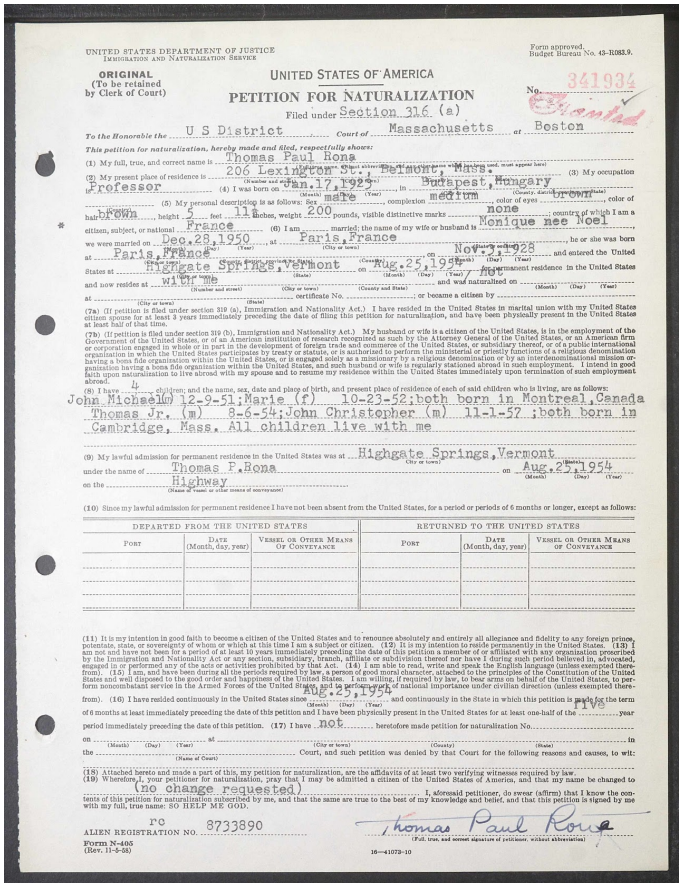
24	U.S.C. NIL. ALIENS 13.							
25								

[HJ000U][GDrive]

1954 - US Naturalization Petition

Note the name - **Norman Christian Dahl (born 1918)**



UNITED STATES DEPARTMENT OF JUSTICE
IMMIGRATION AND NATURALIZATION SERVICE

Form approved.
Budget Bureau No. 43-R083.9.

ORIGINAL
(To be retained by Clerk of Court)

UNITED STATES OF AMERICA

PETITION FOR NATURALIZATION

No. 341934

Filed under Section 316 (a)

To the Honorable the U S District Court of Massachusetts at Boston

This petition for naturalization, hereby made and filed, respectfully shows:

(1) My full, true, and correct name is Thomas Paul Rona
(Given name) (Middle name) (Family name or surname)

(2) My present place of residence is 206 Lexington St., Belmont, Mass.
(Number and street) (City or town) (County) (State)

(3) My occupation is Professor

(4) I was born on Jan.17,1925 at Budapest, Hungary
(Month) (Day) (Year) (City or town) (County, state, or province) (Country)

(5) My personal description is as follows: Sex male; complexion medium; color of eyes brown; color of hair brown; height 5 feet 11 inches; weight 200 pounds; visible distinctive marks none; country of which I am a citizen, subject, or national France

(6) I am married; the name of my wife or husband is Monique nee Noel

we were married on Dec.28,1950 at Paris,France
(Month) (Day) (Year) (City or town)

She was born on Nov.1,1928 at Paris,France
(Month) (Day) (Year) (City or town) (County, province, or state) (State) (Country)

and entered the United States at Highgate Springs,Vermont on Aug.25,1952
(City or town) (State) (Month) (Day) (Year)

for permanent residence in the United States and now resides at with me
(Number and street) (City or town) (County and State)

and was naturalized on
(Month) (Day) (Year)

at certificate No. ; or became a citizen by

(7a) (If petition is filed under section 319 (a), Immigration and Nationality Act.) I have resided in the United States in marital union with my United States citizen spouse for at least 3 years immediately preceding the date of filing this petition for naturalization, and have been physically present in the United States at least half of that time.

(7b) (If petition is filed under section 319 (b), Immigration and Nationality Act.) My husband or wife is a citizen of the United States, is in the employment of the Government of the United States, or of an American institution of research recognized as such by the Attorney General of the United States, or an American firm or corporation engaged in whole or in part in the development of foreign trade and commerce of the United States, or subsidiary thereof, or of a public international organization in which the United States participates by treaty or statute, or is authorized to perform the ministerial or priestly functions of a religious denomination having a bona fide organization within the United States, or is engaged solely as a missionary by a religious denomination or by an interdenominational mission organization having a bona fide organization within the United States, and such husband or wife is regularly stationed abroad in such employment. I intend in good faith upon naturalization to live abroad with my spouse and to resume my residence within the United States immediately upon termination of such employment abroad.

(8) I have 4 children; and the name, sex, date and place of birth, and present place of residence of each of said children who is living, are as follows:
John Michael(d) 12-9-51;Marie (f) 10-23-52;both born in Montreal,Canada
Thomas Jr. (m) 8-6-54;John Christopher (m) 11-1-57 ;both born in Cambridge, Mass. All children live with me

(9) My lawful admission for permanent residence in the United States was at Highgate Springs,Vermont
(City or town)
under the name of Thomas F.Rona on Aug.25,1954
(Month) (Day) (Year)
on the Highway
(Name of vessel or other means of conveyance)

(10) Since my lawful admission for permanent residence I have not been absent from the United States, for a period or periods of 6 months or longer, except as follows:

DEPARTED FROM THE UNITED STATES			RETURNED TO THE UNITED STATES		
Port	Date (Month, day, year)	Vessel or Other Means of Conveyance	Port	Date (Month, day, year)	Vessel or Other Means of Conveyance

(11) It is my intention in good faith to become a citizen of the United States and to renounce absolutely and entirely all allegiance and fidelity to any foreign prince, potentate, state, or sovereignty of whom or which at this time I am a subject or citizen. (12) It is my intention to reside permanently in the United States. (13) I am not and have not been for a period of at least 10 years immediately preceding the date of this petition a member of or affiliated with any organization proscribed by the Immigration and Nationality Act or any section, subsidiary, branch, affiliate or subdivision thereof nor have I during such period believed in, advocated, engaged in or performed any of the acts or activities prohibited by that Act. (14) I am able to read, write and speak the English language (unless exempted therefrom). (15) I am, and have been during all the periods required by law, a person of good moral character, attached to the principles of the Constitution of the United States and well disposed to the good order and happiness of the United States. I am willing, if required by law, to bear arms on behalf of the United States, to perform noncombatant service in the Armed Forces of the United States, and to perform work of national importance under civilian direction (unless exempted therefrom). (16) I have resided continuously in the United States since Aug.25,1954
(Month) (Day) (Year)
and continuously in the State in which this petition is made for the term of 6 months at least immediately preceding the date of this petition and I have been physically present in the United States for at least one-half of the 1 1/2 year period immediately preceding the date of this petition. (17) I have not heretofore made petition for naturalization No.
on
(Month) (Day) (Year)
at
(City or town) (County) (State)
in the Court, and such petition was denied by that Court for the following reasons and causes, to wit:
(Name of Court)

(18) Attached hereto and made a part of this, my petition for naturalization, are the affidavits of at least two verifying witnesses required by law.
(19) Wherefore, I, your petitioner for naturalization, pray that I may be admitted a citizen of the United States of America, and that my name be changed to (no change requested)

I, aforesaid petitioner, do swear (affirm) that I know the contents of this petition for naturalization subscribed by me, and that the same are true to the best of my knowledge and belief, and that this petition is signed by me with my full, true name: SO HELP ME GOD.

RC 8733890
ALIEN REGISTRATION NO.

Thomas Paul Rona
(Full, true, and correct signature of petitioner, without abbreviation)

Form N-405
(Rev. 11-5-58)

16—41073-10

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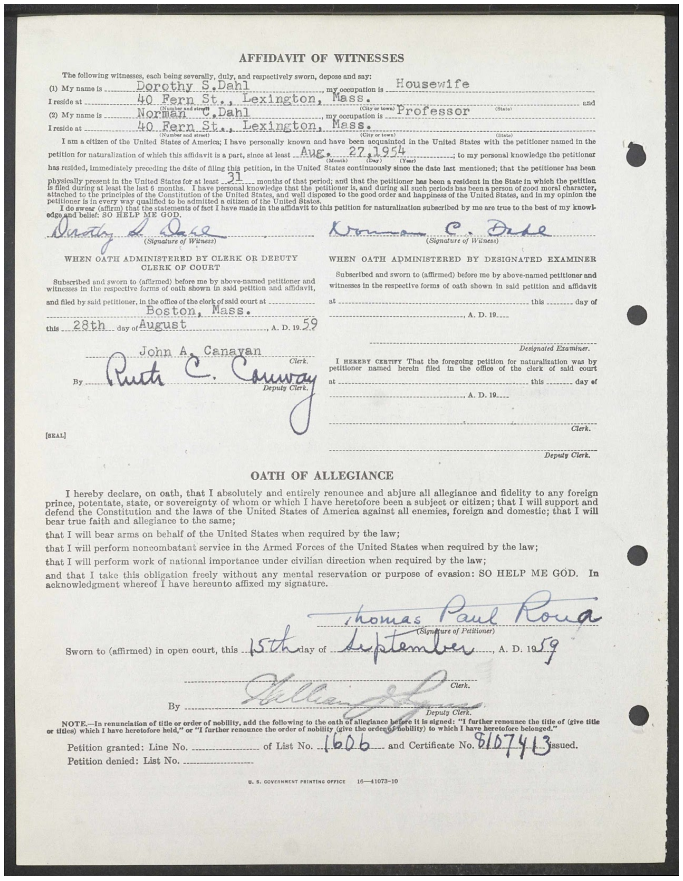

AFFIDAVIT OF WITNESSES

The following witnesses, each being severally, duly, and respectively sworn, depose and say:

(1) My name is Dorothy S.Dahl, my occupation is Housewife
I reside at 40 Fern St., Lexington, Mass. and
(Number and street) (City or town) (State)

(2) My name is Norman C.Dahl, my occupation is Professor
I reside at 40 Fern St., Lexington, Mass.
(Number and street) (City or town) (State)

I am a citizen of the United States of America; I have personally known and have been acquainted in the United States with the petitioner named in the petition for naturalization of which this affidavit is a part, since at least Aug. 27,1954
(Month) (Day) (Year)
to my personal knowledge the petitioner has resided, immediately preceding the date of filing this petition, in the United States continuously since the date last mentioned; that the petitioner has been physically present in the United States for at least 21 months of that period; and that the petitioner has been a resident in the State in which the petition is filed during at least the last 6 months. I have personal knowledge that the petitioner is, and during all such periods has been a person of good moral character, attached to the principles of the Constitution of the United States, and well disposed to the good order and happiness of the United States, and in my opinion the petitioner is in every way qualified to be admitted a citizen of the United States.

I do swear (affirm) that the statements of fact I have made in the affidavit to this petition for naturalization subscribed by me are true to the best of my knowledge and belief: SO HELP ME GOD.

Dorothy S. Dahl
(Signature of Witness)

Norman C. Dahl
(Signature of Witness)

WHEN OATH ADMINISTERED BY CLERK OR DEPUTY CLERK OF COURT

Subscribed and sworn to (affirmed) before me by above-named petitioner and witnesses in the respective forms of oath shown in said petition and affidavit, and filed by said petitioner, in the office of the clerk of said court at Boston, Mass.
this 28th day of August, A. D. 19 59

John A. Canavan
Clerk.
By Ruth C. Conway
Deputy Clerk.

[SEAL]

WHEN OATH ADMINISTERED BY DESIGNATED EXAMINER

Subscribed and sworn to (affirmed) before me by above-named petitioner and witnesses in the respective forms of oath shown in said petition and affidavit

at this day of
A. D. 19

Designated Examiner.

I HEREBY CERTIFY That the foregoing petition for naturalization was by petitioner named herein filed in the office of the clerk of said court

at this day of
A. D. 19

Clerk.
Deputy Clerk.

OATH OF ALLEGIANCE

I hereby declare, on oath, that I absolutely and entirely renounce and abjure all allegiance and fidelity to any foreign prince, potentate, state, or sovereignty of whom or which I have heretofore been a subject or citizen; that I will support and defend the Constitution and the laws of the United States of America against all enemies, foreign and domestic; that I will bear true faith and allegiance to the same;

that I will bear arms on behalf of the United States when required by the law;

that I will perform noncombatant service in the Armed Forces of the United States when required by the law;

that I will perform work of national importance under civilian direction when required by the law;

and that I take this obligation freely without any mental reservation or purpose of evasion: SO HELP ME GOD. In acknowledgment whereof I have hereunto affixed my signature.

Thomas Paul Rona
(Signature of Petitioner)

Sworn to (affirmed) in open court, this 15th day of September, A. D. 1959

Clerk.
By
Deputy Clerk.

NOTE.—In renunciation of title or order of nobility, add the following to the oath of allegiance before it is signed: "I further renounce the title of (give title or titles) which I have heretofore held," or "I further renounce the order of nobility (give the order of nobility) to which I have heretofore belonged."

Petition granted: Line No. of List No. 1606 and Certificate No. 6167413 issued.
Petition denied: List No.

U. S. GOVERNMENT PRINTING OFFICE 16—41073-10

[HG007C][GDrive]

1954 (March)- Promotion at MIT

https://wp.technologyreview.com/wp-content/uploads/2012/10/MIT-Technology-Review-1954-03-2.pdf

"Appointments and Promotions: RECENT Faculty appointments and promotions at M.I.T. were announced on February 1 by James R. Killian, Jr., '26. President of the Institute. Promoted to the rank of assistant professor is Vincent J. Roggeveen, '53, a member of the Department of Civil and Sanitary Engineering. ***Thomas P. Rona, '53, has been appointed assistant professor in the Department of Mechanical Engineering.***"

1954/1955 MIT paper : GAS TEMPERATURE MEASUREMENTS BY ULTRASONIC PULSE METHOD

Whole PDF : [HE002L][GDrive]

Look at who was involved :

1. Professor C. Fayette Taylor, Head of the Division of Automotive Engineering at the Massachusetts Institute of Technology (see http://web.mit.edu/hmtl/www/taylor.pdf)
2. Mr. James C. Livengood
3. Messrs E.A. Oster and P.C. Wu
4. Professors [**Dr Jordan Jay Baruch (born 1923)**]
5. Professor **L.L. Beranek** (see https://en.wikipedia.org/wiki/Leo_Beranek)
6. Dr. **T.F. Hueter** - (see https://www.ob-ultrasound.net/hueter.html)
7. **R.H. Bolt** (see https://en.wikipedia.org/wiki/Richard_Bolt)
8. Professor **R.M. Fano** of the Department of Electrical Engineering (see https://en.wikipedia.org/wiki/Robert_Fano ; "In the early 1960s, Fano was involved in the development of time-sharing computers.")
9. Professor **L. Tisza** of the Physics Department (see https://en.wikipedia.org/wiki/László_Tisza - "(July 7, 1907 – April 15, 2009) was a Hungarian-born American physicist who was Professor of Physics Emeritus at MIT. He was a colleague of famed physicists Edward Teller, Lev Landau and Fritz London, and initiated the two-fluid theory of liquid helium.")
10. Mr. J. Caloggero of the Sloan Laboratories
11. The author' s wife, [**Monique R Rona (born 1928)**], contributed to an unusual degree in the creation of the moral and material surrounding which was felt essential in the performance of this work.

GAS TEMPERATURE MEASUREMENTS BY ULTRASONIC PULSE METHOD

by

THOMAS PAUL RONA

M.E. Ecole d'Electricite et de Mecanique Industrielles
(Paris, France 1943)
E.E. Ecole Superieure d'Electricite
(Paris, France 1945)
M.S. Massachusetts Institute of Technology
(1953)

SUBMITTED IN PARTIAL FULFILLMENT OF THE
REQUIREMENTS FOR THE DEGREE OF
DOCTOR OF SCIENCE
at the
MASSACHUSETTS INSTITUTE OF TECHNOLOGY
June, 1955

Signature of Author .....
Department of Electrical Engineering, May 16, 1955

Certified by ....
Thesis Supervisor

Accepted by .....
Chairman, Departmental Committee on Graduate Students

pg i
[HE002N][GDrive]

ACKNOWLEDGEMENTS

The work reported here has been supported in its various phases by the U.S. Army Office of Ordnance Research and the Coordinating Research Council.

The initiative and supervision of this program was entrusted to Professor C. Fayette Taylor, Head of the Division of Automotive Engineering at the Massachusetts Institute of Technology. (Sloan Laboratories for Automotive and Aircraft Engines.)

The helpful and friendly cooperation and advice of the whole staff of the Sloan Laboratories is hereby gratefully acknowledged. Mr. James C. Livengood has been particularly active with constructive comments and everyday's guidance. Messrs E.A. Oster and P.C. Wu contributed in various ways to test the equipment in actual use on combustion engines.

On the theoretical side, the help given by the Guidance Committee of the Department of Electrical Engineering has been of considerable importance. Professors Jordan J. Baruch, L.L. Beranek Dr. T.F. Hueter and R.H. Bolt contributed generously their time and advices.

In the field of theoretical physics, Professors R.M. Fano of the Department of Electrical Engineering and L. Tisza of the Physics Department allowed the author to draw on their vast background.

Mr. J. Caloggero of the Sloan Laboratories must be credited with resourcefulness in the construction of numerous special measuring devices.

The author's wife, Monique R. Rona, contributed to an unusual degree in the creation of the moral and material surrounding which was felt essential in the performance of this work.

pg ii
[HE002O][GDrive]

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pg iii
[HE002P][GDrive]

CHAPTER -I-

G E N E R A L I T I E S

1.1 ORIGIN AND NATURE OF THE PROBLEM

1.11 Gas temperature Measurements in Engine Combustion Chamber.

Part of the improvement of internal combustion engine performance in recent years has been brought around by a more detailed and more intimate knowledge of the phenomena which take place in the fuel-air mixture before and during combustion. In addition to other characteristics such as pressure, chemical composition and specific volume, the accurate knowledge of specific temperature in the various phases of the compression stroke has been recognized to be of primary importance for further investigation of fuels and combustion chamber designs.

More specifically, the temperature history of the compression stroke plays a determining role in the engine "knock" which at the present time is one of the factors limiting engine performance. "Knock" or detonation of a portion of the fuel-air mixture before arrival of the "normal" flame front produced by the spark is believed to originate in the rapid compression of the end-gas (portion of the charge last to burn in normal operation) by the pressure rise caused by combustion in the other part of the cylinder.

pg 07
[HE002Q][GDrive]

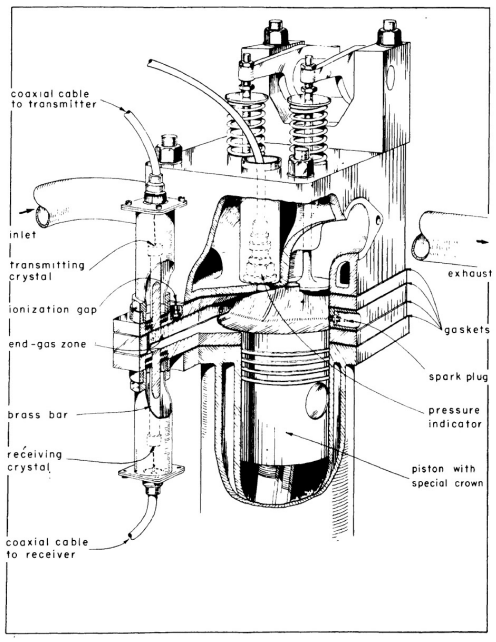


Fig. 1 - Sound Velocity Instrument installed on Engine Head.

pg 158
[HE002R][GDrive]

BIOGRAPHICAL NOTE

The author, Thomas P. Rona was born in Budapest, Hungary on January 17, 1923. Raised and educated in Paris, France, has obtained the degree, Mechanical Engineer in 1943 (Ecole d'Electricite et Mecanique Industrielle, Paris), the degree, Electrical Engineer in 1945 (Ecole Superieure d'Electricite) Paris, and the Certificat d'Etudes Superieures, Electricite Generale (Sorbonne, Paris) in 1945.

His professional carrier includes the French Thompson Houston Co (Radio transmitters) the French National Office for Aeronautical Research (wing vibrations and Analog Computers) and a Consulting Engineer Practice in the French Equatorial Africa (Civil Engineering and Hydro-Electric Power Plant Sites).

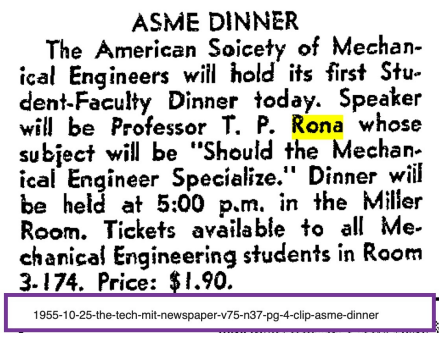
In 1951, the author came in Montreal, Canada, as Assistant Professor of Electrical Engineering at the Ecole Polytechnique of Montreal. He joined the Massachusetts Institute of Technology staff in 1952, where he obtained the degree of Master of Science in Electrical Engineering in 1953. Currently holds the appointment of Assistant Professor of Mechanical Engineering at the Institute.

His family includes his wife, Monique R. Rona-Noel, and three children, John-Michael (1951), Marie-Helen (1952) and Thomas Paul Jr. (1954)

pg 190
[HE002S][GDrive]

1955 (Oct 25) - MIT - Professor "T.P. Rona"

PDF of 1955 (Oct 25) MIT "the Tech" Newspaper - [HE002T][GDrive]



ASME DINNER

The American Soicety of Mechanical Engineers will hold its first Student-Faculty Dinner today. Speaker will be Professor T. P. Rona whose subject will be "Should the Mechanical Engineer Specialize." Dinner will be held at 5:00 p.m. in the Miller Room. Tickets available to all Mechanical Engineering students in Room 3-174. Price: $1.90.

1955-10-25-the-tech-mit-newspaper-v75-n37-pg-4-clip-asme-dinner

[HE002U][GDrive]

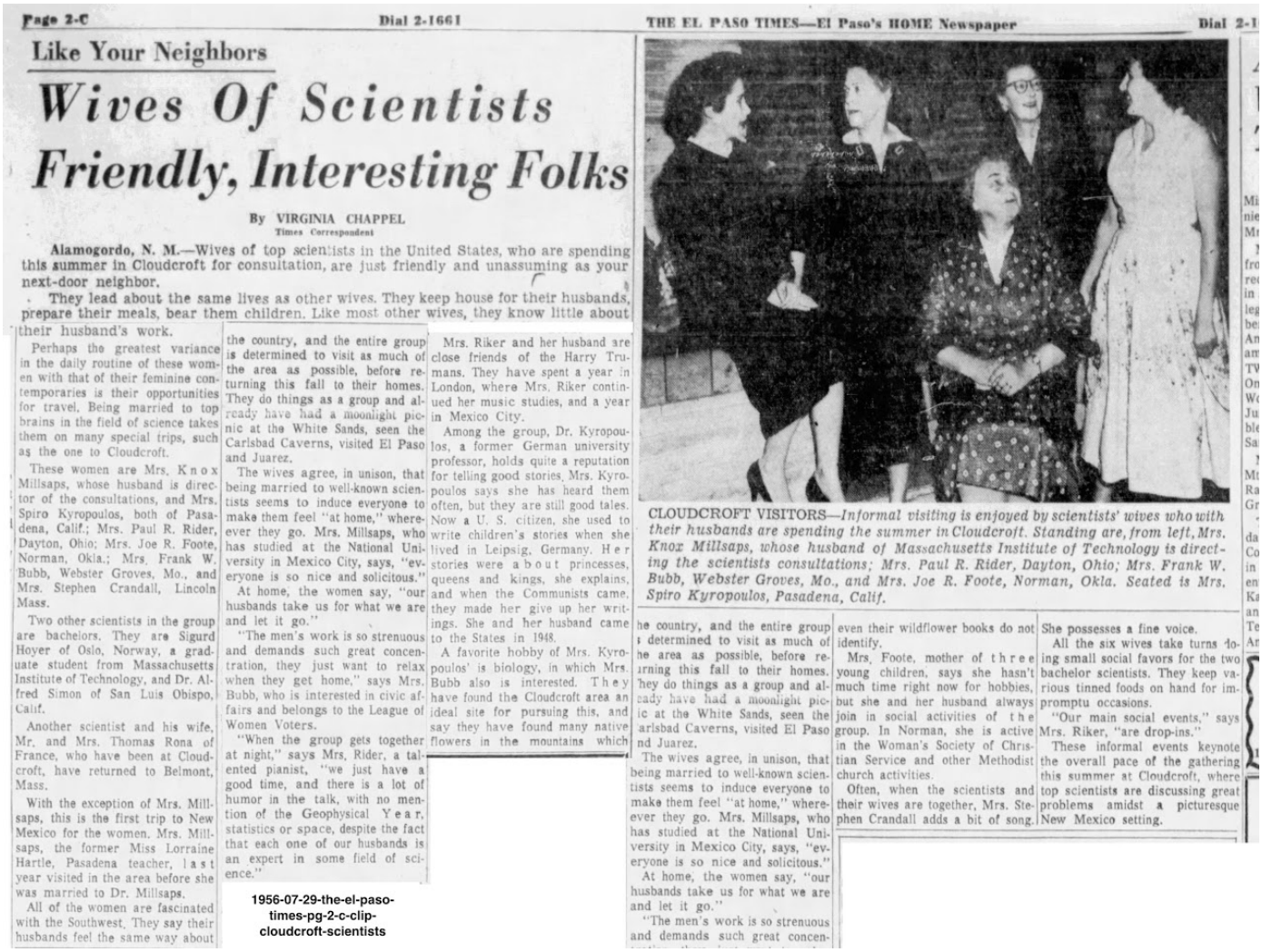
1956 (July 29) - The El Paso Times

Full newspaper page : [HN01B1][GDrive]

Also see - https://www.newspapers.com/image/157785567/

Who was in attendance?

1. 1961 - **Knox Millsaps** is a chief Air Force rsearcher - https://scholarship.rice.edu/bitstream/handle/1911/66288/thr19610217.pdf?sequence=1&isAllowed=y
2. Frank W Bubb = "**Frank Bubb** (July 3, 1892 – May 3, 1961) was a scientist and a mathematician at Washington University. He was a part of the team that developed the cyclotron that produced the first batch of plutonium for the then secret program only referred to as the Manhattan Project, which produced the atomic bomb." (see https://en.wikipedia.org/wiki/Frank_W._Bubb_Sr.)
3. **Spiro Kyropoulos** - https://www.fold3.com/image/7301719 - Greek physisists, moved to the USA from Germany in 1938



Page 2-C Dial 2-1661 THE EL PASO TIMES—El Paso's HOME Newspaper Dial 2-1

Like Your Neighbors

Wives Of Scientists Friendly, Interesting Folks

By VIRGINIA CHAPPEL
Times Correspondent

Alamogordo, N. M.—Wives of top scientists in the United States, who are spending this summer in Cloudcroft for consultation, are just friendly and unassuming as your next-door neighbor.

They lead about the same lives as other wives. They keep house for their husbands, prepare their meals, bear them children. Like most other wives, they know little about their husband's work.

Perhaps the greatest variance in the daily routine of these women with that of their feminine contemporaries is their opportunities for travel. Being married to top brains in the field of science takes them on many special trips, such as the one to Cloudcroft.

These women are Mrs. Knox Millsaps, whose husband is director of the consultations, and Mrs. Spiro Kyropoulos, both of Pasadena, Calif.; Mrs. Paul R. Rider, Dayton, Ohio; Mrs. Joe R. Foote, Norman, Okla.; Mrs. Frank W. Bubb, Webster Groves, Mo., and Mrs. Stephen Crandall, Lincoln Mass.

Two other scientists in the group are bachelors. They are Sigurd Hoyer of Oslo, Norway, a graduate student from Massachusetts Institute of Technology, and Dr. Alfred Simon of San Luis Obispo, Calif.

Another scientist and his wife, Mr. and Mrs. Thomas Rona of France, who have been at Cloudcroft, have returned to Belmont, Mass.

With the exception of Mrs. Millsaps, this is the first trip to New Mexico for the women. Mrs. Millsaps, the former Miss Lorraine Hartle, Pasadena teacher, last year visited in the area before she was married to Dr. Millsaps.

All of the women are fascinated with the Southwest. They say their husbands feel the same way about the country, and the entire group is determined to visit as much of the area as possible, before returning this fall to their homes. They do things as a group and already have had a moonlight picnic at the White Sands, seen the Carlsbad Caverns, visited El Paso and Juarez.

The wives agree, in unison, that being married to well-known scientists seems to induce everyone to make them feel "at home," wherever they go. Mrs. Millsaps, who has studied at the National University in Mexico City, says, "everyone is so nice and solicitous."

At home, the women say, "our husbands take us for what we are and let it go."

"The men's work is so strenuous and demands such great concentration, they just want to relax when they get home," says Mrs. Bubb, who is interested in civic affairs and belongs to the League of Women Voters.

"When the group gets together at night," says Mrs. Rider, a talented pianist, "we just have a good time, and there is a lot of humor in the talk, with no mention of the Geophysical Year, statistics or space, despite the fact that each one of our husbands is an expert in some field of science."

Mrs. Riker and her husband are close friends of the Harry Trumans. They have spent a year in London, where Mrs. Riker continued her music studies, and a year in Mexico City.

Among the group, Dr. Kyropoulos, a former German university professor, holds quite a reputation for telling good stories. Mrs. Kyropoulos says she has heard them often, but they are still good tales. Now a U. S. citizen, she used to write children's stories when she lived in Leipsig, Germany. Her stories were about princesses, queens and kings, she explains, and when the Communists came, they made her give up her writings. She and her husband came to the States in 1948.

A favorite hobby of Mrs. Kyropoulos' is biology, in which Mrs. Bubb also is interested. They have found the Cloudcroft area an ideal site for pursuing this, and say they have found many native flowers in the mountains which even their wildflower books do not identify.

Mrs. Foote, mother of three young children, says she hasn't much time right now for hobbies, but she and her husband always join in social activities of the group. In Norman, she is active in the Woman's Society of Christian Service and other Methodist church activities.

Often, when the scientists and their wives are together, Mrs. Stephen Crandall adds a bit of song. She possesses a fine voice.

All the six wives take turns doing small social favors for the two bachelor scientists. They keep various tinned foods on hand for impromptu occasions.

"Our main social events," says Mrs. Riker, "are drop-ins."

These informal events keynote the overall pace of the gathering this summer at Cloudcroft, where top scientists are discussing great problems amidst a picturesque New Mexico setting.

CLOUDCROFT VISITORS—*Informal visiting is enjoyed by scientists' wives who with their husbands are spending the summer in Cloudcroft. Standing are, from left, Mrs. Knox Millsaps, whose husband of Massachusetts Institute of Technology is directing the scientists consultations; Mrs. Paul R. Rider, Dayton, Ohio; Mrs. Frank W. Bubb, Webster Groves, Mo., and Mrs. Joe R. Foote, Norman, Okla. Seated is Mrs. Spiro Kyropoulos, Pasadena, Calif.*

1956-07-29-the-el-paso-times-pg-2-c-clip-cloudcroft-scientists

[HN01B2][GDrive]

1958 - MIT Professor - Highlights form MIT's President's Report

PDF source : [HE002M][GDrive]

Crandall is "Stephen H. Crandall, MECHANICAL ENGINEERING" / See https://en.wikipedia.org/wiki/Stephen_H._Crandall

[...]

Research in Mechanical Engineering

- Research continued on a large scale throughout the year and is becoming one of the principal means of education of graduate students. A partial and necessarily incomplete narrative of these researches, which have given rise during the year to fifty-five published scientific and technical papers, three books, and thirteen Sc.D. theses, follows.
- Professor Tau-Yi Toong has been working on theories of ignition and flame stabilization under a grant of the National Science Foundation and is conducting research on the interactions between burning fuel droplets under a grant of the Shell Oil Company.
- Professor Frank A. McClintock, in his studies on the mechanism of fracture in metals, has made a theoretical analysis of the stress and strain fields around a crack and has succeeded in establishing criteria for failure from this theory which agree with experiments on the behavior of aluminum foil.
- **Professor Thomas P. Rona is working on the development of a magnetostrictive ring oscillator and on a bifilar inertia reference system with optical registration, both of his invention. He and Professor Crandall have embarked on research on random vibration processes, which recently have acquired great practical significance. They also have taken part in an Air Force development of a highspeed carriage (up to Mach 10) on a track of several miles length.**
- [...]

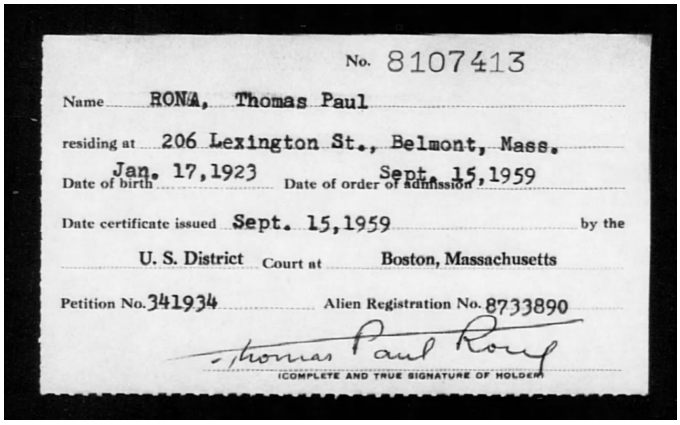
[...]

PERIODICAL PUBLICATIONS, BOOKS, AND REVIEWS

- MCCLINTOCK, FRANK A. A Section in An Introduction to the Mechanics of Solids, edited by S. H. Crandall and N. C. Dahl. (N. Y., McGraw-Hill, 1957.)
  - [We see Dahl, the guy who signed his papers...]
- [...]
- **RONA, THOMAS P. Instrumentation for Random Vibration Analysis. (A Chapter in Random Vibration, edited by S. H. Crandall. Cambridge, Mass., Technology Press, 1958.)**
- [...]

1959 - US Naturalization Certificate

sep 15 1959


No. 8107413

Name RONA, Thomas Paul

residing at 206 Lexington St., Belmont, Mass.

Date of birth Jan. 17,1923 Date of order of admission Sept. 15,1959

Date certificate issued Sept. 15,1959 by the

U. S. District Court at Boston, Massachusetts

Petition No. 341934 Alien Registration No. 8733890

Thomas Paul Rona

(COMPLETE AND TRUE SIGNATURE OF HOLDER)

[HG007D][GDrive]

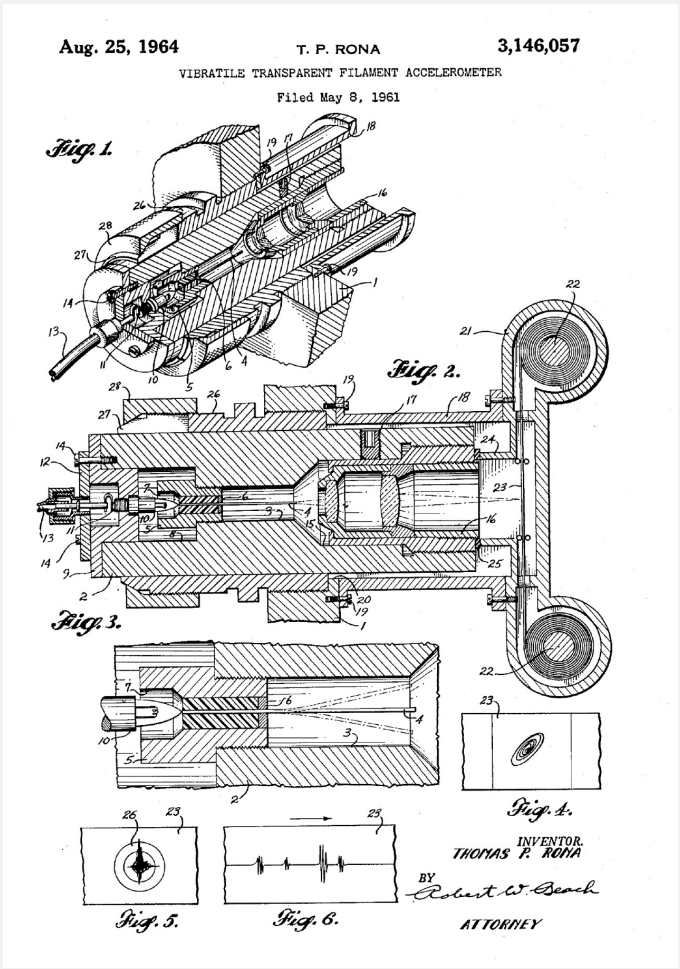
1959 (July) - Thomas Rona joins Boeing in Seattle

Form 1959 MIT - See https://libraries.mit.edu/archives/mithistory/presidents-reports/1959.pdf / 1959-mit-presidents-report.pdf

- pg 117: "Professor Crandall is conducting research on the use of variational principles in heat and fluid flow, random vibration, and solution by means of computing machines of LaPlace's equation in cylindrical coordinates. Professor Thomas P. Rona has been working on the instrumentation of vibration."
- pg 119 : "Professor Rona has requested leave of absence for the coming year."

1961 (files May 8) - Patent (Boeing) : " VIBRATILE TRANSPARENT FILAMENT ACCELEROMETER"

Full PDF : [HG007Y][GDrive]



Aug. 25, 1964 T. P. RONA 3,146,057

VIBRATILE TRANSPARENT FILAMENT ACCELEROMETER

Filed May 8, 1961

Fig. 1.

Fig. 2.

Fig. 3.

Fig. 4.

Fig. 5.

Fig. 6.

INVENTOR.
THOMAS P. RONA
BY Robert W. Beach
ATTORNEY

[HG007Z][GDrive]

United States Patent Office 3,146,057 Patented Aug. 25, 1964

3,146,057

VIBRATILE TRANSPARENT FILAMENT ACCELEROMETER

Thomas P. Rona, 614 Hazel St., Kent, Wash.

Filed May 8, 1961, Ser. No. 108,458
6 Claims. (Cl. 346—108)

The present invention relates to an accelerometer capable of indicating an abrupt motion disturbance in a wide variety of applications by the pattern of light transmitted axially through a transparent filament.

A principal object is to provide such an accelerometer which is very light, small and compact, yet which can produce an indication which is readily visible or can be recorded easily by very simple apparatus.

A further object is to provide mechanism associated with the accelerometer which can make a record of movement of the acceleration sensitive element in various ways, such as on a stationary film, or on a moving film or in a numerical record.

It is also an object to provide an accelerometer sensitive to different types of disturbance such as vibration, shock, impact, static electricity, or magnetic forces.

Such objects can be accomplished by an accelerometer in which a vibratile transparent filament is supported in cantilever fashion having its supported end exposed to a source of light in close proximity to it for projecting light axially through the filament irrespective of the deflection of its free end. The light transmitted by the filament is directed through a magnifying and focusing lens system, or objective onto an indicating or recording surface, such as a ground glass for observation or a film or photoelectric device for recording.

FIGURE 1 is a top perspective of the accelerometer with the near quadrant broken away to reveal its internal construction.

FIGURE 2 is an enlarged central longitudinal section through the accelerometer.

FIGURE 3 is an enlarged fragmentary longitudinal section through the filament-supporting and illuminating portion of the accelerometer.

FIGURES 4, 5 and 6 illustrate sections of film bearing representative traces made by light emitted from the accelerometer filament.

From the drawing it is difficult to appreciate the small size of the accelerometer, but it should be kept in mind that the entire length of the accelerometer body shown in FIGURE 1 would be only about two and one-half inches and the outside diameter of the assembly shown in that figure would be about one inch. This accelerometer assembly conveniently can be mounted in a threaded aperture in a mounting wall **1** so that it can be removed and replaced readily. The assembly thus mounted in the wall will enclose completely the sensitive, or fragile, parts of the accelerometer so that they will be protected from damage. The accelerometer assembly may, however, be taken apart readily for repair or replacement of parts.

The accelerometer assembly includes a barrel **2** having a thick wall as compared to the entire size of the accelerometer assembly. A stepped bore extends through this barrel which has a central portion **3** of smallest diameter forming a chamber in which the delicate transparent filament **4** is received. This filament may have a total length of approximately three-quarters of an inch with approximately two-thirds of its length being free and supported in cantilever fashion by the other third of the filament length being secured in a mounting plug **5**. The exterior of this plug is stepped and the smaller portion adjacent to the free end of the filament is threaded to screw into a complementally threaded end of the central section **3** of the bore through the barrel **2**.

The vibratile linear filament **4** is of bendable and resilient, in other words limber, transparent material, as indicated in FIGURE 3, having a diameter of the order of one-thousandth of an inch and having light refraction characteristics such that a beam of light will be emitted from one end when the opposite end is illuminated irrespective of the amount or nature of the deflection of parts of the filament between its ends. Such light-conducting filament may be a single glass fibre, for example. The core of the filament will have a high index of refraction and the surface of the filament will have a low index of refraction so that light is trapped in the filament instead of being emitted along its length. The supported end portion of the filament can be embedded in wax or resin **6** in the bore of the plug **5**, but the supported end of such filament will extend completely through the wax body so that the end of the filament will be exposed in the cavity **7** in the base of the plug communicating with the plastic filled bore in which the filament is mounted. Care should be taken in mounting the filament in the plug bore so that, as shown in FIGURES 2 and 3, the free end portion of the filament when at rest will extend substantially coaxially through the bore of chamber **3**.

The base of the plug **5** is received in an enlarged portion **8** of the bore through the barrel extending from the smaller central portion of the bore to one end of the barrel. This enlarged portion of the barrel is closed by the cover **9** having a boss fitting within such enlarged bore portion. This boss has a central tapped aperture constituting the socket for a miniature light bulb **10** having a threaded base adapted to be screwed into such socket. The length of the enlarged bore portion **8**, the axial extent of the boss on cover **9** and the axial extent of the cavity **7** in plug **5**, are proportioned relative to the length of the light bulb **10** so that, as shown best in FIGURE 3, the end of the light bulb will be in very close proximity to the supported end of the filament **4**. When the light bulb is energized, therefore, a maximum amount of light will be projected into the supported end of the filament.

The light bulb **10** may be of the center contact type so that one circuit connection will be to the barrel assembly generally. The other contact **11** of spring strip type can be mounted suitably on plate **12** and connected to a wire **13**. Such plate and the cover **9** can be secured to the end of the barrel by bolts **14** screwed into tapped holes in the end of barrel **2**.

In the end of the barrel **2** opposite the light source, the bore through the barrel is enlarged to form the cavity **15** having an internally threaded portion adjacent to the end of the barrel. Into this cavity is screwed an objective **16** providing a lens system which will magnify and focus the beam of light emitted from the free end of the filament 4. Such objective can be secured in place in the barrel by the recessed set screw **17** received in a threaded aperture in the barrel **2** extending transversely of its length and located farther from the open end of cavity **15** than the extent of the threaded portion of such cavity.

The barrel **2** must be mounted in proper relationship to an indicating or recording surface on which the objective **16** focuses the light beam emitted from the filament **4**. Consequently, it is convenient to mount both the barrel and the support for the indicating or recording surface in proper relationship to the mounting wall **1**. A tube **18** secured to one face of the wall by screws **19** threaded into tapped holes in the wall may be supported in alignment with an aperture **20** extending through the wall to receive the accelerometer assembly. On this tube is mounted the desired indicating or recording medium, such as a ground glass or a film to receive light from the objective **16**.

As representative of a film holder as typical of a recording medium, the film case **21** is shown mounted on the end of tube **18** remote from the wall **1**. Opposite ends

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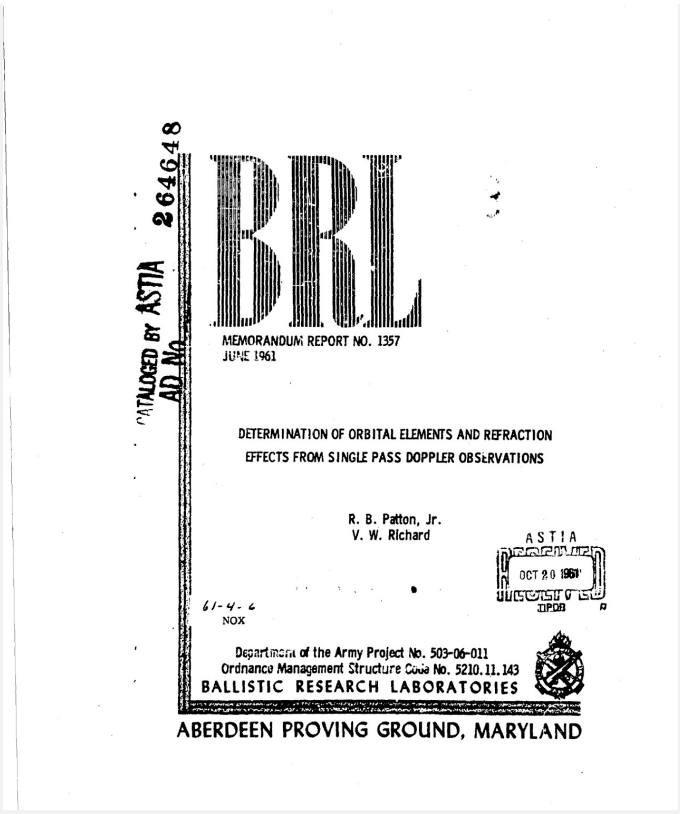
1961 (June) - Ballistic Research Laboratories Report 1357 - Distribution includes Thomas Rona

PDF "1961-06-usa-ballistic-research-laboratories-report-1357-determination-of-orbital-elements-and-refraction-effects-264648.pdf" : [HG007P] [GDrive] / Modified PDF with OCR : [HG007S][GDrive]

R. B. Patton, Jr. / V. W. Richard



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MEMORANDUM REPORT NO. 1357
JUNE 1961

DETERMINATION OF ORBITAL ELEMENTS AND REFRACTION EFFECTS FROM SINGLE PASS DOPPLER OBSERVATIONS

R. B. Patton, Jr.
V. W. Richard

ASTIA
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Department of the Army Project No. 503-06-011
Ordnance Management Structure Code No. 5210.11.143
BALLISTIC RESEARCH LABORATORIES
ABERDEEN PROVING GROUND, MARYLAND

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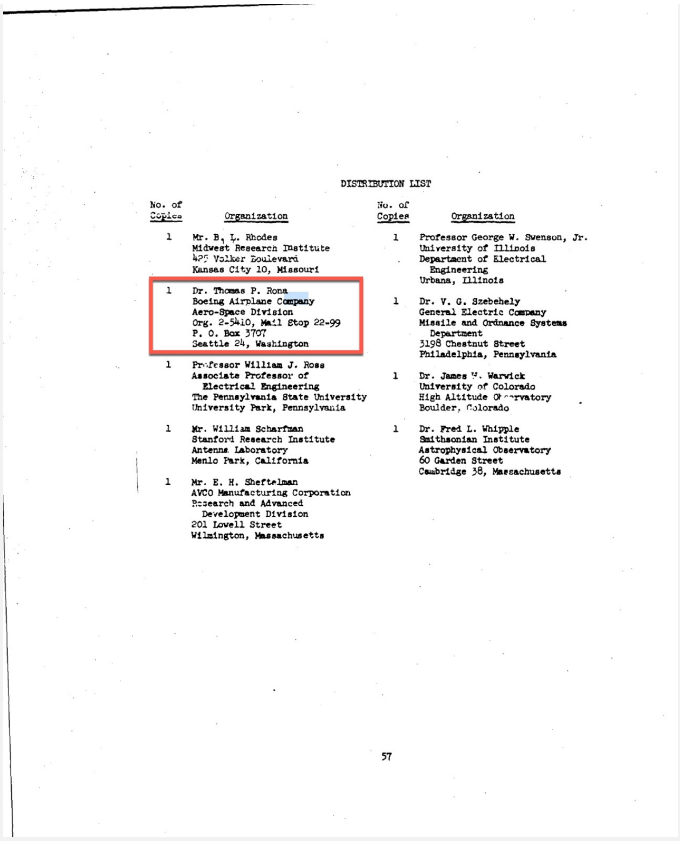

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1	Dr. Fred L. Whipple Smithsonian Institute Astrophysical Observatory 60 Garden Street Cambridge 38, Massachusetts

57

[HG007R][GDrive]

1961 or 1962 - Space Technologies Laboratory - This looks like a Conference?

PDF : [HC0045][GDrive]

Below, starts at page 222 of PDF

i think this might be 1961 or 1962.. as the oldest date contained within is 1961

Section 5
PANEL SESSION

THE ESTABLISHMENT OF TEST LEVELS FROM FIELD DATA

Moderator: Professor Charles E. Crede
California Institute of Technology

Panelists: Mr. Maurice Gertel
Allied Research Associates, Boston
Mr. Neal Granick
NASA, Goddard Space Flight Center
Dr. Thomas Rona
Boeing Airplane Company, Seattle
Dr. Robert Mains
General Electric Company, Schenectady
Dr. Allen Curtis
Hughes Aircraft Company, Culver City

Those concerned with determining the probability that a given equipment will fail in service are faced with the problem of translating environmental data into realistic laboratory tests. Simulation is the art of laboratory testing to create a condition that is representative of the actual environmental condition to which equipment will be subjected. In this context, a simulated environment is not necessarily similar to the actual environment but rather has the same damaging potential. Various criteria of damage have been proposed to evaluate this damaging potential. These, together with analytical and empirical techniques for establishing laboratory test levels were considered by the panelists and form the subjects of the prepared presentations. In presenting the general discussion which followed, a verbatim transcript has not been attempted, but comments have been condensed and consolidated under a number of general headings.

OPENING STATEMENT OF THE MODERATOR

Dr. Crede

This panel has been assembled (1) to present a cross section of the latest thinking on the problem of establishing test levels from field data and (2) to give members of the audience an opportunity to obtain comments on their problems from the experts on the panel. I have deliberately avoided saying that the experts will answer your questions because there are no known answers to many questions that can be asked.

Essentially everyone engaged in the design or manufacture of equipment for military use has a problem in determining test conditions. The very stringent requirements for reliability of such equipment dictates that the equipment should be subjected to shock and vibration tests in the laboratory. The objective of such tests is relatively easy to state: The laboratory tests should cause all failures and malfunctions that would later occur in

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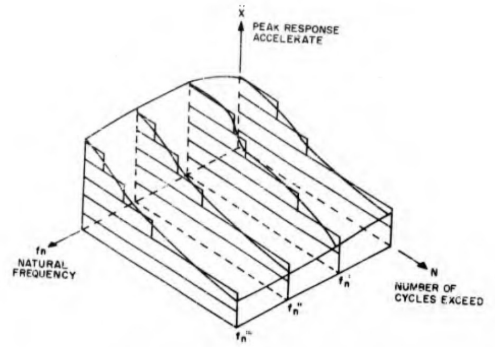

Fig. 3 - Three-dimensional shock spectrum

I must point out, however, that there is a class of equipment failure, described as "temporary malfunction," e.g., electrical noise, loosening of fasteners, etc., for which the presented data reduction technique doesn't fully apply. This isn't a major handicap, however, and until we find a way to design tests for malfunctions the present method based on simulating structural damage will ensure the structural integrity of the equipment we place in future vehicles.

Dr. Crede

Now, if we have followed the advice of Dr. Curtis and Mr. Gertel, we will have separated out from the complexities of a time-history certain numerical parameters which indicate the nature and severity of the field conditions. From our knowledge of these field conditions, we can determine the over-all time during which the equipment will be subjected to these conditions. For example, equipment installed in a manned aircraft may be required to endure hundreds or thousands of hours of vibration, whereas that installed in a ballistic missile must withstand only a very few minutes of vibration. Finally, we may know something of the nature of the equipment to be tested which can be applied in selecting appropriate tests. Dr. Rona, if you were supplied with reduced data as outlined by Dr. Curtis and Mr. Gertel, together with the other information that I mentioned, what concepts would you apply in devising a laboratory test to best simulate the field conditions?

TEST PROGRAM BASED ON MEASURED ENVIRONMENT

Thomas P. Rona

The question, as phrased, may imply that the only thing I can use is the data supplied by my copanelists. Actually, what I shall try to do is to limit the proportion of the test designer's judgment which enters into the definition of the test, and attempt to increase the rational elements. We should not delude ourselves by thinking that by rational we mean absolutely incontrovertible. It is simply a matter of where the elements of judgment do come in the picture.

Specifying a rational shock and vibration test program is, in general, impossible on the basis of measured environment only. While "environment," translated as meaning here input and output phenomena connected with

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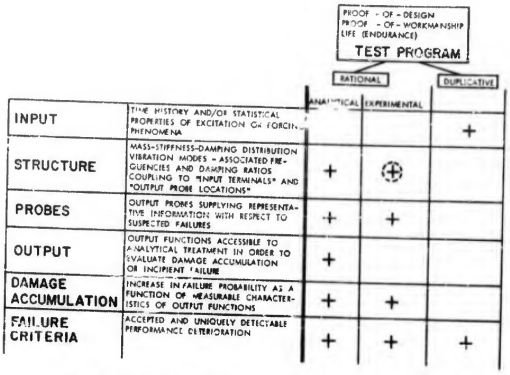


Fig. 4 - Proof of design, workmanship, and life (endurance) of "rational" and "duplicative" test programs

vibration and shock, is one of the essential ingredients of such rational test programs, other information types are just as indispensable. Figure 4 characterizes the components of what may be thought of as being an ideal situation. Two "rational" test program determination processes are compared with a "duplicative" process in order to illustrate the specific requirements of both types.

Before examining the detailed nature of such requirements, the following preliminary statements should be clearly spelled out:

Practical considerations of operational nature often do impose constraints that dominate the technical considerations discussed here. It cannot be our purpose to conceive methods that would modify the respective weights given to operational and technical constraints.

Certain items of information about the type of equipment to be tested (among others, the safety factors, mission success probability and performance penalty paid for overdesign) will often supply valuable indications in order to decide between "rational" or "empirical" test programs.

The objective pursued here is to clarify the differences in input requirements and in quality of test results expected rather than to take a definite stand in favor of one or the other of the approaches discussed.

Figure 4 shows proof of design, proof of workmanship, and life (endurance) test programs in two categories. "Rational" test programs are the ones which, presumably, would start from all the available necessary information in order to obtain results with a minimum of equipment and effort. For want of better description, we call "duplicative" the type of test performed when only the shock and vibration input characteristics to a given piece of equipment are known together with some arbitrary failure criteria. Our efforts are exerted toward duplicating inputs as accurately as possible in order to produce, hopefully, identical failures.

The horizontal lines represent types of information necessary to design test programs. These types are:

Input quantities, in our terminology, are time-history and/or statistical properties of excitation or forcing phenomena. When vibration and shock inputs are not transmitted through specific mounting points, the spatial distribution of input phenomena is also required.

[HC0048][GDrive]

For structure, ideally, the information needed is that which would lead to a complete, detailed dynamic history of the whole structure (including its smallest component) under any arbitrary vibration input. It is clear that such complete information would never be available; however, mass stiffness and damping distribution, possibly the vibration modes (normal or not), associated natural frequencies and damping ratios, as well as the relationship between these vibration modes and excitation input terminals and measuring probe locations are of importance. As a matter of practical limitation, the degree of resolution that is necessary for the knowledge of the structure is determined largely by the shortest "wavelength" that is conceivably present in the structure.

Under the heading "probes," we mean accelerometers, displacement meters, velocity meters, strain gages, strain indicators, and, in general, any device which will give information with respect to the absolute or relative motion of one portion of the structure. As stated above, the information required includes relation of the output probe indications and the structural motions. In addition to this, it is necessary to be in position to relate probe indication with respect to suspected or expected failures.

The output function, in certain cases, must satisfy a certain number of analytical conditions in order to evaluate damage accumulation or incipient failure threat. A typical example would be that a random vibration environment is required to be Gaussian and reasonably narrow band before a meaningful prediction of amplitude distribution probability or peak distribution probability can be made on an analytical basis.

Damage accumulation is the process serving at the base of our prediction that the failure probability of a given structure or subassembly will increase monotonically with the duration of shock and vibration history. The small number of damage accumulation concepts now available should not prevent us from recognizing that they are central to the whole idea of rational test program planning.

Finally, failure criteria are necessary in order to establish a clear-cut end point for failure test programs. Such criteria are quite evident when physical rupture of structural components are involved; they are, however, not so obvious when failure is a function of performance deterioration of electronic equipment, or of a change in temperature, chemical structure, etc.

Figure 4 also illustrates the role of these various input data categories with respect to test program planning. It is readily apparent that if by "environment" we mean shock and vibration input phenomena these are only required for duplicative programs. They are not essential (and possibly not even useful) to the so-called "rational" processes.

If the measured output is of sufficiently simple form to allow analytical application of the available and accepted damage accumulation formula, and if, further, the measured output is uniquely related to the expected failure(s) the test program is described without difficulty in principle. The practical application of such a process, however, is a matter of some complexity (Fig. 5).

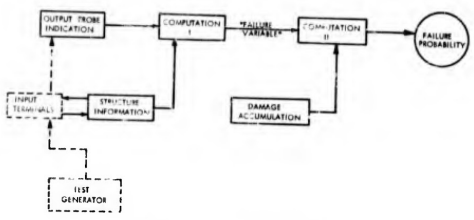
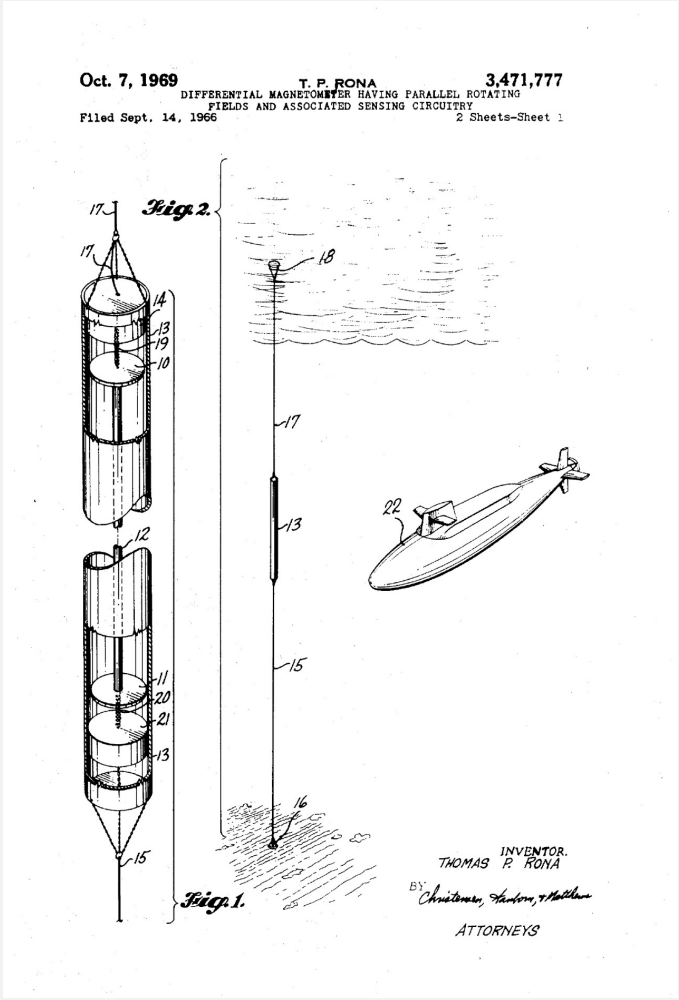


Fig. 5 - Rational test program design

[HC0049][GDrive]

1966 - Boeing patent (approved in 1969) - "Differential magnetometer having parallel rotating fields and associated sensing circuitry"

US Patent PDF : [HG007T][GDrive] (1966-09-14-usa-patent-filing-approved-oct-1969-us3471777.pdf)



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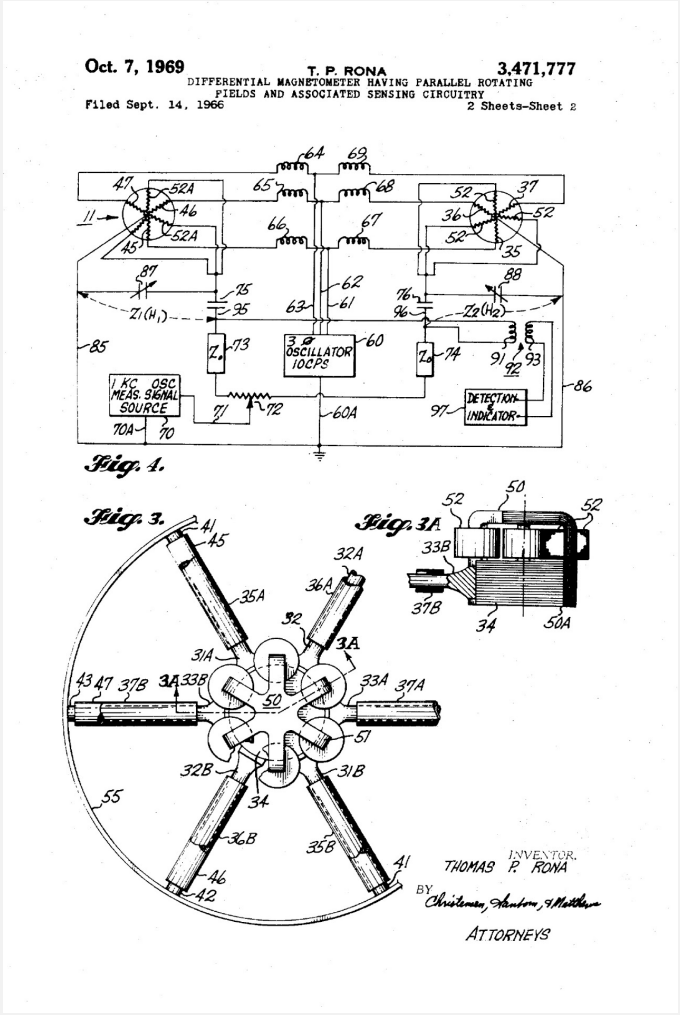

[HG007V][GDrive]

United States Patent Office

3,471,777
Patented Oct. 7, 1969

1

3,471,777

DIFFERENTIAL MAGNETOMETER HAVING PARALLEL ROTATING FIELDS AND ASSOCIATED SENSING CIRCUITRY

Thomas P. Rona, Seattle, Wash., assignor to The Boeing Company, Seattle, Wash., a corporation of Delaware

Filed Sept. 14, 1966, Ser. No. 579,423
Int. Cl. G01r 33/02; F42b 23/26, 21/00
U.S. Cl. 324—43 **10 Claims**

ABSTRACT OF THE DISCLOSURE

The present invention relates to an improved differential magnetometer for measuring gradients in a magnetic field. First and second core assemblies are displaced along an axis and energized by in-phase rotating magnetic fields which are perpendicular to the axis. Elongated ferromagnetic rods are disclosed as being aligned in two parallel planes with the rods secured to the central cores and being provided with windings for generation of the rotating fields. First and second sensing circuits respectively coupled with cores provide first and second output signals which are compared to provide an indication of any perturbation of one rotating field relative to the other. Mechanical and electrical details of a preferred embodiment are provided.

Magnetometers have found widespread uses in recent years and particularly in connection with the detection of surface ships, submarines and other magnetically susceptible objects in the water. Magnetometers (or gradiometers) in particular found widespread usage in floating mines as well as in the detonating devices of torpedoes. As a result of the effort expended in the field of magnetometers a relatively large number of such devices are now available making use of various phenomena such as changes in reluctance of a magnetic circuit, proton resonance, or modifications of optical and/or microwave characteristics of various vapors. While such instruments have met with success and have been produced at various costs and having varying sensitivity levels, it is found that most such instruments measure either the so-called "component field" so that the instrument must be carefully stabilized, or that the instrument is adapted to measure total field in which case it is substantially non-sensitive to direction. In instruments of the first type the direction of a magnetic field along a preferential axis of the instrument is measured and therefore if minute changes of direction of the instrument occur such are interpreted as modifications of the magnetic field and hence false indications are generated unless the instrument is very carefully stabilized. While instruments of the second type which measure total field do not have the problem of false signals caused by changes in direction of the instrument, it is found that such instruments will not measure deflections in the magnetic field without change in magnitude.

It is therefore an object of the present invention to provide an improved magnetometer which is insensitive to moderate changes in attitude and direction. Another object of the present invention is to provide a magnetometer which measures any change in magnitude or in direction of the field gradient. An additional object of the present invention is to provide a differential magnetometer which is insensitive to moderate changes in attitude and direction and yet which measures any change in magnitude or in direction of the field gradient without the need for expensive attitude control equipment. Another object of the present invention is to provide a magnetometer having directional sensitivity without the need for high instrument stability in terms of physical location

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within the field. A more specific object of the present invention is to provide an underwater differential magnetometer for detecting changes in magnetic field gradient caused by the presence of a ship.

In accordance with the teachings of the present invention the above advantages and objects are achieved through the use of a pair of magnetic core assemblies located at opposite ends of a rigid beam. The planes of the core assemblies are maintained parallel with each being perpendicular to the beam. Each core includes a plurality of ferromagnetic rods with the various rods in the two core assemblies being parallel with their respective counterparts within manufacturing tolerances. Each rod extends through the center of the core assembly so that pairs of rods are provided in each core. Each such pair of rods is provided with excitation coils which are energized by an oscillator in unison in a manner such that a rotating excitation field is provided for each core with the field rotation for the two core assemblies providing a bias field rotating at a first frequency.

In one system each core assembly has three rods so that a regular hexagonal system of magnetic axes is provided for each core assembly. The shape and configuration of the core and rod assemblies is such that an external field in the plane of the core assemblies induces within each core a magnetic field which is essentially proportional and parallel to such pane at the location of each core. When the cores are maintained with their planes substantially paralled to the earth surface the external field is that which would be generated by the superposition of the earth's magnetic field and a submarine dipole field when the magnetometer is disposed in the ocean.

Each core is also equipped with a multiplane common-mode impedance measuring circuit. In the specific example illustrated wherein a hexagonal arrangement of core rods is utilized a tri-phase common-mode impedance measuring circuit is utilized. Thus a hexagonal "spider" arrangement of sensing coils and laminated pole pieces is provided for each core assembly. The test coils of these "spider" assemblies form part of an impedance measuring circuit which is driven at a frequency much higher than the bias field frequency. Thus through the use of a tuned bridge circuit arrangement the impedance difference between the two core assemblies is measured to a very high degree of accuracy. Due to the non-linear induction vs. magnetic excitation characteristics of the core material, the measured impedance of each test coil is a very sensitive function of the magnitude of the magnetic excitation resulting from the superposition of the artificially induced bias field and the external field, i.e., the earth's magnetic field including possible local perturbations such as the one caused by the passage of a ship or submarine. If the external perturbation is not identical (in magnitude or direction) for both cores, the difference will be translated in a measurable impedance difference. Thus the output signals provide an accurate indication of any change in the magnitude or direction of the magnetic field gradient.

These and other aspects of the present invention will be more clearly understood from the following description when read with reference to the accompanying drawings wherein,

FIGURE 1 is an isometric drawing with portions cut away from the casing for one specific type of magnetometer provided in accordance with the present invention for underwater use in detecting submarines,

FIGURE 2 is a drawing of the magnetometer of FIGURE 1 located beneath the surface of the ocean and showing a submarine approaching the magnetometer,

FIGURE 3 is an end view of one core and spider assembly of the magnetometer shown in FIGURE 1,

[HG007W][GDrive]

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FIGURE 3A is a cross-section along the lines 3A—3A of FIGURE 3 showing the construction details of one core and spider assembly, and

FIGURE 4 is a schematic circuit diagram of one bias field and sensing coil circuit adapted for use in the system of the present invention.

Referring now to the drawings and in particular to FIGURE 1 an underwater embodiment of the differential magnetometer of the present invention is shown. The apparatus includes a pair of magnetic core and detector assemblies **10** and **11** having their planes maintained parallel to each other by being firmly secured to a rigid beam **12**. The core and detector assemblies are disposed within an elongated tubular housing **13** held in a substantially vertical position by means of an air compartment **14** in the upper end thereof and an anchor and connecting cable assembly **15** and **16** at the lower end thereof. A signal transmission cable **17** extends through the upper end of the housing **13** and has its upper end maintained above or in the vicinity of the surface of the ocean by a suitable flotation device **18** (FIG. 2) so that the information provided by the magnetometer can be transmitted to a remote receiving station by any conventional radio or acoustic transmitter means. The core and detector assemblies **10** and **11** are held in position in the casing **13** by means of the springs **19** and **20**, respectively, spring **19** being secured to the bottom of the air compartment **14** and spring **20** being secured to the electronics package and ballast compartment **21** in the lower portion of the casing. The internal pressure within the casing or housing **13** is preferably vented to the outside with the arrangement being such that when the assembly is anchored in place and stabilized by such purely passive means the longitudinal axis of the instrument will not depart from the vertical by more than 10°. With the instrument located beneath the surface of the ocean as seen in FIGURE 2, and with the axes of the core and detector assemblies being located as shown, the equipment will be sensitive to the vertical gradient of the horizontal component of the earth's magnetic field having the dipole field of a submarine **22** superposed thereon.

Referring now to FIGURE 3 the construction details of one preferred embodiment of the core and detector assemblies will be described. As seen in FIGURE 3 each core assembly includes three ferromagnetic rods with each of said rods having two sections extending in diametrically opposed directions from the central core piece. Thus the sections **31A**, **31B** in effect provide one rod, sections **32A** and **32B** another rod, and **33A**, **33B** a third rod with each extending perpendicularly from the outer surface of the cylindrical laminated core piece **34**. Each rod end is provided with an excitation coil **35A**, **36A**, **37A**, **35B**, **36B**, and **37B**, respectively. Each pair of coils **35A–35B**, **36A–36B**, **37A–37B** is connected with the two coils of the pair in series. The arrangement is such that a triphase system of excitation coils is provided for each of the three rod assemblies in the two core assemblies **10** and **11**. The rods in the two core assemblies **10** and **11** are parallel to their respective counterparts with the excitation coils being connected such that each pair of rods (i.e., one rod from assembly **10** and one rod from assembly **11**) is provided with an in phase excitation signal. Thus a triphase excitation system is provided for each of the two assemblies with the excitation being "in phase" for the two. In order to show the manner in which the core rods are aligned it will be seen in FIGURE 3 that the core rods **31**, **32**, and **33** for the assembly **10** are broken away near their outer ends so that the rods **41**, **42** and **43** together with their associated excitation coils **45**, **46** and **47** will be seen in exact alignment therewith and forming part of the core assembly **11** of FIGURE 1.

The arrangement will be seen to be such that each core and rod assembly allows an external field in the horizontal plane to induce within the core a magnetic field which is essentially proportional and parallel to the

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external horizontal field component at the location of each core. In addition, as seen in FIGURE 3 (and in FIGURE 4 to be described hereinafter) the excitation windings and associated three phase generator cause a constant arbitrary magnitude bias field to be superimposed upon the external field with the said bias field rotating in the plane of the cores with respect to the core orientation and at an angular velocity determined by the frequency of the excitation oscillator.

As seen in FIGURES 3 and 4, each core assembly includes a triphase common-mode impedance measuring circuit. Thus a hexagonal "spider"-shaped reluctance pickup frame **50** will be seen in FIGURES 3 and 3A to be disposed about the core **34**. Each of the six legs **51** of the member **50** are cemented to the exterior of the core **34** along the line of contact **50A** seen in FIGURE 3A. Each of the six legs **51** also has a separate sensing coil **52** disposed thereabout so that the impedance of the central core member **34** can be measured at the fercuency of the measurement signal oscillator **70** shown in FIGURE 4 connected to each of the sensing coils **52**. The arrangement of the parts in the lower assembly **11** of FIGURE 2 is identical to that shown in FIGURES 3 and 3A for the upper unit **10**.

To protect the various components in each of the core and detector assemblies a protective ring of nonmagnetic material **55** is preferably cemeted to the ends of the rods as shown in FIGURE 3.

Referring now to FIGURE 4 the details of one specific embodiment of the circuit arrangement for the system of the present invention will be described. A three phase oscillator **60** denoted as operating at ten cycles per second will be seen to be connected by its three output leads **61**, **62** and **63** to the excitation coils **35**, **36**, **37** and **45**, **46** and **47** through the filier coils **64–69**. These filter coils **64–69** serve to effectively isolate the low frequency oscillator **60** from the high frequency signals of the measurement signal source **70** shown as a one kilocycles per second oscillator. It should be noted that the lead **61** is connected to the excitation coils **35** and **45** of the core assemblies **10** and **11** and that as seen in FIGURE 3 the rods associated with the coils **35** and **45** are in alignment with each other in the complete assembly shown in FIGURE 2. In a similar manner the lead **62** is connected to excitation coils **36** and **46**, and the lead **63** is connected to the excitation coils **37** and **47**. Each of the coils has one end thereof returned to the common signal ground lead **60A** for the oscillator **60**. The geometric and electrical configuration of the system is such that a constant bias field is provided for each of the two core assemblies with the bias fields rotating in the planes of the core assemblies at the angular velocity determined by the frequency of the excitation oscillator **60**.

The measurement signal source **70** shown as a one kilocycle oscillator has its signal output lead **71** connected through the voltage divider **72**, the impedance elements **73** and **74**, and capacitors **75** and **76** to the sensing coils **52** and **52A** (only three of each set of sensing coils being shown in FIGURE 4). One side of the various sensing coils is returned to the common ground **70A** of the oscillator **70** by common leads **85** and **86**. A pair of adjustable capacitors **87** and **88** will be seen to be respectively connected directly across each of the sets of sensing coils **52** and **52A** in the respective core and detector assemblies **11** and **10**. It should be noted that it would also be possible to use the excitation coils themselves as the sensing coils by using suitable frequency separation, such as by using appropriate isolation capacitors.

Since the impedance measuring circuit operates at a very high frequency by comparison to that of the bias field fluctuation, it will be seen that the bias field and the external field can be considered as quasi-static (i.e., varying very slowly with respect to the measurement). The effective field within the two core assemblies **10** and **11** is the result of the superposition of the external horizontal field

[HG007X][GDrive]

1974 (Dec 25) - Daughter marries

Full newspaper page : [HN01AT][GDrive]

Marriage record also below. Source : https://www.familysearch.org/ark:/61903/1:1:QLHX-BYBG s4

they were divorced in 1976 : see [https://www.familysearch.org/ark:/61903/1:1:QLC7-P1KG / s5]

1974-12-25-spokane-daily-chronicle-pg-76-clip-marriage-rona-maris

Marie Rona to Wed Steven Ross Maris

Miss Marie Helene Rona and Steven Ross Maris will be married in a ceremony at 3 o'clock Saturday afternoon at the University Presbyterian Church in Seattle.

The Rev. Ben Lindstrom of Portland, Ore., will officiate at the rite for the daughter of Dr. and Mrs. Thomas P. Rona, Seattle, and the son of Dr. and Mrs. Robert W. Maris, E1316 Twenty-sixth.

A reception will follow at the home of the bride-elect's parents.

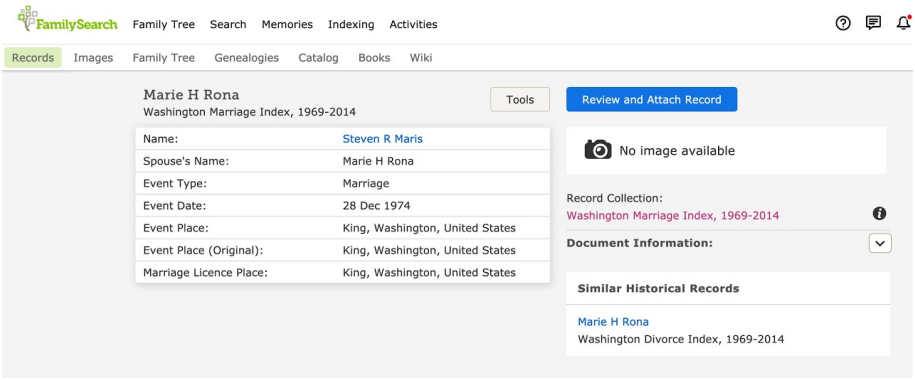
Miss Janet Gwen Maris, sister of the future bridegroom, will be maid of honor.

Patrick Boileau, Portland, Ore., will serve as best man. Ushers will be Michael, Thomas and Chris Rona and Donald and Neil Maris, brothers of the couple.

The couple will reside in Seattle. The bride-elect will be graduated from the University of Washington in June. Maris is attending the U of W Graduate School of Business.

IT'S UNCANNY HOW

[HN01AU][GDrive]



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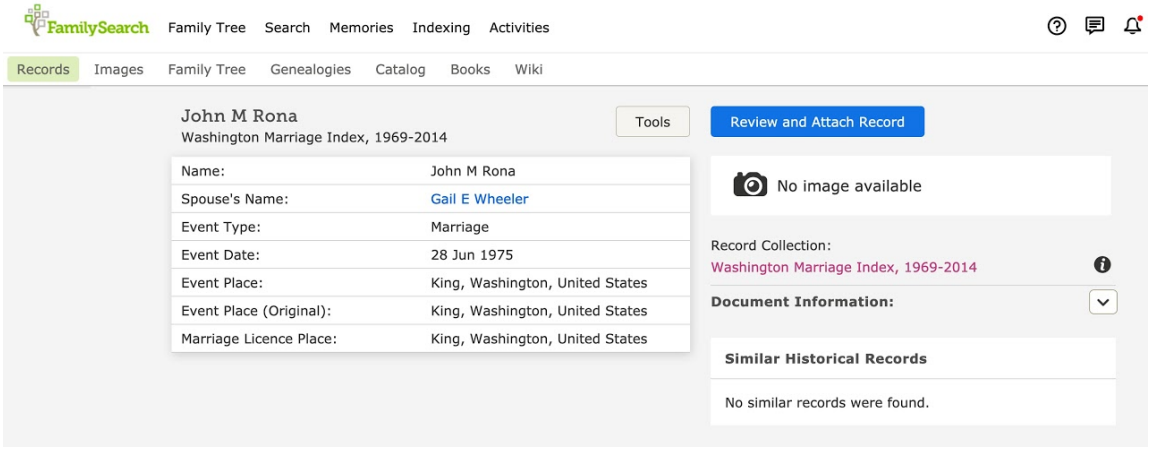
1975 (June 28) - Son John Michael marries

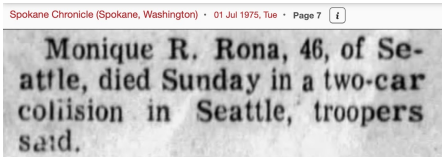


[HL0059][GDrive]

1975 (June 29) - Monique Rona dies in a car accident

Full newspaper page : [HN01AR][GDrive]

Note: In the year 1975, June 29 is a Sunday ; This is being run on July 1, which is a Tuesday



[HN01AS][GDrive]

Seattle Times version

Also - full page PDF here - [HN01AP][GDrive]

Notes - Killed by "Gerald Wayne Henneke"

1975-07-01-the-seattle-times-pg-f-4-clip-monique-rona-obit

Monique Rona dies; Group Health official

Monique Roberta Rona, 46, of 5770 63rd Ave. N. E., died Sunday about four hours after she was injured in a two-car crash at 26th Avenue Northeast and Northeast 117th Street.

Mrs. Rona was eastbound in Northeast 117th Street about 6:45 p. m. when her car and a car southbound in 26th Avenue Northeast, collided.

The driver of the other car, Gerald Wayne Henneke, 31, of 5823 McKinley Pl. N., suffered nose and leg injuries but was not hospitalized, police said.

Mrs. Rona was head of information processing for Group Health Cooperative of Puget Sound. She was the wife of Dr. Thomas P. Rona.

A native of Paris, she came to Seattle 16 years ago, and for 14 years was deputy director of the University of Washington computer center.

She served on the Presidential Commission on Energy, and was an active member of the Association of Computing Machinery.

Two months ago she was named to the Group Health post.

Services are set for 3 p. m. Thursday at University Presbyterian Church. Home Funeral Chapel is handling arrangements.

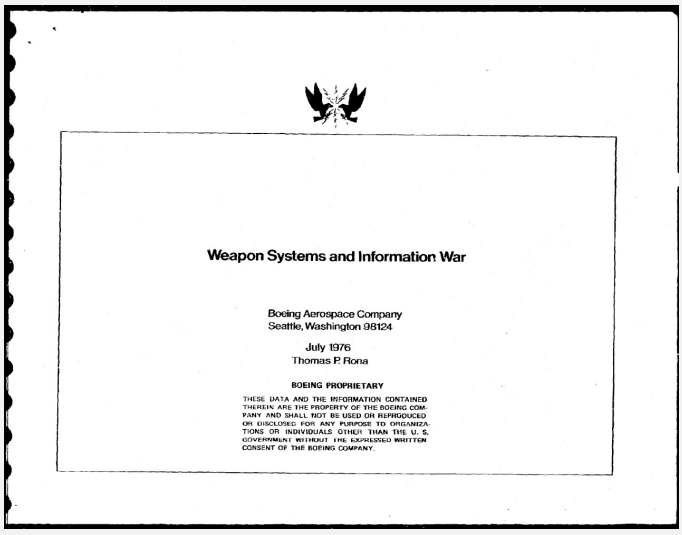
In addition to her husband, Mrs. Rona is survived by four children, John, Mary, Thomas, Jr., and John Christopher, and by her mother, Gabrielle Noel, all of Seattle.

The family suggests remembrances to Medic I.

[HN01AQ][GDrive]

1976 (July) - "Weapon Systems and Information War" : Career-defining research paper with Boeing

PDF (80 pages) - [HC004A][GDrive] .. some are shown below ... **This document introduces the phrase "Information warfare"**



Weapon Systems and Information War

Boeing Aerospace Company
Seattle, Washington 98124

July 1976
Thomas P. Rona

BOEING PROPRIETARY

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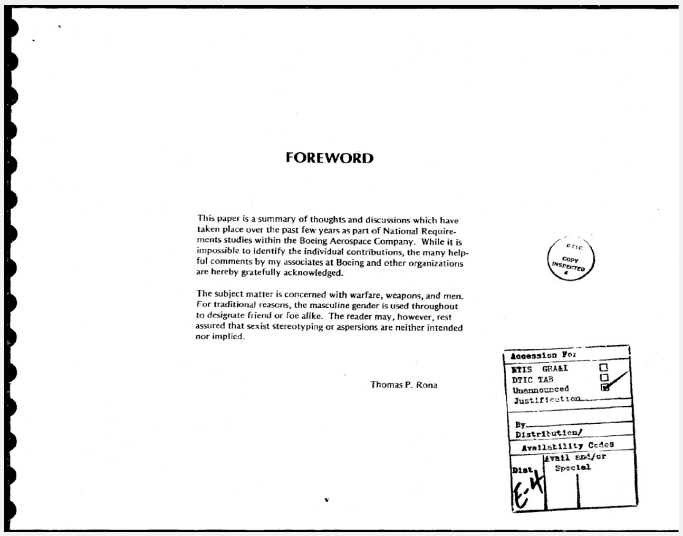
[HC004B][GDrive]



FOREWORD

This paper is a summary of thoughts and discussions which have taken place over the past few years as part of National Requirements studies within the Boeing Aerospace Company. While it is impossible to identify the individual contributions, the many helpful comments by my associates at Boeing and other organizations are hereby gratefully acknowledged.

The subject matter is concerned with warfare, weapons, and men. For traditional reasons, the masculine gender is used throughout to designate friend or foe alike. The reader may, however, rest assured that sexist stereotyping or aspersions are neither intended nor implied.

Thomas P. Rona

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WEAPON SYSTEMS AND INFORMATION WAR

ABSTRACT

Since World War II, advances in technology have brought great increases in the complexity of weapon systems. The need to integrate the many sophisticated subsystems has vastly increased the information flow *within* the weapon system envelope. Overall performance also has come to depend rather critically upon the *external* information flow between the weapon system proper, the target, the command structure, navigation references, and other ancillaries. Because of their susceptibility to countermeasures, these external links and nodes have become major elements of system vulnerability.

Projections related to the information sciences and the associated technology suggest that countermeasures aimed at the external information flow of weapon systems will be further improved to the point that they may well become crucial in influencing the outcome of future engagements.

Functional analysis shows that the information flow to and from a generalized weapon system covers an unusually broad spectrum, ranging from the slowly evolving strategic intelligence all the way to optical communications. Operational information flow, as well as the gathering of intelligence, is susceptible to countermeasures; i.e., disruption and manipulation. The success of countermeasures, as well as that of attacks and counterattacks, hinges essentially on the knowledge of the opponents' order of battle and of the details of the opponents' information structure. Quantitative assessments of the value of countermeasures are possible in a few simple cases.

The potential introduction of advanced and multifaceted countermeasures gives new emphasis to the war-gaming aspects of requirements definition. Considerations of this type may be expected to lead to a modified set of systems requirements such as closing out of strategy options attractive to the enemy, greatly increased number of possible tactical moves for the friendly side, quick change flexibility, and a systematically structured "information war" superimposed on the weapon engagements.

Specific examples from strategic nuclear warfare and from tactical air combat are used as illustrations of the principles involved.

[HC004D][GDrive]

SUMMARY

In the recent decades, many spectacular advances have taken place in military technology. Some of these have improved the performance of individual subsystems such as propulsion, structures, guidance, or warheads; some others have insured the efficient cooperation between all these increasingly complex subsystems by means of integration within the weapon system envelope.

The result of these changes has now been apparent for some time: whenever a weapon can be aimed at its assigned target, the destruction of the latter is assured with a high degree of probability. In the past, protection of targets was often based on passive means such as hardening or on timely counterattacks. There exists now a growing possibility of protecting targets by means of *information denial*. In this protection mode, the defense side aims at depriving the attacker of the essential information required to structure an effective offense. Camouflage, dispersion, and mobility have been used to this effect for many centuries, but modern technology has added strong new impetus to information denial. All forms of warfare, ranging from the highest level nuclear exchange through large-scale "conventional" war to counter-insurgency and guerrilla activity could be impacted.

In many instances, high-performance weapon systems have come to depend critically on interaction with *external* elements, friendly, neutral, or hostile. The command structure, the surveillance and support ancillaries, navigation references, and the target area observables are representative examples. Central to the concept of this *extended weapon system* is the remoteness of the phy ical elements. Communication links are thus introduced that require a new level of integration; more importantly, they introduce new opportunities for the enemy to practice modern and quite effective versions of information denial. Disruption and manipulation of the adversary's information flow by means of countermeasures have rapidly become some of the most potent means to secure military advantage.

There are numerous confluent technologies at hand to reinforce the belief that information-related countermeasures will further grow in efficacy and sophistication; many new areas of application can be readily envisioned. The basic technology aspects have to do with the theoretical and practical advances in the use of the full electromagnetic spectrum ranging from ELF* to gamma rays and of the acoustic spectrum from seismic and tidal pressure fluctuations to ultrasounds at thousands of megahertz in frequency. Transducers are available to transform just about any physical phenomenon into electrical signals, with the attendant capability for transmission, processing, and display for use by human operators. Equipment and software for rather sophisticated information processing, at rates compatible with the speed and frequency domains of interest to weapon systems, are now available within cost, power, weight, and reliability constraints required to satisfy the demands of the most advanced forms of countermeasures.

In the simplest form, information-flow-related countermeasures attempt to disrupt the communication and information links of the enemy in the last few moments immediately preceding the detonation of a weapon. Jamming of the command link of a surface-to-air missile is a typical example. It is, however, readily apparent that countermeasures of this type can be applied at many points of a weapon system, covering in fact the whole period of its evolution from development through deployment, mission, and post-mission phases. The spectrum of events pertinent to the information flow, which is the potential target of countermeasures, covers an extremely broad frequency domain: slowly varying strategic intelligence is updated in bursts occurring in a matter of months or years; tactical intelligence, surveillance, or reconnaissance may deal with event durations measured in days or hours; and events related to the terminal engagement can take place in seconds or even microseconds. Countermeasures may address any or all of these frequency domains; they may be concentrated in any one locale, or again dispersed over many elements of the

* See Glossary, page 71

[HC004E][GDrive]

External Information Flow

Up to the present, we have examined the information flow within the weapon system envelope. We must now go one step further. Referring to Figure 9, the weapon system (A), including the platform, is now shown in the center. The relation of the weapon system to other elements contributing to its operation has been made explicit. On the friendly side, the weapon system must interact with its own command structure (C), with the ancillary and support systems (F), and with the friendly, neutral, or natural navigation reference systems (D). Both weapon and platform have to cope with the natural or hostile man-made environment (E). Finally, the weapon must interact with the target (B) prior to the instant of contact.

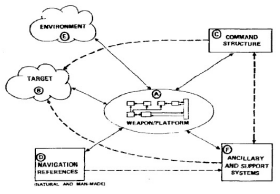

Figure 9. Extended Weapon System and External Information Flow

It is convenient to call all the information-related components within the weapon system (A) the *internal information system* and to consider that all the other elements such as (B), (C), (D), (E), and (F) are tied together by what could be called the *external information system*. All the elements and all the links are, or conceptually could be, present in all weapon systems, even though some of them are less important or evident than some others. Elements other than the weapon system; i.e., boxes (C), (D) and (F), may have *internal* information systems of the same order of complexity and cost as the weapon system (A).

A few examples will allow us to gain more concrete understanding of what these external information links really contribute. The link (A)-(B) between the weapon and the target may convey terminal guidance, or, if properly decoyed, false terminal guidance. If the target is surrounded by active defense, that same link may also serve to convey false observables (decoying) to the defense. Link (A)-(C) between the weapon and the command structure would typically transmit target designation, status report, launch command/confirmation type information. Link (A)-(D) between the weapon and navigation references may sense position of stars, satellites, terrain elements, or artificial land beacons. Link (A)-(F) between the ancillary/support systems and the weapon would typically provide surveillance and reconnaissance information, target identification, warning, intercept control, and vectoring or IFF.

An escort airplane intended to protect a bomber can be considered as an ancillary; all information related to such aerial engagements would flow through link (A)-(F).

The link (A)-(E) between the weapon and the environment allows the weapon to sense its own environment and adapt its surveillance or guidance sensors to the prevailing conditions.

The foregoing is reasonably well understood and may be analyzed within the purview of the weapon system itself. The situation becomes more complicated when we consider links and interactions between the external elements. For instance, a relationship exists between link (D)-(F) and link (B)-(F). The location of the target must be defined with respect to the navigation references. Similarly, link (B)-(C) should be present, either directly or via ancillaries

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(C)-(F)-(B). If the latter is too slow, the commander may want to have direct access to the target. This would be the case, for instance, when the Command Information Center of a combatant ship directs the air battle between fighter/interceptors and the enemy strike forces.

The link (C) (F) exists mostly to convey the status, availability, and confirmation-type data in relation to the ancillary and support systems.

As an illustration, in Figure 10 the role of ancillaries in a "smart missile" is represented. The missile is capable of illuminating the target and sensing target observables, provided that a pre-mission intelligence element has supplied *in advance* the criteria for signature classification and that a pre-mission surveillance/reconnaissance element has supplied rough target location.

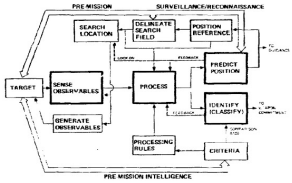


Figure 10. Missile Acquisition and Tracking Functional Relationships — Ancillaries

These examples have been described at some length to support the argument that successful operation of the weapon system is just as critically dependent on the operation of all pertinent elements portrayed in Figure 9 as on the intrinsic capability of the weapon system itself. To put it another way, no matter how complex, competent, or costly the weapon system and its platform might be, if the surrounding external elements fail to perform their tasks, the mission objectives will not be achieved.*

The situation is even more complex owing to the possible interaction of external links with each other. For instance, if guidance or navigation signals are emanating from the weapon system (and this may be highly desirable from the accuracy viewpoint), they may reveal the platform position at the same time and thereby open the way to enemy counterattack.

Complexity is not the only reason why the "extended" weapon system, including all the external elements, is not considered in general as an integrated supersystem. Institutional barriers also exist. The various elements shown in Figure 9 are not necessarily under the cognizance of the same agency; sometimes they involve several sovereign countries. Developments are not necessarily simultaneous; budget considerations quite often cause relatively modern weapon systems to interface with obsolete ancillaries and vice versa. For whatever reasons, integrated system requirements at the extended weapon system level are hardly ever formulated. Examples of this type of difficulty can be found in the areas of "warning on critical events" as related to ICBM launch command, or in the operation of hard-site ABM defense as related to the ICBM launch environment.

The common characteristic of external information systems is that it requires sensing or communications at a distance between physically remote elements. These all involve electromagnetic or acoustic propagation and are, therefore, potentially accessible to hostile interference.

* For instance, in World War II, even though the Germans had what at that time was considered to be a highly competent strategic bomber force, the successful interference with their land-based long-range navigation beams resulted in quite unacceptable targeting errors.

[HC004G][GDrive]

Also see : https://digital-commons.usnwc.edu/cgi/viewcontent.cgi?article=1400&context=ils

What is "information warfare"? Is it nothing more than a bumper sticker, used as a "quick fix" rescue for budgets and programs that find it useful to attach themselves to the hot new concept? Is it such a revolutionary new amalgam of technologies and concepts that old and traditional forms of warfare are soon slated to fall into the same receptacle in which outmoded military technologies such as the catapult and war galley slumber? Is warfare as we understand it, featuring "blast, heat, and fragmentation," about to become obsolete? ***[Author's note : "I am indebted to Lieutenant General Mike Hayden, Director of the National Security Agency-the DIRNSA-for this very descriptive phrase. "]*** *The intent of this brief introduction to information warfare (IW) and information operations (10) is to both explore these issues and present the thesis that they are best understood in light of the environment in which they take place-the information environment-and to explore the relationship of that environment to the specific topic on which this book is focused, computer network attack.*

What is Information Warfare?

A useful starting place is to trace the evolution of the term information warfare itself. ***The earliest use of the term in the United States probably originated in the Office of Net Assessment, where in the 1970s Dr. Tom Rona was investigating the relationships among control systems, a field known as cybernetics.*** *Dr. Rona described the competition between competing control systems as "information warfare," in the sense that control systems can be described as the means for gathering, processing, and disseminating information, processes which can be diagrammed and described with flow and feedback charts of mind-numbing dryness and complexity. [This author first met Dr. Rona and heard his concepts during a presentation on June 13, 1994, at the Information Resources Management College, National Defense University, in Washington DC. He defined IW as "the sequence if actions undertaken by all sides in a conflict to destroy, degrade, and exploit the it!fonnation systems if their adversaries. Conversely, information warfare also comprises all the actions aimed at protecting infonnation systems agaillSt hostile attempts at destruction, degradation and exploitation. ""Information Warfare Action" take place in all phases if conflict evolution: peace, crisis, escalation, war, de-escalation and post conflict periods." Dr. Rona, a gentle man and brilliant analyst, unfortunately passed away in December 1997. For an example ofhis work, see Weapon Systems and Information War, a study prepared for Boeing in 1976.] In 1993 the Department of Defense published an official definition for the term, in a highly classified DoD Directive, TS3600.1. There were actually several definitions, at differing levels of classification.3 Not surprisingly, this definition was frequently revised as the operational and organizational implications of the concept evolved. The current definition has the record for longevity-more than five years at the time of this writing, since the promulgation of the current guidance on information warfare and information operations in DoD Directive 3600.1 on December 9, 1996.4 The publication of Joint Publication 3-13,Joint Doctrine for Information Operations, in October 1998 probably ensures that the current official DoD definitions ofIW and 10 will remain in effect for some time longer.s*

The present definitions leave much to be desired, however, if one is hoping to find explanations that clarify and explore what might constitute the character, conduct, and intent ofIW and 10. But since one must understand what 10 is in order to move to its less comprehensive building block, IW, these definitions do provide a useful starting point: Infonnation Operations: Actions taken to affect adversary infonnation and infonnation systems while defending one's own infonnation and infonnation systems. Infonnation Warfare: Infonnation operations conducted during time of crisis or conflict to achieve or promote specific objectives over a specific adversary or adversaries.

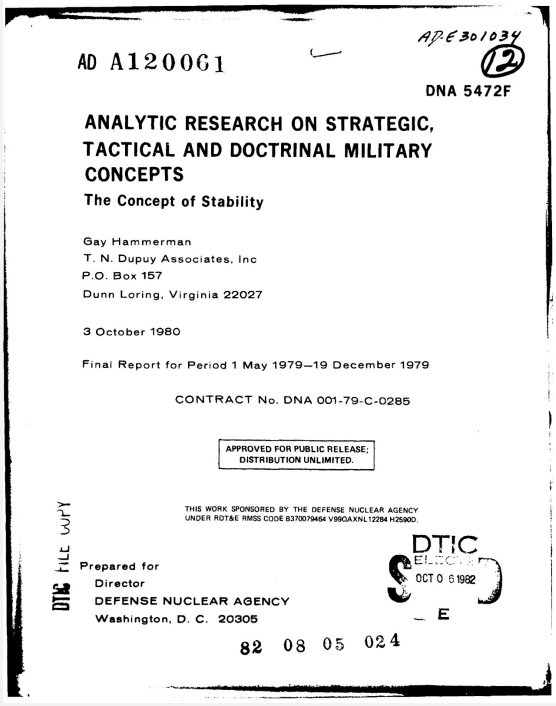
1974(ish) to 1980 - "Ben Plymale, a vice president at Boeing and former defense official from the Nixon administration, was Thomas Rona's friend and mentor"

1. Chapter 4 (of The New Face of War: How War Will Be Fought in the 21st Century Paperback – October 26, 2007 by Bruce D Berkowitz) - [HB0052] [GDrive]
    1. ***"Ben Plymale, a vice president at Boeing and former defense official from the Nixon administration, was [Thomas] Rona's friend and mentor."***
2. **Ben Telfer Plymale (born 1926)** (From Washington Post (**Ben T. Plymale, 55, Official With Boeing Company, Dies (Aug 15, 1981))**: [HN01B3][GDrive])
    1. *"[Ben T Plymale] was deputy director for research and engineering for strategic and space systems at the Defense Department from 1968 to 1972. In addition to serving as deputy team leader of transition at the Pentagon, following Reagan's election as president in November 1980, he was also cochairman of Reagan's Defense Budget Committee.*
    2. *Mr. Plymale joined the Boeing Co. in 1950 and became an authority in strategic defense systems. He was one of the Boeing managers who developed the Minuteman missile program. He was the author of technical works, dealing with gyro-dynamics and navigation systems of missiles, many of which are still used in university instruction.*
    3. *After leaving the Pentagon in 1972, he returned to Boeing as space systems division vice president. From 1974 to 1979, he was vice president for business development, and was Boeing's vice president for advanced missile programs at the time of his death [in August of 1981]"*

1977 - A later report (1980) suggests that in 1977, Thomas Rona has Unpublished working paper at Boeing

See PDF at [HG008W][GDrive]

*"RONA, Thomas P. 1977 "**Strategic Deterrence in the Time/Frequency Domain"** Unpublished working paper, November 1977 (revised May 1978) Boeing Aerospace Company: Seattle, Wash. [Rona presents the concept of the need for ways to maintain deterrence over a broad spectrum of destabilizing Soviet initiatives, e.g. -- in order from those requiring only a slow response to those requiring response within minutes -- development of a particle-beam ABM, unveiling of a cruise missile defense, city evacuation, and ICBM preemption. For stability of deterrence, he suggests what would in effect be US deterrence reserves, i.e., responses the United States could have ready in case of Soviet initiatives. He sees this approach as needed especially for initiatives in the central part of the spectrum, where it should be possible to restore the balance, but where time would be important -- that is, where the response would need to come within weeks or months. The paper thus presents a realistically dynamic view of stability."*



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DNA 5472F

ANALYTIC RESEARCH ON STRATEGIC, TACTICAL AND DOCTRINAL MILITARY CONCEPTS

The Concept of Stability

Gay Hammerman
T. N. Dupuy Associates, Inc
P.O. Box 157
Dunn Loring, Virginia 22027

3 October 1980

Final Report for Period 1 May 1979—19 December 1979

CONTRACT No. DNA 001-79-C-0285

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Washington, D. C. 20305

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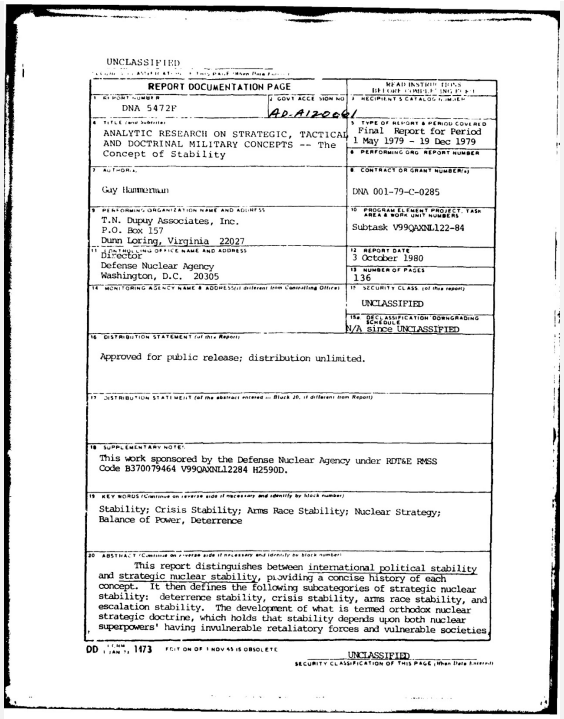

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7. AUTHOR(s): Gay Hammerman	8. CONTRACT OR GRANT NUMBER(s): DNA 001-79-C-0285
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19. KEY WORDS (Continue on reverse side if necessary and identify by block number): Stability; Crisis Stability; Arms Race Stability; Nuclear Strategy; Balance of Power, Deterrence

20. ABSTRACT (Continue on reverse side if necessary and identify by block number): This report distinguishes between international political stability and strategic nuclear stability, providing a concise history of each concept. It then defines the following subcategories of strategic nuclear stability: deterrence stability, crisis stability, arms race stability, and escalation stability. The development of what is termed orthodox nuclear strategic doctrine, which holds that stability depends upon both nuclear superpowers' having invulnerable retaliatory forces and vulnerable societies

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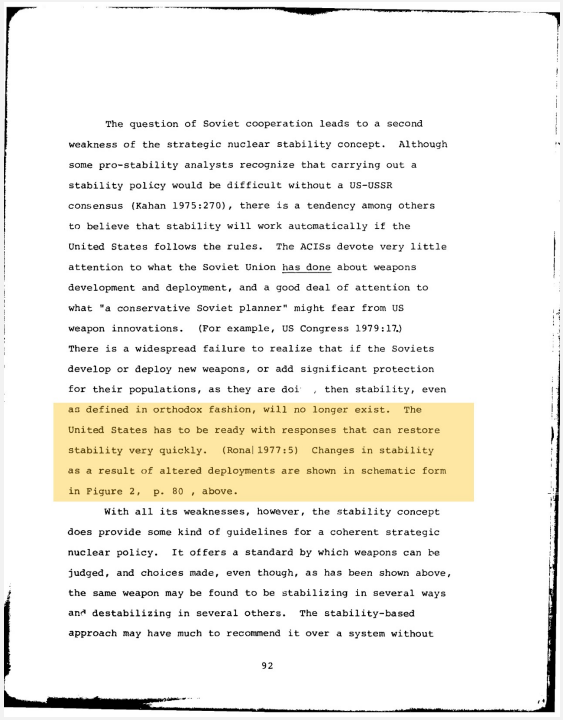

The question of Soviet cooperation leads to a second weakness of the strategic nuclear stability concept. Although some pro-stability analysts recognize that carrying out a stability policy would be difficult without a US-USSR consensus (Kahan 1975:270), there is a tendency among others to believe that stability will work automatically if the United States follows the rules. The ACISs devote very little attention to what the Soviet Union has done about weapons development and deployment, and a good deal of attention to what "a conservative Soviet planner" might fear from US weapon innovations. (For example, US Congress 1979:17.) There is a widespread failure to realize that if the Soviets develop or deploy new weapons, or add significant protection for their populations, as they are doi , then stability, even as defined in orthodox fashion, will no longer exist. The United States has to be ready with responses that can restore stability very quickly. (Rona 1977:5) Changes in stability as a result of altered deployments are shown in schematic form in Figure 2, p. 80 , above.

With all its weaknesses, however, the stability concept does provide some kind of guidelines for a coherent strategic nuclear policy. It offers a standard by which weapons can be judged, and choices made, even though, as has been shown above, the same weapon may be found to be stabilizing in several ways and destabilizing in several others. The stability-based approach may have much to recommend it over a system without

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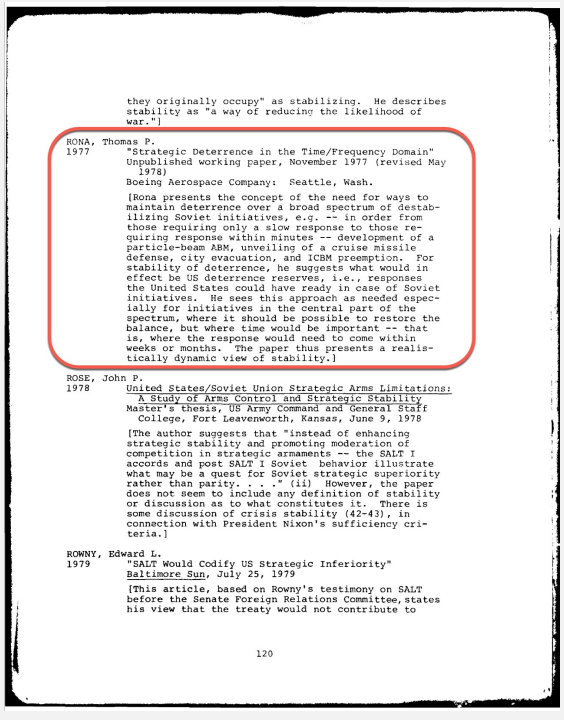

they originally occupy" as stabilizing. He describes stability as "a way of reducing the likelihood of war."]

RONA, Thomas P.
1977 "Strategic Deterrence in the Time/Frequency Domain" Unpublished working paper, November 1977 (revised May 1978) Boeing Aerospace Company: Seattle, Wash.

[Rona presents the concept of the need for ways to maintain deterrence over a broad spectrum of destabilizing Soviet initiatives, e.g. -- in order from those requiring only a slow response to those requiring response within minutes -- development of a particle-beam ABM, unveiling of a cruise missile defense, city evacuation, and ICBM preemption. For stability of deterrence, he suggests what would in effect be US deterrence reserves, i.e., responses the United States could have ready in case of Soviet initiatives. He sees this approach as needed especially for initiatives in the central part of the spectrum, where it should be possible to restore the balance, but where time would be important -- that is, where the response would need to come within weeks or months. The paper thus presents a realistically dynamic view of stability.]

ROSE, John P.
1978 United States/Soviet Union Strategic Arms Limitations: A Study of Arms Control and Strategic Stability Master's thesis, US Army Command and General Staff College, Fort Leavenworth, Kansas, June 9, 1978

[The author suggests that "instead of enhancing strategic stability and promoting moderation of competition in strategic armaments -- the SALT I accords and post SALT I Soviet behavior illustrate what may be a quest for Soviet strategic superiority rather than parity. . . ." (ii) However, the paper does not seem to include any definition of stability or discussion as to what constitutes it. There is some discussion of crisis stability (42-43), in connection with President Nixon's sufficiency criteria.]

ROWNY, Edward L.
1979 "SALT Would Codify US Strategic Inferiority" Baltimore Sun, July 25, 1979

[This article, based on Rowny's testimony on SALT before the Senate Foreign Relations Committee, states his view that the treaty would not contribute to

120

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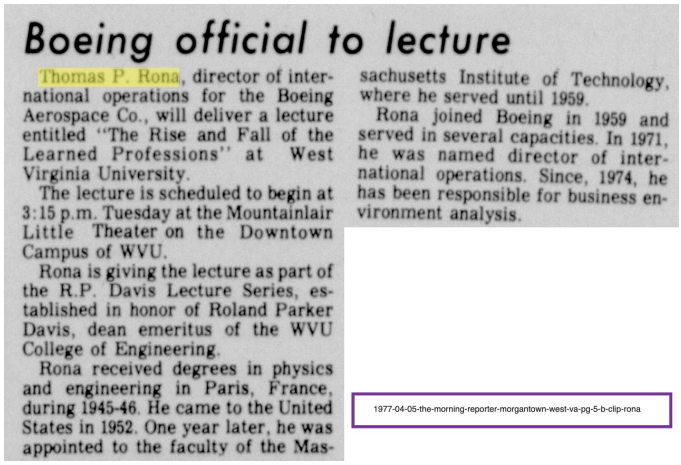
1977 (April 05) - Delivering lecture in West Virginia;

Full pages : [HN01AX][GDrive] / [HN01AZ][GDrive]



Boeing official to lecture

Thomas P. Rona, director of international operations for the Boeing Aerospace Co., will deliver a lecture entitled "The Rise and Fall of the Learned Professions" at West Virginia University.

The lecture is scheduled to begin at 3:15 p.m. Tuesday at the Mountainlair Little Theater on the Downtown Campus of WVU.

Rona is giving the lecture as part of the R.P. Davis Lecture Series, established in honor of Roland Parker Davis, dean emeritus of the WVU College of Engineering.

Rona received degrees in physics and engineering in Paris, France, during 1945-46. He came to the United States in 1952. One year later, he was appointed to the faculty of the Massachusetts Institute of Technology, where he served until 1959.

Rona joined Boeing in 1959 and served in several capacities. In 1971, he was named director of international operations. Since, 1974, he has been responsible for business environment analysis.

1977-04-05-the-morning-reporter-morgantown-west-va-pg-5-b-clip-rona

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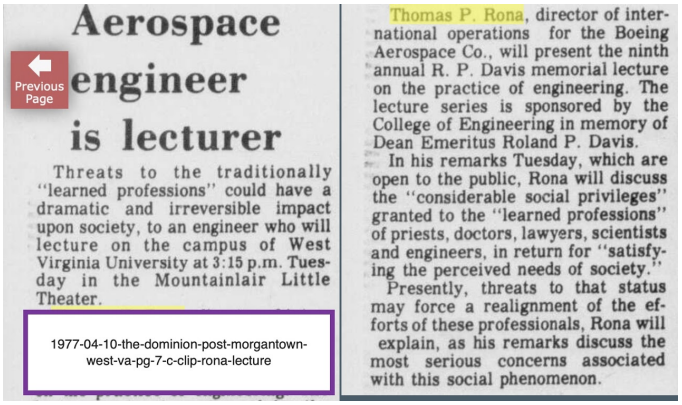


Previous Page

Aerospace engineer is lecturer

Threats to the traditionally "learned professions" could have a dramatic and irreversible impact upon society, to an engineer who will lecture on the campus of West Virginia University at 3:15 p.m. Tuesday in the Mountainlair Little Theater.

Thomas P. Rona, director of international operations for the Boeing Aerospace Co., will present the ninth annual R. P. Davis memorial lecture on the practice of engineering. The lecture series is sponsored by the College of Engineering in memory of Dean Emeritus Roland P. Davis.

In his remarks Tuesday, which are open to the public, Rona will discuss the "considerable social privileges" granted to the "learned professions" of priests, doctors, lawyers, scientists and engineers, in return for "satisfying the perceived needs of society."

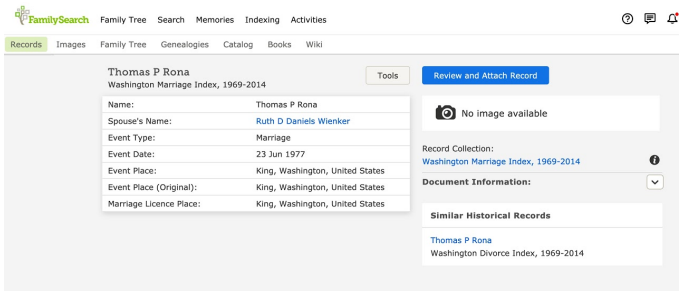
Presently, threats to that status may force a realignment of the efforts of these professionals, Rona will explain, as his remarks discuss the most serious concerns associated with this social phenomenon.

1977-04-10-the-dominion-post-morgantown-west-va-pg-7-c-clip-rona-lecture

[HN01B0][GDrive]

1977 - Two potential Thomas P Rona marriages

Note - Not sure of accuracy of these records, they are transcripts only via FamilySearch .



FamilySearch Family Tree Search Memories Indexing Activities

Records Images Family Tree Genealogies Catalog Books Wiki

Thomas P Rona
Washington Marriage Index, 1969-2014

Tools | Review and Attach Record

Name:	Thomas P Rona
Spouse's Name:	Ruth D Daniels Wienker
Event Type:	Marriage
Event Date:	23 Jun 1977
Event Place:	King, Washington, United States
Event Place (Original):	King, Washington, United States
Marriage Licence Place:	King, Washington, United States

No image available

Record Collection:
Washington Marriage Index, 1969-2014

Document Information:

Similar Historical Records

Thomas P Rona
Washington Divorce Index, 1969-2014

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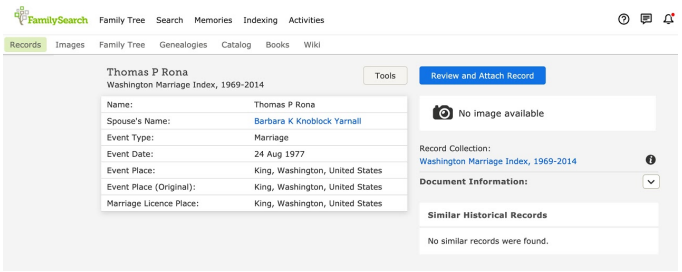

FamilySearch Family Tree Search Memories Indexing Activities

Records Images Family Tree Genealogies Catalog Books Wiki

Thomas P Rona
Washington Marriage Index, 1969-2014

Tools | Review and Attach Record

Name:	Thomas P Rona
Spouse's Name:	Barbara K Knoblock Yarnall
Event Type:	Marriage
Event Date:	24 Aug 1977
Event Place:	King, Washington, United States
Event Place (Original):	King, Washington, United States
Marriage Licence Place:	King, Washington, United States

No image available

Record Collection:
Washington Marriage Index, 1969-2014

Document Information:

Similar Historical Records

No similar records were found.

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1978 - 1984 (dates approximate) - Thomas Rona works for 4 years with Andrew W. Marshall of the Office of Net Assessment project, while still officially with Boeing - Marshall "supported Rona's work on the theory and practice of information war"

See Andrew Walter Marshall (born 1921)

1. Chapter 4 (of The New Face of War: How War Will Be Fought in the 21st Century Paperback – October 26, 2007 by Bruce D Berkowitz) - [HB0052] [GDrive]
    1. *"[**Andrew Walter Marshall (born 1921)**] began in 1978 to draft a **Net Assessment on Command and Control**. "The more we looked at it, the more we could see that the center of the change in warfare was in the sensors and the information systems. The information aspect of weapons had always been important, but now it was more important than ever. So one of your key operational goals had to be to establish an advantage," Marshall recalls.*
    2. ***Before long [Andrew] Marshall heard about [Thomas] Rona's monographs on "information war" at Boeing. The two met and hit it off. Marshall could see Rona was onto something.** "No doubt about it. Tom was the first person to put it all together," recalls Marshall. **For the next four years Marshall supported Rona's work on the theory and practice of information war, or, as it came to be called, information warfare.** It was a bargain, as Boeing still picked up half of Rona's salary. [NOTES - Tom Rona left Boeing on March 1984 ...]*
    3. ***As one connection led to another, Rona himself came to Washington a few years later. [Ben Telfer Plymale (born 1926)], a vice president at Boeing and former defense official from the Nixon administration, was Rona's friend and mentor. Plymale introduced Rona to [William Robert Van Cleave (born 1935)], a professor at the University of Southern California. Van Cleve had been an adviser to Ronald Reagan during the 1980 campaign and was directing the Defense Department transition team for the new administration. Rona started working for van Cleve, and soon caught the eye of [William Robert Graham (born 1937)], who was also working on the transition and was about to become Reagan's new director of the White House Office of Science and Technology Policy. Graham offered Rona a job as deputy director.***

- NOTES : Ben Plymale died in Aug 15, 1981 , at age 55 - See Ben Telfer Plymale (born 1926) (From Washington Post (**Ben T. Plymale, 55, Official With Boeing Company, Dies (Aug 15, 1981))**: [HN01B3][GDrive])
    - *He was deputy director for research and engineering for strategic and space systems at the Defense Department from 1968 to 1972. In addition to serving as deputy team leader of transition at the Pentagon, following Reagan's election as president in November 1980, he was also cochairman of Reagan's Defense Budget Committee.*
    - *Mr. Plymale joined the Boeing Co. in 1950 and became an authority in strategic defense systems. He was one of the Boeing managers who developed the Minuteman missile program. He was the author of technical works, dealing with gyro-dynamics and navigation systems of missiles, many of which are still used in university instruction.*
    - *After leaving the Pentagon in 1972, he returned to Boeing as space systems division vice president. From 1974 to 1979, he was vice president for business development, and was Boeing's vice president for advanced missile programs at the time of his death.*
- NOTES : William Robert Van Cleave - William Robert Van Cleave (born 1935)
- NOTES : William Robert Graham - **William Robert Graham (born 1937)**
    - *"On September 12, 1985, Graham was nominated by President Reagan for the position of Deputy Administrator of NASA. He was confirmed by the United States Senate on November 18, and sworn in on November 25, 1985. For a period from December 4, 1985, to May 11, 1986, Graham served as acting Administrator of NASA following the resignation of James M. Beggs. It was on his watch as acting administrator that the Space Shuttle Challenger was launched in frigid weather, causing o-rings to fail and destroy the ship. Graham left NASA on October 1, 1986, to become director of the White House Office of Science and Technology Policy (OSTP). On October 16, 1986, he was sworn in as director of OSTP and concurrently as science adviser to President Reagan, positions he held until June 1989, when he left government service to join Jaycor, a high-technology company headquartered in San Diego, California. "*

Late 1980 (after US Elections) to Early 1980 - Ben Plymale introduces Thomas P Rona to William Van Cleave

See **Ben Telfer Plymale (born 1926)**

1. Chapter 4 (of The New Face of War: How War Will Be Fought in the 21st Century Paperback – October 26, 2007 by Bruce D Berkowitz) - [HB0052] [GDrive]
    1. *"**Plymale introduced Rona to William van Cleve, a professor at the University of Southern California. Van Cleve had been an adviser to Ronald Reagan during the 1980 campaign and was directing the Defense Department transition team for the new administration. Rona started working for van Cleve, and soon caught the eye of [William Robert Graham (born 1937)] , who was also working on the transition and was about to become Reagan's new director of the White House Office of Science and Technology Policy. Graham offered Rona a job as deputy director**"*
2. See - William Robert Van Cleave (born 1935)
    1. ***From 1979 to 1981 he was Senior Advisor and Defense Policy Coordinator to Ronald Reagan and Director of the Department of Defense Transition Team between the administrations of President Carter and President Reagan.***

1982 patent - : "REMOVABLE EXTERNAL PAYLOAD CARRIER FOR AIRCRAFT"

https://patentimages.storage.googleapis.com/57/e1/ec/46400aec9c8347/US4318328.pdf

1983 (Oct) report - Credit given to Thomas Rona in "BALLISTIC MISSILE DEFENSES AND U.S. NATIONAL SECURITY SUMMARY REPORT"

PDF (original) : [HG0081][GDrive] / PDF (with OCR) - [HG0082][GDrive]

Fred S. Hoffman, Study Director / October 1983

Preface:

President Reagan has directed an "effort to define a long-term research and development program ... to achieve our ultimate goal of eliminating the threat posed by strategic nuclear missiles .... " The President noted that the achievement of the ultimate goal was a "formidable technical task" that would probably take decades, and that "as we proceed we must remain constant in preserving the nuclear deterrent...maintaining a solid capability for flexible response ... pursue real reductions in nuclear arms ... (and) reduce the risk of a conventional military conflict escalating to nuclear war by improving our nonnuclear capabilities."

Two studies assisted in that effort: {I) the Defensive Technologies Study (DTS) to review the technologies relevant to defenses against ballistic missiles and recommend a specific set of long-term programs to make the.necessary technological advances, and (2) the Future Security Strategy Study (FSSS) to assess the role of defensive systems in our future security strategy.

The implications for defense policy, strategy, and arms control were addressed by two FSSS teams: an interagency team led by Mr. Franklin C. Miller~ and a team of outside experts led by Mr. Fred S. Hoffman. This is a report on the results of the work of the team of outside experts. The work was done under the auspices of the Institute for Defense Analyses at the request of the Office of the Under Secretary of Defense for Policy to assist the interagency team.

This report and its conclusions do not necessarily represent the views of the Department of Defense or the Institute for Defense· A,nalyses.

1986 - 1988 : CILTS (Commission on Integrated Long-Term Strategy) : The CILTS Working Group on the Future Security Environment

PDF of book "SIX DECADES OF GUIDED MUNITIONS AND BATTLE NETWORKS: PROGRESS AND PROSPECTS" by Barry D. Watts : [HB004Z][GDrive]

lems are solved. Rather they merely reveal how much care is needed in discussing them.

Questions about Future War and an Anomaly

As mentioned at the end of Chapter I, the overall aim of this chapter has been to address the question: How ought one think about the emergence of guided weapons? By the mid-1980s both Soviet military theorists and Western observers were actively trying to think through how guided munitions and battle networks might eventually affect the conduct of war by military forces able to exploit them. This final section of Chapter II reviews the main questions about guided munitions raised in the late 1980s by Andrew Marshall and Charles Wolf during their deliberations on the future security environment as co-chairmen of a working group for the Commission on Integrated Long-Term Strategy (CILTS). Additionally, the discussion also highlights one anomaly regarding reconnaissance-strike systems that has become increasingly apparent during the last decade.

The Commission on Integrated Long-Term Strategy was begun in the fall of 1986 at the direction of President Ronald Reagan's defense secretary, Caspar Weinberger, and his assistant for national security affairs, John Poindexter. The commission's initial mandate was to propose "adjustments to U.S. military strategy in view of a changing security environment in the decades ahead."[152] Co-chaired by Fred C. Iklé (then undersecretary of defense for policy) and Albert Wohlstetter, CILTS had eleven other commissioners, including Zbigniew Brzezinski, Henry Kissinger, former NATO supreme commander General Andrew Goodpaster, Samuel Huntington and former JCS chairman General John Vessey.[153]

[152] Iklé and Wohlstetter, *Discriminate Deterrence: Report of the Commission on Integrated Long-Term Strategy*, p. i. By the time this report was published in January 1988, Frank Carlucci had replaced Weinberger as defense secretary and Colin Powell had become the assistant for national security affairs, having replaced Carlucci who had held the job from December 2, 1986, until November 23, 1987.

[153] The other CILTS members were Anne L. Armstrong, William P. Clark, W. Graham Claytor, Jr., Admiral (USN, retired) James L. Holloway III, Joshua Lederberg, and General (USAF, retired) Bernard A. Schriever.

[HB0050][GDrive]

The CILTS effort was supported by a number of working groups, whose studies were not published until after the commission's overall report, *Discriminate Deterrence*, appeared in January 1988.[154] *Discriminate Deterrence* did mention the possibility of an emerging RMA driven by the exploitation of microelectronics, information processing, and other technologies. In fact, it observed that the Soviet military was already "engaged in a major effort to understand the implications" of being able to employ precision munitions across wider geographical areas with greater rapidity and intensity than had been previously possible.[155]

However, detailed examination of these prospects and possibilities did not emerge until the report of Marshall and Wolf's CILTS working group on the future security environment was published in October 1988.[156] This group took seriously the possibility that Soviet military theorists might be right in anticipating that the conduct of war was entering a period of major or discontinuous change:

> The Working Group believes that the Soviets are correct in their assessment that the advent of new technologies will revolutionize war, and not merely make current forces marginally better at what they do. In the same way that long-range rifles and railroads transformed combat in the mid-19th century (and tanks and aircraft did in the mid-20th century), the new technologies will profoundly alter tactical requirements, operational possibilities, and even, in some cases, strategic choice in the early 21st century. New theaters of strategic concern—space, most notably—will open up, and previously discarded options (ballistic missile defense, for

[154] The topics assigned to the working groups were "the security environment for the next twenty years, the role of advanced technology in military systems, interactions between offensive and defensive systems on the periphery of the Soviet Union, and the U.S. posture in regional conflicts around the world" (Iklé and Wohlstetter, *Discriminate Deterrence*, p. i).

[155] Iklé and Wohlstetter, *Discriminate Deterrence*, p. 8.

[156] Members of the CILTS working group on the future security environment included Eliot A. Cohen, David F. Epstein, Fritz Ermarth, Lawrence Gershwin, James G. Roche, Thomas Rona, Stephen P. Rosen, Notra Trulock, III, and Dov Zakheim.

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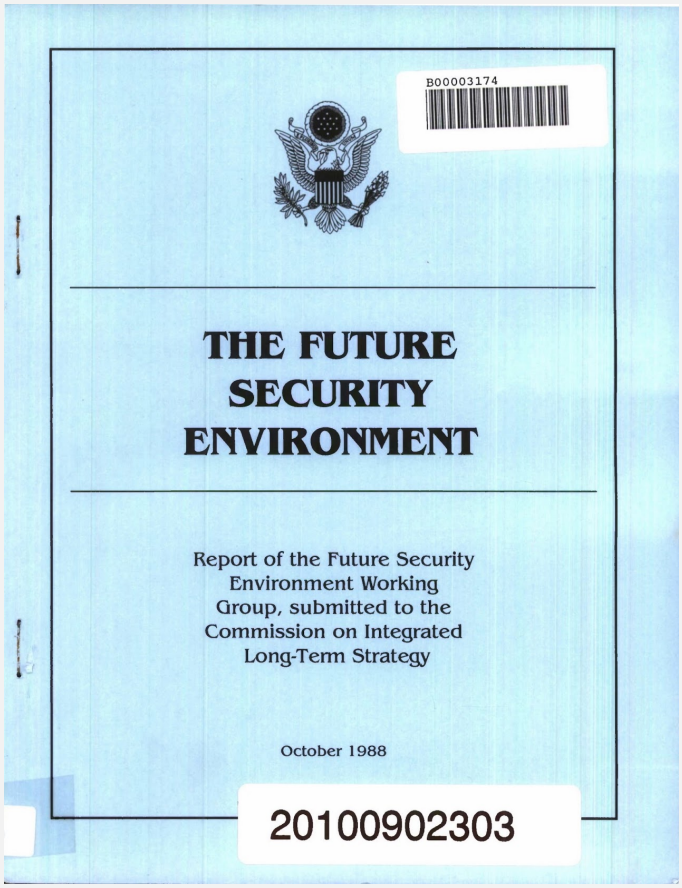
See PDF at [HG008G][GDrive]

The **Future Security Environment Group includes :**

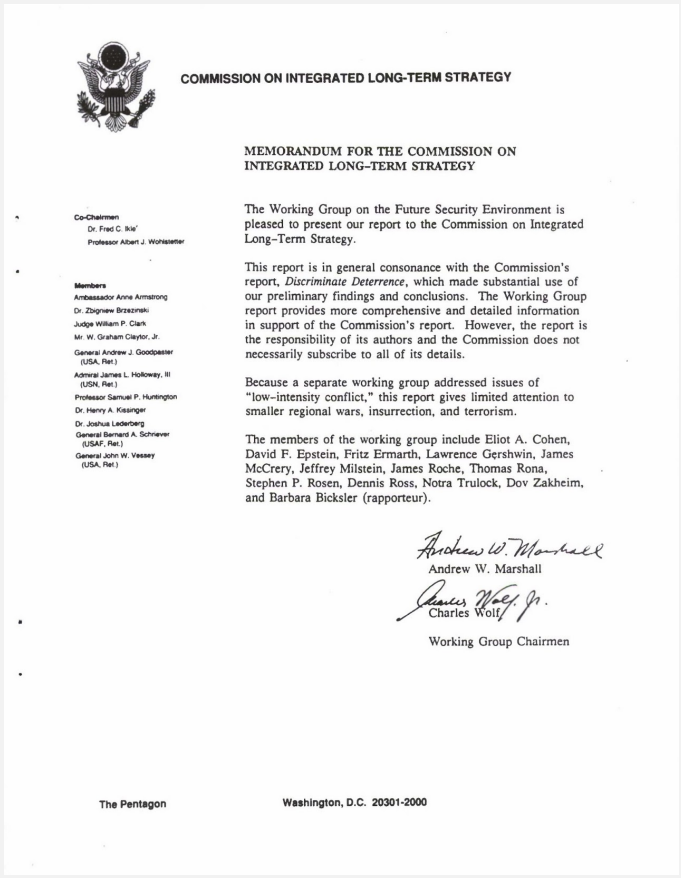
- **Albert James Wohlstetter (born 1913)** (chairman)
- **Dr. Joshua Lederberg (born 1925)**
- (more)

The **Future Security Environment Working Group** includes:

- Eliot Asher Cohen (born 1956)
- **David Friedman Epstein (born 1951)** (Deputy Director of Office of Net Assessment)
- Fritz Walter Ermarth (born 1941)
- Dr. Lawrence Kenneth Gershwin (born 1942)
- James Gerard Roche (born 1939)
- **Thomas Rona**
- Dennis B. Ross (born 1948)
- Dr. Dov Solomon Zakheim (born 1948)



[HG008H][GDrive]


COMMISSION ON INTEGRATED LONG-TERM STRATEGY

MEMORANDUM FOR THE COMMISSION ON INTEGRATED LONG-TERM STRATEGY

Co-Chairmen
Dr. Fred C. Ikle'
Professor Albert J. Wohlstetter

Members
Ambassador Anne Armstrong
Dr. Zbigniew Brzezinski
Judge William P. Clark
Mr. W. Graham Claytor, Jr.
General Andrew J. Goodpaster (USA, Ret.)
Admiral James L. Holloway, III (USN, Ret.)
Professor Samuel P. Huntington
Dr. Henry A. Kissinger
Dr. Joshua Lederberg
General Bernard A. Schriever (USAF, Ret.)
General John W. Vessey (USA, Ret.)

The Working Group on the Future Security Environment is pleased to present our report to the Commission on Integrated Long-Term Strategy.

This report is in general consonance with the Commission's report, *Discriminate Deterrence*, which made substantial use of our preliminary findings and conclusions. The Working Group report provides more comprehensive and detailed information in support of the Commission's report. However, the report is the responsibility of its authors and the Commission does not necessarily subscribe to all of its details.

Because a separate working group addressed issues of "low-intensity conflict," this report gives limited attention to smaller regional wars, insurrection, and terrorism.

The members of the working group include Eliot A. Cohen, David F. Epstein, Fritz Ermarth, Lawrence Gershwin, James McCrery, Jeffrey Milstein, James Roche, Thomas Rona, Stephen P. Rosen, Dennis Ross, Notra Trulock, Dov Zakheim, and Barbara Bicksler (rapporteur).

Andrew W. Marshall

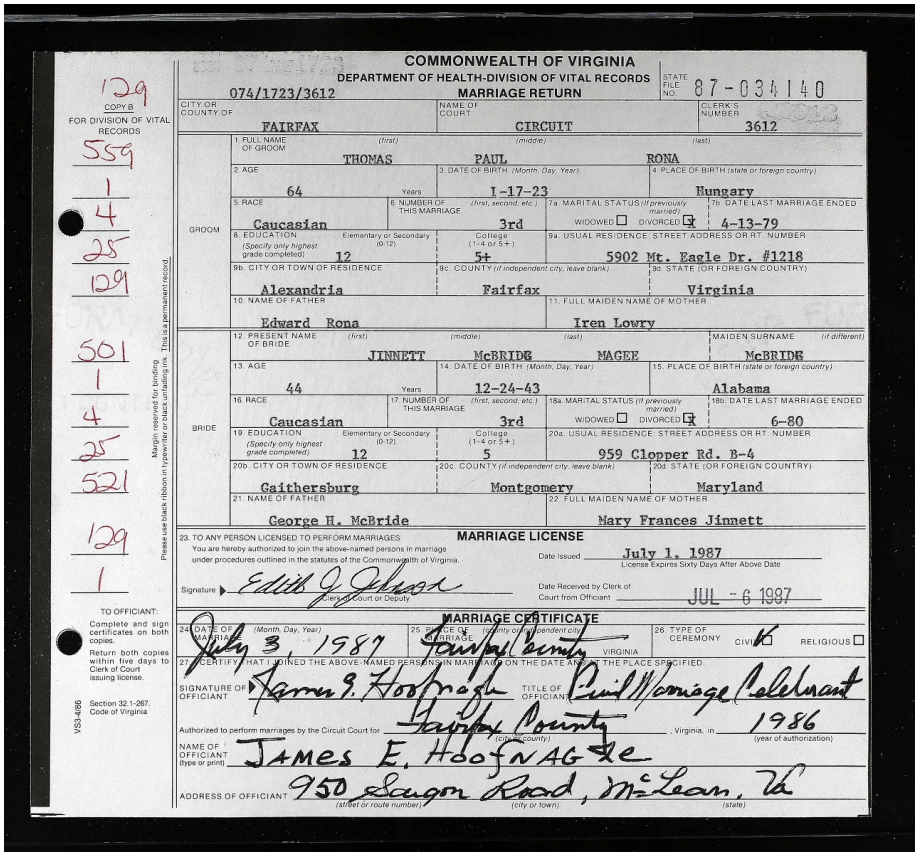
Charles Wolf, Jr.

Working Group Chairmen

The Pentagon Washington, D.C. 20301-2000

[HG008I][GDrive]

1987 (July 06) - Marriage (3rd)



COMMONWEALTH OF VIRGINIA
DEPARTMENT OF HEALTH-DIVISION OF VITAL RECORDS
MARRIAGE RETURN

STATE FILE NO: 87-034140

COPY B FOR DIVISION OF VITAL RECORDS

CITY OR COUNTY OF: FAIRFAX | NAME OF COURT: CIRCUIT | CLERK'S NUMBER: 3612

074/1723/3612

GROOM
1. FULL NAME OF GROOM: THOMAS PAUL RONA
2. AGE: 64 Years
3. DATE OF BIRTH (Month, Day, Year): 1-17-23
4. PLACE OF BIRTH (state or foreign country): Hungary
5. RACE: Caucasian
6. NUMBER OF THIS MARRIAGE: 3rd
7a. MARITAL STATUS (If previously married): WIDOWED ☐ DIVORCED ☒
7b. DATE LAST MARRIAGE ENDED: 4-13-79
8. EDUCATION (Specify only highest grade completed): Elementary or Secondary (0-12): 12; College (1-4 or 5+): 5+
9a. USUAL RESIDENCE: STREET ADDRESS OR RT. NUMBER: 5902 Mt. Eagle Dr. #1218
9b. CITY OR TOWN OF RESIDENCE: Alexandria
9c. COUNTY (If independent city, leave blank): Fairfax
9d. STATE (OR FOREIGN COUNTRY): Virginia
10. NAME OF FATHER: Edward Rona
11. FULL MAIDEN NAME OF MOTHER: Iren Lowry

BRIDE
12. PRESENT NAME OF BRIDE: JINNETT McBRIDE MAGEE
MAIDEN SURNAME (If different): McBRIDE
13. AGE: 44 Years
14. DATE OF BIRTH (Month, Day, Year): 12-24-43
15. PLACE OF BIRTH (state or foreign country): Alabama
16. RACE: Caucasian
17. NUMBER OF THIS MARRIAGE: 3rd
18a. MARITAL STATUS (If previously married): WIDOWED ☐ DIVORCED ☒
18b. DATE LAST MARRIAGE ENDED: 6-80
19. EDUCATION (Specify only highest grade completed): Elementary or Secondary (0-12): 12; College (1-4 or 5+): 5
20a. USUAL RESIDENCE: STREET ADDRESS OR RT. NUMBER: 959 Clopper Rd. B-4
20b. CITY OR TOWN OF RESIDENCE: Gaithersburg
20c. COUNTY (If independent city, leave blank): Montgomery
20d. STATE (OR FOREIGN COUNTRY): Maryland
21. NAME OF FATHER: George H. McBride
22. FULL MAIDEN NAME OF MOTHER: Mary Frances Jinnett

MARRIAGE LICENSE
23. TO ANY PERSON LICENSED TO PERFORM MARRIAGES: You are hereby authorized to join the above-named persons in marriage under procedures outlined in the statutes of the Commonwealth of Virginia.
Date Issued: July 1, 1987 — License Expires Sixty Days After Above Date
Signature: Edith J. Johnson (Clerk or Court or Deputy)
Date Received by Clerk of Court from Officiant: JUL - 6 1987

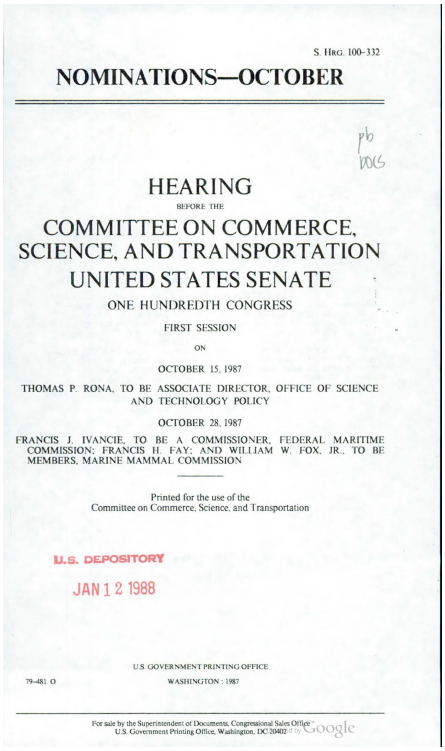
MARRIAGE CERTIFICATE
24. DATE OF MARRIAGE (Month, Day, Year): July 3, 1987
25. PLACE OF MARRIAGE (County or Independent City): Fairfax County — VIRGINIA
26. TYPE OF CEREMONY: CIVIL ☒ RELIGIOUS ☐
27. I CERTIFY THAT I JOINED THE ABOVE-NAMED PERSONS IN MARRIAGE ON THE DATE AND AT THE PLACE SPECIFIED.
SIGNATURE OF OFFICIANT: James E. Hoofnagle
TITLE OF OFFICIANT: Civil Marriage Celebrant
Authorized to perform marriages by the Circuit Court for: Fairfax County (city or county), Virginia, in 1986 (year of authorization)
NAME OF OFFICIANT (type or print): JAMES E. HOOFNAGLE
ADDRESS OF OFFICIANT: 950 Saigon Road, McLean, Va (street or route number) (city or town) (state)

TO OFFICIANT: Complete and sign certificates on both copies. Return both copies within five days to Clerk of Court issuing license.
VSS-4686 Section 32.1-267, Code of Virginia
Margin reserved for binding. Please use black ribbon in typewriter or black unfading ink. This is a permanent record.

[HL005C][GDrive]

1987 (Oct 15)

PDF, original : [HG007H][GDrive] / PDF with OCR : [HG007I][GDrive]



S. HRG. 100-332

NOMINATIONS—OCTOBER

HEARING
BEFORE THE
COMMITTEE ON COMMERCE, SCIENCE, AND TRANSPORTATION
UNITED STATES SENATE
ONE HUNDREDTH CONGRESS
FIRST SESSION
ON
OCTOBER 15, 1987
THOMAS P. RONA, TO BE ASSOCIATE DIRECTOR, OFFICE OF SCIENCE AND TECHNOLOGY POLICY
OCTOBER 28, 1987
FRANCIS J. IVANCIE, TO BE A COMMISSIONER, FEDERAL MARITIME COMMISSION; FRANCIS H. FAY; AND WILLIAM W. FOX, JR., TO BE MEMBERS, MARINE MAMMAL COMMISSION

Printed for the use of the
Committee on Commerce, Science, and Transportation

U.S. DEPOSITORY
JAN 12 1988

U.S. GOVERNMENT PRINTING OFFICE
79-481 O WASHINGTON : 1987
For sale by the Superintendent of Documents, Congressional Sales Office
U.S. Government Printing Office, Washington, DC 20402

[HG007J][GDrive]

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DANIEL K INOUYE HAWAII
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JOHN MCCAIN ARIZONA
RALPH B EVERETT CHIEF COUNSEL AND STAFF DIRECTOR
W ALLEN MOORE MINORITY CHIEF OF STAFF

United States Senate
COMMITTEE ON COMMERCE, SCIENCE, AND TRANSPORTATION
WASHINGTON, DC 20510-6125

STATEMENT FOR COMPLETION BY PRESIDENTIAL NOMINEES

(If more space is needed, please use attached REMARKS sheet)

A. BIOGRAPHICAL DATA

1. Name: RONA (Last) THOMAS (First) PAUL (Other)

Address: 5902 Mt. Eagle Drive (Current residence)
Alexandria, VA 22303

Executive Office of the President
Office of Science and Technology Policy
Room 5013, NEOB, 17th&Penn Ave, NW
Washington, D. C. 20506

2. Position to which nominated: Associate Director, OSTP
Date of nomination: June 1987

3. Date of birth: January 17, 1923 (month) (day) (year)
Place of birth: Budapest, Hungary

4. Marital status: Married
Full name of Spouse: Jinnett McBride Rona

5. Names and ages of children: John Christopher Rona (29)
John Michael Rona (35)
Thomas Paul Rona, Jr. (33)
Marie Helen Rona (34)

6. Education:

Institution	Dates attended	Degrees received	Dates of degrees
Ecole d'Electrictie and Mechanique Industrielle (A.K.a. "Ecole Violet")	June 1939 Sept 1940	Brevet Industriel (HS Equivalent)	Sept 1940
Ecole d'Electrictie and Mechanique Industrielle	Sept 1940 June 1943	BS in ME	June 1943
Ecole Superieure d'Electrictie	Sept 1943 June 1945	EE (Graduate (Degree)	June 1945
University of Paris (Sorbonne)	June 1945 June 1946	Certificate of Lic. in Physics (Electronics)	June 1946
Massachusetts Institute of Technology	June 1952 June 1955	Sc.D. in E.E. with Minor in Industrial Management	June 1955

[HG007K][GDrive]

7. Employment record:

From	To	Name of Employer	Address	Type of Work
4/3/84	Present*	Department of Defense (OSD)	The Pentagon, Washington,DC	Policy Development
7/20/59	3/84	The Boeing Company	Seattle, WA	Requirements Analysis
9/52	7/19/59	Massachusetts Institute of Technology	Cambridge, MA	Teaching and Research
9/51	9/52	University of Montreal (Ecole Polytechnique)	Montreal, PQ	Teaching
8/51	9/51	Unemployed		
9/49	8/51	Self-Employed	Paris, France	Lumber Business
8/47	9/49	Self-Employed	Duala, Cameroun	Consulting
7/46	8/47	Office National d'Etudes et Recherches Aero-nautiques	Paris, France	Research
6/43	6/46	Thompson Houston Company	Paris, France	Research

* Since 12/86 Detailed to the Office of Science and Technology Policy as Assistant Director for Government Programs

Consulting: Edgerton, Germeshausen and Grier, Boston 1955-1959
USAF (Holloman Air Force Base) 1956-1959
Babcock and Wilcox Company, Lynchburg, VA 1958-1979

8. Government experience.

June 1956 through July 1959	Consultant to U.S. Air Force, Holloman AFB
June 1982 through April 1984	Army Science Board - Member
March through April 1984	Consultant, DOD/OSD(P)
April 1984 to date	DOD/OSD(P) Deputy Director for Space and Intelligence Policy (through May 1985) then Special Assistant for C^3I/Space Policy
Since December 1986	Detailed to OSTP as Assistant Director for Government Programs

9. Political affiliations activities: List all memberships and offices held in or financial contributions and services rendered to all political parties or election committees during the last 10 years.

From 1979 through 1983 State Republican Party, Washington
Aggregate political contributions not exceeding $300 over these years.

[HG007L][GDrive]

1988 - Tom P Rona communications with CIA Dep Director Robert Gates (re AIDS)

See https://www.cia.gov/library/readingroom/docs/CIA-RDP90G01353R001500210017-9.pdf / 2008-usa-cia-archive-rdp90g01353r001500210017-9.pdf

Jan 12 1988 https://www.newspapers.com/image/583204659/?terms=%22thomas%2Brona%22

oct 17 1989 https://www.newspapers.com/image/634769022/?terms=%22thomas%2Brona%22

Sep 12 1989 https://www.newspapers.com/image/257216721/?terms=%22thomas%2Brona%22

july 21 1989 https://www.newspapers.com/image/407505904/?terms=%22thomas%2Brona%22

feb 23 1988 https://www.newspapers.com/image/417503349/?terms=%22thomas%2Brona%22

Term "information dominance"

1990-06_Command_Control_Common_Defense

1990 (October 08) - Interview in "Defense News"

Page 1 (cover) : [HP003V][GDrive]

Notes : At this time, Thomas Rona is working for https://en.wikipedia.org/wiki/ICF_International .

ONE ON ONE

Thomas Rona

C³I Consultant

The role of information in wartime has been one of Thomas Rona's main interests for about 30 years.

Rona, who graduated in 1946 from the Sorbonne in Paris, moved to the United States and worked for Boeing Aerospace from 1959 until 1984 when he became deputy director for space and intelligence policy in the Department of Defense. In December 1986, Rona joined the White House staff as deputy director of the Office of Science and Technology Policy.

Since November 1989, he has devoted his time to private consulting. Rona continues to research how military services struggle over the collection, use and protection of information in peacetime and in combat, which he calls the "information war." The information war is becoming more critical, argues Rona, because the side that handles information skillfully will have a decisive advantage, despite the possibility of confronting superior weapons and equipment.

Defense News *staff writer Neil Munro interviewed Rona in his office at ICF Corp., Fairfax, Va.*

PHOTO BY DARREL ELLIS

Q. What is the role of information and intelligence in warfare?

A. Information has always been an important factor in war. But because of modern [highly accurate] weaponry, information becomes not only critical, but technically complex. Modern weapons need and use an enormous quantity of prompt, accurate information. If they do not have it, they cannot operate.

We obviously provide that information to cause our weapons and operations to succeed. But by doing so, we expose our massive communications and information structure to enemy counteraction. This manifests itself in interference [with] communications, exploitation which works by finding out what they are doing by listening. Also, we need to protect our own structure against similar action by the enemy.

This is a complex series of actions which are superimposed at all times on the movement of weapons, vehicles and people. It is there all the time, starting from the concept of a weapon system to delivery of that weapon to the target. It even goes beyond, because you need to assess if you have killed the target. For example, [the enemy] showing a bunch of dead tanks might convince you everything is OK.

Q. How will information war be applied in combat?

A. In modern warfare, both sides will go completely out of their way to confuse [each other's] decisions. If 500 missiles are flying in our direction, then we have no problem because it is either too late to do anything, or we have the preparations to counter them.

But the enemy is not going to do that. The enemy is going to send you a message, perhaps an overt message, saying I don't intend to attack you. We can take the invasion of Kuwait as an example of that. Saddam Hussein was negotiating down to the eve of the invasion, and the president of Egypt came back from Baghdad saying Iraq had no intention to attack.

So the idea of hiding your intent, of sending out confusing signals, disturbing [the enemy's] decision-making, are very important, especially when you are using highly powerful weapons. It is extremely important, and we do not yet know how to handle it.

Q. How should the Department of Defense respond to the increased importance of information war?

A. The logical conclusion ... is to make sure you provide flexible tactical options, and diversify to ensure there are many solutions [to every military problem]. Also, [tactics should be] time variable, and as you plan your operations you must make sure you include moves related to the information war. This obviously puts a different perspective on requirements, especially for command and control. ... It places additional requirements on command and control systems in as much as they need to be improved with respect to [information] security, discrimination, and adaptiveness. The DoD is increasingly applying these views.

Q. How does this affect design of weapons?

A. Information war must impact weapon system requirements. It also offers a number of new moves at the tactical level. In the good old days, when the information war was not accepted at [the tactical] level all you could do was shoot or not shoot, move or not move. That was tactics, [but] today you can add deceptive moves and destruction of the enemy's command and control structure.

Therefore the [pre-war] analyses of engagements must take into account the information war, as well as those in the conventional physical war.

Q. How well have the services incorporated in weapons, tactics and doctrines, the role of information in combat?

A. The military people understand how important it is. The whole idea of command and control is a military concept ... but there is still a lot of progress to be made integrating it into doctrine and weapon development.

Q. Is the concept of information warfare being built into weapons?

A. Somewhere until the mid 1960s, whenever a weapon system was developed, the information warfare aspect was incorporated only afterward. The progress in understanding can be measured by the fact that some of the weapon systems are based on the concept of information denial. The stealthy B-2, is one example. Also, the AWACS [Airborne Warning and Control System aircraft] is entirely constructed to gather the right information, process it and convey it to the right people. You can see what it does in the Persian Gulf; it controls the situation to our advantage.

Another example is the Strategic Defense Initiative. It is a very complex task, and it turns out information is the key. How do you acquire it? How do you control it? How do you make decisions in a timely manner? How do make sure the enemy has no hope of destroying our own information structure?

Q. The technology is moving forward, but are the services using this technology in the right way?

A. The B-2 airplane, for example, is expensive, and so it is a matter to decide whether to expose such an expensive piece of equipment to a first-class air defense. You may choose to attack the target in other ways. But the mere fact that you have [the B-2] forces the enemy to install extremely expensive defenses, so that the battle really starts well before the military operation.

It starts at the development phase. You develop the stealth bomber. In order to counter that, the putative enemy must develop an extremely expensive sensor and air defense system, which costs a pretty penny. And then of course, you may also choose to use missiles instead.

On the larger point, I would not gainsay the judgment of seasoned military officers. Now I will not say that all military development decisions are logical and correct, or in the long run prove valuable. But on the whole, we came out ahead of any opposing empire and ... yet it was expensive, but not that expensive compared to the price of a war. You show me one agency, or one organization in a modern society, that does not make mistakes.

Q. Does it take time for organizations to change themselves to respond to the increased importance of information in wartime?

A. It is difficult to measure how well the concept has penetrated the thinking, and the subliminal thoughts of the servicemen. But in all three services, and at the Department of Defense level, when they talk about command and control, the long distance interaction among systems and people, it becomes very well understood that communication is not the only thing that matters.

The thinking of the top commander [should be] infused with the concept of information war — and that is making enormous progress.

Q. What is the role of time in information warfare?

A. For example, with smart weapons ... once you have found [a target], they will try to prevent you from geting to it. This is where the tempo of operations really begins to play. You have once in a while a smart defensive move like jamming. If jamming is there forever, you will detect it and counter-countermeasure it. But if the jammer jumps from frequency to frequency, that is, it is time variable, [your task becomes harder].

Then you have two choices. Either you make it [the smart weapon] so brilliant that it detects the defense environment and concocts its own penetration tactics without your interfering.

Or you have a command link [sending information to the missile]. You watch the engagement from far away and you detect what the enemy is doing. Then you inject that intelligence to the brain of the missile. However, neither of these yet exist.

Q. Where do we go from here?

A. The technology is moving so fast ... that little [computerized] boxes can handle all the information [we need]. We are at the foothills of this concept and 10 years from now it will be obvious.

[HP003W][GDrive]

1994

https://apps.dtic.mil/dtic/tr/fulltext/u2/a295467.pdf

a295467.pdf

PARTICIPANTS LIST

ARMY SCIENCE BOARD 1994 SUMMER STUDY

"TECHNICAL INFORMATION ARCHITECTURE

FOR ARMY COMMAND, CONTROL,

COMMUNICATIONS AND INTELLIGENCE

1998 (Jan 13) - Passing (see Washington Post)

Source : [HN01AO][GDrive]

Thomas P. Rona, 74, a lecturer and consultant who was a former deputy director of the White House Office of Science and Technology, died of hypertensive cardiovascular disease Dec. 27 at his home in Bethesda.

Dr. Rona came to Washington at the beginning of the Reagan administration. He held several posts dealing with science policy before becoming office deputy director in 1986. He retired in 1989 and since then had been a lecturer and consultant.

His clients included the Defense Department, the Mitre Corp., the Bionetics Corp. and the Johns Hopkins University's Applied Physics Laboratory. He was the author of the 1982 book "Our Changing Geopolitical Premises" and was writing a political novel at the time of his death.

Dr. Rona, who was born in Hungary, was an electrical engineering graduate of the Ecole Polytechnique in Paris. **He moved to Montreal in 1949** and then to Boston, where he served on the faculty of the Massachusetts Institute of Technology. He received a doctorate in engineering from MIT. In 1959, he joined the Boeing Co. in Seattle. He lived in Seattle until moving to the Washington area. His hobbies included painting, listening to classical music and raising tropical fish. He spoke four languages and held several technical patents.

His first wife, the former **Monique R. Noel**, died in 1975.

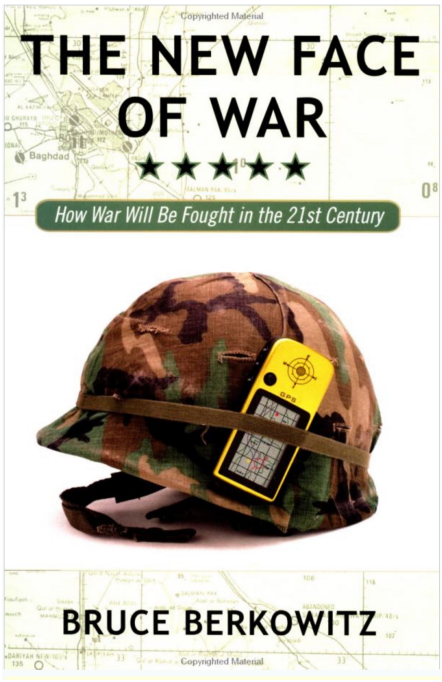
Survivors include **his wife, the former Jinnett McBride, whom he married in 1987 and who lives in Fairfax**; four children from his first marriage, John Michael Rona, Thomas Rona Jr. and Maree Helen Rona, all of Seattle, and **John Christopher Rona of Mount Vernon, Wash.**; a brother, **George, of Brussels**; and seven grandchildren.

Additional Evidence

The New Face of War: How War Will Be Fought in the 21st Century Paperback – October 26, 2007

By Bruce D. Berkowitz

- Amazon purchase : https://www.amazon.com/New-Face-War-Fought-Century/dp/1416584528
- 2003 version : https://archive.org/details/newfaceofwarhoww00berk
- My purchase, 2007 version, text)(chapter 3, below) - [HB004Y][GDrive] -
- Chapter 4 (of The New Face of War: How War Will Be Fought in the 21st Century Paperback – October 26, 2007 by Bruce D Berkowitz) below - [HB0052][GDrive]



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Chapter 3 “THEY ARE ALREADY AMONG US” T o understand modern warfare, you need to begin, of all places, in Budapest.

[...] Much of the twentieth century’s brainpower was born within Hungary: John von Neumann, inventor of both quantum mechanics and the computer program; atomic scientists Edward Teller, Eugene Wigner, Leo Szilard, and Isidor Rabi; Elie Wiesel, humanitarian and recipient of the Nobel Peace Prize; Andy Grove, one of the founders of Intel Corporation. All were Hungarians. Or, more precisely, ex Hungarians. Budapest may resemble a fairyland. Its onion-domed churches and hot-spring fountains may seem enchanting. But the city has always had a dark side. Hungary is at the crossroads of Europe, another way of saying that it has been on the invasion routes connecting Germany, Russia, and Turkey.

Things got especially chaotic in Hungary after World War I, when the Allies carved up the Austro-Hungarian Empire, and got even worse after the Fascists and Communists began to compete for control. Eventually the Fascists won out, and Hungary sided with Nazi Germany during World War II. As a result, the U.S. Fifteenth Air Force flattened Budapest, and the Red Army pillaged what remained. The combination of a cosmopolitan society, a devotion to education, and a penchant for war and riot has made Hungary a leading exporter of human genius.

Among those fleeing all the chaos were Edward and Irene Rona, **who sent their son Thomas and his older brother George to the more tranquil environs of Paris soon after Tom was born in 1923. Tom grew up a Parisian, taking his finals in engineering at the École Polytech-nique on V-E Day. After a brief detour with the French engineering corps building bridges in Cameroon (partly to dodge an irate father and a shotgun marriage), Rona returned to Paris and met Monique Noel, a bank clerk. Tom and Monique soon married.**

Tom and Monique began moving farther and farther west to escape the chaos and constraints of the Old World—first to Montreal, then to a junior faculty position for Tom at the Massachusetts Institute of Technology. By that time he and Monique had three sons and a daughter. **An assistant professor at MIT earned an annual salary of $2,400, so money was tight. Tom heard about an opening for a staff scientist at Boeing. He and Monique flipped a coin. Boeing won, and they piled the four kids in the car and began the drive to Seattle. Tom reported to work, and Monique got a job at the University of Washington.**

It’s hard to tell if Rona ever actually used his engineering degree at Boeing, at least in the sense that he never designed a bomber or missile. Officially he was a senior scientist. Defense contractors like Boeing charge the government an extra fee beyond the basic materials and labor it takes to build a B-52 or an air-launched cruise missile. This money goes into an account for preparing bids and proposals (B&P, in defense contractor jargon), which Boeing used to pay for most of Rona’s salary.

The idea was that Rona would develop new ideas for using military hardware—hopefully, new Boeing hardware. In any case, Rona effectively had a license to look at any technology or topic that seemed interesting and was a potential market for Boeing. It was almost as good as being a professor at a major university, if not better.

People were still trying to assimilate the lessons of World War II when Rona arrived at Boeing. The war was just ten years past, and everyone was still trying to figure out the legacy of what Winston Churchill called the “wizard war”—the contest of electronic weapons and countermeasures.

The British had learned the hard way just how complex this game could be. **Electronic warfare had become a critical factor in World War II during the Battle of Britain.** In 1940 émigrés who had escaped the Continent told British intelligence that the Germans had developed some kind of “beam” weapon. At first the Brits thought this might be a ray gun that could shoot down aircraft by electronically frying their ignition systems; the refugees had talked about the Germans’ testing a “beam weapon that stopped cars.”

When they dug deeper into the reports, though, the Brits discovered that translators had mangled the syntax; what the émigrés really meant was that the Germans were testing a weapon that required them to stop cars-that is, stop nearby traffic to avoid radio interference. Later the British bugged the cells of some German POWs and learned that the weapon was a radio device for guiding bombers to their targets. 1

The Luftwaffe had developed a system of steerable radio beams criss-crossing Britain from stations in France and Germany. A primary beam traced a path to the target for the pilot to follow. If the pilot went off course, the beam would grow weaker, and this would trigger a buzz in his headset telling him to correct his heading. Additional beams bisected the flight path to alert the bombardier as he approached the release point. When the signal from the final crossbeam

his heading. Additional beams bisected the flight path to alert the bombardier as he approached the release point. When the signal from the final crossbeam peaked, the bombardier heard a signal in his earphone and he knew he was over the target. It was like an electronic ". marks the spot."

Eventually the British learned how to deduce the direction of the beams and thus figure out which targets to protect. Yet this breakthrough had little to do with detecting the beams themselves. The real trick was in intercepting and deciphering the communications that the Luftwaffe used to tell their radio stations where to aim their beam each night. This revealed the direction and frequency of the beams, and with this information, the British could both determine the target the Germans planned to bomb, and also track a beam back to its transmitter.

The British soon learned how to transmit their own signals on the same frequency, jamming the receivers on the aircraft or causing the bombardier's signal to go off before his aircraft actually reached its target. Combined, all of these separate ingredients provided the components of an information warfare operation. The British learned where the Germans planned to attack, manipulated the Germans' view of the situation, decided how to respond, and then reacted before the Germans knew what they were up to.

The British thus had the advantage, but they then had to answer the Perennial Question of Information Warfare. Even Indian faced the Perennial Question when they first discovered a rival tribe using smoke signals. it sill confounds information warriors even today: Deny, deceive, destroy, or exploit? Do you transmit your own smoke signals to interfere with his? Do you send bogus signals to confuse your adversary so that he is easier to kill? Do you find the enemy sending the message and kill him? Or do you quietly watch the signals so you know where your adversary plans to be, head him off, and kill him then?

If the Brits jammed the beams or destroyed the radio stations, they might have eliminated the beam system temporarily. The Germans, however, would then have known that their guidance system was successful, or at least successful enough that the British believed they needed to neutralize it. Some German program manager would likely have used this fact to justify a request to build new transmitters that were better hidden and transmitted on different frequencies.

On the other hand, if the British simply sent their fighters to protect the target designated in the deciphered message, some German bombers would have gotten through. Even worse, if a squadron of Spitfires or Hurricanes regularly appeared at the appointed place night after night, the Germans would have eventually figured out that the British had cracked the cipher, which was about the most valuable secret the British had at the time.

This question of how best to attack an information system once you have the advantage—and who should do it—is an old one. Even today it is good for countless interagency meetings and memoranda. The Indian tribes probably had strategy meetings to deliberate how to deal with the smoke signal threat. One warrior likely proposed killing the signal senders, leaving their rivals blind, while another argued passionately for using the information to lay an ambush for the enemy braves who were being directed by the signals.

In the end, the British did a little of each. They jammed some of the signals some of the time, just enough to confuse the Germans. They bombed some of the radio stations. They even leaked some fanciful reports claiming that they had learned how to "bend" radio beams.

The goal was to keep the Germans off balance, and the plan worked. The Germans never lost confidence in their technology and kept using the same beam navigation system. By September 1940 the British had shot down 1,400 German aircraft. German bombing became less accurate. And Ultra, the secret intelligence based on the decrypted intercepts, remained secret until 1974, when the British government itself revealed its coup. 2

Even so, no one had really given much thought to how all these pieces—jamming, deception, intelligence—fit together. The really important thing was always the weapon-a gun or aircraft. Communications, tracking, and guidance were merely "support systems."

This was all about to change, thanks to other events underway in Seattle. As far back as 1851, when the city fathers convinced Henry Yesler to build his newfangled steam—powered sawmill along the banks of the Puget Sound, Seattle had risen, and fallen, on each new wave of technology. After Bill Boeing built his first seaplane for the Navy in 1917, the new technologies driving the Seattle economy were mainly based on aerospace—first airmail, then bombers, and more recently, missiles and satellites.

In the 1960s a new technology began to drive the Seattle economy: computers. Up to then, computers were scarce and expensive, and could only run one program at a time. **Then in 1957 a young mathematics graduate student named John McCarthy proposed a revolutionary idea: time-sharing, or having a single computer run several programs simultaneously.** This completely changed the computer business and, by extension, Seattle.

McCarthy, who was visiting MIT on a fellowship at the time, observed that the slowest part of a computer system is always the person operating it. We work at human speed; the computer works at electronic speed. The computer requires just milliseconds to run a typical calculation. McCarthy, later a distinguished professor in computer science at Stanford, realized that if you can collect computer jobs from many users, the computer can electronically rack-and-stack the jobs as they arrive, perform the operations as capacity becomes available, and thus run more or less continuously. 3

A Teletype—a typewriter that transmits a different electronic signal for each character in the alphabet—made it possible to do all this from miles away. The basic idea for the Teletype had been kicking around since 1909, but it was not until 1931 that the Bell System had introduced it into computers.

It did not take long for some early entrepreneurs to put all the pieces together and see a business opportunity. One could buy a computer, hook users into it with Teletypes, and sell portions of the computer's capacity to companies that couldn't afford to buy their own.

Time-sharing became popular at universities, which typically had two or three large computers located somewhere on campus, and tens of thousands of faculty and students who wanted to use them. S**o it was little wonder that many of the people who tried to get into the timesharing business were college staff, like Monique Rona.**

By then Monique had expanded her repertoire from oceanography to computer science. Soon she found herself running the university's computer center. Tom helped with the financing and Monique got together with some university colleagues to buy a Digital PDP-10. They set up the Computer Center Corporation—C-Cubed, for short—in an office near the campus. Monique put a Teletype on the kitchen table, and they were in business.

The PDP-10 had just hit the market. Being a new machine, it was prone to electronic burps and hangfires. The C-Cubed partners thought they might cut a deal where Digital would give them a discount on the computer if they worked out the bugs.

As it happened, one of the Rona boys attended the Lakeside School, a local private academy, and had heard of some classmates who liked to work with computers. Some of the Lakeside moms had bought their kids a Teletype and a few thousand dollars of computer time from local companies with money raised from a rummage sale. The moms hoped their kids might learn a few computer skills writing programs to play ticktacktoe and the like.

The kids had other ideas. They began playing with the Teletype day and night, taking apart programs and writing some of their own. In no time they burned through the computer time their mothers had bought them and had to look for some new benefactors, just when Monique was looking for some eager minds

to test her PDP-10. The boys cut a deal with C-Cubed: the boys would look for bugs in the PDP-10, and C-Cubed would give them some time on its computer.

Two of the kids, Bill Gates and Paul Allen, seemed to have a knack for computers. When the machine crashed, they would fetch the "core dump" from the trash and search through the machine language line by line to find the bug. They wangled operating manuals from the staff. Eventually the "Lakeside Programmers Group" came to know the insides of the PDP-10 about as well as C-Cubed did. So, when they ran out of their allotted time on the machine, they naturally took the simple expedient of fiddling with the computer's operating system to set back the clocks. Bill, Paul, and their Lakeside buddies Ric Weiland and Kent Evans were four of the earliest computer hackers. 4

Alas, the market for computer time-sharing never worked out as well as Monique had hoped, and C-Cubed eventually went broke, another case of roadkill on the path to IT riches. Gates and Allen went on to other ventures. One was a new company, "Micro-Soft," which they incorporated in April 1975 to sell programs for the Altair 8800, the first personal computer.

Meanwhile, Tom and Monique had that Teletype on their kitchen table. Computers—especially computers that talked with other computers—were part of the family. Tom could see that the Teletype in the Rona kitchen communicating with the PDP in the C-Cubed office near the university was no different than, say, a radar off the coast of New Jersey communicating with a central computer at the North American Air Defense Command in Colorado.

Rona could see that any widget that collected, moved, or processed data was part of a system, each dependent on the other. He could also see that every widget in a system was a potential point of vulnerability, as was the information that passed through them. These so-called support systems were potentially a better target than the weapon itself.

This had not occurred to anyone before, probably because information machines had never routinely talked to one another before. But what Rona now saw was clear: Control the information flowing through your adversary's computers and communications networks, and you could control the outcome of a battle or a war. Or, as Rona's monograph, Weapons Systems and Information War , put it, "Countermeasures aimed at the external flow of information will be further improved to the point that they may well become crucial in influencing the outcome of future engagements.—" 5

Often, in common English, this meant that the best way to defeat your enemy was to attack the components of its information systems, and Rona was broad-minded in defining "component." It included the hardware, of course, but it could just as easily be software, the people operating the system, the people getting the information out of the system, or the data that traveled through it. The best component to attack depended on the opportunities at hand and the risks one was willing to take.

In fact, Rona said, information war offers a major advantage over the old-fashioned kind. In information war, you have a menu of options—that Perennial Question of deny, deceive, destroy, or exploit? It offers an entire matrix of potential pressure points and methods for attacking the enemy. And if your target happens to figure out what you are up to, you can change tactics. The only challenge is to adapt faster than your adversary.

Boeing published Rona's monograph in the summer of 1976 as a "think piece" for company staff and customers. Tom Rona was the first person to use the term "information war" in print. Considering that the Internet was still thirteen years away and a "home computer" was something you built from a box of components with a screwdriver and a soldering gun, it was not a bad piece of prognostication.

Chapter 4 THE ASYMMETRIC WARRIOR

Many people think that information warfare—in particular, the idea of attacking computer networks—was the Defense Department's version of the dot-com boom. Some even believe that information warfare is like the management theories of Enron or Worldcom, a fashionable notion that will not last. But that is a faulty reading of history.

The origins of computer wars have a lot more to do with the Cold War of the 1980s than with the browser wars of the 1990s. The drafters and planners for information warfare were mostly Navy and Air Force officers who worried about fighting a nuclear war with the Soviet Union. Even the rationale for information warfare was originally a grand strategy aimed at toppling the Soviet empire.

To understand all this, one needs to go down the Pacific coast from Tom Rona's Seattle to Santa Monica, California, where the Air Force set up Project RAND in 1946 as one of the first not-for-profit think tanks. Project RAND was partly a leftover from World War II and partly preparation for the Cold War.

Planning a strategic bombing campaign is a lot like planning public works in reverse. Instead of building infrastructure to promote economic growth, the goal is to destroy infrastructure to kill an economy. The methodologies are even similar. You can run an industrial flow analysis to identify a manufacturing choke point and make a factory more efficient. Or you can run a flow analysis to identify a single point failure that will cause the whole plant to shut down when you blast it to bits.

From an analyst's point of view, this is really interesting work. Dismantling a country's infrastructure from 30,000 feet is usually a problem with several potential solutions: How many bombers? What kinds of bombs? Which targets? What is the optimal attack sequence?

During World War II the Army Air Corps recruiters - that is, drafted - economists, engineers, mathematicians, and assorted big-picture thinkers to analyze these problems.

After the war General H. H. "Hap" Arnold, the soon-to-become chief of the soon-to-be-created U.S. Air Force, knew he would need the same kind of eggheads. Unfortunately, the Air Force would have a hard time competing with universities and corporations for this talent in peacetime. And, truth be told, they were an odd fit for a uniformed service in any case.

That was the reason for Project RAND (Research and Development). At first, the Air Force put Project RAND inside the Douglas Aircraft Company. The operation got started just a month after the end of the war, as RAND set up shop in the Douglas Aircraft plant in the Santa Monica municipal airport.

The Air Force soon realized RAND would analyze proposals for all kinds of Air Force projects—including, most likely, aircraft and missiles proposed by Douglas Aircraft. Everyone knew this was an obvious potential conflict of interest. So in 1948 the Air Force spun off Project RAND into a nonprofit corporation. The new company continued to grow, and it soon moved to an office complex two blocks from the beach—a stone's throw from the Santa Monica Pier and conveniently situated next to Chez Jay, a local bar and hideaway.

Andrew W. Marshall was one of the early hires. Marshall started out publishing papers with ferociously academic-sounding titles on basic statistical theory ("Some Tests for Comparing Points of Two Arbitrary Continuous Populations") and methods for assessing the effectiveness of bombing operations ("The Estimation of Parameters in a Physical Vulnerability Model"). Soon, though, Marshall began to focus on bigger questions, like how to

measure the military capabilities of the United States and the Soviet Union and, by implication, how to tilt the balance in our favor.

Marshall soon found a theme that he would return to repeatedly over the next fifty years: "asymmetric threats." At the time, most people measured the so-called superpower arms race by comparing apples to apples.

Marshall saw that such comparisons were usually irrelevant because you usually needed to compare apples to oranges. Comparing the number of tanks the Soviets had to the number of tanks we had told you nothing, said Marshall. Neither did comparing the size of their missiles to the size of our missiles. The reason was simple. Countries playing offense need different weapons from countries playing defense.

Think of it this way: If you are attacking a castle, you need ladders to climb walls, battering rams to smash in the front gate, and shields to protect you from the arrows that the defenders will shoot at you from the parapets. If you are defending the castle, you need arrows to shoot down at the attackers, vats of boiling oil to pour on their heads, and so on.

So it doesn't mean anything to count the number of siege ladders on each side. This may seem painfully obvious today, but it was new for many politicians, generals, and pundits who were accustomed to thinking the strategic balance was something you read off a scorecard to see who was ahead.

To complicate matters further, the Soviet Union and the United States had different strengths to draw on. For instance, the Soviets could build bigger missiles because they had better rocket engines. But U.S. missiles were more accurate because we had better guidance systems. So a missile-to-missile comparison was misleading.

The most interesting thing about asymmetric threats, though, was that even the strongest army or air force could have an Achilles' heel. Indeed, a country might create such vulnerability for itself and not even know it.

This was a point that eventually made Albert Wohlstetter famous. Wohlstetter, one of Marshall's colleagues, described the ultimate asymmetric threat, in which a critical flaw, astutely exploited by an opponent, could leave even the most powerful military force dangerously weak.

At the time, the U.S. Strategic Air Command had four or five times as many long-range bombers as its Soviet counterpart. However, Wohlstetter noted that most U.S. aircraft were parked out in the open on airfields or, even worse, at foreign bases that were within range of a pre-emptive strike by the Soviet air force.

If the Soviets got the first punch, Wohlstetter said, they could destroy most of the U.S. bomber fleet. In fact, our vulnerability, combined with their own weakness, gave them an incentive to strike first if U.S.-Soviet relations went sour. This was really perverse, because the whole point of U.S. nuclear forces was to deter a Soviet attack. Wohlstetter claimed that, as configured, the U.S. force was not only failing to deter; it might even provoke a Soviet strike.

Usually the best army for winning a war bore little resemblance to the army that it had to defeat. They were, in other words, asymmetric. The ultimate goal, said Marshall, was finding the links in an opponent's forces that were not only weak, but which he couldn't fix even if he tried. Now that was really an asymmetric threat. It was the way to win not just a battle but the whole superpower competition.

Marshall knew that the idea of asymmetric threats was not only correct, it was impeccably logical. In fact, it was elegant. If you were defending, it revealed the vulnerability that others had overlooked. If you were on the offense, it could lead to a new strategy that was irresistibly efficient.

Marshall continued to work on measures of military capabilities until 1971. By then he had been at RAND for more than two decades. It wasn't a great time. The United States was en route to losing the Vietnam war, and it seemed that everywhere you looked in the developing world, some country was setting up a Marxist government or signing a "Friendship and Cooperation Treaty" with the Soviets. The United States badly needed a strategic solution—elegant, efficient, or otherwise.

The Soviet Union had pulled even in the superpower competition—or ahead, depending on how you measured it. Of course, measuring and comparing military capabilities happened to be Marshall's specialty. So, he asked, even if the situation looks bad now, can the United States plan a strategy that wins in the long run? To borrow a term from the economist David Ricardo, the United States needed to find its "comparative advantage," the areas in which it had a natural edge over the Soviets.

Computers seemed promising. A totalitarian country like the Soviet Union had to control the flow of information. The Soviet regime was so worried about the threat of samizdat that in 1971 the average citizen could not get near a Xerox machine, never mind a computer. This was a weakness that would help destroy the Soviet Union, although most Soviet leaders did not appreciate it at the time. The Kremlin's information technology phobia allowed the United States to plot a strategy that would emerge in full bloom during the Reagan administration and eventually push the Soviet Union over the edge.

Because the Soviets were so obsessed with controlling information, they could never have their version of Bill Gates and Paul Allen. The very idea of two teenagers foraging for free computer time on some company's PDP-10 was utterly nonsensical in the Soviet context. There were no computers in the private sector. For that matter, there was no private sector. All of the computers in the Soviet Union resided in state-sponsored research institutions and military bases, where they were protected behind security perimeters defined by fence lines three-deep.

The business world was beginning to outpace the government in developing new information technology. Marshall could see that as long as the Communists remained communists, the Soviets would never catch up. The United States, said Marshall, had to figure out some way to use this advantage. 1

As it happened, James Schlesinger—a RAND alum himself—became Secretary of Defense two years later and found himself searching for someone to head an "Office of Assessment and Strategic Planning." Schlesinger had discovered he had no one in the Department of Defense with the responsibility to step back now and then, look at the world, and estimate who was ahead, who was behind, and suggest what the Defense Department could do about it. He called his old colleague Andy Marshall, and Marshall moved to Washington.

"When we brought the office here, we concentrated on the assessment part and left off the strategic planning," Marshall recalls, smiling because he knew which part would likely have the greater influence. Thus began the Office of Net Assessment

"We got hold of some classified writings about how the Russians calculated the correlation of forces," he continues. "We were interested in reconstructing their calculations so that we could see how we might influence them." In other words, Marshall planned to find out how the Soviets decided whether they were ahead or behind in the superpower competition, and then mess around with their minds.

The Soviets seemed especially interested in computers and communications systems and how to attack them. Soviet writers recalled how the Red Army prevailed in World War II through radioelektronaya bor'ba , "radio-electronic combat."

Censorship was so strict in the Soviet Union that Soviet military writers often had to use analogies and examples from the Great Patriotic War to make their point. According to the Soviets, there were four basic techniques in radio-electronic combat: jamming an opponent's communications, using radio direction finding to direct artillery that would destroy the enemy, concealment, and inserting disinformatzia into the adversary's circuits to confuse him. 2

The Soviet writers were worried. According to their calculations, U.S. soldiers were better radioelektronaya bor'ba warriors than they could ever hope to be. They had taken a look at the American electronics industry and the systems that the Defense Department had deployed, and concluded that U.S. war planners must have given the topic a lot of careful thought

As it turned out, they were mistaken. "They thought that we were going to attack their command and control systems, even though our capabilities to do so were really not well developed," Marshall recalls. But this didn't matter. "The important thing was that they thought we were in a radio-electronic revolution, and then screwing them."

So Marshall began in 1978 to draft a Net Assessment on Command and Control. "The more we looked at it, the more we could see that the center of the change in warfare was in the sensors and the information systems. The information aspect of weapons had always been important, but now it was more important than ever. So one of your key operational goals had to be to establish an advantage," Marshall recalls.

Before long Marshall heard about Rona's monographs on "information war" at Boeing. The two met and hit it off. Marshall could see Rona was onto something. "No doubt about it. Tom was the first person to put it all together," recalls Marshall. **For the next four years Marshall supported Rona's work on the theory and practice of information war, or, as it came to be called, information warfare.** It was a bargain, as Boeing still picked up half of Rona's salary. 3

NOTES - Tom Rona left Boeing on March 1984 ..

As one connection led to another, Rona himself came to Washington a few years later. Ben Plymale, a vice president at Boeing and former defense official from the Nixon administration, was Rona's friend and mentor. Plymale introduced Rona to William van Cleve, a professor at the University of Southern California. Van Cleve had been an adviser to Ronald Reagan during the 1980 campaign and was directing the Defense Department transition team for the new administration. Rona started working for van Cleve, and soon caught the eye of [William Robert Graham (born 1937)], who was also working on the transition and was about to become Reagan's new director of the White House Office of Science and Technology Policy. Graham offered Rona a job as deputy director.

After Rona's stint in government, he remained the rest of his life as a Washington writer, consultant, savant, and bon vivant to an informal band of mid-level officers and officials on their way up. In coining the term "information warfare," Rona defined the most important factor in modern military thinking. And it was all because he could not afford to be an assistant professor at MIT, and Boeing was willing to pay him to think of new big ideas that would eventually sell more airplanes and missiles.

If anyone had told Tom Rona that his inventing information warfare was originally just a hook for selling Boeing's electronic widgets, he probably would have appreciated the irony. After all, the power to shape the actions of a military organization is the whole idea of information warfare. And that was exactly what Rona did. But if you caught Tom Rona in a quiet moment, he would likely say that he would be satisfied if he had just discovered some way his adopted country could avoid all the chaos that he had seen in his own life.

https://www.ancientfaces.com/person/edward-rona-birth-1887-death-1979/83110534

Edward Rona (1887 - 1979)

A photo of Edward Rona

Edward Rona

1887 - 1979

updated February 06, 2019

Biography Family Tree Photos Comments Obituary Followers

Edward Rona was born on September 17, 1887. He died in September 1979 at 91 years old. We know that Edward Rona had been residing in Seattle, King County, Washington 98122.

https://search.ancestry.com/cgi-bin/sse.dll?indiv=1&dbid=6716&h=738753&tid=&pid=&queryId=178a821b0e28eb4e5f12720160d3011b&usePUB=true&_phsrc=MOW39&_phstart=successSource

e: Edward Rona

Gender: Male

Age: 91

Birth Year: abt 1888

Residence Place: Seattle, Washington, USA

Death Date: 14 Sep 1979

Death Place: Seattle, Washington

Social Security Number: 538-50-6540

Certificate Number: 022434

Edward and Iene Rona.. from France ?

https://www.ancestry.com/imageviewer/collections/7488/images/NYT715_8127-0396?treeid=&personid=&hintid=&queryId=9a04c50b74687cf079dd8e3d16a9dd33&usePUB=true&_phsrc=MOW43&_phstart=successSource&usePUBJs=true&_ga=2.153528440.1124601309.1603750282-1282622217.1602734250&pId=3028519273

French?

https://search.ancestry.com/cgi-bin/sse.dll?indiv=1&dbid=3693&h=53208751&tid=&pid=&queryId=5928dec913a70fbc0ea16cbc5ba1c6e6&usePUB=true&_phsrc=MOW48&_phstart=successSource

"Edouard Rona"

BITCHUTE @Housatonic YOUTUBE @HousatonicLive ODYSEE @Housatonic BRIGHTEON @Housatonic

Housatonic

Monique R Rona (born 1928)

Born - Nov 3, 1928

Died - June 29, 1975

Married to Thomas Paul Rona (born 1923)

Worked at :

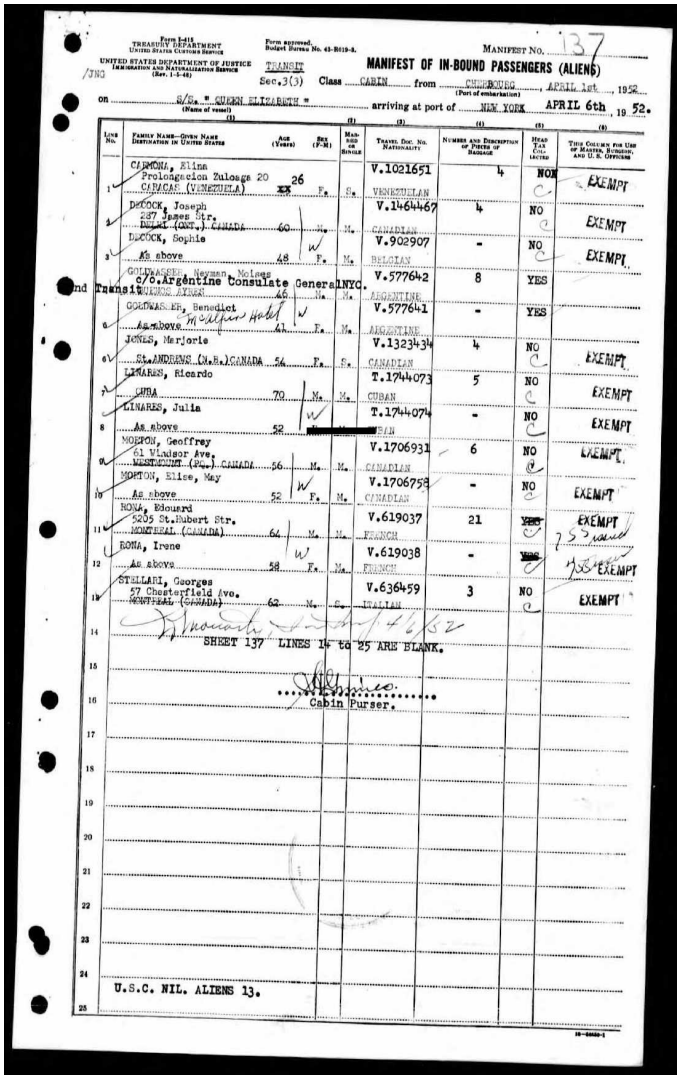
- Computer Center Corporation (Seattle)

Associates :

- Gary Arlen Kildall (born 1942) ("very good friend", according to Gary Kildall)
- Stephen Russell (born 1937) (colleague at **Computer Center Corporation (Seattle)**)
- Robert Gordon Gillespie (born 1933) (boss/colleague at University of Washington)
- Hellmut Paul Oscar Golde (born 1930) (colleague at University of Washington)
- Dr. David Bliss Dekker (born 1919) (Co-founder of **Computer Center Corporation (Seattle)**)
- Carl Garland Young (born 1926) (Co-founder of **Computer Center Corporation (Seattle)**)

1952 (April 16) : In-laws travel to the United States on the SS Queen Elizabeth

original -(before cropping) : [HJ000T][GDrive]



Form I-415
TREASURY DEPARTMENT
UNITED STATES CUSTOMS SERVICE
Form approved, Budget Bureau No. 41-R019.2.

MANIFEST NO. 137

UNITED STATES DEPARTMENT OF JUSTICE
IMMIGRATION AND NATURALIZATION SERVICE
(Rev. 1-5-48)

/JNG

MANIFEST OF IN-BOUND PASSENGERS (ALIENS)

TRANSIT
Sec.3(3) Class CABIN from CHERBOURG (Port of embarkation) APRIL 1st, 1952

on S/S. " QUEEN ELIZABETH " (Name of vessel) arriving at port of NEW YORK APRIL 6th, 19 52.

Line No.	Family Name—Given Name Destination in United States	Age (Years)	Sex (F-M)	Married or Single	Travel Doc. No. Nationality	Number and Description of Pieces of Baggage	Head Tax (if any) Collected	This Column for Use of Master, Purser, and U.S. Officials
1	CAMPOS, Elina Prolongacion Zuloaga 20 CARACAS (VENEZUELA)	26	F.	S.	V.1021651 VENEZUELAN	4	NON C	EXEMPT
2	DeCOCK, Joseph 287 Jones Str. DUBEL (ONT.) CANADA	60	M.	M.	V.1464467 CANADIAN	4	NO C	EXEMPT
3	DeCOCK, Sophie As above	48	F.	M.	V.902907 BELGIAN	-	NO C	EXEMPT
and Transit	GOLDFARBER, Neyman, Moises c/o.Argentine Consulate General NYC.	46	M.	M.	V.577642 ARGENTINE	8	YES	
6	GOLDWARFER, Benedict As above	47	F.	M.	V.577641 ARGENTINE	-	YES	
6	JONES, Marjorie St.ANDREWS (N.B.)CANADA	54	F.	S.	V.1323434 CANADIAN	4	NO C	EXEMPT
7	LINARES, Ricardo CUBA	70	M.	M.	T.1744073 CUBAN	5	NO C	EXEMPT
8	LINARES, Julia As above	52	F.	M.	T.1744074 SPAIN	-	NO C	EXEMPT
9	MORTON, Geoffrey 61 Windsor Ave. WESTMOUNT (P.Q.) CANADA	56	M.	M.	V.1706931 CANADIAN	6	NO C	EXEMPT
10	MORTON, Elise, May As above	52	F.	M.	V.1706759 CANADIAN	-	NO C	EXEMPT
11	ROMA, Edouard 5205 St.Hubert Str. MONTREAL (CANADA)	64	M.	M.	V.619037 FRENCH	21	~~YES~~ C	EXEMPT 753 issued
12	ROMA, Irene As above	58	F.	M.	V.619038 FRENCH	-	~~YES~~ C	753 EXEMPT
13	STELLARI, Georges 57 Chesterfield Ave. ~~MONTREAL (CANADA)~~	62	M.	S.	V.636459 ITALIAN	3	NO C	EXEMPT
14	SHEET 137 LINES 14 to 25 ARE BLANK.							
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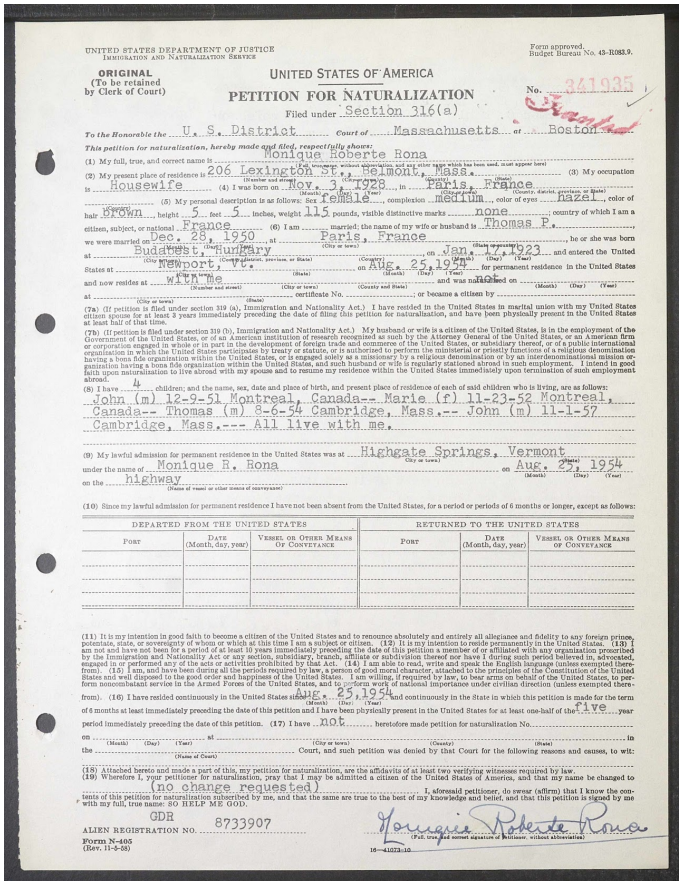
1954 - US Naturalization Petition



UNITED STATES DEPARTMENT OF JUSTICE
IMMIGRATION AND NATURALIZATION SERVICE

Form approved.
Budget Bureau No. 43-R083.9.

ORIGINAL
(To be retained by Clerk of Court)

UNITED STATES OF AMERICA

PETITION FOR NATURALIZATION

No. 341935

Filed under Section 316(a)

To the Honorable the U. S. District Court of Massachusetts at Boston

This petition for naturalization, hereby made and filed, respectfully shows:

(1) My full, true, and correct name is Monique Roberte Rona
(Do not use initials without explanation; if a nickname is used, insert proper name which has been used, in full, after other name which has been used, in quotation marks)

(2) My present place of residence is 206 Lexington St., Belmont, Mass. (3) My occupation is Housewife

(4) I was born on Nov. 3, 1928 in Paris, France
(Month) (Day) (Year) (City or town) (Province, district, province, or State) (Country)

(5) My personal description is as follows: Sex female, complexion medium, color of eyes hazel, color of hair brown, height 5 feet 5 inches, weight 115 pounds, visible distinctive marks none; country of which I am a citizen, subject, or national France

(6) I am married; the name of my wife or husband is Thomas P. ; we were married on Dec. 28, 1950 at Paris, France, he or she was born at Budapest, Hungary on Jan. 17, 1923 and entered the United States at Newport, Vt. on Aug. 25, 1954 for permanent residence in the United States and now resides at with me at certificate No. ; or became a citizen by

(7a) (If petition is filed under section 319 (a), Immigration and Nationality Act.) I have resided in the United States in marital union with my United States citizen spouse for at least 3 years immediately preceding the date of filing this petition for naturalization, and have been physically present in the United States at least half of that time.

(7b) (If petition is filed under section 319 (b), Immigration and Nationality Act.) My husband or wife is a citizen of the United States, is in the employment of the Government of the United States, or of an American institution of research recognized as such by the Attorney General of the United States, or an American firm or corporation engaged in whole or in part in the development of foreign trade and commerce of the United States, or subsidiary thereof, or of a public international organization in which the United States participates by treaty or statute, or is authorized to perform the ministerial or priestly functions of a religious denomination having a bona fide organization within the United States, or is engaged solely as a missionary by a religious denomination or by an interdenominational mission organization having a bona fide organization within the United States, and such husband or wife is regularly stationed abroad in such employment. I intend in good faith upon naturalization to live abroad with my spouse and to resume my residence within the United States immediately upon termination of such employment abroad.

(8) I have 4 children; and the name, sex, date and place of birth, and present place of residence of each of said children who is living, are as follows:
John (m) 12-9-51 Montreal, Canada-- Marie (f) 11-23-52 Montreal, Canada-- Thomas (m) 8-6-54 Cambridge, Mass.-- John (m) 11-1-57 Cambridge, Mass.--- All live with me.

(9) My lawful admission for permanent residence in the United States was at Highgate Springs, Vermont under the name of Monique R. Rona on Aug. 22, 1954 on the highway

(10) Since my lawful admission for permanent residence I have not been absent from the United States, for a period or periods of 6 months or longer, except as follows:

DEPARTED FROM THE UNITED STATES			RETURNED TO THE UNITED STATES		
Port	Date (Month, day, year)	Vessel or Other Means of Conveyance	Port	Date (Month, day, year)	Vessel or Other Means of Conveyance

(11) It is my intention in good faith to become a citizen of the United States and to renounce absolutely and entirely all allegiance and fidelity to any foreign prince, potentate, state, or sovereignty of whom or which at this time I am a subject or citizen. (12) It is my intention to reside permanently in the United States. (13) I am not and have not been for a period of at least 10 years immediately preceding the date of this petition a member of or affiliated with any organization proscribed by the Immigration and Nationality Act or any section, subsidiary, branch, affiliate or subdivision thereof nor have I during such period believed in, advocated, engaged in or performed any of the acts or activities prohibited by that Act. (14) I am able to read, write and speak the English language (unless exempted therefrom). (15) I am, and have been during all the periods required by law, a person of good moral character, attached to the principles of the Constitution of the United States and well disposed to the good order and happiness of the United States. I am willing, if required by law, to bear arms on behalf of the United States, to perform noncombatant service in the Armed Forces of the United States, and to perform work of national importance under civilian direction (unless exempted therefrom). (16) I have resided continuously in the United States since Aug. 25, 1954 and continuously in the State in which this petition is made for the term of 6 months at least immediately preceding the date of this petition and I have been physically present in the United States for at least one-half of the five year period immediately preceding the date of this petition. (17) I have not heretofore made petition for naturalization No. in on M. in the Court, and such petition was denied by that Court for the following reasons and causes, to wit:

(18) Attached hereto and made a part of this, my petition for naturalization, are the affidavits of at least two verifying witnesses required by law.
(19) Wherefore I, your petitioner for naturalization, pray that I may be admitted a citizen of the United States of America, and that my name be changed to (no change requested)

I, aforesaid petitioner, do swear (affirm) that I know the contents of this petition for naturalization subscribed by me, and that the same are true to the best of my knowledge and belief, and that this petition is signed by me with my full, true name: SO HELP ME GOD.

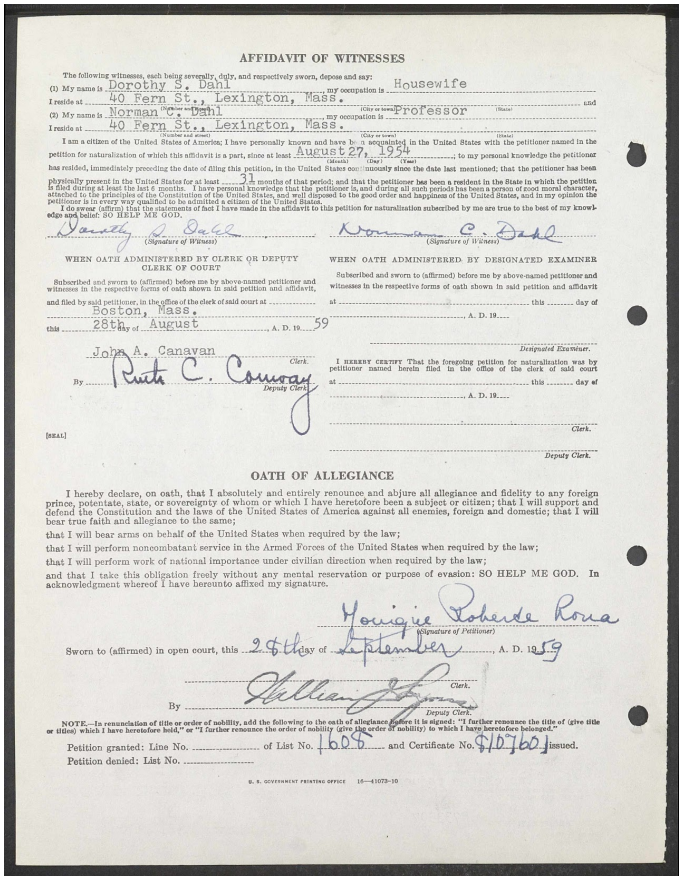
GDR 8733907
ALIEN REGISTRATION NO.

Monique Roberte Rona
(Full, true, and correct signature of petitioner, without abbreviations)

Form N-405
(Rev. 11-5-58)

16—41073-10

[HG007F][GDrive]



AFFIDAVIT OF WITNESSES

The following witnesses, each being severally, duly, and respectively sworn, depose and say:

(1) My name is Dorothy S. Dahl, my occupation is Housewife
I reside at 40 Fern St., Lexington, Mass. and

(2) My name is Norman C. Dahl, my occupation is Professor
I reside at 40 Fern St., Lexington, Mass.

I am a citizen of the United States of America; I have personally known and have been acquainted in the United States with the petitioner named in the petition for naturalization of which this affidavit is a part, since at least August 27, 1954 to my personal knowledge the petitioner has resided, immediately preceding the date of filing this petition, in the United States continuously since the date last mentioned; that the petitioner has been physically present in the United States for at least 31 months of that period; and that the petitioner has been a resident in the State in which the petition is filed during at least the last 6 months. I have personal knowledge that the petitioner is, and during all such periods has been a person of good moral character, attached to the principles of the Constitution of the United States, and well disposed to the good order and happiness of the United States, and in my opinion the petitioner is in every way qualified to be admitted a citizen of the United States.

I do swear (affirm) that the statements of fact I have made in the affidavit to this petition for naturalization subscribed by me are true to the best of my knowledge and belief: SO HELP ME GOD.

Dorothy S. Dahl
(Signature of Witness)

Norman C. Dahl
(Signature of Witness)

WHEN OATH ADMINISTERED BY CLERK OR DEPUTY CLERK OF COURT

Subscribed and sworn to (affirmed) before me by above-named petitioner and witnesses in the respective forms of oath shown in said petition and affidavit, and filed by said petitioner, in the office of the clerk of said court at Boston, Mass.
this 28th day of August, A. D. 19 59

John A. Canavan, Clerk.
By Ruth C. Conway, Deputy Clerk.

[SEAL]

WHEN OATH ADMINISTERED BY DESIGNATED EXAMINER

Subscribed and sworn to (affirmed) before me by above-named petitioner and witnesses in the respective forms of oath shown in said petition and affidavit at this day of A. D. 19

Designated Examiner.

I HEREBY CERTIFY That the foregoing petition for naturalization was by petitioner named herein filed in the office of the clerk of said court at this day of A. D. 19

Clerk.
Deputy Clerk.

OATH OF ALLEGIANCE

I hereby declare, on oath, that I absolutely and entirely renounce and abjure all allegiance and fidelity to any foreign prince, potentate, state, or sovereignty of whom or which I have heretofore been a subject or citizen; that I will support and defend the Constitution and the laws of the United States of America against all enemies, foreign and domestic; that I will bear true faith and allegiance to the same;

that I will bear arms on behalf of the United States when required by the law;

that I will perform noncombatant service in the Armed Forces of the United States when required by the law;

that I will perform work of national importance under civilian direction when required by the law;

and that I take this obligation freely without any mental reservation or purpose of evasion: SO HELP ME GOD. In acknowledgment whereof I have hereunto affixed my signature.

Monique Roberte Rona
(Signature of Petitioner)

Sworn to (affirmed) in open court, this 28th day of September, A. D. 1959

Clerk.
By Ruth C. Conway, Deputy Clerk.

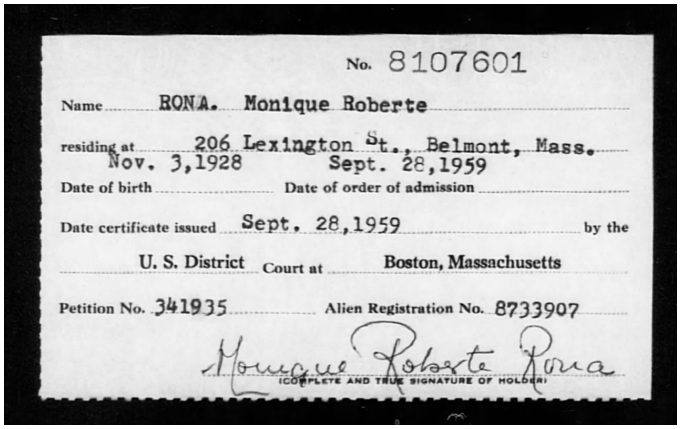
NOTE.—In renunciation of title or order of nobility, add the following to the oath of allegiance before it is signed: "I further renounce the title of (give title or titles) which I have heretofore held," or "I further renounce the order of nobility (give the order of nobility) to which I have heretofore belonged."

Petition granted: Line No. of List No. 1606 and Certificate No. 8107601 issued.
Petition denied: Line No.

U. S. GOVERNMENT PRINTING OFFICE 16—41073-10

[HG007G][GDrive]

1959 (Sep 28) - US Naturalization Certificate



No. 8107601

Name RONA. Monique Roberte

residing at 206 Lexington St., Belmont, Mass.

Date of birth Nov. 3,1928 Date of order of admission Sept. 28,1959

Date certificate issued Sept. 28,1959 by the

U. S. District Court at Boston, Massachusetts

Petition No. 341935 Alien Registration No. 8733907

Monique Roberte Rona
(COMPLETE AND TRUE SIGNATURE OF HOLDER)

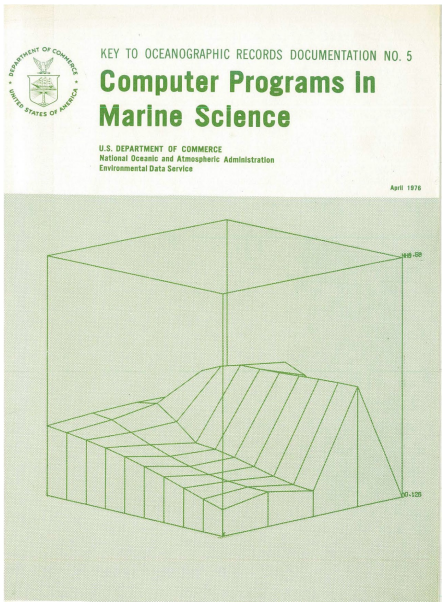
[HG007E][GDrive]

1962 - Writes to programs (for an IBM 709) - Computing assimilation of productivity in seatwater

noaa_13614_DS1-pg-52-clip-m-rona.jpg

1976-04-us-dept-of-commerce-noaa-computer-programs-in-marine-science-13614-ds1

1976-04-us-dept-of-commerce-noaa-computer-programs-in-marine-science-13614-ds1-cvr1



Combined Chlorophyll and Productivity

Language - FORTRAN IV
Hardware - CDC 6400

Computes assimilation of productivity in seawater; also computes the quantities of chlorophyll A, B, and C, and the amount of carotenoids in seawater. The chlorophyll program determines the amount of plankton pigments using the equations of Richards and Thompson. The productivity program (Carbon 14) determines the production of marine phytoplankton by using Neilsen's method. Output consists of both printed matter and of library cards; the cards may be used as input to a multiple regression program to derive a relation between productivity and chlorophyll A; a plot routine may be called to graph one or several variables as a function of depth, or to display the horizontal distribution of any given property. Written by Marsha Wallin, Nov. 1963, based on two programs prepared in 1962 for the IBM 709 by M.R. Rona; revised in 1969 for the CDC 6400.

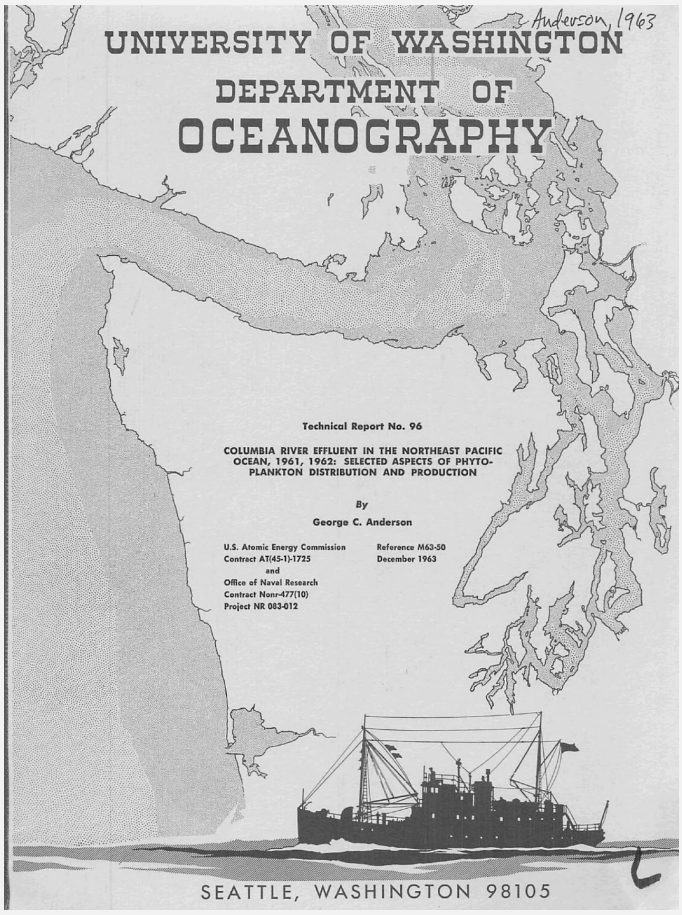
Department of Oceanography
University of Washington
Seattle, WA 98105

Copy on file at NODC (listing, documentation)

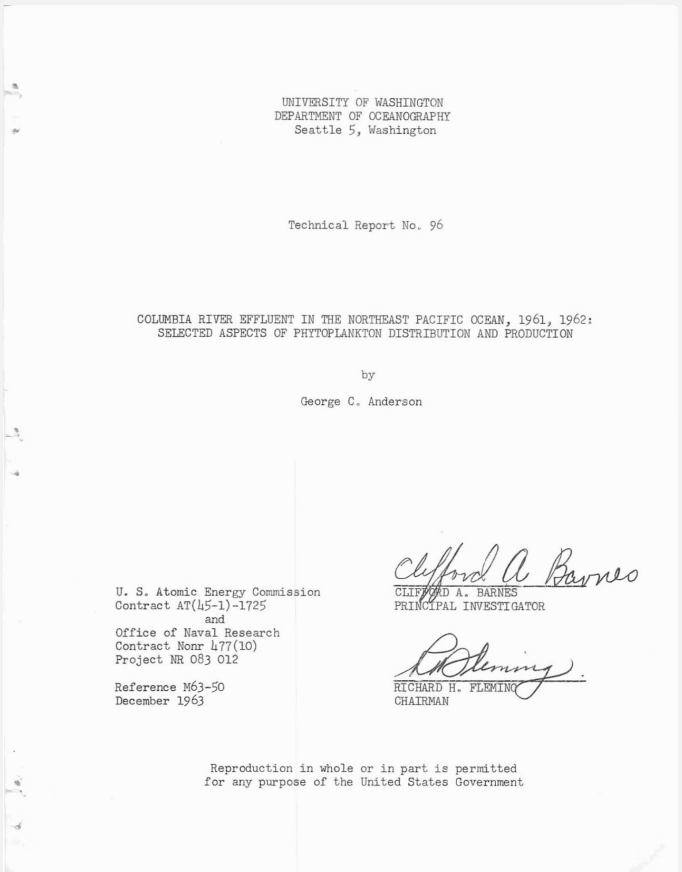
1976-04-us-dept-of-commerce-noaa-computer-programs-in-marine-science-13614-ds1-pg-52-clip-m-rona

1963 (Dec)

Full PDF : [HE002C][GDrive]



[HE002D][GDrive]



UNIVERSITY OF WASHINGTON
DEPARTMENT OF OCEANOGRAPHY
Seattle 5, Washington

Technical Report No. 96

COLUMBIA RIVER EFFLUENT IN THE NORTHEAST PACIFIC OCEAN, 1961, 1962:
SELECTED ASPECTS OF PHYTOPLANKTON DISTRIBUTION AND PRODUCTION

by

George C. Anderson

U. S. Atomic Energy Commission
Contract AT(45-1)-1725
and
Office of Naval Research
Contract Nonr 477(10)
Project NR 083 012

Reference M63-50
December 1963

Clifford A. Barnes
CLIFFORD A. BARNES
PRINCIPAL INVESTIGATOR

RICHARD H. FLEMING
CHAIRMAN

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[HE002E][GDrive]

ACKNOWLEDGEMENTS

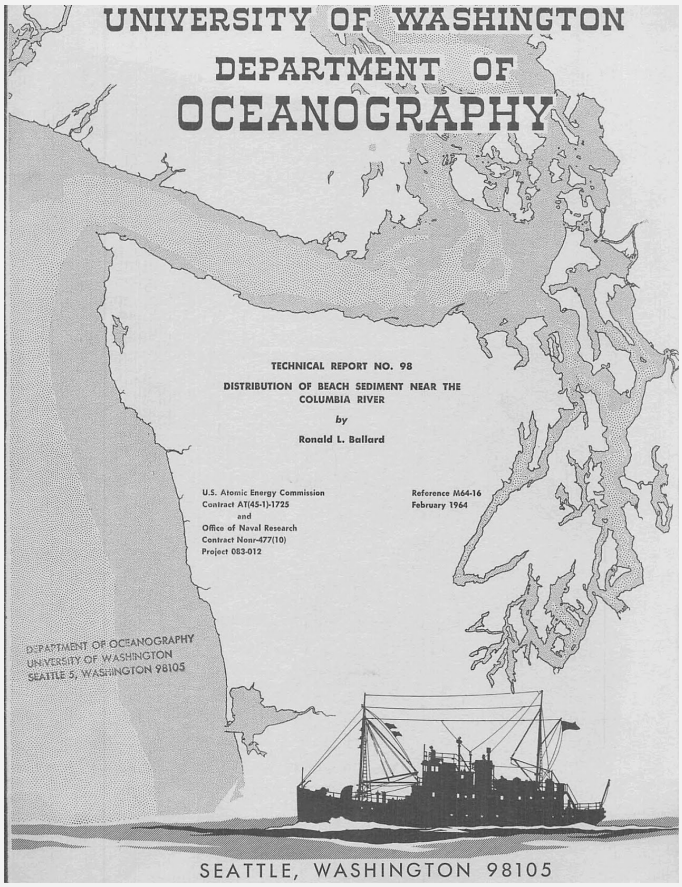
The writer wishes to thank the following people for their assistance: Mr. G. D. Anderson, Dr. K. Banse, Dr. C. A. Barnes, Mr. R. Barton, Mr. T. F. Budinger, Mr. W. Dawson, Mr. D. R. Doyle, Mr. L. A. Hobson, Miss R. Horner, Mr. S. Hoverson, Mrs. L. Long, Mr. C. M. Love, Mr. D. Milne, Mr. M. Morford, Mr. J. Piety, Mrs. M. Rona, Miss D. Semon, Mr. T. Shaeffer, and officers and men of the Brown Bear, Department of Oceanography, University of Washington. Financial support was provided by the U. S. Atomic Energy Commission, Contract AT (45-1)-1725 and the Office of Naval Research, Contract Nonr-477(10), Project NR 083 012.

1963-12-univ-of-washington-oceanograhy-dept-tr-96-columbia-river-effluent-in-northeast-pacific-phytoplankton-pg-15-clip-acks

[HE002F][GDrive]

1964 University of Washington / Oceanography Dept. , Tech Report 98 :

Full PDF : [HE002G][GDrive]



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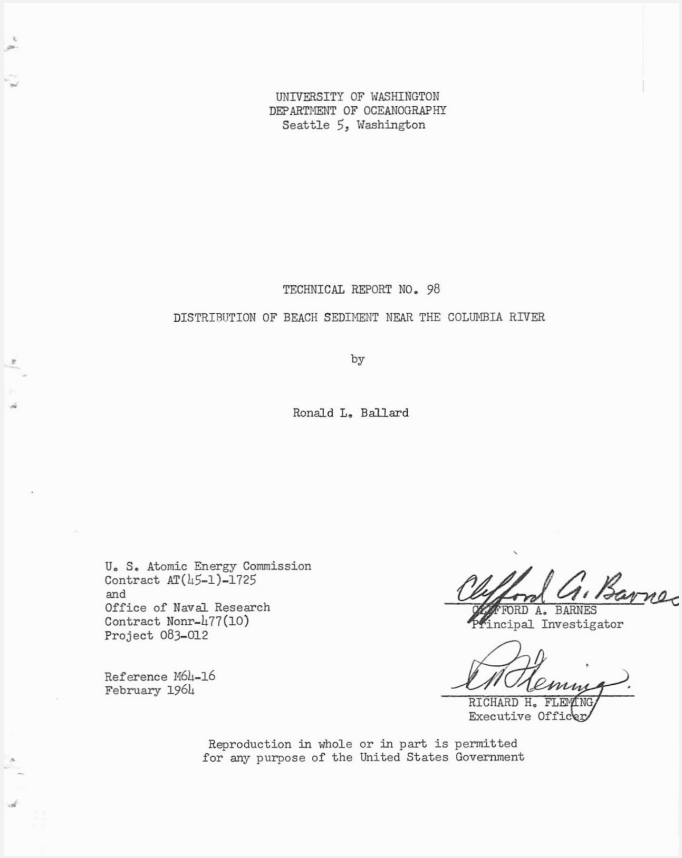

UNIVERSITY OF WASHINGTON
DEPARTMENT OF OCEANOGRAPHY
Seattle 5, Washington

TECHNICAL REPORT NO. 98

DISTRIBUTION OF BEACH SEDIMENT NEAR THE COLUMBIA RIVER

by

Ronald L. Ballard

U. S. Atomic Energy Commission
Contract AT(45-1)-1725
and
Office of Naval Research
Contract Nonr-477(10)
Project 083-012

Reference M64-16
February 1964

Clifford A. Barnes
CLIFFORD A. BARNES
Principal Investigator

RICHARD H. FLEMING
Executive Officer

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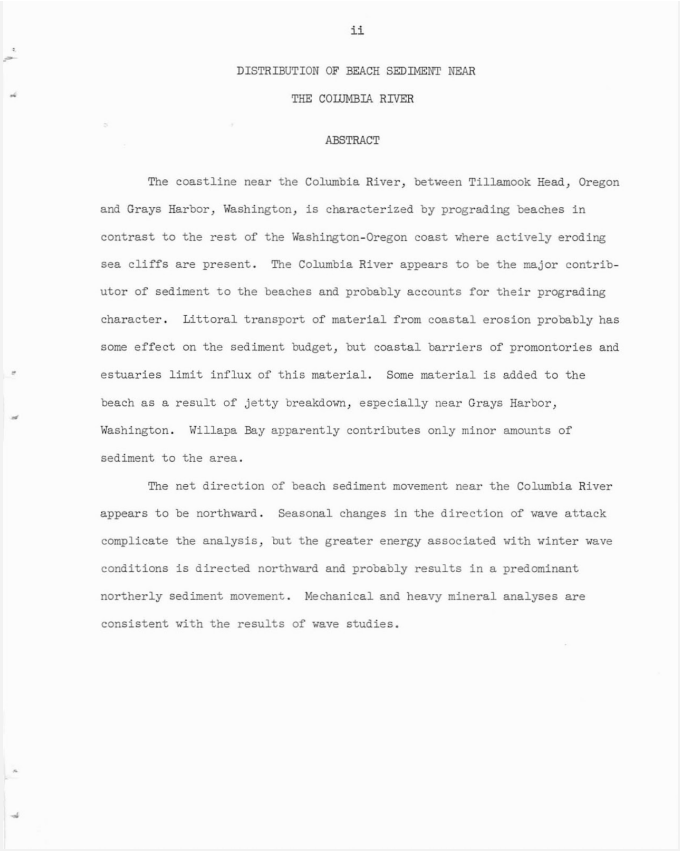


ii

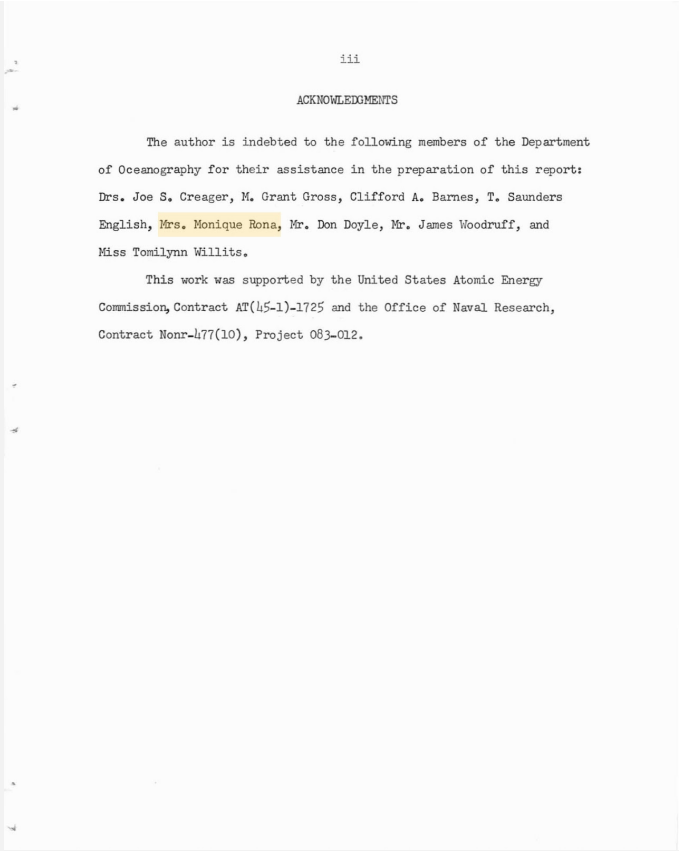
DISTRIBUTION OF BEACH SEDIMENT NEAR
THE COLUMBIA RIVER

ABSTRACT

The coastline near the Columbia River, between Tillamook Head, Oregon and Grays Harbor, Washington, is characterized by prograding beaches in contrast to the rest of the Washington-Oregon coast where actively eroding sea cliffs are present. The Columbia River appears to be the major contributor of sediment to the beaches and probably accounts for their prograding character. Littoral transport of material from coastal erosion probably has some effect on the sediment budget, but coastal barriers of promontories and estuaries limit influx of this material. Some material is added to the beach as a result of jetty breakdown, especially near Grays Harbor, Washington. Willapa Bay apparently contributes only minor amounts of sediment to the area.

The net direction of beach sediment movement near the Columbia River appears to be northward. Seasonal changes in the direction of wave attack complicate the analysis, but the greater energy associated with winter wave conditions is directed northward and probably results in a predominant northerly sediment movement. Mechanical and heavy mineral analyses are consistent with the results of wave studies.

[HE002J][GDrive]



iii

ACKNOWLEDGMENTS

The author is indebted to the following members of the Department of Oceanography for their assistance in the preparation of this report: Drs. Joe S. Creager, M. Grant Gross, Clifford A. Barnes, T. Saunders English, Mrs. Monique Rona, Mr. Don Doyle, Mr. James Woodruff, and Miss Tomilynn Willits.

This work was supported by the United States Atomic Energy Commission, Contract AT(45-1)-1725 and the Office of Naval Research, Contract Nonr-477(10), Project 083-012.

[HE002K][GDrive]

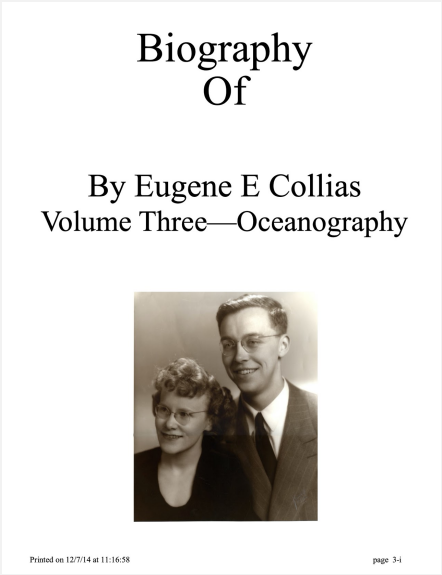
1964 (Aug) - A PDP-5 was purchased and installed on the R/V Brown Bear; Monique Rona is a principal operator

(ALSO SEE NY TImes article : PDP-5 (and similar) computers being used for Ocean studies, 1965 : [HN01BI][GDrive]-)

Source : Biography of Eugene E. and Dorothy M. Collias (Puget Sound Organization) : [HI001I][GDrive]

Notes:

- The "RV Brown Bear" was a wooden research vehicle - read more at https://archive.fisheries.noaa.gov/afsc/history/vessels/boats/brownbear.htm .
- The PDP-5 was one cabinet vs four cabinets, so it could it. See https://en.wikipedia.org/wiki/PDP-5



Biography
Of

By Eugene E Collias
Volume Three—Oceanography

Printed on 12/7/14 at 11:16:58 page 3-i

[HI001J][GDrive]

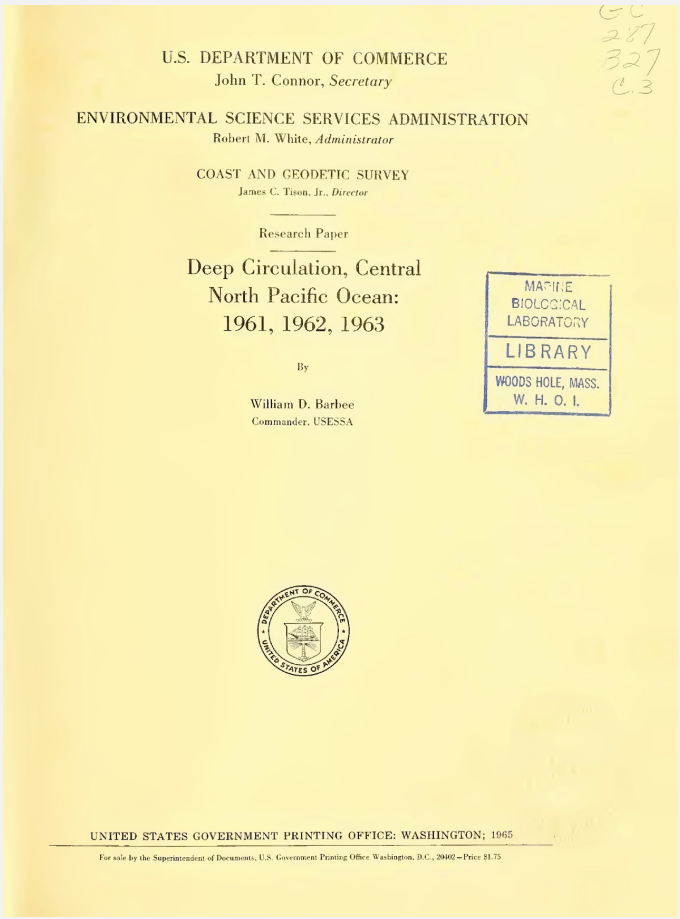
[...]

Computers within the Department of Oceanography

It was decided that Oceanography should have its own sea going computer**. A PDP-5 was purchased and installed on the RV Brown Bear in the August 1964. *Monique Rona* and *William Walker* were the principal operators.** The input-output device was a teletype. No more IBM cards. What was proven by this experiment was that a computer worked very well at sea and was a valuable tool. But the operator frequently rode the rail. When the first **RV T. G. Thompson** arrived in December 1965, the Department purchased two IBM-1130's, one for land and one for the ship. This proved to be a very satisfactory addition. The 1130 used a 16-bit word and had 8K of memory. Within a year, 8K more memory was added. This consisted of a rack mounted panel 19" wide, 8" high, 20" deep and cost $10,000. We know had 16K words of memory and could write larger programs. Because of the limited memory, which we thought of as huge, we used many overlays. Again the language used was FORTRAN. IBM had written many FORTRAN subroutines to handle alphabetic characters, thus increasing the usefulness of this computer. [...]

1965

Download full PDF : [HG007M][GDrive]



U.S. DEPARTMENT OF COMMERCE
John T. Connor, *Secretary*

ENVIRONMENTAL SCIENCE SERVICES ADMINISTRATION
Robert M. White, *Administrator*

COAST AND GEODETIC SURVEY
James C. Tison, Jr., *Director*

Research Paper

Deep Circulation, Central North Pacific Ocean: 1961, 1962, 1963

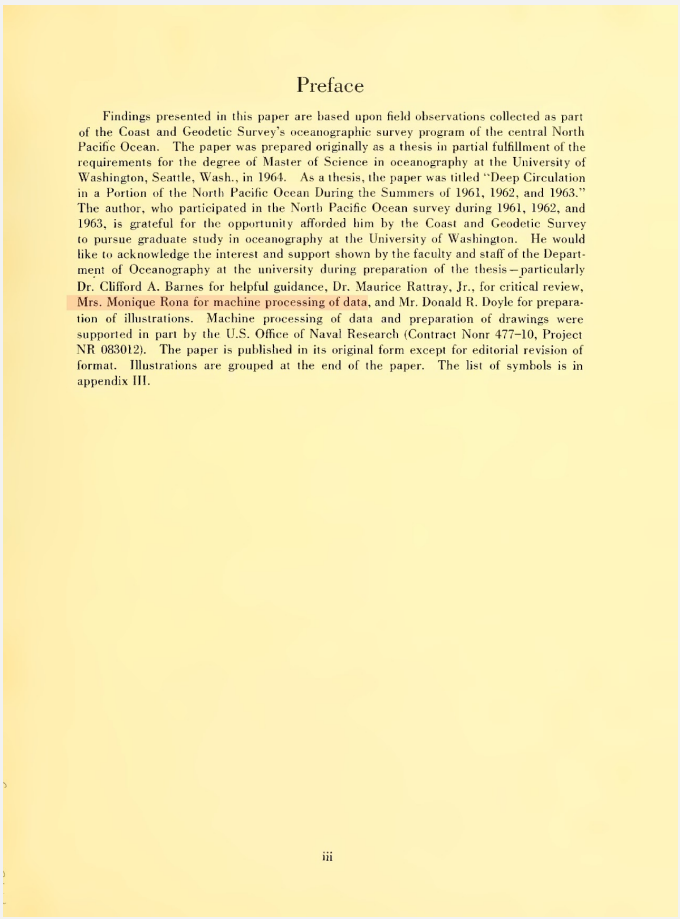
By

William D. Barbee
Commander, USESSA

MARINE BIOLOGICAL LABORATORY
LIBRARY
WOODS HOLE, MASS.
W. H. O. I.

UNITED STATES GOVERNMENT PRINTING OFFICE: WASHINGTON; 1965
For sale by the Superintendent of Documents, U.S. Government Printing Office Washington, D.C., 20402 – Price $1.75

[HG007N][GDrive]



Preface

Findings presented in this paper are based upon field observations collected as part of the Coast and Geodetic Survey's oceanographic survey program of the central North Pacific Ocean. The paper was prepared originally as a thesis in partial fulfillment of the requirements for the degree of Master of Science in oceanography at the University of Washington, Seattle, Wash., in 1964. As a thesis, the paper was titled "Deep Circulation in a Portion of the North Pacific Ocean During the Summers of 1961, 1962, and 1963." The author, who participated in the North Pacific Ocean survey during 1961, 1962, and 1963, is grateful for the opportunity afforded him by the Coast and Geodetic Survey to pursue graduate study in oceanography at the University of Washington. He would like to acknowledge the interest and support shown by the faculty and staff of the Department of Oceanography at the university during preparation of the thesis—particularly Dr. Clifford A. Barnes for helpful guidance, Dr. Maurice Rattray, Jr., for critical review, Mrs. Monique Rona for machine processing of data, and Mr. Donald R. Doyle for preparation of illustrations. Machine processing of data and preparation of drawings were supported in part by the U.S. Office of Naval Research (Contract Nonr 477–10, Project NR 083012). The paper is published in its original form except for editorial revision of format. Illustrations are grouped at the end of the paper. The list of symbols is in appendix III.

iii

[HG007O][GDrive]

1966-03-univ-of-washington-oceanograhy-dept-tr-134-651335.pdf

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1968 - The United Nations Treaty Series Project / PETER H. ROHN UNIVERSITY OF WASHINGTON / Source: International Studies Quarterly , Jun., 1968, Vol. 12, No. 2 (Jun., 1968), pp. 174- 195

Source : [HP003Y][GDrive] (Note - Purchased for 39 dollars , Nov 2020)

[...]

1963. *The United Nations Treaty Series Project (UNTS Project) started as a vague hunch in a class discussion. The question was how to prove the growth of international institutions in conventional international law. The answer was simple in theory but difficult in practice. We should survey the texts of treaties. If references to international institutions increased, the point was proved; otherwise, disproved. The more treaties we surveyed the more reliable the results would be. There was no money to pay for anything, no special equipment, no extra work space, nothing but the idea and the library and a group of students volunteering to do the job as part of their classwork in international law.*

Two months later, some fifty students had combed through all volumes of the United Nations Treaty Series (UNTS). There were 426 volumes in the autumn of 1963. A few key characteristics were extracted from every one of the 6,734 treaties published up to that time in the UNTS. The students coded these key characteristics on dittoed code sheets. By Christmas I had on my desk a pile of several hundred code sheets filled out by 50 students in as many handwritings. I had no way of guessing the level of accuracy and completeness, let alone usefulness, of the whole exercise.

[...][page 178][...]

Also in 1965, the UNTS Project became part of the regular graduate instruction in international law at the University of Washington. A system was developed (and is still in force) whereby seminar students must combine traditional and quantitative methods in international law. Standard procedures include the handling of UNTS Project printouts, code manuals, and raw data cards. Students also use auxiliary equipment in the computer center as well as desk calculators and other simple devices for minor individual tasks. Measurements and computer-oriented activities must be related to traditional research wherever possible.

1966. *This year saw a gradual shift of emphasis from investment to production. Data enlargement continued by adding identifications of international organizations referred to in treaty texts and identity of registering party, as well as some refinements in the 1965 topic code. The second annual updating was completed in June by adding to the data bank UNTS Volumes 454-503 published between June 1965 and June 1966. Data enlargement and updating having become a routine function of an on-going operation, the main thrust of the work in 1966 concerned new programs for the machine-handling of UNTS data, and analytic work in selected aspects of the law of treaties. Completed were the study of the Canadian UNTS Gap," a special study on the role of military matters in the world's treaty pattern,[12] a general statement of theoretical under- pinnings for the UNTS Project, [13] a paper on information retrieval aspects of the UNTS Project, [14] and an outline of a more general scheme of computerizing international law. [15]*

Two professional meetings on the use of computers in international relations research included the UNTS Project: (1) the special working group on electronic data processing set up by the American Society of International Law; [16] and (2) the Institute on "Computers and the Policy-Making Community" sponsored by the Endowment for International Peace and the U. S. Atomic Energy Commission. [17]

Also in 1966, two graduate student papers on UNTS Project material attracted professional interest: (1) one paper was selected for presentation to a West Coast regional conference [l8] and was then revised and published elsewhere; [19] and (2) the other paper was chosen for presentation to the University of Washington Student International Law Society and then also published elsewhere. [20] By the end of 1966, a total of 15 students found their work referred to by name in UNTS Project publications,[21] and 8 of them more than once. [22]

Finally, the UNTS Project was given a broader institutional base at the University of Washington through the appointment of a joint advisory committee by the Dean of the Law School and the Chairman of the Political Science Department.

1967. *Three new sets of data were added in 1967: (1) date of effect, (2) date of registration and (3) official languages. New work began on multilateral treaties and on treaty history subsequent to registration, e.g. prolongations, terminations, accessions, withdrawals, amendments, and reservations. The annual updating proceeded concurrently with the addition of new data. UNTS Volumes 504-550 were coded. This brought our data bank up to date, covering all UNTS volumes published through December 1967.*

The computer center started developing for the UNTS Project a teletype capacity for instant retrieval between the UNTS Project office and the computer center. This is being done by means of the B-5500 XTAB retrieval program adapted by the computer center of the University of Washington especially to the needs of the UNTS Project. It will be used in addition to the existing capacity of the IBM-7094 for both retrieval and computation. The B-5500 program plus teletype response will cut the waste and the waiting time involved in using the IBM-7094 (or later the IBM-360) for simple retrieval jobs. ***[23][Grateful recognition for imaginative help far beyond routine cooperation is made to the two co-directors of the computer center at the University of Washington, David Dekker and Carl Young, and to the following staff members in particular: Charlene Haug, Elton Hay, Larry Menninga and Monique Rona.]*** *Hunches can then be tested in minutes rather than days. Retrieval also has become a somewhat larger part of UNTS Project operations as more faculty and graduate students use our data bank and as more requests for special data printouts are received from outside. [24]mm[...]*

1968 (January) - Report 181 :

https://digital.lib.washington.edu/researchworks/bitstream/handle/1773/16086/M67-8.pdf?sequence=1&isAllowed=y

1968-01-univ-of-washington-oceanograhy-dept-tr-181-processing-oceanographic-station-data.pdf

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1968 (August 14)

Starting Computer Center Corporation (Seattle) ; Full newspaper page : [HN01AV][GDrive]

1968-08-14-the-seattle-times-pg-35-clip-computer-center

Computer Firm Formed

A new computer firm, the Computer Center Corp., has been formed by four University of Washington specialists, it was announced today.

Carl G. Young, director of operations at the university's computer center since 1965, has resigned to become president of the new company, which will specialize in service to scientific firms and industries on a time-sharing basis.

Quarters have been leased in the former Dresslar-Waesche Building at 4057 Roosevelt Way N. E.

Dr. David B. Dekker, who has been faculty director of the University Computer Center since its establishment, is vice president of the new firm.

DEKKER will serve in a consultant capacity during the school year and continue on the university faculty as an associate professor of mathematics and graduate-program adviser in computer sciences. He has resigned his position with the University Computer Center.

C. G. YOUNG

DR. D. B. DEKKER

Richard G. Hamlet, chief systems programmer at the University Computer Center, and Monique R. Rona, chief scientific programmer at the center, have resigned their university positions to join the new firm.

A fifth incorporator is Richard L. Wilkinson, formerly Northwest sales manager of the Digital Equipment Corp.

TIME-SHARING of the capabilities of large, fast and complex central processors will be the principal mode of operation of the corporation, Young said.

The company plans to sell computer time via common-carrier lines from teletype machines or other electronic typewriter devices situated in customer offices.

The user will be able to communicate data directly to the computer and receive almost instantaneous reply in his own office.

The Computer Center Corp. plans to be in operation about November 1.

Westside S & L Leads July Gain

Westside Federal Savings & Loan Association in July led a local reversal of the usual July trend toward a decline in net savings.

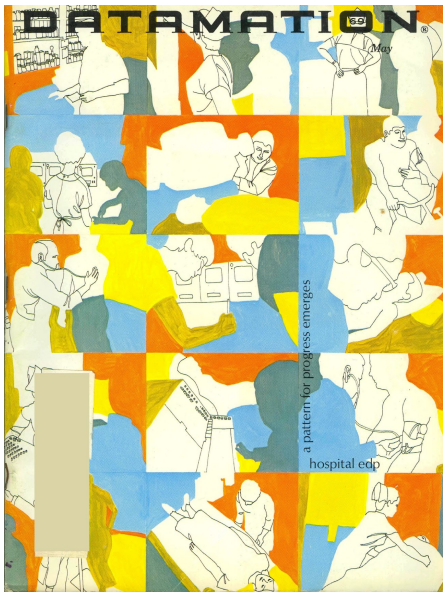
Net savings rose only $200,000 last month in the 23 associations affiliated with the Seattle League of Insured Savings Associations. Westside, a member of the association, registered a gain of $433,000.

In 1966, when there was a tight money situation comparable to this year, league institutions suffered a July loss of $6.7 million.

[HN01AW][GDrive]

1969 (May) - Monique Rona is director of Applications Programming at C3

PDF of Datamation, May 1969 : [HP003Z][GDrive]



[HP0040][GDrive]

■ Computer Center Corp. is a new company in Seattle, Wash., offering time-sharing. Monique R. Rona is the director of applications programming.

1969-05-datamation-pg-155-clip-rona

[HP0041][GDrive]

1968/1969 - Stephen Russell joins Monique Rona at the Computer Center Corp

Interview with Stephen Russell (born 1937), from 2009 (Aug 08) via the Computer History Museum

Source : [HI001H][GDrive]

[...]

Kossow: All these vertically stacked platters.

Russell: Yeah. That was not as reliable as was desirable. But the main struggle was we just didn't get enough business. And so eventually they went out of business. And at that point, I guess I had annoyed DEC sufficiently that they thought maybe I would be useful in marketing. And so I started working for Digital.

Kossow: There's the one little story that you had a couple of testers up in Seattle.

Russell: Oh yes, yes. We did have a testing program. Was it TOPS-10 by then? I'm not sure. **At any rate, the multi-user operating system for the PDP-10 was not a paragon of reliability. In fact, it started out with a pretty dismal mean time to failure. And so we had a couple of people working on basically fixing, full-time, fixing bugs in the operating system. And there was no real lack of bugs to fix. Monique Rona had— was one of the principles, and her son was going to Lakeside School. And so she arranged that we could— we give some time to the Lakeside School who had got a teletype**. And we also had built a training room which had six or eight terminal teletypes in it. And what we would do is on Saturdays especially, we'd open that up to the Lakeside students to come in and load test the computer. We wanted lots of people. And the rules were, you can do anything you want, you can try to break the system if you want. But if you do manage to break the system, you've got to tell us what you did and don't do it again until we tell you. And this was quite fruitful. We collected heavy load bugs this way. And two of the students were Paul Allen and Bill Gates. And they had to be admonished several times about the "don't do it again until we tell you" part of the rules. But they certainly had a great deal of fun and they evidently learned quite a bit.

Kossow: You remember anything in particular that they did?

Russell: No. They asked lots of questions. And one of the things that we would do at Saturdays was, Dick Gruen or I or somebody would be in the terminal room, or periodically stick our nose in the terminal room, make sure that the pandemonium was under control, and answer questions." [...]

1972, Educom Spring Conference, Monique Rona not in attendance

See [HE003I][GDrive], **Robert Gordon Gillespie (born 1933)** was in attendance.

1972 - Back with University of Washington Computer Center, full-time (per Univ Washington general catalog)

PFD - [HE002V][GDrive]

Computer Center

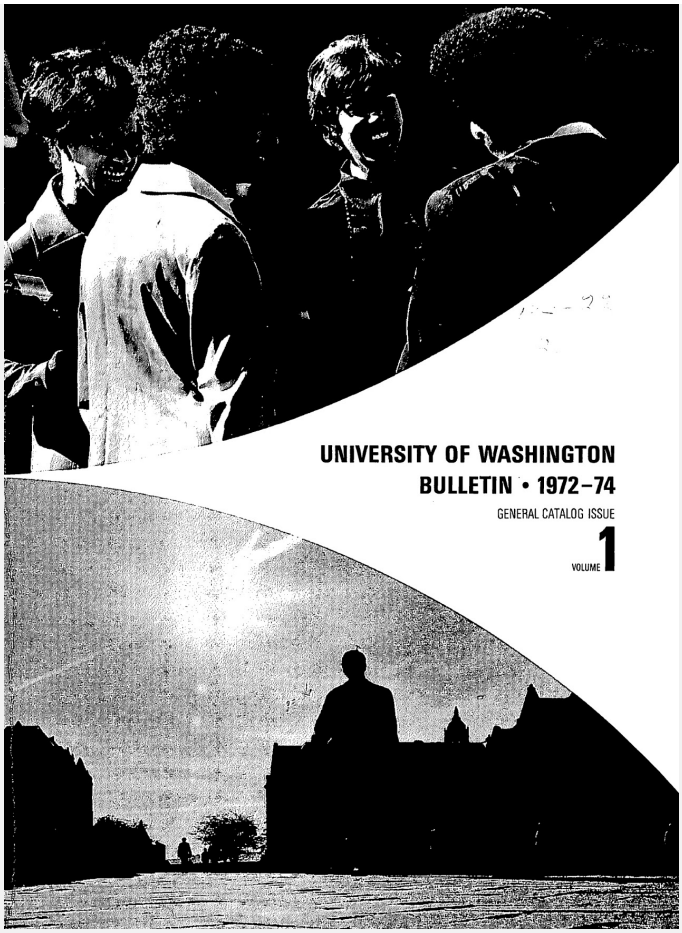
- Robert G. Gillespie , B.A., Director Computer Center SC-10 [See **Robert Gordon Gillespie (born 1933)**]
- Charles W. Dickens, Assistant.Director
- Scott A. Eyler, Assistant Director
- Monique Rona, Assistant Director

The Computer Center, established in 1956, provides computer services for the University of Washington and the community for education, research, and administrative uses. The principal. computers now installed include a Burroughs 5500 and .3. Control Data Corporation-6400. Also available are key-punch/EAM, auxiliary card-handling equipment with service provided for self-servi~ use; graphics equipment, including mechanical · plotting equipment allowing automatic plotting of information and a digital. recording system capable of reading coor:dinates from maps, graphs, film, etc., and recordiDg them on magnetic tape; and terminals which make possible text editing and remote job entry from teletypes directly connected to the B5500 and the CDC 6400.

[...]

The University of Washington Computer Center is equipped with a CDC 6400 computer system, a ,Burroughs-B5500, and miscellaneous supporting equipment.

Ii! provides compu~g services to all areas of the University and is also available. to all students. Robert G. Gillespie is the Director, Charles W. Dickens, Monique Rona, arid Scott Eyler are Assistant Directors of the Computer Center.



UNIVERSITY OF WASHINGTON
BULLETIN • 1972–74
GENERAL CATALOG ISSUE
VOLUME 1

[HE002W][GDrive]

During spring and summer, the Laboratories offer an opportunity for independent and supervised research, as well as a varied program of instruction primarily oriented to graduate students (exceptional, advanced undergraduates are occasionally admitted). Throughout the year, use of the facilities of the Laboratories for research in various areas of marine science is encouraged.

Requests for information on the summer program and for general information concerning study and research, availability of facilities, and admission to the Laboratories should be addressed to the Director, Friday Harbor Laboratories, 208 Kincaid NJ-15, University of Washington, Seattle, Washington, 98195.

Office of Scholarly Journals
Emily Johnson, B.A., *Director*
Parrington Annex 7

The University maintains an Office of Scholarly Journals in association with the Graduate School. The function of the Office is to provide assistance to members of the University faculty who have editorial responsibilities in relation to the publication of the many scholarly journals now associated with the University of Washington.

Requests for information concerning the activities and facilities of the Office should be addressed to the Director, Office of Scholarly Journals, University of Washington, Seattle, Washington 98195.

Computer Center
Robert G. Gillespie, B.A., *Director*
Computer Center SC-10
Charles W. Dickens, *Assistant Director*
Scott A. Eyler, *Assistant Director*
Monique Rona, *Assistant Director*

The Computer Center, established in 1956, provides computer services for the University of Washington and the community for education, research, and administrative uses. The principal computers now installed include a Burroughs 5500 and a Control Data Corporation-6400. Also available are key-punch/EAM, auxiliary card-handling equipment with service provided for self-service use; graphics equipment, including mechanical plotting equipment allowing automatic plotting of information and a digital recording system capable of reading coordinates from maps, graphs, film, etc., and recording them on magnetic tape; and terminals which make possible text editing and remote job entry from teletypes directly connected to the B5500 and the CDC 6400.

[HE002X][GDrive]

The Center offers specialized training through non-credit classes in programming languages and operating systems needed to use the computer systems in the Computer Center. Other services available are consultation; an information center that includes reference materials, computer manuals, and special program libraries; and professional programming.

Cost accounting and reporting is provided to the users for all computer services. The staff of the Center, in liaison with campus users, plans for special hardware and software requirements and develops general purpose computer programs satisfying major user requirements.

The Center is administered through the Office of the Vice President for Research.

Requests for the *Computer Center Newsletter* or for information concerning the facilities should be addressed to the Director, Computer Center, University of Washington, Seattle, Washington, 98195.

Computer Science Laboratory
Hellmut Golde, Ph.D., *Director*
43 Roberts Hall

The Computer Science Laboratory (CSL) is the research and teaching laboratory for the Computer Science Group. It is used for studies of operating systems and other computing project studies which, if done on Computer Center equipment, might impede the job flow; and for studies which require specialized equipment (e.g. graphics terminals) which are not supported by the Computer Center.

The operation of the Computer Science Laboratory is integrated with the graduate training program of the Computer Science Group in order to provide practical experience for those Computer Science students interested in the engineering and applied aspects of computer science. A large amount of time is reserved for open-shop operation for experimental studies.

The Laboratory contains a Xerox Data Systems Sigma 5 Computer with a disc-oriented operating system. A second component is the remote terminal system for interactive computing. The Laboratory also has facilities for computer graphics studies.

Division of Marine Resources
Stanley R. Murphy, Ph.D., *Director*
John Dermody, B.S., *Assistant Director for Operations*
3716 Brooklyn N.E., Apt. 3

The Division of Marine Resources promotes the University's interest in the exploration, development, and

it is recommended that the student admitted to the program in linguistics have completed the equivalent of 45 quarter credits (30 semester credits) of undergraduate college credits in language study. This requirement implies the attainment of proficiency in one language other than English or, in the instance of a non-native speaker of English, a course of study and proficiency in a language other than his native speech. To register for courses, students should consult with the Graduate Program Adviser in Linguistics.

PROGRAMS OF STUDY
Master of Arts
Requirements for the Master of Arts degree are as follows: (1) Familiarity with as many languages as possible; (2) 36 credits, with at least 18 credits in courses numbered 500 or above, including 9 credits for the thesis; (3) successful performance in a comprehensive examination in General Linguistics; (4) completion of a thesis acceptable to the student's committee; (5) attendance at a linguistic institute is strongly recommended.

Doctor of Philosophy
A student may be granted permission to proceed directly for the doctoral degree without an M.A., but the Department reserves the right to require any individual student to present himself as a candidate for the M.A. before accepting him as a prospective candidate for the Ph.D. Requirements for the Ph.D. include 36 credits in linguistics or supporting areas, in lieu of the M.A., plus the following (subject to readjustment by the student's Committee): Linguistics 599; 33 additional credits in linguistics or supporting areas, as approved by the Department; supervised teaching, in lieu of an examination, in first, phonology; second, syntax; third, historical-comparative linguistics; the oral General Examination, and finally, a dissertation suitable for publication and constituting a contribution to knowledge and the Final Examination.

MATHEMATICS

Chairman
Ross A. Beaumont
C138 Padelford Hall

Professors
Carl B. Allendoerfer, Maynard G. Arsove, Ross A. Beaumont, Z. William Birnbaum, Robert M. Blumenthal, Francis H. Brownell III, Douglas G. Chapman (Joint With Fisheries), Harry H. Corson, Caspar R. Curjel, Clyde M. Cramlet (emeritus), Roy Dubisch, Ramesh A. Gangolli, Irving L. Glicksberg, Allen A. Goldstein, Branko Grünbaum, Edwin Hewitt, Peter Hilton, Charles Hobby, James P. Jans, Victor L. Klee, Gunter Lumer, Lee H. McFarlan (emeritus), Ernest A. Michael, Isaac Namioka, Ronald J. Nunke Carl E. Pearson (Joint With Aeronautics and Astronautics), Robert R. Phelps, Richard S. Pierce, Ronald Pyke, Jack Segal, Roy W. Winger (emeritus)

Associate Professors
Sherwin P. Avann, Lutz Bungart, Edward B. Curtis, David B. Dekker (Joint With Computer Science), Lloyd D. Fisher, Jr., Thomas W. Hungerford, Harold H. Johnson, J. Maurice Kingston, Linda Lumer (acting), Robert T. Moore, Anne C. Morel, Robert W. Ritchie (Joint With Computer Science), R. Tyrrell Rockafellar, Leonard Sarason, Edgar Lee Stout, Robert B. Warfield, Jr., Garth W. Warner, Jr.

Assistant Professors
Yuan-Kwok Chan, Barnett W. Glickfeld, Alfred P. Hallstrom, David Handel, John J. Hirschfelder, David Knudson, George A. Kozlowski, Jr., George S. Monk, James A. Morrow, Vilnis Ozols, David F. Pincus, David L. Ragozin, Galen R. Shorack, Robert T. Smythe, Gomer Thomas, John W. Van Ness, Michael J. Westwater, Kenneth Whyburn, Daniel E. Wulbert

Lecturers
Kathleen B. O'Keefe, Helen C. Zuckerman

Traditionally, mathematics has been the basic language of physical science and engineering, but recently it has also become of major importance for students in social science, business administration, and biological sciences. Mathematics is also an essential element of a liberal education, and students from humanities and the arts are encouraged to broaden their education by enrolling in appropriate courses in the Department. The Department of Mathematics serves the University by offering a wide selection of undergraduate and graduate courses which are organized to meet a great variety of mathematical needs.

Mathematics is also a discipline in its own right, and interesting and profitable careers are open to students who specialize in the subject. In order to prepare students for these careers, the Department offers a wide range of degree programs including a general bachelor's degree, a specialized bachelor's degree, several master's degrees, and a doctor's degree. In addition to pure mathematics, programs are available in mathematical statistics, numerical analysis, and teacher education. The Department cooperates closely with the Department of Physics and the College of Engineering in providing instruction in the area of applied mathematics. Several departments offer courses which are of interest to applied mathematics majors. Particular attention is directed to certain graduate courses in the Department of Aeronautics and Astronautics.

[HE002Y][GDrive]

Special Facilities

The Center for Quantitative Science in Fisheries, Forest Resources, and Wildlife Sciences (Gerald J. Paulik, Director), provides a focus for applied statistical and mathematical activity directed particularly toward biological problems. Information on the applied statistics courses taught in the Center, most of which were formerly taught in the Mathematics Department, can be found in the section on the Center under the Colleges of Fisheries and of Forest Resources. The courses include Quantitative Science 382, 383, and 486 (formerly Mathematics 382, 383, and 486). Quantitative Science 281 is equivalent to Mathematics 281.

The University of Washington Computer Center is equipped with a CDC 6400 computer system, a Burroughs B5500, and miscellaneous supporting equipment. It provides computing services to all areas of the University and is also available to all students. Robert G. Gillespie is the Director, Charles W. Dickens, Monique Rona, and Scott Eyler are Assistant Directors of the Computer Center.

A graduate program in biostatistics leading to the degrees of Master of Science and Doctor of Philosophy is administered by the Graduate School Biomathematics Group. Faculty in the Department of Mathematics and certain other departments in the College of Arts and Sciences and certain departments in the School of Medicine cooperate in this program. Information concerning the program will be found in the *Interdisciplinary Graduate Degree Programs* section of this catalog.

A graduate program in computer science leading to the M.S. and Ph.D. degrees is administered by the Graduate School Computer Science Group. Faculty in the Department of Mathematics and certain other departments throughout the University cooperate in this program. Information concerning the program will be found in the *Interdisciplinary Graduate Degree Programs* section of this catalog.

Undergraduate Programs
Advisers
J. Maurice Kingston
C36B Padelford Hall

Kathleen B. O'Keefe
C36C Padelford Hall

Students planning to take courses in mathematics, either as mathematics majors, or as part of some other curriculum, are strongly advised to elect four years of mathematics in high school. Mastery of these four years of work will prepare them to enter Mathematics 124 (Calculus with Analytic Geometry), which is the

[HE002Z][GDrive]

first course of university level offered by the Department. Admission to this course is based upon high school records and either the Mathematics Achievement Test of the Washington Pre-College Testing Program or a placement test given by the Bureau of Testing. Students who have completed a full year of calculus in high school, preceded by accelerated study, are encouraged to take the Advanced Placement Test in Mathematics given by the College Entrance Examination Board or parts I and/or II of the Calculus Test given by the Bureau of Testing. Those whose scores on these examinations are satisfactory will be placed in Mathematics 125 or 126 and given university credit for the courses in calculus which they have been allowed to skip. Alternatively, these students may be qualified to enter the freshman honors course.

As a service to entering students who have had less than four years of high school mathematics, the Department offers the following courses which duplicate high school material: 101 (Intermediate Algebra), 104 (Plane Trigonometry), 105 (Elementary Functions). Mathematics 105 may be taken for University credit. In order to enter 105, students must have the high school prerequisites listed under the detailed course descriptions (see *Volume II, Description of Courses*), and must also obtain satisfactory scores on the Mathematics Achievement Test of the Washington Pre-College Testing Program. Mathematics 101 and 104 are offered without credit and are available only through the Division of Continuing Studies, upon payment of a separate fee.

In order to enter 105, students must have the high school prerequisites listed under the detailed course descriptions (see course descriptions in *General Catalog* Volume II) and also must obtain satisfactory scores on the Mathematics Achievement Test of the Washington Pre-College Testing Program.

GRADUATION REQUIREMENTS
Bachelor of Arts
The B.A. degree is designed for liberal arts majors who have only modest professional aims in mathematics. It also provides a suitable program for prospective high school teachers of mathematics. Grades in all mathematics courses to be counted toward this degree must be C or better, and a grade-point average of at least 2.00 in all mathematics courses must be maintained. There are two curricular options:

LIBERAL ARTS OPTION
A minimum of 50 credits in mathematics beyond trigonometry is required. Courses must include 124, 125, 126, 224, 205 or 302, and 28 or 29 credits in approved electives.

1973 (Oct) - Facts and Futures; What's Happening Now in Computing for Higher Education. Annual Proceedings of theEDUCOM Fall Conference (9th, Princeton, New Jersey ,October 9-11).

Full PDF : [HE002A][GDrive]

Monique Rona
Assistant Director
Computer Center FC-10
University of Washington
Seattle, Washington 98195

1973-10-09-educom-fall-conference-facts-and-futures-whats-happening-now-in-computing-for-higher-ed-clip-rona

[HE002B][GDrive]

1974 (04) - Educom - Monique Rona still with Univ. of Washington

1974-04-ED111361.pdf

Still with U. Washington - "Monique RonaAssistant DirectorUniversity of Washington Computer Center, FC-10Seattle, Washington 98195"

1974 (Dec 25) - Daughter marries

Full newspaper page : [HN01AT][GDrive]

Marriage record also below. Source : https://www.familysearch.org/ark:/61903/1:1:QLHX-BYBG s4

they were divorced in 1976 : see [https://www.familysearch.org/ark:/61903/1:1:QLC7-P1KG / s5]

1974-12-25-spokane-daily-chronicle-pg-76-clip-marriage-rona-maris

Marie Rona to Wed Steven Ross Maris

Miss Marie Helene Rona and Steven Ross Maris will be married in a ceremony at 3 o'clock Saturday afternoon at the University Presbyterian Church in Seattle.

The Rev. Ben Lindstrom of Portland, Ore., will officiate at the rite for the daughter of Dr. and Mrs. Thomas P. Rona, Seattle, and the son of Dr. and Mrs. Robert W. Maris, E1316 Twenty-sixth.

A reception will follow at the home of the bride-elect's parents.

Miss Janet Gwen Maris, sister of the future bridegroom, will be maid of honor.

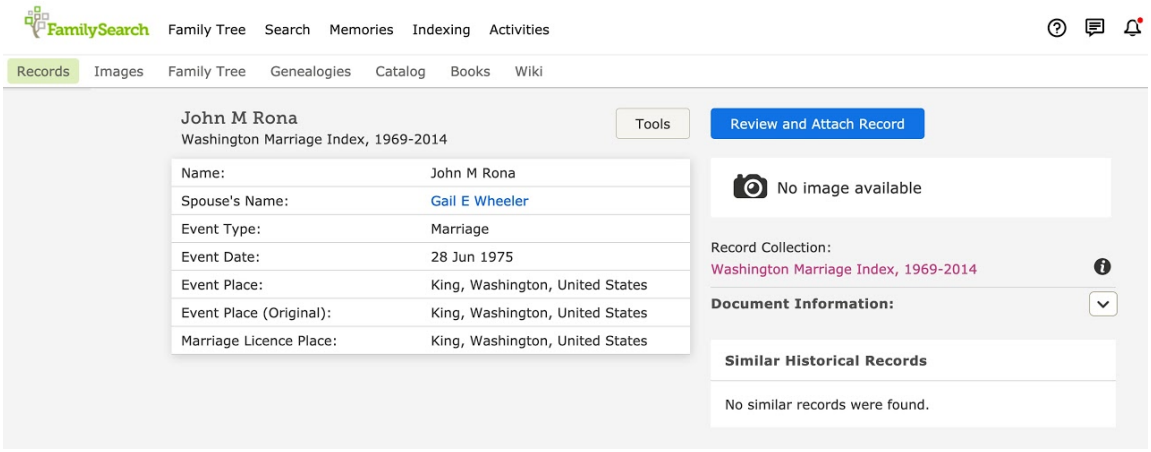
Patrick Boileau, Portland, Ore., will serve as best man. Ushers will be Michael, Thomas and Chris Rona and Donald and Neil Maris, brothers of the couple.

The couple will reside in Seattle. The bride-elect will be graduated from the University of Washington in June. Maris is attending the U of W Graduate School of Business.

IT'S UNCANNY HOW

[HN01AU][GDrive]

1975 (June 28) - Son John Michael marries

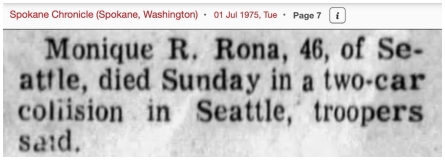


[HL0059][GDrive]

1975 (July 1) - Monique Rona dies in a car accident

Full newspaper page : [HN01AR][GDrive] / Notes:

- In the year 1975, June 29 is a Sunday ; This is being run on July 1, which is a Tuesday
- The date of death is marked as June 29 1975 here : https://www.familysearch.org/ark:/61903/1:1:QLW9-DBBH



[HN01AS][GDrive]

1975 (July 1) - Seattle Times

Also - full page PDF here - [HN01AP][GDrive]

Notes - Killed by **Gerald Wayne Henneke**

1975-07-01-the-seattle-times-pg-f-4-clip-monique-rona-obit

Monique Rona dies; Group Health official

Monique Roberta Rona, 46, of 5770 63rd Ave. N. E., died Sunday about four hours after she was injured in a two-car crash at 26th Avenue Northeast and Northeast 117th Street.

Mrs. Rona was eastbound in Northeast 117th Street about 6:45 p. m. when her car and a car southbound in 26th Avenue Northeast, collided.

The driver of the other car, Gerald Wayne Henneke, 31, of 5823 McKinley Pl. N., suffered nose and leg injuries but was not hospitalized, police said.

Mrs. Rona was head of information processing for Group Health Cooperative of Puget Sound. She was the wife of Dr. Thomas P. Rona.

A native of Paris, she came to Seattle 16 years ago, and for 14 years was deputy director of the University of Washington computer center.

She served on the Presidential Commission on Energy, and was an active member of the Association of Computing Machinery.

Two months ago she was named to the Group Health post.

Services are set for 3 p. m. Thursday at University Presbyterian Church. Home Funeral Chapel is handling arrangements.

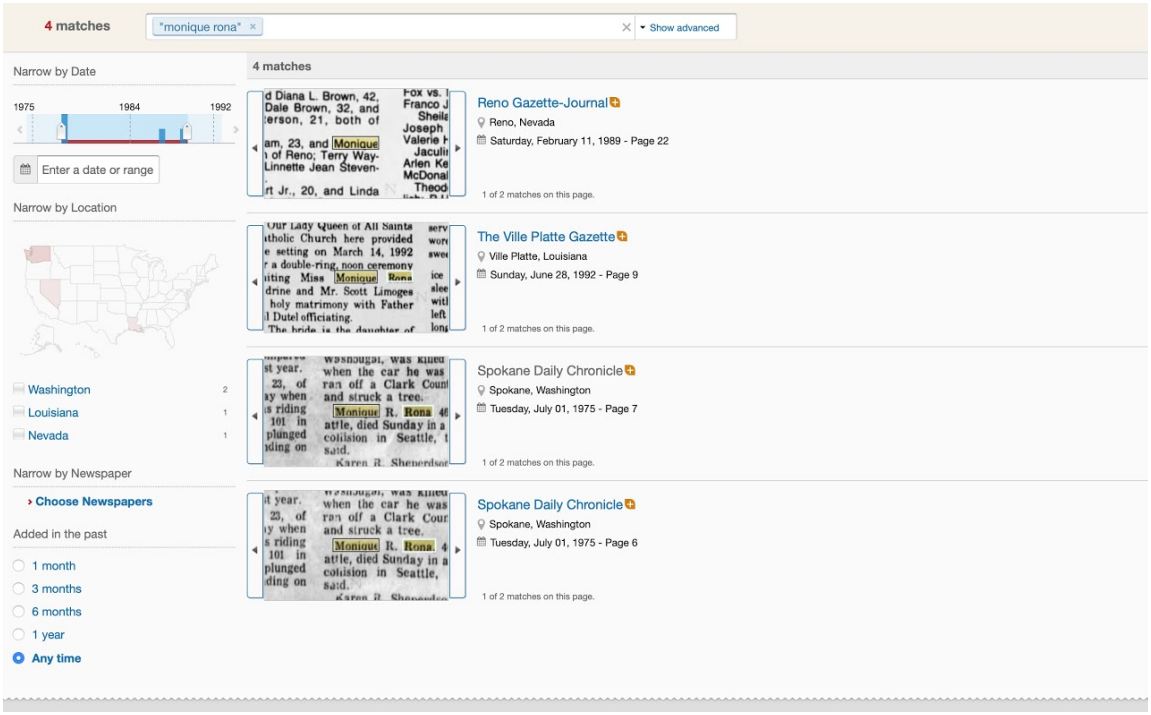
In addition to her husband, Mrs. Rona is survived by four children, John, Mary, Thomas, Jr., and John Christopher, and by her mother, Gabrielle Noel, all of Seattle.

The family suggests remembrances to Medic I.

[HN01AQ][GDrive]

Additional Evidence

2020 (Oct 21) - Almost all references to Monique Rona have been removed from Ancestry / Newspapers . com :

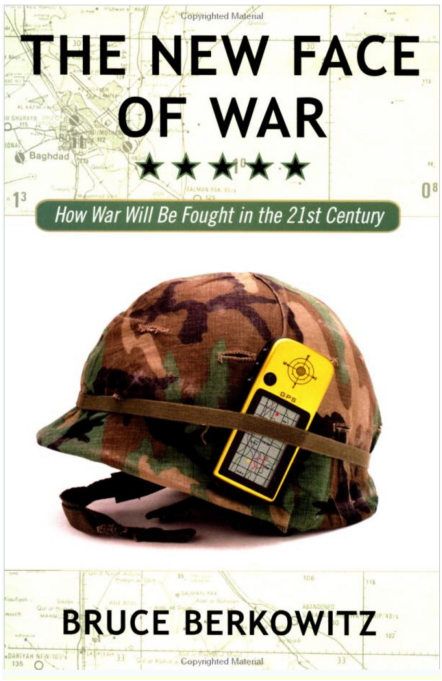


[HN01BF][GDrive]

The New Face of War: How War Will Be Fought in the 21st Century Paperback – October 26, 2007

By Bruce D. Berkowitz

- Amazon purchase : https://www.amazon.com/New-Face-War-Fought-Century/dp/1416584528
- 2003 version : https://archive.org/details/newfaceofwarhoww00berk
- My purchase, 2007 version, text)(chapter 3, below) - [HB004Y][GDrive]



[HB004X][GDrive]

Chapter 3 “THEY ARE ALREADY AMONG US” To understand modern warfare, you need to begin, of all places, in Budapest.

[...] Much of the twentieth century’s brainpower was born within Hungary: John von Neumann, inventor of both quantum mechanics and the computer program; atomic scientists Edward Teller, Eugene Wigner, Leo Szilard, and Isidor Rabi; Elie Wiesel, humanitarian and recipient of the Nobel Peace Prize; Andy Grove, one of the founders of Intel Corporation. All were Hungarians. Or, more precisely, ex Hungarians. Budapest may resemble a fairyland. Its onion-domed churches and hot-spring fountains may seem enchanting. But the city has always had a dark side. Hungary is at the crossroads of Europe, another way of saying that it has been on the invasion routes connecting Germany, Russia, and Turkey.

Things got especially chaotic in Hungary after World War I, when the Allies carved up the Austro-Hungarian Empire, and got even worse after the Fascists and Communists began to compete for control. Eventually the Fascists won out, and Hungary sided with Nazi Germany during World War II. As a result, the U.S. Fifteenth Air Force flattened Budapest, and the Red Army pillaged what remained. The combination of a cosmopolitan society, a devotion to education, and a penchant for war and riot has made Hungary a leading exporter of human genius.

Among those fleeing all the chaos were Edward and Irene Rona, **who sent their son Thomas and his older brother George to the more tranquil environs of Paris soon after Tom was born in 1923. Tom grew up a Parisian, taking his finals in engineering at the École Polytech-nique on V-E Day. After a brief detour with the French engineering corps building bridges in Cameroon (partly to dodge an irate father and a shotgun marriage), Rona returned to Paris and met Monique Noel, a bank clerk. Tom and Monique soon married.**

Tom and Monique began moving farther and farther west to escape the chaos and constraints of the Old World—first to Montreal, then to a junior faculty position for Tom at the Massachusetts Institute of Technology. By that time he and Monique had three sons and a daughter. **An assistant professor at MIT earned an annual salary of $2,400, so money was tight. Tom heard about an opening for a staff scientist at Boeing. He and Monique flipped a coin. Boeing won, and they piled the four kids in the car and began the drive to Seattle. Tom reported to work, and Monique got a job at the University of Washington.**

It’s hard to tell if Rona ever actually used his engineering degree at Boeing, at least in the sense that he never designed a bomber or missile. Officially he was a senior scientist. Defense contractors like Boeing charge the government an extra fee beyond the basic materials and labor it takes to build a B-52 or an air-launched cruise missile. This money goes into an account for preparing bids and proposals (B&P, in defense contractor jargon), which Boeing used to pay for most of Rona’s salary.

The idea was that Rona would develop new ideas for using military hardware—hopefully, new Boeing hardware. In any case, Rona effectively had a license to look at any technology or topic that seemed interesting and was a potential market for Boeing. It was almost as good as being a professor at a major university, if not better.

People were still trying to assimilate the lessons of World War II when Rona arrived at Boeing. The war was just ten years past, and everyone was still trying to figure out the legacy of what Winston Churchill called the "wizard war"—the contest of electronic weapons and countermeasures.

The British had learned the hard way just how complex this game could be. **Electronic warfare had become a critical factor in World War II during the Battle of Britain.** In 1940 émigrés who had escaped the Continent told British intelligence that the Germans had developed some kind of "beam" weapon. At first the Brits thought this might be a ray gun that could shoot down aircraft by electronically frying their ignition systems; the refugees had talked about the Germans' testing a "beam weapon that stopped cars."

When they dug deeper into the reports, though, the Brits discovered that translators had mangled the syntax; what the émigrés really meant was that the Germans were testing a weapon that required them to stop cars-that is, stop nearby traffic to avoid radio interference. Later the British bugged the cells of some German POWs and learned that the weapon was a radio device for guiding bombers to their targets. 1

The Luftwaffe had developed a system of steerable radio beams criss-crossing Britain from stations in France and Germany. A primary beam traced a path to the target for the pilot to follow. If the pilot went off course, the beam would grow weaker, and this would trigger a buzz in his headset telling him to correct his heading. Additional beams bisected the flight path to alert the bombardier as he approached the release point. When the signal from the final crossbeam peaked, the bombardier heard a signal in his earphone and he knew he was over the target. It was like an electronic ". marks the spot."

Eventually the British learned how to deduce the direction of the beams and thus figure out which targets to protect. Yet this breakthrough had little to do with detecting the beams themselves. The real trick was in intercepting and deciphering the communications that the Luftwaffe used to tell their radio stations where to aim their beam each night. This revealed the direction and frequency of the beams, and with this information, the British could both determine the target the Germans planned to bomb, and also track a beam back to its transmitter.

The British soon learned how to transmit their own signals on the same frequency, jamming the receivers on the aircraft or causing the bombardier's signal to go off before his aircraft actually reached its target. Combined, all of these separate ingredients provided the components of an information warfare operation. The British learned where the Germans planned to attack, manipulated the Germans' view of the situation, decided how to respond, and then reacted before the Germans knew what they were up to.

The British thus had the advantage, but they then had to answer the Perennial Question of Information Warfare. Even Indian faced the Perennial Question when they first discovered a rival tribe using smoke signals. it sill confounds information warriors even today: Deny, deceive, destroy, or exploit? Do you transmit your own smoke signals to interfere with his? Do you send bogus signals to confuse your adversary so that he is easier to kill? Do you find the enemy sending the message and kill him? Or do you quietly watch the signals so you know where your adversary plans to be, head him off, and kill him then?

If the Brits jammed the beams or destroyed the radio stations, they might have eliminated the beam system temporarily. The Germans, however, would then have known that their guidance system was successful, or at least successful enough that the British believed they needed to neutralize it. Some German program manager would likely have used this fact to justify a request to build new transmitters that were better hidden and transmitted on different frequencies.

On the other hand, if the British simply sent their fighters to protect the target designated in the deciphered message, some German bombers would have gotten through. Even worse, if a squadron of Spitfires or Hurricanes regularly appeared at the appointed place night after night, the Germans would have eventually figured out that the British had cracked the cipher, which was about the most valuable secret the British had at the time.

This question of how best to attack an information system once you have the advantage—and who should do it—is an old one. Even today it is good for countless interagency meetings and memoranda. The Indian tribes probably had strategy meetings to deliberate how to deal with the smoke signal threat. One warrior likely proposed killing the signal senders, leaving their rivals blind, while another argued passionately for using the information to lay an ambush for the enemy braves who were being directed by the signals.

In the end, the British did a little of each. They jammed some of the signals some of the time, just enough to confuse the Germans. They bombed some of the radio stations. They even leaked some fanciful reports claiming that they had learned how to "bend" radio beams.

The goal was to keep the Germans off balance, and the plan worked. The Germans never lost confidence in their technology and kept using the same beam navigation system. By September 1940 the British had shot down 1,400 German aircraft. German bombing became less accurate. And Ultra, the secret intelligence based on the decrypted intercepts, remained secret until 1974, when the British government itself revealed its coup. 2

Even so, no one had really given much thought to how all these pieces—jamming, deception, intelligence—fit together. The really important thing was always the weapon-a gun or aircraft. Communications, tracking, and guidance were merely "support systems."

This was all about to change, thanks to other events underway in Seattle. As far back as 1851, when the city fathers convinced Henry Yesler to build his newfangled steam—powered sawmill along the banks of the Puget Sound, Seattle had risen, and fallen, on each new wave of technology. After Bill Boeing built his first seaplane for the Navy in 1917, the new technologies driving the Seattle economy were mainly based on aerospace—first airmail, then bombers, and more recently, missiles and satellites.

In the 1960s a new technology began to drive the Seattle economy: computers. Up to then, computers were scarce and expensive, and could only run one program at a time. **Then in 1957 a young mathematics graduate student named John McCarthy proposed a revolutionary idea: time-sharing, or having a single computer run several programs simultaneously.** This completely changed the computer business and, by extension, Seattle.

McCarthy, who was visiting MIT on a fellowship at the time, observed that the slowest part of a computer system is always the person operating it. We work at human speed; the computer works at electronic speed. The computer requires just milliseconds to run a typical calculation. McCarthy, later a distinguished professor in computer science at Stanford, realized that if you can collect computer jobs from many users, the computer can electronically rack-and-stack the jobs as they arrive, perform the operations as capacity becomes available, and thus run more or less continuously. 3

A Teletype—a typewriter that transmits a different electronic signal for each character in the alphabet—made it possible to do all this from miles away. The basic idea for the Teletype had been kicking around since 1909, but it was not until 1931 that the Bell System had introduced it into computers.

It did not take long for some early entrepreneurs to put all the pieces together and see a business opportunity. One could buy a computer, hook users into it

It did not take long for some early entrepreneurs to put all the pieces together and see a business opportunity. One could buy a computer, hook users into it with Teletypes, and sell portions of the computer's capacity to companies that couldn't afford to buy their own.

Time-sharing became popular at universities, which typically had two or three large computers located somewhere on campus, and tens of thousands of faculty and students who wanted to use them. So it was little wonder that many of the people who tried to get into the timesharing business were college staff, like Monique Rona.

By then Monique had expanded her repertoire from oceanography to computer science. Soon she found herself running the university's computer center. Tom helped with the financing and Monique got together with some university colleagues to buy a Digital PDP-10. They set up the Computer Center Corporation—C-Cubed, for short—in an office near the campus. Monique put a Teletype on the kitchen table, and they were in business.

The PDP-10 had just hit the market. Being a new machine, it was prone to electronic burps and hangfires. The C-Cubed partners thought they might cut a deal where Digital would give them a discount on the computer if they worked out the bugs.

As it happened, one of the Rona boys attended the Lakeside School, a local private academy, and had heard of some classmates who liked to work with computers. Some of the Lakeside moms had bought their kids a Teletype and a few thousand dollars of computer time from local companies with money raised from a rummage sale. The moms hoped their kids might learn a few computer skills writing programs to play ticktacktoe and the like.

The kids had other ideas. They began playing with the Teletype day and night, taking apart programs and writing some of their own. In no time they burned through the computer time their mothers had bought them and had to look for some new benefactors, just when Monique was looking for some eager minds to test her PDP-10. The boys cut a deal with C-Cubed: the boys would look for bugs in the PDP-10, and C-Cubed would give them some time on its computer.

Two of the kids, Bill Gates and Paul Allen, seemed to have a knack for computers. When the machine crashed, they would fetch the "core dump" from the trash and search through the machine language line by line to find the bug. They wangled operating manuals from the staff. Eventually the "Lakeside Programmers Group" came to know the insides of the PDP-10 about as well as C-Cubed did. So, when they ran out of their allotted time on the machine, they naturally took the simple expedient of fiddling with the computer's operating system to set back the clocks. Bill, Paul, and their Lakeside buddies Ric Weiland and Kent Evans were four of the earliest computer hackers. 4

Alas, the market for computer time-sharing never worked out as well as Monique had hoped, and C-Cubed eventually went broke, another case of roadkill on the path to IT riches. Gates and Allen went on to other ventures. **One was a new company, "Micro-Soft," which they incorporated in April 1975 to sell programs for the Altair 8800, the first personal computer.**

Meanwhile, Tom and Monique had that Teletype on their kitchen table. Computers—especially computers that talked with other computers—were part of the family. Tom could see that the Teletype in the Rona kitchen communicating with the PDP in the C-Cubed office near the university was no different than, say, a radar off the coast of New Jersey communicating with a central computer at the North American Air Defense Command in Colorado.

Rona could see that any widget that collected, moved, or processed data was part of a system, each dependent on the other. He could also see that every widget in a system was a potential point of vulnerability, as was the information that passed through them. These so-called support systems were potentially a better target than the weapon itself.

This had not occurred to anyone before, probably because information machines had never routinely talked to one another before. But what Rona now saw was clear: **Control the information flowing through your adversary's computers and communications networks, and you could control the outcome of a battle or a war. Or, as Rona's monograph, Weapons Systems and Information War , put it, "Countermeasures aimed at the external flow of information will be further improved to the point that they may well become crucial in influencing the outcome of future engagements.**—" 5

Often, in common English, this meant that the best way to defeat your enemy was to attack the components of its information systems, and Rona was broad-minded in defining "component." It included the hardware, of course, but it could just as easily be software, the people operating the system, the people getting the information out of the system, or the data that traveled through it. The best component to attack depended on the opportunities at hand and the risks one was willing to take.

In fact, Rona said, information war offers a major advantage over the old-fashioned kind. In information war, you have a menu of options—that Perennial Question of deny, deceive, destroy, or exploit? It offers an entire matrix of potential pressure points and methods for attacking the enemy. And if your target happens to figure out what you are up to, you can change tactics. The only challenge is to adapt faster than your adversary.

Boeing published Rona's monograph in the summer of 1976 as a "think piece" for company staff and customers. Tom Rona was the first person to use the term "information war" in print. Considering that the Internet was still thirteen years away and a "home computer" was something you built from a box of components with a screwdriver and a soldering gun, it was not a bad piece of prognostication.

1998 (Jan 13) - Husband passes (see Washington Post)

Source : [HN01AO][GDrive]

Thomas P. Rona, 74, a lecturer and consultant who was a former deputy director of the White House Office of Science and Technology, died of hypertensive cardiovascular disease Dec. 27 at his home in Bethesda.

Dr. Rona came to Washington at the beginning of the Reagan administration. He held several posts dealing with science policy before becoming office deputy director in 1986. He retired in 1989 and since then had been a lecturer and consultant.

His clients included the Defense Department, the Mitre Corp., the Bionetics Corp. and the Johns Hopkins University's Applied Physics Laboratory. He was the author of the 1982 book "Our Changing Geopolitical Premises" and was writing a political novel at the time of his death.

Dr. Rona, who was born in Hungary, was an electrical engineering graduate of the Ecole Polytechnique in Paris. He moved to Montreal in 1949 and then to Boston, where he served on the faculty of the Massachusetts Institute of Technology. He received a doctorate in engineering from MIT. In 1959, he joined the Boeing Co. in Seattle. He lived in Seattle until moving to the Washington area. His hobbies included painting, listening to classical music and raising tropical fish. He spoke four languages and held several technical patents.

His first wife, the former Monique R. Noel, died in 1975.

Survivors include his wife, the former Jinnett McBride, whom he married in 1987 and who lives in Fairfax; four children from his first marriage, John Michael Rona, Thomas Rona Jr. and Maree Helen Rona, all of Seattle, and John Christopher Rona of Mount Vernon, Wash.; a brother, George, of Brussels; and seven grandchildren. MICHAEL C. PALMER Former Area Resident

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Dennis B. Ross (born 1948)

Wikipedia Dennis Ross

Saved Wikipedia (Nov 22 2020) - Dennis Ross

See [HK003R][GDrive]

Director of Policy Planning

In office

January 21, 1989 – August 23, 1992

President

George H. W. Bush

Preceded by

Richard H. Solomon

Succeeded by

Samuel W. Lewis

Personal details

Born

November 26, 1948 (age 71)

San Francisco, California, U.S.

Political party

Democratic

Education

University of California, Los Angeles (BA)

Dennis B. Ross (born November 26, 1948) is an American diplomat and author. He has served as the Director of Policy Planning in the State Department under President George H. W. Bush, the special Middle East coordinator under President Bill Clinton, and was a special adviser for the Persian Gulf and Southwest Asia (which includes Iran) to the former Secretary of State Hillary Clinton.[1]

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Biography[edit]

Ross was born in San Francisco and grew up in Belvedere, California.[2] His Jewish mother and Catholic stepfather raised him in a non-religious atmosphere.[3] Ross graduated from University of California, Los Angeles in 1970 and did graduate work there, writing a doctoral dissertation on Soviet decision-making.[4] He became religiously Jewish after the Six-Day War.[3] In 2002, he co-founded the Kol Shalom synagogue in Rockville, Maryland.[3]

Career[edit]

1970s–1993[edit]

During President Jimmy Carter's administration, Ross worked under Deputy Assistant Secretary of Defense Paul Wolfowitz in the Pentagon. There he co-authored a study recommending greater U.S. intervention in the Persian Gulf region "because of our need for Persian Gulf oil and because events in the Persian Gulf affect the Arab–Israeli conflict."[5]During the Reagan administration, Ross served as director of Near East and South Asian affairs in the National Security Council and Deputy Director of the Pentagon's Office of Net Assessment (1982–84).[4]

Ross returned briefly to academia in the 1980s, serving as executive director of the Berkeley-Stanford program on Soviet international behavior from 1984–1986.[4]

In the administration of President George H. W. Bush, Ross was director of the United States State Department's Policy Planning Staff, working on U.S. policy toward the former Soviet Union, the reunification of Germany and its integration into NATO, arms control, and the 1991 Gulf War.[4] He also worked with Secretary of State James Baker on convincing Arab and Israeli leaders to attend the 1991 Middle East peace conference in Madrid, Spain.[3]

Middle East envoy[edit]

Ross (right) with Ehud Barak in 1999.

Although Ross had worked for outgoing Republican President Bush (even assisting in his re-election effort), incoming Democratic Secretary of State Warren Christopher asked Ross to stay on for a short time to help with early Middle Eastern policy in the new administration.[6] In the summer of 1993 President Bill Clinton named Ross Middle East envoy. He helped the Israelis and Palestiniansreach the 1995 Interim Agreement on the West Bank and the Gaza Strip and brokered the Protocol Concerning the Redeployment in Hebron in 1997. He facilitated the Israel–Jordan peace treaty and also worked on talks between Israel and Syria.[4]

Ross headed a team of several people in the Office of the Special Middle East Coordinator, including his deputy Aaron David Miller, Robert Malley, Jon Schwarz, Gamal Helal, and Daniel Kurtzer (until 1994). Ross, consulting his team, drew up the Clinton Parameters as a bridging solution to save the Israeli–Palestinian negotiations in December 2000.[7]

Ross was criticized by people on both sides of the conflict. Former Palestinian Foreign Minister Nabil Shaath described him as being more "pro-Israeli than the Israelis."[8] Occasional references to his Jewish ancestry were brought up within the Arab world (although Ross maintains this was not a problem with other heads of state during negotiations), while some conservative Israelis branded him "self-hating"—each questioning his ability to be unbiased,[9][10] though Palestinians involved in the negotiation process would insist that his perceived lack of objectivity had little to do with his religion.[11] Describing Ross, Roger Cohen wrote that "Balance is something this meticulous diplomat [Ross] prizes. But a recurrent issue with Ross, who embraced the Jewish faith after being raised in a non-religious home by a Jewish mother and Catholic stepfather, has been asked whether he is too close to the American Jewish community and Israel to be an honest broker with Iran or Arabs. Aaron David Miller, after years of working with Ross, concluded in a book that he 'had an inherent tendency to see the world of Arab–Israeli politics first from Israel's vantage point rather than that of the Palestinians.' Another former senior State Department official, who requested anonymity ... told me, "Ross's bad habit is pre-consultation with the Israelis."[12]

Post–Clinton-era activities[edit]

After leaving his position as envoy, Ross returned to the Washington Institute for Near East Policy as counselor and Ziegler Distinguished Fellow. He became chair of the Jerusalem-based think tank, the Jewish People Policy Planning Institute, funded and founded by the Jewish Agency in 2002.[13]

During these years he taught classes at Marquette University, Brandeis University, Georgetown University and the Kennedy School of Government at Harvard University."[3] He also wrote frequently for publications like *The Washington Post*, *The New York Times*, *The Jerusalem Post*, *The New Republic*, *USA Today*, and *The Wall Street Journal* and worked as a foreign affairs analyst for the Fox News channel.[14]

Ross was a noted supporter of the Iraq war and he signed two Project for a New American Century (PNAC) letters in support of the war in March 2003.[15] However, he opposed some of the Bush Administration's policies for post-war reconstruction.[16] He also opposed Bush's policy of avoiding direct talks with Iran.[3]

Obama Administration positions[edit]

According to *The Wall Street Journal*, Ross, along with James Steinberg and Daniel Kurtzer, were among the principal authors of then-presidential candidate Barack Obama's address on the Middle East to AIPAC in June 2008.[17] It was viewed as the Democratic nominee's most expansive on international affairs.[18]

Ross was appointed Special Advisor for the Persian Gulf and Southwest Asia to Secretary of State Hillary Clinton on February 23, 2009.[19] On June 25, 2009 the White House announced that Ross was leaving the State Department to join the National Security Council staff as a Special Assistant to the President and Senior Director for the Central Region, with overall responsibility for the region. The Central Region includes the Middle East, the Persian Gulf, Afghanistan, Pakistan and South Asia.[20]

Haaretz reported that Ross's work as a Middle East aide in the Obama administration was burdened by tension with special envoy George Mitchell, to the point that Ross and Mitchell sometimes refused to speak to each other. This report indicated that the tension was caused, at least in part, by Ross's occasional efforts to conduct negotiations with Israeli government officials without notifying Mitchell. For example, in both September and November 2010, Ross was said to have tried to persuade Prime Minister Benjamin Netanyahu to freeze settlement construction during negotiations with the Palestinian National Authority, in exchange for unspecified private assurances and a major military arms transfer from the United States.[21]

Palestinian officials reportedly viewed Ross as beholden to the Israeli government, and not as an honest broker or even-handed facilitator of negotiations. For a significant period, Ross refrained from meeting Palestinian Authority officials, while continuing to hold talks with Israeli officials during his visits to the region.[21]

On November 10, 2011, Ross stepped down from his post in the Obama administration.[22] He rejoined The Washington Institute as William Davidson Distinguished Fellow, Counselor, Irwin Levy Family Program on the U.S.-Israel Strategic Relationship. He currently serves on the advisory board for the non-profit America Abroad Media.[23] In 2006, he taught at Georgetown University's Walsh School of Foreign Service as a Distinguished Professor in the Practice of Diplomacy.[24]

Controversies[edit]

See also: Positions on Jerusalem

In their 2006 paper *The Israel Lobby and U.S. Foreign Policy*, John Mearsheimer, political science professor at the University of Chicago, and Stephen Walt, academic dean of the Kennedy School of Government at Harvard University, named Ross as a member of the "Israeli lobby" in the United States.[25] Ross in turn criticized the academics behind the paper.[25] In 2008, *Time* reported that a former colleague of Ross, former ambassador Daniel Kurtzer published a think-tank monograph containing anonymous complaints from Arab and American negotiators saying Ross was seen as biased towards Israel and not "an honest broker".[16]

Ross's memoir of his experiences, *The Missing Peace: The Inside Story of the Fight for Middle East Peace* tells his side of the story and outlines the key lessons to be drawn.[26][27]His 2007 book, *Statecraft: And How to Restore America's Standing in the World*, criticizes the administration of President George W. Bush for its failure to use the tools of statecraft to advance U.S. national interests. He advocates instead for a neoliberal foreign policy which relies on a much broader and more effective use of statecraft.[28] While having worked under both Republican and Democratic administrations, Ross himself is a Democrat.[29]

Ross states in *The Missing Peace* that he and other American negotiators pushed Israeli Prime Minister Ehud Barak to accept Palestinian sovereignty over Arab neighborhoods of East Jerusalem during the Middle East Peace Summit at Camp David.[30] Ross wrote part of Barack Obama's speech to the American Israel Public Affairs Committee during the 2008 Presidential campaign, and the speech stated that "Jerusalem is Israel's capital" and that it should not be divided again. *The Jerusalem Post* reported in November 2008 that, according to Ross, these were "facts." However, Ross stated that the "third point," which is the position of the United States since the Camp David Accords, is that the final status of the city will be resolved by negotiations.[31]

In February 2018, he penned an opinion piece in the Washington Post strongly supportive of the Saudi crown prince Muhammad bin Salman, calling him "a Saudi revolutionary" and stating that he saw "him as more like Mustafa Kemal Atatürk—a leader who revolutionized Turkey by taking away the power of the religious base and secularizing the country."[32]

Affiliations[edit]

Ross co-founded the advocacy group United Against Nuclear Iran (UANI) with Ambassador Richard Holbrooke, former CIA director R. James Woolsey Jr., and former U.S. ambassador to the United Nations for Management and Reform Mark Wallace.[33] He is currently on the advisory board of UANI as well as the Counter Extremism Project.[34][35]

Works[edit]

- *Acting with Caution: Middle East Policy Planning for the Second Reagan Administration*. Policy Papers #1. Washington Institute for Near East Policy. 1985. – the Washington Institute's first policy paper
- *Reforming the Palestinian Authority: Requirements for Change*. Policy Focus #43. Washington Institute for Near East Policy. August 2002.
- *The Missing Peace: The Inside Story of the Fight for Middle East Peace*. Farrar, Straus, and Giroux. August 2004. ISBN 0-374-19973-6.
- Foreword for: Levitt, Matthew (May 1, 2006). *Hamas: Politics, Charity, and Terrorism in the Service of Jihad*. Yale University Press. ISBN 0-300-11053-7.
- *Statecraft: And How to Restore America's Standing in the World*. Farrar, Straus, and Giroux. June 2007. ISBN 0-374-29928-5.
- *Myths, Illusions, and Peace: Finding a New Direction for America in the Middle East*, with David Makovsky, Viking, 2009, ISBN 0-670-02089-3 ISBN 978-0670020898.
- *Doomed to Succeed: The U.S.-Israel Relationship from Truman to Obama* Farrar, Straus, and Giroux. October 2015 ISBN 978-0-37414-146-2
- Trump and the Middle East: Prospects and Tasks, Fathom, Winter 2016
- Critical Reflections on the Trump Peace Plan, Fathom, April 2019

Awards[edit]

- 2015: National Jewish Book Award in the History category for *Doomed to Succeed: The U.S.-Israel Relationship from Truman to Obama*[36]

Further reading[edit]

- Clayton E. Swisher (2004), *The Truth About Camp David: The Untold Story About the Collapse of the Middle East Peace Process*. New York: Nation Books.

See also[edit]

- Israel–United States relations
- Nuclear program of Iran

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Henry Rothschild (born 1920)

[aa6][GDrive]

This page of notes is for **Henry Rothschild**, born in 1920. His name is of interest as he was a senior member of **Philipp Brothers Incorporated** (where he was a mentor to **Marc Rich**), both before and after its acquisition by **Engelhard Corporation** . Naturally, any person with the last name of **Rothschild** is of interest.

It is extremely difficult to locate data on this **Henry Rothschild (born 1920)** . This page, while not well organized, is probably the most comprehensive source available.

It is believed (since it has been stated in reference books) that **Henry Rothschild (born 1920)** is not directly related to the **Rothschild** family that has made its fortune in banking, but this is being validated.

https://www.legacy.com/obituaries/nytimes/obituary.aspx?n=henry-rothschild&pid=157928976

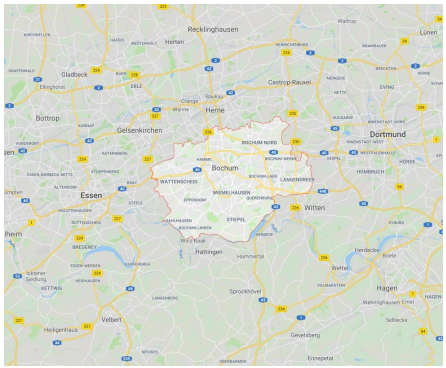
ROTHSCHILD--Henry, passed away June 2 at age 92. Beloved husband of the late Gertrude Neumark Rothschild.

Published in The New York Times on June 4, 2012

conclusion - Born 1920

1920 - Born in Germany

Henry Rothschild was born in **1920**.in "***Bochum, Germany***" [aa5][GDrive] . For more on Bochum, Germany : See https://en.wikipedia.org/wiki/Bochum



1930

Henry Rothschild began learning (and working) at a very young age. *"[Henry] Rothschild had become a lehrling in **Cologne, Germany**, at the age of ten [..]."* [aa1][GDrive]

1936 - Apprenticeship to the Lissauer firm in Cologne, Germany

"[Henry] Rothschild was also apprenticed rather early, at age sixteen, to the Lissauer firm in Cologne." [aa5][GDrive] .

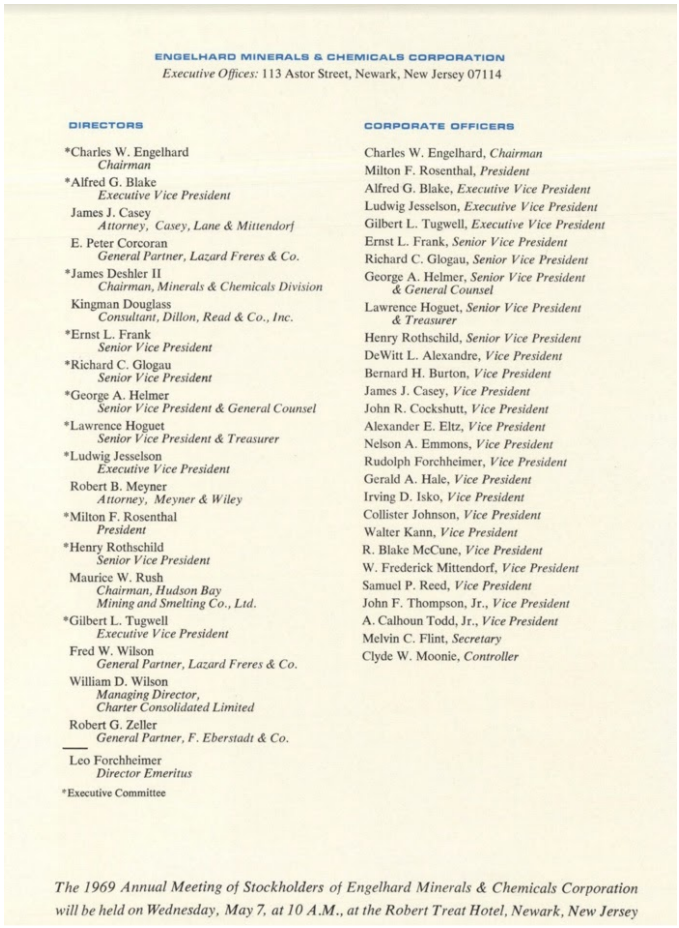
" As we already saw in the cases of Salo Floersheim, Ullmann and Jesselson, an apprenticeship in Germany was no light matter. It usually gave the young man a thorough training in the basics of commercial matters, plus a good knowledge of the specialties of the firm. In the case of Lissauer, it was ore business, and also residues, scrap and metals, as well as chemicals."

1939 - Junior employee of Hoschild, in Bolivia

*"[**Henry Rothschild** was,] in 1939 a junior employee of **Hochschild**, a fresh import from Europe and quite unknown to the Bolivian authorities. He was in a word, rather expendable, andt he Hochschild firm used him to take food, blankets and clothing to the imprisoned men."* [aa5][GDrive] . Henry Rothschild would have been 19 years old at this time.

1969 - Senior Vice President of Engelhard Minerals and Chemicals Corporation

See [aa12][GDrive] . Read more about **Engelhard Corportation** .



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Melvin C. Flint, *Secretary*
Clyde W. Moonie, *Controller*

The 1969 Annual Meeting of Stockholders of Engelhard Minerals & Chemicals Corporation will be held on Wednesday, May 7, at 10 A.M., at the Robert Treat Hotel, Newark, New Jersey

[aa13][GDrive]

Source - "Mining in the Americas: Stories and History" (1993)

See PDF - (See [HB0028][GDrive])

acknowledgements -

Henry Rothschild *of Hartsdale, NY, for information on the events surrounding the nationalization, by Bolivia, of Mina Matilde, and for critical comments regarding the role of the Spaniards in the conquest of South America.*

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Baja - or Lower - California is a Mexican state that is separated from the mainland by the Gulf of California. It is rugged, difficult country. There, south of the town of Santa Rosalia, a rancher one day found colourful nodules that turned out to be copper ore. The find eventually came to be identified as three bodies of rather complex ores. The grade of the first outcroppings was ranging 20-25"o copper. Work began in 1872. The ore was handpicked and lightered on to ships that sailed for Europe.

in 1885, the Mexican govemment granted a concession to exploit the find to a French group controlled by the Rothschilds which set up the Compagnie du Bole-o. They opened the mine, and built a smelter, a port, a power plant and even a 45 kilometre railroad. By 1894, El Boleo produced about 10000 tonnes of copper matte and black copper per year. In 1924, the smelter was rebuilt and the product was thereafter known as blister copper.

The operation was highly suecessful and profitable for the shareholders in the early years. But by the 19305, costs had risen, prices and grades had declined, and 1-21 Boleo's useful life seemed over. But the demand for copper during World War 11 and eventually tax concessions and then subsidies kept the operation going until quite recently.

... page 135 ---

Henry Rothschild*, of Hartsdale, New York, cleared up many questions I had about the Mina Matilde story. Mr Rothschild was one of the senior executives of Philipp Brothers involved in the story.*

page 239

The end of the war thus found the Guggenheims vastly richer and more powerful than at its outbreak; but also with a somewhat tarnished reputation - for profiteering and poor labour relations. They were probably also by then the second richest - next to be Rothschilds - Jewish family in the world."

Henry Rothschild was an example of a key personnel member who was *"eagerly recruited"* by "***Philipp Brothers***" from "***Hochschild***". [See https://www.immigrantentrepreneurship.org/entry.php?rec=167#_edn25 }:

"Several of the new traders were recruited away from Moritz Hochschild's organization. Hochschild, born and raised in Germany and related to the owners of Metallgesellschaft, had from the 1920s onwards become one of the dominant figures in the Bolivian tin trade. Known as one of the three Bolivian "tin barons," he controlled about 25 percent of all Bolivian tin mines.[24] To run his business organization, he hired mainly German Jews, several of whom had prior experience with German metal trading companies. Yet Hochschild found it increasingly difficult to operate in Bolivia in the 1940s and early 1950s. After the disastrous Chaco War of 1932-1935, Bolivian political life became increasingly volatile and the country experienced revolts, coups, and civil wars. In the process, Hochschild's company experienced several setbacks. The situation culminated when a new Bolivian government nationalized all of Hochschild's mining assets in 1952. Philipp Brothers eagerly recruited key personnel like Adolfo Blum and Henry Rothschild from Hochschild.[25]"

[25] The account of Hochschild and his organization is mainly based on Helmut Waszkis, Dr. Moritz (Don Mauricio) Hochschild 1881-1965: The Man and His Companies. A German Jewish Mining Entrepreneur in South America (Madrid: Iberoamericana, 2001).

WIFE -

https://apam.columbia.edu/gertrude-neumark

https://web.archive.org/web/20100623054835/http://engineering.columbia.edu/web/newsletterarchive/spring08/feature3.php

https://www.chronicle.com/article/Gertrude-Neumark-Rothschild/125879/

no mention when married - https://www.newspapers.com/image/96481219/?terms=Gertrude%2BNeumark%2BRothschild

https://www.newspapers.com/image/514430505/?terms=Gertrude%2BNeumark%2BRothschild

https://www.nytimes.com/2010/11/18/business/18rothschild.html

https://publicrecords.directory/profiles/henry-rothschild.5589675.html

Henry Rothschild age 96Also known as: Henry Rothsc From: Vail, CO103 Willow Pl #402,Vail, CO 81657 (914) 725-4064Previous Addresses: 153 Old Colony Rd #1, Hartsdale, NY 10530,

103 Willow Pl, Vail, CO 81657,

103 Willow Pl #302, Vail, CO 81657Possible Relatives: Gertrude F Rothschild

[...]

From "Metal Men: Marc Rich and the $10 Billion Scam"

See [aa1][GDrive])

Nowhere did the company's kitchen-table style of business prove itself better than Bolivia, where Philipp Brothers remains the major conduit for the troubled Andean nation's outpouring of tin, tungsten, and antimony. The association between Philipp Brothers and Bolivia began in 1927, when Arturo Gruenebaum opened the company's first La Paz office, and has transcended the 356 assorted coups, elections, military upheavals, and states of emergency that have rocked the country ever since. ***One of the men who went there was Henry Rothschild, whom Philipp Brothers had lured away from Associated Metals in 1946****. By the time Rothschild had arrived at Philipp Brothers, Jesselson had become the firm's top trade negotiator.* ***Rothschild, who would eventually run the trading arm of Philipp Brothers*** *alongside Jesselson, quick- ly assumed the role of troubleshooter. "I got the fireworks and Jes lit the fuse," Rothschild says. "We were the perfect team."* ***Rothschild was no simple high- road executive who traveled the world just to negotiate for minerals. He was the personification of the Philipp Brothers trader. Rothschild crawled down into Bolivian mines, picked away at veins of tungsten ore alongside coca leaf- chewing miners, and had the bejesus scared out of him on more than one occasion when the decomposed corpses of five-hundred-year-old Indian min- ers fell out of ancient underground holes and buried him in pitch black tun- nels three hundred feet beneath the Altiplano****. Such feats, however, were part of the job description for all Philipp Brothers traders.*

...

Philipp Brothers, the largest raw-material trading company in the world, was scouring American universities for young men they could snatch and mold into lehrlings —the Yiddish word used to describe young men apprentic- ing to be traders. The man in charge of the program was Henry Rothschild, who, like everyone else at Philipp Brothers, had escaped the Nazi holocaust.

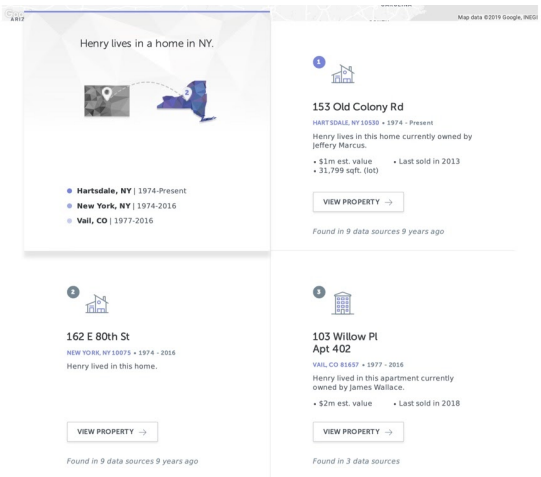
...

Rothschild had become a lehrling in Cologne, Germany, at the age of ten and had no problem encouraging Rich to sacrifice a college education to become a trader at Philipp Brothers*. The company, in fact, preferred to edu- cate their people in-house, the traditional European approach and the Philipp Brothers' way of doing business. Lehrlings were trained to trade every com- modity known to man. The company was run like a large family. Department heads such as Rothschild acted like stern fathers, not executive vice presi- dents. And in Marc Rich, Rothschild sensed something special.*

Addresses / Emails

Spokeo-Henry-Rothschild-20190510-3039.pdf

email - Derived from enry.rothschild@collegeclub.com



TRAVEL

1951 travel - he is now an executive - returning from a trip to Germany

https://search.findmypast.com/record?id=https://familysearch.org/pal:/MM9.3.1/TH-1971-33884-20223-30&parentid=US/PASS/NY/011971661601

TRIP NO.: KL 635 CARRIER: K.L.M. ROYAL DUTCH AIRLINES DATE: Jul. 21st 51

AIRCRAFT NO.: PH-TDP ORIGINATED AT: AMSTERDAM

FLIGHT NO.: 1248 DESTINED TO: NEW YORK PAGE 1 OF 1 PAGE

DISEMBARKING AT: SEE NOTE 1. DATE:

DESTINED TO:

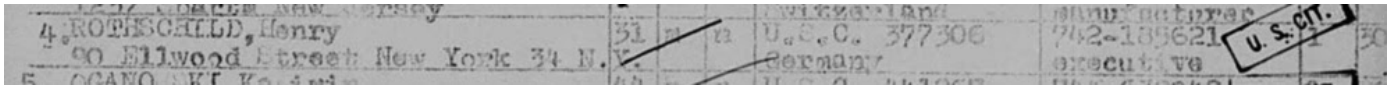
316

	NAME IN FULL (FAMILY NAME, GIVEN NAME, FULL PERMANENT ADDRESS, TICKET NO.)	AGE	SEX	M. S.	NATIONALITY (SHOULD BE NO. & DATE IF ON PASSPORT OR HOME)	OCCUPATION (SEE NOTE 2)	NO. PARS	
1.	BUTT, Elizabeth.	31	F	S	U.S.C. 105421	151b-236914	1	U. S. CIT.
2.	BUTT, Alice	7	F	D	U.S.C. 447934	151B-2319	4	U. S. CIT.
3.	OESCHGER, Jan Paul	52	M	M	U.S.C. 33334	744-943292	2	U. S. CIT.
4.	ROTHSCHILD, Henry	51	M	M	U.S.C. 377306	742-189621	1	U. S. CIT.
5.	OCANO, Kazimir	48	M	M	U.S.C. 441367	744-636042	1	U. S. CIT.
6.	CAMACHO, Oreas	48	M	M	Cuban V 948493	HEAD TAX EXEMPT (A)	1	
7.	JONES, Auclin Jaens	40	M	M	U.S.C. 137	744-641723	1	U. S. CIT.
8.	ZARNOTH, Evelyne Gina	1	F	S	German I 36407 2	HEAD TAX DUE	1	
9.	MARTINEZ Y ALVAREZ, Jose Luis	37	M	M	Cuban V 1516155	HEAD TAX EXEMPT (A)	1	
10.	COMIRO, Angel	42	M	M	Cubana	HEAD TAX EXEMPT (A)	1	
11.	JOHNSON, Gordon Otis Erasmus	29	M	S	U.S.C. 34637	744-62[illegible]592	1	U. S. CIT.
12.	HERRERO, [illegible]	38	M	M	Cuban V 948492	HEAD TAX EXEMPT (A)	1	

Lines 7-9-12 McHugh JUL 22 1951

Lines 3-4-10-11 Tolleah

Lines 1-2-5-6-8 O'Donnell



1956 - Gertrude traveling on her own ...

https://search.findmypast.com/record?id=https%3A%2F%2Ffamilysearch.org%2Fpal%3A%2FMM9.3.1%2FTH-1942-34028-26326-91&parentid=US%2FPASS%2FNY%2F011972450725

https://www.law.com/newyorklawjournal/almID/1202675173651/

*1

In this will construction proceeding, the respondent, Susan Nieschlag, a cousin of the decedent's predeceased spouse, moves, pursuant to CPLR 3212, for summary judgment and an order determining that the decedent's collections of stamps, platinum, gold and silver coins and various currencies ("the collections") constitute tangible personal property specifically bequeathed to her under Article TWO (A) of the decedent's will dated March 22, 2010. The motion is opposed by the executor, who contends that the collections are part of the residuary estate that passes to an irrevocable trust established by the decedent with numerous beneficiaries, principally charities ("the trust"). The executor is the trustee. Pursuant to a stipulation of the parties, a SCPA 2103 proceeding commenced by the executor against Nieschlag seeking turnover and inspection of stamps allegedly gifted to her by the decedent's spouse is being held in abeyance until determination of this motion. A summary judgment motion by the executor in an underlying will construction proceeding was denied (see Matter of Rothschild, NYLJ, Mar. 18, 2014, at 23, col 1 [Sur Ct, Bronx County 2014]).

The decedent died on June 2, 2012, and his spouse, Gertrude F. Rothschild, predeceased him on November 11, 2010. They fled Germany during the 1930's to escape the Holocaust, married in 1950 and had no children. The decedent was a successful commodities trader, and his spouse was a scientist and professor at Columbia University. They executed similar trusts and wills on March 22, 2010. The executor is the fiduciary of the spouse's estate and a co-trustee of her trust. Although the decedent's will was admitted to probate by this court, the will of the decedent's spouse was admitted to probate by the Surrogate's Court, Westchester County. The decedent's will and trust leave approximately 70 percent of the net distributable estate to charities, and the remaining 30 percent remains in trust for designated individuals with the balance passing to charities upon their deaths. It is uncontroverted that the decedent and the spouse did not sell any of the stamps, coins, bullion or currency. Their collections were not maintained in the traditional way or displayed in their various homes but were secreted in various locations in their Hartsdale, New York house. Article TWO (A) of the decedent's will provides that:

"I give all of my tangible personal property (other than currency) including without limitation, wearing apparel, personal effects, jewelry,

....

Nieschlag replies that although the executor refers to the Nieschlags as "distant relatives" they are the only family that the spouse had, both the decedent and the spouse named Nieschlag as a fiduciary in prior wills, and she provides affidavits from her husband and daughter concerning their close relationship with the decedent and spouse, who gave them substantial gifts. Nieschlag concludes that the decedent and the spouse intended that she and her family receive the collections, whether through inter vivos gifts or by virtue of their bequest to Nieschlag of "tangible personal property excluding currency, without limitation."

https://www.law.com/newyorklawjournal/almID/1202742244065/

Case Digest Summary

ESTATE OF HENRY ROTHSCHILD, Deceased (12/1424/D) — In this contested proceeding to terminate a trust commenced by the petitioner, the executor of the estates of the decedent and his spouse and also trustee of various trusts established and/or funded by them, the parties filed a written stipulation discontinuing the proceeding without prejudice or costs.

Full Case Digest Text

ESTATE OF HENRY ROTHSCHILD, Deceased (12/1424/D) — In this contested proceeding to terminate a trust commenced by the petitioner, the executor of the estates of the decedent and his spouse and also trustee of various trusts established and/or funded by them, the parties filed a written stipulation discontinuing the proceeding without prejudice or costs.

Accordingly, this decision constitutes the order of the court marking the proceeding "discontinued" pursuant to the parties' written stipulation and subject to renewal upon two weeks' written notice to the parties and the court. Proceed accordingly.

November 2, 2015

rothschild / rockefeller families unite - May 31 2012 ... henry passed away 2 days later

https://www.newspapers.com/image/273168103/?terms=rothschild

Read "The King of Oil : The Secret Lives of Marc Rich" (1992)

https://play.google.com/store/books/details?id=0iT5MZqDd5gC&rdid=book-0iT5MZqDd5gC&rdot=1&source=gbs_vpt_read&pcampaignid=books_booksearch_viewport

MP4 recording of book - (See [aa4][GDrive])

Sensitive Assignments:

When Rich joined the company in 1954, Philipp Brothers still essentially consisted of a tightly knit group of German-Jewish immigrants. The names of the major players who were active in the company provided an indication of their heritage: ***Ludwig Jesselson***, ***Adolfo Blum***, *and* ***Henry Rothschild****. They were all pioneers of economic globalization who helped write trading history. These men became mentors to Rich, whose family was known in trading circles and whose father came from the tragedy that was Germany—just as they did. He had the best teachers in the business. Most important, Rich had the strength of will and the patience to listen, observe, and learn.*

So Rich learned how to become a commodities trader from the ground up. After two years he became a junior trader, and ***Henry Rothschild*** *soon took him under his wing.* ***Rothschild, who was not a member of the banking family, was born in Bochum, Germany****, entered the commodities business when he was sixteen,* ***and [Henry Rothschild] had previously done business with Marc Rich's father****. He is described as a shy, taciturn, and quick-thinking analyst. The master and apprentice were kindred spirits when it came to their similar ways of thinking.*

[Henry] Rothschild *was an extremely demanding boss who was responsible for the South American market at* ***Philipp Brothers*** *and for developing the firm's expanding network in Europe. He increasingly delegated the day-to-day business to Rich, who effectively became his assistant. "I was fascinated by the size of the market," explains Rich. "Take oil or aluminum. You can find those materials in almost any product you touch. The whole world needs them, from east to west and north to south." It was a fascination that would remain. The first commodity he personally traded was Bolivian tin.*

[...]

[Marc] Rich *was now the man to see when it came to* ***mercury****. It was his first business coup, and it earned significant profits for* ***Philipp Brothers****. The young dealer had not been at Philipp Brothers very long, yet this success strengthened his position enormously within the company. It was proof to his superiors that he had the talent to spot opportunities, the courage to grasp them, the patience to successfully conclude a deal, and enough common sense to avoid excessive risks.*

When the manager of the Bolivian office of Philipp Brothers had to travel back to England because his mother was having an operation, it was immediately clear who would replace him. ***Henry Rothschild*** *sent* ***[Marc] Rich*** *for six months to the same South American country where* ***David Rich*** *had also done business. Bolivia was a dangerous place known for its political and economic instability. A nationalistic movement had brought about a revolution in 1952, and the country's large mines had subsequently been nationalized. The South American country has been an important source of silver, tin, and tungsten since the sixteenth century. Rich not only learned perfect Spanish in La Paz, Bolivia, he also picked up the essentials of doing business in politically volatile countries. He was evidently very adept in his dealings. A partner at the time relates how he always kept the risks under control und managed to establish good contacts thanks to his quiet, modest style.*

Following his success in Bolivia, Philipp Brothers sent its rising star to South Africa for the first time in 1958. At that point the country was still in the Commonwealth, and the trade boycott against the apartheid regime had not yet begun. It was a journey to his first defeat. Rich thrashed out the details of the sale of a manganese ore mine for months on end, and he remembers the negotiations as being "very tedious, very long." In the end, after six months of negotiating, "I couldn't conclude the purchase. I had to come home with empty hands." He did not hear a single word of criticism from his mentors ***Rothschild*** *and* ***Jesselson****. They both knew that Rich would profit from the experience.*

Despite this single setback, he had clearly demonstrated his capacity for sensitive assignments. He had proved that he could stay calm in chaotic situations. He was persistent and innovative without ever becoming foolhardy. More than anything else, he was enterprising and resourceful. Those were exactly the qualities that Philipp Brothers was counting on in early 1959. A bearded revolutionary was in the process of rewriting history in Cuba. Philipp Brothers, which had enjoyed close business ties with the Batista regime, was not amused. It needed a troubleshooter.

See 1987-philipp-brothers-the-history-of-a-trading-giant-1901-1985-waszkis-helmut-fullbookcopy-ocr

https://books.google.com/books?id=3wTw0O7UGAsC&dq=%22Henry+rothschild%22++%27philipp+brothers%22&source=gbs_navlinks_s

[aa5] 1987-philipp-brothers-the-history-of-a-trading-giant-1901-1985-waszkis-helmut-fullbookcopy-ocr / https://drive.google.com/open?id=1ZVA3JmBmud2K9_bIHVq31LNiMdAGvafX

page 93

The Hirsch-owned firm in Amsterdam, NV Groma, now became Jesselson's employer. Many German Jewish firms were moving to Holland to continue their business from there. Julius Philipp had done so. as had the Lissauer firm from Cologne. Dr. Menno Liss-auer himself, and his son-in-law, Walter Rothschild, moved to New York to manage their US firm, Associated Metals.4

{{{ Lissauer - I think that is where Marc Rich worked? }}}

96-97

Back in Bolivia, in June of 1939 President Busch had brought about major changes in the business. He had signed a decree that the Banco Minero would henceforth have a monopoly to buy the production of the small mines, and that all foreign currency proceedS from the exports of mining products be delivered to the government. This was the effective end of the rescate business

which Hochschild, Duncan Fox and Philipp Brothers, as well as others, had worked for years to set up. Admittedly, the business had been profitable, but at the same time, the loans, advances and supplies that the ore buyers had made available to the miners had constructively contributed to the development of dozens of mines. And now, the business was terminated overnight. The ore buyers decided not to accept this, and a letter was soon circulating, signed by Dr. Mauricio Hochschild and Adolfo Blum on behalf of the Hochschild group, Arturo Gruenebaum on behalf of Philipp Brothers aswell asby Duncan Fox, recommendingto the miners to protest the decree. Busch took this asan affront and aseconomic sabotage, and he ordered the principal ore buyers imprisoned. He was determined to punish them in an exemplary way, especially Dr. Hochschild who was to be shot. The others were to stay in jail for a number of years. A cabinet session that was to decide the fate of the prisonerssplit evenly on the issue and it took long discussions before Busch could finally be dissuaded from taking draconian measures. After a few weeks they were all pardoned; Busch com-mitted suicide in August; andthe matter was eventually forgotten, except for the decree which remainedin force.

This is the first time that we meet Henry Rothschild. He was in 1939 a junior employee of Hochschild,a fresh import from Europe and quite unknown to the Bolivian authorities. He was in a word, rather expendable, andthe Hochschild firm used him to take food, blankets and clothing to the imprisoned men.

Gruenebaum at once closed the Potosi office. The Oruro office also ceased buying from the small miners but it continued to buy from the medium-sized ones. The firm now decided to move to La Paz which quickly became the main office of Philipp Brothers in Bolivia. Gruenebaum ran the head office, and Max Goldschmidt took care of Oruro. In La Paz they now began to buy from Banco Minero and, eventually, also from Comibol, the Corporagion Minera deBolivia, which after Bolivia's expropriationof the big tin mines of Patino, Aramayo and Hochschildin 1952, was to become the main operator of these mines.

102-103

HENRY ROTHSCHILD

It was early in 1946 that Gruenebaum left Bolivia for New York. Soon he needed an assistant, and the right man seemed to be available.

Henry Rothschild was just twenty-six when he arrived in New York and visited Gruenebaum. They had met before, in Bolivia, when Rothschild had brought food and blankets to the prison where Gruenebaum shared a cell with Hochschild and Blum.

HERE>>>>

Born in 1920 in Bochum, Germany, Rothschild was also apprenticed rather early, at age sixteen, to the Lissauer firm in Cologne.

As we already saw in the cases of Salo Floersheim, Ullmann and Jesselson, an apprenticeship in Germany was no light matter. It usually gave the young man a thorough training in the basics of commercial matters, plus a good knowledge of the specialties of the firm. In the case of Lissauer,it was ore business, and also resi-dues, scrap and metals, as well aschemicals.

In Bolivia, Hochschild had let him begin in the accounting department in La Paz, but he was soon transferred to Potosi where he spent the next six years in different positions in the sampling area, in a mill, in underground mine workings and in the adminis-trative office. When he left Bolivia after the war, he was probably one of the most experienced managers of medium sized mines.

But six years in Bolivia had been enough. The war was over and v of 1946 he traveled to the United States and th - _ Lrossea the country by laus for three months, "to get to kentbwrfiise lan When he d13131"? fofr 2} 10th the uniqueness of his back-ground and the use u ness 0 1115 experience to the growing Philipp "Brothers organization, must have struck Gruenebaum and the oth€f5~ Nevertheless, it still took them a week to make up their minds; Philipp Brothers gained and Hochschild lost. When Hochs-child learned that Rothschild had left, he tried everything hecould to rehire him, even offering the managership in Arequipa, Peru, and Sao Paulo, Brazrl. But Rothschild had decion Philipp

It was not only Rothschild's background and training that proved very valuable to Philipp Brothers but also, as time was to show, his peculiar kind of mind. Gifted with acuttingintelligence and a light-ning fast intellect,hewas again and again to surprise associates and outsiders alike With his ability to analyze, absorb and digest a sub-

'ect, before others had even begun to understand what it was all about. His memory was phenomenal and no doubt contributed to his analytical powers. On the other hand, he was also shy and reti-cent, and thus not the most ideal person for outside contacts, which in turn was very much Jesselson's strength.

Years later, after Ullmann's death, and when Jesselson began to miss the analytical powers of his original mentor, he was to turn more and more to Henry Rothschild, and the two came to form over the years what several associates were to call "a remarkable team." Jesselson, who always bubbled over with ideas, was to find in Rothschild the ideal partner who could put the right accents on his ideas, provide the technical foundations for many a new busi-ness, and play "devil's advocate." He was also to become, among the inner circle of the group to lead the firm in the 19605 and 19705 the one who had the most knowledge and understanding of legal matters.

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Already in 1944, Adolfo Blum hadjoined. His story will be told in chapter 8. In 1946, aswe saw, Henry Rothschild was hired and became Gruenebaum's assistant, at first doing traffic work, then writing and then supervising the 5hipping and the invoicing paper-work for the Bolivian business. But beginning in 1948, he also

began to travel, and he took on more and more management func-tions, such as supervising the organization of the foreign offices, hiring, and looking after the many intricate legal and administrat-ive details. Once Adolfo Blum began to organize the group in EurOpe, Rothschild became the indispensable link in New York who kept control and supervision over what already in the early

19505 was quickly becoming a sprawling world-wide organization. One Ben-Ami joined, a former member of the Irgun, and Jules Chender. The latter, born in Moskau in 1920, and originally called Yuli Chenderoff, had behind him a colorful career in France when he arrived in the US in 1941. He began to work in a factory as machinist, spoke at first little English but nevertheless went to nightschool at N Y U , considered himself a man of intellect, thought business would be his last choice and really wanted to become a journalist. But beside everything else, he was rabidly in favor of Israel. In the 19405, when the Zionists were struggling to get supplies into Palestine, Chender, familiar with the machine tool industry and the factories and warehouses and shipping agents that dealt with such equipment, was instrumental in arranging for the

urchase and shipment to Palestine of arms and arms-making machinery hidden in huge transformer cases. A few years later, in

1954, Chender joined Philipp Brothers and became one of the

film's foremost copper traders. He died in 1973 at age fifty-three.

Assorted -

http://www.bollyn.com/who-destroyed-the-911-evidence/

In September, when I began my research into the Zionist network behind the destruction of the steel, I called the Hugo Neu company, which was one of the two New Jersey scrapyards that "recycled" the steel. Hugo Neu was a German Jewish immigrant from Fürth (like Henry Kissinger, another Rothschild agent) who came to America and worked as a bank clerk with Seligman & Co. before becoming the head of Associated Metals and Minerals Corporation (AMMC) in New York in the 1930s with his German Jewish fellows, Meno Lissauer and Walter M. Rothschild, the company's president. Lissauer's wife, Meta, was also Walter Rothschild's sister. Hugo Neu started his own scrap metal company in 1945. The company is now run by his son, John, and has very close business ties to the state of Israel and is invested in a Mossad-linked Israeli venture fund.

https://archive.org/stream/kurtereinsbergf001/kurtereinsbergf001_djvu.txt

volunteer at an Amsterdam firm doing business between Holland and the Dutch East
Indies (now Indonesia), I landed a job at M Lissauer & Co, in Cologne, Germany. This
firm, founded in 1905 by Meno Lissauer and his brother, was a major worldwide trader in
metals, minerals and chemical products. The attraction for me was that the firm had a
offices throughout Europe as well as in New York. The latter was called Associated
Metals & Minerals Corp founded in 1924. The shares of Associated Metals were in the
name of Walter Rothschild, Meno Lissauer's brother in law, who was an American
citizen At M Lissauer & Co, Cologne I worked in the ore department for 2 years, until I
was granted the U.S. Immigration Visa. Within a week after arriving in New York in April
1937 I was hired at Associated Metals & Minerals Corp. The Lissauer group had a major
long term contract for the purchase of zinc concentrates with Howe Sound Corporation,
American company, operating a large zinc-lead mine and a lead smelter in the state of
Zacatecas in northern Mexico. It also had several purchase contracts for zinc ores and
concentrates with small Mexican owned mines The concentrates were shipped to zinc
smelters located in Belgium, France and Poland.
My initial travels to Mexico were in relation to the logistics of moving these
concentrates by rail to the port of Tampico and to negotiate for the purchase of
additional quantities of minerals and concentrates from Mexican mines.

Hugo Neu was a Jewish immigrant from Cologne who headed Associated Metals and Minerals Corp. (AMMC) in New York with two other German Jewish immigrants, Dr. Meno Lissauer and his brother-in-law, Walter M. Rothschild."

Dr Meno -

https://www.nytimes.com/1958/05/28/archives/dr-meno-lissauer-industrialist-deadi-board-chairman-of-associated.html

https://www.findagrave.com/memorial/93074251/meta-lissauer

Advertisement

Meta Rothschild Lissauer

https://www.findagrave.com/memorial/93074207/meno-lissauer

https://www.findagrave.com/memorial/93074207/meno-lissauer

https://www.geni.com/people/Meta-Lissauer/6000000037656095609

see 1958-05-28-nytimes-pg-31.jpg / https://drive.google.com/open?id=1_JWToJyIZBk9chmvpVyL-GJQrqHXi_9K

Dr. Meno Lissauer, Industrialist, Dead; Board Chairman of Associated Metals

Dr. Meno Lissauer, chairman of the Associated Metals and Minerals Corporation, 75 West Street, died yesterday at his home at 4503 Fieldston Road, Riverdale, the Bronx, after a brief illness. His age was 78.

Dr. Lissauer, who was born in Luebeck, Germany, was the chief factor in developing the company from a small beginning in 1903 in Cologne, Germany, to its present international scope. He founded the concern with $300 borrowed from a friend. In 1907 he brought his brother, the late Henry Lissauer, into the company and named it M. Lissauer & Cie. After World War I, the company helped to distribute Germany's stockpile of metallic ores and scrap.

Dr. Lissauer organized the West German Metal Dealers Association and was its president for thirteen years. He was also a delegate to the General Association of Commerce and Industry of Germany. For his assistance to the Aachen Technical College in its experiments in extracting metals from residues and wastes he received an honorary doctorate.

When the Nazis came into power in the Nineteen Thirties they put the financial pinch on the company. In 1937 Dr. Lissauer moved to the Netherlands. After the conquest of that country by Germany he fled to Lisbon and finally reached this country. Associated Metals and Minerals already existed here, as did some affiliates elsewhere. From them grew the present international organization.

Dr. Meno Lissauer

In this country Dr. Lissauer was active in philanthropy, as he had been abroad. He was honorary chairman of the metals and mining division of the United Jewish Appeal and a director of the American Federation of Jews in Central Europe. Last year he established at Brandeis University the Meno Lissauer Scholarship Endowment Fund.

Surviving are his widow, Meta; a son, Franz A. of New York; a daughter, Mrs. Hannah Hirschfeld of Scarsdale, N. Y.; a brother, Jonny of Zurich, Switzerland, and four grandchildren.

1958-05-28-nytimes-dr-meno-lissaier-dead.jpg / https://drive.google.com/open?id=1_GWf2bdZZyof3u2-6d9-kkhWRKwbmsrm

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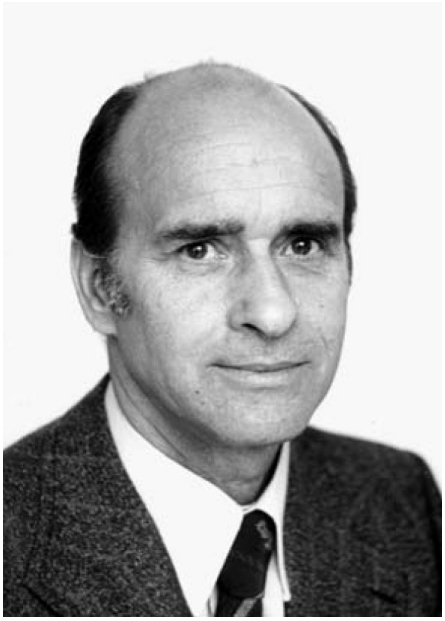
Rudolf Rott (born 1926)



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Wikipedia (DE) Rudolf Rott

Born - May 23, 1926 [HK005F][GDrive]

Saved Wikipedia (Feb 27, 2021) - Rudolf Rott (DE)

Source : [HK005F][GDrive]

Rudolf Rott (born May 23, 1926 in Stuttgart, † April 28, 2003 in Gießen) was a German virologist.

Rott was the son of a civil engineer and went to school in Ellwangen and Rottweil. After two years of military service in World War II, imprisonment and two years in agriculture, he studied veterinary medicine at the University of Giessen, initially from 1950, with his doctorate in 1955 on swine influenza under Elmar Roots. He then worked as an assistant at the Giessen Institute for Animal Disease Studies at Roots and in 1958 went to [Dr. Heinrich Werner Schäfer (born 1912)] at the Max Planck Institute for Virus Research in Tübingen, where he dealt with the avian influenza virus, which is also one of the flu viruses. In 1964 he became a professor in Gießen (after his habilitation in 1963) and head of the newly founded Institute for Virology, which was the first in Germany. In 1994 he retired.

Rott published over 300 scientific papers. He dealt in particular with flu viruses, for example the gene structure and genetic relationship [1] of the flu viruses and surface proteins of the flu viruses (such as neuraminidase). In the mid-1970s, he and his group were able to demonstrate the structure of the virus RNA from eight segments that could be freely exchanged, which explains the high variability of the viruses [2]. The studies at that time also showed that the pathogenicity of the viruses depended on many factors. [3] He and his group in Gießen also researched the glycoproteins of the virus envelope and their role in penetrating the host cell. They were able to prove that the cleavage of the hemagglutinin in the virus envelope by the host's own enzymes was an important mechanism for the virus to be infectious [4]. Rott and his group also demonstrated that the increase in this proteolytic activity on hemagglutinin by bacteria could contribute to the pathogenicity of the influenza viruses [5]. He demonstrated the proteolytic activation of surface glycoproteins in other viruses (such as Paramyxoviridae in Newcastle disease [6], Sendai virus infection).

He also studied the Bornash disease virus, which causes chronic brain disease in horses. [7] Rott and colleagues also demonstrated virulence in humans.

He received the Robert Koch Prize in 1987 and the Otto Warburg Medal in 1982. In 1991 he received the Max Planck Research Award. He was an honorary member of the Society for Virology (1999) and an honorary doctorate from the Free University of Berlin. He was a member of the Royal Society of Medicine (1963), the New York Academy of Sciences (1966) and the Leopoldina (1973), whose Cothenius Medal he received in 1999. In 1995/96 he was a fellow at the Wissenschaftskolleg zu Berlin.

Rott was married to Renate Kröll since 1956 and has a daughter Sabine, who is married to the former director of the Bernhard Nocht Institute Bernhard Fleischer.

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[...]

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2003 : Obituary, In memoriam - Rudolf Rott (1926-2003) [written by Hans-Dieter Klenk]

Source is Virology Division News : [HP0051][GDrive] ; Affiliations expand

- PMID: 14648302
- PMCID: PMC7086589
- DOI: 10.1007/s00705-003-0239-x
- Arch Virol (2003) 148: 2489–2491

Where do new virus infections come from that attract the attention of the public and the scientific community with ever increasing intensity? What role do animals play as reservoirs of these viruses? What are the mechanisms of adaptation when a virus crosses the species barrier between animals and man? Why do infections cause disease in one host species, but not in another? Fundamental contributions to a better understanding of these problems were made by Rudolf Rott who died on April 28. He was 76 years old.

Born in 1926, Rudi belonged to the generation whose youth was traumatically marked by the second World War and the post-war period. He left high school in 1943 to join the German army as a volunteer. Still at the age of 17, he became a commissioned officer. After the war and after finishing high school, he studied veterinary medicine in Gießen, where he subsequently became a research assistant in the Department of Microbiology and Hygiene with Elmar Roots. It was here that his life-long passion for virology originated. Rudi always considered meeting [Dr. Heinrich Werner Schäfer (born 1912)] at Gießen one of his greatest fortunes in life. Werner Schafer quickly recognized the extraordinary scientific talent of the young veterinarian, and offered Rudi a position at the Max Planck-Institut fur Virusforschung in T¨ubingen. In the fifties and sixties of the last century this was one of the world's leading virus research centers, and when Rudi went there it was in its hey-day. Gierer, Schramm, andWecker had discovered RNA genomes with plant and animal viruses. Anderer had elucidated the amino acid sequence of the TMV coat protein and was able to reconstitute the virus from RNA and coat protein. Schafer had discovered that fowl plague virus was an influenza virus and thus laid the foundation for the paradigm role of this virus in influenza virus research. He had also shown that fowl plague virus was an excellent model for studying the architecture and replication of enveloped viruses, in general. The hemagglutinin, the nucleocapsid protein and other viral components had been recognized as different structural and functional entities, and Rudi became heavily engaged in their biochemical and immunological characterization. He was very successful in his research and was soon recognized as one of the most promising young scientists in his field.

In 1964 Rudi returned to his alma mater in Gießen as chairman of the new Department of Virology. Apart from at the Max Planck-Institut in T¨ubingen, virology was not well developed in Germany at that time. Rudi felt that the field could be promoted best by scientific excellence in an academic environment. The new institute was therefore conceived as a research institute. From the beginning the focus was on influenza viruses, and they remained the central issue for the three decades of Rudi's chairmanship, although the spectrum of viruses under investigation increased significantly later.

It soon became clear that influenza virus research at the new institute would follow two major tracks: (1) the elucidation of the structure of the virus genome and of the replication mechanisms, and (2) the analysis of the biosynthesis and function of the envelope constituents. Studies on molecular epidemiology and pathogenesis would follow and prevail in later years. The finding that influenza viruses have segmented genomes provided an explanation for their high genetic variability. In a classic study on the origin of human influenza virus subtypes H2N2 and H3N2 published 1978 in Virology, Rudi and [Christoph Scholtissek (born 1929)] showed that gene exchange was the mechanism underlying the emergence of new pandemic viruses.

Reassortants obtained in the laboratory became invaluable tools to address many important problems in influenza virology on a genetically well defined basis. Thus, it was shown that some of the reassortants derived from two apathogenic parent viruses had acquired pathogenicity. Comparisons among many reassortants revealed that pathogenicity was associated with quite different gene sets. This led to the concept that pathogenicity depends on an optimum gene constellation rather than being defined by a single gene.

Among the viral glycoproteins investigated, the influenza virus hemagglutinin always played a prominent role.The observation that influenza virus infectivity depends on proteolytic activation of the hemagglutinin revealed that receptor binding is not the only function of this protein, it also mediates virus entry by membrane fusion. Equally important was the finding that hemagglutinin activation is a prime determinant of pathogenicity. In a series of studies that extended almost to the end of his scientific career, Rudi demonstrated how structural changes of the cleavage site altered pathogenicity, with heterologous RNA recombination as one of the most interesting mechanisms involved. Among the activating enzymes were also bacterial proteases, which proved to have a decisive effect on the development of pneumonia in co-infected animals.

Numerous other viruses interested Rudi. These included coronaviruses, infectious bursitis virus, papilloma viruses of rodents and birds, Borna disease virus (BDV), and paramyxoviruses. In fact, Rudi's observation that cleavage activation of a viral glycoprotein determines pathogenicity was first demonstrated with Newcastle disease virus and was later confirmed and extended by studies on Sendai virus, another paramyxovirus.

BDV was a particular challenge for him. This virus, which causes infections of the central nervous system (CNS), is endemic in horses and sheep in Central Europe and can be experimentally transmitted to other hosts. Rudi showed that the disease was the result of a T cell-mediated immuno-pathological reaction in the CNS. Disease symptoms vary depending on the host species and immune status, and Rudi was excited when he found that infection of tree shrews caused behavioural disorder. This prompted collaborative studies with clinical groups which showed that seroprevalence forBDV-specific antibodies was significantly higher in neuro-psychiatric patients than in controls. Whether BDV is indeed responsible for human neuro-psychiatric disorders is a matter of ongoing research in many laboratories.

Such a large scientific programme could only be successful with a clear conceptual framework. Rudi realized at a very early stage that elucidation of the pathogenetic mechanisms he was so much interested in would require a multidisciplinary approach combining virological, cell biological, molecular biological, biochemical and immunological expertise. This went well beyond the limits of his own Department, but with his enthusiasm, his charisma, and his scientific stature he was able to convince other groups that it was worthwhile to collaborate with him. Therefore Gießen was soon recognized internationally as a center of virology that over the years became the scientific home of numerous German virologists and the host of guest investigators from all over the world, many of whom were going to be Rudi's life-long friends. Highly ranked academic appointments and prestigious awards, such as the Robert Koch Prize, are documents of his extraordinary scientific reputation. However, despite all of this Rudi continued to be a dedicated researcher working at the bench until the end of his professional career. And he was never distracted from what he considered to be his prime mission, to work for the benefit of his Institute and his field.

Many of Rudi's former collaborators and friends met him last at a reunion on the occasion of his 75th birthday. He was marked by the disease which he had already fought then for some time, finding all the loving care he needed so much with his wife Renate, to whom he was married for almost 50 years. Those who were there and all of his other friends and colleagues will sorely miss him and remember him as a great scientist whose contributions to virology will live on.

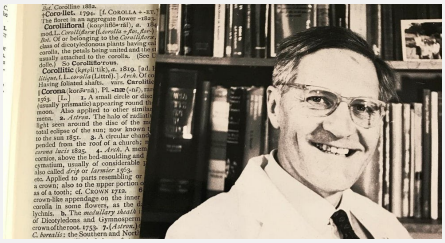
[Written by "]

- [Dr. Hans-Dieter Klenk (born 1938)], Philipps-Universita t, Marburg, Germany
- [Prof. Jürgen Albrecht Richt (born 1958)] , National Animal Disease Center, Ames, IA

2021 (Feb 22) - Yorkshire Post : "The Yorkshireman who named the coronavirus and aided its discovery"

A brilliant but modest Yorkshire scientist helped name the coronavirus and played a role in its discovery

By Sharon Dale / Monday, 22nd February 2021, 12:51 pm / PDF at [HN01IN][GDrive]



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Professor Tony Waterson who helped name the coronavirus in the 1960s

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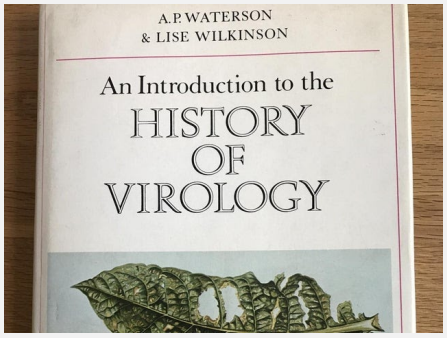
Prof. Tony Waterson, left, a leading authority on viruses, holding a virus model with Prof Rudi Rott of Germany in the mid 1960s. They worked together on research.



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Prof. Waterson was a leading authority on viruses

As Prime Minister Boris Johnson lay dangerously ill with Covid-19 in St Thomas' Hospital in London, he was unaware that decades earlier, in that very same hospital, a Yorkshireman had helped facilitate the discovery of the virus type that caused the devastating world-wide pandemic.

It was in Professor Tony Waterson's Microbiology Department at St Thomas' that the coronavirus was first identified in 1964 by June Almeida, a brilliant, Scottish-born scientist he had headhunted from the Ontario Cancer Institute in Canada.

Hornsea born Prof. Waterson and Dr David Tyrrell, then head of the Common Cold Research Unit, then took on the task of naming the virus with help from a dictionary. This initial discovery was the crucial first building block in helping modern day scientists battle this latest deadly strain.

The story began when the Common Cold Research Unit in Salisbury identified an unusual virus strain in nostril swabs taken from schoolboys. They found that it caused cold-like symptoms but had properties that were quite distinct from the familiar cold viruses and they were keen to find out more.

Dr David Tyrrell later wrote: "I decided to seek help from Tony Waterson, the new professor of virology at St Thomas' Hospital. "He had just recruited an electron microscopist, June Almeida, who was seemingly extending the range of the electron microscope to new limits. She claimed that she would be able to find virus particles with her new, improved techniques.

"We were not too hopeful but felt it was worth a try. The results exceeded all our hopes and her pictures revealed their structure beautifully. June was confident that these three viruses were something quite new."

The daughter of a Scottish bus driver who grew up in a Glasgow tenement and left school at 16 was right. Starting as a lab technician, she went on to study virology and became a leading light in virus imaging, identification, and diagnosis. What she saw that day 56 years ago was the first glimpse of a human coronavirus and she recognised that it was related to viruses in animals as she had seen similar particles while investigating mouse hepatitis and infectious bronchitis in chickens.

This new virus group needed a name and the circumstances of its coinage were recounted by Dr Tyrrell: "We sat down in Waterson's office to consider the implications of these results. We were quite certain that we had identified a previously unrecognised group of viruses. So what should we call them? "Influenza-like seemed a bit feeble, somewhat vague, and probably misleading. "We looked more closely at the appearance of the new viruses and noticed that they had a kind of halo surrounding them. Recourse to a dictionary produced the Latin equivalent, corona, and so the name coronavirus was born."

It was in a short article in the journal Nature in November 1968 that Dr June Almeida, Dr David Tyrrell and six other virologists first used the name "coronavirus" in print.

Prof. Waterson's son Nicholas says that it was only after the start of the pandemic last year that the family became aware of their father's involvement with the work, after looking through his papers and books. "We knew, of course, that he did something clever with viruses and we were even sometimes allowed to peer down the electron microscope on visits to his lab but we really had no idea what he got up to in any detail," says Nicholas. "He died when I was only 18 and learning about this has made me feel closer to him again after so many years."

Just over fifty years ago, in 1970, Prof. Tony Waterson wrote the following somewhat prescient words: "If a pathogenic micro-organism should break loose, which can spread not only from animals to man but also readily from man to man, a major and global disaster would happen."

Dying prematurely in 1983, at the age of 59, he did not live to see the viruses he had named finally cause the global pandemic he had feared. Dr June Almeida passed away in 2007 and Dr David Tyrrell in 2005 but their work also lives on.

*A LIFE SCIENTIFIC: Professor Tony Waterson was born at the Old Hall in Hornsea on the East Yorkshire coast in 1923. His parents had just moved north from Kent after buying Hornsea College, a girl's boarding school based in a rambling Jacobean manor house. Gladys, his mother, became the headmistress and it seems that she was a woman with enormous drive as she was still only in her twenties when she took on the role.

She set the bar very high not only for her pupils but also her own children., though Trevor's son Edward Waterson who lives in York, says: "Tony and his older brother, Trevor, were very close and enjoyed a carefree seaside childhood in what was then a quiet little seaside town."

The young Tony was enrolled at Hornsea College and then sent off to board at the age of only seven at Orleton Preparatory School up the coast in Scarborough. Though he missed his family and objected to cliff-top football in the bracing Yorkshire winds, he threw himself into his schoolwork and excelled academically.

When it came to his secondary schooling, Tony was sent south, winning a scholarship to Epsom College in Surrey and later won a classics scholarship to Emmanuel College, Cambridge in 1941. Despite his lifelong love of Latin and Greek, he chose to follow a more practical scientific path, graduating with a double first in Natural Sciences.

He had been due to be called up for military service in 1943 but according to College archivist Amanda Goode, Emmanuel fought successfully to keep him, arguing that he was one of the "very best" students. It was also at Cambridge that Tony discovered the Christian faith that would guide him through the rest of his life. After completing his medical studies at the London Hospital, he did National Service as an RAF Medical Officer in Germany, looking after servicemen and their families during the Berlin airlift.

His daughter Sarah says that there was always a caring side to him. She recently found a letter he wrote to his mother asking her to send a tin of cocoa from Yorkshire as there was none to be had in Germany and his German teacher wanted some for his elderly mother.

Following National Service, his scientific career took off fast. He returned to Cambridge to lecture and research in pathology, specialising in viruses, and after a sabbatical year back in Germany, he took up the post of Professor of Microbiology at St Thomas's Hospital in London in 1964 at the age of 40. Later he would become the first Professor of Virology at the Royal Postgraduate Medical School at Hammersmith Hospital.

1977, from the book The Influenza Virus Hemagglutinin Symposium, Baden near Vienna, March 21-23, 1977 : "Activation of Influenza Virus Infectivity by Proteolytic Cleavage of the Hemagglutinin"

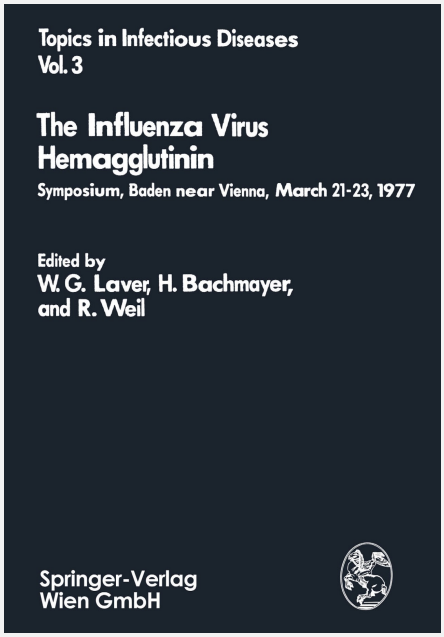
Source PDF of full book of the Symposium : [HI002H][GDrive] / PDF of this article only (pg 69-81): [HI002I][GDrive]

Authors :

- [Prof. Rudolf Rott (born 1926)]
- [Dr. Hans-Dieter Klenk (born 1938)]
- [Christoph Scholtissek (born 1929)]

Abstract

"It is reasonable to assume that a virus disease is manifest in a clinical sense, if cells of vital functional significance are infected by the virus and are killed or at least modified by this infection. Since the tropism of a virus for a host cell represents primarily an interaction between the surface components of the virus and receptors of the cell it is appealing to postulate that structures of a virus surface might determine the infectivity and pathogenic properties of the virus. The results of our experiments have to be interpreted in this sense, because we could demonstrate such an inter-relationship for the hemagglutinin of influenza virus."



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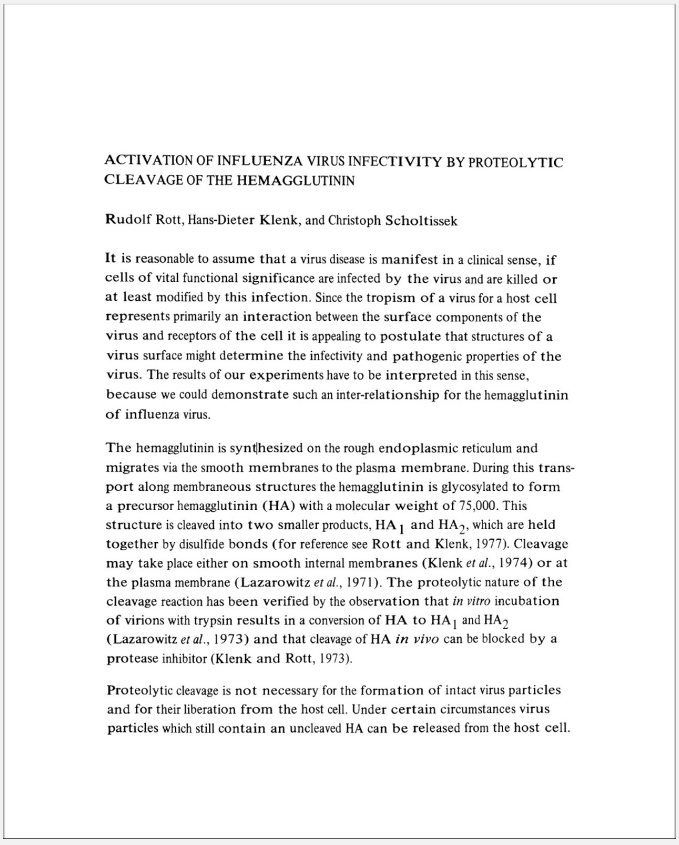

ACTIVATION OF INFLUENZA VIRUS INFECTIVITY BY PROTEOLYTIC CLEAVAGE OF THE HEMAGGLUTININ

Rudolf Rott, Hans-Dieter Klenk, and Christoph Scholtissek

It is reasonable to assume that a virus disease is manifest in a clinical sense, if cells of vital functional significance are infected by the virus and are killed or at least modified by this infection. Since the tropism of a virus for a host cell represents primarily an interaction between the surface components of the virus and receptors of the cell it is appealing to postulate that structures of a virus surface might determine the infectivity and pathogenic properties of the virus. The results of our experiments have to be interpreted in this sense, because we could demonstrate such an inter-relationship for the hemagglutinin of influenza virus.

The hemagglutinin is synthesized on the rough endoplasmic reticulum and migrates via the smooth membranes to the plasma membrane. During this transport along membraneous structures the hemagglutinin is glycosylated to form a precursor hemagglutinin (HA) with a molecular weight of 75,000. This structure is cleaved into two smaller products, HA_1 and HA_2, which are held together by disulfide bonds (for reference see Rott and Klenk, 1977). Cleavage may take place either on smooth internal membranes (Klenk *et al.*, 1974) or at the plasma membrane (Lazarowitz *et al.*, 1971). The proteolytic nature of the cleavage reaction has been verified by the observation that *in vitro* incubation of virions with trypsin results in a conversion of HA to HA_1 and HA_2 (Lazarowitz *et al.*, 1973) and that cleavage of HA *in vivo* can be blocked by a protease inhibitor (Klenk and Rott, 1973).

Proteolytic cleavage is not necessary for the formation of intact virus particles and for their liberation from the host cell. Under certain circumstances virus particles which still contain an uncleaved HA can be released from the host cell.

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ACTIVATION OF INFLUENZA VIRUS INFECTIVITY BY PROTEOLYTIC CLEAVAGE OF THE HEMAGGLUTININ

It is reasonable to assume that a virus disease is manifest in a clinical sense, if cells of vital functional significance are infected by the virus and are killed or at least modified by this infection. Since the tropism of a virus for a host cell represents primarily an interaction between the surface components of the virus and receptors of the cell it is appealing to postulate that structures of a virus surface might determine the infectivity and pathogenic properties of the virus. The results of our experiments have to be interpreted in this sense, because we could demonstrate such an inter-relationship for the hemagglutinin of influenza virus.

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Particles with a precursor HA or the hemagglutinin composed of the cleavage products HA 1 and HA2 are equally capable of a hemagglutination reaction, and in both cases the hemagglutination can be inhibited by specific antisera. This means that the reactive antigenic determinant is not significantly modified

by proteolytic cleavage. The same holds true for the interaction of the hemagglutinin with the host cell. In all systems tested cleavage was not necessary to establish adsorption of virus particles to neuraminic acid containing receptors at the cell surface. A cleaved HA is necessary, however, for the infectious process to proceed further (Klenk eta/., 1975; Lazarowitz and Choppin, 1975).

Infection of embryonated chicken eggs or cells derived from the chorioallantoic membrane of the chick embryo with influenza strains of human and animal origin results in the formation of infectious progeny virus. Attempts to grow infectious viruses in chick fibroblasts are only successful with strains which possess the hema.gglutinin of fowl plague virus (FPV), while all others have only a negligible infectivity. Analyses in polyacrylamide gels show a direct correlation between infectivity and the structure of the hemagglutinin. Only particles with a cleaved HA are infectious. A successful cleavage of HA which corresponds to productive conditions in vivo can be carried out in vitro by treating the inactive virus particles with trypsin. Such a treatment also activates infectivity (Table 1).

A productive infection of cells in which infectious virus is normally not formed is attained if trypsin is added to the culture medium. This becomes particularly evident, if cells are infected under single and multiple cycle conditions with a multiplicity of infection ranging from 30 to 0.003 PFU/cell (Figure 1). Growth curves of FPV which is synthesized in such cells as infectious particles with cleaved HA are identical irrespective of the presence of trypsin. On the other hand a clear requirement for the enzyme is observed in the case of virus N.

When trypsin is present in the medium, replication is similar to that of FPV. In the absence of trypsin, however, newly synthesized non-infectious virus is only demonstrable under single cycle conditions. Under multiple cycle conditions virus production progressively decreases as the multiplicity of infection is reduced. This phenomenon also explains plaque formation by such strains which are normally non-plaque producers in chick fibroblasts in the presence of trypsin (Figure 2).

Whether a proteolytic cleavage is possible in a given host cell is determined primarily by the individual structural characteristics of the HA rather than by the activation of cellular proteases by the infecting virus. This could be demonstrated by double infection of chicken fibroblasts with FPV and virus N, which are produced in highly infectious form or with reduced infectivity, respectively.

Since HA 1 and HA 2 have different electrophoretic mobilities in FPV and virus N, it was possible to determine the origin of the cleaved HA in the mixed virus population by coelectrophoresis with homogeneous preparations of each virus.

The glycoprotein pattern of the progeny virus is shown in Figure 3. The results show clearly that after double infection FPV does not induce cleavage of the hemagglutinin glycoprotein of virus N. Biological tests confirm our previous observation that virus N requires try;>sin to undergo multiple cycle replication in chick fibroblasts, whereas FPV can do so in the absence of the enzyme. In doubly infected cells only FPV-specific hemagglutinin is formed if trypsin is absent. In the presence of trypsin, however, hemagglutinin of both strains can be detected (Table 2).

[...]

Comparisons of the nuclear magnetic resonance (NMR) spectra of chicken fibroblasts exposed to virus N with either cleaved or uncleaved HA are being carried out in our laboratory by C. Nicolau and H-D. Klenk. The results suggest that the hemagglutinin is in fact involved in the penetration process. These studies indicate that virus N with cleaved HA induces an alteration in the fluidity of the lipid bilayer of the plasma membrane, whereas virus N containing uncleaved HA does not. Simitar but more distinct fluidity changes have been observed when Newcastle disease virus containing a biologically active fusion glycoprotein has been compared to virus containing an inactive F glycoprotein.

This could mean that the mechanisms of penetration process resemble each other in both cases and that the function, which is exerted by the F glycoprotein of paramyxoviruses must be attributed to the hemagglutinin of influenza viruses.

Since a hemagglutinin composed of the cleavage products of HA 1 and HA2 is indispensable for the formation of infectious virus particles, only those conditions which have been def"med in our in vitro studies can predispose to a pathological situation in the host organism. In contrast to former conclusions from others it is now clear, however, that viral glycoproteins alone do not determine pathogenicity of influenza viruses. This could be convincingly deduced from a series of experiments, where recombinants of fowl plague virus were compared in vitro and in vivo (Rott et al., 1976). In these experiments there was no correlation between the presence of cleaved glycoproteins and the pathogenicity of the virus. Furthermore, using the same parent recombinants for double infection, the progeny back recombinants were only infrequently pathogenic for chicken, although they carried both surface antigens of the highly pathogenic FPV (Table 5). The results of these experiments show clearly that the pathogenicity of influenza virus depends on more than one gene. This conclusion was underlined by experiments (Table 6) where FPV recombinants were employed which carried a particular defined gene from other influenza viruses (Scholtissek et al., 1977). Here again it became clear that the FPV derived HA cannot induce the disease in the natural host, but a certain gene constellation is necessary to make up a pathogenic virus. Full reconstitution of pathogenicity to levels of the wild type FPV largely depends on the parent strain being used for the gene exchange and the particular gene which is carried 0'Ä~er. This means again that there is no individual gene coding for pathogenicity and that the HA gene is not a 'virulence' gene by itself.

At the present time we cannot list the optimal gene constellation to make up a pathogenic virus and we are not in a position yet to define the particular contribution made by the individual genes which might finally result in the complex phenomenon of pathogenicity.

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Institute for Medical Virology Giessen - Institut für Medizinische Virologie

Institut für Medizinische Virologie Gießen

The **Institute for Medical Virology** has been a research facility at the Justus Liebig University of Gießen since 1966 . The institute emerged from interdisciplinary research in the veterinary, human and biological departments and, when it was founded, housed the first independent chair for medical virology in what was then the Federal Republic of Germany. The first professor was Hans Joachim Eggers (1966–1972) followed by Heinz Bauer (1973–1990, President of the University of Gießen from 1987), Wolfram H. Gerlich (1991–2010) and John Ziebuhr (since 2010). The institute was national from 1996 to 2010Consultative laboratory for hepatitis B and hepatitis D viruses of the Robert Koch Institute and has been the national reference center for HBV and HDV since 2011 . It has been part of the German Center for Infection Research since 2012 .

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history

Giessen virology until the institute was founded

The earliest work on virus infections at the Institute for Hygiene of the Faculty of Human Medicine in Gießen can be traced back to Georg Gaffky (1850–1918), Robert Koch's colleague and later successor . The research was limited to disease descriptions, as the viruses had not yet been characterized as an independent infectious agent and cultivation in the laboratory was not yet successful. Rudolf Otto Neumann (1868–1952) dealt with rabies infections in 1912 , but research into viral infections was not yet an independent subject and remained until the development of cell culture and electron microscopy an exotic branch of hygiene and bacteriology.

With the support of the Hygiene Institute of the Medical Faculty, the Veterinary Medicine Faculty, which has been independent since 1914, founded its own institute for veterinary hygiene , bacteriology, veterinary police and animal disease studies in 1924 (from 1926 Institute for veterinary hygiene and animal disease studies). Wilhelm Zwick (1871–1941), as the first full professor of the new chair, mainly dealt with viral diseases, including rinderpest and Borna's disease . Zwick pursued the plan to set up a Kaiser Wilhelm Institute for animal disease research in Giessen, but this was achieved through the synchronizationthe university from 1933 and the death of Zwick was not realized. After the war Elmar Roots (1900–1962) took over the veterinary institute and deepened the focus on virology even further. In 1955 he acquired the first transmission electron microscope and ultracentrifuge from the University of Giessen; In addition to cell culture, these were the fundamental apparatus on which virological research was based until the 1960s. Rudolf Rott (1926–2003), who after a short stay at the "Max Planck Institute for Virus Research" in Tübingen (now the MPI for Developmental Biology), did his doctorate at Roots) completed his habilitation at Roots and was appointed to the first chair for virology (Faculty of Veterinary Medicine) in Gießen in 1964.

Due to the division of labor in the faculty structure, according to which virological topics were strongly represented at the veterinary medicine faculty since 1924, no separate department for virology was created at the human medicine institute for hygiene and bacteriology. This deviates from the usual development of other virological institutions in German-speaking countries. The fact that virology was not represented independently in the human medicine faculty was particularly

evident from Rott's research focus, which deals with influenza viruses together with Christoph Scholtissek and Rudolf Dernickbusy. These viruses represent in a special way the interaction between human and animal infections. For a planned virological research network on site and its expansion in a planned special research area , an independent medical chair was required, which was established in 1966 and to which Hans Joachim Eggers was appointed on June 23, 1966. Eggers discovered the RNA polymerase of the poliovirus at Rockefeller University in New York and characterized its mutations after he had previously obtained his doctorate at the MPI for Virus Research in Tübingen.

The first laboratories of the new institute were located behind the institute for poultry diseases in a former stable building on Gaffkystraße. Like its partner institute for veterinary medicine, it was named “Institute for Virology”, but with the addition “Department of Human Medicine”. To avoid confusion, the term Institute for Medical Virology became more and more common in the 1980s.

SFB 47 and MZI building

Eggers and Rott designed what was then a new type of research association, which in 1968 resulted in the establishment of the Collaborative Research Center 47 “Mechanisms of Viruses Pathogenicity”. This brought together other research groups at the university, such as biochemistry, pharmacology, microbiology and later plant virology. A research group emerged from the CRC 47, which existed exceptionally long until 1988, and Rott also remained its spokesperson until his retirement in 1994. When the SFB was founded, the premises were limited and in 1968 the university began building an interdisciplinary research center in Frankfurterstrasse 107, the so-called multi-purpose institute (MZI), which was considered exemplary at the time. This building was tailored to the needs of the SFB and, after its successive occupation in 1970/1972, housed all the relevant institutes of the research association. The bundling of three virological institutes (veterinary virology, human virology and plant virology) in a single research building was unique in Europe at the time.

In 1970 Eggers accepted Hans-Dieter Klenk, who had come from New York, as an assistant in the Institute for Medical Virology, with which the veterinary-virological working groups on influenza viruses found a human medical supplement. A research group around Gisela and Gerd Wengler was also set up to deal with other RNA viruses, the alpha and flaviviruses . The first head of the newly established diagnostic department was Jan Leidel , who followed Eggers to Cologne University in 1973.

In 1973, Heinz Bauer , who came from the MPI in Tübingen, established the then still young research area of retrovirology at the institute , became the new chair holder . In the same year, Hans-Dieter Klenk received a C3 professorship at the institute, which he held until he was appointed to the Institute of Virology in Marburg in 1985. Heinz Bauer became President of the Justus Liebig University in 1987, which meant that the chair remained vacant for a long time. The retrovirologist Roland Friedrich, who was appointed to the C3 professorship in 1986 and comes from the laboratory of Michael Bishop and Harald Varmus in San Franciscotook over the provisional management of the institute. He devoted himself to the study of virus-induced leukemia , in particular the Friend leukemia virus .

The "Giessen School of Virology"

From the beginning, many research groups worked at the institute, from which nationally and internationally important virologists emerged. In addition to Hans-Dieter Klenk (Director of the Institute for Virology in Marburg), this group, known as the “Giessen School of Virology”, also includes Robert Friis , Teruko Tamura , Heiner Niemann (Director of the Friedrich Loeffler Institute), Angelika Barnekow (professorship at the University of Münster), Helga Rübsamen-Schaeff (Director of the Georg-Speyer-Haus), Bernhard Fleischer (Director of the Bernhard Nocht Institute for Tropical Medicine) and Masanori Hayami (Director of the Virus Research Institute, Kyoto).

SFB 535 and consulting laboratory

Bauer's successor as director was Wolfram H. Gerlich in 1991 , who previously worked at the Göttingen Institute for Hygiene under Reiner Thomssen (Head of the Medical Microbiology Department, Center for Hygiene and Human Genetics at the University of Kreuzbergring 57) and at Stanford University under William S. Robinson on the hepatitis B virus(HBV) had worked. The Göttingen Institute was then the national reference center for hepatitis viruses. Among other things, Gerlich characterized the surface protein of HBV (HBs antigen) and discovered for the first time the covalent binding of a protein to a viral genome. With his appointment, further employees gradually came to Gießen from Göttingen, who dealt with various aspects of the *Hepadnaviridae* and the then newly discovered hepatitis C virus .

Since the SFB 272, which emerged from the SFB 47 and was initiated by Gerd Hobom , existed at that time and was only granted a short application period foreseeably, Gerlich established a new SFB from 1995, which, following on from the existing interdisciplinary structures in Giessen, also added virological Should involve research groups from Marburg. This was finally achieved in 1997 with the SFB 535 (Invasion Mechanisms and Replication Strategies of Pathogens). This SFB 535, coordinated by the Institute for Medical Virology, existed in the maximum application period until 2009 and significantly shaped the infection research of various institutes in Giessen.

In 1996, the institute was appointed the national consultative laboratory for hepatitis B and D, which entrusted it with issues of standardization, clarification of transmission cases, the efficiency of vaccine preparations, test procedures and procedures for virus inactivation and virus safety with regard to HBV and HDV, among other things at national and international level . The ongoing close cooperation with the WHO , the Paul Ehrlich Institute and the Robert Koch Institute date from this time .

New research building

With Gerlich's retirement in 2010, the tasks as a consulting laboratory ended as intended, and in the previous year the maximum duration of the SFB 535. With the appointment of virologist John Ziebuhr from Queen's University Belfast , the chair could be filledagain in the same year. Ziebuhr previously worked in Würzburg on the molecular biology of coronaviruses and was involved in the characterization and detection of the SARS coronavirus in China. After the end of the consulting laboratory, the tasks of such a laboratory were redefined by the RKI and, due to the increased importance of the pathogens, an upgrade to the reference center was recommended and advertised as such. After a new selection process in 2011, the institute wasFederal Ministry of Education and Research appointed National Reference Center (NRZ) for hepatitis B and D viruses.

Reference Center (NRZ) for hepatitis B and D viruses.

The planning of a new research building for the institutes of the MZI had been advanced since the 1990s. After construction delays, the institute was able to move to the new Biomedical Research Center Seltersberg (BFS) in March 2012 , as the work in the MZI building, which is now over 40 years old, no longer met the requirements for virological work. Ziebuhr was elected the first spokesman for the FSO. In 2012, together with the Marburg virologist Stephan Becker, he succeeded in founding the SFB 1021 (*RNA viruses: RNA metabolism, host response and pathogenesis*), which brings the three virological institutes (veterinary and human virology in Gießen, human virology in Marburg) together again to form a research network. In the same year the Institute for Medical Virology became part of the German Center for Infection Research .

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100 Years of Virology: The Birth and Growth of a Discipline

Charles H. Calisher, M.C. Horzinek

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Rede, gehalten anlässlich der Akademischen Trauerfeier am 7. November 2003

Hans-Dieter Klenk

Rudolf Rott (1926–2003) –
Ein Leben für die Virusforschung

http://geb.uni-giessen.de/geb/volltexte/2004/1882/pdf/Klenk-gu37-2004.pdf

With this sentence Rudolf Rott wrote on October 6th 2000 at the beginning of his commemorative speech placed on his teacher [**Dr. Heinrich Werner Schäfer (born 1912)**], wants i start. He brings it in a few words all that expresses us - just once two and a half years later - at the news moved by Rudi's death. Dear Renate, Dear Sabine, you know that many of us back then and during the previous weeks and months when the end with inexorability often in my mind You guys were. The academic celebration to which we got together here today will the grief cannot suppress, but alleviate it in kind and grateful remembrance to a great scientist, one model academic teacher and one good friend.

I met Rudolf Rott in September 1970 learned when I came from New York an assistant position in the virological institute at the medical faculty with Hans Eggers. It turned out very quickly that Rudi and me the same scientific Interests connected. From the collaboration, which actually started immediately and lasted for more than 15 years a personal friendship that soon also included families. I have Rudi almost everyone during my time in Giessen Day seen, and also later is the regular one Contact never torn off. In the rain He used to come to see me after 6 o'clock in the evening come, and then maybe stayed a quarter, but often an hour or two. Such He not only made visits to me, they were for most employees. Yoshiyuki Nagai, from 1974–1976 visiting scholar in Giessen and later professor at the University of Tokyo, describes this in a letter he sent me on the occasion sent today as follows:

> *Rudi "used to stroll into each lab, almost every day and to take at least a few minutes and sometimes an hour to discuss the data just coming out. Hey what casual and light-hearted in manner, sometimes cracking a joke, but was essentially very eager to share his rich experience and knowledge on animal viruses with us of the younger generation. "*

These conversations weren't all about Science, but often about God and the world. By telling what moved him and drove what he experienced in the present and Past, he allowed me over and over again Insights into his life that go far beyond the scientific went out. Its openness and spontaneity, its intellectual agility made access to his person light.

Youth, academic education

Rudolf Rott was born on May 23, 1926 in Stuttgart born. The father, a government building officer, came from a German resident in Ukraine Family and had his home during abandoned during the First World War. The family of Mother was rooted in Swabian. In different Share Württemberg - in Ellwangen, Oberndorf and Rottweil - Rudi has them Attended school. Has Swabian origin he can never deny it. His youth fell in a time by one by the national governor socialism has so far sparked a spirit of optimism was shaped to an unknown extent. who Rudi's enthusiasm knows the one Was part of his being and which he was about to be has preserved throughout life, can Easily imagine the fascination that this awakening in a supposedly better future evoked the adolescent.

1943, still Before leaving school, he volunteered as a war volunteer and stood as an officer at the age of 18 at the frontline. 2 years later - he was just once 19 - it was all over: captivity, Internment camp. The ideals had each other proved to be illusions. The enthusiasm was given way to knowledge, to the wrong thing to have served. Reiner Thomssen has this everything in his poignant funeral speech on 5. May be described with empathy and fairness. Rudi himself has this past never suppressed. She left a traumatic impact on him. How could it have been otherwise?

But the collapse also offered an opportunity for a new beginning. In 1947 Rudi was still in the Graduated from high school. Then he worked for 2 years long as a servant for a farmer in Hohenlohe. He liked to think back to that time. May also be one of the motifs for the study of veterinary medicine lie that he started in Giessen in 1950. 1955 PhD he on the topic "A Contribution to Etiology the pig flu "with Prof. Roots, whose Assistant he then still in the 3 following Years ago.

During this time he met Renate Kröll who later became his wife. In almost 50 Years of marriage she stood him in love and care and, anytime his temperament of needed to balance wisely aside. The Daughter Sabine and the 3 grandchildren were his pride and joy. He was ingrained in this Family, it gave him strength and confidence. Rudolf Rott also met [Dr. Heinrich Werner Schäfer (born 1912)] in Giessen Schäfer, who was a private lecturer here at the time Held lectures. The two quickly took hold Trust each other, and Rudi has this meeting later again and again as one of the fortunes of his life. When Shepherd who is the extraordinary scientific Talent of the young veterinarian quickly realized an assistant in his department at the Max Planck Institute for Virus Research in Tübingen, Rudi immediately accepted. In the In the 50s and 60s it belonged to Tübingen Institute one of the leading international institutions in the field of virus research. When Rudi arrived, it was in full bloom. Greed, Schramm and Wecker had the RNA genomes discovered by plant and animal viruses. Another had the amino acid sequence of the tobacco mosaic virus cleared up and the virus from RNA and Protein reconstituted in vitro. Schäfer had found that the virus is the classic avian influenza was an influenza virus, and with it the Created the basis for the paradigmatic role, who then research this virus this virus group should play. He could also show that the avian influenza virus in an excellent way to study Structure and reproduction of enveloped viruses completely generally suitable. Hemagglutinin and nucleocapsid protein were in the beginning as building blocks the virus particle has been identified, and Rudi now dealt intensively with her biochemical and immunological characterization. The successes were not lacking. Soon it was valid as one of the most hopeful young virologists.

So it was only logical that the 36-Year olds running the at his alma mater Giessen newly founded Institute for Virology was offered. Of course it wasn't a coincidence that this chair, next to Würzburg the first of its kind in Germany, just working on one Faculty of Veterinary Medicine established virology has always been crucial Receive impulses from veterinary medicine. So I would like to briefly get to the roots of our subject here in Giessen. After this Wilhelm Zwick, from internal medicine coming, in 1924 the newly created ordinariate for veterinary hygiene and animal diseases took over, was increasing in this faculty researched about viral diseases. Already Zwick's research on the Borna's disease and its causative agent Laid the foundations for a research area, which developed to full bloom under Rudolf Rott has been. **The end of the 30s by [Dr. Erich Traub (born 1906)] results obtained on the lymphocytic cells Mouse choriomeningitis not only set current paradigm for a virus-induced, immunopathological Reaction represented, but formed also an essential basis for discovery of the phenomenon of immunological Tolerance. In the 50s was busy Elmar Roots, later Rott's doctoral supervisor, successful with the causative agent of psittacosis, which then was still counted among the major viruses, and with the rabies virus.**

It was also Elmar Roots who initiated the game in 1962 the institute for To divide up veterinary hygiene and animal disease. The rapid development of the microbiological Taking into account subjects were after his sudden death next to that Institute for Hygiene and Infectious Diseases of the animals the Institute for Poultry Diseases as well as bacteriology and virology as independent chairs set up. After The conception of the faculty at that time should be the Primarily doing basic research in virology and such an addition and expansion of the other's scientific spectrum microbiologically oriented facilities of the faculty.

On April 15, 1964 the time had come. Rudolf Rott moved into a newly furnished, almost finished one put stable building that in a short time so That had been rebuilt the requirement were fulfilled for experimental work. For the necessary renovation work stood for a total of 30,000 DM and for them Initial equipment 120,000 DM available. Employees from the very beginning were next Ms. Seitz, who high her boss as everyone's esteemed institute secretary accompanied to the end hat, Rudolf Dernick and [Christoph Scholtissek (born 1929)] from the Max Planck Institute for Virus Research in Tübingen and Hermann Becht, who from Zurich joined them. Your commitment, yours scientific qualification and the common Willing to do good research in pouring the institute has an essential role in running owe its successful start to the then also led to it some years was able to move into a larger building later, in which it is still now.

Scientific work

Thus conditions were created under which focus on the scientific and organizational Rudolf Rott's talent in full bloom could unfold. It is impossible to do this in more than 300 publications laid down life's work, on which more than a hundred employees were involved and trained in a short memorial speech even approximately fully describe. I must therefore limit myself to a few focal points and wants the selection - without chronological Ranking - from two points of view to meet:

1) Where are Rudolf Rott's outspoken Pioneering achievements? "What did he discover?" was that of Otto Warburg again and again asked question when he was about importance and to judge the genius of a scholar would have.

2) Which structures did he create, which ones He set synergisms in motion, that of the virological research on his own Work area benefited?

As mentioned earlier, the new Giessen institute looked its most important task in the extraction newer and not so much in mediation known findings. So it was his Self-image according to primarily one Research institute. The research was after one that is clearly recognizable from the start scientific and organizational concept carried out. On the organizational I will come back to the concept later. The scientific concept was one Virus system from as many different ones as possible To illuminate angles. These Multidisciplinarity was with Rott as virologist, [Christoph Scholtissek (born 1929)] as a molecular biologist - a term which didn't even exist back then - and Becht as an immunologist in principle already in the first Hour. The object to which she their concentrated efforts were like the influenza viruses already in Tübingen. they should the central one for the entire 30 years Remain topic even if the range of Virus systems was later expanded considerably.

Early studies of influenza viruses

One of the themes of the early Gießen work had the structure and replication of the influenza virus RNA to content. From investigations for the so-called multiplicity reactivation there are already first indications of the segmented Genome structure (1). With the help of the virus-specific Polymerase made it possible to make complementary To produce RNA. This allowed again first studies on genetic Relationship between different Influenza viruses (2). Other work of the early phase dealt with the Surface proteins of influenza viruses. So could the neuraminidase by protease treatment cleaved from the virus and enzymatically active form (3). This approach has been used by other laboratories pursued further and ultimately led to X-ray structural analysis of

neuraminidase and for the development of neuraminidase inhibitors, which in recent years as drugs to fight influenza on the market arrived.

Overall, these works reflect a period of careful scanning and searching according to the main thrusts. In the beginning but it was already becoming apparent that influenza virus research is moving in two directions should move, one of which the Elucidation of the genome structure and the replication Mechanisms, but the other is research of biosynthesis and function the content of the virus envelope components. These are strongly molecular and cell biological specific subject areas will later be overlaid by two now completely virologically oriented research areas, namely the molecular Epidemiology and Phylogenesis, as well as the Influenza virus pathogenicity.

The influenza virus genome

One of the most important discoveries in the field influenza virus research was the center observation made in the 1970s that the Virus genome from 8 different RNA Segmenklenk ten, each of which for at least encodes one of the viral proteins (4). That was the explanation for the exceptionally high Influenza virus plasticity and variability found. The segmented genome structure enables namely the free exchange of Genes if a cell is affected by different influenza viruses is infected. Under these conditions Then new viruses can arise, the genes both parents included.

Structure, function and biosynthesis the glycoproteins of influenza viruses

The second focus of the research was the glycoproteins of the influenza viruses that carry the Initiators of the infection process and that Main goal of the immune defense of the infected organism are. Especially investigations on Hemagglutinin have been shown to have these viral components on the endoplasmic reticulum formed and transported from there to the cell surface become (5). In these investigations hemagglutinin appeared for the first time in his Significance as a biological probe, which later became broad Application in the education of the constitutional Exocytosis path found.

Of particular interest were the ko- and post-translational modifications that occur during The maturation process of the glycoproteins takes place. Studies with specific inhibitors contributed significantly to elucidate the glycosylation processes and the function of the carbohydrates at (6, 7). In the acylation was another previously unknown form of protein modification discovered (8). One of many viral glycoproteins observed modification is the proteolytic cleavage. In pouring could be shown that the cleavage of hemagglutinin due to cellular proteases for the infectivity of influenza viruses (9). It is important that the cleavage occurs exactly the place provided for this purpose (10). These findings then led to the discovery that hemagglutinin not just a receptor binding protein, but also a fusion protein. Plays a central role in the merger process a fusion peptide that - through the proteolytic cleavage released - to amalgamation of the virus envelope and cell membrane and so the introduction of the virus genome into the cytoplasm (11).

Studies on the influenza C virus showed that this virus has only one glycoprotein, that has the functions of a hemagglutinin, a Fusion factor and a receptor-destroying one Enzyme combined in itself (12). It differs the influenza C virus is very distinct from the influenza A and B viruses in their receptor specificity. These investigations resulted then also to the discovery of a new receptor-destroying one Influenza virus enzyme, thereby the high receptor specificity of the various influenza viruses underlined becomes.

Pathogenicity Mechanisms for influenza viruses

There was an instrument in the influenza assortment available with which a variety of biologically interesting problems approached on a genetically well-defined basis could be. So they were of great importance in finding the factors that responsible for the pathogenicity of influenza viruses are (13). These investigations have z. B. shown that non-pathogenic reassortants by mutation to pathogenic viruses can reverse (14). In the different Reassortants depended on the pathogenic properties of different gene constellations from. It turned out to be difficult to establish general rules according to which certain genes aim at Pathogenicity change are exchanged can. Overall went from this work suggests that pathogenicity is not due to a single one Gene can be defined, rather that they are more likely the result of an optimal Gene constellation is.

New impulses for pathogenicity research came from the investigations to the proteolytic Activation of hemagglutinin, the then a large one as a specific protein Assigned importance as a pathogenicity determinant could be. Examinations, which was initially carried out on avian influenza viruses were showed that the cleavage of hemagglutinin the spread of infection and thus the pathogenicity (15), but also the Adaptation to a new host (16) is essential influenced. Of the numerous works in which has been shown to be structural Changes at the cleavage site of the hemagglutinin lead to changes in pathogenicity, I just want to mention one here, in the heterologous Recombination with cellular RNA for blamed such an event could be (17). Finally, it should be remembered be that proteolytic activation of hemagglutinin is an important mechanism is also used by bacteria to increase pathogenicity an influenza virus infection lead (18).

Pathogenicity Mechanisms in paramyxoviruses

The proteolytic activation of surface glycoprotein also has with many others Viruses are of great biological importance. In In fact, the role that activation played the pathogenicity plays, for the first time at Newcastle Chicken Disease Virus (NDV) observed (19). Investigations later on Sendai virus, another paramyxovirus, have carried out this concept confirmed in principle (20). Yoshiyuki Nagai brings the importance of these investigations and the catalytic function that Rudi Rott played to the point when he writes:

> *"What was believed at that time was that paramyxovirus fusion glycoprotein synthesized in tissue culture cells would generally be inactive and become activated by treatment with a low dose of trypsin in vitro. What I was actually seeing in Gießen was, however, that the fusion protein of NDV was always proteolytically cleaved and activated in tissue culture cells. One day, looking at these data, Rudi said, just casually as usual, 'the strain Italy (you are using) is highly pathogenic (for chickens) '. Then it flashed across my mind that NDV would represent a useful or perhaps the best model to study the molecular basis of viral pathogenesis. Upon my request, Rudi immediately collected a panel of virulent and avirulent NDV strains. Using this panel, I was soon able to show a perfect correlation between the cleavability of fusion glycoprotein and virulence. "*

And he concludes:

> *"With this, we were able to open a new field, the molecular basis of viral pathogenesis. "*

Influenza Virus Evolution

The elucidation of the segmented genome structure was fundamental to understanding phylogeny and molecular Influenza virus epidemiology. Reassortants are not only created in the laboratory, but also in nature and then lead to the major influenza pandemics. It is general now known that the subtype H1N1 1957 of the subtype H2N2 and this again in 1968 was replaced by the subtype H3N2. Entered in 1977 then again the subtype H1N1, which is genetic largely identical to the previous one H1N1 virus was. In a genetic study, which can certainly be called classic, Scholtissek and Rott were able to show that

this The H2N2 subtype arises on the exchange several genes were based while at Subtype H3N2 essentially only the hemagglutinin Gene was exchanged and obvious originated from an animal virus (21).

Borna disease virus

Finally I would like to have a virus with - like already mentioned - very long tradition in Giessen talk, the causative agent of Borna's disease. It is a relative one rare, naturally found in horses and sheep endemic infection that presents itself as slowly progressive encephalomyelitis with regularly manifested fatal outcome. As with all slow virus infections and theirs Here, too, the experimental pathogen proved itself Access to be extremely difficult. Rudi It is Rott's great merit, along with Hermann Becht and later with Lothar Stitz and Jürgen Richt has not been here over the years Have relaxed until gradually and finally at an ever faster pace set spectacular successes. I want to try, this development here in a nutshell to trace.

The virus had long been known to be infected by its natural hosts to other animal species transmitted by intracerebral inoculation can become neurological Failure phenomena leads. On newer and especially more interesting in retrospect Aspect emerged as with Tupaias Behavioral disorders have been observed (22). The virus, which is exclusively in neuronal tissue increased by itself no signs of illness. The pathological ones Changes and clinical symptoms rather, they are the result of an immune process (23). This could clearly be seen in immune incompetent Rats are shown. Even though the virus is found in the central nervous system Animals multiplied, symptoms of disease appear only after adoptive lymphocyte transfer on. The behavioral disorders already mentioned in animals appeared in a whole new light, as Bornavirus-specific antibodies also contribute observed mentally ill people were (24, 25). In the last mentioned work first came Bornavirus-specific cDNA used. That was also for this virus the molecular age opens up, so that its gene structure then very quickly and thus its location in the system of Viruses could be cleared up.

Giessen, center of virus research

Such a large research program that I do could only sketch here in rudiments of course very clear concepts. On the scientific Concept of the multidisciplinary I have already pointed out the approach. Him faced an organizational concept Rudi caught the eye from the start and then consistently put it into practice. It consisted of all at Giessen University groups active in virology to form a research network merge, and this long before biocenters and gene centers entered the general awareness had entered. In Shape of the legendary Collaborative Research Center 47, Pathogenicity Mechanisms of Viruses, and its successor organizations then very soon suitable funding opportunities instruments found for this network. So a free space was created in which next to the already mentioned again and again new groups could unfold.

First of all, Hans Eggers should be mentioned here as the first director of the sister institute at the Medical Faculty the Verbund in its Actively supported and helped shape the beginnings.

Heinz Sänger researched viroids, self-reproducing, infectious and pathogenic RNA molecules without any envelope proteins. When in 1978 the Nucleotide sequence of the tuber spindle viroid Disease of the potato to be elucidated could, it was the first full description of the molecular Structure of a pathogen.

Gerd Wengler's group led basic Work on the structure and reproduction of Alpha and flaviviruses. These include also investigations on the West Nile virus, a Pathogen that has been found in recent times because of its rapid pace Spread to North America, where it used to be was not known, great public sensation aroused and still does.

Heinz Bauer and Bob Friis, originally also at the Schäfer's Institute in Tübingen, brought the tumor virology department to Giessen. The Group dealt with structure and multiplication of the Rous sarcoma virus and others Retroviruses, as well as in particular with the mechanisms of those indicated by these pathogens Tumorigenesis. With Wolfram Gerlich, the Heinz Bauer's successor then became scientific spectrum through hepatitis research again expanded.

When Heinz Sänger received a call to the Max Planck Institute for Biochemistry in Munich followed, Gerd Hobom was his successor the Chair of Molecular Biology. When Hobom came to Giessen, the enthusiasm jumped for the influenza viruses on him too. He became one of the fathers of the so-called here reverse genetics of influenza viruses and developed Methods used by these viruses for the first time genetically modified in an efficient way could become. You have the area revolutionized and are now relevant in all Laboratories applied.

Giessen was a center for virus research become whose charisma far beyond that Boundaries of our country. The Institute became the scientific home of many German virologists and attracted researchers from all over World for guest visits. Many became Rudis Friends for life. Personal contact was cultivated through countless evenings in the domestic circle.

Finale

Rudolf Rott has a high scientific level as a researcher Reputation acquired. His discoveries in the field of structure and Multiplication of animal viruses, especially the Influenza viruses, their evolution and pathogenesis the diseases caused by them have won numerous awards and Awards recognized by those here only the Society's Otto Warburg Medal for Biological Chemistry and the Robert Koch Prize should be mentioned. The veterinary Faculty of the Free University Berlin has given him an honorary doctorate awarded. He was an honorary member of the society for virology, which he has been doing since its inception was closely connected.

So it was inevitable that he would the scientific community in many Consulted bodies for advice. Be mentioned here only the Robert Koch Foundation, the Alexander von Humboldt Foundation and the Fritz Thyssen Foundation of which he is a member or board member served by committees. Particularly connected he felt at home with the German Research Foundation. Here he was a member of the Senate, Board of Trustees and Main Committee. Since that time the division of our country particularly linked him emotional ties to the Leopoldina. We have heard this before. The close relationships to the Max Planck Society never canceled even after leaving Tübingen. She named him hers in 1991 Member.

All these offices couldn't stop him from what he saw as his main task: for the good of his institute and for the prosperity his specialty, virology, to work. He loved the experimental work. Until the end his professional career he could in the laboratory be encountered. There he sat in the white smock buttoned on the back next to Michaela Orlich, unfortunately his too already deceased technical assistant, in order to give her, as he used to say, instructions to get how to go on should.

In 1994 Rudolf Rott retired. Jurgen Thiel, his successor, he was able to do well Institute handed over. One year old Stay at the Wissenschaftskolleg in Berlin has secured him the departure from office made easier. Our company stayed he is closely related. The evolution of virology, especially those in recent years increasingly public discussion virological He has problems with great interest tracked. His advice was asked and gladly given.

Some of the people in this room probably have Rudi with them a small symposium held on the occasion of his 75th birthday in the summer 2 years ago took place, last seen. It was admirable and moving to see like him, already badly marked by the disease, it didn't take away that listen to most of our lectures. I

would like to finish with Yoshi Nagai again Have a say on this day wrote:

> *"Rudi had many students, coworkers, and collaborators, including us from Japan. I am sure that all of them also admired Rudi as I do for his strong scientific capability and fine personality and appreciated his paternalism. They met him at a reunion to celebrate his 75th birthday in 2001, but I could not be there for a personal reason. While apologizing to Rudi for my rudeness on the phone, I learned that he had already been fighting against the disease. 'Yoshi, don't forget Gießen! 'These were his last words to me. My reply what 'Never.' "*

We all who knew him will become Rudolf Don't forget Rott. He was a great scientist a respected colleague and a good one Friend. So he becomes in our memories and stay in our hearts.

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Dr. Francis Peyton Rous (born 1879)

Francis Peyton Rous (1879–1970), pictured in 1923, at age 44, in his laboratory at the Rockefeller Institute for Medical Research, New York, NY, USA. Source: National Library of Medicine.
[HP005R][GDrive]

Wikipedia Francis Peyton Rous

- Born October 5, 1879 in Baltimore, Maryland [HK006K][GDrive]
- Died February 16, 1970 (aged 90) in New York City [HK006K][GDrive]

ASSOCIATIONS

- **Dr. Richard Edwin Shope (born 1901)** - [HP005P][GDrive]
  - (In 1934, Rous' Rockefeller Institute colleague, [**Dr. Richard Edwin Shope (born 1901)**], asked **Rous** to examine warts on jackrabbits that had definitively been shown to be caused by an ultrafilterable virus. This virus was Shope papillomavirus (rabbit papillomavirus). When Rous confirmed that the warts were benign tumors, he was reinvigorated in his intent to unravel the mysteries of viral oncology. Over the next 30 years, Rous and his colleagues showed that the benign tumors could progress to malignant carcinomas and that chemical carcinogens could interact with the virus — further discoveries that formed building blocks for modern virology. Today, we recognize that ≈20% of human cancers worldwide have infectious etiologies, for which preventive measures such as vaccines have great promise.)
- **Dr. Simon Flexner (born 1863)** - (...)
- **Dr. Cornelius Packard "Dusty" Rhoads (born 1898)** - (...)
- **Dr. Charlotte Friend (born 1921)** -
  - (*"In 1956, **Charlotte Friend** (who had a role in [**Dr. Alice E. Moore (born 1908)**]'s lab as of 1950) gave a paper at the annual meeting of the American Association for Cancer Research in which she stated that she had discovered a virus that caused a leukemia-like disorder in newborn mice. **She was roundly criticized for bringing up what was considered to be the old canard of viruses causing cancer.** Only **Peyton Rous**, who had made a similar announcement years before, spoke in her defense. "*)
- **Dr. Renato Dulbecco (born 1914)** (...)
-

Saved Wikipedia (April 7, 2021) - "Francis Peyton Rous"

Source : [HK006K][GDrive]

- Nationality American
- Alma mater Johns Hopkins University, Johns Hopkins School of Medicine
- Known for Oncoviruses

Awards

- ForMemRS (1940)[1]
- Albert Lasker Award for Basic Medical Research (1958)
- National Medal of Science (1965)
- Nobel Prize in Physiology or Medicine (1966)

Scientific career Fields : Virology

Francis Peyton Rous ForMemRS[1] (/raʊs/) (October 5, 1879 – February 16, 1970) was an American Nobel Prize-winning virologist.

Education and early life

Rous was born in Woodlawn, Maryland in 1879 and received his B.A. and M.D. from Johns Hopkins University.[2]

Career and research

Rous was involved in the discovery of the role of viruses in the transmission of certain types of cancer. On October 13, 1966, he was awarded a Nobel Prize in Physiology or Medicine for his work.

In 1911, as a pathologist, he made his seminal observation that a malignant tumor (specifically, a sarcoma) growing on a domestic chicken could be transferred to another fowl simply by exposing the healthy bird to a cell-free filtrate.[3][4] This finding, that cancer could be transmitted by a virus (now known as the Rous sarcoma virus, a retrovirus), was widely discredited by most of the field's experts at that time. Since he was a relative newcomer, it was several years before anyone even tried to replicate his prescient results. However, some influential researchers were impressed enough to nominate him to the Nobel Committee as early as 1926 (and in many subsequent years). Rous finally received the award 40 years later at the age of 87; he remains the oldest recipient of the Nobel Prize for Medicine or Physiology.[5]

Awards and honors

In addition to the Nobel Prize, Peyton Rous was elected a Foreign Member of the Royal Society (ForMemRS) in 1940,[1] and he won the Albert Lasker Award for Basic Medical Research in 1958 and the National Medal of Science in 1965.

Personal life

In his later life he wrote biographies of [**Dr. Simon Flexner (born 1863)**] and Karl Landsteiner.[7]

His wife Marion died in 1985. His daughter Marni Hodgkin was a children's book editor, and the wife of another Nobel Prize winner, Alan Lloyd Hodgkin.[8]

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- ^
- Jump up to:

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http://centennial.rucares.org/index.php?page=Cancer

2010-rucares-org-rockefeller-univ-hospital-centennial-discovering-first-cancer-causing-virus

Discovering the First Cancer-Causing Virus

In 1911 Peyton Rous (1879-1970) made the startling discovery that a virus could cause cancer. A farmer had brought him a hen with a large lump in her breast. Rous, a pathologist, diagnosed the lump as a sarcoma—a tumor of cells in the connective tissue. He first tested whether the tumor could be transplanted into chickens closely related to the original one. It could, and with each passing, the tumor became more aggressive. To find out whether an infectious agent caused the cancer, Rous prepared an extract—he minced a sample of the tumor tissue in saline solution and passed this through a filter to eliminate bacteria and tumor cells. Then he injected the extract into healthy chickens. Contrary to his expectations, it produced new tumors!

Describing these experiments, Rous suggested that the tumor-inducing agent was "a minute parasitic organism"—a virus. At the time Rous did this research, however, viruses were poorly understood and the causes of cancer were even more mysterious. It was more than 50 years later, in 1966, that the significance of Rous's discovery was recognized with a Nobel Prize.

The assertion that a virus could induce tumors was so controversial that, after a few more studies, Rous abandoned cancer research until the 1930s, when his colleague at the Rockefeller Institute, Richard Shope, discovered another tumor caused by a virus—a papilloma, or wart, found in rabbits. Rous returned to studying cancer, keeping alive the viral theory of cancer causation. Only in the 1950s was the so-called Rous sarcoma virus widely adopted as a tool, because—unlike chemicals or radiation—it reliably and reproducibly induced tumors. In the 1960s a gene called src was identified as producing the protein that leads to tumors. Decades after Rous's original description, the Rous sarcoma virus, now known to be a retrovirus, remains important in research.

Peyton Rous received the BA from The Johns Hopkins University in 1900, and the MD from that university's Medical School in 1905. After teaching pathology at the University of Michigan, he joined the Rockefeller Institute in 1909, becoming a full member (professor) in 1930. He remained at Rockefeller his entire career. Among dozens of awards and honorary degrees, he received the National Medal of Science (1965), the Lasker Award (1958), and the Nobel Prize (1966). He served as editor of the Journal of Experimental Medicine.

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1959-bull-ny-academy-medicine-pg-216-award-to-payton-rous-from-cprhoads-00349-0024.pdf

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CITATION AND PRESENTATION

OF THE

ACADEMY MEDAL*

TO

F. PEYTON ROUS, M.D.

C. P. RHOADS

Director, the Sloan-Kettering Institute for Cancer Research, New York, N. Y.

As YEARS pass it becomes more frequently in order for the somewhat younger individual to speak publicly, in tribute to a somewhat older one. To perform this function a pupil of the senior is usually selected, or at least one who has some direct scientific or other reason to be indebted to the recipient of the honor. To discharge his duties properly, moreover, the payer of tribute is expected to bring forward some unique twist of phrase which will distinguish or make memorable his comment.

Until recently I have never had the honor of working with Peyton Rous, and I have no gift of words adequate to discharge properly my responsibility on this occasion. My contact with this man has been, however, of such a peculiar, and to me inspiring, nature as to lead me to acquiesce with the suggestion that I refer to it publicly, in tribute to this notable recipient of the Academy Medal.

Since it is usual and useful to refer to biographical matters, I would remind you that Dr. Rous was graduated from Johns Hopkins University in 1900, and received his medical degree in 1905. He interned at the Hopkins Hospital in medicine, became interested in pathology and continued this interest at Michigan. He was called to the Rockefeller Institute in 1909 and has been there, and a leader there, since that time.

Recall, if you will, the role of Hopkins in the revolution in medical teaching and research under way then, the inspiration given to younger men by its very great faculty, and its unique point of view.

The problem of the control of cancer disease mounts steadily

* Presented at the Annual Meeting of The New York Academy of Medicine, January 8, 1959.

F. PEYTON ROUS, M.D.

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Recall, if you will, the role of Hopkins in the revolution in medical teaching and research under way then, the inspiration given to younger men by its very great faculty, and its unique point of view.

The problem of the control of cancer disease mounts steadily in importance. The major steps toward its solution have been made by a relatively small number of individuals. Among these Peyton Rous was, in 1911, one of the first. Our modern knowledge of the neoplastic process has been constructed to a large extent around his contributions.

His original demonstration of the cell-free transmission of fowl neoplasms was complete, and at the same time revolutionary. It remained a storm center of discussion among workers in cancer research for forty years. Its significance for an understanding of cancer has been fully appreciated only recently. This work remains a landmark not only in the field of its direct application, but also in virology as a whole.

But Peyton Rous saw beyond the circumscribed area of a single technique. When its possibilities were temporarily exhausted by the limited knowledge of the time, he turned, with similar skill, to other fields.

Modern hematology, replete with knowledge and procedures, gives little hint of how mysterious were the mechanisms of blood generation and destruction thirty years ago. Transfusion was a major surgical undertaking. The preservation of blood was inconceivable, its destruction little understood, and its production a mystery. "Anemia" was a diagnosis almost as useless as "fever" had been before our knowledge of the bacterial etiology of disease. Peyton Rous and his associates went far to illuminate these biological recesses.

*Immunology was also the gainer by his work. New knowledge of the source of antibodies was made available. The discovery of hydrocarbon carcinogens and of a virus-induced cancer of the mammal by [**Dr. Richard Edwin Shope (born 1901)**] brought additional new tools to hand. The complementary actions of the carcinogens and tumor viruses became a major step forward in cancer research. It contributed much to our thinking on hidden or latent viruses that may spring into action under some apparently unrelated stimulus.*

I have recounted, perhaps inadequately, some part of the formal record. May I now refer to a more personal and largely unrecorded aspect of his work. This was his contact with and influence on younger men.

As a young pathologist just entering the field of investigative medicine, I had early contact with Dr. Rous in his capacity as editor of the Journal of Experimental Medicine. I am afraid that I was a brash young man at the time, distinctly overestimating the importance of the manuscript I had submitted. In retrospect, this was not surprising since the work had no value whatever.

Dr. Rous, gravely and patiently, reviewed my efforts with me, demolished my conclusions, refuted my claims and made clear the proper use of my native tongue. He then rebuilt on the ruins such a clear picture of the problem, and the procedure required to solve it, that my conceit was converted almost imperceptibly to inspiration, my enthusiasm to resolution. As I left the generous, patient, and kindly man, I was no longer the same individual. I was, however, wholly convinced that if I worked very assiduously, with the greatest vigor, for a very long time, perhaps I could make a real contribution.

Nothing, please be assured, could have turned me then from a life in medical science.

And realize, if you will, that the world of medical research is now strongly influenced by many, many individuals, much more deserving than I, who chose that career because of Dr. Rous' unique capacity for making inspiration stick and become an irrevocable resolution.

May I then, express my deep feeling and that of many others by the following words in appreciation of Dr. Peyton Rous:

- *DETERMINATION WITHOUT DOGMATISM*
- *CONSISTENCY WITH CONSIDERATION*
- *WISDOM WITH GENEROSITY*
- *A MOST BELOVED PHYSICIAN*
- *TO WHOM SCIENCE OWES SO MUCH*
- *TO WHOM THE CHARACTER OF SCIENTISTS OWES MORE*

And may I then, Peyton, present to you the Medal of The New York Academy of Medicine, a small recognition of what you have meant to so many.

1976 - USA National Academy of Sciences, Biography for FRANCIS PEYTON ROUS

October 5,1879-February 16,1970 ; BY [Dr. Renato Dulbecco (born 1914)]

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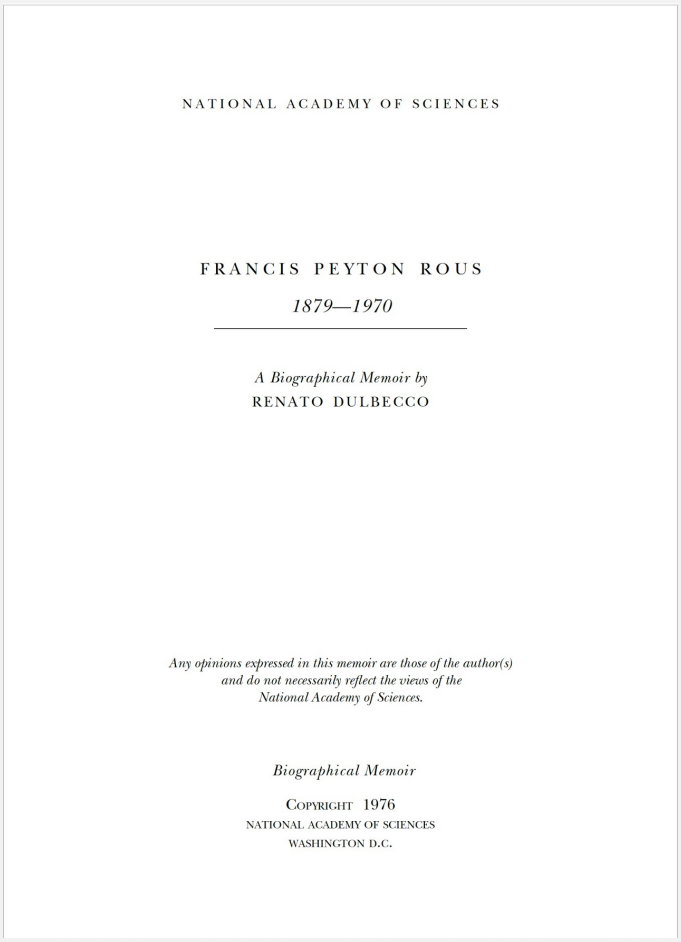

NATIONAL ACADEMY OF SCIENCES

FRANCIS PEYTON ROUS

1879—1970

A Biographical Memoir by
RENATO DULBECCO

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Biographical Memoir

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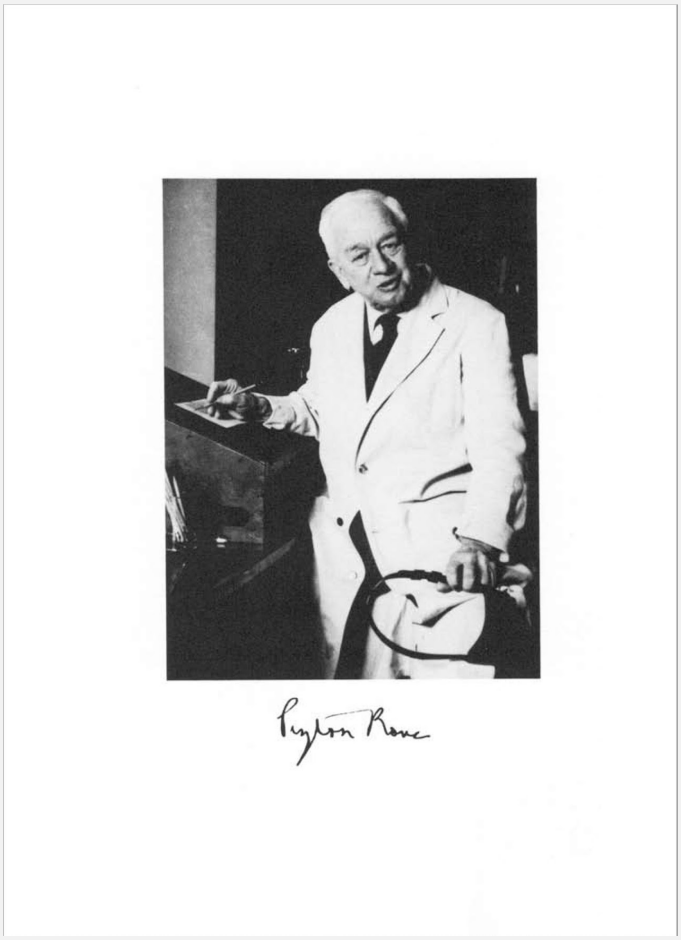

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PEYTON ROUS was awarded the Nobel Prize in 1966, when he was eighty-six years old, for discoveries he had made fifty years before. He was born on the 5th of October 1879 in Baltimore, Maryland, to a family that valued humanistic education. Thus, after the death of his father, when Peyton Rous was a child, his mother rejected the idea of joining her family in Texas and stayed in Baltimore, where excellent education for the children was available. Of the two sisters of Peyton Rous, one became a musicologist, the other a painter; and Peyton himself had a flair for writing.

Peyton Rous enrolled in the Medical School of the recently created Johns Hopkins University, which he attended without special distinction. As an undergraduate he showed a naturalist's tendency and published articles about Baltimore's flowers. After graduating in medicine, he went to the University of Michigan, where he began his research career in pathology, which he perfected during a year in Dresden. In 1909 he joined the Rockefeller Institute under Simon Flexner, to engage in cancer research, against the opinion of influential friends who thought it was a hopeless field. There he remained until his death. In 1921 he became co-editor (and later editor) of the Journal for Experimental Medicine. In 1927 he was elected to the National Academy of Sciences. He died in 1970, at the age of ninety, and is survived by his wife, Marion, and three daughters, Marion, Ellen, and Phoebe.

In addition to the Nobel Prize, Peyton Rous received many honors and honorary degrees, which are listed at the end of this memoir.

The name of Peyton Rous became widely known to biologists in the fifties and sixties for his earlier discovery of a virus causing sarcoma in chickens, which became aptly known as the Rous Sarcoma Virus. At the time he became famous, Peyton Rous appeared as an elderly, highly educated, gentleman with silvery hair. But in his youth he was a very hardworking scientist with a determined, fiery, and highly critical personality. He was a medical man who wished to learn about cancer as a disease and a biologist who did not want to follow the beaten track, and he was willing to hunt for new clues in well-designed but slow experiments.

I, like most of my contemporaries, became acquainted with Peyton Rous's fundamental discovery in the early fifties, when Harry Rubin came to my lab to work with the Rous Sarcoma Virus. He started using a focus technique on the chorioallantoic membrane of the chicken embryo, which Rous had invented many years before. **Later I had occasion to meet Peyton Rous several times on the platform as a speaker, or across the discussion table, or in his laboratory at the (then) Rockefeller Institute. I remember the man-rather small in stature with silvery hair and penetrating eyes. I also remember that before our first meeting I was inclined to think of him as a figure of the past, but soon changed my mind at that meeting and even more so at subsequent ones. Clearly, he was very much alive until his very last days, with a keen interest in new developments in virology and cancer research. He was able to discuss his past work with equanimity and to accept new interpretations of his data. I remember I suggested to him an explanation of the clonal characteristic of the neoplastic transformation of papillomas in terms of somatic cell genetics, a concept that was not part of cancer research in the period of his active work. His interest was immediately aroused; he asked me for a thorough clarification of what I meant and then argued, with passion but no animosity. We parted like old friends who have found something new to talk about. At the time when phage lysogeny was the domain of a very small group of virologists, I suggested to him that it might represent a good model for some features of viral cancer. Again his interest was acute, and I had to embark on a detailed discussion of phage integration, immunity, and lysogenic conversion.**

Peyton Rous discovered the viral etiology of a chicken sarcoma in 1911 through his interest in tumor transplantability to new hosts by a filtrate. He commented: "The behaviour of the new growth has been throughout that of a true neoplasm, for which reason the fact of its transmission by means of a cell-free filtrate assumes exceptional importance" (1911).

He fully realized from the outset that this was "a unique and significant finding" (191 1). He also realized that the significance of the discovery depended on

the true nature of the induced growth. As an experienced pathologist he could see that it was a true cancer: "The (pathological) picture (of the growth) does not in the least suggest a granuloma . . . it exhibits to a special degree, not merely a few, but all those features by which the malignant neoplasms are characterized" (1911).

For about forty years this momentous discovery had little impact, because the minds of scientists were not prepared to think of viruses as agents of cancer. It was expedient to say that the chicken tumor was not a cancer, but some kind of reaction to the virus more akin to inflammation than neoplasia, and perhaps a peculiarity of chicken biology. Peyton Rous soon recognized himself that the tumor would not be accepted as a cancer because it was transmitted by a cell-free extract: "A passing reference should perhaps be made to the ill-defined group of pathological products called granulomata, with which this neoplasm of the fowl may by some be classed, owing to its transmission by an agent separable from the tissue cells" (191 1). Many years later he wrote, "This disclosure (that certain chicken tumors were proved due to viruses), which conflicted with the negative findings in mammalian growths, was determined forthwith as erroneous" (1952).

One wonders how firmly in the early years Peyton Rous himself was convinced that he had demonstrated the induction of a cancer by viruses. The statements he made at the time are very cautious and full of qualifications. At first he used to refer to the "agent" that induced the sarcoma; but a year later, after he discovered a new, different tumor transmissible by filtrate, he proposed that the "agent is probably a living virus" (1912).

During the years 191 1-1914, Peyton Rous worked hard at disproving the objections on the nature of the induced tumors by isolating other viruses that induced tumors in chickens and by carefully studying their pathology. He could show that the tumors induced by the different viruses were capable of invading neighboring tissues and of metastasizing to distant organs; thus they were true cancers. Moreover, each independently isolated virus caused a tumor of a different kind. These facts should have been convincing evidence that the growths were specific responses of the host, yet this conclusion was not generally accepted. However, these discoveries seem to have been convincing for Rous, who wrote, "The findings with the chicken tumors largely demolish the theoretical basis in which objections to an extrinsic cause for cancer have been built up" (1912).

In order to find more generally acceptable evidence, Peyton Rous attempted to extend his observations "especially through carefully devised experiments with the tumors of other species of animals" (1911). Evidently for the viral etiology to be accepted, similar findings were needed in mammals. The strategy of Rous's future work was determined at that time. However, the extension to other species came only many years later with Richard Shope's discovery of the rabbit papilloma virus.

In the meantime Peyton Rous studied many features of the cell-free transmission of the tumor. Examining the effect of the age of the host, he showed that the virus induces characteristic foci on the chorioallantoic membrane of the chicken embryo. This result supplied an assay for the virus that was universally employed until the fifties, when it was superseded by the focus formation in tissue culture.

In this extensive and careful work, Peyton Rous observed the host resistance to the transmission of the tumor, in the form of either absence of growth, slow growth, or normal growth followed by regression. Other experiments showed how essential the conditions of the host are for the development of a tumor after inoculation of the virus. From this observation Peyton Rous began to recognize the existence of limitations to the expression of the oncogenic potential of the virus: "How does it happen that the sarcoma, though ultimately dependent on an extrinsic agent, is dominated in its behaviour by the cells composing it?" (1912). Perhaps the agent depends "on a special set of conditions in order that it might produce a neoplastic change" (1912). He returned later to this point on several occasions.

After discovering the second chicken tumor agent, Peyton Rous started wondering about the etiology of cancer in general: "The demonstration that extrinsic agents are the cause of two connective-tissue growths of the fowl which are characteristic malignant tumors renders it necessary to suppose either that such tumors of the fowl have an entirely different etiology from mammalian tumors, or else that the latter are of similar origin" (1912). This point was also developed to a much greater extent later on.

As further evidence for a viral nature of the chicken tumors, the resistance of the host to the tumor cells could be separated from its resistance to the tumor-inducing agent. Moreover, Rous discovered a third chicken tumor, transmissible by filtrate, markedly different in properties from the two previously described: "The findings with the three tumor-producing agents have a striking similarity and it is difficult to avoid the conclusion that the three are of one class, whatever that class may be. . . . It is perhaps not too much to say that their recognition points to the existence of a new group of entities which cause in chickens neoplasms of diverse characters" (1914).

At the beginning of World War I, Peyton Rous, under the pressure of wartime medical needs, gave up his work with chicken tumor viruses. For the following twenty years until 1934, his interest was in the fields of blood transfusion and attending immune reactions, liver and biliary functions, cellular functions, and vascular permeability. I will return to these activities later on.

A turning point in Peyton Rous's work on cancer was the discovery of the Shope papilloma. In 1933 Richard Shope reported his discovery that a mammalian tumor, the papilloma of cottontail rabbits, was transmitted by a virus-like agent. As in the case of the chicken tumor, Peyton Rous's first concern was whether the papilloma was a true neoplasm. He decided that it was, because, when the papillomas were transplanted deep inside the body, they developed into carcinomas that grew invasively and killed the host. Furthermore, in domestic rabbits the virus-induced papillomas often grew progressively, invading the neighboring tissues and producing metastases, and this malignant evolution could be enhanced by exposing the papillomas to various substances, such as Scarlet Red.

These findings seem to have been for Rous the decisive argument for the validity of his conclusions concerning the chicken tumors, since in a mammal cancer could also be transmitted by a virus. He, therefore, returned to the study of carcinogenesis using the papilloma virus as a new tool. He focused at first on the malignant evolution of the papillomas. By careful observations, following small hints, such as the shape of their growths, color, or the degree of pigmentation, he showed that a few cells in a papilloma became cancerous and generated clones, each with different characteristics.

In trying to understand how such evolution to cancer occurs, Peyton Rous studied the effects of tar, as both a carcinogen and tumor promoter. He found that tar not only strongly enhanced the induction of papillomas or carcinomas by the Shope virus in domestic rabbits but by itself elicited similar papillomas. Could tar papillomas also be virus-induced?

This new phase of Peyton Rous's work, although a natural development of his earlier work, had more ambitious goals, for it aimed at testing the hypothesis that "this disease (cancer) is an infection. . . . A main attraction of this hypothesis is its accessibility to test." However, he clearly saw that this hypothesis could only be true under certain conditions, one of which is that "a living entity responsible for such growths must require for effectiveness a very special basis of predisposition" (1932). He sought to possibly disprove the infectious nature of cancer by comparing the frequency of cancer induction by tar in the skin of two groups of mice with different exposure to the environment: "The animals of one group have been placed under conditions which would facilitate

the entrance into the body of extraneous living agents, whereas those of the others have been sedulously protected" (1932). The results proved "that the mouse cancer cannot be caused by living entities reaching the body from the surrounding world during adult life" but "fail to exclude the possible activity of entities residing habitually in or upon the body" (1932). This experiment showed another requirement of the hypothesis on the infectious nature of cancer: "The supposition (that tumors in general are due to viruses or other extraneous entities) is tenable only if such entities are widely distributed throughout the animal population, being constantly present in or upon the body, like the colon bacillus or the staphylococcus; and if their opportunity to cause tumors is restricted by the need for very special conditions. . . . The more considerable an agent is conditioned in its activity, the more often must it be present if it is to cause disease at all" (1934). These words were prophetic, as shown by the recent developments in the field; yet they were simply the result of cool, logical assessment of the facts then in hand. However, for Peyton Rous this hypothesis was only a guide for the experiment: "The demonstration of the cause for the generality of tumors, whatever this is, waits upon the provision by the investigator of the conditions necessary to its effectiveness" (1934).

He tried several new approaches. One of the major tools was still the technique of inducing skin tumors by application of tar. He used it to create favorable cellular conditions for revealing the neoplastic potential of viral agents. Another tool was the immunity of the infected rabbits against the Shope virus. Peyton Rous found no demonstrable antibodies in rabbits without papillomas or in those with tar papillomas or Brown-Pierce tumors: these findings "speak decisively against the possibility that these growths are caused by viruses antigenically related to the one causing papillomas. Yet this does not exclude a virus causation for them, since the sera of fowls with Chicken Tumor I and Fujinami Sarcoma respectively, though possessed of neutralizing power for the virus causing the growth carried by the host, have no cross-neutralizing effect whatsoever" (1936).

Shortly afterwards, in taking a bird's eye view of his past work and of the cancer problem, he concluded: "How far should one be led by the assumption that certain tumors may be due to viruses? Only so far as to make tests with these growths. The tumor problem has withstood the most corrosive reasoning. Yet since what one thinks determines what one does in cancer research, as in all else, it is as well to think something. And it may prove worthwhile to think that one or more tumors of unknown causes are due to viruses" (1936). He thus recognized that the problem that he so clearly formulated and actively pursued eluded experimental attack and remained unsolved. In fact he later restated the basic question: "What is the papilloma doing in the cancer, if anything?" (1940).

In a renewed effort to answer this question, Peyton Rous used as a new tool the famous line of transplantable rabbit cancers, derived from a viral papilloma called at first "carcinoma V2" (1940), and then, after World War 11, V x 2 because during the war V2 "came to have another significance" (1952). This line did not contain infectious papilloma virus, but for many serial transfers in rabbit it continued to elicit the production of virus-specific antibody.

The result suggested that the virus may play a determining role although in "masked or altered form" (1940). This was a new idea in virology, which had enormous developments many years later. For the next three years, during serial transplantation from one rabbit to another, the V x 2 carcinoma continued to elicit this immune response. However, when it was retested after an interval of one and a half years, four and a half years after its origin, the tumor was found unable to immunize against the papilloma virus; the loss of this property "was not attended by any perceptible change in the V x 2 carcinoma" (1952). This "wholly unexpected" result must have been quite shattering; and Peyton Rous was led to rethink the role of the virus in the production of the cancer. In this agonizing reappraisal he proposed that the virus might have undergone "wider variation" (1952); but he recognized that "at this uncertain point the problem of the cause for the V x 2 carcinoma must perforce be left" (1952). In this way the work of Peyton Rous went full circle: from complete ignorance on the role of viruses in cancer to definitely establishing such a role through brilliant discoveries, to postulating a wider and possibly general role of viruses in spontaneous cancers, and ending up again in a condition of uncertainty. I should not say full circle, but rather one turn of the helix, because the uncertainty was now of a different kind.

The emphasis of Peyton Rous's work in the forties and fifties shifted from the viruses to chemical carcinogens. Many articles were dedicated to the potentiating effect of tar and other carcinogens on virus-induced papillomas. During this work it also became clear that tar alone induces papillomas very similar to those induced by the virus on normal skin or on skin pretreated by tar. In all cases the growth showed progression, i.e., remained benign for some time and then developed into carcinomas, which arose in a few isolated cells. However, many observations also showed that the role of the virus and of the chemicals was different: "The generality of the carcinogens bring about tissue conditions out of which tumors may or may not arise for reasons still undetermined. They may'be fitly called provocative carcinogens. The viruses, on the other hand, both initiate tumors and determine their character and behaviour. They are actuating carcinogens" (1943).

In a new series of experiments, Peyton Rous convincingly demonstrated that the viral and the chemical agents have a cooperative action, producing in combination cancers at much higher frequency and after shorter time than either agent alone. On the basis of this cooperation, Peyton Rous made three important suggestions. One bears on the mechanism of carcinogenesis. He proposed that in utero or at a young age the human or animal body becomes invaded by viruses that "would give no sign of their presence in most instances. . . . But if a provocative carcinogen happened to work on the cells with which such a virus was associated . . . it might undergo variation and . . . give rise to a tumor. The new pathogenic variant would not be transmitted to other animals . . . but would be a dead-end virus, though the harmless source virus liable to the same or other variation would be passed on" (1943). This hypothesis is very similar to some prevalent at the time of this writing, if the dead-end variant is interpreted as a defective integrated provirus that has incorporated a silent oncogene, causing its expression.

Another suggestion was that chemical carcinogens might cause the so-called spontaneous tumors. He added, "A list of human tumors which have been traced to the action of provocative carcinogens is in no small degree a sociological document, reflecting as it does the ways of life, vocation, avocations, habits and environmental stresses of people and individuals" (1943).

The third suggestion was that viruses and chemicals in combination might have a continued role in spontaneous cancer: "The recent discovery that viruses of some sorts lie latent for long periods, causing disease only on special occasion, coupled with the realization that some tumors have viruses as their cause, has led to a supposition already mentioned that agents of this sort may reside in animal tissues, perhaps throughout the lifetime of the organism, doing no harm unless the cells with which they are associated undergo special pathological changes, when they undergo variation as a result of the new, abnormal milieu and render the cells neoplastic. According to this supposition, tar and methylcholanthrene are carcinogens because they alter the environment of viruses. . . ." (1944). Such a possibility is very much in the minds of virologists and oncologists today.

During his work on carcinogenic hydrocarbons, Peyton Rous identified important features of the neoplastic process they initiate. One is that their cancer-inducing activity is greatly enhanced by promoters that stimulate cell proliferation, for instance, wounds. Another feature is that "cancers arise by a step-like progression" (1941). Peyton Rous recognized the importance of this observation, because "the cells of not a few tumors attain to their worst by further neoplastic changes which are scarcely less significant than the one primarily responsible for their state. Indeed the practical significance of these changes is often greater as meaning death to the patient" (1955).

In his later years Peyton Rous continued his experimental work, but his contributions declined in number and relevance. During that time tremendous

changes were occurring in biology, especially the great development of genetics and the birth of molecular biology. Although Peyton Rous showed great interest in these developments, he failed to assimilate them. Obviously, even a brilliant mind is subject to the limitations of age. He became attached to old concepts. The main consequence was his rejection of somatic mutations as a possible cause of cancer and his failure to recognize viruses as new genetic material in the cells they infect. It may be said about him what he said about Leo Loeb: "He outlived his era of discoveries about cancer but what he did for science endures" (1960).

The work on cancer is the big basis on which Peyton Rous's fame rests. The other work, which I already mentioned, is permeated by a similar perceptiveness, imagination, and experimental ability. I should mention especially the work on blood preservation and substitutes, which Peyton Rous carried out during World War I, because it shows another facet of his personality, i.e., the ability to respond to urgent medical needs of society. For instance, in 1918 he wrote: "There exists at present a great and urgent need for an injection fluid that can be satisfactorily employed instead of blood for transfusion in cases of hemorrhage. It is common knowledge that casualty clearing stations, after a 'push', are crowded with men who have lost too much blood to be operated on, who cannot be revived by means of salt solutions and supportive measures, but who would undoubtedly respond to transfusion. For the latter neither time nor donors are available." Quite rapidly, at the beginning of the war, Peyton Rous and associates perfected a method for storing human red blood cells, using a weak gelatin solution to protect them during washing and sugars to preserve them. The procedure was used to establish the first blood bank during the war, which was operated by one of Rous's collaborators. And the solution for suspending the red cells, known as the Rous-Turner solution, is still in use. Such an accomplishment would be a sufficient reason for fame, because it has both scientific and humane values. We know that Peyton Rous was very proud of it.

In addition to his experimental work, Peyton Rous had another absorbing interest: the editorship of the Journal of Experimental Medicine. It is known that he dedicated to it an immense amount of time and energy. He was reputed for the accuracy of his editing, both in regard to scientific content and style. I well remember when I, as a prospective author, first encountered him as an editor. He returned my manuscript with many remarks, mostly of style. I remember I was at first baffled, but then, after studying his comments further, came to appreciate their reasons, which went beyond the mere words. I realized that for him a word, every word, was a concept, which should be examined not only in its present, but also future, context. He reminded me in his letter that I should think that a certain word might become widely adopted and that I should therefore choose it with deliberate care. He was anticipating the flooding of scientific literature with laboratory slang, which has happened in recent times and which was a trend of which he strongly disapproved. But during his editorship, he succeeded in maintaining the Jozirnal of Experimental Medicine at a high level, both in purity of language and strength of content.

Peyton Rous remains in the minds of those who knew him, especially the younger generation, as the image of a man fully dedicated to his work, a scientist with vision, a strong although kind person, with a good sense of humor. His experiments were always designed to test hypotheses and developed in a logical sequence on the basis of results already secured; they were very methodical and thorough and were reported in detail with extreme clarity. He was independent in thought and was against conventional beliefs unsubstantiated by evidence. For instance, he commented:

"Not so long ago in the dark ages of medicine, one could think nearly anything about disease because one knew almost nothing. Theoretical system succeeded system, from humours to homeopathy. Opinions strongly held appeared like realities and were acted upon as such. Now for most diseases all this is at an end: fact has killed fancy. . . . The tumor problem is the last stronghold of metaphysics in medicine" (1936).

Although during his career he formulated some penetrating hypotheses not amenable to direct test, he was fundamentally interested in facts: "No explanation of the cause of cancer is worthy of attention that cannot be tested" (1932).

The language of his reports was vivid, full of images from everyday life, as shown by a few examples:

"The fowl limps and its wings seem stiff" (1913).

"The growth gives it (the fowl) a factitious plumpness" (1913).

"During the outward extension of the membrane (of the Kupffer cells), lava-like flows can be seen on its surface, when the light is cut down, and at its edges fimbriated or 'petaloid' extrusions, at times appearing whip-like, which are in constant slow motion" (1934).

Comparing his work with the chicken viruses, which started with a cancer and led to a virus, and with the Shope virus, which started with a virus and led to a cancer: "The trails have met at the same look-out. What does one see from this?" (1936).

His humor was sometimes biting: Speaking of new reactions elicited in the human body by surgery, he saw their positive aspects: "All that surgery has done in such instances is to make plain the relation of effect to cause, as for example in showing that tetanus is due to insufficiency of the parathyroids, and myoxedema to a thyroid lack" (1929).

The most visible side of Peyton Rous was his interest in scientific truth, in the younger people, the equanimity of judgment and the warmth of human relations he was able to establish both inside his family and outside. I had a hint of this when recently his daughter, Marion, referred to him as "daddy" in an affectionate way; and when several years ago he wrote to me sending his congratulations for the Ehrlich Darmstaedter award (which he nominated me for) and suggesting the nicest Ratskeller in Frankfurt, with the best food, wine, and atmosphere.

Peyton Rous received many official honors in his life, including the highest. But the paramount recognition was the admiration and respect of his younger colleagues, which continues after his death.

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https://www.nature.com/articles/482132a

2013 - Emerging Infectious Diseases • www.cdc.gov/eid • Vol. 19, No. 4, April 2013

Rous and Rhoads association : Yes ... / PDF : [HP005P][GDrive]

Francis Peyton Rous

Prasanna Kumar and Frederick A. Murphy

This is a photograph of Peyton Rous (Francis Peyton Rous, 1879–1970), who in 1909–11 made 2 seminal discoveries that are now the foundation blocks of modern virology and oncology. First, he discovered that a malignant tumor (a sarcoma in chickens) was transmissible; this was the first transmissible solid tumor discovered. Second, he found that the tumor-inducing factor could be passed through a Berkefeld ultrafilter known to retain bacteria. In the context of the times, this finding proved that the agent was a virus, the first of its kind. The virus he discovered is now known as Rous sarcoma virus and has since been studied in many laboratories around the world.

Rous was born in 1879 in Baltimore, Maryland, USA, and raised by his widowed mother, who persevered in supporting his education. He received bachelor of arts and doctoral degrees from The Johns Hopkins University in Baltimore in 1900 and 1905, respectively. After teaching pathology at the University of Michigan, Ann Arbor, and studying morbid anatomy at Friedrichstadt Municipal Hospital in Dresden, Germany, in 1909, he took a position at the Rockefeller Institute for Medical Research in New York, New York, where he spent the rest of his life. Rockefeller was the place in the United States where virology first emerged as a distinct medical science; from the beginning of his career, Rous was surrounded by great scientists.

Rous' entry into tumor virology was fortuitous; the founding director of the Rockefeller Institute, Simon Flexner, had been interested in oncology but wanted to redirect his own work toward polio, which was becoming a major problem. Rous was hired to continue Flexner's research into oncology, a subject about which Rous at first knew nothing.

The beginning of the story behind Rous' claim to fame is remarkable: a woman came to the Rockefeller Institute with a barred Plymouth Rock hen that had a large tumor on its breast. Rous later wrote, "In this paper is reported the first avian tumor that has proved transplantable to other individuals. It is a spindle-celled sarcoma of a hen, which has thus far been propagated to the fourth generation…." In his research, he found that only closely related chickens were susceptible, but in these chickens, continuous passage of cell-free material led to tumors that grew quickly, were more malignant than usual, and produced widespread metastases. Rous continued to study the phenomenon he had begun to unravel for many years, but understanding the mechanistic bases for the complex natural history of Rous sarcoma virus and related viruses had to wait until modern molecular and cellular biologic technologies became available in the 1960s.

In 1934, Rous' Rockefeller Institute colleague, Richard E. Shope, asked him to examine warts on jackrabbits that had definitively been shown to be caused by an

Figure. Francis Peyton Rous (1879–1970), pictured in 1923, at age 44, in his laboratory at the Rockefeller Institute for Medical Research, New York, NY, USA. Source: National Library of Medicine.

Author affiliations: Mill Creek High School, Hoschton, Georgia, USA (P. Kumar); and University of Texas Medical Branch, Galveston, Texas, USA (F.A. Murphy)

DOI: http://dx.doi.org/10.3201/eid1904.130049

[HP005Q][GDrive]

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In 1934, Rous' Rockefeller Institute colleague, [**Dr. Richard Edwin Shope (born 1901)**], asked him to examine warts on jackrabbits that had definitively been shown to be caused by an ultrafilterable virus. This virus was Shope papillomavirus (rabbit papillomavirus). When Rous confirmed that the warts were benign tumors, he was reinvigorated in his intent to unravel the mysteries of viral oncology. Over the next 30 years, Rous and his colleagues showed that the benign tumors could progress to malignant carcinomas and that chemical carcinogens could interact with the virus— further discoveries that formed building blocks for modern virology. Today, we recognize that ≈20% of human cancers worldwide have infectious etiologies, for which preventive measures such as vaccines have great promise.

Rous' colleagues, including the scientists René Dubos and Charles B. Huggins, lauded Rous' personal and professional qualities, writing that he was gifted with supreme intellectual powers, unfailing integrity and honesty, a remarkably intuitive sense for the science itself, great perseverance and work ethic, and an enormous zest for life. One can imagine with wonder Rous in his laboratory and in the legendary lunchroom of the Rockefeller Institute.

Rous was duly honored for his masterful work, winning the National Medal of Science and membership in the National Academy of Sciences, the American Philosophical Society, the Royal Society, and other prestigious organization.

In 1966, when he was 87 years old, Rous was awarded the Nobel Prize in Medicine, an honor he shared with Charles Huggins. After 55 years, the longest "incubation period" in the history of the Nobel Prizes, Rous' discovery had finally been recognized with this honor. In the end, proof that Rous was just ahead of his time might be found in the several additional Nobel Prizes awarded since 1966 to virologists who further unraveled viral oncology Control and Prevention, Atlanta, Georgia. He is planning on a career in medicine.

Dr Murphy is a professor at the University of Texas Medical Branch in Galveston. Formerly, he was chief of the Viral Pathology Branch, then director of the Division of Viral and Rickettsial Diseases, and then director of the National Center for Infectious Diseases at the Centers for Disease Control and Prevention.

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Francis William Ruscetti (born 1943)

Birthday - Feb 6 1943 (See [HL003Z][GDrive])

Worked at Litton Bionetics

Mentor of Dr. Judy Anne Mikovits (born 1958)

https://www.courtlistener.com/pdf/2017/09/27/rogero_v._secretary_of_health_and_human_services.pdf

Dr. Ruscetti received his B.S. in Biology in 1968 from Boston University, and his Ph.D. in Microbiology from the University of Pittsburgh in 1972. (Ex. 238, p. 1.) From 1972 to 1975, Dr. Ruscetti was a Research Instructor at the University of Pittsburgh, School of Medicine. (Id.) From 1975 to 1978, Dr. Ruscetti worked for a private company, and since 1978, has held various senior positions at the National Cancer Institute (NCI). (Id., pp. 1-2.) He currently serves as the Principal Investigator for NCI's Leukocyte Biology Section, and has been an Adjunct Professor of Biochemistry and Molecular Biology at George Washington University -- a position he has held since 1988. (Id.)

Dr. Ruscetti has co-authored more than 300 scientific publications, served on editorial boards of several scientific journals and is currently on the editorial board for Stem Cells. (Ex. 238, pp. 2-32.)

As discussed above, although Drs. Ruscetti and Mikovits are said to have co-authored an expert report (Ex. 236), Dr. Ruscetti did not testify at the evidentiary hearing.

Evidence timeline

1964-1968 United States Air Force (joins at age 21)

Source : [HL0040][GDrive]

1968 B.S. (Biology), Boston University, Boston, MA

Source [HL0040][GDrive]

1969 - Sister's wedding?

https://www.newspapers.com/image/435173946/?terms=%22frank%2Bruscetti%22

1970 (May 05)

also see : https://www.newspapers.com/image/148677456/?terms=%22francis%2Bruscetti%22

Full newspaper page : [HN0112][GDrive]

Pittsburgh Post-Gazette (Pittsburgh, Pennsylvania) • 05 May 1970, Tue • Page 18

Ruscettis Take Trip To Aruba

A wedding trip to Aruba followed the ceremony for Sandra Kay Ickes and Francis William Ruscetti in the First Unitarian Church. The Rev. Jesse Cavileer officiated on April 25. A reception followed at the Fairfax. The couple plans to live in Pittsburgh.

Both are working toward their doctorates at the University of Pittsburgh. She is a graduate of Ohio University and he, of Boston University.

The bride, daughter of Mr. and Mrs. Raymond Ickes of Steubenville, asked Linda Ickes, to be maid of honor. Jane Arista and Judith Trubilla were bridesmaids.

Mr. Ruscetti, son of Mr. and Mrs. Frank Ruscetti of Boston, asked Robert Ruscetti, to be best man. Roy Englebrecht and Roger Weppelman were ushers.

MRS. RUSCETTI

[HN0113][GDrive]

1972 Ph.D (Microbiology), University of Pittsburgh, Pittsburgh, PA

[HL0040][GDrive]

** **Andrew Mellow Fellowship, 1969-1972** [HL0040][GDrive]

1972-1975 Research Instructor, Department of Medicine, University of Pittsburgh, School of Medicine, Pittsburgh, PA

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1981 (September 07)

Source full pages : Page 1 = [HN0114][GDrive] / Page 6 = [HN0115][GDrive]

1981-09-07-the-spokesman-review-spokane-wa-pg-1-clip-lukemia

New hope in leukemia research

By VICTOR COHN
Washington Post

WASHINGTON — What may be a human leukemia virus has been isolated by National Cancer Institute scientists.

The discovery, one they call "exciting" and other authorities call "highly significant," could trigger new interest in searching for viruses as causes of human cancer.

It could also lead to new ways of treatment and even prevention, though it is far too early to say what might or might not be possible.

Dr. Robert Gallo, chief of NCI's Laboratory of Tumor Cell Biology, and his co-workers have so far found the virus in four patients as well as antibodies to the virus — solid evidence of the body's effort to resist it — in 12 more.

Japanese doctors at the University of Kyoto, collaborating with Gallo, reported last week that they too have begun to find the virus in some patients.

Viruses cause cancers without a doubt in several animal species. And they cause leukemia — blood cell cancer — in cows, cats, mice and chickens, as well as gibbon apes, close relatives of man.

But scientists have looked for human cancer viruses for decades with generally thin results. Viruses have been at least "associated" with three human cancers, "associated" meaning they are somehow involved in the cause, with other factors. The three are liver cancer, cancer of the cervix and oned NCI, part of the government's National Institutes of Health, has been criticized for spending too much money on virus research.

Gallo's discovery "gives a strong stimulus to reopen investigations into viral involvement" in human leukemias, Dr. William Jarrett of the University of Glasgow has told Oncology Times,a publication for cancer researchers.

(Continued on page 5)

Leukemia (Continued from page 1)

Gallo's main colleagues in this work have been Bernard Poiesz, Marvin Reitz Jr., Francis Ruscetti, V.S. Kalyanaraman, Marjorie Guroff and M. Sarangadharan.

"What we have found," he said in an interview, "is a new retrovirus or RNA virus." RNA and DNA are nature's two main kinds of genetic material.

Retroviruses cause the known animal leukemias. The one that causes cattle leukemia, a disease highly destructive to livestock, is at least distantly related to the new NCI virus.

Retroviruses are also of high interest today in biology.

It is known that they sometimes carry so-called transforming genes into cells. These may promote normal growth or, sometimes, lead to cancer — either by inserting their new information wrongly or by turning on another gene that makes cells grow inappropriately.

Until now, says Dr. David Baltimore, Massachusetts Institute of Technology Nobel prize-winner, the lack of any known human retrovirus has been a major gap, "so even if this virus is just a human virus and causes no known disease, it is important."

Gallo too says, "We can't yet say this virus causes a leukemia." But he also says, "We clearly are getting an association of this virus with a form of leukemia," and though "we can't say yet that it is an etiologic agent, we suspect it."

He has at least provisionally named the virus "HTLV" for "human T-cell leukemia-lymphoma virus" — "T-cell" because this is the kind of white blood cell that proliferates in this kind of leukemia.

ONE OF THE MAIN problems, always, in studying leukemias and lymphomas — lymph gland cancers, closely related to the leukemias — has been getting T-cells to grow in the laboratory.

Six years ago Gallo, Doris Morgan and Ruscetti found a protein they call TCGF for "T-cell growth factor." This has proved to be the magic key to growing T-cells and leukemia and lymphoma cells well and reliably.

It is this technique that has enabled the NCI group to isolate and grow HTLV virus from four patients with an unusual "and very aggressive" leukemia or lymphoma that often closely resembles a disease called "Sezary leukemia."

Because isolating and growing a virus from any one patient is still long and laborious work, the scientists have screened blood samples from many other patients and found 12 with anti-HTLV antibodies. They have shown there are no such antibodies in the blood of 200 healthy persons.

ANTIBODIES ARE proteins the body makes to fight harmful aggressors. "They are flags that tell us where the virus has been," Gallo explained.

Now, he said, there must be much more study, including epidemiological surveys to see how widespread the virus may be. This will include collaboration with Japanese doctors, since a closely related or perhaps the same form of leukemia is found in a kind of cluster in southwest Japan, and blood samples from Japanese patients have revealed telltale antibodies to the NCI virus.

The Gallo evidence, says Dr. David Katz of the Scripps Clinic and Research Foundation is "quite impressive and convincing." But, says Dr. Max Essex of Harvard, it is going to be a slow process at best to firmly prove this or almost any new-found virus causes human cancer.

GALLO IN 1975 felt sure he had isolated a leukemia virus, but was unable to prove it. What he feels "99 per cent sure of today," he said, is that he just "couldn't keep the virus growing then" and it was replaced in his lab cultures by a contaminant, a primate leukemia virus.

How do people get the new-found virus, if it is indeed a leukemia virus?

"We don't know," he said. "We don't think it, or any cancer, is infectious in the common way, like a cold. There may be infection at a very low level, probably only in genetically susceptible individuals.

"We can speculate, however, that this virus sometimes reaches humans from someplace outside them. You're not born with it in your genes. Then, in some susceptible people, it replicates." That is, it grows.

And in persons whose cells permit such growth it may unlock a gene that starts another step, or whole series of steps, that may lead to a cancer in a process still only dimly understood by inquiring scientists.

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1983 - Frank Ruscetti still officially with Litton Bionetics

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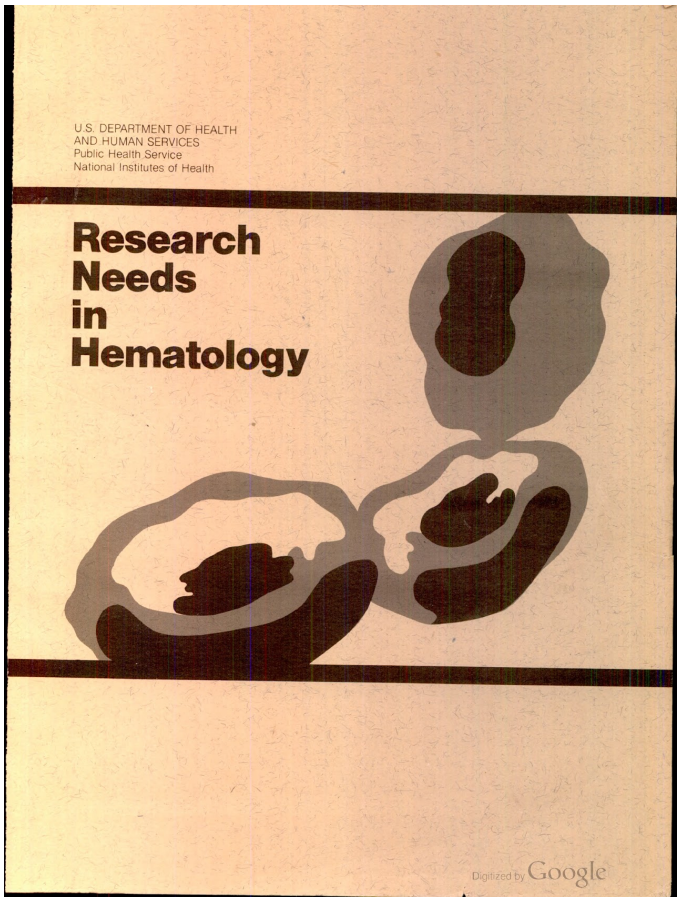
Frank Ruscetti still officially with Litton Bionetics



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ETIOLOGY OF MYELOID STEM CELL DISEASES

F.W. Ruscetti

INTRODUCTION

The existence of a common etiologic agent for such a heterogeneous group of diseases as those that reflect clonal neoplasms of this cellular system is unlikely. Cellular transformation should be divided into at least two distinct phases. The first phase is the primary lesion or "initiating event" which is produced by the etiologic agent(s). It is safe to say that almost nothing is known about these changes in stem cells. The second phase involves the changes that are necessary for maintaining growth of the abnormal cell once transformation has occurred. These changes can occur either as a result of mutational (genotypic) changes in the cell itself or from alterations in secondary cells important in cell regulation, which cause a phenotypic change in the transformed cell. The following are possible etiologic agents:

Viruses

Viruses are the primary suspects as causative agents of these human neoplasms and this suspicion is based primarily upon data derived from studies in lower mammals.

Laboratory-Derived Acutely Transforming Viruses

Unlike viral-induced naturally occurring neoplasia, these "laboratory" viruses induce a fulminating leukemia in 4 to 6 weeks in susceptible animals. Friend leukemia virus, a prototype of this group, unequivocally interacts and directly transforms the myeloid stem cell. The following observations and developments have led to greater understanding of these agents: 1) development of systems for the transformation of myeloid stem cells in vitro; 2) strongly oncogenic viruses differ little in molecular terms from nononcogenic viruses of the same type; 3) viral transforming sequences are closely related to the DNA in normal cells; and 4) oncogenic viruses have been shown to be a result of recombination.

Further study of these agents should prove quite valuable. For example, this group of viruses is easily the most useful in describing the primary initiating events in cellular and molecular terms, and if there is one common unifying mechanism in stem cell transformation, it is most likely to be a permanent genetic change caused by the initiating event.

Research Needs

* Molecular cloning of transforming information
* Development of transforming fragments through restriction endonuclease mapping
* Further development of assays for transformation in vitro.

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Naturally Occurring Oncogenic Viruses

In every case where the primary etiology of naturally occurring leukemias of animals is known, (such as in chickens, cats, Gibbon apes, and cows) an acquired RNA tumor virus is involved. The mechanism of transmission, vertical or horizontal, is usually known, but the mechanism of actual cell transformation is not. Thus, among the major areas of fruitful study are the determination of whether these viruses acutely transform or indirectly stimulate transformation; and the development of further animal models for human disease, such as Feline leukemia virus, which induces aplastic anemia and myelofibrosis, and Gibbon ape leukemia virus, which induces a CML-like disease.

Viruses in Man

Information here is still quite incomplete in comparison to other animals but can be summarized as follows. 1) Type C viral information: certain reported viruses are indistinguishable from known primate viruses and are likely to be contaminants in vivo or in vitro. 2) Herpes viruses: association of herpes simplex with cervical cancer and Epstein-Barr virus with Burkitt's lymphoma is interesting but not conclusive with respect to cause and effect. 3) Recently described is a candidate oncornavirus, which has been associated with mycosis fungoides-Sézary syndrome in the United States and a perhaps similar virus associated with T cell leukemia in southern Japan.

Research Needs

* Searches for viral agents in man should be concentrated on the most likely malignancies to have a viral etiology, such as Hodgkin's disease and other lymphoreticular diseases.

* There is no doubt that hematopoietic stem cells are extremely sensitive to genetic damage by chemicals, radiation, and other environmental influences. Better assay systems for measuring the carcinogenic potential of chemicals are needed, (although all that might be accomplished from a "practical view" could be the expansion of an already lengthy list of chemicals which are known to be harmful to man.)

* A variety of genetic diseases are associated with a high frequency of transformation, leading to clonal neoplasms. These include several syndromes associated with chromosomal abnormalities. It is not clear whether the genetic or chromosomal aberrations are causative factors in the initiation of malignancy or simply epiphenomena (vide ante).

The Recognition and Characterization of the Abnormal Stem Cell

In this section, the questions to focus on include: 1) the phenotypic differences between the abnormal cell and its normal counterpart, 2) the nature of the proliferative advantage of the abnormal cell and how it is maintained, and 3) whether the regulatory mechanisms of hematopoiesis are normal or disturbed in the disease state. This situation, which is very complex, is made more so in certain model systems by secondary mutations and selection within the transformed population, leading to a replacement of the

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original transformed cell with transformed cells more likely to be autonomous. Transformation could conceivably occur at any location in the hematopoietic system. Evidence has accumulated, however, that such disorders as CML and polycythemia vera involve a change at the level of the totipotent stem cell (vide ante).

These diseases are characterized by specific imbalances in the pattern of differentiation. Clearly, a better understanding of factor-cell interactions (vide ante; vide infra) and how they determine differentiation will help explain current observations about these diseases. The acute leukemias are a prototype of the abnormal proliferation of hematopoietic cells. In AML, the blast cells generally do not have a shortened generation time and the increase in blasts is in some way related to a block in the maturation process. We need to continue with a major effort to try to gain an understanding of whether these cells are autonomous (intrinsically programmed to proliferation), under abnormal regulatory influences, and/or are blocked in maturation. Cultures of seemingly normal lymphocytes can be stimulated to grow indefinitely if injected with Epstein-Barr virus or if stimulated by T cell growth factors. Understanding the mechanism of this effect is extremely important. This goal will be aided by the development of systems in vitro for microinjection of proteins, nucleic acids, or antigens.

Leukemic cell lines of a committed cell lineage undergo functional differentiation when exposed to polar compounds, but many do not appear to be under the control of normal regulation. Murine myeloid leukemic blast cell lines exhibit great heterogeneity with respect to differentiation. A major objection to studies on leukemic lines is that these lines are extremely rare and probably do not reflect the true characteristics of cells transformed in vivo. These are, however, undoubtedly useful in understanding gene regulation.

Research Needs

* The development of new genetic systems involving stem cell abnormality.

* Studies of early events in transformation in animal models in vitro to determine whether many cells are initially altered and if the one that predominates has a selective growth advantage or whether the initiating event is clonal.

* Is the unusual chromosomal rearrangement the event that confers the growth potential on the cells, as has been vigorously suggested for Burkitt's lymphoma?

The number of factors regulating normal growth and differentiation within hematopoietic compartments is probably greater than is now appreciated. Little is known about the mechanisms of action of any factor regulating hematopoiesis. An effort should be made to purify all of the important factors; those important in stem cell self renewal, stem cell commitment, cell differentiation, mature cell proliferation, and growth factors utilized by malignant cells. The ultimate goal in each case would be to have a pure factor(s), pure cell type, and an assay system for each category. Assuming that pure growth factor (GF) was available. The

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1987 (July 26)

Full newspaper page : [HN010X][GDrive]

Alabama man key in scientific detective story

By Steve Sternberg
Science/Medicine Writer

Swirling in the blood of Charles Robinson, 28, disc jockey, father of two, was a secret that had puzzled scientists for decades. Its discovery, like many breakthroughs, came unexpectedly.

For Robinson, who died a painful death nearly a decade ago, the discovery of the first human cancer virus meant scientific immortality.

The story began in 1975, when an Alabama doctor found that Robinson, who lived near Mobile, had a rare malignancy known as mycosis fungoides, which starts in the skin and progresses to the lymph nodes and organs.

But Robinson also had weakened immune defenses, and cancer had entered his bones. To learn more, the doctor sent him to the National Cancer Institute labs at Veterans Hospital in Washington, D.C.

"It was clear when Charles Robinson showed up there was something weird," recalls Dr. Paul A. Bunn, who was working at the hospital under a contract to the cancer institute. He took tissue samples for further study.

The research didn't help Robinson, but he managed to make the best of his circumstances.

"He was very jovial despite having a horrible disease," says Bunn. "Initially, he was very sick, then came a remission, then the disease came back."

"He was very fearful," says Dr. Bernard Poiesz, who was then a postdoctoral student at the institute. "His tumor moved very rapidly. It became apparent to him that he did have a lethal disease.

"He never fully realized the impact he made to discovery of HTLV-1. By the time it was fully published, he had died."

The breakthrough was based on a foundation of earlier research.

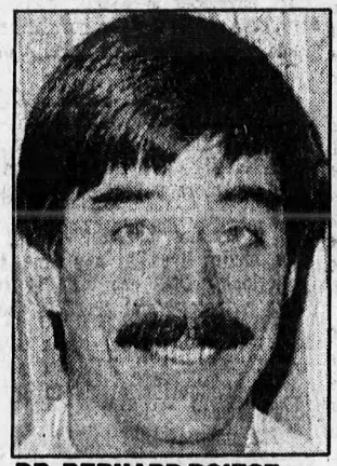
Dr. Robert Gallo of the National Cancer Institute had always been intrigued by the idea of cancer viruses. At first, the interest was intensely personal. At the age of 13, he had watched his younger sister grapple with leukemia.

"It influenced his focus," says one of Gallo's colleagues, Dr. Flossie Wong-Staal, chief of molecular biology at the cancer institute. "Later, the work itself provided the incentive."

Viruses long suspected

Despite the lack of direct evidence, the idea that viruses could cause human cancer had long been rooted in 20th century science.

In 1910, Payton Rous of the Rockefeller Institute found that a virus could cause tumors of muscles, bone and blood vessels in chickens. In 1960, William Jarret of the University of Glasgow discovered a feline leukemia virus.



DR. BERNARD POIESZ: Found chemical evidence that a virus was present.

By the time Charles Robinson became ill, scientists already knew there were animal viruses, called retroviruses, which incorporated themselves into the genetic material of their victims. They knew that unlike other viruses, they could survive indefinitely.

Gallo was convinced there must be such a virus in humans.

"Gallo believed it all along," Bunn says. "There was no question in his mind."

To investigate his theory, Gallo recruited a team of senior scientists and energetic young research fellows. One of them, Dr. Frank Ruscetti, made a crucial discovery — a substance called interleukin-2 that makes white blood cells grow. Without interleukin-2, cells which help defend the body against disease resist growth. With it, they multiply wildly.

But Robinson's "helper T-cells" were unusual. They grew under laboratory conditions without interleukin-2. In 1978, Bunn sent the culture to Poiesz's lab at a cancer institute-sponsored facility in Rockville, Md.

While Poiesz, then 28, was inspecting Robinson's cells for interleukin-2, he also looked for chemical evidence of viruses. In December 1978, he found one. He worked on it for about two months before feeling confident that this was, in fact, from Robinson and not a contaminant.

He called Bunn's lab with the news. "I called them on a Friday," Poiesz says. "I think I said, 'I can't believe it. I think I found a virus in Charley Robinson's cells.' "

"Dr. Poiesz was incredibly excited," Bunn recalls. "When he called to tell me, Dr. Gallo was actually out of town. He showed the data to Dr. [John] Minna, Dr. [Adi] Gazdar and myself. We were extremely excited too — no one had ever seen a human cancer-causing virus."

DR. PAUL A. BUNN: Took samples of Charles Robinson's tissue for further study.

The discussion was held on a Friday in January, in a tiny office in the VA hospital. The researchers listened to the data. They worried that other cells might have contaminated the mixture. "But they all agreed it was a significant finding," Poiesz says.

'Prize-winning discovery'

"It was a prize-winning discovery," says Bunn. "I don't think there was any question in anyone's mind. Possibly the Nobel Prize."

Minna told Gallo about the discovery early Monday morning, in a locker room while both were changing to play tennis.

"He thought it was potentially prize-winning too," Bunn says.

In May 1980, Gallo publicly reported the results for the first time during a meeting at the Cold Spring Harbor Laboratory, in Long Island.

The work was quietly received — until 1981, when doctors began reporting cases of another related disease, AIDS, also caused by a retrovirus.

One year later, Gallo and other researchers were awarded the 1982 Albert Lasker basic medical research award for their work. Although the Lasker award is often a prelude to the Nobel Prize, there are no guarantees. The Nobel also eludes many Lasker laureates.

With the discovery, Gallo increased the research team from a handful of scientists to more than 50. At times, several projects were under way at once.

"We were making a lot of virus, purifying it and characterizing it," Poiesz says. "To make sure the whole operation didn't stop, I stayed up five days in a row. I was so excited and I didn't feel tired."

The next series of experiments nearly soured his optimism. Poiesz had tested patients with mycosis fungoides for the new virus, which Gallo had named human T-cell leukemia virus (HTLV-1). He found none. They had a different disease.

The researchers were puzzled until two things happened.

First, Gallo learned that Dr. Daniel Kitovsky, a cancer specialist at Hammersmith Hospital in England, already had uncovered eight or nine cases of cancer similar to Robinson's.

He used a new test for HTLV-1 developed by Gallo's team at the National Cancer Institute. 'It was dramatic," Gallo says. "All his cases were positive for the virus."

Cluster of cases in Japan

None of the patients had had mycosis fungoides. They had an as yet unnamed disease, which would soon be known as adult T-cell leukemia/lymphoma.

Then the researchers learned of work under way in Japan, where Kiyoshi Takatsuki of Kyoto University reported a cluster of bizarre cancer cases, resembling Robinson's, among people on the islands of Kyushu and Shikoku.

The disease, which Takatsuki called adult T-cell leukemia, infected the blood and bone marrow of its victims. It usually killed them within three or four months.

Until Gallo reported on his work, the Japanese knew of no organism that caused cancer.

While the American researchers were studying Robinson's cells, they encountered a similar case involving a New York City woman who abused drugs and came from the West Indies.

A third case turned up in 1979 — in a tattooed sailor from the merchant marine, who had visited both Japan and the Caribbean. He had both the new cancer and a recently recognized nerve disease — now also linked to HTLV-1.

To study the disease in detail, the researchers needed more cases.

"We wanted to get more cells to study," Bunn says. "The Japanese had all these patients. Gallo's lab and others were instantaneously in competition with the Japanese. But the Japanese didn't want to share their stuff."

In an effort to find their own patients, Gallo's group turned to the Caribbean. In 1980, National Cancer Institute epidemiologist Dr. William Blattner went to Jamaica and consulted with physicians about setting up the research program which is now known as West Indies Project.

In less than a decade, the cells taken from Charles Robinson during an uncomfortable biopsy grew from a cell culture, called HUT 102, into one of the most active and productive medical research efforts of the century.

It has since helped researchers identify new strains of a deadly viral disease that Gallo calls the "first great pandemic of the second half of the 20th century." The disease is AIDS.

The scientists never had a chance to tell Charles Robinson.

He didn't live long enough.

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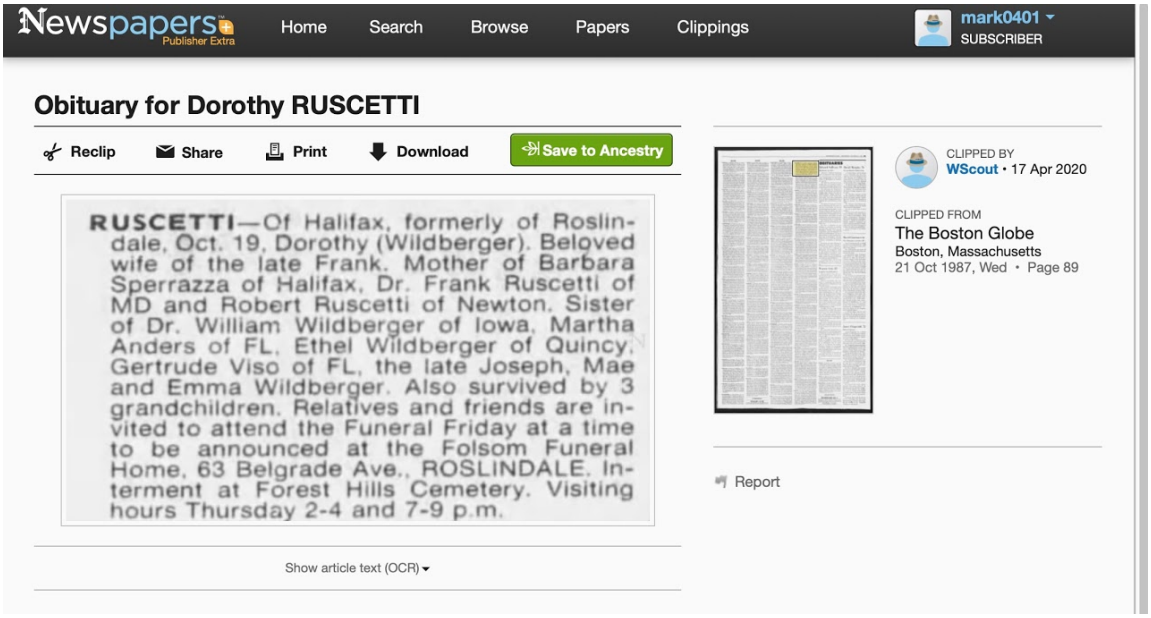
1987 (Oct 21)



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1989 (November 19) - Special Report in the Chicago Tribune

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The Great AIDS Quest

Editor's note

The performance of the press in reporting the spread of the AIDS plague, one of the most important stories of the century, was abysmal.

No story caught us more ill-equipped or unprepared. The speed with which the disease spread, its enormously complex nature and the scientific ignorance of the press made it a story simply beyond our capabilities.

When the story moved to the search for and ultimate discovery of the cause of the disease, the combination of complexity and ignorance forced reporters into the role of stenographers, mostly unchallenging and unable to scrutinize. As some critics suggest, the story of the discovery of the AIDS virus has not really been reported at all—until today.

This special section of The Chicago Tribune contains that story, an almost book-length account culminating two years of intense work by one of journalism's premier investigative reporters. John Crewdson, 43, won the 1981 Pulitzer Prize for national reporting while a New York Times correspondent and later became metropolitan editor of The Tribune. Now a special national correspondent for The Tribune based in San Francisco, he has been assigned to the AIDS story almost exclusively since it crawled onto the front pages of the newspapers in mid-decade, not because of any special science or medical background but because Crewdson had proven over the years to be precise, cautious, curious and persistent in pursuit of the most difficult and elusive stories.

Twenty months ago, Crewdson was assigned to document how different segments of society, particularly the scientific community, the public health sector and the political establishment, reacted to the AIDS scare.

The resulting account of the quest for the cause of this mysterious and terrible disease is a classic story in many ways.

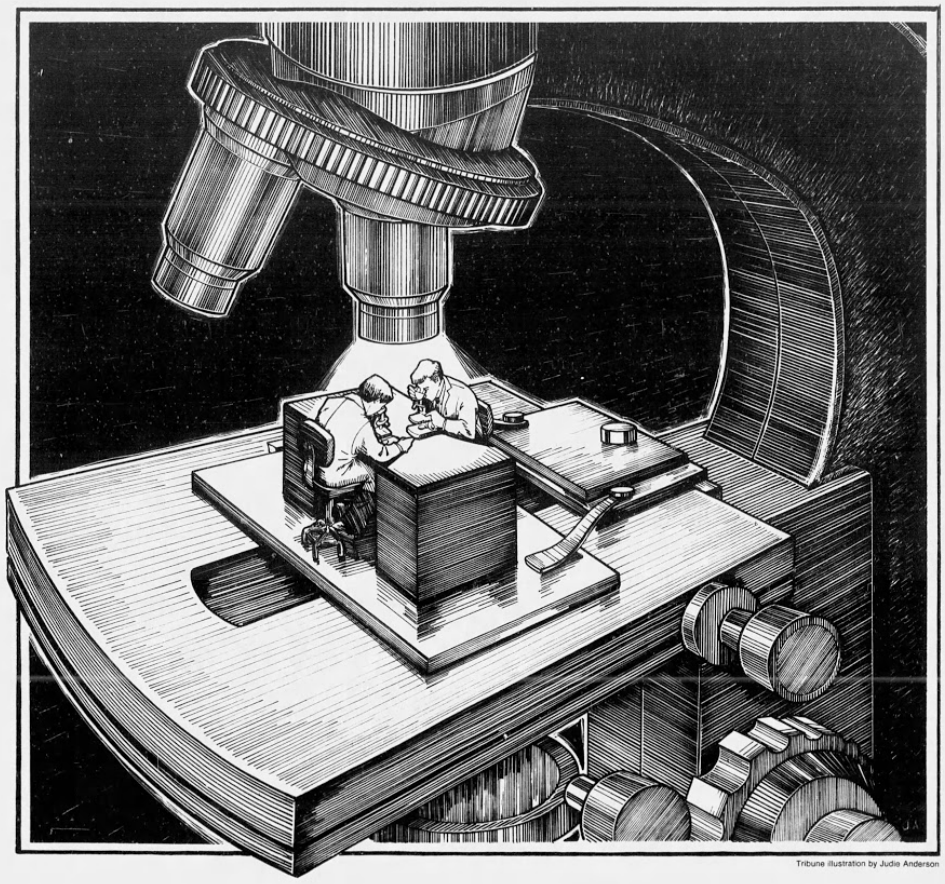
It is a story of commitment and dedication to mankind and of tireless, often brilliant detective work within the magic and marvelous world of modern medical technology. But it is also a story of cut-throat competition and bare-knuckled politics, of individual ego and national pride, and of the kind of intense pressure on human beings that often brings out the worst in even the best and can result in lying, cheating and outright fraud.

The presentation of this story, an entire special section consisting of more than 50,000 words spread over 16 pages, is extraordinary, to say the least. But the story itself is so extraordinary as to demand it.

As extensive as it is, this account is still far less complete than The Tribune would like, in part because precise scientific explanation can be so exhaustive and, more important, because early in Crewdson's investigation, Dr. Robert Gallo, a key figure, ceased to cooperate. Not only did he decline repeatedly to answer questions, he fought the Freedom of Information requests for public records and made numerous attempts to discredit Crewdson's reporting and impugn his personal integrity, both with his editors and with members of the scientific community.

Still, the story is by far the most complete and detailed look at how the government and scientific communities reacted to this huge and growing public health challenge. And it casts, perhaps for the first time, a brilliant and penetrating light on modern medical science.

James D. Squires



Tribune illustration by Judie Anderson

Science under the microscope

1 'We forgot to write the summary'

By John Crewdson

On the afternoon of the day before his 50th birthday, the American scientist Robert C. Gallo sat down at a small desk in a hotel room in Germany. In the chair next to his was Luc Montagnier, one of the French researchers from whom Gallo had been trying for nearly three years to steal the credit for discovering the cause of AIDS.

Neither Montagnier nor Gallo, the unchallenged AIDS superstar at the National Institutes of Health, was there by choice. The two scientists had been forced together by pressure from their governments, and their peers, to write a combined history of their research that would end their increasingly acrimonious dispute.

The Pasteur Institute, where Montagnier works, had formally challenged the patent on the blood test for AIDS developed in Gallo's lab, and the American government was eager to settle the case. Any settlement would turn on the question of who had been first to find the virus that causes the disease and use it to make a test.

The 'definitive scientific history' that emerged from that hotel room in Frankfurt made possible an agreement between the French and American governments, the first ever to resolve an international conflict over a scientific discovery. Officially, the dispute has been settled forever. In reality, the scientific world has been left with more questions than answers about who really discovered the cause of AIDS, and when and where and how.

In an effort to distinguish scientific truth from gossip, rumor and professional jealousy, The Chicago Tribune undertook a reconstruction of the discovery of the AIDS virus that has included the examination of more than 5,000 pages of government documents and interviews with 150 scientists in this country and abroad.

The story that emerges is less heroic than generally portrayed, but no less dramatic: misstated data and secret experiments, phantom viruses and disappearing genes, unreproducible results and muddled lab notes, mislabeled cultures and misleading photographs.

What also emerges is that the history—inelegant, vastly incomplete and technically inaccurate—even begins with a lie. Between the Gallo and Montagnier laboratories, it says, there had always been 'a spirit of scientific cooperation and a free exchange of ideas.'

As with many histories, the biggest lie is in what it doesn't say. Utterly missing from the account of this great scientific achievement is the story of an influential and intimidating scientist who chased the wrong virus for more than a year, only to reverse course and emerge with a virtual genetic twin of the virus that had really been discovered by his rivals in Paris and delivered to him months before.

What happened in Robert Gallo's lab during the winter of 1983-84 is a mystery that may never be entirely solved. But the evidence is compelling that it was either an accident or a theft.

The beginning of the 1980s looked like the beginning of the end for infectious diseases in America. Smallpox had been eradicated, polio was nearly nonexistent and the childhood illnesses were on the ropes. Then, in the spring of 1981, doctors noticed that a few young men in large American cities were dying horrible deaths. Something was ravaging their immune systems, but what?

As the death toll mounted, so did the theories. Because all the early patients were homosexuals, some scientists thought the disease that would later be called AIDS must be a byproduct of the gay lifestyle. But when the same symptoms began turning up in hemophiliacs and in heterosexuals who had received blood transfusions during surgery, the possibilities narrowed. Any number of infectious micro-organisms might be transmitted in semen or blood, but the only thing small enough to evade the filters used to screen the clotting factor given hemophiliacs was a virus.

In May of 1983, less than two years after the first AIDS cases had been recognized by physicians at UCLA, an anxious nation was relieved to learn that scientists at Harvard and the National Institutes of Health had found an important clue. As many researchers had been predicting, it seemed that AIDS was indeed caused by a virus. What came as a surprise was that the virus under suspicion had apparently been around for years.

Its scientific name was human T-cell leukemia virus, HTLV for short, and it belonged to a relatively small group of viruses known as retroviruses. So far HTLV had been linked only to a rare leukemia found mostly in the fishing villages of southern Japan. Now the experts were suggesting it might also be responsible for what would soon become the biggest public health emergency since half a million Americans perished in the great influenza epidemic of 1918.

One of those making the announcement was Robert Charles Gallo, a veteran researcher and laboratory chief at the National Cancer Institute, the biggest and richest of the research institutes that make up the multibillion-dollar federal biomedical complex known as the National Institutes of Health in Bethesda, Md. Not coincidentally, it was in Gallo's laboratory at NIH that the leukemia virus had first been isolated a few years before, a discovery that had propelled Gallo to the top rank of American medicine. Just six months before the announcement, when Gallo was awarded the Lasker prize, the top honor in American biomedicine and frequently a precursor of the Nobel prize, the citation had lauded his "revolutionary discovery of the first retrovirus known to be associated with a human malignancy."

In the summer and fall of 1982, just as the AIDS epidemic was beginning to grip the public's attention, the most important thing on Gallo's mind was finding out how many people around the world had been infected with his new leukemia virus and the even newer substrain, called HTLV-2, that one of his assistants had just isolated from a Seattle seafood salesman.

Arthur Levine, then chief of the cancer institute's pediatrics branch, remembers a conversation with Gallo about AIDS in June of 1982. From colleagues on the West Coast Levine had become aware of the AIDS epidemic early on, and he also knew a thing or two about retroviruses.

"It was a phone call from me to Bob Gallo," recalled Levine, now scientific director of the National Institute of Child Health and Human Development. "I said, 'Bob, have you heard of this bizarre syndrome that's happening in San Francisco and New York?' He hadn't heard of it. I described it to him, and he agreed that it was very intri-

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How Tribune AIDS project was reported

Tribune correspondent John Crewdson began this examination of the scientific research on AIDS 20 months ago. Even though he interviewed more than 150 people in this country and abroad, and reviewed thousands of pages of documents, he wasn't able to answer all the questions surrounding the work of Robert Gallo, a key figure in the discovery of the cause of the disease.

The Tribune sought on many occasions to interview Gallo and some of his associates. Gallo answered some questions in a telephone call in September, 1988, but no in-person interview, at which documents could be reviewed and more extensive questions addressed, was ever granted.

In December, 1988, former U.S. Sen. Birch Bayh, Gallo's Washington-based attorney, sent The Tribune a letter stating that "Dr. Gallo is amenable to your interview request and suggests that it should be arranged expeditiously. We assume that your work will not be published until after the interview has taken place." Bayh also asked for a list of questions.

On Dec. 19, a day before the interview was to have taken place, The Tribune delivered 188 questions, to Bayh's office. Three days later, Bayh's office advised The Tribune that Gallo no longer wished to be interviewed.

In January, 1989, in a telephone conversation with Tribune Editor James D. Squires, Gallo said "the lawyers" had advised him not to grant the interview. In the months that followed there were more letters and telephone calls in which Gallo and Bayh complained about questions Crewdson was asking.

Through Squires, The Tribune again tried to obtain an interview with Gallo, agreeing to send Executive Editor Jack Fuller along with, or instead of, Crewdson. On July 28, Squires sent a letter to Bayh with a revised set of questions. There was no response. In October, The Tribune sent another letter noting that the lack of response was being taken to mean no interview would be granted.

Myron T. Essex, a retrovirologist from the Harvard School of Public Health and a longtime Gallo collaborator, declined a request for an interview because of "a heavy travel commitment and a tight schedule."

Another Gallo collaborator, Harvard biologist William Haseltine, also declined a request for an interview.

Gallo's chief molecular biologist, Flossie Wong-Staal, said in a letter to The Tribune that she did not "have the time or inclination to respond to every naive reporter to satisfy his idle curiosities."

Mikulas Popovic, Gallo's former chief virologist, also declined an interview, saying, "This is not the time to write a history. You should wait for 10 or 15 years."

Even outside of science, Robert Gallo is a celebrity

In just five years, Robert Charles Gallo has become one of the most prominent medical scientists in the world. He has won nearly every award his field has to offer—his biography lists nine single-spaced pages worth—and the hundreds of thousands of dollars in prize money that goes with them. He is the only scientist ever to win two Lasker awards, this country's highest biomedical honor. The New York Times calls him a "strong candidate" for a Nobel prize.

Gallo, who heads the National Cancer Institute's Laboratory of Tumor Cell Biology, is also a celebrity outside the realm of science. When the Italian-American Foundation throws its annual awards dinner, he is there with composer Gian Carlo Menotti. When People magazine chooses its "30 Hardest Working Celebs," he makes the list with Dan Rather and British Prime Minister Margaret Thatcher. Last month, Newsweek magazine counted him among America's 25 "leading innovators." Last week he met Pope John Paul II in Rome.

It is a rare news article about AIDS that does not contain Gallo's generously quoted opinion, and an even rarer conference on the disease where he is not a much-sought-after speaker. So much in demand is he by journalists that those attending last year's international AIDS conference in Stockholm were required to enter a lottery for a chance at a five-minute interview.

Gallo has made scientific careers, and those whose careers have become intertwined with his afford him the highest praise. William Blattner, a National Cancer Institute epidemiologist who has spent much of the last decade searching in different populations for the human leukemia virus first isolated in Gallo's lab, says, "Bob is one of the really great scientists of our time."

Dani Bolognesi, the Duke University virologist who followed Gallo into the field of human retroviruses, is often described as Gallo's closest friend. Bolognesi credits Gallo with "a tremendous amount of intelligence, a great deal of intuition. Bob sees through things and over things and around things in ways that are sometimes difficult for us."

Gallo is respected by other researchers less for his scientific acumen than his ability to see the larger picture. "He is able to synthesize," says Wolf Prensky, chief of virology at St. Clare's Hospital in Manhattan. "It's something that few scientists can do well."

"He is imaginative," says Robin Weiss, the noted British retrovirologist. "He doesn't know the literature well, because he's too busy flying around. He's not scholastic in the pedantic, obsessive way that we ought to be. But Gallo comes out with different ways of looking at things."

"I don't have a great analytical talent," Gallo told The Tribune. "I do think, however, I have some talent in thinking originally. And I have some perseverance and I work hard. But I am not dotting all i's and crossing all t's all the time. It has not been my strength. There are far better scientists than me in that line."

Gallo's strong emphasis on personal loyalty, and his legendary temper, are the reasons given most often by those who know him for declining to talk about Gallo on the record. One former associate spoke for many when he said, "If he died, I might talk to you."

Gallo is not unaware that he inspires controversy. "I have friends and enemies everywhere," he says. "I'm not rewarded by scientific peers. There's a lot of people with a lot to gain by certain things, and there's a lot of jealousy. It provides them with an explanation for their own inadequacies. You know what my flaws are; they're obvious. I tend to be aggressive. I tend to be competitive. I hope to God I don't hurt anybody."

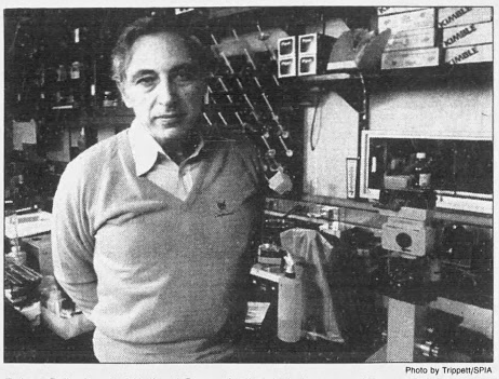

Photo by Trippett/SPIA

Robert Gallo, head of National Cancer Institute's Laboratory of Tumor Cell Biology.

It was Gallo's peers who, until last year, kept him from membership in the National Academy of Sciences, the 2,000-member body that comprises this country's scientific establishment. "He really wanted to be in the academy," says one Nobel laureate. "He would tell you himself that was one of the things that made him unhappy in life."

According to that scientist and others, although Gallo had been proposed for membership several times, on each occasion the selection committee declined to add his name to the ballot. What transpires during academy elections is a closely held secret, but several members confirmed that Gallo finally gained entrance through a process called voluntary nomination in which the selection committee can be bypassed if signatures are obtained from 20 members.

Academy memberships are a plum, but it is the gleaming gold disc with the bas-relief of Alfred Nobel that to a large degree drives science forward. "I don't know if I'll ever get it," Gallo told The Tribune. But he notes that three out of four Lasker recipients have gone on to win the Nobel, including this year's winners, J. Michael Bishop and Harold Varmus of the University of California, both of whom also shared the Lasker prize with Gallo in 1981.

Gallo suggests his two Laskers "ought to mean something" to his chances, and he adds that "the president of the University of Chicago, Leon Jacobsen, has more than once nominated me for a Nobel prize."

Jacobsen, an emeritus professor of medicine at Chicago, where Gallo served his internship and residency in the 1960s, has never been the university's president, and he will not discuss having placed Gallo's name in nomination. "People just don't talk to each other about those things," he says. But Jacobsen does volunteer that he helped engineer Gallo's admission to the National Academy of Sciences.

"We had a hell of a time getting him in," Jacobsen says, "because people are jealous of him. He's published 600 or 700 papers, and he runs a big show. I talked to a lot of these people who are against him, not because of his work but just on principal, whether he was doing too much or publishing too many papers. You know, these things get on some people's nerves, I guess, because maybe they'll put out one a year and he puts out 50."

Gallo's curriculum vitae, nearly a half-inch thick, contains more than 700 scientific articles—a prodigious number even for a scientific superstar. In the last three years alone, Gallo has been a coauthor on more than twice as many articles as any of the other leading scientists in his field. He has not done any scientific "bench work" in years, but in listing himself as an author on most of the papers published by other researchers in his lab, Gallo is hardly alone among the heads of major laboratories.

Several of the articles that bear his name also describe experiments done in other laboratories in which he and his staff played no direct part except perhaps to provide a snippet of DNA or some other piece of raw material. But engineering such collaborations is one of the things Gallo does best. "To be a success in science these days you need a different sort of talent than just the ability to be a good experimenter or ask the right questions," says another cancer institute scientist. "It's become an entrepreneurial business, and Gallo's good at that. He was one of the first of the big-time laboratory operators."

Gallo's laboratory, atop Building 37, a modern concrete-and-glass tower on the edge of the university-style campus of the National Institutes of Health in Bethesda, is the unabashed envy of his colleagues. So is his $8 million annual budget, an enormous sum even for a scientific laboratory that employs more than 50 researchers and support personnel. So is his devoted permanent staff, some of whom have been with him for a decade or more. "It's a very personal operation," says a cancer institute colleague. "That's what everybody wants, to be surrounded by people who will bust their backs to make you look good."

The quality of Gallo's staff is bound to be diminished by the departures of two of his top researchers. Mikulas Popovic, his chief virologist, who played a central role in the isolation of the AIDS virus, left in August for a job at New Mexico State University. Gallo's chief molecular biologist, Flossie Wong-Staal, is said to be leaving Bethesda in January for San Diego.

Each year for the past several years, Gallo has hinted to his friends that he, too, is on the verge of leaving the cancer institute for academia or private industry. At different times he has been rumored to be in negotiations with Duke, Johns Hopkins and Yale and, most recently, with the British financier Robert Maxwell.

The possibility that Gallo might move to Yale was seen by friends as particularly significant in light of his frequently quoted remark a few years back that, because he had attended a lesser-known medical college, he felt the need to work all the harder to prove himself.

Gallo, 52, the only son of a comfortably well-off family, grew up in Waterbury, Conn., where his late father, a metallurgist, owned a small but successful company. Gallo has often said it was the death of his younger sister, Judith, from childhood leukemia that inspired his interest in medical research. After graduating summa cum laude with a degree in biology from Providence College in Rhode Island, he won a medical degree from Philadelphia's Thomas Jefferson University.

In 1965, following his internship and residency at the University of Chicago, Gallo joined the National Cancer Institute as a clinical associate. But after a year of treating cancer patients, an experience he has described as unsettling, he joined the institute's research arm and began a rapid advancement through the ranks, gaining his current position as laboratory chief in 1972.

The rumors of Gallo's departure come and go but Gallo remains at NIH, and those who know him well believe he will never leave. "He never can get a set-up like he's got there now," one friend says, and the cancer institute is happy to see him stay. "In biological research I don't think a supreme personality reigns," says another scientist. "There's no Einstein. He's the only star the NIH has left. He's their big hope for a Nobel prize."

Money and prizes aside, nowhere else will Gallo be able to match the influence he enjoys among those at NIH whose policies determine the course of biomedical research in this country and, to a large extent, the rest of the world. For years, Gallo's position at the cancer institute as first among equals derived from his close personal relationship with the institute's longtime director, Vincent T. DeVita Jr., who resigned unexpectedly last fall to take the No. 2 job at Manhattan's Memorial-Sloan Kettering Cancer Center.

"DeVita and Gallo were very close," says one doctor who knows both men well, and after DeVita's resignation there were fresh rumors that Gallo would not be far behind. But the rumors ceased when DeVita was replaced by Samuel Broder, who worked closely with Gallo during the early years of AIDS research. A former NCI official predicts that "with Broder there, Gallo will still get everything he needs," and Broder's praise of Gallo is unrestrained.

"Gallo is one of the paradigmatic figures of the 20th Century," Broder told the Washington Post. "He's influenced things in our daily lives to an incalculable degree. Einstein, Freud—I'd put him on a list like that, I really would."

In right place at right time, three French scientists make history

When Luc Montagnier arrives for work at the Pasteur Institute, it's not uncommon for him to find someone with AIDS waiting outside his lab. The reason is always the same: the hope that somehow the scientist who discovered the virus that causes the disease will know how to cure it. "These poor AIDS patients," Montagnier says with a shake of his head, "they regard me as a god, you see."

Although Montagnier's work with AIDS has brought him an international reputation, he is regarded as less than a god by his colleagues at the Pasteur. Earlier, his most noteworthy achievement came in the mid-1960s; as a young scientist in London, he developed a method for growing animal cancer viruses that is still widely used.

Last year, when Montagnier offered himself as a candidate for the Pasteur's directorship, a position filled by a vote of the faculty, he reportedly lost by a large margin. Now he is "in discussions" with financial backers in California who want him to head a new research institute in La Jolla that will be devoted to the search for an effective treatment for AIDS.

"My motivation comes back to the patient," Montagnier says. Although he would like to oversee the La Jolla institute while keeping his position in Paris, he acknowledges that might not be possible. "As I view it now I won't be leaving Pasteur," he says. "But if I'm forced to leave I will leave, of course."

Montagnier, 57, grew up in a small town south of the Loire Valley during the World War II. "My father was an accountant," he says. "It was the dream of my parents that I should become a doctor. It was the first time in my family somebody went to college. But I decided I should study not only medicine but also science. I was more interested in science."

Jean-Claude Chermann also began his education with the idea of becoming a doctor. "I came from a very poor family," he says. "My parents were divorced since I was 4 years old. My mother was a seamstress, and at night she was an usher in the theater. I did not want to be a scientist. I would like to be a physician, a surgeon. But I have to work for paying my study and so on, and I decided that it was too long to make physician."

Chermann had been at the Pasteur only a few years when, in the early 1970s, he was approached by a friend of a friend, a young student named Francoise Barre. The only child of a middle-class Parisian family, Barre had played with microscopes and chemistry sets. "I was always interested in the mechanisms involved in human life," she recalls.

As a University of Paris undergraduate, Barre eventually faced the same decision as Montagnier and Chermann, whether to become a doctor or to go into pure science. Hoping hands-on experience would help her decide, she asked Chermann for a job in his lab. After she graduated the job became full time. In 1975, when Chermann elected to work on retroviruses rather than antiviral drugs, Barre remained at his side.

Chermann's decision would irrevocably alter the course of both their careers and their lives. In late 1982, Montagnier, by then the Pasteur's chief of viral oncology, was asked by a group of Paris physicians to look for a retrovirus in patients suffering from a new disease of the immune system. Chermann and Barre were the only other scientists in his unit experienced in isolating and growing retroviruses. Within a few weeks, Montagnier, Chermann and Barre had discovered the virus that causes AIDS.

Photo by Haley/SIPA

Luc Montagnier, chief of viral oncology at the Pasteur Institute in Paris.

Glossary

AMINO ACIDS: the building blocks of **proteins**. Although there are hundreds of amino acids, only 20 are ordinarily found in proteins.

ANTIBODIES: Protein chains produced by the immune system that bind to, and often neutralize, **viruses** and other invaders. Viral antibodies are a sign that the virus is, or has been, present.

ATLV: Adult T-cell leukemia virus, the name given by Japanese scientists to the virus that they discovered, which is the same as Robert Gallo's **HTLV-1**.

B-CELL: The immune system cell involved in producing **antibodies**. A line of cancerous B-cells, called BJAB, was used by the French to grow the AIDS virus called **LAV**.

DNA: Deoxyribonucleic acid; long chains of chemical compounds called **nucleotides** that contain genetic code for assembling proteins. The DNA containing the genetic code for the AIDS virus has about 9,200 nucleotides. By contrast, the DNA code for a human being has about 3 billion nucleotides.

ENZYME: Biochemically active **protein** that regulates viral and other biochemical activities. The enzyme the AIDS virus uses to reproduce itself is called **reverse transcriptase**.

H9: a permanent line of **T-cells** created in Gallo's lab by cloning a single T-cell from an established T-cell line called **HUT78**. When the H9 cells began to multiply, they were infected with the pooled AIDS virus that became known as **HTLV-3B**.

HIV: Human immunodeficiency virus, the generic name for the virus that most scientists believe causes AIDS.

HTLVA: The name given to what may have been an AIDS virus isolate used in experiments in Robert Gallo's lab in early 1984. The derivation of the term is unclear because the existence of such a virus was never publicly acknowledged.

HTLV-1: Human T-cell leukemia virus isolated in Gallo's lab. The first retrovirus associated with cancer in humans, it infects **helper T-cells** and causes them to proliferate wildly. Japanese scientists established a connection between HTLV-1 and adult T-cell leukemia.

HTLV-2: Variant of **HTLV-1**, also isolated in Gallo's lab. HTLV-2 was found in 1981 in a patient code-named MO. It has since been discovered in fewer than a half-dozen patients with an extremely rare disease called hairy cell T-cell leukemia, but scientists are unsure whether the virus is the cause of the disease.

HTLV-3: Gallo's original name for the human retrovirus that causes AIDS. The name was later changed to **HIV** after it became clear the AIDS virus was not related to **HTLV-1** and **HTLV-2**.

HTLV-3B: Gallo's principal AIDS virus isolate, reportedly obtained by pooling tissue culture fluids from 10 individuals in the **H9** T-cell line. Several distinct AIDS virus **DNAs** have been cloned from HTLV-3B that are genetically indistinguishable from the French AIDS virus called **LAV-1**.

HUT78: Human **T-cell** line established in the late 1970s by NCI researcher Adi Gazdar. The progenitor of the Gallo cell line called **H9**, HUT78 was also used in Gallo's lab to grow the French AIDS virus called **LAV-1**.

AIDS

Continued from page 1

guing. And then I said the most intriguing thing is that I think the cause of this syndrome is going to be a retrovirus related to HTLV. He said that's very interesting and got off the phone."

The "bizarre syndrome" was being watched most closely by the federal Centers for Disease Control in Atlanta, where a small group of researchers was hunting frantically for its cause. In the fall of 1982, it occurred to a young CDC virologist named Cy Cabradilla, who had done his postdoctoral fellowship at the cancer institute a few years before, that one of Gallo's two human retroviruses might have something to do with AIDS.

"We were looking at every virus we could get our hands on to see if there was any relatedness," Cabradilla said. "The only one we hadn't really looked at was the human retrovirus. I made an appointment to go up and talk to Bob about evaluating some blood samples for us against HTLV. I spent an afternoon up there. He didn't seem that interested. I don't think he wanted to get involved with a gay disease. I think what turned him around was Max."

"Max" was Myron T. Essex, one of Gallo's longtime collaborators and a senior researcher at the Harvard School of Public Health. Using an established laboratory technique called an immune fluorescence assay, Essex had been testing blood samples from young homosexual men with this newly reported wasting disease.

In the Essex test, the patient samples were exposed to cultures of white blood cells that were known to be infected with the leukemia virus. If the blood contained antibodies to the virus—antibodies are proteins manufactured by the immune system to neutralize invading viruses and other microbes—they would presumably stick to the virus in the cells. When the cells were examined under an ultraviolet light, those to which antibodies had become attached would glow with an iridescent sheen.

Essex was finding that impressive percentages of the samples were positive, an indication that the AIDS patients were infected with the leukemia virus. According to Essex, however, his test was not picking up antibodies to the leukemia virus itself but to a mysterious new protein that seemed to appear on the outer surface of the virus-infected cells as a product of the process of infection.

Essex's data were hardly conclusive, but they were tantalizing nonetheless. As one member of Gallo's staff recalled later, when Gallo first heard about what was going on in Essex's lab at Harvard, "it was like Christmas." For Gallo, the idea that his obscure leukemia virus might be the cause of AIDS made a certain amount of scientific sense.

For one thing, the leukemia virus infected a particular kind of white blood cell known as a helper T-cell, and it was a shortage of helper T-cells that was apparently causing AIDS patients to fall ill with various exotic diseases by robbing their immune systems of the ability to respond to infection. For another, the leukemia virus was a retrovirus, and there was evidence that an animal retrovirus, feline leukemia virus, could cause the same kind of immune deficiency in house cats.

Because so many AIDS patients were homosexual men, many scientists assumed that whatever was causing the disease was transmitted sexually—and so, they thought, was HTLV.

But even if Essex was right, finding antibodies to a protein on the surface of leukemic T-cells was like finding the footprint outside the window after the burglar had fled. Gallo wanted to catch the burglar in the act by finding AIDS patients who were infected with the leukemia virus itself.

From doctors and hospitals around the world, blood and tissue cells from patients with AIDS or pre-AIDS, the collection of lesser symptoms that often precede the disease, had begun arriving in cartons of dry ice at Gallo's laboratory on the top floor of Building 37 on the NIH campus. After the samples were logged in they were tested for reverse transcriptase, the enzyme that retroviruses manufacture in order to reproduce themselves. Those that tested positive were examined for evidence that Gallo's leukemia virus was present in their cells.

The early results were encouraging. Within weeks, Gallo's assistants had detected the leukemia virus in the white blood cells of two East Coast homosexuals, a young Haitian woman named Marcellin who had died of AIDS in Paris, and a 31-year-old Frenchman named Claude Chardon who had been given a blood transfusion in Haiti after losing his left arm in a motorcycle accident.

Including the two East Coast homosexuals and Marcellin, nearly all of those outside Japan in whom the leukemia virus had been found were black. Daniel Catovsky, a researcher at London's Hammersmith Hospital, had discovered it recently in several Caribbean immigrants there, and some scientists were beginning to wonder whether blacks were somehow genetically predisposed to infection with HTLV-1. Most of the infected blacks didn't have AIDS. On the other hand, nearly all of those who were sick with AIDS were both white and homosexual. Chardon seemed to represent some kind of bridge. He wasn't black, and according to his widow he wasn't gay. If Chardon had the leukemia virus and he also had AIDS, then perhaps the two really were connected.

The cells from Marcellin and Chardon had been brought to Gallo in February of 1983 from Paris by a French immunologist named Jacques Leibowitch. When Leibowitch heard about Chardon's case from doctors at the Saint-Lazare Hospital in Paris, he had been quick to recognize its significance. "I was there at the seminar where they presented the case," the Harvard-trained Leibowitch recalled, "and I was strongly motivated to get the cells of this guy. It could serve the purpose of demonstrating that the cause of AIDS was not homosexually related."

In early March of 1983, Gallo sent a paper reporting the detection of his leukemia virus in the two East Coast homosexuals to Science magazine, a weekly published by the American Association for the Advancement of Science and second only to the British journal Nature as a prestigious forum for biomedical research. In a cover letter to the magazine's editors, Gallo made clear he was not claiming the leukemia virus caused AIDS. Rather, he hoped his findings might "direct research in AIDS toward a class of agents not addressed in the literature to this point."

Within a few weeks Gallo had sent Science a second paper, this one reporting that the leukemia virus had now actually been isolated from one of the two East Coast homosexuals and had also been detected in the cells of Marcellin and Claude Chardon. In the meantime Essex had submitted a paper of his own to Science, reporting that up to 40 percent of the AIDS patients whose blood he had tested had antibodies to the mysterious protein on the surface of leukemic helper T-cells. Harvard University, which like most universities owns its faculty members' inventions, promptly applied for a patent on the Essex test.

A few weeks before publication of the papers, Gallo presented his superiors at the National Cancer Institute with a bold proposal. The NCI, he wrote, should move quickly to take the lead in what seemed likely to become a fierce scientific and medical battle against AIDS. A special AIDS working group was needed, Gallo said, and he suggested that he be named its chief of research, an additional responsibility that would require more laboratory space and personnel, but only "until the problem is solved or [for] three years, whichever comes first."

When the papers from Gallo and Essex appeared in the same issue of Science in May of 1983, they made a considerable splash. The Washington Post called the possible involvement of Gallo's leukemia virus "the strongest clue yet to the cause of AIDS." The Boston Globe nominated the virus as "the leading suspect for causing the illness." Even Science's archrival, Nature, took note of "an important group of papers" that "confirms that HTLV is indeed somehow linked with AIDS."

More than 1,200 Americans were already sick with AIDS. Physicians in San Francisco, New York and other big cities were seeing new patients each week, and they were becoming increasingly anxious to know more about the mysterious and deadly disease with which they were confronted. Now they were being told that AIDS might be caused by a leukemia virus. To some, the idea that a cancer virus might underlie an immune deficiency didn't make immediate sense, but most of those who read the articles in Science put their confusion down to lapses in their own understanding of retroviruses and AIDS. The relatively small number of scientists who knew something about retroviruses did have some questions, however.

The curious thing about Essex's data, they thought, was that his numbers were neither high nor low—not high enough to show a conclusive link between the leukemia virus and AIDS and not low enough to be a coincidence. But Gallo and Essex agreed that Essex's test needed to be refined, and they had answers for the other objections as well. When it was pointed out that there was no AIDS in southwestern Japan, where the leukemia virus was most common, Gallo suggested that maybe AIDS hadn't been noticed there yet, or that Japanese people perhaps responded differently to the disease.

The news accounts about the possible link between HTLV and AIDS—and there were many in the spring and summer of 1983—barely mentioned a fourth paper in the same issue of Science. The lapse was perhaps understandable since the magazine itself, in an accompanying news article, had dispensed with the paper in a single sentence. When the nonscientific press referred to the paper at all, it was mostly as an afterthought, to note that researchers at the Pasteur Institute in Paris had provided confirmation of the findings by Gallo and Essex.

The origins of the AIDS work in Paris traced back to the end of 1981, when a group of physicians began meeting informally to discuss what one member, a young immunologist named David Klatzmann, called "a disease which at that time interested nobody." Jacques Leibowitch was also a part of the Paris group, and it was he who focused the group's attention on the possibility that a retrovirus was responsible for AIDS.

"None of us was a retrovirologist and we had no idea what this virus was," Klatzmann recalled. "We discussed how to isolate such a virus, and we reasoned that maybe the lymph node was the best point to look at." Another member, Francoise Brun-Vezinet, had taken a course in virology at the Pasteur Institute and remembered the name of one of her lecturers. In mid-December of 1982 Brun-Vezinet put in a call to Luc Montagnier, the chief of the Pasteur's department of viral oncology. Yes, Montagnier said, he had heard about AIDS and had thought about the possibility that a retrovirus was involved. If the clinicians would bring him a lymph node from someone with AIDS, he would look for such a virus.

The French physicians had already decided the best place to look was the cells of someone who did not yet have full-fledged AIDS. If a virus was present, and if the virus was infecting the helper T-cells, then a person in whom the disease was not so advanced might have more infected cells in which to find the virus. As it happened, another of the Paris clinicians, a tropical disease specialist at the Claude Bernard Hospital named Willy Rozenbaum, had been seeing just such a patient, a young homosexual named Frederic Brugiere.

A fashion designer, Brugiere had been suffering for several months from the persistently swollen lymph glands that often precede AIDS. Other than that, however, he was healthy. On the afternoon of Jan. 4, 1983, Francoise Brun-Vezinet delivered a slice of Brugiere's lymph node to Jean-Claude Chermann, who worked under Montagnier as a lab chief at the Pasteur. Chermann gave the sample to Montagnier, who minced the tissue and put the T-cells he extracted into a flask filled with nutrients to keep them alive. To encourage the growth of any virus that might be present in the cells, Montagnier added an antibody designed to counter the effects of interferon, a protein produced by the immune system that protects T-cells against viral infections.

Because the flask was stored in an incubator that kept it at body temperature, if a virus was present it should begin reproducing in the laboratory just as it would in Brugiere's body. If it happened to be a retrovirus, the first evidence of its existence would be the activation of an enzyme called reverse transcriptase as it assembled DNA copies of the virus's native RNA.

In one sense, the AIDS epidemic could not have come at a better time. If AIDS had appeared even a decade earlier, researchers would not have known where to begin searching for its cause. Helper T-cells had not yet been recognized as a separate class of white blood cells, retroviruses in humans were unknown and there were no reliable tests for reverse transcriptase. Now, however, there was such a test. Every three days Montagnier drained fluid from the culture and gave it to Francoise Barre, another Pasteur scientist who worked for Chermann and who was skilled at using radioactive isotopes to measure the amount of DNA being synthesized by a retrovirus.

Seven times, at three-day intervals, Barre tested the culture fluids for reverse transcriptase, and seven times the results were negative. But on Jan. 26, 1983, when the radioactivity in the fluids reached 5,600 counts per minute—about three times the background radiation at the Pasteur—Barre began paying attention. Three days later, when the radiation level reached 22,000, it seemed only one conclusion was possible: a retrovirus was growing in Frederic Brugiere's cells. Then the numbers on the radiation meter began to fall.

"The first reaction was to think that we had tissue culture problems," Barre recalled, and such a conclusion was understandable. When Gallo's leukemia virus, then the only known human retrovirus, was growing in a culture, the reverse transcriptase level didn't rise and fall; it simply continued to rise as the virus transformed increasing numbers of white blood cells into cancer cells. But the cells in the French AIDS virus culture weren't multiplying as they would have in the body of a cancer patient; they were dying.

If AIDS was characterized by a decline in the number of helper T-cells, and if a virus was infecting those same cells, then perhaps there was nothing wrong with the culture medium after all. Perhaps it was the virus that was killing the cells. That would explain not only the decline in reverse transcriptase activity and the dying cells, it would also explain the clinical progression of AIDS.

The Pasteur group's solution to the question of how to keep the virus growing was both simple and elegant. "We decided," Barre says, "to add fresh cells." When a second attempt was made to grow the virus, Brugiere's cells were mixed with fresh T-cells from blood recently donated by a Spanish tourist at the Pasteur's hospital. There was nothing special about the Spaniard. "I was in a hurry," Montagnier recalled. "The first donor who came along was the right one."

When the new culture was tested for reverse transcriptase on Feb. 14, the results were negative, and they were still negative on the 17th, the 20th and the 22d. But on Feb. 27, the radiation level began to climb, and on March 1 it peaked at 14,000. Three days later it began to fall, but this time there was no concern about possible tissue culture problems. Indeed, the excitement in the Pasteur's small AIDS group was palpable. But just to be sure, the group wanted to reproduce the same result one more time. From Montagnier's crowded lab, the culture was moved to its own room, across the hall from Barre's office on the first floor of one of the Pasteur's oldest buildings.

Because the Spaniard had gone back to Spain, when Barre and Chermann in-

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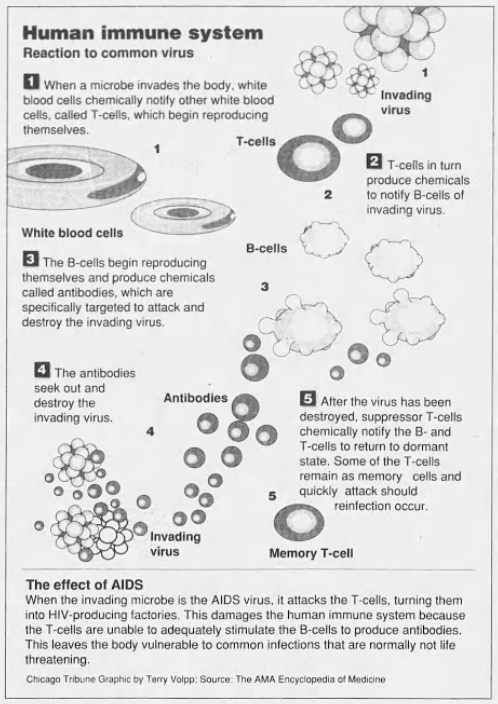

Antibodies: Weapons that target specific intruders

The human immune system fights disease with many weapons. Among the most formidable are antibodies, the biochemical medicine the body uses to cure everything from influenza to pneumonia—and, once cured, to protect itself against a recurrence.

Anything that is not a natural constituent of the body—anything "foreign"—may elicit an immune response, including the production of antibodies that are specifically designed to neutralize the invader. When a patient's body "rejects" an organ that has been transplanted from someone else, it is because the patient's immune system has recognized the heart or liver as something foreign.

In cases of infectious disease the foreign invader is often a virus, a particle a few millionths of an inch in diameter constructed primarily of proteins. As soon as the presence of a virus is noted by the immune system's sentinel cells, a biochemical message is passed to other cells that an invasion is underway.

Like a locksmith who fabricates a key from a wax impression of a lock, the immune system's complex machinery assembles a set of antibodies that have a unique biochemical attraction to the proteins of the invading virus.

When an antibody molecule recognizes a passing virus particle in the patient's bloodstream or tissue, it attaches itself to the virus and renders it harmless. If the person is otherwise healthy and his immune system is functioning properly, he will usually recover after all the virus particles have been neutralized. And because the immune system "remembers" the biochemical makeup of each invading virus, any future attack will be met with such a rapid immune response that the patient will probably never again experience any symptoms of disease.

The vaccines that protect against viral diseases like measles and polio are made with altered versions of the viruses that, although altered, still trigger the production of protective antibodies.

Whether there will ever be an effective vaccine for AIDS is still an open question. Although antibodies to the AIDS virus usually appear within several months of the initial infection, they almost always fail to eradicate the virus; there are only a few cases on record of patients who are antibody-positive and virus-negative, suggesting that the AIDS virus may have been eliminated by their immune systems.

Precisely why the immune response to AIDS is so ineffective is not yet fully understood, although it probably has something to do with the fact that during the first several years of infection the AIDS virus lies quiescent inside the very cells that control the patient's immune system—the helper T-cells—and also with the degree to which the AIDS virus alters its genetic makeup as it replicates inside the patient's body.

When the AIDS virus finally does begin to replicate, it destroys the ability of the T-cells to perform their protective function. With his immune system gravely impaired, the AIDS patient eventually dies of some otherwise nonfatal disease against which his body could no longer mount a defense. Because of the absence of T-cells and their inability to generate antibodies in the later stages of AIDS, patients who are seriously ill often test negative for antibodies to the AIDS virus.

LAV: Lymphadenopathy-associated virus, the name originally given by scientists at the Pasteur Institute to the AIDS virus they discovered in 1983. The original French isolate, found in T-cells from Frederic Brugiere, the patient known as BRU, was called **LAV-1**. Like **HTLV-3B**, LAV-1 contains several distinct AIDS virus DNAs, at least two of which are genetically indistinguishable from variants cloned from Gallo's HTLV-3B.

LENTIVIRUS: A class of slow-acting **retroviruses** including the AIDS virus. Before AIDS, lenti-retroviruses had been found only in animals.

LEUKEMIA: Cancer marked by the uncontrolled proliferation of white blood cells which can take several different forms depending on which cells have become cancerous. Cancers of lymphocytes such as T- and B-cells outside the blood are lymphomas.

MOV: The name used in Gallo's lab for an AIDS virus isolate in late 1983 and 1984. The initials apparently stand for "MO Variant," stemming from the belief among Gallo's assistants that the AIDS virus was genetically similar to HTLV-2. What became of MOV is unclear, because its existence was never publicly disclosed.

NUCLEOTIDES: Chemical building blocks of **DNA** and **RNA**. DNA is composed of four nucleotides: adenine, guanine, thymine and cytosine. RNA substitutes uracil for thymine.

PROTEINS: Chains of **amino acids** varying greatly in size and shape. **Enzymes** and hormones are biochemically active proteins. The AIDS virus has several structural and regulatory proteins including its main core protein, called p-24, and its envelope protein, gp120. The numbers refer to approximate molecular weights (in thousands).

RETROVIRUS: Virus whose genetic code is written in **RNA** rather than **DNA**. Retroviruses reproduce by using **reverse transcriptase** to copy RNA into DNA.

REVERSE TRANSCRIPTASE: The enzyme **retroviruses** manufacture to enable them to reproduce inside a host cell.

RNA: Ribonucleic acid; single-stranded chain of **nucleotides** that contains the genetic code for some viruses, including **retroviruses**. Various forms of RNA also assemble **proteins** according to instructions contained in **DNA**.

SERUM: The pale yellow fluid left over after the cells have been removed from blood. It is used for testing for viral antibodies.

T-CELLS: The "controllers" of the human immune system. **Helper T-cells**, also known as T-4 cells, direct the production of **antibodies** by **B-cells**. Suppressor T-cells signal the immune system to "stand down" after a virus or other invader has been vanquished.

TI7.4: Human **T-cell** line established at M.D. Anderson Hospital in Houston. Along with **HUT78**, it was used in Gallo's lab to grow the French AIDS virus called **LAV-1**.

VIRUS: Infectious organism consisting of nucleic acid, either **DNA** or **RNA**, and **proteins**, sometimes contained in protective envelope of fatty material. Some viruses are harmless; others cause disease by damaging the cells they infect.

WHITE BLOOD CELL: Immune system cells that circulate in the blood and of which there are several types, including the lymphocytes called **T-cells** and **B-cells**.

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fected the culture for a third time they used T-cells from umbilical cord blood supplied by a nearby maternity hospital. Cord blood cells, as they are called, are among the most susceptible to infection by a virus because the newborn babies from which they come are mostly virus-free. On March 14, when the reverse transcriptase level again reached 14,000, two important conclusions were unavoidable: "First, that the virus was killing the cells," Chermann said. "And secondly, that we have to add fresh cells to keep the virus growing. That was the most important thing."

Besides the presence of reverse transcriptase, there were other indications the Pasteur group had found a retrovirus. Tests showed that the virus's genetic material was RNA rather than DNA, and also that the virus particles were the right size and density for a retrovirus. When some of the infected cells were placed under an electron microscope, which uses beams of electrons rather than rays of light to "see" exceedingly tiny things, the resulting photographs showed what looked like retroviral particles budding from the surface of an infected T-cell.

But which retrovirus was it—Gallo's leukemia virus or a new human retrovirus altogether? The photographs were indistinct, but Chermann and Barre didn't see how it could be the leukemia virus. That virus made T-cells multiply rapidly, and this one was killing them.

In February of 1983 Montagnier called Gallo to say the Pasteur group had found what looked like a new retrovirus in an AIDS patient in Paris. Whether it was Gallo's leukemia virus or not wasn't clear, but if Gallo would send the French some antibodies to the leukemia virus they could find out. The request piqued Gallo's curiosity about what was happening on the other side of the Atlantic. "He was very interested," Barre recalled. "He told us that he also had some data indicating that HTLV could be involved in this disease."

The antibodies Gallo sent to Paris were designed to recognize the two main proteins that form the core of the leukemia virus. If they reacted with the virus growing in the Pasteur's culture, then it must be the leukemia virus. But when the antibodies were added to the culture, there was no reaction at all. "It was for us," says Chermann, "the first proof that the virus was different."

In early April, Montagnier informed Gallo that the antibody tests had been negative and that the French now believed they had found a new human retrovirus related to AIDS. "I said we were close to writing a paper," Montagnier recalled. "He said you have to hurry because we also have written some papers [and] Essex also has done it, and perhaps we could have all the papers in the same issue of Science."

Over a weekend, Montagnier and Barre, whose English was more fluent than Chermann's, hammered out a manuscript reporting the isolation of their new retrovirus from Frederic Brugiere, who would henceforth be known in the scientific literature as BRU. Listed first among the authors, the position traditionally reserved for the researcher who has made the greatest contribution to the work, was Francoise Barre. Chermann's name was second, followed by Brun-Vezinet and Rozenbaum. As the senior scientist in the group, Montagnier was last.

The French paper took careful account of the differences between the virus isolated from BRU and Gallo's leukemia virus. There hadn't been any reaction between their virus and the leukemia virus antibodies. Nor had any of the antibodies in BRU's blood reacted with the leukemia virus, which meant that BRU wasn't infected with HTLV-1. The two viruses, the paper concluded cautiously, were "not immunologically related," and the rest of the article was just as carefully worded. The French would have been rash to claim their virus was the cause of AIDS, and they didn't. Its role in the disease, they said, "remains to be determined." Still, the evidence suggested that they had found something new.

Rather than consign such an important article to the mail, Montagnier handed the finished manuscript to his technician, Jacqueline Gruest, who was on the way to visit her daughter in Washington, D.C. But instead of asking her to deliver it directly to Science, he told her to take it to Gallo in suburban Bethesda.

As with most major scientific journals, papers that are to appear in Science are subjected to peer review, an anonymous evaluation of their strengths and weaknesses by other experts in the same field. While a positive review does not ensure publication, a negative review usually means a paper will be rejected. Unlike any other major journal, however, Science allows its prospective authors to suggest their own reviewers, and when Gallo volunteered to review the paper Montagnier quickly agreed.

Once he had the paper in hand, Gallo noticed that the French had neglected to write an abstract, the long summary paragraph that precedes most scientific papers and other scholarly articles, and the absence of an abstract was more than a minor omission. The abstract is as much as many readers of scientific journals are willing to digest. Moreover, it is the only part of a paper reproduced in the electronic databases that are now the most common tools of bibliographic research. Gallo, however, stood ready to help. "Gallo called me," Montagnier said, "and since the time was very short he said to me that he should write the summary."

On April 19, 1983, Gallo sent the Pasteur paper to the editors of Science with a strong letter of recommendation signed by himself and two of his top assistants. "This paper," the three reviewers agreed, "is of obvious immediate great importance and relevance. It will be of very great interest to virtually all scientists and clinicians. The work is careful. The discussion is clear and well-thought-out. It should be published as rapidly as possible." Gallo also included his abstract with the manuscript, but his summary of the French research made it sound as though the virus in BRU's lymph nodes was either the Gallo leukemia virus or a very close relative.

The abstract began by calling the French virus a C-type retrovirus, the same class of retrovirus to which the leukemia virus belongs. It also said that the protein at the core of the French virus was similar to the core protein of the leukemia virus, and that antibodies in BRU's blood had reacted with some of the leukemia virus's proteins. Gallo had also added a sentence to the text of the paper itself. "The virus," he wrote, "appears to be a member of the human T-cell leukemia virus (HTLV) family."

Montagnier remembers being "confused on the phone" as Gallo read the French his abstract, and Barre recalls that "it was very difficult by phone to object" because "you cannot read, you just hear." Only when they saw the abstract later did the Pasteur group realize it didn't accurately reflect the conclusions in their paper.

The French hadn't determined, for example, whether their virus was a C-type or not. "I was very cautious," Montagnier recalled. "I was not saying it was something different from a C-type." Montagnier was also distressed by Gallo's description of the core proteins of the two viruses as similar. "I would not ever agree to that," he says now, "because we showed no cross-reaction" between the French virus and Gallo's antibodies. "This was misleading. The core proteins did not cross-react."

Nor was there any evidence in the French paper to support Gallo's assertion in the abstract that antibodies in BRU's blood had reacted with the proteins of the leukemia virus itself. The French had seen a reaction between BRU's blood and something on the surface of T-cells infected with the leukemia virus, an effect not unlike the one Max Essex was seeing at Harvard. But they thought the reaction involved a protein that was part of the cell itself, not one that belonged to the virus. "We didn't believe it," Barre said in a recent interview in Paris, pointing to a page in her lab notebook where the data is marked with an arrow. "We didn't think it was reacting with the virus."

There were other surprises. Montagnier said he thought Gallo had added the sentence saying the French virus was a member of the "HTLV family" to the abstract rather than to the text of the paper. It was also his understanding, he said, that Gallo had agreed to change what the "L" in HTLV stood for from "leukemia" to "lymphotropic," meaning a virus that has an attraction for white blood cells.

Whatever the French had found growing in BRU, they knew it wasn't a leukemia virus, and Montagnier wasn't even sure the viruses were closely enough related to bear the same general name. "I believed myself that this was wrong," Montagnier recalls, "but I could not really say this is wrong to Gallo, because I had too little evidence at that time."

Although the antibody reactions and the distinctions between the core proteins were crucial to understanding what the French had discovered, they were lost on those who wrote the government news releases and those who read them. A typical report was the one in the Washington Post, which announced that three independent groups of researchers, at Harvard, the National Cancer Institute and the Pasteur Institute, had "all found signs of human T-cell leukemia viruses" in patients with AIDS and pre-AIDS.

Even those scientists working in the same field were confused by the abstract of the French paper. "Everyone thought the French had isolated HTLV too," recalled Jay Levy, a virologist at the University of California medical center in San Francisco. As it began to dawn on the French that their work was being viewed not as an original and potentially important discovery but merely as support for the findings of Gallo and Essex, the elation in Paris gave way to dismay. "We were not very happy," Francoise Barre recalls with her typical understatement. "That's for sure."

Gallo's response to the expressions of displeasure from Paris was to portray the Pasteur group as ingrates whose paper would never have been published in Science without his intercession. "When Montagnier's paper was submitted to Science, I held back mine so he could join," Gallo said in a telephone conversation with The Tribune last year. "No one's ever written this—I don't think I've ever told a reporter before—that Montagnier's paper was rejected by Science, that I intervened and got it accepted. Doesn't that tell you a little bit about my motives?"

Montagnier is unaware of any such rejection—"all I ever heard," he says, "was that my paper had been accepted"—and correspondence from Gallo's files shows that he forwarded the paper to Science with his glowing review just four days after it reached Bethesda. Asked how the French manuscript could have been rejected by other reviewers during the short time it was in Gallo's hands, Ruth Kulstad, the Science editor who handled the paper, would say only, "Everything here is confidential, and we do not discuss papers, authors or referees."

Nearly five years later, sitting in his cramped office in the virology complex at the Pasteur Institute, Luc Montagnier remembered Gallo's motives less than charitably.

"He was not against me writing a paper," Montagnier said, "but he thought my paper would support his own paper on HTLV. Because he thought my virus was HTLV. Gallo didn't believe there could be more than one kind of human retrovirus. He was fully convinced that HTLV was the right one, that there was only one human retrovirus involved in AIDS."

2 The father of human retrovirology

Retroviruses have fascinated scientists since they were discovered in animals early in this century. Until Gallo's HTLV, however, the only known retroviruses were those that caused cancer and other diseases in animals, and a small group of foamy-looking retroviruses in humans that didn't seem to cause any disease at all.

The idea that retroviruses might have something to do with cancer in humans had been talked about for years, and it was a prospect that had vast implications for medicine. If it were possible to "catch" some kinds of cancer the same way one caught polio or smallpox, it might be possible to wipe out such cancers through vaccination the same way polio and smallpox were being eradicated.

When then-President Richard Nixon signed the National Cancer Act of 1971 and declared his "war on cancer," there was genuine hope that the effort might ultimately produce a cancer vaccine. But the promise of those early years has gone almost entirely unfulfilled. Only one human retrovirus, Gallo's HTLV, has been indisputably linked to cancer, a rare cancer called adult T-cell leukemia.

There was more reason for hope in the spring of 1970, when researchers at the University of Wisconsin and the Massachusetts Institute of Technology announced their nearly simultaneous discoveries of an enzyme called reverse transcriptase, the missing piece to the puzzle of how human retroviruses work.

When David Baltimore, the MIT scientist who would share the Nobel prize for reverse transcriptase with Wisconsin's Howard Temin, was invited to the National Institutes of Health to talk about his great discovery, Gallo was in the audience. "After Baltimore had finished speaking," one of Gallo's associates recalled, "Bob came right back up and said, this is what we're going to work on."

Baltimore and Temin had found reverse transcriptase in cancer cells taken from mice and chickens, but if the human cancer virus program was going to go forward somebody would have to find it in human cancer cells. Within a few months Gallo had obliged, publishing a paper reporting the discovery of reverse transcriptase in human leukemia cells.

It looked at first like another historic breakthrough, important enough to put Gallo on the same program with Baltimore and Temin at the Nobel ceremony in Stockholm. But no one who attempted the same experiments could reproduce Gallo's results, and reproducibility is the acid test of science.

Throughout the early 1970s Gallo continued to refine his test for reverse transcriptase, but his periodic reports of new detections of the enzyme in human cancer cells were met with varying degrees of skepticism by his fellow scientists. If Gallo could keep finding reverse transcriptase in human cancer cells, they wondered, why couldn't he find the retrovirus that was producing it?

It was a reasonable question and, in January of 1975, Gallo and a National Cancer Institute colleague named Robert Gallagher announced that they had found the first human cancer retrovirus, called HL-23, in some leukemic blood cells from a woman in Texas. Despite the scientific convention that frowns on announcing important breakthroughs in the news media, reports of Gallo's discovery were in the newspapers before his landmark article was in print. "I got up one morning and read the headlines of the Washington Post," Gallagher recalled. "I was shocked to find that he'd been talking to the press."

It was a great moment while it lasted—"a great Eureka," Gallo called it at the time—but it lasted for only a year. A group of American and British virologists, attempting to confirm his historic find, discovered that the first human cancer virus wasn't human at all but a cocktail of monkey, ape and baboon viruses.

Gallo tried to explain his error by suggesting that the Texas woman had somehow been infected with the baboon virus, but there was really only one conclusion to be reached: Gallo's culture had been contaminated in his laboratory. Gallo first attributed the contamination to "sabotage by my enemies"; now he says, "Who the hell knows?"

Whatever happened to HL-23, by the time it was discredited most of the bright young researchers who had enlisted in the hunt for a human cancer retrovirus had concluded there probably was no such thing, at least not in solid, or tumor, cancers of the breast, colon and lung, and they were the most common.

As Gallo's erstwhile colleagues departed the NIH campus for academia and private industry, they joked that human tumor viruses might as well have been called "human rumor viruses." Now that viruses were passe, the smart money in cancer research was betting on so-called "cancer genes," pieces of defective DNA that somehow trigger the cancerous proliferation of ordinary cells. The cancer crowd also joked about HL-23. Gallo remembers more than one occasion when, preparing to speak at a scientific meeting, he was greeted with derisive laughter.

The question of whether viruses might be involved in blood cancers like leukemias was technically still open. In 1978, scientists in the Netherlands not only detected reverse transcriptase but also photographed what looked like a retrovirus in cells from several patients with an uncommon kind of T-cell cancer known as mycosis fungoides.

But the Dutch weren't able to say much about the new retrovirus, or even whether it was actually responsible for their patients' disease. In order to prove that the virus was causing mycosis fungoides they would need to find it in a much larger number of patients, and they couldn't. "We tried," recalled Elizabeth van der Loo, who as a young graduate student was chiefly responsible

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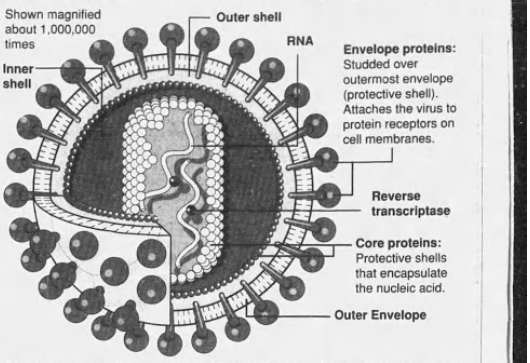
Anatomy of a Human Immunodeficiency Virus (HIV)



RNA (ribonucleic acid): Important in protein synthesis and genetic transmission and is found in all cells and many viruses. Nucleic acids are the chemicals that control cellular heredity and function. All viruses consist of nucleic acid, either RNA or DNA (deoxyribonucleic acid), but never both.

Reverse transcriptase: An enzyme that acts as a biological trigger, stimulating the formation of DNA on a template of RNA in certain viruses composed of RNA, a process crucial to the retrovirus life cycle. The flow of information from RNA to DNA is the reverse of the normal information pathway, hence the name.

Proteins: The tool kit and framework of all cells and components of viruses. They can also serve as enzymatic catalysts that cause or accelerate chemical reactions. Proteins are polymers, long strings of amino acids attached to one another like beads in a necklace to form a larger, more complex molecule.

Chicago Tribune Graphic by Terry Volpp; Sources: Abbott Laboratories. Applied Biosystems

How subtle invader destroys cells that control the body's defenses

The virus that causes AIDS is one of hundreds that inhabit humans, animals, insects, plants—even bacteria. Viruses can take many sizes and shapes. Some are harmless; others cause disease ranging from smallpox, polio and measles to yellow fever, herpes and flu.

Viruses are very small—a hundred times smaller than even bacteria. And, while some are more complex than others, they are among the simplest things on earth: a tiny shred of genetic information tucked inside a protein shell and sometimes covered with an envelope of fatty material. Viruses are not alive. They can reproduce themselves, but only after they have invaded the cells of their preferred host and gained control of the cells' genetic machinery.

Once inside the cell the virus begins its reproductive process, spewing forth new virus particles at such a rate that the cell is destroyed. A single virus can reproduce itself thousands of times in a matter of hours, which is why people who contract most viral diseases become ill a short time after infection.

All the diseases that have been linked to viruses result in some way from the process of infection. The leukemia virus called HTLV-1 infects mainly helper T-cells, the controllers of the human immune system, and causes them to multiply out of control. The AIDS virus infects the same kind of cells but kills them, leaving the body vulnerable to a variety of potentially lethal infections.

The genetic material of many viruses is DNA, a chain of molecules called nucleotides strung together in a sequence that spells out the life-code for every living thing from people to potatoes. When a DNA virus infects a cell, it begins the reproductive process by employing its cousin, RNA, to assemble amino acids into the catalytic proteins, called enzymes, that it needs to construct more copies of itself, and then to assemble the structural proteins that form new virus particles.

The genetic codes of some viruses, like the AIDS virus, are written not in DNA but in RNA. Such viruses, called retroviruses, use an enzyme called reverse transcriptase to copy their original genetic RNA into a complementary strand of DNA that inserts itself into the much larger strand of human DNA in the host cell.

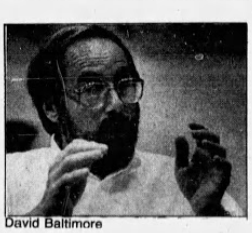
A historical look at AIDS research from 1970 to 1987

JUNE 27, 1970: **Howard Temin** and **David Baltimore** discover reverse transcriptase in cancer cells from mice and chickens.

DEC. 5, 1970: **Robert Gallo** first reports finding reverse transcriptase in human leukemia cells. The report is viewed with skepticism by fellow scientists.

JAN. 31, 1975: **Gallo** announces the isolation of the first human cancer virus, HL-23. It later proves to be a cocktail of monkey and baboon viruses.

SEPTEMBER, 1977: Japanese scientists report an epidemic of disease they call adult T-cell leukemia (ATL) in that country's southwestern provinces.


David Baltimore

1979: Dutch researchers report finding and photographing retrovirus particles in patients with a kind of cancer called mycosis fungoides.

MARCH, 1980: NCI's **Adi Gazdar** reports the establishment of the permanent T-cell lines HUT78 and HUT102, the latter from a 27-year-old mycosis fungoides patient named **Charles Robinson**.

DECEMBER, 1980: **Bernard Poiesz** and **Frank Ruscetti** report the isolation of the first human cancer virus, HTLV, from **Charles Robinson's** cells.

MARCH 24, 1981: At a meeting in Kyoto, Japan, **Gallo** learns **Yorio Hinuma** has found antibodies to a viral antigen in 100 percent of Japanese patients with ATL. **Gallo** tells the group he has found antibodies to HTLV in "some" ATL patients.

JUNE, 1981: UCLA's **Michael Gottlieb** reports first six cases of what will later be called AIDS.

FEB. 19, 1982: **Gallo** publishes data showing antibodies to HTLV in blood from Japanese ATL patients, suggesting his virus may be the same as that detected by the Japanese.

How the AIDS retrovirus attacks the helper T-cell

1. AIDS virus enters the human circulatory system.

2. Virus specifically targets a cell in the human immune system, known as the helper T-cell. It attaches itself to a special receptor that is on the outer wall of the T-cell.

3. Virus is absorbed into the host cell, shedding its outer shell and releasing its own genetic code (RNA) along with the reverse transcriptase enzyme.

4. Enzyme uses the viral RNA to manufacture a DNA copy of itself.

5. Viral DNA inserts itself into the host cell DNA, where it may lie dormant for up to 10 years.

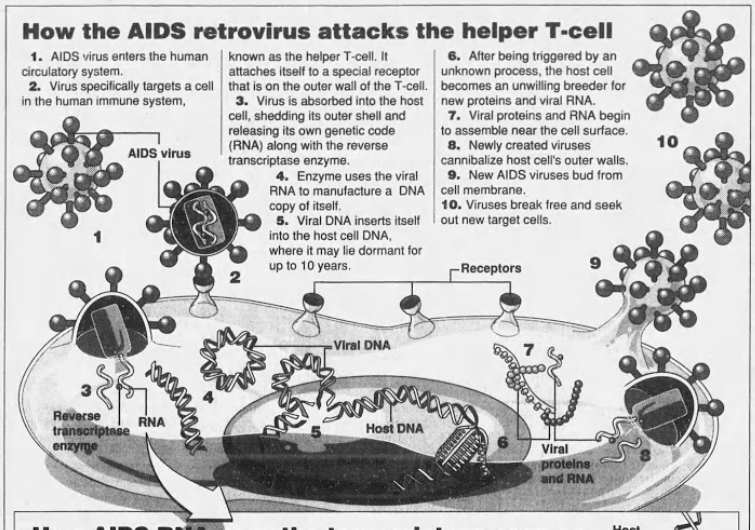
6. After being triggered by an unknown process, the host cell becomes an unwilling breeder for new proteins and viral RNA.

7. Viral proteins and RNA begin to assemble near the cell surface.

8. Newly created viruses cannibalize host cell's outer walls.

9. New AIDS viruses bud from cell membrane.

10. Viruses break free and seek out new target cells.



How AIDS RNA uses the transcriptase enzyme

Normal DNA contains the nucleotides adenine, cytosine, guanine and thymine (A,C,G and T). Instead of thymine, RNA uses uracil or U.

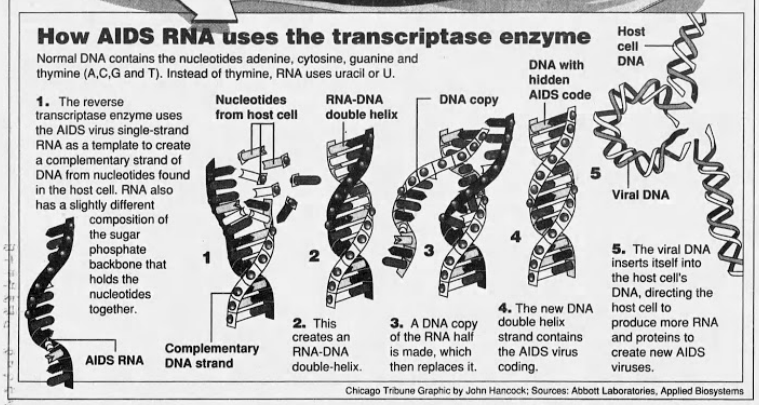
1. The reverse transcriptase enzyme uses the AIDS virus single-strand RNA as a template to create a complementary strand of DNA from nucleotides found in the host cell. RNA also has a slightly different composition of the sugar phosphate backbone that holds the nucleotides together.

2. This creates an RNA-DNA double-helix.

3. A DNA copy of the RNA half is made, which then replaces it.

4. The new DNA double helix strand contains the AIDS virus coding.

5. The viral DNA inserts itself into the host cell's DNA, directing the host cell to produce more RNA and proteins to create new AIDS viruses.



Chicago Tribune Graphic by John Hancock; Sources: Abbott Laboratories, Applied Biosystems

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for the discovery. "But in Holland there are not so many patients with mycosis fungoides."

Gallo's lab, which in the wake of the monkey virus contamination had all but stopped looking for a human cancer virus, had been reduced to publishing papers on the biochemistry of the blood. The initiative to renew the search came from a young physician named Bernard Poiesz who joined the lab in the fall of 1978 as a postdoctoral fellow.

Poiesz had elected to work under one of Gallo's associates, a young cell biologist named Frank Ruscetti, who had just made a great leap forward in the laboratory technique for growing T-cells. With another Gallo assistant named Doris Morgan, Ruscetti had discovered and isolated the protein, now called Interleukin-2, that the human immune system uses as a biochemical signal to encourage T-cells to divide and multiply in response to an infection.

The first year of Poiesz's fellowship had been spent with cancer patients, and he had seen a number with the T-cell cancers that are known as lymphomas. What he wanted, he told Ruscetti, was to continue looking at cells from such patients in hopes of finding a clue to what caused their disease.

The research from Holland had not yet been published, and Poiesz had no real reason to expect to find that lymphomas were being caused by a human cancer virus. But he had learned the art of testing cells for reverse transcriptase as a medical student at the University of Pennsylvania, and "it seemed reasonable to look, because we knew how to look."

Among the first cells Poiesz got to look at were some taken from the lymph node of one of his former patients, a 28-year-old Alabama man named Charles Robinson. "I actually wound up being the fellow that admitted him for the lymph node biopsy," Poiesz says, "not realizing what that lymph node biopsy was going to get us all into."

Robinson had been diagnosed as having mycosis fungoides, the same kind of T-cell cancer as Elizabeth van der Loo's patients. Before Robinson died, however, another cancer institute researcher named Adi Gazdar mixed some of Robinson's cancerous T-cells with Frank Ruscetti's Interleukin-2. The result was a continuous T-cell culture called HUT102, in which Robinson's leukemic T-cells would go on dividing and multiplying in the laboratory long after he was dead.

When Poiesz and Ruscetti began looking at the cells from HUT102 shortly before Christmas of 1978, they found measurable levels of reverse transcriptase. But Poiesz was aware that scientists in Gallo's lab and elsewhere claimed to have detected reverse transcriptase in human cancer cells before. There had been so many false alarms, Poiesz recalled, that "in order for something to be considered interesting there had to be an extraordinary amount of reverse transcriptase."

Because Robinson's cells were showing only a small amount of enzyme activity, Poiesz said, "many people were very skeptical. But I had done enough reverse transcriptase assays on normal T-cells to recognize that if there was a little bit of production, that's all you needed to see to be interested."

In fact, Poiesz and Ruscetti were more than interested. Over the next few months they worked night and day, growing huge quantities of Robinson's cells and trying to isolate, purify and analyze the virus they appeared to contained. "I grew 120 liters of it and saw that it didn't behave like anything else," Poiesz said, "yet it clearly was a retrovirus. We knew that we had stumbled onto something that was different."

Their main concern was that whatever virus was reproducing in Robinson's cells might be one of the many animal retroviruses that were being grown elsewhere in the same building—and which, in a bizarre reprise of the HL-23 fiasco, might have somehow contaminated their cultures. Painstakingly, the two researchers checked their cultures for every one of the dozens of known animal retroviruses. When there were no more animal viruses left, Poiesz recalled, "We knew we had something."

But they were unable to give the good news to Gallo, who was on an extended trip out of the country. "I'd proceeded to do the additional work while he was away," Poiesz said. "He was gone for a couple of months." When Gallo found out that what appeared to be the first human cancer retrovirus had been isolated in his lab, it was in a conversation with another scientist at a backyard cocktail party in Bethesda. "He had just come home that weekend," Poiesz recalled. "I was supposed to have a meeting with him on Monday. I must say he was a little ticked at us."

Considering that he had spent much of the previous decade looking for the first human cancer virus and then enduring the derision of other scientists after he mistakenly claimed to have found it, Gallo's annoyance was understandable to Poiesz. "He was a bit astounded that this had happened," Poiesz said, "because they had tried so long to find a retrovirus. Some very skilled people had tried it, and here was a junior member of the team, a postdoc, and in the first month of working he finds the human retrovirus. That seemed too lucky to be true."

To top it off, Poiesz and Ruscetti had been lucky not just once but three times out of three, finding what looked like the same new virus in a Caribbean islander and in a man from Boston. By then, another researcher in Gallo's lab recalled, there was "quite an uproar about the rest of the people in Gallo's lab not having been included in the discovery. Basically, they had opted out because they didn't believe Bernie in the first place. Then at that point Gallo kind of took over."

In December of 1980, a paper reporting the isolation of a new human retrovirus from a patient identified only as "CR" appeared in the distinguished monthly Proceedings of the National Academy of Sciences. The paper's first author was Bernie Poiesz, with Frank Ruscetti second. Gallo's name was last.

Gallo has called the discovery of HTLV "one of the most exciting stories of 20th Century biology," and it soon earned him informal recognition as "the father of human retrovirology." In keeping with scientific tradition, Gallo also gave the new virus its first name: human T-cell lymphoma virus.

What Gallo's associates remember most, however, was his disappointment that the new virus had not been found in a patient with leukemia, but in one with a lymphoma, mycosis fungoides, which affects far fewer people. "We argued whether it should be lymphoma or leukemia," Poiesz said. "I wanted to not even say it was a human virus until we knew for sure, but HTLV is the name that he wanted it to be."

As would have been true of any report of any new human virus, particularly one announcing the first human cancer retrovirus and especially one from the lab where the HL-23 debacle had occurred just five years before, the HTLV paper attracted a great deal of attention. But once the initial excitement had begun to fade, it became clear that the most important questions remained unanswered.

Although its name implied that the new virus was the cause of T-cell lymphoma, or at least played some central role in the disease, there is no way to be sure a virus isolated from a single patient, or even three such patients, is anything more than a laboratory curiosity. "It was clearly very different and we clearly had it in three humans at that point in time," Poiesz says. "But we hadn't proven that it had caused disease, nor did we at that point have any idea about what was really going on."

When Poiesz and Ruscetti began testing other mycosis fungoides patients for the virus, they couldn't find a single person who was infected, which meant that whatever the virus did, it probably didn't cause mycosis fungoides. "We were striking out," Poiesz says. "At that point it hadn't dawned on us that there might be an epidemic somewhere else in the world."

There was such an epidemic, but it was a long way from Bethesda and it involved a different disease. In the fall of 1977, a year before Bernie Poiesz arrived in Gallo's lab, a team of Japanese medical scientists in Kumamoto had published the first report, in the American journal Blood, of a newly recognized disease they called adult T-cell leukemia, or ATL for short.

A handful of other diseases had previously been discovered that involved the cancerous proliferation of T-cells, but these Japanese cases were unlike anything seen before. Not surprisingly, the urgency to find out what ATL was all about was greatest in the country where its victims lived. Within a few months, a researcher at the Okayama Cancer Institute named Isao Miyoshi had succeeded in growing T-cells taken from a 69-year-old man who had died four months after coming down with ATL.

From the way the old man's cells behaved in the lab, Miyoshi concluded that there must be something in his culture that was being transmitted from one cell to another. The most logical thing was a virus; and because the cells were producing reverse transcriptase, it seemed likely to be a retrovirus. When Miyoshi sent some of the cells to Yorio Hinuma, the eminent Kyoto virologist, Hinuma could see retrovirus particles under an electron microscope.

Three months after Poiesz and Ruscetti's paper electrified the scientific community, Gallo traveled to Kyoto to attend a hastily called meeting to discuss recent developments in human retrovirology. A short time before, Gallo's lab had received some blood samples from Japanese ATL patients sent by another Kyoto researcher, Yohei Ito, who had heard about Poiesz's paper and who wondered whether this new virus called HTLV might have something to do with ATL.

When Gallo's turn came to speak, he reported that some of the blood samples he got from Ito had contained antibodies that reacted with his virus—an indication that some of the Japanese ATL patients might be infected with a virus like HTLV-1. But Hinuma had done some similar experiments, and his results were more conclusive.

Hinuma had mixed Miyoshi's cells with serum, the liquid component of blood that remains after the cells have been removed, that had been taken from a number of patients with ATL. In each case, when the cells were placed under an ultraviolet light, a high percentage of them lit up—evidence that the serum from every single patient, not just some, contained antibodies that were reacting with something foreign in Miyoshi's leukemia cells.

Although he was too cautious to call it a virus at the time, the "something foreign" proved to be the retrovirus Hinuma had photographed. The Japanese named it ATLV, for adult T-cell leukemia virus.

"The Japanese work was driven by studying the pattern of the disease. Gallo's work was driven by coming across this virus and being unaware of ATL," says Robin Weiss of the Institute of Cancer Research in London, a noted retrovirologist and a coauthor of the definitive textbook on human retrovirology.

"Hinuma did that beautiful work," Weiss said. "I think he deserves real credit for that. I think Ito probably deserves the credit for saying this new virus of Gallo's might have something to do with this disease. I'd give Miyoshi the fine credit. Miyoshi's a modest and quiet man; he's continued to do super work in the field."

Except for the Japanese, Gallo's HTLV might well have remained a virus in search of a disease. But now that the Japanese patients were known to have antibodies to both Gallo's virus and to ATLV, it was important to know whether the two viruses were the same. The best way to find out was to crack their genetic codes—literally, to take them apart, identify their genetic building blocks one by one, and then compare them side by side. Although Gallo's assistants struggled with the problem for months, they were unable to clone their virus, a crucial step in breaking its code.

"To be honest," Bernie Poiesz recalls, "the people that were capable of cloning back at NIH were not all that interested. They didn't fully believe the story and they had other priorities. The Japanese worked very fast and very hard. They beat us to the punch."

In the summer of 1983, when scientists in Tokyo published the genetic sequence of ATLV, they managed even without a comparable sequence of HTLV to determine that the two viruses were "very similar." Later experiments appeared to show that the two viruses were in fact the same, which led to a final question: How could the same virus that caused adult T-cell leukemia in Japan have been discovered in Charles Robinson, a patient with mycosis fungoides who had never been anywhere near Japan?

The question became more compelling after Yorio Hinuma, in collaboration with Abraham Karpas, a retrovirologist at Cambridge University in England, reported that every mycosis fungoides patient they tested was negative for antibodies to ATLV. Not long afterward, Gallo and the cancer institute's clinicians concluded that Robinson had not died from mycosis fungoides but from a new kind of T-cell cancer that was much more like adult T-cell leukemia.

In scholarly articles recounting the discovery of HTLV, Gallo began referring to Charles Robinson as a patient with "leukemia-lymphoma," and then simply as someone who had died of adult T-cell leukemia. Although its initials stayed the same, the name of Gallo's virus changed as well: from human T-cell lymphoma virus, to human T-cell leukemia-lymphoma virus, and finally to human T-cell leukemia virus.

With the discovery of HTLV, the humiliation of HL-23 was nearly forgotten—and so, at least by Gallo, were the early contributions of the Dutch and the Japanese. Before their first paper on HTLV was published, Poiesz said, he and Ruscetti had given copies of both the Van der Loo paper from Holland and the one reporting the ATL epidemic in Japan to Gallo, with the suggestion that he might want to mention them in a footnote. He didn't.

In one scholarly article he authored later on the discovery of HTLV, Gallo awarded the Japanese two footnotes out of 85. In another, he gave his own lab credit for having established the link between the virus and adult T-cell leukemia, which was really something Hinuma and Miyoshi had done. To a colleague who asked for recommended reading on HTLV, Gallo sent a list of his own publications. "Much of the additional work," he wrote, "most of it from Japan, is really not terribly relevant. There are a few publications from Holland but they do not say anything particularly new."

When Gallo won his first Lasker prize in November of 1982, for the discovery of HTLV, there wasn't any mention of Bernie Poiesz or Frank Ruscetti. "When people talk about HTLV, it's always Gallo, Gallo, Gallo," an NIH scientist says. "You don't hear Bernie Poiesz's name, and you never hear Frank's name."

After Poiesz's postdoctoral fellowship was over he moved to Syracuse, where he now heads the division of hematology-oncology at the State University of New York Medical Center. When he used Gallo as a reference in applying for a grant to continue his work with HTLV, Poiesz recalls that Gallo responded with an unflattering letter.

"He basically wanted to make sure that he was the major player as the theme of HTLV worked its way out into the world," says Poiesz, who did go on working with HTLV. "I think his competitive nature was such that for some reason there was a false sense of concern that I might do well with it."

From his vantage point in Upstate New York he has watched while his former boss has taken the center stage of science. "There's many different reasons why people associate Bob Gallo's name as the discoverer of HTLV," he says. "I can't change how people perceive it, or how people presented it to the media. The only thing I can do is do my work. I spent many, many nights in that laboratory. The moment of discovery was mine."

In the years immediately following that discovery, Frank Ruscetti fared less well. "Frank's a relatively strong person and Bob's a pretty strong person," says one man who knows both of them. "There was a particular enmity between them for some time. There was a pyramid and Bob Gallo was the boss."

Before long Ruscetti was not only out of Gallo's lab but out of science altogether. It was nearly two years before he would find his way back in, at a National Cancer Institute satellite facility in Frederick, Md., where he is still

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MARCH, 1982: Japanese scientists report the isolation of a retrovirus they call ATLV from patients with ATL.

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MARCH 20, 1982: British researcher **Daniel Catovsky** reports the first ATL cases outside Japan, in several West Indian blacks living in London. All have antibodies to **Gallo's** HTLV.

NOV. 5, 1982: **Gallo** reports the isolation of a substrain of his human retrovirus, called HTLV-2, from a leukemic human T-cell line established by UCLA's **David Golde**.

Luc Montagnier

NOV. 19, 1982: **Gallo** wins the Lasker award for basic medical research, for "his revolutionary discovery of the first retrovirus known to be associated with a human malignancy."

JAN. 4, 1983: A portion of a lymph node from a 32-year-old Paris homosexual known as **BRU** is delivered to Pasteur Institute scientists, who begin efforts to culture the virus they suspect it contains.

JAN. 26, 1983: The Pasteur group obtains the first evidence of reverse transcriptase activity in **BRU's** cells, indicating the presence of a retrovirus.

FEB. 9, 1983: Paris physician **Jacques Leibowitch** brings **Gallo** cells from several AIDS patients, including **Marcellin** and **Claude Chardon**.

MARCH 3, 1983: **Gallo** sends Science magazine a paper reporting the detection of HTLV in two East Coast homosexuals with AIDS. Same day, he sends to Paris HTLV antibody that has been requested by the Pasteur researchers.

MARCH 24, 1983: Harvard's **Max Essex** submits a paper to Science reporting that 25 percent to 40 percent of AIDS patients have antibodies to a mysterious protein on the surface of HTLV-infected cells.

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employed. "My battles with Gallo were legendary," Ruscetti says, "but I won't talk to you. I just keep my mouth shut and try to do science."

When Gallo wrote the official history of his research on AIDS and human retroviruses, he recorded that the first human cancer virus, HTLV, had been discovered by "Gallo, Poiesz and coworkers." Asked about the history of that discovery last year, Gallo replied, "I think I've forgotten more than Poiesz and Ruscetti ever knew, times 10."

3 'You have to let Jean-Claude speak'

In the spring of 1983, while Bernie Poiesz was still enjoying the memory of a postdoctoral fellowship that had produced an almost unheard-of 11 major papers, and while Frank Ruscetti was still looking for work, Robert Gallo was channeling the search for the source of AIDS in the direction of the leukemia virus they had discovered.

But even as Gallo was promoting the virus, which he now called HTLV-1, in interviews and letters to his colleagues as the "leading candidate" for the cause of the AIDS epidemic, experiments in his own laboratory were producing persuasive evidence that HTLV-1 had nothing to do with AIDS.

At Harvard, Max Essex was finding ever-higher percentages of AIDS patients positive for what he said were antibodies to the leukemia virus. But Gallo's assistants had also begun testing AIDS patients' blood samples with a more specific test, one that measured antibodies to the virus itself, not to a mysterious protein on the surface of virus-infected cells, and they were obtaining very different results.

A few weeks before Gallo's papers on the possible link between the leukemia virus and AIDS were published in Science in May, 1983, one of Gallo's assistants sent him a note reporting that only 17 AIDS patients "out of a much larger number tested" had so far proven antibody-positive. The following month, Gallo acknowledged in a memo to a senior cancer institute official that, despite Essex's impressive numbers, his own lab was finding that most AIDS patients were not infected with HTLV-1.

Gallo's staff had also detected the leukemia virus itself, not just antibodies to the virus, in a small number of AIDS patients like Claude Chardon. But except for the four detections that Gallo reported in Science and a handful of others, efforts to find the virus in other AIDS patients had been unavailing. Lee Ratner, a molecular biologist who joined Gallo's lab as the hunt for HTLV-1 in AIDS patients was gathering speed, recalled that Gallo's assistants had looked for the virus in "something like a hundred" AIDS patients and that all of them were negative.

Gallo didn't report the low numbers of AIDS patients who had antibodies to the leukemia virus or who were infected with the virus itself. As the negative data piled up behind the scenes, Gallo continued to make the case for his virus in public. "The evidence is certainly accumulating," he told the Journal of the American Medical Association in June of 1983, that HTLV was "the best lead yet found" for the cause of AIDS.

In addition to overseeing the other operations of his cancer laboratory, in the spring of 1983 Gallo was spending increasing amounts of his time on AIDS—so much that, in April, he complained in a letter to a Japanese scientist that "the pressure on me is unusually severe." The reason, he said, was that he had just accepted an "additional new responsibility" as scientific director of a new cancer institute task force on AIDS.

When the task force held its first formal meeting in July, Luc Montagnier, chief of cancer virology at the Pasteur Institute in Paris, flew in to attend. In response to an appeal from Gallo, Montagnier brought a tiny vial containing a sample of the virus the French believed to be the cause of AIDS. In April, the French had sent Gallo a tiny vial of viral DNA. Gallo said it hadn't been enough. "We desperately need more DNA," Gallo wrote Montagnier a few days later. "The data is critical for you, us and the field so please do everything possible to get a good amount of DNA to us as soon as possible."

To the three dozen members of the task force Gallo said what he had been saying in public, that his leukemia virus made a "very attractive" candidate for the cause of AIDS. But Montagnier had brought data on new isolates of the French virus taken from other patients with AIDS, and also some photographs of the virus he hadn't published in Science. "I was reluctant to show them in the paper," Montagnier explained later, "because people would say it was just a viral contamination with something else."

The new pictures were viewed with a careful eye by Matthew A. Gonda, the chief of the cancer institute's electron microscope facility in Frederick, Md. Gonda had recently written a paper on a class of animal retroviruses known as lentiviruses, slow-acting retroviruses that until then had been found only in goats, horses and sheep and whose barlike core is readily distinguishable from the disc-like core of HTLV-1.

It looked to Gonda like the virus the French were now calling LAV had to be a lentivirus too. When Gonda wrote a memo to that effect, recalled Berge Hampar, the former general manager of the Frederick facility, "Gallo was really furious. The last thing he wanted to hear was that the French had a lentivirus, because if it was lenti that meant it wasn't HTLV. He called Gonda at home, ranting and raving. He screamed at him for an hour."

Scientific meetings at Long Island's venerable Cold Spring Harbor Laboratory have a special cachet. Apart from the laboratory's picturesque waterside setting, it has a history of producing good science. Its reputation derives largely from the fact that its director is James D. Watson, the American biologist who, with Francis Crick, solved the mystery of the double helix—the structure of DNA.

When Gallo and Essex were asked to organize an important conference on HTLV at Cold Spring Harbor for mid-September of 1983, they included a special forum on the known links between the leukemia virus and AIDS. Montagnier was among those invited to Cold Spring Harbor, and he had a good deal to say.

All summer the Paris group had been working with success to firm up the connection between its new virus and AIDS, and it had made some significant advances. When Montagnier learned he had been given just 15 minutes to speak, he protested. "I am asking you," he wrote to Gallo, "to allot me 30 minutes, and possibly not at the very end of the meeting."

The Cold Spring Harbor conference opened on the morning of Wednesday, Sept. 14, with a welcoming speech by Essex and an introduction by Gallo. For the rest of that day and most of the next, a succession of scientists reviewed various aspects of their work on Gallo's leukemia virus and its odd new cousin, HTLV-2.

When the session on AIDS began late Thursday afternoon, Essex began with the report that he had now detected leukemia virus antibodies in up to 70 percent of AIDS patients. He was followed by Gallo, whose talk highlighted "the possibility that HTLV plays an important role in the origin of AIDS." The next-to-last speaker was Montagnier, who had been given 20 minutes to speak instead of the half-hour he asked for and who was still at the end of the program. By the time he took the podium, many of those at the meeting had already left.

Since the beginning of the year, Montagnier began, the new French virus had been identified in a total of seven patients besides BRU, the fashion designer from whom it was first isolated. The French, moreover, had now found their virus in at least one member of every group in which AIDS seemed to be prevalent: three homosexuals, a hemophiliac and a Haitian.

They had also developed a test for antibodies to the virus. Since July, Francoise Brun-Vezinet, the physician who had delivered a piece of BRU's lymph node to the institute in January, had been growing the French virus in a special room in the basement of the Pasteur. The purified virus had been used to test for antibodies in dozens of AIDS patients' blood samples, including some that had been sent to Paris by doctors in New York.

The Pasteur tests, Montagnier said, were showing that more than 60 percent of patients with pre-AIDS, and nearly 20 percent of those with AIDS, had antibodies to the French virus. The same patients, however, had tested negative for HTLV. The two viruses, he said, seemed to be "clearly distinct." They didn't react biochemically, and when the French virus was looked at under an electron microscope it had an entirely different shape. The only other virus that resembled it at all was a lentivirus that caused infectious anemia in horses.

By all accounts, it was a dramatic moment. Montagnier was telling Gallo, and in front of many of his closest colleagues, that for the better part of a year he had been leading science down the wrong road. According to several of those present, when the time came for Montagnier to entertain questions Gallo rose to the attack, suggesting that the measurements of reverse transcriptase activity by the French had been flawed and that they hadn't isolated a retrovirus at all. "He told him it was terrible science," said a scientist who was there, "that there was no way it could be true."

"I went up to poor Montagnier afterwards," another scientist recalled. "He was sitting in the corner. He looked like he'd been beaten over the head with a sledgehammer. I said, 'The data looks good, I'm sure you've probably got it, don't take to heart what these guys have said to you.' "

Gallo now regrets his treatment of Montagnier. "He was definitely, definitely hurt and it certainly hurt our relationship badly," he told The Tribune. "I wouldn't do that again."

Montagnier's talk had gone far beyond the BRU paper in Science four months before, but many of those at Cold Spring Harbor were still not convinced by his data. For a few, however, the talk provided their first real understanding of the depth and importance of the French research on AIDS. The Science paper, recalled the British retrovirologist Robin Weiss, "turned out to be a seminal paper, but it didn't convince the world that this was the virus. His Cold Spring Harbor paper made me take that first one much more seriously."

Bernie Poiesz was in the audience that day. Like Gallo and Essex, Poiesz had been looking for evidence that the leukemia virus had something to do with AIDS, and he remembers thinking after Montagnier's presentation that the French might be right after all. "The data seemed to make sense," Poiesz said. "He obviously didn't have it fully developed, but he had gone a substantial way and it was plausible to me that they had found something that was different."

Impressive as the French data were, researchers who hadn't attended the Cold Spring Harbor meeting remained mostly unaware of the latest findings from Paris. One was the University of California's Jay Levy. In early October, in Paris for his brother's wedding, Levy stopped by the Pasteur to say hello. It was not until then, he recalled, "that I realized they did not have HTLV" but something completely different.

As an AIDS-causing agent, Levy said, the French virus "was almost too good to be true." It grew in the same helper T-cells that AIDS patients lacked, Levy said, and it killed them. "I came back to the hotel room and I told my wife, 'Sharon, I've been looking for this virus and I think they've found it.' But if I hadn't gone to see them I never would have known."

Within a few weeks, Levy would isolate the AIDS virus in his San Francisco lab, but he would not publish his discovery for several months after that. Levy wanted to make sure the virus, which he would call ARV, for AIDS-related virus, could survive the acid treatment used in the preparation of the clotting factor that keeps hemophiliacs from bleeding to death. If it couldn't, it was obviously the wrong virus and Levy would have to look somewhere else.

A few days after the September meeting at Cold Spring Harbor, one of Gallo's assistants sent him the latest draft of the still-unpublished paper reporting that only 8 percent of the AIDS patients they had tested had antibodies to HTLV-1. "Not sure he will want to publish on AIDS at this time," the assistant wrote to one of her colleagues, "but we'll see."

While Gallo pondered whether or not to publish, the French were having trouble getting their latest research into print. Their Science paper had shown that the French virus infected T-cells, but not which kind of T-cells. Since then, Paris immunologist David Klatzmann had proven that the virus had a particular affinity for infecting—and killing—the helper T-cell, precisely the same cells AIDS patients didn't have enough of.

Klatzmann's discovery made the most convincing case yet that the French virus played a critical role in the disease. Had it been published, Robin Weiss said later, "it would have added some weight, because it would have said this odd virus we have selectively grows in and kills the kinds of cells that disappear from AIDS patients."

In trying to determine the attraction of the virus for helper T-cells, Klatzmann had used blood samples taken from a young hemophiliac who had been injected regularly for years with a clotting factor known as Factor VIII, some of which had been made from blood tainted with the AIDS virus. What was significant was that, unlike all the other patients in whom the French had found the virus, this young man was perfectly healthy.

In the summer of 1983, no one suspected that infection with the AIDS virus would be as widespread as it is. Fewer than 2,000 Americans were then ill with the disease, and many doctors assumed that, as with most contagious diseases, illness set in a short time after infection. By isolating their new virus from someone who was still healthy and had been infected for some time, the French had discovered the phenomenon of the "healthy carrier," those infected but symptom-free individuals who, by unwittingly infecting others, had spread the virus through large populations of gay men and heroin users.

When Klatzmann and the Pasteur group sent a paper describing the affinity of the AIDS virus for helper T-cells to Nature in the summer of 1983, the paper was summarily rejected. One of the journal's reviewers had only a few technical criticisms, but the other dismissed it out of hand. If what the French were saying was true, the second reviewer wrote, it would be a very important paper. He just didn't think it was true—it sounded to him like what the French had was a mouse virus contaminant.

The authors quickly resubmitted their paper to an American journal, the Proceedings of the National Academy of Sciences. One of that journal's reviewers thought the paper should be published forthwith, but the second reviewer never replied. When Klatzmann encountered the man at an AIDS conference in Atlanta two years later, he recalled, "he told me that he had been too busy."

While many of those attempting to treat AIDS patients were under the misapprehension that Gallo's leukemia virus, or one very much like it, was the cause of AIDS, the French continued to try to make their voices heard. Because of the difficulties they were having in publishing their papers, the French decided to use important scientific meetings like the one at Cold Spring Harbor to spread the word of their discoveries.

But when Klatzmann presented his unpublished data to a meeting of the New York Academy of Sciences in November, his talk didn't produce many headlines. "The journalist from the New York Native [a weekly newspaper with a mostly homosexual readership] called and he did interview me, actually," Klatzmann recalled. "I was also interviewed by Channel 13," the public broadcasting station in New York, "but I was told later that they took off my part."

Despite the ongoing work in Paris, Gallo's human leukemia virus was still the hottest thing in virology. But even as Gallo was adding the American Cancer Society's medal of honor to his prizes and awards, the case for HTLV-1 as the cause of AIDS was beginning to collapse under its own weight. According to the minutes of the November meeting of Gallo's AIDS task force, that month's discussion focused on what to do about "the continuing problem" posed by the still-unpublished data showing that very few AIDS patients were infected with the leukemia virus.

Part of the problem was that the negative data were no longer coming only from Gallo's lab. One task force member had found only a single AIDS patient out of 59 positive for antibodies to the Gallo virus, and a handful of scientists outside NIH were now questioning Gallo's thesis in public. Some weeks earlier, a Boston University researcher named Paul Black had sent a letter to the New England Journal of Medicine suggesting that Gallo's leukemia virus was "unlikely to be in itself the cause" of AIDS. In an interview with the Associated Press, Black dismissed Gallo's research on the connection between AIDS and the leukemia virus as "hype."

Gallo was not pleased. "There are people who were writing letters at that time in the New England Journal saying we were nuts," Gallo recalls. "Paul Black. I know Paul, I regard him as a colleague and friend and I didn't understand why he wrote it. I called him up on the telephone and argued with him."

Although Black's objections were founded on intuition, a few other labs had been compiling the same sort of negative antibody data that Gallo had in his lab. But it was proving as difficult for the others as for the French to find their way into print.

Sometime in 1981 a Manhattan physician named Joseph Sonnabend first began seeing a few mysterious cases of what would later be called AIDS. Like other doctors in New York and San Francisco, Sonnabend was interested in learning as much as possible about the disease that was killing his patients. When Gallo began suggesting two years later that HTLV-1 played an important role in AIDS, Sonnabend started taking blood from his patients to be tested for antibodies to Gallo's virus.

The tests were conducted by Shinji Harada, who was spending a year at the University of Nebraska and who already knew a lot about the leukemia virus. Before coming to Omaha, Harada had investigated on his own the idea that the virus might have something to do with AIDS, but he hadn't found any connection.

When Sonnabend's blood samples arrived in Omaha, Harada ran the same tests again, and with the same results. "AIDS patients had no antibody against HTLV," Harada says.

Just to be sure, Harada forwarded some of the same samples to scientists in two other laboratories. One was Yorio Hinuma, the Kyoto University virologist who established the first link between Gallo's new human retrovirus and adult T-cell leukemia. The other was Abraham Karpas, a retrovirologist in the department of hematological medicine at Cambridge University in England. Both Hinuma and Karpas confirmed Harada's results in short order.

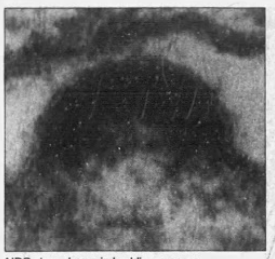
When the Sonnabend group wrote up its findings and sent the paper off to several major journals, none of them was interested. Sonnabend had recently taken on the task of editing a new journal devoted exclusively to AIDS, and in his capacity as editor Sonnabend decided to publish his own paper. "I toned it down somewhat," he recalls; "which I sort of regret now. I even added a sentence at the end, to the effect that maybe the difference between our results and Gallo's could be attributed to the different geographical ori-

Continued on following page

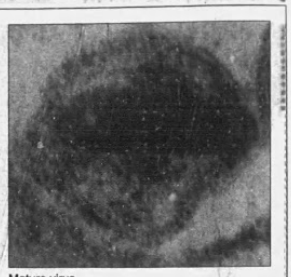
The AIDS virus

HTLV-3

■ **The photos at right show the AIDS virus in its later two stages of development. As new virus particles are created inside the helper T-cell they "bud" through the cell's membrane. Once free, the new viruses go in search of new cells to infect.**

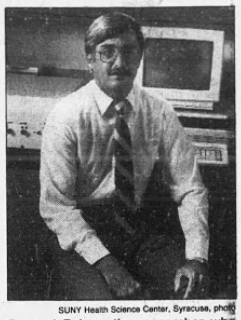


AIDS virus shown in budding process



Mature virus

Chicago Tribune Graphic; Source: National Cancer Institute



SUNY Health Science Center, Syracuse, photo

Bernard Poiesz, the researcher who isolated HTLV-1 as a postdoctoral fellow in Gallo's laboratory.

Myron Essex

APRIL 12, 1983: At **Gallo's** urging, Pasteur researchers begin writing a paper reporting the discovery in **BRU** of what they believe is a new human retrovirus different from HTLV.

APRIL 15, 1983: A Pasteur technician delivers the French paper to **Gallo** in Bethesda.

APRIL 19, 1983: **Gallo** sends a second paper to Science reporting the isolation of HTLV from one of the East Coast homosexuals and detections of the virus in **Marcellin** and **Chardon**. Same day, he sends the French paper to Science with a letter urging that it be published.

APRIL 27, 1983: Harvard University applies for a patent on the Essex test for antibodies to HTLV.

MAY 5, 1983: An assistant informs **Gallo** that, using a test different from the one developed by **Essex**, only 17 AIDS patients have tested positive for antibodies to HTLV "out of much larger number tested."

MAY 20, 1983: The three papers by **Essex** and **Gallo** reporting evidence of HTLV in AIDS patients are published in Science. A fourth paper, the one reporting the isolation of a retrovirus from **BRU**, is largely overlooked.

JUNE, 1983: **Gallo** informs his superiors that, despite **Essex's** published data, experiments in his lab show most AIDS patients are not infected with HTLV.

JUNE, 1983: Japanese researchers publish the first genetic sequence of ATLV; they suggest ATLV and HTLV-1 are "very similar."

JUNE, 1983: Pasteur researchers begin growing the **BRU** virus, now called LAV.

JUNE 3, 1983: **Gallo** tells scientists at the Centers for Disease Control HTLV is still "the best published lead to date" for the cause of AIDS.

JUNE 22, 1983: Pasteur researchers say they have found antibodies to LAV in six homosexuals with pre-AIDS and have detected the virus itself in four of the six. **Gallo** tells a reporter HTLV "is providing the best lead yet found" for the cause of AIDS.

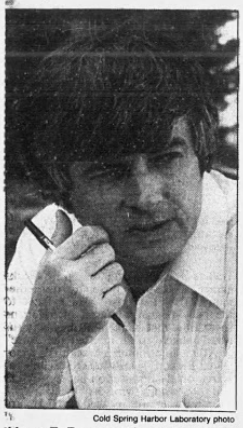
JUNE 29, 1983: **Gallo** asks **Montagnier** for another sample of the French virus.

JULY 10, 1983: In a letter to **Montagnier**, **Gallo** expresses concern that **Essex** has now detected antibodies to HTLV in more than half the AIDS patients he tested, while Pasteur researchers are reporting only 20 percent of AIDS patients positive for antibodies to their virus. "Something is missing," he says.

JULY 18, 1983: **Montagnier** attends the monthly meeting of **Gallo's** AIDS task force, bringing a sample of LAV and photographs showing particles that look different from HTLV. **Gallo** tells the meeting HTLV-1 is a "very attractive" candidate for the cause of AIDS.

Reuters photo

Pope John Paul II confers with Robert Gallo during the closing session of an AIDS conference sponsored by the Vatican in Rome last week. At the Pope's right is Msgr. Fiorenzo Angelini; at center is an unidentified priest.



Cold Spring Harbor Laboratory photo

Myron T. Essex, senior researcher at the Harvard School of Health and a longtime Gallo collaborator.

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gin. But I was just being polite."

In December of 1983, Gallo finally sent his negative findings on HTLV-1 and AIDS to the Lancet. At first glance the paper looked like a refutation of what he had been saying for the last year about possible links between the leukemia virus and AIDS, but it was much more subtle than that. In addition to reporting the mostly negative antibody data, the Lancet paper encouraged speculation that the cause of AIDS might be an undiscovered near-relative of HTLV-1. "There is no need," the paper cautioned, "to assume that members of the HTLV family are limited to two strains."

Max Essex had recently found a slight genetic variation in the feline leukemia virus that he said turned it from a cancer virus into a cell-killer, and now Gallo was suggesting that the AIDS agent might be a similarly mutant form of HTLV-1. The "undiscovered relative" theory was attractive for a number of reasons. Among other things, Gallo had never been able to explain the absence of AIDS in Japan, nor how a virus that caused the uncontrolled multiplication of white blood cells could also be responsible for the disappearance of those same cells.

As it happened, researchers in Gallo's lab had recently discovered just such a minor variant of HTLV-1 in an American homosexual with AIDS. It was very closely related genetically to the leukemia virus, but different enough to justify a name of its own. Gallo called his newest virus HTLV-1B.

Because most of the differences in the "1B strain" followed the same pattern as those in the feline virus variant, it looked like exactly what Gallo had been predicting in the way of a cell-killing mutant.

In mid-January of 1984, Gallo dispatched a new article to Science reporting the isolation of HTLV-1B from a patient with AIDS. "We were very excited," recalled one of the scientists in Gallo's lab.

The 1B paper had not yet appeared when, in early February, 250 of the world's leading researchers gathered at Park City, Utah, for what would be the biggest scientific conference thus far devoted exclusively to AIDS. As at Cold Spring Harbor, Gallo would be the star. "You are the keynote speaker," Harvard's Jerry Groopman, one of the conference organizers, had written to him earlier. "You can speak for 45 minutes, 90 minutes, or two days if you would like."

According to notes taken by one scientist in the audience, Gallo began his keynote address by declaring that the "only candidate" for an AIDS virus was one of the HTLVs—maybe HTLV-1, possibly HTLV-1B. Whether they were leukemia viruses or AIDS viruses, Gallo said, they were all "one big family."

On the last day of the Park City meeting Gallo dictated a letter to Jay Levy, who had made some comments to a reporter that Gallo considered misinformed. Levy had suggested that the reporter ask Gallo why, if HTLV caused AIDS, there weren't many AIDS patients who also had leukemia. "I never said HTLV caused AIDS," Gallo wrote to Levy. Then he added, "HTLV itself, nonetheless, could still cause AIDS."

Luc Montagnier had had a hard time at Cold Spring Harbor, and David Klatzmann had been virtually ignored in New York City. Perhaps Jean-Claude Chermann, the chief of the Pasteur lab where the French virus had been isolated, would be more successful in Park City.

Chermann had known Gallo for nearly 20 years. The two men had been to each other's homes and dined with each other's families. But when they had last seen one another, in early October, 1983, at a meeting in Seillac, France, there had been an unaccustomed tension between them. "In October we know that we have the virus," Chermann recalled in his heavily accented English. "But everybody was saying that we were wrong."

In the belief that the scientific community was taking its cues from Gallo, Chermann said, he made one last appeal in Seillac to his old friend. "We took a bicycle ride," Chermann said, "and I said to Gallo, you know me for a long time. I can tell you we have the virus. I will not fight anymore with you. The next meeting will be in Park City, Utah. In February we tell you exactly how LAV is the cause of AIDS."

When Chermann's plane landed in Park City four months later, Gallo was at the airport. As Chermann recalled his conversation with Gallo during the ride into town, "He say, 'You know, Jean-Claude, you are invited to this meeting, but you cannot speak about LAV as a retrovirus.' He say, 'You don't know if it's a retrovirus,' and so on.

"I said, Bob, you know that I am working with retrovirus for 20 years. I will give exactly how we think about the virus. It was very difficult for me to speak. Jerry Groopman came and told Gallo, 'You have to let Jean-Claude speak.' "

Besides Groopman, the other Park City organizer was Michael Gottlieb, the UCLA immunologist who had reported the first cases of AIDS, in five homosexual men from Los Angeles, nearly three years before. The previous spring, a few weeks after the Pasteur group had published the BRU paper in Science, Gottlieb had heard Chermann and Klatzmann speak at a sparsely attended meeting in Naples.

It was Gottlieb who had discovered the most important clinical feature of AIDS patients, the depletion of their helper T-cells, and when he heard the news from Paris about a virus that killed those same cells he was electrified. "The words that come to mind are amazed, astonished," Gottlieb said. "I was sitting there hearing something that clicked, saying, these guys have found something important, these guys are on the right track." At breakfast the next morning, Gottlieb invited Chermann to Park City.

Park City is a ski resort in winter, and Gottlieb admits that "at these ski meetings, the pressure is to get the morning meeting done by noon so we can get out onto the slopes." Chermann had been given a place near the end of the morning program. At the last minute, Gottlieb recalled, Groopman and Gallo, who was chairing the session, added a Harvard researcher named William Haseltine to the program ahead of Chermann.

"I had been told by Groopman that Haseltine was only going to talk for 10 minutes," Gottlieb said. "Haseltine is still going at 30 minutes, and it looks like he's going for 45. I went to Groopman and I said, 'Hey, Jerry, this is your guy and he's cutting into Chermann's time.' Jerry got the chair's attention, and Gallo said something to Haseltine. Jerry told me later that Haseltine was livid."

When Chermann finally spoke, Gottlieb recalled, "he was a little flustered by the events, and his English isn't that great anyway. Jean-Claude—I love him—he's a great guy, but his presentation was a little discombobulated. But people were sitting there ready to go skiing and all of a sudden there were people saying, 'Hey, these guys have something.' These were people who hadn't read the Science paper; they hadn't heard the story."

Chermann provided an impressive summary of what the French had accomplished in less than a year: 10 isolates of their virus from patients with AIDS or pre-AIDS, the attraction of the virus for helper T-cells, even a new picture of the virus showing clearly that it didn't look anything like Gallo's leukemia virus. Chermann also presented new data showing that the Pasteur's AIDS blood test had found antibodies to the virus in nearly 40 percent of AIDS patients, and in almost 75 percent of those with pre-AIDS.

Those numbers were a quantum leap from the ones Montagnier had brought to Cold Spring Harbor, and following Chermann's talk a small group of American scientists paid a clandestine visit to his room. They wanted him to know, one of them recalled, that no matter what Gallo thought they had been convinced. As far as they were concerned, the cause of AIDS was the French virus called LAV.

The data from Paris were looking good, but in Gallo's lab there was trouble. Not long after the paper on the discovery of HTLV-1B had been submitted to Science, someone had discovered that the virus hadn't been isolated from an AIDS patient after all. It had come instead from a Zairean man named Elomata, one of the blood samples Jacques Leibowitch had brought Gallo from Paris. Elomata had died of adult T-cell leukemia, not AIDS, which meant that HTLV-1B was just a new variant of Gallo's leukemia virus.

"There was a mixup between the different DNAs," said one scientist who worked on HTLV-1B, explaining that someone in Gallo's lab had mistaken a 7 for a 1. Whatever occurred, overnight Gallo's AIDS virus candidate had vanished into the great, dark void of laboratory error. The paper on HTLV-1B that had been sent to Science never appeared, and it was not the only paper from Gallo's lab to disappear before publication during the long winter of 1984.

In early March, Gallo wrote the editor of the Lancet to ask that the paper submitted the previous December, the one showing that very low percentages of AIDS patients had antibodies to the leukemia virus, also be put on hold. His lab, Gallo said, had recently obtained "over 40 new virus isolates" from patients with AIDS and pre-AIDS, viruses that were "significantly" different from the leukemia virus or any of its known variants.

"My concern," Gallo wrote, "is that the mostly negative HTLV-1 data will be construed as negative to all HTLV. I need some time to think about the best way to present this to avoid confusion."

With the exception of the ill-fated HTLV-1B, Gallo hadn't mentioned anything about a new AIDS virus when he spoke at Park City less than a month before. But when the proceedings of the meeting were published several months later, they contained a paper by Gallo reporting the isolation of a new human retrovirus called HTLV-3 from "a large number" of AIDS patients.

"The week after the meeting," recalled Mike Gottlieb, who as one of the organizers was responsible for collecting and publishing the papers delivered at Park City, "someone in Gallo's lab called and told me they were going to send me a manuscript and to keep it quiet, to keep the information confidential.

"It's not kosher, but I had no sense at the time of what was about to happen. I don't want to look stupid or naive, but I certainly was naive. I did not read it carefully enough to appreciate the significance of the work or the political overtones." There "definitely" should have been a footnote to Gallo's paper pointing out that it was not delivered at the symposium, Gottlieb says, but there wasn't.

When the proceedings of the Cold Spring Harbor conference the previous September were published in the summer of 1984, they also lacked any indication that Gallo's introductory lecture had been rewritten. According to the new version, Gallo had obtained "over 50 isolates of a retrovirus from AIDS or pre-AIDS patients" called HTLV-3, which was "closely related to, but distinguishable from, HTLV-I and HTLV-II." Gallo's other Cold Spring Harbor paper, the one in which he had discussed "the possibility that HTLV plays an important role in the origin of AIDS," had vanished from the proceedings altogether.

If Gallo's discovery of HTLV-3 seemed to settle the cause of AIDS, it left open the question of Max Essex and his antibody test. If HTLV-3 was the cause of AIDS, then it wasn't HTLV-1. If it wasn't HTLV-1, then something was the matter with the Essex test. In March of 1984 the U.S. Patent Office agreed, rejecting the Harvard application for a patent on Essex's test on the ground that it was "inoperative and therefore lacks utility."

In other words, the Essex test didn't work. Or, rather, it worked too well. "I think Max is very lucky, or unlucky," said Cy Cabradilla, who tried to replicate the test for the Centers for Disease Control. "I took that procedure back to CDC, and we did get results that were very comparable." But when blood from people who didn't have AIDS was tested, Cabradilla said, "we were getting the same results."

Whatever the Essex test measured, it wasn't Gallo's leukemia virus. Gallo says now that although he had long suspected Essex's data were wrong, "in time I recognized how wrong. Did I know it then? Perhaps. Are you getting me on a weak point? Probably. I really don't know what he was detecting."

When Essex, who has never retracted his HTLV antibody papers, shared the Lasker prize with Gallo three years ago, the citation noted their "unique contributions to the understanding of AIDS." Last year, when Harvard created a university-wide office to coordinate its research on AIDS, Max Essex was the man it put in charge. Essex declined a request for an interview with The Tribune, citing "a heavy travel commitment and a tight schedule."

4 'Could you patent the sun?'

The afternoon of April 23, 1984, was one of those occasions relished by the federal government, a rare chance for the bureaucrats to go before the television cameras with their white hats on. As the medical writers filed into the cramped auditorium shortly after lunchtime, they were handed an eight-page release from the National Cancer Institute's press office. Soon they were listening to Margaret Heckler, the secretary of health and human services, announcing that "the probable cause of AIDS has been found."

It was, Heckler said, a new virus, and its discoverer was "our eminent Dr. Robert Gallo," chief of the National Cancer Institute's Laboratory of Tumor Cell Biology. Those reporters who wanted the scientific details were handed preprints of four articles by Gallo that would appear 10 days later in Science magazine. "Getting one paper in Science is a lot," Gallo said later. "Getting two is fantastic. Getting three was a record. We had four at one time."

The first article described the new virus, which Gallo had named HTLV-3, as the latest member of the human leukemia virus family on which he had built his scientific reputation. The second article reported the isolation of the virus from nearly 50 patients with AIDS or pre-AIDS, the third described its major proteins, and the last reported the invention of a blood test for antibodies to the virus.

Like many big stories in Washington Gallo's discovery began as a news leak, and before the story had played itself out it would reveal as much about the science of politics as about the politics of science. It broke on Monday, April 16, when the Wall Street Journal reported, "Speculation is mounting in the medical community that researchers soon will announce discovery of a new variation of human cancer virus that may cause acquired immune deficiency syndrome." Gallo's leukemia virus, the Journal noted, "has been suspected of causing AIDS since it was isolated in an AIDS victim last year."

Most scientists agree, and Gallo concurs, that the first word of a major discovery should come not at a news conference but in a scholarly article that has been subjected to prepublication scrutiny by independent experts in the field. "Science is after peer review," he told The Tribune. "You can't just go putting stuff in notebooks and handing them to reporters." The fact that his own landmark discovery was announced at a news conference, Gallo said, "wasn't my idea. It was as the result of a reporter that things hit the fan."

Gallo was referring to Martin Redfern, a science correspondent for the British Broadcasing Corp., whom Gallo has accused of stealing copies of the unpublished Science papers from his office. Redfern emphatically denies the accusation and gives a different version of events. A few days before the news conference, Redfern says, he stopped in Washington to interview Gallo about his leukemia virus research. Halfway through the conversation, Redfern said, Gallo told him that "we've just discovered the cause of AIDS."

"When the interview had finished," Redfern recalled, "he said, 'Would you like preprints of the papers?' To which I said, 'Dead right.' He asked one of his colleagues to get them out. The chap's eyes opened rather wide and he said, 'Are you sure? All four of the AIDS papers?' And Gallo said, 'Yes, I trust this man.' There were several people around who were a little surprised that he'd given me the story."

In a 1987 interview with the Dutch newspaper Financiel Dagblad, Gallo maintained that "after the interview, when I left my room for lunch, he took private documents from my desk."

Redfern says that he promised Gallo he would keep the story to himself unless it broke first somewhere else, and that he reported what he knew only after the leak had appeared in the Wall Street Journal. In fact, it was Gallo himself who first disclosed the existence of HTLV-3 a month before the Journal article appeared, in a speech in mid-March to a meeting of the French Association for Cancer Research in Marseille.

To the millions of Americans who watched the evening news and read the next morning's newspapers, however, Gallo's news conference seemed a genuinely historic moment. Three years ago AIDS hadn't even been recognized. Two years ago it didn't have a name, and now an American cancer researcher had found the cause.

AIDS was fast becoming a partisan issue, and behind all the self-congratulation there were unmistakable political overtones. With increasing frequency the Reagan administration was being accused, not just by homosexual groups but by scientists and some members of Congress, of not having done enough or spent enough, quickly enough, to gain a foothold in the battle against the disease.

But here was Secretary Heckler telling the critics they could thank the Reagan administration for the fact that the cause of AIDS had been found, and with it a test to screen the blood supply for contamination with the virus. A vaccine to protect the uninfected, she said, might be available within two years. Heckler's optimism about an AIDS vaccine was unfounded, and much of what was said that April afternoon would not bear up later under scrutiny.

Near the end of the news conference, a reporter asked Gallo when he had actually made his momentous discovery. When, precisely, had he isolated the AIDS virus? "When you see the papers published in Science," Gallo said, "you will see that we've been mass-producing it for six months. Okay?"

Six months before the news conference was late October of 1983. But the minutes of Gallo's AIDS task force meetings for November and December contain no indication that the AIDS virus had even been identified, much less mass-produced, by Gallo's lab. Instead, the minutes reflect a mounting concern among the task force members about the lack of any solid link between AIDS and Gallo's leukemia virus.

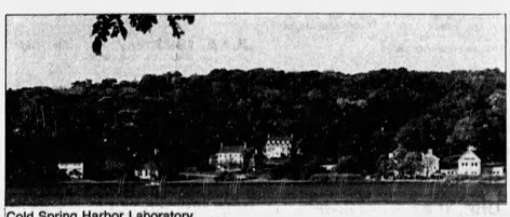
The question of just when Gallo's lab found the AIDS virus is further obscured by his assertion to The Tribune

Continued on following page

AUG. 4, 1983: Gallo and others conclude that **Charles Robinson** did not have mycosis fungoides but died of "a new form" of lymphoma very similar to ATL.

AUG. 15, 1983: Gallo receives a sample of **BRU's** serum from Paris. Same day, **Essex** sends a paper to Science reporting that hemophiliacs are also positive for antibodies to HTLV.

AUG. 26, 1983: The Pasteur group and collaborating French physicians send Nature magazine a paper reporting that LAV infects and kills helper T-cells, the same kind of cells whose disappearance causes an immune deficiency in AIDS patients. The paper, which provides the strongest link yet between the French virus and AIDS, is rejected.



Cold Spring Harbor Laboratory

SEPT. 14, 1983: A major conference on HTLV begins at Long Island's Cold Spring Harbor laboratory with an introduction by **Gallo**, who says he believes HTLV is involved in AIDS.

SEPT. 15, 1983: **Montagnier**, who is given only 20 minutes to speak, tells the conference his group has found LAV antibodies in nearly three-quarters of patients with pre-AIDS and in 20 percent with AIDS. Same day, Pasteur lawyers apply for a European patent on the LAV blood test used in the studies.

SEPT. 20, 1983: Gallo writes another scientist that he now has 11 isolates of HTLV "and related retroviruses" from AIDS patients.

SEPT. 22, 1983: A second shipment of LAV is delivered to **Gallo's** lab. **Mikulas Popovic, Gallo's** chief virologist, signs a receipt promising that it will not be used for commercial purposes. **Popovic** immediately begins trying to grow the virus and sends a small amount to **Matthew Gonda** in Frederick, Md., for observation under the electron microscope.

SEPT. 27, 1983: Gallo writes a German scientist that a genetic variant of HTLV is the "most likely" candidate for an AIDS virus, adding, "I have never seen the virus that **Luc Montagnier** has described." Same day, **Gallo's** assistants give him a copy of their unpublished paper reporting fewer than 10 percent of AIDS patients have antibodies to HTLV-1.

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that "in the month of January we had all essential data," and that by the time of the symposium in Park City in early February "we knew everything that we published."

According to Gallo's lab records, it was in mid-January that he sent to Science the paper reporting the discovery of HTLV-1B in an American homosexual with AIDS. It was during the Park City meeting that Gallo had admonished Jay Levy, the University of California virologist, that "HTLV itself" might be the cause of AIDS.

Gallo's records show, moreover, that some of the essential data contained in the four Science papers could not have existed until less than a month before the papers were submitted for publication at the end of March, and the discrepancies between the data in the records and the published articles suggest the haste with which they were assembled.

Three weeks before the news conference, Gallo flew to Paris to confer with the AIDS team at the Pasteur Institute. As Luc Montagnier remembers the meeting, Gallo told the French that he would soon be announcing his discovery of the cause of AIDS. "He said that he would have several papers published shortly in Science and he didn't know exactly how this would be announced," Montagnier said, "that perhaps a press conference would be done."

The French, who had been trying to persuade the scientific community for nearly a year that the virus they called LAV was the cause of AIDS, were taken aback. The day after Gallo's visit, they had published a paper in the Lancet, their first in a major journal in nearly a year, reporting the latest evidence linking their virus with AIDS.

According to Jean-Claude Chermann, in whose lab LAV had been discovered, Gallo assured the French that he thought his virus and theirs were the same and that he didn't intend to take any of the credit that rightfully belonged to the Pasteur Institute. After the news conference, Gallo telephoned Montagnier in Paris. "He said, 'It's over now,' " Montagnier recalled. " 'I mentioned your contribution and I think everything is fine.' "

Gallo has said repeatedly since then that he acknowledged at the news conference that the two viruses were the same. An official transcript of the news conference, however, does not contain such a statement. When a reporter asked Gallo whether the two viruses were the same, Gallo said, "It may in time be the same as what has been called LAV in a couple of publications," but he added that "I cannot say at this point whether the viruses are identical."

In that morning's Washington Post, Gallo had cautioned that "only time will tell" if the two viruses were the same. He was "astounded," he said, by the "hullabaloo" caused by "sour-grapes" comments from unnamed scientists "who seem to be threatened by my data." When the four Science papers were published 10 days later, one of them contained the assertion that "HTLV-III and LAV may be different."

Predictably, Gallo's comments caused consternation at the Pasteur. "He was just saying, we don't know if it be the same," Chermann said. "And that, scientifically for me, ethically and morally, was not acceptable." Chermann recalls that when he brought the matter up later, Gallo blamed his staff: "He say, 'I put all my people in the room and we discuss. At the end we ask, is the same or is not the same? And people say is not the same.' "

The question Gallo had left hanging—were the two viruses the same?—was not a trivial one for those engaged in the search for a vaccine and a cure. As Richard M. Krause, then-director of the National Institute of Allergies and Infectious Diseases, wrote in a memo to the head of NIH, "It is important to learn if HTLV-3 and LAV are one and the same virus, or are two somewhat different viruses each able to produce a syndrome that resembles AIDS."

According to records from Gallo's lab, experiments by his assistants had already produced evidence that his virus and the one from Paris were the same.

In the months before the news conference, Gallo's staff had begun a series of tests on several cell cultures in which they hoped the new AIDS virus was growing, mixing the cultures with blood serum known to contain antibodies to the AIDS virus. If the antibodies in the serum attached themselves to the cells, it meant the virus was present in the cultures.

Gallo's lab had several sources of serum from which to choose, including some from a hemophiliac with pre-AIDS identified as ET, and some from a laboratory rabbit that had been deliberately injected with the AIDS virus. According to Gallo's published papers, almost every one of the AIDS virus cultures showed a strong positive reaction to both the rabbit and ET.

Although it was not mentioned in any of his articles, Gallo had a third source of AIDS virus antibodies with which to test his cultures. In the summer of 1983, Luc Montagnier had sent Gallo a sample of blood serum from BRU, which experiments at the Pasteur had already shown was loaded with antibodies to the French virus—not surprising, since BRU was the source of the original French isolate.

When Gallo's assistants mixed BRU's serum with the cells where the AIDS virus was believed to be growing, the lab notes show, in some cases the reactions were more intense than with the serum from ET. If BRU had antibodies to Gallo's AIDS virus, then the Gallo virus and the French virus were almost certainly the same. But none of Gallo's Science articles reported that BRU's serum had even been used in the experiments, much less that the reactions had been positive.

As the controversy between Paris and Bethesda over who had been first to discover the AIDS virus began to generate heat, Gallo changed direction. Even if he and the French had isolated the same virus, he began to say, his lab had been first to develop a working blood test for the AIDS virus and first to prove that the virus was the cause of the disease.

According to Nature magazine, when Gallo and Montagnier shared the Lasker Prize in September of 1986 the news release, which had originally credited Montagnier with the discovery of the AIDS virus, was changed at the last minute because of objections from the American jurors to cite him for having found a virus that was "later shown to be the cause of AIDS."

The distinction is far from academic. Finding a new virus in a patient with a new disease, or even in several such patients, is not the same as discovering the cause of the disease. The new virus might be the cause, but so might some other virus still lurking in the background. To link a specific virus with a specific disease, it is necessary to show that everyone who has the disease is infected with the virus, by finding viral antibodies in the blood of large numbers of people who are sick. Before such a search could be mounted, however, there would have to be a blood test for AIDS. (See TEST, p. x.)

In the two centuries since Priestly and Lavoisier raced each other to discover oxygen, the desire to be first has helped push science forward. Nobels and Laskers have stepped up the pace. But there was much more than prizes and prestige riding on the development of a successful AIDS test.

Whether it was French or American, a test for AIDS would be a most welcome development from a public health standpoint. Although it had been clear for at least two years that AIDS was being spread through blood transfusions as well as sexual intercourse, there hadn't been any way to screen the blood supply.

As the number of people with AIDS grew, so did the market for such a test, and most of it was in the United States. Just to keep the domestic blood supply pure, the federal government estimated that 23 million tests would be needed each year, and that didn't take account of the growing demand from people in this country and abroad who wished to find out whether they had been infected.

The Reagan administration was much less interested in patent royalties than in the domestic and international political considerations of being first with an AIDS test. But for a nonprofit institution like the Pasteur that receives less than half its funding from the French government, the royalties from what has become a $175 million-a-year AIDS test market in the U.S. alone would pay for a great deal of research.

To the National Cancer Institute, stepping to the forefront of AIDS research could mean a welcome end to the long dry spell of budget increases that had followed the reverses of the government'a war on cancer. For Gallo and his senior assistants, an AIDS test patent would mean hundreds of thousands of dollars in royalty payments in addition to their government salaries.

By February of 1984 Gallo's lab had developed an AIDS blood test, called an ELISA, that is fundamentally the same as the test employed today by hospitals, clinics and blood banks around the world to guard the blood supply. As soon as it was ready, Gallo asked the Centers for Disease Control to send him a large number of blood samples from patients with AIDS and pre-AIDS with which he could prove its accuracy.

Among the more than 200 blood samples the CDC shipped to Bethesda on Feb. 27 were a number from men and women who didn't have AIDS and didn't belong to any of the groups most likely to get it. All the samples were "blind," labeled only with a code number that gave no indication of whether the donor was sick or well. If Gallo's ELISA could distinguish between them—if the sick donors had antibodies to his virus and the well donors didn't—it would prove not only that his blood test worked but also that his virus was the cause of AIDS.

A few weeks later the CDC gave Gallo the results. His ELISA had done so well that there was no doubt his virus was the cause of AIDS. But when Gallo arrived in Paris in early April to inform the French of the impending announcement of his discovery, he was met with a surprise. In the belief that the French should be given a chance to test their ELISA on the same blood samples, the CDC had shipped a second set to the Pasteur.

Among those at the Paris meeting was Donald Francis, the CDC epidemiologist in charge of ELISA testing. Francis, who has both a medical degree and a Harvard Ph.D. he earned in Max Essex's lab, had brought with an 11-page, single-spaced computer printout that contained the scores for both sides.

"We sat there in Jean-Claude Chermann's office with the printout, three or four fingers going down these columns, looking at the similarities and dissimilarities," Francis recalled. When they reached the bottom, it was clear that the French ELISA had scored as well as Gallo's. Both teams had gotten the right answer on 78 percent of the samples tested, but Gallo had marked many of his blood samples "plus-minus," scientific shorthand for "maybe it's there and maybe it's not."

"Gallo really cranked up the specificity on his test to make sure he wouldn't miss anything," Francis said, adding that Gallo had scored more than twice as many false positives as a result. When all the "plus-minuses" were changed to positives, Gallo scored 81 percent and the French, who had many fewer "plus-minuses," had 79 percent. Despite his slight margin in the corrected scores, two things were now obvious: Both the French virus and Gallo's were the cause of AIDS, and the French had an equally reliable test.

There had been considerable tension during the Paris meeting—at one point Gallo had insisted that Don Francis leave the room because he wasn't a practicing virologist—and that evening Chermann took everybody to the Paradis Latin, a glitzy supper club on the fringes of the Latin Quarter with a topless floorshow. According to Chermann, when he and Gallo found themselves in the men's room, Gallo suggested that perhaps the blood test results should be announced by himself and the Pasteur.

"We can do this together," Chermann recalls Gallo telling him. "We don't need CDC." Chermann was flabbergasted, but no more so than Francis, who remembers Gallo telling him the next morning at breakfast: "You and I can do this together. We don't need the French."

In the end, Gallo did it alone. At the news conference two weeks later he didn't mention that the French virus had passed the same test, and Gallo now hints that he mistrusted the CDC's results from the beginning. "I never stood over that code and went through it with them," Gallo told The Tribune. "How do I know and how do you know? It was in their hands."

The French were eager to publish the results of their performance in the CDC competition. Because the testing had been done in collaboration with Gallo, Montagnier said, the French felt the results should also be published jointly. "Enclosed is a draft of the comparative serology which we discussed last April in Paris," Francis wrote to Gallo in October, 1984. "Please send me comments, authors and corrections as soon as possible."

When Gallo replied two months later, his primary interest seemed to be in the apportionment of credit. "If LAV precedes HTLV-III in this paper as a title then I will be last author," he wrote to Francis. "If not, I don't care who the last author is. (One or the other Don, but not both for your friends abroad). If there is a problem for you then let's just forget the whole thing."

The results of the blood testing were never published. Two years later, when Gallo prepared a sworn statement recounting the history of his AIDS research, he maintained that at the time of the news conference in April of 1984, "my colleagues and I did not consider LAV and HTLV-III to be the same, or even substantially the same, virus. Quite clearly the data available to us indicated that the two viruses functioned differently and reacted differently."

More than 30 years ago, broadcaster Edward R. Murrow asked Jonas Salk who should own the rights to the polio vaccine that bears his name. "Well, the people, I would say," Salk replied. "There is no patent. Could you patent the sun?"

It is still not possible to patent the sun, or any of nature's original constituents. But it is possible to patent a useful rearrangement of nature, and when the Supreme Court ruled in 1980 that the patent and trademark laws could be applied to the products of genetic engineering—in that particular case, to a microbe that ingests petroleum and might be useful in cleaning up oil spills—the biotechnology industry was born.

On Sept. 15, 1983, as Luc Montagnier was announcing the Pasteur's initial ELISA results at Cold Spring Harbor, the institute's attorneys were in London filing an application for a patent on the Pasteur ELISA made with LAV. In early December, while Gallo was still trying to unravel the mysteries of HTLV-1B and the Essex test, the Pasteur filed an application for an American patent.

But as Gallo and Margaret Heckler stood before the television cameras in late April of 1984, the Pasteur no longer had the field to itself. A few hours before the news conference, the U.S. government filed an application of its own for a patent on the ELISA made with Gallo's AIDS virus, HTLV-3. The application included a sworn declaration in which Gallo stated that he was "the original, first and sole inventor" of the AIDS ELISA.

The stakes riding on the competing applications were enormous. If the American patent were granted to Pasteur, it meant no other AIDS test could be produced and sold in this country without paying royalties to the French. If the U.S. government's application prevailed, Pasteur would be shut out of the only market that really mattered.

In patent law priority is everything, and in the case of the AIDS test there didn't seem to be any question about who had finished first. Although Gallo later asserted in scientific articles that the first AIDS blood testing had been done in his lab, the Pasteur had been using its ELISA to test blood samples for months before Gallo even had a virus to test with.

The previous November, while Gallo was still deciding whether to publish the data showing that most AIDS patients weren't infected with his leukemia virus, the French were running the first controlled test of their ELISA with blood samples from the CDC. On the very day the CDC shipped blood samples to Gallo's lab, in fact, the Pasteur team was reporting the results of their ELISA tests in a French medical journal. But when the Gallo AIDS test patent was granted in May of 1985, the Pasteur's application was still gathering dust.

The French, Gallo said later, hadn't received the patent "because they didn't have a working test." In 1985, when the Pasteur Institute filed a formal challenge to the Gallo AIDS test patent, Gallo declared in a sworn statement that while he was "satisfied that HTLV-III had been proven to be the cause of AIDS. . . . I saw no evidence of this for LAV up through the allowance of the Gallo patent."

Such accusations greatly distress the French. "We had the test by the summer of 1983," Montagnier says. "The test was not as sensitive as it is now, so we missed more than half of the AIDS patients. But for people who were just healthy carriers it was OK. We could detect a very high proportion. It could have been used for blood supplies."

Montagnier wrote to the French Ministry of Health offering the ELISA to test the French blood supply and screen potential donors. "I got a nice answer but nothing was done," he said. "People did not believe. Even some of my French colleagues said, well, you have a new retrovirus. But why do you have to involve that retrovirus in AIDS? AIDS is caused by HTLV-1."

"We should have been able to produce the test for commercial use," Montagnier says. "It could have been done. Some time, perhaps a few months, could have been gained, if people had believed what we said. Some lives could have been saved."

When Gallo announced his AIDS virus in April of 1984, it had been more than eight months since the French had first sent a sample of their virus to Gallo's lab. But Gallo told the reporters he hadn't been able to compare his virus to theirs because the French hadn't sent enough to make such comparisons possible. "There could not be a definitive answer from the lack of material that was sent to us," Gallo said. "That's what's been the delay." In a letter to Chermann that summer, Gallo reaffirmed that "the material you sent to us was inadequate for comparative studies."

Gallo maintains that there was no virus in the small vial of frozen liquid that Montagnier had brought to Bethesda in July of 1983. According to Montagnier, when he delivered the vial to Gallo's home Gallo put it in the vegetable crisper of the family refrigerator where it eventually thawed, allowing the virus to die.

Whatever happened to the July shipment, a week after the confrontation between Gallo and Montagnier at Cold Spring Harbor the following September a second shipment of virus was on the way from Paris to Bethesda. Now that the French had applied for a patent on their virus, they asked Gallo to agree in writing that the sample would not be used for any commercial or industrial purpose.

On Sept. 22, 1983, the day the second shipment arrived in Bethesda, Mikulas Popovic, Gallo's chief virologist, began trying to grow it in the same kind of helper T-cells from fresh umbilical cord blood in which the French had first isolated the virus from BRU.

Although Chermann recalls Gallo telling him in Park City that "nobody believes your virus is a retrovirus," Gallo's lab records show that the French virus was kept alive in the cord blood culture for several weeks while Popovic established two critical facts: that the French had discovered a human retrovirus, and that it wasn't Gallo's leukemia virus.

According to the records, Gallo's lab also had visual evidence that the French virus was unique. On the same day the cord blood cultures were set up, Popovic sent a sample of the virus to Gonda's electron microscope lab in Frederick. Within a few days Gonda reported that the electron microscope showed a particle that looked like a lentivirus.

Growing the AIDS virus in fresh white blood cells, as both Popovic and the French had done, is not the only way of keeping it "alive." A more efficient method is to put the virus in a self-propagating culture known as a permanent cell line, but Gallo has repeatedly asserted that his lab was unable to grow the French virus successfully in such a cell line. (See LINE, p. x.)

The virus, he wrote in the first of the four Science articles published in May, 1984, "has not yet been transmitted to a permanently growing cell line for true isolation and therefore has been difficult to obtain in quantity." According to a 1986 memo from Popovic to Gallo, however, in December of 1983 the French AIDS virus was "successfully transmitted" into a permanent cell line, called Ti7.4, which "yielded reproducible but low-level LAV."

In his conversation with The Tribune, Gallo said that the laboratory comparisons between his AIDS virus and the one from Paris had never been made, and that his failure to make them was "the one thing that I regret. It is true

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Popovic memo about LAV

Final paragraph from memo dated Aug. 19, 1985, from Mikulas Popovic to Robert Gallo and associate NCI director Peter Fischinger, reporting that the French AIDS virus was grown successfully in Gallo's lab and found to be the same as Gallo's AIDS virus, HTLV-3.

By December 1983 we had prepared specific reagents against HTLV-III. We then transmitted LAV to a cell line developed at M.D. Anderson Hospital known as TI 7.4. This T-cell line yielded reproducible but low-level LAV. We later tested our reagents against this cell line and eventually showed that LAV and HTLV-III had cross-reactive major proteins. We concluded that they could be related viruses or the same general subtype. By January-February 1984 others in our group showed that more than 90% of AIDS sera reacted with HTLV-III specific proteins. We never "scaled-up" LAV for comparable testing but noted that as late as October-November 1983 Montagnier found only 20% AIDS sera reacted with LAV.

Mika Popovic, M.D.

OCT. 3, 1983: **Gonda** tells **Popovic** he has photographed the French virus and it appears to be a lentivirus, a slow-acting retrovirus of a different category than HTLV.

OCT. 6, 1983: **Popovic** determines LAV does not react with antibodies to HTLV, indicating the French have discovered a new human retrovirus.

OCT. 18, 1983: **James Hoxie** sends **Gallo** a blood sample from **RF**, a Haitian immigrant who is dying of AIDS in Philadelphia.

OCT. 19, 1983: A Long Island physician sends **Gallo** malignant tumor cells taken from a 57-year-old carpet salesman infected with the AIDS virus from a blood transfusion.

OCT. 24, 1983: **Gallo's** assistants use LAV to infect five permanent T-cell lines, including HUT78 and Ti7.4.

OCT. 26, 1983: Work is completed on HTLV-1B, a genetic variant of HTLV that Gallo believes may be the cause of AIDS.

NOVEMBER, 1983: The NCI AIDS task force learns that experiments by one of its own members show only 1 of 59 AIDS patients has antibodies to HTLV. The group says "the very low" percentages are "a continuing problem."

NOV. 10, 1983: **Popovic's** notes appear to show that the French virus is reproducing in Ti7.4 and HUT78. The next day, he apparently renames the two cultures HUT78/V and Ti7.4/V.

NOV. 11, 1983: **Gallo** is awarded the American Cancer Society's Medal of Honor.

NOV. 15, 1983: **Popovic** begins the isolation of HTLV-3B by pooling cells from the Long Island carpet salesman and two other patients in HUT78. Same day, he sends **Gonda** samples of the HUT78 and Ti7.4 cultures in which LAV is growing.

NOV. 16, 1983: French immunologist **David Klatzmann** presents the data from the paper rejected by Nature to a meeting of the New York Academy of Sciences. He is virtually ignored.

NOV. 21, 1983: **Popovic's** notes show HUT78/V and Ti7.4/V are "OK," an apparent indication that the French virus continues to grow in both lines.

NOV. 22, 1983: **Popovic's** notes contain the cryptic entry "HUT78/V; Ti7.4/V = MOV." Same day, he adds more material from the initial three patients to his pooled HUT78 culture. In Paris, Pasteur researchers make their first successful infection of a permanent B-cell line with LAV.

NOV. 28, 1983: The University of California's **Jay Levy** says he has isolated the retrovirus he calls ARV from a San Francisco homosexual with AIDS.

NOV. 29, 1983: According to **Popovic's** notes, a new cell line called Htu4, derived from HUT78, is infected with the virus **Popovic** now calls "MOV."

DEC. 5, 1983: Pasteur applies for a U.S. patent on its LAV blood antibody test. **Popovic** sends the virus called MOV to **M.G. Sarngadharan**, the Gallo assistant in charge of developing a blood test for AIDS.

AP Laserphoto

Gallo and then-Health and Human Services Secretary Margaret Heckler at the news conference announcing isolation of the virus.

Continued from preceding page

that we had reagents before submitting our papers to have analyzed Montagnier's virus, and to have concluded in those papers that his and ours were essentially the same virus."

The Popovic memos state, however, that the comparisons Gallo mentioned were carried out. The infected Ti7.4 cell line, one memo says, was "used for comparative studies" with the Gallo AIDS virus. "We later tested our reagents against this cell line," the memo maintains, "and eventually showed that LAV and HTLV-III had cross-reactive major proteins." Popovic declined to be interviewed.

Neither Popovic's memos nor the portions of his laboratory notes made public under the Freedom of Information Act contain the data produced by the experiments with the French virus to which the memos refer. According to one memo, however, the initial confirmation that the French virus was growing in the Ti7.4 cell line was obtained on Dec. 14, 1983—the same day Gonda informed Popovic in writing that the virus in that cell line was producing lentivirus particles.

It was also on Dec. 14 that Gallo wrote a letter to a French scientist, not one affiliated with the Pasteur, bringing him up to date on his AIDS virus research. Although his lab had now found antibodies to the human leukemia virus in a number of AIDS patients, Gallo wrote, "We still have not seen the Montagnier group's type of virus in a patient here, nor to my knowledge has anyone else."

The Popovic memos do not appear to contain some of the most important details of his AIDS virus research. According to the memos, the French virus was put into the Ti7.4 cell line in mid-December of 1983—*after* the Gallo AIDS virus had been isolated and used to make the rabbit antibody and the blood test for AIDS. But the lab notes on which the memos are based appear to show that the French virus actually began growing in Ti7.4 on Oct. 24, 1983—three weeks *before* the isolation of the Gallo AIDS virus was begun.

Nor do the Popovic memos mention that Ti7.4 was not the only cell line in which he succeeded in growing the French virus. According to Gallo's lab records, a second T-cell line called HUT78 was also successfully infected with the French virus on Oct. 24.

What ultimately became of the French AIDS virus Popovic was growing in the two cell lines is unclear from his laboratory notes. Popovic later maintained in an interview with Science magazine that the cells in both lines had died after two or three weeks. None of Gallo's lab records that were made public mention the death of either culture, and notes from a different section of Gallo's lab appear to show more than 70 references to further experiments involving LAV in the late winter and spring of 1984.

In January, the notes show, LAV was being compared genetically with the leukemia virus that Gallo incorrectly believed to be the cause of AIDS. In February, DNA was being obtained from "LAV producer human cells." Notes from March and April appear to reflect the use of LAV in several genetic engineering experiments.

Gallo says the handwritten notations are not references to the French virus, but rather a generic designation for the AIDS virus employed by some of his assistants before the name HTLV-3 was adopted in the four Science papers. "We didn't know what to call it," Gallo told The Tribune. "Until we published those papers we had a million and one names."

The lab notes, however, show that the Ti7.4 cell line and other cultures that were clearly infected with the French virus were called LAV, while those infected with other viruses were given different names. The notes also contain several references to LAV that bear dates later than March 30, the day the four papers were submitted to Science.

The fact that Gallo's lab had assembled persuasive evidence months before his news conference that the AIDS virus from Paris was the same as his own was never disclosed to his fellow scientists, to the press or to the public, much less to the researchers at Pasteur.

After the Park City meeting in February of 1984, Chermann was invited to Bethesda to give a talk on LAV. Popovic was in the audience. "Afterward I said to Mika, we send you twice or three times the virus," Chermann recalled. "We need to know if you are replicating or not the virus. And he told me—you know, with his pipe like this—'I cannot speak. Only the boss can speak.' "

5 'Only because there are so many'

In the summer of 1984, the race was over and Robert Gallo had won. With the publication of Gallo's unprecedented four papers in a single issue of Science, the medical community had accepted what the French had been saying for over a year: that AIDS was caused by a new human retrovirus. Now that there was a virus to study, the long march toward a vaccine and a cure could begin.

Still, there were some stray ends that needed tying up. In August, San Francisco's Jay Levy published a paper in Science reporting the isolation of the AIDS virus he called ARV. Levy said he had actually found ARV the previous November, making him the first American to have isolated the AIDS virus. But he was the second American to publish, and that made him an also-ran.

Gallo had a couple loose ends of his own. One was the paper he had withheld from the Lancet in March, reporting that most AIDS patients weren't infected with the human leukemia virus. Another was his paper on HTLV-1B, which had now been rewritten to identify the source of the virus as "an African patient with adult T-cell leukemia." But nobody outside Gallo's lab knew about the mixup with HTLV-1B or that the leukemia virus antibody paper had been held up for many months, and when those papers finally appeared in print hardly anybody noticed.

The only cloud on the horizon that summer was a paper in the Lancet by Robin Weiss and his colleagues in London, who had tested nearly 2,000 Britons for antibodies to the Gallo and French viruses. Half, who weren't at risk for AIDS, had tested negative. Almost all the others, who either had AIDS or were at risk, were positive. Since the CDC competition hadn't ever been published, the Weiss paper represented the first large-scale blood test results for the French virus.

What made the paper even more significant was the way the tests had been conducted. The first virus tested was LAV. But when HTLV-3 was exposed to the LAV-positive samples, all the antibodies had been "sopped up" by the French virus—a clear indication that the two AIDS viruses were the same.

Everyone who had anything to do with AIDS that summer was reading Gallo's papers, and many of them wanted a sample of his new virus to work with. If science was going to find a vaccine or a cure, scientists needed to study the virus that was now officially responsible for having claimed thousands of American lives.

There is a gentlemen's agreement in science that a researcher who claims to have isolated a new virus is obliged to send a sample to anyone who asks. The French, for example, had begun sending their virus to Gallo almost from the day it was discovered. The stated reason for such professional comity is to further the dissemination of scientific information; the unspoken one is to discourage cheating. And while some scientists are quicker than others to honor the unspoken agreement, it is NIH policy that cells, viruses and other materials discovered in its laboratories must be made available "to the field."

Early in April of 1984, workers at the cancer institute's Frederick, Md., facility, which occupies part of the Army's old biological warfare center at Fort Detrick, had begun growing the Gallo virus in enormous quantities. The day before Gallo's papers were published in Science, he wrote to several of his closest colleagues, including Max Essex at Harvard, to say that samples of his new AIDS virus would be available to them within a few weeks—on condition Gallo's name be included as an author on whatever papers they might publish later. But when a letter arrived from Jay Levy asking Gallo for a sample of HTLV-3, it was ignored. "I never got any virus from Bob," Levy says.

"Gallo was being very careful about who he gave the virus to," recalled W. Gerard Robey, who collaborated with Gallo while at Frederick and is now with Abbott Laboratories in Chicago. "He didn't want to give it to everybody and be scooped on half the interesting work."

Among those who had the most problems obtaining the Gallo virus were Donald Francis and his crew at the Centers for Disease Control. Although the CDC and NIH are sister agencies under the umbrella of the federal Public Health Service, there had never been much love lost between the two, and the tension between Francis's lab and Gallo's was especially thick. The CDC's decision to send blood samples to Paris for testing hadn't helped, and neither had the defection to Atlanta of one of Gallo's top assistants, V.S. "Kaly" Kalyanaraman.

"CDC was starting to be a big retrovirology center," recalled Jean-Claude Chermann. "It took Kaly, and some other scientists. Don't forget that the CDC had a lot of money for AIDS. At this time CDC was very important."

What appeared to bother Gallo most was the CDC's collaboration with the French. Don Francis's people had been growing the French virus in Atlanta for some time, and they insisted on referring to the AIDS virus in their papers by its French name, LAV. "I am puzzled," Gallo wrote to a senior CDC official, "by the continual use of LAV. As we have discussed periodically, the generic designation of the virus is HTLV-III/LAV."

According to Berge Hampar, then the general manager of the Frederick facility, while Max Essex and a few other researchers were given "tons of virus for free," the cancer institute charged the CDC $75 a liter. "The CDC actually had to open an account at Frederick," Hampar said. "Isn't that amazing?" Before Gallo would agree to give the CDC his new virus at any price, he made officials there sign a written promise not to compare it genetically with any other AIDS virus they might have growing in their lab.

The year 1983 had been a busy one for Gallo, and 1984 was busier still. When Gallo received the coveted General Motors cancer prize in early June, the citation was read by Robin Weiss, who recalls pointing out that Gallo had "published more papers during the previous year that I had in my entire career."

In between lectures and awards, Gallo continued to press the case for making the AIDS virus the newest member of his leukemia virus family. When the government applied for the patent on Gallo's AIDS test, it asserted that "the biological properties" of the AIDS virus proved that it was "a member of the HTLV family."

In scientific articles and interviews, Gallo elaborated on his rationale for making the AIDS virus the third HTLV. Both the AIDS virus and the other HTLVs were retroviruses, Gallo said, and both preferred to infect helper T-cells. Both viruses had core proteins that were the same size, he said, and their reverse transcriptases, the enzymes they used to reproduce themselves, had the same molecular weight. Both viruses, Gallo said, had a shared sequence of amino acids in the proteins that formed the outer envelopes that protected them when they were outside the cell.

Another of Gallo's arguments was that the leukemia virus and the AIDS virus had probably originated in Africa, and considering the number of AIDS cases there it seemed reasonable that AIDS had its beginnings somewhere on that continent. There wasn't very much adult T-cell leukemia in Africa, however—almost all the known cases had been found in the fishing villages of southwestern Japan—and there was virtually no AIDS in Japan.

Gallo set out to construct an epidemiological bridge between those two very different and distant societies, suggesting that the 16th Century Portuguese explorers who stopped in Japan might have brought with them African slaves or monkeys infected with a virus that eventually evolved into HTLV-1. In a letter to the British journal Nature, Gallo even maintained that the Japanese word for monkey, *amakawa*, was "derived from the Portuguese word macaco also meaning monkey."

When Yorio Hinuma, the Kyoto University virologist who with Isao Miyoshi had established the link between HTLV-1 and T-cell leukemia, heard about Gallo's hypothesis, he wrote his own letter to Nature. Hinuma cited evidence "that HTLV-1 was already present in aboriginal Japanese in pre-historic times." The Japanese word for monkey, Hinuma noted, was not *amakawa,* but *saru.*

The Pasteur's AIDS research group had known from the moment it discovered LAV that it bore no more than a superficial relationship to HTLV-1, and they had demonstrated many of the dissimilarities in their research. But Gallo kept insisting they were wrong.

"The virus, you explained to us, was not related to HTLV," he wrote to Jean-Claude Chermann in July. "We now know that it is related to HTLV-I and clearly belongs to that virus family." In an interview with the BBC a few weeks earlier Gallo went even farther, asserting that his lab had found genetic similarities between the AIDS virus and "the whole genome" of the leukemia virus.

In August of 1984, Gallo published a paper in Science that appeared to contain the first hard evidence to back up his assertions about the similarities between the AIDS virus and HTLV-1. Using a technique called hybridization analysis, which measures the degree to which two strands of DNA will adhere to each other biochemically and are thus alike, sections of the leukemia virus DNA had been found to have the same genetic composition as the AIDS virus DNA.

"The present data," the paper concluded, "support our proposal that this virus should be classified within the HTLV family." In November, Gallo published another paper endorsing the conclusions in his August paper. In a third paper published in December, he termed the genetic similarities between the AIDS and leukemia viruses "significant."

The day before the third paper appeared, dozens of biologists from around the world gathered in Wilson Hall on the tree-lined campus of the National Institutes of Health. They

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Breeding ground for killer AIDS virus: Cancer in a jar

Human beings are really not much more than a collection of different kinds of cells: skin cells, blood cells, heart muscle cells, hair-forming cells and thousands of others, each providing some aspect of the body's structure and function. As the body grows or ages or repairs damage to itself, new tissue is formed by the division of existing cells.

The process of cell division can also be induced in the laboratory, by placing cells in a culture that contains the biochemicals and nutrients they need to live and grow. No normal cell will go on multiplying endlessly outside the human body. A skin cell may produce perhaps 50 generations before it dies, other kinds as few as a dozen. The exception is the cancer cell. Cancer, by definition, is the uncontrolled multiplication of a cell, and under the right laboratory conditions human cancer cells will continue to reproduce forever.

The type of cell the AIDS virus prefers to infect is a white blood cell called the helper T-cell, a key component of the human immune system whose role is to direct companion immune system cells, called B-cells, in the production of antibodies designed to kill viruses, bacteria or other invaders. Because the AIDS virus ultimately kills the T-cells it infects, when all the infected T-cells are dead the virus will also stop reproducing. To keep the AIDS virus replicating in the laboratory, it must either be fed a continuous supply of fresh T-cells or placed in culture with a collection of cancerous T-cells that are continuously reproducing on their own, the laboratory equivalent of cancer in a jar.

When a leukemic T-cell line is exposed to particles of the AIDS virus, the particles attach themselves to a particular protein, known as CD4, on the surface of the cells. Using the CD4 protein as a kind of portal, the AIDS virus deposits its genetic material—a single strand of RNA—in the interior of the cell. Once inside, the enzyme called reverse transcriptase begins making virtual carbon copies of the viral RNA in the form of its genetic cousin, DNA. This "proviral" DNA then inserts itself into the much longer strand of DNA that occupies the center of every human cell and contains the individual's complete genetic code.

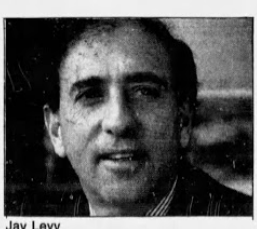
When, through a series of complicated internal and external events, the viral DNA is activated inside the T-cell, it produces new virus particles that burst forth from the occupied cell in search of new T-cells to infect. At the same time, the virus-infected T-cells often begin to divide and multiply. Because each new cell retains a copy of the virus's DNA and thus the ability to produce new particles of virus, the amount of virus in a patient's system—or in an infected T-cell line in a laboratory—can increase very rapidly.

Sooner or later, most AIDS-infected T-cells will be killed by the replicating virus, which does irreversible damage to the cell. However, some leukemic T-cell lines are resistant to the cell-killing effects of the virus. A few lines even seem to be immune, their infected cells apparently capable of surviving and dividing forever while providing a limitless source of virus for scientists to study.

DEC. 12, 1983: **Gallo** sends a paper to Science reporting that the Essex test is probably measuring antibodies to a protein from HTLV itself rather than a hybrid produced by an infected cell.

DEC. 13, 1983: A rabbit injected by **Samgadharan** with the AIDS virus begins producing antibodies that can be used to verify the presence of the virus in human cells.

DEC. 14, 1983: **Gonda** reports observing the AIDS virus in the HUT78 and Ti7.4 cultures in which LAV is growing. **Popovic** confirms LAV is growing in the Ti7.4 cell line. Same day, **Gallo** tells a French scientist, "We still have not seen the Montagnier group's virus in a patient here, nor to my knowledge has anyone else."



Jay Levy

DEC. 16, 1983: **Gallo** sends the Lancet his manuscript reporting fewer than 10 percent of AIDS patients have antibodies to HTLV.

DEC. 20, 1983: At its December meeting, the AIDS task force agrees that whether the Essex test is measuring antibodies to a viral or a cellular protein is now "a major question."

JAN. 2, 1984: **Popovic** sends more MOV to **Samgadharan.** Same day, he adds material from seven new patients to his pooled virus culture, now called "HTJV pool." His notes contain two other entries: "Sarang serolog. O.K.!!!" and

JAN. 6, 1984: The first AIDS virus antibody tests are performed in Gallo's lab on blood samples from patients with AIDS and pre-AIDS.

JAN. 10, 1984: **RF's** cells test negative for reverse transcriptase. **Gallo** tells a colleague that HTLV remains a leading candidate for the cause of AIDS.

JAN. 13, 1984: **Gallo** writes a German researcher that "we now have 18 isolates" of HTLV from AIDS patients, and that "it has become somewhat more likely that HTLV may be involved" in AIDS. He adds that the Essex test, which he had "worried" might be picking up antibody to a cellular protein, is measuring antibody

JAN. 18, 1984: **Gonda** reports that cells from **RF** and patients identified as **LS** and **BK** are all negative for virus. Same day, **Gallo** sends Science a paper reporting the isolation of HTLV-1B from a homosexual with AIDS.

JAN. 19, 1984: According to Gallo laboratory notes, the first experiments are begun in which "LAV" is genetically compared with HTLV-1 and HTLV-2.

JAN. 25, 1984: **Popovic** subdivides the HUT78 cell line, which he now calls HT, into 41

Continued from preceding page

were there partly for the reasons that scientists have always gone to scientific meetings—to see old friends, exchange gossip in the corridors and listen to one another talk—and partly because this meeting offered a special attraction.

In biology the topic of the moment was AIDS, and the group that had assembled that morning in Bethesda could fairly be considered the illuminati of AIDS research. Max Essex and William Haseltine had come down from Harvard. Hilary Koprowski from the Wistar Institute in Philadelphia was there, and so was the grand old man of retrovirology, Ludwik Gross. Once again, however, the star was Gallo, whose discovery of HTLV-3 had brought him almost instant recognition as this country's foremost AIDS researcher.

It was a critical time for AIDS research, as scientists in the U.S. and abroad began to gain their first detailed understanding of the mechanics of the virus that was now killing hemophiliacs, transfusion patients and intravenous drug users as well as homosexuals. Gallo had been chosen to deliver the symposium's opening lecture, and he used the occasion to repeat the many similarities between the AIDS virus and his leukemia virus. So far, the two viruses had been compared only by indirect methods. The only sure way to determine how related they really were was to unravel their DNAs and compare them side by side.

The genetic sequence of the leukemia virus had been worked out by scientists in Japan the year before, and an intensive effort to sequence the Gallo AIDS virus had been underway for months, by researchers in the labs of Gallo, Haseltine and two private companies. "There were 19 of us involved," recalled Lee Ratner, who coordinated the effort from Gallo's lab, "and we worked our tails off for three to four months."

On the other side of the Atlantic, the Pasteur Institute had put together a team of five young scientists to break the genetic code of LAV. Unlike Gallo, they had no stake in whether the AIDS virus was a member of the HTLV family or not, and they had been saying for months that it wasn't. The real value of the AIDS virus sequence was that, once in hand, it would lay open the secrets of how the virus worked—and, perhaps, how it could be made not to work. The Pasteur group had found the virus a year before Gallo, but they were only slightly ahead in the race to decode its DNA.

Before the virus could be sequenced, its DNA had to be cloned—extracted from an infected T-cell and then copied millions of times by inserting it into a bacterium, called E. coli, that is the biological equivalent of a photocopying machine. The reason for the delay in Paris had been the difficulty encountered by the Pasteur's AIDS group in finding someone who wanted to do the cloning.

Ordinarily, the molecular biologists would have leapt to take part in a historic scientific event. But it wasn't yet clear that the project would be historic, and none of them wanted to risk spending months cloning a virus that might not be the cause of AIDS. "At this time nobody was believing us," Chermann recalled. "Pasteur was not believing us, and we were fighting against the Americans."

Chermann's lab was near the institute's computer center, a place where the molecular biologists tended to congregate, and to get there they had to cross his corridor. "I tried to stop some people to say, could you help us to clone," Chermann recalled. "If one had taken the bet, the virus would have been cloned and sequenced before the announcement of HTLV-3."

In the end he and Montagnier persuaded Simon Wain-Hobson, an Oxford-educated British expatriate who was working on the virus that causes hepatitis-B and teaching gene-cloning courses on the side. "Montagnier had asked a number of people on the staff if they wanted to do it, and many people said no," Wain-Hobson recalled. "He and I discussed it for a long time and perhaps we should have got going earlier, but I must confess that I was terribly unimpressed at the time. I said, 'Well I've got a few things to finish off and I'll start as soon as I can.' If he'd made a more convincing case I'd probably have started a bit earlier."

Montagnier also recruited two graduate students from the department of molecular biology, Marc Alizon and Pierre Sonigo. Once the cloning was done, the genetic sequence followed in relatively short order. "It was all over by early November," Wain-Hobson recalled. "We worked in shifts. It took us longer to write the paper than it took to do the sequence, because we're terrible at writing. We tried to make a nice paper of it."

By chance, Montagnier had been invited to speak at the NIH symposium in December, 1984, and as soon as the French sequence was finished he telephoned the symposium's organizer, Samuel Broder, to ask that Wain-Hobson also be allowed to speak. The French, Montagnier told Broder, had data "of great importance" to present, but he didn't say exactly what it was.

When Broder, who has since become the cancer institute's director, agreed, Wain-Hobson and Montagnier began to have second thoughts about showing their genetic sequence on Gallo's turf. If they didn't bring their sequence and Gallo presented his, Wain-Hobson remembers thinking, it would look as though the French were behind. But relations between Gallo and the French had deteriorated so much, Wain-Hobson said, that he wasn't sure what might happen to his data. In the end they decided not to show the sequence itself, but to present instead a "map" of the virus's principal genes, those regions of its DNA that contained the instructions for manufacturing its principal proteins.

Gallo's opening paper was followed by one from Max Essex and another from Gallo's chief molecular biologist, Flossie Wong-Staal. Wain-Hobson had been given only 10 minutes to speak, and when his turn came he didn't waste words. He began by questioning Gallo's published data showing similarities between the AIDS virus and the leukemia virus, and ended by unveiling his genetic map.

Several of those who were present remember the auditorium falling quiet as Wain-Hobson's slide flashed on the screen. According to the French gene map, the AIDS virus and Gallo's leukemia virus were hardly alike. The leukemia virus had only four genes; the AIDS virus had at least five, and there were important differences in their size and placement that made the AIDS virus the most complex human retrovirus yet seen.

The first two genes in the AIDS virus—"gag," which contains the genetic code for its core proteins, and "pol," for the reverse transcriptase—were about the same size and in the same place as in the leukemia virus. But the ends of gag and pol overlapped, and the French AIDS virus had a short third gene called "Q" that the leukemia virus was missing.

Farther down the sequence the real differences began to emerge. The fourth gene in the AIDS virus was "env," the gene that contained the code for the proteins that formed its outer envelope. The leukemia virus had an envelope gene too, but it was only about half as long. And the leukemia virus didn't have anything resembling the fifth gene, "F," that the French had found behind the AIDS virus's envelope.

As soon as Wain-Hobson finished speaking, several members of the Gallo sequencing group left the auditorium. The exodus was led by Haseltine, Gallo's longtime associate from Harvard and a key member of the team that, less than a week before, had finished sequencing the Gallo AIDS virus.

"I remember Bill stomping out of there with a contingent of people," said the CDC's Cy Cabradilla, who was in the audience that day. "I also remember him grabbing people and saying, 'No, no, his sequence is wrong. We've got the right sequence.' Bill Haseltine was very upset. Molecular biologist, cloner, sequencer, supposed to be a top gun, and here he got upstaged by the French."

When it was time for questions the Gallo group filed back to their seats. There were one or two half-hearted queries for some of the other speakers but no questions for Wain-Hobson. One member of the audience remembers thinking that everyone was waiting for Gallo to fire the first shot. If they were, he didn't disappoint them.

"Gallo walked to the microphone," recalled one scientist who was there, "and he said, 'I have a question for Dr. Wain-Hobson.' But he didn't ask a question, he made a speech. He talked for more than 10 minutes."

When Gallo finished, Wain-Hobson recalled, it was with a question. "Why," Gallo wanted to know, "do you stress the differences between HTLV-1 and HTLV-3?"

"Only because there are so many," Wain-Hobson replied.

Gallo now says he cannot recall attending the symposium. "I don't think anybody in our lab went to it," he said. "Who went? I was there?" But Gallo was there, and in the space of 10 minutes he had seen his arguments for the similarities between the AIDS virus and his leukemia virus demolished by his rivals from Paris.

"The people from Gallo's camp couldn't believe it," said Cabradilla, who was working on the sequence of another AIDS virus clone. "They were shocked. This small band of molecular biologists out of the Pasteur Institute had just beaten these guys from NCI and Harvard. Other groups, myself included, were saying, hey, good job."

No one outside the Gallo group will ever know for sure what the Gallo gene map of the AIDS virus looked like that day, because neither Gallo nor his associates presented any of their data at the symposium. But one member of another group that was working feverishly to finish the sequence of Jay Levy's AIDS virus recalls talking to a member of Gallo's staff after the meeting broke up. "I got the distinct impression that Simon Wain-Hobson had the story," the scientist said, "and that everyone else, including us, was close but behind."

Constructing a gene map from a DNA sequence can be compared to translating poetry from a foreign language. The poet's thrust may be obvious, but the elegance of the finished translation will turn on words that can be interpreted in more than one way. For a multitude of reasons, it is possible for two scientists to look at the same DNA sequence and disagree about where a gene begins and ends, or even whether it exists at all.

According to several members of the Gallo group, one of their disagreements with the French was over whether the fifth gene shown in Wain-Hobson's map was a real gene or a mirage. Because the leukemia virus didn't have five genes, the prevailing opinion in Gallo's camp was that the AIDS virus probably didn't either, and that what looked like a fifth gene was simply an error in translation. "Nobody was believing that it was a functional gene," said Nancy Chang, one of the Gallo sequencers. "We thought maybe it was a sequencing error, or not really anything significant."

In late January of 1985, spread across several pages, Nature published the Gallo lab's genetic sequence of the AIDS virus, row after row of a's, c's, g's and t's, more than 9,200 in all. Gallo called the sequence "a significant step forward in understanding how the virus works." AIDS researchers, Haseltine said, could now "see the face of the enemy." But the face drawn by Gallo and Haseltine was that of the wrong enemy. Unlike the French, they were still fighting the last war.

The Gallo sequence paper also contained a gene map, and its first two genes, pol and gag, looked exactly like those in the gene map Simon Wain-Hobson had brought to Bethesda. The Gallo map had a third gene, called "sor," that matched the gene the French called Q. It also contained a fifth gene, "3'orf," but the Gallo group hedged the question of whether the fifth gene really existed or was just an error in translation.

The major difference between Gallo's map and the one drawn by the French was in the fourth gene. If the leukemia virus was any guide, the fourth gene was probably the env, or envelope gene. But it was so much longer than the env gene in the leukemia virus that the Gallo group thought it had to contain the code for some other protein as well. But what function would such a protein be likely to perform?

The leukemia virus had a transactivator gene that appeared to switch the virus on after years, or even decades, of latency. Because the AIDS virus can also remain latent for long periods, the Gallo group thought the second half of the envelope gene was probably the AIDS virus transactivator. Because they weren't sure what it did, they called it "lor," for "long open reading frame." All together, Gallo's fourth gene was "env-lor."

According to Simon Wain-Hobson, Nature had originally expressed interest in publishing the French sequence paper, and when it was finished he gave them a call. "I said, you'll have our paper tomorrow," he said. "And then they didn't want it." Fortunately for the French, a journal called Cell, published by the Massachusetts Institute of Technology, was more receptive.

"They were naturally somewhat upset about this," recalled Benjamin Lewin, the editor of Cell. "They felt they had been working pretty much evenly with Gallo's group and suddenly they were not going to get their paper published maybe until months afterwards. We said, yes, we thought the sequence of the first isolate of the AIDS virus was a significant event. It didn't take us very long to decide that we should publish the paper and that we should publish it

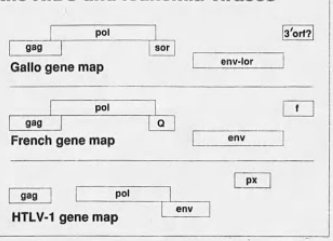
Continued on following page

Cold Spring Harbor Laboratory photo

William Haseltine (left), a Harvard University researcher, and Mikulas Popovic, chief virologist at Gallo's lab, at the 1983 conference at Cold Spring Harbor.

Genetic maps of the AIDS and leukemia viruses

Top: The Gallo group's gene map of the AIDS virus, with the fourth gene identified as "env-lor."
Middle: The gene map presented by Simon Wain-Hobson at the NCI symposium, showing the fourth gene as an envelope gene.
Bottom: The four genes of the leukemia virus HTLV-1.



Chicago Tribune Graphic

As the cooks squabbled, the alphabet soup boiled down to HIV

As with mountains and galaxies, the naming of new viruses is a scientific honor reserved for their discoverers. Nomenclature in virology dates back to the time, not so long ago, when scientists' names were attached to the viruses they discovered. That is no longer common, but for Robert Gallo the best name for the virus that causes AIDS was the one that ensured its place as the newest member of his family of human retroviruses.

"Any impartial scientist," Gallo wrote to his French counterpart, Luc Montagnier, "will adopt the name HTLV-III. In fact, almost everyone in the U.S. and most people in Europe have already done so."

The French, understandably, preferred the name they had given their own isolate: LAV, which was short for lymphadenopathy-associated virus. Many other researchers, wishing not to anger Gallo but hoping to accord the French due credit as the discoverers, resorted to calling the virus HTLV-3/LAV. But each isolate of the AIDS virus was also given its own designation, and as more viruses were isolated the confusion engendered by such compound names was vastly increased.

The question was further complicated by the fact that the University of California's Jay Levy had found the AIDS virus independently—Levy said he had actually isolated the virus ahead of Gallo, but Gallo had published first—and Levy was calling his virus ARV, for AIDS-related virus.

"LAV is clearly an inaccurate name, and AIDS virus or AIDS related virus is the dumbest name I have heard yet," Gallo wrote to one colleague. "Clearly, human T-lymphotropic virus III is as accurate, as innocuous, and as consistent with the past as any name possible."

When Gallo was pressed for the rationale behind the name HTLV-3, he referred to a meeting at Cold Spring Harbor Laboratory on Long Island in September of 1983, where he had persuaded eight other scientists at a lobster dinner on the beach to join him in signing an "international agreement" that the next new virus related to his original human leukemia virus should be called HTLV-3.

The agreement, said British virologist Robin Weiss, who was among the signatories, had nothing to do with AIDS. It was was intended, he said, to resolve the dispute between Gallo and the Japanese over whether the leukemia virus should be called HTLV-1 or ATLV, the name being used in Japan.

Montagnier was there but wasn't asked to sign, Gallo said later, because "he only had one paper in the literature." In fact, Montagnier wouldn't have signed. "We never used the initials of HTLV," Montagnier wrote to Gallo later. "The initials of HTLV have been coined by you. In renaming this virus HTLV you have induced a lot of confusion amongst unaware people."

Gallo said his choice of names had been mandated by the "Cold Spring Harbor agreement." But in March of 1984 he wrote a personal letter to the editor of a London medical journal saying he was "debating whether to call [the AIDS virus] HTLV-III or HTLV-A (A = AIDS)."

Gallo chastised the French for having taken issue with his choice, imploring Montagnier to "save our energy in trying to contain the virus and the disease rather than to beat a dead horse over nomenclature." But it was Gallo who was firing off angry letters to colleagues whenever the name LAV appeared in a scientific paper. To one longtime collaborator who had used the French designation, Gallo wrote, "I cannot accept the excuse that: [a] 'you did not know,' or [b] 'the journal changed the name.'"

After nearly a year of dispute, the International Committee on the Taxonomy of Viruses stepped in. Under the chairmanship of Harold Varmus, the University of California virologist who won a Nobel prize last month, the committee assembled a panel to choose a new name. The panel included nearly everybody—Gallo and his friends, Robin Weiss, the French and the California ARV researchers—and the consensus was that none of the existing names was really right.

LAV wouldn't do, because it was possible to get AIDS without ever having had lymphadenopathy. ARV wouldn't do, because not everyone who was infected with the virus got AIDS. HTLV-3 was clearly wrong, because the AIDS virus had so little in common with the other HTLVs. The best name the group could come up with was human immunodeficiency virus, or HIV, a choice that Varmus concedes was less than inspired.

But when the 13-member panel published its decision in a letter to Nature, the letter bore only 11 signatures. Gallo and his closest colleague among the panelists, Max Essex of Harvard, had refused to sign.

Gallo vowed later never to use the new name. "The names of the virus that are already in the literature will be maintained," he said at the time. Although his AIDS papers referred to HTLV-3 for more than a year afterward, he has since joined the rest of the scientific community in adopting HIV.

JAN. 30, 1984: Using blood samples sent to Paris by the CDC, the Pasteur group finds antibodies to LAV in 10 of 10 patients with pre-AIDS and 3 of 10 with AIDS.

FEB. 7, 1984: In the keynote address at an AIDS symposium in Park City, Utah, **Gallo** says his "only candidate" for the AIDS virus is a close genetic variant of HTLV-1. His assistants passed a paper reporting that Claude Chandon

FEB. 9, 1984: **Gallo** writes **Jay Levy** that "HTLV itself . . . could still cause AIDS."

FEB. 13, 1984: **RF, SN, LS** and **BK** are still negative for electron microscopy. **Popovic** sends viruses called HTLVA and MO Variant to **Gonda** for observation.

FEB. 23, 1984: Lab notes show DNA being extracted from "LAV producer human cells." The French tell CDC they now have 11 retrovirus isolates from patients with AIDS and pre-AIDS.

FEB. 25, 1984: H9 and several other clones of the HT cell line are infected with the pooled virus culture **Popovic** now calls HT(pool

was infected with HTLV-1. **Jean-Claude Chermann** reveals that antibodies to LAV have now been found in 75 percent of pre-AIDS patients and 38 percent of those with AIDS.

FEB. 8, 1984: Pasteur researchers infect a new permanent cell line called FR8 cell line with LAV.

Robert Gallo (left) and Luc Montagnier

FEB. 14, 1984: Chermann, attending an NCI seminar, asks Popovic if he has succeeded in growing the LAV sent from Paris. "I cannot speak," **Popovic** replies. "Only the boss can speak."

FEB. 22, 1984: Gonda reports observing lentivirus in "HTLVA" and "MO Variant."

FEB. 27, 1984: CDC sends blood samples to **Gallo** and the French for testing with their respective AIDS tests. Same day, Pasteur researchers infect a new cell line called BJAB with LAV.

1991 - Dec 5

https://www.newspapers.com/image/207489727/?terms=frank%2BRuscetti

1996 - Francis Ruscetti profile from National Cancer Institute directory

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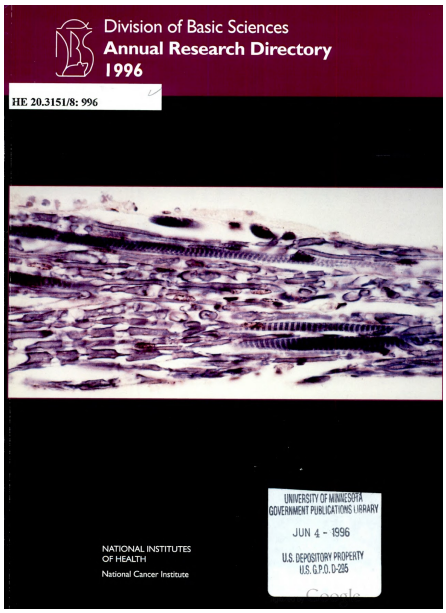

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Laboratory of Leukocyte Biology

Negative Regulation in Viral Pathogenesis

Francis W. Ruscetti, Ph.D.

Chief of the Laboratory and Investigator

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Biography: *Dr. Ruscetti obtained his Ph.D. from the University of Pittsburgh working on prokaryotic RNA metabolism under Lew Jacobsen, and did postdoctoral work on hematopoiesis under Dane Boggs. From 1975 to 1983, he studied human retroviruses and T cell biology in the National Cancer Institute's Laboratory of Tumor Cell Biology.*

Research: Cell cycle control of cell growth and differentiation is tightly regulated by a series of complex interactions. It is the main tenet of our studies that unrestricted growth control and inappropriate transcriptional activation due to defects in negative regulatory control play a major role in oncogenesis and retroviral pathogenesis.

Transforming Growth Factor β: Growth Inhibition of Stem Cells
In studying negative regulation of hematopoietic stem cell (HSC) growth, we have found TGFβ selectively inhibits the growth of all primitive stem cell populations isolated. Both in vivo and in vitro experiments have shown that HSC's are reversibly prevented from entering the cell cycle after TGFβ treatment regardless of the growth stimulant used. In single cell assays, using highly purified murine HSC, growth inhibition by TGFβ1 was direct. Future projects include disruption of TGFβ growth regulation in stem cell lines and fresh stem cells to test for oncogenic potential and clone genes involved in TGFβ regulation of HSC growth.

Negative Regulation of Viral and Cellular Genes During Retroviral Infection
We previously demonstrated HIV–1 latency in monocytes in vivo. The presence of latently infected monocytes constitutes a possible source for reactivation of virus production during the normal immune response. We have identified immune activation of latently infected monocytes to be a mechanism by which latent HIV–1 can be reactivated to produce infectious virus. Ongoing studies involve identification of these genes as well as signal transduction pathways involved in immune activation of latent HIV–1.

Methylation of the viral LTR is a second mechanism by which HIV–1 and HTLV–I proviral expression is silenced. We have recently demonstrated that these viruses upregulate expression of DNA methyltransferase (metase) in infected cell lines and primary cells. Further, we have identified the IFN-γ gene as a target of this increased DNA metase activity. Thus, increasing DNA metase expression may be another mechanism by which HIV–1 evades the immune response. As aberrant methylation has long been thought to be important in oncogenesis, this may also be a mechanism of tumor development associated with human retroviral infections. Future studies will determine the molecular basis of human retroviral upregulation of DNA metase, if increased methylation of the IFN-γ gene routinely occurs in AIDS patients, and will identify other targets of the increased metase activity.

Although largely unknown, the cellular events triggered by HTLV–I infection in the lymphoproliferative process are of major importance to the establishment of leukemia. We have recently characterized an infectious clone of HTLV–I as well as a susceptible expressing cell line to study the molecular interactions of this infectious clone. We have shown this infectious

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Keywords:

- AIDS
- virus-cell interactions
- retroviruses
- stem cells

Recent Publications:

- Wong, P, et al. Immunity 1994; 1:571-83 .
- Mikovits, J, et al. J Leukoc Biol 1994; 56:340--6.
- Mayers, D, et al. Proc Natl Acad Sci USA 1995; 92:215-9.
- Derse, D, et al. J Virol 1995; 69:1907-12.

2002 (Feb 03)

Full newspaper page : [HN010V][GDrive]

2002-03-23-the-gazette-montreal-canada-pg-13-clip-nobel

Nobel elicits ignoble ambition

Claim to have discovered HIV undid researcher Robert Gallo

Science Fictions
The War Between the Scientists Who Discovered HIV
By John Crewdson
Little Brown and Co., 688 pages, $39.95

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Special to The Gazette

Studies have shown that peer approval and recognition are the most important factors that motivate scientists to achieve greatness. Many non-scientists might have difficulty identifying with this notion. After all, in the world of business and sports it is seemingly ever-higher salaries and other monetary considerations that drive people to do their best. But for scientists, ultimate recognition is really the Nobel Prize, sought by many and received by few. Among those who either covet a Nobel or who believe that they have a realistic chance of winning one, the quest can become all-consuming.

In this book, John Crewdson, a Pulitzer Prize-winning journalist at the Chicago Tribune, has chronicled the manner in which the need to be identified as the discoverer of HIV, the virus that causes AIDS, caused the well-known virologist Robert Gallo to embark on a course that would prove destructive for Gallo himself as well as for many of his colleagues, including a rival group of scientists at the Pasteur Institute in Paris, headed by professor Luc Montagnier.

The book is a detailed expansion of a riveting series of articles that Crewdson wrote on this subject for the Chicago Tribune in 1996. It includes a wealth of details that were omitted from the original, shorter version, and this is both its strength and its weakness. Notably, while the case that Crewdson, writing almost as a prosecutor, builds against Gallo is compelling, it is so detailed as to risk boring the casual reader.

It is hard to know what might have motivated Crewdson to write this lengthy description of the events surrounding the discovery of HIV. It is clear, however, that he must have felt a need to portray the excesses of human behaviour that can emerge when participants feel that a Nobel Prize is on the line, and that Gallo's excesses in pursuit of this goal were so egregious as to warrant full documentation.

Indeed, the author comes across as an excellent prosecutor. Readers who are fans of courtroom dramas or novels will know that such individuals are determined to obtain a conviction, even if it sometimes means providing an interpretation of events that best fits the prosecutorial thesis. This is clearly the case here thought it is doubtless within the scope of journalistic license.

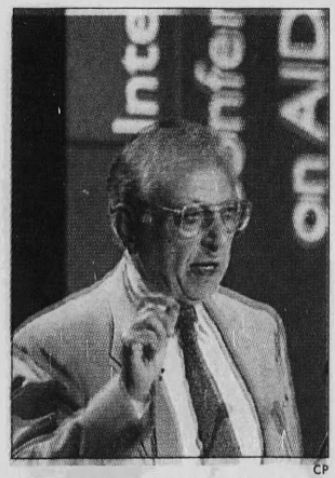
FACTUAL ERRORS

There are, however, several factual errors in this version of events. First, in the introductory pages, Crewdson makes the point that Gallo was extremely stingy and did not make his reagents and resources available to other laboratories for their own research. This is largely untrue. Indeed, the reviewer of this book received HIV from Gallo's lab in 1984, shortly after publication of Gallo's papers in Science (notwithstanding the fact that Gallo had appropriated the virus from the French) as well as cells in which to replicate the virus and monoclonal antibodies with which to perform biochemical analysis.

Gallo also made these reagents available to scientists from many laboratories around the world. Sadly, however, he refused to provide these same materials to many others, whom he might have perceived as enemies or competitors, and in this context Crewdson is dead-on.

Another example of a misstep by Crewdson is his statement that the first human retrovirus to be isolated, HTLV-I, a cause of a rare form of leukemia, was first identified by Frank Ruscetti and Bernard Poiesz at the National Cancer Institute in Bethesda, Md. Although this statement is true, Crewdson ascribes no credit to Gallo for this discovery. Yet both Ruscetti and Poiesz were postdoctoral fellows in Gallo's laboratory at the time that this work was done. Crewdson surely knows that it is accepted procedure for the head of a laboratory to claim credit for research conducted on his premises by more junior scientists.

It is sad that these shortcomings detract from what is otherwise a compelling case that Gallo claimed and obtained recognition for research that had, in fact, been accomplished by the French. But what Crewdson fails to acknowledge is that the work conducted in Gallo's laboratory added new findings to those that had been published by the French and that the cumulative effect of the research efforts of both groups was to spur the field forward much faster than would otherwise have been the case.



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Robert Gallo speaks at a Vancouver AIDS conference in 1996.

LACK OF OBJECTIVITY

It is probably incorrect to state, as Crewdson does, that the in-fighting between the American and French groups slowed the development of a blood test that could safeguard the blood supply against HIV-1 contamination. In reality, both groups contributed to the development of such tests.

Further evidence of the author's lack of objectivity is the inference that Gallo may have personally unplugged freezers that contained stockpiles of viruses that he was anxious to destroy, so that other scientists could neither corroborate nor contest the validity of his results. And, in fairness, the implication that Gallo deliberately stole the French virus is impossible to prove. It remains entirely possible that sloppy research led to the contamination of cultures in Gallo's laboratory by the French HIV isolate that grew out and was later claimed by the Gallo laboratory to be their own.

Although this book describes the history of the first cases of HIV/AIDS in the United States in succinct fashion, it misses out on one of the most important aspects of the epidemic – the extent of human suffering that has been wrought by HIV throughout the world. The book makes little mention of the important issues of drug access, attempts to develop a vaccine against HIV-1 and the ability of the virus to mutate with amazing agility, giving rise to problems of drug resistance as well a wide array of HIV strains that differ from one another with regard to immunological makeup.

Simply put, this means that it may be impossible to design a single vaccine that will protect against all forms of HIV-1. The latter issue is so important that it ensures that HIV will continue to be one of the world's most important problems in public health for many years to come.

Although the roles of the French vs. U.S. scientists in regard to the research performed are well described, it is also probably unfair, in spite of his undeniable faults, to single out Gallo as the sole villain of the piece. Most scientists in the field concur that the leader of the French group, Luc Montagnier, was himself prone to fits of vanity in regard to his own role in the story.

The book also gets sidetracked by the personal lives of some of its leading characters, and Crewdson seems to take joy in describing the extramarital relationships of some of them. In reality, these tidbits of information only detract from the main theme – how the quest for scientific glory, if taken to excess, can do harm.

In summary, this book is a successful indictment of Gallo, whom history will probably judge to have been guilty of excessive zeal in the pursuit of scientific glory. However, there are certainly worse crimes and the fact remains that the research performed in the Gallo lab helped advance HIV drug discovery and the development of antiviral treatments that have enabled many hundreds of thousands of people around the world to live longer and enjoy higher quality lives.

Most scientists, even those who have large laboratories, are not prone to the types of excessive behaviour attributed to Gallo in this book. At the same time, most scientists would be happy to leave behind his long and distinguished legacy of scientific accomplishment.

✤ *Mark Wainberg is director of the McGill University AIDS Centre at Montreal's Jewish General Hospital and past president of the International AIDS Society. He is acquainted with almost all the scientists described in this book.*

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The Norwegian Study of CFS, NO-CFS Stage 1; Confirmatory stufy for the detection of Gamma-retroviruses related Gene Sequences

Norway 2010

2010-prosjektbeskrivelse-eng-no-cfs-stage-one-xmrv-study1.pdf

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2014 - Resume for Dr. Frank Ruscetti

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Education:

- 1968 B.S. (Biology), Boston University, Boston, MA
- 1972 Ph.D (Microbiology), University of Pittsburgh, Pittsburgh, PA

Brief Chronology of Employment:

1972-1975 Research Instructor, Department of Medicine
University of Pittsburgh, School of Medicine, Pittsburgh, PA

1975-1978 Cell Biologist, Department of Cell Biology,
Litton Bionetics, Inc., Kensington, MD

1978-1983 Cancer Expert, Laboratory of Tumor Cell Biology
National Cancer Institute
Bethesda, MD

1983-1984 Cancer Expert, Laboratory of Molecular Immunoregulation
Biological Response Modifiers Program
National Cancer Institute
Frederick, MD

1984-1992 Senior Investigator, Head, Lymphokine Section
Laboratory of Molecular Immunoregulation
Biological Response Modifiers Program
National Cancer Institute
Frederick, MD

1992-2002 Chief, Laboratory of Leukocyte Biology
Division of Basic Sciences
National Cancer Institute - Frederick Cancer Research
& Development Center
Frederick, MD

2002-2004 Principal Investigator, Leukocyte Biology Section

Basic Research Laboratory

National Cancer Institute - Frederick

Frederick, MD

2004 -2013 Principal Investigator, Leukocyte Biology Section

Laboratory of Experimental Immunology

Center for Cancer Research

National Cancer Institute - Frederick

Military Service:

1964-1968 United States Air Force

Societies:

American Society for Microbiology

International Association for Comparative Research on Leukemia and Related Diseases

Human Retrovirology Association

International Society for Cytokine and Interferon Research

International Society for Experimental Hematology

American Society of Hematology

American Association for Cancer Research

Honors & Other Special Scientific Recognition:

- Andrew Mellow Fellowship, 1969-1972
- NIAMDD Consultant in Hematology Research, 1979-1981
- Member, Cell Proliferation Committee of Amer. Soc. of Hematology, 1983-1986
- Editorial Board, Experimental Hematology, 1986-1988
- Adjunct Professor of Biochemistry, George Washington University, 1988-2004
- HHS Distinguished Service Award for Biomedical Research, 1991
- Scientific Advisory Board, Guthrie Institute for Medical Research, 1991-2003
- Editorial Board, Experimental Hematology, 1994-1996
- Editorial Board, J. of Interferon & Cytokine Res., 1994-2000
- Editorial Board, Stem Cells, 1994-Present
- Award for Contribution to Human Retrovirology, Human Retrovirology Assoc., 2005
- Team Science Award Society for Immunotherapy of Cancer 2010
- Health and human services award for contribution to safety of blood supply 2012
- American Association of Immunologists Lifeline of Important Events: Discovery of interleukin 2, 1977

Research Interests:

Regulation of growth and differentiation of human leukocytes; biology and etiology of human leukemia; interactions of regulatory factors, chemicals, and oncogenic viruses with hematopoietic cells; tumor and viral mediated immunosuppression.

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2017 (Jan 18)

Full newspaper page : [HN0110][GDrive]

RUSCETTI, Maureen (O'Neill)

2017-01-18-the-boston-globe-pg-b8-clip-ruscetti

Of Brookline, Newton, Franklin and Popponessett Beach on Cape Cod, passed away peacefully on Sunday, January 15th, 2017, surrounded by her family, after a courageous battle with complications from type-1 diabetes mellitus, dysphasia and multiple strokes. She was born in Brookline on October 15, 1947, the daughter of Carroll O'Neill and Marjorie Ross.

Maureen was an active and well-loved graduate of Brookline High School, Class of 1965, and attended the University of Massachusetts, Amherst in pursuit of her BA. She was a student of life with a renaissance soul, a fierce advocate for the rights of the underdog whether person or animal.

Welcoming all to her world of arts and humanities, poetry and music, gourmet cooking and eating, she was also a gifted photographer, avid sketcher, devoted singer in the Sunday choir, staunch equestrian competitor with trusted mount Aja and loving guardian of all children. She believed children were God's gift to the family and could be seen doing the "Snoopy Dance" on the lawn celebrating every newborn. Everybody loved Maureen.

Nobody more so than Her Bob, devastated husband of 33 years, who must now walk the land without her by his side. Bob freely admits marrying way out of his league, Beloved son, Jonas Driscoll and wife Kerry, daughter Maddison, son Jack and Grandpa Mike of Sharon. Jonas has lost his greatest teacher and best friend. She is also survived by her siblings, sister Susan Yas and her husband "Sol" of Easton, sister Marjorie Clapprood and her husband Christopher Spinazzola of Boston, brother John R. O'Neill and his wife Martha of No. Attleboro, sister-in-law Barbara Sperrazza and family of Halifax and brother-in-law Frank Ruscetti and wife Sandra of Carlsbad, CA. Further survived by countless (grand) nieces, (grand) nephews, other relatives and friends.

A Mass of Christian Burial will be celebrated on Friday January 20, 2017 at 10:00 AM in St. Mary of the Assumption Church, 5 Linden Pl., Brookline. Visiting hours will be held in the Bell-O'Dea Funeral Home, 376 Washington St., BROOKLINE on Thursday January 19th from 3:00-7:00. Interment will be private.

There will be a memorial celebration of Maureen's life this coming summer on Cape Cod, which was Maureen's wish, details to come.

In lieu of flowers, donations may be made in Maureen's name to the Joslin Diabetes Center, One Joslin Place, Suite 745, Boston, MA 02215

[HN0111][GDrive]

Father

1938 - father's petition for citizenship

https://search.findmypast.com/record/browse?id=us%2fusnatur%2f007778606%2f01683

https://search.findmypast.com/record/browse?id=us%2fusnatur%2f007778606%2f01684

WW2 draft card - https://www.fold3.com/image/687168774?terms=ruscetti

1981 - passes https://www.findmypast.com/transcript?id=US%2FMASS%2FDEATHS%2F001332070

Obituary - https://www.newspapers.com/image/436957408/?terms=ruscetti

GALLO

1991 (Jan 31) - Chicago Tribune : EX-GALLO AIDE CHARGED WITH EMBEZZLEMENT

Source : [HN010Z][GDrive]

John Crewdson, Chicago TribuneCHICAGO TRIBUNE

A former longtime deputy to AIDS researcher Dr. Robert Gallo has been charged with stealing $25,000 that a German pharmaceutical firm paid the U.S. government for biological research in the Gallo laboratory.

The former deputy, Dr. Prem Sarin, 57, was charged by a federal grand jury here last week with embezzlement and three other violations of federal law, including two felony charges of making false statements on financial disclosure forms.

Sarin is the second scientist from the Gallo lab to have been charged with criminal offenses by the U.S. attorney`s office here. Last year, Syed Salahuddin, another longtime Gallo aide, pleaded guilty to accepting illegal gratuities from a Maryland company that supplied the Gallo lab with services and materials.

Ties between that company, Pan-Data Systems, and another Gallo assistant, Dr. Dharam Ablashi, are being investigated by Richard Kusserow, inspector-general of the Department of Health and Human Services, according to sources familiar with that investigation.

Kusserow`s investigators are also conducting an inquiry into possible perjury and false statements by Gallo himself in connection with his prize-winning AIDS research at the National Cancer Institute in suburban Bethesda, Md., just outside Washington.

The cancer institute is part of the National Institutes of Health, which is an agency of the Department of Health and Human Services. Kusserow, who previously headed the white-collar fraud unit in the Chicago office of the Federal Bureau of Investigation, has oversight responsibility at HHS.

According to federal court files in the Sarin case, Sarin had tentatively agreed to plead guilty earlier this month to two lesser offenses. When that deal fell through, federal prosecutors asked the grand jury to charge the scientist with four violations of law, including embezzlement.

The offenses to which Sarin had agreed to plead guilty carry a maximum penalty of six years in prison and a $350,000 fine. The maximum for the four offenses with which he is now charged is 21 years in prison and a fine of $850,000.

Asked why his client had chosen to stand trial, Sarin`s attorney, W. Neil Eggleston, said only, "He`s innocent." Eggleston declined to confirm reports that Sarin had repaid the $25,000 that is the focus of the alleged embezzlement.

Other sources close to the case suggested that Sarin had withdrawn from the deal because of prosecutors` insistence that any plea bargain include some jail time.

Wife - Dr. Sandra k Ruscetti

https://www.linkedin.com/in/sandra-ruscetti-85084623/

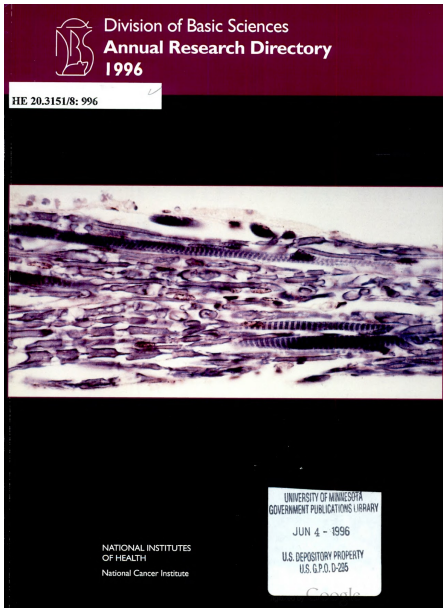
https://grantome.com/grant/NIH/ZIA-BC005657-22

book - retroviruses in rodents

https://books.google.com/books?id=rFzmBwAAQBAJ&pg=PA405&lpg=PA405&dq=sandra+ruscetti&source=bl&ots=lALuFNP7ag&sig=ACfU3U3x8hUmC4Z8vh122erNSF0LCf1t5Q&hl=en&sa=X&ved=2ahUKEwjn9_eTx7bpAhXcmXIEHbv0C88Q6AEwBXoECAoQAQ#v=onepage&q=sandra%20ruscetti&f=false

1996 - Wife - National Cancer Institute Directory

Full PDF - [HG004H][GDrive]



[HG004I][GDrive]

Laboratory of Molecular Oncology

Molecular Basis for the Pathogenesis of Murine Retroviruses

Sandra K. Ruscetti, Ph.D.

Senior Investigator

Building FCRDC 469
Room 140
Phone 301–846–5740

Biography: *Dr. Ruscetti obtained her Ph.D. from the University of Pittsburgh and has been at the National Cancer Institute since 1975, where she began her studies on retroviruses in the laboratories of Wade Parks and Edward Scolnick.*

Research: The major focus of the research being conducted in this laboratory is to determine the molecular basis for the pathogenesis of retrovirus-induced leukemia and neurological disease in rodents. Three separate but interrelated animal model systems are being studied.

Erythroleukemia Induced by the Friend Spleen Focus-forming Virus
The erythroleukemia-inducing Friend spleen focus-forming virus (SFFV) encodes a unique envelope glycoprotein which alters the growth of erythroid cells by rendering them independent of erythropoietin (EPO). In order to understand the mechanism by which SFFV causes EPO independence, we have been studying the signal transduction pathways activated by EPO and determining how they are altered by SFFV. Our results indicate that several members of the Stat family of latent transcription factors are rapidly, but transiently, activated by tyrosine phosphorylation in response to EPO, and that the same proteins are constitutively activated in erythroid cells infected with SFFV. Studies are in progress to determine the mechanism by which SFFV infection of erythroid cells leads to constitutive activation of Stat proteins, and to determine whether the viral protein can activate other signal transduction pathways.

Leukemia Induced by a Myb-Ets-containing Retrovirus
The *gag*-myb-Ets-containing ME26 virus causes leukemia and anemia when injected into newborn mice. Our previous studies suggested that the virus was not transforming erythroid cells, but was causing leukemia by a unique mechanism involving the inappropriate activation of erythroid-specific genes in hematopoietic precursor cells. Studies undertaken to understand how ME26 virus induces EPO-responsiveness in hematopoietic cells showed that the viral protein transactivates the erythroid transcription factor GATA–1, and then cooperates with the GATA–1 protein to activate the EPO receptor gene. Studies are in progress to determine how the viral protein transactivates the GATA–1 gene, and how virus expression leads to the activation of some erythroid-specific genes, but not others.

Neurological Disease Induced by a Variant of Friend Murine Leukemia Virus
PVC–211 MuLV is a variant of the erythroleukemia-inducing Friend murine leukemia virus that causes a rapid neurodegenerative disease in rodents. We have been carrying out studies on this virus to determine the molecular basis for the change from leukemogenicity to neuropathogenicity. Our studies indicate that the envelope gene of PVC–211 MuLV is essential for its pathogenicity, and that there is a direct correlation between the ability of the virus to replicate in brain capillary endothelial cells (BCEC) and its ability to cause neurological disease. Studies are in progress to understand how replication of PVC–211 MuLV in BCEC results in the death of neurons. We have further shown that PVC–211 MuLV is unique among MuLV's in its

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[HG004L][GDrive]

Sandra K Ruscetti, Ph.D.

Senior Investigator

Building FCRDC 469

Room 140

Biography: Dr. Ruscetti obtained her Ph.D. from the University of Pittsburgh and has been at the National Cancer Institute since I 975, where she began her studies on retroviruses in the laboratories of Wade Parks and Edward Seo/nick.

Laboratory of Molecular Oncology

Molecular Basis for the Pathogenesis of Murine Retroviruses

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Erythroleukemia Induced by the Friend Spleen Focus-forming Virus

The erythroleukemia-inducing Friend spleen focus-forming virus (SFFV) encodes a unique envelope glycoprotein which alters the growth of erythroid cells by rendering them independent of erythropoietin (EPO). In order to understand the mechanism by which SFFV causes EPO independence, we have been studying the signal transduction pathways activated by EPO and determining how they are altered by SFFV. Our results indicate that several members of the Stat family of latent transcription factors are rapidly, but transiently, activated by tyrosine phosphorylation in response to EPO, and that the same proteins are constitutively activated in erythroid cells infected with SFFV. Studies are in progress to determine the mechanism by which SFFV infection of erythroid cells leads to constih1tive activation of Stat proteins, and to determine whether the viral protein can activate other signal transduction pathways .

Leukemia Induced by a Myb-Ets-containing Retrovirus

The gag-myb-Ets-containing ME26 virus causes leukemia and anemia when injected into newborn mice. Our previous studies suggested that the virus was not transforming erythroid cells, but was causing leukemia by a unique mechanism involving the inappropriate activation of erythroid-specific genes in hematopoietic precursor cells. Studies undertaken to understand how ME26 virus induces EPO-responsiveness in hematopoietic cells showed that the viral protein transactivates the erythroid transcription factor GATA-1, and then cooperates with the GATA-1 protein to activate the EPO receptor gene. Studies are in progress to determine how the viral protein transactivates the GATA-1 gene, and how virus expression leads to the activation of some erythroid-specific genes, but not others.

Neurological Disease Induced by a Variant of Friend Murine Leukemia Virus

PVC-211 MuLV is a variant of the erythroleukemia-inducing Friend murine leukemia virus that causes a rapid neurodegenerative disease in rodents . We have been carrying out studies on this virus to determine the molecular basis for the change from leukemogenicity to neuropathogenicity. Our studies indicate that the envelope gene of PVC-211 MuLV is essential for its pathogenicity, and that there is a direct correlation between the ability of the virus to replicate in brain capillary endothelial cells (BCEC) and its ability to cause neurological disease. Studies are in progress to understand how replication of PVC-211 MuLV in BCEC results in the death of neurons. We have further shown that PVC-211 MuLV is unique among MuLV's in its ability to replicate efficiently in capillary endothelial cells, and that as few as two amino acid changes in its envelope protein are responsible. This unique property of PVC-211 MuLV is now being developed for use in gene therapy targeted to endothelial cells.

Keywords:

- DNA binding proteins
- receptor signaling
- retroviruses
- virus-cell interactions

Recent Publications:

- Masuda, M, et al./ Virol 1993; 67:4580-7.
- Ruscetti, SK, et al. Ann NY Acad Sci 1994; 718:245-56.
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- Masuda, M, et al. Virology 1996; 215:142-51.

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Housatonic

Stephen Russell (born 1937)

Wikipedia Steve Russell (computer scientist)

Also see :

- Worked at Computer Center Corporation (Seattle) .

Associations

- **Monique R Rona (born 1928)** (worked with M Rona at **Computer Center Corporation (Seattle)**)

Saved Wikipedia (Oct 21, 2020)

[HK003F][GDrive]

1937 (age 82–83)[1]

Other names Slug

Citizenship United States

Alma mater Dartmouth College, 1958

Known for Spacewar!

Lisp

Scientific career

Fields Computer science

Institutions MIT

Influences John McCarthy

Spacewar! on the Computer History Museum's PDP-1, 2007

Stephen Russell (born 1937)[1] is an American computer scientist most famous for creating Spacewar!, one of the earliest video games.

Biography

Russell attended Dartmouth College in Hanover, New Hampshire from 1954 to 1958.

Russell wrote the first two implementations of the programming language Lisp for the IBM 704 mainframe computer. It was Russell who realized that the concept of universal functions could be applied to the language. By implementing the Lisp universal evaluator in a lower-level language, it became possible to create the Lisp interpreter; prior development work on the language had focused on compiling the language.[2] He invented the continuation to solve a double recursion problem for one of the users of his Lisp implementation.[3]

In 1962, Russell created and designed Spacewar!, with the fellow members of the Tech Model Railroad Club at the Massachusetts Institute of Technology (MIT), working on a Digital Equipment Corporation (DEC) PDP-1 minicomputer.[4][5] Spacewar! is widely considered to be the first digital video game[6][7] and served as a foundation for the entire video game industry.[8]

He later served as an executive of Computer Center Corporation (nicknamed C-Cubed), a small time-sharing company in Washington (state). In the fall of 1968, he mentored Bill Gates and Paul Allen on the use of the DEC PDP-10 mainframe, while they were part of the programming group of Lakeside School (Seattle).[9][10]

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2002 (Feb 28) - NYTimes - "A Long Time Ago, in a Lab Far Away . . ."

By John Markoff / Source - [HN01H4][GDrive]

STEVE RUSSELL sat in a darkened movie theater recently watching the army of credits roll by after a computer-animated Hollywood blockbuster.

There was a time, he recalls thinking, when a cutting-edge computer-generated fantasy could be conceived, written, tested and packaged for distribution in a few months, just through the part-time efforts of a small group of friends.

To be precise, that time was 40 years ago this month, with the result played out on a computer screen at the Massachusetts Institute of Technology. Two tiny spaceships were locked in mortal combat as they swung around a simulated sun. The duel was called Spacewar.

Designed by a small group of pioneering computer programmers led by Mr. Russell, it was the world's first video game. It was an early hint that a powerful new entertainment medium was on the horizon, one that would ultimately bond Silicon Valley to Hollywood. Perhaps most significantly, Spacewar

demonstrated that sheer fun would become a driving force underlying progress in computing technology.

Over the years it played a crucial role in inspiring the creators of companies like Apple and Atari, said Henry Lowood, the curator of Stanford University's collections on the history of science and technology. "It set off a chain of events that created companies and led to a whole idea of what Silicon Valley would be," he said.

It certainly established at least one stereotype of the high-tech age: a few frenzied geeks in their 20's obsessively laboring after-hours in a computer lab on a creation that combined play and programming.

But the premise of Spacewar seemed to reflect the specific preoccupations of that time in the early 1960's. It was completed the same month that John Glenn made the nation's first manned orbital flight. And the cold war was at its most perilous stage: the Berlin Wall had just gone up, and the Cuban missile crisis would soon follow.

Now those 20-something geeks are near or past retirement age. Unlike more recent generations of computing and Internet pioneers, Spacewar's six programmers did not find fortune from their invention. Their achievement has made them legends only within the fraternity of the world's original computer hackers.

"The only money I made from Spacewar was as a consultant for lawsuits in the video game industry in the 1970's," said one of the game's creators, Alan Kotok. "I have all this fame, but it's in a very narrow circle."

Mr. Kotok and the other members of the original team all remained part of that circle, pursuing careers in computers. Several became hardware designers, several went on to write software, one became a professor and one joined the secretive National Security Agency.

Their early creation is now a museum piece -- literally -- reflecting the software principles and programming culture of its era.

Designed to take advantage of the Digital Equipment Corporation's brand-new PDP-1 minicomputer and the advent of a cathode-ray display screen, Spacewar was written before software was patented, and the original programmers' instructions were shared and freely modified by a small group of software designers.

Introduced some months later at Decus, which was then a Digital Equipment Corporation users' group, Spacewar immediately attracted a cult following. It became so addictive that at the M.I.T. laboratory where it was designed, play was soon banned except during lunchtime and after working hours.

Spacewar was the original "twitch" game, requiring lightning reflexes. Each player used keyboard controls or a joystick to maneuver a tiny ship capable of firing a stream of torpedoes as it slid across the screen. Before long a "hyperspace" option was added so that a player could make his ship vanish and reappear at a random place on the screen, avoiding certain death.

Stewart Brand, founder of The Whole Earth Catalog, saw the game played by young hackers at Stanford's computer center in the early 1960's. "They were absolutely out of their bodies, like they were in another world," he recalled. "Once you experienced this, nothing else would do. This was beyond psychedelics. It impressed the heck out of me."

In fact, though they came to be known for their hours in front of a computer screen, the game's creators initially met through M.I.T.'s hiking club. The group was led by Mr. Russell, known as Slug, and Martin Graetz, known as Shag, both devoted science fiction fans who wondered why better science fiction movies weren't being made.

Another contributor, Peter Samson, then a 21-year old undergraduate studying engineering at M.I.T., added a crucial component called "expensive planetarium," an accurate scrolling star field that portrayed the night sky over Cambridge.

Spacewar began in January 1962 as a simple object-in-motion program, Mr. Graetz said, and by February had become a rudimentary game, including two ships, a supply of fuel and a store of torpedoes.

Both Mr. Russell and Mr. Kotok said it was never their intent to create a new digital entertainment medium. After the new Digital Equipment computer with its display was installed in late 1961, the group simply began thinking about what might be the best way to demonstrate the power of the new machine and hit on the idea of a graphical simulation of a battle between two spaceships.

Spacewar was an obvious choice, but no one in the group sensed what impact the program would have over a decade and a half of popularity.

"One of the things that drew me to the project was that here you could do interaction and painless education and demonstration, and it was engaging," said Mr. Russell, who was 24 at the time.

After agreeing to be the project's lead programmer, Mr. Russell said he procrastinated until Mr. Kotok drove to Digital Equipment and returned with a paper tape containing necessary math subroutines. Mr. Russell set to work by entering code on a Flexowriter, a typewriter device that translated commands into holes punched in paper tape.

Perhaps the most impressive feat was that Spacewar worked at all. The processor for the PDP-1 minicomputer ran at about 100,000 instructions per second, snail-like in comparison with the speed of today's fastest microprocessors, which exceed two billion instructions per second.

Moreover, the computer, which was built from discrete transistors, had to make the most of about nine kilobytes of random access memory, unfathomably little compared with the RAM of today's desktop machines, which can boast as much as one gigabyte -- a million kilobytes.

"Each new game tends to push the state of the art," said Richard F. Rashid, who heads research at Microsoft. "They stretch the machine as far as you can stretch it."

Moreover, the Spacewar program became an integral part of a spreading hackers' culture as it was carried on punched paper tape to the dozen or so research centers and universities that had the early PDP minicomputer.

"What I was most pleased with was that a number of people saw Spacewar and went off and said, 'I can do that' and then implemented their version on another system without looking at the source code," Mr. Russell said.

One of those inspired by the game was Nolan Bushnell, who went on to found the Atari Corporation. He was first seized by the idea of commercializing video game technology when he came across a version of Spacewar while a graduate student in engineering at the University of Utah.

In 1971 he introduced a version of Spacewar called Computer Space, which was [illegible]

In 1971 he introduced an arcade version of Spacewar called Computer Space, which was a commercial flop. Mr. Bushnell kept at it, though, and soon introduced the more successful Pong.

The game also made an impression on two other entrepreneurs-to-be, Steve Jobs and Steve Wozniak, the founders of Apple Computer, who as teenagers would ride their bicycles to Stanford's artificial intelligence lab, where the game was frequently played.

But credit for the first commercial video game actually goes to Bill Pitts, a Stanford graduate who with a high school friend, Hugh Tuck, installed Galaxy Game, a coin-operated version of Spacewar, in Stanford's student union several months before Mr. Bushnell introduced Computer Space.

It became a huge hit and was played by students for more than six years, allowing Mr. Pitts to pay back the $60,000 he had invested in the project. Today his version of Spacewar is in the collection of the Computer Museum History Center in Mountain View, Calif.

For his part, Mr. Russell, now 64, is only an occasional gamer. He visits arcades to keep up with video game technology and spends a couple of hours a month playing at his own PC. But his tastes, like the times, have changed. Now it is solitaire, not spaceships, that keeps him coming back.

The Crew Members

What Ever Happened to the Spacewar Six?

Forty years after its first shot was fired, the game Spacewar can be experienced on the Web at agents.www.media

.mit.edu/groups/el/projects/spacewar. Here is what became of the M.I.T. programmers who created it:

DAN EDWARDS -- A cryptography expert, he joined the National Security Agency.

MARTIN GRAETZ -- Joined the Digital Equipment Corporation shortly after working on Spacewar and became an early expert on diagnostic software.

ALAN KOTOK -- Became a computer hardware designer at Digital Equipment, where he worked for 34 years. He is now associate chairman of the World Wide Web Consortium, which develops guidelines for Web technology.

STEVE RUSSELL -- Moved to Stanford University, where he specialized in tools for artificial intelligence research. Now works at the Nohau Corporation, a Silicon Valley company that makes computer design tools.

PETER SAMSON -- Works at AutoDesk, a design-software company, where he helps develop three-dimensional modeling tools that are used extensively by computer game companies.

WAYNE WIITANEN -- A mathematician, he worked at General Motors researching neural nets, circuits that mimic the way nerve cells are connected in the brain. He is retired.

Correction: March 1, 2002

A caption in Circuits yesterday with an article about the 40th anniversary of the first video game misstated the name of the game. As the article noted, it is Spacewar, not Spacewars.

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http://wordsbloom.com/uploads/files/Hard%20Drive%20-%20Bill%20Gates%20and%20the%20Making%20of%20the%20Microsoft%20Empire%20%281%29.pdf

As it turned out, the real world called them first. And what a deal it was—all the free computer time they wanted.

Founded by four University of Washington computer experts in the fall of 1968 with the backing of several Seattle investors, Computer Center Corporation was a private Seattle firm offering the largest concentration of timesharing computer power on the West Coast. The company (which Gates referred to as "C-Cubed") had leased several computers from Digital Equipment Corporation, including a PDP-10 like the one Gates and the other Lakeside students used.

Computer Center Corporation attempted to sell its timesharing services to scientific and engineering businesses in the region—or any other customer in need of computer power at an affordable price.

One of the firm's founders and chief scientific programmer, Monique Rona, had a son in the eighth grade at Lakeside—the same grade as Gates. She knew about the school's teletype machine and its deal with General Electric for computer time. A representative from her company contacted Lakeside to inquire whether the school would be interested in making a similar arrangement with Computer Center Corporation. The students would have an even greater opportunity to learn about computers, the representative argued.

http://wordsbloom.com/uploads/files/Hard%20Drive%20-%20Bill%20Gates%20and%20the%20Making%20of%20the%20Microsoft%20Empire%20%281%29.pdf

Space Wars became the mother of all computer games. Before long, a generation of new games followed.

At Stanford, Russell worked on multi-user computer systems, using DEC s PDP-6. C-Cubed was created to take the next version of that multi-user system, the PDP-10, and make a commercial service out of it. Russell was recruited by the C-Cubed company from Stanford's Artificial Intelligence Research Center in late 1968 because of his experience with multi-user computer systems.

Russell sometimes gave Gates and Allen computer manuals, with instructions to return them the next morning. Instead of going home, the boys would remain at C-Cubed all night reading.

Paul Allen and Bill Gates "got a big part of our start in computer science through the University of Washington when we were still students at Lakeside School," said Paul Allen in announcing his $14 million commitment to the UW Department of Computer Science & Engineering. "UW Computer Science & Engineering is an engine of opportunity, and we want to help make sure it's an even more cutting-edge resource for coming generations."

DEC PDP-10

SDS Sigma 5

Burroughs B5500

Control Data Corporation 6400

The Computer Center Corporation, a timesharing startup founded in the late 1960s by UW faculty and staff (including Computer Science & Engineering professor David Dekker and graduate student Dick Hamlet), made PDP-10 time available to Lakeside students by means of a teletype terminal.

Gates and Allen also utilized four computers on the UW campus -- an SDS Sigma 5 operated by Computer Science & Engineering, a DEC PDP-10 operated by the Medical School, and a Burroughs B5500 and a Control Data 6400 operated by the Academic Computer Center (now Computing & Communications).

During the 1980s, the University of Washington employed an exceedingly apt slogan in radio spots: "UW: You get something, whether you go there or not." Indeed! Research universities contribute to their regions in many ways -- some explicit, and some serendipitous.

The recent commitments of Allen, Gates, Microsoft Corporation, and dozens of other individuals and organizations to the UW Department of Computer Science & Engineering ensure that UW CSE will continue to lead and to serve long into the future.

2009 (Aug 08) - Stephen Russell Interview at Computer History Museum

Source : [HI001H][GDrive] / Text copy : [HI0028][GDrive]

Interviewed by: Al Kossow

Recorded: August 9, 2008

Al Kossow: We're rolling. It's August 9th, 2008. This is Al Kossow we're in Mountain View, with Steve Russell. Thanks for coming by.

Steve Russell: You're welcome.

Kossow: So I wanted to start with early history. So where were you originally from and what was your family like?

Russell: I was born in Hartford, Connecticut. My father was an engineer; my mother was a teacher turned housekeeper.

Kossow: What sort of engineer?

Russell: Mechanical. He told me a bunch of stories, on his knee.

Kossow: Oh, okay. So where did he work?

Russell: He worked for the Hartford-Empire Company which became part of Emhart, which is still around in a much different incarnation. They built glass machinery, and he had worked on building and installing annealing lehrs, which take the hot glass fresh out of the mold and heat it up again to the point where it oozes but doesn't fall down, you hope, and then cool it down very slowly, which relieves the stresses and makes it possible for the glass to survive. If you don't do that, if you just take it out of a mold after it's been molded and let it cool down quickly, the glass becomes very fragile, like the demonstration, Prince Rupert's Drops and Bologna bottles, where you just do something very small to it and it explodes.

Kossow: So did he end up going around the country when they were installing these?

Russell: He did a fair amount of field work. He also had several patents on construction details for lehrs. He worked on automatic control systems, which at the time were vacuum tube chart recorder systems where a chart recorder would record something and provide control signals to control it. And he also worked on installing the actual molding machinery and giving advice on the operation of the glass furnace, which at the time— and I think it's still true— but at the time the construction of the glass furnace was there would be a large central furnace, maybe 50 or 100 feet in diameter, and the raw— the batch that was going to be melted, would be put in there, in one side, and then there were long tunnels, called feeders, which took the glass out of the central furnace and heated it up to— or cooled it down, as the case may be— to exactly the right temperature for molding, and ended up with a device that would drip glass and cut off pieces of red-hot glass and send them off to molding machines. It took something of the order of five or ten days for the batch that went into the furnace to actually get out there to the far end of the feeders where it turned into bottles. But it was— what went in affected what went out, and so there was a considerable element of back magic involved in figuring out when things weren't coming out right, at the far end, what was wrong somewhere along the way.

Kossow: Did you have any siblings?

Russell: What? No.

Kossow: There was no siblings.

Russell: My father grew up in Worchester. He was born in 1898, so he grew up in Worchester around the turn of the 1900. And he told me stories about that, and one in particular that I remember is he was— one of his things was when he was a kid he went down to a foundry, which was relatively close to where he lived, and learned about the engines and what was in the foundry. It occupied two city blocks, one for the foundry and one for the machine shop, and it had its own power; it had a 300 horsepower Corliss engine, and that ran the whole two blocks of the factory. The biggest load was the blower on the cupola.

Kossow: It was all electric?

Russell: No.

Kossow: Well the mechanics—

Russell: Belts and line shafts.

Kossow: Oh, okay.

Russell: With a line shaft that went over the street that separated the two blocks of factory.

Kossow: Okay, so it was a single motor driving the entire—

Russell: Yes.

Kossow: So this would've been in—

Russell: 1905 maybe, somewhere around there. And one of the— in the, well I think, sometime between 1945 and 1948 his company acquired the Pitkin Governor Company who had been making steam engine governors for— and governors for anything, for that matter.

Kossow: Like fly ball governors?

Russell: Yes. Which had a factory somewhere near Hartford, I don't remember exactly where, and they were shutting down the factory because it was woefully obsolete; namely, it had a central steam boiler and steam engine and everything in the factory ran off line shafts. And they had a beautifully maintained Corliss engine, and the last day they were operating it my father got me in and I got to see it. The reason they were operating it on a Saturday was because the manager was cleaning out his office, which was on the second floor, and he was kind of lame, so they had to keep the elevator running.

Kossow: Oh, and it was all driven off a common—

Russell: And the elevator was run off clutches off the line shafts.

Kossow: So was that one of the last Corliss engines running in Connecticut?

Russell: I don't think it was the last.

Kossow: No.

Russell: But I don't know. It was certainly very late for a Corliss engine. They did have electric lights, but there was no sign of electric motors. And it was very interesting because it was very quiet. Even though there was sort of some belt noise, which was just occasional flapping and a tick as the—

Kossow: The leather belts.

Russell: Yes, a tick as the splices went over the pulleys, but the Corliss engine itself made no noise at all when it wasn't putting out any power.

Kossow: So when did you get interested in trains?

Russell: I don't remember, and I'll tell you why.

Kossow: Did you do a lot of train traveling?

Russell: Something which I've been told about, and which there are pictures of me, is when I was about three, we took a train across the country to visit my mother's folks— **my mother's father and her sister and brother-in-law in the State of Washington**. So that was a long train trip, which I don't remember. But the picture shows me lying down on his living room floor looking admiringly at his O Gauge model, which was running on track on the floor. So I was definitely interested then, but I don't remember it, and the next Christmas he gave me a Lionel train set, and I haven't recovered. And that was— I got interested— well I liked running the trains. When I got to be around ten somewhere, I'm not sure exactly where, I started getting interested in signals and doing more elaborate layouts and that sort of stuff, and that's what got me started getting interested in electronics. **And then my father got laid off in, I guess the end of 1948 or the beginning of 1949, and my folks decided to move out to the State of Washington and go into farming with my grandfather.** And we made a long auto trip out of that. We went down south and around and covered almost all the extant narrow gauge railroads at the time: the East Broad Top, the East Tennessee and Western North Carolina, the Denver and Rio Grande and— that was about it; we didn't cover the California and Sierra Railroads.

Kossow: So you father was a big train fan then too?

Russell: Well he was tolerant at least.

Kossow: Oh. Oh, so he was doing this for you.

Russell: Yes.

Kossow: So you'd just try to visit the track or actually try to get rides?

Russell: Yes. Well in some cases they were still carrying passengers and in other cases they were— the crews were susceptible to begging.

Kossow: So you'd hop on and then your parents would meet you.

Russell: Yes. So anyway my parents, my father went into partnership with my grandfather, which didn't work out very well and lasted less than a year, and then we moved up to a small farm in Burlington, Washington. And so I went to Mount Vernon High School, which was near Burlington, and when we moved— I started my freshman year in high school when we were in Mount Vernon, and when we moved to Burlington I kept going to Mount Vernon High School. And I had some friends. My friends were mostly interested in electronics and radio and that sort of thing.

Kossow: Did you get a ham license then?

Russell: No, I got a ham license much later, much, much later, but I let it lapse. But I learned in high school a great deal about radio and World War Two radar because there was plenty of surplus World War Two radio and radar around. One of the guys who was a little older than I was, not much, was an avid ham and his equipment tended to be made by butchering, really crudely, surplus radio gear. One of the things— his favorite metal working tool was an ice-pick.

Kossow: Ugh…

Russell: Which tended to leave volcanic holes in the aluminum chasses but it was effective, when wielded with enthusiasm.

Kossow: Okay, so then did you end up getting a scholarship to go to Dartmouth, or how did you end up back on the East Coast?

Russell: Well my aunt married- my father's sister married G.W. Pierce [NOTE : See https://en.wikipedia.org/wiki/G._W._Pierce , George Washington Pierce article on Wikipedia] , who was a Harvard professor, and they felt that everyone should get a proper education, and so she paid for my tuition. Uncle George was a— started out as an acoustics expert, and in the 1930s he studied the acoustics of sound waves in quartz and how you could use the sound waves in quartz as a resonator for electronic oscillators; the Pierce oscillator circuit was one he designed. And he then went off— one of the things that he showed me one time when I was visiting, in the late forties, was— in fact there were several things on that visit. One was a closet in the Applied Science Laboratory where he had attempted to build a pendulum clock that would compete in accuracy with the crystal clock. But it wasn't successful, the crystal was still better, but it was an electrically driven pendulum in a vacuum chamber and quite elaborate. **The same visit he also took me to see Harvard Mark I, which was busily printing tables for something or other, and Professor Aiken showed us around, and he checked to see what it was doing and decided he could demonstrate the error detection feature.**

> *[NOTE : See The https://en.wikipedia.org/wiki/Harvard_Mark_I , the Wikipedia article for "the IBM Automatic Sequence Controlled Calculator (ASCC)" . Side note : "as a general purpose electromechanical computer that was used in the war effort during the last part of World War II. One of the first programs to run on the Mark I was initiated on 29 March 1944[2] by **John von Neumann**. **At that time, von Neumann was working on the Manhattan Project**, and needed to determine whether implosion was a viable choice to detonate the atomic bomb that would be used a year later. The Mark I also computed and printed mathematical tables, which had been the initial goal of British inventor Charles Babbage for his "analytical engine".]]*

And so he put his finger in one of the typewriters so that it kept a number from striking, and there were contacts on the typewriter that noticed whether the numeric keys had actually completely hit, and so that rang a bell and caused operators to come out of their offices and so on. And they were also— down in the basement they were working on an electronic machine, but that wasn't nearly as interesting and apparently it wasn't working yet.

Kossow: So that would've been the Mark II.

*[NOTE : See https://en.wikipedia.org/wiki/Harvard_Mark_II : "The **Harvard Mark II**, also known as **Aiken Relay Calculator**,[1][2][3] was an electromechanical computer built under the direction of Howard Aiken and was finished in 1947. It was financed by the United States Navy. Howard Aiken and Grace Hopper worked together to program and build the Mark II."]*

Russell: Two or three, I'm not sure.

Kossow: The first drum calculator.

Russell: So I thought that was interesting.

Kossow: And so was that your first exposure to computing?

Russell: Other than just doing- learning math, or learning grade school math.

Kossow: Automatic computation.

Russell: Yes, yes. Well let's see, had I— I had seen adding machines before.

Kossow: But there was no machines up at Dartmouth yet?

Russell: Oh no. My senior year at Dartmouth, 1958, '57, '58, I worked on the most advanced data processing operation that Dartmouth had, which was a card shop with a 402 or 403, the slow tabulator. And that had just been installed in the last year or so.

Kossow: Okay, so here it is, it's 1958, and somehow or other you get hooked up with John McCarthy.

Russell: John McCarthy was— in '56, '57, and maybe a little earlier— was a professor at Dartmouth. And he had arranged to get the SNARC.

> *[See https://en.wikipedia.org/wiki/John_McCarthy_(computer_scientist) : John McCarthy (September 4, 1927 – October 24, 2011) was an American computer scientist and cognitive scientist. McCarthy was one of the founders of the discipline of artificial intelligence.[1] He co-authored the document that coined the term "artificial intelligence" (AI), developed the Lisp programming language family, **significantly influenced the design of the ALGOL programming language, popularized time-sharing,** invented garbage collection, and was very influential in the early development of AI. McCarthy spent most of his career at Stanford University.[2]]*
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> *https://medium.com/interesting-histories/john-g-kemeny-inventor-of-basic-f0d118c9f2f4 : "Kemeny completed his doctorate in 1949, aged 23, for a dissertation on "Type-Theory vs. Set-Theory". He also completed his marriage, wedding Jean Alexander from coastal Maine, USA, of whom we will hear more later. Kemeny was appointed to the Dartmouth Mathematics Department in 1953, four years after his dissertation — and within two years' time, he had already become its chairman. It was there that Kemeny met Thomas Kurtz, another PhD from Princeton, who had taken a pay cut to work at Dartmouth and was looking for ways to increase his income. Kemeny suggested an IBM research fellowship at the MIT computing site nearby. This happened in the summer of 1956. The computer and cognitive scientist John McCarthy had arranged a course in "artificial intelligence" — probably the first time that the term was ever used in a course. "]*
>
> *WHY DOES RUSSELL NEVER MENTION - KEMENY ?*

Marvin Minsky built the stochastic Neural Analog Research Computer, which was an electronic rack about this big, a tabletop rack, which was attempting demonstrating an electronic mechanism for doing learning the way it was thought that human nervous systems did, and it was a bunch of vacuum tube, relatively straightforward vacuum tube electronics, and you connected them randomly when you got the— and you would put a pulse in and then you got

something out maybe. And when you got a result you liked you said, "Yeah that's good," and that caused all the neurons that had fired in the last operation to crank their little pots, probability pots, up higher. And when you said, "No that's bad," it caused the ones that had fired in the last operation to crank their probability pots down lower. And this was done with— they remembered whether they had fired, and what that did was cause a magnetic clutch to pull in, and then the reward or punishment was done by turning a- by a motor running for a bit to crank the pots over a little.

Kossow: And they all changed by the same amount.

Russell: Yes. Much later **Minsky (see https://en.wikipedia.org/wiki/Marvin_Minsky)** fought the Perceptron wars and apparently proved that that couldn't do it. **And so I had worked on that, and McCarthy, John McCarthy had arranged that, and he offered me a job at MIT working on computers, which he thought I could handle. The summer— I didn't fulfill all of my graduation requirements. I was supposed to produce a senior thesis but I never got around to it. That summer I had a job in summer stock at the Berkshire Playhouse in Stockbridge, Massachusetts, which at last observation was still running, under a different name. I had been quite active in theater work in college, and I was student technical director of the Dartmouth Players my senior year.**

Kossow: So this was stages and props and lighting.

Russell: So I spent the summer in summer stock getting paid $25.00 a week plus board, or plus room rather. The room was in the basement under the scene shop, not a particularly wonderful place but it didn't rain— well it didn't rain there often. Well when the— there was one incident where the scene designer had gotten enthusiastic with washes where you'd put all the flats down and then throw a big bucket of colored water on them. And it turned out that he did that one Saturday, and that got all the beds kind of wet down in the basement. We were not happy.

Kossow: So there was more than just you down there.

Russell: Oh yes. Yes, well it was some of the apprentices and the rest of the technical crew. Anyway—

Kossow: So you got through that.

Russell: Yeah, we got through that. Well actually I learned a lot and— no I actually had fun at it.

Kossow: Did you do much theater work after that?

Russell: I did a little when I was working at MIT but not too much. Computers were more absorbing, at the time anyway.

Kossow: So you get to MIT then, it'd be—

Russell: The fall of '58.

Kossow: So at that point they had the 704.

Russell: At that point they had the 704 installed and running. I had worked the previous summer— actually I had worked at MIT for John, and he sent me to work using FORTRAN, which was just out of the box, and I did a little, some matrix inversions and some other stuff in FORTRAN. So I sort of knew my way around there. Anyway, when I arrived— I don't remember the detailed sequence of who did what but my impression is that John had figured out the basic machine language code for CAR, CDR and CONS, on the 704, and had—

Kossow: So he had in mind what the basic atoms of Lisp were going to be at that point.

Russell: Yes. I'm pretty sure— he may have had garbage collection in mind but I don't remember that it was mentioned first off, but it came fairly- it came sometime that fall. And it was abundantly clear, from later events, that no one had thought through garbage collection completely at that point. So anyway we started writing some sample code. We did list input and output routines and maplist and a few other of the standard functions; I don't remember the other ones, but we had written all those in assembler.

Kossow: So this is just you and John working on that.

Russell: No, there was— Klim Maling was another full-time employee, and there were several students and grad students associated with it one way or another. I don't remember their names but there were a couple who were seriously thinking about compiling Lisp, at least by December they were. And we were certainly very conscious that it would be a good thing to compile Lisp, although it was much easier to write an interpreter. And given the size of the 704 it was probable that compiled code would have given even less space for free storage. So compiling wasn't on the high priority list.

Kossow: So just to give a background of what was going on at the time, there was John working on developing Lisp, and that was in which department? So what was going on around him at the time?

Russell: I think that was in electrical engineering. John and Marvin had started the artificial intelligence project I guess that summer; so the summer of 1958, something like that.

Kossow: What building was it in?

Russell: Building 26, and I think Building 26 was mostly electrical engineering. We started out in a dungeon in the basement next to the coin machines, which was echoy and noisy. We later on moved up to the second floor. So anyway we had been, Klim and I some of the students, had been hand assembling, or hand compiling, Lisp M-expressions for map list and print and read and that sort of thing. And my remembrance is that John sort of came in one day, in late September or October or something like, that with the universal M-expression, that is the Lisp interpreter written out as an M-expression, and we sort of looked at it and said, "Oh yeah, that'll work," and I looked at it and said, "Oh, that's just a matter of doing more hand compiling, like I've been doing. I can do that."

Kossow: So that's how the first one was bootstrapped.

Russell: Yes.

Kossow: Just by hand.

Russell: And actually most of the code is probably in still in the Lisp 1.5 listing. But I got something working before Christmas, which was a useable interpreter; no garbage collector, but there weren't any big programs yet. And my remembrance is that in the beginning of December or so Jim Slagle, a blind grad student, had a seminar where he explained how he was planning to do formal integration in Lisp, and he started writing his Lisp expressions on the

board, or getting them on the board somehow, I don't remember exactly how that was done. But he had no trouble understanding Lisp and writing Lisp, but he used a Braille typewriter. There was no connection between that and the machine so somebody had to read the output to him. And I, and I guess Dan Edwards— I think Dan Edwards was an undergraduate at the time, I'm not sure— and a couple of the grad students who were worrying about how to compile Lisp were sort of sitting in the back, and he wrote something and then it had a clever double recursion in it, and we sort of started muttering, the interpreter can't handle that. What happened was, the initial version there was a problem with something like maplist where there was a functional argument. And the problem was if the functional argument had a variable by the same name as one of the internal variable's in maplist, that actually— if it was all interpreted— that was actually visible on the association list, the A list, then inside the functional argument you would see the map list version of the variable name before you'd see the intended version, which was out in the outer call to maplist. And so anyway we had been using a dodge like defining a function- or using internal variable names like terribly unique program variable, and it was clear that with this double recursion that wouldn't work. And so there was a great deal of muttering—and, I think I invented it, I'm not sure; I'm sure it got critiqued by plenty of other people— what we fixed on what was generally called the function funarg hack where when the functional argument got passed a map list, it got extended with- it got transformed from the function to funarg, which had the function and the current A list at the time of binding. So what happened in the machinery of map list or whatever else was churning around with the functional argument wouldn't be visible to the internal function when it actually got called. And at the time we thought it was a rather despicable thing, and we didn't like it all because it was going to be hard to compile. Nowadays there's a lot more patience for things that are hard to compile and a lot more memory to use for such things. But it worked, and so it stayed and— oh, and also no one ever suggested a better idea. I don't remember— I believe the garbage collector was proposed in the fall of '58 and I don't think we started— I don't remember when we started working on it seriously. I wasn't— I guess it started in parallel with the second version of the interpreter which had the function funarg hack. That got working sometime in the spring of 1959. And the other project was to get- was to make the garbage collector work. And one of the things which became evident much, much later, as garbage collector bugs kept showing up for years and years, was that it would've been a really good idea if we had segregated the storage for list structure, and the stack for list structure, from other kinds of storage that weren't involved in garbage collection. But we hadn't and so what we did was make up a table of all the locations where list structure could be stored and use that to interpret the stack— let's see, I think we also must have had a template for the function. So anyway so there was a list of all the places where list structure could be stored and a way of determining what things on the stack were list structure and what were not. And it turned out that those lists were not fully correct, because they were made by hand by reading the code, and so for at least a year, and I think longer than that, we would periodically get bugs where somebody had done some perfectly innocent function and had gotten the free storage list tacked in the middle of its list structure, because something that shouldn't have been garbage collected was. So I'm sure that we hadn't thought that out when we had fixed the programming conventions.

Kossow: So you had something sort of working then in the spring, '59?

Russell: Yeah, I don't think we had the garbage collector fully functioning in the spring. I think that wastook another while.

Kossow: So were there very many people trying to use the language at that point? Because you said somebody was trying to do integration with it.

Russell: I think there were of the order of five or ten serious grad students, and John inflicted it on his Introduction to AI class, and so there were a bunch- there were maybe another 20 more or less student users. And I'm not sure exactly how big— I don't remember exactly when this happened and how big the user base was at the time. But sometime later John figured out that CAR and CDR weren't really good names. And so he tried to launch a program to call them FIRST and REST, which seemed like much better names. And I remember supporting this and trying to help in it. But it didn't work. There were too many entrenched users who were used to CAR— had internalized CAR and CDR and didn't want any change. And I don't know how many there were at the time but it couldn't have been more than 50. But the damage had already been done. I'm reminded of the original, the landline Morse code story. When Morse first developed the telegraph he had— there were, some words had long spaces in them and there was a long dash that was assembled, and it very early became evident that this led to transcription errors. The original Morse receiving instruments were siphon recorders.

Kossow: What's that?

Russell: Ink siphon, recording on paper tape, driven by clockwork. But after the first year or so they realized that the operators weren't bothering to keep the ink supplied, because they were listening to the tink-tink of the recorder and recording it directly, writing it down, having learned what the tink-tink sounded like. So then they said, "Okay, we don't need that," and they built the “modern”, that is, the telegraph sounders that are around, which were simply designed to sound like the siphon recorder. After about ten years or so, when Morse telegraphs were being expanded to Europe, they had to revise the character code to handle some of the European characters, and at that point they eliminated the long dash and the inter-character long spaces, and they tried to persuade the U.S. operators to adopt that. [Shakes his head ‘no’] And so landline Morse kept its intra-character space and long dash until the last landline Morse circuits were shut down. Same problem.

Kossow: Yes. Now just so that it's on here, CAR and CDR come from—

Russell: Contents of Address Register and Contents of Decrement Register.

Kossow: Which are two registers in the 704.

Russell: They are two fields in a 704 instruction, and because they were used for indexing— they're used in the indexing instructions— and because they were used for indexing there were special load instructions which would load either address or decrement into the accumulator. So this made it easy to do instruction in CAR and CDR. And that was the reason— that was clearly an effective way to do list structure, and that was the reason they were called that. There was also another—

Kossow: John had come up with that?

Russell: Yes.

Kossow: Those two functions?

Russell: And we had no problem thinking about it that way for the first year or two. It was only after trying to teach it. Another feature of the indexing instructions on the 704 was that they used two's complement arithmetic and so the number that you wanted to store in the list structure was actually the two's complement of the location in memory that you were pointing to, and it turned out that made— <video breaks up > <Crew talk>

Kossow: All right, we're rolling. So this is tape number 2 of the Oral History of Steve Russell. So we're at mid-1959, MIT. So at that point, you're concentrating mostly on working with John on Lisp. At that point, had Jack Dennis gotten the TX-0? So what's going on? Computing at MIT at that point, was this 704 by 1959?

Russell: 704 but not much else; Whirlwind, I guess, in the fall of 1958 or 1959—

Kossow: That's when they were shutting it down.

Russell: They were shutting down Whirlwind, and since a bunch of people in the Computation Center had worked on Whirlwind, they arranged some tours of Whirlwind. And I took one of them, and one of the things I remember was the "bouncing ball" program. Now, much, much later I have gotten the impression from reading some of the Whirlwind literature that somehow that was felt to be very important. I think it may have been a benchmark for Whirlwind's ability to do real-time stuff, but I haven't seen any direct evidence of that. But there's some indirect reference that—

Kossow: So was this running on the large scope?

Russell: This was running on a large scope; this wasn't one of the Cape Cod scopes. That was still classified. But this was running on a scope that was in a rack by the operator position. It was more or less the size of the PDP-1 scope, it may have been a little bit smaller. The PDP-1 scope is 10 inch, I believe. It's 9.25 inches diagonal, x and y size for the display area. At any rate, the bouncing ball display— there was a wall and a floor that was drawn. The floor had a little hole in it. The ball started off on the top of the wall. I don't remember whether it was just a single spot or whether it was round or something more. But anyway, the ball got pushed off by an unseen hand, and it fell down and bounced on the floor, in smaller and smaller bounces, showing that the physics were correct, and it either bounced off the edge of the screen, or it bounced into the hole and went down through the bottom of the screen. And when it went through the hole in the bottom of the screen, it then stopped changing the amount of force it got pushed with. So you got push… bounce, bounce, bounce, bounce… push a little harder… bounce, bounce, bounce, bounce… push a little harder yet… bounce… bounce… bounce… boip! And they had a speaker on Whirlwind, and so it made relatively distinctive sounds for the bouncing. I don't know how they contrived that, whether they contrived that, or whether that was just the way it worked; but it did come with sound effects.

Kossow: So did you just get a tour of the control room and the Flexowriter array area? Or did you actually go into the computer itself?

Russell: We went into the computer itself, but they kept us on the main pathways. It was live; it was 300 volts exposed on those racks. It wasn't a place where you wanted a large mob.

Kossow: So, were there fans above it, cooling? I'm just curious as to how loud it was inside.

Russell: I don't remember an impression that it was loud. Of course, I was used to 704 computer rooms, which weren't exactly quiet, and tab shops, which weren't quiet. But by the data processing standards of the day, I don't think it was loud. I think they had air conditioning and ducting, but I don't remember for sure. Anyway, there was more stuff to do on Lisp, and we worked on Lisp for a while. I don't remember anything about TX-0 appearing. **At some time around, I think it was 1961, late 1961, early 1962, I had gotten bored with working on Lisp and got a job at Harvard. And part of that involved my not having a deferment anymore, so I went into the Army Reserve, and I think—**

Kossow: So you had had a deferment while you were working for John?

Russell: Yes. I'm not clear on the exact sequence of events— anyway, I started working for Harvard; I had to go off for six months of active duty; I came back, management had changed; new management was not nice, and—

Kossow: So you didn't stay at Harvard very long?

Russell: No. And when I came back from— **about the time I was convinced that I didn't want to continue working for Harvard, John was moving to California, to Stanford, and offered me a job at Stanford, which I took. So I ended up at Stanford in the fall of 1962.** But, popping back a little earlier, when I was working at MIT, I got active in the model railroad club and continued to be active when I was working at Harvard, and a number of the people in the model railroad club were associated with Jack Dennis's lab, and TX-0 and the PDP-1 when it arrived in 1961. I don't know exactly when TX-0 got going, but it was going noticably at least a year or more before the PDP-1. That had a display. It had roughly the same complement of I/O gear that PDP-1 had, and you could write similar type programs with it; it wasn't quite as fast, but it was transistorized.

Kossow: So was Jack's lab in Building 26, too?

Russell: Yes, it was also on the second floor of building 26, just down the hall. One of the things— a missed opportunity in the museum setting up its PDP-1 restoration display I thought, was that it would have been very easy to recreate the building 26 décor, which was painted cement block and tile floor. Probably not as interesting as the mural of the production line.

Kossow: Trying to pretend it's The Mill.

Russell: Anyway, the PDP-1 arrived, and Marvin Minsky wrote the tripos demonstration, generally called the Minskytron, and there was the famous weekend where the mob of undergraduates transcribed the macro assembler from TX-0 to the PDP-1, because they didn't like FRAP. And then fairly quickly thereafter, they wrote DDT and connected up the macro symbols to DDT. So that was all sort of in place by the middle of the fall of 1961. And the combination of the Minskytron and having DDT with interactive debugging with symbols was very tempting. I don't remember the exact order of things, but I'm pretty sure I started talking up a better demonstration program than the Minskytron, and eventually, Alan Kotok went up to Maynard and collected the sine and cosine routines from DECUS, presented them to me, and said, "Okay, here are the sine and cosine routines; now what's your excuse?" And I discovered I had run out of excuses; I had to actually think. And so I started work and figured out the basic trick of Spacewar! display which is that you only need to calculate a unit vector pointing in the direction of the spaceship. And you can express everything else the spaceship does, and the outline of the spaceship in terms of that unit vector, suitably scaled. So it's basically a lot of addition in the usual program upkeep.

Kossow: Do you want to just give an overview, then, of how Spacewar! actually works?

Russell: It's one big loop, and the loop is on the displayable objects. And I called them displayable objects, although I didn't know about object orientation or object-oriented programming at the time.

Kossow: So you have the sun—

Russell: Colliding objects, not displayable objects. The colliding object is a space ship, there are two of those. And that has a lot of extra data with it. It shares the position and velocity tables with all of the torpedoes and explosions that are running around. So there's just one big loop through the colliding objects, and it looks at all the higher-numbered colliding objects to see if there's a collision, using an octagon because you don't need to calculate the square root of anything, you can do that by work on X difference, Y difference, and X+Y difference—

Kossow: So the bounding box for the collision detection is an octagon?

Russell: Yes. So it goes through, it sees if this object is colliding with any higher-numbered object. If it is, it replaces the calculation routines. That's another thing that every colliding object has, is a calculation routine. It replaces the calculation routine with the explosion calculation routine. And then things take care of themselves. Then, after it's decided whether it's an explosion or not, it goes off to the calculation routine. And the calculation routine updates the position, since all colliding objects have velocity; and if it's a spaceship, it worries about reading the controls and updating the other things about the spaceship in deciding whether to launch a torpedo or not. And if a torpedo needs to be launched, it searches up the colliding object table for an empty slot, indicated by having no calculation routine. It searches up the table for an empty slot, puts a torpedo calculation routine there, and the spaceship position plus the suitable increments, so it won't run into its torpedo, and of the velocity of the spaceship plus an increment for the torpedo, and it goes on. When that the main loop gets done, you go off and do some star display and display the sun, and calculate — and part of the spaceship calculation is to calculate the effect of gravity on the spaceship. Originally, there wasn't any gravity, and I had an interpreter, which interpreted the outline description, and Dan Edwards, sometime in late 1961 or early 1962, looked at that code and decided if he could write a special purpose compiler which would compile precisely the right code, and proceeded to. And there's one compiled outline for each spaceship; each spaceship actually does half of the spaceship outline and then you twiddle the vectors and do the other half. That keeps the display running just as fast as it can. That gives time to calculate the effect of gravity on the two spaceships, but not on the torpedoes. So we decided that they were photon torpedoes not affected by gravity.

Kossow: So when the explosion routine starts, it continues calculating motion, so the explosion moves?

Russell: Yes. If you see two spaceships collide, if you watch closely, you will see that there are two explosions that continue off in the direction that the two spaceships were going. There is another number in the table for all colliding objects, which is the size. And this is, roughly speaking, proportional to the amount of computing it takes to compute that object. And at the end of the loop, as you go through the main loop, you accumulate the sizes also; and so at the end of the loop, there's fritter away time loop that attempts to keep the frame rate approximately constant. It doesn't do a wonderful job; it's visually adequate, but God help you when you try to take a movie of it.

Kossow: One of the complaints with all modern, little kids trying to play it now is that it's TOO SLOW.

Russell: Kids who are used to something like Asteroids seem to think that. But when we do the demos, we get a number of people who seem to be still quite addicted to it with the old, slow version. Now, that was always a complaint; the reason that all the parameters got accumulated in the first page of the listing, which says you can put that first page of the listing of the console, and anyone who wanted to try a different set of parameters could. But the ones that were compiled in or assembled in were the ones that I thought were good. Now it turns out I'm not a representative arcade game player, and so my version of the parameters is slower and gives more opportunity for marksmanship than the arcade version.

Kossow: Right, that's the whole thing with gravity and doing the, what's that called, where you whip around the sun? Does it have a name, where you whip around the sun and you shoot?

Russell: The closest name is the "CBS maneuver" is what happens when two lazy experts fight each other, which is they both turn at right angles to the sun, and fire for 3.5 or 4 seconds, so they're now in stable orbits, and they know it. And then they turn at each other and start trying to place torpedoes where they think the other one is going to be. And so the trails turn into an eye around the sun, and CBS used that as a logo, so it got called the "CBS maneuver". One of the spaceships can go the other way around the sun, so that both ships meet on the same side of the sun. But that seems usually to have less chance of winning. Not much less, but somewhat less.

Kossow: It's better that you stay on opposite sides, then?

Russell: Yes.

Kossow: And then at some point, you added hyperspace?

Russell: Yes, and we realized that that was going— I don't remember whether we actually had it. I may have had it for a little while with no limit, but it became very clear that someone who didn't understand could use hyperspace to escape their proper justice forever, and so we added the unreliability of hyperfield generators very quickly. One thing that Asteroids and the arcade versions, the later arcade versions of Spacewar! added, which actually was a big help, especially with their high acceleration rates, was “training mode” where space was actually viscous. So if you got your ship accelerated so that it was going across the screen so fast you couldn't understand what was going on, if you took your hands off, the situation would gradually become understandable. I don't think I would have been persuaded to do that in the original Spacewar! because it was “unrealistic.” But it definitely made it easier to learn.

Kossow: So are there any other favorite anecdotes about Spacewar!, or just the spread of Spacewar!?

Russell: Well, the "imitation is the sincerest form of flattery"— many people saw Spacewar! as, some people ask for copies of the source, and of course we gave them out because we very briefly considered trying to sell Spacewar!. We realized the only possible customer was Digital Equipment, and we also, on a little reflection, that they were too cheap to do it. So we gave it out to anyone who wanted it, and some people got the listing and thought about it, and by reading it— a lot of people simply saw the game and had a computer that wasn't the PDP-1 but did have a display, and implemented Spacewar! their own way. I suspect most of them figured out the “basic trick”, but I'm not sure.

Kossow: What “basic trick” were you thinking of?

Russell: That you could do everything based on the spaceship unit vector. How are you fixed for the source code for different implementations of Spacewar!?

Kossow: We have a few. I don't know if we have the PDP-10 version. We have the 12 version, and I think we have a PDP-7 version.

Russell: I think Bob Saunders wrote the PDP-7 version. I think one 6 version simply ran on the PDP-1 simulator. I think there must have been others, but I don't know. Something for some history grad student to pursue. When we were running a demo for the Yelp event, there was one woman who had done Spacewar! in turtle graphics as a high school programming project, which she wasn't too happy with. She seemed to like the demo of the original Spacewar!.

Kossow: So turtle graphics running on a micro or something like that?

Russell: I didn't quiz her. I didn't have the opportunity to quiz her further.

Kossow: So she thought this version was better?

Russell: No, she just thought it was nice to see the original.

Kossow: So she was in her mid-20s?

Russell: 20s or early 30s; probably 20s. The DEC field service story where the DEC production people got into the practice of loading Spacewar! the last thing before PDP-1 shipped, and field service would then unpack it, make sure that nothing horrible had happened, tried turning on power, and starting Spacewar!. And if it worked, they would call the customer over and say, "See, it works." If it didn't work, then they'd worry about it. In the restoration project, we had a little reflection and we decided that probably if Spacewar! works, just about everything works, as far as machine instructions go. It doesn't guarantee all the I/O gear works, but it does multiply and divides, and just about every instruction. So a lot of people implemented Spacewar! just from knowing that it existed and having seen it maybe once.

Kossow: Were there any other interesting hacks you remember from back then, at MIT? There's all the TMRC train stuff.

Russell: Yes, under the layout provided, the TMRC had developed a telephone equipment scrounge method, which consisted of the Western Electric Educational Gift Program. The things that Western Electric was giving away to educational institutions came out in a catalog toward the end of the school year. So for years and years, TMRC members would go over to the electrical engineering department supply room and get a copy of the catalog and look to see what they thought the layout could use, ask for it, and then Freddie Broderick, who ran some part of that, got a station named for him on TMRC, would then duly request it from Western Electric, and most of the time it would come through. So there was a carefully sorted store of relays and switches and general electrical stuff, telephone quality, under the layout, which got used for making parts and layout, and also got used for the first two versions of Spacewar! controls.

Kossow: Those were the three-way lever switches?

Russell: The version that I remember quite clearly, and nobody else does, so I think they must have died very early— there was a 1930s design, 4-pushbutton block that was used for buzzing buzzers in an office; so you'd have a receptionist who had maybe one or two or three lines on a phone and when one of them rang, she'd pick it up, find out who it was and then buzz the buzzer to get that person to pick up the phone. Those were nice because you could hold them in one hand and play them like a flute. But they died very quickly; they were designed for being pushed a few times a day, and it turned out that there was a fatigue problem when they were pushed hundreds of times a day. And so they died fairly early. Then somebody, it may have been Bob Saunders, made up the second version, which is the one that's Shag sketched and everyone remembers, which is a wood box with a slanted masonite top, and a left-right-off switch, and up-off-down switch, and a pushbutton. And that was used for rotate left, rotate right for the horizontal one, accelerate or fire torpedo for the up down one and hyperspace for the pushbutton.

Kossow: And were quiet enough that you couldn't tell what the other guy was pushing?

Russell: Yes. They were switchboard type switches, so they didn't click; also the first ones didn't click. And one of the problems with clicking switches, which is what people tend to start with, is you could tell when your opponent is out of torpedoes or rockets because you hear the switch clicking and nothing is happening on the screen.

Kossow: So most of the play, then, was done with the lever switches?

Russell: Yes.

Kossow: So the exhibit that we have isn't really accurate with the pushbuttons?

Russell: No, but those are genuine— those are clicking arcade type pushbuttons. But usually when we do the demo, the demonstrators don't get to the point where that matters. Occasionally, it does. But the improvised quality of the control boxes is quite authentic, and they always were pretty improvised.

Kossow: But they've held up pretty well. It's been running for two years now, and haven't had any problems with the boxes?

Russell: No, in fact, there have been occasional problems with the cables, but given the craftsmanship of the original cable construction, that's not surprising.

Kossow: So go back to 1962, then, when you came out to the west coast?

Russell: Yes. At that point, they were building what was then the computer center complex; I forget the names of the buildings, but anyway. Eichler of Eichler Homes was building them. We were scrounging for— we had some time on a 7090 down at IBM San Jose somewhere. I don't remember exactly where, but we had weekend or nighttime time. So we did a little work on Lisp, and—

Kossow: So this was all 1.5 at that point?

Russell: Yes, and John also had the idea that we could build, we should build a display-based timesharing system using PDP-1 and what we would we could get with custom displays. And he and Pat Suppes worked up a joint proposal to do this. I don't remember the exact dates on that, but at any rate, it arrived, and we also got custom displays from Philco. That took a while, to do the request for proposal and evaluate that sort of stuff.

Kossow: This is all coming out of ARPA funding?

Russell: I think so, I don't remember. Stanford should have it all in their archives somewhere.

Kossow: So how many people were working with John, then at that point? You had come out, so you were working for him full time?

Russell: I don't remember. There was the usual herd of grad students. It wasn't a big herd; I think it was the order of four or five. I don't remember if there was anyone else full-time. I think there were, but I don't offhand remember who all they were. The PDP-1— one of the things that DEC figured out— I'm not clear on who did the pushing on them; I suspect some combination of John and Ed Fredkin provided a lot of the motivation. But DEC figured out that they could build a swapping drum which would replace the contents of 4K of PDP-1 memory in one drum revolution, which meant that the drum had to be 4000 words around, and the data rate had to be a little slower than the 5 microsecond memory of a PDP-1. It was about 8 microseconds, I believe. And because the drum was 4000 words around, you could start the transfer at any point to the appropriate words, to the appropriate address and have it wrap around and end up in one revolution without any latency penalty. That was the basis for doing the PDP-1 timesharing system, the idea being that you'd get a 16K PDP-1, you'd have 12K for system, and 4K for user, and then you could swap users in and out. Part of that was there was a computer science department committee, which included Niklaus Wirth, sort of blessing the operation, the design, and so on. And Wirth was very insistent that the keyboard should include modifier keys. I remember that I resisted this idea; I believe John did, too. But Niklaus Wirth was very insistent.

Kossow: And what did he want to use the alternate sets for?

Russell: He felt that modifying the meaning of a keystroke would be a good additional control mechanism. I don't remember his exact detailed argument. And since they were just contacts, it wasn't very expensive to put them in so it was easier to put them in. And of course as soon as they started working, everybody started using them, and they've been on the keyboard ever since.

Kossow: So this was in addition to the normal control keys.

Russell: No, in addition to the normal shift key. These were essentially an ordinary typewriter keyboard.

Kossow: Right, because they weren't ASCII yet.

Russell: Yes.

Kossow: So why was he [Wirth] called "Bucky"?

Russell: He was very enthusiastic. He got the nickname Bucky Beaver. I don't know exactly the history of that.

Kossow: Just eager beaver.

Russell: Yes.

Kossow: So they were called “bucky bits”?

Russell: Informally.

Kossow: The modifier [keys]. So they were a separate bit in the encoding?

Russell: There was a space bar. There was a space bar, which was sort of at the bottom of the keyboard, and they were just square buttons, maybe just a key and half space off from the ends of the space bar, one on each side.

Kossow: And then when they came back from the display, they were just extra bits that got tacked onto the encoding.

Russell: And since the PDP-1 system— they seemed to be quite useful for editing and the like on the PDP-1 system, so when MIT AI was doing new keyboard system, they imitated it, and they may have added another one. But at any rate, they never fell off the keyboard after that.

Kossow: All right. Well let's take a break. It's a couple minutes to go on here, let's head on into tape number three.

Kossow: This is tape number three of the oral history of Steve Russell. You were just getting the PDP-1 time-sharing system going at Stanford, and you had just gotten the Philco displays.

Russell: Yeah, and we got them going. Philco did custom displays.

Kossow: Were the displays in a room adjacent to the 7090 and the PDP-1?

Russell: The displays had a central controller that was almost as big as the PDP-1. And they had big cables that went out to 12 displays. I think the cable length could be something like 100 to 150 feet. It was one off. **It was done by Philco military people.** It was very high performance for the time, not nearly as high performance as was originally promised, but high enough. It could do text much better because in addition to a high performance deflection system, it had an analog character generator system. So there was a digital memory for the strokes involved in making a character, but an analog system that produced high-speed but small deflection signals to actually draw the character on the screen at the current position. And being high-speed analog being pushed as hard as it would go, the printing— the character set, the first time people looked at it, was nearly unreadable. However, after a week or so, you get used to it just like getting used to somebody's handwriting, and so it was no particular problem, wasn't too satisfactory. And the overall speed of the system was not what was promised, and in fact the negotiations over the final price with Philco started out with, well, the system seems to be performing at about half the speed, so we think it's worth about half the price. <laughs> Things went on from there. But at any rate, they didn’t make a terrific lot of money on it, that's for sure.

Kossow: Could it only draw characters or could it do graphics as well?

Russell: It could do graphics also. It had a vector generator which could cover the whole screen. The reason the graphics were fast was because they just covered a character position. And I think they had a separate deflection coil for the characters. So there was a gross deflection and then a character deflection. But we could run 12 users and the response was pretty good. And you could run 4K PDP-1 program. And it was six…

Kossow: What sorts of programming did you do on that system?

Russell: Other than working on pieces of the various operating systems that we tried to do for it and spending an unhappy summer evening— several— many, a couple of months of unhappy summer evenings debugging the IBM 1301 disk interface, the only thing I really did was a 3-D flight simulator. I didn't do all of it. I think, let's see— Bill McKeeman wrote a program he called GOGOL which was a compiler, a sort of ALGOL 58 compiler, which in fact fit in a 4K PDP-1 and compiled code that fit in a 4K PDP-1. And he provided the flight equations and we had a little— and I think I provided the scenery, which was lights. And so we had a program where you could fly a simulated, real plane. And the landscape consisted of a field with runway lighting and it was night, so there was a town with a grid street display next to the air field. So everything was done with sequences of lights on a line, uniformly spaced lights on a line with a perspective view so as that they gradually disappeared in the distance. And that was instructive but not the— as a game it wasn't too much fun because it was too much— it was very slow-paced. Now, that's realistic. The rate at which things go on in an airplane when it's going crosscountry and not going very fast isn't very fast. But it's a lot more interesting when you can turn around and look at the countryside than when you're looking at a screen and it's night. <laughs> So, that was interesting, but not a good game.

Kossow: The start of the CRT-based text editors were on those though, right?

Russell: Yes, and in fact <laughs> we had— I didn't do the text editors but I was certainly in on the text format and the way things worked. It turned out that we had a pretty good text editor, eventually. We had one problem in that if inserted a lot in the middle of a text file or at the beginning of a long text file, it would provoke copying, recopying the whole rest of the text file to provide some space. The basic storage idea was you had the standard read text routine, which would read a block from the disk. And the block always had the information about how much of the block was actually in use. So for text reading, you would read the block, pick up the word count or— and go that far. And you knew when you got that far you had to go to the next block. So the reading was reasonably as fast as you could do it, but you didn't have to fill the block completely. And so the meta-information, which was the pointers to all the line beginnings, was stored in the top of the block. And there was some more notes in the blocks so as it, I think it started, there was a pointer than said how far

beginnings, was stored in the top of the block. And there was some more notes in the blocks so as it, I think it started, there was a pointer that said how far that extended at the top of the block. And then the space in between was for expansion of the text. And that way, by knowing where all the lines began, we could get reasonably fast searching. And by having the block normally starting out half full, there was room for a lot of editing without requiring any copying or anything. You could just read the block, edit it and write it back or maybe read the two adjacent blocks, edit them and write them back.

Kossow: So these blocks were being swapped in from the 1301 disk?

Russell: The 1301 or— yeah.

Kossow: The drum was just used for swapping or was there a file system on there too?

Russell: I don't remember how it was distributed. There was some file system available on the drum. But it wasn't all that big. I forget, was it 32 files? I don't know. I think there's a brochure for it running around loose somewhere, but I don't remember. May have been just 16 files, but that's still a four files over for non-swap, not involved in swapping. <laughs> As that system got going and with— six displays were for computer science department, six were for Pat Suppes' programmed instruction studies. And when that system got going it had the <laughs> most trying computer bug I've ever had to deal with, which was "the drum with two beginnings". This drum, you know, had a counter which kept a position. And when the system got to be used heavily, what we discovered was every now and then it would— programs would get really trashed and looked like they'd just been relocated— we looked carefully and eventually figured out that it looked like they'd just been relocated in memory. So the right code was there, but it was in the wrong place. And a bunch further detective work indicated that the drum was sometimes screwing up the locations where it was swapping the addresses. And…

Kossow: Did it appear to be swapping on 4k boundaries?

Russell: It was still doing 4k boundaries, but it was just relocating the 4k that was swapped into different addresses, modulo the 4K. Well, there was much weeping and a great deal of study. Of course this only happened when it was in heavy use. So we had to whip up a diagnostic to show it, which we managed to do. And then we called in the DEC and Vermont Research who had made the drum and they determined, oh, it seems there are two beginnings to this drum sometimes. Turns out, the way they got the index mark was they had one track reserved for the index and one track reserved for clock. And what they do is write a single transition on the index track, which was the beginning of the drum, and then write 4,000 words, 4,000 pulses around the drum and twiddle the frequency of the writing when they were writing the clock track, so as that there was some gap, but not a very big gap between the end of the 4,000 words and the beginning. And they'd always start writing when the index results came around. And that was fine. But it turned out that when things were very busy and there was lots of writing, you were doing writes and reads at the same time, in some cases, there would be enough cross-talk to generate a spurious index pulse, which would zero the counter.

Kossow: How did they get around the problem?

Russell: They moved the twisted pair that carried the index pulse signal carefully away from everything else. But that was a long saga, because it took at least a week, I think it may have been more than a week, to get it all sorted out. And there were lots of people standing around, you know, when is it going to be fixed? When is it going to be fixed? And to debug it you needed the whole system.

Kossow: So you had to run it really hard and then you could put a scope on the index and every once in awhile see this erroneous pulse.

Russell: Yeah. And this is before the day, you know, with the modern storage scope there'd be no problem. But this was the days when you put a hood on the scope and twiddled… <laughs>

Kossow: And tried to see the extra little thing that isn't there very much. The learning group kept using it after John moved off to the PDP-6?

Russell: Right.

Kossow: So that was about 1965?

Russell: Something like that. I don't remember the times. You know, I was busy with setting up the PDP-1, herding the PDP-1 maintenance and at the time then, we got the D. C. Power Lab and there was a bunch of setting up with that and getting the PDP-6 to work. As I say, I don't remember the times, but the PDP-6 was more or less working, and I left in about '68 I believe.

Kossow: I was just reading John Markoff's book and the whole story about how the D. C. Power building happened, and that there's nothing inside of it, and there was no air conditioning…

Russell: Oh yes, there was air conditioning. There was the Great Mother Of All Air Conditioners. <laughs> No, the central air conditioning had been provided and there was a 300 ton, a BIG 300 ton air conditioning unit down in the basement. And that was always fun for us because— well, usually it was fun. When it didn't work, it wasn't fun. Anyway, it eventually, because it was so big, we started calling it the great mother of all air conditioners or GMOAC. <laughs>

Kossow: So was it a central unit supplying the whole building?

Russell: Yes, the whole building.

Kossow: But it wasn't enough air conditioning with the 6 in there and everything else?

Russell: Oh no. No, it was designed on the idea that it was offices. And a big computer room with that vintage computer was a lot more than offices. And of course offices, you know, had a desk and a light. It didn't have a computer on the desk. The neat thing about the basement was, it was a partial basement and was all concrete. And it was curved, the building was curved, so it was sort of a science fiction location. And taking people down there and leading them into this room with this giant green machine was sort of surreal. We liked taking people on that part of the tour.

Kossow: So you ended up having to shuttle a lot between campus and there?

Russell: Yeah. And eventually I ended up at the, in the Power Lab.

Kossow: So you overlapped with Les [Ernest] for a couple of years?

Russell: Yes, yeah.

Kossow: What did you end up working on out at SAIL?

Russell: Mostly herding maintenance and connecting peripherals and that sort of stuff. There was plenty of maintenance to do on a PDP-6. We had,

generally had one or two technicians to help with that but I was supervising that. You know, there were lots of things happening.

Kossow: Widgets being built and robots running around?

Russell: Well, and we were debugging hardware while the time-sharing system was running, which was periodically exciting for all concerned.

Kossow: Do you have any interesting Dave Poole stories?

Russell: <laughs> Let's see. I don't think I was there. I wasn't very aware of the tree house. What was it? I don't remember. <laughs> The PDP-6 was stretching the technology, it turned out. It wasn't planned to be, but it was. And so many things in the PDP-6 were marginal for one reason or another. One thing that was marginal was the memory bus, which was DC, marginal at DC at full length as— in hindsight what I say now is that the notion of noise margins was not well developed at the time those circuits were designed. I don't think they calculated noise margins AT ALL. At any rate, there was an additional problem in the memories that we had, which was that they had— they were built with the latest two-sided technology at the time, which involved, at the time they were designed, which involved eyelets instead of plated through holes because plated through holes weren't considered reliable and probably weren't reliable for quite a while. I wasn't exposed to early unreliable plated through holes. It turns out the eyelets were brass. And the idea was, you put the eyelet through the board and you just crunched down and flanged it out. So, on the side you had a eyelet that was flared out at about a 45 degree angle and a piece of etch running up to it. And when it got soldered, you had a solder fillet in the, between the eyelet and the etch. But it also turned out that the coefficient of thermal expansion for circuit board and brass was not the same. So as the system heated and cooled, there was always a little push and pull. Now, solder doesn't behave well under tension, and under repeated stress tends to fatigue and crack. And the cracks tend to corrode. And it turns out that lead oxide or tin oxide or some combination of them makes a poor but intermittent diode. And so <laughs> the essence of the thing was that the memories kept developing cold solder joints. And so we ended up with a program of doing what we called running mechanical margins. I revealed the method of running mechanical margins to the PDP-1 restoration group a year or so ago, and they were amazed. They just weren't familiar with this. Anyway, what we did was we would run the memory diagnostic and start tapping gently on all the boards in the memory that had this problem. When the memory diagnostic rang the bell to say there was a memory error, then we'd start localizing the tapping to try and locate the board. It turned out you could do this fairly reliably. And the alternative would have been to take the computer down for something over a week and redo all the joints, which was a really big job. And we concluded it was better to run mechanical margins for a couple hours once a week than do that. And what we'd do is we'd…

Kossow: So you just take the handle of the screwdriver or something, just tap on them?

Russell: Tap gently. Because, if you tapped on the back of the board that had the problem, you'd get pretty consistent failures and it you tapped on its neighbors, it wouldn't be consistent. So then we'd pull the board and redo the connections on that board. But it was kind of laborious because the fix we used was, we'd take a piece of copper wire, we'd clean out the solder in the eyelet, we'd take a piece of copper wire and run it through the eyelet and then solder it on both sides. And so then when the eyelet stopped conducting, it didn't matter. But there were like 40 of those on a board, so— and there were, you know, lots of boards on the machine, so it was ugly. And as part of this, the system programmer decided that I needed to be alerted whenever there was a memory problem. And so whenever the system detected— they fixed it so whenever the system detected a memory error, it rang the bell on every teletype in the building. <laughs> So there was no escape. And this was when all of the office terminals were teletypes. So it was…

Kossow: How long did it ring it? For, like, a minute or just once?

Russell: No, just once for each error. At any rate, because of this memory intermittence, there was— we did have problems on acceptance test too, or DEC had problems on acceptance test. And Bob Clements was the DEC engineer who herded the acceptance through. I don't know whether he was still working in field service. He started working in DEC field service and he went on to engineering fairly quickly. But anyway, he was herding the acceptance and because the memories were so intermittent, we kept finding memories problems and reasons not to. And eventually, the final acceptance involved Dave Poole stomping up and down on top of the memories and having the memory diagnostic continue to run without reporting any errors. <laughs> It was a nice high computer room, so you could easily stand on top of the boxes and jump up and down or stomp. I don't think he was jumping up and down, he was stomping.

Kossow: How big of a hardware crew was there back then, a dozen people? How many people were at SAIL when you left in '68?

Russell: I think there was like 25 or 30 offices. I'm not sure. You know, some of them were two or three students to an office, some of them were individual. Let's see. What was it? There was a technician for sure, and usually another engineer working on hardware and on some combination of maintenance and hooking up new stuff, because there were various arms and TV camera and other things getting hooked on. So…

Kossow: So by the time you left, you weren't really doing much programming at all?

Russell: No. And when I left, I went to work for a startup in Seattle called Computer Center Corporation. And there it was some amount of herding the DEC hardware people and a fair amount of customer training and some helping with applications-type programming, but not much programming.

Kossow: Were they KI10s by that point or KA10s.

Russell: No, KA10s. This was the first round of time-sharing startups, Applied Logic and CompuServe, and Computer Center was a little late in that but essentially the same group.

Kossow: So where did they come out of?

Russell: University of Washington computer people, mostly, and me and Dick Gruen from variously DEC and Stanford. The . . .

Kossow: Did they end up adding any special hardware to the KAs?

Russell: No. <laughs> The communications hardware was really special. I forget what it was called. It was the Straight-8 with the bit banging teletype hardware attachment instructions.

Kossow: The DC01? It wasn't the 680.

Russell: Maybe it was 680.

Kossow: Okay. So it was like a 32-channel teletype multiplexer?

Russell: But it was done by adding, in essence, a "receive one bit and transmit one bit" instruction to a PDP-8. And so the software had to change the base address, do the instruction and then change the next base address. And I forget the horrible details, but at one point I wallowed in them to try to put in five-channel teletype code, to mix five-channel and eight-channel in the same line, which was in principle possible, but in practice very hard. That was GENUINE

PDP-8 programming, where you look the— <laughs> you got these…

Kossow: Count the cycles?

Russell: You had the assembler listing with all the timings and you kept adding them up and worrying about it. But the thing that was especially memorable about that was the console. The PDP-8 was a Straight-8, installed on a rack, but still a Straight-8. And we had a problem with static control in the computer room. I think they didn't put any humidification in originally, and we also had some cheap plastic chairs in the computer room. And at one point in the middle of winter, I remember sitting on the chair in front of the stopped 680 and getting up and having the chair go zap, zap, zap, zap to the strips at the side of the floor tile, and sitting down and having it go zap, zap, zap, zap again, and watching the PDP-8 program counter increment. So to keep things running, we had the— during the daytime we insisted on no shoes in the computer room. And <laughs> don't get anywhere near this PDP-8. We also had a giant Bryant. This was the big giant— the big Bryant moving head disk there, first moving head disk which had a hydraulic actuator and…

Kossow: All these vertically stacked platters.

Russell: Yeah. That was not as reliable as was desirable. But the main struggle was we just didn't get enough business. And so eventually they went out of business. And at that point, I guess I had annoyed DEC sufficiently that they thought maybe I would be useful in marketing. And so I started working for Digital.

Kossow: There's the one little story that you had a couple of testers up in Seattle.

Russell: Oh yes, yes. We did have a testing program. Was it TOPS-10 by then? I'm not sure. At any rate, the multi-user operating system for the PDP-10 was not a paragon of reliability. In fact, it started out with a pretty dismal mean time to failure. And so we had a couple of people working on basically fixing, full-time, fixing bugs in the operating system. And there was no real lack of bugs to fix. Monique Rona had— was one of the principles, and her son was going to Lakeside School. And so she arranged that we could— we give some time to the Lakeside School who had got a teletype. And we also had built a training room which had six or eight terminal teletypes in it. And what we would do is on Saturdays especially, we'd open that up to the Lakeside students to come in and load test the computer. We wanted lots of people. And the rules were, you can do anything you want, you can try to break the system if you want. But if you do manage to break the system, you've got to tell us what you did and don't do it again until we tell you. And this was quite fruitful. We collected heavy load bugs this way. And two of the students were Paul Allen and Bill Gates. And they had to be admonished several times about the "don't do it again until we tell you" part of the rules. But they certainly had a great deal of fun and they evidently learned quite a bit.

Kossow: You remember anything in particular that they did?

Russell: No. They asked lots of questions. And one of the things that we would do at Saturdays was, Dick Gruen or I or somebody would be in the terminal room, or periodically stick our nose in the terminal room, make sure that the pandemonium was under control, and answer questions.

Kossow: So how many terminals did you have in the terminal room?

Russell: I think it was six or eight. The idea was, you'd use it for doing training classes because we were training people and using— I think we had BASIC by then. **There was one professor at the University of Washington was using computer time who was very annoying. And I had sort of heard of his reputation. I hadn't dealt with him directly when he started. But I got him a couple of times, and knowing his reputation, I had somehow set my mind that I was not going to be annoyed by him. And I managed not to be, which was a little surprising, and I tended to have relatively short patience. And so since I didn't <laughs> run away, I'd swear never again when I talked to him, I got him for, as— you know, if he had a call it got to me very quickly. And eventually, we got to be quite good friends and he was— we got along well. But it was mostly because I had decided for some reason that I just wasn't going to let him annoy me. Now, I don't usually do that, and I've not done that a number of times since when it would have been a good idea. But…**

Kossow: But you managed to get through it. So would this be 1972, 1973 then when you went to DEC?

Russell: Yeah. I started in DEC I think in late '69 or '70, something like that.

Kossow: So the time-sharing business didn't stay around very long then at all?

Russell: No. Well, it managed to operate, it turned, out nine months after its net worth was zero, which was rather amazing.

Kossow: Just ended up not paying the bills for…

Russell: Yes. Well, you know, those things like travel agents and…

Kossow: But you were out of there by then?

Russell: Well, no, I was around, sort of, as a spectator, as a bemused spectator, sort of preparing for the next paycheck not to appear.

Kossow: That's what I was wondering, if they stiffed you for your pay. You managed to get out of that.

Kossow: All right. This is tape number four of the world history of Steve Russell. **So we're launching into your career at DEC.**

Russell: Well, let's see. I started out in PDP-10 marketing, which translated as maybe marketeer. And what that translated to was running benchmarks and explaining sales pitches of a certain amount of system configuration. And I started out in building 5 in the mill of 5/5. Let's…

Kossow: So this was still before the KI10 came out? They were still selling KAs?

Russell: I don't remember the exact phasing of which…

Kossow: Because it was right around then when the KI10 came out. Did you end up going on field trips a lot to customers?

Russell: Not a lot, but some. And one of the more memorable disasters was Bonneville Power Administration— actually it turned out quite well. But Bonneville Power Administration was looking for a central computer to gather together the data and to run predictions. Because Bonneville Power is the federal agency that runs most of the power dams in the Columbia Basin starting with the Grand Coulee. And one of the problems that they wanted to optimize was when they— the water storage is almost all upstream in Grand Coulee and a couple of other dams up at the headwaters. And so once they let water out of Grand Coulee or the other storage reservoirs, the water goes down to the sea sort of irresistibly over a period of about 48 hours. And what they want to do is optimize it so that they don't let any water go over the spillway and get wasted on the way, they want to go through turbines and generate power. And so by regulating when they— how much water they use in which dams, they can try to optimize it so that the head is

turbines and generate power. And so by regulating when they— how much water they use in which dams, they can try to optimize it so that the head is the maximum and yet none of the water goes over the spillway.

Kossow: Were they worrying about peak demand then, as well?

Russell: Yeah. They knew what their demand pattern was. But they also wanted to keep track of what was going on in real-time for reporting. And so they had a real-time benchmark. And I was one of the guys working on the benchmark. And one of the things we had to do was time a number of things. And so we got the benchmark running, the usual style, late at night, and came the big demonstration. And we started it, started running the benchmark, and things were all right for a bit. But then it started coming up with negative elapsed times for some of the tasks. And we scratched our heads a little and figured out oh, it was because one— we were triggering one of the start or stop, I forget which from one— from the internal crystal clock and the other one from the power line clock. And so when the power line clock was slightly off when they were making up for the power line having gotten slow, then we started getting the negative elapsed times. Well fortunately, Bonneville Power understood that explanation. And so as we were— the two of us were sort of commiserating after the long demo and trying to wind down, the salesman came bouncing in and said, "Hey boys, you're in real luck. I persuaded them to give us another chance," to which our reaction was, "Oh, shit," <laughs> because we got to work our ass off for ANOTHER two weeks.

Kossow: So you switched everything over to the crystal clock?

Russell: Yeah. We fixed the timing problem and ran the benchmark. The benchmark worked fine. They bought the system and much later the salesman gave me a tour of the Bonneville Power Control Center so that worked out all right after all. But it was memorable, and continued my education on benchmarking.

Kossow: So then you stayed in marketing support for a couple of years?

Russell: Yeah. Wasn't too much too memorable other than that, I think. I did herd a product through the process. It wasn't a very big product. There was a remote printer for the 10 systems, which had PDP-8 and a card reader, and a printer, and some Teletypes on it.

Kossow: Ran over a synchronous line?

Russell: Well, yes. And the printer was inexpensive and had a cam instead of a— this more or less standard paper tape— wide paper tape carriage control unit like the IBM printers have. And I wrote it up something like "a vertical format preset to 11-inch forms." And I guess I did a pretty good job because the salesman on the account that was complaining, that wanted to run checks or something like that called up and said, "Does this mean it does what the customer wants?" I said, "No. It's just describing what we have and it still doesn't do what the customer wants." But at least the salesman read it. Dick Gruen's [ph?] joke was, "He was never sure that the salesman read any of the technical material, but he's QUITE sure that they knew every detail of the commission plan." Of course the DEC commission plan was very simple. There wasn't any.

Kossow: So the salesmen were always straight salary?

Russell: Yeah, which has benefits but had its disadvantages, too. The DEC sales force was clearly not in the IBM league, and the IBM sales force certainly had a commission plan. But one of the things that I've noticed is that IBM was very careful to use their very best salesmen to sell this year's commission plan to the sales force. Because they always changed it every year to emphasize the things they wanted to push and deemphasize the things they didn't want to push or would sell themselves, they felt. And they had very good salesmen in sales management to sell this— the opportunities in the new plan to the sales force. So it gave them an opportunity to fire up the sales force again at least once a year. And if you don't change this commission plan, or don't have one, you have to try and invent other opportunities.

Kossow: So then you ended up in Computer Special Systems after that?

Russell: Yeah. One of the things that I ended up doing was configuring special systems. And at one point they decided to put selling standard systems in one group and selling special systems with one-off configurations and special peripherals in another group, and I ended in that group and ended up doing a lot of figuring and some amount of sketching out solutions for, you know, listening to customer problems and sketching out solutions. Oh, I guess it was before then, one of— this— because I worked on the remote printer thing I got also involved in the software. And the first version of software had a problem that it was written by a guy who was somewhere around the world's worse software designer, but unfortunately one of the world's best debuggers. And so he had debugged this software almost into operation. And he left, and I had inherited it. And it was in a race with one of the other guys in the group who was rewriting it reasonably from the ground up. Unfortunately he won the race, but I was only two weeks late, but it was a real slog because it was all PDP and assembly language. And it was a full PDP- 8 and it was full standard PDP-8 program, out of time and space. And to fix bugs, what the original perpetrator had done was say “oh, it fails under this condition, this condition, this condition. Okay, I'll recognize that and then get around the failing code.” So the code kind of grew, and ran out of space, of course. So a fair amount of the time what I would do is discover I didn't have enough space for the next patch that needed to be put in. So I'd run through and find all the flags that indicated the various horrible conditions that were no longer used because I had removed the problem, and eliminate the code that set and reset those flags, then run a cross-reference again and discover some more code that that eliminated. And so I do this algorithmic simplification for about a week and then I'd have enough space in most of the pages so I could do some more patching.

Kossow: The standard PDP-8 programming, where it doesn't fit, and then you squish the subroutines until it fits. And then you repeat.

Russell: Repeat until done, yes. It was educational but not particularly rewarding. And as I say, it took just as long for another guy to rewrite the code from scratch with a little discipline and get it working as it did to fix the broken code. And, of course, the final result was infinitely better because there was still some space to add features.

Kossow: But somebody in management give this guy the task of doing it.

Russell: Yeah. Ah, yes, there was COBOL. One of the things that was going on was Digital was writing COBOL for the PDP-10, or was getting a COBOL for the PDP-10. I don't remember if it was all in-house or external. And so I tried using it. I did a TMRC timetable in COBOL. Well, I'd never written COBOL, so I was sort of using the manual and what I knew. And so I ended up using multiple subscripts on an array. I forget what else, but basically what I was doing was writing FORTRAN in COBOL. Well, apparently nobody had tested those things, and so, in particular, the double subscripted array just was just plain a bug. It just started out not working, so I filed a software performance report. Funny how they always report bad performance and never— very seldom saw one with good performance. At any rate that got fixed and the program eventually got working. And it turned out one of the things that we needed was indexed sequential access. This was an IBM buzz word that was around and it's basically an indexed file. And it turns out to be a— it was very useful for random access files because you could look them up on the main index and you could get to essentially any size file that you could hold in about three disk accesses, which is wonderful compared with doing it sequentially or almost anything else you can do. And in fact, it's about as good as you can do. And so I ended up writing some ISAM routines for COBOL. And I hadn't particularly looked at other— the IBM implementations were sufficiently surrounded by jargon that it

was hard to penetrate what was going on. So I sort of winged it and ended up with essentially the right solution. And that worked and sold a system, I believe. And unfortunately there was one bug which I never got fixed, which was if you deleted— if a block got completely deleted and went to zero, somehow it— the pointers got confused and the software crashed. Didn't damage the file but it did crash and you had to restart it. But that was interesting, and the solution was very neat and very nice. I used something like the Stanford trick where in the block there was some metadata hidden up at the top of a block. But at least you didn't have to copy the block forward, you just split— when a block filled up you just split the block into two new blocks. And then one write of the index, change the index from pointing from the old one to the new one. So if you had atomic writes, which the hardware usually did, the file would be in good order no matter what.

Kossow: So I guess this is right around the time when the Magnavox lawsuit happened and you had to dig up all the old Spacewar! code?

Russell: Yeah. The time Magnavox lawsuit was happening, I don't remember exactly what the timing on that was but I had to— they wanted copies of Spacewar!, and so I dredged up my copes of Spacewar!. I made some copies for myself and gave them the originals which had the date of my writing on them, and which eventually I think came into the computer history collection, and did a deposition, which didn't go very well. That was about the most reward I ever got for Spacewar! was I got a free lunches from— free dinners from the lawyers. I guess I didn't mention that when Spacewar! was written there was— in principle we were not allowed to patent software and you couldn't copyright it. So there was basically no protection for programs at all. Later on that got changed, but that was the situation with Spacewar!. The only choice you had was never revealing the sources or making them open.

Kossow: Which was hard to do in a university.

Russell: Yes.

Kossow: How long did you end up staying at DEC?

Russell: Eight or nine years. After Special Systems, I went off on a consulting contract to New Zealand which was fun for me, but worked out really poorly. And so I ended up getting shunted off into running the message switching system, the internal Teletype message switching system and herding that for a while, while a new one was being written.

Kossow: So it was like an internal TWX system?

Russell: Yeah. And then eventually I got disgusted with that and tried to fit in another couple of places and that didn't work. So I got laid off and after a while started working for Chase Interactive Services, which was a interactive money transfer subsidiary of Chase Manhattan Bank, which was located in Waltham and was doing money transfer on IBM, big IBM 360s. And I did software on that in COBOL, and also ended up dealing with a worldwide communication system. One of the disadvantages of being in Boston and having the bosses in New York was you've got to have meetings in New York. And Boston wasn't far enough away so as you could do it overnight. So you had to get up at some God-awful hour in the morning, get to the airport, take the shuttle and get into New York about 10:00 and have your— have a day full of meetings and then go back, which made a long and ugly day. I learned a certain amount about expectation control, I guess, from that. There were two pieces to the system. One was a domestic money transfer system where people would deposit— typically branches, subsidiaries, licensees would deposit money in— at various remote locations into some kind of bank account and would call in what they had deposited. And Chase would accumulate it all and make it available as a usable balance for the customer. And so that involved a lot of phone calls of people calling in. And they would typically just call in the dollar— report an account number and a dollar amount. And we had a phone center that took those calls and typed them in on various types of terminals. And the thing I learned from that was that even trained and skilled operators who did that for a living still had a 1% error rate or so. And that's really the best you can hope for, for any sort of keying operation or most any sort of thing that people do. It was constrained, they got plenty of practice. They were reasonably motivated. They weren't dumb. And that's the best you can do. And you still have a lot of people who think they don't make mistakes, and they do. They make at last one percent. And if they're really bad they make 15%. And that's what you have to deal with in designing a human interface.

Kossow: So there had to be all this audit stuff to reconcile the errors?

Russell: Yeah, banks have been running with people for centuries. So the controlling that and dealing with fixing it up was a well-understood and routine operation. The worldwide money transfer system had another problem. It was a state of the art system with PCs, out in the far corners of the world, and it handled big money transfers. Unfortunately the software on both our end and the PC end was not perfectly reliable, it turned out. And the standard sort of problem would be you'd get an operations vice president from Tokyo, or London calling in and saying, "We've got to close the books in 15 minutes and we can't close the books. You've got to do something." Now, unfortunately, closing the books in London, New York, and Tokyo and Sidney is nicely distributed around the clock. So these calls would come in at 6:00 in the morning or midnight. And so it was an unpleasant support nightmare which I started out handling with three or four other people and eventually it got down to two. And when I announced I was leaving, the other person stopped speaking to me and never spoke to me again.

Kossow: Did you just end up digging through the database trying to find out…

Russell: Well, that was what I learned out about expectation control. It turned out the right thing to do was to do a very quick look or a quiz of the reporter to find out about what the problem looked like and then call my boss, so my boss got the word before it came down— before the shit started coming down from above. And so it ended up spending about half-time telling my management what was going on and the other half of the time actually working the problem. And sometimes the problem wasn't soluble, and there were times when we were told we had to close the books in 15 minutes and the books didn't get closed.

Kossow: So they can't close them till they balance?

Russell: Yeah. And if the system won't give them any numbers they don't even have the raw material to balance with.

Kossow: So this is the early '80s then, so pretty much everything is 370s so you're not working with batch anymore?

Russell: No, this was CP/CMS. Just sit at a terminal and correct the COBOL and then tell it to try it, and look to see what happened.

Kossow: So then at some point you moved back to the West Coast? Well, I guess so because you're out here now.

Russell: Yes. <laughs> Tom Zito was a…

Kossow: Well, he's ex-Atari.

Russell: He was promoting the idea of doing video games on VCR— on TV sets. He was starting an operation as part of Nolan Bushnell's Atari. Actually I forget, only very briefly I believe we were part of Atari.

Kossow: So they were still in Borregas in Sunnyvale?

Russell: We started out in the— where was it? Maybe it was always Axilon. There's…

Kossow: That's where Androbot and…

Russell: Was it currently— well it's not clear. There's this rusty building on— just off Lawrence [ph?] by 237.

Kossow: The triangle building?

Russell: No, it's not triangle, it's square. But the COR-TEN self-protecting steel siding, so it's a dark rust color, and that's where we started out. The building's still there. The enterprises have changed at last once.

Kossow: I was thinking of 280. The triangle building's 280. Yeah, 237.

Russell: Like the Mill, buildings stay through an awful lot of enterprises.

Kossow: Yeah, it's like that whole corner down 237 in Sunnyvale where CDC used to have all their software operations. It's down in there.

Russell: Anyway, that was the start…

Kossow: How did you end up getting linked up with Zito and the people on the West Coast?

Russell: Zito knew of me because of Spacewar!, and thought that since he was in the game business I would be an asset. I guess I was, but, you know, the whole enterprise didn't work out perfectly. But the idea was to record special material on a VCR tape and play the VCR, use your VCR, to play into a special box which would have game controllers on it and allow you to play a game on your TV set with TV-quality pictures. Now at the time you couldn't afford to synthesize them. There wasn't enough computing around to do that.

Kossow: And it would have been cheaper than a video disk.

Russell: There was electronics for doing frame storing. So with a frame store that held a couple of frames and a control box, you could selectively pick frames off the interlaced video on— from the VCR and so you could switch around. We developed the electronics. And the way it finally worked out was you could have four live video streams and periodic other updates. So what you could do is do a mass design which had the game control stuff on it and you could pick one of four video streams to show live at almost video quality in the picture window that was let through by the mask. And so you could do various sorts of games. And the two kinds of games that we ended up developing were either sports games like football where you got to choose what move to make and then it played out, or a surveillance camera sort of thing. There was a title, Night Trap, which got transmogrified through a couple of different iterations but started out in the video version. The idea was that you had a surveillance camera that looked at a bunch of places in a house. And the house was being used for a weekend party by a bunch of teenagers and was invaded by some evil monsters called Auger, which look like human beings in black leather. Look amazingly like human beings in black leather. And the idea was that the house had traps, trap doors in it. And you looked around and figured where the monsters were coming in. And if you saw one, if you hit the trap door at the right time it would disappear and you'd get a score. And if you didn't get them all then the teenagers were carried off by the monsters and you lost. But if you did get them all then you'd save them and so on.

Kossow: What year was this?

Russell: Not quite sure.

Kossow: Mid-'80s?

Russell: Yeah. So that wandered on through development in a couple of demos, and it got sold to Hasbro. So it was Hasbro Electronics for awhile. And we got that developed to the point where it was a go/no-go production decision, and Hasbro decided no-go, probably correctly. And so that folded up and I went off and worked for— did various sorts of consulting and ended up working for X-Ray Instrumentation Associates for a while doing gadgetry for x-ray work. And then it revived itself as digital pictures which was taking the same video material and more, and fixing it so it would play on PCs and Macs. I think that was around '85, '86. It was just when we were going from Windows— from DOS to Windows, I believe. No, I think it was going— yeah. And so I ended up taking the code that had— the C code that had worked on the Macintosh and bashing that into submission working on a PC for Night Trap. And that just barely got out and got published. And we did not have a successful Christmas season, and that folded up. Then I was looking around and started working for Nohau who made microprocessor emulators. And what I was working on there was software which was interacting debugging for C programs. So this is back to making DDT. But the machine was considerably more complicated and it was more C stuff, and so it was considerably more complicated. And the disassembler actually was worse than the PDP-1 disassembler, but I never— it was never the worse problem that we had to deal with so I never ended up…

Kossow: So it was for different microprocessor targets?

Russell: Yes, 8051s was our staple business and it's changed hands, but that business is still sort of alive. And I was working on Motorola 68000s and 6800s mostly.

Kossow: This is Tape No. 5, the oral history of Steve Russell. So you had switched then from mainframe work, through games, into tools and debuggers and things like that. So we're kind of into the early '90s.

Russell: Yes.

Kossow: So you've been working on tools since then?

Russell: Yes. Tools and, you know, board and microprocessors, board support type, but debugging and board support type tools.

Kossow: Like embedded systems?

Russell: Yes.

Kossow: And you were, I'm trying to remember, the company that you're with.

Russell: Nohau.

Kossow: Nohau. Oh, those are the little, white boxes that?

Russell: Yes.

Kossow: Ah, okay.

Russell: The original scheme was you have an 8051 on a board, and a tentacle so that you can plug it into an 8051 socket. And you can run the 8051 programs in the one in the box at full 8051, full, old 8051 speed, and operate your board as if the processor, as if it was plugged into the board, but you get debugging. You get visibility on all the memory references and a reasonable debugger, so that you could do source-level debugging.

Kossow: So it had like overlay RAM and then address traps and the usual sorts of things that in-circuit emulators have.

Russell: And that whole business kept getting transmogrified as the chips got faster and faster and denser and denser. The original scheme played a lot of games which depended on the original 8051 architecture. And as it evolved, and other people started doing 8051's, that kept having to get tinkered to deal with the latest hardware. And they also did ones for the Motorola 6800 family. There was a 8-bit 6809 derivative family that was system on the chip, and 68000 derivatives that were systems on the chip. And there the interface was considerably different, because they had different memory interface, and they had background debug mode, which was a not many wire debug interface to the processor.

Kossow: So these were the CPU32 [Motorola CPU 32 processor family] things. Little ten-pin connectors.

Russell: Those got used a lot. The Motorola systems got used a lot in the automotive business for ignition control, engine control, and miscellaneous function control. So they could afford relatively luxurious debugging facilities, although they eventually got over it.

Kossow: And so did you end up working on the firmware that was in the boxes, or the tools that ran on the PC's that controlled the boxes?

Russell: Both. It turned out I was primarily working on the Motorola or Freescale systems, and there you didn't have to do much in the box, but you had the single wire, or not many wire debugging interface, which is basically a serial half duplex interface to talk to the memory and do run control on the processor.

Kossow: So were they bought out by Arium?

Russell: No. Nohau went bankrupt a couple of years ago, and the business got bought up by ICE Tech [ICE Technology], and ICE Tech is still more or less a business. They aren't doing much software development, and I don't believe they're doing much new design, but they're selling the old products and supporting them. And there's still quite a bit of 8051 business apparently, and there's some Motorola business still, too.

Kossow: Did you ever work with ARM at all?

Russell: Only very, very peripherally. Nohau did support ARM, and occasionally I had to help with it, but I didn't have to get into all the details of ARM.

Kossow: Okay. So when did you get involved with the Museum? Were you involved much at all with the Museum in Boston?

Russell: I was involved in the Museum in Boston only in coming to the Spacewar!, the PDP-1 revivals, or one of them for 15 through 20th, or something, anniversary of Spacewar!. That must have been when I was working for DEC. There's a picture from that on the wall somewhere. And then I was working. Let's see. When I got out here at one point I got vaguely involved in the Computer History Museum in that I unloaded all my back issues of Datamation on them. Not a terribly unique contribution, but at any rate it cleared out my garage a little. And then I kept an occasional contact. They had a Spacewar! revival at Moffett where Bill Pitts had a computer, had Galaxy working. So, you know, they knew more or less where I was. And so when the PDP-1 restoration project got started, they got in contact with me, and I sort of said, "Yeah, yeah, do it." And then for the first, I think, two years, mostly what I did was monitor the email, and when they were saying, oh, my God, the display doesn't work, or the paper tape reader doesn't work, I'd say, "oh, yeah, they used to fail."

Kossow: And you've been getting more and more involved ever since.

Russell: Yes. Well, now I get a new audience every couple of weeks, so I can tell the same old stories.

Kossow: Bill Pitts.. that just reminded me. Did they have much contact with you while that was all going on? Did they ever talk to you about Spacewar! back then?

Russell: Back when?

Kossow: When they were working on Galaxy Game?

Russell: No. Bill Pitts, you know, he was hanging around the AI project when I was working there, and he certainly knew what Spacewar! was. And shortly after I left, he got the idea that he could build a multiuser Space War PDP-11 and collect quarters, and he did. And he and Ted Panofsky did a fair amount of work restoring that system. And he has grumbled at me several times since that the Museum doesn't keep it working.

Kossow: Yeah. Do you have any other thoughts?

Russell: Well, there is a pitch for a pet project or two I'd like to do. One of the things which I believe I can still do. We don't have working Flexowriters, and I can't demonstrate it. But I believe I can show how, in the thrilling days of yesteryear, how we used to edit programs on a Flexowriter and give some impression of how slow it was but how it was still possible to get work done. And I think a mercifully short video can be made of that, and I think we can also do something that's longer and is a useful full explanation. But I think somebody, probably me, needs to do some writing. Because my impression is that something like that, the mercifully short demonstration especially isn't going to fly if it isn't scripted. Not that I'm good at following scripts, but writing the script is a good exercise and it allows you to time it. And if you rephrase it on the fly, then it usually doesn't upset the timing too much. Actually, I think it would also be useful to get a similar thing for a keypunch, as there some of the details of card drifting and stuff that are important to getting things done and make it a little less painful. But actually I was thinking that one of the things— Remember I mentioned with Lisp how, if we had segregated the storage, it would have been a lot easier to debug, and there would have been a lot fewer garbage collector problems? That is something which nowadays with good editors, and programmable editors, and easy copy and paste, I wouldn't hesitate to think about if I had a program like Lisp stated without the garbage collector, I wouldn't hesitate about going back and segregating all the storage and doing those changes. But in the days of cards, when doing this to a card deck involved a great deal, no checking and a great deal of grief, it was just sort of something that was just too horrible, and it's now something which I would easily consider doing.

Kossow: Yeah. Just the state of tools that have. People complain that the tools really haven't evolved very much, but, right. Yeah.

Russell: <laughs> Well, one of the noted but forgotten, but unread pieces of literature is this Mythical Man Month. At Juniper, where I'm working now, we're dealing with a version of FreeBSD and applications, which is huge. At last report there were something, there were claimed to be 6,000 software engineers

working on it. And they're complaining about we aren't getting features done on time. It takes too long to do a compilation. You know, all of the tools are just too slow.

Kossow: Maybe the code is just too big.

Russell: Yeah. But the code is probably at least one, and probably two orders of magnitude bigger pile of code than the system 360, which provoked Mythical Man Month.

Kossow: Right. And in 2008 the size of systems that we're trying to deal with are just so much bigger than was being done in the '60s. Right?

Russell: Yeah. And one of the other things is almost none of those software engineers are writing— are dealing with brand new designs. They are dealing with an extension or a modification of a current design.

Kossow: Or they're implementing something that's a standard.

Russell: Yeah.

Kossow: That you have to deal with what is the—

Russell: Or taking the standard thing and it's got a new. Well, okay, this worked on last year's hardware, but now we have this year's hardware and the interface is different. And the system starts out on a dual-core control system, and that actually deals with a third of maybe four to 32 separate subcontrol systems that actually shovel packets. And those are now being implemented on N-Core MIPS systems where N is greater or equal eight.

Kossow: It's a lot of processors.

Russell: Yeah.

Kossow: So then you have all the synchronization nightmares.

Russell: Yeah. Well, there's a sort of old curmudgeon lunch group that periodically marvels at the state of things. And their sort of consensus is there are probably still a bunch of one-liners in the operating system. It's just that nobody particularly excites them. And probably if the load were radically different there'd be a whole bunch of new bugs that show up. But because the load isn't radically different, and the environment is reasonably settled and reasonably stable, it's possible to produce what looks like very reliable software, which is what is in practice very reliable software.

Kossow: You just never tickle the bugs.

Russell: Yeah. But we think they're there. It's okay since we know they're there. But it's still, I don't know the counts, but I think FreeBSD is probably spectacularly larger than System 360. And I know that what we distribute is spectacularly larger than FreeBSD, 'cause there's a whole pile of high performance applications in there. And so it's amazing. And we managed to make it work, but it's easy to prophesize gloom and doom.

Kossow: So would it have been better if it would have been implemented in Lisp instead of C or C++ or whatever it's being implemented in?

Russell: C damn it. C++ has been dragged in with kicking and screaming. But most of the code is still being implemented in C, and there is no— Well, I guess some of that you can blame on the free software movement, too, which likes C because it's more portable than C++, or five years ago, it was more portable than C++. One of the things that I did do when I was working at Nohau was every now and then when I had to do major surgery on a module, I would spend the extra two hours or so it took to make it compile in C without errors and then compile in C++ without errors. And when I did that, then the C, the somewhat better type checking in C++ would find my errors better. And even though it was still C, it was still written as C, we were was still ahead compiling it in C++. But Juniper isn't to that point yet.

Kossow: Now, it's the issue of having to turn products and just push out the next product after this one is done.

Russell: And, well, there are some pieces of discipline that Juniper has fairly well. They do insist on reviews before check in. And a lot of the reviews are thoughtful reviews. There are some disparaged groups that seem to do a lot of rubber stamp reviews. However, when they integrate with the full system, they seem to have a lot more problems. No, Lisp would not be a good language to implement something like a high performance router like Juniper is doing. There's a basic problem with garbage collection. If you do it simply, it causes everything to stop when it happens. And if you do something to avoid that, the overhead on the garbage collection becomes a lot more, and you still end up writing code with the illusion that free storage is infinite. And there's no way to guarantee— Free storage is not infinite. And reviewing code to establish or prove that it uses a bounded amount of storage, is really, really hard, and probably in a complicated system, a system with anywhere near that many lines, you don't stand a chance. And so it's questionable whether you should even start on using Lisp for something like that.

Kossow: What I was thinking was just a higher level language other than C.

Russell: I think there are a bunch of places where C++ or Modula 2 or 3 or, you know, something like that, which allows you to have objects, and encourages some discipline, would be a better way to do things from scratch but, you know, how you would get there from here is a little hard to say. One of the things which— if you can constrain the set of objects available, the types of objects available, to the class program so that you can say these system routines can only use these objects. The device drivers can only use these kinds of objects, and you can handle all— You could arrange to handle all of the interprocessor communication or inter-thread communication through a constrained set of objects where you have to use the high priority version if you're running a high priority thread, and you have to use the low priority version if you're running a low priority thread. I think you could build a structure that is a lot more—a lot better at gracefully dealing with errors and a lot better at not encouraging stupid programming errors. But I ain't see one, and I'm not sure I'm prepared to design one.

Kossow: So there it is, the state of programming in 2008.

Russell: The state of one corner of programming. These are embedded systems, by the way.

Kossow: Right, where things break. Your car stops working or, your packets don't get routed.

Russell: Or the Internet gets stolen.

Kossow: We haven't talked about security at all. Oh, well, thank you very much for this marathon session.

Russell: You're welcome

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S

A B C D E F G H I J K L M N O P Q R S T U V W X Y Z

PEOPLE (by last name / then D.o.B.)

- Dr. Albert Bruce **Sabin** (born 1906)
- Samuel **Sachs** (born 1851)
- **Sachs/Sacks family**
  - Samuel Sachs (born 1855)
    1. Herman Alexander Sacks (born 1885)
    2. Alexander Sachs (born 1892) (Married Charlotte Cramer Sachs (born 1907))
    3. Elinor Sachs Barr (born 1894) (Married David S Barr (born 1894))
    4. Joseph Alexander Sachs (born 1896)
- Paul Lewis **Sagan** (born 1959)
- Dr. Jonas Edward **Salk** (born 1914)
- Dr. Heinrich Werner **Schäfer** (born 1912)
- Lt. Captain Maurice **Schiff** MD (born 192x)
- Edward Maurice **Schiff** (born 1928)
- Adam Bennett **Schiff** (born 1960)
- Eve Sanderson **Schiff** (born 1962)
- Michael **Schimmel** (born 1896)
- Stuart Barr **Schimmel** (born 1925)
- James Rodney **Schlesinger** (born 1929)
- Christoph **Scholtissek** (born 1929)
- Dr. Calvin Walter **Schwabe** (born 1927)
- Walter **Scott** Jr. (born 1931)
- William Forsythe **Sharpe** (born 1934)
- Dr. Richard Edwin **Shope** (born 1901)
- Dr. Robert Ellis **Shope** (born 1929)
- Charles Noel **Sibley** (born 1899)
- Charles Gald **Sibley** (born 1917)
- John William **Sidgmore** (born 1951)
- William Hunter **Simpson** (born 1926)
- Dr. Theobald **Smith** (born 1859)
- Dr. Anna Lenore Skow **Southam** (born 1915)
- Dr. Chester Milton **Southam** (born 1919)
- Arnold Meyer **Spielberg** (born 1917)
- Irvin Nathaniel **Spielberg** (born 1918)
- Dr. James Hahn **Steele** (born 1913)
- Marvin Leonard **Stein** (born 1924)
- Prof. Adrian **Stokes** (born 1887)
- Peter Paul **Strzok** I (born 1936)
- Peter Paul **Strzok** II (born 1970)
- **Symington** family
- James Symington (born 1750)
  1. Thomas Symington (born 1793)
     1. William Stuart Symington I (born 1839)
        1. William Stuart Symington II (born 1871)
           1. William Stuart Symington III (born 1901)
              1. James Wadsworth Symington (born 1901)
        2. Powers Symington (born 1872)
        3. Charles Julian Symington (born 1883)
     2. Thomas Alexander Symington II (b1842)
  2. John D Symington (born 1797)

PLACES / COMPANIES / OTHER

- Silicon Beach Communications Inc.
- Singer Corporation
- 1918 Spanish Influenza
- USS Sylph (PY-5)
- Symington Machine Corporation
- Symington Wayne Corporation
- S3 Technologies

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Housatonic

Dr. Albert Bruce Sabin (born 1906)

Wikipedia Albert Sabin

Associations

- Dr. Alice E. Moore (born 1908) (...)
-

Saved Wikipedia (March 26, 2021) : Albert Sabin

2021-03-26-wikipedia-org-albert-sabin.pdf

https://en.wikipedia.org/wiki/Albert_Sabin

HK0060

https://drive.google.com/file/d/14b4EUJZhYQ6IqPnLGOCQnm_iLWNyaao2/view?usp=sharing

Born

Abram Saperstejn

August 26, 1906

Białystok, Russian Empire

(now Poland)

Died

March 3, 1993 (aged 86)

Washington, D.C., U.S.

Citizenship

Poland (until 1930), United States (since 1930)

Alma mater

New York University

Known for

Oral polio vaccine

Spouse(s)

Sylvia Tregillus

(m. 1935; died 1966)

Jane Warner

(m. 1967; div. 1971)

Heloisa Dunshee de Abranches

(m. 1972)

Awards

E. Mead Johnson Award (1941)

National Medal of Science (1970)

John Howland Award (1974)

Presidential Medal of Freedom (1986)

Scientific career

Fields

Immunology, virology

Albert Bruce Sabin (/ˈ seɪbɪn/ *SAY-bin*; August 26, 1906 – March 3, 1993) was a Polish-American medical researcher, best known for developing the oral polio vaccine, which has played a key role in nearly eradicating the disease. In 1969–72, he served as the President of the Weizmann Institute of Science in Israel.

Biography[edit]

Abram Saperstejn (later Albert Sabin) was born in Białystok, Russian Empire (before and since 1918 in Poland), to Polish-Jewish parents, Jacob Saperstejn and Tillie Krugman.[1] In 1921,[2] he emigrated with his family on the SS *Lapland* which sailed from Antwerp, Belgium, to the Port of New York. In 1930, he became a naturalized citizen of the United States and changed his name to Sabin, as well as assuming the middle name Bruce. He graduated from high school in Paterson, New Jersey.[3]

Sabin began university in a dentistry program, but was interested in virology and changed majors. He received a bachelor's degree in science in 1928 and a medical degree in 1931 from New York University.[3][4]

In 1983, Sabin developed calcification of the cervical spine, which caused paralysis and intense pain.[5][6] Sabin revealed in a television interview that the experience had made him decide to spend the rest of his life working on alleviating pain.[7] This condition was successfully treated by surgery conducted at Johns Hopkins Hospital in 1992 when Sabin was 86. A year later, Sabin died in Washington, D.C., from heart failure.

Medical career[edit]

Sabin trained in internal medicine, pathology, and surgery at Bellevue Hospital in New York City from 1931 to 1933. In 1934, he conducted research at The Lister Institute for Preventive Medicine in England, then joined the Rockefeller Institute for Medical Research (now Rockefeller University). During this time, he developed an intense interest in research, especially in the area of infectious diseases.

In 1939, he moved to Cincinnati Children's Hospital in Cincinnati, Ohio. During World War II, he was a lieutenant colonel in the U.S. Army Medical Corps and helped develop a vaccine against Japanese encephalitis. Maintaining his association with Children's Hospital, by 1946, he had also become the head of Pediatric Research at the University of Cincinnati. At Cincinnati's Children's Hospital, Sabin supervised the fellowship of Robert M. Chanock, whom he called his "star scientific son."[8]

Sabin went on a fact-finding trip to Cuba in 1967 to discuss with Cuban officials the possibility of establishing a collaborative relationship between the United States and Cuba through their respective national academies of sciences, in spite of the fact that the two countries did not have formal diplomatic ties.[9]

In 1969–72, he lived in Israel, serving as President of Weizmann Institute of Science in Rehovot. After his return to the United States, he worked (1974–82) as a research professor at the Medical University of South Carolina. He later moved to Washington, D.C. area, where he was a resident scholar at the John E. Fogarty International Center on the NIH campus in Bethesda, Maryland.

Polio research[edit]

Sabin (right) with Robert C. Gallo, M.D., *circa* 1985

With the menace of polio growing, Sabin and other researchers, most notably Jonas Salk in Pittsburgh and Hilary Koprowski and H. R. Cox in New York City and Philadelphia, sought a vaccine to prevent or mitigate the illness. This was complicated because there were multiple strains of the disease. In 1951, the National Foundation for Infantile Paralysis's typing program confirmed the existence of three main serotypes of poliovirus, since known as type 1, type 2, and type 3.[10][11][3]

Salk developed an inactivated poliovirus vaccine (IPV), a "dead" vaccine given by injection, which was released for use in 1955.[12][13] It was effective in preventing most of the complications of polio, but did not prevent the initial intestinal infection.[13]

By carrying out autopsies of polio victims, Sabin was able to demonstrate that the poliovirus multiplied and attacked the intestines before it moved to the central nervous system. This also suggested that polio virus could be grown in other tissues besides embryonic brain tissue, leading to easier and cheaper methods of vaccine development.[3][10] John Enders, Thomas Huckle Weller, and Frederick Robbins would successfully grow poliovirus in laboratory cultures of non-nerve tissue in 1949, an achievement that earned them the 1954 Nobel Prize in Physiology or Medicine.[3]

Sabin developed an oral vaccine based on mutant strains of polio virus that seemed to stimulate antibody production but not to cause paralysis. Recipients of

Sabin developed an oral vaccine based on mutant strains of polio virus that seemed to stimulate antibody production but not to cause paralysis. Recipients of his live attenuated oral vaccine included himself, family, and colleagues. Sabin's first clinical trials were carried out at the Chillicothe Ohio Reformatory in late 1954. From 1956–1960, he worked with Russian colleagues to perfect the oral vaccine and prove its extraordinary effectiveness and safety. The Sabin vaccine worked in the intestines to block the poliovirus from entering the bloodstream.[3]

Between 1955 and 1961, the oral vaccine was tested on at least 100 million people in the USSR, parts of Eastern Europe, Singapore, Mexico, and the Netherlands. The first industrial production and mass use of oral poliovirus vaccine (OPV) from Sabin strains was organized by Soviet scientist Mikhail Chumakov.[14][15] This provided the critical impetus for allowing large-scale clinical trials of OPV in the United States in April 1960 on 180,000 Cincinnati school children. The mass immunization techniques that Sabin pioneered with his associates effectively eradicated polio in Cincinnati. Against considerable opposition from the March of Dimes Foundation, which supported use of Salk's relatively effective killed vaccine, Sabin prevailed on the Public Health Service to license his three strains of vaccine. While the PHS stalled, the USSR sent millions of doses of the oral vaccine to places with polio epidemics, such as Japan, and reaped the humanitarian benefit.[10] Indeed, it was not clear to many that the vaccine was an American one, financed by U.S. dollars, as it was not widely available to ordinary Americans.[*citation needed*]

Sabin's first oral poliovirus vaccine (OPV), for use against type 1 polioviruses, was licensed in the US in 1961. His vaccines for type 2 and type 3 polioviruses were licensed in 1962. At first, the monovalent poliovirus vaccines were administered together by being put on a sugar cube. In 1964, a single trivalent OPV containing all three viral serotypes was approved.[13][10] Sabin's oral vaccine was easier to give than the earlier vaccine developed by Salk in 1954, and its effects lasted longer. The Sabin vaccine became the predominant method of vaccination against polio in the United States for the next three decades. It broke the chain of transmission of the virus and allowed for the possibility that polio might one day be eradicated.[3][10]

Sabin also developed vaccines against other viral diseases, including encephalitis and dengue. In addition, he investigated possible links between viruses and some forms of cancer.

Philanthropy[edit]

Sabin refused to patent his vaccine, waiving every commercial exploitation by pharmaceutical industries, so that the low price would guarantee a more extensive spread of the treatment. From the development of his vaccine Sabin did not gain a penny, and continued to live on his salary as a professor. The Sabin Vaccine Institute was founded in 1993 to continue the work of developing and promoting vaccines. To commemorate Sabin's pioneering work, the institute annually awards the Albert B. Sabin Gold Medal in recognition of work in the field of vaccinology or a complementary field.

Awards and recognition[edit]

Leaders in the effort against polio were honored at the opening of the Polio Hall of Fame on January 2, 1958. From left: Thomas M. Rivers, Charles Armstrong, John R. Paul, Thomas Francis Jr., Albert Sabin, Joseph L. Melnick, Isabel Morgan, Howard A. Howe, David Bodian, Jonas Salk, Eleanor Roosevelt and Basil O'Connor.[16]

The CARE/Crawley Building houses the University of Cincinnati College of Medicine.

- For the trivalent oral vaccine consisting of attenuated strains of all three types of the poliovirus, the President of the Supreme Soviet of the USSR awarded the highest civilian honour, the medal of the Order of Friendship Among Peoples (1986).[17][18][19]
- Election to the Polio Hall of Fame, which was dedicated in Warm Springs, Georgia, on January 2, 1958
- Howard Taylor Ricketts Prize (1959)
- Robert Koch Prize (1962)
- Feltrinelli Prize (1964)
- Lasker-DeBakey Clinical Medical Research Award (1965)
- National Medal of Science (1970) [20]
- Medal of Liberty (1986)
- Presidential Medal of Freedom (1986)
- The Cincinnati Convention Center was named after Sabin from 1985 to 2006.[21]
- In 1999, Cincinnati Children's Hospital Medical Center named its new education and conference center for Sabin.
- The street that runs between the University of Cincinnati College of Medicine and Cincinnati Children's Hospital Medical Center was renamed Albert Sabin Way on April 28, 2000.[22]
- On March 6, 2006, the US Postal Service issued an 87-cent postage stamp bearing his image, in its Distinguished Americans series.[23]
- In early 2010, Sabin was proposed by the Ohio Historical Society as a finalist in a statewide vote for inclusion in Statuary Hall at the United States Capitol.
- In 2012, Albert Sabin was named a "Great Ohioan" by the Capitol Square Foundation.[24]

See also[edit]

- List of Poles
- Jonas Salk

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- Archives holding his papers

External links[edit]

Wikimedia Commons has media related to ***Albert Sabin***.

- Dr. Albert Sabin's Discovery of the Oral Polio Vaccine, Cincinnati Children's Hospital Medical Center
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- The Finding Aid for the Albert B. Sabin Papers, University of Cincinnati

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Presidents of Weizmann Institute of Science

1976 (May) - Dr. Albert Sabin Interview

May 13 1976 - Dr. Albert Sabin interview - https://drc.libraries.uc.edu/bitstream/handle/2374.UC/701641/19760313_tape1.pdf?sequence=1

1976-05-13-interview-dr-altert-sabin-tape1

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1976-05-22-interview-dr-altert-sabin-tape1

March 13, 1976

Side 1; Page 1

Q . trying to pick up, as it were, the strings of your laboratory after World War II. Now, last time we left you, you were working in the Rockefeller Institute Laboratories in Princeton. You had worked on dengue; you had worked on Japanese Encephalitis. You had made trips to Panama and to Japan. How did you get back to Cincinnati, and what was the nature of your operations when you returned to Cincinnati.

A Actually, I returned to Cincinnati before I went to Panama early in 1946 and before I went to Japan, China, Korea in 1946 because at that fime I already ~ a civilian. My laboratory in Cincinnati had to be completely reconstituted because the people who were my co-workers at the Rockefeller Institute at Princeton except one who was carried over--they all were different people. One of the people that I brought with me, back with me to Cincinnati to provide some continuity was Dr. Walter Schlesinger who . originally came to me because he had worked with Dr. Olitsky at the Rockefeller Institute and it was a sort of continuity and when he was commissioned an officer, he worked with me at the Rockefeller Institute at Princeton. However, he was not with me on Okinawa, you see. But, when we started back up the laboratory in Cincinnati we had to have some new people. One of the people who came to work with me was a man who had been a resident in pediatrics at the Children's Hospital: Dr. Richard Blumberg who subsequently became head of the department of pediatrics at Emery University, in Atlanta. And ~~ had to get a new staff. The program was in part a continuation of unanswered questions that were left over from the research during the War period, and that concerned problems in dengue. And that I continued with Dr. Schles~inger. He also accompanied me then to Japan because when I had to organize a new unit for work on encephalitis in Japan he carne with me. Subsequently the broad outlines were to continue in part with the problems in various outlying areas of the world, particularly the Far East in which I had become involved during World War II. But, to start to return to the study--systematic study of poliomyelitis which was interrupted actually in 1943 when I went into uniform and left the laboratory. But there were certain other things that weEe carried over. And they were problems--I might call them problems of opportunity that you don't plan on, but which arise in the course of the search for understanding in other areas. One of these problems that remained in my mind actually began at the Rockefeller Institute of Princeton with a very peculiar observation that the yellow fever vaccine that I had to use in my studies on human volunteers in the Trenton State Prison for its possible affect dn dengue infection of New Guinea and other places--that an extraordinary event occurred that had a bearing on an old problem of the genetic constitution of the host in relation to its response to viruses. I wonder if I may begin on that now.

Q Oh, please. Why don't you begin on that now. We can come back to other things later.

A Because this provides a transition from the work at the Rockefeller Institute at Princeton. It was a question left hanging. It was a basic question not directly virus didn't kill the mice quite the same way. In some, related to any specific problem that had to be solved. To any mission-oriented problem. There had been observations in previous years with using certain strains, with certain strains of mice that W were used for work in yellow fever that had indicated

had been observations in previous years with using certain strains, with certain strains of mice that W were used for work in yellow fever that had indicated that when you used different strains of mice, the yellow fever let's say 100% would die after a certain inoculation, and mice were used to standardize the potency of yellow fever vaccine for use in man, was standardized by determining the killing power in mice--intracerebral virulence in mice. But there was never a clean-cut thing of this group of mice is 100% resistant. This group is 100% susceptible. There were always different strains of mice in which there were variations in percentages. But something happened during my work on dengue at the Rockefeller Institute at Princeton which was a departure for something from which I got a great deal of joy and which gave us a real insight into at least one aspect of genetic resistance to infection with certain viruses. I obtained some yellow fever vaccine from Dr. Max Theiler from the Rockefeller Foundation where they had been making the vaccine in New York for use on human volunteers. I inoculated the human volunteers at the New Jersey State" Prison with this vaccine. Subsequently they were to be inoculated at different times with dengue virus to see or rather to get an understanding of what may happen in the

~ . field. ~ soldlers who had been vaccinated against yellow

fever, are then taken into an area in which dengue is

prevalent. There were reasons for doing this.

But, as is my custom, right after I finished

inoculating the human volunteers, the prisoners, with--.

I hope this prisoners is not misunderstood. They were real

volunteers. Civilians with them. I took the vial back to

the Princeton Laboratory to do a titration to make sure that

the material that just went into the people really had full

potency--despite the fact that Max Theiler told me it ~

alright--to double check. I have to do it on myself to make

sure that that particular ampule that I used didn't have

something wrong with it. That was my way of working, always.

And, I did it on mice that had been inbred for more than

25 years at the Rockefeller Institute at Princeton, and 10

and behold, it had no potency. Well, Ehe shock was great.

Because I said, here, I spoiled my experiment. I called up

Max Theiler to tell him this, and I said, "Max, did you test ,,~\,,*

out what ampules of this before you sent it to me?" He said

"You know I wouldn't send you inactive stuff. Of course I

did and it had full potency."

Well, certainly, I said, "The ampule that I used

certainly didn't have any potency here." So, we decided to

find out what was wrong, and I sent him back some of the

stuff that I still had for titration in New York. And he

sent me another ampule from the same lot for titration In

Princeton. And 10 and behold, in New York, full potency--

all the mice died after intracerebral inoculation with way

out, a high titer, and in Princeton again, another ampule,

it doesn't work. So, the suspicion arose that the inbreeding

of mice, even though they are all supposed to have come from

some stock years ago at the Rockefeller Institute in New York,

had brought~about some change in the mice. But at any rate,

when I then got some mice myself from the Rockefeller Institute

in New York, and the Rockefeller Institute at Princeton, and

did a simultaneousltest with the same stuff, beautiful, 100%

died with the New York mice--Swiss, white Swiss mice. 100%

survived. I said, "My God, what a wonderful opportunity to

Incidentally, I was highly gratified because he

do genetic experiments, crossing, find out what is the basis

of this resistence, how many genes determine it." But there

were too many other things to do. I had to go off to Japan,

and this was postponed. So when I returned to Cincinnati, I

,~

had a very nice young man, ~ Wallace, who had a masters'

degree, he came to work with me, so he went off on that.

subsequently went on to get his Ph.D. at Ohio State, then

he worked with Harvard and other places, and then quite

recently he, in recent years, became the first black professor

of microbiology in a southern university, at the University of

Kentucky at Louisville, University of Louisville.

To make a long story short, we became involved in

breeding in a typical Mendellian type of experiment.

Q Where did you get the mice? This sounds like a silly question. But, is there a special place where you could have gotten them?

A Well, there are breeders. The Princeton mice, which came to be called in my report, PRI--Princeton Institute mice-- I obtained from Princeton and then we bred them ourselves. And the Rockefeller Institute mice--white Swiss mice, again we got some from the Rockefeller Institute, and we bred them ourselves. So, for these genetic experiments, we didn't buy mice. We got them and we bred them.

Q The reason I asked that, is that I know there was one place which had specifically bred mice like the Jackson Laboratories.

A This was out. Because their mice would not have any of this inbred quality. The only mice where you could have 100% death and 100% survival were these Rockefeller Institute Swiss mice, and the Princeton's. And so, we got some of those mice because I had two floors of animal quarters, really. Animal quarters were an important facility at the Children's Hospital Research Foundation. So we bred those mice. There was no other way. Very carefully to make sure there was nothing else in the rooms and so on and so on. Then we did typical Mendellian type of experiments. We crossed we bred the Rockefeller Institute with the Princeton Rockefeller Institute mice, New York that is, with the Princeton Rockefeller Institute mice, got the first generation. You see, we would have to accumulate enough mice from different litters, and sure enough, without going into too much detail, which is contained in my publication, it worked out exactly as Mendell's it was a typical Mendellian ratio. The FI generation, the first cross between the New York and the Princeton mice were &00% resistent. And then there was a back cross, and then the second generation, the F2 came out very beautifully 25% fully susceptible, 25% fully resistent, others in between. At any rate, it was the first clean cut demonstration of the closest approximation to one gene determining susceptibility and resistence. But, it was also interesting that this gene was influencing something very special that applied to a certain group of viruses, like yellow fever and then we found that the related ones, dengue, the so-called arthropod, the D group. However, western equine, eastern equine encephalitis, other viruses that were pathogenic for mice were not affected by this gene at all. It was a gene that operated for something that was referable to one specific group of viruses. But then it was possible not only to show for the first time this beautiful genetic story for resistences and susceptibility, at least for one group of viruses and the specificity of it. You see, it was not some non-specific factor. But also, how it operated. What did that gene do? And it turned out that what that gene did was to determine what the level of viral mUltiplication should be in the mice so that in the mice that would go on and die, the susceptible ones, it would multiply up to a level of perhaps one hundred million mouse infectious doses per gram of brain whereas in the resistent ones, it still multiplied but only to a level of about 100 thousandths as much, you see--you see, ten to the two or ten to the three. And it could be shown that even when the resistent mice were inoculated with let's say, 1 to ten millionth dilution, something that would have one lethal dose for the susceptible strain, that still would multiply because you could then show it by the development of antibodies. So here was something that actually was--the gene was influencing the level of multiplication--and the level of multiplication influenced whether or not it shall be a lethal disease, a clinically apparent disease or an inapparent disease which nevertheless -V) gave rise to immune response~measured by antibody. **This was a very important observation, and of course, you still had to check to make sure that it was working at the cellular level, that it was not an affect that could be perhaps on the host which in general held down the level of multiplication to be sure for a specific group of viruses for some, not for others, and this was done in a very nice experiment that I did together with Alice Moore of the Sloan Kettering.** There was a transplant ~ tumor, called sarcoma 180 I don't know.

Q Alright.

A **Sarcoma 180, and it had been so differentiated that you could transplant it. It would grow in any mouse regardl~ss of its genetic origin. And, Russian Spring/Summer encephalitis was one of the viruses affected by this gene because it is in the b group of ~l ~ viruses. And Russian Spring/Summer encephalitis was shown by Alice Moore to have a great destructive effect on this tumor when it was transplanted into mice, because it grew in that tumor tb a very high level.** Perhaps ten to the 8, ten to the 9th per gram. The tumor was destroyed, but then the mice would die of the Russian Spring/Summer encephalitis virus. So we did the following We transplanted the Sarcoma l80--these are cells of an unknown--where, I mean, certainly they didn't come from the Princeton mice with this specific resistence. They were transplanted and allowed to grow in the resistent mice from the Princeton Institute. And then they were inoculated with Whereas in the brain it did not. So the mice survived, the Russian Spring/Summer encephalitis. And the multiplication within the tumor cells that were foreign to these mice and within the brain and other tissues was then determined quantitatively. And it turned out that in the transplanted sarcoma cells, it grew perfectly well to a very high level. tumor was destroyed, and i~ showed that it was not some general factor in the body of the mouse of this special genetic constitution that would influence with multiplication-- influence the multiplication of the virus anywhere in the body. This was a very striking experiment. Now, of course there was always in the back of my mind--polio never left me--no matter what neuratropic virus I worked on.

Q **You know, I have never run across Alice Moore's name before you just mentioned it.**

A **Well, Alice Moore had worked with Tommy Francis at the Rockefeller and then she got her Ph.D., and then she went to Sloan Kettering. She was one of the old soldiers so to speak.**

Q **Well, you know, I just hadn't run across the name.**

A Now, one of the interesting things, and this came out in the discussion, was that in any disease, infectious disease in which some people who are infected have a very mild, not even clinically recognizable disease, and others have a varying spectrum. The question always arises, what influence does the genetic constitut±on of the host have?

Q Yes.

A And naturally, I was alwa¥s interested in poliomyelitis which was the case par excellence in which a hundred people or a thousand people infected with the same virus maybe we don't know the dose exactly, but with the same virus during an outbreak and a small percentage become paralyzed, and others are not paralyzed. So the question was, to what extent does the genetic constitution of the host play the role. And sure enough, there were studies by M~cock on the families in the Tennessee hills that had been inbreeding that provided very clean evidence that there was some genetic factor that did play a role because in generations after generations there was an unusual incidence of the paralytic disease that couldn't be accounted for on where they lived. It was something heritable. Of course the other interesting factor--but let me carry this through later to polio which we will discuss more.

Q Yes.

A What I came to learn later, however, which now has I think a very important impact on my thinking about those problems is that the genetic variations, the genetic constitutions of different virus particles of the same virus ultimately have a much greater role to play and a role that you can control than the genetic constitution of the host. We are dealing with this in many different things. This is a big thing now in cancer. Genetic constitution plays some role in cancer. I am sure genetic constitution plays some role in other diseases, also. But, one must always keep in mind the probability that it is only a minor part of a more complex picture. The other interesting significance of this work. I am working now to the genetics of resistence to at least one group of viruses, is that it could explain what certain things, for example, why yellow fever in Africa, in the native population was a relatively mild disease whereas newcomers, foreigners, strangers coming in there would die like flies. Or, when it was transported to the Western hemisphere, killing epidemics. I think that this data provides an explanation that probably over eons of years in which y~llow fever must have existed in Africa together with the population that it killed off the susceptible portion of the population and left a population by this form of selection with genes that had the capacity to limit the multiplication of the yellow fever virus, that they were populations of different genetic constitutions. Wel~, there are similar aspects in other viruses, I am sure, but there was never the opportunity that was provided by shear chance by anything as serendipity--this is serendipity--of having 100% resistence, 100% susceptibility. Leslie Webster approached this problem in studying resistence and susceptibility with some of the different strains that he bred out from among the Rockefeller Institute Swiss mice. But there were differences, but there was never this clean-cut thing--at least for viruses. He had some for bacteria. So, this was an interesting side activity in which we spent a lot of time--John Wallace was a very excellent technical associate, highly reliable as his subsequent career proved, and I had gotten a great deal of gratification out of working this out because to be quite frank, I had to go back and study, refresh my memory, and study anew the basic principles of genetics, and I used to be in frequent conference with Dr. Lynch at the Rockefeller Institute who was the geneticist--Rockefeller Institute in New York--to check the data, and it was an interesting period.

Q And this is just a chance observation.

A During the work, the specific work on the influence of yellow fever vaccination of our troops, against the diseas~ to which they were exposed, like dengue, and then this then was followed up in the period after I returned to Cincinnati, made my special effort, and it took a number of years because it takes a number of years to do all this breeding, you see, and to collect enough mumbers. But it was an interesting thing.

Q Now, your unit in Cincinnati, Dr. Sabin, it was an autonomous unit, wasn't it.

A Well it was autonomous to the extent that I had a part of the facilities of the research foundation which with its own endowment, was nevertheless, a part of the University of Cincinnati. I had my--I had a floor myself, I had--actually kinds of animals. So the two floors of animal quarters. I had I didn't have the floor to myself, a whole floor to myself before I went off to war in 1943. It was only when I got back and I needed to really expand my activities, I had a floor to myself with laboratories with all the things that I needed. And I had two floors of animal quarters because those were the days when a virologist had to use animals, and you had to have room, space, for thousands and thousands of mice, and ultimately for hundreds of monkeys at anyone time because I used thousands and thousands of monkeys, and room for chimpanzees and for all that. Now, the only thing that I got from the Research Foundation was my own salary, and perhaps a couple of thousand dollars of fluid funds to be able to do what I liked that I couldn't do with funds let us say from a grant support. But, I was completely autonomous. This, I think, is important. I still stress that as being important. In what I did, because I went--I got my own money ['rCDmdifferent sources after World War II, you know we didn't have the National Institutes of Health and federal support programs at the time. Before World War II, when I came from the Rockefeller to Cincinnati the money came from the National, the new National Foundation for Infantile Paralysis. When I returned, the money came from two sources: the Armed Forces Epidemiological Board to support all the work on the arthropod borne viruses and encephalitis, things that were continuing, and the National Foundation for Infantile Paralysis specifically work having to do with poliomyelitis. I had complete autonomy in decision on how to use the money, what to do, whom to hire and how many to hire and I had the money and I managed it. I had a very excellent relationship with first the original l1\~ director, Dr. G~ Mitchell, who died within two years after I came and then after the interim when Dr. W68ch came to be the Head of the Department of Pediatrics and Director of the Research Foundation, there really grew up an affectionate relationship of mutual respect and admiration which lasts until

this day. Dr. Wecch--

Q You just get along well with pediatricians. A A few months ago, he celebrated his 80th birthd?y. He is continuing still as a post-retirement professor at the University of Florida at Gainesville and it is a really warm, affectionate relationship. At one point there was a question of the extent to which I would need new space to develop a growing program, and there was disagreement that actually I had forgotten until I saw a letter--I don't know how it turned out that the first big application for five years that I made to the National Foundation for Infantile Paralysis--it was a question of putting up another floor, and the money that it would cost, and a judgment was made against the Foundation's using ihs own money. It would come to almost a quarter of a million dollars which was a lot of money in those days. But I must say that I enjoyed the complete autonomy that I had. I participated in conferences and other things, but I must say not as much. When I first came to the research foundation, I was studying directly clinical--certain clinical manifestations like rheumatoid arthritis and the very young who had rheumatic fever and I had special beds, or the various encephalotosphies. I had very close contact with the cl~nic. Later on, it came to be something else. I was studying for example, infections, febrile illnesses of unknown origin. I was studying polio. I was studying the diarrheas, that were prevelant during the summer. So I always had a close contact but very specific. I didn't take time out to make general rounds. I didn't take time out to attend conferences in which I was not directly involved. I am afraid I was--

Q You didn't teach.

A concentrate. I would give lectures occasional_lectures more inspiration lectures, but not as any set thing. I had no set responsibilities.

Q In other words, did you have to give annual reports as to what you were doing?

A Yes, annual reports because we had a very excellent scientific advisory board in the research foundation. It was the top people in the country this was an old tradition. But they were basically the same kind of reports that I would give to the sources of my grant--didn't develop anything special.

Q Let"s turn to the grant sources because in essence they are interesting. Certainly, one of the important grant sources was the fiational ~oundation. Now, did you meet with O'Connor, or were there special people in the foundation to whom you wrote.

A You see, I had an old relationship with the foundation because while I was still at the Rockefeller Institute, and Dr. Rivers, who became one of the important advisors of the national foundation along with Paul De Kr~~ before he was "assassinated" ..•a.s.s.a•ssinated in quotation marks by Basil O'Connor. I was picked out as a promising young man, but the Rational ~undation which just started--it was 1938-- he should be helped to develop a great career in virology and thereby ultimately help the overall problem of polio. So that I was taken to meet Basil O'Connor in 1938 and I had an intimate relationship. Their plan was to send me off to Sweden for three years to work with biophysicists, the great biophysics groups in Upsala. Actually this was to follow an example which was done with Horsfa.~, Frank Horsfa.~ was sent there for years. I was to go there for three years--I would teach them virology. They would teach me biophysics and so on, and I would come back a real hot shot high berth to make important advances. That was of course, it came to a head in 1939. Early in 1939 war clouds were brewing, and I had to make a decision between staying at the Rockefeller Institute and coming to Cincinnati, going to Sweden. I selected to come to Cincinnati--I won't--I think we covered that once before.

Q No, we covered that.

A So that my association, long before I needed money from them, I already knew Basil O'connor. I knew Tom Rivers. I knew Paul De Kr~•uf, and only later did they get people like Harry Weaver and so that I was in with the group. And basically, I was in with the group that was set up to decide the grand policies, the overall policies of the foundation, so it was more of a personal relationship in working things out, t~ ~~ ~arker, the overall program the foundation was supporting. Those were the years before Basil O'Connor had developed a special affinities and I would say that the relations were very very good.

[...]

Interview with Dr. Albert Sabin

May 22, 1976

A Supplement to our discussion of May 14, May 15 in which the work covered by the semi annual reports of January to December of 1953 had been covered. The important observation mentioned there was that the MEF(1) mouse adapted virus from Dr. Olitsky's laboratory had been found by me to be non-scitopathic for monkey kidney cells in tissue culture. But, that without destroying the cells, without being scitopathic, it nevertheless imparted a resistance to super infection. I recalled at that time my publication in 'Science' of work that I did very shortly after the publication of the discovery of Enders, Weller, Robbins of the capacity of polio virus to multiply in tissue culture in non-nervous tissue. And I wanted to know why did my own studies in 1936 not pick up this question. This phenomenon. So this is the publication, less than a page in 'Science' of August 27, 1954 under the title "Non-scitopatho-genic variants of poliomyelitis viruses and resistance to superinfection in tissue culture." Now I am going to -- just a moment stop.

I am reading here from the publication in 'Science' of August 27,1954 on non-scitopathic variants of poliomyelitis viruses and resistance to superinfection in tissue culture.

Ever since unequivocal multiplication in non-nervous tissue was demonstrated by Enders, Weller and Robbins thirteen years after my own experiment in 1936 failed to show any multiplication in non-nervous tissues, it had been an intriguing question why those 1936 experiments with non-nervous tissue -- that is, human non-nervous tissue -- had failed. My own recent experiments had demonstrated--incidentally, as an aside here I am modifying a little bit the reading to bring it more --

Q Sure.

A My own recent experiments have demonstrated that intracerebral passage in monkeys favors the segregation of variants that are devoid of scitopathogenic activity for fibroblasts growing out of monkey testicles in tissue culture but possess full scitopathogenic activity for epithelial cells derived from monkey kidney.

So that was a little difficult to understand. It still did it in monkey kidney although it didn't do it for fibroblasts and testicles.

Now more recently I have found that from the nervous system of infected animals it is possible to segregate variants that have no scitopathogenic effect on epithelial cells derived from monkey kidneys.

This again is an aside, pointing once again to the multiplicity of potentials in individual virus particles in a population of polio virus In a culture. Then I continue.

Since the MV strain of virus that was used in 1936 -- in the 1936 cultivation experiment, that had a large number of intracerebral passages. I have just noticed a mistake in the reprint. That should have read intracerebral, and it says intercerebral. In monkeys it appeared possible that it might be a variant. "It" means the mixed virus, the MV strain of Flexner's might be a variant that lacked the property of multiplication in non-nervous tissues. This also is important because of the decades of work with this strain as the prototype of poliomyelitis virus in man. Of course this was the thing that I have been struggling with and at the end of my stay at the Rockefeller Institute. A specimen of this mixed virus that had been frozen for many years was found to have had no scitopathogenic effect on epithelial cells derived from monkey kidney in any dilution tested -- the reason for that is to look for a zone phenomenon in the case of the mixed population that you, of virus particles that you had picked up.

Although intracerebral inoculation of this stored specimen that had been frozen, produced typical paralytic poliomyelitis in the monkey. Now the freshly passaged virus obtained from this monkey also produced no scitopathogenic effect on monkey kidney epithelial cells and four blind passages failed.

passaged virus obtained from this monkey also produced no scitopathogenic effect on monkey kidney epithelial cells and four blind passages failed.

Blind passages, that is in epithelial cell monkey kidney epithelial cell cultures -- failed to yield a scitopathogenic agent. Although in the third and fourth passages a few epithelial cells degenerated and fell off the glass within four days after inoculation. Whereas the bulk of the growth remained unaffected for ten to twelve days. It should be noted for your, Saul Benison's benefit that the significance of that is that you get a scitopathic effect with a high concentration of virus within 24 hours and it if the concentration is low, you didn't get it. In four days and certainly minute amounts will appear at 70. But this is ten to twelve days, and nothing happened. Then I say here last year, I observed, that would be 1953, that a strain of MEF(1) suckling mouse adapted poliomyelitis virus and this was the strain that was adapted in Dr. Olitsky's laboratory

by Slesinger --

Q And Kosalls

A And Kosalls. Derived this strain, was derived from the viral progeny in a single suckling mouse -- this is, I selected this myself in terminal dilution at the end point of an intracerebral titration in suckling mice, exerted little or no scitopathogenic effect on monkey kidney cells. Notice the point of little or no. It doesn't say no. But after an incubation period of seven to twelve days, the majority of the epithelial cells that had been exposed to the virus even in dilutions as high as one to ten million to one to a hundred million of the suckling mouse strain had become resistant to the rapid -- not the word rapid -- scitopathogenic effect of the parent MEF(1) strain that means the monkey, the original monkey brain pass~ge virus before it had been submitted to adaptation to suckling mice. Now similar tests then performed after I had noticed that. It was then that I went back to the mixed virus. Similar tests performed with the MV virus revealed that after an incubation period of ten to twelve days in roller tubes the epithelial cells derived from monkey kidney had acquired a limited resistance to the scitopathogenic effect of one hundred TCD(50) of the homotypic type 2 YSK strain.

And here is what one saw. At two days after challenge the epithelial cells in the control tube at two days as well as in the tubes that receive very high dilutions of the MV virus. This is from monkey spinal cord. Were completely destroyed. So the ordinary process, two days, everything was gone. The epithelial cells in the tubes inoculated with the lower dilutions of MV virus. That is lower dilutions of spinal cord of the monkey. Showed little or no change in two days. But at four days almost all the cells were similarly destroyed. Now this is a little different from what I observed and previously described with the MEF(1) strain. You see, there are again differences here. Between the MV, which was monkey brain adapted and the MEF(1) which was suckling mouse brain adapted. The epithelial cells in the tubes inoculated then with -- but at four days you see there is then a prongation, a temporary inhibition. This limited resistance characterized by the period of delay was not observed when a mixture of the MV, that is non-scitopathogenic and YSK viruses was added to normal epithelial cells. That is at the same time. Nor was this observed when the YSK virus which is scitopathogenic was added one hour or six days after the addition of MV virus. Now the importance of this is as follows.

The fact that this was not observed when the scitopathic virus was added one hour later meant that some molecular, biological event had to take place as a result of the reaction between the MV virus or the MEF(1) virus with the cell that took more than hour. Because if you added the scitopathic virus one hour later it didn't happen, you see. So obviously this shows that some event that interfered with the normal proliferation of virus had occurred and required more than an hour. The fact that it did not occur six days when the scitopathic virus was added six days after the MV virus means that that transitory change, biological change that in the first that it was transitory, that it was not a complete resistance that was imparted onto that cell. So these are important observations by themselves indicating somewhat the nature of the interference that the strict neuratropic virus exerts on the cells and a nonnervous cell growing in tissue culture. Of course I am not reading all of this from the --

Q No, you interjected.

A I am interpreting in the light of more recent understanding. My final paragraph says, it should be noted here that strict neuratropic variants that have recently been segregated in this laboratory--this was during the course of my many experiments from type 1 and type 3 viruses--have conferred no such resistance on epithelial cells derived from monkey kidney. But it is possible that the challenge viruses may not have been added at the right time. This again shows the very involved biological events that take place in a cell after infection with polio virus. And it also suggests that the strict neuratropes probably go into the cell, that they do not merely occupy a receptors that some step is interfered with. And it may be that not all strict neuratropes have that capacity. Not all strict neuratropes have the biological characteristics that are similar. They are only similar in that they will not produce a scitopathic effect in non-nervous tissue. I go on to say from these observations that further work on the mechanism of resistance produced by non-scitopathogenic variants of poliomyelitis virus would be of the greatest interest particularly with respect to the possible operation of a phenomenon comparable to that of licogenic pharge (?).

I personally did not pursue that any further. I have finished reading this now. Again, because this is an example of somebody having to make a choice. Make a choice whether I wanted to pursue, go in the direction that I have already set out, the main line of my work or to go off on a tangent and find out what is it that happens in a cell infected by strict neuratrope, stokey variance (?) of poliomyelitis virus. To the best of my knowledge this observation had never been picked up by the molecular biologists who studied in very great detail. Of course the work of Baltimore on the minutest detail of the biology of replication of polio virus in cells which added very much to our knowledge not so much about polio virus for the control of polio virus as a disease, as a cause of the raising of disease but for basic understanding biologic phenomenau He .punsued that very extensively. This was part of his Nobel oration, the description of that work. And yet just what different mutants of variance of polio virus do particularly those who do not multiply to the best of my knowledge, and I have now checked the literature, has never been followed up. And I am sure that it would throw considerable interesting general biological light on the interaction between viruses and cells at different phases of replication. So much for this. If you need this --

Q Dr. Sabin, before you leave that, let me ask a question that almost seems -- you have never had any formal training in genetics before undertaking this, this kind of work.

A Let me answer this as follows. I never had any formal training in genetics except laboratory. You see in Medical School nor was that the period in which the tools for studying the molecular biology of viral replication were available. Nor may I say that I trained myself in fundamental genetics but fundamental--this is Mendellian genetics until years not years later but actually it happened before I must backtrack a little bit because I am not sure. I think we covered it in a previous chapter when by accident during my work at the Rockefeller Institute at Princeton during World War II, I discovered the complete resistance genetic resistance of mice bred out, white mice bred out at the Rockefeller Institute at Princeton to yellow fever virus and then other viruses by comparison to the same original stock of Swiss mice that were bred out at the Rockefeller Institute in New York. And then when after the war was over I went back to study the genetics of this resistance it was then that I trained myself so it isn't correct to say that in 1953, 54 I had no training in genetics because I trained myself. Because my publications with beautiful genetic laws operating in resistance to infection with yellow fever virus and with dingue virus and certain other viruses in the same group forced me to train myself in genetics so that I had that training by the time that this work was done. It was enough to make me think genetically in terms of the multiplicity of potentials of individual virus particles but this was not a situation that was comparable to here is a, one

kind of a pea and here is another kind of a pea and I cross the two and what do I get. What do I get. This I was able to do. I crossed white mice with a 100% resistance to, resistant to yellow fever virus with mice that are 100% susceptible. I study the Fl generation. I study the back crosses. I study the F2 generations. I study the mechanism involved. That was a genetic study. But here, this was a different kind. This had nothing to do really with genetics as such in the classical style as you say. It had more to do with the biology, molecular biology and the chemistry of the phenomenon that go into operation when a virus particle hooks up by proper receptors to a,~susceptible cell and then a whole chain of events can either happen or not happen or be interfered with, depending on the nature of the virus particle. So this is quite another aspect of genetics. It hasnothing to do with inheritance and certain characters when virus particles are crossed. Or, as in the case of influenza when two virus particles with different genetic material infect the same cell. It is quite a different story. A pursuit of the observations that I just described further to analyze the mechanism at what stage, what happened, could have yielded an understanding of the steps involved in replication of polio viruses in cells just what it is that some strict neuratropes lack that prevents them from multiplying in a non-nervous cells and what it is that they nevertheless do in that cell that interferes with the multiplication of those that can multiply in that cell. Well, so much for general biology which I did not pursue in this particular instance because of the over riding priority in my own judgment of the other things that I had decided to pursue. Now there is--it is an important principle if I may bring this out --

Q Oh, please.

A In the life of a scientist. Because subsequently as a so-called administrator especially, I ran into this the wife's

penance to his science [???] and I had to think about this problem. And even now because in a scientist's life there are many occasions when you can ask more questions than you can handle. And there are many scientists who simultaneously try to work on ten, twenty differoent things at the same time. The same ones. Alright they may have a lot of hands doing many other things. And this by and large is not productive. When I analyze the work of people who tried to spread themselves allover the place they accumulate a lot of pebbles but as a rule--not always--I am saying as a rule they do not end up with any meaningful structure, with any meaningful, larger contribution. And the reason for that is that they had not made up their mind out of the ten or twenty burning desires that they have, which one they should concentrate on. And this is a good example of in my own case, I am also guilty of having tried my hand at many things at the same time. I am not trying to throw stones at others. But this is a constant problem with me, and in this case I made a decision that, not to divert myself more than is absolutely necessary to get to the answer of the problem that I originally defined.

Q You see me turning pages and what I was turning for was to find something I had marked down and it bears on what you have just said. You found a variant that had an uncogenic effect on helocells and I wondered why you didn't pursue that. It looked like an interesting--

A Saul--there is something wrong in this statement a priori. I did not find a variant that was uncogenic for helocells because helocells are malignant cells.

Q Yes.

A So it couldn't be a variant. I don't know what you have in mind.

Q Let me shut this a minute. [...] Dr. Sabin, in your semi annual report to the National Foundation for the period of January 1, 1955 to June 30, 1955 on page 4 at the bottom of the page under item number 5 you have said the following. Many unclassified viruses have been recovered from the stools of chimpanzees during the course of our poliomyelitis studies. One of these strains was sent to Dr. Huthner (Huebner) who was looking for non-human viruses to use for experimental therapy of human carcinoma of the uterus. This chimpanzee virus whilescitopatogenic for helocells and human sera contained no antibodies for it. In preliminary tests it produced extensive destruction in uterine cancers. The point of this observation is that a battery of antigenically distinct chimpanzee enteric viruses for which human beings would have no antibody might lend themselves to consecutive administration in tests for their destructive capacity in certain human cancers. And I wonder if you would comment on it because I think it bears on what we have been talking about.

A I would like to comment on this because it represented a very important effort during that period in which an attempt was made to use viruses to destroy human cancers. Should I continue on this--

Q Please, please. We have plenty of tape.

A Alright. Now here is the background of this. When tissue cultures came into use for the isolation of viruses and it opened up Pandora's box progress, one of the cell lines that was used very commonly because it was easy was used for polio as well as other viruses was the helocell. The helocell was regarded at that time as having been derived from a carcinoma of the cervix of the uterus. Cervix of the uterus and perpetuated. Now, in the study that subsequently followed in various laboratories and particularly Dr. Huebner and the National Institutes of Health pursued this. It was found that many of the ~o-called echo and coccaski viruses that were being isolated from human stools had an effect not only on helocells but on other cell lines derived from human cancers. There are not many. But, so the question naturally arose, would it be possible to use such viruses in human beings-- viruses that would be, not be harmful to the human being to destroy a cancer in the living animal. If these relatively inocuous orphan viruses as they were called at the time, could destroy cancer cells in vitro much better than any drug that you could find, why not use them in the human body to destroy cancers. Some experiments had been done in model systems in which it was indeed found that this could be done. I myself carried out an experiment which was reported in the literature. I don't know whether we discussed it earlier with Alice Moore.

Q Hold it. Hold it. Go ahead.

A Of the Sloan Kettering Institute. It had been found that a transplantable sarcoma of mice--the sarcoma 180 was very readily destroyed by Russian spring summer encephalitis virus. So that if you had a mouse that carried this tumor and you inoculated it with Russian spring summer encephalitis virus that localized in the tumor, it destroyed the tumor but it also killed the mouse. So you didn't know what was going to happen. But then I found, and this relates to our previous discussion, that when we used the Princeton Institute mice, that were genetically resistant to yellow fever virus and to certain other viruses which included Russian spring summer encephalitis group, it was possible to inoculate the virus and the mice would not die. So the question arose, what would happen in a mouse, a Princeton Rockefeller Institute mouse, a resistant mouse that would not die of Russian spring summer encephalitis but which was carrying a big tumor of sarcoma, a transplantable tumor sarcoma 180. Dr. Alice Moore at the Sloan Kettering Institute was working with this. So we transp~ anted some sarcoma 180 into Princeton Institute white mice; they developed big tumors. And they were inoculated with large doses from varying doses of Russian spring summer encephalitis. Well, to make a long story short, the virus dissolved the tumor. It did. Because the tumor was genetically different from the mouse, even though it grew In it. It was well adapted to growth. And the virus multiplied to a very high level in that tumor and destroyed most of it. The mouse survived. So that was in an era, you see, where this was under considerable discussion and there were some seminars devoted to it. One of the problems was that if you used viruses that were commonly disseminated among human beings that you would not be able to find human--that the vast majority of human beings had immunity to them, and that it wouldn't multiply in them. Now you can't use a virus like Russian spring summer, it would kill them, you see. There were some other experiments tried with Wes Nile for example, so when I run across in the stools of chimpanzees a virus that kills

HeLocells in tissue culture and for which as I said, human beings have no antibodies, I say why isn't this a wonderful opportunity. Here we have a virus that will destroy these cells and we have no problem of immunity in human beings. And that is why I turned it over to Huebner who by that time after many studies in model systems in mice had already begun to collaborate with surgeons who did a very wonderful thing. In order to prevent too much of the virus being distributed throughout the body before it got to the tumor itself, they would isolate the arterial supply to the tumor and actually inject the virus into the artery supplying the tumor and they had found already with some other viruses in patients who had no immunity that this would indeed punch a hole in the tumor. It would eat away much of the tumor. Pretty much the way certain chemotherapy would do. But the problem was, that no sooner than that hole was punched, and as the individual developed immunity to that virus, the tumor cells began to grow again, and after a couple of months you were no further ahead. A situation not unlike that with chemotherapy. So, during a symposium that was held during that period at the M. D. Anderson I proposed the following strategy. I always was influenced. This is an aside. By my training at Carlisle Barracks as a medical officer. I didn't get much basic military strategy but it had an impact on me because there was very much in that strategy that has to do with an attack on human disease. So I thought that the following strategy may be worthwhile. That if one virus will destroy a large number of tumor cells in an existing tumor and then it stops why not come in with a second blow. In other words, you have the first group of troops advancing, just opening up a hole and then before that hole can be filled in by the enemy, come in with another one and destroy the others. And with a third one and with a fourth one. So the suggestion that I made was that one should not give up this work simply because the body becomes immune and you cannot destroy the tumor completely. The strategy that I proposed is that we should develop a battery of viruses. Viruses that would be non pathogenic for man, and when you are dealing with patients who are going to die of cancer anyway, the problem is not so great. And just give them one after another. After one knocked out a part of a tumor, individual is immune. Give them a second one. Knock out some more. Give him a third one. Knock out some more. Actually years later, this became the approach of chemotherapy, you see. But, this~was not pursued. So when I say in this report that Dr. Huebner reported to me that this virus that I casually picked up, or accidentally picked up from the stools of chimpanzees did produce an effect in destroying uterine carcinoma. Actually it is cervical carcinoma, I felt that it was not pursued far enough by the virologists who took this approach. They left the field to chemotherapy. And I am not at all sure now more than twenty years later that that approach isn't at least as good as the approach that is being made by chemotheraphists against cancer. And may indeed provide additional weapons but it does require the development of a battery of viruses which can be given one after another with a destructive effect on a particular tumor cell. Period.

Q Not period. I have--

A I want to say here--

Q Okay. Well I find interesting the problem is interesting. You are not seduced by it.

A Well I am not seduced by it because we are back to where I started. The decision whether an individual scientist has to make who is interested in carrying his work to the meaningful end point, to an end point of decision that if I would suddenly drop everything else and go off and pursue this particular thing which at that t~me was already being done by Huebner and others, that I probably would lose the imput that I had already made on a~major objective. The point was that if a scientist works all sorts of interesting observations arise on the side. Sometimes they are more important than the original objective. My judgment was that my original objective was more important than this. And that I had to concentrate the efforts on the original objective until a yes or a no answer would be available. Mind you this is 19--the work was done in 1954. I was still a long way from knowing which way it would go. But I am very glad I made the decision. Although, I just finished saying that I think that that work was left prematurely, that it was still desirable because of our lack of knowledge of how to prevent cancer to use in addition to chemotherapy to use what I would call viral therapy of cancers, viral therapy of cancers and selecting viruses paricularly the many orphan viruses from closely related primates that would have a destructive effect on cancer cells in vitro--using them one after another. This is a variation of the strategy. Now this is not without difficulties because unless you carried out very careful studies beforehand you might run into a virus that might be very pathogenic for man. And this is one of the reasons that the work really again was left. Of course some of the chemotherapeutic agents they are using now are pretty damned awful. I doubt whether there are many virus diseases that can produce the serious side effects as the chemical agents.

Q Now period. Dr. Sabin at this point I would like for you to read into the record a letter of October 3, 1955 which is a summary letter. And I think an important letter.

A Actually it is a supplementary letter. I is addressed Dr. Koom of the NFIP in which I s~y that in adcord with your request I am sending you herewith a brief progress report to supplement the semi annual progress report and the information contained in my letter of September 10 all this for presentation to the committee on virus research and epidemiology. The first topic is the search for strains possessing minimal pathogeniticity for monkeys by the spinal route. Since the semi annual report was written three such strains turned up during our screening of poliomyelitis viruses reoovered from the stools of healthy children. I should add which we ourselves recovered from the stools of healthy children. The stools having been obtained from Drs. Fox and Gelfain in the New Orleans region. This included two type 1 strains, one designated P-2149 and the other P-2226 and one type 2 strain designated P-712, Seven, twelve. That is seven twelve. It 1S just one. Now the search for variants capable of producing the scitopathogenic effect in capuchin or capuchin monkey kidney cells revealed that some, but not all type 1 strains may possess a few particles out of a very large population which can produce

a scit9pathogenic effect in capuchin monkey kidney cells. These particles have been segregated from the others and passaged in a series, in series in capuchin monkey kidney sufficiently to get away from the original population of virus particles derived from cynamologous monkey kidney cultures. Although tests on several strains are still in progress those that were completed on one type 1 strain indicated that the particles which have the special capacity for producing the scitopathic effect in capuchin cells are as pathogenic for monkeys by the spinal route as was the parent virus. Let me digress here. This is an example of the attempt to pursue every possible selected medium that might provide polio virus particles with different properties. The ideal properties we were seeking. And this is the main reason for having pursued this. And this is an example of population genetics of virus particles, polio 'virus particles population genetics is quite different from the genetics of individuals. Alright. I go on and say although tests on two other strains are scheduled for the near future it would now appear that this approach is not promising and will therefore not be pursued further in 1956. It had to be done. It was done, and out. Further work in progress on attempts to find variants which will propagate in chick embryo indicates that this is not a promising line of work and will not be pursued in 1956. Additional observations on human volunteers. Most of the men who were fed the experimentally segregated attenuated poliomyelitis viruses in January 1955 were available for a check on the level of their antibody six months after ingestion of the virus. As an aside I want to say here that this was refers to work we have not yet discussed in detail. This refers to the work on human volunteers in the Chillicothe Federal Prison. Now I continue from the letter. In all instances the titers were either the same. That is the titers of antibody, six months after ingestion of the virus were either the same or higher at six months than at three months. In a number of instances the higher titers eccurred in those volunteers who were fed a second type of virus three months after the initial ingestion of another titer. As an aside I would like to say here this is an important observation that was followed up later which indicated that you can get a booster virus against--not a booster virus--a boost of antibody titer when you are infected not by the same type but by another type. In other words that the cross relationship between the three distinct types of polio virus is such that you may get a temporary boost let us say in type 1 antibody even though the infection was with type 2. And this is still until this day not understood because the assumption is that In an unknown patient if

he has had a--he shows a boost, a rise in antibody for type 1 he had an infection of type 1. It is terribly important and it became important subsequently during the mass trials when one tried to determine the nature of intercurrent paralytic disease to decide what a rise in antibody meant. Did it mean that that person was infected in nature with that particular type. It doesn't. That is what this work showed, you see. I am going back to this.

Q Go ahead.

A In my letter of September la, I wrote you of a new series--excuse me again for stopping here. I keep speaking of my letter of September la, and yet I don't have a letter of September 10. I read into the record a letter of June 25, 1955

but nothing. I have no copy of a letter of September 10, and I don't know what I said in my letter of September 10.

Q Alright.

A Would you stop this a moment?

Q Yes, yes.

A We have been unable to locate the letter of September 10 so I will just continue reading from the letter of October 3. And this paragraph, this paragraph begins In my letter of September 10, I wrote you of a new series of tests which were to begin at Chillicothe on September 13. A total of 27 men were used. Six men were used for each of the three type 1 strains that were tested. That is LSC P-2149, and P-2226. Six men for the type 3Glen strain. Parenthetically this is a strain isolated from a healthy child in Cincinnati that was relatively avirulent to begin with. And three men who lacked both type 1 and 3 antibody received a mixture of equal amounts of type 1, P-2149 and type 3 Glen viruses. Each strain was tested in a dose of 0.1 ml and O. and one thousandth of an ml. The viruses this time were fed in a cherry syrup rather than in milk in the hopes that this might lead to a larger number of virus particles being trapped on the throat. It is interesting. From the results that have been obtained, it would appear that this was achieved although one cannot be certain to what extent the strain of virus might have played a part. At any rate while none of the volunteers who received virus in milk in January from a dose of 1 thousandth ml had virus multiplication in their throat. Six out of eleven of the present group presented evidence of viral multiplication in the throat after ingestion of one thousandth ml. Alimentary infection was established in all volunteers ~n:the test performed on serial bleedings up to two weeks after ingestion of the virus indicated that all but one developed antibody. Many of them within one week after ingestion of the virus. The one who thus far has not developed antibodies received one tenth ml of the LSC virus and has exhibited very active viral multiplication in his throat and lower alimentary tract. Let me digress here. This is one of those many observations that I encountered in several hundred volunteers I studied who didn't follow the classical concept. The classical concept is that polio virus multiplies; antibody appears within about a week, etc., etc. That is classical alright because that is the way it usually happens but there are these exceptions that we must remember. And here is a beautiful one which we encountered again later of where the dose of virus that is fed is big, active viral multiplication goes on in the throat and lower alimentary tract, but he had not developed antibodies. So the mere absence of antibody is by itself no proof in anyone person statistically it may be significant. But in anyone person it doesn't mean that he didn't have a previous infection with the virus. That is determined only by his response to subsequent infection. Now I continue reading from the letter now. Many of the volunteers, particularly in the group who received I say here who received P-2149 virus developed an antibody within one week after ingestion of the virus. Of special interest is the fact that all three volunteers who were fed a mixture of about one millionth TCD50 of the type 1 P-2149 strain and the type 3 Glen strain developed antibodies for both type 1 and type 3 strains. This lack of interference in the case of these two strains in human volunteers is to be contrasted with the complete suppression of the multiplication and antibody response to the type 3 Leon virus when ir.was fed to chimpanzees with a mixture of our Mahoney and YSK attenuated viruses. That is with type 1 and type 2. Preliminary tests on the current human volunteers already indicate that apparently both type 1 and type 3 viruses multiply simultaneously in the pharyngeal wall. However, many additional tests still remain to be done before a complete picture will be available. I want to digress here a moment, because these statements in this letter here are a reflection of the numerable facets that had to be elucidated. The numerable questions which are just as basic as any other questions would have to be asked as to what would happen if you would feed these strains separately, if you feed two together, if you feed the three types together. Are there strains which may interfere less with one another--all of that work had to be done in advance of any decision of rushing out and administering the first strain of virus that you had that looked like a plausible candidate. When I read back on this now I am amazed at the tremendous amount of preliminary infrastructure studies that I believed were necessary that we carried out and that provided us ultimately with a spectrum of knowledge about the behavior of polio virus strains in the human alimentary tract that is still up to the present time not properly perceived by my colleagues who have not done all of this work because I have never written a monograph in which I documented everyone of the experiences that have left such a deep impression on my own thinking.

Q Now since you have raised this question of infrastructure of research--

A Of knowledge.

Q Knowledge. For example, by the end of 1953, beginning of 1954 you have several strains which are avirulent on spinal inoculation in chimpanzees. Why do you continue research for a variant that is also avirulent for monkeys?

A I think this question was touched upon before and the answer is simple. The striving was to determine whether any strain we possessed or anybody else possessed could be as nonneurotropic for the most highly sensitive primate and still multiply in the intestinal tract enough to produce (a) the systemic immunity that we were measuring and looking for as well as the resistance to reinfection that is an essential component of the whole challenge of breaking the chain of tansmittance. We did not want to give up. It would be very easy to say alright, this is good enough. But it was necessary to continue. You have to have here a judgment how long do you continue, and when do you stop. And I would say the judgment depends on the results that you gain from ace~bain effort. If yow. continue too long and you don't do anything. That's not very wise because you may never get it. You might get it. As a matter of fact, I continued. I did continue as I think I remarked before after the worldwide tests on increasingly larger numbers of human beings were already in progress. I did continue after the vaccine had already been administered to over 100 million people in the world. I did continue with the search by cold adaptation, by getting viruses that wou~d multiply at 25° which they ordinarily don~t. And did succeed in obtaining mutants that even on spinal inoculation in monkeys were not active, that produced practically--were not paralytogenic. In other words, I achieved that. And then I continued with the experiments in chimpanzees and finally feeding to children and they turned out to be much worse from the point of view of quick reversion to larger numbers with increased virulence in the human intestinal tract that we had selected. So, we did achieve finally strains that were inactive on intraspinal inoculation in the monkey but they were no good. For other reasons. Okay.

Q Go ahead.

A Now, we go back to the letter of October 3, 1955. And the next,the final, the beginning of the last paragraph on page 2. I say tomorrow on October 4, a new series of tests are scheduled to begin on another group of 20 volunteers at Chillicothe. Let me digress here. The numbers of volunteers that could be used at

anyone time in Chillicothe were influenced by several factors. We were dealing there with young adults. Some of them had immunity already naturally acquired immunity to all three types of polio. Some lacked immunity for one or at least antibody for one or another type. So we had to constantly screen new numbers because there were, I forget, a couple of thousand young prisoners in this federal prison. We had to screen them, bleed them ahead of time, find out those that were without antibody for the type or types that we were going to test. And then there was another constraint. The warden of the prison said all of these prisoners are working and you cannot disrupt my various activities in the prison by taking out too many people. You can have so many at a time. Alright. So that is the reason for some of the numbers that we used. So another test was to begin on another group of 20 volunteers at Chillicoth. Twelve men will be used for the type 2 strain, P-712 in doses ranging from one tenth to one thousandth of an mI. This is the standard, preliminary. One man who is without antibody for all three types of polio-- they were rare as hen's teeth in that age group and in that social group--will receive a mixture of all three types. Four men who are without antibody for type 1 and type 2 are receiving a mixture of 1 and 2. And three men without antibody for types 2 and 3 will receive a mixture of types 2 and 3 virus. The studies on both groups of these volunteers should be completed by the end of this year, and at the end of that time we may be in a position to decide ~hich of the strains are most suitable for further progressive studies in human beings. An emphasis on the step by step approach. I continue from the letter. At this time we are testing in monkeys. Always the first step, monkeys, chimpanzees, humans. At this time we are testing in monkeys two additional type~:3 strains which were recovered from healthy children in the New Orleans area.

Q This was Fox and Gelfain.

A Yes. Only if they should exhibit a markedly lower pathogenicity for monkeys by the spinal route than the Glen strain. That is the Cincinnati strain from--that's the strain from Cincinnati children. Now under investigation would tests Ilinhuman beings be carried out. I will digress again. This is an illustration of the indicators for decision. At this stage if it was not better intraspinally than others we had already studied, it stopped at the phase of tests in the monkeys for neuralvirulence. If it had been better we would have gone on tOe the next phase. Now I continue from the letter. As matters stand now, therefore, it would appear that the major effort in 1956. Let me digress again. This shows the constant job of planning ahead and trying to project to a group who has to provide you with the funds and so forth. And it is a necessity. I am not speaking against it--but of being able to project ahead what you are likely to do on the basis of what you know now. What you ultimately do may turn out to b~ altogether different because you don't know what the results will dictate. So that is why I say as matters stand now therefore it would appear that the major effort in 1956 would be concerned with an extension of studies in human beings of the strains that proved to be the optimum ones in the current tests. Thees studies would be essentially the ones that were outlined the memorandum accompanying the 1956 application. It would be my plan to prepare at least ten liters of each of the selected strain, carry out the most extensive safety and control tests on them, and then use aliquots of these basic lots for all the projected studies in human beings. I am digressing here once again, because this has the important principle. It touches on the important principle of starting with a seed lot, a lot big enough so that the variation from lot to lot as it grows will be eliminated; this is an attempt to eliminate as many variables as possible. But you are no~ ready for that sort of thing until you have a potential candidate.

Q Alright. Hold it. We are running to the end of thetape.

END OF TAPE.

BITCHUTE @Housatonic **YOUTUBE** @HousatonicLive **ODYSEE** @Housatonic **BRIGHTEON** @Housatonic

Samuel Sachs (born 1851)

Wikipedia Samuel Sachs

https://en.wikipedia.org/wiki/Samuel_Sachs 2019-11-wikipedia-org-samuel-sachs.pdf /

Samuel Sachs

From Wikipedia, the free encyclopedia

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Samuel Sachs

Born

July 28, 1851

Maryland, US

Died

March 2, 1935 (aged 83)

New York City, US

Occupation

Investment banker

Known for

Name partner of Goldman Sachs

Spouse(s)

Louisa Goldman (m. 1882)

[1]

Children

Paul J. Sachs (1878–1965)

Arthur Sachs (1880-1975)

Walter E. Sachs (1884–1980)

Ella Sachs (1886-1918)

Parent(s)

Sophie and Joseph Sachs

Family

Julius Sachs (brother)

Bernard Sachs (brother)

Marcus Goldman (father-in-law)

Samuel Sachs (/zɑːks/; July 28, 1851 – March 2, 1935) was an American investment banker.

Contents

- 1 Early life
- 2 Career

- 3 Philanthropy
- 4 Personal life and death
- 5 See also
- 6 References
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Early life

Samuel Sachs was born on July 28, 1851 in Maryland, the son of Sophie (née Baer) and Joseph Sachs, both Jewish immigrants from Bavaria, Germany.[2] He has one older sibling, Julius Sachs, and three younger siblings, Emily Sachs, Henry Sachs, and Bernard Sachs.[2]

Career

Sachs, along with his longtime friend Philip Lehman of Lehman Brothers, pioneered the issuing of stock as a way for new companies to raise funds.

Sachs then joined his father-in-law Marcus Goldman's firm which prompted the name change to Goldman Sachs in 1904. Together they underwrote securities offerings for such large firms as Sears, Roebuck and Company. During this time Goldman Sachs also diversified to become involved in other major securities markets, like the over-the-counter, bond, and convertibles markets which are still a big part of the company's revenue today. Sachs retired in 1928.

Philanthropy

Sachs donated US$50,000 (equivalent to $731,000 in 2018) to Harvard University in 1924.[3]

Personal life and death

Sachs married Louisa Goldman, the youngest daughter of Marcus Goldman, also Bavarian Jewish immigrants.[2][4] They resided at The Pierre.[5] They had four children: Paul Joseph Sachs, Arthur Sachs, Walter Edward Sachs, and Ella S. Sachs.[2]

Sachs died on March 2, 1935 in New York City.[5][6]

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Housatonic

Herman Alexander Sacks (born 1885)

Herman Alexander Sacks and Leanore
[HL001N][GDrive]

- **Born -** June 17, 1885 [HT002W][GDrive] / Birthplace: Russia
  - Notes : On marriage transcripts, birth date is suggested to be 1887. We are going with the draft registration, as that date is expicit
- **Death -**
- **PARENTS -** Samuel Sacks and Sarah (Alexandrovitz) Sacks [HL001L][GDrive]
- **MARRIAGE - Wife -**
- **CHILDREN :**
  -
- **SIBLINGS:**
  - Alexander Sachs (born 1892)
  - **Elinor Sachs Barr (born 1894)** (Married **David S Barr** (born 1894))
  - Joseph Alexander Sachs (born 1896)
- **OTHER FAMILY** :
  - In-laws (via **David S Barr** (born 1894)) :
    - Brother In-Law **Simon Pelham Barr** (born 1892)
- **Profession** - ....

1885 - Born in "Russia"

1901 - Migrate to the USA

Age 16 ?

1910 - US Census for "Sacks" family

- "Sacks" not "Sachs"
- Younger brother **Alexander Sachs** (born 1892) still has name "Samuel" (not yet changed to "Alexander")
- 38 (or 40?) west 117th street - Right next to 1915 address
- Herman Sack immigrated to the USA in 1901, 3 years before his siblings
- Sadly, mother Sarah must have passed (father "Sundel" is widowed)
- Father here is "Sundel", not "Samuel" ... ???
- Sister "Elinor" is here as "Lena"

Full Census Form : [HS000J][GDrive] / **TRANSCRIPT :** [HS000K][GDrive]

Record Transcription:
Us Census 1910

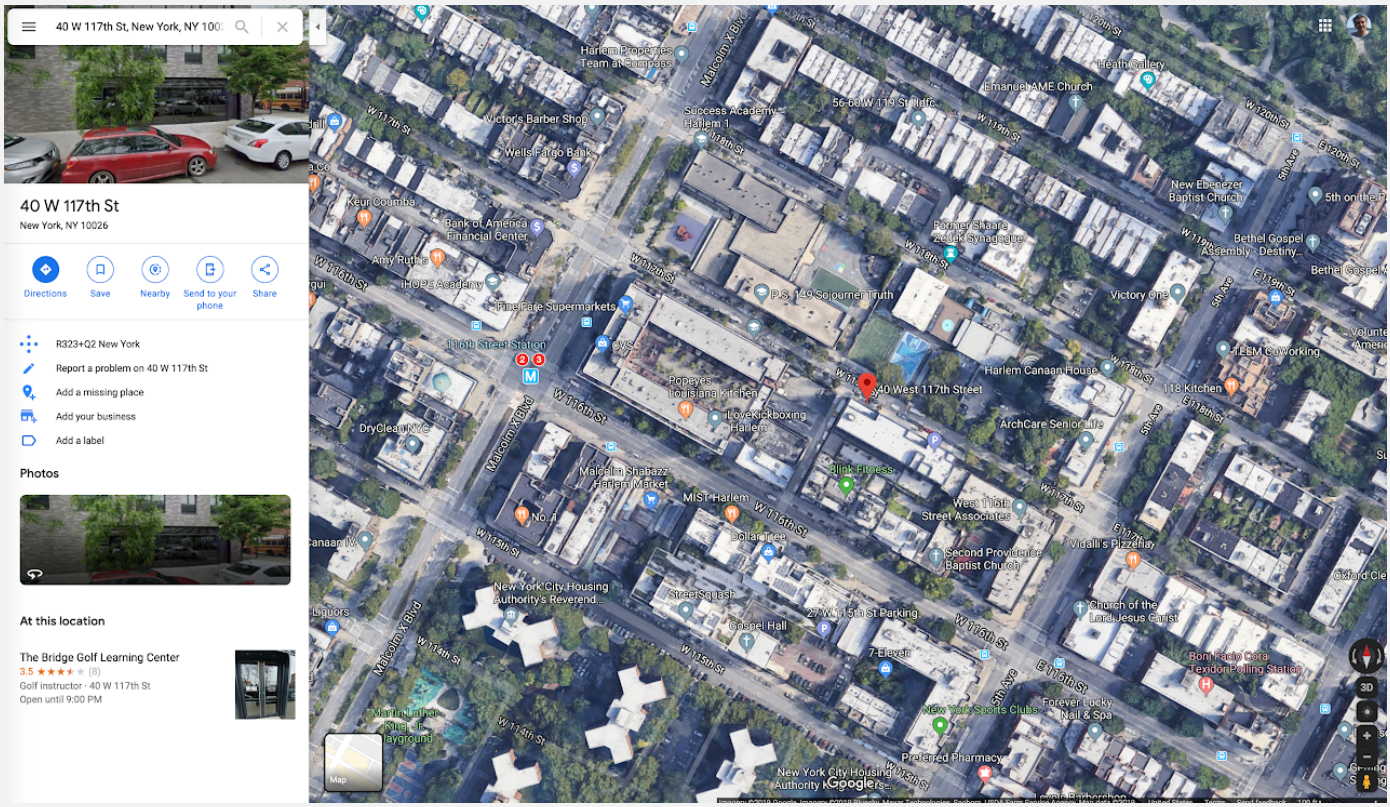
Household Members

First name(s)	Last name	Relationship	Marital status	Gender	Age	Birth year
Sundel	Sacks	Self	Widowed	Male	54	1856
Herman	Sacks	Son	Single	Male	24	1886
Samuel	Sacks	Son	Single	Male	18	1892
Lena	Sacks	Daughter	Single	Female	15	1895
Joseph	**Sacks**	**Son**	**Single**	**Male**	**13**	**1897**

[HS000L][GDrive]

40 W 117th Street NYC - Today

Whatever was there in 1920, is not there anymore (as of 2019)



1912 (Jan) - Herman Sachs/Sacks marriage to Fannie Steinberg

Transcript - [HL001J][GDrive]

Record Transcription:
United States Marriages
Learn about this record set

First name(s)	Herman
Last name	Sacks
Sex	Male
Race	White
Marital status	Single
Age	25
Birth year	1887
Birth place	Russia
Father's first name(s)	Samuel
Father's last name	Sacks
Mother's first name(s)	Sarah
Mother's last name	Alexandrovitz
Event	Marriage
Year	1912
Event date	26 Jun 1912
Location	Manhattan
Place	Manhattan, New York, United States
County	New York
State	New York
Country	United States
Spouse's first name(s)	Fannie
Spouse's last name	Steinberg
Spouse's race	White
Spouse's marital status	Single
Spouse's age	19
Spouse's birth year	1893
Spouse's birth place	Manasqua..., N.J.
Spouse's father's first name(s)	Barnet
Spouse's father's last name	Steinberg
Spouse's mother's first name(s)	Sarah
Spouse's mother's last name	Fridlander
FamilySearch film number	001613384
Record set	United States Marriages
Category	Birth, Marriage & Death (Parish Registers)
Subcategory	Civil Marriage & Divorce
Collections from	Americas, United States

[HL001L][GDrive]

1915 NYC Census

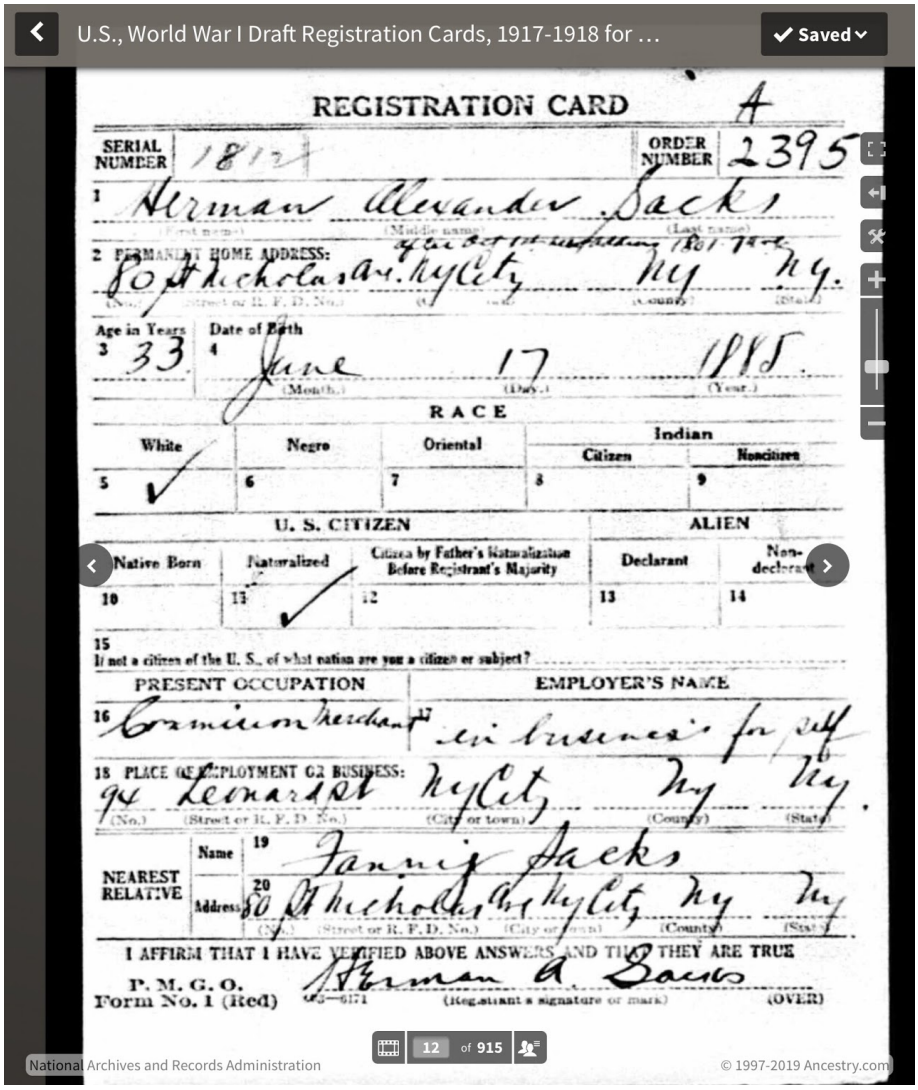
Full image : [HS000M][GDrive]

Already have a servant !

[HS000N][GDrive]

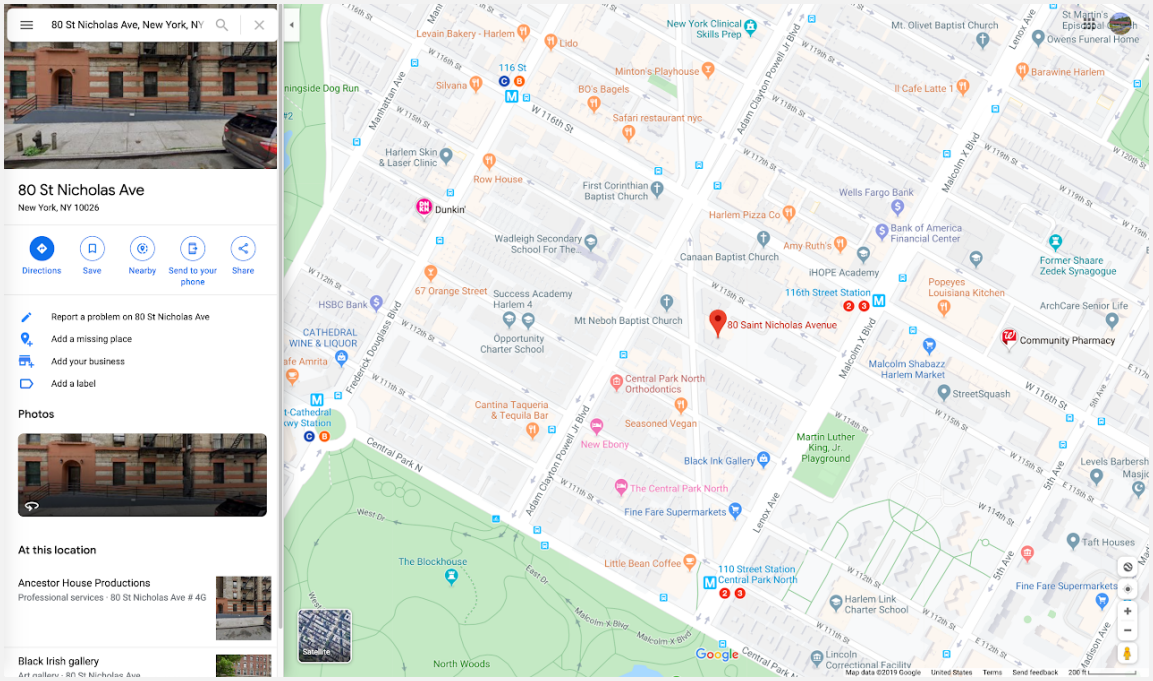
1917 - Herman Sacks WW1 Registration

Address : 80 St. Nicholas Ave, New York City - see map below



[HT002W][GDrive]

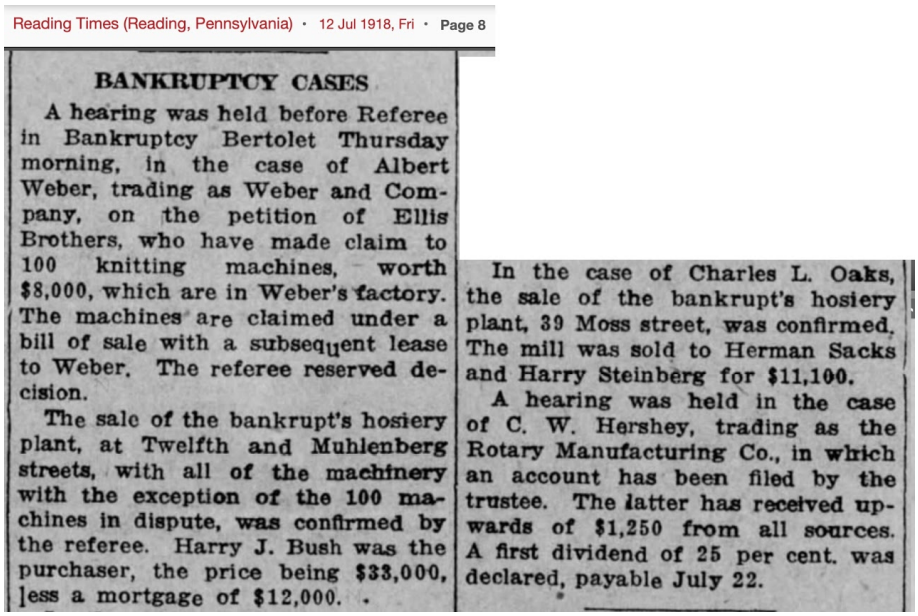
80 St. Nicholas Ave, New York City



1918 - Sachs Steinberg : Hoisery plant

Question - Is this a Steinberg in his wife's family ?

Full Drive : [HN00J6][GDrive]



Reading Times (Reading, Pennsylvania) · 12 Jul 1918, Fri · Page 8

BANKRUPTCY CASES

A hearing was held before Referee in Bankruptcy Bertolet Thursday morning, in the case of Albert Weber, trading as Weber and Company, on the petition of Ellis Brothers, who have made claim to 100 knitting machines, worth $8,000, which are in Weber's factory. The machines are claimed under a bill of sale with a subsequent lease to Weber. The referee reserved decision.

The sale of the bankrupt's hosiery plant, at Twelfth and Muhlenberg streets, with all of the machinery with the exception of the 100 machines in dispute, was confirmed by the referee. Harry J. Bush was the purchaser, the price being $33,000, less a mortgage of $12,000.

In the case of Charles L. Oaks, the sale of the bankrupt's hosiery plant, 39 Moss street, was confirmed. The mill was sold to Herman Sacks and Harry Steinberg for $11,100.

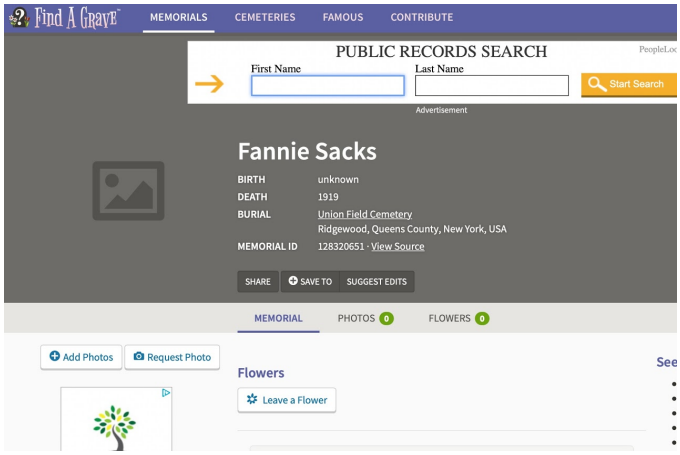
A hearing was held in the case of C. W. Hershey, trading as the Rotary Manufacturing Co., in which an account has been filed by the trustee. The latter has received upwards of $1,250 from all sources. A first dividend of 25 per cent. was declared, payable July 22.

[HN00J7][GDrive]

1919 - Fannie Sacks dies ?

Transcript : [HL001Q][GDrive]

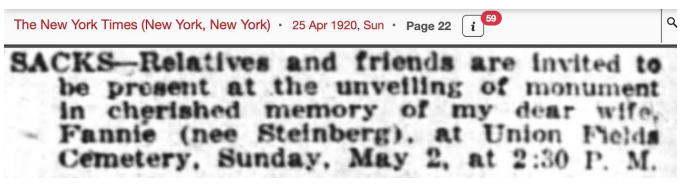
Cemetery : Union Field Cemetery in Queens County, New York



[HL001R][GDrive]

1920 (April) - Memorial for Fannie (Steinberg) Sacks

Full page : [HN00I4][GDrive]



The New York Times (New York, New York) · 25 Apr 1920, Sun · Page 22

SACKS—Relatives and friends are invited to be present at the unveiling of monument in cherished memory of my dear wife, Fannie (nee Steinberg), at Union Fields Cemetery, Sunday, May 2, at 2:30 P. M.

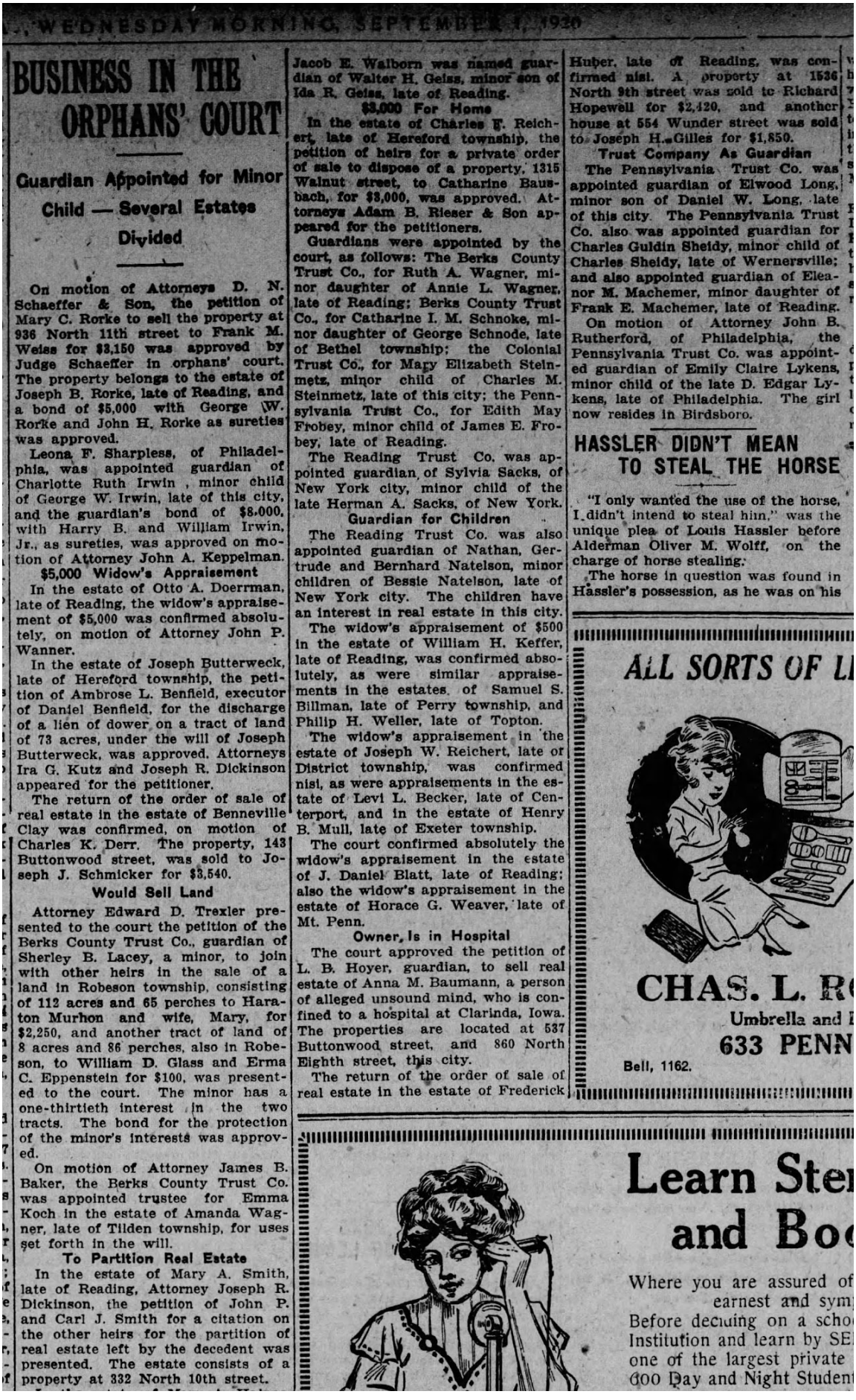
[HN00I5][GDrive]

1920 (Sep) - Sylvia Sacks has Reading Trust Co. appointed as guardian

Full page : [HN00HY][GDrive]

Sylvia Sacks was born 1914 (est)

*"The **Reading Trust Co.** was appointed guardian of **Sylvia Sacks**, of New York City, minor child of the late **Herman A. Sacks** of New York"*



...WEDNESDAY MORNING, SEPTEMBER 1, 1920

BUSINESS IN THE ORPHANS' COURT

Guardian Appointed for Minor Child — Several Estates Divided

On motion of Attorneys D. N. Schaeffer & Son, the petition of Mary C. Rorke to sell the property at 936 North 11th street to Frank M. Weiss for $3,150 was approved by Judge Schaeffer in orphans' court. The property belongs to the estate of Joseph B. Rorke, late of Reading, and a bond of $5,000 with George W. Rorke and John H. Rorke as sureties was approved.

Leona F. Sharpless, of Philadelphia, was appointed guardian of Charlotte Ruth Irwin, minor child of George W. Irwin, late of this city, and the guardian's bond of $8,000, with Harry B. and William Irwin, Jr., as sureties, was approved on motion of Attorney John A. Keppelman.

$5,000 Widow's Appraisement

In the estate of Otto A. Doerrman, late of Reading, the widow's appraisement of $5,000 was confirmed absolutely, on motion of Attorney John P. Wanner.

In the estate of Joseph Butterweck, late of Hereford township, the petition of Ambrose L. Benfield, executor of Daniel Benfield, for the discharge of a lien of dower on a tract of land of 73 acres, under the will of Joseph Butterweck, was approved. Attorneys Ira G. Kutz and Joseph R. Dickinson appeared for the petitioner.

The return of the order of sale of real estate in the estate of Benneville Clay was confirmed, on motion of Charles K. Derr. The property, 143 Buttonwood street, was sold to Joseph J. Schmicker for $3,540.

Would Sell Land

Attorney Edward D. Trexler presented to the court the petition of the Berks County Trust Co., guardian of Sherley B. Lacey, a minor, to join with other heirs in the sale of a land in Robeson township, consisting of 112 acres and 65 perches to Haraton Murhon and wife, Mary, for $2,250, and another tract of land of 8 acres and 86 perches, also in Robeson, to William D. Glass and Erma C. Eppenstein for $100, was presented to the court. The minor has a one-thirtieth interest in the two tracts. The bond for the protection of the minor's interests was approved.

On motion of Attorney James B. Baker, the Berks County Trust Co. was appointed trustee for Emma Koch in the estate of Amanda Wagner, late of Tilden township, for uses set forth in the will.

To Partition Real Estate

In the estate of Mary A. Smith, late of Reading, Attorney Joseph R. Dickinson, the petition of John P. and Carl J. Smith for a citation on the other heirs for the partition of real estate left by the decedent was presented. The estate consists of a property at 332 North 10th street.

Jacob E. Walborn was named guardian of Walter H. Geiss, minor son of Ida R. Geiss, late of Reading.

$3,000 For Home

In the estate of Charles F. Reichert, late of Hereford township, the petition of heirs for a private order of sale to dispose of a property, 1315 Walnut street, to Catharine Bausbach, for $3,000, was approved. Attorneys Adam B. Rieser & Son appeared for the petitioners.

Guardians were appointed by the court, as follows: The Berks County Trust Co., for Ruth A. Wagner, minor daughter of Annie L. Wagner, late of Reading; Berks County Trust Co., for Catharine I. M. Schnoke, minor daughter of George Schnode, late of Bethel township; the Colonial Trust Co., for Mary Elizabeth Steinmetz, minor child of Charles M. Steinmetz, late of this city; the Pennsylvania Trust Co., for Edith May Frobey, minor child of James E. Frobey, late of Reading.

The Reading Trust Co. was appointed guardian of Sylvia Sacks, of New York city, minor child of the late Herman A. Sacks, of New York.

Guardian for Children

The Reading Trust Co. was also appointed guardian of Nathan, Gertrude and Bernhard Natelson, minor children of Bessie Natelson, late of New York city. The children have an interest in real estate in this city.

The widow's appraisement of $500 in the estate of William H. Keffer, late of Reading, was confirmed absolutely, as were similar appraisements in the estates of Samuel S. Billman, late of Perry township, and Philip H. Weller, late of Topton.

The widow's appraisement in the estate of Joseph W. Reichert, late of District township, was confirmed nisi, as were appraisements in the estate of Levi L. Becker, late of Centerport, and in the estate of Henry B. Mull, late of Exeter township.

The court confirmed absolutely the widow's appraisement in the estate of J. Daniel Blatt, late of Reading; also the widow's appraisement in the estate of Horace G. Weaver, late of Mt. Penn.

Owner Is in Hospital

The court approved the petition of L. B. Hoyer, guardian, to sell real estate of Anna M. Baumann, a person of alleged unsound mind, who is confined to a hospital at Clarinda, Iowa. The properties are located at 537 Buttonwood street, and 860 North Eighth street, this city.

The return of the order of sale of real estate in the estate of Frederick Huber, late of Reading, was confirmed nisi. A property at 1536 North 9th street was sold to Richard Hopewell for $2,420, and another house at 554 Wunder street was sold to Joseph H. Gilles for $1,850.

Trust Company As Guardian

The Pennsylvania Trust Co. was appointed guardian of Elwood Long, minor son of Daniel W. Long, late of this city. The Pennsylvania Trust Co. also was appointed guardian for Charles Guldin Sheidy, minor child of Charles Sheidy, late of Wernersville; and also appointed guardian of Eleanor M. Machemer, minor daughter of Frank E. Machemer, late of Reading.

On motion of Attorney John B. Rutherford, of Philadelphia, the Pennsylvania Trust Co. was appointed guardian of Emily Claire Lykens, minor child of the late D. Edgar Lykens, late of Philadelphia. The girl now resides in Birdsboro.

HASSLER DIDN'T MEAN TO STEAL THE HORSE

"I only wanted the use of the horse, I didn't intend to steal him," was the unique plea of Louis Hassler before Alderman Oliver M. Wolff, on the charge of horse stealing.

The horse in question was found in Hassler's possession, as he was on his

ALL SORTS OF L

CHAS. L. R

Umbrella and

633 PENN

Bell, 1162.

Learn Ste

and Boo

Where you are assured of earnest and sym

Before deciding on a scho Institution and learn by SE one of the largest private 600 Day and Night Studen

In the estate of Mary A. Haines, late of Reading, an order of sale was granted to Irvin S. Brant, the administrator, to sell a two-story brick dwelling at 1043 Muhlenberg street, and his bond was approved. Attorney Henry P. Keiser represents the estate.

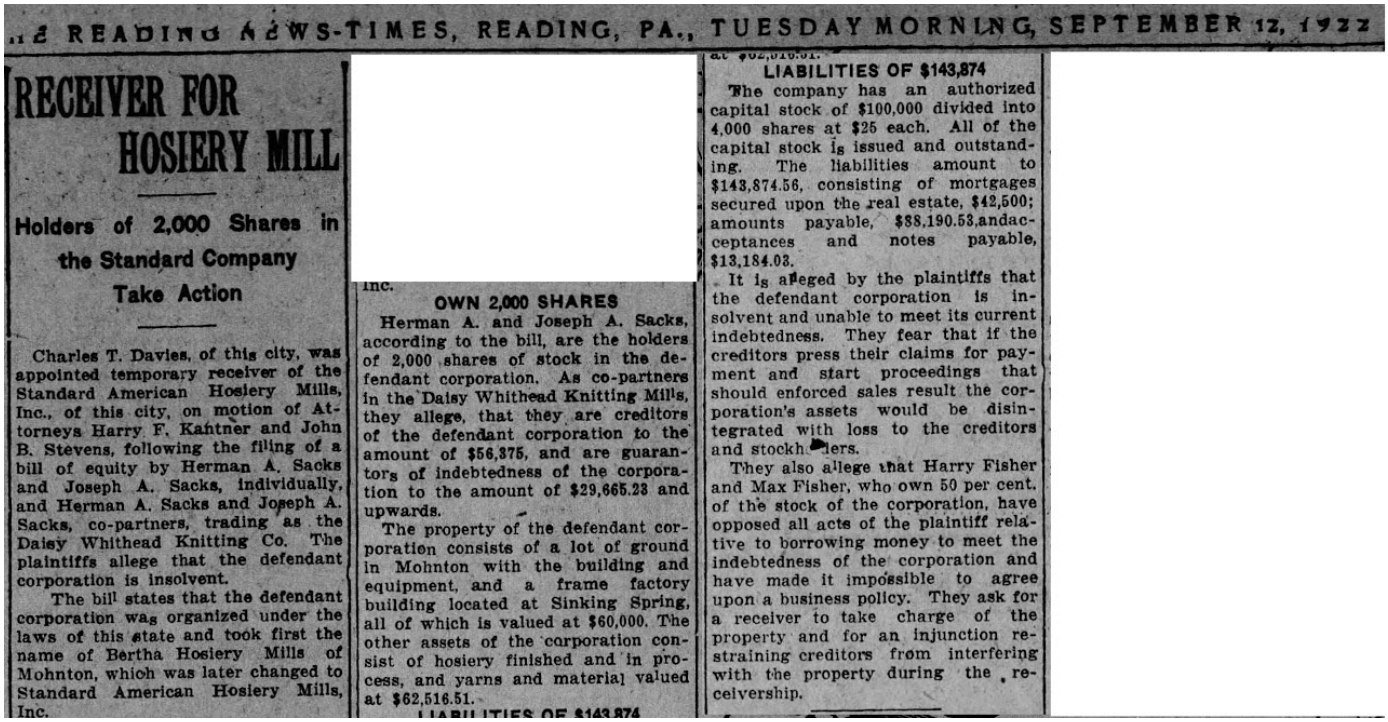
On motion of Attorney F. A. Marx the court appointed the Berks County Trust Co., guardian of Wilbur K. Stalley, minor child of Schuyler C. Stalley, late of Reading. On motion of Attorney Adam B. Rieser & Son,

FALL
Day-School, Sept. 7
Enroll Now — While
Registration Hours: Daily,
Wednesday, Thursday and Frid
KEYSTONE INSTITUTE

[HN00HZ][GDrive]

1922 (Sep 12) - Stock -

[HN00IF][GDrive]



READING NEWS-TIMES, READING, PA., TUESDAY MORNING, SEPTEMBER 12, 1922

RECEIVER FOR HOSIERY MILL

Holders of 2,000 Shares in the Standard Company Take Action

Charles T. Davies, of this city, was appointed temporary receiver of the Standard American Hosiery Mills, Inc., of this city, on motion of Attorneys Harry F. Kantner and John B. Stevens, following the filing of a bill of equity by Herman A. Sacks and Joseph A. Sacks, individually, and Herman A. Sacks and Joseph A. Sacks, co-partners, trading as the Daisy Whithead Knitting Co. The plaintiffs allege that the defendant corporation is insolvent.

The bill states that the defendant corporation was organized under the laws of this state and took first the name of Bertha Hosiery Mills of Mohnton, which was later changed to Standard American Hosiery Mills, Inc.

OWN 2,000 SHARES

Herman A. and Joseph A. Sacks, according to the bill, are the holders of 2,000 shares of stock in the defendant corporation. As co-partners in the Daisy Whithead Knitting Mills, they allege, that they are creditors of the defendant corporation to the amount of $56,375, and are guarantors of indebtedness of the corporation to the amount of $29,665.23 and upwards.

The property of the defendant corporation consists of a lot of ground in Mohnton with the building and equipment, and a frame factory building located at Sinking Spring, all of which is valued at $60,000. The other assets of the corporation consist of hosiery finished and in process, and yarns and material valued at $62,516.51.

LIABILITIES OF $143,874

The company has an authorized capital stock of $100,000 divided into 4,000 shares at $25 each. All of the capital stock is issued and outstanding. The liabilities amount to $143,874.56, consisting of mortgages secured upon the real estate, $42,500; amounts payable, $88,190.53,andacceptances and notes payable, $13,184.03.

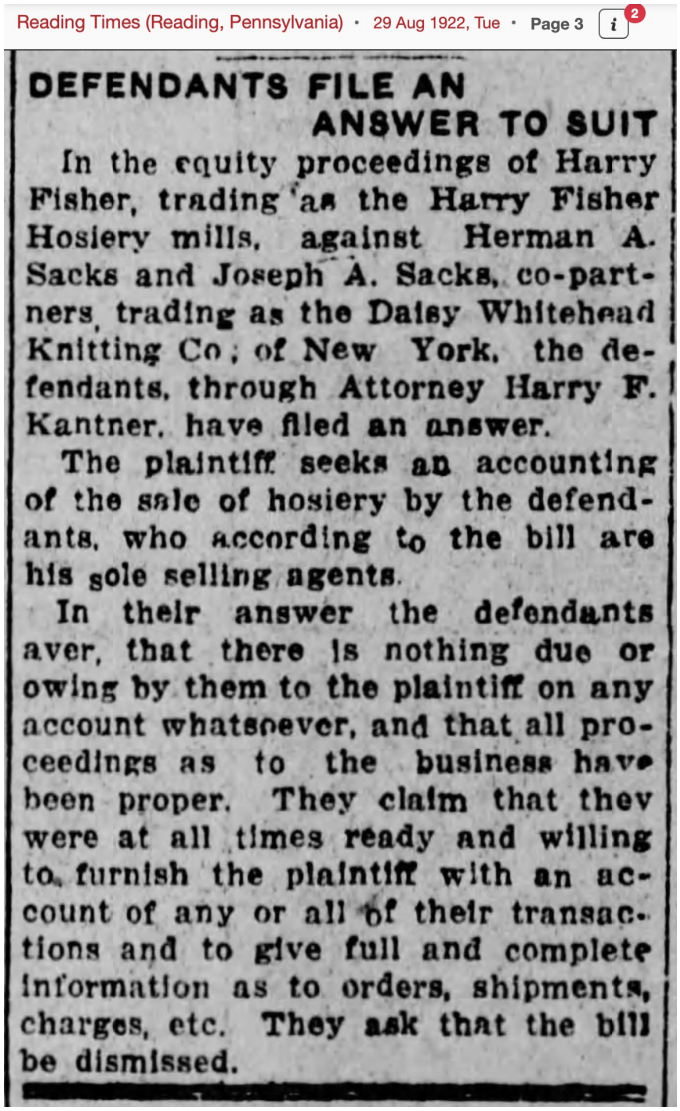
It is alleged by the plaintiffs that the defendant corporation is insolvent and unable to meet its current indebtedness. They fear that if the creditors press their claims for payment and start proceedings that should enforced sales result the corporation's assets would be disintegrated with loss to the creditors and stockholders.

They also allege that Harry Fisher and Max Fisher, who own 50 per cent. of the stock of the corporation, have opposed all acts of the plaintiff relative to borrowing money to meet the indebtedness of the corporation and have made it impossible to agree upon a business policy. They ask for a receiver to take charge of the property and for an injunction restraining creditors from interfering with the property during the receivership.

[HN00IG][GDrive]

1922 (Aug 29) - Herman and Joseph Sacks, defendants

Full page : [HN00ID][GDrive]


Reading Times (Reading, Pennsylvania) • 29 Aug 1922, Tue • Page 3

DEFENDANTS FILE AN ANSWER TO SUIT

In the equity proceedings of Harry Fisher, trading as the Harry Fisher Hosiery mills, against Herman A. Sacks and Joseph A. Sacks, co-partners, trading as the Daisy Whitehead Knitting Co; of New York, the defendants, through Attorney Harry F. Kantner, have filed an answer.

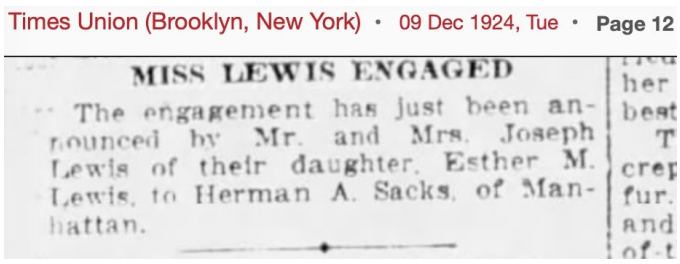
The plaintiff seeks an accounting of the sale of hosiery by the defendants, who according to the bill are his sole selling agents.

In their answer the defendants aver, that there is nothing due or owing by them to the plaintiff on any account whatsoever, and that all proceedings as to the business have been proper. They claim that they were at all times ready and willing to furnish the plaintiff with an account of any or all of their transactions and to give full and complete information as to orders, shipments, charges, etc. They ask that the bill be dismissed.

[HN00IE][GDrive]

1924 (Dec) - Engagement to Esther Lewis

Full page : [HN00IB][GDrive]


Times Union (Brooklyn, New York) • 09 Dec 1924, Tue • Page 12

MISS LEWIS ENGAGED

The engagement has just been announced by Mr. and Mrs. Joseph Lewis of their daughter, Esther M. Lewis, to Herman A. Sacks, of Manhattan.

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[HN00IC][GDrive]

1925 (March 17)- wedding

Full page : [HN00I2][GDrive]

Sacks-Lewis Wedding.

Miss Esther Lewis, daughter of Mr. and Mrs. Joseph Lewis, of 906 East Eighth street, became the bride of Herman Sacks, son of Mr. and Mrs. S. Sacks, of Manhattan, Sunday night. The ceremony was performed at the Brooklyn Jewish Centre, 667 Eastern parkway, in the presence of 150 guests, by the Rev. Hyman Landau, assisted by Dr. Herbert Goldstein of Institute Synagogue, Manhattan.

Miss Lewis was beautifully attired in a white satin gown trimmed with lace and pearls, and a duchess lace veil. She wore a diamond bracelet, a gift of the groom, and carried a bouquet of roses and lilies of the valley. Her sister, Miriam, attended as maid of honor. The six bridesmaids, gowned in pastel shades, carried old-fashioned bouquets of tulips and sweet peas. They were the Misses Martha Jacobs, Sophie Zazeela, Jean Steinway, Esther Kehrman, Rose Kohn and Bertha Ciechanow. Eleanor Rhoda Linder was the flower girl. Joseph A. Sachs, brother of the bridegroom, served as best man, and the ushers were Jack Lewis, Alexander Lewis, Arthur Newman, Jack Gross, Manuel Swarz and T. H. Tenzer.

A reception followed the ceremony in the dining hall of the Centre, after which the couple departed on an extended honeymoon trip to Florida and Cuba. Upon their return they will make their home at 905 West End avenue, Manhattan.

[HN00I3][GDrive]

Marriage Transcript

Transcript : [HL001L][GDrive]

Marries Esther M Lewis - Born in 1902 (age 22-ish), parents Joseph Lewis and Gussie (Jacobson) Lewis ....

Record Transcription:
United States Marriages

Learn about this record set

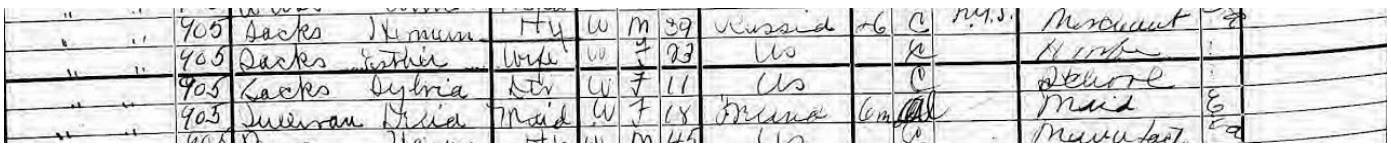
First name(s)	Herman A
Last name	Sacks
Sex	Male
Age	38
Birth year	1887
Father's first name(s)	Samuel
Father's last name	-
Mother's first name(s)	Sara
Mother's last name	Alexandrwitch
Event	Marriage
Year	1925
Event date	15 Mar 1925
Location	Kings
Place	Kings, Saratoga, New York, United States
County	Saratoga
State	New York
Country	United States
Spouse's first name(s)	Esther M
Spouse's last name	Lewis
Spouse's sex	Female
Spouse's age	23
Spouse's birth year	1902
Spouse's father's first name(s)	Joseph
Spouse's father's last name	-
Spouse's mother's first name(s)	Gussie
Spouse's mother's last name	Jacobson
FamilySearch film number	001614644
Record set	United States Marriages
Category	Birth, Marriage & Death (Parish Registers)
Subcategory	Civil Marriage & Divorce
Collections from	Americas, United States

[HL001M][GDrive]

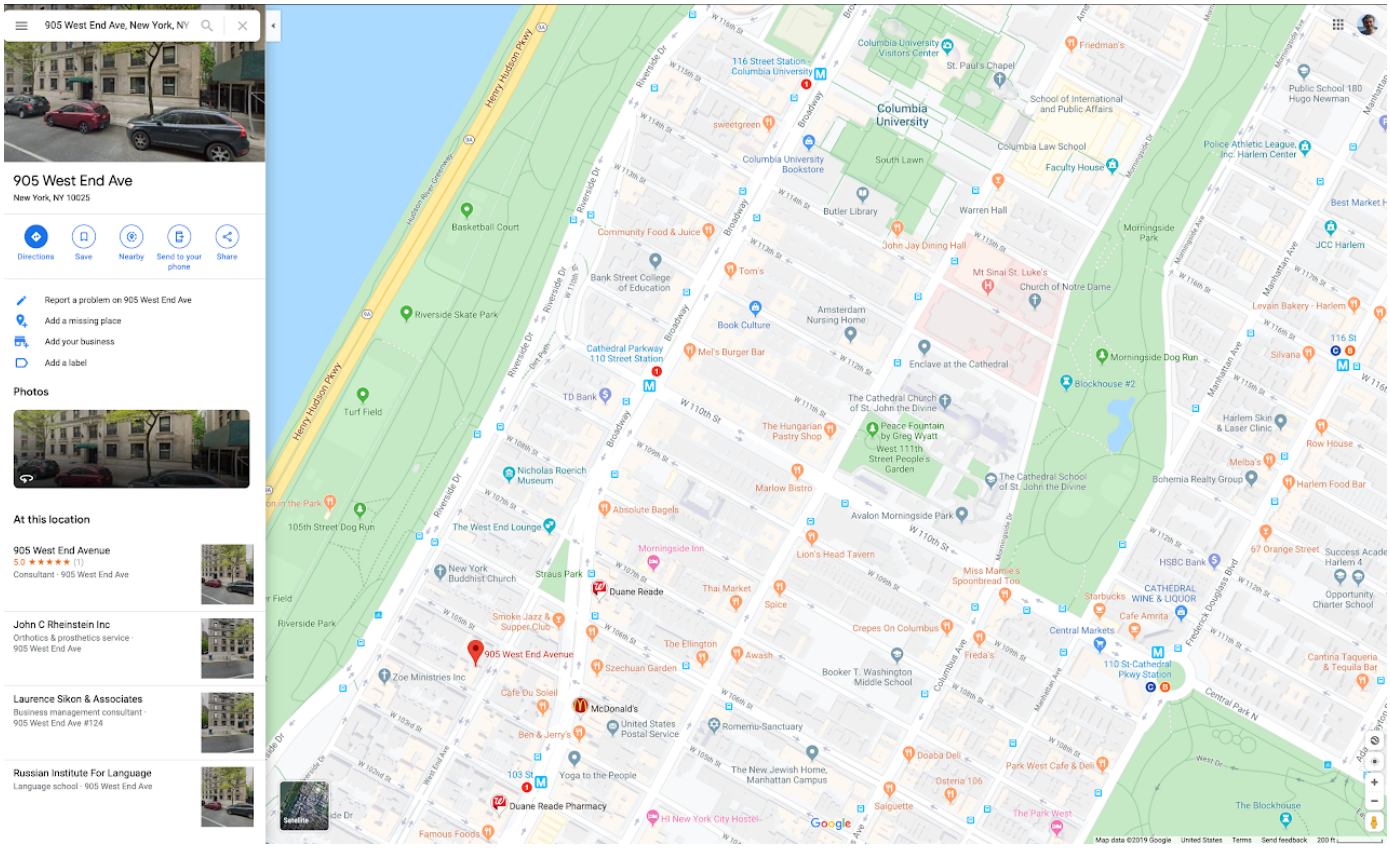
1925 (Summr) - New York State Census

Address - 905 West End Avenue, Manhattan, New York City

Full Sheet : [HS000O][GDrive]



[HS000P][GDrive]



1918 - 1925 - Business (ETC)

1922 "The Jewish Forum" - See [HP001H][GDrive]

Herman A. Sacks and Bro.

1922-the-jewish-forum-clip-herman-a-sacks-and-bro-happy-new-year-wish

BAYER—Mr. and Mrs. Samuel Bayer of 2 West 94th Street, N. Y. C., wish all relatives and friends a Happy New Year.

BRESLOW—Dr. M. Breslow of 64 Bristol Street, Brooklyn, wishes all relatives and friends a Happy New Year.

CAPLOW—Mr. and Mrs. Samuel N. Caplow of 1159 Eastern Parkway, Brooklyn, extend Happy New Year Greetings to all their relatives and friends.

CHOROSH—Mr. and Mrs. William H. Chorosh and family of 1851 Seventh Avenue, N. Y. C., wish their relatives and friends a Happy New Year.

COHEN—Mr. and Mrs. Abraham Cohen of 51 East 96th Street, N. Y. C., wish their relatives and friends a very Happy and Prosperous New Year.

COHEN—Mr. and Mrs. Frank Cohen of 949 West End Avenue, N. Y. C., wish all relatives and friends a very Happy and Prosperous New Year.

COHEN—Mr. and Mrs. Jacob D. Cohen of 1261 Madison Avenue, N. Y. C., wish all relatives and friends a very Happy New Year.

FRANKEL—Mr. Chester E. Frankel of 19 West 44th Street, N. Y. C., wishes all relatives and friends a Happy New Year.

FREUDER—Mr. Samuel Freuder, 242 Union Avenue, Mt. Vernon, N. Y., wishes all his friends a Happy New Year.

GLENN—Mr. Mendel G. Glenn of 570 Ralph Avenue, Brooklyn, wishes a Happy and Prosperous New Year to all his relatives and friends, to the members of the Agudath Hamorim, Histadruth Ivrith, and the teachers staff of the Newark Talmud Torah. May the coming year be the realization of the fulfilment of our National Hope!

HAUPTMAN—Mr. and Mrs. M. Hauptman of 60 Exeter Street, Brooklyn, wish all relatives and friends a Happy New Year.

HOENIG—Mr. Moses H. Hoenig of 5 Beekman Street, N. Y. C., wishes all relatives and friends a Happy New Year.

KIRSCHSTEIN—Mr. and Mrs. Benjamin Kirschstein of 229 West 97th Street, N. Y. C., wish all relatives and friends a Happy New Year.

NEWMAN—Mr. and Mrs. Samuel Newman of 1454 47th Street, Brooklyn, wish all relatives and friends a Happy New Year.

PROPP—Mr. and Mrs. M. Propp of 122 West 114th Street, N. Y. C., wish all relatives and friends a Happy New Year.

ROSENWEIG—Mr. and Mrs. Louis Rosensweig of 219 East 178th Street, N. Y. C., wish everybody a Happy New Year.

SACKS—Mr. Herman A. Sacks & Bro. of 1884 7th Avenue, and 94 Leonard Street, N. Y. C., wish all relatives and friends a Happy New Year.

SOLOMON—Mr. and Mrs. Morris Solomon of 1990 7th Avenue, N. Y. C., extend New Year Greetings to all relatives and friends.

STEIN—Mr. and Mrs. Joseph Stein of 12 Gold St., N. Y. C., wish all relatives and friends a Happy New Year.

STEINBERGER—Mr. and Mrs. Morris F. Steinberger of 1719 Union Street, Brooklyn,, wish all relatives and friends a Happy New Year.

WEINBERGER—Mr. and Mrs. W. Weinberger of 17 West 24th Street, N. Y. C., extend to their relatives and friends best wishes for a Happy New Year.

ZUBOW—Mr. and Mrs. J. Zubow of 53 East 96th Street, N. Y. C., wish all relatives and friends a Happy New Year.

Best Wishes for a HAPPY and PROSPEROUS NEW YEAR to All Israelites

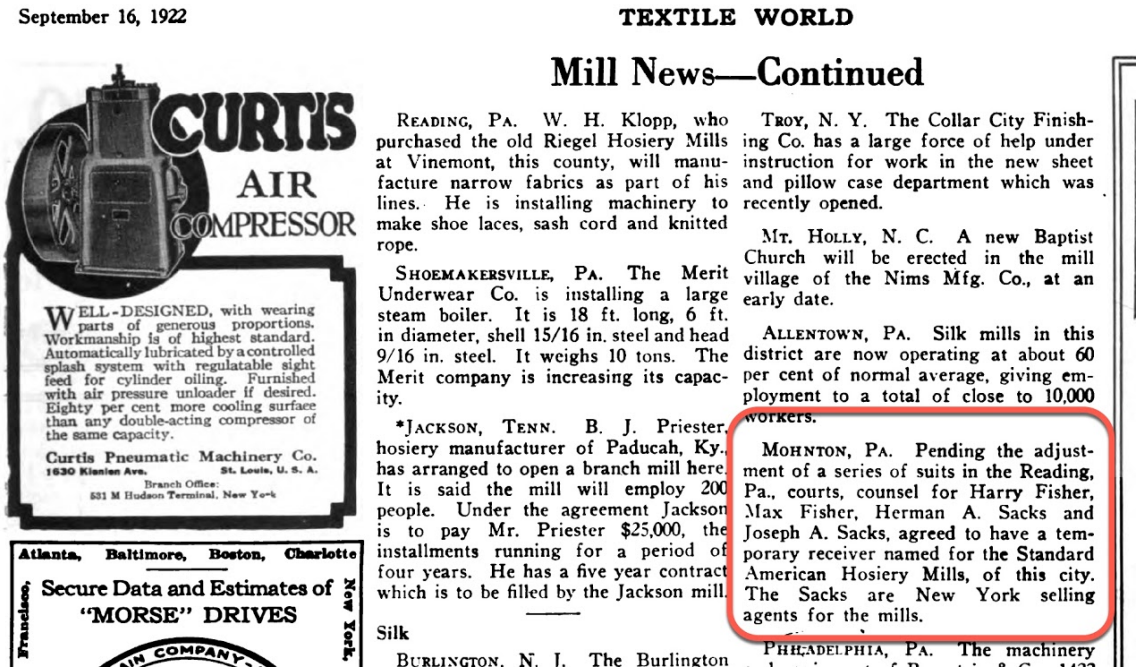
WITTY BROS.

CLOTHIERS

[HP001H][GDrive]

1922 (Sep) - "Standard American Hosiery Mills"

July thru Dec issues : [HP001F][GDrive]



September 16, 1922 TEXTILE WORLD

CURTIS AIR COMPRESSOR

WELL-DESIGNED, with wearing parts of generous proportions. Workmanship is of highest standard. Automatically lubricated by a controlled splash system with regulatable sight feed for cylinder oiling. Furnished with air pressure unloader if desired. Eighty per cent more cooling surface than any double-acting compressor of the same capacity.

Curtis Pneumatic Machinery Co.
1630 Kienlen Ave. St. Louis, U. S. A.
Branch Office:
531 M Hudson Terminal, New York

Atlanta, Baltimore, Boston, Charlotte
Secure Data and Estimates of "MORSE" DRIVES
Francisco, New York.

Mill News—Continued

READING, PA. W. H. Klopp, who purchased the old Riegel Hosiery Mills at Vinemont, this county, will manufacture narrow fabrics as part of his lines. He is installing machinery to make shoe laces, sash cord and knitted rope.

SHOEMAKERSVILLE, PA. The Merit Underwear Co. is installing a large steam boiler. It is 18 ft. long, 6 ft. in diameter, shell 15/16 in. steel and head 9/16 in. steel. It weighs 10 tons. The Merit company is increasing its capacity.

*JACKSON, TENN. B. J. Priester, hosiery manufacturer of Paducah, Ky., has arranged to open a branch mill here. It is said the mill will employ 200 people. Under the agreement Jackson is to pay Mr. Priester $25,000, the installments running for a period of four years. He has a five year contract which is to be filled by the Jackson mill.

Silk

BURLINGTON, N. J. The Burlington

TROY, N. Y. The Collar City Finishing Co. has a large force of help under instruction for work in the new sheet and pillow case department which was recently opened.

MT. HOLLY, N. C. A new Baptist Church will be erected in the mill village of the Nims Mfg. Co., at an early date.

ALLENTOWN, PA. Silk mills in this district are now operating at about 60 per cent of normal average, giving employment to a total of close to 10,000 workers.

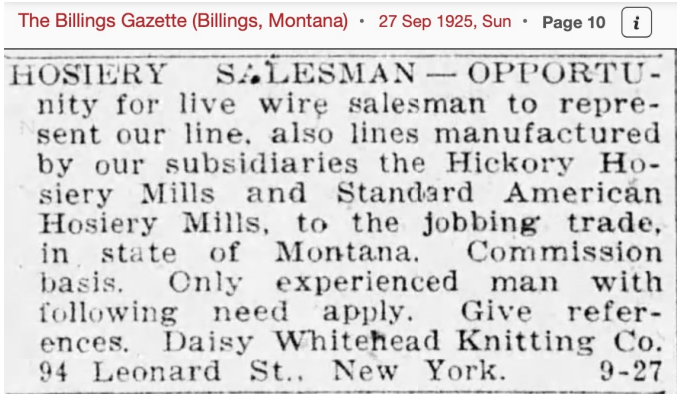
MOHNTON, PA. Pending the adjustment of a series of suits in the Reading, Pa., courts, counsel for Harry Fisher, Max Fisher, Herman A. Sacks and Joseph A. Sacks, agreed to have a temporary receiver named for the Standard American Hosiery Mills, of this city. The Sacks are New York selling agents for the mills.

PHILADELPHIA, PA. The machinery

[HP001F][GDrive]

1925 (Sep 27) - Daisy Whitehead Knitting Company

Full page : [HN0018][GDrive]



The Billings Gazette (Billings, Montana) · 27 Sep 1925, Sun · Page 10

HOSIERY SALESMAN — OPPORTUnity for live wire salesman to represent our line, also lines manufactured by our subsidiaries the Hickory Hosiery Mills and Standard American Hosiery Mills, to the jobbing trade, in state of Montana. Commission basis. Only experienced man with following need apply. Give references. Daisy Whitehead Knitting Co. 94 Leonard St., New York. 9-27

[HN0019][GDrive]

1926 - Feb 25

Full page : [HN0016][GDrive]

JUDGE MAY ADDRESSES PAPER BOX MERCHANTS

Gives Interesting Talk Before Manufacturers at Brooklyn Jewish Center

The first step towards the organization of the paper products industry of the Brooklyn Federation of Jewish Charities took place last night at the Brooklyn Jewish Center. Judge Mitchell May addressed a group of the leading men in the paper-box, corrugated paper, and other allied trades in Brooklyn. Herman Brickman, executive director of the Federation, also spoke.

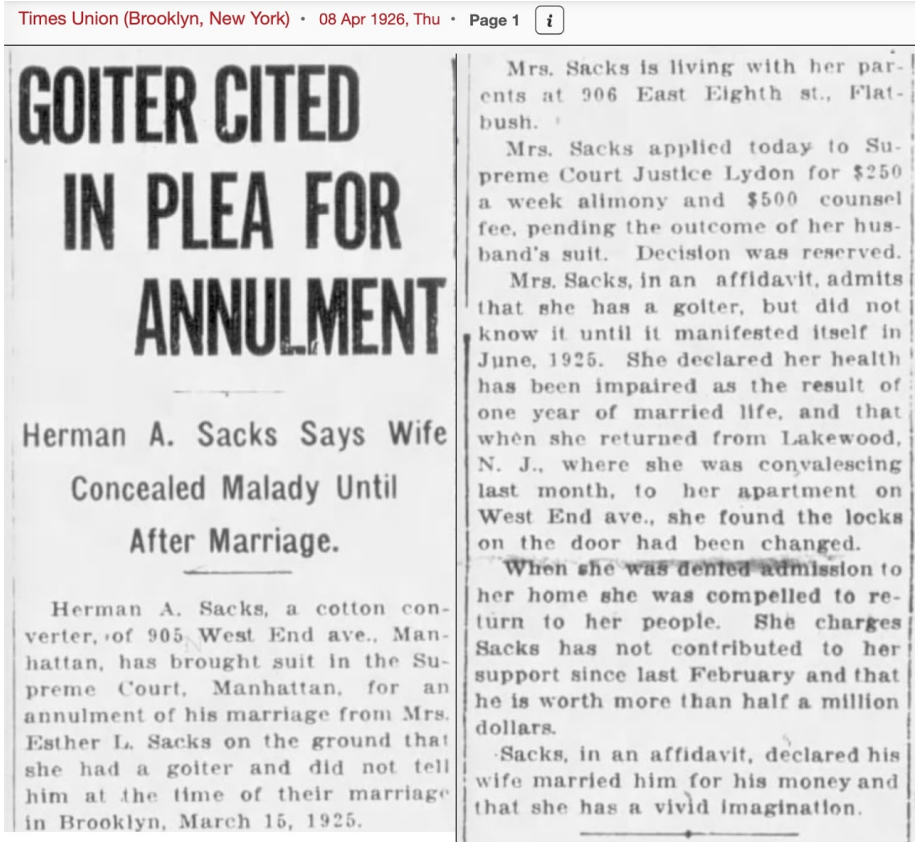
A committee was appointed for the next meeting of the newly formed organization, to draw up a program and prepare a slate of officers. The committee, which will meet Monday, March 8, at the Brooklyn Jewish Center, consists of R. A. Bonime, chairman; Henry Citron, Hyman Freeman, David Freeman, Edward Karfoil, Philip Karlsruher, Samuel Koff, Harry Kovner, Henry Nias, Abraham Price, Julius Reiner, Joseph Rubin, Abraham Cohen, A. Jonas, Louis Weiner, Jacob S. Barshay, Herman Sacks, Jacob Mazer and C. S. Reich.

1926-02-25-the-brooklyn-citizen-pg-5-clip-paper-box-merchants

[HN00I7][GDrive]

1926 (April)

Full page : [HN00I0][GDrive]



Times Union (Brooklyn, New York) • 08 Apr 1926, Thu • Page 1

GOITER CITED IN PLEA FOR ANNULMENT

Herman A. Sacks Says Wife Concealed Malady Until After Marriage.

Herman A. Sacks, a cotton converter, of 905 West End ave., Manhattan, has brought suit in the Supreme Court, Manhattan, for an annulment of his marriage from Mrs. Esther L. Sacks on the ground that she had a goiter and did not tell him at the time of their marriage in Brooklyn, March 15, 1925.

Mrs. Sacks is living with her parents at 906 East Eighth st., Flatbush.

Mrs. Sacks applied today to Supreme Court Justice Lydon for $250 a week alimony and $500 counsel fee, pending the outcome of her husband's suit. Decision was reserved.

Mrs. Sacks, in an affidavit, admits that she has a goiter, but did not know it until it manifested itself in June, 1925. She declared her health has been impaired as the result of one year of married life, and that when she returned from Lakewood, N. J., where she was convalescing last month, to her apartment on West End ave., she found the locks on the door had been changed.

When she was denied admission to her home she was compelled to return to her people. She charges Sacks has not contributed to her support since last February and that he is worth more than half a million dollars.

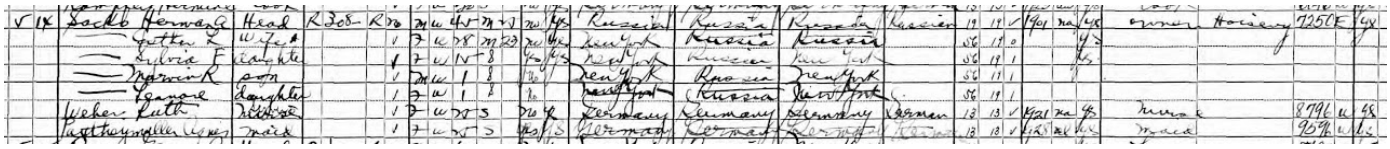
Sacks, in an affidavit, declared his wife married him for his money and that she has a vivid imagination.

[HN001][GDrive]

1930 census

Full Census Forms : [HS000Q][GDrive]

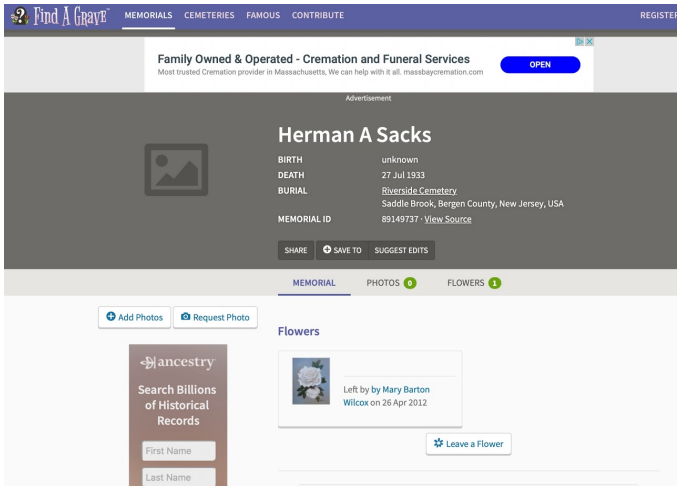
Relatives : Esther L Sacks (age 28?), Sylvia F Sacks (15? cant read..) , Marvin R Sacks (1) , Leanore Sacks (1) , Ruth Weher (???)



[HS000R][GDrive]

Herman A Sacks - Died in 1933 (is this info correct ?)

Transcript - [HL001O][GDrive]

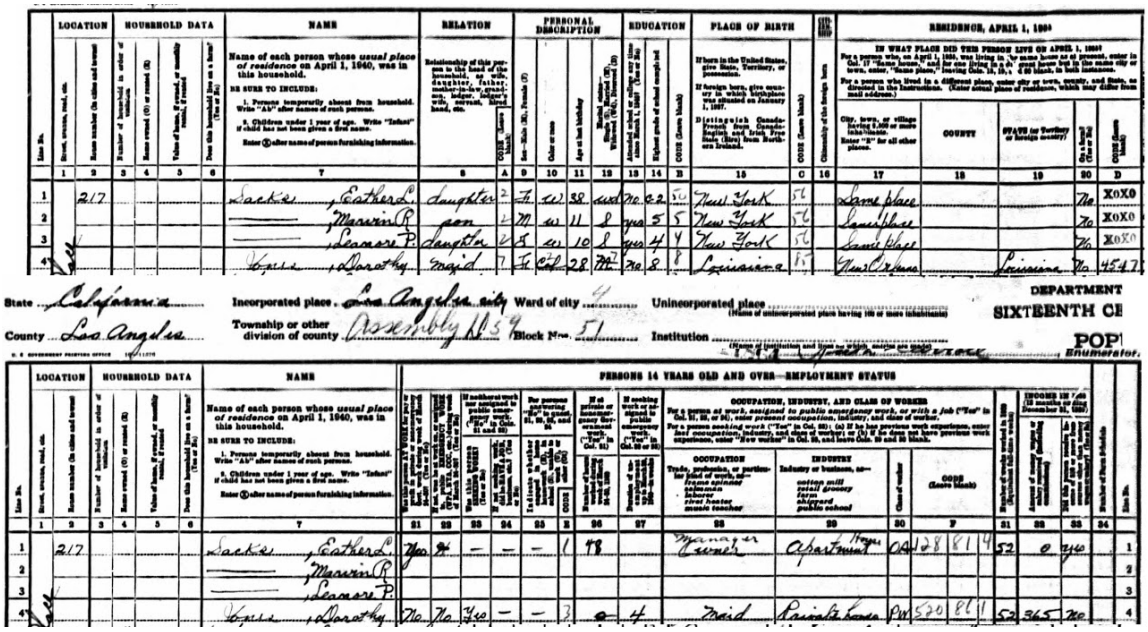


[HL001P][GDrive]

1940 - Esther moves to Los Angeles

Esther moves to Los Angeles - she is there for 1940 census -

Full Census Form : [HS000S][GDrive]



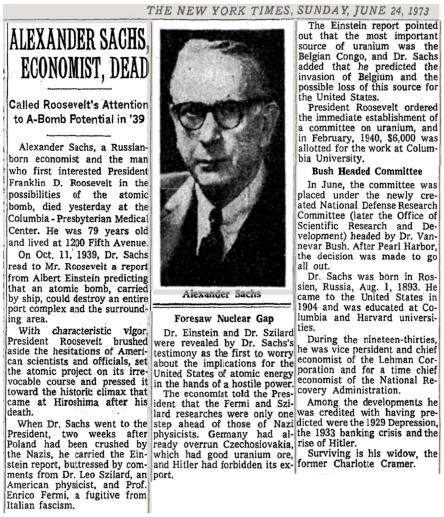
[HS000T][GDrive]

1948 (June) - Esther married Harrold Bassim -

In June 2, May 1948 - "Esther L. Sacks" married a "Harold R. Bassim"

See California marriage records for 1948 : [HL001S][GDrive]

1973 (June 23) - Alexander Sachs (younger brother) dies



THE NEW YORK TIMES, SUNDAY, JUNE 24, 1973

ALEXANDER SACHS, ECONOMIST, DEAD

Called Roosevelt's Attention to A-Bomb Potential in '39

Alexander Sachs, a Russian-born economist and the man who first interested President Franklin D. Roosevelt in the possibilities of the atomic bomb, died yesterday at the Columbia-Presbyterian Medical Center. He was 79 years old and lived at 1200 Fifth Avenue.

On Oct. 11, 1939, Dr. Sachs read to Mr. Roosevelt a report from Albert Einstein predicting that an atomic bomb, carried by ship, could destroy an entire port complex and the surrounding area.

With characteristic vigor, President Roosevelt brushed aside the hesitations of American scientists and officials, set the atomic project on its irrevocable course and pressed it toward the historic climax that came at Hiroshima after his death.

When Dr. Sachs went to the President, two weeks after Poland had been crushed by the Nazis, he carried the Einstein report, buttressed by comments from Dr. Leo Szilard, an American physicist, and Prof. Enrico Fermi, a fugitive from Italian fascism.

Alexander Sachs

Foresaw Nuclear Gap

Dr. Einstein and Dr. Szilard were revealed by Dr. Sachs's testimony as the first to worry about the implications for the United States of atomic energy in the hands of a hostile power.

The economist told the President that the Fermi and Szilard researches were only one step ahead of those of Nazi physicists. Germany had already overrun Czechoslovakia, which had good uranium ore, and Hitler had forbidden its export.

The Einstein report pointed out that the most important source of uranium was the Belgian Congo, and Dr. Sachs added that he predicted the invasion of Belgium and the possible loss of this source for the United States.

President Roosevelt ordered the immediate establishment of a committee on uranium, and in February, 1940, $6,000 was allotted for the work at Columbia University.

Bush Headed Committee

In June, the committee was placed under the newly created National Defense Research Committee (later the Office of Scientific Research and Development) headed by Dr. Vannevar Bush. After Pearl Harbor, the decision was made to go all out.

Dr. Sachs was born in Rossien, Russia, Aug. 1, 1893. He came to the United States in 1904 and was educated at Columbia and Harvard universities.

During the nineteen-thirties, he was vice president and chief economist of the Lehman Corporation and for a time chief economist of the National Recovery Administration.

Among the developments he was credited with having predicted were the 1929 Depression, the 1933 banking crisis and the rise of Hitler.

Surviving is his widow, the former Charlotte Cramer.

[HN00HX][GDrive]

Article : [HN00HV][GDrive]

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1979 (Dec 21) - Younger Joseph A Sachs passes - No mention of Herman

Article : [HN00IA][GDrive]

SACKS-Joseph A. *Beloved husband of the late* ***Florence****. Devoted father of Sanford, Renee Benin and Zachary. Cherished grandfather of Sharon, David. Wendy, Benlamin and Alexander. Dear brother of Eleanor Barr. Service Sunday December 23 at 10:30 a.m. "The Riverside", 76th St. & Amsterdam Ave.*

THIS POINT FORWARD - BAD LEADS ....

1920 Census - NOT OUR HERMAN, this one immigrated in 1905

https://www.findmypast.com/transcript?id=USC%2F1920%2F004966632%2F00759%2F054

Married to Fannie - 3 kids ... George, Beckie, Samuel ...

1900 census

https://www.findmypast.com/transcript?id=USC%2F1900%2F004114591%2F00266%2F079

fannie steinberg born in USA - June 1896 birth ?

Brother is Barnet

1910 census https://www.findmypast.com/transcript?id=USC%2F1910%2F004972987%2F00771%2F026 <- father is Barnet, mother Rebecca, children

BITCHUTE @Housatonic YOUTUBE @HousatonicLive ODYSEE @Housatonic BRIGHTEON @Housatonic

Housatonic

Alexander Sachs (born 1892)

[HL001W][GDrive]

Wikipedia Alexander Sachs

- **Born -** August 01, 1892 ([HG001F][GDrive]) / Birthplace: Raseiniai, Raseiniai District Municipality, Kaunas County, Lithuania [HL001V][GDrive]
- **Death -** June 23, 1973 (79) / New York, New York, United States [HL001V][GDrive]
- **PARENTS -** "Son of Samuel Sachs and Fay Sachs " [HL001V][GDrive]
- **MARRIAGE - Wife -** (1) _____ (2) **Charlotte Cramer Sachs** (born 1907) [HL001V][GDrive]
- **CHILDREN :**
  -
- **SIBLINGS:**
  - **Herman Alexander Sacks** (born 1885)
  - **Elinor Sachs Barr** (born 1894) (Married **David S Barr** (born 1894))
  - **Joseph Alexander Sachs** (born 1896) [HL001V][GDrive]
- **OTHER FAMILY** :
  - In-laws (via **David S Barr** (born 1894)) : Confirmed here : ([HT002Z][GDrive])
    - Brother In-Law **Simon Pelham Barr** (born 1892)
- **Profession** - Economist and Banker

Saved version of Alexander Sachs : [HK000X][GDrive]

NOTE THE BIRTHDATE IS WRONG IN THIS ARTICLE - See WW1 Draft Registration : [HG001F][GDrive]

Alexander Sachs *(August 1, 1893 – June 23, 1973) was an American economist and banker. In October 1939 he delivered the Einstein–Szilárd letter to President Franklin D. Roosevelt, suggesting that nuclear-fission research ought to be pursued with a view to possibly constructing nuclear weapons, should they prove feasible, in view of the likelihood that Nazi Germany would do so. This led to the initiation of the United States' Manhattan Project.*

Life and career

Born in Rossien, Lithuania, Sachs moved to the U.S. in 1904 to join his brother, ***Joseph A. Sachs****, who was instrumental in his further education. He was educated at Townsend Harris High School in New York City, the City College of New York, and Columbia College. In 1913 he joined the municipal bond department at Boston-based investment bank Lee, Higginson & Co. but in 1915 returned to education as a graduate student in social sciences, philosophy, and jurisprudence at Harvard College. In later life, he was on the faculty at Princeton University.*

Between 1918 and 1921 he was an aide to Justice Louis Brandeis and the Zionist Organization of America on international problems of the Middle East and the World War I peace conference.

From 1922 to 1929 he was economist and investment analyst for Walter Eugene Meyer in equity investment acquisitions. He then organized and became director of Economics Investment Research at the Lehman Corporation, a newly established investment company of Lehman Brothers. In 1931 he joined the board at Lehman. He was vice president from 1936 to 1943, remaining on the board until his death.

In 1933 Sachs served as organizer and chief of the economic research division of the National Recovery Administration. In 1936 he served on the National Policy Committee. ***During the war, he was economic adviser to the Petroleum Industry War Council and special counsel to the director of the Office of Strategic Services.***

He was knighted by the Queen of England and at the time of his death held the title of Sir Alexander Sachs.

He was married to the inventor Charlotte Cramer Sachs (1907–2004) and is survived by, among others, his nephew Paul S. Barr, M.D. of New York; and his nephew Zachary H. Sacks, an attorney in Los Angeles.

[Atomic Bomb - Notes are later ...]

1898 - Did father Samuel Sachs move to the USA before the rest of the family did ?

Samuel remarries in 1913 - Transcript = https://www.findmypast.com/transcript?id=FS%2FMAR%2F37276559%2F1

his father was Hyman Sacks, mothr was Anna Merkowsky Sacks

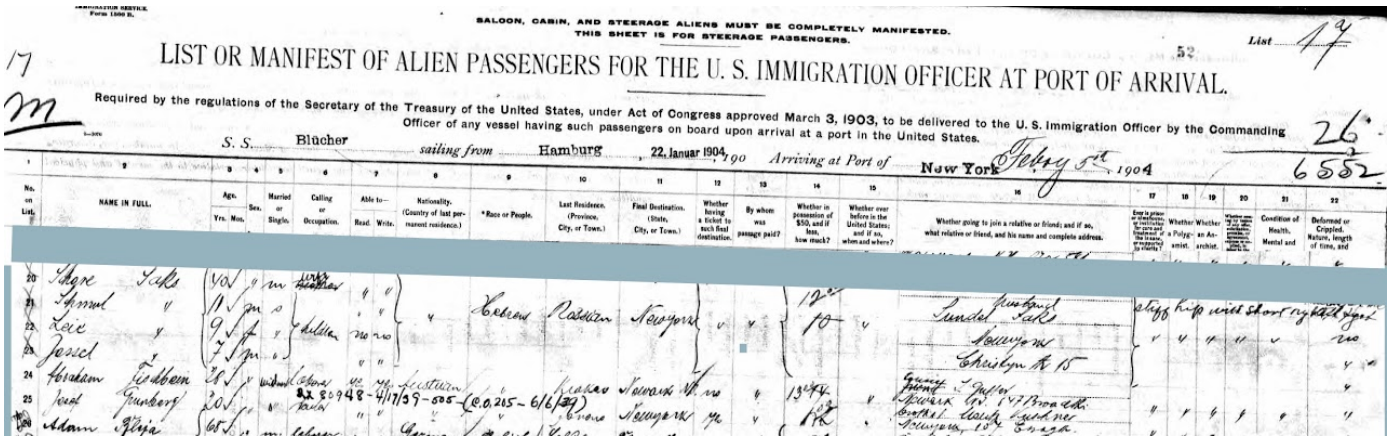
Hyman Sack - https://www.fold3.com/image/3373292 - Dec 8 1897

Samuel Sacks and 2nd wife Lena (aka Lina Freidman, also born in Russia) in 1930 census (manhattan) : **Transcript :** [HS000U][GDrive] / Full Census Form : **Image :** [HS000U][GDrive]

1904 (Feb 5) - Passenger info, voyage arriving in New York City (from Hamburg) on Blucher

"Sohone Saks" (age 40), Shamal (age 11), Lie (age 9),and Jossel (age 7) - Husband "Sundel Saks" in New York

Full sheet : [HJ0007][GDrive]



SALOON, CABIN, AND STEERAGE ALIENS MUST BE COMPLETELY MANIFESTED.
THIS SHEET IS FOR STEERAGE PASSENGERS.

List 17

LIST OR MANIFEST OF ALIEN PASSENGERS FOR THE U. S. IMMIGRATION OFFICER AT PORT OF ARRIVAL.

Required by the regulations of the Secretary of the Treasury of the United States, under Act of Congress approved March 3, 1903, to be delivered to the U. S. Immigration Officer by the Commanding Officer of any vessel having such passengers on board upon arrival at a port in the United States.

S. S. Blücher sailing from Hamburg, 22 Januar 1904, 190 Arriving at Port of New York Febry 5th 1904

[HJ0008][GDrive]

40 W 117th Street NYC - Today

Whatever was there in 1920, is not there anymore (as of 2019)

1906 - Immigration ? (thought it was 1904..)

https://www.findmypast.com/transcript?id=US%2FPASS%2FNY%2FELLIS2%2F008158289%2F3

Samuel Sachs - 1906

Role Arrival Port Relation (Uncle) To:

Others Passenger: Samuel Alexandrowitz <- Much closer to mother's maiden name...

Departure ; Bremen

SS https://en.wikipedia.org/wiki/USS_Aeolus_(ID-3005)

"https://en.wikipedia.org/wiki/USS_Aeolus_(ID-3005)"

1910 - US Census for "Sacks" family

- "Sacks" not "Sachs"
- Younger brother **Alexander Sachs** (born 1892) still has name "Samuel" (not yet changed to "Alexander")
- 38 (or 40?) west 117th street - Right next to 1915 address
- Herman Sack immigrated to the USA in 1901, 3 years before his siblings
- Sadly, mother Sarah must have passed (father "Sundel" is widowed)
- Father here is "Sundel", not "Samuel" ... ???
- Sister "Elinor" is here as "Lena"

Full Census Form : [HS000J][GDrive] / **TRANSCRIPT :** [HS000K][GDrive]

Record Transcription:
Us Census 1910

Household Members

First name(s)	Last name	Relationship	Marital status	Gender	Age	Birth year
Sundel	Sacks	Self	Widowed	Male	54	1856
Herman	Sacks	Son	Single	Male	24	1886
Samuel	Sacks	Son	Single	Male	18	1892
Lena	Sacks	Daughter	Single	Female	15	1895
Joseph	**Sacks**	**Son**	**Single**	**Male**	**13**	**1897**

[HS000L][GDrive]

1912 (Jan) - Herman Sachs/Sacks marriage to Fannie Steinberg

Transcript - [HL001J][GDrive]

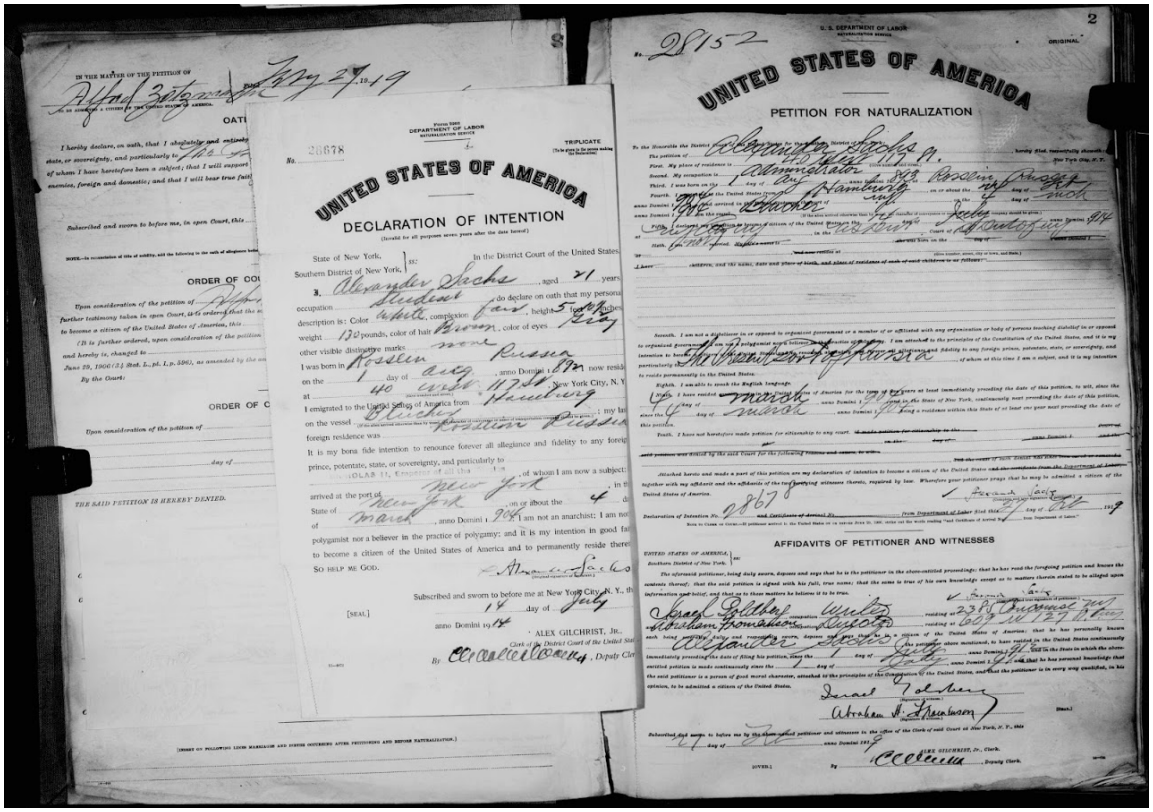
Record Transcription:
United States Marriages
Learn about this record set

First name(s)	Herman
Last name	Sacks
Sex	Male
Race	White
Marital status	Single
Age	25
Birth year	1887
Birth place	Russia
Father's first name(s)	Samuel
Father's last name	Sacks
Mother's first name(s)	Sarah
Mother's last name	Alexandrovitz
Event	Marriage
Year	1912
Event date	26 Jun 1912
Location	Manhattan
Place	Manhattan, New York, United States
County	New York
State	New York
Country	United States
Spouse's first name(s)	Fannie
Spouse's last name	Steinberg
Spouse's race	White
Spouse's marital status	Single
Spouse's age	19
Spouse's birth year	1893
Spouse's birth place	Manasqua..., N.J.
Spouse's father's first name(s)	Barnet
Spouse's father's last name	Steinberg
Spouse's mother's first name(s)	Sarah
Spouse's mother's last name	Fridlander
FamilySearch film number	001613384
Record set	United States Marriages
Category	Birth, Marriage & Death (Parish Registers)
Subcategory	Civil Marriage & Divorce
Collections from	Americas, United States

[HL001L][GDrive]

1914 - Immigration / Petition for Naturalization

Address : 40 West 117th street in Manhattan ... Note the names on the petitions :



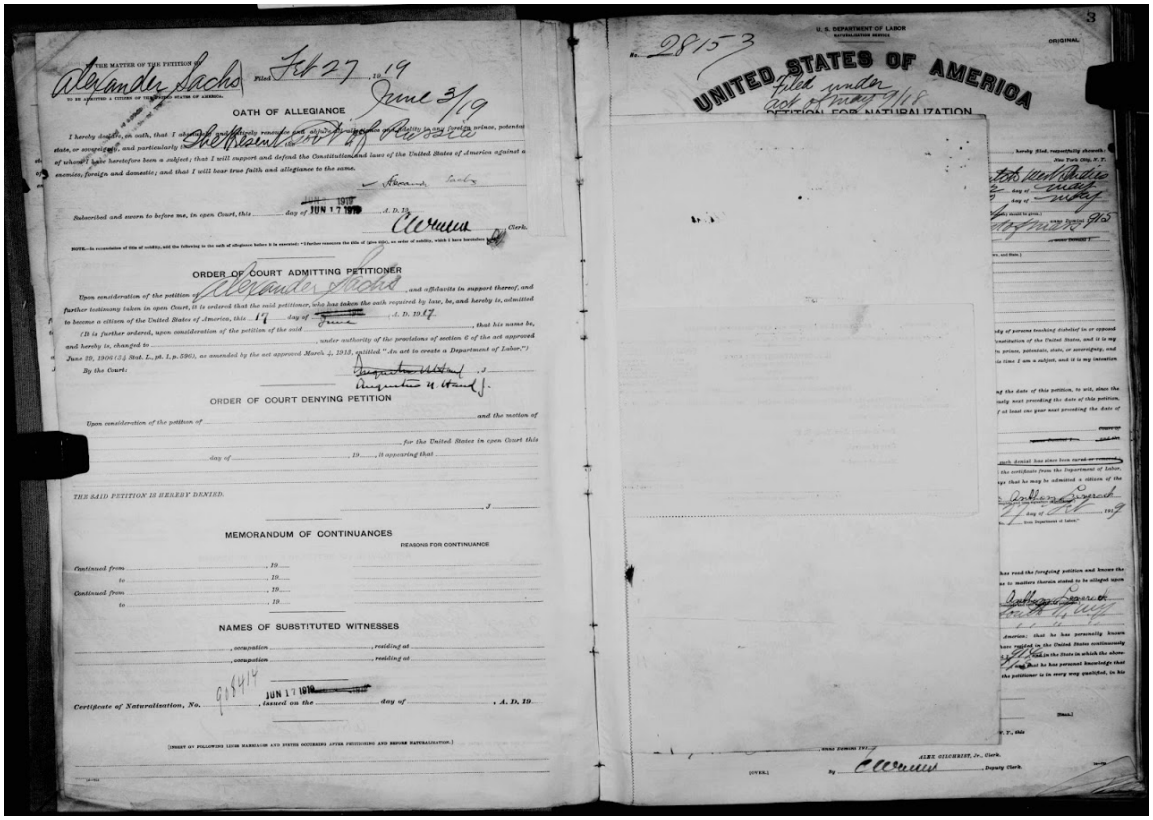
UNITED STATES OF AMERICA

DECLARATION OF INTENTION

PETITION FOR NATURALIZATION

AFFIDAVITS OF PETITIONER AND WITNESSES

[HG001M][GDrive]



UNITED STATES OF AMERICA

OATH OF ALLEGIANCE

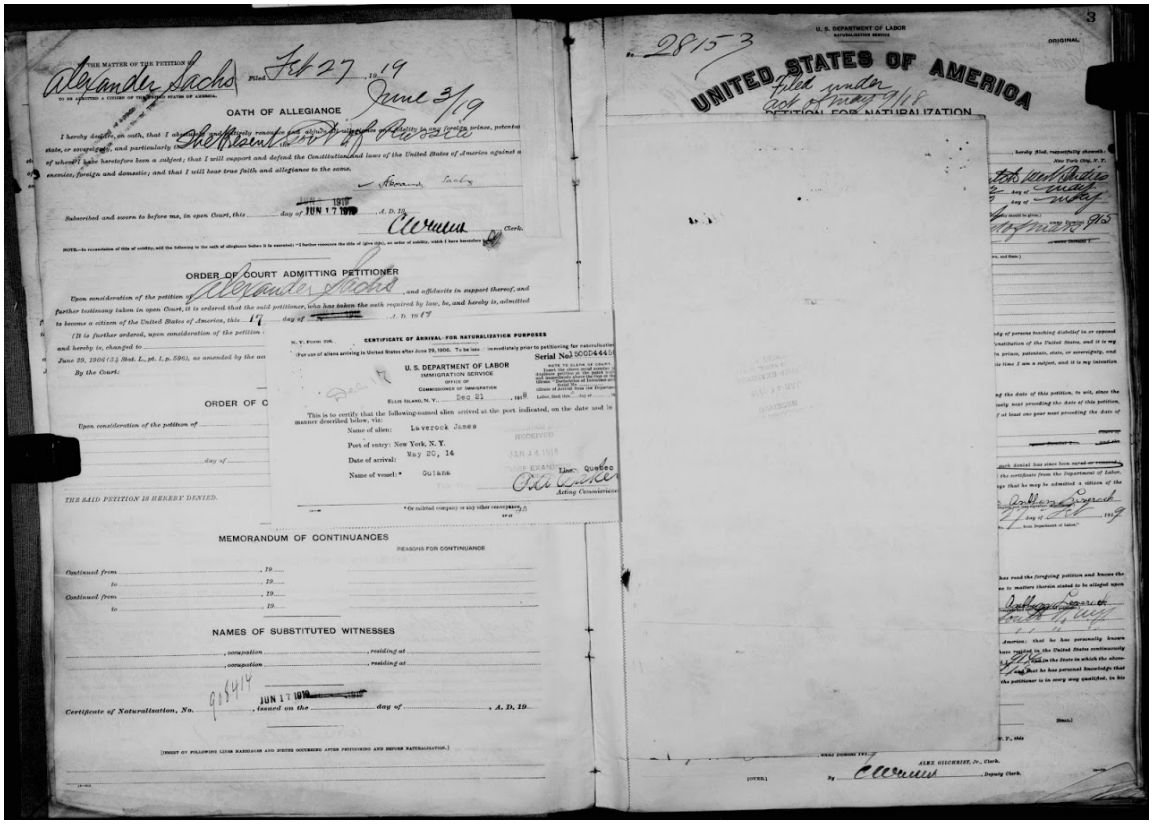
ORDER OF COURT ADMITTING PETITIONER

ORDER OF COURT DENYING PETITION

MEMORANDUM OF CONTINUANCES

NAMES OF SUBSTITUTED WITNESSES

[HG001N][GDrive]



UNITED STATES OF AMERICA

OATH OF ALLEGIANCE

ORDER OF COURT ADMITTING PETITIONER

CERTIFICATE OF ARRIVAL FOR NATURALIZATION PURPOSES

U. S. DEPARTMENT OF LABOR
IMMIGRATION SERVICE

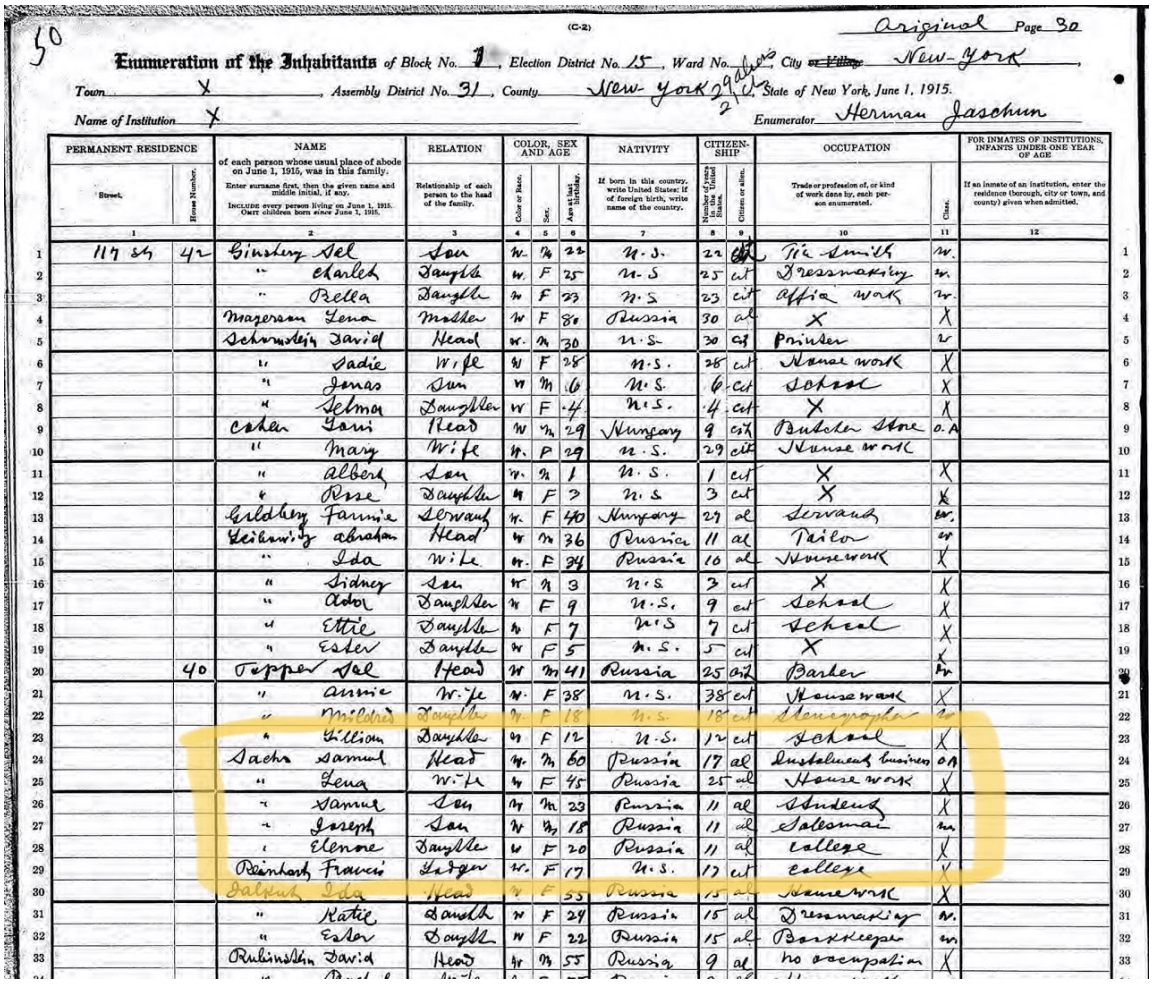
MEMORANDUM OF CONTINUANCES

NAMES OF SUBSTITUTED WITNESSES

[HG001O][GDrive]

1915 Census

Source of image (Tweet) : [HT002X][GDrive]



(C-2) Original Page 30

Enumeration of the Inhabitants of Block No. 1, Election District No. 15, Ward No. 21st City ~~of Village~~ New-York

Town X, Assembly District No. 31, County New York, State of New York, June 1, 1915.

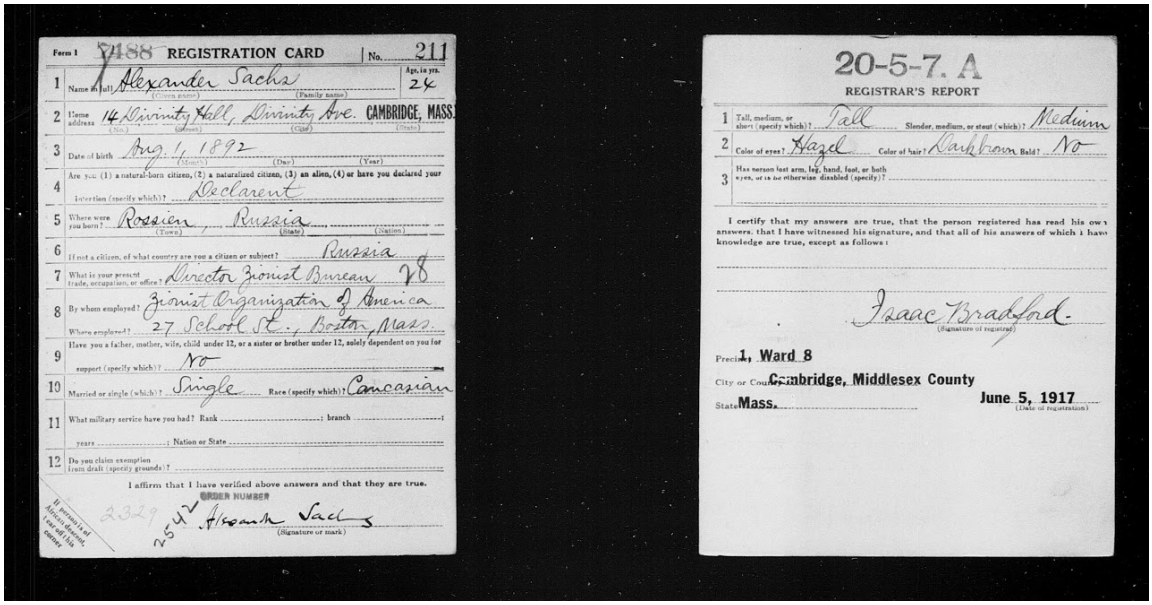
Name of Institution X Enumerator Herman Jaschin

PERMANENT RESIDENCE: Street	House Number	NAME of each person whose usual place of abode on June 1, 1915, was in this family. Enter surname first, then the given name and middle initial, if any. INCLUDE every person living on June 1, 1915. Omit children born since June 1, 1915.	RELATION: Relationship of each person to the head of the family.	COLOR, SEX AND AGE: Color or Race	Sex	Age at last Birthday	NATIVITY: If born in this country, write United States; if of foreign birth, write name of the country.	CITIZENSHIP: Number of years in the United States	Citizen or alien	OCCUPATION: Trade or profession of, or kind of work done by, each person enumerated.	Class	FOR INMATES OF INSTITUTIONS, INFANTS UNDER ONE YEAR OF AGE: If an inmate of an institution, enter the residence (borough, city or town, and county) given when admitted.
1		2	3	4	5	6	7	8	9	10	11	12
1	117 St	42	Ginsburg Sol	Son	W.	M	22	N.S.	22	cit	Tie Smith	W.	
2			" Charles	Daughter	W	F	25	N.S	25	cit	Dressmaking	W.	
3			" Bella	Daughter	W	F	23	N.S	23	cit	office work	W.	
4			Mazersen Lena	Mother	W	F	80	Russia	30	al	X	X	
5			Schmuckler David	Head	W.	M	30	N.S.	30	cit	Printer	W	
6			" Sadie	Wife	W	F	28	N.S.	28	cit	House work	X	
7			" Jonas	Son	W	M	6	N.S.	6	cit	School	X	
8			" Selma	Daughter	W	F	4	N.S.	4	cit	X	X	
9			Cohen Sam	Head	W	M	29	Hungary	9	cit	Butcher Store	O. A	
10			" Mary	Wife	W.	F	29	N.S.	29	cit	House work		
11			" Albert	Son	W.	M	1	N.S.	1	cit	X	X	
12			" Rose	Daughter	W	F	3	N.S	3	cit	X	X	
13			Goldberg Fannie	Servant	W.	F	40	Hungary	29	al	Servant	Ser.	
14			Leibowitz abraham	Head	W	M	36	Russia	11	al	Tailor	O A	
15			" Ida	Wife	W.	F	34	Russia	10	al	Housework	X	
16			" Sidney	Son	W	M	3	N.S	3	cit	X	X	
17			" Abbe	Daughter	W	F	9	N.S.	9	cit	School	X	
18			" Ettie	Daughter	W	F	7	N.S	7	cit	School	X	
19			" Ester	Daughter	W	F	5	N.S.	5	cit	X	X	
20		40	Tepper Sol	Head	W	M	41	Russia	25	al	Barber	Bar	
21			" Annie	Wife	W.	F	38	N.S.	38	cit	House work	X	
22			" Mildred	Daughter	W.	F	18	N.S.	18	cit	Stenographer	Ste	
23			" Lillian	Daughter	W	F	12	N.S.	12	cit	School	X	
24			Sachs Samuel	Head	W.	M	60	Russia	17	al	Installment business	O A	
25			" Lena	Wife	W	F	45	Russia	25	al	House work	X	
26			" Samuel	Son	W	M	23	Russia	11	al	Student	X	
27			" Joseph	Son	W	M	18	Russia	11	al	Salesman	Sm	
28			" Elenore	Daughter	W	F	20	Russia	11	al	College	X	
29			Reinhardt Francis	Lodger	W.	F	17	N.S.	17	cit	College	X	
30			Dalsuk Ida	Head	W	F	33	Russia	15	al	Housework	X	
31			" Katie	Daughter	W	F	24	Russia	15	al	Dressmaking	W.	
32			" Ester	Daughter	W	F	22	Russia	15	al	Bookkeeper	Bk	
33			Rubinstein David	Head	W	M	55	Russia	9	al	no occupation	X	

[HT002Y][GDrive]

1917 (June 5) - WW1 Registration

Interesting that he signed up for the draft while in Cambridge, Massachusetts - Not while in New York City



Form 1 — 7188 — REGISTRATION CARD — No. 211

1 Name in full: Alexander Sachs (Given name) (Family name) — Age, in yrs.: 24

2 Home address: 14 Divinity Hall, Divinity Ave. CAMBRIDGE, MASS. (No.) (Street) (City) (State)

3 Date of birth: Aug. 1, 1892 (Month) (Day) (Year)

4 Are you (1) a natural-born citizen, (2) a naturalized citizen, (3) an alien, (4) or have you declared your intention (specify which)? Declarent

5 Where were you born? Rossica (Town) Russia (State) (Nation)

6 If not a citizen, of what country are you a citizen or subject? Russia

7 What is your present trade, occupation, or office? Director Zionist Bureau 78

8 By whom employed? Zionist Organization of America
Where employed? 27 School St., Boston, Mass.

9 Have you a father, mother, wife, child under 12, or a sister or brother under 12, solely dependent on you for support (specify which)? No

10 Married or single (which)? Single Race (specify which)? Caucasian

11 What military service have you had? Rank ....; branch ....; years ....; Nation or State ....

12 Do you claim exemption from draft (specify grounds)? ....

I affirm that I have verified above answers and that they are true.

ORDER NUMBER 2329

25 Alexander Sachs (Signature or mark)

If person is of foreign birth, he will also answer

20-5-7. A

REGISTRAR'S REPORT

1 Tall, medium, or short (specify which)? Tall Slender, medium, or stout (which)? Medium

2 Color of eyes? Hazel Color of hair? Dark brown Bald? No

3 Has person lost arm, leg, hand, foot, or both eyes, or is he otherwise disabled (specify)? ....

I certify that my answers are true, that the person registered has read his own answers, that I have witnessed his signature, and that all of his answers of which I have knowledge are true, except as follows: ....

Isaac Bradford (Signature of registrar)

Precinct 1, Ward 8

City or County Cambridge, Middlesex County

State Mass. June 5, 1917 (Date of registration)

[HG001F][GDrive]

1917 (December)

Alexander Sachs claims a restores Palestine Rights the World's Oldest Tragedy

Full page ; [HN00IJ][GDrive]

TAKING JERUSALEM WAR'S FIRST RESULT

Alexander Sachs Claims a Restored Palestine Rights the World's Oldest Tragedy

THE BELGIUM OF HISTORY

Now to Be Restored After Nearly Twenty Centuries of Exile, Deportation and Persecution

At a meeting held in the Ritz-Carlton Hotel last night for the formation of a University Zionist Society in Montreal, Mr. Alexander Sachs, director of the Zionist Bureau for Canada, declared that Great Britain's liberation of the Holy Land along with its declaration of its intention to re-establish Palestine as a national home for the Jewish people, was the one positive fact in the war, and the first chapter in the fulfilment of the British aim in the war. That aim was expressed by the former Premier Asquith, on the 25th of September, 1914, as the enthronement of public right, which, in addition to the repudiation of militarism, meant that room must be found and kept for the independent existence and the free development of the smaller nationalities, each with a corporate consciousness of its own. British arms and British statesmanship had thus enthroned the idea of public right in the oldest and most radiant corner of civilization—Palestine.

"There is magnificent historic justice in this," said the speaker. "The peace of Europe was broken by the violation on the part of Germany of the European covenant, with a small nation—Belgium. The new covenant which shall make possible peace and progress of all the nations is beginning by a new covenant with the Belgium of history, a nation conquered by the scientific militarism of Rome, a people deported and persecuted from land to land, and from age to age, yet surviving its conquerors and oppressors and living to see the fulfillment of its aspiration for its national land, at that critical point of civilization, when the great powers are allied to resist another Rome and another scientific militarism."

The speaker pointed out that Belgium bore the same relation to the three powers in Europe. England, France and Germany, that Palestine had to the three continents, Europe, Asia and Africa. Belgium had been called "the cross-roads of Europe." Palestine has the bridge of the three continents, and between the maritime basin of the Mediterranean and that of the Indian Ocean, Belgium was a buffer state just as Palestine would be. Three years and three months after Great Britain entered the war to vindicate the "Cross-roads of Europe," she conquered the "Cross-roads of the three continents," in the same great cause.

"The declaration of the Right Hon. Arthur J. Balfour, secretary for foreign affairs, 'His Majesty's Government views, with favor, the establishment in Palestine of a national home for the Jewish pepople and will use its best endeavors to facilitate the achievement of this object,' that declaration," said the speaker, "made to the tune of the triumphal entry of the British army, brings about the healing of the oldest and most persistent national tragedy in history. It is an earnest of the healing of the national tragedy which opened the war, and, above all, an earnest of the healing of the nations which allied victory would bring about."

The speaker told of the great results already attained in Palestine by Jewish colonists, and said it would be a great encouragement to the inhabitants of the plains of Northern France and Belgium when, after peace they once more attempted to reconstruct their countries.

A committee was formed to consider the whole basis and purposes of a University Zionist Society in Montreal, and their report will be made to another meeting. Mr. Louis Fitch presided last night.

MASS FOR SOLDIERS

Requiem Service at Chapel of Notre Dame de Bon Secours

A requiem mass was celebrated at 8.30 yesterday morning at the Chapel of Notre Dame de Bon Secours, for the repose of the souls of the French soldiers from Canada who had fallen on the field of honor in the war.

A large number of the French Army Sac au Dos, 1914, under Captain Raoul Vennat, attended the service. The French Consul-General, M. C. E. Bonin, was also present with members of his staff, and Capt. Dutoit, with other French officers who are in Montreal on a special mission. The Military Headquarters were represented by Major-General E. W. Wilson, C.M.G., G.O.C., Lt.-Col. Hill, G.S.O., Lt.-Col. W. J. Stewart and Lt.-Col. L. LeDuc, while there was a large attendance of other officers and men from the C.E.F. and the Active Militia.

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[HN00IK][GDrive]

1918 (Jan) - Article in "The World Court Magazine" : "Conditions and Prospects in Palestine"

PDF : [HP005S][GDrive]

Conditions and Prospects in Palestine

By ALEXANDER SACHS

Assistant to Executive Secretary of the Zionist Organization of America

FROM the outbreak of the war until the British occupation Jewish colonization passed through a critical period. The three and a half years seemed like one day of suffering. The crisis appeared in two forms: economic want and political oppression. The economic situation was affected by the moratorium; by interruption of communication and exchange between Palestine and the outside world; by enormous depreciation of Turkish paper money; by abnormal taxation and official robbery, and by the plague of locusts in 1915. Of political oppression three periods may be named: First, the regime of Bey-Adin, Kaimakam of Jaffa, a zealous anti-Zionist, under whom sentences of exile were passed and the evacuation of Jaffa was ordered; second, the regime of Chassan Bey who instituted indescribable persecution, plunder, anarchy, false accusations and tyranny, and at this time cholera and spotted fever broke out; third, from the evacuation of Jaffa until the British occupation, the days of panic and despair, impression of men into the Turkish army, arrest and exile of innocents, incredible sufferings—and then deliverance came.

The Zionist Commission appointed by the British Government and the Zionist Organization, immediately upon its arrival in Palestine, in April, 1918, set up a relief department, "to coordinate the relief work in Palestine." The Relief Department has now a branch at Cairo and the following agencies in Palestine:

1. In Jerusalem, relief is under the immediate supervision and control of a special Administrative Committee of the Commission.

2. In Jaffa, the administration of relief is in the hands of the Va'ad Ha'ir (Committee of the City) acting with Mr. M. J. Rosenhack, representing the Relief Department.

3. In the Judean Colonies, such relief as is necessary is administered by the Va'ad of each colony, aided by the Va'ad Haitachaduth (Committee of the Federation of Jewish Colonies).

JERUSALEM

The Jewish population of Jerusalem is now 26,000. In the last few years of the war, the Jewish population has been reduced from 56,000 to 26,000. The war has similarly swept away sources of income as well as of life, and the condition was aggravated by a depreciation of Turkish paper money. Jerusalem has also suffered during the war from the partial activity to which the best elements of the Jewish life were restricted under the Turkish regime, and from the imprisonment and exile of many of its most prominent and valuable workers. Finally came disease. Malaria is a constant, though a remediable illness in the town: some 60 per cent. of the inhabitants

[HP005T][GDrive]
page 604 ... (625 in PDF)

show signs of malarial infection. This population without bread-earning occupations, without food and clothing, deprived of many of its best protectors, was ravaged by severe epidemics.

The work of the Jerusalem Relief Department consists of distribution of bread to school children, orphans, and inmates of the institutions, medical relief, and the support of hospitals and institutions. For relief purposes, Hebron counts as a branch of Jerusalem. The funds for the relief come from the American Jewish Relief Committee, supported by direct relief to individuals and institutions sent through the Zionist Organization. Vast sums in the hundreds of thousands were and are required to meet the situation.

Constructive relief work is being conducted through Ateliers for Women and Girls, which are also playing a most important part in the education of the city. They consist of needle work, school and lace, and wool ateliers employing around seven hundred women and girls, and while a considerable amount is given as subvention, they are gradually becoming self-supporting. The Bezalel School of Arts and Crafts and Workshop, are also employing workers. This institute of Applied Arts is mainly in need of material to carry on its work.

Of the special problems confronting Jerusalem, important place should be given to the problem of the orphans, of whom, it is estimated, there are 2,500, a number representing 10 per cent. of the population. The Commission's constructive plan is to distribute them among the agricultural colonists and to provide from the central sources for relief, for their maintenance and education.

JAFFA

Before the evacuation of the Jewish population by the Turks, the Va'ad Ha'ir had a complete relief organization, including in relief the sale of food at cost price and provision for orphans and aged. Since the return of the Jewish population to Jaffa, the Va'ad is carrying on the existing relief work in opening institutions, chief among them, Jaffa Jewish Hospitals which has involved originally an expenditure of £5,000.

JUDEAN COLONIES

As to the problem of relief in the Colonies, the Relief Department has granted the Va'ad Haitachaduth money for relief during June, after which it was intended to arrange for relief in food. A further sum was given the Va'ad for the purpose of small loans to inhabitants of the colonies who do not own land.

There is a greater relief problem affecting the laborers and traders.

General Allenby's victorious march has also liberated Galilee and Samaria, so that relief work, especially food control, has been opened there under direction of the Union of Galilean Colonies. In Safed alone there are 500 orphans whose parents have died during the war.

LOOKING FORWARD

A correspondent writes of the recent visit paid by five members of the Zionist Commission to some of the colonies in occupied territory showing that the colonists have got the

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1918 (March 26)

- https://www.newspapers.com/image/419796311/?terms=%22alexander%2Bsachs%22
- 1918-03-26-the-gazette-montreal-canada-pg-17.jpg
- https://drive.google.com/file/d/1-65uvdRF-BUkBaXTHNgm8wwO5D3_17w4/view?usp=sharing

- 1918-03-26-the-gazette-montreal-canada-pg-17-clip-palestine
- https://drive.google.com/file/d/1rkIsNRzw-Nlb-TJfu0BqYhj3qkcrJt3B/view?usp=sharing

1918-03-26-the-gazette-montreal-canada-pg-17-clip-palestine

PALESTINE VICTORY IS LIGHT IN GLOOM

Alexander Sachs Told Canadian Club Importance of Near East Front

JEWS OF WORLD PLEASED

Grateful To Great Britain For Declaration in Favor of Zionist Movement—Isaiah's Foreign Policy

In the redemption of Palestine, and the return of the Jews to the land of which they were dispossessed so many centuries ago, Mr. Alexander Sachs told the Canadian Club in the Windsor Hotel yesterday there was an earnest of a new era for all peoples in the whole world as soon as the German scheme for a Berlin-Bagdad railway and domination of the world has been defeated. He believes Palestine to be the great strategic point in the future life of the world, being, as it is, the cross-roads of three continents, the natural meeting point for transcontinental lines from Pekin to Paris, from India to Petrograd and to other places. He believes that if the Jews hold Palestine under the suzerainty of the British Government, there will come a time when people of Australia can travel to England in fifteen days for an Imperial conference, and men in India get to London in three days. The alternative is for Germany to win and the despotic Turk to unite the Eastern countries and those parts of Russia in Europe and Asia, where Mohammedanism predominates into one Empire under a government which would revive the worst features of the Dark Ages.

Mr. Sachs protested against the idea that the eastern front is a side-show. The front had to be considered as a whole, and the importance of the east was to be seen in the German willingness to compromise in the west and not in the east. So, though the sky was dark temporarily in the west, the gloom was partially dispersed by the light coming from the east. The British successes on the Jordan were real successes. That front was important, because the safety and security of the British Empire were bound up in securing this highway between the east and the west. At the very beginning, Lord Kitchener's plan had been to attack the Germans through Turkey and not through the Dardanelles in order to prevent the Turks becoming an important military factor, and thus bring the whole Bagdad scheme to naught.

ISAIAH'S PROPHECY.

The speaker contended that Isaiah, the great Hebrew prophet, had preached tens of centuries ago that the foreign policy of a nation should be moral and not rapacious. Asquith and Lloyd George's utterances during this war had been exactly the same. It was necessary to make granaries of Palestine and Mesopotamia as well, to prevent the famine after the war which Mr. Hoover feared. The discovery by Aronstein, a Jew, in the Mt. Carmel agricultural experiment station, of wild wheat, was an important discovery. It had been introduced into Montana and Arizona because wild wheat would grow anywhere.

Mr. Sachs traced the history of the Jew in his migrations, which were really deportations, the reasons for his stubborn survival, his contributions to history, and progress in one country after another, Hannibal, the Carthaginian general, being a Jew, as his name attested. The declaration of November 22nd, 1917, by the British Parliament, had at length brought in sight of the Jewish people, the eternal Belgium of history, their promised land. The speaker told of the splendid productivity of the soil of Palestine, the plans of Jews for its development, with the support of Great Britain, the things already accomplished, the dreams for the future, and the great gratitude of Jews in every country for Great Britain's guarantee. The Jews had a mixture of poetry and practicality in their natures, just as had the British, who were a nation of shop-keepers as well as of Shakespeares. The British were a real Zionist people, a Bible people, and they were taking the role of the Annointed One prophesied by Hebrew prophets to act as restorer of the Jews to their land. Empires were needed for security and small nations for intensive effort. Small trees produced most fruit and it was the ambition of Palestine to be one of those small trees.

Mr. W. M. Birks, president, introduced the speaker.

1918 (June 18)

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- https://drive.google.com/file/d/1WHVj9FliparErEqCF6DynKV9RRucOGl4/view?usp=sharing
- 1918-06-18-calgary-herald-pg-9-clip-sachs
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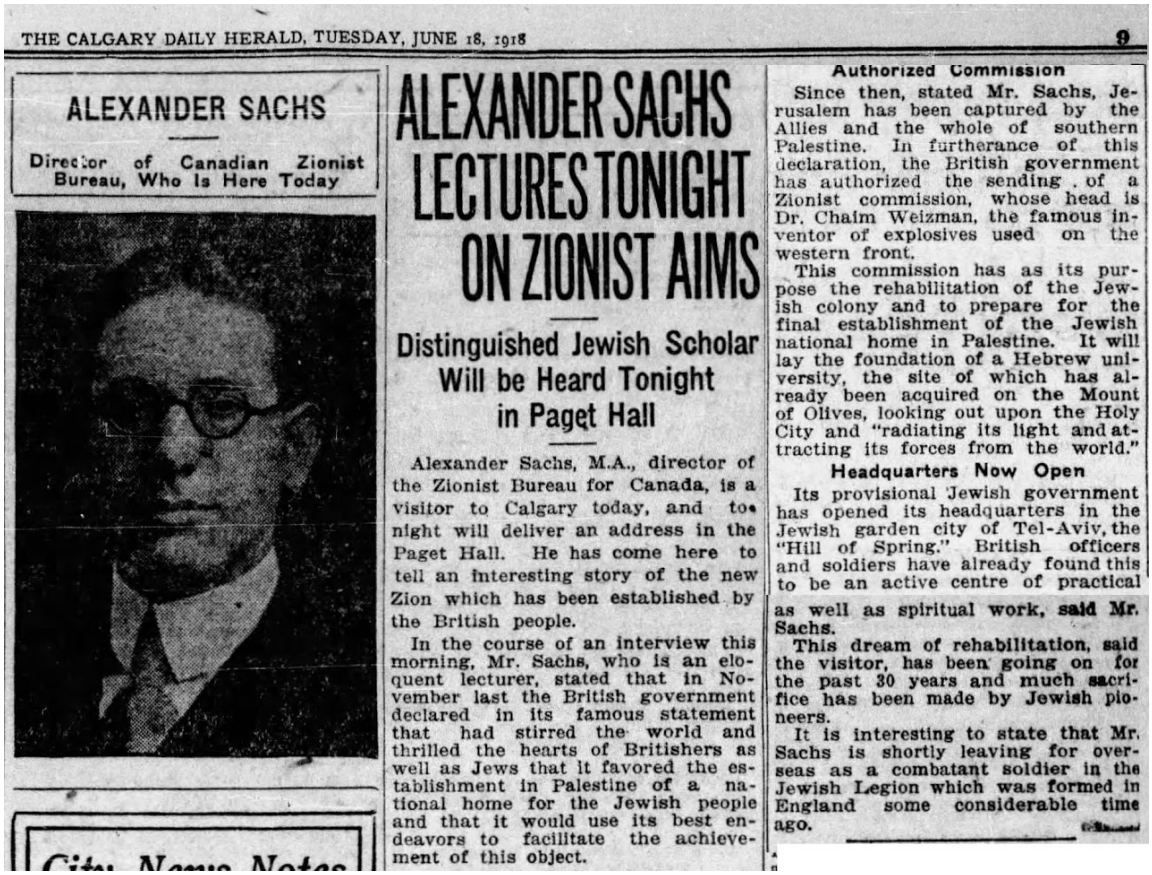


THE CALGARY DAILY HERALD, TUESDAY, JUNE 18, 1918 9

ALEXANDER SACHS

Director of Canadian Zionist Bureau, Who Is Here Today

ALEXANDER SACHS LECTURES TONIGHT ON ZIONIST AIMS

Distinguished Jewish Scholar Will be Heard Tonight in Paget Hall

Alexander Sachs, M.A., director of the Zionist Bureau for Canada, is a visitor to Calgary today, and tonight will deliver an address in the Paget Hall. He has come here to tell an interesting story of the new Zion which has been established by the British people.

In the course of an interview this morning, Mr. Sachs, who is an eloquent lecturer, stated that in November last the British government declared in its famous statement that had stirred the world and thrilled the hearts of Britishers as well as Jews that it favored the establishment in Palestine of a national home for the Jewish people and that it would use its best endeavors to facilitate the achievement of this object.

Authorized Commission

Since then, stated Mr. Sachs, Jerusalem has been captured by the Allies and the whole of southern Palestine. In furtherance of this declaration, the British government has authorized the sending of a Zionist commission, whose head is Dr. Chaim Weizman, the famous inventor of explosives used on the western front.

This commission has as its purpose the rehabilitation of the Jewish colony and to prepare for the final establishment of the Jewish national home in Palestine. It will lay the foundation of a Hebrew university, the site of which has already been acquired on the Mount of Olives, looking out upon the Holy City and "radiating its light and attracting its forces from the world."

Headquarters Now Open

Its provisional Jewish government has opened its headquarters in the Jewish garden city of Tel-Aviv, the "Hill of Spring." British officers and soldiers have already found this to be an active centre of practical as well as spiritual work, said Mr. Sachs.

This dream of rehabilitation, said the visitor, has been going on for the past 30 years and much sacrifice has been made by Jewish pioneers.

It is interesting to state that Mr. Sachs is shortly leaving for overseas as a combatant soldier in the Jewish Legion which was formed in England some considerable time ago.

1919 (Dec 5)

- https://www.newspapers.com/image/80070951/?terms=%22alexander%2Bsachs%22 (also - https://newspaperarchive.com/philadelphia-jewish-exponent-nov-28-1919-p-7/)
- https://drive.google.com/file/d/1VgE3d4De05kX5RAFE-wXUVMABvT_dPP7/view?usp=sharing
- 1919-12-05-the-jewish-monitor-dallas-texas-pg-12-clip-wales
- https://drive.google.com/file/d/1VA01S3c4YMbMypqYigwW8Y7Pp7c-iDfp/view?usp=sharing

Twelve THE JEWISH MONITOR Friday, December 5, 1919.

ZIONISTS PRESENTED GIFT TO PRINCE OF WALES.

H. R. H. The Prince of Wales received on board the Renown at 10 o'clock Saturday morning a deputation consisted of Judge Julian W. Mack, president; Dr. Stephen S. Wise, vice president; Mr. Jacob de Haas, executive secretary, and Alexander Sachs, assistant executive secretary of the organization.

The deputation presented to H. R. H. The Prince of Wales a silver menorah studded with garnets in appreciation of the official declaration by the British government on November 2nd, 1917, in favor of the establishment in Palestine of a National Home for the Jewish people. The Menorah which the Zionists presented is particularly appropriate. It is one of the first pieces of work turned out by the Bezalel School of Arts and Crafts in Jerusalem after its liberation by General Allenby two years ago, during the Chanuka festival.

In presenting this gift, Judge Mack said:

"Your Royal Highness: We have the great honor to offer you the greetings of the Zionist Organization of America, a large and representative body of American Jews. The mighty British Commonwealth of which your most honored father is the sovereign head has stood out for some centuries as the friend and protector of the Jewish people, a furtherance resting in part upon British devotion to the moral and spiritual ideals of the ancient Jewish commonwealth and in part upon the traditional British championship of the rights of smaller peoples.

Jews in our land and in all Allied lands were inexpressibly gladdened by the Balfour Declaration of November, 1917, affirming the purpose of the British government to facilitate the creation in Palestine of a National Jewish Homeland. This declaration was shortly thereafter sealed by the deliverance of Judeau from the yoke of Turkish misrule by the British armies under Sir Edmond Allenby, which included some of the bravest of young British Jews as well as the Jewish Legion drawn in part from the Jewish youth of our own land.

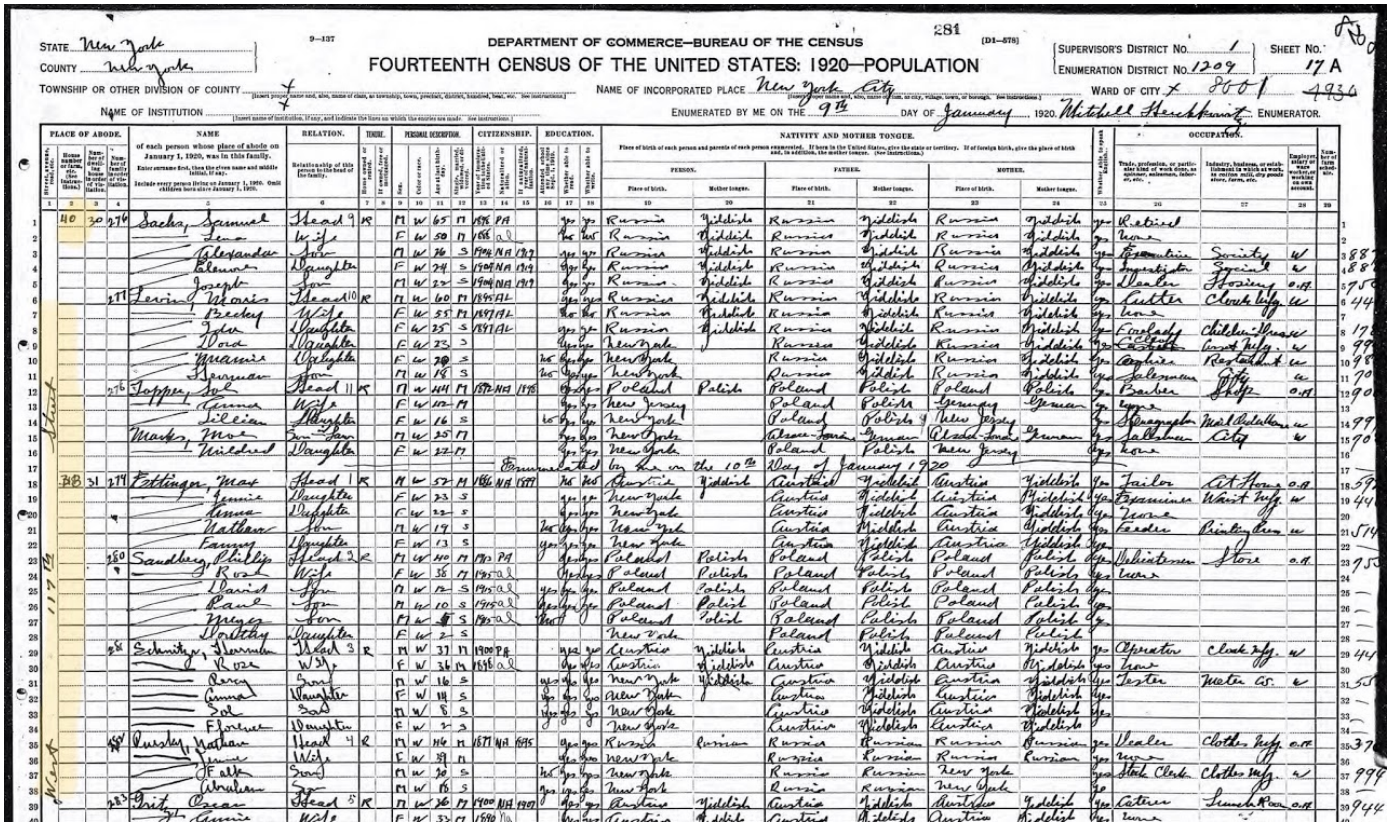
Under the rule of your most honored father, the British Empire has thus by the Balfour Declaration kindled the light of hope for multitudes of our people that walk in darkness. We have therefore ventured to believe that your Royal Highness might be pleased to receive at our hands, speaking on behalf of the Zionist Organization of America under the honoring leadership of Justice Louis D. Brandeis of the United States Supreme Court, this Hebrew symbol of light and hope, the Menorah, the first work of the Jewish craftsmen of Jerusalem after its redemption by Britain.

May this symbol ever token the gratitude of the people of Israel to your Commonwealth and above all Israel's deep and unfeigned devotion to your father's house, for your own is the thrice royal and blessed lineage that does justice, loves mercy and walks humbly before God.

1920 Census - Living with parents in NYC

Can also access transcript : See [HS000W][GDrive]

- Who is "Lena" ?
- His father is "retired"? With 3 children going to Columbia ?



DEPARTMENT OF COMMERCE—BUREAU OF THE CENSUS

FOURTEENTH CENSUS OF THE UNITED STATES: 1920—POPULATION

STATE New York — COUNTY New York — TOWNSHIP OR OTHER DIVISION OF COUNTY 7 — NAME OF INCORPORATED PLACE New York City — WARD OF CITY 7 — SUPERVISOR'S DISTRICT NO. 1 — ENUMERATION DISTRICT NO. 1209 — SHEET NO. 17 A

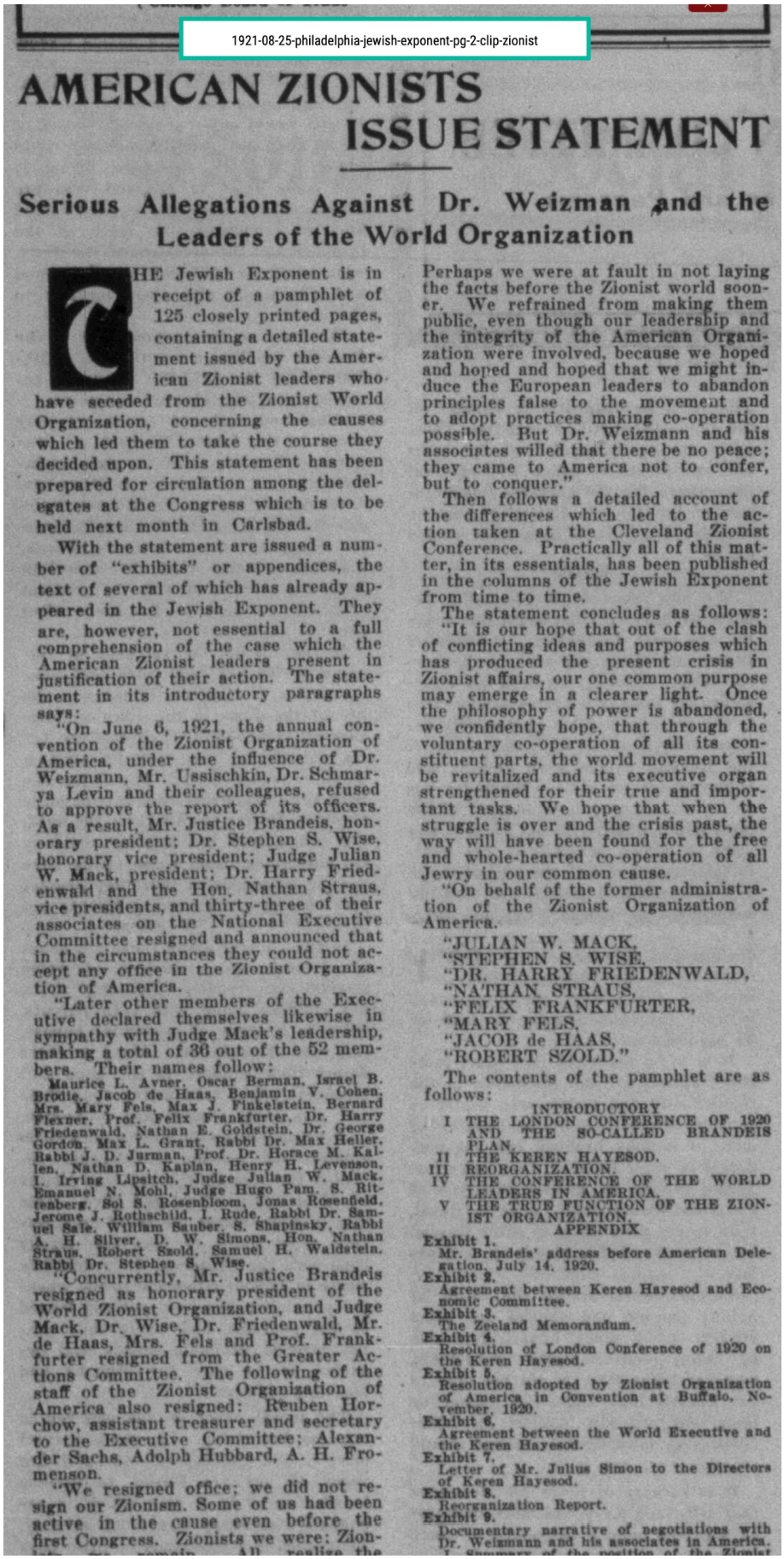
NAME OF INSTITUTION 7 — ENUMERATED BY ME ON THE 9th DAY OF January, 1920. Mitchell Hershkowitz, ENUMERATOR.

PLACE OF ABODE	NAME	RELATION	PERSONAL DESCRIPTION	CITIZENSHIP	EDUCATION	NATIVITY AND MOTHER TONGUE	OCCUPATION
	of each person whose place of abode on January 1, 1920, was in this family.	Relationship of this person to the head of the family.	Sex; Color or race; Age at last birthday; Single, married, widowed, or divorced; Whether attended school at any time since Sept. 1, 1919; Whether able to read; Whether able to write	Year of immigration to the U.S.; Whether naturalized or alien; Whether able to speak English or, if not, language spoken	Whether attended school any time since Sept. 1, 1919; Whether able to read; Whether able to write	Place of birth of each person and parents of each person enumerated. If born in the United States, give the state or territory. If of foreign birth, give the place of birth and, in addition, the mother tongue. (See instructions.)	Trade, profession, or particular kind of work done, as spinner, salesman, laborer, etc.; Industry, business, or establishment in which at work, as cotton mill, city grocery store, farm, etc.; Employer, salary or wage worker, or own account; Number of farm schedule.

| | | |

1921 (Aug 26)

- https://newspaperarchive.com/philadelphia-jewish-exponent-aug-26-1921-p-2/
- 1921-08-25-philadelphia-jewish-exponent-pg-2-lowres.jpg
- https://drive.google.com/file/d/1s1I0QHiVdZtE0JrJg82skr-qT3jGq6Jh/view?usp=sharing
- 1921-08-25-philadelphia-jewish-exponent-pg-2-clip-zionist.jpg
- https://drive.google.com/file/d/1_RMOBpDNzXmMJEJ0B2xErULcFkSQN3AD/view?usp=sharing



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AMERICAN ZIONISTS ISSUE STATEMENT

Serious Allegations Against Dr. Weizman and the Leaders of the World Organization

THE Jewish Exponent is in receipt of a pamphlet of 125 closely printed pages, containing a detailed statement issued by the American Zionist leaders who have seceded from the Zionist World Organization, concerning the causes which led them to take the course they decided upon. This statement has been prepared for circulation among the delegates at the Congress which is to be held next month in Carlsbad.

With the statement are issued a number of "exhibits" or appendices, the text of several of which has already appeared in the Jewish Exponent. They are, however, not essential to a full comprehension of the case which the American Zionist leaders present in justification of their action. The statement in its introductory paragraphs says:

"On June 6, 1921, the annual convention of the Zionist Organization of America, under the influence of Dr. Weizmann, Mr. Ussischkin, Dr. Schmarya Levin and their colleagues, refused to approve the report of its officers. As a result, Mr. Justice Brandeis, honorary president; Dr. Stephen S. Wise, honorary vice president; Judge Julian W. Mack, president; Dr. Harry Friedenwald and the Hon. Nathan Straus, vice presidents, and thirty-three of their associates on the National Executive Committee resigned and announced that in the circumstances they could not accept any office in the Zionist Organization of America.

"Later other members of the Executive declared themselves likewise in sympathy with Judge Mack's leadership, making a total of 36 out of the 52 members. Their names follow:

Maurice L. Avner, Oscar Berman, Israel B. Brodie, Jacob de Haas, Benjamin V. Cohen, Mrs. Mary Fels, Max J. Finkelstein, Bernard Flexner, Prof. Felix Frankfurter, Dr. Harry Friedenwald, Nathan E. Goldstein, Dr. George Gordon, Max L. Grant, Rabbi Dr. Max Heller, Rabbi J. D. Jurman, Prof. Dr. Horace M. Kallen, Nathan D. Kaplan, Henry H. Levenson, I. Irving Lipsitch, Judge Julian W. Mack, Emanuel N. Mohl, Judge Hugo Pam, S. Rittenberg, Sol S. Rosenbloom, Jonas Rosenfeld, Jerome J. Rothschild, I. Rude, Rabbi Dr. Samuel Sale, William Sauber, S. Shapinsky, Rabbi A. H. Silver, D. W. Simons, Hon. Nathan Straus, Robert Szold, Samuel H. Waldstein, Rabbi Dr. Stephen S. Wise.

"Concurrently, Mr. Justice Brandeis resigned as honorary president of the World Zionist Organization, and Judge Mack, Dr. Wise, Dr. Friedenwald, Mr. de Haas, Mrs. Fels and Prof. Frankfurter resigned from the Greater Actions Committee. The following of the staff of the Zionist Organization of America also resigned: Reuben Horchow, assistant treasurer and secretary to the Executive Committee; Alexander Sachs, Adolph Hubbard, A. H. Fromenson.

"We resigned office; we did not resign our Zionism. Some of us had been active in the cause even before the first Congress. Zionists we were; Zion-

Perhaps we were at fault in not laying the facts before the Zionist world sooner. We refrained from making them public, even though our leadership and the integrity of the American Organization were involved, because we hoped and hoped and hoped that we might induce the European leaders to abandon principles false to the movement and to adopt practices making co-operation possible. But Dr. Weizmann and his associates willed that there be no peace; they came to America not to confer, but to conquer."

Then follows a detailed account of the differences which led to the action taken at the Cleveland Zionist Conference. Practically all of this matter, in its essentials, has been published in the columns of the Jewish Exponent from time to time.

The statement concludes as follows:

"It is our hope that out of the clash of conflicting ideas and purposes which has produced the present crisis in Zionist affairs, our one common purpose may emerge in a clearer light. Once the philosophy of power is abandoned, we confidently hope, that through the voluntary co-operation of all its constituent parts, the world movement will be revitalized and its executive organ strengthened for their true and important tasks. We hope that when the struggle is over and the crisis past, the way will have been found for the free and whole-hearted co-operation of all Jewry in our common cause.

"On behalf of the former administration of the Zionist Organization of America.

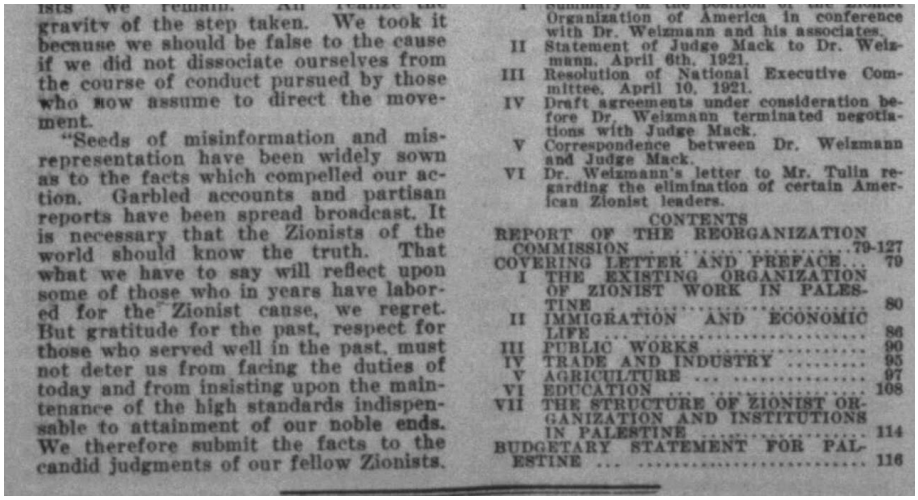
"JULIAN W. MACK,
"STEPHEN S. WISE,
"DR. HARRY FRIEDENWALD,
"NATHAN STRAUS,
"FELIX FRANKFURTER,
"MARY FELS,
"JACOB de HAAS,
"ROBERT SZOLD."

The contents of the pamphlet are as follows:

INTRODUCTORY
I THE LONDON CONFERENCE OF 1920 AND THE SO-CALLED BRANDEIS PLAN.
II THE KEREN HAYESOD.
III REORGANIZATION.
IV THE CONFERENCE OF THE WORLD LEADERS IN AMERICA.
V THE TRUE FUNCTION OF THE ZIONIST ORGANIZATION.

APPENDIX

Exhibit 1.
Mr. Brandeis' address before American Delegation, July 14, 1920.
Exhibit 2.
Agreement between Keren Hayesod and Economic Committee.
Exhibit 3.
The Zeeland Memorandum.
Exhibit 4.
Resolution of London Conference of 1920 on the Keren Hayesod.
Exhibit 5.
Resolution adopted by Zionist Organization of America in Convention at Buffalo, November, 1920.
Exhibit 6.
Agreement between the World Executive and the Keren Hayesod.
Exhibit 7.
Letter of Mr. Julius Simon to the Directors of Keren Hayesod.
Exhibit 8.
Reorganization Report.
Exhibit 9.
Documentary narrative of negotiations with Dr. Weizmann and his associates in America.



gravity of the step taken. We took it because we should be false to the cause if we did not dissociate ourselves from the course of conduct pursued by those who now assume to direct the movement.

"Seeds of misinformation and misrepresentation have been widely sown as to the facts which compelled our action. Garbled accounts and partisan reports have been spread broadcast. It is necessary that the Zionists of the world should know the truth. That what we have to say will reflect upon some of those who in years have labored for the Zionist cause, we regret. But gratitude for the past, respect for those who served well in the past, must not deter us from facing the duties of today and from insisting upon the maintenance of the high standards indispensable to attainment of our noble ends. We therefore submit the facts to the candid judgments of our fellow Zionists.

Organization of America in conference with Dr. Weizmann and his associates.
II Statement of Judge Mack to Dr. Weizmann, April 6th, 1921.
III Resolution of National Executive Committee, April 10, 1921.
IV Draft agreements under consideration before Dr. Weizmann terminated negotiations with Judge Mack.
V Correspondence between Dr. Weizmann and Judge Mack.
VI Dr. Weizmann's letter to Mr. Tulin regarding the elimination of certain American Zionist leaders.

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VII THE STRUCTURE OF ZIONIST ORGANIZATION AND INSTITUTIONS IN PALESTINE 114
BUDGETARY STATEMENT FOR PALESTINE 116

1922 (Feb) - Davis S Barr marriage to Elinor Sachs (sister of Alexander Sachs)

Transcript : [HL001T][GDrive] / Image of Transcript : [HL001U][GDrive]

1930 NYC US Census - Parents "Samuel Sacks" and (mom or stepmom) "Lena Sacks"

Parents ***"Samuel Sacks"*** (age 75 - migrated to the USA in 1898) and ***"Lena Sacks"*** (age 60 - migrated to the USA in 1880)

Address - 104 112th St, Manhattan - Which is only one block away from **Philip Barr** (born 1872) (father of **Simon Pelham Barr** (born 1892) and **David S Barr** (born 1894)) at (as of the 1920 US Census) ats **"65 Lenox Avenue"** in New York City. Note that 64 Lenox Avenue is between West 113th Street and West 114th Street in Manhattan.

Transcript : [HS000U][GDrive] / Full Census Form : **Image :** [HS000U][GDrive]

1931 (Oct 16) - Alexander Sachs traveling from France to NYC -- Traveled on same ship with Henry ("Harry") Sachs of Goldman Sachs (but they may not have been traveling as a group)

Note : As Alexander Sachs was born Aug 1 1892 ... Alexander Sachs would be Age 39 on Aug 1 1892 - but this form says age 37 ..

It says that this Harry Sachs lives at "**4W 74th Street in New York City** "... Which indeed is the address in his Obituary (see below) ... So this is the banker from Goldman Sachs ... (more info on Harry Sachs in additional references of this page).

Full page of voyage - [HJ0009][GDrive]

Form 630
U. S. DEPARTMENT OF LABOR
IMMIGRATION SERVICE

Record on this blank United States citizens and citizens of insular possessions of the United States arriving at a port of continental United States from a foreign port or a port of the insular possessions of the United States, and such citizens arriving at a port of said insular possessions from a foreign port, a port of continental United States, or a port of another insular possession.

Number 7

LIST OF UNITED STATES CITIZENS
(FOR THE IMMIGRATION AUTHORITIES)

S. S. " ILE DE FRANCE " Sailing from LE HAVRE (France), October 16th, 1931. Arriving at Port of NEW-YORK (U.S.A.) October 22nd 1931.

25

No. on List.	Name in Full: Family Name.	Name in Full: Given Name.	Age: Yrs.	Age: Mos.	Sex.	Married or Single.	If native of United States insular possession or if native of United States, give date and place of birth (city or town and state).	If naturalized, give name and location of court which issued naturalization papers, and date of papers.	Address in United States.
17	SACHS	Alexander	37		M	M		District Court of New-York - N.Y.- July 1915 - Passport 417816.	C/o Lehman Corporation 1 South William St - New-York City-N.Y.-
18	-"-	Harry	75		M	M	April 2 1856 - Boston - Mass.- Passport 169143.		4 W. 74 St - New-York City - N.Y.-
19	-"-	Nellie	65		F	M	April 15 1866 - New-York City - N.Y.- Passport 169144.		-"- -"- -"- -"-
20	-"-	Edith	37		F	S	March 13 1874 - New-York City - N.Y.- Passport 169145.		-"- -"- -"- -"-

[HJ000A][GDrive]

1933 Dec 14 - Alexander Sachs missing for months !?!?!

Full newspaper page : [HN00IH][GDrive]

HONOLULU STAR-BULLETIN, THURSDAY, DECEMBER 14, 1933

The DAILY WASHINGTON MERRY-GO-ROUND

By DREW PEARSON and ROBERT S. ALLEN

SPRAGUE'S OWN INSIDE STORY OF HOW HE GAVE RESIGNATION TO F. D. R.; PROFESSOR DAZED IN SPOTLIGHT GLARE DELUGED BY COMMERCIAL OFFERS; GENERAL JOHNSON FINDS HE HAS A MYSTERY MAN IN DR. ALEXANDER SACHS

throughout the nation.

MYSTERY MAN

Gen. Hugh Johnson has gone the president's forgotten man one better. He has a mystery man.

Several months ago Dr. Alexander Sachs, brilliant, witty head of the NRA research division, suddenly disappeared from his office. The whisper went that despite a personal plea of the president, Sachs' employers, the New York banking firm of Lehman & Brothers, had commanded Sachs' return.

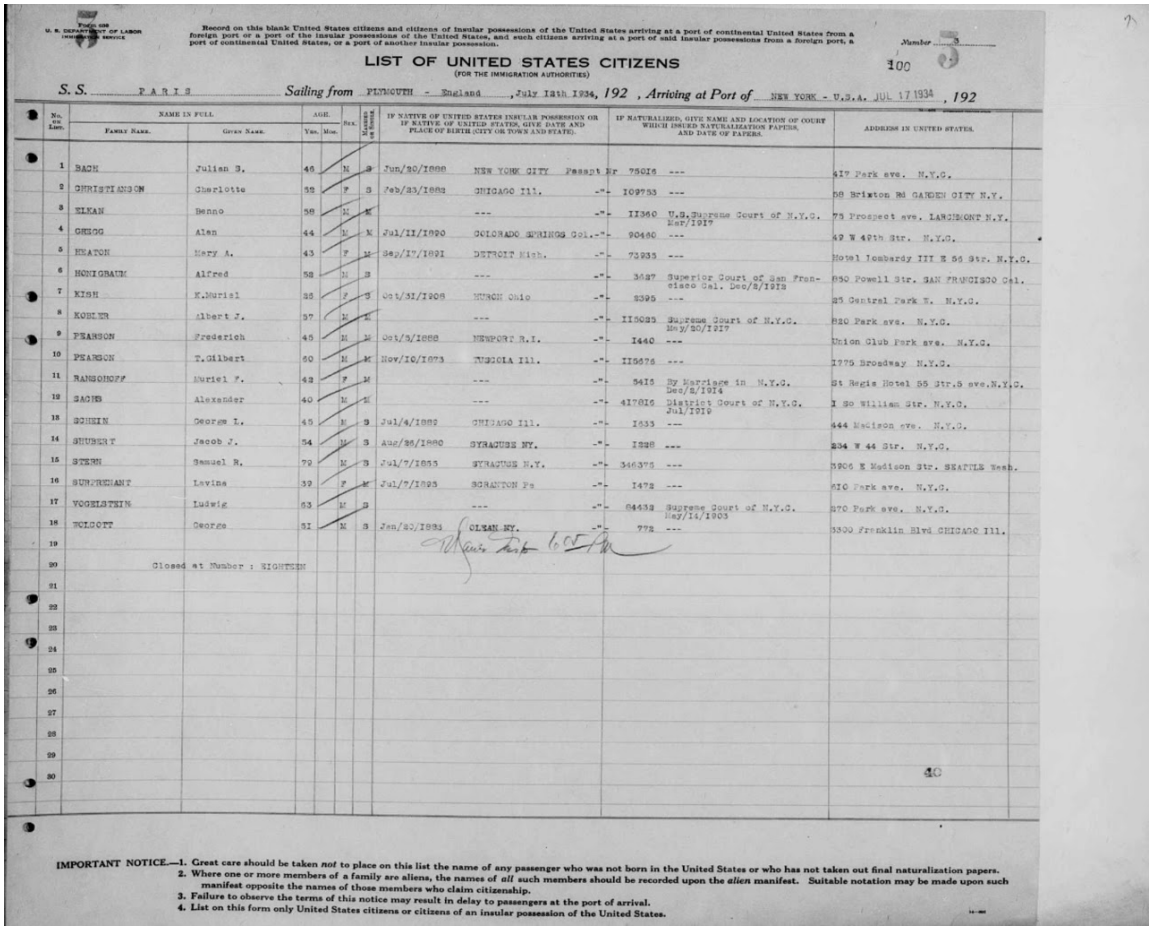
NRA spokesmen emphatically denied that Sachs had resigned, explained that he had merely taken a rest trip to Bermuda, pointed to the fact his name was still on his office door.

The sign is still there. So is Sachs' office staff. But not Sachs. Twice recently he has been in Washington, on one occasion used a stenographer from his office. But Johnson, despite repeated effort, has not been able to contact him.

[HN00II][GDrive]

1934 (July) - Travel Paris / London

1 South William St, NYC - Which is the Lehman Brothers building



Record on this blank United States citizens and citizens of insular possessions of the United States arriving at a port of continental United States from a foreign port or a port of the insular possessions of the United States, and such citizens arriving at a port of said insular possessions from a foreign port, a port of continental United States, or a port of another insular possession.

Number 100

LIST OF UNITED STATES CITIZENS

(FOR THE IMMIGRATION AUTHORITIES)

S. S. PARIS Sailing from PLYMOUTH - England, July 13th 1934, 192 , Arriving at Port of NEW YORK - U.S.A. JUL 17 1934, 192

No. on List	Family Name	Given Name	Age Yrs.	Age Mos.	Sex	Married or Single	If native of United States insular possession or if native of United States, give date and place of birth (city or town and state)	If naturalized, give name and location of court which issued naturalization papers, and date of papers	Address in United States
1	BACH	Julian B.	46	M	M	S	Jun/30/1888 NEW YORK CITY	Passpt Br 75016 ---	417 Park ave. N.Y.C.
2	CHRISTIANSON	Charlotte	59	F	M	S	Feb/23/1883 CHICAGO Ill.	-"- 109753 ---	98 Brixton Rd GARDEN CITY N.Y.
3	ELKAN	Benno	58	M	M		---	-"- II360 U.S.Supreme Court of N.Y.C. May/1917	73 Prospect ave. LAWRENCE N.Y.
4	GHIOG	Alan	44	M	M	S	Jul/II/1890 COLORADO SPRINGS Col.	-"- 90480 ---	42 W 49th Str. N.Y.C.
5	HEATON	Mary A.	43	F	M	S	Sep/I7/1891 DETROIT Mich.	-"- 73935 ---	Hotel Lombardy III E 56 Str. N.Y.C.
6	HONIGBAUM	Alfred	58	M	M	S	---	-"- 3687 Superior Court of San Francisco Cal. Dec/8/1913	850 Powell Str. SAN FRANCISCO Cal.
7	KISH	K.Muriel	35	F	M	S	Oct/3I/1908 MURCH Ohio	-"- 8395 ---	25 Central Park N. N.Y.C.
8	KOHLER	Albert J.	37	M	M		---	-"- II3025 Supreme Court of N.Y.C. May/30/1927	820 Park ave. N.Y.C.
9	PEARSON	Frederich	45	M	M	S	Oct/3/1888 NEWPORT R.I.	-"- I440 ---	Union Club Park ave. N.Y.C.
10	PEARSON	T.Gilbert	60	M	M	S	Nov/I0/1873 TUSCOIA Ill.	-"- II5676 ---	1775 Broadway N.Y.C.
11	RANSOHOFF	Muriel F.	42	F	M		---	-"- 5415 By Marriage in N.Y.C. Dec/5/1914	St Regis Hotel 55 Str.& ave.N.Y.C.
12	SACHS	Alexander	40	M	M		---	-"- 417016 District Court of N.Y.C. Jul/1919	I 5o William Str. N.Y.C.
13	SCHEIN	George L.	45	M	S	S	Jul/4/1889 CHICAGO Ill.	-"- I633 ---	444 Madison ave. N.Y.C.
14	SHUBERT	Jacob J.	54	M	S	S	Aug/26/1880 SYRACUSE NY.	-"- I328 ---	234 W 44 Str. N.Y.C.
15	STERN	Samuel R.	79	M	S	S	Jul/7/1855 SYRACUSE N.Y.	-"- 346375 ---	5906 E Madison Str. SEATTLE Wash.
16	SUMPREMANT	Lavina	32	F	M	S	Jul/7/1923 SCRANTON Pa	-"- I472 ---	4I0 Park ave. N.Y.C.
17	VOGELSTEIN	Ludwig	63	M	S		---	-"- 84432 Supreme Court of N.Y.C. May/I4/1903	870 Park ave. N.Y.C.
18	WOLCOTT	George	51	M	S	S	Jan/22/1883 OLEAN NY.	-"- 772 ---	3300 Franklin Blvd CHICAGO Ill.

Closed at Number : EIGHTEEN

40

IMPORTANT NOTICE.—1. Great care should be taken *not* to place on this list the name of any passenger who was not born in the United States or who has not taken out final naturalization papers.
2. Where one or more members of a family are aliens, the names of *all* such members should be recorded upon the *alien* manifest. Suitable notation may be made upon such manifest opposite the names of those members who claim citizenship.
3. Failure to observe the terms of this notice may result in delay to passengers at the port of arrival.
4. List on this form only United States citizens or citizens of an insular possession of the United States.

[HJ000B][GDrive]

1936 (Sep) - 1936 Sep 20- rural electrification program

Full page sources :

- Page 1 : [HN00IU][GDrive]
- Page 3 : [HN00IW][GDrive]

28 PAGES TODAY
1st News Section, 12 Pages
2nd. News Section, 8 Pages
Comic Section, 8 Pages

Messenger OWENSBORO INQUIRER

THE WEATHER
Kentucky: Mostly cloudy possibly light showers in west portion Sunday. Monday showers not much change in temperature.

SUNDAY EDITION. Editorial Rooms Phone 301 OWENSBORO, KY., SUNDAY, SEPTEMBER 20, 1936. Business Office Phone 300 No. 37.

FDR CALLS PARLEY ON POWER POOLING

WHITE HOUSE CHARGES NEWSPAPER WITH POLITICAL PLOT

ELECTRICITY AT CHEAPER RATES IS AIM OF PRESIDENT

Representatives of Private Utilities, Banking and Electric Equipment Industries To Meet At Washington Sept. 30.

By DOUGLAS B. CORNELL.

Washington, Sept. 19 (AP)—A conference to explore the possibility of providing cheap electricity by pooling public and private power in the Southeast and, ultimately, in other regions was called today by President Roosevelt for September 30.

In a statement summoning the meeting of federal power officials and representatives of private utilities, banking and electric equipment industries, the president said:

"The public interest demands that the power that is being or soon will be generated by the Tennessee Valley Authority and at the Bonneville dam and other public works projects should be made to serve the greatest number of our people at the lowest cost and, as far as possible, without injury to existing actual investment."

To Aid Rural Program

It appears, Mr. Roosevelt added, that pooling of power through the joint use of existing transmission line networks "will smooth out the peaks and valleys of separate system operations, reduce the amount of necessary reserve capacity and postpone the need for investment in new generating facilities."

A regional net work, he said, also would promote rapid expansion of the government's rural electrification program.

It was explained at the White House that the conference was being called for September 30 because existing contracts between the Commonwealth and Southern corporation and the Tennessee Valley Authority for interchange of power and common use of transmission facilities soon will expire. Their present arrangement was described as a rudimentary form of pooling.

The confeernce was announced soon after Mr. Roosevelt returned to Washington this morning from Cambridge, Mass., to be with Mrs. Roosevelt, who is ill of grippe. He expected to leave tomorrow or Monday night for his Hyde Park, N. Y., home, taking Mrs. Roosevelt with him. White House assistants said her condition was improving steadily.

Invited to Parley

Those invited to the power conference were: Wendell L. Willkie, president, Commonwealth and

(Continued on Page 3, Section 1)

Southern corporation; Preston S. Arkwright, president, Georgia Power company; Samuel Ferguson, chairman of the board, Hartford Electric Light company; Owen D. Young, chairman of the board, General Electric company; Russell C. Leffingwell of J. P. Morgan and company; Arthur E. Morgan, chairman, and H. A. Morgan and David E. Lilienthal of the Tennessee Valley Authority; Frank R. McNinch, chairman, and Basil Manly of the Federal Power commission; Frederic A. Delano, vice chairman of the National Resources committee; Morris L. Cooke, Rural Electrification administrator; Louis B. Wehle, New York attorney, and Alexander Sachs, research director of Lehman corporation.

[HN00IV][GDrive]

1936 (Sep 30)

https://www.loc.gov/item/2016878596/

"President discusses power pool, Washington, D.C., Sept. 30. President Roosevelt discussed the question of pooling private and public electric power with private and government power experts at the White House today. After a conference that lasted most of the afternoon Frank R. McNinch, Chairman, Federal Power Commission, and Wendell L. Wilkie, President of Commonwealth and Southern Corporation, emerged from the President's office to state that President Roosevelt had agreed to consider pooling Government hydroelectric projects and private power facilities in the TVA area. The president's decision will not only mean an exchange between the Tennessee Valley Authority and private utilities of the Southeast but touch possibilities for Bonneville Dam on the Columbia River and other public works projects. Harris and Ewing, Alexander Sachs, extreme right"

1936 nov 26

Full page : [HN00IX][GDrive]

1936-11-26-tyler-morning-telegraph-pg-4-clip-dc-merrygoround

The Washington Merry-go-Round

By DREW PEARSON and ROBERT S. ALLEN

WASHINGTON.—The old power keg, the power issue, is sizzling within the New Deal again, and may break out into the open at any moment.

This time it is going to be a congressional fight like the holding corporation bill row, but a war involving such important projects as the Tennessee Valley authority.

Chief issue at stake is whether the New Deal should compromise with the power companies.

Liberals inside the administration say Roosevelt's overwhelming election is a passport to the president to push the power fight to the limit. They want no compromise.

Pseudo-liberals and conservatives say the president should now work out a system whereby the government and private power companies can cooperate. They propose the British "grid" system, or power pool, by which the generating and transmitting equipment of both public and private is consolidated into a single network, operated by a joint board on which the public and private power companies are both represented.

Object of the grid system is to eliminate costly competition between private and public projects.

Cast of Characters

A weird cast of characters is taking part in this controversy.

Those advocating the grid system or power pool are' Louis Brandeis Wehle, nephew of Justice Brandeis, and a Harvard classmate of the president's; now a New York lawyer for Prudential Life and other firms with investments in power

Alexander Sachs, rotund, genial economist for the Leham Corp., banking firm; also General Johnson's first economic adviser in NRA.

Basil Manly, pseudo-liberal vice-chairman of the federal power commission:

Dr. Arthur E. Morgan, crotchety, hard-working chairman of TVA.

Chief opponents of the power pool are:

David E. Lilienthal, sleek, black-haired, crusading director of TVA:

J. D. Ross, lethargic, idealistic member of the securities-exchange commission, and former superintendent of the Seattle power system, largest and most successful municipal plant in the country.

The Row

During the campaign the above held a conference at the white house when a plan for pooling Tenessee Valley power operations was discussed. Sachs and Brandeis' nephew, both representing investment companies with money tied up in the power companies, urged the pool system.

Ross and Lilienthal, their dander up, warned the president that the plan was a utility-concocted scheme to out-bargain the government at the very moment the latter had the power companies on the run. They claimed that in such a pooling system, the government was bound to lose out to the private companies.

The president, at that time, was non-committal. He postponed any decision until after elections.

Renewed Fight

But just as he sailed for South America, the issue cropped up again.

It arose as a result of increasing friction between Dave Lilienthal and A. E. Morgan, both executives of TVA. The two men have been getting on each other's nerves. Last spring Morgan served notice on the white house that if Lilienthal were reappointed (his term was up in June), he, Morgan, would resign.

Roosevelt serently reappointed Lilienthal. Morgan did not resign. Now it begins to look as if the president hoped that he would. In fact, when the president returns, Morgan's retirement would not surprise inner white house advisers.

Long Shot

Shortly after the election Colonel Robert McCormick, publisher of the violently anti-New Deal Chicago Tribune, instructed his Washington bureau to obtain a color portarit of the president for the Tribune's Sunday rotogravure section..

With some misgivings, one of the Tribune's correspondents submitted the request to white house secretary Steve Early.

"If it were for you personally," Early, a one-time reporter, replied, "we'd be glad to oblige. But there are no favors being extended here to Mr. McCormick."

That, apparently, closed the matter. The Tribune reporter departed —but he did not give up.

The day the president sailed for the Pan-American peace conference, the president and his white house staff posed with newspapermen at a press conference picture. In addition to the official photographer several other camermen from Washington newspapers were permitted to "shoot" the picture.

Unknown to the white house, one of them was equipped with a color-camera, and he "shot" the president for the Chicago Tribune.

Merry-Go-Round

What's in a name? Chief legal officer of the treasury's procurement division is William K. Laws; two budget bureau officials are J. J. Love, Jr., and W .S. Stork; and the secretary to the assistant disbursing officer is Mrs. M. G. America. . . . Slated for early return in a high New Deal post is able, popular Frank Walker, former head of the national emergency council. Walker resigned last year because of the demands of his extensive moving picture theatre business, but his private afairs are now in shape so that he can leave them. . .. Donald S. Thompson, acting chief of the research division of the Federal Deposit Insurance corporation, has figured out this interesting statistical comparison: President Roosevelt captured 98.5 percent of the electorial college vote; approximately 98.5 percent of all bank depositors are protected by the government's deposit insurance.

[HN00IY][GDrive]

1937 May 27

Full page : [HN00IZ][GDrive]

BEHIND THE SCENES IN WASHINGTON

By Rodney Dutcher

Secret Battle Going On Over Whether Securities Commission Shall Protect Investers or Bankers . . . Robinson Appointment to Court Will Bring Battle for Senate Majority Leadership.

By RODNEY DUTCHER
Kenosha Evening News Washington Correspondent

Washington—The question whether the Securities Exchange Commission should emphasize a desire to "be fair to the brokers and bankers" or a determination to "protect the investor" has again become an issue, following resignation of Chairman James M. Landis.

Crusaders for adequate regulation and for enforcement of the securities act, claiming that the New Deal has provided neither, insist that Roosevelt's decision will tell whether the administration really means its frequently reiterated promises to protect security holders.

Commissioner William O. Douglas is out in front as the most likely successor to Landis, But if the professional manipulators of what Justice Brandeis used to call "other people's money" have anything to do with it, Douglas won't get the job.

Says Investors Gypped

Douglas is an able lawyer and an expert on corporation law. When he was at Yale he was said to be one of the highest paid law professors in the United States. He has had experience in the securities business.

He handled one of the SEC's outstanding jobs—an investigation of corporate reorganizations and the work of protective committees, with a report and a legislative plan submitted to Congress. He demonstrated his fearlessness in a speech to the Bond club during which he told New York bankers that investors were being gypped by financial concerns which reaped commissions on stock and bond flotations far in excess of the value of their services.

Douglas boldly declared in favor of competitive bidding for the privilege of handling new issues, as against the traditional Wall Street custom, which he said often enabled certain banking houses to monopolize such business. He charged that fees were being exacted for underwriting when there was no need for it, and predicted that bankers would lose their financial power over such processes as management, formulation of industrial policies and reorganizations.

Wall Street didn't like it at all. And its emissaries, as Douglas presumably must have anticipated, have been pulling all possible wires here to see to it that Douglas doesn't succeed Landis. Large contributors to the Democratic campaign fund have joined in the stop-Douglas movement. Dr. Alexander Sachs of Lehman Brothers has been reportedly working for appointment of a "safe" chairman. Although the purpose of the securities act is to regulate bankers and brokers and to protect the investor, it is being seriously proposed that the commission ought to have one or two brokers among its members.

Investors may well watch as closely as they can the progress of this behind-the-scenes battle. The appointment of SEC's next chairman will shed some light as to the integrity of the New Deal.

Battle For Leadership

If Senator Joe Robinson of Arkansas goes on the Supreme Court, the fight for the very important post of majority leader in the Senate is expected to be between Senator Alben Barkley of Kentucky and Senator James F. Byrnes of South Carolina. (Don't ignore the "if.")

Barkley would be the administration candidate for the job. He is liberal without being radical, and comes from a state which is far enough north and far enough south to figure as a softening factor in the troublesome sectional problem in Congress. He gets along well with all factions and has qualities of leadership.

Byrnes also is popular, but not so much with liberals as with conservatives. Although his ability is obvious and his relationships with Roosevelt have been close in the past, the White House hasn't forgiven him for seeking an amendment to the Guffey coal act which would have forced the President to sign—or reject—an unqualified condemnation of sit-down strikes.

Byrnes is out after the powerful position. So, presumably, is Barkley, although less obviously. As soon as Justice Van Devanter resigned, Byrnes became the busiest promoter in the Senate for the Supreme Court aspirations of Robinson.

It is rather vital to the President to have a Senate leader of unquestioned loyalty. Consequently, if Senate Democrats should choose Byrnes in preference to Barkley, it would mean that the current Senate revolt against the White House direction had gone far into the dangerous stage.

(Copyright, 1937, NEA Service, Inc.)

[HN00J0][GDrive]

1939 (Oct) - The Atomic Bomb proposal / letter

Atomic bomb proposal letter story (from Wikipedia / Robert Jungk)

Saved version of Alexander Sachs : [HK000X][GDrive]

Robert Jungk (See https://en.wikipedia.org/wiki/Robert_Jungk) describes Sachs's role in bringing to President Roosevelt's attention the possibility of an atomic bomb:

It was nearly ten weeks before Alexander Sachs at last found an opportunity, on October 11, 1939, to hand President Roosevelt, in person, the letter composed by [Leo] Szilard and signed by [Albert] Einstein at the beginning of August [1939]. In order to ensure that the President should thoroughly appreciate the contents of the document and not lay it aside with a heap of other papers awaiting attention, Sachs read to him, in addition to the message and an appended memorandum by Szilard, a further much more comprehensive statement by himself. The effect of these communications was by no means so overpowering as Sachs had expected. Roosevelt, wearied by the prolonged effort of listening to his visitor, made an attempt to disengage himself from the whole affair. He told the disappointed reader that he found it all very interesting but considered government intervention to be premature at this stage.

Sachs, however, was able, as he took his leave, to extort from the President the consolation of an invitation to breakfast the following morning. "That night I didn't sleep a wink," Sachs remembers. "I was staying at the Carlton Hotel [two blocks north of the White House]. I paced restlessly to and fro in my room or tried to sleep sitting in a chair. There was a small park quite close to the hotel. Three or four times, I believe, between eleven in the evening and seven in the morning, I left the hotel, to the porter's amazement, and went across to the park. There I sat on a bench and meditated. What could I say to get the President on our side in this affair, which was already beginning to look practically hopeless? Quite suddenly, like an inspiration, the right idea came to me. I returned to the hotel, took a shower and shortly afterwards called once more at the White House."

Roosevelt was sitting alone at the breakfast table, in his wheel chair, when Sachs entered the room. The President inquired in an ironical tone:

"What bright idea have you got now? How much time would you like to explain it?"

Dr. Sachs says he replied that he would not take long.

"All I want to do is to tell you a story. During the Napoleonic wars a young American inventor came to the French Emperor and offered to build a fleet of steamships with the help of which Napoleon could, in spite of the uncertain weather, land in England. Ships without sails? This seemed to the great Corsican so impossible that he sent [Robert] Fulton away. In the opinion of the English historian Lord Acton, this is an example of how England was saved by the shortsightedness of an adversary. Had Napoleon shown more imagination and humility at that time, the history of the nineteenth century would have taken a very different course."

After Sachs finished speaking the President remained silent for several minutes. Then he wrote something on a scrap of paper and handed it to the servant who had been waiting at table. The latter soon returned with a parcel which, at Roosevelt's order, he began slowly to unwrap. It contained a bottle of old French brandy of Napoleon's time, which the Roosevelt family had possessed for many years. The President, still maintaining a significant silence, told the man to fill two glasses. Then he raised his own, nodded to Sachs and drank to him.

Next he remarked: "Alex, what you are after is to see that the Nazis don't blow us up?"

"Precisely."

It was only then that Roosevelt called in his attaché, [Brigadier] General [Edwin] "Pa" Watson, and addressed him—pointing to the documents Sachs had brought—in words which have since become famous: "Pa, this requires action!"

1940 Census - NYC

Transcript : [HS000Y][GDrive] / **Full Census Form :** [HS0010][GDrive]

Record Transcription:
Us Census 1940

Household Members

First name(s)	Last name	Relationship	Marital Status	Gender	Age	Birth year	Birth place
Alexander	**Sachs**	**Head**	**Married**	**Male**	**46**	**1894**	**Russia**
Jeanise	Sachs	Wife	Married	Female	42	1898	Massachusetts
Minnie	Biersack	Servant	Single	Female	39	1901	Germany

[HS000Z][GDrive]

1945 (Dec 1) - US Senate Atomic Bomb Investigation

Full Page : [HN00IL][GDrive]

The Rhinelander Daily News (Rhinelander, Wisconsin) · 01 Dec 1945, Sat · Page 4

National Affairs

By PETER EDSON
NEA Washington Correspondent

WASHINGTON, Dec. 1—The Senate's atomic bomb investigation got off to an awful start Tuesday, when a self-styled economic Jeremiah named Alexander Sachs took the witness stand and for two hours refused to let go. In that time he delivered a non-stop lecture on the history of civilization that was far deadlier than any atomic bomb ever concocted.

The committee room was small and crowded. The air was warm. The cigars smoked by Chairman Brien McMahon (Dem., Conn.) and Sen. Tom Connally (Dem., Tex.) were strong. Maybe it was the atmosphere and not the first atomic witness's testimony. But in the interests of accurate reporting, it must be recorded that towards the end of the proceedings, Senator Connally's lowest chin drooped to his vest and his eyes closed. Sen. Arthur Vandenberg (Rep., Mich.) propped his chin in the angle of his thumb and first two fingers and his eyes closed too. They were concentrating.

Anyway, when the quorum came for the senators to get back to the floor of the Capitol at high noon, Brother Sachs still had five years to go. He had got from his version of Genesis, "In the beginning there was a political concept and a moral concern," up to June, 1940, which marked the fall of Paris to the Germans and the appointment of another committee by President Roosevelt. Chairman McMahon tried several times to stop the lecture, but Alexander Jeremiah Sachs paid no attention and went blithely on, quoting from Exodus, St. John, Clemenceau and the Irish poet Yeats, and having a fine time. It was his day and he enjoyed it thoroughly, whether anyone else did or not. Maj. Gen. Leslie R. Groves sat around for an hour, twiddling his thumbs and waiting for his chance to testify, but he never got a word in and was told to come back the next day.

Probably Be Heard From Again.

Chairman McMahon at the end, getting in the next-to-the-last words, said Mr. Sachs might come back at some later time, to finish his statement, but he wasn't very specific as to when. You'll just have to guess at what happened between 1940 and 1945. What Brother Sachs had to do with the atomic bomb never did come out quite clearly, although the modest inference was that it was practically everything.

At one point Sachs said his role was to be a "resonator" to the President's ideas. At another point Sachs said Roosevelt said to him, "Pa Watson's going to be too busy to be historian, you've got to be it." At still a third point Sachs said he did not hesitate to be a glorified messenger boy. Maybe that's what resonator and historian mean—messenger boy.

Anyway, Sachs finally admitted coyly, without anyone asking him, that he was the man who carried the first memo on atomic energy from Albert Einstein to President Roosevelt. This was his fame and it rates him right alongside Paul Revere, the fellow whose name nobody can remember but who carried the message to Garcia, and the three other fellows who brought the good news from Ghent to Aix. Boy, page Albert Hubbard and two poets.

He Comes From Russia.

Sachs is quite a guy, no fooling. Big body, big bald head crowned by a fringe of gray hair that stuck straight up like Caesar's wreath. His eyes bulged behind thick-lensed, heavy horn-rimmed glasses. He spoke rapidly, his voice high and at times cracking. He was born in Russia 52 years ago, came to America in 1904, graduated from Columbia and Harvard and became vice president of Lehman Brothers, bankers. Probably in charge of the philosophical window. And don't ever say big investment houses do not have souls. The soul of Mr. Sachs is as big as history. For a time, he was economic adviser to the late Gen. "Iron Pants" Johnson, back in NRA days. This could explain a lot of things but probably doesn't.

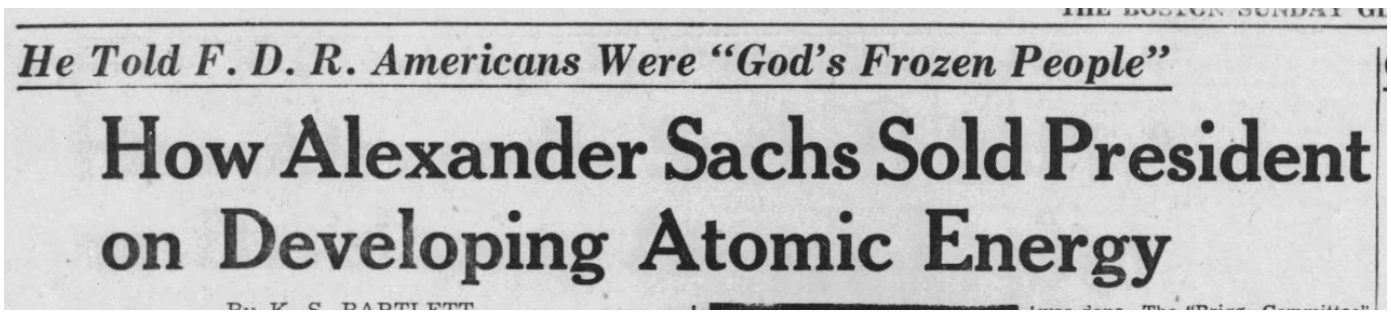
Mr. Sachs did other things besides carry memoranda to Roosevelt. He wrote messages to Roosevelt on the state of the world. Then he took them to him and read them aloud. This was to impress the President with their contents, so that the material came to him "by ear and not by way of the mascara of the eye."

Under our social system, Mr. Sachs said to the senators, "You gentlemen are punch drunk from printer's ink." The senators all laughed at that. Printer's ink isn't the only thing you can get punch drunk on.

[HN00IM][GDrive]

1945 (Dec 9)

Full page : [HN00IN][GDrive]



He Told F. D. R. Americans Were "God's Frozen People"

How Alexander Sachs Sold President on Developing Atomic Energy

By K. S. BARTLETT

An alert young man with most eager eyes and an intense curiosity about almost every subject in the world—

Talkative, with a passion for big words and long sentences, but able to be a good listener, too—

Gifted with a notable amount of personal magnetism—

That's how some New Englanders remember Dr. Alexander Sachs, New York economist, recently in the news as the man credited with selling the late President Roosevelt on atomic research more than six years ago.

Talked Law While Shaving

"I remember him as studying philosophy and we were in some of the same classes," said Prof. Raphael Demos, now an associate professor of philosophy at Harvard, "As I recall it he was talkative in class and had a tendency to use long sentences, as it is said he still does."

Prof. Demos and Sachs both roomed in Divinity Hall, one of the smaller and least pretentious of the Harvard dormitories back in the early days of World War I. Sachs was then enrolled in the Graduate School of Arts and Sciences and held a Francis Parkman fellowship.

"He was interested in law, too," recalls Demos, "and was a great admirer of the late Justice Brandeis. I can remember mornings we'd talk about law while we were shaving."

A Boston editorial writer who did much of his work in the evening in those days remembers that young Sachs used to drop in to see him from time to time.

"I can't remember what we talked about," he says, "but what I do recall even after all these years is the vivid and charming personality of the boy and his gift for talking interestingly about all kinds of things. I can't imagine him ever saying a stupid or trite thing."

Another local professional man with whom Sachs has corresponded for some years on a variety of subjects, although they never met, says his letters leave the impression of

ALEXANDER SACHS

Asked a President to "Please pay attention"

"a very bright and clever mind," with a "definitely journalistic tinge."

It may have been that last quality which helped him as a Washington correspondent phrased it the other day, "to draw back the curtain on nuclear fission for Mr. Roosevelt.

Here's the story as Sachs himself told it before the Senate "Blue Ribbon atomic energy committee recently. His friend, Prof. Albert Einstein, had studied a report made back in 1939 by the American physicist Dr. Leo Szilard, recounting his own experiments and those of Prof. Enrico Fermi, a fugitive from Fascist Italy. They were worried as Einstein was over the possibility of an enemy country developing atomic explosives.

Sachs knew the President, having met him frequently while in Washington with NRA. Einstein thought him the man to bring the whole matter to the Chief Executive's attention. So Sachs started for Washington armed with a letter from Einstein suggesting government development of atomic energy, the report and memorandum prepared by Szilard in something as close to every-day language as you can get in writing about atomic energy.

This was in September, 1939, and Mr. Roosevelt was almost buried in the avalanche of work which followed the German invasion of Poland. It took Sachs some time to get an interview, which turned out to be the first of several.

He read his three papers aloud—something he likes much better than merely handing them over to be read—and added an argument of his own. Then the President knifed through to the heart of the problem.

"Alex," he said, "what you're after is to see that the Nazis don't blow us up."

"This Requires Action"

Then, says Sachs, the President called his aid, Maj Gen Edwin M. Watson, and said:

"Watson, this requires action."

Friends say that Sachs in some of the interviews eased the President into the discussion "with a few learned jokes." Geoffrey T. Hellman, writing in The New Yorker, says Sachs disclaims this.

"I'd just tell him I'd paid for the trip to Washington and couldn't deduct it from my income tax and would he please pay attention," Hellman quotes Sachs as saying, "I once made a joke about Americans being God's Frozen People during the wartime freeze on everything—to which incidentally I was in some particulars opposed."

According to the testimony before the Senate committee President Roosevelt told Watson to bring Dr. Sachs and Dr. Lyman J. Briggs, then director of the Bureau of Standards, together and have them set up a working committee. This was done. The Briggs Committee eventually became a sub-committee of the National Defense Research Committee, headed by Dr. Vannevar Bush, which was created during the Summer of 1940 and thereafter Dr. Sachs as he put it recently, "provided for his own disappearance" from the picture.

He had been, so Gen "Wild Bill" Donovan wrote him recently, "the deft intermediary between committee room, laboratory and planning board" and "the nation is indebted to you for the catalytic function which you performed."

Russian-born Sachs is 52 now, with fluffy, iron gray hair, well gone on top. Although he came to this country when he was 11 years old some still notice a faint trace of accent at times. He was a brilliant youngster and was only 19 when Columbia gave him a B. S. degree.

There followed a period as a clerk in the New York office of the old firm of Lee, Higginson & Co.

Had Parkman Fellowship

Next Harvard, in 1915, with the Parkman Fellowship. In 1916 he enrolled for jurisprudence and was awarded the Henry Bromfield Rogers Memorial Fellowship for the study of ethics in relation to jurisprudence or sociology.

He went back to Wall Street shortly and became an economic adviser and consultant. His work branched into many fields as his writings show. Recent ones include an article on taxation, on strategic materials, and on the logistics of petroleum pipelines as compared with tanker construction. He was for many years connected with the Lehman Corporation, an investment trust, managed by Lehman brothers, becoming a vice president in 1936, and resigning in 1942 to become an independent economic consultant.

He wouldn't, it is said, please the exponents of the "clean desk" theory.

"Sachs," says an interviewer, "likes to carry research around with him and is the possessor of 40 second-hand brief cases, a birthday gift from some jocular Lehman Corporation officials. His pockets are stuffed with memoranda which he deposits in a pile on the floor when he is looking for something.

"And both in writing and in conversation he uses such phrases as 'if only we could overcome the sclerotic-ism of the Right and the infantilism of the Left.'"

Which roughly is the economist's way of mentioning the troubles arising out of the lack of sensibility or stubbornness of the Right and the childishness of the Left.

That presumably is the sort of thing some of his one-time dormitory mates at Harvard remember. And one suspects too that he gets as much kick out of trying out such—or much more—exotic phrases on the layman as a Southwestern University football coach does out of his latest razzle-dazzle.

The Boston Globe (Boston, Massachusetts) • 09 Dec 1945, Sun • Page 51

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Atomic Energy

HEARINGS

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SPECIALCOMMITTEEONATOMIGENERGY

FIRST SESSION

PURSUANT TO

S. Res. 179

A RESOLUTION CREATING A SPECIAL COMMITTEE

TO INVESTIGATE PROBLEMS RELATING TO

THE DEVELOPMENT, USE, AND CON TROL OF ATOMIC ENERGY

PART 1

NOVEMBER 27,28,29AND 30,1945 DECEMBER 3, 1945

1948 - Honorary Commander, Order of the British Empire

See [http://docs.fdrlibrary.marist.edu:8000/findbrow.cgi?collection=Sachs,+Alexander]

"AWARDS AND DISTINCTIONS: Honorary Commander, Order of the British Empire 1948"

1950 (Feb 27)

Full pages:

- Page 1 : [HN00IP][GDrive]
- Page 2 :

REVEALS ROOSEVELT SCHEME FOR WARNING THE WORLD

How F.D. Planned to Use Atom Bomb

DR. ALEXANDER SACHS

How a secret memorandum influenced the vital A-bomb decision . . . how a story about Napoleon moved Roosevelt to commit the United States to use of the bomb . . . why the President listened to Alexander Sachs . . . and: Did Roosevelt, in his last months, change his mind about how to deal with Russia?

The Boston Globe (Boston, Massachusetts) • 27 Feb 1950, Mon • Page 1

(These questions are all answered in a startling copyrighted article which will appear in Look Magazine, out tomorrow, and printed in advance here, by special permission of the publishers.)

By NAT S. FINNEY

What did President Roosevelt intend to do with the atomic bomb?

It is a strange fact that the biographies and memoirs of Roosevelt's official associates supply no answer to this question.

Dr. Alexander Sachs, recognized in the famous Smyth report as the man who persuaded Roosevelt to launch the atomic-energy project, has now come forward with an answer.

The President, he says, planned to demonstrate the bomb before international representatives of governments, science and religion, before he ordered it dropped on America's wartime enemies.

Dr. Sachs, a New York economist and student of the history of science, bases his assertions about what was in F. D. R.'s mind when he aied on conversations he had with Roosevelt as late as December, 1944.

A memorandum advocating a new political strategy to bring about the surrender of Japan without the long, to-the-last-man struggle foreseen by the War Department General Staff was read by him to Presicent Roosevelt immediately before the 1944 elections, Dr. Sachs says. F. D. R. expressed agreement with the ideas contained in the memorandum, and told Maj Gen Edwin (Pa) Watson, his aid, about his views. This memorandum contained an idea Dr. Sachs submitted in a letter of May 8, 1944, which the President acknowledged by a letter to Dr. Sachs. In this May, 1944, letter it was urged that "victory over Germany would accelerate the defeat of Japan" far earlier than the military believed.

A Plan to End the War with Japan

"Final Phase European War and Emerging Opportunity for Liquidating Far Eastern War," was the title of this memorandum. It refers to the atomic bomb only in the code words "exponential weapon." But the meat of the policy it put forward was that with use of the atomic bomb in a series of dramatic warnings, Japan's Ruling House, along with groups that could point to a record of resistance to the Japanese militarists, could regain control of Japan. And that, in view of the utter hopelessness of the outlook of Japan from the Spring of 1945 on (with Germany defeated) the Japanese Emperor would accept surrender terms.

These terms, Dr. Sachs says, aimed at a "constructive use of the institution of the Emperor, with safeguards."

Dr. Sachs says the broad plan, in which use of the bomb was an integral part, had been set in motion before Roosevelt death at Warm Springs, Ga., in April, 1945. James V. Forrestal, then Secretary of the Navy, had recalled Capt (now Admiral) Ellis M. Zacharias from the West Coast to prepare the series of broadcasts in Japanese that played their part in Japan's ultimate surrender.

See SACHS Page 2

[HN00IQ][GDrive]

Sachs Pleaded With Roosevelt to "Tell Someone" of His Decision to Use A-Bomb

Continued from the First Page

(Editor's Note—Henry L. Stimson, Secretary of War in 1945, has described the War Department General Staff's estimate of the Far Eastern war situation in July, 1945, in a way that pictures the alternative to Dr. Sachs' suggestions for ending hostilities: "The strategic plans of our armed forces for the defeat of Japan, as they stood in July, had been prepared without reliance upon the atomic bomb. . . . We were planning an intensified sea and air blockade, and greatly intensified strategic air bombing, through the Summer and early Fall, to be followed on Nov. 1 by an invasion of the southern island of Kyushu. This would be followed in turn by an invasion of the main island of Honshu in the Spring of 1946. The total United States military and naval force involved in this grand design was of the order of 5,000,000 men; if all those indirectly concerned are included, it was larger still. We estimated that if we should be forced to carry this plan to its conclusion, the major fighting would not end until the latter part of 1946, at the earliest. I was informed that such operations might be expected to cost over a million casualties to American forces alone.")

Forrestal Returned from Pacific In State of Emotional Shock

The relationship between Dr. Sachs and President Roosevelt was known to close mutual friends. But the extent of Dr. Sachs' activities as a personal, nonofficial adviser on atomic energy and grand strategy is little-documented, except in Dr. Sachs' own files.

The President's executive officer on some matters of atomic energy was General Watson. Forrestal, who Dr. Sachs says returned from the Pacific in a state of emotional shock that impelled him to reach for any honorable way to end the war, was intermediary with Zacharias. Roosevelt, Watson and Forrestal are dead.

Dr. Sachs' lips were sealed by a pledge of secrecy to Roosevelt himself. He did not feel himself released until the Smyth report disclosed how he labored to persuade F.D.R. to undertake the atomic energy project, and even then he felt doubt about describing his association with the project during late phases of the war. He has discussed this association with acquaintances in conversations and letters, but the public has not heard the story.

I have examined Dr. Sachs' records of his conversations, and copies of the memoranda he used as the bases of his discussions with President Roosevelt. Here is Dr. Sachs' version of the last chapter of President Roosevelt's life:

Its roots go 12 years deep in time, back to 1933 when Dr. Sachs was still Governor of New York and campaigning against Herbert Hoover for the Presidency. Dr. Sachs, then, and up to the war, with Lehman Corp., and since an independent consultant and director of Lehman Corp., had won himself a reputation in England and the United States as an economist of unusually deep grasp of monetary matters.

Through mutual friends, Roosevelt asked Sachs' advice on a projected campaign speech on the gold standard. Sachs tells how he responded with a suggestion that, instead of making a derivative speech, the subject be assigned to the late Senator Carter Glass, who was a master in his own right.

F.D.R. heeded Dr. Sachs' counsel, and appreciated the refreshing candor with which it had been given. Thus began an unusual association of two men as American history records.

Its culmination came in February of 1945, just before the failing President left Washington for Warm Springs. In the course of a long relaxed conversation at the White House President Roosevelt accepted the view of world events Dr. Sachs says he first put forward in April of 1941—the view that American policy could not be based upon expectation of a friendly and cooperative Soviet Union.

The President undertook to reconsider the philosophy underlying his administration's expectation of a postwar era of one-worldism and to take under serious advisement the revision of the policy he therefore had followed.

He agreed, says Dr. Sachs, with the contention that the ordinary state and military agencies of the Federal Government were so fixed in the patterns of the old policy they could not hope to develop a new one. They suffered, Dr. Sachs explains in his own phrases, from hardening of the categories, blinkered thinking, encrusted ideas.

Roosevelt planned to name Lewis Douglas, Dr. Sachs and one other man, not designated when F. D. R. died, to a special Presidential commission that would make a fresh review of the facts and present fresh conclusions forcibly as to command the change F. D. R. might seek.

Plans for using the bomb had an earlier culmination. This occurred after the 1944 elections, during the first week of December to Dr. Sachs' recollection.

Roosevelt and Sachs met at the White House where Sachs says he read what is here called his lost memorandum. At the conclusion of the two men's long conversation, the President nodded his agreement to Dr. Sachs' proposals for the use of the atomic bomb.

"For God's sake tell someone," Sachs pleaded.

The President agreed to "tell Pa" (Gen Watson). Dr. Sachs is satisfied that Gen Watson was told. His plea to President Roosevelt that someone be told was prompted by his own observation that F. D. R.'s powers were overstrained, and his anxiety that he, who had been insistent upon holding no official position whatever, might not be sole possessor of such a secret.

The President, in Dr. Sachs' poignant phrase (he thinks it comes from Shakespeare but cannot find the line) was becoming "disorderly minded."

Lengthening pauses spaced F. D. R.'s conversations with Dr. Sachs, pauses during which the President was there, yet in a sense not there.

The line and conference of F. D. R.'s thought was not broken by these pauses, which Dr. Sachs respected in silence, but the continuity of the President's on-pressing drive was momentarily suspended as if he listened inwardly to another, private harmony.

Our Enemies Would Be Warned

Here, as recaptured later by Dr. Sachs in a letter to Secretary of War Robert P. Patterson, is the proposal for the atomic bomb's use with which F. D. R. expressed agreement in December, 1944.

"Following a successful test, there should be arranged (a) rehearsal demonstration before a body including internationally recognized scientists from all Allied countries and, in addition, neutral countries, supplemented by representatives of the major (religious) faiths; (b) that a report on the nature and the portent of the atomic weapon be prepared by the scientists and other representative figures; (c) that, thereafter, a warning be issued by the United States and its allies in the Project to our major enemies in the war, Germany and Japan, that atomic bombing would be applied to a selected area within a designated time limit for the evacuation of human and animal life, and, finally (d) in the wake of such realization of the efficacy of atomic bombing, an ultimatum demand for immediate surrender by the enemies be issued, in the certainty that failure to comply would subject their countries and peoples to atomic annihilation."

(Dr. Sachs' recommendation that representatives of the major religious faiths attend the atomic bomb demonstration called for something more than Catholics, Protestants. . . . He wanted representatives of Judaism, Mohammedanism and Buddhism.)

Facts Have Been Twisted

This was the understanding in early December of 1944, and so far as Dr. Sachs can recollect or was informed, it remained the understanding until President Roosevelt's death on April 12, 1945.

Yet a simple restatement of the plan as put down by Dr. Sachs in July, 1946, from his memory of the memorandum, can lead to profound misunderstanding of what was in the mind of Dr. Sachs and President Roosevelt when they last discussed their shared secret of the vast atomic explosion about to be unleashed.

Indeed, incomplete information about the plan on which the minds of Dr. Sachs and Franklin Roosevelt then met has already been tortured and twisted to make it appear that had Roosevelt lived Hiroshima and Nagasaki would never have occurred.

(Editor's Note—This is not, as might appear to some, a denial that F. D. R. had planned to demonstrate the bomb before using it as a military weapon. Dr. Sachs is simply making it clear that neither he nor anyone else can be sure of what F. D. R. would have done had he lived to face the situation existing in August, 1945. The Roosevelt plans called for more atomic bombs than actually existed in August, 1945. Obviously, Dr. Sachs could not know how this and other technical facts might have caused F. D. R. to change his plans.)

It has been whispered that President Truman knowingly brushed this plan aside in favor of the actual use of the bomb decided upon by an interim committee headed by Secretary of State James F. Byrnes and Secretary of War Henry Stimson.

This committee, Secretary Stimson records, submitted its conclusions to a panel of distinguished scientific advisers who, partly because they could not, in the light of the facts, suggest an alternative, raised no objection to the way in which the bomb was used.

Dr. Sachs emphatically disagrees with those who argue that the American-British-Canadian team of nations that made the bomb is morally guilty for the use made of it. While he continues to believe that his broad sense of his proposal for a demonstration under international, inter-religious auspices of the weapon's powers could have been made when the bomb was tested at Alamogordo, N. M., he is convinced that the essential features of President Roosevelt's plans for using the bomb were carried out.

Dr. Sachs decries the kind of "apocalyptic thinking" that makes the precise use of the atomic bomb the central overshadowing item in the unfolding of the President's much-more-comprehensive plan to bring about the surrender of Japan through negotiations with Hirohito after our facilitating a political coup d'etat.

Warning to Japan

He points out that there was a warning to Japan—numerous warnings culminating in the ominous Potsdam Declaration. He continues in the belief that had these warnings been sharply dramatized by such a disclosure of the bomb's awful powers as he conceived, Hirohito might well have been able to regain control earlier.

Yet, he emphasizes, it was the bomb's terrific impact that sealed victory in the psychological war. President Roosevelt had set in motion by having Capt Zacharias recalled to Washington to speak to Japan in Japanese that forehandedly fully included ceremonial and archaic language to appeal to the court and high naval and other officials.

Dr. Sachs has only praise for the responsible men who made the fateful, final decisions in carrying through broad plans that were never seriously questioned by Roosevelt's successors, despite the great unpopularity of all suggestions that a deal should be made with the Japanese Emperor.

History Teaches F. D. R.

He has a sharp word for persons who now give currency to an American "guilt complex" at the use of the bomb. He compares this "self-denigration" to the sobs-thinking about Germany which followed World War I, and he warns that the upshot could be similar.

His story of the conversation with President Roosevelt, during which a decision was reached on use of the bomb as an integral part of ending the slaughter in the Pacific, suggests that Roosevelt may have been weighing in his mind all the political and moral implications of the use of the bomb.

(It must be remembered that in December, 1944, there was no certainty the weapon could be made or would be ready in time to provide a sign or shocking accent to hasten the end of the mounting horror by other weapons of scientific killing.)

Dr. Sachs says his way of dealing with President Roosevelt was to prepare a careful memorandum and read it aloud, pausing to discuss any fact or concept that raised a question in F. D. R.'s mind. Sachs would then attempt to support a crucial point by a story drawn from history—Roosevelt was an avid, ranging reader of history with relish for a telling passage, particularly when it was new to him.

The discussion on this December day revolved about the subtle point of a statesman's responsibilities to history, and the rightness or wrongness of visiting the world with a new agent of destruction. Dr. Sachs was ready with a story.

You Can't Bury a Discovery

Toward the end of the 16th century, John Napier, the Scotsman who invented the logarithmic tables, became greatly interested in engines of war because of his Protestant zeal that Britain should never fall to such a threat as the Spanish Armada.

Napier's biographer and descendant, Dr. Sachs told the President, learned that the Scotch mathematician had not only devised such weapons as sets of burning mirrors and primitive tanks, but had come upon an invention which succeeded in annihilating all animal life in an area of a square mile.

His biographer, Sachs told President Roosevelt, recounted that Napier was "so disquieted that he buried the machine," feeling that "mankind had many engines with which to destroy each other and that . . . he could never willingly increase them."

With this story as his key, Dr. Sachs says he convinced President Roosevelt that it was neither possible nor desirable to suppress such a discovery as was being brought to birth within the Manhattan District.

He saw the bomb as the climax of human technological achievement, linked to the most fundamental forces of nature. Its use would be a readily readable sign to the whole of humanity, and would, therefore, foreshorten the war and save millions of lives of our own and the Allies, and our enemies as well. But that the weapon must, at the very least, be demonstrated so that the complexities of its impact upon human development would be felt.

This, in its strange and somewhat indirect way, was the crux of the President's decision—a decision with an elaborate background that can be understood only by some grasp of the relationship between F. D. R. and his most unusual confidential adviser.

Sachs Spoke Out

The beginning of this relationship has been described. At their first meeting, President Roosevelt found that Alexander Sachs was an enormously well-informed man who preferred complete anonymity and had no desire whatever about differing with the President when he believed him to be in error.

Few who knew Roosevelt well can be surprised that he formed an attachment to Dr. Sachs. The attachment grew through the years. It grew for reasons that are clearly on the record.

In his own and related fields—modern economics—Dr. Sachs has a startling record of having been among the few pack of more orthodox thinkers was wrong. He helped frame the National Recovery Administration would be a failure and be held unconstitutional, and very frankly advised F. D. R. of what he anticipated. Yet he backstopped the late Hugh Johnson through the NRA days. There are numerous other instances of the sort.

One central belief held steadily by Dr. Sachs in the years when World War II was gathering was the key to his peculiar helpfulness to Roosevelt. Sachs demonstrated historically that the Great Depression was something more profound than a collapse in the economic sphere. It was a collapse of the Great Culture of Western Europe. During the 1932 campaign, Dr. Sachs asked F. D. R. whom he considered his principal opponent. "Why, Herbert Hoover, of course," the New Deal candidate replied. "You are wrong, Mr. Roosevelt." Sachs says he told his friend. "Your enemy is Adolf Hitler."

He Saw War Coming

Long before other advisers to F. D. R. warned him that the great threat was aggression by the dictators, Dr. Sachs was correctly interpreting events in Europe and Asia.

Partly because of his deep feeling of alarm about the oncoming war, Dr. Sachs kept a sharp eye on unorthodox events in the scientific world. As the 1930's drew toward their end, a providential combination of circumstances made Dr. Sachs perhaps the only man who could have advised President Roosevelt about atomic energy.

His long record of giving the President sound advice in economic matters caused F. D. R. to rely upon him. His steadfast refusal to accept any public favor or assignment convinced Roosevelt he had discovered a counselor who genuinely desired anonymity.

Dr. Sachs' lifelong interest in fundamental science (he is reputedly a first-rate mathematician) caused him to follow and understand the emergent possibility of unlocking the huge energies inside the atom. He attended a series of lectures in England in 1936-37 at which Lord Rutherford and F. W. Aston clearly indicated atomic energy. At the beginning of 1939, he secured one of the few careful translations made of the historic Hahn-Strassmann report on atomic fission.

During the latter phases of the Nazi purge of non-Aryan members of the great German scientific community, Dr. Sachs became interested in helping those who needed to be rescued. He got acquainted with some of these emigre scientists in the course of his professional trips in England. Others came to the United States and Canada. Through them, Dr. Sachs got the most expert, personal advice.

Thus, in the Summer of 1939, when the Navy Department flatly turned down proposals for an atomic project, Dr. Sachs was being told by such men as Drs. Leo Szilard and Eugene Wigner that the possibility of atomic weapons could not be neglected.

1939: Year of Decision

Dr. Sachs says he undertook to familiarize President Roosevelt both on the scientific possibilities of atomic energy, and the political possibilities if Germany became able to terrorize the democratic world with an atomic devastator. It is hard now to recall what things were like in early 1939. Austria had been swallowed by Hitler in 1938. Czecho-Slovakia, deserted by shock-sick England and France, had been taken over without a shot. The United States had no means for offensive war.

Dr. Sachs says he became F. D. R.'s personal Jeremiah on the subject of technological warfare because of real fear that Germany might succeed in terrorizing the whole world.

During the late Summer of 1939, Dr. Sachs says he broached the subject with President Roosevelt about starting an atomic project. The President was so preoccupied with problems of the neutrality act that he could not then give the matter attention.

The story of how Dr. Sachs enlisted Dr. Einstein to contribute a supporting letter to the dossier of material he used to convince the President is told in the Smyth report, and Dr. Sachs' testimony before the Congressional atomic energy committee fills in a good deal of detail. But Dr. Sachs has never publicly told the story of the crucial meeting at which President Roosevelt decided to commit himself to making an atomic weapon.

Roosevelt Not Convinced

On Oct. 11, 1939, Dr. Sachs read a long letter-memorandum of his own to President Roosevelt along with the letter signed by Dr. Einstein and a joint memorandum signed by Dr. Szilard and himself. The President was impressed and willing to help, but not convinced he should embark on such a costly course of action under government auspices.

(Dr. Sachs later advised him that producing an atomic weapon might well cost two billion dollars on the basis of the telescoped cost of electrical power in the years before World War I.)

Dr. Sachs says he asked President Roosevelt if he could see him the next day. The President invited him to come to breakfast.

Dr. Sachs tells how he spent most of that night either at his room at a Washington hotel, or in nearby Jackson Park, trying to think of something he might say that would bring the President to order a study of the feasibility of atomic weapons.

He recalls returning to his hotel room at dawn, and of dozing in a chair while waiting the operator's wake-up call. He did not go to bed for fear he would lose the thread of what he wished to tell the President.

He came back to the White House, he says, to find Roosevelt seated alone at his breakfast table while a servant attended him. As he sat down, the President said:

"What bright idea have you got now? How much time would you like?"

Dr. Sachs says he replied that he would not take long. "All I want to do is tell you a story." This is Dr. Sachs' recollection of the story:

Lord Acton and the Atom Bomb

He told the President that many years before, while he was in his final year at Columbia University, he had become acquainted with a philosopher and theologian, Prof. Dickinson Sergeant Miller. Later, in 1915, through this friendship, he met and talked to a visiting British divine, Rev. John Neville Figgis. Fr. Figgis, he explained to President Roosevelt, had written a book on political theory, entitled "From Gerson to Grotius." This interest in European politics caused Fr. Figgis to be chosen as literary executor and editor of the lectures and writings of Lord Acton, a famous English political historian with whose work President Roosevelt was acquainted.

Fr. Figgis, Dr. Sachs told President Roosevelt, discovered that Lord Acton had been asked an unusual question about English history. Could Lord Acton mention an outstanding instance of England being saved from national peril, not by its own efforts, but by the failure of an enemy to seize advantage of an opportunity to destroy England? Dr. Sachs explained that, according to Fr. Figgis, Lord Acton asked a day to consider the question.

Napoleon Blunders

The next day, Dr. Sachs told President Roosevelt, Lord Acton was ready with his answer. There was an outstanding example of how England had been saved by an enemy's mistake.

During the Napoleonic Wars, after Bonaparte had tried to land his armies on England's shores and failed because of the English Channel's trick tides and currents, a young American inventor came to the French Emperor with an idea.

The inventor was Robert Fulton, and his idea was that Napoleon build a fleet of steamships that could overpower the channel's currents. Then Napoleon would be able to land his armies, and a helpless England would be at his mercy.

Dr. Sachs repeated Lord Acton's story of how Napoleon scoffed at Fulton's idea. And he told President Roosevelt how Lord Acton held that if the French Emperor, then at the zenith of his power, had only had the humility and the imagination to entertain a new idea the 19th century history of England might have been far different.

Dr. Sachs says President Roosevelt sat silent when he had finished his story. "That seemed like a very long silence to me," he recalls. "I suppose it was two or three minutes, but it seemed like half an hour."

The servant, Dr. Sachs remembers, was clearing away the dishes and, without saying anything, President Roosevelt scribbled something on a piece of note paper and handed it to the servant. A moment later the servant returned with a tall package. When he unwrapped it, Dr. Sachs saw it was a magnum of Napoleon brandy. The servant drew the cork, and not until then did Mr. Roosevelt speak. He ordered the servant to pour.

A Toast to the Future

When each man, President Roosevelt and Dr. Sachs, held a penny of the old brandy, the President clicked his glass with Dr. Sachs and drank. Then, with a friendly gesture, he told Dr. Sachs he would take action on atomic energy. General Watson was directed to follow through.

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Blue Cross received from members	$22,306,360.53
Blue Cross paid hospitals for care of members	16,094,264.70
Addition to mandatory reserves for future protection of Blue Cross members	4,329,527.84
Other addition to Reserve for future protection of Blue Cross members after deducting 5.8%* for operating expenses	904,662.53

*The extremely low Blue Cross operating expense of only 5.8% ensures every Blue Cross member of the greatest hospitalization service at the lowest possible cost.

Blue Cross is strictly a non-profit service. It is the only non-profit hospitalization plan providing service benefits available to the people of Massachusetts.

Massachusetts citizens believe in self-protection

Since 1937, when Blue Cross first offered its benefits, more than half the population of Massachusetts has wanted and joined Blue Cross. For services to these members, $88,013,832.02 has been paid by Blue Cross to Massachusetts hospitals, supporting the plan. This has been for all types of services to all types of members... men, women, and children . . . services that many would be unable to pay for without Blue Cross.

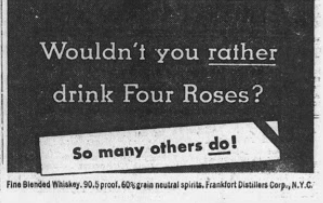
This is a healthy situation. Men and women believe in protecting themselves...the voluntary way...the honorable way. They ask no charity. They want no charity. And they have found in Blue Cross the means of paying for their health protection at the lowest possible cost.

Blue Cross is still growing stronger and stronger. It increased its benefits last June. It intends to increase its benefits further in March. Always, Blue Cross will continue to be the "best buy".

If you are not a BLUE CROSS Member, find out about all its advantages. Send coupon today.

BLUE CROSS
Consult our nearest office — Address
38 Chauncy Street, Boston 6
Tel. HUbbard 2-5100

BLUE CROSS
38 Chauncy St., Boston, Mass.
I am interested in joining Blue Cross. Please send me complete information on your benefits and enrollment requirements.
NAME
ADDRESS



[HN00IR][GDrive]

1965 (Dec 30)

Full page : [HN00IS][GDrive]

Behind The Headline

The Fate Of Man In Balance

By ERNEST CUNEO

New York — There is a legend attached to the inception of the atomic bomb and, unlike most legends, there is substantial fact behind it. The legend:

When Alexander Sachs, New York financier and industrialist, brought Einstein's document to President Roosevelt the President was unconvinced. The mind of Alexander Sachs, sleepless throughout the night, sought for a clinching argument and found it. He appeared early at the White House the next morning. He told the President that after Napoleon had conquered Europe he raved and ranted because he could not attack England. The British fleet in the channel barred his way, and Napoleon raged that he could not defeat an enemy whose allies were the winds and the tides.

Defeated by What?

After weeks of this one of Napoleon's ministers timidly ventured the suggestion that Napoleon see a young man in Paris who claimed he could conquer the ocean floods. Napoleon finally consented to see him. He asked him to what service he belonged. The young man answered that he belonged to none, he was not a military man. Napoleon became brusque. Commissioned in no army? Ranked in no navy? The young man answered in the negative. "Throw him out," screamed the Emperor, "it is an imposition on his Imperial Majesty to take up time with these people."

The young man was ushered out. Alexander Sachs then made his point to the President. The young man whom Napoleon refused to hear was Robert Fulton. Under his arm he had the plans of the first steamboat, with which Napoleon could have circumvented the British fleet and invaded England.

Sachs made a further point. He told the President that while the verdict of history was that Napoleon had been defeated by the snows of Russia, he lost because of his own lack of imagination. The President, a man of imagination, saw the point, and at once acquiesced to the Manhattan project, named in honor of Sachs, according to the legend.

And Today's Thinkers

As a slight fillip to the same legend the President is then said to have opened a bottle of cognac, given to his grandfather by Napoleon.

It took daring new thinking evident merit 1966 might well be the year to dust off the Baruch plan and try it again. For one thing, Moscow seems to have now discovered, as the United States perceived early, that the weapon a man carries may be the cause of his death, for if people become afraid of his using it they will shoot first.

The idea of a world only 10 years away in which any one of 15 nations could destroy tens of millions of people and half a continent in 24 hours is a nightmare from which all civilized men, including the Soviet scientists, recoil.

At the time the Baruch proposals were made President Harry Truman expressed the hope and belief that nuclear weapons would blow the world together, not apart. No nation has the right to give up trying. Indeed, the warning of Prime Minister Wilson is more than 2,500 years old, because over and above all of its augurs the Delphic oracle proclaimed, "Remember, O Greek, that necessity is above the gods themselves."

That same daring human imagination which promulgated nuclear weapons must now be employed to save mankind from them. The Baruch proposal, reintroduced, might well start off a chain reaction of imaginative nuclear control.

Voice Of The People

Genovese Again

(A forum for readers' comment on matters of public interest and on this newspaper's editorial opinions. Like Voltaire, we may disagree with what they say but will defend to the death their right to say it. Letters will not be published without signature and full address.)

Editor, The Call:

I have seen everything now. This can only happen in the United States. A man like Genovese wants a year's leave of absence with pay when he becomes eligible in July, which is 3 years at Rutgers.

In the whole country would any other industry give you a year's pay to go and write a book, which no doubt will show this country as being no good. My son and other teachers in this city have been drafted, even with the shortage of teachers, and sent to the Far East. They are not going to get any year's leave of absence with pay, only the $100 a month the Army pays. No wonder our taxes are high! Mr. Governor, now make a speech and say something about the Bill of Rights. While I am on the subject of Mr. Genovese I would like to know where the ones who took his part and find fault with this country's being in South Vietnam were when Russia went into Hungary to crush the Hungarian revolt.

JOSEPH LESKOVICS
122 Belmont Avenue
Paterson, Dec. 22, 1965.

Thanks

Editor, The Call:

On behalf of the entire Recreation Commission of Oakland we wish to thank you sincerely for the wonderful coverage your paper has given us during the past year.

Best wishes to you and your staff for a prosperous new year!

Mrs. GERARD HOEKSTRA
Secretary,
Oakland
Recreation Commission
Field Oak Road
Oakland, Dec. 22, 1965.

Thanks

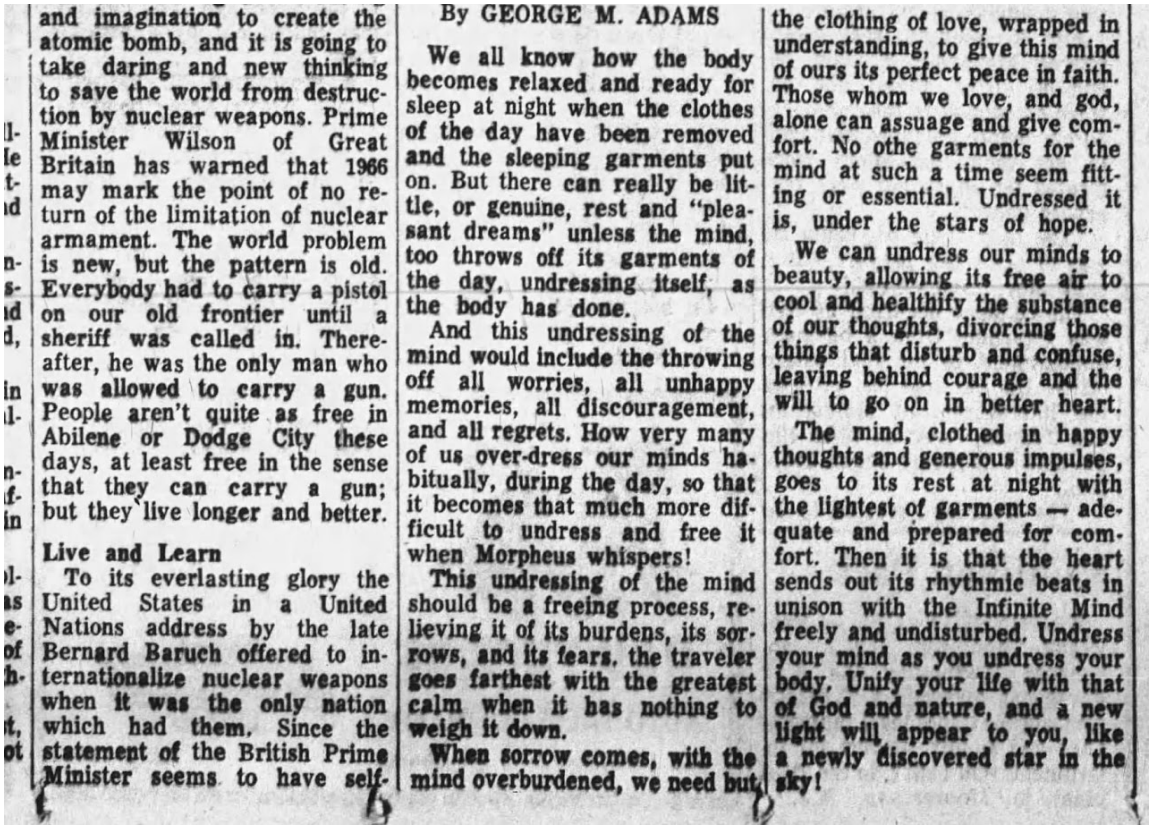
Editor, The Call:

The Tenants Council of River View Towers would like to take this opportunity to thank you for the splendid coverage you gave to our organization during this year. We are grateful to you and your staff.

MARIAN DALTON
105 Presidential Boulevard
Paterson, Dec. 15, 1965.

Today's Talk

Undress Your Mind!



and imagination to create the atomic bomb, and it is going to take daring and new thinking to save the world from destruction by nuclear weapons. Prime Minister Wilson of Great Britain has warned that 1966 may mark the point of no return of the limitation of nuclear armament. The world problem is new, but the pattern is old. Everybody had to carry a pistol on our old frontier until a sheriff was called in. Thereafter, he was the only man who was allowed to carry a gun. People aren't quite as free in Abilene or Dodge City these days, at least free in the sense that they can carry a gun; but they live longer and better.

Live and Learn

To its everlasting glory the United States in a United Nations address by the late Bernard Baruch offered to internationalize nuclear weapons when it was the only nation which had them. Since the statement of the British Prime Minister seems to have self-

By GEORGE M. ADAMS

We all know how the body becomes relaxed and ready for sleep at night when the clothes of the day have been removed and the sleeping garments put on. But there can really be little, or genuine, rest and "pleasant dreams" unless the mind, too throws off its garments of the day, undressing itself, as the body has done.

And this undressing of the mind would include the throwing off all worries, all unhappy memories, all discouragement, and all regrets. How very many of us over-dress our minds habitually, during the day, so that it becomes that much more difficult to undress and free it when Morpheus whispers!

This undressing of the mind should be a freeing process, relieving it of its burdens, its sorrows, and its fears. the traveler goes farthest with the greatest calm when it has nothing to weigh it down.

When sorrow comes, with the mind overburdened, we need but the clothing of love, wrapped in understanding, to give this mind of ours its perfect peace in faith. Those whom we love, and god, alone can assuage and give comfort. No othe garments for the mind at such a time seem fitting or essential. Undressed it is, under the stars of hope.

We can undress our minds to beauty, allowing its free air to cool and healthify the substance of our thoughts, divorcing those things that disturb and confuse, leaving behind courage and the will to go on in better heart.

The mind, clothed in happy thoughts and generous impulses, goes to its rest at night with the lightest of garments — adequate and prepared for comfort. Then it is that the heart sends out its rhythmic beats in unison with the Infinite Mind freely and undisturbed. Undress your mind as you undress your body. Unify your life with that of God and nature, and a new light will appear to you, like a newly discovered star in the sky!

[HN00IT][GDrive]

1968 - Involvement with LBJ / Nixon Presidential election

See [HX000C][GDrive]

On the thousands of hours of White House tapes Richard Nixon secretly recorded, you can hear him order exactly one burglary. It wasn't Watergate, but it reveals the real root of the cover-up that toppled a President.

On June 17, 1971, (one year to the date before the Watergate arrests, by impure coincidence) Nixon ordered his inner circle to break into the Brookings Institution. "Blow the safe and get it," the president said. "It" was a file of secret government documents on the 1968 bombing halt.

"What good will it do you, the bombing halt file?" asked National Security Adviser Henry Kissinger seconds after the president ordered his top aides to commit a felony.

"To blackmail him," Nixon replied. President Lyndon Johnson had halted the bombing of North Vietnam less than a week before Election Day. Nixon claimed LBJ did it for political reasons, to throw the election to his vice president, Hubert Humphrey.

Kissinger knew better, since he had inside information about the talks. Having worked on an abortive bombing halt deal for Johnson in 1967, Kissinger used his connections with LBJ's negotiators then to gain access to the Paris talks in 1968 -- access he used as a secret informant to the Nixon campaign.

"You remember, I used to give you information about it at the time," Kissinger reminded the president. "To the best of my knowledge, there was never any conversation in which they said we'll hold it until the end of October. I wasn't in on the discussions here. I just saw the instructions to [Ambassador Averell] Harriman," the chief U.S. negotiator in Paris. (Kissinger's words on tape contradict his later claim that he didn't even have access to classified information at the time.)

Nixon had his own reasons to realize that the bombing halt file didn't contain blackmail material on Johnson. He knew from classified briefings during the campaign that Johnson had remained unwavering in demanding three concessions: If Hanoi wanted a bombing halt, it had to (1) respect the DMZ dividing Vietnam, (2) accept South Vietnamese participation in the Paris peace talks, and (3) stop shelling civilians in Southern cities. Throughout the negotiations, LBJ didn't budge from these three demands. Hanoi remained equally adamant, insisting on an "unconditional" bombing halt -- until October 1968. Then Hanoi suddenly reversed course and accepted all three. Johnson didn't decide the timing of the bombing halt; Hanoi did.

If the bombing halt file didn't contain dirt on Johnson, what made Nixon want it desperately enough to risk impeachment and prison? Over the decades, evidence has slowly accumulated that Nixon had a far more compelling motive: the fear that the bombing halt file contained dirt on him.

Throughout the 1968 campaign, the Republican nominee promised not to interfere with the Paris talks. "We all hope in this room that there's a chance that current negotiations may bring an honorable end to that war," he told the Republican convention in Miami, "and we will say nothing during this campaign that might destroy that chance." Publicly, Nixon claimed to put the quest for peace above his own quest for votes, although it was clear that any negotiating breakthrough by Johnson before Election Day would help Vice President Humphrey's campaign.

One week before Election Day, Johnson got a tip that Nixon was trying to sabotage the negotiations. It came from a highly credible source, the legendary Alexander Sachs.

Sachs entered world history when, clutching a report from Albert Einstein, he warned Franklin Roosevelt in 1939 that Nazi Germany could corner the world uranium market and build an atomic bomb, a warning that led to the Manhattan Project. Sachs was also credited with predicting the Great Depression and the rise of Hitler, so he was not someone whose warnings could be safely ignored.

Sachs, chief economist for Lehman Corporation, informed Johnson that he had learned from Wall Street colleagues "closely involved with Nixon" that the Republican nominee "was trying to frustrate the president, by inciting Saigon to step up its demands, and by letting Hanoi know that when he took office 'he could accept anything and blame it on his predecessor.'"

By that point, North Vietnam had already accepted Johnson's terms. So had South Vietnam, privately, in meetings with the U.S. ambassador.

But America's allies in Saigon saw risk and opportunity in the upcoming U.S. presidential election. The risk was the election of Hubert Humphrey, a dove who had urged LBJ not to Americanize the war in the first place and whose supporters hoped he'd withdraw from Vietnam quickly if elected. The opportunity was to elect the premiere anti-Communist politician of the Cold War, Richard Nixon. All Saigon had to do to tip the election to their preferred candidate was refuse to take part in the Paris talks. No talks, no peace -- there could be no settlement of the war if one side of it refused to even negotiate. The hopes for peace stirred by the bombing halt would evaporate.

Once LBJ received the warning from Sachs, he took a closer look at diplomatic intelligence collected by the National Security Agency (which intercepted cables from the South Vietnamese Ambassador Bui Diem in Washington, DC, to his home government in Saigon) and Central Intelligence Agency (which bugged South Vietnamese President Nguyen Van Thieu's office). *"[I am] still in contact with the Nixon entourage, which continues to be the favorite despite the uncertainty provoked by the news of an imminent bombing halt," Ambassador Diem cabled President Thieu on Oct. 28, 1968. "I [explained discreetly to our partisan friends our] firm attitude." The president ordered the Federal Bureau of Investigation to put a wiretap on the embassy's phone and tail one of "our partisan friends," Anna Chennault, the Republican Party's top female fundraiser.*

It didn't take long for the FBI to strike pay dirt. Three days before the election, the bureau sent the White House this wiretap report: "Mrs. Anna Chennault contacted Vietnamese Ambassador Bui Diem and advised him that she had received a message from her boss (not further identified) which her boss wanted her to give personally to the ambassador. She said the message was that the ambassador is to 'hold on, we are gonna win' and that her boss also said, 'Hold on, he understands all of it.'" That day, President Thieu had announced that the South would not send a delegation to Paris, rendering any settlement of the war impossible for the time being and stalling Humphrey's surge in the polls.

(for the rest - see [HX000C][GDrive])

1979 (Dec 21) - Younger Joseph A Sachs (brother) passes

Article : [HN00IA][GDrive]

SACKS-Joseph A. Beloved husband of the late Florence. Devoted father of Sanford, Renee Benin and Zachary. Cherished grandfather of Sharon, David. Wendy, Benlamin and Alexander. Dear brother of Eleanor Barr. Service Sunday December 23 at 10:30 a.m. "The Riverside", 76th St. & Amsterdam Ave.

Alexander Sachs notes from FDR Library (at Marist College)

Download list (as of 2020) at : [HE0016][GDrive]

Papers of ALEXANDER SACHS (1874-1973)

The papers were donated to the Library by Charlotte Cramer Sachs (Mrs. Alexander Sachs) in 1985.

The papers consist of correspondence, financial papers, reports, studies, memoranda, minutes, printed material, extracts, charts, tables, statistics, ledgers, speeches and court testimony relating to Alexander Sachs' work as an economist and independent consultant in economic administration, his service as an economic advisor to President Roosevelt and to several government agencies and departments including the National Recovery Administration, the National Policy Committee, the President's Power Pool Conference, the Interstate Oil Compact Commission, the Petroleum Industry War Council, the Office of Strategic Services, Department of Defense, the Federal Reserve Board, the National Industrial Conference Board, the Justice Department and the State Department. Also included are his files relating to his work as an independent economic consultant to major corporations, utilities, railroads and some individuals.

Also included is material on Alexander Sachs' personal interests in philosophy, history, religion, the Middle East, Palestine, atomic energy, international relations and government. Among the subjects included, there is material on agriculture, banking, building, commodities, currency, depression, labor, minerals, oil, politics, public finance, railroads, recovery, stock markets, and taxation.

Quantity: 168 linear feet *[...]*

Related Materials:

- *President's Official File*
- *President's Personal File*
- *Papers of Louis H. Bean / Adolf A. Berle / Francis Biddle / Gerhard Colm / Morris L. Cooke / Oscar Cox / Frederic Delano / Mordecai Ezekial / Leon Henderson / Harry Hopkins / Harold Ickes / Isador Lubin / Gardner Jackson / Gardiner Means / Henry Wallace / Louis B. Wehle*

ALEXANDER SACHS BIOGRAPHICAL SKETCH

- *1893 August 1, born to Samuel and Sarah Fay Alexander Sacks in Rossien, Lithuania.*
- *1904 Summer, carne to the u.s. with his family.*
- *1908-1910 attended Townsend Harris High School, N.Y.C.*
- *1908-1910 attended The College of the City of New York.*
- *1910-1912 Columbia College; received B.S. degree in 1912.*
- *1912 Changed his name to Alexander Sachs (Alexander being his mother's maiden name).*
- *1913-1914 statistician and member of the municipal bond department of Lee Higginson & Co., investment bankers.*
- *1915-1917 attended Harvard College as a graduate student in social sciences, philosophy and jurisprudence.*
- *1916 Francis Parkman Fellow at Harvard College.*
- *1917 H.B. Rogers Memorial Fellowship at Harvard College.*
- *1918-1921 aide to Justice Brandeis and Zionist Organization of America on international problems of the Middle East and World War I peace conference.*
- *1919 June 17, naturalized citizen in N.Y.C.*
- *1922-1929 economist and investment analyst for Walter Eugene Meyer in equity investment acquisitions.*
- *1923 December 5, married Jeanne Cassell; divorced 1944.*
- *1929-1942 organized and became the Director of Economics and Investment Research of the Lehman Corporation, a newl? established investment company of Lehman Brothers.*
- *1931-1973 member of the Board of Directors of the Lehman Corporation.*
- *1936-1942 Vice President of Lehman Corporation.*
- *1942-1973 independent economic advisor and investment consultant in administrative economics and investment management for financial, utility and industrial corporations and a few individuals. s~M*
- *1945 August 30, married Charlotte Cramer in [Stamford], CT.*
- *1973 June 23, Alexander Sachs died at Columbia Presbyterian Medical Center in New York City.*

Voluntary Service:

- *1931 subcommittee of economists to the President's Committee on Recent Economic Changes.*
- *1931 Summer, special advisor to Lord Reading and Lord Lothian on the impact of world depression on sterling and England.*
- *1932 economic research for some of Franklin D. Roosevelt's campaign speeches.*
- *1933 June to September organizer and first director of Division of Research and Planning of National Recovery Administration.*
- *1936 member of the National Policy Committee.*
- *1936 member of the International Conference on Problems of the Pacific.*

- *September 1936 advisor to and member of President's Power Pool Conference.*
- *1938-1945 Chairman, Advisory Committee on Economics to the Interstate Oil Compact Commission.*
- *1938 collaborated with J.M. Keynes in a reorientation of tax policies towards the promotion of constructive capital investment.*
- *1938-1947 member of the Board of Councillors to the Committee on Economics of the Interstate Oil Compact Commission.*
- *1939 originator of the atomic project in conferences with President Roosevelt, and Presidential Representative on the organizing committee.*
- *1942 economic advisor to the Petroleum Industry War Council.*
- *1944 March 22-January 1946 designated Special Consultant on economic questions to the Director of the Office of Strategic Services.*
- *1952 member, 13th conference on Science, Philosophy and Religion.*
- *1954 u.s. Atomic Energy Commission "Q" Clearance.*
- *1955 June Deputy advisor to European Productivity Agency Conference in Paris.*
- *1955 August 2 appointed a consultant to the Board of Governors of the Federal Reserve System.*
- *1957 July 18 appointed research asssistant and special consultant to the Department of Defense Operations Research Office at The Johns Hopkins University.*
- *1957-1958 chairman, Conference of Business Economists member of the advisory committee of the Walter Kidde Nuclear Labs.*
- *1966 participated in National Industrial Conference Board conference on gold and world monetary problems.*
- *1966 May participated in a panel of experts for the u.s. Senate subcommittee on Government Research and National Policy.*
- *1968 special consultant to the Under-Secretary of State for Political Affairs.*
    - *Member, executive committee of the-Council for Democracy and Citizens for Victory.*

Achievements

- *Foresaw the collapse of the boom of the late Twenties and forecast the world's entry into a prolonged period of declining long term interest rates.*
- *Proposed the policy of long term low interest rates as a recovery measure.*
- *Devised the insured amortized mortgage for the reform of building finance and the revitalization of residential construction.*
- *Founded Central Statistics Board.*
- *Originated the economic-financial basis of the Federal Housing Administration.*
- *Collaborated with Dean Landis in the revision of the Securities and Exchange Commission.*

Special Studies:

- *1941 study for Lewis Douglas of the Mutual Life Insurance Co. on criteria for the conservation of income and value in the investment field.*
- *1946 study on money rate trends since the Great Depression with perspective on the developing postwar economy.*
- *1947 study for the Rockefeller Foundation on investment policies for educational institutions.*
- *1942-1945 study for Cities Service Oil Co. on the problems of the functional economies of the oil industry in relation to the economy.*

Legal Matters:

- *1941-1943 special collaborator for United Gas Pipeline Co. for presentation and pretrial settlement of issues before the Federal Power Commission.*
- *1942 preparation of material for Union Pacific Railroad Co. excess profits tax credit case.*
- *1950s expert witness for the Justice Department in their tax case against Radio Corporation of America.*
- *1951 expert witness on utility economics and finance for New York Telephone Co. rate and finance cases.*
- *1951 and 1954 preparation of material including briefs for the Pacific Lighting Gas Supply Co. and the Southern Counties Gas Co. in rate cases before the California Public Utility Commission.*
- *1952 expert witness for Philadelphia Electric Co. in an arbitration case involving alternative energy resources.*
- *1961 testified before the Federal Communications Commission in one of its periodic reviews of the Bell Systems earnings.*

Speeches and Lectures:

- *1933 November, Swarthmore College*
- *1934-1936 Institute of Public Affairs, Univerisity of Virginia*
- *1937 American Management Association*
- *1938 American Mining and Metallurgical Engineers*
- *1939 St. John's College, Annapolis, MD*
- *1939 New School for Social Research*
- *1942-1943 St. John's College and Town and Gown Meetings, Annapolis, MD*
- *1946 St. John's College, Annapolis, MD lectured on atomic bomb and world affairs*
- *1965 Weizmann Institute of Science on the atomic project*
- *1966 Institute of World Affairs at University of Chicago*

Publications: Book Chapters, Pamphlets and Periodical Articles

- *"An Economic Program to Meet the Depression." Barron's September 26, 1932: 3, 10-11.*
- *"A Report on Coal." The New Republic August 30, 1933.*
- *"National Recovery Policies and the Problem of Economic Planning." in America's Recovery Program, pp. 107-190. Oxford Press, 1934.*
- *"Summary of a Comprehensive Financial Analysis of the Causes of the Slump." The Annalist January 14, 1938: 35-36.*
- *"The Financial Dynamics of the Recovery Since 1933 and Latest Constriction Phase 1n Capital Flow." Financial Management Series Number 53. American*

- *"The Financial Dynamics of the Recovery Since 1933 and Latest Construction Phase In Capital Flow." Financial Management Series Number 53, American Management Association. New York, 1938.*
- *"Taxation and Recovery." Fortune May 1939.*
- *"Point-Counterpoint on Economic Stagnation." Social Research May 1939.*
- *"Restoring the Economic-Cultural Bases of American Foreign Investment." The Academy of Political Science, Columbia University, 1950.*
- *"Korean Diplomacy: It Stands in Need of Searching ReExamination." Barron's, March 26, 1951.*
- *"Rights, Promises, and Property." in Moral Principles of Action, Chapter 14. New York: Harper, 1952.*
- *"A Critique of 'The Cycle Theory'." The Conference Board Business Record, vol.X, no. 4 (April 1953): 151-154.*
- *"Killing the Goose: The Tax Laws are Making Industry Live Off Capital." Barron's October 18, 1954.*
- *"Interest Rates and Monetary Policy." Studies in Business Economics, Number 62, 1956.*
- *"On Determination of the 1957 Outlook." The Conference Board*
- *Business Record vol.XIV, no. 4 (April 1957)*
- *"Unemployment Wages and Inflation." Studies in Business Economics Number 62, 1958.*
- *"The A.T. & T. Case in a Changed Economy." Financial Analysts Journal September 1966.*
- *Contributor to Gold and World Monetary Problems, National Industrial Conference Board [Report of] Convocation. New York: Macmillan, October 1966.*

Awards and Distinctions

- *Honorary Commander, Order of the British Empire 1948*

Alexander Sachs - DESCRIPTION OF THE COLLECTION

This collection consists of Alexander Sachs' office files generated by his work for Walter Meyer, the Lehman Corporation, various government agencies and departments, and his clients. There are some files concerning financial and family matters and non-economic subjects of personal interest to Alexander Sachs including ancient history, the Middle East, science, philosophy and religion.

The papers are arranged in eleven different series, following the filing procedures used in his office. These series are: correspondence files; subject files; reports, studies and memoranda; economic charts and statistics; chronological file; unfinished work and notes; economic extracts; government publications; desiderata; clients file; and financial matters.

Periodically, the office files were culled of inactive files to be sent to storage. These storage files have been reintegrated into the collection.

The series of reports, studies and memoranda was created during the processing of the collection to contain those items which had been water damaged prior to their arrival at the Library. During the water damage and resultant restoration processes, the office file designations for these items were removed.

All of the series are interconnected. For example, although the bulk of the papers relating to one of Mr. Sachs' clients will be in the client's file, correspondence with a company official may be in the correspondence file, a study on the client's type of business may be in the reports, studies and memoranda file, charts for that report may be among the economic charts and statistics, carbon copies of letters from Mr. Sachs to a company official may be in the chronological file, extracts of articles published by the company may be in the economic extracts, and government publications may have been used to compile reports to the company. Some of the related items are cross-referenced.

A small amount of correspondence from Alexander Sachs to Sidney B. Lurie was given to the Library by Mr. Lurie in 1983. These items have been placed in the correspondence file: Lurie, Sidney B.

worked with einstein

From - Home Front Heroes: A Biographical Dictionary of Americans During Wartime, Volume 3

Benjamin F. Shearer / Greenwood Publishing Group, 20

SACHS, ALEXANDER (1893–1973)

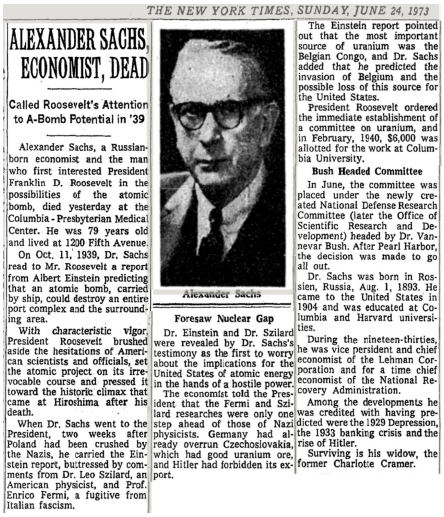
Although Alexander Sachs made his career as an economist, his most important role may have been convincing Franklin D. Roosevelt to fund research into atomic bombs. Born in Lithuania on August 1, 1893, Sachs came to the United States with his family as Jewish refugees in 1904. He graduated from Columbia University in 1912 and subsequently did postgraduate work in philosophy at Harvard, although he did not earn a doctorate. He became an economist with Lehman Brothers, known for his scorn of stock market hype in the 1920s and his disdain for Hoover administration recovery efforts.

Sachs was an acquaintance of **Albert Einstein** and had served President Roosevelt on a number of New Deal projects. He therefore struck Einstein, **Enrico Fermi**, and **Leo Szilard** as the appropriate go-between to explain their atomic theories—and the dangers of other countries developing an atomic bomb—to the president. Sachs' October 11, 1939, visit to the White House led to Roosevelt's forming a series of committees that ultimately approved the Manhattan Project. Sachs also served the war effort as an economic consultant for several government agencies.

His enthusiasm for the atomic bomb paled after the bombing of Hiroshima and Nagasaki. Sachs had expected its first uses to be test detonations that would convince Germany and Japan to surrender. Feeling that the United States had made a moral error in using the bomb on civilians, he became an advocate of nuclear arms control. Sachs died on June 23, 1973, in New York.

Wende Vyborney Feller

1973 (June 23) - Alexander Sachs dies



THE NEW YORK TIMES, SUNDAY, JUNE 24, 1973

ALEXANDER SACHS, ECONOMIST, DEAD

Called Roosevelt's Attention to A-Bomb Potential in '39

Alexander Sachs, a Russian-born economist and the man who first interested President Franklin D. Roosevelt in the possibilities of the atomic bomb, died yesterday at the Columbia-Presbyterian Medical Center. He was 79 years old and lived at 1200 Fifth Avenue.

On Oct. 11, 1939, Dr. Sachs read to Mr. Roosevelt a report from Albert Einstein predicting that an atomic bomb, carried by ship, could destroy an entire port complex and the surrounding area.

With characteristic vigor, President Roosevelt brushed aside the hesitations of American scientists and officials, set the atomic project on its irrevocable course and pressed it toward the historic climax that came at Hiroshima after his death.

When Dr. Sachs went to the President, two weeks after Poland had been crushed by the Nazis, he carried the Einstein report, buttressed by comments from Dr. Leo Szilard, an American physicist, and Prof. Enrico Fermi, a fugitive from Italian fascism.

Alexander Sachs

Foresaw Nuclear Gap

Dr. Einstein and Dr. Szilard were revealed by Dr. Sachs's testimony as the first to worry about the implications for the United States of atomic energy in the hands of a hostile power.

The economist told the President that the Fermi and Szilard researches were only one step ahead of those of Nazi physicists. Germany had already overrun Czechoslovakia, which had good uranium ore, and Hitler had forbidden its export.

The Einstein report pointed out that the most important source of uranium was the Belgian Congo, and Dr. Sachs added that he predicted the invasion of Belgium and the possible loss of this source for the United States.

President Roosevelt ordered the immediate establishment of a committee on uranium, and in February, 1940, $6,000 was allotted for the work at Columbia University.

Bush Headed Committee

In June, the committee was placed under the newly created National Defense Research Committee (later the Office of Scientific Research and Development) headed by Dr. Vannevar Bush. After Pearl Harbor, the decision was made to go all out.

Dr. Sachs was born in Rossien, Russia, Aug. 1, 1893. He came to the United States in 1904 and was educated at Columbia and Harvard universities.

During the nineteen-thirties, he was vice president and chief economist of the Lehman Corporation and for a time chief economist of the National Recovery Administration.

Among the developments he was credited with having predicted were the 1929 Depression, the 1933 banking crisis and the rise of Hitler.

Surviving is his widow, the former Charlotte Cramer.

[HN00HX][GDrive]

Article : [HN00HV][GDrive]

Called Roosevelt's Attention to A-Bomb Potential in 1939

Alexander Sachs, a Russian–born economist and the man who first interested President Franking D. Roosevelt in the possibilities of the atomic bomb, died yesterday at the Columbia-Presbyterian Medical Center. He was 79 years old and lived at 1200 Fifth Avenue. On Oct. 11,1939, Dr. Sachs read to Mr. Roosevelt a report from Albert Einstein predicting that an atomic bomb, carried by ship, could destroy an entire port complex and the surrounding area. With characteristic vigor, President Roosevelt brushed aside the hesitations of American scientists and officials, set the atomic project on its irrevocable course and pressed it toward the historic climax that came at Hiroshima after his death. When Dr. Sachs went to the President, two weeks after Poland had been crushed by the Nazis, he carried the Einstein report, buttressed by comments from Dr. Leo Szilard, and American physicist, and Prof. Enrico Fermi, a fugitive from Italian fascism.

Foresaw Nuclear Gap

Dr. Einstein and Dr. Szilard were revealed by Dr. Sachs's testimony as the first to worry about the implications for the United States of atomic energy in the hands of a hostile power. The economist told the President that the Fermi and Szilard researches were only one step ahead of those of Nazi physicists. Germany had already overrun Czechoslovakia, which had good uranium ore, and Hitler had forbidden its export. The Einstein report pointed out that the most important source of uranium was the Belgian Congo, and Dr. Sachs added that he predicted the invasion of Belgium and the possible loss of this source for the United States. President Roosevelt ordered the immediate establishment of a committee on uranium, and in February, 1940, $6,000 was allotted for the work at Columbia University.

Bush Headed Committee

In June, the committee was placed under the newly created National Defense Research Committee (later the Office of Scientific Research and Development) headed by Dr. Vannevar Bush. After Pearl Harbor, the decision was made to go all out. Dr. Sachs was born in Rossien, Russia, Aug. 1, 1893. He came to the United States in 1904 and was educated at Columbia and Harvard universities. During the nineteen-thirties, he was vice president and chief economist of the Lehman Corporation and for a time chief economist of the National Recovery Administration. Among the developments he was credited with having predicted were the 1929 depression, the 1933 banking crisis and the rise of Hitler. Surviving is his widow, the former Charlotte Cramer.

TO - DO

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1910s

- 1911 Mar 27 - Young hebrews ?
  - https://www.newspapers.com/image/53889125/?terms=%22alexander%2Bsacks%22
- 1916 (July 4) award!
  - https://newspaperarchive.com/philadelphia-jewish-exponent-jul-14-1916-p-7/
- 1916 (Oct 6) - harvard grad / zionist speech
  - https://www.newspapers.com/image/603283645/?terms=%22alexander%2Bsachs%22
- 1917 (May)
  - https://www.newspapers.com/image/430623064/?terms=%22alexander%2Bsachs%22
- 1917 (Jun 3)
  - https://newspaperarchive.com/boston-sunday-post-jun-03-1917-p-24/
- 1917 (june 25)
  - https://www.newspapers.com/image/430626652/?terms=%22alexander%2Bsacks%22
- 1917 (Nov 11)
  - https://www.newspapers.com/image/430921892/?terms=%22alexander%2Bsachs%22
- 1917 (Dec 20) <--- think i alredy have this one
  - https://www.newspapers.com/image/420010060/
- 1917 (Dec 22)
  - https://www.newspapers.com/image/576535836/?terms=%22alexander%2Bsachs%22
- 1918 (Jan 10)
  - https://www.newspapers.com/image/420012832/?terms=%22alexander%2Bsachs%22
-
- 1919 *Juy 23
  - https://www.newspapers.com/image/419705178/?terms=%22alexander%2Bsachs%22
- 1919 (March 3)
  - https://www.newspapers.com/image/544204936/?terms=%22alexander%2Bsachs%22
- 1919 (Mar 22)
  - https://www.newspapers.com/image/525087130/?terms=%22alexander%2Bsachs%22

1920s

- 1920 (Jan 14) - Socialist convention ? I am not sure if this is "our" Alexander Sachs
  - https://www.newspapers.com/image/329785641/?terms=%22alexander%2Bsachs%22

1930

- 1931 (Nov 27)
  - https://www.newspapers.com/image/457524235/?terms=%22alexander%2Bsachs%22
- 1932
  - alexander sachs is ill
  - https://newspaperarchive.com/new-york-columbia-spectator-mar-17-1932-p-1/
- 1933 <---- BIG YEAR FOR 'Alexander Sachs" references
- 1933 (Feb 5)
  - https://www.newspapers.com/image/173907636/?terms=%22alexander%2Bsachs%22
- Feb 1933
  - https://www.newspapers.com/image/173907636/?terms=%22alexander%2Bsachs%22
- MARCH 1933 <---- FDR admiistration begins
- 1933 (APri 02)
  - Railroad exec meetings with FDR ?
    - https://www.newspapers.com/image/400768051/?terms=%22alexander%2Bsachs%22 and
    - https://www.newspapers.com/image/373507013/?terms=%22alexander%2Bsachs%22
- Apri l933
  - https://www.newspapers.com/image/373507013/?terms=%22alexander%2Bsachs%22

- 1933 (June 16)
  - https://www.newspapers.com/image/595308264/?terms=%22alexander%2Bsachs%22
- Rrferred to as Dr. Alex Sachs
  - https://www.newspapers.com/image/444444209/?terms=%22alex%2Bsachs%22

1933 (June 20)

https://www.newspapers.com/image/127984550/?terms=%22alexander%2Bsachs%22

chief of research and planning for congress ?

1933 (June 20)

https://www.newspapers.com/image/32909293/?terms=%22alexander%2Bsachs%22

NICE PICTURE

1933 (June 23)

https://www.newspapers.com/image/373533467/?terms=%22alexander%2Bsachs%22

1933 (June 28)

https://www.newspapers.com/image/545174774/?terms=%22alexander%2Bsachs%22

1933 (July 1) - Alex Sachs with a picture

https://www.newspapers.com/image/415195451/?terms=%22alex%2Bsachs%22

1933 July 26

https://www.newspapers.com/image/56330177/?terms=%22alex%2Bsachs%22

July 19 1933

https://www.newspapers.com/image/553328574/?terms=%22alexander%2Bsachs%22

1933 - CLearly advising Roosevelt

https://www.newspapers.com/image/416408166/?terms=%22alexander%2Bsachs%22

1933 (Oct 20) - "ALex Sachs"

https://www.newspapers.com/image/553325685/?terms=%22alex%2Bsachs%22

1933 (Nov 14) Ax Sachs quuts rsearch board of NRA

https://www.newspapers.com/image/355258732/?terms=%22alex%2Bsachs%22

==========

- 1934 (Jan)
  - https://www.newspapers.com/image/99727704/?terms=%22alexander%2Bsachs%22
  - https://www.newspapers.com/image/47112314/?terms=%22alexander%2Bsachs%22
- 1934 (Feb)
  - https://www.newspapers.com/image/1249689/?terms=%22alexander%2Bsachs%22
  - NO OAH TAKEN !!!
  - https://www.newspapers.com/image/197557291/?terms=%22alexander%2Bsachs%22
- 1934 (March)
  - Lehman profiting !
  - https://www.newspapers.com/image/355161351/?terms=%22alexander%2Bsachs%22
- 1934 (May)
  - https://www.newspapers.com/image/187335942/?terms=%22alexander%2Bsachs%22
- jun
  - https://www.newspapers.com/image/604422926/?terms=%22alexander%2Bsachs%22
  - https://www.newspapers.com/image/24662946/?terms=%22alexander%2Bsachs%22
- NRA for coal and oil !!!
  - https://www.newspapers.com/image/76208228/?terms=%22alexander%2Bsachs%22
  - https://www.newspapers.com/image/146768186/?terms=%22alexander%2Bsachs%22
  - https://www.newspapers.com/image/143035646/?terms=%22alexander%2Bsachs%22
- Dec 26
  - https://www.newspapers.com/image/251532422/?terms=%22alexander%2Bsachs%22

1935 July 12

https://www.newspapers.com/image/230875742/?terms=%22alexander%2Bsachs%22

1935 July 18

https://www.newspapers.com/image/195729402/?terms=%22alexander%2Bsachs%22

1935 Sep 14

https://www.newspapers.com/image/479898276/?terms=%22alexander%2Bsachs%22

1935 Sep 29

https://www.newspapers.com/image/174725488/?terms=%22alexander%2Bsachs%22

1935 Dec 10

https://www.newspapers.com/image/147048234/?terms=%22alexander%2Bsachs%22

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cheaper electricity -

1936 Sep 20

https://www.newspapers.com/image/375672222/?terms=%22alexander%2Bsachs%22

https://www.newspapers.com/image/596556676/?terms=%22alexander%2Bsachs%22

1936 Oct 1

https://www.newspapers.com/image/373978815/?terms=%22alexander%2Bsachs%22

1936 Oct 4

https://www.newspapers.com/image/107733588/?terms=%22alexander%2Bsachs%22

1936 OCt 30 - big bonus

https://www.newspapers.com/image/140526154/?terms=%22alexander%2Bsachs%22

- 1936 Nov 24
  - https://www.newspapers.com/image/95808693/?terms=%22alexander%2Bsachs%22
- 1936 Dec 08
  - https://www.newspapers.com/image/274987296/?terms=%22alexander%2Bsachs%22
- 1936 Dec 12
  - https://www.newspapers.com/image/583617538/?terms=%22alexander%2Bsachs%22
- 1938 July 27
  - https://newspaperarchive.com/amarillo-daily-news-jul-27-1938-p-5/
  - https://newspaperarchive.com/port-arthur-news-mar-27-1938-p-73/
- 1939 March 17
  - https://newspaperarchive.com/galveston-daily-news-mar-17-1939-p-5/
  - 1939-03-17-th-galveston-daily-news-pg-5.png
  - 1939-03-17-the-galveston-daily-news-pg-5-clip-oil-industry.jpg
- 1939 July19
  - Interstate oil / Sachs
  - https://newspaperarchive.com/albuquerque-journal-jul-19-1939-p-1/
  - 1939-07-19-the-albuquerque-journal-pg-1.png
  - 1939-07-19-the-albuquerque-journal-pg-1-clip-interstate-oil.jpg

Dec 23 1940

https://newspaperarchive.com/wichita-daily-times-dec-23-1940-p-3/

1940-12-23-wichita-daily-times-pg-3.png

1940-12-23-wichita-daily-times-pg-3-clip-group-british-aid.jpg

1941 Feb 19

https://newspaperarchive.com/butte-montana-standard-feb-19-1941-p-4/

1941-02-19-butte-montana-standard-pg-4.png

1941-02-19-butte-montana-standard-pg-4-clip-french-gold-sachs.jpg

1941 Sep 5

1941 Sep 5

https://newspaperarchive.com/rushville-evening-daily-republican-sep-05-1941-p-3/

1941-09-05-the-rushville-indiana-republican-pg-3.png

1941-09-05-the-rushville-indiana-republican-pg-3-clip-lehman-corp.jpg

support for lend leas

https://www.newspapers.com/image/297479354/?terms=%22alexander%2Bsachs%22

Dorothy Thompson

https://www.newspapers.com/image/554394577/?terms=%22alexander%2Bsachs%22

1941 - www2 grmany imacts

https://www.newspapers.com/image/605115563/?terms=%22alexander%2Bsachs%22

https://www.newspapers.com/image/84890731/?terms=%22alexander%2Bsachs%22

https://www.newspapers.com/image/89887914/?terms=%22alexander%2Bsachs%22

Jan 1 1942

Pierre - Freee frech aisles

https://newspaperarchive.com/helena-independent-jan-01-1942-p-4/

1942 march 10

https://newspaperarchive.com/annapolis-capital-mar-10-1942-p-3/

1942-03-10-annapolis-capital-pg-3

1942-03-10-annapolis-capital-pg-3-clip-sachs-barr

1942 march 17

https://newspaperarchive.com/annapolis-capital-mar-17-1942-p-6/

1942-03-17-annapolis-capital-pg-6.jpg

1942-03-17-annapolis-capital-pg-6-clip-sachs.jpg

1942 Oct 21

1942 Oct 21

https://newspaperarchive.com/annapolis-capital-oct-21-1942-p-5/

1942-10-21-annapolis-capital-pg-5.png

1942-10-21-annapolis-capital-pg-5-clip-sachs-barr.jpg

https://newspaperarchive.com/annapolis-capital-dec-03-1942-p-5/

1942-12-03-annapolis-capital-pg-5.png

1942-12-03-annapolis-capital-pg-5-clip-sachs-barr.jpg

1943 Jan 5

https://newspaperarchive.com/annapolis-capital-jan-05-1943-p-3/

1943-01-05-annapolis-capital-jan-05-1943-pg-3.jpg

1943-01-05-annapolis-capital-jan-05-1943-pg-3-clip-barr-sachs.jpg

1943-02-06

1943-02-06-annapolis-capital-pg-3.png

1943-02-06-annapolis-capital-pg-3-clip-barr-sachs.jpg

https://newspaperarchive.com/lowell-sun-jun-15-1943-p-38/

1943-06-15-the-lowell-sun-pg-38.png

1943-06-15-the-lowell-sun-pg-38-clip-thompson-wedding

https://newspaperarchive.com/bradford-era-jun-21-1943-p-1/

1943-06-21-the-bradford-era-pg-1.png

https://drive.google.com/file/d/1VNuS_utGssxpOncihTRISsNOnVuwE_-u/view?usp=sharing

[HN017N][GDrive]

1943-06-21-the-bradford-era-pg-1-clip-oil-compact

https://drive.google.com/file/d/1XmvkbUKQgfjL8_rPHECnMugNnv7199MY/view?usp=sharing

[HN017O][GDrive]

1944 - May 26

Large-scale irrigatin plas fr Palstin -

Cmmmission on Palstine Surveys - inclues Alexander Sachs

https://newspaperarchive.com/philadelphia-jewish-exponent-may-26-1944-p-16/

august 13 1945

https://newspaperarchive.com/princeton-daily-princetonian-aug-13-1945-p-2/

August 24 1945

https://newspaperarchive.com/charleston-gazette-aug-24-1945-p-6/

1945 August

https://www.newspapers.com/image/598707011/?terms=Roosevelt%2Balexander%2Bsachs

1945 Dec 7 - Sachs with Groves

https://www.newspapers.com/image/19970038/?terms=%22alexander%2Bsacks%22

1945 Nov 28

https://www.newspapers.com/image/253260706/?terms=charlotte%2Bcramer%2Bsachs

Sachs recalls first atomic bomb meetings ... sound slike there has been revisions ..

1947 (Aug) - Alex Sachs

https://www.newspapers.com/image/128568142/?terms=%22alex%2Bsachs%22

1947 (Aug) - Alex Sachs - a bomb decision

https://www.newspapers.com/image/179490513/?terms=%22alex%2Bsachs%22

1951

Sep 6

https://www.newspapers.com/image/187598936/?terms=alexander%2Bsachs%2Btruman

1966jan 3 sachs Baruch

https://www.newspapers.com/image/65005936/?terms=%22alexander%2Bsachs%22

1966 june 9

https://www.newspapers.com/image/451674411/?terms=%22alexander%2Bsachs%22

1967 Feb - cartoon

https://www.newspapers.com/image/271046052/?terms=%22alexander%2Bsachs%22

DONE

1968 election

https://historynewsnetwork.org/article/146770

1970 oct

https://www.newspapers.com/image/529294124/?terms=%22alexander%2Bsachs%22

1970 july

https://www.newspapers.com/image/272797421/?terms=%22alexander%2Bsachs%22

1972 nov

https://www.newspapers.com/image/65779981/?terms=%22alexander%2Bsachs%22

1972 Dec

https://www.newspapers.com/image/298436952/?terms=%22alexander%2Bsachs%22

EXTRA REFERENCES

Good reference -

https://infoproc.blogspot.com/2018/11/contingency-history-and-atomic-bomb.html

- *Rossien, Lithuania*

https://www.jewishgen.org/Communities/community.php?usbgn=-2618385 :

Raseiniai, Lithuania

Alternate names: Raseiniai [Lith], Rasayn [Yid], Rossieny [Rus], Raseinen [Ger], Rosienie [Pol], Raseiņi [Latv], Rasein, Raseyn, Raseinai, Rasseyn, Resein, Rossein

https://en.wikipedia.org/wiki/Raseiniai : "

Raseiniai (pronunciation
(help·info)

) (Samogitian: *Raseinė*, Polish: *Rosienie*, Yiddish: ראָסיין) is a city in Lithuania. It is located on the south eastern foothills of the Samogitians highland, some 5 km (3.1 mi) north from the Kaunas–Klaipėda highway. "

ADDITIONAL INFO - HENRY "HARRY" SACHS

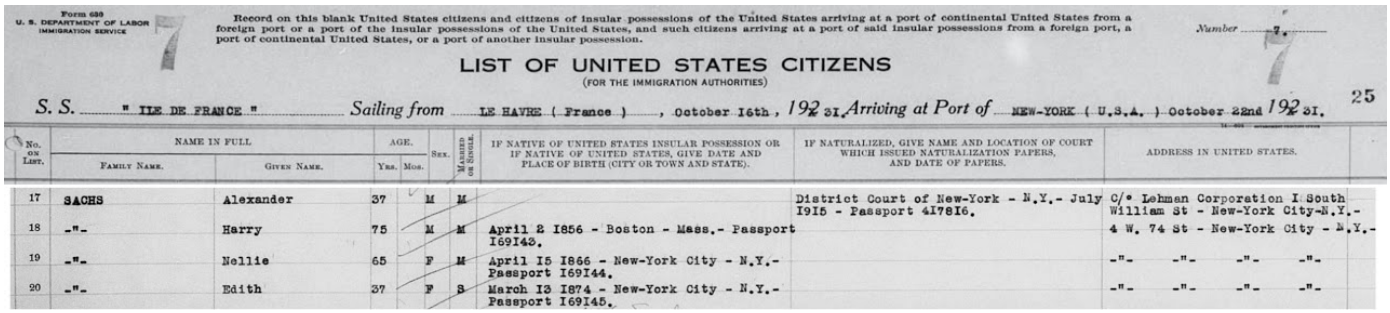
1931 (Oct 16) - Alexander Sachs traveling from France to NYC -- Traveled on same ship with Henry ("Harry") Sachs and his family (but they may not have been traveling as a group)

Born Aug 1 1892 ... Alexander Sachs would be age 40 on Aug 1 1932 - Age 39 on Aug 1 1892 - but this form says age 37 ..

It says that this Harry Sachs lives at "**4W 74th Street in New York City** "... Which indeed is the address in his Obituary ... So this is the banker from Goldman Sachs ... (more info on Harry Sachs in additional references of this page).

Full page of voyage - [HJ0009][GDrive]

(Picture of Harry Sachs : https://www.amazon.com/Photography-Poster-Wilcox-Broening-finish/dp/B07VHY8W1K)



Form 630
U. S. DEPARTMENT OF LABOR
IMMIGRATION SERVICE

Record on this blank United States citizens and citizens of insular possessions of the United States arriving at a port of continental United States from a foreign port or a port of the insular possessions of the United States, and such citizens arriving at a port of said insular possessions from a foreign port, a port of continental United States, or a port of another insular possession.

Number 7.

LIST OF UNITED STATES CITIZENS
(FOR THE IMMIGRATION AUTHORITIES)

S. S. " ILE DE FRANCE " Sailing from LE HAVRE (France), October 16th, 1931. Arriving at Port of NEW-YORK (U.S.A.) October 22nd 1931.

25

No. on List.	Name in Full: Family Name.	Name in Full: Given Name.	Age: Yrs.	Age: Mos.	Sex.	Married or Single.	If native of United States insular possession or if native of United States, give date and place of birth (city or town and state).	If naturalized, give name and location of court which issued naturalization papers, and date of papers.	Address in United States.
17	SACHS	Alexander	37		M	M		District Court of New-York - N.Y.- July 1915 - Passport 41781 6.	C/o Lehman Corporation 1 South William St - New-York City-N.Y.-
18	-"-	Harry	75		M	M	April 2 1856 - Boston - Mass.- Passport 169143.		4 W. 74 St - New-York City - N.Y.-
19	-"-	Nellie	65		F	M	April 15 1866 - New-York City - N.Y.- Passport 169144.		-"- -"- -"- -"-
20	-"-	Edith	37		F	S	March 13 1874 - New-York City - N.Y.- Passport 169145.		-"- -"- -"- -"-

[HJ000A][GDrive]

Harry Sachs, banker - Dies in February 18 of 1933

Full page : [HN00J4][GDrive]

The Brooklyn Daily Eagle (Brooklyn, New York) • 18 Feb 1933, Sat • Page 22

Harry Sachs Dies In Atlantic City; Banker Was 76

Atlantic City, Feb. 18 (AP)—Harry Sachs, 76, of New York, a member of the investment banking firm of Goldman, Sachs & Co., died at the Shelburne Hotel last night. He had been ill for some time with diabetes and complications incidental to his age.

He registered at the hotel four days ago. Several relatives, including his wife, son and daughter, were at the bedside when he died. His body was taken to New York.

Born in Baltimore

Harry Sachs lived at 4 W. 74th St., Manhattan. He was for 40 years a member of the international banking firm of Goldman, Sachs & Co. Recently he had been acting in an advisory capacity, although at one time he was the floor member for the firm on the New York Stock Exchange.

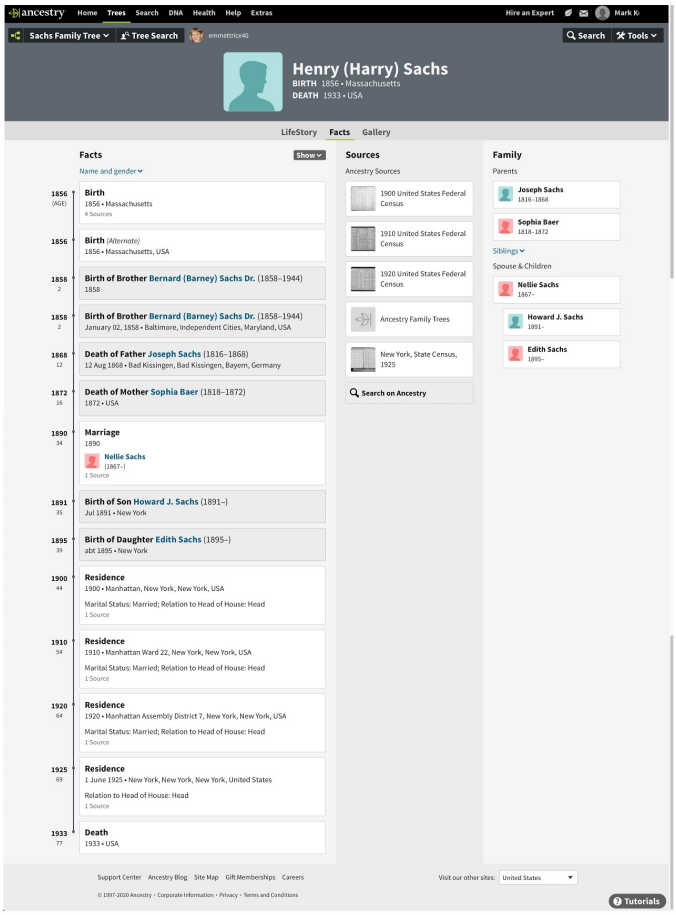
Mr. Sachs was born in Baltimore and came to New York City as a child. Prior to entering the investment field he was in the mercantile business.

No funeral arrangements have been made yet.

[HN00J5][GDrive]

Info on Harry Sachs - Nellie is his wife, Edith is his daughter.

Transcript :[HL001X][GDrive]



ancestry Home Trees Search DNA Health Help Extras Hire an Expert Mark K

Sachs Family Tree Tree Search emmettrice40 Search Tools

Henry (Harry) Sachs
BIRTH 1856 • Massachusetts
DEATH 1933 • USA

LifeStory Facts Gallery

Facts Show
Name and gender

1856 (AGE) **Birth** 1856 • Massachusetts 4 Sources
1856 **Birth** *(Alternate)* 1856 • Massachusetts, USA
1858 2 **Birth of Brother Bernard (Barney) Sachs Dr.** (1858–1944) 1858
1858 2 **Birth of Brother Bernard (Barney) Sachs Dr.** (1858–1944) January 02, 1858 • Baltimore, Independent Cities, Maryland, USA
1868 12 **Death of Father Joseph Sachs** (1816–1868) 12 Aug 1868 • Bad Kissingen, Bad Kissingen, Bayern, Germany
1872 16 **Death of Mother Sophia Baer** (1818–1872) 1872 • USA
1890 34 **Marriage** 1890 Nellie Sachs (1867–) 1 Source
1891 35 **Birth of Son Howard J. Sachs** (1891–) Jul 1891 • New York
1895 39 **Birth of Daughter Edith Sachs** (1895–) abt 1895 • New York
1900 44 **Residence** 1900 • Manhattan, New York, New York, USA Marital Status: Married; Relation to Head of House: Head 1 Source
1910 54 **Residence** 1910 • Manhattan Ward 22, New York, New York, USA Marital Status: Married; Relation to Head of House: Head 1 Source
1920 64 **Residence** 1920 • Manhattan Assembly District 7, New York, New York, USA Marital Status: Married; Relation to Head of House: Head 1 Source
1925 69 **Residence** 1 June 1925 • New York, New York, New York, United States Relation to Head of House: Head 1 Source
1933 77 **Death** 1933 • USA

Sources
Ancestry Sources
1900 United States Federal Census
1910 United States Federal Census
1920 United States Federal Census
Ancestry Family Trees
New York, State Census, 1925
Search on Ancestry

Family
Parents
Joseph Sachs 1816–1868
Sophia Baer 1818–1872
Siblings
Spouse & Children
Nellie Sachs 1867–
Howard J. Sachs 1891–
Edith Sachs 1895–

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Visit our other sites: United States
Tutorials

[HL001Y][GDrive]

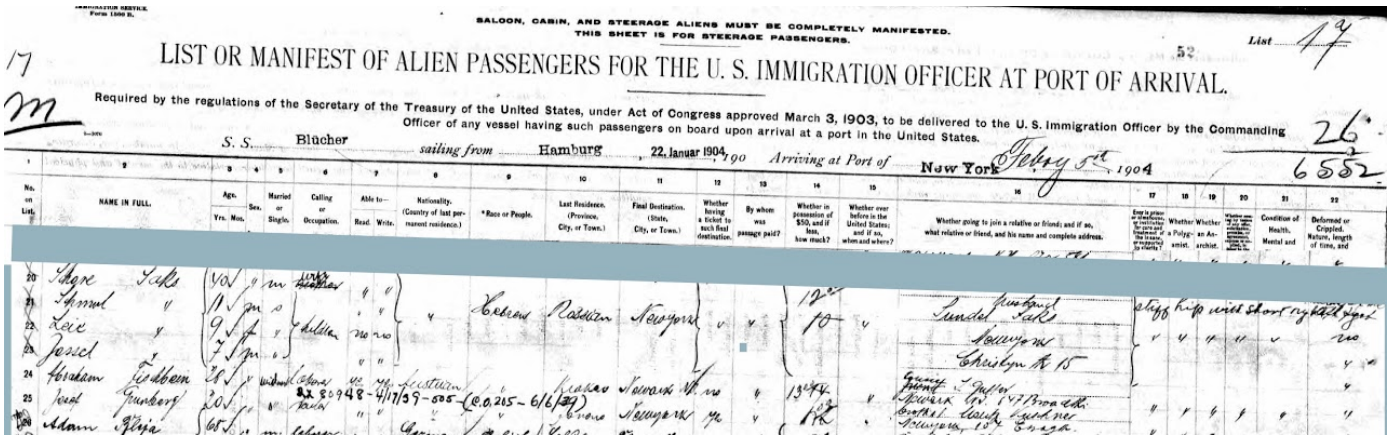
Joseph Alexander Sachs (born 1896)

- **Born -** September 14 1896 (verified on two draft card below ... [HG001I][GDrive] and [HG001G][GDrive])
- **Death -** Dec 21 1979 [HN00IA][GDrive]
- **PARENTS -** Son of Samuel Sachs and Fay Sachs
- **MARRIAGE** -
- **CHILDREN :**
  -
- **SIBLINGS:**
  - **Herman Alexander Sacks (born 1885)**
  - **Alexander Sachs** (born 1892)
  - **Elinor Sachs Barr** (born 1894) (Married **David S Barr** (born 1894))
- **OTHER FAMILY** :
  - In-laws (via **David S Barr** (born 1894)) :
    - Brother In-Law **Simon Pelham Barr** (born 1892)
- **Profession** -

1904 (Feb 5) - Passenger info, voyage arriving in New York City (from Hamburg) on Blucher

"Sohone Saks" (age 40), Shamal (age 11), Lie (age 9),and Jossel (age 7) - Husband "Sundel Saks" in New York

Full sheet : [HJ0007][GDrive]



SALOON, CABIN, AND STEERAGE ALIENS MUST BE COMPLETELY MANIFESTED.
THIS SHEET IS FOR STEERAGE PASSENGERS.

LIST OR MANIFEST OF ALIEN PASSENGERS FOR THE U. S. IMMIGRATION OFFICER AT PORT OF ARRIVAL.

Required by the regulations of the Secretary of the Treasury of the United States, under Act of Congress approved March 3, 1903, to be delivered to the U. S. Immigration Officer by the Commanding Officer of any vessel having such passengers on board upon arrival at a port in the United States.

S. S. Blücher sailing from Hamburg, 22 January 1904, 790 Arriving at Port of New York February 5th 1904

[HJ0008][GDrive]

1910 - US Census for "Sacks" family

- "Sacks" not "Sachs"
- Younger brother **Alexander Sachs** (born 1892) still has name "Samuel" (not yet changed to "Alexander")
- 38 (or 40?) west 117th street - Right next to 1915 address
- Herman Sack immigrated to the USA in 1901, 3 years before his siblings
- Sadly, mother Sarah must have passed (father "Sundel" is widowed)
- Father here is "Sundel", not "Samuel" ... ???
- Sister "Elinor" is here as "Lena"

Full Census Form : [HS000J][GDrive] / **TRANSCRIPT :** [HS000K][GDrive]

Record Transcription:
Us Census 1910

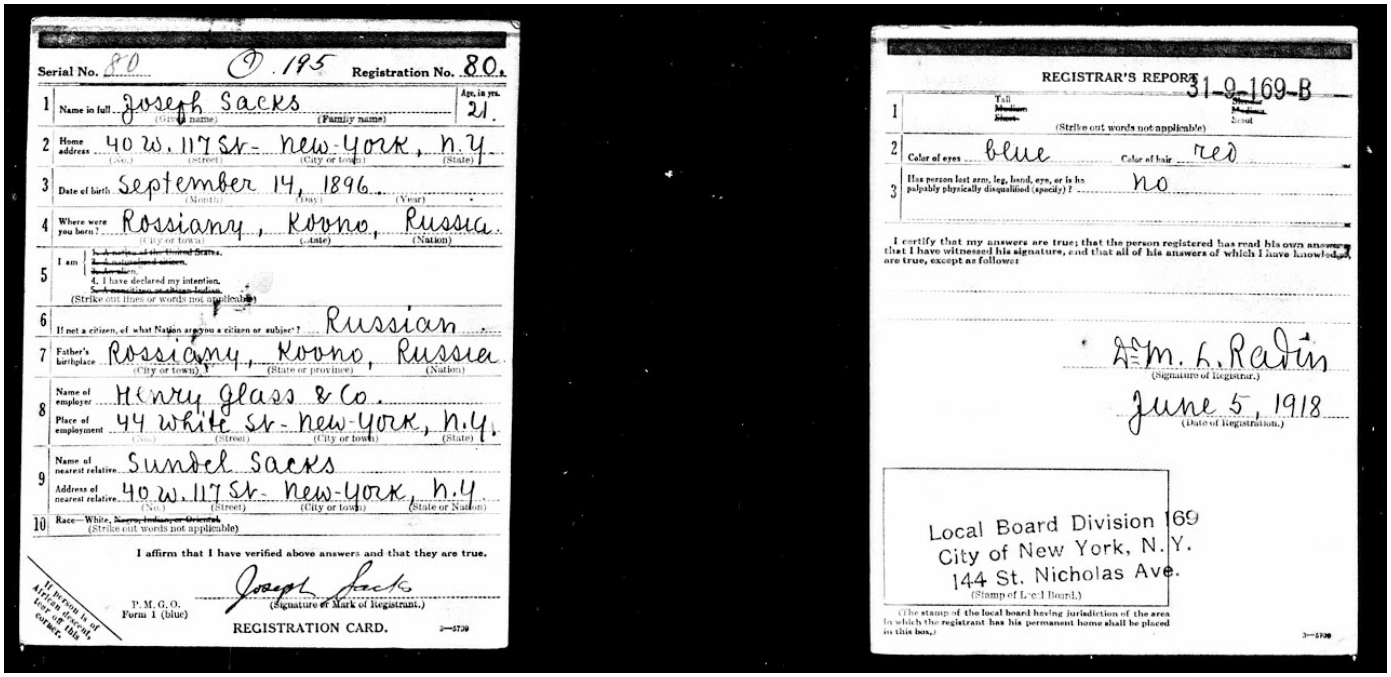
Household Members

First name(s)	Last name	Relationship	Marital status	Gender	Age	Birth year
Sundel	Sacks	Self	Widowed	Male	54	1856
Herman	Sacks	Son	Single	Male	24	1886
Samuel	Sacks	Son	Single	Male	18	1892
Lena	Sacks	Daughter	Single	Female	15	1895
Joseph	**Sacks**	**Son**	**Single**	**Male**	**13**	**1897**

[HS000L][GDrive]

1918 - WW1 Draft

Sep 14 1896 - Draft card birthday



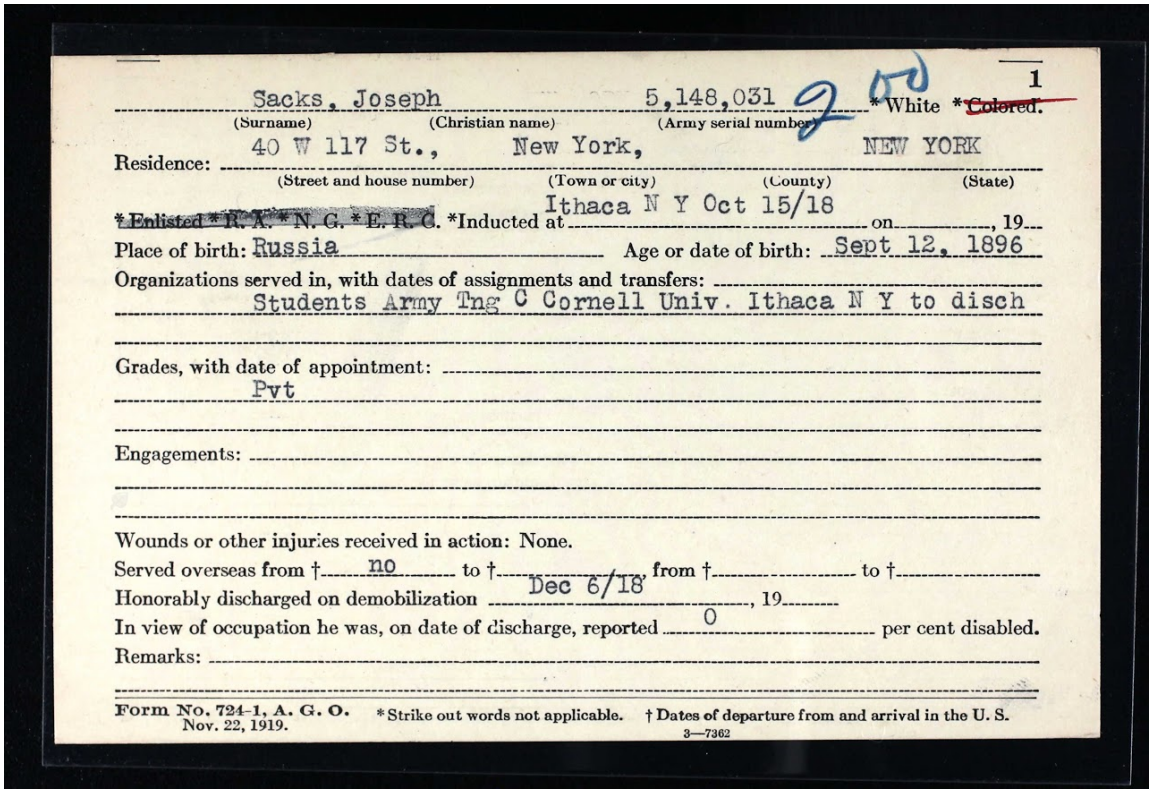
Serial No. 80 — Registration No. 80.
1 Name in full: Joseph Sacks — Age, in yrs.: 21
2 Home address: 40 W. 117 St. - New-York, N.Y.
3 Date of birth: September 14, 1896
4 Where were you born?: Rossiany, Kovno, Russia
5 I am: 4. I have declared my intention.
6 If not a citizen, of what Nation are you a citizen or subject?: Russian
7 Father's birthplace: Rossiany, Kovno, Russia
8 Name of employer: Henry Glass & Co. — Place of employment: 44 White St. - New-York, N.Y.
9 Name of nearest relative: Sundel Sacks — Address of nearest relative: 40 W. 117 St. - New-York, N.Y.
10 Race: White
I affirm that I have verified above answers and that they are true.
Joseph Sacks (Signature or Mark of Registrant.)
P. M. G. O. Form 1 (blue)
REGISTRATION CARD.

REGISTRAR'S REPORT 31-9-169-B
1 (Strike out words not applicable)
2 Color of eyes: blue — Color of hair: red
3 Has person lost arm, leg, hand, eye, or is he palpably physically disqualified (specify)?: no
I certify that my answers are true; that the person registered has read his own answers; that I have witnessed his signature, and that all of his answers of which I have knowledge are true, except as follows:
A. M. L. Radin (Signature of Registrar.)
June 5, 1918 (Date of Registration.)
Local Board Division 169
City of New York, N.Y.
144 St. Nicholas Ave.
(Stamp of Local Board.)

[HG001I][GDrive]

1918 - WW1 Discharge / Service Abstract

NOTE there is a typo below - It says Sept. 12 1896 is the birthday, but other docs say Sep 14.



Sacks, Joseph (Surname) (Christian name) 5,148,031 (Army serial number) *White *Colored. 1

Residence: 40 W 117 St., (Street and house number) New York, (Town or city) NEW YORK (County) (State)

*Enlisted *R. A. *N. G. *E. R. C. *Inducted at Ithaca N Y Oct 15/18 on ____, 19__

Place of birth: Russia Age or date of birth: Sept 12, 1896

Organizations served in, with dates of assignments and transfers:

Students Army Trng C Cornell Univ. Ithaca N Y to disch

Grades, with date of appointment:

Pvt

Engagements:

Wounds or other injuries received in action: None.

Served overseas from †no to † from † to †

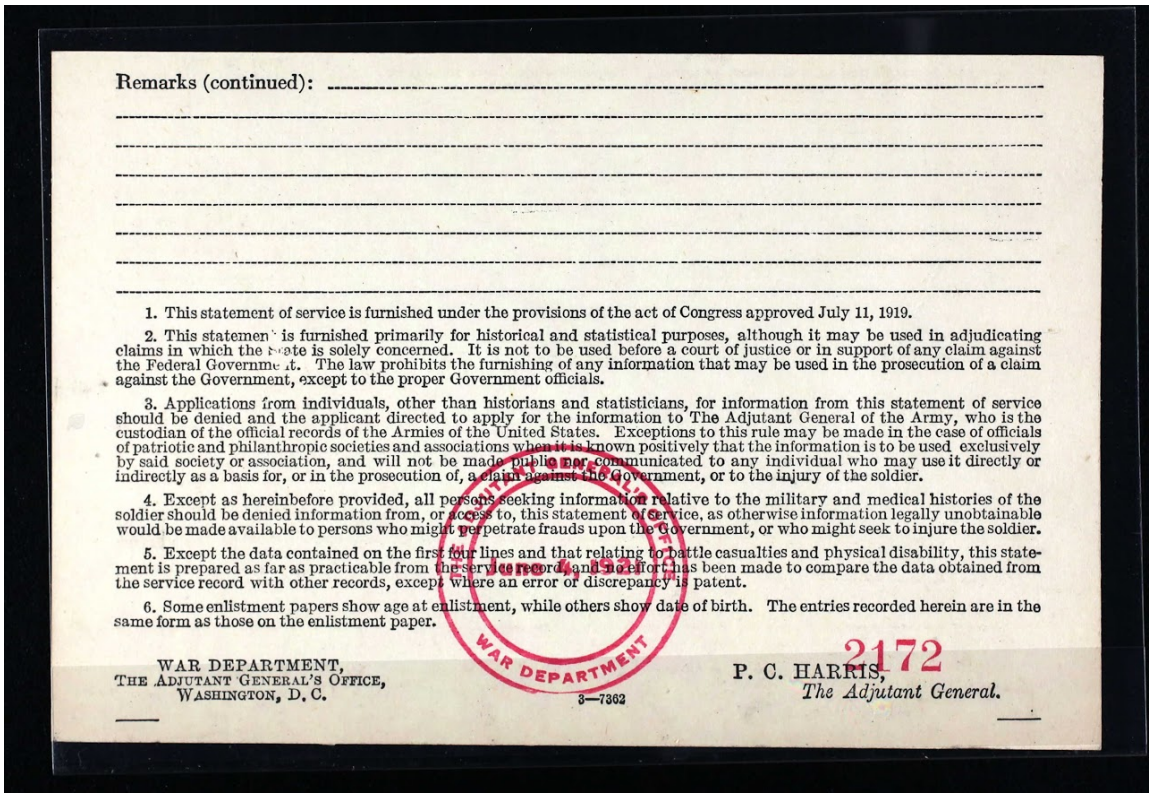
Honorably discharged on demobilization Dec 6/18, 19__

In view of occupation he was, on date of discharge, reported 0 per cent disabled.

Remarks:

Form No. 724-1, A. G. O. Nov. 22, 1919. *Strike out words not applicable. †Dates of departure from and arrival in the U. S. 3—7362

[HG001J][GDrive]



Remarks (continued):

1. This statement of service is furnished under the provisions of the act of Congress approved July 11, 1919.

2. This statement is furnished primarily for historical and statistical purposes, although it may be used in adjudicating claims in which the state is solely concerned. It is not to be used before a court of justice or in support of any claim against the Federal Government. The law prohibits the furnishing of any information that may be used in the prosecution of a claim against the Government, except to the proper Government officials.

3. Applications from individuals, other than historians and statisticians, for information from this statement of service should be denied and the applicant directed to apply for the information to The Adjutant General of the Army, who is the custodian of the official records of the Armies of the United States. Exceptions to this rule may be made in the case of officials of patriotic and philanthropic societies and associations when it is known positively that the information is to be used exclusively by said society or association, and will not be made public nor communicated to any individual who may use it directly or indirectly as a basis for, or in the prosecution of, a claim against the Government, or to the injury of the soldier.

4. Except as hereinbefore provided, all persons seeking information relative to the military and medical histories of the soldier should be denied information from, or access to, this statement of service, as otherwise information legally unobtainable would be made available to persons who might perpetrate frauds upon the Government, or who might seek to injure the soldier.

5. Except the data contained on the first four lines and that relating to battle casualties and physical disability, this statement is prepared as far as practicable from the service record, and no effort has been made to compare the data obtained from the service record with other records, except where an error or discrepancy is patent.

6. Some enlistment papers show age at enlistment, while others show date of birth. The entries recorded herein are in the same form as those on the enlistment paper.

WAR DEPARTMENT,
THE ADJUTANT GENERAL'S OFFICE,
WASHINGTON, D. C.

WAR DEPARTMENT

3—7362

2172

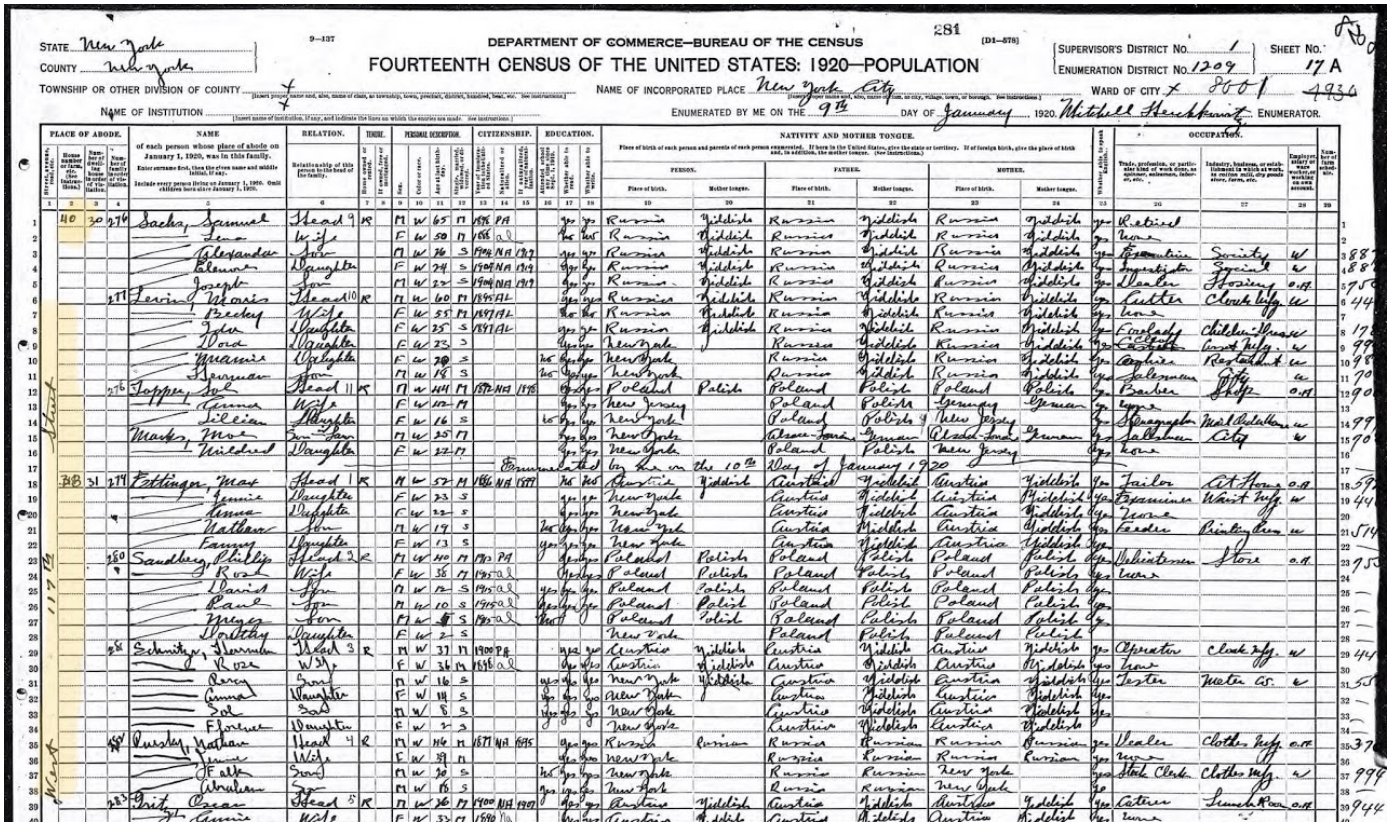
P. C. HARRIS,
The Adjutant General.

[HG001K][GDrive]

1920 Census - Living with parents in NYC

Can also access transcript : See [HS000W][GDrive]

- Who is "Lena" ?
- His father is "retired"? With 3 children going to Columbia ?
- Joseph A Sacks is, at this time, a "Dealer of Hosiery"



STATE New York COUNTY New York TOWNSHIP OR OTHER DIVISION OF COUNTY 1 NAME OF INSTITUTION

DEPARTMENT OF COMMERCE—BUREAU OF THE CENSUS

FOURTEENTH CENSUS OF THE UNITED STATES: 1920—POPULATION

SUPERVISOR'S DISTRICT NO. 1 ENUMERATION DISTRICT NO. 1209 SHEET NO. 17 A

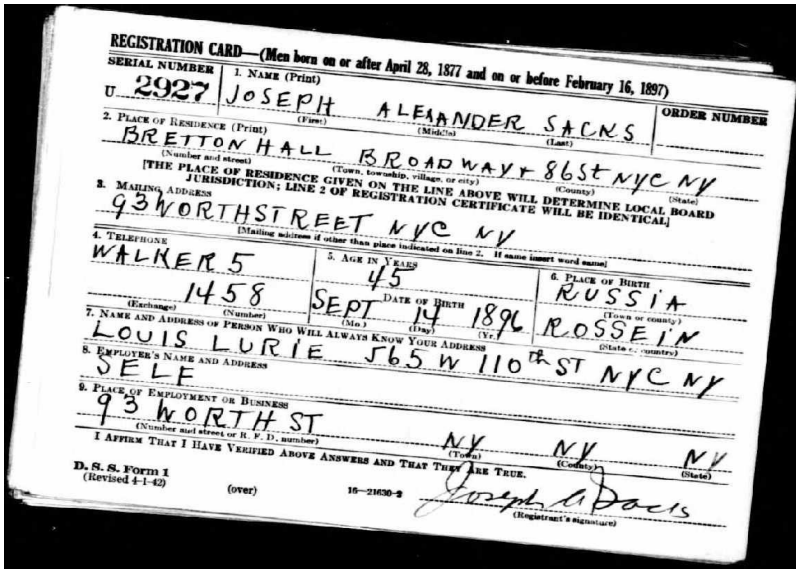
NAME OF INCORPORATED PLACE New York City WARD OF CITY 1 2001 4936

ENUMERATED BY ME ON THE 9th DAY OF January 1920. Mitchell Hershkowitz ENUMERATOR.

	PLACE OF ABODE	NAME	RELATION	HOME	PERSONAL DESCRIPTION	CITIZENSHIP	EDUCATION	NATIVITY AND MOTHER TONGUE	OCCUPATION
	Street, avenue, road, etc. / House number or farm / Number of family in order of visitation	Name of each person whose place of abode on January 1, 1920, was in this family. Enter surname first, then the given name and middle initial, if any. Include every person living on January 1, 1920. Omit children born after January 1, 1920.	Relationship of this person to the head of the family.	Home owned (O) or rented (R)	Sex / Color or race / Age at last birthday / Single, married, widowed, or divorced	Year of immigration to the United States / Naturalized or alien / Year of naturalization / Able to speak English	Attended school any time since Sept. 1, 1919 / Able to read / Able to write	Place of birth of each person and parents of each person enumerated. If born in the United States, give the state or territory. If of foreign birth, give the place of birth and, in addition, the mother tongue. (See instructions.)	Trade, profession, or particular kind of work done, as spinner, salesman, laborer, etc. / Industry, business, or establishment in which at work, as cotton mill, city grocery store, farm, etc. / Employer, salary or wage worker or own account.
								Person: Place of birth / Mother tongue. Father: Place of birth / Mother tongue. Mother: Place of birth / Mother tongue.	
1	40 30 274	Sachs, Samuel	Head		M W 65 M	1885 PA		Russia Yiddish Russia Yiddish Russia Yiddish	Retired
2		Lena	Wife		F W 50 M	1888 al		Russia Yiddish Russia Yiddish Russia Yiddish	None
3		Alexander	Son		M W 26 S	1894 NA 1917		Russia Yiddish Russia Yiddish Russia Yiddish	Secretary Society W
4		Salomon	Daughter		F W 24 S	1896 NA 1919		Russia Yiddish Russia Yiddish Russia Yiddish	Secretary Society W
5		Joseph	Son		M W 22 S	1898 NA 1919		Russia Yiddish Russia Yiddish Russia Yiddish	Dealer Flooring O.W.
6	271	Levin, Morris	Head	R	M W 60 M	1895 AL		Russia Yiddish Russia Yiddish Russia Yiddish	Cutter Cloak Mfg. W
7		Becky	Wife		F W 55 M	1897 AL		Russia Yiddish Russia Yiddish Russia Yiddish	None
8		Jack	Daughter		F W 25 S	1897 AL		Russia Yiddish Russia Yiddish Russia Yiddish	Floorlady Children's Wear W
9		Dora	Daughter		F W 23 S			New York Russia Yiddish Russia Yiddish	Cashier Cloak Mfg. W
10		Miriam	Daughter		F W 20 S		No	New York Russia Yiddish Russia Yiddish	Cashier Restaurant W
11		Herman	Son		M W 18 S		No	New York Russia Yiddish Russia Yiddish	Salesman Jobber W
12	276	Topper, Sol	Head	R	M W 44 M	1872 NA 1898		Poland Polish Poland Polish Poland Polish	Barber Shop O.W.
13		Anna	Wife		F W 40 M			New Jersey Poland Polish Germany German	None
14		Lillian	Daughter		F W 16 S		No	New York Poland Polish New Jersey	Stenographer Mail Order House W
15		Marks, Moe	Son-in-law		M W 25 M			New York Austria Yiddish Austria Yiddish	Salesman City W
16		Mildred	Daughter		F W 22 M			New York Poland Polish New Jersey	None
17					Enumerated by me on the 10th Day of January 1920				
18	38B 31 279	Pottinger, Max	Head	R	M W 52 M	1886 NA 1897	No No	Austria Yiddish Austria Yiddish Austria Yiddish	Tailor Cut Shop O.W.
19		Jennie	Daughter		F W 23 S			New York Austria Yiddish Austria Yiddish	Examiner Waist Mfg. W
20		Anna	Daughter		F W 22 S			New York Austria Yiddish Austria Yiddish	None
21		Nathan	Son		M W 19 S		No	New York Austria Yiddish Austria Yiddish	Feeder Binding Room W
22		Fanny	Daughter		F W 13 S			New York Austria Yiddish Austria Yiddish	
23	280	Sandberg, Phillip	Head	R	M W 40 M	1910 PA		Poland Polish Poland Polish Poland Polish	Veterinarian Store O.W.
24		Rose	Wife		F W 36 M	1911 al		Poland Polish Poland Polish Poland Polish	None
25		David	Son		M W 12 S	1915 al		Poland Polish Poland Polish Poland Polish	
26		Paul	Son		M W 10 S	1917 al		Poland Polish Poland Polish Poland Polish	
27		Meyer	Son		M W 8 S	1919 al		Poland Polish Poland Polish Poland Polish	
28		Dorothy	Daughter		F W 2 S			New York Poland Polish Poland Polish	
29	28	Schmitz, Herman	Head	R	M W 37 M	1900 PA		Austria Yiddish Austria Yiddish Austria Yiddish	Operator Cloak Mfg. W
30		Rose	Wife		F W 34 M	1898 al		Austria Yiddish Austria Yiddish Austria Yiddish	None
31		Percy	Son		M W 16 S		No No	New York Austria Yiddish Austria Yiddish Austria Yiddish	Tester Meter Co. W
32		Emma	Daughter		F W 11 S		No No	New York Austria Yiddish Austria Yiddish Austria Yiddish	
33		Sol	Son		M W 8 S		No No	New York Austria Yiddish Austria Yiddish Austria Yiddish	
34		Florence	Daughter		F W 2 S		No No	New York Austria Yiddish Austria Yiddish Austria Yiddish	
35	48	Pursky, Nathan	Head	R	M W 46 M	1871 NA 1895		Russia Russian Russia Russian Russia Russian	Dealer Clothes Mfg. O.W.
36		Jennie	Wife		F W 39 M			New York Russia Russian Russia Russian	None
37		Falk	Son		M W 20 S		No	New York Russia Russian New York	Stock Clerk Clothes Mfg. W
38		Abraham	Son		M W 16 S		No No	New York Russia Russian New York	
39	283	Grit, Oscar	Head	R	M W 36 M	1900 NA 1907	No No	Austria Yiddish Austria Yiddish Austria Yiddish	Cutter Trunk Mfg. O.W.
40		Annie	Wife		F W 33 M	1900 Na		Austria Yiddish Austria Yiddish Austria Yiddish	None

[HS000X][GDrive]

1942 - WW2 Draft



REGISTRATION CARD—(Men born on or after April 28, 1877 and on or before February 16, 1897)

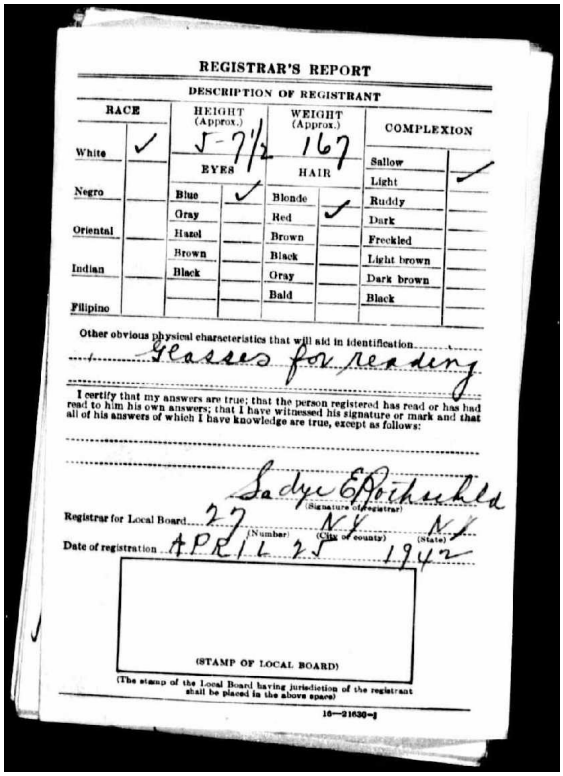
SERIAL NUMBER U 2927 — ORDER NUMBER

1. NAME (Print): JOSEPH (First) ALEXANDER (Middle) SACHS (Last)
2. PLACE OF RESIDENCE (Print): BRETTON HALL BROADWAY & 86ST NYC NY (Number and street) (Town, township, village, or city) (County) (State)
THE PLACE OF RESIDENCE GIVEN ON THE LINE ABOVE WILL DETERMINE LOCAL BOARD JURISDICTION; LINE 2 OF REGISTRATION CERTIFICATE WILL BE IDENTICAL]
3. MAILING ADDRESS: 93 WORTH STREET NYC NY (Mailing address if other than place indicated on line 2. If same insert word same)
4. TELEPHONE: WALKER 5 1458 (Exchange) (Number)
5. AGE IN YEARS: 45 — DATE OF BIRTH: SEPT 14 1896 (Mo.) (Day) (Yr.)
6. PLACE OF BIRTH: RUSSIA (Nation) ROSSEIN (Town or county) (State, county)
7. NAME AND ADDRESS OF PERSON WHO WILL ALWAYS KNOW YOUR ADDRESS: LOUIS LURIE 565 W 110th ST NYC NY
8. EMPLOYER'S NAME AND ADDRESS: SELF
9. PLACE OF EMPLOYMENT OR BUSINESS: 93 WORTH ST (Number and street or R. F. D. number) NY (Town) NY (County) NY (State)

I AFFIRM THAT I HAVE VERIFIED ABOVE ANSWERS AND THAT THEY ARE TRUE.

Joseph A Sachs (Registrant's signature)

D. S. S. Form 1 (Revised 4-1-42) (over) 16—21630-2



REGISTRAR'S REPORT

DESCRIPTION OF REGISTRANT

RACE		HEIGHT (Approx.)		WEIGHT (Approx.)		COMPLEXION	
White	✓	5-7½		167		Sallow	✓
Negro		EYES		HAIR		Light	
Oriental		Blue	✓	Blonde		Ruddy	
Indian		Gray		Red		Dark	
Filipino		Hazel		Brown	✓	Freckled	
		Brown		Black		Light brown	
		Black		Gray		Dark brown	
				Bald		Black	

Other obvious physical characteristics that will aid in identification: Glasses for reading

I certify that my answers are true; that the person registered has read or has had read to him his own answers; that I have witnessed his signature or mark and that all of his answers of which I have knowledge are true, except as follows:

Sadye E Rothschild (Signature of registrar)

Registrar for Local Board 27 (Number) NY (City or county) NY (State)

Date of registration APRIL 27 1942

(STAMP OF LOCAL BOARD)

(The stamp of the Local Board having jurisdiction of the registrant shall be placed in the above space)

16—21630-1

[HG001G][GDrive]

[HG001H][GDrive]

1979 (Dec 21) - Joseph A Sachs passes

Article : [HN00IA][GDrive]

SACKS-Joseph A. Beloved husband of the late Florence. Devoted father of Sanford, Renee Benin and Zachary. Cherished grandfather of Sharon, David. Wendy, Benlamin and Alexander. Dear brother of Eleanor Barr. Service Sunday December 23 at 10:30 a.m. "The Riverside", 76th St. & Amsterdam Ave.

ADDITIONAL REFERENCE INFO

BITCHUTE @Housatonic **YOUTUBE** @HousatonicLive **ODYSEE** @Housatonic **BRIGHTEON** @Housatonic

Housatonic

Charlotte Cramer Sachs (born 1907)

https://sova.si.edu/record/NMAH.AC.0878

2019-smithsonial-online-virtual-archives-charlotte-cramer-sachs-papers.pdf

Biographical / Historical

Charlotte Cramer Sachs *was born in Berlin, Germany on September 27, 1907. Her father,* ***Hans Siegfried Cramer,*** *worked as a businessman for a successful grain import and export company whose innovative enterprises included the import of soy beans from Eastern Europe. In 1903, Hans married Gertrud Bruck, one of the first women to attain her Abitur, somewhat similar to an American high school diploma, at age eighteen. Bruck's formal education ended there, as her wish to attend university was thwarted by her father Adalbert, a judge who insisted that she remain at home. The couple settled in Berlin and had two children—Frederick H., born March 2, 1906, and Charlotte. From 1913 to 1924 The Cramers lived in the Berlin Dahlem suburb occupying "Haus Cramer," a villa built in 1912 to their specifications by German architect Hermann Muthesius.*

On September 12, 1924, Cramer Sachs married Donald Samuels, a top executive of the Manhattan Shirt Company and moved to New York from England where their daughter Eleanor was born on June 11, 1926. Several years later, the couple divorced. Mother and daughter lived together in London for a few years before moving back to New York around 1936. Charlotte's parents relocated to New York at the same time, after a brief stay in London following their flight from Berlin after Hitler's rise to power. ***In August 1945, Charlotte Cramer married Alexander Sachs, a leading economist who had introduced Albert Einstein to President Franklin Delano Roosevelt and acted as advisor to the President.***

Although she established her business career in America, Cramer Sachs retained fond memories of the house and extensive grounds in Dahlem. In 1977 she composed the song "A Salute to Berlin" to commemorate the designation of Haus Cramer as one of the city's historic landmarks. In 2000, she donated a painted portrait of herself from the time she had lived in Haus Cramer to the villa's new owner, Stanford University. The house retains additional significance in the context of this collection because Cramer Sachs credited its wine cellar—unusual in that it provided a separate, climate controlled environment for red and white wines—as an inspiration for her line of custom-built, vibration-free wine storage devices, which would later make Cramer Products Company a household name among wine connoisseurs.

While she did not attend university her pursuit of learning continued throughout her life as she studied poetry, musical composition, and the fine arts. Cramer Sachs often told her niece, Lilian Randall, that she wished she had received further education, although her public art exhibitions, poetry awards, numerous original songs, the establishment of Crambruck Press (her own publishing company), as well as language fluency in French, English, and German, are testaments to this inventor's intellectual curiosity and development. Evidence of Cramer Sachs's entrepreneurial spirit surfaced in her early thirties with her first patent: Improvements in Combined Key and Flashlight, July 16, 1940, patent number 2,208,498.

In 1940, Cramer Sachs completed courses from the New York Institute of Dietetics, an effort spurred by the onset of her daughter's diabetes. With financial assistance from her parents in the early 1940s, Cramer Sachs developed Joy Products prepared mixes, marking the beginning of a successful career in inventing. "We were a pioneer in that field," said Cramer Sachs of her baking mix manufacturing company, an operation that consisted of a Bronx neighborhood factory employing ninety workers. The enterprise began with corn muffin and popover mixes and expanded into frostings, puddings, and breads. Newspaper clippings from the time promoted Joy packaged mixes as ideal gifts for "the boys overseas" who were in locations where it was "impossible to get together the makings of a cake." Cramer Sachs refused an early offer to sell her mix formulas which were subsequently copied and exploited by larger, more powerful companies. Joy Products, whose name was chosen to express the inventor's delight in creativity, remained in business as a modest one-woman operation for over twenty years before succumbing to competition.

Cramer Sachs created another highly successful invention, the specialty wine cabinet, more than twenty years after she founded Joy Products. In addition to her memories of visits with her father to the wine cellar in her family's German villa, further motivation came from an interest—though she hardly drank it at all—in wine and recognition that "standard cooling and refrigerating appliances [were] too cold for wines." Reportedly, Cramer Sachs "started looking for [an appropriate device] and could not find one," and thus the impetus to invent took shape. The "Modern Wine Cellar," 1966, was an early example of over twenty wine-related inventions, most of them storage devices. A mention of her product in Grossman's Guide to Wines, Spirits, and Beers, increased demand among wine lovers and may have prompted Cramer Sachs to state that she "should find a good market" for her newest invention line. Testimony from David H. Wollins, a successful New York lawyer and customer of Cramer Sachs, lauded the cabinet as "the finest home wine storage system in the world." She framed his letter and hung it in her office at 381 South Park Avenue, her base operation where she employed one or two part-time helpers from the 1960s until her death in 2004.

The inventor took great joy in music, expressed in her own numerous compositions and her creation of the games "Domi-Notes" and "Musicards" in 1961 and 1969. Her fondness for music also prompted the expansion of her specialty cabinets to include temperature and humidity controlled devices for storing a variety of items, most notably the "Well Tempered Cabinet for Musical Instruments," which Cramer Sachs first designed for legendary violinist Isaac Stern. Soon the inventor began producing similar cabinets for the storage of cigars, furs, and documents.

Described by her niece as "shy with people but a great admirer of talent, intellect, and humanity," Cramer Sachs also "harbored a great love for animals." She invented several pet accessories in the early 1950s, including: "Watch-Dog," a dog collar with a time piece; "Bonnie Stand," a holder fashioned to accommodate disposable food bowls; and "Guidog," an early version of a retractable dog leash.

In 1972, Cramer Sachs suffered the loss of her only child, Eleanor, and in the summer of the next year her husband Alexander passed away. She continued her "business of creating new product ideas" for the remainder of her life. The most recent invention materials represented in the collection are those for the "Conservator" from 2002, a temperature and humidity controlled device with compartments to store a variety of items. In her last telephone conversation with her niece, on March 10, 2004, Cramer Sachs expressed her hope that she would feel "strong enough to get to the office the next day or so." The inventor died the following day at the age of 96.

Patents issued to Charlotte Cramer Sachs:

United States Patent: 2,208,498, "Combined Key and Flashlight," July 16, 1940

United States Patent: 2,509,423, "Wedge Heel Shoe," May 30, 1950

United States Patent: 2,808,191, "Lap Tray," October 1, 1957

United States Patent: Des. 363,618, "Cabinet," October 31, 1995

Housatonic

Paul Lewis Sagan (born 1959)

Wikipedia Paul Sagan

Worked at :

- Akamai Technologies, Incorporated

https://www.marketscreener.com/business-leaders/Paul-Sagan-11668/biography/

Middle name lewis - https://www.ancestry.com/discoveryui-content/view/28437313:62209?indiv=1&tid=&pid=&queryId=c646e6e2b3f3829674cdb5f71d0d100c&usePUB=true&_phsrc=fEm99&_phstart=successSource

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Saved Wikipedia (Dec 30, 2020) - Paul Sagan

[HK004K][GDrive]

Born 1959 (age 60–61)

Nationality American

Alma mater Medill School of Journalism

Occupation Business executive

Employer General Catalyst Partners

Paul Sagan (born 1959) is an American businessman and managing partner at General Catalyst Partners.[1] A three-time Emmy award winner for broadcast journalism in New York,[2] Sagan began his career at WCBS-TV as a news writer and news director.[3] Joining Time Warner to design and launch NY1, in 1995 he was named president and editor of new media at Time Inc.[4] Sagan joined Akamai Technologies in 1998,[5] becoming CEO in 2005.[5] In 2014, he became a venture capitalist at General Catalyst Partners.[1] He became chairman of the Massachusetts Board of Elementary and Secondary Education in 2015.[6]

Career[edit]

Media and news[edit]

Upon graduating from the Medill School of Journalism at Northwestern University, Sagan began his career at WCBS-TV as a news writer. He was named news director in 1987.[3]

In 1991, he joined Time Warner to design and launch NY1. In 1995 he was named president and editor of new media at Time Inc.,[4] a position he held until 1997.

From 1997 to 1998 Sagan served as senior adviser to the World Economic Forum.

Akamai[edit]

Sagan joined Akamai Technologies in October 1998 as chief operating officer, became president the following year[5] in 1999.[1]

He was elected to the Akamai board of directors in January 2005,[5] and would serve as the executive vice chairman of Akamai Technologies.[7]

He became CEO in April 2005.[5] During his tenure, he oversaw a number of acquisitions.[1] He was succeeded as Akamai CEO by Akamai co-founder Tom Leighton on January 1, 2013.[8]

General Catalyst[edit]

In January 2014, he became a venture capitalist at General Catalyst Partners in Cambridge, Massachusetts.[1] He became a partner at the firm.[1][9] He kept his role as vice chairman of Akamai's board.[9][10]

Moderna[edit]

Throughout the COVID-19 pandemic, Sagan served as Senior Advisor and Executive-in-Residence at Moderna as a member of the Board of directors working on vaccines.[11]

Boards[edit]

He is a member of the board of directors of Akamai,[7]VMware, Inc., and the not-for-profit ProPublica,[12] of which he named chairman in December 2016.[13] He is also a trustee of his alma mater, Northwestern University.[12]

Previously, he was a member of the board of directors of Datto Inc.[14], Dow Jones & Company,[15]Digitas,[16] EMC Corporation,[17] L2, Inc.,[17] Maven Networks,[18] OpenMarket,[19] FutureTense, Inc.,[20]and VDONet Corp.[21] before each company was sold. He also served for a period of time on the boards of Experience, Inc.[22] iRobot Corp. and Medialink Worldwide, Inc.[23] He resigned from the iRobot board in June 2015.[24]

Committees and public positions[edit]

Sagan was appointed by President Barack Obama to the President's National Security Telecommunications Advisory Committee in 2010 and served until 2017..[25]

Governor Charlie Baker appointed Sagan to be chairman of the Massachusetts Board of Elementary and Secondary Education in 2015.[6] In 2017, there was a controversy when a state investigation found that he had donated $500,000 to the nonprofit Families for Excellent Schools, a charter school advocacy group that had been fined for hiding donors' identities in 2016, and which had been involved in a ballot question the year before. Sagan defended his decision to keep the donation private.[26][27][28] The Massachusetts Teachers Association and some others called for Sagan to be fired from his chairmanship for the donation, but the Governor had defended Sagan. [29][30]As of 2018, Sagan remained chair of the Board of Elementary and Secondary Education.[31]

Honors[edit]

He is a three-time Emmy award winner for broadcast journalism in New York.[2] He became a fellow of the American Academy of Arts and Sciences in 2008.[32] In 2009 Sagan was named the Ernst & YoungEntrepreneur of the Year award in the technology category.[33] In 2008 he was named as a member of the Knight Commission on the Information Needs of Communities in a Democracy.[34]

Housatonic

Dr. Jonas Edward Salk (born 1914)

Wikipedia Jonas Salk

Associations

- **Dr. Alice E. Moore (born 1908)** (...)
- **Dr. Renato Dulbecco (born 1914)** (A founding member of Salk Institute, and wrote Jonas Salk's obituary - https://sci-hub.se/https://doi.org/10.1038/376216a0#)
- [**Dr. Thomas Francis Jr. (born 1900)**] (Dr. Thomas Francis was a mentor to Dr. Jonas Salk - [HK005W][GDrive])
-

Saved Wikipedia (March 26, 2021) - "Jonas Salk"

2021-03-26-wikipedia-org-jonas-salk.pdf

https://en.wikipedia.org/wiki/Jonas_Salk

HK005Y

https://drive.google.com/file/d/1qjcrhhit4Pi359LG_xIiNpehtF3K5lw7/view?usp=sharing

Jonas Salk

Jonas Salk at Copenhagen Airport (May 1959)

Born

Jonas Salk

October 28, 1914

New York City, U.S.

Died

June 23, 1995 (aged 80)[1]

La Jolla, California, U.S.[1]

Resting place

El Camino Memorial Park

San Diego, California

Nationality

American

Alma mater

City College of New York[1]

New York University[1]

Known for

First polio vaccine

Spouse(s)

Donna Lindsay

(m. 1939; div. 1968)[1]

Françoise Gilot

(m. 1970)[1]

Awards

- Albert Lasker Award (1956)[1]
- Robert Koch Medal[1]
- Mellon Institute Award[1]
- United States Presidential Citation[1]
- Congressional Gold Medal[1]

Scientific career

Fields

Medical research,

virology, and epidemiology

Institutions

University of Pittsburgh

Salk Institute

University of Michigan

Doctoral advisor

[**Dr. Thomas Francis Jr. (born 1900)**]

Signature

Jonas Edward Salk (/sɔːlk/; born Jonas Salk; October 28, 1914 – June 23, 1995) was an American virologist and medical researcher who developed one of the first successful polio vaccines. He was born in New York City and attended the City College of New York and New York University School of Medicine.[2]

In 1947, Salk accepted a professorship in the School of Medicine at the University of Pittsburgh. It was there that he undertook a project to determine the number of different types of poliovirus, starting in 1948. For the next seven years Salk devoted himself towards developing a vaccine against polio.

Salk was immediately hailed as a "miracle worker" when the vaccine's success was first made public in April 1955, and chose to not patent the vaccine or seek any profit from it in order to maximize its global distribution.[2] An immediate rush to vaccinate began in both the United States and around the world. Many countries began polio immunization campaigns using Salk's vaccine, including Canada, Sweden, Denmark, Norway, West Germany, the Netherlands, Switzerland, and Belgium. By 1959, the Salk vaccine had reached about 90 countries.[3] Less than 25 years later, domestic transmission of polio had been completely eliminated in the United States.

In 1963, Salk founded the Salk Institute for Biological Studies in La Jolla, California, which is today a center for medical and scientific research. He continued to conduct research and publish books in his later years, focusing in his last years on the search for a vaccine against HIV. Salk also campaigned vigorously for mandatory vaccination throughout the rest of his life, calling the universal vaccination of children against disease a "moral commitment".[4] Salk's personal papers are today stored in Geisel Library at the University of California, San Diego.[5][6]

[...]

Early life and education

Jonas Salk was born in New York City to Daniel and Dora (née Press) Salk. His parents were Ashkenazi Jewish; Daniel was born in New Jersey to immigrant parents and Dora, who was born in Minsk, emigrated when she was twelve.[7][8] Salk's parents did not receive extensive formal education.[2] Jonas had two younger brothers, Herman and Lee, a renowned child psychologist.[10] The family moved from East Harlem to 853 Elsmere Place, the Bronx,[11] with some time spent in Queens at 439 Beach 69th Street, Arverne.[12]

When he was 13, Salk entered Townsend Harris High School, a public school for intellectually gifted students. Named after the founder of City College of New York (CCNY), it was, wrote his biographer, Dr. David Oshinsky, "a launching pad for the talented sons of immigrant parents who lacked the money—and pedigree—to attend a top private school." In high school "he was known as a perfectionist ... who read everything he could lay his hands on," according to one of his fellow students.[13] Students had to cram a four-year curriculum into just three years. As a result, most dropped out or flunked out, despite the school's motto "study, study, study." Of the students who graduated, however, most had the grades to enroll in CCNY, noted for being a highly competitive college.[14]:96

Education

Salk enrolled in CCNY, from which he earned a Bachelor of Science degree in chemistry in 1934.[15] Oshinsky writes that "for working-class immigrant families, City College represented the apex of public higher education. Getting in was tough, but tuition was free. Competition was intense, but the rules were fairly applied. No one got an advantage based on an accident of birth."[14]

At his mother's urging, he put aside aspirations of becoming a lawyer and instead concentrated on classes necessary for admission to medical school. However, according to Oshinsky, the facilities at City College were "barely second rate." There were no research laboratories. The library was inadequate. The faculty contained few noted scholars. "What made the place special," he writes, "was the student body that had fought so hard to get there... driven by their parents.... From these ranks, of the 1930s and 1940s, emerged a wealth of intellectual talent, including more Nobel Prize winners—eight—and PhD recipients than any other public college except the University of California at Berkeley." Salk entered CCNY at the age of 15, a "common age for a freshman who had skipped multiple grades along the way."[14]:98

As a child, Salk did not show any interest in medicine or science in general. He said in an interview with the Academy of Achievement,[16] "As a child I was not interested in science. I was merely interested in things human, the human side of nature, if you like, and I continue to be interested in that."

Medical school

After City College, Salk enrolled in New York University to study medicine. According to Oshinsky, NYU based its modest reputation on famous alumni, such as Walter Reed, who helped conquer yellow fever. Tuition was "comparatively low, better still, it did not discriminate against Jews... while most of the surrounding medical schools—Cornell, Columbia, University of Pennsylvania, and Yale—had rigid quotas in place." Yale, for example, accepted 76 applicants in 1935 out of a pool of 501. Although 200 of the applicants were Jewish, only five got in.[14]:98 During his years at New York University Medical School, Salk worked as a laboratory technician during the school year and as a camp counselor in the summer.[15]

*[NOTE : **Dr. Alice E. Moore (born 1908)** was a research peer and mentor-ee of **Dr. Thomas Francis Jr. (born 1900)** at the New York University Medical School (in the Dept. of Bacteriology) from 1938 to 1942, after which time she took a role at the Rockefeller Institute]*

During Salk's medical studies, he stood out from his peers, according to Bookchin, "not just because of his continued academic prowess—he was Alpha Omega Alpha, the Phi Beta Kappa Society of medical education—but because he had decided he did not want to practice medicine." Instead, he became absorbed in research, even taking a year off to study biochemistry. He later focused more of his studies on bacteriology, which had replaced medicine as his primary interest. He said his desire was to help humankind in general rather than single patients.[13] "It was the laboratory work, in particular, that gave new direction to his life."[14]

Salk has said: "My intention was to go to medical school, and then become a medical scientist. I did not intend to practice medicine, although in medical school, and in my internship, I did all the things that were necessary to qualify me in that regard. I had opportunities along the way to drop the idea of medicine and go into science. At one point at the end of my first year of medical school, I received an opportunity to spend a year in research and teaching in biochemistry, which I did. And at the end of that year, I was told that I could, if I wished, switch and get a Ph.D. in biochemistry, but my preference was to stay with medicine. And, I believe that this is all linked to my original ambition, or desire, which was to be of some help to humankind, so to speak, in a larger sense than just on a one-to-one basis."[17]

Concerning his last year of medical school, Salk said: "I had an opportunity to spend time in elective periods in my last year in medical school, in a laboratory that was involved in studies on influenza. The influenza virus had just been discovered about a few years before that. And, I saw the opportunity at that time to test the question as to whether we could destroy the virus infectivity and still immunize. And so, by carefully designed experiments, we found it was possible to do so."[18]

Postgraduate research and early laboratory work

In 1941, during his postgraduate work in virology, Salk chose a two-month elective to work in the [Dr. Thomas Francis Jr. (born 1900)]' laboratory at the University of Michigan. Francis had recently joined the faculty of the medical school after working for the Rockefeller Foundation, where he had discovered the type B influenza virus. According to Bookchin, "the two-month stint in Francis's lab was Salk's first introduction to the world of virology—and he was hooked."[13]:25 After graduating from medical school, Salk began his residency at New York's prestigious[14] Mount Sinai Hospital, where he again worked in Francis's laboratory.[14] **Salk then worked at the University of Michigan School of Public Health with Francis, on an army-commissioned project in Michigan to develop an influenza vaccine. He and Francis eventually perfected a vaccine that was soon widely used at army bases, where Salk discovered and isolated one of the strains of influenza that was included in the final vaccine.**[13]:26

Polio research[edit]

Further information: Polio and Polio vaccine

President Franklin D. Roosevelt meeting with Basil O'Connor

In 1947, Salk became ambitious for his own lab and was granted one at the University of Pittsburgh School of Medicine, but the lab was smaller than he had hoped and he found the rules imposed by the university restrictive.[19] In 1948, Harry Weaver, the director of research at the National Foundation for Infantile Paralysis, contacted Salk. He asked Salk to find out if there were more types of polio than the three then known, offering additional space, equipment and researchers. For the first year he gathered supplies and researchers including Julius Youngner, Byron Bennett, L. James Lewis, and secretary Lorraine Friedman joined Salk's team, as well.[20][21] As time went on, Salk began securing grants from the Mellon family and was able to build a working virology laboratory.[13] He later joined the National Foundation for Infantile Paralysis's polio project established by President Franklin D. Roosevelt.[13][22]

Extensive publicity and fear of polio led to much increased funding, $67 million by 1955, but research continued on dangerous live vaccines.[23][14]:85–87 **Salk decided to use the safer 'killed' virus, instead of weakened forms of strains of polio viruses like the ones used contemporaneously by Albert Sabin, who was developing an oral vaccine.**[24]

After successful tests on laboratory animals, on July 2, 1952, assisted by the staff at the D.T. Watson Home for Crippled Children, Salk injected 43 children with his killed-virus vaccine. A few weeks later, Salk injected children at the Polk State School for the retarded and feeble-minded. He vaccinated his own children in 1953.[25][26] **In 1954 he tested the vaccine on about one million children, known as the polio pioneers. The vaccine was announced as safe on April 12, 1955.**[23][22][27][28][29]

Salk in 1955 at the University of Pittsburgh

Magazine photo of Jonas Salk to O'Neill, "the most elaborate program of its kind in history, involving 20,000 physicians and public health officers, 64,000 school personnel, and 220,000 volunteers,"[23] with over 1.8 million school children participating in the trial.[30] A 1954 Gallup poll showed that more Americans knew about the polio field trials than could give the full name of the President.

March of Dimes poster circa 1957

The project became large, involving 100 million contributors to the March of Dimes, and 7 million volunteers.[23][31]:54 The foundation allowed itself to go into debt to finance the final research required to develop the Salk vaccine.[32] Salk worked incessantly for two-and-a-half years.[23][33]

Salk's inactivated polio vaccine was the first vaccine for the disease; it came into use in 1955.[34][35] It is on the World Health Organization's List of Essential Medicines, the safest and most effective medicines needed in a health system.[36]

Becoming a public figure[edit]

Celebrity versus privacy[edit]

With David Ben-Gurion in Jerusalem, 1959

Salk preferred not to have his career as a scientist affected by too much personal attention, as he had always tried to remain independent and private in his research and life, but this proved to be impossible. "Young man, a great tragedy has befallen you—you've lost your anonymity", the television personality Ed Murrow said to Salk shortly after the onslaught of media attention.[37] When Murrow asked him, "Who owns this patent?", Salk replied, "Well, the people I would say. There is no patent. Could you patent the sun?"[38] The vaccine is calculated to be worth $7 billion had it been patented.[39] However, lawyers from the National Foundation for Infantile Paralysis did look into the possibility of a patent, but ultimately determined that the vaccine was not a patentable invention because of prior art.[40]

Salk served on the board of directors of the John D. and Catherine T. MacArthur Foundation.[41]

Author Jon Cohen noted, "Jonas Salk made scientists and journalists alike go goofy. As one of the only living scientists whose face was known the world over, Salk, in the public's eye, had a superstar aura. Airplane pilots would announce that he was on board and passengers would burst into applause. Hotels routinely would upgrade him into their penthouse suites. A meal at a restaurant inevitably meant an interruption from an admirer, and scientists approached him with drop-jawed wonder as though some of the stardust might rub off."[42]

For the most part, however, Salk was "appalled at the demands on the public figure he has become and resentful of what he considers to be the invasion of his privacy", wrote The New York Times, a few months after his vaccine announcement.[29] The Times article noted, "at 40, the once obscure scientist ... was lifted from his laboratory almost to the level of a folk hero." He received a presidential citation, a score of awards, four honorary degrees, half a dozen foreign decorations, and letters from thousands of fellow citizens. His alma mater, City College of New York, gave him an honorary degree as Doctor of Laws. But "despite such very nice tributes", The New York Times wrote, "Salk is profoundly disturbed by the torrent of fame that has descended upon him. ... He talks continually about getting out of the limelight and back to his laboratory ... because of his genuine distaste for publicity, which he believes is inappropriate for a scientist."[29]

During a 1980 interview, 25 years later, he said, "It's as if I've been a public property ever since, having to respond to external, as well as internal, impulses. ... It's brought me enormous gratification, opened many opportunities, but at the same time placed many burdens on me. It altered my career, my relationships with colleagues; I am a public figure, no longer one of them."[37]

Maintaining his individuality[edit]

"If Salk the scientist sounds austere", wrote The New York Times, "Salk the man is a person of great warmth and tremendous enthusiasm. People who meet him generally like him." A Washington newspaper correspondent commented, "He could sell me the Brooklyn Bridge, and I never bought anything before." Award-winning geneticist Walter Nelson-Rees called him "a renaissance scientist: brilliant, sophisticated, driven ... a fantastic creature."[43]:127

He enjoys talking to people he likes, and "he likes a lot of people", wrote the Times. "He talks quickly, articulately, and often in complete paragraphs." And "He has very little perceptible interest in the things that interest most people—such as making money." That belongs "in the category of mink coats and Cadillacs —unnecessary", he said.[29]

Establishing the Salk Institute[edit]

The Salk Institute at La Jolla

In the years after Salk's discovery, many supporters, in particular the National Foundation, "helped him build his dream of a research complex for the investigation of biological phenomena 'from cell to society'."[44] Called the Salk Institute for Biological Studies, it opened in 1963 in the San Diego neighborhood of La Jolla. Salk believed that the institution would help new and upcoming scientists along in their careers, as he said himself, "I thought how nice it would be if a place like this existed and I was invited to work there."[citation needed]

In 1966, Salk described his "ambitious plan for the creation of a kind of Socratic academy where the supposedly alienated two cultures of science and humanism will have a favorable atmosphere for cross-fertilization."[45] Author and journalist Howard Taubman explained:

Although he is distinctly future-oriented, Dr. Salk has not lost sight of the institute's immediate aim, which is the development and use of the new biology, called molecular and cellular biology, described as part physics, part chemistry and part biology. The broad-gauged purpose of this science is to understand man's life processes.

There is talk here of the possibility, once the secret of how the cell is triggered to manufacture antibodies is discovered, that a single vaccine may be developed to protect a child against many common infectious diseases. There is speculation about the power to isolate and perhaps eliminate genetic errors that lead to birth defects.

Dr. Salk, a creative man himself, hopes that the institute will do its share in probing the wisdom of nature and thus help enlarge the wisdom of man. For the ultimate purpose of science, humanism and the arts, in his judgment, is the freeing of each individual to cultivate his full creativity, in whichever direction it leads. ... As if to prepare for Socratic encounters such as these, the institute's architect, Louis Kahn, has installed blackboards in place of concrete facings on

the walls along the walks.[45]

The New York Times, in a 1980 article celebrating the 25th anniversary of the Salk vaccine, described the current workings at the facility:

At the institute, a magnificent complex of laboratories and study units set on a bluff overlooking the Pacific, Dr. Salk holds the titles of founding director and resident fellow. His own laboratory group is concerned with the immunologic aspects of cancer and the mechanisms of autoimmune disease, such as multiple sclerosis, in which the immune system attacks the body's own tissues.[37]

In an interview about his future hopes at the institute, he said, "In the end, what may have more significance is my creation of the institute and what will come out of it, because of its example as a place for excellence, a creative environment for creative minds."

Francis Crick, codiscoverer of the structure of the DNA molecule, was a leading professor at the institute until his death in 2004.

The institute also served as the basis for Bruno Latour and Steve Woolgar's 1979 book Laboratory Life: The Construction of Scientific Facts.[46]

AIDS vaccine work[edit]

Beginning in the mid-1980s, Salk engaged in research to develop a vaccine for AIDS. He cofounded The Immune Response Corporation (IRC) with Kevin Kimberlin and patented Remune, an immunologic therapy, but was unable to secure liability insurance for the product.[47] The project was discontinued in 2007, twelve years after Salk's death.[citation needed]

Salk's "biophilosophy"[edit]

Jonas Salk during a 1988 Centers for Disease Control visit

In 1966, The New York Times referred to him as the "Father of Biophilosophy." According to Times journalist and author Howard Taubman, "he never forgets ... there is a vast amount of darkness for man to penetrate. As a biologist, he believes that his science is on the frontier of tremendous new discoveries; and as a philosopher, he is convinced that humanists and artists have joined the scientists to achieve an understanding of man in all his physical, mental and spiritual complexity. Such interchanges might lead, he would hope, to a new and important school of thinkers he would designate as biophilosophers."[45] Salk told his cousin, Joel Kassiday, at a meeting of the Congressional Clearinghouse on the Future on Capitol Hill in 1984 that he was optimistic that ways to prevent most human and animal diseases would eventually be developed. Salk said people must be prepared to take prudent risks, since "a risk-free society would become a dead-end society" without progress.

Salk describes his "biophilosophy" as the application of a "biological, evolutionary point of view to philosophical, cultural, social and psychological problems." He went into more detail in two of his books, Man's Unfolding, and The Survival of the Wisest. In an interview in 1980, he described his thoughts on the subject, including his feeling that a sharp rise and an expected leveling off in the human population would take place and eventually bring a change in human attitudes:

I think of biological knowledge as providing useful analogies for understanding human nature. ... People think of biology in terms of such practical matters as drugs, but its contribution to knowledge about living systems and ourselves will in the future be equally important. ... In the past epoch, man was concerned with death, high mortality; his attitudes were antideath, antidisease", he says. "In the future, his attitudes will be expressed in terms of prolife and prohealth. The past was dominated by death control; in the future, birth control will be more important. These changes we're observing are part of a natural order and to be expected from our capacity to adapt. It's much more important to cooperate and collaborate. We are the co-authors with nature of our destiny.[37]

His definition of a "biophilosopher" is "Someone who draws upon the scriptures of nature, recognizing that we are the product of the process of evolution, and understands that we have become the process itself, through the emergence and evolution of our consciousness, our awareness, our capacity to imagine and anticipate the future, and to choose from among alternatives."[48]

Just prior to his death, Salk was working on a new book along the theme of biophilosophy, privately reported to be titled Millennium of the Mind.

Personal life[edit]

The day after his graduation from medical school in 1939, Salk married Donna Lindsay, a master's candidate at the New York College of Social Work. David Oshinsky writes that Donna's father, Elmer Lindsay, "a wealthy Manhattan dentist, viewed Salk as a social inferior, several cuts below Donna's former suitors." Eventually, her father agreed to the marriage on two conditions: first, Salk must wait until he could be listed as an official M.D. on the wedding invitations, and second, he must improve his "rather pedestrian status" by giving himself a middle name."[14]:99

They had three children: Peter (who also became a physician and is now a part-time professor of infectious diseases at the University of Pittsburgh),[25][26] Darrell, and Jonathan Salk. In 1968, they divorced and, in 1970, Salk married French painter Françoise Gilot.

Jonas Salk died from heart failure at the age of 80 on June 23, 1995, in La Jolla,[49] and was buried at El Camino Memorial Park in San Diego.[50]

Honors and recognition[edit]

- 1955, one month after the vaccine announcement, he was honored by the Commonwealth of Pennsylvania, where he was given their "highest award for services" by Governor George M. Leader, Meritorious Service Medal, where the governor added,

... in recognition of his 'historical medical' discovery ... Dr. Salk's achievement is meritorious service of the highest magnitude and dimension for the commonwealth, the country and mankind." The governor, who had three children, said that "as a parent he was 'humbly thankful to Dr. Salk,' and as Governor, 'proud to pay him tribute'.[51]

- 1955, City University of New York creates the Salk Scholarship fund which it awards to multiple outstanding pre-med students each year
- 1956, awarded the Lasker Award
- 1957, the Municipal Hospital building, where Salk conducted his polio research at the University of Pittsburgh, is renamed Jonas Salk Hall and is home to the university's School of Pharmacy and Dentistry.[52]
- 1958, awarded the James D. Bruce Memorial Award

Salk's bronze bust in the Polio Hall of Fame

- 1958, elected to the Polio Hall of Fame, which was dedicated in Warm Springs, Georgia
- 1975, awarded the Jawaharlal Nehru Award and the Congressional Gold Medal
- 1976, awarded the Academy of Achievement's Golden Plate Award[53]
- 1976, named the Humanist of the Year by the American Humanist Association
- 1977, awarded the Presidential Medal of Freedom from President Jimmy Carter, with the following statement accompanying the medal:

Because of Doctor Jonas E. Salk, our country is free from the cruel epidemics of poliomyelitis that once struck almost yearly. Because of his tireless work, untold hundreds of thousands who might have been crippled are sound in body today. These are Doctor Salk's true honors, and there is no way to add to them. This Medal of Freedom can only express our gratitude, and our deepest thanks.

- 1981, decorated by the Italian government on January 3 as a Grand Officer of the Order of Merit of the Italian Republic[54]
- 1996, the March of Dimes Foundation created an annual $250,000 cash "Prize" to outstanding biologists as a tribute to Salk.[55]
- 2006, the United States Postal Service issued a 63-cent Distinguished Americans series postage stamp in his honor.
- 2007, California Governor Arnold Schwarzenegger and First Lady Maria Shriver inducted Salk into the California Hall of Fame.[56]
- 2009, BBYO boys chapter chartered in his honor in Scottsdale, Arizona, Named "Jonas Salk AZA #2357"
- Schools in Mesa, Arizona; Spokane, Washington; Tulsa, Oklahoma; Bolingbrook, Illinois; Levittown, New York; Old Bridge, New Jersey; Merrillville, Indiana; Sacramento, California ; and Mira Mesa, California ; are named after him.
- 2012, October 24, in honor of his birthday, has been named "World Polio Day", and was originated by Rotary International over a decade earlier.[57]
- 2014, On the 100th anniversary of Salk's birth, a Google Doodle was created to honor the physician and medical researcher. The doodle shows happy and healthy children and adults playing and going about their lives with two children hold up a sign saying, "Thank you, Dr. Salk!"[58][59]

Documentary films[edit]

- In early 2009, the American Public Broadcasting Service aired its new documentary film, American Experience: The Polio Crusade.[20] The documentary, available on DVD, can also be viewed online at PBS's website.
- On April 12, 2010, to help celebrate the 55th anniversary of the Salk vaccine, a new 66-minute documentary, The Shot Felt 'Round the World, had its world premiere. Directed by Tjardus Greidanus[60] and produced by Laura Davis,[61] the documentary was conceived by Hollywood screenwriter and producer Carl Kurlander to bring "a fresh perspective on the era."[62]
- In 2014, actor and director Robert Redford, who was once struck with a mild case of polio when he was a child, directed a documentary about the Salk Institute in La Jolla.[63]
- In Chapter 10 of the 2018 season of Genius Michael McElhatton portrays Salk in a short cameo where he is on a date with Françoise Gilot.[64]

Salk's book publications[edit]

- Man Unfolding (1972)
- Survival of the Wisest (1973)
- World Population and Human Values: A New Reality (1981)
- Anatomy of Reality: Merging of Intuition and Reason (1983)

See also[edit]

- Lee Salk

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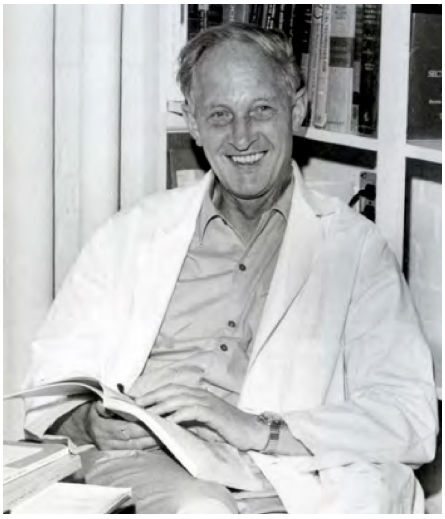
External links[edit]

Wikimedia Commons has media related to Jonas Salk.

Wikiquote has quotations related to: Jonas Salk

- The American Experience: The Polio Crusade video, 1 hr. by PBS
- "Legacy of Salk Institute", video, 30 minutes, history of Salk vaccine
- "Polio Vaccine" intro., Britannica, video, 1 minute
- Jonas Salk Legacy Foundation
- Jonas Salk Trust
- Salk Institute for Biological Studies
- Documents regarding Jonas Salk and the Salk Polio Vaccine, Dwight D. Eisenhower Presidential Library
- 1985 Open Mind interview with Richard D. Heffner: Man Evolving...
- Pittsburgh Post-Gazette feature on Jonas Salk and the Polio cure 50 years later
- The Salk School of Science (New York, New York)
- Patent US Patent 5,256,767 : Vaccine against HIV
- The short film Man Evolving (1985) is available for free download at the Internet Archive
- Register of Jonas Salk Papers, 1926–1991 – MSS 1, held in the UC San Diego Library's Special Collections & Archives

Dr. Heinrich Werner Schäfer (born 1912)



[HI002M][GDrive]

Wikipedia (DE) Werner Schäfer (Tiermediziner)

Associations

- Christoph Scholtissek (born 1929)
- Dr. Erich Traub (born 1906) (Werner Schäfer was a protege of Dr. Traub ... [HW005X][GDrive] , as early as the 1930s - [HI002L][GDrive])
- Prof. Rudolf Rott (born 1926) (A protege/student of Dr. Werner Schäfer - Prof. Rott actually wrote the memorial for Werner Schäfer)

Saved Wikipedia (March 1, 2021) - "Werner Schäfer (Tiermediziner)"

Saved Wikipedia : [HK005J][GDrive]

Werner Schäfer (* 9. März 1912 in Herne-Wanne, Westfalen; † 25. April 2000 in Tübingen) war ein deutscher Tiermediziner und Virologe, der in Tübingen in den Nachkriegsjahren eine Schule für Virologie begründete.

Werner Schäfer (veterinarian)

Werner Schäfer (born March 9, 1912 in Herne-Wanne, Westphalia, † April 25, 2000 in Tübingen) was a German veterinarian and virologist who founded a school for virology in Tübingen in the post-war years.

Life

Schäfer graduated from high school in Korbach in 1931 and then studied veterinary medicine at the University of Gießen. In 1938 he received his doctorate from Hugo Keller (on the concentration of hydrogen ions in various organs in cattle). He became an assistant at the Institute for Veterinary Hygiene and Animal Diseases with Karl Beller and began to turn to virology. At the beginning of the Second World War he was on a research trip to East Africa and was interned there. After an exchange of prisoners, he was a veterinary officer on the Eastern Front and later at the Reich Research Institute Insel Riems. After the war he worked as a resident veterinarian in Usseln before Adolf Butenandt brought him to the Max Planck Institute for Biochemistry in Tübingen as head of the virology department. From 1954 onwards a Max Planck Institute for Virus Research was established in Tübingen (founded by Gerhard Schramm and Hans Friedrich-Freksa [1906–1973]), at which Schäfer stayed for the rest of his career.

Schäfer first examined influenza viruses using the example of avian influenza, which he discovered to be related to the influenza A virus. From the mid-1960s he turned to retroviruses, which at the time were known to cause cancer (leukemia), and research into which began with the emergence of AIDS in the 1980s.

Prizes and awards

In 1991 he received the Robert Koch Medal, 1957 the Carus Medal, 1978 the Paul Ehrlich and Ludwig Darmstaedter Prize, 1972 the Aronson Prize and 1962 the Emil von Behring Prize. He was a Fellow of the Royal Society of Medicine (1959) and a member of the Leopoldina (1969). He was an honorary doctor of the University of Veterinary Medicine Hannover (1972), honorary member of the German Society for Hygiene and Microbiology and the Society for Virology.

[**Prof. Rudolf Rott (born 1926)**] is one of his students.

https://www.deutsche-biographie.de/gnd139495606.html#ndbcontent

2021-03-01-deutsche-biographie-de-schafer-werner.pdf

genealogy

V Wilhelm (1878–1959), tax officer;

M Margarete N.N. 1879-1960);

⚭ 1939 Emma Grabe (1912–2001);

1 S, 2 T.

Life

After graduating from high school in 1931, S. studied humanist. State high school in Korbach (Hesse) at the Univ. Pouring veterinary medicine. After graduating as Dr. med. vet. In 1938 with Hugo Keller (research on the hydrogen ion concentration of various organs and tissues of cattle) he accepted an assistant position in the local institute for veterinary hygiene and animal diseases with Karl Beller. Here he began to deal with virus-related animal diseases. When the war broke out, he was on a research trip to East Africa. This was followed by internment, returning home via a prisoner exchange and military service as a veterinary officer on the Eastern Front and at the "Reich Research Institute Insel Riems". After the end of the war, S. ran a veterinary practice in Usseln (Waldeck). In 1948 he was called by → Adolf Butenandt (1903–95) as head of the virology department at the MPI for Biochemistry in Tübingen.

The MPI for Virus Research was founded here in 1954 under the direction of S., → Gerhard Schramm (1910–69) and → Hans Friedrich-Freksa (1906–73). S., whose work quickly found worldwide recognition, initially dealt with a group of viruses, which include the causative agents of influenza, measles and mumps. He obtained the pure representation of the virus particles, the elucidation of their fine structure and important insights into the reproduction mechanisms. The discovery of the close relationship between the classic avian influenza virus and the influenza A virus in humans was of great importance. **He derived the hypothesis that viruses occasionally change host and that new flu epidemics may have their origin in animals that live closely with humans.** This idea was later confirmed several times, e.g. B. in the epidemic of the Hong Kong flu in 1997. The elucidation of the virus structure made it possible to isolate those components from the virus particles that are particularly important for the infection process. It turned out that such preparations are excellent for immunizations. Because they are well tolerated, they are widely used today for vaccination against influenza and measles.

In 1952, at S.'s instigation, the "Federal Research Center for Virus Diseases of Animals" was established in Tübingen. Employees and students were appointed to professorships in virology or held senior positions in the healthcare sector. S. established a new era of virology in Germany in the post-war years. In the mid-1960s, the focus of his research changed. The interest now turned to the retroviruses, a class of pathogens that cause leukemia and immune deficiencies. Molecular and cell-biological aspects of virus replication were worked on intensively and new approaches for the immunotherapy of these diseases were developed, which were received with great interest in medicine. S. was one of the most important virologists of his generation and contributed significantly to German research regaining international importance after the war. |

Awards

Carus Medal d. Leopoldina (1957);

Member d. British Royal Soc. of Medicine (1959);

Emil v. Behring Prize d. Univ. Marburg (1965);

Ludwig Schunk Prize d. Univ. Giessen (1965);

Member d. Leopoldina (1969);

Dr. med. vet. H. c. (University of Veterinary Medicine Hannover, 1972);

Aronson Prize (Berlin 1972);

Award d. World Committee for Comparitive Research on Leukemia and Related Diseases (1975);

Robert Koch Medal in Gold d. Robert Koch Foundation (1991);

Honorary member d. German Society for Hygiene and Microbiol. (1981) et al. Ges. F. Virol. (1994).

Works

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An infectious component v. Ribonucleic acid character from d. Virus d. americ. Equine encephalomyelitis, in: Zs. F. Naturforsch. 12 b, 1957, pp. 415-17 (with E. Werker);

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https://pubmed.ncbi.nlm.nih.gov/10955000/

[Werner Schäfer. A life as researcher and teacher]

[Article in German]

R Rott [1], H J Thiel, V Moennig
Affiliations expand

- PMID: 10955000

Abstract

The following short biography recalls Professor Dr. Dr. h.c. Werner Schäfer, emeritus professor and director of the Medical Biology Department of the Max-Planck-Institut für Virusforschung in Tübingen and scientific member of the Max-Planck Society who died on 25th April 2000. He was one of the most distinguished pioneers of animal virology and one of the great personalities who since the Second World War have helped German science to regain its international reputation. In a brief synopsis the important results of his work on the viruses he used as models to conduct his research have been portrayed. As a result of Schäfer's scientific conception to gain insights into the functional characteristics of viruses by looking at their structure, the field of virology has taken new directions and founded a school whose pupils try to continue his successful and much honoured life's work.

2000 article - From Max-Planck-Gesellschaft - "Flashback : Werner Schafer"

Source : [HI002L][GDrive]

The birds began to die in the spring of 1997. Within the span of a few days, 7,000 chickens on three poultry farms in Hong Kong perished. A short while later, a three-year-old boy who had been admitted to the hospital with flu symptoms died. Tests revealed that the same pathogen was the cause of death in both cases: a bird flu virus of the H5N1 type. After 18 more people were infected, six of whom died, experts became alarmed. Was a new flu pandemic imminent?

The incident brought to mind images from 1918/1919, when the Spanish flu claimed an estimated 50 million lives. To ward off the danger, more than 1.2 million chickens and hundreds of thousands of other birds were slaughtered in Hong Kong's poultry markets and on the surrounding farms. In time, the scare passed – but the concerns remained.

The Hong Kong outbreak is the first documented case in which a bird flu virus not only infected humans, but also killed them. However, fears had been circulating for quite a while that this could happen one day. Virologist Werner Schäfer at the Max Planck Institute for Virus Research in Tübingen had already speculated about it in the 1950s.

Schäfer was born in Wanne, Germany on March 9, 1912. He originally wanted to become an architect and, after completing his secondary education, did an apprenticeship in carpentry. He later changed his mind and studied veterinary medicine in Giessen. **After earning his doctorate, he joined the Veterinary Hygiene and Animal Infection Institute under [Dr. Erich Traub (born 1906)], an expert in foot and mouth disease.**

He then yielded to his thirst for adventure. In the summer of 1939 – shortly after marrying – he headed for East Africa on a grant from the German Research Council. In Tanzania, he set up a simple laboratory in a building on a German farm, where he began to carry out research into animal diseases such as anthrax, blackleg, brucellosis and pseudorabies, which were threatening the country's livestock.

Schäfer could well imagine a future as a researcher in Africa, but his plans were thwarted by the war. He was incarcerated and deported to Germany in 1940, where he was drafted into the army as a veterinary officer. For a while he was based on the island of Riems, near Greifswald, to work at the Reich Research Institute there in a program aimed at developing vaccines against influenza, rinderpest and bird flu.

After the war, there were no immediate prospects for a post as a virologist. Without further ado, Werner Schäfer opened a veterinary practice in Usseln, Hesse. Business flourished, and he had no concerns about his family's subsistence. Nevertheless, he didn't hesitate for a moment when Nobel laureate Adolf Butenandt, then Director of the Kaiser Wilhelm Institute for Biochemistry in Tübingen, looked him up in the spring of 1948 and offered him a research post. After three years as a rural veterinarian, the 36-year-old moved to Tübingen to head the Animal Virology Department.

The research team was initially housed in a ramshackle outbuilding of the Pharmacology Department. The annual budget for equipment was a mere 10,000 marks. Despite this, Werner Schäfer was inordinately productive; he had learned how to improvise in Africa. His career soon took off. In 1954 he was elected a Scientific Member of the Max Planck Society. Two years later, he was appointed Director of the Biological and Medical Department of the newly created Max Planck Institute for Virus Research in Tübingen.

One of Schäfer's main research interests was the virus responsible for avian influenza, now commonly known as bird flu. The highly infectious pathogen affects birds in the wild as well as poultry of all kinds. Infection leads to dyspnea, apathy, high fever and motor disorders. Infected animals usually die within a few days.

The dreaded virus offered a number of advantages as a study object: It proved to be an excellent model for studying enveloped viruses. Moreover, public

health policy forbade US competitors from working with the pathogen. The virus is easy to handle in the laboratory and multiplies vigorously in incubated chicken eggs. Heinz Schwarz, an electron microscopist who worked closely with Werner Schäfer at the Institute, recalls: “Some of our colleagues periodically drove in the Institute’s car, an Opel P4 dubbed Friedolin, to a chicken farm in Tuttlingen to pick up pallets of eggs.”

Soon they were cultivating viruses at full speed. Schäfer’s aim was to find out the functions of the various viral components and to determine the role they play in infections. To this end, he combined electron microscopic structural analyses with physicochemical and immunological investigations and observed the course of the disease in experimental animals.

“Schäfer was a true pioneer, since there was no DNA sequencing at the time,” says Volker Moennig, veterinary professor at the University of Veterinary Medicine Hannover, Foundation who had earlier worked at the Institute in Tübingen. “The times were also different with regard to handling the virus. Today, a laboratory safety rating of 3 would be mandatory.”

Despite the limited resources, Schäfer managed to characterize the bird flu virus in detail. He noted an astonishing similarity to another pathogen – the causative agent of influenza A in humans. Under the electron microscope, both appeared to be studded with fine spikes, which Schäfer compared to the “detonators of a naval mine.” The viruses also shared many physicochemical and immunological properties. For example, both pathogens were able to infect mice, causing a pneumonia that proved fatal after a few days. The pathological changes in lung tissue caused by both forms looked identical. Schäfer even managed to immunize mice against influenza A with the bird flu virus and vice versa.

The striking similarity of the two pathogens led Werner Schäfer to a troubling conclusion: “It is conceivable that representatives of this group occasionally change their host specificity so that a new type of influenza virus […] emerges,” he wrote in a seminal work in 1955. He was to be proven right.

Today we know that avian viruses do, in fact, act as a natural gene pool from which new flu viruses can emerge that can potentially infect humans. A tiny change to a protein building block is enough to enable the virus to evade the immune system and change its host. The danger is especially acute in places where people and poultry live in close proximity, as in many Asian countries.

Experts particularly fear the emergence of hybrid viruses: when a bird virus and a human virus come together in an infected cell, they are able to exchange DNA segments to form a new virus that spreads from human to human – a recipe for a pandemic. The Spanish flu may have been the result of such dangerous liaisons. In the 1997 Hong Kong flu epidemic, the viruses made the leap from bird to human, but fortunately not from human to human.

Werner Schäfer presented his findings on viral kinship at a symposium in London in 1956. Luminaries including James Watson and Francis Crick, who had discovered the structure of DNA three years earlier, were in the audience. It proved to be an international breakthrough for Schäfer. There followed invitations from all over the world, and the “Tübingen Group” ranked among the most pre-eminent virus researchers in the world.

Werner Schäfer devoted 16 years of research to the avian flu virus. Thanks to his work, the pathogens have long ranked among the best characterized of all animal viruses. Schäfer also laid the groundwork for the development of vaccines when he discovered that a component of the viral envelope is sufficient to confer immunity in a host. This led to the development of split-virus vaccines, which are still used today in some flu and hepatitis B vaccines.

Schäfer finally closed the bird flu chapter of his career in the early 1960s. At over 50, he switched to an entirely new research field: retroviruses, which were thought to play a role in the development of cancer. In fact, oncogenes, which promote unbridled cell growth, were discovered for the first time in the genomes of retroviruses. Schäfer and his team investigated the role of the viruses in the development of leukemia and carried out successful immunization experiments.

In the 1980s, retroviruses made headlines when it was discovered that they cause AIDS. By that time, Schäfer had already retired. The winner of many awards, he died in Tübingen on April 25, 2000 at the age of 88.

Heinrich Werner Schäfer

1912–2000

BIRTH 9 MAR 1912 • Wanne

DEATH 25 APR 2000

https://www.ancestry.com/family-tree/person/tree/158956023/person/152081525791/facts?_phsrc=TmZ20&_phstart=successSource

Obituary written by Rott -

https://link.springer.com/content/pdf/10.1007/s007050070126.pdf

2000_Article_Obituary.pdf

Obituary
In Memoriam Werner Schäfer
erner Schäfer, former Director of the Max-
Planck-Institut für Virusforschung in Tübingen,
Germany, died on April 25th this year at the age of 88.
He was, and still remains, one of the most distinguished
pioneers of animal virology. He was fascinated
by the close relationship between the structures and
functions of viruses, and has contributed in considerable
measure to present day knowledge in this field. He
adopted a research method that consisted of a series of consequent steps built around a basic concept and applied it to all the virus types he studied. The structural characterization of isolated virus particles and the components that play a part in their construction, as well as the resulting analysis of their functions, have enabled a deeper insight into the nature of viruses. He was highly regarded worldwide for his studies on fowl plague virus (FPV), Newcastle disease virus, and mouse encephalomyocarditis virus, as well as RNA tumor viruses. In particular, FPV proved to be an excellent paradigm for the study of structural and functional relationships in enveloped viruses and served as a useful model for following virus replication, especially of orthomyxoviruses. FPV became one of the first animal viruses that was thoroughly analyzed with respect to physical, chemical, architectural and biological properties. Of great epidemiological interest was his discovery that FPV is an influenza virus and that it might, perhaps through a process of recombination, take part in the evolution of new influenza viruses. He also showed that the hemagglutinin glycoprotein of influenza viruses induces the production of protective neutralizing antibodies in infected hosts. Schäfer's proposal to use only the immunogenic glycoprotein for vaccine production has been realized in the use of subunit vaccines for immunization against other virus infections. From 1963 onwards, Schäfer and his research colleagues concentrated solely on the study of RNA tumor viruses. Characterization of the different structural compounds of murine and chicken retroviruses was without doubt one of the highlights of the many studies performed in Tübingen. The fundamental insights obtained from this work also contributed considerably to the understanding of the structure of Human immunodeficiency virus. Another spinoff was the development of an immunological strategy that was used in the therapy of tumors caused in animals by RNA leukaemia viruses.
Werner Schäfer devoted his long life to the service of science. His outstanding scientific successes have been rewarded by numerous honours. He was an exemplary academic teacher and, using his remarkable creative talent and enthusiasm, founded a School of Virology from which over 20 former pupils now hold leading positions at universities and other research institutes in several countries. For them and all other coworkers, colleagues, and friends, Werner Schäfer will remain unforgettable.
R. Rott, Giessen
Hans-Dieter Klenk, Marburg

https://mmbr.asm.org/content/mmbr/27/1/1.full.pdf

STRUCTURE OF SOME ANIMAL VIRUSES AND SIGNIFICANCE OF THEIR COMPONENTS1 WERNER SCHAFER Max-Planck-Institut fur Virusforschung, Tubingen, Germlian

Lt. Captain Maurice Schiff MD (born 1917)

Born - Dec 20 1917 https://www.findmypast.com/transcript?id=US%2FMCV%2F786204%2F10968454163202235737

Parents : Father is - Jacob Schiff , Mother is Bessie Schiff (Son of Jacob (Yaakov) Solomon (Zalman) Shiffand Bessie Mary Schiff - Source : [HL000V] [GDrive]

Siblings include - Frank Ephraim Schiff (Brother)

Other Relatives:

Nephew - Edward Maurice Schiff (born 1928)

Great Nephew - Adam Bennett Schiff (born 1960)

1920 Census - Was "Maurice" born as "Morris" ?

Transcript : [HL000X][GDrive]

Actual 1920 US Census sheet - [HL000Z] [hGDrive]

Note : This **Jacob Schiff** was a butcher

Record Transcription:
Us Census 1920

Household Members

First name(s)	Last name	Relationship	Marital status	Gender	Age	Birth year	Birth place
Jacob	Schiff	Self	Married	Male	42	1878	Russia
Bessie	Schiff	Wife	Married	Female	40	1880	Russia
Nathan	Schiff	Son	Single	Male	18	1902	England
Frank	**Schiff**	**Son**	**Single**	**Male**	**16**	**1904**	**England**
Celia	Schiff	Daughter	Single	Female	14	1906	Massachusetts
Fannie	Schiff	Daughter	Single	Female	12	1908	Massachusetts
Ella	Schiff	Daughter	Single	Female	10	1910	Massachusetts
Henry	Schiff	Son	Single	Male	6	1914	Massachusetts
Morris	Schiff	Son	Single	Male	2	1918	Massachusetts

[HL000Y][GDrive]

1942 - Engagement / Wedding

Full page : [HN00A2][GDrive]

Also see:

- https://www.newspapers.com/image/147643233/?terms=%22maurice%2Bschiff%22
- https://www.newspapers.com/image/523992901/?terms=%22joseph%2Bbiener%22
- https://www.findmypast.com/transcript?id=US%2FFS%2FM%2F043616151%2F1

[HN00A3][GDrive]

1949 (June 24) - Father Jacob Schiff passes (Maurice in Philadelphia)

Full page : [HN00AM][GDrive]

1956 - Trips to Israel

Full page : [HN00AA][GDrive]

Oakland Tribune (Oakland, California) • 09 Apr 1956, Mon • Page 16

Sisterhood Speaker

SAN LEANDRO, April 9 — Dr. Maurice Schiff will be guest speaker at a meeting of the Sisterhood of Temple Beth Sholom today at 8:30 p.m. He will give an illustrated account of his recent trip to Israel.

[HN00AB][GDrive]

1958 (Feb 15)

Full page : [HN00A4][GDrive]

Oakland Tribune (Oakland, California) • 15 Feb 1959, Sun • Page 32

NAVAL HOSPITAL DOCTOR WINS AWARD FOR THESIS

Capt. Maurice Schiff, chief of the Eye, Ear, Nose and Throat Service at the Oakland Naval Hospital, has been named the 1959 winner of the Harris P. Mosher Memorial Award of the American Laryngological, Rhinological and Otological Society.

The organization confers the honor each year on the candidate for election to active fellowship in the society whose membership thesis is the best among candidates.

Dr. Schiff will present his winning paper—"Juvenile Nasopharyngeal Angiofibroma"—at the society's annual program in Hot Springs, Va., on March 12.

The surgeon, a 17-year Navy veteran, lives with his wife, Gladys, and son, Lawrence, 15, at 722 Woodland Ave., San Leandro.

Dr. Schiff has been at the Oakland Naval Hospital since 1955. He is also on the teaching staff of the University of California Medical School.

CAPT. MAURICE SCHIFF
Surgeon Honored

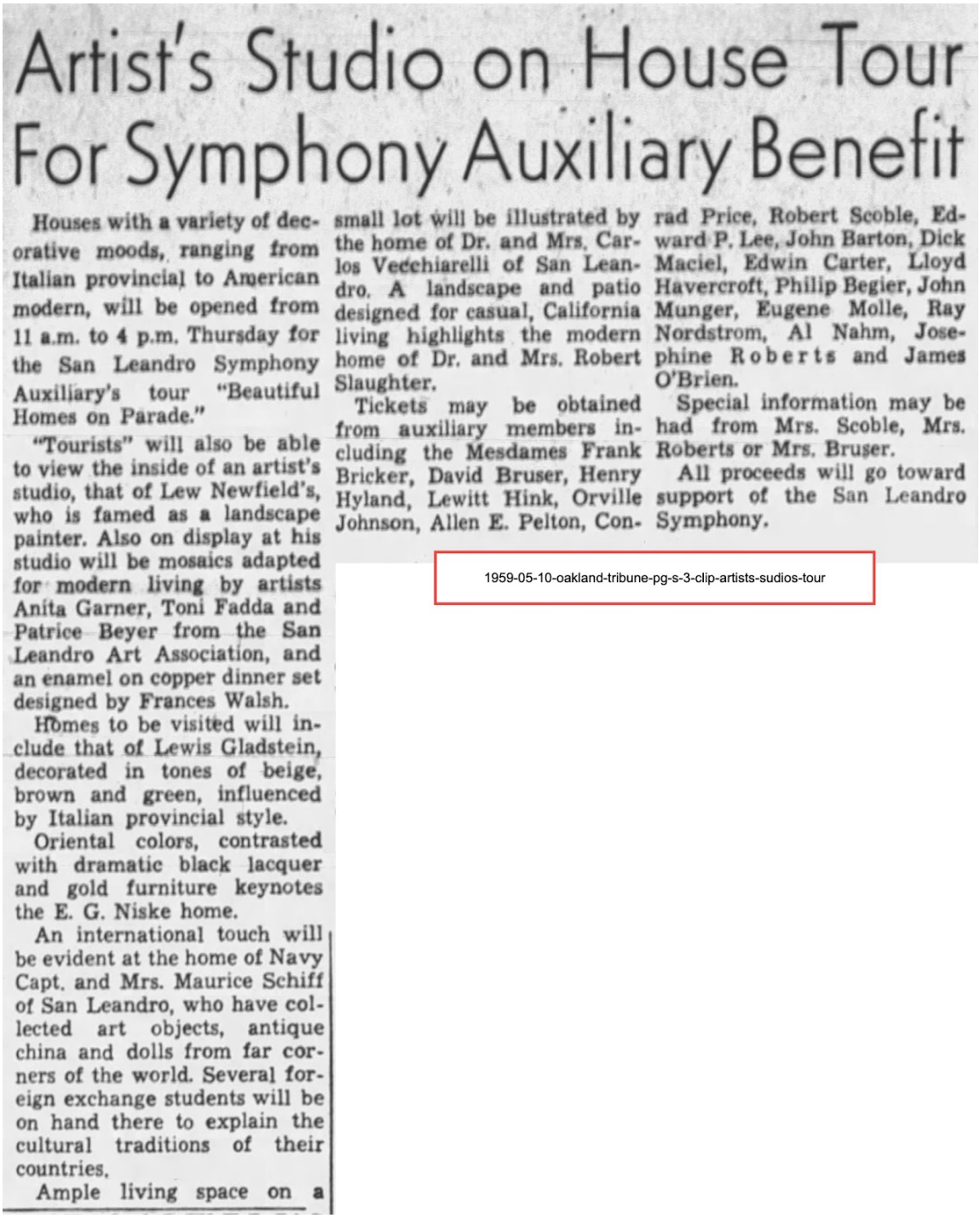
[HN00A5][GDrive]

1959 (May 10)

https://www.newspapers.com/image/331940257/?terms=%22Maurice%2Bschiff%22

1959-05-10-oakland-tribune-pg-s-3 https://drive.google.com/open?id=1gBHVMow98HYTWWaw_gO2swE-OCn4APq1

1959-05-10-oakland-tribune-pg-s-3-clip-artists-sudios-tour https://drive.google.com/open?id=1gDXcLMA7PNVs2kGDASlI9alL3PtemuZT



Artist's Studio on House Tour For Symphony Auxiliary Benefit

Houses with a variety of decorative moods, ranging from Italian provincial to American modern, will be opened from 11 a.m. to 4 p.m. Thursday for the San Leandro Symphony Auxiliary's tour "Beautiful Homes on Parade."

"Tourists" will also be able to view the inside of an artist's studio, that of Lew Newfield's, who is famed as a landscape painter. Also on display at his studio will be mosaics adapted for modern living by artists Anita Garner, Toni Fadda and Patrice Beyer from the San Leandro Art Association, and an enamel on copper dinner set designed by Frances Walsh.

Homes to be visited will include that of Lewis Gladstein, decorated in tones of beige, brown and green, influenced by Italian provincial style.

Oriental colors, contrasted with dramatic black lacquer and gold furniture keynotes the E. G. Niske home.

An international touch will be evident at the home of Navy Capt. and Mrs. Maurice Schiff of San Leandro, who have collected art objects, antique china and dolls from far corners of the world. Several foreign exchange students will be on hand there to explain the cultural traditions of their countries.

Ample living space on a small lot will be illustrated by the home of Dr. and Mrs. Carlos Vecchiarelli of San Leandro. A landscape and patio designed for casual, California living highlights the modern home of Dr. and Mrs. Robert Slaughter.

Tickets may be obtained from auxiliary members including the Mesdames Frank Bricker, David Bruser, Henry Hyland, Lewitt Hink, Orville Johnson, Allen E. Pelton, Conrad Price, Robert Scoble, Edward P. Lee, John Barton, Dick Maciel, Edwin Carter, Lloyd Havercroft, Philip Begier, John Munger, Eugene Molle, Ray Nordstrom, Al Nahm, Josephine Roberts and James O'Brien.

Special information may be had from Mrs. Scoble, Mrs. Roberts or Mrs. Bruser.

All proceeds will go toward support of the San Leandro Symphony.

1959-05-10-oakland-tribune-pg-s-3-clip-artists-sudios-tour

1961 (Jan 22)

Full page : [HN00A0][GDrive]

Scout Gets Eagle Badge From Nimitz

Lawrence Joel Schiff of San Leandro, was presented with his Eagle Scouting badge, highest honor to a Boy Scout, by Fleet Adm. Chester Nimitz at a ceremony held at Oakland Naval Hospital Friday evening.

The boy, son of Navy Capt. Maurice Schiff, a surgeon on the hospital staff, of 722 Woodland Ave., San Leandro, lost a leg in a camping accident in Europe when his father was stationed there.

Adm. Nimitz holds the Silver Buffalo, highest scouting award for adults, because of his long support and interest in the Boy Scouts of America.

Young Schiff is a member of Explorer Post 508 of the Chabot District of Oakland Area Council. The unit is sponsored by the Men's Fellowship of the First Presbyterian Church of San Leandro. Ted Woods was chairman of the ceremony attended by some 300 persons.

Frank Dix is scout executive of the Oakland Area Council.

Tribune photo

ADM. CHESTER NIMITZ BESTOWS EAGLE SCOUTING AWARD ON LAWRENCE J. SCHIFF
Scout Executive Frank Dix and Capt. Maurice Schiff, boy's father, watch ceremony.

1961-01-22-oakland-tribune-pg-30-clip-schiff

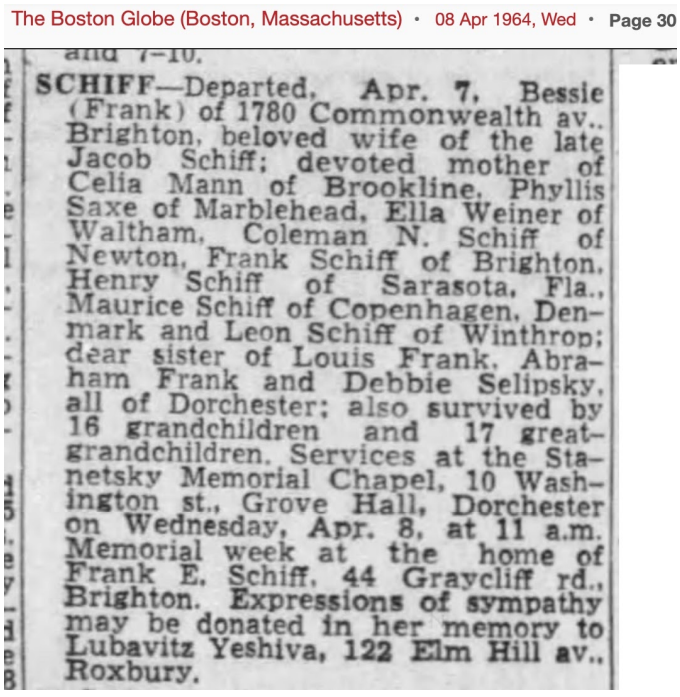
NEW STORE HOURS
For

[HN00A1][GDrive]

1964 - April 08 - Mother Bessie Schiff) passes

Currently residing in Copenhagen, Denmark

Full page : [HN009Y][GDrive]



The Boston Globe (Boston, Massachusetts) · 08 Apr 1964, Wed · Page 30

and 7-10.

SCHIFF—Departed, Apr. 7, Bessie (Frank) of 1780 Commonwealth av., Brighton, beloved wife of the late Jacob Schiff; devoted mother of Celia Mann of Brookline, Phyllis Saxe of Marblehead, Ella Weiner of Waltham, Coleman N. Schiff of Newton, Frank Schiff of Brighton, Henry Schiff of Sarasota, Fla., Maurice Schiff of Copenhagen, Denmark and Leon Schiff of Winthrop; dear sister of Louis Frank, Abraham Frank and Debbie Selipsky, all of Dorchester; also survived by 16 grandchildren and 17 great-grandchildren. Services at the Stanetsky Memorial Chapel, 10 Washington st., Grove Hall, Dorchester on Wednesday, Apr. 8, at 11 a.m. Memorial week at the home of Frank E. Schiff, 44 Graycliff rd., Brighton. Expressions of sympathy may be donated in her memory to Lubavitz Yeshiva, 122 Elm Hill av., Roxbury.

[HN009Z][GDrive]

https://www.geni.com/people/Bessie-Schiff/6000000005953499117

Bessie Mary Schiff

‹ Back to Schiff surname

Bessie Mary Schiff (Frank)

Birthdate:	1881
Birthplace:	Ukmergė, Ukmergė District Municipality, Vilnius County, Lithuania
Death:	April 07, 1964 (82-83) Boston, Suffolk County, Massachusetts, United States
Immediate Family:	Daughter of Yisroel Moshe "Morris Israel" Frank and Johanna Hanna Frank Wife of Jacob (Yaakov) Solomon (Zalman) Shiff Mother of Morris Schiff; Henry Schiff; Nathan Coleman Schiff; Frank Ephraim Schiff; Henry Schiff and 4 others Sister of Louis Frank; Debbie Frank; Sarah Frank and Abe Frank
Managed by:	Private User
Last Updated:	January 25, 2020

View Complete Profile

1967 (April 26) - Guest speaker

https://www.newspapers.com/image/572005771/?terms=%22maurice%2Bschiff%22

1968 (Jan 10) - Passing of brother (Frank Ephriam Schiff)

Full page - [HN009W][GDrive]

SCHIFF — Departed Jan. 9, Frank Ephriam, of 211 Lakeshore rd., Brighton. Beloved husband of Martha (Sneirson). Devoted father of Mrs. Judith Sokoll of Fairfield, Ct.; Edward Schiff of Framingham. Dear brother of Coleman Nathan Schiff of Newton, Dr. Maurice Schiff of LaJolla, Calif.; Henry Schiff of Sarasota, Fla.; Leon Schiff of Winthrop, Mrs. Celia Mann of Brighton, Mrs. Phyllis Sax of Marblehead and Mrs. Ella Weiner of Waltham. Also survived by four grandchildren. Services at the Stanetsky Memorial Chapels, 1668 Beacon st., Brookline, Thursday, Jan. 11, at 12 noon. Memorial week will be observed at his late residence through Sunday evening. Expressions of sympathy may be donated in his memory to the Bessie and Jacob S. Shiff Scholarship Fund, care of the New England Hebrew Academy, Seaver st., Roxbury.

1968-01-10-the-boston-globe-pg-47-clip-schiff

[HN009X][GDrive]

1973 - National recognition as expert

https://www.newspapers.com/image/437167777/?terms=%22maurice%2Bschiff%22

1976 (July 22)

Full page : [HN00A8][GDrive]

Weekly Free Press (Escondido, California) • 22 Jul 1976, Thu • Page 10

Audiometer, vision device gifts accepted

ESCONDIDO — Three gifts were accepted with thanks recently by the Escondido Union (elementary) School District board.

A Beltone C15 audiometer, valued at $2,500, was donated by Maurice Schiff, MD, of La Jolla. The device will be used in hearing tests by district staff members.

The Sunrise Lions Club gave a Keystone telebinocular, valued at $200, for use at Juniper and Oak Hill schools. The device is used in vision tests.

The Lincoln School Parent-Teacher Association culminated two years of fund-raising by donating money for draperies and curtains for the Lincoln School auditorium. The draperies and curtains are being made by Charles E. White & Co.

[HN00A9][GDrive]

1978 (July 06)

Full page : [HN00A6][GDrive]

RESEARCH LEADS TO NEW TREATMENTS

Doctor to Opera Singers Loves His Role

BY LOUISE SPIZIZEN

When Ezio Pinza, the renowned basso, quit his Metropolitan Opera career of 23 years to sing in "South Pacific," the world speculated as to his reasons.

Was it the money?

A secret romance with Mary Martin?

Few people knew then or know now that the 57-year-old Pinza had been warned by a doctor at Stanford University that his voice would last only another year on the opera stage.

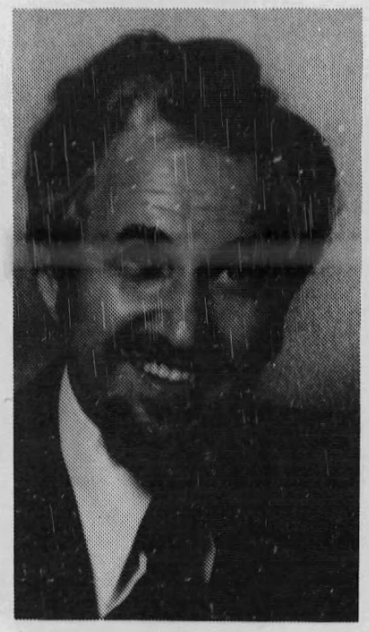
"But," Dr. Paul Moses told him, "you could sing movie or stage musicals for 20 more years." And when Pinza died eight years later, his singing career was still going strong.

Opera singers need the care of physicians as much as they need agents and voice coaches. The singers gathering in San Diego now for the Aug. 4 opening of "Aida" feel a lot more secure knowing that Dr. Maurice Schiff is here.

Gone are the days, according to Schiff, of hot tea and honey or crystal atomizers of throat spray backstage. Now there are proteolytic enzymes. Science has taken over.

Schiff has just returned from New York where he lectured for the second year at Juilliard School's Symposium on the Professional Voice.

This five-day session gathers together voice teachers and coaches, experts in speech and phonetics and laryngologists. This year there also were communications engineers who have done detailed photographic studies of the vocal chords as they produce sound.



Dr. Maurice Schiff

Schiff reported to the symposium on his new work in treating laryngitis with hormones.

All this sounds a bit unlikely for a physician who says, "My primary practice is ear surgery." But then he adds, "My work with singers is my avocation, a labor of love."

Maurice Schiff fell in love with opera as a high school student in Boston. Frustrated at not understanding the languages, he began an intensive study of French, German and Italian.

His language ability was furthered considerably by overseas duty in the U.S. Navy and a stint in Italy for NATO. While in Italy, he studied voice and music with a retired member of the San Carlo Opera.

Schiff met Pinza's physician, Dr. Moses, when he returned from Italy. Moses was living in Palo Alto and caring for opera singers who visited San Francisco, even as Schiff, who lives in Rancho Santa Fe, looks after opera singers in San Diego.

Moses had written a book, "Voice of Neurosis," dealing with how emotions affect the sound of the speaking voice. Schiff, at the time, was interested in how emotions affect the nose. Both men were anxious to differentiate allergic or physical diseases from emotional disorder.

"When we met," Schiff recalls, "it was like sparks from hot metal. From our morning appointment in Moses' office, he took me home for lunch — a remarkable gesture from an European-born man — and we talked all the rest of that day."

Moses helped Schiff plan a book called "Voice and Opera," for which Schiff was going to begin research into the effects of hormones on certain tissues.

Moses died before the project could be completed, but Schiff was able to go to Copenhagen as a National Research Fellow. There, in the Connective Tissue Laboratory, he began his hormone research and it has steered him into some rare paths.

Schiff describes how sopranos, during their menstrual periods, typically lose the top three or four notes of their vocal range. Just as the body tissues tend to retain water at this time, so does the connective tissue in the larynx. "This fact is so well known," Schiff says, "that in European opera houses, sopranos are given two or three 'courtesy' days off each month."

Thus, when a soprano came to Schiff, concerned that an important debut she was to make in five months was scheduled at a poor time for her, he devised a 20th-century update of witch's brew. He put her on the pill, altering her normal cycle, and withdrew the estrogens after her flawless debut.

Normally, Schiff is called in when laryngitis strikes. These calls are always dire emergencies, 11th-hour catastrophes. Besides temporarily disabling a singer, such attacks have grave emotional overtones.

"Working with singers requires time, sympathy, and concern," he says.

[HN00A7][GDrive]

1993 - Passing ?

https://www.findmypast.com/transcript?id=US%2FMCV%2F786204%2F10968454163202235737

Record Transcription:
California, Death Record Index, 1940-1997

First name(s)	Maurice
Last name	Schiff
Sex	Male
Birth date	12/20/1917
Birth place	Massachusetts
Year	1993
Death date	11/29/1993
Death place	San Diego
State	California
Country	United States
Father's last name	-
Mother's last name	Frank
Record set	California, Death Record Index, 1940-1997
Category	Birth, Marriage & Death (Parish Registers)
Subcategory	Civil Deaths & Burials
Collections from	Americas, United States

2008 - Passing of older brother George W Schiff

Note - Mauirce Schiff must have passed before 2008

https://www.newspapers.com/image/444392009/?terms=%22maurice%2Bschiff%22

ON GLOBE

DEATHS

SCHIFF, George W.—Of Waltham, April 5, 2008. Husband of Vera B. (Olivieri). Father of George W. Schiff, Jr. and his wife, Teresa, of Stamford, CT, Janet L. Rogan and her husband, Rick, of Mansfield and David L. Schiff and his wife, Jean, of Bolton. Grandfather of Daniel Rogan. Brother of Robert Schiff of St. Joseph, IL and the late Maurice Schiff. Also survived by many nieces and nephews. Relatives and friends are invited to attend the Funeral at 9:30 a.m. Thursday from The Joyce Funeral Home, 245 Main Street (Rte. 20), WALTHAM, followed by a Funeral Mass in Saint Jude Church, 147 Main Street, Waltham, at 10:30 a.m. Visiting hours Wednesday 4-8 p.m. For complete obituary, guest book and directions please visit www.joycefuneralhome.com

OTHER REFERENCES

http://worldcat.org/identities/lccn-n50066038/

1958

https://jamanetwork.com/journals/jamaotolaryngology/article-abstract/598221

https://www.newspapers.com/image/444392009/?terms=%22maurice%2Bschiff%22

https://books.google.com/books?id=V6hMAQAAIAAJ&pg=PA490&lpg=PA490&dq=captain+maurice+schiff&source=bl&ots=BiqBJyoOUx&sig=ACfU3U0UammoMIRS0h5IEwIE67bRRpuybg&hl=en&sa=X&ved=2ahUKEwjN9rS3wODnAhVhYTUKHVPMC-IQ6AEwBHoECAsQAQ#v=onepage&q=captain%20maurice%20schiff&f=false

BITCHUTE @Housatonic YOUTUBE @HousatonicLive ODYSEE @Housatonic BRIGHTEON @Housatonic

Housatonic

Edward Maurice Schiff (born 1928)

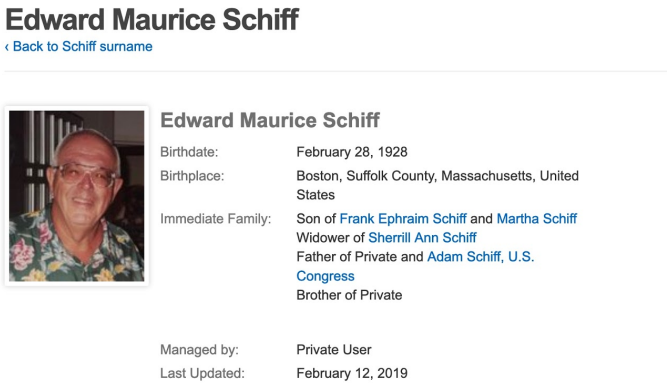
Birthdate: February 28, 1928 (see [HL0010][GDrive])

Parents - Father is Frank Ephraim Schiff - Mother is Marha Schiff

Children - Adam Bennett Schiff (born 1960) (married to Eve Sanderson Schiff (born 1962))

Other relationships:

Uncle is Lt. Captain Maurice Schiff MD (born 1917)



[HL0011][GDrive]

1930 US Census - Boston

Father goes by "Frank J. Schiff" at this time

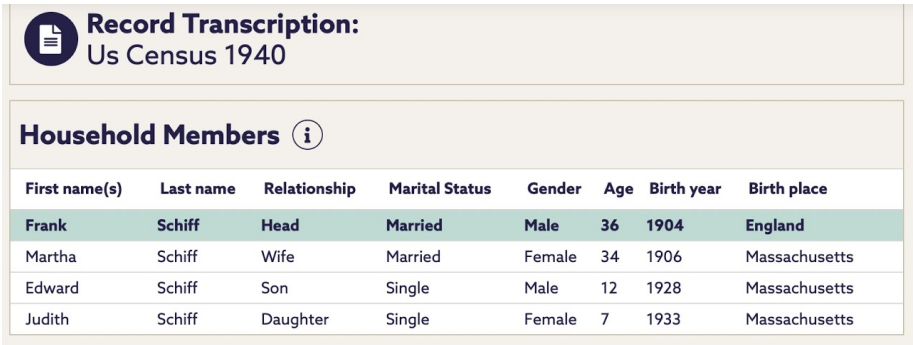
Full Transcript - https://www.findmypast.com/transcript?id=USC%2F1930%2F004950018%2F00195%2F015

1940 US Census - Boston

Father Frank E. Schiff is a Pharmacist

Full form - [HL0012][GDrive]

Transcript - [HL0013][GDrive]



Record Transcription:
Us Census 1940

Household Members

First name(s)	Last name	Relationship	Marital Status	Gender	Age	Birth year	Birth place
Frank	Schiff	Head	Married	Male	36	1904	England
Martha	Schiff	Wife	Married	Female	34	1906	Massachusetts
Edward	Schiff	Son	Single	Male	12	1928	Massachusetts
Judith	Schiff	Daughter	Single	Female	7	1933	Massachusetts

[HL0014][GDrive]

1946 (Oct) - Enlistment for service (before Univ. of Alabma)

See https://www.lamag.com/mag-features/adam-schiff-impeachment/

"[...] Ed [Schiff] served in the Army just after World War II and graduated from the University of Alabama before launching a career as a traveling salesman "in what he called the schmatta business, the rag business,"

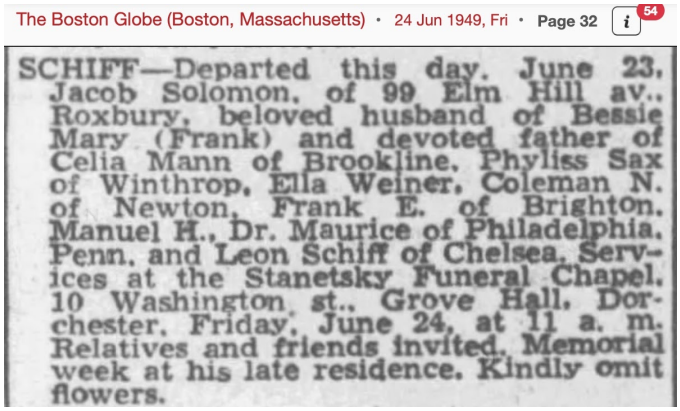
Record Transcription:
World War Ii Army Enlistment Records

First name(s)	Edward M
Last name	Schiff
Race	White
Birth year	1928
Birth state	Massachusetts
Marital status	Single, without dependents
Enlistment year	1946
Enlistment month	Oct
Enlistment day	02
Enlistment place	Ft Banks Boston Massachusetts
Enlistment term	Enlistment for the duration of the War or other emergency, plus six months, subject to the discretion of the President or otherwise according to law
Branch	No Branch Assignment
Grade	Private
Soldier Number	31522791
Education	Fourth Year of High School
Resident county	-
Resident state	Massachusetts
Country	United States
Source	Civil Life
Record set	World War Ii Army Enlistment Records
Category	Military Service & Conflict
Subcategory	Second World War
Collections from	Americas, United States

[HG000T][GDrive]

1949 (June 24) - Grandfather Jacob Schiff passes

Full page : [HN00AM][GDrive]

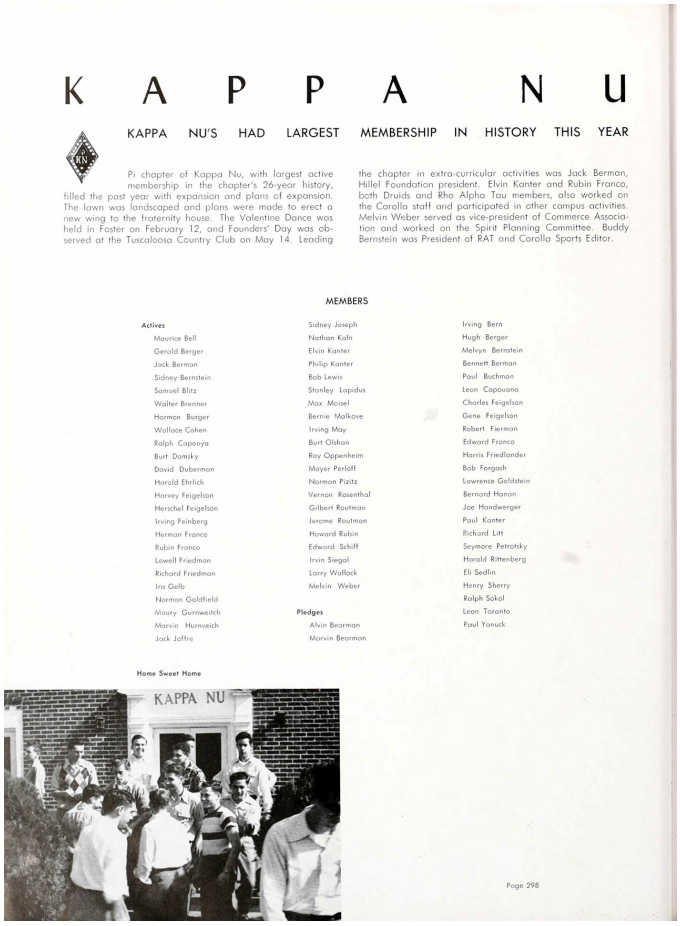

The Boston Globe (Boston, Massachusetts) · 24 Jun 1949, Fri · Page 32

SCHIFF—Departed this day, June 23, Jacob Solomon, of 99 Elm Hill av., Roxbury, beloved husband of Bessie Mary (Frank) and devoted father of Celia Mann of Brookline, Phyliss Sax of Winthrop, Ella Weiner, Coleman N. of Newton, Frank E. of Brighton, Manuel H., Dr. Maurice of Philadelphia, Penn, and Leon Schiff of Chelsea. Services at the Stanetsky Funeral Chapel, 10 Washington st., Grove Hall, Dorchester, Friday, June 24, at 11 a. m. Relatives and friends invited. Memorial week at his late residence. Kindly omit flowers.

[HN00AN][GDrive]

1949 - University of Alabama

Edward Schiff lived in Tuscaloosa, Alabama, USA, in 1949.



K A P P A N U

KAPPA NU'S HAD LARGEST MEMBERSHIP IN HISTORY THIS YEAR

Pi chapter of Kappa Nu, with largest active membership in the chapter's 26-year history, filled the past year with expansion and plans of expansion. The lawn was landscaped and plans were made to erect a new wing to the fraternity house. The Valentine Dance was held in Foster on February 12, and Founders' Day was observed at the Tuscaloosa Country Club on May 14. Leading the chapter in extra-curricular activities was Jack Berman, Hillel Foundation president. Elvin Kanter and Rubin Franco, both Druids and Rho Alpha Tau members, also worked on the Corolla staff and participated in other campus activities. Melvin Weber served as vice-president of Commerce Association and worked on the Spirit Planning Committee. Buddy Bernstein was President of RAT and Corolla Sports Editor.

MEMBERS

Actives

Maurice Bell
Gerald Berger
Jack Berman
Sidney Bernstein
Samuel Blitz
Walter Bronner
Harmon Burger
Wallace Cohen
Ralph Capouya
Burt Domsky
David Duberman
Harold Ehrlich
Harvey Feigelson
Herschel Feigelson
Irving Feinberg
Herman Franco
Rubin Franco
Lowell Friedman
Richard Friedman
Ira Gelb
Norman Goldfield
Maury Gurnweitch
Marvin Hurnveich
Jack Joffre
Sidney Joseph
Nathan Koln
Elvin Kanter
Philip Kanter
Bob Lewis
Stanley Lapidus
Max Meisel
Bernie Malkove
Irving May
Burt Olshan
Roy Oppenheim
Mayer Perloff
Norman Pizitz
Vernon Rosenthal
Gilbert Routman
Jerome Routman
Howard Rubin
Edward Schiff
Irvin Siegal
Larry Wallack
Melvin Weber

Pledges

Alvin Bearman
Marvin Bearman
Irving Bern
Hugh Berger
Melvyn Bernstein
Bennett Berman
Paul Buchman
Leon Capovano
Charles Feigelson
Gene Feigelson
Robert Fierman
Edward Franco
Harris Friedlander
Bob Forgash
Lawrence Goldstein
Bernard Hanon
Joe Handwerger
Paul Kanter
Richard Litt
Seymore Petrotsky
Harold Rittenberg
Eli Sedlin
Henry Sherry
Ralph Sokol
Leon Toronto
Paul Yanuck

Home Sweet Home

Page 298

[https://www.ancestry.ca/sharing/19216266?h=3a6fc9][1949-ancestry-com-univ-of-alabama-yrbook-pg-w-edward-schiff-31916-b031356-00304.jpg]

1955 (Nov) - Schiff-Glovsky engagement

Full page : [HN009P][GDrive]

Engagements

SHERRILL A. GLOVSKY

1955-11-10-the-north-adams-transcript-pg-7-clip-glovsky

SHERRILL A. GLOVSKY

Miss Sherrill Glovsky To Marry Brighton Man

Atty. and Mrs. Harry Arthur Glovsky of 525 Church street have announced the engagement of their daughter, Miss Sherrill Ann Glovsky, to Edward Maurice Schiff, son of Mr. and Mrs. Frank Ephraim Schiff of Brighton.

Miss Glovsky attended the University of Massachusetts and was graduated from the Boston university School of Public Relations and Communications. She is a copywriter at the Salinger Advertising agency in Boston.

Prior to attending the University of Alabama, Mr. Schiff was an information and education instructor in the Armed Forces. He presently is a manufacturer's representative for two West Coast concerns.

[HN009Q][GDrive]

1956 (May 28) - Schiff-Glovsky wedding

Full page : [HN009N][GDrive]

Schiff-Glovsky

Miss Sherrill Ann Glovsky of 1662 Commonwealth avenue, Brighton, daughter of Atty. and Mrs. Harry Arthur Glovsky of 525 Church street, became the bride of Edward Maurice Schiff, son of Mr. and Mrs. Frank Ephraim Schiff of 44 Greycliff road, Brighton, Saturday evening in Beacon house, Brookline. Rabbi Samuel Perlman officiated.

Matron of Honor

The bride had Mrs. Milton Sokoll, a sister of the bridegroom, as matron of honor and Miss Phyllis Weis of Providence, R. I., a former roommate at Boston university, as maid of honor. Mr. Sokoll served as best man for his brother-in-law, and Harvey Gold and Bernard Goldman of Brighton, friends of the couple, Burton Glovsky, the bride's brother, Robert Belson of Brookline, the bridegroom's cousin, Leon Schiff of Winthrop, uncle of the bridegroom, and Morton Schiff of Jamaica Plain, a cousin of the bridegroom were the ushers.

1956-05-28-the-north-adams-transcript-pg-8-clip-schiff-glovsky

The wedding music was provided by Lou Carter and his orchestra.

The bride, escorted by her father, wore a traditional wedding gown of ivory tulle and Alencon lace. It was fashioned with a fitted bodice and full skirt. She had a veil of illusion net and carried a Bible trimmed with white orchids and stephanotis.

The attendants were dressed in bouffant gowns in blue and carried old-fashioned bouquets.

Prior to Ceremony

The wedding reception at Beacon house was held at 6:30 o'clock prior to the ceremony.

The bride is employed as a copy writter and the bridegroom is a sales representative.

Following a wedding trip to Florida, Mr. and Mrs. Schiff will reside in Brighton.

Local residents who attended the wedding were Mr. and Mrs. Harry Melcher, Dr. and Mrs. Arthur Rosenthal, Mr. and Mrs. Leon H. Weiner of Williamstown, Mr. and Mrs. Isadore Shapiro, Mr. and Mrs. Samuel Hirsh, Mrs. Joseph Shapiro, Mr. and Mrs. Eli Shapiro, Mr. and Mrs. Maurice Shapiro, Mr. and Mrs. Harry Hertz, Mr. and Mrs. Samuel Goldstein, Mr. and Mrs. S. Kronick, Mr. and Mrs. Jason Kerson, Miss Jane Rosenthal and Miss Frances Kaplan.

[HN009O][GDrive]

1958 - Son Daniel is born

https://www.newspapers.com/image/545379467/?terms=%22Frank%2BSchiff%22

1960s - Framingham, MA

See : [HN00AO][GDrive]

Historical records kept at the Framingham Public Library show that the Schiff family moved from Brighton [Massachusetts] to Framingham in 1958, two years before [Adam] Schiff was born.

The family settled in to a three-bedroom home on Bradford Road that was built the year they moved in.

Between 1958 and 1960, the year [Adam] Schiff was born, [Adam] Schiff's father Edward listed his occupation as a salesman in city records. In 1961, Edward began working for Adam Hats, a company that manufactured and sold budget-priced hats ranging from fedoras to pork pies. His mother Sherrill was listed as working in the home.

The Bradford Road house, now painted white with yellow trim, is shaded by an expansive tree and a hedge divides the yard from the quiet street.

In 1966, the family moved into a four-bedroom at the end of the Wildewood Terrace cul-de-sac. The next year, Edward Schiff listed his occupation as self-employed in city records. [...]

The last year the Schiff family was listed in city records was 1969. His family then left for the West when Adam [Schiff] was 9 years old.

1968 (Jan 10) - Passing of father (Frank Ephriam Schiff)

Full page - [HN009W][GDrive]

Edward Schiff - Still in Framingham

SCHIFF — Departed Jan. 9, Frank Ephriam, of 211 Lakeshore rd., Brighton. Beloved husband of Martha (Sneirson). Devoted father of Mrs. Judith Sokoll of Fairfield, Ct.; Edward Schiff of Framingham. Dear brother of Coleman Nathan Schiff of Newton, Dr. Maurice Schiff of LaJolla, Calif.; Henry Schiff of Sarasota, Fla.; Leon Schiff of Winthrop, Mrs. Celia Mann of Brighton, Mrs. Phyllis Sax of Marblehead and Mrs. Ella Weiner of Waltham. Also survived by four grandchildren. Services at the Stanetsky Memorial Chapels, 1668 Beacon st., Brookline, Thursday, Jan. 11, at 12 noon. Memorial week will be observed at his late residence through Sunday evening. Expressions of sympathy may be donated in his memory to the Bessie and Jacob S. Shiff Scholarship Fund, care of the New England Hebrew Academy, Seaver st., Roxbury.

1968-01-10-the-boston-globe-pg-47-clip-schiff

[HN009X][GDrive]

1972 - Farah's

Full page : [HN009L][GDrive]

EL PASO HERALD-POST
Wednesday, September 27, 1972

FARAH'S SALES EXECS—More than 250 salesmen and sales executives of Farah Manufacturing Co. gathered in El Paso for a week-long view of the new Spring line of men's and boy's slacks being produced by all nine of the Farah Texas and New Mexico factories. Regional sales executives are from left, front row: George Martine, Chicago, Midwest Regional sales director; Richard Thomasino, Reston, Va., Regional sales director; Benjamin C. Dawkins, Houston, Regional sales director; Jack R. Sheets, El Paso, national sales manager; Wilbert W. Maloney, Lebanon, Pa., Northeast District sales manager; Leo A. Alvarez, Columbus, Ohio, Regional sales director, and Joseph G. Paglia, Boston, Northeast Regional sales director. Back row, Denis J. Baumgartner, New Orleans, District sales manager; Bill Lawson, La Mesa, Cal., Pacific sales director; William P. Hamilton, Kansas City, Mo., Regional sales director; Edward M. Schiff, San Francisco, West Coast Regional sales director; Charles Cantrell, Atlanta, Southeast Regional sales director; Herbert D. Niemeier, Baltimore, Atlantic sales director, and Leonard J. McMahan, Boston, Northeast District sales manager.

[HN009M][GDrive]

1974 (Feb 09) - Transfer of ownership lumber/construction yard

https://www.newspapers.com/image/564279868/?terms=%22Edward%2BM%2BSchiff%22

1974 (July 26)

Full page : [HN00AC][GDrive]

How to avoid newcomer blues

—Examiner photo by Bob McLeod

By Bea Pixa

With a bit of tenacity and a genuine desire to be friendly, a person can finally feel at home in a new community. Aggressiveness did the trick for Sherry Schiff, now a successful transplant to the East Bay suburb of Alamo.

Sherry's husband was posted to California three years ago as sales manager for a corporation. Before that the family had been moved to Arizona. Change is hardest on the wife, Sherry maintains. "Your husband has his job. Children meet other children in school. It's up to the wife to make friends. You just have to be aggressive and get across the message: 'I'm here, I'm interesting, and you'd like to know me.'".

Woe to the woman who isn't a joiner, she warns. "You have to belong to an organization—the PTA, a newcomers' club, church groups, Weight Watchers — anything. If you sit in your house, no one will come to the door."

She also recommends a certain fearlessness about making the first move. "If I meet a woman I like, I'll suggest getting together with the husbands."

Mother of two sons, 14 and 15, Sherry, a former advertising copywriter who is probably years older than she looks, shrewdly prefers to keep her age a secret. She lived in Framingham, Mass. among her family and friends for 13 years and "was completely happy," but viewed her husband's first transfer as "an adventure."

The cross country trip brought her first brush with the harsher realities of relocating. One son, a collector of tropical fish, had to have all his specimens packed in plastic bags and styrofoam. Later, when all the furnishings were unpacked Sherry wailed that the movers gave "more care to the toilet brush than my crystal." She also laments that only when the house was fixed up to be sold, did she finally get her husband to make all the repairs she wanted done while they were living in it.

Then, she reports, once she was in her new home, "My husband went off to work, and I was left with no friends, and no family. I said to myself, 'I must have been out of my mind to want this.'"

Her loneliness, she reports, became oppressive. "I'd talk to strangers—anyone who looked interesting." Hearing the telephone ring, she recalls, "was a thrill. Even if it was the wrong number, I'd try to get a conversation going."

After a year and a half in Arizona the fateful words came again: "I've been transferred." This time, it was to California, where, feeling an old hand at assimilating, Sherry has fit in happily after about six months of concentrated effort. The move, however, will be permanent, since her husband has recently gone out of my way to be ply business for himself.

The trauma of uprooting started Sherry talking to other women who shared the experience, and she has condensed her impressions into a humorous, illustrated booklet, "Good Grief We've Been Transferred" (Door Harbor Press).

Some of her old friends, she giggles, would be shocked to learn that their meeting was not just happenstance, but the result of calculated strategy. At a PTA meeting, for instance, Sherry says she would scan the crowd and rush for a seat next to people who looked appealing.

"You have to work at it. If you show an interest in people, they'll want to know you." She says she has become especially aware of the plight of the newcomer through her own ordeals. "When I went back east to visit, I apologized to one girl who had moved into the community when I was there, because I hadn't gone out of may way to be friendly with her."

Moving has also taught her that it's best to try out a neighborhood before buying a home. In Alamo, they decided to rent before building their present house, to get a clearer impression of the area.

Aside from the difficulty of finding new friends, Sherry thinks the most frustrating experiences are locating a suitable doctor, dentist and beauty parlor — "not necessarily in that order."

[HN00AD][GDrive]

1974 (Oct 06)

Two pages :

- [HN00AI][GDrive]
- [HN00AK][GDrive]

Tribune photo by KEITH DENNISON

Bette Stewart, sales manager for a Concord van line, finds the high cost of living reflected in a slowdown in the moving industry, as families are reluctant to take on increased home payments

Revolt of the Company Wives

By JOAN McKINNEY
Tribune Staff Writer

America's corporate structure has come under fire for quite a few things in the past decade. Not the least of these is the disruption of family life caused by company-ordered transfers.

There are more than two-and-a-half million such moves a year, according to the estimates of one moving company, and author Vance Packard, exploring the phenomenon of mobility in America in "A Nation of Strangers," claimed that it contributed to, if it did not cause "a nation that is coming apart at the seams."

But for years it has been a fact of life. The young man who joined a large corporation, if he wanted to get ahead, had to be prepared to pick up wife, family and household goods on demand and move wherever the firm dictated. He was, in effect, little better off than the ballplayer who can be traded at his club owner's whim.

And, until recently, anyway, it would never have occurred to a dutiful wife that there was any alternative.

Some may have hated it, like the Fremont woman who claims that she still cries every time she sees a moving van in front of a house. Others, perhaps with a little gypsy in their souls, have enjoyed the nomadic life. And probably quite a few, like Sherry (Mrs. Edward) Schiff of Alamo, welcomed the first transfer as an adventure, found it instead to be a trauma.

And more and more they are saying "no more."

Continued on Page 15, Col. 1

[HN00AJ][GDrive]

The Corporate Wives' Revolt

WOMAN TODAY
Oakland Tribune Sun., Oct. 6, 1974 15

Continued from Page 12

The Schiffs spent the first 13 years of their marriage in their native Massachusetts, were transferred by the national menswear firm for which he worked to Scottsdale, Ariz., for two years, then to the Bay Area. They've "settled" here, building a traditional, white-portioned New England manor-type house among the shingled ranch-moderns in the Round Hill Country Club area.

"I guess I just had to have a little bit of home," said Sherry, surveying her sunken living room and dark-paneled den with pride.

But "home" is now definitely California, she indicated. "We had been in this house six months when the company called, asking my husband to transfer back to New York. We had a man in hanging curtains that day, and I said 'at least wait until the curtains are up.' This time Ed turned the company down."

The first departure from the former norm was that this refusal didn't cost Schiff his sales manager's job. However, like a number of company men who have tired of the cross-country shuttle, he decided instead to go into business for himself, and now sells building supplies in Valley.

Sherry, who has a background in advertising copywriting, decided to put her experiences to good use by writing a helpful booklet for other moving mothers. Entitled "Good Grief, We've Been Transferred," it is illustrated by Chris Bancroft of Concord and published by Door Harbor Press in Alamo. It chronicles the agonies of her first transfer to Arizona.

"The first move is very traumatic," said the sprightly Mrs. Schiff, who has two sons, Daniel, now 16, and Adam, 14. "I am the only person I know who was excited about the first transfer, but when I got to Arizona, I was miserable.

"We made a lot of mistakes, too. First, my husband bought a house without me and, of course, I hated it. So I ran right out and found another that I liked. Ed fell in love with it too—it was a magnificent home—but unfortunately it was the best one in the area. That meant that the schools were not as good as they might be, and when it came time to sell it was not so easy.

"When he was transferred here, my husband called me and said 'I have found this terrific area,' and I said 'don't buy, let's rent first and see how we like it.' That's what we did, and three months later we knew we wanted to build our own home here."

Though obviously no "libber" herself, she does credit the women's movement with having a lot to do with what appears to be a current slowdown in transfers.

"A wife is more concerned with her own needs than she used to be," Sherry said, "particularly if she has a job herself. She is more likely to say 'I won't go,' and husbands are more likely to sit down and discuss the pros and cons with the family. The personnel manager of an engineering firm told me that men were turning down jobs that involved transfers more often, and that companies think twice now before asking them to move."

The high cost of living has as much, if not more to do with it, in the opinion of Bette Stewart, sales manager for Campbell Moving Co., North American Van Lines' agent in Concord.

"During the summer months in the moving industry everything usually goes very quickly," said Bette, one of few women to hold such a job. "Just as soon as school is out, everyone uproots the family and goes.

Smart firms that really want their men to transfer, she noted, are offering added inducements. For instance, "This year more than ever before we are shipping cars right inside vans with the furniture. People don't want to drive their cars and spend so much on gasoline."

Now, said Mrs. Stewart, "the people who are moving for the most part are those whose companies are paying top dollar to get them to move. They can offer to arrange for the sale of their homes."

This is done through what is called "relocation" companies, such as Trans-American Relocation Services, Inc., headquartered in the Pyramid in San Francisco. Giaro Schuman, assistant director of marketing, explained how it works.

"A third party service firm, such as ours, enters into a contract with the corporation to take over the home of the transferred employe," he said.

After appraising the home, a fair market value is established and offered to the employee. If he accepts, the relocation company gives him an advance on his equity, then takes over the business of selling the house.

Extra charges, such as brokers' fees, closing costs, termite inspections etc., may be borne by the corporation, which also makes up any difference between the price offered and a possible lower selling price.

How does this help the man who is faced with higher mortgage costs in another area?

"Sometimes the corporation will arrange loans and credits," said Schuman, "even making the loans themselves, and paying discount points, if any."

Schuman questions that there is a moving slow-down, at least in this area. "Some areas have nothing going on because there is just no money," he said, "but in others people find it and buy homes in spite of high interest rates. We are having our best year yet."

TransAmerica, like other relocation companies, will contract with corporations for all their moves, charging 10 to 15 per cent of the appraised value of each home sold. And, he noted, "if they have as many moves as, say, Texaco, which has 500 in a year, and the average home value is $40,000, that adds up to quite a bit of change—say two million dollars." Because of this high cost, he added, some companies are developing their own programs to handle moving expenses.

Kaiser Industries in Oakland, according to Art Handy, manager of compensation and program design (an interesting title), assumes all expenses in moving families. And the transferee is generally paid the full fair market value of his house, though sometimes the payment is only 90 per cent.

Handy admitted that high interest rates do cause some problems for the man who is transferred, and might be a factor in his decision to accept such transfer, but claimed to know of no case where the transfer was refused because of this.

The company does not, however, pay the difference in decimal points between mortgages and, according to another former employe, while it will pay closing costs for sale or purchase of a house, it will not foot the bill for the broker's fee, which is by far the greatest expenditure.

In spite of this, Handy at least claims that there is no lessening of transfers.

Why are they necessary? For career advancement, naturally, one staffer indicated, and "because the specific ability of a certain man may be needed for a certain plant."

While Dr. Lewis E. Albright, director of organization and management for Kaiser Aluminum and Chemical Corporation claimed, in a 1973 speech in Chicago, that "the opportunity to take on a different or broader assignment is what motivates" some employes, very little concern appears to have been shown by any large company about the problems of the wives and families who do not have such motivation.

As the wife in Sherry Schiff's book says to her husband: "At least you've met some people at work . . . but what about me?"

What, indeed. It's a question that more and more women may be asking in the years to come. And men, too. Author Daniel Tzeer poses the problem effectively in the current issue of Forum magazine, in an article entitled "Is This Trip Necessary? The Heavy Human Costs of Moving Executives Around."

"I would like to suggest," he writes, "that an important consequence of the corporate commitment to moving managers around is that their wives and children are deprived of the fundamental human requirement of social continuity and personal stability; that the managers are debarred from becoming effective members of the communities in which they find themselves; and that by forcing people to adapt to the company's scheme, rather than adapting the company to the people who work in it, American business is disenchanting the sons and daughters of its own executives, and in some degree impairing the potential effectiveness of the executives themselves.

It bears thinking about.

Tribune photo by HOWARD EKER

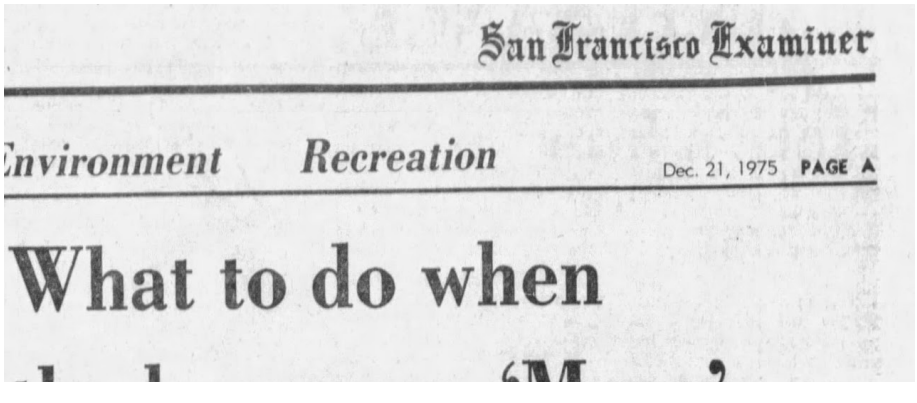
Mrs. Edward Schiff and her husband brought a bit of New England to Contra Costa

[HN00AL][GDrive]

1975 (Dec 21)

Sherry Schiff

Full page : [HN00AE][GDrive]



San Francisco Examiner

Environment Recreation Dec. 21, 1975 PAGE A

What to do when

the boss says: 'Move'

By Larry Maatz

"Good Grief, we've been transferred."

That's the reaction of many of us when we get news that our jobs are going to take us across the country to a new home, new schools, new neighborhoods, new friends.

It's also the title of a new book by Alamo's Sherry Schiff, relocation consultant for the John M. Grubb Company, east bay realtors.

Sherry, a vivacious, brown-eyed mother of two teenaged boys, got into the field as the result of her own experiences.

"I viewed our first transfer as a tremendous adventure," she says. "I was all excited about the idea. But as soon as we arrived, my husband went out of town. I was all alone, no family, no friends, no hairdresser. I was lonesome, at loose ends. Even though I tried to be a good sport, there were few days that went by when I wasn't close to tears.

"The children missed their family and friends, particularly during the bolidays. Somehow, Thanksgiving isn't the same when you order a turkey for four."

A native of North Adams, Massachusetts and a graduate of Boston University, Sherry first worked with Boston's educational television station, then moved on to advertising copy writing for a few years before marrying, settling down and starting a family in Framingham. Massachusetts.

"We'd lived in Framingham for thirteen years when we got word of the transfer — our first — to Scottsdale, Arizona, she says. "My husband moved out first, while I stayed behind to sell the house and clear up the loose ends. Then, two years later, just as we were getting settled again, we were transferred, this time to the Bay Area."

The Schiffs are not alone.

A study by the United States Census Bureau shows that almost half — 48.5 per cent — of all Americans five years old and over have changed their residence in the last five years. (Comparable rates are 12 per cent in Europe, 6 per cent in Japan.

Nor is the John Grubb Company alone in recognizing the commercial possibilities of a relocation consultant. Fifteen years ago, a dozen or so U. S. Realtors founded the Inter-City Referral Service, a non-profit organization aimed at easing the pain of inter-city transfers.The commercial possibilities of the service were not ignored, to be sure, but the service has proven to be a popular attraction to the participating Realtors. Other major realty companies such as the Bay Area's Grubb and Ellis Company provide their own relocation services, focussing, in the latter case, on solving the problems of inter-city and cross-country corporate transfers — seeing to the selling of one home and the buying of another.

Sherry's interest, however, is less in easing the pain and problems of departure, than in facilitating the re-entry.

Sherry Schiff: "You've got to get the message across: 'I'm here, I'm interesting, and you ought to get to know me.'"

expensive house in the neighborhood."

It was these problems, and others, that led her to write her current book, a 40-page, cartoon-illustrated pamphlet (Door Harbor Press, Alamo, California, $2.50), as well as get her into the consulting side of the business with the John Grubb Company.

"I wan't to be able to work with newcomers from the outset, " she says. "If I know they their needs, I can make reccomendations as to area, neighborhoods, social organizations.

"If they're new to the area they're going to be unfamiliar with commuting patterns, times and costs, and they're not going to be aware of the wide variety of weather conditions in the area here.

"They're not going to be familiar with schools, churches, synagogues. But if I, or others like me, can get involved at the beginning, we can help them maximize their housing dollar — allocate it to their best advantage."

In the meantime, she has some advice for newly arrived wives.

"You've got to get involved in the new community even before the bags are unpacked," she says, "and you've got to get your family involved as well. Search out the possibilities for your children — Boy Scouts, Brownies, soccer leagues. And don't forget your own interests. Check into bridge clubs, join the PTA immediately, even if only to meet the people in your neighborhood.

"Be agressive — seek out every opportunity you can to meet people you might enjoy. The more people you meet, the more likely you you are to find those individuals who might become your friends .

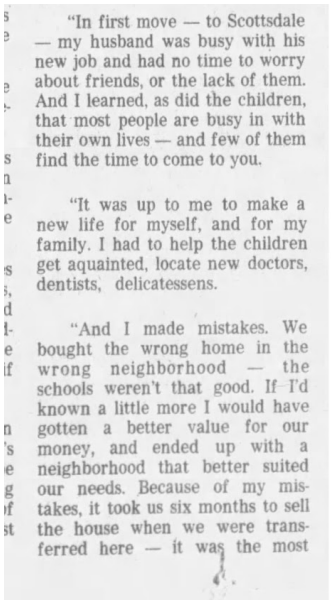
"I used to think that a woman who got up in front of a PTA meeting was brave — agressive — but they're not, they're just recognizing that people are out there waiting to be met.

"You can do a lot of things on your own — getting together with those families of friends that you meet in civic activities, starting up a social life. Remember, you're going to have to build a whole new one from scratch.

"But the key to the whole process is you. You've got to get the message across: 'I'm here, I'm interesting, and you ought tc get to know me.'

"Join the newcomers clubs, there are bound to be some in your new area; join an art or craft group, take bridge lessons. Could a few trips to Weight Watcher's do your a shape some good? Get involved in little theater, the symphony association, historical societies, the League of Woman Voters.

"With a little effort, you may find yourself pursuing interests that you never knew you had — the transfer to a new town, new schools, new people, may have been the best thing that ever happened to you."



"In first move — to Scottsdale — my husband was busy with his new job and had no time to worry about friends, or the lack of them. And I learned, as did the children, that most people are busy in with their own lives — and few of them find the time to come to you.

"It was up to me to make a new life for myself, and for my family. I had to help the children get aquainted, locate new doctors, dentists, delicatessens.

"And I made mistakes. We bought the wrong home in the wrong neighborhood — the schools weren't that good. If I'd known a little more I would have gotten a better value for our money, and ended up with a neighborhood that better suited our needs. Because of my mistakes, it took us six months to sell the house when we were transferred here — it was the most

[HN00AF][GDrive]

1977 (Jan) - Building permit

https://www.newspapers.com/image/563777156/?terms=%22Edward%2BM%2BSchiff%22

https://www.newspapers.com/image/295583135/?terms=%22Edward%2BSchiff%22

https://newspaperarchive.com/vallejo-times-herald-feb-01-1977-p-15/

1977 (April 25)

Full Page - [HN00AG][GDrive]

Hughes Plywood In New Building

AMERICAN CANYON—There is a new location here for an old but expanding business.

Hughes Plywood, formerly located at 4225 Broadway, has moved to a new building at 4711 Napa-Vallejo Highway (at Lombard Crossing on the west side of Highway 29 half way between Napa and Vallejo).

The building supply company has doubled its staff from two to four persons, more than doubled the size of its operation to a total of two acres, has expanded inventory and added a new truck for a mobile cement "batching" service.

The "automated batch plant on wheels" allows the company to mix fresh cement on construction sites in the exact amount needed, noted associate Ed Schiff.

"Our basic business is plywood," he said, "Siding, redwood, redwood fencing, roofing, windows, kitchen cabinets and a huge stock of paneling." In addition, Hughes Plywood, one of eight Hughes stores in the state, has a large stock of doors, fireplaces and other building supplies.

The size of the company allows it to buy large quantities of plywood directly from the mills. This means a large selection at low prices, said Schiff, who runs the local store with associate Charles Morris.

Unlike other building suppliers, who look for the larger jobs, Hughes is different. They want the smaller ones. "Our business as it stands now has been growing and developing primarily with the homeowner and the small contractor," Schiff said.

Hughes Plywood has operated here for a decade.

FRESH CONCRETE mixed at the job site is a new feature offered by Hughes Plywood, now located on Highway 29 at the Lombard railroad crossing. Associate owner Ed Schiff (left), Jim Giggey and associate Charles Morris admire the company's new "concrete-mobile." The building supply company has also doubled its staff with the recent move. (Register photo)

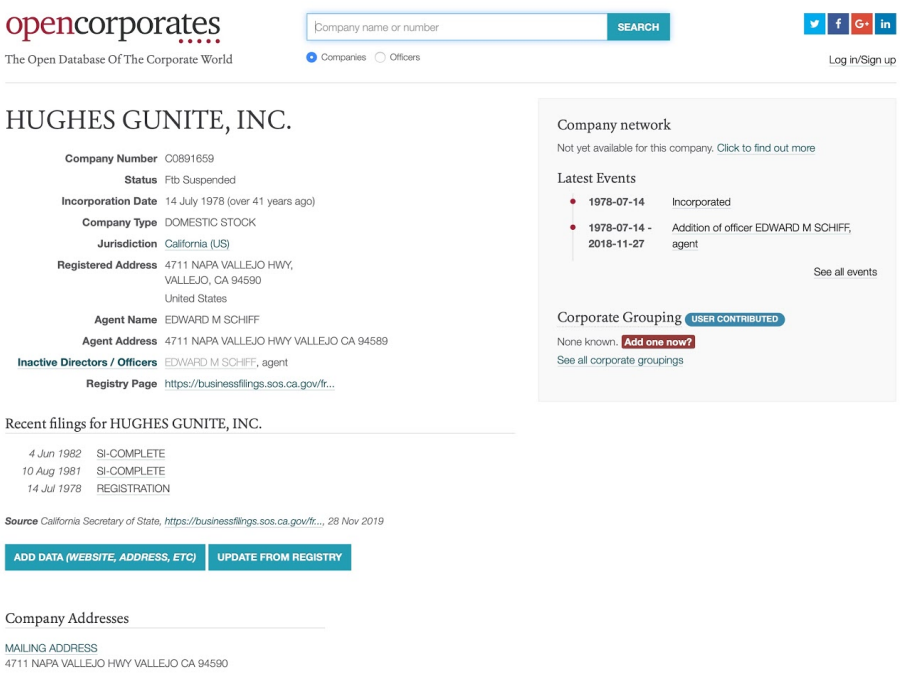
[HN00AH][GDrive]

Corporation - Hughes Gunite, Inc. (1978 - 2016)

https://opencorporates.com/companies/us_ca/C0891659

2020-02-opencorporates-com-companies-us-ca-c0891659.pdf

2020-02-opencorporates-com-companies-us-ca-c0891659-clip1.jpg



opencorporates
The Open Database Of The Corporate World

Company name or number SEARCH
Companies Officers
Log in/Sign up

HUGHES GUNITE, INC.

Company Number	C0891659
Status	Ftb Suspended
Incorporation Date	14 July 1978 (over 41 years ago)
Company Type	DOMESTIC STOCK
Jurisdiction	California (US)
Registered Address	4711 NAPA VALLEJO HWY, VALLEJO, CA 94590 United States
Agent Name	EDWARD M SCHIFF
Agent Address	4711 NAPA VALLEJO HWY VALLEJO CA 94589
Inactive Directors / Officers	EDWARD M SCHIFF, agent
Registry Page	https://businessfilings.sos.ca.gov/fr...

Company network
Not yet available for this company. Click to find out more

Latest Events
- 1978-07-14 Incorporated
- 1978-07-14 - 2018-11-27 Addition of officer EDWARD M SCHIFF, agent

See all events

Corporate Grouping USER CONTRIBUTED
None known. Add one now?
See all corporate groupings

Recent filings for HUGHES GUNITE, INC.

4 Jun 1982	SI-COMPLETE
10 Aug 1981	SI-COMPLETE
14 Jul 1978	REGISTRATION

Source California Secretary of State, https://businessfilings.sos.ca.gov/fr..., 28 Nov 2019

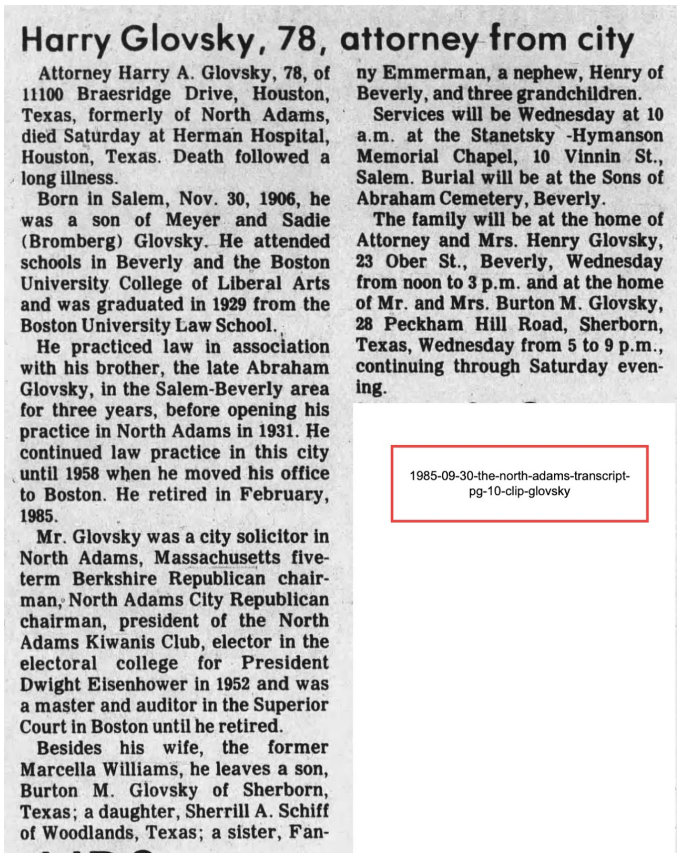
ADD DATA (WEBSITE, ADDRESS, ETC) UPDATE FROM REGISTRY

Company Addresses

MAILING ADDRESS
4711 NAPA VALLEJO HWY VALLEJO CA 94590

1985 (Sep 30) - Maternal grandfather

Full page : [HN009J][GDrive]



Harry Glovsky, 78, attorney from city

Attorney Harry A. Glovsky, 78, of 11100 Braesridge Drive, Houston, Texas, formerly of North Adams, died Saturday at Herman Hospital, Houston, Texas. Death followed a long illness.

Born in Salem, Nov. 30, 1906, he was a son of Meyer and Sadie (Bromberg) Glovsky. He attended schools in Beverly and the Boston University College of Liberal Arts and was graduated in 1929 from the Boston University Law School.

He practiced law in association with his brother, the late Abraham Glovsky, in the Salem-Beverly area for three years, before opening his practice in North Adams in 1931. He continued law practice in this city until 1958 when he moved his office to Boston. He retired in February, 1985.

Mr. Glovsky was a city solicitor in North Adams, Massachusetts five-term Berkshire Republican chairman, North Adams City Republican chairman, president of the North Adams Kiwanis Club, elector in the electoral college for President Dwight Eisenhower in 1952 and was a master and auditor in the Superior Court in Boston until he retired.

Besides his wife, the former Marcella Williams, he leaves a son, Burton M. Glovsky of Sherborn, Texas; a daughter, Sherrill A. Schiff of Woodlands, Texas; a sister, Fanny Emmerman, a nephew, Henry of Beverly, and three grandchildren.

Services will be Wednesday at 10 a.m. at the Stanetsky -Hymanson Memorial Chapel, 10 Vinnin St., Salem. Burial will be at the Sons of Abraham Cemetery, Beverly.

The family will be at the home of Attorney and Mrs. Henry Glovsky, 23 Ober St., Beverly, Wednesday from noon to 3 p.m. and at the home of Mr. and Mrs. Burton M. Glovsky, 28 Peckham Hill Road, Sherborn, Texas, Wednesday from 5 to 9 p.m., continuing through Saturday evening.

1985-09-30-the-north-adams-transcript-pg-10-clip-glovsky

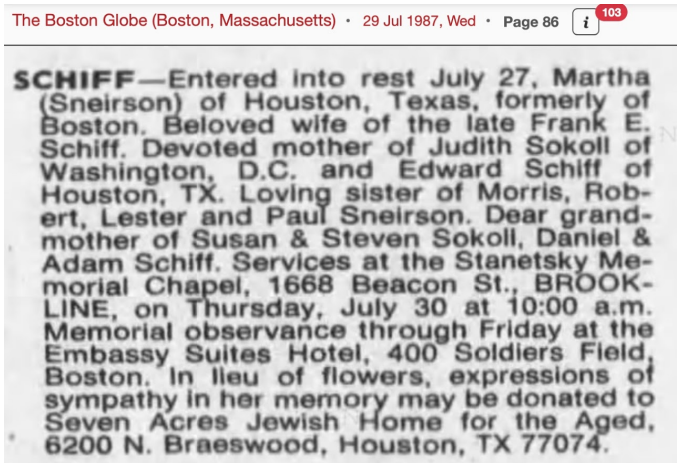
[HN009K][GDrive]

https://www.legacy.com/obituaries/bostonglobe/obituary.aspx?n=burton-michael-glovsky-burt&pid=170416430

GLOVSKY, Burton Michael Burt, 76, died March 5, 2014 after a courageous battle with lung cancer. He was a long-time resident of Lake Worth, Florida. He was born on April 22, 1937, in North Adams, Massachusetts, the son of the late Harry and Marcie Glovsky. Mr. Glovsky was a graduate of Boston University, and prior to moving to Florida, worked as a sales rep for various womens clothing lines. He enjoyed swimming, and spending time with family, friends, and pets. He loved watching football and was an enthusiastic fan of the New England Patriots. Members of his family include his wife of 45 years, Susan Glovsky of Lake Worth, Florida; daughter Lorrie Thomson and her husband, Bill, of Milford, New Hampshire; grandchildren Benjamin, Joshua, and Leah; nephews Adam Schiff, Daniel Schiff, Mark Cohen; and niece Jill Cohen. He was predeceased by his sister Sheryl Schiff. A Service was held on March 7 at the Eternal Light Memorial Gardens in Boynton Beach, FL.

1987 (July 29) - Passing of mother

Full page : [HN008I][hGDrive]



The Boston Globe (Boston, Massachusetts) · 29 Jul 1987, Wed · Page 86 103

SCHIFF—Entered into rest July 27, Martha (Sneirson) of Houston, Texas, formerly of Boston. Beloved wife of the late Frank E. Schiff. Devoted mother of Judith Sokoll of Washington, D.C. and Edward Schiff of Houston, TX. Loving sister of Morris, Robert, Lester and Paul Sneirson. Dear grandmother of Susan & Steven Sokoll, Daniel & Adam Schiff. Services at the Stanetsky Memorial Chapel, 1668 Beacon St., BROOKLINE, on Thursday, July 30 at 10:00 a.m. Memorial observance through Friday at the Embassy Suites Hotel, 400 Soldiers Field, Boston. In lieu of flowers, expressions of sympathy in her memory may be donated to Seven Acres Jewish Home for the Aged, 6200 N. Braeswood, Houston, TX 77074.

[HN008J][GDrive]

Florida company

Source / PDF copy - [HW0010][GDrive]

Edward M Schiff - Boca Raton, FL 33496

Edward M Schiff is a Unclassified business in Boca Raton, FL.

Business Name:	Edward M Schiff
Categorized In:	Unclassified
Address:	[redacted] Drive, Boca Raton, FL 33496
Phone Number:	[redacted] Full Phone Report
Contact Person:	Edward Schiff, Principal Full Name Report
NAICS Code:	5619900
SIC Code:	7389
Business Type:	B2B (Business to Business)
Founding Year:	2006
Employee #:	1 to 4
Location Type:	Single Location
Annual Revenue ($):	$100.000 to $499.999
Share This Business:	
Similar Businesses:	Purple Monkey Scrapbking - Boca Raton, FL 33496 Pat Smith Pressure Cleani - Boca Raton, FL 33496 Joanna Drowos Do Mph P A - Boca Raton, FL 33496 Karen & Co In - Boca Raton, FL 33496 Lorus S Cupo - Boca Raton, FL 33496 Jon L Swergold Pa - Boca Raton, FL 33496 Siltrent LLC - Boca Raton, FL 33496 Zeus Events LLC - Boca Raton, FL 33496 L&S Research Inc - Boca Raton, FL 33496 2245 Corporation - Boca Raton, FL 33496 Selectcommunitiescom Inc - Boca Raton, FL 33496 6201 Corporation - Boca Raton, FL 33496 Lutsky Sandra Florida Ltd Part - Boca Raton, FL 33496 Jacaranda Center LLC - Boca Raton, FL 33496 Socialite Teen - Boca Raton, FL 33496 Fran Losey - Boca Raton, FL 33496 Roni Lipton - Boca Raton, FL 33496 Herbert & Ellen Levitt Fo - Boca Raton, FL 33496 Cai Gold Coast Chapter - Boca Raton, FL 33496 Donald Resnick - Boca Raton, FL 33496

Related Categories
- Unclassified in United States
- Unclassified in Florida
- Unclassified in Boca Raton, FL
- Unclassified in 33496 Boca Raton, FL
- All businesses in Florida State
- All businesses in Boca Raton, FL
- All businesses in 33496 Boca Raton, FL

Edward M Schiff, a stable growing company under Unclassified, is being run by Edward Schiff, Principal Full Name Report. Since , their sales have been favorable and consistent at $100.000 to $499.999. Company location coordinates are: [redacted].

It can be reached by dialing [redacted] Full Phone Report, and you could get in touch with their sales team in [redacted] **Drive, Boca Raton, Florida FL 33496**. Visit their website at: to know more about the company's history, products and services, as well as frequently asked questions and privacy policies.

Special deals are also offered from time to time. Their professional and honest business transactions fortifies both consumers and businesses in their B2B segments.

Their modest but solid single location houses 1 to 4 staff members. All are benefiting from the company's generous programs and sound training solutions.

You can learn more by checking their classification codes: SIC – 7389 and NAIC – 5619900. Call the hotline stated above for faster transaction and queries. Edward M Schiff would like to hear from you.

2008 (July 04)

Full page : [HN00AP][GDrive]

South Florida Sun Sentinel (Fort Lauderdale, Florida) • 04 Jul 2008, Fri • Page 31

Schiff

Schiff, Sherrill Ann, 75, of Boca Raton passed away peacefully on Tuesday, July 2, 2008. She was the beloved wife of Edward for 52 wonderful blessed years. The loving mother of Daniel M. Schiff and U.S. Congressman Adam B. Schiff. Sherry's blessings include her daughters-in-law, Amy Sporer Schiff and Eve Sanderson Schiff. Her grandchildren, Rachel, Frank, Alexandra and Elijah Schiff were the delight of her life. Burton Glovsky of Wellington is her brother. A memorial service will be held on Sunday morning July 6th at 10 AM at the Rubin Memorial Chapel located at 7340 Boynton Beach Blvd., Boynton Beach, FL. Shiva will be held on Sunday, July 6th & Monday, July 9th at the Schiff's home at 2176 NW 62nd Drive, Broken Sound, Boca Raton. Memorial contributions may be made to Hospice By The Sea, 1531 West Palmetto Rd., Boca Raton, FL 33486.

[HN00AQ][GDrive]

Father - Frank Ephraim Schiff

Father - Frank Ephraim Schiff

Source : [HL000V][GDrive]

Birthdate: October 11, 1903 / Birthplace: England, United Kingdom

Death: January 09, 1968 (64) / Location : Boston, Suffolk County, Massachusetts, United States

Place of Burial: Woburn, Middlesex County, Massachusetts, United States

Immediate Family:

- Son of Jacob (Yaakov) Solomon (Zalman) Shiffand Bessie Mary Schiff
- Husband of Martha Schiff
- Father of Edward Maurice Schiff and Private
- Brother of Morris Schiff; Henry Schiff; Nathan Coleman Schiff; Henry Schiff; Fanny Schiff , Ella Schiff; Private and Celia Schiff « less

[HL000W][GDrive]

1920 Census

Transcript : [HL000X][GDrive]

Actual 1920 US Census sheet - [HL000Z] [hGDrive]

Note : This **Jacob Schiff** was a butcher

Record Transcription:
Us Census 1920

Household Members

First name(s)	Last name	Relationship	Marital status	Gender	Age	Birth year	Birth place
Jacob	Schiff	Self	Married	Male	42	1878	Russia
Bessie	Schiff	Wife	Married	Female	40	1880	Russia
Nathan	Schiff	Son	Single	Male	18	1902	England
Frank	**Schiff**	**Son**	**Single**	**Male**	**16**	**1904**	**England**
Celia	Schiff	Daughter	Single	Female	14	1906	Massachusetts
Fannie	Schiff	Daughter	Single	Female	12	1908	Massachusetts
Ella	Schiff	Daughter	Single	Female	10	1910	Massachusetts
Henry	Schiff	Son	Single	Male	6	1914	Massachusetts
Morris	Schiff	Son	Single	Male	2	1918	Massachusetts

[HL000Y][GDrive]

Harry Glovsky

1958 - Attorney Harry Glovsky

https://www.newspapers.com/image/545274014/?terms=%22edward%2Bschiff%22

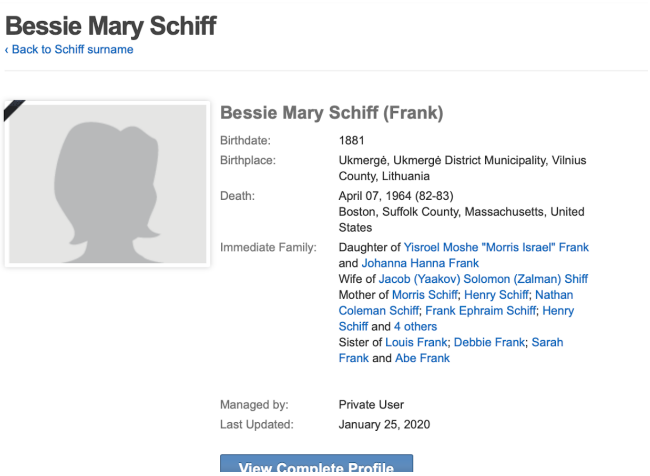
1964 - April 08

https://www.newspapers.com/image/433778597/?terms=%22maurice%2Bschiff%22

https://www.newspapers.com/clip/40938430/bessie_frank_schiff/

SCHIFF—Departed, Apr. 7, Bessie (Frank) of 1780 Commonwealth av., Brighton, beloved wife of the late Jacob Schiff; devoted mother of Celia Mann of Brookline, Phyllis Saxe of Marblehead, Ella Weiner of Waltham, Coleman N. Schiff of Newton, Frank Schiff of Brighton, Henry Schiff of Sarasota, Fla., Maurice Schiff of Copenhagen, Denmark and Leon Schiff of Winthrop; dear sister of Louis Frank, Abraham Frank and Debbie Selipsky, all of Dorchester; also survived by 16 grandchildren and 17 great-grandchildren. Services at the Stanetsky Memorial Chapel, 10 Washington st., Grove Hall, Dorchester on Wednesday, Apr. 8, at 11 a.m. Memorial week at the home of Frank E. Schiff, 44 Graycliff rd., Brighton. Expressions of sympathy may be donated in her memory to Lubavitz Yeshiva, 122 Elm Hill av., Roxbury.

https://www.geni.com/people/Bessie-Schiff/6000000005953499117



Bessie Mary Schiff

‹ Back to Schiff surname

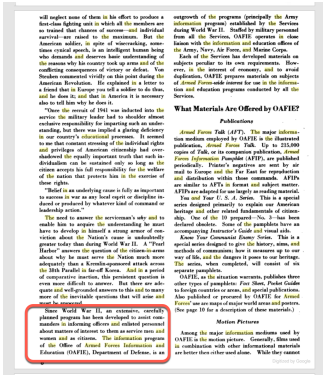
Bessie Mary Schiff (Frank)

Birthdate:	1881
Birthplace:	Ukmergė, Ukmergė District Municipality, Vilnius County, Lithuania
Death:	April 07, 1964 (82-83) Boston, Suffolk County, Massachusetts, United States
Immediate Family:	Daughter of Yisroel Moshe "Morris Israel" Frank and Johanna Hanna Frank Wife of Jacob (Yaakov) Solomon (Zalman) Shiff Mother of Morris Schiff; Henry Schiff; Nathan Coleman Schiff; Frank Ephraim Schiff; Henry Schiff and 4 others Sister of Louis Frank; Debbie Frank; Sarah Frank and Abe Frank
Managed by:	Private User
Last Updated:	January 25, 2020

View Complete Profile

https://www.newspapers.com/clip/45225332/ed_schiff_jounalist_turned_actor/

https://books.google.com/books?id=_3ZHAQAAIAAJ&pg=PA7&lpg=PA7&dq=Information+and+educational+instructor+in+the+armed+forces&source=bl&ots=BTI0e6cHNW&sig=ACfU3U0ZsRVyowieGy2AdxF5XVXw57W_qw&hl=en&sa=X&ved=2ahUKEwiUv6iX5t7nAhVQdcAKHTaOD68Q6AEwGXoECAoQAQ#v=onepage&q=Information%20and%20educational%20instructor%20in%20the%20armed%20forces&f=false



will neglect none of them in his effort to produce a first-class fighting unit in which all the members are so trained that chances of success—and individual survival—are raised to the maximum. But the American soldier, in spite of wisecracking, sometimes cynical speech, is an intelligent human being who demands and deserves basic understanding of the reasons why his country is at war and why he is performing unexpected tasks or is denied. The following memorandum briefly on this point during the American Revolution. He explained in a letter to a friend that in Europe you tell a soldier to do this, and he does it; and that in America it is necessary also to tell him why he does it.

"Since the recruit of 1941 was inducted into the service the military leader had to shoulder almost exclusive responsibility for imparting such an understanding, but there was implied a glaring deficiency in our country's educational processes. It seemed to me that constant stressing of the individual rights and privileges of American citizenship had overshadowed the equally important truth that such individualism can be sustained only so long as the citizen accepts his full responsibility for the welfare of the nation that protects him in the exercise of these rights.

"Belief in an underlying cause is fully as important to success in war as any local esprit or discipline induced or produced by whatever kind of command or leadership action."

The need to answer the serviceman's why and to enable him to acquire the understanding he must have to fight well is the reason for much of the discussion about the Nation's cause is undoubtedly greater today than during World War II. A "Pearl Harbor" answers the question of the citizen-soldier about why he must serve the Nation much more adequately than a Kremlin-sponsored attack across the 38th Parallel in far-off Korea. And in a period of comparative inaction, this persistent question is even more difficult to answer. But there are adequate and well-grounded answers to this and to many more of the inevitable questions that will arise and must be answered.

Since World War II, an extensive, carefully planned program has been developed to assist commanders in informing officers and related personnel about matters of interest to them as service men and women and as citizens. The information program of the Office of Armed Forces Information and Education (OAFIE), Department of Defense, is an outgrowth of the programs (principally the Army information program) established by the Services during World War II. Staffed by military personnel from all the Services, OAFIE operates in close liaison with the information and education offices of the Army, Navy, Air Force, and Marine Corps.

Each of the Services has developed materials on subjects peculiar to its own organization. To avoid duplication, plus the need of economy and to stress Armed Forces-wide interest for use in the information and education programs conducted by all the Services.

What Materials Are Offered by OAFIE?

Publications

Armed Forces Talk (AFT). The major information medium employed by OAFIE is the illustrated publication, *Armed Forces Talk*. Up to 215,000 copies of *Talk*, or its companion publication, *Armed Forces Information Pamphlet* (AFIP), are published periodically. Printer's negatives are sent by air mail to Europe and the Far East for reproduction and distribution within those commands. AFIPs are similar to AFTs in format and subject matter. AFIPs are adapted for use largely as reading material.

You and Your U. S. A. Series. This is a special series designed primarily to explain our American heritage and other related fundamentals of citizenship. One of the 10 prepared—No. 5—has been declared obsolete. Some of the pamphlets have an overseas circulation of more than 100,000 copies.

Know Your Communist Enemy Series. This is a special series designed to give the history, aims, and methods of communism; how it measures up to our way of life, and the dangers it poses to our heritage. The series, when completed, will consist of six separate pamphlets.

OAFIE, as the situation warrants, publishes three other types of pamphlets: *Fact Sheet, Pocket Guides* to foreign countries or areas, and special publications. Also published or procured by OAFIE for *Armed Forces* use are maps of major world areas and posters. (See page 10 for a description of these materials.)

Motion Pictures

Among the major information mediums used by OAFIE is the motion picture. Generally, films used in combination with other informational materials are better than either used alone. While they cannot

Housatonic

Adam Bennett Schiff (born 1960)

Wikipedia Adam Schiff

Born June 22, 1960

Parents - Father is Edward Maurice Schiff (born 1928) **(see** [HL000S][GDrive])

Married to - Eve Sanderson Schiff (born 1962)

Adam Schiff, U.S. Congress

‹ Back to Schiff surname

Adam Bennett Schiff

Birthdate:	June 22, 1960
Birthplace:	Framingham, Middlesex County, Massachusetts, United States
Immediate Family:	Son of Edward Maurice Schiff and Sherrill Ann Schiff Husband of Private Brother of Private
Managed by:	Tamás Flinn Caldwell-Gilbert
Last Updated:	May 23, 2018

[HL000T][GDrive]

Saved Wikipedia :

See [HK000Q][GDrive]

Early life, education, and career

Schiff was born in Framingham, Massachusetts, the son of Edward and Sherrill Ann (Glovsky) Schiff.[1] He was raised in a Jewish family which moved to Scottsdale, Arizona in 1970 and Alamo, California in 1972.[2] He graduated from Danville's Monte Vista High School in 1978,[3][4] and was both his class valedictorian[5] and the student voted by his peers as "most likely to succeed".[6] Schiff received a Bachelor of Arts degree in political science from Stanford University in 1982 and a Juris Doctor from Harvard Law School in 1985.[7]

After law school, Schiff served as a law clerk for Judge William Matthew Byrne Jr. of the United States District Court for the Central District of California.[8] From 1987 to 1993, he was an Assistant United States Attorney in the Office of the United States Attorney for the Central District.[9] While in this position, Schiff came to public attention when he prosecuted the case against Richard Miller, a former FBI agent who was convicted of spying for the Soviet Union.[10] The first trial resulted in a hung jury; the second trial resulted in a conviction that was overturned on appeal.[11] Miller was convicted in a third trial.[12]

In May 1994, Schiff was a candidate for the 43rd district seat in the California State Assembly in a special election and lost to Republican nominee James E. Rogan.[13] That November, he was the unsuccessful Democratic nominee for a full term, again losing to Rogan.[14]

California State Senate

In 1996, Schiff was elected to represent the 21st district in the California State Senate.[15] When his term began, Schiff at age 36 was the Senate's youngest member.[16] During his four year term, Schiff served as chairman of the senate's Judiciary Committee and Select Committee on Juvenile Justice, and the state legislature's Joint Committee on the Arts.[16]

As a state senator, Schiff authored dozens of measures that were enacted into law.[16] These included Senate Bill 1847, Chapter 1021.[17] Passed in 1998, this legislation continued work on the stalled Blue Line light rail extension to Pasadena by renaming the Blue Line as the Gold Line[17] and creating the

this legislation continued work on the stalled Blue Line light rail extension to Pasadena by renaming the Blue Line as the Gold Line — and creating the Foothill Gold Line Construction Authority, which separated the project from the Los Angeles County Metropolitan Transportation Authority.[18] The construction authority finished the Pasadena line in 2003 and extended it to Azusa in 2016.[18] A subsequent third leg was begun, which is intended to extend the line to Pomona by 2025.[18] Schiff's work to re-energize the project caused him to be regarded in the San Gabriel Valley as the "Father of the Gold Line".[18]

U.S. House of Representatives

Schiff and Heather Podesta at a party hosted by the Podesta Group in Washington, D.C., honoring the inauguration of Barack Obama

In 2000, Schiff was the Democratic nominee for the U.S. House of Representatives in California's 27th congressional district. On November 7, 2000, Schiff defeated Republican incumbent James E. Rogan, and he began serving his first term on January 3, 2001. He was reelected every two years from 2002 to 2018, and began serving his 10th term in Congress in January 2019.

2003 invasion of Iraq

Schiff voted in favor of the 2003 invasion of Iraq.[19] In February 2015, discussing how or whether to tailor Bush-era plans from 2001 and 2002 to fight ISIS, Schiff was asked if he regretted voting to invade. He said, "Absolutely. Unfortunately, our intelligence was dead wrong on that, on Saddam at that time. The vote set in motion a cascading series of events which have [had] disastrous consequences".[20][21]

Schiff at the United States Capitol during the 115th congress

US congressional delegation at Halifax International Security Forum 2014

Schiff with former Israeli Prime Minister Ehud Barak in November 2014

Armenian genocide resolution

Schiff has been a leading voice in Armenian-American issues; he claims to have over 70,000 Armenian-Americans in his district.[22][23] He introduced U.S. House Resolution 106, recognizing the Armenian genocide, which was approved by the House Foreign Affairs Committee on October 11, 2007,[24] but began to lose support after Turkey's prime minister said that approval of the resolution would endanger U.S.-Turkey relations.[25] On March 4, 2010, the resolution was again approved to go forward by the House Foreign Affairs Committee by a 23–22 margin.[26] Immediately, the Turkish government recalled its U.S. ambassador.[26] Schiff said in 2007, "When you think about what we have against us – the president, a foreign policy establishment that has condoned this campaign of denial, the Turkish lobby – against that you have the truth, which is a powerful thing but doesn't always win out".[27] On October 29, 2019, the full House of Representatives finally passed the resolution by a vote of 405–11.[28]

Helicopter noise

Beginning with Rep. Howard Berman before Berman was defeated for reelection, Schiff has worked on reducing unwanted helicopter noise across Los Angeles County by proposing legislation to force the Federal Aviation Administration (FAA) to study and regulate helicopter noise in Los Angeles, the Helicopter Noise Relief Act.[29] After reintroducing his legislation, Schiff worked with Senator Dianne Feinstein to push the FAA to act, and together they attached a provision in the 2014 omnibus appropriations package directing the U.S. Secretary of Transportation and FAA to address helicopter noise in Los Angeles County skies.[30] As a result, in 2015 the FAA created a county-wide helicopter noise public complaint system, the first step towards regulation.[31][32]

Intelligence and surveillance reform

Schiff has been a prominent supporter of surveillance reforms, especially in the wake of the leaks of classified intelligence by Edward Snowden.[33] In 2007, in response to disclosure of the Terrorist Surveillance Program, Schiff and Rep. Jeff Flake offered a successful amendment in the House of Representatives to clarify that the Foreign Intelligence Surveillance Act is the exclusive means for collecting foreign intelligence information within the United States.[34] Schiff has been a critic of the bulk collection of telephone metadata by the National Security Agency. In January 2014, Schiff introduced the Telephone Metadata Reform Act,[35] which would prohibit the bulk collection of domestic phone records. Schiff has also introduced several bills aimed at reforming the Foreign Intelligence Surveillance Court, including a bill to require outside counsel to be appointed to argue for privacy and civil liberties protections in certain cases before the Court.[36]

Investigation of Benghazi attack

Schiff was appointed to the House Select Committee on Benghazi in 2014 by Nancy Pelosi to serve as one of the five Democrats on the Committee.[37] Schiff had participated in the House Permanent Select Committee on Intelligence investigation into the attacks on the Benghazi diplomatic compound, which found that the initial talking points provided by the intelligence community were flawed but without an intention to deceive, and that diplomatic facilities across the world lacked adequate security.[38] The report's findings were unanimous and bipartisan. Before he was appointed as a Member of the Benghazi Select Committee, Schiff called the establishment of a select committee to investigate the 2012 attack a "colossal waste of time," and said Democratic leaders should not appoint any members, stating: "I think it's just a tremendous red herring and a waste of taxpayer resources".[39] Despite those reservations, he still accepted an appointment to the Committee because if he felt he "could add value, [he] would serve".[40]

Press freedom

Schiff formed the bipartisan, bicameral Congressional Caucus for the Freedom of the Press in 2006[41] aimed at advancing press freedom around the world. The Caucus proposed the Daniel Pearl Freedom of the Press Act and it was originally introduced to Congress by Schiff and Rep. Mike Pence (R., Ind.) and by Sen. Christopher Dodd (D., Conn.) on October 1, 2009, in response to the murder of Daniel Pearl by terrorists in Pakistan.[42][43] The legislation requires the United States Department of State to expand its scrutiny of news media intimidation and freedom of the press restrictions during its annual report on human rights in each country.[44] After its introduction, the act passed through the House of Representatives with a vote of 403 to 12 and passed unanimously in the Senate; however, a provision requiring the Secretary of State (in coordination with the Department of State's Bureau of Democracy, Human Rights and Labor, and in consultation with the Undersecretary for Public Affairs and Public Diplomacy) to establish a grant program aiming to promote freedom of the press worldwide was removed in the Senate.[43][45] On May 17, 2010, President Barack Obama, accompanied by the Pearl family, signed into law the Daniel Pearl Freedom of the Press Act.[46]

Saudi Arabian-led intervention in Yemen

In 2015, Schiff supported the Saudi Arabian-led intervention in Yemen, saying: "The military action by Saudi Arabia and its partners was necessitated by the illegal action of the Houthi rebels and their Iranian backers. ... But ultimately, a negotiated end to this crisis is the only way to restore order in Yemen and shrink the space for terrorism".[47]

War authorization reform and authorization against ISIS

After the President's speech at the National Defense University examining the U.S. war powers during the War on Terror, Schiff introduced bipartisan legislation to repeal the 2001 Authorization for Use of Military Force Against Terrorists, the legislation passed in the days after the September 11 attacks to combat al-Qaeda, because he felt that "the current AUMF is outdated and straining at the edges to justify the use of force outside the war theater".[48] The bill, introduced with Rep. Tom Rooney (R-FL), was intended to sunset. In addition to his legislation, Schiff has been a forceful proponent of debating and voting on a new war authorization against the Islamic State of Iraq and the Levant.[49]

Schiff has been a very prominent supporter of national defense spending. Schiff has voted for every increase in the defense budget over the course of his career.[50]

Comments on Trump–Russia collusion investigation

Further information: Special Counsel investigation (2017–2019)

On March 22, 2017, in an interview with Chuck Todd on MSNBC Schiff claimed there was “more than circumstantial evidence now” that Donald Trump's campaign colluded with Russia. Todd followed up by asking if he had seen direct evidence of collusion and Schiff responded that there was "evidence that is not circumstantial and is very much worthy of investigation".[51]

On April 2, 2017, Schiff, the ranking member on the House Select Intelligence Committee, which is tasked with conducting inquiries related to Russian interference in the 2016 United States elections, appeared on CNN's *State of the Union*. In the wide-ranging interview, Schiff and host Jake Tapper discussed Michael Flynn's request for immunity, Schiff's and Devin Nunes's separate inspections of White House documents, Trump's allegations of wiretapping in Trump Tower, and Nunes's apparent close association with the Trump White House.[52] Tapper asked Schiff if there was evidence of Donald Trump–Russia collusion. Schiff replied: "I don't think we can say anything definitively at this point. We are still at the very early stage of the investigation. The only thing I can say is that it would be irresponsible for us not to get to the bottom of this".[53] Tapper asked, "Do you think that Chairman Nunes was part of an attempt to provide some sort of cover for the president's claim about Obama wiretapping him at Trump Tower, which, obviously, this does not prove, but to cover for that, or an attempt to distract, as you're suggesting?" Schiff replied, "It certainly is an attempt to distract and to hide the origin of the materials, to hide the White House hand. The question is, of course, why? And I think the answer to the question is this effort to point the Congress in other directions, basically say, don't look at me, don't look at Russia, there is nothing to see here".[54] A few days later, Nunes recused himself as leader of the investigative panel while the House Committee on Ethics investigated whether he had disclosed classified information.[55][56]

On July 23, 2017, on "Meet the Press", Schiff stated, "[A]t the end of the day we need to make sure that our president is operating not in his personal best interests and not because he's worried about what the Russians might have but because what he is doing is in America's best interest. The fact that we have questions about this is in itself harmful".[57] The following morning on Twitter, Trump referred to Schiff as "Sleazy Adam Schiff, the totally biased Congressman looking into 'Russia'" and called the Russian collusion investigation "the Dem loss excuse".[58] Schiff responded on Twitter that the president's "comments and actions are beneath the dignity of the office".[59]

In December 2018 Schiff suggested that Trump associate Roger Stone may have lied to Congress, and said the transcript of his testimony should be forwarded to the Special Counsel.[60] Stone hit back, saying Schiff was "a con man."[61] In November 2019 Stone was convicted of lying to Congress.[62]

When he became the chairman of the House Intelligence Committee in 2019, Schiff took a personal mission to investigate Trump's connections to Russia, separate from the investigation by the Special Counsel.[63] Schiff came under fire when he demurred when asked if he would accept it if the Special Counsel's investigation concluded that Donald Trump did not collude with Russia, saying that he has great confidence in Mueller but that "there may be, for example, evidence of collusion or conspiracy that is clear and convincing, but not proof beyond a reasonable doubt," as is needed for a criminal conviction.[64]

On March 28, 2019, the nine Republican members of the House Intelligence Committee officially called for Schiff to resign due to his allegations that President Trump's campaign colluded with Russians in the 2016 election.[65] Schiff responded by accusing the Republican members of tolerating "immoral" and "corrupt" conduct by Trump campaign members and administration appointees.[66][67]

North Korea

Schiff called North Korea "one of the most brutal and despotic regimes in the world". After the death of American student Otto Warmbier who had been imprisoned during a visit to North Korea, Schiff said: "The barbaric treatment of Otto Warmbier by the North Korean regime amounts to the murder of a U.S. citizen".[68]

In April 2018, asked whether he thought Trump deserved at least partial credit for North Korea's involvement in talks with the US, Schiff responded: "I think it's more than fair to say that the combination of the president's unpredictability and indeed, his bellicosity had something to do with the North Koreans deciding to come to the negotiating table".[69]

Israel and anti-Semitism

Schiff is a supporter of Israel.[70] In December 2016, Schiff urged President Obama to veto UN Security Council Resolution 2334, which condemned Israeli settlement building in the occupied Palestinian territories as a violation of international law.[71]

In February 2019, Representative Ilhan Omar tweeted, "It's all about the Benjamins baby" in reference to American politicians' support for Israel and invoked the American Israel Public Affairs Committee (AIPAC). It received widespread bipartisan condemnation, including from many Democratic leaders as well as Schiff, for implying that lobby money was fueling American politicians' support of Israel. Schiff said it was "never acceptable to give voice to, or repeat, anti-Semitic smears".[72] However, his party stopped short of a resolution specifically condemning anti-Semitism in response, proposing a motion condemning "all discriminatory remarks" to not offend Omar and her fellow Muslim-American congresswoman.

Murder of Jamal Khashoggi

After news reports that the CIA concluded that Saudi Crown Prince Mohammed bin Salman had ordered the assassination of Saudi journalist Jamal Khashoggi, Trump said there was insufficient CIA evidence to link bin Salman to the murder.[73] Schiff, the top Democrat on the House intelligence committee, was briefed by the CIA on the agency assessment, and stated afterwards that Trump was being dishonest about the CIA findings.[74]

Impeachment inquiry against Donald Trump

Main article: Impeachment trial of Donald Trump

As chairman of the Intelligence Committee, Schiff was one of the lead investigators in the impeachment inquiry against Donald Trump stemming from the Trump–Ukraine scandal.[75] Trump was impeached along party lines by 228 votes to 193 in the House of Representatives on December 18, 2019, making him only the third American President to be impeached.[76]

On January 15, 2020, House Speaker Nancy Pelosi named Schiff as a lead impeachment manager.[77][78] In this role, Schiff leads a team of seven House members responsible for presenting the impeachment case against President Donald Trump during his trial before the United States Senate. He had previously served as lead manager for the impeachments of Samuel B. Kent and Thomas Porteous alongside Bob Goodlatte (R-VA).[79]

Committee and caucuses

Committee assignments

- **Permanent Select Committee on Intelligence (Chairman)**
- **House Appropriations Committee (on leave)**

Caucuses

- Co-chair of the Congressional International Anti-Piracy Caucus
- Co-founded the Democratic Study Group on National Security
- Co-founded the Congressional Caucus for Freedom of the Press
- Vice Chairman of the Congressional LGBT Equality Caucus[80]

Caucus memberships

- **New Democrat Coalition**[81]
- **House Baltic Caucus**[82]
- **Congressional Arts Caucus**[83]
- **Afterschool Caucuses**[84]
- **Congressional Asian Pacific American Caucus**[85]

Congressional campaigns

Schiff speaking to the California Democratic Party in June 2019.

In 2000, Schiff challenged Republican incumbent Jim Rogan in what was then the 27th District. The district had once been a Republican stronghold, but had been trending Democratic since the early 1990s. In what was the most expensive House race ever at the time[86] (several elections in 2006[87] and 2008[88] later eclipsed it), Schiff unseated Rogan, taking 53 percent of the vote to Rogan's 44 percent. He became only the second Democrat to represent this district since its creation in 1913.

After the 2000 census, the district was renumbered as the 29th and made significantly more Democratic. As a result, Schiff has never faced another contest nearly as close as his 2000 bid, and has been reelected nine times. His district became even more Democratic after the 2010 census, when it was renumbered as the 28th and pushed into Los Angeles itself. Even before then, none of his Republican challengers had cleared 35 percent of the vote.

In 2010, Schiff defeated Tea Party–backed Republican John Colbert for a sixth term.[89] In 2012, he defeated Republican Phil Jennerjahn.[90] In 2014, he defeated independent candidate Steve Stokes.[91] In 2016, he defeated Republican candidate Lenore Solis.

In 2018, Schiff initially competed in the primary with Democratic challenger Kim Gruenenfelder. After Gruenenfelder dropped out of the race, Schiff went on to defeat Republican candidate Johnny Nalbandian.

Personal life

Schiff and his wife Eve have two children, Alexa and Elijah.[108]

Schiff has participated in multiple endurance challenges, including triathlons and marathons. Schiff was the only Congressman to participate in the inaugural Washington, D.C. triathlon in 2010[109] and has since participated in other races in Philadelphia, New York City, and Malibu.[110] In 2014, Schiff was the first member of Congress to participate in the AIDS/LifeCycle, a seven-day charity bike ride from San Francisco to Los Angeles to raise awareness and funding to fight HIV and AIDS.[111]

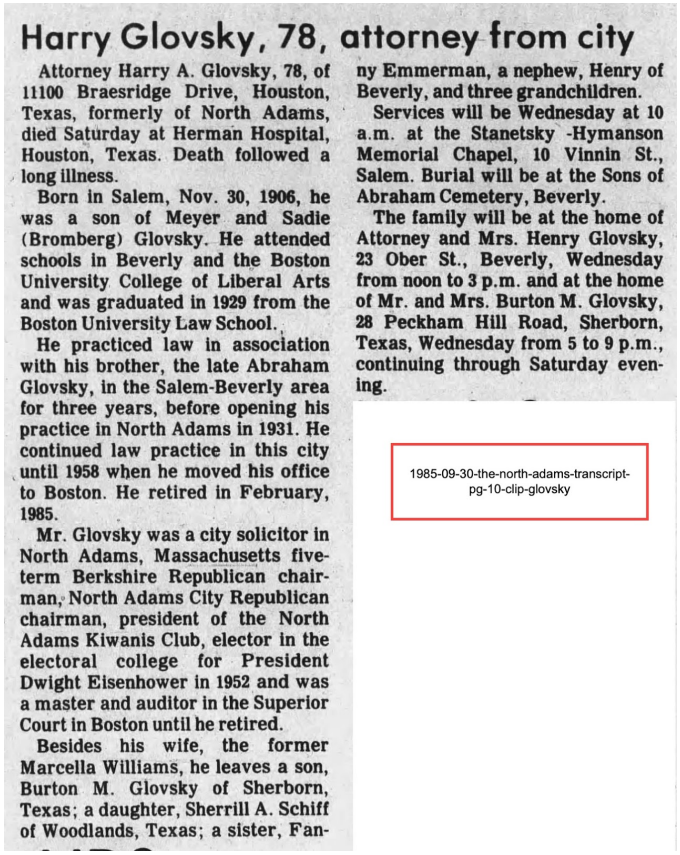
The New Yorker reported in 2018 that "Schiff has been writing screenplays on the side for years", including a murder mystery, a post-Holocaust story, and a spy drama.[112]

Schiff is vegan.[113]

-

1985 (Sep 30) - Maternal grandfather

Full page : [HN008G][GDrive]



Harry Glovsky, 78, attorney from city

Attorney Harry A. Glovsky, 78, of 11100 Braesridge Drive, Houston, Texas, formerly of North Adams, died Saturday at Herman Hospital, Houston, Texas. Death followed a long illness.

Born in Salem, Nov. 30, 1906, he was a son of Meyer and Sadie (Bromberg) Glovsky. He attended schools in Beverly and the Boston University College of Liberal Arts and was graduated in 1929 from the Boston University Law School.

He practiced law in association with his brother, the late Abraham Glovsky, in the Salem-Beverly area for three years, before opening his practice in North Adams in 1931. He continued law practice in this city until 1958 when he moved his office to Boston. He retired in February, 1985.

Mr. Glovsky was a city solicitor in North Adams, Massachusetts five-term Berkshire Republican chairman, North Adams City Republican chairman, president of the North Adams Kiwanis Club, elector in the electoral college for President Dwight Eisenhower in 1952 and was a master and auditor in the Superior Court in Boston until he retired.

Besides his wife, the former Marcella Williams, he leaves a son, Burton M. Glovsky of Sherborn, Texas; a daughter, Sherrill A. Schiff of Woodlands, Texas; a sister, Fanny Emmerman, a nephew, Henry of Beverly, and three grandchildren.

Services will be Wednesday at 10 a.m. at the Stanetsky -Hymanson Memorial Chapel, 10 Vinnin St., Salem. Burial will be at the Sons of Abraham Cemetery, Beverly.

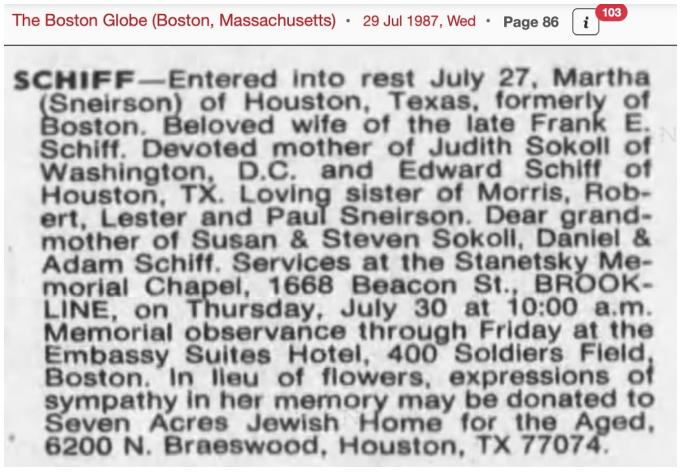
The family will be at the home of Attorney and Mrs. Henry Glovsky, 23 Ober St., Beverly, Wednesday from noon to 3 p.m. and at the home of Mr. and Mrs. Burton M. Glovsky, 28 Peckham Hill Road, Sherborn, Texas, Wednesday from 5 to 9 p.m., continuing through Saturday evening.

1985-09-30-the-north-adams-transcript-pg-10-clip-glovsky

[HN008H][GDrive]

1987 (July 29) - Paternal grandmother

Full page : [HN008I][hGDrive]



The Boston Globe (Boston, Massachusetts) · 29 Jul 1987, Wed · Page 86

SCHIFF—Entered into rest July 27, Martha (Sneirson) of Houston, Texas, formerly of Boston. Beloved wife of the late Frank E. Schiff. Devoted mother of Judith Sokoll of Washington, D.C. and Edward Schiff of Houston, TX. Loving sister of Morris, Robert, Lester and Paul Sneirson. Dear grandmother of Susan & Steven Sokoll, Daniel & Adam Schiff. Services at the Stanetsky Memorial Chapel, 1668 Beacon St., BROOKLINE, on Thursday, July 30 at 10:00 a.m. Memorial observance through Friday at the Embassy Suites Hotel, 400 Soldiers Field, Boston. In lieu of flowers, expressions of sympathy in her memory may be donated to Seven Acres Jewish Home for the Aged, 6200 N. Braeswood, Houston, TX 77074.

[HN008J][GDrive]

1988 (Aug 31)

Related articles : For more on this case, see Werner Bruchhausen (born 1940x)

Full page : [HN008K][GDrive]

The Los Angeles Times (Los Angeles, Califor... · 31 Aug 1988, Wed · Page 22

■ High Bail for Alleged Escape Accomplice

A **Los Angeles** woman charged with helping "technobandit" Werner Bruchhausen in a foiled escape from a Florida prison was ordered Tuesday to post $50,000 bail before she can be freed.

Margaret Winget, 41, appeared briefly in federal court in Los Angeles before U.S. Magistrate Venetta Tassopulos, who said Winget deserved a high bail because of the nature of the charges against her.

"After providing this type of assistance to someone else . . . I think she would want to do the same for herself," Tassopulos said.

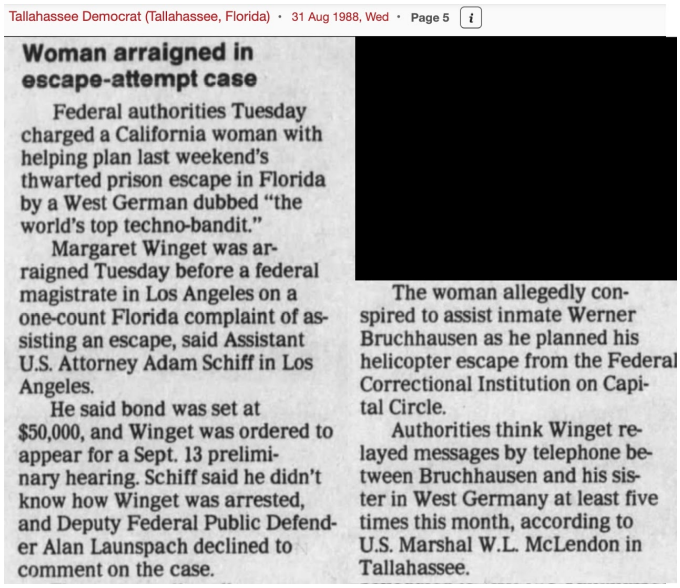
Prosecutor Adam Schiff told Tassopulos that Winget, a medical office assistant, "was the arranger" of Bruchhausen's attempt to escape by helicopter Sunday from the Federal Correctional Institute at Tallahassee. He said Winget had relayed telephone messages from Bruchhausen to others to assist in the escape plans.

Bruchhausen, 45, is serving a 15-year sentence for selling high-tech secrets to the Soviet Union and other Eastern bloc countries.

[HN008L][GDrive]

1988 (Aug 31)

Full page : [HN008M][GDrive]



Tallahassee Democrat (Tallahassee, Florida) · 31 Aug 1988, Wed · Page 5

Woman arraigned in escape-attempt case

Federal authorities Tuesday charged a California woman with helping plan last weekend's thwarted prison escape in Florida by a West German dubbed "the world's top techno-bandit."

Margaret Winget was arraigned Tuesday before a federal magistrate in Los Angeles on a one-count Florida complaint of assisting an escape, said Assistant U.S. Attorney Adam Schiff in Los Angeles.

He said bond was set at $50,000, and Winget was ordered to appear for a Sept. 13 preliminary hearing. Schiff said he didn't know how Winget was arrested, and Deputy Federal Public Defender Alan Launspach declined to comment on the case.

The woman allegedly conspired to assist inmate Werner Bruchhausen as he planned his helicopter escape from the Federal Correctional Institution on Capital Circle.

Authorities think Winget relayed messages by telephone between Bruchhausen and his sister in West Germany at least five times this month, according to U.S. Marshal W.L. McLendon in Tallahassee.

[HN008N][GDrive]

1989 (Jan 10)

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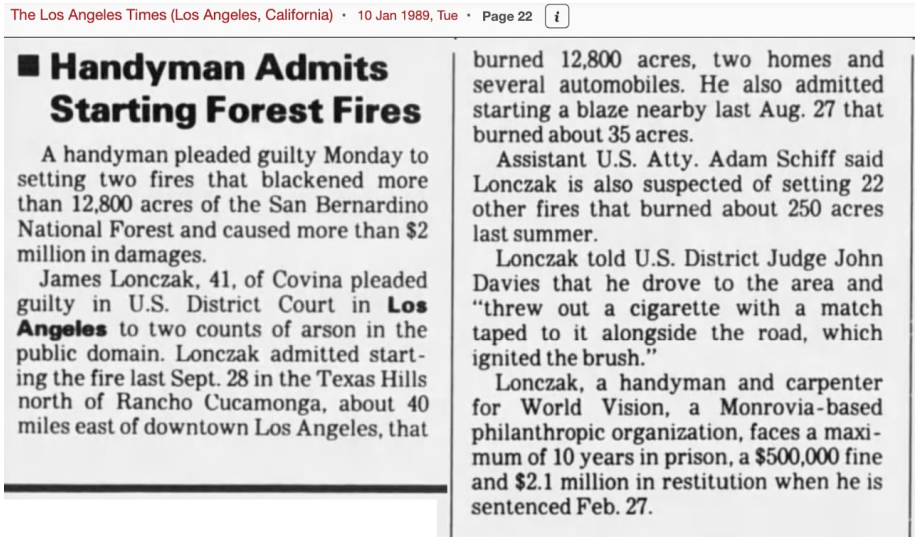
1989-01-10-the-los-angeles-times-part-2-pg-2

1989-01-10-the-los-angeles-times-part-2-pg-2-clip-handyman



The Los Angeles Times (Los Angeles, California) • 10 Jan 1989, Tue • Page 22

■ Handyman Admits Starting Forest Fires

A handyman pleaded guilty Monday to setting two fires that blackened more than 12,800 acres of the San Bernardino National Forest and caused more than $2 million in damages.

James Lonczak, 41, of Covina pleaded guilty in U.S. District Court in **Los Angeles** to two counts of arson in the public domain. Lonczak admitted starting the fire last Sept. 28 in the Texas Hills north of Rancho Cucamonga, about 40 miles east of downtown Los Angeles, that burned 12,800 acres, two homes and several automobiles. He also admitted starting a blaze nearby last Aug. 27 that burned about 35 acres.

Assistant U.S. Atty. Adam Schiff said Lonczak is also suspected of setting 22 other fires that burned about 250 acres last summer.

Lonczak told U.S. District Judge John Davies that he drove to the area and "threw out a cigarette with a match taped to it alongside the road, which ignited the brush."

Lonczak, a handyman and carpenter for World Vision, a Monrovia-based philanthropic organization, faces a maximum of 10 years in prison, a $500,000 fine and $2.1 million in restitution when he is sentenced Feb. 27.

1989 (jan 19)

Full page : [HN008O][GDrive]

1989-01-19-the-napa-valley-register-pg-20-clip-pistol-bush

20—The NAPA REGISTER Thursday, Janu

Starter pistol against Bush misdemeanor

LOS ANGELES (AP) — A man who said he wanted to "symbolically assassinate" George Bush has been convicted of two misdemeanor counts for bringing a starter pistol to a campaign rally for the president-elect.

John Arthur Junot, 40, an anti-nuclear activist who wrote a poem about John Hinckley Jr., faces up to 18 months in prison and up to $105,000 in fines at his sentencing, scheduled March 6 before U.S. District Judge Dickran Tevrizian.

After a non-jury trial, Junot was convicted Wednesday of interfering with a Secret Service agent engaged in a protective function and disorderly conduct in an area protected by the Secret Service.

"He wanted to fire the pistol at the vice president and broadcast his view that any candidate was vulnerable and that if Bush was killed, (Indiana Sen. Dan) Quayle would be president," Assistant U.S. Attorney Adam Schiff said.

Junot told a prison psychologist that he brought the starter gun to the Nov. 6 rally in the San Fernando Valley suburb of Woodland Hills to "symbolically assassinate Bush," according to court records.

"The psychotherapist thought he was dangerous and posed a real threat to people protected by the Secret Service and people who were the object of views he thought were anathema to himself," Schiff said.

The daylong trial before the judge involved 14 witnesses, including Secret Service agents, police, bystanders at the rally and the psychotherapist. Junot, who didn't testify, waived his right to a jury trial.

Junot's first attorney had requested a court-ordered mental evaluation and the second attorney requested that the psychotherapist enter into a treatment relationship with Junot.

An agent who searched Junot's apartment found the poem that said he understood Hinckley, who attempted to assassinate President Reagan in March 1981 to impress actress Jodie Foster.

"The first line of the poem is, 'If it takes a blood bath, let's get it over with,'" Schiff said.

Junot said that society should lock Hinckley up or the foundations of society would crumble, the prosecutor said.

"He has a very grandiose opinion of himself," Schiff said of Junot.

"Also found, in his car, was a Bible that had been hollowed out for a gun but he explained to the Secret Service that it just didn't fit," Schiff said.

Junot caused a commotion at the rally, when he fumbled while trying to hold the gun and a placard, dropping the gun shortly after Bush had taken the stage, Schiff said.

"There is no law that per se makes a starter pistol unlawful," said Schiff. "It depends on the circumstances and whether it was brought to an area where the Secret Service was protecting a candidate."

Defense attorney Terry Amdur argued: "It's clear that until he pulls out the gun intentionally or drops it intentionally, the government has proven intent without an act."

Junot's psychotherapist, Jeanne G. Hetzel, said she felt the defendant was a danger, based on his beliefs, intentions and intelligence, Schiff said.

"He told the psychotherapist that he wanted to get close enough to fire the pistol," Schiff said.

[HN008P][GDrive]

1989 (March 17)

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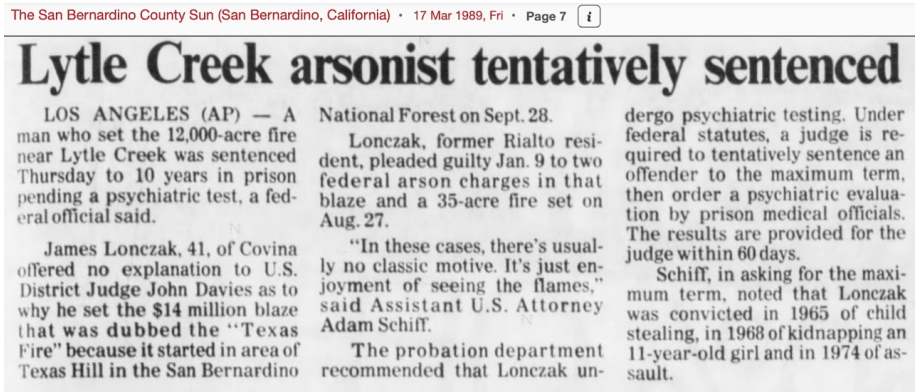
1989-03-17-the-san-bernardino-county-sun-pg-7

1989-03-17-the-san-bernardino-county-sun-pg-7-clip-fire



The San Bernardino County Sun (San Bernardino, California) · 17 Mar 1989, Fri · Page 7

Lytle Creek arsonist tentatively sentenced

LOS ANGELES (AP) — A man who set the 12,000-acre fire near Lytle Creek was sentenced Thursday to 10 years in prison pending a psychiatric test, a federal official said.

James Lonczak, 41, of Covina offered no explanation to U.S. District Judge John Davies as to why he set the $14 million blaze that was dubbed the "Texas Fire" because it started in area of Texas Hill in the San Bernardino National Forest on Sept. 28.

Lonczak, former Rialto resident, pleaded guilty Jan. 9 to two federal arson charges in that blaze and a 35-acre fire set on Aug. 27.

"In these cases, there's usually no classic motive. It's just enjoyment of seeing the flames," said Assistant U.S. Attorney Adam Schiff.

The probation department recommended that Lonczak undergo psychiatric testing. Under federal statutes, a judge is required to tentatively sentence an offender to the maximum term, then order a psychiatric evaluation by prison medical officials. The results are provided for the judge within 60 days.

Schiff, in asking for the maximum term, noted that Lonczak was convicted in 1965 of child stealing, in 1968 of kidnapping an 11-year-old girl and in 1974 of assault.

1989 (April 4)

https://www.newspapers.com/image/405197759/?terms=%22Adam%2Bschiff%22

1989-04-04-the-los-angeles-times-part-2-pg-9

1989-04-04-the-los-angeles-times-part-2-pg-9-clip-bush-pistol

The Los Angeles Times (Los Angeles, California) · 04 Apr 1989, Tue · Page 7

Man Who Brought Pistol to Bush Rally Is Sentenced

A paralegal worker who plotted a "symbolic assassination" of President Bush just before the November election was sentenced Monday to time served for bringing a starter pistol to a Bush rally in Woodland Hills.

John Arthur Junot was sentenced to four months in prison, but he faces immediate release because he has already served five months. He also was ordered to pay a $250 fine and $1,000 to cover the cost of his three-year supervision after his release.

"You are a very bright individual, but between the left ear and the right ear something's gone astray," U.S. District Judge Dickran Tevrizian said during the sentencing.

Junot, 40, told a psychologist that he wanted to fire the non-lethal pistol near Bush in Warner Park on Nov. 6 to "remind Americans of Bush's mortality and the consequences of (Vice President Dan) Quayle's inadequacies."

Junot was standing about 50 yards from the corner of the stage where Bush was speaking when witnesses saw him drop the starter pistol.

After a one-day, non-jury trial, Tevrizian convicted Junot on Jan. 18 of one count of disruptive conduct in an area protected by the Secret Service and one count of interfering with the Secret Service.

"This is not a joke," Tevrizian told Junot, who works at a Los Angeles legal aid office. "This is serious business. . . . I don't believe in social protest where anyone is threatened with violence or where violence occurs."

Defense lawyer Terry Amdur, seeking probation for Junot, noted a psychiatrist's report that describes Junot as an "activist, protester and angry young man" capable of channeling his intelligence into socially redeeming activities.

"He didn't attempt to harm anyone," Amdur said. "He attempted to make a political statement. He now realizes that was ill-advised."

Assistant U.S. Atty. Adam B. Schiff said Junot is "dangerous not because he intends to be dangerous, but because he's willing to do whatever is required to make his political statement."

1989 (April 18)

Full page : [HN008Q][GDrive]

The Los Angeles Times (Los Angeles, Califor... · 18 Apr 1989, Tue · Page 3

■ Two Guilty of Selling Food Given to Needy

A pastor and a baker were convicted Monday in federal court in Los Angeles of selling $100,000 in surplus government food that was supposed to have gone to needy families.

Joe Andy Vigil, 58, of **Lynwood**, used his position as pastor with the Pacific Latin American Church to obtain the honey, butter and dry milk intended for distribution to the poor, Assistant U.S. Atty. Adam Schiff said.

Some of the food was properly handed out to the needy through the church, but at least $100,000 worth was unaccounted for in late 1984 and 1985, Schiff said.

Vigil gave that food to David Reynoso, owner of the Kream Krop Bakery in **Inglewood**, Schiff said.

There was no direct evidence that Vigil profited, Schiff said, but witnesses testified that he left Reynoso's office with envelopes and that he drove a Cadillac and bought a $2,600 television while presumably living on Social Security.

After a two-week trial, jurors convicted Vigil of one count of conspiracy and six counts of selling, conveying and disposing of government food without authority. Reynoso, 65, of **La Mirada**, was convicted of conspiracy and six counts of receiving, retaining and concealing government food for his own gain, Schiff said. The men face up to 65 years in prison when they are sentenced May 31.

[HN008R][GDrive]

1989 (June 20)

https://www.newspapers.com/image/607632588/?terms=%22Adam%2Bschiff%22

1989-06-20-the-news-pilot-san-pedro-ca-pg-14

1989-06-20-the-news-pilot-san-pedro-ca-pg-14-clip-garrison

News-Pilot (San Pedro, California) · 20 Jun 1989, Tue · Page 14

■ Robert Wayne Garrison, 43, pleaded guilty last week to an April robbery of $11,500 from a Long Beach bank. Garrison, who spent seven years in federal prison on a previous robbery conviction, could have been sentenced to 20 years without parole if prosecutors succeeded in their efforts to designate him a career criminal, Assistant U.S. Attorney Adam Schiff said.

1989 (Sep 8)

Full page : [HN008S][GDrive]

2 Part II / Friday, September 8, 1989 / F

Metro Digest

■ Woman Pleads Guilty in Housing Swindle

An Anaheim woman pleaded guilty Thursday to embezzling $83,000 in government money intended for poor tenants being displaced from their **South Los Angeles** homes—a swindle federal prosecutors said illustrates the kind of oversight that has mushroomed into the scandal at the U.S. Department of Housing and Urban Development.

Juanita Maria Tachvighi, 44, admitted that she stole HUD funds that should have been paid to 10 families who were being ousted from their apartments by a rehabilitation project, Assistant U.S. Atty. Adam Schiff said.

Tachvighi, who has agreed to repay the money, pleaded guilty in U.S. District Court in Los Angeles to five counts of embezzling federal funds and three counts of theft of government property. She faces up to 80 years in prison and a $2-million fine.

Tachvighi had contracted with a Los Angeles County agency to provide relocation services for the tenants whose apartment building had been targeted for renovation. But between July, 1986, and early 1988, according to Schiff, she funneled many of the agency's checks into her own bank account, leaving tenants to struggle with debts and higher rents.

[HN008T][GDrive]

1989 (Sep 27)

Full page : [HN008U][GDrive]

INS blocks Mexican's release

LOS ANGELES (AP) — The Immigration and Naturalization Service stepped in to keep the brother-in-law of Mexico's former president in prison despite court orders to free him on $200,000 bail.

The 9th U.S. Circuit Court of Appeals on Tuesday upheld a federal judge's release order for Ruben Zuno Arce, who is charged with perjury before a grand jury and has been in federal prison for 49 days.

After the ruling, Assistant U.S. Attorney Adam Schiff said the INS had placed a hold order on the multimillionaire businessman, who allegedly owned the Mexican home where authorities say U.S. drug agent Enrique Camarena was tortured and killed in 1985.

Schiff said INS officials in San Antonio want Zuno for a hearing on whether he should be excluded from the United States as a drug trafficker.

U.S. District Judge Robert Takasugi, who ordered Zuno's release, said he had no jurisdiction over the INS matter.

However, he took under submission a defense writ of habeas corpus seeking Zuno's release.

The defense termed his continued imprisonment outrageous.

Attorney Edward Medvene suggested the government was using the INS proceeding as a subterfuge to hold Zuno in the United States.

Zuno was charged with lying when he said he didn't know two Mexican drug kingpins tied to the 1985 Camarena murder.

Meanwhile, Schiff disclosed in court that Zuno allegedly was involved in the murder of two Mexican policemen in 1978.

However, Zuno's lawyers told Takasugi that their client did not shoot anyone and was never charged.

Medvene said the incident occurred after Zuno's father, then the governor of Jalisco, Mex., was kidnapped.

1989-09-27-north-county-times-oceanside-ca-pg-3-clip-ins-mexican-release

[HN008V][GDrive]

1989 (Oct 11)

https://www.newspapers.com/image/405601415/?terms=%22Adam%2Bschiff%22

1989-10-11-the-los-angeles-times-pg-b2

1989-10-11-the-los-angeles-times-pg-b2-clip-zuno

The Los Angeles Times (Los Angeles, California) · 11 Oct 1989, Wed

Way Cleared for Zuno to Return to Mexico

A **Los Angeles** federal judge Tuesday cleared the way for Mexican businessman Ruben Zuno Arce, who faces perjury charges in connection with the murder of a U.S. drug agent, to return to Mexico.

U.S. District Judge Robert M. Takasugi accepted offers by Zuno's lawyers of property and cash to secure $200,000 bail and ordered Zuno's release at 10 a.m. today after Assistant U.S. Atty. Adam Schiff signs off on two pieces of property offered as security.

Unless an unexpected problem arises, Zuno, 59, will be released from the Metropolitan Detention Center, where he has been held since Aug. 9, and placed on a flight to Mexico.

The arrangement for Zuno's departure was approved last week by Immigration Judge Lauren R. Mathon after the INS modified a "hold" placed on Zuno that labeled him a suspected drug trafficker.

"The immigration service will take him to LAX and place him on the next available flight to the interior of Mexico," said INS District Counsel John Bartos.

Zuno, brother-in-law of former Mexican President Luis Echeverria, is due back in federal court on Nov. 7. He faces charges of lying to a grand jury when he denied knowing two drug kingpins who are in jail in Mexico pending charges in the February, 1985, murder of U.S. Drug Enforcement Administration agent Enrique Camarena.

1989 (oct 17)

Full page : [HN008W][GDrive]

North County Times (Oceanside, California) • 17 Oct 1989, Tue • Page 3

2 guilty in immigration scheme

LOS ANGELES (AP) — A former federal immigration employee and a Los Angeles man pleaded guilty to conspiracy charges Monday in connection with a scheme that issued phony immigration papers to several Israeli citizens.

Carol Denise London, 25, of Bellflower, and Ely Dany Mizrahy, 29, of Los Angeles face a maximum penalty of 65 years in prison and a $1.25 million fine when they are sentenced Jan. 8, said Assistant U.S. Attorney Adam Schiff.

[HN008X][GDrive]

1989 (oct 31)

Full page : [HN008Y][GDrive]

Mexican Businessman Makes Court Date

By SCOTT HARRIS
TIMES STAFF WRITER

A prominent Mexican businessman charged with lying to a grand jury investigating the murder of U.S. drug agent Enrique Camarena defied a prosecutor's prediction Monday simply by showing up in court.

"We're pleasantly surprised," Assistant U.S. Atty. Adam Schiff said after Ruben Zuno Arce arrived as promised in U.S. District Court in Los Angeles. Schiff had earlier argued unsuccessfully against bail for Zuno, saying it was unlikely the wealthy, well-connected businessman would ever return to the United States if given the chance to leave.

During Monday's hearing, U.S. District Judge Robert M. Takasugi ordered that Zuno's perjury trial date be moved from Nov. 7 to Dec. 12 to allow time for a series of pretrial motions to be argued.

Zuno's attorneys are attempting to learn the identity of government informants. Prosecutors have been protective of their identity, Schiff said, because "a number of people" connected with the Camarena case "have ended up dead."

Zuno, the 59-year-old brother-in-law of former Mexican President Luis Echevveria, is suspected by U.S. authorities of being a drug trafficker—an allegation he denies. He was arrested by immigration officers in San Antonio on Aug. 9 and brought to Los Angeles as a material witness in the 1985 murder of Camarena.

Prosecutors say Zuno owned the Guadalajara house in which Camarena was tortured before he was murdered. Zuno was indicted by a federal grand jury on three perjury counts after he denied knowing Mexican drug lords Rafael Caro Quintero and Ernesto Fonesca Carillo. Both men are in Mexican jails pending charges in the Camarena slaying.

Zuno spent two months in federal custody before his release Oct. 11 on a $200,000 bond. Zuno's attorney, Edward Medvene, said he never doubted his client would return to face charges.

Schiff said he still considers Zuno a flight risk. "We're not at the day of trial yet," he said. "I'll believe it when I see it."

1989-10-31-the-los-angeles-times-pg-a-25-clip-mexican-businessman

[HN008Z][GDrive]

1989 (Nov 28)

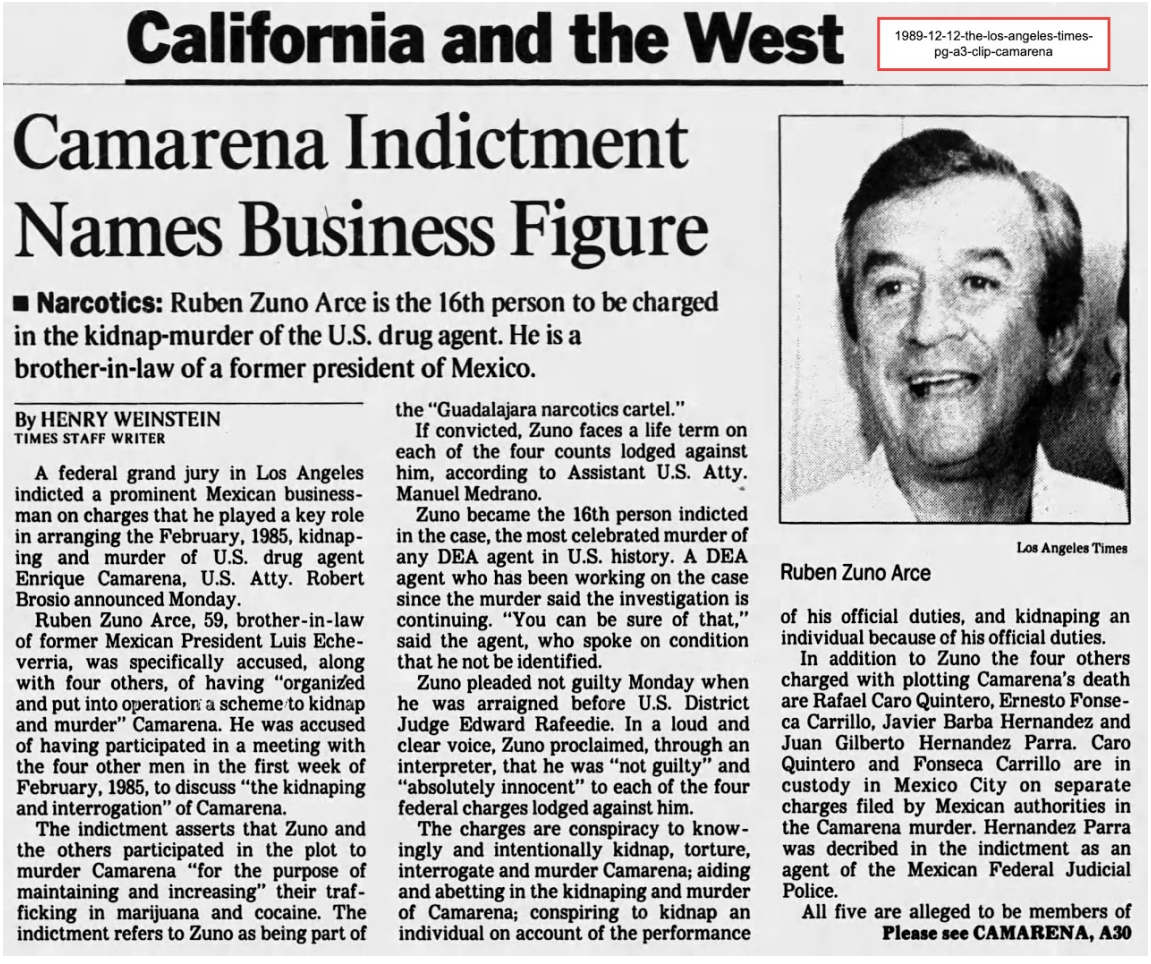
Full page : [HN0090][GDrive]

[HN0091][GDrive]

1989 (Dec 12)

Full pages :

- [HN0092][GDrive]
- [HN0094][GDrive]



[HN0093][GDrive]

CAMARENA: Indictment

Continued from A3

the Guadalajara drug cartel.

Zuno was arrested Saturday night at Los Angeles International Airport when he arrived in the United States for a scheduled hearing on other federal charges pending against him. He and his lawyers appeared to be stunned by the new charges, but declined comment beyond the not-guilty plea.

Judge Rafeedie ordered Zuno held without bail, despite the pleas of his defense lawyer, Edward Medvene, that his client was neither a flight risk nor a threat to the community. He had been free on $200,000 bail on federal perjury charges and has twice returned to the United States from Mexico for hearings on that case.

Prosecutor Medrano asserted that Zuno might flee, that he represented a threat to witnesses who would testify at his trial and that the charges against him were of sufficient gravity to deny him bail. "The complexion of this case is night and day different from the perjury case," Medrano said.

Zuno surfaced as a potentially important figure in the Camarena case in August when immigration authorities in San Antonio arrested him as a suspected drug trafficker and brought him to Los Angeles for questioning as a material witness in the ongoing investigation into Camarena's murder. He denied any involvement in the murder.

He was held without bail for nearly two months by a variety of federal agencies, during which time he testified before a grand jury under a grant of immunity.

On Sept. 7, he was charged with perjuring himself before the grand jury on two occasions. That indictment states that Zuno lied when he denied knowing Rafael Caro Quintero and Ernesto Fonseca Carrillo. A trial on the perjury charges is scheduled to begin in January before U.S. District Judge Robert Takasugi.

Monday marked the first time that federal authorities alleged that Zuno was directly involved in Camarena's murder.

"The charges against Zuno go to the heart of this case," prosecutor Medrano told Judge Rafeedie. He noted that Zuno has been charged with plotting the murder with Caro Quintero and Fonseca Carrillo. "This man rises to that level of [drug] trafficker," Medrano asserted. At another point, Medrano asserted that Zuno had been "part and parcel of the entire planning stage" of the Camarena kidnaping and murder.

Zuno is a member of an influential Mexican family. His father was governor of the state of Jalisco, and his sister is married to Echeverria.

Zuno, his attorneys and his wife have consistently denied that he has had any involvement with drug trafficking.

Camarena was tortured in a Guadalajara house purchased by Caro Quintero in January, 1985, less than a month before the murder.

According to court documents filed in San Antonio in August, Zuno owned the home until Jan. 11, 1985, when he sold it to another man who, in turn, sold it to Caro Quintero.

In all, 16 men have been indicted in Los Angeles in connection with the Camarena murder. Three of them were convicted in a trial held before Judge Rafeedie last year. Raul Lopez Alvarez, a former homicide officer for the Mexican Federal Judicial Police, was sentenced to 240 years in prison; Rene Martin Verdugo Urquidez, a San Felipe land developer, was sentenced to 240 years and an additional life term; and Jesus Felix Gutierrez, former owner of a Los Angeles area seafood company, was sentenced to 10 years.

Eight of the remaining 13 indicted in the case are fugitives, according to prosecutors. Among them are Caro Quintero and Fonseca Carrillo. The Mexican government has refused U.S. requests to extradite them to this country.

Other defendants include Armando Pavon Reyes, a former commander of the Mexican Federal Judicial Police who originally headed the Mexican government investigation into the Camarena murder, and Sergio Espino Verdin, a police officer identified by U.S. officials as one of Camarena's interrogators. Pavon Reyes and Ines Calderone Quintero are fugitives.

Juan Jose Bernabe Ramirez, a former Mexican police officer arrested earlier this year, is scheduled to go on trial in February for his alleged role in the murder.

Camarena's pilot, Alfredo Zavala Avelar, also was kidnaped and murdered. Indictments have been lodged against some of the 16 defendants for their role in that killing, but Zuno was not named in those charges.

Later in the day Monday, Judge Takasugi denied motions filed by Zuno's lawyers that the perjury charges be dropped on grounds of prosecutorial misconduct. The lawyers also objected to the fact that a briefcase belonging to Zuno was seized when he was arrested at Los Angeles International Airport Saturday night.

They asserted that confidential materials were photocopied by government agents. Assistant U.S. Atty. Adam Schiff denied that charge.

[HN0095][GDrive]

1990 (Jan 17)

Full pages :

- [HN0096][GDrive]
- [HN0098][GDrive]

LOS ANGELES TIMES

1990-01-17-the-los-angeles-times-pg-b9-clip-camarena

Perjury Case Dropped Against Man Accused in Camarena Plot

By HENRY WEINSTEIN
TIMES STAFF WRITER

A federal judge in Los Angeles on Tuesday dismissed perjury charges against a prominent Mexican businessman, who still faces trial on accusations that he helped plan the 1985 murder of U.S. drug agent Enrique Camarena.

U.S. District Judge Robert M. Takasugi dismissed the government's three-count perjury indictment against Ruben Zuno Arce, 59, after a brief hearing.

Takasugi denied a request from Assistant U.S. Atty. Adam B. Schiff for more time to present witnesses who would describe Zuno's alleged motive for perjuring himself before a federal grand jury that investigated the Camarena murder here last summer.

Zuno is the brother-in-law of former Mexican President Luis Echeverria, and his father was once the governor of the Mexican state of Jalisco.

He was indicted last September for perjuring himself when he told the grand jury that he did not know either Rafael Caro Quintero or Ernesto Fonseca Carrillo, two Mexican drug kingpins who were in a Mexican jail on charges of murdering Camarena in Guadalajara in February, 1985. They subsequently were convicted and received long sentences in Mexico while separate charges stemming from the Camarena case are pending against them here.

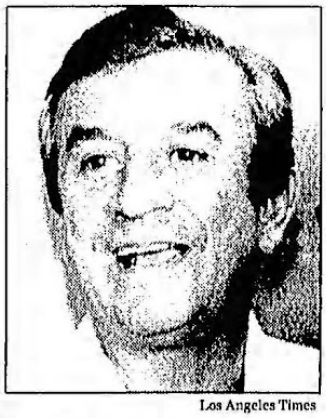
Zuno's perjury trial was scheduled to begin Jan. 30, but prosecutors wanted to have it postponed until after his Feb. 20 trial on more serious charges. In that case, Zuno is accused of having "organized and put into operation a scheme to kidnap and murder Camarena." If convicted, he faces life in prison.

Schiff said he sought the continuance because he believed witnesses were in danger and so they would not have to come to Los Angeles to testify. Schiff also said that, if Zuno is convicted in the conspiracy case, it is likely prosecutors will not bring the perjury case to trial.

Edward M. Medvene, Zuno's chief defense counsel, was unwilling to agree to a continuance, and the judge would not grant one. Then Schiff said he had been authorized by his superiors to ask Takasugi to dismiss the perjury case without prejudice, meaning that the government could refile the charges later. Takasugi granted that motion.

Zuno's lawyers were pleased with the dismissal.

Please see ZUNO, B10



Los Angeles Times

Ruben Zuno Arce

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1990-01-17-the-los-angeles-times-pg-b10-clip-camarena

ZUNO: Perjury Case Dismissed

Continued from B9

"We believe that the government dismissal of the perjury case is a reaffirmation of what we've said since . . . they took him into custody—the government doesn't have a case," Medvene said.

"This is a very important victory for Mr. Zuno," said James J. Blancarte, one of his other defense lawyers. "Simple logic dictates if they don't have the evidence to convict him on perjury charges [that he knew Fonseca and Caro], then they don't have the evidence to convict him on charges that he conspired with Fonseca and Caro to kill Camarena."

Asked if it was possible that prosecutors had dropped the perjury charges so that they would not have to show their hand in advance of the more significant conspiracy case, Blancarte responded: "It's possible, but it stands side by side with the possibility that they don't have a case."

Medvene said that the government attempted to keep Zuno jailed to compel him "to supply information he doesn't have," a reference to the possibility that he could implicate others in Camarena's murder.

The dismissal of perjury charges will have no impact on Zuno's conspiracy trial, according to Assistant U.S. Atty. Manuel Medrano, the lead prosecutor in that case.

Zuno is the 16th person indicted in the Camarena case, a matter of the highest concern to the U.S. Drug Enforcement Administration and recently the subject of an NBC TV miniseries.

DEA agents have said there will be more indictments in the case by Feb. 7, the fifth anniversary of the murder and the last day on which charges can be filed before the federal statute of limitations runs out.

[HN0099][GDrive]

1990 (March 22)

Full pages :

- [HN009A][GDrive]
- [HN009C][GDrive]

1990-03-22-the-los-angeles-times-pg-b9-clip-miller-trial

Prosecutors Deny Misconduct Charges in Miller Spy Case

By HENRY WEINSTEIN
TIMES STAFF WRITER

Justice Department lawyers have vigorously denied that they have engaged in any misconduct in prosecuting espionage charges against former FBI Agent Richard Miller.

In January, attorneys for Miller claimed in a motion filed in U.S. District Court in Los Angeles that charges against him should be dismissed because prosecutors intentionally withheld information that could benefit Miller's defense.

But in their response, prosecutors maintain that the defense motion "is wholly without merit." The defense has conveyed "a false sense of conspiracy and wrongdoing on the part of the government," according to the brief filed by Assistant U.S. Attys. Russell Hayman and Adam Schiff.

The defense motion, prosecutors contend, is "a rehashing of . . . old issues with a new face," contentions that were rejected by U.S. District Judge David Kenyon, who presided over Miller's two trials and the trial of Soviet spy Svetlana Ogorodnikova, with whom Miller had an adulterous affair in 1984.

Miller, 52, was tried on espionage charges twice, with the first trial ending in a hung jury in 1985. The next year, a jury convicted him of trading a secret FBI manual to the Soviet Union for sex, money and a Burberry trench coat. It was the first time an FBI agent had been convicted of espionage.

The conviction was overturned by the U.S. 9th Circuit Court of Appeals last April and he was released on bail last October.

Miller says he was not a spy but was attempting to revive his lackluster FBI career with an attempt to infiltrate the KGB.

Kenyon removed himself from the case and U.S. District Judge Robert M. Takasugi took over. Miller's third trial is scheduled to begin July 10.

Much of the government response deals with a July, 1989, letter sent to FBI Director William Sessions by a lawyer for former FBI Agent John Hunt. Hunt was a witness in both of Miller's earlier trials. The letter urged Sessions to investigate possible FBI misconduct in the case. The letter claimed that the FBI omitted from Hunt's investigative reports on the case information that was favorable to Miller.

"All of the issues raised by" Miller's January motion "have been aired" during the earlier trials, the prosecutors retorted. "The defense has long been aware of Mr. Hunt's view" that his report had been inaccurately summarized and "has cross-examined him on this issue in all proceedings."

The prosecutors also maintain that the FBI conducted an in-depth investigation of the case. "The fact that the FBI did not back away from a prosecution of one of its own agents is a clear testament to its objectivity and single-minded pursuit of the criminal actors," the prosecution response states.

Moreover, the prosecution motion maintains that much of the information contained in the letter from Hunt's lawyer, Lynn Sarko of Seattle, tends to incriminate Miller rather than exonerate him. And the prosecutors state that they have turned over to Miller's lawyers all relevant information that could aid his defense.

In reply, Joel Levine, one of Miller's lawyers, asserted that prosecutors have "mischaracterized many of the things we were attempting to say." He said that a number of issues were raised by the July, 1989, letter that the prosecutors did not deal with in their response.

Levine and his co-counsel, Stanley I. Greenberg, said they plan to file a detailed written reply and hope that Judge Takasugi will grant a hearing so that the issues they have raised can be further explored before Miller's trial. Takasugi is scheduled to hear the misconduct motion on June 11.

[HN009B][GDrive]

1990 (April 17) - Need to verify - the clipper said "Adam Schiff sister in-law-Amy Sporer Schiff - Grandfather's obituary"

Full page : [HN009D][GDrive]

The Los Angeles Times (Los Angeles, California) · 17 Apr 1990, Tue · Page 114

DEATH NOTICES/FUNERAL

AGNELLO, John J.
Pierce Brothers Stone, Upland

ARONOW, Albert M. born on May 12, 1913 in New York; died April 14, 1990 of complications of Parkinson's disease at his home in Los Angeles with his beloved wife, Alice at his bedside. He was the adored father of Maureen (Sandy) Ellenberg and Ruth (Al) Sporer; grandfather of Amy (Dan) Schiff; and great-grandfather of Rachel, all residing in San Jose, CA.; also grandfather of Julie (Stuart) Krigel of Dallas, TX., Steven Ellenberg of New York, and Gary Ellenberg of Los Angeles; also mourning his death are his sister, Anne McMichael, of Griffin, GA., and her daughter, Judy (Gary) Howard, and children; his cousin, Ben (Valerie) Margolis of Los Angeles; his brother-in-law and sister-in-law, Herman and Annie Berman and their daughter, Tara (Moshe) Kaiserman and their children, of Van Nuys, CA.

Albert graduated from U.C.L.A., class of 1934 with a bachelor's degree in chemistry; he became a nationally known coatings chemist, who specilized in industrial and marine products; he retired as Technical Director of Sinclair Paint Co., in 1983; he was a past President of the Los Angeles Society for Coating's Technology, and recipient of their Outstanding Service Award; he received the highest honor of the society when he was raised to honorary membership; he initiated scholarship and library programs for Coating's Technology; he was a dedicated supporter of rational improvements in air quality requirements. Albert was dearly loved by all who knew and worked with him.

Private family services only will be held. Contributions may be made to your charity of choice.

[HN009E][GDrive]

1990 (May 11)

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1990-05-11-the-los-angeles-times-pg-a1

1990-05-11-the-los-angeles-times-pg-a1-clip-hazardous

https://www.newspapers.com/image/175318106/?terms=%22Adam%2Bschiff%22

1990-05-11-the-los-angeles-times-pg-a38

1990-05-11-the-los-angeles-times-pg-a38-clip-hazardous

2 Indicted in Hauling of Toxic Waste to Mexico

■ **Environment:** Charges are the first under a federal law involving smuggling of hazardous material.

By MAURA DOLAN
and LARRY B. STAMMER
TIMES ENVIRONMENTAL WRITERS

Federal, state and Los Angeles County law enforcement officials announced Thursday the first federal felony indictment under an environmental law in a case involving the smuggling of toxic wastes from California into Mexico.

Citing growing trafficking of hazardous garbage from California across the border, the officials also announced the creation of a new multi-agency task force intended to remove jurisdictional problems that have hampered such smuggling investigations in the past.

"There are a lot of types of crime that have gone global—white collar crime, terrorism and drugs, just to name a few," said William Stollhans, assistant special agent in charge of enforcing environmental laws for the FBI. "The indictment today is an example of where environmental crimes have now gone international. They know no international boundaries."

The indictment charges that Raymond Franco, 57, a licensed waste hauler from El Toro, accepted money from California businesses to take their wastes to legal landfills or recycling facilities. But instead of going to the designated sites, the indictment says, Franco and an accomplice, David Torres, 39, of Huntington Park, loaded drums of the dangerous materials into enclosed trucks destined for Mexico, concealing the barrels under cardboard and wood and surrounding them with empty drums.

Much of the dangerous material allegedly was dumped at a Tijuana warehouse owned by Torres, and investigators fear some of the barrels later may have been used by nearby residents to store water. Prosecutors said the government of Mexico cooperated fully in the inquiry.

Among the firms whose waste ended up in Tijuana was Barmet Aluminum Corp. of Torrance, which paid Franco a total of $12,000 in 1988 to haul 57 drums of hazardous material to a treatment facility and a licensed hazardous-waste landfill, according to the indictment.

Had the material actually gone to a legal landfill, the cost would have approached $28,000, more than twice as much as the firm paid Franco, investigators said. The division manager of the Torrance

Please see TOXIC, A38

1990-05-11-the-los-angeles-times-pg-a1-clip-hazardous

TOXIC: 2 Waste Haulers Indicted

Continued from A1

facility, which was not charged, said the company trusted Franco to dispose of the material lawfully.

On Wednesday, The Times reported that increasingly strict environmental laws and the escalating costs of legal disposal are prodding more and more hazardous waste generators in Southern California to send their toxic garbage illegally into Mexico, where it is dumped or used in industrial processing.

The indictment announced Thursday marked the first time transporters of hazardous waste have been charged with illegal smuggling under the U.S. Resource and Conservation Recovery Act, which prohibits, among other things, disposing of hazardous waste without a permit.

In a similar case in 1986, three Americans were indicted by a federal grand jury in San Diego for falsifying shipping documents. That case was filed under federal mail fraud statutes.

"This is the first time that California law enforcement officers have in fact witnessed the unlawful smuggling of toxic waste into Mexico and have documented it," said William Carter, a Los Angeles County deputy district attorney who helped investigate the case. "This is just one set of players out of dozens who are out there operating in similar fashion. We just have to take them one set at a time."

In a separate case stemming from the Franco investigation, the federal grand jury also indicted Laminating Co. of America, a Garden Grove firm, accusing it of conspiracy to dispose of and transport hazardous waste and 46 counts of illegal transportation and disposal of toxic waste—all within Orange County.

Rex Scatena, an attorney for Laminating, said the company is "an old, family-run business." He said he had not yet seen the indictment, but he defended the firm.

"They have all the necessary permits to dispose of and handle the materials they use there," Scatena said.

Franco, who authorities said disappeared from his Orange County home a year ago, was arrested in New York on Wednesday. He was arraigned before a federal magistrate in Brooklyn on Thursday and was held pending a bail hearing today. Authorities said they were planning to summon Torres to appear before a federal magistrate in Los Angeles. Torres is believed to be cooperating with investigators.

Franco and Torres could not be reached for comment, but a woman who identified herself as Franco's wife said her husband is innocent.

Reached by telephone at the couple's El Toro home, the sobbing woman said, "He did nothing wrong. . . . He is a good person."

Franco was charged with one count of conspiracy, seven counts of illegal transportation and disposal of hazardous waste and one count of illegal export of hazardous waste to Mexico. Torres was charged with one count of conspiracy, six counts of illegal transportation and disposal of hazardous waste and one count of illegal export of hazardous waste to Mexico.

If convicted, Franco faces a maximum sentence of 32 years in prison and a fine of $250,000 on each count. Torres faces a maximum of 27 years in custody, and a fine of $250,000 for each count.

Investigators said they placed Franco under surveillance in 1988 after he was identified as a possible suspect during routine monitoring by county health department officials of local waste generating companies.

While under surveillance in October, 1988, Franco and Torres met at Laminating Co. of America in Garden Grove and loaded 16 drums of hazardous waste onto two trucks. Torres headed north in his truck but investigators lost track of him before he made any stops.

The other truck, driven by a Mexican national, headed to the border, investigators said. The CHP stopped the vehicle before it reached the border and the driver was arrested and subsequently prosecuted by Orange County authorities for illegally transporting hazardous waste, according to Los Angeles County investigators. The man served jail time and eventually returned to Mexico.

As undercover investigators continued to watch Franco, prosecutors said, they saw repeated illegal activities at Laminating Co. According to the indictment, the firm's employees were seen on several occasions illegally disposing of hazardous wastes in trash bins destined for a municipal landfill in the city of Orange. Franco also was seen dumping hazardous materials into an ordinary trash bin.

The waste, eventually picked up by the municipal garbage company and taken to Santiago Landfill, should have been put into special containers and taken to a licensed hazardous waste facility.

In the meantime, Barmet Aluminum Corp. notified the U.S. Environmental Protection Agency that hazardous waste facilities where Franco and Torres were supposed to have taken Barmet's materials had not, in fact, received them. The corporation, based in Ohio, has aluminum recycling plants across the nation.

"The guy [Franco] did something wrong," said Jorge Eulloqui, division manager of the corporation's Torrance facility. "We trusted him, we hired him under good conscience and he defrauded our company."

Eulloqui, who said his plant budgets about $50,000 a year for the treatment, recycling and disposal of hazardous waste, said the company employee who contracted with Franco is no longer with the firm. Eulloqui said he does not believe that the former employee suspected anything was amiss even though the fees paid to Franco were unusually low for legal disposal.

Los Angeles County and federal prosecutors, who announced the filing of the indictments at a news conference in Los Angeles, said they hope they will deter illegal dumping in the future.

"Companies realize it's cheaper to pollute than to dispose of hazardous material properly," said Assistant U.S. Atty. Adam B. Schiff, who is helping to prosecute the cases. "We hope the announcement of the indictments and the task force will impress individuals that the calculus is changing dramatically, that the costs are going up dramatically."

The new environmental task force will include representatives of the FBI, the EPA, the U.S. Department of Transportation, the California Highway Patrol and the California Department of Health Services.

Officials said halting waste trafficking into Mexico will be a top priority of the task force, which will have jurisdiction over much of Southern California. Previously, law enforcement investigators told The Times that little was being done to stop toxic waste smugglers because of jurisdictional problems and lack of adequate staffing.

"We have to be as diligent at the border in stopping those poisons that are going south as we are in trying to stop the drugs that are coming north," said Los Angeles County Dist. Atty. Ira Reiner.

Reiner said crops imported from Mexico may be contaminated by toxic ground water and poisons that have been dumped in Mexican rivers.

State officials also have worried that toxic waste dumped by Americans in Mexico is contributing to contamination in California. An internal state government memo obtained Thursday by The Times warned a year ago that the illegal disposal of hazardous waste in Mexico posed ground water contamination and air pollution threats not only to Mexico, but also to the United States.

The May 30, 1989, memo to state Health Director Kenneth W. Kizer said the potential for environmental problems "appears to be extreme," both from the illicit trafficking of hazardous waste into Mexico, and from waste generated in Mexico by American-owned factories along the border.

Times staff writer Catherine Gewertz in Orange County contributed to this story.

1990 (Aug 22)

Full pages :

- [HN009F][GDrive]
- [HN009H][GDrive]

1990-08-22-the-los-angeles-times-pg-b1-clip-miller-trial

Miller Loses Bid to Keep Confession Out of New Trial

■ **Spy case:** Former FBI agent says he admitted passing manual to Soviets in order to please his interrogators. 'I did not give anybody any documents,' he says.

By GEORGE RAMOS
TIMES STAFF WRITER

On the eve of his third trial for spying, former FBI agent Richard W. Miller testified Tuesday during a pretrial hearing that he confessed to passing a secret bureau manual to the Soviet Union because he was trying hard to please the fellow agents who were interrogating him.

The five intense days of questioning in the fall of 1984—including talks with two FBI superiors who were members of the Mormon Church, as Miller was—confused issues in his mind and prompted him to confess when, in fact, he had not done anything wrong, he said.

"I want to be so honest that the statements I made were of benefit to the FBI . . . even to the side of error," Miller testified. "I had talked myself into believing that I had [passed secrets to the Soviets]. I thought I was helping out my government."

Some eight months later, Miller said he realized, as he reviewed evidence in preparation for his first trial, that he was innocent.

Please see MILLER, B4

[HN009G][GDrive]

1990-08-22-the-los-angeles-times-pg-b4-clip-miller-trial

BILL ROBLES / For The Times

Attorney Stanley Greenberg, with Joel Levine, center, speaks at hearing for Richard Miller, left.

MILLER: Ex-Agent's Trial Starts Today

Continued from B1

"I've told the truth and I always have," he said. "I did not give anybody any documents."

Miller, 53, made his comments to support pretrial defense motions to throw out the 1984 confessions he made to FBI agents. His federal court trial begins today in Los Angeles.

But U.S. District Judge Robert M. Takasugi, who will preside over the trial without a jury, ruled that the confessions can be admitted.

Miller's attorneys, Joel Levine and Stanley Greenberg, had contended that his confession—that he passed the manual to former lover Svetlana Ogorodnikova in exchange for sex, money and an expensive trench coat—should be kept out of this trial because federal prosecutors in the past withheld certain evidence from the defense and U.S. District Judge David V. Kenyon, who presided over the first two trials.

Levine and Greenberg, however, said they would still make prosecutorial misconduct part of their strategy.

An example of that alleged misconduct, they argued, was the prosecution's failure to disclose that at the time he was being grilled by interrogators, Miller, who had been excommunicated from the Church of Jesus Christ of Latter-day Saints for sexual impropriety, had sought the "blessing" of both Richard T. Bretzing, who was head of the FBI's Los Angeles office at the time, and Phillip Christenson, a ranking agent in the office.

The defense lawyers argued that Miller's request should have been disclosed to the defense and to Kenyon during the earlier trials. This has added significance, they said, because Bretzing and Christenson were both bishops of the Mormon Church at the time, and that played a role in Miller confessing to passing the secret FBI handbook.

Assistant U.S. Atty. Adam Schiff, the current prosecutor, countered that recent decisions have allowed confessions to stand despite so-called "religious" issues. He argued that Miller had confessed without discussion from anyone about his religious life.

Christenson was brought into court Tuesday to testify about the incident, and confirmed that Miller, in the midst of tense interrogation by FBI agents, at one point asked for a blessing from him.

"There was a short pause and [Miller] said, 'No, that wouldn't be appropriate,'" Christenson testified.

Miller said he asked for the blessing in part because he looked upon Christenson and Bretzing as spiritual advisers.

Miller's first trial ended in a hung jury in November, 1985. The following year, a Los Angeles federal court jury convicted him, but the conviction was overturned by a three-judge panel of the U.S. 9th Circuit Court of Appeals in April, 1989.

He was released on bail last October after 5½ years in prison and has been working as a private investigator in Manhattan Beach.

Miller has continued to maintain his innocence, admitting in the past that he had an affair with Ogorodnikova to infiltrate the Soviet KGB and to revive his declining career with the FBI.

At one point, his attorneys likened Miller to Ralph Kramden, the well intentioned but blundering bus driver portrayed by Jackie Gleason on the old "Honeymooners" TV show.

With opening statements scheduled to start today, Miller's third trial will be different from the first two in several aspects:

- In addition to a new judge, there is a new prosecuting team. Schiff is the new lead prosecutor. Former U.S. Atty. Robert Bonner, recently confirmed as the head of the Drug Enforcement Administration, and Assistant U.S. Atty. Russell Haymen handled the first two trials.
- The case is being heard without a jury. On the advice of his lawyers, Miller reluctantly agreed to have Takasugi decided the case.
- The trial is expected to last about two months, much shorter than the six-month marathon trials before Kenyon.
- With Miller testifying on the pretrial motions, his lawyers said he may testify on his behalf in this trial. Miller did not take the witness stand in the first two.

BACKGROUND

■ Richard W. Miller, 53, is the first FBI agent to be accused of spying for the Soviet Union. He was arrested in October, 1984, on suspicion of giving a secret FBI manual to Soviet emigre Svetlana Ogorodnikova during an adulterous affair he had with her that year. An FBI agent since 1964, his career had been on the decline before his arrest over job performance and weight problems.

[HN009I][GDrive]

1990 (Oct 09)

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1990 (Oct 13)

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1990-10-13-the-los-angeles-times-pg-b1

1990-10-13-the-los-angeles-times-pg-b1-clip-miller-trial

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1990-10-13-the-los-angeles-times-pg-b14

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1990-10-13-the-los-angeles-times-pg-b1-clip-miller-trial

Miller, His Freedom Waning, Proclaims Innocence

By RONALD L. SOBLE
TIMES STAFF WRITER

Richard W. Miller says he tends "to eat more" when under stress, and these days the former Los Angeles FBI agent is under considerable stress.

Miller, 53, was convicted by U.S. District Judge Robert M. Takasugi on Tuesday of espionage—the first FBI agent ever found guilty of spying. His sentencing is set for Jan. 7, and he faces a maximum sentence of two life prison terms plus 50 years.

Until he learns his sentence, "R.W.," as his family calls him, expects to experience the gnawing anxiety which, he said, partially explains why about 300 pounds now hang on his 5-foot, 10½-inch frame.

"I have three months of freedom," he said. "What happens after Jan. 7, I don't know."

Miller's girth belies his personality. He appears more teddy than grizzly. In an interview this week, he betrayed a shyness, a tentativeness, in talking to a reporter. Some of this he attributed to a diagnosed hearing problem.

"It is in such situations as this, that it really clicks in," he said.

The verdict in the nonjury trial was Miller's second conviction for espionage (the first conviction was overturned by a federal appellate panel) and his third trial (the first, in 1984, ended with a hung jury).

In the interview, Miller again proclaimed his innocence.

"I was absolutely not a spy," Miller said quietly. "I never was. I never will be."

Miller served five years in prison before he was given a new trial; it's been about a year since he posted bail and walked out of a Minnesota penitentiary. Since then, he's assisted a private detective, helped set type for a weekly newspaper and honed his skills as an artist, cartoonist and poet.

Miller was interviewed in the small, comfortable Downey home of his sister, Maryann Deem, who sat beside him on a sofa. He spoke of the uncertainty that has pervaded his life since he was first accused,

Please see MILLER, B14

MILLER: Ex-FBI Man Waits Anxiously

Continued from B1

and he seemed haunted by his adulterous affair with convicted Soviet spy Svetlana Ogorodnikova—to whom, the government successfully argued, Miller passed secret documents in exchange for the promise of $65,000.

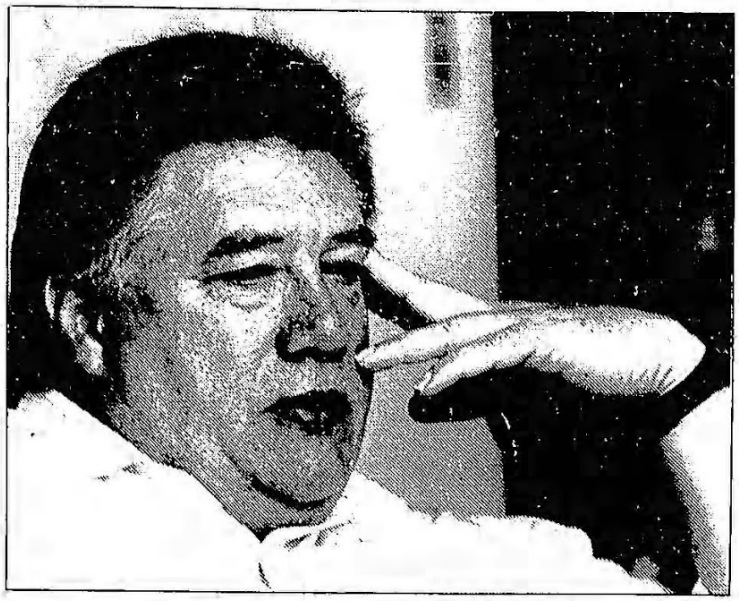
He called the affair with Ogorodnikova, now serving an 18-year prison sentence, a "dumb" thing to do and added, "It seems to get dumber as I go through the court system."

Nonetheless, Miller said he believes a handful of FBI bureaucrats "without scruples" came down on him with a vengeance.

"They know who they are," he said. "I'm not going to name names."

Then Miller's bespectacled face lit up. "I am a very fortunate fellow," he said. "I have so many blessings I can't count them."

Miller explained that he was primarily referring to the fact that Takasugi, over the prosecution's objections, let him remain free on $337,000 bail until his sentencing so he could enjoy the holiday season



ANACLETO RAPPING / Los Angeles Times

Richard W. Miller, looking forward to three more months of freedom, maintains "I was absolutely not a spy. I never was. I never will be."

with his family.

Conscious of a weight problem that got him into serious trouble at the FBI, Miller said he has been riding a bicycle daily and even cycled on occasion about 12 miles to the federal courthouse in downtown Los Angeles during his trial.

But Albert Sayers, a retired FBI agent who hired Miller last year to work at his Manhattan Beach-based detective agency, said Miller sees food as an antidote for stress.

"When he's stressed, he eats," Sayers, the case investigator for Miller's lawyer, said recently. "He'll go out and buy a gallon of ice cream and eat it at one sitting."

In prison, at the Federal Medical Center in Rochester, Minn., Miller developed calligraphy skills. He proudly displayed for his visitor a series of greeting cards he produced for fellow inmates.

"Dearest Becky," began a Miller-designed birthday card, "We have loved, we have cried, we have laughed, we have sighed. And it's nice to recall in the Spring or the Fall, all the times we did share, all the times we did care. . . ."

Miller also is fascinated by cartoon characters. The stars of his comic strip closely resemble the ubiquitous Kilroy character of World War II vintage.

Miller also developed considerable computer skills while in prison. So far, it has allowed him to hold a part-time $8-an-hour job on a weekly newspaper, the Los Angeles Downtown News, where he used a computer to lay out ads.

The newspaper's publisher, Sue Laris-Eastin, said she didn't know when Miller was hired six months ago that "this was the R.W. Miller of this case." Then, one morning before his trial started, Miller asked for a private meeting.

"He told me he was going on trial and that he wanted to keep his job," Laris-Eastin said. "I told him it wasn't my place to decide his innocence or guilt."

So Miller stayed on the job, often being dropped off by Levine at the paper's 1st Street office after his daily court appearance during the seven-week trial.

Laris-Eastin likes Miller's work. "He's very accurate with what he does," she said.

Sayers, one of Miller's former FBI supervisors, made clear he loves Miller like a brother and believes he's absolutely innocent. And Sayers, too, said Miller performed well on the job. "The FBI doesn't hire dummies," Sayers said.

Miller's downfall, Sayers suggested, stemmed from a serious personality defect—naivete.

"He could fall in a barrel of lollipops and come up sucking his thumb," Sayers said.

Sayers described Miller as "a kind of peculiar personality . . . a kind of a loner," Sayers said.

Miller was even uncomfortable carrying a revolver, added Sayers, a former FBI weapons instructor.

"He wouldn't harm a fly," he said. "He hated to carry that gun."

His personality also played a role in Miller's defense. His attorney, Joel Levine, painted a picture of a bumbling agent who, more often than not, tripped over his own feet.

Levine told the court that once, while stationed at the FBI's Riverside office, Miller "even went so far as to be the last one out of the office at night and he left the keys to the office in the door when he left. And when we hear something like that, it doesn't sound like somebody who's an FBI agent."

So it follows, according to Levine's closing argument, that Miller finally got in "over his head" when his James Bond-style mission to use Ogorodnikova to penetrate the KGB backfired.

The government prosecutor, Assistant U.S. Atty. Adam B. Schiff, said the "bumbling agent" theory is his "pet peeve."

"The defense has been pretty successful in packaging Miller in a certain way," Schiff said in an interview after the verdict. But the portrait that emerged from testimony of his fellow agents, he said, was of a capable individual who allowed personal problems to take control of his professional life.

This was a reference to the fact that Miller, a divorced father of eight children, was being hounded with financial and domestic problems, had been the target of disciplinary action for not conforming to the FBI's weight standards and had been excommunicated from the Mormon church for adultery.

Moreover, Miller's dilemma went beyond personal crises, Schiff said.

"Miller had no plan of infiltrating anything," he said. "He was an intelligent, conniving individual who chose to go down in flames because the prospects offered by Svetlana far outweighed the prospects of serving his country."

Miller is a Wilmington native who was recruited by the FBI shortly after graduating from Brigham Young University in Utah. His children, ages 8 to 24 years, live with his ex-wife, who has remarried and resides in Utah.

Miller expressed regret over his dealings with Ogorodnikova. He said he had somehow got it into his head that he could emulate James Bond and single-handedly penetrate Soviet intelligence.

"In the movies it works; in real life it doesn't," he said.

1990-10-13-the-los-angeles-times-pg-b14-clip-miller-trial

BITCHUTE @Housatonic YOUTUBE @HousatonicLive ODYSEE @Housatonic BRIGHTEON @Housatonic

Housatonic

Eve (Sanderson) Schiff (born 1962)

Eve Schiff was born Eve Sanderson on December 12, 1962 in Burbank, California

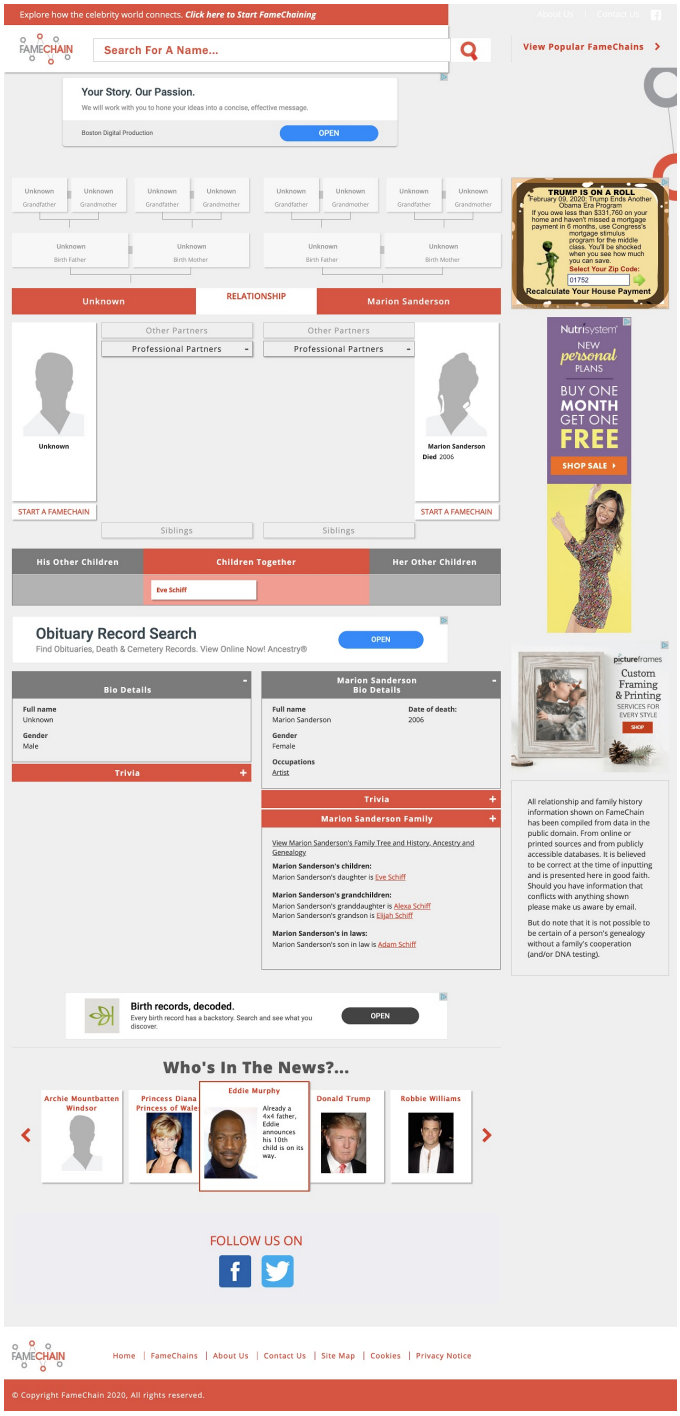
Married to Adam Bennett Schiff (born 1960)

Eve Schiff was born Eve Sanderson on December 12, 1962 in Burbank, California

Married to Adam Bennett Schiff (born 1960)

Noticed that Most genealogy sites have no info who father of Eva Sanderson (is as of Sun Feb 9)

Such as FameChain :



[HL0034][GDrive]

Helping Adam Schiff run for office -

1994

- https://www.newspapers.com/image/160133708/?terms=%22Eve%2BSanderson%22
-
- https://www.newspapers.com/image/157517219/?terms=%22Eve%2BSanderson%22
-

Source : EarthTheNecklace (see [HL0035][GDrive])

- Eve Schiff was born Eve Sanderson on December 12, 1962 in Burbank, California. She graduated from Torrey Pines High School, San Diego in 1980.
- Eve's mother, Marion Sanderson, was an artist. She passed away in the mid '00s
- Eve studied at the University of California, Santa Barbara. Her major and chosen career are, however, unknown.
- Eve and Adam Schiff Married in 1995
- 1990 was an eventful year in Schiff's career. That year, he had risen to prominence as the prosecutor who secured the first espionage conviction against an FBI agent in the infamous Richard Miller case. That was also the year he met his future wife.
- His friends had arranged a doubles match at a Marina Del Rey tennis court one day in 1990. One of the participants was Eve Sanderson.

Mother - Marion Sanderson

1985 (Jan 17) - Marion Sanderson - artists page

Full pages : [HN00NR][GDrive] / [HN00NS][GDrive]

Marion Sanderson

She has exhibited widely in San Francisco and San Diego.

Marion Sanderson came to Del Mar by way of Michigan, where she was raised, and art schools in Chicago, Paris and New York City.

"I was a commercial artist for several years," Sanderson said, "because I felt that I drew better than I painted. But it didn't satisfy me. And I couldn't do both. After working, I didn't have the energy or enthusiasm to paint. So I gave up commercial work."

Although these seven artists represent only a segment of the teeming art scene, their differing works offer a look at art today.

The Felicita Foundation for the Arts will show "Art Today" Friday through March 4 at the Mathes Cultural Center in Escondido. The center, at 3rd Avenue and Kalmia, is open from 10 a.m. to 4 p.m. Monday through Saturday with no admission charge. For more information, call 743-3322.

[HN00NT][GDrive]

Adam Schiff on Facebook - See [HL0036][GDrive]

- *May 8 2016 -"Happy Mother's to my wife, Eve. She's a great mom, and had a terrific example to follow with her mother, Marion Sanderson, who passed a decade ago. An artist, Marion was a beautiful person and a real sweetheart -- as fantastic a mother-in-law as anyone could ask. We lost my mother, Sherrill Ann Schiff, about five years ago. "Nana" as she was called by our kids, was a wonderful, loving and proud mother and grandmother. We miss them both. Here's my mom with a characteristic smile."*

- .. suggests his mother-in-law passed in 2006
- .. "**Marion Sanderson**"
- .. Was an artist

James Sanderson

[HN00NW][GDrive]

FIRST MARRIAGE - 1945

Full page - [HN00NX][GDrive]

1945 - first marriage ? https://search.ancestry.com/cgi-bin/sse.dll?indiv=1&dbid=9093&h=2530084&tid=&pid=&usePUB=true&_phsrc=jWH47&_phstart=successSource

Battle Creek Enquirer (Battle Creek, Michigan) · 29 Mar 1945,

Ruth Champlin Bride Of Sergt. Sanderson

Miss Ruth Champlin, daughter of Mrs. John Minnick of 48 North Union, became the bride of Staff Sergt. James D. Sanderson, son of Mrs. Alice Sanderson of Big Rapids and of Wilber Sanderson of Grand Rapids, at 4 o'clock Tuesday afternoon at Mr. and Mrs. Minnick's home. The Rev. John Clemens of the Maple Methodist church performed the ceremony.

Miss Marjorie Noble and Roy Champlin, brother of the bride, attended the couple.

The bride wore an afternoon dress of aqua crepe and a corsage of gardenias and red roses. Miss Noble's frock was yellow and her corsage of blue iris.

Out-of-town guests at the wedding were Mr. and Mrs. Wilber Sanderson of Grand Rapids, Mrs. Alice Sanderson of Big Rapids, Miss Frances Curle of Albion and Miss Barbara Shannon and Miss Jane Clark of Kalamazoo.

The couple left after the ceremony for a brief honeymoon in Chicago. Young Mrs. Sanderson will accompany her husband to his new station.

Mrs. Sanderson is a 1943 graduate of Central high school and attended Western Michigan college. Sergeant Sanderson also attended Western Michigan college and entered the marine corps more than a year ago.

[HN00NY][GDrive]

Who is James Dean Sanderson ?

Full page : [HN00NU][GDrive]

Readers feel bond to 'Liberated Male'

Reader response was immediate and enthusiastic to our Aug. 9 tryout of Jim Sanderson's "The Liberated Male."

Scores of letters brought messages of agreement with the veteran journalist's aversion to TV's "assault" on viewers with commercials for feminine hygiene products.

The message, too, was "Give us more Sanderson."

So, starting now, we'll be running his column regularly on Living Today pages. To let readers get to know "The Liberated Male," it will run twice a week, in Thursday and Sunday editions. In a month or so, we'll switch to once-a-week, Sunday.

Subjects you can expect "The Liberated Male" to write on are "Having a Baby is Dad's Business, Too;" "Tears for a Man—Yes, They Are Allowed;" "Men's Lib Group Rejects Idea They Oppress Women;" "To Make a Man Happy Just Ogle His Body;" and "Getting Together—Learning to Grow;"

And in case you're wondering, "Who is this fellow Sanderson?", here's what we know:

—James Dean Sanderson, reared in Muskegon, Mich., ended World War II as a Marine Corps 2nd Lt. attached to Naval Intelligence. He was the youngest officer ever commissioned by the Corps.

Jim Sanderson

—After graduation from Medill School of Journalism at Northwestern University, he went to work for Salt Lake Tribune and, later, for Stars and Stripes as a reporter and copy editor.

—He broke into TV as a stringer for NBC News in the Mideast and Africa. He went on to write and produce his own film documentaries on the Iron Curtain, which were distributed worldwide by the U.S. Information Agency.

—He has written scripts for radio, TV and motion pictures and his reporting and social commentary have appeared in every major magazine in the United States and dozens of foreign publications.

—Among his published books are novels on such themes as the U.S. presidential campaign and the Hungarian revolution.

1979-08-23-the-pantagraph-bloomington-illinois-pg-b-13-clip-sanderson

[HN00NV][GDrive]

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ww2 draft

https://www.fold3.com/image/660241284?terms=james,dean,sanderson

1930 US census

https://www.fold3.com/image/136513874?rec=136513909

on neptunia - 1954

https://search.findmypast.com/record?id=https%3A%2F%2Ffamilysearch.org%2Fpal%3A%2FMM9.3.1%2FTH-1942-34002-2643-6&parentid=US%2FPASS%2FNY%2F012366019495

Jack Sanderson - Older Brother died very young

https://search.ancestry.com/cgi-bin/sse.dll?dbid=60872&h=602104645&indiv=try&o_vc=Record:OtherRecord&rhSource=6224

Catherine B (Kroth) Page (1919 - abt. 2012)

- https://www.wikitree.com/wiki/Kroth-6
- 2020-02-wikitree-com-catherine-b-kroth-page-1919-abt-2012
- https://drive.google.com/open?id=1VOviWg-rM12hY08l9EiRt_wtmJ0A6Cbj

Catherine B (Kay) Page formerly Kroth

Born 3 Mar 1919 in Paw Paw, Michigan

Ancestors ancestors

Daughter of Frank Joseph Kroth and Anna Theresa (Brach) Kroth

Sister of Dorothy Ann Kroth, Marion F Kroth, Robert J Kroth, Thomas Kroth and Joan E Kroth

Wife of Frank T Page — married 23 Sep 1948 in Paw Paw, Michigan

Descendants descendants

Mother of [private daughter (1950s - unknown)], [private daughter (1950s - unknown)], [private daughter (1950s - unknown)], [private daughter (1950s - unknown)] and [private son (1950s - unknown)]

Frank T. Page

- https://www.foresthillspalmcityflorida.com/obituary/page-frank
- 2016-03-20-foresthillspalmcityflorida-frank-t-page.pdf
- #
- 2016-03-20-foresthills-palmcityflorida-frank-t-page-4465426-fbs.jpg
- #

Frank T. Page

January 1, 1918 - March 20, 2016

Frank T. PageFrank T. Page Jr., 98, of Palm City, FL, passed away peacefully on Sunday, March 20, 2016 in his home at Sandhill Cove Retirement Living.

Born in 1918 in Pittsburgh, PA, he graduated from Central Catholic High School and from the University of Illinois where he was a member of the Kappa Sigma Epsilon fraternity.

During World War II Frank served in the US Army Air Corps attaining the rank of Captain. He was involved in public relations during his army career and managed the Santa Ana Army Air Force Baseball Team working with illustrious professional players including Joe DiMaggio.

Frank started his career in the oil industry with the Mobil Oil Company in North Carolina and later moved with Mobil to Chicago, Illinois. It was there that he met his wife, Catherine "Kay" Kroth. They were married in Paw Paw, Michigan in 1948. He joined The Phillips Petroleum Company in Bartlesville, Oklahoma in 1948. In 1950 he was promoted to Phillips' International Office in New York City where he became a manager and later director. Frank loved the vibrancy of New York City and his work allowed him to travel extensively worldwide, mainly to the Middle East, Europe, Asia and South America. He continued to work there until his retirement in 1977. He was a lifelong, avid golfer and was a member of Morris County Golf Club in Convent Station, NJ for over 60 years. In 2005, Frank and Kay moved from their home in Summit, NJ to Palm City, FL.

Frank and Kay Page were members of St. Teresa Catholic Church in Summit, New Jersey and then Holy Redeemer Catholic Church in Palm City.

Survivors include his son, Dr. Robert Page, MD and his wife Yan Gao, MD of Knoxville, TN; his daughters, Anne Page and her husband Robert Mercer of Mystic, CT; Elizabeth Van Wagener and her husband Vandy of Denver, CO; Karen Page of Stuart, FL; Cindy Sonntag and her husband Randy of Jupiter, FL; and four grandchildren and two great grandchildren. He was preceded in death by his wife of 63 years, Catherine K. Page and all seven of his siblings.

Visitation will be from 9:00 to 10:00 AM on Monday, April 4, 2016 at the Forest Hills Funeral Home, Palm City, FL. A Mass of Christian Burial will be celebrated at 10:30 AM at Holy Redeemer Catholic Church. Interment will follow in Forest Hills Memorial Park with military honors provided by the Patrick Air Force Base Honor Guard.

The 59-year-old can at least count with the support of longtime wife Eve. The two have been married for nearly 25-years. The couple is known for being super supportive of each other.

Eve Schiff was born Eve Sanderson, she used to be a tennis player and was active in the game for most of her youth. In fact, it was on a tennis court in Marina del Rey back in 1990 that she met future husband, Adam.

Jr - (brother of Anna Brach) Kroth

full newspaper page : [HN017B][GDrive]

CHICAGO TRIBUNE, THURSDAY, JANUARY 28, 1965

E. J. BRACH, 77, HEAD OF CANDY COMPANY, DIES

Edwin J. Brach, 77, chairman of the board of E. J. Brach & Sons, candy manufacturers, died yesterday at his winter home in Tucson, Ariz.

E. J. Brach

Mr. Brach, who lived at 595 Sheridan rd., Winnetka, was 17 years old when his father, the late Emil J. Brach, founded the candy firm in 1904.

Began as Corner Shop

The business started out as a corner candy shop at North avenue and Towne street, a street that no longer exists. It was known as Brach's Palace of Sweets. Edwin's job then was to sell over the counter, keep records, and cut and pack candy.

Today E. J. Brach & Sons, with general offices and its factory at 4656 Kinzie st., is one of the largest candy makers in the country.

Mr. Edwin Brach was elected a vice president of the firm when it incorporated in 1916. In 1947, after his father's death, he became president, and in 1951 was elected chairman of the board.

Known for Charity

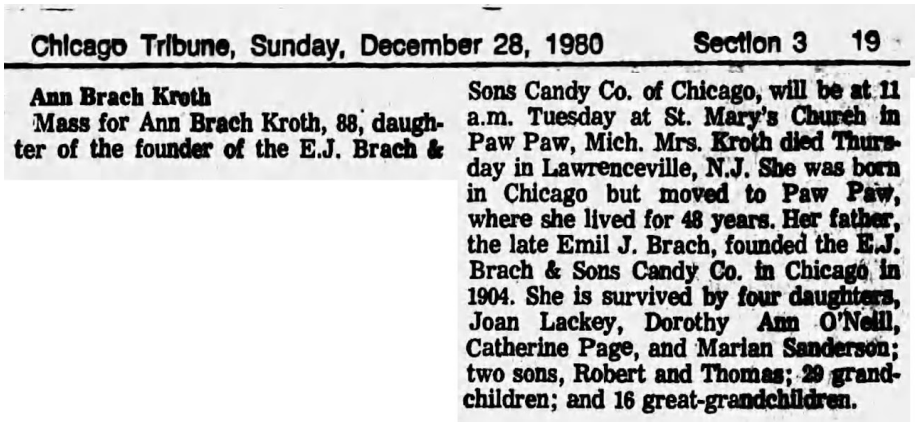
Mr. Brach also was known for his charitable interests, including St. Anne's hospital.

Surviving are his widow, Hazel Shurtleff Brach; a daughter, Mrs. Barbara Sharpe; the brother, Frank, now president of the firm; and a sister, Mrs. Anna V. Kroth. Private services will be held in Tucson.

[HN017C][GDrive]

1980-12-28-chicago-tribune-sec-3-pg-19-clip-ann-brach-kroth

Full newspaper page : [HN017D][GDrive]



Chicago Tribune, Sunday, December 28, 1980 Section 3 19

Ann Brach Kroth

Mass for Ann Brach Kroth, 88, daughter of the founder of the E.J. Brach & Sons Candy Co. of Chicago, will be at 11 a.m. Tuesday at St. Mary's Church in Paw Paw, Mich. Mrs. Kroth died Thursday in Lawrenceville, N.J. She was born in Chicago but moved to Paw Paw, where she lived for 48 years. Her father, the late Emil J. Brach, founded the E.J. Brach & Sons Candy Co. in Chicago in 1904. She is survived by four daughters, Joan Lackey, Dorothy Ann O'Neill, Catherine Page, and Marian Sanderson; two sons, Robert and Thomas; 29 grandchildren; and 16 great-grandchildren.

[HN017E][GDrive]

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Housatonic

Michael Schimmel (born 1896)

Married to **Leonore Barr** (sister of Simon Pelham Barr (born 1892) / David S Barr (born 1894))

Father of Stuart Barr Schimmel (born 1925)

Schimells lived on Central Park West, as did David S Barr, as did Alexander Sachs, as did Wexner's wife

Source = ?

MASTAN CO. FILES FINANCING PLAN. The Mastan Company, Incorporated, 350 Fifth Avenue, New York, filed a registration statement (File 2-19764) with the SEC on February 9th seeking registration of $5,000,000 of 5zt senior notes due 1977 and 170,000 shares of common stock, to be offered for public sale on an all or none basis through underwriters headed by F. Eberstadt & Co., 65 Broadway, New York. The public offering price (maximum 105~ per note and $12 per share*) and underwriting terms are to be supplied by amendment.

An additional 17,000 common shares will be offered to certain company employees and Michael Schimmel, former- ly senior partner of Michael Schimmel & Co., the company's auditors, at the offering price less underwriting discount.

The company (formerly The Mastan Co., Inc.) is engaged in the business of commercial and industrial finance. It makes loans for terms of up to three years secured by first or second mortgages on real estate and by liens on chattels, assignments of contracts and various other collateral; and it also provides work- ing funds to clients by advances made on a revolving basis against the security of current trade accounts receivable, inventory held for sale and other assets. The net proceeds from this financing will be added to general funds and will be available for general corporate purposes. Part of such proceeds may be used temporarily to reduce bank borrowings.

In addition to certain indebtedness, the company has outstanding 1,700,000 shares of Class B common stock, all of which are owned by Master Properties, Inc., of New York. Master Properties is 35~ owned by Nathan Schulman, board chairman and president of the company, 35-2/31 by his wife, and 2~ by Ph. Wechsler &Son, Inc

Michael Schimmel :

1953 Jan 23

https://www.newspapers.com/image/59520170/?terms=%22michael%2Bschimmel%22

April 3 1946https://www.newspapers.com/image/490161602/?terms=%22michael%2Bschimmel%22

May 17 1943

https://www.newspapers.com/image/544060682/?terms=%22michael%2Bschimmel%22

may 7 1964

https://www.newspapers.com/image/515932784/?terms=%22michael%2Bschimmel%22

Jan 5 1972 - atlantic city investing

https://www.newspapers.com/image/491658625/?terms=%22michael%2Bschimmel%22

https://www.newspapers.com/image/180938411/?terms=%22michael%2Bschimmel%22

1973 (Dec. 9) - Mrs. Lenore Barr Schimmel, wife of Michael Schimmel, president of a philanthropic foundation bearing his name, died y

[HN00L2][GDrive]

Mrs. Lenore Barr Schimmel, wife of Michael Schimmel, president of a philanthropic foundation bearing his name, died yesterday at her home, 145 Central Park West. Her age was 74.

Mrs. Schimmel was a vice president of the foundation and a former president of the Hebrew Home for the Aged in Riverdale, the Bronx.

*Surviving, besides her husband, are two sons, **Stuart** and Herbert; a daughter, Mrs. Joan Fisher; three sisters, Mrs. Mae Gould, Mrs. Evelyn Gaines and Mrs. Edith Barr, and eight grandchildren.*

1977 (April 15) - NY Times - Stuart (Barr) Schimmel Weds Caroline F. Hover

[HN00L1][GDrive]

Caroline Fearey Hover, daughter of Mr. and Mrs. John Lawrence Fearey of Chestnut Hill, Philadelphia, was married yesterday to Stuart Barr Schimmel of New York. The bride is executive secretary of the Bibliographical Society of America, of which her husband is president.

Justice Arnold L. Fein of the State Supreme Court performed the ceremony at the bridegroom's home.

The bride, an alumna of the Westover School in Middlebury, Conn., and the University of Pennsylvania, received Master of Science degree in library service from Columbia University. Her father is with Hoppin Watson, a brokerage concern in Philadelphia, and her mother teaches at the Germantown Friends School.

*Mr. Schimmel is a son of Michael Schimmel of New York and the late **Lenore Barr Schimmel**. The bridegroom is an alumnus of Rensselaer Polytechnic Institute and Columbia University and until his retirement was a partner in the firm of **Michael Schimmel** and Company, C.P.A., founded by his father. He is currently a partner in Consolidated Investing Company.*

His father, a philanthropist, recently gave the Schimmel Center for the Performing Arts to Pace University and the Schimmel Auditorium to New York University. The bridegroom's first wife died. Mrs. Schimmel's previous marriage ended in divorce.

1981 (Feb 10) - michael-schimmel-accountant-philanthropist-dead-at-84

[HN00L3][GDrive]

Michael Schimmel, an accountant and philanthropist, died last Wednesday at the Kingsbrook Jewish Medical Center in Brooklyn. He was 84 years old and a resident of Manhattan.

Mr. Schimmel retired in the 1950's from the New York accounting firm bearing his name, and his sons, Stuart and Herbert, took it over. At his death, he was a partner with his sons in the Consolidated Investment Company.

He gave the Schimmel Center for the Performing Arts to Pace University and the Schimmel Auditorium to New York University at its Washington Square campus.

A graduate of N.Y.U.'s School of Commerce, he was director emeritus of the university's Alumni Federation and a former director of its Commerce Alumni Association.

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https://www.newspapers.com/image/520215492/?terms=%22stuart%2BB%2Bschimmel%22

mzr 24 1979

1956

https://www.newspapers.com/image/58752754/?terms=%22stuart%2B%2Bschimmel%22

https://www.findmypast.com/transcript?id=US%2FTRIB%2F004938185

2020-findmypast-com-usa-obituary-notices-michael-schimmel.pdf

Record Transcription:
United States Obituary Notices

Learn about this record set

Record set	United States Obituary Notices
First name(s)	Michael
Last name	Schimmel
Birth year	1896
Death year	1981
State	New York
Country	United States
Place	New York, New York
Full name as given	Michael Schimmel
Birth date	05 May 1896
Death date	Feb 1981
Full dates	May 5, 1896 - February 1981
Obituary text	Michael was born on May 5, 1896 and passed away in February 1981. Michael was a resident of New York, New York.
Source link	View the Source Record
Category	Birth, Marriage & Death (Parish Registers)
Subcategory	Civil Deaths & Burials
Collections from	Americas, United States

2020-findmypast-com-usa-obituary-notices-michael-schimmel-img1.jpg

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Housatonic

Stuart Barr Schimmel (born 1925)

Father is Michael Schimmel (born 1896) Mother is Leonore Barr (sister of Simon Pelham Barr (born 1892) / David S Barr (born 1894))

Grandfather is Philip Barr (born 1872)

1973 (Dec. 9) - Mother (Mrs. Lenore Barr Schimmel) passes

[HN00L2][GDrive]

Mrs. Lenore Barr Schimmel, wife of Michael Schimmel, president of a philanthropic foundation bearing his name, died yesterday at her home, 145 Central Park West. Her age was 74.

Mrs. Schimmel was a vice president of the foundation and a former president of the Hebrew Home for the Aged in Riverdale, the Bronx.

*Surviving, besides her husband, are two sons, **Stuart** and Herbert; a daughter, Mrs. Joan Fisher; three sisters, Mrs. Mae Gould, Mrs. Evelyn Gaines and Mrs. Edith Barr, and eight grandchildren.*

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[HN00L1][GDrive]

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1981 (Feb 10) - Father Michael Schimmel passes

[HN00L3][GDrive]

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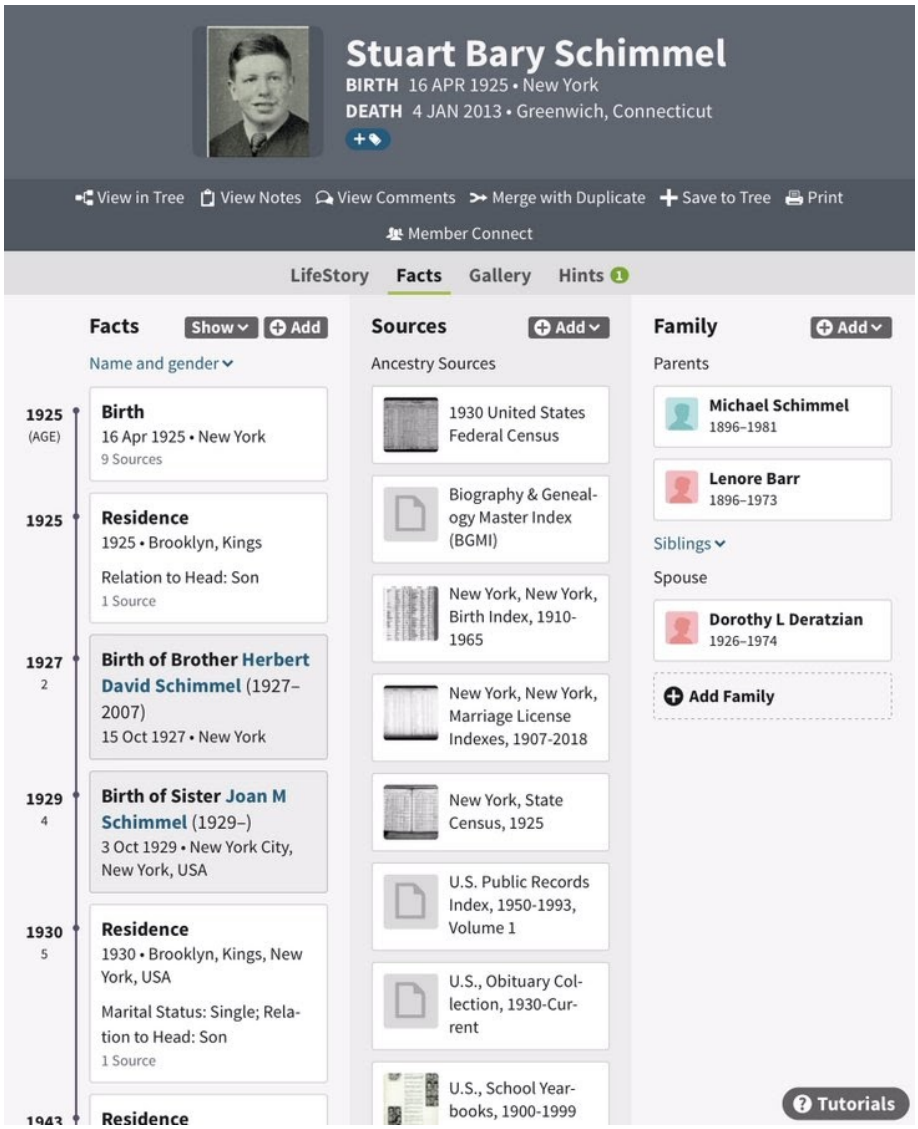
Mr. Schimmel retired in the 1950's from the New York accounting firm bearing his name, and his sons, Stuart and Herbert, took it over. At his death, he was a partner with his sons in the Consolidated Investment Company.

He gave the Schimmel Center for the Performing Arts to Pace University and the Schimmel Auditorium to New York University at its Washington Square campus.

A graduate of N.Y.U.'s School of Commerce, he was director emeritus of the university's Alumni Federation and a former director of its Commerce Alumni Association.

[HT0040][GDrive]



[HT0043][GDrive]

LAST NAME	FIRST NAME	M I	RANK or	SERIAL	BOX	NOTES	LOCATION
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Scheiner	Albert	L	T-4	3373479	682		230/86/40/02
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Scheurmann	Richard	D	SGT	12281482	682		230/86/40/02
Schewel	Stanford	L			682		230/86/40/02
Schewel	Stanford	L			682		230/86/40/02
Schexmayder	Elwood	L	PFC	38494094	682		230/86/40/02
Schexnayder	Elwood	L	SGT	38494094	686		230/86/40/02
Schiaffo	Alfred	D	1ST LT	1639603	682		230/86/40/02
Schick	Leo	J			683		230/86/40/02
Schieffelin	William	O	M SGT	14098541	683		230/86/40/02
Schiff	Robert	M			683		230/86/40/02
Schiff	Robert	M	PFC	32859950	683		230/86/40/02
Schiffauer	Gertrude	M	CAF-5		683		230/86/40/02
Schillace	Marcus	A	CPL	13060225	683		230/86/40/02
Schillinger	Marian	M	CAF-5		683		230/86/40/02
Schilt	Hollis	R	T-5	16154794	683		230/86/40/02
Schimmel	Stuart	B		42125990	683		230/86/40/02
Schimpf	Charles	J		42003366	683		230/86/40/02
Schinchirimini	B	P			683		230/86/40/02
Schinchirimini	Peter	F	T-5	33779776	683		230/86/40/02
Schindler	James	C		16147206	683		230/86/40/02
Schiowitz	Harold	H			683		230/86/40/02
Schirone	Charles	N			683		230/86/40/02
Schlack	Francis	J		33367919	683		230/86/40/02
Schlafani	Louis	A		31048505	683		230/86/40/02
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Schlamb	Kermit	F		518062	683		230/86/40/02
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Schlesinger	Edmond				683		230/86/40/02
Schletter	Aline	B		A203940	683		230/86/40/02
Schley	Reeve		CAPT	01031128	684		230/86/40/02
Schlickenmaie	Herbert	W	S/SGT	33-389261	684		230/86/40/02
Schlien	Frederick	C	S/SGT	33-306536	684		230/86/40/02
Schluter	Claymer				684		230/86/40/02

[HT0044][GDrive]

[HT0042][GDrive]

Name:	Stuart B Schimmel
Birth Year:	1925
Race:	White, citizen (White)
Nativity State or Country:	New York
State of Residence:	New York
County or City:	Kings
Enlistment Date:	31 Mar 1944
Enlistment State:	New York
Enlistment City:	Camp Upton Yaphank
Branch:	No branch assignment
Branch Code:	No branch assignment
Grade:	Private
Grade Code:	Private
Term of Enlistment:	Enlistment for the duration of the War or other emergency, plus six months, subject to the discretion of the President or otherwise according to law
Component:	Selectees (Enlisted Men)
Source:	Civil Life
Education:	4 years of high school
Marital status:	Single, without dependents
Height:	03
Weight:	640

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https://www.newspapers.com/image/520215492/?terms=%22stuart%2BB%2Bschimmel%22

mzr 24 1979

1956

https://www.newspapers.com/image/58752754/?terms=%22stuart%2B%2Bschimmel%22

https://www.legacy.com/obituaries/nytimes/obituary.aspx?n=stuart-b-schimmel&pid=162223794

SCHIMMEL--Stuart B. The Council of the Grolier Club is deeply saddened to learn of the death of fellow member and former Councilor Stuart B. Schimmel. A Grolier member since 1961, Stuart served on the Grolier Club Council from 1972 to 1986, chairing committees on Audit, Public Exhibitions, Special Functions, and Finance. Exhibitions from his personal collections of Literary Forgers and Forgeries (1961) and Collectors in Fiction (1994), and his curatorial role in shows of artwork from the New Yorker (1974), and New York in literature (1978), represent just a few of his activities in the world of books, and his knowledge and enthusiastic presence will be sorely missed. We join with his many friends and colleagues in extending heartfelt sympathy to his wife, Caroline. Eugene S. Flamm, President

Published in The New York Times on Jan. 8, 2013

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Housatonic

James Rodney Schlesinger (born 1929)

Wikipedia James R. Schlesinger

Associations:

- Andrew Walter Marshall (born 1921) (In 1973, Secretary of Defense James R. Schlesinger, Mr. Marshall's onetime colleague at Rand, created the Office of Net Assessment and put Mr. Marshall in charge.)
- James Rodney Schlesinger (born 1929) (Long-time deputy director of Office of Net Assessment - Long-time associate of David Epstein, see 2008 photo)
-

Saved Wikipedia (Nov 21 2020) for James R. Schlesinger

See [HK003P][GDrive]

1st United States Secretary of Energy

In office

August 9, 1977 – August 23, 1979

President

Jimmy Carter

Preceded by

John F. O'Leary (FEA)

Succeeded by

Charles Duncan Jr.

12th United States Secretary of Defense

In office

July 2, 1973 – November 19, 1975[1]

President

Richard Nixon

Gerald Ford

Preceded by

Elliot Richardson

Succeeded by

Donald Rumsfeld

9th Director of Central Intelligence

In office

February 2, 1973 – July 2, 1973

President

Richard Nixon

Deputy

Vernon A. Walters

Preceded by

Richard Helms

Succeeded by

Vernon A. Walters (acting)

Chair of the Atomic Energy Commission

In office

August 17, 1971 – January 26, 1973

President

Richard Nixon

Preceded by

Glenn Seaborg

Succeeded by

Dixy Lee Ray

Personal details

Born

James Rodney Schlesinger

February 15, 1929

New York City, New York, U.S.

Died

March 27, 2014 (aged 85)

Baltimore, Maryland, U.S.

Political party

Republican[2]

Spouse(s)

Rachel Line Mellinger

(m. 1954; died 1995)

Children

8

Education

Harvard University (BA, MA, PhD)

▪

- e

James Rodney Schlesinger (February 15, 1929 – March 27, 2014) was an American economist and public servant who was best known for serving as Secretary of Defense from 1973 to 1975 under Presidents Richard Nixon and Gerald Ford. Prior to becoming Secretary of Defense, he served as Chair of Atomic Energy Commission (AEC) from 1971 to 1973, and as CIA Director for a few months in 1973. He became America's first Secretary of Energy under Jimmy Carter in 1977, serving until 1979.

While Secretary of Defense, he opposed amnesty for draft resisters and pressed for development of more sophisticated nuclear weapon systems. Additionally, his support for the A-10 and the lightweight fighter program (later the F-16) helped ensure that they were carried to completion.

Early life and career[edit]

James Rodney Schlesinger was born in New York City, the son of Jewish parents, Rhea Lillian (née Rogen) and Julius Schlesinger.[3] His mother was a Lithuanian emigrant from what was then part of the Russian Empire and his father's family was from Austria. He converted to Lutheranism in his early twenties. **Schlesinger was educated at the Horace Mann School** and Harvard University, where he earned a B.A. (1950), M.A. (1952), and Ph.D. (1956) in economics. **Between 1955 and 1963 he taught economics at the University of Virginia** and in 1960 published *The Political Economy of National Security*. **In 1963, he moved to the RAND Corporation, where he worked until 1969**, in the later years as director of strategic studies.[4]

Nixon Administration[edit]

In 1969, Schlesinger joined the Nixon administration as assistant director of the Bureau of the Budget,[5] devoting most of his time to Defense matters. In 1971, President Nixon appointed Schlesinger a member of the Atomic Energy Commission (AEC) and designated him as chairman. Serving in this position for about a year and a half, Schlesinger instituted extensive organizational and management changes in an effort to improve the AEC's regulatory performance.

CIA Director[edit]

Schlesinger was CIA Director from February 2, 1973 to July 2, 1973.[6][7] Schlesinger was extremely unpopular with CIA staff, as he reduced CIA staff by 7%, and was considered a Nixon loyalist seeking to make the agency more obedient to Nixon.[7] He had a CCTV camera installed near his official portrait at the CIA headquarters in Langley, Va., as it was believed that vandalism of the portrait by disgruntled staff was likely.[7]

Secretary of Defense (1973–1975)[edit]

Schlesinger left the CIA to become Secretary of Defense on July 2, aged 44. As a university professor, researcher at Rand, and government official in three agencies, he had acquired an impressive resume in national security affairs.

Nuclear strategy[edit]

Then Chairman Schlesinger with Nixon in September 1971

Shortly after assuming office, Schlesinger outlined the basic objectives that would guide his administration: maintain a "strong defense establishment"; "assure the military balance so necessary to deterrence and a more enduring peace"; obtain for members of the military "the respect, dignity and support that are their due"; assume "an . . . obligation to use our citizens' resources wisely"; and "become increasingly competitive with potential adversaries.... [W]e must not be forced out of the market on land, at sea, or in the air. Eli Whitney belongs to us, not to our competitors." In particular, Schlesinger saw a need in the post-Vietnam era to restore the morale and prestige of the military services; modernize strategic doctrine and programs; step up research and development; and shore up a DoD budget that had been declining since 1968.[8]

Analyzing strategy, Schlesinger maintained that the theory and practice of the 1950s and 1960s had been overtaken by events, particularly the rise of the Soviet Union to virtual nuclear parity with the United States and the effect this development had on the concept of deterrence. Schlesinger believed that "deterrence is not a substitute for defense; defense capabilities, representing the potential for effective counteraction, are the essential condition of deterrence."[*citation needed*] He had grave doubts about the assured destruction strategy, which relied on massive nuclear attacks against an enemy's urban-industrial areas. Credible strategic nuclear deterrence, the secretary felt, depended on fulfilling several conditions: maintaining essential equivalence with the Soviet Union in force effectiveness; maintaining a highly survivable force that could be withheld or targeted against an enemy's economic base in order to deter coercive or desperation attacks against U.S. population or economic targets; establishing a fast-response force that could act to deter additional enemy attacks; and establishing a range of capabilities sufficient to convince all nations that the United States was equal to its strongest competitors.[8]

To meet these needs, Schlesinger built on existing ideas in developing a flexible response nuclear strategy, which, with the President's approval, he made public by early 1974. The United States, Schlesinger said, needed the ability, in the event of a nuclear attack, to respond so as to "limit the chances of uncontrolled escalation" and "hit meaningful targets" without causing widespread collateral damage. The nation's assured destruction force would be withheld in the hope that the enemy would not attack U.S. cities. In rejecting assured destruction, Schlesinger quoted President Nixon: "Should a President, in the event of a nuclear attack, be left with the single option of ordering the mass destruction of enemy civilians, in the face of the certainty that it would be followed by the mass slaughter of Americans?"[8]

With this approach, Schlesinger moved to a partial counterforce policy, emphasizing Soviet military targets such as ICBM missile installations, avoiding initial attacks on population centers, and minimizing unintended collateral damage. He explicitly disavowed any intention to acquire a destabilizing first-strike capability against the USSR. But he wanted "an offensive capability of such size and composition that all will perceive it as in overall balance with the strategic forces of any potential opponent."[8]

Schlesinger devoted much attention to the North Atlantic Treaty Organisation, citing the need to strengthen its conventional capabilities. He rejected the old assumption that NATO did not need a direct counter to Warsaw Pact conventional forces because it could rely on tactical and strategic nuclear weapons, noting that the approximate nuclear parity between the United States and the Soviets in the 1970s made this stand inappropriate. He rejected the argument that NATO could not afford a conventional counterweight to Warsaw Pact forces. In his discussions with NATO leaders, Schlesinger promoted the concept of burden-sharing, stressing the troubles that the United States faced in the mid-1970s because of an unfavorable balance of international payments. He urged qualitative improvements in NATO forces, including equipment standardization, and an increase in defense spending by NATO

governments of up to five percent of their gross national product.[8]

Yom Kippur War and Cyprus crisis[edit]

Secretary of Defense James Schlesinger with Chairman of The Joint Chiefs of Staff General George S. Brown and Deputy Secretary of Defense Bill Clements and Air Force Chief of Staff General David C. Jones at The White House Lawn on January 1975.

Schlesinger had an abiding interest in strategic theory, but he also had to deal with a succession of immediate crises that tested his administrative and political skills. In October 1973, three months after he took office, Arab countries launched a surprise attack on Israel and started the Yom Kippur War. A few days after the war started, with Israel not faring as well as expected militarily, the Soviets resupplying some Arab countries and the Israeli government having authorized the use and assembly of nuclear weapons,[9] the United States began an overt operation to airlift materiel to Israel. As Schlesinger explained, the initial U.S. policy to avoid direct involvement rested on the assumption that Israel would win quickly. But when it became clear that the Israelis faced more formidable military forces than anticipated, and could not meet their own resupply arrangements, the United States took up the burden. According to Henry Kissinger, with the president's authority, the directive was made to resupply Israel with the needed equipment and eliminate State Department delay. "It was alleged that the airlift was deliberately delayed as a maneuver to pressure Israel." [10] Schlesinger rejected charges that the Defense Department delayed the resupply effort to avoid irritating the Arab states and that he had had a serious disagreement over this matter with Secretary of State Henry Kissinger. Eventually the combatants agreed to a cease-fire, but not before the Soviet Union threatened to intervene on the Arab side and the United States declared a higher level worldwide alert of its forces.[8]

Another crisis flared in July 1974 within the NATO alliance when Turkish forces, concerned about the long-term lack of safety for the minority Turkish community, invaded Cyprus after the Cypriot National Guard, supported by the government of Greece, overthrew President Archbishop Makarios. When the fighting stopped, the Turks held the northern portion of country and about 40 percent of the island. Turkey's military action caused controversy in the United States, because of protests and lobbying by supporters of the Greek Cypriot side and, officially, because Turkish forces used some U.S.-supplied military equipment intended solely for NATO purposes.[8]

He felt the Turks had overstepped the bounds of legitimate NATO interests in Cyprus and suggested that the United States might have to reexamine its military aid program to Turkey. During this time, President Gerald R. Ford had succeeded Nixon after his resignation; eventually Ford and Secretary of State Henry Kissinger made it clear with two presidential vetoes that they favored continued military assistance to Turkey as a valued NATO ally, but Congress overrode both vetoes and in December 1974 prohibited such aid, which instituted an arms embargo that lasted five years.[8]

Indochina[edit]

Secretary of Defense James Schlesinger with Chairman of The Joint Chiefs of Staff General George S. Brown at The Pentagon, November 18, 1974.

The last phase of the Vietnam War occurred during Schlesinger's tenure. Although all U.S. combat forces had left South Vietnam in the spring of 1973, the United States continued to maintain a military presence in other areas of Southeast Asia. Some senators criticized Schlesinger and questioned him sharply during his confirmation hearings in June 1973 after he stated that he would recommend resumption of U.S. bombing in North Vietnam and Laos if North Vietnam launched a major offensive against South Vietnam. However, when the North Vietnamese began their 1975 Spring Offensive, the United States could do little to help the South Vietnamese, who collapsed completely as the North Vietnamese captured Saigon in late April. Schlesinger announced early in the morning of 29 April 1975 the evacuation from Saigon by helicopter of the last U.S. diplomatic, military and civilian personnel.[8]

Only one other notable event remained in the Indochina drama. In May 1975 Khmer Rouge forces boarded and captured the crew of the *Mayaguez*, an unarmed U.S.-registered freighter. The United States bombarded military and fuel installations on the Cambodian mainland while Marines landed by helicopter on an offshore island to rescue the crew. The 39 captives were retrieved, but the operation cost the lives of 41 U.S. military personnel. Nevertheless, the majority of the American people seemed to approve of the administration's decisive action.[8]

Defense budget[edit]

Schlesinger give a briefing to the press.

Unsurprisingly, given his determination to build up U.S. strategic and conventional forces, Schlesinger devoted much time and effort to the Defense budget. Even before becoming secretary, in a speech in San Francisco in September 1972, he warned that it was time "to call a halt to the self-defeating game of cutting defense outlays, this process, that seems to have become addictive, of chopping away year after year." Shortly after he took office, he complained about "the post-war follies" of Defense budget-cutting. Later he outlined the facts about the DoD budget: In real terms it had been reduced by one-third since FY 1968; it was one-eighth below the pre-Vietnam War FY 1964 budget; purchases of equipment, consumables, and R&D were down 45 percent from the wartime peak and about $10 billion in constant dollars below the prewar level; Defense now absorbed about 6 percent of the gross national product, the lowest percentage since before the Korean War; military manpower was at the lowest point since before the Korean War; and Defense spending amounted to about 17 percent of total national expenditures, the lowest since before the Pearl Harbor attack in 1941. Armed with these statistics, and alarmed by continuing Soviet weapon advances, Schlesinger became a vigorous advocate of larger DoD budgets. But he had little success. For FY 1975, Congress provided TOA of $86.1 billion, compared with $81.6 billion in FY 1974; for FY 1976, the amount was $95.6 billion, an increase of 3.4 percent, but in real terms slightly less than it had been in FY 1955.

Dismissal as Secretary of Defense[edit]

Secretary of Defense James R. Schlesinger with President Gerald R. Ford and Secretary of State Henry Kissinger during a briefing at The White House, November 1974.

Schlesinger's insistence on higher defense budgets, his disagreements within the administration and with Congress on this issue, and his differences with Secretary of State Kissinger all contributed to his dismissal from office by President Ford in November 1975. Schlesinger's legacy included the development of the close-air support aircraft the A-10 and the lightweight F-16 fighter. Kissinger strongly supported the Strategic Arms Limitation Talks process, while Schlesinger wanted assurances that arms control agreements would not put the United States in a strategic position inferior to the Soviet Union. The secretary's harsh criticism of some congressional leaders dismayed President Ford, who was more willing than Schlesinger to compromise on the Defense budget. On 2 November 1975, the president dismissed Schlesinger and made other important personnel changes. Kissinger lost his position as special assistant to the President for national security affairs but remained as secretary of state. Schlesinger left office on 19 November 1975, explaining his departure in terms of his budgetary differences with the White House.

The unreported, but important, main reason behind Schlesinger's dismissal, though, was his insubordination toward President Ford. During the *Mayaguez* incident, Ford ordered several retaliatory strikes against Cambodia. Schlesinger told Ford the first strike was carried out, but Ford later learned that Schlesinger, who disagreed with the order, had none of them carried out. According to Bob Woodward's 1999 book, *Shadow*, Ford let the incident go, but when Schlesinger committed further insubordination on other matters, Ford finally fired him. Woodward observes, "The United States had just lost a war for the first time. . . . That the president and the secretary of defense could not agree on who was in charge was appalling.. . . [This] unpublicized breakdown in the military chain of command was ... perhaps the most significant scandal of the Ford presidency." Schlesinger had also disobeyed Ford when told to send as many military aircraft as possible to evacuate South Vietnam. Schlesinger disagreed with doing so and didn't send the aircraft. Woodward says that an elected president, which Ford was not, would never have tolerated the insubordination.

In spite of the controversy surrounding both his tenure and dismissal, Schlesinger was by most accounts an able secretary of defense. A serious and perceptive thinker on nuclear strategy, he was determined that the United States not fall seriously behind the Soviet Union in conventional and nuclear forces and devoted himself to modernization of defense policies and programs. He got along well with the military leadership because he proposed to give them more resources, consulted with them regularly, and shared many of their views.[*citation needed*] Because he was a forthright speaker who could be blunt in his opinions and did not enjoy the personal rapport with legislators that prior Secretary of Defense Melvin Laird had, his relations with Congress were often strained. A majority of its members may have approved Schlesinger's strategic plans, but they kept a tight rein on the money for his programs. As for the Pentagon bureaucracy, Schlesinger generally left its management to Deputy Secretary of Defense William P. Clements.[*citation needed*]

Secretary of Energy (1977-1979)[edit]

Schlesinger while serving as Energy Secretary

Secretary of The Energy James Schlesinger with President Jimmy Carter at The Oval Office on March 23, 1977.

After leaving the Pentagon, Schlesinger wrote and spoke forcefully about national security issues, especially the Soviet threat and the need for the United States to maintain adequate defenses. When Jimmy Carter became President in January 1977 he appointed Schlesinger, a Republican, as his special adviser on energy[11] and subsequently as the first Secretary of Energy[11] in October 1977. According to one account, "Schlesinger impressed candidate Jimmy Carter with his brains, his high-level experience... and with secrets regarding the defense spending vacillations of his old boss, Ford, just in time for the presidential debates."[12]

As Energy Secretary, Schlesinger launched the Department's Carbon Dioxide Effects and Assessment Program shortly after the creation of that department in 1977. Secretary Schlesinger also oversaw the integration of the energy powers of more than 50 agencies, such as the Federal Energy Administration and the Federal Power Commission.[11] In July 1979, Carter replaced him as part of a broader Cabinet shakeup.[11] According to journalist Paul Glastris, "Carter fired Schlesinger in 1979 in part for the same reason Gerald Ford had—he was unbearably arrogant and impatient with lesser minds who disagreed with him, and hence inept at dealing with Congress."[12]

Post-government activities[edit]

Schlesinger at the Pentagon in 2004, as Chairman of the Independent Panel to Review Department of Defense Detention Operations

After leaving the Energy Department, Schlesinger resumed his writing and speaking career, including the 1994 lecture at the Waldo Family Lecture on International Relations at Old Dominion University.[13] He was employed as a senior adviser to Lehman Brothers, Kuhn, Loeb Inc., of New York City. He advised Congressman and presidential candidate Richard Gephardt in 1988.[12]

In 1995, he was the Chairman of the National Academy of Public Administration (NAPA). They wrote a report in conjunction with the National Research Council called "The Global Positioning System: Charting the Future" [14] The report advocated for the opening GPS up to the private sector.

On February 8, 2002, he appeared at a hearing before the Senate Governmental Affairs Committee in support of the creation of a commission to investigate the 9/11 attacks.[15]

On June 11, 2002 he was appointed by U.S. President George W. Bush to the Homeland Security Advisory Council. He also served as a consultant to the United States Department of Defense, and was a member of the Defense Policy Board.

In 2004, he served as chairman to the Independent Panel to Review DoD Detention Operations.[16]

On January 5, 2006, he participated in a meeting at the White House of former Secretaries of Defense and State to discuss United States foreign policy with Bush administration officials. On January 31, 2006 he was appointed by the Secretary of State to be a member of the Arms Control and Nonproliferation Advisory Board. On May 2, 2006, he was named to be a co-chairman of a Defense Science Board study on DOD Energy Strategy. He was an honorary chairman of The OSS Society.[17] He was also a Bilderberg Group attendee in 2008.[18]

In 2007, NASA Administrator Michael Griffin appointed Schlesinger to be the Chairman of the National Space-based Positioning, Navigation, and Timing (PNT) Advisory Board. The "PNT Board" is composed of recognized Global Positioning System (GPS) experts from outside the U.S. government that advise the Deputy Secretary level PNT Executive Committee in their oversight management of the GPS constellation and its governmental augmentations. [1]

On June 5, 2008, Defense Secretary Robert Gates appointed Schlesinger to head a task force to ensure the "highest levels" of control over nuclear weapons. The purpose of the review was to prevent a repeat of recent incidents where control was lost over components of nuclear weapons, and even over nuclear weapons themselves.[*citation needed*]

Schlesinger was Chairman of the Board of Trustees of The MITRE Corporation, having served on it from 1985 until his death in 2014; on the advisory board of *The National Interest*; a Director of BNFL, Inc., Peabody Energy, Sandia Corporation, Seven Seas Petroleum Company, Chairman of the Executive Committee of The Nixon Center. He was also on the Advisory Board of GeoSynFuels, LLC. Schlesinger penned a number of opinion pieces on global warming, expressing a strongly skeptical position.[*citation needed*]

Peak oil[edit]

Schlesinger raised awareness of the peak oil issue and supports facing it. In the keynote speech at a 2007 conference hosted by the Association for the Study of Peak Oil and Gas in Cork, Schlesinger said that oil industry executives now privately concede that the world faces an imminent oil production peak.[19][20] In his 2010 ASPO-USA keynote speech, Schlesinger observed that the Peak Oil debate was over.[21] He warned of political inaction as a major

hindrance, like those in Pompeii before the eruption of Mount Vesuvius.

On June 5, 2008, U.S. Secretary of Defense Robert Gates announced that he had asked Schlesinger to lead a senior-level task force to recommend improvements in the stewardship and operation of nuclear weapons, delivery vehicles and sensitive components by the US DoD following the 2007 United States Air Force nuclear weapons incident. Members of the task force came from the Defense Policy Board and the Defense Science Board.[22]

Personal life[edit]

In 1954, Schlesinger married Rachel Line Mellinger (February 27, 1930 – October 11, 1995); they had eight children: Cora (1955), Charles (1956), Ann (1958), William (1959), Emily (1961), Thomas (1964), Clara (1966) and James (1970).

Though raised in a Jewish household, Schlesinger converted to Lutheranism as an adult.[23]

Rachel Schlesinger was an accomplished violinist and board member of the Arlington Symphony. In the early 1990s, she was a leader in the fundraising effort to create a premier performing arts center on the Virginia side of the Potomac River. She died from cancer before seeing the center's completion. After her death, Dr. Schlesinger donated $1 million to have the center named in his wife's memory.[*citation needed*] The Rachel M. Schlesinger Concert Hall and Arts Center at Northern Virginia Community College, Alexandria Campus opened in September, 2001. It is an up-to-date building that features the Mary Baker Collier Theatre, the Margaret W. and Joseph L. Fisher Art Gallery, the Wachovia Forum and Seminar Room spaces. Clients of the Schlesinger Center include the Alexandria Symphony, the United States Marine Band, "The President's Own", and the U.S. Marine Chamber Orchestra, the United States Army Band, "Pershing's Own", and the U.S. Army Strings, the United States Navy Band, the New Dominion Chorale, the American Balalaika Symphony, Festivals of Music, various ethnic groups and many others.

Schlesinger worked consistently with distinction long after his government and academic experiences, serving on numerous governmental advisory boards until only weeks before his death at the age of 85.[24][25] He was buried at Ferncliff Cemetery in Springfield, Ohio.

Selected publications[edit]

- Schlesinger, James R. *America at Century's End*. New York: Columbia University Press, 1989. ISBN 0-231-06922-7 OCLC 19268030
- Schlesinger, James R. *American Security and Energy Policy*. Manhattan, Kan: Kansas State University, 1980. OCLC 6699572
- Schlesinger, James R. *Defense Planning and Budgeting: The Issue of Centralized Control*. Washington: Industrial College of the Armed Forces, 1968. OCLC 3677
- Schlesinger, James R. *The Political Economy of National Security; A Study of the Economic Aspects of the Contemporary Power Struggle*. New York: Praeger, 1960. OCLC 1473931

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Housatonic

Christoph Scholtissek (born 1929)

Wikipedia (DE) Christoph Scholtissek

born December 25, 1929 [HK005I][GDrive]

Associations

- Prof. Rudolf Rott (born 1926)
- Dr. Heinrich Werner Schäfer (born 1912)

Saved Wikipedia (March 1, 2021) - "Christoph Scholtissek"

Source : [HK005I][GDrive]

Christoph Scholtissek (born December 25, 1929 in Dortmund) is a German biochemist and virologist. He is particularly known for his fundamental work and discoveries on animal and human influenza viruses.

Life

Christoph Scholtissek studied chemistry at the University of Mainz and began - after various scientific positions at the University of Heidelberg, Madison and the University of Naples - his virological research at the Max Planck Institute for Virus Research in Tübingen with [Dr. Heinrich Werner Schäfer (born 1912)], the nestor of virology in Germany at the time. Here he dealt with the reproduction and biochemistry of the classic avian influenza virus. In 1964 he followed his colleague Rudolf Rott from Tübingen as C3 professor for biochemistry and virology at the Institute for Virology in Gießen, where he worked until his retirement in 1995. As an emeritus, he continued to research his field, was visiting professor in the Virology and Molecular Biology Department at St. Jude Children's Research Hospital in Memphis, and continues to publish on influenza viruses.

Researches

Among other things, he demonstrated that the genome of influenza viruses is segmented and that this gives the viruses the high genetic variability in new pandemics. The epidemiological importance of the domestic pig in the mixture of human, porcine and avian influenza virus strains to newly arranged viruses was largely recognized by him. The name mixing vessel for this special position of pigs in the epidemiology and genetics of influenza viruses goes back to Scholtissek. He was the first to succeed in establishing temperature-sensitive mutations to study the function of virus proteins in influenza viruses, and he described the importance of phosphorylation of the nucleoprotein during virus replication. Since the 1960s he has been working on specific inhibitors of virus replication that could be used in the treatment of influenza. Over 200 publications in scientific journals reflect his influence on modern virology of the 20th century.

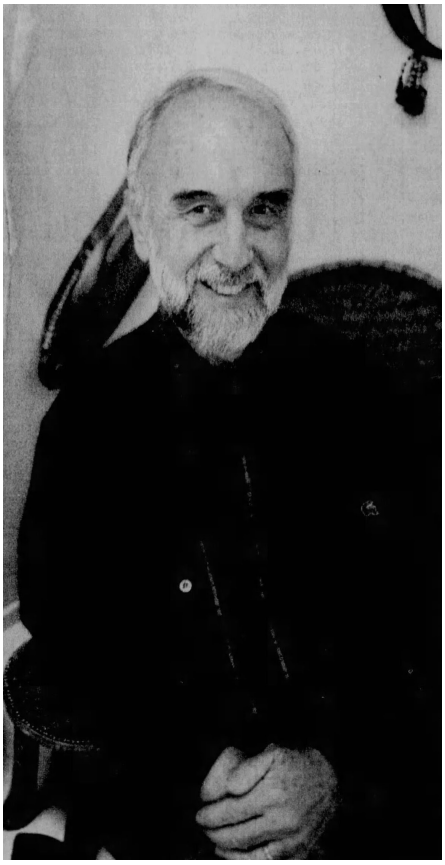
Awards

Dr. Fritz Merck Prize 1967

Prize of the German Society for Hygiene and Microbiology 1981

Loeffler Frosch Medal of the Society for Virology 2009

Dr. Calvin Walter Schwabe (born 1927)



1992 1992-01-02-the-sacramento-bee-pg-d-1-crop-schwabe-1.jpg

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father - https://www.ancestry.com/family-tree/person/tree/23369333/person/1478929353/facts?_phsrc=bis103&_phstart=successSource

A visionary who was an inspiration and "founding father" for the "**One Health**" model.

Dr. Calvin W. Schwabe (Courtesy of the Dr. Calvin W. Schwabe family) - Via AVMA.org

https://www.avma.org/javma-news/2013-07-01/legends-accidental-epidemiologist

By R. Scott Nolen / Published on June 19, 2013

By all accounts, the late Dr. Calvin W. Schwabe was ahead of his time.

Called the father of veterinary epidemiology, Dr. Schwabe recognized the relationship between animal and public health decades before the current one-health movement.

In “Veterinary Medicine and Human Health,” Dr. Schwabe’s seminal work first published in 1964, he wrote: “Veterinary medicine is the field of study concerned with the diseases and health of non-human animals. The practice of veterinary medicine is directly related to man’s well-being in a number of ways.”

An early advocate for integrating aspects of veterinary and human medicines, Dr. Schwabe is even credited with coining the phrase "one medicine," although the term's origins are still debated. Among his more noteworthy achievements is establishing a department of epidemiology at the University of California-Davis School of Veterinary Medicine, the first of its kind in any veterinary school in the world.

Dr. Schwabe also made several important scholarly contributions during his 52-year career in such fields as parasitic zoonoses, tropical health, and livestock health in pastoral societies. By the time of his retirement in 1991, he had trained hundreds of students from around the world in public animal disease control.

Ironically, Dr. Schwabe's esteemed career in epidemiology nearly didn't happen.

Roots of a legacy

Dr. Schwabe was born March 15, 1927, in Newark, N.J. After receiving his DVM degree from Auburn University in 1954, he was accepted as a doctoral student in parasitology and tropical medicine at Harvard University. He decided to also work toward a master's in public health.

In a 1991 interview with colleague Dr. Philip Kass, Dr. Schwabe recalled how he initially rebuffed an offer by professor John Gordon, chair of the Department of Epidemiology in Harvard's School of Public Health, to take an advanced epidemiology course limited to 10 select students. "I hadn't even taken his basic course. So I said, 'And, uh, well, thank you very much. But I'm here to get a Doctor of Science in parasitology. And I'm just by-the-by going to pursue the MPH,'" according to an interview transcript.

Once Dr. Schwabe's adviser explained what an honor it was to be chosen for the advanced course, he apologized to Gordon and accepted his offer. "Personally, as I say, I slipped into this involuntarily," he told Dr. Kass. Dr. Schwabe would go on to earn an MPH degree from Harvard in 1955 and his doctorate in parasitology the following year.

> *"Veterinary medicine is the field of study concerned with the diseases and health of non-human animals. The practice of veterinary medicine is directly related to man's well-being in a number of ways." - Dr. Calvin W. Schwabe*

Beginning in 1956, Dr. Schwabe spent nearly a decade on the medical and public health faculties of the American University in Lebanon. He founded a department of tropical health and a department of epidemiology and biostatistics, and developed a research program on hydatid disease and other parasitic zoonoses. By 1960, Dr. Schwabe was consulting for the World Health Organization on hydatid disease. With the agency's support, he began studying the disease among cattle societies in East Africa. From 1964-1966, he directed parasitic disease programs for the United Nations.

Around the time "Veterinary Medicine and Human Health" was published, Dr. Schwabe became convinced veterinary education was suffering from a lack of vision. In the book, he wrote: "I felt too often then that our traditional, conservative faculties were being dragged kicking-and-screaming into efforts to provide appropriate training for veterinarians in areas other than the most conventional aspects of private practice.

"My interests from then on were in deliberately and expeditiously preparing veterinary graduates not only to participate—but to assume leadership roles with respect to continually changing and often quite different needs for their contributions in different parts of the world. These interests were in trying to better integrate veterinary capabilities with relevant human needs."

In 1966, Dr. Schwabe joined the faculty at the UC-Davis veterinary school. There, he established the Department of Epidemiology and Preventive Medicine, now the Department of Medicine and Epidemiology, which he chaired, and served as a professor of epidemiology at the university's veterinary and medical schools. Notably, UC-Davis awarded the world's first doctorate in veterinary epidemiology to Dr. Peter Schantz in 1969.

Additionally, Dr. Schwabe instituted a master's program in preventive veterinary medicine that teaches the principles and strategies of mass disease control and prevention in animals.

"(The MPVM) is globally unique and has contributed to many leaders in veterinary medicine and public health, both nationally and internationally," observed Dr. Mo Salman, professor of veterinary epidemiology at Colorado State University's College of Veterinary Medicine & Biomedical Sciences.

Hardly anyone working today in the field of veterinary epidemiology has not been influenced by Dr. Schwabe. Dr. Marguerite Pappaioanou became acquainted with him while pursuing a master's in veterinary public health and doctorates at UC-Davis. She remembers Dr. Schwabe as a "masterful storyteller" who understood how veterinary medicine had improved human life throughout history.

"He saw that it was human health and well-being that was the unifying theme and cause of veterinary medicine, and his lectures and stories conveyed this in ways that no one else has repeated," said Dr. Pappaioanou, who went on to work for the Centers for Disease Control and Prevention, in academia, and for the Association of American Veterinary Medical Colleges.

"Coming out of his lectures, you really believed that you could change the world in important ways," she added.

One Health

[See **One Health**]

Dr. Schwabe was a prolific writer and authored several books on veterinary medicine as well as "Unmentionable Cuisine," his treatise on food prejudices that described foods ranging from bugs to turkey testicles. Yet, he considered "Veterinary Medicine and Human Health" to be his most important work. The book, which went through three editions, was Dr. Schwabe's attempt to synthesize diverse relationships between human and animal species within a context of veterinary activities promoting human health.

His view of veterinary medicine was expansive, and he railed against the mindset that limited veterinarians to animal life and well-being. According to Dr. Schwabe, early veterinary medicine was almost inseparable from human medicine.

"Traditional veterinary medicine," he said, "is concerned in varying degrees with problems in agriculture, biology, and public health. These have been the three natural avenues of development for veterinary medicine. Until recent years, however, progress in extension of organized veterinary interests in public health has been frustrated by 'accepted beliefs'—long held in the Western world—on the presumed biological uniqueness of man. These erroneous notions have thwarted a general appreciation of veterinary contributions to the development of a science of general medicine."

Dr. Bruce Kaplan considers Dr. Schwabe a "giant" within the [**One Health**] movement and describes "Veterinary Medicine and Human Health" as an essential explanation for incorporating veterinarians into interdisciplinary collaborations concerning public health. "That was true then and certainly critical in

today's world of emerging and re-emerging zoonotic diseases worldwide," said Dr. Kaplan, a one-health leader and primary contents editor for the One Health Initiative website.

Dr. Schwabe died June 24, 2006, at his home in Haverford, Pa., from complications of post-polio syndrome. He was 79. In recognition of Dr. Schwabe's contributions to biology and medicine, his papers and memoirs are housed at the National Library of Medicine in Bethesda, Md.

On the email discussion list ProMED, Dr. Peter Cowen, an associate professor of epidemiology, public health, and population medicine at North Carolina State University College of Veterinary Medicine, wrote the following eulogy: "Cal Schwabe was a great thinker. In addition to the gift of having extraordinary vision about his subjects, he mastered the art of thinking deeply about things. Cal devoted much of his effort to thinking about how veterinary medicine could serve society. He also examined the interface between veterinary medicine and other disciplines. His unique gift was the ability to articulate interrelationships, analogies, historical influences and potential avenues for development into a unified picture so elegant, so full of opportunity, so demanding of the best in people and the profession, that it could hardly fail to inspire.

"Cal Schwabe will be missed. His productivity, his acute evaluation and synthesis of so many topics, and his ability to spot trends and inspire must be replaced. With Cal's passing, the question of what should a veterinarian do needs new recruits to answer it."

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1992-01-02-the-sacramento-bee-pg-d-1-crop-schwabe.jpg

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Housatonic

Walter Scott Jr. (born 1931)

https://en.wikipedia.org/wiki/Walter_Scott_Jr.

Childhood friend of, and life-long businessparter, of Warren Buffet

Worked at Kiewit Corporation (previously known as **Peter Kiewit Sons' Incorporated**), for Peter D. Kiewit (born 1900) .

For KDG / Level 3 stuff , see Kiewit Diversified Group .

Saved Wikipedia - Sep 2020

[HK002N][GDrive]

Born May 21, 1931 (age 89) Omaha, Nebraska, United States

Education Colorado State University

Occupation Former CEO, Peter Kiewit Sons' Incorporated

Net worth $4.5 billion (November 2019)[1]

Children 6

Walter Scott Jr. (born May 21, 1931) is an American civil engineer, philanthropist, and former CEO of Kiewit Corporation .

Education He graduated from Colorado State University in 1953 with a bachelor's degree in civil engineering.[3]

Career

Scott was first elected to the Peter Kiewit Sons' Incorporated board in 1964. In 1979, he was elected president. When Peter Kiewit died later that same year, Scott was selected to succeed him as chairman.[*citation needed*]

He sits on the board of Berkshire Hathaway, and is a childhood friend of Warren Buffett.[1] He is also on the board of directors of Burlington Resources, Commonwealth Telephone Enterprises, Level 3 Communications Inc., MidAmerican Energy Holdings, RCN Corporation, Valmont Industries, and Peter Kiewit Sons' Inc, and is the chairman of the Open World Leadership Center at the Library of Congress.[4] He is a director of the Joslyn Art Museum, Nebraska Game and Parks Foundation, and the Omaha Development Foundation. Nationally, he is a director of the Horatio Alger Association and the National Forest Association.[*citation needed*]

Scott is chairman of Level 3 Communications.[5] The corporation is one of the firms created by the 1998 separation of the two operating divisions of Peter Kiewit Sons' Inc. Since the split-off, Scott now serves as chairman Emeritus of Peter Kiewit Sons', Inc.[*citation needed*]

Philanthropy

Scott consistently ranks among the wealthiest Americans. With his wife, Suzanne, he founded the public, non-profit Suzanne and Walter Scott Foundation which has funded the Scott Atrium & Education Center at University of Nebraska Medical Center,[6] the Scott Technology Center[7] in Omaha, and The Summit: Bechtel Family National Scout Reserve.[8]

In June 2010, when Warren Buffett appealed to him to join the Giving Pledge, he partially accepted, stating that after his death his remaining estate will go into his eponymous foundation.[9]

In 2011 he committed $10 million to the construction of Engineering II, a $70 million, 122,000 square feet (11,300 m^2) building which will house interdisciplinary energy, environment and health programs at Colorado State University.[*citation needed*]

In November 2016 it was announced Scott would be donating $53.3 million to Colorado State University School of Engineering, CSU's largest ever gift, and that the College of Engineering at CSU will be renamed the Walter Scott Jr. College of Engineering, becoming the only named college of engineering in the state of Colorado.[10]

Collector

In 1996 Scott acquired the original sales document of the Louisiana Purchase for his private collection.[11]

Honors and awards

Scott was the 1997 recipient of the Horatio Alger Award.[12]

He became an Eagle Scout in 1946 and is a recipient of the Distinguished Eagle Scout Award.[8]

Personal life

Scott's second wife Sue Scott had been a good friend of his first wife, Carolyn, who died in 1983, but did not know Walter. They married in 1987 at their place of worship, Countryside Community Church. Suzanne died in 2013.[13]

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Scott

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Youtube videos

Warren Buffett and Walter Scott Jr. pushing for Medicaid expansion

Nov 1, 2018 / KMTV 3 News Now

https://www.youtube.com/watch?v=x5QboGQk0y0

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Walter Scott Jr.- 1997 Horatio Alger Award Winner

Sep 16, 2008 / Horatio Alger Association

Horatio Alger Winner and previous board chairman, Walter Scott, Jr. said he has enjoyed hi membership with the Horatio Alger Association and meeting the young people who have received scholarships for education.

https://www.youtube.com/watch?v=8dNx8c0ot80

Nebraska philanthropist Suzanne Scott died Monday

Sep 9, 2013 / KETV NewsWatch 7

Omaha philanthropist Suzanne Scott, whose name adorns many prominent projects alongside her husband Walter, has died.

https://www.youtube.com/watch?v=srmopZybyTw

Nebraska Stories | The Quiet Billionaire & More

Mar 28, 2017 / NETNebraska

The Quiet Billionaire, A Match Made in Ogallala, Picturing Rodeo, Schmackery's, & Fire Drones

"The Quiet Billionaire"

An intimate portrait of retired construction executive and active philanthropist, billionaire Walter Scott. We learn about his passions, his philanthropic efforts impacting the lives of countless Nebraskans and his most important life lessons.

[and more ...]

July 22, 2002 article in Fortune Magazine - The Inside Story Of Level 3

Fortune magazine - [HP0035][GDrive]

It's a saga that brings together Bill Gates, Bernie Ebbers, Bill Miller--and even Warren Buffett. It travels from the Flaming Gorge Dam to the very backbone of the Internet, but mostly to downtown Omaha. And it may just be the most unexpected survival tale of the telecom era.

By Andy Serwer

(FORTUNE Magazine) – On the south side of Omaha, less than a mile west of the Missouri River, sits one of that city's leading tourist attractions: the famed Omaha zoo. Sure, there are those who will quietly snicker at the notion of Nebraska having a top-notch zoo--coastal snobs, no doubt, who think the fairest fauna are limited to the Bronx or to San Diego. But Omaha has one damn fine zoo. Trust us on that.

It wasn't until the 1970s, however, that the zoo--founded nearly a century earlier with a pair of bison on loan from Buffalo Bill--truly became a star attraction. That's when Omaha's most beneficent citizen lassoed the local business community into donating tens of millions of dollars. The same businessman, for that matter, was also a driving force behind the city's new art museum, the engineering institute, and the Nebraska game and parks foundation.

Here--and especially if you're a longtime reader of FORTUNE--you might be guessing that this citizen-philanthropist is none other than Warren Buffett, the Oracle of Omaha, the legendary investor and grand pasha of Berkshire Hathaway, who is certainly the city's (and perhaps history's) most famous businessman. But you'd be wrong. This isn't a Buffett story. (Sorry.) In fact, while locals hold Mr. Buffett in the highest regard, he is not perceived as Omaha's primary benefactor. That distinction goes to Omaha's other eminence grise--an unflappable, balding 71-year-old named Walter Scott.

Round-shouldered and with the slightest paunch, the city's first citizen has something wonderfully avuncular about him. He has a quiet dignity. As much as Buffett is sage and statesmanlike in his public appearances, Scott--who made his fortune as a construction company executive building highways, tunnels, and dams--is salt of the earth. Buffett, a close friend for decades, has a simple phrase that pretty much sums up Scott: "Walter is a builder."

Indeed, it is this image that makes Scott's other daytime role even more strange and compelling. For Omaha's civic guardian is also the protagonist in the astounding tale of telecom networking company Level 3, a modern business saga befitting Homer--an epic that ropes in not just Buffett (yes, he's in it after all) but also Bill Gates, billionaire Craig McCaw, and famed fund manager Bill Miller. In its twists and turns you'll find WorldCom's embattled ex-CEO Bernie Ebbers and Salomon Smith Barney's scandal-tainted telecom analyst Jack Grubman, once one of the hottest stars on Wall Street. At its heart is the rise and fall of the easy-money Internet, the spectacular collapse of the telecom sector--a failure that gets more colossal and dispiriting every day--and billions of dollars of losses by ordinary investors in a single, 723,000-strong city on America's Great Plains. (For more on WorldCom, see "Is There Any Way Out of the Telecom Mess?")

But more amazing, perhaps, is that plainspoken Walter Scott, as founder and chairman of Level 3, may actually have one of the few tickets out of this mess. When all is said and done, his company--and yes, here's our Homeric finale--may actually...survive. It may even be that a host of investors from the Cornhusker State, who clung faithfully to the stock as it fell from $130 to $30 to $3, will actually get back a tiny portion of their investment.

Not that this is a fairy tale. We should point out at the start that Level 3--which has seen its market cap sink from $44 billion in March 2000 to $1.3 billion today--will never return to the lofty levels of the bull market. Those heady days simply aren't coming back. But of all the so-called telecom infrastructure companies now on life support, Scott's Level 3 may actually have the best shot of breathing in the next two years.

In fact, as FORTUNE went to press, rumors were floating around that outside investors were about to make a sizable cash infusion into the company--perhaps hundreds of millions of dollars in equity. That, of course, speaks volumes in this environment. There are reasons for this unthinkable optimism--technological, management, and yes, even accounting reasons. But in the oddest twist, the biggest thing Level 3 has going for it are the shareholders who have seemingly lost everything: mostly, the good citizens of Omaha. Remarkably, perhaps even incredibly, they remain true to Walter Scott.

The local Lexus dealer. A prominent banker. The founder of a credit card company. The nephew of Warren Buffett. Each of them is out a bundle. There are hundreds, probably thousands of investors in Omaha who have suffered combined losses in Level 3 stock equal to tens of billions of dollars. "I personally know at least five people who've lost $20 million or more in this stock," says Ron Carson, head of local investment firm Carson Wealth Management.

The city feels their collective pain. Sales at Borsheim's, the high-end jewelry store that Buffett's Berkshire Hathaway owns, were down in 2001 for the first time ever, in part because locals were pinched by losses in Level 3. But the economic fallout appears to be manageable. The more significant effect may be psychological. Investing meltdowns just aren't supposed to happen in Omaha. This is a town where business leaders have impeccable ethics, and the smarts to go with them. This is a town strewn with multimillionaires and comfortable retirees. This is a town where investing is for the long haul. "There's a lot of pride in Omaha. It has a great work ethic, the Midwest work ethic you hear about," says Level 3 investor Denny Walker. To people like Walker, Level 3 wasn't so much a highflier of the bull market, it wasn't even so much a stock. It was an Omaha company--a company in a town, as locals like to remind you, that has five FORTUNE 500 names based there.

If you haven't been there, Omaha is probably different from what you imagine. It's more wooded than bare; hilly, not flat. What is likely to be close to your preconceptions, however, are the steak houses. There are loads of them in this erstwhile cattle town, everything from meccas like Piccolo Pete's and Johnny's to (sacrilege!) a couple of Outbacks. And then there's Gorat's.

Gorat's is rustic and dark, but the food is good, and not surprisingly it's a terrific value. It's Warren Buffett's favorite restaurant in town, where he has held more than a few high-powered tete-a-tetes over the years. Gorat's is the perfect place to sit down, enjoy a nice cut of beef, and ask Buffett (who, for the record, orders a T-bone and a Cherry Coke) about his dear friend Walter Scott.

While he never discusses his stock holdings, Buffett is happy to talk about Scott. And over a long, rambling conversation and a three-course, two-hour dinner, Buffett's affection for his fellow Omahan becomes clear. "A lot of people like to make simple things complex. Walter does the opposite. He has an ability to cut through what's complicated," says Buffett, picking at some cottage fries. "He is also a man who gives you his word, and that's it. He is a person of great integrity. People here have tremendous respect for him."

Buffett and Scott both work in the Kiewit Plaza building, which is high on a hill overlooking the city. Scott has been on the Berkshire board since 1988--for a time he was the company's one-man audit committee. But their ties go back even further. "I first got to know Walter when we were teenagers, really," Buffett says. "We both had a crush on the same girl, Carolyn Falk. She was the daughter of my father's [business] partner. Walter won her, and they ended up getting married." Hardly the way to kick off a lifelong friendship, but Buffett and Scott grew close over the years as their careers blossomed more or less simultaneously.

With such a longstanding relationship, Buffett must have invested in Level 3 stock, right? "I won't comment on that," he says, working on a chocolate sundae. Which means either he doesn't own any, or the amount he owns is too small to disclose in Berkshire's financial statements. Or he could own its bonds. Things could change, of course. When Berkshire Hathaway vice chairman Charlie Munger was asked at his company's annual meeting in May whether he would buy Level 3, he replied, "It's very hard to guess the future, but it's conceivable. We have a history of occasionally wading in when no one else will."

What Level 3 does isn't easy to understand, given that even the most basic explanations are laced with new-economy jargon. But here's how it works in the simplest terms: It sells broadband capacity on its spanking-new fiber-optic network. Most of Level 3's customers are big-kahuna Internet service providers (ISPs) and portals, such as AOL (its biggest customer), Microsoft, and Yahoo, which require highly advanced transmission lines to send reams of data at lightning speeds. Let's say you're an MSN customer and you live in a city where Microsoft uses Level 3's network. When you click on any Web address, the signal goes from your computer through Level 3's network to MSN servers and then back again--except for the so-called last mile, it never passes through copper wire or even a circuit switch. The passage is instant.

The technology, by most expert accounts, is impressive. It's both low-cost and easily upgradable. "The Level 3 network is considered to be better, thanks to an automated system that can add fiber capacity," says Eli Noam, a professor of finance and economics at Columbia University Business School.

But it wasn't the newfangled bells and whistles that impressed so many of Level 3's early investors. It was the founder. Says Omaha attorney Thomas F. Dowd, who hasn't sold a share even as his paper losses have exceeded $1.3 million: "Walter Scott is the reason, probably, that most Omahans put so much money in the stock."

Fiber optics is light years from where Walter Scott began his career 54 years ago, when he took a job at Peter Kiewit Sons' construction. Dutch immigrant Peter Kiewit founded the business in 1884 and began building things like the majestic ten-story Livestock Exchange Building in Omaha's meatpacking district. The company went on to construct enormous projects such as the Fort McHenry tunnel beneath Baltimore Harbor and the Flaming Gorge Dam in Utah. Kiewit also built much of the Interstate Highway System in the West. When Scott became CEO in 1979, the company was generating tremendous amounts of cash, as it still is today. That helped account for the bountiful rise in Kiewit's privately held stock, which was bought by younger employees at less than book value and sold by retiring employees back to the company, also at less than book.

Kiewit always generated more cash than it could use, so the company was forced to invest outside the construction business. Over the years, Kiewit bought into coal mines, toll roads, and cable TV, but in the 1980s the company began to focus its investments on the telecommunications business. At the fore of this move was Jim Crowe, who came to Kiewit from Morrison Knudsen before that giant construction company famously went bust.

Though a man blessed with serious brainpower, an intense vision, and a physical presence to match, Crowe, who is Level 3's CEO, is not as beloved as Scott is in Omaha. Detractors whisper that unlike Scott he is a bit of a spendthrift, and likes to collect fancy houses--he's got them in Idaho, Arizona, and Colorado. Still, he commands respect. When you meet Crowe you aren't surprised to learn that his father, Henry Crowe, was a highly decorated World War II Marine Corps major. Jim Crowe didn't go into the service himself, but he does have a military bearing.

At Crowe's urging, Kiewit bought a company called Metropolitan Fiber Systems, which built circuit-switch and fiber-optic networks for phone companies. By 1987, the company was renamed MFS and was building its own networks. It quickly became one of the nation's biggest CLECs, or competitive local-exchange carriers. Then, in 1993, MFS was spun out of Kiewit and taken public, a move that greatly boosted the net worth of Kiewitites who had bought into MFS before its public offering. That was the first time many Omaha investors got rich off a Scott venture.

The good times were just starting. The Internet was about to raise the financial stakes exponentially.

Every two years a group of about 50 Buffett intimates, including Scott and Bill Gates, gather at a venue for an informal multiday potlatch. In 1995 the location was Ireland's K Club, a splendid estate turned into a hotel and golf course. Gates gave a talk about how the Internet would be a revolutionary force and how he was repositioning Microsoft to meet that challenge. He also mentioned that the Net could destroy the businesses of traditional phone companies. That got Scott's attention. "Yes, Bill's talk is probably what got us thinking about the Internet," acknowledges Scott.

Scott and Crowe concluded that they should find a business that played off the infrastructure of the Net and wed it to MFS. The most attractive buy was an "Internet backbone" company named UUNet, then headed by John Sidgmore (who's now CEO of WorldCom). In April 1996, MFS bought UUNet for $2 billion, a record price for an Internet company. Meanwhile, down in Mississippi, WorldCom CEO Bernie Ebbers must have watched mushrooming MFS with some alarm. MFS looked to be a step ahead of his burgeoning empire. Ebbers had a solution: Buy MFS! In late August he offered an astonishing $14 billion of WorldCom stock for MFS.

The buyout was a boon for hundreds of longstanding Kiewit employees. "People made a bunch of money on MFS," says Omaha investor Ron Carson. "That set the stage for people buying Level 3. It reinforced the idea that Kiewit never misses. But people began to think about it like you could get rich overnight."

Scott put Crowe in charge of what was called Kiewit Diversified Services--basically all of Kiewit's businesses and investments in companies other than construction. Crowe hatched a plan to build a new company like MFS from the ground up--but this time it would construct a long-haul fiber-optic-only network based on Internet protocol. He rehired 18 of his former key MFS lieutenants from WorldCom and got to work.

Kiewit's privately held class C shares, which tracked its construction business and made so many of its employees rich, could be owned only by Kiewit employees. (Sources say that the annual compound appreciation of C shares has been more than 20% over the years.) In 1992 the company issued class D shares that tracked its diversified business. ('C' for construction. 'D' for diversified.) D shares were thinly traded, but they could be owned by non-Kiewitites. Knowing someone in Omaha was the best way to get your hands on some.

Scott and Crowe agreed that, as with MFS, it made sense to separate Kiewit Diversified Services from the construction company. For the new company, they chose the name Level 3, which refers to the seven-layer Open Systems Interconnect network model. The point was that Level 3 would focus on the bottom three levels: the first being the physical layer of fiber itself; the second, the optical layer, or the signal; and the third layer, the Internet Protocol, which in a sense is the language by which the signal is sent. Despite the mysterious name (or perhaps because of it!), "there was a tremendous amount of buzz in Omaha about Level 3," says a local businessman. "You'd hear about a block of stock for sale and then it would be sold, like that."

One person who got in early was Buffett's nephew Tom Rogers. Rogers, a local venture capitalist who works out of a renovated office in an old building in downtown Omaha, bought the stock before it was publicly traded on Nasdaq. "I remember the lady who cuts my hair asking me about the stock," recalls Rogers, who says he still owns "truckloads" of shares. "I paid my personal trainer in Level 3 shares instead of cash. I really wanted him to own this stock," he says.

On April Fool's Day 1998, Level 3 began trading on Nasdaq. The company sold a few nontelco businesses to raise more cash, but it hung on to the coal mines and a toll road for cash flow. Meanwhile, Craig McCaw's Internext venture jumpstarted the company by buying $700 million of network capacity. By the following year Level 3's stock was soaring.

It didn't hurt, of course, that Salomon Smith Barney's superstar telco analyst Jack Grubman began coverage of Level 3 with an outperform rating. In his first full report, Grubman wrote glowingly, "Level 3 is a great play on bandwidth...[which] will be chronically scarce. Capacity actually creates demand in this

business...bandwidth-centric names are good values at any price since nobody can predict the true demand caused by growth." Grubman even offered a homespun analogy about Level 3's limitless prospects: "Like the attic of a house gets filled, no matter how much bandwidth is available, it will get used."

Still, for all the enthusiasm on Wall Street, Level 3's hardiest fans were right back home in Omaha. Roger Bendet, the general manager of Lexus of Omaha on the city's western edge (which is out near Boys Town, of Spencer Tracy and Mickey Rooney fame), didn't hesitate to jump in. Neither did Denny Walker, founder of Memberworks, a company that processes credit cards. "I first got in at about $10, when it was a Kiewit stock," he says. "We bought about 10,000 shares, kept those, and bought more. We own about 15,000 now."

As expected, Level 3's network build-out was impressive. Crowe secured rights of way from big railroads, including Union Pacific, which is based in--you guessed it--Omaha. Level 3 dug trench, laid cable, and burned through billions of dollars furiously, crossing the Mississippi three times and completing the 16,000-mile North American section in 30 months. Speed was critical because other companies were building networks too. It was not unlike the race to complete the railroads in the old West.

Through 1999 and 2000, quarterly sales raced ahead from $100 million to over $400 million. Meanwhile, Grubman had raised his rating to "1S" (buy speculative) and put a $130 price target on the stock. Soon the go-go mutual funds were loading up on shares. In March 2000, Janus owned 20 million shares of Level 3, Fidelity owned ten million, and Putnam held seven million.

On March 10, the stock hit $130, just as Grubman had said it would! On that day Level 3 had a market cap of some $44 billion--about $4 billion more than General Motors. "The feeling at that time was that Level 3 was a gold mine that was never going to end," says a significant local investor. "If you didn't own the stock, you looked foolish."

Omaha used to be home to another can't-miss stock: an energy-trading company called Enron. Many retired Enron employees still live in the area, and they've hung on to the stock. "I had one family come in and say, 'Dad told Mom before he died never to sell Enron because it was a utility and she could live off it forever,'" says Carson. "It's been devastating." Another big local holding is WorldCom (converted from MFS shares).

Then there's Level 3--which by April 2000 was getting a reality check. The company's big-spending customers, those Internet companies and CLECs, hit the wall. Sales began to wilt, and then so did Level 3's share price. In just one year the stock sank 90%, to $13 a share. (Only then did Grubman cut his price target, from $130 down to $20.)

The problem, as most of us can recite by now, was a sudden glut of capacity. The attic, it seems, wasn't ever going to fill up. If Level 3 had been the only player building a fiber-optic network, it would be hailed as a great success story. But the old telcos--AT&T, WorldCom, and Sprint--were adding broadband capacity to their networks, and upstarts like Global Crossing, Williams, Broadwing, and Qwest were churning out entirely new networks. No question, Level 3 had a great network, says Scott Cleland, an analyst with the Precursor Group. "But it's like a great racetrack. You still need the fans. You still need the customers. And companies like AT&T and Qwest started with customers."

What's more, advances in technology (particularly something called DWDM--dense wave division multiplexing--that can increase the capacity of a strand of fiber by 200 times) caused the cost of adding bandwidth to a network to fall by 99% from 1995 to 2000. Level 3 stock continued to plummet, dropping to $3 in a three-month period.

Still, investors like Omaha lawyer Thomas Dowd, who owns 89,000 shares, hung in. "Granted, it's an industry with problems," Dowd says with remarkable peace of mind. "Crowe told us a long time ago that there would be a tremendous shakeout, but that the survivors are going to have wonderful businesses."

Many of his fellow Omahans are in deep too. One man sold his entire business for $20 million to buy Level 3 stock. Those shares today are worth only $3.5 million. Others made the mistake of building grand homes on the strength of their paper holdings. "I had a neighbor," says one knowledgeable Omahan, "who built a house for $2 million [that's a lot of house in Omaha] borrowed against Level 3 stock. He had a margin call and had to sell it for $1.5 million. He didn't live in the house a single day."

"It's embarrassing to talk about," acknowledges money manager Carson, who won't reveal the exact amount he himself owns. "It's a lot," he concedes. "It was enough money at the peak so that I wouldn't have to work again."

So, did Scott and Crowe bail out of the stock, you wonder? With Scott, the answer is an emphatic no. He has sold next to nothing. With Crowe, the answer is yes--to a point. In 2000, Crowe announced he would begin a regular program in which he would sell a set number of shares, 2,000 to 4,000, a day. As of last June, he had sold about one million shares worth $50 million (giving him an average selling price of $50.) Then he suddenly dumped nearly three million shares. Why? "In the beginning I borrowed money to buy $55 million of Level 3 stock," Crowe explains. "I needed to pay off that debt." And guess who was the buyer of the stock? None other than Walter Scott, who purchased 2.95 million shares from Crowe at $6.75 each, for a total of $19 million. Since then Crowe hasn't sold a share, and he still owns almost ten million shares.

Today, with Level 3's stock below $5, its market cap is down to $1.3 billion (GM's is $30 billion, by the way). As for those three big institutional holders: Janus now owns 550,000 shares, Fido 74,000, and Putnam 10,000. Of the 37 million shares those fund giants once owned, 36.4 million have been sold off.

And guess who bought those shares? No question, many were picked up by Omahans who were dollar-cost averaging the stock, or in some cases doubling up as the stock went down. Almost every Level 3 shareholder we spoke with for this article--Rogers, Dowd, Carson, and others--acknowledged buying the stock as it fell. By FORTUNE's best estimates, perhaps as much as $20 billion--nearly half of Level 3's stock market value at its peak--was lost, on paper at any rate, by Omaha shareholders.

"I saw Walter Scott at a function recently," says one Omaha businessman. "And some guy came right up to him and asked him, 'Hey, what's going on with Level 3? The guy wasn't agitated or anything, but Walter left right after that." Clearly it's tough for Scott, whose own holdings have fallen a jaw-dropping $4.2 billion, to $200 million. "There are some that bought stock at a very high price," says Scott, nodding his head. "I've never had anybody get mad at me or anything. That doesn't mean it won't happen. It's just that I haven't had anybody yet."

The first couple of months of this year were particularly grim for Level 3. On Jan. 29 the company, which had earlier moved its headquarters to Broomfield, Colo., to attract more skilled engineers, took a $3.2 billion impairment charge, adjusting the value of its assets downward by that amount. Revenue has also been lagging. In the latest quarter, Level 3 had sales of $386 million and operating expenses (which includes debt service) of $725 million. With $5.9 billion of debt on its books, Level 3's annual interest costs alone are around $516 million.

Crowe and his sales force have had some luck luring bigger and more stable customers, including SBC and Cox Communications. Says Jay Rolls, vice president of data engineering at Cox: "As soon as we inked a contract with them, the Level 3 guys showed up and stayed for two days straight until we were

up and running. When we called up our other provider, a big player, they basically asked, Why are you bothering us?" Still, the high-tech economy remains weak, and other customers are pulling the plug. Level 3 estimates that some 15% of its recurring revenue is at risk, and that two-thirds of those sales will be disconnected within several months. "Level 3 is in a tough situation because its whole model is based on underpricing the competition--which they can do, but it puts huge pressure on them," says Precursor's Scott Cleland.

Mainstream Wall Street clearly agrees. Merrill Lynch, for one, just downgraded the stock to a sell. Nor do the capital markets seem sanguine about Level 3's prospects. The company's benchmark 9.125% bonds trade around 48 or 50 cents on the dollar and yield 27%. Market observers say at those prices the bond market is betting the company is headed for bankruptcy. "The stock is trading at $4," says one powerful money manager. "Typically the equity markets get these things wrong, so the trade to make would be to short the stock and go long the bonds."

But is Level 3 really in such dire straits? The most surprising twist in this saga is that it just might not be. In fact, there's at least one high-profile investor fishing around in Level 3's equity, Legg Mason's superstar Bill Miller--the only fund manager to beat the S&P 500 11 years in a row. At a recent lunch in Manhattan, Miller, who won't say how big his position is, remarked, "Well, as the saying goes, it's not going to go bankrupt tomorrow, though it's priced as such. But even if it does go bankrupt, it won't be for several years." Another well-regarded money manager, Staley Cates of Longleaf Partners, makes a similar point. As Cates, who is long on Level 3 bonds, put it in a recent conference call: "All that matters to us is [the bonds'] cash flow. Level 3's cash position today of over $1 billion sees us through a good number of quarters before we think there's a true liquidity problem."

Yes, about that cash position. Level 3 has $2.78 in cash per share, enormous in this environment. If you assume that's enough liquid fuel to make it through to the next upswing in the high-speed Internet business, then the company may have a big strategic advantage over its rivals. One called "survival."

Another issue in this market is whether this company has even a whiff of the accounting or other ethical improprieties that have tainted so many other telcos. Buffett and many others stand by Scott as the ultimate straight-shooter. But even Scott seems taken aback by the headlines around him, to the point that he hedges his take on his own company. "In this environment," says Level 3's chairman, "you never can guarantee 100%. I mean, we knew a lot of the things that were going on. We did not participate.... I'm comfortable that our integrity is together. That doesn't mean somebody couldn't go in and find something, but we have always tried to be as open and straightforward as possible."

To that end, Scott won't even guess at the correct valuation of Level 3. "I don't have any idea," he says, when pressed. "I don't know. I don't think you can evaluate it today. I don't know what it's worth. Have no idea."

But if actions speak louder than "I don't knows," Scott believes Level 3 is worth more than its share price. Through the purchase of some warrants, he has effectively invested more money in the company within the past three or four months. "If just keeping my stock is any indication," he says, "I guess you'd have to say I'm convinced Level 3 will make it."

Many Omahans are even greater believers in their savior's leadership. "In the long term, people are the most valuable, and they've got the people," explains Omaha investor Denny Walker, who still clings faithfully to his 15,000 shares. "I never wavered," he says. [...]

Gates - GM Mosquito company

OK this is is disinfo ...

A [...] highly-classified "***Of Special Importance***" new **Foreign Intelligence Service** (SVR) report circulating in the **Kremlin** today noting a nearly **3-week period** of events that saw **DHS whistleblower Phillip Haney being assassinated after he talked with Russian disease expert Olesya Krasilova about the coronavirus outbreak in Iran**, that was followed by the **assassination of US Attorney Timothy Delgado, along with his wife Tamara Delgado, who was investigating the contract murder of Haney**, and **President Donald Trump ordering the take down of a CIA narco plane after he discovered the White House communication system had been hacked**, says that the series of events immediately following these **Trump-Deep State** skirmishes presage a much more brutal conflict soon to come—a series of events that began on **Wednesday-11 March** when **Trump's Department of Justice announced the arrest of over 600 Mexican drug cartel members** known to be **working with rogue elements of the CIA**, as well as the shock revelation that **Trump's FBI** had been **secretly wiretapping a former top Obama Clinton Regime official in the DEA**—that continued into **Thursday-12 March** when **Trump met with Prime Minister Varadkar of Ireland in the White House**—a meeting made notable because it was also attended by **Anne Tatlock**, who is the main trustee for the **Howard Hughes Medical Institute**, and aside from her medical institute being a global leader in the investigation of coronaviruses, **Tatlock is a first-generation Irish-American whose parents were born in Ireland**, thus making her being at the **White House** no surprise—but in the earlier morning hours of **Friday-13 March**, saw **Tatlock** flying from **Washington D.C.** to **Offutt Air Force Base** in **Nebraska** where she was met by **Warren Buffett**—both of whom then went into the secure **US Strategic Command** bunker complex, where they were met a few hours later by the world's **2nd** richest man **Bill Gates [...]** and after his emerging from this secure bunker meeting he held with **Tatlock** and **Buffett**, then saw **Gates making a shock announcement that he has immediately resigned from the board of the Microsoft company he founded, as well as from his position on Buffett's company's board of directors**—the greatest significance of though, is that what has just occurred happened previously during the last time a **US** national crisis was underway—and occurred on **11 September 2001** when **America** was attacked—**an attack of suspicious origin** that saw then **President George W. Bush** immediately flying to **Offutt Air Force Base**—and upon his entering the secure **US Strategic Command** bunker complex, saw him, like **Gates** yesterday, being confronted by **Anne Tatlock** and **Warren Buffett**, **both of whom were already there waiting for him**.

[Note: Some words and/or phrases appearing in quotes in this report are English language approximations of Russian words/phrases having no exact counterpart.]

Taken out :

Remember ;: **Bill Gates 2018** warned "***The world needs to prepare for pandemics just like war***"—

Offutt airforce base ... the nuke bomb planes (https://en.wikipedia.org/wiki/Offutt_Air_Force_Base) (2020-09-10-wikipedia-offutt-air-forece-base.pdf)

Offutt Air Force Base /ˈɒfʌt/ (IATA: **OFF**, ICAO: **KOFF**, FAA LID: **OFF**) is a U.S. Air Force base south of Omaha, adjacent to Bellevue in Sarpy County, Nebraska. It is the headquarters of the U.S. Strategic Command (USSTRATCOM), the 557th Weather Wing, and the 55th Wing (55 WG) of the Air Combat Command (ACC), the latter serving as the host unit.

Aviation use at Offutt began in September 1918 during World War I as an Army Air Service balloon field.[2] Originally named **Fort Crook**, it was renamed in honor of World War I pilot and Omaha native 1st Lt. Jarvis Offutt in 1924.

Offutt AFB's legacy includes the construction of the *Enola Gay* and *Bockscar*, the planes that dropped Little Boy and Fat Man over Hiroshima and Nagasaki in World War II. Offutt served over 40 years as the headquarters for the former Strategic Air Command (SAC) and home for its associated ground and aerial command centers for the U.S. in case of nuclear war during the Cold War. The population was 8,901 at the 2000 census.

OMG - https://en.wikipedia.org/wiki/Strategic_Air_Command (2020-09-10-wikipedia-strategic-air-command.pdf)

Useful :

- *Remember the timing of Gates leaving berkshire hatahway right at the start of the pandemic*
- *Whose idea was it? Is Gates being set up ?*
-

2008-08-21-cnbc-canadian-oil-sands-tour-has-omaha-connections

Canadian Oil Sands Tour Has Omaha Connection

PUBLISHED THU, AUG 21 200812:49 PM EDTUPDATED FRI, SEP 13 20134:33 PM EDT

Alex Crippen@ALEXCRIPPEN

As oil sand stocks continue to rally in the wake of Monday's visit by Warren Buffett and Bill Gates to northeastern Alberta, we may have a "clue" to an Omaha connection for the tour.

Canada's national newspaper ***The Globe and Mail reports today*** that the trip was arranged by Kiewit Corp., an engineering firm based in Omaha that is a contractor on .

Buffett and Gates toured that facility by helicopter and then looked at some other projects in the area from the air, according to the *Globe*, which also says the trip was supposed to be "top-secret."

After picking up 7% yesterday, Canadian Natural is up another 3% to $85.42 in New York Thursday. Current real-time price:

Long-time Buffett friend and former Kiewit CEO Walter Scott, Jr.

Long-time Buffett friend and high-school classmate Walter Scott, Jr. is a former CEO of Kiewit and currently sits on the boards of that company, Berkshire Hathaway and Berkshire subsidiary MidAmerican Energy Holdings. Along with Buffett, he also holds a stake in Omaha's minor league baseball team.

The Globe article stays with the interpretation that while Buffett might be curious about oil sands, it would be very unusual for him to make an investment there. It cites the absence of a competitive "moat" for commodity producers and quotes Buffett-watcher Tony Arrell of Burgundy Asset Management as saying, "I wouldn't have any idea [why he made the trip], but I can hardly think of a time that he has invested in a big, capital-intensive thing."

Current Berkshire stock prices:

Class A:

Class B:

Questions? Comments? Email me at buffettwatch@cnbc.com

https://www.cnbc.com/2008/08/21/warren-buffetts-canadian-oil-sands-tour-has-omaha-connection.html

Berkshire subsidiary MidAmerican Energy Holdings

https://ww.fashionnetwork.com/news/Berkshire-says-yahoo-cfo-decker-to-join-board,42452.html

Comments (mwk) - gates was at the side of Scott Jr ...

By Jonathan Stempel

NEW YORK, March 1 (Reuters) - Warren Buffett's Berkshire Hathaway Inc. on Thursday said Susan Decker, the chief financial officer of Internet media company Yahoo Inc. , will join its board of directors.

The appointment is effective at Omaha, Nebraska,-based Berkshire's May 5 annual meeting, Buffett said in his annual letter to Berkshire shareholders. **Decker will replace Malcolm Chace, who has been on the 11-person board since 1992.**

Buffett said Decker fulfills his requirements that board members be "owner-oriented, business-savvy, interested and truly independent." He also said her age, 44, was a plus.

"(She) is young -- an attribute, as you may have noticed, that your chairman has long lacked," said Buffett, who is 76. "We will seek more young directors in the future."

In December, Yahoo gave Decker additional responsibility over a new unit focused on advertising, Yahoo's main source of income. The new role was part of a reorganization that may have bolstered Decker's chances of eventually succeeding Terry Semel as Yahoo's chief executive.

Decker is the latest executive from a technology-oriented company to join Berkshire's board. **Others include Microsoft Corp. Chairman Bill Gates and Level 3 Communications Inc. Chairman Walter Scott.**

"He appears to be building some institutional knowledge about technology companies onto Berkshire's board, figuring that in 10 to 15 years technology will be much more important to Berkshire, and a place the company might start moving toward," said Morningstar Inc. analyst Justin Fuller.

Buffett owns more than 50 companies, but generally gets more than half of the profit from insurance and reinsurance.

Chace's grandfather, also named Malcolm Chace, was a key figure in 1929 in merging four New England textile units into Berkshire Fine Spinning Associates, which merged in 1955 with Hathaway Manufacturing to form Berkshire Hathaway, Buffett said. Buffett took control of the combined company in 1965.

BITCHUTE @Housatonic **YOUTUBE** @HousatonicLive **ODYSEE** @Housatonic **BRIGHTEON** @Housatonic

Housatonic

William Forsythe Sharpe (born 1934)

https://en.wikipedia.org/wiki/William_F._Sharpe

1969-09-document-resume-computer-instruction-planning-practice-with-book-included-judith-b-edwards.pdf

Source - [HB004D][GDrive]

Following is mentioned :

[...]

Sharpe, William F.BASIC:An Introduction to Computer ProgrammingUsing the BASIC Language.New York, N. Y.:The Free Press, 1967.

The first half of the book describes BASIC and its useand containsa set of problems andsolutions for each chapter.The last halfhas four appe dices, two explaining the Dartmouthand Universityof Washington systems, one containing a shortlibrary of BASICprograms and one being a summaryof the language.Some previousknowledge ofowcharting would be helpful to a reader sincethere is none included.The problems and library programs aregenerally oriented to economics and the social scie cesrather thanphysical sciences.

[...]

Aug 26 2020 Wikipedia capture - [HK002H][GDrive]

William F. Sharpe

[...]

William Forsyth Sharpe (born June 16, 1934) is an American economist. He is the STANCO 25 Professor of Finance, Emeritus at Stanford University's Graduate School of Business, and the winner of the 1990 Nobel Memorial Prize in Economic Sciences.

Sharpe was one of the originators of the capital asset pricing model. He created the Sharpe ratio for risk-adjusted investment performance analysis, and he contributed to the development of the binomial method for the valuation of options, the gradient method for asset allocation optimization, and returns-based style analysis for evaluating the style and performance of investment funds.

Early years

William Sharpe[1] was born on June 16, 1934 in Boston, Massachusetts. As his father was in the National Guard, the family moved several times during World War II, until they finally settled in Riverside, California. Sharpe spent the rest of his childhood and teenage in Riverside, graduating from Riverside Polytechnic High School in 1951.[2] He then enrolled at the University of California at Berkeley planning to pursue a degree in medicine.[1] However, in the first year he decided to change his focus and moved to the University of California at Los Angeles to study Business Administration. Finding that he was not interested in accounting, Sharpe had a further change in preferences, finally majoring in Economics. During his undergraduate studies, two professors had a large influence on him: Armen Alchian, a professor of economics who became his mentor, and J. Fred Weston, a professor of finance who first introduced him to Harry Markowitz's papers on portfolio theory. While at UCLA, Sharpe became a member of the Theta Xi[3] Fraternity and Phi Beta Kappa Society. He earned a B.A. from UCLA in 1955 and a M.A. in 1956.

Academic training

After graduation, in 1956 Sharpe joined the RAND Corporation. While doing research at RAND, he also started work for a Ph.D. at UCLA under the supervision of Armen Alchian. While searching for a dissertation topic, J. Fred Weston suggested him to ask Harry Markowitz at RAND. Working closely with Markowitz, who in practice "filled a role similar to that of dissertation advisor",[1] Sharpe earned his Ph.D. in 1961 with a thesis on a single factor model of security prices, also including an early version of the security market line.

Professional career

In 1961 after finishing his graduate studies, Sharpe started teaching at the University of Washington. He started research on generalizing the results in his dissertation to an equilibrium theory of asset pricing, work that yielded the Capital asset pricing model. He submitted the paper describing CAPM to the *Journal of Finance* in 1962. However, ironically, the paper[4] which would become one of the foundations of financial economics was initially considered irrelevant and rejected from publication. Sharpe had to wait for the editorial staff to change until finally getting the paper published in 1964.[5] At the same time, the CAPM was independently developed by John Lintner, Jan Mossin, and Jack Treynor.

In 1968 Sharpe moved to the University of California at Irvine but stayed there for only two years, and in 1970 he moved, this time to Stanford University. While teaching at Stanford, Sharpe continued research in the field of investments, in particular on portfolio allocation and pension funds. He also became directly involved in the investment process by offering consultance to Merrill Lynch and to Wells Fargo, thus having the opportunity to put in practice the prescriptions of financial theory. In 1986, in collaboration with the Frank Russell Company, he founded *Sharpe-Russell Research*, a firm specialized in providing research and consultancy on asset allocation to pension funds and foundations. His 1988 paper, 'Determining a Fund's Effective Asset Mix', established the model later referred to as returns-based style analysis.[6]

Later career

In 1989 he retired from teaching, retaining the position of Professor Emeritus of Finance at Stanford, choosing to focus on his consulting firm, now named *William F. Sharpe Associates*. In 1996, he co-founded Financial Engines (NASDAQ: FNGN) with Stanford Professor Joseph Grundfest and Silicon Valley lawyer Craig W. Johnson.[7]Financial Engines uses technology to implement many of his financial theories in portfolio management.

Today, Financial Engines has over 200 employees and is the leader in automated retirement plan investment advice and management, with more than $200 Billion in managed retirement accounts, providing advice and managed account services to employees in over 1000 major corporations. In March, 2018, Financial Engines was acquired for $3 Billion in cash.[8]

Sharpe served as a President of the American Finance Association and he is a trustee of the Economists for Peace and Security. He is also the recipient of a Doctor of Humane Letters, Honoris Causa from DePaul University, a Doctor Honoris Causa from the University of Alicante (Spain), a Doctor Honoris Causa from the University of Vienna and the UCLA Medal, UCLA's highest honor.

Since 2009, Sharpe has been an advocate of "adaptive asset allocation" strategies, which seek to exploit recent market behaviour to optimise asset allocation and thus maximise returns and reduce volatility[9][10]

Selected publications

Papers

- Sharpe, William F. (1963). "A Simplified Model for Portfolio Analysis". *Management Science*. **9** (2): 277–93. doi:10.1287/mnsc.9.2.277. S2CID 55778045.
- Sharpe, William F. (1964). "Capital Asset Prices – A Theory of Market Equilibrium Under Conditions of Risk". *Journal of Finance*. **XIX** (3): 425–442. doi:10.2307/2977928. hdl:10.1111/j.1540-6261.1964.tb02865.x. JSTOR 2977928.

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- Portfolio Theory and Capital Markets (McGraw-Hill, 1970 and 2000). ISBN 0-07-135320-8
- Asset Allocation Tools (Scientific Press, 1987)
- Fundamentals of Investments (with Gordon J. Alexander and Jeffrey Bailey, Prentice-Hall, 2000). ISBN 0-13-292617-2
- Investments (with Gordon J. Alexander and Jeffrey Bailey, Prentice-Hall, 1999). ISBN 0-13-010130-3
- Sharpe, William F. (2012). *William F Sharpe: Selected Works*. World Scientific-Nobel Laureate Series: Vol. 2. World Scientific. p. 712. ISBN 978-981-4329-95-8.

[...]

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1. ^ Jump up to: a b c William F. Sharpe on Nobelprize.org, accessed 29 April 2020
2. ^ Durian, Hal (July 9, 2011). "Poly Highs Class of 1951 Left its Mark". *The Press-Enterprise*. Retrieved February 9, 2013.
3. ^ http://www.thetaxibruins.com/alumni/index.php?per_page=100&page=5[*permanent dead link*]
4. ^ Sharpe (1964) in Selected publications
5. ^ Gans, Joshua S.; Shepherd, George B. (1994). "How are the mighty fallen: Rejected classic articles by leading economists". *Journal of Economic Perspectives*. **8** (1): 165–79. doi:10.1257/jep.8.1.165.
6. ^ Sharpe, William F. (December 1988). "Determining a Fund's Effective Asset Mix". *Investment Management Review*: 59–69.
7. ^ [1] Concept2Company Ventures
8. ^ [2] Financial Engines, robo-advice pioneer, to be sold for $3 billion
9. ^ Research by Professor William F. Sharpe ftse.com website 2011 (includes video interview)
10. ^ Sharpe, William F. "Adaptive asset allocation policies." Financial Analysts Journal 66.3 (2010): 45-59.

External links

- Personal web site of Dr. Sharpe
- IDEAS/RePEc
- "William F. Sharpe (1934–)". *The Concise Encyclopedia of Economics*. Library of Economics and Liberty (2nd ed.). Liberty Fund. 2008.
- William F. Sharpe publications indexed by Google Scholar
- "William F. Sharpe". JSTOR.
- William F. Sharpe on Nobelprize.org including the Prize Lecture December 7, 1990 *Capital Asset Prices with and without Negative Holding*

William F Sharpe - biography

Source : [HE0020][GDrive] : **BASIC: An Introduction to Computer Programming Using the BASIC Language,** The Free Press (New York), 1967, 144 pages.

2020-08-web-stanford-edu-stanco-25-profrssor-of-finance-william-f-sharpe-resume-bio-positions-1956-2010-img-1.jpg

2020-08-web-stanford-edu-stanco-25-profrssor-of-finance-william-f-sharpe-resume-bio-other-positions-img-1.jpg

2020-08-web-stanford-edu-stanco-25-profrssor-of-finance-william-f-sharpe-resume-bio-courses-taught-img-1

2020-08-web-stanford-edu-stanco-25-profrssor-of-finance-william-f-sharpe-resume-bio-pubs-pt1-img-1

2020-08-web-stanford-edu-stanco-25-profrssor-of-finance-william-f-sharpe-resume-bio-pubs-pt2-img-1

2020-08-web-stanford-edu-stanco-25-profrssor-of-finance-william-f-sharpe-resume-bio-pubs-pt3-img-1

POSITIONS:

1956-1961	Economist, The RAND Corporation
1961-1963	Assistant Professor, University of Washington
1963-1967	Associate Professor, University of Washington
1967-1968	Professor, University of Washington
1968-1970	Professor, University of California, Irvine
1970-1973	Professor, Stanford University
1986-1988	President, Sharpe-Russell Research, Inc.
1973-1989	Timken Professor of Finance, Stanford University
1988-1990	Chairman, Sharpe-Tint, Inc.
1989-1992	Timken Professor Emeritus of Finance, Stanford University
1990-1992	Chairman, William F. Sharpe Associates
1992-1995	Professor of Finance, Stanford University
1995-1999	STANCO 25 Professor of Finance, Stanford University
1996-2003	Chairman, Financial Engines, Inc.
1999-2002	Special Advisor, Hong Kong Council on Innovation and Technology
1996-2009	Director, Financial Engines, Inc.
1999-	STANCO 25 Professor Emeritus of Finance , Stanford University
1999- 2013	Director, C.M. Capital Corporation
2007- 2019	Member, Investment Committee, Community Hospital of the Monterey Peninsula
2008-	Faculty Affiliate, Stanford Center on Longevity
2009- 2012	Trustee, York School
2010-2019	Board member, Carmel Bach Festival
2010-2011	Member, Ad Hoc Committee on Retirement System, City of Carmel-by-the-Sea, California

2020-08-web-stanford-edu-stanco-25-profrssor-of-finance-william-f-sharpe-resume-bio-positions-1956-2010-img-1

OTHER POSITIONS:

Associate Editor, The Journal of Financial and Quantitative Analysis, 1966-1972.
Associate Editor, Management Science, 1970-1972.
Associate Editor, The Bell Journal of Economics and Management Science, 1970-1973.
Editorial Advisor on Finance and Computer Science, Praeger Publishers: New Directions in Management and Economics Series, 1970-1972.
Visiting Professor, London Graduate School of Business, January, 1972.
Member, Policy Committee, Computer Research Center for Economics and Management Sciences (National Bureau of Economic Research), 1972-1975.
Senior Research Associate, National Bureau of Economic Research, 1976-1977.
Trustee, College Retirement Equities Fund, 1975-1983.
Director, American Finance Association, 1977-1978.
Director, Western Finance Association, 1978-1980.
Trustee, Financial Analysts Research Foundation, 1978-1981.
Vice President, American Finance Association, 1979.
President, American Finance Association, 1980.
Associate Editor, The Journal of Finance, 1983-1986.
Research Associate, National Bureau of Economic Research, 1982-1986.
Co-director, Stanford-International Program inInvestment Management, 1983-1985.
Co-director, Stanford-London Graduate School of Business Investment Management Program, 1986.
Academy of Financial Services, Board of Directors, 1986-1987.
Member, Prize Committee, Institute for Quantitative Research in Finance, 1983-1992.
Member, Advisory Board, Program in Finance, Golden Gate University, 1986-1992.
Trustee, Research Foundation of the Institute of Chartered Financial Analysts, 1987-1993.
Member, Council on Education and Research, the Institute of Chartered FinancialAnalysts, 1987-1993.
Member, Task Force on the Body of Knowledge, the Association for Investment Management and Research, 1990-1991.
Member, Visiting Committee, Jerusalem School of Business, Hebrew University, 1993
Juror, Prize in Economy, "Rey Jaime I" (Spain), 1995, 2000, 2005, 2006, 2007
Trustee, Dominican College of San Rafael, 1987-1989, 1992-1996
Trustee, AXA Rosenberg Mutual Funds 1988-2003.
Associate Editor, The Journal of Fixed Income, 1991-1995
Trustee, Smith Breeden Associates, Inc., 1992-2000.
Senior Fellow, International Association of Financial Engineers, 1993-
Member, Financial Economists Roundtable, 1993-2003
Director, Stanford Management Company, 1993-2001.
Director, C-ATS Software, 1994 -1997
Distinguished Fellow, The Institute for Quantitative Research in Finance, 1994 -
Adviser, Japanese Financial Economics Association, 1994 -1990
Member, Charles Schwab Financial Services Advisory Council, 1994-1997
Director, Financial Engines, Inc. 1996-2010

2020-08-web-stanford-edu-stanco-25-profrssor-of-finance-william-f-sharpe-resume-bio-other-positions-img-1

COURSES TAUGHT:

1960: University of California at Los Angeles (Extension)
Price Theory

1960: San Fernando Valley State College
Intermediate Price Theory

1966: University of California, Berkeley
Intermediate Price Theory

1961-1968: University of Washington
Price Theory
Intermediate Price Theory
Managerial Economics
Business Finance
Capital Allocation
Investments
Portfolio Analysis and Security Analysis
Introduction to Data Processing
Computer Programming
Computer Programming Languages
Business Statistics
Operations Research
Seminar in Operations Research
Research Seminar on Computer Programming
Executive Development Program
Computer Programming Languages

1968-1970 University of California, Irvine
Elementary Economics
Micro-Economic Theory
Computer-Assisted Instruction in Economics
Economics of Securities Markets
Economics of Computers
Prices in the Central City
Portfolio Theory and Capital Markets

1970 - 2001 Stanford University
Portfolio Theory and Capital Markets
Investments
Micro-Economic Theory
Theory of Finance
Financial Aspects of Pension and Endowment Funds
Institutional Investment Management
Portfolio Management
Macro-Investment Analysis
Protected Investment Products

2020-08-web-stanford-edu-stanco-25-profrssor-of-finance-william-f-sharpe-resume-bio-courses-taught-img-1

PUBLICATIONS:

Proposal for a Smog Tax, with D. M. Fort, W. A. Niskanen and A. H. Pascal, The RAND Corporation, Paper P-1621-RC, February 1959, 27 pages.

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Nancy Jacob - Co-author on the BASIC book with William F Sharpe

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Nancy Jacob named ninth dean

1981 • In 1980s, Deans, Diversity, Milestones

Nancy Jacob (1981-89), ninth dean of the School of Business Administration, becomes the first woman to lead a major American business school. Her administration launches the Executive MBA Program, centers for banking and retail management, and a program to promote economic, ethnic and gender diversity among the study population.

As an undergraduate at the UW, Jacob (BA 1967) worked as a research assistant to Nobel Prize-winning financial economist William Sharpe, eventually co-authoring an early book on the economics of computing. She earned her PhD in financial economics at UC-Irvine and became one of a select few women teaching finance at the university level. In 1978 she became chair of the Department of Finance, Business Economics and Quantitative Methods.

During her tenure as dean, she drives many important initiatives and innovations at the School of Business Administration. Among them the Executive MBA Program, the Center for the Study of Banking and Financial Markets, the nation's only Center for Retail, Transportation and Distribution Management, the Business Education Opportunity Program (BEOP), and *Pacific Northwest Executive*, a quarterly magazine focused on the financial, managerial and policy issues of the region's economy.

After retiring from the UW, Jacobs will found and lead two successful investment firms and continue her nearly 40-year service as a trustee of TIAA-CREF.

Upon receiving the Foster School's Distinguished Leadership Award in 2014, Jacobs will reflect on the dearth of women in finance at the beginning of her pioneering career, and comment on the ongoing challenges for women in every traditional male-dominated field.

"We make a big deal of the glass ceiling for women executives in their careers," she will say. "But that's misleading because life is not a vertical climb. It's a multidimensional trip. It doesn't come with an *easy* button or a *fair* button. It is what it is. But when one door closes, another opens. You have to be flexible and you have to be willing to deal with adversity."

How much Bill Sharpe influenced her ... Foster School 2014 Distinguished Leadership Awardee Nancy Jacob (BA 1967)

https://www.youtube.com/watch?v=jr3UMRWygWU

Dr. Richard Edwin Shope (born 1901)

"Richard Edwin Shope as a U.S. Navy officer"
[HK005N][GDrive]

Wikipedia Richard Shope

Born December 25, 1901 Des Moines, Iowa [HK005M][GDrive]

Died October 2, 1966 (aged 64) [HK005M][GDrive]

Children include : **Dr. Robert Ellis Shope (born 1929)**

ASSOCIATIONS

- **Dr. Theobald Smith (born 1859)** (see : [HI0034][GDrive] : "Dr Shope acknowledged the influence of the legendary [Dr. Theobald Smith (born 1859)], at the Rockefeller Institute, on his own career and observed that Smith "although possessed of great imagination and ... uncanny foresight, was a meticulously methodical worker, who abhorred the waste of anything – time, material, or animals." This set a pattern for Shope's career and an informal distillation of his key accomplishments are summarized in the bullet form. ")
- Academic advisors **Dr. Paul Adin Lewis (born 1879)** - Academic Advisor [HK005M][GDrive]
- Influenced **Dr. Erich Traub (born 1906)** - Shope discovered and influenced Dr. Traub [HK005M][GDrive]
- **Sir Patrick Playfair Laidlaw (born 1881)** (Collaborator on isolating influenza virus in 1933)
- **Dr. Thomas Francis Jr. (born 1900)** (Collaborator in isolating swine influenza virus, 1935-ish)
- **Dr. Francis Peyton Rous (born 1879)**
  - [HP005P][GDrive] : (In 1934, Rous' Rockefeller Institute colleague, [**Dr. Richard Edwin Shope (born 1901)**], asked [**Dr. Francis Peyton Rous (born 1879)**] to examine warts on jackrabbits that had definitively been shown to be caused by an ultrafilterable virus. This virus was Shope papillomavirus (rabbit papillomavirus). When Rous confirmed that the warts were benign tumors, he was reinvigorated in his intent to unravel the mysteries of viral oncology. Over the next 30 years, Rous and his colleagues showed that the benign tumors could progress to malignant carcinomas and that chemical carcinogens could interact with the virus— further discoveries that formed building blocks for modern virology. Today, we recognize that ≈20% of human cancers worldwide have infectious etiologies, for which preventive measures such as vaccines have great promise.)
- ...

Saved Wikipedia (Feb 2, 2021) : Richard Shope

Source : [HK005M][GDrive]

- Nationality American
- Citizenship United States
- Alma mater University of Iowa
- Known for: Identified **Shope papilloma virus** and main cause of 1918 pandemic as Influenza A virus
- Spouse(s) Helen Ellis
- Children 4
- Awards
  - 1957 Kober medal
  - 1957 Albert Lasker Clinical Medical Research Award
    - U.S. Army Legion of Merit
- Scientific career : Fields : Virologist
- Institutions
  - Rockefeller University
  - National Naval Medical Center

[...] Richard Edwin Shope (December 25, 1901 – October 2, 1966) was an American virologist who, together with his mentor Paul A. Lewis at the Rockefeller Institute, identified influenzavirus A in pigs in 1931.[1] **Using Shope's technique**, Smith, Andrewes, **and Laidlaw of England's Medical Research Council cultured it from a human in 1933**.[1] They and Shope in 1935 and 1936, respectively, identified it as the virus circulating in the 1918 pandemic.[1] In 1933, Shope identified the Shope papillomavirus, which infects rabbits. His discovery later assist other researcher to link the papilloma virus to warts and cervical cancer. He received the 1957 Albert Lasker Clinical Medical Research Award.[2]

Career

In 1931 Shope worked as researcher and together with [**Dr. Paul Adin Lewis (born 1879)**] at Rockefeller University discovered that the cause of swine flue was virtually identical to bacillus influenza, a bacteria that had in 1892 been identified as the cause for human influenza. Shope and Lewis went on to identify a virus that also had links to influenza, putting into doubt the thesis that flue was caused by a bacterial infection. Soon after this controversial discovery, Lewis traveled to Brazil to study an outbreak of yellow fever. **The 28 year old Shope had put himself forward for this research trip, but his offer was refused by Lewis. Instead Shope continued to research swine flue. Lewis did not return from the research trip, as he died of a yellow fever infection brought about by a laboratory accident.**[3]

Shope continued his work at the Department of Animal Pathology at the Rockefeller Institute for Medical Research in Princeton, New Jersey.[4] In 1933 Wilson Smith, Christopher Andrewes, and [**Sir Patrick Playfair Laidlaw (born 1881)**] isolated the influenza virus. In 1935 Shope found that humans that had been alive during the 1918-1919 swine flue epidemic still carried antibodies against the swine flue virus.[5] Throughout the 1930s Shope continued to research swine flue. While studying swine flue on farms in Iowa Shope discovered that virus infections caused the mad itch, also known as pseudorabies, in cattle. Scope also discovered that virus infection caused fibroma in the cottontail rabbits he had hunted in New Jersey, and that a virus infection was also responsible for the papillomatosis in the cottontail rabbits he had observed in Iowa. By the last 1930s Shope had established himself as a well-known expert with a reputation as a virus hunter.[6]

Shope left the Rockefeller Institute to join a research team the Canadian Department of National Defence and the US War Department established to investigate rinderpest.[7] The research team was based in Canada, but Shope could not commence research at the speed he was accustomed to, as he was also in active service as Commander in the US Naval Reserve.[8] In 1943 Shope presented his team's research on rinderpest at a meeting hosted by George Merck.[9]

Family

His son [**Dr. Robert Ellis Shope (born 1929)**] was also a virologist, who specialised in arthropod-borne viruses.[10]

1966 (Oct 03) - NYTimes : Obituary for Dr. Richard Edwin Shope

Source : [HN01KM][GDrive]

The New York Times

MONDAY, OCTOBER 3, 1966

Dr. Richard Edwin Shope Dead; Pathologist at Rockefeller U., 64

Dr. Richard Edwin Shope, a physician and animal pathologist internationally recognized as an authority on the field of virology, died of cancer of the pancreas yesterday at James Ewing Hospital. He was 64 years old and lived in Kingston, N. J.

Dr. Shope was a member and professor of Rockefeller University here. He had been on its faculty and that of its predecessor, the Rockefeller Institute, since 1925.

Study of Encephalitis

Dr. Shope was the first to isolate an influenza virus, the first to establish the feasability of animal immunization against influenza and the first to offer an explanation of the pandemic Spanish flu of 1918-19.

Through his many experiments with animals, he added considrably to the understanding of malignant tumors.

In studying mosquitoes as carriers of the dreaded "sleeping sickness" in New Jersey six years ago, he was stricken with the often-fatal disease and was one of the few victims to recover without permanent brain damage. Members of his family said last night that Dr. Shope's death had not been complicated by possible traces of the encephalitis.

Dr. Shope, the son of a physician, developed in his youth an interest in animals on the family's farm near Des Moines, Iowa, where he acquired an elementary knowledge of poultry anatomy by dressing chickens.

Later, while a premedical student at the State University of Iowa, he decided he would prefer research to practice. He received his medical degree in 1924 and conducted experiments with dogs while an instructor in pharmacology in the university's College of Medicine.

A year later, Dr. Shope was named an assistant to Dr. Paul A. Lewis of the animal pathology laboratory of the Rockefeller Institute in Princeton. He served as an assistant for five years, as an associate for four and as a member until 1949. He then was with the Merck Institute in Rahway, N. J., for three years, after which he became a member and professor at the Rockefeller Institute.

In 1928, Dr. Shope and Dr. Lewis initiated work on swine influenza and established that the disease resulted from the concerted activity of a bacterium and a virus. Their studies with swine demonstrated in this disease a hemophilic bacillus, resembling Pfeiffer's bacillus, which had long been suspected of producing influenza in human beings, and a virus like the one found two years later to be responsible for human influenza.

Shortly thereafter, Dr. Shope and his associate identified the swine lungworm as reservoir and intermediate host for the swine influenza virus and described a method of vaccination against the disease, later applied in principle to human flu.

Dr. Shope later made a significant contribution to scientific knowledge of malignancy. Experiments with a tumor occurring in midwestern cottontail rabbits revealed that the virus from cottontail papillomas cause similar growths in domestic rabbits, which eventually became cancerous. The rabbit tumor was the first with malignant potentialities in a mammal to be proven to have been caused by a virus.

Bitten by Mosquitoes

In 1960, Dr. Shope conducted research on Eastern equine encephalitis, a virus inflammation transmitted by mosquitoes and often called "sleeping sickness."

He went to southern New Jersey to collect virus-bearing mosquitoes. Bitten, he soon displayed "sleeping sickness" symptoms and a co-worker, Dr. Delphine Clark, recovered live virus in his blood—the first to be taken from a living person. Dr. Shope recovered in a few weeks and returned to his work on the disease.

Dr. Shope sat on many advisory committees, among them those of the United States Public Health Service, the National Academy of Sciences and the National Cancer Institute.

He held honorary degrees from Yale University, Rutgers University, the University of Chicago, the University of Pennsylvania, the University of Utrecht in the Netherlands and Justus-Liebig University in Giessen, Germany.

The slender, 6-foot, 2-inch amateur fisherman and gardener was recipient of many awards, including the Semi-Centennial Research award of Sigma XI, the John Phillips Memorial Medal of the American College of Physicians, the Kober Medal of the Association of American Physicians, the Albert Lasker Award and the Bertner Foundation Award. He held memberships in the National Academy of Sciences, the American Philosophical Society and the Harvey Society.

In presenting the Kober Medal, Dr. Peyton Rous, a noted Rockefeller University pathologist, noted that this was only the second time the Association of American Physicians had so honored contributions to the health of domesticated animals. "Dr. Shope," he said, "is beyond all else a naturalist. . . . His feeling for animals is not sentimental but compassionate."

Surviving Dr. Shope are his widow, the former Helen Madden Ellis; three sons, Dr. Richard E. Jr. of Minneapolis, Dr. Robert E. of New Haven and Dr. Thomas C. of Minneapolis; a daughter, Mrs. Richard Fitz-Gerrell of Boulder, Colo.; a brother, Raymond H. of Des Moines, and a sister, Mrs. Pierre Le Bourdais of Honolulu.

A memorial service will be held tomorrow at 2 P.M. at the First Presbyterian Church in Princeton, N. J.

Dines Carlsen, Artist, Dies; Winner of Design Prizes

Dines Carlsen, an artist, died on Saturday at St. Luke's Hospital. He was 65 years old and lived in Falls Village, Conn., and Summerville, S. C.

Mr. Carlsen studied art under his father, Emil, also an artist. A member of the National Academy of Design, he won its third Hallgarten Prize in 1919 and its second Hallgarten Prize in 1923.

His paintings of still-life and flowers, have been hung in the Corcoran Gallery, washington, the John Herron Art Institute in Indianapolis, and the Grand Central Art Gallery.

His widow, the former Florence Gulick Shaw, survives.

RILEY H. ALLEN

HONOLULU, Oct. 2 (AP)—Riley H. Allen, editor of The

ditioning Engineers, died Friday at the Swedish Hospital in Seattle. He was 66 years old and lived on Mercer Island off Seattle.

Sept 30, 1966, wife of Charles I. Clark. Service at the Fairchild Chapel Franklin Ave at 12th St, Garden City Wednesday 8 P.M.

CORNMAN—Ida R. Beloved wife of Morris, devoted mother of Sivia and Andrew Brodsky, loving grandmother of Ann and Gregory Brodsky, dear sister of Esther Schwartzman, Bella M. Katz, Dr. Rose J. Sachs, Minna S. Barkan, Florence Levin, Joseph and Howard Lane. Services at Riverside Chapel, Coney Island Ave at Ocean Pkwy, Bklyn 1 PM Monday. Please omit flowers.

CORR—Irene W. On October 2, 1966, devoted mother of William. Reposing at Frank E. Campbell, Madison Ave at 81 St. Requiem Mass, Church of St Ignatius Loyola, Park Ave and 84 St, Tuesday, 10 AM. Interment Troy, N. Y.

CRABBE—Idoline Watts, Beloved mother of Mrs. William Scheerer 2nd and David Mackay Crabbe, dear sister of Harry Dorsey Watts, Jr., Delray Beach, Fla., Mrs. Harold McTigue, and Mrs. Evelyn Watts Fiske, Santa Barbara Calif. Funeral Services at Trinity Church, Hewlett, L.I. 10 A.M. Tuesday

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2017 (Jan 26) - Iowa's Richard Edwin Shope, MD: his contributions to influenza research and One Medicine-One Health, January 26, 2017

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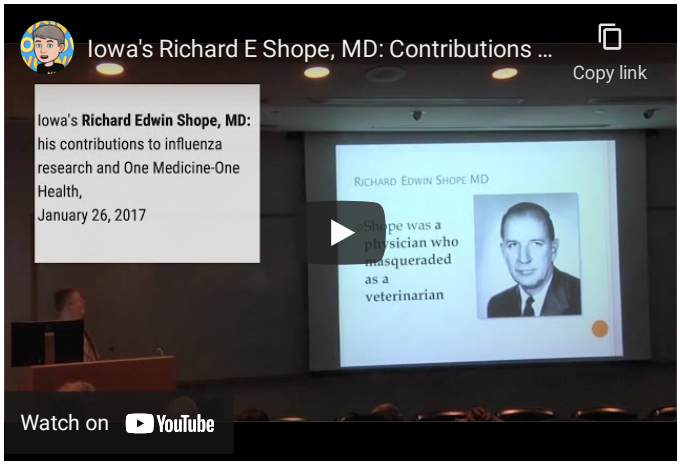


[...]

[Russell Currier] Yeah! I wanna just talk just briefly about One Health, and the, uh... Let's see, yeah, and those concepts, but before I even get into that, if you

want, uh, some nice reading material, I've displayed a book called **Zoobiquity** there on that center table, and I got interested in that book when I had a subscription to the Sunday New York Times. The week in review section had, the front page of that section, 2/3 of it was on this book and then it continued inside, and it was two full pages, by Barbara Natterson-Horowitz and Catherine Bowers. One of them dated must've dated the editor there or something in years past. Because they just, they just went full hog on that thing, and it's very, very good. I've met these gals on several occasions, and they're delightful and very accomplished and, uh, you'll get a whole concept of One Medicine, you might say, or One Health, and she's just one of a few other key physicians that are working in the area. Let's talk just a little bit about One Health. A lot of people have a very narrow view of this and think it's just Zoonotic disease, which is, uh, somewhere around here. Let me see. Well, it doesn't make any difference. But it really embraces all the major disciplines, now includes environmental health and plant health, and it's incredibly important that if something happens in one area, it's gonna impact another. So, that comes to mind with one of the leaders in this movement, another physician, along with Barbara Natterson-Horowitz who I mentioned there, is Laura Khan, too, who's just published a book in the last year on antimicrobials in livestock production. So, that's, I see Zoonotic infections here now. So I mean, it's a big concept, and it's bigger than just Zoonotic disease. Let me say that it even brings in evolutionary concepts, and it calls for interdisciplinary investigations and cooperation, so that just gives you some idea of that.

[...] One Medicine thing goes back for hundreds of years, and you might say it peaked in about the 19th century. There was a lot of collaboration between physicians and veterinarians. Many physicians around the staff at veterinary colleges. In fact, the first veterinary college, established 1761, was staffed entirely by physicians. So, uh, it's kind of had a resurrection in just the last quarter-century, but the most depressing, minimal amount of effort in this area was actually in the inter-work area of the first half of the 20th century, from about 1915 through 1945. There were two exceptions to that, two exceptions, and here is the first of those two. This is Karl Frederick Meyer.

[Karl Frederick Meyer] was a veterinarian that was educating in Switzerland, and he accomplished just a number of major things. This is just a short list. It goes on and on, and he was, it's been said that, if it wasn't for World War 2 he probably would've been nominated for the Nobel Prize. So, he was quite the guy. And you notice that there's MD after his name. We'll get to that in a minute. If you want some reviews, and I think these slides are accessible through Donna or somewhere, a nice bio was written by him in, for the National Academy of Sciences, by Albert Sabin of polio vaccine fame, and there's a couple short little recent pieces by Pospischil and Konigsbaum, if I got that right, in the last few years on him. He's just a remarkable person. And it led to the awarding of the Laker Award, which we'll talk about, but he was the he was an incredible guy. [...] He got into trouble during World War Two. He was from the German part of Switzerland, and he had a heavy German accent, and he came under suspicious, you know, during the McCarthy era and he lost his security clearance and what have you. So, with that approaching, he had gotten an honorary MD degree from the College of Medical Evangelists of Yorba Linda, California for his work on saving the canning industry of California from Botulism, especially for olives and mushrooms. And so, in summary here, this is in bold type, Meyer was a veterinarian who masqueraded as a physician.

The second person is the topic of today's lecture, [Richard Edwin Shope,] and he was a physician who masqueraded as a veterinarian. Just a remarkable person.

He was born December 25th, of course we all recognize that date as Christmas Day, and I would like to read a paragraph very quickly from his daughter's term paper in high school of 1952, largely dictator by Doctor Shope. "Christmas Eve night of the year 1901," "It was cold and snowy outside, but inside the Shope house" "at Riverview Street, Des Moines, Iowa, always warm and cozy." "There was a blazing fire in the old fireplace," "But the only two taking advantage of it" "Were Doctor Charles Cornelius Shope, prominent physician" "In Des Moines, and Julia Anderson, MD." "Both were quite nervous, still, for Mrs. Mary Hashille" "Was expected to bear his first child." "They left at 5 o'clock in the morning of December 25th." "Doctor Watson, the family doctor, appeared" "and announced that that the Shope's" "First child was a long, skinny boy." "A few days later, Doctor Watson examined Richard" "And said that he was jaundiced," "And would probably not live." "However, Richard did full through," "And in five months he weighed 17 pounds, he could get" "Up and walk at the age of nine and a half months." So that's a little bit about [his] birth.

[Richard Edwin Shope] went out to Iowa State College to enroll in a course in forestry, but the office was closed, so, and this is true, he hopped a freight train for IOC and enrolled in pre-medical studies here, and became quite a tremendous student. There he is as a student athlete, both for varsity football and for track and field. He ran the 440 and the Hertz, and did quite well in those areas. He entered the college after two years of pre-med. This is also his daughter Nancy's birthday. While in medical school, he was expelled for writing a makeup example of physical chemistry for a classmate. His period of expulsion lasted for his Christmas vacation, so the only actual penalty turned out to be a failure in the course despite straight A grades throughout the semester. He was also made ineligible for one year from competing in football and track. Furthermore, he was required to make up his course in physical chemistry during the Summer between his freshman and sophomore years. The remainder of his [...] school career was without serious consequence. His grades good, and in his senior year he was elected to Alpha Omega Alpha at the honorary Omega fraternity. He was also chosen president of his senior class, and overall the University of Iowa president. So he was quite the man. And, uh... One of the... Things that he had to do, you know, he was about 16 maybe going on 17 when he got here. There was a compulsory to be the same as ROTC today, it was called SATC, and so he was put in a special group of boys called the Saturday, what was it, Saturday Afternoon Tea Club, I think, for SATC, and did fairly well there. So, and in the year 1918, which includes this period, of course, several of those boys in that quasi-military group died from the influenza. So, it was pretty serious stuff. He remained in Iowa. You know, it's been said that medical schools are monsters that devour their own young. That was particularly true here in Iowa, because he nearly went on staff here and taught pharmacology, and did research of, on tuberculosis.

And then he [got] a call from [Dr. Paul Adin Lewis (born 1879)]. He was referred by his pharmacology professor to come to Princeton and work with Paul Lewis. [Dr. Paul Adin Lewis (born 1879)] was the, one of the two [first] scientists to work with the polio virus, but he had this research on animal diseases and that sort of thing. [Richard Edwin Shope] got married here. He married Helen Ellis of Lineville, Iowa, who's father was a physician, and actually Richard Shope did the practices for both his father and his father-in-law during the Summers when they were on vacation. He made extra money that way. And they, what was really interesting is that he had been a, he met his wife by, it was raining hard and she'd come to the overhang of their rooming house, and he thought it was his girlfriend at the time, and so he went out and he realized it wasn't. But he obviously liked what he saw. He asked her out the following Saturday and seven months later they were married. And then they took that big trip east. That trip took eight days in that $35 jalopy, and it was was covered with graffiti and sometimes, I think it was West Virginia or Pennsylvanian, it was crank-start. There was no electric start, and he couldn't get it started, and someone, a crowd of spectators came around there and watched that and they said, well, you know it says here painted right on your car to shake before starting. So he shook the car, and a quarter of a turn later it took off. So, things improved after that.

[Richard Shope], as he was working on hog cholera at that time with **Dr. Charles Murray**, a professor over at Ames, asked him, "Why don't you look into something we don't know about" "Anything about: hog flu?" And Shope realized that if he could find the cause of hog flu, it might be the answer to human flu, too. And he received assistance from a practicing veterinarian here in IOC, **Dr. Fred Crow**, and the whole thing about the swine connection was very controversial. Cedar Rapids had a national swine show the last few days of September, and October, and there had been influenza-like illness in west central Illinois in August. Well, when you bring all these pigs in, lo and behold, it really took off. This show was actually shut down early because of that. At any rate,

Illinois in August. Well, when you bring all these pigs in, lo and behold, it really took on. This show was actually shut down early because of that. At any rate, the... The fellow by Dr. Koen was actually on two sides, he says, "I have no apologies to offer of my diagnosis of flu." "Last fall we were confronted with a new condition," "If not a new disease." This was never in swine textbooks. "I believe I have as much to support this diagnosis in pigs" "As physicians have to support a similar diagnosis in men."

"The similarity of the epidemic among people" "And epizootic among pigs was so close, the reports so" "Frequent, that the outbreak" "in the family would be followed" "Immediately by an outbreak among the hogs." "Striking coincidence. It looked like flu," "It presented identical symptoms of flu," "It terminated like flu." "Until proved that it was not a flu," "I shall stand by that diagnosis." And that statement is in every review paper on the history of influenza, but it's very, very good. So, Shope had a natural interest in that.

Before we go on, I wanna talk just briefly about [Dr. Theobald Smith (born 1859)], because he was **at the Rockefeller Center** heading up this research in the final years of his long and productive career. **But he worked originally, he was a physician, that originally worked for the Bureau of Animal Industry in the US Department of Agriculture, and he headed up the team under Daniel Salmon, that's who the genus salmonella's named after, to look at Texas cattle fever, and this was, needed a lot of work, and it was spreading, and it was a major problem with livestock production. And he worked with another veterinarian by Fred Kilbourne, and Cooper Kurtz who was both a veterinarian and a physician, and a crackerjack pair of cytologists. But they had worked out that indeed it was tick-transmitted, it was a... Protozoan by the name of babesia [see https://en.wikipedia.org/wiki/Babesia]. And it was transmitted on by a tick called Boophilus annulatus. But this, I think, came out at around 1892, this report, and this opened up the whole field of inquiry of thinking about arthropods as vectors in disease. And so the work on malaria, Walter Reed on yellow fever and his team and on plague, on being flea-transmitted, was enabled by this. So this was really groundbreaking work, and that laboratory at the Bureau of Animal Industry, was so effective that the Marine US Public Health Service Marine Hospitals said that, you know, we need a laboratory too. Theyfor one in agriculture. You know it today as the National Institutes of Health.**

So, Richard Shope had two inspirational figures. One was Paul Lewis, who later, shortly after the work here, isolated the flu virus, went down to work on yellow fever in Brazil, caught it in the laboratory and died just after a few days of illness.

So, Paul Lewis was a very unfortunate thing. So, the real big event occurred in 1930, and Shope was a lover of the fellow by the name of [Sir Patrick Playfair Laidlaw (born 1881)] from Britain to connect swine flu to the 1918 pandemic strain.

This is a little bit about Paul Lewis that I forgot about, but anyway, he worked with a fellow by the name of **[Dr. Simon Flexner (born 1863)]** to find a vaccine for polio.

Well, they had one, and who he protected for the monkeys, and Simon Flexner was the brother Abraham Flexner who did the study at the medical schools, particularly here in Iowa, among others, to improve education and patterned after the Johns-Hopkins Model, and is uh, as um, Jim Hanson told me, you know, I was trying to discuss this with his, he says well, look Russ, I'm paraphrasing here, but he said, Johns-Hopkins was an example of a good medical school.

The University of Iowa was an example of a bad medical school. So, they'd really changed things around here. But that would be the brother of Simon Flexner.

Now, one of the real problems, Shope had three sons and a daughter, and the oldest son, Richard Jr., became a veterinarian, and the second son, Robert Shope, become an arbo-virologist who was charismatic, and almost was very effective and isolated a number of flu viruses and so forth.

But here's where our friendly New England Journal of Medicine, you know, with those eagle eye editors, they said, "The breakthrough came in 1931 when Robert Skype," "A veterinarian, transmitted the infectious agent" "Of swine influenza."

Well, first of all, the names are wrong. It should be Richard Shope, and he was a physician, not a veterinarian. So, um... And then, what Dick Shope did, he worked with a British team that was looking at this, too.

They had them doing research with ferrets on distemper which is very important, as you know, in dogs, but several other species as well.

So they had this colony of ferrets and got interested in this, and they tried to infect ferret intra-nasally, and they could not do it.

I think Shope's suggested that they anesthetize them, and uh... And still infected, that infective material with virus deeper, and they got infection all the time.

And ferrets now are identified as being exquisitely susceptible to all influenzas.

And they adapted it to then run it through a hundred times, then into mouse, and you could see the thing and finally got it to grow in pigs, and they blamed the vaccine that came out when, I think the late 40's, but that was quite an accomplishment.

And here, Shope wanted his name to identify with Shope Fibroma and also Shope Pappilloma, and here's an example of the, an artist's rendition of the Pappilloma, and it almost looks like they have horns.

Taxidermists had a ball with these things.

What they would do is, with jack rabbits, the taxidermists would, and attach antelope horns pheasant wings on the side and call 'em flying jackalopes 'til they were a postcard entity of Walldrug and places like that out west.

The next thing is, is that this actually helped with the development of Gardacil vaccine.

I put that picture of that bunny rabbit there, is from a New York Times article which I have here, and I'll just read you the first two sentences.

It says, "Nuns and Jews, cow warts and rabbit horns." "The common link: They are all crucial elements to the" "search for the world's newest vaccine."

And, uh, I won't get into all the detail on that, but Shope's work was foundational in terms of dealing with that. [...]

This is Camp Dodge, Iowa, during World War I, and there were 18,000 men grouped there to form the Statue of Liberty. That was a very, very active base at the time, and uh... They had an influenza episode there in the fall, and one of the interesting things, and Shope pointed this out in a review article which I'll be talking about a little bit later, but they were struck, uh, the 2nd Infantry Regiment was in Hawaii in the Spring. In June, were... Affected by the first wave of that flu. That was actually some of the big nature's vaccine scream. They were transferred to Camp Dodge in August, and then in September, October of, I mean, they almost needed trucks or something to cart away dead soldiers because it killed 6.8%. But virtually none of the men in Hawaii in June became ill with this 1918 thing. In subsequent research, uh, when... When Shope got to really working with this, he had a mild case of influenza in swine, and he gave that term a name called Filtrate Disease. And then he finally discovered that they also needed a cold pathogen called Haemophilus influenzae suis, and this, uh, was that, and the full-blown flu in which it had this funny, whooping-type breathing called thumping. Pigs that were affected by this were called thumpers. So he, you know, he basically identified what a complicated thing, and up to this time, the human influenza was assumed to be due to or Haemopilus influenza, a little different strain. But Shope was a student, certainly, of the disease. So anyway, um... One of the things that puzzled Shope was that there was just no hog flu almost all year 'round, and then the first cold wave of weather in Autumn each year, which was a stressor, these swine would just all break out with this disease. So, how did it occur? How did it maintain itself? And this where he went down somewhat of a controversial thing, and he postulated that lung worms, that swine were affected by, lay eggs in small bronchials that are coughed up and swallowed to go out with the feces, and then eggs are consumed by earth worms, and later the worms are eaten by pigs. A delicacy for them. Pass through the stomach into the, and then came out. They go through three stages in the worm, earth worm, and two stages in the swine as they're migrating back to their This cycle was never fully confirmed, but I for some reason put this in to show this... Basically. It's kind of gross, transparent look at pigs. And he postulated that the virus ran intostate or masked state, that's sometimes used, where you can't isolate it no matter how many earth worms you grind up. Well, Christopher Andrewes isolated the first human influenza virus, and he and Shope became just very good friends, and they traveled back and forth across the ocean to see each other. In fact, Shope took him up to Woman Lake, Minnesota, where his family's cabin is, and worked with, uh, Anyway, Andrewes and his co-investigators Smith, Wilson, and Laidlaw, were later knighted for this accomplishment. And uh... In those years, Shope basically said that the human and swine influenza were remarkably the same and have a lineage. He also worked with some other things, like mad itch, or pseudorabies, which we've heard about because of the program with he Iowa Department of Agriculture eliminated that, but generally it's a mildly, not of major consequence, at least to older swine. But they still got rid of it. But in cattle, it just devastating, and he showed that. The first big swine diseases textbook, called Dunn Swine, by an editor by the name of Dunn, it, he wrote the chapter on wolf influenza, Shope did, in probably the second as well as this pseudorabies. So, he was quite the guy you'd ask for. A lot of the emphasis from his work identified him as being a veterinarian. He also worked with swine pox here, and showed it could be, although not necessarily, transmitted by the agency of pig-swine-lice. On viruses and cancer, we've already talked a little bit about this. I'm jumping around a bit. This changed the, uh, in domestic rabbits, it's very serious. It was rare in wild rabbits, and he got busy with other work. He then worked with a fellow by the name of [Dr. Francis Peyton Rous (born 1879)], and he had been working with chickens, sarcomas in chickens, and uh... And his work from, the hand-off work form Shope, enabled him to get the Noble prize. Rous had been nominated for this both before and after World War II, I think he finally got it '66. Probably Shope was no longer alive. But he was the, tied with someone else with being the oldest recipient to receive a Noble prize, and that is... Anyways, we get into the 1940s, of course World War 2 happens, and Shope was assimilated into the Navy, and the first thing the Navy did was assign him to the Army. A special project to develop a Rinderpest vaccine. This is cattle plague. The Rinderpest is a take-off of a German word. It was a joint Canadian-US project on Grosse Island in the Saint Lawrence River, and it took them 19 months, but here they adapted that virus through, into, uh, hens' eggs, and it was protective against... That. Later in the 1950's, a Doctor Walter Plowright, due to using bovine kidney cells, developed a vaccine. Well, it was improved. It was so improved that it really enabled the uh... Eradication of Rinderpest, which was a big problem with African livestock, and he was honored, and I went to this ceremony in Hoyt Sherman in Des Moines in 1999. He world the World Food Prize for that work. Well, after that project on Rinderpest was done, he was transferred back to the Navy. He was transferred to Guam and Okinawa after an assault began, and started to study tropical diseases. And he had a curious thing happen to him. He found a mold growing on the covering of his wife's photograph on his desk, and he scratched off some of that, grew it, and found that the, trying to recall the name of... Doesn't make any difference, but it was mold. And he it in vivo antiviral properties, and he named it after his wife Helenine. It was a nucleoprotein that stimulated interferon production. In fact, the journal CA, if any of you wanted to look that up, it's a two-page article here, talks about that, and there was an interesting quote, gotta find it, of course, here, because I'm getting off-script... Here's the paragraph from it. "Doctor Shope's discovery of Helenine" "And its antiviral effects might be considered an accident," "But for the creative mind discovery is never completely" "An accident." "It is the mind which finds the significant significance" "In the insignificant." "Mystery in the commonplace." "A scientific achievement is, in reality," The next logical step in the never ending process" "Of adding one new observation to another, building" "On those that have been made before." So, it was quite the deal. When he got back, he got busy, and... Developed an effective vaccine to a South American rat disease that was delivered and they introduced it to Great Britain. You know, I don't know if you are aware of this, but if you get to certain insular cysts, rats just take off. We all think of Australia, but when I was in the I went to Puget Sound to, um, exercise those two, um, what are they called? Yeah, Friday harbor. I went there and rode the jeep around and what have you, and our commanding officer says, you can't step anywhere in thisexcept under the right reasons. You know, it was just that bad. I got back for a visit a few years ago, I asked the, uh, a clerk in the store, it was kind of interesting, he said, ah, yeah I grew up here and we just ate a lot of rabbit. She saysyou know, because there were just so many. But, when they start drilling into fields, that's like, you know, gophers in southern Minnesota, you know, it'll affect farming equipment and what have you. Well, this

virus got into France where they had domestic rabitries for food use, food pro, er, meat production, and the vaccine that he developed for this actually saved the French rabbit industry. He also, in the 1950s, isolated a second benign-tumor virus. He also was the first to isolate and identify the hemorrhagic disease virus of deer. And in our southern counties, every year, especially if it's a hot semi-dry year, hemorrhagic, I mean, the flies just come out and harass the heck out of the deer, they get this disease and it's very often fatal. Really, really bad news. So he had really worked across the board. So, later when Rockefeller closed the Princeton branch, he had a little job on his farm there, he decided to leave and go to work for Merck in New Jersey. That did not last long. So, he returned to Rockefeller in Manhattan and he rented a right across from the institute, and lived that way. He later died from a pulmonary fibroma in 1966, and during his lifetime he had two serious illnesses. One was lymphocytic choriomeningitis, which would be a small, robotype disease, and also eastern equine encephalomyelitis. That's not one I ever wanna get. The human fatality rate, I believe, is 40 to 50% for eastern equine. So, he had plenty of neurons, so maybe he lost a few, I bet. But anyway, I'm sure it wasn't a pleasant experience. If you want embellish yourself with some reading, in the wake of the 1957 Asian flu, he wrote a review paper on it, and he used, he focused on three pandemics, and in his introductory paragraphs he discusses a little bit about the Asian flu, but he talks about the '19 episode and a couple in the 19th century, and uh... Many articles in that issue are dedicated to the Asian flu, which if you don't know, are, uh... Was seeded into the United States of America from Grinnell, Iowa. The presbyterian youth camp had a big conference there with over 1,700 people, and it was written up by me and veterinary heritage will get yourself a copy of this. I gotta plug myself here, I'm sorry. At any rate, what happened is a student from Davis went to a state conference, presbyterian, I guess, and you just can't trust those Calvicals, but anyway, uh... He had flu, and so he got there and it just spread like wildfire. And several of those teenagers were hospitalized in Vermont, and then everyone got on the buses, a few cars and trains, and fanned out over the rest of the country. That was in June. And what they did was infect their siblings when they got home, who then went to Valley Forge where 58,000 youngsters were at the Boy Scout National Jamboree. And that seeded the virus into the US in, really, by August and early September. It actually peaked in October, so by time they got the vaccine, got it ready to go, hell, it was too late. It just, it didn't do any good. So, that's reviewed in subsequent papers over in the Iowa Heritage if you'll care to take a look at it. Sir Christopher Andrewes was very close to Dick Shope, and, you know, they did part company on the lung worm theory. He made the comment that, look Dick, uh, basically the earth worm is not native to North America, and neither were pigs, and the swine virus just evolved, and almost overnight you're saying that these three are linked in a complex cycle? He just couldn't believe it, and Dick Shope gave him a can of earth worms to take back to England, and couldn't infect pigs there with them, so. It was controversial, but I can say with a fair degree of confidence that Doctor Shope adhered to that theory, and even though it was somewhat of a moot point as husbandry changes and what have you, but anyway here's kind of a touching tribute. He received many honors, he was elected to the American Philosophical Society and National Academy of Sciences. He got honorary degrees from the University of Utrecht, which was a DVM in that case, so, he could've been the reverse of KF Meyer, and then, I don't know, I was listed there. I contacted the dean here last week at the veterinary college. I would've bet next month's social security check against $5 that I asked the veterinary college to confirm an honorary DVM. They haven't. So, I was just crushed by learning that. So, he was uh, but the important one's on the bottom. That Lasker award is America's nobles, if you will, and a high proportion of people who get the Lasker award go on to get the Noble award. Here's a little trivia from an editorial of the Journal of the Veterinary Association, which a It says the second time this award has been given to a physician for contributions to the health of domesticated animals.

The previous recipient was Dr. Theobald Smith, who we visited about earlier in this talk. [Dr. Francis Peyton Rous (born 1879)] gave really a touching thing, he says, Dr., I don't know if he was, he might've been deceased by this time, I'm not sure. No, he was there, yeah. Dr. Shope's theme throughout his scientific life has been the meaning of animal diseases for mankind, though he would never say so. Yet not alone from this theme has he drawn his wisdom and strength. He knows human nature well. How does he value his fellow creatures including ourselves? Much as he does the lower animals, with understanding, indulgence, humor and love. So, as an epilogue, I just want to inventory the family. Of course, we've already talked about Richard and Helen Shope. They had four kids. Dick Jr. was a veterinarian that got a PhD in virology at the University of Minnesota, and that's where I roamed, because during my vet school days I'd see him smoking a small cigar and working on things. And his, he also, Dick Junior was enlisted in the Navy and became a pilot, and he just got his wings when the World War 2 ended, so he, I think, discharged and then he went to, all of them went to Port Wenn for their educations, because they had an inside track for admittance. And then Robert, who, like I say, he was a charismatic figure with I mean, people talk in reverational tones about him, and he really was an incredible abrovirologist, and sadly both of them are deceased. And Robert pretty much had pulmonary fibroma like his dad, and it somewhat affected Dick Jr., but he was, of course, older. The youngest of the family was Tom, the baby, he was an academic pediatrician. He went through the CDC EIS program about the same time I did. I think it was after me, but his whole was career in pediatric infectious disease with emphasis in virology. So that DNA from his daddy went into those three people. And Nancy was the equestrian wife of a Colorado rancher, and they lived happily ever after. Here's the family. I was gonna get that photoshopped out, but that's a neighbor girl, so-- And I decided, alright, I'll leave her in. But this is the Shope family about 1940, '49. But this is Nancy Shope, who gave me a lot of information, and this Dick Shope's mother Mary, and this is Dick Jr., a very tall guy, and that's Helen, and this is the baby of the family, Tom, who is that infamous pediatrician in Anarbor, and that's Robert, the very distinguished, and I think he even had a lung transplant at the end, it just didn't work out. And there's Dick, Dick Shope himself. And there's me and Dick Jr. We had gone to the Lexington restaurant, a good place to eat, it's been closed a few years but I heard it's re-opening. It ran at the avenue of Lexington and St. Paul. We had a nice dinner and a few libations to go with it. The server was gracious enough to photograph us. Just a great guy. These are references for your use, and all the references, the early references mentioned as well as these, I have PDFs, so you know, if, my email is ruscorrier, with one s, @yahoo.com. If you want a shortcut to the circuit, I can send you any one of them, send you all of them I guess. And, um, the... The one by Gert Williams is really neat, 'cause he talks about a lot of different scientists, but the one on Shope is just absolutely precious. Andrewes wrote a nice memoir for the National Academy of Sciences, and he does inventory all his publications by year. Just very, very nice. And then I, of course, I mentioned him in that thing as well. So, there it is. And my question right now, just being rhetorical, I don't wanna embarrass anyone, but I kind of have to end on a half-summary note. How do we remember Dick Shope at the University of Iowa? Can anyone tell me about a hall or a meeting room? A custodian closet named after him? We don't. And... In my naivety, I corresponded to President Sally Mason at the time about doing something, and really got nowhere, and I kinda read between the lines, and they'd like a lot of money. So I wrote to all the vaccine producers of influenza vaccine saying, hey, we're kind of passing the hat here, we'd like to make a request to Iowa to name under in honor of Dick Shope. Got nowhere. Well, I grew up, I mean I lived in Irvingdale, and when I first moved there, my next door neighbor, not next door, but the neighbor across the street down five homes, was John He once gave me a ride to work in a snowstorm, and his daughter once babysat for us, and... I thought, hey, I'm gonna get something named after Richard Shope. Well, I got the same thing. Anyway, I didn't think he wanted any money, but he just kinda couldn't be bothered. So, anyway, my challenge to you, it's a healthy challenge, that a lot of time has been under the bridge, and you're kind of tied with AMES at the veterinary college, which may be even be more appropriate that literally nothing is named in honor of this guy here. Just a remarkable person who plowed new ground, and like I say, he was right at the Nobel level in terms of all of his life's accomplishments, and he really was part of, as Tom Brokaw said, America's Greatest Generation. So, I believe that, to you, is a quite little challenge between us folks and if you could influence anyone and you wanna contact me for supporting information or what have you, I'd be happy to do that. I think we're about out of time, anyway. That's the substance of my formal remarks, and I would entertain a question or comment or two if I could be able to help. Yes, sir? -

[Audience Member] In your earlier slide, you mentioned the effectiveness of the polio vaccine. Is that before Salk and-- -

[Russell Currier] Both, by almost four-five decades at least

[Russell Currier] Both, by almost four, five decades at least.

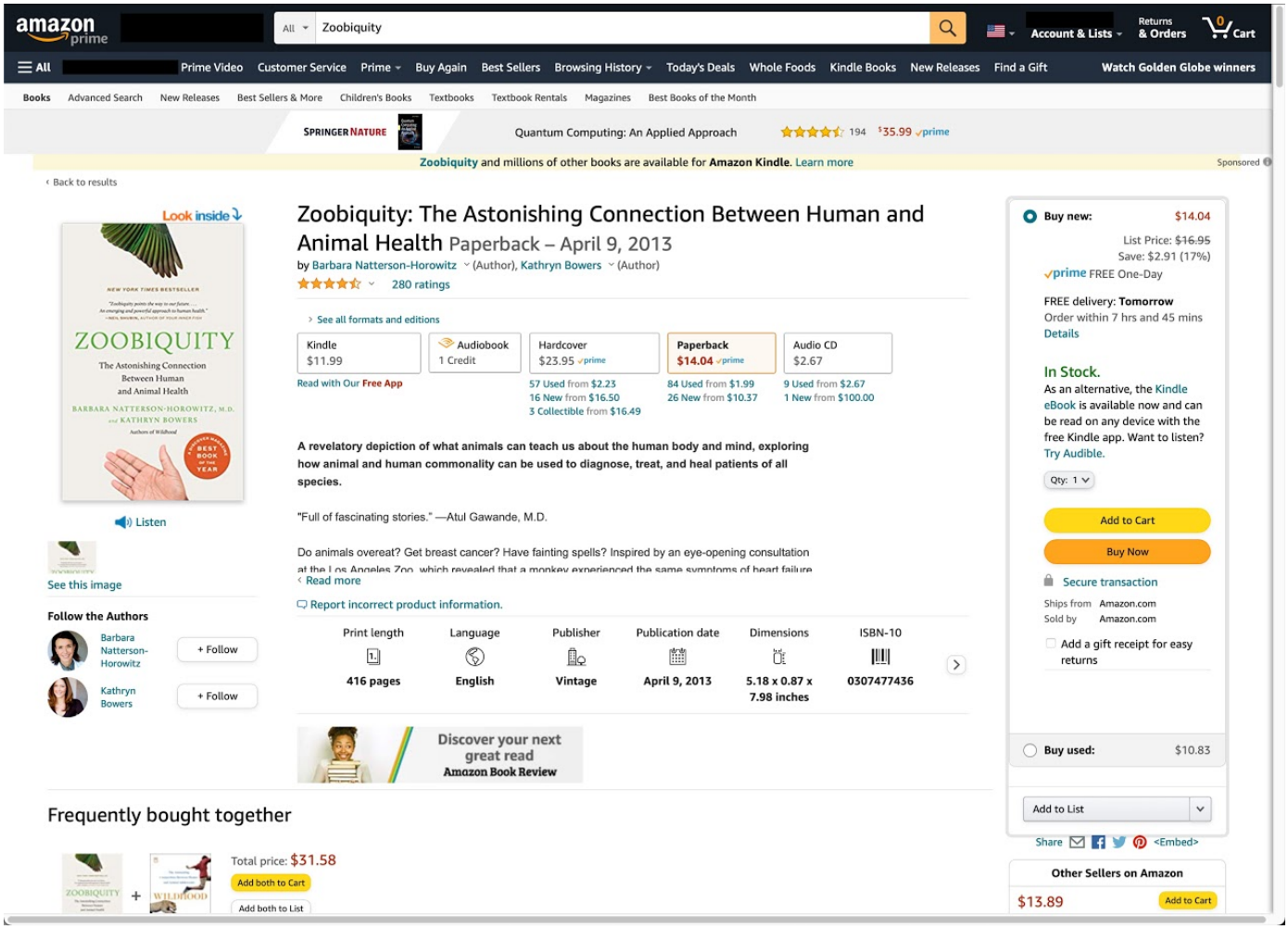
[Audience Member] Why didn't anything happen after that? -

[Russell Currier] I don't know. I've never pursued it that much, but they had a vaccine that protective against, uh, in monkeys. But it took a long time, because you know it, it was a difficult vaccine to produce in primates in the first place, and then to make sure it was inactive. And then we got into problems with the so then even when did have the Salk vaccine, the laboratories was really primarily a veterinary group, but they latched onto this vaccine and got a big chunk of it out, and that's what really helped cement the epidemic intelligence service at CDC, under Dr. Alex Wagner. But I don't know what the problem was. And I would also say, you know, in terms of these memoirs though, the one by Sabin, Sabin comes to mind, and really they should call it the Kaprowski vaccine, but Sabin was old school, quote unquote, and they let him get the glory because these guys didn't want to be bothered with the press and everything, but... To Sabin's credit, he wrote a very touching memoir of... I'm trying to think of his name. KF Meyer. One of the things I forgot to mention as I was flipping through here, I gotta read this to you, I told you, since the polio question prounced me to it, this is a quite from Kaprowski who wrote this chapter on polio, but also edited a book entitled Micropunners, Then and Now. This is on page 146, one short paragraph, immunization travel, this is polio, of children in Sonoma Valley, California was made possible through active collaboration of Karl F Meyer, the director of the George Williams Hooper Foundation at the University of California. authority on infectious disease, Meyer had a veterinary degree from the University of Zurich, and an honorary degree from the College of Medical Evangelists in Yorba Linda. He liked to use his MD title and once after, and I told you the rationale for that, and once after presenting the results of our polio trials in California, a not-very-friendly member of the audience asked him, "Is it true, Dr. Meyer, that you are a veterinarian" "And not an MD?" It is true, answered Meyer. Are you sick? That ended the exchange. Anyhow... Boy, oh, yes sir. -

[Audience Member] Your slide said that he had honorary degrees at just a number of places, it said Iowa. Yet I wonder, was it University of Iowa or Iowa State that was-- - [Russell Currier] I'm sure it was here. I didn't research it, but, someone, if you wanna get back into the archival thing, then shoot me an email and let me know. Probably was a doctor of science, or something like that. But I uh... You know, you give these talks. I've had a horrendous week where I'm doing other work, too, so I just couldn't nail down every detail, but that was one I actually thought of, oh, I thought GoogleIowa, but I really didn't, and apologize for that. But, this is, in terms of great American scientists, this guy here was a giant. And when you figure what he accomplished, and Dick Shope, like KF Meyer, were not desk-type scientists, or bench-type scientists. They got out in the field. And one time they did a horse's head, and I think that was his first diagnosis for western equine encephalitis. He wanted, there was a horse ailing, and it wasn't gonna make it anyway, and he wanted to buy from the horse from the farmer and euthanize it and remove its head, and he wouldn't agree to it. He was talking to the farmers wife and he said, you know, when you go to bed tonight, he goes to sleep, raise the shade, or some, there was some signal he worked out with here, and soon as that happened, and he was smoking his pipe hiding out there in a ditch or something, he went in and he gavel think or something to horse, removed its head, threw it in a gunny sack and took it back to San Francisco. That was the type of guy KF was. Now, he was the same way. He just had to, he just had to dig up to his elbows in a puddle of guts on pigs and stuff like that, in working, getting samples. A good example, I talk to an old professor yesterday at AMES who said he was a graduate student, this was about '48, '49, or 1950, and it was a hot Summer in Iowa and there was a muskrat die-off, uh... And he was in the diagnosticthe only guy, it was just quiet, and he taking apart this, doing a necropsy on this muskrat. In walk this tall well-dressed guy who identified himself as Richard Shope, and he knew of course who he was. I mean at that point he knew who he was. And he says, "You mind if I look over your shoulder?" He says, no. So, there was some liver lesions there, and he says, this is from Bill Shweisser's, the veterinarian we're talking about, he wanted of that liver, do you mind if I take some samples and take it back? I'll give you a report. Which he did, and there was some factor, I don't fully understand, but it actually helped out later on with lesion errors diagnosis. So, just that type of remarkable guy. He'd go hunting and, you know, if there was a wart on that rabbit, he would study it. He was just that type of guy. This was a family that subsisted on two big things, the Shope family, one was wild game and the other was laboratory pork. He didn't throw all of those dead pigs away. He just removed the lungs and fed the family with the rest. He knew what he was doin'. You gotta be resourceful. Remember that $35 jalopy, you know, he had some lean early years, I'm sure, as he was starting his family and what have you, but he was an incredibly great human being, and all four of his children as well. And like I said, Robert had meeting her too, speaking, but I didn't. Didn't have any personal relationship. And then I corresponded with Nancy and Tom, the two youngers, and they, she said, we were really two families, because I can't remember my father until after World War 2. I was so young when he left, and then they come home and established that relationship. So, in your subconscious, I wanna bury that thought. Let's get something named after him, and I'll see what I can do over names with the College of Veterinary Medicine, 'cause it's long overdue. [...]

Book - "Zoobiquity"

Mentioned above ....



[2021-03-06-amazon-zoobiquity-book-img-1 / https://drive.google.com/file/d/1V1QE_ddi0n60mM4SyRDu_iVqZzqPksVr/view?usp=sharing]

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https://www.jstor.org/stable/25144355?seq=1
JOURNAL ARTICLE

Cracks in the Foundation: Frederick T. Gates, the Rockefeller Foundation, and the China Medical Board

John S. Baick
The Journal of the Gilded Age and Progressive Era
Vol. 3, No. 1 (Jan., 2004), pp. 59-89 (31 pages)
Published By: Society for Historians of the Gilded Age & Progressive Era

2004-01-the-journal-of-the-gilded-age-and-progressive-era-vol-3-25144355-gates-rockefeller-china-medical-board.pdf
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(2009) One Health Initiative website - "Remembering a Great One Health Physician Giant in History … Richard Shope, MD"

August 23, 2009 : Submitted by: Russell W. Currier, DVM, MPH, Dipl. ACVPMExecutive Vice President EmeritusAmerican College of Veterinary Preventive Medicine1864 NW 151 CourtDes Moines IA [...] / Source : [HI0034][GDrive]

Summary of Richard Edwin Shope Contributions to One Medicine/Health

Richard E. Shope MD (Dec 25, 1901 – October 2, 1966) was one of the pioneer microbiologists to investigate a variety of human and animal diseases and merits recognition for his many accomplishments that supported later research that continues to this very day. Dr Shope graduated from medical school at The University of Iowa in 1924 and immediately remained on staff there to teach pharmacology and work on the chemotherapy of tuberculosis. Shortly afterward he was invited to join the laboratories of the Rockefeller Institute at Princeton to work with Dr Paul Lewis, the discoverer of polio virus. **Subsequently in 1928, he left tuberculosis research to investigate hog cholera in the field where he observed his first outbreak of swine influenza.** Later research on influenza resulted in isolation of the virus from pigs and its co-pathogen Haemophilus influenzae suis, and subsequent research that

Later research on influenza resulted in isolation of the virus from pigs and its co-pathogen Haemophilus influenzae suis, and subsequent research that postulated that the swine virus was related to the human 1918 pandemic virus.

Dr Shope acknowledged the influence of the legendary [Dr. Theobald Smith (born 1859)], at the Rockefeller Institute, on his own career and observed that Smith "although possessed of great imagination and … uncanny foresight, was a meticulously methodical worker, who abhorred the waste of anything – time, material, or animals." This set a pattern for Shope's career and an informal distillation of his key accomplishments are summarized in the bullet form.

From Bernard Easterday, 4th Int'l Symposium on Emerging and Reemerging Pig Diseases, Rome June, 2003: "It remained for Shope to present the first reliable experimental evidence that influenza is caused by a virus (15). [Year 1931.] He demonstrated that he could reproduce swine influenza under strict experimental conditions by inoculating both filtered and unfiltered material from affected pigs into the respiratory tract of normal pigs. The disease produced by the filtered material was mild (later sometimes referred to as "filtrate disease") but it could be transmitted repeatedly in this manner. Subsequently, Shope would describe swine influenza as a "… disease of complex etiology, being caused by infection with the bacterium H. influenzae suis and the swine influenza virus acting in concert." Three years after Shope reported the viral nature of SI, Andrewes and Laidlaw (15) would report the viral nature of influenza in human beings. [Ref: Shope, RE 1964 Swine Influenza, In Diseases of Swine 2nd Ed. Ed by H.W. Dunne. P. 109-126.] Note: Shope and Christopher Andrewes became very good friends and Shope collaborated with the UK investigators on techniques to isolate virus which they subsequently did utilizing ferrets and Andrewes and co-investigators, Smith and Laidlaw, were later knighted for this accomplishment.

1936-1937. Shope postulated linkage between human and swine influenza. [Laidlaw also advanced same idea at same time.]

1941. Shope postulated linkage of "masked or occult" viral infection of pigs with swine lung worm and its intermediate host, earth worms. This was very controversial and was not entirely corroborated. The issue became a moot point as husbandry of pigs was changing that precluded importance of this postulated cycle. From Sir Chrotopher Andrewes biographical memoirs: "In 1930 Shope's attention was drawn to "mad itch" [aka pseudorabies], a violent distressing and fatal disease of cattle in the Midwest. He showed that it was caused by a virus transmissible to rabbits, and that it was endemic among pigs, in which it was comparatively harmless. Cattle contracted infection through contact with pigs. He finally proved the identity of cattle 'mad itch' with psedudorabies, a disease prevalent in parts of Europe. Later he studied another disease of pigs – swine pox – and showed that it could be, though it was not necessarily, transmitted through the agency of pig-lice. He also published evidence that hog cholera virus might persist, as swine flu virus appeared to do, in lungworms. Ref: Biographical Memoirs vol 50 (1979), p 353-375, © The National Academy of Sciences. Shope's three most outstanding discoveries followed each other in rapid succession: swine influenza in 1931, the rabbit fibroma in 1932, and rabbit papilloma in 1933." Andrewes again, "The work [masked rabbit papilloma virus studies by Shope] gained a new dimension when it was found that in many tame rabbits the warts progressed and became carcinomatous [sic]. This change, though common in domestic rabbits, was rare in cottontails. Shope at this time, was busy with many problems, so he generously gave the material to [Dr. Francis Peyton Rous (born 1879)]. What Rous did with the rabbit cancers during the next thirty years is a matter of history." [Peyton Rous received Nobel Prize for Medicine in 1966 for work demonstrating viral etiology of cancer.]

Viral etiology of cancer. Shope described papilloma in jack rabbits and the pathological condition bears his name "Shope papilloma [or fibroma]", and in urban legend mode affected bunnies were referred to as "jack-a-lopes." He prompted a colleague at Rockefeller Institute, [Dr. Francis Peyton Rous (born 1879)], to extend his inquiries to mammals. Rous had already demonstrated transmission in chickens but not mammals. **During WW II, Shope was attached to the US Army and detailed to a joint Canadian-US project on Grosse Isle in St Lawrence River to develop a rinderpest vaccine for cattle.** There was concern of biowarfare and deliberately introduced rinderpest would be a food production catastrophe. From Andrewes, "**Here Shope, with a staff of five other scientists, worked in strict isolation, and in the course of nineteen months produced an effective vaccine by growing and attenuating the virus in hens' eggs.** This has since been used on a large scale in the field." **Shope was then transferred back to the Navy. He was in first party to set up a lab to study tropical diseases on Guam and on Okinawa after assault began.** Shope was actually fired on. He found mold from Guam growing on photo of his wife Helen. He isolated a substance from this mold with in vivo antiviral properties and named it after wife "Helenine". Later found to be nucleoprotein that stimulated interferon production. Approximately two years after WW II: Shope developed an effective vaccine to a South American rabbit disease that was deliberately introduced to Great Britain to reduce population and extensive burrowing of rabbits in farm fields. Inadvertent introduction in France however resulted in decimated rabbit populations and adverse effect on commercial rabbitries. Shope's vaccine saved the rabbit industry in France. Circa 1950s: Shope isolated a second benign-tumor virus from deer. Also isolated the deer "hemorrhagic disease" virus. **Later when Rockefeller closed the Princeton branch, Shope decided to leave and go to work for Merck in Rahway NJ.** Subsequently he returned to Rockefeller in Manhattan [rented room during weekdays!] Later died from abdominal cancer October 2nd, 1966.

During lifetime had two serious viral diseases, lymphocytic choriomeningitis and eastern equine encephalomyelitis.

Andrewes, " Shope received many honors. He was elected to the American Philosophical Society (1944) and the National Academy of Sciences (1940). He received honorary degrees from the **universities of Utrecht, Rutgers, Giessen,** Chicago, Pennsylvania, Iowa, and Yale, as well as many prizes and awards.. [...]"

"On May 8, 1957, the Association of American Physicians awarded the Kober Medal to Dr Richard E Shope, the second time this award has been given to a physician for contributions to the health of domesticated animals. The previous recipient was [Dr. Theobald Smith (born 1859)]."

[See Harvard Magazine, July-August 2009] Dr Shope acknowledged influence of individuals on his career specifically Theobald Smith, who worked out arthropod transmission of disease and Paul Lewis who discovered/isolated polio virus and died of yellow fever while studying the same disease in South America. "Dr Shope then paid tribute to a veterinary practitioner, Dr Fred J. Crow of Iowa City Iowa, "who permitted me to spend … time with him in the field…and who guided me during my initial experience with swine influenza…He got me my first case of swine pox and … of pseudorabies and …served as the connecting link between the practicality of the field and science of the laboratory." Ref: JAVMA, Nov 15, 1957, p 486-487. The following excerpt is from the Souvenir Book published by the Eastern Iowa Veterinary Association on their 25th Anniversary (1913-1938). It was written by Richard E. Shope MD, of the Rockefeller Institute for Medical Research, Department of Animal and Plant Pathology, Princeton, New Jersey. "In the summer of 1928, I was in Iowa doing blood counts in hog cholera and other swine diseases with the cooperation of a number of veterinarians in eastern Iowa. During that time I had occasion to go to Ames to see Dr Charles Murray and it was he who first called my attention to the existence of swine influenza. Returning to eastern Iowa, arrangements were made with Dr Fred Crow for the collection of material from typical cases when the epizootic should appear during the autumn. Dr Crow telegraphed me on November 13 saying, 'Plenty of hog flu – come at once.' I took the first train west, and on arriving in Iowa City found that there was indeed plenty of 'hog flu.' Through the friendliness and cooperation of a number of eastern Iowa veterinarians and their clients, many swine autopsies were obtained and material from the best cases was shipped back to Princeton. At that time, because we had no idea as to how fragile or easily killed the causative agent might be, we packed our infectious material in iced thermos jugs and sent it by air mail from Cedar Rapids. After several unsuccessful attempts to establish swine influenza in our experimental pigs in Princeton with the various samples sent, one batch finally 'took.' This had been obtained by

Dr Crow on the Probst Brothers' farm near Iowa City. Dr Lewis, my chief, wired me of his success in establishing the disease experimentally and to return to Princeton as soon as possible." [...] Finally a quote from Dr Peyton Rous' on the occasion of conferring The Academy Medal to Richard E. Shope, M.D. at the Annual Meeting of The New York Academy of Medicine, January 7, 1965: "Dr Shope's theme throughout his scientific life has been the meaning of animal diseases for mankind, though he would never say so. Yet not alone from this theme has he drawn his wisdom and his strength. He knows human nature well. How does he value his fellow creatures including ourselves? Much as he does the lower animals – with understanding, indulgence, humor, and love." [...]

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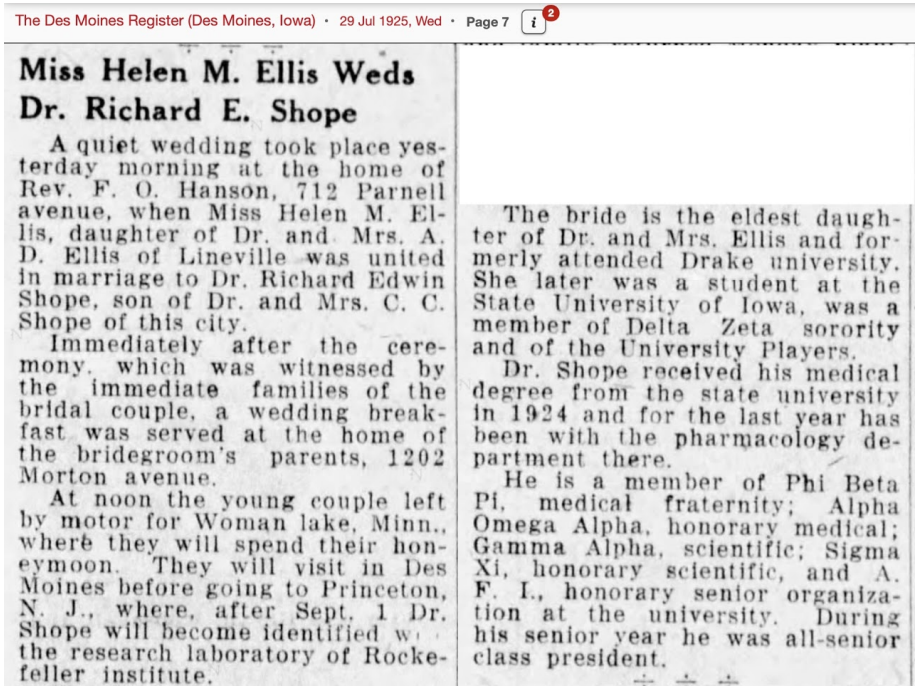
EVIDENE TIMELINE

1925 (July 25) -

Full newspaper page : [HN01KP][GDrive]



The Des Moines Register (Des Moines, Iowa) • 29 Jul 1925, Wed • Page 7

Miss Helen M. Ellis Weds Dr. Richard E. Shope

A quiet wedding took place yesterday morning at the home of Rev. F. O. Hanson, 712 Parnell avenue, when Miss Helen M. Ellis, daughter of Dr. and Mrs. A. D. Ellis of Lineville was united in marriage to Dr. Richard Edwin Shope, son of Dr. and Mrs. C. C. Shope of this city.

Immediately after the ceremony, which was witnessed by the immediate families of the bridal couple, a wedding breakfast was served at the home of the bridegroom's parents, 1202 Morton avenue.

At noon the young couple left by motor for Woman lake, Minn., where they will spend their honeymoon. They will visit in Des Moines before going to Princeton, N. J., where, after Sept. 1 Dr. Shope will become identified w[illegible] the research laboratory of Rockefeller institute.

The bride is the eldest daughter of Dr. and Mrs. Ellis and formerly attended Drake university. She later was a student at the State University of Iowa, was a member of Delta Zeta sorority and of the University Players.

Dr. Shope received his medical degree from the state university in 1924 and for the last year has been with the pharmacology department there.

He is a member of Phi Beta Pi, medical fraternity; Alpha Omega Alpha, honorary medical; Gamma Alpha, scientific; Sigma Xi, honorary scientific, and A. F. I., honorary senior organization at the university. During his senior year he was all-senior class president.

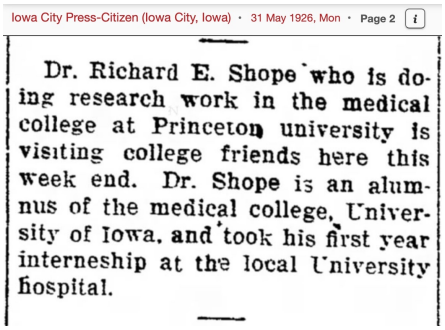
[HN01KQ][GDrive]

1926 (May 31) - At Princeton

- https://www.newspapers.com/image/23010349/?terms=%22richard%20e.%20shope%22&match=1

1926-05-31-iowa-city-press-citizen-pg-02.jpg

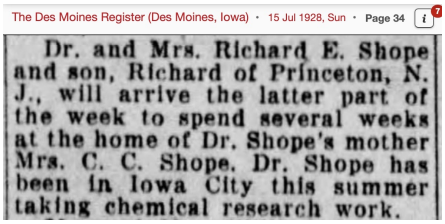
1926-05-31-iowa-city-press-citizen-pg-02-clip-shope.jpg


Iowa City Press-Citizen (Iowa City, Iowa) · 31 May 1926, Mon · Page 2

Dr. Richard E. Shope who is doing research work in the medical college at Princeton university is visiting college friends here this week end. Dr. Shope is an alumnus of the medical college, University of Iowa, and took his first year interneship at the local University hospital.

1928 (July 15)

Full newspaper page : [HN01KR][GDrive]


The Des Moines Register (Des Moines, Iowa) · 15 Jul 1928, Sun · Page 34

Dr. and Mrs. Richard E. Shope and son, Richard of Princeton, N. J., will arrive the latter part of the week to spend several weeks at the home of Dr. Shope's mother Mrs. C. C. Shope. Dr. Shope has been in Iowa City this summer taking chemical research work.

[HN01KS][GDrive]

1929 (July 20) - Dr. Lewis funeral -

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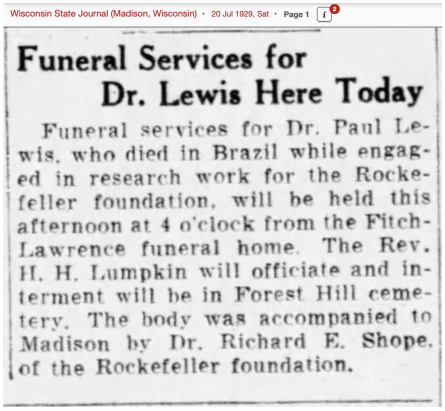
1929-07-20-wisconsin-state-journal-pg-01-clip-lewis-funeral

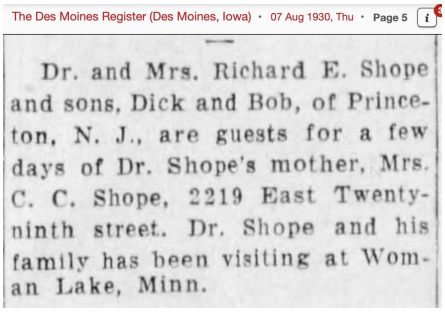

Wisconsin State Journal (Madison, Wisconsin) · 20 Jul 1929, Sat · Page 1

Funeral Services for Dr. Lewis Here Today

Funeral services for Dr. Paul Lewis, who died in Brazil while engaged in research work for the Rockefeller foundation, will be held this afternoon at 4 o'clock from the Fitch-Lawrence funeral home. The Rev. H. H. Lumpkin will officiate and interment will be in Forest Hill cemetery. The body was accompanied to Madison by Dr. Richard E. Shope, of the Rockefeller foundation.

1930 (Aug 07) - Of Princeton -

Full newspaper page : [HN01KT][GDrive]

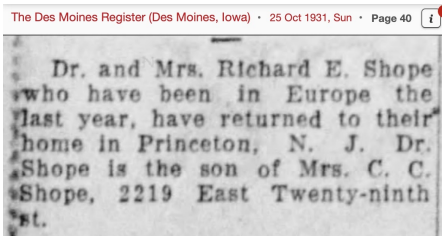

The Des Moines Register (Des Moines, Iowa) · 07 Aug 1930, Thu · Page 5

Dr. and Mrs. Richard E. Shope and sons, Dick and Bob, of Princeton, N. J., are guests for a few days of Dr. Shope's mother, Mrs. C. C. Shope, 2219 East Twenty-ninth street. Dr. Shope and his family has been visiting at Woman Lake, Minn.

[HN01KU][GDrive]

1931 (Oct 25) - spent year in Europe

Full newspaper page : [HN01KV][GDrive]


The Des Moines Register (Des Moines, Iowa) · 25 Oct 1931, Sun · Page 40

Dr. and Mrs. Richard E. Shope who have been in Europe the last year, have returned to their home in Princeton, N. J. Dr. Shope is the son of Mrs. C. C. Shope, 2219 East Twenty-ninth st.

[HN01KW][GDrive]

Is 1931 the year that Dr. Shope met a young Erich Traub in Germany?

See [**Dr. Erich Traub (born 1906)**]

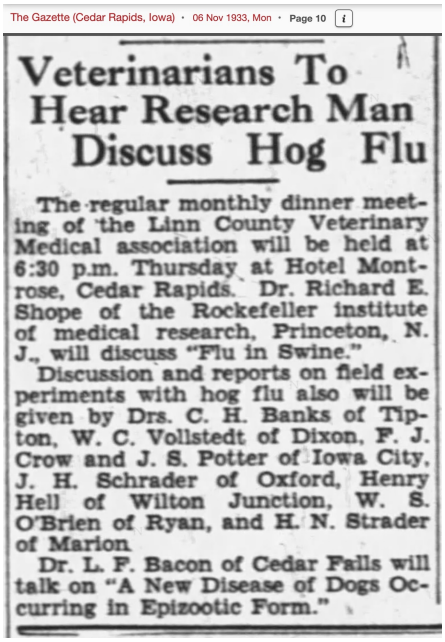
"[...]After coffee with cake, TRAUB told me how he came to the US when ***RICHARD E. SHOPE, the famous virologist from the Rockefeller Institute, spent his time in Giessen, among other places, in the early 1930s.*** *Zwick's work on the Borna Disease attracted researchers who poured in...* ***like TRAUB, who was already considered a student proficient in English, to SHOPE he was assigned as a language facilitator. SHOPE soon saw TRAUB's interest and talent in viral research and invited him to the Rockefeller Institute. Shope was right in his assumption.*** *Much later (1959), he told me himself.*

TRAUB's talent soon starts after he began research at Princeton, the Rockefeller Institute branch. The topic to which he dedicated his work in the first place was the behavior of the mouse lymphocytic choriomeningitis virus. A number of communications that began in Science and continued in the Journal of Experimental Medicine, and which are generally regarded as classical today, since "... many pioneering series of investigations in many of the key biological properties of the virus were established. "(1) ***When BURNET and MEDAWAR received the Nobel Prize in 1960 for their seminal immunological work, I, as a veterinarian and TRAUB's employee, would have liked to see that he, too, had participated in the prize because what TRAUB already described in 1936 and 1939, was the mode of origin of the condition, which was later baptized with "immune tolerance" and which represented a pillar of Burnet's clone-selective theory (2). The American researcher HOTCHIN has appreciated TRAUB's dedication by giving him his monograph with the words: "To ERIC TRAUB who started the whole thing" (3). [148] "***

1933 (Nov) - speaking about swine flu -

https://www.newspapers.com/image/547667039/?terms=%22richard%20e.%20shope%22&match=1

1933-11-06-the-cedar-rapids-gazette-pg-10-clip-shope-hog-flu



The Gazette (Cedar Rapids, Iowa) • 06 Nov 1933, Mon • Page 10

Veterinarians To Hear Research Man Discuss Hog Flu

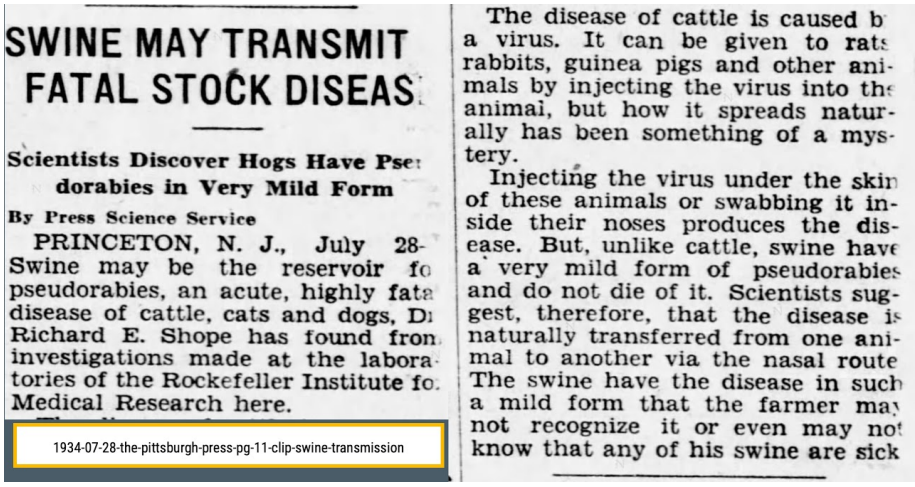
The regular monthly dinner meeting of the Linn County Veterinary Medical association will be held at 6:30 p.m. Thursday at Hotel Montrose, Cedar Rapids. Dr. Richard E. Shope of the Rockefeller institute of medical research, Princeton, N. J., will discuss "Flu in Swine."

Discussion and reports on field experiments with hog flu also will be given by Drs. C. H. Banks of Tipton, W. C. Vollstedt of Dixon, F. J. Crow and J. S. Potter of Iowa City, J. H. Schrader of Oxford, Henry Hell of Wilton Junction, W. S. O'Brien of Ryan, and H. N. Strader of Marion.

Dr. L. F. Bacon of Cedar Falls will talk on "A New Disease of Dogs Occurring in Epizootic Form."

1934 (July) - injecting a "virus" causes illness, thus viruses are bad

Full newspaper page : [HN01KX][GDrive]



SWINE MAY TRANSMIT FATAL STOCK DISEAS

Scientists Discover Hogs Have Pse dorabies in Very Mild Form

By Press Science Service

PRINCETON, N. J., July 28- Swine may be the reservoir fo pseudorabies, an acute, highly fata disease of cattle, cats and dogs, Dr Richard E. Shope has found from investigations made at the laboratories of the Rockefeller Institute fo Medical Research here.

The disease of cattle is caused b a virus. It can be given to rats rabbits, guinea pigs and other animals by injecting the virus into the animal, but how it spreads naturally has been something of a mystery.

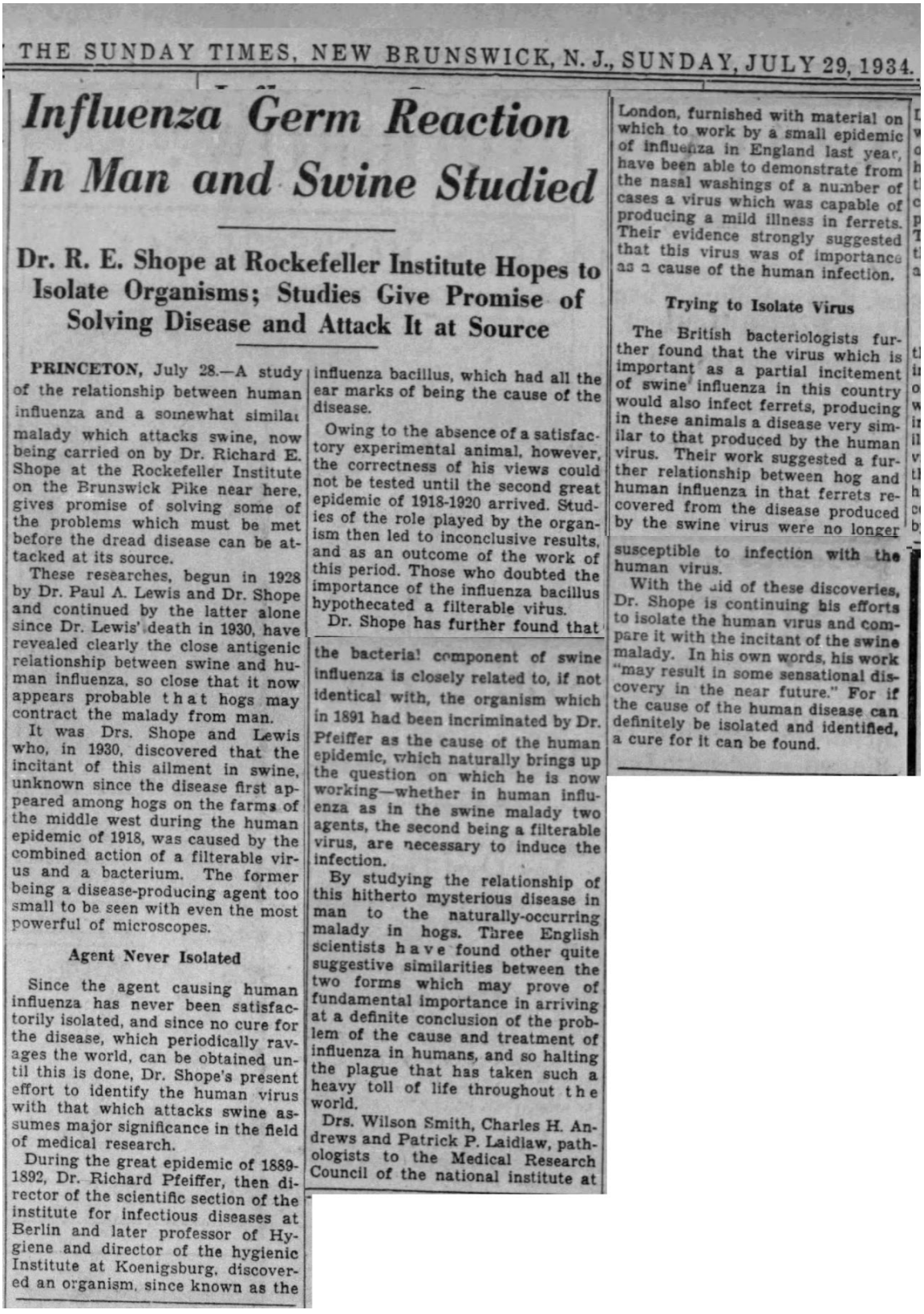
Injecting the virus under the skin of these animals or swabbing it inside their noses produces the disease. But, unlike cattle, swine have a very mild form of pseudorabies and do not die of it. Scientists suggest, therefore, that the disease is naturally transferred from one animal to another via the nasal route The swine have the disease in such a mild form that the farmer may not recognize it or even may not know that any of his swine are sick

1934-07-28-the-pittsburgh-press-pg-11-clip-swine-transmission

[HN01KY][GDrive]

1934 (July 29) -

Full newspaper page ; [HN01KZ][GDrive]



THE SUNDAY TIMES, NEW BRUNSWICK, N. J., SUNDAY, JULY 29, 1934.

Influenza Germ Reaction In Man and Swine Studied

Dr. R. E. Shope at Rockefeller Institute Hopes to Isolate Organisms; Studies Give Promise of Solving Disease and Attack It at Source

PRINCETON, July 28.—A study of the relationship between human influenza and a somewhat similar malady which attacks swine, now being carried on by Dr. Richard E. Shope at the Rockefeller Institute on the Brunswick Pike near here, gives promise of solving some of the problems which must be met before the dread disease can be attacked at its source.

These researches, begun in 1928 by Dr. Paul A. Lewis and Dr. Shope and continued by the latter alone since Dr. Lewis' death in 1930, have revealed clearly the close antigenic relationship between swine and human influenza, so close that it now appears probable that hogs may contract the malady from man.

It was Drs. Shope and Lewis who, in 1930, discovered that the incitant of this ailment in swine, unknown since the disease first appeared among hogs on the farms of the middle west during the human epidemic of 1918, was caused by the combined action of a filterable virus and a bacterium. The former being a disease-producing agent too small to be seen with even the most powerful of microscopes.

Agent Never Isolated

Since the agent causing human influenza has never been satisfactorily isolated, and since no cure for the disease, which periodically ravages the world, can be obtained until this is done, Dr. Shope's present effort to identify the human virus with that which attacks swine assumes major significance in the field of medical research.

During the great epidemic of 1889-1892, Dr. Richard Pfeiffer, then director of the scientific section of the institute for infectious diseases at Berlin and later professor of Hygiene and director of the hygienic Institute at Koenigsburg, discovered an organism, since known as the influenza bacillus, which had all the ear marks of being the cause of the disease.

Owing to the absence of a satisfactory experimental animal, however, the correctness of his views could not be tested until the second great epidemic of 1918-1920 arrived. Studies of the role played by the organism then led to inconclusive results, and as an outcome of the work of this period. Those who doubted the importance of the influenza bacillus hypothecated a filterable virus.

Dr. Shope has further found that the bacterial component of swine influenza is closely related to, if not identical with, the organism which in 1891 had been incriminated by Dr. Pfeiffer as the cause of the human epidemic, which naturally brings up the question on which he is now working—whether in human influenza as in the swine malady two agents, the second being a filterable virus, are necessary to induce the infection.

By studying the relationship of this hitherto mysterious disease in man to the naturally-occurring malady in hogs. Three English scientists have found other quite suggestive similarities between the two forms which may prove of fundamental importance in arriving at a definite conclusion of the problem of the cause and treatment of influenza in humans, and so halting the plague that has taken such a heavy toll of life throughout the world.

Drs. Wilson Smith, Charles H. Andrews and Patrick P. Laidlaw, pathologists to the Medical Research Council of the national institute at London, furnished with material on which to work by a small epidemic of influenza in England last year, have been able to demonstrate from the nasal washings of a number of cases a virus which was capable of producing a mild illness in ferrets. Their evidence strongly suggested that this virus was of importance as a cause of the human infection.

Trying to Isolate Virus

The British bacteriologists further found that the virus which is important as a partial incitement of swine influenza in this country would also infect ferrets, producing in these animals a disease very similar to that produced by the human virus. Their work suggested a further relationship between hog and human influenza in that ferrets recovered from the disease produced by the swine virus were no longer susceptible to infection with the human virus.

With the aid of these discoveries, Dr. Shope is continuing his efforts to isolate the human virus and compare it with the incitant of the swine malady. In his own words, his work "may result in some sensational discovery in the near future." For if the cause of the human disease can definitely be isolated and identified, a cure for it can be found.

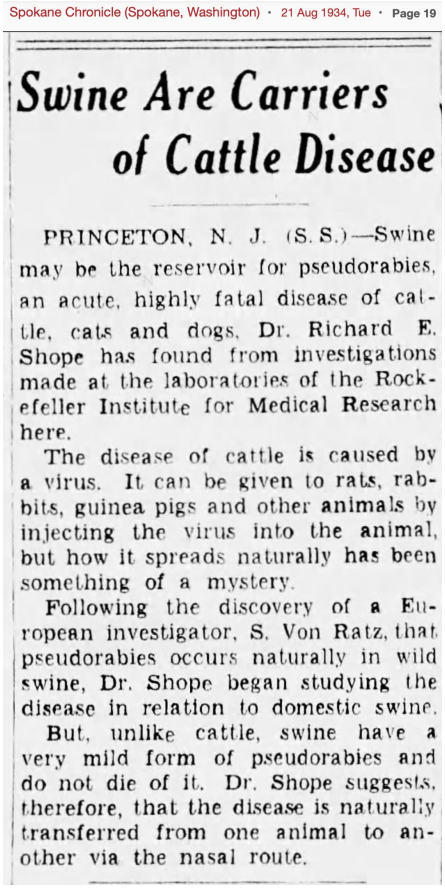
[HN01L0][GDrive]

1934 (Aug 21)

https://www.newspapers.com/image/562038317/?terms=%22richard%20e.%20shope%22&match=1

1934-08-21-spokane-daily-chronicle-pg-03.jpg

1934-08-21-spokane-daily-chronicle-pg-03-clip-swine-as-carriers.jpg



Spokane Chronicle (Spokane, Washington) • 21 Aug 1934, Tue • Page 19

Swine Are Carriers of Cattle Disease

PRINCETON, N. J. (S. S.)—Swine may be the reservoir for pseudorabies, an acute, highly fatal disease of cattle, cats and dogs, Dr. Richard E. Shope has found from investigations made at the laboratories of the Rockefeller Institute for Medical Research here.

The disease of cattle is caused by a virus. It can be given to rats, rabbits, guinea pigs and other animals by injecting the virus into the animal, but how it spreads naturally has been something of a mystery.

Following the discovery of a European investigator, S. Von Ratz, that pseudorabies occurs naturally in wild swine, Dr. Shope began studying the disease in relation to domestic swine.

But, unlike cattle, swine have a very mild form of pseudorabies and do not die of it. Dr. Shope suggests, therefore, that the disease is naturally transferred from one animal to another via the nasal route.

1934 (Dec 21)

https://www.newspapers.com/image/419825570/?terms=%22richard%20e.%20shope%22&match=1

1936 (June) - Rockefeller Institute Research : THE SUSCEPTIBILITY OF SWINE TO THE VIRUS OF HUMAN INFLUENZA* - BY RICHARD E. SHOPE, M.D., Am) THOMAS FRANCIS, JR., M.D.

(From the Department of Animal and Plant Pathology, The Rockefeller Institute for Medical Research, Princeton, N. J., and the Hospital of The Rockefeller Institute for Medical Research, New York) / PDF : [HI0031][GDrive]

With **Dr. Richard Edwin Shope (born 1901)**

Note, some of this research from 1935 : "PLATES 45 TO 48 -- (Received for publication, June 26, 1935)"

THE SUSCEPTIBILITY OF SWINE TO THE VIRUS OF HUMAN INFLUENZA*

By RICHARD E. SHOPE, M.D., AND THOMAS FRANCIS, JR., M.D.

(From the Department of Animal and Plant Pathology, The Rockefeller Institute for Medical Research, Princeton, N. J., and the Hospital of The Rockefeller Institute for Medical Research, New York)

PLATES 45 TO 48

(Received for publication, June 26, 1936)

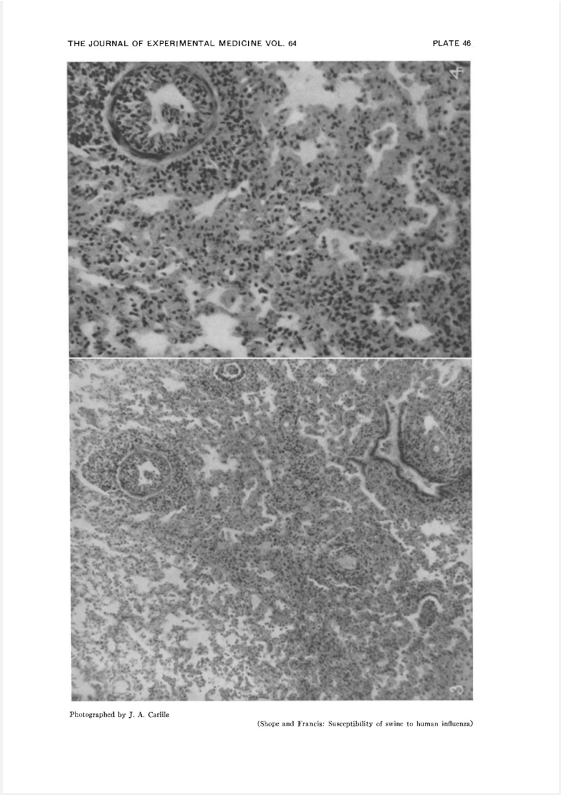
The similarity in the pathogenic properties of human and swine influenza virus for ferrets led Elkeles (1) to attempt the transmission of the human agent to swine. He found that very young pigs (2 to 6 weeks old), developed a mild illness when the virus from man was given intranasally under light ether narcosis. At autopsy these animals sometimes showed scattered dark red bronchopneumonic areas of consolidation in the upper lobes of the lung. When cultures of either swine or human influenza bacilli were added to the virus at the time of its administration, the swine developed a more severe illness. The clinical picture was characterized by a low grade fever, apathy, loss of appetite, and sometimes cough. At autopsy varying degrees of bronchopneumonia were encountered. Virus, pathogenic for ferrets, could be recovered from the pneumonic lungs. It thus appeared that Elkeles had produced a disease somewhat resembling swine influenza by the administration to young pigs of human influenza virus mixed with influenza bacilli of either human or swine origin. This observation made more credible the theory that swine influenza may have arisen as the result of the infection of swine in 1918 from human sources (2–4).

The question of the pathogenicity of human influenza virus for swine was of such importance that it seemed to warrant further investigation. The present paper reports our experience in the transmission of human influenza virus to swine.

* Presented at the 37th Annual Meeting of the Society of American Bacteriologists in New York, December 26, 1935.

791

[HI0031][GDrive]



THE JOURNAL OF EXPERIMENTAL MEDICINE VOL. 64 PLATE 46

Photographed by J. A. Carlile

(Shope and Francis: Susceptibility of swine to human influenza)

[HI0031][GDrive]

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Experimental - The Infection of Swine with Human Influenza Virus Alone

The PR 8 (Francis (5)) and WS (Smith, Andrewes, and Laidlaw (6)) strains of the human influenza virus were used in our experiments. No diflqculty was encountered in establishing either strain in swine 6 to 14 weeks of age. Older or younger animals were not tried. All animals were inoculated intranasally using the same methods employed in earlier studies of swine influenza (7, 8). The instillations were made with a Luer syringe without needle by pressing the tip of the syringe into the external nares. It was not necessary to anesthetize swine in order to induce infection with human influenza virus alone, although animals infected under ether narcosis exhibited somewhat more extensive pulmonary lesions at autopsy than those inoculated without anesthetic.

The WS virus was transferred 2, and the PR 8 virus 5, serial passages in swine before the experiments were discontinued. 10 per cent suspensions of infected mouse lung (5, 9) in physiological saline served as the source of virus for the first swine inoculation in each of the passage series and, after the first swine passage, similar suspensions of infected swine lung were used to inoculate swine of subsequent passages. 6.5 cc. of virus suspension was administered to each animal.

The disease produced in swine by human influenza virus was clinically very mild and, apart from a transient and indefinite malaise, no constant symptoms

were observed. It was sometimes difficult to be certain on antemortem examination that the animals had actually been infected. In most cases there was no significant elevation in temperature though a few had fever on the afternoon of the day following inoculation. 4 animals were kept under observation for 3 weeks or longer and made uneventful recoveries. 8 others were killed either by stunning and bleeding or by chloroforming on the 3rd or 4th day after inoculation and these exhibited the following picture at autopsy. There was a scattered, patchy, lobular atelectasis of one or more of the anterior lobes of the lung (Figs. 1 and 2). On cut section the involvement about the bronchi was seen to be more extensive than was apparent from the uncut surface. The involved lung was a reddish purple in color, beefy in appearance, felt rubbery, and was moist. A rather scant glassy tenacious mucous exudate could sometimes be pressed from the cut bronchi.

Histologically in involved areas of lung the alveolar walls were folded, greatly thickened, and infiltrated with large numbers of mononuclear cells (Figs. 3 and 4). Capillaries in the alveolar walls were dilated and packed with red blood cells. The partially collapsed alveoli themselves were either free of cells or contained at the most an occasional desquamated epithelial cell or a few lymphocytes. Polymorphonudear leucocytes were conspicuously absent. There was a pronounced perlbronchial round cell infiltration. The bronchial epithelium was, in places, fragmented and partially desquamated, and the cilia were either denuded or badly matted together. Some bronchi contained a scant, mixed lymphocytic and polymorphonuclear leucocytic exudate. Lymph channels in the interlobular septa were sometimes dilated and the septa themselves thickened and loosely infiltrated with mononuclear cells.

The trachea, bronchi, and lungs of swine infected with human influenza virus were in most instances bacteriologically sterile. The few animals from whose respiratory tracts organisms could be cultivated showed no evidence that their disease had been modified by the bacterial contaminant.

Influenza virus was demonstrated in the lung lesions of all passage swine by the inoculation of mice (5, 9). No evidence was obtained that serial transmission of the virus in swine modified its pathogenicity for mice. Also, the pathogenicity of the virus for swine appeared to remain constant through the number of serial passages to which it was submitted. It was of interest that the areas of swine lung that appeared free of lesions were also free of virus.

The symptoms and pathology observed in swine infected with human influenza virus were indistinguishable from those of the filtrate disease (10) produced in swine by the intranasal administration of swine influenza virus alone.

The Infection of Swine with Human Influenza Virus and H. influenzae suis

Sixteen swine have been inoculated intranasally with mixtures of human influenza virus and the bacterium, H. influensae suis (11). These animals were included in two serial passage experiments. One series, started with virus from infected ferret lung (6), was continued for 5 passages, and the other, initiated with virus from infected mouse lung, was carried through 3 passages in swine before being discontinued. 6.5 cc. of 10 per cent virus suspension to which had been added 0.5 co. of a 24 hour horse blood culture (11) 1 of H. influenzae suis, strain 18, was given intranasally to each animal. It was known from other experiments conducted at the same time as those under discussion that this culture of H. influenzae suis, in combination with swine influenza virus, was capable of producing characteristic influenza in swine (10).

In 11 of the 16 swine inoculated with mixtures of human influenza virus and H. influenzae suis the resulting illness was definitely more severe than that caused by the virus alone. This enhancement was evident both clinically and at postmortem examination. The temperature reactions were similar to those seen in swine influenza although nsuaHy the fever was less persistent. Seldom was it maintained for longer than 3 days, whereas 5 to 6 day fevers are not uncommon in swine influenza. Fever, while it lasted, was high, exceeding 41°C. on 1 or [...]

[...]

Summary

Swine inoculated intranasally with human influenza virus alone develop an ill defined, mild, and usually afebrile illness of short duration. At postmortem the anterior lobes of the lungs of such animals contain scant, scattered areas of lobular atelectasis. Transmission of the virus for 5 serial passages through two groups of swine

failed noticeably to enhance its pathogenicity for this species. The disease produced in swine by infection with human influenza virus alone is indistinguishable clinically and pathologically from that caused by infection with swine influenza virus alone. Transmission of human influenza virus from swine to swine by contact succeeded in only one of four attempts.

Swine inoculated intranasally with a mixture of human influenza virus and H. influenzae suis usually develop a febrile, depressing illness similar to mild swine influenza. The pneumonia encountered in such animals at autopsy is similar to but less extensive than that seen in swine influenza. In some animals H. influenzae suis fails to become established and the disease then seen is identical with that caused by human influenza virus alone.

The human influenza virus recovered after 5 serial transfers in swine was immunologically the same as that with which the experiments were begun.

1936 (Nov 12) -

Full newspaper page : [HN01KN][GDrive] ; No credit to **Dr. Frederick Lamont Gates (born 1886)** ?

THE BOSTON GLOBE
...RSDAY, NOVEMBER 12, 1936

Virus and Bacteria Seen Cause of "Flu" in Man

Scientist Finds Possibility Great 1918 Epidemic Had Origin in Disease of Swine

NEW HAVEN, Nov 11 (A P)—The breaking down of the cause of influenza to what appears to be two agents—bacteria and a filtrable virus—was announced tonight by Dr Richard E. Shope of the Rockefeller Institute for Medical Research.

Dr Shope told the Yale Medical Society that recent experiments convinced him the disease apparently is produced by the concerted activity of these two agents.

The question as to the cause of influenza has been highly controversial for some time. Dr Shope terms his conclusions "newer knowledge of influenza." He pointed out, however, "proof of his theory must await future widespread outbreaks of the disease."

The physician told of studies he had made with Dr Paul A. Lewis on a disease of swine which appeared for the first time in 1918 and, because of its marked similarity to human influenza, was called "swine influenza."

Agents Act Together

Dr Shope said Dr Lewis and he had found that the disease had a "complex etiology, that is, it was produced by the concerted activity of two agents—bacterium, similar in all respect to the earlier discovered germ, and the other was a filtrable virus different from any previously encountered."

"It was this work," pointed out Dr Shope, "that suggested the possibility that human influenza might have a similar complex origin. The thing lacking, so far as the human disease was concerned, was the demonstration of a filtrable virus. This was provided in 1933 when Smith, Andrewes and Laidlaw in England found that the filtered nose and throat washings from cases of human influenza contained a virus which was capable of infecting ferrets and mice.

"Other strains of an identical virus were isolated in Puerto Rico and Philadelphia."

Viruses Not Alike

Dr Shope said:

"This new human virus and swine influenza were found to cause identical disease pictures in ferrets and mice. The two agents were, however, serologically different. Evidence obtained in neutralization experiments with the sera of human blood suggested that the human virus was a widespread infectious agent. They further demonstrated that the swine virus had also, at some time in the past, infected man.

"The theory has been advanced that the swine virus represents the surviving prototype of that responsible for the 1918 pandemic influenza in man. The swine virus, however, appears to be no longer pathogenic for man and proof of the theory must await future widespread outbreaks of the disease. There is no way of telling, as yet, whether human influenza is a pure virus infection, or whether, like the swine disease, both the virus and a bacterium are esential to its causation."

[HN01KO][GDrive]

1937 (April 21) - https://www.newspapers.com/image/204568227/?terms=%22richard%20e.%20shope%22&match=1

Saved Wikipedia (Mar 7, 2021) - "Shope papilloma virus"

Source : [HK006B][GDrive]

Shope papilloma virus

Virus classification

(unranked): Virus

Realm: Monodnaviria

Kingdom: Shotokuvirae

Phylum: Cossaviricota

Class: Papovaviricetes

Order: Zurhausenvirales

Family: Papillomaviridae

Genus: Kappapapillomavirus

Species: Kappapapillomavirus 2

Synonyms[1]

- Rabbit papilloma virus
- Rabbit (Shope) papilloma virus
- Cottontail rabbit papillomavirus (Shope)
- Cottontail rabbit papillomavirus

The Shope papilloma virus (SPV), also known as cottontail rabbit papilloma virus (CRPV) or Kappapapillomavirus 2, is a papillomavirus which infects certain leporids, causing keratinous carcinomas resembling horns, typically on or near the animal's head. The carcinomas can metastasize or become large enough to interfere with the host's ability to eat, causing starvation. Richard E. Shope investigated the horns and discovered the virus in 1933, an important breakthrough in the study of oncoviruses. The virus was originally discovered in cottontail rabbits in the Midwestern U.S., but can also infect brush rabbits, black-tailed jackrabbits, snowshoe hares, and European rabbits.[2]

History

Richard Edwin Shope discovered the Shope papillomavirus

In the 1930s, hunters in northwestern Iowa reported that the rabbits they shot had several "horn" protrusions on many parts of their bodies including their faces and necks.[3] The virus is also a possible source of myths about the jackalope, a rabbit with the horns of an antelope, and related cryptids such as the wolpertinger. Stories and illustrations of horned rabbits appear in scientific treatises dating back many years, such as the Tableau encyclopédique et méthodique, from 1789.

The Iowa reports led cancer researcher Richard E. Shope to investigate, and he discovered the virus in 1933.[4] He separated the virus from horny warts on cottontail rabbits, and made one of the first mammalian tumor virus discoveries.[4] Shope determined the protrusions were keratinous carcinomas due to the infection of CRPV. Shope's research led to the development of the first mammalian model of a cancer caused by a virus. He was able to isolate virus particles from tumors on captured animals and use these to inoculate domestic rabbits, which then developed similar tumors. This has contributed to our understanding of fundamental mechanisms in neoplasia, or the formation of a new, abnormal growth of tissue.[4] The virus was sequenced in 1984, showing substantial sequence similarities to HPV1a. It has been used as a model for human papillomaviruses both before and after this discovery. The most visible example of this role is the HPV vaccine, which was developed based on and incorporating research done using the virus as a model. Similarly, it has been used to investigate antiviral therapies.

Genome

There is a lack of specific data about the reproductive cycle of papillomaviruses. Research is not conclusive about which coding regions are expressed before or after replication of viral DNA. The E1 region should carried the DNA required for cis and/or trans. E1 is the largest Open reading frame, which is the set of codons in the genome that code for proteins, encoding a 602 base protein. E1 is similar to COOH-terminal domain of the Simian virus 40, plays a role in viral DNA replication maintaining plasmids within a cell. Results have found that CRPV and BPV1 are found in the same location of the genome, which indicates that papillomaviruses likely have similar methods of replicating their genomes outside of a chromosome. A notable difference between the genomes of the four strains is that the E6 protein is almost twice as long in the CRPV as in any of the other strains of papillomaviruses. The E6 protein is somewhat homologous with a family of ATP syntheses that are found in mitochondria of cattle. The homology is significant enough to imply an evolutionary relationship between E6 and the beta chain of the ATP synthase family; however, they do not have the same function or enzyme activity. The E2 protein overlaps with the E4 open reading frames in the other papillomaviruses. These differences in the E2 proteins likely determine how oncogenic a virus is. The noncoding region has a homologies with BPV1. Other homologies exist, such as the fact that all papillomaviruses have repeated sequences in the noncoding parts of their genomes. CRPV has some notable repeats, some as long as 32 base pairs. Many pairs up stream of the transcription locations are homologous with promoter sequences in of SV40.[5]

Life cycle

Replication cycle and transcription

The papillomavirus life cycle begins with cells actively multiplying in epithelial cells of basal and parabasal layers. The differentiation of these cells is necessary for this virus to complete its life cycle. Transforming proteins E6 and E7 induce the S-phase in the lower epithelial layers.[6] Viral replication proteins E1 and E2 are also required to form the papilloma and keep the episomal viral genome replication low. Genome amplification will be restrained until viral replication proteins increase and several viral proteins are co-expressed. The infected, differentiating cells travel towards the epithelial surface during the viral cycle's late stage. In the upper epithelial layers, the promoter activity is altered during the virus' production. E4 proteins are expressed, and viral DNA amplification starts in the differentiated cells. Following this, the L1 and L2 viral capsid proteins are expressed and the infectious virions begin to assemble.[7]

Expression of the papillomavirus E4 protein correlates with the onset of viral DNA amplification. Using a mutant cottontail rabbit papillomavirus (SPV) genome incapable of expressing the viral E4 protein, it has been shown that E4 is required for the productive stage of the SPV life cycle in New Zealand White and cottontail rabbits.[6]

Assembly and release

The virus particles are assembled in the upper epithelium. The virus capsomere icosahedral shell is packaged with an 8000 base pair genome, 360 L1 protein copies, and 12 copies of L2 proteins inside. L2 proteins gather at PML body nuclear structures and recruit L1 proteins during virus assemblage. L2 proteins are not necessary for assemblage, but it is possible that they augment packaging and infectivity. Capsid proteins have been thought to also gather at the PML bodies during packaging.[6]

Transmittance of the Papillomavirus requires release from the infected skin cell at the epithelial surface, as they are non-lytic. They are resistant to desiccation, enhancing their survivability during extracellular transfer between hosts. Cornified squame release from the surface of epithelial cells may also contribute to their survival. Immune detection of the virus in the host may also be hindered by antigen retention until the virus reaches upper epithelial cells.[6]

Modulation of host processes

When Richard E. Shope began his research on SPV, little was known about the natural transmission of the virus vectors and interactions of the virus on its hosts. In the lab setting, Shope worked with the virus' natural host, the cottontail rabbit.[4] Particularly, he worked with the cottontails of Iowa and other western states of the United States. He worked with these species because it was discovered that SPV had a restricted geographic range and was confined to the high plains of the western United States.[4] Therefore, the major host species of SPV is the cottontail rabbit of the western United States. Cottontail rabbits in Shope's lab usually were infected with the virus through parasites such as rabbit ticks.[4] When infected with SPV, hosts develop papillomas on hair-bearing skin, usually around the face and neck.[4] Shope found through his research that rabbit epidermal cell transformation by SPV requires interaction with mesenchymal cells. It was further found that mesenchymal types support papillomatous transformation.[4] Shope's research also investigated how vitamin A deficiencies or excess might affect host susceptibility to SPV. Shope found that deficiencies in vitamin A did not affect the relative growth of the papillomas, but in cases where there was excesses of vitamin A Shope papillomas were inhibited.[4] Therefore, when SPV infects a host, vitamin A plays an important role in the host/virus interactions.

Location in the host

Fluorescent antibody study identified the locations of viral antigens in wild rabbit papillomas. They were present only in the nucleus of keratohyaline and keratinized layer cells, and not deeper down in proliferating epithelial cells. In domesticated rabbits, the viral antigens were present in much smaller quantity in only superficial, keratinized layers. The investigation proposed that the virus is only present in proliferating cell nuclei during early development, containing a deficient amount of proteins and mostly nucleic acid. The proteins may be immunologically specific in order to keep its transmissibility, making it a masked virus.[8]

Associated viruses

Most homologous papillomaviruses are actually CRPV and HPV1a. This is possibly because both of these viruses target the skin. From an evolutionary perspective, CRPV and HPV1a could have diverged recently, or they could have converged due to their similar target. CRPV is a member of the papillomaviruses so it is related to all viruses in this family.[5]

Tropism

Infection of a rabbit's follicular cell, often occurs in locations including ears, nose, eyelids, and the anus. The infection first appears as a red and swollen area on the skin, followed by development of circular papilloma warts and keratinized horny warts. Although transmission between rabbits is high, the tumors themselves do not contain the infectious virus. 25% of Papilloma infections become malignant and form squamous cell carcinoma. Metastases can form in the lungs and lymph nodes, and if it advances further, can develop in the kidneys and the liver.[2]

Rabbit Papilloma displays tropism for the cutaneous epithelium. Warts are made up of nearly homogenous vertical tissue strands. Their outer coloration is typically black or greyish, and cut sections are usually white or pinkish white with a flesh-like center. Dark coloration is due to abundant melanin pigment. The warts are made up of several tight, branching, threadlike epidermis processes connected by narrow tissue cores. These growth structures indicate that the growth occurs simultaneously at several different centers, causing the surrounding tissue to bulge from the growth's lateral pressure. The normal epithelium abruptly transitions into a narrow zone of rapidly thickening epithelial layers, made up of rapidly multiplying cells.[3]

Rabbits re-infected with the virus exhibit some or complete immunity, and can transmit the virus to other wild rabbits, and from wild to domestic rabbits. A domestic strain cannot transmit it to another domestic rabbit, however.[3]

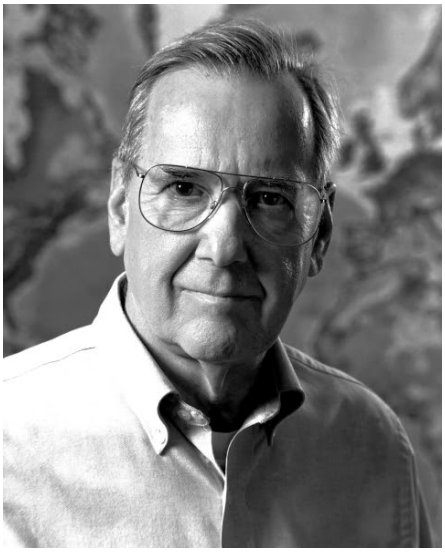
Immunologically, the papillomatosis virus is not related to fibroma or myxoma in rabbits.[3]

See also

- Oncovirus – cancer virus

BITCHUTE @Housatonic YOUTUBE @HousatonicLive ODYSEE @Housatonic BRIGHTEON @Housatonic

Dr. Robert Ellis Shope (born 1929)



[HK006R][GDrive]

Wikipedia Robert Shope

Born - February 21, 1929 [HK006S][GDrive]

Died January 19, 2004 [HK006S][GDrive]

Parents : Father - **Dr. Richard Edwin Shope (born 1901)**

Associations

- **Dr. Roger Gerrard Breeze (born 1946)** (Dr. Roger Breeze was a roommate of Dr. Robert Shope, in the early days of Dr. Breeze's new assignment as director of the **Plum Island Animal Disease Center** ; Dr. Robert Shope was living in Connecticut and with Yale at this time; There was likely professional collaboration (details TBD))
- **Dr. John Timothy Roehrig (born 1952)** (Research collaboration: West Nile (See PDF : [HP0067][GDrive]) and other published works)
- **Dr. Joshua Lederberg (born 1925)** ("*Lederberg J, Shope RE, Oaks SC, editors. Emerging infections: microbial threats to health in the United States. Institute of Medicine, National Academy Press; Washington, DC: 1992.*")
- **Dr. Clarence James Peters (born 1940)** (...)
- **Dr. Thomas Patrick Monath (born 1940)** (collaboration, such as : https://pubmed.ncbi.nlm.nih.gov/10217584/)
-

Saved Wikipedia (March 2, 2021) - "Robert Shope"

Source - [HK006S][GDrive]

Robert Ellis Shope (February 21, 1929[1] – January 19, 2004) was an American virologist, epidemiologist and public health expert, particularly known for his work on arthropod-borne viruses and emerging infectious diseases. He discovered more novel viruses than any person previously, including members of the Arenavirus, Hantavirus, Lyssavirus and Orbivirus genera of RNA viruses. He researched significant human diseases, including dengue, Lassa fever, Rift

Valley fever, yellow fever, viral hemorrhagic fevers and Lyme disease. He had an encyclopedic knowledge of viruses, and curated a global reference collection of over 5,000 viral strains. He was the lead author of a groundbreaking report on the threat posed by emerging infectious diseases, and also advised on climate change and bioterrorism.

Biography

Born in 1929 in Princeton, New Jersey, Shope was the son of Richard E. Shope, also a prominent virologist.[2][3] His brothers, Richard E. Shope, Jr and Thomas C. Shope, were also virologists.[4] Shope attended Cornell University, where he gained a BA in zoology (1951) and an MD (1954).[2][3][5] After an internship at Yale School of Medicine, Shope joined the U.S. Army Medical Corps and served for a total of three years at Camp Detrick in Frederick, Maryland and then at the U.S. Army Medical Research Unit in Kuala Lumpur, Malaysia. He subsequently joined the Rockefeller Foundation and – after a year studying with Max Theiler in New York – he was posted to Belém, Brazil, at the foundation's International Virus Program, where he spent six years, rising to direct the institute.[2][5][6]

Returning to the US in 1965, Shope joined the recently established Yale Arbovirus Research Unit (YARU) at Yale School of Medicine with other virologists from the Rockefeller Foundation. Initially an associate professor, he rose to direct the unit for 24 years.[2][5][6][7] Shope also headed the university's Division of Infectious Disease Epidemiology.[5] After his retirement from Yale in 1995, Shope and his colleague Robert B. Tesh moved to the University of Texas Medical Branch at Galveston, Texas, where they founded a new arbovirus centre.[3][5][6][7][8] Shope subsequently held the university's John S. Dunn Distinguished Chair in Biodefense.[1][5]

Research

Transmission electron micrograph showing dengue virions, one of many arboviruses Shope researched

The virologist Charles H. Calisher described Shope as a "walking encyclopaedia on the arbovirus catalogue,"[1] and during his career Shope contributed to the discovery of hundreds of novel viruses[3][5] – more than any person previously.[2][9] His research encompassed not only the areas of virology, tropical and emerging infectious diseases, but also epidemiology, vector biology and public health.[2] Calisher and emerging infectious disease specialist C. J. Peters highlighted his multidisciplinary approach, stating that "He brought the virus community together and served as a bridge between classical arbovirology and many other disciplines" including ecology, genetics and structural biology.[10] Epidemiologist and emerging infectious disease specialist Stephen S. Morse considered Shope to exemplify the approach of "integrating the laboratory and the epidemiological and being able to think broadly about the evolutionary issues as well as the specifics."[1]

Shope initially studied the Australian disease then known as "epidemic polyarthritis" with S. G. Anderson, showing that it was caused by an alphavirus, later characterised as Ross River virus.[2] His interest in infectious diseases was stimulated by his military service in Malaysia, where he investigated fevers among army personnel and locals.[2][6] During his time in Brazil in the early 1960s, he characterised over fifty different arboviruses (viruses transmitted by arthropods) including Guama and Oropouche viruses, many previously unknown. He also studied the viruses' vertebrate reservoirs, including birds, marsupials and rodents.[2]

Later that decade while at YARU, he characterised novel arboviruses from birds in Egypt. In 1969, his research turned to outbreaks of Lassa and yellow fever in Nigeria. The following year, with Frederick A. Murphy, he discovered Duvenhage, Lagos bat and Mokola viruses, which were the first viruses shown to be related to rabies. He characterised Thottapalayam virus, later shown to be the first hantavirus, from an Indian shrew in 1971. With Murphy and others, he discovered multiple viruses related to bluetongue, including bluetongue 20 virus, the first bluetongue-like virus from Australia.[2] In the late 1970s, with Jim Meegan, he showed that Rift Valley fever virus – previously believed to be restricted to sub-Saharan Africa, and mainly to infect livestock – was the cause of an epidemic in Egypt in which around 200,000 people were infected.[2][11] With Allan Steer, he was the first to describe Lyme disease, a tick-borne bacterial disease, in the US. He subsequently worked on viral hemorrhagic fevers, discovering Sabiá and Guanarito viruses, the causative agents of Brazilian and Venezuelan hemorrhagic fevers.[2] He also researched dengue and its vaccines.[1][2]

During Shope's time at Yale, YARU became the global repository for arboviruses.[7][8] When he and Tesh moved to University of Texas Medical Branch in 1995, they brought the arbovirus collection – consisting of more than 4,000 strains of arbovirus and more than 1,000 other viral strains, as well as reagents such as antibodies – with them.[2][3][5][7][8] The collection is used by scientists internationally to identify virus strains.[7][8] At Galveston, Shope widened his focus to include bioterrorism, winning $3.7 million in funding to develop measures to counter the threat. His group identified alphavirus, arenavirus and flavivirus as potential bioterrorist risks, and Shope worked with structural biologist David Gorenstein to develop new small-molecule antivirals targeted against these viruses.[1][2][3][7]

Public health and advisory work

> The medical community and society at large have tended to view acute infectious diseases as a problem of the past. But that assumption is wrong. We claimed victory too soon.
>
> — Robert Shope (1992), [1]

Shope led a high-profile investigation, with Joshua Lederberg and Stanley Oaks, into the risks posed by emerging infectious diseases and the measures necessary to respond to them for the Institute of Medicine. The findings were published in 1992 as Emerging Infections: Microbial Threats to Health in the United States, with Shope as the principal author, and the publication was swiftly recognised as groundbreaking. It suggested that the success of vaccines and antibiotics had led to the threat of infectious diseases being underestimated.[2][3][12][13] Shope stated at the press conference announcing the report's publication: "The medical community and society at large have tended to view acute infectious diseases as a problem of the past. But that assumption is wrong. We claimed victory too soon."[1] The report was important in improving the detection of infectious diseases in the US, and has been credited with stimulating renewed global interest in the area.[2][3][12][13] Shope continued to advise the US government on the topic later in the 1990s, and contributed to the establishment of American and international surveillance programs for infectious diseases including ProMED.[1]

Shope was one of seven scientists to brief Bill Clinton and Al Gore in 1997 on the effects of climate change, warning that the range of mosquitoes and other arthropod vectors would increase, affecting the prevalence of dengue, malaria and other infectious diseases.[2][3] He also served on the WHO Expert Panel on Virus Diseases and the International Committee on Taxonomy of Viruses, as well as numerous committees and expert panels for US national bodies including the Institute of Medicine, National Institutes of Health and National Research Council.[2] He was one of the co-editors of Fields Virology, the "definitive" virology text.[2]

Personal life

Shope was married to Virginia; the couple had two sons (Peter and Steven) and two daughters (Deborah and Bonnie). He had idiopathic pulmonary fibrosis, for which he received a lung transplant in December 2003. He died the following month in Galveston, from complications from the operation, at the age of 74.[2][3]

Societies, awards and honours

Shope served as president of the American Society of Tropical Medicine and Hygiene (ASTMH) in 1980.[2][14] He was awarded the society's Bailey K. Ashford Medal (1974),[15] Richard M. Taylor Award (1987)[16] and Walter Reed Medal (1993).[17] In 2005, ASTMH established the Robert E. Shope International Fellowship in Infectious Diseases in his memory.[9] The University of Texas Medical Branch named its biosafety level 4 laboratory, completed just before his death, The Robert E. Shope, M.D. Laboratory, and also set up a fellowship in his memory.[2][18] A symposium was held in his honour on March 18–21, 2004.[10]

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https://www.nytimes.com/2004/01/23/us/robert-shope-74-virus-expert-who-warned-of-epidemics.html?_r=1

2004-01-23-nytimes-robert-shope-74-virus-expert.pdf

By Stuart Lavietes / Jan. 23, 2004

Dr. Robert E. Shope, an expert on viruses who was the principal author of a highly publicized 1992 report by the National Academy of Sciences warning of the possible emergence of new and unsettling infectious illnesses, died on Monday in Galveston, Tex. He was 74.

The cause was complications of a lung transplant he received in December, said his daughter Deborah Shope of Galveston. Dr. Shope had pulmonary fibrosis, a disease of unknown origin that scars the lungs.

A professor of epidemiology at Yale for 30 years, Dr. Shope contended that the growth of world population, rapid international travel and the development of drug-resistant microbes and pesticide-resistant insects made worldwide epidemics more likely.

In his report, he also said health officials in the United States had grown complacent, believing that antibiotics and vaccines had conquered infectious diseases.

"We're vulnerable to something along the line of the 1918-1919 influenza pandemic that killed 20 million people worldwide," Dr. Shope said at a news conference announcing the report. "It's happened once; it can happen again."

The report recommended the development of a worldwide surveillance system to detect new diseases and prevent them from developing into epidemics. Had such a system been in place in the 1980's, Dr. Shope said, the spread of AIDS might have been limited.

The report's findings were also published as a book, "Emerging Infections: Microbial Threats to Health in the United States" (1992). Edited by Dr. Shope, Dr. Joshua S. Lederberg, a Nobel laureate, and Dr. Stanley C. Oaks Jr., it has become a standard reference on the topic.

The report also helped bring about a stronger network of disease detection laboratories in the United States, some authorities said. But, despite the World Health Organization's containment of SARS last winter, the worldwide system envisioned in the report, with laboratories conducting research in areas that have historically produced new viruses, has not been put into place, said Dr. Robert Tesh, a longtime colleague of Dr. Shope.

Dr. Shope, who received his undergraduate and medical degrees from Cornell, developed an expertise in viruses transmitted to people and domestic animals by rodents, mosquitoes and other biting, stinging insects. He helped discover hundreds of viruses, conducting investigations in Malaysia as an Army medical officer and in Brazil for the Rockefeller Foundation. At Yale, he led or participated in investigations of Rift Valley fever, Lassa fever, Venezuelan hemorrhagic fever and other diseases.

Working with Dr. Tesh, Dr. Shope also built the World Reference Center for Emerging Viruses and Arboviruses, a collection of some 5,000 samples.

Dr. Shope and Dr. Tesh joined the faculty of the University of Texas Medical Branch in Galveston in 1995, bringing the collection of viruses with them.

In 1997, Dr. Shope was invited to the White House with six other scientists to brief President Bill Clinton on global warming, which Dr. Shope said could accelerate the spread of infectious diseases because more germ-carrying mosquitoes would thrive in the warmer climate.

In the last two years, Dr. Shope worked on a Defense Department project to develop antidotes to viral agents that terrorists might use.

Robert Ellis Shope was born in Princeton, N.J., and grew up as a neighbor of Albert Einstein.

In addition to his daughter Deborah, Dr. Shope is survived by his wife, Virginia Shope, of Branford, Conn.; another daughter, Bonnie Rice of Belmont, Mass.; two sons, Peter and Steve, both of Newfields, N.H.; two brothers, Tom, of Ann Arbor, Mich., and Richard, of Hudson, Wis.; a sister, Nancy FitzGerrell of Boulder, Colo.; and six grandchildren.

Charles Noel Sibley (born 1899)

???

Worked for many years at United Fruit Company

Father - "WIlliam Peto Sibley"

See https://www.wikitree.com/wiki/Sibley-202

William Peto Sibley (1861 - abt. 1922)

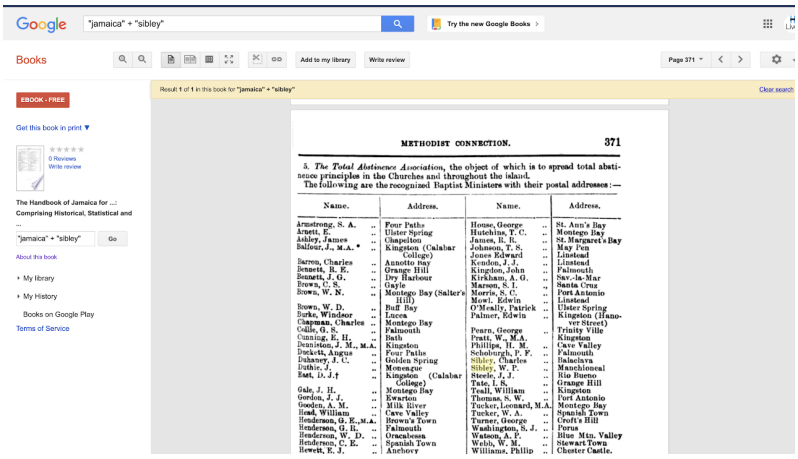
William Peto Sibley

Born 9 Dec 1861 in Mt Peto/Balaclava St Elizabeth Jamaica

Below - I think this is his fatehr, mentioned in the book https://books.google.com/books?id=oFU1AAAAIAAJ&dq=%22jamaica%22+%2B+%22sibley%22&source=gbs_navlinks_s

The Handbook of Jamaica for ...: Comprising Historical, Statistical and General Information Concerning the Island Compiled from Official and Other Reliable Records

U.S. Government Printing Office, 1891 - Jamaica



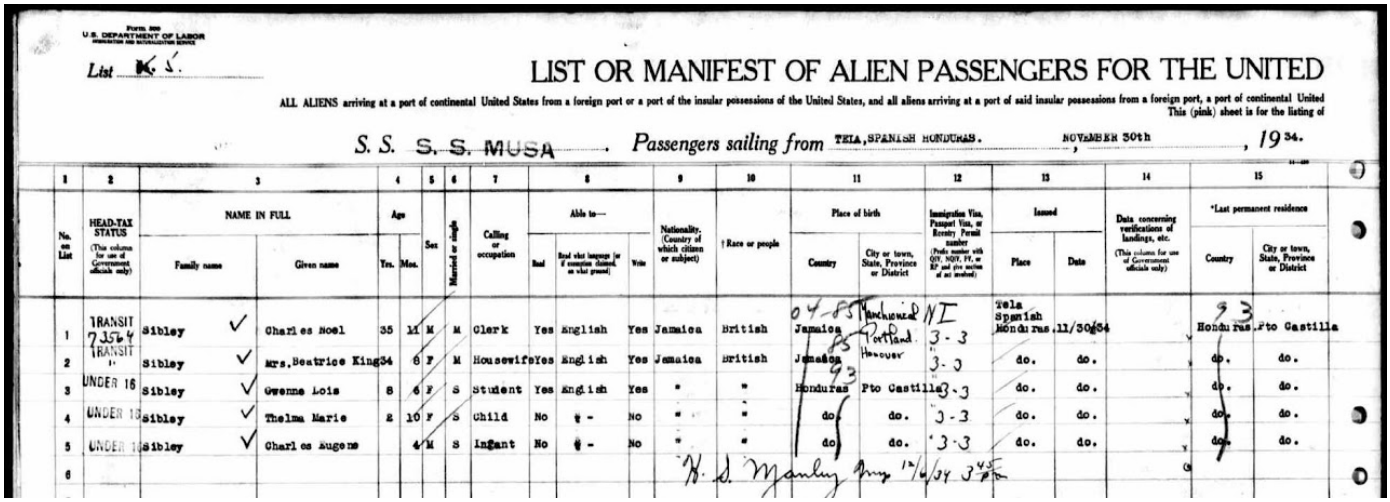
1934 (Dec 06) - ship log

https://www.ancestry.com/interactive/7488/NYT715_5582-0752?pid=2017801094&backurl=https://search.ancestry.com/cgi-bin/sse.dll?indiv%3D1%26dbid%3D7488%26h%3D2017801094%26tid%3D%26pid%3D%26usePUB%3Dtrue%26_phsrc%3DcLI1%26_phstart%3DsuccessSource&treeid=&personid=&hintid=&usePUB=true&_phsrc=cLI1&_phstart=successSource&usePUBJs=true&_ga=2.145219766.328052624.1592105006-967392348.1591972089

Full - 1934-12-06-ancestry-com-passenger-log-ss-musa-nyt715-5582-0752.jpg / https://drive.google.com/open?id=1YkB-9MEtKmnYRlPrbbxgIlicK3ovb2S_

Looks like his new son is "**Charles Eugene Sibley**"

The SS Musa - https://www.history.navy.mil/our-collections/photography/numerical-list-of-images/nhhc-series/nh-series/NH-89000/NH-89953.html



LIST OR MANIFEST OF ALIEN PASSENGERS FOR THE UNITED

ALL ALIENS arriving at a port of continental United States from a foreign port or a port of the insular possessions of the United States, and all aliens arriving at a port of said insular possessions from a foreign port, a port of continental United States, shall be listed on this manifest. This (pink) sheet is for the listing of

S. S. S. S. MUSA Passengers sailing from TELA, SPANISH HONDURAS. NOVEMBER 30th, 1934.

No. on List	HEAD-TAX STATUS	NAME IN FULL: Family name	NAME IN FULL: Given name	Age: Yrs.	Age: Mos.	Sex	Married or single	Calling or occupation	Able to read	Able to write	Nationality (Country of which citizen or subject)	†Race or people	Place of birth: Country	Place of birth: City or town, State, Province or District	Immigration Visa, Passport Visa, or Reentry Permit number	Issued: Place	Issued: Date	Data concerning verifications of landings, etc.	*Last permanent residence: Country	*Last permanent residence: City or town, State, Province or District
1	TRANSIT 7364	Sibley ✓	Charles Noel	35	11	M	M	Clerk	Yes	Yes	Jamaica	British	Jamaica	Kingston & Portland	3-3	Tela Spanish Honduras	11/30/34		Honduras	Pto Castilla
2	TRANSIT	Sibley ✓	Mrs. Beatrice King	34	6	F	M	Housewife	Yes	Yes	Jamaica	British	Jamaica	Portland Hanover	3-3	do.	do.		do.	do.
3	UNDER 16	Sibley ✓	Gwenne Lois	8	6	F	S	Student	Yes	Yes	"	"	Honduras	Pto Castilla	3-3	do.	do.		do.	do.
4	UNDER 16	Sibley ✓	Thelma Marie	2	10	F	S	Child	No	No	"	"	do.	do.	3-3	do.	do.		do.	do.
5	UNDER 16	Sibley ✓	Charles Eugene		4	M	S	Infant	No	No	"	"	do.	do.	3-3	do.	do.		do.	do.
6																				

W. J. Manley Insp. 12/6/34

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1957 (Sep 13) - Becomes US citizen

Full page - [HN00TC][GDrive]

Two Here Become U. S. Citizens

1957-09-13-the-marshall-news-messenger-texas-pg-6-b-clip-us-citizens

Dr. Dieste and C. N. Sibley Take Allegiance at Ceremony in Tyler

Two Marshall citizens joined some 170 million persons as citizens of the United States this week in a short ceremony in Judge Joe Sheehy's federal district court in Tyler.

Taking the allegiance of citizenship was a Marshall doctor and a retired fruit company employe.

The doctor, Antonio Dieste, lives at 2105 S. Garrett with Mrs. Dieste and three children and is chief surgeon at the Texas and Pacific Railway Employes Association hospital on W. Houston.

Dr. Dieste has been living in Marshall since 1951 and has been a resident of Texas since 1948. He is originally from Tampico, Mexico, and lived in Corpus Christi before moving to Marshall.

AMERICAN ALL TIME

Dr. Dieste said he was happy to actually become a citizen but that he felt he had been an American all the time.

Before coming to Marshall, he was surgical chief resident at Memorial Hospital in Corpus Christi. He received his BS and MD degrees at the University of Mexico Medical School, Mexico City.

Also taking the oath of citizenship was Charles Noel Sibley who came to Marshall three and one-half years ago.

Mr. Sibley, who lives with Mrs. Sibley and five children at 1309 Mobile, is retired from the United Fruit Co. A native of Jamaica, British West Indies, Mr. Sibley worked for the company for 39 years.

He said he spent most of his younger years in Central America working his way up through the company's "ranks" to become superintendent of material and supplies.

LIFE DIFFERENT

He explained that life in the United States is quite different from Life in Central America. "We saw many revolutions," he said. He said that one day the leaders of an uprising would be called rebels and the next day they would be the federal government.

He chose America after spending many vacations here. "I decided that when I retired I would settle in the United States. That became an ambition," he said.

Mr. Sibley met his wife while on a vacation trip in Santa Fe, N.M., in 1950.

They both say they wouldn't live anywhere else.

LEGAL NOTICE

THE STATE OF TEXAS

TO: Z. T. DAWSON, MARY ANN FOREMAN, TOMMIE BRYANT, JAMES DAWSON, EMMA DEAN, BESSIE GRANT, LILLIE BELL EVANS, ROBERT NICKERSON, JAMES EVANS, JR., and EMMA EVANS.

GREETING:

You are commanded to appear by filing a written answer to the Plaintiffs' Third Amended Original Petition at or before 10 o'clock A.M. of the first Monday after the expiration of 42 days from the date of issuance of this Citation, the same being Monday the 28th day of October, A. D., 1957, at or before 10 o'clock A.M., before the Honorable District Court of Harrison County, at the Court House in Marshall, Texas.

Said Plaintiffs' Third Amended Original Petition was filed on the 5th day of September, 1957.

The file number of said suit being No. 19,834.

The names of the parties in said suit are: Wilson Hart and wife, Essie Hart, as plaintiffs, and Mattie Heath and husband, Albert Heath; Margaret Dawson, a feme sole, David Dawson, Lola Riley, a feme sole, Lula Fagan and husband, Son Fagan; Willie Reed, Velma Reed, Cris Dawson Davis, A. W. Langston, Lessie B. Alonzo and husband, George Alonzo; Z.T. Dawson, Lewis Hart, Lillie Bell Evans, Adam Evans, Mary Ann Foreman, Tommie Bryant, Silvia Foreman, and husband, John Foreman; Milo Dawson II, Jim Hart, John Henry Dawson, James Dawson, Emma Dean, a feme sole, Harrison Dawson, Maggie H. Jones, a feme sole, Bessie Grant, Charity Hart Sterling and husband, David Sterling, C. M. Pope, Jr., Humble Oil & Refining Company, a corporation; Robert Nickerson, Claude Bateman, Jr., James Evans, Jr., Emma Evans; Trice Production Company, a corporation; Hayward Hart, Betharene Riter and husband, Riter; Lewis L. Hart, Shirley Jean Hart, a feme sole, Lola May Hart, a feme sole, Gracie Lee Jackson and husband Jackson; Louise Riter and husband, Riter; and Dorothy Jean Riter and husband, Riter, as Defendants.

The nature of said suit being substantially as follows, to wit:

This suit is in the nature of a trespass to try title, wherein Wilson Hart and wife, Essie Hart, are the owners of the following described tract of land in Harrison County, Texas, to-wit:

Being the South 73 acres, more or less, of a 120 acre tract of land in the M. Lindsey Survey, Abst. 393, and the Wm. Tipton Survey, Abst. 712, and being the same 120 acres of land conveyed by James Wightman to David Lester, by deed dated 3-2-1877, recorded in Vol. 9, at page 93 of the Deed Records of Harrison County, Texas, situated in the SWC of a 565 acre survey made for Mary Wightman, by virtue of deed from J. J. Craven, dated in 1852, being out of the SWC of the M. Lindsey Survey, and extending to the SBL of the Wm. Tipton Survey, and having for its boundaries the following identified lands:

Bounded onthe East by a 140 acre tract sold to Alfred Johnson;

Bounded on the North by a 100 acre tract of land sold to Lyman Hawood;

Bounded on the South by the South Boundary line of the Wm. Tipton Survey, Abst. No. 712;

Bounded on the West by the WBL of the said 565 acre survey;

and were the owners and entitled to the possession of said tract of land on the 1st day of January, 1957.

That on or about the 1st day of January, 1957, the defendants unlawfully entered upon said premises and ejected and dispossessed plaintiffs of such premises, and are now unlawfully withholding the possession of said premises from the plaintiffs.

Plaintiffs further allege that they have claimed the land above described under deed duly registered, they have had and held peaceable and adverse possession of the land and tenements above described, cultivating, using and enjoying the same, and paying all taxes thereon, for a period of more than five years after defendants' cause of action accrued, if any, and before the commencement of this suit; and this they are ready to verify.

Plaintiffs further allege that they have claimed the land above described, and have had and held continuous, peaceable and adverse possession of said land, cultivating, using and enjoying the same for the period of more than ten years after the defendants' cause of action accrued, if any, and before the commencement of this suit, and this they are ready to verify.

Wherefore, premises considered, plaintiffs pray that the defendants be cited to appear and answer herein; that on final hearing of this suit, plaintiffs have and recover of and from the defendants the right, title and interest which is asserted by said defendants, that plaintiffs have a writ of possession; that writ of restitution issue; that plaintiffs recover all costs of suit, and for general relief.

If this Citation is not served within 90 days after the date of its issuance, it shall be returned unserved.

Issued this 10th day of September, A.D. 1957.

Given under my hand and seal of said Court, at office in Marshall, Texas, this the 10th day of September, A. D. 1957.

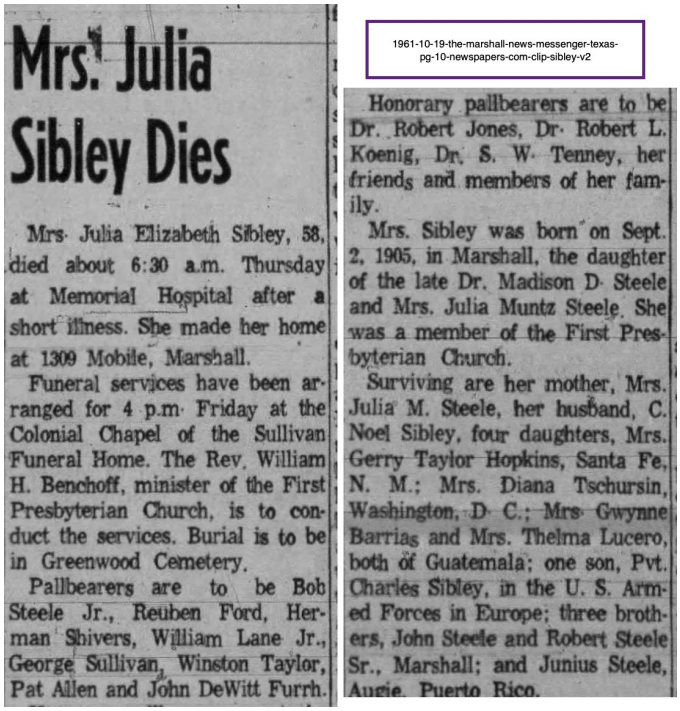
JACK A. MOORE, Clerk
District Court Harrison County, Texas
By: PATTY GREER Deputy

Sept. 13, 20, 27, and Oct. 4

[HN00TC][GDrive]

1961 (Oct 19) - Passing of wife Mrs. Julia Elizabeth Sibley

source, unmodified image - [HN00T7][GDrive]



Mrs. Julia Sibley Dies

Mrs. Julia Elizabeth Sibley, 58, died about 6:30 a.m. Thursday at Memorial Hospital after a short illness. She made her home at 1309 Mobile, Marshall.

Funeral services have been arranged for 4 p.m. Friday at the Colonial Chapel of the Sullivan Funeral Home. The Rev. William H. Benchoff, minister of the First Presbyterian Church, is to conduct the services. Burial is to be in Greenwood Cemetery.

Pallbearers are to be Bob Steele Jr., Reuben Ford, Herman Shivers, William Lane Jr., George Sullivan, Winston Taylor, Pat Allen and John DeWitt Furrh.

1961-10-19-the-marshall-news-messenger-texas-pg-10-newspapers-com-clip-sibley-v2

Honorary pallbearers are to be Dr. Robert Jones, Dr. Robert L. Koenig, Dr. S. W. Tenney, her friends and members of her family.

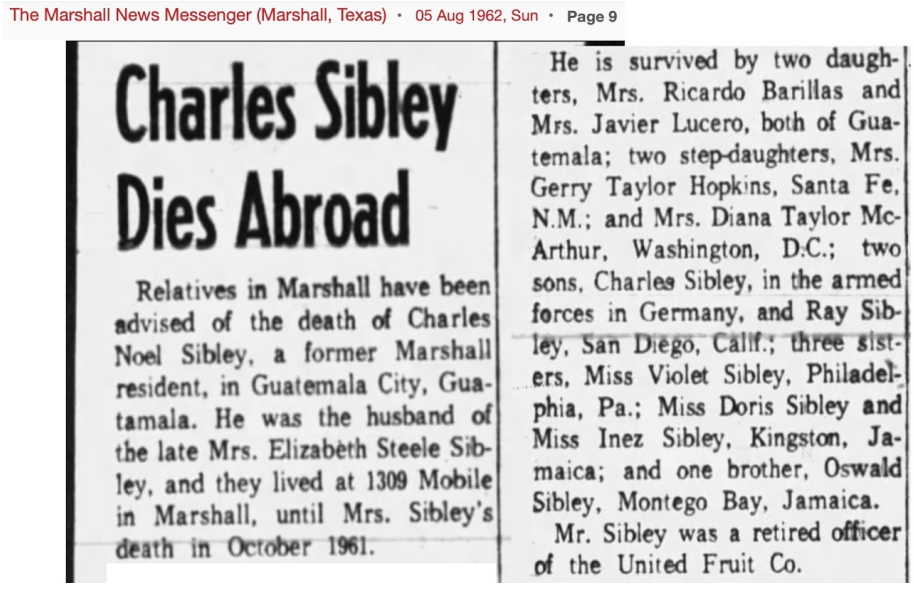
Mrs. Sibley was born on Sept. 2, 1905, in Marshall, the daughter of the late Dr. Madison D. Steele and Mrs. Julia Muntz Steele. She was a member of the First Presbyterian Church.

Surviving are her mother, Mrs. Julia M. Steele, her husband, C. Noel Sibley, four daughters, Mrs. Gerry Taylor Hopkins, Santa Fe, N. M.; Mrs. Diana Tschursin, Washington, D. C.; Mrs. Gwynne Barrias and Mrs. Thelma Lucero, both of Guatemala; one son, Pvt. Charles Sibley, in the U. S. Armed Forces in Europe; three brothers, John Steele and Robert Steele Sr., Marshall; and Junius Steele, Aguie, Puerto Rico.

[HN00T8][GDrive]

1962 (Aug 03) - Charles Noel Sibley dies

Full page - [HN00TE][GDrive]



The Marshall News Messenger (Marshall, Texas) · 05 Aug 1962, Sun · Page 9

Charles Sibley Dies Abroad

Relatives in Marshall have been advised of the death of Charles Noel Sibley, a former Marshall resident, in Guatemala City, Guatamala. He was the husband of the late Mrs. Elizabeth Steele Sibley, and they lived at 1309 Mobile in Marshall, until Mrs. Sibley's death in October 1961.

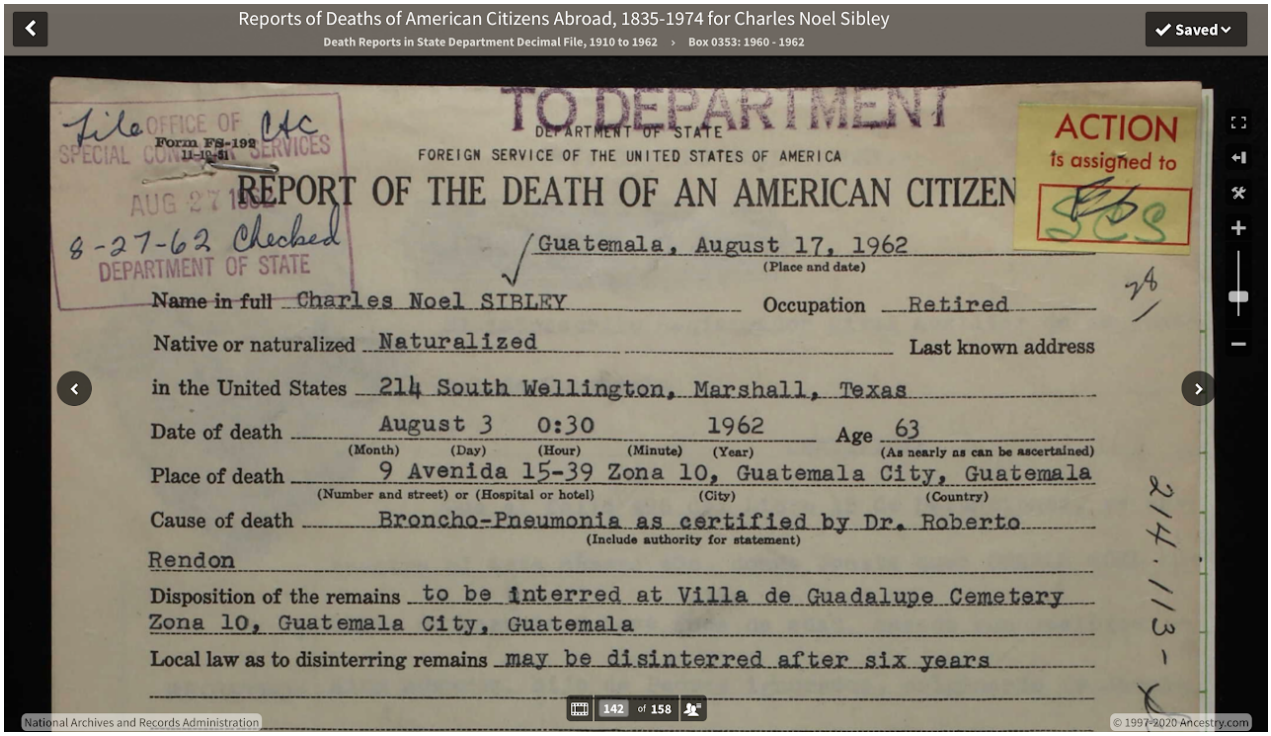
He is survived by two daughters, Mrs. Ricardo Barillas and Mrs. Javier Lucero, both of Guatemala; two step-daughters, Mrs. Gerry Taylor Hopkins, Santa Fe, N.M.; and Mrs. Diana Taylor McArthur, Washington, D.C.; two sons, Charles Sibley, in the armed forces in Germany, and Ray Sibley, San Diego, Calif.; three sisters, Miss Violet Sibley, Philadelphia, Pa.; Miss Doris Sibley and Miss Inez Sibley, Kingston, Jamaica; and one brother, Oswald Sibley, Montego Bay, Jamaica.

Mr. Sibley was a retired officer of the United Fruit Co.

[HN00TF][GDrive]

Death certificate below -

Research comment - "The relationship seems to be downplayed, but Diana Lee Taylor MacArthur's mother was eventually found, and it opens up a whole array of network relationships. She was born Julia Elizabeth Steele in Marshall, Texas. The elusive husband turns out to be Charles Noel Sibley of Jamaica."



2011 - Son Charles Eugene Sibley Passes

See https://subscriber.thenewsenterprise.com/content/charles-eugene-sibley-0

Charles Eugene Sibley

Submitted by Mary Alice Holt on Wed, 06/22/2011 - 1:40pm Army veteran Elizabethtown KY Honduras Obituaries

Charles Eugene Sibley, 76, of Elizabethtown, died Tuesday June 21, 2011, at the home of his daughter-in-law.

He was a native of Port Castilla, Honduras, and served in the United States Army.

He is preceded in death by his parents, Charles N. and Beatrice Sibley; and a son, Joseph Sibley.

He is survived by his daughter, Caroline Sibley; a stepdaughter, Alice; two stepsons, Ed and Bill; a sister, Thelma Lucero of Guatemala City, Guatemala; seven grandchildren and four great-grandchildren.

A memorial service was held Thursday, June 23, at Brown Funeral Home in Elizabethtown.

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Housatonic

Charles Gald Sibley (born 1917)

Wikipedia Charles Sibley

Born - August 7, 1917 [HK0024][GDrive]

Biography - See http://www.nasonline.org/publications/biographical-memoirs/memoir-pdfs/sibley-charles.pdf

Saved wikipedia article on Charles Sibley

See [HK0024][GDrive]

Charles Sibley

Charles Gald Sibley (August 7, 1917 – April 12, 1998) was an American ornithologist and molecular biologist. He had an immense influence on the scientific classification of birds, and the work that Sibley initiated has substantially altered our understanding of the evolutionary history of modern birds.

Sibley's taxonomy has been a major influence on the sequences adopted by ornithological organizations, especially the American Ornithologists' Union.

Charles Sibley is of no known family relation to renowned bird artist David Sibley.

Life and work

Educated in California (A.B. 1940; Ph.D. 1948 in Zoology, University of California, Berkeley. Minor fields: Paleontology, Botany), he did his first fieldwork in Mexico in 1939 and 1941, then in Solomon Islands, Bismarck Archipelago, New Guinea, and the Philippines during World War II while on leave from the U.S. Navy, in which he was Ensign to Lieutenant in the Communications and Medical Service Corps. He was based for much of the war at Emirau Island, in what is now New Ireland Province of Papua New Guinea. His first job after college was from 1948 to 1949 as instructor in Zoology and Curator of Birds, University of Kansas, followed from 1949 to 1953 as Assistant Professor of Zoology, San Jose State College, California. From 1953 to 1965 he was Associate Professor then Professor of Zoology and director of the ornithological laboratory at Cornell. Between 1965 and 1986 he was Professor of Biology and William Robertson Coe Prof. of Ornithology, Dept of Biology; and Curator of Birds at the Peabody Museum at Yale. From 1986 to 1992 he was Dean's Professor of Science and Professor of Biology at San Francisco State University, and from 1993 until his death he was Adjunct Professor of Biology at Sonoma State University.

Sibley developed an interest in hybridisation and its implications for evolution and taxonomy and, in the early 1960s he began to focus on molecular studies: of blood proteins, and then the electrophoresis of egg-white proteins.

By the early 1970s Sibley was pioneering DNA-DNA hybridisation studies, with the aim of discovering, once and for all, the true relationships between the modern orders of birds. These were highly controversial to begin with, and regarded by colleagues as anything from snake-oil salesmanship on the one hand to Holy Writ on the other.[1] With the passage of time and ever-improving laboratory methods, the balance of scientific opinion has shifted closer to the latter interpretation, though the picture is by no means clear-cut and simple. Some of Sibley's results – such as the close relationship of galliform birds and waterfowl and their distinctness from other neognaths – have been verified. Other results such as the inclusion of diverse groups into the Ciconiiformes have turned out to be very much in error.

Sibley became estranged from his American co-workers for a time and corresponded with overseas colleagues extensively. But by the mid to late 1980s, Sibley's ongoing work had reversed the trend. His revised phylogeny of living birds in the light of DNA analysis, published in various forms in 1986–1993 was both controversial and highly influential.

In 1986 he was elected a Member, National Academy of Sciences, U.S.A. In 1988 Sibley and Jon Ahlquist were awarded the Daniel Giraud Elliot Medal from the National Academy of Sciences.[2] He was elected President of the International Ornithological Congress in 1990. His landmark publications, *Phylogeny and Classification of Birds* (written with Ahlquist) and *Distribution and Taxonomy of Birds of the World* (with Burt Monroe) are among the most-cited of all ornithological works, the former setting out the influential Sibley-Ahlquist taxonomy.

Acid tongue

During the 1970s, Sibley was a highly controversial figure in ornithological circles, for both professional and personal reasons. His friend Richard Schodde, writing Sibley's obituary in *Emu*, commented that he was:

... a rebel with a cause. In argument he would bulldoze through, brooking no contradiction. Critics were baited with an acid tongue, and, in fits of temper, he could be a cruel mimic. In short, lesser mortals were not tolerated easily and, as has been said by others, collegiate friends were few. ... I never found him malicious or vindictive, even against those who had tried to bring him down. Nor was he particularly sophisticated or cultured, just a big, up-front Yank possessed by 'the big picture' in avian phylogeny and convinced of the righteousness of his cause and invincibility of his intellect.[3]

Partly due to personality conflicts, Sibley had few long-term collaborations with other scientists, with the notable exception of Jon Ahlquist. Nonetheless, he was effective in persuading others to provide him with the blood, tissue, and egg white samples which were the key to his work.[1]

Other ornithological Sibleys

Charles Gald Sibley is of no known family relation to renowned bird artist David Sibley, although the families knew each other: one of Charles' daughters babysat David, and David's father Fred worked for Charles at Yale.

There is some family resemblance, and Charles did a fair amount of genealogical research but could only establish that any relationship was no closer than fourth cousin.

Here is where we take note of how Wikipedia sets a narrative of things they don't want you to know. It states there is no known connection to bird artist David Sibley. So we go searching for David Sibley.

By Lynn Cline
The New Mexican

David Allen Sibley began observing birds when he was just knee-high to a young stork.

He had no idea his book, *The Sibley Guide to Birds*, published late in 2000 by Alfred A. Knopf, would take off in such graceful flight, just like a California condor.

The comprehensive field guidebook on North American birds, written and illustrated by Sibley and published under the auspices of the National Audubon Society, already has drawn praise as wide as the sky.

Journalists writing for the heavies — *The Wall Street Journal*, *The New York Times Book Review*, *Time Magazine* and *The New Yorker* — have commended Sibley's magnum opus and even drawn comparisons to ornithologists John James Audubon (1785-1851) and Roger Tory Peterson (1908-1996).

"I laugh every time I read (that) because it's something my publicist came up with," Sibley said in a soft-spoken voice, referring to the comparisons during a phone interview from his home in Concord, Mass. "Lots of people came up with it, but my publicist came up with it independently."

Sibley's guide is deserving of the praise. With more than 6,600 illustrations of 810 species and 330 regional populations, the book is a small encyclopedia.

Sibley's illustrations depict nearly every species in flight. He also includes voice descriptions as well as measurements indicating length, wingspan and weight. Best of all, he includes information for bird-watchers at all levels.

"In all situations, you must first consider the welfare of the birds," Sibley writes in the book's introduction. "Avoid making a disturbance, especially at roosting and nesting sites. Tread lightly and encourage others to do the same. Be respectful and helpful to others, especially to nonbirders (who may not appreciate someone trampling lawns or blocking traffic just to see a bird)."

That's good advice, especially in Santa Fe where birds live wing-to-neck with flocks of tourists and residents.

Sibley travels to New Mexico for two birding book events on Thursday, April 26. The first, a booksigning, takes place from 2 to 3 p.m. Thursday, April 26, at Collected Works Bookstore in Santa Fe. The second event, a talk and signing, takes place at 7 p.m. at Bound to be Read bookstore in Albuquerque.

Sibley's guidebook arrives at a time when bird watching is rumored to be the second most popular recreational sport in the country — behind golf or gardening, depending on whom you ask. According to *The Wall Street Journal*, birding attracts 42 million people in America.

In New Mexico, where lots of bird-watchers flock, approximately 450 species of birds exist. The least commonly seen birds in Northern New Mexico include the Swainson's Hawk, according to Lauren Parmeler, director of education at Randall Davey Audubon Center, which serves as the state office of the National Audubon Society. "Swainson's Hawk is a big migratory bird that migrates all the way to Argentina," Parmeler said. That's a bird most people don't see in Santa Fe. You have to go out and look for it."

Swainson's Hawk, according to Sibley, is a buteo, a species marked by flight characteristics and extensive variation in plumage and shape. Swainson's Hawk, the most slender of buteos, has a relatively long tail, long and fairly pointed wings and emits a long, high-pitched scream.

Sibley, who has spent 25 years amassing his field guide, basically grew up with birds. He is the son of professional ornithologist David Sibley, who was well-connected in the field. In fact, David Sibley spent his career competing with another bird expert named Charles Sibley.

"Charles Sibley was well-known," Sibley said. "He did research that got a lot of publicity, so a lot of people had heard the name Sibley associated with ornithology."

Sibley said his father and Charles Sibley even ended up working in the same department at Yale University, which caused some confusion in the public as to which Sibley had achieved which advances in the birding field.

Illustrations of a Sabine's gull, top, and a great blue heron, left, from "The Sibley Guide to Birds," above

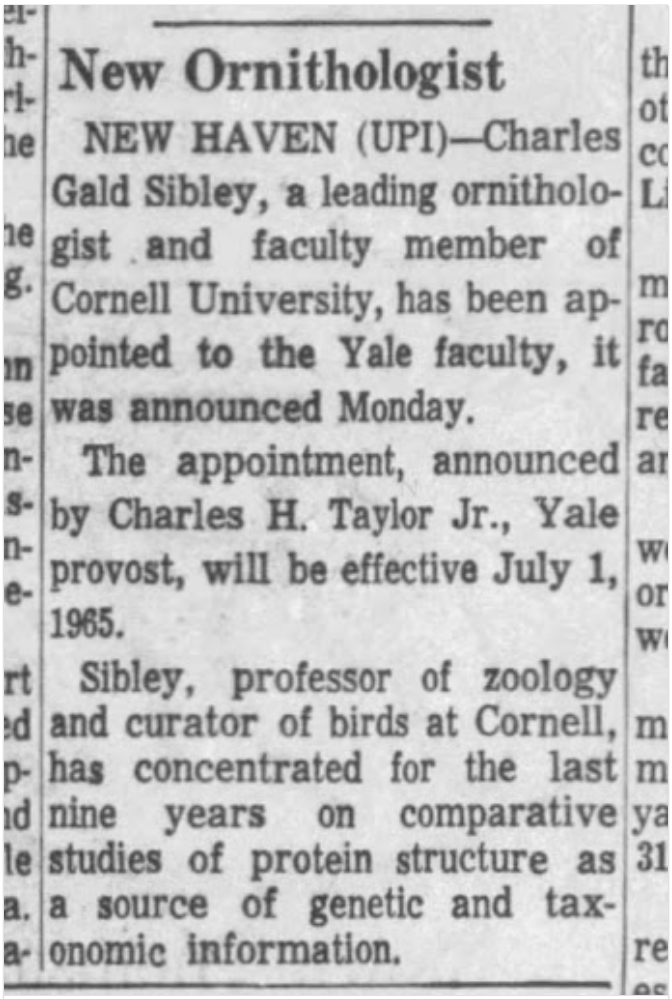
Even though Sibley, who was born in 1961 in Plattsburgh, N.Y., has spent most of his life roaming the country, watching and drawing birds, he hasn't kept his head in the clouds. He knew at an early age that he wanted to devote his life to the fine-feathered friends.

continued on Page 46

Charles/Fred/David Sibley - Newspapers.com

Clipping found in The Santa Fe New Mexican in Santa Fe, New Mexico on Apr 20, 2001. Charles/Fred/David Sibley

So this got us to thinking about the most famous bioweapons guy, Dr. Sidney Gottlieb. Born August 3, 1918 and died in the same year 1998. That is too close. Is Gottlieb a made up spook name? Are they all the same person?



New Ornithologist

NEW HAVEN (UPI)—Charles Gald Sibley, a leading ornithologist and faculty member of Cornell University, has been appointed to the Yale faculty, it was announced Monday.

The appointment, announced by Charles H. Taylor Jr., Yale provost, will be effective July 1, 1965.

Sibley, professor of zoology and curator of birds at Cornell, has concentrated for the last nine years on comparative studies of protein structure as a source of genetic and taxonomic information.

Charles Gald Sibley - Newspapers.com

Clipping found in Hartford Courant in Hartford, Connecticut on May 18, 1965. Charles Gald Sibley

Seems interested in genetics. And there's the Taylor surname again. In fact, the Sibley's and Taylors have been marrying quite frequently for a couple of hundred years.

FRANCES L. SIBLEY

SANTA ROSA, CA — Frances L. Sibley died Sunday June 3, 2001 in Santa Rosa, CA. For 56 years, Frances was the beloved wife of the late Charles G. Sibley. She was the loving mother of Barbara of Cambridge, MA, Carol and her husband, Tom of Forest Grove, OR and Dorothy Wilson and her husband, Edward of Portland, OR and the devoted grandmother of Megan and Lin Wilson of Portland, OR. Her sister, Elizabeth Selix of Sonoma, CA, as well as 3 nieces and a nephew, all of California, also survive her.

Frances graduated from the University of California, Berkeley in the class of 1942, and was awarded an MS in home economics in 1945. She lived with her husband and family in Ithaca, New York from 1954-1965 and in Guilford, CT from 1965-1986. While in Guilford, Frances was active in the Leete's Island Garden Club and served as its president from 1982-84. In 1986 she and her husband retired to Tiburon, CA and in 1993 they moved to Santa Rosa. Frances was a weaver and member of the Handweavers' Guild of Connecticut and the Tamalpais Weavers' Guild.

Frances will be remembered as a kind and loving person, always facing the challenges of life with courage and good humor. Family and friends will celebrate her life at a future date. Arrangements are under the care of the Daniels Chapel of the Roses Funeral Home, (707)525-3730.■

Obituary for FRANCES L. SIBLEY - Newspapers.com

Clipping found in The Ithaca Journal in Ithaca, New York on Jun 9, 2001. Obituary for FRANCES L. SIBLEY

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Housatonic

John William Sidgmore (born 1951)

Wikipedia John W. Sidgmore

Middle name is William - [HN01CY][GDrive]

Saved Wikipedia (2020, Dec 17) - John W. Sidgmore

Source : [HK004A][GDrive]

John W. Sidgmore (April 9, 1951 – December 11, 2003) became the Chief Executive Officer of [**UUNET Technologies, Incorporated**] in June 1994. UUNET was purchased by [**MFS Communications Company, Incorporated**], later taken over by WorldCom, which eventually bought MCI. He later became WorldCom's Chief Operations Officer. **Sidgmore worked to revive WorldCom after disgraced CEO Bernard Ebbers left**. Sidgmore was instrumental in beginning to turn around the failed company, revealing to federal investigators an $11 billion accounting fraud, left over from Ebbers' management of the company.

John Sidgmore died suddenly on December 11, 2003 at the age of 52 from kidney failure. He is survived by his wife Randi, and their son, Michael.[1]

Early life

A native of Spring Valley, New York, he attended the State University of New York at Oneonta, majoring in economics.[2]

EVIDENCE TIMELINE

1974 (Feb 05) - Engagement

Note - Middle name "William"

Full newspaper page : [HN01CX][GDrive]

THE JOURNAL-NEWS, TUESDAY, FEBRUARY 5, 1974 7A

Parents announce daughters' engagements

Murray-Sidgmore

Miss Jamie Lynn Murray

Mr. and Mrs. Richard Murray of Spring Valley announce the engagement of their daughter, Miss Jamie Lynn Murray of Spring Valley, to John William Sidgmore of Spring Valley.

The bride-elect was graduated from Ramapo Senior High School in 1969, Rockland Community College in 1971 and SUNY at Oneonta in 1973 with a B.S. degree in elementary educational psychology. She is employed by East Ramapo Central Schools, Spring Valley.

Sidgmore is the son of Mr. and Mrs. John H. Sidgmore Jr. of Spring Valley. He was graduated from Ramapo Senior High School in 1969, Rockland Community College in 1971 and SUNY at Oneonta in 1973 with a B.A. degree in economics. He is employed by Rockwell International, Springfield, N.J.

The couple will be married in May in Spring Valley.

[HN01CY][GDrive]

Dec. 12, 2003 (Dec 12) - NYTimes - "John Sidgmore, 52, Dies; Headed WorldCom"

By Barnaby J. Feder / Source : [HN01CW][GDrive]

John W. Sidgmore, a leading Internet entrepreneur who became chairman and chief executive of the scandal-ridden WorldCom last year when its founder, Bernard J. Ebbers, was forced to resign, died yesterday of kidney failure, according to a statement issued by his family. He was 52 and lived in Potomac, Md.

Mr. Sidgmore became a senior executive at WorldCom in 1996 when it swallowed [**MFS Communications Company, Incorporated**] in a $14 billion deal. That takeover occurred shortly after Mr. Sidgmore arranged to merge [**UUNET Technologies, Incorporated**], the Internet networking company he ran, with MFS.

Initially, he and Mr. Ebbers worked closely together, although the compact, rock-'n'-roll-loving Mr. Sidgmore, who was a fixture in Washington, and the towering Mr. Ebbers, who operated out of Clinton, Miss., made a study in contrasts.

Mr. Sidgmore had built UUNet into the dominant carrier of Internet traffic. He helped WorldCom maintain a huge share of that traffic even as demand exploded and numerous other carriers spent billions of dollars to compete. He also played a central role in WorldCom's 1999 takeover of MCI, which made it the second-largest long-distance phone company after AT&T.

That same year, though, Mr. Sidgmore had a falling-out with Mr. Ebbers that began when Mr. Ebbers killed a deal Mr. Sidgmore had negotiated to acquire Nextel, a wireless phone company. He played little role in day-to-day operations for more than two years until Mr. Ebbers was forced to resign in April 2002.

Mr. Sidgmore spent much of his time advising or helping to manage start-up technology companies in the Washington area.

Mr. Sidgmore's plans to rescue WorldCom were sidetracked as evidence mounted that the company had been involved in one of the largest accounting frauds in history. By late July, less than three months after Mr. Sidgmore took over, his task became leading the company into the largest bankruptcy reorganization ever.

Mr. Sidgmore tenaciously fought critics who advocated that WorldCom be broken up in bankruptcy. He maintained his wry sense of humor, which had helped make him one of the industry's most well-liked executives. In a statement yesterday, WorldCom said that he had had a profound positive effect on its employees.

Mr. Sidgmore was never charged with any misconduct, but as the scope of WorldCom's crisis widened, so did pressure from investors and regulators for a more thorough break with the past. Michael D. Capellas, the executive who led Compaq into its merger with Hewlett-Packard, succeeded him a year ago.

"He created the backbone of the Internet," said Frank Dzubeck, president of Communications Network Architects, a consulting firm in Washington. "It was made up of islands until he put it together at UUNet to link the various service providers. It's unfortunate that he is going to be better remembered for the end of his career."

John William Sidgmore was born April 9, 1951, in Suffern, N.Y. Most of his early business career was spent with General Electric Information Systems, where he rose through the management ranks before leaving in 1989 to take on the challenge of rescuing Intellicom Solutions, a troubled computer services company. The company was sold to the Computer Sciences Corporation in 1991.

Mr. Sidgmore's rise to prominence began when he joined UUNet in 1994 and focused it on providing Internet service to businesses. A year later, he took it public in one of 1995's most successful stock sales.

Mr. Sidgmore is survived by his wife, Randi, and his son, Michael, both of Potomac; his father, John; a brother, Michael; and a sister, Jean.

2003 (Dec 11) - Former WorldCom CEO John Sidgmore dies at 52

https://www.bizjournals.com/washington/stories/2003/12/08/daily32.html

By Jeff Clabaugh – Staff Reporter

Dec 11, 2003, 4:33pm EST Updated Dec 11, 2003, 5:04pm EST

John Sidgmore, the WorldCom executive elevated to CEO when Bernie Ebbers was ousted last year, has died at age 52.

A statement says Sidgmore died from complications associated with kidney shutdown presumptively related to acute pancreatitis.

Sidgmore took over as CEO shortly before WorldCom first announced it had uncovered accounting irregularities and eventually filed for bankruptcy protection. He remained chief executive during the company's search for a permanent boss and stepped down last December when former Hewlett Packard president Michael Capellas was brought on board.

Sidgmore, previously chief executive of UUNet, led UUNet's $2 billion merger with MFS Communications and served as president of the combined companies. WorldCom later acquired MFS in a $15 billion deal, and named Sidgmore vice chairman and chief operations officer.

WorldCom issued a statement late Thursday praising Sidgemore as a leader. "He was a true Internet visionary, leader and friend who had an uncanny ability of bringing joy into people's lives. We celebrate John's entrepreneurial spirit that will remain with us going forward."

Sidgmore was widely considered an Internet pioneer and recognized as one of the most influential communications executives in the country. He is survived by his wife, Randi; son, Michael; and dog, Dewey.

The family says a funeral will be held Sunday morning, with details to be announced.

DEC. 14, 200312 : Los Angeles Times - "John Sidgmore, 52; Helped Reveal WorldCom Scandal"

[HN01GU][GDrive]

John Sidgmore, 52, the WorldCom executive who helped reveal the accounting troubles that led to the biggest bankruptcy filing in U.S. history, died Thursday of complications associated with acute pancreatitis, a family spokesman announced.

A resident of Potomac, Md., Sidgmore was named president of WorldCom in April 2002, when the firm's founder, Bernard Ebbers, was forced to resign. Sidgmore quickly disclosed the company's accounting problems. He resigned last December but continued to work with WorldCom as a consultant.

Sidgmore had been vice chairman of the board when the company was involved in an accounting shell game to make it appear more profitable, but he said in July 2002, soon after the bankruptcy declaration, "I haven't been involved in the direct operations of the company in several years."

Earlier that month, he had expressed optimism about the firm, yet also apologized for its "past transgressions" and vowed to cooperate as the government investigated.

"We want the bad guys exposed," Sidgmore said at a news conference. "We want the bad guys punished." The Securities and Exchange Commission had filed civil fraud charges a week earlier against WorldCom after the company disclosed that it had improperly accounted for nearly $4 billion in expenses, thus inflating its earnings. The news sent the company's stock plummeting below a dime.

Sidgmore was born in Suffern, N.Y. He earned a bachelor's degree in economics from the State University of New York in 1973 and spent most of his early business career with General Electric Information Systems.

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Silicon Beach Communications Inc.

http://beach.silcom.com/www/about/index.shtml

Who We Are

Communications Without Compromise

Silicon Beach Communications is a full service communications provider integrating Internet, voice, and data solutions. As an Integrated Communications Provider, the Company has a broad range of programs for individuals, growing businesses and major corporations. Our portfolio of Internet, telecommunications, and advanced network services are marketed through value-added resellers (VARs), independent agents, and internal direct-sales professionals. Silicon Beach delivers and supports its services through its Business Solutions Group and Consumer Solutions Group, backed by a complete Technical Support Department and a 24-hour network operations center.

Silicon Beach was founded in early 1994 to fulfill the region's burgeoning need for quality Internet service, and rapidly grew to be the largest, and best regional Internet Service Provider exclusively focused on the Central Coast. **A merger with NetLojix Communications in 1996** allowed the company to diversify its product offering with voice and data connectivity services, and become a full-service Integrated Communications Provider. Silicon Beach now offers a complete suite of communications products and services for individuals and businesses.

https://www.newswire.com/news/zomongo-tv-corp-selects-internet-pioneer-frank-dziuba-to-oversee-the-2898991

ZOMONGO.TV CORP selects Internet pioneer Frank Dziuba to oversee the continued expansion and technological advancement of Zomongo's network and software platforms.

J. O. Ostrowski, President and CEO of the USA & Canadian based ZOMONGO entities, announced the appointment of international internet communications expert Frank Dziuba as Chief Technology Officer.

PRESS RELEASE MAR 31, 2016

March 31, 2016 (Press Release) - Frank Dziuba, a U.S. Internet software and services expert, will serve as Chief Technology Officer for Zomongo.TV, ensuring the company can meet and bolster its plans for global expansion.

Mr. Dziuba' s list of accomplishments makes him perfectly suited to advance Zomongo's suite of communication products including ad streaming, digital advertising and mobile application development.

As a pioneer and entrepreneur in the early days of the World Wide Web, Mr. Dziuba founded an Internet Service Provider, "Silicon Beach Communications", in Santa Barbara, California in 1994. His ISP grew to be the largest in the central coast and was later acquired by Netlojix communications. During that time he also developed the first Internet auction dedicated to selling art and numismatics.

Mr. Dziuba provided consulting to Genuity Networks, a subsidiary of Bechtel and now owned by Level 3 Communications, and was integral in their deployment of their national Internet infrastructure. He worked with Cisco and the United Nations to build and host the 'Netaid.org' (now Mercy Corps) donations website after the Netaid live video concert event of October 9, 1999. **Later, working with UltraDNS, (now owned by Neustar), he designed the first implementation of their secure 'Enterprise DNS' Solution for large, secure, enterprise level corporations targeting fortune 1000 companies.**

More recently, Mr. Dziuba built a completely automated web based system for a customer self-managed teleconference service. This service allowed customers to call a toll free number and have as many as 300 callers in one audio conference. Recording calls and downloading the recordings was also automated. The web interface allowed the customer to see reports, billing and management of their conference codes on bridges positioned around the U.S. using secured communications.

Jeffrey Taylor, Zomongo's Chief Operations Officer stated "Frank brings to us over 30 years of technological achievement and groundbreaking ideas related to Internet communications and program development. We are excited to have Frank on board and feel he augments our management team and will effectively direct our efforts to create products and services that help companies with their marketing endeavors."

Housatonic

William Hunter Simpson (born 1926)

Associations

- Mary Maxwell Gates (born 1929) (Both were regents at the University of Washington at thee same time)
- Gordon Calvin Culp (born 1926) (Regent, University of Washington)

[HL005M][GDrive]
University of Washington Regents, 1984. Left to right Robert Philip, Gordon Culp, Mary Gates, UW President William Gerberding, W. Hunter Simpson, Herman Sarkowsky, Edward Carlson, Janet Skadan

https://archive.seattletimes.com/archive/?date=20060122&slug=simpsonobit22m

2006-01-22-seattle-times-obituary-simpsons-giving-spirit-larger-than-life.pdf

Obituary | Simpson's giving spirit was "larger than life"

Jan 22, 2006

W. Hunter Simpson

By Tan Vinh

Seattle Times staff reporter

W. Hunter Simpson, one of Seattle's top philanthropists and a former executive who is credited with starting the four-day workweek in Western Washington, died Friday night at Swedish Medical Center.

The cause was heart failure, his family said Saturday. Mr. Simpson was 79.

For much of the 1980s and '90s, Mr. Simpson was often at the top of every Seattleite's list when a volunteer was needed for advisory boards, election campaigns or to donate money. The Mercer Island millionaire was the former president and chief executive officer of [Physio-Control Corporation], maker of heart defibrillators and other heart and blood-pressure monitoring equipment.

Mr. Simpson, who joined [**Physio-Control Corporation**] in 1966 after 17 years as an IBM sales-and-marketing executive, quickly turned the Redmond-based company into a powerhouse and cultivated a loyal following among his employees, whom he referred to as "team members."

His idea of the 10-hour-day, four-day workweek remains a common practice. In 1985, his company was included in the book, "The 100 Best Companies to Work for in America."

"He was larger than life," said William Gerberding, former president of the University of Washington, where Mr. Simpson served on the Board of Regents from 1981-93. "He had many roles — in politics, in philanthropy and at the university and in business."

Gerberding considered Mr. Simpson "one of the greatest regents in the history of the university" and said he was a key player in building UW campuses in Bothell and Tacoma.

During the 1980s, Mr. Simpson was instrumental in pushing the UW to turn to the private sector for fundraising, which helped the university raise tens of millions of dollars, UW officials said.

"He was the most generous and giving man. ... He had a lot of passion for many causes, particularly for the University of Washington," said his daughter, Christine Brent.

Mr. Simpson was born Nov. 2, 1926, in Tacoma and graduated from Stadium High School. After graduating from the UW with a business degree in 1949, he became a rising star at IBM, overseeing 600 workers in 11 states from his office in downtown Seattle.

In 1966, he took over Physio and quickly turned it into one of the nation's most respected companies. Eli Lilly bought the company for $149 million 14 years later, but kept him in charge.

When Mr. Simpson retired in 1985, the company had reached the $100 million mark in annual sales. The company was purchased by Medtronic in 1998.

Mr. Simpson was an early advocate of turning Seattle into a biotech hub and investing locally.

"I get a pitch in the mail once a month: 'Why don't you build your machines in Taiwan, why don't you build your machines in Korea.' I just throw that stuff away," Simpson told The Seattle Times in 1985. "My responsibility is to create opportunities right here."

He kept a busy schedule, serving on the Mercer Island City Council and 30 medical, educational and nonprofit boards.

At the UW, though, he made headlines in 1986 for launching a fundraising drive on behalf of then-Gov. Booth Gardner at the same time he was asking Gardner to reappoint him to the UW Board of Regents. He was eventually reappointed to the board.

He was involved in another debate in 1997, when he was a volunteer on the state Information Services Board. He was fined for his part in a unanimous vote to uphold a state computer contract with IBM while he owned stock in the company.

The ruling did not taint Mr. Simpson's reputation, but he considered it unfair and vowed at the time to retreat from civic life. Nonetheless, Mr. Simpson remained active in civic causes, family and friends said.

Mr. Simpson loved sailing and was an "auctionholic," said childhood friend Dr. George Thomas. He once outbid everyone for a flight in a Russian MiG jet fighter for his wife of 54 years, Dorothy Lewis.

In addition to his wife, Mr. Simpson is survived by his brother, Robert Simpson of Spokane; a son, Brooks Simpson, of Bellevue; daughters Christine Brent of Tiburon, Calif., and Anne Simpson of Mercer Island; and six grandchildren. Mr. Simpson lost his 18-year-old grandson, R. Hunter Simpson, to brain cancer on Dec. 31.

A memorial service will be held Saturday at Emmanuel Episcopal Church, 4400 86th Ave. S.E., Mercer Island, followed by a celebration of life at the Conibear Shellhouse at the UW. Times for both events were not yet available.

Information from The Seattle Times archives was used in this report. Tan Vinh: 206-515-5656 or tvinh@seattletimes.com

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W. Hunter SIMPSON November 2, 1926 - January 20, 2006 W. Hunter Simpson, 79, former President and CEO of [**Physio-Control Corporation**] and past University of Washington Regent, died Friday, January 20, 2006 of heart failure following a brief illness. He passed peacefully surrounded by his loving family at Swedish Hospital. Born on November 2, 1926 in Tacoma, Washington, to Stewart and Anne Simpson, he graduated from Stadium High School. After beginning college at the University of Washington, Hunter was assigned in 1945 to attend the University of California, Berkeley as part of the Marine V-12 Program. The following year, he returned to the University of Washington and graduated in 1949 with a B.A. in Business Administration. He was a member of the Phi Delta Theta fraternity. After graduation, Hunter worked for IBM's Data Processing Division in the Seattle office, but was called back into service as a Marine Corp Captain during the Korean War. He returned to IBM after his service. During the last five years of his 17-year tenure with IBM, he was the executive responsible for sales and marketing across the Pacific Northwest. From 1966 to 1986, Hunter was president and CEO of [**Physio-Control Corporation**], a manufacturer of medical electronic equipment which dramatically changed the face of emergency medical care with the introduction of the first portable, battery-powered LIFEPAK defibrillator/monitor. The device revolutionized emergency response, enabling specialty trained paramedics to defibrillate patients in the field prior to transport to a hospital, saving lives around the world. From a near-bankrupt operation of three people, Hunter led [**Physio-Control Corporation**] to the position of world leader in the industry. He established enlighted and novel management practices, unheard of in the '60s and '70s. Hunter married Dorothy Lewis of Miami Beach, Florida in 1951. Hunter and Dottie have been active and energetic participants in the Seattle community for five decades. Together they were awarded, in 2002, the inaugural Gates Volunteer Service Award in recognition of their inspiring leadership and philanthropy on behalf of the University of Washington. Hunter served as a University of Washington Regent from 1981 to 1993, and was a founding director of the Washington Research Foundation, with the purpose of managing and licensing technologies from the UW for the benefit of scientific research. The University of Washington was one of Hunter's primary passions, and he played a major role as a Regent and philanthropist in its continuing development as a leading research university. His standards and vision for the University were ambitious, and his energy and dedication were extraordinary. Hunter also served on numerous boards of Northwest-based corporations and non-profits, including Immunex Corp., Data I/O Corp., Edmark Corp., ACT Theatre, KCTS public TV, Overlake and Children's Hospital Foundations, and the Columbia Tower Club where he was the Founding Chairman. Additionally, Hunter enthusiastically contributed to important Mercer Island issues, including the multi-year effort to ensure I-90 had a positive impact on the island, as well as actively serving a full term on the Mercer Island City Council. Always humble with recognition, he was the recipient of many honors and awards over the years for his contributions to business and the community. He was inducted into the Junior Achievement Business Hall of Fame as a Laureate in 1994. Hunter was a devoted husband and father, always enthusiastically supporting his wife and children in their many professional and philanthropic endeavors. He was the family cheerleader who directed Christmas and summer gatherings with the skill of a CEO and the humor of a stand-up comedian. "Let's have one meeting," quickly got the attention of his clan of children and grandchildren. Hunter's great love of the Northwest was well known. He always referred to it as "God's country." The hard work of corporate life was balanced with time spent enjoying his outdoor playground. He often reminded friends and family of Seattle's unique environment where you could sail in the morning and ski in the afternoon - and get the half-day ticket price! Skiing gave way over the years to more time on the water with summers spent cruising the San Juans and Desolation Sound in various family sailboats named Nirvana and finally on the "lovely lady" Circe. Hunter is survived by Dorothy (Dottie) Lewis Simpson, wife of 54 years; their children, Brooks Simpson, Anne Simpson and Christine Simpson Brent; son-in-law, Dr. Bruce Brent; grandchildren, Hailey and Blake Simpson, Eric and Kirsten Hagfors, and Leisa and Wyatt Brent; and brother, Robert Simpson of Spokane. He is preceded in death by his grandson, R. Hunter Simpson, who died December 31, 2005 of brain cancer. A Service for family and close friends will be held on Mercer Island at Emmanuel Episcopal Church on Saturday, January 28th at 1:00 p.m. A Celebration of Life will follow, for all friends and acquaintances, at the University of Washington's Conibear Shellhouse. It will begin promptly at 4:30 p.m. with a program of remembrance. In lieu of flowers, memorials may be sent to the Medic One Foundation, the R. Hunter Simpson Foundation at the Seattle Foundation, or the University of Washington.

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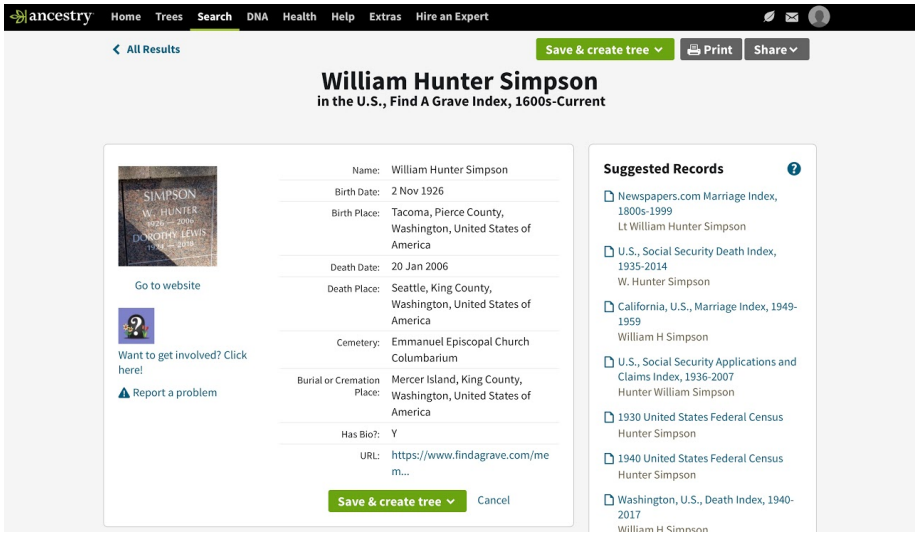

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Singer Corporation

Wikipedia Singer Corporation

Wikipedia capture : [HK0004][GDrive]

Singer Corporation is an American manufacturer of domestic sewing machines, first established as **I. M. Singer & Co.** in 1851 by Isaac Merritt Singer [HK0006] with New York lawyer Edward Clark. Best known for its sewing machines, it was renamed **Singer Manufacturing Company** in 1865, then **the Singer Company** in 1963. It is based in La Vergne, Tennessee, near Nashville. Its first large factory for mass production was built in Elizabeth, New Jersey, in 1863.

History of Singer's sewing machines and its business

Old Singer logo

A Singer 1851 sewing machine

Singer Corporation's original design was the first practical sewing machine for general domestic use. It incorporated the basic eye-pointed needle and lock stitch developed by Elias Howe, who won a patent-infringement suit against Singer in 1854.

Patent No. 8294, of August 12, 1851, introduced one of the most useful machines, and one of the most remarkable men, that have figured in the development of the sewing machine. Isaac Merritt Singer, strolling player, theater manager, inventor, and millionaire, brought into the business a new machine and novel methods of exploitation, which gave a powerful impulse to the youthful industry. The Singer improvements met the demand of the tailoring, and leather industries for a heavier and more powerful machine.

Singer consolidated enough patents in the field to enable him to engage in mass production, and by 1860, his company was the largest manufacturer of sewing machines in the world. In 1885, Singer produced its first "vibrating shuttle" sewing machine, an improvement over contemporary transverse shuttle designs (see bobbin drivers). Singer began to market its machines internationally in 1855 and won first prize at the Paris World's Fair. The company demonstrated the first workable electric sewing machine at the Philadelphia electric exhibition in 1889 and began mass-producing domestic electric machines in 1910. Singer was also a marketing innovator and was a pioneer in promoting the use of installment payment plans.

[...]

Singer in Scotland

Workers leaving Singer Sewing Machine Factory on Clydebank

In 1867, the Singer Company decided that the demand for their sewing machines in the United Kingdom was sufficiently high to open a local factory in Glasgow on John Street. Singer Vice President George Ross McKenzie selected Glasgow because of its iron making industries, cheap labour, and shipping capabilities. Demand for sewing machines outstripped production at the new plant and by 1873, a new larger factory was completed on James Street, Bridgeton. By that point, Singer employed over 2,000 people in Scotland, but they still could not produce enough machines.

In 1882, McKenzie, by then President-elect of the Singer Manufacturing Company, undertook the ground breaking ceremony on 46 acres (19 ha) of farmland at Kilbowie, Clydebank. Originally, two main buildings were constructed, each 800-foot (240 m) long, 50-foot (15 m) wide and three storeys high. These were connected by three wings. Built above the middle wing was a 200-foot (61 m) tall clock tower with the "Singer" name clearly displayed for all to see for miles around. A total of 2.75 miles (4.43 km) of railway lines were laid throughout the factory to connect the different departments such as the boiler room, foundry, shipping and the lines to main railway stations. Sir Robert McAlpine was the building contractor and the factory was designed to be fire proof with water sprinklers, making it the most modern factory in Europe at that time.

With nearly a million square feet of space and almost 7,000 employees, it was possible to produce on average 13,000 machines a week, making it the largest sewing machine factory in the world. The Clydebank factory was so productive that in 1905, the U.S. Singer Company set up and registered the Singer Manufacturing Company Ltd. in the United Kingdom. Demand continued to exceed production, so each building was extended upwards to 6 storeys high. A railway station with the company name was established in 1907 with connections to adjoining towns and central Glasgow to assist in transporting the workforce to the facility.

In the First World War, sewing machine production gave way to munitions. The Singer Clydebank factory received over 5000 government contracts, and made 303 million artillery shells, shell components, fuses, and aeroplane parts, as well as grenades, rifle parts, and 361,000 horseshoes. Its labour force of 14,000 was about 70% female at war's end.

From its opening in 1884 until 1943, the Kilbowie factory produced approximately 36,000,000 sewing machines. Singer was the world leader and sold more

machines than all the other makers added together. In 1913, the factory shipped 1.3 million machines. The late 1950s and 1960s saw a period of significant change at the Clydebank factory. In 1958, Singer reduced production at their main American plant and transferred 40% of this production to the Clydebank factory in a bid to reduce costs. Between 1961 and 1964, the Clydebank factory underwent a £4 million modernization program which saw the Clydebank factory cease the production of cast iron machines and focus on the production of aluminium machines for western markets. As part of this modernisation programme, the famous Singer Clock was demolished in 1963. At the height of its productiveness in the mid 1960s, Singer employed over 16,000 workers but by the end of that decade, compulsory redundancies were taking place and 10 years later the workforce was down to 5,000. Financial problems and lack of orders forced the world's largest sewing machine factory to close in June 1980, bringing to an end over 100 years of sewing machine production in Scotland. The complex of buildings was demolished in 1998.

Painted Singer Sewing sign in Kingston, N.Y.

Marketing

The Singer sewing machine was the first complex standardized technology to be mass marketed. It was not the first sewing machine, and its patent in 1851 led to a patent battle with Elias Howe, inventor of the lockstitch machine. This eventually resulted in a patent sharing accord among the major firms. Marketing strategies included focusing on the manufacturing industry, gender identity, credit plans, and "hire purchases."

Singer's marketing emphasized the role of women and their relationship to the home, evoking ideals of virtue, modesty, and diligence. Though the sewing machine represented liberation from arduous hand sewing, it chiefly benefited those sewing for their families and themselves. Tradespeople relying on sewing as a livelihood still suffered from poor wages, which dropped further in response to the time savings gained by machine sewing. Singer offered credit purchases and rent-to-own arrangements, allowing people to rent a machine with the rental payments applied to the eventual purchase of the machine, and sold globally through the use of direct-sales door-to-door canvassers to demonstrate and sell the machines.

World War II

During World War II, the company suspended sewing machine production to take on government contracts for weapons manufacturing. Factories in the United States supplied the American forces with Norden bomb sights and M1 Carbine rifle receivers, while factories in Germany provided their armed forces with weapons.

In 1939, the company was given a production study by the government to draw plans and develop standard raw material sizes for building M1911A1 pistols. The following April 17, Singer was given an educational order of 500 units with serial numbers S800001 – S800500. The educational order was a program set up by the Ordnance Board in the U.S. to teach companies without gun-making experience to manufacture weapons.

After the 500 units were delivered to the U.S. government, the management decided to produce artillery and bomb sights. The pistol tooling and manufacturing machines were transferred to Remington Rand whilst some went to the Ithaca Gun Company. Approximately 1.75 million 1911A1 pistols were produced during World War II, making original Singer pistols relatively rare and collectable.

Post war and present

Singer resumed developing sewing machines in 1946. They introduced its first sewing machine with zigzag function in 1952, the Slant-o-Matic. 2011 marked their 160th anniversary. Currently, they manufacture computerized, heavy duty, embroidery, quilting, sergers, and mechanical sewing machines.

In 2017, they launched their new Singer Sewing Assistant App.

Diversification

In the 1960s the company diversified, acquiring the Friden calculator company in 1965 and General Precision Equipment Corporation in 1968. GPE included Librascope, The Kearfott Company, Inc, and Link Flight Simulation. In 1968 also Singer bought out GPS Systems and added it to the Link Simulations Systems Division (LSSD). This unit produced nuclear power plant control center simulators in Silver Spring, Maryland and Columbia, Maryland while flight simulators were produced in Binghamton, New York.

In 1987, corporate raider **Paul Alec Bilzerian** (born 1950) made a "greenmail" run at Singer, and ended up owning the company when no "White Knight" rescuer appeared. To recover his money, Bilzerian sold off parts of the company. Kearfott was split, the Kearfott Guidance & Navigation Corporation was sold to the Astronautics Corporation of America in 1988 and the Electronic Systems Division was purchased by GEC-Marconi in 1990, renamed GEC-Marconi Electronic Systems (and later incorporated into BAE Systems). The four Link divisions developing and supporting industrial and flight simulation were sold to Canadian Avionics Electronics (CAE) and became CAE-Link. The nuclear power simulator division became S3 Technologies, and later GSE Systems, and relocated to Eldersburg, MD. The Sewing Machine Division was sold in 1989 to Semi-Tech Microelectronics, a publicly traded Toronto-based company.

For several years in the 1970s, Singer set up a national sales force for CAT phototypesetting machines (of UNIX troff fame) made by another Massachusetts company, Graphic Systems Inc. This division was purchased by Wang Laboratories in 1978.

21st century

The Singer Corporation produces a range of consumer products, including electronic sewing machines. It is now part of SVP Worldwide, which also owns the Pfaff and Husqvarna Viking brands, which is in turn owned by Kohlberg & Company, which bought Singer in 2004.

Its main competitors are Baby Lock, Bernina, Brother, Janome, Juki and Aisin Seiki—a Toyota Group company.

Singer Buildings

Singer was heavily involved in Manhattan real estate in the 1800s through Edward Clark, a founder of the company. Clark had built The Dakota apartments and other Manhattan buildings in the 1880s. In 1900, the Singer company retained Ernest Flagg to build a 12-story loft building at Broadway and Prince Street in Lower Manhattan. The building is now considered architecturally notable, and has been restored.

The 47-story Singer Building, completed in 1908, was also designed by Flagg, who designed two landmark residences for Bourne. Constructed during Bourne's tenure, the Singer Building (demolished in 1968) was then the tallest building in the world and was the tallest building to be intentionally

demolished until the Twin Towers of the World Trade Center were destroyed in the September 11 attacks.

At their Clydebank factory Singer built a 200 feet (61 m) clock tower which stood over the central wing and had the reputation of being the largest four-faced clock in the world. Each face weighed five tons and it took four men fifteen minutes twice a week to keep it wound. The tower was demolished after the factory closed in 1980 and now site of Clydebank Business Park. Singer railway station, built to serve the factory, is still in operation.

The famous Singer House, designed by architect Pavel Suzor, was built in 1902–1904 at Nevsky Prospekt in Saint Petersburg for headquarters of the Russian branch of the company. This modern style building (situated just opposite to the Kazan Cathedral) is officially recognized as an object of Russian historical-cultural heritage.

In 2018, a large factory fire destroyed a Singer distribution office and warehouse in Seven Hills, Sydney. Singer had manufactured sewing machines in Australia at a purpose-built plant in the western Sydney suburb of Penrith, from 1959 until 1967.

List of company presidents

- Isaac Merritt Singer [HK0006] (1851–1863)
- Inslee Hopper (1863–1875)
- Edward C. Clark (1875–1882)
- George Ross McKenzie (1882–1889)
- Frederick Gilbert Bourne (1889–1905)
- Sir Douglas Alexander (1905–1949)
- Milton C. Lightner (1949–1958)
- Donald P. Kircher (1958–1975)
- **Joseph Bernard Flavin** (born 1928) (1975–1987)
- **Paul Alec Bilzerian** (born 1950) (1987–1989)
- Iftikhar Ahmed (1989–1997)
- Stephen H. Goodman (1998–2004)

History Article from "ReferenceForBusiness.com" : "The Singer Company N.V. - Company Profile, Information, Business Description, History, Background Information"

See [HW000A][GDrive]

The Singer Company N.V. is the number one maker and seller of consumer and industrial sewing machines in the world, not to mention the oldest. With distribution into more than 150 countries worldwide and ownership of 1,500 retail outlets, Singer boasts of having one of the best-known brand names in the world. Throughout the late 20th century, however, Singer has struggled to maintain profitability, and the original sewing operations have weathered several incarnations as a private and a public company.

Company Origins

Isaac Merritt Singer was born in Pittstown, New York, in 1811, and ran away from his immigrant parents at the age of 12 to join a troupe of traveling actors. Singer remained an actor until 1835. During the following years he worked at various jobs while he invented things on the side. By 1850, Singer had gone to Boston with a patented device for carving wood-block type he hoped to sell to type manufacturers.

In Boston, Singer became interested in a prospective client's sewing machine repair business. The first patent for a sewing machine had been granted in England in 1790, but because of their unreliability none of the machines since then had been commercially successful. The first sewing machine with an eye-pointed needle, invented in 1846 by Elias Howe, seemed on the verge of capturing the public interest, but it, too, required frequent repairs. Singer quickly set to work to invent a reliable machine.

Singer finished his machine in 1850 and was granted a patent for it in 1851, the same year he established I.M. Singer and Company. The machine was an immediate success, prompting Howe to file suit against Singer for patent infringement. In 1854 Singer hired a young lawyer named Edward Clark to defend him; Clark agreed to take the case in exchange for a third of Singer's business, and eventually the two men became equal partners in the company, Singer running the manufacturing side and Clark the financial and sales side.

Clark stymied the lawsuits brought against Singer and then brought the manufacturers together to pool their patents by creating the Singer Machine Combination, the first patent pool in the United States. The combination, which lasted until 1877, when the last patent ran out, licensed 24 sewing machine manufacturers to make the machines for $15 a machine, with Singer and Howe receiving $5 each for every machine sold domestically.

Expansion in the 19th Century

With Clark supervising the day-to-day operations, I.M. Singer and Company began to grow rapidly. Until the late 1850s the price of a sewing machine limited its market to commercial interests like professional tailors and harness manufacturers. But at that time, Clark introduced the first consumer installment payment plan. This plan, combined with an aggressive marketing strategy, enabled the young company to survive the business panic of 1857 and gave Singer the decisive lead in sewing machines for more than a century.

In 1863 Clark and Singer dissolved their partnership and the company was incorporated as Singer Manufacturing Company after Singer's rather sordid personal life (which eventually resulted in 24 children by four women) came to light. Both Clark and Singer retained some stock in the company but sold the rest to their employees. Clark continued as president of the company until his death in 1882; Isaac Singer, who had fled to Europe, died in England in 1875.

employees. Clark continued as president of the company until his death in 1882; Isaac Singer, who had fled to Europe, died in England in 1875.

For the next 70 years, the business was led by three men: F.G. Bourne, who was president from 1873 to 1905; Douglas Alexander, who led the company from 1906 to 1949; and Milton Lightner, who served from 1949 to 1958. These men increased Singer's role as the United States' first multinational company. Singer had begun manufacturing in Scotland in 1867 and in Canada in 1873. By the 1880s, the company's extensive European operations were exporting sewing machines to Africa and soon after the turn of the century Singer was selling its product in the South Pacific. The one setback during this growth and expansion occurred in 1917, when the company's Russian holdings were seized during the Bolshevik Revolution. In 1918 Singer acquired the Diehl Manufacturing Company to make sewing machine motors.

Throughout the 1920s and 1930s, Singer's profits rose steadily as it convinced more and more people around the world that a Singer sewing machine was indispensable. By the end of World War II, however, the sewing machine market had matured in the United States. To make matters worse, within a few years European manufacturers were offering zig-zag machines (which Singer had decided in the 1930s would not find a market in the United States) and, suddenly, highly competitive Japanese manufacturers began to flood the market. In the United States alone, Singer's market share had halved, to only one-third, by the late 1950s.

Singer had hired a lawyer, Donald P. Kircher, to supervise the company's legal affairs in 1948. In 1955 Kircher was appointed Lightner's assistant, and in 1958 he was made president. Hired to help turn Singer around, Kircher began a complete reorganization of the company: plants were modernized, manufacturing procedures automated, products upgraded, and merchandising improved. By 1963 Singer's share in the U.S. sewing machine market had increased to 40 percent.

Diversification in the 1950s and 1960s

Under Kircher's direction, Singer also began an ambitious overseas construction program. Besides spending large amounts of money to revamp company facilities in Scotland, Brazil, France, West Germany, and Italy, Kircher also started building new factories in Australia, Mexico, and the Philippines. In addition, Kircher reaffirmed the strategy of looking toward underdeveloped regions of the world for the company's largest markets.

Kircher also began a domestic diversification program. One of his first decisions was to purchase Haller, Raymond & Brown, Inc., a leading electronics research firm and Singer's first step into the electronics industry. He also bought three companies in 1960 and 1961: two knitting-machine makers and a carpet-tufting-machinery maker. Initially, this diversification strategy was also successful. Between 1958 and 1963, Singer's sales almost doubled, to $1.2 billion (between 1952 and 1956 sales had risen only 12 percent, from $325 million to $364 million). In 1963 Singer dropped the "Manufacturing" from its name to better reflect the nature of its business.

Kircher's plan also included a more aggressive acquisition and diversification policy. The first important purchase, in 1963, was of Friden, Inc., a manufacturer of office equipment and calculators. The second one, of General Precision Equipment Corporation (GPE), was made in 1968. General Precision gave Singer access to three markets: industrial products (such as gas meters), defense electronics, and aerospace. But GPE and Friden were only part of Kircher's grand plan. Altogether, Kircher bought 22 manufacturing firms with products ranging from audio to aerospace equipment.

In 1958, 90 percent of Singer's total sales came from sewing machines; by 1970, this portion was reduced to 35 percent, and Kircher's diversification strategy seemed to work. Singer's sales exceeded $1.9 billion, 40 percent from business abroad.

Losses in the 1970s

But Kircher, described by subordinates as autocratic and imperious, had overreached himself. Although the company reported $2.6 billion in sales for 1974, one Wall Street analyst estimated that Singer's debt had reached $1.1 billion--a staggering price for its acquisition program. Combined with a collapse in the aerospace market and a glut in office equipment in the late 1960s, it is not surprising that Singer reported a $10.1 million loss in 1974. The single bright spot that year was Singer's original sewing machine operation, which accounted for 54 percent of company sales.

While Kircher was confined to a hospital bed in 1975, the board of directors looked for someone to replace him. They hired **Joseph Bernard Flavin** (born 1928) *, who had worked at IBM and at Xerox, where he was an executive vice-president. Forty-seven years old when he became Singer's president, Flavin immediately took a $411 million write-off to eliminate the company's money-losing ventures, including a home-building concern, a printing operation, a telecommunications firm, an Italian household appliance plant, and a West German mail-order house. This write-off was the largest of its time and reduced Singer's book value by 50 percent. Flavin then planned to revitalize the company's sewing machine operation and develop its power tool and aerospace businesses.*

Over the next few years, Singer also concentrated on developing high-technology electric components, including air conditioning and heating systems, gas meters, thermostats, electrical switches, dishwashers, and auto dashboards. The company made the guidance system for the Trident missile and navigation equipment for airplanes and ships, and Singer electrical instruments played an important role in NASA's Apollo lunar modules.

Flavin managed to reduce the company's $1.1 billion debt by 55 percent after he became president, but in 1979 he took a $130 million write-off on the sewing machine business, which in North America and Europe had fallen off drastically. This move involved the restructuring of Singer's North American and European operations; its oldest factory in Europe, near Clydebank, Scotland, was one of the casualties. Flavin also replaced 80 of his top 200 managers. All these changes were made in the middle of a headquarters move from New York City to Stamford, Connecticut.

In 1980 Singer's aerospace and marine divisions' operating profits increased by 34 percent, to $36 million, due in large part to Singer's role as the nation's leading manufacturer of aircraft simulators, including the one used to train space shuttle astronauts. In addition, this division won a large contract for helicopters from the Defense Department in 1981. Encouraged by these results, management decided to create SimuFlite, a new venture that provided ground school and flight simulation training for corporate pilots.

Continued Problems in the 1980s

Foreign manufacturers like Bernina, Pfaff, and Viking, along with inexpensive imports from Japan, began to cut deeply into what little was left of Singer's sewing machine market during the early 1980s. That and the belief among top officials at Singer that the sewing industry in the United States was finally drying up led the company to abandon its century-old core business. In 1986 Singer spun off its sewing machine division as a separate company called SSMC Inc. Singer also got rid of all 1,600 company-owned stores and service centers, either by closing them or making them independent.

Although Singer had become a $2 billion-a-year defense conglomerate, it was beset by endless problems and an enormous debt. Its stock price was driven down by the announcement of a $20 million loss in July 1987, which it attributed to development costs for several new aerospace products. Then, that fall, Chairman Joseph Flavin died unexpectedly. Therefore, to no one's surprise, Singer became a prime takeover candidate. The buyer was a surprise, however: **Paul Alec Bilzerian** (born 1950) *, a somewhat obscure corporate raider best known as a greenmailer. For $50 a share--some $15 below what Singer's investment banker, Goldman Sachs, had expected it to sell for--Bilzerian walked away with Singer.*

Bilzerian took on a huge debt load. Bilzerian first [illegible] of Singer's assets, then the assets [illegible] all of Singer's defense businesses. But

Despite a staggering debt load, Bilzerian at first promised not to strip Singer of its most productive assets, planning only to sell off its defense electronics business. But only months later, prime assets began to go. Between July and October 1988 Bilzerian sold eight of Singer's 12 divisions, for about $2 billion, which tidily covered his debt.

But, in December 1988, Bilzerian was indicted--for non-Singer-related activities--and in May 1989 he was convicted of nine counts of securities and tax violations. More troublesome for the company itself, however, was the multitude of suits filed against it after mid-1988 by former employees regarding pension benefits; stockholders disillusioned by Bilzerian's dealings; buyers of divisions who claimed they were overcharged; and the federal government, which sought treble damages of $231 million for Defense Department overcharges dating back to 1980. Renamed the Bicoastal Corporation in 1989, the company agreed to pay $55 million to the federal government in 1992 to settle the fraud charges.

Rebounding: Early 1990s

Meanwhile, SSMC, the original sewing machine business, defied predictions and managed to stay in business. In 1989 Semi-Tech Global purchased SSMC and began to turn the company around. SSMC reclaimed its heritage by renaming itself The Singer Company. Then, in 1991, the company offered shares to the public on the New York Stock Exchange. Semi-Tech Global retained control of the company with ownership of 50 percent of the shares. Two years later, Semi-Tech Global sold its interest in Singer to Semi-Tech Corp., owner of 43 percent of Semi-Tech Global.

Also in 1993, Semi-Tech Global acquired G.M. Pfaff AG, the second largest sewing machine manufacturer in the world. Founded in 1862 in Germany, the company had a history almost as long as Singer's and had built a comparable international reputation. Although Pfaff sold its machines mostly through its own retail stores in Germany, its international sales were handled through mass merchants, independent dealers, and distributors.

In the early 1990s Pfaff was operating at a loss, and Semi-Tech Global purchased 72 percent of the company's shares, thus gaining control of the company. Semi-Tech cut staff, outsourced and relocated much of the company's manufacturing, and sought growth primarily in developing countries. In addition, Semi-Tech Global hired Singer to manage the company. Within the next few years, Singer and Pfaff were cross-sourcing each other's products and had created efficiencies in research and development by working together to design new products.

In the mid-1990s Singer began selling other consumer durable products, hoping to cash in on widespread respect and awareness of its brand. New products included televisions, videocassette recorders, and home appliances. The company focused its sale of this new line in developing countries, where it had established distribution networks and, unlike most manufacturers and retailers in these countries, offered credit plans. For example, Singer met with a great deal of success in Mexico, where it focused its efforts on working-class consumers unused to the idea of credit but unable to buy a major appliance like a sewing machine without it. Singer's sales in Mexico quintupled between 1988 and 1993 and showed no signs of diminishing. It also held its repossession rate to about two percent.

Despite success in such developing countries as Mexico, Singer was reporting losses by the late 1990s. Although the company could still claim profits of $29 million in 1996, in 1997 Singer lost $238 million on revenues of $1.1 billion. Revenues had declined 19 percent from the previous year, stemming from the economic crisis in Asia, an economic slowdown in Brazil, and weak sales in the United States. A new president and chief executive officer, Stephen H. Goodman, took charge in early 1998.

In an effort to eliminate redundancies and thus reduce costs, Singer acquired Pfaff in 1997 for $157.5 million. Thus Singer's management of Pfaff became permanent when it purchased Semi-Tech Global's 80.5 percent interest in the company. Singer consolidated the two companies' marketing and distribution operations, shared their manufacturing plants, and reduced their combined overheads. As part of this reorganization, Singer eliminated almost 6,000 jobs, cutting 5,531 from manufacturing and 437 from marketing. The company projected this 28 percent cut would result in savings of $104 million a year.

Although revenues were up in 1998, to $1.26 billion, Singer still reported a loss of $207 million. The continued economic downturns in Asia and Brazil affected the company's performance, as did a decline in the industrial sewing market. Singer initiated a restructuring program in 1998 that included projected property sales of approximately $260 million. That year the company sold $37 million worth of property. In 1999 Singer continued with the program by selling its Taiwan operations for $58.6 million. On September 13, 1999, Singer announced that it was voluntarily filing for reorganization under Chapter 11 of the U.S. Bankruptcy Code. The company's stock continued to trade on the New York Stock Exchange at the NYSE's discretion.

CAE - Canadian Avaiation electronics

july 1988 - CAE buys link division

https://www.latimes.com/archives/la-xpm-1988-07-11-fi-4250-story.html

Singer Co. has sold its Link flight simulation and training systems division to CAE Industries of Canada for $550 million (U.S.). Singer has previously said that all of its divisions are up for sale following the takeover by stock speculator Paul A. Bilzerian in January. CAE, a manufacturer of commercial flight simulators and other industrial products, said it had reached a definitive agreement with Singer on the purchase. Singer's Link division, based in Binghamton, N.Y., employs 7,500 and posted revenue of $550 million in 1987.

Dr. Theobald Smith (born 1859)

[HK006D][GDrive]

Wikipedia Theobald Smith

- Born July 31, 1859 , Albany, New York [HK006C][GDrive]
- Died December 10, 1934 (aged 75) , New York City, New York [HK006C][GDrive]

Associations -

- **Dr. Paul Adin Lewis (born 1879)** - Dr. Lewis was hired by and worked with Dr. Theobald Smith. Smith was highly impressed with Lewis' work.
- **Dr. Richard Edwin Shope (born 1901)** - (see : [HI0034][GDrive] : "Dr Shope acknowledged the influence of the legendary [Dr. Theobald Smith (born 1859)], at the Rockefeller Institute, on his own career and observed that Smith "although possessed of great imagination and ... uncanny foresight, was a meticulously methodical worker, who abhorred the waste of anything – time, material, or animals." This set a pattern for Shope's career and an informal distillation of his key accomplishments are summarized in the bullet form. ")
- **Dr. Simon Flexner (born 1863)** - (see [HW005Z][GDrive] Smith's acknowledged leadership in this field and his unmatched reputation for productive research led early in 1914 to an invitation from [**Dr. Simon Flexner (born 1863)**], director of the Rockefeller Institute for Medical Research, to head the newly endowed department of animal pathology to be established at Princeton, N.J. (In 1901, at the inception of the Institute, he had rejected an offer to become its director but had agreed to join the board of scientific directors under Welch's chairmanship.).)

Saved Wikipedia (Mar 9, 2021) - Theobald Smith

Source : [HK006C][GDrive]

- Nationality American
- Alma mater Cornell University, Albany Medical College
- Known for Texas cattle fever, Salmonella
- Scientific career : Fields : Epidemiology
- Institutions : US Department of Agriculture, Harvard University, Rockefeller University

Prof Theobald Smith FRS(For)[1] HFRSE (July 31, 1859 – December 10, 1934) was a pioneering epidemiologist, bacteriologist, pathologist and professor. He

is widely considered to be America's first internationally significant medical research scientist.[2][3] His work included the study of Texas cattle fever and the epidemiology of cattle infected by ticks transmitting protozoa. He also discovered a species of Salmonella, named for his chief Daniel E. Salmon, and studied anaphylaxis, then referred to as Theobald Smith phenomenon.[4] Smith taught at Columbian University (now George Washington University) and established the school's department of bacteriology, the first at a medical school in the United States.[4] He also worked at Harvard University and the Rockefeller Institute.

Education

Smith was born in Albany, New York, the son of Philip Smith and his wife, Theresa Kexel.[5]

He received a Bachelor of Philosophy degree from Cornell University in 1881, followed by an MD from Albany Medical College in 1883.[2] After his graduation from medical school, Smith held a variety of temporary positions which might broadly be considered under the modern heading of "medical laboratory technician". After some prodding by his former professors, Smith secured a new research lab assistant position with the Veterinary Division of the US Department of Agriculture (USDA) in Washington, D.C., beginning his position there in December 1883.[6]

Research

Smith became the Inspector of the newly created Bureau of Animal Industry (BAI) in 1884. Established by Congress to combat a wide range of animal diseases—from infectious disease of swine to bovine pneumonia, Texas cattle fever to glanders—Smith worked under Daniel E. Salmon, a veterinarian and Chief of the BAI.[7] Smith also discovered the bacterial species which would eventually form the genus Salmonella. After two years of work studying the efficacy of bacterial vaccination in pigs, Smith erroneously believed he had found the causative agent of hog cholera.[8]

Smith turned his attention to Texas fever, a debilitating cattle disease; this work is detailed in a chapter in Microbe Hunters, by Paul De Kruif. In 1889, he along with the veterinarian F.L. Kilbourne discovered Babesia bigemina, the tick-borne protozoan parasite responsible for Texas fever. This marked the first time that an arthropod had been definitively linked with the transmission of an infectious disease and presaged the eventual discovery of insects as important vectors in a number of diseases (see yellow fever, malaria).

Smith also taught at Columbian University in Washington, D.C. (now George Washington University) from 1886 to 1895, establishing the school's Department of Bacteriology. In 1887, Smith began research on water sanitation in his spare time, investigating the level of fecal coliform contamination in the Potomac River. Over the next five years, Smith expanded his studies to include the Hudson River and its tributaries.[9]

While Smith's work at the BAI had been highly productive, he chafed against the federal government bureaucracy and the lack of leadership from his supervisor. In 1895 Smith moved to Cambridge, Massachusetts to accept a dual appointment: serve as professor of comparative pathology at Harvard University, and direct the pathology lab at the Massachusetts State Board of Health.[6]

Smith joined the Rockefeller Institute for Medical Research as Director of the Department of Animal Pathology in 1915 and remained there until his retirement in 1929.

In 1933, Smith was awarded the Royal Society's prestigious Copley Medal "For his original research and observation on diseases of animals and man.".

Publications

- Parasitism and Disease (1934)

Other discoveries

- Observed differences between human and bovine tuberculosis (1895).
- Discussed the possibility of mosquitos as a malaria transmission vector (1899).
- Variation and bacterial pathogenesis (1900).
- Discovered anaphylaxis (1903), which is also sometimes referred to as "Theobald Smith's phenomenon".[10]
- Brucellosis infections
- Used toxin/antitoxin as a vaccine for diphtheria (1909).
- In the process of investigating an epidemic of infectious abortions of cattle in 1919, Smith described the bacteria responsible for fetal membrane disease in cows now known as Campylobacter fetus.[11]

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External links

- Paul de Kruif Microbe Hunters (Blue Ribbon Books) Harcourt Brace & Company Inc., New York 1926: ch. VIII Theobald Smith: Ticks and Texas Fever (pp. 234-251)

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1901 (July) - https://www.newspapers.com/image/72126609/?terms=%22theobald%20smith%22&match=1

1926 https://www.newspapers.com/image/373071364/?terms=theobald%20smith%20viruses&match=1

1933 (march) - https://www.newspapers.com/image/47569330/?terms=%22theobald%20smith%22&match=1

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1933 (AUg) - https://www.newspapers.com/image/341787120/?terms=%22theobald%20smith%22&match=1

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1936 ... "filterable viruses" could cause disease in plants ! https://www.newspapers.com/image/355774936/?terms=theobald%20smith%20viruses&match=1

[HW005Z][GDrive] Smith's acknowledged leadership in this field and his unmatched reputation for productive research led early in 1914 to an invitation from [**Dr. Simon Flexner (born 1863)**], director of the Rockefeller Institute for Medical Research, to head the newly endowed department of animal pathology to be established at Princeton, N.J. (In 1901, at the inception of the Institute, he had rejected an offer to become its director but had agreed to join the board of scientific directors under Welch's chairmanship.) Although fifty-five years old and not in robust health, Smith resigned from the State Board of Health that summer, but remained at Harvard for a year until preliminaries for the new department had been fulfilled. At a testimonial dinner in June 1915 extraordinary tributes were paid to Smith by distinguished colleagues from all over the world.

Encyclopedia.com (2021) - "Smith, Theobald"

Source : [HW005Z][GDrive]

[...] The scope and thoroughness of Smith's researches in bacteriology, immunology, and parasitology produced many discoveries of theoretical import and immediate utility to public health and veterinary medicine. **He was the most distinguished early American microbiologist and probably the leading comparative pathologist in the world.** His greatest accomplishment—elucidation of the causal agent and mode of transmission of Texas cattle fever—first conclusively proved that an infectious disease could be arthropod-borne. Unlike many contemporary bacteriologists in the United States, he received no training in France or Germany.

Smith's parents were Philipp Schmitt, a tailor and the son of a farmer, and Theresia Kexel, whose recent forebears were village schoolmasters. Both born in Nassau, Germany, they married in 1854 and emigrated to America, settling in Albany, N.Y., where Philipp followed his trade for more than forty years. They took in boarders, worked hard, and were very thrifty. Their second child and only son was baptized in his mother's Roman Catholic faith (the father being Lutheran) and given the surname of his godparent, Jacob Theobald, a friendly immigrant neighbor. He appears in the parish register as Theobald Schmitt but in high school lists as Theobald J. Smith, for he temporarily adopted his godfather's first name. **Before entering Cornell University**, he discarded the second

In high school lists as Theobald J. Smith, for he temporarily adopted his godfather's first name, **before entering Cornell University,** he dissarded the second initial and rejected the Roman church.

At home, German was spoken, and Smith's education began at a German-speaking private academy. As a youth he quoted Goethe, enjoyed Schiller, and subsequently mastered the original reports of Robert Koch and Paul Ehrlich. In 1872, after two years of parish schooling, he entered the recently founded Albany Free Academy, where he excelled in all subjects, became president of the debating society, and was valedictorian in 1876. With a state scholarship supplementing his earnings from piano lessons, organ-playing, and book keeping, **he entered Cornell in 1877,** His industry, versatility, and inclination for scientific studies brought durable friendships with the physiologist and comparative anatomist Burt G. Wilder and with the microscopist Simon H. Gage. In 1881 he received the Ph.B. degree with honors and enrolled at the Albany Medical College, where he headed the 1883 M.D. class. His thesis was entitled "Relations Between Cell-activity in Health and Disease."

Smith felt unready for private practice. **With Gage's help he obtained an assistantship with Daniel E. Salmon, chief of the veterinary division of the U.S. Department of Agriculture, commencing December 1883. Six months later he became inspector in the new Bureau of Animal Industry, established by Congress under Salmon's charge to combat bovine pleuropneumonia, glanders infectious diseases of swine, and Texas cattle fever. Smith taught himself Koch's culture-plate methods and improved on them. Through careful field and laboratory studies of swine epizootics, he differentiated hog cholera from the multiplex swine plague (Schweineseuche), implicating distinctive bacillary species for each disease.** These findings appeared in the annual reports of the Bureau from 1885 to 1895 and in two monographs, Hog Cholera: Its History, Nature and Treatment (1889) and Special Report on the Cause and Prevention of Swine Plague (1891). **In 1886 pioneer observations involving hog cholera bacilli were made by Smith on bacterial variation—a phenomenon that excited his continuing speculative interest—and on the immunity developed by pigeons inoculated with heat-killed cultures, thus heralding a new approach to bacterial vaccine production.** Salmon's assumption of sole or senior authorship of several reports on this bacillus led to the selection of the species in 1900 as the prototype of an eponymous Salmonel la genus. **Some twenty years after Smith discovered Salmonella choleraesuis, however, the actual etiological agent of hog cholera proved to be viral, and the bacillus was accepted thereafter as a secondary invader.**

These projects overlapped with another major assignment. Texas cattle fever, on which Smith worked intermittently, restricted by its summer incidence. In November 1892, more than six years after first observing "small round bodies" in red blood corpuscles from stricken cattle, he completed his classic monograph Investigations Into the Nature, Causation, and Prevention of Texas or Southern Cattle Fever (1893), He found that the disease resulted from erythrocyte destruction by a protozoan microparasite, Pyrosoma bigeminum, **carried in the blood of apparently healthy southern cattle and transmitted to susceptible northern cattle by the progeny of blood-sucking ticks (Boophilus bovis)**. The complex, **meticulously verified tick-borne mechanism was viewed incredulously by many, but never refuted**—a situation that facilitated acceptance within a decade of the mosquito-borne nature of malaria and yellow fever.

Smith's international recognition was hastened by his publications in German journals. In Washington he was promoted in 1891 to chief of the division of animal pathology of the Bureau of Animal Industry, but Salmon sought unduly to divert credit for Smith's work to himself and to other veterinarians. For example, F. L. Kilborne, superintendent of the experimental farm, was over generously made coauthor of the Texas fever monograph. Smith chafed under the repeated injustices but delayed resigning because of fresh research opportunities, including a novel protozoal disease of turkeys, and observations on two varieties of tubercle bacilli from mammals, which presaged a lifelong involvement with human and animal tuberculosis. Moreover, he had developed other interests, including the bacteriology of water supplies. Beginning in 1885 – 1886 with unofficial observations on the total bacterial count of samples from the Potomac River, he systematically examined (1892) microflora in the Hudson River for fecal bacteria. In a report to the New York Department of Health (1893), he advocated quantitative assays of Bacillus coli communis as an index of intestinal pollution and introduced the fermentation tube to demonstrate the presence of gas-producing coliforms. His techniques and detailed studies of B. coli and related microorganisms were incorporated in recommendations of the committee of American bacteriologists appointed in 1895 (on which Smith served under W. H. Welch's chairmanship) that culminated in the first edition of the Standard Methods of Water Analysis (1905) of the American Public Health Association.

Smith recognized that improved sanitation of sewage, milk, and water supplies required an aroused public interest. He disliked the limelight but nevertheless addressed farmers and sanitarians and regularly participated in meetings of the Biological Society of Washington. In 1886 he became lecturer and professor of bacteriology at the National Medical College (the medical department of Columbian University, now known as George Washington University). This appointment, one of the first chairs of bacteriology at an American medical school, was held until 1895. His industry was leavened and his dissatisfactions eased by a happy marriage in 1888 to Lilian Hillyer Egleston, a clergyman's daughter. Her intelligence, high principles, and social graces furthered her husband's work and life aims. They had two daughters (born in Washington) and a son.

In 1895 Smith resigned from the Bureau, becoming director of an antitoxin laboratory for the Massachusetts State Board of Health and professor of zoology at Harvard University. In six months, in improvised quarters at the Bussey Institution in Jamaica Plain, near Boston, he produced potent diphtheria antitoxin. Through a cooperative arrangement devised by H. P. Walcott, chairman of the State Board of Health, and President Charles Eliot of Harvard, both of whom admired Smith, he was appointed in 1896 to the new George F. Fabyan chair of comparative pathology, endowed by a wealthy Bostonian. Smith retained his directorship of the antitoxin laboratory and was privileged to reside in a mansion nearby, commuting daily to Harvard Medical School. Although he took teaching and committee duties seriously, his class lectures were more thorough than inspiring. The dual position intensified his resolute pursuit of new knowledge on the etiology, pathology, and prevention of communicable disease.

During a European trip in 1896, Smith met many leading microbiologists, including Ehrlich and Koch. To the latter he imparted preliminary observations on two varieties of mammalian tubercle bacilli, which he expanded in another classic report, "A Comparative Study of Bovine Tubercle Bacilli and of Human Bacilli From Sputum" (1898). Three years later Koch confirmed these distinctions but failed to acknowledge Smith's priority until 1908. Koch's extreme views on the negligible role of bovine bacilli in human tuberculosis were not endorsed by Smith.

In 1903 Smith inspected several European vaccine lymph manufacturing facilities, prior to designing an enlarged antitoxin and vaccine laboratory, erected in 1904. Smith was the first scientist in North America to adopt Ehrlich's standardized antitoxic unit; and he introduced many improvements in titration methods, which Ehrlich praised on visiting his laboratory in 1904. Irregularities in guinea pig susceptibility to toxin could be reduced through careful breeding and selection of animals (1905), especially by eliminating passively immune progeny of females previously used for titrations (1907). In studying the antigenic properties of toxin-antitoxin mixtures. Smith foresaw their application to the active immunization of humans (1909, 1910). Incidentally, he mentioned to Ehrlich his observation of the sudden death of guinea pigs following second injections of antitoxin. Ehrlich's colleague R. Otto verified this serum-hypersensitivity, designating it the "Theobald Smith phenomenon" (1906).

In 1903 Smith and A. L. Reagh reported agglutination relationships between certain members of the typhoid-paratyphoid-coliform group of bacilli. A second paper, again involving the hog-cholera bacillus, revealed the nonidentity of its flagellar and somatic agglutinogens. These immunologic contributions were fundamental to subsequent development of the Kauffmann-White schema for identifying Salmonella organisms serologically.

Research opportunities in parasitology were plentiful. Malaria was endemic in parts of Massachusetts, and as early as 1896 Smith conjectured that the disease was mosquito-borne. The reluctance of the State Board of Health to support his hypothesis, and difficulties in studying malaria in an unfavorable latitude, discouraged him from this field and the palm soon went to Ronald Ross. Other parasitic diseases studied by Smith were murine sarcosporidiosis (1901), coccidiosis of mouse kidney (1902) and rabbit intestine (1910), and amebiasis in the pig (1910). In 1913 he revived investigations into turkey blackhead begun twenty years earlier in Washington.

The output and functions of the pioneer state laboratory multiplied, and administrative duties mounted. Smith was consulted by bacteriologists, veterinarians, and sanitarians; and Eliot encouraged his defense of animal experimentation during an antivivisectionist campaign (1902), his membership on the Charles River Dam committee (1903), and his inquiry into possible damage to animals by smelter smoke from the Anaconda Copper Mining Company in Montana (1906). Before retiring from the presidency of Harvard University in 1909. Eliot persuaded Smith to give eight Lowell lectures (never published) to popularize comparative pathology. In 1912, as Harvard exchange professor at the University of Berlin, Smith took his family to Germany for six months. His inaugural address, "Parasitismus und Krankheit," abstractly developed the theme of his Harvey lecture (1906) on the parasitism of the tubercle bacillus. His convictions about the importance of comparative pathology were permeated increasingly by the concept of host-parasite interrelationships.

Smith's acknowledged leadership in this field and his unmatched reputation for productive research led early in 1914 to an invitation from [Dr. Simon Flexner (born 1863)], director of the Rockefeller Institute for Medical Research, to head the newly endowed department of animal pathology to be established at Princeton, N.J. (In 1901, at the inception of the Institute, he had rejected an offer to become its director but had agreed to join the board of scientific directors under Welch's chairmanship.) Although fifty-five years old and not in robust health, Smith resigned from the State Board of Health that summer, but remained at Harvard for a year until preliminaries for the new department had been fulfilled. At a testimonial dinner in June 1915 extraordinary tributes were paid to Smith by distinguished colleagues from all over the world.

For more than two years after this move, Smith was largely responsible, in consultation with Rockefeller Instituterepresentatives,for the general plans of the new division, design of laboratories and animal quarters, and selection of equipment. By the end of 1917 antipneumococcus and antimeningococcus sera were being manufactured in horses, researches into cattle diseases had begun, and a commodious director's house was under construction. In 1920 Smith and H .W. Graybill showed that the protozoon causing turkey blackhead was transmitted in novel fashion, involving ingestion by the healthy host of the embryonated eggs of a small nematode, Heterakis papillosa, which was parasitic in the ceca of infected birds. (The infective agent, erroneously designated Amoeba meleagridis by Smith many years before, was recognized by E. E. Tyzzer, his successor at Harvard, as a unique flagellate, which he renamed Histomonas meleagridis.) Proximity to a large dairy herd infected with Bang's disease reawakened Smith's early interest in Bacillus abortus and bovine contagious abortion; and he published, sometimes with R. B. Little, twelve papers and a monograph in this field. In 1926 they described the protection induced by vaccinating heifers with living B. abortus culture of low virulence. Other investigations concerned Vibrio fetus,a spirillar cause of cattle abortion, hitherto unrecognized in America; a possible new species, Bacillus actinoides, producing bronchopneumonia in calves;tne vitally protective antibodies in colostrum for newborn calves; and the pathogenicity of certain bovine strains of B, coli in calves deprived of colostrum.

In 1929, at age seventy, Smith relinquished his directorship of the division of animal pathology and was succeeded by Carl Ten Broeck, a longtime associate. He continued working at Princeton as member emeritus of the Rockefeller Institute. Smith had become vice-president of the board of scientific directors in 1924 and succeeded Welch as president in 1933. In November 1934 increasing weakness forced his hospitalization in New York, where he died just before an exploratory operation for intestinal cancer. His ashes and, six years later, those of his wife were buried in the woods at their summer home at Silver Lake, New Hampshire. In 1967 they were reinterred in the nearby Chocorua cemetery.

Honors came to Smith rather late in life. Between 1917 and 1933 he delivered the Herter, Mellon, Pasteur, Gross, De Lamar, Milbank Memorial, Welch, and Thayer lectures. A climactic series of five Vanuxem lectures, given at Princeton in 1933, and published in book form as Parasitism and Disease (1934), philosophically embodied his scientific credo. He received a dozen honorary doctorates from renowned American and European universities. He held membership in numerous scientific and medical societies, and was president of the Society of American Bacteriologists (1903), the National Tuberculosis Association (1926), and the Triennial Congress of Physicians and Surgeons (1928). He was elected a trustee of the Carnegie Institution in 1917. Smith was a foreign member of the Royal Society of London and eleven other ancient societies. Further honor awards were the Mary Kingsley, Flattery, Kober, Trudeau, Holland, Sedgwick, Manson, and Copley medals. Recommended several times for the Nobel prize, this ultimate distinction eluded him, although he surely deserved it. His portrait in oils is at the entrance to the Theobald Smith Building of the Rockefeller Institute, now known as the Rockefeller University, which he served so faithfully in various capacities for thirty-three years.

Smith unpretentiously summarized his own life work as "a study of the causes of infectious diseases and a search for their control." His outstanding success in this quest derived from a farsighted, dispassionately critical intelligence, linked to capacities for unsparing industry, punctilious concern for detail, technical inventiveness, and indomitable persistence. These qualities were applied to realistically chosen problems. Between 1883 and 1934 he published at least one scientific research report annually, and in several of these years the annual output was ten or more such publications–a record demanding rare degrees of self-discipline and dedication to the work ethic. As a director he was fair in judgment but sparing of praise, painstakingly conscientious, and abhorrent of waste or extravagance. All who knew Smith and his work respected him. Individuals as diverseas Osler, Welch, Simon Flexner, Prudden, Rous, [Dr. Richard Edwin Shope (born 1901)], and Ten Broeck held him in profound admiration. Smith was too reticent to be popular, and he displayed an element of restraint even with Gage, despite their half-century of close friendship. Hans Zinsser observes, "there was about him an unobtrusive pride, a reserve tinged with austerity which did not invite easy intimacy."

Smith's relaxations were modest and quiet, befitting his nature. When tired, he sought solace in reading, piano-playing, or calculus. During the hot summer months, he found refreshment at his lakeside home, where besides preparing manuscripts, he enjoyed boating, making household repairs, and landscaping. His pattern of life was consistently rational, yet he did not lack emotion. He hated war and wastefulness, for example, but knew that great ideas must be both launched and defended, often at high cost in a hostile environment. That a scientist of such unswerving probity and fine accomplishments should carry so little fame among his countrymen testifies partly to his self-effacing character. Many of his discriminating contemporaries thought him comparable to Pasteur and Koch, and the passage of time has not dimmed the luster of his contributions to the conquest of disease.

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His more important monographs include Hog Cholera; Its History, Nature and Treatment (Washington, 1889) written with D. E. Salmon and F. L. Kilborne; Special Report on the Cause and Prevention of Swine Plague (Washington, 1891); Investigations Into theNature, Causation, and Prevention of Texas or Southern Cattle Fever (Washington, 1893), written with F. L. Kilborne, repr. in Medical Classics. 1 (1936–1937), 372–597; Studies in Vaccinal Immunity Towards Disease of the Bovine Placenta Due to Bacillus Abortus (Infectious Abortion) (New York, 1923), written with R. B. Little: and Parasitism and Disease (Princeton, N.J., 1934), the Vanuxem lectures.

Smith's lasting interest in the bacteriology and immunology of tuberculosis is expressed in "The Diagnostic and Prognostic Value of the Bacillus Tuberculosis in the Sputum of Pulmonary Diseases," in Albany Medical Annals, 5 (1884), 193–198; "Some Practical Suggestions for the Suppression and Prevention of Bovine Tuberculosis," in Yearbook of the United States Department of Agriculture (1895), 317–330; "Two Varieties of the Tubercle Bacillus From Mammals," in Transactions of the Association of American Physicians. 11 (1896), 75–93; "A Comparative Study of Bovine Tubercle Bacilli and of Human Bacilli From Sputum," in Journal of Experimental Medicine, 3 (1898), 451–511, repr. in Medical Classics,1 (1936–1937), 599–669: "The Thermal Death-point of Tubercle Bacilli in Milk and Some Other Fluids," in Journal of Experimental Medicine,4 (1899) 217–233; "The Relation Between Bovine and Human Tuberculosis." in Medical News, 80 (1902), 343–346; "Studies in Mammalian Tubercle Bacilli. III . Description of a Bovine Bacillus From the Human Body. A Culture Test for Distinguishing the Human From the Bovine Type of Baccilli," in Transactions of the Association of American Physicians, 18 (1903), 109– 151; "The Parasitism of the Tubercle Bacillus and Its Bearing on Infection and Immunity," inJournal of the American Medical Association, 46 (1906), 1247–1254, 1345–1348, the Harvey lecture: "Certain Aspects of Natural and Acquired Resistance to Tuberculosis and Their Bearing on Preventive Measures," ibid.,68 (1917), 669–674, 764–769, the Mellon lecture; and "Focal Cell Reactions in Tuberculosis and Allied Diseases," in Bulletin of the Johns Hopkins Hospital, 53 (1933), 197–225, the Thayer lectures.

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full book - https://publicism.info/history/influenza/

https://publicism.info/history/influenza/37.html

The Great Influenza: The Epic Story of the Deadliest Plague in History - John M. Barry (2004)

Part VII. THE RACE

Chapter 24

2004-the-great-influenza-john-m-barry-from-publicism-info-chapter-24

WHILE PARK TRIED to produce an antiserum or vaccine against the disease in New York, Philadelphia was already approaching collapse. Its experience would soon be echoed in many cities around the country.

There **Paul Lewis** was searching for the answer as well. Few, including Park, were more likely to find it. The son of a physician, Lewis grew up in Milwaukee, went to the University of Wisconsin, and finished his medical training at Penn in 1904. Even before leaving medical school he knew he intended to spend his life in the laboratory, and he quickly acquired both a pedigree and a well-deserved reputation. He started as a junior investigator working on pneumonia under Welch, Osler, Biggs, and several others who comprised the Rockefeller Institute's Board of Scientific Advisers. **Lewis impressed them all. Most impressed was Theobald Smith, one of the world's leading bacteriologists, for whom Lewis then worked in Boston. Later Smith recommended Lewis to Simon Flexner, saying that Harvard lacked the resources to allow Lewis to develop fully and that "[h]is heart lies in research."**

From Smith there could come no higher compliment. Lewis deserved it. He seemed born for the laboratory. At least that was the only place where he was happy; he loved not only the work itself but the laboratory environment, loved disappearing into the laboratory and into thought. "Love" was not too strong a word; his passions lay in the lab. At Rockefeller, Lewis had started off pursuing his own ideas but when a polio epidemic erupted Flexner asked him to work with him on it. He agreed. It was a perfect match. **Their polio work was a model combination of speed and good science. They not only proved that polio was a viral disease, still considered a landmark finding in virology, but they developed a vaccine that protected monkeys from polio 100 percent of the time. It would take nearly half a century to develop a polio vaccine for humans. In the course of this research Lewis became one of the leading experts in the world on viruses.**

Flexner pronounced Lewis "one of the best men in the country,...a very gifted fellow." That may have been an understatement. **Richard Shope worked closely with him in the 1920s, knew many of the world's best scientists (including Flexner, Welch, Park, Williams, and many Nobel laureates)—and himself became a member of the National Academy of Sciences. He called Lewis the smartest man he ever knew.** Joseph Aronson, a prize-winning University of Pennsylvania scientist who had also done research at the Pasteur Institute, named his son after Lewis and, like Shope, said Lewis was the brightest man he had ever met.

When the war began, Pearce, the National Research Council official, told Lewis what he told only four or five other scientists in the country: to expect to be asked "for special service in connection with epidemic disease." [Richard Pearce was the head of the National Research Council's section on medicine. Pearce was grabbing at any information he could get from the French, the British, even the Germans, and distributing it to investigators everywhere.... see Chapter 23...]

Lewis was ready. He received a navy commission and told Flexner he had "no onerous routine duties." His laboratory abilities were far more important. He was still cooperating with Cole and Avery on the development of pneumonia serum, and he was also, as he told Flexner, experimenting with dyes "as regards their capacity to inhibit the growth" of the bacteria that cause tuberculosis. The idea that dyes might kill bacteria was not original with him, but he was doing world-class work in the area and his instincts were right about its importance. Twenty years later a Nobel Prize would go to Gerhard Domagk for turning a

dye into the first antibiotic, the first of the sulfa drugs.

But now the city did not need laboratory breakthroughs that deepened understanding. It needed instant successes. Lewis had reached his conclusions about polio with tremendous speed—roughly a year, and they had been both sound and pioneering conclusions. But now he had only weeks, even days. Now he was watching bodies literally pile up in the hospital morgue at the Navy Yard, in the morgues of civilian hospitals, in undertaking establishments, in homes.

[Lewis] remembered Flexner's work on meningitis during an epidemic of that disease. Flexner had solved that problem and the success had made the reputation of the Rockefeller Institute. Knowing that Flexner had succeeded then made a solution to this seem possible. Perhaps Lewis could do the same.

He considered whether a filter-passing organism caused influenza. But to look for a virus Lewis would have to look in darkness. That was science, the best of science—at least to look into the gloaming was—but he was not now engaged only in science. Not right now. He was trying to save lives now. **He had to look where there was light. First, light shone on a kind of blunt-force use of the immune system. Even if they could not find the pathogen, even if they could not follow normal procedures and infect horses with the pathogen and then prepare the blood from horses, there was one animal that was suffering from the disease that was scorching its way across the earth. That animal was man.**

Most people who contracted the disease survived. Even most people who contracted pneumonia survived. It was quite possible that their blood and their serum held antibodies that would cure or prevent disease in others. Lewis and Flexner had had some success using this approach with polio in 1910. In Boston, Dr. W. R. Redden at the navy hospital also remembered, as he reported, "the experimental evidence presented by Flexner and Lewis with convalescent serum from poliomyelitis." Now Redden and a colleague drew blood from those who had survived an influenza attack, extracted the serum, and injected it into thirty-six pneumonia patients in a row, beginning October 1. This was not a scientific experiment with controls, and in a scientific sense the results proved nothing. But by the time they reported the results in the October 19 JAMA, thirty patients had recovered, five were still undergoing treatment, and only one had died.

Experiments began in Philadelphia using both the whole blood and serum of survivors of influenza as well. These too were not scientific experiments; they were desperate attempts to save lives. If there was any sign this procedure worked, the science could follow later.

Lewis let others conduct that blunt-force work. It took no truly special skills, and others could do it as well as he. He spent his time on four things. He did not do these things sequentially. He did them simultaneously, moving down different paths—setting up experiments to test each hypothesis—at the same time.

First, he tried to develop an influenza vaccine using the same methods he had used against polio. This was a more sophisticated version of the blunt-force approach of transfusing the blood or serum of influenza survivors. For he at least suspected a virus might cause influenza.

Second, he stayed in the laboratory following a shimmer of light. As Park had reasoned, so Lewis reasoned. Research could find bacteria. Pfeiffer had already pointed an accusing finger at one bacillus. Lewis and everyone in his laboratories were working hours and days without relief, taking only a few hours off for sleep, running procedure after procedure—agglutination, filtration, transferring culture growths, injecting laboratory animals. His team too searched for bacteria. They took more swabs from the throats and noses of the first victims, exposed the medium to it, and waited. They worked intensively, twenty-four hours a day in shifts, and then they waited, frustrated by the time it took bacteria to grow in the cultures, frustrated by the number of cultures that became contaminated, frustrated by everything that interfered with their progress.

In the first fifteen cases, Lewis found no B. influenzae. Ironically, the disease had exploded so quickly, spreading to hospital staff, that Lewis had little except sputum samples to work with: "The hospitals were so depleted [of staff]…I have had no autopsy material" except from four "badly decomposed" bodies, almost certainly too long dead to be of any use.

Then, like Park and Williams, Lewis adjusted his techniques and did begin to find the bacillus regularly. He gave this information to Krusen, the health commissioner. The Inquirer and other newspapers, desperate to say something positive, declared that he had found the cause of influenza and "armed the medical profession with absolute knowledge on which to base their campaign against the disease."

Lewis had no such absolute knowledge, nor did he believe he had it. True, he had isolated B. influenzae. But he had also isolated a pneumococcus and a hemolytic streptococcus. Some instinct pointed him another direction. He began third and fourth lines of inquiry. The third involved shifting his dye experiments from trying to kill tuberculosis bacteria to trying to kill pneumococci.

But death surrounded him, enveloped him. He turned his attention back to helping produce the only thing that might work now. After the emergency, if anything seemed to work he could always return to the laboratory and do careful, deliberate experimentation to understand it and prove its effectiveness.

So he chose as his targets the bacteria he and others had found. From the first instant he had seen the dying sailors, he had known he would have to begin work on it now. For even if he had guessed right, even if what he was doing could succeed, it would take time to succeed. So, in his laboratory and in other laboratories around the city, the investigators no longer investigated. They simply tried to produce. There was no certainty that anything they produced would work. There was only hope.

He started by preparing medium using beef peptone broth with blood added, and then growing cultures of the pathogens they had isolated from cases—B. influenzae, Types I and II of the pneumococcus, and hemolytic streptococcus. He personally prepared small batches of vaccine including these organisms and gave it to sixty people. Of those sixty, only three people developed pneumonia and none died. A control group had ten pneumonias and three deaths.

This seemed more than just promising. It was not proof. Many factors could explain the results, including random chance. But he could not wait for explanations.

His laboratory had no ability to produce the immense quantities of vaccine needed. It required an industrial operation. They needed vats to grow these things in, not petri dishes or laboratory flasks. They needed vats like those in a brewery.

He handed off this task to others in the city, including those who ran the municipal laboratory. It would take time to grow enough for tens of thousands of people.

The whole process, even in its most accelerated state, would take at least three weeks. And it would take time once they made the vaccine to administer it to thousands and thousands of people in a series of injections of increasing doses spaced several days apart. In all that time, the disease would be killing.

Meanwhile, Lewis began work on still a fifth line of inquiry, making a serum that could cure the disease. This work was trickier. They could make a vaccine with a shotgun approach, combining several organisms and protecting against all of them. (Today vaccines against diphtheria, pertussis—whooping cough—and tetanus are combined in a single shot; a single shot protecting against measles, mumps, and rubella is routinely given to children; and today's flu shots contain vaccines against both the influenza virus and pneumococci—and the pneumococcal vaccine is a descendant of the work done at Rockefeller Institute

contain vaccines against both the influenza virus and pneumococci—and the pneumococcal vaccine is a descendant of the work done at Rockefeller Institute in 1917.)

A serum had to aim at only one specific target; if it worked at all, it would work only against a single organism. To make a serum that worked, Lewis would have to pick a single target. If he had to aim at a single target, he had to choose the bacillus Pfeiffer had discovered, B. influenzae. It was still by far the most likely cause of the disease.

Developing a serum against this organism would likely be difficult. While Lewis was still at the Rockefeller Institute, Flexner himself had tried to do this in collaboration with Martha Wollstein. Wollstein—a fine scientist, although Flexner never treated her with the respect he gave to others—had experimented with B. influenzae almost continuously since 1906. But Flexner and she had made no progress whatsoever. They had not only failed to develop a serum that could help man; they had failed to cure any laboratory animals.

Lewis never understood precisely where Flexner had gone wrong in that attempt, although it certainly would have been the subject of many talks in the famous lunchroom where solutions to so many scientific problems were suggested. Now he had no opportunity to think deeply about the problem, think all the way through it, come up with a hypothesis with explanatory power, and test it.

Lewis could only hope that Flexner failed because his technique was faulty. That was quite possible. Flexner had sometimes been a little sloppy in the laboratory. He had once even conceded, "Technically, I am not well-trained in the sense of meticulous and complete accuracy."

So now Lewis hoped some technical error—perhaps in the preparation of the medium, perhaps in too rough a usage for the killed bacteria, perhaps somewhere else—accounted for Flexner's problems. It might have. For example, many years later a young graduate student entered a laboratory and saw a renowned Harvard professor at the sink washing glassware while his technician was perfoming a complex task at the workbench. The student asked him why the technician was not washing the glassware. "Because," the professor replied, "I always do the most important part of the experiment and in this experiment the most important thing is the cleanliness of the glassware."

Lewis turned all his attention in effect to washing the glassware, to the most mundane tasks, making certain there would no mistakes in the work itself, at the same time applying any knowledge about Pfeiffer's bacillus that had been learned since Flexner's failure.

Lewis knew full well that little of what he was doing was good science. It was all, or nearly all, based on informed guesswork. He only worked harder.

As he worked, the society about him teetered on the edge of collapse.

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Dr. Anna Lenore Skow Southam (born 1915)

[HG00BZ][GDrive]

Born 1915

Died 1996

Married to **Dr. Chester Milton Southam (born 1919)**

Biography, from US NIH - "Dr. Anna Lenore Skow Southam : 1915 - 1996"

Source : [HG00BY][GDrive]

Dr. Anna Lenore Skow Southam conducted extensive research and published widely in the area of reproductive health, infertility, and sterility, and performed some of the earliest clinical evaluations of a rapid immunological pregnancy test.

Little is known about her early life, or her decision to embark on a career in medicine. Born Anna Lenore Skow in 1915 and raised in Northern Idaho, she earned her bachelor of science degree from the University of Idaho in 1942. After she married Dr. Chester M. Southam, she and her husband ran a laboratory at Idaho's Moscow Hospital. She began graduate studies around this time and was accepted into the pre-medical program at the Columbia University College of Physicians and Surgeons in New York City, and earned her medical degree in 1947. Following a year-long internship at Bellevue Hospital, she took the position of assistant resident at the Sloane Hospital for Women from 1947 and 1953.

During her time at the Sloane Hospital, Dr. Southam began publishing the results of her early clinical research. This was focused on reproductive problems in women, particularly the endocrinological aspects of infertility. At the end of her residency in 1953, she became a research assistant in the Department of Obstetrics and Gynecology at Columbia, and accepted the position of assistant obstetrician and gynecologist at the Columbia-Presbyterian Medical Center. In 1959, Dr. Southam received her diplomate from the American Board of Obstetrics and Gynecology. She maintained a lengthy affiliation with Columbia University College of Physicians and Surgeons and Columbia-Presbyterian Hospital, eventually becoming associate professor of obstetrics and gynecology at Columbia University and an associate attending obstetrician and gynecologist at Columbia-Presbyterian Medical Center.

Dr. Southam recorded her research on fertility and sterility in dozens of articles and published regularly in the Sloane Hospital Bulletin. At the same time, she directed the Sloane Hospital Endocrine Clinic at Columbia-Presbyterian for many years, where she cared for women who had difficulty becoming pregnant. Southam worked on testing oral contraceptives as well as testing drugs for inducing ovulation. Notably, she performed the early clinical evaluation for a rapid immunological test for pregnancy. Accounts of her clinical work appeared in the American Journal Obstetrics and Gynecology, Fertility and Sterility, and the Journal of the American Medical Association.

Throughout her career, Dr. Southam volunteered for service on a number of professional committees, including Planned Parenthood, the Human Betterment Association, and the National Committee on Maternal Health. Continuing her public service until late in her career, she embarked on a six-week teaching tour that took her to Taiwan in the early 1960s, followed by a six-month tour of duty as a visiting professor at the All-India Institute for Medical Research. In these roles Dr. Southam worked under the auspices of the Ford Foundation's Population Office, for which she lectured widely and conducted research on population control. Although she retired from Columbia University and Columbia-Presbyterian in 1967, she continued her work for the Ford Foundation for several more years. Shortly after she ended her career in medicine, she wrote a note to the Alumni Office at the University of Idaho, providing a rare glimpse into her personal life. Noting that she enjoyed looking back over the past, Dr. Southam described herself at the age of 76 sitting in her apartment in Santa Monica, California, playing with her grandchildren and admiring the ocean at her front lawn. After savoring her well-deserved retirement, Dr. Anna Southam died in November 1994.

2010(est) - Univ. of Cambridge UK research by R.A. Braun : "Agents of Fertility: The Ford Foundations' Fertility Research Program Guided by its Biomedical Advisors"

Source : [HE0030][GDrive]

Written by : Ramona A. Braun, University of Cambridge : PhD candidate, History of Science/Centre for Latin American Studies , Email: contact@handsoninstruments.com

I am most grateful to the RAC as they awarded me a generous grant to investigate the newly acquired archives of the Ford Foundation with respect to their Population Program. During my archival research I investigated the following sources:

1. Oscar Harkavy's office files preserved in 27 boxes
2. Ford Foundation unpublished reports, on paper and on microfilm
3. Ford Foundation "logs" (unsuccessful grant applications) and grants; amongst these, I processed all cases and projects advised by A. Southam and E. Witschi

My stay in September to October 2013 focussed specifically on the Ford Foundation's efforts to play an important rôle in the field of population politics by building and maintaining a well supported and unique individual grant program from 1959 until the 1980s (cf. Hertz 1984). This program focussed on support for physiological investigations into the reproductive organs in order to find new ways and means for contraceptive measures. My own interest was specifically on the first half of this period, 1959 to the mid-1970s, as it was in this period that the FF Population Program had the largest international impact (on the early Ford Foundation, cf. Walsh and Atwater 2012; Berelson, Anderson, and Harkavy 1965). For the PhD thesis more particularly, I researched the FF's investment in sterilization and laparoscopy.

I acknowledge most helpful support from Lucas Buresch for the Ford Foundation (hereafter FF) as well as Tom Rosenbaum and Beth Jaffe on Rockefeller Foundation related requests.

My research findings will help other historians to define what kind of rôle the FF played in fertility research in comparison to other global actors such as the Population Council and the Rockefeller Foundation, both run by the Rockefeller Family. In a more general perspective, this research helps to reveal the impact civilian and philantropic funding had on political decisions and medical and health innovations in the field of birth control in the 1950s-70s. Research at the RAC supports my argument that specifically after World War II, contraceptive and neo-eugenic innovations and efforts were highly influenced by private foundations in the field who in turn were influenced by individual physicians and scientists.

First, I will outline the theory or rationale of reproductive research presented by the FF for their new Population Program. This will allow to trace the theory on the basis of which the advisors acted and on the basis of which Oscar Harkavy, head of the Population Program, justified his decisions. Second, I will describe the work of two of these advisors, and finally three significant projects in some more detail.

A Program and its Faces: What Did "Reproductive Physiology" Mean for the FF and How Did It Connect to Birth Control?

Oscar Harkavy, an economist by training (Harkavy 1995), chaired the FF Population Program. Harkavy had a crucial role in shaping the profile of the FF's policy and ideology concerning reproduction and its control by medical means – a policy I termed, in my grant application, "Physiology for Contraception". Reproductive physiology was neither a clear term at the time nor an established research field with its institutions. The term and the questions it addressed were unsolved for a long period of time.

Reproductive physiology was investigated both in medicine and in biology. In medicine, the active specialties were mainly gynecology and urology, and the more laboratory-based sub-disciplines of histology and pathology. In biology, researchers came mostly from embryology, endocrinology and institutes of physiology that dealt mostly with cells, nerves, fluids and tissue. The main questions were how all the reproductive organs in women and men functioned at any given time and what their important elements were. While biologists worked on the smaller structures, gynecologists and urologists investigated mainly entire organs such as the tubes, the ovaries, or the sperm ducts in men.

The Ford Foundation became convinced, after a few investigations, that its funding rôle should be that of boosting research on reproductive physiology (whatever the term covered) in order to access new knowledge to create new contraceptives of all possible kinds. In short, research into physiology should lead to better population control.

When Oscar Harkavy started this Population Program, he depended heavily on experts from medicine and the biomedical sciences to get an overview of current research and to help define what the FF should be aiming to fund. In order to progress quickly, he invited some of the most noted fertility and contraception researchers of the United States to present opinion papers on their topics. Their 1959 workshop was an important step in formulating the Population Program.

On 9 June 1959, the FF convened a meeting of experts at the FF headquarters in New York Cityi. Invited to this seminal meeting were Willard Allen, Lewis L. Engel, Reuben G. Gustavsson, Allan T. Kenyon, C.N.H. Long, Warren O. Nelson, and Gregory Pincus. The most prominent participants were Engel from Harvard and Pincus from the Worcester Foundation who had both earlier attracted global attention to their research.

When considering the "state of the field", members of the workshop agreed that "attempts to control conception by steroids" needed additional scientific research. Furthermore, the participants agreed that "the state of present knowledge" did not allow to define "chemical and physical processes" during the "reproductive cycle": reproductive physiology was not clearly understood. This program was completely in tune with research dynamics in the gynecological infertility community described two paragraphs above. Concerning possible avenues for FF research, it was considered obvious that the "list of the 1958 grants of the Population Council's Medical Division" supplied a reliable catalog of the best institutes carrying out research on human reproduction. Members of the FF meeting looked with great expectations towards the Population Council's budget for 1959 (on the interdependence between Pop Council and FF, cf. The Population Council 1965, 1978; Huang 2011; most recently Abrahamson 2013).

With regard to the papers given, G. Pincus described his Puerto Rican field trials and he was eager to state that the Pill was safe to take: "many of the reported side effects […] diminish with time of use". There were no "pathological side effects". Under the heading of "Obstacles of Research", it was discussed that the "principal obstacle is the lack of trained personnel", especially MDs in comparison to PhDs. It was mainly PhDs in "biochemistry and physiology" who "carried" the field. The group identified a particular obstacle to clinical research by MDs in the liability of physicians for any "unforeseen adverse consequences" of experiments in the United States.

The meeting's report underlined that organizations including the government spent $900,000 per year on medical research geared towards population control, of which $215,000 was provided by the Population Council. However, the FF deplored that the NIH, for instance, only supported research explicitly not related to birth control.

The FF program also identified "investigators overseas" as a possible group of grantees, especially with regard to the situation in the medical disciplines. In conclusion, the FF decided to support bio-medical efforts in a broad sense, be it MDs or PhDs, who worked on the physiology of reproduction, or more directly on birth control methods.

By 1969, the focus had shifted somewhat. Experience with working with MDs made the FF define the research to be carried out no longer as "physiology" but as "biology". The "Foundation strategy" communicated in 1968ii declared: "We continue to assign highest priority to a greatly expanded worldwide program in reproductive biology directed toward the development of radically new concepts in fertility control. Our estimate of $ 150 million a year as an optimum level of support for biomedical research in fertility control is taken seriously by responsible government officials." The FF would contribute to these efforts a budget of $ 8 million in fiscal year 1969.

The emphasis on physiology in 1959 and on biology in 1968 shows that there was a gradual shift in understanding reproductive research within the FF. It is likely that over the years, the more biologically oriented projects looked more promising. Margaret Rossiter's research at the RAC in 2012 (Rossiter 2012) identified a similar change of mind in Warren Weaver, the Rockefeller Foundation's program director responsible for biomedical sciences and one of the main actors in defining "physiology" for the twentieth century. During his lifetime, Weaver became more favourably inclined towards funding projects in the history of science. Likewise, Harkavy shifted from the term "reproductive physiology", in the 1950s much more medical than biological in definition, to the term "reproductive biology".

[....]

Anna L. Southam and her Impact on the Ford Foundation's Funding Patterns

Anna L. Southam (1915-1996) was the FF's second medical/scientific advisor and supported some projects in her own sphere of interest just like Witschi did. She started this position in 1965 and in 1968, Southam broadened the scope of her work becoming responsible for projects in Asia, together with Lyle Saunders.xvii

It is noteworthy here that she is one of the few female fertility researchers, alongside Sophia Kleegman also based at New York and Elizabeth Palmer (wife of the eminent Raoul Palmer) in Paris, who were part of the international community of infertility experts in the 1960s.

Besides being a physician at the Columbia College of Physicians and Surgeons, she also worked as a medical advisor to the [Ford Foundation]. At Columbia, Southam was based in Howard C. Taylor's (1900-1985) department who advised the Population Council in clinical matters. One could therefore say that the Columbia College of Physicians and Surgeons/ Department of Obstetrics and Gynecology advised the Rockefeller Foundation and the Ford Foundation. A detailed study of the intricate relations between Columbia and these two or more philanthropic organisations as well as their impact on population control programs is still missing.

Southam had a degree of education with [illegible] at Columbia [illegible] (Interdepartmental Laboratory at Yale) [illegible] for 1950 [illegible]

Southam had made a name for herself, together with her Columbia colleague C. Lee Buxton (later head of department at Yale), as co-author of a 1958 book on infertility (Buxton and Southam 1958) in which both displayed their interest in a specific form of infertility investigation in women, namely culdoscopy. Culdoscopy is an endoscopic technique of viewing the contents of the abdomen and, more specifically, the internal genital organs such as the tubes and ovaries, through a rigid optic tube called the culdoscope. The culdoscope, an instrument which is no longer in use, was a rigid endoscope developed in the 1940s that was inserted through a small incision in the vagina next to the uterus. The physician inserted the culdoscope through the vagina; this vaginal endoscope thus served to look at the tubes and ovaries without surgically having to open the abdomen.

Despite being an alternative to open surgery, enthusiasm for this tool was minimal in the gynecological community interested in infertility: the cumbersome procedure demanded from the woman a so-called knee-chest-position i.e. being on all fours on the operating table. The technique was internationally known after its inventor Decker had described it in the widely read American Journal of Obstetrics and Gynecology (Decker and Cherry 1944). There were a few vocal proponents of the technique in New York where culdoscopy had been developed and at Hopkins (cf. TeLinde 1948; Decker 1952). Anna Southam believed it had a promising future.

It is in this perspective that one needs to see her and the FF's support of a project of operative culdoscopy, culdoscopy used to sterilize women for population control. Starting in 1973, the FF poured hundreds of thousands of dollars into a project of "operative culdoscopy" for female sterilization as a contraceptive method at the University of the West Indies in collaboration with the State University of Floridaxviii. After one decade, both the head of the project and the FF had to acknowledge that they had failed to develop a viable technique of performing sterilization on large numbers of women. The FF also learned that the travel budget for sending staff from Jamaica to Florida had mainly been used for beach holidays.

More interesting than the description of a failed project and the money spent on dubious procedures, is the broader context in which Southam and the described technology operated. The year the project started, 1973, was a point in time when a very different technique of endoscopic surgery had already proven useful in sterilizing hundreds of women in a day, if needed and wanted, for the purpose of population control: laparoscopy.

Laparoscopy is a method in which a rigid endoscope is inserted through an incision below the navel. As an abdominal technique, it has the advantage that the abdominal organs are better visible. The woman can lie on her back rather than being on all fours. Laparoscopy in gynecology had been developed at the same time as culdoscopy, in the 1940s, yet until the late 1960s it had been used in Europe only (widely read books are Frangenheim 1972; Steptoe 1968). From 1967 onwards, the technique was used in the United States. It came with instruments to coagulate and thereby sterilize the tubes, and a handbook that showed how to do it (Steptoe 1968). The method revolutionized population control in developing countries, especially India (a history of the implementation of the technique in India is yet to be written but hints towards it can be found in Connelly 2008).

By 1973, a number of plastic and metal clips were available for tubal sterilization in case the surgeon wanted to avoid, or did not have available the necessary electrical current, to perform coagulation of the Fallopian tubes. This had proven effective in developing countries with poor operating conditions. By 1973, a professional organization called the American Association of Gynecological Laparoscopists (AAGLxix) had formed and hosted its second international meeting in the USA. Southam knew about all this, as did everybody else engaged in population control. Yet Southam chose, with the means at hand, to take a more political stand.

She chose to support research into an alternative technique, a technique that was not likely to be successful but one that she had helped to disseminate in the late 1950s. As a medical advisor to the FF, Southam supported a technique that was close to her heart: operative culdoscopy. It can be debated whether this was compliant with the FF's declared policy of seeking objective external advice. What is more interesting to the history of population policy is that foundation money was used with the intention to change current medical practice and to make political claims, however unrealistic they may have been. Southam used the FF, an agent much more powerful than herself, to have her say in the discussion about mass-sterilizations.

Southam was not against mass-sterilizations, therefore she went with the general flow of gynecologists interested in contraception in the 1960s. Southam wanted to have her own technique, funded through her initiative, implemented by her and, we can suppose, eventually to be named after her if successful. The University of the West Indies served as a risk-free test-area for that technique, and if it failed, this could always have been attributed to untrained personnel. Southam's favoured technique would have a chance to prove itself.

The case of culdoscopy in the West Indies shows two points very clearly: First, the institutional power the FF's advisors had to to effectively approve or reject projects. Second, the fact that a woman in the generally male business of population control did not act in any way different from her male colleagues: she did not put forward any argument concerning the userfriendliness of her technique for women, she did not criticize mass-sterilizations and she did not question the fact that few women were trained in the program supported by her. Southam was not a feminist, and in her pursuit of a technique of her own she mimicked her male counterparts. This finding counters a general trend in the historiography of women in science to describe women as victims of male agency. Southam was not a victim, she was as powerful as her male counterparts. However, she was not interested in strengthening the voice of other women, or of the women subjected to her culdoscopic operations.

[...]

EVIDENCE TIMELINE

1961 (Nov 14)

Source : [HN01IW][GDrive]

Life's Just The Way She Likes: Busy Day At Home And Hospital

By JOAN W. KONNER
(Staff Writer)

The daily schedule of Anna L. Southam, M. D., of Demarest goes something like this:

7 A. M. — Husband, Chester Southam, M. D. brings her coffee and toast in bed.

8 A. M.—Makes household plans for the day; says good-bye to younger children, Lenore (Lenny), 15, a student at Northern Valley Regional High School and Arthur, 5, a kindergartener, (Larry, 19, her oldest child attends Wittenberg College, Springfield, Ohio).

8:30 A. M. — Reports to work at the Columbia Presbyterian Medical Center in New York, where she is associate attending obstetrician and gynecologist at the Presbyterian Hospital and associate professor of obstetrics and gynecology at Columbia University's College of Physicians and Surgeons.

8:30 A. M. to 6:30 P. M. — Working hours: laboratory research, takes charge of the gynecological clinic (infertility and endocrine clinic), teachers medical school classes, conferences with research fellows, office hours, operating room time, and writing.

6:30 P. M. — Leaves for home and hopes that patients do not go into labor at night;

7 P. M. — Time with family.

The woman who carries this giant-sized schedule works, in professional career, for and against the same goal — pregnancy.

Dr. Southam is an authority on the problems of infertility and birth control.

She is co-author of "Human Infertility", and numerous other papers and pamphlets on fertility. She is also a member of the medical advisory council of the Bergen County Planned Parenthood Center, 59 Essex Street, Hackensack.

"The interest in infertility and control of over-fertility go hand in hand," the tall, spare woman with midnight blue eyes and steel gray hair explained. "Actually both situations are two sides of the same coin."

A case in point is her current research product. She and a team of researchers are trying to establish whether antibodies, or factors which work against pregnancy, are present in women who cannot conceive. If such antibodies should ever be proved and isolated, they may someday be used to immunize other persons against pregnancy just as polio virus is now used to prevent polio.

Sitting in her book-lined office in the medical school building, Dr. Southam stated her approach to the problems of infertility.

"I'm antipsychological," she said in her soft-spoken, but direct manner. "I always try to find the reason for infertility.

"Naturally a woman gets frustrated when she cannot become pregnant. She's barred from her calling as an artist would be if he were prevented from painting. But frustration is not the cause.

"We can't always find the cause, and we recognize that the psychological factor is at times important, but it is not a bush to hide behind."

Also like two sides of the same coin, Dr. Southam's career has always gone hand in hand with her family life.

A native of Idaho, she met her husband in college at the University of Idaho. The two attended medical school together at Columbia University, College of Physicians and Surgeons.

She gave birth to her first child 7 days after graduating college, to her second, in her fourth year of medical school, and to her last, after office hours.

By design her daily hours coincide with her husband's. He does cancer research at the Memorial Cancer Research Center, New York.

When Dr. (Mrs.) Southam is home, she is not too tired to be both an indoor and outdoor girl.

"If it's ironing I have to do, I'm beat, but if it's gardening, I'm fine," she said with quiet humor.

She loves to cook (specialty of the house, beef stroganoff), but hates dishwashing. Often on weekends the beds go unmade.

The whole family loves the out-of-doors. They have spent many vacations and weekends on camping and canoe trips.

"When you get up on the rocks, you know no one can get you on the telephone," she admitted.

Dr. Southam describes her life as hectic at times — she recalls the time one of her patients went into labor when she was cooking Thanksgiving dinner for 20 — but said she wouldn't have it any other way.

"I think my husband and I spend more time with our children than people who are home all the time.

"The children know when we're home, they're the important thing.

"Life is just the way I want it," she summed up, "except I'd like more hours in the day."

FOR AND AGAINST PREGNANCY: Dr. Anna Southam of Demarest works in her laboratory at the Columbia Presbyterian Medical Center in New York, to solve the mysteries of infertility and develop new methods of birth control. (The Record photograph.)

L. A. Sto... As Burne...

By PEG ZWECKER
(Chicago Daily News Fashion Editor)

Beverly Hills, Calif., Nov. 14 — Fashion is a burning question out here.

Millionaire refugees of the disastrous Bel Air-Brentwood fire are building up wardrobes as fast as the busy clerks can wait on them. Stores are doing a land-office business.

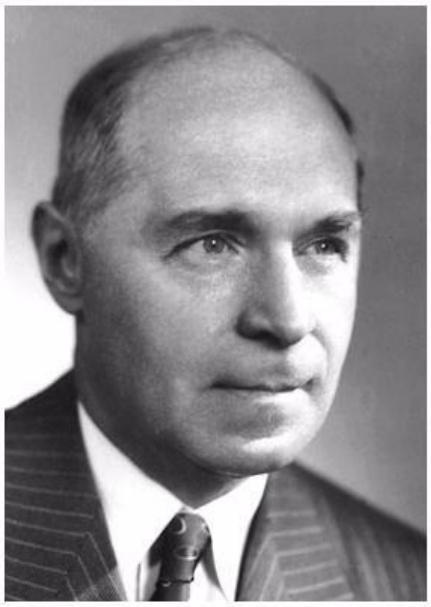
Unshaken Burt Lancaster, who

Tallman Woman Is Elected To Second Auxiliary Term

Hackensack — Mrs. Harrison B. Wilson of Tallman, N. Y., was elected to serve a second term as president of the Woman's Auxiliary of the Hackensack Hospital Association at the annual meeting of the group yesterday in Alumni Hall.

BITCHUTE @Housatonic YOUTUBE @HousatonicLive ODYSEE @Housatonic BRIGHTEON @Housatonic

Dr. Chester Milton Southam (born 1919)



1956
[HW0061][GDrive]

Wikipedia Chester M. Southam

Born October 4, 1919 [HK005P][GDrive]

Died April 15, 2002 (aged 82) [HK005P][GDrive]

Married to **Dr. Anna Lenore Skow Southam (born 1915)**

Associated with :

- **Dr. Lloyd John Old (born 1933)** (...)
- **Dr. Alice E. Moore (born 1908)** (...)
- **Dr. Cornelius Packard "Dusty" Rhoads (born 1898)** (...)
-

Dr. Chester Southam was a a researcher at Memorial Sloan Kettering Cancer Center, pioneered the study of viruses as potential agents to treat cancer. (aka "Virotherapy")

See : Virotherapy : "***Virotherapy*** *is a treatment using biotechnology to convert viruses into therapeutic agents by reprogramming viruses to treat diseases. There are three main branches of virotherapy: anti-cancer oncolytic viruses, viral vectors for gene therapy and viral immunotherapy. These branches utilize three different types of treatment methods: gene overexpression, gene knockout, and suicide gene delivery. Gene overexpression adds genetic sequences that compensate for low to zero levels of needed gene expression. Gene knockout utilizes RNA methods to silence or reduce expression of disease-causing genes. Suicide gene delivery introduces genetic sequences that induce an apoptotic response in cells, usually to kill cancerous growths.[1] In a slightly different context, virotherapy can also refer more broadly to the use of viruses to treat certain medical conditions by killing pathogens."*

Saved Wikipedia (March 10, 2021) - "Chester M. Southam"

[HK005P][GDrive]

Alma mater

- University of Idaho (BS, MS)
- Columbia University (MD)

Scientific career Fields : oncology

Institutions

- Memorial Sloan Kettering
- Thomas Jefferson University

Chester Milton Southam (October 4, 1919 – April 5, 2002)[1] was an immunologist and oncologist at Memorial Sloan Kettering Cancer Center and Cornell University Medical College; he went to Thomas Jefferson University in 1971 and worked there until the end of his career.[1] **He ran many experiments involving the injection of live cancer cells into human subjects, without disclosing that they were cancer cells, and using subjects with questionable ability to consent, such as incarcerated people and senile patients in long-term care at a hospital.**[2] The New York State Attorney General encouraged the Board of Regents of the University of the State of New York to take away Southam's medical license.[2] Regardless, he went on to be president of the American Association for Cancer Research.

Life

Southam earned a Bachelor of Science degree and a master's degree from the University of Idaho and his medical degree from Columbia University, graduating in 1947.[3] He became an intern at Presbyterian Hospital in New York City in 1947. In the following year he was promoted from clinical fellow to attending physician at the Memorial Hospital for Cancer and also received a promotion from research fellow to full member at the Chief Division Virology/Immunology.[3] He joined the faculty of Cornell's medical college in 1951 and was eventually promoted to full professor.[3]

From the mid-1950s to the mid-1960s, Southam conducted clinical research on people without their informed consent, in which he injected cancer cells (HeLa cells) into their skin, to see if their immune system would reject the cancer cells or if the cells would grow. He did this to patients under his care or others' care, and to prisoners.[4][5] In 1963, doctors Avir Kagan, David Leichter and Perry Fersko of Jewish Chronic Disease Hospital objected to the lack of consent in his experiments and reported him to the Regents of the University of the State of New York which found him guilty of fraud, deceit, and unprofessional conduct, and in the end he was placed on probation for a year.[4][5] Southam's research was conducted in an era when cancer research was closely followed in the mainstream media; his experiments and the case at the Regents were reported in The New York Times.[6][7][8][9][10]

In the 1950s, Southam also tested the West Nile Virus as a potential [virotherapy]; he injected it into over 100 cancer patients who had terminal cancer and few treatment options.[11] This work had some good results and was also reported in The New York Times, but some people he injected got severe cases of West Nile fever; he went on to do further research to see if he could "train" the virus to kill cancer without the common side effects of chemotherapy.[11]

Southam was later elected president of the American Association for Cancer Research.[11] **In 1971, Southam left his positions at Memorial Sloan Kettering and Cornell** and became an attending physician in the Department of Medicine and Head of the Division of Medical Oncology at Thomas Jefferson University Hospital and a professor of medicine at Thomas Jefferson University Medical College; he held these positions until the end of his career in 1979.[3]

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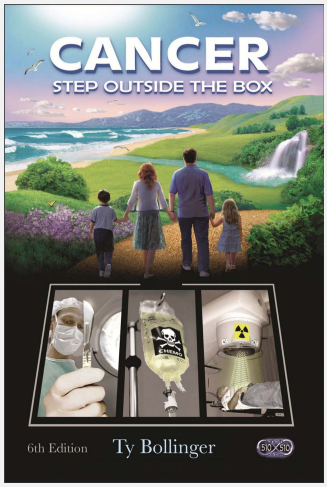
- ^ Osmundsen, John A. (26 January 1964). "Many Scientific Experts Condemn Ethics of Cancer Injection". The New York Times.
- ^ Plumb, Robert K. (22 March 1964). "Scientists Split on Cancer Tests". The New York Times.
- ^ "Ruling is Upset on Cancer Test". The New York Times. 8 July 1964.
- a b c Sepkowitz, Kent (2009-08-24). "West Nile Made Its U.S. Debut in the 1950s, in a Doctor's Syringe". The New York Times. ISSN 0362-4331. Retrieved 2016-11-13.

TESTING ON HUMANS: Southam, RHOADS (boss of Dr. Chester Southam), and a "Gates" connection ?

NOTE : No connection of Dr. Southam to Tuskegee Study (https://en.wikipedia.org/wiki/Tuskegee_Syphilis_Study)

SEE Dr. Robert Charles Nowinski (born 1945) / Genetic Systems Corporation for info on the testing at the Fred Hutchinson Cancer Research Center

PDF of book **"Cancer: Step outside the box"** : [HB006A][GDrive]



[HB006B][GDrive]

I used to believe that the “cancer conspiracy” was an unintentional result of the love of money and that there were really no malicious intentions at its roots. However, due to stories like the three that follow, I believe that I was a bit naïve in my initial assessment of the situation.

In 1931, [**Dr. Cornelius Packard "Dusty" Rhoads (born 1898)**], a pathologist from the Rockefeller Institute for Medical Research, purposely infected human test subjects in Puerto Rico with cancer cells, and thirteen of them died. Despite the fact that Rhoads gave a written testimony stating he believed all Puerto Ricans should be killed, **he later established the U.S. Army Biological Warfare facilities in Maryland, Utah and Panama, and was named to the U.S. Atomic Energy Commission, where he began a series of radiation exposure experiments on American soldiers and civilian hospital patients**.

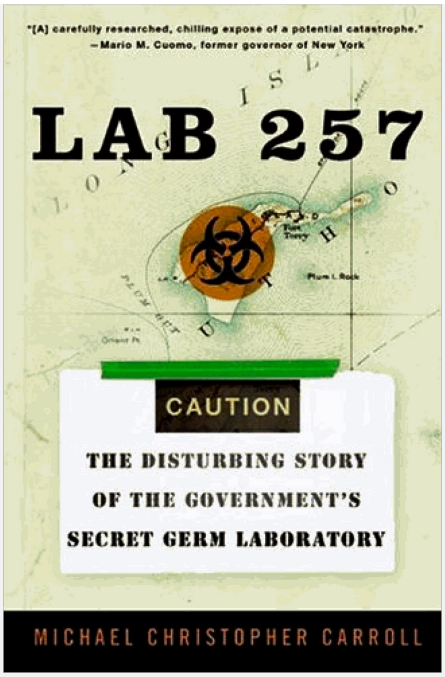
Then, in **1963, Chester M. Southam** (who injected Ohio State Prison inmates with live cancer cells in 1952) performed the same procedure on twenty-two senile, African-American female patients at the Brooklyn Jewish Chronic Disease Hospital in order to watch their immunological response. He told the patients that they were receiving “some cells,” but conveniently left out the fact that they were cancer cells. Ironically, Southam eventually became president of the American Association for Cancer Research!

In 1981, the **Seattle-based Genetic Systems Corporation** began an ongoing medical experiment called “Protocol No. 126” in which cancer patients at the **Fred Hutchinson Cancer Research Center** in Seattle were given bone marrow transplants that contained eight experimental proteins made by Genetic Systems, rather than standard bone marrow transplants. As a result, 19 human “subjects” died from complications directly related to the experimental treatment. [**MORE on the research in Seattle that may possibly connect to Gates : See Genetic Systems Corporation**] [...]

Sections of book Lab 257... If Dr. Robert Shope had West Nile at Yale in the 1990s, was his "source" of West Nile connected to Dr. Chester Southam ?

Source of comments below : https://www.ageofautism.com/2009/04/olmsted-on-autism-yupidity-from-yale-an-ongoing-series.html

Book by Michael Carroll - [HB0033][GDrive]



cover : [HB005X][GDrive]

"Carroll reports that Yale (Yale Arbovirus Research Unit, or YARU) worked closely with Plum Island on Rift Valley fever virus. Carroll also reports that **the future head of YARU (Shope) had worked with Ft. Detrick in its human experimentation program, Operation Whitecoat. Whitecoat experiments included injecting humans with Rift Valley fever virus (the virus is reported to be 30% fatal) to develop and test vaccines against the virus.**

YARU also had worked on WNV. According to Carroll:

- ***"[Dr. Robert Ellis Shope (born 1929)]'s Yale Arbovirus Research Unit (YARU) across Long Island Sound held twenty-seven different strains of West Nile virus in its New Haven, Connecticut, freezers until 1995, when he moved to the University of Texas and took his strains with him. YARU and Plum often trafficked in viruses, most notably the dangerous Rift Valley fever virus in 1977. Had Dr. Shope shared West Nile virus reference samples with his friend Plum Island director Dr. Roger Breeze--the island laboratory being the only official location where foreign animal germs like West Nile virus are supposed** to be studied?"

[Other reference : YARU moved to Texas, 1994 ... https://www.nytimes.com/1994/11/20/nyregion/yale-viral-lab-to-move-to-texas.html]

Yale later developed the first commercial vaccines for WNV. Chester Southam had injected human subjects in vaccine experments with WNV in the area's surrounding hospitals. Was this part of an Operation Whitecoat project? Did Ft. Detrick or YARU play a role in these human tests similar to that which they played in the Rift Valley virus/Whitecoat Operation? If Yale had WN at the time of the outbreak, did Plum Island? Were they working together on it?

[...]

"Why AIDS was created" - Written by/sourced from WinstonSmith.Net

source : [HW0060][GDrive]

Why AIDS Was Invented

AIDS is proving fantastically beneficial to cancer researchers. In this e-book the author proposes that these benefits are not coincidental and reveals that cancer researchers not only created animal immunosuppressive viruses to do exactly what HIV does but even modified them for growth in human cell cultures, shortly before the epidemic began. Moreover, published human experiments with deadly monkey cancer viruses are exposed and proposed as smaller-scale versions of the cancer experiment which culminated in the useful epidemic of immunosuppression and cancer associated with HIV. The surprising manner in which this catastrophic epidemic is systematically fulfilling the long-term goals of the cancer vaccine establishment—the very group that invented immunosuppressive viruses—is also revealed. For more information on how cancer research is related to AIDS and the Gulf War

AIDS: The "Perfect" Disease

In this study the author argues that AIDS and the associated epidemic of cancer are caused by a type of virus specifically developed and tested by cancer researchers (prior to AIDS) to increase susceptibility to cancer. Moreover, it is proposed that AIDS is the culmination of increasingly sophisticated experiments which were conducted intentionally in animals and humans to induce cancer as a means of developing and testing cancer vaccines. An eye-opening series of published experiments, including one in which immunosuppression was exploited to cause sarcoma tumors in human subjects injected with monkey cancer viruses, is revealed as a precedent for the experiment proposed to explain the explosion of immunosuppression and useful sarcomas in AIDS Evidence is also presented to support the thesis that the AIDS epidemic was deliberately started as an exercise in biowarfare conducted under the cover of an international human cancer experiment. This would explain why the HIV epidemic is selectively depopulating regions of the globe that the national security establishment had targeted for depopulation in the 1970s as a means of maintaining access to resources in the developing world. Additionally, the "cancer vaccine experiment" theory of the origin of AIDS could also explain not only why the AIDS virus selectively depopulates the exact components of the immune system that cancer researchers had been targeting for decades prior to AIDS but why homosexual populations are disproportionately infected by HIV and rare cancers. The relationship between AIDS research and the Gulf War Syndrome are also reviewed in this work.

Why AIDS Was Invented

"As disastrous as the spread of HIV is, the insights that the AIDS epidemic provides into the causes of cancer may ultimately lead to new and successful approaches to cancer prevention." [1]

On the heels of one of medical science's greatest triumphs—the vaccine against polio—researchers pursued the ultimate goal: a vaccine against human cancers. Unfortunately, unlike the case with the poliovirus, there were no known cancer viruses with which to make or test human cancer vaccines. **Therefore, researchers engaged in a crash government program to isolate and characterize animal and human viruses capable of causing human cancer so they could manipulate them into serving as vaccines.** [2] In this long-range human cancer vaccine research program, scientists consistently followed the path that had already led to cancer vaccines in animals. In the effort with animal cancer viruses, **tumor cells were extracted from chemically or radiation-induced tumors and turned into so-called "cell-free filtrates."** These filtrates were then injected into other animals to see if the tumors could be "transplanted." If transplanted tumors successfully grew, the researchers assumed that these injections had contained cancer viruses (since all other cells had been filtered out). [3] As part of this effort, researchers injected these "synthetic" cancer viruses into experimental animals with differing immune system health and genetic backgrounds. This allowed them to observe how viral cancer growth was controlled by the immune response under different host conditions. After watching how the immune system reacted to the injected cancer viruses, researchers were able to develop procedures for artificially boosting the immune system reactions they observed in the form of vaccines. **By manipulating into vaccines the cancer viruses they had created,**

researchers now had a laboratory model for the creation and prevention of viral cancer in animals—they could give lab animals combinations of the experimental cancer viruses and vaccines (based on these or other viruses) they had created to determine the effectiveness of the cancer vaccines. In order to replicate this successful research technique in humans, [4] researchers needed a way to induce human cancer on demand. This would allow researchers to observe cancer growth from its earliest stages [5] as well as develop and test potential human cancer vaccines. As a means of reaching this lofty goal, virologists engaged in a long-running research effort to isolate human cancer viruses from cancer patients using procedures developed in animal research. [6] The cancer-causing potential of these viruses was tested by injecting them in lab animals. In some cases researchers went even further and conducted barbaric human "cancer transplant" experiments in which an array of human and animal cancer cells and viruses were isolated, combined and injected in human subjects to induce and measure tumor growth directly. This gave researchers the opportunity not only to monitor carefully the critical transition from health to cancer growth in human subjects, but also to look for natural immune responses to the initial challenge with cancer which might be artificially amplified with vaccines.

- 1 V. Beral, H. Jaffe, and R. Weiss, "Cancer Surveys: Cancer, HIV and AIDS," Eur. J. Cancer, vol. 27, no. 8, 1991, 1058.
- **2 This program was called the Special Virus Cancer Program.** The goals of this massive government research effort were outlined in its 1967 Progress Report: "The main objectives of this Program are: (1) to determine whether viruses comparable to those now known to be associated with avian and murine leukemia are etiological agents of human leukemia, and (2) to develop an effective vaccine or other means for the prevention and/or control of human leukemia and lymphoma when such etiological agents are found." F. Rauscher and R. Reisinger, Special Virus-Leukemia Program, Progress Report #4, Program Staff, National Cancer Institute, Etiology Area, May 1967, p.1.
- 3 "Un-natural Viruses" Nature New Biology, vol. 230, March 17, 1971, 65, 66.
- 4 Virologists were anxious to extend the cancer vaccine procedures successfully developed for use in animals to man: "It has already been shown that a vaccine prepared against one particular virus will immunize mice not only against that virus but against others as well. …This is important because it shows that (a) animal leukemia can, in fact, be prevented with vaccines and that the causative viruses from which the vaccines were prepared can be attenuated and/or killed by procedures already established for the influenza, polio, and measles diseases of man… This approach may make possible more effective control of the human disease than that attained by drug therapy alone." Special Virus-Leukemia Program, Progress Report #4, p. 14.
- 5 Cancer researchers have long coveted the ability to watch cancer grow from its earliest stages in a large number of human subjects. To this end, human victims of naturally occurring immunosuppressive disorders have been the subjects of numerous monitoring programs in which the relationship between immune system health and cancer could be correlated. By watching people predisposed to cancer, researchers could eliminate the drawbacks of epidemiological studies, in which such correlations were typically made after cancer had already been manifested. R. A. Good, "Relations between Immunity and Malignancy," Proc. Nat. Acad. Sci. USA, vol. 69, no. 4, April 1972, 1026-1032.
- 6 Scientists affiliated with the government's cancer virus program correctly predicted that deadly human cancer viruses would be created using the same techniques by which animal viruses had been isolated and made more potent: "Experience with animal tumor viruses suggests that it may be possible to establish and enhance the disease-inducing potency of candidate particulates from human neoplasma by use of virus passage, concentration and purification procedures. As with murine and avian tumor viruses it must be anticipated that increasing potency of candidate viruses from human and other animal neoplasms will confer on these viruses…" Special Virus-Leukemia Program, Summary Progress Report for the Period September 1964 through June 1965, p. 9. [emphasis added]

A similar procedure had been used in vaccine research for hepatitis (an alleged cancer-causing virus in humans). In this case mentally retarded children were injected with hepatitis so that vaccine researchers could watch the disease progress from its earliest stages. One government investigation described a study "from 1956 to 1972 [by] Dr. Saul Krugman of New York University [who] led a study team at the Willowbrook State School for the Retarded, on Staten Island, New York": **Noting the high incidence of hepatitis among the residents of the school, nearly all of whom were profoundly mentally impaired children and adolescents, Krugman and his colleagues injected some of them with a mild form of hepatitis serum. The researchers justified their work on the grounds that the subjects probably would have become infected anyway, and they hoped to find a prophylaxis for the virus by studying it from the earliest stages of infection.[7]**

Human experiments involving vaccines against hepatitis would continue for years to come and can be tied directly to the outbreak of AIDS in homosexuals chosen for experimental hepatitis vaccine trials shortly before they began dying of previously rare cancers. Vaccines against hepatitis would also later be used in an ambitious international human cancer vaccine experiment (recently declared a success), which will be discussed shortly.

Unfortunately, clues to the hypothesized naturally occurring human immune response to cancer, which might be harnessed for vaccines, proved elusive. Therefore, an indirect way of determining which immune system components were critical in fighting off human cancer was investigated. This effort—which was similar to the approach used in human hepatitis research and animal cancer research—consisted of injecting cancer cells in patients with various immune system deficiencies. **The hope was that if cancer cells grew more consistently in patients with immune system components that were damaged in specific ways, then these components were the keys to fighting off cancer in healthy patients. Follow-up efforts that focused on strengthening these identified components might be the key to training the human immune system to prevent cancer with vaccines.** [8]Thus, it was hoped that if researchers traveled the path through "immunosuppression," it would lead to the ultimate goal of cancer "immunocompetence" in the form of vaccines. [9] In the 1950s researchers began to use this procedure systematically in humans in the same manner it had been used in lab animals. For example, researchers deliberately induced tumors in human subjects with compromised immune systems by injecting them with cancer cells thought to contain human cancer viruses. Clues were sought as to the immune system deficiencies responsible for increased tumor transplant growth by correlating tumor rejection rates with other measures of immune system health. Chester Southam was a leading researcher who published numerous papers describing the use of this technique in human subjects. Southam described his methodology as follows: **The procedure, as I explained, requires simply the hypodermic injection of a suspension of tissue-cultured cells at two sites on the anterior thigh or arm and observation of the sites at about weekly intervals for six weeks or until regression is complete. These cells are of two or more cancer cell lines. These cancer cell lines were chosen because they have the necessary growth capacity to produce a measurable reaction.[10]**

- 7 Advisory Committee on Human Radiation Experiments - Final Report, Chapter 3, Section: "The Development of Human Subject Research Policy at DHEW," http://tis.eh.doe.gov/ohre/roadmap/achre/chap3_2.html (12/31/01)
- 8 One author stated the goal: "Here, then, we have a wide possibility: if there is such a biological mechanism as a defense against cancer, then it may be possible to stimulate it either before cancer strikes or perhaps even later when the cancer has taken hold." Earl Ubell, "Injecting Cancer Cells—the Case for the Defense," New York Herald Tribune, January 26, 1964, 29.
- 9 It was in order to generate organisms with various immune system defects for these studies that numerous means of inducing immune system deficiencies (or immunodeficiencies), including the use of viruses designed for this purpose, were eventually developed.
- 10 Jay Katz, Experimentation with Human Beings (New York: Russel Sage Foundation, 1972), 11.

Southam injected hundreds of healthy and diseased patients [11] with "cancer transplants" so he could measure the tumor growth and correlate it with the immune system health of the cancer transplant recipient. [12] One of the results of Southam's dangerous tests was that the tumors he transplanted in healthy human subjects seemed to regress faster with repeated implants while the implants in cancer patients showed less favorable results: **In brief, normal recipients responded to implanted human cancer cells with a marked local inflammatory reaction and rapid complete regression of the implants within a maximum period of 3 to 4 weeks. . . . In striking contrast, however, those recipients that had advanced cancer showed little or no acute inflammatory response, the implanted cancer cells grew progressively for a period of 3 weeks or more before regression started, and some individuals failed to reject implanted cancer cells over periods of observation between 6 weeks and 6 months. [13]**

Southam assumed that the different reactions to cancer injections were due to the differences in the test subjects' immune systems. [14] After watching how these tumor transplants grew in healthy patients, patients with cancer, and patients with diseases other than cancer (at the Jewish Chronic Disease Hospital), Southam claimed cancer patients had an immune system defect that contributed to cancer growth: **All the patients in the study undertaken at the Jewish Chronic Disease Hospital rejected the transplants as promptly as did the healthy persons. Thus it has been demonstrated that cancer patients lack an immune mechanism present in other individuals, including chronically diseased patients.**

- 11 Southam summarized this procedure: "During the past 10 years, as we have seen, cancer cells have been implanted in almost 600 well persons and cancer patients. . . . The technique for measuring immune reactions is now standardized and the results are predictable."

- 12 Southam explained, "Other than the two hypodermic injections and observation of the reaction, the only other procedure would be drawing serum for study of antibody reactions to the transplanted [cancer] cells at approximately two-week intervals during the observation period."
- 13 C. M. Southam and A. E. Moore, "Induced Immunity to Cancer Cell Homografts in Man," Annals of New York Academy of Sciences, vol. 73, 1958, 635.
- 14 "The tumor inoculums survived for longer periods in patients with more advanced cancer. These observations could be explained by variations in the immunological responses of the hosts." [emphasis added] C. M. Southam, "Homotransplantation of Human Cell Lines," Bull. N.Y. Acad. Med., vol. 34, no. 6, June 1958, pp. 416-23.

More specifically, Southam postulated that the reason the cancer patients were more susceptible to tumor growth was due to defective cellular-based immune reactions. [15] Southam also assumed that the reason healthy patients seemed to reject the repeated tumor cell implants with greater efficiency was that they had a natural mechanism for preventing cancer that he was stimulating through injections of controlled amounts of cancer—resulting in an induced immunity. Southam wrote: **The growth of a repeat implant of the same cell type has been studied in normal recipients. The repeated implants formed smaller nodules and regressed more rapidly as judged by gross and microscopic examination. This accelerated rejection of a second implant is presumably the result of an induced immunity.[16]**

Southam hoped that the defense mechanisms against cancer he claimed to be monitoring in these studies might be further manipulated to control cancer growth: **The studies also demonstrated a correlation between the rate of rejection of homotransplanted cancer cells and the patient's apparent ability to restrain his own disease, thus providing additional direct evidence that patients may have immunological (defense) mechanisms to restrain their own cancer. These results, of course, give hope that, through further clinical research, methods of stimulating such mechanisms to greater efficacy can be developed. [17]**

The question was how to make such human cancer vaccines. One of the goals of these tumor transplant studies was to identify potential human cancer viruses in the tumor transplant cells so that these viruses could be tested as vaccines. Chester Southam summarized, "If and when a causative virus of human cancers is found, it may provide a source of antigen for cancer prophylaxis, but this is merely a hope for the future."[18]

- 15 "The immunologic derangement responsible for the comparative slowness of rejection in patients with cancer is still unidentified, but the search is narrowing down and an impairment of cell-associated immune mechanisms now seems probable."
- 16 Ibid.; C. M. Southam, et al.
- 17 Katz, 37.
- 18 C. M. Southam, "Studies of Host Defense Against Human Cancer," Indian J Cancer, vol. 4, no. 1, March 1967, 3-15.

While Southam and other researchers were able to induce tumor growth in human subjects using human tumor transplants,[19] they were not able to identify human cancer viruses in these studies.[20] Researchers had considered the possibility that animal cancer viruses that had acquired the ability to jump the species barrier—like the flu virus—might be responsible for human cancer. If it were true that animal cancer viruses could cause human cancer, then existing animal cancer vaccines might be directly applicable to humans.

As a means of examining this intriguing hypothesis, researchers began to study how cancer viruses from one species could cause cancer in other species. Cancer researchers also began to join cancer viruses from various species and grow them in human cell cultures. [21] They also began to study how animal cancer viruses might cause cancer directly in humans—by injecting human subjects with the animal cancer viruses they grew in cell cultures.

In one of these tests, researchers used a procedure similar to the one that Southam and his colleagues had used in human guinea pigs. However, in addition to injecting subjects with human cancer cell growths (such as the cancer cell line known as HeLa), they also injected a monkey cancer virus known as SV40.

- 19 It was determined after much of this type of human cancer transplant experimentation had been completed, that Southam and his colleagues had conducted many of his experiments on cancer patients at Sloan-Kettering and the Jewish Chronic Disease Hospital in Brooklyn without their consent. The prestigious journal Science published a scathing review of the controversy which ensued (along with an inset of the Nuremberg Code) in which it was revealed that many of the patients involved in the cancer transplant experiments were told only that they would be involved in "skin tests" or that they were to receive "some cells." (Some of these patients were senile and some didn't even speak English.) As the Attorney General of the State of New York noted during an investigation into Southam's experiments in 1964/65: "An analysis of the patients selected amply illustrates that a substantial number of them had not sufficient mental or physical ability to comprehend what was being told to them or what was being done to them; and those who may have had the capacity to understand were not given the full and true nature of the experiment." Louis J. Lefkowitz, Attorney General of the State of New York, Petitioner's Post-Hearing Memorandum, published in: Jay Katz, Experimentation with Human Beings, (N.Y., New York, Russel Sage Foundation, 1972), 45; E. Langer, "Human Experimentation: Cancer Studies at Sloan-Kettering Stir Public Debate on Medical Ethics," Science, vol. 143, 551-553.
- 20 The New York Times summarized the overall situation in 1975 as follows: "[M]ore than 100 different viruses have been proved capable of causing some kind of cancers in some animal species under some circumstances. Many viruses have been suggested as possible causative factors of some cancers in man, but no such case has been proved to date." Harold M. Schmeck Jr., "Scientists Find Virus Linked to Human Leukemia; Diagnostic Value Seen," New York Times, January 9, 1975.
- 21 One example is particularly noteworthy. In this example a rat sarcoma virus (Kirsten sarcoma virus) adapted for human cell growth was combined with a noncancerous baboon virus (a virus known as M7). This pseudotype murine/baboon combination virus proved to have extraordinary characteristics. In addition to being capable of infecting human cell cultures, this pseudotype virus was capable of inducing tumors in a wide range of primates including dogs and monkeys. Since the virus proved so infectious, researchers thought it would readily cause cancer in man. S. S. Kalter and R. L. Heberling, "Primate Endogenous Viruses: Their Role in Oncogenesis and as Biohazards," Joint WHO/IABS Symposium on the standardization of cell substrates for the production of virus vaccines, Geneva, December 1976. Develop. biol. Standard., vol. 37, 219-228.

In a twenty-page paper in the Journal of the National Cancer Institute, researchers published table after table of the results of their attempts to induce tumors with a monkey virus in human subjects (cancer patients) of various ages and in various disease states. **They began by using separate injections of human cancer cells and animal cancer viruses in different regions of the same subject's body. Because initially only the human cancer cell implants resulted in tumors while the SV40 implants did not, researchers began to investigate systematically the mechanism by which the monkey virus SV40 could be made to cause human tumors. Experimental parameters investigated included: the length of time the SV40 was cultured in human cells, the type of human cancer cells the SV40 cancer virus was cultured with, the length of time the recipient subject had been on immunosuppressive drugs, and the dose of cancer virus cells injected.** [22] The experimentation with human subjects using the human cancer cell/monkey cancer virus cultures eventually paid off. Researchers found that by using the right mixture of human cancer cells and the SV40 virus (cultured for the proper length of time and given in sufficient quantities), the SV40 monkey cancer virus could not only reproducibly cause tumors (referred to as "nodules") in human subjects but could also be retrieved in cells removed from induced cancer growths. [23] The authors summarized: **The formation of nodules after . . . implantation of cells from simian virus 40 (SV40) transformed human tissue culture could be correlated with the stages of the transformation process, number of cells implanted, and possibly the presence of infectious virus in the implants.**

While initially the researchers had more difficulty inducing human tumors with the SV40 virus than they did with just human cancer cells (such as HeLa cancer cells), eventually they found the SV40 monkey virus, when mixed and cultured properly, could produce human tumors (characterized as sarcomas) with comparable ease: **Judging by the results of homologous implantation, HeLa cells and late passage, virus-free SV40-transformed cells had a comparable neoplastic potential. Histologically, nodules produced by SV40-transformed human cells were sarcomas.**

- 22 The caption of Table 5 read: "Growth of nodules after homologous implantations of SV40-transformed cultures related to cell dosage and length of time spent in tissue culture after exposure to SV40." The subheading read: "Ratios represent number of sites showing growth of nodules over number of sites inoculated." F. Jensen, H. Koprowski, J. S. Pagano, J. Ponten, and R. G. Ravdin, "Autologous and Homologous Implantation of Human Cells Transformed In Vitro by Simian Virus 40," Journal of the National Cancer Institute, vol. 32, no. 4, April 1964, 922-937.
- 23 In this manner researchers attempted to verify experimentally that the SV40 monkey virus fulfilled Koch's postulates in human cancer growth. This meant that for an agent to be responsible for a disease, 1) it had to be present in all cases of the disease, 2) it had to cause the disease when intentionally placed in healthy subjects, and 3) it had to be present in the intentionally infected subject. J. Cohen, "Fulfilling Koch's Postulates," Nature, vol. 266, 1994, 1647.

Researchers now had a model for inducing cancer in humans using animal cancer viruses. This model allowed them to watch such cancers grow from the earliest stages under laboratory conditions. [24] They also had a model for testing vaccines for this virus, which had already been tested in animals. [25] In yet another series of experiments of this type, but published by different authors, both human cancer patients and test monkeys were injected with a monkey tumor virus known as the Yaba virus. The Yaba virus had been tested in monkeys with the following result: **Intravenous inoculation of virus in the**

rhesus monkey produces widespread tumors in the subcutaneous tissues, skeletal muscle, lungs, and heart and occasionally results in the death of the monkey. [26]

Nevertheless, the virus was injected in human test subjects so that the induced tumors and immune system reactions to the virus could be measured—hopefully identifying an immune response that might be manipulated for use in human cancer vaccines. Following these virus injections, the researchers observed that "the humans developed lesions quite similar to those of the monkeys" and that "inoculation of virus produces only local tumors in the monkey and human." [27]

- 24 One researcher summarized the importance of such a model in developing immunological means of fighting cancer: "We needed to know more about the earliest transforming events if we were ever to be able to make meaningful determinations of specific changes in cells which reflected their conversion to transformed and subsequently to malignant cells. This basic information about early tumor cells is essential also if we are to ever 'unravel' the mystery of the very complex immunologic responses which occur in the host experiencing the cancer event." Joseph H. Coggin Jr., University of South Alabama, Annual Progress Report Contract EE-77-S-05-5601, Report Number ORO-5601-034, Period: August 1, 1978 to May 1, 1979, Project Title: Radiation and Chemical Effects on Viral Transformation and Tumor Antigen Expression.
- 25 Declassified documents from the government's human radiation experiments reveal that researchers had developed methods for inducing "transplantation resistance" to SV40 in animals. One researcher reported, "We could reproducibly detect transplantation resistance and a significant inhibition of tumor development in animals sensitized to an intermediate level of the tumor extract and given a relatively large tumor cell challenge." Human cells infected with SV40 were also tested as vaccines in hamsters. One report stated, "We are able to readily confirm that human cells transformed by SV40 in vitro were capable of interrupting oncogenesis in the hamsters." Were such anticancer measures tested in humans following the development of transplantable SV40 tumors? Report titled: Induction of Transplantation Resistance with Soluble SV40 Induced Hamster TSTA, Joseph Coggin Jr., University of South Alabama College of Medicine. Declassified by the Department of Energy: Internet location: http://tis.eh.doe.gov/ohre/ (12/31/01)
- 26 J. T. Grace and E. A. Mirand, "Human Susceptibility to a Simian Tumor Virus," Annals of the New York Academy of Sciences, v. 108, 1963, 1128.
- 27 Ibid., 1123-1128.

The depraved nature of these experiments is compounded by the fact that the researchers used human beings as walking tissue cultures for the monkey tumor virus they were studying—alternately inducing human tumors through injection of the monkey virus, removing tissue from the induced tumors, re-injecting the virus removed from the human tumors induced, and finally inducing more tumors in other human subjects with the transplanted and processed virus. The authors summarized this process: **A cell-free filtrate of a monkey tumor was injected into three sites on the left forearm, and a tumor suspension into three sites on the right forearm of Patients 1, 2, and 3. Tumors developed at all sites. A single site was excised from the left forearm of Patient 2 at 17 days and from Patient 3 at 10 days. A suspension of each of these tumors was then injected into patient 5. . . . By this method, replication of the virus in the human was established. [28]**

This experimentation in which animal viruses were passaged and tested in human subjects in vaccine research is reminiscent of the Nazi concentration camp studies with typhus. In these experiments "inmates of the camp were infected with typhus for the purpose of procuring a continuing supply of fresh blood taken from persons suffering from typhus." Having a fresh supply of such contaminated blood allowed Nazi doctors to inject patients with disease-causing blood to test vaccines. Some of these vaccines, subsequently tested directly in humans deliberately infected with the pathogenic virus to be vaccinated against, were developed using mouse viruses. As described in the Nuremburg Trials: "Other inmates, some previously immunized and some not, were infected with typhus to demonstrate the efficacy of the vaccines." [29] Active ImmunosuppressionWhile researchers developed ways of causing cancer in animals—and extended these techniques to humans, the specific immune system dysfunctions which supposedly aided cancer growth still eluded them. In addition to injecting cancer cells and viruses into subjects with naturally occurring immune system defects, there was another, more sophisticated way of determining which defects of the immune system resulted in increased cancer growth. This involved developing ways of deliberately inducing such defects so that the immune system damage could be correlated with cancer growth due to cancer transplants. Once again, if certain viruses damaged the immune system and resulted in increased cancer growth, researchers might assume that by boosting the damaged components through vaccines, cancer could be prevented. [30] The procedure for inducing controlled immunodeficiencies allowed researchers the ability to create immune system defects on demand in the laboratory and then measure the transplantability of the cancer viruses they had developed. In addition to allowing them the flexibility of not having to find animals with natural immune system defects, it also allowed them to watch cancer grow from its earliest stages under controlled conditions.

- 28 R. S. Metzgar, J. T. Grace Jr., and E. E. Sproul, "Immunological Studies of Subcutaneous Virus-Induced Histiocytomas In Primates," Ann. N. Y. Acad. Sci., vol. 101, 192-202.
- 29 Trials of War Criminals before the Nuremberg Military Tribunals, Vol. II, (Washington, D.C.: U.S. Government Printing Office, October 1946-April 1949), 267-269. Hereafter Trials of War Criminals.
- 30 Additionally, if there were naturally occurring immunosuppressive viruses that aided cancer growth in this manner, cancer might be immediately reduced by reducing exposure to such cofactors.

This procedure essentially represented a four-step process in cancer vaccine research. The first step would be to inject test subjects with both immunosuppressive agents and cancer agents. The second step would be to determine which induced immune system deficiencies resulted in greater cancer growth. The third step would be to develop means of stimulating these immune system mechanisms. The fourth step would be to test these immune system-stimulating procedures in the presence of cancer injections as a means of evaluating their effectiveness as cancer vaccines. [31] Thus, by carefully inducing immunodeficiency, researchers might ultimately develop immunoproficiency against cancer.

By injecting animals with different immune system-damaging viruses along with different cancer viruses, researchers hoped to identify combinations of immunosuppressive and cancer viruses which might be occurring naturally to cause cancer in humans. [32] Thus, animal immunosuppressive and cancer viruses provided a laboratory model for cancer creation that allowed researchers to mimic processes that they suspected were causing cancer naturally in man.

As part of this research, immunosuppressive viruses with properties amazingly similar to AIDS [33] were created and tested extensively in mice throughout the 1960s.

In these experiments, researchers would inject mice with both sarcoma viruses and immunosuppressive leukemia viruses. [34] Once the leukemia viruses damaged the immune systems of the experimental mice, researchers measured the resulting cancer susceptibility (due to the sarcoma viruses) in the leukemia virus-impaired test subjects. [35]

- 31 This branch of research is actively and successfully pursued in animal cancer research today.
- 32 Similarly, it had been suspected that malaria created an immunosuppressive state in humans, which aided the growth of cancer allegedly caused by the Epstein-Barr virus. To test this hypothesis, researchers injected primates with combinations of a virus capable of inducing Burkitt's lymphoma and agents capable of inducing malaria. The 1967 report of the Special Virus-Leukemia Program noted that such studies were being conducted in monkeys: "A special project in progress involves induction of malaria in the recipient prior to inoculation with Burkitt virus." Special Virus-Leukemia Program, Progress Report #4, p. 21. See also: D. P. Burkitt, "Etiology of Burkitt's Lymphoma–an Alternative Hypothesis to a Vectored Virus," J. Natn. Cancer Inst. 42, 19-28 1969; Whittle, Brown, Marsh, Greenwood, Seidelin, Tighe, Wedderburn, "T-cell Control of Epstein-Barr Virus-Infected B Cells is Lost During P. Falciparum Malaria," Nature, vol. 312, 1984, 449-450.
- 33 One of these viruses, called the Duplan virus, was created by cancer researchers in 1962 by irradiating mouse leukemia viruses. According to an article published in 1989, this virus induces "a severe immunodeficiency disease with striking similarities to human AIDS." D. C. Aziz, Z. Hanna, and P. Jolicoeur, "Severe Immunodeficiency Disease Induced by a Defective Murine Leukaemia Virus," Nature, vol. 338, 6 April 1988, 505-508. Other researchers who tested the nearly forty-year-old virus reported, "This crude virus stock induced a severe immunodeficiency syndrome which has been designated murine acquired immunodeficiency syndrome." M. Huang and P. Jolicoeur, "Characterization of the gag/Fusion Protein Encoded by the Defective Duplan Retrovirus Inducing Murine Acquired Immunodeficiency Syndrome," Journal of Virology, December 1990, 5764-5772.
- 34 For a description of an experiment of this type in mice, see M. A. Chirigos, K. Perk, W. Turner, B. Burka, and M. Gomez, "Increased Oncogenicity of the Murine Sarcoma Virus (Moloney) by Co-infection with Murine Leukemia Viruses," Cancer Research, vol. 28, June 1968, 1055-1063.
- 35 Using methods similar to those used in experiments which were conducted with mice using combinations of leukemia and other cancer viruses, experiments were also conducted with cats from the early 1970s in which attenuated or inactivated feline leukemia viruses were used to induce immunosuppression in R. G. Olsen, E. A. Hoover, J. P. Schaller, L. E. Mathes, and L. H. Wolff, "Abrogation of Resistance to Feline Oncornavirus Disease by Immunization with Killed Feline Leukemia Virus," Cancer Research, vol. 37, July 1977, 2082-2085.

Since immunosuppressive viruses were able to increase cancer growth dramatically in mice and cats, researchers suspected that immunosuppressive viruses were also able to increase cancer growth in humans. [36] **In order to gain a better understanding of the role of immunosuppression in human cancer, researchers began to conduct international studies of humans with immunodeficiency syndromes so they could watch cancer grow from its initial stages and correlate the type of cancer growth with viruses detected and the type of immune system dysfunction observed.** [37] In parallel with cancer studies of naturally occurring immunodeficiency diseases in humans, in the 1970s cancer researchers began growing immunodeficiency viruses they had created for animal studies in human cell cultures. They also combined the monkey virus they had used to induce human sarcoma tumors with these immunosuppressive viruses.

In the 1980s an epidemic of sarcoma cancer due to an animal immunosuppressive virus began to explode in human populations and alert scientists to the impending AIDS epidemic. [38] As it turns out, this cancer epidemic due to AIDS is proving to be highly combination with cancer virus injections. Following the induction of immunosuppression with the modified feline leukemia virus, experimental cats were found to be much more susceptible to cat cancer viruses.

- 36 Immunosuppressive drugs used in kidney transplants resulted in increased cancer rates in humans. This fact, combined with the fact that naturally occurring immunodeficiency diseases also resulted in higher rates of cancer in humans, caused researchers to postulate that the immunodeficiency model in animalswould provide clues to human cancer growth and prevention.
- 37 By watching cancer grow in subjects predisposed to cancer, researchers could learn more about the initial stages of cancer growth (and the factors that caused it) than conducting epidemiological studies in subjects who had already contracted cancer. By watching only those patients known to be predisposed to cancer growth due to naturally occurring immunodeficiencies, the observation time required could be drastically shortened in crucial experiments designed to monitor tumor growth from its very beginning stages. These advantages (for naturally occurring forms of immunodeficiencies) were summarized by Joseph Fraumeni in a National Cancer Institute Monograph as follows: "Future attempts at identifying etiologic agents in human leukemia and lymphoma may involve the longitudinal study of individuals over a period of time that covers the critical phase of tumor induction. Such a project would be extremely difficult to carry out, perhaps impossible, if all persons had an identical risk of developing these otherwise uncommon cancers. Epidemiologic and experimental advantages would result from the use of patients at exceptionally high risk of leukemia and lymphoma, such as those affected with certain constitutional diseases." [emphasis added] Fraumeni also noted, "There are significant advantages to the use of constitutional disorders and other 'high-risk' conditions in laboratory and epidemiologic research on these neoplasms." One of these advantages was that researchers could probe the immune responses of such patients and then correlate the exact form of their deficiencies with cancer growth. J. P. Fraumeni Jr., "Constitutional Disorders of Man Predisposing to Leukemia and Lymphoma," National Cancer Institute Monograph 32, August 1969, 228.
- 38 Lawrence Altman wrote in the New York Times, "It was the sudden appearance of the Kaposi's sarcoma cancer in large numbers of gay men in New York City that led doctors to recognize what is now called AIDS. Until then, Kaposi's sarcoma had been rare, and few experts suspected that it was related to a virus." useful to researchers seeking to develop human cancer vaccines—the group that invented and tested immunosuppressive viruses for this very reason. Lawrence K. Altman, "Surviving With AIDS Is One Problem, Cancer Is Yet Another," New York Times, May 6, 1997.

The Benefits of AIDS

The AIDS virus has allowed cancer researchers to make major breakthroughs—providing long-awaited proof that viruses cause sarcoma in humans [39] and that such cancers can be controlled by the immune system (the so-called immunodeficiency theory of cancer susceptibility). Headlines in the New York Times have announced that long-sought human cancer viruses have finally been isolated from AIDS patients suffering from the most prominent form of AIDS-related cancer called Kaposi's sarcoma.40 **Although it is not known for sure that the virus is totally responsible for the growth of Kaposi's sarcoma in AIDS victims, this fortuitous development is extremely encouraging to those studying the viral causes of human cancers.** Lawrence Altman, writing in the New York Times, recently predicted, "Ultimately, the new findings about the Kaposi's sarcoma virus could help unravel many unknowns about how viruses cause cancers." This line of research, which at long last correlated a herpes virus with the growth of Kaposi's sarcoma in human subjects, [41] encouraged another group of researchers to look for other forms of cancer that might be caused by this same virus. These researchers have recently announced another major breakthrough in viral cancer research—finding a link between this same virus and a common form of blood cancer known as multiple myeloma, the second most prevalent form of blood cancer in the U.S. [42]

- 39 Recall that researchers had been systematically searching for such human cancer viruses for over forty years. Up until the advent of the AIDS epidemic, this search had been in vain. Schmeck wrote in the New York Times in 1975: "... more than 100 different viruses have been proved capable of causing some kind of cancers in some animal species under some circumstances. Many viruses have been suggested as possible causative factors of some cancers in man, but no such case has been proved to date." Schmeck.
- 40 The source of Kaposi's sarcoma, the leading form of cancer that develops in immunosuppressed AIDS patients, has recently been traced to a type of herpes virus. Lawrence K. Altman, "Virus Linked To a Cancer Is Identified: Malignancy Is Found In Gay AIDS Patients," New York Times, March 1, 1996.
- 41 Cancer researchers had long theorized that human cancers could be caused by herpes viruses. One government report summarized in 1967: "The virus or group of viruses most persistently detected and isolated from human leukemia and lymphoma materials is a Herpes-type agent.... This virus appears to be an important candidate for consideration as an etiologic agent of human cancer..." In the 1970s researchers wrote numerous papers speculating on the manner in which such viruses might cause human cancer. AIDS is providing the perfect research vehicle for proving these theories. F. Rauscher and R. Reisinger, Special Virus-Leukemia Program, Progress Report #4, p. 3.
- 42 Lawrence K. Altman, "A Virus Associated With AIDS Is Linked To Appearance of a Common Blood Cancer," New York Times, June 20, 1997.

How fortunate! As a direct result of the rare cancers that form in HIV victims, cancer researchers are gaining insight into the manner in which cancer viruses and viruses which cause immune system impairment interact to cause cancer. And they are able to do this thanks to the same type of viruses which government researchers had isolated, purified and made more virulent and infectious for this very purpose. [43] Lawrence Altman, who has been chronicling the AIDS epidemic through the New York Times, recognized the benefits of AIDS to cancer researcher at the very beginning of the epidemic. Altman predicted that the rare cancer caused by AIDS would provide insight into the causes of other types of cancer: **The sudden appearance of the cancer, called Kaposi's sarcoma, has prompted a medical investigation that experts say could have as much scientific as public health importance because of what it may teach about determining the causes of more common types of cancer. [44]**

This prediction came true. Another researcher more recently summarized how AIDS-related cancers are providing valuable insight into the cause of cancer in general: "The etiology and mechanism of the specific cancers that are increased with HIV infection are proving highly informative for our general understanding of cancer etiology." [45] As a result of this convenient new insight into the mechanisms of cancer growth, researchers are now predicting that the AIDS epidemic and the associated cancer epidemic will assist in the development of cancer prevention strategies. One author suggested, "The AIDS-malignancies have provided insights into the pathogenesis of neoplastic disease in general and into strategies for further therapeutic intervention." [46] Other authors in the European Journal of Cancer summarized the benefits of AIDS to cancer vaccine research in the following manner: **As disastrous as the spread of HIV is, the insights that the AIDS epidemic provides into the causes of cancer may ultimately lead to new and successful approaches to cancer prevention. [47]**

Indeed, the AIDS epidemic appears to be perfectly suited to providing a research vehicle to the viral cancer research effort, which invented immunosuppressive viruses to determine the links between cancer, viruses, and immunodeficiency so that cancer vaccines could be created. One author wrote of the utility of AIDS-related cancers or neoplasms to cancer prevention efforts: **The occurrence of these neoplasms offers an opportunity to study the role of viruses and immunodeficiency in development of these tumors. Also, the pathogenic mechanisms leading to specific malignancies can be elucidated. This information ought to guide development of strategies for prevention of virally determined cancers.[48]**

- 43 Herpes-type viruses were isolated from human cancers and mass-produced to determine their ability to cause cancer as far back as 1967: "The production of herpes-type virus from a culture of the African Burkitt lymphoma has been increased at Chas. Pfizer and Co., Inc. by a substantial increase in the virus content of the culture." Suspected cancer-causing viruses were isolated from humans and injected into various species to assess their cancer-causing potential: "Materials from human patients have already been inoculated into 600 newborn monkeys and chimpanzees of various species, and into large numbers of dogs, cats, mice, hamsters, etc." Special Virus-Leukemia Program, Progress Report #4, pp. 12, 20.
- 44 Lawrence K. Altman, "Rare Cancer Seen in 41 Homosexuals," New York Times, July 3, 1981.
- 45 C. Rabkin, "Epidemiology of AIDS-Related Malignancies," Current Opinion in Oncology, vol. 6, 1994, 492-496.
- 46 A. M. Levine, "AIDS-Related Malignancies: the Emerging Epidemic," Journal of the National Cancer Institute, vol. 85, no. 17, September 1, 1993, 1392.
- 47 V. Beral, et al.
- 48 D. T. Purtilo, "Opportunistic Cancers in Patients With Immunodeficiency Syndromes," Arch. Pathol. Lab. Med, vol. 111, December 1987, 1129.

Altman provided a fitting summary of the situation: **. . . scientists saw in the tragedy of the AIDS epidemic an extraordinary opportunity to study the interplay of viruses, an impaired immune system and the development of cancer. In a way, AIDS research was an extension of the war on cancer that the Government declared in 1971.[49]**

It should be clear that the HIV epidemic is providing cancer researchers with extensive knowledge of human cancer viruses and the immune system reactions to them. This knowledge will certainly assist in the development of human cancer vaccines, but HIV itself may even be used in such vaccines if recent animal research is applicable to human cancer prevention. Recent cancer experiments with HIV in animals have shown that the virus can be used not only to cause cancer but to inhibit its growth in the form of cancer vaccines! By using components of HIV in experimental vaccines against tumors (which were induced by modified forms of HIV), researchers have reportedly dissected the role of CD4 and CD8 T-cells in tumor prevention through immunosurveillance. One group of scientists reported, "This model has allowed us to begin to dissect some of the mechanisms mediating and regulating tumor immunosurveillance." The researchers who conducted this experiment optimistically noted that this line of experimentation with HIV "may provide a successful concerted approach to cancer immunotherapy." [50] Whether HIV will be used directly as a cancer vaccine in humans in a similar manner remains to be seen. However, HIV may have much more far-reaching medical uses than cancer vaccines—as stunning as that achievement might be. Specifically, the use of HIV in the brave new world of genetic therapy in humans looks promising.

- 49 Lawrence K. Altman, "The Doctor's World: AIDS Research Yields Clues Linking Viruses and Cancer," New York Times, April 14, 1998.
- 50 S. Matsui, J. Ahlers, A. Vortmeyer, M. Terabe, T. Tsukui, D. Carbone, L. Liotta, and J. Berzofsky, "A Model for CD8+ CTL Tumor Immunosurveillance and Regulation of Tumor Escape by CD4 T Cells Through an Effect on Quality of CTL," Journal of Immunology, vol. 163, no.1, 1 July 1999, 184-193.

Indeed, HIV has the potential to be a very useful experimental and therapeutic virus with broad biomedical applications. [51] Amazingly enough, researchers have begun using the HIV virus itself as a viral "vector" for the controversial line of medicine known as gene therapy—at least in the laboratory. By deleting certain genes in the deadly AIDS virus, researchers have been able to exploit its unique infectious properties while eliminating its harmful capacity. Andrew Pollack wrote in the New York Times: **In a bold but potentially frightening effort to turn one of the world's most virulent killers into a cure, scientists and biotechnology companies are trying to tame the AIDS virus and harness it to treat disease. The scientists say they have stripped the human immunodeficiency virus of its ability to cause disease, while leaving intact its ability to infect human cells. Such a crippled virus, they say, could be used to deliver genes in to human cells for gene therapy. [emphasis added]**

As a result of laboratory tests, the subfamily of viruses to which HIV belongs is thought to be one of those most suited for the emerging technology of genetic therapy. This type of virus, the lentivirus, seems to have infectious properties which render it superior to other viruses for the insertion of genes in human DNA. This includes the DNA of nondividing cells, which pose a barrier to other types of viral vectors. Pollack noted: **H.I.V., on the other hand, is both cunning at evading the body's immune defenses and can carry large genes. Most important, it is one of a small class of viruses, known as lentiviruses, that can incorporate genes into the chromosomes even of nondividing cells. [52]**

This convenient infectious property, together with its carrying capacity, makes HIV one of the more promising ones for use in human clinical gene therapy trials.

It should be clear that the cancer epidemic due to AIDS is proving fantastically beneficial to cancer researchers, but the question needs to be asked: Are these stunning developments merely due to coincidence? Altman had noted, "In a way, AIDS research was an extension of the war on cancer that the Government declared in 1971." Is there more to Altman's comment than meets the eye?

- 51 Cancer researchers are not the only ones who are benefiting from the medical knowledge gained in the fight against AIDS. The entire medical research community stands to reap tremendously useful knowledge from the AIDS catastrophe. Several knowledgeable authors summarized in the medical literature: "Furthermore, an unforeseen dividend for HIV research is the unraveling of the rich, intricate pathways of gene regulation utilized by the virus, which may well illuminate novel, fundamental cellular processes. The understanding of basic biology that we gain from the studies of HIV may be one major legacy of this epidemic to medical science." [emphasis added] Y. N. Vaishnav and F. Wong-Staal, "The Biochemistry of AIDS," Annu. Rev. Biochem,1991, vol. 60, 580.
- 52 Andrew Pollack, "Scientists Enlist H.I.V. To Fight Other Ills," New York Times, January 19, 1999.

Could researchers have caused the AIDS/cancer epidemic using the tools they had developed in the government's war on cancer? Did they continue in their human experiments with cancer-causing monkey viruses and escalate to the use of "active" immunosuppression with the monkey immunosuppressive viruses they developed for animal cancer experiments? In the human experiments with SV40 tumor transplants, researchers mimicked active immunosuppressive experiments that were conducted by Chester Southam in animals. In Southam's animal experiments, he gave mice treatments that disabled their immune systems in an attempt to increase tumor growth due to cancer virus injections. [53] In the SV40 experiments with humans, patients undergoing immunosuppressive treatments for cancer were injected with the cancer-causing monkey virus SV40 to determine both whether such viruses were capable of causing human cancer and whether immunosuppression aided such cancer growth. [54] The SV40 researchers even got to use one of the same immunosuppressive treatments (an immunosuppressive chemical known as Cytoxan) in their human transplant studies [55] that Southam used in cancer transplant studies in mice. [56], [57]

- 53 Southam reported, "It seemed reasonable to test this possibility by studying quantitatively the transplantability of syngeneic tumours under conditions which suppress or enhance immunological responses." J. Reiner and C. M. Southam, "Effect of Immunosuppression on First-Generation Isotransplantation of Chemically Induced Tumours in Mice," Nature, vol. 210, 23 April 1966, 429-430.
- 54 Although a New York Times reporter [Altman] recently noted, "[I]t would be unethical to inject humans with a virus to prove that it can cause cancer," as documented in this work, scientists have conducted numerous experiments using just such a procedure. Lawrence K. Altman, "A Virus Associated With AIDS."
- 55 Some of the human patients used in the monkey virus experiment were undergoing immunosuppressive treatments with Cytoxan for their cancer: "Seventy-five percent of the patients had been given cytotoxic drugs, including cyclophosphamide (Cytoxan), 5-fluorodeoxyuridine, and 5-fluorouracil in full therapeutic doses." Researchers were able to study the injected cancer cell growth as a function of how long it had been since the immunosuppressive treatments had been halted: "[Cancer] Cells were inoculated into patients 1 to 31 days after drug administration was terminated, except for 2 patients who received their last dose of Cytoxan on the day of implantation." F. Jensen, et al.
- 56 Southam explained, "Such an investigation has been undertaken in this laboratory and the results obtained with cyclophosphamide ('Cytoxan') are sufficiently interesting and reliable to merit this preliminary report. Cyclophosphamide ('Cytoxan') was chosen for this study because its immunosuppressive effect had previously been demonstrated in a variety of experimental systems and because its pharmacological characteristics seem well suited to the objective." This chemical had the advantage that it "acts very rapidly after systemic administration to initiate cytotoxic changes, including destruction of those cells responsible for immunological reactions." Conveniently, "if administration of the drug is stopped 24 h or more before a transplant is injected, it results in a host in which immunosuppression will continue for a considerable time, but in which there is no persistence of a cytotoxic drug which might inhibit the tumor transplant." J. Reiner and C. M. Southam, "Effect of Immunosuppression on First-Generation Isotransplantation of Chemically Induced Tumours in Mice," Nature, vol. 210, 23 April 1966, 429-430.
- 57 Experiments similar to these were also conducted in monkeys in which immunosuppression and infection with the SV40 virus were studied to determine the cancer-causing potential of SV40. G. A. Cole and K. V. Shah, "Experimental Simian Virus 40 Infection of Normal and Immunosuppressed Spider Monkeys," Acta virol, vol. 18, 1974, 65-69.

Since cancer researchers routinely used experimental cancer-induction procedures in humans that they developed in animals, it is natural to ask whether, in addition to immunosuppressive chemicals, researchers have also used monkey immunosuppressive viruses in conjunction with SV40 or other cancer virus transplants in humans. Curiously, monkey immunosuppressive viruses were not only available to researchers prior to AIDS but were mixed with the SV40 virus and propagated in human cell cultures! While the public is completely ignorant of this fact, simian immunosuppressive viruses(SIVs) such as the Mason Pfizer Monkey Virus (MPMV)—one of three types of SIV58—were available to researchers as early as 1970 when the virus was grown in cell cultures.59 Well before AIDS, MPMV was shown to induce immunodeficiency states in monkeys in the early 1970s [60][61] as well as the 1980s. [62] In one of these early experiments, MPMV was mixed with SV40—the monkey cancer virus (which had already been injected in humans to cause cancer)—and the Rous

- 58 MPMV is one of "three independent virus isolates" of "simian acquired immunodeficiency syndrome (SAIDS) in macaque monkeys." One group of researchers reported, "When inoculated into young monkeys, MPMV produced a spectrum of nononcogenic disease associated with an immunodeficiency condition." R. M. Thayer, M. D. Power, M. L. Bryant, M. B. Gardner, P. J. Barr, and P. A. Luciw, "Sequence relationships of type D retroviruses which cause simian acquired immunodeficiency syndrome," Virology, 1987 April 157(2), 317-329.

- 59 This immunosuppressive virus was isolated from a mammary tumor of a rhesus monkey in 1970. H. C. Chopra and M. M. Mason, "A New Virus in a Spontaneous Mammary Tumor of a Rhesus Monkey," Cancer Research, vol. 30, no. 8, August 1970, 2081-2086.
- 60 The virus not only had immunosuppressive properties, it was reported to act like a slow virus—just like HIV. D. L. Fine, J. Landon, R. Pienta, M. Kubicek, M. Valerio, W. Loeb, and H. Chopra, "Responses of Infant Rhesus Monkeys to Inoculation With Mason-Pfizer Monkey Virus Materials," Journal of the National Cancer Institute, vol. 54 no. 3, March 1975, 651-658.
- 61 In 1986 one group of researchers described how immunodeficiency states were induced in monkeys in the early 1970s using MPMV. Since the virus did not immediately induce cancer and since AIDS hadn't started in human populations, the effects of the virus (immunosuppression and fatal infection by opportunistic diseases) at that time did not attract widespread notice. The researchers reported in one paper, "However the results were disappointing at that time because tumors were not induced by inoculation of MPMV into newborn rhesus monkeys and other nonhuman primates. Instead, many of the inoculated neonatal animals developed persistent lymphadenopathy, thymic atrophy, and weight loss and eventually died of undue susceptibility to facultative organisms. Because of the absence of transmissible tumor and the lack of occurrence at that time of human AIDS, this nononcogenic but immunosuppressive result attracted little scientific attention." M. L. Bryant, M. B. Gardner, P. A. Marx, D. H. Maul, N. W. Lerche, K. G. Osborn, L. J. Lowenstine, A. Bodgen, L. O. Arthur, and E. Hunter, "Immunodeficiency in rhesus monkeys associated with the original Mason-Pfizer monkey virus," J. Natl. Cancer Inst., 77(4), October 1986, 957-965.
- 62 Cryogenically preserved samples of this virus, isolated in the 1970s, were shown to induce a disease (simian acquired immune deficiency syndrome, SAIDS) very much like that due to simian immunodeficiency viruses (SIVs). The researchers who published the experiment in 1986 stated, "MPMV produces an acquired immunodeficiency similar to that caused by the recently described simian acquired immune deficiency syndrome type D retroviruses." Ibid.

sarcoma virus in human cell cultures.63 Researchers also mixed the immunosuppressive virus with simian sarcoma virus.64 Is it not curious that cancer researchers were mixing immunosuppressive monkey viruses with sarcomas and coaxing them to grow in human cells in the late 1970s—just before HIV broke out in human populations and caused an epidemic of immunosuppression and sarcoma? Could this epidemic have been an extension of the human tumor transplant experiments with SV40, using the technology perfected over decades of research with animal immunodeficiency viruses? If researchers were going to use animal immunosuppressive viruses to conduct such experiments in man, how might they have been conducted? It would make sense for researchers to use vehicles that would allow them not only to inject subjects with viruses but to conduct follow-up studies to see how the immunosuppressive and cancer viruses resulted in immune system destruction [65] and cancer growth. Vaccine programs meet these criteria and are the perfect vehicles for implementing such experiments.

- 63 H. Ogura, T. Tanaka, M. Ocho, T. Kuwata, and T. Oda, "Detection of Mason-Pfizer monkey virus infection by syncytia formation of human cells doubly transformed by Rous sarcoma virus and simian virus 40," Arch Virol, 57(2), 1978, 195-198.
- 64 H. Ogura, "Interactions Among Retroviruses Mason-Pfizer Monkey, Baboon Endogenous, Simian Sarcoma Virus-Associated and Murine Leukemia Detected by Virus-Mediated Cell Fusion Inhibition Assay," Microbiol. Immunol., vol. 24, no. 8, 1980, 761-763.
- 65 Such research would not be unprecedented. A long-running program exploiting unsuspecting black men naturally infected with syphilis was supervised by the government for decades. This program, known as the Tuskegee study, was conducted "to see how the syphilis germ destroys the body. In the late stages, the germ can cause paralysis, gradual blindness and dementia." Sanjay Bhatt, "The anthrax vaccine: Government's shot in the dark," Palm Beach Post, December 30, 2001. In this case, natural cases of syphilis were deliberately left untreated so victims of the disease could be monitored for medical research purposes. A government report summarized the experiment: "By the mid-1940s it was becoming clear that the death rate for the infected men in the study was twice as high as for those in the control group. The study was reviewed by PHS officials and medical societies and reported by a number of journals from the early 1930s to 1970. In the 1960s a growing number of criticisms began to appear, although the study was not stopped until 1973. Thus, men with a confirmed disease were not told of their diagnosis and were deceived into participating in the study under the guise of its being therapeutic for unspecified maladies. In addition to exposing the subjects to the additional harms of participation in the study, the false belief that treatment was being administered prevented subjects from otherwise seeking medical care for their disease. Over this forty-year history, at least 28 participants died and approximately 100 more suffered blindness and insanity from untreated syphilis before the study was stopped." Advisory Committee on Human Radiation Experiments - Final Report, Chapter 3, Section: "The Development of Human Subject Research Policy at DHEW," http://tis.eh.doe.gov/ohre/roadmap/achre/chap3_2.html (12/31/01)

Prior to AIDS, the world's medical elite was well aware of the usefulness of immunosuppressive viruses to cancer research: World Health Organization (WHO) representatives had made statements expressing their desire that the organization get involved in research with immunosuppressive viruses capable of selectively targeting T-cells. [66] (Researchers associated with WHO were optimistic that the immunosuppressive research conducted in animals could be usefully extended to human beings.[67]) Members of WHO had also recommended that experimental agents be placed in vaccines as a vehicle for measuring the human immune response on a global scale68(as a means of separating genetic from environmental determinants of immune system function). A report by a WHO study group had also recommended an international study of naturally immunosuppressed humans with immunological deficiency syndromes for cancer research purposes (this was prior to the emergence of the international Acquired Immunodeficiency Syndrome epidemic)![69] Did WHO achieve all of these goals simultaneously by placing immunosuppressive agents in some of its vaccines, thereby creating a highly useful international epidemic of acquired immunodeficiency syndromes and cancer resulting from selective T-cell depletion? **The possibility that increased cancer rates due to infectious agents present in vaccines would be useful for cancer vaccine research was evident in the 1967 report of the Special Virus-Leukemia Program.** Projects were initiated to correlate cancer deaths of children and veterans with vaccines they may have received (as compared to "matched control groups"). One project recommended that a massive database be constructed and maintained by obtaining "death certificates for all U.S. children under 15 years of age who have died of cancer, 1960-1964" so that cancer deaths could correlated with names "of children believed to be at unusual risk of cancer; e.g., those given certain vaccines in the past." Were similar databases created for vaccine recipients who were deliberately predisposed to cancer through vaccines? [70]

- 66 The following chilling recommendation for future research was made in a World Health Organization publication from 1972: "An attempt should be made to ascertain whether viruses can in fact exert selective effects on immune function . . . or by affecting T cell function as opposed to B cell function. The possibility should also be looked into that the immune response to the virus may itself be impaired if the infecting virus damages more or less selectively the cells responding to the viral antigens." [emphasis added] This is exactly what HIV does. A. Allison, W. Beveridge, W. Cockburn, J. East, H. Goodman, H. Koprowski, P. Lambert, J. Van Loghem, P. Miescher, C. Mimms, A. Notkins, and G. Torrigiani, "Virus-Associated Immunopathology: Animal Models and Implications For Human Disease," Bulletin of the World Health Organization, vol. 47, no. 2, 1972, 259.
- 67 "Recent studies on virus-induced immunopathological reactions in domestic and experimental animals have led to the development of concepts and technical methods that may be useful in investigating certain viral diseases in man, including hepatitis." [emphasis added] Ibid., 258.
- 68 "In relation to the immune response, a number of useful experimental approaches can be visualized. One would be a study of the relationship of HL-A type to the immune response, both humoral and cellular, to well-defined bacterial and viral antigens during preventive vaccination." [emphasis added] Federation Proceedings, vol. 31, no. 3, May-June 1972, 1102.
- 69 The pre-AIDS WHO report recommended that an "international co-operative study of patients with immunological deficiency syndromes should be carried out." It also suggested that "[o]bservations on patients with immunological deficiency diseases should be as complete as possible, and it is desirable that they should enable valid comparisons to be made between patients studied in different institutions." [emphasis added] A. C. Allison, B. A. Askonas, B. Benacerraf, R. Ceppellini, R. A. Good, E. S. Lennox, H. O. McDevitt, R. S. Nezlin, and M. Seligmann, "Genetics of the Immune Response," World Health Organization Technical Report Series, no. 402, 34, 52.
- 70 Special Virus-Leukemia Program, Progress Report #4, Program Staff, National Cancer Institute, Etiology Area, May 1967, pp. 29, 31.

Unfortunately, there is evidence to support the radical hypothesis that humanitarian vaccine programs were used to conduct inhumane cancer experiments. Promiscuous homosexuals were selectively targeted with an e**xperimental vaccine against hepatitis B** beginning in the late 1970s.[71] And the AIDS epidemic in promiscuous homosexuals began almost immediately after the first of these vaccine experiments.[72] It has been documented that recipients of this experimental hepatitis vaccine have been disproportionately afflicted with AIDS [73] and that immunosuppressed homosexuals are being targeted with numerous follow-up studies to monitor how cancer develops in immunosuppressed victims versus healthy populations.[74] Interestingly enough, the suspect experimental hepatitis B vaccine given to homosexuals just prior to the AIDS epidemic appears to have been a subset of a proposed global cancer vaccine experiment administered by the World Health Organization.[75] It was thought that hepatitis B was the cause of a form of cancer called hepatocellular carcinoma and that by immunizing people against hepatitis, immunity to this form of cancer might be obtained.[76] Hepatitis B vaccination trials were conducted as a means of developing vaccines for use in these international hepatitis/cancer vaccine trials. [77] (Hepatitis was also mentioned in WHO publications discussing the experimental merits of extending animal immunosuppressive techniques to human research.)

- 71 W. Szmuness, C. E. Stevens, E. J. Harley, E. A. Zang, W. R. Oleszko, D. C. William, R. Sadovsky, J. M. Morrison, and A. Kellner, "Hepatitis B Vaccine: Demonstration of Efficacy in a Controlled Clinical Trial in a High-Risk Population in the United States," The New England Journal of Medicine, vol. 303, no. 15, 9 October 1980, 834.
- 72 G. J. P. Van Griensven, N. A. Hessol, B. A. Koblin, R. H. Byers, P. M. O'Malley, N. Albrecht-van Lent, S. P. Buchbinder, P. E. Taylor, C. E. Stevens, and R. A. Coutinho, "Epidemiology of Human Immunodeficiency Virus Type 1 Infection among Homosexual Men Participating in Hepatitis B Vaccine Trials in Amsterdam, New York City, and San Francisco, 1978-1990," American Journal of Epidemiology, vol. 137, no. 8, 913.
- 73 Studies show that forty percent of the recipients of some of these vaccine trials developed AIDS. (Half of the volunteers participating in these trials were given a placebo.) Ibid.; C. E. Stevens, P. E. Taylor, E. A. Zang, J. M. Morrison, E. J. Harley, S. Rodriguez de Cordoba, C. Bacino, R. C. Y. Ting, A. J. Bodner, M. G. Sarngadharan, R. C. Gallo, and P. Rubinstein, "Human T-Cell Lymphotropic Virus Type III Infection in a Cohort of Homosexual Men in New York City," JAMA, April 25, 1986, vol. 255, no. 16, 2167-2172.
- 74 D. W. Lyter, J. Bryant, R. Thackeray, C. R. Rinaldo, L. A. Kingsley, "Incidence of Human Immunodeficiency Virus-Related and Nonrelated Malignancies in a Large Cohort of Homosexual Men," J. Clin. Oncol., October 1995, vol. 13, no. 10, 2540-2546; C. R. Rinaldo, L. A. Kingsley, D. W. Lyter, B. S. Rabin, R. W. Atchison, A. J. Bodner, S. H. Weiss, and W. C. Saxinger, "Association of HTLV-III

with Epstein Barr Virus Infection and Abnormalities of T Lymphocytes in Homosexual Men," Journal of Infectious Diseases, vol. 154, no. 4, October 1986, 556-561.

- 75 The hepatitis vaccine developed in these trials has been referred to by some observers as the first human cancer vaccine.
- 76 Researchers affiliated with the WHO noted in one publication, "The Meeting considered that there were good grounds to suppose that vaccination of children with hepatitis B vaccine at birth, or shortly thereafter, would confer long-term protection against the development of hepatocellular carcinoma." "Prevention of Liver Cancer," World Health Organization Technical Report Series 691 (Geneva: World Health Organization, 1983), 27.
- 77 These cancer vaccine trials have been declared a success. One paper reported, "Universal childhood vaccination against hepatitis B in Taiwan appears to have reduced the incidence of hepatocellular carcinoma." Mei-Hwei Chang, Chien-Jen Chen, Mei- Shu Lai, Hsu-Mei Hsu, Tzee-Chung Wu, Man-Shan Kong, Der-Cherng Liang, Wen-Yi Shau, and Ding-Shinn Chen, "Universal hepatitis B vaccination in Taiwan and the incidence of hepatocellular carcinoma in children." The New England Journal of Medicine, 26 June 1997, vol. 336, no. 26, 1855.

Given the admitted experimental nature of this cancer vaccine effort employing hepatitis vaccines, and, given the useful immunosuppression subsequently associated with one branch of it, it seems logical to ask: **Was this direct attempt at cancer vaccination using the hepatitis B vaccine augmented through the addition of immunosuppressive viruses, as was done in experimental animal populations?** [78] In other words, was there a covert cancer vaccine experiment within the overt cancer vaccine experiment associated with the hepatitis B program? Could this explain why immunosuppression in homosexual populations is proving so beneficial to cancer research? Such a procedure would represent the replication in human populations of a published experiment conducted in cats in which kittens were injected with a "vaccine" containing a mixture of immunosuppressive viruses and cancer agents. **Four-week-old specific-pathogen-free cats were immunized with a combined vaccine composed of killed feline leukemia virus and killed feline oncornavirus-associated cell membrane antigen-containing tumor cells.**

The authors further explained that the immunosuppressive leukemia virus present in the vaccine increased susceptibility to the oncornavirus cancer agents: "Thus, it appears that the protective immunity to feline oncornavirus disease was hindered rather than enhanced by inclusion of inactivated, purified FeLV as a vaccine component."[79] The Source of the International AIDS EpidemicIn addition to the AIDS outbreak in American homosexuals, there is evidence supporting the theory that the international HIV epidemic is also the result of a premeditated international "cancer vaccine" experiment implemented using existing vaccine programs associated with the World Health Organization.

While gay recipients of the hepatitis B/cancer vaccination program have been disproportionately stricken by the AIDS virus, according to a front page article in The Times of London, it is a segment of the recipients of the international smallpox vaccination administered by the WHO which have been disproportionately afflicted with AIDS in the developing world. Pearce Wright summarized in the Times: **The World Health Organization, which masterminded the 13 year campaign, is studying new scientific evidence suggesting that immunization with the smallpox vaccine Vaccinia awakened the unsuspected, dormant human immuno defence virus infection (HIV).[80]**

- 78 This process might allow long-term immunocompetence (through vaccine development) to be attained through short-term immunocompromise induced in a group of unfortunate human test subjects.
- 79 R. G. Olsen, et al.
- 80 Pearce Wright, "Smallpox vaccine 'triggered Aids virus,'" The Times of London, Monday, May 11, 1987.

The Times elaborated, "The smallpox vaccine theory would account for the position of each of the seven Central African states which top the league table of most affected countries; why Brazil became the most afflicted Latin American country; and how Haiti became the route for the spread of Aids to the U.S." ConclusionAIDS is providing a fantastic laboratory model on a large-scale—essentially duplicating research efforts conducted earlier on a smaller-scale to prove the immunodeficiency and virus model of cancer growth. For example, AIDS is providing answers that studies of immunosuppressed transplant patients and children with naturally occurring immune deficiency syndromes sought with respect to the viral nature of cancer and the breakdown of the immunological surveillance mechanism.[81] Indeed, the AIDS epidemic is providing a near ideal research vehicle for proving theories about cancer causation that were popular shortly before the epidemic broke out. In 1972 the Proceedings of the National Academy of Sciences published numerous articles speculating not only on the relationship between immunodeficiency [82] and viruses [83] in cancer formation, but specifically on the relationship between herpes viruses and cancers. [84] AIDS has made international headlines apparently showing that immunodeficiencies can be a major contributor to cancer due to viruses and that one of the main forms of cancer due to such immunodeficiencies—Kaposi's sarcoma—is due to a herpes virus.

Thus, in addition to providing evidence that the "breakdown of the immunological surveillance mechanism" can lead to cancer, AIDS is helping to identify the specific viruses involved in the resultant conversion to cancer. Consequently, the damage inflicted by HIV on the immunological surveillance mechanism will be useful in the development of cancer vaccines and, as is evident in animal experiments, the deadly AIDS virus itself may even be used in experimental human cancer vaccines.

- 81 One author summarized the situation in 1969: "Although further analyses are obviously required, the results suggest that children with immune deficiency syndromes or adults treated with immunosuppressives have a greatly increased risk of developing tumours, especially of the lymphoreticular system. Presumably this represents breakdown of the immunological surveillance mechanism, allowing proliferation of tumour cells that would otherwise be restrained by an immune response. Whether one or more viruses are involved cannot be stated on existing evidence." A. C. Allison, "Immune Responses to Virus-Induced Tumours,"Proc. Roy. Soc. Med, vol. 62, September 1969, 956-958.
- 82 R. A. Good, "Relations Between Immunity and Malignancy."
- 83 H. Temin, "The RNA Tumor Viruses—Background and Foreground, Proc. Nat. Acad. Sci. USA, vol. 69, no. 4, April 1972, 1016-1020.
- 84 G. Klein, "Herpes viruses and Oncogenesis," Proc. Nat. Acad. Sci. USA, vol. 69, no. 4, April 1972, 1056-1064.

In summary, it seems improbable that, by sheer chance, an unprecedented epidemic infection due to a type of virus invented by cancer researchers began benefiting cancer researchers almost immediately after they grew it in human cell cultures.

Given the immense benefits of the disease in combination with the history of human experimentation with cancer-causing viruses by the cancer research establishment, it seems more likely that AIDS is the result of human experimentation and not accident. This type of human experimentation would be directly in line with the type of cancer research perfected over decades of animal experiments with immunosuppressive viruses. It would also represent the culmination of a long series of experiments in humans in which immunosuppression was exploited as a mechanism to induce cancer by various means (including monkey sarcoma viruses) in the search for cancer vaccines. While this conclusion may seem extreme, the open medical literature contains many surprises that run contrary to what a blind faith in the medical research establishment would foster. One can only wonder what surprises the classified records of the CIA (which had an entire wing of a hospital to experiment in as part of its MKULTRA program [85]) and the National Cancer Institute hold. It is hoped that this brief study will provide insight into what areas should be further investigated. **A more detailed study, titled AIDS: THE "PERFECT" DISEASE, which examines not only the cancer research benefits of AIDS described above, but also the benefits to the national security establishment, is available at http://www.authorhouse.com/BookStore/.**

In this study, disturbing links between the national cancer research establishment and the biowarfare establishment are revealed as is the manner in which AIDS is helping to fulfill long-standing national security goals related to international population control in addition to fulfilling the goals of the cancer vaccine research establishment. Additionally, the sordid history of previously secret national and international testing programs of the U.S. government is reviewed. The proposed cancer experiment to explain the AIDS epidemic is placed within the context of this backdrop of unethical human experimentation under humanitarian pretexts. These unconscionable testing programs serve as a warning to those who would doubt that an experiment of the size and scope of that proposed to explain the AIDS epidemic could and would be carried out by the U.S. government under the auspices of cancer research.

- 85 "In another MKULTRA project, CIA secretly provided funding for the construction of a wing of Georgetown University Hospital in the 1950s so that it would have a locale to carry out clinicaltesting of its biological and chemical programs." Advisory Committee on Human Radiation Experiments, Appendix E:

http://www.gwu.edu/~nsarchiv/radiation/dir/mstreet/interim/intret.txt (12/31/01)

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2020 - University of Mississippi paper, Online Journal of House Ethics : Tuskegee Syphilis Study not Americas only Medical Scandal Chester M. Southam, MD, Henrietta Lacks, and the Sloan-Kettering Research Scandal

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Can you give someone cancer?

In December 2011, following his diagnosis of cancer, Venezuelan president Hugo Chavez speculated that American agents had induced the disease in him and possibly other South American leaders by injecting them with cancer cells. Despite the State Department's rejecting Chavez's claims, there nonetheless was no shortage of CIA conspiracy theorists who accepted the charge. The media too grabbed onto the story, not only because of the outlandish nature of the accusation but also because of the underlying question it raised: Can you give someone cancer? (Miami New Times, March 7, 2013; Slate, December 30, 2011).

While direct communication of cancer from one host to another has been documented, and transplanting cancer cells to another person in an effort to cause cancer is possible, it is extremely rare. It has been shown in organ transplant recipients, mother-to-fetal transmission, and a few rare events such as one reported in 2015 in the New England Journal of Medicine where cancer cells from a tapeworm invaded a man's body, spreading to his lymph nodes and his lungs. While ordinarily, the immune system would not allow this, in this case the man was severely immunosuppressed due to HIV/AIDS (Muehlenbachs et al. 2015). Other reported cases include transmission to a lab worker via a needle stick or a cut on the hand and one where a surgeon's laceration developed into a sarcoma. In these cases, however, while the cancer cells grew locally at the point of entry, they failed to progress beyond the site of entry (Welsh, 2011). It is well established that in normally functioning immune systems such cells (including cancer cells from another person) would be recognized as foreign and destroyed before they have a chance to wreak havoc (Janeway 1993). The reason we know this today is because decades ago researchers attempted to do just such a thing: injecting prison inmates and chronically ill hospitalized patients with live cancer cells. These experiments, carried out with little or no informed consent, took place in New York City, at one of the leading cancer research centers in the United States, despite the safeguards of the American healthcare and research ethics systems. While the scandal garnered headlines at the time (e.g., New York Times, January 26, 1964),it has since been largely forgotten, as have the people who unknowingly placed their bodies on the line to advance scientific knowledge, and it is a story that deserves retelling.

A brief history of ethics in medical research

While the Nuremberg Code of 1947 is generally regarded as the first document to set out ethical regulations for human experimentation based on informed consent, rules to protect the welfare of people subjected to medical experimentation were in fact in place long before this including in Germany. The first detailed regulation of non- therapeutic research in Wester medicine came from the Prussian minister for religious, educational, and medical affairs in 1900, following the public outcry at the work of Albert Neisser, the discoverer of the gonococcus (Vollmann and Winau, 1996).

In 1898, Neisser, who was attempting to develop a syphilis vaccine, published a study that outlined his results as well as his methods and study participants. Public debate in the press as well as among academicians ensued: Neisser had injected serum from patients with syphilis into patients who were admitted to hospital for other medical conditions, none of whom had suffered from syphilis at the time of the experiment. The controversy rested on two issues: the first was that most (but not all) of these patients were prostitutes, while the second was that none of them had been informed about the experiment or asked for their consent. After four of the prostitutes subsequently developed syphilis, it raised the issue of whether or not it was the injected cells that had in fact caused their illness, or as Neisser insisted, they had contracted it separately by pursuing their occupation (Toellner, 1981).

The majority of physicians aware of the case supported Neisser; the single exception was Albert Moll, a Berlin psychiatrist and highly regarded sexologist (Maehle 2012). While largely unrecognized in the medical literature, Moll is largely responsible for the formulation and elaboration of a theoretical conception of the contractual nature of the patient–doctor relationship and the development of informed consent, saying,

- *"I have observed with increasing surprise that some medics, obsessed by a kind of research mania, have ignored the areas of law and morality in a most problematic manner. For them, the freedom of research goes so far that it destroys any consideration for others. The borderline between human beings and animals is blurred for them. The unfortunate sick person who has entrusted herself to their treatment is shamefully betrayed by them, her trust is betrayed, and the human being is degraded to a guinea pig…." (Maehle 2009) Moll would go on to author one of the most comprehensive books on the subject of medical ethics, Arztliche Ethik (Medical Ethics)* (Katz, 1997).

Following increasing pressure from Moll as well as the press, the Neisser case came under investigation by the public prosecutor and the Royal Disciplinary Court. The court found that although Neisser was a well-known medical authority and may have been convinced that the trials were harmless, he should have sought the patients' consent; he was fined, and was lucky not to receive a more stringent punishment, because two years later, upon further investigation into the case, government lawyers stated that conducting non-therapeutic research on a subject without consent fulfilled the criteria for causing physical injury (battery) in criminal law (Vollmann and Winau, 1996).

Additional action was taken by the Prussian Landtag (parliament), which commissioned a detailed report from the Scientific Medical Office of Health, which was composed of leading German physicians, including Rudolf Virchow. The commission stated that a physician who recognized that injected serum might cause infection had no right to inject such a serum, but that in any case both informing the subject and obtaining the subject's consent were preconditions to experimentation. Informed consent became a mandatory precondition for any non-therapeutic research. Written documentation and clear responsibility of an institution's medical director for all human experimentation became legal doctrine, and all hospitals, clinics and medical directors were advised that any medical interventions other than for diagnosis, healing, and immunization were excluded under all circumstances if "the human subject was a minor or not competent for other reasons" or if the subject had not given "unambiguous consent" after a "proper explanation of the possible negative consequences of the intervention (Goss, 2017). Others took the somewhat extreme position that purely scientific experimentation on human subjects was unethical even if they gave voluntary consent and that self-experimentation should always precede experiments on patients, noting that the scientific validity of the experiment did not serve to mitigate these conditions (Vollmann and Winau, 1996).

Ironically, the other main early attempt to protect a human research subject's autonomy would occur in Hitler's Germany. In the German Reich's Rundschreiben (Reich's Circular) of 1931 the Reich government issued detailed guidelines that clearly distinguished between therapeutic ("new therapy") and nontherapeutic ("human experimentation") research and set out strict precautions for each. The rules for new therapy were explicit: "New therapy may be applied only if consent or proxy consent has been given in a clear and undebatable manner following appropriate information. New therapy may be introduced without consent only if it is urgently required and cannot be postponed because of the need to save life or prevent severe damage to health…." When it came to non-therapeutic research there was no wiggle room; the law clearly stated that "under no circumstances [is it] permissible without consent" (Sass, 1983).

While it's thus clear that the basic concept of informed consent was developed long before the Second World War and these guidelines remained in place throughout the reign of Adolf Hitler, they failed to stop the unethical experiments taking place in Nazi concentration camps (Caplan, 1991). It would be these experiments and the subsequent postwar trials of the physicians involved in them that would lead to the creation of the Nuremberg Code, a document among whose 10 principles the longest is on informed consent (Kumar 2013).

Informed consent

While it is widely believed that the Nuremberg Code has legal standing, in fact this document has no legal force behind it (Ghooi, 2011). In the US, legal informed consent owes its genesis to two landmark legal cases. Schloendorff vs. The Society of New York Hospital (1914) established the principle of patient consent and is considered one of the landmark legal cases in bioethics, while Salgo v. Leland Stanford etc. Bd. Trustees is responsible for adding 'informed' to the notion of 'consent.' A brief review of the Schloendorff case follows.

Mary E. Schloendorff agreed to have her physician examine her under anesthesia and to have her fibroid tumor biopsied. Prior to the procedure, Schloendorff specified that she was not consenting to the removal of the tumor; nonetheless, while she was anesthetized, the surgeon, believing the mass was malignant, removed the tumor. Schloendorff then sued the hospital. the course made its way to the New York Court of Appeals, which found that the operation to which the plaintiff did not consent constituted medical battery. Justice Benjamin Cardozo wrote that in the court's opinion:

- *"Every human being of adult years and sound mind has a right to determine what shall be done with his own body; and a surgeon who performs an operation without his patient's consent commits an assault for which he is liable in damages. This is true except in cases of emergency where the patient is unconscious and where it is necessary to operate before consent can be obtained."*

Schloendorff, however, received no monetary gain, since she had sued the hospital and not the surgeons; the court found that a non-profit hospital could not be held liable for the actions of its employees due to the legal principle of charitable immunity. Justice Cardozo's opinion is widely cited as the basis for the requirement to seek consent from patients before medical intervention is provided, upholding a patient's right to autonomous decision-making (Deverette, 1995).

The second case, the Salgo decision, marks the birth of the doctrine of informed consent as it is known today; the term "informed consent" was first used in this case. In 1957, Martin Salgo, age 55, consented to undergo a diagnostic procedure to locate the source of chronic pain in his leg; it was believed he was suffering from arteriosclerosis and that his aorta was also involved. He was advised to undergo diagnostic aortography. While under anesthesia, his aorta was injected with a contrast medium, and images were taken of the abdominal aorta. The next morning Salgo awoke to find that his lower limbs were paralyzed as a result of the contrast agent used in the procedure. Salgo subsequently sued his doctor, claiming that he was not informed about paralysis being a risk or possible complication of the contrast material. The court noted that a physician violates his duty to the patient if he withholds any facts necessary to form the basis of an intelligent consent by the patient to the proposed treatment. The court also noted that when discussing risk, the physician has discretion "consistent with the full disclosure of facts necessary to an informed consent." Salgo's doctor's defense argued that if patients were informed of all the possible complications, they would become frightened and would not consent to treatment. The court rejected this defense and ruled that simple consent was not sufficient for medical procedures; instead, sufficient disclosure of possible risks and complications, allowing "informed consent," was necessary for patients to make autonomous decisions, whether regarding a surgical procedure or a medical experiment (Osman, 2001).

While lacking legal standing, the Nuremberg Code did form an outline of what are now considered a physician's ethical duties, which were codified in a subsequent document created in 1964 in Helsinki, known as the Declaration of Helsinki, which addressed clinical research and humane treatment of study participants as well as issues such as informed consent. Like its predecessor, the Declaration of Helsinki has no legal standing or power (Shuster, 1997), but together they serve as models for regulators in most countries and inform the current US federal research regulations, which require not only the informed consent of the research subject (with proxy consent sometimes acceptable, such as for young children) but also prior peer review of research protocols by a committee (the institutional review board) (NIH Office for Protection from Research Risks 1991). With such protections in place, one might assume that US citizens were protected against unethical or life-threatening medical experimentation; unfortunately, as we will see, this was not the case.

Unclean hands

In jurisprudence, there is a doctrine known as "unclean hands"—if a defendant can prove that a plaintiff has "unclean hands," that is, has acted unethically,

then the plaintiff's complaint will be dismissed (Upcounsel.com n.d.). During the doctors trial in Nuremberg, defense attorneys argued that this doctrine applied, stating that the German experiments were essentially equivalent to those that had been and were still being performed in US penitentiaries (Weindling, 2001). This statement had more than a kernel of truth to it. While there had been relatively little medical research into human disease in the US during the 1930s, this would change dramatically in the 1940s, when for the first time there would be US government funding for such research (Baader et al. ,2005).

With the outbreak of WWII and the potential for American involvement in the conflict, there was a push for governmental involvement in and funding of academic research. In 1941, President Franklin D. Roosevelt authorized the establishment of the Office of Scientific Research and Development (OSRD). From 1941 through 1945, the OSRD's Committee on Medical Research would be responsible for developing and funding projects involving both human and animal subjects that studied, among other things, disease transmission and vaccine development. Susan Lederer, a professor of medical history and bioethics, notes that the human subjects involved in these studies were primarily "subjects of convenience"—individuals or populations conveniently and readily available to researchers, who included children in orphanages, patients in mental institutions, military personnel, and those incarcerated in penal institutions (Lederer 1995). This was an era in medicine when no one thought it necessary to ask permission to remove tissue samples from a patient or to ask permission to use such samples in medical experiments (Javitt, 2010). One such patient was an African-American women who, following delivery of her fifth child by age 30, developed intense vaginal bleeding and sought care at the Johns Hopkins Hospital, which, although segregated, was the only hospital in her hometown of Baltimore that would treat African-American patients. Hopkins was a charity hospital, as its benefactor Johns Hopkins, founder of the university and hospital, stipulated in his will (Johns Hopkins Medicine n.d.). Although the woman would expire on October 4, 1951, from what would be diagnosed as cervical cancer, she would nevertheless become immortal.

Henrietta and her HeLa cells

On October 4, 1951, Johns Hopkins–trained physician and director of the Tissue Culture Laboratory in the Hopkins Department of Surgery George Otto Gey appeared on national television to announce that a major breakthrough had occurred in cancer research (Skloot, 2000, Hanks and Bang, 1971). Gey had spent the majority of his career attempting to develop a method to grow cells outside the body. The problem was that cells cultured for laboratory studies survived for only a few days at most; but if he were able to keep cells alive "in culture," this would allow researchers to experiment on the cells in ways not possible in the body, thus increasing their knowledge of cell biology, especially that of cancer cells, and thus potentially leading to a cure (Gold, 1986:16).

For Gey to accomplish his goal, he would require a constant supply of cancerous tissue samples. Luckily for him, he had a readily available supply at the major medical institution where he worked; however, these sample were obtained without the patient's or their family's knowledge or permission (Lucey et al., 2009). One such sample would come from the 31-year-old African American women, Henrietta Lacks, who had died earlier on the day of Gay's televised announcement.

Gey had earlier observed that Lacks's cells were the first he had come across that could be divided multiple times without dying, and so on the day of her death, Gey had had Mary Kubicek, his lab assistant, take additional tissue samples while Lacks's body lay in the Johns Hopkins morgue (Gold, 1986:19–22). **Gey was able to start a cell line from Lacks' sample by isolating one specific cell and repeatedly dividing it, meaning that the same cell could then be used to conduct many experiments. They became known as HeLa cells, because Gey's standard method for labeling samples was to use the first two letters of the patient's first and last names (Gold, 1986:18).** These HeLa cells were in high demand by other researchers and were put into mass production. They were mailed to scientists around the globe, and the cell line would be used to make many important breakthroughs in biomedical research. **For example, by 1954, Jonas Salk was using HeLa cells in his research to develop the polio vaccine; the cells used in the vaccine were mass-produced in the first- ever cell production factory at the Tuskegee Institute, in Tuskegee, Alabama, where African-American scientists not only helped to grow the HeLa cells but also evaluated Salk's vaccine** (Brown and Henderson 1983). In a twist of irony, "Black scientists and technicians, many of them women, used cells from a black woman to help save the lives of millions of Americans, most of them white. And they did so on the same campus—and at the very same time—that state officials were conducting the infamous Tuskegee syphilis study" (Skloot, 2010:97). **What many people are unaware of, however, is that the HeLa cells were also participants in one of largest ethical breaches in cancer research** (Prison Legal News, March 15, 2008).

Chester Southam, MD

Chester Southam earned his BS and MS degrees from the University of Idaho and received his MD degree from Columbia University in 1947. Following a one-year internship at New York City's Presbyterian Hospital, he began training at Memorial Hospital for Cancer (the forerunner to Sloan-Kettering Cancer Hospital), also in New York. Over the next 4 years he would rise to become a research fellow and eventually director of the hospital's Division of Virology/Immunology. In 1951, he joined the faculty of Cornell's medical college, where he was eventually awarded a full professorship (New York Times, April 10, 2002).

From 1954 through 1966, Southam would concentrate his research on two main questions: whether cancer could be transmitted from person to person and whether certain virus antibodies had anti-neoplastic properties. To answer these questions, he would utilize society's most vulnerable citizens, including patients already diagnosed with cancer and undergoing gynecological surgery at Memorial Sloan-Kettering Cancer Hospital, incarcerated inmates, and frail, chronically ill nursing home patients (The BMJ Opinion, July 3, 2017). It was research that would raise ethical and moral issues that government regulators would later compare to those raised by Nazi experimentation (Arras 2008:75).

In 1953, Southam began what appear to have been his first human experiments to test his theory about virus antibodies with anti-neoplastic properties. To do this, he and various colleagues routinely inoculated cancer patients with dangerous viruses, including West Nile, Ilheus, and Bunyamwera viruses. A review of their published work makes the following statement:

- *"All patients were volunteers who had advanced neoplastic disease of an extent, type, and stage which precluded the possibility of therapeutic benefit from surgery, x-ray, or anti-neoplastic chemotherapeutic agents."*

The general physical condition of these patients varied extremely, from apparently well to terminal. There was a wide range of diagnostic types, including epidermoid carcinomas, adenocarcinomas, lymphomas and leukemia and other sarcomas. Blood for antibody studies was obtained immediately prior to each virus inoculation and usually at weekly intervals thereafter during the period of hospitalization, and as frequently as was practicable after patients had been discharged to their homes. (Southam and Moore, 1954)

Nowhere in the statement is there any indication of informed consent having been obtained from the patients; what is clear is the overreaching attempt to make it known that these patients were terminal, with the implication that they were going to die anyway. These early studies, not unlike Southam's later ones, would at times have serious consequences for the patients involved. An earlier paper authored by Southam noted some of the negative reactions suffered by some patients: "…caused mild encephalitis in 3 patients, and in the other patients caused no symptoms. Bunyamwera virus caused a very severe

encephalitis with residual mental damage in one patient" (Southam and Moore, 1951).

Sloan-Kettering and cancer immunology

Beginning in February 1954, Southam and his colleagues initiated their first human experiments in cancer immunology by injecting 14 previously diagnosed terminal cancer inpatients at the Memorial Hospital (which became Sloan-Kettering in 1948) with cancer cells. While hospital administrators stated that informed consent was given by these patients, it was highly questionable whether this consent met the standards for informed consent, both from a legal and an ethical standpoint. In explaining their consent policy, the hospital administration said this: "…these patients knew that they were receiving cancer cells, understood the reasons for the experimentation, and consented to it orally" (Langer, 1964). In a paper (Southam et al., 1957) reporting the results of this experiment the description of informed consent is somewhat vague: "…All recipients were volunteers who were aware of the general purposes of the study and the nature of the implanted materials and who were agreeable to subsequent biopsies." This loose interpterion of informed consent would continue throughout Southam's professional career.

While the results of the study showed that the transplanted cancer cells did grow in the cancer patients, producing small nodules that if excised did not return and if left alone would continue growing for 4–6 weeks and then spontaneously disappear, this wasn't the whole story. Two of the patients died before the anticipated regression; while they had been diagnosed as terminal at the time of implanting the cells, the fact that they died before regression had occurred meant that one could only assume that these patients' nodules were not excised. Nonetheless, their deaths were attributed to their existing cancer. In four patients, cancer regrowth occurred at the implantation site following removal of the nodule, and in one patient, the implanted cells were found to have metastasized to the axillary nodes. This patient had been suffering from uterine adenocarcinoma, which according to Southam could "readily be distinguished from the implanted cells," and at autopsy her adenocarcinoma was found to be confined to the abdomen and perineum, confirming that the metastasis that had occurred was a result of the implanted cells (Katz et al., 1972:11).

With this information, Southam believed he could argue that cancer patients lacked immunity to the cancer cell implants and were in fact suffering from an immune deficiency to cancer cells; however, to prove this theory, it would be necessary to demonstrate that the effects observed with cancer patients did not also occur in healthy individuals. Of course, being able to recruit subjects willingly volunteering to be injected with cancer cells was unlikely, and as a result, in situations like this, many researchers have used themselves as their subject; when asked if he ever considered using himself, Southam replied that "I would not have hesitated,…if it would have served a useful purpose. But, he continued, "to me it seemed like false heroism, like the old question whether the General should march behind or in front of his troops. I do not regard myself as indispensable— if I were not doing this work someone else would be—and I did not regard the experiment as dangerous. But, let's face it, there are relatively few skilled cancer researchers, and it seemed stupid to take even the little risk." While Southam would later say that this statement regarding self-injection was misquoted (Katz et al., 1972:49), it was a moot point, as he would find a ready supply of test subjects in the state of Ohio.

The prison volunteers

"CANCER RESEARCH VOLUNTEERS NEEDED" was the headline of a notice posted in the May 19, 1956, issue of the Ohio Penitentiary News, a weekly newspaper written and published by prisoners that was distributed throughout the US for annual subscription fee of $.50. The notice went on to explain that one of the ongoing issues in cancer research was why and how individuals without cancer (can) fight off cancer cells and prevent them from multiplying. But the explanation went further—it almost was made to sound diagnostic in nature, with the implication in the verbiage that any volunteer who had a previously undiagnosed or "hidden" cancer would be able to be diagnosed early and perhaps have a greater rate of survival. Below is such an example from the British Medical Journal.

For many years there has existed, one of many puzzling phenomena in the growth of cancer cells that still needs an answer; is still unsolved. Live cancer cells can be transferred from one individual to another. In the person who has cancer, the cancer cells will live and grow. In the person who has no cancer in his body, all of the transferred cells will die, eventually, after a short period of growth. It is this part of the problem that requires some further observation and study. Just how the normal individual who does not have cancer can kill off the transplanted 'Foreign' cancer cells, is the present important problem. So far, in past experiments, all attempts at growing one person's cancer cells in another individual, who does not have cancer, have ultimately failed. This is so, definitely, as far as we know now, that if transplanted cells do not grow, when injected into another person, it follows, that the injected person does not have cancer. If the cells do grow, it would indicate that the person injected probably does have a hidden or lurking cancerous growth somewhere in his body. (BMJ, 1956)

Researchers may have worried that they would have difficulty recruiting volunteers, or they may have honestly believed that the project was so benign that selection criteria were not needed—in any case, those criteria were almost non-existent. Inmates with history of TB, syphilis, osteomyelitis, cardiac disease, or hypertension would all be eligible to participate in the study. The researchers need not have worried: while the study called for 25 volunteers, the warden received applications from 130 of the 3,800 convicts in the penitentiary. While using prisoners for medical experimentation was common practice in the US at the time, most studies offered some form of financial incentive or a reduction in sentence, whereas in this case no incentives were offered. Most participants indicated that their reason for volunteering was that someone in their family had died of cancer, while others felt that this would be a way of redeeming themselves in the eyes of society: they had been "blanks all their lives" and were glad to have the opportunity to do something useful.

Each inmate was given a release to sign that indicated that the experiment was being carried out by the Division of Medical Research, College of Medicine, The Ohio State University, and the Sloan-Kettering Institute for Cancer Research, New York City. The release text ran as follows: "This study, as it has been explained to me, is intended to determine whether or not presumedly live cancer cells can be successfully transplanted, indirectly, from one individual to another. I have been told that the cancer cells will be transplanted to my body by means of direct needle injection under my skin…." The principal investigators were listed as "Doctors Charles A. Doan, Alice E. Moore, and Chester M. Southam, or their associates."

While Southam's prison inmate experiments raised ethical concerns, and some of his peers in the medical community believed that the research had violated the bioethical principles of informed consent, non-maleficence, and beneficence, the research would nonetheless continue for 12 years, eventually involving over 200 inmates. Sloan- Kettering received between $300,000 and $500,000 (between $3 million and $5 million in today's dollars) in federal funds from the National Cancer Institute and funding from the American Cancer Society (AP News, August 16, 1985). **With his reputation as a cancer expert, and emboldened by the backing of prestigious institutions such as Sloan-Kettering, the American Cancer Society, and the federal government, Southam would now find a new research study for his HeLa cells, which he had injected into the Ohio State Penitentiary inmates (Skloot, 2010:168).** This next project would not go as well for Southam, however.

The Jewish Hospital for Chronic Diseases

In 1963, with funding from the United States Department of Public Health and the American Cancer Society, Southam and colleague Emanuel Mandel began a study to test Southam's hypothesis that chronically ill patients who were not suffering from cancer would be able to reject implanted cancer cells as rapidly as patients who were not suffering from any disease and faster than those who were already afflicted with cancer. Southam hoped to be able to demonstrate that the apparent absence of immunity in the cancer patients was in fact attributable to cancer, and not simply to the general debility that accompanies any severe, chronic illness.

While his theory was proven correct and was recognized as one of the leading research experiments in the cancer field, there was a problem: how he had reached that conclusion. When it was revealed, the press had a field day, with magazines such as Good Housekeeping blaring vivid and critical headlines like "How doctors use patients as guinea pigs" (October, 1965:79). Science Magazine put it thus:

- "A number of circumstances made the case particularly newsworthy. The patients in question were 22 seriously ailing and debilitated inhabitants of a relatively obscure Brooklyn institution, The Jewish Chronic Disease Hospital(JCDH).

Nazi doctors?

In August 1963, a group of three physicians at JCDH, Avir Kagan, David Leichter, and Perry Fersko, expressed their concern about the methods used in Southam's research, and the issue was brought to the Hospital's Medical Grievance Committee for investigation however, instead of condemning these practices, the committee found no irregularities and instead commended the research. The three physicians resigned in protest and took their concerns to William Hyman, a hospital board member and an attorney. When Hyman asked the hospital for the relevant patient records, he was refused; then, believing that the hospital board of directors would side with him, he asked for their support, but the board instead endorsed the findings of the grievance committee. This forced Hyman to go through the courts and the press, with the latter quoting Hyman's description of Southam's experiments as "acts which belong more properly in Dachau" (Katz, 1972) and labeling the case "the hottest public debate on medical ethics since the Nuremberg trials of Nazi physicians" (Langer, 1964).

On July 7, 1964 in another twist of irony, the Appellate Division of the State Supreme Court ruled that a member of a hospital's board of directors did not have the right to inspect the medical records of patients, citing patient physician privacy protection (New York Times, July 7, 1964). This ruling would eventually be overturned by the New York State Court of Appeals on the grounds that "[t]he privacy of the patient could be protected, as the trial court had pointed out, by a simple order requiring that the patient's name be concealed" (Ratnoff 1966).

Following this ruling, Hyman pressed his case with New York Attorney General Louis L. Lefkowitz, who rejected Southam's assertion that oral consent had been given, saying that the patients "had not sufficient mental or physical ability to comprehend what was being told to them or what was being done to them," and that those patients with such capacity had been misled.

Lefkowitz' who was outraged, saying "every human being has an inalienable right to determine what shall be done with his own body," and sought to revoke Southam's license to practice medicine (Katz 1972).

Following a lengthy hearing, the New York State Board of Regents said that the "[z]eal for research must not be carried to the point where it violates the basic rights and immunities of a human person," and found both Southam and Mandel guilty of "fraud or deceit" and unprofessional conduct, voting to suspend their licenses. **However, this was later changed to a period of probation, Mand the disciplinary action had little if any effect on Southam's professional career, as he eventually published the results of his study from the JCDH in the Annals of the New York Academy of Sciences, where no mention was made of the lack of informed consent.**

In 1968, Southam was elected president of the American Association for Cancer Research. He died in 2002.

While the 1966 expose on the shortcomings of patient consent procedures penned by Harvard professor Henry Beecher (1966) in the New England Journal of Medicine cited the Southam case, it would take more than a decade until the post-Tuskegee outcry propelled the formation of the National Commission for the Protection of Human Subjects of Biomedical and Behavioral Research, the publication of the commission's Belmont Report, and, ultimately, the proliferation of institutional review boards to monitor experimentation.

Conclusion

One might wish to believe that unethical medical experimentation on human subjects is a thing of the past and that today's modern medicine still hides its collective head in shame for its ethical stumbles in the mid–20th century, unfortunately this is not the case. While stricter enforcement of rules and the introduction of IRBs have had a dramatic effect on unethical practice in the United States, this cannot be said of other some countries, where US-based companies and research organizations continue to exploit the absence of adequate laws to protect human subjects. While these issues are beyond the scope of this paper, it is important to understand that they do continue.

A 2008 report published by the Center for Research on Multinational Corporations revealed details of many such unethical trials, carried out in India, Nigeria, Russia, Argentina, and Nepal, among others. It revealed, for instance, the unrecorded deaths of 14 women in Uganda during a trial of the anti-HIV transmission drug Nevirapine, in a study sponsored by Boehringer Ingelheim and the US National Institutes of Health (NIH). It also revealed that eight patients in Hyderabad, in India, had died during a trial of the anti- clotting drug streptokinase—and that none of them were aware that they were part of an experiment (Somo.nl, n.d.) Even at Sloan-Kettering, almost 60 years after Southam's research, the institute would again make headlines when, in December 2018, a report in the New York Times disclosed that the hospital's chief medical officer, José Baselga, failed to disclose corporate ties in dozens of scientific articles he authored.

In fact, Baselga received millions of dollars in payments from companies involved in medical research, potentially compromising the work (New York Times, September 8,2018)

32 Similarly, it had been suspected that malaria created an immunosuppressive state in humans, which aided the growth of cancer allegedly caused by the Epstein-Barr virus. To test this hypothesis, researchers injected primates with combinations of a virus capable of inducing Burkitt's lymphoma and agents capable of inducing malaria. The 1967 report of the Special Virus-Leukemia Program noted that such studies were being conducted in monkeys: "A special project in progress involves induction of malaria in the recipient prior to inoculation with Burkitt virus." *Special Virus-Leukemia Program, Progress Report #4*, p. 21. See also: D. P. Burkitt, "Etiology of Burkitt's Lymphoma–an Alternative Hypothesis to a Vectored Virus," *J. Natn. Cancer Inst.* 42, 19-28 1969; Whittle, Brown, Marsh, Greenwood, Seidelin, Tighe, Wedderburn, "T-cell Control of Epstein-Barr Virus-Infected B Cells is Lost During *P. Falciparum* Malaria," *Nature*, vol. 312, 1984, 449-450.

http://www.winstonsmith.net/

Cancer Vaccine Researcher Injects Humans With West Nile Virus

Anti-Cancer Properties Tested in Humans by Injecting Patients with West Nile Virus Cultured in Mouse Brains

***J. Immunology*, vol. 72, 1954, pp. 446-462.**

Chester Southam Publishes Chart Showing Immune Response to Inoculations of West Nile Virus as Experimental Cancer Vaccine

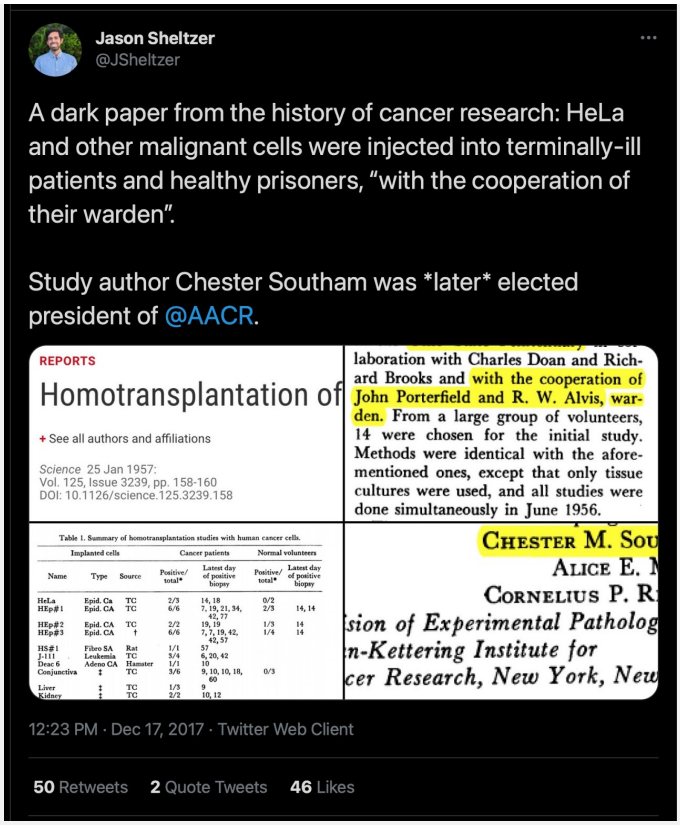
Chester Southam, human "tumor transplant" doctor, attempts to "prime" the human immune response to cancer with various viruses: West Nile Virus, Egypt 101 Virus, Ilheus Virus, Bunyamwera Virus, Rabies Virus:

1957 - Testing reports

Link to Tweet : [HT00C2][GDrive] / Jason Sheltzer / @JSheltzer

A dark paper from the history of cancer research: HeLa and other malignant cells were injected into terminally-ill patients and healthy prisoners, "with the cooperation of their warden". Study author Chester Southam was *later* elected president of @AACR.

See: **Dr. Alice E. Moore (born 1908)** / **Dr. Cornelius Packard "Dusty" Rhoads (born 1898)** / **Dr. Chester Milton Southam (born 1919)**



REPORTS

Homotransplantation of Human Cell Lines

+ See all authors and affiliations

Science 25 Jan 1957:
Vol. 125, Issue 3239, pp. 158-160
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[HT00C3][GDrive]

Studies to determine whether these homologous cancer cells had a similar capacity for propagation in normal healthy human beings were undertaken at the Ohio State Penitentiary in collaboration with Charles Doan and Richard Brooks and with the cooperation of John Porterfield and R. W. Alvis, warden. From a large group of volunteers, 14 were chosen for the initial study. Methods were identical with the aforementioned ones, except that only tissue cultures were used, and all studies were done simultaneously in June 1956.

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Table 1. Summary of homotransplantation studies with human cancer cells.

Implanted cells			Cancer patients		Normal volunteers	
Name	Type	Source	Positive/ total*	Latest day of positive biopsy	Positive/ total*	Latest day of positive biopsy
HeLa	Epid. Ca	TC	2/3	14, 18	0/2	
HEp#1	Epid. CA	TC	6/6	7, 19, 21, 34, 42, 77	2/3	14, 14
HEp#2	Epid. CA	TC	2/2	19, 19	1/3	14
HEp#3	Epid. CA	†	6/6	7, 7, 19, 42, 42, 57	1/4	14
HS#1	Fibro SA	Rat	1/1	57		
J-111	Leukemia	TC	3/4	6, 20, 42		
Deac 6	Adeno CA	Hamster	1/1	10		
Conjunctiva	‡	TC	3/6	9, 10, 10, 18, 60	0/3	
Liver	‡	TC	1/3	9		
Kidney	‡	TC	2/2	10, 12		
Appendix	‡	TC	0/1			
Fibroblast	Normal	TC	0/3			

* No. of recipients who had positive biopsies for the presence of the implanted cancer cells/No. of persons who were implanted with the same type of cell.
† HEp#3 in cancer patients includes one from tissue culture, 2 from cortisone-treated rats, and three from chick-embryo chorioallantoic membrane.
‡Cells isolated by Chang (*1*) from normal tissues but showing neoplastic changes in tissue culture (*6*).

[HT00C5][GDrive]

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[HT00C6][GDrive]

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ONCOLYTIC HERPES SIMPLEX VIRUS 1 (HSV-1) VECTORS: INCREASING TREATMENT EFFICACY AND RANGE THROUGH STRATEGIC VIRUS DESIGN

J. Carson,[1] D. Haddad,[1,2] M. Bressman,[1] and Y. Fong[1]

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SUMMARY

Viruses have long been considered potential anticancer treatments. Wild-type viruses have been tested as anticancer agents in clinical trials since the 1960s. The possibility of viral oncolysis as an alternate cancer therapy was transformed by the emergence of modern genetic engineering. The herpes simplex virus (HSV) family offers particular advantages for use as a viral oncolytic. The engineered vectors that make up oncolytic HSVs (oHSVs) have demonstrated remarkable safety in clinical trials, with some evidence of efficacy. The past decade has seen a focus on increasing the efficacy of oncolytic vectors by adding exogenous transgenes to enhance tumor destruction. The current paper describes the various strategies for engineering HSV for increased cancer tissue specificity and efficacy. Presented are the rationale, preclinical data and clinical data where available. This is meant to illustrate a basic framework for the development of a novel therapy meant to exploit the viral life cycle for the killing of cancer.

Southam's Simian-Human virus research impacted and was continued by other doctors in the 1960s

Annals of the New York Academy of Sciences : HUMAN SUSCEPTIBILITY TO A SIMIAN TUMOR VIRUS - James T. Grace Jr. Edwin A. Mirand (First published: November 1963)

BUT ... It does not mention "human testing", only "a lab worker ACCIDENTALLY was stabbed with an infected needle"

PDF source : [HP005E][GDrive]

1963-11-annals-of-the-new-york-academy-of-sciences-vol-108-issue-3-human-susceptibility-to-a-simian-tumor-virus-pg-1123 ... to 1128

Volume 108, Issue 3

Epizootiology of Cancer in Animals

Pages: 619-1325
November 1963

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HUMAN SUSCEPTIBILITY TO A SIMIAN TUMOR VIRUS

James T. Grace, Jr. and Edwin A. Mirand
Roswell Park Memorial Institute, New York State Department of Health, Buffalo, N.Y.

In 1957 Bearcroft and Jamieson noted an outbreak of subcutaneous tumors in a rhesus monkey colony in Yaba, Nigeria.[1] The initial tumor was detected on the face of a rhesus monkey which was housed in an open air pen. Subsequently, similar tumors appeared in 20 rhesus monkeys in the same colony. No tumors developed in African monkeys housed in the same area although one dog-faced baboon did develop a lesion. The tumors were composed of large pleomorphic cells, some of which contained cytoplasmic inclusion bodies, thus strengthening the suspicion that these lesions might be of viral etiology. Subsequently, Andrewes and co-workers demonstrated cell-free transmission of the tumors and identified the etiologic agent as a virus which morphologically resembled members of the pox virus group.[2] Niven *et al.* in a study of the histopathology of the tumors concluded that the cell of origin was probably the fibroblast or fibrocyte.[3] However, a detailed pathogenetic study by Sproul *et al.* indicated that the cell of origin was the tissue histiocyte and that the lesion might properly be termed a histiocytoma.[4,5] This point will be expanded in a later section of this paper.

Susceptibility to this virus appears to be limited to primates. Extensive studies involving inoculation of newborn and adult rabbits, guinea pigs, hamsters, rats, mice, and dogs by a variety of routes failed to produce proliferative lesions or evidence of virus replication.[6] The virus produced no lesions in the embryonated egg following inoculation of the chorioallantoic membrane or yolk sac. Subsequent inoculation of the egg passage material into monkeys revealed no evidence of virus. Similarly extensive attempts to propagate the virus in tissue culture were unsuccessful.[6,7] TABLE 1 shows the types of cell cultures employed and the results. In none of the cell culture systems employed was there evidence of cytopathogenicity or replication of virus.

TABLE 2 shows the susceptibility of various monkeys to the virus. Generally the rhesus and cynomolgus are most susceptible.[7] Six human volunteers with far advanced cancer were inoculated with virus obtained from monkey tumors. These tumor filtrates were cell-free, and as determined by animal, embryonated egg and tissue culture studies, were free of extraneous simian viruses. The humans developed lesions quite similar to those of the monkeys although the proliferative responses were not as marked and the lesions regressed earlier than those of monkeys. Viral recovery combined with serial passage and titration demonstrated replication of the virus in humans.[8,9]

A healthy young male laboratory worker accidentally punctured the web space of his hand with a contaminated needle. Within one week viral complement-fixing antibody appeared in his serum. The level rose progressively for three weeks and then remained at that level for four months at which time he developed a nodule at the site of needle puncture. The nodule grew rapidly for a period of seven days when it reached the diameter of about two centimeters. At this time the nodule was surgically excised. Histologically it

[HP005G][GDrive]

was similar to the typical monkey lesion and virus was readily recovered from it (FIGURE 1). The serum antibody level gradually diminished over the ensuing three-and-one-half months to a level where it was no longer detectable. He has now been observed for some two years following the excision of the lesion and has had no further difficulty.

Metzgar *et al.* developed a method for measuring complement-fixing antibodies against the virus.[8] The level of complement-fixing antibodies correlates well with the level of neutralizing capacity of the serum. Following inoculation of the virus into a susceptible host there is a prompt and sustained rise in complement-fixing antibody. The antibody level remains high during the period of active tumor growth. During this time the animals are resistant to reinfection with the virus. Following surgical removal or regression of the lesions there is a gradual diminution of antibody level until it becomes undetectable. This may require several months. Generally antibody levels developing in humans following infection are lower than those observed in susceptible monkeys. Immunity developing following tumor regression in the monkey is of relatively short duration. However, resistance to reinfection can be correlated with the level of serum antibody.[8]

When the virus is inoculated subcutaneously or intradermally, it produces a local tumor (FIGURE 2). Occasionally a remote tumor in the subcutaneous

TABLE 1
YABA VIRUS IN CELL CULTURE

Cell line	CPE	Virus replication
Chang conjunctiva (human)	—	—
Chang liver (human)	—	—
Human bone marrow D6 (Berman, Stulberg)	—	—
Henle embryonic intestine (human)	—	—
Amnion human primary	—	—
Embryonic skin & muscle, human (Gray)	—	—
Hela (Gey)	—	—
Salk monkey heart	—	—
Monkey kidney, rhesus, primary	—	—
Mouse embryo, ICR, primary	—	—

TABLE 2
MONKEY SUSCEPTIBILITY TO YABA VIRUS

Species of monkey	Susceptibility
Rhesus (*Macaca* mulatta)	Good
Cynomolgus (*Macaca* irus)	Good
African Green (*Cercopithecus* aethiops)	Slight
Mona (*Cercopithecus* mona)	No
Vervet (*Cercopithecus* aethiops pygerythrus)	No
Sooty (*Cercocebus* fuliginosus)	No
Squirrel (*Saimiri* sciurea)	No

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tissue of susceptible monkeys may occur with this type of inoculation but this is uncommon. However, when the virus is inoculated intravenously into rhesus monkeys, the animals develop literally hundreds of small tumors in the muscle, subcutaneous tissues, heart, and lungs (FIGURES 3 & 4). Morpho-

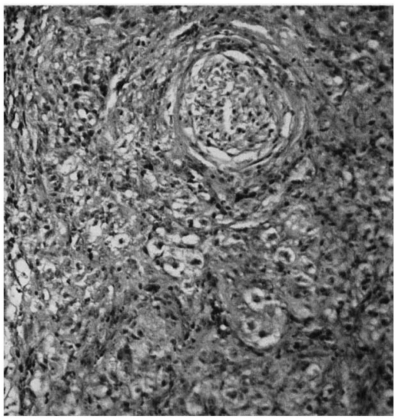

FIGURE 1. Histologic section of the lesion occurring in a laboratory worker accidentally infected with Yaba virus four months previously. This lesion shows many large cells containing cytoplasmic inclusion bodies in various stages of degeneration. However, mitotic activity was still apparent in some areas.

logically these lesions are similar to those produced by local inoculation. Death occasionally follows the intravenous route of infection.[5]

Histologically the tumors produced by the Yaba virus may be classified as histiocytomas.[4,5] In the pathogenetic studies of Sproul *et al.* it was noted that large numbers of histiocytes migrate to the area of virus inoculation in about 48 hours. By 72 hours the histiocytes began to show alterations. The alterations include enlargement of the nuclei and striking prominence of the nucleoli. They then assume elongate forms and by the fifth day mitosis is

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very active. Occasional cytoplasmic inclusion bodies may be noted by the fifth day. By the seventh to ninth day there is active division of the spindle-shaped cells and they may assume definite patterns (*e.g.*, spiral forms) (FIGURE 5). The reticulum is well formed at this time. By the second week there are

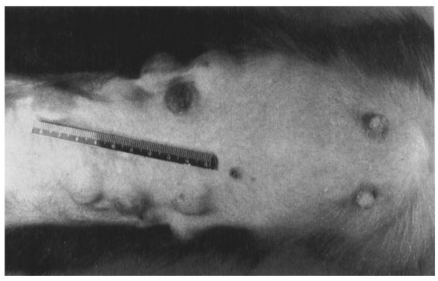

FIGURE 2. Tumors on abdomen of rhesus monkey three weeks following virus inoculation.

FIGURE 3. Rhesus monkey which received intravenous inoculation of virus.

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many degenerating cells but at the same time other cells continue to divide actively. This general picture continues over the next four to six weeks during which time the number of degenerating cells gradually increase and the number of dividing cells gradually diminish. However, only at the very end stage

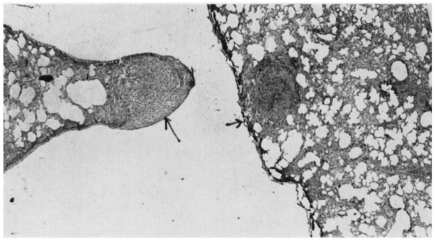

FIGURE 4. Tumor nodules in lung (as indicated by arrows) of rhesus monkey receiving intravenous inoculation of Yaba virus.

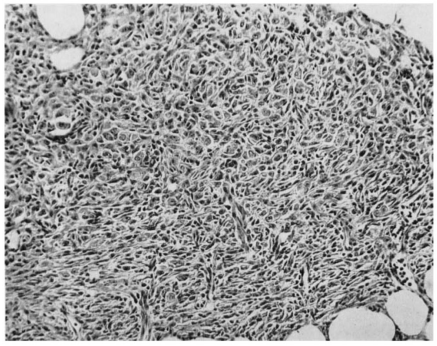

FIGURE 5. Nine-day-old tumor in rhesus monkey (H & E stain) showing spindle-shaped cells assuming a definite pattern.

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of regression is there a noticeable host cellular reaction with infiltration of mononuclear cells. Regression occurs without central necrosis although the tumors may ulcerate on the surface. Once inclusion bodies appear in the cells, mitosis ceases and there is gradual cellular degeneration with increasing eosinophilic cytoplasmic masses, accumulation of cytoplasmic lipid, vacuolization and eventual cell dissolution. Regression of the tumor, however, cannot be related to the level of serum antibody and the histologic pattern of regression does not show the cellular response observed in homograft rejections. Thus the tumor regression may well be related to an *in vivo* cytopathic effect of the virus. In other words, the virus produces striking morphologic changes in the target cells and these in turn grow rapidly to produce tumors. However, the virulence of the virus is such that eventually it produces death of the tumor cells and resultant tumor regression. Virus released from the degenerating tumor cells is presumably bound by circulating antibody, thus preventing reinfection.

Summary

The Yaba virus is a simian agent which induces benign histiocytomas in susceptible monkeys and humans. Following infection there is a rise in viral complement-fixing antibody. However, growth and regression of the tumors cannot be correlated with serum antibody levels. Regression appears to be an individual cell phenomenon and may well represent an *in vivo* cytopathic effect of the virus. Subcutaneous or intradermal inoculation of virus produces only local tumors in the monkey and human. Intravenous inoculation of virus in the rhesus monkey produces widespread tumors in the subcutaneous tissues, skeletal muscle, lungs, and heart and occasionally results in death of the monkey.

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1964 (Jan 26) - NYTimes : "Many Scientific Experts Condemn Ethics of Cancer Injection"

https://www.nytimes.com/1964/01/26/archives/many-scientific-experts-condemn-ethics-of-cancer-injection.html

1964-01-26-nytimes-many-scientific-experts-condemn-ethics-of-cancer-injection.pdf
January 26, 1964, Page 70

Medical research circles are buzzing over the disclosure last week of experiments in which persons were injected with living cancer cells without their knowledge.

Discussion centers less on the legality of the experiments than on the ethics and morality of them. Opinion is varied, but it leans heavily toward condemnation of the failure to inform the subjects of the research about exactly what was being done to them.

Varied reactions were expressed in interviews with several scientists active in clinical research and other authorities who have studied the ethics and morality of human experimentation.

Judgment ranged from the opinion that the experiments were “completely indefensible” on ethical grounds, and should not have been conducted at all, to the view that the experimenters were justified in the way they did their research. Both extremes were minority opinions.

The majority expressed the view that the studies were important and productive and should have been done, but that it was unethical not to tell the subjects that they were receiving living cancer cells instead of just “cells,” as the experimenters had described the tests to the patients.

The scientists who did this work, on the other hand, insisted that to tell many of the patients who took part in the research that they were receiving cancer cells would have been unethical.

The reason they gave for this was that a person who has cancer and will not admit it to himself—or has not been told of it—would be forced into the realization of his condition and that this would be psychologically - harmful to him.

The problem came to light last Monday when it was disclosed that 22 patients at Brooklyn's Jewish Chronic Disease Hospital had been injected with living cancer cells with their consent but without their knowing what the injections really consisted of.

It came out subsequently that nearly 300 other patients at the Sloan - Kettering Institute for Cancer Research and Memorial Hospital for Cancer and Allied Diseases had also participated in this work and that many of them had, similarly, not been told that the injections contained living cancer cells.

A third group, inmates of the Ohio State Penitentiary in Columbus, Ohio, volunteered for the tests, knowing that the injections consisted of cancer cells.

The research, under the direction of Dr. Chester M. Southam of Sloan - Kettering, has been going on for 10 years. It is aimed at studying the nature of the body's defense mechanisms—the immune reactions—in healthy persons, cancer patients and persons suffering from chronic diseases other than cancer.

The important outcome of the study so far is that a cancer patient's immune mechanisms are deficient. compared with those of the two other groups. The nature of the deficiency is now being studied.

Possible fruits of the work include the knowledge of how to help cancer patients fight their own tumors with immune reactions, how to manipulate the reaction so that grafts of foreign tissues would be practicable, and how to transfer immunity to disease from one person to another.

Thus, there has never been any - question of the potential value of the research.

Neither has there been much doubt about the safety of experiments. Sufficient experience with the injection of cancer cells in animals and in humans—many of them scientists, or volunteers who were told what they were getting—has shown that the risk of, say, causing cancer by the injections was considered to be very low.

Nor has there been any question of the competence and high standards of Dr. Southam, who is recognized as one of the world's leading authorities in this field.

Two supporters of the manner in which the work was done, in fact, declared that if the same procedure had been followed by almost any scientist other than Dr. Southam they would have thought it unethical, their regard for him was so high.

Rather, the question of ethics has been raised over the matter of whether the scientists usurped the rights of the subjects to make their own decisions about taking part in the experiments,

It w as pointed out by several critics of the work that these experiments were distinctly different from the sort of clinical research that is aimed at evaluating the efficacy of a new drug or vaccine or other therapeutic procedure.

Such studies, tney pointed out, are of direct potential benefit to the individual being tested. By contrast, the possibility of immediate benefit to the subject was not a consideration of the Sloan - Kettering project.

Moreover, the critics said, because a physical act on the person of the subject was involved in the research, a finite — though small — risk was involved. They asserted that this called for the complete disclosure to the subject of the nature of the injection.

In this respect, Dr. Southam said in an interview:

“It is not necessary to present [the subject] with what you feel are inconsequential data and [it is] unethical to ram down his throat information which is detrimental to his condition.”

Asked whether it would not be possible to use as subjects cancer sufferers who knew of their condition and so would not suffer from the revelation, Dr. Southam replied:

“You just don't know what the patient really knows or has accepted by himself.”

Dr. Southam was asked why the subjects at Jewish Chronic Disease Hospital who did not have cancer were similarly deprived of the knowledge that the injections contained living malignant cells.

He replied that the preparation of the patients and acquisition of their consent was left up to Jewish Hospital officials, who had decided simply to follow procedures that had been used for so long by the SloanKettering team.

The controversy gains significance because of the growing amount of human experimentation.

The ethics and morality of such experimentation have been discussed in medical journals in this country and abroad and by panels in medical schools.

An ethical code has been adopted by some institutions in this country and elsewhere: the Nuremberg Code for Permissible Human Experiments.

The first article of that code states:

“The voluntary consent of the human subject is absolutely essential. This means that the person involved should have legal capacity to give consent; should be so situated as to be able to exercise free choice, without the intervention of any element of force, fraud, deceit, duress, overreaching, or other ulterior form of constraint or coercion; and should have sufficient knowledge and comprehension of the elements of the subject matter involved as to enable him to make an understanding and enlightened decision. . . .”

State health officials are reported to be studying whether a stricter code of ethics for clinical research would be needed or justified.

The board now has no regulations about what kind of Consent, written or oral, is required from patients in scientific experiments.

Although many hospitals “do not go in for ‘paper,’ ” as one authority phrased the attitude toward written consent, some experts believe that this is the only ethical form of agreement and that vocal consent is not enough.

1964 (Dec 04) - NYTimes : "Mouse leukemia fought by a virus ..."

December 4, 1964, Page 47 / Source : [HN01K3][GDrive]

The discovery of a virus that appears capable of knocking out leukemia in mice without seriously harming the animals has been reported b/ a team of Long Island scientists.

The virus seems to he different from any other found in mice, a scientist said yesterday, and may represent a new category of these infectious agents.

Its unusual properties may account for the strange circumstances under which the virus was found by scientists at the Waldemar Research Foundation of Woodbury, L. I.

Those circumstances, in fact, may point the way to the development, of techniques for finding other viruses of similar characteristics — perhaps viruses that could be used safely against cancer In humans—the scientists said.

The report was presented yesterday to newsmen by Dr. Norman Molomut, director of Waldemar, at the New York Hilton Hotel. His colleagues, Dr. Morton Padnos and Dr. Leo Gross, were also present. Their findings will be published in Nature, the British scientific journal, in its issue of Dec. 5, and in a forthcoming number of The Journal of the National Cancer Institute.

The possibility of using viruses against cancer is not a new idea. The ability of viruses to kill cells and their preference for infecting only certain kinds led to speculation many years ago over whether viruses could be found that would attack cancer cells preferentially.

Work in 1920's Recalled

Work along this line began with the use of quite common viruses injected directly into animal cancers, and some measure of success was reported.

In the early nineteen - twenties for example, scientists at the Institut Pasteur in Paris reported making animal cancers shrink with injections of vaccinia, the virus in smallpox vaccine.

Early work on anticancer viruses in this country was done at the Sloan-Kettering Institute by [Dr. Alice E. Moore (born 1908)].

In a telephone interview yesterday, Dr. Moore recalled trying several types of. viruses against several kinds of animal cancers. She killed some of the tumors that way but left others unaffected. Moreover, she said, it was never determined how to predict which virus would work on which cancer.

In the early nineteen-fifties [Dr. Alice E. Moore (born 1908)] and Dr. Chester Southam began using viruses against tumors in human terminal cancer patients.

They found that the virus—Egypt 101, a strain of West Nile virus — sometimes was more destructive of cancer cells than of normal- ones or persisted! longer in tumors than in! healthy tissue.

The trouble was, Dr. Moore said, that the viruses did not "seem to be able to knock out" the very last cancer cell. Therefore, the tumors grew back when the viruses were depleted from the body. Additional injections of virus did not work because the first one acted as a vaccination, rendering the patient immune to further exposures to the virus.

New Findings Outlined

Nor would it have been practical to give an overwhelmingly large initial dose of the virushoping - in this way to kill all the cancer cells—because this would present the risk of death from viral infection.

In contrast, the virus that the Waldemar scientists have found seems to be ^effective against mouse leukemia —a blood cancer—at doses much lower than those that would cause overwhelming infection.

Moreover, all mice that received the virus are alive and free of cancer more than 150 days after receiving transplants of leukemia tissue, the scientists said. Normally, mice die of transplanted leukemias in a couple of weeks.

The virus was discovered in tissue cultures of a mouse tumor that would not grow when implanted into mice, Dr. Molomut said. The tumor was an Ehrlich ascites carcinoma, a cancer that grows in the abdominal fluid of mice.

In an effort to find out what was preventing the transplanted tumors from “taking” the scientists fractionated the cancer tissue and injected each fraction into mice, Dr. Molomut said.

Blood Stream Studied

Because their research focused primarily on tumor immunity, they, looked for reactions to the injections in the blood stream. One cell - free fraction of the tumor tissue culture caused a marked depletion in white blood cells, called lymphocytes, Dr. Molomut said.

Inasmuch as leukemia is characterized by an overabundance of white blood cells, he explained, that cell - free fraction was injected into mice that had received transplants of leukemia tissue. When growth of the leukemia tissue was inhibited, Dr. Molomut said, the fraction was studied further and found to contain a virus.

Dr. Molomut said he believed other viruses probably existed and should be sought in human material.

Meanwhile, the Waldemar virus is being more thoroughly studied by Dr. Molomut and his colleagues, Dr. John B. Nelson at the Rockefeller Institute and Dr. John Maloney of the National Institutes of Health in Bethesda, Md.

1968-1969 - President, American Association for Cancer Research

Note : **Dr. Lloyd John Old (born 1933)** and Dr. Dan H. Moore .. both reporting to Southam for the periodical "Cancer Research" / PDF source : [HP005M] [GDrive]

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1953 (March) - also studying radiation impact on tissues

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https://www.nytimes.com/1964/07/08/archives/ruling-is-upset-on-cancer-test-appellate-count-bars-data-to-a.html

1956 - https://www.newspapers.com/image/490303007/?terms=Chester%20Southam%20trump&match=1

aug 1985 https://www.newspapers.com/image/588853986/?terms=Chester%20Southam%20trump&match=1

1961 (Nov 14) - Wife Anna L. Southam in the news...

Source : [HN01IW][GDrive] / For more, see **Dr. Anna Lenore Skow Southam (born 1915)**

Life's Just The Way She Likes: Busy Day At Home And Hospital

By JOAN W. KONNER
(Staff Writer)

The daily schedule of Anna L. Southam, M. D., of Demarest goes something like this:

7 A. M. — Husband, Chester Southam, M. D. brings her coffee and toast in bed.

8 A. M.—Makes household plans for the day; says good-bye to younger children, Lenore (Lenny), 15, a student at Northern Valley Regional High School and Arthur, 5, a kindergartener, (Larry, 19, her oldest child attends Wittenberg College, Springfield, Ohio).

8:30 A. M. — Reports to work at the Columbia Presbyterian Medical Center in New York, where she is associate attending obstetrician and gynecologist at the Presbyterian Hospital and associate professor of obstetrics and gynecology at Columbia University's College of Physicians and Surgeons.

8:30 A. M. to 6:30 P. M. — Working hours: laboratory research, takes charge of the gynecological clinic (infertility and endocrine clinic), teachers medical school classes, conferences with research fellows, office hours, operating room time, and writing.

6:30 P. M. — Leaves for home and hopes that patients do not go into labor at night;

7 P. M. — Time with family.

The woman who carries this giant-sized schedule works, in professional career, for and against the same goal — pregnancy.

Dr. Southam is an authority on the problems of infertility and birth control.

She is co-author of "Human Infertility", and numerous other papers and pamphlets on fertility. She is also a member of the medical advisory council of the Bergen County Planned Parenthood Center, 59 Essex Street, Hackensack.

"The interest in infertility and control of over-fertility go hand in hand," the tall, spare woman with midnight blue eyes and steel gray hair explained. "Actually both situations are two sides of the same coin."

A case in point is her current research product. She and a team of researchers are trying to establish whether antibodies, or factors which work against pregnancy, are present in women who cannot conceive. If such antibodies should ever be proved and isolated, they may someday be used to immunize other persons against pregnancy just as polio virus is now used to prevent polio.

Sitting in her book-lined office in the medical school building, Dr. Southam stated her approach to the problems of infertility.

"I'm antipsychological," she said in her soft-spoken, but direct manner. "I always try to find the reason for infertility.

"Naturally a woman gets frustrated when she cannot become pregnant. She's barred from her calling as an artist would be if he were prevented from painting. But frustration is not the cause.

"We can't always find the cause, and we recognize that the psychological factor is at times important, but it is not a bush to hide behind."

Also like two sides of the same coin, Dr. Southam's career has always gone hand in hand with her family life.

A native of Idaho, she met her husband in college at the University of Idaho. The two attended medical school together at Columbia University, College of Physicians and Surgeons.

She gave birth to her first child 7 days after graduating college, to her second, in her fourth year of medical school, and to her last, after office hours.

By design her daily hours coincide with her husband's. He does cancer research at the Memorial Cancer Research Center, New York.

When Dr. (Mrs.) Southam is home, she is not too tired to be both an indoor and outdoor girl.

"If it's ironing I have to do, I'm beat, but if it's gardening, I'm fine," she said with quiet humor.

She loves to cook (specialty of the house, beef stroganoff), but hates dishwashing. Often on weekends the beds go unmade.

The whole family loves the out-of-d rs. They have spent many vacations and weekends on camping and canoe trips.

"When you get up on the rocks, you know no one can get you on the telephone," she admitted.

Dr. Southam describes her life as hectic at times — she recalls the time one of her patients went into labor when she was cooking Thanksgiving dinner for 20 — but said she wouldn't have it any other way.

"I think my husband and I spend more time with our children than people who are home all the time.

"The children know when we're home, they're the important thing.

"Life is just the way I want it," she summed up, "except I'd like more hours in the day."

FOR AND AGAINST PREGNANCY: Dr. Anna Southam of Demarest works in her laboratory at the Columbia Presbyterian Medical Center in New York, to solve the mysteries of infertility and develop new methods of birth control. (The Record photograph.)

L. A. Sto
As Burne

By PEG ZWECKER
(Chicago Daily News
Fashion Editor)

Beverly Hills, Calif., Nov. 14 — Fashion is a burning question out here.

Millionaire refugees of the disastrous Bel Air-Brentwood fire are building up wardrobes as fast as the busy clerks can wait on them. Stores are doing a land-office business.

Unshaken Burt Lancaster, who

Tallman Woman Is Elected To Second Auxiliary Term

Hackensack — Mrs. Harrison B. Wilson of Tallman, N. Y., was elected to serve a second term as president of the Woman's Auxiliary of the Hackensack Hospital Association at the annual meeting of the group yesterday in Alumni Hall.

http://www.winstonsmith.net/cancerman.htm

1918 Spanish Influenza

WikiPedia 🌍 Spanish Flu

Key names :

- Dr. Frederick Lamont Gates (born 1886)
-

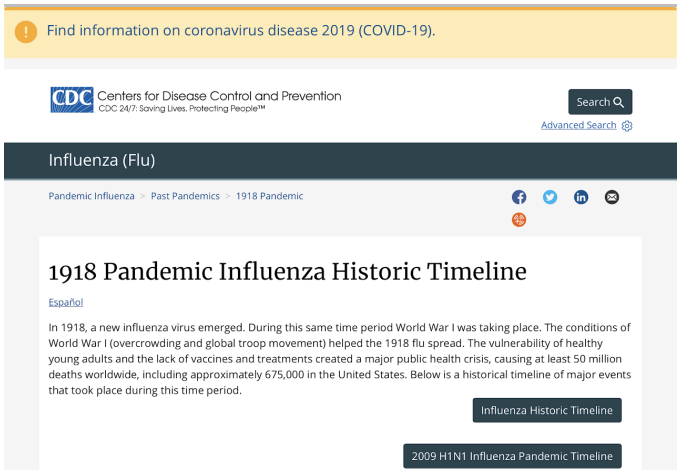
Saved Reference articles

CDC Timeline (as of March 2020)

Source - PNG file is [HG005N][GDrive] / PDF is [HG005O][GDrive]

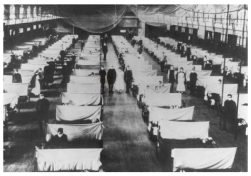
key events -

- **June 1917**
  - A draft is established to increase the number of soldiers; Army begins training recruits at 32 large camps, each housing 25,000 to 55,000 soldiers.
- Timelineicon
- **March 1918**
  - Outbreaks of flu-like illness are first detected in the United States.
  - More than 100 soldiers at Camp Funston in Fort Riley, Kansas become ill with flu. Within a week the number of flu cases quintuples.
  - Sporadic flu activity spreads unevenly through the United States, Europe, and possibly Asia over the next six months.
- Timelineicon
- **April 1918**
  - First mention of influenza appears in an April 5 weekly public health report. The report informs officials of 18 severe cases and three deaths in Haskell, Kansas.
- Timelineicon
- **May 1918**
  - By May, hundreds of thousands of soldiers travel across the Atlantic each month as they are deployed for World War I.



April 1917
- U.S. enters World War I with 378,000 in the armed services.

March 1918



- Outbreaks of flu-like illness are first detected in the United States.
- More than 100 soldiers at Camp Funston in Fort Riley, Kansas become ill with flu. Within a week the number of flu cases quintuples.
- Sporadic flu activity spreads unevenly through the United States, Europe, and possibly Asia over the next six months.

October 1918

- The 1918 flu pandemic virus kills an estimated 195,000 Americans during October alone.
- In fall of 1918 the United States experiences a severe shortages of professional nurses, because of the deployment of large numbers of nurses to military camps in the United States and abroad, and the failure to use trained African American nurses.
- Chicago chapter of the American Red Cross issues urgent call for volunteers to help nurse the ill.
- Philadelphia is hit hard with the pandemic flu viruses—more than 500 corpses await burial, some for more than a week. Cold-storage plants are used as temporary morgues, a manufacturer of trolley cars donates 200 packing crates for use as coffins.
- Chicago, along with many other cities across the United States, closes theaters, movie houses and night schools and prohibit public gatherings.
- San Francisco's Board of Health requires any person serving the public to wear masks and issues strong recommendation to all residents to wear masks in public.
- New York City reports a 40 percent decline in shipyard productivity due to flu illnesses in the midst of World War I.

December 1918
- Public health officials begin education programs and publicity about dangers of coughing and sneezing; careless disposal of "nasal discharges."
- Committee of the American Public Health Association encourages stores and factories to stagger opening and closing hours and for people to walk to work when possible instead of using public transport to prevent overcrowding.

January 1919

- A third wave of influenza occurs in the winter and spring of 1919, killing many more. Third wave subsides in the summer.
- In San Francisco, 1,800 flu cases and 101 deaths are reported in first five days of January.
- Many San Antonio citizens begin complaining that new flu cases aren't being reported, and that this is fueling another influenza surge.
- Seven-hundred and six cases of influenza and 67 deaths are reported in New York City, triggering fear of a recurrence of severe flu activity.
- Trustees of the Boston City Hospital ask mayor for a special appropriation of $3,000 to study the treatment of influenza.

June 1917
- A draft is established to increase the number of soldiers; Army begins training recruits at 32 large camps, each housing 25,000 to 55,000 soldiers.

April 1918
- First mention of influenza appears in an April 5 weekly public health report. The report informs officials of 18 severe cases and three deaths in Haskell, Kansas.

May 1918
- By May, hundreds of thousands of soldiers travel across the Atlantic each month as they are deployed for World War I.

September 1918

- The second wave of flu emerges at Camp Devens, a United States Army training camp just outside of Boston, and at a naval facility in Boston.
- Between September and November, a second wave of flu peaks in the United States. This second wave is highly fatal, and responsible for most of the deaths attributed to the pandemic.
- New York City's Board of Health adds flu to the list of reportable diseases, and requires all flu cases to be isolated at home or in a city hospital.
- By the end of September, more than 14,000 flu cases are reported at Camp Devens—equaling about one-quarter of the total camp, resulting in 757 deaths.

November 1918

- The end of World War I enables a resurgence of influenza as people celebrate Armistice Day and soldiers begin to demobilize.
- Salt Lake City officials place quarantine signs on front and rear doors of 2,000 homes where occupants have been struck with flu.
- By the end of World War I the U.S. military grew in size from 378,000 soldiers in April 1918 to 4.7 million soldiers.

February 1919
- Influenza appears to be nearly eradicated in New Orleans as number of reported cases drops.
- Illinois passes a bill to create a one-year course to become a "practical nurse," an effort to address the nursing shortage the pandemic had exposed.

April 1919
- At Versailles Peace Conference, while negotiating the end of World War I with other world leaders, U.S. President Woodrow Wilson collapses. Some historians speculate he was weak from influenza, which was still rampant in Paris.

Page last reviewed: March 20, 2018
Content source: Centers for Disease Control and Prevention, National Center for Immunization and Respiratory Diseases (NCIRD)

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CLICK TO SEE FULL SIZE IMAGE

Saved Wikipedia Article on "Spanish Flu" (July 3 2020)

See [HK0025][GDrive]

Disease : Influenza / Virus strain : Strains of A/H1N1 / Location : Worldwide / First outbreak : *Disputed*

Date : February 1918 – April 1920

Suspected cases‡ : 500 million (estimate)[2] / Deaths : 17–50+ million (estimate)

The **Spanish flu**, also known as the **1918 flu pandemic**, was an unusually deadly influenza pandemic caused by the H1N1 influenza A virus. Lasting February 1918 to April 1920, it infected 500 million people–about a third of the world's population at the time–in four successive waves. The death toll may have been anything from 17 million to 50 million, and possibly as high as 100 million, making it one of the deadliest pandemics in human history.[3]

The first observations of illness and mortality were documented in the United States (in Fort Riley, Haskell County, Kansas as well as in New York City), France (Brest), Germany and the United Kingdom. To maintain morale, World War I censors minimized these early reports. Newspapers were free to report the epidemic's effects in neutral Spain, such as the grave illness of King Alfonso XIII, and these stories created a false impression of Spain as especially hard hit. This gave rise to the name "Spanish" flu. Historical and epidemiological data are inadequate to identify with certainty the pandemic's geographic origin, with varying views as to its location.

Most influenza outbreaks disproportionately kill the very young and the very old, with a higher survival rate for those in between, but the Spanish flu pandemic resulted in a higher than expected mortality rate for young adults.[4] Scientists offer several possible explanations for the high mortality rate of the 1918 influenza pandemic. Some analyses have shown the virus to be particularly deadly because it triggers a cytokine storm, which ravages the stronger immune system of young adults.[5] In contrast, a 2007 analysis of medical journals from the period of the pandemic found that the viral infection was no more aggressive than previous influenza strains.[6][7] Instead, malnourishment, overcrowded medical camps and hospitals, and poor hygiene, all exacerbated by the recent war, promoted bacterial superinfection. This superinfection killed most of the victims, typically after a somewhat prolonged death bed.[8][9]

The 1918 Spanish flu was the first of two pandemics caused by H1N1 influenza A virus; the second was the 2009 swine flu pandemic.[10]

name stems from the pandemic's spread to Spain from France in November 1918.[11][12] Spain was not involved in the war, having remained neutral, and had not imposed wartime censorship.[13][14] Newspapers were therefore free to report the epidemic's effects, such as the grave illness of King Alfonso XIII, and these widely-spread stories created a false impression of Spain as especially hard hit.[15]

Alternative names were also used at the time of the pandemic. Similar to the name of Spanish flu, many of these also alluded to the purported origins of the disease. In Senegal it was named 'the Brazilian flu', and in Brazil 'the German flu', while in Poland it was known as 'the Bolshevik disease'.[16] In Spain itself, the nickname for the flu, the "Naples Soldier", was adopted from a 1916 operetta, *The Song of Forgetting* (*La canción del olvido*) after one of the librettists quipped that the play's most popular musical number, *Naples Soldier*, was as catchy as the flu.[17]

Nearly a century after the Spanish flu struck in 1918–1920, the World Health Organization (WHO) called on scientists, national authorities and the media to follow best practices in naming new human infectious diseases to minimize unnecessary negative effects on nations, economies and people - this includes a recommendation to no longer name diseases after places.[18][19] More modern terms for this virus include the "1918 influenza pandemic," the "1918 flu pandemic," or variations of these.[20][21][22]

History - Timeline

First wave of early 1918

The pandemic is conventionally marked as having begun on 4 March 1918, with the recording of the case of Albert Gitchell, an army cook at Camp Funston in Kansas, United States, despite there likely having been cases before him.[23] The disease had been observed in Haskell County in January 1918, prompting local doctor Loring Miner to warn the US Public Health Service's academic journal.[24] Within days, 522 men at the camp had reported sick.[25] By 11 March 1918, the virus had reached Queens, New York.[26] Failure to take preventive measures in March/April was later criticised.[27]

As the US had entered World War I, the disease quickly spread from Camp Funston, a major training ground for troops of the American Expeditionary Forces, to other US Army camps and Europe, becoming an epidemic in the Midwest, East Coast, and French ports by April 1918, and reaching the Western Front by the middle of the month.[23] It then quickly spread to the rest of France, Great Britain, Italy, and Spain, and in May reached Wrocław and Odessa.[23] After the signing of the Treaty of Brest-Litovsk, Germany started releasing Russian prisoners of war who then brought the disease to their country.[28] It reached North Africa, India, and Japan in May, and soon after had likely gone around the world as there had been recorded cases in Southeast Asia in April.[29] In June an outbreak was reported in China.[30] After reaching Australia in July, the wave started to recede.[29]

The first wave of the flu lasted from the first quarter of 1918, and was relatively mild.[31] Mortality rates were not appreciably above normal;[32] in the United States ~75,000 flu-related deaths were reported in the first six months of 1918, compared to ~63,000 deaths during the same time period in 1915.[33] In Madrid, Spain, fewer than 1,000 people died from influenza between May and June 1918.[34] There were no reported quarantines during the first quarter of 1918. However, the first wave caused a significant disruption in the military operations of World War I, with three-quarters of French troops, half the British forces, and over 900,000 German soldiers sick.[35]

Seattle police wearing masks in December 1918

Deadly second wave of late 1918

The second wave began in the second half of August, probably spreading to Boston and Freetown, Sierra Leone by ships from Brest, where it had likely arrived with American troops or French recruits for naval training.[35] From the Boston Navy Yard and Camp Devens (later renamed Fort Devens), about 30 miles west of Boston, other U.S. military sites were soon afflicted, as were troops being transported to Europe.[36] Helped by troop movements, it spread over the next two months to all of North America, and then to Central and South America, also reaching Brazil and the Caribbean on ships.[37] From Freetown, the pandemic continued to spread through West Africa along the coast, rivers, and the colonial railways, and from railheads to more remote communities, while South Africa received it in September on ships bringing back members of the South African Native Labour Corps returning from France.[37] From there it spread around Southern Africa and beyond the Zambezi, reaching Ethiopia in November.[38]

From Europe the second wave swept through Russia in a southwest-northeast diagonal front, as well as being brought to Arkhangelsk by the North Russia intervention, and then spread throughout Asia following the Russian Civil War and the Trans-Siberian railway, reaching Iran (where it spread through the holy city of Mashhad), and then later India in September, as well as China and Japan in October.[39] The celebrations of the Armistice of 11 November 1918 also caused outbreaks in Lima and Nairobi, but by December the wave was mostly over.[40]

American Expeditionary Force victims of the Spanish flu at U.S. Army Camp Hospital no. 45 in Aix-les-Bains, France, in 1918

The second wave of the 1918 pandemic was much more deadly than the first. The first wave had resembled typical flu epidemics; those most at risk were the sick and elderly, while younger, healthier people recovered easily. October 1918 was the month with the highest fatality rate of the whole pandemic.[41]

Third wave of 1919

In January 1919 a third wave of the Spanish Flu hit Australia, where it killed 12,000 following the lifting of a maritime quarantine, and then spread quickly through Europe and the United States, where it lingered through the Spring and until June 1919.[42][43][44][40] It primarily affected Spain, Serbia, Mexico and Great Britain, resulting in hundreds of thousands of deaths.[45] It was less severe than the second wave but still much more deadly than the initial first wave. In the United States, isolated outbreaks occurred in some cities including Los Angeles,[46] New York City,[47] Memphis, Nashville, San Francisco and St. Louis.[48] Overall American mortality rates were in the tens of thousands during the first six months of 1919.[49]

Fourth wave of 1920

In spring 1920 a very minor fourth wave occurred in isolated areas including New York City,[47] the United Kingdom, Austria, Scandinavia, and some South American islands.[50] Peru experienced a late wave in early 1920, and Japan had one from late 1919 to 1920, with the last cases in March.[51]

American Red Cross nurses tend to flu patients in temporary wards set up inside Oakland Municipal Auditorium, 1918.

History - Potential origins

Despite its name, historical and epidemiological data cannot identify the geographic origin of the Spanish flu.[2] However, several theories have been proposed.

United States

The first confirmed cases originated in the United States. Historian Alfred W. Crosby stated in 2003 that the flu originated in Kansas,[52] and popular author John M. Barry described a January 1918 outbreak in Haskell County, Kansas, as the point of origin in his 2004 article.[5]

A 2018 study of tissue slides and medical reports led by evolutionary biology professor Michael Worobey found evidence against the disease originating from Kansas, as those cases were milder and had fewer deaths compared to the infections in New York City in the same time period. The study did find evidence through phylogenetic analyses that the virus likely had a North American origin, though it was not conclusive. In addition, the haemagglutinin glycoproteins of the virus suggest that it originated long before 1918, and other studies suggest that the reassortment of the H1N1 virus likely occurred in or around 1915.[53]

Europe

The major UK troop staging and hospital camp in Étaples in France has been theorized by virologist John Oxford as being at the center of the Spanish flu.[54] His study found that in late 1916 the Étaples camp was hit by the onset of a new disease with high mortality that caused symptoms similar to the flu.[55][54] According to Oxford, a similar outbreak occurred in March 1917 at army barracks in Aldershot,[56] and military pathologists later recognized these early outbreaks as the same disease as the 1918 flu.[57][54] The overcrowded camp and hospital was an ideal environment for the spread of a respiratory virus. The hospital treated thousands of victims of poison gas attacks, and other casualties of war, and 100,000 soldiers passed through the camp every day. It also was home to a piggery, and poultry was regularly brought in from surrounding villages to feed the camp. Oxford and his team postulated that a precursor virus, harbored in birds, mutated and then migrated to pigs kept near the front.[56][57]

A report published in 2016 in the Journal of the Chinese Medical Association found evidence that the 1918 virus had been circulating in the European armies for months and possibly years before the 1918 pandemic.[58] Political scientist Andrew Price-Smith published data from the Austrian archives suggesting the influenza began in Austria in early 1917.[59]

China

In 1993, Claude Hannoun, the leading expert on the 1918 flu at the Pasteur Institute, asserted the precursor virus was likely to have come from China and then mutated in the United States near Boston and from there spread to Brest, France, Europe's battlefields, the rest of Europe, and the rest of the world, with Allied soldiers and sailors as the main disseminators.[60] Hannoun considered several alternative hypotheses of origin, such as Spain, Kansas, and Brest, as being possible, but not likely.[60] In 2014, historian Mark Humphries argued that the mobilization of 96,000 Chinese laborers to work behind the British and French lines might have been the source of the pandemic. Humphries, of the Memorial University of Newfoundland in St. John's, based his conclusions on newly unearthed records. He found archival evidence that a respiratory illness that struck northern China (where the laborers came from) in November 1917 was identified a year later by Chinese health officials as identical to the Spanish flu.[61][62] However, no tissue samples have survived for modern comparison.[63] Nevertheless, there were some reports of respiratory illness on parts of the path the laborers took to get to Europe, which also passed through North America.[63]

One of the few regions of the world seemingly less affected by the 1918 flu pandemic was China, where several studies have documented a comparatively mild flu season in 1918.[64][65][66] (Although this is disputed due to lack of data during the Warlord Period, see Around the globe). This has led to speculation

that the 1918 flu pandemic originated in China,[66][65][67][68] as the lower rates of flu mortality may be explained by the Chinese population's previously acquired immunity to the flu virus.[69][66][65]

A report published in 2016 in the Journal of the Chinese Medical Association found no evidence that the 1918 virus was imported to Europe via Chinese and Southeast Asian soldiers and workers and instead found evidence of its circulation in Europe before the pandemic.[58] The 2016 study suggested that the low flu mortality rate (an estimated one in a thousand) found among the Chinese and Southeast Asian workers in Europe meant that the deadly 1918 influenza pandemic could not have originated from those workers.[58] Further evidence against the disease being spread by Chinese workers was that workers entered Europe through other routes that did not result in a detectable spread, making them unlikely to have been the original hosts.[53]

Epidemiology and pathology - Transmission and mutation

As U.S. troops deployed en masse for the war effort in Europe, they carried the Spanish flu with them.

The basic reproduction number of the virus was between 2 and 3.[70] The close quarters and massive troop movements of World War I hastened the pandemic, and probably both increased transmission and augmented mutation. The war may also have reduced people's resistance to the virus. Some speculate the soldiers' immune systems were weakened by malnourishment, as well as the stresses of combat and chemical attacks, increasing their susceptibility.[71][72] A large factor in the worldwide occurrence of the flu was increased travel. Modern transportation systems made it easier for soldiers, sailors, and civilian travelers to spread the disease.[26] Another was lies and denial by governments, leaving the population ill-prepared to handle the outbreaks.[73]

The severity of the second wave has been attributed to the circumstances of the First World War.[74] In civilian life, natural selection favors a mild strain. Those who get very ill stay home, and those mildly ill continue with their lives, preferentially spreading the mild strain. In the trenches, natural selection was reversed. Soldiers with a mild strain stayed where they were, while the severely ill were sent on crowded trains to crowded field hospitals, spreading the deadlier virus. The second wave began, and the flu quickly spread around the world again. Consequently, during modern pandemics, health officials pay attention when the virus reaches places with social upheaval (looking for deadlier strains of the virus).[75] The fact that most of those who recovered from first-wave infections had become immune showed that it must have been the same strain of flu. This was most dramatically illustrated in Copenhagen, which escaped with a combined mortality rate of just 0.29% (0.02% in the first wave and 0.27% in the second wave) because of exposure to the less-lethal first wave.[76] For the rest of the population, the second wave was far more deadly; the most vulnerable people were those like the soldiers in the trenches – adults who were young and fit.[77]

After the lethal second wave struck in late 1918, new cases dropped abruptly – almost to nothing after the peak in the second wave.[78] In Philadelphia, for example, 4,597 people died in the week ending 16 October, but by 11 November, influenza had almost disappeared from the city. One explanation for the rapid decline in the lethality of the disease is that doctors became more effective in prevention and treatment of the pneumonia that developed after the victims had contracted the virus. However, John Barry stated in his 2004 book *The Great Influenza: The Epic Story of the Deadliest Plague In History* that researchers have found no evidence to support this position.[5] Another theory holds that the 1918 virus mutated extremely rapidly to a less lethal strain. This is a common occurrence with influenza viruses: there is a tendency for pathogenic viruses to become less lethal with time, as the hosts of more dangerous strains tend to die out.[5] Some fatal cases did continue into March 1919, killing one player in the 1919 Stanley Cup Finals.

Epidemiology and pathology - Signs and symptoms

US Army symptomology of the flu.

The majority of the infected experienced only the typical flu symptoms of sore throat, headache, and fever, especially during the first wave.[79] However, during the second wave the disease was much more serious, often complicated by bacterial pneumonia, which was often the cause of death.[79] This more serious type would cause *heliotrope cyanosis* to develop, whereby the skin would first develop two mahogany spots over the cheekbones which would then over a few hours spread to color the entire face blue, followed by black coloration first in the extremities and then further spreading to the limbs and the torso.[79] After this, death would follow within hours or days due to the lungs being filled with fluids.[79] Other signs and symptoms reported included spontaneous mouth and nosebleeds, miscarriages for pregnant women, a peculiar smell, teeth and hair falling, delirium, dizziness, insomnia, loss of hearing or smell, blurred vision, and impaired color vision.[79] One observer wrote, "One of the most striking of the complications was hemorrhage from mucous membranes, especially from the nose, stomach, and intestine. Bleeding from the ears and petechial hemorrhages in the skin also occurred".[80] The severity of the symptoms was believed to be caused by cytokine storms.[81]

The majority of deaths were from bacterial pneumonia,[82][83][84] a common secondary infection associated with influenza. This pneumonia was itself caused by common upper respiratory-tract bacteria, which were able to get into the lungs via the damaged bronchial tubes of the victims.[85] The virus also killed people directly by causing massive hemorrhages and edema in the lungs.[86]Modern analysis has shown the virus to be particularly deadly because it triggers a cytokine storm (overreaction of the body's immune system).[5] One group of researchers recovered the virus from the bodies of frozen victims and transfected animals with it. The animals suffered rapidly progressive respiratory failure and death through a cytokine storm. The strong immune reactions of young adults were postulated to have ravaged the body, whereas the weaker immune reactions of children and middle-aged adults resulted in fewer deaths among those groups.[78][87]

Epidemiology and pathology - Misdiagnosis

Because the virus that caused the disease was too small to be seen under a microscope at the time, there were problems with correctly diagnosing it.[88] The bacterium haemophilus influenzae was instead mistakenly thought to be the cause, as it was big enough to be seen and was present in many, though not all, patients.[88] During the deadly second wave there were also fears that it was in fact plague, dengue fever, or cholera.[89] Another common misdiagnosis was typhus, which was common in circumstances of social upheaval, and was therefore also affecting Russia in the aftermath of the October Revolution.[90] In Chile, the view of the country's elite was that the nation was in severe decline, and therefore the assumption of doctors was that the disease was typhus caused by poor hygiene, and not an infectious one, causing a mismanaged response which did not ban mass gatherings.[89]

Response - Public health management

Coromandel Hospital Board (New Zealand) advice to influenza sufferers (1918)

While systems for alerting public health authorities of infectious spread did exist in 1918, they did not generally include influenza, leading to a delayed response.[90] Nevertheless, actions were taken. Maritime quarantines were declared on islands such as Iceland, Australia, and American Samoa, saving many

lives.[90] Social distancing measures were introduced, for example closing schools, theatres, and places of worship, limiting public transportation, and banning mass gatherings.[91] Wearing face masks became common in some places, such as Japan, though there were debates over their efficacy.[91] There was also some resistance to their use, as exemplified by the Anti-Mask League of San Francisco. Vaccines were also developed, but as these were based on bacteria and not the actual virus, they could only help with secondary infections.[91] The actual enforcement of various restrictions varied.[92]

A later study found that measures such as banning mass gatherings and requiring the wearing of face masks could cut the death rate up to 50 percent, but this was dependent on them being imposed early in the outbreak and not being lifted prematurely.[93]

Response - Medical treatment

As there were no antiviral drugs to treat the virus, and no antibiotics to treat the secondary bacterial infections, doctors would rely on a random assortment of medicines with varying degrees of effectiveness, such as aspirin, quinine, arsenics, digitalis, strychnine, epsom salts, castor oil, and iodine.[94] Treatments of traditional medicine, such as bloodletting, ayurveda, and kampo were also applied.[95]

Response - Information dissemination

Due to World War I, many countries engaged in wartime censorship, and suppressed reporting of the pandemic.[96] For example, the Italian newspaper *Corriere della Sera* was prohibited from reporting daily death tolls.[97] The newspapers of the time were also generally paternalistic and worried about mass panic.[97] Misinformation would also spread along the disease. In Ireland there was a belief that noxious gases were rising from the mass graves of Flanders Fields and being "blown all over the world by winds".[98] There were also beliefs that the Germans were behind it, for example by poisoning the aspirin manufactured by Bayer, or by releasing poison gas from U-boats.[99]

Mortality

Around the globe

Difference between the influenza mortality age-distributions of the 1918 epidemic and normal epidemics – deaths per 100,000 persons in each age group, United States, for the interpandemic years 1911–1917 (dashed line) and the pandemic year 1918 (solid line)[100]

Three pandemic waves: weekly combined influenza and pneumonia mortality, United Kingdom, 1918–1919[101]

The Spanish flu infected around 500 million people, about one-third of the world's population.[2] Estimates as to how many infected people died vary greatly, but the flu is regardless considered to be one of the deadliest pandemics in history.[102][103] An estimate from 1991 states that the virus killed between 25 and 39 million people.[81] A 2005 estimate put the death toll at 50 million (about 3% of the global population), and possibly as high as 100 million (more than 5%).[80][104] However, a reassessment in 2018 estimated the total to be about 17 million,[105] though this has been contested.[106] With a world population of 1.8 to 1.9 billion,[107] these estimates correspond to between 1 and 6 percent of the population.

The disease killed in many parts of the world. Some 12-17 million people died in India, about 5% of the population.[108] The death toll in India's British-ruled districts was 13.88 million.[109] Another estimate gives at least 12 million dead.[110] The decade between 1911 and 1921 was the only census period in which India's population fell, mostly due to devastation of the Spanish flu pandemic.[111][112]

In Finland, 20,000 died out of 210,000 infected.[113] In Sweden, 34,000 did.[114]

In Japan, 23 million people were affected, with at least 390,000 reported deaths.[115] In the Dutch East Indies (now Indonesia), 1.5 million were assumed to have died among 30 million inhabitants.[116] In Tahiti, 13% of the population died during one month. Similarly, in Western Samoa 22% of the population of 38,000 died within two months.[117]

In New Zealand, the flu killed an estimated 6,400 Pakeha and 2,500 indigenous Maori in six weeks, with Māori dying at eight times the rate of Pakeha.[118][119]

In the U.S., about 28% of the population of 105 million became infected, and 500,000 to 850,000 died (0.48 to 0.81 percent of the population).[120][121][122] Native American tribes were particularly hard hit. In the Four Corners area, there were 3,293 registered deaths among Native Americans.[123] Entire Inuit and Alaskan Native village communities died in Alaska.[124] In Canada, 50,000 died.[125]

In Brazil, 300,000 died, including president Rodrigues Alves.[126]

In Britain, as many as 250,000 died; in France, more than 400,000.[127]

In Ghana, the influenza epidemic killed at least 100,000 people.[128] Tafari Makonnen (the future Haile Selassie, Emperor of Ethiopia) was one of the first Ethiopians who contracted influenza but survived.[129][130] Many of his subjects did not; estimates for fatalities in the capital city, Addis Ababa, range from 5,000 to 10,000, or higher.[131]

The death toll in Russia has been estimated at 450,000, though the epidemiologists who suggested this number called it a "shot in the dark".[81] If it is correct, Russia lost roughly 0.4% of its population, meaning it suffered the lowest influenza-related mortality in Europe. Another study considers this number unlikely, given that the country was in the grip of a civil war, and the infrastructure of daily life had broken down; the study suggests that Russia's death toll was closer to 2%, or 2.7 million people.[132]

Devastated communities

A chart of deaths from all causes in major cities, showing a peak in October and November 1918

Even in areas where mortality was low, so many adults were incapacitated that much of everyday life was hampered. Some communities closed all stores or required customers to leave orders outside. There were reports that healthcare workers could not tend the sick nor the gravediggers bury the dead because they too were ill. Mass graves were dug by steam shovel and bodies buried without coffins in many places.[133]

Bristol Bay, a region of Alaska populated by indigenous people, suffered a death rate of 40 percent of the total population, with some villages entirely disappearing.[134]

Several Pacific island territories were hit particularly hard. The pandemic reached them from New Zealand, which was too slow to implement measures to prevent ships, such as the SS *Talune*, carrying the flu from leaving its ports. From New Zealand, the flu reached Tonga (killing 8% of the population), Nauru (16%), and Fiji (5%, 9,000 people).[135] Worst affected was Western Samoa, formerly German Samoa, which had been occupied by New Zealand in 1914. 90%

of the population was infected; 30% of adult men, 22% of adult women, and 10% of children died. By contrast, Governor John Martin Poyer prevented the flu from reaching neighboring American Samoa by imposing a blockade.[135] The disease spread fastest through the higher social classes among the indigenous peoples, because of the custom of gathering oral tradition from chiefs on their deathbeds; many community elders were infected through this process.[136]

In Iran, the mortality was very high: according to an estimate, between 902,400 and 2,431,000, or 8% to 22% of the total population died.[137] The country was going through the Persian famine of 1917–1919 concurrently.

In Ireland, during the worst 12 months, the Spanish flu accounted for one-third of all deaths.[138][139]

In South Africa it is estimated that about 300,000 people amounting to 6% of the population died within six weeks. Government actions in the early stages of the virus' arrival in the country in September 1918 are believed to have unintentionally accelerated its spread throughout the country.[140] Almost a quarter of the working population of Kimberley, consisting of workers in the diamond mines, died.[141] In British Somaliland, one official estimated that 7% of the native population died.[142] This huge death toll resulted from an extremely high infection rate of up to 50% and the extreme severity of the symptoms, suspected to be caused by cytokine storms.[81]

Less-affected areas

In the Pacific, American Samoa[143] and the French colony of New Caledonia[144] also succeeded in preventing even a single death from influenza through effective quarantines. Australia also managed to avoid the first two waves with a quarantine.[90] Iceland protected a third of its population from exposure by blocking the main road of the island.[90] By the end of the pandemic, the isolated island of Marajó, in Brazil's Amazon River Delta had not reported an outbreak.[145] Saint Helena also reported no deaths.[146]

1919 Tokyo, Japan

Estimates for the death toll in China have varied widely,[147][81] a range which reflects the lack of centralized collection of health data at the time due to the Warlord period. China may have experienced a relatively mild flu season in 1918 compared to other areas of the world.[65][66][69][148] However, some reports from its interior suggest that mortality rates from influenza were perhaps higher in at least a few locations in China in 1918.[132] At the very least, there is little evidence that China as a whole was seriously affected by the flu compared to other countries in the world.[149]

The first estimate of the Chinese death toll was made in 1991 by Patterson and Pyle, which estimated China had a death toll of between 5 and 9 million. However, this 1991 study was subsequently criticized by later studies due to flawed methodology, and newer studies have published estimates of a far lower mortality rate in China.[64][150][65] For instance, Iijima in 1998 estimates the death toll in China to be between 1 and 1.28 million based on data available from Chinese port cities.[151] The lower estimates of the Chinese death toll are based on the low mortality rates that were found in Chinese port cities (for example, Hong Kong) and on the assumption that poor communications prevented the flu from penetrating the interior of China.[147] However, some contemporary newspaper and post office reports, as well as reports from missionary doctors, suggest that the flu did penetrate the Chinese interior and that influenza was severe in at least some locations in the countryside of China.[132] Although medical records from China's interior are lacking, there was extensive medical data recorded in Chinese port cities, such as then British-controlled Hong Kong, Canton, Peking, Harbin and Shanghai. This data was collected by the Chinese Maritime Customs Service, which was largely staffed by non-Chinese foreigners, such as the British, French, and other European colonial officials in China.[152] As a whole, accurate data from China's port cities show astonishingly low mortality rates compared to other cities in Asia.[152] For example, the British authorities at Hong Kong and Canton reported a mortality rate from influenza at a rate of 0.25% and 0.32%, much lower than the reported mortality rate of other cities in Asia, such as Calcutta or Bombay, where influenza was much more devastating.[152][65] Similarly, in the city of Shanghai – which had a population of over 2 million in 1918 – there were only 266 recorded deaths from influenza among the Chinese population in 1918.[152] If extrapolated from the extensive data recorded from Chinese cities, the suggested mortality rate from influenza in China as a whole in 1918 was likely lower than 1% – much lower than the world average (which was around 3–5%).[152] In contrast, Japan and Taiwan had reported a mortality rate from influenza around 0.45% and 0.69% respectively, higher than the mortality rate collected from data in Chinese port cities, such as Hong Kong (0.25%), Canton (0.32%), and Shanghai.[152]

Patterns of fatality

A nurse wears a cloth mask while treating a patient in Washington, DC

The pandemic mostly killed young adults. In 1918–1919, 99% of pandemic influenza deaths in the U.S. occurred in people under 65, and nearly half of deaths were in young adults 20 to 40 years old. In 1920, the mortality rate among people under 65 had decreased sixfold to half the mortality rate of people over 65, but 92% of deaths still occurred in people under 65.[153] This is unusual, since influenza is typically most deadly to weak individuals, such as infants under age two, adults over age 70, and the immunocompromised. In 1918, older adults may have had partial protection caused by exposure to the 1889–1890 flu pandemic, known as the "Russian flu".[154] According to historian John M. Barry, the most vulnerable of all – "those most likely, of the most likely", to die – were pregnant women. He reported that in thirteen studies of hospitalized women in the pandemic, the death rate ranged from 23% to 71%.[155] Of the pregnant women who survived childbirth, over one-quarter (26%) lost the child.[156]Another oddity was that the outbreak was widespread in the summer and autumn (in the Northern Hemisphere); influenza is usually worse in winter.[157]

There were also geographic patterns to the disease's fatality. Some parts of Asia had 30 times higher death rates than some parts of Europe, and generally Africa and Asia had higher rates, while Europe, North America, and Asia had lower ones.[158] There was also great variation within continents, with three times higher mortality in Hungary and Spain compared to Denmark, two to three times higher chance of death in Sub-Saharan Africa compared to North Africa, and possibly up to ten times higher rates between the extremes of Asia.[158] Cities were affected worse than rural areas.[158] There were also differences between cities, which might have reflected exposure to the milder first wave giving immunity, as well as the introduction of social distancing measures.[159]

Another major pattern was that of differences between social classes. In Oslo, death rates were inversely correlated with apartment size, as the poorer people living in smaller apartments died at a higher rate.[160] Social status was also reflected in the higher mortality among immigrant communities, with Italian Americans, a recently arrived group at the time, were nearly twice as likely to die compared to the average Americans.[158] These disparities reflected worse diets, crowded living conditions, and problems accessing healthcare.[158] Paradoxically however, African Americans were relatively spared by the pandemic.[158]

More men than women were killed by the flu, as they were more likely to go out and be exposed, while women would tend to stay at home.[159] For the same reason men also were more likely to have pre-existing tuberculosis, which severely worsened the chances of recovery.[159] However, in India the opposite was

true, potentially because Indian women were neglected with poorer nutrition, and were expected to care for the sick.[159]

A study conducted by He *et al*. (2011) used a mechanistic modeling approach to study the three waves of the 1918 influenza pandemic. They examined the factors that underlie variability in temporal patterns and their correlation to patterns of mortality and morbidity. Their analysis suggests that temporal variations in transmission rate provide the best explanation, and the variation in transmission required to generate these three waves is within biologically plausible values.[161] Another study by He *et al*. (2013) used a simple epidemic model incorporating three factors to infer the cause of the three waves of the 1918 influenza pandemic. These factors were school opening and closing, temperature changes throughout the outbreak, and human behavioral changes in response to the outbreak. Their modeling results showed that all three factors are important, but human behavioral responses showed the most significant effects.[162]

Impact

World War I

Academic Andrew Price-Smith has made the argument that the virus helped tip the balance of power in the latter days of the war towards the Allied cause. He provides data that the viral waves hit the Central Powers before the Allied powers and that both morbidity and mortality in Germany and Austria were considerably higher than in Britain and France.[59]

Economic

Alberta's provincial board of health poster

Many businesses in the entertainment and service industries suffered losses in revenue, while the healthcare industry reported profit gains.[163] Historian Nancy Bristow has argued that the pandemic, when combined with the increasing number of women attending college, contributed to the success of women in the field of nursing. This was due in part to the failure of medical doctors, who were predominantly men, to contain and prevent the illness. Nursing staff, who were mainly women, celebrated the success of their patient care and did not associate the spread of the disease with their work.[164]

A 2020 study found that US cities that implemented early and extensive non-medical measures (quarantine etc.) suffered no additional adverse economic effects due to implementing those measures,[165] when compared with cities that implemented measures late or not at all.[166]

Long-term effects

A 2006 study in the *Journal of Political Economy* found that "cohorts *in utero* during the pandemic displayed reduced educational attainment, increased rates of physical disability, lower income, lower socioeconomic status, and higher transfer payments received compared with other birth cohorts."[167] A 2018 study found that the pandemic reduced educational attainment in populations.[168] The flu has also been linked to the outbreak of encephalitis lethargica in the 1920s.[169]

Legacy

Despite the high morbidity and mortality rates that resulted from the epidemic, the Spanish flu began to fade from public awareness over the decades until the arrival of news about bird flu and other pandemics in the 1990s and 2000s.[170] This has led some historians to label the Spanish flu a "forgotten pandemic".[52]

1918 influenza epidemic burial site in Auckland, New Zealand

There are various theories of why the Spanish flu was "forgotten". The rapid pace of the pandemic, which, for example, killed most of its victims in the United States within less than nine months, resulted in limited media coverage. The general population was familiar with patterns of pandemic disease in the late 19th and early 20th centuries: typhoid, yellow fever, diphtheria and cholera all occurred near the same time. These outbreaks probably lessened the significance of the influenza pandemic for the public.[171] In some areas, the flu was not reported on, the only mention being that of advertisements for medicines claiming to cure it.[172]

Additionally, the outbreak coincided with the deaths and media focus on the First World War.[173] Another explanation involves the age group affected by the disease. The majority of fatalities, from both the war and the epidemic, were among young adults. The number of war-related deaths of young adults may have overshadowed the deaths caused by flu.[153]

When people read the obituaries, they saw the war or postwar deaths and the deaths from the influenza side by side. Particularly in Europe, where the war's toll was high, the flu may not have had a tremendous psychological impact or may have seemed an extension of the war's tragedies.[153] The duration of the pandemic and the war could have also played a role. The disease would usually only affect a particular area for a month before leaving[*citation needed*]. The war, however, had initially been expected to end quickly but lasted for four years by the time the pandemic struck.

In 2019, the first dedicated monument to the memory of the pandemic was unveiled in Wiesloch in Germany.[174]

- [...]

Comparison with other pandemics

This flu killed more people in 24 weeks than HIV/AIDS killed in 24 years.[78] However, it killed a much lower percentage of the world's population than the Black Death, which lasted for many more years.[175]**Notes**

1. ^ Not necessarily pandemic, but included for comparison purposes.

Research

Main article: Spanish flu research .. see next ..

An electron micrograph showing recreated 1918 influenza virions

The origin of the Spanish flu pandemic, and the relationship between the near-simultaneous outbreaks in humans and swine, have been controversial. One hypothesis is that the virus strain originated at Fort Riley, Kansas, in viruses in poultry and swine which the fort bred for food; the soldiers were then sent from Fort Riley around the world, where they spread the disease.[197] Similarities between a reconstruction of the virus and avian viruses, combined with the

human pandemic preceding the first reports of influenza in swine, led researchers to conclude the influenza virus jumped directly from birds to humans, and swine caught the disease from humans.[198][199] Others have disagreed,[200] and more recent research has suggested the strain may have originated in a nonhuman, mammalian species.[201] An estimated date for its appearance in mammalian hosts has been put at the period 1882–1913.[202] This ancestor virus diverged about 1913–1915 into two clades (or biological groups), which gave rise to the classical swine and human H1N1 influenza lineages. The last common ancestor of human strains dates to between February 1917 and April 1918. Because pigs are more readily infected with avian influenza viruses than are humans, they were suggested as the original recipients of the virus, passing the virus to humans sometime between 1913 and 1918.

At the Centers for Disease Control and Prevention, Terrence Tumpey examines a reconstructed version of the 1918 flu.

An effort to recreate the 1918 flu strain (a subtype of avian strain H1N1) was a collaboration among the Armed Forces Institute of Pathology, the USDA ARS Southeast Poultry Research Laboratory, and Mount Sinai School of Medicine in New York City. The effort resulted in the announcement (on 5 October 2005) that the group had successfully determined the virus's genetic sequence, using historic tissue samples recovered by pathologist Johan Hultin from an Inuit female flu victim buried in the Alaskan permafrost and samples preserved from American soldiers[203] Roscoe Vaughan and James Downs.[204][205]

On 18 January 2007, Kobasa et al. (2007) reported that monkeys (*Macaca fascicularis*) infected with the recreated flu strain exhibited classic symptoms of the 1918 pandemic, and died from cytokine storms[206] – an overreaction of the immune system. This may explain why the 1918 flu had its surprising effect on younger, healthier people, as a person with a stronger immune system would potentially have a stronger overreaction.[207]

On 16 September 2008, the body of British politician and diplomat Sir Mark Sykes was exhumed to study the RNA of the flu virus in efforts to understand the genetic structure of modern H5N1 bird flu. Sykes had been buried in 1919 in a lead coffin which scientists hoped had helped preserve the virus.[208] The coffin was found to be split and the cadaver badly decomposed; nonetheless, samples of lung and brain tissue were taken.[209]

In December 2008, research by Yoshihiro Kawaoka of the University of Wisconsin linked the presence of three specific genes (termed PA, PB1, and PB2) and a nucleoprotein derived from 1918 flu samples to the ability of the flu virus to invade the lungs and cause pneumonia. The combination triggered similar symptoms in animal testing.[210]

In June 2010, a team at the Mount Sinai School of Medicine reported the 2009 flu pandemic vaccine provided some cross-protection against the 1918 flu pandemic strain.[211]

One of the few things known for certain about the influenza in 1918 and for some years after was that it was, except in the laboratory, exclusively a disease of human beings.[212]

In 2013, the AIR Worldwide Research and Modeling Group "characterized the historic 1918 pandemic and estimated the effects of a similar pandemic occurring today using the AIR Pandemic Flu Model". In the model, "a modern day 'Spanish flu' event would result in additional life insurance losses of between US$15.3–27.8 billion in the United States alone", with 188,000–337,000 deaths in the United States.[213]

In 2018, Michael Worobey, an evolutionary biology professor at the University of Arizona who is examining the history of the 1918 pandemic, revealed that he obtained tissue slides created by William Rolland, a physician who reported on a respiratory illness likely to be the virus while a pathologist in the British military during World War One.[214] Rolland had authored an article in the *Lancet* during 1917 about a respiratory illness outbreak beginning in 1916 in Étaples, France.[215][216] Worobey traced recent references to that article to family members who had retained slides that Rolland had prepared during that time. Worobey extracted tissue from the slides to potentially reveal more about the origin of the pathogen.[*citation needed*]

Saved Wikipedia Article on "Spanish Flu Research" (July 3 2020)

See [HK0026][GDrive]

Spanish flu research concerns scientific research regarding the causes and characteristics of the "Spanish flu," a variety of influenza that in 1918 was responsible for the worst influenza pandemic in modern history. Many theories about the origins and progress of the Spanish flu persisted in the literature, but it was not until 2005, when various samples were recovered from American World War I soldiers and an Inuit woman buried in the Alaskan tundra, that significant research was made possible.

Origin of virus

There are two prevailing theories usually postulated.[*citation needed*] One theory by Alfred W. Crosby is that the virus strain originated at Fort Riley, Kansas, by two genetic mechanisms – genetic drift and antigenic shift – in viruses in poultry and swine which the fort bred for local consumption. Though initial data from a recent reconstruction of the virus suggested that it jumped directly from birds to humans, without traveling through swine,[a] this has since been cast into doubt. One researcher published in 2004 argued that the disease was found in Haskell County, Kansas, as early as January 1918.[2] A similar and even more deadly virus had been seen earlier at British camps in France and at Aldershot.[3]

Earlier investigative work published in 2000 by a team led by British virologist, John Oxford[4] of St Bartholomew's Hospital and the Royal London Hospital, suggested that a principal British troop staging camp in Étaples, France, was at the center of the 1918 flu pandemic or at least a significant precursor virus to it. There had been a mysterious respiratory infection at the military base during the winter of 1915–1916.[5]

Discovery of viral genomes

Dr. Jeffery Taubenberger and Dr. Ann Reid reviewing a genetic sequence from the 1918 Spanish flu virus.

Centers for Disease Control and Prevention as Dr. Terrence Tumpey examines a reconstructed version of the 1918 flu.

In February 1997, Johan Hultin recovered samples of the 1918 influenza from the frozen corpse of a Native Alaskan woman buried for nearly eight decades in permafrost near Brevig Mission, Alaska.[6] He brought the samples to a team[*where?*] led by Jeffery Taubenberger of the US Armed Forces Institute of Pathology (AFIP). Brevig Mission lost approximately 85% of its population to the 1918 flu in November 1918. One of the four recovered samples contained viable genetic material of the virus. This sample provided scientists a first-hand opportunity to study the virus, which was inactivated with guanidinium

viable genetic material of the virus. This sample provided scientists a first-hand opportunity to study the virus, which was inactivated with guanidinium thiocyanate before transport. This sample and others found in AFIP archives allowed researchers to completely analyze the critical gene structures of the 1918 virus.

"We have now identified three cases: The Brevig Mission case and two archival cases that represent the only known sources of genetic material of the 1918 influenza virus," said Taubenberger, chief of AFIP's molecular pathology division and principal investigator on the project.[7][b]

The archived autopsy samples had been taken from WWI Army privates Roscoe Vaughan and James Downs.[9]

Wikinews has related news:

- Scientists recreating the 1918 flu virus suggest that it may have come from birds

The 6 February 2004 edition of *Science* magazine reported that two research teams, one led by Sir John Skehel, director of the National Institute for Medical Research in London, another by professor Ian Wilson of The Scripps Research Institute in San Diego, had managed to synthesize the hemagglutinin protein responsible for the flu outbreak of 1918. They did this by piecing together DNA from a lung sample from an Inuit woman buried in the Alaskan tundra and a number of preserved samples from American soldiers of the First World War. The teams had analyzed the structure of the gene and discovered how subtle alterations to the shape of a protein molecule had allowed it to move from birds to humans with such devastating effects.

On 5 October 2005, Tumpey and other researchers at the Centers for Disease Control and Prevention (CDC) in Atlanta, Georgia, and the Mount Sinai School of Medicine in New York, announced that the (~13 kbp) genetic sequence of the 1918 flu strain, a subtype of avian strain H1N1, had been reconstructed using historic tissue samples and a small part of the RNA from a modern strain.[10][11][12]

Characteristics of virus

Influenza viruses have a relatively high mutation rate that is characteristic of RNA viruses. The H5N1 virus has mutated into a variety of types with differing pathogenic profiles; some pathogenic to one species but not others, some pathogenic to multiple species.[13] The ability of various influenza strains to show species-selectivity is largely due to variation in the hemagglutinin genes. Genetic mutations in the hemagglutinin gene that cause single amino acid substitutions can significantly alter the ability of viral hemagglutinin proteins to bind to receptors on the surface of host cells. Such mutations in avian H5N1 viruses can change virus strains from being inefficient at infecting human cells to being as efficient in causing human infections as more common human influenza virus types.[14]

In July 2004, researchers led by H. Deng of the Harbin Veterinary Research Institute, Harbin, China, and Robert Webster of the St. Jude Children's Research Hospital, Memphis, Tennessee, reported results of experiments in which mice had been exposed to 21 isolates of confirmed H5N1 strains obtained from ducks in China between 1999 and 2002. They found "a clear temporal pattern of progressively increasing pathogenicity."[15] Results reported by Webster in July 2005 reveal further progression toward pathogenicity in mice and longer virus shedding by ducks.

In December 2008, research by Yoshihiro Kawaoka of University of Wisconsin showed the presence of the three specific genes (termed PA, PB1, and PB2) and a nucleoprotein derived from the H1N1 1918 flu samples was enough to trigger similar symptoms in animal testing.[16]

Research of viral pathogenesis

Recent research of Taubenberger *et al*. has suggested that the 1918 virus, like H5N1, could have arisen directly from an avian influenza virus.[11] However, researchers at University of Virginia and Australian National University have suggested that there may be an alternative interpretation of the data used in the Taubenberger *et al*. paper.[17][18] Taubenberger *et al*. responded to these letters and defended their original interpretation.[19]

Other research by Tumpey and colleagues who reconstructed the H1N1 virus of 1918 came to the conclusion that it was most notably the polymerase genes and the HA and NA genes that caused the extreme virulence of this virus.[12] On 18 January 2007, Kobasa *et al*. reported that infected monkeys (*Macaca fascicularis*) exhibited classic symptoms of the 1918 pandemic and died from a cytokine storm.[20]

The sequences of the polymerase proteins (PA, PB1, and PB2) of the 1918 virus and subsequent human viruses differ by only 10 amino acids from the avian influenza viruses. Viruses with 7 of the 10 amino acids in the human influenza locations have already been identified in currently circulating H5N1. This has led some researchers to suggest that other mutations may surface and make the H5N1 virus capable of human-to-human transmission.

Another important factor is the change of the HA protein to a binding preference for alpha-2,6 sialic acid (the major form found in the human respiratory tract). In avian virus the HA protein preferentially binds to alpha-2,3 sialic acid, which is the major form in the avian enteric tract. It has been shown that only a single amino acid change can result in the change of this binding preference. Altogether, only a handful of mutations may need to take place in order for H5N1 avian flu to become a pandemic virus like the one of 1918. However it is important to note that likelihood of mutation does not indicate the likelihood for the evolution of such a strain, since some of the necessary mutations may be constrained by stabilizing selection.

Blood plasma as an effective treatment

In the event of another pandemic, US military researchers have proposed reusing a treatment from the deadly pandemic of 1918 in order to blunt the effects of the flu: Some military doctors injected severely afflicted patients with blood or blood plasma from people who had recovered from the flu. Data collected during that time indicates that the blood-injection treatment reduced mortality rates by as much as 50 percent.[21]

Navy researchers have launched a test to see if the 1918 treatment will work against deadly Asian bird flu. Results thus far have been inconclusive.[*citation needed*] Human H5N1 plasma may be an effective, timely, and widely available treatment for the next flu pandemic.[*citation needed*] A new international study using modern data collection methods, would be a difficult, slow process. Citing the months-long wait for a vaccine for the next pandemic, many flu experts are of the opinion that the 1918 method is something to consider.[22]

In the worldwide 1918 flu pandemic, "physicians tried everything they knew, everything they had ever heard of, from the ancient art of bleeding patients, to administering oxygen, to developing new vaccines and sera (chiefly against what we now call *Hemophilus influenzae* – a name derived from the fact that it was originally considered the etiological agent – and several types of pneumococci). Only one therapeutic measure showed any hint of success: Transfusing blood from recovered patients to new victims."[23]

2018 Article - "Part 1 : Did a Military Experimental Vaccine in 1918 Kill 50-100 Million People Blamed as Spanish Flu?" , From "First Freedoms Inc.", Distributed on "VaccineImpact dot com"

See [HW002Z][GDrive]

by Kevin Barry, President : First Freedoms, Inc.

NOTE - the following is from FreePress,org at [HW0031][GDrive]

The "Spanish Flu" killed an estimated 50-100 million people during a pandemic 1918-19. What if the story we have been told about this pandemic isn't true?

What if, instead, the killer infection was neither the flu nor Spanish in origin?

Newly analyzed documents reveal that the "Spanish Flu" may have been a military vaccine experiment gone awry.

In looking back on the 100th anniversary of the end of World War I, we need to delve deeper to solve this mystery.

Summary

- The reason modern technology has not been able to pinpoint the killer influenza strain from this pandemic is because influenza was not the killer.
- More soldiers died during WWI from disease than from bullets.
- The pandemic was not flu. An estimated 95% (or higher) of the deaths were caused by bacterial pneumonia, not influenza/a virus.
- The pandemic was not Spanish. The first cases of bacterial pneumonia in 1918 trace back to a military base in Fort Riley, Kansas.
- From January 21 – June 4, 1918, an experimental bacterial meningitis vaccine cultured in horses by the Rockefeller Institute for Medical Research in New York was injected into soldiers at Fort Riley.
- During the remainder of 1918 as those soldiers – often living and traveling under poor sanitary conditions – were sent to Europe to fight, they spread bacteria at every stop between Kansas and the frontline trenches in France.
- One study describes soldiers "with active infections (who) were aerosolizing the bacteria that colonized their noses and throats, while others—often, in the same "breathing spaces"—were profoundly susceptible to invasion of and rapid spread through their lungs by their own or others' colonizing bacteria." (1)
- The "Spanish Flu" attacked healthy people in their prime. Bacterial pneumonia attacks people in their prime. Flu attacks the young, old and immunocompromised.
- When WW1 ended on November 11, 1918, soldiers returned to their home countries and colonial outposts, spreading the killer bacterial pneumonia worldwide.
- During WW1, the Rockefeller Institute also sent the antimeningococcic serum to England, France, Belgium, Italy and other countries, helping spread the epidemic worldwide.

During the pandemic of 1918-19, the so-called "Spanish Flu" killed 50-100 million people, including many soldiers.

Many people do not realize that disease killed far more soldiers on all sides than machine guns or mustard gas or anything else typically associated with WWI.

I have a personal connection to the Spanish Flu. Among those killed by disease in 1918-19 are members of both of my parents' families.

On my father's side, his grandmother Sadie Hoyt died from pneumonia in 1918. Sadie was a Chief Yeoman in the Navy. Her death left my grandmother Rosemary and her sister Anita to be raised by their aunt. Sadie's sister Marian also joined the Navy. She died from "the influenza" in 1919.

On my mother's side, two of her father's sisters died in childhood. All of the family members who died lived in New York City.

I suspect many American families, and many families worldwide, were impacted in similar ways by the mysterious Spanish Flu.

In 1918, "influenza" or flu was a catchall term for disease of unknown origin. It didn't carry the specific meaning it does today.

It meant some mystery disease which dropped out of the sky. In fact, influenza is from the Medieval Latin "influential" in an astrological sense, meaning a visitation under the influence of the stars.

WHY IS WHAT HAPPENED 100 YEARS AGO IMPORTANT NOW?

Between 1900-1920, there were enormous efforts underway in the industrialized world to build a better society. I will use New York as an example to discuss three major changes to society which occurred in NY during that time and their impact on mortality from infectious diseases.

1. Clean Water and Sanitation

In the late 19th century through the early 20th century, New York built an extraordinary system to bring clean water to the city from the Catskills, a system still in use today. New York City also built over 6000 miles of sewer to take away and treat waste, which protects the drinking water. The World Health Organization acknowledges the importance of clean water and sanitation in combating infectious diseases. (2)

2. Electricity

In the late 19th century through the early 20th century, New York built a power grid and wired the city so power was available in every home. Electricity allows for refrigeration. Refrigeration is an unsung hero as a public health benefit. When food is refrigerated from farm to table, the public is protected from potential infectious diseases. Cheap renewable energy is important for many reasons, including combating infectious diseases.

3. Pharmaceutical

In the late 19th century through the early 20th century, New York became the home of the Rockefeller Institute for Medical Research (now Rockefeller University). The Institute is where the modern pharmaceutical industry was born. The Institute pioneered many of the approaches the pharmaceutical industry uses today, including the preparation of vaccine serums, for better or worse. The vaccine used in the Fort Riley experiment on soldiers was made in horses.

US Mortality Rates data from the turn of the 20th century to 1965 clearly indicates that clean water, flushing toilets, effective sewer systems and refrigerated foods all combined to effectively reduce mortality from infectious diseases BEFORE vaccines for those diseases became available.

Have doctors and the pharmaceutical manufacturers taken credit for reducing mortality from infectious disease which rightfully belongs to sandhogs, plumbers, electricians and engineers?

If hubris at the Rockefeller Institute in 1918 led to a pandemic disease which killed millions of people, what lessons can we learn and apply to 2018?

THE DISEASE WAS NOT SPANISH

While watching an episode of American Experience on PBS a few months ago, I was surprised to hear that the first cases of "Spanish Flu" occurred at Fort Riley, Kansas in 1918. I thought, how is it possible this historically important event could be so badly misnamed 100 years ago and never corrected?

Why "Spanish"?

Spain was one of a few countries not involved in World War I. Most of the countries involved in the war censored their press.

Free from censorship concerns, the earliest press reports of people dying from disease in large numbers came from Spain. The warring countries did not want to additionally frighten the troops, so they were content to scapegoat Spain. Soldiers on all sides would be asked to cross no man's land into machine gun fire, which was frightening enough without knowing that the trenches were a disease breeding ground.

One hundred years later, it's long past time to drop "Spanish" from all discussion of this pandemic. If the flu started at a United States military base in Kansas, then the disease could and should be more aptly named.

In order to prevent future disasters, the US (and the rest of the world) must take a hard look at what really caused the pandemic.

It is possible that one of the reasons the Spanish Flu has never been corrected is that it helps disguise the origin of the pandemic.

If the origin of the pandemic involved a vaccine experiment on US soldiers, then the US may prefer calling it Spanish Flu instead of The Fort Riley Bacteria of 1918, or something similar. The Spanish Flu started at the location this experimental bacterial vaccine was given making it the prime suspect as the source of the bacterial infections which killed so many.

It would be much more difficult to maintain the marketing mantra of "vaccines save lives" if a vaccine experiment originating in the United States during the years of primitive manufacturing caused the deaths of 50-100 million people.

"Vaccines save lives … except we may have killed 50-100 million people in 1918-19" is a far less effective sales slogan than the overly simplistic "vaccines save lives."

THE DISEASE WHICH KILLED SO MANY WAS NOT FLU OR A VIRUS. IT WAS BACTERIAL.

During the mid-2000's there was much talk about "pandemic preparedness." Influenza vaccine manufacturers in the United States received billions of taxpayer dollars to develop vaccines to make sure that we don't have another lethal pandemic "flu," like the one in 1918-19.

Capitalizing on the "flu" part of Spanish flu helped vaccine manufacturers procure billion dollar checks from governments, even though scientists knew at the time that bacterial pneumonia was the real killer.

It is not my opinion that bacterial pneumonia was the real killer – thousands of autopsies confirm this fact.

According to a 2008 National Institute of Health paper, bacterial pneumonia was the killer in a minimum of 92.7% of the 1918-19 autopsies reviewed. It is likely higher than 92.7%.

The researchers looked at more than 9000 autopsies, and "there were no negative (bacterial) lung culture results."

"… In the 68 higher-quality autopsy series, in which the possibility of unreported negative cultures could be excluded, 92.7% of autopsy lung cultures were positive for ≥1 bacterium. … in one study of approximately 9000 subjects who were followed from clinical presentation with influenza to resolution or autopsy, researchers obtained, with sterile technique, cultures of either pneumococci or streptococci from 164 of 167 lung tissue samples.

There were 89 pure cultures of pneumococci; 19 cultures from which only streptococci were recovered; 34 that yielded mixtures of pneumococci and/or streptococci; 22 that yielded a mixture of pneumococci, streptococci, and other organisms (prominently pneumococci and nonhemolytic streptococci); and 3 that yielded nonhemolytic streptococci alone. There were no negative lung culture results." (3)

Pneumococci or streptococci were found in "164 of (the) 167 lung tissue samples" autopsied. That is 98.2%. Bacteria was the killer.

WHERE DID THE SPANISH FLU BACTERIAL PNEUMONIA OF 1918-19 ORIGINATE?

When the United States declared war in April 1917, the fledgling Pharmaceutical industry had something they had never had before – a large supply of human test subjects in the form of the US military's first draft.

Pre-war in 1917, the US Army was 286,000 men. Post-war in 1920, the US army disbanded, and had 296,000 men.

During the war years 1918-19, the US Army ballooned to 6,000,000 men, with 2,000,000 men being sent overseas. The Rockefeller Institute for Medical Research took advantage of this new pool of human guinea pigs to conduct vaccine experiments.

" A REPORT ON ANTIMENINGITIS VACCINATION AND OBSERVATIONS ON AGGLUTININS IN THE BLOOD OF CHRONIC MENINGOCOCCUS CARRIERS by Frederick L. Gates (From the Base Hospital, Fort Riley, Kansas, and The Rockefeller Institute for Medical Research, New York. / Received 1918 Jul 20) " See [HG005A][GDrive]

(Author note: Please read this Fort Riley paper in its entirety so you can appreciate the carelessness of the experiments conducted on these troops.)

(Author note: Please read this Fort Riley paper in its entirety so you can appreciate the carelessness of the experiments conducted on these troops.)

Between January 21st and June 4th of 1918, []reports on an experiment where soldiers were given 3 doses of a bacterial meningitis vaccine. Those conducting the experiment on the soldiers were just spitballing dosages of a vaccine serum made in horses.

The vaccination regime was designed to be 3 doses. 4,792 men received the first dose, but only 4,257 got the 2nd dose (down 11%), and only 3702 received all three doses (down 22.7%).

A total of 1,090 men were not there for the 3rd dose. What happened to these soldiers? Were they shipped East by train from Kansas to board a ship to Europe? Were they in the Fort Riley hospital? [The report from [Dr. Frederick Lamont Gates (born 1886)] report doesn't tell us.

An article accompanying the American Experience broadcast I watched sheds some light on where these 1,090 men might be. [Dr. Frederick Lamont Gates (born 1886)] began his experiments in January 1918.

By March of that year, "100 men a day" were entering the infirmary at Fort Riley.

Are some of these the men missing from Dr. Gates' report – the ones who did not get the 2nd or 3rd dose?

"… Shortly before breakfast on Monday, March 11, the first domino would fall signaling the commencement of the first wave of the 1918 influenza.

Company cook Albert Gitchell reported to the camp infirmary with complaints of a "bad cold."

Right behind him came Corporal Lee W. Drake voicing similar complaints.

By noon, camp surgeon Edward R. Schreiner had over 100 sick men on his hands, all apparently suffering from the same malady…" (5)

[Dr. Frederick Lamont Gates (born 1886)] does report that several of the men in the experiment had flu-like symptoms: coughs, vomiting and diarrhea after receiving the vaccine.

These symptoms are a disaster for men living in barracks, travelling on trains to the Atlantic coast, sailing to Europe, and living and fighting in trenches.

The unsanitary conditions at each step of the journey are an ideal environment for a contagious disease like bacterial pneumonia to spread.

From Dr. Gates' report:

"Reactions.– … Several cases of looseness of the bowels or transient diarrhea were noted. This symptom had not been encountered before. Careful inquiry in individual cases often elicited the information that men who complained of the effects of vaccination were suffering from mild coryza, bronchitis, etc., at the time of injection."

"Sometimes the reaction was initiated by a chill or chilly sensation, and a number of men complained of fever or feverish sensations during the following night.

Next in frequency came nausea (occasionally vomiting), dizziness, and general "aches and pains" in the joints and muscles, which in a few instances were especially localized in the neck or lumbar region, causing stiff neck or stiff back. A few injections were followed by diarrhea.

The reactions, therefore, occasionally simulated the onset of epidemic meningitis and several vaccinated men were sent as suspects to the Base Hospital for diagnosis."(4)

According to [Dr. Frederick Lamont Gates (born 1886)], they injected random dosages of an experimental bacterial meningitis vaccine into soldiers. Afterwards, some of the soldiers had symptoms which "simulated" meningitis, but Dr. Gates advances the fantastical claim that it wasn't actual meningitis.

The soldiers developed flu-like symptoms. Bacterial meningitis, then and now, is known to mimic flu-like symptoms. (6)

Perhaps the similarity of early symptoms of bacterial meningitis and bacterial pneumonia to symptoms of flu is why the vaccine experiments at Fort Riley have been able to escape scrutiny as a potential cause of the Spanish Flu for 100 years and counting.

HOW DID THE "SPANISH FLU" SPREAD SO WIDELY SO QUICKLY?

There is an element of a perfect storm in how the [Dr. Frederick Lamont Gates (born 1886)] bacteria spread. WWI ended only 10 months after the first injections. Unfortunately for the 50-100 million who died, those soldiers injected with horse-infused bacteria moved quickly during those 10 months.

An article from 2008 on the CDC's website describes how sick WWI soldiers could pass along the bacteria to others by becoming "cloud adults."

"Finally, for brief periods and to varying degrees, affected hosts became "cloud adults" who increased the aerosolization of colonizing strains of bacteria, particularly pneumococci, hemolytic streptococci, H. influenzae, and S. aureus.

For several days during local epidemics—particularly in crowded settings such as hospital wards, military camps, troop ships, and mines (and trenches)—some persons were immunologically susceptible to, infected with, or recovering from infections with influenza virus.

Persons with active infections were aerosolizing the bacteria that colonized their noses and throats, while others—often, in the same "breathing spaces"—were profoundly susceptible to invasion of and rapid spread through their lungs by their own or others' colonizing bacteria." (1)

Three times in his report on the Fort Riley vaccine experiment, [Dr. Frederick Lamont Gates (born 1886)] states that some soldiers had a "severe reaction" indicating "an unusual individual susceptibility to the vaccine".

While the vaccine made many sick, it only killed those who were susceptible to it. Those who became sick and survived became "cloud adults" who spread the bacteria to others, which created more cloud adults, spreading to others where it killed the susceptible, repeating the cycle until there were no longer wartime unsanitary conditions, and there were no longer millions of soldiers to experiment on.

The toll on US troops was enormous and it is well documented. Dr. Carol Byerly describes how the "influenza" traveled like wildfire through the US military. (substitute "bacteria" for Dr. Byerly's "influenza" or "virus"):

"… Fourteen of the largest training camps had reported influenza outbreaks in March, April, or May, and some of the infected troops carried the virus with them aboard ships to France …

As soldiers in the trenches became sick, the military evacuated them from the front lines and replaced them with healthy men.

This process continuously brought the virus into contact with new hosts—young, healthy soldiers in which it could adapt, reproduce, and become extremely virulent without danger of burning out.

… Before any travel ban could be imposed, a contingent of replacement troops departed Camp Devens (outside of Boston) for Camp Upton, Long Island, the Army's debarkation point for France, and took influenza with them.

Medical officers at Upton said it arrived "abruptly" on September 13, 1918, with 38 hospital admissions, followed by 86 the next day, and 193 the next.

Hospital admissions peaked on October 4 with 483, and within 40 days, Camp Upton sent 6,131 men to the hospital for influenza. Some developed pneumonia so quickly that physicians diagnosed it simply by observing the patient rather than listening to the lungs…" (7)

The United States was not the only country in possession of the Rockefeller Institute's experimental bacterial vaccine.

A 1919 report from the Institute states: "Reference should be made that before the United States entered the war (in April 1917) the Institute had resumed the preparation of antimeningococcic serum, in order to meet the requests of England, France, Belgium Italy and other countries."

The same report states: "In order to meet the suddenly increased demand for the curative serums worked out at the Institute, a special stable for horses was quickly erected …" (8)

An experimental antimeningoccic serum made in horses and injected into soldiers who would be entering the cramped and unsanitary living conditions of war … what could possibly go wrong?

Is the bacterial serum made in horses at the Rockefeller Institute which was injected into US soldiers and distributed to numerous other countries responsible for the 50-100 million people killed by bacterial lung infections in 1918-19?

The Institute says it distributed the bacterial serum to England, France, Belgium, Italy and other countries during WWI. Not enough is known about how these countries experimented on their soldiers.

I hope independent researchers will take an honest look at these questions.

THE ROAD TO HELL IS PAVED WITH GOOD INTENTIONS

I do not believe that anyone involved in these vaccine experiments was trying to harm anyone.

Some will see the name Rockefeller and yell. "Illuminati!" or "culling the herd!"

I do not believe that's what happened.

I believe standard medical hubris is responsible – doctors "playing God", thinking they can tame nature without creating unanticipated problems.

With medical hubris, I do not think the situation has changed materially over the past 100 years.

WHAT NOW?

The vaccine industry is always looking for human test subjects. They have the most success when they are able to find populations who not in a position to refuse.

Soldiers (9), infants, the disabled, prisoners, those in developing nations – anyone not in a position to refuse.

Vaccine experimentation on vulnerable populations is not an issue of the past. Watch this video clip of Dr. Stanley Plotkin where he describes using experimental vaccines on orphans, the mentally retarded, prisoners, and those under colonial rule.

The deposition was in January 2018. The hubris of the medical community is the same or worse now than it was 100 years ago.

Watch as Dr. Plotkin admits to writing:

"The question is whether we are to have experiments performed on fully functioning adults and on children who are potentially contributors to society or to perform initial studies in children and adults who are human in form but not in social potential."

Please watch the horrifying video clip.(10) : "Dr. Stanley "Human-in-Form" Plotkin, re: experiments on orphans/mentally retarded/prisoners" / Video - [HV006O][GDrive]

[...]

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Author affiliations: *Armed Forces Health Surveillance Center, Silver Spring, Maryland, USA; †Australian Army Malaria Institute, Enoggera, Queensland, Australia

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Video - [HV006O][GDrive] / PDF - [HV006P][GDrive]

2019 Article - "Part 2 : Did a Military Experimental Vaccine in 1918 Kill 50-100 Million People Blamed as Spanish Flu?" , From "First Freedoms Inc.", Distributed on "VaccineImpact dot com"

See [HW0030][GDrive]

by Kevin Barry, President : First Freedoms, Inc.

[...]

In Part 1 (1) (See [HW002Z][GDrive]), I asked if medical products made in horses may have played a role in the new disease which killed millions worldwide in the pandemic of 1918-19.

The December 1917 issue of Popular Mechanics magazine is BELOW - sheds light on the vaccine manufacturing process of 100 years ago.

The feature article, “How New York City’s Health Department Makes Serums and Vaccines for the United States Army” describes processes in place in 1917:

“After the horse has been inoculated with the disease poison in gradually increasing doses he is bled and his serum is found to be antitoxin.

This is administered to human beings and renders them immune to the disease …. Some horses give more antitoxin serum than others.

The same horse may be used at several different times for the preparation of distinctly different antitoxins … Horses are used in the preparation of diphtheria, tetanus antitoxin and antimeningococcus serum. “

It is difficult to believe that they used the same horses to make multiple disease serums, but they did.

If safety had been a concern, perhaps certain horses would have been dedicated to producing serum for one disease (or “poison” as the article calls it), but safety does not appear to be on the list of concerns.

These muddled and potentially contaminated serums were then given to soldiers (and to the public).

Recovering the diphtheria serum from horse blood in Marburg, Germany, drawn from nature by Fritz Gehrke, 1890s

Courtesy of National Library of Medicine

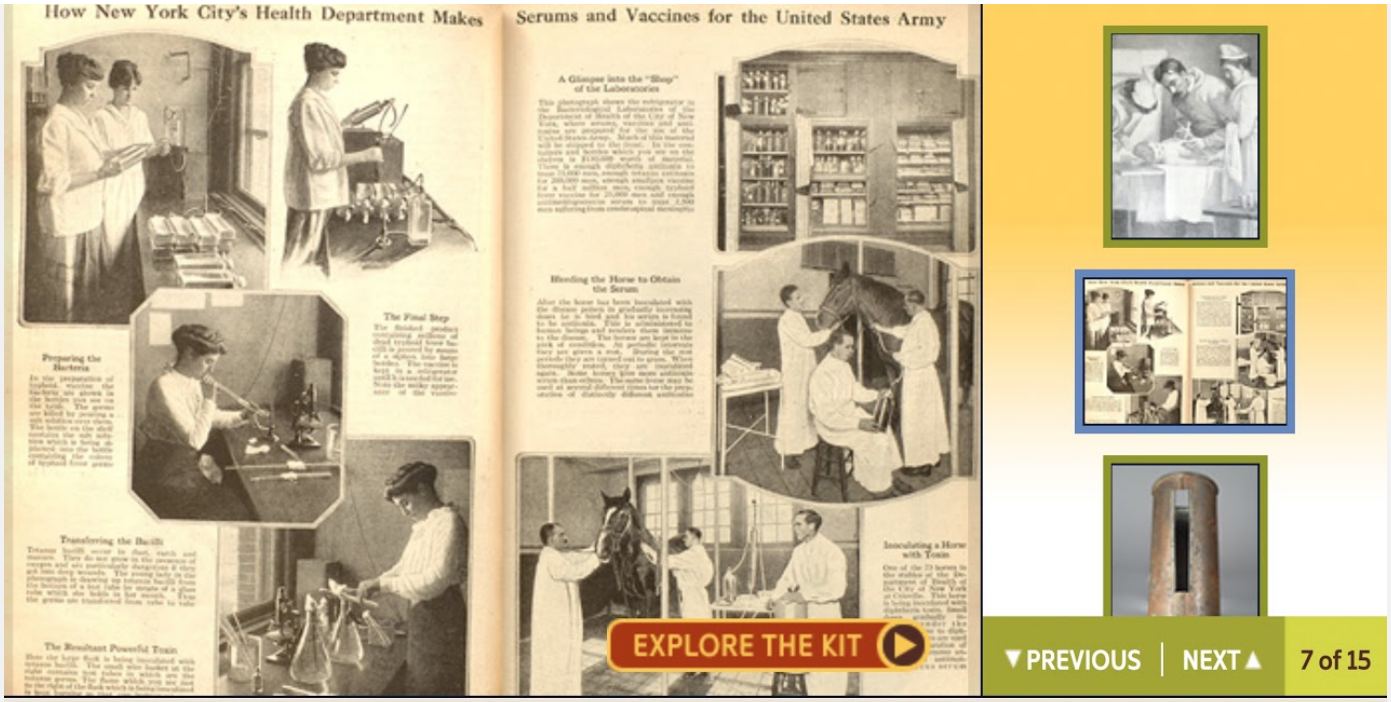
PREVIOUS | NEXT (1/15)

Humans and animals have natural defense systems that produce antibodies in the blood to combat bacteria and other harmful substances invading the body. In the late nineteenth century, scientists investigating this immune response in animals developed new methods for treating diseases in humans.

One of these early therapies used blood serum, collected from animals inoculated with toxins from bacteria. The natural protection these animals developed against the toxin could be passed to humans through injections of the serum. In commercial production, horses and other large animals served as living serum factories to grow the so-called “antitoxins” for human use.

Serum therapy provided an effective cure for diphtheria, an often fatal childhood disease. The demand for serum established a new drug industry that required the use of large numbers of animals for production.

[HG005L][GDrive]



"How New York City's Health Department Makes Serums and Vaccines for the United States Army," *Popular Science*, December 1917

Courtesy Smithsonian Libraries, National Museum of American History

How New York City's Health Department Makes Serums and Vaccines for the United States Army

Preparing the Bacteria

In the preparation of typhoid vaccine the bacteria are grown in the bottles you see on the table. The germs are killed by pouring a salt solution over them. The bottle on the shelf contains the salt solution which is being siphoned into the bottle containing the colony of typhoid fever germs.

Transferring the Bacilli

Tetanus bacilli occur in dust, earth and manure. They do not grow in the presence of oxygen and are particularly dangerous if they get into deep wounds. The young lady in the photograph is drawing up tetanus bacilli from the bottom of a test tube be means of a glass tube which she holds in her mouth. Thus the germs are transferred from tube to tube.

The Resultant Powerful Toxin

Here the large flask is being inoculated with tetanus bacilli. The small wire basket at the right contains test tubes in which are the tetanus germs. The flame which you see just to the right of the flask which is being inoculated is kept burning so that any instrument may be immediately sterilized after exposure.

The Final Step

The finished product containing millions of dead typhoid fever bacilli is poured by means of a siphon into large bottles. The vaccine is kept in a refrigerator until it is needed for use. Note the milky appearance of the vaccine.

A Glimpse into the "Shop" of the Laboratories

This photograph shows the refrigerator in the Bacteriological Laboratories of the Department of Health of the City of New York, where serums, vaccines and anti-toxins are prepared for the use of the United States Army. Much of this material will be shipped to the front. In the containers and bottles which you see on the shelves is $150,000 worth of material. There is enough diphtheria antitoxin to treat 75,000 men, enough tetanus antitoxin for 200,000 men, enough smallpox vaccine for a half million men and enough antimeningococcus serum to treat 2,500 men suffering from cerebrospinal meningitis.

Bleeding the Horse to Obtain the Serum

After the horse has been inoculated with the disease poison in gradually increasing doses he is bled and his serum is found to be antitoxin. This is administered to human beings and renders them immune to the disease. The horses are kept in the pink of condition. At periodic intervals they are given a rest. During the rest periods they are turned out to grass. When thoroughly rested, they are inoculated again. Some horses give more antitoxin serum than others. The same horse may be used at several different times for the preparation of distinctly different antitoxins.

Inoculating a Horse with Toxin

One of the 73 horses in the stables of the Department of Health of the City of New York at Ctisville. This horse is being inoculated with diphtheria toxin. Small doses gradually increased render the horse immune to diphtheria. Horses are used in the preparation of diphtheria, tetanus antitoxin and antimeningococcus serum.

[HG005M][GDrive]

“How New York City’s Health Department Makes Serums and Vaccines for the United States Army,” Popular Science, December 1917

Courtesy Smithsonian Libraries, National Museum of American History

How New York City’s Health Department Makes Serums and Vaccines for the United States Army

- ***Preparing the Bacteria -*** *In the preparation of typhoid vaccine the bacteria are grown in the bottles you see on the table. The germs are killed by pouring a salt solution over them. The bottle on the shelf contains the salt solution which is being siphoned into the bottle containing the colony of typhoid fever germs.*
- ***Transferring the Bacilli -*** *Tetanus bacilli occur in dust, earth and manure. They do not grow in the presence of oxygen and are particularly dangerous if they get into deep wounds. The young lady in the photograph is drawing up tetanus bacilli from the bottom of a test tube be means of a glass tube which she holds in her mouth. Thus the germs are transferred from tube to tube.*
- ***The Resultant Powerful Toxin -*** *Here the large flask is being inoculated with tetanus bacilli. The small wire basket at the right contains test tubes in which are the tetanus germs. The flame which you see just to the right of the flask which is being inoculated is kept burning so that any instrument may be immediately sterilized after exposure.*
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- ***A Glimpse into the “Shop” of the Laboratories -*** *This photograph shows the refrigerator in the Bacteriological Laboratories of the Department of Health of the City of New York, where serums, vaccines and anti-toxins are prepared for the use of the United States Army. Much of this material will be shipped to the front. In the containers and bottles which you see on the shelves is $150,000 worth of material. There is enough diphtheria antitoxin to treat 75,000 men, enough tetanus antitoxin for 200,000 men, enough smallpox vaccine for a half million men and enough antimeningococcus serum to treat 2,500 men suffering from cerebrospinal meningitis.*
- ***Bleeding the Horse to Obtain the Serum -*** *After the horse has been inoculated with the disease poison in gradually increasing doses he is bled and his serum is found to be antitoxin. This is administered to human beings and renders them immune to the disease. The horses are kept in the pink of condition. At periodic intervals they are given a rest. During the rest periods they are turned out to grass. When thoroughly rested, they are inoculated again. Some horses give more antitoxin serum than others. The same horse may be used at several different times for the preparation of distinctly different antitoxins.*
- ***Inoculating a Horse with Toxin -*** *One of the 73 horses in the stables of the Department of Health of the City of New York at [Otisville]. This horse is being inoculated with diphtheria toxin. Small doses gradually increased render the horse immune to diphtheria. Horses are used in the preparation of diphtheria, tetanus antitoxin and antimeningococcus serum.*

SPECIES JUMP?

Were pathogens transferred from these horses to humans in mass quantities in ways they had never transferred before?

Humans and horses had interacted closely for centuries, but horse serum had not been injected into humans in that way before, bypassing the human immune system.

Is it possible that this new method of exposure caused the bacterial pneumonias which ripped human lungs apart in ways never seen before?

Could pathogens relatively harmless to horse lungs make a species-jump and destroy human lungs?

In 1919, a Dutch military veterinarian named Captain Emile Bemelmans “developed an extensive theory on the relation between human and animal influenza …. In 1919, he argued that ‘the human ‘flu’ and the so-called ‘infectious disease of the breast’ of horses are exactly identical in aetiological, bacteriological and epidemiological senses.’

In her 2014 paper “‘Spanish’ flu and army horses: what historians and biologists can learn from a history of animals with flu during the 1918–1919 influenza pandemic”, Dr. Floor Haalboom describes Bemelmans’s work:

“In 1919, Bemelmans’s argument on the identical nature of human and horse influenza in the Nederlandsch Tijdschrift voor Geneeskunde (the Dutch medical journal) was reviewed in the veterinary journal,

… in 1914 he extended his theory on horse flu to several human and animal infectious diseases in an article in the Dutch medical journal. Bemelmans listed human influenza as an example among many other animal and human diseases which he thought were accompanied by (deadly) infections of streptococci.

Although he did not yet argue that human and horse flu were exactly equal, he did explicitly note their similarities: ‘Also between the human influenza and the so-called breast disease in horses peculiar similarities exist’…

… In these papers, Bemelmans addressed the nature of influenza (although he still preferred the name ‘flu’) of both humans and horses. He opposed the ideas that Pfeiffer’s bacterium or a filterable virus caused the disease, but thought toxins made by the bacteria streptococci were responsible for its deadly secondary complications. “ (4)

Dr. Bemelmans’s contemporaneous observations have largely been lost to history, in part because of the self important attitude of the medical community.

The hubris of the medical community prevented them from listening to a lowly veterinarian.

However, Dr. Bemelmans’s observations and persistence in getting them published are extraordinarily valuable. His awareness at the time that bateria was the killer of both humans and horses in the pandemic of 1918-19 put him decades ahead of his contemporaries.

The NIH paper describing bacteria as the predominant killer was published in 2008.(5)

See https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2599911/ https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2599911/pdf/nihms76103.pdf

If Dr. Bemelmans was correct that horses and humans were suffering from an identical disease, are there diseases identical (or very similar) in both horses and humans? Do any of those diseases target the lungs?

"Animal Models – A Neglected Medical Resource", Cornelius, CE, DVM, Ph.D.N Engl J Med 1969; 281:934-944 (6)

In a 1969 paper, Kansas State University veterinarian Dr. Charles E. Cornelius compiled a list of diseases which were very similar or identical in humans and various other species. Among the diseases identical/very similar in humans and horses is pulmonary emphysema, which targets the lungs.

Did a pathogen which causes pulmonary emphysema "species-jump" from horses to humans in these serums and vaccines?

The vaccines were obviously manufactured in primitive, unavoidably unsafe conditions and then given to WW1 soldiers as an experiment.

What exactly was in the serums and vaccines made in the horses at the Rockefeller Institute – especially considering that the same individual horses were used to for variety of serums for multiple diseases?

Recall from Part 1 that Streptococci bacteria were commonly found in the tissue samples from the autopsies of those who died in 1918-19. (5)

Cornelius said human and horse pulmonary emphysema are identical. Bemelmans reported that humans and horses were suffering from the same disease.

Did doctors treating soldiers suffering from "Spanish Flu" report on encountering a new killer type of pulmonary emphysema, causing lung damage that they had ever seen before?

PULMONARY EMPHYSEMA AT CAMP HANCOCK GEORGIA

"Acute Pulmonary Emphysema Observed During the Epidemic of Influenzal Pneumonia at Camp Hancock, Georgia"Robert G. Torrey American Journal of the Medical Sciences 1919, p. 170 – 181 (7)

Captain Dr. Torrey served at Camp Hancock, just outside of Augusta, GA. The soldiers who came through Camp Hancock were likely on their way to Charleston, SC to board ships to France, but many of them would not survive to get to the front.

Thousands died at Camp Hancock. Some who survived the illness likely made it to the ships, potentially passing the infectious bacteria to other soldiers in the unsanitary conditions which were rampant during WWI.

From Dr. Torrey's report:

"Summary

… Certain conditions were invariably present, including an intense bronchitis and peribronchitis similar to that found in a previous epidemic of pure hemolytic streptococcus infection (Scarlet Fever). There was also present from the first a destructive softening of the lung parenchyma.

In addition to this there was always an early and persisting generalized pulmonary emphysema which frequently was the main factor in causing death by interference with the mass movement of venous blood.

These conditions were found in every case examined at autopsy. Except for frequent otitis media (ear infection) there were almost no complications or sequelae outside of the chest.

The pulmonary emphysema, with consequent venous stasis, accounted for the cyanosis (turning blue/purple color), epistaxis (nosebleeds) and fixation of the chest in the phase of extreme inspiration (inhaling), with low stand of the diaphragm, which characterized these cases, and also accounted for the paradoxical physical signs (paradoxical breathing) in which fluid developed in the chest."

Torrey describes what happened to these soldiers as they died. They were coughing, becoming "cloud adults" (8) (as described in Part 1).

It looked like a bacterial infection to him. Autopsies showed lung tissue had been damaged, which restricted blood flow, turning the dying a bluish/purple color, due to lack of oxygen.

When the patients tried to inhale, their diaphragms constricted instead of expanded, the opposite of what diaphragms are supposed to do.(9) Fluids then filled their lungs, and many did not survive, literally the fluid in their lungs strangling the soldiers to death.

FLUID IN THE LUNGS STRANGLED THE HUMAN VICTIMS OF SPANISH FLU – STRANGLES?

There is a highly contagious horse respiratory infection called Strangles (or Distemper). If this disease can kill horses, what would it do to human lungs if introduced into humans, via injection and therefore bypassing the immune system, on a mass scale?

"Strangles is a highly contagious upper respiratory infection of horses caused by the bacteria Streptococcus equi subspecies equi (S. equi). It is transmitted by inhalation or direct contact with contaminated surfaces (for example horses sharing water buckets)." (10)

Did streptococcus equi contaminate the serums and vaccines made in horses produced at the Rockefeller Institute and injected into soldiers in a vaccine experiment? Was streptococcus equi in the medical serums given to the soldiers as treatments? Was it some other pathogen which species jumped?

Did medical hubris lead to a mistake which caused a species jump which killed 50-100 million people 100 years ago?

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COMMENTS

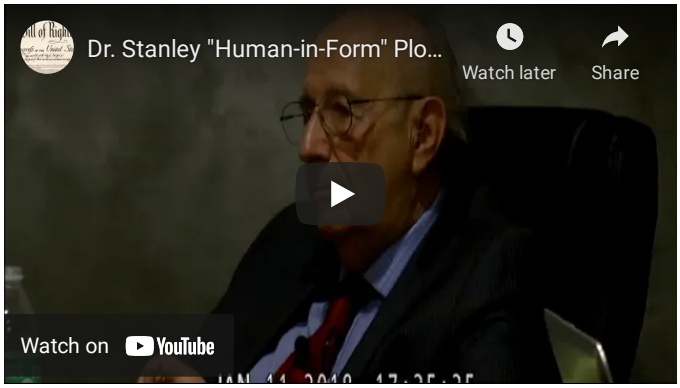
[....]

CATRYNA WHITE January 3, 2019 at 9:56 am - Reply

> One thing that is little known is that thousands of horses were shipped from Missouri, USA to Europe during WWI. Every single one of the received what is referred to as a "flu bacterium." So, not only were the soldiers and eventually the citizenry inoculated with all manner of filth, but the horses used in the war, were too.

2018 (January) Interview - "Dr. Stanley "Human-in-Form" Plotkin, re: experiments on orphans/mentally retarded/prisoners"

Video - [HV006O][GDrive] / PDF - [HV006P][GDrive]



1918 (July) Report - A REPORT ON ANTIMENINGITIS VACCINATION AND OBSERVATIONS ON AGGLUTININS IN THE BLOOD OF CHRONIC MENINGOCOCCUS CARRIERS.

BY [Dr. Frederick Lamont Gates (born 1886)] / First Lieutenant, Medical Corps, U. S. Army.

(From the Base Hospital, Fort Riley, Kansas, and The Rockefeller Institute ./or Medical Research, New York.) (Received for publication, July 20, 1918.)

Source : [HG005A][GDrive]

Following an outbreak of epidemic meningitis at Camp Funston, Kansas, in October and November, 1917, a series of antimeningitis vaccinations was undertaken on volunteer subjects from the camp. Major E. H. Schorer, Chief of the Laboratory Section at the adjacent Base Hospital at Fort Riley, offered every facility at his command and cooperated in the laboratory work connected with the vaccinations. In the camp, under the direction of the Division Surgeon, Lieutenant Colonel J. L. Shepard, a preliminary series of vaccinations on a relatively small number of volunteers served to determine the appropriate doses and the resultant local and general reactions. Following this series, the vaccine was offered by the Division Surgeon to the camp at large, and "given by the regimental surgeons to all who wished to take it.

Preliminary Series.

The preliminary series of vaccinations was carried out in the 342nd Field Artillery Regiment through the courtesy of Colonel Nugent and Major Czar C. Johnson, surgeon of the regiment. This organization volunteered en masse in response to the call issued by the Division Surgeon and offered a most promising opportunity for an extended series of observations. Moreover, only one case of meningitis had developed in the 342nd Field Artillery and the regiment had recently been covered in the search for meningococcus carriers. During the first experience the vaccination of known carriers was avoided and this regiment appeared to be free from them.

- Choice and Preparation o' Vacc'ne.--That at least two serologically distinct disease-producing types of meningococci exist has been known since Dopter(1) in 1909 described the "parameningococcus" obtained first from the nasopharynx and then from the blood and spinal fluid of active cases of epidemic meningitis. Following Dopter's discovery Wollstein(2) confirmed the serological distinction between normal or regular meningococci and parameningococci by a comparative study of agglutination, opsonization, and complement fixation of the two types, concluding that :
- "Because of the variations and irregularities of serum reactions existing among otherwise normal strains of meningococci it does not seem either possible or desirable to separate the parameningococci into a strictly definite class. It appears desirable to consider them as constituting a special strain among meningococci not, however, wholly consistent in itself."
- In a more recent study based on absorption of agglutinin and agglutination tests Gordon (3) has distinguished four groups of meningococci which be calls Types I. II, III, and IV. Groups I and II are distinct and correspond to the known types. They are responsible for 75 to 85 per cent of the cases of epidemic meningitis. Other meningococci he separates into Types III and IV. Tulloch (4) finds, however, that definite group relationships exist between Types I and III, and II and IV, so that a I - I I I group type and a II-IV group type can be distinguished. These and certain other strains can be classified only by the absorption of agglutinin test, since they agglutinate in two or more of the type sera. Type II also 'appears to include a complex subgroup and shows considerable variation among the cocci comprised therein." Nicolle, Debains, and Jouan, (5) employing a rapid method of agglutination or flocculation (without incubation) in low dilutions of immune horse serum, have also reported four types of the meningococcus which they designate A (Gordon I and III, regular meningococcus), B (Gordon II and IV, parameningococcus), C, and D. Types A and B are common, Types C and D relatively rare. They find that certain meningococci are related to two or more of their specific types and must therefore be classed as "indeterminates."
- In a recent article Mathers and Herrold 6 readily distinguish the two main types by agglutination, and group around them most of their atypical strains. The strains which fail to agglutinate in type sera bave nevertheless similar antigenic properties, since "monovalent serum prepared from these strains agglutinates in a specific way meningococci belonging to one or the other of t~e large biologic groups."

It appears, therefore, that while two distinct types or groups of meningococci may be clearly differentiated, most of the other organisms that do not fall strictly within these two groups are either intermediates or irregular variants of one or the other. Meningococci of other types in as far as they can be distinguished are only occasionally responsible for a case of epidemic meningitis.

In order to cover the two pathogenic types of meningococci and variants of them, it has become the practice in this country, following the methods of Flexner and Jobling (7) and Amoss and Wollstein, (8) to prepare highly polyvalent therapeutic sera by the repeated injection of a number of representative strains with the object of producing a serum which would protect against any pathogenic strain that might be encountered. For protective inoculation high polyvalency would seem to be equally desirable, but the choice of strains for human vaccination is limited by the fact that only a few injections are practicable, whereas the production of therapeutic serum requires a long series of inoculations in which immunity is gradually built up by the repeated injection of small doses of each antigen. The inclusion of any considerable number of strains in a vaccine for human use might defeat the purpose of the vaccination by the introduction of toxic amounts of bacterial protein without a sufficient quantity of any one specific antigen to give rise to protection against its given strain. But since 70 to 85 per cent of the cases of epidemic meningitis are caused by meningococci of the two main types, the limitation of the strains in a vaccine to representatives of these types would seem to be the rational procedure, holding out hope of protection against a large proportion of disease-producing strains.

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Therefore, for the vaccine used at Camp Funston only three organisms were chosen from the stock of The Rockefeller Institute, but the vaccine may be

regarded as having represented the two main types of the meningococcus. It was also anticipated that the epidemic at Camp Funston might furnish some strain or strains of meningococci not closely related to the main types and which ought therefore to be included in the vaccine, but a type study at Fort Riley showed that the sixteen strains recovered from active cases in December and January would be covered by a vaccine containing normal and para strains.

Method of Preparing Vaccine.--The vaccine used was made in the laboratory of The Rockefeller Institute. 16 hour growths on 1 percent glucose agar in Blake bottles were washed off with isotonic salt solution, like strains pooled, and the concentrated suspensions immediately heated to 65°C. for 30 minutes to kill the cocci and inactivate the autolytic ferment. Experiments have shown that this temperature does not impair the antigenic properties of the organism and the intact cocci are less toxic than their autolyzed products.

Following the usual tests for purity and sterility the suspensions were standardized, diluted in 0.85 per cent salt solution, mixed in equal proportions of the three strains in concentrations of 1,000 million, 2,000 million, 4,000 million, and 8,000 million cocci per cc. and preserved with 0.35 per cent tricresol.

All the injections in the preliminary series were made strictly subcutaneously with a fine needle (No. 25) at the insertion of the deltoid muscle, usually in the left arm unless a recent vaccina "take" had occurred. Then the right arm was used. The tincture of iodine used as antiseptic was then sponged off with alcohol.

For the determination of dosage and the study of reactions and antibody formation six groups of about 50 men each were chosen from the various companies in the regiment. Successive groups received increasing doses of vaccine in a series of three injections at 4 to 10 day intervals according to the schedule in Table I.

About 25 men of Groups I, II, III, V, and VI gave preliminary (control) blood samples for the study of immunity reactions on the day of the first injection and a later specimen was obtained from as many vaccinated men as were available on the 8th to 10th day after the third injection.

At Major Johnson's direction First Lieutenant Serge Androp, Medical Corps, obtained reports from the men at inspection the morning following the vaccirrations in regard to the resulting localand general reactions.

Group No.	1st injection.	Interval.	2nd injection.	Interval.	3rd injection.	Interval. Blood samples taken.
	millions	*days*	*millions*	*days*	*millions*	*days*
I	500	4	1,000	4	2,000	8
II	750	9	1,500	10	3,000	9
III	1,000	9	2,000	10	4,000	9
IV	1,500	8	3,000	8	8,000	10
V	2,000	7	4,000	7	8,000	10
VI	2,000	6	5–6,000	6	10,000	9
VII	2,000	7	4,000	8	8,000	17

TABLE I.
Vaccination Schedule, Preliminary Series.
[HG005B][GDrive]

Dosage and Reaction.--The determination of the dosage of vaccine for subsequent groups followed from the reports of the reactions produced by the given doses. It was considered important to increase the doses gradually in order to locate closely the zone of mild reactions and to avoid unexpectedly severe results. Accordingly, the vaccinations were begun with the injection of 500 million cocci, and this initial dose was increased in successive groups by 250 or 500 million until it had reached 2,000 million. For the second and third doses in each group, the first dose was usually multiplied by two and by four. Thus it usually happened that a given dose had already been used as a second or third in one group before it was tried as the first dose in a later series.

Only two reactions of any consequence were reported from doses of less than 2,000 million cocci. An officer in Group II who explained that he had long been hypersensitive to foreign protein and had reacted severely to the typhoid and paratyphoid vaccinations developed a severe local and general reaction, with headache and malaise, after the first injection of 750 million cocci. A second officer in Group II was similarly affected after a second injection of 1,500 million cocci and was confined to bed part of the following day. The two reactions after these small doses were merely transient, but they demonstrate a factor of individual susceptibility which was found to be of considerable importance in the determination of proper doses of vaccine.

When an initial dose of 2,000 million was reached (Group V) general reactions began to appear with greater frequency. None of the men in this group felt ill enough to report at sick call the following morning, but nine men stated upon question that they had felt feverish the preceding night. Four of them had had headache also and one reported a chill. Arms were moderately sore at the site of injection, but not sore enough to interfere with routine duties.

From this time on, a small number of the men in each group reported some local or general discomfort following the vaccination. The symptom most frequently mentioned was a "feverish sensation" often accompanied by headache, which was sometimes severe enough to cause loss of sleep. Morning temperatures, when taken, were reported normal. In a few instances there was transient nausea, malaise, or aching joint pains, and three reactions were initiated with a chill. Eight men had general reactions after the first and second doses, or after the second and third, and three complained of discomfort after all three injections.

On the whole the reactions produced by' the vaccine in the preliminary series were mild as compared with those that occasionally follow injections of typhoid or paratyphoid prophylactic and there was little complaint among the men. The occurrence of an occasional reaction of greater severity even with the smaller doses, and increasing local tenderness after the injection of the larger doses of vaccine led to the choice of relatively lower doses for the general series throughout the camp rather than the attempt to push the dosage up to the limit of endurance. Later experience fully justified this decision. Doses of 2,000, 4,000, and 8,000 million had already been decided upon when Group VI was given a second injection of 5,000 or 6,000 million and a third injection of 10,000 to determine the relative security of the chosen doses. The injection ol 10,000 million cocci caused general reactions in eleven men, but none of them was confined to bed or relieved from duty following the injection.

Finally, a seventh group of 99 men received the chosen doses of vaccine at weekly intervals about a week before the corresponding injections were given in the camp at large and served as a final check on the dosage. On giving the third injections to Group VII it was noted that many of the men still had a small painless area of subcutaneous induration at the site of the former injections. This persistent induration ~has been personally experienced after injection of meningococcus vaccine. It disappears gradually, leaving no trace. A more general discussion of reactions is reserved for the report on the larger vaccination series.

Immunity Reactions.--Agglutination is the reaction of choice for the study of antibody production with the meningococcus. It is the most delicate as well as the most specific, and is most easily made on a large number of sera and in multiple dilutions. In studying agglutination, however, several factors have to be taken into account aside from the obvious requirement of a carefully standardized technique. One of the most important is the relative agglutinability of various strains of meningococci and their response to one or both of the type (normal andpara) immune bodies. Meningococci vary also in antigenic power and not always in consonance with their agglutinability, so that it is sometimes profitable to use certain type strains as antigens and other strains to test antibody production.

Most of the control sera taken in advance of vaccination from men of Groups I, II, III, V, and VI were used up in agglutination tests against the vaccine strains in a dilution of 1: 10. Except in one instance in which the para strain was partially agglutinated, the results of these tests were uniformly negative. When the first of the serum specimens, taken on the 8th and 10th days after vaccination and tested in 1:10 dilution against the vaccine strains, also gave negative results, it was decided to collect all the available sera for later study in lower dilutions and against more easily agglutinable strains. This study was subsequently made at The Rockefeller Institute. A certain number of sera from each group was examined by macroscopic agglutination with a modification of the Wright method in dilutions of 1:2 and higher against the following strains from the stock of The Rockefeller Institute:

- No. 8. A "regular" which is also agglutinated in low dilutions of para serum.
- No. 10. An intermediate which agglutinates in both "regular" and para serum.
- No. 60. One of Dopter's paras which is relatively easily agglutinable and was represented in the vaccine.

On account of the limited amounts of serum available and the low dilutions required, the following method of agglutination was employed:

- Capillary glass tubing of an internal diameter of 2 mm. is drawn out into capsules 8 to 10 cm. long (Fig. 1). For use the ends are snapped off and a nipple is slipped on one end and folded double, giving accurate control of the aspirated fluids. A file mark measures equal volumes of serum and salt solution for successive dilutions, which are made in the capsule and deposited in a row on a plate of solid paraffin in a Petri dish. The paraffin plate is conveniently cleaned by melting off a thin layer in hot water. Equal amounts of a serum dilution and a meningococcus suspension are measured in the capsule, mixed on the paraffin plate, and drawn up to form a column about 1 to 1.5 cm. long. Four or five such specimens, separated by air bubbles, are sealed in a capsule for incubation. Only one dilution of a serum shouldbe used in a single capsule, but several meningococcus suspensions (4 billion per cc.) may be tested against it, as the admixture of specimens in the capsule is inappreciable. The capsules are woven through holes in a card which designates their contents, and incubated in a horizontal position for 24 hours at 55°C. Complete agglutination is indicated by a widespread flocculated sediment of organisms (Fig. 2). The flocculi are distributed through the clear fluid on rolling the tube briskly between the palms (Fig. 3). Absence of agglutination corresponds to a smooth line of sediment, which goes into even suspension on whirling. Partial agglutination is easily recognized in a combination of the two types of sediment. Results are read with the unaided eye or under a small hand lens.

As stated above, most of the control sera had been exhausted before this more comprehensive series of tests was undertaken. There remained fourteen normal control sera frorh Group VI, and it happened that the practically negative results obtained with the sera of Groups I, II, and III admit these specimens as controls, since the small doses of vaccine used in these groups did not give rise to demonstrable antibody formation. To these may be added twelve sera from supposed non-contacts obtained in New York City.

Controls, not vaccinated.	Strains.			Group I.	Strains.			Group II.	Strains.		
	8	10	60		8	10	60		8	10	60
N 1	−	−	−	5	++	++	++	71	−	−	−
N 2	−	−	−	8	−	−	−	73	−	−	−
N 3	−	−	−	11	−	−	−	77	++	++	−
N 4	−	−	+	13	−	−	−	79	−	−	−
N 5	−	−	−	14	−	+	−	81	−	−	−
N 6	−	−	−	15	−	+	−	88	−	−	−
N 7	−	−	−	20	−	−	−	94	−	−	−
N 8	−	−	−	21	+	−	−	100	−	−	−
N 9	−	−	−	24	−	++	−	112	−	−	−
N 10	−	−	−	25	−	−	−	113	−	−	−
N 11	+	−	−					114	−	+	−
N 12	−	−	−					115	−	−	−
Group III.				Group IV.				Group V.			
122	−	−	−	173	+	+	+	227	−	++	+
125	−	−	−	179	−	+	−	233	++	++	+
126	−	−	−	180	−	+	−	234	++	++	−
127	−	−	−	183	−	+	−	237	+	++	+
134	−	−	−	185	−	++	−	239	+	+	+
135	−	−	−	186	−	−	−	240	++	++	−
140	−	−	−	188	−	−	−	246	−	+	−
142	−	−	−	192	−	+	−	250	−	++	+
147	−	−	−	195	−	+	−	251	−	++	++
152	−	−	−	197	−	−	−	252	++	++	++
155	−	−	−	202	−	++	−	253	−	++	+
160	−	−	−	206	−	+	−	254	−	++	+
				210	−	+	−	255	−	++	+
				212	−	++	−	256	++	++	+
				215	−	+	−	257	−	++	++
								259	−	+	−
								261	++	++	+
								262	+	++	++
								263	++	++	++
								264	++	++	++
								267	−	++	++
								268	−	++	++

Group VI.	Before vaccination (controls). Strains.			After vaccination. Strains.			Group VII.	Strains.		
	8	10	60	8	10	60		8	10	60
269				−	−	−	322	−	++	++
270				−	+	+	323	−	++	++
271	−	+	+	−	+	−	324	−	+	++
273	+	+	−	−	++	++	326	−	++	++
274				+	++	−	331	−	+	+
278	−	−	−	+	++	−	334	−	++	++
284	−	−	−	−	+	−	335	−	++	++
286	−	−	−	+	++	+	354	−	++	++
287	−	−	−	−	++	−	380	−	++	++
288	−	−	−	−	+	−	395	−	+	+
289	−	−	−	−	+	−	397	−	++	++
290	+	+	−	+	++	+	399	−	++	+
291	−	−	−	+	+	−	406	−	++	+
292	−	−	−	−	++	−	409	−	++	++
294	−	−	−	−	+	−	415	+	++	++
296	−	−	−	+	++	++				
299				−	+	+				
310				−	+	+				
317				−	+	−				

++ indicates complete agglutination, + partial agglutination, − no agglutination.

TABLE II.
Agglutination Tests with Sera of Vaccinated Men. Dilution 1: 2.
[HG005C][GDrive]

Table II shows the absence of agglutination in Groups I, II, and III with few exceptions. In three cases only was more than a partial agglutination of one strain in the 1 : 2 dilution observed. The titers in these cases ran as follows:

Group.	Serum.	Strain.		
		8	10	60
I	5	1:32	1:8	1:8
	24	0	1:32	0
II	77	1:8	1:32	0

[HG005D][GDrive]

It may be assumed, therefore, that the number of unvaccinated men whose sera would a g g l u t i n a t e any of these chosen strains of meningococci is small, and on the basis of this assumption the observation that twelve of fifteen sera from Group IV agglutinate Strain 10 partially or completely is unmistakable evidence of antibody formation through the agency of the vaccine. Group V, in which the dosage reached that chosen for the camp at large, confirms this evidence of reaction, for all the twenty-two sera studied contained antibodies for the meningococcus. In some instances the more easily agglutinable strains were agglutinated in a dilution of 1 : 32 or 1 : 64 (Table III).

Serum.	Strains.		
	8	10	60
227	0	1:32	1:32
233	1:2	1:32	1:8
234	1:2	1:4	0
237	1:2	1:16	1:4
239	1:2	1:16	1:2
240	1:2	1:64	0
246	0	1:2	0
250	0	1:128	1:8
251	0	1:32	1:32
252	1:32	1:64	1:8
253	0	1:32	1:8
254	0	1:64	1:8
255	0	1:32	1:2
256	1:2	1:64	1:2
257	0	1:64	1:16
259	0	1:2	0
261	1:2	1:32	1:2
262	1:2	1:32	1:32
263	1:4	1:32	1:32
264	1:2	1:64	1:64
267	0	1:8	1:8
268	0	1:64	1:8

TABLE III.
Agglutinin Titers of Sera from Group V.
[HG005E][GDrive]

The final evidence of antibody production is furnished by a direct comparison of sera from Group VI taken before the first vaccination with sera taken 9 days after the third injection of vaccine, in which the appearance or increase in agglutinins is observable in all but two instances. The presence of agglutinins in the sera from Group VII merely confirms the previous findings. It may, therefore, be stated that the injection of well tolerated doses of meningococcus vaccine is followed by specific antibody formation in the human body.

The preliminary series of vaccinations, therefore, served to establish the method of injection, the proper dosage for extended vaccination, the reactions which might be expected to follow the chosen doses, and the production of immune bodies in the serum of vaccinated men. On the basis of these findings the vaccine was offered to the camp at large.

General Series.

The vaccine used in the general series of inoculations in the camp was made by Lieutenant Peter K. Olitsky at The Rockefeller Institute by the methods already described. It was shipped to Fort Riley in bulk and was diluted in isotonic salt solution to standard concentration, preserved with 0.3 per cent cresol and distributed in 50cc. bottles to the regimental surgeons under Major Schorer's direction. The use of two suspensions, one of 4,000 million cocci per cc. (Vaccine A and B) , and the other of 8,000 million (Vaccine C), adjusted the injection volumes to 0.5 and 1 cc. of Vaccine A and B and then 1 cc. of Vaccine C, volumes similar to those for the typhoid prophylactic, with doses of 2,000 million, 4,000 million, and 8,000 million cocci to be given at weekly intervals.

At the direction of the Division Surgeon, the. Division Training Officer, Captain Albert Bower, to whom especial thanks is due for his mediation between the regimental surgeons and the laboratory, called a meeting of the surgeons at which the method of giving the vaccine and the results to be expected and observed were fully described and discussed. The surgeons were thus informed of the procedure and object of the vaccination and their cooperation was enlisted, without which little could have been accomplished. The response of the men when the vaccine was offered to them was due in large measure to the

interest and example of the regimental surgeons.

According to the statistics of the division headquarters, the total strength of the 89th Division at this time was approximately 25,000 officers and men. Of the~e, 4,792 (19per cent) took the first injection, 4,257 (17 per cent) the second also, and 3,702 (15 per cent) completed the series.

Part of the men received the full dosage as planned. About half of those vaccinated, whose third injection was due after February 4, 1918, were given a final injection of 4,000 million, on account of the occurrence of several fairly severe reactions from the larger dose among medical officers at Fort Riley. In some regiments the vaccinations had been completed before February 5.

Reactions.--After the first injections had been given, the opinion was almost universal in the camp that the vaccine caused less general and local reaction than the typhoid prophylactic. In very few regiments was a man excused from duty the following day on account of the reaction from the vaccination. The general feeling was that the second dose caused less reaction than the first, but there were a few men in almost every organization who had reactions of moderate severity, sometimes being confined to bed for the day with headache, joint pains, and nausea. Several cases of looseness of the bowels or transient diarrhea were noted. This symptom had not been encountered before. Careful inquiry in individual cases often elicited the information that men who complained of the effects of vaccination were suffering from mild coryza, bronchitis, etc., at the time of injection.

Among the units who took the third injections before the dosage was reduced, and so received a third dose of 8,000 million meningococci, there were several instances of fairly severe reactions, general and local, which necessitated relief from duty the following day. The reactions were not more severe than those that occasionally follow paratyphoid prophylactic and no untoward results were reported. The large majority of the men seem to have suffered no appreciable reaction whatever. The smaller doses of 4,000 million cocci caused even fewer reactions.

As in the preliminary series, the factor of individual susceptibility was prominent, a few officers and men suffering severely from doses which caused no general discomfort in the great majority o'f the men. In general, the more severe reactions occurred among the commissioned officers, and especially among the medical officers at the Base Hospital and in the Medical Officers' Training Camp at Fort Riley, due in part perhaps to more confining occupations, higher nervous tension, and more introspection than was common among the enlisted men. In one regiment, through a misunderstanding, four men were given an initial dose of 8,000 million cocci, which was well tolerated. The surgeon reported:

- "One had chill for 30 minutes, headache for 1 hour, slight local reaction.
- One had slight headache, slight local reaction.
- One had severe local reaction and headache for 24 hours.
- One had slight local reaction, headache for 12 hours."

A survey of the reports of the regimental surgeons and of the observations in the preliminary series shows that headache was the most frequent symptom following injection, and accompanied most of the other symptoms encountered. Sometimes the reaction was initiated by a chill or chilly sensation, and a number of men complained of fever or feverish sensations during the following night. Next in frequency came nausea (occasionally vomiting), dizziness, and general "aches and pains" in the joints and muscles, which in a few instances were especially localized in the neck or lumbar region, causing stiff neck or stiff back. A few injections were followed by diarrhea. The reactions, therefore, occasionally simulated the onset of epidemic meningitis and several vaccinated men were sent as suspects to the Base Hospital for diagnosis.

Such transient reactions are illustrated by the following brief protocols:

- Individual 1.--C. D., Private, Battery D, 342nd Field Artillery.
- Jan. 15, 1918. 1st injection 2,000 million. "Sore arm."
- Jan. 22. 2nd injection 4,000 million. "Sore arm, headache."
- Jan. 29. 3rd injection 8,000 million. "Began to feel badly about 15 minutes later and had a chill. 3 hours later was sent to the Base Hospital complaining of headache, lumbar pain, stiff neck, and fever, 103°F. No nausea. Went to sleep about 2 hours later and slept well. Had entirely recovered the next morning."
- Individual 2.--L. N., Private, Field Hospital Company 354, 314th Sanitary Train.
- Jan. 21, 1918. 1st injection 2,000 million. "Slight local soreness."
- Jan. 28. 2nd injection 4,000 million. "Slight local soreness."
- Feb. 4. 3rd injection 8,000 million. "About an hour and a half after injection, was taken with a severe chill and a subnormal temperature. About 20 minutes later his temperature rose to 103.6°F. and then fell within the next 2 hours to 101°F. Temperature normal the following morning. He complained of no other symptoms."

The most severe illness immediately following vaccination is described by the officer himself as follows:

- Individual 3.--J. M. K., First Lieutenant, 314th Sanitary Train.
- Jan. 21, 1918. 1st injection 2,000 million. 4.30 p.m. Soreness at site of injection in evening. Slept well.
- Jan. 22. Awakened feeling drowsy and listless. Local soreness worse. Pains in back of neck, calves of legs, thighs, lumbar region, and both arms. No appetite. Symptoms grew worse after holding sick call at the Infirmary. Perspired on slight exertion. Felt chilly and warm by turn. Went to quarters and lay in bunk. Soon felt feverish. Developed diarrhea about i1 a.m. Eight movements in 5 hours. Cup of hot chocolate at 1 p.m. Felt nauseated. Vomited six times in next 3 hours. Took sodium bicarbonate, 2 gm. in glass of warm water, promptly vomited. Retained 15 minutes later, and then began to feel better. Felt well next morning but had no appetite. Bowels still loose. Returned to duty. Appetite returned the evening of Jan. 24. Local soreness persisted 3 days.
    - Jan. 22, 9.45 a. m . . . . . Temperature (F) = 98.4 , Pulse = 86
    - 1.15 p. m . . . . . .Temperature (F) = 99.8 , Pulse = 82
    - 3.45 p. m . . . . . .Temperature (F) = 101.0 , Pulse = 92
    - 7.30 p. m . . . . . Temperature (F) = 101.8 , Pulse = 108
    - 10.00 p. m . . . . . Temperature (F) = 100.0 , Pulse = 98
    - Jan. 2.3, 7.25 a. m . . . . . Temperature (F) = 97.8 , Pulse = 98

- Jan. 28. 2nd injection 4,000 million. Local reaction severe. Duration 3 days. General reaction, malaise of 24 hours duration.
- Feb. 4. 3rd injection 8,000 million. Local reaction severe. Duration 4 days. General reaction, nausea, looseness of bowels (not diarrhea), chilliness, but no fever. Muscle soreness severe and general. Appetite absent for 2 days.

The occurrence of such reactions as those described above was rare but they illustrate the importance of the factor of individual susceptibility. The great majority of the men vaccinated were reported to have had no general symptoms, and very few men were confined to quarters after any dose of the vaccine.

Occurrence of Meningitis after Vaccination.--The records of cases of epidemic meningitis in Camp Funston have been followed up to June 4, 1918, thus covering the period that the 89th Division remained in camp. In the interval between January 21 when the vaccination was started in the camp and June 4, 46 cases of meningitis are reported to have entered the Base Hospital at Fort Riley. Of these patients, three had received one, two, or three injections of antimeningitis vaccine. The following data have been collected in regard to these cases.

- Case 1.--L. T., Second Lieutenant, 314th Engineers.
- Jan. 21, 1918. 1st injection 2,000 million. Next day neck was rather stiff. slight headache. Well for next 2 days, but working very hard on double duty.
- Jan. 25. Fainted at Officers' Call. Felt "under the weather" with indefinite symptoms the next 2 days but remained on duty.
- Jan. 28. 2nd injection 4,000 million. This made him feel so much better that he remarked to his friends that he "was getting to,be a dope fiend in the stuff and couldn't get along without it."
- Jan. 29. Felt worse again, headache, "no ambition.': Following days he remained on duty, but tired easily and often felt chilly and feverish, had stiff neck and joint pains.
- Feb. 2. Remained in bed. Throbbing headache, became nauseated and vomited twice. Sent to Base Hospital. Lumbar puncture on arrival showed a turbid fluid with many leukocytes and moderate numbers of intracellular Gram-negative diploeocci.
- Lieutenant T. had a very mild case of meningitis which yielded promptly to serum treatment.
- Case 2.--E. H., Corporal, Company C, 354th Infantry.
- Jan. 21, 1918. 1st injection 2,000 million. "Never felt anything. Arm not very sore."
- Jan. 26. Went on 5 days leave, returning Jan. 31, and so missed second injection.
- Feb. 1. "Felt sore all over." Had chills. Frontal headache.
- Feb. 2. Headache continued, stiff joints and aching pains. Sent to Base Hospital. Diagnosis, epidemic meningitis.
- Corporal H. had a severe case of meningitis but recovered.
- Case 3.--J. C. N., Private, Company B, 340th Machine Gun Battalion.
- Jan. 24, 1918. 1st injection 2,000 million.
- Jan. 31. 2nd injection 4,000 million.
- Feb. 8. 3rd injection 4,000 million. Reactions not reported.
- Mar. 31. Acute otitis media and right frontal sinusitis.
- Apr. 16. Epidemic cerebrospinal meningitis.
- Apr. 24. Cerebrospinal fluid found positive for meningococcus for the last time.
- Apr. 27. Ulcer of right cornea followed by slight opacity with slight impairment of vision.
- May 5. Right facial paralysis which has since improved considerably.
- Private N. will be ready for assignment to domestic military service about July 1, 1918.

The examples of Lieutenant T and Corporal H are instructive, since they may well be, and probably are, instances of meningococcus inoculation in individuals in the incubation period of a meningococcus meningitis, Assuming this to be the fact, the indication is tha~ ne harm was done by the procedure. But whether this is the precise fact or not, the cases have no real bearing on the value of antimeningitis vaccination, because the interval between the first inoculation and the diagnosis of the meningitis was too brief to permit immunization to be effected.

314th Engineers.	After 3rd injection.	Strains.			355 Infantry.	After 3rd injection.	Strains.			314th Sanitary Train.	After 3rd injection.	Strains.		
		8	10	60			8	10	60			8	10	60
	days					*days*					*days*			
501	17	−	+	−	535	15	−	−	−	585	17	−	++	+
502	17	−	+	−	536	15	−	++	+	586	17	−	+	+
503	17	−	+	+	537	15	+	++	++	587	17	−	−	−
504	17	−	−	−	538	15	−	++	+	590	17	+	−	−
506*	10	−	++	++	539	15	−	+	−	591	17	−	−	−
509*	10	−	−	−	541	15	−	++	+	593	17	−	+	+
510*	10	−	−	−	544	15	−	+	−	595	17	−	++	++
511*	10	−	++	++	545	15	−	++	+	598	17	+	++	++
512*	10	−	++	+	547	15	+	++	++	600	17	−	+	+
513*	10	−	++	−	549	15	+	+	+	606	17	++	++	++
514*	10	−	+	+	553	15	++	++	++	609	17	−	++	++
515*	10	−	+	−	558	15	+	++	+	610	17	++	++	++
516*	10	−	+	++	560	15	−	−	−	611	17	+	++	+
517*	10	−	−	−	562	15	+	+	−	612	17	−	++	++
518*	10	−	−	−	565	15	−	+	−	613	17	++	++	++
520*	10	+	++	++	566	15	−	−	−	614	17	−	++	++
528	18	−	−	−	568	15	−	−	−	615	17	−	−	−
531*	10	−	+	+	569	15	−	++	+	618	17	+	++	++
532	18	−	+	−	570	15	−	−	−	619	17	−	++	++
533	18	−	−	−	571	15	−	+	−	622	17	−	+	+
534	18	−	−	−	574	15	−	++	+					
					576	15	−	++	++					
					578	15	+	++	+					
					581	15	−	++	+					
					583	15	−	+	+					

* 3rd dose 4,000 million cocci.

TABLE IV.
Agglutination of Meningococci in Sera of Vaccinated Men. Dilution 1: 2.
[HG005F][GDrive]

It is clear that Private N developed meningitis at a period at which protection following vaccination should have been present. In his case the vaccination must be considered as having failed to afford protection. A study of the type of the infecting meningococcus would conceivably have thrown light on the incident, or the incident may merely indicate that occasional individuals fail to be adequately immunized, just as in the ahalogous procedure of antityphoid inoculation.

Immunity Reactions, General Series.--In addition to the blood samples taken for study in the preliminary series of vaccinations, similar samples were obtained from a group of men in each of three regiments who had completed the vaccination series. The serum specimens were taken at an interval of from 10 to 18 days after the third injections had been given, and were examined for agglutinins by the method already described. The results of these tests are shown in Table IV. The sera of 50 men showed some content of agglutinins; the sera of 16 others failed to do so.

Examination for Agglutinins of the Blood Serum of Chronic Carriers.

While every case of epidemic meningitis is presumed to develop from the carrier state, many observers have noted the rarity of the disease among chronic carriers. The presence of the meningococcus in the nasopharynx is but one of the factors in the accident which results in the bacterial invasion of the body, and the relatively low infectivity of the meningococcus is to be credited to causes of resistance on the part of the carrier host among which may well be the appearance of immune bodies in the blood as the result of the multiplication of meningococci in the nasopharynx.

If the presence of agglutinins for the meningococcus could be demonstrated in the blood of chronic carriers, light would thereby be thrown on the mechanism of this resistance. With the object of detecting the possible existence of meningococcus agglutinins in the blood serum of carriers, a number of such sera have been studied in low dilutions by the capsule method described in an earlier section of this report.

Through the courtesy of Passed Assistant Surgeon J. L. Waterman, United States Naval Hospital, Brooklyn NavyYard, and Dr. F. S.Westmoreland, Riverside Hospital, New York, opportunity was given to obtain blood samples from a number of chronic carriers of the meningococcus, and the corresponding carrier strains were kindly furnished by Dr. A. W. Williams of the Department of Health, of the City of New York, or obtained directly from the men themselves. The men studied were known to have harbored meningococci for from 4 to 16 weeks.

20 carrier strains of the meningococcus have been subjected to the agglutination tests in low dilutions with the sera of the hosts from whom they were obtained and the carrier sera were tested against the stock strains of spinal origin that had been studied in the sera of vaccinated men from Camp Funston. 18 of the carrier strains were also tested with 12 normal sera from supposed non-contacts as controls. The results of these tests are recorded in Tables V to IX. The trials with non-contact sera (Table V) show that with two exceptions the carrier strains are not usually agglutinated in normal sera in a 1 : 2 dilution. One of the exceptional strains was partially or completely agglutinated by 9 and the other by 8 of the 12 sera. The other cultures were only occasionally agglutinated in this low dilution of normal serum. One supposedly normal serum agglutinated 11 of the 18 carrier strains. In the presence of sera from their hosts, however, all but 4 of these carrier strains were agglutinated (Table VI) and the sera in most instances showed agglutinins for stock spinal strains of the meningococcus. Subsequently the sera were reexamined in multiple dilutions, and at this time 2 of those previously found negative agglutinated their strains up to 1:4 and 1:8 (Table VII). The titers of the other sera ran from 1 : 4 to 1 : 64.

Normal control serum.	Carrier Strains.																	
	124	125	127	128	129	133	134	136	139	141	147	150	151	153	156	160	161	162
1	−	−	−	−	−	−	−	−	−	++	+	−	−	−	−	−	−	−
2	−	−	−	−	−	−	−	−	−	−	−	−	−	−	−	−	−	−
3	−	−	−	−	−	−	−	+	−	++	++	−	−	−	−	−	−	−
4	−	−	−	−	−	−	−	−	+	+	+	+	−	−	−	−	−	−
5	+	−	+	−	−	−	−	−	−	++	+	−	−	−	−	−	−	−
6	−	−	−	−	+	−	−	−	−	+	+	−	−	−	+	−	+	+
7	−	−	−	−	−	−	−	−	−	+	−	−	−	−	+	−	−	−
8	−	−	−	−	−	−	−	−	−	−	−	−	*	−	−	+	−	−
9	++	−	−	−	−	−	−	−	−	+	+	−	−	−	−	−	−	−
10	+	+	+	+	+	+	−	−	−	++	++	−	−	−	++	−	+	+
11	+	−	−	−	−	−	+	−	−	+	+	−	−	−	−	−	−	−
12	−	−	−	−	−	−	−	−	−	−	−	−	−	−	−	−	−	−

* No test.

TABLE V.
Control Agglutination Tests with Normal Sera against Carrier Strains. Dilution 1:2
[HG005G][GDrive]

Serum of.	Homologous nasal strains.	Spinal Strains.		
		8	10	60
Carrier 2	++	++	++	++
" 3	−	−	−	−
" 6	+	+	++	++
" 9	++	++	++	+
" 11	+	++	++	−
" 13	++	++	++	++
" 16	++	++	++	++
" 18	+	++	++	+
" 25	+	++	++	+
" 27	++	++	++	++
" 28	++	++	++	++
" 29	++	++	++	++
" 30	+	+	++	+
" 36	+	−	−	−
" 39	++	++	+	−
" 40	+	+	+	−
" 41	−	+	−	−
" 43	−	+	−	−
" 48	++	++	++	−
" 50	−	−	−	−

TABLE VI.
Agglutination of Homologous Nasal Strains and Stock Spinal Strains in Sera of Carriers
[HG005H][GDrive]

Serum of.	Homologous Strain.	Agglutination titers.					
		1:2	1:4	1:8	1:16	1:32	1:64
Carrier 2	124	++	+	+	−	−	−
" 3	125	+	+	+	−	−	−
" 6	127	+	++	+	++	−	−
" 9	128	++	++	++	++	++	+
" 11	129	+	++	++	++	++	++
" 13	133	++	+	−	−	−	−
" 16	134	++	++	++	+	−	−
" 18	136	++	++	+	+	−	−
" 27	139	++	++	+	+	−	−
" 28	141	++	++	+	+	−	−
" 36	147	++	+	+	+	++	++
" 39	150	++	++	++	++	+	+
" 40	151	−	+	+	+	−	+
" 41	153	++	*	+	−	−	−
" 43	156	−	−	−	−	−	−
" 46	160	++	++	++	++	++	++
" 48	161	++	++	++	−	−	−
" 50	162	++	+	−	−	−	−

* No specimen.

TABLE VII.
Agglutination of Carrier Strains in Homologous Sera.
[HG005I][GDrive]

Serum drawn May 24, 1918.	Examination of May 29.				Examination of June 12.				Examination of June 24.			
	Homologous Strain.	Spinal Strains.			Homologous Strain.	Spinal Strains.			Homologous Strain.	Spinal Strains.		
		8	10	60		8	10	60		8	10	60
16	−	−	−	−	+	++	++	+	++	No test.		
36	−	−	−	−	+	−	−	−	++	−	+	+
39	−	−	−	−	++	++	+	−	++	−	++	++
40	−	−	−	−	+	+	+	−	−*	−	−*	−
41	−	−	−	−	−	+	−	−	++	−	++	++
43	−	−	−	−	−	+	−	−	−	−	++	++
46	−	−	−	−	No test.				++	−	−	++
50	−	−	−	−	−	−	−	−	++	−	+	+

* + in higher dilutions.

TABLE VIII.
Appearance of Agglutinins in Carrier Sera after Storage. Dilution 1: 2.
[HG005J][GDrive]

Serum of.	Agglutination titers of homologous strains in rabbit serum.		Agglutination titers of stock spinal strains in carrier sera.		
	Normal.	Para.	No. 8	No. 10	No. 60
Carrier 27	1:400+	1:400	1:2	1 16	1:16
" 28	1:400+	1:100	0	1:32	1:4
" 36	1:400+	1:50	0	1:64	1:4
" 39	1:800	1:100	0	1:32	1:64
" 40	1:400+	1:50	0	1:64	0
" 41	1:400+	1:100	0	1:32	1:8
" 43	1:50	1:100	0	1:32	1:8
" 46	1:800	1:200	0	0	1:16
" 48	1:50	1:100	0	1:32	1:8
" 50	1:400+	0	0	1:8	1:2

TABLE IX.
Agglutination of Stock Strains in Sera of Carriers.
[HG005K][GDrive]

Appearance of Agglutinins in Sera after Storage.--On numerous occasions we have observed an increase in agglutinating power in sera which have stood at ice box temperature for some time. The fact was reported in a recent paper (9) as having occurred with typhoid agglufinins in guinea pig sera, and Tulloch (4) records an instance in rabbit serum during immunization to the meningococcus. This he explains as due to the presence of constituents of the serum or of the organisms which do not take part in the mechanism of agglutination, but which may be present "in such quantity or in such a physical state that they protect the united antibody-antigen complex from the flocculating action of the electrolytes."

Table VIII shows the appearance of agglutinins in some of the sera under discussion after they had stood, sealed, at 4°C. for some time. The other sera were not examined so early after bleeding. The inconstancy of the phenomenon has already been described ° and is implied by Tulloch in his reference to "this particular serum."

A variation of a different order was encountered when ten of the sera studied on May 29 or June 12 were examined on June 24 in multiple dilutions with the stock spinal strains (Table IX). Six of the ten had agglutinated Strain 8 in the 1:2 dilution. Now all but one serum failed to do so. Strains 10 and 60, however, were agglutinated in various serum dilutions by practically all the specimens examined, including No. 43, which had failed to agglutinate its homologous strain. Agglutinins for these spinal strains are only rarely found in normal sera (Table II).

DISCUSSION.

- Heretofore meningococcus vaccines have not been extensively employed for prophylactic immunization, and only a few references are to be found in the literature that relate vaccination experiences. Davis, TM in 1907, describing animal experiments and the therapeutic use of an autogenous vaccine reported a personal experience in which he suffered a very severe reaction following the subcutaneous injection of a 24 hour slant culture of a meningococcus heated to 65°C. for 30 minutes. Shortly after inoculation, nausea and vomiting were followed by a severe chill, lasting half an hour, and then intense headache, muscular pain, purging, and vomiting of bile. His temperature rose to 103°F., and during the remainder of the day, and in the night following, nausea and vomiting continued, with headache, thirst, and marked prostration. Later symptoms included a diffuse rash, herpes, and in the urine granular, hyaline, and epithelial casts. The reaction subsided gradually. The leukocytes rose to 44,050 on the 3rd day, and the opsonic index reached 2.3 on the 2nd day, returning to normal by the 5th day.
- Sophian and Black n studied agglutination and complement fixation in serum specimens from ten students who had been vaccinated with two or three doses of a monovalent vaccine. The doses given were 500 or 1,000 million, 1,000 or 2,000 million, and 2,000 million cocci, at 7 day intervals. Their vaccine had been heated to 50°C. for 1 hour. Following the vaccinations they noted malaise, frontal headache, and slight fever with occasionally more severe symptoms; intense frontal or vertical headache, general bodily pain, nausea, vomiting, and a rise of temperature to 102-104°F. Labial herpes was seen. Using a readily agglutinable organism, they found the agglutinin titers of the sera of their vaccinated subjects to range from 1 : 200 to 1: 1,500. Complement was fixed in serum dilutions up to 1 : 250.12 Complement-fixing antibodies were found in low dilutions of the serum of seven of

these men after an interval of 2 years.

- Sophian and Black refer to Hall's experience in Kansas City in the vaccination of about 280 persons in families in which meningitis had occurred. A number of doctors and nurses were likewise inoculated, and in no instance did the disease occur subsequent to vaccination. About 100 persons in Dallas were vaccinated, but most of them did not complete the vaccination series. Two nurses developed epidemic meningitis some weeks after a series of two inoculations; both recovered.
- Recently Whitmore, Fennel, and Petersen TM have reported an experience with a polyvalent lipovaccine in which total doses of 40,000 million or 80,000 million cocci were given subcutaneously in one or two injections. 55 men in all were vaccinated. 40,000 million cocci in one dose did not cause any general reaction. Two doses of 40,000 million cocci each at a 3 day interval were followed by two instances of constitutional reaction among 25 men. 5 men received 80,000 million cocci in a single injection which was followed after 24 hours by a moderate general reaction. In the first days after vaccination with the larger doses agglutinin formation was observed against three of the vaccine strains, especially those that respond to antibodies of both the normal and the para type.

These reports from the literature coincide with the present experience with meningococcus vaccine in their descriptions of the reactions that may be expected, and of the appearance of specific antibodies in the blood after vaccination. As Sophian and Black pointed out, the general symptoms indicate some degree of meningeal irritation and occasionally they may simulate the onset of meningitis. The symptoms are not progressive, however, and even though severe, they clear up in a few hours. In one instance in which a lumbar puncture was done on a suspect 3 days after a secdnd dose of vaccine the spinal fluid was found normal. The illness described by Davis is instructive to show the severity of the symptoms which may follow an injection of meningococcus substance many times the proper dose. Whitmore, Fennel, and Petersen, by protecting their vaccine in oil, were able to give much larger doses in a single injection with only moderate constitutional effects.

Whatever may be the relation of agglutinins to specific protection against invasion the agglutination test is recognized as the most reliable indication of antibody formation due to the meningococcus, and is used generally in the standardization of therapeutic sera as an index of potency. With equal reason the presence of agglutinins may be taken as an index of active immunization after vaccination. We do not know the ratio of agglutinin formation to protective power, and can only discover by wide experience what agglutinin titers correspond to relatively complete immunity to meningococcus invasion. It is perhaps significant, however, that the agglutinin titers of the sera of vaccinated men are of the same order of serum dilutions, namely 1 : 4 to 1 : 64+, as those of chronic carriers of the meningococcus, who are usually refractory to the strains carried. A study of the blood of cases of meningitis which have recovered without serum treatment might be instructive in this connection.

Meningococcus agglutinins appear not to have been found previously in the blood of chronic carriers. Cathoire, (14) in a brief communication, reported that the agglutinin study of carrier sera led to no positive result, but with the Wright technique he was able to show a constant increase in opsonic power compared with sera from normal persons, and he therefore concluded that the relative immunity of carriers is to be explained by a specific change in the serum.

Herrick (15) thinks that the occurrence of relapses in some cases of epidemic meningitis "lends discouragement to vaccine prophylaxis and other measures for the production of immunity." It should be pointed out that relapses are probably caused by reinfection from small pockets in the meninges in which the meningococcus has been walled off, and so permitted to survive therapeutic measures otherwise effective. It may be mentioned in passing that the occurrence of relapses in typhoid fever has been no contraindication to the employment of typhoid prophylaxis. The object of prophylactic vaccination is to oppose the meningococcus at the threshold, and if a systemic invasion precedes the spinal infection, as recent observations tend to show, the building up of antibodies in the blood stream is the means by which a hematogenous incursion is to be combated.

SUMMARY.

1. A meningococcus vaccine suspended in salt solution has been given subcutaneously as a prophylactic to about 3,700 volunteers in three injections of 2,000 million, 4,000 million, and 4,000 or 8,000 million cocci at weekly intervals.
2. These doses rarely caused more than the mildest local and general reactions. Exceptionally a more severe reaction emphasized the presence of an unusual individual susceptibility to the vaccine. In such instances the symptoms were in part those of meningeal irritation and sometimes simulated the onset of meningitis.
3. Specific meningococcus agglutinins have been demonstrated in the blood serum of vaccinated men as compared with normal controls.
4. Moreover, agglutinins have been demonstrated in the blood serum of chronic carriers of the meningococcus. Evidence is thus brought forward that the relative immunity of chronic carriers to epidemic meningitis may be due to the presence of specific antibodies in the blood stream.

(9) Gates, F.L., Antibody production after partial adrenalectomy in guinea pigs, J. Exp. Med., 1918, xxvii, 725
(10) Davis, D. J., Studies in meningococcus infections, J. Infect. Dis., 1907, iv, 558.
(11) Sophian, A., and Black, J., Prophylactic vaccination against epidemic meningitis, J. Am. Med. Assn., 1912, lix, 527. Black, J. H., Prophylactic vaccination against epidemic meningitis, J. Am. Med. Assn., 1914, lxiii, 2126.
(12) Such figures must be accepted with reserve. They are far higher than laboratory experience would lead one to expect after such prophylactic doses of a meningococcus.
(13) Whitmore, E. R., Fennel, E. A., and Petersen, W. F., An experimental investigation of lipovaccines: a preliminary note, J. Am. Med. Assn., 1918, lxx, 427.
(14) Cathoire, E., Recherche du pouvoir opsonisant du s~rum des porteurs sains de m~nlngocoques, Compt. rend. Soc. biol., 1910, lxix, 240.
(15) Herrick, W. W., The intravenous serum treatment of epidemic cerebrospinal meningitis, Arch. Int. Med., 1918, xxi, 541.

Evidence Timeline

1916 (Dec 02) - Vaccine attempt for animals to help with Shipping Fever ?

Full page - [HN00W6][GDrive]

THE PACIFIC COMMERCIAL ADVERTISER, HONOLULU, SATURDAY, DECEMBER 2, 1916.

Territorial Market

SHIPPING FEVER VACCINE IS HERE

To Cure Disease Causing Loss of Kona Cattle and Honolulu Hogs

In his report to the board of agriculture and forestry Dr. V. A. Norgaard states that hemorrhagic septicemia, otherwise known as "shipping fever," has gained quite a foothold in Hawaii. It especially affects young cattle and hogs.

The disease was first observed here about four years ago in a shipment of cattle from Hawaii. At the same time the first reports of its appearance as an epidemic were received from a half dozen of the States.

Worst in Kona

The Kona side of Hawaii is most seriously infected, even though no outbreaks have been reported direct from there. But nearly every case which has come under observation here can be traced more or less directly to Kona. Unusual heavy shipments of cattle have arrived from Kona and a number of them have had dead or dying cattle at the time of arrival, one shipment as high as five head. These deaths cannot be attributed to rough weather or hard handling, although shipping undoubtedly accelerated the development of the disease.

Hogs that have died of the disease here in Honolulu have been among animals fed on slaughter house offal and in practically every case Kona cattle have been among those furnishing the refuse. In hogs the disease takes practically the same form as in cattle—extensive hemorrhages, pleuro-pneumonia and intense bloody inflammation of the intestines.

1916-12-02-the-honolulu-advertiser-pg-2-clip-shipping-fever-vaccine

Symptoms of Infection

Characteristic are the gelatinous exudations under the skin and in both chest and abdominal cavities, as well as the intense bluish-black discoloration of all lymph glands. The disease in hogs corresponds closely to what we used to call swine plague and does undoubtedly appear most frequently and in its most fatal form where the hog cholera infection is present. Had that been the case here the flocks where the disease appeared would undoubtedly have been wiped out in short order.

Medical treatment is of little or no value. An effort to check one of the outbreaks by means of large injections of hog cholera serum gave doubtful results. About thirty head out of more than seventy died, even though but few were affected at the time of treatment. It is, of course, impossible to say how many would have died had this treatment not been resorted to. In a smaller flock, about thirty head, two of the worst ones, were treated similarly. One of these died and one is still alive. Of the remainder, untreated, more than two-thirds are dead and some sick.

This is the disease that almost wiped out the herds of buffalo and elk in Yellowstone National Park, and at the time of that epidemic the federal animal husbandry specialists at Washington developed a vaccine which was effective in controlling the epidemic.

Vaccine Now Here

Doctor Norgaard cabled to the Cutter Laboratories in Berkeley for fifty boxes of the vaccine, which arrived on November 21. This vaccine is prepared for cattle but may possibly prove effective for hogs also. In any case it constitutes the only therapeutic and preventive measure, beyond sanitary and hygienic precautions, which seems to hold out any promise of success. The disease is, however, known to disappear as suddenly as it appears, but the very fact that the organism causing it is, so to speak, ubiquitous, makes all effort at eradication seem more or less futile. It is the only known infectious disease which may originate spontaneously—it does not have to be introduced. The infection is here and everywhere, but it becomes disease producing only under certain obscure circumstances on the disappearance of which the infectious agent again becomes innocuous.

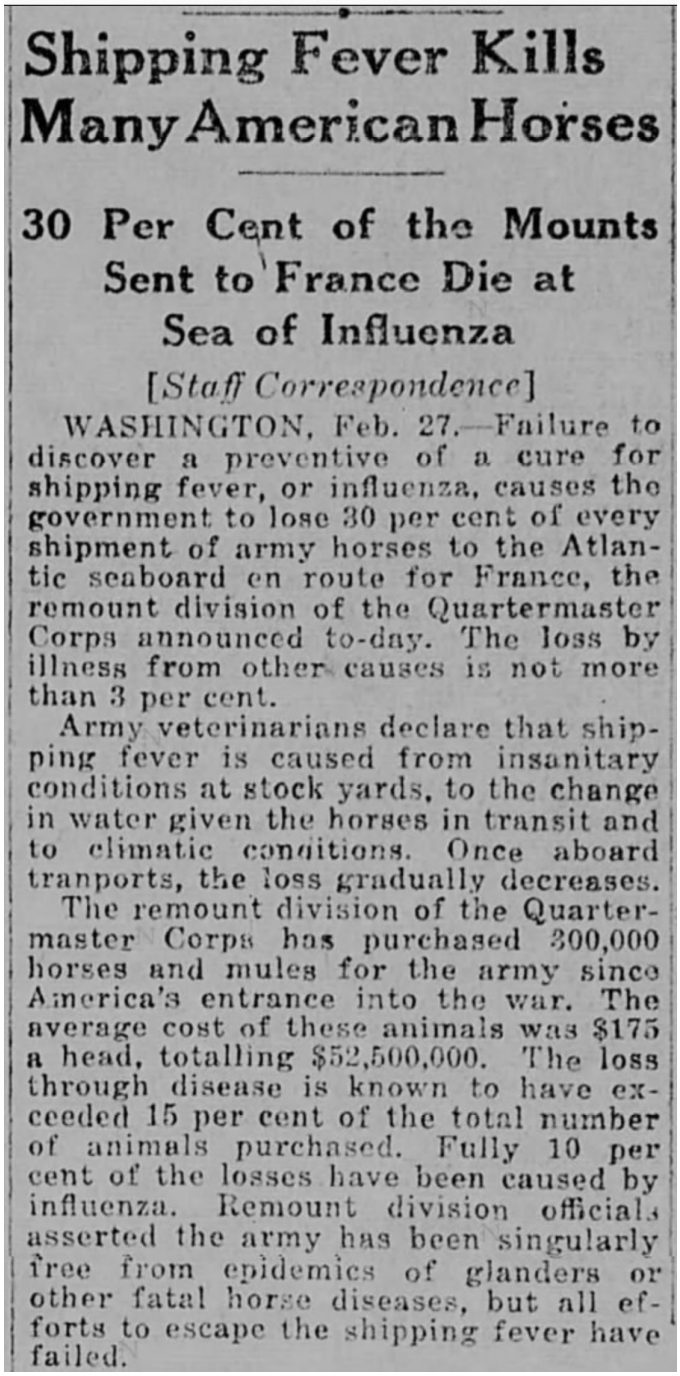
Neither horses, dogs nor poultry is exempt from the disease, but fortunately human beings seem to be immune. It is, therefore, of importance that all poultry be kept away from the hog yards where the disease appears.

[HN00W7][GDrive]

1918 (Feb 28) - "shipping fever" killing horses

Full page - [HN00W8][GDrive]

New-York Tribune (New York, New York) • 28 Feb 1918, Thu • Page 4



Shipping Fever Kills Many American Horses

30 Per Cent of the Mounts Sent to France Die at Sea of Influenza

[Staff Correspondence]

WASHINGTON, Feb. 27.—Failure to discover a preventive of a cure for shipping fever, or influenza, causes the government to lose 30 per cent of every shipment of army horses to the Atlantic seaboard en route for France, the remount division of the Quartermaster Corps announced to-day. The loss by illness from other causes is not more than 3 per cent.

Army veterinarians declare that shipping fever is caused from insanitary conditions at stock yards, to the change in water given the horses in transit and to climatic conditions. Once aboard tranports, the loss gradually decreases.

The remount division of the Quartermaster Corps has purchased 300,000 horses and mules for the army since America's entrance into the war. The average cost of these animals was $175 a head, totalling $52,500,000. The loss through disease is known to have exceeded 15 per cent of the total number of animals purchased. Fully 10 per cent of the losses have been caused by influenza. Remount division officials asserted the army has been singularly free from epidemics of glanders or other fatal horse diseases, but all efforts to escape the shipping fever have failed.

[HN00W9][GDrive]

1918 (Mar 1)

Full page - [HN00WA][GDrive]

Fall River Daily Evening News (Fall River, Massachusetts) · 01 Mar 1918, Fri · Page 5

SHIPPING FEVER KILLS MANY AMERICAN HORSES.

30 Per Cent. of the Mounts Sent to France Die at Sea of Influenza.

Washington, Feb. 28.—Failure to discover a preventive or a cure for shipping fever, or influenza, causes the government to lose 30 per cent. of every shipment of army horses to the Atlantic seaboard en route for France, the remount division of the Quartermaster Corps announced yesterday. The loss by illness from other causes is not more than 3 per cent.

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The army soon will go into the market for the purchase of sufficient horses to mount the seven regiments of cavalry now being organized at Southern posts. All are to be purchased directly from farmers and breeders. Heretofore 90 per cent. of the animals have been brought from horse dealers because the Quartermaster Corps did not have enough officers to send to individual farms in quest of animals.

The Central States, with Kansas City as the chief army market, furnished most of the 300,000 animals purchased last year by the department. Artillery animals came from the North Central States, chiefly from Iowa and Nebraska. Ninety per cent. of the mules in the army were furnished by Missouri, with Oklahoma and Texas furnishing the remainder.

Display a menu

[HN00WB][GDrive]

1918 (March 12)

Full page - [HN00WC][GDrive]

Grippe!

The attack of grippe is so ferocious that it often makes invalids of strong men and women. The blood is robbed of its richness and redness. Thus the whole body is deprived of its chief means of nourishment and sustenance. Hence it is vitally important that convalescence begin with the blood.

In one European country, the grippe is known as "*Lightning-catarrh.*" There could be no better name to describe the speed with which the grippe germs first attack the air passages, then sweep through the system in a destroying horde, pillaging the blood, ravaging the vital organs, laying waste to health and strength. No form of illness is more acute or exhausting, and the initial attack is followed by debility which often lasts for several months.

Gude's Pepto-Mangan

"The Red Blood Builder"

Will help you to get well

Study this picture so you will know how genuine Pepto-Mangan looks

Friendly Warning

There are many imitations of Pepto-Mangan on the market, but you can be sure of getting the genuine if it bears the name "Gude" and is put up in the bottle and sealed package as pictured here. Ask for it by its full name—"*Gude's Pepto-Mangan.*" For sale at all drug stores.

Whether in the prevention of or convalescence from grippe, the blood must play an important role. The man or woman with rich, red blood stands the best chance to pass immune through an epidemic, because the *germicidal* power of pure, vigorous blood—that is to say, its power to destroy the germs of sickness and thus prevent their gaining a foothold in the system — is very high. And it is only through the systematic upbuilding of the blood that the grippe convalescent can recover from his debility and fully regain his former strength, vitality and working capacity.

To prevent the grippe, or to assist convalescence if you already have had the grippe, make sure of regular exercise, sleep, rest, an abundance of fresh air and a well balanced diet. Also fortify your blood and your body with *Gude's Pepto-Mangan*, "The Red Blood Builder."

Gude's Pepto-Mangan increases the number of the red blood cells and their capacity to rid the blood of poisons and to carry renewed strength — in the form of oxygen—from the lungs to every cell and tissue of the body. *Gude's Pepto-Mangan* is a splendid general tonic and appetizer. It is easily digested and assimilated and exceedingly pleasant to taste. Universally used and prescribed by the medical profession for run-down, bloodless and anemic people of all ages and conditions.

Pepto-Mangan is made only by

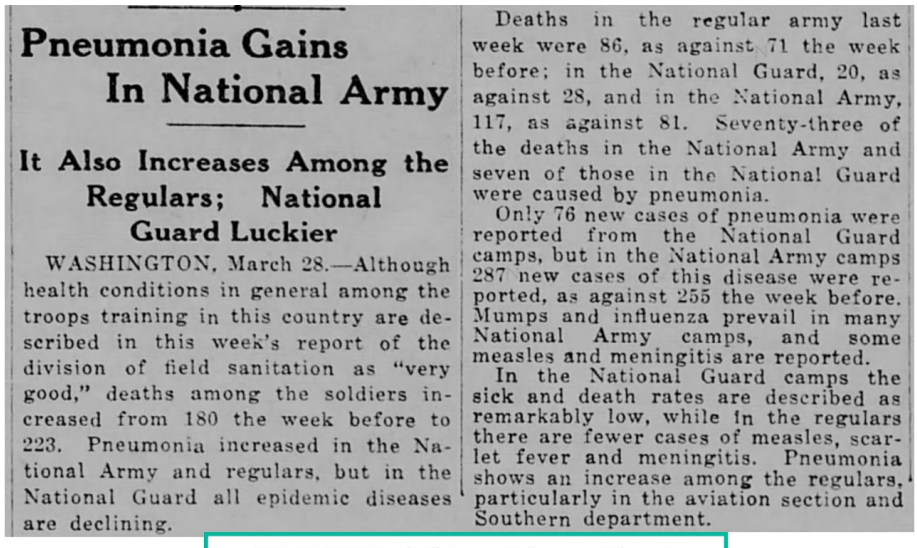
M. J. BREITENBACH COMPANY, Manufacturing Chemists, NEW YORK

1918-03-12-nytimes-pg-15-clip-grippie-pepto-ad

[HN00WD][GDrive]

1918 (March 29)

Full page - [HN00WG][GDrive]



Pneumonia Gains In National Army

It Also Increases Among the Regulars; National Guard Luckier

WASHINGTON, March 28.—Although health conditions in general among the troops training in this country are described in this week's report of the division of field sanitation as "very good," deaths among the soldiers increased from 180 the week before to 223. Pneumonia increased in the National Army and regulars, but in the National Guard all epidemic diseases are declining.

Deaths in the regular army last week were 86, as against 71 the week before; in the National Guard, 20, as against 28, and in the National Army, 117, as against 81. Seventy-three of the deaths in the National Army and seven of those in the National Guard were caused by pneumonia.

Only 76 new cases of pneumonia were reported from the National Guard camps, but in the National Army camps 287 new cases of this disease were reported, as against 255 the week before. Mumps and influenza prevail in many National Army camps, and some measles and meningitis are reported.

In the National Guard camps the sick and death rates are described as remarkably low, while in the regulars there are fewer cases of measles, scarlet fever and meningitis. Pneumonia shows an increase among the regulars, particularly in the aviation section and Southern department.

1918-03-29-new-york-tribune-pg-7-clip-pneumonia-army

[HN00WH][GDrive]

1918 (April 7)

Full page - [HN00WI][GDrive]

WADSWORTH HAILS LOAN WITH PARADE

Fifty-third Infantry Brigade Marches Through Streets of Spartanburg.

CAMP'S SICK RATE JUMPS.

Influenza Epidemic Reduces Ratio of Effectives.

(Special to The Standard Union.)

CAMP WADSWORTH, Spartanburg, S. C., April 6.—The Fifty-third Infantry Brigade opened the Liberty Loan campaign to-day with a parade in Spartanburg. Besides the 107th and 108th Regiments of Infantry, the 106th Machine Gun Battalion and two ambulance corps took part.

The parade was reviewed by Major General O'Ryan and Brig. General Guy Carleton and their staffs.

The sick rate in camp took another jump during the week, due to an epidemic of influenza. The reports show 24.6 non-effectives per thousand for the week as against 22.7 per thousand for last week.

A provisional regiment, to be composed of all the machine gun units of the Twenty-seventh Division, under the command of Major Edward McLeer, divisional machine gun officer, will go to the rifle range at Glassy Rock next Tuesday for a course of instruction. The provisional regiment will march to the range and back.

The following promotions were announced to-day at division headquarters: Battalion Sergeant Major John A. McPike, of the 105th Machine Gun Battalion, to be second lieutenant, quartermaster corps, and ordered to Newport News, Va., for assignment to duty; Major Robert P. Wadhams, Medical Corps, to be Lieut. Colonel and assigned to command the 102d sanitary train, and Capt. Frank W. Sears, Medical Corps, assigned to the 102d ammunition train.

Three colonels reported to-day to Brig.-Gen. Guy Carleton, commanding the Provisional Depot for Corps and Army Troops. The colonels came here from the field officers' school at San Antonio. They were rendered surplus when the National Guard divisions were reorganized, and have been sent here for duty with the depot. As there are no vacancies at present, they have been temporarily attached to pioneer infantry regiments. The new colonels are Col. William A. Raupp, formerly of the Second Missouri Infantry, attached to the Fifty-sixth Pioneer Infantry; Col. Leroy K. Robbins, formerly of the Fifth Missouri, attached to the Fifty-fifth Pioneer Infantry, and Col. Maurice E. Finney, formerly of the Eighth Pioneer Infantry, attached to the Third Pioneer Infantry.

Three hundred men of the Medical Department arrived here to-day from Fort Oglethorpe, Ga. They were assigned to the sanitary detachments of the Pioneer Infantry regiments and the Anti-Aircraft Machine Gun Battalion. The Second and Fifty-third Pioneer Infantry regiments each received forty of the men and now have a full complement of men in their sanitary detachments. The new men are Regular Army and National Army men and have received training at the medical school at Fort Oglethorpe.

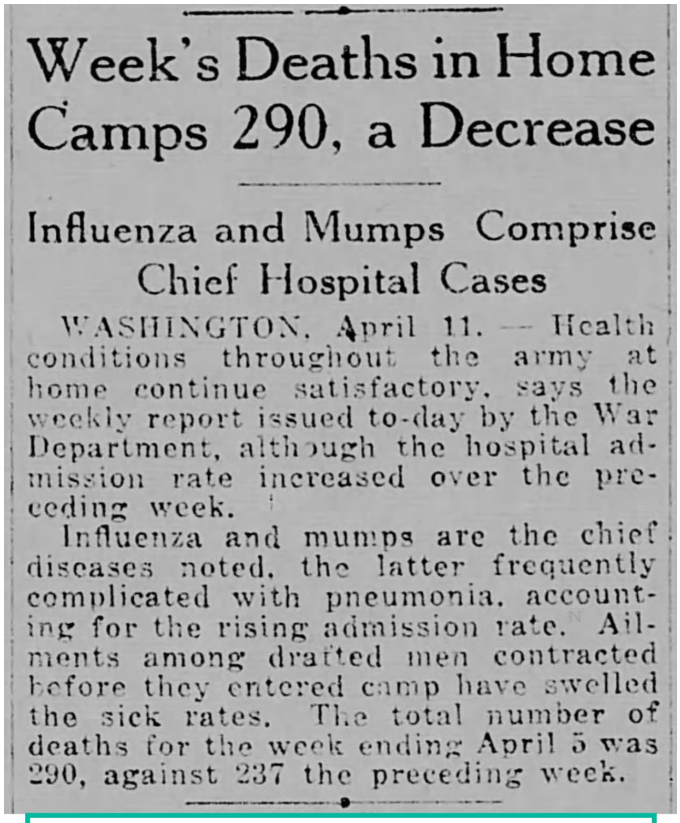
L. F. G.

1918-04-07-the-brooklyn-standard-union-pg-5-clip-parade

[HN00WJ][GDrive]

1918 (April 12)

Full page - [HN00WE][GDrive]



Week's Deaths in Home Camps 290, a Decrease

Influenza and Mumps Comprise Chief Hospital Cases

WASHINGTON, April 11. — Health conditions throughout the army at home continue satisfactory, says the weekly report issued to-day by the War Department, although the hospital admission rate increased over the preceding week.

Influenza and mumps are the chief diseases noted, the latter frequently complicated with pneumonia, accounting for the rising admission rate. Ailments among drafted men contracted before they entered camp have swelled the sick rates. The total number of deaths for the week ending April 5 was 290, against 237 the preceding week.

1918-04-12-new-york-tribune-pg-3-clip-army-influenza

[HN00WF][GDrive]

1918 (APril 21)

While shipping fever was high, the rate of death is noted as being DOWN thanks to new improved focused care

Full page - [HN00WK][GDrive]

The Great Increase In Army Horses

Breeders' Gazette: In ten months since war was declared the number of horses and mules in the United States Army has been increased from an original 66,145 to more than 350,000. Incidental to the purchase and care of so many animals, it has been necessary to build up a great system of officers, veterinarians and men to buy and handle horses. At the onset of hostilities the remount service had one officer and four clerks in Washington and a few purchasing agents. There were five remount depots. Its present strength is 300 officers and 11,000 enlisted men, and it has provided a total of thirty-four remount depots, with shelters, hospitals, storage houses and other equipment. The veterinary force has been increased from an original group of sixty-four officers and no enlisted men to the present organization of 1000 officers and 12,000 men, recruited from those without military experience. This construction of organization, system and equipment represents a gigantic task.

In handling so many horses there is a large unavoidable number of disabilities and deaths. The worst trouble is influenza or shipping fever. During the war the British have lost about 10 per cent of the horses purchased in this country, counting only those that died here. The French and Italian losses have been greater. None of the veterinarians has found a satisfactory way to deal with influenza. Medical treatment and vaccination are unreliable. The principal results are secured from sanitary measures and provisions for the care and comfort of the horses. Of course, these healthful conditions are difficult to secure in crowded and hastily provided quarters. During December and January the deaths of horses averaged weekly about 3 per 1000 head on hand. Steady improvement was noted and the deaths steadily declined from 5 per 1000 to about 2 per 1000 head. Even at that, during the six weeks ending January 12 the losses were 4777 head of horses and mules, valued at $835,975.

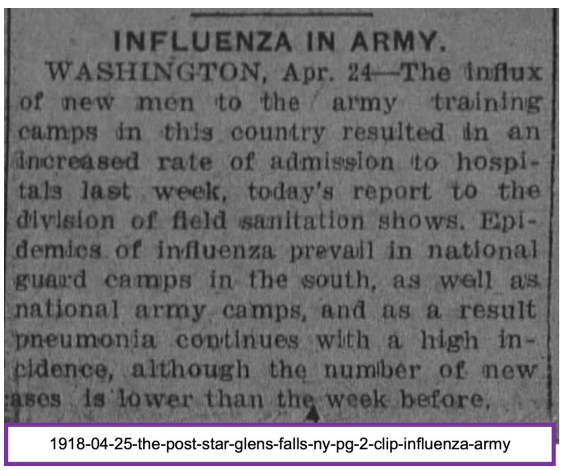
The steady improvement in the health of the horses is ascribed to the completion of quarters, the experience of officers and men, the increasing veterinary supplies, the establishment of hospitals at railroad centers, the prevention of infection so far as possible by sanitary measures, and the co-operation of other authorities in disinfecting cars and stockyards. With so many trained minds bent upon the successful management of horses under crowded conditions, it is probable that some improvement will be worked out in present methods of dealing with shipping fever. This disease has done more than all else to injure the horse business in America.

1918-04-21-san-francisco-chronicle-pg-3-army-horses

[HN00WL][GDrive]

1918 (april 25)

Full page - [HN00WM][GDrive]



INFLUENZA IN ARMY.

WASHINGTON, Apr. 24—The influx of new men to the army training camps in this country resulted in an increased rate of admission to hospitals last week, today's report to the division of field sanitation shows. Epidemics of influenza prevail in national guard camps in the south, as well as national army camps, and as a result pneumonia continues with a high incidence, although the number of new cases is lower than the week before.

1918-04-25-the-post-star-glens-falls-ny-pg-2-clip-influenza-army

[HN00WN][GDrive]

1918 (June 22) - Spanish flu impacting German Army

Full page - [HN00WO][GDrive]

Spanish Influenza Is Raging in the German Army; Grip and Typhus Also Prevalent Among Soldiers

LONDON, June 26. Influenza is now epidemic all along the German front, according to advices received from the Dutch frontier, and the prevalence of this ailment is said to be hampering the preparations for offensive operations.

The proportion of men sent to hospitals on account of influenza has risen rapidly in all the German units in the last few days, and special hospitals are being established in the rear areas dealing solely with this disease.

Thus far only the more serious cases have been sent to the hospitals, but the German army doctors say that, unless even the light cases are removed from the units, it will be difficult to prevent further spread of the epidemic.

The disease prevalent in the German Army is reported to be of the new Spanish type, which recently broke out in Berlin and other German cities, and is presumed to have been brought to the trenches by men returning from leave.

In the German cities the disease has been very hard to deal with owing to the shortage of doctors and the conditions of undernutrition among the city populations.

WITH THE BRITISH ARMY IN FRANCE, June 26. (Associated Press.) German troops on the western front are suffering from an epidemic of grip, which incapacitates them for a week or ten days. There are also many cases of typhus and dysentery within the German lines southwest of Lille.

There is no evidence, however, that these illnesses are responsible for the delay of the new offensive. It is believed that the German High Command has nearly completed its preparations for the next great attack against the allied front.

[The prevalence of influenza and dysentery among the German troops on the western front was reported by Philip Gibbs in THE TIMES of Tuesday last.]

2018-06-27-nytimes-pg-1-spanish-infliuenza-raging-in-german-army

1918 (may 28)

Full page - [HN00WQ][GDrive]

Dunkirk Evening Observer (Dunkirk, New York) · 28 May 1918, Tue ·

KING ALFONSO IS ILL WITH PLAGUE

Mysterious Disease Resembling Influenza Has Affected 40 Per Cent. of Spain's Population.

Madrid, May 28.—A mysterious plague is sweeping Spain. It is estimated that 40 per cent of the population is affected. The disease resembles influenza. So far there have been no known fatalities, but the greatest alarm is felt.

King Alfonso is confined to his bed and it is feared he is a victim of the plague. The premier and the ministers of finance, education and marine, and the under foreign secretary are also suffering from the disease.

Many business places have been forced to shut down. The minister of war suspended the military maneuvers scheduled for this time.

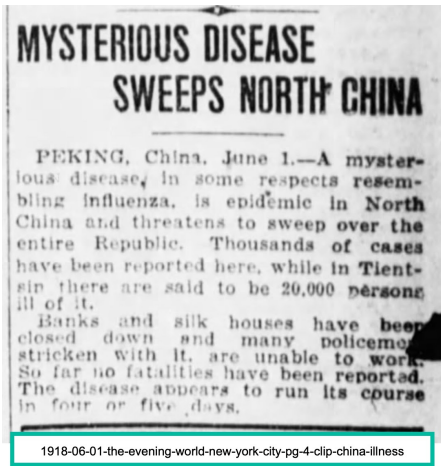
[HN00WR][GDrive]

1918 (May 31) - "Flu" takes the life of Frederick Trump Sr, in New York City

see Frederick Trump (born 1869)

1918 (June 1) - North China

Full page - [HN00WS][GDrive]



MYSTERIOUS DISEASE SWEEPS NORTH CHINA

PEKING, China, June 1.—A mysterious disease, in some respects resembling influenza, is epidemic in North China and threatens to sweep over the entire Republic. Thousands of cases have been reported here, while in Tientsin there are said to be 20,000 persons ill of it.

Banks and silk houses have been closed down and many policemen stricken with it, are unable to work. So far no fatalities have been reported. The disease appears to run its course in four or five days.

1918-06-01-the-evening-world-new-york-city-pg-4-clip-china-illness

[HN00WT][GDrive]

1918 (Nov 13) - Medical Officers training camp - Fort Riley

Full page - [HN00X6][GDrive]

[HN00X7][GDrive]

The official narrative has drifted on the Spanish Flu of 1918 - Here is an evidence timeline

1963 - spanish flu started in europe

https://www.newspapers.com/image/38205924/?clipping_id=46586346

1987 - probably from swine *might have originated in america

https://www.newspapers.com/image/527918795/?terms=%22spanish%2Bflu%22

1989 - flu is named where first outbreak is seen]

https://www.newspapers.com/image/91997795/?terms=%22spanish%2Bflu%22

1989 -

https://www.newspapers.com/image/508216482/?terms=%22spanish%2Bflu%22

"incubatedin the trenches in europe"

1997

https://www.newspapers.com/image/522209554/?terms=fauci%2Bspanish%2Bflu

2002 - it was TOTALLY NATURAL

https://www.newspapers.com/image/351594399/?terms=fauci%2Bspanish%2Bflu

2003

https://www.newspapers.com/image/268775519/?terms=fauci%2Bspanish%2Bflu

2005 - CDC still says spanish flu started with birds

https://www.newspapers.com/image/33690023/?terms=%22spanish%2Bflu%22

No source - BIrds !

https://www.newspapers.com/image/244030580/?terms=fauci%2Bspanish%2Bflu

2009 - "Mild spring ourvreak"

https://www.newspapers.com/image/632535361/?terms=fauci%2Bspanish%2Bflu

Taubenberger - traced it back to kansas ... but still, "nobody knows for sure where it came from"

https://www.newspapers.com/image/505465301/?terms=fauci%2Bspanish%2Bflu

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https://exhibits.lib.ku.edu/exhibits/show/world-war-one/medical-officers--training-cam

2020-univ-kansas-exhibits-website-ww1-medical-officers-training-camp-img1.png / https://drive.google.com/file/d/12ve-ye-5jbttwwRy8lJuMoADBo4Th5y4/view?usp=sharing

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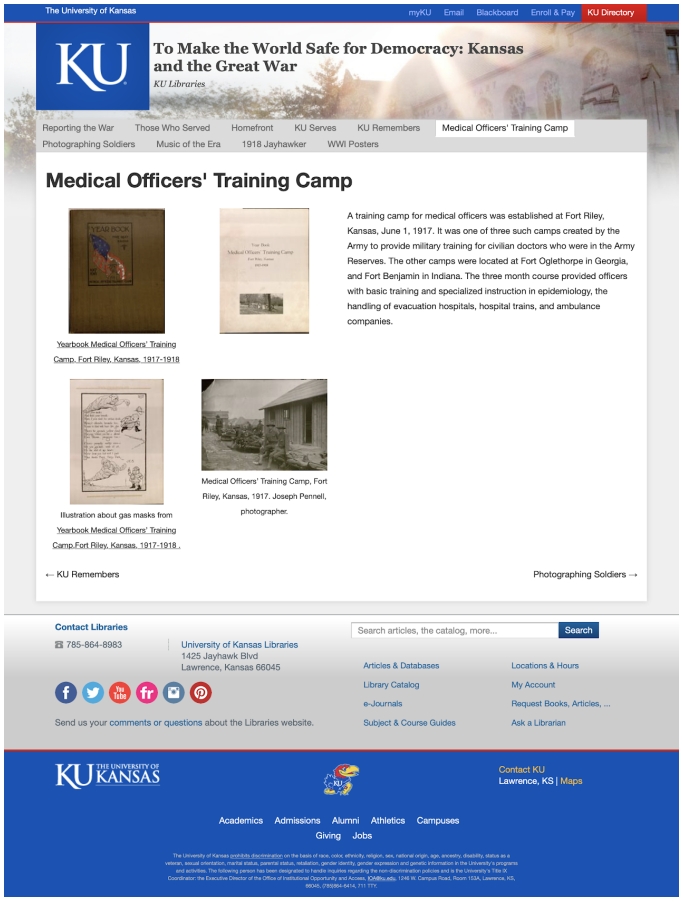
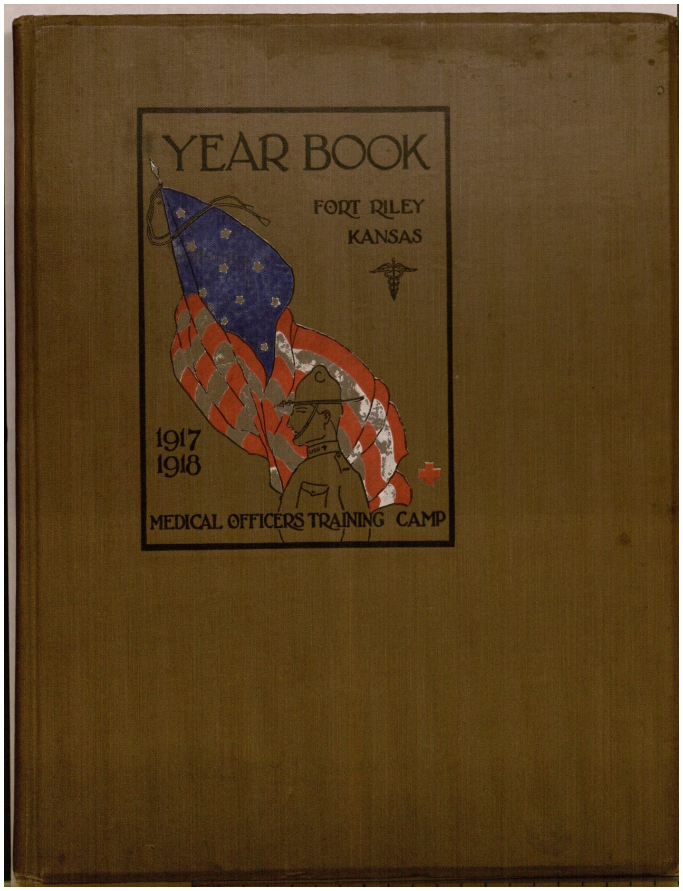
A training camp for medical officers was established at Fort Riley, Kansas, June 1, 1917. It was one of three such camps created by the Army to provide military training for civilian doctors who were in the Army Reserves. The other camps were located at Fort Oglethorpe in Georgia, and Fort Benjamin in Indiana. The three month course provided officers with basic training and specialized instruction in epidemiology, the handling of evacuation hospitals, hospital trains, and ambulance companies.

Book - “Yearbook, Fort Riley, Kansas. Medical Officers Training Camp, 1917-18.,” *KU Libraries Exhibits*, accessed July 7, 2020, https://exhibits.lib.ku.edu/items/show/7107.





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https://history.amedd.army.mil/booksdocs/wwi/VolVII/frontmatter.html

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2017-09-usa-national-archives-prologue-magazine-tonys-lab-ww1-germ-warfare.pdf

"Tony's Lab"

Germ Warfare in WWI Used on Horses in the U.S.

Fall 2017, Vol. 49, No. 3

By David Pfeiffer

Enlarge

A shipment of horses at a New York City rail yard, 1918. (165-WW-280A-050)

On a chilly November night in 1915, a dockhand crept silently through the darkness near the Newport News, Virginia, shipyard as he approached dockside corrals filled with horses destined to board British or French transport ships headed for Europe to aid in the Allied war effort.

As he neared the Breeze Point wharf, he carried a brown paper package and rubber gloves. He snapped on the gloves and removed from the package two glass syringes containing a yellow liquid.

The dockhand, a stevedore named John Grant, checked out the hundreds of horses and mules in the British remount depot. Taking care to avoid the night watchmen, he went to the first mule corral. Then he jabbed the needles into the hides of as many mules that he could reach. After jabbing many horses in two pens, he dumped the rest of the liquid in the animal's water basins and food troughs and threw the gloves and syringes into the river.

During 1915–1916, thousands of horses and mules were killed in these horse pens. The yellow liquid, which carried the glanders bacteria, had been cooked

up in what was known as “Tony’s Lab” by an American-born German agent named Anton Dilger.

German espionage and sabotage in the United States was going on long before the United States formally entered the war in April 1917. Dilger’s work was just one of many ways the Germans sought to undermine America’s ability to aid its allies. Fewer horses and mules would make moving artillery and other war materiel much more difficult; it had become a strategic priority for Germany.

Anton Dilger’s Early Life Spent Around Horses, Riding

Enlarge

Anton Dilger’s passport photo, attached to his 1916 application. (National Archives, RG 76)

Dilger was born on a horse farm, named Greenfield, near Front Royal, Virginia, on February 13, 1884. He was the son of Hubert Dilger, a German immigrant and a U.S. Army captain who had received the Medal of Honor for his service as a horse artillery officer at the Battle of Chancellorsville in the spring of 1863.

Hubert Dilger, an expert horseman, was instrumental in saving Union forces in the fighting retreat of General Hooker’s troops during Confederate General Stonewall Jackson’s flank attack at the end of the battle. The Confederates won the battle but did not destroy Hooker’s army, due partly to the efforts of Captain Dilger.

At Greenfield, Anton was taught to ride and to hunt and fish. He was also well acquainted with German culture. Four of his sisters married Germans and moved back to Germany. As a boy, Anton idolized his famous great grandfather on his mother’s side, Dr. Freidrich Tiedemann, known as the “great physiologist of Heidelberg.”

Anton’s grandfather was also a German medical doctor, so, unsurprisingly, Anton was sent, at the age of nine, to study in Germany. He stayed at his sister Edna’s house in Mannheim and enjoyed a comfortable life in Germany.

He passed the medical exam at the University of Heidelberg in 1908 and by 1909 was an assistant at the university surgical clinic while researching his doctoral dissertation. While studying microbiology and germ culture, he learned how to set up a tissue-culture lab. Ironically one of his challenges was how to prevent bacterial infections in animal tissue cultures. Later, in Washington, D.C., he applied his expertise for the opposite purpose.

German Government Shows Interest in Dilger as Agent

Dilger received his doctoral degree in 1912, a year after Hubert Dilger died. Greenfield farm was in decline, and the family sold off part of the farm to the U.S. government. During the years before World War I, it became part of a U.S. Army Remount Depot, where the Army gathered, evaluated, and trained warhorses.

The young and handsome Doctor Dilger cemented his reputation back in Germany as a superb surgeon and a ladies man. Once war arrived, Dilger served in military hospitals performing battlefield surgery in Serbia and Bulgaria in 1914 and in Rastatt, Germany, in 1915. Seeing family members wounded and killed in the conflict hastened his conversion to a pro-German and anti-Allied outlook.

As a German patriot in possession of a U.S. passport, he was a prime candidate for recruitment by German intelligence to work in America.

According to German records, Dilger left Germany on September 29, 1915, working with the Imperial Prussian War Ministry in America.

Officially neutral, the United States provided loans and other goods and supplies to the Allies. Because America supplied hundreds of thousands of horses and mules to the war effort, the Prussian Imperial War Ministry was very interested in cutting off this supply.

Dilger, Brother, and Sister Leave Farm for Chevy Chase

Anton boarded the Dutch passenger liner *Noordam* in Amsterdam, bound for New York City and heading toward his final destination of Washington, D.C. Among the items he carried was a small briefcase filled with fragile glass test tubes that contained the basis for manufacturing the glanders germ. The glanders bacteria was a primary killer of horses and mules.

With the help of his sister Jo, who lived with her family in northwest Washington, D.C., he searched for a rental house where he could establish a physician’s office and set up a small laboratory for his experiments. He hung up his shingle but never saw any patients.

During a visit to Greenfield in December 1915, Anton persuaded his sister Em and his brother Carl to join him in Washington. He asked Em to be the housekeeper and Carl, a former beer brewer, to help in the lab. More importantly to Anton, she could be hostess and consequently discourage any possible gossip. Em had no idea that her brother was a German agent.

Carl had had his own brewery in Montana and knew how to propagate yeast and ferment vats of beer, a useful skill when it came to cooking up cultures. After Anton confided in him the nature of his mission, Carl was eager to help.

Anton settled in a two-story white brick house in the 5500 block of 33rd Street, NW, near Connecticut Avenue, not far from Chevy Chase Circle. Even in those days, Chevy Chase was a fast-growing and fashionable neighborhood, only six miles from the White House.

There was even a tramline connecting Chevy Chase with downtown. Because Chevy Chase was a new neighborhood with lots of strangers, Anton could easily blend in. Most important, the house had a spacious basement with a separate entrance that Anton could turn into a secret lab. It was a case of hiding in plain sight.

Anton Sets Up “Tony’s Lab”

Anton and Carl bought lab equipment and wire cages for the guinea pigs they would use to test the effectiveness of the poison they were to manufacture

Anton and Carl bought lab equipment and wire cages for the guinea pigs they would use to test the effectiveness of the poison they were to manufacture. They had an incubation oven, sterilizing machine, petri dishes and rows of glass vials. Later, Anton's associates would call the basement "Tony's Lab."

Enlarge

A poisoned horse at Covington, Kentucky. (111-SC-6991)

For several months, the brothers incubated vials of anthrax and glanders. They were careful not to touch the cultures, since the bacteria in the cultures could also kill men. At room temperature, the cultures would be effective for about a month.

When the cultures were ready to go, German agents (Abeteilung IIB) from Baltimore stopped by the house each week to pick them up. These German agents then delivered the cultures to ports on the East Coast, including Newport News, Norfolk, Baltimore and New York, where hired stevedores would secretly inject the animals or contaminate their food supplies with the deadly germs.

The German agent who picked up the cultures at the little house on 33rd Street was Capt. Frederick Hinsch, one of the leaders of the Baltimore group of German agents. To demonstrate the effectiveness of the cultures, Anton showed him the guinea pigs; they were listless and dying. Hinsch was satisfied. In exchange for the cultures, Hinsch handed over a few thousand dollars to cover expenses, such as equipment, glassware purchases, house rental, and salaries for both Anton and Carl. The money came from Paul Hilken, the Baltimore paymaster.

The Baltimore group worked out of the offices of the North German Lloyd steamship line. Hinsch was charged with organizing dockhands, German sailors, and others for sabotage operations such as planting cigar bombs in U.S. ships carrying munitions, distributing flyers to get dockworkers to strike, and poisoning horses and mules being shipped to the Allies.

This was not the first German attempt at killing American horses. Agents earlier attempted to bomb or derail trains packed with horses or mules headed for British remount depots such as Newport News. In January 1915, the Germans planned to bomb transport trains in Canada that carried ammunition as well as warhorses. As it turned out, the cold Canadian winter made it difficult to lay the explosives.

New York City Police Increase Guards on Horses

Enlarge

Anton Dilger applied for a U.S. passport for his return to Germany in 1916. (National Archives, RG 76)

Enlarge

A letter recommendating that Anton Dilger be granted a passport. (National Archives, RG 76)

After another plan to bomb trains heading out of the Chicago stockyards went awry, the Germans turned to germ warfare as a more efficient method to stem the supply of horses and mules heading to the Allies.

An attempt at germ warfare in May 1915 did not work because the saboteur, Erik von Steinmetz, did not know enough microbiology to keep the cultures alive. It became evident to the German General Staff that they had to have an agent who knew bacteriology and knew what he was doing. That agent was Dr. Anton Dilger.

The Dilgers continued to operate their lab until January 29, 1916, when Anton suddenly returned to Germany using a new U.S. passport he had obtained so he could, as he told the Department of State, work as a doctor in Heidelberg. He had also gotten a letter of recommendation from an acquaintance in the U.S. Army Medical Corps.

What had happened?

Capt. Tom Tunney was a New York City police detective and head of the department's bomb squad assigned to investigate and apprehend the culprits in the bombing of buildings and ships in New York harbor. In the winter of 1915–1916, he gathered information concerning Steinmetz's attempted germ attack and wondered if the Germans were going to make another attempt. He had no suspects and no clues—nothing but the fear of another attack.

Captain Tunney ordered doubling the guards at the New York horse corrals and spread the word along the waterfront to be on the lookout for enemy agents who might attempt to poison the animals. He later found out that his vigilance succeeded in preventing a large-scale biological attack.

At a secret meeting in late January 1916, Hilken, being somewhat cautious, told Hinsch and Dilger that "They're on to us." He had learned from Paul Koenig, a German agent in the New York area, that New York police were asking questions around the harbor about plots to poison horses awaiting shipment to the Allies. There were also more guards around the horse corrals. At the meeting, Dilger was handed a cable that ordered him back to Berlin "for discussions." Anton had gotten his wish to get back to Germany, and Dilger's lab had succeeded in remaining undetected.

U.S. Agents Interview Anton, Deem Him Not a Traitor

After Anton left, Carl Dilger continued the work of the lab with Fred Herrmann, a good friend of Anton's, who had been living at the house. They added the manufacture of incendiary pencils and other explosives to their repertoire. Some of these incendiaries ended up being used in the Black Tom explosion in New Jersey, a munitions factory that supplied ammunition to the Allies

Because Carl tended to brag about his mission after having more than a couple of beers at the local taverns, Hilken and Hinsch pushed him out of the operation in May 1916. They sent him to Berlin with an important sealed message to the Political Section of the General Staff. The message was to keep Carl in Germany so that he could not undermine the sabotage operation in America, but the message was lost, and Carl continued in service delivering incendiary tubes. Herrman stayed on at the lab.

After the Black Tom explosion in July 1916 and the increased law enforcement scrutiny that followed, Herrmann decided to close up the lab and move to St. Louis. The St. Louis operation failed since Herrmann did not have Anton's medical and scientific knowledge, and the germ cultures died.

Enlarge

The Black Tom munitions depot in New Jersey was a prime target for saboteurs. Germany was eventually held accountable for the devastating explosion there. (111-SC-95793)

Amazingly, it was the local police, like Captain Tunney in New York, not the national law enforcement entities such as the Bureau of Investigation, the Secret Service, and Military Intelligence, that were most effective against German sabotage operations. Bureaucratic inefficiencies, lack of law enforcement authority, and lack of staff contributed to their failure.

For example, an agent of the Bureau of Investigation interviewed Anton Dilger in July 1917 while he was visiting one of his brothers at Greenfield. He had come to America to deliver secret coded messages from Berlin to German agents and diplomats. Later in July, he was interviewed again by another bureau agent while he was staying at his sister Jo's house in Washington. Again, this interview did not raise any red flags, the agent saying in his report that "Dr. Dilger is not a man who would be guilty of any traitorous acts towards this country." Anton Dilger had slipped through the bureau's fingers.

Anton Receives Iron Cross for His Service to Germany

Anton then went to Mexico to join with the other Baltimore-based agents, specifically Hinsch and Hilken, who had escaped the United States after the declaration of war in April 1917. Taking on the alias "Dr. Delmar," Anton's main mission from Berlin was to promote a Mexican invasion of the United States, and he raised money to finance the proposed campaign. Feuding among Anton, the German agents, and Berlin caused the campaign to fizzle, but Anton was still awarded the Iron Cross in January 1918 in recognition of his sabotage and espionage work.

Enlarge

Carl Dilger applied for a passport in 1916 to allow him to travel to Germany. (National Archives, RG 76)

Even so, Anton had made enemies both in Mexico and Berlin. Now in Spain, he feared that Allied investigators were finally catching up to him. Then came the Spanish influenza epidemic of 1918–1919, which killed possibly as many as 50 million people worldwide. On October 17, 1918, Anton Dilger died of influenza in Madrid at the age of 34. That was the official story. Ironically, he was a germ saboteur killed by an infectious disease.

There were problems with this version of events. Carl Dilger and Fred Herrmann later claimed that they suspected German agents had murdered Anton—that he had been poisoned "because he knew too much." In testimony years later to the Mixed Claims Commission, they alleged that Anton's cover had been blown and Allied agents were closing in. There is still some doubt whether Anton even died in Madrid in 1918. The details of his death remain murky to this day.

The Mixed Claims Commission, U.S. and Germany, was established in 1922 for the purpose of satisfying claims of the United States and its citizens against Germany since 1914. By 1933, most of the claims had been settled. The largest group of unsettled claims were the sabotage claims, which consisted of the 153 claims of U.S. citizens who suffered losses as a result of German sabotage in 1916–1917. The sabotage claims remained before the commission for more than 12 years, and due to German intransigence, it was not until 1939 that a decision was rendered in favor of the U.S. claimants.

According to later estimates, the German germ sabotage campaign in America killed thousands of horses during World War I. Even so, that number was not a significant factor in the war effort since more than over 750,000 horses were shipped to the Allies from America. This was the first modern germ warfare campaign in history. But it was not the last.

The story of Anton Dilger and "Tony's Lab" are filled with ironies. But the most notable one is that an American-born son of a Civil War hero, who loved horses and was an expert horseman, became a German agent whose germ cultures were responsible for the deaths of thousands of horses in the United States during World War I.

David A. Pfeiffer retired earlier this year after 40 years as an archivist at the National Archives, specializing in transportation and diplomatic records. Over the years, he has written a number of articles for *Prologue*, including the award-winning "Bridging the Mississippi: The Railroads and Steamboats Clash at the Rock Island Bridge" in Summer 2004. He holds a bachelor's degree from Ithaca College and a master's degree from George Mason University, both in history.

Note on Sources

The main primary source that I consulted was the records of the Mixed Claims Commission, United States and Germany, 1922–1941. The records are part of Record Group 76: Records of Boundary and Claims Commissions and Arbitrations housed at the National Archives at College Park in Maryland. The MCC records include a tremendous amount of information on the sabotage claims cases and their eventual settlement. The record series consulted for this article were the Records Relating to German Saboteurs and Their Activities, Chronological List of German Sabotage Activities, 1893–1927 (Entry 73), which has a great chronology of the surveillance of German agents, and the Records Relating to German Saboteurs (Entry 76). There are files on Anton and Carl Dilger, Frederick Herrmann, Paul Hilken, and Frederick Hinsch, and others. I also briefly checked the Testimony of Frederick L Herrmann and Theodore J. Wozniak, 1930 (Entry 79) and Testimony in Sabotage Cases, 1930 (Entry 82).

There are two agent reports on interviews with Anton Dilger during July 1917 in the Records of the Federal Bureau of Investigation (Record Group 65), Investigative Cases Files of the Bureau, 1908–1922 (Microfilm Publication M1085), Old German Files #33415 and #26601. These records are also at the National Archives at College Park.

My main secondary source was *The Fourth Horseman: One Man's Mission to Wage the Great War in America*, by Robert Koenig. This is the definitive work on Anton Dilger, and the author pieced together a great story of Dilger and World War I German sabotage. As he mentioned in his note to sources, there are many gaps in the records and his personal letters. And espionage is not usually well documented.

Other books consulted include the classic on German espionage, particularly Black Tom and Kingsland, by Jules Witcover titled *Sabotage at Black Tom: Imperial Germany's Secret War in America, 1914–1917*. See also *The Secret War on the United States in 1915: A Tale of Sabotage, Labor Unrest and Border Troubles*, by Heribert von Feilistzsch; *The Detonators: The Secret Plot to Destroy America and an Epic Hunt for Justice*, by Chad Millman; and the *Dark Invasion, 1915, Germany's Secret War and the Hunt for the First Terrorist Cell in America*, by Howard Blum. There is also a very good post in the WETA Boundary Stones blog, by Mark Jones titled "'Tony's Lab' and World War I Germ Sabotage in Washington."

I also consulted a book review on the *Fourth Horseman* by Jack Woodall titled "Bioterror Is Nothing New." And finally, I looked at a piece by Sarah McCammon

of NPR on April 6, 2017, called "The Unsung Equestrian Heroes of World War I and the Plot to Poison Them" (*www.npr.org/2017/04/06/522594344/the-unsung-equestrian-heroes-of-world-war-i-and-the-plot-to-poison-them*)

https://www.reuters.com/article/uk-factcheck-vaccines-caused-1918-influe-idUSKBN21J6X2

2020-04-01-reuters-com-false-claim-1918-influenza-pandemic-caused-by-vaccines.pdf

Housatonic Note - This "fact check" is correct !

Reuters Fact Check

April 1, 2020 / 5:38 PM / 3 months ago

False claim: the 1918 influenza pandemic was caused by vaccines

6 Min Read

Shared 582 times as of March 31, 2020, a 2018 post (here) on a page called "Stop Mandatory Vaccination" claims that "the 1918 Influenza Epidemic was a Vaccine-caused Disease." This claim is false.

The claim that the influenza pandemic of 1918 "was the after-effect of the massive nation-wide vaccine campaign" is unfounded. A vaccine against the flu did not exist at the time. According to the Centers for Disease Control and Prevention (CDC), having "no vaccine to protect against influenza infection and no antibiotics to treat secondary bacterial infections that can be associated with influenza infections" meant that "control efforts worldwide were limited to non-pharmaceutical interventions, such as isolation, quarantine, good personal hygiene, use of disinfectants, and limitations of public gatherings, which were applied unevenly." (here)

According to the CDC report "Achievements in Public Health, 1900-1999," prior to 1900, the vaccines for smallpox, rabies, typhoid, cholera and plague had been developed in the U.S. (see Table 1 here). The report states that "although the first vaccine against smallpox was developed in 1796, greater than 100 years later its use had not been widespread enough to fully control the disease… Four other vaccines -- against rabies, typhoid, cholera, and plague -- had been developed late in the 19th century but were not used widely by 1900."

It is true that U.S. soldiers during World War I were subject to immunization requirements. However, it is not true, as the post claims, that this was the first major conflict in which this happened. Published by the National Institute of Health (NIH)'s National Center for Biotechnology Information (NCBI) in 2018, a paper (here) called "The US Military Commitment to Vaccine Development: A Century of Successes and Challenges," says that "the first large-scale smallpox infection prevention campaign was conducted in 1777 by the Continental Army."

In addition, a 2006 paper called "Immunization to Protect the US Armed Forces: Heritage, Current Practice, and Prospects," published here by the Bloomberg School of Public Health at Johns Hopkins University, says that American servicemen underwent some version of smallpox immunization in the American Revolutionary War (1775-1783), the War of 1812, the Mexican-American War (1846-1848), the Civil War (1861-1865), and the Spanish-American War (1898). (See Table 2: "Immunizations used widely during major conflicts") During World War I, soldiers were given live smallpox and whole cell typhoid inoculations, as well as therapeutic tetanus and diphtheria antitoxins. "With a vaccine to shield troops from typhoid bacteria during the unsanitary conditions of World War I," the paper says, "a mere approximately 2,000 cases of typhoid fever, with 227 deaths, were reported among 4.1 million Americans in uniform.

Killing an estimated 675,000 Americans (virus.stanford.edu/uda/), the 1918 H1N1 flu pandemic (also referred to as the "Spanish Influenza" or "Spanish flu") was indeed the deadliest flu pandemic in modern history (here).

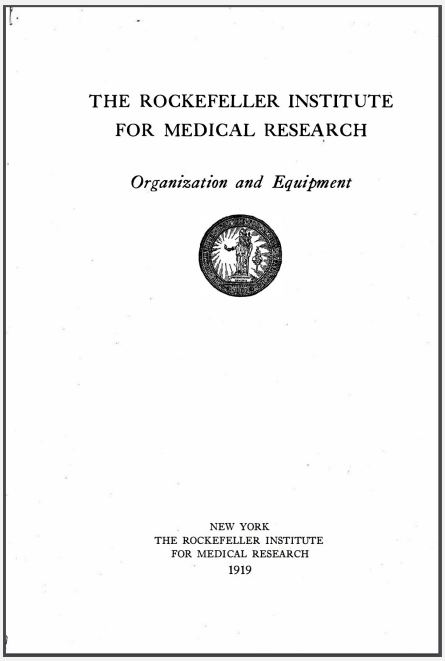
The outbreak of the "Spanish flu" was recorded in Spain in May 1918, several months before the November 11, 1918 armistice ending WWI. In the U.S., "it was first identified in military personnel in spring 1918" and that "crowded conditions and the movement of troops during World War I likely contributed to the spread of the 1918 virus around the world," according to the CDC (here , here).

The specific origins of the "Spanish flu" outbreak are unknown, but it is known to have been an H1N1 Influenza "with genes of avian origins" (here). In terms of geography, "France, China and Britain have all been suggested as the potential birthplace of the virus, as has the United States" according to the history channel (here).

Finally, the claim that "more of our men were being killed by medical shots than by enemy shots from guns" is unsubstantiated. There is no evidence to show any vaccine killed more men than "enemy shots from guns". According to a paper called "The U.S. Military and the Influenza Pandemic of 1918–1919," by the NCBI in 2010, it was "influenza and pneumonia [that] killed more American soldiers and sailors during the war than did enemy weapons." (here) The U.S. did not develop the first influenza vaccine until the 1940s (here) and the first pneumonia vaccine until 1977 (here).

1918 - THE ROCKEFELLER INSTITUTE FOR MEDICAL RESEARCH - Pamphlet

See [HI0011][GDrive]


THE ROCKEFELLER INSTITUTE
FOR MEDICAL RESEARCH

Organization and Equipment

NEW YORK
THE ROCKEFELLER INSTITUTE
FOR MEDICAL RESEARCH
1919

[HI0012][GDrive]

[...]

THE ROCKEFELLER INSTITUTE FOR MEDICAL RESEARCH

BUILDINGS AND EQUIPMENT - NEW YORK CITY

THE principal laboratory buildings of the Institute are situated on the cliff overlooking the East River, at the end of East 66th Street, New York City. The situation insures excellent light and air, and greater quiet than would be enjoyed in the more accessible and crowded central parts of the city. The central structure, the first erected (in 1905-06) (see frontispiece) is a laboratory and administration building with five floors and a light basement, and has a series of accessory rooms on the roof. It covers a ground area of 136 feet by 60 feet. Another laboratory building, containing six floors. and two basements and covering 150 feet by 62 feet of ground, shown at the left of the frontispiece, was opened in 1916. In both buildings each floor is arranged with laboratories and offices about a central corridor. The construction of both buildings is fire-proof and such , that all interior partitions can be altered or removed as occasion requires. Hot and cold water, steam, compressed air, suction, gas, and electric current are supplied to the laboratories. Refrigeration by means of a brine circulation is carried to central positions in the buildings and several large thermostats are a part of the construction. Pipes and drains, vents, and conduits, are exposed or carried through accessible ducts wherever possible, to facilitate inspection and alteration.

In addition to the laboratories these buildings provide administrative offices, an assembly room, library, publication division, a central supply room, illustration division, x-ray division, and facilities for section making, sterilization, and the making of culture media.

The animal house is an eastward extension of the new laboratory building. In it are kept small animals, such as rabbits, guinea pigs, monkeys, etc. There is also provision for ten horses and a smaller number of goats and sheep. Two cold rooms are arranged for aquaria. The building includes arrangements for the storage and preparation of foods, the repair and sterilization of cages, and the incineration of refuse. Walls and floors are finished so that they can be washed down with a hose. The cages are suspended on metal racks instead of being placed on the floor.

The hospital (see frontispiece) is a seven-story building, with two additional basement floors in the wall of the East River cliff, and a roof-house. It is connected by a covered bridge at the level of the third floor with a two-story and basement isolation pavilion, and with the laboratory building beyond. The first floor of the hospital provides for the administration and reception rooms, and for the quarters of the resident staff. The second floor is entirely occupied by the nurses' quarters. The third floor contains a number of small rooms for the accommodation of one or two patients each. The fourth, fifth, and half of the sixth floors are arranged for ward patients. The hospital is planned with the idea of enabling the staff and nurses to give an unusual amount of attention to each of a small number of patients. The general wards are for only six or eight beds each. The balconies at each end of the building are large enough to permit all the beds t0 be rolled out in pleasant weather. The seventh floor of the hospital and. half of the sixth are devoted to laboratories.

It is the policy of the hospital to engage each member of the staff in both clinical and laboratory work, and to provide ample laboratory facilities as near the wards as possible. On the roof is a small operating suite. On this floor also is a sun room for patients.

A power house built and operated by the Institute provides the buildings with heat, light, electric power, pressure, refrigeration, vacuum, and filtered water. It has reserve capacity for future buildings.

BUILDINGS NEAR PRINCETON, NEW JERSEY

[...]

WAR ACTIVITIES OF THE INSTITUTE

THE Institute was created to conduct, assist, and encourage research. It has left largely to other agencies the task of carrying into effect, on an extensive scale, discoveries and methods of immediate practical utility made and developed by its staff. But for the period of the belligerency of the United States the activities of the Institute were chiefly diverted to the service of our own nation and the other allied nations in their common struggle against the Central Powers.

Fortunately the Institute had made contributions looking toward the prevention and the curative treatment of disease which offered immediate application to the medical problems likely to arise in connection with the greatly enlarged personnel of the United States Army and Navy. For example, curative serums for epidemic meningitis and for one of the forms of pneumonia had been worked out here. Moreover, under the support of the Rockefeller Foundation, one of its members, Dr. Alexis Carrel, in conjunction with Dr. H. D. Dakin, had perfected at Compiegne, France, in the early period of the war, a method of treating infected surgical wounds, which had come to have wide applicability in practice. That important medical and allied problems would arise and call for investigation was also patent. The several laboratories of the Institute were so equipped in men and materials as to enable it to supplement the various research and otlJ.er laboratories at the command of the Government. All these resources were placed at the disposal of the Surgeon General and other governmental agencies, and were freely used by them during the war.

The war activities of the_ Institute may be divided into three classes: first, the establishment of teaching courses in the surgical treatment of wounds, in bacteriology, specific treatment of pneumonia, cardiography,. clinical chemistry, and the .technical side of bacteriology and histology; second, special research work in various aspects of bacteriology, immunology, biochemistry of antiseptics, chemotherapy, effects of poison gas, acetone formation, and the methods of preparing certain drugs of German origin employed as therapeutic agents; and third, the production of serum on a large scale for the treatment of meningitis, pneumonia, and dysentery.

TEACHING COURSES

1. **The Surgical Treatment of Wounds.-The War Demonstration**
    1. Hospital of the Institute was planned as a school in which to teach military surgeons the art of applying the Carrel-Dakin treatment. Moreover, it was considered desirable to erect in the United States a unit hospital which might serve in construction and equipment as a model for such structures to be established on the western front.
    2. The hospital was composed of double-walled and double-roofed wooden buildings of paneled and take-down construction. In order to make it useful not only for the practical aims of war instruction in surgery, but as a model of a small hospital unit which might be copied, as in fact it was repeatedly, the details of structure· and equipment were carefully attended to. Thus grouped conveniently about two central ward buildings (see frontispiece) each providing twenty-five beds, with necessary attendance and service facilities, were research and operating pavilions, kitchen, and mess-rooms for nurses and employees, laundry, laboratories, lecture rooms, executive_ offices, and storage, with separate dormitories for physicians, nurses, maids, and orderlies. These were all connected by covered corridors,_ the more essential of which were completely enclosed. Heat, light, and power were furnished from the Power House of the Institute. The wards were ventilated by ceiling louvres with fan sashes in the windows, which by a turn of the hand could be substituted by muslin screens. By the lowering of large panels in the sides of the wards these could be thrown open at will for air in hot weather, or as. □re escapes in an emergency.
    3. The patients in the hospital at first were drawn from the civilian community, and finally, as the wounded were returned from France to the United States, from the Army and Navy.
    4. The teaching staff of the hospital consisted of surgeons, bacteriologists, and chemists assigned by the Surgeon General of the Army for instruction purposes, and of French military surgeons commissioned by the French Ministry of War. The course of instruction for medical officers covered a period of two weeks. The number of army and navy officers and enlisted personnel of _various grades given instruction from the opening of the hospital in August, 1917, to its close in April, 1919, was about 1,100. Twenty□seven nurses and eighty-three civilians also received instruction.
2. **Courses in Bacteriology, Immunology, and Clinical Chemistry.**
    1. The fact was early recognized by the Directors of the Institute that the Surgeon General would make heavy demands upon the personnel of the bacteriological and clinical chemical laboratories of the I country. It was thought probable that the existing highly trained personnel would prove inadequate to meet the needs. On the other hand, the number of partially trained bacteriologists and clinical chemists in the United States among practitioners of medicine who had ·entered the United States service as commissioned medical officers and others was obviously much larger. Hence it was proposed to establish teaching courses in bacteriology, serology, and medical chemistry for the latter class of students.
    2. The Surgeon Generals of the Army and Navy gladly availed themselves of this suggestion and nearly 600 medical officers and others attended the courses. The classes were conducted largely by members of the scientific staff of the Institute, many of whom were commissioned officers in the army and assigned to this duty.
3. **Treatment of Pneumonia.**
    1. One of the most serious menaces to the health of our troops has been pneumonia. The serum developed at the Hospital of the Institute for the treatment of so called Type I pneumonia having been demonstrated to be efficacious, it was imperative that military surgeons of the United States should be familiar with the best methods of its application. Hence arrangements were perfected by which medical officers were sent as internes to the Hospital of the Institute, remaining there from six weeks to several months, during which period they learned the modern technique of diagnosis and specific treatment of the disease. The officers so trained were later assigned to base hospitals in this country and abroad.
4. **Cardiography.**
    1. A small number of specially qualified medical officers were given instructions in modern methods of studying the heart by means of graphic methods: electrocardiograph, polygraph, and x-ray. This course was interrupted by the assignment of its head (Dr. Cohn) to overseas service.
    2. The Institute Hospital and the War Demonstration Hospital were officially designated as United States Army Auxiliary Hospital No. 1, and the laboratories as United States Army Auxiliary Laboratory No. 1.

SPECIAL RESEARCH WORK

IN ADDITION to new questions which were investigated as they arose in connection with therapeutic serum manufacture on a large scale, to meet the emergency of war-time requirements, a number of special problems were taken up.

The special chemotherapeutic studies in progress at the Institute on the treatment of syphilis, the requirements of the Army and Navy in this respect, and

the possibility of devising a more effective and less costly drug than the German preparation salvarsan led to a promising series of laboratory and clinical studies not yet completed.

Among the other activities carried forward by members of the staff of the Institute were: important contributions to the methods of preparing a protective and curative serum for gaseous gangrene,- whose control became so serious a problem early in 'the war; the making of acetone in aircraft production, by a new process involving bacterial action; studies on the synthesis of drugs, leading to contributions on the manufacture of certain drugs having important uses in the medical service; studies on poison gases. When hostilities ceased, Dr. Carrel and his assistants brought to a close in France studies in hemorrhage and shock, well under way in his temporary hospital at St. Cloud to which they were driven by the German aggressions at Compiegne. A series of studies was undertaken on the occurrence and characters of hemolytic and other streptococci which had been found to be of _ serious import in certain pneumonias, complicating measles, and influenza, especially in military establishments.

Researches on pneumococcic and meningococcic vaccine and on meningitis carriers were carried on in the Institute in New York or in field studies in various military camps and cantonments.

SERUM PRODUCTION

In order to help meet the suddenly increased demand for the curative serums worked out at the Institute, a special stable for horses was quickly erected and a special and suitable laboratory staff assembled at the Department of Animal Pathology. In undertaking serum manufacture on a large scale, the officers of the Institute had another object in view; namely, the standardization of the product. This latter consideration became of high importance in establishing standards for the commercial produ□ers. Three kinds of curative serums were manufactured in quantity; namely, antimeningococcic,, antipneumococcic Type I, and antidysenteric (polyvalent). Other serums intended for diagnostic purposes, such as Types I, II, III, and IV antimeningococcic, and Types II and III antipneumococcic serums were produced in smaller amounts. The quantities of the several kinds of serums distributed are as follows: 939.40 liters, or 46,970 bottles (20 cc.) of antimeningococcic serum; 344.79 liters, or 3,447 bottles (100 cc.) of antipneumococcic serum; 78 .36 liters, or 3,918 bottles (20 cc.) of antidysenteric serum. The amounts partially include the various diagnostic serums issued.

Reference should be made to the fact that before the United States entered the war, the In□titute had resumed the preparation of antimeningococcic serum, in order to meet the requests from England, France, Belgium, Italy, and other countries.

BITCHUTE @Housatonic YOUTUBE @HousatonicLive ODYSEE @Housatonic BRIGHTEON @Housatonic

Housatonic

Arnold Meyer Spielberg (born 1917)

[HN018H][GDrive]

Wikipedia Arnold Spielberg

Born Arnold Meyer Spielberg February 6, 1917 in Cincinnati, Ohio, U.S. [HK0036][GDrive]

Died August 25, 2020 (aged 103) Los Angeles, California, U.S. [HK0036][GDrive]

Siblings include : Irvin Nathaniel Spielberg (born 1918)

Children 4 (including Steven and Anne) [HK0036][GDrive]

Also see : General Electric Mainframe Computers

Saved Wikipedia (Sep 24 2020) - Arnold Spielberg

Source - [HK0036][GDrive]

Arnold Meyer Spielberg (February 6, 1917 – August 25, 2020) was an American electrical engineer instrumental in contributions "to real-time data acquisition and recording that significantly contributed to the definition of modern feedback and control processes".[2] For General Electric[3] he designed, with his colleague Charles Propster, the GE-225 in 1959.[4] He cited the first computer-controlled "point of sale" cash register as his greatest contribution.[5] He was the father of film director Steven Spielberg.

Early life and career

Arnold Spielberg was born in Cincinnati on February 6, 1917.[6] He was of Jewish descent. His mother, Rebecca (née Chechick), was born in Sudylkiv, Ukraine; his father, Samuel, was born in Kamianets-Podilskyi, Ukraine.[7] They later immigrated to the United States, meeting and eventually marrying in Cincinnati.[8]

From the age of nine, Spielberg began building radios. He scrounged parts from garbage cans to assemble his first crystal receiver. "At 15, Arnold became a ham radio operator, building his own transmitter, a skill that proved fortuitous when he enlisted in the U.S. Army in January 1942, one month after the Japanese attack on Pearl Harbor, and joined the Signal Corps." After training as a radio-gunner for the Air Corps, his skills in the design of new airplane antennas elevated him to the position of Communications Chief of a B-25 Squadron in India.[5] During the Holocaust, Spielberg lost between 16 and 20 relatives.[9]:21

Spielberg married concert pianist Leah Posner (1920–2017) in January 1945.[10] After graduating from the University of Cincinnati with a Bachelor of Science in Electrical Engineering, he joined RCA's Advanced Development Department in 1949, where he did early work on servo and guidance systems.[6][11]

In 1960, Spielberg traveled to Moscow as part of a delegation of electrical engineers from Phoenix. The trip coincided with an incident that became the subject of his son's 2015 film *Bridge of Spies*.[12][13]Steven Spielberg described the event his father experienced at the time:

The Russians were putting the pilot Gary Powers' helmet and his flight suit and the remains of the U-2 plane on show for everyone in Russia to see. A military man saw my father's American passport and took him to the head of the queue and repeated really angrily to the crowd, "look what your country is doing to us."[12][14]

Work

When RCA entered the computer field, Spielberg began doing early circuit designs implementing computer logic. Moving into systems design, he was responsible for the design of a tape-to-tape data sorter. He designed and patented the first electronic library system, implemented as an interrogation system for data stored on an array of magnetic tapes. Promoted to Manager of Advanced Product Development, he was given responsibility for development of a "point of sales" system. The system involved a central processing computer called Recorder Central with ten satellites, specially designed point-of-sale units. All data were error-checked by feedback data verification. The system had all the capabilities of today's point-of-sale systems, including price lookup on a large drum storage unit, calculating sales transactions including sales tax and discounts, and credit verification.[2]

In 1957, Spielberg began working for General Electric. Here he was instrumental in developing the GE-200 series of computers.[15] The GE-225 was derived from the GE-312 and 412 process-control computers. Spielberg and Charles "Chuck" H. Propster had worked together at RCA on BIZMAC before designing the GE-225,[16] introduced in 1960.[10]

Spielberg retired in 1991 but continued consultation work for technology companies. He also worked with the USC Shoah Foundation Institute for Visual History and Education, formerly Survivors of the Shoah Visual History Foundation,[10] an organization founded by his son Steven.[17]

Personal life and Death

Spielberg had four children with his wife Leah: son Steven and daughters Anne, Nancy, and Sue. He also had 14 grandchildren and 20 great-grandchildren.[18] In February 2017 he became a centenarian.[19] Spielberg died from natural causes at his home in Los Angeles, California, on August 25, 2020, at the age of 103.[6][10]

References

1. **[...]**
2. ^ Jump up to: [a] [b] "Arnold M. Spielberg". *computer.org*.
3. ^ "A Portrait of the GE Computer Department". *smecc.org*.
4. ^ "It's BASIC: Arnold Spielberg and the Birth of Personal Computing". *gereports.com*. Archived from the original on May 3, 2015.
5. ^ Jump up to: [a] [b] "A close encounter with Steven Spielberg's dad – Hollywood". *Jewish Journal*.
6. ^ Jump up to: [a] [b] [c] Moreau, Jordan (August 25, 2020). "Arnold Spielberg, Father of Steven Spielberg, Dies at 103". *Variety*. Retrieved August 25,2020.
7. ^ http://birth-records.mooseroots.com/l/1321764/Arnold-Meyer-Spielberg
8. ^ Illingworth, Shaun; Holyoak, Sandra Stewart (May 12, 2006). "Spielberg, Arnold". *Rutgers Oral History Archives*. Rutgers University. Retrieved August 26, 2020.
9. **Book : "Steven Spielberg - A biography - 2010, 2nd edition - by Joseph McBride" / Chapter 1, family history** / Source - [HB004L][GDrive]
10. ^ Jump up to: [a] [b] [c] [d] Barnes, Mike (August 25, 2020). "Arnold Spielberg, Computer Designer and Father of Steven Spielberg, Dies at 103". *The Hollywood Reporter*. Retrieved August 26, 2020.
11. ^ Oldfield, Homer R. (1996). *King of the Seven Dwarfs: General Electric's Ambiguous Challenge to the Computer Industry*. IEEE Computer Society Press. p. 82. ISBN 9780818673832.
12. ^ Jump up to: [a] [b] Keegan, Rebecca (December 3, 2015). "For Steven Spielberg on 'Bridge of Spies,' being boxed in by facts is great for the imagination". *Los Angeles Times*. Retrieved August 29, 2016.
13. ^ Calia, Michael (October 7, 2015). "Steven Spielberg Remembers the Cold War in 'Bridge of Spies'". *The Wall Street Journal*. Retrieved August 29, 2016.
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15. ^ "G.E. 200 Series Computers". *smecc.org*.
16. ^ Dalton, Andrew (August 26, 2020). "Computer pioneer Arnold Spielberg, Steven's dad, dies at 103". Associated Press. Retrieved August 26, 2020.

17. ^ O' Malley, J. P. (January 28, 2017). "How Steven Spielberg grew a social conscience". *The Times of Israel*. Jerusalem. Retrieved August 26, 2020.
18. ^ "A close encounter with Steven Spielberg's dad". *Jewish Journal*. June 13, 2012. Retrieved August 26, 2020.
19. ^ Tomas Kellner (February 5, 2017). "Happy Birthday, Mr. Spielberg: Computer Pioneer Who Helped Design GE's First Computers Turns 100 On Monday". General Electric. Retrieved February 7, 2017.

Videos

May 9, 2018 : Spielberg 101: Computing Pioneer Talks About GE's First Digital Blockbuster (GE Reports)

Video : [HV00BQ][GDrive] / PDF : [HV00BR][GDrive]

1956 RCA BIZMAC Computer - History Archives Project - 1950's Mainframe Military Army

Video : [HV00BW][GDrive] / PDF : [HV00BX][GDrive]

Computer History Archives Project - RCA BIZMAC Computer shown in vintage pics and video.

The Giant BIZMAC was installed at OTAC Military Base, Detroit, Michigan in 1956. Formerly classified photos & 1957 video show control panels and operations of this giant data processing machine. This Giant Brain occupied 20,000 feet. Hope you enjoy this rare look at a vintage computing milestone. Compiled and edited by Mark Greenia, Computer History Archives Project (CHAP).

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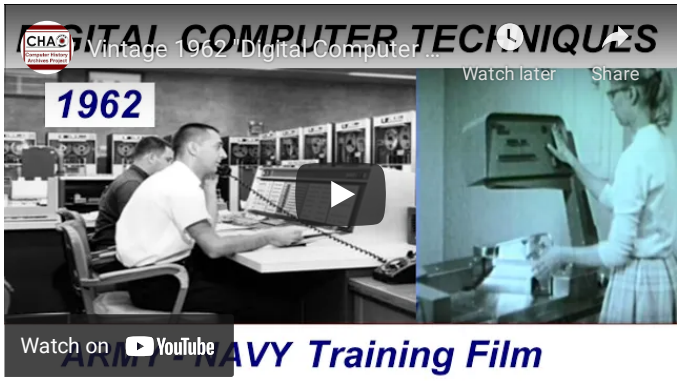
https://www.youtube.com/watch?v=B_OvFoZIIZ4

Vintage 1962 Army Navy Film "Digital Computer Techniques" - core memory, magnetic storage, etc.

May 30, 2016

Computer History Archives Project

Original un-edited 1962 film. A “somewhat dry” Army/Navy film of basic computer concepts. Detailed descriptions & diagrams of computing “input, store, control, arithmetic, output”, etc. Machine peripherals shown briefly. Film quality starts poor, but gets better towards the end. Nice description of “core memory” at 10:20 mins into the film. - Watch with a cold drink and some tasty snacks and enjoy this classic educational treat.



EVIDENCE TIMELINE

1930 - Feb 14 - Bar Mitzvah

https://www.newspapers.com/image/530477825/?terms=%22arnold%2Bspielberg%22

1942 (January 21) - Enlistment / WW2

Transcript : [HG008O][GDrive]

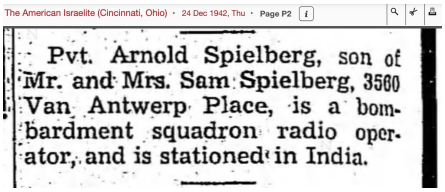
Record Transcription:
World War Ii Army Enlistment Records

First name(s)	Arnold M
Last name	Spielberg
Race	White
Birth year	1917
Birth state	Ohio
Marital status	Single, without dependents
Enlistment year	1942
Enlistment month	Jan
Enlistment day	21
Enlistment place	Ft Thomas Newport Kentucky
Enlistment term	Enlistment for the duration of the War or other emergency, plus six months, subject to the discretion of the President or otherwise according to law
Branch	Branch Immaterial - Warrant Officers
Grade	Private
Soldier Number	15088831
Education	Fourth Year of High School
Resident county	-
Resident state	Ohio
Country	United States
Source	Civil Life
Record set	World War Ii Army Enlistment Records
Category	Military Service & Conflict
Subcategory	Second World War
Collections from	Americas, United States

[HG008P][GDrive]

1942 (Dec 23)

Full newspaper page : [HN0187][GDrive]


The American Israelite (Cincinnati, Ohio) · 24 Dec 1942, Thu · Page P2

Pvt. Arnold Spielberg, son of Mr. and Mrs. Sam Spielberg, 3560 Van Antwerp Place, is a bombardment squadron radio operator, and is stationed in India.

[HN0188][GDrive]

1944 (Feb 10) - With Robert W Heldman, in India

Full newspaper page : [HN018U][GDrive]

The American Israelite (Cincinnati, Ohio) · 10 Feb 1944, Thu · Page P1

In Service of Our Country

Corp. Robert Heldman, son of Mr. and Mrs. Warren J. Heldman, 740 Clinton Springs Avenue, and Master Sgt. Arnold H. Spielberg, son of Mr. and Mrs. Samuel Spielberg, 3560 Van Antwerp Place, participated in a short-wave broadcast from their base in India giving their squadron's history. Corp. Heldman recently transferred to the 14th Air Force in China and Sg. Spielberg is still in India with a bombardment squadron of the Army Air Forces.

[HN018V][GDrive]

[MWK note : I just ordered two books, unsure if this is a Robert K or a Robert W ... :

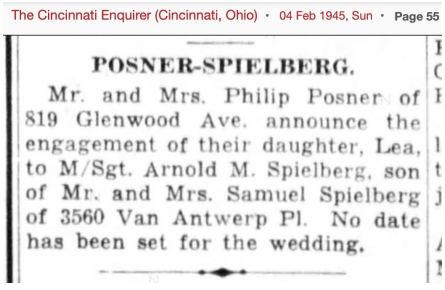
*"**Global Telecommunications : Layered Networks' Layered Services Robert K Heldman" (1992)***

"Future Telecommunications Information Applications Services Infr" (1993)

"Written by a top-level executive at US West - a leading Regional Bell Operating Company - this book explores the full range of information applications that exist now, how they will change in the 90's, and what narrowband, wideband, and broadband services and products will be needed. It also examines what must be done to the ageing telecommunications infrastructure in America to allow these products and services to become a reality."

1945 (Feb 04)

Full newspaper page : [HN019G][GDrive]


The Cincinnati Enquirer (Cincinnati, Ohio) · 04 Feb 1945, Sun · Page 55

POSNER-SPIELBERG.

Mr. and Mrs. Philip Posner of 819 Glenwood Ave. announce the engagement of their daughter, Lea, to M/Sgt. Arnold M. Spielberg, son of Mr. and Mrs. Samuel Spielberg of 3560 Van Antwerp Pl. No date has been set for the wedding.

[HN019H][GDrive]

1945 (Feb 09)

https://www.newspapers.com/image/100569746/?terms=%22arnold%2Bspielberg%22

1945 (March 1)

Full newspaper page : [HN018W][GDrive]

Page 6 THE AMERICAN ISRAELITE

THURSDAY, MARCH 1, 1945

CINCINNATI Social and Personal

Weddings & Engagements

Mr. and Mrs. Philip Posner, 819 Glenwood Avenue, announce the marriage of their daughter, Lea, to M/Sgt. Arnold Spielberg, son of Mr. and Mrs. Samuel Spielberg, 3560 Van Antwerp Place. The ceremony was performed by Rabbi Louis Feinberg in his study on Sunday, Feb. 25th.

A reception for the immediate families followed at the home of the bride's parents.

Among out-of-town guests were Mrs. Minnie Zuber, of New York City, cousin of the groom, and Capt. and Mrs. Bernard Posner, of Winston-Salem, N. C., brother and sister of the bride.

The bride and groom are making their home in Dayton, where M/Sgt. Spielberg is stationed at Wright Field.

[HN018X][GDrive]

1945 (March 08)

Full newspaper page : [HN018Y][GDrive]

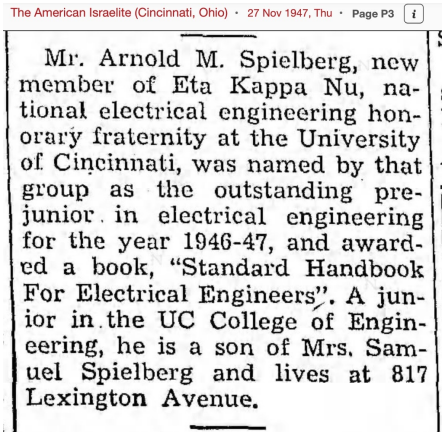
The American Israelite (Cincinnati, Ohio) · 08 Mar 1945, Thu · Page P10

Mrs. Sonia Lerman, of New York City, Mr. and Mrs. Isadore Chase, of Richmond, Ky., and Pvt. Joseph Lask, Camp Gruber, Okla., attended the marriage of Miss Lea Posner and M/Sgt. Arnold Spielberg on Sunday, Feb. 25th.

[HN018Z][GDrive]

1947 (Nov 27)

Full newspaper page : [HN0194][GDrive]



The American Israelite (Cincinnati, Ohio) · 27 Nov 1947, Thu · Page P3

Mr. Arnold M. Spielberg, new member of Eta Kappa Nu, national electrical engineering honorary fraternity at the University of Cincinnati, was named by that group as the outstanding pre-junior in electrical engineering for the year 1946-47, and awarded a book, "Standard Handbook For Electrical Engineers". A junior in the UC College of Engineering, he is a son of Mrs. Samuel Spielberg and lives at 817 Lexington Avenue.

[HN0195][GDrive]

1947/1949 - Co-Oped during college with the Crosley Corporation

SOURCE - (23 June 1987) Interview of Arnold Spielberg : Conducted by Anne Frantilla at Charles Babbage Institute

Text with OCR - [HI001D][GDrive] / Original PDF (but with OCR) : [HI001F][GDrive]

*"**And I co-oped at a now-defunct company called Crosley, where I worked on television production, engineering production line, first of all doing quality control, measuring all sorts of components to see if they stayed within specifications, and then later on working in the Test Equipment Department, designing test equipment to, you know, to use in assembly and alignment of radio receivers first, then television.** Then when television started to come in, I switched to designing wide-band amplifier-measuring devices, and then designed a signal distribution system for calibrating and tuning, you know, aligning television sets. And the last thing I did before graduation was to work on the line, troubleshooting sets that didn't seem to work, try to find out what's wrong and passing information back to Engineering, so they could put corrections into their design."*

Additional Information on Crosley :

1. **https://en.wikipedia.org/wiki/Powel_Crosley_Jr.**
    1. **Powel Crosley Jr.** (September 18, 1886 – March 28, 1961) was an American inventor, industrialist, and entrepreneur. He was also a pioneer in radio broadcasting, and owner of the Cincinnati Reds major league baseball team. In addition, Crosley's companies manufactured Crosley automobiles and radios, and operated WLW radio station. Crosley, once dubbed "The Henry Ford of Radio," was inducted into the Automotive Hall of Fame in 2010 and the National Radio Hall of Fame in 2013.
    2. He and his brother, Lewis M. Crosley, were responsible for many firsts in consumer products and broadcasting. **During World War II, Crosley's facilities produced more proximity fuzes than any other U.S. manufacturer, and made several production design innovations.**
2. **https://en.wikipedia.org/wiki/Crosley_Broadcasting_Corporation**
    1. The **Crosley Broadcasting Corporation** was a radio and television broadcaster founded by radio manufacturing pioneer Powel Crosley, Jr.. It had a major influence in the early years of radio and television broadcasting, and helped the **Voice of America** carry its message around the world.
3. **Voice 0f America - Crosley and General Electric ! (https://en.wikipedia.org/wiki/Voice_of_America)**
    1. " Before World War II, all American shortwave stations were in private hands.[12] Privately controlled shortwave networks included the National Broadcasting Company's International Network (or White Network), which broadcast in six languages,[13] the Columbia Broadcasting System's Latin American international network, which consisted of 64 stations located in 18 different countries,[14] **the Crosley Broadcasting Corporation in Cincinnati, Ohio, and General Electric which owned and operated WGEO and WGEA, both based in Schenectady, New York**, and KGEI in San Francisco, all of which had shortwave transmitters. Experimental programming began in the 1930s, but there were fewer than 12 transmitters in operation.[15] In 1939, the Federal Communications Commission set the following policy: "

1948 (Jan 04)

Full newspaper page : [HN019E][GDrive]

THE CINCINNATI ENQUIRER
Sunday, January 4, 1948

Engagements—Weddings

GUTTMAN—SPIELBERG.

Mrs. Rebecca Spielberg announces the marriage of her daughter, Natalie Bernice, to Mr. Jack J. Guttman, son of Mr. and Mrs. Harry Guttman. The wedding took place December 21 at the Hotel Alms, Rabbi Louis Feinbe[illegible] officiating. Mrs. Arnold Spielberg was matron of honor and Mr. Ervan Guttman was his brother's best man. Among the out-of-town guests were Mrs. Sonia Lerman, New York; Mr. Henry Guttman and Mr. and Mrs. Gene Guttman of Connersville, Ind., and Mr. and Mrs. Edward Guttman of Wilmington, Ohio. Mr. and Mrs. Jack Guttman are residing in Cincinnati.

[HN019F][GDrive]

1949 - Graduates University of Cincinnati ... Senior thesis with Henry Federlin

Source : 2017 (Feb) - GE Corporation web site : "Happy Birthday, Mr. Spielberg: Computer Pioneer Who Helped Design GE's First Computers Turns 100 On Monday" / See : [HC0042][GDrive]

" AS: I studied electrical engineering at the University of Cincinnati, and I got my degree in 1949."

Source : 2015 (March 16) : Univ of Cincinatti : The grandfather of ET and the father of the modern Point-of-Sale system : See Source : [HE0028] [GDrive]

"One of his professors was Dr. William Osterbrock whom he almost electrocuted by accident while tuning an amateur radio set. He did quite well at UC and was recognized for his academics and was elected to Eta Kappa Nu International Electrical and Computer Engineering Honor Society of the IEEE his pre-junior year, Tau Beta Pi Engineering Honor Society his junior year, and he won an electric engineering award. [...] He did his senior thesis with Henry Federlin entitled "A General Purpose RF Sweep Signal Generator". Arnold described Henry as an expert machinist and a "straight forward guy". I was able to obtain a copy of this thesis thanks to Henry's wife. "

1949 - Joins RCA - Electronic circuits for missile systems

Source : 2017 (Feb) - GE Corporation web site : "Happy Birthday, Mr. Spielberg: Computer Pioneer Who Helped Design GE's First Computers Turns 100 On Monday" / See : [HC0042][GDrive]

" AS: [...] I got my degree in 1949. The first job I had was with RCA. I was designing electronic circuits for missile systems. When they started working on computers, I joined that group. After that, I moved to GE."

SOURCE - (23 June 1987) Interview of Arnold Spielberg : Conducted by Anne Frantilla at Charles Babbage Institute : See Text with OCR - [HI001D] [GDrive] / Original PDF (but with OCR) : [HI001F][GDrive]

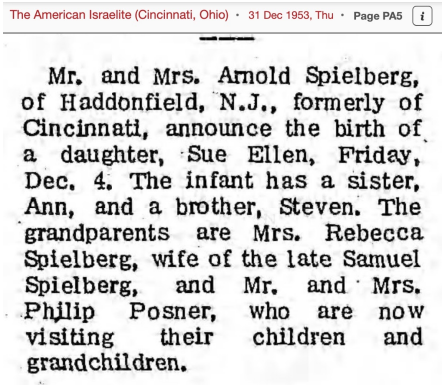
So when I graduated I joined RCA. I joined RCA to work on television, but they had other ideas and they put me in some radar programs, and I kind of enjoyed that. In 1950 I transferred into a the beginning computer group there. So I really started working on computers in 1950. And at that time vacuum tubes were the main source of logic. And so I did some interesting work with the RCA tube design group in Harrison, New Jersey, because they were trying to design vacuum tubes that would respond as logic elements. They had one tube designed to be a three-input 11and11 gate, another one designed to be a two-input "and" gate, an "or" gate. And I built up some circuits with them. My job was to try to evaluate this and see if they were practical, should they continue with designing of functional, tubes. And a number of us pretty soon came to the conclusion that wasn't the way to go.

F: How much contact did you have with other people in the industry? Were there other people working on the same sorts of problems? Was it ... a kind of tight-knit community?

S: Well, there was a large group of people, and RCA, in order to get started there, was hiring people from all over. Some of their main sources of talent were people from MIT that worked on the Whirlwind computer. Which was the MIT's claim to fame. And there was a bunch of sharp guys, because the group that came together, RCA came out of research and development labs. While the development was going on down in Camden, New Jersey, there was some very original work going on up in Princeton Labs of RCA by a gentleman by the name of Jan Rykeman, who was the man would claims to have invented the magnetic core memory. And there was a big patent ...

1953 (Dec 31)

Full newspaper page : [HN0190][GDrive]


The American Israelite (Cincinnati, Ohio) · 31 Dec 1953, Thu · Page PA5

Mr. and Mrs. Arnold Spielberg, of Haddonfield, N.J., formerly of Cincinnati, announce the birth of a daughter, Sue Ellen, Friday, Dec. 4. The infant has a sister, Ann, and a brother, Steven. The grandparents are Mrs. Rebecca Spielberg, wife of the late Samuel Spielberg, and Mr. and Mrs. Philip Posner, who are now visiting their children and grandchildren.

[HN0191][GDrive]

1956 (june 28) - Still in New Jersey

https://www.newspapers.com/image/531449770/?terms=posner%2Bspielberg

1957 (Feb 07) - In NJ, getting redy to move to Arizona -

https://www.newspapers.com/image/180556607/?terms=%22arnold%2Bspielberg%22

1958 (Aug 1)

https://www.newspapers.com/image/116766657/?terms=arnold%2Bspielberg

also - https://www.newspapers.com/image/104080138/?terms=%22arnold%2Bspielberg%22

1959

https://www.newspapers.com/image/104080048/?terms=%22Arnold%2BSpielberg%22

1959 (Oct 24)

Full newspaper page : [HN018K][GDrive]

GE Board Chairman Cites Vital Role Of Research

Saturday, October 24, 1959 The Arizona Republic, Phoenix, Arizona Page 17

DIRECTORS VISIT—Directors of General Electric Co. yesterday toured that firm's computer department plant in Phoenix. Shown watching the operations of one of the company's computers are, from left, Philip D. Reed, chairman of finance committee, director and former chairman of board of directors of General Electric Co.; Arnold Spielberg, manager of industrial computers and systems engineering for the Phoenix plant; Henry Ford II, president, Ford Motor Co., Dearborn, Mich.; and K. R. Geiser, manager of business systems for the Phoenix computer department. — (Photo by Herb McLaughlin)

Cordiner Speaks At Luncheon

"RESEARCH is the key to progress and prosperity in America," Ralph J. Cordiner, chairman of the board of General Electric, told a group of civic and business leaders yesterday in Phoenix.

Cordiner was host at a luncheon in Camelback Inn for members of General Electric's board of directors and a group of special guests.

The GE executive said 70 per cent of the production of General Electric companies today is devoted to processing and manufacturing of products which did not exist before the war.

Cordiner also emphasized that General Electric plows back more money into research and product development than it takes out in profits.

Cordiner added: "I would suggest to you business men of Phoenix that you invite to this state industrial companies which are especially interested in research, because research is the key to progress and prosperity in America.

"THE FUTURE of your city and your state will be assured if you bring to this state industries which are willing to spend more on research than they take out in profits.

"Phoenix was selected as the site for our computer development," he continued, "because our team of experts decided this was the best possible place in the United States for this operation. We have never regretted that decision. We like your community. We want our people to be part of your community and you have made us very welcome."

Governor Fannin welcomed the visiting board members to Phoenix and told them they have made a place for themselves in this community. He added that Phoenix and Arizona are "happy indeed" to have the General Electric operation in this state.

He especially commended General Electric for making it possible for Ken Michaels, manager of community relations and communications for the GE computer department here, to serve as president this year of the United Fund.

C. C. Lasher, general manager of the computer department in Phoenix, presided at the luncheon.

Among General Electric board members who visited in Phoenix yesterday while on a tour of the firm's facilities in California and Arizona were:

Henry Ford II, president and director, Ford Motor Co., Dearborn, Mich; S. Sloan Colt, director and member of the executive committee, Bankers Trust Co., New York; Donald K. David, vice chairman of the board, Ford Foundation, New York; Charles D. Dickey, chairman, committee on trust matters, Morgan Guaranty Trust Co., New York; John Holmes, director, Swift and Co., Chicago.

Frederick L. Hovde, president, Purdue University, Lafayette, Ind.; Gilbert W. Humphrey, president and director, Hanna Mining Co., Cleveland; John E. Lawrence, partner, James Lawrence and Co., Boston; George H. Love, chairman of the board, Consolidated Coal Co., Inc., Pittsburgh; Thomas B. McCabe, president, Scott Paper Co., Chester, Pa.; George G. Montgomery, chairman of the board, Kern County Land Co., San Francisco.

Henry S. Morgan, partner, Morgan Stanley and Co., New York; Robert Paxton, president, General Electric Co., New York; Philip D. Reed, chairman of the finance committee, General Electric, New York; Robert T. Stevens, president, J. P. Stevens and Co., Inc., New York; Sidney J. Weinberg, partner, Goldman, Sachs and Co., New York; and Robert W. Woodruff, chairman of the finance committee and director, the Coca Cola Co., Atlanta.

[HN018L][GDrive]

1961 (Feb 11)

Newspaper page : [HN018I][GDrive]

Engineers Told Russ Standards Below U.S.

By JOANNE SMOOT

"Russian scientists admit the United States is ahead technically, but they firmly believe the U.S.S.R. will surpass us.

Speaking from first hand experience, Arnold Spielberg told the Arizona section meeting of the American Industrial Engineers last night at the Desert Sun that Russians "believe the United States wants war."

"And, those that I spoke to were some of the most educated scientists in Russia," Spielberg said.

HE RECENTLY returned from the International Federation of Automatic Control's Congress held in Moscow, where he acted as delegate from the American Automatic Control Council.

"I spoke to many of Russia's top scientists, and they asked me questions like: 'Why is the United States so aggressive? Why are U. S. military bases surrounding Russia?' "

A radar scientist begged: "Please don't drop atomic bombs on us," said Spielberg.

"Russia is a land of contrast. On the one hand they have many achievements, but on the other, they fall quite short of U. S. standards," the speaker explained.

"IT'S LIKE the two Russian scientists who were talking, and one said: 'You know, we have an atomic bomb small enough to fit into a suitcase and smuggle into New York City!' "

"And the other replied: 'Ah, go on . . . where would we get a suitcase?' "

Spielberg said the delegates from some 30 nations attending the congress were treated royally, but certain restrictions were made on their freedom.

"WE COULDN'T take any pictures from the plane once we were over Russian territory, yet there was no customs check when we arrived.

"We couldn't photograph the Kremlin in Moscow or the factories," he said.

Moscow is a conglomeration of the old and the new, without a happy medium. For instance:

"There are banks, but no checks can be written.

"There are computers, but no cash registers or adding machines.

"Skeleton keys are used in a hotel that was built in 1957."

In the same hotel, Spielberg related such oddities as "paint that rubbed off the walls, one notebook to sign in all guests in the 23 story structure."

"THERE WERE six elevators in the hotel, which was Moscow's best, but never more than four worked at one time. It took nearly 20 minutes to get to the 23rd floor," he related.

Spielberg praised Russian education, where students are paid $80 a month to attend a university. "In 1959, one Russian university graduated 107,000 engineers and in 1960, 119,000 were graduated. This is approximately 20,000 more then U.S. school graduated," he said.

He also noted that Russian scientists "were skeptical of our advanced engineering," but at the same time, curious.

Russia is a very cultural minded nation, he said. In contrast, "Communism replaces religion, and their deity is Khrushchev."

"RUSSIAN interpretors are thoroughly indoctrinated in communism but they couldn't translate technical phrases in the Science Museum."

Spielberg said the U-2 is one of the most prominently displayed objects in Moscow's huge park. "I didn't think the plane looked like it had exploded, or been shot down. But who knows?"

Spielberg said he was most impressed by: "The complete indoctrination of the Russian people, their determination to convert the world to communism, and their planned economy."

"KHRUSHCHEV means to see the Russian flag flying over each nation in the world before his death," said Spielberg.

"The only thing they (the U.S.S.R.) respect, is power. We must take the aggressive approach to freedom," he emphasized. "We must never back off, but be firm in our relations with Russia."

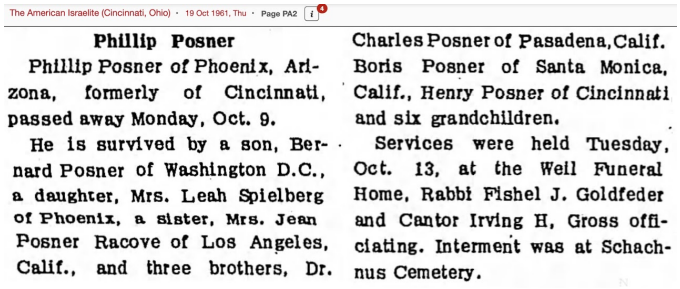
"I'd rather be dead than live under communism," he concluded.

1961-02-11-arizona-republic-pg-11-clip-engineers-in-russia

[HN018J][GDrive]

1961 (Oct 19) - Passing of father-in-law Phillip Posner

Full newspaper page : [HN0192][GDrive]



The American Israelite (Cincinnati, Ohio) · 19 Oct 1961, Thu · Page PA2

Phillip Posner

Phillip Posner of Phoenix, Arizona, formerly of Cincinnati, passed away Monday, Oct. 9.

He is survived by a son, Bernard Posner of Washington D.C., a daughter, Mrs. Leah Spielberg of Phoenix, a sister, Mrs. Jean Posner Racove of Los Angeles, Calif., and three brothers, Dr. Charles Posner of Pasadena, Calif. Boris Posner of Santa Monica, Calif., Henry Posner of Cincinnati and six grandchildren.

Services were held Tuesday, Oct. 13, at the Weil Funeral Home, Rabbi Fishel J. Goldfeder and Cantor Irving H. Gross officiating. Interment was at Schachnus Cemetery.

[HN0193][GDrive]

1963 (April 07)

Full newspaper page : [HN018F][GDrive]

R-D: Key to Expanding Economy

By BERNICE JONES

Research and development—RD, as the initiated call it—is the fire that keeps the economic mule off its haunches.

Bernice

Research—the inquiry of scientific minds into new knowledge that will culminate in new or improved products.

Development—the time, money, and talent devoted to putting research discoveries into practical, usable form, and into the market place for customers to buy.

Women's Business Views

It can be a new hairpin; a new method of cooking; new fabrics for fashion (bless the drip-dry researcher); the perfect vehicle for earth-moon round trips; someday maybe even a solution for keeping grass green without water, and whisker-brisk without benefit of mower.

It may be true, what they say, that there's nothing new under the sun.

But there's lots of things around our grandparents never dreamed of, let alone used.

And lot's of things in the making that none of us will see, but our grandchildren will take for granted.

IN DEER VALLEY—Just a few weeks ago General Electric Computer Division received a package from its Semiconductor Products Department in Syracuse, N.Y.

It contained a number of what Arnold M. Spielberg describes as "early June pea" sized transistors that will add efficiency to data processing computers.

Transistors are old hat now—magic little pieces of rare metal that are natural transmitters of electric signals.

But this new batch represents a break-through in the use of silicon that is expected to bring new efficiency in home appliances, such as television and radio.

Silicon transistors have been expensive and therefore pretty much limited to military and space application. Of more general use have been transistors made of germanium, less expensive.

OLD TALE — Silicon is preferred because of its greater heat resistance and reliability of performance.

At work in GE laboratories were researchers who finally discovered a way of treating silicon so that it could be "boxed" in a coat of epoxy (plastic instead of the metal housing used previously.)

Result: The better performing silicon semiconductors at prices less than those for germanium, with still greater savings in store when the development stage reaches volume production.

In your house and mine: TV and radio that will probably give better and longer service (without calling the repairman), with signals that are now somewhat elusive coming in louder and clearer.

Engineer Spielberg, incidentally, is a war-time air corps bomber squadron communications chief who had built himself a wholly different career. On high school graduation he went into retailing; left a post as store manager for Lerman Brothers in Richmond, Ky.

FROM HAM—A ham operator since early youth, his war experience sent him back to the University of Cincinnati for a degree in electrical engineering, obtained under a work-study system that put him in quality control at the Crosley Division of Aviation Corp.

He came to Phoenix in 1957 after designing military navigational systems for RCA; still remembers his wife's dismay at the description of our booming Arizona culled from a 1929 edition of World Book—"desert wilderness populated chiefly by Indians."

A more current magazine article on Scottsdale made her somewhat less apprehensive and now "she wouldn't dream of living anywhere else."

BACK TO — transistors.

At Motorola several years ago, its researchers found a way to put transistors to work in automobile ignitions.

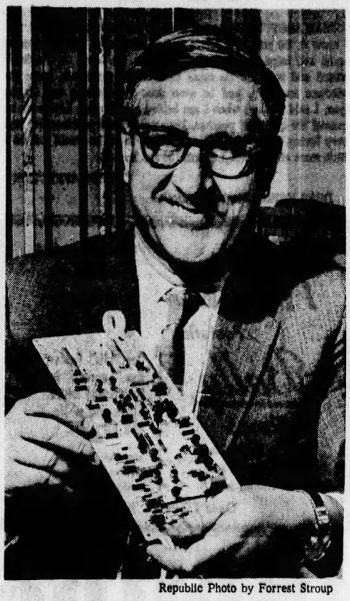
If you're handy under the hood, conversion kits are on the market so you can install your own.

Advantages claimed smoother, easier starting; 100,000 miles on one set of points; five to 10 per cent saving on gas mileage; leaping passing ability.

The automotive industry has found some other semiconductor devices, important aids for better motoring. But for some reason, transistor ignition systems are sitting on the side lines.

Cost may be a factor, but it would appear that this would be more than offset by the savings made possible through the greater efficiency.

Well, questions are a part of research and development. Maybe someone can provide the answer to this one.



Republic Photo by Forrest Stroup

Arnold M. Spielberg, GE Engineer

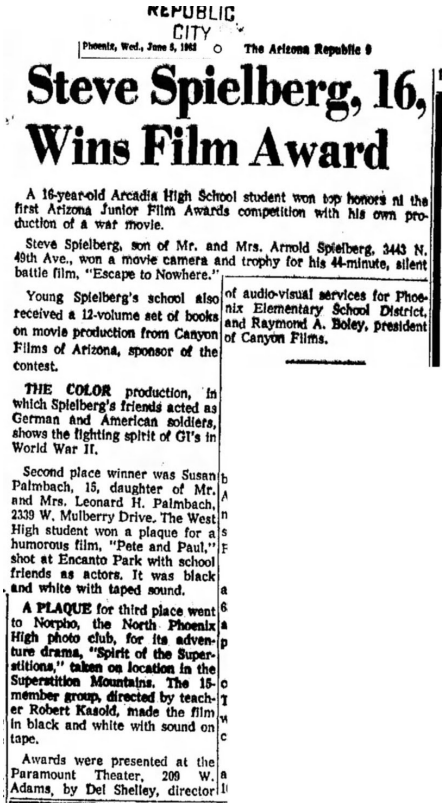
Transistor Research And Development Adds Economic Spur

1963-04-07-arizona-republic-pg-f-9-clip-spielberg

[HN018G][GDrive]

1963 (June 05)

Full newspaper page : [HN018O][GDrive]



REPUBLIC
CITY
Phoenix, Wed., June 5, 1963 ○ The Arizona Republic 9

Steve Spielberg, 16, Wins Film Award

A 16-year-old Arcadia High School student won top honors at the first Arizona Junior Film Awards competition with his own production of a war movie.

Steve Spielberg, son of Mr. and Mrs. Arnold Spielberg, 3443 N. 49th Ave., won a movie camera and trophy for his 44-minute, silent battle film, "Escape to Nowhere."

Young Spielberg's school also received a 12-volume set of books on movie production from Canyon Films of Arizona, sponsor of the contest.

THE COLOR production, in which Spielberg's friends acted as German and American soldiers, shows the fighting spirit of GI's in World War II.

Second place winner was Susan Palmbach, 15, daughter of Mr. and Mrs. Leonard H. Palmbach, 2339 W. Mulberry Drive. The West High student won a plaque for a humorous film, "Pete and Paul," shot at Encanto Park with school friends as actors. It was black and white with taped sound.

A PLAQUE for third place went to Norpho, the North Phoenix High photo club, for its adventure drama, "Spirit of the Superstitions," taken on location in the Superstition Mountains. The 15-member group, directed by teacher Robert Kasold, made the film in black and white with sound on tape.

Awards were presented at the Paramount Theater, 209 W. Adams, by Del Shelley, director of audio-visual services for Phoenix Elementary School District, and Raymond A. Boley, president of Canyon Films.

[HN018P][GDrive]

1963 (Dec 08)

by Esther Clark

Teenage Cecil B.

In the field of amateur movie-making, increasingly popular with teenagers, Steve Spielberg is an award winner.

photographs, Ralph Camping

FREEPORT, ARIZ., EXISTS only as a city in a science fiction thriller of a 16-year-old Phoenix movie maker with an amateur but honored standing and a professional outlook.

When Steve Spielberg winds up "Firelight" with retakes during Christmas vacation, the 90-minute sound-color film will be his sixth major production. The fifth, "Escape to Nowhere," won this year's first annual Film Festival award, sponsored by Canyon Films.

If plans work out for the Arcadia High School junior, the public may view "Firelight" sometime in January. Its first showing, he hopes, will be for AHS drama classes.

PROCEEDS FROM THE PUBLIC premiere are earmarked for Steve's pet charity, Perry Institute, for mentally retarded children. What other profits accrue from succeeding showings will go toward production of the next cinematic venture.

"It grows on you. You can't shake it," is the reason the slightly built, fast-talking teenager gives for hanging onto a movie camera. His first experience with one was as an Ingleside School seventh grader.

It was an eight-minute western in color, "The Last Gun." The "good guys," in white hats, won. It also was the beginning of an all-consuming hobby from which he plans to launch a career as a producer.

GOOD AND BAD, EARTHLINGS in "Firelight" are doomed to a weird fate because their obsession for interplanetary travel affords the opportunity to take hate, war and prejudice to outer space residents.

To prevent such an occurrence, script writer Steve has leaders of the planet Altaris transport entire cities from earth, but in miniature, as exhibits Altarians would pay to see.

When "Firelight" is finished, nearly 100 actors will be in the cast, fellow students being the principals. Profit from previous films paid for the $60 pilot; "angels" he hopes will come through for the remaining $300.

STEVE FIGURES HE HAS understanding parents, who not only approve of his movie making but also of his taking over the house and yard for filming or "company" huddles.

During the filming of the "Firelight" pilot, at least 15 teenagers and uncounted pieces of equipment were in, through and around the Spielberg home. At one point in shooting, a neighbor passing slowly in his car shouted a greeting to Steve's parents that included mention of the flashing red light by the carport door. This was a signal that filming was in progress and onlookers were to be quiet.

Says Mrs. Spielberg about the constant commotion at her home: "We're all for Steve's hobby; this way we

Continued, next page

Movie set in Spielberg carport. Night "shooting" is an attraction for neighbors and passing motorists.

Leading lady Carol Stromme pauses in face makeup to read lines for mirror-holding Steve.

[HN018M][GDrive]

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Leading man Andrew Owen studies script and is attended royally by, from left, Tina Lanser, Anne Spielberg and Jean Weber.

To get shadow effect on jeep-seated Linda, Steve adjusts cardboard cutouts in front of which lights are passed. Onlookers are, from left, Tina Lanser, Warner Marshall and Beth Weber.

Movie producer Steve Spielberg is all set for camera action. Steve's father, Arnold Spielberg, helps.

Teenage Cecil B.

Continued from page 19

know and the parents of his teenage friends know where they are; they're not cruising up and down Central Avenue."

DAD DOESN'T EVEN MIND that he never got to use the movie camera the family gave him for Father's Day in 1958. Steve tried it out and didn't let go.

Since Steve is the only boy and oldest in a family of four, he occasionally finds himself in touchy situations with the sisters. Once in a while they are allowed to "get into the act," like the time an emergency arose when World War II-themed "Escape to Nowhere" was made.

To all appearances, there are no "women" in the movie, not even an Army nurse. But Steve's 13-year-old sister, Anne, does have a few seconds in the picture, which aims to depict the bravery of American GIs in capturing a strategic hill in Africa (Camelback Mountain).

"WE WERE SHY A SOLDIER the day we filmed one scene, so we had her put on a uniform and helmet. We got rid of her in a hurry," Steve smiles unabashedly. He did it by holding the camera on her only long enough to show an uphill crawl and then the fatal "shot" from a Nazi rifle.

The same 23-member cast movie, featuring Steve's high school friends, gives the impression in another scene of a long line of GIs sneaking past the enemy. After-school actors were hard to come by that day, too. Steve and a classmate simply went around and around the grinding automatic camera on the ground.

For a war picture, his is singularly without gore because he, as producer-director-script writer has an aversion to "too much blood." At the insistence of the "you gotta have it" from the cast, he thinned red oil paint to lend realism.

COSTUMING IN "FIRELIGHT" is no problem; everyone is in modern attire. It was different with the war picture. Intending for enemy soldiers to wear black shirts, Steve dyed white T-shirts but the color failed to take and that's why the bad boys are in blue.

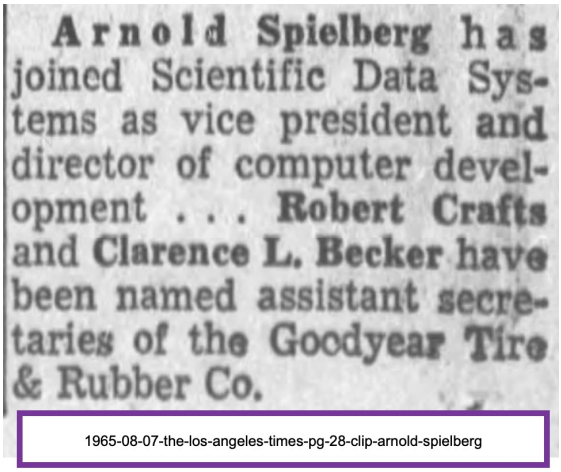
Drama and music classes the young movie maker takes in school are a big help. He's putting experience as a school orchestra clarinetist to use in writing the score for the science fiction film. Should he ever write a script calling for dancing, he could instruct at least the twist, mashed potato and popeye.

Lights out. Action!

[HN018N][GDrive]

1965 (Aug 07)

Full newspaper page : [HN018Q][GDrive]


Arnold Spielberg has joined Scientific Data Systems as vice president and director of computer development . . . Robert Crafts and Clarence L. Becker have been named assistant secretaries of the Goodyear Tire & Rubber Co.

1965-08-07-the-los-angeles-times-pg-28-clip-arnold-spielberg

[HN018R][GDrive]

1966 (Sep 08)

https://www.newspapers.com/image/382332359/?terms=arnold%2Bspielberg

1966 (Nov 24)

https://www.newspapers.com/image/531477164/?terms=%22arnold%2Bspielberg%22

1969 (Aug 14)

https://www.newspapers.com/image/104417498/?terms=%22arnold%2Bspielberg%22

1971 (Oct 07)

https://www.newspapers.com/image/385565283/?terms=arnold%2Bspielberg

1973

https://www.newspapers.com/image/98064875/?terms=%22arnold%2Bspielberg%22

1973-07-26-detroit-free-press-pg-28

1973-07-26-detroit-free-press-pg-28-clip-spielberg

Detroit Free Press (Detroit, Michigan) · 26 Jul 1973, Thu · Page 28

Michigan Briefs

Burroughs Corp. has appointed Arnold Spielberg director engineering for the company's computer systems group. He will be responsible for coordinating and monitoring the engineering programs of all the group's plants.

1983 (March 09)

Full newpaper pages : Page B1 at [HN018B][GDrive], Page B2 at [HN018D][GDrive]

E. T.'s grandma

1983-03-09-the-akron-beacon-journal-pg-b-1-clip-spielberg

Steven Spielberg's mom star of her own galaxy

By Irene Rogers

Leah Posner Spielberg Adler, a very long name, a tiny, petite lady, a soaring gigantic spirit. Leah and husband Bernie Adler are the originators of The Milky Way, Beverly Hills' first and only kosher dairy restaurant, and Leah is its true star.

As she sits talking on a Sunday afternoon just before the restaurant opens for the evening, Leah is looking self-assured and charming. She is bright, funny and outspoken.

And excited. "My spirit is the same as when I was 17. I'm excited all the time, and I am very excited about being in the restaurant business. There is something about food that brings people to a very emotional level. I love producing this show every day. It's like a production at the Met! The yelling, the screaming, the details. 'Is the soup ready? Are the tables set? Can we open the doors?' "

IN ADDITION to being the star of The Milky Way, Leah Posner Spielberg Adler is the mother of the most spectacularly successful young man in the world today, Steven Spielberg, who before the age of 35 has achieved unparalleled success in the motion picture industry with his productions of *Jaws*, *Close Encounters of the Third Kind*, *Raiders of the Lost Ark*, *Poltergeist* and, of course, the phenomenal *E. T.*, which really makes Leah E. T.'s grandma.

Leah Spielberg Adler

In exploring Leah's life, marvelous glimpses of Steven Spielberg emerge, and one sees where his spirit hails from.

"When I want something, I want it so much I can move mountains. I get superhuman strength, and Steve is exactly like this, too. With us there is no such thing as 'impossible' or 'No, you can't do that.' "

Leah, who was born and raised in Cincinnati and who studied at the Conservatory of Music there, is a fine concert pianist. "I studied since I was 5, and I always had a madness for good music. It was never a case of my parents telling me to practice — I always loved to play.

"I come from a very nurturing background. My father was very creative, but very poor. In this day and age, he probably really would have made a mark. He danced ballet so beautifully — he was from Russia. I was raised on Nijinski and how Nijinski's leaps looked like he was suspended in air. I was raised on stories of Henrik Ibsen in Norway. Somehow my father found his way into Norway and became a friend of Ibsen's. He also played the most beautiful classical guitar. I still have his guitar at home.

"I loved to play piano for my folks. Whenever I practiced, my mother and father would come and sit in the room. It was as though I was giving a concert. I

See E. T.'s, page B2

[HN018C][GDrive]

E. T.'s grandma star of her own galaxy

Continued from page B1

played my whole life until The Milky Way was born. Now I do not have the time. Somehow The Milky Way has taken over. My creative drives are coming out in the restaurant."

LEAH WAS married in Cincinnati, and Steven was born there. When Steve was 8, Leah's husband, Arnold Spielberg, was sent to Phoenix, Ariz. He was one of five people who opened up the computer department for General Electric. "I was hysterical. I mean, in 1955 what nice Jewish girl moved to Arizona? I looked in an encyclopedia (it was published in 1920, but I did not notice at the time), and it said, 'Arizona is a barren wasteland.' I went there kicking and screaming. I had to promise Steve a horse, because he didn't want to go either.

"I never made good on that promise, and he still reminds me of that today. We took the train across the country, got off the train and instantly fell in love with Phoenix. It was a wonderful place to raise the kids. That's where Steve did all his early movie stuff."

Leah has three daughters, in addition to Steve. "Anne is also a writer and just getting started. Recently sold her first film project. Nancy lives in New York City and is president of a jewelry company and has just become engaged. Susie is married, lives in Washington, D. C., and had her first baby earlier this year. They are a wonderful group of kids."

Steven Spielberg's movie-making started in early childhood with his father's 8mm movie camera, and he soon progressed to his own equipment.

"We had the wildest life. He's been working at his craft since he was 10. I had a beautiful house, which Steve took over. My living room had dollies and flood lights and big heavy cables running across the floor. We were all involved. The whole family. Always.

"His story is filled with more happenstance than even mine is. Wanting — being. When we came out here, we had no pull. We didn't know anybody at all. He started Long Beach State at 17, and after his first semester he quit and started going every single day to Universal Studios.

"For some reason which we never figured out, he got by the guards just by his looking like he belonged there. Wherever he went, into the sound stages, into the editing department, he learned. From 9 to 5 every day, like he had a job there which he didn't, he would move around that studio, from one department to another, absorbing everything."

She adds, "Steve and I are very close; we have this mother-son team going, so whenever people finish interviewing him he says you got to go see my mom. So they do."

Leah Spielberg Adler and son, Steven Spielberg

LEAH'S SECOND husband, Bernie Adler, was director of the computer department for Lockheed, and seven years ago Lockheed decided to move the computer department back east. Then Leah and Bernie were faced with the decision.

"We decided we did not want to go back to the days of waking up to 'eight inches of snow forecast for today,' and so Bernie decided it was time to open his own business.

"Bernie and I work wonderfully together (they have been married for 17 years). I scream a lot, but he ignores me. We have a perfect division of labor. I'm center stage; he is backstage. I run the front, I meet, I greet, I talk a lot. But Bernie is the brains."

BOTH OF Leah's parents have died, but, as Leah says, "They are with me constantly. My mother was born in 1881 and was one of the few women who went to college. She used to speak on the radio. She was a public speaker and was very well known in Cincinnati. She did the book reviews. She was full of enthusiasm.

"There was always such a charged-up feeling in the house. Everything was exciting. My dad would come home with some chestnuts and say, 'Look, kids, what I've got!'

"My mom died when Steve was 9 or 10, but she had always said one thing about Steve: 'This boy is going to make a name for himself in the world.' She adored him. A Variety headline the other day said 'E. T. Sweeps the World,' and I thought of my mother."

Irene Rogers is a free-lance writer living in California.

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1983-03-09-the-akron-beacon-journal-pg-b-2-clip-spielberg

[HN018E][GDrive]

1995 (Feb 06)

Full newspaper page : [HN018S][GDrive]

1995-02-06-the-los-angeles-times-pg-e-4-clip-spielberg

Arnold Spielberg joins co-chairs Karen Stevens, left, and Paula Raelson at heart institute benefit.

CONWAY

Continued from E1

When you've done that, you don't worry about the flavor of birthday cake."

Said Williams: "Actually, I like angel food. It's the frosting that I'll take any way it turns up."

◇

Spielberg, heart to heart: Movie director Steven Spielberg's father, Arnold Spielberg, was among guests who attended the "In the Mood" dinner benefit for the Sadleback Memorial Heart Institute last week at the Four Seasons Hotel in Newport Beach.

A resident of Leisure Word in Laguna Hills, the 78-year-old Spielberg said it was institute cardiologist Richard Caso who helped give him a new lease on life after heart disease was diagnosed two years ago.

"Dr. Caso placed me on a diet and exercise regimen . . . and I've since lost about 20 pounds and feel better than I have in years," he said.

Spielberg says he feels so good he was able to hike four miles at altitudes exceeding 11,000 feet during a recent visit to Crater Lake in Aspen, Colo. Karen Stevens and Paula Raelson were co-chairs of the $100 per-person benefit.

◇

Honoring the Herberts: Gavin and Ninetta Herbert, owners of Casa Pacifica in San Clemente—once Richard Nixon's Western White House—were honored last week by Julie Nixon Eisenhower at a docent tea held at the Richard Nixon Library & Birthplace in Yorba Linda.

The Herberts were singled out by Eisenhower for their donation of the Carillon electronic bells that chime hourly at the library, playing patriotic songs such as "Stars and Stripes Forever." She presented them with a signed, framed photograph of her parents.

Eisenhower was in California to attend a luncheon at Arco in Los Angeles with library supporters who are organizing the April 27 "Architect of Peace" dinner that will honor Walter Annenberg. After the luncheon, Eisenhower met with library docents to thank them for their support.

◇

Pacific Symphony bash: French-Canadian pianist Alain Lefevre schmoozed with Pacific Symphony supporters backstage at the Orange County Performing Arts Center following his performance of Rachmaninoff's Piano Concerto No. 2 in Segerstrom Hall last week.

Orchestra buffs dined on pastries and sipped coffee in Founder's Hall, while Lefevre and his wife, Johanne, an attorney, received accolades for his performance.

Johanne said her husband of 11 years had been practicing "eight hours a day, six days a week" to prepare for his appearance with symphony conductor Carl St.Clair.

Lefevre, 32, called the Rachmaninoff concerto "one of the most extraordinary concertos ever written" and said the occasion was a sentimental one for him. "It was a year ago that I lost my father," he said.

Among orchestra supporters raving over Lefevre's work was Sharon Lesk, a trustee of the Leo Freedman Foundation, sponsor of the orchestra's classics concert series.

Lesk had more than the concert to celebrate, she said.

"I have just been named by Ross Perot the new California executive director of United We Stand America," said Lesk, an attorney.

Her agenda for the organization?

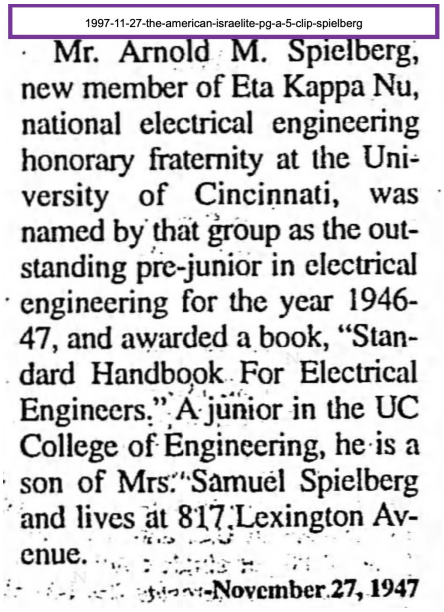
"I want to unite the group and begin to debate issues like whether or not there should there be another political party," she said.

Lesk said she was unsure whether Perot would make another stab at the presidency in 1996.

[HN018T][GDrive]

1997 (Nov 27)

Full newspaper page : [HN0189][GDrive]


1997-11-27-the-american-israelite-pg-a-5-clip-spielberg

Mr. Arnold M. Spielberg, new member of Eta Kappa Nu, national electrical engineering honorary fraternity at the University of Cincinnati, was named by that group as the outstanding pre-junior in electrical engineering for the year 1946-47, and awarded a book, "Standard Handbook For Electrical Engineers." A junior in the UC College of Engineering, he is a son of Mrs. Samuel Spielberg and lives at 817 Lexington Avenue.

November 27, 1947

[HN018A][GDrive]

https://www.newspapers.com/image/160258923/?terms=%22Arnold%2BSpielberg%22

Scientific Data Systems ..

http://archive.computerhistory.org/resources/text/Oral_History/SDS/102658201.05.01.acc.pdf

https://books.google.com/books?id=jf9HBgttTeQC&pg=PA139&lpg=PA139&dq=%22Arnold+Spielberg%22+%2B+%22Scientific+Data+Systems%22&source=bl&ots=Q3AsSYAvFe&sig=ACfU3U37vT_QPbcRXpb4B68j9SlAuit6qg&hl=en&sa=X&ved=2ahUKEwjph7zUyIPsAhXRUt8KHRbeDR44ChDoATACegQICBAB#v=onepage&q=%22Arnold%20Spielberg%22%20%2B%20%22Scientific%20Data%20Systems%22&f=false

2017 (Feb) - GE Corporation web site : "Happy Birthday, Mr. Spielberg: Computer Pioneer Who Helped Design GE's First Computers Turns 100 On Monday"

Source : [HC0042][GDrive]

The name Spielberg brings to mind a movie magician whose blockbusters changed storytelling forever. But Steven Spielberg isn't the first disruptor in the family. His father, Arnold, who turns 100 on Monday, helped mold computing — a field whose rise and dominance over all areas of life has no peer in the history of mankind.

Arnold used to design groundbreaking computers for GE in the 1960s. In 2006, he received the IEEE Computer Pioneer Award — one of the industry's top honors.

Arnold has been interested in machines, radio and electricity ever since he was a boy growing up in Cincinnati, Ohio. He served as a communications chief in a B-25 squadron in World War II and later established himself as an expert in early computer systems. Coming to work at GE in the 1950s, he helped revolutionize computing when he designed the GE-225 mainframe computer. The machine enabled computer researchers at Dartmouth University to develop the BASIC programming language, an easy-to-use coding tool that quickly spread and ushered in the era of personal computers as well as movies driven by computer graphics — a tool mastered by his son.

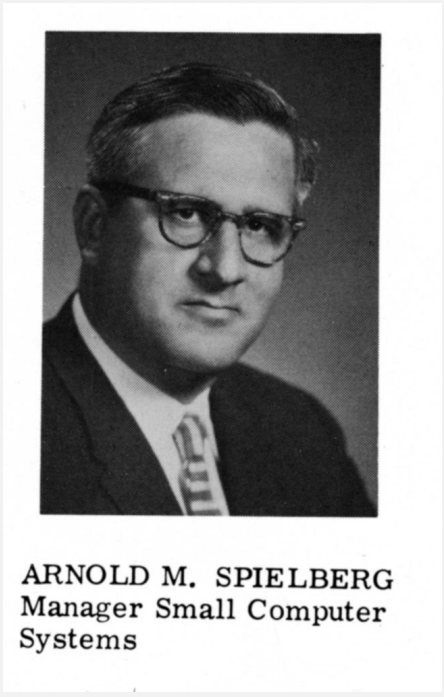
Last year, we visited with Arnold for a one-on-one interview. Surrounded by photographs with President Barack Obama, Hollywood actors and directors, family and framed patent certificates — he received 12 patents in total — he talked about computers, his love for science fiction and his work on Hollywood blockbusters such as Christopher Nolan's "Interstellar." What follows is an edited version of our discussion.

GE Reports: When you started designing computers back in the 1950s, the technology was still very new. How did you choose that line of work?

Arnold Spielberg: I was always interested in electricity. I liked working with magnets, and I liked working with radios. I knew about Edison and Tesla, but not in detail. I got my first crystal radio set when I was 9. It's basically a diode that can detect radio waves, and I played around with it. But I never could get it working until a radio repairman who lived next door helped me set it up.

GER: What else were you building?

AS: Once I saw an Erector Set in a hardware store. I went inside and asked the owner if I could use it to make a steam shovel and put it in the shop window so they could sell more Erector Sets. He grudgingly agreed and I sat in the back every day after school until it was finished. Later, I brought my mom over and showed her what I built. Sure enough, I got the construction set for Hanukkah. But I was also influenced by science fiction. There were twins in our neighborhood who read one of the first sci-fi magazines, called Astounding Stories of Science and Fact. They gave me one copy, and when I brought it home, I was hooked. The magazine is now called Analog Science Fiction and Fact, and I still get it.



[HC0043][GDrive]
Arnold Spielberg in 1961, when he worked as the manager of GER's Small Computer Systems business. Image credit: Museum of Innovation and Science Schenectady

[HC0044][GDrive]
Dartmouth had one of our computers, and they programmed it to develop the computer language BASIC," Spielberg says. Image credit: Museum of Innovation and Science Schenectady

GER: How did you end up in GE?

AS: [...] I joined GE's computer department in Schenectady, New York, in 1955. My first job was designing circuits for the first computer process controls. The department was just starting. I stayed at the YMCA and visited my family, which was still back in New Jersey, on the weekends.

GER: Who were the computers for?

AS: The first ones were used for the industrial market. Our customers were paper mills and steel mills like Jones and Laughlin Steel Company in Pittsburgh, Youngstown Sheet and Tube in Ohio, and McLouth Steel in Michigan. They were the first customers ever to have a control system for a hot strip mill.

GER: What did the computers do?

AS: The first computers I built were data-acquisition systems. Their job was to monitor defects. They were a wire-programmed system, which means that they were uniquely designed to do just that job. Another computer called GE-312 monitored a turbine for Southern California Edison. We didn't dare to control it because that required stops and starts, which could have endangered the machine's life. The function then was just to make sure that it stayed within specified temperature ranges and that all the contacts were opened or closed as prescribed.

GER: Tell me about the computer Dartmouth used to write BASIC.

AS: Unlike the previous computers, the GE-225 — as it was called — was a business computer. It stored its own software, handling the input and output of data. We relocated the factory to Phoenix and sold it within GE as well as to the external market. GE used them for general business applications and some scientific work, but mostly to do business processing. I was in charge of the small-computer-systems group, whose job it was to design the circuits, design the logic, plan the system and put it all together.

GER: How small was this small computer?

AS: The computer consisted of three racks of equipment. Each rack was 2 feet wide and 7 feet tall. There was air conditioning at the bottom of each rack to cool it off because the circuits ran pretty warm. The memory could range from 8,000 to 16,000 20-bit words. It had an auxiliary memory that could go to 32,000 20-bit words. The computer interfaced with magnetic tapes, with punch cards and punch tapes, among other things.

One of our colleagues, Bill Bridge, designed a computer interface for Dartmouth that could transfer information from the computer to dumb terminals. They had no memory and no capability of doing computation. These were just input and output devices with keyboards. People could connect between 15 to 20 terminals to one computer and use that for time sharing. GE was one of the first companies to do time sharing and allow multiple terminals to talk to a computer.

Dartmouth had one of our computers, and they programmed it to develop the computer language BASIC. It allowed people to use the system to solve problems and handle data coming in out of the computer. Steve Wozniak may have used one such remote terminal to write software for Macs.

GER: Did your friends or family understand what you were doing?

AS: Back then I didn't have that many friends who were interested in computers. It was like a big mystery to them. My son Steven came to visit once, and I showed him the factory and the engineering floor. I tried to get him interested in engineering, but his heart was in movies. At first I was disappointed, but then I saw how good he was in moviemaking.

GER: You were also involved in movies.

AS: I went to Caltech, and met with the astrophysicists Kip Thorne and Lisa Randall and several other scientists, and we sat there and brainstormed ideas about black holes for the movie "Interstellar." It was a lot of fun because we kicked around all kinds of ideas about the size of black holes and how feasible they are and how likely there actually may be one.

GER: You didn't turn Steven into an engineer, but he turned you into a moviemaker.

AS: It's in the family now.

2015 (March 16) : Univ of Cincinatti : The grandfather of ET and the father of the modern Point-of-Sale system

Source : [HE0028][GDrive]

[...] Arnold Spielberg graduated from Hughes High School which cross the street from UC at the southwest corner and located on Clifton Avenue where Calhoun and McMillan meet Clifton. [...]

When he talked about Cincinnati, I was able to relate and when he mentioned the Hughes vs Roger Bacon football rivalry, he noticed I was particularly interested because I went to Roger Bacon. If you want to learn more about what he did outside of his Cincinnati time see a list of interviews below. I will focus on his time in Cincinnati and at UC. His first wife, Leah Posner, graduated from Walnut Hills High School and so did his brother Russell. They were high school classmates of Viola Woodward who also graduated from UC and did computer programming on the ENIAC (see UC's first computer geek).

Arnold Spielberg was born on **February 6, 1917** in Cincinnati, Ohio. He attended Avondale Public School and then Hughes High School (1930-34). At Hughes he won an award for his science ability, but his overall GPA was not good enough to get a college scholarship. His parents were not well-to-do and his father had been sick at the time so he had to go to work. The summer between his junior and senior year in high school he work in **Cynthiana, KY**, which is a small town north of Lexington. **His cousins had a small department store there. After graduating he went back down there and work for a total of seven years until 1941 when World War II started.**

At Hughes he discovered his love for math and science. He also took Spanish, architectural drawing, and drafting. In those days, there was a boys' homeroom and girls' homeroom. Oatis Gates was the head of the homeroom who was well-liked by the students. He worked out with the gymnastic team and learn how to do tricks on the horizontal bar and other apparatus. He built up his upper body strength even built a horizontal bar for use when he lived in Kentucky. Two of his friends, Sid Patterson and Roger Walby(?), were the co-captains of the football team. Their chief rival was Roger Bacon and Hughes beat RB his senior year he told me with a satisfying smile. He went back to Hughes on two different occasions for his class reunion.

He was friends with Jake Schott (class of 1933) who was also a ham radio operator and later went on to become the Chief of Police in Cincinnati. He (treasurer) and Jake formed the radio club. Withrow High School had a glider club (a secondary glider that was towed the entire time) and the two schools did a project together were they put a receiver in one of the gliders to see if they could communicate with it. This experiment helped him later when he was stationed at Wright-Patterson Air Base in Dayton. He learned how to shoot using a rifle that he borrowed from Jake. Later, Arnold bought a used Steven's Walnut Hill Single Shot 22 Caliber rifle from an old hunter in Cynthiana which he had recently given to his son, Steven. This is the gun his son first had learned how to shot.

Arnold was also a ham radio operator (call sign of W8IDX) using a system he had built himself. He was more interested in electronics than working at his cousins' department store. He had to change his call sign while living in Kentucky to W9AUM (Always Under Modulated). He also built a phone transmitter during that time. **He learned the department store business which paid later in his life. He went from stock-boy to assistant manager.** In 1940 he was transferred to a store in Richmond, KY where he served as a co-manager. He learned a lot about managing a business, skills that would serve him well later in life.

At the onset of WWII, he decided to enlist since **he knew he would have been drafted anyway so he joined the Army Signal Corp**. He enlisted at Fort Thomas, KY and after a week he was sent to Louisville and later to New Orleans at New Orleans Army-Air Force Base and the 422nd Signal Company. **Part of his responsibilities was to teach Morse code to the new recruits** who did not seem very interested in learning any of that until he started telling "dirty" stories and then suddenly their learning shot up. **In May of 1942 he was sent off to what was then Karachi, India (now Pakistan) zigging and zagging on the way there. This was at the height of the German submarine attacks something that another UC Bearcat, Dr. Paul Herget, had a hand in preventing.**

When he came back to the United States, he was stationed at Wright Field where his brother was also stationed. He was a master sergeant working on designing a radio receiver to help guide a bomb. He knew he wanted to engineer after his experiences in the war and his work at Wright. He did his freshman and sophomore years in one year. Keep in mind that he was an older student having graduated from high school in 1934 and after having served in the war he was quite mature. He and Leah were also married. They lived in Avondale in a two-family house. He would walk to UC or take the street car.

[...]

Mr. Spielberg was recognized by the IEEE in 2006 as a Computing Pioneer for his work on developing a computerized Point of Sale System while working for RCA. The system was tested in Cleveland, Ohio at the former Higbee's Department Store. Higbee's was made famous in the movie "A Christmas Story" and now is the site of the Horseshoe Casino Cleveland. This citation reads "For recognition of contribution to real-time data acquisition and recording that significantly contributed to the definition of modern feedback and control processes." **Mr. Spielberg went on to work at General Electric where he developed some of their first computers and later for IBM, Scientific Data Systems, and ended his computing career with Burroughs Corp (which became Unisys).**

Footnote:

1. While at the GE Computer Department Alumni symposium in 2006, I met another UC Bearcat who also worked for GE and helped start the time-share industry in the 1960s. His name was Gerry Haller.

Interviews:

1. An interview with Arnold Spielberg conducted by Anne Frantilla on June 23, 1987 at Mission Viejo, CA, Charles Babbage Institute Center for the History of Information Processing, University of Minnesota, Minneapolis
2. An interview with Arnold Spielberg for the Rutgers Oral History Archives conducted by Sandra Stewart Holyoak and Shaun Illingworth, New Brunswick, NJ on May 12, 2006. (https://oralhistory.rutgers.edu/interviewees/30-interview-html-text/146-spielberg-arnold)
3. A recent interview that Arnold Spielberg gave can be found at http://boingboing.net/2016/12/27/arnold-spielberg-stevens-d.html

2020-09-29-wikipedia-org-steven-spielberg

https://en.wikipedia.org/wiki/Steven_Spielberg

Some of the films he cited as early influences that he grew up watching include the Godzilla kaiju film King of the Monsters (1956), which he called "the most masterful of all the dinosaur movies because it made you believe it was really happening",[32] as well as titles such as Captains Courageous (1937), Pinocchio (1940), and particularly Lawrence of Arabia (1962), which he cited as "the film that set me on my journey".[33] In 1963, at age 16, Spielberg wrote and directed his first independent film, a 140-minute science fiction adventure called Firelight, which would later inspire Close Encounters. The film was made for $500, most of which came from his father, and was shown in a local cinema for one evening, which earned back its cost.[34]

After attending Arcadia High School in Phoenix for three years, his family later moved to Saratoga, California where he attended and graduated from Saratoga High School in 1965. He attained the rank of Eagle Scout. His parents divorced while he was still in school,[35] and, soon after, he graduated. Spielberg moved to Los Angeles, staying initially with his father. His long-term goal was to become a film director. His three sisters and mother remained in Saratoga. In Los Angeles, he applied to the University of Southern California's film school but was turned down because of his "C" grade average.[21]:548 He then applied and was admitted to California State University, Long Beach where he became a brother of Theta Chi Fraternity.[36][37]

While still a student, he was offered a small, unpaid, intern job at Universal Studios with the editing department.[38][39] He was later given the opportunity to make a short film for theatrical release, the 26-minute, 35 mm Amblin', which he wrote and directed. Studio vice president Sidney Sheinberg was impressed by the film, which had won a number of awards, and offered Spielberg a seven-year directing contract. It made him the youngest director ever to be signed for a long-term deal with a major Hollywood studio.[21]:548 He subsequently dropped out of college to begin professionally directing TV productions with Universal.[40][41] Spielberg later returned to California State University, Long Beach and completed his BA degree in Film and Electronic Arts in 2002.[42]

(23 June 1987) Interview of Arnold Spielberg : Conducted by Anne Frantilla at Charles Babbage Institute

Text with OCR - [HI001D][GDrive] / Original PDF (but with OCR) : [HI001F][GDrive]

Interview location : Mission Viejo, CA

Abstract : Spielberg, an electronics engineer and manager in Product Technology Operations for Unisys, discusses product development in the computer industry. He describes his work with RCA and General Electric Computer Dept. in the 1950s; IBM, Scientific Data Systems, and Electronic Arrays in the 1960s; and his work with Burroughs (and later Unysis) after 1973.

Notes :

- F = ANNE FRANTILLA
- S = ARNOLD SPIELBERG
- // = UNINTELLIGIBLE PASSAGE

F: This is Anne Frantilla talking to Arnold Spielberg in Mission Viejo, California on June 23, 1987.

S: Electronics was sort of a way of life for me, because I started playing around with radios when I was about eight or nine years old, when I was living in Cincinnati. Crystal sets were all that was practically available for a little kid. And I always had an interesting connection with Boy Scouts, because there was a Boy Scout who was older than me, and he sort of took a liking to me and gave me an old crystal set that he had. This was about 1926 .. My uncles had just come to this country from China, and they came to the United States through China from Russia. I'll never forget at my house I had this crystal set turr:ied on to a radio station in Cincinnati, WKRC, and I put the earphones on his ears, and his eyes opened wide. He had never, heard a radio in his whole life, you know. I've never forgotten it. So I always was interested in electronics and played with magnetics and made magnets and Erector sets and all that stuff. So in time I became a ham radio operator and that was in 1932 and I used to operate a lot. I was raised during the Depression and I missed college by an inch. So I went to work and I worked for about SE;wen years in the department store business down in Kentucky.

F: In sales, or ...

S: Well, sales, and then I eventually became a manager at the store. And so I learned that business pretty thoroughly. But all this time I was still working witrt ham radio. And then in the service I volunteered during World War II and I was sent to India. And in India I was the Communications Chief of a bomb squadron. And so I picked up some more electronics there. And ...

F: For a bomb squadron?

S: A medium bomb squadron, of B25s. Our squadron was called the Burma Bridge Busters because our job was to destroy the communication lines for the Japanese that were coming up through Burma, to try to invade China from the bottom, and into India as well. So, for a while I flew a combat missions as a radio operator, but then when they found out I could fix radios, they grounded me. So that worked out o.k. And when I came back to the States on rotation, I was able to finagle my way into Wright Field. My brother was a graduate engineer there, working in Wright Field, and he got drafted into the service. And so I took his place, so to speak, at Wright Field. And I worked on developing a radio receiver to guide a bomb. Now that was the first time anybody handed me a developmental program. I didn't know the first thing about how to go about designing something other than one does as a ham,"code your own equipment, you know. I never had a college education, and so it was just hands-on experience and it was kind of fun.

F: What technology does that involve? Was that something new? _

S: No, it wasn't radar. It was radio. It was using high frequency ...

F: Guides?

S: Yes, we used high frequency radio signals at 300 MHertz, and the bomb was guided by five different tones. The tones were filtered out and they in turn actuated a servomechanism which tilted the fins to left or right, or forward or backward, or neutral. That were the five tones. And the pilot sat there with a stick and he watched the bomb go down, and he would steer to left if it was veering, you know, to try to hit the target. And the way a bomb falls, it falls in a trajectory that if you'd fly the plane at the right altitude, you could sort of stay above it, you know, as it goes down and try to guide it in. And it had a technical name, RAZAR--radio and azimuth, range and azimuth control or something like that, I've forgotten. But that was my first experience in doing some engineering, so ....

F: Sounds pretty creative.

S: Yes, it was fun, and I was frustrated for a long time because the specifications that they wanted us to adhere to, you know, were specs I'd never heard of, so I had to look them up. What does microvolts per meter mean, and what's the IF band width, and ...

F: Did most people you were working with know? _

S: Oh, yes. There was a lot of engineers there. It was funny situation, because I came back from India as a Master Sergeant, with no college education, working with Ph.D.s who were corporals, you know. Some of them were pretty mad. What's this guy doing with all this rank here, and no training, and here I am, this hafd-working Ph.D. and they drafted me i_n the army and stuck me right back in Wright Field as a corporal. That kind of stuff. But I got a lot of help and//. And so right after, I decided to go to school under the GI Bill. [...] . So when I graduated [Cincinnati], I joined RCA. I joined RCA to work on television, but they had other ideas and they put me in some radar programs, and I kind of enjoyed that. In 1950 I transferred into a the beginning computer group there. So I really started working on computers in 1950. And at that time vacuum tubes were the main source of logic. And so I did some interesting work with the RCA tube design group in Harrison, New Jersey, because they were trying to design vacuum tubes that would respond as logic elements. They had one tube designed to be a three-input 11and11 gate, another one designed to be a two-input "and" gate, an "or" gate. And I built up some circuits with them. My job was to try to evaluate this and see if they were practical, should they continue with designing of functional, tubes. And a number of us pretty soon came to the conclusion that wasn't the way to go.

F: How much contact did you have with other people in the industry? Were there other people working on the same sorts of problems? Was it ... a kind of tight-knit community?

S: Well, there was a large group of people, and RCA, in order to get started there, was hiring people from all over. Some of their main sources of talent were people from MIT that worked on the Whirlwind computer. Which was the MIT's claim to fame. And there was a bunch of sharp guys, because the group that came together, RCA came out of research and development labs. While the development was going on down in Camden, New Jersey, there was some very original work going on up in Princeton Labs of RCA by a gentleman by the name of Jan Rykeman, who was the man would claims to have invented the magnetic core memory. And there was a big patent ...

F: I thought that was attributed to Forrester.

S: Well, there was a day ... that's right. And there was a big patent battle between Jan Rykeman of RCA Labs and the Hazeltine Corporation which held ...

F: Hazeltine Corporation?

S: Yes. For they claimed to hold a patent, and the two patents were right on the edge of contention. And I think J. Forrester won on that one. But I thought Rykeman was as much a contributor to that invention as Forrester, because they were just running parallel. And at that point in time I became a supervisor, and I had a very smart young guy that I sent up to the labs to learn how to make magnetic cores. We pretty soon came to the conclusion after this early vacuum tube stuff, that vacuum tube functional elements, that we would use vacuum tubes as drivers and use diodes for logic, although we had a contest, so to speak, whether we were going to build computers out of magnetic elements or diodes and logic elements. And the industry went diodes. And so that's where we went, too. Then I got , involved with the Bizmac computer and my first job there was to design the arithmetic system. And then after that I was responsible for designing a data sorter-merger-extractor, a wired program system, because they didn't use stored programs on that. They kept the stored program concept for computers and we did wired logic, were doing special functions. So this is a huge machine that would fill this room. And the purpose was to take data on magnetic tapes and sort it, or to extract information from magnetic tapes, or to merge data. **And this was all in response to a contract that RCA had with the Ordnance Tank and Automotive Center to design a computer system for handling the ordnance operation.** And it was in Michigan. And it was a lot of fun. I learned a lot there. A lot of us had a lot of opportunity to write patents. I must have about 1o or 15 patents in my name for all kinds of computer logic and systems . Then after that program got launched, since I was in the Advanced Development part of RCA, I got a very interesting program, that was the design of point-of-sales unit for a department store. We worked with an associate merchandising corporation and they were interested in sponsoring someone to develop an electronic cash register. And I got , picked for that project because of my department store experience. So I was able to be very conversant with department store managers, and, as a matter of fact, I think that was one of the best planned systems, despite the ancient technology we're in now.

F: Would that be something that would keep track of inventory?

S: Yes, it could. I'll just give you a brief outline of what its purpose was. The first thing was designed to capture data at the point-of-sale, like you see in any store you go to now. What we did was make a mockup and went to about six different major department stores throughout the country and set up--what you might say , operating environments, where we'd have sales people ring up sales on this mockup machine, and then critique it, and we had buyers critique it

might say-- operating environments, where we'd have sales people ring up sales on this mockup machine, and then critique it, and we had buyers critique it, floor managers critique it, and we took elaborate notes. And then went back and incorporated this in an overall system design. And the overall system was designed to have multiple cash registers feeding into a central computer. And then the central computer in turn produced data on magnetic tape, which was in turn carried over to the Bizmac computer which was the inventory control computer. So the purpose was to capture data at the point-of-sale and then use it to modify inventory records, so as the store would have a current status of all their stock, and a current status of the sales activity.

F: Sounds like a pretty advanced .. .

S: It was. As a matter of fact, it is ... there's very few changes in the current system of point-of-sale operation that we didn't conceive of at RCA, including reading merchandise tags, including checking for bad credit and having a list of credit people on the drum. We used a big drum for the storage of information.

F: You know who made the drums?

S: Bryant, in Walled Lake, Michigan was the original. That drum was about 16 or 18 inches in diameter and about 24 inches long. It was huge drum.

F: Burroughs, I know, used some in the sos that they bought from the ERA.

S: Yes, that's right. The ERA was a good drum maker then. Well, Bryant was a maker of high-quality bearings and machine tools. And we felt that they could engineer a drum that would spin and hold its own, and what problems we had were usually-metal expansion, all that stuff, which was a pain in the neck. But we had it working. I have some pictures of my · collection at home of those earlier systems. · But the sales recorder, they used a computer, and it was one of the first times that I've ever known of, other than John Wilkes in England, that anyone built a micro-programmed computer. This computer we built, the custom computer for taking all the data of the sales recorder, was a wired micro-program computer, that is, we used diodes to set up the micro-steps, and we had a counter that stepped it along, and tor multiplication would step along feedback step-along. Feedback is your repeated additions and shift, binary type multiplication. So we literally had a micro-programmed computer, but not like the current technologies, which is stored in RAMs and ROMS. But the concept is similar. That's what I meant by this business_ of ideas re-occurring and re-occurring and re-occurring.

F: Did you get other contracts from that?

S: No. What happened was we did try for a lot of contracts. We went to the military, we showed them that we could automate logistics centers at the various Air Force bases. But the problem was very fundamentally that the system was too early. We didn't even have transistors in it. It was all diode logic in tubes. This was done from 1954 to 1956, and the mean-time-to-failure of that system when it was installed--it was installed as a test system in Higbee's in Cleveland--and there was 10 point-of-sale units in the sportswear department feeding the recorder's Central, which was the name of the supporting computer. And it usually would stay together for about eight hours and then it would go down. And somebody would be jumping out to fix it, so it would barely hold together for the day and then the technicians would pile on it at night and try to get it back to life again . .

F: There must have been some sort of backup system with it.

S: Nope.

F: During the day if it went down they couldn't make any sales?

S: When it went down, they had to go use hand cash registers. They left the regular cash registers around. So after a year of trial, they concluded that functionally it was a good idea, that functionally it would work, but that technology-wise it wasn't ready. And so RCA ate a couple million dollars worth of costs there, and so did the associate merchandising corporation. And they said, o.k., end of experiment, end of program. Now, a lot of the people that were on that program went to different companies. Some went to IBM, and IBM set up an operation in Rochester, Minnesota to continue to examine systems using point-of-sale. And some of the original RCA guys became part of that and I ran into them later when I joined: IBM. And, matter of fact, they asked me all about it--early days. I left RCA in late '56, early '57. I joined the General Electric computer department. At that time the computer department was called the Industrial Computer Department because Ralph Cordner said, "You will not join the business, making business computers. I will not allow that. 11 And every time a plan was sent to him that mentioned going into business computers, he would would write "No" across it and send it back .

F: What was his reason?

S: His reason was that. General Electric is an industrial company, and if you want to make computers, you can make them for the industry. So there was a sharp guy by the name of Barney Oldfield who was head of the Microwave Lab, and he set-about to, somehow to make this happen. And he convinced the Bank of America that General Electric could build the IRMA computer that the Stanfdrd Research Institute (SRI) was designing for them. So, after several under-the-table operations in which he had some pretty good names associated with the company, like Dr. Herb Grosch, Dr. Bob Johnston who used to be//, was part of that team. And they hired me to help set up the Industrial Computer Department, because that was the banner under which we flew. But in the meantime, they did seti the Bank of America the concept of building the computer, and GE launched into the computer business despite Gardner's statement that he wouldn't. And so when they were recording the story, when they finally dedicated the first computer, Cordner came out to attend the dedication ceremonies and promptly fired Barney Oldfield right after the ceremony, for violating his rules. And he gave the company 18 months to get out of the business. You know, gave them II. And there was only about five or six people that knew about that. Certainly not me. But I remember working on a computer for process control, that another guy and I went to the general manager and said, "Hey, we can put a memory in this thing and now you've got yourself a business computer. So II we did it. And that got him started. That became the GE 225 and 235 which was, well, they were both successful computers. I really didn't find out about all that high-level machinations until I went to the GE reunion, where some of the guys that were involved in that spoke about it.

F: Whatever happened to the Bank of America contract?

S; They shipped about 18 or 20 systems. They were problem systems, but they worked. And we got our data sorters, you know, check sorters, from National Cash Register, who in turn got them from II Pitney-Bowes, I believe, was the original developer. In the meantime, Burroughs was doing their own ...

F: But the check sorters that we used came from National Cash Register.

S; I didn't know they made them.

S: Well, they actually had them made by Pitney-Bowes, and then modified themselves, and GE finally made their own. But then they really lost the banking business because--a lot of things I wasn't totally aware of, but-while their product planning was not well directed, they came up with a middle-range product that I started, called the 400-Series of the product planning I I decimal machine, something like our B.;Series. But it was not competitive, it was priced too high, so it didn't succeed. And then they came out with a 600 line which was pretty good. But by then they just decided to work their way out of the business. And a lot of people thought they lost a lot of money in the business, but as I understand it from some of the people that were involved in finances, they really

didn't lose much money on it. At least that's the story I heard. So when they started to ease their way out of the business, that's when I left and went to IBM. And I joined IBM in 1963 to work on process control--computers. IBM was just really starting to get into process control. And again, one of the guys that got me into IBM was a fellow that worked with me at RCA. So there's again the old IBM community of people. And ...

F: How was IBM perceived within//?

S: How was it perceived? It was a top company. This was, in '63 IBM was a league leader. They were in business computers. They decided to get into process control and they adapted an old machine called the 1620, and they repackaged it and called it the 171 o. But it really didn't cut it. They installed a few because they have such a tremendous sales force, that they put a few in some paper mills and a few in some// to do some data logging, but then they started programs that would come up with a new one. And that's where I came in. And thts new machine was not well-conceived because the people who put the system logic together came out of the business computer line and their goal really was not to make a process control computer, but to make a small business computer. And since they were funded from the process control line, they gave lip service to process control. It was typical politics. So when I took a look at that computer, I say, "My God, this will never work in a process control world!' And so, this fellow who came with me from RCA, John//, and I sat down and designed a machine that we thought would do the trick. And we presented it to management and they bought it. And I ended up being responsible for the design of that machine. And the result that was called the IBM-1800. But the guts of the machine were then flipped over and used in the 1130, which was a very, very popular IBM small business scientific computer, and it replaced the 1620 which by then had died out in terms of the market, in the market.; So the 1130, I guess, over its life sold about 15,000 or 20,000 machines. And the 1800 process control computer sold about 82,000. In both cases they met their forecast. The real problem with getting into process control is the same as it is in almost any company--the marketing end of it. To sell computers in the process control industry requires a lot of custom design because each of the processes have different technologies, different sensors required. The front ends are the most complex part of the system. **So when I first started working on this system, I spent at least three to four months writing specifications for what the front end should be, based on my experience at GE.** And there were a few good guys at IBM that knew that industry, and so we put our heads together and got a fairly good specification written, and then part of it was built up in Rochester, Minnesota--the high-performance analog-to-digital conversion stuff was built up there. And the low-level work and the main processor and all the peripherals and all the peripheral controllers were built in San Jose, were under my control. And so it was a very intense work, because anybody who says that things are taken easy at IBM is wrong, because I used to come to work at 7:00 in the morning and work until 6, 7:00 at night and come in and work on Saturday, because what' happened was when they decided to put the new computer in, they didn't want to change the schedule. So we literally had to discard the first system and start over again and still keep the same schedule. And it was almost like an impossible thing, and yet, in a little less than two years, we designed a machine, built the first prototype, built the second version of it--you know, called the B-level, the first was the A-Model and then the B-Model--and we were just ready to release the C-Model to Manufacturing when I got an offer to be a Vice President in Scientific Data Systems, and I said, "Goodbye, IBM." And so I went to work for Scientific Data Systems in Santa Monica.

F: Was there any project that was competing with the one that IBM--the one for process control?

S: The 1800 was a, what would be considered now, mini. But in those days it was a small, medium-sized computer. Small-medium range. And the systems that were similar to it in performance characteristics were Scientific Data Systems' 900-Series--the 91 o, the 920, the 930--were a competing level of machine. Except they didn't have process control front ends. They were designed to be used in the small scientific and in downrange missile stuff. They did have some special front ends for them, but they were directed at missile simulation, missile data analysis. And that's one of the reasons I guess Scientific Data Systems wanted me-- because of that experience there, and also the previous experience at GE, plus several of the guys from GE went to work at SDS while I was at IBM, and said, 11Why don't you get Arnold? 11 That kind of stuff. So the other competitors to that machine were TRW, the RW-300, that was a little bit earlier machine, actually. And Daystrom had a machine that was--it was a good machine, but they never could market it right--they were always selling at such a low price that they really couldn't make any money · off it. And IBM's marketing force just overrode a lot of people. And also they had a shrewd piece of marketing concept: they did not try to use the computer as a process controller. They used it as mostly a data logging system. And they also incorporated a lot for factory record, data gathering, parts counting, production line control, production line data logging. Every place they could apply it to a data-logging operation, they would not then get committed to run a process. And it's easier to sell in that marketplace. You can build a good base of business, and from there they can grow. After I left IBM they started a System 7 which was their next generation processing control, but I was no longer involved in that. And I don't even know what happened to it, or whether it's still active or not. I know that while I was there I was often questioned about the point-of-sale system because IBM was doing some planning along that line. // they were very careful not to ask me about real trade secrets.

F: I don't think that would be true today, do you?

S: I don't know about today, but I know then they had a man in charge of, you might say, official information gathering. But when I left GE I had to sign all kinds of disclaimers I wouldn't give out any information. When I entered IBM they said, 11We don't want to know anything about what you've done specifically. 11 So the questions they asked me about sales recorders, pointof- sale systems, were not how I built it, or how it was built, but what were some of the concepts in terms· of application orientation. That's fairly open. But that was kind of interesting. I stayed at Scientific Data Systems where I was responsible for the whole 900-Series and then the Sigma-Series. The Sigma 2, 3, 5, 7. We were working a Sigma-9 with the French company. They would paying for a lot of them, and that's when they sold out to Xerox. And at that point I left and decided to go with a small semiconductor company called Electronic Arrays. That was a mistake. They built MOS semiconductors up at Mountain View and they asked me to be a Vice President of Operations in Southern California, in the L.A. area, actually out in the valley, to try to get them into the business of applying their MOS technology. So we had a few small contracts, but the company was very underfunded and the president was a guy that was so wrapped up in semiconductors, especially so wrapped up in MOS, that we had to build all of our systems out of the MOS technology that was coming out of the mountain he planned, even though the costs were so prohibitive that we couldn't make it for a profit. And even though we wanted to use TTL, he said no, we got to use MOS. And he would come up with a logic family of MOS technology that was like the small-scale integration right now. Very small scale. But it was too costly in terms of the number of gates that were functions per dollar. So, while we shipped about 40 or 50 of those systems, the company eventually--well, it was MAI--that was Management Assistance, and they did maintenance and they also did a few products of their own. And their job was do a lot of computer maintenance, or contract maintenance. So we built this IBM controller for them, tape controller, and then when they canceled the contract, fortunately for the company we had a cancellation clause, we collected a million dollars on the . cancellation clause. We used that to set up a calculator company, so I had to write the business plan for a calculator company, and we set up and manufactured a four-function calculator, a printing calculator, and then we had two others planned. And that was my first experience in applying MOS into calculators. And at that time we sold a lot of chips to the Japanese, which, instead of buying from them, they were buying the chips from us. That was rather interesting. And this was in the period of 1969 through 1971. '68 to '71, that time. And then the company really got into trouble financially. We sold the calculator operation to a sort of a broker who tried to complete the line and then he ended up getting a couple of good contracts to make some more calculators. But what had happened, the prices were going down so fast that it was difficult to keep up with it. Our original plan was that the calculators were going to sell for $398.00--for a four-

function calculator.

F: Wow!

S: Well, that's what they brought. Our plan was the next year they'd go to $298, the next year $198, the next year to $100. And it came down even faster than that. So the price just shot down, because the minute Jhe Japanese got a hold of it and they started putting high production techniques in it, the first calculator would have five chips, the next calculator was designed to have three chips, and of course pretty soon they were down to one chip. So that was a// adventure that got me experience in doing plans, and setting up a small business within a business, and so was the whole small company a business, because as a Vice President I was laying out printed circuit boards, you know, in the beginning, when there was only about 10 people in the group. We used to do everything. After leaving Electronic Arrays, I went into consulting, and I did some consulting for SRI, and for some small companies that needed systems and procedures working, and some technology, evaluations and things like that.

F: You had no problem getting work?

S: It was a bad time then. I would say I was about 35% busy and the rest of the time just messing around. And then Dr. Bob Johnston had a party one time. He found out that I wasn't doing anything much. He said, "Why don't you come to work for Burroughs?" And so in 1973 I joined Burroughs as the Director of Engineering under Lloya~ole~~) And for the first--oh, I joined him in April of '73, and then until September I spent my time out here in California helping the Galicia plant, going through some of the rough starts on getting the 1700-line. That was under Rod Bunker then. And I worked with Dean Ernest and some other guys, that we were just trying to see if we couldn't get the product cost down, because the 1700 was promised as a low-cost machine and it came in pretty high and it took a lot of effort to kind of re-direct it to get the cost down, but never down to the goals.

F: Well, it was definitely one of the most successful product lines ...

S: It became a successful product line, and yet initially it looked very sad in terms of cost. But I guess marketing handled it o.k. And after there I moved to Detroit, and I was involved in all the plans then under the Computer Systems Group. And I was in Detroit for about two years when the DC&L program started. That was a mistake. We involved way too much . of the company's product plans onto a technology that was (how shall I call it?). It was best labelled experimental in the beginning, and it looked like-- as a matter of fact it had promise. It did have promise, and if we'd have picked maybe one or two products and said let's use these as the target products, we wouldn't have gotten management so nervous about committing all this money and all the programs to a technology that was still evolving and still had a lot to go and had a lot of cost.

F: Is there anyone group or group of people that sort of were pushing for that?

S: Yeah, the focus of the push was really two places--at the senior management level it was under Dr. Bob Johnson and Herb Stopper. Herb really did a lot of the conceiving of the function of the circuit system. The Rancho Bernardo plant actually did the implementation of the BC&L technology. The packaging concepts were worked out in Tredyffrin under Sid Einhart then, and I think if we had stayed, "Let's build the machine in Tredyffrin and no place else, we'd have had a good chance of success because that machine was big enough so we could have absorbed some of the cost of the water cooling, the liquid cooling,//, it exceeded its cost objectives it would be like the 1700 was. It exceeded its cost objectives a lot, yet it became successful. Another problem that happened with the product is there was a lot of problems initially in the technology at Rancho. And so this kept delaying the product coming to the marketplace. And so what happened was the technology became older without seeing the light as a product that brings some return to the company. Also, the signal level that was chosen under the emphasis of Dr. Stopper, was incompatible with the other ECL technology that Fairchild was sponsoring and that Motorola was working on. So we had no way of rescuing ourself by saying hey, let's grab some ECL from Motorola or from Fairchild and fill in the gaps and make a system that could have been compatible in that sense.

F: You mean technology was changing increasingly fast, or do you just think it took an extraordinary amount of time to get it ...

S: Yeah, but you see, that's true even now. But now they've really cleaned up the art of having very high density VLSI technology. They also have now cleaned up the design automation methodologies for laying down, you know, defining the patterns. In the early days the DA was crude. A lot of stuff had to be laid out by hand. Gate arrays were just beginning to be ...

F: Gate arrays?

S: Gate arrays. That's the concept, instead of doing the design of a chip exactly customized to the function that you want to do, you have an array of gates that can be interconnected to make the logic. But the array is a fixed pattern, and then you just configure it to the logic that you want. And some of our ... well, matter of fact, the A-3 is built of gate array type logic. The A- 1 o was built that way. A BCL, the A-9 was built that way, and the concept of having quick turnaround custom circuits just wasn't ready. But now with the silicon simulation technology that they have to go to simulate circuits using high-performance systems, you can have a much faster turnaround. And thus you can go back to some custom circuits. In the meantime, while all this was going on, the computers on a chip, you know, while I was with Electronic Arrays, Intel was beginning to work on the 8080, or the earliest single-chip computer. And as a matter of fact, speaking about rock, I proposed to Electronic Arrays that we build a three-chip computer, a computer chip, a memory access chip, and an 1/0 chip. And they said, naw, we don't want to do that. And it was about the same time the 8080 was coming out, I heard Dr. Davidow // at Intel. So I often thought, gee, what would happen ... we never had the money to do it, though. Forget it. We were so lightly funded that probably it was a good decision not to do it. But on the other hand it was a shame. We would have flunked because we would not have had the money to put into it. So in working on CML, it was a frustrating job because there was a tremendous controversy about using the program. This plant in particular, but then engineering manager, Irv Houk absolutely did not want to use CML. He was probably right, in retrospect. The A-9 program shoved around from one technology to another, trying to meet everybody's various pulls and demands as to what the machine should be. You start off as a CML machine, then they said let's do it on a PTL, but that wasn't enough performance. Then it was back to CML again because it wasn't enough performance. Then they proposed the F-100, Fairchild ECL technology . That one finally came out to be. But that cost about three or four years of //

F: I could be wrong, but wasn't the company doing very well in the '70s? I mean, it looked like that's when it started being really profitable. Mayo~ it's more toward the end of the '70s.

S: Well, more toward the end, yes. And also, recognizing the fact that CML was not going to make it, Bob Merrell was then the vice president, started a bunch of programs using PTL technology. They redid ... they gave up on the CTL technology. They redid the 1800, the 17 series of// in PTL. Then came the 1800 and 1900 series. They started a PTL program here that became the 5900. Pasadena continued evolving out of CTL into TTL, and so TTL really became the rescuing technology. And then Rancho Bernardo sort of sunk into limbo for a while. And there was one successful machine that opened out of BC&L in Pasadena, and that was the 4800. It was made out of BC&L-zero. And it exceeded its cost, but it had nice performance. Then there was another machine built out of BC&L-zero at Liege which was a 1700-style machine, but built at Liege out of BC&L-zero. The BC&L-zero was packaged in a conventional package

out of BC&L-zero at Liege which was a 1700-style machine, but built at Liege out of BC&L-zero. The BC&L-zero was packaged in a conventional package. Instead ofa liquid cool pack, it was an air-cooled system. And so it didn't suffer from the problems of trying to make it a good packat)ing technology with liquid coolant work. And now there's some of the people who were early proponents of the liquid cooling have come up with a much nicer package down there at Rancho. Gunther Weber's//. And what happened with me is, after the CML fiasco (I might call it that), I officially transferred out here because my exwife did not want to live in Detroit any more. So I stayed here and worked on it. Then I went to work in this plant in Systems, and then gradually evolved into an Activity Manager and put together a graphics program.

[...]

F: Did you think it was frustrating for people working on CNL?

S: On CNL?

F: Well, it doesn't seem like overall the company lost that much. They sort of rescued themselves in time.

S: Well, they did rescue, but in reality, we delayed our entrance into the VLSI field by at least three years. I would say we could have been into the VLSI fiel"d sooner had we had a little more focus and more development without commitment. In other words, if we had put one product together and looked at it, we could have learned from it instead of diversifying--not diversifying--diluting all the skills and trying to cover a whole bunch of bases, and not succeeding at any ...

F: All right. Talking about who was arguing who, doing what, in terms of BC&L or not, what groups do you think had the most input. There's marketing people and legal people and engineering people.

S: Well, the market people, in all honesty, I think, really, didn't really know whether the technology was ...

F: Did they have a say?

S: Well, Product Planning was then under Fred Meier, you know, was concerned that we're not getting the objectives. You know, he looks at it and says, "Where's my results? 11 And the results weren't there. So obviously he became sour on it. Bob Merrell at first was for it and then against it, as he saw nothing happening. Bob O'Connell, who was head of the semiconductor group, was trying to make his group do it, and of course there'd be head clashes while they tried to straighten each other out. And the net result was finally the company said, "Let's go.""

F: Was the top-level management?

S: Well, gentlemen like Paul Mirabito were really at the mercy of his people who were giving him good technical advice, imaginative advice. But after a while he said, I'm sure he saw// 'we're not there yet.' And unfortunately Herb Stopper was a very convincing talker, an extremely brilliant guy. I used to work with Herb at GE, so I knew him before he came to Burroughs. He was in our group at GE. And he's an extremely bright guy, but extremely stubborn. And he had the concept that anything he says can be done, anybody ought to be able to do. And so, he never put a product down in the marketplace. And so he would come up with absolutely correct theories, but the implementation was tough, and he'd get totally impatient when it wasn't happening. And he'd start clamping down on people. And Bob Johnson supported him on a lot of that, although Bob's a very sharp engineer also, but also a guy who never really put products in the marketplace personally. And there's something to having your hands dirty and completing a program and making it into the factory and going through the nitty-gritty of getting a product through the manufacturing cycle that is a very--how shall I call it--leveling type of experience. You say, boy, Murphy's Law works. If it can go wrong it will. And you start to work on problem-solving those problems. And unless you carry that out and have some of that under your belt, everything looks ethereal, looks like it can happen. And then you get rosy glasses. And that's a lot of what happened in the higher level there. There was some rosy glasses at the corporate level of engineering, I think, and some insisted that yes, it can be done. And then at some of these big meetings we have at Detroit, stop work put up curves. Yes, the cost can really be here. It can under ideal circumstances, but not under the.practicality of what was happening at those times ..

F: It seems like such a complex thing.

S: It is. It was a very complex ... and the industry has matured now and now we know how to do it. And things that seemed to be ... that were very difficult then are still difficult, but the technology is here and the tools are here and the design automation is here an~Jthere's maturity in the thing. And we were on the forefront. And when you're on the forefront it's not too hard to slip. And it hurt me.

F: // It's hard to work on a project that doesn't.

S: I got a kick in the butt for it, too. Somehow or other I should have made it happen. That's the job.

F: Someone's got to be the fall guy.

S: Well, a fall guy or what. A number of us took a beating and I was about ready to quit. But then I said, naw, I ain't going to do that. I'm going to stick it out and show them I can do it. And that's what happened. And so now, well, we'll talk about graphics now, because what happened was the company had decided that it would be a good idea if we had some new product avenues. Graphics, according to the corporate product manager study, was an evolving, an emerging, field.

F: Do you think they're correct?

S: The company was correct in saying graphics is emerging. The company was correct in saying it can be a business. The company is correct in saying that it would complement our product line. What was wrong was that there was no real training in marketing, in how to sell it. It's such a new concept, and it's a technical concept that has to be sold. And you were not going into the front door to your DPO, operator of data processing operations and say, 11Hey, I'm gonna do more business for you. I'm gonna give you a more efficient machine now. I'm gonna crunch the numbers faster for you, or I'm going to do your banking faster," or what have you. Instead you say, 11I'm going to give you good reports. I'm going to give you graphic illustration of your data. And I'm going to give you publication quality of all these slides that you can make presentations with. 11 And so that was the marketing end of the thing that really need to be grown.

F: It was kind of before its time?

S: That's A. The company that we selected had a good product, but the product was an older product. And it was at the highest end of the graphic performance line. It was designed to be a high-end system producing very, very high resolution graphics. Very high quality. The software for it was very user-unfriendly. And unfortunately, initially enough of us did not know enough about graphics to know just how unfriendly it was.

F: It's probably a whole different ballgame then ...

S: Well, we began to learn as we got through the program. We began to see that this interact program that was sponsored by E. N. Herschel, who was the then-president of Superset, was a clever program, but it was designed to be run by a Ph.D. And when some of our programmers got hold of this, they said, "Oh, my God, this is user-unfriendly." And we tried to convince them to change it. And we couldn't. That's one. The other thing is the product cost and the market price we could sell it for were too close to each other. And the way Burroughs does business is, we lump in all the hardware support, and we lump in all the development costs as preproduction costs, you know. And that added to the whole cost transfer price such that the costs were too high from the profitability point of view, particularly since the volume forecasted was low. When I first started the program, I suggested that we don't even build any more plants. We take a small group of us and move us right down to San Diego, move into an adjacent building right with Superset, we set up a small manufacturing operation that has low overhead, and we can produce it, and top brass said, "No way. That's not our way of doing business." And I still think I'm right, you know, because subsequently large companies have set up what they call tiger teams that are put in a little building and go off and do this. I mean, take away the pressure and you just get this done. And that's what we really wanted to do. We wanted to set up a little tiger team and go out and do it. And so, as a substitute for the tiger team, we set up a plant within a plant in Pasadena. They decided this plant was too busy to make it. Ed Nelson was overloaded. They'll put it up in Pasadena. So they created a plant within a plant and· had a program manager. And they gave it relief for one year in charging into it all the high cost of the overhead. So that brought the cost down. But it was an artificial bringing down because they redistributed the cost to other products within the Pasadena plant. You can't get something for nothing. If you got n people there, the money's got to be charged some way. Well, they decided they'd do a favor for the graphics program and not charge it. But so the other products ate it. But that's life. We had a very good team here in putting this product together. We had a very good program planned, but the budget was always at the bottom end of everybody's desire. So when this plant was given budget money, they were given budget money for all the mainstream products and I got what was left, which wasn't enough. And yet it seemed like a lot of money, and the reason it seemed like a lot of money is if you don't sell many, any development costs a lot of money. So it became a circle. And the interesting thing about all this in retrospect is after we canceled the program and turned the work back over to Superset for a while, until it was completely canceled, we had the program here, and then turned the work back to Superset and said, "O.k., you've got a lower-cost operation then. You do all the work." The marketing was still not selling enough, and when I talked to Dr. Stern, as I went back to the stockholders' meeting about three or four months ago, and Fred Meier introduced me to him as a man who helped get the GP-2000 started, so I said, "Well, just at the time when we had decided to kill the program, orders were starting to come in." Now what that does, it ties back to the concept of how you really have to develop a sales force to sell it and it takes time.

F: You also have to work in tandem with what's going on.

Well, there was only two people in market planning to work on this. One guy in product planning and one guy in market planning. And they were fellows who never had experience in direct brand-new program introduction. And so, while they tried hard, it was very difficult to get the market people to make a decent forecast. First the forecast was real high. Then when it came time to cut the mustard, down went the forecast. Up went the cost. The cost forecast played reverse roles. The higher the forecast, the lower the cost. The lower the forecast, the higher the cost. Both are self-fulfilling destruct prophesies. And the lesson we learned out of that, and we're trying to pioneer, is to help marketing get started early in a new product program. I remember giving several talks here at the plant to our other activity managers about the experience we had on this program, the idea being to help look for advance clues as to how we can help marketing introduce a product, help get training across, help make the product palatable to the salesmen so they can sell it.

F: You know, some of that sounds familiar to me as some marketing problems they haa when they were doing the B-5000. That was part of it, that the salesmen didn't really know what they were selling. The customers didn't know what to make of it, so ...

S: And they didn't know how to sell the graphics programs either.

F: It's kind of similar.

S: And now I think graphics is a really fascinating industry. An ir,tteresting sidelight--1 was over to Steve's house one day and George Lucas was there. This was about three or four years ago. And Lucas had this company making the very highest level of quality graphics, and they were using it for animation. And he was trying to help organize a company under his name. I said, "Hey, George, what are you going to do with that company?" He said, 11Arnold, 11 he said, 111 don't know how to manage that company. I'm going to sell it." And he did. He sold it off. It was just too new for him. It was too different. It didn't fit under ILM, the industrial lights and magic. It had special effects. Because it was prohibitively costly and to get a really good animation into a movie, you almost needed a Cray computer to crank out the data. Now even that's being helped, because now the industry, like Tl especially is coming out with custom chips that are graphics-oriented chips. They're designed to refresh the tube real fast, refresh the screen, refresh the memory real fast, do bit manipulation, picture manipulation, pixel management that they're all customized on a chip. So you can put a system together that works fast and it's cheap. And so what's happening is the graphics industry is becoming driven now by PCs, except for the very high end. Then they really need big computers because you got so many pixels to manage. Now I'm running a mundane program but necessary called . Engineering Reso.urces. ,And we have a lot of things to do here. I don't know hdw much you want to go into that now. It's not really an archival thing--it's a current project.

F: It sounds like you're sort of involved in different aspects of projects over the years. You could make comparisons like between how equipment was tested over the years.

S: Well, for example, most all the early equipment, the '50s and '60s were all hand, manually assembled, hand-wired, soldered, and very complex back panels, large panels of logic, of plug-in ... one functional element was a package about six inches by six inches by two inches deep or I think it was something like that. It was a logic// couple tubes on it, some resistors and diodes and that's a flip-flop. Now a flip-flop is so small you can't even see it. That's one. In terms of the ... the assembly methodologies went from hand-soldered to wire wrap to etched back planes. I'll talk about the back . planes. The etched back planes reflow soldering, which means you don't have to get a new head, just put solder mask on there. I mean solder array //, then either reflow solder or air heater. And then make the connections that way. Patching gets denser and denser and denser. Layers get thicker and more and more layers o.f interconnect. A back panel used to be a layer of wires criss-crossing, then the XV edge, then multi-layer, you know. And that's where we're at now. Multi-layer back planes. And then mounting techniques were originally everything was socketed and then everything was soldered in by soldering by drilling holes and plate through the holes and putting the components in. And now surface soldering is coming in because it's more compact. And each time you advance that technology, the tools required are more complex. Surface ~o_ldering is complex ~n_d also ~he field repair poli<?Y is changed. It used to: be that a guy would go out in the field, unsolder the wires and take the transistor out, put a new one in, and solder it back in. And then a chip would be unplugged, and assembly of componentry. And now the whole board is changed out And that means everything can be repaired faster. And since computers are taking less and less space, a board becomes a more, a larger and larger significant part of the system. So the cost of spares are going up, because you can't stock a small component--now you stock a board. And more and more each board becomes a custom board. So often the spares are equal to cost of the machine. For example, we have an A-15 here, and a set of spares for the A-15 is a quarter of a million dollars. That means you now have a new logistics. You'd better make

the machine last a long time, so that the reliability is way up there so the need to change out is small. Too, you better have a fast way of getting spares to . the spot, because no customer is going to be happy with a machine down more than half an hour. Or an hour at the most. Or they start to scream .

F: Do you think reliability is improving?

S: Definitely. In our future machines we're talking about reliabilities of over a year. And mean time between a system halt of longer than a year. Now when I was in Process Control, they wanted us at first to achieve a 99% up time. Then they raised they the jumping bar to 99-1/2% up time. Then they raised--about every two years they do this--then the next jump was about 99.8 up time. That's asking a lot. And our companies then would not agree to redundancy in the systems. I often proposed, particularly for nuclear control, a dual system. The military and space program often has three or four systems, all sharing the function, you know, and if one goes down the others take over. But the cost was so much in those days that they couldn't have the redundancy that they needed. So they used to talk about having redundant circuits. They tried to come up with circuit systems that would path A, if it would quit, path B would work. And very few machines were really built like that. But the most popular machines in the current marketplace are like tandem that have dual systems tied together. But what's happening is I think tandem's even going to get by-passed because of the increased reliability of very large-scale integration. So putting a machine together with very few soldered parts, you know, very few plugs, every time you make a connection it's a reliability focus point. And so the more you reduce that, the longer you can bet on the componentry lasting. And so we're committing ourselves now for future products to come out in the very late '80s to be in the one-year reliability range. That's pretty good. With 24-hours a day running, there was over 8,000 hours . Now that doesn't still hold true for some of the physically moving peripherals. Disks are getting lhat way, though. Disk technology is getting way up there in the $50,000 range, and that's a lot. You have to figure something drastic right there. Now, as far as testing things in the factory is concerned, early testing was by oscilloscopes and probes. You looked at pulses and you looked at the wave shape. You said now that's o.k. or it's not o.k. or something's missing here. So scopes and probes and brilliant engineers helping the test technicians on the floor how to test something. And also in the early systems, because componentry cost a lot of money, you tried to design with the fewest number of parts, and particularly, you tried to design with the fewest number of flip-flops because flip-flops are considered to be unreliable. So that perforce the logic became very complex, the system logic became complex in terms of you would take the same data and you'd use that .,. . qr rather take the same path, try t9 put different pieces of data througli the same path at a different time sequence, so tracing a fault, you had to know where it was in the time sequence as well as what path it was going through. Nowadays, with componentry costing less, you will to be redundant; you're willing to make a once-through path in terms of making the system easier to check. Furthermore, you now put probes on the end of cards, you know, so you can test the function. You have diagnostics that are getting better and better and betters so that you can exercise the machine with diagnostics more exactly and D-drive and other test techniques like that are homing in on individual parts. But now we back away from that somewhat, because now it's necessary just to show that card is bad. As far as the field is concerned, you can just pull the card, swap it, send it back to the factory where a different level of diagnostics can be used, to home in on the particular parts that are bad. The next thing that's happening, and it. actually was happening at IBM . when I was there, is the beginning of use of robots to test. Instead of putting peripherals on the line to test the computer going down the line, they'll find a functional robot that will simulate the peripheral, and especially for a high-volume production, just plug the robot into the output and it runs through a whole bunch of exercises// on the tape, I'm running like a tape, or acting like a printer. And we're talking about that now. Also, a lot of peripherals are disappearing from the scene that used to be electromechanical, like card punches and card readers, and paper tape readers and paper tape punches--they're all passe. And once the main elements of storage, disks, magnetics, magnetic disk, magnetic tape, magnetic cartridge, CD-type things, laser, laser-read, laser-written, these are all very reliable technologies. And what's coming to the front is distribution of data. So datacom is becoming more and more important, the need for long-distance communication, the need for terminals, so everybody's remote to the host. So datacom is becoming a larger and larger portion of the peripherals that are attached to a system. Highdensity storage, archival storage like tapes or CDs, terminals driven from concentrators and high-quality datacom subsystems is what a system is evolving into. And graphics next.

F: Talking about the telecom, datacom elements, it seems like products within an industry are becoming more interdependent upon each other. Like the new contract they did with the graphics company you were talking about. I don't think in the '50s companies really shared resources to come up with a product.

S: You mean, are we as much vertically integrated as we used to be? Do you know what I mean by vertically· integrated?

F: Yes, yes.

S: O.k. Yeah, plants try to be vertically integrated, but every now and then well we got smart. We have probably admitted we don't know how to make a good disk. Well, we don't know how to make a good magnetic disk system, and so we buy them. We don't know how to make tape any more, so we buy them. Or, put it another way. A specialty company has passed us up, so it's now more convenient and better business judgment to buy the technology from them. So we've become more and more an assembler of componentry and there used to be, early on, early discussed, I remember having sat with some of the people with Intel. They, remember (no you can't, you wouldn't understand}, you know, if you will turn over the development of this or//, the people let us do their system for you, we'll deliver yo_u a systems on a chip, you know what I rnean? And Poleski ~as then president of SDS, said, 11No way! You're not going to take away my prerogative design, my kind of computer, you know: 1 But yet 8086, 80386, the newest ones, those are now forcing companies to use that processor in their application, because somebody just concentrated on that. So you might say the semiconductor people are slowly stealing pieces of the show. On the other hand, the name of the game now is the application software, the business end of it, and that's where the companies ours will continue to shine. We just have to strike the right balance, what we buy and what we make. And so that's what happening. The industry is evolving into ... every time there's a new step in the technology, it creates a new set of balances as to how you deal with it in a business sense.

F: It seems like in the early days that it was more possible to trace products by the contributions of specific individuals, whereas now it seems to be almost impossible. You know, people change jobs so quickly and departments are so big. I don't know if it's because the technology is not improving dramatically, like it did between vacuum tubes and transistors. It's harder to trace product developments to specific individuals.

S: Yeah, I agree with you. And yet there's always some genius somewhere that comes up with the unusual break. But by and large, most of the engineers working in this place here are not inventors. They are applyers. That doesn't mean they couldn't under the right circumstance, but most of the circuits inventions are taking place in semiconductor companies, one. Two, most technology is so complex now it takes a team of people to make it happen. You, to put an idea together, whereas in the early days, I'm thinking of a terminology, I'll use the work the 11Benski-Fetch 11--and I know you've never of that. When I was back in RCA, a very bright guy who came to RCA from MIT where he was working on Whirlwind, came up with an idea of drawing information from a drum in clumps of data and transferring it to a core memory where it was operated on the core memory, and then putting the results back on the drum again. He got a patent on that. We called it the Benski-Fetch. It was named after Lowell Benski. Nowadays that's old hat. You know what I mean? But yet in the 1950s that was an invention because it was the first time done. I have some patents on library systems for storage retrieval based on looking up a reference and then using that reference to point to another reference and getting that, as a library system for searching for data on tape, with all the front and the back ends of tape all identified on a drum. So I can know which tape to go to . Now that technology is//, nobody needs it any more. Yet it could be identified with a person. Or, while I was working on a sales recorder, when we were storing information on a drum, we wanted to be able to find the . data and yet we

with a person. Or, while I was working on a sales recorder, when we were storing information on a drum, we wanted to be able to find the . data and yet we were looking up some prices. A guy by the name of Phillipi Tonkel, a guy from Brazil, came up with a hashing scheme which everybody uses in the industry now. And we got a patent on it way back then. And it's a scheme of taking data that has an identifying number, and operating on that number and developing an algorithm which randomizes that number in such a way that you can distribute it in various channels, and you can search the channels by taking the unknown number, randomizing it, having a resultant number point to that channel, and go find it. And that's what we used on the sales recorder, and yet hashing is a common technology now. But it was a marvelous invention and you could point to that guy who did it. Now maybe somebody else did it in other companies, but we didn't know it. There's a lot of small invention like that. Circuits inventions, flip-flop inventions ideas. This fellow Chuck Profster came up with a novel way of designing a ,two-two flip-flop that he could get isolated output from. And he did it by' putting a resistor in the cathode of the tube and that change of voltage across the resistor was the output signal. And yet he made the circuits stable enough so it functioned. And that became a patent. So there's a lot of early st.uff that was done that you could name people for. And in the early days of the computer industry, whenever, when transistors started coming in, everybody that could be applied to it was translating tube surfaces and transistors and writing patents on them. But that was RCA. RCA was very patent-conscious .

F: So maybe patents aren't the way to document product development.

S: Well, patents still are, because there are some really great things happening that people get patents on. But also, I'm sure the guy who invented the CD deserves a patent. And yet, way back then, we worked on thermoplastic recording at RCA. In the early '50s we were working on a . scheme where we coated a disk with a thermoplastic material and the disk (no, I'm sorry, it was the first tape, magnetic tape) and the tape passed into a vacuum chamber through an isolator that squeezed down on the tape, and the thermoplastic was written on by an electron beam which warped the thermoplastic and made it take a shape. And then as it came out, a light was shined on it and you could then, based on the reflection, detect whether it was a 1 or a o. So we made a thermoplastic board and we tried to apply it two ways: one, for computer storage data, and the other for television. And yet the change of ... like a laser writing on a laser disk does exactly the same thing with a brand new technology. That's what I mean, re-invent, re-invent, re-invent. Yeah. I guess my enjoyment in this whole computer industry is I was always down in the front of something. It's called the "neck sticking out position."

F: You know, some people don't like that, I don't think, being in that position ...

S: I always took dumb risks.

F: Do you think they were dumb?

S: It was fun, I think that's the main thing, if you do it, you like it.

F: One other thing I wanted to ask you about is your reaction to the merger.

S: Oh. At first I was skeptical. Yeah, I just wondered how in the hell is Burroughs and Sperry going to make something go together. But, I give tremendous credit to Blumenthal. That guy is a genius. Because many of us saw synergies. I mean, you could look at a company and say, "Yeah, they got this and they got that: 1 But at his level--he's not an engineer in that sense--to be able to perceive that somehow or other ... I think it's more than perceiving, it says, when you're at that level of power, and you decide that something's going to happen, and you put enough mental force behind it, you can get it to happen. And i think that's the strength of a good leader. You may not know exactly how it's going to happen. You may see the threads of a connection, but you say I'm going to make those threads solidify. And then you say, hey, you go do it. And it's the go do it part, and the judgment factor to apply as to how much money to spend, how much not to, what to get rid of and what to keep, is the amazing thing, to me, about making the merger work. Plus trying to make it look like you really merged, not one to take over the other, so that the officers of the key people of the two companies didn't feel threatened, or particularly, Sperry didn't feel like being a threat and therefore we're on the low end of the ball.

F: Did you get the impression that he worked real hard?

S: And the fact that he changed the name to a completely different name, whether you like Unisys or not doesn't make any difference, just the fact that he changed the name, tried to give it a whole new image, is a good. piece of psychology. I'm real pleased with what's happened, because the stock's gone up, whatever we own in stock is worth more, and that's good. I'm a person who believes in taking a risk and also trying to get a reward for it. I think it's gone weU and I don't know all the officers--I've just met Mr. Kroger for the first time when I went back to Detroit. He impressed me as a pretty sharp guy, but that's all I know. I've met Mr. Blumenthal several times and he's a bright guy. When they brought Jerry Jacobson in, I thought ... he's a friend of mine. I thought he was a very bright guy and he may rub people the wrong way a lot because he's a very cynical sort of a guy, but he sure has got a good mind. So I think you have some really good minds in the company and you direct them right, and you're going to pull results in the end. I was skeptical at first. A lot of us were, I'm sure. But it's working out. I think also, another thing that impressed me was the . spirit with which data was exchanged. Teams came out here, some of our teams went back there to meet the Sperry people, they met with us, and there was a fairly open divulgence of information. That's important to keep things going on the right foot.

F: Could we talk a bit about your involvement in phase review and how it compared to what existed before?

V: O.k. Well, when I first came to work here, there was no phase review. Instead, the process of getting a program started, was called the PDA program. PDA process was the Product Development authority and the PDA really was a loosely-administered way of defining, or marketing of the product planning. First of all, PDA was started by ... by start I mean it was originated through request from marketing, or product planning, rather, to engineering, to propose to them a product around this description. So the first thing that came out of marketing was a description of what they wanted: Actually I use the word marketing loosely, I really mean what Dow CPM or Product Manager, and then called Product Planning. It existed before '73 when I joined. And the PDA process then was designed to take this request for a response and respond to it. And the PDA response required that you define what you wanted to build, estimate what it would cost in terms of development cost, define the product in response to the specification that you got from Product Planning, and indicate a competitive product cost of the unit, and then submit that. That, in turn, was reviewed by Product Manager, and it was finally signed off it o.k. by Dr. Bob Johnson and/or, in other words Corporate Engineering, as well as the group, the Engineering Vice President and the group directors. That became the authorization to spend money. O.k.? And the PDA asked for such things as schedule, cost, dates, marketing information, but in a . loose form, and had no phasing to it. It asked you to furnish a schedule. Then the schedule would be monitored ad hoc by internal local management and monitored by corporate management, by corporate engineering as part of a periodic review process which was not that highly formalized. When Blumenthal came into the company it was decided that a more formal method of defining product programs was necessary. And there was a prototype in terms of either IBM or Xerox's phase review process. And the concept behind that was that a product goes through various phases in its cycle: the concept phase, the development phase, the product engineering phase, the release to manufacturing, and finally, the release to a manufacturing and field test, and then finally, a year after the first shipment, a review process that says is this product still good? So a set of guidelines was prepared by a small team in Corporate Engineering in the Syst~ms Management portion of

Corporate Engineering. And I think that's kind of ... Lyle, I think I mentioned, was involved. Tom Carpenter, I don't think Doug Simmons was involved because he was a corporate field engineer or something like that. And they came out with an early manual on it, and it was fairly well written. And a lot of the ideas were lifted from other companies, but that's o.k., and was sent to the plants for review. And along with it came an agenda for training a training program, and since I at that time was in charge of the systems management for the engineering group here, I was one of the first ones to go in to training, along with about a half a dozen other people. And the training was designed to be a handson type training in which we took a home-created product concept and just wrote a phase review on it, as if we were really dealing with a product. . V: Now, the first product that we put into phase review process here ... this is hardware, software came a little bit later. The first hardware to be put under phase review was the 5900 and I was given the responsibility of preparing that and it was a good shakeout method because it was kicked out and then accepted after we did some modification. And the whole process of scheduling phase review and timing here came to the focus. By timing I mean, first of all, the whole concept was broadcast to the company and so ·" they had it dovetailed and fit in with the various review programs. There was also a problem of concurrency. All phase reviews had to be concurred by the various function that were affected. First of all, there was the various management functions affected: financial, for overall analysis of profitability, manufacturing for manufacturability, engineering for sound engineering, marketing--is there a marketing plan? field engineering, if there's a field plan. You know, all the elements had to concur and be a part of the review process. Then they had a lot of guys I considered hanger-ans, who sat there and felt it was their job to keep busy in Corporate and usually reject everything--on the most nit-picking thing you've ever seen. That tended to bottle up the phase review process so that it took time to clear a phase review, that is, theoretically, when you entered Phase 1, you could be in Phase 2 and if you exited, ongoing to Phase 2, to Phase 3, from Phase 3 to Phase 4. So stuff could get hung up except no plant was going to sit there and wait on the review process. So the idea then was to keep the discipline of the phase review, not stop the plant from moving forward unless there was really something wrong. // So the trick was now how to invent ways of shortcutting the review process, clearing up non-concurrences and getting people to pick on the real major things. And, as it evolved, people who nonconcurred out of the area of their expertise were not permitted to nonconcur. That is, if I'm a marketing guy and I nonconcur with a manufacturing problem, forgefit. That's not right. If you're a marketing guy you concur or nonconcur with a market-oriented problem.

F: That makes sense.

END OF SIDE TWO, TAPE 1 OF SPIELBERG INTERVIEW

Book : "Steven Spielberg - A biography - 2010, 2nd edition - by Joseph McBride"

Chapter 1, family history

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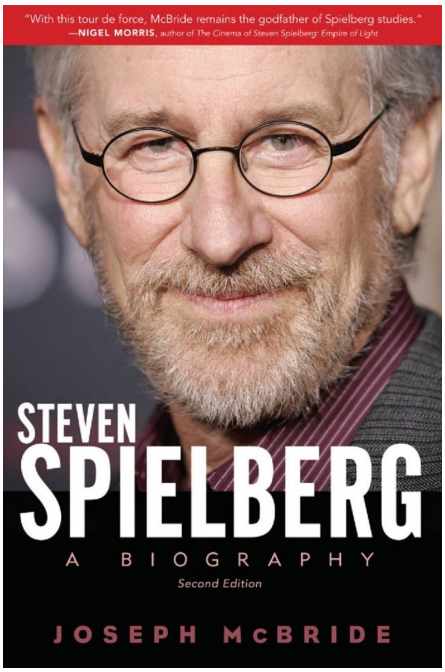

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ONE of the stories Fievel told was of how he learned his lessons. As a Jew growing up in Odessa, Russia, in the late nineteenth century, Fievel was prohibited from attending secondary school by the czarist government's numerus clausus (closed number), a quota system severely limiting the number of Jews allowed to receive a higher education. But he found a way around the edict. Steven remembered what Fievel told him: "They did allow Jews to listen through open windows to the classes, so he pretty much went to school-fall, winter, and spring-by sitting outside in driving snow, outside of open windows."

A version of this memory made its way into An American Tail. Separated from his family after coming to New York, Fievel Mousekewitz forlornly presses his nose against a pane of glass to watch a group of little American mice attending school. Always the outsider, even in America, the strange new land of freedom, where there were supposed to be "no cats." Though Steven Spielberg failed to acquire his grandfather's yearning for education, he too became a

storyteller, and he never forgot the image of the boy sitting outside the schoolhouse, or what it showed him about being a Jew in a hostile land.

Always convenient scapegoats during economic and political upheavals in a land of deep-seated anti-Semitism, Russian Jews in the late 1800s were subjected to increasingly frequent and brutal pogroms (the Russian word for "devastation")- In his childhood, Steven listened with fascination to his grandparents' tales of pogroms. The social and economic liberties of Russian Jews were restricted further by laws compelling them to live only in shtetlach and barring them from most occupations except for certain forms of trade. Nearly 2 million Jews fled Russia and Eastern Europe for the United States between 1881 and 1914, "a migration comparable in modern Jewish history only to the flight from the Spanish Inquisition," Irving Howe wrote in World of Our Fathers. America was seen "not merely as a land of milk and honey," observed novelist Abraham Cahan, "but also, perhaps chiefly, as one of mystery, of fantastic experiences, or marvelous transformations."

Steven Spielberg's ancestors were part of that vast migration, settling in the hospitable midwestern city of Cincinnati, which, in the words of historian Jonathan D. Sarna, was then "the oldest and most cultured Jewish community west of the Alleghenies." Some of his relatives remained in Russia for generations to come, and some eventually went to Israel, but many of those who did not emigrate were murdered along with the rest of their communities in the Nazi Holocaust. His father estimates they lost sixteen to twenty relatives in the Holocaust, in both Ukraine and Poland.

The original roots of the Spielberg family, Arnold Spielberg says, may have been in Austria-Hungary, where some of his ancestors, before emigrating to Russia, may have lived in an area controlled by the Duke of Spielberg. The Spielberg family name, which is German-Austrian, means "play mountain." Spiel connotes either recreation or a stage play (cf. the English word "spiel," meaning a recitation), and berg means mountain or hill. It is a fittingly theatrical name for a playful adult who works in show business and ever since his childhood has loved to build and film miniature mountains. A "play mountain" appears as a central plot device in Close Encounters of the Third Kind: Richard Dreyfuss obsessively constructs in his living room the image of the Wyoming mountain where, in the film's magical finale, the alien mother ship makes its landing. **A film production company Arnold and Steven Spielberg formed early on, when Steven was a college student in Long Beach, California, was called Playmount Productions.**

Steven's grandfather Shmuel Spielberg, who in America would change his name to Samuel, was born in 1873 in Kamenets- Podolsk, Russia. Once ruled by Lithuanian-Polish nobles and known in Polish as Kamieniec Podolski, it is now part of the independent state of Ukraine. In 1897, a few years before Shmuel's departure for America, Kamenets had a population of about forty thousand, including about sixteen thousand Jews.

Most of the Jews spoke Yiddish as their principal or only language, and they lived as all Russian Jews did, in a tightly knit, insular community whose religious and cultural tradition brought comfort and mutual support in the midst of hostility. Although anti-Semitism permeated many of the city's institutions during the reigns of Czars Alexander III and Nicholas II, the memorial book of Jewish life in Kamenets reports, "In general, relations between Jews and non-Jews in town were correct." Even during the Ukrainian pogroms of 1881 and the widespread pogroms of 1905, there were no massacres in Kamenets, although there was some vandalism of Jewish properly.

Steven's grandfather Shmuel was the second son of a farmer, rancher, and huntsman named Meyer Spielberg and his wife, Bertha (Bessie) Sandleman, who also had three younger daughters. When Shmuel was about five years old, both his parents died in an epidemic, and he was raised by his brother, Avrom (Arnold Spielberg was given the Hebrew name Avrom in his honor). Shmuel worked on his brother's ranch as a cowboy, rounding up cattle and horses. Jews were conscripted into the czarist army for a six-year period, and Shmuel found his way into the army band, playing the baritone, a brass wind instrument. "By staying in the band," his son Arnold relates, "he managed to keep from getting killed or shot. And then he became a cattle buyer for the Russian army. He used to go up to Siberia and buy cattle, and he dealt with Manchuria. When the Russo-Japanese war started [in 1904], he just said, 'I will not get back into the army again.' He escaped to America in 1906, and then he brought my mother in 1908 [the year they married]."

Samuel (Shmuel) Spielberg's wife, Rebecca Chechik, "Grandma Becky" to Steven's generation, was the daughter of Nachman (Nathan) Morduhov Chechik and Reitzl (Rachel) Nigonova Hendler, who had eight other children. The Chechik family name, which is also spelled Tsetsik and means "linnet" in Russian, later was Americanized to Chase.

The Chechiks had a brewery in Sudilkov, a shtetl that no longer exists. Sudilkov was in the Kamenets area, near the larger town of Shepetovka, where some other family members lived. Arnold Spielberg relates that his grandfather Nachman Chechik "prayed and studied the Torah. His wife ran the brewery business. She was a shrewd woman. She and the children ran the business. My uncle Herschel, the oldest son, was the brewmaster. In those days, the old Jewish men, if they could get out of business and study the Torah, that's what they did." The brewery trade was forbidden to Jews by the Russian government in 1897, and some of Rebecca Chechik's siblings eventually emigrated to China. They lived in the Manchurian city of Harbin and then in Shanghai's British enclave, the setting for the opening scenes of Steven Spielberg's World War II film Empire of the Sun.

Samuel Spielberg, Arnold's father, worked for a few years as a grocer and a peddler in Cincinnati before he found a steady but modest living as a jobber, operating a store on West Third Street. "He'd go down to the small stores in Indiana, Kentucky, and Ohio," Arnold explains. "He'd buy up their merchandise that they had not been able to sell. He'd buy what they called job lots, or incomplete lots. He'd bring them to his store and he'd sell them to other merchants, or to retail; he had some retail trade. And, of course, in the wholesale trade he sold to even smaller stores."*

Arnold's mother, Rebecca, was "a very enterprising woman. She took care of the kids and ran the house. She was interested in politics-we were Democrats from way back-and she'd read a lot, go to plays, go to concerts. She'd join all the Jewish organizations." Mildred (Millie) Friedman Tieger, a longtime friend of Steven's mother, remembers Rebecca as "a strong, powerful woman, very smart, and more domineering" than her husband.

In addition to their son Arnold Meyer Spielberg, who was born on February 6, 1917, Rebecca and Sam had a younger son, Irvin (called Buddy or Bud), who became an aeronautical engineer and worked on NASA's space program, and a daughter, Natalie, who married Jacob (Jack) Guttman and with him ran a family business that manufactures cake decorations (Natalie died in 1992).

STEVEN'S mother's side of the family, the Posners, originated in Poland. "Posner" means "a person from Poznan," the name of a city and province in western Poland (also spelled Posnan or Poseft). Poznan was taken over by Prussia in the late eighteenth century, and as the late Dr.Jacob Rader Marcus, dean of American Jewish historiography, noted in a 1994 interview, "Germans despised Posners. If a German says, 'He's a Posner,' it means he's held in contempt." But the Posner ancestors of Steven Spielberg had a more worldly background in Russia than the Spielbergs, for the Posners' cosmopolitan hometown of Odessa, a bustling port on the Black Sea, was known as "The Paris of Russia."

In the end, however, Jews were scarcely more welcome in Odessa than they were anywhere else in Russia. Odessa was the site of regular anti-Jewish riots, and an unusually severe pogrom occurred there in 1905, the year of the attempted revolution and the mutiny by sailors on the battleship Potemkin (later the subject of Sergei Eisenstein's silent film classic Potemkin, which includes the famous Odessa Steps sequence). When Odessa's Jews celebrated the czar's promise of reforms, four hundred Jews were killed in retaliation during four days of mayhem. Such attacks-which also occurred in several other parts of

Russia during 1905-were provoked by the authorities and executed by local ruffians with the help of policemen and Cossacks.

That year of turmoil was the year Philip Posner, born in Odessa in 1884, came to Cincinnati to make a new life for himself and his family, one he hoped would be safer from persecution and tyranny. He would remain devoutly Orthodox, resisting the modernizing influences of the Haskalah, the Jewish Enlightenment movement that flourished in Odessa, and the Reform movement in America. But Odessa's cultural ferment would leave an imprint on his consciousness, despite the deficiencies of his formal education. An artist manque, Philip Posner would pass along his artistic inclinations to his daughter and his famous grandson.

* Steven Allan Spielberg's Hebrew name, Shmuel, is a tribute to his grandfather, who died before he was born. Asked why Steven was not given the first name of Samuel, Arnold says, "We gave him an Anglicized 'Steven.' We just artificially made it that. Leah and I wanted to give him a non-Biblical name. 'Allan' came from the Hebrew Aharon. And we just liked the name Allan, out of nowhere."

Philip's parents, Simon Posner (son of Ezekiel Posner and Anna Fildman) and Miriam (Mary) Rasinsky (daughter of Benjamin Rasinsky), emigrated soon after him to Cincinnati, where Simon Posner, like Samuel Spielberg, became a jobber. The oldest of six children, Philip followed the same profession, selling schmatte (clothing) and other merchandise to support his wife, the former Jennie Fridman, and their two children, Leah and Bernard (Bernie). ***["Leah Posner" and "Bernard Posner"]***

Philip Posner was "a very emotional man," his son-in-law Arnold Spielberg recalls. "A religious, very observant man. He used to go to the synagogue in the morning, in the evening, any time. He was at one time quite well-to-do, and then the Depression took him under, along with many other people."

One time, Leah recalled, her family did not have enough to eat for several days until her father made ten dollars buying and selling old jewelry. He used the money to take them on a holiday. "We were poor, but there was no depression in our house."

Philip worked mostly out of his home, and Steven loved to play in his grandfather's attic, which was crowded with his merchandise-shoes and socks and shoelaces, belt buckles and tie clips. Norman Cummins, a fellow Jewish merchant who ran a discount clothing store, would buy Philip's discontinued stock "as a mitzvah-a blessing," Cummins's wife, Edith, remembered. "Mr. Posner was a little, slight, sweet sort of man. He had a very nice, pleasant little house. I would go there with my husband, and I'd talk to Steven. He was a real skinny tyke, very lively. Who knew he was going to be this big man? He'd sit there and eat a cookie and dip it in a glass of milk. When he had finished his glass of milk, his grandmother would strain the cookie out of the milk and put the milk back. I was very impressed by that. I don't know if it was poverty or just frugality."

Like the violin-playing Papa Mousekewitz in An American Tail, Steven's Grandpa Fievel poured his heart not into his business but into his music, playing the guitar and dancing ballet. Leah, who inherited her father's love for music, felt his creativity was sidetracked by his struggle to make a living. Fievel's brother Boris was the first known relative of Steven Spielberg to enter show business. He was a Shakespearean actor in the thriving Yiddish theater of the period; Leah remembers Boris declaiming Hamlet's "To be or not to be" soliloquy in their living room, in Yiddish. Boris was also a vaudevillian, singing and dancing with a straw hat and a cane, and he later became a lion tamer in the circus. (In Spielberg's 1995 animated film Balto, set in Alaska during the 1920s, there is a Russian Jewish refugee goose named Uncle Boris.)

Leah's mother, Jennie, born in 1882, was a native Cincinnatian. She was the second oldest of ten children born to Russian emigres Louis Fridman, who had come to the United States by way of London in 1870, and Sarah Leah Nathan. Louis Fridman's father, a cigarmaker named Israel Fridman, was born in Poland in 1830-the earliest date of birth that can be traced for any of Steven's ancestors-and died of emphysema in Cincinnati in 1883Louis practiced his father's profession for a while, but he also worked as a horse cart driver and a traveling salesman.

Steven's Grandma Jennie was a lively, hardworking, and self-reliant "American lady," as family friend Millie Tieger described her. "Both of [Steven's] grandmas were more assertive than the grandpas." Immigrant men often found that to be the case, for their traditionally dominant role in the old country tended to wither away in the face of the harsh economic realities and more liberal mores they encountered in America.

Before her marriage to Philip Posner in 1915, Jennie briefly ran a millinery shop with her sister Bertha. Jennie also majored in English at the University of Cincinnati, and Arnold Spielberg remembers her as "a very bright woman and a cultured, gentle woman." She called everyone she liked "Dolly," including her daughter Leah, who was born on January 12, 1920, and inherited her effervescent, outspoken personality from her mother.

Jennie "was never too domestic," Leah admiringly recalled. Jennie worked as a milliner and clerk for a while after her marriage. Later she taught English in her home to German Jewish immigrants, many of whom were refugees from Nazism and had their tuition paid by local Jewish charities to help them acclimate to life in America and to prepare for citizenship applications. And yet the husband of this thoroughly modern American lady never lost his old-world ways.

Fievel Posner had a long white beard and wore the traditional Orthodox garb of black coat and hat. While growing up, Steven became so embarrassed by his grandfather's appearance and frequent davening (praying) that he tried to keep his gentile friends away from the house when Grandpa Fievel came to visit. One day when Steven was eight years old and living in Haddon Township, New Jersey, he was playing football with some friends in the street, "and suddenly my grandfather, with the yarmulke, comes out of our house, two houses down, and yells: 'Shmuel! Shmuel!' [Steven's Hebrew name]. I'm not answering him. I'm pretending I don't know him. I'm denying that name. My friend is saying, 'He's looking your way. Does he mean you?' They point at me, and I'm saying 'No, it's not me,' and I'm denying the existence of my own grandfather."

I F not quite the "paradise for the Hebrews" extolled by a nineteenthcentury Ohio historian, what the Spielbergs and Posners found in the Queen City of the West was a stolid, largely German-American burg where Jews and gentiles lived in relative harmony and prosperity.

Arnold Spielberg had only "a little" trouble with anti-Semitism when he was growing up, such as an incident when a man wearing a Ku Klux Klan insignia on his belt called him a "Jewboy." "But my street was the best street in the world," he nostalgically recalls. "During the wintertime, the city would block it off and we had sled riding. The street went right down into a park. We had a ballfield there. We had a woods to go play in. It was a wonderful place for a kid to grow up. You couldn't have asked for a better place."

Even though its Jewish population has always been modest compared to those of cities on the East Coast-Jews made up only about 5 percent, or 22,000, of Cincinnati's 475,000 citizens when Steven Spielberg was bornCincinnati was long regarded as "a Jewish version of the American dream," Jonathan D. Sarna wrote in his and Nancy H. Klein's 1989 history, The Jews of Cincinnati.

The roots of the city's Jewish community date back as early as 1814. As the birthplace of the Reform movement, founded in the mid-nineteenth century by Rabbi Isaac Mayer Wise to liberalize and Americanize traditional Judaism, Cincinnati is home to such renowned Reform institutions as Hebrew Union College, The American Israelite newspaper, and the American Jewish Archives. Spielberg's birthplace, the nonsectarian Jewish Hospital in Avondale, is the

oldest Jewish hospital in the United States. Partly because of its strong German influence, Cincinnati has never been immune to antiSemitism, and Sarna concludes that "in many ways, the Jewish vision of Cincinnati was simply too good to be true." But Jews arrived early enough in Cincinnati to have won the status of pioneers, and they have long been seen as an integral part of the city's social, political, and cultural establishment, even if they were not always as readily accepted in all parts of the business community.

Among the many hurdles Russian Jews, such as Spielberg's grandparents, faced when they began pouring into America in the late nineteenth century was the hostility of many German Jews who had preceded them. German Jews who had settled in America viewed themselves as far more educated, more solvent, and more cultured than the hordes of newcomers seeking their help and kinship. For much of Spielberg's grandparents' and parents' lives in Cincinnati, their German Jewish neighbors "held Eastern Europeans in utter contempt," Jacob Marcus said. "The German Jews were predominant socially, culturally, and financially, but for every German Jew there were at least five or six Eastern Europeans, which included Russians, Poles, Rumanians, and Eastern Hungarians. It was only around the 1930s or the 1940s that a few individuals of Germanic origin began to marry into the families of Eastern Europeans." In housing, too, the German Jews were "always a street ahead [of the Eastern Europeans] and ne'er the twain shall meet," he observed. "The lines were drawn very sharply until about 1950."

With the coming of the automobile around the turn of the century, Cincinnati, like the mid western city of The Magnificent Ambersons, found itself "heaving up in the middle incredibly." And as Cincinnati heaved and spread by annexing the outlying suburbs of the horse-and-buggy days, the old inner city was left a slum, occupied by Negroes and the poorest whites. Avondale, the genteel suburb of first remove for Jews leaving the West End, by the 1920s became the city's largely Jewish enclave. It was there Spielberg's grandparents and parents lived, where Steven was born and where he spent his first two and a half years.*

The more fashionable streets north of Rockdale Avenue in Avondale initially were the domain of German Jews. As the WP A's guide to the city put it, "The Orthodox Jews infiltrated the southern part of the suburb and gradually moved north, establishing a lively shopping district along Reading Road near Rockdale Avenue." Beginning less than a block from Arnold and Leah Spielberg's apartment at 817 Lexington Avenue, across the street from the Conservative Adath Israel synagogue on Reading Road, that district included the neighborhood movie house, the Forest Theatre. When Arnold was a boy, "Every Saturday we used to get a nickel and go to the Forest Theatre. I used to like to watch most adventure movies, all the Douglas Fairbanks movies, all the serials."

South Avondale was a haimish-warm and unpretentious-Jewish neighborhood of extended families and landsleit-people from the old country- who all pulled together to survive. Although his grandfather Samuel Spielberg died a year before he was born, Steven grew up with an advantage few of today's children share, that of having three grandparents living in the same neighborhood.

Leah's parents, Philip and Jennie Posner, had rented a white frame house at 819 Glenwood Avenue since 1939, the fifth home they had lived in since their marriage. Arnold Spielberg remembers it as "a very nice home. When I was going to school at the University of Cincinnati, they lived just one block over. Leah would go over to their house, I'd come back after school, and we'd sit down and have a Sabbath lunch. Then we'd pray after lunch and sing songs. I learned all their songs."

Sam and Rebecca Spielberg had lived in ten homes before the family settled in 1935 into half of a red-brick duplex they rented at 3560 Van Antwerp Place. "Our street was ninety-five percent Jewish," Arnold recalls. "And all of them were successful people, doctors, dentists, or lawyers. It was very education-oriented. My brother and I were the only engineers that came out of that street. We used to brag to each other as to how religious the families were. My friends were almost all Orthodox. We were one of the few Conservative families on the street." After Sam's death, Rebecca continued to live there, supported by her children. Although Sam's grandson would amass a fortune estimated by Forbes magazine in 1996 at $1 billion, Sam's estate amounted to only $1,728.57, of which Rebecca received $1,182.15 after the costs of his final illness, burial, and probate.

* Spielberg announced in 1989 that he planned to make a movie dealing with his childhood years in Cincinnati, from a script by his sister Anne, /1// Be Home. The movie would have to be shot on location, he said, because "there's nothing in LA. that looks like Cincinnati-nothing."

By the time of Steven's birth, many of Avondale's old homes had been cut into duplexes or subdivided into three or four apartments, with the former maid's quarters on the top floor often serving as the tiny apartment of an elderly or unmarried family member. **After Arnold's discharge from the U.S. Army Air Forces in September 1945, he and Leah rented their modest firstfloor apartment on Lexington Avenue from Mrs. Bella Pritz, who lived upstairs with her daughter (the apartment occupied by the Spielbergs was one of two on the first floor).** Though Avondale was already being vacated by German Jews, who kept moving northward into fresher and more rustic suburban acreage, it still was only "lower middle-class at worst" in those years, historian Jacob Marcus recalled. With housing growing scarcer as veterans began coming back from the war, the newlywed Spielbergs were lucky to find a decent apartment.

"It was a lovely neighborhood," recalls their neighbor Peggie Hibbert Singerman. The houses had "big backyards, huge porches on the front, swings. They were elegant houses, with wonderful woodwork in some of them." Many of those beautiful old homes remain well preserved today, long after the white flight of the 1950s that saw the Jewish population abandon Avondale to blacks climbing the economic ladder behind them. The house where Steven lived as a young child is still standing; it is a rental property owned by the Southern Baptist church, which in 1967 bought the Adath Israel building across the street, now a national historic landmark.

IN their growing restlessness with the comfortable but limiting environment of Cincinnati's Jewish enclave, Arnold and Leah Spielberg were typical of many second-generation American Jews whose postwar ambitions for themselves and their children would lead them to turn their backs on their aging hometowns and depart for the brave new world of suburbia.

Arnold Spielberg, his sister Natalie Guttman recalled, "was always a questioning, exploring, and highly intelligent youngster whose quest for learning was and has never really been quenched." But when Arnold was attending Avondale Grade School, he was regarded as "a nerd," according to a schoolmate, Dr. Bernard Goldman. "He didn't fit into the group. Other kids played ball, but he never seemed to join in that. He wasn't a spectator. He probably had his own interests."

From early boyhood, Arnold's primary interests were scientific: "The earliest influence was the son of the man who lived upstairs [in my building]. His son used to tinker around with radios. I was a little kid then, about six or seven years old, and I used to go down to the basement, watching him build stuff. Then another guy moved into the house next door-he was a radio repairman, and he gave me parts. And I was going to Avondale School one day-I'll never forget this-I was walking up the street on Windham Avenue, and I looked in the wastebasket. There was a bunch of radio stuff. I picked up that radio stuff, ran home, and opened the door-'Mom, don't throw this out!' I went to school, barely made it to class, came home-it was a crystal set that somebody had tried to fix. I just put the wires to the nearest connection and I got it to work. This was in 1927 or '28; I was ten years old at that time.

"I'll never forget putting the earphones on my uncle's ears when he came over from Manchuria to America. It was the first time he ever heard a radio. The family thought I was nuts, you know, a 'crazy-head scientist.' I was always into magnetics and electrical stuff. Making magnets, burning up batteries, making shocking machines out of batteries from the old battery radio sets. I used to go around to people's houses and say, 'Have you got any used-up batteries?' They'd give 'em to me, I'd get some power out of 'em, connect 'em all in series, make sparks. Typical kid stuff."

Arnie and his brother Buddy, who was only a year younger, shared the same hobby. "They were into electrocuting rats in the attic," their nephew, Samuel Guttman, relates. "Arnold was a ham operator [from the age of fifteen], and somehow he had an antenna system that ruined the radio reception in the neighborhood. The two terrorized the neighborhood. My mother once got so crazy she threw a punch at 'em through a glass door." Arnold "was remarkably intelligent in school, and he would fool around at home- he did all kinds of smart scientific things," recalls family friend Millie Tieger. "He built a television set in the 1930s, before anybody else did, before anybody knew what a television was. Everybody said, 'Arnold, what are you doing?"'

Some of Arnold's visionary qualities can be attributed to his avid interest in reading science fiction, a habit he later passed on to his son. "I've been reading science fiction since I was seven years old, all the way back to the earliest Amazing Stories," Arnold says. "Amazing, Astounding, Analog-I still subscribe. I still read 'em. My kids used to complain, 'Dad's in the bathroom with a science-fiction magazine. We can't get in."'

Sam and Becky Spielberg, who spoke mostly Russian around the house, were struggling to make ends meet during the Depression, and they could not afford to send Arnold and Buddy to college. **After his graduation in 1934 from Hughes High School, Arnold barely missed out on a college scholarship and had to take a job far beneath his potential, working as a clerk in a chain of small-town department stores across the river in Kentucky, run by his mother's relatives, the Lerman brothers.**

Before becoming a store manager for the Lermans, Arnold worked as an assistant manager in Cynthiana, Kentucky, for his older cousin Max Chase, a nephew of Rebecca Spielberg. Starting the process that eventually would make Arnold's son Steven into a filmmaker, Max gave Arnold his first movie camera during the early 1930s. "I started taking home movies when I lived in Kentucky," Arnold recalls. "My cousin bought one of the earliest 8mm movie cameras. He didn't know how to use it, so he said, 'Here, you use it.' I was about seventeen years old when I started doing that. I used to take a lot of junk movies, you know what I mean? Family and stuff like that. But no class. Just pictures."*

Arnold continued to work for the Lermans until the coming of World War II. **He enlisted in the U.S. Army Signal Corps in January 1942, but was soon transferred into the Army Air Forces. After serving as an airplane-parts shipping clerk in Karachi, Pakistan, he parlayed his ham-radio experience into a post as a radio operator. Stationed first in Karachi and then outside Calcutta, in the China-Burma-India theater of operations, he was part of a B- 25 bomber squadron that destroyed Japanese railroad lines, shipping, and communications in Burma, earning them the nickname of "The Burma Bridge Busters." Arnold recalls that although he "flew a couple of missions," he spent most of the war running the squadron's communications room: "At first I signed on to be a radio gunner, but they said, 'No, if you know how to fix radios, you're better off on the ground.' They wouldn't let me fly anymore." He was rotated back to the United States in December 1944, serving out the rest of the war at Wright Field in Dayton, Ohio.**

The country's shared sacrifices and its victory over fascism, coupled with the eventual discovery of the full dimensions of the Holocaust, contributed to the postwar advancement of social acceptance and economic opportunities for American Jews. The Cold War climate of fierce American competitiveness with the Soviet Union also helped open doors in higher education, science, and business during the postwar years, while helping make Christians somewhat more tolerant in their social interactions with Jews, or at least less overt about their anti-Semitism.

The most immediate and far-reaching benefit of wartime service for Arnold Spielberg was the GI Bill of Rights, which finally enabled him, like 2.2 million other American veterans, to attend college. The GI Bill gave veterans what one of them called "a ticket of admission to a better life."

It was that for Arnold Spielberg, making it possible for the former department store manager to earn a degree in electronic engineering from the University of Cincinnati in June 1949 and launching him on what would turn out to be a highly successful career in computer engineering. Arnold remembers that just before his father died, he was "so proud" to see his son enter college.

• Arnold is still shooting home movies today, mostly of his travels, using a Sony High-8 video camera and a professional-quality Avid editing system his son gave him. In his current occupation as an electronics industry consultant, Arnold also has been making industrial.films: "Ever since I retired, they say to me, 'With the name Spielberg, you've got to be able to make movies.' So they got me making movies."

"Arnold blossomed in an academic setting," family friend Millie Tieger observed. "Arnold was such a turn-around person. He married Leah and she encouraged him to go to college. She pushed him. She was already a graduate of the University of Cincinnati; she was a smart girl, talented, very outgoing. I think she wanted Arnold also to have a good education. He turned out to be a brain, absolutely brilliant, a pioneer in computers. When Arnold was working in New Jersey, doing early computer research, he used to come to Cincinnati, and he would sit down at our kitchen table and calculate numbers to the thirteenth power. I had no idea what he was talking about. I would say, 'Shut up, Arnold."'

WHEN Steven Spielberg's mother attended walnut Hills High School, the college preparatory school for Cincinnati public school students, she was "kinda mousy. So was I," recalls fellow student Edith Cummins. "We weren't the prom queen types. She was very plain." "I was different-looking," Leah told Fred A. Bernstein, author of The Jewish Mothers' Hall of Fame. "But I never wanted to change. If I had had a tiny pug nose, maybe I wouldn't have had to develop a personality. But instead, I learned to play piano. I was somebody. I loved my life, and I believed in me."

"She was so different from the Spielbergs," notes Millie Tieger. "She had a sparkle. They were all bigger, dark, and here is this under-five-foot young lady, blond, her eyes flash, she talks like this [moves her head and eyes rapidly as she talks]. Arnold was super-smart and accomplished, but I think Leah had a more all-encompassing 'people' personality. She's a very insightful creature."

Leah started dating Arnold Spielberg in 1939- Arnold attended high school with Leah's brother, Bernie. "We all played tennis together," Arnold's sister Natalie recounted. "Leah was going with somebody else at the time, but when she broke up with her boyfriend I introduced her to Arnold because I thought that would be a good match."

During the early 1940s, Leah pursued her musical ambitions as a student at the renowned Cincinnati Conservatory of Music, affiliated with the University of Cincinnati. She planned a career as a concert pianist and did some public performing, much to the pride and delight of her family. Leah was "a very talented concert pianist," Arnold says. "She contributed a lot of artistic talent to Steven."

Leah, a home economics major in college, was graduated and took a job as a social worker for the Travelers Aid Society at the city's Union Terminal. She married Arnold in South Avondale's Adath Israel synagogue on February 25, 1945, while he was still in active service at Wright Field. Joining him in Dayton, Leah worked for the local social services department. After his discharge later that year and their return to Cincinnati, Leah helped administer

Bayern, Leah worked for the local social welfare department. After his discharge later that year and their return to Cincinnati, Leah helped administer electrocardiograms for a few months at the Jewish Hospital, but quit that job shortly before Steven was born at the same hospital. With her own artistic career sidetracked by the demands of raising a family, she passed on her artistic ambitions to her son, but never stopped playing the . piano.

"The first piece of furniture we got when we were married was a piano," Arnold says. "We borrowed a bed, and we bought a Baldwin spinet." Arnold, who took piano lessons as a boy, was always an avid music listener. "We had a big collection of classical records," he recalls. "We had classical music playing in the house all the time, way back, early on." While pregnant with Steven, Leah spent much of her time playing classical pieces on her piano, and when he was an infant in diapers, he would sit on her lap on the piano bench, listening and learning to tap out the music. Sometimes Arnold also got into the act: "I knew enough to know the notes, so when she'd play, I'd turn the pages."

Sometimes the music would affect Steven in unexpected ways. "Steven always had a highly developed imagination," said Leah. "He was afraid of everything. When he was little he would insist that I lift the top of the [piano] so he could see the strings while I played. Then he would fall on the floor, screaming in fear." But Millie Tieger, who remembers watching him as a small child sitting at the piano with his mother, suggests that the early influence of Leah's music is "the key to the understanding" of his creative development: "What went into Steve when he heard his mother play music so beautifully?"

Like fellow wunderkind director Orson Welles, whose father was an inventor and whose mother was a concert pianist, Spielberg acquired his dazzling blend of artistic talents from a synthesis of his parents' disparate abilities. He once said he is the product of "genetic overload." His father describes Steven's personality as "a lucky piece of synergy," explaining that Steven's mother is "a very musically creative person, she's a good dancer. And she's a zany type. I'm a little more grounded. But I also like creative things. I was a great storyteller. I love science fiction."

Arnold's pioneering creativity within his own field of computers has brought him several patents. When Steven was an infant, his father would put him to sleep by the imaginative means of using an oscilloscope to reflect wavy lines on the wall. Though Steven showed no interest in following his father into engineering, he picked up his interest in filmmaking from his father. Steven's fascination with all kinds of cutting-edge technology and his mastery of the tools of filmmaking have been evident from the earliest days of his professional career.

The influence of music is also strongly evident in Spielberg's career. He played the clarinet (though not very well) in his grade school and high school bands, and sat in as first clarinet for composer John Williams in the beach scene of Jaws. He still noodles on the instrument for pleasure and relaxation. He has been a passionate collector of movie scores since childhood, and has said, "If I weren't a filmmaker I'd probably be in music. I'd play piano or I'd compose. I'd probably be a starving composer somewhere in Hollywood right now, hopefully not starving, but I probably would not have been successful."

In the view of Williams, who has written the scores for most of Spielberg's films, he is being overly modest about his musical sense: "Steven could have been a composer himself. He has that rhythmic sense in his whole being, and I think that is one of the great things about his directing-this rhythmic, kinetic sense he has."

Through his parents, Spielberg inherited his love of music from Grandpa Shmuel, who performed in the Russian army band, and from Grandpa Fievel, the Russian immigrant Jew who was not allowed to go to school but used his music to proclaim "How wondrous are Thy works."

Perhaps the most joyous scene in all of Spielberg's movies is the ending of Close Encounters of the Third Kind, in which the scientists finally devise a way of communicating with the alien mother ship by using their computers to play synthesized music together. The musical interchange between the humans and their extraterrestrial visitors starts as a few tentative notes and quickly becomes a rapturous duet of spiritual celebration.

"When I saw Close Encounters," Millie Tieger recalls, "I thought, There's Leah with the music and Arnold with computers. That's Steve, the little boy. Steve wrote a movie about Mommy and Daddy."

Sept. 8, 1996 - NYTimes - "Bernard Posner, 80, Advocate For Those With Disabilities"

Source - [HN01H0][GDrive]

By Robert Mcg. Thomas Jr.

Bernard Posner, a Government bureaucrat who was so moved by the plight of disabled veterans that he put his very able body on the line as a leading champion of the rights of all Americans with disabilities, died on Wednesday at nursing home in Rockville, Md. He was 80 and had been executive director of the President's Committee for the Employment of the Handicapped.

His family said the cause of death was a stroke.

A native of Cincinnati who majored in English at the University of Cincinnati, Mr. Posner later studied under the G.I. bill to receive a master's degree in communications from American University.

He came through his Army service in World War II unscathed and with no special interest in the problems faced by the disabled. But when **a chance encounter with friend led to a position in the Veterans Administration's press office after the war,** Mr. Posner unwittingly took what would become more than a job.

Working with disabled veterans to create national campaigns to promote their employment had such a transforming effect on his outlook that he was soon a man with a mission.

Recognizing that millions of civilians with physical or mental handicaps faced the same problems as disabled veterans, he started working as an unpaid part-time volunteer for the Presidential committee on the handicapped that had been established by Harry S. Truman.

Mr. Posner joined the committee full time in 1960, initially as a special assistant to the chairman, Harold Russell, later as assistant director, and as executive director from 1975 until his retirement in 1986.

It was a reflection of his zeal and his devotion to the cause of the disabled that during his years as assistant director, Mr. Posner went somewhat beyond the official scope of his job and actually posed as a mentally retarded worker to gain insights into how the retarded are treated by bosses, co-workers and the public.

After brief stints working in a Washington laundry, picking onions in Arizona and washing dishes at a Los Angeles restaurant (all with the secret complicity of the business owners) Posner wrote articles about his experiences and used them in arguing for more enlightened treatment for the mentally deficient.

Mr. Posner, whose efforts were widely recognized by advocates for the disabled, helped lay the groundwork for the Rehabilitation Act of 1973, which required Government contractors to provide accommodations for handicapped workers.

Even before the passage of the landmark Americans With Disabilities Act, which extended the provisions of the 1973 law to an estimated 43 million handicapped Americans in 1990, Mr. Posner had been instrumental in getting millions of dollars' worth of elevators and other special provisions for the handicapped in the construction of the Washington Metro.

After he retired in 1986, Mr. Posner continued his work as a volunteer with the National Organization on Disability. In 1990, when President George Bush signed the Americans With Disabilities Act, the man who had taken a Government job and discovered a national mission was at the White House ceremony.

Mr. Posner, who lived in Silver Spring, Md., is survived by his wife, Bess; a son, Paul of Burke Va., and a granddaughter.

1941

https://www.newspapers.com/image/100454402/?terms=%22bernard%2Bposner%22

1942 (Sep 03)

https://www.newspapers.com/image/530312329/?terms=%22bernard%2Bposner%22

1958

https://www.newspapers.com/image/116766657/?terms=posner%2Bspielberg

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1951 (Aug 02)

Full newspaper page : [HN0196][GDrive]

The American Israelite (Cincinnati, Ohio) · 02 Aug 1951, Thu · Page P1

Mr. Bernard Posner, son of Mr. and Mrs. Philip Posner, 819 Glenwood Avenue, has been appointed director of radio and television activities for the Veterans Administration in Washington, D.C.

A graduate of the University of Cincinnati College of Liberal Arts in 1938, Mr. Posner served as editor of the Schenley Distillers house organ at the outbreak of World War II.

After serving at various Army stations in the United States, he was discharged as a captain in January 1946. Since that time he has been associated with the information service of the Veterans Administration in Washington. He is married and has one son.

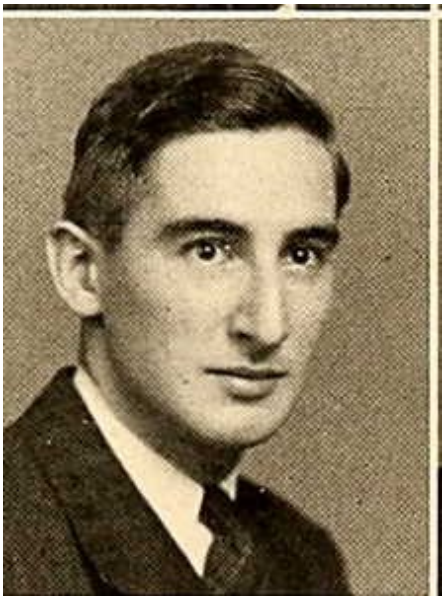
As director of radio and TV activities for the VA, Mr. Posner has charge of a weekly recorded program that is broadcast over 2500 stations, television spot announcements, full-length features and other programs.

[HN0197][GDrive]

BITCHUTE @Housatonic YOUTUBE @HousatonicLive ODYSEE @Housatonic BRIGHTEON @Housatonic

Housatonic

Irvin Nathaniel Spielberg (born 1918)



Irvin Spielberg - 1941 College yearbook
[HE0029][GDrive]

Born Dec 19, 1918

Siblings include : Arnold Meyer Spielberg (born 1917)

Associated with:

- TRW Incorporated

Evidence Timeline

Dec 1 1935

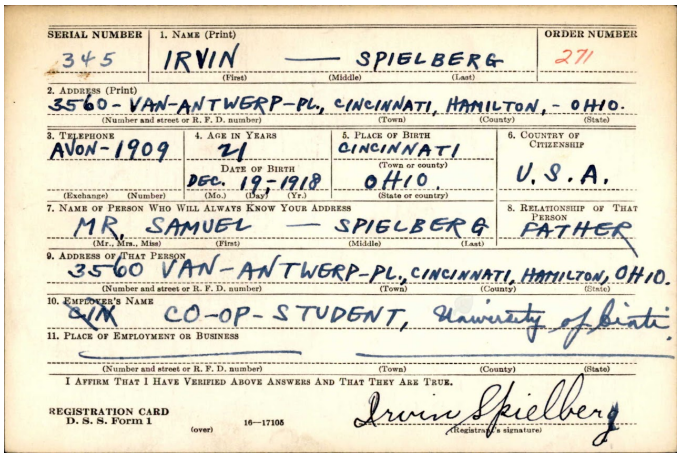
https://www.newspapers.com/image/103162606/?terms=%22irvin%2Bspielberg%22

1940 Census

he was co-opting somewhere as a machine operator

https://search.findmypast.com/record?id=USC%2F1940%2F005460723%2F00347&parentid=USC%2F1940%2F1603740161

1940 (October) - draft card



SERIAL NUMBER 345 | 1. NAME (Print) IRVIN (First) — SPIELBERG (Middle) (Last) | ORDER NUMBER 271

2. ADDRESS (Print) 3560 - VAN-ANTWERP-PL, CINCINNATI, HAMILTON, - OHIO. (Number and street or R. F. D. number) (Town) (County) (State)

3. TELEPHONE AVON-1909 (Exchange) (Number) | 4. AGE IN YEARS 21 DATE OF BIRTH DEC. 19-1918 (Mo.) (Day) (Yr.) | 5. PLACE OF BIRTH CINCINNATI (Town or county) OHIO. (State or country) | 6. COUNTRY OF CITIZENSHIP U.S.A.

7. NAME OF PERSON WHO WILL ALWAYS KNOW YOUR ADDRESS MR. SAMUEL (Mr., Mrs., Miss) (First) — SPIELBERG (Middle) (Last) | 8. RELATIONSHIP OF THAT PERSON FATHER

9. ADDRESS OF THAT PERSON 3560 VAN-ANTWERP-PL, CINCINNATI, HAMILTON, OHIO. (Number and street or R. F. D. number) (Town) (County) (State)

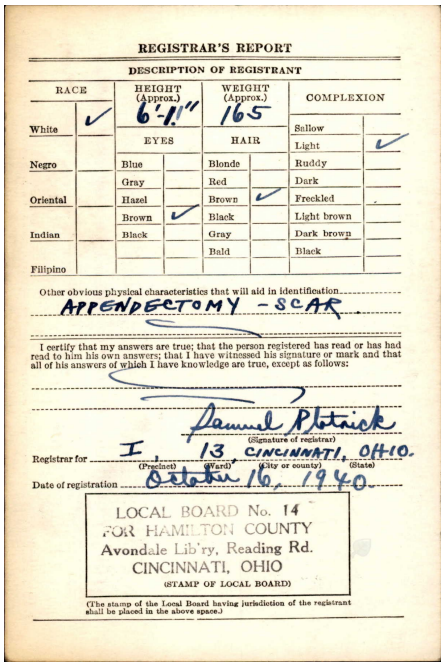
10. EMPLOYER'S NAME YM CO-OP-STUDENT, University of Cinti.

11. PLACE OF EMPLOYMENT OR BUSINESS (Number and street or R. F. D. number) (Town) (County) (State)

I AFFIRM THAT I HAVE VERIFIED ABOVE ANSWERS AND THAT THEY ARE TRUE. Irvin Spielberg (Registrant's signature)

REGISTRATION CARD D. S. S. Form 1 (over) 16—17105

[HG006X][GDrive]



REGISTRAR'S REPORT

DESCRIPTION OF REGISTRANT

RACE		HEIGHT (Approx.)		WEIGHT (Approx.)		COMPLEXION	
White	✓	6'-1"		165		Sallow	
		EYES		HAIR		Light	✓
Negro		Blue		Blonde		Ruddy	
		Gray		Red		Dark	
Oriental		Hazel		Brown	✓	Freckled	
		Brown	✓	Black		Light brown	
Indian		Black		Gray		Dark brown	
				Bald		Black	
Filipino							

Other obvious physical characteristics that will aid in identification: APPENDECTOMY - SCAR.

I certify that my answers are true; that the person registered has read or has had read to him his own answers; that I have witnessed his signature or mark and that all of his answers of which I have knowledge are true, except as follows:

Samuel Rotnick (Signature of registrar)

Registrar for I, 13 CINCINNATI, OHIO. (Precinct) (Ward) (City or county) (State)

Date of registration October 16, 1940

LOCAL BOARD No. 14
FOR HAMILTON COUNTY
Avondale Lib'ry, Reading Rd.
CINCINNATI, OHIO
(STAMP OF LOCAL BOARD)

(The stamp of the Local Board having jurisdiction of the registrant shall be placed in the above space.)

[HG006Y][GDrive]

March 09 1941

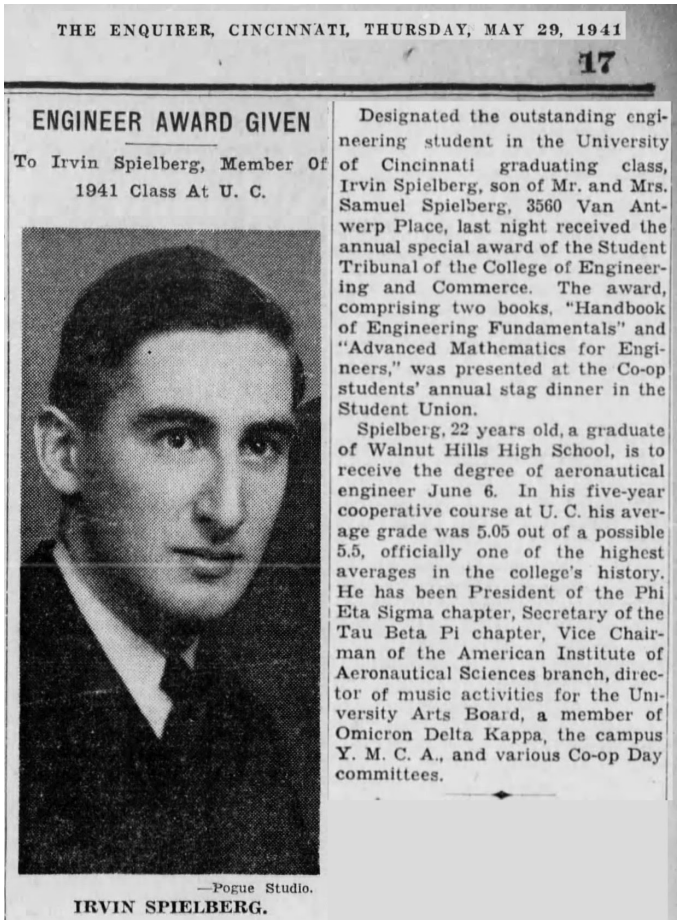
https://www.newspapers.com/image/103183828/?terms=%22irvin%2Bspielberg%22

March 23 1941

https://www.newspapers.com/image/100469631/?terms=%22irvin%2Bspielberg%22

1941 (May 29) - Award

Full newspaper page : [HN0198][GDrive]



THE ENQUIRER, CINCINNATI, THURSDAY, MAY 29, 1941 17

ENGINEER AWARD GIVEN

To Irvin Spielberg, Member Of 1941 Class At U. C.

—Pogue Studio.

IRVIN SPIELBERG.

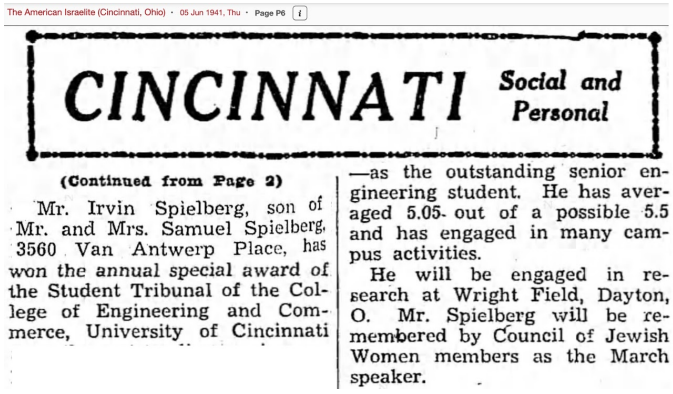
Designated the outstanding engineering student in the University of Cincinnati graduating class, Irvin Spielberg, son of Mr. and Mrs. Samuel Spielberg, 3560 Van Antwerp Place, last night received the annual special award of the Student Tribunal of the College of Engineering and Commerce. The award, comprising two books, "Handbook of Engineering Fundamentals" and "Advanced Mathematics for Engineers," was presented at the Co-op students' annual stag dinner in the Student Union.

Spielberg, 22 years old, a graduate of Walnut Hills High School, is to receive the degree of aeronautical engineer June 6. In his five-year cooperative course at U. C. his average grade was 5.05 out of a possible 5.5, officially one of the highest averages in the college's history. He has been President of the Phi Eta Sigma chapter, Secretary of the Tau Beta Pi chapter, Vice Chairman of the American Institute of Aeronautical Sciences branch, director of music activities for the University Arts Board, a member of Omicron Delta Kappa, the campus Y. M. C. A., and various Co-op Day committees.

[HN0199][GDrive]

1941 (June 05) - He will be engaging in research at wright filed

Full newspaper page 2 : [HN019K][GDrive] and page 6 [HN019L][GDrive]



The American Israelite (Cincinnati, Ohio) · 05 Jun 1941, Thu · Page P6

CINCINNATI Social and Personal

(Continued from Page 2)

Mr. Irvin Spielberg, son of Mr. and Mrs. Samuel Spielberg, 3560 Van Antwerp Place, has won the annual special award of the Student Tribunal of the College of Engineering and Commerce, University of Cincinnati —as the outstanding senior engineering student. He has averaged 5.05 out of a possible 5.5 and has engaged in many campus activities.

He will be engaged in research at Wright Field, Dayton, O. Mr. Spielberg will be remembered by Council of Jewish Women members as the March speaker.

[HN019M][GDrive]

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june 7 1941 - aeronautical engineer

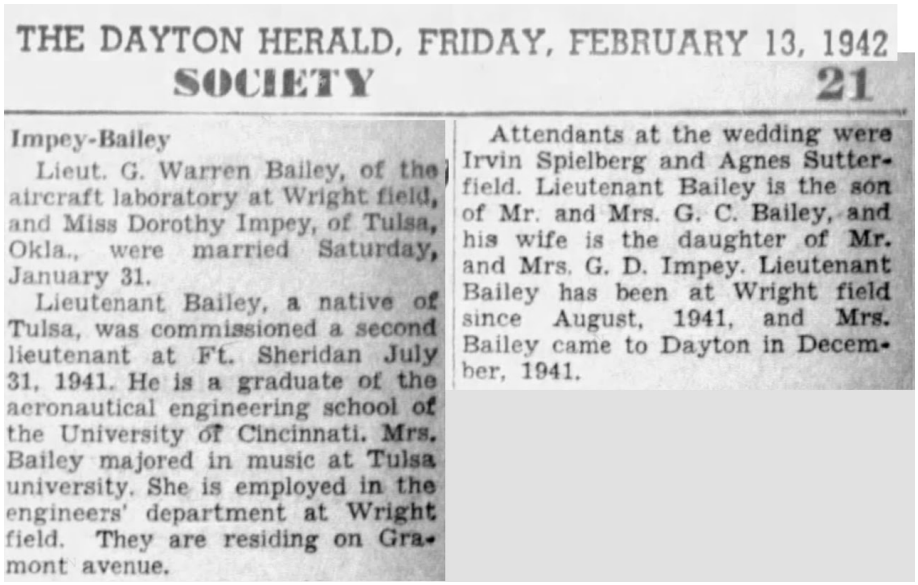
https://www.newspapers.com/image/102717250/?terms=%22irvin%2Bspielberg%22

june 26 1941

https://www.newspapers.com/image/530308888/?terms=%22irvin%2Bspielberg%22

1942 (Feb 13) - At wedding of Lieutenant G Warren Bailey

Full newspaper page : [HN019N][GDrive]



THE DAYTON HERALD, FRIDAY, FEBRUARY 13, 1942

SOCIETY 21

Impey-Bailey

Lieut. G. Warren Bailey, of the aircraft laboratory at Wright field, and Miss Dorothy Impey, of Tulsa, Okla., were married Saturday, January 31.

Lieutenant Bailey, a native of Tulsa, was commissioned a second lieutenant at Ft. Sheridan July 31, 1941. He is a graduate of the aeronautical engineering school of the University of Cincinnati. Mrs. Bailey majored in music at Tulsa university. She is employed in the engineers' department at Wright field. They are residing on Gramont avenue.

Attendants at the wedding were Irvin Spielberg and Agnes Sutterfield. Lieutenant Bailey is the son of Mr. and Mrs. G. C. Bailey, and his wife is the daughter of Mr. and Mrs. G. D. Impey. Lieutenant Bailey has been at Wright field since August, 1941, and Mrs. Bailey came to Dayton in December, 1941.

[HN019O][GDrive]

1942 (June 28) - big wedding

https://www.newspapers.com/image/391744448/?terms=%22irvin%2Bspielberg%22

jan 21 1943 - Now in the army ? where was he before this?

https://www.newspapers.com/image/530313270/?terms=%22irvin%2Bspielberg%22

Feb 18 1943 -

"private" irvin spielberg ... at miami beach

https://www.newspapers.com/image/530313440/?terms=%22irvin%2Bspielberg%22

may 04 1944 - ENLISTMENT ?

https://www.findmypast.com/transcript?id=USM%2FWWARMYENLIST%2F6345772

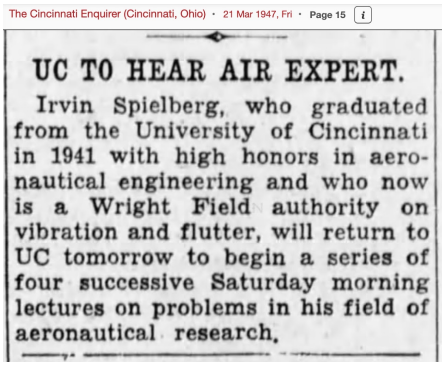
national jewish welfare board card

https://www.ancestry.com/imageviewer/collections/2125/images/32212_620303056_0007-01073?treeid=&personid=&hintid=&queryId=bcd887a5945b9708d29cbd143a0fa455&usePUB=true&_phsrc=CIM5&_phstart=successSource&usePUBJs=true&_ga=2.177144033.550439616.1601947863-214153302.1600833344&pId=99609

1947 (March 21)

"wright field authority on vibration and flutter"

Full newspaper page : [HN019A][GDrive]



The Cincinnati Enquirer (Cincinnati, Ohio) · 21 Mar 1947, Fri · Page 15

UC TO HEAR AIR EXPERT.

Irvin Spielberg, who graduated from the University of Cincinnati in 1941 with high honors in aeronautical engineering and who now is a Wright Field authority on vibration and flutter, will return to UC tomorrow to begin a series of four successive Saturday morning lectures on problems in his field of aeronautical research.

[HN019B][GDrive]

1950 (Sep 23) engagement

Full newspaper page : [HN019C][GDrive]

The Cincinnati Enquirer (Cincinnati, Ohio) · 23 Sep 1950, Sat · Page 10

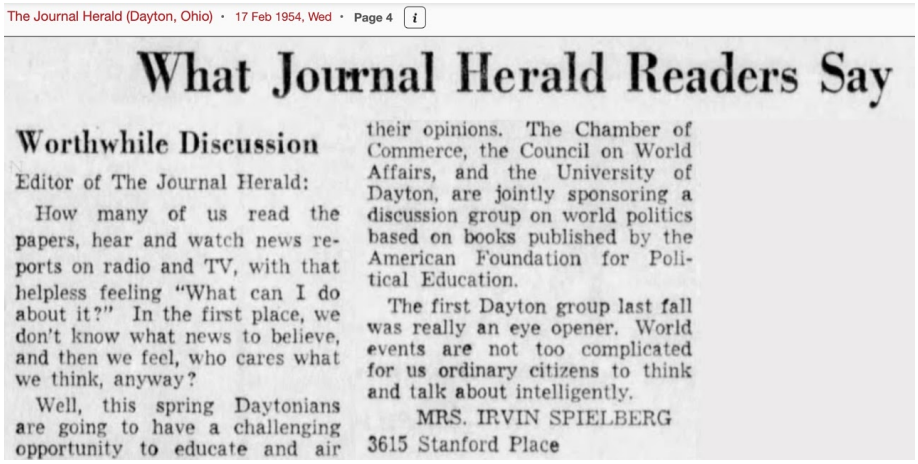
Engagement

Mr. and Mrs. David Fabe of Wess Park Drive announce the engagement of their daughter, Frances, to Mr. Irvin N. Spielberg, son of Mrs. Rebecca Spielberg. The wedding is to take place in October.

[HN019D][GDrive]

1954 (Feb 17) - Mrs Irvin Spielberg - presenting with Council on World Affairs

Full newspaper page : [HN019P][GDrive]



The Journal Herald (Dayton, Ohio) · 17 Feb 1954, Wed · Page 4

What Journal Herald Readers Say

Worthwhile Discussion

Editor of The Journal Herald:

How many of us read the papers, hear and watch news reports on radio and TV, with that helpless feeling "What can I do about it?" In the first place, we don't know what news to believe, and then we feel, who cares what we think, anyway?

Well, this spring Daytonians are going to have a challenging opportunity to educate and air their opinions. The Chamber of Commerce, the Council on World Affairs, and the University of Dayton, are jointly sponsoring a discussion group on world politics based on books published by the American Foundation for Political Education.

The first Dayton group last fall was really an eye opener. World events are not too complicated for us ordinary citizens to think and talk about intelligently.

MRS. IRVIN SPIELBERG
3615 Stanford Place

[HN019Q][GDrive]

1954 (March) - Weight Airfield Development Center - Subsonic FLUTTER TESTS OF AN UNSWEPT ALL-AIOVABLE HORIZONTAL TAIL

Full PDF : [HG008J][GDrive]

AD No. 39947
ASTIA FILE COPY

CONFIDENTIAL

WADC TECHNICAL REPORT 54-53

(Title--UNCLASSIFIED)
SUBSONIC FLUTTER TESTS OF AN UNSWEPT ALL-MOVABLE HORIZONTAL TAIL

NILES R. HOFFMAN
IRVIN N. SPIELBERG

AIRCRAFT LABORATORY

MARCH 1954

WRIGHT AIR DEVELOPMENT CENTER

CONFIDENTIAL

AF-WP-(B)-O-12 SEP 54 75

54AA 56199

[HG008K][GDrive]

CONFIDENTIAL

FOREWORD

This project was carried out by the Dynamics Branch of the Aircraft Laboratory, Directorate of Laboratories, WADC, under Research and Development Order No. 159-36T, "Investigation of Flutter Problems of All-Movable Tails". The tests were conducted in the Wright Air Development Center Five Foot Wind Tunnel during February 1953. The authors were also the project engineers.

Mr. Leon A. Tolve materially assisted the work by many helpful suggestions. Mr. Francis F. Hense constructed the flutter model.

This report reveals information relating to flutter research and has applications to military aircraft design. Since the safeguarding of this information is necessary in the interests of national security, this report has been classified "Confidential" in accordance with paragraphs 2.a and 24.a. (9) of AFR 205-1.

CONFIDENTIAL

[HG008L][GDrive]

CONFIDENTIAL

ABSTRACT

The results of subsonic wind tunnel flutter tests on a dynamic model of an unswept all-movable horizontal tail are presented. The test data show the variation of flutter speed with stabilizer rotational restraint for three positions of the rotational axis. In addition, the effect of free-play in the stabilizer actuating mechanism on the flutter speed is determined for one rotational frequency at one rotational axis position. Complete model data, including the measured zero airspeed coupled vibration frequencies and node lines, are included.

PUBLICATION REVIEW

This report has been reviewed and is approved.

FOR THE COMMANDER:

for DANIEL D. McKEE
Colonel, USAF
Chief, Aircraft Laboratory
Directorate of Laboratories

CONFIDENTIAL

[HG008M][GDrive]

CONFIDENTIAL

INTRODUCTION

The current use of all-movable horizontal tails in place of the more conventional stabilizer-elevator combination has introduced some new flutter problems to the aircraft designer. In particular he needs to know how stiff the actuating mechanism of an all-movable tail must be in order to insure freedom from flutter, and what amount of stabilizer rotational free play can be tolerated before a normally safe configuration becomes dangerous from the flutter standpoint. In order to provide answers to questions such as these, the Aircraft Laboratory of the Wright Air Development Center initiated a project to investigate the flutter characteristics of all-movable tails. The first phase of this project, subsonic wind tunnel tests of an unswept stabilizer flutter model, is reported here. Subsequent phases will include subsonic tests of a swept back model and transonic tests.

The present investigation consisted of two parts. First, a series of tests were conducted to determine the effect of varying the rotational restraint of an all-movable stabilizer on the flutter speed. These tests were performed for three locations of the axis of rotation. A second series of tests were then run to determine the influence of stabilizer rotational free play on the flutter characteristics of a particular case. This report presents a description of the model including its mass and elastic properties, the zero airspeed vibration modes and frequencies for all configurations tested in the wind tunnel, and finally the wind tunnel flutter data.

The vertical bending of a fuselage was not simulated in the model used for this investigation. This mode of vibration is expected to influence the flutter test data appreciably for low rotational frequencies of the all-movable tail. The Wright Air Development Center plans to investigate this effect by further wind tunnel tests in a future phase of the all-movable stabilizer flutter research program.

CONFIDENTIAL

[HG008N][GDrive]

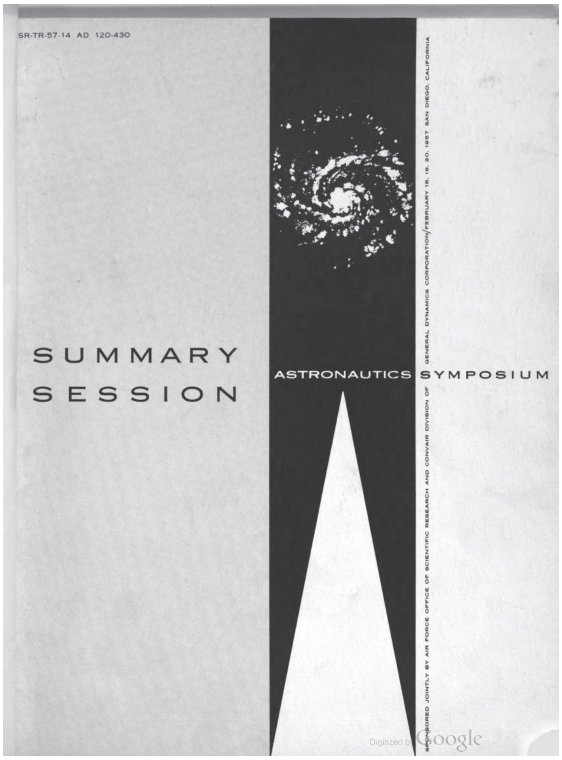
1955 - Mrs Spielberg politically active

https://www.newspapers.com/image/531447134/?terms=%22irvin%2Bspielberg%22

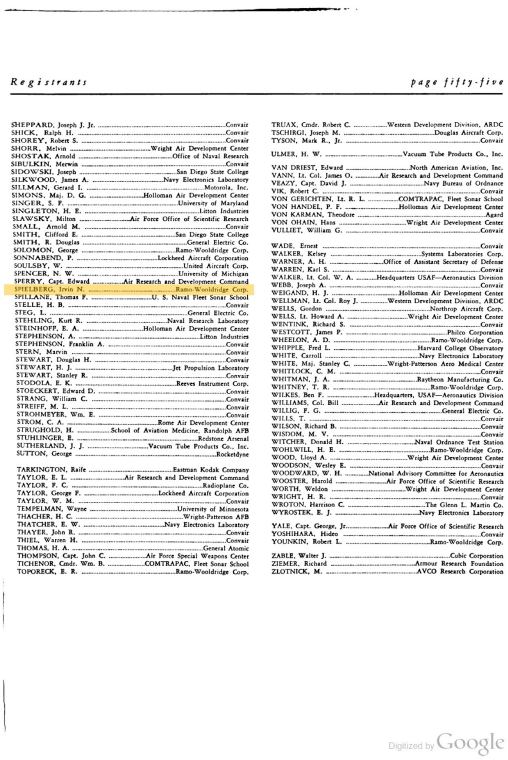
1957 (Feb) - Astronautics Symposium - Irvin Spielberg with "Ramo-Wooldridge Corp."

PDF : [HI001L][GDrive]

"The Astronautics Symposium was held at San Diego, Calif., February 18 to 20 , 1957, under sponsorship of the United States Air Force Office of Scientific Research and Convair Division of General Dynamics Corporation . Attending were 600 scientists and engineers from the armed services, independent research organizations, universities and colleges and industrial concerns."



[HI001M][GDrive]



[HI001N][GDrive]

1958 - Now in Los Angeles

https://www.newspapers.com/image/381236009/?terms=%22irvin%2Bspielberg%22

1958 -With "Space Technology Laboratories"

Source - (from a July/August 2010 issue of TRA's Gazette - For Northrop Grumman & TRW legacy retirees"

PDF : [HC004H][GDrive]

TRA's No Name GAZETTE

For Northrop Grumman & TRW legacy Retirees

VOL. XXII NO. 5 July/August 2010

Election Time at TRA! Please Vote

HAPPENINGS AT NORTHROP GRUMMAN

Aerospace Systems Sector (NGAS)

ABU DHABI, UAE, July 14, 2010) -- With the support of the United States Navy, NGAS and its industry partners (Sikorsky/Schweizer, Rolls-Royce, Raytheon, FLIR Systems, Cubic, Kearfott, Rockwell-Collins, General Electric, Sierra Nevada, Telephonics, and L-3 Communications) today successfully completed a rigorous set of flight demonstrations of the MQ-8B Fire Scout vertical unmanned aerial system (VUAS) in the United Arab Emirates under extreme environmental conditions. The test flights were conducted in early July over a ten-day period. They validated Fire Scout's steady system maturation and helped signal its readiness for the U.S. Navy's upcoming Operational Evaluation of the system, planned for late 2010 aboard the USS Halyburton.

By Frank Warren

Information Systems Sector (NGIS)

SAN PEDRO, CA — NGIS has received an indefinite-delivery/indefinite-quantity (ID/IQ) award from the U.S. Air Force to provide mission planning software systems and tools so that warfighters can quickly and effectively plan missions and transfer required data to aircraft avionics. NGIS is one of five companies that received an award under the Mission Planning Enterprise Contract II from the Electronic Systems Center, Air Force Materiel Command, Hanscom Air Force Base, Mass. The companies will compete for delivery orders with a potential value of $919 million collectively over a five-year base period and five-year optional terms, making the potential period of performance 10 years.

Each Fall TRA nominates its Officers and Members-at-Large for the coming year. Then it's your responsibility as members to ratify these nominations or nominate other candidates. By nominating just one candidate for each position, we avoid the disappointment that can happen when a person agrees to run, then does not win the election.

Officers serve for a one-year term, while the Directors-at-Large are elected for two years. These longer terms for the latter group help bring continuity to the management and daily operation of TRA. Directors-at-Large are limited to six successive years (three terms) while Officers may serve only two consecutive terms, with the exception of the Treasurer, who may serve up to five consecutive terms.

Please take the time to vote. Your votes show that you support the nominating committee and those other hard-working individuals that help make TRA strong.

You can vote by e-mail or by completing the enclosed ballot and mailing it in. Just follow the instructions on the ballot.

Electronic Systems Sector (NGES)

CHARLOTTESVILLE, Va. — NGES has been selected to supply the bridge navigation systems for three new bulk carriers being built in China for Italian ship-owner Deiulemar Shipping. Each of the ships is to be fitted with the company's Sperry Marine VisionMaster FT S- and X-band radars, gyro-compass, autopilot, steering control, speed log, echosounder, voyage data recorder, and other navigation systems. The equipment is being supplied through Telemar, the sales and service representative for Northrop Grumman Sperry Marine products and systems in Italy. Telemar will oversee the installations and provide technical support and service for the shipboard navigation systems. The 176,000 deadweight ton ships are on order from New Century Shipbuilding Company's New Times Shipbuilding yard in Jiangsu, China. They are due for delivery to Deiulemar in 2010/2011.

[HC004I][GDrive]

Aerodynamic Analysis Of A Statue

During the summer of 1958 I was summoned to the office of Will Duke, Vice President and Associate Director of the Systems Engineering Division, Space Technology Laboratories.

He said that Jimmy Doolittle, the Chairman of the Board of STL, wanted an aerodynamicist to perform a loads analysis of a statue. It seemed that the Order of Daedalians, a group of Air Force officers, all retired and many of General rank, who had been Army Air Corps pilots in the 1920's, wanted to give a gift to the recently established Air Force Academy at Colorado Springs. The intended gift was to be a statue of Daedalus, the mythical Greek who fashioned wings of wax for himself and his son, Icarus, to enable them to escape their island imprisonment.

General Doolittle was concerned that high winds (up to 70 mph) sweeping down from the Rocky Mountains toward the Academy might damage the sculpture or tear it off its pedestal.

I visited the sculptor at his studio in Pasadena, where I was shown a one-tenth scale model of the sculpture: a man with arms wide-spread, a wing attached to each arm, and mounted horizontally on a vertical pedestal. When completed at full scale, the pedestal would be 10 feet tall, the wing span about 16 feet, and the man, 6 feet.

Back at STL, I approximated the wing shape, selected a NACA airfoil that nearly matched the wing camber, and estimated the lift and drag coefficients. I then calculated total forces, moments, and load distribution, assuming a 70 mph wind encountering the winged man at a high angle of attack.

From these I determined the bending moments at the wing root, the force tending to lift the man off the pedestal, and the force tending to topple the pedestal.

I communicated these results to the sculptor, with some suggestions as to what portions of the sculpture needed to be strong enough to sustain the loads. I reported the same to Dr. Duke and gave him my analysis and calculations. I had hoped to be allowed to present the same information to Dr. Doolittle, but Duke reserved that privilege for himself.

About a week later I received a phone call from Dr. Doolittle's secretary. She conveyed his thanks to me for my work and then told me that Gen. Doolittle and Gen. K.B. Wolfe met with the sculptor, viewed the model, and decided it was an inappropriate gift.

Irv Spielberg

1964 (July 4)

Full newspaper page : [HN01BL][GDrive]

NEW SPACE SHIP HAS AIRPLANE ATTACHED

1964-07-04-san-pedro-daily-news-pg-9-clip-new-space-ship

By FRANK MACOMBER
Miltary-Aerospace Writer
Copley News Service

REDONDO BEACH, Calif.—Space Technology Laboratories here has come up with a new space vehicle named Janus.

It is a spaceship with an airplane attached.

Janus' performance characteristics are outlined in a paper written by I. N. Spielberg and C. B. Cohen, assistant directors of STL's Aerospace Laboratory.

Janus is a spacecraft with a subsonic, turbojet airplane built into its structure. Weighing only about 16,000 pounds, the blunted, half-cone shaped spaceship resembles half a baked potato.

Spielberg and Cohen say it could carry three atronauts on a two-week earth-orbiting mission. On reentry, the airplane would be separated at about 50,000 feet and, with a landing speed of only 120 miles an hour, it could be maneuvered to any airport within its 200-mile range.

Meanwhile the pod or spacecraft would float to earth on parachutes for reuse.

Recalling that 15,000 people and a virtual fleet of ships and planes were involved in the Mercury manned flight recoveries, the STL engineers claim Janus appears to be as economical as it is scientific.

After providing for life support systems there still is 860 cubic feet of usable space for all the scientific equipment needed for a 14-day mission.

"With a Titan III or Saturn I booster additional tons of payload could be carried," the paper says.

The airplane weighs only 4,000 pounds and carries the spacecraft's communications and airplane navigation equipment.

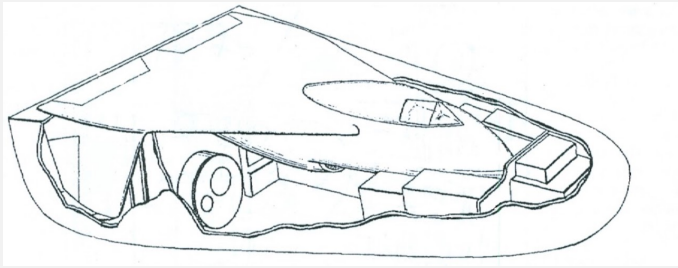
"As we progress into the more sophisticated spacecraft of the 1970s, Janus-type spacecraft could be used for space station-to-earth shuttles, or as a test station, command and communications satellite or manned early warning space station," the Spielberg-Cohen paper points out.

[HN01BM][GDrive]

Another Look at Staged Reentry: Janus (1962-1966) - From Blog "SpaceFlightHistory"

See [HW0057][GDrive] / 1965 paper : https://arc.aiaa.org/doi/10.2514/3.28224

[HW0058][GDrive]
The M2-F1 lifting-body glider (left) and its successor, the M2-F2. Of the experimental lifting bodies NASA built and flew, the Janus spacecraft would have most resembled these pioneering aircraft. Image credit: NASA.



[HW0059][GDrive]
Cutaway view of the Janus spacecraft. Image credit: U.S.Patent Office.

In 2013, while spending a gleeful Sunday afternoon searching through old patent applications (don't judge me), I stumbled upon an intriguing design for a piloted spacecraft using "staged reentry." I wrote about it on my old Beyond Apollo blog on the WIRED website.

In 2017, I expanded that post with more context details on the history of lifting body research and better illustrations and posted it on this blog (see the link at the end of this post). At the time, the patent application, filed in January 1964 by TRW engineers C. Cohen, J. Schetzer, and J. Sellars and granted in December 1966, remained my only source of information on the staged reentry concept.

No longer. One benefit of working at a university is that journal articles formerly locked up behind paywalls, out of reach of independent scholars on a budget, are now readily accessible. Last month, while spending a gleeful Sunday afternoon searching through the **1965 volume of *The Journal of Spacecraft & Rockets*, I stumbled upon a staged reentry design named for Janus, the two-faced Roman god of endings and beginnings. Closer examination confirmed**

that the Janus spacecraft was indeed the unnamed spacecraft of the 1966 patent.

Janus is an apt name for the proposed spacecraft design, because its most unique features are related to launch and (especially) landing - that is, the beginning and ending of its mission**. The name was first used in a confidential May 1962 TRW Space Technology Labs report by I. Spielberg and C. Cohen.**

Spielberg, whose name does not appear on the patent application, presented the staged reentry concept at the first conference of the American Institute of Aeronautics and Astronautics in Washington, DC (29 June-2 July 1964) along with Cohen, whose name was the only one to appear on the 1962 report, the 1964 presentation, the 1965 *Journal of Spacecraft & Rockets* paper based on the presentation, and the 1966 patent. It seems likely, given his continuous involvement, that Cohen originated and championed the Janus staged reentry concept.

Patent applications are not engineering papers; or, perhaps, one may say that lousy is the engineering paper that reads like a patent application. In addition to being more readable, the 1965 Spielberg and Cohen paper provides considerably more detail than the patent application.

The TRW engineers explained the rationale behind the staged reentry concept:

> A manned system should provide precision and flexibility in its landing characteristics. It should be capable of routine launch and routine return without a large recovery task force. Moreover, these criteria must be satisfied without curtailing payload volume or weight or reducing the reliability of reentry protection. In general, these requirements conflict, since efficient entry vehicles (e.g., blunt lifting bodies) have poor landing characteristics, whereas vehicles that land well (winged configurations) tend to have low volumetric efficiency and serious reentry design problems. The staged reentry concept. . . circumvents the difficult design compromises that otherwise must be made to ensure good landing qualities, high volumetric efficiency, and desirable reentry characteristics.

The Janus spacecraft comprised two parts that would separate in flight. The largest part was a 26.8-foot-long, 16-foot-wide, 10-foot-deep "pod." Designed to carry three astronauts, it was an 11,660-pound half-cone lifting body with flat aft and top surfaces and a curved, blunt nose.

The TRW engineers described the pod's double-walled structure. Its inner hull, the pressure vessel, would be manufactured from aluminum sheet. The outer hull would be made of aluminum honeycomb with aluminum alloy plates for added strength. Aluminum frames with "I" and "Z" cross-sections would link the two hulls. An ablative heat shield (that is, one that chars and erodes to carry away heat) would cover the aluminum honeycomb, and low-density insulation would fill the space between the inner and outer hulls.

The other part of the Janus spacecraft was a 4000-pound delta-wing jet aircraft measuring 21 feet long, 13.3 feet across its wings, and 5.33 feet tall. It would include twin downward facing rudder fins and a belly-mounted air intake feeding a Continental 356-23 turbojet engine. The engine could be started at 18,000 feet of altitude using ambient air or at up to 45,000 feet with supplemental oxygen. Cruise speed at 30,000 feet was about Mach 0.6 (370 knots) and range with a full load of 77 gallons (500 pounds) of jet fuel was 200 nautical miles.

The flat top of the small jet would form the largest part of the top of the lifting body. The jet's underside would form the "ceiling" of the lifting body's 860-cubic-foot pressurized internal volume; that is, the plane's belly, including its air intake, would protrude into the main crew living and working space. Ceiling height, though variable, would measure no less than seven feet.

The jet would ride on three rod-like "pneumatic/explosive actuators" attached to the pod. Latches would link the actuators to holes in the plane's nose and on the underside of its wings. Other latches would anchor the jet's wing leading edges.

Spielberg and Cohen recognized that creating an air-tight seal between jet and pod would pose significant design challenges. They proposed an inflatable or "fluted" (grooved) gasket, presumably made of a rubberized fabric. They admitted that their seal system, though "feasible," was not yet "optimized."

Atop a booster on the launch pad, jet and lifting body would point their noses at the sky. Spielberg and Cohen envisioned that the flat aft surface of the pod would sit atop a launch vehicle adapter that would measure 10 feet in diameter where it linked to the pod. The bottom of the adapter would match the larger diameter of the launch vehicle upper stage.

Just before launch, the astronauts would pass through a hatch in the side of the adapter. Overhead they would see the flat aft surface of the pod, which would include a round hatchway. The hatchway would lead into a cylindrical airlock just large enough to hold one space-suited astronaut. A round hatch in the airlock would in turn lead into the pod. In the near-vacuum of low-Earth orbit, the airlock would permit astronauts to spacewalk without depressurizing the pod.

Forward-facing crew couches would be arranged single-file, one behind the other, in a line beneath the jet fuselage. This would place the astronauts one above the other on the launch pad.

The pod would contain the Janus spacecraft main control console. Intended for use in orbit, it would be mounted on the pod's aft interior wall next to the inner airlock hatch. This would place it out of reach of the reclining astronauts. Critically important controls would be mounted on couch arms.

The patent application said nothing about possible launch vehicles, but in their paper Spielberg and Cohen specified two candidates: Titan III (probably the Titan IIIC variant) and Saturn C-1 (otherwise known as Saturn I). The former could boost 28,000 pounds into the 140-nautical-mile orbit required to forestall orbital decay long enough to carry out a two-week Janus mission; the latter, 20,000 pounds. The total weight of the Janus spacecraft (crew, pod, and jet) was 15,660 pounds, so in theory it could transport 12,340 pounds of unspecified payload if launched on a Titan III and 4340 pounds if launched on a Saturn C-1.

It is worth noting that Janus included no docking mechanism, and that was it not designed to perform significant maneuvers in space (apart from a deorbit burn). This ran against the grain of NASA requirements in the first half of the 1960s, when both Gemini and Apollo were under development. Though it could carry a hefty payload, it could not deliver it anywhere. Presumably, this meant that its payload would always take the form of equipment that would remain inside the pod. It is conceivable, however, that small payloads could be tossed out its airlock and larger ones assembled outside by spacewalkers — Spielberg and Cohen did not, however, suggest these possibilities.

A successful mission would begin with launch from Cape Kennedy on Florida's east coast. The launch vehicle would ascend vertically, then roll toward the southeast on a course that would avoid Caribbean islands and South America. About 10 minutes after liftoff, Janus would reach its operational orbit and separate from the upper stage of its launch vehicle. The crew would then unstrap from their couches and begin work in the pod's large pressurized volume.

They would also work in the jet cockpit. The jet's glass canopy, which would stand higher than the rest of the Janus spacecraft's mostly flat top, would make

the cockpit the prime spot for conducting Earth and astronomy observations.

Spielberg and Cohen proposed a novel method for entering and leaving the cockpit. The crew couches would each be mounted on a pair of rails, and the underside of the jet's fuselage would include automatic doors. Operating controls on the couch arms would cause the doors to open and the couch to ride the rails from pod to cockpit and vice versa. The TRW engineers explained that a single set of couches shared between the pod and the jet would save weight, though with the large Janus payload capability this would probably have been a minor concern.

The crew would breathe a 47% oxygen/53% nitrogen air mix at a pressure of 7.5 pounds per square inch. Water for crew needs would come from fuel cells, the primary task of which would be to generate 2.5 kilowatts of continuous electricity by combining liquid hydrogen and liquid oxygen. Fluid circulating in pipes in the pod walls would gather and carry waste heat from the pressurized volume and the fuel cells to a radiator mounted on the pod's aft surface.

For return to Earth, the astronauts would sit in their couches in the pod, turn the Janus spacecraft using small thrusters so that its aft end pointed in its direction of motion, and ignite its 1100-pound solid-propellant retrorocket. After burnout, the retrorocket casing would be cast off and Janus reoriented with its nose aimed forward. Descent toward 400,000-foot reentry altitude would last 14 minutes. At start of reentry, the Janus spacecraft would be moving at about 250 feet per second (fps).

Reentry would be a balancing act. The lifting-body pod would need trim flaps for stability and steering; however, four trim flaps attached in pairs to the bottom edge of its flat aft surface would tend to tip its nose down (that is, give it a negative angle of attack). This would permit hot reentry plasma to course over the pod's top surface, destroying the jet canopy. At the same time, the pod would be tail-heavy, raising its nose and making it aerodynamically unstable.

Spielberg and Cohen proposed a two-part solution: cautiously reshaping the pod's nose and packing its triangular nose volume with heavy subsystems (for example, the fuel cells and their reactants). The former would tend to level its angle of attack and the latter, they calculated, would shift its center of gravity forward to a point 54% of its length (about 11 feet) aft of the pod's nose, yielding a slightly "nose up" angle of attack. The pod's nose would thus bear the brunt of reentry heating, and no reentry plasma would reach the jet canopy

The Janus spacecraft would reenter at a very shallow angle (just 2°). It would thus shed speed gradually in a low-density atmosphere, preventing maximum deceleration from exceeding 1.9 gravities. An automated attitude control system would operate the trim flaps and small thrusters to maintain stability as the pod descended.

During reentry, the outer hull, safe behind its heat shield, would maintain a temperature below 600° Fahrenheit (F). The inner hull would remain at 70° F throughout the mission. The hot outer hull would tend to expand. If the aluminum frames linking the inner and outer hulls were rigidly attached at both ends, differential expansion would tear them apart. To avoid this, Spielberg and Cohen proposed that the frames be attached to the outer hull by flexible connections and to the inner hull by rigid ones.

A little less than 12 minutes after reentry start, at an altitude of about 120,000 feet, the Janus spacecraft would slow to a velocity of about 50 fps. Deprived of lift, its angle of descent would increase in a little over a minute to about 55°.

At 50,000 feet of altitude, the Janus spacecraft would slow to subsonic speed and begin to lose stability. The mission commander would activate the motors that would raise the three couches into the jet cockpit. Beneath the astronauts' feet, the fuselage doors would close and seal. At 45,000 feet, the spacecraft would slow to Mach 0.9, and jet separation from the pod could occur.

Separation would begin with a command to fire explosive bolts. This would release the latches linking the jet to the pod so that the three rod-like pneumatic actuators could extend, pushing the jet away from the pod with a jolt. The pressure seal would be breached, exposing the pod's interior to the outside environment.

The commander would ignite the jet's engine and fly at a cruise altitude of 30,000 feet to a waiting airfield up to 200 nautical miles away. The jet would land on a nose wheel and skids attached to the ends of its rudder fins. The pod, meanwhile, would deploy parachutes from its aft surface and descend to a landing on its nose.

In the event of an abort on the launch pad or during first-stage operation, a pair of solid-propellant abort rocket motors mounted on the pod's aft surface outside the adapter linking it to the launch vehicle would ignite to boost the Janus spacecraft up and away. The motors would propel it to an altitude of 6600 feet in 19 seconds. If no first-stage abort took place, the abort motors would eject after second-stage ignition so that the launch vehicle would not need to carry their weight to orbit.

The deorbit rocket motor would play two possible abort roles: in an abort off the launch pad, it could be ignited after the twin abort rocket motors burned out to boost the Janus spacecraft higher and farther downrange, providing more time for successful jet separation; it would also become the primary abort rocket motor after the twin abort motors ejected.

An abort within 200 nautical miles of Cape Kennedy would see the commander separate the jet from the pod as during a normal descent, then fly back to the launch site. The jet could also remain attached to the pod throughout the abort, in which case the entire Janus spacecraft would descend nose down on parachutes to a landing or splashdown at 25 feet per second. Spielberg and Cohen included 1030 pounds of recovery gear in the Janus spacecraft mass budget.

Down-range aborts — for example, during second stage flight — would occur over open ocean, placing land — never mind suitable airports — outside the jet's 200-nautical-mile range. Spielberg and Cohen noted that the lifting body would during second-stage flight be high enough to use its trim flaps and steering thrusters to maneuver closer to land. This would, they judged, permit jet separation within 200 miles of airfields on Caribbean islands or in northeastern South America.

Here is the link to my staged reentry post based only on the Cohen, Schetzer, and Sellars patent of December 1966. In addition to a summary history of lifting body development in the United States, the post contains detailed labeled drawings from the patent application.

Source

"Janus: A Manned Orbital Spacecraft with Staged Re-Entry," I. N. Spielberg and C. B. Cohen, *The Journal of Spacecraft & Rockets*, Volume 2, Number 4, July-August 1965, pp. 531-536.

Patent No. 3,289,974, "Manned Spacecraft With Staged Re-Entry," C. Cohen, J. Schetzer, and J. Sellars, TRW, 6 December 1966.

1970 - daughter joins american field service international

https://www.newspapers.com/image/386161261/?terms=%22irvin%2Bspielberg%22

1982 - was he producubg some movies?

https://www.newspapers.com/image/89838601/

1995 (April 27)

Full newspaper page : [HN019I][GDrive]

More news

Workum scholarships helped former Cincinnatians

A scholarship for a college education made all the difference in the world in the lives of two prominent former Cincinnatians. Though now firmly rooted in California, both Irvin Spielberg and Shirley Pine Riskin remember, and continue to acknowledge, the roll that the Workum Scholarship Fund played in enabling them to pursue higher educaiton and become the productive citizens they are today.

Now in its 78th year, the Workum Fund continues to aid Jewish college students in whatever way best serves their needs and the times. Emphasis for the past nine years has been to provide college students with career-related Jewish communal job experiences through the Summer Internship Program.

However, nearly 60 years ago, when Irvin Spielberg, now of Pacific Palisades, but then a senior at Walnut Hills High School, Workum provided financial scholarships so promising students could fulfill their potential.

"If it hadn't been for the scholarship and Mrs. Irvin Westheimer (who interviewed me for the scholarship), my life might have been totally different in ways I couldn't imagine," Spielberg said.

"I faced the prospect of paying my own way to college, which in the 1930s was highly unlikely, or not going. Both my parents were immigrants. I was the first in my family to go to college."

With the Workum Scholarship of about $200 per year plus money for books and fees, Spielberg was able to attend the University of Cincinnati College of Engineering and the embark on a successful engineering career. He worked as an aeronautical engineer at Wright Field in Dayton, with interruptions for military service in World War II and the Korean War. He also continued his education with a master's degree from Harvard. Then, in 1956, he moved to California and worked in the aeropsace industry until his retirement in 1986.

Irvin Spielberg

Shirley Pine Riskin

"Workkum started me on a career that led to interesting and challenging work, a happy family life, and travel to all parts of the world," Spielberg said. He and his wife (former Cincinnatian Frances Fabe) have been married for 45 years and and have three children and five grandchildren.

Spielberg believes he owes a considerable debt to the Workum Foundation. "I've been engaged in a 'repayment program,'" he said. "to help Workum support other promising needy students. "I feel that I owe something back to the fund," he said.

Riskin also feels a sense of indebtedness to Workum.

"Workum made it possible for me to go to college; probably made it possible to marry the man I did; enriched my life; and expanded my horizons," Riskin said.

The daughter of immigrants, she was among the first in her family to go to college.

"I wanted to go to college," she said. "I loved to learn and to read. I wanted the answers to so many questions."

With a four-year Workum scholarship, she went to UC and majored in philosophy. Riskin credits that with helping her have a successful first-date with her husband-to-be.

"We talked about Franz Kafka. I never would have known about Kafka unless I had gone to college."

But more than Kafka, Riskin gained confidence in her intellectual abilities and in her ability to relate to people of all educational backgrounds. She parlayed these skills into a very active and productive volunteer career.

In addition to involvement with her children's schools, she has been intensely involved in community work. She began and edited the newsletter for the Friends of the Palo Alto Library and served on its board a number of years. She helped pioneer recycling in Palo Alto; she was active in Physicians for Social Responsibility; she was active in the League of Women Voters and did a study on bottle bill tax legislation.

Now living in Santa Cruz, she has taken on a volunteer job to raise fellowship money for the American Association of University Women.

Though she has lived in California for 35 years, Riskin recontacted Workum in recent years in order to be able to leave the fund a bequest. "I have always been grateful to Workum," she said.

This is the first of three articles in a series about the Workum Scholarship Fund, a project of the National Council of Jewish Women, Cincinnati Section.

Contributions to the fund may be sent to Sylvalee Kaplan, 16 Diplomat Drive, Cincinnati, OH 45215.

1995-04-27-the-american-israelite-pg-9-clip-workshop

[HN019J][GDrive]

2015 (March 1) - Obituary

https://www.newspapers.com/image/203539449/?article=07cbbae9-845c-4e42-a551-15410c6f196b

https://www.legacy.com/obituaries/latimes/obituary.aspx?n=irvin-nathaniel-spielberg&pid=174267396

Irvin Nathaniel Spielberg

December 18, 1918 - February 19, 2015 Irvin Nathaniel "Buddy" Spielberg died February 19th at his home in Pacific Palisades. Born in Cincinnati, OH, he attended Walnut Hills High School and the University of Cincinnati. He served in the Army Air Corps as a flight engineer on a B-29 in the South Pacific in WWII before going to Harvard University for his Masters in Aeronautics. After working at Wright Field in Dayton, OH, he took a job in the aerospace industry in Los Angeles in 1956, where he worked until 1986. After retiring, he volunteered for many years at Recording for the Blind. He is survived by his wife of 64 years, Frances Fabe "Peachy" Spielberg and his children Ginny Gibbs (Michael), Jack Spielberg (Sarah Seaver), and Fred Spielberg (Guadalupe Verdejo) and grandchildren Jonathan, Lydia, Lindsay, Nathaniel, and Victor. He is also survived by his brother, Arnold Spielberg of Pacific Palisades, and predeceased by his sister, Natalie Spielberg Guttman of Cincinnati. Buddy was a gentle and generous man, concerned with civil rights, inequality, the environment and the Vietnam War during the 1960s. Donations in his memory can be made to Recording for the Blind (Learning Ally) c/o Financial Development, 20 Roszel, Princeton, NJ 08540.

2015-07-12-tra-spacepark-org-freds-obituary-irvin-spielberg.doc

See [HC004J][GDrive]

Irvin Nathaniel ("Buddy") Spielberg, died Thursday night, 19 February 2015, at his home in Pacific Palisades, CA, at the age of 96, following a short illness. Born on December 18, 1918, and raised in Cincinnati, OH, he was the middle son of Ukrainian Jewish immigrants who arrived in the early 20th Century. Growing up in a liberal New Deal family during the Great Depression, he dreamt of studying medicine as a child, however, his family's financial situation and the onset of WW II pushed him into a work-study program in engineering at the University of Cincinnati. Upon graduation, he served the US military as an aeronautical engineer at Wright Field in Dayton during the early years of the war. Called to active duty in 1944, he was posted to the Pacific theater in the 313th Bomb Wing, 504th Bomb Group, 421st Bomb Squadron of the Army Air Corps. As the flight engineer of an eight-person B-29, Buddy flew dozens of long-haul missions between Tinian, Saipan, Iwo Jima, the Philippines and Japan, during the final months of the war. **He returned to civilian life in 1946, but was called back to active duty in Korea in the early 1950s, reaching the rank of Lieutenant.**

Buddy attended Harvard University on the GI Bill and earned a Master's of Science degree in aeronautical engineering. He married Frances (Peachy) Fabe in Cincinnati in 1950, and **left the Midwest in 1956 to accept a post with Ramo Wooldridge, later Space Technology Laboratories, later Thompson Ramo Wooldridge or TRW.** A specialist in aircraft flutter and rocket trajectory, Buddy gradually moved from flight engineering into aerospace projects, working on some of the emblematic space exploration initiatives of the 1960s and 1970s, including the Pioneer, Gemini and Beyond Jupiter projects. He also worked on anti-ballistic missile weapons systems, but vastly preferred aerospace technology.

Buddy was a gentle and generous man, concerned with civil rights, inequality, the environment and the Vietnam War during the 1960s. He and Peachy enjoyed hiking, traveling, theatre, and entertaining. After he retired, he volunteered at Recording for the Blind, reading and explaining mathematics, physics, and engineering text books. He loved Mozart operas, Zane Grey novels, the Cincinnati Reds and his family above all else.

He is survived by his wife of 64 years (Frances); his three children (Virginia, John and Frederick); his five grandchildren (Jonathan, Lydia, Lindsay, Nathaniel and Victor); and his elder brother, Arnold. He was predeceased by his younger sister, Natalie. By his own wishes,

https://arc.aiaa.org/doi/abs/10.2514/6.1964-290

https://arc.aiaa.org/doi/abs/10.2514/3.28224?journalCode=jsr

ETC

https://ohiohistorycentral.org/w/Wright_Field

Wright Field

Wright Field map.jpg

Beginning in the 1910s, with World War I's outbreak, the United States government began investigating the use of airplanes in war. In 1913, President Woodrow Wilson created the National Advisory Committee on Aeronautics (NACA). This committee suggested establishing a center to research the use of airplanes in the military and also to seek improvements in airplane technology. Due to the presence of several automobile and aircraft plants in Ohio, the NACA established this center at McCook Field in Dayton, Ohio.

By 1924, the United States Air Corps had outgrown the facilities at McCook Field. Hoping to keep the Air Corps in Dayton, the city officials and residents donated 5,250 acres of land on the city's outskirts. The Air Corps accepted the land and built Wright Field on the site. The base was named Wright Field to honor Orville and Wilbur Wright's contributions to flight. The Wrights had tested many of their early airplanes in the vicinity of Wright Field. Wright Field formally opened in 1927.

formally opened in 1927.

In 1926, the United States government created the Army Air Corps, replacing the earlier Air Corps. The Army Air Corps stationed its Materiel Division at Wright Field. Here, scientists continued to improve aircraft. The scientists also realized that they had to work together to create the best possible plane. Before creation of the Army Air Corps, researchers studied individual parts of the plane, like engines, armor, wings, and propellers. Now scientists continued to specialize in individual components of planes, but they realized that changes in a plane's armor would affect all other parts of the plane. The same held true for changes in engines, wings, and the other parts of a plane. Under the Army Air Corps, the researchers now kept a dialog open between the various experts.

Despite Wright Field's existence, the United States Army Air Corps entered World War II at a severe disadvantage numerically and technologically when compared to the Air Forces of other nations. To help overcome these weaknesses, the federal government, in 1940, designated 300 million dollars to improve Wright Field and to create an Air Corps with at least 5,500 planes. In 1941, only forty buildings existed at Wright Field, but by 1944, the airfield consisted of more than three hundred buildings. During World War II, research continued on airplanes, with much attention focused upon improving the horsepower of plane engines, airplanes' ranges and maneuverability, safety features for crews, and weapons. Workers at Wright Field helped to design and to construct numerous airplanes, such as the C-47 Skytrain, the C-54 Skymaster, the Curtiss C-46 Commando, the Sikorsky XR-4, the Curtiss-Wright P-40 Warhawk, the B-24 Liberator, and the B-29 Superfortress, among many others, during World War II.

Upon World War II's conclusion, Wright Field continued to play a major role in aircraft research and construction. In 1947, the United States government created the United States Air Force, eliminating the Army Air Forces and establishing a new branch to the United States military. That same year, the Air Force combined Wright Field with nearby Patterson Field, creating Wright-Patterson A

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https://apps.dtic.mil/dtic/tr/fulltext/u2/039949.pdf

Leon Alfred TOlve

Family-Placed Death Notice

Leon Alfred Tolve

Leon Alfred Tolve, 88, of Memphis and Marietta, Georgia, retired Division Engineer in charge of the Aeromechanics Division of Lockheed Aircraft, now Lockheed Marietta, died at Baptist Hospital on May 29, 2004. Graveside Services will be conducted at Elmwood Cemetery, Memphis, TN at 3:00 PM on June 1, 2004. He graduated from Georgia Institute of Technology in 1938. During World War II, he served as a Design Engineer at the Army Air Corps Aeronautical Research Center at Wright Field, Dayton, Ohio, where all U.S. World War II aircraft were developed. At Lockheed, he was in charge of over 100 engineers involved in the development of the C-130, C-141 and the C5A, the world's largest aircraft. After retirement, he served as a consultant in aeroelasticity (vibration and flutter), and served as a consultant on the design of HondaJet which will go into production in September 2004. He is survived by a niece, Nancy T. Gibson of Memphis and two great-nephews and a great-niece. The family request that memorials be sent to Georgia Tech Foundation, Inc. 760 Spring Street, N.W., 4th Floor, Atlanta, Georgia 30308. Canale Funeral Directors.

https://www.history.com/news/hangar-18-ufos-aliens-wright-patterson

Does Hangar 18, Legendary Alien Warehouse, Exist?

Crashed UFOs, alien autopsies and government cover-ups—untangling the legend surrounding Ohio's Wright-Patterson Air Force Base.

SARAH PRUITT

Gremlin/Getty Images

As home to Project Blue Book, ground zero for government investigation of UFOs from 1951 to 1969, Wright Field (now Wright-Patterson Air Force Base) outside Dayton, Ohio, ranks up there alongside Area 51 as a subject of enduring speculation.

Many of the rumors surrounding Wright-Patt, as it's known for short, involve what might have gone on inside a particular building, known as Hangar 18. UFO enthusiasts believe the government hid physical evidence from their investigations—including flying saucer debris, extraterrestrial remains and even captured aliens—in this mysterious warehouse, specifically inside a sealed, highly guarded location dubbed "the Blue Room."

The legend of Hangar 18 goes back to the supposed crash of a UFO in the desert near Roswell, New Mexico, in July 1947. According to a press release issued by the Roswell Army Air Field (RAAF) at the time, their personnel inspected the "flying disc" and sent it on to "higher headquarters." A subsequent press release from an Air Force base in Fort Worth, Texas (assumed to be the aforementioned headquarters) claimed the disc was a weather balloon—a

claim the Air Force acknowledged was untrue in 1994, admitting it had been testing a surveillance device designed to fly over nuclear research sites in the Soviet Union.

Roswell

Jesse Marcel, head intelligence officer, who initially investigated and recovered some of the debris from the Roswell UFO site, pictured in an article run by the Corsicana Dialy Sun on July 9, 1947.

Universal History Archive/Getty Images

READ MORE: What Really Happened at Roswell?

But in addition to Fort Worth, many UFO researchers believe some of the materials from Roswell were also transported to Wright Field after the crash and stored in Hangar 18, based on unsubstantiated reports from former military pilots. One, Oliver Henderson, reportedly told his wife that he flew a plane loaded with debris, along with several small alien bodies, from Roswell to Wright Field. According to the children of another pilot, WWII ace Marion "Black Mac" Magruder, their father claimed to have seen a living alien at Wright Field in 1947 and told them "it was a shameful thing that the military destroyed this creature by conducting tests on it."

Senator Barry Goldwater of Arizona, the Republican nominee for president in 1964, was notoriously fascinated by UFOs and Hangar 18. Goldwater said publicly that he tried to gain access to the Blue Room in the early '60s, but had been denied access by a furious General Curtis LeMay.

Wright-Patterson Air Force Base, Hangar 18

Wright-Patterson Air Force Base in Ohio, circa 2000.

United States Geological Survey

Even after Project Blue Book wrapped up in 1969, rumors continued to swirl around Wright-Patt. In 1974, a Florida UFOlogist named Robert Spencer Carr publicly claimed that the Air Force was hiding "two flying saucers of unknown origin" inside Wright-Patterson's Hangar 18, according to a report in the Tampa Tribune. Carr claimed to have a high-ranking military source, who saw the bodies of 12 alien beings while autopsies were being performed on them. Though Carr's claims were dubious, widespread media coverage of them, as well as the release of the 1980 movie Hangar 18, helped cement the legend of Wright-Patt as a hotbed of the government's UFO-related activities.

READ MORE: Project Blue Book

For its part, the Air Force has categorically denied the rumors, and maintains there has never actually been a Hangar 18 anywhere on Wright-Patt, though there is a Building 18.

"Periodically, it is erroneously stated that the remains of extraterrestrial visitors are or have been stored at Wright-Patterson Air Force Base," the Air Force said in an official statement issued in January 1985. "There are not now, nor have there ever been, any extraterrestrial visitors or equipment on Wright-Patterson Air Force Base."

WATCH: Full episodes of Project Blue Book online now.

BY SARAH PRUITT

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Papers of Rudi Berndt, WPAFB Engineer via Operation Paperclip, Now Open for Research

Posted on December 5, 2018 by Lisa Rickey

We are pleased to announce that MS-632: Rudi Berndt Papers is now open for research.

Rudi Julius Berndt (1921-2004) was a German engineer who came to the United States as part of Operation Paperclip (or Project Paperclip), a secret program of the Joint Intelligence Objectives Agency to recruit leading German scientists, engineers, and technicians at the close of World War II (before the Russians did).

Berndt's particular area of expertise was parachute development. From 1941 to 1946, he was a member of the parachute research and development team at the Graf Zeppelin Research Institute Stuttgart-Ruit, working alongside such leaders in the field as Helmut Heinrich and Theodor Knacke.

At age 25, Berndt was one of the youngest recruits for Operation Paperclip. He began his employment with the U.S. Army Air Services in the autumn of 1946, coming to Dayton to start his work at Wright Field in November. Berndt dedicated over 40 years of his life to civilian service at Wright-Patterson Air Force Base, retiring in 1990.

The manuscript collection primarily documents Berndt's work in parachute development, in both Germany and the United States, from the WWII era through the Cold War. Educational records, as well as a significant amount of material pertaining to Berndt's arrival in the United States as part of Operation Paperclip, are also included. Of particular note are Berndt's memoirs, which describe his early life in Germany through his retirement.

Admiral Nimitz Historic Site

National Museum of the Pacific War

Center for Pacific War Studies

Fredericksburg, Texas

Interview with

Mr. Irvin N. Spielberg

(WW II - B-29 Flight Engineer - Tinian & Philippine Islands)

Date of Interview: November 6, 2003

Admiral Nimitz Historic Site

National Museum of the Pacific War

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Interview with Mr. Irvin N. Spielberg

(WW II – B-29 Flight Engineer - Tinian & Philippine Islands)

My name is Richard Misenhimer. Today is November 6, 2003. I am interviewing Mr. Irvin Spielberg by telephone. His phone number is 310-454-4750. This interview is in support of the National Museum of the Pacific War's Center for Pacific War Studies for the preservation of historical information related to World War II.

Mr. Misenhimer: Mr. Spielberg I want to thank you for taking the time today to do this interview.

Mr. Spielberg: You are welcome.

Mr. Misenhimer: Let me ask you – do you have a middle initial?

Mr. Spielberg: Yes. The initial is "N". It stands for Nathaniel.

Mr. Misenhimer: What is your mailing address?

Mr. Spielberg: 234 Notteargenta Road, Pacific Palisades, California 90272.

Mr. Misenhimer: Thank you, I appreciate that. I have the agreement with the Nimitz Museum, which normally when I do these interviews in person, I give to the person to read and sign, but since we are doing it by the telephone, let me read this and you can tell me if this is satisfactory. Admiral Nimitz State Historic Site, the National Museum fo the Pacific War, Center for Pacific War Studies, Fredericksburg, Texas, Oral History Project. The purpose of the Admiral Nimitz State Historical Site, National Museum of the Pacific War, Oral History Project, is to collect, preserve, and interpret the history of World War II and the role of Fleet Admiral Chester W. Nimitz by means of the tape recorded and/or video taped interview. Taped or video recordings of such interviews become part of the Center for Pacific War Studies Archives of the National Museum of the Pacific War, Texas Parks and Wildlife Department. These tape recordings will be made available for historical and other academic research by scholars and members of the family of the interviewee. Any transcription subsequently produced from the tape recordings will be conducted with the knowledge of the interviewee by the National Museum of the Pacific War. We, the undersigned, have read the above and voluntary offer the National Museum of the Pacific War full use of the information contained on taped or video recording these oral history research interviews. In view of the scholarly value of the research material, we hereby sign rights, title and interest pertaining to it to the National Museum of the Pacific War, Texas Parks and Wildlife. Is that OK with you?

Mr. Spielberg: Yes, I completely agree.

Mr. Misenhimer: Here is another question, yes or no. I give permission for excerpts from my Oral History to be used in the Nimitz Foundation Publication, the Nimitz News.

Mr. Spielberg: Yes, I authorize that also.

Mr. Misenhimer: Fine, thanks very much. Now, let me start off by asking you when were you born?

Mr. Spielberg: In December of 1918. In a month and a half I will be 85 years old.

Mr. Misenhimer: Great. December, what day?

Mr. Spielberg: December 18th.

Mr. Misenhimer: 12-18-18, right?

Mr. Spielberg: Yes.

Mr. Misenhimer: Where were you born?

Mr. Spielberg: Cincinnati, Ohio.

Mr. Misenhimer: Did you have brothers and sisters?

Mr. Spielberg: I have an older brother. His name is Arnold, who is still alive. He is approaching 87. I had a younger sister who died about ten years ago.

Mr. Misenhimer: Was your older brother in the service also?

Mr. Spielberg: Yes he was in the Army/Air Corps. He served in the CBI Theater – China, Burma, India. He was in the 490th Bomb Squadron, the so-called "Burma Bridge Busters."

Mr. Misenhimer: Where did you go to school?

Mr. Spielberg: Elementary and high school in Cincinnati, and I attended the University of Cincinnati and graduated in June of 1941 with a degree in aeronautical engineering.

Mr. Misenhimer: What year did you finish high school?

Mr. Spielberg: 1936.

Mr. Misenhimer: Did you go straight from high school to college?

Mr. Spielberg: Yes I did.

Mr. Misenhimer: When did you enter the service?

Mr. Spielberg: I entered the service the first week of January of 1943.

Mr. Misenhimer: Do you have an exact day?

Mr. Spielberg: Yes, I can look it up. I kept a log. Here it is, 11th of January 1943.

Mr. Misenhimer: Which branch did you go into?

Mr. Spielberg: I was assigned to the Army/Air Corps.

Mr. Misenhimer: Did you volunteer or were you drafted?

Mr. Spielberg: I was drafted.

Mr. Misenhimer: Did you have any choice of which branch you went into?

Mr. Spielberg: Yes, I wanted to enter the Army/Air Corps. If you will let me speak a little without questions.

Mr. Misenhimer: Certainly, go ahead.

Mr. Spielberg: I think I can give you some necessary background to what will follow as you draw out my Army experience.

Mr. Misenhimer: Sure, go right ahead.

Mr. Spielberg: As I mentioned, I was graduated in aeronautical engineering in June of 1941. As with most of the members of the senior class in aeronautical engineering, all of those who passed the physical applied for a Navy commission, including me. I never heard from the Navy up until graduation day. Not wanting to be without a job, without the volunteer commission in the Navy, I took a position at Wright Field, Dayton, Ohio, as an aeronautical engineer. I was assigned as a civil service employee to the Aircraft Laboratory.

I worked there until I was drafted. What happened is that the officer in charge of the laboratory to which I was assigned assured me that I would never be drafted, I was too important to the war effort and was classified as a "key employee" in a war industry. In any event, I got a draft notice in the middle of December 1942, abut one year after Pearl Harbor. I brought it to my supervisor, a Captain, who immediately took it up to the head personnel officer for all military personnel at Wright Field. He assured me via the Major, who was head of the Aircraft Laboratory, that I wouldn't be drafted and they would get that draft order changed. They tried their best but failed.

So in January of '43 I reported, as directed, to Fort Thomas, Kentucky. After 3-4 days of indoctrination and issuance of all GI clothing, I was transferred down to Miami Beach, Florida, for basic training in the Army/Air Corps. While there we went through the usual tests that are given to newly inducted or volunteer servicemen, and I applied for and was rated to become an Aviation Cadet to go to Pilot Training. About 1½ months into basic training I was called off of the training grounds, told to get out of my fatigues, put on a dress uniform, and go report to the Captain who was the head of the training company. I did so and he told me he had orders to relieve me from active duty, put me in the enlisted reserve corps, and send me back to Wright Field to resume my civilian job. I said, "Do I have to go?" He said, "Well, according to the way I read the orders, you are supposed to go." In addition, I had received a letter from the Personnel

Officer, a Colonel, at Wright Field urging me to return and saying I would do far more good for the war effort as an engineer working on research and development of the new Air Corps combat airplanes than I would as a soldier.

I agreed and I returned to Dayton, Ohio, to my civilian job and resumed receiving my regular civil service pay. But the notice that took me off of active duty put me on "reserve" status and said that I would be recalled in six months. Of course I called that to the attention of the personnel people at Wright Field. They once again reassured me that they would this time get me a deferment. What happened is six months later I got a notice from Fort Hayes, Columbus, Ohio, telling me I have to report there on such-and-such a date. This was roughly six months after, March of '43, when I transferred out of active duty. It would put it at about September. Sure enough, I had to report back to Fort Hayes. I was assigned to Jefferson Barracks, Missouri, and I took basic training the second time. I repeated it from the beginning. I had not finished the first basic training at Miami Beach.

Late in that second period, in about late November of 1943, I again was notified to report to the company commander and I was again being transferred to the enlisted reserve corps. Once again, there was a letter accompanying it from the personnel officer at Wright Field, urging me to return, saying that they missed me extremely because they had not been able to find a replacement. By this time I had about two years of direct experience in airplane dynamics. The officer said I would do wonders for the morale of the other civilian employees there who were also faced with possible drafting. Well, I did return. Sure enough, I spent six more months as a civilian engineer doing the same kind of work that I had been doing before, even at a higher level. At the end of that six months, once more the Army/Air Corps called me up. This time I was sent to Sheppard Field, Texas, and I took a third basic training, starting again at the beginning. It sounds impossible, but that is the way it happened. Anyway, for the third time I was called in and told that they had orders to transfer me to the enlisted reserve corps. This time I refused to go, and the Company Commander agreed. He said, "OK, stay in." When I applied again for pilot training I was told they weren't accepting candidates, that they had a pipeline full of candidates for aviation cadet. I inquired about bombardier, navigator, weather officer, and all of them were filled.

I was assigned to the Command Gunnery School at Lowry Field, which is just outside of Denver, Colorado. So I attended the Command Gunnery School and I found out that was the training ground for the enlisted men to be in charge of the central fire control system, which was an entirely new defensive system for the B-29 heavy bomber. I hadn't heard about it before, but it sounded interesting. I was about one-half or two-thirds of the way through the training; I think the training program was eight weeks and this must have been in the fifth or sixth week. I found out that at Lowry Field there was also the school for Flight Engineers on B-29's. I thought, "Heck, Flight Engineer is probably closer to my background and training as an aeronautical engineer than gunnery was." So I looked up the commander of the training group for flight engineers, introduced myself, told him my credentials - namely a degree in aeronautical engineering with over two years' of experience, and he agreed that I would be a good candidate for flight engineer. He arranged to transfer me out of Command Gunnery School to the Flight Engineers Training School.

I completed that training at Lowry Field. It was an interesting program for me. At Wright Field my work was primarily analytical to predict the vibration, flutter, and dynamic load characteristics of Air Corps aircraft, with occasional participation in ground and flight tests. Here, I was faced with the challenging task of being able to understand and know how to troubleshoot all of the electrical, mechanical, pneumatic, oxygen, hydraulic and fuel systems on an airplane that I had never been in before. Normally the flight engineer trainer spends about 3-4 months at the Boeing Company, where the airplane was manufactured, learning to be essentially an aircraft mechanic on a B-29. I had to skip all of that and I started right in where you train to become a flight engineer. Well, the one advantage that I had over the other men, where they had it all over me in terms of "how do you maintain all of the various systems of the airplane," was in cruise control. "How do you manage the fuel usage so as to achieve maximum flight range of the airplane, to be able to fly those 3,000 mile round trips from the Marianas Islands to Japan and back." That involved knowledge of aerodynamics, power plants, propulsion and fuel consumption, things like that. I breezed through that area. In fact I helped the instructor explain it.

I successfully completed the flight engineer school. That also involved flying in B-24's, which had been set up with flight engineer stations so you had the complete B-29 instrument panel, throttle controls, the mixture controls, at a station in the body of the B-24. In fact there were six such stations and six different trainees could go aboard on the flight and each would read the instruments and monitor the fuel consumption, plotting the cruise control data.

When we finished all of that training at Lowry Field, I was transferred to Maxwell Field in Montgomery, Alabama. This occurred in about October-November of 1944. There I was assigned to a skeleton crew, consisting of the airplane commander, which was the designation for the position that would normally be called pilot, and a pilot, who would normally be called a co-pilot. In the B-29 the pilot was the airplane commander, the co-pilot was the pilot. So the three of us, the airplane commander, the pilot and flight engineer, trained as a trio at Maxwell Field. This involved flying as an observer with, in my case, a trained flight engineer. In the airplane commander's-pilot's case it was a trained airplane commander. Each one learned his own position until we were allowed to fly solo. The three of us were always together on training flights.

Once we completed that transitional training at Maxwell Field, we were assigned, the three of us, to MacDill Field in Tampa, Florida; and there the rest of the crew was assembled, for a total of 11 men. There were five officers and six enlisted men. Incidentally, all of this time I was a Private. The officers were: the airplane commander, pilot, navigator, bombardier, and radar officer. The enlisted men were: flight engineer, radio operator, command gunner, right gunner, left gunner and tail gunner. So the entire crew was assembled and we began the overseas flight training, which involved not just short flights. By this time we were no longer flying with a check-out officer, but we were going solo as a crew. A simulated long range flight, like a typical combat mission, might go from Tampa, up to Minneapolis, down to Albuquerque, across to Memphis, Tennessee, and back down to Tampa. This would be done just to show what it feels like to be airborne for 8-10-12 or more hours. In those flights, my responsibility was, not only to monitor all the controls and the flight instruments, but to keep a log of the fuel consumption, to do the transfer of fuel so that we had sufficient fuel for each engine.

I guess I have to point out at this time – each engine of the four engines on the B-29 had its own separate fuel tank, and it drew fuel from that tank. Each tank held about twelve hundred gallons, and once that was exhausted, that engine would quit. But in addition, in the center section of the wing where the wing went through the fuselage, there was an additional large tank of about 1200 or more gallons. The total fuel capacity was about 5,500 gallons. It was the flight engineer's responsibility, as you burned fuel from each of the four wing tanks, to transfer fuel out of the center tank to each of them in turn, alternating so that you never unbalanced the airplane by putting too much in one wing tank in preference to the others. So we had practice doing that. We had practice keeping the flight engineer's log, which is where you record how much fuel you are consuming, for what length of time, and what speed, etc. The B-29's had no fuel flow gauges to tell us at any particular power setting , altitude, etc., that we were burning so many gallons per minute, or so many gallons per hour. What the flight engineer had to do was reset the manifold pressure, the RPM, airspeed, the altitude, the outside air temperature, and go into a series of charts that the Boeing Company prepared. In those charts you put in all of those readings and came out with a number that represented that each engine should be drawing so many gallons per minute. Using that calculated number and then the number of minutes that you were flying at that power setting, you would calculate the amount of fuel burned by all four engines.

We also had fuel gauges which weren't very accurate, but you could roughly check your calculations against that, but not very accurately. In that way you could keep track of fuel consumption during the whole flight. It kept you busy, particularly in the dark, during night missions writing down all of these

could keep track of fuel consumption during the whole flight. It kept you busy, particularly in the dark, during flight missions writing down all of these numbers, and at the same time keeping watch on the instrument panel and transferring fuel. The whole idea was that when you finished your missions and were on your way home, you had to have enough gas to get home.

We finished the overseas flight training at MacDill Field and were transferred to Mather Field, outside of Sacramento, by way of Topeka. Then we flew overseas. Our crew was split. We were not assigned to a B-29 of our own, so half of us dead-headed with one crew and the rest with another crew. We flew from to Mather Field, to Hickam Field, Honolulu, to Kwajalein by way of a refuel at Johnson Island, then on to Guam. We spent one night in Honolulu and again at Kwajalein. We arrived at Guam in the afternoon. Our airplane commander went in and got our orders. We found out then that we were going to be based on Tinian and we were assigned to the 313th Bomb Wing, 504th Bomb Group, 421st Bomb Squadron. So we flew to Tinian and there we were.

Mr. Misenhimer: What day did you arrive on Tinian?

Mr. Spielberg: I think it was 25th of June, 1945, so you see there was only two months more of the war before the Japanese surrendered. It was after the war in Europe had ended. We started flying missions almost immediately. I flew with our crew a total of eight missions, plus two more missions after hostilities ceased to drop supplies at prisoner of war camps in Japan. The first three missions were night fire bombing missions. We fire-bombed chosen cities in Japan. Our fourth mission was a daylight mission to bomb an aircraft plant in Nagoya.

Then the whole 504th Bomb Group was taken off of fire-bombing and assigned to drop mines by parachute to mine harbors, not only in Japan, but also in Korea. That was an extremely interesting adventure. I can look back at it with amusement and pride. The difficulty was that the distance was so great to Korea that you flew with half a load of gas from Tinian to Iwo Jima. Iwo Jima was in American hands by this time. At Iwo you filled up your airplane with as much gas as you could stuff into the tanks. Then you flew non-stop from Iwo Jima, across Japan, across the Inland Sea to Korea. Then once you laid your mines across the harbor, you flew all the way back to Tinian. The total flight time, not counting the ground time on Iwo Jima, from Tinian to Iwo Jima, Iwo to the target area in Korea, back to Tinian, was something like 18 hours. Time on the ground at Iwo was about an hour, maybe an hour and 15 minutes. In any event, we mined three harbors in Korea, and one in Japan. One of them was Fusan, which I think today is called Pusan. That is in South Korea. The second one, in what today is North Korea, was called Seishin. I think it has a different name today. It is way up in North Korea, almost close to Vladivostok in Siberia. They were hazardous missions I can assure you. Particularly, since all over Japan, across the Inland Sea, and over Korea we were picked up by search lights and we encountered anti-aircraft fire.

In all of the missions that we flew, though, we never once saw an enemy aircraft. We understood, although I don't know how accurate it is, that the Japanese were husbanding their aircraft in anticipation of an invasion. In any event, we were never attacked by enemy aircraft, but we did have lots of flak and were always picked up by search lights.

Mr. Misenhimer: What altitude were you flying across there?

Mr. Spielberg: These mining missions we were at six to eight thousand feet; very low and therefore very vulnerable. Also, once you have approached the harbor, you had to slow down so that you laid the mines in a string across the harbor. You didn't want to drop them all in a cluster. If you flew too fast you wouldn't drop the last one by the time you ran out of harbor. In any event it turned out to be very hazardous flying, and for which our Bomb Group, the 504th, received a Presidential Unit Citation.

Mr. Misenhimer: Back to the altitude now, did you fly at this 6,000 feet all the way from Iwo Jima?

Mr. Spielberg: No, no, when you left Tinian on a normal flight to Japan, you would try to fly at the altitude where you would get maximum range. You had to husband your fuel. That could be anywhere from 12,000-18,000 feet. On the daylight missions, you climbed up to a higher bombing altitude, such as 22,000-24,000 feet. If you went too much higher than that, the winds up high were very, very severe and the bombing accuracy was decreased. On a day mission after the bombs were dropped you sort of let the airplane gently settle down so that you could throttle back until you reached an altitude of about 12,000-14,000 feet, and then you sort of held that all the way back to Tinian. For a low altitude mission, if you tried to climb back up to a higher altitude, you used more fuel than you really wanted to, so you generally tried to hold between 6,000 and maximum 10,000 feet on the way home. That meant, on re-crossing Japan on the way back, you once again were picked up by radar-directed search lights and then encountered flak.

Let me pause for just a minute. I have given you a rush of events to just about the end of the war, or the end of hostilities. Now, jumping ahead another month, our crew was broken up in September or early-October 1945. The airplane commander and a couple of the enlisted men had enough points to be sent home immediately. Several of the others, since the crew was split up, were assigned to different crews or to different duties on Tinian. By that time I had been promoted, and on September 1, 1945 I was a Tech Sergeant. October 1st I was promoted to Master Sergeant. The T.O. for flight engineer, if you were enlisted, called for a Master Sergeant rank. In the 3rd week of October I was called in by our Bomb Group Commander. He said that many of the group's flight engineers were going home in a short time, and I was one of the few experienced flight engineers, that is with combat experience, that was left in the Bomb Group. He asked me would I like to become an officer. I said, "Well, I wouldn't mind that." He said, "What you have to do is to appear before a board at Wing Headquarters and they will ask you some questions. Since you already have experience and having an engineering degree, I don't think you will have any trouble, but please put on a clean uniform and sew your stripes on." I did all of that and appeared before the board. They asked me a few of what I think now were perfunctory questions and were very happy to approve me as an officer. I was not made a commissioned officer, a 2nd Lieutenant, rather I was given a Warrant as a Flight Officer. In any event, I was then transferred out of the Bomb Squadron, the 421st, to 504th Bomb Group Headquarters. I was designated the Group Flight Engineer and I was also appointed to the Wing Flight Engineer Board. So I was engaged in training the flight engineers of the new crews. I actually prepared a questionnaire in which I recorded as questions, "What would you do in this type of situation," basing them on actual events either that happened to our crew or to other crews that I had heard about. I also asked about emergency procedures in other situations they might get into. That I thought was quite successful.

Just to finally round out the experience, in December, or perhaps early-January of 1946, our bomb group got orders to transfer to Clark Field in the Philippine Islands. I was sent in a party of advance people to Clark Field to assess the state of readiness to receive all of the B-29's – what were the hangars like, do they have the equipment, stands to hoist engines out to change engines, etc. As part of the team we did a three-week survey and came back and reported to our Bomb Group Commander. In about a month everything was packed up on Tinian and moved Clark Field. Things were pretty disorganized there, but we gradually began to get things in shape. The runways were repaired. The Army Engineers came in and laid down steel mats. They even had concrete brought in. We gradually were bringing the airplanes up to flying status, one by one. Of course there was a lot of down time when the airplanes were sitting on the ground while we were still getting organized and repairing. Particularly the hangars had been bombed out. I guess when the American Army was capturing Clark Field from the Japanese they bombed the runways and everything.

Sometime in March of 1946, well after the war had ended, while we were trying to get the 29's back in service, we received a report in the middle of the

afternoon that a B-29 carrying a Lt General was lost somewhere between Clark Field and Okinawa. His airplane had not been heard from in several hours and it was figured that it went down somewhere between the two places. We were ordered to get every possible B-29 into flying condition, and the next morning take off to search for any signs of crew, life raft, etc. My job that afternoon was to run up the engines, check them out, check out other systems on the airplane and say, "OK, this one is flight ready for takeoff tomorrow." Toward the end of that afternoon, it must have been about 5:30 p.m., a pilot approached me. He introduced himself as Captain Bailey, and said, "I have an airplane that is ready and I want to take it up and check it out myself. I don't have a flight engineer." He wanted to know if I would be his flight engineer, and I said that I could. So I got my parachute, checked it out, and then I went to preflight that aircraft. This means that you make a preflight check of certain things, which is standard procedure for the flight engineer. Captain Bailey assured me, "Hey, I have done that already. I'm not only a pilot, an airplane commander, but I'm a flight engineer and I've checked it out already." I took his word for it.

We started to take off, all of a sudden the aircraft was filled with gasoline fumes. It was so thick that when we were about 1,000, maybe 1,500 feet, off the ground, I noticed that the pilot had passed out, slumped forward on the control wheel, his chest was pressing against the wheel, and we were heading down. As soon as I smelled gasoline, I got on the intercom, put it on "command" so it would override any other conversation on the intercom, and said that everybody should pull out his oxygen hose, put it in his mouth and pinch his nose, set the oxygen control to demand so that rather than breathing a mixture of oxygen and air, the setting lets you breath 100% oxygen. I don't know how many people obeyed me, but I did that. That is when I saw that the pilot had slumped over against the wheel. So I left my seat, left the oxygen, moved the pilot off the wheel, even shook him, but he was unconscious and I pushed him onto the bombardier's seat. I grabbed hold of the pilot, sitting in the co-pilot's seat, I shook him. He appeared to be wide awake; his eyes were open, but he wasn't aware of what was going on. I shook him and said, "Can you take control of the airplane?" I got no response, so I went back to my station and by that time I was beginning to feel "woozy". Are you interested in this?

Mr. Misenhimer: Oh yes, very much.

Mr. Spielberg: Well, I had straightened the wheel out, the control wheel, and put us in a steady climb. I went back to my station, put the mixture control in "rich", pushed the throttles forward until we had full climbing power and advanced the rpm of the engines, all four of them, so that we were in a steady climb. I happened to notice at that time the altimeter was at something like 1,800 or 2,000 feet. Then I thought this situation was so bad that I had better warn the guys in back. The pilot had agreed to take a number of enlisted men up as passengers. I put on the warning bell, telling them to bail out. We had made sure that everyone had a parachute. By this time I had been away from the oxygen tube long enough that I thought that I might pass out, so I opened the bomb bay doors, dropped the landing gear and prepared the airplane for bail out. It turned out that one of the passengers in the front compartment was a Captain or a Major, a fighter pilot who had never had a ride in a four-engine airplane and had asked if he could come along. Well I asked him if he could take control of the airplane? He didn't answer me. What happened next is, after I saw the airplane was steadied and climbing, I bailed out. As soon as my parachute opened I said, "My God, why did I do that?" I didn't know how many people in back had bailed out. I landed OK and made my way back to my base late that night. By the way, I landed somewhere north of Clark Field in the hills in northern Luzon.

In any event, I subsequently learned that the fighter pilot, Joe Howell was his name, had got into the pilot's seat, got on the radio and contacted the tower. It turned out that when I opened the bomb bay doors the gasoline fumes ceased. There were no longer any fumes. The fighter pilot, under the guidance of the tower, brought it in for a safe landing. I talked to him afterward. He said that he had to close the bomb bay doors in order to land, and when he did the fumes came back so terrible that he almost passed out during the landing. In any event, the airplane got down with just minimum damage; nobody was injured in the landing, but the pilot and co-pilot were both hospitalized. I don't know whether the pilot had lung damage or not, but he inhaled a lot of gasoline fumes. Major Howell told me the next morning that after they landed and came to a stop and opened the bomb bay doors, somebody had left the filler cap on the center wing tank off and it was still siphoning out gas. That is what filled the airplane with gas fumes. I told that story to my children. I said, "The one lesson that I learned from it is that if you have a job to do and somebody says he will do it for you, no matter how much you trust him, do it yourself because it is your responsibility." I trusted Captain Bailey to check the airplane and apparently he did not check whether that cap on the center wing tank had been loose or not. So much for my big adventure.

Mr. Misenhimer: How many others had bailed out?

Mr. Spielberg: It turned out that seven people in the back had bailed out. Of course the airplane commander, the pilot, and Major Howell, the fighter pilot had not bailed out and I think there was one other passenger. I'm not certain about that.

Mr. Misenhimer: Did those others who bailed out get back safely?

Mr. Spielberg: Yes, one boy sprained his ankle, but otherwise no one was injured. They got back safely. I came back about six hours after they did. I didn't leave the airplane until about five minutes after they did and traveled further away than their landing. In any event, that ended that episode.

I was able to leave service in June '46 and finally reached my home in July of '46. As a parenthetical note, once I was at Camp Attebury in Indiana being discharged, they asked me if I wanted to stay in the Officers Reserve Corps. I said, "Sure," and I was recalled to active duty during the Korean war. I had returned to my job at Wright Field as an aeronautical engineer, and when I was recalled to active duty I was not sent to B-29 or B-50 school. I was considered too valuable and was assigned to my regular desk duty – same work with a nice cut in pay. Eventually I got promoted to be a 1st Lieutenant, and when the Korean War ended my military career ended. Is there anything else I can fill in.

Mr. Misenhimer: I have several questions that I would like to ask you. On Tinian, which field were you stationed at? North Field or West Field?

Mr. Spielberg: North Field on Tinian.

Mr. Misenhimer: Did you ever have any contact with the 509th?

Mr. Spielberg: Yes and no. Yes because from where our B-29's were parked, you could see theirs. You couldn't come close to them because they were guarded by the biggest Marines carrying sub-machine guns that I ever saw. We could see that their airplanes did not have top and bottom forward and rear gun turrets. The four turrets were missing. We speculated that they were used for high speed reconnaissance flights so they could dash in, take photographs and dash out again. They probably gained extra speed by eliminating the additional weight and aerodynamic drag from those turrets. That was all that we knew about them. We had no idea of what the real mission of the 509th was.

I can add, that the morning that we heard that an "A" bomb had been dropped on Hiroshima – my feeling was "Why did they have to do that? We are winning the war because we are running out of targets." Every week General LeMay would announce over the radio to Japan that we are going to bomb targets from this list of cities, so be prepared. And then we would go and pick them off one-by-one. So we were running out of targets. I thought we were going to win the war by air power alone. I didn't think at that time of the humanitarian aspect of the bomb, but perhaps I rationalized it by the fact that I participated in killing

many, many people in firebombing whole towns. I sort of wrestled with my conscience whether it was the right thing for the United States to have dropped the bomb. Through the years... Do you mind my editorializing?

Mr. Misenhimer: No, no, go right ahead.

Mr. Spielberg: Over these years since then I've come to believe that it was absolutely the right thing to do. I realize now, having learned from reading various sources, that the Japanese were prepared to defend their homeland the way they had a last-ditch defense of Okinawa. That was one of the bloodiest battles of all of World War II. I figure if the U.S. Army and Marines invaded Japan, the number of deaths would have far exceeded the toll of Hiroshima and Nagasaki. Over the years I've come to believe that we did the right thing.

My airplane commander was Captain John Combs. I would like to say a few words about him. He was from Indiana. By the time he entered the service as a pilot, he already had a Masters Degree in either Chemistry or Agronomy. He was well educated. I thought he was a wonderful pilot and a wonderful commander of men. When the war ended he became a pilot for Eastern Airlines. He stayed in the Reserves. He was also called to duty during the Korean War. He was assigned to become the personal pilot for General Mark Clark in Japan. We have had several reunions with some of our crew members and he has told us stories about some of his adventures and some of the people that he ferried all over the orient, to Europe, to the United States. You should contact him and get his oral history.

Mr. Misenhimer: I would be glad to. I will get his name and phone number, but before we do that let me ask you a few more questions. As I understand, when LeMay took over 20th Air Force that he started running low level bombing missions. This was probably in March or April.

Mr. Spielberg: Yes.

Mr. Misenhimer: So your bombing missions across Japan were at the low level. Is that correct?

Mr. Spielberg: Yes. Well, low level being like nine to twelve thousand feet. The aerial mining missions were even lower, six to eight thousand.

Mr. Misenhimer: OK. Was your aircraft ever hit by anti-aircraft fire?

Mr. Spielberg: On one mission we had a hit in the rear, but it did no damage. We found a hole in the fuselage in front of the horizontal stabilizer. It was just a small tear.

Mr. Misenhimer: Now the other planes in your flight – were any of those ever damaged or lost?

Mr. Spielberg: A number of them were shot down. As I told you earlier, we came over late in the war. We were flying missions up until the end of the war, August 14th on Tinian, August 15th in the States. By that time, there were very few fighter...

Mr. Misenhimer: This is Side 2 of Tape #1.

Mr. Spielberg: In the missions that we flew, we never saw a single enemy aircraft. I mentioned earlier that they were being held in readiness for the invasion. The major losses that our Bomb Squadron sustained in those last two months of the war were primarily due to occasional anti-aircraft fire, but more likely either malfunction, such as an engine failure, or running out of fuel and having to ditch or having to land at Iwo Jima. Fortunately for us, Iwo was in American hands, and the airplanes could be repaired before they flew on back to Tinian.

Mr. Misenhimer: Did you ever have to make an emergency landing at Iwo?

Mr. Spielberg: On one mission. We were coming back after a night incendiary raid and I noticed that we could hardly hold up speed. I had to keep inching the throttles forward to give it a little more power, which was using more gas than I predicted we should have. I finally said to the pilot, "I think we ought to make the landing at Iwo because at the rate we are having to use fuel we won't make it to Tinian." So we landed there, and the ground crew there checked the engine. It turned out that they had to remove and replace three engines. Three of them had bad cylinders, the pistons in the cylinders were so loose that the engine couldn't hold compression. We couldn't draw the power that the engine is normally expected to give. That was the one case where we had to make a landing at Iwo. It was not an emergency landing because the runway at Iwo was long enough to handle the B-29's. It was a conventional landing.

There was one other flight where we lost an engine right over the target. This was another nighttime incendiary raid. About five minutes before we started our bomb run the gunners reported flames and sparks coming out of the left inboard engine. Capt Johnny Combs asked me if I could see anything wrong on the instruments. I looked and it took 15 seconds or so before I noticed that we were losing oil pressure on the #2 engine. That is the left inboard engine. He said, "What do you think we should do?" I said, "Well, I think that we should feather the propeller and shut down the engine. If you lose all of your hydraulic pressure there is nothing to govern the propeller, the blades would go to flat pitch and the propeller will spin up and run away. That could tear the propeller away from the engine and off its mount. Captain Combs said, "Look, let's follow it. We are just a minute or so away from dropping the bombs, let's see if we can keep four propellers running until we drop the bombs and get out of here." So we tried that. We went through the bombing run, dropped the bombs. You know, when you lose 10,000-11,000 pounds the airplane rises up. That change in the altitude of the airplane due to the sudden rising caused the propeller to run away. I could see the RPM, normally at about 2200, zipping up to 2500-3000-3500, approaching 4,000, and the noise was deafening. The pilot reached to feather the engine and the co-pilot reached to feather the engine, and between them they feathered two engines, the bad one and the #1, the outboard. So there we are, leaving the target, dropping precipitously with only power on two engines. Well, we got out of it OK. I was very busy. I had to shut down the bad engine, so it would stop windmilling and stop using fuel. Then I wanted to start the other engine. Well, we successfully air started it, and pretty soon we had three engines up and running and we were pulling away. By the way, once the ground search light observers see that an airplane has lost one engine, with the propeller not turning, they concentrate all the flak and all the search lights on that one plane. We got through it OK.

Then my real job came – transferring all of the fuel that was left in that #2 engine's fuel tank to the other three engines so that we could utilize all the fuel in the #2 tank. Then, getting the right power settings for maximum range to get back to Tinian. As we approached Iwo Jima, the aircraft commander asked me, "Can we make it, or should we land?" I said, "Sir, I believe we can make it." He said, "Are you sure?" I said, "Yes." So we continued on and we come to what the navigator says is the "point of no return." Either you return to Iwo or you continue on to Tinian. Once again, Johnny Combs asked me, "Can me make it?" I said, "Yes". Well, we made it! When we got down I measured the fuel remaining for those three engines and we had about 20-25 minutes of flying time. So, it was close, but we got back OK. That I guess was one of the most severe experiences we had in all of our flights.

Mr. Misenhimer: About how many flying hours from Iwo to Tinian.

Mr. Spielberg: That is about 3 ½ hours.

Mr. Misenhimer: Of course three engines were going slower than normal.

Mr. Spielberg: Yes, that's right. A typical round-trip to Japan and back was 14-14 ½ hours. A typical flight from Tinian to Iwo, Iwo to Korea, and then back to Tinian was 18-19 hours.

Mr. Misenhimer: There on Tinian what did you live in?

Mr. Spielberg: As an enlisted man we lived, two enlisted crews, to a large hut. It was more like a shed. It had wooden sides, and I think it had a wood roof, I'm not sure. There were 12 Army cots in there and two 6-man enlisted crews occupied it. Officers lived in Quonset Huts. There would be 20-25 beds to a Quonset Hut.

Mr. Misenhimer: How was the food there on Tinian?

Mr. Spielberg: I remember it as being OK. The Enlisted Men's Club didn't have a refrigerator, so you had your choice of drinking warm Coke or warm beer. Of the two, warm beer tasted better. Subsequently we got more of the amenities. We didn't have anylaundry service. Some of us tried to build the windmill type washing machine where you use wind power to turn a vane and chug a paddle up and down in a huge, washed out oil drum, filled with soapy water. Mostly you just took an old bomb crate, mounted it on wooden legs and then used a scrub brush, bucket and soap. You soaked your clothes and washed them out that way. We had a theater, which showed movies about four times a week, I believe.

Mr. Misenhimer: Did you ever have a USO Show on Tinian?

Mr. Spielberg: Not that I saw. I only saw movies at our theater.

Mr. Misenhimer: On August 6th, when they dropped the first Atomic Bomb on Hiroshima, how did you hear about that?

Mr. Spielberg: I think that on August 5th we had run a mission. It was the day before the A-bomb. Typically you ran a mission and then you had two days off, and then you ran another mission. The first day off you are supposed to rest, but the second day you go down to the flightline and make sure your airplane is ready for your next mission. Then on the third day, on about August 8th, you were ready for the next mission. Well, that morning of August 6th, we heard about it. As I said earlier, I was thinking, "Why did we have to do that when we were already winning?"

Mr. Misenhimer: Did you know what an Atomic Bombs was?

Mr. Spielberg: No, I had never heard of it, but I had a vague idea. I had studied physics in college and I had a vague idea about the atomic principle and uranium. I didn't know anything about fissioning uranium. I had never heard of the word Plutonium.

Mr. Misenhimer: When Japan surrendered, did you have much of a celebration?

Mr. Spielberg: Well, let me tell you about our last mission of the war. It was on the night of August 14th. It was another aerial mining mission to Maizures Harbor, Japan. We were told that the Japanese were expected to surrender any minute. After we took off and were airborne to Japan, we might receive a signal, either from a ship at sea or from Iwo Jima. That signal, whatever the code was, would tell us to dump our load of mines in the ocean, turn around and come home. If we had not heard it by the time we approached the target, continue with the mission. We never heard the signal, we continued with the mission, laid our mines across Maizures Harbor. There is a little story connected with that, but that is secondary. We came all the way back to Tinian. When we got back we were greeted by the Chaplain and the Group Commander. We all went to have breakfast and went to bed; we had been up all night. We were awakened about 10 o'clock that morning by shooting, shouting; everybody was firing their 45's. We had been issued 45's. Pretty soon the MP's came through and collected everybody's sidearms. We learned then that the war was over, and that the Japanese had accepted the terms of surrender.

The story I was going to tell you about is this. We were approaching the harbor, and it was totally cloud covered, so the bombardier couldn't use his bomb sight. So the radar officer had taken over the bomb run using his radar. As we entered the target the line across the harbor, he said, "Drop one." I think we were carrying six 2,000 pound mines. In any event, what normally happens is that the radio man in the front compartment or the command gunner in the rear compartment looks through the window in the door to the bomb bay compartment and says, "Number one is dropped sir," or something like that. Well, no word came from either radio or command gunner. Meanwhile, our radar officer said, "Drop number two." The aircraft commander gets on the intercom and says, "Radar, radio, gunner, is anything going out?" They said that nothing was coming out of the rear bomb bay, nothing was falling out of the front bomb bay. Meanwhile we are half way across the harbor and all of a sudden somebody, I think it may have been out Radar Officer, yelled, "Salvo these SOB's." Someone, I guess it was the Bombardier, hit the salvo switch and the mines landed in a cluster in one part of the harbor, and we got out of there. So much for our pinpoint mining. At least we dropped them on the target area.

Mr. Misenhimer: What would you have considered your most frightening time over there?

Mr. Spielberg: I think that my most frightening time was when we accidentally feathered two engines.

Mr. Misenhimer: Yes. How come the co-pilot, or the pilot, feathered the wrong engine?

Mr. Spielberg: You see, the four feathering buttons, one for each engine, are on the central panel between the airplane commander and the pilot. I don't know exactly what happened when they were reaching for the buttons. Both buttons on the left were pushed and two engines were feathered. It was fortunate that the bad engine was feathered before it really wound up to the point of throwing the propeller blade. Why is that important for me personally? Because the flight engineer's seat is right in the plane of the propellers.

Mr. Misenhimer: OK.

Mr. Spielberg: So if they would go through the fuselage they would go right by my head.

Mr. Misenhimer: What medals or ribbons did you receive?

Mr. Spielberg: We got an Air Medal after completing five missions. Our Bomb Group was given two separate Presidential Unit Citations with Oak Leaf Clusters for various campaigns we participated in. Only those other than a Good Conduct Medal, and Theater Ribbons.

Mr. Misenhimer: Did you come home with any souvenirs?

Mr. Spielberg: One souvenir that I saved is the emblem of our Bomb Squadron, the 421st Bomb Squadron. It is a picture of a huge gorilla holding a bomb, poised to hurl it on Japan. That was on a leather patch that you were supposed to sew on your flight jacket. I never sewed it on, and I believe that I still have it. I have one other souvenir that I prize very highly. When we were flying mining missions to Korea, there was always the possibility that if you were disabled, you might have to land in China, or some place in Southeast Asia. I believe the airplane commander was furnished with $100 in gold pieces to buy

our way to safety, if necessary. Every crew member was furnished with a nylon banner, about 9" x 12", which was written in five or six different languages, and the message was essentially as follows: I am an American aviator. My airplane has been disabled. My government is an enemy of the Japanese. If you will help me my Government will reward you. Or words to that effect. It was in French, Japanese, Chinese, Korean, Thai Language, and in the language that was spoken in Viet Nam, Laos and Cambodia (French Indochina). It has a big American flag at the top of it. So I have it framed on the wall in my home.

Mr. Misenhimer: How long were you overseas total?

Mr. Spielberg: About 13 months.

Mr. Misenhimer: When you got home, did you have any trouble adjusting to civilian life?

Mr. Spielberg: Not really. I took about two weeks of vacation, and then went back to work at Wright Field. It turns out that my Father had died while I was overseas. My Mother was all alone. My older brother, Arnold, who you may have met, was already enrolled in college. He was married and had a child. My younger sister was still in college and I was the only support for my Mother, so I had to go back to work immediately.

Mr. Misenhimer: Anything else you recall?

Mr. Spielberg: On our one daylight bombing mission, this was to, I believe, the Aichi Aircraft Company in Nagoya. Our bomb squadron, all squadrons of the 504th Bomb Group, were to rendezvous at some point about 50-75 miles off the shore of Japan. Our navigator had the coordinates, and he was supposed to get us to that point. We were supposed to rendezvous, then get in formation, and go in formation over the target. Well, as we approached that point, we saw hundreds of airplanes, with all different designations. These were not only groups from our Bomb Wing, but different wings, one from Saipan, another one from Tinian, one from Guam, planes with every designation, all flying around trying to locate their own groups. We would see a group rendezvousing up ahead so Johnny Combs, our commander, put the throttles forward to try to speed up and get close to them. In the meantime, I'm busy writing down that we were at such and such a manifold pressure, such and such rpm. I was trying to log our usage of fuel, and in the meantime we can't find our group. So when I say, "Capt we are going to use too much fuel trying to find our own group." We joined the nearest formation since we were all going to the same target. We dropped our bombs with them. We trusted the leader of that formation to have found the right target. By the time that we dropped our bombs we saw smoke rising up from the ground.

Mr. Misenhimer: On September 2nd, when they had the ceremony on the Missouri. Were you part of that fly-over?

Mr. Spielberg: The only one of our crew who was asked to fly there was Johnny Combs, our aircraft commander. I wish I had gone.

Mr. Misenhimer: Did you fly the same plane every day, or a different plane?

Mr. Spielberg: No, we flew one plane about three or four missions, and then we had different planes. When we came over to Tinian we brought a new airplane. Once we arrived on Tinian it was assigned to one of the older, more experienced crews, and we had a different airplane of a crew that wasn't going to fly then. We never did have our own plane. This is a problem for the flight engineer. If you do all your flying in the same airplane, you get to have a better feel for how accurate those cruise control charts are. You can depend on them much more carefully.

Mr. Misenhimer: What were some of the names of the planes that you flew?

Mr. Spielberg: One was called "Omaha Two More Times." I can't remember too many of them. I have some photographs somewhere where I can see some of the names. There was one called "Nip Finale."

Mr. Misenhimer: Did you ever get a chance to meet LeMay?

Mr. Spielberg: No. In fact, I never met the Wing Commander. I got to know the Group Commander. He was with us when we moved to the Phillippines. As I was assigned to the group staff, when he called the staff together I was included.

Mr. Misenhimer: What did you think of LeMay?

Mr. Spielberg: He was an extremely bold man. He quickly realized that high altitude precision bombing was going to do no good in defeating Japan. Going in anywhere from 25,000-30,000 feet in formation, conquering the enormous winds, even with a supposedly accurate bombsight, no way could we do precision bombing effectively. So we suddenly switched tactics to low altitude, saturation fire-bombing. They were quite effective. I remember, when we took those two prisoner of war supply missions after the end of hostilities, after August 14-15, and before September 2nd, we had maybe 10-15 minutes of extra fuel time that I calculated we could go cruising around. We cruised over Tokyo, Osaka, Nagoya, and we even flew over Hiroshima. To tell the truth, from the air, they all looked the same. Totally burned out. Block after block with nothing maybe except a brick wall or a chimney standing. You couldn't tell the difference between Hiroshima and Tokyo, except when you realize that one airplane did it to Hiroshima and hundreds of fire bombing raids did it for Tokyo. The damage looked identical.

Mr. Misenhimer: You mentioned the high winds over there. I understand that is when the Jet Stream was first discovered.

Mr. Spielberg: It could be. I am not aware of that.

Mr. Misenhimer: I had read that somewhere; that is when they first encountered those high winds at the high altitudes there.

Mr. Spielberg: In fact we heard estimates that sometimes the winds were up over 150 miles per hour.

Tape #1030

Transcribed by: Wanda Cook , Hunt, Texas , January 26, 2004

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Housatonic

Dr. James Hahn Steele (born 1913)

Wikipedia James Harlan Steele

A visionary who was an inspiration and "founding father" for the "**One Health**" model.

Associations

- **Dr. Alexander Duncan Langmuir (born 1910)** ([HP006F][GDrive]):)
  - *" [Dr. James Hahn Steele (born 1913)] enjoyed a good relationship with [Dr. Alexander Duncan Langmuir (born 1910)], who founded CDC's Epidemic Intelligence Service (EIS) training program in 1951. In 1953, Dr Langmuir asked Dr Steele to recruit veterinarians to work in all epidemiologic areas (animal and nonanimal diseases) of the EIS program. This was the beginning of a new sphere of opportunity for veterinarians in public health. Today, veterinarians are integrated into all areas of PHS activity."*
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2013 (Nov 21) - NYTimes : "James H. Steele, Pioneer in Veterinary Public Health, Dies at 100"

By William Yardley

- Nov. 21, 2013
- https://www.nytimes.com/2013/11/22/us/james-h-steele-pioneer-in-veterinary-public-health-dies-at-100.html
- 2013-11-21-nytimes-james-h-steele-pioneer-in-veterinary-public-health-dies-at-100.pdf

James H. Steele in 1985.

2013-11-21-nytimes-james-h-steele-pioneer-in-veterinary-public-health-dies-at-100-img-1.jpg

James H. Steele, a veterinarian whose pioneering efforts to prevent the spread of disease from animals to people led him to be called “the father of veterinary public health,” died on Nov. 10 in Houston. He was 100.

His death was announced by several organizations with which he had long affiliations, including the Centers for Disease Control and Prevention and the University of Texas School of Public Health.

The potential for a disease to pass from animals to people had been understood for millenniums, but it was not until the late 18th century, when Edward Jenner developed a vaccine for smallpox, that someone found a way to prevent it. The idea that government could take a systematic approach to fighting disease in animals to protect people did not take hold until the middle of the 20th century, when Dr. Steele led the way.

He helped establish mass vaccination and prevention programs in the United States for diseases like rabies and bovine brucellosis. After setting up federal programs, he helped start them at the state level. He visited dozens of countries to start veterinary public health programs and to help trace specific diseases, like Rift Valley fever in Nigeria, where he traveled in the 1970s. He constantly looked beyond his immediate field: in 1964, he published a paper titled “The Socioeconomic Responsibilities of Veterinary Medicine.”

He participated via Skype this summer at the annual conference of the American Veterinary Medical Association in Chicago during a lecture series, “The James Steele Challenge: A Better World Through One Health.” It focused on his lifelong passion: convincing people that economic prosperity was rooted in animal, human and environmental health. Scores of students cite him as their mentor.

“What would things be like if there had never been a Jim Steele?” said Dr. Craig N. Carter, a veterinarian who studied under Dr. Steele and later wrote a biography of him, recalling the questions he and several colleagues asked one another after a recent memorial service for Dr. Steele. “Would we be 30 or 40 years behind where we are now?”

In 1942, a year after Dr. Steele received his doctor of veterinary medicine degree from Michigan State University, he became one of the first veterinarians to receive a master’s degree in public health from Harvard. In 1945 he started the veterinary public health program at the United States Public Health Service in Washington. In 1947, he and the unit moved to Atlanta, to what is now called the Centers for Disease Control and Prevention.

Two years after that he went to work for the office of the surgeon general as chief veterinary officer. He became the nation’s first assistant surgeon general for veterinary affairs in 1968 and deputy assistant secretary for health and human services in 1970. The formal name for the types of diseases Dr. Steele dealt in, which pass from animals to humans, is zoonoses. While he had strong science and field experience — his interest in pursuing a veterinary degree increased after he helped investigate a brucellosis outbreak in a lab at Michigan State in the 1930s — his special talent was in finding practical ways to address disease on a large scale.

“He had to take all that science and translate it into a disease control program,” said Dr. Peter Cowen, who teaches epidemiology and public health in the college of veterinary medicine at North Carolina State University. “Jim took the science and protected public health.”

James Harlan Steele was born on April 3, 1913, in Chicago to James Hahn Steele and the former Lydia Norquist. He grew up, all the way to 6-foot-7, in Chicago, and stayed there into his 20s, selling insurance to help his family before he entered Michigan State.

In 1971, he became a professor at the University of Texas School of Public Health in Houston.

He retired in 1983. His survivors include his wife, Brigitte; his sons, Michael, James and David; and four grandchildren. His first wife, the former Aina Oberg, died in 1969.

Many veterinarians and public health officials credit Dr. Steele for a recent increase in attention to what is called “one health” or “one medicine.” They note that epidemiologists are now far more aware of humans’ vulnerability to animal diseases, in part because among the emerging diseases of the last two decades, including West Nile virus, mad cow disease and monkeypox, 70 percent are zoonoses, crossing from animals to people.

“This was something that just totally was not considered before Jim Steele,” Dr. Carter said. “His work has led to this progression toward integrated medicine.”

Dr. Steele wrote several books and received scores of awards, including the Medal of Merit from the World Animal Health Organization and the Surgeon General’s Medallion.

He was quick to credit his mentors and students, and he always put his accomplishments in context.

“The impact of veterinary research through the years has been startling,” he wrote in the 1960s. “It has opened vast areas of continents to animal husbandry, given a base to many industries and improved human nutrition beyond expectation. Probably in no other creative area has an investment returned so great a dividend for mankind.”

2014 : CDC's Emerging and Infectious Diseases : "In Memoriam: James Harlan Steele (1913–2013)"

Volume 20, Number 3—March 2014 / Source : [HP006F][GDrive]

Myron G. Schultz : Author affiliation: Centers for Disease Control and Prevention, Atlanta, Georgia

James Steele, DVM, MPH, passed away on November 10, 2013, in Houston; he was 100 years old. Jim Steele (Figure) was an extraordinary man. All of the dimensions of his life were on a grand scale. He was larger than life in so many ways; his vision, his leadership, his accomplishments in public health, his worldwide friendships, his mentorship of scores of young acolytes who came within his orbit, his extraordinary memory, his bear hugs, and his longevity were all manifestations of his boundless enthusiasm for life.

Dr Steele's professional career spanned more than 70 years. It began in 1938 when he worked in a brucellosis testing laboratory for the Michigan State Department of Agriculture while studying veterinary medicine at Michigan State University. Brucellosis developed in many of his veterinary colleagues, and he wanted to learn how the causative pathogen and other pathogens were transmitted from animals to humans. This was the beginning of his lifelong vocation of studying and controlling zoonotic diseases.

In 1941, Dr Steele received a doctorate of veterinary medicine from Michigan State University, and in 1942, he earned a master of public health degree from Harvard University. In 1943, he was commissioned as a sanitarian in the Public Health Service (PHS). He spent most of World War II in Puerto Rico and the Virgin Islands, where he coordinated milk and food sanitation programs, evaluated zoonotic threats to the islands, and conducted research on brucellosis, bovine tuberculosis, rabies, and Venezuelan equine encephalitis.

After the war, Dr Steele's encounter with Assistant Surgeon General Joseph Mountin [https://en.wikipedia.org/wiki/Joseph_Walter_Mountin], the legendary founder of the Communicable Disease Center (now named Centers for Disease Control and Prevention; CDC), changed his career. Dr Steele was fond of telling how Dr Mountin challenged him by asking, "What are you veterinarians going to do now that the war is over?" In response, Dr Steele described some of the known zoonotic diseases, and Dr Mountin asked questions about their prevalence and control. Dr Steele's main response was "We don't have any data, nor do we know how to control these zoonoses." In the end, Dr Mountin said, "Steele, it is quite apparent that we have a problem and a lot of ignorance—let us exploit it!" Thus, in 1945, Dr Steele produced a detailed report titled Veterinary Public Health, which outlined the risks posed by zoonotic diseases and the benefits of employing veterinarians for research and response efforts. Dr Mountin and Surgeon General Thomas Parran were impressed by the scope of the report, and in 1947, Dr Steele convinced the Surgeon General to establish a Veterinary Medical Officer category in the PHS. He entered this service category and became the PHS chief veterinary officer. When he retired from the PHS Commissioned Corps in 1971, Dr Steele was an Assistant Surgeon General, the first veterinarian to achieve this rank.

Dr Steele came to CDC in 1947, just after its beginning. There was no road map for the work he did—he was a pioneer, creating CDC's veterinary public health program. Much of his work was focused on rabies eradication. He and his team improved the existing vaccine, and he then worked toward eliminating the disease in dogs and cats in the United States and other countries. He also worked on other diseases that threatened humans and animals, including bovine tuberculosis and brucellosis, Q fever, psittacosis, salmonellosis and other food-borne diseases, and avian influenza.

Dr Steele also pioneered the integration of veterinary public health into the Pan American Health Organization (PAHO) and the World Health Organization (WHO). In 1950, he attended the first WHO Expert Committee meeting, and in 1965, he chaired the second meeting. These meetings brought together the most eminent experts in the world of zoonotic diseases and emphasized the need for international collaboration and common goals. Jim Steele worked closely with PAHO and WHO throughout his career.

Dr Steele enjoyed a good relationship with [Dr. Alexander Duncan Langmuir (born 1910)] , who founded CDC's Epidemic Intelligence Service (EIS) training program in 1951. In 1953, Dr Langmuir asked Dr Steele to recruit veterinarians to work in all epidemiologic areas (animal and nonanimal diseases) of the EIS program. This was the beginning of a new sphere of opportunity for veterinarians in public health. Today, veterinarians are integrated into all areas of PHS activity.

When he retired from PHS in 1971, Dr Steele became a professor at the University of Texas School of Public Health. He was an active teacher, writer, and mentor. He compiled the CRC Handbook Series in Zoonoses, the first comprehensive collection addressing diseases shared by humans and animals. The book remains a staple of public health curricula throughout the world.

Dr Steele received numerous awards during his career. Among them are the American Public Health Association's Bronfman Prize, the American Veterinary Medical Association's International Veterinary Congress Prize, the Surgeon General's Medallion, the PAHO Abraham Horwitz Award for Excellence in Leadership in Inter-American Health, the OIE (World Organization for Animal Health) Medal of Merit, and many more. In addition, the University of Texas School of Public Health holds an annual James Steele Lecture, and a James H. Steele Veterinary Public Health Award is given annually at CDC's EIS Conference.

The message of the One Health Initiative is that human health and animal health are inextricably linked: we cannot have good public health unless we have good animal health, and we cannot have good animal health unless we have good public health. Jim Steele was a father of the One Health Initiative. He didn't merely profess this concept—he practiced it for 7 decades, and he taught it to younger generations of veterinarians. Jim Steele had an extraordinary capacity for mentoring younger health professionals and sustaining lifelong relationships.

Lewis Thomas, the physician–philosopher who wrote about so many aspects of life, said that the highest state of life is to be useful—to be engaged in purposeful activity with your fellow men. By this measure, Jim Steele was a rich man—not in material wealth, which is ephemeral—but in his relationships with other human beings, which are enduring. Jim Steele has left a legacy in which millions of persons have been granted healthier lives. The world is a better place because Jim Steele lived and served humanity.

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Housatonic

Marvin Leonard Stein (born 1924)

Wikipedia Marvin Stein (computer scientist)

Saved Wikipedia (Nov 13 2020) - Marvin Stein (computer scientist)

See [HK003S][GDrive]

Marvin Stein (1924-2015) was a mathematician and computer scientist, and the "father of computer science" at the University of Minnesota.[1]

Early life[edit]

Marvin Stein was born in Cleveland, Ohio in 1924 to Russian-Jewish immigrants. The family later moved to Los Angeles, California to treat Stein's mother's tuberculosis.[2] As an adult Stein entered University of California, Los Angeles in 1941. His studies were interrupted and in 1942 he served in the US Army Signal Corps as a tabulating machine operator, and had a short stint working at IBM. He returned to school after the war and graduated from UCLA in 1947.[3]

After earning his Ph.D. from the Institute for Numerical Analysis at UCLA (an ancestor of UCLA's computer science department), Stein was hired as a senior research engineer by aircraft manufacturer Convair in southern California. He primarily worked on missile simulations for the SM-65 Atlas,[3] on which he worked with a UNIVAC 1103. Though the 1103 been made for and used by the Armed Forces Security Agency under the name "Atlas 2" (unrelated to the missile of the same name), this was the first commercially sold 1103. Stein's work installing the UNIVAC 1103 with Erwin Tomash introduced him to the emerging computer-science scene in Minnesota in the 1950s.[4]

Stein lost his job with Convair when his security clearance was revoked by the House Un-American Activities Committee on account of Stein's Jewish heritage. It was later re-instated, but Stein had already decided to move on.[2]

University of Minnesota[edit]

In 1955, Remington Rand, manufacturer of the UNIVAC computers, heard that the University of Minnesota was considering purchasing a machine from one of Rand's rivals: an IBM 650. Rand offered to simply give the university 400 free hours on a UNIVAC 1103 on the condition that they hire a dedicated faculty member to oversee its operations. Stein was hired in the IT Mathematics department in the University of Minnesota to fulfill this condition, and he assumed stewardship of the UNIVAC.[5] The UNIVAC 1103 was around 60 feet long, 30 feet wide, and weighed over 17 tons.[1]

Stein taught the first University of Minnesota courses on high-speed computation and played a singular role in developing the university's path to computer science education. In 1958, Stein was made the head of the university's Numerical Analysis Center at the Institute of Technology (later the University Computer Center), for which the university purchased its own 1103 at a discounted price of $250,000. The center was also home to a Reac 100.[4] Stein maintained a computer archives system for decades, over three significantly different generations of machine.[6]

In 1967, Stein created - with William Munro, Neal Amundson, and Hans Weinberger - the university's graduate program in Computer and Information Sciences. Three years later, in 1970, the university established a formal Computer Science department.[4] Stein resigned as head of the Computer Center and became the first head of this new Computer Science department.[7] He stepped down the following year, and served as a professor in the department until his retirement in 1997.[1]

Stein received a Guggenheim fellowship in 1963-1964 for his work with Magnus Hestenes on the conjugate gradient method and for being the principal inventor of the Pope-Stein division algorithm and the Stein-Rose sorting algorithm.[1] He served as a visiting professor of computer science at Weizmann Institute of Science in Rehovot, Israel from 1963-1964 and at Tel Aviv University and Hebrew University of Jerusalem from 1971 to 1972.[2]

Stein died in 2015. His papers are held in the University of Minnesota Archives.[2]

Publications[edit]

In 1964, Stein wrote *Computer Programming: A Mixed Language Approach* with contributor William Munro for Academic Press.[8] It was well reviewed in its time,[9] and in 2017, more than five decades after its publication, it was still in print in its third edition.[10] It was written with the intention to provide instruction in assembly language programming to both professional programmers and highly technical laypersons. Much of the book was originally designed around the CDC 1604 and the Fortran language.[11]

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See [HN01BK][GDrive] (Note - Middle name is identified here - "Leonard")

Stein, Marvin Leonard Died peacefully on February 27, at the age of 90. Marvin was born on July 15, 1924 in Cleveland, Ohio to Russian-Jewish immigrants, Carl Stein and Marion Marks. When Marvin was three, his mother contracted tuberculosis. Marvin, his parents and older brother Harvey, moved to Los Angeles for her treatment and remained there after her death. Marvin grew up in the Boyle Heights area of L.A., which was known for its eclectic mix of people. He graduated from Roosevelt High School in 1941. Marvin continued his education at UCLA, but left to serve in the United States Army during WW II. While at Roosevelt, Marvin met Ruth Meyerson, who car pooled with him to UCLA. Marvin and Ruth married on July 15, 1944, his twentieth birthday. They celebrated their 70th wedding anniversary last summer. After World War II, Marvin resumed his education at UCLA, earning a Ph.D. in Mathematics in 1951. After working at UCLA Mathematics Institute of Numerical Analysis (1948-1952), Marvin became a research engineer at Convair in San Diego, California, working on the development of the Atlas missile. It was the height of the McCarthy Era and Marvin's security clearance was revoked because he was Jewish. By the time the action was overturned by the court, Marvin was ready for a change. In 1956, Marvin accepted a position as Assistant Professor at the University of Minnesota, where he was promoted in full professor in 1961. Although he spent his entire academic teaching career at the U of M, he was also a visiting professor at the Weizmann Institute of Science (1963-1964) and the Tel Aviv and Hebrew Universities (1971-1972). Through his life and work in Israel, he established a close connection to that country, personally and professionally, that would last to the end of his life. Marvin is affectionately referred to as "the father of Computer Science at the University of Minnesota." Some in the 1950s doubted that machines could be used to solve complex problems, while others didn't think that working on machines to solve problems was a good idea. Marvin begged to differ, understanding the need for development of computers and the impact computers could have on our society. He became director of the Numerical Analysis Center, taught the University's first courses in high-speed computation and created with others the first graduate program in Computer and Information Sciences in 1967. In 1970 he served as founding Department Head for Computer Sciences. He had an important role in the discovery of the conjugate gradient method and he was the principal inventor of the Stein-Pope division method and the Stein-Rose sorting algorithm. His children fondly remember their dad making his huge flashing computers punch out cards shaped like Mickey Mouse and, years later nodding sagely while they showed him their iPads. Marvin continued as a professor until his retirement in 1997. The Marvin L. Stein papers are held in the University of Minnesota Archives. Marvin was at his happiest when he was with Ruth, their children, and grandchildren, dancing to Benny Goodman records, walking through Prospect Park in Minneapolis, or along the beach in San Diego. Marvin was preceded in death by his parents, his brother Harvey Stein, his sister Jacqueline Yahr, and his beloved son, Eugene Harvey Stein. He is survived by his wife of 70 years, Ruth Meyerson Stein, his brother Steve Stein of Los Angeles, his children Tamar Stein (Abram Edelson) of Los Angeles and Jerry Stein (Margy Braden Stein) of Minneapolis, his daughter-in-law Sandi Stein of Minneapolis, and his adored grandchildren Jennifer Edelson (Greg Wagner), Libby Edelson, Jordan Stein (Carrie Walker Stein), Nat Bennett (Sharon Stanley), Sarah Stein (Rob Vork), Ben Braden Stein, great-grandchildren Elijah and Gabriel Wagner, Sefirah, Aryeh and Zvi Stein, Max Vork and Saul Stanley-Bennett, as well as nephew Paul Stein of Miami, and many dear family members in southern California.

7 November 1984 - Interview - Charles Babbage Institute - Center for the History of Information Processing - Marvin Stein Interview

Conducted by William Aspray

[HI001K][GDrive]

Abstract

In the first session of the interview, Stein discusses his early career and the formation of the University of Minnesota's computing facilities. After learning basic digital and analog operation during World War II, he obtained a doctorate in mathematics from UCLA. While teaching numerical analysis at UCLA, he also worked on missile simulation at Convair, Inc., in San Diego. After becoming familiar with the ERA 1103 computer Convair purchased from Engineering Research Associates, Stein made frequent consultant visits to ERA headquarters in Minnesota. In 1955, the University of Minnesota hired Stein to introduce their first computer courses and administer ERA's gift of free computer time. He describes early computer applications to crystallography and low-energy electron scattering, and the policy he established for the computer center to make users self-sufficient programmers. Stein reviews the growth of the Computer Center: the acquisition of an ERA 1103 computer with National Science Foundation support, the construction and use of a hybrid computer out of the 1103 and a Reeves Electronic Analog Computer (REAC), and the purchase in 1960 of Control Data 1604 and 1700 computers.

In the second session, Stein discusses the formation of Minnesota's program in computer science. He explains the rationale for his 1966 proposal for a graduate program in computer science and for the move in 1969 to a department of computer science independent from mathematics and electrical engineering. Stein reviews the curriculum that was intended to introduce students to a wide variety of applications so that they could introduce computer science into other disciplines. Stein discusses the difficulties in hiring enough qualified faculty members, the relations between the computer center and the computer science department, and the state's attempt to bring all educational computing under the control of the Minnesota Educational Computer Consortium.

ASPRAY: Professor Stein, I thought that we'd start the session today by talking about Minnesota in the period prior to your coming to the University. I would like to try to get some background as to the kinds of mechanized computing activities there were at the University then. Why don't I let you just begin some place and I'll stop you at one point.

STEIN: As far as I know, there were two foci of computing in the University. Of course, the business office did the routine kinds of computing that were being done in those days, usually with IBM tabulating equipment. The School of Business had some kind of a computer center, and the Institute of Technology and some of the departments in engineering, physical sciences, and mathematics did some computing. I believe that the School of Business had an organized activity. Apparently they had some IBM statistical sorters and things like that. I'm not totally familiar with what they did.

ASPRAY: Were their users only people in the business school, or were the facilities more generally available to University researchers?

STEIN: I believe that they were open to all University researchers. Fees were charged for the services provided. There was a professional staff that operated that equipment.

ASPRAY: As far as you know, was there any subsidy from the business school or the University general administration for these fees? Or did the fees really cover the costs?

STEIN: I think the fees actually covered the costs. As I said, some of the departments did computing. In those days, there were two mathematics departments: one was in the Institute of Technology and the other was in the College of Science, Literature and the Arts, as it was then known. The IT mathematics department had a laboratory equipped with hand calculating machines, which were used in a course in numerical analysis for engineers.

ASPRAY: You say hand calculating machines. What sorts of machines do you have in mind?

STEIN: I mean just mechanical calculators.

ASPRAY: Marchants?

STEIN: Marchants, Monroes, and the machines of that ilk. The Institute of Technology had something that you could call a computer center. It was run by two graduate students who were employed as research fellows. One of them is now a professor in electrical engineering.

ASPRAY: Who is that?

STEIN: That's James Holte. This organization had some of the most antiquated IBM tabulating equipment I've ever seen, and I've seen a lot of it.

ASPRAY: Punched card equipment?

STEIN: Yes. Before coming to the University, during my army service during World War II, I functioned as a tabulating machine operator, and later I spent a short period working for IBM. The equipment that IT had, even for those days, was museum equipment. But they did have something interesting, and that was a Reeves Electronic Analog Computer.

ASPRAY: The REAC?

STEIN: Yes. They were very proud of it. I'm not sure where the money came from; some of it probably came from local industry. My guess is that they spent about fifty thousand dollars for the equipment. That was a pretty good piece of money in those days.

ASPRAY: What year would this have been?

STEIN: I think that they acquired it in the early 1950s. Possibly in 1949.

ASPRAY: About that time.

STEIN: You might find the date in one of the files. I turned over the Reeves file, which I inherited.

ASPRAY: Yes, I think there is some information, though I don't recall the date.

STEIN: That machine was still state of the art, even when I arrived. It was being used for a number of research activities in the University, and also by local industry.

ASPRAY: Can you give me some examples of the University's uses of the machine?

STEIN: You realize you're making me think back thirty years. I don't know that anybody's memory is that good. But, as I recall, one of the people who was quite interested in that machine was Russ Amundson, who now has a building on campus named after him. He was head of chemical engineering in those days. He was quite interested in systems of differential equations that were associated with various kinds of chemical factories. I don't know if these were reactors; probably not. They were more likely processes used in refining oil and things like that. As I recall, the person who was helping him in this work, and probably had his hands on it the most, was Gus Aris. Subsequently, they both became Regents' Professors. Of course, Honeywell Aeronautical used this equipment extensively for missile simulation, and simulation of other kinds of vehicles. I would think that people in aeronautical engineering made use of it.

ASPRAY: Do you know what financial arrangements were between industry and the University for the use of

REAC?

STEIN: There was an hourly charge made. I don't remember what it was; but for those days the budget had a significant surplus. Somehow the surplus didn't come along when I took over that lab.

ASPRAY: That is to say that the charges that were placed against users were more than sufficient to cover the costs of the equipment and the personnel at the time, so that it was a money making operation?

STEIN: Well, at least it didn't lose money. It may very well be that when I noticed the surplus, the normal charges -- cross charges for the salaries of personnel -- had not actually been applied to the budget.

ASPRAY: Were there University users of the REAC other than from the science and engineering departments? Economists, for example? Psychologists?

STEIN: I don't remember. I think that in the files that I turned over there's a report on REAC usage for the year 1955 or 1956, which would have been typical

for previous years. There may even be a complete list of problems undertaken on the REAC.

ASPRAY: I didn't find that. But it may still be in the files; I didn't get through them entirely.

STEIN: Certainly I remember compiling that report, and it ought to be in the files somewhere.

ASPRAY: My guess would be that the REAC didn't get much use from psychologists and economists, except in very narrow ranges, because it was an analog machine and mostly suitable for differential equations. Is that correct?

STEIN: Well, no. It's correct that it's mostly suitable for differential equations. You could also adapt it for the solution of systems of linear algebraic equations. The University of Minnesota has a group of economists who are remarkably good at mathematics, and it did in those days too.

ASPRAY: I see.

STEIN: It's possible that there were some economists using it. I don't know what interest there was in man-machine interactions among the psychologists. But a machine like the REAC might have presented them some opportunities in that area, although I'm not aware that they were actually interested.

ASPRAY: What were the weaknesses of the REAC?

STEIN: One is that it's very difficult to program. The so-called set up time poses a problem.

ASPRAY: Could you explain that procedure to me?

STEIN: Essentially, the REAC is a collection of electronic elements that function in parallel. To solve a problem, such as finding a solution to a system of differential equations, one has to wire those elements together in the appropriate order. There is a plugboard for that purpose. One had to put a considerable number of wires into the right holes on a rather complicated looking board. There were also dials on which various constants could be set and introduced into the system. One had essentially to draw the wiring diagram corresponding to the problem, and then actually set the machine up in accordance with this diagram. That could take a considerable amount of time. There was also a scaling problem involved. I don't want to launch into a lecture, so I'll just say that it's much more difficult than scaling in digital computation, most of which is handled by floating-point arithmetic. Analog computers don't have floating point arithmetic for that purpose. Probably the most significant difficulty was the error. Analog systems are very limited in their accuracy, even in the problems that they're suited for, which are a limited class of problems.

ASPRAY: Can you quantify what the typical amount of time that it took to set up a problem was, and what the typical error would be?

STEIN: I don't recall that I have ever personally undertaken a problem on the REAC, or on any other analog computer. But I have given some thought to analog computers and the relationships between analog and digital computation. I'd say that for a system of about ten differential equations, which might have been the outer limit of the machine that they had here, it might take a couple of weeks of tinkering around to get set up. There were also considerable doubts as to when a problem was checked out -- that is, as to whether the set-up actually reflected the mathematical equations, because people who used these machines generally did not speak of integrating and differentiating, but in more physical terms. They talked about low-pass and high-pass filters, and so on. That was another problem. Sometimes the mathematics wasn't even known. The engineers were satisfied that they had the analog of the physical system. My guess is that one was lucky to get two or three digits of accuracy.

ASPRAY: The MIT people claimed that they typically got three digits of accuracy on the Rockefeller Differential Analyzer.

STEIN: That sounds about right. In any event, that was the state of computing before I got here.

ASPRAY: Given all the limitations of the REAC, do you think it provided good service to the University?

STEIN: Yes. It was the best thing they could get at that time. There were talented people at the University and in industry who knew how to use that equipment properly, within its limitations. Consequently, it was well worth it. They got good results from it.

ASPRAY: Were there close ties between the computing activities in the business school and the ones in IT?

STEIN: I don't think there were any ties at all until I arrived.

ASPRAY: Let's turn now to the series of decisions at the University that resulted in bringing you to the campus. Who were the people involved? Could you tell the story?

STEIN: Back in the REAC days, in 1950 or 1951, there had been some serious thought given to establishing an Institute of Technology computer center on a more solid basis. They were planning to hire a faculty member with the rank of instructor. In those days, they sometimes used the instructor rank for regular faculty positions. A person whom I had worked with and knew socially as a graduate student was head of the mathematics department here. That's Stefan Warschauski. He called me and asked if I had an interest in that position. I said that I did, but he later informed me of some internal politics, of which I certainly don't know the details, the result of which was that the people involved had left by the time I actually came here in 1955. I believe that two engineering departments couldn't agree as to the organization and control of this center, so it never came to be.

ASPRAY: Were some of the people who were involved in this first attempt in 1951 later involved in the more formal arrangements?

STEIN: Yes. There was Professor Henry Hartig, who was head of electrical engineering when I came here, and Gerry Shepherd, who is now retired Academic Vice President, succeeded Hartig as head of Electrical Engineering, and was Associate Dean of IT when I arrived. Shepherd was involved in both attempts, I'm sure. He probably had a significant interest in anything of that nature. Hartig was mo re or less in control of the REAC and the tabulating equipment. At least that was my understanding, since when I took over I received all the budget and correspondence files from him. There was a realization at the University that something more had to be done, that their digital computing facilities were inadequate. I believe that somewhere in the central administration somebody had decided to order an IBM 650, which had a serial kind of drum. The significant thing that happened was that a group in St. Paul, Engineering Research Associates (which by that time had been taken over by Remington Rand, and probably were beginning to be referred to as UNIVAC), were building a machine called the Engineering Research Associates 1103. It was later renamed the UNIVAC Scientific Computer. Arnie Cohen, former Assistant Dean of IT, was one of the principle architects of that machine. Seymour Cray was also heavily involved in it. In any event, a gentleman from UNIVAC named Byron Smith, in cooperation with Arnold Cohen, offered the University of Minnesota four hundred hours of use of this machine.

ASPRAY: Free usage?

STEIN: Free usage. The University then wanted a faculty member to take charge of this gift, and also to introduce to the University some courses in modern

computing machinery. These were to address, essentially, what we do with these things. They also wanted a course that viewed them as objects of intrinsic interest.

ASPRAY: Not only the service aspect, but also the science of computing.

STEIN: That's right. This was the work of a study committee of distinguished faculty members appointed by President Morrill. I'm sure that that report has to be in the archives somewhere, and would make interesting reading. It addresses itself to computing at the University of Minnesota.

ASPRAY: Is this the report that had many sections, of which the subject of computing was one?

STEIN: Yes. I think it was an outstanding piece of work.

STEIN: It recommended that in order to make the best use of UNIVAC's gift, some new people should be brought in. As it happened, through the good offices of a person well known to the Babbage Institute, Mr. Erwin Tomash, I was involved in some consulting work for Engineering Research Associates. If my memory serves me right, Mr. Tomash himself was involved in the design of the 1103. He may at that time have been the national sales manager for UNIVAC. He introduced me to Byron Smith. Since I was consulting, I was coming to St. Paul regularly. As I mentioned, I was also well acquainted with Stefan Warschauski, the head of the Mathematics Department in the Institute of Technology. He asked me on one of my visits if I had any interest in the position. I had an interest in it. On a Friday afternoon I paid my visit to the IT Dean's office and spoke with Gerry Shepherd, and on Monday I had an offer. Things could really move quite quickly back in those days. This was in the summer of 1955.

ASPRAY: And you took the position?

STEIN: I accepted the position, and I've been on the faculty here since September 1955.

ASPRAY: Before I ask you any more details about your own background, let me come back to something for a moment. Did the gift of time on the 1103 preempt the purchase of the IBM 650?

STEIN: It did. That was one of the first things I took care of when I arrived, because my feeling was that all that we would do by acquiring an IBM 650 would be to saddle ourselves with the need for another one almost immediately. The machine didn't have the capacity to do anything significant in the university.

ASPRAY: At that time, was the 701 available from IBM?

STEIN: Yes, the 701 and the 1103 were the two machines for so-called "scientific computation" in those days.

ASPRAY: What inclined you towards the 1103? Was it the fact of the gift?

STEIN: No, the 1103 was clearly a superior machine in every respect. I don't want to pursue a detailed analysis of my reasons, but it was simply a better machine in terms of its computing capacities. In terms of the software available, which people didn't think much about in those days, it probably was inferior; but that's not the fault of the machine.

ASPRAY: Why don't we go back and briefly discuss your background? What was your career like prior to your coming to the University?

STEIN: I was raised in Los Angeles, and entered UCLA in 1941. I was interested in studying philosophy in those days. It just so happened for some reason that I began to be interested in the philosophy of science and mathematics. It may have been because of the visit of Bertrand Russell to the campus the year before my entrance. I was still a high school boy when he came, but, nevertheless, I was quite excited by his visit. That was the kind of philosophy that I wanted to study. I soon discovered that one really ought to know a lot more about mathematics and science before attempting to philosophize. I was a little appalled at my fellow students, most of whom were a lot older than I. They were all very glib about it, but they didn't seem to know much. They had a lot of gall. I switched to physics. In trying to understand the Michelson-Morley experiment, I soon discovered that one didn't really study physics the way that I wanted to without knowing mathematics. So I ended up as a mathematics student. But my studies were interrupted by the war and I was enlisted in the army at the end of 1942. For some reason I was assigned to the Signal Corps. The Signal Corps wanted to computerize the operations of its signal depots, which meant essentially that they wanted an accounting procedure to keep track of their stock. They were looking for people who had some kind of mathematical training, and my card must have fallen out of the hopper. I was assigned to the L.A. Signal Depot and actually sent to the local IBM office. I was only a private first class. I think the commanding officer sent me to the local IBM office to learn how to become a key-punch operator. Fortunately for me, while my key-punching courses were going on, IBM was offering a course for installation managers, a refresher course. I asked the people if I could sit in on this course. I seemed to have found something that interested me, because by the end of the first week I was helping the instructor teach it. When I returned to the signal depot, it turned out that all of the higher ranking noncoms who had been sent to IBM World Headquarters had not learned all that they had been expected to learn there. And being a brash young man I said, "Listen, Colonel, I know how to do all this stuff." Since he was not really a colonel, but had been the manager of a large business and a reserve officer, he didn't believe in ranks, and he said, "All right, Stein, if you can do this, you're in charge." So I took over that installation. At the end of the war in Europe, I went off on a special project which was working with the officers who were planning the invasion of Japan, at least the Signal Corps' part of the invasion. They wanted to know what equipment was available and what days it would be loaded onto various boats, what days it would arrive at the battlefields, and things like that. My job was to come in at night when everybody had left, balance the files, and then program the answers to the questions that were being sent to me by the planning officers. They sent them to me by teletype. I never saw any of those officers personally. So that meant programming, really: wiring boards and planning the passage of cards. I didn't realize it, but I suppose I was inventing what we call data-base analysis. I was too busy doing it to develop a theory for it. In those days I wasn't a very theoretical person. But I did learn something; I had the hands-on experience of operating equipment and doing computations. At the end of the war, I returned to UCLA and resumed my studies. I graduated in 1947 and became a teaching assistant. At that point, the National Bureau of Standards and the Regents of the University of California entered into an agreement to establish an Institute for Numerical Analysis on the campus of UCLA. Part of the agreement was that there would be some graduate research fellows appointed. I applied for one of these fellowships, and was in the first group of research fellows at the Institute for Numerical Analysis. At the same time, they were building a computing machine.

ASPRAY: This was SWAC?

STEIN: Yes, SWAC under Harry Huskey. I took quite an interest in that machine. In addition to that, there were programming classes for senior staff given by a very distinguished programmer. I don't know why my memory is failing me. She won the Gold Medal of the Department of Commerce for her contributions to programming. Under this distinguished lady (Ida Rhodes), I learned programming with a distinguished class of mathematicians such as Alexander Ostrowski. It turned out that I was the only member of the research staff who had had his hands on a computing machine. The only actual computing machine we had was a Card Programmed Calculator. The machine that was being built, the SWAC, wasn't ready. We were learning to program for it, but whenever we

had to try out an idea it went on the Card Programmed Calculator. I was the most junior member of the research staff, but the only member who had had hands-on experience with such equipment, so I was involved in trying out almost every new idea. I worked with Magnus Hestenes on a number of problems in the calculus of variations, numerical methods for solving these problems. He and I were also involved at that time in the development of the conjugate gradient method.

ASPRAY: That's something I'm not familiar with.

STEIN: That is a well known method of solving systems of linear equations, that Hestenes and Edward Stiefel have the credit for developing. I worked with Hestenes in the early stages of that. Some of our work was subsequently published in the Journal of Optimization Theory and Applications as an important historical contribution to numerical analysis.

After getting my Ph.D. and spending another year at the Institute as a member of the research staff, I found that there were not many academic jobs available because of the Korean War. UCLA was starting a graduate program leading to a certificate in numerical analysis. It was not an extension program, but it was handled administratively through the extension division. Since the appointment to the program didn't pay a living wage, they found me a job at Convair down in San Diego.

ASPRAY: What did you do there?

STEIN: At Convair, I was a senior research engineer. They were operating in the computing laboratories some Card Programmed Calculators, and I designed some of what we called 'boards' in those days. Those are the operating systems for doing extensive computations on the Card Programmed Calculator. Primarily, I worked on missile simulations, which were being done for the Atlas missile, our first ballistic missile. I had those missiles flying in orbits around the moon, long before Sputnik was ever heard of -- theoretically, of course.

ASPRAY: Of course.

STEIN: At that time, Convair decided to go for a real digital computer -- an internally programmed one, that is , since the CPC was certainly a real digital computer. Convair chose an 1103, which was installed by Erwin Tomash. That's when I became acquainted with Erwin. It became my job to get that machine installed and operating and to begin using it properly. It was through what I did at Convair that I made the acquaintance of people here in the Twin Cities.

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ASPRAY: How would that be?

STEIN: The 1103 machine that we received at Convair was probably serial number two. Serial number one was probably at the National Security Agency.

ASPRAY: I see.

STEIN: The machine was very secret. In any event, it was a very early machine and it couldn't function very well without periodic visits from the people who had designed it. We had people like Jim Thornton come out to do maintenance on it. People who were sent out as representatives of Engineering Research Associates were very high level people. We had people like Claire Miller and Abraham Franck. Because of this I was acquainted with the movers and shakers in that organization here in St. Paul. As I mentioned, this led to my opportunities for consulting work and then to accept the position at the University of Minnesota.

ASPRAY: You were doing your consulting work for UNIVAC?

STEIN: Part of it, yes.

ASPRAY: Why were you attracted to the position at the University?

STEIN: It was probably psychological. In those days, I believe, the professors used to brainwash the students. They said the good students will become the professors and the ordinary students will be out there working in industry. Consequently, when I found myself working in industry, I had in my mind the stigma of being an ordinary student. When an opportunity came for an academic position, I said, this is what I was educated for and I can always return to industry; so I will try it to see what I can make of it.

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ASPRAY: Had you started to look for other academic positions while you were at Convair?

STEIN: Yes, I had.

ASPRAY: What were the conditions of your appointment here at the University? What were your responsibilities?

STEIN: I was appointed as an assistant professor in the IT Mathematics Department. My responsibilities were to oversee the use of the gift of four hundred hours of time on the ERA 1103, to introduce course work, and ultimately to do research in modern computing machinery. I introduced a course, which in one form or another we still have around today.

ASPRAY: An introductory course?

STEIN: No, it was an advanced course. It carried graduate credit. It probably involved things that are taught to freshman today, or that they are expected to know when they arrive. It attracted an extraordinary amount of interest. There were so many people there that I had to teach it in two sections.

ASPRAY: This was offered for the first time in what year?

STEIN: In 1955. I had two sections of about fifty people each, which in those days were considered very large sections. I began to try to use the gift of time in the best way that we could. Many people didn't think we ought to be expending our resources on this, and my idea was to show how valuable this gift was. So I actually went out looking for people with applications that would demonstrate this.

ASPRAY: You went to various faculty members and departments?

STEIN: Not so much. Most of these people came to me after we announced that I was here and ready to consult. There was a committee established ultimately under the chairmanship of Gerry Shepherd. It was an University-wide committee. The very first committee was actually under the chairmanship of Professor Hartig, the head of Electrical Engineering.

ASPRAY: What was the mission of this committee?

STEIN: The committee was to establish a policy for the use of this gift of time, and to allocate the hours to the various requesters.

ASPRAY: How did you fit in with the committee?

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STEIN: One might say that I functioned as staff for the advisory committee. I received the requests, made the recommendations, and then worked with the people that were allocated time by the committee. Ultimately, they made me a member of the committee as well.

I was looking for the most likely projects among all the requests. I selected two. One was in low-energy scattering of electrons that came from the physics department. The two people involved in that were Alfred Glasgold and Warren Cheston. Cheston subsequently became Dean of the Institute of Technology. They were assistant professors of physics in those days. I worked personally with them to set up the mathematical models and the programs that would be needed. The other was a very large project in crystallography, on molecular structure, which was under the leadership of Bill Lipscomb, a professor of physical chemistry. He came over with about ten of his graduate students, and I established a seminar that they attended once a week for about a quarter. Then they went off on their own. This led to some very important work, and subsequently Lipscomb won a Nobel prize for it.

We had other things which I considered very useful pieces of research going on. But I didn't involve myself personally in them as much. There was work in spectroscopy, under Bryce Crawford. A large variety of useful research began. Even at that early day we didn't neglect the educational or instructional use of the computer. Some of that time was provided to instructors who wanted to use computing in conjunction with their teaching. Of course, I myself probably made the most use of it; but I don't think I was the only one.

ASPRAY: Can you give me an example of the way that you used it?

STEIN: As I said, I established a course. I would suggest some type of exercise that would illustrate the ideas that I was discussing. Then we would have one student who would volunteer to illustrate that, and actually carry out the exercise on the computer. That student would write a report. All the other students would receive a copy of that

report and their assignment was to do a critique of it. I had a number of people who subsequently made their mark using computers in their own fields of research. For example, Lawrence Liddiard, who is now the acting director of University Computer Services, was a student in that course. I still remember the project that he undertook -- exceptionally well, I might add.

ASPRAY: What was that?

STEIN: He wrote a program to solve some systems of differential equations. Early on, the advisory committee set up policies, mainly through my advice. One was that people had to do their own programming, though we would assist them in every way possible to do the work themselves. I think this had a great trickle- down effect. It made for a much better and really a much higher level use. People would come in for their first job and instead of going away after we had done it for them, and maybe never coming back except to do that over again, they would suddenly realize what this system could really do for them. They would begin the important things that they subsequently did. There were also a lot of graduate students who were given free access for their research. As I said, a lot of these people subsequently went on to other faculties and became experts in using computing equipment in their work. I am

thinking of people such as David Campbell, who inherited the Strong Interest Inventory; he was a student of mine. We had them from many fields: Frank Baker, who is now a professor at the University of Wisconsin, and heads up a laboratory there in quantitative concepts in education, and so on.

ASPRAY: I see.

STEIN: So I think this gift was really the nucleus of everything that has happened since, and a lot of other good things.

ASPRAY: The work of Baker in education is one example, at least later in his career, of something outside the sciences. What percentage of jobs that were done with your free time on the 1103 were not science or technology projects?

STEIN: I think among the files that you took were all of the usage records. I have to say that if you counted them in terms of time used, the physical sciences and engineering used the most time. But if you counted in terms of projects, then projects from education, psychology, business, statistics, agriculture, etc., were very well represented.

ASPRAY: The gift of the time was a gift to the University as a whole, not to IT. Is that correct?

STEIN: That's right.

ASPRAY: So there weren't any restrictions independent of the project that said that preference went to IT, or that preference went to, say, agriculture?

STEIN: No. There were no restrictions. It was an University-wide committee that operated the gift. The gift was

renewed in 1956-'57. In the summer of 1956, Dean Spillhaus appointed me Director of the Institute of Technology Computer Center, which consisted of the kinds of equipment I mentioned previously, plus the gift. While it was a gift to the University, the administration of it was in the hands of IT.

Also, at that time there was some consolidation. The tabulating equipment throughout the University, which was mainly in the School of Business and IT, was all consolidated and put under the directorship of Professor Kenneth Clark of Psychology. (He subsequently left here and became a dean at the arts college at the University of Rochester.) Then we soon found that we weren't able just to do what had to be done with the gift of time that we had.

ASPRAY: That is, the number of requests for use were greater than the amount of time allotted.

STEIN: Yes. One thing that happened was that the project on which I spent most of my personal time, which was the scattering project, raised some money from the Atomic Energy Committee and from a research program that had been set up at Convair under Charlie Crichfield, a former professor of physics at the University, who was director of research at Convair at that time. We used to go out to San Diego -- in those days one had to travel to use these machines. We spent quite a lot of time out there finishing the computations that we'd begun via the gift. We simply

didn't have the time here. So we decided that we needed our own machine. Warschauski applied to the National Science Foundation for a grant. Leon Cohen, I believe, was the program director for the mathematical sciences then. He came and visited us. On that grant, I don't know whether I was the principal investigator, or if Warschauski was. But in any event, we received a hundred-thousand dollars from the NSF. There were other moneys that were raised, up to about a quarter of a million dollars.

ASPRAY: Through the University?

STEIN: Yes. Some of that may have come from alumni; I really don't know. The advisory committee had people like

Gerry Shepherd, Russ Amundson, and Jack Darley, who was subsequently a dean of the graduate school, on it. At that time he was a professor of psychology. Al Meier was on the committee. You can see that it was considered an important committee.

ASPRAY: Yes.

STEIN: The committee managed to raise the money. At that time, Los Alamos was offering its MANIAC free to anybody that wanted to cart it away. So Gerry Shepherd, Leroy Anderson -- now Emeritus Professor of Electrical Engineering -- and I went down to Los Alamos to have a look at it. We discovered that it was a "breadboard" machine that couldn't live away from the people that had designed and built it. While we were there, the people at Los Alamos, Metropolis was leading the group there -- he offered us their plans for MANIAC II, which was to be an advanced version of the machine, with a CRT memory. All we had to do was agree to build the machine. So we actually did that. We used this as part of our money-raising activities, although the idea of building a machine wasn't all that exciting to me. But you have to remember that Shepherd and Anderson were electrical engineers and were much more comfortable with the idea of building a machine. As I now recall, that was the vehicle for raising the rest of the money that we did get, the money to build that machine.

ASPRAY: I'm confused at this point. Did all of the money that was raised go into the building of that machine, or did you also purchase a machine?

STEIN: You see, we never built the machine.

ASPRAY: You never built a machine, you just said you were going to.

STEIN: Yes. Russ Amundson was consulting for UNIVAC in those days. A gentleman named Stutzman was quite high in their organization. He subsequently founded his own process control business in this area. Amundson came

back and said, "They'll sell us an 1103 for a quarter of a million dollars." Just what we happened to have.

ASPRAY: Wasn't that convenient.

STEIN: So we decided that we would buy the 1103. I very reluctantly at that time rejected another offer to build a machine. This one came from Seymour Cray. I had lunch with Seymour at the Campus Club. Control Data had just gotten off the ground then. He sketched the machine on the back of an envelope and said, "Why don't the University and Control Data jointly agree to build this machine? We'd build it on the campus of the University of Minnesota. And after a certain number of years, maybe three years of joint use, it would become the sole property of the University." It was a very attractive machine that he sketched, which ultimately turned out to be the CDC 1604. I had no doubt that they had the ability to build the machine. But we were under pressure to get a machine immediately. There was the waiting period, and the fact that there was no software. We already had a lot of work underway with the 1103. This was also a consideration: Control Data was not financially a very strong company. They didn't have the space to build the machine, and they didn't have the capital to build the machine, judging by their offer. And then we would have had to share the machine for that period of time as well. So knowing that ultimately I would certainly like to have that machine -- and ultimately we did acquire it --I reluctantly had to turn him down. Then, of course, there was the fact that they were being sued by Remington Rand. The outcome of that was not known. Frankly, it didn't look very good for them. I still have never understood the settlement. Of course, I wasn't privy to any of that.

We acquired the 1103. At that time we organized an University-wide center which was called the Numerical Analysis Center, with the 1103 as its heart. The center was budgeted with something like twenty-four thousand dollars, which seemed like a lot of money at the time. I was appointed the director of the Numerical Analysis Center. I told you that the tabulating equipment had been put together. They gave us the tabulating equipment, and we had the REAC and the 1103.

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ASPRAY: What size staff did you have?

STEIN: I had a very small staff. Well, actually, the tabulating staff was probably the biggest part of it. I had myself, a secretary, the people who provided the tabulating services. Maybe six, I'm guessing now, my memory is failing. About six to ten half-time research assistants. But, again, I provided you with the budget statements for all budgets that we had in those days. So we can determine the exact size of my staff if we look at that.

ASPRAY: Were you doing any teaching?

STEIN: Yes. I always taught. I had all the duties of a professor in mathematics, and luckily for me, after one year as an assistant professor, I'd been promoted to the tenure rank of associate professor. I spent my time developing research and coursework, and developing the Numerical Analysis Center. I was joined in those early years by Bill Munro who is now associate head of the Computer Science Department. We were pretty informal in those days: he was associate director or co-director. He was Acting Director in the years I was on sabbatical. I could not have accomplished nearly half as well without his advice, and his help in almost every project. That was starting in the second or third year I was here.

ASPRAY: So that was about 1957 or so?

STEIN: Yes, he was on sabbatical when I first arrived here. It didn't take us very long. Probably by the end of the 1950s, it was clear that we had used up the capacity of the 1103. So we set about looking for a replacement for it. Another interesting thing that we did was mating it to the REAC. We designed and built one of the first hybrid computers.

ASPRAY: So you took your 1103 and tied it to the REAC?

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STEIN: Yes.

ASPRAY: What was the purpose of that?

STEIN: I've always had a great interest in simulation and in continuous system simulation. There is something known as the Stein-Rose sorting algorithm, which is the theoretical basis for continuous system simulation. The kinds of continuous systems that one simulated in a way were analog computers. Part of the simulation is that you have to describe the system that you're simulating. Parts of these systems were better described by analog computers and other parts by digital.

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STEIN: Describing the system and describing the control had analog and digital aspects to it. I thought that this kind of hybrid machine would function very well in problems like that. Historical users of the analog system were quite interested in this. For exa mple, simulating missile flights and missile control looked like a very good thing to do. It's the kind of thing I'd been involved in myself. Convair and Honeywell Aero had an interest in it. So we actually built a machine to do that. I have to admit it was not a great success. One thing we learned is that you should never put your prime machine into that kind of a system. That's where I learned about programming difficulties.

ASPRAY: Will you elaborate on that?

STEIN: What happened was that we found that our digital computer was tied up all the time while we were tinkering with wiring up the plugboard for the analog for checking, testing, and so on. So the effective use time on the digital machine was comparable to what one would expect of an analog machine.

STEIN: Yes. Also, I didn't feel all that comfortable with the part of my empire in the Engineering Shop. But as we did

our own maintenance on the 1103, we had to have it. But looking forward to our next machine, which was obviously on the horizon then, I knew we weren't going to do the maintenance on it. We thought we would go out and get a commercial hybrid computer. At that point I worked with N.R. Amundson, and we obtained about a half-million dollars for that purpose from the National Science Foundation and the NASA; we had to agree to install this facility in the Space Science Center. We went out and we bought, or had designed and built for us, a hybrid computer based on an Engineering Research Associates' computer. And we had a Control Data 1700, which was a small computer that CDC developed mainly with process control in mind. We also went out and got the 1604, as I said I had known we would eventually.

ASPRAY: In what years were these acquisitions made?

STEIN: We got the 1604 in the sixties, in about 1960. I'd have to look at the record.

ASPRAY: And the hybrid machine?

STEIN: The first hybrid we built in the late 1950s. The second one came about -- the planning, money raising, design, and then building -- all went on in the early sixties. We actually got that machine in about 1966.

ASPRAY: Was it a success?

STEIN: No. It was more of a success than our first one. But by the time we actually got it, digital computing had improved so much that there wasn't a lot of interest left in analog or hybrid computing. The good cases just became too specialized. It was useful as a hands-on facility because our digital facilities were behind glass; our first one had been all hands-on and open-shop. It had some interest in another way because after all it allowed us to do parallel computations. The two machines ran simultaneously and had to be synchronized. So it led to some thinking about parallel computing, which was not all that important a subject in those days as it obviously is today. I'd have to say

we were among the first people who were involved in and thinking about parallel computation, just how to use two machines that could run and work at the same problem at the same time.

We developed the use of the 1604. It was a great machine; I really loved it. I think Seymour designs beautiful machines. We had it loaded down, and it became clear that it was time to go out and get our next machine. President Wilson came in about the time we were thinking about 1604. His advice was to get the best machine we could, not to worry about what it cost, and not to get something obsolete -- not to think about things that were obsolete, because we couldn't conceive of raising enough money. As it turned out, he was right. We got a half-million dollars from the NSF, which was at that time one of the biggest grants ever given by them for that purpose. We received an appropriation from the legislature, which may have been their first direct special item for buying a computer. That was a quarter of a million dollars. So we came up with three quarters of a million dollars for that system, which was retailing for about a million and a half. We managed to acquire it for that amount of money.

ASPRAY: Before we go on, why don't we talk briefly about the 1103 owned by the University, and some of its outside uses. What sorts of problems by outside groups worked on the 1103?

STEIN: We had outside users, but we didn't actively go out and solicit outside business. One of our restraints was that we didn't care to be in competition with various manufacturers with whom we had to do business in other ways, and who were operating service bureaus. We allowed outside use if there was clearly some justification for it: if we had some type of unique program, or if it was one of our students who had received his or her degree and had gone to work for an outside organization, and wanted to come back to do something on the equipment that he or she had written the program for and was familiar with.

ASPRAY: So continuity was a criterion?

STEIN: That was the kind of thing we looked for. I remember turning down offers from Honeywell to buy thousands

of hours, primarily because it seemed that we ought not to be in competition in that way. Also, our faculty and students were making good use of the time. We were pretty heavily loaded. We didn't want to get into a position where we essentially said, "Too bad for you, but we need the money." Our system was blind as to whether the user

was paying for the usage or not. It might have been naive of us, but that is the way we operated. Students had as good access as research projects that paid. And I was a little worried that these outside users who were putting down large sums of money would demand priorities that at that time I didn't want to concede to them. Maybe if we needed the money, or if I knew more about money in those days, we would have done it; but we didn't. What the applications were, I don't remember. You could probably find them in the files somewhere.

We had other kinds of relations with outside organizations, because all computers have user organizations. We were active in the national user organizations: the UNIVAC users' organizations when we had the 1103, the CDC users' organization with the 1604 and, subsequently, with VIM, which in Roman numerals you can interpret as 6000. Also, I recall that we had a sort of a Twin Cities users' organization that included the University, industrial, and some business users, I believe. I served as the first chairman of this organization, and I remember the trials and tribulations of trying to arrange programs.

ASPRAY: What was some commonality of interests between these various local groups?

STEIN: Just computers. I believe that in the Twin Cities, there's a chapter of the ACM, the Association for Computing Machinery functioning now. That chapter grew out of this group. I participated in getting it off in its beginnings. I was the first chairman of the group, and I was the first program director. We had people like John W. Carr III, who at that time I believe was the president of the ACM, come out and speak to us. Mainly our programs brought in academic and not so many business people. I presume it was because those were the people I knew the best.

ASPRAY: Again, on this early period, where was Minnesota in comparison with some of the other universities that

are regularly compared with it - the big research midwestern universities like Wisconsin, or Illinois, and Michigan?

STEIN: In terms of hardware and software facilities, we were equal to any of them. We developed most of our software facilities ourselves. In terms of the amount of money that was being spent, we were lagging far behind. In terms of the national publicity that we were getting, we were way behind. That was probably our own fault. For what we were doing, we should have had a lot more publicity. I think we ran a computer center that was the equal of anybody's. There was one professor down in the medical school who always complained about our center. He was one of these guys that walked in the door the second the computer would go down. We used to make it hard for people to take their work elsewhere, especially if they had financing. But we allowed him to take his to the University of Wisconsin, where he claimed that they had a program much better than ours. Within a month, he was back and very apologetic. I think that in terms of what we had we were up there. In the early days with our 1103 and our 1604, we always had the best machine available. That even became more so when we went into the 6600.

I was on sabbatical in 1963-64. All the time I was gone, I kept thinking that we had come to the end of our rope as far as the 1604 was concerned, and that we had to get a new machine. When I came back we began to work on getting a CDC 6600, which was the supercomputer of its time. We had a grant of over nine hundred thousand dollars from the NSF toward that machine. We also received authority from the regents to borrow the balance that we would need beyond that. I might add that that grant from NSF was one of the biggest that they had ever given for that kind of a thing. The only bigger one that they had given up to that point was to the University of Texas. And since Texas had the President, and we only had the Vice President, that's what we had expected to happen. But we received almost as much as they did. The regents, I think for the first time, agreed to borrow money. They had various negotiations, and we finally arrived at a contract with CDC. The machine that normally would have gone for about three million came in for about a million and a half. I'm sure the actual contract is on file, so you can check those figures.

At that time, I thought we had established a computer center that was second to none in any university. It was a supercomputer and put us in a position to really take off. We'd built up the staff to about seventy full-time i We had

leased the NSP building out on Highway 280. We put in a network because our main computer was out on Highway 280. We then had a concept of it as being the center of a network of subsidiary computers at different locations on

280. We then had a concept of it as being the center of a network of subsidiary computers at different locations on campus. These would have the ability simultaneously to do some local kinds of work, which would be tailored to the local interests, and to send work back and forth to the main machine at Lauderdale. We actually established that with such centers on the West Bank, in the Medical School, and on campus in Experimental Engineering and in Space Science. It was a very successful concept, and at the time, we were looking ahead to tying in Duluth and all the other branch campuses. And I felt that in order to properly exploit the potential of this supercomputer center, which was still called the Numerical Analysis Center, we needed a graduate program in computer science.

DATE: 7 November 1984

TAPE 3/SIDE 1

ASPRAY: This is the a second [session of an] interview with Marvin Stein in his office at the University of Minnesota on the seventh of November 1984. The interviewer is William Aspray of the Charles Babbage Institute. In our last interview [session], we discussed the development of the computing center. Computing activities, especially the machinery that was purchased or donated to the University up until the founding of a graduate program in computer science. Let's go back and discuss some of the educational issues -- the development of programs, the pressures to build up a program in computer science -- and then talk about the formation of this graduate program.

STEIN: When I arrived here in 1955, my mandate, as I took it, was to introduce the use and application of computing machinery to the University, to introduce course work about modern computing machinery as devices of intrinsic interest, and ultimately to introduce research about computing and computing machinery. I began with a course in 1955, a three-quarter sequence whose name I don't remember, about the hardware and software organization associated with modern computing equipment. There were so many people attending that first meeting, as I recall.

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Maybe a hundred people, which at that time was considered tremendous;~p thirty or forty to a class in those days. We immediately split that course into two sections, both of which I taught. That was the beginning of a successful course. It contained all the elements of what we teach in computer science today, except for numerical analysis. At the same time I was starting the course I just described, Bill Munro was beginning a year sequence in numerical analysis for engineers. All these courses were in the Institute of Technology Mathematics Department. I'd say that out of those two sequences almost all of the current curriculum in computer science developed. What's left of the course I started is the content of our two-quarter sequence, 5101 and 5102. The attendees were mainly graduate students.

ASPRAY: In science and engineering?

STEIN: In science, engineering, psychology, education, life sciences.

ASPRAY: What were the prerequisites for taking the course?

STEIN: I'm not really sure I recall. Probably the prerequisites were something like upper-division standing and a year of analysis. As I viewed it, the prerequisites were just a reasonable order of intelligence and some kind of experience dealing with symbolism and its manipulation.

ASPRAY: Were undergraduates admitted?

STEIN: Yes, and there were undergraduates in the course. But I'd say the majority of students were graduate students. A number of the students have gone on to make names for themselves in computer science, in the application of computational techniques, and in their own areas of expertise.

ASPRAY: Were the students in this three-quarter sequence exp ected to do a certain amount of laboratory work?

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STEIN: Yes. We began to use some of the time that had been given to us on the Engineering Research Associates 1103, in connection with this particular course and also in connection with the numerical analysis sequence. The students developed quite an expertise in dealing with computer equipment. This was not only the students from engineering, physical sciences, and math, but as I said from a wide spectrum in the University. I recall one graduate

student in sociology, who upon completing his degree went to another Big Ten university as an assistant professor. He came back on a visit and stopped by to see me and just wanted to tell me how useful the course was. He had become the expert in his department, and he didn't have to believe the so-called experts in the computing center when they told him, "Oh, that can't be done." So he was quite enthusiastic about that course and the kind of education that it gave him.

ASPRAY: Did you teach the students about some of the equipment that was available at the time other than the ERA 1103? Say, the IBM punched card equipment you had at the time?

STEIN: At the very beginning we didn't have any punched card equipment, and we worked with paper tape. When I arrived at the University I was given an office and next door to it another office that was called a lab. The sole equipment in that lab was a Flexowriter, which is a kind of typewriter that is equipped to read and produce paper tape. This was our sole source of input and output on the ERA 1103.

ASPRAY: At certain other schools --I'm thinking of Wisconsin and Michigan -- over a period of time, the faculty had to develop new compilers or other kinds of operating systems, and various kinds of software to help with the coursework for the mass teaching of students. Was that your experience here also?

STEIN: Yes, except that I became the director of the University Computer Center, which was originally called the Numerical Analysis Center. I had staff and they helped with developing software that would be useful in the instructional aspects of computing as well as with the software that would be useful in the research aspects. We

always tried to run an integrated center which was accessible for instructional use and research use without either group of users feeling put upon by the other. I think we were very successful in this endeavor. We didn't have any political or other quarrels among the actual users of the equipment.

ASPRAY: Can you give me some of the examples of this software either for research or instructional purposes?

STEIN: For one thing, we had developed, the University of Minnesota Fortran. It was developed under my direction, but under the direct leadership of Lawrence Liddiard, who is now the acting director of University Computer Services.

ASPRAY: When would that have been?

STEIN: That started about 1960. We developed a number of Fortran systems. This was particularly true when we began to use the CDC 1604. It had been the habit of Seymour Cray, the designer of the 1604, to develop some software that he used in the factory which generally was not the official software that purchasers of the machine would get. We had access to the software that Cray himself used. Using that as a starting point, we began to develop our own University of Minnesota Fortran and also our own operating system. We repeated that when we went from the 1604 to the CDC 6600. This was also a Cray-designed system. Again, we obtained the software that he had been using during the design and testing phases of that machine, and improved it to what ultimately became the University of Minnesota Fortran -- UMF, as we called it. A very well known and widely used Fortran system.

ASPRAY: Used well beyond the University of Minnesota?

STEIN: Yes. We had a number of Canadian universities that used it. It was used by the Tel Aviv University in Israel, the Hebrew University in Jerusalem. I believe that the University of London made use of it, and there were a number of others. In addition we developed our M-O-M-S, or MOMS system, our operating system which served us

in good stead until after I'd left the Computer Center. Then a fundamental change in management philosophy occurred. There was a decision made to go with the official software that was produced and maintained by the organization from which we had purchased the hardware equipment. Those decisions were connected with the so called "unbundling" that occurred. I forget the exact year.

ASPRAY: 1956?

STEIN: No, it would have to be in the 1960s, or maybe even in the early 1970s when it became a significant thing. Software became a separate item that was purchased. In the first contracts that I wrote, I purchased three systems, software was never a consideration. We just received whatever software the manufacturer had that would be given

to us free of charge. When I came back as the chairman of the committee that negotiated the contract for a major update of the CDC-6600 into the Cyber 74, the majority of the language in that contract was devoted to discussing software. Probably in that kind of environment the University couldn't depart too far from the official softwares. In any event, we did things like that on a grand scale.

In 1966 and 1967, we had many plans for introducing a computer network, and the CDC 6600 was installed. When we purchased it we decided we'd install it on campus in the Experimental Engineering building. After the architects that we employed presented their plans, we put them out to bid. The cost proved so prohibitive, that we decided to lease a building in Lauderdale, on Highway 280, from the Northern States Power Company. This building had been their computer center and research lab up to that point. We were able to install the CDC 6600 there at a very low cost. But it was a site four or five miles off campus, so we immediately began to think about communications and networks. Our design was that we would have the CDC 6600 as the center which could then communicate with medium-sized remote stations, the capacity of, say, a CDC 3200. These stations were to have the ability to communicate at about five to six thousand characters per second with the 6600 at Lauderdale, and then simultaneously to carry on work designed with the interests of some local area such as IT, Space Science, Education Psychology, Physical Sciences, or Medical Sciences in mind.

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Now, it was our intention to put in a number of these. We actually installed stations like that in the Medical School, based on a CDC 3300, one on the West Bank to be used by the School of Business that replaced their computer center, and also by the Life Sciences Research Center. Those activities, local activities, then became centered on a CDC 3200, and they also had the facility to communicate directly to the 6600. We also had a terminal in the Experimental Engineering Building and one in the Space Sciences Center. We had plans to install one in the new Psychology Building, which was being built at that time, for the use of Education and Psychology, and one in the St. Paul Campus. Longer range plans included tying in the more remote campuses, Duluth particularly. We were looking into microwave communications. We then began developing software to implement these concepts. A particular aspect of that software was to give us the ability to submit a problem to the local activity of the remote computer, and then to have that problem shifted over to the 6600 batch. It would be sent out there, returned to the local site, then returned to the originator. We developed these facilities to go from that local remote use (that is, remote from the main computer) to the central computer without having to remove the problem and start over again. This was also one of the contributions that we made. We also, as I mentioned in our last interview, devised hybrid comp uting systems.

ASPRAY: Analog-digital.

STEIN: Right. We developed simulation languages for so-called continuous system simulation that would simulate the hybrid systems on a purely digital system. These are just some of the samples of software developments that we were doing. I think I've gone somewhat astray from your question.

ASPRAY: That's fine.

STEIN: I'd say that the two courses I mentioned were the only two courses in what we might call computer science, which really didn't exist at that time. Those were the numerical analysis sequence and the one that I developed. They

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were really supported by the University Computer Center, even though they were given through mathematics. Students could use these sequences for plan-B papers, and they could be examined in the content of this material as part of their written preliminary examinations in mathematics. Subsequently we brought in courses in systems and non-computational mathematics and artificial intelligence. But these were mainly ad-hoc courses that would be given under some special number.

ASPRAY: They would be given course credit, though?

STEIN: Yes.

ASPRAY: Usually through mathematics?

STEIN: Yes. We found that there was really, in mathematics, a great deal of resistance sometimes to giving credit to this kind of work, and also to accepting the theses of our students. They seemed to be willing to accept this kind of material for masters' degrees, but when it came to a doctoral thesis it became quite difficult. While one could be examined in this kind of material as a topic, still a candidate had to take a normal series of examinations covering the kinds of subject matter that people getting degrees in mathematics undergo. That was only natural, and I had to agree with that because those people were getting degrees in mathematics.

ASPRAY: I can understand that very well, too. Were the courses that you mentioned first, numerical analysis and the course that you introduced, offered every year?

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STEIN: Yes. Those course sequences have been offered every year since 1955, they've always been very well attended, and until recently they've had a high proportion of graduate students. As a matter of fact, particularly in the early days, I was frequently called upon to serve on graduate student committees in a wide variety of fields,

because the graduate school, or at least various graduate group committees, allowed in certain programs that this course could serve as a so-called research technique and could be substituted for a language. Computing and numerical analysis -- computer science, which it wasn't called at that time -- was so new that it was felt that we ought to be on the committees to examine the students. And we did that very frequently for both masters' and doctoral candidates.

ASPRAY: How did these two course sequences change over time?

STEIN: Over time, we took advantage of new things that were discovered or came of interest to the budding group of computer scientists. For example, these courses started before the advent of a language such as Fortran, before the advent of operating systems. We always had an operating system, but at the beginning it was transparent to the users because we were working on an open- shop basis. So if the user thought there was an operating system, that user considered it simply to be the computer itself. But languages, even assembly languages, became much more sophisticated. Operating systems that were mainly software-based rather than hardware-based came into general use, and so we had to provide a theoretical view of systems like that for our students. To a large extent, the course began to deemphasize aspects of hardware organization, aspects possibly of computer architecture, and began to concentrate more on software considerations. We looked at the structure of assemblers, compilers, and operating systems. What we gave up for that was some of the detailed structure and organization of the underlying hardware that we used to teach. For example, we used to spend some time talking about machine arithmetic and the theory of machine arithmetic, which can be approached as very abstract mathematics. But that was deemphasized, and today we have a separate course which runs one quarter and covers that subject and a graduate seminar that is given every other year, maybe sometimes more frequently, that covers the more advanced and abstract aspects of that subject. Today we have a separate course in computer architecture which covers a lot more material beyond what we covered in the beginning.

ASPRAY: Were students encouraged to take both sequences, or did they elect to take both sequences? That is, the

numerical analysis and the other sequence?

STEIN: Yes. Most students elected to take both. That is, most students that came from mathematics, the physical sciences, and engineering elected to take both. Some of the students from the life sciences and social sciences were not so sure that they needed both, so they took the course in the organization and application of computing machinery and software. I think it was mainly that they had some kind of a vocational objective or, in certain cases, they had a thesis topic in mind; I suppose most graduate students at that point learn what they have to learn to complete their research and write their thesis.

ASPRAY: Are there records still available from these courses such as course descriptions or any materials of that sort?

STEIN: I may have some records. I'm sure I have the class record books and so on. But, of course, the catalogs are probably somewhere in the University Archives.

ASPRAY: One can learn a lot more from a syllabus than from a catalog description.

STEIN: Yes. I probably do have some syllabi of mine left over from those days. But, as I was beginning to say, we found it harder and harder to get our graduate students through to degrees. What was very discouraging is that a number of them decided not to go ahead because they felt that they were not really interested in getting their degrees in mathematics, in studying the other subjects that were required. Some of the other subjects were very valuable and interesting, but I'm talking about the complete gamut of subject matter.

ASPRAY: One might think that numerical analysis, logic, combinatorics, and probability all might have some relevance to computing.

STEIN: Yes. But I think what they were talking about is that they really didn't want to prepare for the written preliminary examinations and qualifying examinations over the complete gamut of subject matter. They wanted a course of study directed at their own interests, their own particular kind of research. So, we were losing students to places that had programs.

ASPRAY: Can you tell me which schools those were?

STEIN: There weren't really very many. Stanford had a program, MIT did and possibly the University of Wisconsin did. Another way we were losing students was the following; as director of the Computer Center, I made it my business to conduct a developmental program. We began with undergraduate students and we put them to work as computer operators. But a part of their duty was to have in-house education, and to take the courses that I have mentioned. These students then progressed from operators: they became consultants, and some ultimately system programmers. This progression went along with their educational development as well. Of course we had attrition. I might appoint twenty students at the beginning of every year, have ten of them survive to their BA's, and of those, maybe five would come to work as graduate research assistants in the Computer Center. We would suddenly discover that they would leave because they were finding it difficult to pursue their graduate degrees along the lines that interested them. Perhaps our biggest competitor was Bell Labs because they would hire the students and then let them go back to some university for a year to get a degree.

ASPRAY: To get a master's degree?

STEIN: Yes. We lost some of our best prospects to Bell Labs, and we weren't getting any Bell Labs students because we didn't have a program. In 1966, this really began to hurt us, because at that time we obtained the CDC 6600, which was the supercomputer of its time and I felt that this put us in a position to assume the leadership in computing and computing science among the universities in the United States. In order to do this, we had to build up our staff properly. As part of the grant from the NSF, we had funds not only for acquiring the equipment, but for

building a staff. Yet I really felt that it would be difficult, if not impossible, to build up the staff properly and to retain the staff without a program, a solid program, in computer science in the university while the students that we had developed were going off to Bell Labs and other places. Some of them, as I recall, went to UCSD. I'm particularly thinking of two of them who did very nice Ph.D. theses out there in mathematics, but with computer science subject matter.

In any event, what I believe I was talking about was our decision that we could not exploit this leap into the future which we potentially could make with the CDC 6600, without having a strong academic program in computer science in the University. Late in 1966, I decided that we should try to go ahead with a graduate program in computer science. The graduate school appointed a committee to study the matter. Up to this point, the only academic program we had was some kind of a concentration or minor in computer science that one could get with a bachelor's degree in mathematics. It was so difficult that I don't know of one student who ever completed that program. I talked to the then Acting Dean of IT, Frank Vebrugge, into appointing a committee to study the problem and it was, if I may

say so, a very distinguished committee consisting of N.R. Amundson, who subsequently became a Regents Professor; Lawrence Marcus, who also became a Regents Professor; Warren Cheston, who subsequently became Dean of IT; Hans Weinberger, currently the head of the Mathematics Research Center here; George Collins, who was then the head of Electrical Engineering and has resumed that position after some hiatus just recently; myself; and Bill Munro. The committee came out with a favorable report. I don't have the exact date; the committee report I have is in the archives and so on. It was accepted by the graduate school after discussion by all the group committees and by the executive committee. A program that we called Computer and Information Science was established late in 1967.

ASPRAY: What about hiring a faculty?

STEIN: Hiring a faculty turned out to be a problem. We soon found out that, while we had enough mass to establish a decent program, it would be impossible to maintain that program at any reasonable level for very long, considering how quickly the field was changing, because we had no access to curriculum. We could not introduce any courses

without putting them through the curriculum committee of some department that was not terribly interested in allocating any of its resources to a new program. We couldn't hire faculty. We couldn't hire graduate assistants, except by using funding that was available in the Computer Center. This funding was limited. We did have a small amount of flexibility in this matter because Dean Spilhaus, at my urging, had allocated two positions to this new area, Computer Science. Spilhaus' attitude, "If we have a new horse we have to back it," I considered very commendable on his part, and he gave two positions to the program. The positions, however, were assistant professor positions he felt should be attached to mathematics. The recruiting, however, was to be jointly between the University Computer Center and the Mathematics Department.

ASPRAY: Were the qualifications for the people to take these positions somewhat a mixture, in the sense that mathematics wanted to use these people part-time for their own aims?

STEIN: Yes. The fact is Mathematics wanted to use these people full-time for their own aims. We had difficulty agreeing on the people, although we went out and we tried to recruit people upon whom we did agree. Unfortunately, we didn't succeed in getting them. A couple of the people we were after, young fellows at that time who had just finished their graduate work, subsequently went on to make excellent reputations for themselves. They didn't want to come to a completely new program. We did manage to get some visitors on those positions. One that I can remember was Joseph Gruska working in automata theory and computational complexity. He came from Czechoslovakia, and now he is a rather eminent person in that particular area at the University of Brateslava, I believe.

We had difficulties. We couldn't reward people very well because we didn't control any budgets to speak of. We couldn't introduce courses. We couldn't hire people. So we would, in a few years, just atrophy. I went to warn Cheston, who by that time had become the Dean of IT. We pointed out the situation to him. After the discussions in which Bill Munro participated, we went back and wrote him a letter summarizing what we had discussed. He agreed to the points that we had made, that without a budget the program would atrophy and without an undergraduate

program it was going to be pretty difficult to get a budget. So we proposed at that time to introduce a department with an undergraduate curriculum to support. He agreed and he appointed a committee consisting of four people: myself, Johannes Nitsche, both of us from Mathematics, and Richard Kain and Bruce Lee, both from Electrical Engineering. We were given a budget and a mandate to define and organize the department and the program.

ASPRAY: This was in what year?

STEIN: This was in the beginning of 1969.

ASPRAY: So, essentially, you tried through 1968 to get the program on its feet without support?

STEIN: Yes. We found some people inside the University who wanted to be associated with the department. Bruce Lee was chairman of the organizing committee. For purposes of recruiting, we thought it would be better to refer to him as Acting Head of the Department. He functioned as chairman under that particular title. We organized the

department, defined a curriculum, and went through the various approvals that had to be obtained -- the faculty, the regents, the higher educational coordinating commission, and so on. In the academic year 1970-71, we began functioning as an independent department.

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STEIN: During this organizational period, we were teaching our courses and trying to function as a department. But, the courses were being offered through Mathematics, and we were in temporary space that had been made available to us in Experimental Engineering by the Computer Center -- by me, as director of the Computer Center really. But, by the 1970-71 year, we were able to move into the area that we now occupy in Lind Hall (not as much of it as we have now, but enough for that day) and to begin functioning as an independent department with its own budget, its own faculty, its own curriculum, its own everything -- including its own troubles, which every independent department

has. At that time, I decided to resign as director of the Computer Center and to transfer my appointment as a professor of mathematics to the new department. I was, in that first year, functioning as acting head of the department.

ASPRAY: Before we go any further, I have a number of questions about these early years. Can you specify for me who the faculty members from the university were who came over to participate in the computing center at the beginning?

STEIN: Yes. Ultimately, I came over. Bill Munro went into this almost at the outset of the organizational days with the title of Associate Department Head, which he still has. And there was Jay Levitt, who was an associate professor.

ASPRAY: In mathematics?

STEIN: His title was Associate Professor of Computer Science. In those days, there was a process where people who were appointed in one department and had most of their responsibilities in another department could obtain promotions, without their titles necessarily reflecting any department, but rather more or less what they were doing. So actually, Jay Levitt and Kris Frankowski were both appointed as assistant professors in mathematics who spent most of their time in the Computer Center and also in teaching the kinds of courses that sprang up from the two sequences that I mentioned at the beginning of our talk. They were promoted to Associate Professors of Computer Science under that special process. Both of them came over to the department when it was organized. Frankowski is still with us, and Levitt is now at SUNY Buffalo, where he is the Director of Academic Computing. We also hired as new assistant professors two of our graduate students who had obtained their Ph.D.'s. The first one was Duane Zimmerman. He was our first Ph.D. student, and he had to remain another year while his wife finished her Ph.D. in mathematics. Both of them, I think, went to a university out in Southern California. Zimmerman joined our faculty, though we knew he would only stay a year. Then, we hired Bill Frante who had been with me since he had been an

undergraduate. He was one of these people whom I had put into our training program, which I discussed previously, and he had become a graduate student and als o functioned as Operations Manager for the University Computer Center until he obtained his degree. I was his advisor, and we hired him as an assistant professor. At the time, he didn't think he was going to stay very long. We didn't think it was, in general, a good idea for former students to remain very long; but he went off on a very independent and fruitful line of research and, at the end of last year, he resigned from our faculty with the rank of full professor. I think he's president of a venture capital company in this area at the moment. That was the original department faculty, assembled from among University faculty and former graduate students.

ASPRAY: The 1968 curriculum had just appeared at the time. What role did it play in the development of your own curriculum here at the University?

STEIN: To tell you the truth, we were very aware of the developments of the ACM curriculum committee, particularly. But I don't know that what they had set down played a great role in our curriculum development. What

did play a great role in curriculum development was something rather more general. For one thing, the Institute of Technology, when I arrived here in 1955, was awarding five-year bachelor's degrees. The five-year programs were abandoned, and departments went over to four-year programs. There was quite a lot of discussion as to what a suitable four-year program was. Dick Jordan, who was head of Mechanical Engineering at that time, and who functioned for several years after his retirement as Associate Dean of IT, chaired a committee to define a four-year degree program in the Institute of Technology. He examined questions regarding its objectives, such as whether to train the professional or to develop somebody who had a broader background and who would then have to become more specialized through a specific employment in the field. He came up with a program whose objective was to train people in a more general way: people who could see the influence of the social sciences on engineering, and so on. These curricula were to have many electives. The electives were quite open, and about that time, the proper liberal arts education for any graduate of the University had been more or less defined. There was a liberal education requirement, and I think the Jordan reports took that very much into consideration as well.

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That was the atmosphere in which I was functioning as chairman of our curriculum committee; that was the atmosphere I was working in. We developed a curriculum that did not try all that hard to train people in narrow specialties, but was open and had a lot of electives in it. It was my hope that we could work with what we called the senior elective, which was composed of a number of credits, half of which had to be in comp uter science and half in some related field, usually in IT though not necessarily, but generally in some obvious field of application. In those days, obvious fields were even fields such as political science, economics, and education as well as electrical engineering, math, statistics, and so on. We thought, if we could combine this elective with liberal education, that we could produce at the bachelor's level people who might go on to graduate school in other areas and bring computer science to important applications, or else who would be well qualified to work in government, industry, or business, but primarily in areas of applications of computer science. While I think we were successful, to a large extent we weren't as successful as we had hoped. That is mainly because, in the long run, we didn't know enough about the requirements of the other areas. But I think we still have that philosophy, and it works. Of course, we have students who take all the electives that they can with intense concentration in computer science, and those are the ones, primarily, who are going on to graduate work in computer science.

As far as the specifics of the curriculum, I don't know that we were radically different from those that were proposed, particularly by the ACM, but we didn't really study it that hard. We felt that we knew enough about it, that we had been working in this area long enough, to know what we wanted to do. We already had a start, and courses that were extant, and so we had a certain basis to begin from. I remember we introduced a so-called undergraduate minor in computer science, so we had that to look at. Our product developed from our own experience, that minor, the Jordan report, all of which reflected the needs of the University of Minnesota. Of course, we then compared what we did to the ACM curriculum recommendation.

ASPRAY: Did you look at the curriculum of any other universities very carefully at all? Stanford, or Purdue?

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STEIN: Stanford was primarily a graduate program. We may have looked at Wisconsin. The reason I say that is that in the year that I was doing all this, we had retained J. Ben Rosen as a consultant, who at that time, had just retired as head of the Computer Science Department at the University of Wisconsin. So we certainly had his ideas and his input in the process. I remember I would send in the minutes of every curriculum committee meeting, and he would reply with his comments and suggestions. But, I can't say that we were influenced by any place very mu ch.

ASPRAY: What about the number of students you were getting in the early days? Had you had any students participate in the program that ran for just a short period by itself?

STEIN: We had very few students who tried that minor. It was a program that was still reminiscent of the five-year degree. To complete it, one needed well over two hundred credits, whereas the programs developed under the influence of the Jordan report required about a hundred and eighty. While the cost of tuition wasn't that big a consideration in those days, it still was some consideration, and in order to have a minor in computers or computing on their diploma, I don't think students were willing to forego the opportunities that were then available to them in business and industry, just to spend the extra time and

money.

ASPRAY: What about the development of the undergraduate program? How long did it take for enrollments to pick up there?

STEIN: My forecasts were that we would have about 100 students in each year. In about six years, that came to pass. We started in our first year with probably about fifty students. This was with a curriculum in the Institute of Technology. Subsequently, very shortly after that curriculum was approved and functioning, I began talking with people in CLA about a curriculum leading to a Bachelor of Arts degree in Computer Science. (The IT curriculum leads to a Bachelor of Computer Science.) These talks were cordial and were nearly completed by the end of 1970-71. They were well advanced, while I was still chairman of curriculum. Then, I turned this over to a new member of the faculty, Ken Brown. I had hired him while I had been acting as head in the first year. I also hired J. B. Rosen, who decided to leave Wisconsin. He was to come as the department head. Brown culminated the CLA negotiations. We now also have a CLA curriculum. In the Bachelor of Computer Science program, we now have a total of about six hundred undergraduate majors. I would guess we have another four hundred in CLA who are candidates for a Bachelor of Arts degree in computer science.

ASPRAY: How do the two curricula differ?

STEIN: In terms of the required technical courses, they don't differ at all. The IT program has the senior option, which meets concepts that were suggested in the Jordan report and is therefore akin to a type of what you'll find in other IT curricula. Our senior option differs from the CLA equivalent thing, which is distribution of electives in CLA designed to meet certain college requirements. That is the most significant difference with regard to computer science. Nevertheless, I think that a person in IT who took his senior option with an emphasis in some CLA field would probably end up with about the same number of credits of Computer Science, counting required technical courses and electives, as a student in CLA. The other differences are also at the college level. The CLA students have to study languages, while the IT students have to take physics. As I said, technically there isn't much difference, and I don't see a lot of difference among the students themselves.

ASPRAY: Could you make some comments about the development of the graduate program and about the numbers of graduate students you started to get over time?

STEIN: The graduate program was approved in 1967. The graduate school set up a special group committee for Computer Science, which elected Bill Munro as chairman. The functions of a group committee, in those days, were to appoint faculty, to approve student programs, and things of that nature.

STEIN: When Bryce Crawford, the Dean of the Graduate School at that time, wrote the letter approving the program, he pointed out that the executive committee was rather insistent that it be a very interdisciplinary program. Consequently, we appointed people from a wide variety of fields in the university, from the School of Business, Education, Statistics, the Life Sciences, Mathematics, Electrical Engineering. Of course, we appointed all of the people that were in our department, and we were actively recruiting people. This was before the department, but as we became a department, naturally, we appointed all the people that were at the University, that joined the department, and, ultimately, when we had the department, all the people that we recruited; so that we had a pretty good-sized and a relatively active faculty. There was a pent-up demand for this program, and we also managed to recruit a pretty good new class of students. This was due partly to the fact that the Computer Center had a number of assistantships to offer these people. In the first year, we gave the written preliminary examination. I would guess about 25 students took the exam, which I don't think was too bad to get the program underway. I don't know if you wanted me to go into the details.

ASPRAY: I would like to hear more about the development of the curriculum and what kinds of students you wanted to produce.

STEIN: We were interested in what we considered the core area of computer science, and we were primarily interested in producing students for industry, government, and business to work at research laboratories and, to a certain extent, inevitably, there were those who insisted on an academic career in computer science. We were concentrating on students who were really interested in compilers, languages, operating systems, and the generalized applications of computer science.

ASPRAY: Could you elaborate on that for me?

STEIN: What I'm really talking about is where you're not looking at some specific differential equation, but a class of mathematical problems, and how computer science methodology and computing machinery could impinge on the solution of problems of this nature.

ASPRAY: Can you give me some examples of areas of computer science that the program did not pursue actively?

STEIN: I don't know that we had it in mind to exclude any particular areas. I think if there was one that we didn't pursue actively, it would have been in computer architecture and design; although we always had an intention to maintain a solid interface with that area, particularly in the part that we would call architecture. Design, we had a feeling, was more or less an engineering subject. To the ext ent we were pursuing it, it was through the members of the graduate faculty who were in Electrical Engineering.

If you consider there to be two faculties, the core area faculty would be primarily the departmental faculty. The graduate faculty includes the departmental faculty, but graduate faculties transcend departmental lines. There were the core areas of computer science, which at that time we could think of as software engineering, compilers, languages, operating systems, and the generalized kinds of applications I mentioned, and then the more peripheral areas, which would be more specific applications and would be dealt with in the components of the graduate faculty that belonged to other departments. I would say the more important components, which possibly at the beginning we considered to be somewhat peripheral, were theory, computer architecture, and design. But we always intended to have, in the graduate faculty, people who were also depart mental faculty, who could serve as an interface to these peripheral areas, so that they weren't out there orphaned with no attention from us. That is the way we've tried to develop. I think some of these peripheral areas have drawn closer to the core as the subject has developed and

changed, particularly with the advent of very large scale integration and the rendering of hardware, the least expensive element of a computer system. I believe one can begin to think very much in terms of designing special purpose systems, fit to the application. When that's been made feasible, you won't design a system for some general kind of application, but you'll design really big systems to much more specific kinds of applications.

I believe that pulls the whole spectrum of applications in much closer to the core of computer science. In particular,

you really need the theory, the architecture, and the design aspects. The whole thing has become much more tight-knit. But just how we organize our faculty is an open question being discussed even today.

ASPRAY: How did the strength of having a whole series of high-end line computers affect the program? For a university, you had the best computing equipment that anyone could have.

STEIN: To my mind, it didn't affect it very much. And, unfortunately, I don't think our graduate program affected the Computer Center very much. In the outcome, we didn't take that leap into the future that I'd been hoping for. There were two things that I tried to institute when we started the graduate program, and one was a system by which every graduate student undertook to become an expert in some aspect of the Computer Center's operations, particularly in the software. One would become an expert in Pascal, another in MNF Fortran, another in some part of the operating system, another in something else, and so on... The aim was that these people would serve as resource people in the Department and to the Computer Center. That would establish a special relationship between the Computer Center and the Computer Science program as well. Another thing that I tried, which we had as a requirement, was called the practicum, which said that no student could get an advanced degree in computer science without demonstrating a high level of proficiency in the actual application and use of computing machinery.

ASPRAY: How would that be demonstrated?

STEIN: This would be demonstrated by industrial work, properly certified and documented, by carrying out some special project with a member of the Computer Science graduate faculty, or it could be demonstrated by making some contribution, possibly connected with the idea that I previously mentioned, in the Computer Center. Later, in order to help students with the Internal Revenue Service, because sometimes they were paid for carrying out these projects, and we wanted them to be tax-deductible, we made them a required part of their education. We said that they could do this by teaching, at the appropriate level, the use of computing equipment.

We had that practicum requirement for a while. But one year when I returned from sabbatical, it seemed to have disappeared and I never did find out what happened to it. We began that other scheme, clearly, because the first bunch of graduate students that we had were given appointments in the Computer Center. Those were the new ones, and most of the residue already had appointments in the Center. But I left the Center in June 1970, and the new management really didn't have any interest in pursuing a special relationship with Computer Science. If you want to know the truth, I don't think they had any great interest in taking a supercomputer and developing the potential of that system as a supercomputer and a research tool, which could still be used in an integrated manner to provide for the instructional needs of those times. They didn't pursue it. As a matter of fact, philosophically, they took an entirely different emphasis, which was what I call "Meccizing" the Computer Center, and that is turning it in directions which would be more in accordance with the philosophy of the Minnesota Educational Computing Consortium.

ASPRAY: It's worthwhile to have some of this spelled out.

STEIN: This was a move instituted by state government to coordinate and control all of the computing activities that were supported by the state of Minnesota. It grew out of a study of state computing that was made by a committee appointed by Governor Levander. That committee saw that the University of Minnesota, the state universities, and all education came under this state-supported rubric. A bill was introduced in the legislature, which didn't pass. I probably should consult sources, but I suppose that then they tried for a somewhat more modest success, which would not include everything. Also, they were probably influenced by the passage of the Joint Powers Act. They

came up with this organization, The Minnesota Educational Computing Consortium, which would organize computing for the University of Minnesota, the state colleges, the private colleges, the technical and vocational schools, the community colleges, and all of the public schools, K through 12, as the jargon has it. This organization came to be under the auspices of the Joint Powers Act. I was one of the people who was not very much in favor of its coming into existence in the form that it had. Essentially, it was to take control of all the computing equipment and provide computing services to all of these aspects of education. It might not have intended to take physical control

of the existing systems , but it did intend to have its own systems through which it would control.

I think the new management of the Computer Center was in favor of very close cooperation with MECC, and in order to effect this cooperation, they had to really cut back on the plans that I had had to develop what would certainly be called the Supercomputer Center today. As I said, our name was the Numerical Analysis Center. At that point, we changed to the University Computer Center. I'm sure a lot of the attitudes within the University came right from the top. President Moos felt that this was a way to secure his popularity and standing with the legislature, because the legislature was behind this, or at least he thought they were. As a matter of fact, while initially they had been, by the time it all came to be, there had been a change in the governor and a change in control in the legislature and the legislature actually severely modified MECC in subsequent years. They ultimately changed it to what I thought it should have been in the first place, but by then it was too late.

ASPRAY: Namely, what did it become?

STEIN: It became primarily a consulting organization for K through 12, not worried about maintaining hardware systems or maintaining a lot of control over the use of hardware systems, but one which would work with the public schools and provide applications training to the teachers in using computers effectively. If they had had a broader function, then they might have set up some general standards of cooperation among existing organizations in the state that were already well advanced in computing. There was one area where nobody was really very well advanced, although the University might have had the most experience in it, and that was in communications. They may have provided, even down to the engineering levels, consultation on networking and communications. That's what I thought they should be doing. While they're not doing all of that today, they are concentrating their efforts in the public schools.

ASPRAY: You mentioned University administration a moment ago, which brings me to my next question. How strong was the support from central administration for the development of the Department of Computer Science?

When I look at Minnesota compared to some of the other Big Ten schools, the number of faculty members seems much smaller. Now I understand there are adjuncts and people from other departments that are involved. But, still it seems like the core is extremely small, especially given the large number of students you have coming through.

STEIN: One of the things that I did in the year 1970-71 that I spent as acting head of the Computer Science Department -- which was, as I said, our first year as an independent department -- was making the plan for the development of Computer Science. That plan was made in competition with a number of University departments. We were competing for the right to submit our proposal to an NSF institutional program. NSF restricted submissions to one proposal per university. I wrote the proposal, which was actually a five-year developmental plan for the department. Ours was selected as the most worthy proposal, and I believe that at that point we had the support of the central administration. We certainly had the support of the Dean of IT, who was Warren Cheston, and he told me that even if we were not funded, the personnel part of our proposal could be handled by IT out of deaths, retirements, and resignations.

TAPE 5/SIDE 1

STEIN: This was an oral communication from the dean; he didn't put it in writing. They seldom do. In addition to that, part of our proposal envisaged a computer science laboratory which came to about a million dollars. We were asking the National Science Foundation for half of that. We received the okay from central administration, on the

recommendation of consultants they had hired to survey the future of computing in the University of Minnesota. One of these consultants subsequently came to work for the University. He was Peter Patton, the former director of our Computer Center. The other was already hired by the University and that was Peter Rolle. The two Peters then recommended that we receive an item in the University budget, and it went to the legislature. Unfortunately, it wasn't funded. Neither was our NSF proposal, because the NSF decided to kill its institutional program.

ASPRAY: What year was this?

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STEIN: 1970. That was a political decision. Institutions weren't supporting the President at the time. In any event, I think I was entitled to the feeling that our program had considerable support. At that time, we had about twelve full-time equivalent faculty members in the program. I had envisaged an expansion to about thirty-one FTE.

ASPRAY: By what time?

STEIN: In roughly five years. I have to step back a little because that also included our graduate students on salary, taking four half-time graduate students as being equivalent to one faculty FTE. Including them, we were expanding from twelve faculty FTE, and a number of graduate students on salary at that time, to thirty-one. This proposal was approved. At least the faculty part of that could presumably have been dealt with out of deaths, retirements, and resignations, if necessary.

The following year, I went on sabbatical. When I came back, I discovered that there was a crisis, and the University was valiantly trimming budgets. We benefitted to the extent that we didn't get any trim. But from that point on, there was never any commitment to the original program. We had a new dean. The dean who was originally with us, you remember, had been a member of the committee that founded the graduate program. He had left. His successor, while not antipathetic to our program, was not particularly favorable to it. I had predicted to the outgoing dean that he wouldn't be. He had assured me that I was wrong. But, nevertheless, that's the way that it turned out. Dick Swalin never did anything against us, particularly, but he never did anything for us, either. We did receive a few new resources and I think we actually got our faculty up to fourteen or fifteen positions at one time. But in 1980, when I started to write another report -- "Computer Science at the University of Minnesota in the Decade of the '80s" -- I think that we were at that same twelve or thirteen faculty members. While our workload had gone up by a factor of 10, (it certainly exceeded the predictions that I had made for credit hours, etc.), the faculty hadn't gone up at all. Nevertheless, the Gorman report rated us number 4 among undergraduate programs in computer science.

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ASPRAY: This was in what year?

STEIN: This was in 1980. This had to be accomplished through the sacrifice and hard work of the faculty that we had. I just want to make one nasty remark while I have the opportunity; we can edit it out later if necessary. I believe in that same period, the School of Chemistry received fourteen positions. They're part of IT. If there had been a will, there would have been a way. I don't say it isn't partly our own fault; we didn't scream and yell. Maybe our department head should have functioned at that level a little better. He didn't, and I think ultimately that's probably why he had to step down as head. That's only an opinion. We didn't get any of these resources. Today I don't think we will ever get the resources, although my last report called for the number thirty as a minimum, and today the central administration is talking thirty in 1994. In 1994, we'll need sixty. However, I will probably be almost retired by then.

ASPRAY: Let me ask you another question. The University postures itself today as an extremely important resource in the growth of high tech industry in Minnesota. From all that I've heard from you, the department and computing center, especially, were oriented towards serving the needs of the University rather than serving the needs of the outside community, with the exception that your programs were oriented towards producing a number of people for industry and business.

STEIN: Yes. That is the greatest service that we can do them.

ASPRAY: I understand that and agree with that. What I wanted to ask -- maybe I didn't start this the right way --

was about any additional University industrial relationships. For example, adjunct faculty positions, funds from outside industry to help with the educational program, any kinds of job placement for practicum experience. Could you comment on those?

STEIN: Yes. Your concept was essentially correct. The institutions that I've developed were oriented toward

serving the university in the most direct sense to produce the students, to support the faculty research, to support instruction, and so on. I think that, in the long run, the best service that the University can do for the business, and the industrial community, the government, or just for the community in general, is to produce the educated people that they need. But we did have direct relations with industry, mainly, and also with state government. We had graduate student positions where students would do work for which they would be paid, that would be recognized by the faculty of our program, under the direction of a person in industry who would have the status of an adjunct faculty member. We had a number of arrangements of that type.

In Computer Center days, we always had arrangements with the manufacturer of the equipment that we bought, and we had particularly with CDC, arrangements for the development of software. They had acquired the rights to a lot of the software that I mentioned to you. We were paid for them essentially, by receiving exceptionally big discounts and, in other similar ways, by receiving some direct grants of actual cash money for the development of software. I remember one was for the development of a Basic compiler that was in the days before microcomputers made Basic a must. I think CDC wanted that compiler as a point in selling equipment to schools. We had research contracts with industry, and we had industrial people here teaching courses as adjunct faculty members. We had some of our faculty leave us and join industry. For instance, Don Boyd left the faculty and he's now with Honeywell Computer Science, where he's manager of quite a large program. We used the adjuncts in those days usually to give special courses in areas of expertise that faculty did not have. In that case the students were mainly advanced. We used the adjuncts also sometimes to give special courses, topics courses, which we encouraged our seniors to attend, especially those who were interested in going to work upon graduation, as a way of easing their transition into the industrial community. My feeling is, again, that our product is the educated people more than specific pieces of hardware or software; yet we have a little mix of the other as well. I think we contributed to high tech. But I think the advent of MECC took away a lot of our ability to do that.

END OF INTERVIEW

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Housatonic

Prof. Adrian Stokes (born 1887)

1927 (Oct) - Nature Magazine - "PROF. ADRIAN STOKES. Obituary"

Source : [HP005A][GDrive]

PROF. ADRIAN STOKES. T HE death of Dr. Adrian Stokes, Dunn professor of patholog s Hospital Medical School, Univer · ~L on,·has robbed pathology, an the re med· ne, of one who, though he h""l"IA"'LfF'd.y accom lished much, had not yet reac the height of his powers, and his loss, at the early age of forty, is the more poignant because of the tragic circumstances which surround it. Adrian Stokes was the youngest son of Mr. Henry John Stokes, and was born at Lausanne in 1887. There was a strong medical tradition in the family, for many of his forbears had left names to conjure with in Irish medicine. At Trinity College, Dublin, where he graduated in 1910, he early gave promise of brilliance, for he not only gained numerous academic distinctions, but he was also a keen athlete and was a worthy member of one of the strongest cricket elevens that has represented his Alma Mater. After doing the usual house appointments, Stokes spent eight months at the Rockefeller Institute in New York, and then returned to Dublin where he joined the staff of Prof. O'Sullivan. Henceforth he devoted himself whole-heartedly to the study of pathology and bacteriology, and he had become an expert in laboratory technique when the War broke out in 1914. He at once obtained a commission in the R.A.M.C. and served in France throughout the War. Although actually attached to a casualty clearing station as a specialist in pathology and bacteriology, Stokes took the broadest view of his duties and responsibilities. He equipped his motor cycle and sidecar with an incubator, setting up what was in effect the first mobile laboratory in France, and his work did much to restrict the incidence of typhoid fever in the early days of the War. Of the original work which Stokes carried out during this time, his investigations into the cause and mode of transmission of spirochretal jaundice was probably the most important. He identified the spirochrete and demonstrated its presence in the bodies and urine of trench rats, a discovery which led to the suppression of what might have become a very serious epidemic. But it was not only in his own particular branch that Stokes did brilliant work. He was the inspiration of the mess in which he lived. Full of energy and ingenuity, he not only lent a hand wherever one was required, but also he tackled the problems of others and applied his knowledge of laboratory technique to solving their difficulties. He kept himself up to date in the various new methods of treatment and, as soon as he was convinced of their superiority he never rested until they had been adopted in his immediate vicinity. ' Brass hats ' were to him the means of obtaining what he felt was necessary for the good of the sick, gassed and wounded, and his vehement, but clear and cogent, demands for apparatus, drugs, etc., were very rarely unsuccessful. All this he effected while maintaining his own

special department at the height of efficiency. Those who served with him aver that he did more than any other single individual to improve the medical treatment of the troops and to diminish wastage. On demobilisation in 1919, Stokes was appointed to the chair of bacteriology and preventive medicine at Trinity College, Dublin, but in 1920 he was invited by the Rockefeller Foundation, who had been greatly impressed by his work on spirochretal jaundice already mentioned, to join the West African Yellow Fever Commission. It happened that during his visit to Africa very few cases of yellow fever occurred, and his work was necessarily indeterminate. In 1922, Stokes was appointed to the Sir William Dunn chair of pathology at Guy's Hospital Medical School in the University of London, which he occupied at the time of his death. He did much to improve the status of pathology in the School, and he was tireless in his efforts to arouse interest and to stimulate research. Intensely practical in his teaching, he succeeded in attracting brilliant students, and, given the time, he would have created a school of pathologists keen to tackle problems whose solutions might lead to advances in medicine. In April of this year Dr. Beeuwkes, the head of the Rockefeller West African Yellow Fever Com - mission, asked for Stokes's help, for the problem of yellow fever in West Africa was little nearer solution than it had been in 1920. Indeed, it was still uncertain whether it was identical with the yellow fever of South America. The latter disease is carried by Stegomyia Jasciata, the common domestic mosquito, and Noguchi has described a leptospira as the causative organism. Stokes obtained leave of absence from Guy's for six months and sailed for Lagos in May. He was not particularly hopeful of succeeding where others had failed, and his first letters spoke of negative results. In July the outlook was brighter, and in the middle of August he wrote that he had succeeded in transmitting the disease from the human pat.ient to monkeys, both by blood infection and through the medium of mosquitoes. No leptospirre had been found, and he was satisfied that the cause had not yet been isolated. He was then engaged in the microscopical examination of infected mosquitoes in serial section. "It is infuriating to know that one has the virus under one's eyes and cannot see it," he wrote at that time. Then on Sept. 16 came a cable to say that Stokes was seriously ill. He was removed that day to the European Hospital, where he died of yellow fever on Sept. 19. How he contrncted the disease is not yet certain, but it would appear highly probable that he infected himself accidentally in his laboratory. Time alone can show the value of his work on the disease to which he fell a victim; but if, as appears certain, he has helped materially towards the discovery of the cause of yellow fever in West Africa, he would not have counted the cost.

In Stokes's public and private life, transparent honesty and sincerity irradiated his every word and every action ; outspoken and candid, he never left any doubt as to his meaning and' to beat about the bush ' was foreign to his nature. His energy and his capacity for work were amazing, and all the more so when one remembers that his greatest enemy was insomnia, and that for him five hours was an unusirnlly good night's sleep. As a teacher, he preached the gospel of scientific truth with an earnestness born of conviction. His students absorbed from him the right critical attitude towards their work, and the best of them became infected with his own zeal for research. He was generous to a fault, and many a lame dog was helped over a stile without ever knowing whence his help had come. An Irishman by everything but the accident of his birthplace, he loved his country as deeply as he hated those whom he regarded as being responsible for her unhappy state, which was a source of real grief to him. Stokes died in harness, as he would have wiRhed to die, but his premature dea1,h will be widely

mourned by all who arc interested in the advancement of med~c~I knowledge, and eRpecially by those who were privileged to come into intimate contact with_ a personality so vigorous, so stimulating, and so kmdly. T. B. ,T.

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Peter Paul Strzok I (born 1936)

BORN: 03/18/1936 ([HW001L][GDrive])

Children:

Father of **Peter Paul Strzok II (born 1970)**

Family Tree - Parents, Sisters and Brothers

Family tree doc : See [HL001G][GDrive].

42. MICHAEL JOHN[5] STRZOK *(MARI ANNA[4] POLNIASZEK, FRANCIS[3], JOANNIS[2], VALENTINUS[1])* was born Aft. 1894 in probably, Thorp, Clark, WI, and died in Eau Claire, WI. He married JOSEPHINE BADZINSKI September 02, 1929 in St Hedwig's, Thorp, Clark, WI, daughter of WALTER BADZINSKI and MYRTLE KUBERA. She was born November 01, 1911 in rural Thorp, Clark, WI, and died November 01, 1997 in Sacred Heart Hospital, Eau Claire, WI.

Children of MICHAEL STRZOK and JOSEPHINE BADZINSKI are:

i. JULIANNE[6] STRZOK, d. Laurinburg. NC; m. HARRIS; d. Laurinburg. NC.
ii. JAMES S J STRZOK, d. Silver Springs, MD.
iii. RICHARD DR. STRZOK, d. League City, TX; m. JIMMIE; d. League City, TX.
iv. MICHAEL STRZOK, d. Lawrenceberg, IN; m. BEVERLY; d. Lawrenceberg, IN.
v. PETER STRZOK, d. Minneapolis, MN; m. VIRGINIA SUE; d. Minneapolis, MN.
vi. DAVID STRZOK, d. Washburn, WI; m. CLARE; d. Washburn, WI.
vii. LAD STRZOK, d. Washburn, WI; m. JENNY; d. Washburn, WI.
viii. CHRISTINE STRZOK, d. Milwaukee, WI; m. ROCKY TODD; d. Milwaukee, WI.
ix. MARYANNE STRZOK, d. dsp, Altoona, WI.
x. STEPHANIE STRZOK, d. Eau Claire, WI; m. KIM SCHEIDEGGER; d. Eau Claire, WI.
xi. ELIZABETH STRZOK, d. dsp, Boulder, CO.

[HL001I][GDrive]

1958 - Graduates Marquette University with a BS (Bachelor of Science) degree

Source : US Army Register notes, 1963 US Army Register (Full page : [HG0012][GDrive] / Image above: [HG0013][GDrive])

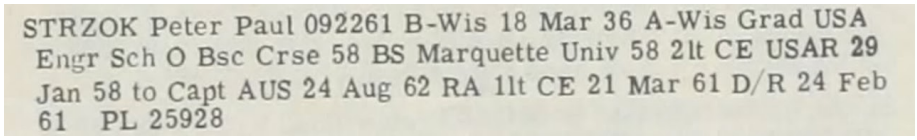
1957 - Another moving violation? Sep 5 1957 - https://www.newspapers.com/image/267805843/?terms=%22peter%2Bstrzok%22

1958 - 1969 - US Military (Army)

1958 (January) to 1962 (August) - US Air Force

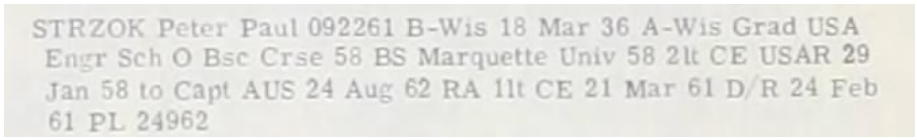
1962 (August 24) -

1958-1963 - Second Lieutenant, Corps of Engineers, US Army Reserves / Captain , US Army


STRZOK Peter Paul 092261 B-Wis 18 Mar 36 A-Wis Grad USA
Engr Sch O Bsc Crse 58 BS Marquette Univ 58 2lt CE USAR 29
Jan 58 to Capt AUS 24 Aug 62 RA 1lt CE 21 Mar 61 D/R 24 Feb
61 PL 25928

1963 US Army Register
Full page : [HG0012][GDrive]
Image above: [HG0013][GDrive]

1964 - No change in US Army Register between 1963 and 1964

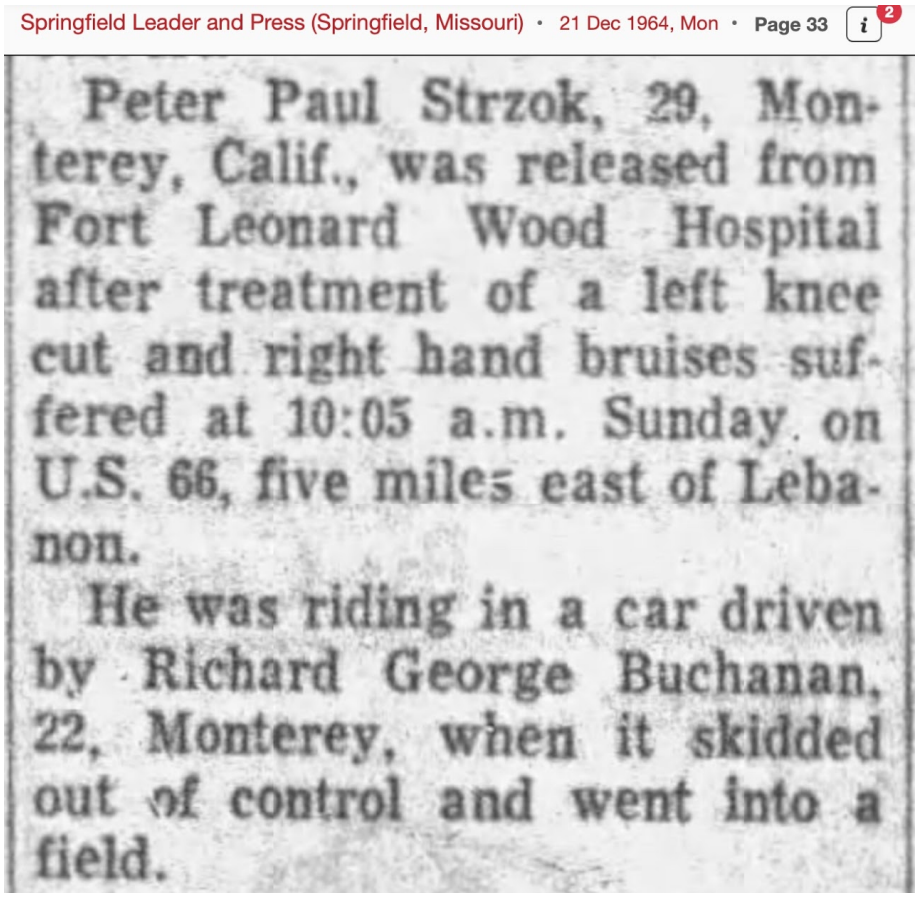

STRZOK Peter Paul 092261 B-Wis 18 Mar 36 A-Wis Grad USA
Engr Sch O Bsc Crse 58 BS Marquette Univ 58 2lt CE USAR 29
Jan 58 to Capt AUS 24 Aug 62 RA 1lt CE 21 Mar 61 D/R 24 Feb
61 PL 24962

1964 US Army Register
Full page : [HG0014][GDrive]
Image above: [HG0015][GDrive]

1964 (Dec 21) - Living in Monterey, California, but gets into a car accident in Missouri

This may mean "**Presidio of Monterey" language school (see** https://en.wikipedia.org/wiki/Defense_Language_Institute)

Full page : [HN00HT][GDrive]

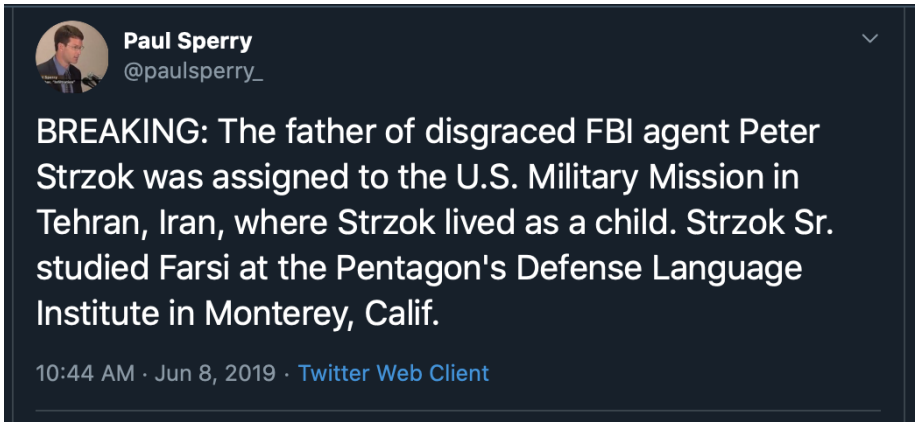

Springfield Leader and Press (Springfield, Missouri) • 21 Dec 1964, Mon • Page 33

Peter Paul Strzok, 29, Monterey, Calif., was released from Fort Leonard Wood Hospital after treatment of a left knee cut and right hand bruises suffered at 10:05 a.m. Sunday on U.S. 66, five miles east of Lebanon.

He was riding in a car driven by Richard George Buchanan, 22, Monterey, when it skidded out of control and went into a field.

[HN00HU][GDrive]

https://twitter.com/paulsperry_/status/1137369853113901056

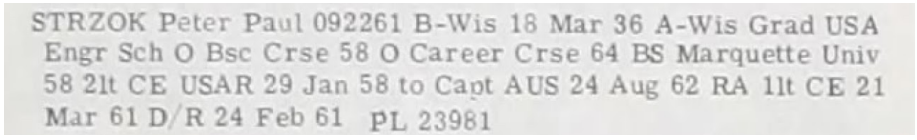


D/R Date of Rank - Feb 23 1961

AUS - Army of the United States

RA - Regular Army

CE - Corps of Engineers

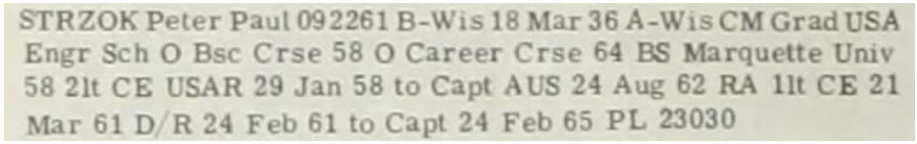

STRZOK Peter Paul 092261 B-Wis 18 Mar 36 A-Wis Grad USA Engr Sch O Bsc Crse 58 O Career Crse 64 BS Marquette Univ 58 2lt CE USAR 29 Jan 58 to Capt AUS 24 Aug 62 RA 1lt CE 21 Mar 61 D/R 24 Feb 61 PL 23981

1965 US Army Register
Full page : [HG0016][GDrive]
Image above: [HG0017][GDrive]

Feb 24 1965 - Promoted to Captain

RA - Regular Army

CE - Corps of Engineers


STRZOK Peter Paul 092261 B-Wis 18 Mar 36 A-Wis CM Grad USA Engr Sch O Bsc Crse 58 O Career Crse 64 BS Marquette Univ 58 2lt CE USAR 29 Jan 58 to Capt AUS 24 Aug 62 RA 1lt CE 21 Mar 61 D/R 24 Feb 61 to Capt 24 Feb 65 PL 23030

1966 US Army Register
Full page : [HG0018][GDrive]
Image above: [HG0019][GDrive]

1966 (November) - Serving in Iran

The following anniversary announcement identified **Peter Strzok Sr. in Iran as of November, 1966**. For full newspaper page, see : [HN00HR][GDrive]

Marshfield News-Herald (Marshfield, Wisconsin) • 03 Nov 1966, Thu • Page 13

Walter M. Badzinskis of Thorp Mark 60th Anniversary Oct. 29

Mr. and Mrs. Walter M. Badzinski of Thorp, who were married Oct. 29, 1906, in St. Aloysius Catholic Church in Roseau, Minn., marked the 60th anniversary of their marriage on Saturday, Oct. 29, at a celebration held in the American Legion Hall at Thorp. The Rev. Anton Drewnicki, Leo, Minn., officiated at the 1906 nuptial rites.

At 10 a.m. in St. Hedwig Chapel in Thorp, the Rev. Eward Masalewicz celebrated an anniversary Mass of thanksgiving, with St. Hedwig's Senior Choir singing Polish hymns.

* * *

The dinner was served by the Ladies Auxiliary to the couple, their 12 children with their spouses, the grandchildren and great-grandchildren, also Mr. and Mrs. Harold Goodrich, Minneapolis, Minn., brother-in-law and sister of Mrs. Badzinski, and Mr. and Mrs. Joe Kubera, Augusta, and Mr. and Mrs. Andrew Kubera, Thorp, her brothers and sisters-in-law. Priests attending were Father Masalewicz and the Rev. Roy Mish of St. Hedwig's parish.

Table decorations included a bouquet of 12 red long-stemmed roses, a gift of the 12 in-laws and a decorated anniversary cake. There also were potted chrysanthemums from the David Kraemer children of Marshfield. Mrs. Badzinski had a corsage of white chrysanthemums and red roses and her husband had a white chrysanthemum centered with a red rosebud for his boutonniere. Special gifts included silver to Mr. Badzinski from the grandchildren and great-grandchildren and a crystal rosary to Mrs. Badzinski from the grandchildren.

Mr. Badzinski, son of John and Apolonia Badzinski, was born in German Poland at Izabella on Sept. 9, 1881, attending school there for seven years. He also attended a locksmith school for three years. He served in the 14th Infantry of the German Army for 25 months.

Mrs. Badzinski, the former Myrtle Kubera, was born in Poland Dec. 29, 1887, to Michael and Josephine Kubera. She was educated in the town of Reseburg, living in Wisconsin and Minnesota before she married. Following their marriage, the couple homesteaded in Kit Karson County, Colorado, farming for five years. They then farmed in the towns of Withee and Reseburg for 30 years. In 1941 he retired.

Both Mr. and Mrs. Badzinski, who are in fair health, are Catholics. He served School Board District 3 in the town of Reseburg for four years and as supervisor of Reseburg township three years. His hobbies are hunting and fishing and his wife enjoys sewing.

* * *

The 12 children of the Badzinskis are Louis, Thorp; John, Thorp; Mrs. Michael (Josephine) Strzok, Gilman; George, Bayfield; Mrs. Walter (Apolonia) Szczech, Greenwood; Harry, Thorp; Alex, Thorp; Joseph, Colby; Mrs. Stanley (Gertrude) Staszcuk, Eau Claire; Albert, Enid, Okla.; Mrs. David (Elizabeth) Kraemer, Marshfield; and Mrs. Edmund (Valentina) Krych, Minneapolis, Minn. There are 56 grandchildren and 34 great-grandchildren. All of the children with their spouses and their families including the grandchildren and great grandchildren, were present with the exception of grandchildren in the armed services, Richard Strzok in Hawaii, Peter Strzok in Iran, John Badzinski Jr. in Colorado, Michael Strzok Jr. in Connecticut, Ronald Staszcuk in Texas, James Strzok in Missouri and Dennis Badzinski in Florida.

Relatives attending from out of town came from St. Paul and Minneapolis, Minn., Enid Okla., and from Milwaukee, Wautoma, Waupaca, Marshfield, Colby, Gilman, Eau Claire, Bayfield, Greenwood, Barron and Berlin.

The original attending couple, John Kubera and Maggie Quada, were unable to attend due to illness.

[HN00HS][GDrive]

1969 (July) - Major Peter P Strzok

(See full page in newspaper at [HN00GK][GDrive])

A Bronze Star medal with First Oak Leaf Cluster for heroism, awarded posthumously to Sp. 4 Kenneth Verrett, was presented to his mother, Mrs. Donna Verrett, 613 Carrie St., by Major Peter Strzok, ROTC officer at Lake Superior State College. Sp. 4 Verrett, who was killed in action March 31, 1969, in Vietnam, was awarded the medal for valorous action while serving as a team leader with the 8th Cavalry during a search and clear mission in Tay Ninh Province. Although wounded, Verrett had gone to a forward position to evacuate the last casualty when he was killed. Other medals presented to his mother include the Combat Infantryman's Badge, Air Medal, Good Conduct Medal, Purple Heart, National Defense Service Medal, Vietnam Campaign Medal and service ribbon, Expert Badge for automatic rifle, and Marksman Badge for rifle. (Evening News Photo)

[HN00GL][GDrive]

(See full page in newspaper at [HN00GT][GDrive])

THE EVENING NEWS, SAULT STE. MARIE, MICH., TUES., JULY 29, 1969 7

Sault Program Outlined

Says ROTC Will Expand

Lake Superior State College's ROTC program will be expanding this fall, according to Major Peter P. Strzok, associate professor of military science at the school.

Strzok spoke to Rotarians at their Monday luncheon meeting.

The program has been changed from an engineering emphasis to one of general military science, stressing the specialties of the students enrolled. Thus, a graduate with a major in finance may very well be assigned to the Finance Corps, which will be of more benefit to both the Army during his active duty and to the officer when he decides to return to civilian life.

Strzok also noted that the staff has been increased 70 per cent, with a complement this fall of two non-commissioned officers and three officers. Strzok stated that the larger staff, combined with a relatively small class size, allows for a better program than some larger schools can provide.

Ray Chelberg reported that proceeds from last weekend's White Elephant Sale exceeded $100, proceeds of which will go to the Boy Scouts and the Camp Fire Girls. In other business, Bill Blackstock, Kiwanis president, was present and presented a check for $20 to Rotary President Bob Champion. The amount was contributed to the Camp Fire Girls, and was earned by the Rotarians by their stellar play in softball last week. Blackstock also presented an umpires medal to Ray Chelberg, who was said to have done the most by his calls to insure a Rotary victory.

Guests and visiting Rotarians at the meeting included Wilfred L. LePage of Monroe, Michigan; Brian Callaghan, Hillsdale; Wesley Logan, Hastings, Michigan; W.O. Shelon, Cheboygan, Michigan; and Dick Malpass of East Jordan.

[HN00GU][GDrive]

1970 april 07 - usher at wedding

https://www.newspapers.com/image/3419982/?terms=%22peter%2Bstrzok%22

1970

Peter Strzok II - child born Mar 12 1970 - **Father referred to as "Major Peter Strzok" - Confirming that Peter Paul Strzok I (born 1936) is a Major**.

Also - Note that **Peter Strzok II (born 1970)** was born at the hospital on the **Kincheloe Air Force Base** (https://en.wikipedia.org/wiki/Kincheloe_Air_Force_Base).

(See full page in newspaper at [HN00GM][GDrive])

Newspapers by Ancestry

The Evening News (Sault Sainte Marie, Michigan) · 12 Mar 1970, Thu · Page 7

Downloaded on Jun 8, 2019

STRZOK

Major and Mrs. Peter Strzok are the parents of a son born March 7 at 5:50 a.m.

[HN00GO][GDrive]

1970 (May) - Major Peter P Strzok

(See full page in newspaper at [HN00GP][GDrive])

ROTC Cadets Stage Event At Camp Lucas

There was some puffing and a lot of sweat in old Camp Lucas Friday.

Army ROTC cadets from seven Michigan colleges and universities were in competition at a counter-guerilla invitational meet sponsored by the Lake Superior State College military science department.

Friday's workouts on the physical training courses, battlefield first aid stations, map course and other activities were the prelude to all-night exercises which would take the teams out into the woods and fields.

The Camp Lucas portion of the weekend had individuals and teams competing against the stopwatch in creeping and crawling exercises over a measured course, and making it hand over hand along the high bars in exhausing workouts.

With encouragement from the sidelines, most of the cadets managed to finish individual events. A few fell panting on the grass and then got up to finish off what they had started.

"The first-aid exercises were designed," Major Peter Strzok, chairman of the military science department said, to test under stress the thoroughness of the cadets' application of the medical treatment procedures."

Several simulated casualties were stretched out with foam rubber wounds, rubber face masks exhibiting the proper symptoms, and a verbal story line of how it happened.

Teams of cadets were expected to apply the proper first aid measures.

One of them looked anxiously at an Evening News photographer teetering on a chair with his camera. There seemed a possibility that they might have a real victim to work on.

Participants included teams from Northern Michigan University, Michigan Technological University, Central Michigan University, the University of Detroit, Western Michigan University, and the University of Wisconsin at Oshkosh.

LSSC cadets serve as the "aggressor enemy" in the field exercises, harassing the teams in a wide-range sort of chess game. One division head, who preferred to remain anonymous, volunteered to join the enemy.

Cadets assemble Saturday for a critique and steak fry — they will have existed on two candy bars and a canteen of water since the previous Friday evening. Major General J. H. Chiles, deputy commander of the Fifth Army, will be on hand to observe the exercise.

Planning for the meet has been underway since early 1969. "It's been a big job for the detachment," Major Strzok said. "but it is a fine opportunity for these young men to test their physical fitness and alertness as well as the effectiveness of their photographer teetering on a the past months."

The cadets were welcomed to campus Friday morning by Dr. Kenneth J. Shouldice, LSSC president, who said that "the College is proud to support the ROTC unit on campus and regards it as an important element of the academic and co-curricular structure.

"The ROTC is a voluntary program at LSSC" Dr. Shouldice said. "We have some fine cadets enrolled; and we are proud of them."

[HN00GQ][GDrive]

(See full page in newspaper at [HN00GR][GDrive])

ROTC Cadets Viewed

Major Peter Strzok of Lake Superior State College, representing the 5th Army, conducted the annual federal inspection of the Sault High School ROTC unit this week. Cadets lined up in the park across from St. Mary's School for the inspection. Also taking part were members of the Sault High ROTC Girls' Drill Team. Later in the day the ROTC unit

[HN00GS][GDrive]

1978 (July) - to 1979 (Feb 6) : Works in Iran as a "Support Unit Manager" with Bell-Textron during the height of the Iranian Revolution

Bell-Textron's is *"a firm which sold and services 2,000 helicopters for the Iranian government"*. See [HN00GW][GDrive] .

Peter Strzok II's role at Bell-Textron was terminated when he left Iran (at some time before February 1979), making his employment in Iran with Bell-Textron only a half-year tenure. See [HN00GW][GDrive].

Note these dates, and compare to the Iranian Revolution (Wikipedia : https://en.wikipedia.org/wiki/Iranian_Revolution#Rise_and_exile_of_Ayatollah_Khomeini) . It was from "January 1978 – 11 February 1979". It is almost as if Peter Paul Strzok I went to Iran and worked at Bell-Textron as Iran during the same August 1978 to December 1978 time that *"strikes and demonstrations paralyzed the country"*.

*"Demonstrations against the Shah commenced in October 1977, developing into a campaign of civil resistance that included both secular and religious elements, and which intensified in January 1978. **Between August and December 1978, strikes and demonstrations paralyzed the country.. The Shah left Iran for exile on 16 January 1979,** as the last Persian monarch, leaving his duties to a regency council and Shapour Bakhtiar who was an opposition-based prime minister. Ayatollah Khomeini was invited back to Iran by the government, and returned to Tehran to a greeting by several million Iranians. The royal reign collapsed shortly after on 11 February when guerrillas and rebel troops overwhelmed troops loyal to the Shah in armed street fighting, bringing Khomeini to official power."*

Outside sources of interest -

1. HousatonicITS Twitter thread on Bell Helicopter topics - https://threadreaderapp.com/thread/1023588548216324096.html
2. Quixotic Joust research - http://joust38.rssing.com/chan-8543343/all_p4.html - (2014-10-quixotic-joust-blogspot-com-all-page-4.pdf /https://drive.google.com/open?id=1_ITXjvJelGn6AQiuqNYH3sChNd4VLSUQ)

1979 (Feb)

(See full page in newspaper at [HN00GV][GDrive])

Gilman native says individual Americans treated well in Iran

By Arnie Hoffman
Regional editor

America as a country is despised because it was seen as a supporter of the Shah of Iran, but individual Americans were treated well in respect to the crisis in Iran according to a former Gilman area man who left that Asian nation Feb. 6.

Peter Strzok

Peter P. Strzok, 43, son of Mr. and Mrs. Mike Strzok, now living in Eau Claire, said he hopes the government of Ayatollah Ruhollah Khomeini will stabilize the country.

"I'd like very much to go back to Iran," said Strzok, who spent two terms of military service and seven months as a civilian in the country.

On the issue of treatment of Americans in Iran, Strzok, who was a support unit manager for Bell Helicopter Inc., said, the resentment of America was because Iranians linked the U.S. involved with the shah. "Recently when Iranians saw Americans they would yell 'death to the shah' at them," he said.

No physical violence

Strzok said, "individually, Americans did not suffer any physical violence at the hands of the Iranians. He said two American officials had been killd and one of the deaths may have come in a robbery rather than an assassination.

"When you have a country where hundreds were killed and only two Americans out of the thousands in that country were slain, you can't make a case of physical violence against Americans," he said.

He noted even in the attack on the American embassy there were no Americans killed.

He said there were as many as 45,000 Americans working in Iran as late as last October and with the dependents that number may have been as many as 70,000.

Strzok said it was a combination of several groups that brought about the downfall of the shah. He said he hoped Khomeini would be able to unite those factions and form a stable government. He saids he expected the United States to have a good relationship with the new government because the country needs America's technology.

Needs unification

"Uniting the factions is going to be a major problem," he said, "they all joined together to oppose the shah and some of them may want to go in a different direction."

Strzok said the Communist element is strong in Iran not so much because of numbers but because the Communists are extremely well organized and everthing they do has a purpose. He said some of the problems which seem to exist are not neccesarily the doings of Khomeini supportors but rather separate groups including the one which attacked the U.S. embassy.

He said from his observations the high school students who blocked the streets and yelled the chants were not the ones leading the overthrow of the shah.

He said the workers in downtown Tehran were the ones who brought about the revolution. "The shah's government was very corrupt," Strzok said, "and it got to the point where the workers could not tolerate it any longer because many of the promises of housing, jobs and better living conditions never came about."

Reached a point

"It got to the point where the shah had to go and the people learned how much money some of his top government officials were taking out of the contry to he added.

Strzok said he sensed a change was in the making when he returned to Iran last July after retiring as a Lt. Col. with the U.S. Army Corps of Engineers.

"It was the first time I had heard the working people speaking out openly and criticizing the shah and the corruption in the government," he said.

"It was a consensus sort of thing," he added.

The situation deteriorated to a point, he said, that it was announced in December that the American school at Tehran would not reoen in January and would be closed until the following fall. After the announcement, Strzok's wife and eight-year-old son, Peter, returned to the U.S. Jan. 6.

Large U.S. school

The school, Strzok said, had 3,500 students and was the largest American school outside of the states. His wife was a teacher there.

Strzok, who was working for a firm which sold and serviced 2,000 helicopters for the Iranian government, said he feels Iran has some strong points which may enable the Khomeini government to survive. The major one being that there is a stronger element of management now than ever before. On the negative side, he said the factions within the country, based on economic, religious, ethnic and tribal differences, could create problems.

Strzok said he enjoyed living in Iran as did most Amercians in the country and that he'd like to go back. "It is a beautiful country; the only regret I had was that since July, with the marshall law, that we didn't have the opportunity to travel about more.

Strzok, whose job with Bell-Textron was terminated when he left Iran, is already making plans to fly to Saudi Arabia early next week to check on a new job with a construction enterprise.

[HN00GW][GDrive]

1980 - Joins Catholic Relief Services, moves to Upper Volta in Africa

See [HN00GY][GDrive] .

1981 (Aug)

(See full page in newspaper at [HN00GX][GDrive])

Peter P. Strzok

State native finds his niche in relief work

By LISA FOTH
Of the Press-Gazette

Peter P. Strzok, a native of Gilman, Wis., has seen international cooperation succeed in his work as program director for the Catholic Relief Services in Upper Volta.

Strzok, 45, moved from job to job for two years after retiring as a lieutenant colonel in the U.S. Army and in 1980 found his home in Upper Volta, the fifth-poorest country in the world, according to the United Nations.

Upper Volta is located in west Africa and is bordered on the north by the Sahara Desert and on the south by the Ivory Coast. Catholic Relief Services began its work there in 1960 and has provided financial, educational and medical aid with the help of the U.S. government.

"The big bucks were there," Strzok said about his last job before joining Catholic Relief Services. "But working with greedy people warps your mind."

So when the opportunity came to continue working in foreign countries — as he did during his 21-year stint with the Army — Strzok moved his family to what he calls "a very open and friendly country."

Catholic Relief Services is the largest volunteer agency in Upper Volta and works closely with the U.S. Agency for International Development, the many other nations that provide assistance to the country, and other volunteer organizations.

"It's a pretty well-integrated development program," Strzok said about the cooperation between nations and other agencies. "The program is working reasonably well."

Up to 98 percent of the food intended for distribution reaches its final target. And Strzok feels that is successful, compared with the 50 percent rate in some African nations.

One problem the people of the country face is the lack of a distribution system for the foods they produce.

The Catholic Relief Services focus the majority of their assistance on the infants and mothers of the country. More than 28,000 tons of food is distributed throughout the country each year in hopes of decreasing the 35 percent mortality rate among children up to 3 years old.

Pure water, however, is the biggest health problem for the country Strzok said. And one of his goals is to provide portable water sources.

While that would greatly decrease the high mortality rate among children, Strozek realizes it would also increase the population significantly.

"But we'll worry about that when we reduce the mortality rate of the kids," he said.

Another key to the success of the aid agencies in Upper Volta is the close-knit family situation of the country.

"They're some of the most honest and open people I've ever known," Strzok said. "It's a special country."

[HN00GY][GDrive]

1981 (Aug)

(See full page in newspaper at [HN00GZ][GDrive])

Catholic Relief battles Upper Volta famine

Thirty-five of every 100 children in Upper Volta fail to reach age 7.

They are victims of malnutrition and disease in a west African country that is listed by the United Nations as the continent's poorest.

Ninety percent of Upper Volta's 7 million people work at subsistence farming and live in grinding poverty.

The average yearly income in 1978 was $125.

Peter Strzok, a Wisconsin native, works to save lives in Upper Volta as program director for Catholic Relief Services there.

His agency in the past year distributed 25,000 tons of food valued at $30 million to the hungry of Upper Volta.

The food, provided by the Agency for International Development through the Food for Peace program, includes dried milk, cornmeal, soybean oil and rice.

"We feed them food which is indigenous to their country so they don't build up a liking for food that cannot be raised in their own country," he said an interview.

Strzok, who was in the Twin Cities this week while on a month's leave from his job, said the message he wanted to bring to Roman Catholics and other taxpayers was that his aid program really works, with 98 percent of the food received going to the intended recipients.

Strzok

It's a multi-faceted program geared largely to "nutrition intervention," he said. Mothers are encouraged to bring in their children for weighing so their nutritional status can be monitored. If it is bad, they get more assistance.

Families also are instructed in the use of local vegetables and products and in health care.

"The biggest health problem is the lack of drinkable water," Strzok said. "Children get diarrhea and become dehydrated and then vulnerable to other childhood diseases that are endemic there—measles, malaria, meningitis, cholera, tetanus, typhoid and hepatitis.

"With one doctor for 70,000 people, health care is minimal. The situation is very grim."

Catholic Relief Services works with other voluntary agencies in Upper Volta to prevent duplication of effort and to make sure that available resources are applied most efficiently, he said.

In answer to a question, Strzok said if the Reagan administration had understood how infant formula is promoted in Third World countries such as Upper Volta, it would not have cast the only vote in the World Health Organization against a voluntary marketing code.

Most African women cannot afford to buy the formula and the water available for mixing with it causes diarrhea, he said.

Strzok, 45, served 21 years in the U.S. Army Corps of Engineers before retiring with the rank of lieutenant colonel. He spent much of his Army service in development work in Iran, Saudi Arabia, Vietnam, the Philippines and Korea.

He said he finds his work in Upper Volta to be "enjoyable, gratifying and fulfilling."

He and his wife and their 11-year-old son will return to Africa late this month.

[HN00H0][GDrive]

(See full page in newspaper at [HN00H1][GDrive])

4D - Leader-Telegram

Religion News

Friday, August 21, 1981

Per capita income in Africa's Upper Volta is $125 yearly

By Lynn Meyer
Leader-Telegram staff

While some American women might feel like martyrs if their washing machine breaks down one week and their dryer the next, many women in the Upper Volta of Africa may walk 10 miles to get the water they need for one day and then carry it back home.

"It's rough...very primitive," said Peter Strzok of life in the Upper Volta of Africa. Strzok, a former U.S. Army engineer, is director of a $25 million program, sponsored by Catholic Relief Services there. He and his wife and son have lived in Africa for three years. Strzok is a native of Gilman, and his parents, Michael and Josephine Strzok, reside in Eau Claire.

Upper Volta, according to Strzok, is about the size of Minnesota and has a population of 7 million people. The area is next to the Sahara Desert and is landlocked. There are no natural resources except the poeple, Strzok said. "It is the poorest country in Africa," he added, "per capita income is about $125 per year."

Catholic Relief Services, an overseas development agency for the American Catholic Church, is in Upper Volta (among many other places) attempting to help the people there.

Three on-going programs

"We have three programs in Upper Volta," Strzok said. One is a nutrition intervention program for pre-school children and their mothers. "We are trying to raise the nutrition standards of mothers, children and pregnant women," Strzok said. "This is our first priority group." He said that in Upper Volta, 35 percent of the children die before they reach 15 because they are so susceptible to disease. "This death rate is just unacceptable, anyplace in the world," he said. The people are subject to all kinds of diseases like typhoid, polio, leprosy, malaria, cholera and meningitis and are too malnourished to fight them. There is also the fact, Strzok said, that disease is largely uncontrolled because of lack of medical facilities. "There is one doctor per 70,000 people," Strzok reported.

The second target group of the agency is primary age school children. "We give a school lunch to all children in elementary school," he said, adding that in Upper Volta, only one out of eight children is able to go to school, simply because there aren't enough schools, The goverment is too poor to provide them. "We are feeding 250,000 school children each day," Strzok said, "and we cooperate with their government to help build schools."

Food for work

The third area in which the agency works is on community projects. The agency provides food for people who provide their time to build community facilities.

"The food comes from the U.S. government as part of the Food for Peace program," Strzok explained. He said that the U.S. government will supply the food because Catholic Relief Services is more easily able to distribute it and at a far smaller cost. Also, the agency is not a missionary program. People of all denominations are employed by the agency which distributes about 25,000 tons of food a year, most of which comes from the Midwest.

The next part of the program in helping the people, after feeding them, is educating them, according to Strzok. Ideally, the people of Upper Volta would someday be able to help themselves and become more of a developed area. "But Upper Volta is one of those countries where it's hard to foresee them ever getting out," Strzok said. There simply are no resources, and there and no work. Strzok said that gas is $4 a gallon and that rising energy costs are making it increasingly difficult.

But the people are hard working and are trying hard to reciprocate for the aid they are getting, Strzok said. "It's not a case of give me, give me, give me.

"They are wonderful, hard-working people with strong family values... they have made us feel like guests in their country..." He said it is not that they are not willing to work, it is just that there is very little work to be had.

From what Strzok reported, it doesn't look good that Upper Volta will ever be a very productive, self-supporting country.

And yet, as Strzok said, "you can't just ignore their existence." People who have been overseas, who have seen the people, realize the need to help them. After seeing starving children, "you can't be apathetic," he said, noting that Americans just happened to be lucky in being born in the United States.

"I really believe the world has to address the problem of developing countries," he said, "they are always going to be with us."

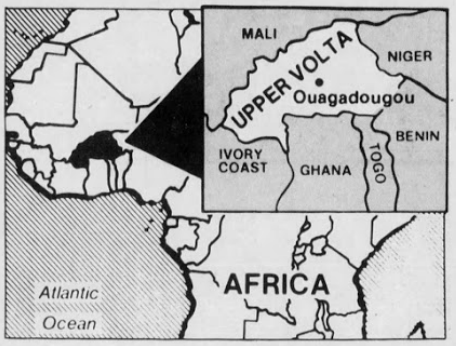
In a country where 40 out of 100 children die, they need help. It's not something people get used to, their children dying. "A mother's grief is no less," he said.

Peter Strzok

[HN00H2][GDrive]

1983 (Jan)

(See full page in newspapers (pages "1C" and "2C") at [HN00H3][GDrive] and [HN00H4][GDrive])



Poor sister

Tiny nation a 'basket case' Catholic worker assesses

By JOEL RUTCHICK
Times Staff Writer

Being left alone is devastating for an anonymous African nation with an unfamiliar name and without the resources to fend for itself.

That is where the job begins for Peter Strzok, whose assignment as director of Catholic Relief Services in Upper Volta is to harness outside resources to improve lives in the Colorado-sized country south of the Sahara Desert in West Africa.

"No matter how valiant and courageous, they are a basket case in the brotherhood of man," Strzok said of the people he knows of as the Voltaics.

All indicators suggest the plight of Upper Volta looms much worse by the year 2000, he said.

Yet Strzok points to statistics showing that Upper Volta already ranks pretty high on the misery index — the world's second highest illiteracy rate, a life expectancy of 42 years, an average per capita income of $150 a year and overall standing as the world's third or fourth poorest nation.

"This is, I think, a solvable problem if you devote the resources to it," said Strzok, whose name is pronounced Struck.

A native of a dairy farming area in northwestern Wisconsin, and a graduate of Marquette University, Strzok visited the St. Cloud area this week to enroll his 12-year-old son, Peter Jr., at St. John's Preparatory School.

Coming to Upper Volta's capital Ouagadougou about three years ago marked the beginning of the 46-year-old Strzok's third career.

He spent 21 years with the U.S. Army Corps of Engineers until his retirement in 1978. He worked two years in the private sector before his appointment with the organization that is part of the United States Catholic Conference.

His earlier jobs also entailed considerable travel — the Middle East and Vietnam, for instance.

As for excitement, he heard nightly riots and screaming, watched banks burn in downtown Tehran and did not leave Iran until Ayatollah Khomeini ascended to power in 1979.

"I'm enjoying this job more because it's more fulfilling," Strzok said.

His organization helps those who are most in need, Strzok said, and he finds the receptivity of the Voltaics particularly gratifying.

"There are countries in Africa where I would not want to work because it's so darn difficult," he said. "I think there's an extreme amount of goodwill through Upper Volta."

The residents are "straight with you" and the atmosphere is influenced less by politics, he said.

Catholic Relief Services receives its operating budget from Roman Catholics in this country and gets its project funds from a variety of sources, including the governments of the United States, Canada, and France and United Nations organizations, he said.

The organization works in 70 countries, 23 of them in the sub-Saharan region of Africa. Upper Volta trails only India and Egypt in the size of Catholic Relief Services programs and received $30 million in assistance from the organization in 1981, Strzok said.

Although his organization is in the country at the invitation of the Catholic Church of Upper Volta, programs reach the neediest segment of the population, regardless of religion, he said.

"Our food is not used for proselyting," he concluded.

Probably the most important aspect of Catholic Relief Services' presence is the mother-child program, designed to curb infant malnutrition.

"About 30 out of 100 children die before they reach the age of 3," Strzok said. Sixty percent of children 3 years old or under suffer from severe malnutrition, he added.

Two other components of Catholic Relief Services work are its school lunch and food for work programs.

Akin to the Work Projects Administration of Depression-era America, the food for work program gives Upper Volta's men meaningful employment on road construction, water projects and other public improvements, he said. Because there is no agricultural work from December to June, these men would not have other work during that time.

Upper Volta has few good roads, a water shortage and almost no industry. The country generates less than 50 percent of what its people need to survive and there are "no natural resources except their people," Strzok said.

Of Upper Volta's 6 million people, roughly 5.5 million of them work as subsistence farmers.

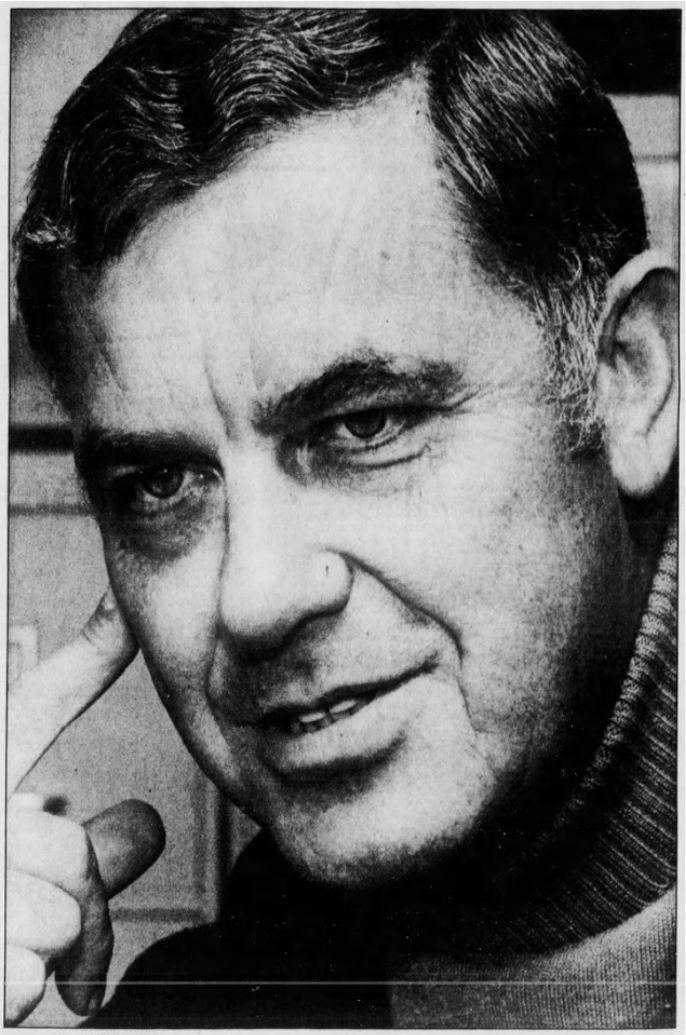
But the country faces tough agricultural conditions because its most densely populated area is characterized by very poor soil, erratic rainfall and a treeless plain or savannah.

The southwestern and south-central portion of Upper Volta is sparsely populated, even though it has the country's most fertile land. It will remain that way unless a campaign is successful to eradicate a disease that can lead to blindness. A fly found in that part of the country causes that disease, known as onchocerciasis.

Upper Volta gained independence in 1960 as part of France's policy to give up its colonies in old French West Africa.

But the French-speaking country is probably worse off today than 20 years ago, which has led to Strzok assessing his organization's impact and other help in more realistic terms.

When he started in 1980, he thought, "Boy we can do this, this, this. But you don't know that you can't do it."



Times photo by Steve Wolt

The misery of Upper Volta can be solved if enough resources are devoted to the problem, says Peter Strzok, director of Catholic Relief Services in the African nation.

[HN00H5][GDrive]

(See full page in newspaper at [HN00H6][GDrive])

This is the book that Peter P Strzok II is pictured with : "Accelerated Development in Sub-Saharan Africa : An Agenda for Action". This is written and distributed by The World Bank. Click here to download this PDF : [HB000T][GDrive]

Army-to-Africa move gratifying

By William R. Wineke
Religion reporter

One might expect that, after 21 years in the Army, Peter Strzok would want to retire to a soft job someplace in the South and start making money.

Instead, Strzok (he pronounces his name "struck") moved his family to Upper Volta, an almost barren nation in Africa, where he is program director for Catholic Relief Services.

"I've rarely had a job where I've been so challenged and I've never had a job where I've been so gratified," Strzok said during a visit to Madison this week.

Upper Volta, a part of the old French West Africa, is bounded by the Sahara Desert. The country is the size of Minnesota and is home to 7 million people, more than 90 percent of whom are subsistence farmers.

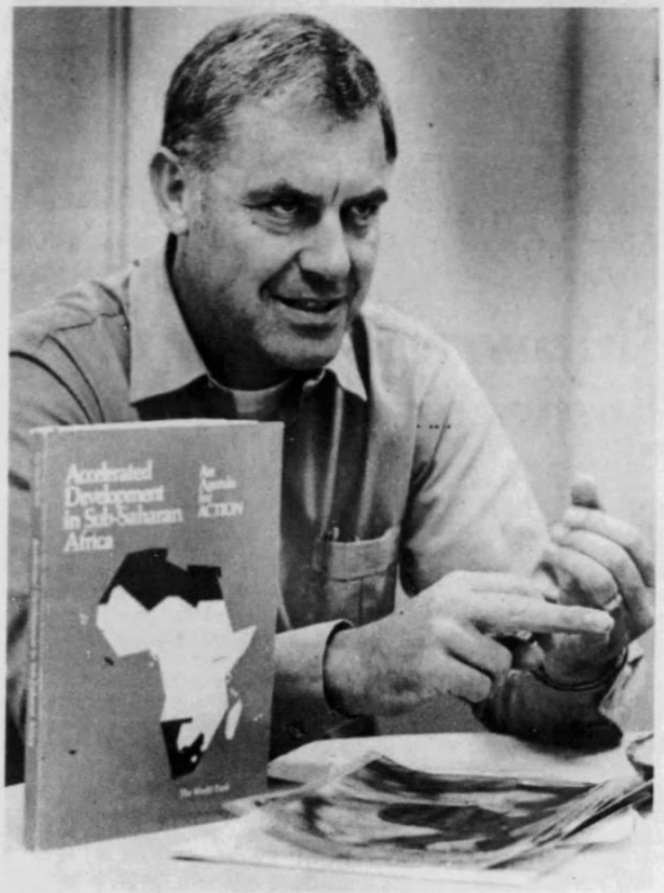
The program Strzok directs helps teach young farmers more effective farming techniques, provides school lunches to 250,000 children each day and is helping farmers learn to plant "oil seeds," like peanuts, which can be used for a cash crop and also for personal nutrition.

Catholic Relief Services is the largest single social assistance program in Upper Volta, Strzok said. It has an annual budget of $30 million and serves about 500,000 people a year.

Most of the program funds come through the U.S. Food for Peace program. American Catholics contribute about $500,000 annual to the Upper Volta program.

He said working with the residents of Upper Volta is rewarding and saddening.

"The reality of Upper Volta is that the people are worse off in 1982 than they were in 1960 and in the year 2000 they will be worse off than they are now," Strzok said.



Peter Strzok details problems of Upper Volta.

— State Journal photo by Joseph W. Jackson III

"Upper Volta is one of the three poorest nations in Africa and one of the five poorest nations in the world."

It is a nation where people are not only poor but are also hungry, Strzok added.

"We distribute 20,000 tons of American food each year and I can say with assurance that 98 percent of that food gets to the proper places," Strzok said.

Strzok said change in Upper Volta won't come quickly.

"Fundamental cultural change doesn't take years; it takes generations," Strzok said.

"The farmers here have been farming one way for more than 800 years and they aren't going to start farming another way just because an American comes in and tells them to do so."

Strzok also suggested that change in agriculture must be integrated with other changes in an economic system.

"You can't tell a farmer to go into debt to purchase a machine that will make him more productive unless you can also assure him that he will have adequate time to repay the debt. Otherwise, he might go into debt this year and face a drought next year. Unless he has a long-term commitment, he could be wiped out by the drought and end up worse than he began."

Strzok, a native of the Eau Claire area, grew up on a dairy farm and spent 21 years with the Army Corps of Engineers before joining Catholic Relief Services three years ago.

He said he finds motivation in his work in Upper Volta, partially because he can see the projects his staff supports do good and partially because the country is relatively free of graft.

"You don't see much corruption. I think that is because the economy is so very fragile that people understand that graft and corruption would tip the balance and everything would go down the tubes," Strzok said.

Grant's grandson dies

ESCONDIDO, Calif. (AP) — Chapman Grant, 95, historian, zoologist, publisher and grandson of former President Ulysses S. Grant, died last weekend in a nursing home. He was the son of Jesse Grant, the president's youngest son.

[HN00H7][GDrive]

1983 (Aug)

(See full page in newspaper at [HN00H8][GDrive])

Relief services director en route to Haiti

While Peter Strzok was with the U.S. Army Corps of Engineers, he worked with the governments of underdeveloped nations.

Following his retirement, he began working with Catholic Relief Services, this time dealing directly with the struggling farm families in the impoverished African nation of Upper Volta.

Strzok has just completed a three year term in Upper Volta.

His next assignment is director of Catholic Relief Services in Haiti.

One goal of the service is to reduce the infant mortality rate — about 22 percent in Haiti.

As necessary as that goal is, it poses another problem. "What does reduction of the infant mortality rate do to social systems 10 years down the line?" Strzok asks.

HE DOESN'T have the answer, but believes there must be a solution. "It's a hard job to come up with a model effective over time," he said.

Catholic Relief Services is an overseas assistance and development program of the United States Roman Catholic Church. Most of Strzok's work involves food assistance.

Peter Strzok

He was in Bismarck Wednesday while traveling through North Dakota on his vacation between assignments.

The food assistance program Strzok worked with the last three years involved 150,000 children and mothers.

Once a month the child was weighed and checked for health problems, while the mothers participated in a nutrition education discussion.

THEY WERE taught how to properly nourish their children with the staples available to them — dry milk, vegetable oil and corn meal.

"It's interesting work but it's discouraging. You're lucky if you hold your own," Strzok said.

The food assistance work is short term. The long-range goal — Strzok calls it a challenge to the world — is to make the country self-sufficient and productive.

Changes Strzok and his colleagues implement come slowly.

Change is delayed further because each idea must be explained to the people and adapted to their culture.

"You have to be sensitive to the whole thing," Strzok said. "You have to work in terms of generations."

THE WISCONSIN native is married and has a 13-year-old son. He said his family has a good attitude about the lifestyle, but every now and then his son wishes for a television video game.

Strzok said his value system changed when he moved to Upper Volta. "You don't have all the choices," he said.

There's no question about what televison station to watch or which career to pursue. Rather, the people spend their time working to survive.

"It's not less interesting," he said, "just different."

[HN00H9][GDrive]

1985 - Peter Strzok Sr. "blows whistle" of Catholic Relief fund mismanagement

aug 8 1985

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1986 (Aug)

(See full page in newspaper at [HN00HA][GDrive])

Dispute arises over Catholic agency's famine work

By RALPH BLUMENTHAL

© 1985 New York Times

NEW YORK, N.Y. — The spending of money collected for Ethiopian famine victims has become the center of a dispute involving Catholic Relief Services, the largest private charity operating in Ethiopia.

A former representative of the agency, an arm of the U.S. Roman Catholic Church, has complained in letters to church hierarchy and public officials that the agency misled donors and failed to properly spend money collected since last October for the drought-stricken African country.

The former representative, James MacGuire, and other past and present employees assert that the food distribution program has been hampered by several problems, including a dispute with the U.S. government, which supplies the food, over who is supposed to pay for transportation of supplies in Ethiopia.

Officials from the relief agency, the largest charity distributing U.S. government food in Ethiopia, acknowledge some problems in spending money collected in a well publicized fund-raising drive that began in October. But they say the money will eventually be used for projects to alleviate famine in Africa.

According to the Catholic Relief Services' own figures, the agency has so far spent less than $9 million of the $50 million in emergency aid collected from the public since October.

The agency also says it has distributed less than 90,000 tons of food in Ethiopia so far this year, short of the projected 140,000 tons.

A Separate Issue

In a separate issue, former and present employees have questioned the agency's use of money collected from aid recipients in Ethiopia and elsewhere that is supposed to be earmarked for food projects benefiting the contributors.

Agency records suggest that such money was sometimes lent or applied to other agency programs and expenses in what the critics assert were improper dealings.

Herbert Beckington, the inspector-general of the U.S. Agency for International Development (AID), said last week that he was reviewing material regarding "certain allegations concerning CRS operations." He said he was "not conducting an audit or investigation" but declined to give further details.

Lawrence Pezzullo, executive director of CRS, which is based in New York, said "we agree there's a disagreement" with the government agency but defended his organization's record in distributing food to more than 1 million starving Ethiopians. He termed the allegations of misused money "scurrilous" and blamed "disgruntled" former employees for raising them. "Our record is excellent," said Pezzullo.

Those Who Complained

Those who have raised the complaints include three former employees: MacGuire, who is a former Peace Corps worker and Catholic Relief Services representative in Burundi, and who is now director of corporate development for Macmillan Inc.; Peter Strzok, a former Army Corps of Engineers officer who served with the Catholic agency in Africa and Haiti; and Jean Serge Picard, who served in Zaire and Burundi.

Also interviewed was Norbert Clement, who worked for the relief agency for 25 years in Rwanda, Ethiopia and Haiti. He is still an employee of the agency but is on leave.

Catholic Relief Services was founded in 1943 and, with an annual budget of $430 million, has operations in 70 countries.

Agency officials said last week that while little of the $50 million in donations had been spent so far, the service had still aided 1.8 million Ethiopian famine victims.

William Schaufele, director of the agency's African operations, said $8,141,000 had been spent so far and $22,890,000 had been "allocated" to Ethiopian projects and would be spent by the end of next year. The remaining $20 million, the agency previously announced, will finance long-term development projects in the rest of Africa.

Other 'Problem Nations'

Pezzullo said the agency had decided that apart from Ethiopia "there are 17 more problem countries" in Africa. Asked whether the money had been deposited in a bank, he said it had and added: "What the money is doing now is irrelevant. The important thing is it will be spent over the next 10 to 15 years."

Of other agencies getting contributions for Ethiopian aid, World Vision International said it had spent nearly $20 million of $24 million in donations; Save the Children, $3.6 million of $4.5 million; Lutheran World Relief, $3.1 million of $5.2 million; and CARE, $2.1 million of $5 million.

Information sheets used by Catholic Relief Services workers who take calls from donors say "100 percent of the money we collect for Ethiopia is used in Ethiopia to transport food from the ports, by plane, truck and train and distribute it to about 1 million people in distribution centers."

Another said: "Donations will be used to transport more food from the ports to the people. One hundred percent of their donation will be used for the relief. We have a very low overhead."

Agency documents show the $8.1 million spent included $1.8 million for categories listed as "administration," "direct program support" and "overhead, consultations, etc." at Catholic Relief Services offices in New York, Geneva and Nairobi, Kenya. Pezzullo said the money was for direct support of the Ethiopian aid effort.

First 7 Months of 1985

Figures provided by the agency show that it has distributed about 87,000 tons of food in the first seven months of 1985, less than the expected 20,000 tons a month, or 140,000 tons by now.

"We probably overestimated the amount of food we could get through the pipeline," Pezzullo said.

John Donnelly, another agency official, blamed Ethiopian "bottlenecks," for the shortfall, including a lack of trucks and the problem of moving goods through a poor, Marxist country that is fighting a war against rebels.

At the same time, the agency and other charities have been arguing with AID over the federal agency's recent insistence that the organizations pay half the cost of inland transport, an expense customarily absorbed by the host nation or the United States.

On May 24, Pezzullo wrote to M. Peter McPherson, administrator of AID, warning that the dispute could hold up deliveries to Eritrea province, one of the hardest-hit sections of Ethiopia.

"Before embarking on a program which would bring food to an additional 40,000 families in Eritrea," Pezzullo wrote, "we require a commitment from AID to provide food and funds from land transport and local administrative costs."

Despite Ample Funds

Puzzullo said his agency later agreed to pay half the inland transport costs after AID agreed to similarly finance relief service projects in Ethiopia.

But MacGuire contended that AID and the Catholic agency "have permitted hundreds of thousands to die whilst, despite ample funds available, they squabbled over who would pay for what in Ethiopia."

The former staff members have also criticized the relief agency on an entirely separate issue, the agency's collection and use of money contributed by poor aid recipients.

Federal law governing the distribution of free government food permits relief groups to ask those receiving the aid for nominal contributions, based on their ability to pay. But the money must be held for the benefit of the contributors.

Catholic Relief Services collects about $6 million a year in this way.

Picard said that in 1983 he refused a superior's directive to transfer $200,000 in such contributions out of Burundi, where they had been collected, to Nairobi. He also contended that such money supposedly earmarked for the poor from whom it came was often applied to unrelated agency expenses.

Another former employee, Strzok, recently wrote the agency that while he served in Upper Volta, now Burkina Faso, he was told to use money from aid recipients to meet overhead.

And Clement, now on leave in Paris, said he had been told to use similar money to defray administrative expenses in Senegal but that he had resisted.

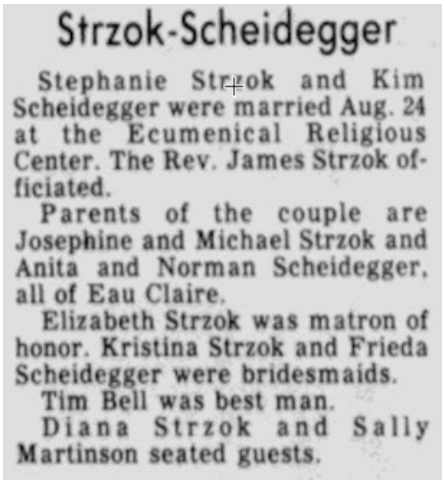
AID has been trying for several years to audit how that money is spent to ensure compliance with government provisions. But the Catholic agency has refused to allow the audits, contending that the money is unrelated.

[HN00HB][GDrive]

1986 (Nov)

Brother **Jim Strzok** oversees family wedding : Stephanie Strzok to Kim Scheidegger

(See full page in newspaper at [HN00HC][GDrive])



Strzok-Scheidegger

Stephanie Strzok and Kim Scheidegger were married Aug. 24 at the Ecumenical Religious Center. The Rev. James Strzok officiated.

Parents of the couple are Josephine and Michael Strzok and Anita and Norman Scheidegger, all of Eau Claire.

Elizabeth Strzok was matron of honor. Kristina Strzok and Frieda Scheidegger were bridesmaids.

Tim Bell was best man.

Diana Strzok and Sally Martinson seated guests.

[HN00HD][GDrive]

1986 (Oct)

As of 1986, "Peter Strzok is president of the non-profit AFGRO (Agency to Facilitate the Growth of Rural Organizations) and a student at the Humphrey Institute."

(See full page in newspaper at [HN00HE][GDrive])

Commentary

Plague of locusts – and of bunglers in international relief

By Peter Strzok

"Watch out for the crickets!" said the headline on an April 1986 editorial in Afrique Agriculture, a Paris periodical. Describing the return of the crickets, the magazine spoke of clouds of flying locusts (the adult stage of the crickets), each cloud weighing 100 tons, moving 40 miles per day and consuming half its weight in vegetation per day. As an adult, the female locust lays 200 eggs per day for about a month. A swarm may consume 1,500 tons of vegetation and lay trillions of eggs during its 30-day life.

A witness to such an attack years ago in northern Ghana described the event: "The sky is blackened out. A great sound of beating wings is everywhere. The plume of the swarm is 12 miles long, 4 miles wide. It descends on a village, inundating it with an 8-foot flood of swarming, eating insects which devour all vegetation available. Women battle to protect their children. Humans and animals alike are terrorized. Suddenly, the swarm moves and is gone. Shock and disbelief remain, along with the denuded field and trees. Another chapter to the African folklore of devastation is made."

During the last three weeks in September, I visited the Ivory Coast, Mali, Burkina Faso, Senegal and Gambia to see the condition of the crops, the effects of the locusts and measures underway to contain the infestation. The trip went from the rain forests in the south to the southern edges of the Sahara in Mali. Everywhere the land is lush and herds are robust. Rainfall this year is twice normal.

But in the Sahel, there is always a dark side. The moisture has caused an eruption of harmful insects, of which the locust is only one. Aphids infest the peanuts; blister beetles attack the maturing millet, sucking the milky kernels dry.

In early 1986, the U.N. Food and Agriculture Organization (FAO) warned of grasshopper and locust infestation across the Sahelian zone — from Mauritania and Senegal through Mali, Burkina Faso, Niger, Chad, the Sudan and Ethiopia — a belt 5,000 miles long and 500 miles deep. Two and a half million square miles in Africa's most productive region for cereals, cotton and cattle are at risk.

Donor agencies and regional organizations in Africa responded. In mid-August, after a direct appeal from President Diof of Senegal to Peter McPherson, head of the U.S. Agency for International Development (AID), a team of experts from the United States went to Senegal. Their story is one of strong host-government cooperation, superior data collection on infestation, effective spraying and breakthrough techniques to get the treatment to the locations of greatest need on time and on target.

But this effort may be in vain because of the lack of cooperation by international partners. That is a story of frustration, bungling and inactivity. The result may well be reinfestation and catastrophic destruction of vegetation in the next two to six weeks as the crickets mature into flying locusts and begin their pilgrimage of consumption, egg-laying and destruction across the Sahel. Not yet added to the equation are the deterioration of rural agriculture, human suffering and the costs of emergency food aid.

The U.S. team worked with Senegalese government and local AID technicians who helped get a quick fix on the problem. Using helicopters from the Senegalese Army because of impassable roads from heavy rains, the team plotted the infestation in a wide belt in central Senegal. The crickets were moving south toward Gambia and fanning out east and west. Subsequent infestations were located along the Senegalese border with Mauritania and in north central Senegal.

Five DC7 aircraft used for spraying in Sheridan, Wyo., went to Dakar, along with three loads of insecticides and equipment. Spraying began in late August.

The DC7s flew their missions out of Dakar airport, each carrying 3,000 gallons of insecticide solution and able to ferry its load 500 miles before beginning systematic swath spraying over the infested areas. The insecticide was Malathion in the same concentration used in the United States, with negligible risk to warmblooded animals. Malathion's effects on crickets are immediate and deadly. It also kills other insects such as aphids and blister beetles.

The teams worked from daylight to sunset until the end of September. The infestations were controlled in a vast, 22,000-mile-square region.

Adjacent areas were another matter. FAO is coordinating the African response from a special office in Rome. An African antilocust organization had two small aircraft in Senegal. Neither had operated for two years, but the U.S. government provided the necessary spare parts. In late September, a Cessna was flying, piloted by a French woman competent in small aircraft but with no spraying experience.

FAO reported spray swaths of 1.5 kilometers wide, which the U.S. team considered completely beyond the capabilities of the aircraft. I observed the plane spraying at an altitude of 600 to 800 feet. Dick Dyer, a U.S. Agriculture Department pilot with 35 years' experience in locust control, said spraying should be done at 250 feet.

As a result, the FAO effort was ineffective and its reports that infestations are being controlled are inaccurate.

In Mauritania, the U.S. team attempted to obtain information on infestation in areas adjacent to their work in Senegal. The FAO office in Dakar did not have current data. Similarly, officials in Western Mali lacked information about the extent and location of infestation. According to the U.S. team, the French government made commitments for assistance but contributed little.

A Canadian control effort in Burkina Faso is apparently having a positive impact. The Canadian program in Senegal is growing as well; on Sept. 26, as the U.S. effort was winding down, four spray aircraft from the Canadian government arrived to begin the third phase of locust control.

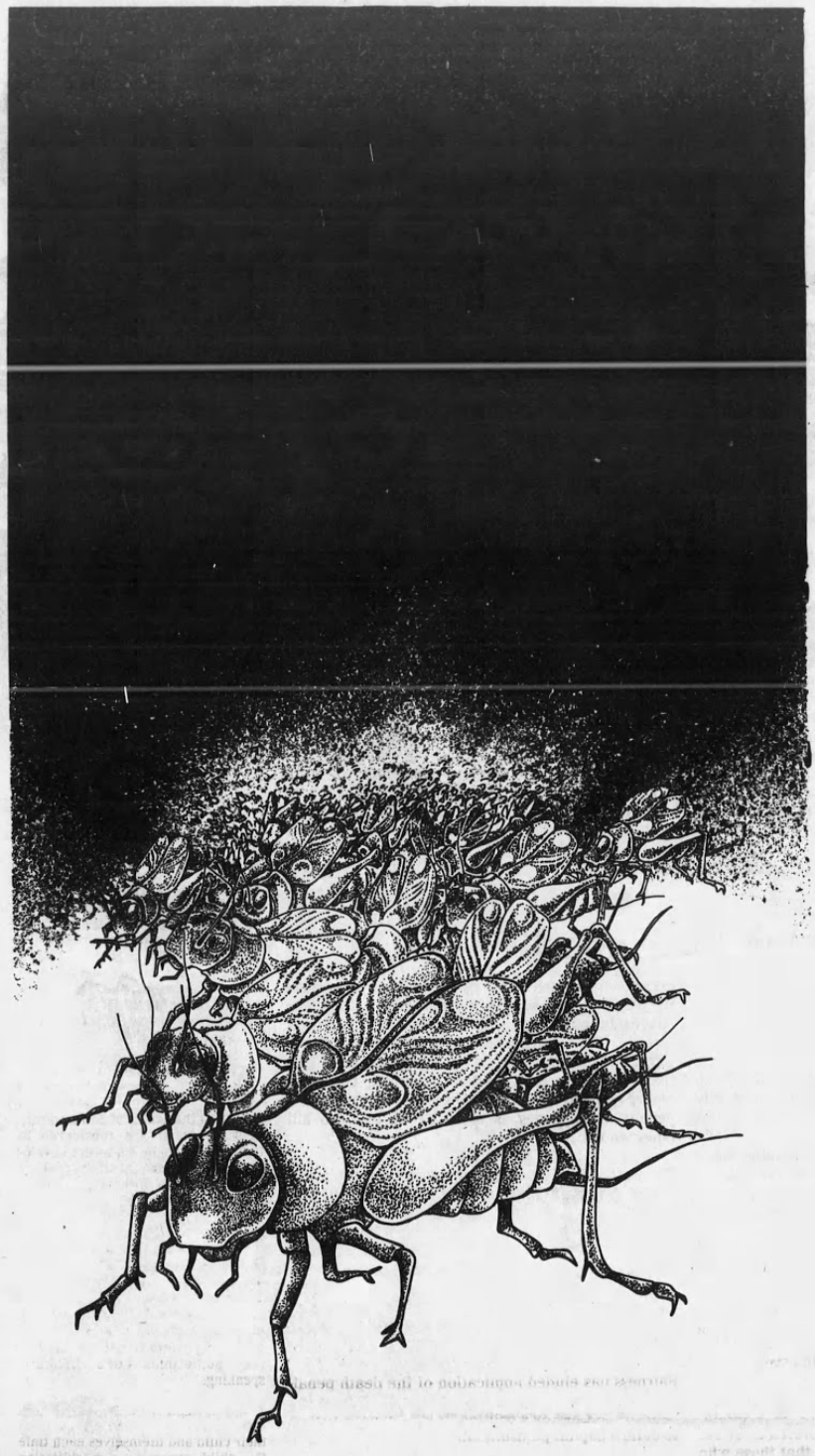


Illustration by Craig MacIntosh

But the threat remains. The U.S. team, which debriefed USDA and AID officials in Washington last month, fears reinfestation when the locusts mature and begin flying in two or three weeks. Next year, the problems throughout the Sahel may be more severe as the larvae hatch from the first rains in May through October. That allows time for seven or eight cycles of locusts to multiply in geometric proportions. Unless strong planning and control begin now, "there is nothing which can prevent such a disaster," according to the U.S. team chief.

On Sept. 26 I talked to Alioune NDiaye, director of the FAO locust program in Dakar, about follow-up initiatives for 1987. He spoke of organizing a conference in Dakar in late October at which nongovernment agencies would be asked to teach villagers how to control the problem. He gave two examples: having the villagers plow their fields with hoes to a depth of 2 or 3 inches, exposing the locust larvae to the sun, and teaching them to make a broth from the leaves of the Neem tree, which is a natural insecticide, to spray next year on the hatching larvae.

Both of these are important, local techniques with almost no undesirable ecological side effects. But in the sparsely populated grasslands stretching from Mauritania and Senegal to the Sudan, who is going to treat the land where larvae wait by the billions to hatch at the first great rain?

Other troubling questions remain unanswered. Why wasn't the joint response, with the FAO lead, more effective? Will the next several weeks bring catastrophic damage to crops that could have been easily and cheaply protected? Given the predictions of even greater problems in 1987, what international measures are necessary?

The countries of the Sahel remain hostage to events they cannot control. Assistance from donors is of marginal benefit because of lack of cooperation. To the people of the Sahel, such poor performance only adds to their distress. Their fragile government structures, limited financial resources, low level of education, poor infrastructure and debilitating diseases are all severe constraints. Yet their governments have been professional and cooperative in fighting the locust infestation. By contrast, the developed world — by disjointed assistance and bungling — may put great areas of Africa at great risk of crop destruction and famine in 1987.

Peter Strzok is president of the nonprofit AFGRO (Agency to Facilitate the Growth of Rural Organizations) and a student at the Humphrey Institute.

[HN00HF][GDrive]

1991

(See full page in newspaper at [HN00HG][GDrive])

Reader says he sees need for military censorship

If you ran the paper

Lou Gelfand

Peter Strzok, a retired Army officer, said that he was disturbed by my March 3 column about Star Tribune writer Paul McEnroe ("Reporter in war zone used fax to avoid censorship"). He also took issue with my comment that "the Pentagon's effort to control access to the news backfired in some ways."

McEnroe eluded censors with his tales of British commandos operating behind Iraqi front lines by using his hotel's facsimile machine.

Strzok asked, "Was he placing British commandos at risk by detailing their operations and methods used?

"Such operations are risky enough in total news blackout conditions; one is never sure what additional information can give an opponent a total picture of both the order of battle and probable next targets . . . .

"I spent two tours in Vietnam, two in Saudi Arabia and three in Iran. I think I understand the absolute need for reporter oversight in combat actions. Your apparent delight that McEnroe beat the system is terribly misplaced. You should, instead, have looked at the consequences of a profession unable to police itself, whether in pursuit of a good story, scoop or whatever."

Response: I commented that McEnroe and other journalists who drifted on their own would not have escaped the censors if the military had given them permission to join fighting units. Less than 150 of perhaps as many as 1,000 media personnel were assigned to combat units.

In Vietnam reporters freely joined combat units. That's how Peter Arnett, David Halberstam and other American journalists came to inform the American public that the U.S. government was not telling its people the truth about the war. There never were serious accusations that reporters revealed military secrets.

Reader Strzok is right that the military learned a lesson in Vietnam it has applied in Grenada, Panama and the Persian Gulf: Protect what the public knows by rigidly controlling the news media. It might be popular with the public at the time, but what happens when the day comes that the public needs the media and the Pentagon has them under quarantine?

■

Deb Gerber and Garrett Tomczak disputed my comment last Sunday that sports columnist Patrick Reusse had the right to criticize girls' basketball even though I disagreed with his stand.

Gerber said Reusse should have been disciplined. She wrote that Jimmy (The Greek) Snyder was fired from his CBS-TV job "after voicing his bigoted ideas about a group of people," and Andy Rooney of "60 Minutes" was suspended "when he referred to another group of people in a less than progressive manner."

(Rooney denied making the statement attributed to him in a magazine.)

She continued, "Patrick Reusse insults women athletes — students at that — and you write of 'freedom of expression' and the need for room for 'uncomfortable radical views.' Pardon me, sir, but I can't see the trees for the forest."

Tomczak wrote, "When you say, 'there needs to be room in the Star Tribune for uncomfortable radical views,' ask yourself this: If instead of impugning girls' basketball players, Patrick Reusse had written disparagingly of black athletes or remarked sarcastically about the limitations of Special Olympics participants, would he today have a job anywhere in the fourth estate? And would you have a job for defending his right to freedom of expression?"

Response: If I couldn't defend the First Amendment I would not want to be reader representative.

In a free society you allow someone with whom you disagree to be heard. Edward R. Murrow said, "The right of dissent . . . the right to be wrong, is surely fundamental to the existence of a democratic society."

■

A reader asked why the newspaper did not identify the driver who lost control of his car on Hwy. 252 and wound up in the back door of a Brooklyn Center apartment building. The March 11 story was displayed under a five-column headline.

Reporter Dan Oberdorfer got to the scene after the State Patrol and Brooklyn Center police left. He found a Minnesota Department of Transportation tag identifying the owner of the vehicle but the individual had an unlisted phone number.

Oberdorfer said he could not be sure that the owner was the driver, and because of deadline considerations elected not to identify the driver, who has not been charged.

■

The reader representative hears complaints and compliments Monday through Friday from 8:30 a.m. to 4:30 p.m. Phone 673-4450. From beyond the Twin Cities area call 1-800-752-8120.

[HN00HH][GDrive]

1994

(See full page in newspaper at [HN00HI][GDrive])

Why can't world do for Bosnians what it's doing for the Kurds?

Robert J. White

Like the Muslims of Bosnia, the Kurds of northern Iraq know something about life and death under siege. Surrounded by enemies, people in both places rely on protected supply lines and help from the outside world.

There is a crucial difference, though. It makes one want to grab the outside leaders by their collars and yell in the faces of Bill Clinton, John Major, Francois Mitterrand and Boutros Boutros-Ghali: Do in Bosnia what you are doing so well in northern Iraq.

For the crucial difference is that a Kurdish recovery is taking place while the Bosnian disaster worsens.

The comparison is of course imperfect. Comparisons always are. Kurds are ethnically distinct; Bosnian Muslims are so like their Serbian and Croatian brethren that only loyalties and religion set them apart. Bosnians have a recognized country; Kurds do not.

But Kurds and Bosnian Muslims have much in common, including broken promises from the United States and deadly persecution by their neighbors. Last month the Kurdish leader Massoud Barzani told a New York Times reporter, "We are a people who faced genocide and managed to survive."

The words could as easily have come from Bosnia's President Alija Izetbegovic.

The promise to the Kurds was only implicit in the 1970s. It was a promise of aiding them against oppression from Iraq, and it was manifested through a quiet shipment of supplies, year after year, through Iran with the shah's approval. But as the price of a 1975 resolution by Iraq and Iran of their border dispute, Americans shut down that lifeline.

The Iraqis, unsurprisingly, repressed the Kurds more vigorously than before. And the 1975 agreement disintegrated five years later when Iraq launched its war against Iran.

The promise to Bosnia was more explicit. As a candidate in 1992, Clinton argued for lifting the arms embargo against the Bosnian government and using force if necessary to defend the Muslims. In office in 1993, the Clinton administration pursued those ideas with NATO allies, but tepidly; no one has acted upon either proposal.

The Kurds saw Iraq's defeat in the Gulf War as an opportunity to free themselves from their masters in Baghdad. When Iraqis crushed that revolt, coalition partners came to the aid of the Kurds. Nearly three years later, British, French and U.S. military forces are still present on the ground in Iraq's northwest corner — not to fight a war, but to signal allied seriousness. Their planes fly daily north of the 36th parallel. Iraqi forces keep their distance.

An array of agencies — U.N., Western governmental and mostly European nongovernmental — are helping the Kurds. Turkey, although trying to suppress a revolt of its own Kurdish minority, cooperates by providing the only overland road through which supplies reach the Kurds in Iraq.

Peter Strzok, head of the U.S. Office of Foreign Disaster Assistance operation in northern Iraq, was in the Twin Cities earlier this week. Prospects for the Kurds are improving, he said. They are rebuilding; with outside help, last year 100,000 were resettled in villages once destroyed by the Iraqis.

The emphasis on agriculture has dramatically increased crop production, Strzok said. He was here partly to encourage the University of Minnesota to send a technical assistance team to northern Iraq and partly to see his family. Strzok, who once was at the Humphrey Institute, still makes his home in Minneapolis.

In contrast, prospects for Bosnia are bleak. British, French, Canadian and other governments with military forces serving there under the United Nations are thinking of pulling out when the current U.N. mandate expires March 31. The United States faces no such dilemma because it has no troops on the ground helping to protect and move aid convoys to cities like Sarajevo and Tuzla.

While assaults on such cities continue, the allied leaders conduct a macabre diplomatic competition over who wants Balkan peace most. British Prime Minister Major conveys more discreetly the idea French President Mitterrand bluntly tells President Clinton: Get the Muslims to accept an unfair partition of Bosnia so that the shooting will stop.

Clinton objects because the United States — which said it would contribute peacekeeping forces once an agreement is in place — would then have to persuade, or perhaps force, the Muslims to comply. The administration doesn't want to be in that position.

But does a halt to the killing require that a peace plan first be accepted all around? Cease-fires in Bosnia mean nothing because they rely on nonexistent good will among Muslims, Serbs and Croats. Similarly, a cease-fire in northern Iraq would mean nothing if it relied on good will between Iraqis and Kurds.

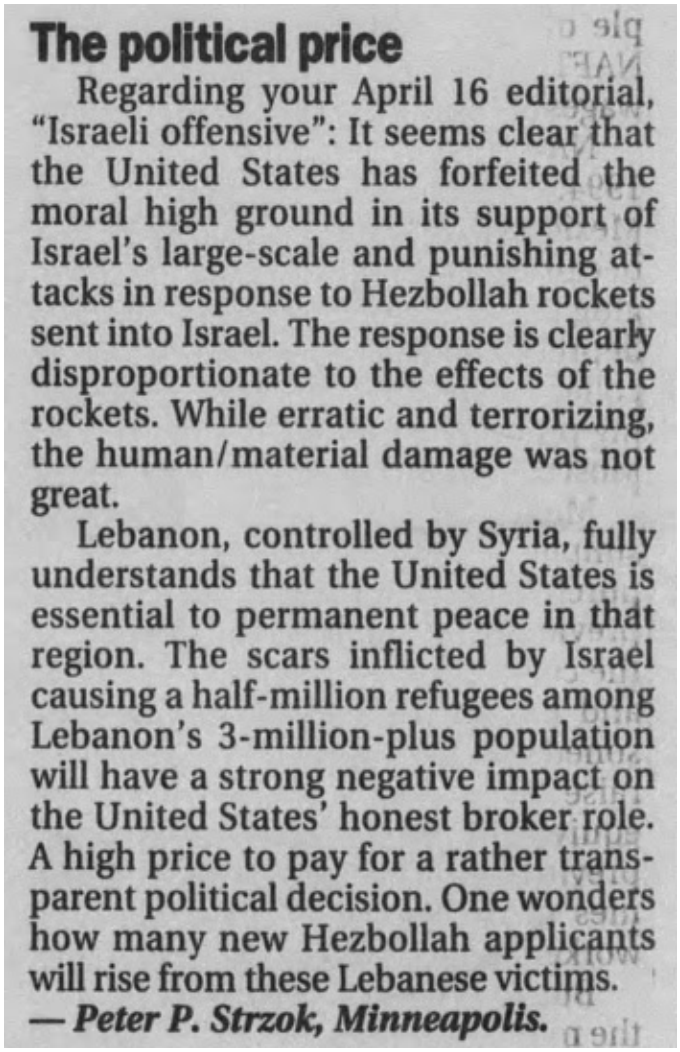
Life for the Kurds of Iraq is improving, and although they suffer occasional violence from Iraq, they are no longer hounded, gassed and bombarded. Yet no lasting agreement is in sight. U.S. policy, and that of the allies, is carefully restricted to support for Kurdish autonomy, not independence. If Bosnia's political future is unclear, the Kurds' is more so.

Kurdish society is growing healthier because the United States and its European allies have made clear their determination to protect it. They have vacillated on Bosnia, which is painfully dying. What does it take to make President Clinton see the connection?

[HN00HJ][GDrive]

1996

(See full page in newspaper at [HN00HK][GDrive])



The political price

Regarding your April 16 editorial, "Israeli offensive": It seems clear that the United States has forfeited the moral high ground in its support of Israel's large-scale and punishing attacks in response to Hezbollah rockets sent into Israel. The response is clearly disproportionate to the effects of the rockets. While erratic and terrorizing, the human/material damage was not great.

Lebanon, controlled by Syria, fully understands that the United States is essential to permanent peace in that region. The scars inflicted by Israel causing a half-million refugees among Lebanon's 3-million-plus population will have a strong negative impact on the United States' honest broker role. A high price to pay for a rather transparent political decision. One wonders how many new Hezbollah applicants will rise from these Lebanese victims.

— Peter P. Strzok, Minneapolis.

[HN00HL][GDrive]

2003

(See full page in newspaper at [HN00HM][GDrive])

Aid workers alarmed by attacks at food warehouses

Many other Iraqis living in exile in the United States are postponing long-awaited visits to their homeland because of the violence that persists there.

Insurgents are staging 10 to 25 attacks a day on U.S. forces in Iraq, Gen. Tommy Franks, former head of the U.S. Central Command, told a congressional committee this week. The shootings, grenade attacks and bombings are threatening relief work, even though most of the assailants have targeted military forces.

The Minneapolis-based American Refugee Committee sent a security expert to Iraq last week to assess safety for workers who are delivering relief in the country's southern regions. The committee received a $500,000 grant in May from the U.S. Agency for International Development to help distribute relief supplies, assess reconstruction needs and rebuild schools, clinics and other facilities. It is awaiting approval of a larger grant from the State Department for resettling Iraqis who are living in Iran, said Hugh Parmer, the committee's president.

"At this point, we have not had any incidents in which security problems have interfered with our operations," Parmer said.

Concern over looters

Even so, workers at several humanitarian organizations are alarmed. The United Nations World Food Program said in a statement on Thursday that there had been at least 12 incidents since June 10 of looting and shooting in or near food warehouses. The agency withdrew its staff from one Baghdad warehouse after it was attacked by several hundred looters. A few trucks bringing food into Iraq also have been hijacked, it said.

"These incidents have not yet halted the arrival and distribution of food, but we are worried their continuation could discourage commercial transporters from sending more trucks into trouble spots," said Amer Daoudi, the program's operations manager for Iraq.

Iraq poses one of the most significant tests the United States has faced since the Civil War in trying to hold together a chaotic political entity while also launching an immense reconstruction project, said Peter Strzok, who formerly directed humanitarian and development programs in the Middle East.

Strzok now lives in Washburn, Wis. and is independently organizing a program that involves sending reconditioned tractors, tillers and other aid to northern Iraq, where conditions are more secure than in the country's middle and southern regions.

"We believe that if we could set up in the north, we could eventually move south as security is established," he said.

The violence also is giving pause to companies aspiring to get a piece of potentially lucrative action in the oil-rich country that could be a hub for Middle East commerce. Still, they are betting on calmer days ahead.

Air service to resume

Northwest Airlines won preliminary approval last month to schedule service to Iraq. The authority granted by the U.S. Department of Transportation is subject to approval by the Federal Aviation Administration and other agencies. Other carriers with the authority are United Airlines, American Airlines, Delta, World Airways and Kalitta Air, transportation officials said.

Safety is a concern, and Northwest has set no timetable for launching the service it expects to provide via Amsterdam, said spokeswoman Mary Stanik. "Should we receive all of the other approvals, then we'll be ready to talk about what it might take in terms of security," she said.

At least four other Minnesota companies are negotiating contracts to do business in Iraq, said Odeh Muhawesh, president and CEO of Minnesota Middle East Trading Company Inc. He and two partners in Minneapolis promote themselves as catalysts for companies that want to tap into the huge public works investment the U.S. government is controlling in Iraq.

Muhawesh, who is of Jordanian descent, said he opened an office in Jordan last month and is negotiating with Iraqi business leaders as well as U.S. government officials for projects in the telecommunications and food processing industries. He declined to name the companies involved until contracts are sealed.

The business could be conducted through a secure free-trade zone in Jordan, relieving companies of the need to take risks in Iraq, Muhawesh said. His company, however, plans to open an office in Baghdad.

While Muhawesh "definitely is concerned about security," he also worries that Minnesota's leaders are timid about chasing potential business in Iraq. Minnesota risks losing a share of billions of dollars the United States and other countries are investing in Iraq, he said.

Muhawesh said that in discussions with federal agencies controlling reconstruction funding, he has learned that officials from other states are aggressively lobbying for their companies. Sen. Mark Dayton, a Democrat, has helped Minnesota companies secure a toehold in the bidding process, he said, but some other Minnesota officials at the state and congressional level have declined to lobby on behalf of local companies.

"My biggest disappointment has been our politicians," he said. "They just don't seem to get it. . . . They don't seem to understand the impact this could have."

One immediate impact of the war has been to give Iraqi exiles in the United States more open contact with relatives who had been afraid to speak frankly during telephone conversations that were assumed to be monitored by Saddam Hussein's government.

Taking the risk

It was a call from a cousin in Iraq that spurred Yacoub Aljaffery's decision in June to buy a plane ticket to Amman. His family in New Brighton was so worried about the danger that he didn't tell his mother where he was going, he said.

At the Iraqi border, U.S. military guards warned him to be careful passing through Fallujah, where attacks had been heavy, he said. He took their advice. In southern Iraq, Aljaffery heard gunfire at night, but he never felt threatened.

Upon arriving at a village near Nasiriyah, he traversed a narrow street between sand-colored houses and knocked on a grey door of a house he hadn't seen since he was 10 years old. The cousin who opened the door didn't know him, but an uncle just inside shrieked and fell to the ground.

Then began the crying, the hugging and the feasting. The family slaughtered a sheep and cooked it over an open fire.

Aljaffery felt a level of security his family hasn't known in Iraq during his lifetime, which has been marked by hostility between his Shiite people and Saddam, a Sunni Muslim. His father, a religious leader who was killed during the Shiites' 1991 uprising, now is openly honored as a martyr.

Electricity and water had been largely restored in the region, he said, and people were relishing simple freedoms such as the liberty to post a slogan on a wall. But the sense of well-being won't be complete, he said, until a permanent government under local control takes shape.

"When this happens, people will be a lot happier," he said. "Right now they don't know the future of their country."

Sharon Schmickle is at sschmickle@startribune.com.

[HN00HN][GDrive]

(See full page in newspaper at [HN00HO][GDrive])

BAYFIELD COUNTY

Man wants to donate farm equipment to Iraq

WASHBURN – Peter Strzok thinks the Midwest's old sheds and barns contain something that could help Iraq's shaky economy: farm equipment.

The Washburn man started a campaign this month to collect old garden tillers and farm equipment for shipment to Iraqi farmers.

He plans to collect the equipment in Ashland, recondition it with the help of volunteers and truck it to Duluth, Minn., for transfer to ship. He hopes to send his first shipment by September.

Even small, basic equipment could boost crop yields significantly in Iraq, said Schwan Rashid, an accountant in Des Moines, Iowa, who grew up farming in northern Iraq and has family there.

[HN00HP][GDrive]

2015

(From [HX000B][GDrive])

Time for Africa to Take Charge of Its Security?

By Peter P. Strzok, Special to The Pilot Dec 8, 2015

[Note: The author, who lives in Pinehurst, is president of the Minnesota-based Agency to Facilitate the Growth of Rural Organizations (AFGRO).]

I was an invited guest at the ***second Dakar Forum for Peace and Security for Africa, held Nov. 9-10 at Dakar, Senegal.*** *Some 800 attended.*

Under the patronage of the president of Senegal, Macky Sall, the conference drew experts on African security from all over the world, dominated by Africans and Europeans, who regard an unstable and weak Africa as directly threatening the stability of the European Union.

There is an uneven legacy of colonial Europe in Africa associated with granting independence to most African nations in the 1960s. The EU remains Africa's largest donor for development; it is also Africa's largest external market.

Increasingly confronted with multiple threats by terrorists organizations that are thriving in African territories, Europe and nations worldwide see the urgent need to expand help to Africa to strengthen its security capacities.

This concern seemed validated by the massacres in Paris and Bamako, Mali, shortly after the Dakar Forum. Similar atrocities occur on an almost daily basis, by Boko Haram in the Lake Chad region — by ISIS, expanding its power in Libya and Tunisia; attacks on U.N. peacekeeeping forces in Northern Mali; and maritime kidnappings on trade routes adjacent to Africa.

There are other considerations for a stable Africa.

There is more unused arable land in Africa than the rest of the world combined. The population of the world today is about 7 billion; by 2100, it will be 10.1 billion. Africa's share of that population today is 1 billion.

Combined with Asia's population, those two continents will represent, in 2100, 80 percent of the world's population.

The International Food Policy Research Institute (IFPRI) indicates that sufficient food production capacity to meet these population increases is not infeasible, with the assumption that unused arable land (with water) can be exploited under positive conditions. Absent this, there is the spectre of millions of destitute Africans and Asians fleeing to other continents/countries. This is the challenge.

What are my takeaways from the second Dakar Forum?

First, the president of Senegal spoke of the need to promote a "tolerant Islam" in Africa. *He asked assistance of Arab countries with schools of Islam, to assist Africans to better understand the attraction of jihadists and corrective responses. He stressed the need to professionalize African Union's military- ready forces, in training, equipment and in sharing intelligence on jihadists.*

Many experts spoke of the issues of porous borders, which, in this huge continent with vast open areas, present formidable problems to monitor and/or interdict human movements. This requires developing trust with local populations, not an easy task given that these diverse ethnic groups typically treat state authorities with distrust.

As to the U.S. roles: The deputy commander of USAFRICOM, Vice Admiral Franken, told a Reuters reporter that regional efforts against Boko Haram "could lead to a significant degradation of its activities within six months."

It is also true that country-specific U.S. assessments, which in the past were provided by staff working and traveling throughout host countries, visiting with village chiefs and other notables, are now greatly impeded by the cautionary, almost bunker-down conditions that describe official U.S. staff working in many African countries.

There remain the issues of wide-scale corruption by national leaders in many countries. Control of land by an elite few in several countries inhibit maximizing food production; incentives for those who work the land are negligible at best.

As to natural resources, such as oil, gas and other precious minerals, there is no country in Africa that has a positive record of using the proceeds from that wealth in a significant way for the public good.

There are many younger Africans, educated in technical skills and dedicated to the power of democratic practices for the common good, who are involving themselves in strategies to save Africa from its negative practices of the past. How they fare going forward against entrenched interests is a significant problem.

In a final request by African leaders to the United Nations, one expert calculated that the Security Council spends about 70 percent of its time debating crises and other urgent issues about Africa. It would seem an imperative that the African Union have a permanent seat on the Security Council

A final caveat: If Africa is to take charge of its future, it has to create the right incentives for its working class, mostly agriculturists, so as to minimize the poverty and despair that leads its youth to the join the expanding groups of terrorists.

2016

From : [HN00HQ][GDrive] (downloaded Dec 25 2017)

Peter P. Strzok: 50-year di!erence in Iran

By Peter P. Strzok

[Sep 3, 2016]

Like many of you, I followed the news last month about the Russian Air Force's use of the ***Iranian Hamadan Air Base****. First reported on Aug. 15, it has been copiously covered by Russian TV and the Sputnik International websites and other international news agencies.*

The history of Hamadan Air Base provides a somber irony for Americans associated with Iran and the Middle East.

Following World War II, Presidents Truman and Eisenhower approved a massive development program for Iran. Its military component included efforts to contain the Soviet intrigues in Northwest Iran. To this end, the U.S. Army Corps of Engineers established the Tehran Engineer District, which would go on to build military installations designed to block penetration of Soviets to Iran and Iraq oil fields and contiguous warm water ports.

After the Soviets surprised the U.S. with testing of its atomic bomb in August 1949, part of the U.S. response was to build a series of air bases from which to launch B-47s, our first jet bombers capable of carrying atomic weapons. *On the southern flank, bases were in Morocco, Libya, Iran and Pakistan. Hamadan was multipurpose. It was a base for Iranian Air Force units, but it could also act as a recovery base for Northern African-based B-47s, whose combat range precluded their ability to reach Soviet targets and return to home base. Thus, Hamadan has three-mile runways, north to south; the strong prevailing winds are west to east.*

In 1965, I was an Army engineer captain assigned to the U.S. Military Mission to Iran. Fresh out of Persian language studies at Monterey, California, one of my jobs was to accept civic action schools being built from funds accrued from sales by Iran of food aid provided by the U.S. *These schools were being built in border areas, concentrating on nomadic groups such as the Kurds, Balouch, Turkoman, Azeris and Afghans, under the theory that educated nomads tend toward sedentary living with reduced security concerns. One was built in Marivan, a Kurdish village hard up against the Iraqi border. In October 1965, I flew from Tehran, in a de Havilland Otter, to meet with contractors and Tehran Engineer District staff, to turn over the Marivan school for transfer to the government to Iran.*

Our pilot, an army engineer involved with topographic mapping of Iran, stopped at Manadan to refuel. With a strong west-to-east wind, and given the Otter's expansive wing area, he decided he could not use the north-south runways. With the agreement of the Iranian base commander, he had the Otter pulled into a hangar and took off into the wind, using the parking area to gain takeoff. We landed in a harvested wheat field in Marivan. With his villagers, the village chief celebrated this new gift - an elementary school for the children, a first in the region.

Some 50 years later, the roles are reversed. News reports last month indicated Russia was granted use of Hamadan and was using its best aircraft to take the fight to both ISIS and Syrian opponents of President Assad.

Not so fast. Iranian leadership was apparently offended by the powerful Russian public relations efforts over its air force's use of Hamadan. On Aug. 22, the Iranian foreign minister's spokesman, Bahram Qassemi, spun the story this way: "Russia made a request to use Iran's territory to battle against the terrorists in Syria. ... They got our temporary permission for that. ... The deployment is temporarily finished. ... Russia has no airbase in Iran." (Tehran Times, Aug 24).

Russian-Iranian history is replete with confrontations. From the late 19th century to 1945, Russia had control over much of the northern half of Iran, with the British managing the southern half. Xenophobia is pervasive in Iran. After the glorious history of enlightened leaders such as Cyrus and Darius, Persia decayed too often into a corrupt and fragmented governance. Outsiders are still often viewed with distrust, no matter how much benefit Iran might gain. In the case of Hamadan, Iranian leadership was offended by Russia's exuberant reporting of its TU-22M3 strategic bombers and Sukhoi SU-34s - a sales pitch by Russia, impinging on Iran's sovereignty.

By the way, the village of Marivan has grown substantially. Reports about Iran's nuclear program show it to have important activities in applied nuclear research. I last viewed the Marivan area from the Iraqi side of the border, in 1994. I was escorting U.S. visitors to Penjwen, a Kurdish Iraqi village that is called "the Iraqi Verdun" because of its almost total destruction, a strategic site won and lost many times during that horrific war, 1980-88.

Peter P. Strzok lives in Pinehurst. He was a longtime member of the Army Corps of Engineers. Since 1980, he has worked at village levels in over 13 countries in West Africa.

Tweet thread from "R_D__P_LL" on Peter Strzok Sr.

Tweet : 2018-07-18-twitter-R_D__P_LL-1019642804186693632.jpg

"14) In Sept and Nov 1993, he gets a grant from USAID for a project in IRAQ. Fascinating. Who else gets large amounts of money from @USAID ? "

The "Agency for International Development"

Field Title	Value	Meaning
Agency Code	1152	Agency for International Development
Contracting Office Code	11521	11521
Agency Name	AGENCY FOR INTERNATIONAL DEVELOPMENT	AGENCY FOR INTERNATIONAL DEVELOPMENT
Contracting Office Name	AGENCY FOR INTERNATIONAL DEVELOPMENT	AGENCY FOR INTERNATIONAL DEVELOPMENT
Contracting Office Address 1	WASHINGTON	WASHINGTON
Contracting Office Address 2	*	*
Contracting Office Address 3	*	*
Contracting Office City	WASHINGTON	WASHINGTON
Contracting Office State	DC	DISTRICT OF COLUMBIA
Contracting Office ZIP Code	20523	20523
Contracting Office Country	*	*
Contract Number	AIDTOA00003410	AIDTOA00003410
Modification Number	*	*
Contracting Office Order Number	*	*
Action Date	199309	Undefined Code
Type of Entry	A	Original - Use this code to report an action which has not been previously reported to the FPDS
Report Period	19934	Fourth Quarter 1993
Est. Completion Date	199408	August, 1994
Kind of Contract Action	C	Max Definitive Contract
Dollars Vs Obligations	+000000.00	+000000.00
Product or Service Code	R499	R499
Product or Service Description	OTHER ADMINISTRATIVE SUPPORT SVCS	OTHER ADMINISTRATIVE SUPPORT SVCS
DOD Claimant Program	*	*
DOD Sequence or Order Code	*	*
Standard Industrial Classification Code	8999	Undefined Code
SIC Nomenclature	SERVICES, NEC	SERVICES, NEC
Commercial Item Acquisition	*	Undefined Code
Contractor Name (Text Format)	STRZOK, PETER, H	STRZOK, PETER, H

Common Parent Name (Text Format)	*	*
Contractor Establishment Code	808884 IAC	808884IAC
Contractor Name 1 (Text 1)	*	*
Contractor Name 2	*	*
Contractor Street Address	*	*
Contractor DUI	*	*
Contractor State Abbreviation	*	Undefined Code
Contractor ZIP Code	*	*
Contractor Country	*	*
Principal Place of Performance State Abbreviation	*	Undefined Code
Principal Place of Performance ZIP Code+4	*	*
Principal Place of Performance Country Code	ID	IRAQ
Place of Performance City	*	*
Place of Performance County	*	*
Place of Performance Country	*	*
Contract Act Amount Obligated	0	No
Tariff or Penalized Acquisition	*	Undefined Code
Multi-Year Contract	*	Undefined Code
Country of Manufacture Code	UR	UNITED STATES
Purpose of Procurement	C	Not scrutinized for other reason
Type of Contract or Modification	Z	Letter Mod
Competition in Contracting Act Code	C	Subject or Statute Other Than CICA
Solicitation Procedures	*	Undefined Code
Authority for other than Full and Open Competition	*	Undefined Code
Number of Offers Received	*	Undefined Code
Extent Competed	B	Not Available for Competition
Type of Contractor	H	Domestic Contractor Performing Outside U.S.

Field Title	Value	Meaning
Agency Code	1152	Agency for International Development
Contracting Office Code	11521	11521
Agency Name	AGENCY FOR INTERNATIONAL DEVELOPMENT	AGENCY FOR INTERNATIONAL DEVELOPMENT
Contracting Office Name	AGENCY FOR INTERNATIONAL DEVELOPMENT	AGENCY FOR INTERNATIONAL DEVELOPMENT
Contracting Office Address 1	WASHINGTON	WASHINGTON
Contracting Office Address 2	*	*
Contracting Office Address 3	*	*
Contracting Office City	WASHINGTON	WASHINGTON
Contracting Office State	DC	DISTRICT OF COLUMBIA
Contracting Office ZIP Code	20523	20523
Contracting Office Country	*	*
Contract Number	AIDTOA00003410	AIDTOA00003410
Modification Number	*	*
Contracting Office Order Number	*	*
Action Date	199311	November, 1993
Type of Entry	A	Original - Use this code to report an action which has not been previously reported to the FPDS
Report Period	19941	First Quarter, 1994
Est. Completion Date	199408	August, 1994
Kind of Contract Action	M	Modification
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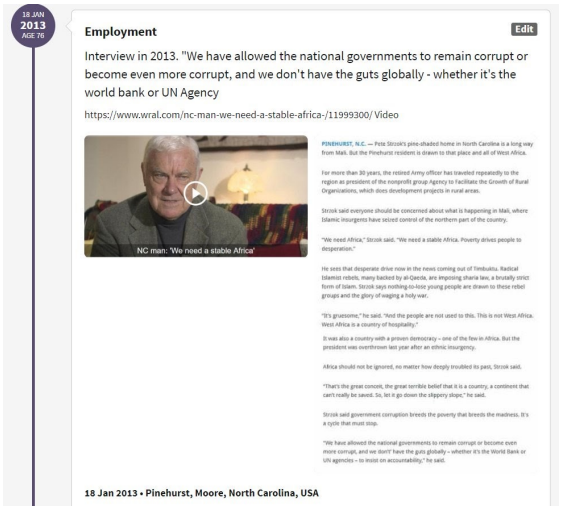
Product or Service Code	R499	R499
Product or Service Description	OTHER ADMINISTRATIVE SUPPORT SVCS	OTHER ADMINISTRATIVE SUPPORT SVCS
DOD Claimant Program	*	*
DOD Sequence or Orders Code	*	*
Standard Industrial Classification Code	8999	Undefined Code
SIC Nomenclature	SERVICES, NEC	SERVICES, NEC
Commercial Item Acquisition	*	Undefined Code
Contractor Name (Text Format)	STRZOK, PETER, H	STRZOK, PETER, H

Tweet : 2018-07-18-twitter-R_D__P_LL-1019643506845835264.jpg

"16) Here is an attachment the earliest publicly available form 990 for his charity "AFGRO". He deals quite a bit with the @WorldBank. #Strzok"

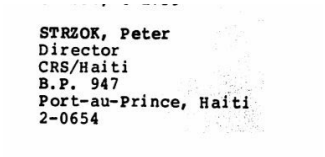
Tweet : 2018-07-18-twitter-R_D__P_LL-1019644061190316039.jpg

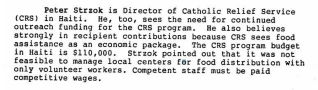
"18) In 2013, he gives an interview saying we need a stable africa.... #Strzok https://www.wral.com/nc-man-we-need-a-stable-africa-/11999300/Video ..."

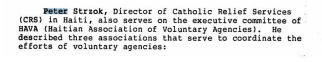


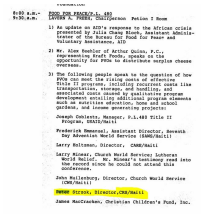
Tweet : 2018-07-18-twitter-R_D__P_LL-1021112697700667394.jpg

"20) 9:30AM, Wednesday, June 20th, 1985 - Peter Strzok (The Father) is in Haiti for a quarterly meeting for "Maximizing Development Assistance. #ConfessionsofanEconomicHitman "


STRZOK, Peter
Director
CRS/Haiti
B.P. 947
Port-au-Prince, Haiti
2-0654


Peter Strzok is Director of Catholic Relief Service (CRS) in Haiti. He, too, sees the need for continued outreach funding for the CRS program. He also believes strongly in recipient contributions because CRS sees food assistance as an economic package. The CRS program budget in Haiti is $110,000. Strzok pointed out that it was not feasible to manage local centers for food distribution with only volunteer workers. Competent staff must be paid competitive wages.


Peter Strzok, Director of Catholic Relief Services (CRS) in Haiti, also serves on the executive committee of HAVA (Haitian Association of Voluntary Agencies). He described three associations that serve to coordinate the efforts of voluntary agencies:


9:00 A.M.- Peter Strzok, Director, P.L.480
9:30 A.M. Catholic Relief Services Petion I Room

1) An update on AID's response to the African crisis presented by Rita Chang Nixon, Assistant Administrator, Bureau for Food for Peace and Voluntary Assistance, AID

2) Mr. Alex Dechter of Arthur Quinn, P.C., representing Kraft Foods, speaks on the opportunity for PVOs to distribute surplus cheese from Kraft.

3) The following people speak to the question of how PVOs can best use Title II resources. Under Title II programs, including recurrent costs like transportation, storage, and handling, and development activities, including food-for-program development activities, including food-for-program development activities, including additional program elements such as nutrition education, home and school gardens, and income generating projects.

Joseph Deblants, Manager, P.L.480 Title II Program, CRS/HAITI

Frederick Emmanuel, Assistant Director, Seventh Day Adventist World Service (SDAWS/Haiti)

Larry Reitsman, Director, CRWS/Haiti

Larry Minear, Church World Service; Lutheran World Relief. Mr. Minear's backstopy read into the record, as he was to COULD not attend this conference.

John Hollenburg, Director, Church World Service (CWS/Haiti)

Peter Strzok, Director,CRS/Haiti

James MacCracken, Christian Children's Fund, Inc.

Tweet : 2018-07-18-twitter-R_D__P_LL-1021113290469101571.jpg

"21) Haiti Country Profile --- May 1984. Peter Strzok, Director of Catholic Relief Services. https://pdf.usaid.gov/pdf_docs/PNAAQ451.pdf ... @CoreysDigs"

Tweet : 2018-07-18-twitter-R_D__P_LL-1021114118277947392.jpg

"22) Sahel Regional Financial Management Report [Ernst & Young] March, 1991. Peter Strzok - Food for Development. #Strzok @CoreysDigs @littlecarrotq https://pdf.usaid.gov/pdf_docs/PDABH916.pdf ..."

Tweet : 2018-07-18-twitter-R_D__P_LL-1021114870547218434.jpg

"23) Political Economy in Haiti - Publish in 1990. Peter Strzok listed as a research assistant --- Which Strzok? Probably the father. #Strzok @antischool_ftw https://pdf.usaid.gov/pdf_docs/PNABI297.pdf ..."

Tweet : 2018-07-18-twitter-R_D__P_LL-1021115857815113729.jpg

"24) USAID Contracts. 1988 - Agency to Facilitate the Growth of Rural Organizations [Strzoks Non-Profit] Notice the address with the university... Also forgot to highlight his name below ! #Strzok @Avery1776 https://pdf.usaid.gov/pdf_docs/PNACZ058.pdf ..."

Tweet : 2018-07-18-twitter-R_D__P_LL-1021116504354549760.jpg

"25) USAID Contracts. 1994. IRAQ. $186,626 for the year. Interesting. Working as Disaster Assistance Response Team Leader for the Office of Foreign Disaster Assistance."

Tweet : 2018-07-18-twitter-R_D__P_LL-1021117307366662147.jpg

"26) Report for measuring basic needs for vulnerable groups. 1994. Iraq. #Strzok @Deplorable80210 https://pdf.usaid.gov/pdf_docs/PNABW061.pdf ..."

2) A quick background: Peter Paul Strzok II (FBI) has a father named Peter Paul Strzok who was born in 1933. We know he was in the Army Corp of Engineers - Catholic Relief Services - President of a non profit (AFRGO) and has worked all over the world.

3) In 1991 - Just before getting a contract with USAID for Disaster Relief in Iraq --- **Peter Strzok [II (born 1936)]** started a company based in "Minnesota" called **"MINAFCO, INC."** VERY LITTLE INFO ON THIS COMPANY. I believe changed address to WI in 2002.

MINAFCO, INC.

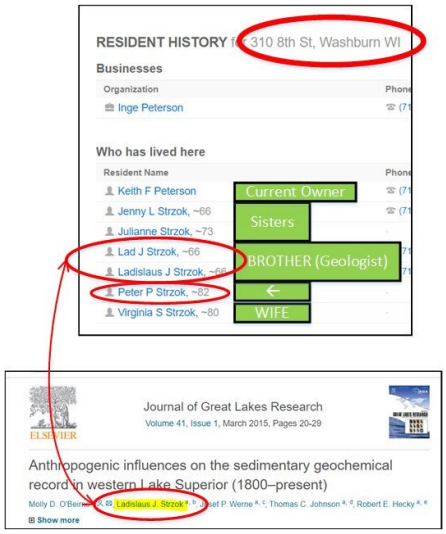
Company Number	1b6c475b-9dd4-e011-a886-001ec94ffe7f
Native Company Number	6Y-664
Status	Inactive
Incorporation Date	27 February 1991 (over 27 years ago)
Company Type	Business Corporation (Domestic)
Jurisdiction	Minnesota (US)
Registered Address	2233 N Hamline Ave #530 %Alan Anderson St Paul, MN 55113 USA United States
Governing Legislation	302A
Inactive Directors / Officers	Peter P Strzok, chief executive officer
Registry Page	https://mblsportal.sos.state.mn.us/Bu...

Recent filings for MINAFCO, INC.

9 Jan 2008	ADMINISTRATIVE DISSOLUTION - BUSINESS CORPORATION (DOMESTIC)
20 Dec 2002	REGISTERED OFFICE AND/OR AGENT - BUSINESS CORPORATION (DOMESTIC)
27 Feb 1991	BUSINESS CORPORATION (DOMESTIC) BUSINESS NAME (BUSINESS NAME: MINAFCO, INC.)
27 Feb 1991	BUSINESS CORPORATION (DOMESTIC) BUSINESS NAME
27 Feb 1991	ORIGINAL FILING - BUSINESS CORPORATION (DOMESTIC)

Source Office of the Minnesota Secretary Of State, https://mblsportal.sos.state.mn.us/Bu..., 1 Jul 2017

4) This Wisconsin address - Same as Minafco, has all the signs that this definition was a Peter Strzok operation. Curious enough his brother, Lad Strzok is a geologist. So what the hell does Minafco do???



RESIDENT HISTORY f 310 8th St, Washburn WI

Businesses

Organization	Phone
Inge Peterson	☎ (7

Who has lived here

Resident Name	Phone
Keith F Peterson	☎ (7
Jenny L Strzok, ~66	☎ (7
Julianne Strzok, ~73	
Lad J Strzok, ~66	7
Ladislaus J Strzok, ~66	7
Peter P Strzok, ~62	
Virginia S Strzok, ~80	

Current Owner

Sisters

BROTHER (Geologist)

←

WIFE

Journal of Great Lakes Research

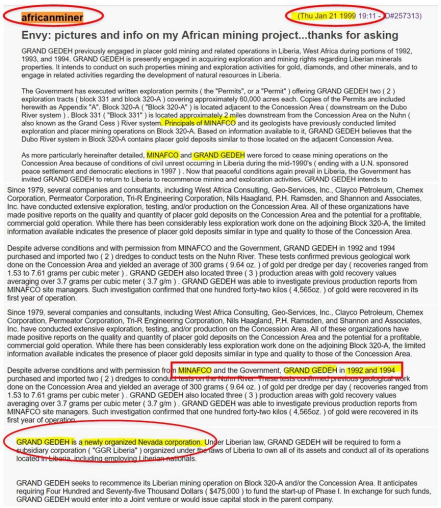
Volume 41, Issue 1, March 2015, Pages 20-29

Anthropogenic influences on the sedimentary geochemical record in western Lake Superior (1800–present)

Molly D. O'Beirn[a, b], Ladislaus J. Strzok[a, *], Josef P. Werne[a, c], Thomas C. Johnson[a, d], Robert E. Hecky[a, e]

Show more

5) Well - I believe it is a GOLD MINING COMPANY. In an old archived gold investment blog --- look who decided to share some details... "africanminer" I believe this is actually PETER STRZOK. I'll show you in a bit. READ THIS



africanminer (Thu Jan 21 1999 19:11 - ID#257313)

Envy: pictures and info on my African mining project...thanks for asking

GRAND GEDEH previously engaged in placer gold mining and related operations in Liberia, West Africa during portions of 1992, 1993, and 1994. GRAND GEDEH is presently engaged in acquiring exploration and mining rights regarding Liberian minerals properties. It intends to conduct on such properties mining and exploration activities for gold, diamonds, and other minerals, and to engage in related activities regarding the development of natural resources in Liberia.

The Government has executed written exploration permits (the "Permits", or a "Permit") offering GRAND GEDEH two (2) exploration tracts (block 331 and block 320-A) covering approximately 60,000 acres each. Copies of the Permits are included herewith as Appendix "A". Block 320-A ("Block 320-A") is located adjacent to the Concession Area (downstream on the Dubo River system) . Block 331 ("Block 331") is located approximately 2 miles downstream from the Concession Area on the Nuhn (also known as the Grand Cess) River system. Principals of MINAFCO and its geologists have previously conducted limited exploration and placer mining operations on Block 320-A. Based on information available to it, GRAND GEDEH believes that the Dubo River system in Block 320-A contains placer gold deposits similar to those located on the adjacent Concession Area.

As more particularly hereinafter detailed, MINAFCO and GRAND GEDEH were forced to cease mining operations on the Concession Area because of conditions of civil unrest occurring in Liberia during the mid-1990's (ending with a U.N. sponsored peace settlement and democratic elections in 1997) . Now that peaceful conditions again prevail in Liberia, the Government has invited GRAND GEDEH to return to Liberia to recommence mining and exploration activities. GRAND GEDEH intends to

Since 1979, several companies and consultants, including West Africa Consulting, Geo-Services, Inc., Clayco Petroleum, Chemex Corporation, Permeator Corporation, Tri-R Engineering Corporation, Nils Haagland, P.H. Ramsden, and Shannon and Associates, Inc. have conducted extensive exploration, testing, and/or production on the Concession Area. All of these organizations have made positive reports on the quality and quantity of placer gold deposits on the Concession Area and the potential for a profitable, commercial gold operation. While there has been considerably less exploration work done on the adjoining Block 320-A, the limited information available indicates the presence of placer gold deposits similar in type and quality to those of the Concession Area.

Despite adverse conditions and with permission from MINAFCO and the Government, GRAND GEDEH in 1992 and 1994 purchased and imported two (2) dredges to conduct tests on the Nuhn River. These tests confirmed previous geological work done on the Concession Area and yielded an average of 300 grams (9.64 oz.) of gold per dredge per day (recoveries ranged from 1.53 to 7.61 grams per cubic meter) . GRAND GEDEH also located three (3) production areas with gold recovery values averaging over 3.7 grams per cubic meter (3.7 g/m) . GRAND GEDEH was able to investigate previous production reports from MINAFCO site managers. Such investigation confirmed that one hundred forty-two kilos (4,565oz.) of gold were recovered in its first year of operation.

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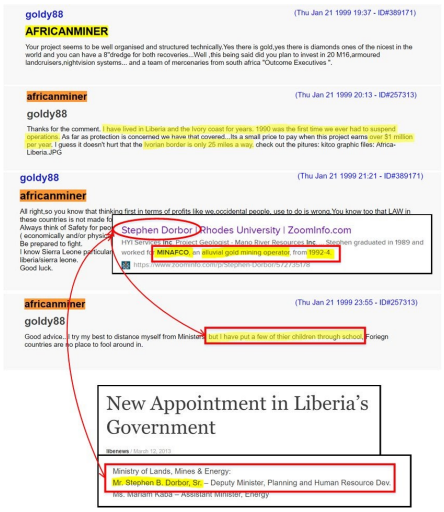
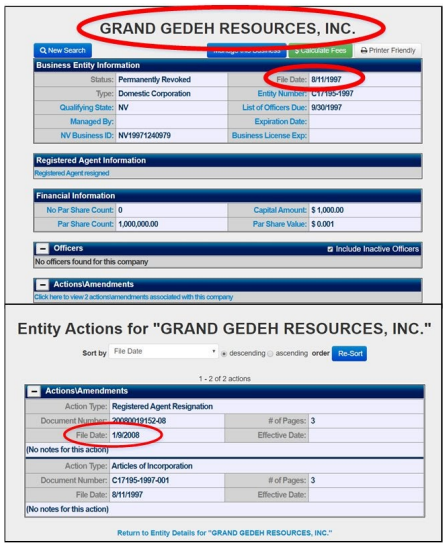
GRAND GEDEH is a newly organized Nevada corporation. Under Liberian law, GRAND GEDEH will be required to form a subsidiary corporation ("GGR Liberia") organized under the laws of Liberia to own all of its assets and conduct all of its operations located in Liberia, including employing Liberian nationals.

GRAND GEDEH seeks to recommence its Liberian mining operation on Block 320-A and/or the Concession Area. It anticipates requiring Four Hundred and Seventy-five Thousand Dollars ($475,000) to fund the start-up of Phase I. In exchange for such funds, GRAND GEDEH would enter into a Joint venture or would issue capital stock in the parent company.



6) Why do I believe "africanminer" is Strzok??? Well - he refers to a newly organized Nevada corporation "Grand Gedeh." Let's have a look. This blog post was written in 1999 --- Grand Gedeh incorporated in 1997. But wait --- When was it dissolved???



7) Yep - that's right. The SAME EXACT DATE that MINAFCO, INC (Strzok's company) was dissolved. Coincidence? I think not. Strzok's involved with GOLD MINING IN AFRICA ___ and probably getting the elected officials the #DeepState wants --- Like Stephen B Dorbor.

MINAFCO, INC.

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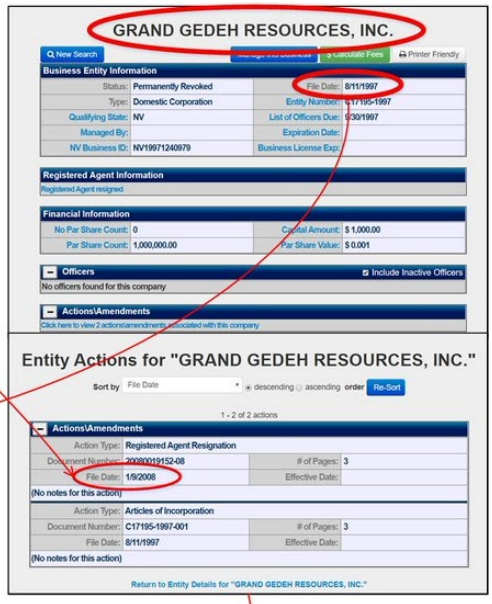

GRAND GEDEH RESOURCES, INC.

New Search | Printer Friendly

Business Entity Information

Status:	Permanently Revoked	File Date:	8/11/1997
Type:	Domestic Corporation	Entity Number:	C17195-1997
Qualifying State:	NV	List of Officers Due:	9/30/1997
Managed By:		Expiration Date:	
NV Business ID:	NV19971240979	Business License Exp:	

Registered Agent Information

Registered Agent resigned

Financial Information

No Par Share Count:	0	Capital Amount:	$ 1,000.00
Par Share Count:	1,000,000.00	Par Share Value:	$ 0.001

Officers — Include Inactive Officers

No officers found for this company

Actions\Amendments

Click here to view 2 actions\amendments associated with this company

Entity Actions for "GRAND GEDEH RESOURCES, INC."

Sort by File Date descending ascending order Re-Sort

1 - 2 of 2 actions

Actions\Amendments

Action Type:	Registered Agent Resignation		
Document Number:	20080019152-08	# of Pages:	3
File Date:	1/9/2008	Effective Date:	

(No notes for this action)

Action Type:	Articles of Incorporation		
Document Number:	C17195-1997-001	# of Pages:	3
File Date:	8/11/1997	Effective Date:	

(No notes for this action)

Return to Entity Details for "GRAND GEDEH RESOURCES, INC."

africanminer (Thu Jan 21 1999 19:11 - [illegible]257313)

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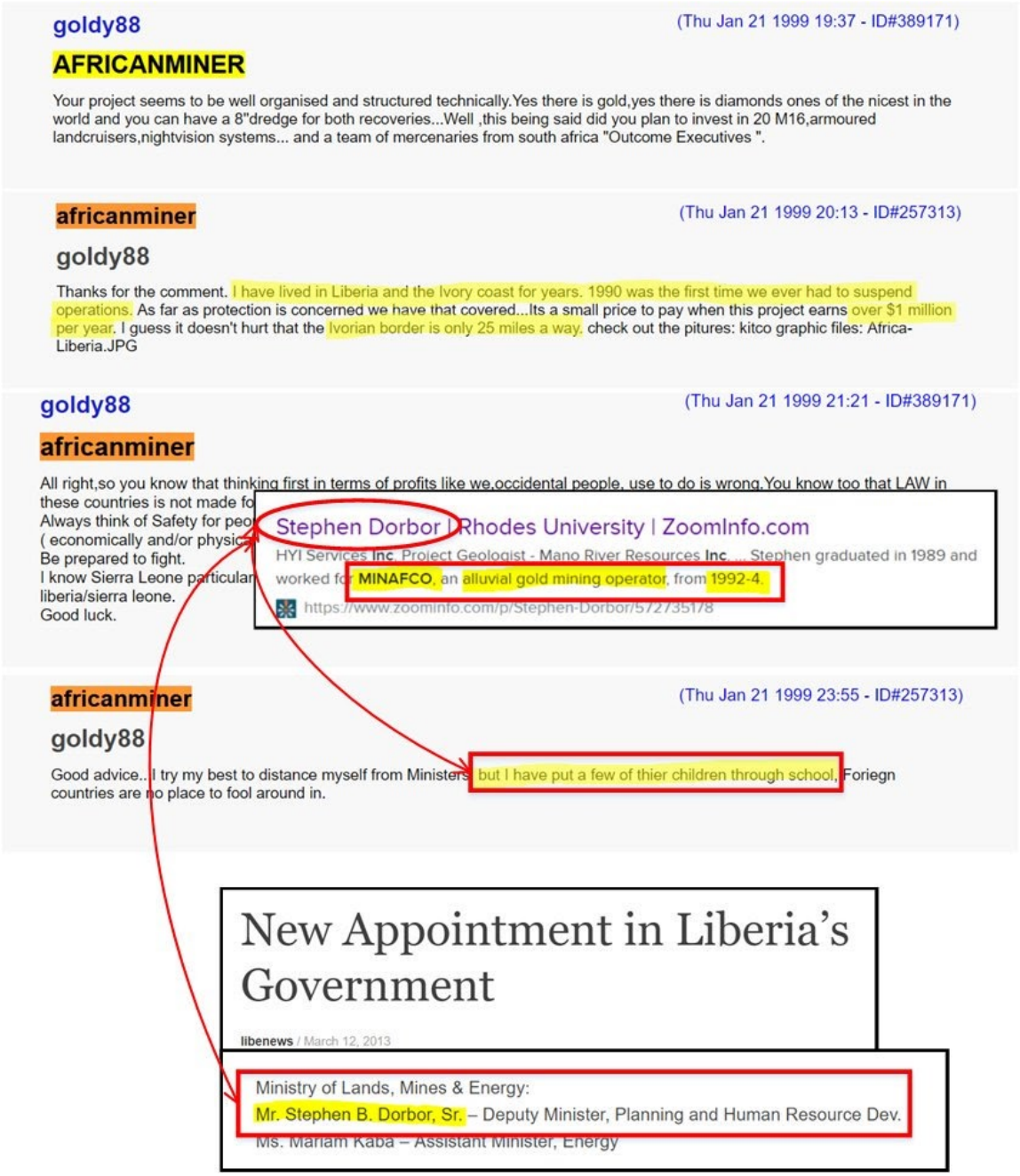
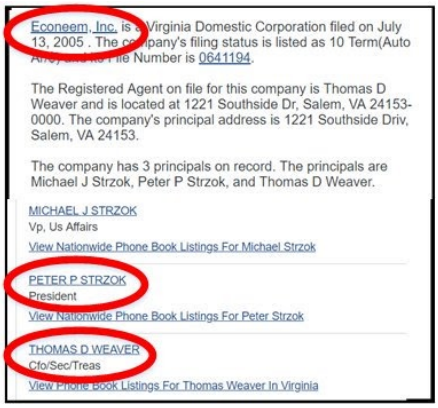
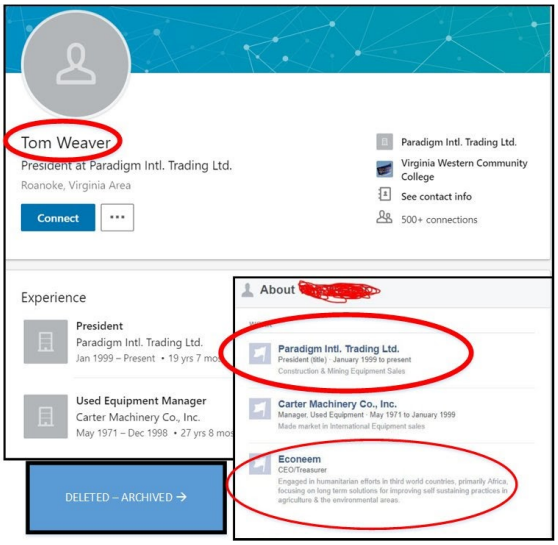


8) So under the guise of "Catholic Relief Services" and "USAID" and "Humanitarian Efforts" he's also involved with getting mineral rights in poor countries like Liberia. Fascinating. Makes me think of the book "Confessions of an Economic Hitman" --- But wait - IT GETS BETTER!!

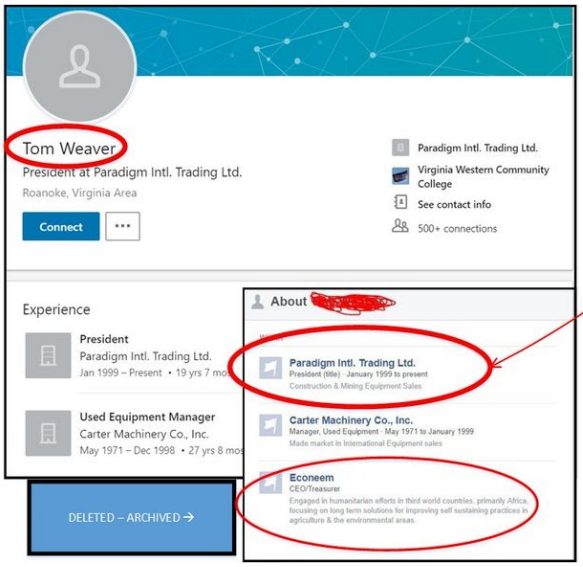
9) He also is involved with a company called, "Econeem, Inc." a Virginia based company. Unironically, it has been "PURGED" from the state website. So what''s special about Econeem, Inc?

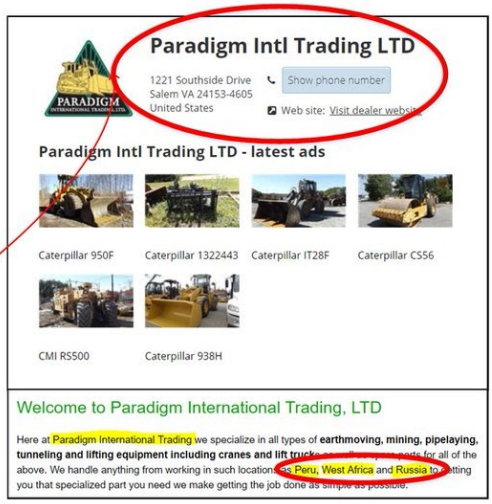


10) Registered agent "Thomas Weaver" may give us a clue. Pay attention to the ADDRESSES for this company. Strzok also was apart of a paper published for the World bank / USAID called "NEEM"



11) Thomas Weaver - for whatever reason - scrubbed is position with Econeem [archived by the anons of course] and is the President of Paradigm International Trading. Now they say they work internationally. Peru, West Africa, and Russia.





12) In 2003, Peter Strzok (the father) mentions that it would be good to send "Farm Equipment" to help with "Iraq." Interesting....

A 2003 article in the Fond du Lac Commonwealth Reporter newspaper in Wisconsin reprinted an Associated Press story that reported Strzok, the elder, "thinks the Midwest's old sheds and barns contain something that could help Iraq's shaky economy: farm equipment."

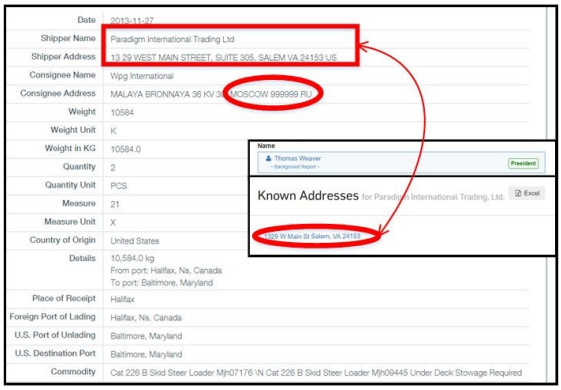
He planned to collect the equipment in Ashland, Wisconsin, recondition it and then truck it to Duluth, Minnesota to ship it to Iraq.

He also wrote a column in the Minneapolis Star Tribune in 1986. In it, he described visiting the Ivory Coast, Mali, Burkina Faso, Senegal and Gambia to "see the condition of the crops."

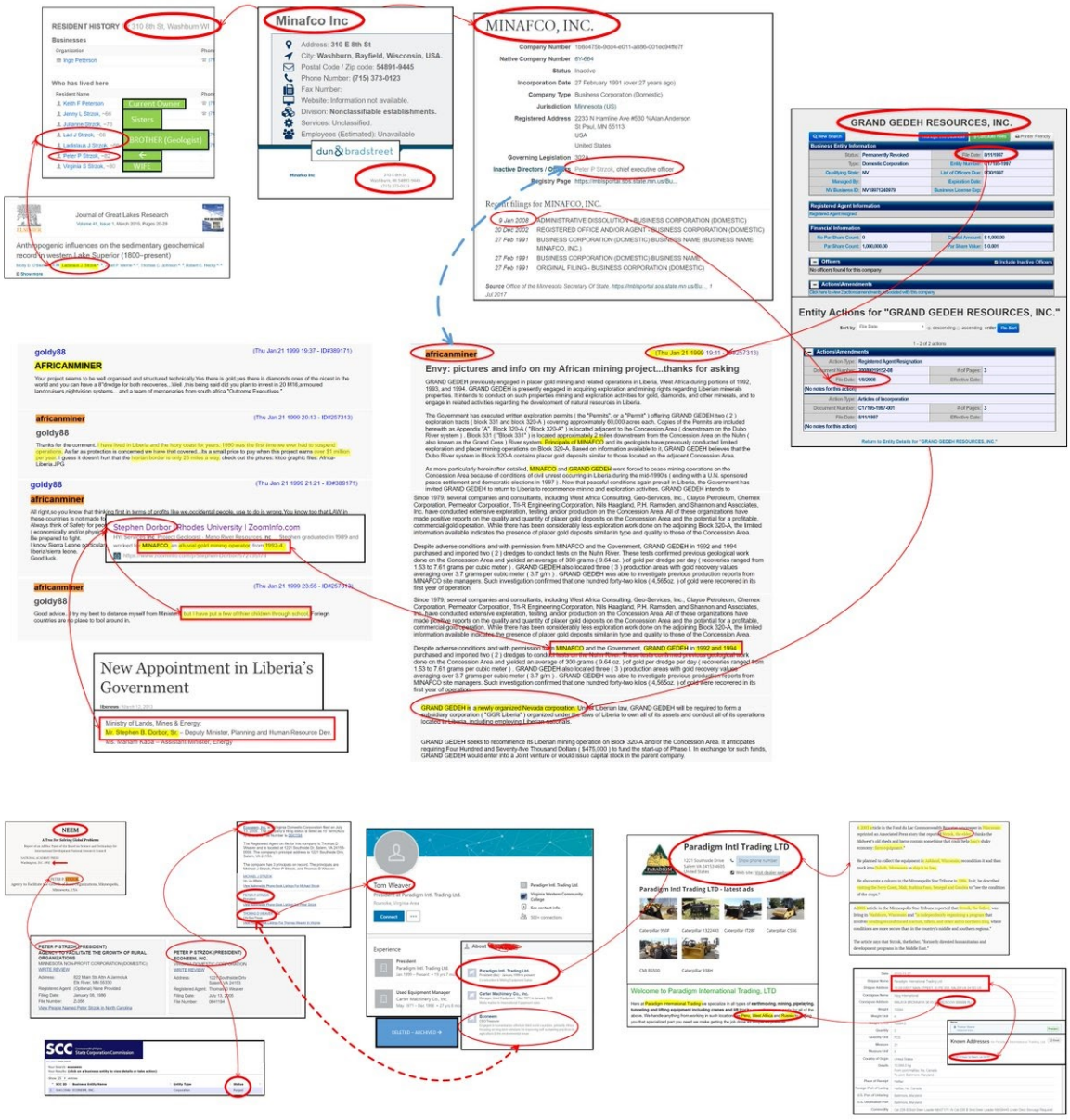
A 2003 article in the Minneapolis Star-Tribune reported that Strzok, the father, was living in Washburn, Wisconsin and "is independently organizing a program that involves sending reconditioned tractors, tillers, and other aid to northern Iraq, where conditions are more secure than in the country's middle and southern regions."

The article says that Strzok, the father, "formerly directed humanitarian and development programs in the Middle East."

13) Iraq you say? How about --- RUSSIA??? Please confirm that the ADDRESSES match in relation to Thomas Weaver - agent/president of Paradigm International Trading. Yes - they could be sending Equipment --- and who else knows what..... Does USAID get special treatment?



14) Summary: Peter Strzok was involved with a gold mining company that brought in $1MM + a year in Liberia. Probably assisted with installing favorable ministers. He was/is involved with shipping "equipment" internationally. 🔽 for full layouts. @Thomas1774Paine @CoreysDigs



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Housatonic

Peter Paul Strzok II (born 1970)

Wikipedia Peter Strzok

Peter Paul Strzok II was born in 1970.

For his father, see **Peter Paul Strzok I (born 1936)** .

Married to Melissa Hodgman (born 1968)

Wes Sundquist

https://biobeat.nigms.nih.gov/2018/05/interview-with-a-scientist-wes-sundquist-how-the-host-immune-system-fights-hiv/

POSTED ONMAY 30, 2018

Interview with a Scientist: Wes Sundquist, How the Host Immune System Fights HIV

BY STEVE CONSTANTINIDES

For more than 30 years, NIGMS has supported the structural characterization of human immunodeficiency virus (HIV) enzymes and viral proteins. This support has been instrumental in the development of crucial drugs for antiretroviral therapy such as protease inhibitors. NIGMS continues to support further characterization of viral proteins as well as cellular and viral complexes. These complexes represent the fundamental interactions between the virus and its host target cell and, as such, represent potential new targets for therapeutic development.

In this second in a series of three video interviews with NIGMS-funded researchers probing the structure of HIV, Wes Sundquist,Link to external web site professor of biochemistry at the University of Utah, discusses his lab's studies of how HIV uses factors in host cells to replicate itself. In particular, Sundquist focuses on the ESCORT pathway that enables HIV to leave infected cells and spread infection elsewhere.

Sundquist also talks about the University of Utah's Center for the Structural Biology of Cellular Host Elements in Egress, Trafficking, and Assembly of HIV (CHEETAH).Link to external web site This center uses computational and experimental methods to analyze HIV molecular complexes and determine how they interact with and commandeer cellular machinery to move themselves throughout cells and tissues. By visually reconstructing virus particle assembly and trafficking, CHEETAH aims to develop HIV into a leading model for understanding how human viruses interact with cellular hosts, and to provide a platform for designing new therapeutic strategies.

Dr. Sundquist's work is funded in part by the NIH under grants 5R01GM112080 and 2P50GM082545.

2014-nasonnline-org-member-directory-members-wesley-sundquist.pdf

[HG006U][GDrive]

Wesley I. Sundquist

University of Utah

Election Year: 2014

Primary Section: 21, Biochemistry

Membership Type: Member

Biosketch

Wes Sundquist is Benning Professor and Co-Chair of Biochemistry at the University of Utah School of Medicine. Sundquist is a biochemist recognized for his work on HIV assembly, virus-host interactions and the Endosomal Sorting Complexes Required for Transport (ESCRT) pathway. He is known particularly for defining the structure of the HIV capsid and for demonstrating that HIV and other enveloped viruses usurp the ESCRT pathway to bud from cells. Sundquist was born in St. Paul, Minnesota in 1959 and grew up in St. Paul and Washington, DC He graduated from Carleton College, Northfield, Minnesota with a degree in chemistry and from Massachusetts Institute of Technology with a PhD in chemistry (with Steve Lippard). He was postdoctoral fellow at the MRC Laboratory of Molecular Biology, in Cambridge, England (with Aaron Klug) and joined the faculty in the Biochemistry Department at the University of Utah in 1992. He has received a Searle Scholars Award, the ASBMB Amgen Award for the Application of Biochemistry and Molecular Biology to the Understanding of Disease, the Bernard Fields Award for Retrovirology, and a Distinguished Alumnus Award from Carleton College. He is a member of the American Academy of Arts and Sciences and the National Academy of Sciences.

Research Interests

Wes Sundquist's laboratory studies the molecular and structural biology of retroviruses, with particular emphasis on the Human Immunodeficiency Virus (HIV). Projects in the laboratory focus on understanding the architecture and assembly of the viral particle, the mechanisms of intrinsic host cell defenses, and the process of virus budding. The laboratory also studies the cellular roles of the ESCRT pathway in the cytokinesis and its regulation by the abscission checkpoint. We are particularly interested in understanding how the ESCRT machinery catalyzes the membrane fission reactions required for virus budding and cell division. Experimental approaches include NMR, EM, and crystallographic studies of viral complexes, biochemical analyses of the interactions between viral components and their cellular partners, and genetic and cell biological studies of protein functions.

Related Links

2020-04-linkedin-com-wes-sundquist

[HL0051][GDrive]

- Wes Sundquist
- Wes has a account

Professor and Co-Chair of Biochemistry at University of Utah Hospitals and Clinics

- Greater Salt Lake City Area
-
- 45 connections
-
- **Contact info**
- **University of Utah Hospitals and Clinics**

Experience

- **Professor and Co-Chair of Biochemistry**
- Company Name
- University of Utah Hospitals and Clinics

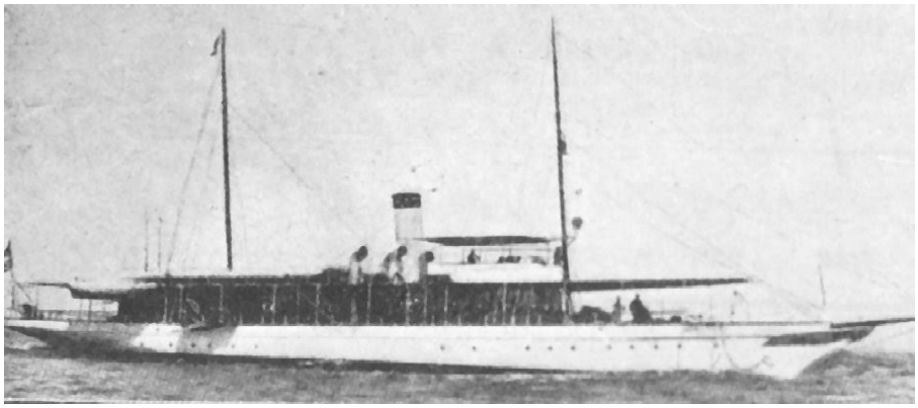
Interests

- **University of Utah Health**
- 22,151 followers

Housatonic

USS Sylph (PY-5)

Wikipedia USS Sylph (PY-5)



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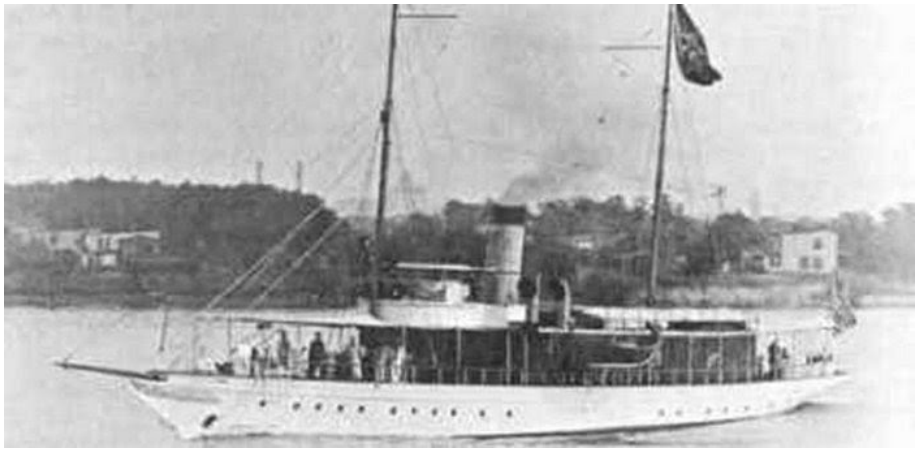

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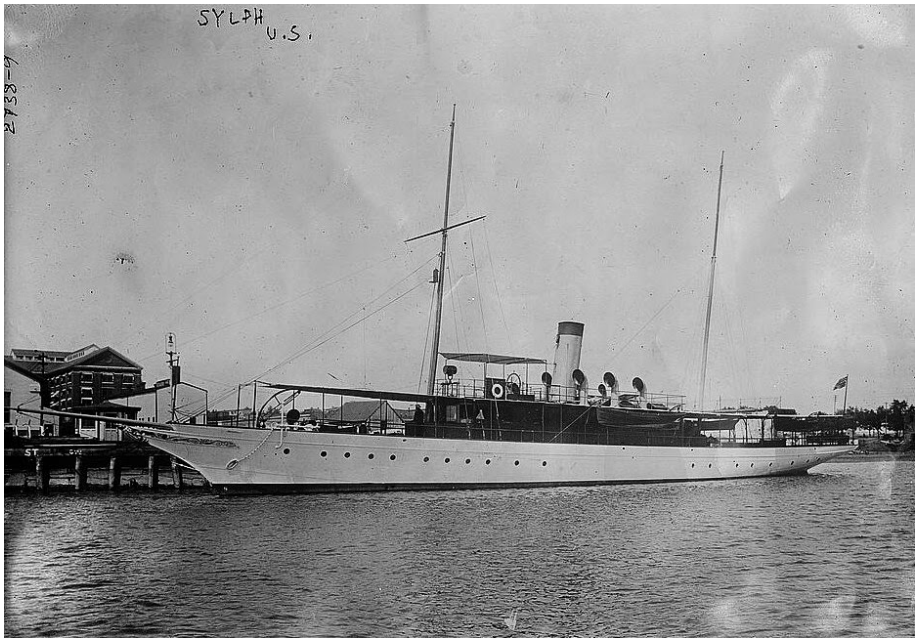

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1907 - Sylph - Evans

https://www.newspapers.com/image/76070310/?terms=gise%2Bsylph

Wikipedia - https://en.wikipedia.org/wiki/USS_Sylph_(PY-5)

Source : 2019-navysource-org-archives-12-1305.pdf /

Patrol Yacht:

- *The third **Sylph** was built in 1890 by John Roach and Co., Chester, PA*
- *Acquired by the Navy in June 1898*
- *Commissioned **USS Sylph** 18 August 1898 at the Norfolk Navy Yard for use as a Presidential Yacht*
- *Designated a Patrol Yacht, **PY-5**, 17 July 1921*
- *Decommissioned 27 April 1929 at the Norfolk Navy Yard*
- *Struck from the Navy list 29 April 1929*
- *Sold 26 November 1929 to Mr. Frank B. Clair of Brooklyn, NY (Mr. Clair was reportedly an ex-bootlegger). Mr. Clair and his partner Captain John Nugent converted her into a party fishing boat and*

*operated her from Sheepshead Bay, Brooklyn, NY. The **Sylph** fished from Sheepshead Bay until April 1939, when she changed her business and ran a ferry service from Sea Gate, Brooklyn to the Battery in Manhattan. In 1941, her owners defaulted on the mortgage held by the Worthington Diesel Company and they took possession of the vessel*

- *Fate unknown.*

Specifications:

- *Displacement 152 t.*
- *Length 123' 8"*
- *Beam 20'*
- *Draft 7' 6"*
- *Speed 15 kts.*
- *Complement 31*

1921 - 35

- *Armament: 1905 - One 6-pounder*

1914 - None

- *Propulsion: Two Almy boilers, one 550ihp vertical triple-expansion steam engine, one shaft*

1935 - Replaced by a 400hp Worthington diesel engine.

Source : 2019-navysource-org-archives-12-1305.pdf /

Commanding Officers

- *[01]* ***LT William John Maxwell, USN*** *(22 October 1894 - 1898)*
- *[02]* ***LT William Henry Buck, USN*** *(1 December 1898)*
- *[03]* ***LT William John Maxwell, USN*** *(16 September 1899)*
- *[04]* ***LT William Kern Gise (born 1871), USN*** *(30 January 1900)*
- *[05]* ***LT Charles Francis Preston, USN*** *(28 June 1902)*
- *[06]* ***LT Franck Taylor Evans, USN*** *(1905)*
- *[07]* ***LT Roscoe Carlyle Bulmer, USN*** *(2 June 1906 - 16 May 1908)*
- *[08]* ***LT Roger Williams, USN*** *(1908)*
- *[09]* ***CDR Charles Russell Train, USN*** *- Retired as Rear Admiral (27 December 1909 - 1911)*
- *[10]* ***LT Christopher Raymond Perry Rodgers, USN*** *(1911)*
- *[11]* ***LT Harrison Edward Knauss, USN*** *(1915)*
- *[12]* ***LT Joel William Bunkley, USN*** *- USNA Class of 1909 Retired as Rear Admiral (1 June 1916)*
- *[13]* ***LTJG(T) Robert Martin, USN*** *(1918 - 1919)*
- *[14]* ***LT Haiden Trigg Dickinson, USN*** ***(*** *25 November 1919 - 1 June 1920)*
- *[15]* ***LCDR Guy Evans Baker, USN*** *(1 June 1920)*
- *[16]* ***LCDR Louis Peter Wenzell, USN*** *- Retired as Rear Admiral (19 February 1923 - 22 August 1925)*
- *[17]* ***LCDR Francis Eliot Maynard Whiting, USN*** *- Retired as Vice Admiral (22 August 1925 - 9 February 1927)*
- *[18]* ***LT Charles Butler McVay, III, USN*** *- USNA Class of 1920 , Awarded the Silver Star, the Bronze Star and the Purple Heart - Retired as Rear Admiral (9 February 1927 - April 1928)*

Housatonic

Thomas Symington (b1793)

See [HL000R][GDrive]

Thomas Alexander Symington

Birthdate: December 23, 1795 (it is 1793 - Typo on Geni ...)

Birthplace: Brandywine River, Delaware, United States

Death: March 12, 1875 (79)

Indian Spring, Bel Air, Harford, Maryland, United States

Son of James Symington and Margaret Leith DuffSellar Symington

Husband of Angeline Augusta Symington and Mary Archer Symington

[...]

Brother of James Symington; Hannah Symington; Colonel John Symington and Margaret Symington

Also see https://www.findagrave.com/memorial/92412431/thomas-harrison-symington :

" Thomas Harrison Symington "

Children : (see See [HL000R][GDrive])

- *Elizabeth Symington;*
- *Caroline Janney;*
- **William Stuart Symington I (b1839)** (aka *Major William S.Symington, Sr. (CSA);)*
- **Thomas Alexander Symington II (b1842)**
- *Charles Symington*
- *John Macduff Fife Symington*
- *Mamie Dawson*

"Stuart Symington - A Life" / Page 1 - 4

Source: "Stuart Symington - A Life" (See [HB000H][GDrive])

*According to family tradition, the original Symington in America, **James [Symington]**, arrived from Scotland in 1785. 1 He landed in Philadelphia, where he worked as a stonecutter. Aboard ship he had met **Margaret Ogilvie**, a young Scotswoman traveling alone. Her marital status at the time remains unclear. Either she was the widow of a man named William Ogilvie, or she was running away from an unhappy marriage with him. Divorce was hard to come by in Scotland in the eighteenth century. Margaret had left behind two children, apparently with her mother, and was pregnant with a third, [but] she completely captivated young James Symington, who was making his way co America from Ayrshire.*

*How Margaret paid for her passage to America is unknown. [...]. At some point she became acquainted with another passenger, Robert Morris, the wealthy Philadelphia banker and signer of the Declaration of Independence who was famed as the "financier of the Revolution." Morris invited her to join his household as housekeeper or governess. Her child, a daughter initially named Deborah Morris, was born in the Morris home, and when in 1787 her shipboard acquaintance persuaded her to marry him, she was given away by Morris. About a year after their marriage, James and Margaret Symington moved to a house on **Brandywine Creek**, near Wilmington, where James operated a mill for grinding flint. In 1800 they moved to Baltimore and James resumed the stonecutting trade. Apparently he did rather well. When he died in 1827, he left an estate of seventy-five thousand dollars, a substantial sum in the early nineteenth century.*

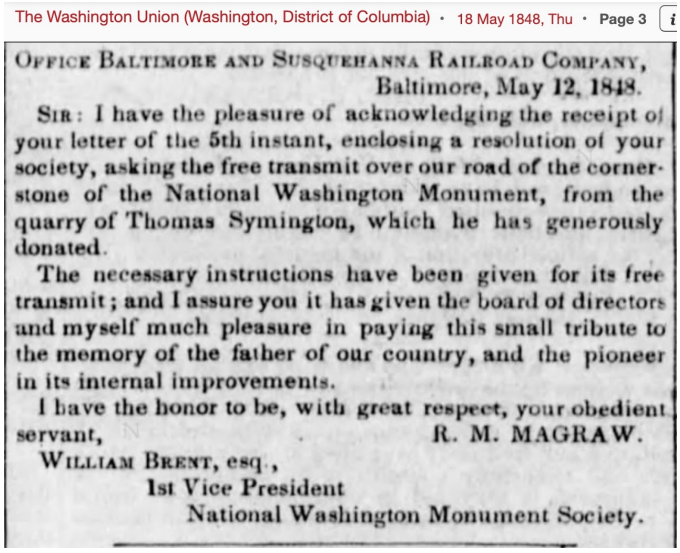
*James adopted Deborah, and he and Margaret eventually had two more daughters and three sons, one of whom was **Thomas [Symington], born December 23, 1793**, on Brandywine Creek. Thomas served as an apprentice to his father in the stonecutting trade, and then as a young man went to work for William Stuart, who had a stonecutting and marble business. Stuart, whose father had fought in the War of the Revolution, became lieutenant colonel of the U.S. Infantry defending Baltimore during the War of 1812, being credited, according to family legend, with "saving" Fort McHenry during the British naval bombardment the night of September 13, 1814, when he took over from the commandant, alleged to have been drunk. In addition to being a war hero, William Stuart was a successful businessman who was active in politics. He served several terms on the Baltimore city council and as a member of the Maryland House of Delegates. He had a short term as mayor of Baltimore, after which he became president of the Maryland Institute of Arts. His daughter, Angeline, whom Thomas Symington married in 1825, was obviously quite a catch.*

[Thomas Symington's wife Angele passed when he was at the age of seventy-one.] He [then] married Mary Wilson, thirty-seven, whom he had met at the Episcopal Church, where she was the church organist; she bore him two children before he died in 1875 at the age of eighty-two.

***Thomas Symington did well financially, making substantial sums in real estate, marble quarries, and chemicals and fertilizer. He furnished much of the marble for the 1850 addition to the capitol building in Washington. He provided the cornerstone of the Washington Monument as a gift.** Unlike many others, including his son, he seems to have survived the Civil War financially intact. In 1862 he retired to a farm outside Baltimore, which he named " Indian Spring," managing his various business enterprises in addition to farming. When he died, he left an estate of one hundred thousand dollars in cash and what apparently was a substantial unrecorded balance that he divided among his children.*

May 18 1848 - Washington Monument cornerstone

Full Page : [HN006T][GDrive]



The Washington Union (Washington, District of Columbia) • 18 May 1848, Thu • Page 3

OFFICE BALTIMORE AND SUSQUEHANNA RAILROAD COMPANY,
Baltimore, May 12, 1848.

SIR: I have the pleasure of acknowledging the receipt of your letter of the 5th instant, enclosing a resolution of your society, asking the free transmit over our road of the corner-stone of the National Washington Monument, from the quarry of Thomas Symington, which he has generously donated.

The necessary instructions have been given for its free transmit; and I assure you it has given the board of directors and myself much pleasure in paying this small tribute to the memory of the father of our country, and the pioneer in its internal improvements.

I have the honor to be, with great respect, your obedient servant,
R. M. MAGRAW.

WILLIAM BRENT, esq.,
1st Vice President
National Washington Monument Society.

[HN006U][GDrive]

[HN006U][GDrive]

Those who have but one apartment in which they must of necessity perform all the domestic duties, should be careful to remove all matters that are offensive in smell, as cabbage, water, dirty soap-suds, &c.; they should indeed, if possible, avoid washing in the room they live in. For the same reason, drying clothes in-doors should be avoided.

Flowers in water, and living plants in pots, greatly injure the purity of the air during the night, by giving off large quantities of an air (carbonic acid) similar to that which is separated from the lungs by breathing, which, as before stated, is highly noxious. On this account they should never be kept in bed-rooms: there are instances of persons who have incautiously gone to sleep in a close room in which there has been a large growing plant, having been found dead in the morning, as effectually suffocated as if there had been a charcoal stove in the room.

A constant renewal of the air is absolutely necessary to its purity: for in all situations it is suffering either by its vital part being absorbed, or by impure vapors being disengaged and dispersed through it. *Ventilation, therefore, resolves itself into the securing of a constant supply of fresh air.*

In the construction of houses, especially in those built for the poor, this great object has been too generally overlooked, when, by a little contrivance in the arrangement of windows and doors, a current of air might, at any time, be made to pervade every room of a house of any dimensions. Rooms cannot be well ventilated that have no outlet for the air; for this reason there should be a chimney to every apartment. The windows should be capable of being opened, and they should be situated on the side of the room opposite to, and furthest from, the fire-place, that the air may traverse the whole space of the apartment in its way to the chimney.

Fire-places in bed-rooms should not be stopped up with chimney-boards. The windows should be thrown open for some hours every day, to carry off the animal effluvia which are necessarily separating from the bed-clothes, and which should be assisted in their escape by the bed being shaken up, and the clothes spread abroad, in which state they should remain as long as possible; this is the reverse of the usual practice of making the bed, as it is called, in the morning, and tucking it up close, as if with the determination of preventing any purification from taking place. Attention to this direction, with regard to airing the bed-clothes and bed after being slept in, is of the greatest importance to persons of weak health. Instances have been known in which restlessness and an inability to find refreshment from sleep would come on in such individuals when the linen of their beds had been unchanged for eight or ten days. In one case of a gentleman of a very irritable habit, who suffered from excessive perspiration during the night, and who had taken much medicine without relief, he observed that, for two or three nights after he had fresh sheets put upon his bed, he had no sweating; and that, after that time, he never awoke, but that he was literally swimming, and that the sweats seemed to increase with the length of time he slept in the same sheets. By not permitting him to sleep in the same sheets or night-clothes more than twice without their being washed, he instantly lost his debilitating affection. F.

MONUMENT TO WASHINGTON.

WASHINGTON, July 4th, 1848.

MR. EDITOR:—I need not tell you this has been a great day in the metropolis. Not only has the birth-day of our country been celebrated after the old custom, but we have deposited with appropriate ceremonies, upon Monument Square, the corner stone of a monument to Washington, "which will declare to generations yet unborn how their fathers venerated the memory of him who was the Father of his own country, and the admiration of the world." The number of people who flocked into the city yesterday afternoon from every quarter of the compass, was truly immense, and the same business has continued nearly the whole of this day.

The weather has been truly delightful, sunny but comparatively cool, and the recent showers had so thoroughly cleaned the streets that we were not tormented with the dust. During the morning the streets were completely thronged with spectators; flags were flying from every public building in town, and at various places were hung across the avenue with such mottos as the following—"May our country always be right, but right or wrong, always our country," and again—"First in war, first in peace, and

[HN006V][GDrive]

first in the hearts of his countrymen." The most picturesque feature, however, was the *procession*, which was under the command of Major General Quitman, who was assisted by Gen. George Cadwalader, Col. May and Maj. A. A. Nicholson. It was formed in front of the City Hall, and at twelve o'clock precisely took up its line of march. I cannot tell you how long it was, but I know this, that it took forty minutes for it to pass the corner of a street. The military display was exceeding imposing, and I regret that I cannot give you the names of the various companies which were in the procession. But besides these, there were the President of the United States, heads of departments, the Supreme Court Judges, the Diplomatic Corps, the Masons, the Odd Fellows, Members of Congress, delegates from neighboring States, temperance orders, Rechabites, the corporate authorities of Alexandria, Georgetown and Washington, the benevolent and literary societies of the city, revolutionary officers, several well disciplined bands of firemen, the Monument Society and any quantity of citizens.

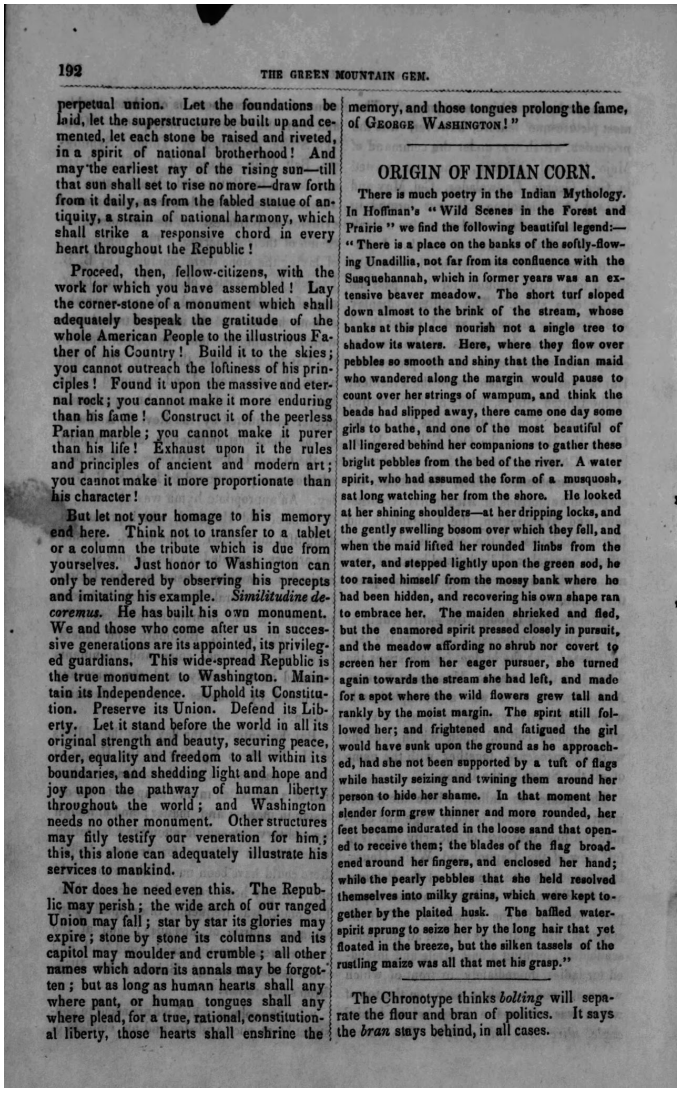
After passing through the entire length of the avenue, the procession turned to the left, and passed over the bridge, (which spans the Tiber,) on their way to Monument Square. At this bridge there was a triumphal arch, white as the driven snow,'(for it was covered with bleached cotton,) upon which was the word *Independence*, together with the name of all the States in the Union.

The square, so called, where the monument is to be erected, is very large and commands a fine prospect of the city, and is in full view of the Capitol and White House. It is formed by the junction of the Potomac and the Tiber, and is indeed a most appropriate location for the monument. Near the center of this square was erected an immense scaffolding, forming a half circle and intended for ladies, immediately in front of which was a stupendous white arch, on the top of which was chained a *large white headed eagle, alive and full of life.* The corner stone of the monument is of white marble, and bears the following inscription—"Corner Stone, presented by Thomas Symington, Balt. 1848.—Executed by Thos. Berry and Alexander Rutherford, Washington."—The assembled multitude were ranged around evincing deep interest in the memorable occasion of their gathering. The ceremonies of laying the stone were conducted by B. B. French, Esq., Master of the Masonic fraternity of this District, and it is not unworthy of note that he used the identical trowel with which Washington laid the corner stone of the Capitol, and wore the same gloves and apron, the later worked and presented by the lady of Gen. Lafayette. An appropriate prayer was offered by the Rev. C. A. Davis, of the Methodist persuasion, and Chaplain of the Grand Lodge of Masons, and the benediction was pronounced by Rev. R. R. Gurley. An appropriate hyma was also sung to the tune of Old Hundred, which produceda delightful impression on the mind. Among the articles deposited in the corner stone, I noticed a complete census of the United States, and several flags, which had been presented to the monument association by the young men of Baltimore and others. Corn, oil and wine, coins and documents enclosed in the cavity, and the ceremony completed by remarks from the officiating mason.

But the feature of the day was the address of Mr. Winthrop Speaker of the House of Representatives. It was the brilliant production of a cultivated mind; adapted to the occasion in manner and matter; and although the auditory listened in attentive admiration to its eloquent delivery for over two hours there could have been none there who would not willingly have remained twice the time. The orator was frequently interrupted by involuntary bursts of applause; and at the close retired from the stand amid loud and enthusiastic cheering. Below is Mr. Winthrop's peroration:

"Let the column which we are about to construct be at once a pledge and an emblem of

[HN006W][GDrive]



192 THE GREEN MOUNTAIN GEM.

perpetual union. Let the foundations be laid, let the superstructure be built up and cemented, let each stone be raised and riveted, in a spirit of national brotherhood! And may the earliest ray of the rising sun—till that sun shall set to rise no more—draw forth from it daily, as from the fabled statue of antiquity, a strain of national harmony, which shall strike a responsive chord in every heart throughout the Republic!

Proceed, then, fellow-citizens, with the work for which you have assembled! Lay the corner-stone of a monument which shall adequately bespeak the gratitude of the whole American People to the illustrious Father of his Country! Build it to the skies; you cannot outreach the loftiness of his principles! Found it upon the massive and eternal rock; you cannot make it more enduring than his fame! Construct it of the peerless Parian marble; you cannot make it purer than his life! Exhaust upon it the rules and principles of ancient and modern art; you cannot make it more proportionate than his character!

But let not your homage to his memory end here. Think not to transfer to a tablet or a column the tribute which is due from yourselves. Just honor to Washington can only be rendered by observing his precepts and imitating his example. *Similitudine decoremus.* He has built his own monument. We and those who come after us in successive generations are its appointed, its privileged guardians. This wide-spread Republic is the true monument to Washington. Maintain its Independence. Uphold its Constitution. Preserve its Union. Defend its Liberty. Let it stand before the world in all its original strength and beauty, securing peace, order, equality and freedom to all within its boundaries, and shedding light and hope and joy upon the pathway of human liberty throughout the world; and Washington needs no other monument. Other structures may fitly testify our veneration for him; this, this alone can adequately illustrate his services to mankind.

Nor does he need even this. The Republic may perish; the wide arch of our ranged Union may fall; star by star its glories may expire; stone by stone its columns and its capitol may moulder and crumble; all other names which adorn its annals may be forgotten; but as long as human hearts shall any where pant, or human tongues shall any where plead, for a true, rational, constitutional liberty, those hearts shall enshrine the memory, and those tongues prolong the fame, of GEORGE WASHINGTON!"

ORIGIN OF INDIAN CORN.

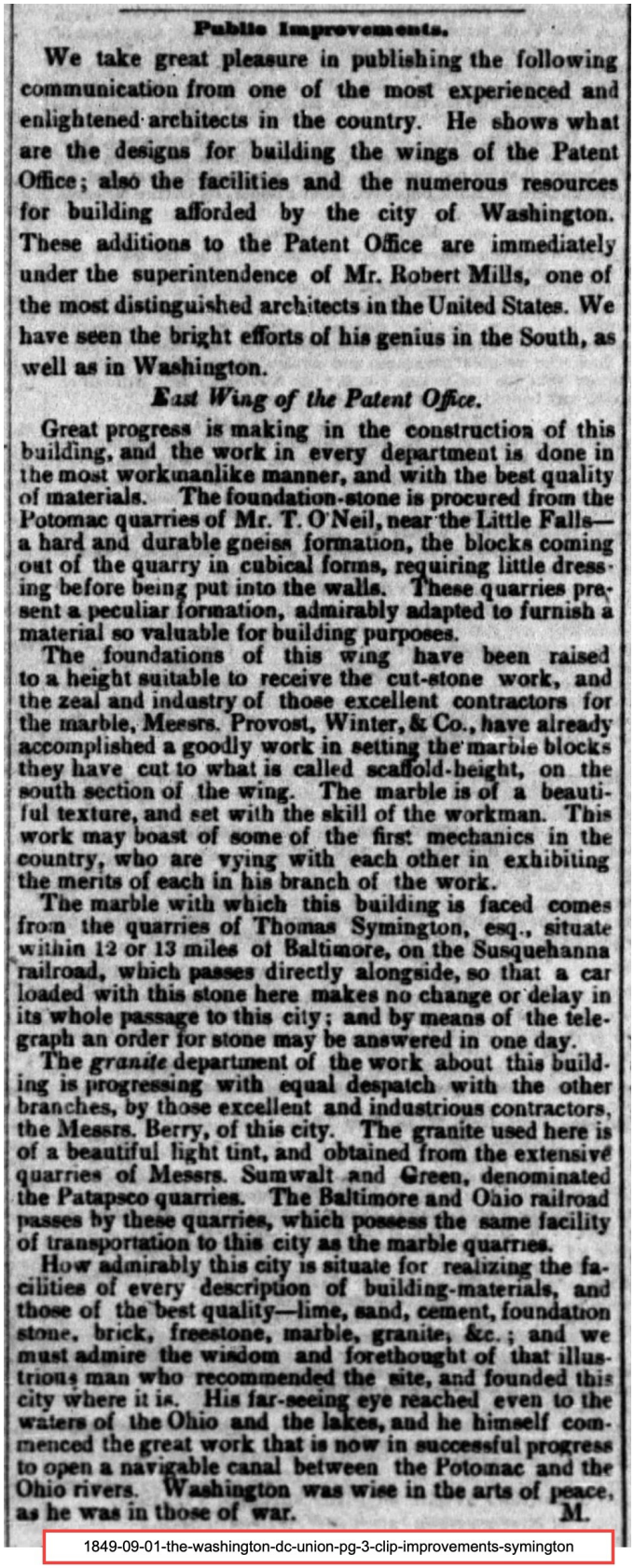
There is much poetry in the Indian Mythology. In Hoffman's "Wild Scenes in the Forest and Prairie" we find the following beautiful legend:—"There is a place on the banks of the softly-flowing Unadillia, not far from its confluence with the Susquehannah, which in former years was an extensive beaver meadow. The short turf sloped down almost to the brink of the stream, whose banks at this place nourish not a single tree to shadow its waters. Here, where they flow over pebbles so smooth and shiny that the Indian maid who wandered along the margin would pause to count over her strings of wampum, and think the beads had slipped away, there came one day some girls to bathe, and one of the most beautiful of all lingered behind her companions to gather these bright pebbles from the bed of the river. A water spirit, who had assumed the form of a musquash, sat long watching her from the shore. He looked at her shining shoulders—at her dripping locks, and the gently swelling bosom over which they fell, and when the maid lifted her rounded limbs from the water, and stepped lightly upon the green sod, he too raised himself from the mossy bank where he had been hidden, and recovering his own shape ran to embrace her. The maiden shrieked and fled, but the enamored spirit pressed closely in pursuit, and the meadow affording no shrub nor covert to screen her from her eager pursuer, she turned again towards the stream she had left, and made for a spot where the wild flowers grew tall and rankly by the moist margin. The spirit still followed her; and frightened and fatigued the girl would have sunk upon the ground as he approached, had she not been supported by a tuft of flags while hastily seizing and twining them around her person to hide her shame. In that moment her slender form grew thinner and more rounded, her feet became indurated in the loose sand that opened to receive them; the blades of the flag broadened around her fingers, and enclosed her hand; while the pearly pebbles that she held resolved themselves into milky grains, which were kept together by the plaited husk. The baffled water-spirit sprung to seize her by the long hair that yet floated in the breeze, but the silken tassels of the rustling maize was all that met his grasp."

The Chronotype thinks *bolting* will separate the flour and bran of politics. It says the *bran* stays behind, in all cases.

[HN006X][GDrive]

1849 (Sep 1)

[HN006Y][GDrive]



Public Improvements.

We take great pleasure in publishing the following communication from one of the most experienced and enlightened architects in the country. He shows what are the designs for building the wings of the Patent Office; also the facilities and the numerous resources for building afforded by the city of Washington. These additions to the Patent Office are immediately under the superintendence of Mr. Robert Mills, one of the most distinguished architects in the United States. We have seen the bright efforts of his genius in the South, as well as in Washington.

East Wing of the Patent Office.

Great progress is making in the construction of this building, and the work in every department is done in the most workmanlike manner, and with the best quality of materials. The foundation-stone is procured from the Potomac quarries of Mr. T. O'Neil, near the Little Falls—a hard and durable gneiss formation, the blocks coming out of the quarry in cubical forms, requiring little dressing before being put into the walls. These quarries present a peculiar formation, admirably adapted to furnish a material so valuable for building purposes.

The foundations of this wing have been raised to a height suitable to receive the cut-stone work, and the zeal and industry of those excellent contractors for the marble, Messrs. Provost, Winter, & Co., have already accomplished a goodly work in setting the marble blocks they have cut to what is called scaffold-height, on the south section of the wing. The marble is of a beautiful texture, and set with the skill of the workman. This work may boast of some of the first mechanics in the country, who are vying with each other in exhibiting the merits of each in his branch of the work.

The marble with which this building is faced comes from the quarries of Thomas Symington, esq., situate within 12 or 13 miles of Baltimore, on the Susquehanna railroad, which passes directly alongside, so that a car loaded with this stone here makes no change or delay in its whole passage to this city; and by means of the telegraph an order for stone may be answered in one day.

The *granite* department of the work about this building is progressing with equal despatch with the other branches, by those excellent and industrious contractors, the Messrs. Berry, of this city. The granite used here is of a beautiful light tint, and obtained from the extensive quarries of Messrs. Sumwalt and Green, denominated the Patapsco quarries. The Baltimore and Ohio railroad passes by these quarries, which possess the same facility of transportation to this city as the marble quarries.

How admirably this city is situate for realizing the facilities of every description of building-materials, and those of the best quality—lime, sand, cement, foundation stone, brick, freestone, marble, granite, &c.; and we must admire the wisdom and forethought of that illustrious man who recommended the site, and founded this city where it is. His far-seeing eye reached even to the waters of the Ohio and the lakes, and he himself commenced the great work that is now in successful progress to open a navigable canal between the Potomac and the Ohio rivers. Washington was wise in the arts of peace, as he was in those of war. M.

1849-09-01-the-washington-dc-union-pg-3-clip-improvements-symington

[HN006Z][GDrive]

Dec 27 1852

[HN0070][GDrive]

The Baltimore Sun (Baltimore, Maryland) · 27 Dec 1852, Mon · Page 2

a perpetual or draw kiln.

Mr. Thomas Fortune and Mr. Antipas Harrington are also quarrying a great quantity of marble for Mr. Thomas Symington, on the property of Messrs. Griscom & Burrough. It is used on the National buildings at Washington, and for the face of the Washington Monument. We noticed in the quarries some immense circular blocks intended for the columns of the Patent Office.—They are also engaged in getting out the blocks for the pedestal of Mills' equestrian statue of Jackson. The blocks are six in number, some 13 by 6 feet in size, and 2 feet thick, and the four largest weigh about 19 tons each. These immense blocks are transported the whole distance to Washington by railroad, on cars prepared expressly for the purpose.

[HN0071][GDrive]

APril 9 1853

[HN0072][GDrive]

The Baltimore Sun (Baltimore, Maryland) · 09 Apr 1853, Sat · Page 4

SECOND BRANCH.—Branch met—Mr. Griffith presented the petition of Thomas Symington in relation to a grievance complained of—referred to the committee on the harbor. The President laid before the Branch a communication from the appeal tax court in relation to property which may be taken into direct taxation—referred to the committed of ways and means. Mr. Gill called up the resolution for repairing the bridges over Harford run at Eden street and Spring street, by arching the run. The resolution was amended by striking out all that part relating to Spring street, and then adopted. Mr. Farlow called up the ordinance providing for enclosing the Eastern Fountain lot with an iron railing on a granite base, which was passed. Mr. Suter offered an ordinance requiring the Register to make record of streets which are condemned, &c.—laid on the table. Mr. Suter called up the ordinance to tunnel McKim street from Eager to Madison street, which was passed. Mr. Suter called up the resolution adverse to the petition of J. Howard McHenry, which was passed. Adj.

[HN0073][GDrive]

july 15 1854

[HN0074][GDrive]

Clerk's Office of the Circuit Court of the county of Preston, on the 5th day of July, 1854:—

Wm. E. Tutt and John P. Byrne, *Complainants,*

vs.

Thomas Symington, *Defendant,*

In Chancery.

The object of this suit is to subject a certain Tract of Land in Preston county, purchased of the Complainants by the Defendants, to the payment of the purchase money on a lien reserved therefor in the deed of Complainants to Defendants; and it appearing by affidavit that the said Defendant is not a resident of this State; on motion of the complainants by their counsel, it is ordered that the said Defendant do appear here within one month after due publication of this notice, and do what is necessary to protect his interest; and that a copy of this order be published in the Monongalia Mirror, a weekly newspaper published in Morgantown, Monongalia county, once a week for four successive weeks, and posted at the front door of the court house of this county, on the first day of the next County Court.

A copy, Teste:

J. H. CARROLL, Clk.

W. T. Willey, Counsel. 256 5t

[HN0075][GDrive]

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jan 26 1869

[HN0076][GDrive]

[HN0077][GDrive]

Mar 4 1870

[HN0078][GDrive]

The Maryland Central Railroad.

We were handed a letter addressed to a gentleman of this town by Thomas Symington, Esq., of this county, conveying information in regard to the above road, which must be of general interest to our citizens. We do not concur in the opinion that we shall not be able to carry out successfully the "Edgewood Railroad affair," as it is denominated by Mr. S., but on the contrary look hopefully to the completion of that enterprise at no distant day. However, in this matter we have no antagonisms to foster. If we can have the Maryland Central Road by any renewed exertions on the part of our people, in the common interests of us all let us go to work again, and neglect no opportunities that may be offered us in this connection. We publish the communication as a matter of much importance to the citizens of this county, and

shall be glad to further the interests of the enterprise in any manner we shall be able to do so:

INDIAN SPRING, Feb. 24th, 1870.

DEAR SIR:—I suppose you will not be able to carry out successfully the Edgewood Railroad affair, and that the Bel Air people and papers, including their legal gentlemen, will be willing to show as much zeal in the Maryland Central as they have done with the former. If so, now is the time to show it.

A memorial, signed by the heaviest taxpayers in the city, is now before the Councils, asking them to subscribe to the Maryland Central $400,000, upon condition that $1,100,000 be raised from other sources. If the bill be passed, our road will go on at once. We have the *official* promise of the Philadelphia & Baltimore Central Company, indorsed by the P., W. & B. R, R. Co., that if we raise $500,000, or *near* it, and get the right of way, they will finish the road.

If the above bill is passed, we will stand thus:

City subscription, - - -	$400,000
Private, - - - - -	150,000
P., W. & B. R. R., - - -	950,000
Total, - - - - - -	$1,500,000

If the city should subscribe say $300,000
or less, our private subscription must make
up, with the city subscription say, $475,000
Phila., R. R., - - - - 1,025,000

1,500,000.

If the city should refuse to subscribe, but offer to endorse bonds, we must try and get them to take a second lien, so that the Phila. Company get the first.

Respectfully,

THOS. SYMINGTON.

1870-03-04-the-aegis-and-intelligencer-bel-air-md-pg-2-clip-symington-rr

[HN0079][GDrive]

March 16 1875 - funeral

[HN007A][GDrive]

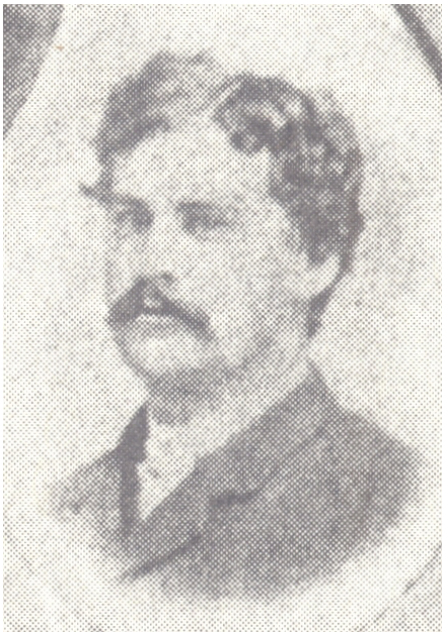
The Funeral of Thomas Symington, who died at his residence in Harford county on Friday morning, took place yesterday afternoon from the Associate Reformed Church, on West Fayette street. Rev. Dr. Leyburn conducted the ceremonies, and the interment took place at Greenmount. Messrs. William McKim, W. W. Spence, Francis Dawes, J. Crawford Neilson, Judge John H. Price, and John Gill serving as bearers.

[HN007B][GDrive]

BITCHUTE @Housatonic YOUTUBE @HousatonicLive ODYSEE @Housatonic BRIGHTEON @Housatonic

Housatonic

William Stuart Symington I (b1839)



https://www.findagrave.com/memorial/23522774/william-stuart-symington#view-photo=8764680

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https://www.findagrave.com/memorial/23522774/william-stuart-symington

Capt William Stuart Symington

BIRTH 9 Jan 1839 USA

DEATH 9 Jun 1912 (aged 73) Baltimore City, Maryland, USA

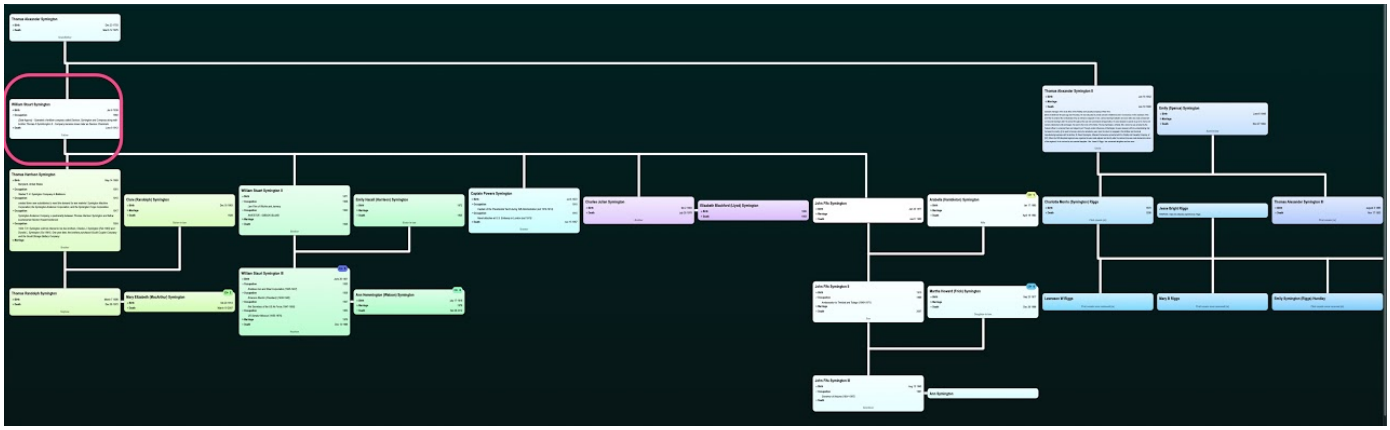
BURIAL Loudon Park Cemetery / Baltimore, Baltimore City, Maryland, USA

Civil War Confederate Staff Officer. Lt. Company B, 21st Virginia Infantry, May 23, 1861. Resigned April 5, 1862. Volunteer Aide-de-camp to Pickett's Brigade at Frayser's Farm. Lt. Ordnance Officer to Pickett, July 1, 1862. Lt., Aide-de-camp to Pickett, October 10, 1862. Capt., September 24, 1863. Served with Pickett to Appomattox. Baltimore chemist and insurance salesman after the war.

[intro - todo]

William Stuart Symington I in the Symington Family Tree

🌳 See the Symington Family Tree PDF (https://drive.google.com/open?id=1Up5Wff_tkeaqfmvJ-4ZCd00ezWJwptUb)



2019-06-08-research-pol-tech1-geneology-symington1-clip3-w-w-symington-1.jpg / https://drive.google.com/open?id=1OLdmSd26LRL_S0beTpfCVOS5BLcMZu5s

Parents - Thomas Symington (born 1793)

Father of **William Stuart Symington II (born 1871)** (conceptualized **Gibson Island** before his passing)

Grandfather of **William Stuart Symington III (born 1901)**

Siblings include:

- Younger brother **Thomas Alexander Symington II (born 1842)**

Co-Founder (along with his younger brother **Thomas Alexander Symington II (born 1842)**) of the **Davison, Symington and Company** (approximately 1855 ... see the excellent 1951 scanned book on Davison Chemical's history up until 1951: 1951-10-davison-book-its-background-and-contributions-since-1832-chester-hockley-ocr.pdf / https://drive.google.com/open?id=1tYLksPXWxqfoAADLEsGhHqtetVoxaIH-); Later on, this became known as the **Davison Chemical Company** in the late 1800s.

Note - Years later, other members of the Symington family bought the "indian Spring" farm back...

The New York Times

MONDAY, JANUARY 11, 1926

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Hibben and R. L. Zahour of the Illumination Bureau of the Westinghouse Lamp Company. They have been experimenting with trees for two years.

Temperature and humidity, they found, have no effect on the color cycle of the leaves. As a matter of fact, Autumn leaves are really brighter than green leaves, merely because they reflect more sunlight.

BUY ANCESTRAL ESTATE.

Symington Brothers Get Back Indian Spring Farm in Maryland.

Special to The New York Times.

BALTIMORE, Md., Jan. 10.—Charles J. Symington of New York City and his brother, Donald, of Baltimore County, have bought from Dr. O. H. Hoffman the famous Indian Spring Farm and estate at Priestford Bridge, Harford County, Md.

The property thus returns to the family ownership with which its name was so long associated, the purchasers being grandsons of the late Thomas Symington.

The estate, embracing 536 acres, was sold by Herman Stump in 1862 to Thomas Symington, who greatly improved it until it was sold in 1900 by the Symington heirs. Since then it has been owned by B. Howard Haman and the late John D. Worthington of Belair.

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EARLY LIFE

Thomas and Angeline had two daughters and four sons. The oldest of the sons, born January 5, 1839, they understandably named William Stuart, after Angeline's father.

This first W Stuart Symington [who became ***William Stuart Symington I*** *]- as is true of all his descendants who have borne the name, he dropped " William" -* ***enlisted in the Virginia Militia at the age of twenty-two to fight for the Confederacy in the Civil War****. He became a second lieutenant at the outset and about a year later was appointed first lieutenant in the Confederate Army. Stuart became an aide to his first cousin by marriage, General George E. Pickett, and served in that capacity throughout the war. He fought with Pickett at Five Forks, Drewry's Bluff, Gettysburg, and Petersburg. Near the end of the Seven Days in June 1862, he disobeyed Pickett's orders to join him in Richmond and stayed behind to participate in the Battle of Frayzer's Farm. His horse was shot seven times and finally killed. He also had a horse shot out from under him during the futile, bloody assault on Cemetery Ridge in the waning hours of the Battle of Gettysburg. In command of Union troops at Cemetery Ridge was* ***Brigadier General James S. Wadsworth****, whose granddaughter* ***Evelyn*** *would become Mrs. W Stuart Symington III.*

Lieutenant Symington remained with Pickett during all of the dreary months from Gettysburg to Appomattox and was among those cited by Pickett, in his final report to General Lee, "for gallantry and untiring zeal. " He surrendered his sword as a captain, but throughout the rest of his life he was referred to as "Major." ***Whatever his rank, his devotion to the Lost Cause remained undiminished. In its obituary of him, the Baltimore Sun wrote, "wild horses would not have dragged an admission from him that he believed that the South was in the wrong. " Rather than sign the Oath of Allegiance required of all former Confederate officers, he went to Germany, studying at the University of Heidelberg, until the frenzy calmed down.*** *He was vice president of the Society of the Army and Navy of the Confederate States in Maryland, and in the last year of his life the society gave a testamentary dinner for him, the only person they had ever so honored up to that time. Three days before his sudden death on June 9, 1912 - he collapsed after a game of golf on a hot Sunday afternoon - he had led a parade of Confederate veterans celebrating the Confederate Memorial Day.*

After returning to Baltimore from Germany, Major Symington went into the fertilizer business. Apparently, he was not very good at it.

Note: Among others of the ***Davison, Symington and Company*** *was his younger brother* ***Thomas Alexander Symington II (born 1842)*** *) (approximately 1855 ... see Excellent 1951 scanned book on Davison Chemical's history up until 1951: 1951-10-davison-book-its-background-and-contributions-since-1832-chester-hockley-ocr.pdf / https://drive.google.com/open?id=1tYLksPXWxqfoAADLEsGhHqtetVoxalH-); Later on, this became known as the* ***Davison Chemical Company*** *in the late 1800s.*

The company went into bankruptcy, and its owner lost everything. *The family had to sell their big house on Charles Street and move into a small, rented house on North Avenue, not a particularly fashionable part of the city.* ***Later he recovered somewhat, serving as secretary of the Consolidated Gas Company in Baltimore. By the time of his death, he was looked upon as one of Baltimore's leading citizens and, even in the midst of the family's most serious financial vicissitudes, they moved in Baltimore's most fashionable society.***

One reason for that could well have been the woman Major Symington had the good fortune to marry. While in Richmond during the war on a recruiting trip, he attended a debutante ball at which he met a beautiful young woman named ***Lelia Skipworth Powers****, daughter of a prominent Episcopal clergyman. In addition to her beauty, she possessed an impeccable Virginia lineage. Through her mother she was a direct descendant of Benjamin Harrison, who was married to Anne Carter, daughter of Robert "King" Carter, whose descendants included the Lees. After returning from Germany, Major Symington went back to Richmond and persuaded Lelia to marry him. They made a handsome couple, and, before Lelia died at the age of forty-four, they had a daughter and seven sons. The sons were all strapping young men, inheriting physiques that reflected their father's strength and their mother's beauty. All of them, with one exception, went into business and became financially successful.*

Legal - Oct 1968 :

Washington Fire Insurance Company vs. Davison and Symington.

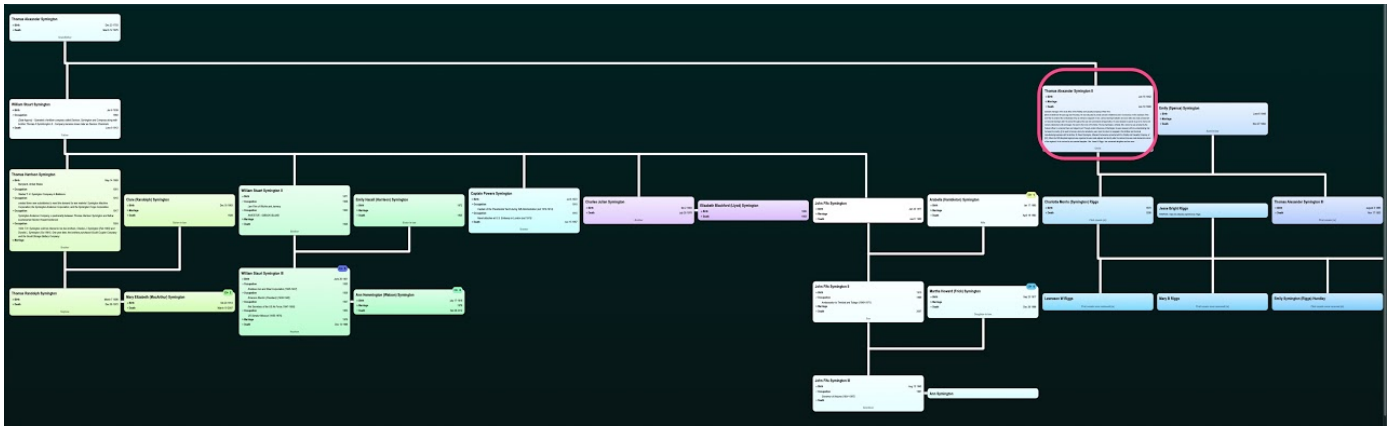
See 1870-cases-argued-and-determined-in-the-court-of-appeals-of-maryland-vol-xxx-oct-1968-to-aprill-1969.pdf / https://drive.google.com/open?id=15S0jr1v1pq2De4ocfIhdLJnBAuUVeMtO

Thomas Alexander Symington II (b1842)

[intro - todo]

Thomas Alexander Symington II in the Symington Family Tree

🌳 See the Symington Family Tree PDF (https://drive.google.com/open?id=1Up5Wff_tkeaqfmvJ-4ZCd00ezWJwptUb)



2019-06-08-research-pol-tech1-geneology-symington1-clip-t-a-symington-2.jpg / https://drive.google.com/open?id=1ONIZwTdMNncJ2PhiLQCQC00vEPQvRI0H

His older brother is **William Stuart Symington I (b1839)** .

See : [HL000O][GDrive]

Thomas Alexander Symington, II /bbbBIRTH 18 Jan 1842 / Baltimore City, Maryland, USA / DEATH 19 Jan 1900 (aged 58) / Baltimore City, Maryland, USA

Obituary

Source - [HN006S][GDrive]

*"[**Thomas A Symington II** was a] well-known insurance man and Confederate veteran. Mr. Thomas A. Symington, assistant manager of the local office of the **Fidelity and Casualty Company, of New York**, died [January 19, 1900] at his home, 1013 North Calvert street [of Baltimore].*

Mr. Symington was born in Baltimore 58 years ago [...]. He was educated in private schools in Baltimore and in Connecticut. At the outbreak of the Civil War he entered the Confederate Army as ordnance sergeant in Gen. James Gearing's battalion and soon after was made a lieutenant on General Gearing's staff. He served through the war and surrendered at Appomattox. He was released on parole to go to his home and remain undisturbed until exchanged. He went to the home of his father, Thomas Symington, at Belair. Md.. where he was arrested by the Federal officer in command there and lodged in jail. Through certain influences at Washington he was released, with the understanding that he leave the country. He had a short time before refused to take the oath of allegiance because Gen. Kirby Smith was still in the field, and, therefore, would not admit that the war was over. He went to Europe, where he remained for a year.

*Upon his return be engaged in the fertilizer and chemical manufacturing business with his brother, **W. Stuart Symington**. [We believe this was with the **Davison, Symington and Company**]. Afterward he became connected with the Fidelity and Casualty Company, of New York.*

When the Fifth Maryland Regiment was organized he was made adjutant and shortly after the railroad riots was matte lieutenant-colonel of the regiment. His wife, who was a daughter of Mr. W. W. Spence, died several years ago. He Is survived by one married daughter - Mrs. Jesse B. Riggs - two unmarried daughters and two son."

*Co-Founder [along with his younger brother **William Stuart Symington I (b1839)**] of the **Davison, Symington and Company** (approximately 1855 ... see Excellent 1951 scanned book on Davison Chemical's history up until 1951: [HB000J][GDrive]); Later on, this became known as the **Davison Chemical Company** in the late 1800s.*

1013 North Calvert street [of Baltimore] : SYMINGTON FAMILY HISTORY - BEFORE THOMAS A. SYMINGTON WAS BORN

"Stuart Symington - A Life" / Page 1 - 4

Source: "Stuart Symington - A Life" (See [HB000H][GDrive])

*According to family tradition, the original Symington in America, **James [Symington]**, arrived from Scotland in 1785. 1 He landed in Philadelphia, where he worked as a stonecutter. Aboard ship he had met **Margaret Ogilvie**, a young Scotswoman traveling alone. Her marital status at the time remains unclear. Either she was the widow of a man named William Ogilvie, or she was running away from an unhappy marriage with him. Divorce was hard to come by in Scotland in the eighteenth century. Margaret had left behind two children, apparently with her mother, and was pregnant with a third, [but] she completely captivated young James Symington, who was making his way co America from Ayrshire.*

*How Margaret paid for her passage to America is unknown. [...]. At some point she became acquainted with another passenger, Robert Morris, the wealthy Philadelphia banker and signer of the Declaration of Independence who was famed as the "financier of the Revolution." Morris invited her to join his household as housekeeper or governess. Her child, a daughter initially named Deborah Morris, was born in the Morris home, and when in 1787 her shipboard acquaintance persuaded her to marry him, she was given away by Morris. About a year after their marriage, James and Margaret Symington moved to a house on **Brandywine Creek**, near Wilmington, where James operated a mill for grinding flint. In 1800 they moved to Baltimore and James resumed the stonecutting trade. Apparently he did rather well. When he died in 1827, he left an estate of seventy-five thousand dollars, a substantial sum in the early nineteenth century.*

*James adopted Deborah, and he and Margaret eventually had two more daughters and three sons, one of whom was **Thomas [Symington], born December 23, 1793**, on Brandywine Creek. Thomas served as an apprentice to his father in the stonecutting trade, and then as a young man went to work for William Stuart, who had a stonecutting and marble business. Stuart, whose father had fought in the War of the Revolution, became lieutenant colonel of the U.S. Infantry defending Baltimore during the War of 1812, being credited, according to family legend, with "saving" Fort McHenry during the British naval bombardment the night of September 13, 1814, when he took over from the commandant, alleged to have been drunk. In addition to being a war hero, William Stuart was a successful businessman who was active in politics. He served several terms on the Baltimore city council and as a member of the Maryland House of Delegates. He had a short term as mayor of Baltimore, after which he became president of the Maryland Institute of Arts. His daughter, Angeline, whom Thomas Symington married in 1825, was obviously quite a catch.*

[Thomas Symington's wife Angele passed when he was at the age of seventy-one.] He [then] married Mary Wilson, thirty-seven, whom he had met at the Episcopal Church, where she was the church organist; she bore him two children before he died in 1875 at the age of eighty-two.

***Thomas Symington did well financially, making substantial sums in real estate, marble quarries, and chemicals and fertilizer. He furnished much of the marble for the 1850 addition to the capitol building in Washington. He provided the cornerstone of the Washington Monument as a gift.** Unlike many others, including his son, he seems to have survived the Civil War financially intact. In 1862 he retired to a farm outside Baltimore, which he named " Indian Spring," managing his various business enterprises in addition to farming. When he died, he left an estate of one hundred thousand dollars in cash and what apparently was a substantial unrecorded balance that he divided among his children.*

EARLY LIFE

"Stuart Symington - A Life" / Page 1 - 4

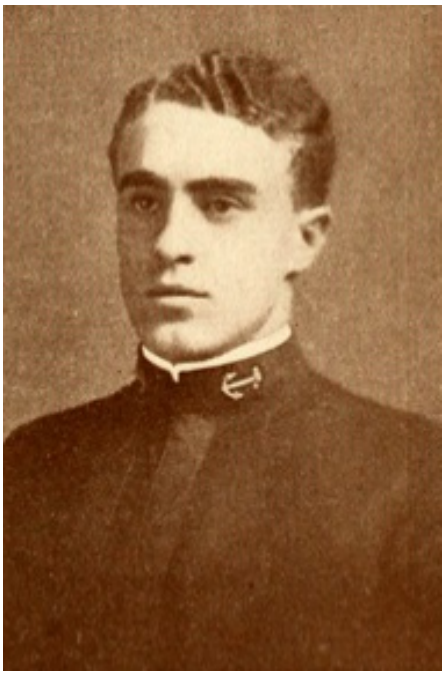
"Thomas and Angeline had two daughters and four sons. The oldest of the sons, born January 5, 1839, they understandably named William Stuart, after Angeline's father."

Thomas Alexander Symington II was born in 1842.

Thomas, and his older brother **William Stuart Symington I** , both served with the Confederate Army, and both left the nation for some time.

1885 (Aug) - His son Thomas Alexander Symington III was born

See [HL000P][GDrive]



[HL000Q][GDrive]

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Housatonic

William Stuart Symington II (born 1871)

[HL000M][GDrive]

[HL000N][GDrive]

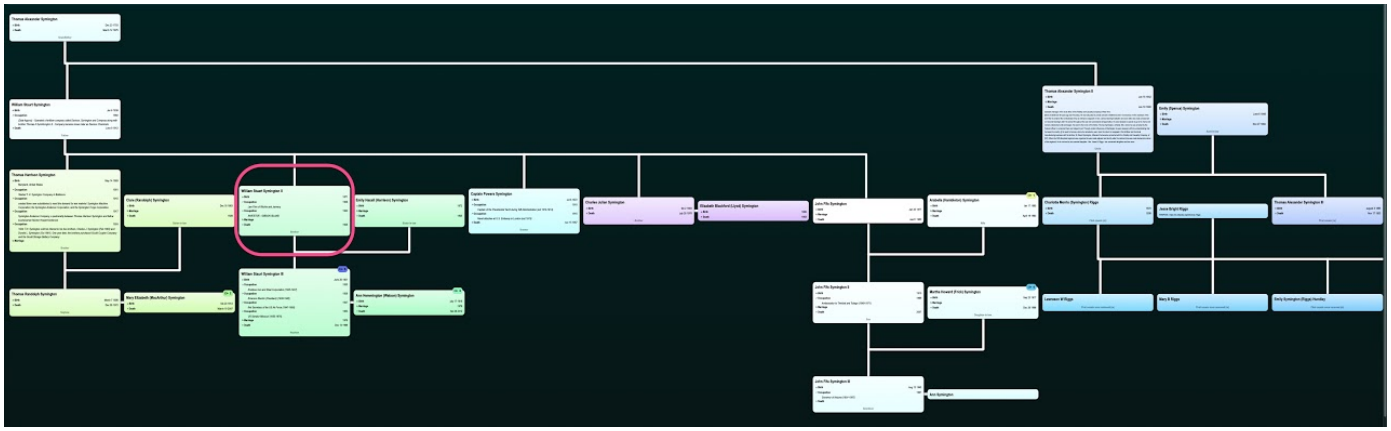
William Stuart Symington, Jr / ***BIRTH*** *6 Feb 1870 / Maryland, USA /* ***DEATH*** *19 Feb 1926 (aged 56)*

[intro - todo]

🌳 See the Symington Family Tree PDF [aa2][GDrive]

William Stuart Symington II in the Symington Family Tree

Symington family Tree, latest version (entire PDF - symington1.pdf / https://drive.google.com/open?id=1Up5Wff_tkeaqfmvJ-4ZCd00ezWJwptUb)



2019-06-07-research-pol-tech1-geneology-symington1-clip2.jpg / https://drive.google.com/open?id=1OJhHy5S6e3G3rOxxTnsDIOPv-ldw-QqV

Son of **William Stuart Symington I (born 1839)** (Co-Founder of the **Davison, Symington and Company** - Which was the name of the **Davison Chemical Company** in the late 1800s.)

Father of **William Stuart Symington III (born 1901)** .

Source: "Stuart Symington - A Life" (See [HB000H][GDrive])

*[**William Stuart Symington II's** mother was] **Lelia Skipworth Powers**, a daughter of a prominent Episcopal clergyman. In addition to her beauty, she possessed an impeccable Virginia lineage. Through her mother she was a direct descendant of Benjamin Harrison, who was married to Anne Carter, daughter of Robert "King" Carter, whose descendants included the Lees. [...] Lelia died at the age of forty-four, [which is after her and husband **William Stuart Symington I**] had a daughter and seven sons. The sons were all strapping young men, inheriting physiques that reflected their father's strength and their mother's beauty. All of them, with [the one exception of **W. Stuart Symington II**], went into business and became financially successful.*

*[The young **William Stuart Symington II**] had no interest in business, but instead went to Johns Hopkins University, where he studied language and literature. He became fluent in three foreign languages and ultimately received a Ph.D. in French literature. An athlete as well as a student, he was captain of the football team at Hopkins and played lacrosse on a Baltimore club team that won a national championship. At the age of twenty-three he received an appointment as an associate professor of romance languages at Stanford; after a year he returned east to become a full professor at Amherst College. Two years later, on November 17, 1897, he married **Emily Haxall Harrison**, a young woman of rare beauty and, apparently, rather daunting determination. Like many southerners, the Harrisons had lost everything in the Civil War, and Emily brought little to the marriage except her beauty, her strong personality, deep religious convictions, and some fine antique furniture.*

*[**William Stuart Symington II** and his wife **Emily Symington**] had six children: a daughter, Louise, and five sons, the oldest being **W. Stuart Symington III** , born June 26, 1901.*

With a growing family, the young professor and his wife found it difficult to make ends meet on a salary that was never more than one hundred dollars per month. Moreover, teaching may have lost some of its allure, possibly because of the situation at Amherst. Family legend has it that from the beginning of his tenure, Professor Symington had difficulty with the college janitor. Then one day, so the story goes, he used some blackboards that were still wet. The janitor, observing this from the door, shouted, " He wrote on them boards." The students laughed, and young Symington, knowing that his control of the class was in jeopardy, called the janitor and threw him out. Deciding that he had better report the incident to the president, he was met with the comment, "This man is the first janitor we have had here in many years who is able to keep Amherst warm in the winter; so, especially in that you are relatively new, if it came to which one of you would have to leave, I wouldn't give much for your chances with the Board of Trustees." After this episode, he is supposed co have gone home and told his wife, "Pack up. The janitor has more weight than I do."

Emily (Harrison) Symington and baby Stuart [aka William Stuart Symington III]. Symington family photograph.

In any event, in 1903 Professor Symington resigned his post at Amherst and moved his family to New York, where he enrolled in the law school at New York University. They had virtually no money, and Emily was too proud to cake any help from their relatives, some of whom were quite well off. As a result, her husband eked out a living as a translator while attending school. Their son remembered the first years of his life "as years of real poverty. "

1906 - 1913

[In 1906 (see news on passing), William Stuart Symington II finished law school at the University of Maryland.]

Judge Stuart Symington (II) , family photograph

[Fresh out of law school, **William Stuart Symington II**] took his family back to Baltimore, where he began the practice of law. He met with only sporadic success, and complicated his life by engaging in a number of unsuccessful business and real estate ventures.

"Much of his attention after he began the practice of law and especially to the interests of the **Symington Company** manufacturers of railroad devices, of which his brothers were the officers." [news article]

The family's fortunes waxed and waned. At times they were very poor, and even when they enjoyed a degree of prosperity, there never seemed to be enough money, at least not enough to support the way of life to which they aspired and which their ancestry would seem to predict. Moreover, they felt disadvantaged when they compared their situation to that of the other Symington brothers, all of whom were successful in business. [...]The family had a pleasant home, built with help from Uncle Tom, in Roland Park, one of the pioneering upscale residential developments in the country, IO but after a few years they had to give it up and move back to the city, living first in a small apartment and then a small house.

1914 (Summer) - Wife and children go to Switzerland

In the summer of 1914, however, Emily took all of the children - by then numbering six - on an extended tour of Europe. [...] Emily settled the family in a small Swiss hotel in Vevey, a pleasant little town between Lausanne and Montreux on the shore of Lac Leman. She put the children in school, primarily to learn French [...].

Apparently, [his wife Emily] had no specific plans to return home. She rarely heard from her husband, but his infrequent letters were red-letter events for the entire family. [**William Stuart Symington II**] rarely sent money, and before long the family was desperately short of funds, [and on August 20 the oldest child noted], "We are now staying entirely on credit." [...]

Whatever Emily's plans, the outbreak of World War 1 cut them off. After some hesitation, she decided that she should return home. She took the family to London and with help from [brother-in-law] Powers, a captain in the navy, booked passage on the Britannia, arriving in New York on October 22 [1914].

Then it was back to the little house in Baltimore. Indeed, the transition from summer in Switzerland to winter in Baltimore was symbolic of the roller-coaster kind of existence the family endured. Their finances, never equal to Emily's aspirations, created severe tensions between an easygoing [husband] and a strong-willed, determined [wife].

1915 - 1919

When the United States entered the World War Mr. Symington attempted to enter the ranks of a fighting arm of the United States Army. he was rejected after a physical examination.

"During and after World War I, actively involved in management of his brother's business, Symington Corporation." See [HG000J][GDrive].

He then turned his attention to such patriotic work as he could do outside the army. In 1919, at a meeting in Cleveland, he was elected president of the **Association of Manufacturers of War Materials**.

One of his activities during the war was to organize a $6,000,000 unit of the Symington Company in Chicago for the manufacture of 155-millimeter shells. He was the president of this unit. It had just been completed when the war ended.

1921 - Purchases Gibson Island, Maryland

(founder of **Gibson Island**)

1924 - Appointed to Supreme Bench in Maryland

"Appointed by Governor Albert C. Ritchie to Supreme Bench of Baltimore City, 1924. Died while serving on bench. Noted by his colleagues for having mastered academics, business, and law." See [HG000J][GDrive].

1926 (Feb 19) - Passed

Baltimore evening Sun - Friday Feb 19 1926 : (full page from newspaper - [HN004Y][hGDrive]

W. S. SYMINGTON, SUPREME BENCH MEMBER, DEAD

Jurist Succumbs To Illness Started By Tooth Infection.

CONDITION REGARDED AS SERIOUS FOR WEEKS

Years As Teacher Preceded Lawyer And Judge Career.

Judge W. Stuart Symington died today in the Johns Hopkins Hospital.

He had been ill since December with an ailment which began with an infected tooth.

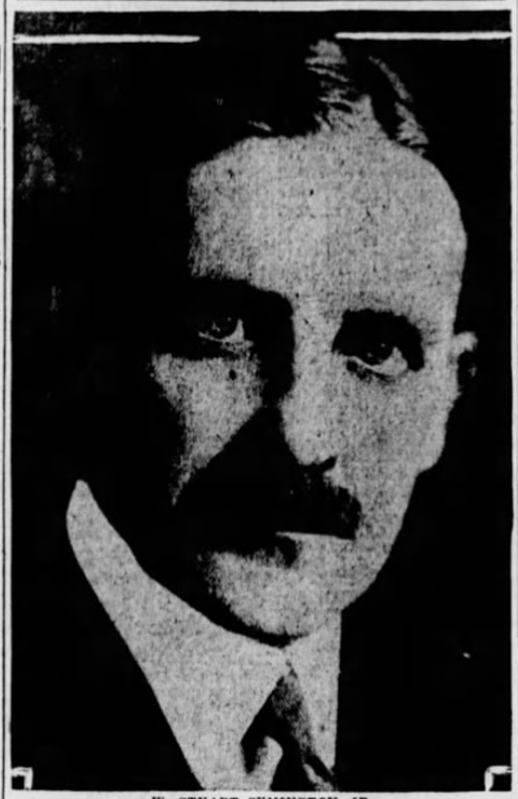
Moved To Hopkins.

At first a patient in the Union Memorial Hospital, he was moved to the Johns Hopkins Hospital for special observation some weeks ago.

It had been known for weeks that the character of his illness was dangerous.

The Supreme Bench will hold a memorial meeting within a few days to pass suitable resolutions in connection with Judge Symington's death, the judges decided today.

Jurist Who Died Today



W. STUART SYMINGTON, JR.

Judge Symington was a member of one of two Baltimore families which had long been conspicuous in Baltimore society for the numbers of sons it included. The other family was the Riggs group of brothers. William P. Riggs, a member of the latter family, died early this month.

Was Teacher First.

Born in Baltimore fifty-five years ago, the son of W. Stuart Symington, Mr. Symington was educated in the public schools and at City College and spent the early part of his career as a teacher, entering the practice of law only in 1906.

He took the doctor of philosophy degree at Johns Hopkins University in 1901, majoring in Romance languages.

Following his graduation from the Hopkins, he went to the Leland-Stanford University, in California, where he taught for several years, going from there to Amherst, where he taught Romance language for seven years.

Leaving Amherst, he went to Columbia University Law School, where he studied law for two years, leaving there to return to Baltimore and complete his law studies in the Law School of the University of Maryland, from which he graduated in 1906. He was admitted to the Baltimore bar in the same year.

Much of his attention after he began the practice of law was devoted to corporation law and especially to the interests of the Symington Company, manufacturers of railroad devices, of which his brothers were the officers.

When the United States entered the World War Mr. Symington attempted to enter the ranks of a fighting arm of the United States Army. He was rejected after a physical examination.

He then turned his attention to such patriotic work as he could do outside the army. In 1919, at a meeting in Cleveland, he was elected president of the Association of Manufacturers of War Materials.

One of his activities during the war was to organize a $6,000,000 unit of the Symington Company in Chicago for the manufacture of 155-millimeter shells. He was the president of this unit. It had just been completed when the war ended.

Bought Gibson Island.

About 1921 Mr. Symington bought Gibson Island, an island in the Chesapeake Bay off the mouth of the Magothy river. He organized the Gibson Island Club and subsequently organized the Gibson Island Company. He was president of both organizations.

In August, 1924, Gov. Albert C. Ritchie appointed Mr. Symington a member of the Supreme Bench, succeeding Judge James M. Ambler, whose term of office had expired.

Throughout his life Judge Symington was interested in tennis, squash and other athletic sports. He is said to have been an unusually able tennis player.

Was On B. C. C. Board.

He was formerly one of the members of the Baltimore Country Club, serving for a time as a member of the board of governors of that organization, but retiring when he went to Gibson Island.

He was a member of the Maryland Club.

Widow Survives.

Surviving Mr. Symington are his widow, who before her marriage was Miss Emily Harrison, and the following children: Mrs. Louise Symington Orrick, W. Stuart Symington 3d, Francis Fife Symington, Charles H. Symington and James Symington.

He also leaves the following brothers: Thomas H. Symington, Capt. Powers Symington, U. S. N., recently retired; John F. Symington of S., Donald L. Symington and Charles J. Symington.

There also is a sister, Mrs. Lelia S. Goode.

Arrangements for the funeral have not been completed. It is expected that it will take place from Mount Calvary Protestant Episcopal Church.

[HN004Z][hGDrive]

BITCHUTE @Housatonic YOUTUBE @HousatonicLive ODYSEE @Housatonic BRIGHTEON @Housatonic

Housatonic

Powers Symington (born 1872)

[HC0007][GDrive]

"German Squadron Visit, Howard TAFT, Ships, Powers Symington, Count Bernstorff, 1912"

[intro - todo]

🌳 **See the Symington Family Tree PDF (https://drive.google.com/open?id=1Up5Wff_tkeaqfmvJ-4ZCd00ezWJwptUb)**

Brother of **William Stuart Symington II (born 1871)** (who conceptualized **Gibson Island** before his passing)

Son of **William Stuart Symington I (born 1839)** (Co-Founder of the **Davison, Symington and Company** - Which was the name of the **Davison Chemical Company** in the late 1800s.)

Born Oct 6 1872 (https://www.findagrave.com/memorial/11415454/powers-symington)

1902(?) -Powers Symington works on Continuous Aim Fire tech

Source : US Naval Institute - Naval History Magazine / April 2015 Naval History Magazine Volume 29, Number 2 / "Continuous-Aim Fire: Learning How to Shoot " By Lieutenant Commander Benjamin F. Armstrong, U.S. Navy . See [HP0009][GDrive]

"In November 1900, Lieutenant William Sims joined the wardroom of the Kentucky, the U.S. Navy's newest battleship. He had just come from a tour as an attaché at the American Embassy in Paris, where he had been studying and collecting intelligence on European battleship design and gunnery practices. As the Kentucky sailed to China Station, Sims got his sea legs back after three years on shore duty. He also studied his new ship and started comparing what he had observed in Europe with what he found back at sea with his shipmates. That led him to conclude that despite new ships and newfound importance, the U.S. Navy still had a lot of room for improvement.

While visiting Hong Kong, Sims had a chance encounter with a Royal Navy captain who opened his eyes to a way he could help improve American naval standing. Percy Scott was the commander of the protected cruiser HMS Terrible, and what the lieutenant discovered was the British captain's new gunnery technique of continuous-aim fire. It was a revolutionary change to naval gunnery that virtually nobody in the Royal Navy was taking seriously. Sims saw it for what it was: a chance to change naval warfare forever.

On board his previous ship, the cruiser Scylla, and again in the Terrible, Scott regeared the elevation mechanisms on his big guns and added telescopic sights. The latter allowed gun directors to see the enemy at the extreme ranges naval guns were achieving at the turn of the century. Maximizing the gearing allowed the directors to constantly adjust the barrels of the guns as the ship moved. This allowed them to keep the guns continuously aimed at the enemy, rather than waiting for the rolling of the ship to put the enemy in the crosshairs. Gun crews could not only shoot more accurately but also fire as quickly as they could reload the giant guns.

Sims watched gunnery practice on board the Terrible and learned how the British had improved their accuracy by an order of magnitude while nearly quadrupling their rate of fire. The work of one ship could have the destructive potential of a squadron of ships still using the old methods. Despite the fact that the Royal Navy didn't seem interested in Scott's innovation, Sims immediately took it back to the U.S. Asiatic Squadron and began tinkering with the gearing of its ships' guns and training crews in the new techniques. Having worked as an intelligence collector and analyst while in Europe, he immediately wrote a report that he sent back to the Bureau of Ordnance (BuOrd) in Washington, D.C.

But the bureau didn't appear to believe the report; its claims seemed too extreme. Instead BuOrd stowed the report away in a basement file cabinet at the Washington Navy Yard. Sims heard nothing. However, he continued to develop and improve the continuous-aim fire techniques—adjusting the gearing, working with the gun crews to develop training methods, and writing papers on all of his findings.

Over the course of two years Sims wrote 13 reports, all of which were sent to the bureau. Many of them had the endorsements of captains on China Station and even Rear Admiral George Remy, who commanded the squadron. They had seen the results. However, the Bureau of Ordnance still didn't believe the success Sims claimed to achieve. It decided to run its own test to prove he was wrong.

The bureau's experts used a gun mounted on the banks of the Anacostia River at the Washington Navy Yard; their report stated that what the lieutenant in the Pacific was claiming was impossible. Of course they hadn't changed the gearing of the gun, as Sims' reports instructed, and they tested the technique on dry land instead of on the rolling deck of a ship, which changed the physics. But the Navy stood by its report, and the official policy was that continuous-aim fire was impossible.

Sims, after two years of developing the procedures and writing the reports, was understandably frustrated. As a result he did something he later admitted was "the rankest kind of insubordination." Sims wrote a letter directly to President Theodore Roosevelt.

Roosevelt, a knowledgeable student of naval affairs and former assistant secretary of the Navy, read the letter and realized that if what Sims claimed was actually possible it would have significant ramifications. He suggested the Bureau of Navigation fill the relatively obscure billet of "inspector of target practice" by bringing Sims home from China Station. Even if continuous-aim fire didn't work, American naval gunnery was so poor it was worth taking the chance.

Sims returned to Washington and took on his new position with the tenacity of a blue crab grabbing a chicken bone. Given two junior lieutenants to serve as his assistants, Ridley McLean and ***Powers Symington****, he began revolutionizing gunnery in the U.S. Navy. They started by circulating the procedures for continuous-aim fire and instituting mandatory gunnery practice for all ships. They also initiated an annual gunnery competition involving every ship in the Fleet. The winner would be announced in the newspapers of the day and have the honor of being known as the best ship in the Navy. Also, the gunnery officer in the winning ship was required to write a report on how his ship won. The reports were circulated to U.S. wardrooms all around the world, and consequently, gunnery methods and techniques were constantly refined.*

Sims was promoted to lieutenant commander and traveled the world to visit ships and help train gun crews. In the span of just a few years he and his team changed naval warfare forever. The system they introduced increased the speed with which American gunners hit their targets by 100 percent and the effectiveness of American batteries by 500 percent. U.S. sailors became some of the best gunners in the world and led a revolution in naval affairs. Subsequent innovations included fire control and the all-big-gun battleship, or dreadnought. Throughout the Fleet, William Sims became known as "the man who taught us how to shoot."

Sims continued pushing boundaries in the years leading up to World War I—advocating for all-big-gun battleships, developing torpedo-boat destroyer tactics, and eventually commanding all American naval forces in England when the United States entered the war. During the conflict he was central to the adoption of the convoy system that won the First Battle of the Atlantic. When he returned home he served a second term as president of the Naval War College, where he helped establish the system of study and war-gaming used throughout the interwar years to develop American naval aviation and submarines.

Naval innovation is too often seen through the lens of technology, defined by the weapons and hardware we label as "game-changers" or "transformations." However, some of the most important developments in history have come from the "software": innovations in tactics, techniques, and procedures such as the development of continuous-aim fire. Ideas, it must be remembered, can be even more powerful than the steel and explosives that dominate our naval history."

1905 (Dec) - Best man at wedding

Also in attendance - **William Kern Gise (born 1871)** .

Full page : [HN004T][GDrive]

The Washington Post (Washington, District of Columbia) · 29 Oct 1905, Sun · Page 166

Miss Anita Evans, daughter of the former consul general to London, will be married at noon on Wednesday to Lieut. David Foote Sellers, U. S. N. The ceremony will take place in St. Thomas' Episcopal Church and will be followed by breakfast for the bridal party only in the home of the bride's parents, on Massachusetts avenue. The family is in mourning for the bride's brother, Lieut. Evans, otherwise there would have been more festivity on this occasion. The bride's sister, Miss Evans, will be her only attendant. The best man will be Lieut. Powell Symington and the ushers will be Lieut. Commander Gibbons, of the Dolphin; Capt. Archibald Butt, Paymaster Izard, Lieut. Roscoe Spear, Capt. Harry Lay, and Lieut. William K. Gise. The wedding will be a brilliant one, as all navy weddings are sure to be The officers will wear full-dress uniform and the guests will be from among the most distinguished official and army and navy families in the city.

[HN004U][GDrive]

1912 (June 13)

Full page : [HN005N][GDrive]

BALTIMORE, THURSDAY MORNING, JUNE 13, 1912.

Cemetery.

FUNERAL OF MAJOR SYMINGTON

Floral Design From President And Mrs. Taft On Grave.

A design from President and Mrs. Taft was among the many flowers placed upon the grave of Major W. Stuart Symington, who was buried yesterday afternoon in Greenmount Cemetery. Commander Powers Symington, of the President's yacht Mayflower, is a son of Major Symington. Out of respect for him and in honor of his father, Bugler J. W. Ivy, of the Mayflower, was sent to Baltimore to sound taps over Major Symington's grave. The officers and men of the yacht also sent flowers.

Brief funeral services were held at the home of Major Symington's son, Mr. Thomas H. Symington, 218 Ridgewood road, Roland Park, after which the body was taken to St. David's Protestant Episcopal Church, where services were conducted by the Rev. Dr. William M. Dame, rector of Memorial Protestant Episcopal Church; the Rev. W. H. H. Powers, of Towson, and Rev. Theodore C. Foote, of St. David's.

The pallbearers were T. H. Symington, W. S. Symington, Jr., Commander Powers Symington, John F. Symington of S., E. H. Symington, Donald Symington and Charles J. Symington, all sons of Major Symington, and a half-brother, Mr. John F. Symington. The casket was draped with the Confederate flag. The honorary pallbearers were:

Messrs.—

George W. Booth,	J. Livingston Minis,
J. Southgate Lemmon,	Michael Jenkins,
Frederick M. Colston,	Rufus W. Applegarth,
Gustav Lurman,	D. William H. Welch,
Randolph Barton,	Frank Brown,
J. McKenny White,	Gen. Felix Agnus,
Albert Marburg,	Ewing Harvey,
William H. Graffiin,	James R. Wheeler,
C. D. Langhorne,	George C. Jenkins,
Charles W. Field,	Andrew C. Trippe,
Joseph W. Jenkins,	A. R. H. Ranson,
McHenry Howard,	Dr. Delano Fitzgerald,
R. Curzon Hoffman,	Key Compton,
Charles H. Grasty,	Frank H. Hambleton,
Yates Pennington,	George May,
Charles T. Crane,	Capt. Neilson Poe,
Joseph Packard,	Spalding L. Jenkins.
J. H. Cottman,	

Among those present at the services at the church were:

Messrs.—

Gen. James R. Wheeler,	J. H. S. Compton,
Gen. L. L. Jackson,	Richard B. Post,
Major P. P. Dandridge,	Walter Warren,
Ex-Congressman Denny,	Dr. George Reuling,
Capt. H. A. Wise,	Charles S. Winder,
Col. Washington Bowie,	Ral Parr,
Prof. C. F. Raddatz,	Dr. Sidney Cone.
Felix V. Brainer,	Dr. Samuel C. Chew,
Robert C. Cole,	Prof. B. L. Gildersleeve,
Bartlett S. Johnston,	Col. D. G. McIntosh,
William J. Ewing,	Judge J. P. Gorter,
Clymer Whyte,	James McC. Trippe.
George S. Jackson,	

They Mourn Major Symington.

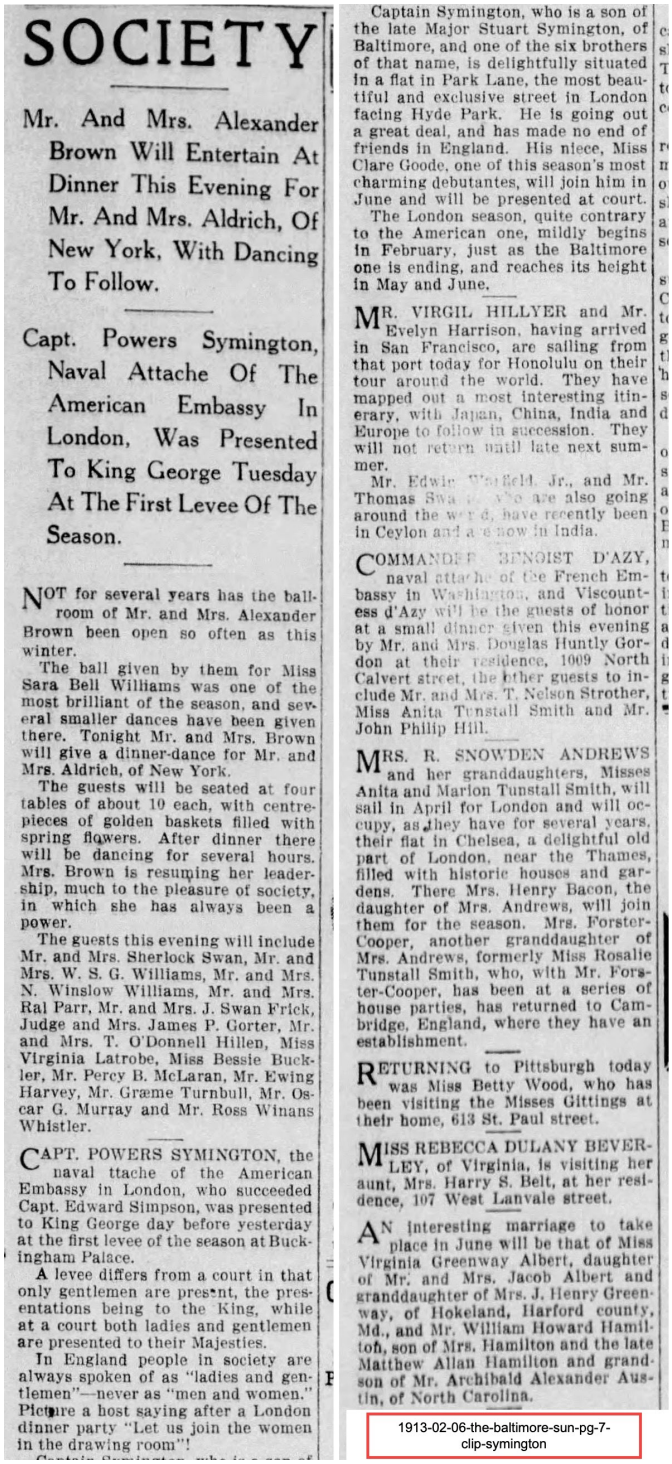
The board of directors of the Baltimore Mutual Fire Insurance Company at a special meeting held yesterday passed resolutions regretting the death of Major W. Stuart Symington. Major Symington was one of the incorporators of the company in 1885 and was its president from 1886 to 1887. Major Symington had held no office with the company for a number of years, but always maintained a friendly interest in it and with its executive officers.

The resolutions conclude with the following paragraph: "We have all lost a courteous, gallant friend—and Baltimore can mourn the loss of a citizen of the very highest type—and we respectfully convey our sympathies to the family."

[HN005O][GDrive]

1913 (Feb 06)

Full page : [HN005P][GDrive]



SOCIETY

Mr. And Mrs. Alexander Brown Will Entertain At Dinner This Evening For Mr. And Mrs. Aldrich, Of New York, With Dancing To Follow.

Capt. Powers Symington, Naval Attache Of The American Embassy In London, Was Presented To King George Tuesday At The First Levee Of The Season.

NOT for several years has the ballroom of Mr. and Mrs. Alexander Brown been open so often as this winter.

The ball given by them for Miss Sara Bell Williams was one of the most brilliant of the season, and several smaller dances have been given there. Tonight Mr. and Mrs. Brown will give a dinner-dance for Mr. and Mrs. Aldrich, of New York.

The guests will be seated at four tables of about 10 each, with centrepieces of golden baskets filled with spring flowers. After dinner there will be dancing for several hours. Mrs. Brown is resuming her leadership, much to the pleasure of society, in which she has always been a power.

The guests this evening will include Mr. and Mrs. Sherlock Swan, Mr. and Mrs. W. S. G. Williams, Mr. and Mrs. N. Winslow Williams, Mr. and Mrs. Ral Parr, Mr. and Mrs. J. Swan Frick, Judge and Mrs. James P. Gorter, Mr. and Mrs. T. O'Donnell Hillen, Miss Virginia Latrobe, Miss Bessie Buckler, Mr. Percy B. McLaran, Mr. Ewing Harvey, Mr. Græme Turnbull, Mr. Oscar G. Murray and Mr. Ross Winans Whistler.

CAPT. POWERS SYMINGTON, the naval ttache of the American Embassy in London, who succeeded Capt. Edward Simpson, was presented to King George day before yesterday at the first levee of the season at Buckingham Palace.

A levee differs from a court in that only gentlemen are present, the presentations being to the King, while at a court both ladies and gentlemen are presented to their Majesties.

In England people in society are always spoken of as "ladies and gentlemen"—never as "men and women." Picture a host saying after a London dinner party "Let us join the women in the drawing room"!

Captain Symington, who is a son of the late Major Stuart Symington, of Baltimore, and one of the six brothers of that name, is delightfully situated in a flat in Park Lane, the most beautiful and exclusive street in London facing Hyde Park. He is going out a great deal, and has made no end of friends in England. His niece, Miss Clare Goode, one of this season's most charming debutantes, will join him in June and will be presented at court.

The London season, quite contrary to the American one, mildly begins in February, just as the Baltimore one is ending, and reaches its height in May and June.

MR. VIRGIL HILLYER and Mr. Evelyn Harrison, having arrived in San Francisco, are sailing from that port today for Honolulu on their tour around the world. They have mapped out a most interesting itinerary, with Japan, China, India and Europe to follow in succession. They will not return until late next summer.

Mr. Edwin Warfield, Jr., and Mr. Thomas Swan, who are also going around the world, have recently been in Ceylon and are now in India.

COMMANDER BENOIST D'AZY, naval attache of the French Embassy in Washington, and Viscountess d'Azy will be the guests of honor at a small dinner given this evening by Mr. and Mrs. Douglas Huntly Gordon at their residence, 1009 North Calvert street, the other guests to include Mr. and Mrs. T. Nelson Strother, Miss Anita Tunstall Smith and Mr. John Philip Hill.

MRS. R. SNOWDEN ANDREWS and her granddaughters, Misses Anita and Marion Tunstall Smith, will sail in April for London and will occupy, as they have for several years, their flat in Chelsea, a delightful old part of London, near the Thames, filled with historic houses and gardens. There Mrs. Henry Bacon, the daughter of Mrs. Andrews, will join them for the season. Mrs. Forster-Cooper, another granddaughter of Mrs. Andrews, formerly Miss Rosalie Tunstall Smith, who, with Mr. Forster-Cooper, has been at a series of house parties, has returned to Cambridge, England, where they have an establishment.

RETURNING to Pittsburgh today was Miss Betty Wood, who has been visiting the Misses Gittings at their home, 613 St. Paul street.

MISS REBECCA DULANY BEVERLEY, of Virginia, is visiting her aunt, Mrs. Harry S. Belt, at her residence, 107 West Lanvale street.

AN interesting marriage to take place in June will be that of Miss Virginia Greenway Albert, daughter of Mr. and Mrs. Jacob Albert and granddaughter of Mrs. J. Henry Greenway, of Hokeland, Harford county, Md., and Mr. William Howard Hamilton, son of Mrs. Hamilton and the late Matthew Allan Hamilton and grandson of Mr. Archibald Alexander Austin, of North Carolina.

1913-02-06-the-baltimore-sun-pg-7-clip-symington

[HN005Q][GDrive]

1913 (June 12)

Full page : [HN005R][GDrive]

1913-06-12-the-baltimore-sun-pg-9-clip-symington

MR. IRWIN B. LAUGHLIN, charge d'affaires of the United States Embassy, and Mrs. Laughlin gave a dinner at 15 Great Stanhope street, London, last night for Mr. Walter H. Page, the new Ambassador. The Baltimoreans present included Mr. J. Ridgely Carter, once Minister to Roumania, and Mrs. Carter and Capt. Powers Symington, naval attache of the American Embassy. Other guests were Sir Edward Grey, Lord and Lady Sandhurst, Mr. and Mrs. Louis Harcourt, the Hon. Aubrey Pauncefote, Sir William and Lady Tyrrell, Consul-General and Mrs. Griffiths and Mr. and Mrs. Humphry Ward.

[HN005S][GDrive]

1914 (jan 18) - lost submarine

[HN005T][GDrive]

1914-01-18-the-baltimore-sun-pg-1-clip-sub

NO TRACE OF SUBMARINE

Destroyers With Weighted Cables Sweep Bay Bottom In Vain.

LIFTING BOAT IS DUE TODAY

But Even If Found, Little Craft Can't Be Raised Till Tomorrow. Hope For Men Long Abandoned.

Plymouth, Jan. 17.—An all-day search by a fleet of torpedo boats, to which were attached cables for sweeping the bottom of Whitesand Bay, near here, failed to locate the sunken British submarine A7.

When darkness fell the commanding officer reluctantly ordered the vessels to return to their moorings.

Although hope of any of the crew being alive was long ago given up—six hours being the maximum time they could breathe after the ship sank—the search will be resumed at daylight.

The work of locating the craft has been made more difficult by the fact that the buoy which the parent ship placed when the submarine was missed was driven out to sea and it is believed that the submarine itself drifted and probably lies at a depth of 30 fathoms.

On Watch All Night.

A destroyer kept watch throughout last night over the spot where the tiny vessel was supposed to have disappeared after her dive during the maneuvers yesterday morning. With the first streak of light at dawn a number of destroyers, with weighted cables stretched between them, steamed up and down the bay sweeping the bottom of the sea, but encountered no obstacle.

The lifting craft specially fitted for raising sunken submarines cannot reach the scene of the disaster before Sunday night and the authorities say that there is small chance of raising the boat before Monday, even if she should be located.

Many Theories As To Cause.

Many theories have been put forward to account for the accident. The A7, with A9, had been ordered to attack a destroyer with torpedoes. The A9 fired hers, but the A7 did not.

Nothing has been heard of the A7 since and it is believed that the machinery got out of order or the men were overcome by gas.

A7 was one of only three vessels of her class remaining in the regular flotilla. The others are being utilized for purposes of instruction.

Commander Powers Symington, naval attache of the American Embassy, called at the Admiralty today to express regret in behalf of the Navy Department.

Lieut. Gilbert Molesworth Welman, who commanded the A7, was the nephew of Lady Molesworth, who died September 26 last from the sting of a wasp, and succeeded to her Trewarthenic estate in Cornwall.

More Than 200 Lives Lost.

The loss of the British submarine boat calls attention to the heavy loss of life sustained since these diving boats have been attached to the great navies of the world.

Submarine accidents in the different navies have caused the loss of more than 200 lives during the last 10 years. Collisions and explosions on board and the inrush of water through all the open ports have been the common causes of these mishaps.

The navies of France, Great Britain and Russia have been the principal sufferers in the number of lives lost. In five serious accidents France has lost 82 officers and men. Great Britain, whose submarines have given that country the most serious trouble, has lost 77 men.

The American Navy has had a few submarine accidents, but the loss of life was small compared to those which have befallen the French and British navies.

[HN005U][GDrive]

1914 (Aug 22) - navy assessment

[HN005V][GDrive]

THE LEAVENWORTH TIMES, SATURDAY MORNING, AUGUST 22, 1914

HUGE TASK AHEAD FOR ATTACHES IN EUROPE CONFLICT

American Army and Navy Officers in Various Countries to Keep Tab on Developments.

SPECIALLY TRAINED OBSERVER

Military Attache Is Not Chosen for Looks, but for Ability—Must Watch Carefully for New Inventions and Methods.

Washington, Aug. 21.—During the present European crisis there is no class of men to whom the American public's interest is more deeply attached than the officers of our army and navy who are serving as attaches to our various embassies in the belligerent countries.

In the old days a military or naval attache at a European court was chosen for two reasons—because he was especially handsome in his dress uniform and was able to afford the expense through his private means, or because he was a personal friend of the American ambassador serving at the capital to which he was assigned.

Now things are different. In addition to being a trained courtier, who will be able to take his place with credit to his country in any gathering, whether of business men or crowned heads, he must be a specially trained military observer, capable of obtaining information for the use of the home government on all new military features which may be introduced.

WILL BE KEPT BUSY.

Maj. George T. Langhorne, a Kentuckian, who is looking after our military interests at Berlin, has his hands full. Though a cavalry officer himself, he must pay attention to every different branch of the military service with which Germany is making her struggle against the allies. For instance, he must report, in as detailed a manner as possible, upon the types of military automobile with which Germany has been conducting her advance guard attack.

This will include a separate report upon the type of motor used, its speed on good roads, its ability to travel over rough ground, whether it is armored effectively, whether it carries a rapid fire gun and, summing up, whether its use has been a success. In the advance through Belgium, Germany used a new form side by an advance guard of automobiles. These machines carried light rapid-fire guns, which gave them an attacking strength.

With the light artillery they carried, the outposts of the enemy could easily be brushed away, while the troop trains following only a few yards behind gave the support needed in case a heavier column of the enemy appeared.

MUST GIVE RESULTS.

Upon each and every detail of this work Major Langhorne must be able to report, and upon his views, as well as upon the results which have been obtained, will depend the action which our war college experts will take. Another feature of the German army's work which Major Langhorne must watch with special attention will be the use of dirigible airships.

A modern military dirigble costs at least $500,000. Its maximum life at the best is short, being generally estimated at about four years. In time of war, it presents so large a target that it is only safe from the bullets of the enemy when many thousand feet in the air, and then it may be liable to destruction from a chance shrapnel shot or from the aeroplanes of the enemy. As the result of this it will mainly be used for night attacks, sailing over the enemy's fortifications and dropping bombs containing hundreds of pouds of explosives as near as possible to powder magazines, according to some. Through the watchfulness of our military attache in Berlin the American army officers must be able to know whether it will pay our government to construct machines of this type.

Maj. Spencer Cosby, from Maryland, who is serving at Paris, will have his specialties to handle. In Aeronautics the French army without question leads the world as far as aeroplanes go. Major Cosby will also have an interesting report to make on the wonderful French artillery.

FRENCH ARTILLERY.

It is on this branch of her service that France places its great reliance. Her infantry is weak, according to some officers, the men being young and not comparing at all favorably with the infantry of the German service, but in field artillery France has reached a state of near perfection.

Transportation of troops is likely to be the most important feature upon which Lieut. Col. George O. Squier, the American military attache at London, will report. With the German army busy in its attacks upon Russia, it appears hardly likely than an invansion of Great Britain can be attempted, and for this reason the British troops are likely to be sent to the continent, there to aid in repelling the German attacks. The handling of these troops, both by sea and rail is something which England has brought down to a fine system, having learned her lesson during the Boer War.

most difficult of tasks accomplished if he is able to report fully to Washington on the most important branch of the French navy. While France is well supplied with battleships and torpedo boat destroyers as well as with fast cruisers, she has made the submarine her especial pet.

Russia, Italy and Austria are also being watched by our army and navy men abroad. In the first named country, Lieut. Commander Major will cover the naval end of the work as well as that of France, while no army officer is designated to remain at St. Petersburg. In Austria-Hungary Capt. Allan T. Briggs of Connecticut represents our army, and Lieut. Commander Richard D. White the navy, the last named officer also being given the duty of looking after Italian naval affairs. He is a Missourian by birth. Col. George M. Dunn of Indiana is the United States military attache at Rome.

of attack, massing her troops on trains which were flanked on each

Perhaps the most interesting experience that will be had by any of our military attaches will be that of Lieut. Sherman Miles, whose work lies between the two little governments of Servia and Montegro. This young man, whose father, Gen. Nelson Miles, is the ranking retired officer of the American army, will have an opportunity of observing the most interesting kind of warfare, taking place in a mountainous country.

England, with her tremendous force of superdreadnoughts, will be closely watched by Commander Powers Symington, U. S. N., attached to the London embassy with Ambassador Page. If this type of vessel shows its superiority, it stands to reason that the United States must go on building these $9,000,000 monsters, in order to defend her enormous coast line.

On the other hand Germany has pinned her faith to the support which she will give her battleship fleet from the finest fleet of torpedo destroyers in the world. For years past Germany has been doing her best to bring this branch of her service to a state of perfection and has come very close to obtaining the object sought. She has over 150 vessels of this type, all capable of making thirty knots per hour or more and has placed the finest officers of her navy on this work. Germany for years past has been holding night maneuvers of her torpedo destroyers in fleet formation, running the vessels at top speed without a light showing. This is something that no other nation has dared to attempt.

OLD SOLDIER'S SON.

Lieut. Commander Walter R. Gherardi, who claims Hawaii as his birthplace, will watch this work for the United States, and it is quite possible that his reports may result in limiting the superdreadnought construction in favor of a mosquito fleet, small in tonnage, but mighty in numbers and destructiveness.

Lieut. Commander Samuel I. M. Major, U. S. N., will have one of the

[HN005W][GDrive]

1914 (Aug 28)

[HN005X][GDrive]

NEARING NATIVE SHORE

Many Baltimoreans To Arrive This Week From War-Torn Europe.

DR. BLOODGOOD AMONG THEM

Mrs. W. Stuart Symington, Jr., And Children Safe In Switzerland — Others Are Heard From.

With the arrival of several large steamers from England within the next two days, the majority of Baltimoreans will have gotten out of the trouble zone and landed on their native shores. The Adriatic, the Olympic, the St. Paul and the San Giovanni are due within the next 48 hours in New York.

Among those who will land will be Dr. Joseph C. Bloodgood, who attended the surgical congress in London. Dr. F. P. Mall, of the Johns Hopkins Medical School; Dr. W. W. Willoughby and Dr. J. W. Bright, of the university, are still in London and are expected to sail soon.

Misses Ella and Mary Kremelberg, sisters of Mrs. John Gill, Jr., are still in London and have not informed relatives here their intention to sail. They were in Paris when the war started, but made a hurried dash to London.

Mrs. Ral Parr and Mrs. Donnell Swann likely will sail within a day or two for New York.

Mr. and Mrs. Charles C. Homer and Dr. and Mrs. H. L. Homer, who are in Bremen, are not expected to be able to reach London for a week or more.

Mr. and Mrs. Charles Kreuder, parents of Charles Kreuder, Jr., an assessor for the Appeal Tax Court, are still at Hanau, Germany, according to a message to their son. They are with relatives, but the police are watching them closely, and it is believed that they will be held until the mobilization period is over.

Mr. Kirwan Helped Charter Ship.

George W. Kirwan, who reached New York from Italy on a chartered steamer, was at his office yesterday and expressed pleasure that he had been able to reach his native land without having to pass through the warring countries. He was one of the most energetic of the Americans who arranged for the charter of the steamer and saw to it that those unable to pay their share of the charter price were not left behind. Miss Cora Thomas was the only other Baltimorean on the ship.

Friends of Mrs. W. Stuart Symington, Jr., and her six children were relieved from their great anxiety yesterday when Mr. Symington announced that he had received a letter from his wife and their six children and that they were safe in Switzerland. Her brother-in-law, Lieut.-Com. Powers Symington, U. S. N., now naval attache at the London Embassy, has sent her word to remain in Switzerland until he can accompany her out. In her letter Mrs. Symington says that all the Swiss male population is at the border under arms and that she had great difficulty cashing checks in Luzerne.

Miss Polly Carter, who is in London, has written to her friends, saying that the English are keeping calm and collected and that every person seems more than anxious to do his duty, whether it be on the firing line or at home.

School Teachers Heard From.

Miss Caroline Becker, Miss Harriett Ebaugh, Miss Rose O. Wickes and Miss Mary Robinson, public school teachers, notified friends yesterday by cable that they would sail from Liverpool September 19. They will not reach here until long after school opens, but it is believed that the School Board will overlook this in view of the difficulties travelers are now encountering.

Mr. and Mrs. Abraham Fader have reached the United States through Canada, but will not return home until Monday next.

Miss Margaret Kerr, daughter of Mrs. Richard P. Baer, of Catonsville, arrived yesterday morning at her home on Frederick road, from Europe after some thrilling experiences in the war zone. Miss Kerr landed at New York Wednesday from the steamship Cameronia from Glasgow, and was accompanied by Miss Jane Byrne, director of the Lawrence House Settlement.

When the first talk of war spread over Europe they were in Germany and left immediately for England and Scotland. They had intended sailing on the Caledonia from Glasgow about two weeks ago, but the sailing of the steamer was postponed.

Messrs. Walter L. Read and Leo C. Read, of Eden Terrace, Catonsville, who spent the summer traveling abroad, have sailed from Italy to Liverpool, whence they will take passage for home as soon as possible.

Mr. and Mrs. Sidney Lansburgh, who have been in Lucerne, Switzerland, since war was declared, are now at The Hague and have cabled they will sail Saturday on the steamer Rotterdam from Rotterdam.

Mrs. William Hatton, matron, and her daughter, Miss Mabel Hatton, teacher at the Episcopal Church Orphan House, Frederick, Md., who are in Europe, have written to friends that they are uncertain when they will be able to return.

Mr. and Mrs. Edw. L. Rich, of Richland, Catonsville, have received word from their cousin, Miss Harriet Tyler, who is spending the summer traveling abroad, that she is in Scotland and the pleasure of her trip is in no way being married by the war.

Mrs. Severn R. Allnutt, of Catonsville, yesterday received a cablegram from her sister, Miss Ethel H. Crosby, president of the Woman's Civic League of Catonsville, who spent the summer at Malaga, Spain, with her cousin, R. F. Bevan, announcing her departure for home. Miss Crosby sailed Wednesday from Cadiz, Spain, on the steamer Isabella.

Misses Eisenbrandt In Frankfort.

A report of the safety of a large party of Baltimoreans who have been traveling together was received yesterday by Former City Councilman William A. Eisenbrandt from the State Department in Washington. He was informed that his daughters, Misses Jeannette and Alice Eisenbrandt; their cousin, Miss Marie Eisenbrandt, and aunt, Miss Alice Schulz, were in Frankfort, all safe and well and amply provided with funds. They are to leave Frankfort today for Holland, and expect to sail for home on September 12.

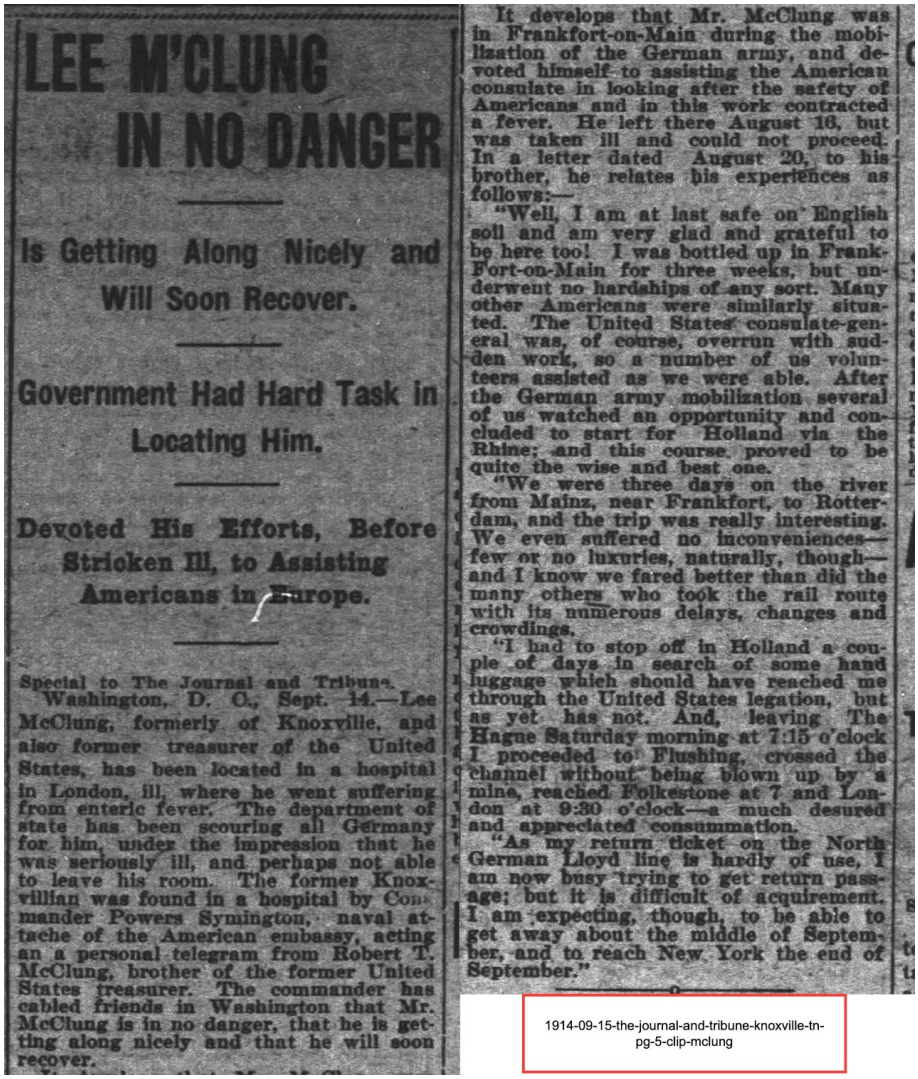
In the party are Mr. and Mrs. Charles S. Stauffen and their son, Charles K. Stauffen; Mr. and Mrs. Frederick Denhardt William Caspari, H. A. Schwartz and W. Caspari Wylie.

1914-08-28-the-baltimore-sun-pg-3-clip-native-shore

[HN005Y][GDrive]

1914 (Sep 15)

[HN005Z][GDrive]



LEE M'CLUNG IN NO DANGER

Is Getting Along Nicely and Will Soon Recover.

Government Had Hard Task in Locating Him.

Devoted His Efforts, Before Stricken Ill, to Assisting Americans in Europe.

Special to The Journal and Tribune.

Washington, D. C., Sept. 14.—Lee McClung, formerly of Knoxville, and also former treasurer of the United States, has been located in a hospital in London, ill, where he went suffering from enteric fever. The department of state has been scouring all Germany for him, under the impression that he was seriously ill, and perhaps not able to leave his room. The former Knoxvillian was found in a hospital by Commander Powers Symington, naval attache of the American embassy, acting an a personal telegram from Robert T. McClung, brother of the former United States treasurer. The commander has cabled friends in Washington that Mr. McClung is in no danger, that he is getting along nicely and that he will soon recover.

It develops that Mr. McClung was in Frankfort-on-Main during the mobilization of the German army, and devoted himself to assisting the American consulate in looking after the safety of Americans and in this work contracted a fever. He left there August 16, but was taken ill and could not proceed. In a letter dated August 20, to his brother, he relates his experiences as follows:—

"Well, I am at last safe on English soil and am very glad and grateful to be here too! I was bottled up in Frankfort-on-Main for three weeks, but underwent no hardships of any sort. Many other Americans were similarly situated. The United States consulate-general was, of course, overrun with sudden work, so a number of us volunteers assisted as we were able. After the German army mobilization several of us watched an opportunity and concluded to start for Holland via the Rhine; and this course proved to be quite the wise and best one.

"We were three days on the river from Mainz, near Frankfort, to Rotterdam, and the trip was really interesting. We even suffered no inconveniences—few or no luxuries, naturally, though—and I know we fared better than did the many others who took the rail route with its numerous delays, changes and crowdings.

"I had to stop off in Holland a couple of days in search of some hand luggage which should have reached me through the United States legation, but as yet has not. And, leaving The Hague Saturday morning at 7:15 o'clock I proceeded to Flushing, crossed the channel without being blown up by a mine, reached Folkestone at 7 and London at 9:30 o'clock—a much desured and appreciated consummation.

"As my return ticket on the North German Lloyd line is hardly of use, I am now busy trying to get return passage; but it is difficult of acquirement. I am expecting, though, to be able to get away about the middle of September, and to reach New York the end of September."

1914-09-15-the-journal-and-tribune-knoxville-tn-pg-5-clip-mclung

[HN0060][GDrive]

1915 (Feb 23)

[HN0063][GDrive]

GREAT BRITAIN PLANNED TO CONTROL AT PANAMA

Had Arranged With Japan to Prevent Use of Canal by Germany In Time of War.

Washington, Feb. 23.—Discovery of an alleged agreement between Japan and Great Britain with reference to the Panama canal almost led to the dismissal by the British government of Commander Powers Symington, American naval attache in London, according to a report received here today. As it is, the report states a number of British officers with whom Commander Symington consorted have been disciplined.

It is not expected that the American officer will remain much longer in London.

According to the information obtained, Commander Symington learned that an arrangement had been reached by the British and Japanese governments whereby Japanese men-of-war were to watch the Pacific entrance of the canal and prevent its use by German cruisers. To facilitate the operations of the Japanese ships they were to be provided with a base at Vancouver, British Columbia.

Four Japanese cruisers have been steaming along the American Pacific coast and have been obtaining supplies from Vancouver. Their presence has been known in Washington for some time.

Commander Symington regarded the information he obtained as important and conveyed it to the American ambassador. The latter promptly brought it to the attention of Sir Edward Grey, British minister for foreign affairs. Sir Edward, according to the report, denied that there was any menace against the United States in the arrangement. When he learned the ambassador's source of information he promptly made inquiries. He learned with whom Symington has been associated, and these men were punished for the revelations.

1915-02-23-the-gazette-cedar-rapids-iowa-pg-1-clip-panama

[HN0064][GDrive]

1915 (April 30)

[HN0061][GDrive]

U. S. EMBASSY IN LONDON IS A BUSY PLACE THESE DAYS

Affairs of Austria, Turkey and Germany Are in Hands of Page and His Assistants.

London, April 16.—(Correspondence of the Associated Press.)—Under stress of war, Germany, Austria-Hungary and Turkey have all entrusted their affairs in Great Britain to the American Embassy, thus piling an extraordinary burden upon Ambassador Page and making it necessary to enlarge the embassy staff. American affairs alone, with the thousands of controversies and claims arising from interrupted shipping and the stubborn citizenship cases encountered daily, would be troublesome enough. But in addition to these the American ambassador and his assistants are looking after the interests of thousands of Germans and Austrians interned in England and are entrusted with the business matters of enemies of England who cannot communicate with this island except through a neutral

1915-04-30-the-leavenworth-times-pg-9-clip-attache

agency.

William Buckner is the special attache of the embassy who is entrusted with Austrian and Turkish affairs. He maintains his office at the Austro-Hungarian embassy building in London, where he meets all inquirers and diverts from the American embassy a crowd which would be burdensome at this time when the embassy is frequently crowded with Americans seeking passports.

PASSPORT WORK.

German affairs are in charge of Edward G. Lowry, special attache, who has an office in the German embassy building. Mr. Lowry has just recently returned from Germany where he arranged for the distribution of gifts and comforts among Englishmen interned there, through the agency of American consuls. Leland Littlefield, who is a special attache of the embassy, is assisting in caring for German affairs.

At a time when travelers move between England and the continent with such difficulty the passport work of the embassy is especially arduous. Charles E. Stangeland, second secretary, is in charge of this department which demands his entire time, as well as that of several assistants.

Second Secretary J. Herbert Stabler is entrusted with the claims and controversies which arise from England's active campaign against shipping. This department of the embassy's work in growing heavier every day, because of England's aggressive policy under the order in council suppressing trade to and from Germany.

MUCH CODE WORK.

First Secretary Irwin Laughlin handles the diplomatic business of the embassy and is in constant conference with Ambassador Page. Second Secretary Edward Bell has charge of the general correspondence of the embassy, meets press representatives and visitors whose business cannot be referred directly to some special division of the embassy. Second Secretary Franklin M. Gunther, who was sent to London from Christiania on special duty, is Mr. Bell's assistant. Third Secretaries Elbridge Gerry Greene and Eugene C. Shoecraft and Howard N. Barnes, additional secretary detailed direct frof the State Department where he has had many years experience, are in charge of code work, now unusually heavy because of the frequent interchange of lengthy notes between England and the United States.

Sam B. Trissel and John T. Boifeullet are additional secretaries detailed to interview visitors and direct inquirers to the proper department. Clifford N. Carver is private secretary to Ambassador Page. Francis and Edward Hodson are resident clerks, sons of the late Charles Hodson, who was attached to the American Embassy for many years. The Hodson brothers are permanent employes of the embassy who have passed their entire lives in the service of the United States and are unfailing sources of information concerning diplomatic affairs in London.

MILITARY ATTACHES.

Commander Powers Symington is naval attache. Naval Constructor Louis B. McBride and Lieutenant John H. Towers, aviator, are also attached to the embassy. Lieutenant Colonel Thomas H. Treadwell of the marine corps is another attache. The army is represented at the London embassy by Lieutenant Colonel G. O. Squier and Lieutenant John G. Quekemeyer. Captains A. M. Miller and W. A. Castle of the army are at the embassy temporarily awaiting assignment with the British army as observers.

[HN0062][GDrive]

1915 (May 27)

[HN0065][GDrive]

BALTIMORE, THURSDAY, MAY 27, 1915. 16 PAGES. PRICE ONE CENT.

The Nebraska's Captain

NEBRASKAN'S CAPTAIN SAYS HE SAW NOTHING; HAD NO WARNING AS SHIP WAS HIT

—From the Philadelphia Public Ledger.

CAPT. J. S. GREENE

He is a Philadelphian and is in command of the American-Hawaiian liner Nebraskan, hit by either a mine or submarine's torpedo.

BIG BATTLE BETWEEN GERMANS AND ITALIANS EXPECTED AT TRENTINO

First Great Clash Imminent, With Strong Forces On Way.

ONLY TWO MILES APART

Advance Is Being Made Over Snowy Peaks In Alps A Mile High.

KING VICTOR CHEERS MEN

Taking Command, He Gives An Address, Declaring Kingdom Is To Redeem Territory.

Chiasso, Switzerland (on the Italian frontier), May 27.—The first great battle of the Austro-Italian war may be fought in the Trentino. The Italian Army is pushing steadily northward into the Tyrolean Alps, advancing over passes and snowy peaks a mile high.

In practically every instance the Austrian forces are fleeing without offering serious resistance and falling back upon the main body of the Austrian Trentino army. Advices received here today indicate that the Austrians are massed in great force in the Adige river section.

Strong Italian forces are being brought up to support the advance guard raiding the Trentino frontier district. Swiss military men believe a clash between the two main bodies may occur within a few days.

Berlin Hears The Same.

Berlin, via Copenhagen, May 27.—A big battle between Austrian and Italian armies along the Trentino border is imminent, according to dispatches from German correspondents with the Austrian Army.

The Austrian Army is strongly entrenched just inside the Trentino frontier, their outposts in constant clash with Italian scouting parties. Only two miles separate the two main forces.

King Victor In Command.

Rome, May 27.—King Victor Emmanuel arrived at the front today and assumed supreme command of the Italian armies that are pressing into Austrian territory along the entire frontier from Switzerland to the Adriatic Sea.

The King announced his assumption of the command with the following decree, issued as an order of the day:

"Soldiers: On land and sea the solemn hour of the vindication of our national claims has sounded.

"Following the example of my great ancestor, I assume today the supreme command of the land and sea forces, with sure confidence of victory which your valor, self-sacrifice and discipline will bring.

"The enemy whom you prepare to fight is seasoned and worthy of you. He is favored by the ground and by scientific preparation. He will offer ob-

Shepherd Has Gone To The Italian Frontier

By WILLIAM G. SHEPHERD.

Chiasso, Switzerland (on the Italian frontier), May 27.—Chiasso today is the busiest town of 4,000 in the world. For 48 hours hundreds of tourists have been flocking in—all bent on one mission. They hope to work their way northward along the border and see the expected Alpine clash between the Italian and Austrian armies.

It reminds you of the old days along the Rio Grande when the elite of El Paso crowded the river's edge to watch the Mexican factions shoot Juarez to pieces. But instead of El Paso policemen and soldiers from Fort Bliss to shoo back the crowds, the sturdy Swiss militiamen are on the job along the Swiss frontier. Their double business is to keep Italian and Austrian fighters from stepping over on Swiss soil and to keep spectators off the stage.

The crowds came by train, by automobile, on bicyles and in curious little carts. They included, of course, some correspondents, hot from the French and English battle fronts, who wanted to see what this new kind of a battle with different opponents would look like.

Refugees are flocking in daily—German and Austrian refugees from Italy and Italian refugees from Germany and Austria. Most of them bring wild tales of border battles and hairbreadth escapes from revengeful mobs. To date actual battle business has been poor along the Swiss frontier.

by a custom house guard, who killed an Austrian about to explode a mine at Cormons, it was announced today.

ITALY HOLDS CONSULS

Action Due To Detention By Austrians Of Six Italians.

Berlin, via The Hague, May 27.—The Italian police at Piacenza are holding six Austrian Consuls who were en route to the Austrian frontier, according to Vienna dispatches today.

The Piacenza authorities declare they seized the Austrian Consuls because the same number of Italian Consular representatives have been detained by Austria. Austria has officially denied this allegation.

Turkish Submarine Under Allied Fleet

Craft That Sank British Battleship Triumph Steamed Beneath Warships—About 500 Saved.

London, May 27.—The Turkish submarine which sank the British battleship Triumph in the Gulf of Saros off the northern shores of the Gallipoli Peninsula passed underneath the Anglo-French fleet in the Dardanelles when she steamed out to make the attack. The submarine steamed from a Turkish base between the Dardanelles Narrows and

COMMANDER SYMINGTON IS A BALTIMOREAN

Commander Symington, the United States naval attache at London, was appointed to duty at the embassy about three years ago. His commission to that post will expire in the fall, at which time he is expected to return to Baltimore.

He is 42 years old and was born in this city. In 1890 he graduated from the Naval Academy at Annapolis. In August, 1911, he was "commanded" by President Taft to assume the duties of skipper of the official Presidential yacht, the Mayflower. Previous to that, for a year or more, he had been on duty in the office of naval intelligence at Washington. His appointment as captain of the President's yacht relieved Commander George W. Logan, who relieved Commander Coontz as commandant of cadets at the Naval Academy.

Commander Symington has six brothers in this city—Thomas H. William Stuart, John Fife of S., Donald L. and Charles J. Symington—and one sister—Mrs. Lelia Symington Goode, of Guilford.

U. S. BATTLESHIPS DAMAGED

Georgia And Nebraska Come Together In Gale Off Newport.

Newport, May 27.—During the northwest gale last night the collier Cyclops dragged her moorings 20 fathoms, striking the battleship Virginia with such force as to loosen several plates on the collier. The battleship Georgia, to which the collier Orient was tied, dragged her anchors and struck the battleship Nebraska, ripping off her bridge and sinking her motor launch. The reported loss of life is now denied.

Mason Analyzes The New British Cabinet

By J. W. T. MASON.

New York, May 27, 11 A. M.—The formation of the coalition British Ministry is advantageous to the empire chiefly because it has broken the absolutist powers of Lord Kitchener. Hereafter the Minister for War will have no authority over the supply of munitions. David Lloyd-George, who has been transferred from the post of Chancellor of the Exchequer and is now the first Minister of Munitions, has become the most important member of the Government. To increase the ammunition supply is the chief creative work the Government has to do. The problem undid Kitchener's reputation as an organizer, and now a Democratic civilian comes forth to the task where the militarist and dictator failed.

If Lloyd-George succeeds at his new post, democracy will have won a great victory. The Minister of Munitions is the only democrat, as America knows the word, in the British Government. He has sprung from the people and is the people's spokesman and champion. He represents the highest type which the common people of Great Britain have yet reached. For Lloyd-George to fail now would mean British democracy had been unable to rise to the opportunity offered it. If Lloyd-George succeeds, his success will be democracy's own.

It is perhaps the most significant fact of the war that at this critical time in England's history she has appealed to a man of the people to come to her rescue. In the new coalition Cabinet are aristocrats, laborites, philosophers, members of the upper class, members of the middle class, members of the legal class, nonconformists, Unionists, militarists and one man who is above everything else the representative of democracy. To this man has been given the work of righting the ghastly errors of the past when the nation withheld ammunition from its field army and the Government refused to hearken to the artillery lessons of the war.

The chief executive burden of the war thus has passed from the militarists to the shoulders of democracy, and democracy is now, in reality, and for the first time, responsible for England's accomplishments in the war. This is the principal fact in the reconstruction of the Cabinet. Apart from Lloyd-George's appointment to the new Ministry of Munitions, the military consequences of the coalition Cabinet will be negligible. Mr. Balfour, the new First Lord of the Admiralty, has been assisting Winston Churchill from the outbreak of the war, and as a member of the committee of Imperial defense he has

Uncertainty May Make Attack On U. S. Ship An Unsolvable Mystery.

BALTIMOREAN TO DIRECT PROBE UPON ARRIVAL AT LIVERPOOL

London, May 27.—Two more steamships have fallen victims of German submarines.

The Danish steamer Betty, carrying a cargo of grain from Baltimore to Copenhagen, was torpedoed in the North Sea yesterday.

The British steamship Morwenna, of Montreal, was torpedoed off St. Anne's Head. After firing a torpedo at the ship's side the German submarine opened fire upon her, shelling the steamer for several minutes. One of her crew was killed and three wounded by shell fire. The remainder of the crew escaped in boats and after drifting for several hours were picked up by a Belgian trawler.

All of the crew of the Danish steamer were rescued and landed at Newcastle.

Liverpool, May 27.—The Nebraskan is scheduled to arrive in port at 9 o'clock tonight. Great crowds are awaiting the arrival of the American ship. Among the experts who will examine the hull of the Nebraskan are Lieutenant Towers and Naval Constructor McBride, attaches of the American Embassy in London.

Washington, May 27.—The State Department today received from Consul-General Skinner, London, the following:

"Greene, master of the American steamer Nebraskan, in wireless to me via Land's End, reports:

" 'Nebraskan passed Fastnet Rock Tuesday 4.33 P. M., from Liverpool, bound to Delaware Breakwater, in ballast.

" 'At 8.24 P. M., when the steamer was 48 miles west half south from Fastnet, she experienced a violent shock, followed instantly by a terrific explosion, bursting hatches and throwing hatch beam, cargo derrick and twisted iron into air and filling lower hold, forward, completely with water.

" 'Crew took to boats immediately. After standing by ship one hour they returned on board and started for Liverpool at 10.30 P. M.

" 'About 1.25 A. M. met two vessels sent by British Admiralty in answer to wireless call, and one has been in attendance ever since.

" 'It was dusk when explosion occurred.

" '*Flag had been hauled down five minutes before.*

" 'Steamer's name painted on both sides of ship in letters six feet tall.

" 'Had no warning and saw nothing.' "

To Administration officials this was the most significant sentence in the report.

It was taken as disclosing an uncertainty which promised to make the incident an unsolvable mystery.

If the ship was torpedoed by a submarine, it was agreed that the attack was an act of war. Officials admitted as much after examining precedents.

The United States had addressed a sharp note to Germany, it was pointed out, protesting against submarine warfare and flatly warning the Kaiser that we "could not be expected to do less than to use all of our powers" to protect Americans. If, with this note before his Government, a German submarine commander fired a torpedo at the Nebraskan, it was held that his act was one of belligerency and a direct assault upon the honor of the United States.

It was considered that, as yet, however, there was no evidence that this happened.

Green said frankly that he did not know whether a mine or a torpedo damaged his vessel. He and his men saw nothing, though for an hour after the explosion they floated in their boats on the open sea about the Nebraskan.

Hopeful It Was A Mine.

This was one of the principal reasons why officials were hopeful today that, despite the British Admiralty's declaration, it was a mine the American ship struck.

Realizing the extreme seriousness of the situation, the President has decided there will be no jumping at conclusions; the Admiralty's claim that Germans attacked the ship will not be accepted without proof.

The President is handling the case personally. All reports from the State Department's representatives abroad are sent direct to his study. Copies go to the other responsible officials. By the Presi-

dash will certainly defeat him.

On Sacred Natural Bounds.

"Soldiers, yours is the glory of hoisting the tricolor of Italy upon the sacred bounds which nature places as the confines of our country. Yours the glory of achieving the work undertaken with so much heroism by our fathers."

The offensive campaign of the Italian armies has opened auspiciously, but the Austrians, withdrawing slowly to their first line of trenches, are yet to strike their first blow. Their preparations are known to be complete, however, and even those most confident of the ultimate victory of the Italian forces admit that they will win only after desperate fighting.

900,000 In Opposing Armies.

It is, of course, impossible to state the strength of the Italian armies, but it is understood at the Italian War Office that the Austrian and German forces concentrated along the line where they will oppose the Italian campaign number about 900,000 men. Most of them are seasoned veterans from the western and eastern theatres of war.

First Shot By Customs Guard.

Rome, May 27.—The first shot in the Italian invasion of Austria was fired

the Sea of Marmora, which made it necessary for the underwater craft to make her way beneath the French and British warships, which are bombarding the Turkish forts on the Dardanelles and the Turkish land positions on the peninsula.

It is said unofficially that about 500 of the men on the Triumph were saved. The battleship carried a crew of about 700.

The battleship was struck in a vital part and sank in less than 10 minutes, which makes the saving of a majority of her crew an outstanding feature of the operation.

MAY WHEAT TUMBLES

Persistent Selling Sends Price Down To $1.44¼.

Chicago, May 27.—Persistent selling of May wheat by commission houses forced values in that market down until at 12.30 offerings were made at $1.44¼, a decline of 5¾ from the opening. At one time during the morning May wheat was 13 cents under the high mark of yesterday.

been one of the closest advisers of Premier Asquith. His appointment as Mr. Churchill's successor will probably not be followed by any important changes at the Admiralty.

"The other changes are chiefly serviceable as giving the country confidence that everything possible is being done to conclude the war successfully. From the standpoint of party politics the reconstruction of the Cabinet is of prime importance to the Liberals. It will not be impossible to create an impression among the voters that any one party is responsible if the war ends without all of Great Britain's intentions being realized.

GERMANY CALLS RESERVES

All Of Untrained Landsturm Over 35 Summoned To Colors.

Amsterdam, May 27.—Germany has called all her untrained landsturm over 35 years into active service, according to Berlin advices today. Italy's entrance into the war is said to have necessitated this step.

dent's order there is to be no discussion of intended action until all facts are known.

Commander Symington Goes To Liverpool For Inquiry

London, May 27.—American Ambassador Walter H. Page today sent Commander Powers Symington, naval attache of the United States Embassy, to Liverpool to make a thorough examination of the American steamship Nebraskan to determine whether or not she had been torpedoed by a submarine. Commander Symington was also instructed to receive the report of Capt. J. S. Greene of the steamer Nebraskan, which will be transmitted to the State Department at Washington by Ambassador Page.

The Nebraskan carried her name and home port, New York, in enormous white letters painted on both sides of her hull so that she would not be mistaken for a British merchantship by the commanders of German submarines, which are constantly prowling through British waters on all sides of the British Isles.

[HN0066][GDrive]

1915 (Dec 16)

[HN0067][GDrive]

1915-12-16-the-baltimore-sun-pg-5-clip-symington-lusitania

MAY GIVE NEW LUSITANIA DATA

Commander Symington Here On Way To Report At Capital.

Commander Powers Symington, U. S. N., naval attache at London and brother of W. Stuart Symington, Jr., was in Baltimore yesterday on his way to Washington with important information that is supposed to have a bearing on the sinking of the Lusitania by a German submarine several months ago.

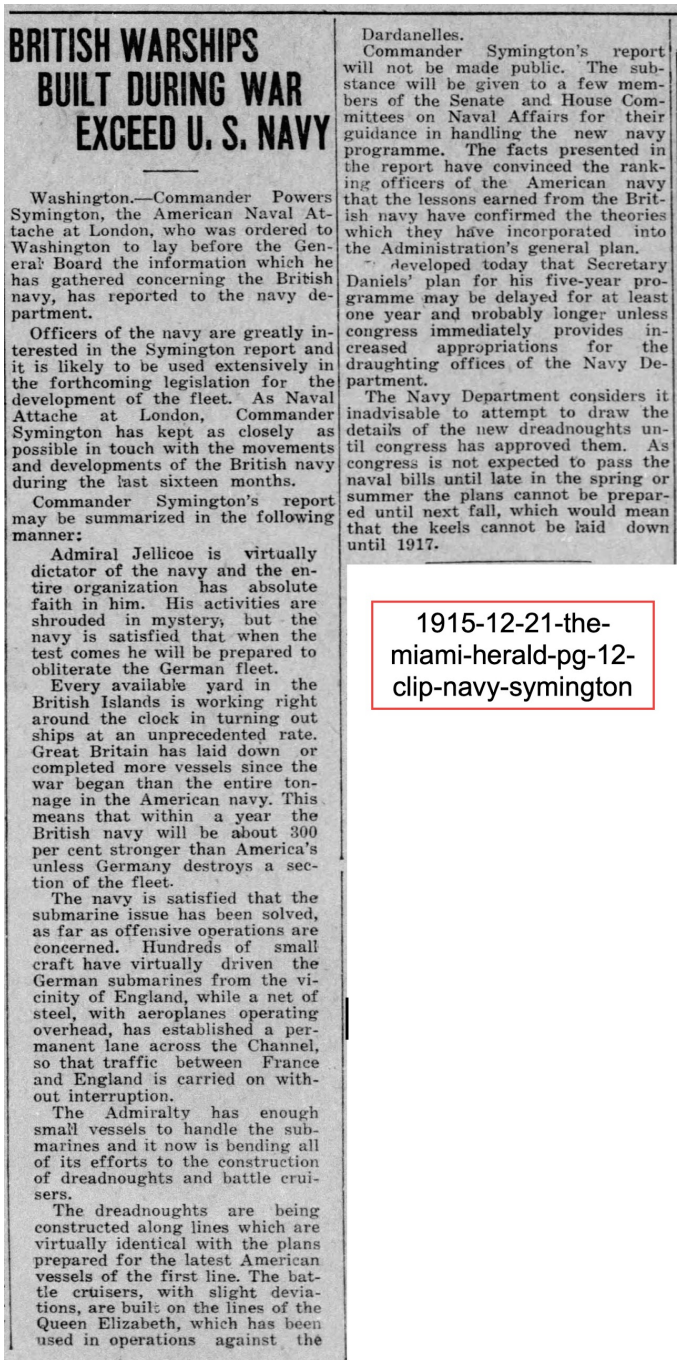
Commander Symington's home is in Baltimore and he spent some time with relatives here. He went to Washington last evening. His information is said to be of a confidential nature, and he therefore declined to discuss his mission. The Commander interviewed survivors of the Lusitania disaster and got first-hand information for his Government. This, it is said, he is to submit to officials at Washington today.

Commander Symington has been on duty in London since the outbreak of the European war. It is believed he has much information bearing on the war that is to be made the subject of a verbal and personal report.

[HN0068][GDrive]

1915 (Dec 21)

[HN0069][GDrive]



BRITISH WARSHIPS BUILT DURING WAR EXCEED U. S. NAVY

Washington.—Commander Powers Symington, the American Naval Attache at London, who was ordered to Washington to lay before the General Board the information which he has gathered concerning the British navy, has reported to the navy department.

Officers of the navy are greatly interested in the Symington report and it is likely to be used extensively in the forthcoming legislation for the development of the fleet. As Naval Attache at London, Commander Symington has kept as closely as possible in touch with the movements and developments of the British navy during the last sixteen months.

Commander Symington's report may be summarized in the following manner:

Admiral Jellicoe is virtually dictator of the navy and the entire organization has absolute faith in him. His activities are shrouded in mystery, but the navy is satisfied that when the test comes he will be prepared to obliterate the German fleet.

Every available yard in the British Islands is working right around the clock in turning out ships at an unprecedented rate. Great Britain has laid down or completed more vessels since the war began than the entire tonnage in the American navy. This means that within a year the British navy will be about 300 per cent stronger than America's unless Germany destroys a section of the fleet.

The navy is satisfied that the submarine issue has been solved, as far as offensive operations are concerned. Hundreds of small craft have virtually driven the German submarines from the vicinity of England, while a net of steel, with aeroplanes operating overhead, has established a permanent lane across the Channel, so that traffic between France and England is carried on without interruption.

The Admiralty has enough small vessels to handle the submarines and it now is bending all of its efforts to the construction of dreadnoughts and battle cruisers.

The dreadnoughts are being constructed along lines which are virtually identical with the plans prepared for the latest American vessels of the first line. The battle cruisers, with slight deviations, are built on the lines of the Queen Elizabeth, which has been used in operations against the Dardanelles.

Commander Symington's report will not be made public. The substance will be given to a few members of the Senate and House Committees on Naval Affairs for their guidance in handling the new navy programme. The facts presented in the report have convinced the ranking officers of the American navy that the lessons earned from the British navy have confirmed the theories which they have incorporated into the Administration's general plan.

It developed today that Secretary Daniels' plan for his five-year programme may be delayed for at least one year and probably longer unless congress immediately provides increased appropriations for the draughting offices of the Navy Department.

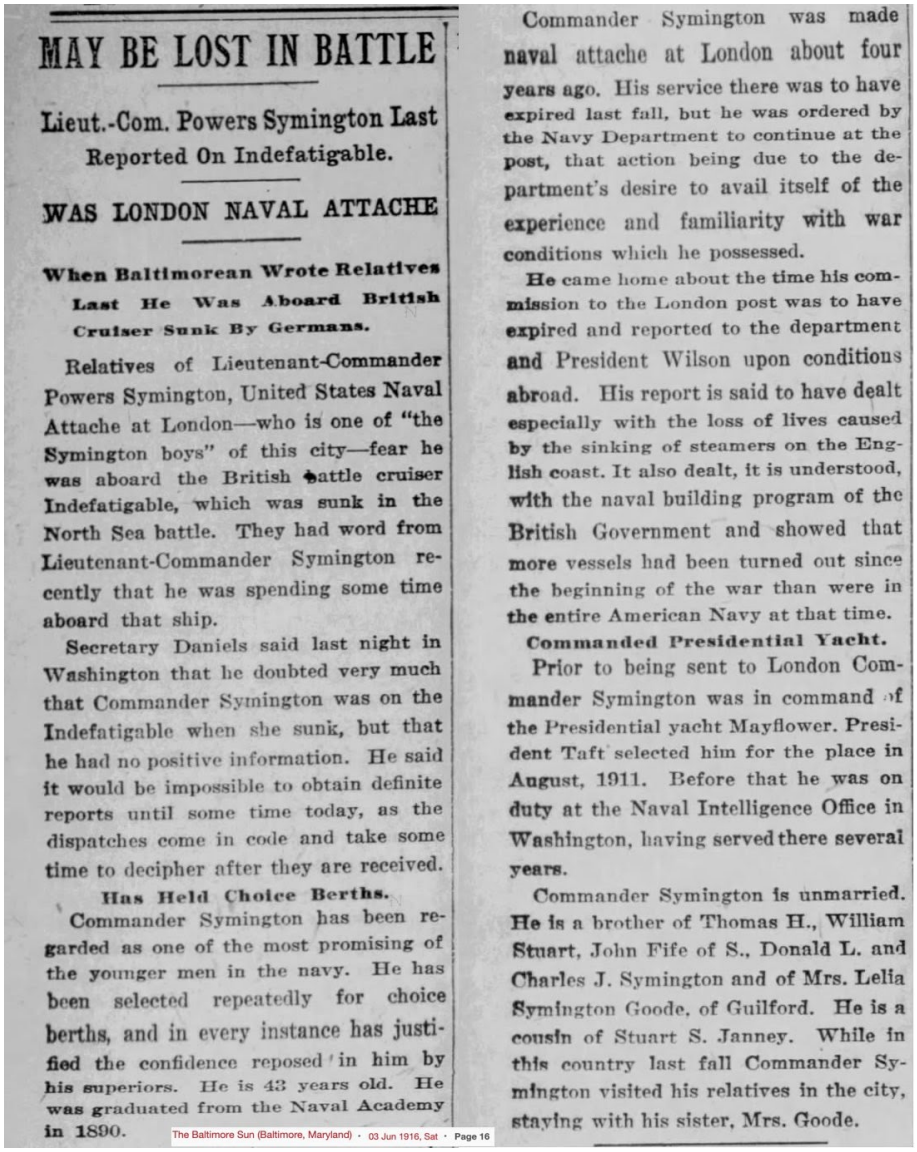
The Navy Department considers it inadvisable to attempt to draw the details of the new dreadnoughts until congress has approved them. As congress is not expected to pass the naval bills until late in the spring or summer the plans cannot be prepared until next fall, which would mean that the keels cannot be laid down until 1917.

1915-12-21-the-miami-herald-pg-12-clip-navy-symington

[HN006A][GDrive]

1916 (June) - Powers Symington - Fear that he was lost in battle

Full page : [HN004V][GDrive]



MAY BE LOST IN BATTLE

Lieut.-Com. Powers Symington Last Reported On Indefatigable.

WAS LONDON NAVAL ATTACHE

When Baltimorean Wrote Relatives Last He Was Aboard British Cruiser Sunk By Germans.

Relatives of Lieutenant-Commander Powers Symington, United States Naval Attache at London—who is one of "the Symington boys" of this city—fear he was aboard the British battle cruiser Indefatigable, which was sunk in the North Sea battle. They had word from Lieutenant-Commander Symington recently that he was spending some time aboard that ship.

Secretary Daniels said last night in Washington that he doubted very much that Commander Symington was on the Indefatigable when she sunk, but that he had no positive information. He said it would be impossible to obtain definite reports until some time today, as the dispatches come in code and take some time to decipher after they are received.

Has Held Choice Berths.

Commander Symington has been regarded as one of the most promising of the younger men in the navy. He has been selected repeatedly for choice berths, and in every instance has justified the confidence reposed in him by his superiors. He is 43 years old. He was graduated from the Naval Academy in 1890.

Commander Symington was made naval attache at London about four years ago. His service there was to have expired last fall, but he was ordered by the Navy Department to continue at the post, that action being due to the department's desire to avail itself of the experience and familiarity with war conditions which he possessed.

He came home about the time his commission to the London post was to have expired and reported to the department and President Wilson upon conditions abroad. His report is said to have dealt especially with the loss of lives caused by the sinking of steamers on the English coast. It also dealt, it is understood, with the naval building program of the British Government and showed that more vessels had been turned out since the beginning of the war than were in the entire American Navy at that time.

Commanded Presidential Yacht.

Prior to being sent to London Commander Symington was in command of the Presidential yacht Mayflower. President Taft selected him for the place in August, 1911. Before that he was on duty at the Naval Intelligence Office in Washington, having served there several years.

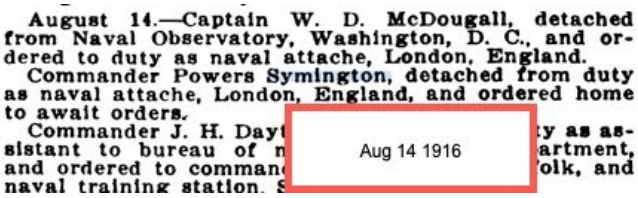
Commander Symington is unmarried. He is a brother of Thomas H., William Stuart, John Fife of S., Donald L. and Charles J. Symington and of Mrs. Lelia Symington Goode, of Guilford. He is a cousin of Stuart S. Janney. While in this country last fall Commander Symington visited his relatives in the city, staying with his sister, Mrs. Goode.

The Baltimore Sun (Baltimore, Maryland) · 03 Jun 1916, Sat · Page 16

[HN004W][GDrive]

1916 (Aug - Dec)

Source of all the following : [HP000A][GDrive]



August 14.—Captain W. D. McDougall, detached from Naval Observatory, Washington, D. C., and ordered to duty as naval attache, London, England.
Commander Powers Symington, detached from duty as naval attache, London, England, and ordered home to await orders.
Commander J. H. Dayt[illegible] as assistant to bureau of n[illegible]artment, and ordered to comman[illegible]olk, and naval training station, S[illegible]

Aug 14 1916

[HP000B][GDrive]

New Allowance for Naval Officers.

A decision of importance to naval officers is that reached by Acting Secretary Roosevelt this week by his approval of the recommendation of bureau chiefs and the commander-in-chief of the Atlantic fleet that blankets, sheets, pillow cases, and bed spreads be provided for the use of commissioned and warrant officers on board ship, to be carried on the allowance lists as equipage, title B, and charged to the appropriation "Construction and Repair;" that napkins and towels for commissioned and warrant officers on board ship be added to the allowance lists as equipage under title B and charged to the appropriation "Maintenance, Supplies and Accounts," and that hammock mattresses be supplied to the crews of vessels and to enlisted men of the Navy on shore, these mattresses to be accounted for in like manner as are hammocks. Upon transferring men, hammocks and mattresses will be retained on board ship or at the station, thus reducing the amount of baggage to be handled. The allowance lists now provide napkins as a part of the mess outfit for all officers' messes on board ship. The allowance of other articles will be ten hand towels, ten bath towels, four sheets, two pillow cases, one double blanket, and two spreads. The enlisted men now in the service own their own hammock mattresses. It is not the intention to replace these mattresses, but it is proposed to provide a hammock mattress for all men enlisted after a certain date. This suggestion regarding allowances to officers came from Commander Powers Symington, U. S. Navy, on duty as naval attache at London, who wrote to the Navy Department pointing out the desirability of furnishing all officers with blankets and linen, saying: "I have found it very convenient in going from ship to ship in the British navy not to have to carry an extra trunk full of blankets, sheets, pillow cases, napkins, bedspreads, and towels, as these articles are supplied to the ship by the Admiralty. I am convinced that this would be a great convenience to officers when transferred and would save probably one trunk for every officer in the Navy." The proposition was heartily approved by the bureau chiefs and by Admiral Mayo. The surgeon general remarked that while it would seem at first that the use of a mattress by different individuals would be unhygienic, it was a practice at all hospitals, hotels, etc., to use the same mattress for different individuals without even a mattress cover. He added: "It is believed that the use of the mattress cover will largely eliminate the chances of soiling the mattress itself. Furthermore, on the more modern ships disinfectors are being installed as well as on board the hospital ship. There are also disinfecting plants at all the large naval hospitals, at the training stations, and at some of the navy yards, but the disinfection of a mattress is not considered necessary unless it has been exposed to contagion or infection."

Sep 23 1916

—o—

[HP000C][GDrive]

THE NAVY

Secretary of the Navy—Josephus Daniels.

Assistant Secretary of the Navy—Franklin D. Roosevelt.

THE NAVY GAZETTE.

November 23.—Ensigns J. R. Redman, R. W. Christie and R. O. Davis, detached from the Montana and ordered to the Fulton.

Gunner E. J. McCluen, ordered to treatment at naval hospital, Philadelphia, Pa.

Gunner H. W. Stratton, detached from the Montana and ordered to duty in connection with fitting out the Idaho and to duty on board that vessel when placed in commission.

November 24.—Commander P. Symington, detached from office of naval intelligence, Navy Department, and ordered to command the Tacoma December 16.

Lieutenant C. J. Parrish, detached from the Yankton and ordered to the Montana December 1.

Lieutenant A. W. Loder, detached from the Prairie and ordered to the Montana December 1.

Ensign B. T. Hunt, detached from the Salem and ordered to the Yankton.

Passed Assistant Surgeon P. R. Stalnaker, ordered to naval training station, Newport, R. I.

Passed Assistant Surgeon G. E. Robertson, detached from the Memphis and ordered to the Arkansas December 22.

Assistant Surgeon C. H. Weaver, detached from the Arkansas and ordered to the Paducah.

Acting Assistant Dental Surgeon J. R. Barber, detached from receiving ship, Norfolk, Va., December 1 and ordered to the Connecticut.

Chief Pay Clerk F. Scherberger, detached from the South Carolina and ordered to the Florida.

Pay Clerk W. E. Lund, detached from the Florida and ordered home to wait orders.

Acting Pay Clerk H. Atwood, detached from the New Jersey and ordered to the South Carolina.

Nov 23 1916

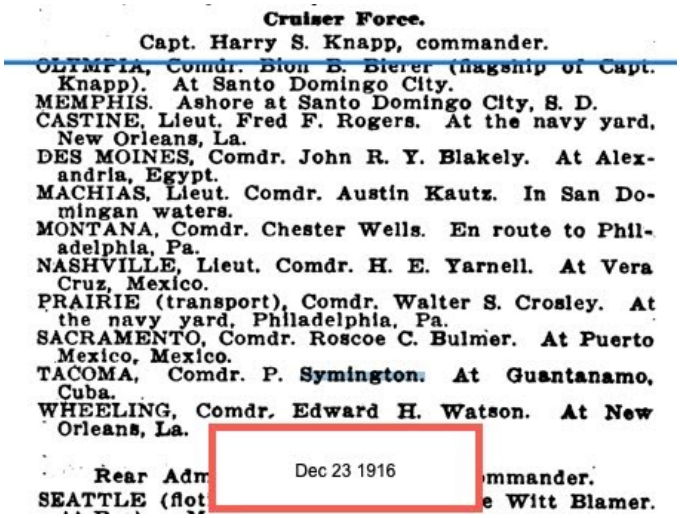
[HP000D][GDrive]

—Commander Powers Symington, U. S. N., has arrived in this country from London, where he has been for several years as naval attache to the American embassy.

—The military l[illegible] John H. Beacom has been pre[illegible]r, Judge Bea[illegible]

Dec 9 1916

[HP000E][GDrive]



Cruiser Force.

Capt. Harry S. Knapp, commander.

OLYMPIA, Comdr. Bion B. Bierer (flagship of Capt. Knapp). At Santo Domingo City.
MEMPHIS. Ashore at Santo Domingo City, S. D.
CASTINE, Lieut. Fred F. Rogers. At the navy yard, New Orleans, La.
DES MOINES, Comdr. John R. Y. Blakely. At Alexandria, Egypt.
MACHIAS, Lieut. Comdr. Austin Kautz. In San Domingan waters.
MONTANA, Comdr. Chester Wells. En route to Philadelphia, Pa.
NASHVILLE, Lieut. Comdr. H. E. Yarnell. At Vera Cruz, Mexico.
PRAIRIE (transport), Comdr. Walter S. Crosley. At the navy yard, Philadelphia, Pa.
SACRAMENTO, Comdr. Roscoe C. Bulmer. At Puerto Mexico, Mexico.
TACOMA, Comdr. P. Symington. At Guantanamo, Cuba.
WHEELING, Comdr. Edward H. Watson. At New Orleans, La.

Rear Adm[illegible] ommander.
SEATTLE (flot[illegible] e Witt Blamer.

Dec 23 1916

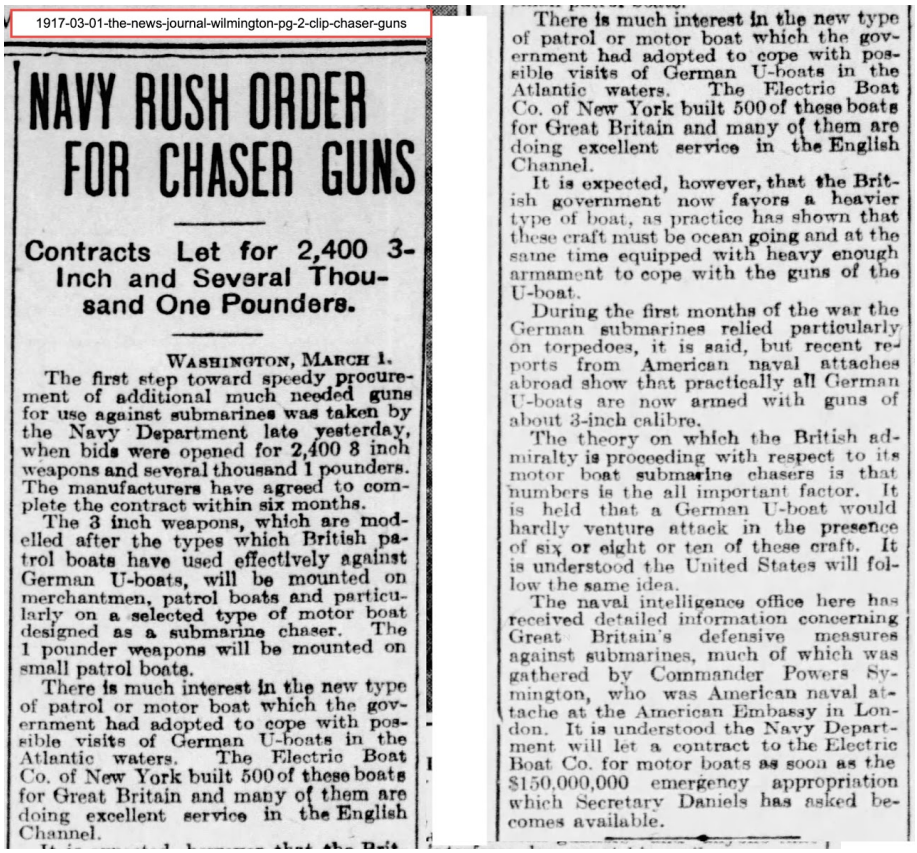
[HP000F][GDrive]

1916 - at royal event, Wintston Churchill present

https://books.googleusercontent.com/books/content?req=AKW5QadFO5ZLwv0HPgSwDp2bVWCojTgLotxOvNi8tWGuQPCYFmv3nhgAMvMXKaUqfuAze8SLDHmBWc5kHXxoigBQgv-yn_W3t_qGWX1Vu-4V9cUpRvXGWIkke8jTkxs0TwemJJVxo7Sm9iwddTPKg8SwTp5If6DhPtw-Lv4_QsTcqKy6kGCoRykphoQgT2JrdLKgGzNSUqC5x8Eo49K2UclcEF6W-XqSj1DhfzYcm5H8oresIsC6B-Wvi4fDq5eEyVI0rrWlGzt7

1917 (Mar 1)

[HN006D][GDrive]



1917-03-01-the-news-journal-wilmington-pg-2-clip-chaser-guns

NAVY RUSH ORDER FOR CHASER GUNS

Contracts Let for 2,400 3-Inch and Several Thousand One Pounders.

WASHINGTON, MARCH 1.

The first step toward speedy procurement of additional much needed guns for use against submarines was taken by the Navy Department late yesterday, when bids were opened for 2,400 3 inch weapons and several thousand 1 pounders. The manufacturers have agreed to complete the contract within six months.

The 3 inch weapons, which are modelled after the types which British patrol boats have used effectively against German U-boats, will be mounted on merchantmen, patrol boats and particularly on a selected type of motor boat designed as a submarine chaser. The 1 pounder weapons will be mounted on small patrol boats.

There is much interest in the new type of patrol or motor boat which the government had adopted to cope with possible visits of German U-boats in the Atlantic waters. The Electric Boat Co. of New York built 500 of these boats for Great Britain and many of them are doing excellent service in the English Channel.

There is much interest in the new type of patrol or motor boat which the government had adopted to cope with possible visits of German U-boats in the Atlantic waters. The Electric Boat Co. of New York built 500 of these boats for Great Britain and many of them are doing excellent service in the English Channel.

It is expected, however, that the British government now favors a heavier type of boat, as practice has shown that these craft must be ocean going and at the same time equipped with heavy enough armament to cope with the guns of the U-boat.

During the first months of the war the German submarines relied particularly on torpedoes, it is said, but recent reports from American naval attaches abroad show that practically all German U-boats are now armed with guns of about 3-inch calibre.

The theory on which the British admiralty is proceeding with respect to its motor boat submarine chasers is that numbers is the all important factor. It is held that a German U-boat would hardly venture attack in the presence of six or eight or ten of these craft. It is understood the United States will follow the same idea.

The naval intelligence office here has received detailed information concerning Great Britain's defensive measures against submarines, much of which was gathered by Commander Powers Symington, who was American naval attache at the American Embassy in London. It is understood the Navy Department will let a contract to the Electric Boat Co. for motor boats as soon as the $150,000,000 emergency appropriation which Secretary Daniels has asked becomes available.

[HN006E][GDrive]

1917 (Dec 12) - Powers Symington - Part of response team to Halifax, Nova Scotia explosion

2017 thesis paper from Northwestern University - See [HE0002][GDrive]

1917 (Mar 29)

[HN006B][GDrive]

1917-03-29-the-los-angeles-times-pg-4-clip-officer-obscurity

Sidetracked.

WARFARE OBSERVERS SENT TO OBSCURITY.

OFFICERS HOME FROM ABROAD GET REMOTE BILLETS.

Department Assigns Army Men Back from Foreign Front to Posts Far from Present Activity. Unusual Course Arouses Criticism as Causing Loss of Efficiency.

[BY DIRECT WIRE—EXCLUSIVE DISPATCH.]

WASHINGTON, March 28. — Lieut.-Col. Spencer Cosby, Engineer Corps, U.S.A., recently returned from France, where he absorbed valuable information relating to modern warfare, has been sent by the War Department to Milwaukee to superintend the building of a bridge.

Capt. Powers Symington, U.S.N., recently returned from London, where he had opportunity to familiarize himself with the most powerful navy in the world, has been sent to command the cruiser Tacoma, a ship unfit for real warfare.

The assignment of these military men to obscure duty on the eve of the war, thus placing them where their experiences in the European conflict can be of no value to the army and navy of the United States, has given rise to criticism.

When attention had been called to these instances of shunting away from headquarters men whose information at such a time could be used to advantage by the War and Navy departments, investigation revealed that they are not the only American military observers in Europe who came home only to be ordered far away from headquarters. Here are a few other instances: Lieut. John G. Quekemeyer, observer at French and English fronts, now with Seventh Cavalry at Fort Bliss, Tex.

Maj. Samuel D. Rockenbach, observer of the efficiency of the German fighting machine, now discussing it with his comrades on the Mexican border in the vicinity of Laredo.

Lieut.-Col. George T. Langhorne, after service as military attache at Berlin, recalled and sent to Fort Bliss to think it over.

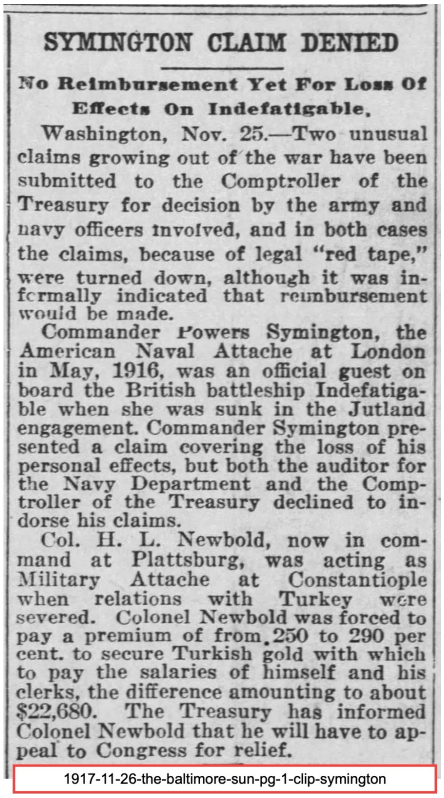
Maj. J. K. Miller, who studied modern warfare on French and English fronts, now applying his knowledge of trench fighting to the Canal Zone guards.

Department officials insist that these men will be assigned to duty when the proper time arrives, but so far, having encountered opposition in the department in the present administration, their names have been overlooked, despite the woeful shortage of officers.

[HN006C][GDrive]

1917 (Nov 26) - He sued? omg

[HN006F][GDrive]



SYMINGTON CLAIM DENIED

No Reimbursement Yet For Loss Of Effects On Indefatigable.

Washington, Nov. 25.—Two unusual claims growing out of the war have been submitted to the Comptroller of the Treasury for decision by the army and navy officers involved, and in both cases the claims, because of legal "red tape," were turned down, although it was informally indicated that reimbursement would be made.

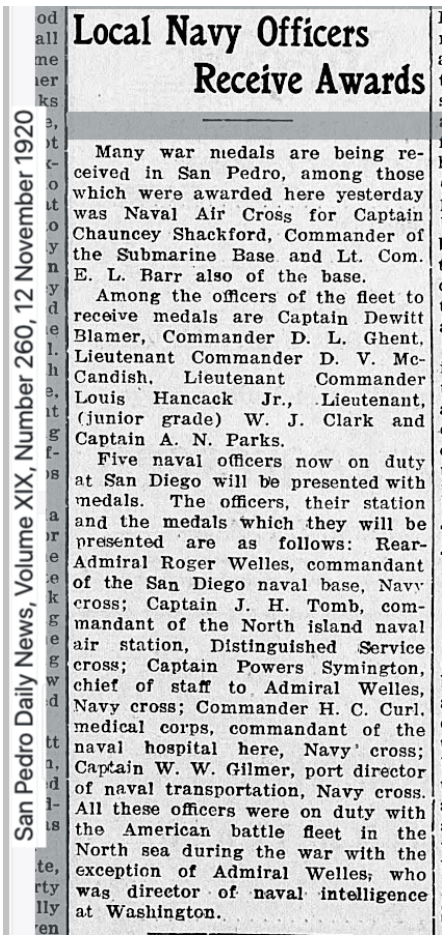
Commander Powers Symington, the American Naval Attache at London in May, 1916, was an official guest on board the British battleship Indefatigable when she was sunk in the Jutland engagement. Commander Symington presented a claim covering the loss of his personal effects, but both the auditor for the Navy Department and the Comptroller of the Treasury declined to indorse his claims.

Col. H. L. Newbold, now in command at Plattsburg, was acting as Military Attache at Constantiople when relations with Turkey were severed. Colonel Newbold was forced to pay a premium of from 250 to 290 per cent. to secure Turkish gold with which to pay the salaries of himself and his clerks, the difference amounting to about $22,680. The Treasury has informed Colonel Newbold that he will have to appeal to Congress for relief.

1917-11-26-the-baltimore-sun-pg-1-clip-symington

[HN006G][GDrive]

1920 (Nov 12)



San Pedro Daily News, Volume XIX, Number 260, 12 November 1920

Local Navy Officers Receive Awards

Many war medals are being received in San Pedro, among those which were awarded here yesterday was Naval Air Cross for Captain Chauncey Shackford, Commander of the Submarine Base and Lt. Com. E. L. Barr also of the base.

Among the officers of the fleet to receive medals are Captain Dewitt Blamer, Commander D. L. Ghent, Lieutenant Commander D. V. McCandish, Lieutenant Commander Louis Hancack Jr., Lieutenant, (junior grade) W. J. Clark and Captain A. N. Parks.

Five naval officers now on duty at San Diego will be presented with medals. The officers, their station and the medals which they will be presented are as follows: Rear-Admiral Roger Welles, commandant of the San Diego naval base, Navy cross; Captain J. H. Tomb, commandant of the North island naval air station, Distinguished Service cross; Captain Powers Symington, chief of staff to Admiral Welles, Navy cross; Commander H. C. Curl, medical corps, commandant of the naval hospital here, Navy cross; Captain W. W. Gilmer, port director of naval transportation, Navy cross. All these officers were on duty with the American battle fleet in the North sea during the war with the exception of Admiral Welles, who was director of naval intelligence at Washington.

[HN004X][GDrive]

1921 - golf /seaplane

[HN006P][GDrive]

1921-07-10-oakland-tribune-pg-6-x-clip-seaplane-symington

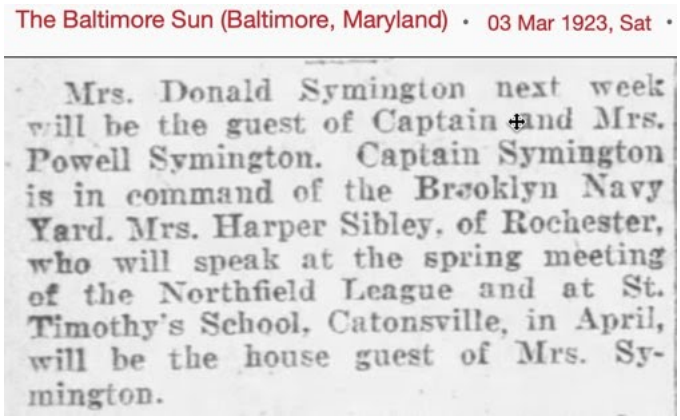
Navy Captain Goes to Links in An Airplane

Captain Powers Symington, U. S. N., of the battleship Mississippi, may be said to enjoy golf playing de luxe, for he comes and goes to the links in an air or aquaplane, as the case may be. While lying in San Francisco bay with his ship, the captain would order his air machine and proceed to the links. A wireless call would bring the pilot back and return with the captain to his ship.

[HN006Q][GDrive]

1923 (March 23) - captain powell symington - Brooklyn navy yard

[HN006H][GDrive]


The Baltimore Sun (Baltimore, Maryland) · 03 Mar 1923, Sat ·

Mrs. Donald Symington next week will be the guest of Captain and Mrs. Powell Symington. Captain Symington is in command of the Brooklyn Navy Yard. Mrs. Harper Sibley, of Rochester, who will speak at the spring meeting of the Northfield League and at St. Timothy's School, Catonsville, in April, will be the house guest of Mrs. Symington.

[HN006I][GDrive]

1934 (March 30)

[HN006N][GDrive]

CWA POST QUIT BY SYMINGTON

Captain Powers Symington, county director of the Civil Works Administration, resigned that position yesterday as the State Emergency Relief Administration made ready to take over the Federal employment program. The resignation, effective tomorrow, was accepted by Captain Edward Macauley, State CWA director.

Symington's resignation was not unexpected, in view of the refusal of Captain Macauley to accept appointment as head of the Works Division of the SERA. Symington, close friend of Macauley, accepted the post with the Federal agency only at Macauley's insistent urging.

As Symington withdrew from the CWA directorship, complete demobilization of CWA workers, except those in clerical departments, was accomplished in the State. More than 75,000 workers were dropped from the rolls, including 8,000 in San Francisco.

R. C. Branion, head of the SERA, announced that H. V. Grant, assistant to Symington, will take over his former chief's duties under the new plan. In Alameda County, Chester R. Hunt will be replaced by F. M. Holly. Under the SERA, the county directors will be known as construction managers, and their duties will be considerably curtailed, Branion said.

Branion estimated that in less than two weeks, the SERA program will be under way and the first contingent of workers will be back on their jobs.

A number of California surveys, undertaken by the CWA, will be carried on by the SERA without interruption, he said.

8,000 CWA Workers Lose Jobs; SERA to Start

The last Civil Works Administration job in California came to a close last night. And some 8,000 workers were warned by R. C. Branion, director of the works department of the State Emergency Relief Administration, that it will be useless for them to attempt to return to work on CWA jobs Monday. Future plans for SERA jobs will be announced before Monday by Branion through the newspapers, he said.

[HN006O][GDrive]

1935 (May 18)

[HN006L][GDrive]

MARIN FLYERS GO TO CAPITAL

SAN RAFAEL, May 17.—Hamilton Field will be depopulated of flyers and mechanics for the next ten days while the 7th headquarters detachment and the 70th service squadron camp at Mather Field, Sacramento, for a period of actual field training. First detachment of eight men under St. Sgt. Hershell Adams left yesterday and today 82 enlisted men commanded by St. Sgt. Francis Monahan left for the capital to set up camp. Thirty bombing planes, one transport ship and some 66 trucks and motorcycles will leave Saturday morning for Sacramento. Col. Clarence L. Tinker will command the training maneuvers.

Funeral services were held today for Joseph W. Glaser Sr., who died at his home in San Anselmo Wednesday night. Glaser, well known San Francisco hardware merchant of years ago and of recent years manager of the San Anselmo offices of the Lang Realty Co., was one of the organizers and the first president of the North Beach Merchants Association. He retired several years ago.

Annual dinner of the San Rafael Chamber of Commerce will be held at the Marin Golf and Country club Tuesday at 7 p. m. An interesting and entertaining program has been arranged. George V. Kaenel, the retiring president, will give a brief review of the achievements of the past year.

Urgent appeal to residents of Marin county to attend the Mountain Play in the natural amphitheater on the south slopes of Mt. Tamalpais Sunday was issued today by Marvelous Marin Inc., which has undertaken sponsorship of the play as one of its major annual activities.

Bay section members of the California Elementary Principals' Association will meet Saturday evening at Hotel Oakland to hear an address by Vierling Kersey, state superintendent of public instruction, on the place of the elementary principals in the state school system.

Lt. Col. Glen I. Jones, M. D., and family arrived today on a transport from Washington, D. C. Col. Jones is reporting for duty at Hamilton Field and will command the station hospital.

A very simple but lovely home wedding will take place Saturday night, May 25, when Miss Betty McLaren becomes the bride of Harold Scott at the McLaren home in Kensington Road, San Anselmo at 8 o'clock.

Sailing with Colonel Henry L. Roosevelt, assistant secretary of the Navy, to Honolulu will be Captain Powers Symington of Kentfield, former naval officer and friend for many years of Colonel Roosevelt.

First ladies' night of the Twenty-Thirty club was held last evening at the Marin Golf and Country club when members of the club entertained their ladies at a dinner meeting.

1935-05-18-santa-rosa-republican-pg-8-clip-symington

[HN006M][GDrive]

1937 (Feb) - sister passes

[HN006J][GDrive]

1937-02-03-the-baltimore-sun-pg-4-clip-goode

MRS. LELIA GOODE, 69, DIES IN HOPKINS

Daughter Of Major And Mrs. W. S. Symington Succumbs To Pneumonia

Organized First Church In Idaho Town When State Was Frontier

Mrs. Lelia Symington Goode, daughter of the late Major and Mrs. W. Stuart Symington and a sister of the late Judge W. Stuart Symington, died at 9 o'clock last night in the Johns Hopkins Hospital. She was 69 years old.

Mrs. Goode's death was unexpected, since she apparently had been on the road to recovery from bronchial pneumonia, which she contracted about two weeks ago.

A native Baltimorean, Mrs. Goode went to Couer d'Alene, Idaho, to live shortly after her marriage to the late John Goode, a Virginian. Mr. Goode was a district attorney in Idaho when that State was regarded as being on the frontier.

Organized First Church

Mrs. Goode organized the first church in the little Idaho town and played a prominent part in the social and church activities while there.

Survivors of Mrs. Goode, who in recent years lived at the Severn Apartments, include a son, Stuart S. Goode, of Los Angeles, Cal.; two daughters, Mrs. R. E. Lee Taylor, of this city, and Mrs. Robert McLean, of Philadelphia.

Four Brothers Survive

She is survived also by four brothers, Capt. Powers Symington, U. S. N. (retired); C. J. Symington, of New York; Donald Symington and Jack Symington, both of Baltimore.

Funeral services will be held at 4 P. M. tomorrow in Emanuel Protestant Episcopal Church. Burial will be in the family plot in Greenmount Cemetery.

[HN006K][GDrive]

1944 - Correspondence between FDR and Captain Powers Symington

http://docs.fdrlibrary.marist.edu/psf/box37/a335m03.html

1944-06-30-fdrlibrary-captain-powers-symington-letter-fdr-to-a335m03

http://docs.fdrlibrary.marist.edu/psf/box37/a335m02.html

1944-07-07-fdrlibrary-letter-fdr-to-captain-powers-symington-a335m02

http://docs.fdrlibrary.marist.edu/psf/box37/a335m07.html

1944-08-18-fdrlibrary-letter-fdr-to-captain-powers-symington-a335m07

M03

PSF Churchill

CAPTAIN POWERS SYMINGTON
834 GROVE STREET
SAN FRANCISCO, CALIFORNIA

June 30 1944

Dear Mr President It occurs to me that you might be at a loss to find a suitable present to give Mr Churchill, a gesture of friendship between the two great men of our time. I am enclosing something that I think will interest you and be acceptable to him.

In 1916 I was as you may remember with the Grand Fleet and a short time before the battle of Jutland I got the Division Commanders of the Fleet to sign these papers as I could have a souvenir of my pleasant association with that great group of British Seamen. A number of them were killed at Jutland and these documents do become unique. I had thought at one time to give them to the Naval Academy Museum but believe now they should right be in Britain, perhaps in the Admiralty.

Mr Churchill was 1st Lord when I went to England and I believe he would appreciate the special significance of these papers to the British Navy. I don't care if you stay in for six terms. More power to you.

Yours in high great respect.
P. Symington

M02

PSF Churchill

July 7, 1944.

My dear Powers:-

It is certainly good to hear from you again -- and especially such a nice letter with its enclosures.

I think it is a grand idea that these very interesting documents should be in Britain. I shall send them, at the first opportunity, to the Prime Minister as a gift from you via me to the British Prime Minister and the British Navy.

I do hope to see you one of these days soon.

With all good wishes,

Very sincerely yours,

FRANKLIN D. ROOSEVELT

Captain Powers Symington, U.S.N., Rtd.,
834 Grove street,
San Francisco,
California.

M07

PSF Churchill folder 1-44

File Personal

August 18, 1944.

Dear Symington:-

I have just received a letter from the Prime Minister and I enclose a copy of it, for I think it will interest you.

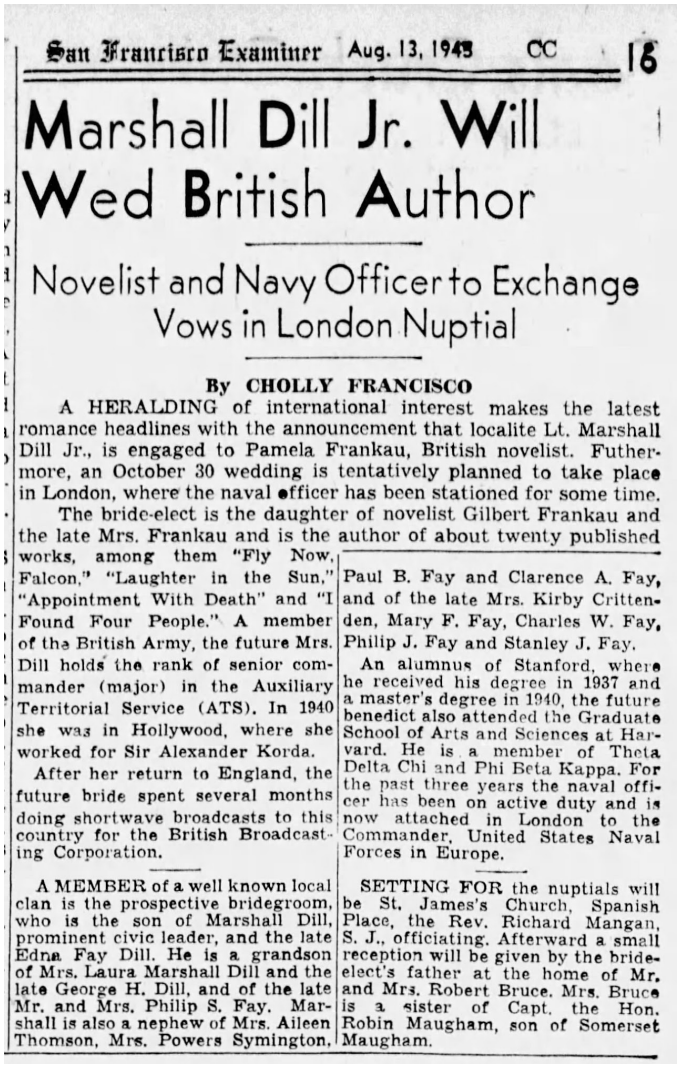
Always sincerely,

Captain Powers Symington, U.S.N.,Rtd.,
834 Grove Street,
San Francisco,
California.

(Enclosure)

1945 (Aug)

[HN005J][GDrive]



San Francisco Examiner Aug. 13, 1945 CC 16

Marshall Dill Jr. Will Wed British Author

Novelist and Navy Officer to Exchange Vows in London Nuptial

By CHOLLY FRANCISCO

A HERALDING of international interest makes the latest romance headlines with the announcement that localite Lt. Marshall Dill Jr., is engaged to Pamela Frankau, British novelist. Futhermore, an October 30 wedding is tentatively planned to take place in London, where the naval officer has been stationed for some time.

The bride-elect is the daughter of novelist Gilbert Frankau and the late Mrs. Frankau and is the author of about twenty published works, among them "Fly Now, Falcon," "Laughter in the Sun," "Appointment With Death" and "I Found Four People." A member of the British Army, the future Mrs. Dill holds the rank of senior commander (major) in the Auxiliary Territorial Service (ATS). In 1940 she was in Hollywood, where she worked for Sir Alexander Korda.

After her return to England, the future bride spent several months doing shortwave broadcasts to this country for the British Broadcasting Corporation.

A MEMBER of a well known local clan is the prospective bridegroom, who is the son of Marshall Dill, prominent civic leader, and the late Edna Fay Dill. He is a grandson of Mrs. Laura Marshall Dill and the late George H. Dill, and of the late Mr. and Mrs. Philip S. Fay. Marshall is also a nephew of Mrs. Aileen Thomson, Mrs. Powers Symington, Paul B. Fay and Clarence A. Fay, and of the late Mrs. Kirby Crittenden, Mary F. Fay, Charles W. Fay, Philip J. Fay and Stanley J. Fay.

An alumnus of Stanford, where he received his degree in 1937 and a master's degree in 1940, the future benedict also attended the Graduate School of Arts and Sciences at Harvard. He is a member of Theta Delta Chi and Phi Beta Kappa. For the past three years the naval officer has been on active duty and is now attached in London to the Commander, United States Naval Forces in Europe.

SETTING FOR the nuptials will be St. James's Church, Spanish Place, the Rev. Richard Mangan, S. J., officiating. Afterward a small reception will be given by the bride-elect's father at the home of Mr. and Mrs. Robert Bruce. Mrs. Bruce is a sister of Capt. the Hon. Robin Maugham, son of Somerset Maugham.

[HN005K][GDrive]

1945 (OCT)

[HN005L][GDrive]

Golden Wedding Guests Were Among Those At S. F. Wedding In 1895

A dinner party was held recently at the Lagunitas Club honoring Mr. and Mrs. E. G. Schmiedell of Ross on their golden wedding anniversary. Sixty-five guests were seated at a golden horseshoe table where golden leaves and fruits along the table, and flowers in tall golden containers, made the decorations long to be remembered. Golden tapers were inthe candlesticks.

Seward McNear was master of ceremonies. Members of the wedding party 50 years ago were present as well as the Schmiedell family.

The honored guests have two daughters, Mrs. James Moffitt and Miss Doris Schmiedell, one son, Edward G. Schmiedell Jr. They have one granddaughter, Mrs. Richard P. Gatterdam (Alice Moffitt) and a great-grandchild, James Moffitt Gatterdam.

Teh wedding of the Schmiedells took place in Grace Church in San Francisco in 1895.

Guests included Mrs. Henry S. Kiersted, Mrs. Grace Martin Horn, Miss Mary Eyre and Miss Sarah Collier, who had been the bride's attendants, and William Page, who was an usher. These were in the group of hosts at the anniversary fete.

Others were General and Mrs. George Pillsbury, Captain and Mrs. Powers Symington, Dr. and Mrs. Herbert Moffitt, Messrs. and Mesdames Benjamin Dibblee, Seward McNear, Willard O. Wayman, John Forbes, Wakefield Baker, A. Crawford Greene, Mesdames Frederic Hope Beaver and Harry Poett.

[HN005M][GDrive]

1950 (April)

Full page : [HN005C][GDrive]

HELPING TO celebrate the Chamber of Commerce's centennial anniversary at a formal dinner last night in the Palace Hotel's Garden Court were, left to right: Mr. and Mrs. Marshall Dill and Powers Symington. Approximately 1,000 persons were on hand for the colorful event. Tables were set for ten and were centered with elaborate arrangements of seasonal flowers.

—Photo by San Francisco Examiner.

Chamber of Commerce Anniversary

ANOTHER OF this week's gala gatherings took place last evening when San Francisco's Chamber of Commerce received honors on its centennial anniversary. For the occasion, about 1,000 people met in the Palace Hotel's Garden Court for a formal dinner. Tables, set for ten, were centered with outstanding arrangements of seasonal flowers.

Paul A. Bissinger, president of the chamber, presided at the speakers' table. Guest speaker was the Hon. W. Stuart Symington, secretary of the Air Force, who planed west for the occasion, which commemorated, in addition to the hundreth anniversary of the founding of the chamber of commerce, the centennials of California's admission to the Union and of the City of San Francisco's receipt of its charter.

Among those gathered at a table were the Marshall Dills, the Paul B. Fays, Capt. and Mrs. Powers Symington, the William Wallace Meins and Sally Fay. Others noted included Mayor and Mrs. Elmer E. Robinson, the Joseph S. Thompsons, the A. J. Gocks, Brig. Gen. G. H. Davidson, V. Adm. and Mrs. G. D. Murray, and R. Adm. and Mrs. J. E. Stika.

At the conclusion of the affair, the Robert Chatfield-Taylors entertained a group at supper at their Pacific Avenue home.

1950-04-19-the-san-francisco-examiner-pg-14-clip-chamber-of-com

[HN005D][GDrive]

1951 (Feb)

Full pages :

- [HN005E][GDrive]
- [HN005F][GDrive]

1951-02-04-the-san-francisco-examiner-pg-smart-1-clip-clothes-king

Susan Smith Says:

Mein's Togs Fit For King

THE DYNAMIC Mrs. Powers Symington (Maude Fay), who was well-known in Germany as one of the great Wagnerian singers, and who was always spoken of as the "Great Fay," lived a brilliant and glamorous life in the years before World War I. She was considered a great artist not only in Germany but was also welcomed in England where she sang at Covent Garden in the gala performance for the Crown Prince of Sweden. She was greatly loved and respected by those of the most exalted position as well as by the humblest.

In all the years since, her loyalty and devotion to those friends in Germany, especially in Bavaria, and in Austria, has never wavered, and she has devoted herself to alleviating their distress, fairly taking the clothes off her husband, "Pete," to send them to those who are in such dire need. Occasionally she levies on her friends as well, wherever she may chance to see them.

An example of her powers of persuasion is the following story told by her of a visit to the William Meins at Woodside:

"At a dinner at the William Meins last summer I went into the guest room to titivate and saw there a couple of huge boxes. Being the most unsuccessful package maker in the world, I was lost in admiration of the virtuoso detail work of the wrapping. I asked Frances Mein to what country they were destined. She has been so very generous, especially to England. She knew I was stripping my close friends and relatives almost to the bone sending clothes to Bavaria and Austria.

"These two countries were home to me for sixteen years and the present distress of those wonderful friends is never out of my heart or mind. Persons who have had fabulous wealth, palaces and castles, and whose family names have been identified with diplomats, statesmen, and social and cultural lead-

(Continued on Page 5, Col. 3)

Susan Tells of 'Clothes for King'

(Continued from Page One)

ers of central Europe for centuries, are now penniless without homes and absolutely dependent upon friends and relatives in foreign countries; all were anti-Hitler and many were in prison for years. Among them is Count Walter von Berchem, a close and dear friend of my Munich period.

"When Frances offered to send some things to my friends I was elated. She said, 'You can have those boxes, but I am not certain what's in them' — she thought, however, that it was all men's clothing. In one special box she had put an elegant suit of Bill's and with her charming manner of giving she had put extravagant neckties in each pocket of the suit.

"I did not see the clothes, as for nothing in the world would I have disturbed those perfect wrappings, even at the risk that an old bachelor might be showered with infant layettes.

Thanks for Gifts

"Count Berchem received the elegant suit with the gorgeous ties. His letter to me, effulgent with words of thanks, related the following experience: His cousins, the Schonborns, opened their historical castle, 'Schloss Wiesentheid' in Unterfranken-Germany, for a week of festivities, inviting forty-eight guests; artists, professors, scientists, relatives, and among them was the 80 year old Crown Prince Ruprecht with his charming daughter.

"His first wife, who died suddenly in Sorrento, was the wondrously beautiful Princess Marie Gabriele, a niece of the Empress Elizabeth of Austria. All those gathered together in the castle look upon Prince Ruprecht as the legitimate king of Bavaria, although the prince himself has no delusions about ever ascending the throne. Count Berchem writes, 'His Majesty is still mentally and physically vital, extremely well informed, and very intelligent;' he continues his letter, 'thanks to your fabulous gift.

"I aroused extravagant attention and admiration clothed in the most stunning suit of clothes and tie that I have ever seen since many years ago, when I used to give so much thought, time and money to my own wardrobe. I felt like a Hochstapler (a professional top-drawer thief).

"A very young princess was brought into the drawing room to meet His Majesty; on seeing the two men standing together when she was presented, she just naturally made a deep reverence to the elegant 'Mein clothes', to the real amusement of the king, shabby in comparison to Count Berchem, and to the embarassment of the count, who has been living in the Tyrol in poverty, all his great estates and wealth confiscated. He explained that some old castles, not too demolished in the war have again been taken over by their owners.

Peasants Raise Food

"The peasants in the countryside raise all the food and cultivate the wine and are given very small wages as they live on the estates and are provided with homes; they belong to families that have served in the castles for centuries.

"It is an attractive thing to have the very young people visit in an ancestral home where they witness the kind of life, of culture, of good manners, good taste, generous sharing and kindliness which was that of their forebears.

"Bill Mein will have to remember when ordering his clothes, they must be fit for kings of yesteryear."

[HN005G][GDrive]

1956 (Oct)

Full page : [HN005H][GDrive]

Frances Fay, John Bowes to Wed

By FRANCES MOFFAT
Society Editor, The Examiner

THE WEEK opens with an important romantic announcement, coming from Mr. and Mrs. Charles W. Fay Jr., who are telling of the engagement of their oldest daughter, Frances, to John Garland Bowes, son of Mr. and Mrs. William Ketcham Bowes.

FRANCES FAY AND JOHN GARLAND BOWES
Their engagement is announced by her parents

Their marriage is planned for after the first of the year. Frances is the sister of Dorothy Fay, a 1954 debutante, and little Victoria. She is the granddaughter of Mr. and Mrs. William Wallace Mein and the late Mr. and Mrs. Charles W. Fay.

THE BRIDE-ELECT, one of the most popular subdebs, is a grand-niece of Mrs. Powers Symington and Paul B. Fay. She is the niece of Mrs. Charles de Bretteville, William Wallace Mein Jr. and Gardner Mein.

She attended Miss Burke's and was graduated from Garrison Forest School in Maryland. She attended the University of California, where she belonged to Alpha Phi. Frances made her bow at the 1952 Cotillion Ball and will give up membership in The Spinsters with her marriage.

John is the son of Mr. and Mrs. William Ketcham Bowes of this city. He has a brother, William K. Bowes Jr., and is the grandson of Mrs. Edwin Jonathan Bowes and the late Mr. Bowes of San Francisco and of the late Mr. and Mrs. Arthur Addison Garland of Santa Barbara.

THE YOUNG MAN is the nephew of Edwin Laurence Bowes and Mrs. Egbert Bailey Clark, both of this city; Mrs. Frederick Diehl of Evanston, Ill., Mrs. Merton L. Jenk of Beverly Hills, Eldon Addison Garland of Colusa and the late Arthur Henry Garland.

John was graduated from Stanford, where his fraternity was Phi Gamma Delta and also has a degree from the Harvard Graduate School of Business. He served during the Korean conflict as an Air Force lieutenant. He is a member of The Bachelors.

[HN005I][GDrive]

1957 (Nov)

Full page : [HN0054][GDrive]

Capt. Powers Symington Dies In S.F.

Requiem High Mass for retired Navy Capt. Powers Symington, former summer resident of Marin County and an uncle of Sen. Stuart Symington (D-Mo.), was celebrated today at St. Brigid's Church, San Francisco. Burial was in Holy Cross Cemetery, Colma.

An octogenarian, Captain Symington died Friday in San Francisco. He had been in poor health for some time.

1957-11-18-daily-independent-journal-san-rafael-c-pg-4-clip-symington

Captain Symington and his wife, former operatic star Maude Fay, spent many summers in Kentfield. They sold their home there several years ago. Mrs. Symington, who survives, was founder and organizer of the Marin Music Chest. She is a member of a pioneer San Francisco family.

Until recently, the couple lived in the old Fay family mansion on Grove street in San Francisco.

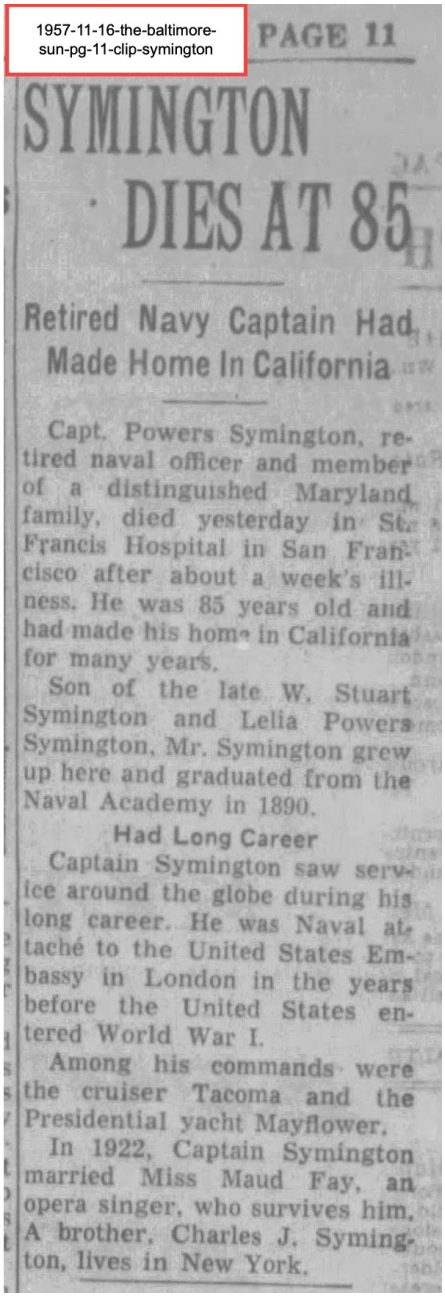
Captain Symington retired from active Navy duty in 1925. He was an observer aboard a British warship during the Battle of Jutland in 1916, before the U.S. entered World War I. During World War II the Navy recalled him for duty in the United States.

Besides his wife, he is survived by many nieces and nephews.

[HN0055][GDrive]

Full page : [HN0056][GDrive]

1957-11-16-the-baltimore-sun-pg-11-clip-symington



PAGE 11

SYMINGTON DIES AT 85

Retired Navy Captain Had Made Home In California

Capt. Powers Symington, retired naval officer and member of a distinguished Maryland family, died yesterday in St. Francis Hospital in San Francisco after about a week's illness. He was 85 years old and had made his home in California for many years.

Son of the late W. Stuart Symington and Lelia Powers Symington, Mr. Symington grew up here and graduated from the Naval Academy in 1890.

Had Long Career

Captain Symington saw service around the globe during his long career. He was Naval attaché to the United States Embassy in London in the years before the United States entered World War I.

Among his commands were the cruiser Tacoma and the Presidential yacht Mayflower.

In 1922, Captain Symington married Miss Maud Fay, an opera singer, who survives him. A brother, Charles J. Symington, lives in New York.

[HN0057][GDrive]

1962 (June)

Full page : [HN0058][GDrive]

Fays Golden Wedding... JFK Sent His Greetings!

—du Charme photos.

Mrs. Powers Symington spoke over the microphone held for her by Under Secretary of the Navy Paul B. "Red" Fay Jr. (above) at the 50th wedding anniversary reception Monday of his parents, the senior Fays. Looking on are Mark Barry (left) and Mr. and Mrs. John C. Oliver Jr.

Mrs. Frank Tatum (left) congratulates Mr. and Mrs. Paul B. Fay who celebrated 50 years of marriage Monday. They received wires from President Kennedy and Attorney General Robert Kennedy

Mmes. Felix McGinnis, Dean Witter and Otis Johnson (L to R in photo at left) were among guests at the golden wedding anniversary of Mr. and Mrs. Paul B. Fay. Party at San Francisco Golf Club also honored three Fay grandchildren, Wendy Woods, Patricia McGettigan and Ann Barry.

Yosemite, Hawaii Lure Travelers

Mr. and Mrs. Fred Guerrero gave a dinner party recently for their daughter, Marie, and eight of her friends who were graduated from Dominican College.

Among the guests were Gloria Sun, daughter of Chinese Consul General and Mrs. Patrick Sun, and Mary Hennessy, daughter of Mr. and Mrs. James Hennessy.

●

Marianne Basich, daughter of Mr. and Mrs. Vladimir R. Basich, will be graduated from Scripps College in commencement exercises Tuesday. She is an alumna of Lowell High School.

[HN0059][GDrive]

1964 (Oct 8)

Full page : [HN005A][GDrive]

Page 56—S.F. Examiner Thursday, Oct. 8, 1964 5C2H*

Mrs. Powers Symington Dies

Maude Fay (Mrs. Powers) Symington, a native San Franciscan who became one of Germany's great pre-World War I Wagnerian sopranos, died here yesterday. She was 84.

Mrs. Symington was born April 18, 1878, at 834 Grove St., the family home built by her father, Philip Fay. Her residence was at 1999 Broadway.

She was educated in The City's public schools, and in 1902 went to Dresden, Germany, where she studied for the opera under Madam Orgeni.

DEBUT IN 1906

She made her debut in 1906 with the Munich Royal Opera as Marguerite in Faust. Earning the critcis' title "Die Fay," she sang before the then crowned heads of Europe including King Alfonso of Spain and the King of Sweden.

Prince Heinrich Luitpold of Bavaria wooed the Irish girl, but his untimely death prevented their marriage.

Mrs. Symington returned to the U. S. in 1916, making her first appearance with the New York Metropolitan Opera as Elsa in Lohengrin.

MUSIC PATRON

In 1922 she married Capt. Powers Symington of Baltimore, a naval officer. They lived in New York and Paris, and in 1927 returned here.

Once settled here and in Kentfield, Marin County, Mrs. Symington quickly became one of The City's leading patronesses of music and the arts. She founded the Marin Music Chest, and in 1932 was named impresario of San Francisco Opera Comique, Inc.

BLUNT ADVICE

Her husband moved in political circles, was a "New Dealer" of note, and served for awhile as the county Civil Works Administration chief. Mr. Symington died in 1957.

An outspoken member of the social scene, she once approached a younger, somewhat plump soprano and said, "You have the most beautiful voice since Rethberg, but you simply must lose 20 pounds."

On another occasion she advised a socialite planning to "abandon society" because it prevented one from truthfulness, "Tell the truth, and society will abandon you."

She loved to entertain—and even flames leaping from an adjoining home failed to keep her from luncheon preparations for a distinguished visitor. She then found food and shelter for the fire victims.

KIN A CABINET AIDE

Mrs. Symington is survived by her brother, Paul B. Fay Sr., and several nieces and nephews. Among the nephews are Paul B. Fay Jr., Undersecretary of the Navy. A nephew of her late husband is Democratic Senator Stuart Symington of Missouri, a former Secretary of the Air Force.

The Rosary will be recited tonight at 8:15 o'clock at the MacAvoy - O'Hara Mortuary. A Requiem Mass will be celebrated at 11 a.m. tomorrow in St. Brigid's Church, Van Ness Ave. and Broadway.

[HN005B][GDrive]

1964 (Oct)

Full page ; [HN0052][GDrive]

1964-10-08-daily-independent-journal-san-rafael-ca-pg-4-clip-symington

OBITUARY

Maude Fay Symington Dies At 86

Maude Fay Symington, founder of the Marin Music Chest and a former prima donna of grand opera, died yesterday in her San Francisco home at the age of 86.

She and her husband, Capt. Powers Symington of Baltimore, Md., a naval officer and diplomat, spent their summers at "High Hat," their home on the Fay Estate in Kentfield until three years before his death in 1957.

She attended public school in her native San Francisco and in 1902, went to Dresden, Germany, to study singing with Aglaia Orgeni, a famous voice teacher.

She made her debut as Marguerite in "Faust" at the Munich Royal Opera House in 1906 and came to be known at "Die Fay" in Germany, where she sang leading roles in operas of Wagner and Richard Strauss. Her career took her to Budapest, Paris, Vienna, Brussels and London, in all of which she was hailed as an outstanding operatic soprano.

Two years after World War I, she returned to the United States where she sang with the New York Metropolitan, Chicago and San Carlo Opera companies. After several successful concert tours, she retired.

She and Captain Symington, an uncle of Sen. Stuart Symington of Missouri, were married in 1922 and after living in the East and Paris, came to the coast in 1927. They maintained residences in both Kentfield and San Francisco.

In March, 1933, she explained her dream of a music chest for Marin to a mass meeting in the Marin Junior College gymnasium in Kentfield. Its organization followed immediately. The first series of concerts was presented in 1934. Mrs. Symington served as president of the Marin Music Chest for seven years.

In 1939, she received the Morago Crest at the 76th commencement exercises at St. Mary's College for her efforts in "furthering the European tradition of culture on the Pacific Coast."

Surviving are her brother, Paul B. Fay, and several nieces and nephews including Paul B. Fay Jr., undersecretary of the Navy, and Dr. Marshall Dill Jr., chairman of the history department at Dominican College in San Rafael.

Rosary will be recited at 8:15 p.m. today at McAvoy-O'Hara Co., 4545 Geary Boulevard, San Francisco. Requiem High Mass will be celebrated at 11 a.m. tomorrow at St. Brigid's Church, Van Ness Avenue and Broadway, San Francisco.

Contributions to the Little Children's Aid or the Marin Music Chest are preferred by the family.

[HN0053][GDrive]

1976 (Jan 10) - Remembering Mrs. Symington

Remembering The Diva

By Stuart Nixon

"Statuesque Maude Fay Symington, her opera career behind her, descended like Brunhilde on Marin County in 1929, determined to transform the quiet suburbs into an American Bayreuth."

Maude Symington succeeded beyond the imagining of those she prodded. Dairy farmers and country lawyers are seldom moved by song. Yet Marin ranchers, professional people, laborers and schoolchildren came to share Maude's dream. Forty-one years after her Marin Musical Chest lit its first candle in the rural darkness, its heritage makes this county a vanguard figure in America's swing toward culture.

Maude Fay was born in San Francisco in 1878, one of nine active and articulate brothers and sisters. Her summers were spent in the family cottages off Laurel Grove Avenue, in Kentfield. She learned early that she had a voice, and with hard-won funds, she left for Munich to have it trained. Maude's success was dazzling: she created operatic roles for Richard Strauss, sang with Caruso, became an Irish-American prima-donna.

World War I almost broke Maude Fay's heart. In post-War America she sang but little, after being branded pro-German at the "Met". But she preserved her love of music, married an American Navy officer, and when he retired, came back to Kentfield to live and work.

Captain and Mrs. Powers Symington built a small Mediterranean villa on the hilly back lot of the Fay property. Never affluent, they somehow entertained family, friends and celebrities at "High Hat", and their hospitality grew to a legend. Yet Maude needed more outlets for her tearing energies, disciplined and shown the soul's summits by opera. Her democratic ideals had been sharpened by the aristocratic traditions of Europe, and she determined to implant them in her home soil.

This would take the form of a people's music festival to be shared by everyone, rich and poor, young and old. As she said: "The greatest music in the world, for the greatest number of people, at the lowest possible prices." In Depression-era San Rafael, Mill Valley, Fairfax — concerned mainly with economic survival — this was quite an order.

Carlos Freitas, then a young attorney, recalls Maude's first appearance at his office in 1931. He was president of Marvelous Marin, a booster organization; and she wanted its support for her music festival. Says Judge Freitas:

"Mrs. Symington was lucid, enthusiastic and terribly persuasive. For her, parliamentary law was never invented. You simply couldn't say no. In five minutes I was overwhelmed."

Recognizing that a festival of this kind could never be supported by a few socialites and commuters, Maude went after the broadest political and financial base. Her nephew, Professor Marshall Dill of Dominican College, recalls the dark mornings when "she would wake Uncle Pete to drive her out to Point Reyes and catch the dairy farmers when they came in from milking."

In 1932-3, and for years thereafter, Mrs. Symington's concept of the Marin Musical Chest permitted anyone to join for as little as 25 cents, and to gain admittance to its concerts for another 25 cents. Non-members were supposed to pay $3. Firms and more affluent individuals were dragooned into paying more, of course. In the mid-1930's the Chest membership ran between 4000 and 5000, in a county with a population of under 50,000.

During the Chest's formative years, Maude's devoted assistants included Judge Freitas as treasurer, Mrs. Gregory Jones, William Rattray, organist at St. John's Episcopal Church; and the indispensable Kitty (Mrs. Melville) Oppenheimer. How much of their time and effort she cajoled and demanded will never be computed.

Dressed and carrying herself like some Edwardian empress, she would sweep into any gathering, launch her sermon on the unifying force of good music, and ostensibly answer questions. Her replies from the throne were prefaced by an affectionate but haughty "My Dear . . ." No doubts or arguments could prevail against such regal poise.

At last Maude and her allies had collected enough funds to schedule the first concert series.

The launching took place with Nelson Eddy on the rainy night of January 3, 1934, in the Fairfax Pavilion.

"Dressed and carrying herself like some Edwardian empress, she would sweep into any gathering, launch her sermon on the unifying force of good music, and ostensibly answer questions."

Success of the first concerts brought the requirement for a more permanent and spacious hall. This was solved when Maude appealed to her old San Francisco friend, Mother Raymond, of the Dominican Sisters, to build an outdoor theater opposite the College, in Forest Meadows. The Sisters furnished the concert platform and "shell", and the W.P.A. built the uncomfortable wooden seats.

The first concert was held there in September, 1934, again with Nelson Eddy, who was on his way to Hollywood stardom. Rain held off, with the aid of Dominican prayers, but when the concert began, Mrs. Jones says, "the benches began breaking up — you could hear them crashing all over Forest Meadows."

Star followed star at the annual series, now called the Marin Music Chest. John Charles Thomas, Helen Traubel, Jose Iturbi, Menuhin, Jan Peerce, Richard

Tucker, Artur Rubinstein, the San Francisco Ballet, the San Francisco Symphony under its various maestros — Monteux, Dobrowen. Rise Stevens gave an especially memorable concert. Ezio Pinza sang at Tamalpais High auditorium when it was too cold for outdoor performances. Paul Robeson, Isaac Stern, Dorothy Maynor, Tossy Spivakowski . . . and many young artists, who made their debuts before a major audience at Forest Meadows.

"The greatest music in the world, for the greatest number of people, at the lowest possible prices."

The impresario had one of her typical encounters with the Northwestern Pacific Railway because of this outdoor setting. On Sunday afternoons, there always seemed to be a train that whistled in the midst of an aria. After numerous interviews and countless "My Dear man", the NWP was prevailed upon, and the trains ran silent.

As the Chest propsered, it took the added responsibility, at Maude's urging, of providing cash scholarships for talented young musicians from Marin County. In most years, four scholarships were donated, varying with the organization's finances. Today several members of the San Francisco Symphony are former Marin Music Chest scholars, as is Hugo Rinaldi, conductor and director of music for the San Rafael schools.

"I received four consecutive $200 scholarships, starting in 1938," says Rinaldi. "Without that money, I could never had completed my musical education."

Other scholars include Jean Mitchell, Mill Valley cellist; Corwine Swall, Mill Valley singer; Marian Marsh, who recently made her Metropolitan debut; and David del Tredici, pianist-composer at Boston College, who will conduct his Bicentennial Symphony this summer for the Chest.

Maude handed over the reins of the Music Chest to younger subordinates in 1940, but her enthusiastic orations before each concert continued a tradition for many years. She died in 1964.

To scores of young people she was "Aunt Maude", an incalculable influence. To her family, she was "The Diva". That, says Hugo Rinaldi, is Italian for "the star, the top," and most appropriate for Maude.

[HN0051][GDrive]

US NAVY OFFICER RECORD

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RECORD OF OFFICERS, U. S. NAVY.

Copied

Powers Symington

Year.	Month.	Day.		Sea service, present commission. Y'rs.	M'o's.	D'ys.	Total sea service. Y'rs.	M'o's.	D'ys.	Other duty. Y'rs.	M'o's.	D'ys.	Unemployed. Y'rs.	M'o's.	D'ys.	Remarks.
1872	Oct	6	Born in Baltimore, Maryland.													
1888	Sep	7	Appointed Naval Cadet 3d [illegible] Secy													
1892	May	24	Detd from Academy to the "Chicago" (2) 6 June (12)	0	4	20	0	4	20	3	4	0	0	0	29	
1894	"	8	Detd home to examination (Cruise Chd) exp 3d May				2	2	3	2	4	10	0	1	12	
"	"	28	Detd two months leave (999) det 29 May							3	5	7				
"	June	30	Graduated (final)													
"	"	30	Total service as Naval Cadet	2	2	3	2	2	3	2	5	4	0	2	13	
1894	July	1	Promoted to Ensign													
"	"	25	Commissioned an Ensign from 1 July 94 (501)													
"	Aug	1	To the "Atlanta" 13th Aug (310)													
"	Sep	1	Mem G.C.M. Norfolk 21st (278)													
"	Oct	5	Leave 3 days from 7th inst (55621)													
"	"	29	Leave 4 days (60004)													
"	Dec	31	Total Service to date (Atlanta)	0	4	18	2	6	21	3	5	7	0	3	25	
1895	Sep	14	~~Detd~~ cancelled home & be ready for the "Alliance" (77016)													
"	"	17	Detd to the "Alliance" as Ch Sig Offr (77016) vice Doty													
"	"	21	Leave 7 days (77300)													
"	Dec	31	Total service to date	1	4	18	3	6	21	3	5	7	0	3	26	
1896	June	12	Leave 7 days (~~17369~~)													
"	Dec	31	Total service to date	2	4	18	4	6	21							
1897	Feb	8	Leave seven days (45894)													
"	Mar	31	Leave seven days (57198)													
"	Apr	23	Detd 28th apr to Coast Survey (60593) relt Lieut Downing 4/29	3-28	2	8	16	4	10	19						
"	May	3	To the CSS "Blake" (62882) exp 7th May	0-8						3	5	15				
"	June	4	Detd to the "Yeaney" (68089) transd 14 June													
"	Dec	31	Total service to date	7 2d	3	4	10	5	6	13	3	5	15	0	3	26	Total service: 9 yrs. 3 mo. 24 days.
1898	Feb.	2	Transferred from Yeaney to the McArthur. -changes-													
1898	Apr	4	Detd to the "R.S. Franklin" (79887) det'd H. exp. 11 Apl.													
"	"	7	Detd to the "Eagle" (100436) det'd 11 exp 13 apr	0-8						2	5	23				
"	Nov	12	Leave 7 days -147819-													
"	Dec	12	Member G.C.M. 15th inst. -152812-													
"	"	31	Total service to date	1-22	4	4	21	6	6	5	3	5	23	0	3	26
1899	Mar	2	" " as Ensign													
1899	Mar	3	Lieutenant, Junior Grade													
"	June	19	Commissioned from 3d March -169651-													

RECORD OF OFFICERS, U. S. NAVY.

Powers Symington

Year.	Month.	Day.		Sea service, present commission. Yrs.	Mo's.	Dys.	Total sea service. Yrs.	Mo's.	Dys.	Other duty. Yrs.	Mo's.	Dys.	Unemployed. Yrs.	Mo's.	Dys.	Remarks.
1899	Aug.	14	Leave one week from Aug. 15th 135129 Comdt.													
"	Sept.	11	Member G.C.M. Navy Yard Portsmouth 11 Sept. 137318													
"	"	15	Temporary duty on Light House Tenders during trial of "Kearsarge" 23d inst. - 188084 - Repd. 23 Sep. Completed 26 Sept.													
"	"	19	Detd and W.O. upon reporting of relief 188703 duty 20 Oct. time 30 Oct. 189717	0	7	2	7	3	9							
"	Oct.	4	Detached "Enterprise" - 190543 -													
"	"	9	To New York Ny and return, home 12 Oct. 3p. temp duty 191317							3	5	27				
"	"	9	Home, one month's leave. - 189825 -													
"	Nov.	13	To New York Nov. 15 temp duty. Then to Sparrows Point, Md and Baltimore, Md temp duty. repd 15 Nov. 190388										0	5	1	
"	Dec	31	Total service to date	1-7	0	7	2	7	3	9	3	7	14	0	5	1
1900	June	20	Det. and to the R.S. Vermont June 27. 224829 Rep. 27 June.	0-3										0	5	4
"	July	2	Mem. G.C.M., N. New York. 5 inst. 223603													
"	Aug	14	Leave 2 weeks from Aug 21. 229617													
"	"	30	To exam. for promo. Wash. Sep 4. 231573													
"	"	30	Lieutenant.													
"	Sep	18	Take charge draft-men to Portsmouth N.H. for the "Alvarado" & "Dandoval" then return 234101 Comdt.													
"	"	27	Commissioned from Aug. 30. 1900. 234048													
"	Dec	31	Total service to date	11-27	0	0	0	7	3	9	4	7	11	0	5	4
1901	Feb	1	To Bureau Equip. for Compass Instr. Feb. 4th. and return. 251102. Rep. Feb. 4.													
"	"	5	Re-commissioned from Aug. 30. 1900. 251270													
"	"	11	Det. 16th and to the "New York". 250539 arrival 16 Feb. 1-15													
"	Dec	31	Total service to date	10-15	0	10	15	8	1	24	4	8	26	0	5	4
1902	"	"	" " " "		1	10	15	9	1	24	4	8	26	0	5	4
					2	10	15	10	1	24	4	8	26	0	5	4
1903	June	25	Leave Nine days from June 26. 5446-1 C.m.C.													
"	July	17	Temp duty on the "Penning ton" 5446-2 C.m.C.													
"	Aug.	26	To command Fortune to Mare Island and return. 1291-40 C.m.C.													
"	Dec	31	Total service to date.		2	10	15	10	1	24	4	8	26	0	5	4

RECORD OF OFFICERS, U. S. NAVY.

Powers Symmington

Year.	Month.	Day.		Sea service, present commission. Yrs.	Mo's.	D'ys.	Total sea service. Yrs.	Mo's.	D'ys.	Other duty. Yrs.	Mo's.	D'ys.	Unemployed. Yrs.	Mo's.	D'ys.	Remarks.
1904	Jan.	7	Addl. duty as Fleet Gunnery Officer of Pacific Squadron. 3646-4 Par. 8 Jan 3153-46 Nav. C.													
	Apr.	6	Det., home and await orders. 3646-6.													
1904	Apr.	26	Record transferred to C. N.													

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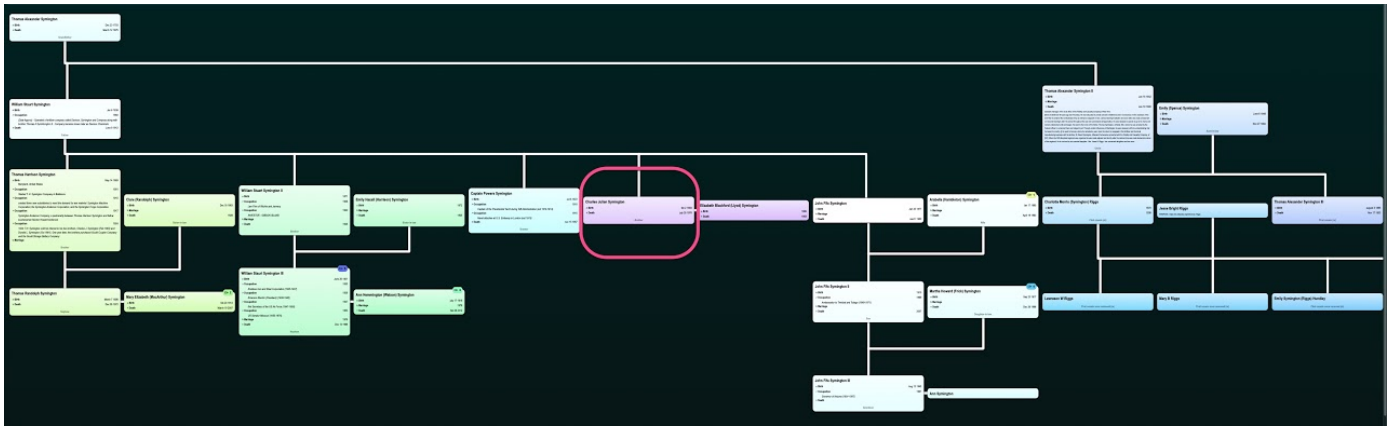
Housatonic

Charles Julian Symington (born 1883)

Charles Julian Symington in the Symington Family Tree

Symington family Tree, latest version (entire PDF - research-pol-tech1-geneology-symington1.pdf / https://drive.google.com/open?id=1Up5Wff_tkeaqfmvJ-4ZCd00ezWJwptUb



2019-06-07-smington1-clip1.jpg / https://drive.google.com/open?id=1L-4bkgIcTQYNkGKXziYOn58ja34m98Zo

Born *February 02, 1883* [HL000L][GDrive]

father: **William Stuart Symington I** (born 1839)

mother: Lelia Skipworth (Powers) Symington

spouse: Married Elizabeth Lloyd, October 1, 1912.

Siblings include :

- **William Stuart Symington II (born 1871)**
- **Powers Symington (born 1872)**

Career

Honorary Chairman of the Board Symington Wayne Corporation. (See **Symington Wayne Corporation**)

Geni.com profile (from June 2019)

See [HL000L][GDrive]

Death: July 28, 1978 (95)

Immediate Family:

- *Son of Major William S.Symington, Sr. (CSA) and Lelia Wayles Skipworth Symington*
- *Husband of Elizabeth Blackford Symington*
- *Father of Arthur Lloyd Symington; Charles J Symington, Jr; Private; Pamela Stuart Mayer and Private*
- *Brother of Lelia Skipworth Goode; Thomas Harrison Symington; William Stuart Symington, Jr.; Pete Symington; Jack Symington; Edmund Harrison Symington and Donald Leith Symington*

1925 (Feb) Gould Coupler sold

Full page : [HN0049][GDrive]

Gould Coupler and Battery Plants Sold, Second Time in Five Weeks, for $14,000,000

Symington Co., Rochester, Manufacturers of Railroad Specialties, Acquires Depew Works From Charles J. Graham, Pittsburgh, Through a Group of Bankers Representing Charles J. Symington—Plans of New Owners Not Announced, But Gould Properties Will Remain Intact, It is Indicated.

By GEORGE W. FOSTER, Real Estate Editor.

The Gould Coupler Co. and the Gould Storage Battery Co. at Depew were sold yesterday for the second time within five weeks. It was reported in financial circles in New York that close to $14,000,000 is involved in the new transaction.

The Symington Co., Rochester, manufacturers of railroad specialties, acquired the Gould properties yesterday from Charles J. Graham, Pittsburgh, Pa. It is understood the Symington Co. will assume immediate control.

Buys Through Bankers.

Mr. Graham, vice-president of the Pittsburgh Bolt & Nut Co., purchased the Gould holdings from Com. Charles A. Gould of Buffalo December 31. He virtually confirmed the report at that time that he paid $12,000,000 for the two companies.

A group of bankers, including the Chase Security Co., Hambelton & Co., and Blair & Co., all of New York city, representing Charles J. Symington, president of the Symington Co., purchased the Gould interests from Mr. Graham. The negotiations have been in progress in New York for the past week.

G. H. Dietz, secretary to Com. Charles A. Gould, called The Courier yesterday from the main offices of the Gould Coupler Co., No. 32 East Forty-second street, New York city, announcing he was speaking for Mr. Graham, and dictated this statement:

"Charles J. Graham, vice-president of the Graham Bolt & Nut Co., Pittsburgh, Pa., who in December purchased the Gould Coupler Co. and Gould Storage Battery Co. from Com. Charles A. Gould, founder and president, announces that he has disposed of his holdings in the Gould Coupler Co. and Gould Storage Battery Co. to a group of bankers headed by the Chase Security Co., Hambelton & Co., and Blair & Co. Mr. Graham states that he understands the bankers to be acting for Charles J. Symington, president of the Symington Co. of Rochester."

Mr. Dietz said the sale had just been concluded and that he was not authorized to announce the consideration. Reports filtering through financial circles, however, placed the figures at "more than a million over the price paid by Mr. Graham when he acquired the property."

The Symington Co. works are located in Lincoln Park, Rochester. The company was founded in 1901 by E. H. Symington. It manufacturers specialities for locomotives, engines and general railroad equipment. The works cover a site of twenty acres, having one of the largest malleable iron furnaces in the country. Main headquarters of the company are at No. 233 Broadway, New York city.

What changes are contemplated in the operating and directing forces of the Gould companies, Symington Co. interests would not say yesterday. It is reported that the plants will be retained as individual units and that a merger, if carried out, would not be undertaken for at least a year.

When Mr. Graham assumed control of the Gould properties Commodore Gould retired as president. William S. Gould, his son, succeeded to that place.

Some Changes Indicated.

It was reported yesterday that Mr. Symington would become president and that Donald S. Barrows, vice president of the Symington Co., in charge of operations at the Rochester works, would be made vice president.

It is said Mr. Barrows will act as managing director of all the companies and that E. J. Mohr, now assistant to Mr. Barrows, would assume charge at Rochester.

Charles A. Gould II, grandson of Commodore Gould, is now treasurer of the Gould companies and Eugene Gray of New York city is secretary. John H. Patterson is in charge of operations at the Depew works.

Retention of some interest by the Goulds in the holdings at the time the companies were sold to Mr. Graham was said at the time to be instrumental in naming William S. Gould as president.

The Gould company was founded fifty years ago by Commodore Charles A. Gould. It manufactures couplers, journal boxes, friction gears, bolsters, end sills and automobile batteries.

The plants occupy a site of seventy-five acres at Depew, bounded by Neoga street on the east, Transit road on the west, D. L. & W. tracks on the north and the Erie railroad on the south. More than 2,500 men are employed in the works.

The companies were capitalized at $10,000,000 in 1905. The holdings in land and buildings have been increased about $5,000,000.

[HN004A][GDrive]

1933 (July) - FDR Jr sailing with George whitney, charles j symington Jr, Drexel Pau jr.

Full page : [HN004B][GDrive]

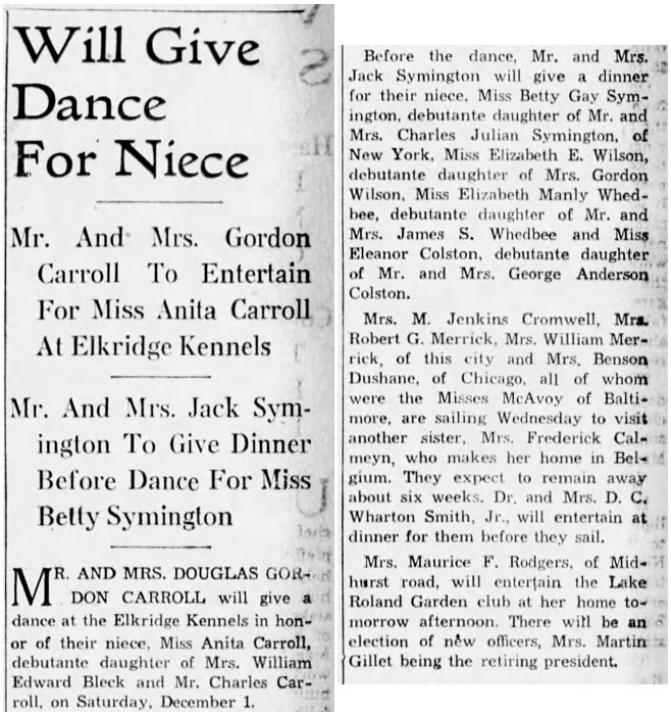
YOUNG ROOSEVELT SAILS

NEW YORK, July 5. (AP)—Franklin D. Roosevelt, Jr., sailed today on the U. S. liner Washington for a two months' trip to Europe—the graduation gift from his father, President Roosevelt. He was accompanied to the liner by his mother. With young Roosevelt were George Whitney, Jr., son of Mr. and Mrs. George Whitney, the former a partner in the firm of J. P. Morgan and Company; Drexel Paul, Jr., of Philadelphia, and Charles J. Symington, Jr., of New York.

[HN004C][GDrive]

1934 (Nov)

Full page : [HN004D][GDrive]



Will Give Dance For Niece

Mr. And Mrs. Gordon Carroll To Entertain For Miss Anita Carroll At Elkridge Kennels

Mr. And Mrs. Jack Symington To Give Dinner Before Dance For Miss Betty Symington

MR. AND MRS. DOUGLAS GORDON CARROLL will give a dance at the Elkridge Kennels in honor of their niece, Miss Anita Carroll, debutante daughter of Mrs. William Edward Bleck and Mr. Charles Carroll, on Saturday, December 1.

Before the dance, Mr. and Mrs. Jack Symington will give a dinner for their niece, Miss Betty Gay Symington, debutante daughter of Mr. and Mrs. Charles Julian Symington, of New York, Miss Elizabeth E. Wilson, debutante daughter of Mrs. Gordon Wilson, Miss Elizabeth Manly Whedbee, debutante daughter of Mr. and Mrs. James S. Whedbee and Miss Eleanor Colston, debutante daughter of Mr. and Mrs. George Anderson Colston.

Mrs. M. Jenkins Cromwell, Mrs. Robert G. Merrick, Mrs. William Merrick, of this city and Mrs. Benson Dushane, of Chicago, all of whom were the Misses McAvoy of Baltimore, are sailing Wednesday to visit another sister, Mrs. Frederick Calmeyn, who makes her home in Belgium. They expect to remain away about six weeks. Dr. and Mrs. D. C. Wharton Smith, Jr., will entertain at dinner for them before they sail.

Mrs. Maurice F. Rodgers, of Midhurst road, will entertain the Lake Roland Garden club at her home tomorrow afternoon. There will be an election of new officers, Mrs. Martin Gillet being the retiring president.

[HN004E][GDrive]

1942 - Draft Registration (todo)

https://www.fold3.com/document/284047598/

https://www.fold3.com/image/284047601

1946 (Oct) - Marriage

Full page : [HN004F][GDrive]

—Moser

Mrs. Charles J. Symington Jr.

Mary Jo Finucane Takes Vows In Lady of Lourdes Church

THE ceremony yesterday at which Miss Mary Jo Finucane, daughter of Mr. and Mrs. Bernard E. Finucane of Ambassador Drive, became the bride of Charles J. Symington Jr., son of Mr. and Mrs. Charles J. Symington of Huntington, L. I., was marked by extreme simplicity. The wedding took place at 11:30 a. m. in Our Lady of Lourdes Church, where the Rev. John Reddington of Geneva received the vows.

The church was adorned simply with white gladioli and ferns.

The bride, whose father gave her in marriage, wore an unadorned dress of white taffeta. Rosepoint lace held her short veil and she carried bridal roses and stephanotis.

Her only attendant was Miss Carolyn Scott of Quaker Center, Scarsdale, who wore a blue net gown and carried yellow chrysan-

Lloyd Symington of Washington, D. C., was best man.

White roses decorated the home of the bride's parents, where the reception was held following the ceremony. Later, the couple left for a Southern trip.

The bride, who is a member of the Junior League of Rochester, was graduated from the Madeira School in Greenway, Va., and from Smith College. During the war, she served with the American Red Cross as a staff assistant in Italy.

Mr. Symington is a graduate of Groton Preparatory School and of Harvard University.

[HN004G][GDrive]

1947 (July) - Symington - Pratt engagement

Full page : [HN004H][GDrive]

Symington—Platt

Announcement has been made by Mr. and Mrs. Charles J. Symington of 45 E. 62d St., Manhattan, and Lloyd Harbor, of the engagement of their daughter, Miss Ann Byrd Symington, to Thomas Collier Platt 3d, son of Mr. and Mrs. Platt Jr. of Laurel Hollow.

Miss Symington was graduated from St. Timothy's School in Catonsville, Md., and is a student at Bennington (Vt.) College. She is a granddaughter of the late Maj. W. Stuart Symington of Baltimore.

The bridegroom-elect is an alumnus of the Brooks School and Yale University, where he was a member of the Fence Club and Wolf's Head Society. He is attending the Yale Law School.

During the war he served as an ensign in PT Squadron 41 of the navy. Mr. Platt is a grandson of the late Henry B. Platt and the late Dr. Graham Lusk, former professor of physiology at Cornell University.

[HN004I][GDrive]

1953 (Oct)

Full page : [HN004J][GDrive]

PRIVATE FUNDS TO GO ABROAD?

New York. —(AP)— An American planning group is trying to chart a course for private investment to help less-developed countries attain a self-sustaining economy.

Leaders of the National Planning association say this could:

Accomplish more effectively some objectives of the point four and United Nations programs; stem the drift toward socialism and communism, and spare the United States taxpayer the burden of continued grants and loans.

The association, a nonprofit, nonpolitical organization, announced Sunday it will make case studies of six or eight United States business firms it says have been "pioneering in a new program of private investment abroad."

Identity of the companies to be studied was not disclosed.

Chairman H. Christian Sonne of the association said it will try to make an impartial study of how these companies have improved social and economic conditions of the area in which they operate. And he added, "we hope to find a general pattern of their business practices, and to induce other companies to go into foreign countries and do likewise."

Charles J. Symington, chairman of the board of Symington-Gould corporation, heads a special policy committee composed of agriculture, business, labor and professional members of the N. P. A. trustees which will take charge of the project.

The case studies will be financed by a grant from the Carnegie Corporation of New York, by other foundations and business contributions. Director of research for the project is Eugene W. Burgess, former government economist and vice president of General Mills.

First of the studies is expected to be completed in the next few weeks.

Symington told a news conference here that "United States business has come to the realization that the ultimate success of foreign enterprises and the security of investments abroad depend to a large extent upon the benefits that accrue to the people of the host countries."

He said company practices which "are highly beneficial and acceptable to the local people" produce maximum rewards to both the countries and the companies. He added:

"If we could create some ground rules by means of which it would be possible to get United States private business, the United States government, and the governments of foreign countries — especially the less-developed countries — to agree on ways of exporting United States managerial skills as well as private investment, we would take long strides toward building a sounder world economy in double quick time."

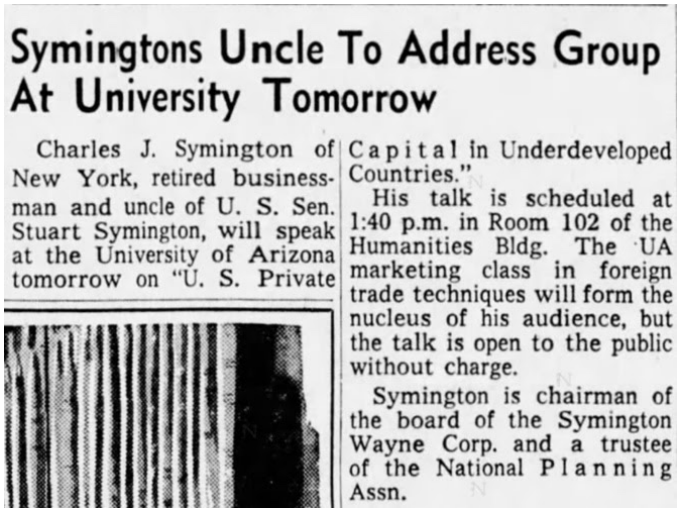
Pointing out the need for the United States to import raw materials from abroad, Symington said that today there is more reason than ever before for the kind of enterprise the association will study.

"The vital question of peace or war," he said, "may well depend upon the bringing of competent, profitable and socially responsible development to the less-developed nations, as does the ultimate economic health of our own country."

[HN004K][GDrive]

1961 (March) - Speaking Engagement with his father

Full page : [HN004L][GDrive]



Symingtons Uncle To Address Group At University Tomorrow

Charles J. Symington of New York, retired businessman and uncle of U. S. Sen. Stuart Symington, will speak at the University of Arizona tomorrow on "U. S. Private Capital in Underdeveloped Countries."

His talk is scheduled at 1:40 p.m. in Room 102 of the Humanities Bldg. The UA marketing class in foreign trade techniques will form the nucleus of his audience, but the talk is open to the public without charge.

Symington is chairman of the board of the Symington Wayne Corp. and a trustee of the National Planning Assn.

[HN004M][GDrive]

1961 (Sep) - Dashew Data Corp

Full page : [HN004N][GDrive]

Photo Card in Seconds

City Man Heads Firm of Great Potential

By DON RECORD

Democrat and Chronicle Financial Editor

CHARLES J. Symington Jr., who has been in business in the Rochester area for 14 years, has just been elected president of a new company which appears to have great potential.

It is the Dashew PhotoData Corp., which will have its headquarters here even though the principal owners are in Los Angeles and Jackson, Miss. A key to launching of the new company is development of a bi-camera, which can combine a photograph of a person and other data on a plastic card in less than a minute; then in another machine this card can be embossed and punched for electronic data processing systems.

It's Their Business

The resulting cards would be tamper-proof and would be especially valuable as auto licenses, for identification in large schools, industrial plants, military forces and other government departments, unemployment, liquor control boards, credit clubs and innumerable other uses. It would be sold on a basis of savings in time and costs, plus prevention of errors.

Dashew PhotoData Corp. is a joint venture of Dashew Business Machine Inc. of Los Angeles and School Pictures Inc. of Jackson, Miss. Dashew did much of the early work in the program and then combined with Jackson engineers to produce the equipment on a commercial scale at the Jackson plant.

Symington expects to have demonstrator models ready to show at the Department of Motor Vehicles Convention in Miami, Fla., starting Oct. 2.

PICTURES, PICTURES—Charles J. Symington Jr., left, president of Dashew PhotoData Corp., whose career has revolved around pictures, confers with W. Thomas Smith Jr., president of Eastern Division of School Pictures, Inc., on new identification card.

STARTING this new venture, Symington brings a record of business success as head of Rochester Laboratories, 950 Ridge Road, Webster, launched 14 years ago, greatly expanded and finally sold to School Pictures Inc. of Jackson, Miss. Then Symington became a vice president and director of that company and president and general manager of its Eastern Division. He resigned from the latter post in order to head Dashew PhotoData Corp., and was succeeded by W. T. Smith Jr. of Jackson.

Symington lived in Rochester as a baby, but grew up in New York City. He is the son of Charles J. Symington, then president of the Symington-Gould Corp., manufacturers of railroad equipment in Rochester and Depew. Charles Jr. is a first cousin of Missouri Sen. W. Stuart Symington.

The present Rochesterian graduated from Harvard in 1936 and Trinity College, Cambridge in 1938 with an M.A. in English literature. Then he went with an advertising agency in Chicago for two years, worked for a year in the Depew foundry, served five years in the Navy, then cast his lot with future growth of Canada. He established Lookout, Ont., a rather wild region, grubstaked prospectors flown into the wilds, carried hunting and fishing parties to their favorite grounds.

Then he married Mary Jo Finucane of Rochester, daughter of Bernard E. Finucane, now board chairman of the Security Trust Co. He took his bride to Sioux Lookout, but soon decided that business might be all right for a bachelor, but hardly civilized enough for a prospective father, so they returned to Rochester and looked around for another business.

His father-in-law was a director of the Kryptar Corp. and knew that this firm was about to divest itself of its former Technifinish operation, a mail order amateur photofinishing business, which had been highly successful before Kryptar went into the film manufacturing business.

* * *

SYMINGTON FORMED

Rochester Laboratories Inc. with James Wilmot and Claude Wright, bought the photofinishing business and set up shop in the former Winpro camera plant in Webster. Later he bought out his partners' interest and expanded into larger quarters.

Amateur photofinishing proved to be a highly seasonal business, so Symington looked around for other work for the winter season, thus got into the field of taking pictures of school children. He organized franchised photographers who contacted the schools, took the individual pictures and sent the negatives to Rochester for printing.

This business grew so fast that it soon far surpassed amateur photofinishing, and since the two did not operate too well together, Symington sold the mail order business to Carhart's and concentrated on the school field, for which he was equipped to process a million pictures a week. The average student bought a package of 20 pictures costing less than $3, or about as much as snapshots.

His biggest competitor was School Pictures Inc. of Jackson, Miss., which operated nationally but was anxious to increase its business in the East where Symington's operations were largely concentrated. They made such a good offer that he sold out to them, but continued to operate as president of the Eastern Division and vice president and a director of the parent company.

* * *

TWO EXECUTIVES, Thomas Greenwell, plant manager, and Mary Berard, production manager, who have been with the company almost since it was started by William J. Brown back in the 30's, are still highly important to the success of the business, which in peak periods requires 100 young women in processing the pictures.

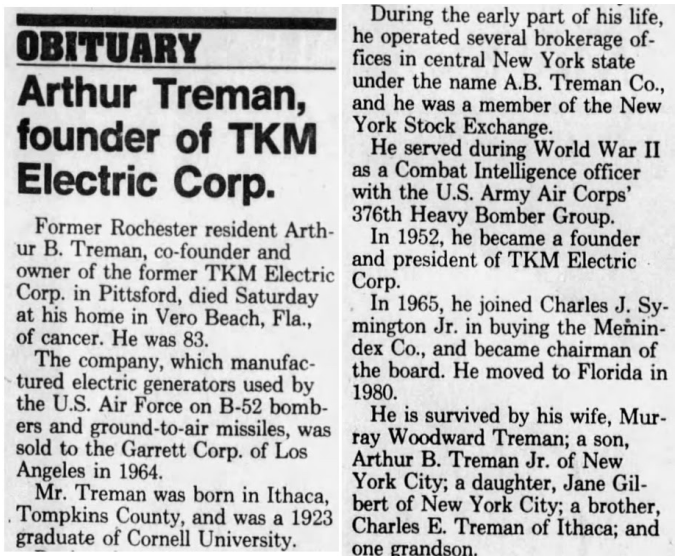
School Pictures Inc. turned out approximately 100 million prints last year, about one-third of them in color. This year it looks as though 45 per cent would be in color. The company also manufactures cameras and other equipment. It recently offered 100,000 shares of its stock to the public at 9⅞ a share and at 9 to employes. This stock is now listed at $30 a share.

In cooperation with Dashew PhotoData, with use of the bi-camera and the regular School Pictures camera, the company plans to offer embossed photo identification cards along with the packets of pictures this year with prospects of greatly increasing the volume of the new product.

[HN004O][GDrive]

1965 (May) - Purchases Memindex Co. with Arthur Treman (founder and president of TKM Electric Corp.)

Article is from 1985; it is the passing of **Arthur Treman** : See full page at [HN004R][GDrive] .



OBITUARY

Arthur Treman, founder of TKM Electric Corp.

Former Rochester resident Arthur B. Treman, co-founder and owner of the former TKM Electric Corp. in Pittsford, died Saturday at his home in Vero Beach, Fla., of cancer. He was 83.

The company, which manufactured electric generators used by the U.S. Air Force on B-52 bombers and ground-to-air missiles, was sold to the Garrett Corp. of Los Angeles in 1964.

Mr. Treman was born in Ithaca, Tompkins County, and was a 1923 graduate of Cornell University.

During the early part of his life, he operated several brokerage offices in central New York state under the name A.B. Treman Co., and he was a member of the New York Stock Exchange.

He served during World War II as a Combat Intelligence officer with the U.S. Army Air Corps' 376th Heavy Bomber Group.

In 1952, he became a founder and president of TKM Electric Corp.

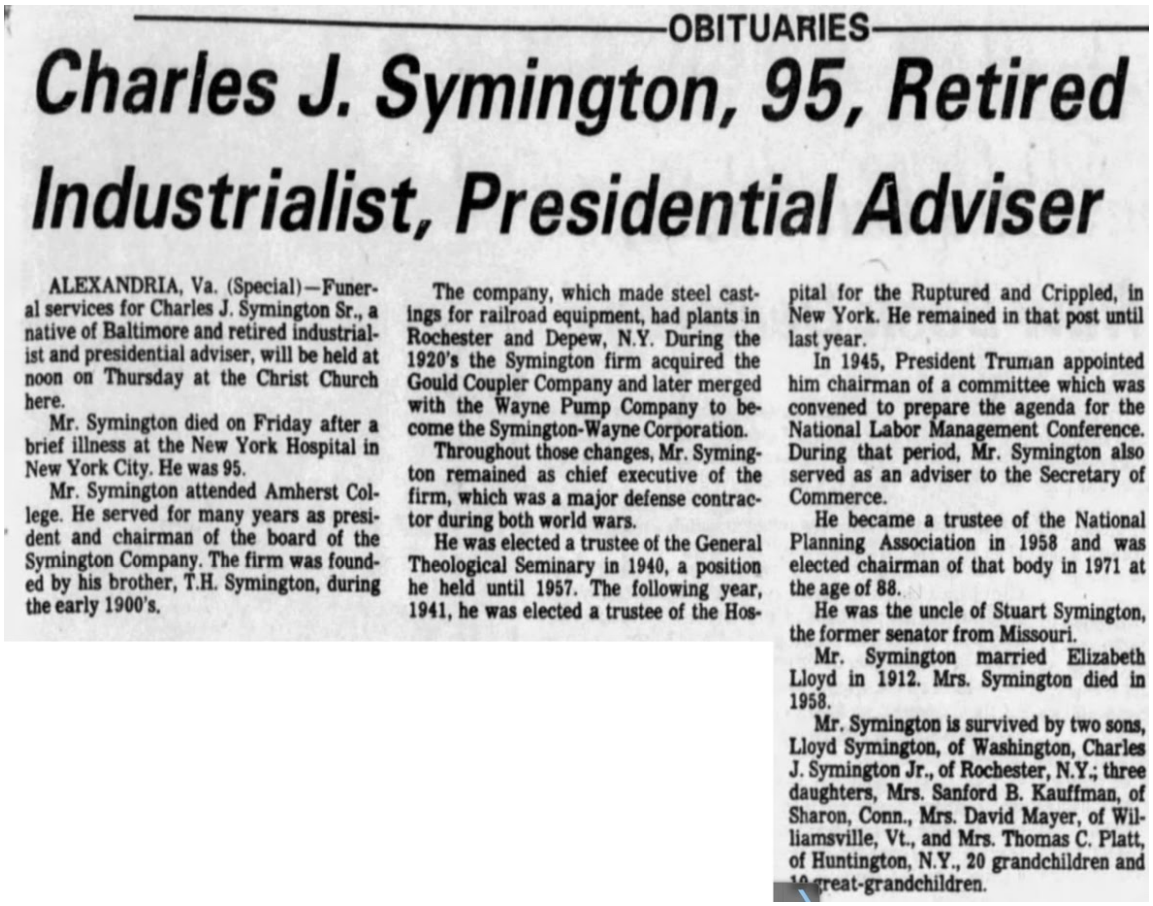
In 1965, he joined Charles J. Symington Jr. in buying the Memindex Co., and became chairman of the board. He moved to Florida in 1980.

He is survived by his wife, Murray Woodward Treman; a son, Arthur B. Treman Jr. of New York City; a daughter, Jane Gilbert of New York City; a brother, Charles E. Treman of Ithaca; and one grandson.

[HN004S][GDrive]

1978 (Aug) - Died

Full page : [HN004P][GDrive]



OBITUARIES

Charles J. Symington, 95, Retired Industrialist, Presidential Adviser

ALEXANDRIA, Va. (Special)—Funeral services for Charles J. Symington Sr., a native of Baltimore and retired industrialist and presidential adviser, will be held at noon on Thursday at the Christ Church here.

Mr. Symington died on Friday after a brief illness at the New York Hospital in New York City. He was 95.

Mr. Symington attended Amherst College. He served for many years as president and chairman of the board of the Symington Company. The firm was founded by his brother, T.H. Symington, during the early 1900's.

The company, which made steel castings for railroad equipment, had plants in Rochester and Depew, N.Y. During the 1920's the Symington firm acquired the Gould Coupler Company and later merged with the Wayne Pump Company to become the Symington-Wayne Corporation.

Throughout those changes, Mr. Symington remained as chief executive of the firm, which was a major defense contractor during both world wars.

He was elected a trustee of the General Theological Seminary in 1940, a position he held until 1957. The following year, 1941, he was elected a trustee of the Hospital for the Ruptured and Crippled, in New York. He remained in that post until last year.

In 1945, President Truman appointed him chairman of a committee which was convened to prepare the agenda for the National Labor Management Conference. During that period, Mr. Symington also served as an adviser to the Secretary of Commerce.

He became a trustee of the National Planning Association in 1958 and was elected chairman of that body in 1971 at the age of 88.

He was the uncle of Stuart Symington, the former senator from Missouri.

Mr. Symington married Elizabeth Lloyd in 1912. Mrs. Symington died in 1953.

Mr. Symington is survived by two sons, Lloyd Symington, of Washington, Charles J. Symington Jr., of Rochester, N.Y.; three daughters, Mrs. Sanford B. Kauffman, of Sharon, Conn., Mrs. David Mayer, of Williamsville, Vt., and Mrs. Thomas C. Platt, of Huntington, N.Y., 20 grandchildren and 10 great-grandchildren.

[HN004Q][GDrive]

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Housatonic

William Stuart Symington III (born 1901)

Wikipedia 🌐 Stuart Symington

June 26, 1901 – December 14, 1988

🌳 See the Symington Family Tree PDF (https://drive.google.com/open?id=1Up5Wff_tkeaqfmvJ-4ZCd00ezWJwptUb)

Son of **William Stuart Symington II (born 1871)** (conceptualized **Gibson Island** before his passing)

Grandson of **William Stuart Symington I (born 1839)** (Co-Founder of the **Davison, Symington and Company** - Which was the name of the **Davison Chemical Company** in the late 1800s.

Married to -

Father of James Wadsworth Symington (born 1901)

For now - See the Wikipedia page - [HK000M] (he is often simply referred to as **"Stuart Symington"**)

James Wadsworth Symington (born 1927)

Wikipedia James W. Symington

https://en.wikipedia.org/wiki/James_W._Symington

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Saved Wikipeda - https://en.wikipedia.org/wiki/James_W._Symington / 2020-06-12-wikipedia-org-james-w-symington.pdf

James W. Symington

From Wikipedia, the free encyclopedia

Jump to navigationJump to search

James W. Symington

Member of the

U.S. House of Representatives

from Missouri's 2nd district

In office

January 3, 1969 – January 3, 1977

Preceded by

Thomas B. Curtis

Succeeded by

Robert A. Young

Chief of Protocol of the United States

In office

March 22, 1966 – March 31, 1968

President

Lyndon B. Johnson

Preceded by

Lloyd Nelson Hand

Succeeded by

Angier Biddle Duke

Personal detailsBorn

James Wadsworth Symington

September 28, 1927 (age 92)

Rochester, New York, U.S.

Political party

Democratic

Relations

See Symington family

Parents

Stuart Symington

Evelyn Wadsworth

Education

Yale University (BA)

Columbia Law School (JD)

Military serviceAllegiance

United States

Branch/service

United States Marine Corps

Years of service

1945–1946

Rank

Private first class

Battles/wars

World War II

Awards

Order of Friendship (2008)

James Wadsworth Symington (/ˈ saɪmɪŋtən/; born September 28, 1927) is an American lawyer and politician who represented Missouri from 1969 to 1977 as a four-term member of the U.S. House of Representatives. Prior to that, in the late 1960s, he served as Chief of Protocol of the United States.

Biography[edit]

Youth, family, and education[edit]

Symington, son of Stuart (U.S. senator, Missouri) and Evelyn (Wadsworth) Symington, was born on September 28, 1927, in Rochester, New York. He is the great-grandson of James Wolcott Wadsworth (U.S. Congress, New York) and grandson of James Wolcott Wadsworth Jr. (U.S. Congress, New York) and great-grandson of John Hay. James attended St. Bernard's School in New York City, St. Louis Country Day School in St. Louis, Missouri. In 1945, he graduated from Deerfield Academy in Massachusetts and enlisted in the United States Marine Corps at the age of 17.[1] He served in the Marine Corps as a private first class from 1945 to 1946. Symington earned his Bachelor of Arts degree from Yale University in 1950 where he sang as a member of the Whiffenpoofs and the Glee Club.[2] He also joined Berzelius secret society (according to the 1950 Yale Banner). He graduated from Columbia Law School in 1954.

Early legal career and public service[edit]

After graduating from law school, Symington served for two years as Assistant City Counselor (1954–1955) for St. Louis. In 1958, Symington entered the United States Foreign Service and was posted to London as assistant to John Hay Whitney, the U.S. ambassador to the United Kingdom and his cousin once removed on his mother's side.[3] He served in this role until 1960, when he returned to private practice in Washington, D.C.. He served in a series of roles in government from 1961 to 1968: deputy director, Food for Peace (1961–1962); administrative assistant to Attorney General Robert F. Kennedy (1962–1963); director, President's Committee on Juvenile Delinquency (1965–1966); consultant, President's Commission on Law Enforcement and Administration of Justice (1965–1966); and Chief of Protocol of the United States (1966–1968).

Congressional career[edit]

In 1968, Symington was elected as a Democrat to the 91st Congress to represent Missouri's 2nd Congressional District. He served four terms in the U.S. House of Representatives from 1969 to 1977. While in Congress, he served on the House Commerce Committee and the Committee on Science and Technology, chairing the subcommittees on Space Science and Applications; Science, Research & Technology; and International Cooperation.

In the 1976 election, he chose not to seek his seat for a fifth term; rather, he made an unsuccessful bid for the Democratic nomination to fill the U.S. Senate seat vacated by his father, who retired after serving four terms. He faced Missouri Governor Warren Hearnes and Congressman Jerry Litton in the

Democratic primary. Litton won the primary but was killed when his plane crashed en route to the victory party. Hearnes was named the Democratic candidate and ultimately lost to Republican Party candidate John Danforth. At the end of his congressional term, Symington returned to the D.C.-based law firm Smathers, Symington & Herlong as a partner.

Post-congressional roles[edit]

Symington in 2001

Symington served as director of The Atlantic Council from 1986 to 2001, and as director of the Library of Congress Russian Leadership Program in 2001. In 1992, he founded the American-Russian Cultural Cooperation Foundation, which he chaired from its inception until 2015.[4][5] He also made occasional appearances as a singer.[6]

Symington appeared as a commentator in the 1990 Ken Burns film *The Civil War*.[7] As of 2001, he was practicing law with the law firm of Nossaman LLP/O'Connor & Hannan, where he specializes in legislative and administrative representation.[8][9] Symington is also a writer. A collection of his poems, songs, and prose, *A Muse 'N Washington: Beltway Ballads and Beyond* , was published in 1999.

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Housatonic

Symington Machine Corporation

Full book video recording here : [HB000E][GDrive]

SYMINGTON MACHINE CORPORATION

The **Symington Machine Corporation** was a major manufacturer during WW I, producing British and Russian shrapnel from April, 1916 to March, 1917. The shrapnel was used in anti-aircraft and 75mm field guns. A new plant was built in 1917 to accommodate a contract for the manufacture of 3,000 75mm 1916 model field guns.

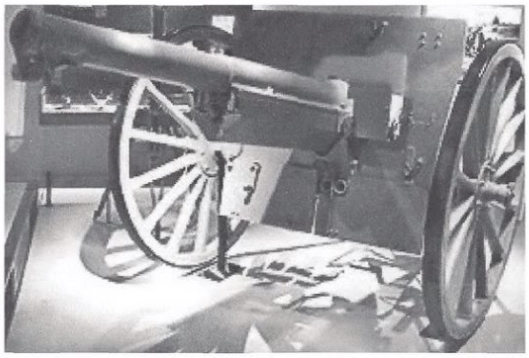
In addition to the manufacture of guns, the **Symington-Anderson Company** manufactured 500 6-inch trench mortars while the **Symington Forge Corporation** constructed a plant, which opened in 1917, to produce forgings for 75mm steel and shrapnel. By December, 1918 it had delivered 3,595,782 forgings to the military.

The Symington-Gould Corporation, headed by Charles J. Symington, was founded in 1924. The manufacturing plant was located at 20 Symington Place.

At left below, the diagram shows the internal structure of a shrapnel shell invented by British General Harry Shrapnel. Shrapnel, or shell fragments, resulted when an artillery projectile, provided with a bursting charge filled with lead balls, exploded in flight.

A 75 mm field gun is shown below. It was the major field piece used by the French and the Allied Expeditionary Forces during WW I. At right below is one of the 75 mm Mark IV shells produced by the thousands at Symington's Lincoln Park factory.

By the 1920s, the Symington-Gould Corporation was manufacturing railway equipment, draft gears, journal boxes and devices for railway cars, and steam and electric locomotives. They also produced a line of malleable iron castings.



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[HB000F][GDrive]

OCR

*The **Symington Machine Corporation** was a major manufacturer during WW I. producing British and Russian shrapnel from April, 1916 to March. 1917. The shrapnel was used in anti - aircraft and 75mm field guns. A new plant was built in 1917 to accommodate a contract for the manufacture of 3,000 75mm 1916 model field guns. In addition to the manufacture of guns, the **Symington-Anderson Company** manufactured 500 6-inch trench mortars while the **Symington Forge Corporation** constructed a plant. which opened in 1917. to produce forgings for 75mm steel and shrapnel. By December, 1918 it had delivered 3,595,782. forgings to the military. The **Symington-Gould Corporation**, headed by Charles J. Symington. was founded in 1924. The manufacturing plant was located at 20 Symington Place. At left below. the diagram shows the internal structure of a shrapnel shell invented by British General Han}; Shrapnel. Shrapnel. or shell fragments. resulted when an artillery projectile. provided with a bursting charge filled with lead balls, exploded in flight. A 75 mm field gun is shown below. It was the major field piece used by the French and the Allied Expeditionan' Forces during WW I. At right below is one of the 75 mm Mark IV shells produced by the thousands at Symington's Lincoln Park factory. By the 1920s, the **Symington-Gould Corporation** was manufacturing railway equipment. draft gears- joumal boxes and dC\ices for railway ears. and steam and electric locomotives. The} also produced a line of malleable iron castings.*

housatonic

Symington Wayne Corporation

Enthusiast notes about Symington Wayne Corporation

See [HW000O][GDrive]

It used to run at about 175 pounds for years. I expect the valves and rings are worn. But I cannot seem to find any information on this manufacturer or anything source for parts either.

This was not a fly by night company and I'm surprised that there is virtually no information available on these. What ever happened to the Wayne Pump Company of Wayne Indiana ? ? ?"

A vintage Wayne air compressor
[HW000P][GDrive]

Well, we did some research, and this may be part of the story, Ron:

> *"On June 11, 1943, the assets of Equipment Corporation were acquired by the Wayne Pump Company and moved to Fort Wayne, Indiana. Six years later [this would be about 1949], following the purchase of the company by* ***C.J. Symington [Charles Julian Symington (born 1883)]****, the Wayne Pump Company merged with the Martin & Schwartz Company from Salisbury, Maryland. Symington combined the field working group and the senior management group of Martin & Schwartz with the Wayne Pump Company name and location. In 1951, poor labor conditions and a strike in Fort Wayne forced Symington to move the Hose Reel Division and the Gasoline Pump Division back to Salisbury, Maryland, leaving the Air Compressor Division as the only product line left in Fort Wayne, Indiana.*
>
> *During the late 50's, the* ***Wayne Pump Company*** *name was changed to Symington – Wayne to include the Symington – Gould Company in Depew, New York. In the next ten years the* ***Symington – Wayne Company*** *would experience more changes than just its name. The following decade saw controlling interest change to* ***Dresser Industries****."*

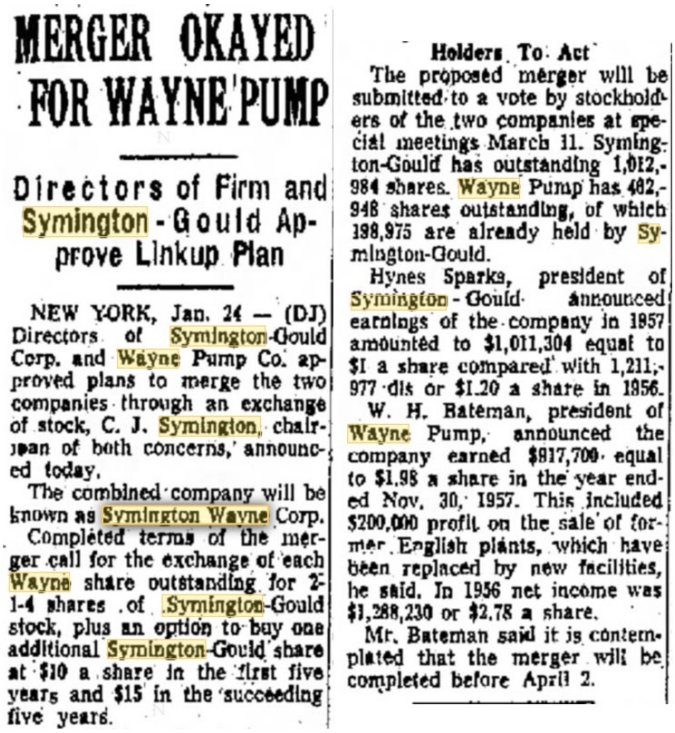
[...]

Then, Who is Wayne-Vaughn Equipment?

Now, to complicate that a bit, this site has a post from another visitor about Wayne air compressors. It says "Wayne-Vaughn Equipment Company in Fort Wayne, Indiana sent me a PDF manual for mine (a Wayne air compressor), which is a model #5163HG. They only have the complete valve assemblies in stock. No other parts available. In the picture of the tag, the top number is the model# and the bottom number is the serial#. Number for Wayne-Vaughn parts is 877-655-6804 X-202. I talked to Tom and he was most helpful and quite patient. He told me about the history of my particular model (last made in 1950). Hope this helps. Good Luck

1958 (Jan 25)

Full page : [HN003L][GDrive]



MERGER OKAYED FOR WAYNE PUMP

Directors of Firm and Symington-Gould Approve Linkup Plan

NEW YORK, Jan. 24 — (DJ) Directors of Symington-Gould Corp. and Wayne Pump Co. approved plans to merge the two companies through an exchange of stock, C. J. Symington, chairman of both concerns, announced today.

The combined company will be known as Symington Wayne Corp.

Completed terms of the merger call for the exchange of each Wayne share outstanding for 2-1-4 shares of Symington-Gould stock, plus an option to buy one additional Symington-Gould share at $10 a share in the first five years and $15 in the succeeding five years.

Holders To Act

The proposed merger will be submitted to a vote by stockholders of the two companies at special meetings March 11. Symington-Gould has outstanding 1,012,984 shares. Wayne Pump has 482,948 shares outstanding, of which 198,975 are already held by Symington-Gould.

Hynes Sparks, president of Symington-Gould announced earnings of the company in 1957 amounted to $1,011,304 equal to $1 a share compared with 1,211,977 dls or $1.20 a share in 1956.

W. H. Bateman, president of Wayne Pump, announced the company earned $817,709 equal to $1.98 a share in the year ended Nov. 30, 1957. This included $200,000 profit on the sale of former English plants, which have been replaced by new facilities, he said. In 1956 net income was $1,288,230 or $2.78 a share.

Mr. Bateman said it is contemplated that the merger will be completed before April 2.

[HN003M][GDrive]

1958 (March 12)

Full pages :

- Page 1 - [HN003N][GDrive]
- Page 2 - [HN003O][GDrive]

Wayne Pump Merges

Bateman To Head New Corporation

William H. Bateman III, of Salisbury, was slated to be elected today to the presidency of a new multi-million-dollar manufacturing enterprise, the Symington Wayne Corp.

Symington Wayne is the result of a merger of Salisbury's Wayne Pump Co., which Bateman headed, with the Symington-Gould Corp., of Depew (near Buffalo), N.Y.

Symington - Gould, maker of steel castings and railroad equipment, had owned a controlling interest in Wayne Pump, maker (as most Salisburians know) of gasoline pumps of the kind used by service stations.

The merger was approved yesterday by stockholders of the two companies.

Directors of the new company were scheduled to hold their first formal meeting in New York City today, and it was at this meeting that Bateman was to be named president. His election was considered no more than a formality.

AT THE SAME time, Hynes Sparks, who had been president of Symington - Gould, was to be elected board chairman of Symington Wayne.

C. J. Symington, board chairman of Symington-Gould and elder statesman of the entire enterprise, was to become chairman of the executive committee of the new corporation's board of directors.

Bateman told the Times that, although Symington - Wayne will maintain executive offices in New York, he will continue to make his home in Salisbury and to keep his principal office here.

Corporate functions will be divided between Salisbury and New York, Bateman said, with the former being the head accounting office and the latter the chief sales office.

Yesterday's merger, effected through an exchange of stocks, is the latest of many in the last decade involving what was originally the Martin & Schwartz, Inc., of Salisbury, an old-line manufacturer of gasoline pumps.

In January of 1950, all stock in Martin & Schwartz was purchased by Symington-Gould.

IN NOVEMBER of 1951, Martin and Schwartz was merged with the Wayne Pump Company of Fort Wayne, but, company headquarters were transferred to Slisbury.

At the time of this merger, Symington - Gould owned about 32 per cent of Wayne's stock. Over the years, these holdings were gradually increased to about 43 per cent.

Meantime, Symington - Gould di- (See BATEMAN, Page 2)

versified in other directions. One of its recently acquired holdings was in the Oregon Metallurgical Company, a small firm manufacturing castings of relatively rare metals.

Yesterday's merger was expected to lead to operational economies, and, according to talk in financial quarters, would probably effect tax savings.

In a proxy statement issued prior to yesterday's stockholders' meeting, Wayne Pump officials declared:

"Each company is faced with particular problems because it is in a cyclical business primarily dependent upon one line of products for one industry, Symington-Gould on freight car castings for the railroad industry and Wayne on service station pumps for the petroleum industry; the merger will, it is believed, contribute to the solution of these problems . . . It makes available the combined resources and increase financial strength of both enterprises for future expansion and diversification."

With the dissolution of Wayne Pump as a corporate entity, the Salisbury area would lose its only representation on the New York Stock Exchange.

Wayne Pump stock closed on the Big Board yesterday at 20⅝. Symington - Gould closed at 8⅛.

Under the articles of merger, each share of Symington - Gould was to remain outstanding as one share of Symington Wayne, and each share of Wayne Pump was to be converted into two and a quarter shares of Symington Wayne.

There were 1,012,984 shares of Symington - Gould outstanding and 462,948 shares of Wayne Pump.

No changes whatsoever are now anticipated in the local plant's manufacturing operations.

The plant has recently been expanding its payroll to mass - produce a new kind of blending pump for which it has received a huge order from Sun Oil Co.

Guns, Gas End Second Night Of Prison Riot

PETROS, Tenn. (AP) — Rioting prisoners at Brushy Mountain State Prison — their disturbances ended by gunfire and tear gas — told newsmen they were ready to return to work.

A spokesman for the convicts, peering through the shattered glass of a window in his riot-

[HN003P][GDrive]

1958 (April 1)

Full page : [HN003J][GDrive]

Merger Plans Win Approval

NEW YORK (AP) — Directors of the Symington-Gould Corp. and the Wayne Pump Co. announced Thursday that plans for merging the two firms have been approved.

Symington-Gould manufactures railway equipment specialties and castings. Wayne, with plants at Ironton, Ohio, Fort Wayne, Ind., Salisbury, Md., and Toronto, Ont., makes gasoline pumps and auto service station equipment. The merged company would be called the Symington Wayne Corp.

[HN003K][GDrive]

1959 (Jan 30)

Full page : [HN003Q][GDrive]

Net Off Slightly For Symington

Salisbury, Md., Jan. 29 (AP)—The Symington-Wayne Corporation said today in a preliminary report net sales for the year ended 1958 totaled $41,208,526 against $45,446,905 in 1957.

The net included operations of the old Wayne Pump Company from December 1, 1957, to March 12, 1958, when it was merged with Symington Wayne.

Net profit after taxes last year was $1,639,291 against $1,746,029 for 1957. The 1957 figure included a gain of $199,925 on the sale of its English plant.

Profit per share for 1958 was $1.02 against $1.09 in the previous year. Directors declared the regular quarterly dividend of 15 cents per share on capital stock payable next April 15 to stockholders of record April 1.

[HN003R][GDrive]

1959 (May)

Full page [HN003S][GDrive]

Stockholders Vote to Sell Globe Hoist

Stockholders of the Globe Hoist Co. voted at a meeting in Des Moines Saturday to sell operating assets of the company to the Symington-Wayne Corp., of Salisbury, Md.

The sale does not include the Globe Machinery & Supply Co. of Des Moines which will continue to operate as in the past.

The assets sold were valued at $1,800,000 to $2,000,000. The sale was reported to be primarily for cash.

Announcement of the sale was made by Frank Bredimus, of Philadelphia, Penn., president of the Globe Hoist Co.

Some assets of the Globe Hoist Co. were retained by the stockholders. They include the Globe Hoist Co. building in Des Moines and the Credit Acceptance Corp. of Des Moines.

Close D. M. Plant

Symington - Wayne will close the Des Moines plant which employs 60 persons. The Globe Hoist Co. has a total employment of 400 in three plants.

Symington - Wayne has rented the Globe Hoist building here for one year to allow time for moving fixtures and equipment to other plants.

The Globe Hoist Co. was founded here in 1936 by the late Fred W. Swanson, sr. It is the leading manufacturer of hoists in the world.

After Mr. Swanson's death in November, 1956, his son Fred W. Swanson, jr., became board chairman of the company. He died in January of this year at the age of 47.

Principal Holdings

Principal stockholders in the Globe Hoist Co. are Mrs. F. W. Swanson, jr., Mrs. Stratton Eller, Mrs. Joseph Davis, and Mrs. Richard Morgan, all of Des Moines, and the Globe Machinery & Supply Co. of Des Moines.

A newly formed corporation will operate the unsold assets and business under the continuing name of the Globe Hoist Co., it was announced. Plans call for the retention of present management.

Globe Hoist has factories and offices in Des Moines, Philadelphia and Long Beach, Cal. It owns controlling interest in Pacific Curtainwall, Inc., of Long Beach, Cal.

Station Hoists

The company manufactures automotive hoists for service stations and garages, and a line of materials handling equipment.

It was incorporated in 1936 as a successor of the manufacturing division of Globe Machinery & Supply Co., an old Iowa firm.

Here and Abroad

The Symington-Wayne Corp. has plants in Salisbury, Md.; Fort Wayne, Ind.; Ironton, Ohio, and Buffalo, N. Y. as well as in London, England; Rio de Janiero, Brazil; Toronto, Canada, and Capetown, South Africa.

Symington-Wayne manufactures gasoline station pumps and other equipment, railroad equipment and diversified pumps. Principal companies in the corporation are the Wayne Pump Co., which makes gasoline station pumps, and the Gould Pump Co.

[HN003T][GDrive]

1959 (Oct 29)

Full age : [HN003U][GDrive]

Wayne Report Shows Sales Up, Profit Down

Directors of Symington Wayne Corp. learned in a meeting yesterday that although net sales the first nine months this year topped last year's comparable period, net profit and earnings per share declined.

W. H. Bateman, president of the firm here, announced that the directors have declared a regular quarterly dividend of 15 cents per share on the corporation's capital stock, payable Jan. 15, 1960 to stockholders of record Jan. 4, 1960.

Net sales for nine months ending Sept. 30 this year were $34,096,216, the report showed.

Although this was about $1,500,000 more than net sales for the same period in 1958, the corporation's net profit, after taxes, was down. The profit figures were $1,578,689 for the first nine months of 1958 compared with $1,479,328 for the same period in 1959.

Earnings for the period this year were 92 cents per share compared to 98 cents per share in the first nine months of 1958.

[HN003V][GDrive]

1960 (Feb 16)

Full page : [HN003W][GDrive]

APPOINTED. W. H. Bateman, president of Symington Wayne Corp., has announced the appointment of A. E. Allen, Ft. Wayne, Ind., above, as vice president for planning, a newly created post in the corporation. Mr. Allen, formerly head of the Fort Wayne and Ironton manufacturing plants, will assist Mr. Bateman with long range planning and with new acquisitions in Symington Wayne's expansion program. He will be a frequent visitor to the Salisbury plant.

[HN003X][GDrive]

1960 (May 9)

Full page : [HN003Y][GDrive]

New Way to Buy Gas Introduced

A revolutionary way to buy motor gasoline is being initiated in the coastal area from Santa Cruz to Lompoc.

Dispensing seven grades of gasoline at seven prices, Hancock and Norwalk service stations report that for the first time motorists are offered fuels to fit their individual cars as well as their pocketbooks.

The West's newest gasoline marketing operations utilize a single "Econ-O-Blend" (Hancock) or "Power-Blend" (Norwalk) pump to dispense different fuels by a unique blending at the nozzle.

The principle of custom blending gasoline is similar to that of regulating hot and cold taps at a sink to get the desired water temperature from a single faucet.

To make it easy for drivers to find ideal fuels for their specific cars, charts posted in the Hancock and Norwalk stations list makes, models, and recommended blend numbers. Station attendants have been instructed to "sell down" to customers by suggesting that they keep trying the next lower blend until finding the most economical blend that gives good performance.

The pumps, manufactured by the Wayne Pump Company division of the Symington Wayne Corporation, reportedly offer the only new way to buy gasoline here in 25 years. Wide use of the pumps by other companies in the East and the Midwest has been highly successful.

[HN003Z][GDrive]

1961 (May 13) - Buying SK tools

Full page : [HN0040][GDrive]

AGREES TO BUY TOOL PRODUCER FOR 3 MILLION

Symington Wayne corporation announced that it has agreed to purchase Sherman-Klove company, Chicago designer and manufacturer of hand tools, for about 3 million dollars.

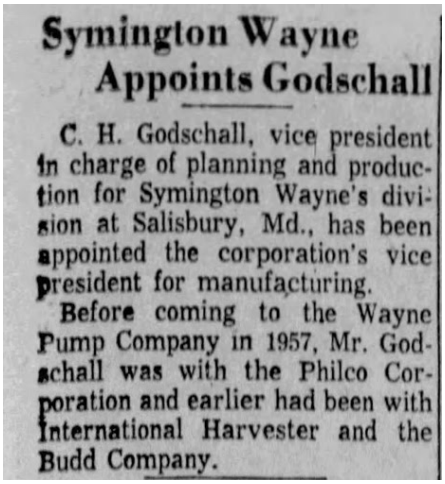
The acquisition is subject to approval of Sherman-Klove shareholders and other conditions, but is expected to be completed early next month.

Under the agreement, the Chicago firm would become a Symington Wayne subsidiary, operating under its present management. William J. McDonough, president of Sherman-Klove, would head the subsidiary.

[HN0041][GDrive]

1961 (May 28) - Philco / Budd / Godschall

Full page : [HN0042][GDrive]



Symington Wayne Appoints Godschall

C. H. Godschall, vice president in charge of planning and production for Symington Wayne's division at Salisbury, Md., has been appointed the corporation's vice president for manufacturing.

Before coming to the Wayne Pump Company in 1957, Mr. Godschall was with the Philco Corporation and earlier had been with International Harvester and the Budd Company.

[HN0043][GDrive]

1961 (Sep 22) - Buys Electrolite

Full page : [HN0044][GDrive]

Symington-Wayne Buys Tool Firm

NEW YORK — Symington Wayne Corp. announced yesterday that it had made an agreement to acquire the business and operating assets of Electrolite Corp., Defiance, Ohio, for a cash payment in an undisclosed amount.

Electrolite, in business for 30 years, is a manufacturer and national marketer of mechanics' hand tools.

W. H. Bateman, of Salisbury, president of Symington Wayne, said that the purchase of Electrolite is in line with his company's policy of diversification and growth by acquisition.

Electrolite's products will complement the hand tool line manufactured by Symington Wayne's subsidiary the Sherman - Klove Co., Chicago.

"With the acquisition," Mr Bateman said, "our corporation will have a broader line of hand tools and an increased participation in a business which has in the past been less subject than most to cyclical business trends."

In addition to the Electrolite plant in Defiance, Symington Wayne which manufactures petroleum, industrial and transportation equipment, has seven plants in the U.S. and seven abroad. The corporation has marketing offices in the world's principal trade centers.

Electrolite will continue under present management and will be operated as a wholly - owned subsidiary of Symington Wayne.

C. W. Schlooer, formerly executive vice president and general manager, will be president.

[HN0045][GDrive]

1962 (Feb 8)

Pages:

- page 1 [HN0046][GDrive]
- page 21 [HN0047][GDrive]

Pump Maker's Net Profit Off

NEW YORK — Symington Wayne Corp., Salisbury, reported yesterday consolidated net profits for the year 1961 of $1,705,593 or $1.05 per share on sales of $56,250,251.

Profits for the year 1960 were $2,169,364 or $1.35 per share on sales of $58,017,356.

The company attributed the lower earnings in 1961 to a sharp decline in its railroad steel foundry operations reflecting a depressed condition of the railroad business. The combined sales and profits of other company operations as a group were, however, ahead of 1960.

-:-

THE COMPANY had a substantial backlog of business on hand at the beginning of the year, including a recent order for approximately six million dollars for the company's blending pump.

On April 3, 1961, Symington-Wayne acquired for cash the Sherman-Klove Company in Chicago, Ill., manufacturer of socket wrenches and accessories and on Oct. 31, 1961, also for cash, Lectrolite Corp. of Defiance, O., manufacturer of flat wrenches and other mechanic hand tools. It was reported that these companies contributed very satisfactorily to overall corporation earnings during the portion of the year they operated as company subsidiaries.

The company also acquired on June 28, 1961, a majority inter-

((See SYMINGTON, Page 2)

"Sing Along With Mitch" Tonite at 10 on Chan. 11 - 16 & CATV 4 Powell Motors & Buick. — adv.

Continued From Page One

SYMINGTON

est in Wayne Italiana, SPA, a leading manufacturer of gasoline service station pumps.

THE COMPANY announced yesterday that the board of directors had approved a proposed issue of about $5,000,000 of convertible subordinated debentures to be offered to the holders of common stock and stock purchase warrants of the corporation. It is expected that a registration statement covering the debentures will be filed with the Securities and Exchange Commission during February 1962.

The regular quarterly dividend of 20 cents per share was declared payable on April 16, to stockholders of record on April 2.

[HN0048][GDrive]

1965 (April 10) - NY Times - Mention of The "Symington-Wayne Corporation"

See [HN003H][GDrive]

Operations of the Symington Wayne Corporation last year resulted in rises in sales and earnings over those of 1963, it reported yesterday.

The concern, a manufacturer of gasoline pumps and service-station and railway equipment, showed net sales of $84,754,784, compared with $74,109,200 in 1963. Net income increased to $4,180,805, or $2.35 a share, from $3,176,642 or $1.75 a share.

The New York Times
Published: April 10, 1965

[HN003I][GDrive]

TODO - Leads

https://www.newspapers.com/image/375957968/?terms=symington-wayne%2Bcorporation

Nye Tool company-

https://www.newspapers.com/image/376384897/?terms=symington-wayne%2Bcorporation

Computer !

https://www.newspapers.com/image/291449619/?terms=symington-wayne%2Bcorporation

Emile F. duPont becomes director...

https://www.newspapers.com/image/291626402/?terms=symington-wayne%2Bcorporation

Frank Brediumus

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https://www.newspapers.com/image/376758328/?terms=symington-wayne%2Bcorporation

Symington-Wayne, universal american Corp - plan to merger

https://www.newspapers.com/image/292296755/?terms=symington-wayne%2Bcorporation

Tender offer from dresser industries

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https://www.newspapers.com/image/283244629/?terms=symington-wayne%2Bcorporation

1967 Dec - Dresser acquires Symington-Wayne

https://www.newspapers.com/image/377036637/?terms=symington-wayne%2Bcorporation

No longer mentioned after 1968 / 1969

BITCHUTE @Housatonic **YOUTUBE** @HousatonicLive **ODYSEE** @Housatonic **BRIGHTEON** @Housatonic

Housatonic

S3 Technologies

S3 Technologies : ("S3" stood for "Simulation, Systems, and Services")

Part-owned (via GSE) as of 1995(?) by National Patent Development Corporation .

"In May 1990 Link-Miles Simulation Corporation, the domestic simulator business in Columbia, MD, announced a joint venture named General Energy Technologies with NPO Energia of the Soviet Union. General Energy Technologies would be a Soviet enterprise centered in Moscow and would provide Soviet and Eastern European simulation, training, and engineering services in energy related fields including nuclear and fossil fuel power plants, and chemical processing."

Newspapers com - Searches for "NPO Energia" (sorted by date)

1990 (May 2)

Encouraged by safety problems connected to Chernobyl

Full pages:

- [HN0004][GDrive]
- [HN0006][GDrive]

ment of Labor THE TAMPA TRIBUNE Wednesday, May 2, 1990 **Business & Finance** Tribune graphic

Soviets, Bicoastal unit form venture

By BILL SHELTON
Tribune Business Writer

TAMPA — Link-Miles Simulation Corp., a subsidiary of Tampa-based Bicoastal Corp., has formed a joint venture with a Soviet nuclear power plant designer to build training systems and instruct operators in that country.

Link-Miles, a Maryland company that builds control-room simulators for nuclear power plants, said the partnership with the Soviets is an attempt to boost that country's dismal safety record at its 50 nuclear powered generating facilities.

"There's no question that the disaster at Chernobyl helped this joint venture move along," says Gill Grady, director of contracts at Link-Miles. "The Soviets want to make their plants safer."

In 1986, a fire in one of four reactors at Chernobyl, about 80 miles north of the Ukrainian capital of Kiev, helped spur a core meltdown and an explosion that released huge clouds of radioactive particles into the atmosphere.

At least 300 Ukrainians have died because of the disaster, and about 150,000 people show some effects of radiation poisoning, according to a Soviet parliamentary delegation.

Grady said the partnership, in which Link-Miles is the majority owner, is the first of its kind. The joint venture, called General Energy Technologies, includes NPO Energia, a division of the Soviet Ministry of Atomic Energy, Grady said.

The Soviet Union is planning 30 more nuclear power plants, and Grady said the government had intended to build a training simulator at each facility. In the United States, a simulator costs $10 million to $15 million.

"But it's beginning to look doubtful they would want to build one simulator for each plant," Grady said, "but there will be sever-

See U.S.-SOVIET, Page 3D

[HN0005][GDrive]

The Tampa Tribune, Wednesday, May 2, 1990

U.S.-Soviet business venture set

■ From Page 1D

al more planned."

Link-Miles already is under contract to build simulators for NPO Energia, Grady said.

"Although we're going to be working with the same customer, the difference now is that we're hoping to branch into the actual training of the operators," Grady said.

"We have the expertise to build simulators for Soviet power plants," he added. "They have the expertise to design the plants and the hardware."

Most business agreements with organizations inside the Soviet Union contain delicate payment agreements.

Payment to Link-Miles for the initial contract with NPO Energia would be in U.S. currency, Grady said. But payments to the joint venture would involve some trading partners that would deal in commodities of value on the world market.

"But possibly even more valuable than the simulation business itself," Grady said, "is the potential for our use of the relatively low-cost brainpower of Soviet engineers and scientists."

Grady said he couldn't speculate on other business possibilities with the Soviets but forecasted that the joint venture has a bright future.

Link-Miles' parent is Bicoastal Corp., a Tampa-based company owned by investor Paul Bilzerian. Bilzerian last June was convicted by a federal jury on nine felony counts stemming from stock transactions he made in 1985 and 1986.

Bicoastal, under Chapter 11 bankruptcy reorganization since last November, was formerly The Singer Co., which made aircraft and nuclear power plant simulators.

[HN0007][GDrive]

Source pages :

- [HN0008][GDrive]
- [HN000A][GDrive]

THE SUN
Businessextra
C
WEDNESDAY

Link-Miles enters deal with Soviets

Venture will produce atomic-plant trainers

By Ted Shelsby

Link-Miles Simulation Corp. has formed a joint venture with a Soviet company to produce power plant simulators that could prevent a repetition of the 1986 Chernobyl nuclear accident, the Columbia-based company announced yesterday.

The Soviet Union has made "a big push" for Western-style power plant simulators since Chernobyl, according to Gilbert R. Grady, director of contracts for Link-Miles. He said the accident was blamed on operating error and might have been prevented with better training.

Link-Miles produces full-scale replicas of various control rooms used in power plants around the world. The simulators are used to train plant operators for normal operations and hone their skills in dealing with potential disasters.

The units are not just fancy look-alikes. They are connected to high-speed computers that "create" hundreds of different malfunctions or combinations of breakdowns, and it's up to the control-room operators to spot the problem and take corrective action.

Mr. Grady said that Link-Miles is investing between $500,000 and $1 million into a venture with NPO Energia, the Moscow-based organi-

See **LINK-MILES,** 3C, Col. 1

[HN0009][GDrive]

The Baltimore Sun (Baltimore, Maryland) · 02 May 1990, Wed · Page 23

WEDNESDAY, MAY 2, 1990

Venture will make simulators for Soviet nuclear power plants

LINK-MILES, from 1C

zation responsible for the Soviets' operating nuclear power plants and for training personnel.

Link-Miles and NPO Energia will set up General Energy Technologies, a Soviet enterprise that will provide the Soviet Union and other Eastern European countries with power plant simulators, training and engineering services.

Mr. Grady said that the Soviet Union, which has about 50 nuclear power plants in operation and about 30 under construction, represents "the largest market in the world not yet tapped."

He said that the Soviets have simulators but that they do not match the quality of those built in the West because of a lack of high-speed computers.

Mr. Grady said the Soviets don't have the computer capacity to produce "real-time" simulators, in which an adjustment on the simulator would produce the same response, in the same amount of time, as it would on actual control-room equipment.

"When they push a button it takes a few seconds or a minute for something to happen," he said, indicating that this interferes with effective training.

Under terms of the new agreement, Link-Miles will also provide engineering services to assist General Energy Technologies in the construction of simulators.

To circumvent problems with the ruble, which is not freely convertible to Western currency, Mr. Grady said that Link-Miles "has a trading partner in New York that is experienced in countertrade." To extract Link-Miles' profit, he explained, the trading company will pick from a list of Soviet products, including such commodities as lumber and titanium, that it can sell in the world market and convert to dollars or other hard currency.

Link-Miles is a division of Tampa, Fla.-based Bicoastal Corp., formerly the Singer Co.

[HN000B][GDrive]

1990 (May 4)

- Link Miles Simulation Corp (which soon becomes S3 Corp)... to be part of NPO Energia
  - [HN000C][GDrive]

...rite resumes and prepare ...s. Students were also able ...s with area businesses.

Money Today

■ NYSE.....B17
■ AMEX.....B16
■ Mutuals.....B15

B18 THE EVENING SUN FRIDAY, MAY 4, 1990

Columbia firm to produce simulators for Soviets

Associated Press

COLUMBIA — Link-Miles Simulation Corp. announced it has entered into a joint venture with a Soviet organization to produce nuclear power-plant simulators that could prevent a repeat of the 1986 Chernobyl nuclear accident.

The Soviet Union has made a big push for Western-style power plant simulators since the Chernobyl accident, said Gilbert Grady, director of contracts for Link-Miles.

Grady said the Chernobyl accident was blamed on operator error and might have been prevented with better training.

Link-Miles produces full-scale replicas of various control rooms used in power plants around the world which are used to train plant operators for normal operations and hone their skills in dealing with potential disasters. The simulators are connected to computers that create hundreds of different malfunctions or combinations of breakdowns operators must deal with.

Grady said Link-Miles is investing between $500,000 and $1 million in the joint project with NPO Energia, the Moscow-based organization responsible for operating Soviet nuclear power plants and training personnel.

The new venture will be known as General Energy Technologies and based in Moscow. It will provide the Soviet Union and other Eastern European countries with power-plant simulators, training and engineering services, he said.

Grady said the Soviet Union, which has about 50 operational nuclear power plants and another 30 under construction, represents the largest untapped market for simulators in the world.

Grady said the Soviets are not able to produce real-time simulators, which would work at the same speed as actual control room operations, because of a lack of high-speed computer technology.

"When they push a button it takes a few seconds or a minute for something to happen," Grady said.

Because the ruble is not convertible, Link-Miles will choose from a list of Soviet products, including commodities such as lumber and titanium, that it can sell on world markets to extract its profit, Grady said.

[HN000D][GDrive]

1990 (Dec)

Using Russia rockets for amrican space travel?

- Sources Pages:
  - [HN000E][GDrive]
  - [HN000G][GDrive]

Dow Jones Industrials 2,614.36 Down 7.92

Marketplace

Star Tribune Friday December 14/1990 1D

nothing on the shelves. And the situation becomes panicky."

A Soviet highway to heavens: American to be sent to Mir

By Harry F. Rosenthal
Associated Press

Washington, D.C.
Somewhere in the United States, a company is sitting on what it had hoped would remain a big secret: It has contracted with the Soviet Union to send an American to the space station Mir.

The secret is trickling out, but the company isn't ready to say much. It had hoped to make a big announcement in January.

"We executed a contract with NPO Energia, which is the manned part of the Soviet space program," said Art Dula, whose Space Commerce Corp. in Houston markets Soviet space services in the United States.

What company is paying for it and why? Dula wouldn't say, explaining that secrecy is part of the contract.

The Soviets — for a hefty price — have taken passengers from a number of nations aboard their space station. They have included a Frenchman, a Cuban, an East German and, this month, Japanese journalist Toyohiro Akiyama.

But there's never been an American.

The weekly newspaper Space News was the first to reveal the secret, with only the sketchy information that the unnamed company's cost will be more than the $12 million

Space deal continued on page 7D

[HN000F][GDrive]

Star Tribune/Friday/December 14/1990 7D

Spotlight/Soviet trade

Space deal Continued from page 1D

the Tokyo Broadcasting Service paid to the Glavkosmos space agency. Other news accounts then repeated that information.

Dula's associate, Bill Wirin of Colorado Springs, Colo., said Space Commerce Corp. signed the deal Nov. 30 in Moscow.

"Our company policy is that we never discuss what we are doing without approval from our partners," he said.

Wirin called the contract "another sign of the warming relationship between the Soviets and the United States on a commercial basis, at a time when the U.S. is talking about giving them food."

Wirin, like Dula, said he'd like to say more. But he referred calls to Brown, Nelson and Associates, a Houston public relations company.

"This company has a big announcement to make, but the plan was to make that announcement in January," said Guy Brown, one of the principals in the public relations company. "The client doesn't want to be disclosed by name. It's an American company. I'd like to disclose more, but I'm under a restriction from them."

Brown said the company would select the American, but would not say for what purpose.

"One check has passed hands, probably earnest money," Brown said. "It's pretty much a fait accompli."

[HN000H][GDrive]

- 1992 (April) ... Energia USA (wholly owned by NPO Energia)
  - they need patents !
    - [HN000I][GDrive]
    - [HN000K][GDrive]

SUNDAY
APRIL 12, 1992

THE SUN

VOL. 92 NO. 15 BALTIMORE, MARYLAND

2 Americans make pitch for Russian space sales

Technology is tops, but buyers cautious

By Douglas Birch
Staff Writer

HERNDON, VA. — Attention, shoppers!

Want to buy the most powerful booster rocket ever built, a 20-story behemoth that could toss five tractor-trailers into orbit? Have at least $15 million to spare for a round-trip ticket to Mir, Earth's only space station and zero-gravity resort?

Well, Jeff Manber and Chris Faranetta are the guys to see.

They are vice presidents and salesmen for Energia USA, a wholly-owned subsidiary of NPO Energia of Kaliningrad, the design arm of the former Soviet Union's ambitious space empire.

These two red-blooded young Americans have been hawking Russia's tried-and-true space hardware, services and expertise since shortly before Energia USA opened its four-person office here six weeks ago.

And, though they haven't sold anything yet, they are eager to deal.

"The collapse of the Soviet Union is contributing, accelerating, forcing connections to take place where it looked like none would take place," says Mr. Manber, 37, a Northwestern University graduate who formerly toiled on Wall Street and for the Department of Commerce on commercial space issues.

But don't come to Energia USA's sparsely-furnished offices on Innovation Avenue here, expecting to pick up a couple of spaceships for pocket change. And please don't use the phrase "fire-sale prices," as certain newspapers have.

"If you say to a Russian, we want this at 'fire-sale prices,' forget it. He won't deal with you," says Mr. Manber.

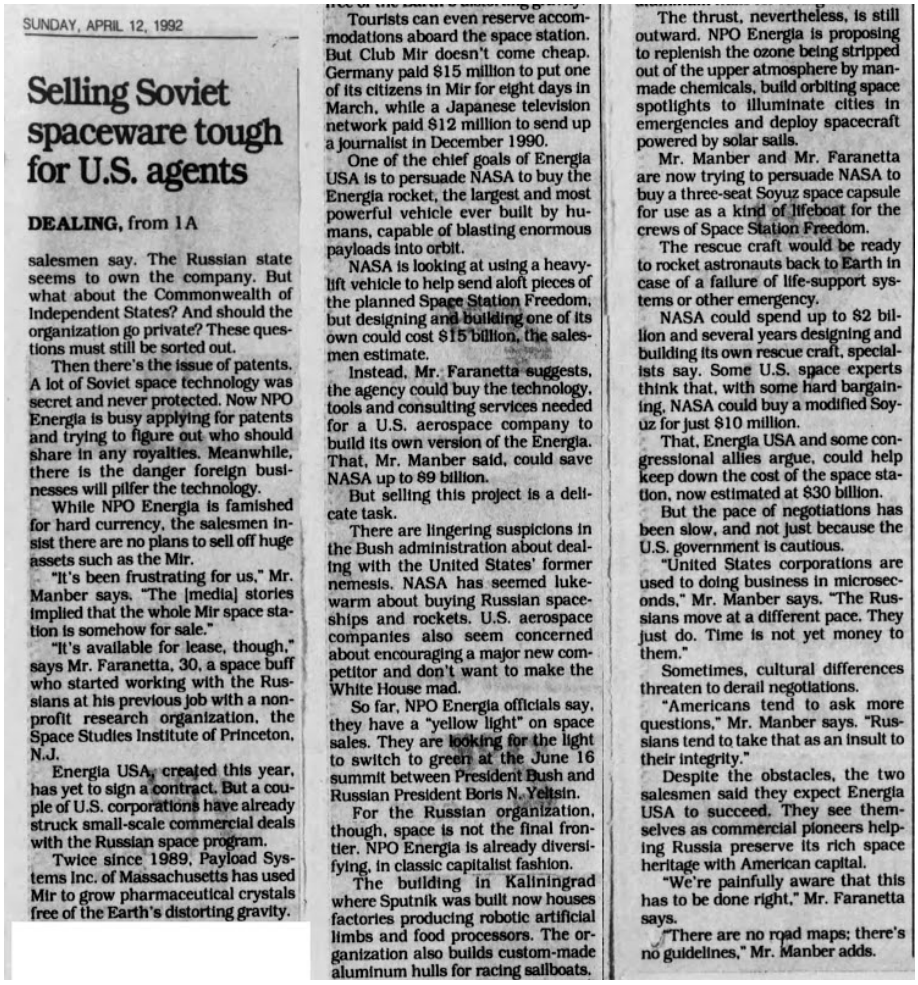
"Is $15 million for putting a cosmonaut into space a 'fire-sale price?' " demands an indignant Katya Syromyatnikova, the office's 21-year-old student intern from Moscow State University, who sits at an old drafting table translating technical documents.

Energia USA hopes to help the Russian space industry turn a profit by encouraging Western investment and by selling technology, data and expertise to the National Aeronautics and Space Administration, aerospace and other companies.

Where will NPO Energia's profits eventually go? Good question, the

See **DEALING**, 15A, Col. 1

[HN000J][GDrive]



SUNDAY, APRIL 12, 1992

Selling Soviet spaceware tough for U.S. agents

DEALING, from 1A

salesmen say. The Russian state seems to own the company. But what about the Commonwealth of Independent States? And should the organization go private? These questions must still be sorted out.

Then there's the issue of patents. A lot of Soviet space technology was secret and never protected. Now NPO Energia is busy applying for patents and trying to figure out who should share in any royalties. Meanwhile, there is the danger foreign businesses will pilfer the technology.

While NPO Energia is famished for hard currency, the salesmen insist there are no plans to sell off huge assets such as the Mir.

"It's been frustrating for us," Mr. Manber says. "The [media] stories implied that the whole Mir space station is somehow for sale."

"It's available for lease, though," says Mr. Faranetta, 30, a space buff who started working with the Russians at his previous job with a nonprofit research organization, the Space Studies Institute of Princeton, N.J.

Energia USA, created this year, has yet to sign a contract. But a couple of U.S. corporations have already struck small-scale commercial deals with the Russian space program.

Twice since 1989, Payload Systems Inc. of Massachusetts has used Mir to grow pharmaceutical crystals free of the Earth's distorting gravity.

Tourists can even reserve accommodations aboard the space station. But Club Mir doesn't come cheap. Germany paid $15 million to put one of its citizens in Mir for eight days in March, while a Japanese television network paid $12 million to send up a journalist in December 1990.

One of the chief goals of Energia USA is to persuade NASA to buy the Energia rocket, the largest and most powerful vehicle ever built by humans, capable of blasting enormous payloads into orbit.

NASA is looking at using a heavy-lift vehicle to help send aloft pieces of the planned Space Station Freedom, but designing and building one of its own could cost $15 billion, the salesmen estimate.

Instead, Mr. Faranetta suggests, the agency could buy the technology, tools and consulting services needed for a U.S. aerospace company to build its own version of the Energia. That, Mr. Manber said, could save NASA up to $9 billion.

But selling this project is a delicate task.

There are lingering suspicions in the Bush administration about dealing with the United States' former nemesis. NASA has seemed lukewarm about buying Russian spaceships and rockets. U.S. aerospace companies also seem concerned about encouraging a major new competitor and don't want to make the White House mad.

So far, NPO Energia officials say, they have a "yellow light" on space sales. They are looking for the light to switch to green at the June 16 summit between President Bush and Russian President Boris N. Yeltsin.

For the Russian organization, though, space is not the final frontier. NPO Energia is already diversifying, in classic capitalist fashion.

The building in Kaliningrad where Sputnik was built now houses factories producing robotic artificial limbs and food processors. The organization also builds custom-made aluminum hulls for racing sailboats.

The thrust, nevertheless, is still outward. NPO Energia is proposing to replenish the ozone being stripped out of the upper atmosphere by man-made chemicals, build orbiting space spotlights to illuminate cities in emergencies and deploy spacecraft powered by solar sails.

Mr. Manber and Mr. Faranetta are now trying to persuade NASA to buy a three-seat Soyuz space capsule for use as a kind of lifeboat for the crews of Space Station Freedom.

The rescue craft would be ready to rocket astronauts back to Earth in case of a failure of life-support systems or other emergency.

NASA could spend up to $2 billion and several years designing and building its own rescue craft, specialists say. Some U.S. space experts think that, with some hard bargaining, NASA could buy a modified Soyuz for just $10 million.

That, Energia USA and some congressional allies argue, could help keep down the cost of the space station, now estimated at $30 billion.

But the pace of negotiations has been slow, and not just because the U.S. government is cautious.

"United States corporations are used to doing business in microseconds," Mr. Manber says. "The Russians move at a different pace. They just do. Time is not yet money to them."

Sometimes, cultural differences threaten to derail negotiations.

"Americans tend to ask more questions," Mr. Manber says. "Russians tend to take that as an insult to their integrity."

Despite the obstacles, the two salesmen said they expect Energia USA to succeed. They see themselves as commercial pioneers helping Russia preserve its rich space heritage with American capital.

"We're painfully aware that this has to be done right," Mr. Faranetta says.

"There are no road maps; there's no guidelines," Mr. Manber adds.

[HN000L][GDrive]

Newspapers - "S3 Technologies"

...rite resumes and prepare
...s. Students were also able
... with area businesses.

Money Today

NYSE.....B17
AMEX.....B16
Mutuals.....B15

B18 THE EVENING SUN FRIDAY, MAY 4, 1990

Columbia firm to produce simulators for Soviets

Associated Press

COLUMBIA — Link-Miles Simulation Corp. announced it has entered into a joint venture with a Soviet organization to produce nuclear power-plant simulators that could prevent a repeat of the 1986 Chernobyl nuclear accident.

The Soviet Union has made a big push for Western-style power plant simulators since the Chernobyl accident, said Gilbert Grady, director of contracts for Link-Miles.

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The new venture will be known as General Energy Technologies and based in Moscow. It will provide the Soviet Union and other Eastern European countries with power-plant simulators, training and engineering services, he said.

Grady said the Soviet Union, which has about 50 operational nuclear power plants and another 30 under construction, represents the largest untapped market for simulators in the world.

Grady said the Soviets are not able to produce real-time simulators, which would work at the same speed as actual control room operations, because of a lack of high-speed computer technology.

"When they push a button it takes a few seconds or a minute for something to happen," Grady said.

Because the ruble is not convertible, Link-Miles will choose from a list of Soviet products, including commodities such as lumber and titanium, that it can sell on world markets to extract its profit, Grady said.

[HN000D][GDrive]

1990 (Aug 11)

- Link Miles Simulation Corp name change to S3 technologies (S3 stood for Simulation, Systems, and Services)
- Full Page [HN000O][GDrive]

The Baltimore Sun (Baltimore, Maryland) • 11 Aug 1990, Sat

Name change for firm

Columbia-based (Singer) Link Miles Simulation Corp., the world's largest producer of nuclear power plant simulators, announced a change in the name of their corporation yesterday.

The new name of the company is S3 Technologies. "S3" stands for Simulation, Systems & Services.

The company has more than 400 employees.

[HN000P][GDrive]

Feb 14 1991

- Source pages :
  - [HN000Q][GDrive]
  - [HN000S][GDrive]

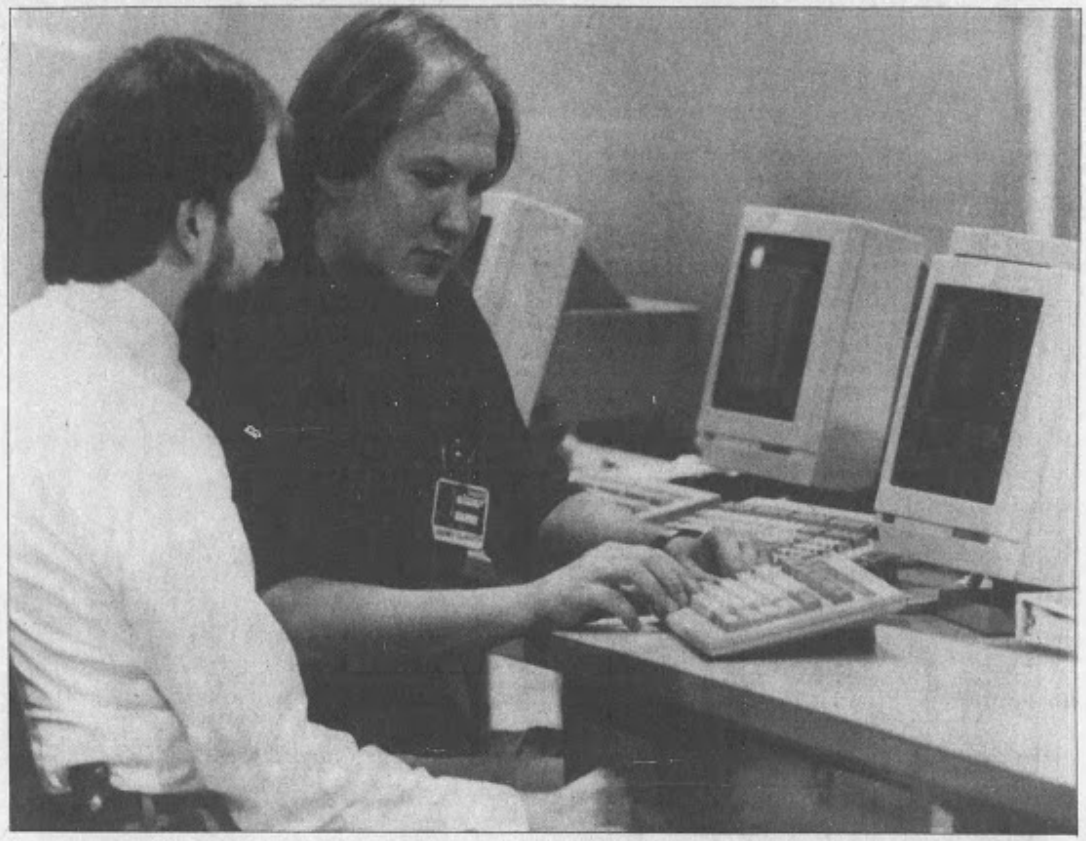
■ NYSE.....B12
■ AMEX.....B12
■ Mutuals.....B11
■ Dividends...B13

GM Chairman

cluding a $2.1
ok in the third
. Including the

Ford's $
$1.11 a share
or 68 cents a

Revenue
$24.1 billion



Soviet engineer Andrey Zlokazov, right, works with engineer Phil Geil of S3 Technologies in Columbia.

Maryland businesses woo Soviets

Columbia firm's pact leads to joint venture

By Liz Atwood
Evening Sun Staff

The United States has postponed its arms summit in Moscow. European countries are considering suspending economic aid to the Soviet Union. And American lawmakers recently passed resolutions condemning the Soviets for the military crackdowns in Lithuania and Latvia that left 19 people dead.

But Maryland businesses are going ahead with plans to invest and trade in the Soviet Union.

"If we survived the Afghanistan embargo, then this time we can stay in business," said Mark Selawry, project manager with the Argus Trading Co., which exports to the Soviet Union equipment to manufacture circuit boards.

U.S.-Soviet relations are far different today than in 1980 when Jimmy Carter imposed a trade embargo on the Soviets for their invasion of Afghanistan. While Ronald Reagan lifted the grain embargo in 1981, he placed new economic sanctions against the Soviet Union for the repression of Poland. Those sanctions lasted until Mikhail Gorbachev came to power in 1985.

This time, "basically business is going on as usual," Selawry said. On Jan. 20, when Soviet troops charged a Latvian police station, Argus concluded a deal in the Latvian capital Riga to import equipment to repair circuit boards.

Columbia-based S3 Technologies is preparing to enter the second phase of an agreement with the Soviet Union to build nuclear power plant simulation systems. Nancy Ryan, a spokesman for the company, said workers soon will be traveling to Moscow to install the systems, which are used to train nuclear power plant operators.

So successful have relations been between S3 Technologies and the Soviet organization that oversees nuclear power plant operations that the two have formed a joint venture called General Energy Technologies. This new company will help establish technology training programs in

See SOVIET, B11, Col. 1

[HN000R][GDrive]

Maryland firm seek business in Soviet Union

SOVIET, From B1

the Soviet Union. So far, neither the joint venture nor the original contract has been adversely affected by recent events in the Soviet Union, company officials said.

One Baltimore-based organization has not been so fortunate, however. The American Center for International Leadership finds its existence in jeopardy after a major conference scheduled for Leningrad was canceled two weeks ago.

The center, which moved to Baltimore last April and employs nine people, is designed to promote understanding between business and government leaders from the United States and other countries.

Stephen Hayes, president of the center, said 150 American business and government leaders were supposed to fly to the Soviet Union, but the trip was canceled after a number of the participants changed their minds about going. Hayes said concern over the Persian Gulf war was the main reason for the cancellations, but the violence in the Baltics was also a factor.

The center currently is working to reschedule the conference.

Although Hayes said the cancellation of the event threatened the very existence of the center, recent talks have been encouraging. The tensions in the Baltics appear to have eased and the center now is considering taking at least part of the group to the Soviet Union. "It's just starting to turn around, but we're not out of the woods yet," he said.

Even in good times, business with the Soviet Union can be risky. Besides dealing with the usual difficulties of communication, business leaders also must figure out with which government entity to deal. Selawry said even a company such as Argus, which has been trading with the Soviet Union since 1981, has had trouble recently collecting its bills from the Soviets.

Argus concentrates its work in the Soviet Union and Eastern Europe, but lately has been curtailing its activities in the U.S.S.R., he said.

Robert Babcock, a Columbia builder who has been working on projects in Moscow, said he was not surprised at the recent turn of events in the Baltics.

"It's been going on for 11 months," he said. "Gorbachev keeps trying to tell them [the Baltic states] not to be independent . . . Gorbachev had to do something."

Babcock said that, while he regrets the bloodshed, he believes the United States should go ahead with plans to export grain as a means to improve trade relations.

"The largest consumer front in the entire world has just opened up," he said.

Although there is risk now, he said he expects in 10 to 15 years the market will be "incredible."

For now, however, many Maryland companies are moving cautiously, said Robert McDonald, with the Maryland International Division, a state agency that promotes foreign trade.

"Business relations with Maryland companies and the Soviet Union are in the formative stages," McDonald said.

Maryland has entered into several trade and exchange programs with Russia — the Soviet Union's largest republic — but has not made any agreements with Baltic states or the Soviet government itself, he said.

So far the Baltic events have not affected any of the state's trade agreements or exchange programs, said Robert Walker, deputy secretary for the Maryland Department of Agriculture.

"At this point, nothing has been adversely affected, but clearly events in the Baltic states cause additional concern," he said.

Maryland has participated in several agriculture exchanges. In April, the state is to play host to Soviet veterinary students and aquaculturalists. The Maryland Department of Agriculture is looking for state farmers interested in spending two weeks in the Soviet Union.

Walker said he doesn't anticipate any problems with those exchanges, and pointed out that such exchanges can contribute to the democratization of the Soviet Union. Should the U.S. State Department so advise, Maryland would postpone the programs, Walker said.

"That part of the world involves a lot of risk," Walker said. "There's a lot of interest, but also a lot of reluctance."

Hoping to reassure Maryland businessmen, Moscow Mayor Gavriil K. Popov visited Baltimore last week. Popov met with several businessmen hoping to work out a housing construction agreement.

The mayor said he was concerned that the events in the Baltics could harm business negotiations, but he said the Soviets want to be flexible. "There is a pervading line of cooperation," he said.

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DECEMBER 31, 1990

ASSETS

Mortgage Loans	$62,509,680.00
Other Loans	1,307,549.00
Cash/Investments	37,113,296.00
Fixed Assets	377,711.00
Other Assets	291,679.00
TOTAL	$101,599,915.00

SAVINGS, LIABILITIES, RESERVE AND SURPLUS

Savings Accounts	$89,665,181.00
Mortgage Escrow	680,234.00
Misc. Liabilities	559,355.00
Reserves & Surplus	10,695,145.00
TOTAL	$101,599,915.00

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[HN000T][GDrive]

Oct 1991

- WHOLE PAGE !

Business

Howard County Sun

Nuclear plant safety brightens future for simulator maker

By Erik Nelson
Staff writer

In the past year, S3 Technologies of Columbia has created 50 new jobs feeding on an industry that isn't growing at all in the United States: nuclear power.

S3, which manufactures simulated nuclear power plant control rooms, was among seven companies recognized by the Greater Baltimore Committee with its 1991 Venture Awards Thursday for helping strengthen the local economy by investing in new jobs and equipment.

Although the $50 million-a-year company has yet to gain the name recognition of county-based companies like the Rouse Co. or the Ryland Group, it has grown enough in three years to make it one of the county's largest employers with a staff of 440. The company opened in Howard in 1982 with less than 50 employees. In June, it moved into a new 160,000 square-foot building off Dobbin Road.

Despite the recession and despite the halt of nuclear power plant construction in the United States, the company has flourished largely because of concerns about the safety of nuclear power.

In fact, said Gill Grady, the company's director of contracts administration, the company's major expansions were triggered by reaction to accidents at Three Mile Island and Chernobyl.

S3 currently is awaiting Soviet government approval of a contract for four Chernobyl-type reactor simulators, and Chernobyl is a potential site for one of them, said Grady.

He said that the recent upheaval in the Soviet Union and financing problems have delayed that approval.

The simulators cost from $10 million to $12 million in the United States. But reactor control rooms overseas tend to be larger, so simulators can fetch prices between $15 million and $20 million.

After the worst U.S. nuclear accident, at Three Mile Island in 1979, the Nuclear Regulatory Commission required all nuclear plants to have simulators identical to their control rooms.

General Public Utilities Nuclear Corp., which runs the TMI plant, had used a generic simulator that did not exactly match its control room, Grady said.

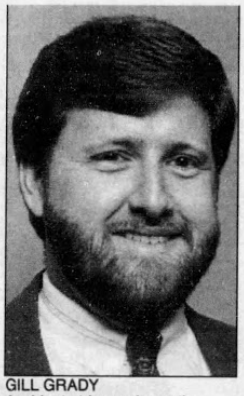
The NRC grants licenses based on how well operators perform on a simulator.

Of the country's 77 nuclear-reactor-equipped facilities, 76 have simulators and 40 of those were made by S3.

On April 26, 1986, an explosion and fire at Chernobyl in the Soviet Union's Ukrainian republic spewed radiation around the world and caused at least 32 deaths in nuclear power's worst disaster.

The Chernobyl accident sparked concern for nuclear plant safety worldwide, and orders for S3 simulators increased. Of 49 simulators outside the United States, 30 were made in S3's Columbia facilities.

THE HOWARD COUNTY SUN — ALGERINA PERNA
Simulator engineers (from left) Dr. Abdollah Abtahi, Richard Libra and Homa Ghandforoush work at a nuclear power plant control room simulator.



GILL GRADY
Accidents triggered growth

The company has already produced two nuclear plant simulators in a joint venture with the Soviets' All Union Research Institute for Nuclear Power Operations, which trains plant operators. It has also done business with Germany, Sweden, Finland and Taiwan.

While simulators have made operators better prepared for some emergencies, there is a limit to their training.

Because there has never been a meltdown in this country, the simulators can't reproduce the effects of one.

"You can go up to a certain point in an accident, and then no one knows what happens," Grady said.

The company buys the same equipment used in a control room and hooks it up to computers that simulate the way reactor cores, turbines, cooling systems and other components of a nuclear power plant react to commands from the control room.

In fact, what a student on a simulator sees during a malfunction such as a stuck coolant valve is the same thing an operator would see in a control room.

"You can teach the operator to respond to emergency situations," Grady said.

Although no new nuclear plants have been built in the United States in several years, utility companies are now upgrading their simulators with newer, more accurate software and state-of-the art hardware, some of which is manufactured by S3.

Nuclear plant simulators make up about three-quarters of S3's business, which has always involved simulators of some sort.

Its earliest incarnation was a company called Engineering Research Corp., in Prince George's County. The company made flight simulators for the Navy after World War II, and was influenced by simulator inventor Ed Link, whose name was attached to the company years later when it became Link-Miles Simulation Corp.

The company went through several ownership changes, including a purchase in 1968 by sewing-machine maker Singer. Singer owned Link-Miles for 20 years. It sold the company in 1988 to an entrepreneurial partnership, which in turn sold the sewing machine division and adopted the name Bicoastal Corp.

Link-Miles switched its name to S3 last year. The name stands for simulation, systems and services.

Although Bicoastal still owns S3, "we basically operate on our own, which has been really good for us," Grady said.

The company also makes simulators for large systems such as oil refineries and fossil-fuel power plants, as well as small vocational simulators for heating and cooling systems and gasoline and diesel engines.

Venture Award recipients

Over the last year:

- **Communications and Systems Specialists Inc. (CSSi),** a Columbia computer hardware and software developer, expanded its staff 44 percent to 52 employees, bought $18,000 worth of equipment and increased its space 25 percent to 14,548 square feet;
- **Martek Corp.,** a Columbia biotechnology firm, expanded its staff 13 percent to 34 employees, bought $600,000 worth of equipment and doubled its sales;
- **New Horizons Diagnostics Corp.,** a Columbia biotechnology firm, expanded its staff by 22 percent to 39 employees, bought $100,000 worth of equipment and expanded its space by 33 percent;
- **Larriland Farm Inc.,** a Woodbine farm and produce retailer, expanded its staff by 28 percent to 50 employees and bought $70,000 worth of new equipment;
- **Nixon's Farm,** a West Friendship farm and conference retreat, increased its staff from 7 to 12 and purchased $120,000 in new equipment;
- **Nucletron Corp.,** a Columbia biotechnology firm, expanded its staff 25 percent to 50 employees, bought $80,000 worth of equipment and increased its space 20 percent to 6,500 square feet; and
- **S3 Technologies,** a Columbia maker of system simulation equipment, expanded its staff 13 percent to 440, expanded its equipment inventory 35 percent and increased its space 52 percent to 160,000 square feet.

The awards, which recognize the "initiative, ingenuity and entrepreneurial spirit" of these growing companies, is sponsored by the Greater Baltimore Committee and supported by the Howard County Office of Economic Development.

Source: Howard County Office of Economic Development.

[HN000U][GDrive]

March 1992

Source page: [HN000V][GDrive]

The Baltimore Sun (Baltimore, Maryland) • 24 Mar 1992, Tue

DATELINE: MOSCOW

In a city full of brick walls, you need guide for survival

By Kathy Lally
Moscow Bureau

FOREIGN CLOSEUP

MOSCOW — Carole D. Frank arrived here from Columbia, Md., in June and ran straight into a brick wall.

Mrs. Frank works in Moscow as a psychological counselor for foreigners who are trying to make sense of life in this fascinating, but illogical and often maddening city.

Like many of her clients, she is the kind of person who relishes taking on a job and getting it done.

Moscow has brick walls especially designed for such people. Try to get something done in Moscow. Just try it. Try, for example, to make a telephone call, Mrs. Frank said.

"First, there's no phone book," she said. "Then the phone doesn't work." Sometimes you pick up the phone and before you even try to dial there's a busy signal. There might as well be a little sign popping out of the receiver admonishing, "Don't even THINK of telephoning today."

"Then the phone works and I can't hear you, but you can hear me," Mrs. Frank said, "and I call back and I can hear you, but you can't hear me." And then just when you can hear each other you get cut off.

If it's that hard to make a telephone call, imagine the difficulties in clinching a business deal in a country where the banks have more abacuses than computers.

Point 1 of Mrs. Frank's Moscow Survival Guide comes in here: Forget about being goal-oriented; better to drift with the current.

And Point 2: Be willing to fail because you will.

Here, Mrs. Frank likes to tell her briefcase story.

One day, she left her briefcase on the subway. Unfortunately, some honest person found it and turned it in. After hours of traveling to one station and wading through torrents of Russian with the help of a friend who translated by phone, she was told the briefcase had been sent to another station.

Once there, she was refused the briefcase because she had to fill in a form requiring the number of her Soviet passport. Of course, she didn't have a Soviet passport. More shouting. She begged to be allowed to leave without the briefcase.

"It was an inexpensive plastic one," Mrs. Frank said. "I never wanted to see it again."

She was forbidden to leave without it. She couldn't leave with it. Finally, the bureaucracy relented. A beaten Carole Frank trudged home, briefcase in hand.

Mrs. Frank tells this tale with the relish of a survivor. Unfortunately, many of her clients are not. Half of them are so far gone by the time they see her, they give up and return to the countries from which they came.

Personally, Mrs. Frank looks on the bright side.

"I have more friends than I've ever had in my life," she said, enumerating the advantages of being here. "It's wonderful to work in such a fascinating place.

"And if someone told me I could leave tomorrow, I'd be out of here in a minute."

She laughs at this self-revelation. It only proves Point 3 of her Moscow Survival Guide:

Have a sense of humor.

Mrs. Frank is here because of her husband, Tony, who works for S-3 Technologies in Columbia. Mr. Frank is part of a team from Columbia helping Russians build a nuclear reactor simulator to train nuclear power plant workers.

He is here for a year or more (until the contract is completed — and knowing Moscow that could be a lifetime.)

"He's trying to build a nuclear reactor simulator in a place that doesn't have a copying machine," Mrs. Frank said.

To join her husband, Mrs. Frank gave up a job she loved in the eating disorders unit at Baltimore's Mercy Medical Center. In Moscow, she is coordinator for the mental health grant at the U.S. Embassy and provides counseling at a clinic that cares for foreigners.

Life here, she said, is like anywhere else — only more so: "Anything that would normally happen is exacerbated by being in Moscow."

And it draws exactly the wrong kind of person, she said, the hard-driving Type A personality who runs full speed into one brick wall after another.

"I keep reminding myself this is a time I'll always remember," Mrs. Frank said, managing a cheerful smile — wiping the brick dust off her brow.

[HN000W][GDrive]

March 1993

- S3 partnering with Seimens

Source Page : [HN000X][GDrive]

THE SUN

Staff

PAGE 13C
MONDAY
MARCH 22, 1993

Business

S3, German partner land two contracts

If you're tired of those old, run-of-the-mill computer games and have a few dollars to spare, you might want to give **S3 Technologies** in Columbia a call.

S3 builds computer-driven replicas of nuclear power plant control rooms, which are used to train operators. Last week, S3 announced that it and partner **Siemens AG** of Germany received two contracts worth over $55 million for simulators in Germany.

Kraftwerk-Simulator-Gesellschaft MbH is buying three simulators replicating control rooms and operations at three plants. Two of those will be built in S3's Stanford Boulevard manufacturing facility.

The second contract is from **Hamburgische Electricitats-Werke AG**, for a replica control room; it includes an option for a second unit this year.

S3 Technologies is a unit of Florida-based **Bicoastal Corp.**

[HN000Y][GDrive]

Aug 10 1993

Sale to ManTech International Corp, Faifax VA

- Source pages :
  - [HN000Z][GDrive]
  - [HN0011][GDrive]

THE SUN
Howard County
AND MARYLAND
SECTION B
TUESDAY, AUGUST 10, 1993

S3 purchase deal means firm will stay in Columbia

Simulator company employs 300

By James M. Coram
Staff Writer

Howard County officials were celebrating yesterday the success of their plans to keep Columbia-based S3 Technologies and its 300 employees.

They had feared that Simulation, Systems and Services Technology Co., as S3 Technologies is officially known, would be sold to a foreign investor and moved abroad.

Instead, the contract buyer, ManTech International Corp. of Fairfax, Va., plans to keep S3 Technologies in Columbia and operate it as wholly owned subsidiary once it purchases the company Aug. 31, said Michael J. Cromwell III, executive vice president of ManTech.

ManTech, a 25-year-old privately held company that supplies defense, aerospace, environmental and intelligence technology to federal agencies, signed a purchase agreement July 29.

The agreement calls for ManTech to buy all of S3 Technologies' stock from BiCoastal Corp. of Tampa, Fla. BiCoastal had filed for bankruptcy. Mr. Cromwell declined to reveal the purchase price.

Although S3 Technologies' sales have fallen since 1991, when the nuclear power simulator company was making $50 million a year, it is still profitable, with sales in the $36 million range in 1992, Mr. Cromwell said.

ManTech was looking to expand into a commercial market internationally and S3 Technologies was an ideal instrument, Mr. Cromwell said. "It is a world leader in utility simulation in Germany, Taiwan, Korea and Russia," he said, areas where Man-

See MANTECH, 7B

[HN0010][GDrive]

THE SUN
Howard County
AND MARYLAND
SECTION B TUESDAY AUGUST 10, 1993

ALGERINA PERNA/STAFF PHOTO

Simulation engineers at S3's nuclear power plant simulator are (from left) Dr. Abdollah Abtahi, Richard Libra and Homa Ghandforoush.

MANTECH

From 1B

Tech already has a foothold.

"Technically, what S3 does is first cousin to a number of things that we do in the simulator area," he said. "We have desk-top simulators for the Navy, flight simulators for the Air Force and NASA and strong software training. It is a direct plug-in."

William H. Howard Jr. thought the same thing when he took over as county economic development director six months ago. A former banking executive, Mr. Howard is good friends with John Moore, chief financial officer at ManTech.

ManTech "is a small version of Westinghouse," Mr. Howard said. "They were looking to add a commercial line. I had visited ManTech and told John they were a duplicate of the S3 facility."

The potential merger was "a pleasant surprise," Mr. Cromwell said. S3 Technologies "is a technological powerhouse of a resource. We expect to invest, to accelerate what we have into new market places."

S3 Technologies is a world leader in nuclear power plant simulation. More than half of U.S. simulators were made by S3. The company has also captured 61 percent of the overseas market.

Concerns about the balance of trade and the safety of nuclear power plants abroad make the international market place "a real growth opportunity" for S3 Technologies and ManTech, Mr. Cromwell said. "The future is excellent on a number of fronts."

Mr. Cromwell said it would be premature to comment on what S3 will look like after the merger until Bill Kuhlmann, the new manager, takes command.

"Employees have been living under a cloud for four years, making it very hard for them," Mr. Cromwell said. "Customers were very concerned about vendor stability and frankly, it caused S3 to lose some good people."

Workers at the Columbia office learned about the merger last week.

"We're all very positive about the move," said Richard Libra. "We've been in Chapter 11 for a long time."

"It's a positive direction," said Dr. Abdollah Abtahi. "We're looking forward to becoming part of the ManTech family. Overall, it's very uplifting to become part of a larger company."

Short term, the merger will mean keeping 300 jobs in Howard County, Mr. Howard said. "Long term, it underscores the county's commitment to high tech and hopefully a move of a company headquarters here."

The merger is also a boon from a policy standpoint, he said. "[County Executive Charles I. Ecker] says we not only want to bring people to Howard County, but once here we don't forget about them. We certainly haven't forgotten about a marquee name like S3, and we won't forget about others either, regardless of size."

ManTech employs 3,000 people worldwide and did about $200 million worth of business last year. The company has about 700 employees in Maryland — 250 in Howard County — and did about $50 million in business in the state last year, Mr. Cromwell said.

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[HN0012][GDrive]

The Baltimore Sun (Baltimore, Maryland) • 06 Oct 1993, Wed

This announcement appears as a matter of record only.

MANTECH INTERNATIONAL CORPORATION

has successfully acquired 100% of the Common Stock of

S3 Technologies Company

from BiCoastal Corporation on August 31, 1993

MANTECH INTERNATIONAL CORPORATION

[HN000N][GDrive]

April 6 1994

See National Patent Development Corporation .

Full newspaper page : [HN0013][GDrive]

MARKET SUMMARY, 20D

THE SUN

Business

PAGE 11D
WEDNESDAY
APRIL 6, 1994

Computer simulation firms announce merger

By Michael Dresser
Sun Staff Writer

Three Columbia-based companies and a Swedish firm are joining forces to create an international computer simulation company based in Columbia.

Simulation, Systems and Services Technologies Co., known as S3, agreed Friday to merge with EuroSim AB of Sweden and two Columbia-based units of National Patent Development Corp. to form a new company to be known as Global Simulation and Engineering Systems Inc. (GSE).

The new company, which will be housed in S3's Columbia headquarters, will be headed by S3 Chief Executive William E. Kuhlmann, a former General Physics Corp. president. Mr. Kuhlmann said yesterday that the merging companies now account for annual sales of about $55 million.

"We hope to do a public financing in the fall of this year, probably at the earliest," he said. The merger would help the companies make the transition from a hardware orientation to an emphasis on software, he said.

The existing companies are active in the creation of computer simulations of power generation operations, both for nuclear and fossil fuel plants, and chemical processing. The simulations are used both for training and the development of new procedures in those industries.

The merger of the three companies is not expected to result in any significant job losses, said S3 Vice President Michael Allocco.

S3's Columbia operation will continue to employ about 275 workers, and they will be joined by an estimated 50 to 60 workers from General Physics International Simulation and Engineering Inc. and GPC Simulation Services Division. For the short term, he said, the merging companies will be operated with their current management structure intact.

General Physics International is owned by General Physics Corp. of Columbia, which is itself owned by National Patent Development Corp. of New York. GPC Simulation Services is a General Physics spinoff that is now directly owned by National Patent, which will control three of the seven board seats in GSE.

ManTech International Corp. of Fairfax, Va., which owns S3, will control another three seats, while the Swedish firm will control one.

[HN0014][GDrive]

Newspapers - "bicoastal corp"

- 1987 (March)
  - ???
    - https://www.newspapers.com/image/337124580/?terms=%22bicoastal%2Bcorp%22
- 1987 (Oct)
  - Paul Bilzerian (BiCoastal) looking to buy Singer (which owns Kearfott navigational guidance)
    - https://www.newspapers.com/image/495575585/?terms=%22bicoastal%2Bcorporation%22
      - 1987-10-30-the-record-hackensack-new-jersey-pg-c-2.jpg
      - 1987-10-30-the-record-hackensack-new-jersey-pg-c-2-clip-bilzerian
- 1989 (nov 11)
- https://www.newspapers.com/image/110998781/?terms=%22bicoastal%2Bcorporation%22
- 1990 (Sep)
- https://www.newspapers.com/image/258028722/?terms=%22bicoastal%2Bcorporation%22
- 1993 (Feb 1)
- https://www.newspapers.com/image/424258641/?terms=%22bicoastal%2Bcorporation%22

Newspapers = "General Energy Technologies"

Feb 14 1991 - see above !!!

- https://www.newspapers.com/image/367645065/?terms=%22S3%2BTechnologies%22
  - 1991-02-14-the-baltimore-sun-pg-b14
  - 1991-02-14-the-baltimore-sun-pg-b14-clip-s3
- https://www.newspapers.com/image/367645014
  - 1991-02-14-the-baltimore-sun-pg-b11
  - 1991-02-14-the-baltimore-sun-pg-b11-clip-s3

In April 1990 Link-Miles Simulation Corporation of Columbia signed a contract to provide nuclear plant simulators to SYPRO of Sweden and Pennsylvania Power & Light Co. Link-Miles also won a contract for an ethylene plant simulator.

In August 1990 Link-Miles Simulation Corporation of Columbia, MD, a manufacturer of nuclear power-plant control room simulators, was renamed S3 Technologies. Before that it was Industrial Simulation Corporation, and even earlier, the Link Simulation Systems Division of Singer. In September 1993 ManTech International bought S3 Technologies.

T

A B C D E F G H I J K L M N O P Q R S T U V W X Y Z

PEOPLE (by last name / then D.o.B.)

- Thomas Jefferson **Taylor** II (born 1874)
- Antonio Jefferson **Taylor** (born 1904)
- Claudia Alta "Lady Bird" **Taylor** (born 1912)
- William Brockenbrough **Taylor** Sr (born 1925)
- Diana Lee **Taylor** (born 1933)
- William Brockenbrough Newton **Taylor** Jr (born 1947)
- John Parks **Tazewell** (born 1920)
- Dr. Howard Martin **Temin** (born 1934)
- Dr. Edward Donnall "Don" **Thomas** (born 1920)
- Dr. Erich **Traub** (born 1906)
- Frederick **Trump** (born 1869)
- Fred Christ **Trump** (born 1905)
- John George **Trump** (born 1907)
- Gilbert Leonard **Tugwell** (b1919)

PLACES / COMPANIES / OTHER

- **Thiokol** Chemical Corporation
- Trusted Information Systems Inc.
- TRW Incorporated

Thomas Jefferson Taylor II (born 1874)

Born - 1874

Married to Mary Minnie Lee Pattillo (father is Luke Pattillo - see CORRECT data on https://www.findagrave.com/memorial/51934566/luther-pattillo)

Children

Claudia Alta "Lady Bird" Taylor (born 1912) , wife of President Lyndon Baines Johnson.

Thomas Jefferson Taylor III

Antonio Jefferson Taylor (born 1904)

Info from Geni.com

Birthdate: August 29, 1874

https://www.geni.com/people/Thomas-Taylor-II/6000000006783883396

Thomas Jefferson Taylor, II

‹ Back to Taylor surname

Thomas Jefferson Taylor, II

Birthdate:	August 29, 1874
Birthplace:	Milton, Autauga Co., AL, United States
Death:	October 22, 1960 (86) Marshall, Harrison, Texas, United States
Immediate Family:	Son of Thomas Jefferson Taylor I and Emma Louisa Bishop Husband of Ruth Taylor; Mary Minnie Lee Pattillo and Beaulah Pearl Pittman (Wisdom) Father of Thomas Jefferson Taylor, Jr.; Antonio J. Taylor and Lady Bird Johnson Brother of William Thomas Taylor; Walter Bates Taylor; Preston Edward Taylor and Ida May McKay Curtis Half brother of James Cecil Bishop; Edmund Morris Bishop; Bessie Irene Bishop; Jessie Eugene Bishop; Minnie Lee Bishop and 3 others

Obituary - Full newspaper page : [HN0137][GDrive]

The Shreveport Journal (Shreveport, Louisi... • 24 Oct 1960, Mon • Page 4

Karnack Services Conducted For Thomas J. Taylor

MARSHALL, Tex.—Services were conducted at 4 p.m. Sunday at Karnack Methodist Church in Karnack for Thomas Jefferson Taylor, 86, father of Mrs. Lyndon B. Johnson, wife of the Democratic vice presidential nominee, who died in Memorial Hospital in Marshall about 3:15 p.m. Saturday.

Burial was in Algoma cemetery in Marshall. Officiating ministers were the Rev. R. E. Bischoff, pastor and the Rev. Billy Bonner, a former pastor.

Mr. Taylor was born in Alabama Aug. 29, 1874, and came to Karnack in 1899 when he was 25 years old. He opened a general store and erected a sign "Dealer in Everything" which identified the establishment as serving the entire area. He invested continuously in Harrison County land to become one of the largest landowners in East Texas.

His store is just outside the Longhorn Ordnance Works reservation, most of the Longhorn site having been acquired from him.

He also "dealt in everything," lending financial assistance to numerous individuals which from time to time had him in contracting, automobile, sawmill, fishing and other businesses.

Mr. Taylor was a lifelong member of the Methodist Church and had been a member of the Karnack Church for 60 years. He also was a continuous benefactor and erected the Sunday School building, which is known as Taylor Hall. He also presented the church with its organ.

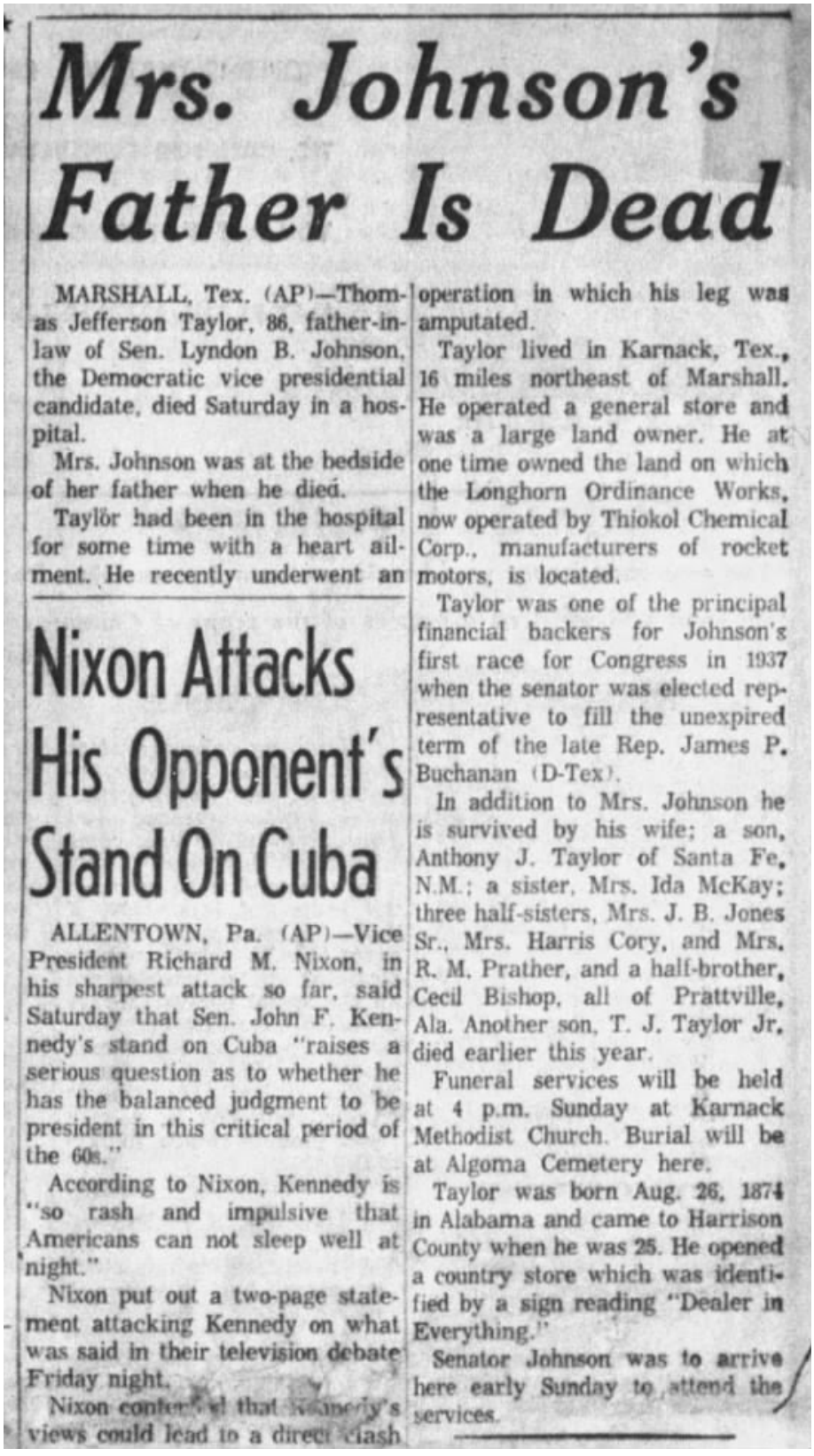
Taylor had suffered a heart ailment for the past 15 months and had been in the Marshall hospital most of that time.

Besides Mrs. Johnson, Mr. Taylor is survived by his wife and a son, Antonio J. Taylor, of Santa Fe, N.M.; a sister, Mrs. Ida McKay; three half-sisters, Mrs. J. D. Jones Sr., Mrs. Harris Cory and Mrs. R. M. Prather, and a half-brother, Cecil Bishop, all of Prattville, Ala. Another son, T. J. Taylor Jr., died last summer.

[HN0138][GDrive]

1960 (Oct 23) - The Longview Daily News (Longview, Texas)

[HN00TG][GDrive]



Mrs. Johnson's Father Is Dead

MARSHALL, Tex. (AP)—Thomas Jefferson Taylor, 86, father-in-law of Sen. Lyndon B. Johnson, the Democratic vice presidential candidate, died Saturday in a hospital.

Mrs. Johnson was at the bedside of her father when he died.

Taylor had been in the hospital for some time with a heart ailment. He recently underwent an operation in which his leg was amputated.

Taylor lived in Karnack, Tex., 16 miles northeast of Marshall. He operated a general store and was a large land owner. He at one time owned the land on which the Longhorn Ordinance Works, now operated by Thiokol Chemical Corp., manufacturers of rocket motors, is located.

Taylor was one of the principal financial backers for Johnson's first race for Congress in 1937 when the senator was elected representative to fill the unexpired term of the late Rep. James P. Buchanan (D-Tex).

In addition to Mrs. Johnson he is survived by his wife; a son, Anthony J. Taylor of Santa Fe, N.M.; a sister, Mrs. Ida McKay; three half-sisters, Mrs. J. B. Jones Sr., Mrs. Harris Cory, and Mrs. R. M. Prather, and a half-brother, Cecil Bishop, all of Prattville, Ala. Another son, T. J. Taylor Jr., died earlier this year.

Funeral services will be held at 4 p.m. Sunday at Karnack Methodist Church. Burial will be at Algoma Cemetery here.

Taylor was born Aug. 26, 1874 in Alabama and came to Harrison County when he was 25. He opened a country store which was identified by a sign reading "Dealer in Everything."

Senator Johnson was to arrive here early Sunday to attend the services.

Nixon Attacks His Opponent's Stand On Cuba

ALLENTOWN, Pa. (AP)—Vice President Richard M. Nixon, in his sharpest attack so far, said Saturday that Sen. John F. Kennedy's stand on Cuba "raises a serious question as to whether he has the balanced judgment to be president in this critical period of the 60s."

According to Nixon, Kennedy is "so rash and impulsive that Americans can not sleep well at night."

Nixon put out a two-page statement attacking Kennedy on what was said in their television debate Friday night.

Nixon contended that Kennedy's views could lead to a direct clash

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MAX SIMS LALE AND LONGHORN ARMY AMMUNITION PLANT

3-2007

Max Sims Lale and Longhorn Army Ammunition

Gail K. Beil

Max S. Lale

By Gail K Beil and Max S. Lale

In 1946 Max Lale reluctantly left the U.S. Army. He would have preferred to make a career of the military, he once said, but his wife Georgiana, an only child from Denison, Texas, was dead set against it and felt the need to be closer to her parents. Max, who constantly struggled to win the approval of Georglana's

socialite mother. decided the better part of valor was to put the uniform in the closet and take up his first career, journalism.

Born in Oklahoma on August 31, 1916, Max graduated from the journalism school at the University of Oklahoma before serving in the military and joined the *Marshall News Messenger* as a reporter in 1946. While there he met his mistress, Texas history, particularly the history of Harrison County. That love affair survived Georgiana and lasted throughout his life. His last bit of research committed to publication - in this case in the **April 29, 2006**, edition of the News Messenger - was completed five days before his death. The only difference between it and all the other pieces written over the years for a number of historical journals. newspapers, and books was that its genesis was not in the clacking keys of an old Royal typewriter. Max wrote it on a legal pad. his beloved second wife, Cissy, transcribed it on her brand new computer. and I added it as a sidebar to a feature I had written on Marshall's Temple Moses Montefiore's unique tracker organ.

Max acquired his love for history as a byproduct of his journalism career. One of his first assignments from News Messenger publisher Millard Cope was to write a comprehensive history of Marshall and Harrison County. The piece was to he some thirty-two pages in length and include everything from agriculture to **weapons of mass destruction**. Unfortunately, after it had been set in linotype and was ready for production about half of the article was dumped or spilled or otherwise destroyed. There were apparently no other copies, so half of what reporter Lale wrote never saw print. This vexed him so much that he spent the next sixty years trying to recapture the lost stories. Along the way he contributed to numerous historical journals, wrote nineteen Texas Historical Marker applications, at least six nominations for the National Register. and too many book reviews to count. He also produced a book-length account of the Sims and Lale families in Shawnee and his well-received autobiography, Max's Memoirs.

Max left Marshall briefly late in the 1950s for Greenville, Texas and a stint as publisher of the Greenville Herald. He soon returned and on August 1, 1961, took a position as public information officer for **Thiokol Chemical Company,** contractor at the **Longhorn Army Ammunition Plant (LAAP).** Longhorn occupied more than 8,000 acres on the eastern shore of Caddo Lakc near Marshall - a body of water that usually has the adjective "mysterious" attached to it, divides itself between Texas and Louisiana, and is considered Texas' only naturally formed lake.

Immediately Max began anew researching and writing local history. He started collecting and publishing not only Longhorn's colorful history but also that of **Harrison County's first ammunition plant, the Powder Mill, built in 1861 to serve the Trans-Mississippi Department of the Confederate States of America**. When LAAP finally became eligible for official historical recognition in 1999, Max and I vowed we would collaborate on an application for its Texas Historical Marker. Other projects tore us away and we never did. So in honor and memory of Max Sims Lale, and based almost entirely on his research, here is the history of LAAP from 1941 to 1997. May it become Max's twentieth, and my thirteenth, successful historical marker application.

Longhorn Army Ammunition Plant

Shortly before Japanese forces attacked Pearl Harbor on December 7, 1941 , as war looked inevitable and plans for the manufacture of material and weapons to fight it leapt from old soldier's dreams to the drawing boards of the War Department, **Monsanto Chemical Company** was approached by the U.S. Army's Ordnance Department to consider the operation of a smokeless powder plant. Monsanto was willing to take on the charge, but the St. Louis-based firm answered that it would be better suited for the manufacture of TNT, "an explosive described as 'looking like maple sugar when cold and maple syrup when melted.'" From the beginning of operations at what was first called the **Longhorn Ordinance Works** there were two employers; the contractor, who employed the majority of the workers, and the Army, owner of the land and facility and in charge of all operations. The Army generally stationed a colonel, one or two other officers, and three dozen or more civilians at the armament works. [1]

The new installation was a six-line special TNT plant designed by E.I. DuPont de Nemours C. Inc. and the location for the plant was announced on December 15, 1941. The site chosen consisted of 8,493 acres in the unincorporated village of Karnack in Harrison County, on the banks of Caddo Lake. At the time Lyndon Baines Johnson was a U.S. Representative from Texas and a favorite of President Franklin Delano Roosevelt. Johnson's wealthy, influential father-in-law, Thomas Jefferson "Cap" Taylor, whose home was located less than three miles from Caddo Lake, happened to own a great deal of the land involved and assisted in the purchase of much of the rest. Taylor's general store, "TJ. Taylor - Dealer in Everything," on U.S. 43 was a prominent landmark in Karnack. and he had made a name for himself as a political powerhouse by snaring the second state park established in Texas, Caddo Lake State Park, which consisted of 478 acres on the Cypress Bayou where it empties into the lake, [2]

Production at Longhorn began on October 6, 1942, with the first flake of TNT produced at 12:20 p.m., October 19. At its height in the 1940s, the plant had 1,518 employees, many of whom were imported from St. Louis by Monsanto. The influx caused a housing shortage in Marshall and permission was granted to construct a large housing addition, dubbed "Yankee Stadium," normally impossible in the wartime economy, on the south edge of town. Loyal and patriotic, Longhorn workers "staunchly backed the War Bond program, 99 percent signing up for payroll deduction purchases averaging 10 percent of their salaries." **Longhorn had produced 414,805,500 pounds of TNT when production ceased on August 15, 1945**. By then it had reduced the price from the original cost of seventeen cents per pound to approximately six and a quarter cents per pound, quite a reduction from the nearly fifty cents per pound the explosive had cost during World War I. [3]

On April 23, 1946, the plant became what the Army called "a standby installation," with Monsanto maintaining a small workforce until June 16, 1946, when the government assumed control of the facility. At that point, the staff consisted of two Army officers and thirty-two civilians. It soon increased to three officers and eighty-five civilians when it became apparent that Monsanto had failed to clean up the plant adequately before being relieved of responsibility. [4]

From November 1945 to June 1950, Longhorn remained in mothballs, with the labor force fluctuating between 85 and 210 - all employed by the U.S. Army - depending on the workload required to maintain the facility and keep the plant in operating order. In February 1952 it was needed again, and this time Universal Match, also based in St. Louis, was the general contractor with instructions to manufacture a propellant fuel that would be loaded, assembled, and packaged as pyrotechnic ammunition for use in Korea. Universal Match's general manager arrived in Marshall on December 7, 1951 to begin operations. On July 27,1953 an armistice between the U.S., Korea, and China was signed, and on March 14, 1956 Universal Match's contract was cancelled. A month later the production of all pyrotechnic ammunition items ceased and Plant One was again relegated to standby status. [5]

Longhorn was divided into three production units, each with a unique manufacturing capability. Plant One had opened with the arrival of Monsanto and produced TNT. Monsanto also opened Plant Two to meet the need for pyrotechnics - flares and illuminating bombs. **By 1956 plants one and two were idle but work had begun on a new plant, one that would be used by Thiokol Chemical Corporation to produce an altogether new product - solid fuel rocket motors.** Longhorn was selected as the site to do the work following an engineering study by the chemical giant, which already had two contracts to operate facilities at Redstone Arsenal in Huntsville, Alabama. **Whether Lyndon Johnson's position on the Senate Armed Services Committee had anything to do with the ultimate decision to make rocket motors on the banks of rural Caddo Lake remains speculation**. [6]

Plant Three cost $10 million, an expenditure that included roads, railroad tracks, and eventually fresh water treatment and wastewater treatment

installations. The highly guarded, intensely classified area was, for the most part, completely self-sufficient. **Ray McElvogue** was named Thiokol's general manager on October 2, 1952, and remained in that position until well into the 1970s. Plant Three grew in a series of five expansions, each built by Brown and Root Construction and costing $11,503,411 by the time all were completed in 1962. Driven by the Cold War, the escalating problems in the Far East, and a growing number of American troops committed to Vietnam by 1964, the need for intermediate-range, nuclear-tipped rockets escalated. **Even though Longhorn had no role in the manufacture of nuclear weapons its employees, who numbered nearly 3,000 in those days, provided the muscular means of delivery.** For that effort Longhorn had been funded with more than $141 million in 1964. Additionally, Plant Two was reopened to manufacture button bombs, illuminating flares, and other pyrotechnics needed in increasing numbers in Vietnam. A portion of those construction dollars financed the construction of three huge powder magazines in a remote area away from where TNT and solid fuel were produced. [7]

Dynamics other than war and threats of war began playing a part in the growth of the plant, particularly in the recruitment of employees as the need for them grew from the dozen Thiokol brought to Karnack in 1952 to the 2,663 who suited up in white in 1968 to run the production lines. What had been a white man's world as far as skilled and semi-skilled workers were concerned in 1941 now included women and minorities. Employment efforts extended from advertisements in scientific journals to recruitment forays into the Job Corps and the Neighborhood Youth Corps - both programs of Johnson's "Great Society." [8[

All blessings come with consequences and so it was with the influx of new employees, most of whom chose to reside eleven miles away in Marshall. The roads between the plant and the town were narrow and winding and poorly graded. The almost right-angle curves, un-maintained road shoulders, and daily traffic jams as nearly 2,000 automobiles entered and left the plant at the same time twice a day, where they often met the ten buses serving Karnack ISD students, led to much frustration and too many accidents. Moreover, despite the fact that the City of Marshall had issued permits in 1967 for 114 residences plus a few apartments, and another 224 were issued the next year, there was a critical shortage of housing, especially rentals for the more transient Army's officers and civilian personnel, who numbered about 300 of the more than 2,900 employees. By 1968, Colonel Royce P. Larned, who was commanding officer and in charge of the plant itself, and Ray McElvogue decided it was time to take matters into their own hands. [9]

They met with the Texas Highway Department's resident engineer, Harrison County Judge, and Precinct Two County Commissioner. The county was responsible for the purchase of highway right-of-way, which had grown increasingly expensive after World War II. Since all the roads involved were state property the state would have been responsible for actually building or improving them, Before the meeting Colonel Lamed had ordered a study of the traffic problems and road conditions on the highways and farm-to-market roads that employees traveled daily. The study was conducted by the state highway department and resulted in a book-length report. On December 27, 1968, it was presented to the local officials. In addition the Access Road Study went up the chain of command to the D. S Army Munitions Command as well as to state and federal officials. It apparently failed to make an impression. Resident Engineer Gilbert A. Youngs said that while improvements to the forty miles of access road into the LAAP installation were on the drawing boards, "No funds are provided for it~ reconstruction at this time and other priorities in the county prevent our contemplating its reconstruction within the next five or six years." [10]

This response was utterly unsatisfactory to Larned and McElvoguc who decided to counter it with an aggressive public relations campaign to educate the public about the economic and strategic importance of LAAP to the community. McElvogue conducted off-the-record, one-on-one meetings with community leaders and spoke to local civic groups, beginning with the Marshall Rotarians. He served as president of the Greater Marshall Chamber of Commerce in 1968, and he and Max Lale continued to he members of the board of directors for a number of years. News conferences with Vietnam veterans and foreign visitors appeared not only in the local media but also an in-house publication. the Longhorn Missile, for which Lale was responsible. **Both Lale and McElvogue were also members of a semi-secret organization consisting exclusively of white males; bankers, major retailers, the News Messenger publisher, and heads of a couple of other Harrison County manufacturing plants. The group called itself "The Citizens Advisory Board," but members were known locally as "The Do Gooders."** Among the organization's functions was to choose and fund candidates for city and county offices.

When the state refused to improve the roads between Marshall and LAAP Lale, ever the practical historian, decided to take a page from the history of Marshall city government. In decades past, when the economic engine of the town had been the Texas and Pacific Railroad, the T & P was always represented by one member of the five-man city council. Lale concluded that LAAP should enjoy the same privilege and decided to run for a seat, a decision apparently endorsed by both McElvogue and the Do Gooders. He was elected to a two-year term in April 1963, running unopposed and drawing 1,970 votes out of a total of 2,023 cast (the others were write-ins). After one two-year term he retired, at the request, he said, of his boss. For his service in this unpaid position he was presented with a box of cigars. By 1967, McElvogue himself saw the merit in having an official seat at the table and ran in 1967 against rancher Carl Swendson, whom he defeated, 678 to 456. His success was undoubtedly aided by a non-partisan "Democracy in Action" program at the plant designed to encourage employees to register to vote and to support their candidates with their funds and their efforts.

In October 1968 Thiokol executives and Army leadership decided to show off the LAAP facilities to the public and scheduled an open house at the site. More than 6,000 invitations were sent to employee families. Marshall and Harrison County opinion leaders, and area dignitaries. Lale, who had circulated a full year's printing of the Longhorn Missile (1968) to opinion makers, school and college personnel, banking institutions, and key business firms in the area, created a program that included paintings by well-known local artist Max Cole and the history of both Longhorn Army Ammunition and the Confederate-era Marshall Powder Mill. The open house, a..o;; well as a celebration on December 30, 1968, for LAAP's production of the IO-millionth round of artillery and mortar illuminating ammunition drew extended coverage from ABC and CBS affiliates in Shreveport and Tyler. Marshall Radio Station KMHT (for which Lale had once been the newscaster in addition to his duties as a News Messenger reporter) and Marshall and Longview newspapers also covered both events extensively. The year of frenetic activity led to many awards earned by the plant from manufacturing and defense-related entities. Each presentation ceremony was well covered by both the in-house and general publications. [11]

Although the roads continued to be a headache, in other areas conditions improved. [12]

The increasing volume of criticism over U.S. involvement in the Vietnam War reached Marshall only peripherally. No local protests were held against a government-owned plant manufacturing ammunition for an unpopular war. Indeed, concern was exactly the opposite. Local residents worried that troop withdrawals from Vietnam, Congressional debate over the further proliferation of anti-ballistic missiles, and high-profile anti-war demonstrations across the nation would have a deleterious effect on the economic status of Marshall and Harrison County. Their concern was palpable enough that McElvogue tried to reassure his employees and the community at large in a letter he called "Smoke Signals."

- I am sure you have been hearing and reading a lot of references to and criticism of 'the military-industrial complex' in our country and may be concerned that the criticism, at least by reference, is against us in the Longhorn Division....Here at Longhorn we are performing a absolutely vital task in supporting American fighting men who, without our production, would be severely handicapped in a particularly difficult war. We more than most can appreciate the anguish of our men in Vietnam. We more than most do pray for a honorable end to the war. There is no "conspiracy" about our activities. We are not

plotting to rob the taxpayers. We are not trying to take over the country.

- Don't be bugged. We are doing important work. We are doing it with high quality, on time and at a very reasonable cost. Whatever else may be said, we have the satisfaction of knowing our friends and relatives in Vietnam recognize and respect the work we are doing. [13]

While there were no local demonstrations against the war or the plant, the fears of MeElvogue and others did come to pass. By 1973 a cease-fire in Vietnam was declared, and in 1975 the ignoble evacuation of Saigon was complete and no U.S. troops were left in South Vietnam. From a high in November 1968 of 2,986 workers and officers, LAAP employment rolls numbered fewer than 1,000 by 1975. Max Lale, who had suffered a heart attack and subsequent open-heart surgery at age 59, retired from Thiokol on October 23, 1975. There were no more comprehensive installation histories prepared under his careful hand. [14]

Longhorn again had its place in the sun in 1988 when national leaders decided to eliminate the Pershing Missiles once manufactured there. On December 8, 1987, U.S. President Ronald Reagan and USSR General Secretary Mikhail Gorbachev signed the Treaty of Intermediate Nuclear Forces, in which the United States and the Soviet Union consented to eliminate an entire class of nuclear missiles. The U.S. agreed to destroy the entire class of medium-range Pershing I and Pershing II weapons and the USSR an equivalent class of SS 20 Sabers. The Soviet-manufactured Saber motors were done away with at Kapustin Yar Missile Test Complex in the USSR at the same time that the majority of Pershing motors were static-fired, then crushed, at Longhorn. [15]

On September 8, 1988, a U.S. delegation led by Vice President George H.W. Bush and a Soviet entourage led by Chief Inspector Nikolai Shabalin, along with representatives from several NATO countries and local, state, and federal dignitaries, watched as Thiokol engineers fired the first Pershing I motor, bound into the harness at the static testing site, and it burned itself out. It was then rolled from the platform and beaten into small bits by the bucket of a bulldozer. Pieces of the spent and blackened casing were presented to many of those in attendance. The routine was repeated with a Pershing II rocket motor. They were the first two of 700 Pershing I and II rocket engines eventually static-fired at Longhorn. Covering this first destruction on American soil of a ground-launched cruise missile, as specified in the INF Treaty, were representatives from more than one hundred foreign and domestic media outlets. But the dignitaries and the press were not the only observers. High on a utility wire above the site perched two or three dozen bluebirds. When the engine roared to life the little birds vanished, but as quiet once more returned to the shores of the lake and the tall pines surrounding the ceremonial grounds, so did the flock of bluebirds, which returned to the wire. The missiles and manufacturing activities are all gone now. The bluebirds remain, harbingers of Longhorn's future. [16]

Following the official ceremonies, the work of carrying out the treaty began in earnest. Every six weeks until May 1991, a team of Soviet scientists, military officers, and KGB agents arrived in Marshall, occupied a special "secure" wing of the Ramada Inn hotel, and remained for a month. When their job of witnessing the elimination of the missiles ended each day they were free to do almost anything they wished or go anywhere in the county except into private homes. Trips to Wal-Mart and automobile showrooms were a favorite, and many also accompanied their official escort, Colonel Jim Kealey, fo St. Joseph's Catholic Church in downtown Marshall. Visits to schools and colleges provided a particularly enjoyable experience for both students and Soviets. When the Marshall High School Mavericks won the state UIL football playoffs in 1990 many members of the inspection teams attended home games. Tongue in cheek, they claimed credit for bringing luck to the Mavericks with their presence. When acclaimed journalist and Marshall native Bill Moyers updated and reissued his Emmy Award-winning documentary, "Marshall, Texas/Marshall, Texas." in 1992, he included a segment showing one of the Soviet Inspection Teams playing tag football with some of the Mavericks. "M.T. / M.T." opens with scenes from "Max Lale Day" when the town honored its official historian with festivities on the town square. [17]

In 1990, Longhorn was listed as one of the Department of Defense facilities with known contaminants in the soil, surface, and ground water sufficiently toxic to be named to a list of federal Superfund Sites. Under the supervision of what is now known as the Texas Commission on Environmental Quality and the federal Environmental Protection Agency, five separate locations within the plant were to be restored using funds allotted by the DOD. Per chlorate, heavy metals and other armament-related debris, petroleum, and lubricants were identified in one or all. Work to clean up Longhorn began soon afterward. [18]

Its personnel already reduced to a skeleton crew of Morton-Thiokol and Army civilian workers, Longhorn fell victim to the "peace dividend" after the Cold War ended. On June 27, 1995, officials of the U.S. Army, with Congressman Jim Chapman as a guest, held inactivation ceremonies, although cleanup work continued under the direction of the environmental protection agencies. The Army had the option of retaining the land or offering it to any other federal agency, with top priority going to the Department of the Interior, which quickly snapped it up. About 900 acres of the most-pristine land and the two-remaining cinder block-constructed facilities was leased to the private, non-profit Caddo Lake Institute in 1997. **The remaining land apart from the cleanup sites was transferred to the U.S. Fish and Wildlife Service, and as each of the Superfund areas is pronounced safe it is added to the Caddo Lake National Wildlife Area**. Public access is expected to begin in September 2006. [19]

Most of the termite-ridden and contaminated buildings are gone. The three powder magazines still stand as lonely sentries on a narrow road at the south end of the old plant. When the U.S. Fish and Wildlife Service took over, Williams decided to "open their doors and see what came in." What came in were several varieties of bats, and Williams and other nature enthusiasts and tourism-promotion officials envision an attraction equal to the Congress Avenue Bridge in Austin and the Waugh Drive span in Houston, where hundreds of people gather at twilight to watch the bats' departure. [20]

Max often mused that when he joined the Army ROTC at the University of Oklahoma in the 1930s, it was equipped with horse-drawn, French-made seventy-millimeter guns. He lived to see the Army field artillery equipped with medium range missiles whose motors were manufactured at Longhorn, where he spent the last fourteen years of his working life. And he fully approved of the decision to make Longhorn a wildlife preserve.

NOTES

'Proposal to Monsanto made in Ih~ sIlmm~r of L941. Much of the material for thi~ account,

including the I\uotation in this paragraph, is taken [rom a well documenled, four-vulume hislury

of Longhorn researched and prepared by Max Lale, a complete set of which can be found in the

archives of the Harrison County Historical Museum Library (hereafter referred to as Installation

History). According to Lale, information rdating to the beginning of the plant he drew from a I>pecial

section devoted to LAAP published in the Marshall News Messenger, November 4, 1945.

Housatonic

Antonio Jefferson Taylor (born 1904)

Born - 1904

Married **Julia Elizabeth Sibley (born 1905)**

- Divorced
- Second marriage was to

Parents

Father was Thomas Jefferson Taylor II (born 1874)

Siblings

Sister : Claudia Alta "Lady Bird" Taylor (born 1912) , wife of President Lyndon Baines Johnson.

Brother - Thomas Jefferson Taylor III

1986 (Sep 01) - Obituary

He is described here ([HN00TB][GDrive]) as "a consultant to the Agency for International Development", and "appointed to the psot by President Lyndon B. Johnson"

Full page of below newspaper clipping here : [HN00T9][GDrive]

Ruptured heart kills city businessman Antonio J. Taylor

By The New Mexican Staff

Memorial services will be conducted Thursday, Sept. 4, at 11 a.m. at St. John's United Methodist Church for prominent Santa Fe businessman Antonio J. Taylor who died at St. Vincent Hospital Sunday.

TAYLOR

Taylor, 82, died of a ruptured aorta.

In 1927, Taylor opened the Old Mexico Shop at Galisteo, which deals in imported arts and crafts, at Galisteo and Water Streets.

Born in 1904 in Karnack, Texas, Taylor came to New Mexico in 1918 as one of the first students of the Los Alamos Ranch for Boys.

Fluent in Spanish, Taylor had a lifelong love affair with Mexico and became one of the first people in the United States to import huge volumes of Mexican arts and crafts.

Fellow importer Lou Slavitz of New York City said Taylor would scour the Mexican countryside looking for top quality crafts and art. He would advance craftsmen part of the cost of materials and have them discount their wholesale price when they delivered their consignments of goods.

His support and encouragement in developing Mexican arts and crafts for export won him widespread respect and recognition on both sides of the border.

Taylor was one of the first people to use mail order to market his collections of imported merchandise.

In 1940, Taylor was president of the Santa Fe Fiesta Council. In 1968, he served as an informal translator for discussions between then U.S. President Lyndon Johnson and Mexican President Luis Dias Ordaz which lead to the Chamizal Agreement between the two countries.

Johnson was married to Taylor's sister Lady Bird Johnson. The former first lady was a frequent visitor to Santa Fe.

In 1976, Taylor received the rank of Commander of the Order of Isabel La Catolica bestowed by King Juan Carlos of Spain in recognition for his service as vice counsel of Spain in the U.S. southwest.

Taylor was a distinctive figure in Santa Fe, known for his wit, charm and kindness. At Christmas, the Old Mexico Shop would invite the children from the now closed St. Vincent Orphanage to pick out new shoes.

Survivors include his wife Matianna Vigil Taylor; two daughters, Mrs. Jack Hopkins of Santa Fe and Mrs. Diana McArthur of Washington, D.C. and a sister, Mrs. Lyndon B. Johnson of Austin, Texas. Other survivors include four grandchildren, and two great grandchildren.

Taylor will be buried at a private ceremony at Rosario Cemetery. The family requests that in lieu of flowers, memorial contributions be made to the Salvation Army, where Taylor served on the board of directors.

1986-09-01-the-morning-herald-pg-a-7-clip-antonio-j-taylor

{HN00TA][GDrive]

EVIDENCE TIMELINE

1954 (Nov 17) - Niece Diana Lee Taylor marries Nikolai Tschursin

Marriage of Diana Lee Taylor (born 1933)

See [HN00T6][GDrive]

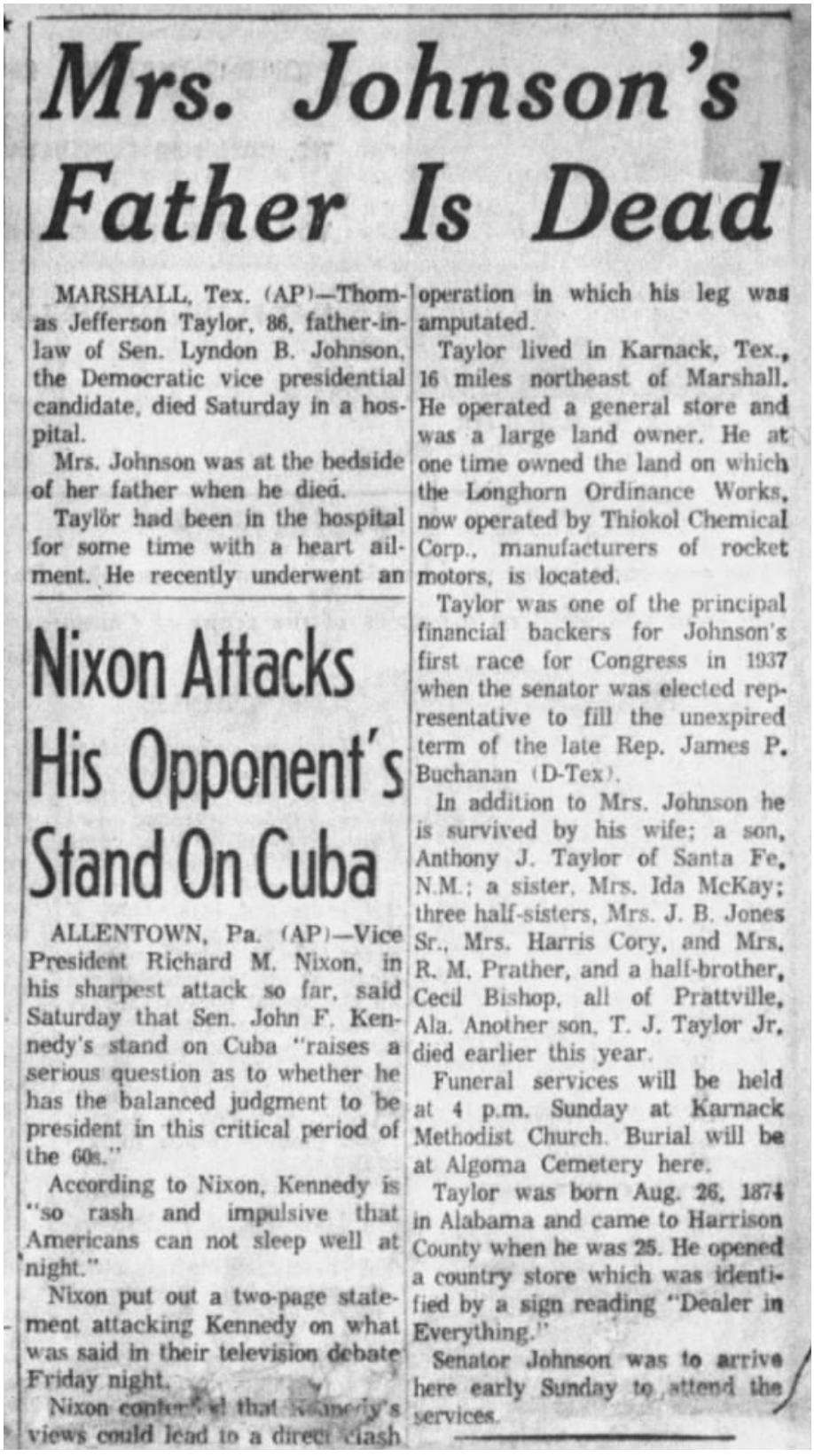
1959 - Brother Thomas Jefferson Taylor Jr. dies

https://www.newspapers.com/image/587989981/?terms=thomas%2Bj%2Btaylor%2Bjr

1960 (Oct 23) - Father Thomas J Taylor II dies

See Thomas Jefferson Taylor II (born 1874)

[HN00TG][GDrive]



Mrs. Johnson's Father Is Dead

MARSHALL, Tex. (AP)—Thomas Jefferson Taylor, 86, father-in-law of Sen. Lyndon B. Johnson, the Democratic vice presidential candidate, died Saturday in a hospital.

Mrs. Johnson was at the bedside of her father when he died.

Taylor had been in the hospital for some time with a heart ailment. He recently underwent an operation in which his leg was amputated.

Taylor lived in Karnack, Tex., 16 miles northeast of Marshall. He operated a general store and was a large land owner. He at one time owned the land on which the Longhorn Ordinance Works, now operated by Thiokol Chemical Corp., manufacturers of rocket motors, is located.

Taylor was one of the principal financial backers for Johnson's first race for Congress in 1937 when the senator was elected representative to fill the unexpired term of the late Rep. James P. Buchanan (D-Tex).

In addition to Mrs. Johnson he is survived by his wife; a son, Anthony J. Taylor of Santa Fe, N.M.; a sister, Mrs. Ida McKay; three half-sisters, Mrs. J. B. Jones Sr., Mrs. Harris Cory, and Mrs. R. M. Prather, and a half-brother, Cecil Bishop, all of Prattville, Ala. Another son, T. J. Taylor Jr., died earlier this year.

Funeral services will be held at 4 p.m. Sunday at Karnack Methodist Church. Burial will be at Algoma Cemetery here.

Taylor was born Aug. 26, 1874 in Alabama and came to Harrison County when he was 25. He opened a country store which was identified by a sign reading "Dealer in Everything."

Senator Johnson was to arrive here early Sunday to attend the services.

Nixon Attacks His Opponent's Stand On Cuba

ALLENTOWN, Pa. (AP)—Vice President Richard M. Nixon, in his sharpest attack so far, said Saturday that Sen. John F. Kennedy's stand on Cuba "raises a serious question as to whether he has the balanced judgment to be president in this critical period of the 60s."

According to Nixon, Kennedy is "so rash and impulsive that Americans can not sleep well at night."

Nixon put out a two-page statement attacking Kennedy on what was said in their television debate Friday night.

Nixon contended that Kennedy's views could lead to a direct clash

1961 (Oct 19) - Passing of sister-in-law - Mrs. Julia Elizabeth Sibley

See [HN00T8][GDrive]

1963 - In the White House to see brother-in-law (and president) LBJ "in action"

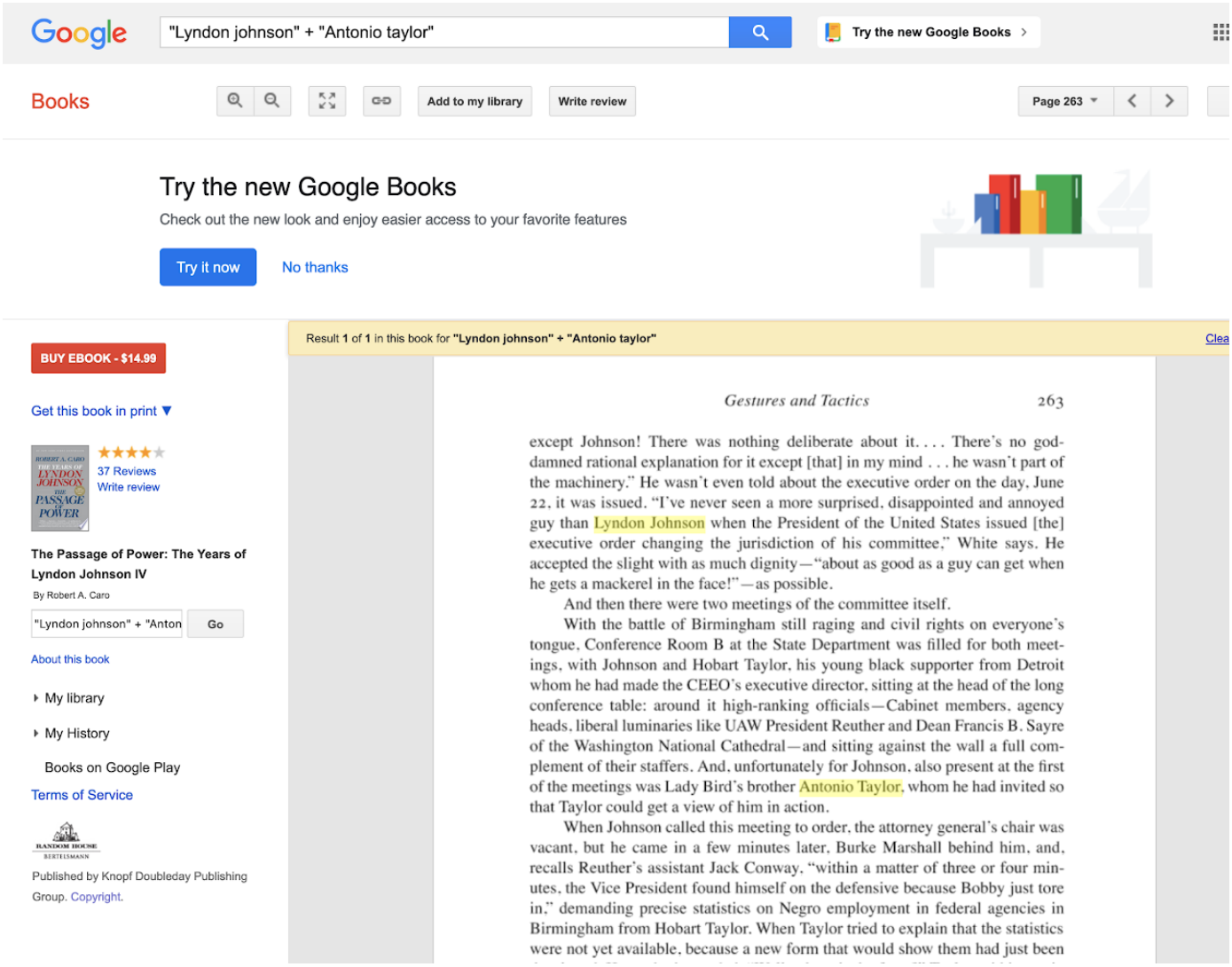
https://books.google.com/books?id=kouZh-f8cLMC&dq=%22Lyndon+johnson%22+%2B+%22Antonio+taylor%22&source=gbs_navlinks_s

Book -

The Passage of Power: The Years of Lyndon Johnson IV

Robert A. Caro

Knopf Doubleday Publishing Group, May 1, 2012 - Biography & Autobiography - 736 pages



1978 (Oct 31) - Visits daughter Diana in DC

https://www.newspapers.com/image/581545944/?terms=%22donald%2Bmacarthur%22

1978-10-31-the-santa-fe-new-mexican-pg-a-7 / 1978-10-31-the-santa-fe-new-mexican-pg-a-7-clip-macarthur

Mr. and Mrs. A.J. Taylor and Mrs. Jack Hopkins went east to visit his daughter and son-in-law, Dr. and Mrs. Donald MacArthur of Washington. Mrs. MacArthur, a Washington career woman, is remembered as the former Diana Taylor, and is a sister of Mrs. Hopkins. The MacArthurs recently purchased a condominium in Bethany Beach, Md., so they drove the short distance to see this beautiful area, a new development in a magnificent setting.

1978-10-31-the-santa-fe-new-mexican-pg-a-7-clip-macarthur

1988 (Dec 2) - Passing of son-in-law Dr. Donald MacArthur

Source - PDF - [HN00T2][GDrive] / JPEG is [HN00T1][GDrive]

See Dr. Donald Malcolm MacArthur (born 1931)

Founder of the Dynamac Corporation .

1994 - Grandaughter passes

Diana Taylor's daughter, a microbiologist, committed suicide in 1994 in Maryland. Years later, Diana decided to build a school In Pakistan in her honor.

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https://www.washingtonpost.com/archive/local/1988/11/29/donald-m-macarthur-57-founder-of-md-firm-dies/5ffe116a-79f4-4351-bd24-317bd16cae6f/

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https://www.yumpu.com/en/document/read/25971623/corporate-qualifications-same-satxorg

William Brockenbrough Taylor Sr (born 1925)

[HG0009][GDrive]

- **Born** March 11 1925 [HL000D][GDrive]
- **Parents** Lewis Jerome Taylor, Sr (born 1894) and Roberta Page (Newton) Taylor (born 1895) [HL000E][GDrive]
-
- **Siblings**
  - Betsy Tazewell (Married **John Parks Tazewell** (born 1920)
  - Rev Lewis Jerome Taylor, Jr (22 Feb 1923) [HL000F][GDrive]
  - Rev. Robert Page Taylor [HL000G][GDrive]
- **Married** Nancy Dare (Aitcheson) Taylor [HK000L][GDrive]
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Office Manned Space Flight, NASA, 1962-67.

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Office, Chief of R&D, US Army, 1967-69.

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See book : [HB000C][GDrive]

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Chapter 1 - The Beginnings

Pages 7 to 17

[...]

In the approved Memorandum, dated July 22, 1952, Collins assured Secretary Pace that he "strongly" concurred that the Army should have a "dynamic program"in the area of nuclear energy. To accomplish this, the Chief of Staff proposed that the Army immediately enter into a contract with a qualified research group to begin work on a program that would produce a mobile or semi-mobile atomic power source within a four- to eight-year period. The Memo acknowledged that the cost of producing power from the first nuclear plant would probably exceed that from a conventional power source. Consequently, the Army would have to justify its expenditure of funds on the basis of logistic savings in transporting fuel to remote areas. Secondarily, the service would have to justify the program as providing an impetus for the development of the commercial nuclear power industry and so offer great potential value to the nation as well as having "a major indirect military benefit."20

The Memorandum went on to explain that the research contract would not only be feasible, "but very timely in light of the progress made to date in reactor development and in light of the studies that are being made by the power industry."

To initially finance the Army's Nuclear Power program, Collins proposed that the Army provide approximately $250,000 to the Chief of Engineers to administer the contract. During the 1953 fiscal year, Collins said that the Chief of Research and Development would need an additional $1 million to continue the Program, to be obtained either by reallocation of his budget or by appealing to the Secretary of Defense's emergency fund. According to the Memo, Dr. Hafstad agreed that the Corps of Engineers should initiate the project. Once it had developed a firm military requirement and defined a specific reactor project, the Army would consult with the AEC "to determine the best way for proceeding with the engineering and construction phase."21

Collins explained that the initial contract would be expected to accomplish three goals. It would determine the nature of the Army's requirements for power sources to be provided by power plants. It would ascertain the most effective type of reactors to meet those requirements and provide a preliminary design analysis to show the scope of the effort required. Finally, it would arrive at a proposed program that would include a probable time schedule, estimated cost, and organizational structure recommended to carry out the project.

The Chief of Staff singled out the immediate need to assign an officer to the project who could carry it forward with "dedicated vigor, determination and continuity." He reported that the Chief of Engineers had agreed to assign an officer to the program for as long as needed. Collins said he was prepared to approve and he urged Pace to recognize that "the officer selected for this position shall be permitted to remain with it so long as assignment appears desirable." On the other hand, decisions regarding size of the support staff and whether it should include in the area of nuclear energy. To accomplish this, the Chief of Staff proposed that the Army immediately enter into a contract with a qualified research group to begin work on a program that would produce a mobile or semi-mobile atomic power source within a four- to eight-year period. The Memo acknowledged that the cost of producing power from the first nuclear plant would probably exceed that from a conventional power source. Consequently, the Army would have to justify its expenditure of funds on the basis of logistic savings in transporting fuel to remote areas. Secondarily, the service would have to justify the program as providing an impetus for the development of the commercial nuclear power industry and so offer great potential value to the nation as well as having "a major indirect military benefit."20

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In concluding, Collins raised the issue of how the Program would be classified for security purposes. He "earnestly" proposed that the project be unclassified except for details "that must be classified in accordance with the regulations of the AEC as required by the Atomic Energy Act." Collins justified this position by voicing a theme that would run through the life of the Army's Nuclear Power Program. It offers "a fruitful source of effective publicity on Army support of peaceful application of atomic energy."23

While Collins' Memo was passing upward through the chain of command, Gen. Nichols continued to establish the groundwork for the future Nuclear Power Program.

On July 17, Dr. Dunning called to say that Columbia "would be very interested in doing the job but could undertake it only if it is to be a long-range thing." He explained that the school would have to reassign people to the contract from other work, from other institutions, and from other contracts with industry. Since Columbia had a firm policy that it would not handle any project on a subcontract basis, Dunning suggested that if the Army wanted the university to work with a private research firm, it would have to give prime contracts to both and have it cross-referenced to each.24

On July 29, 1952, Secretary Pace responded to Collins' Memo by giving the Chief of Staff's proposal his "complete approval and support." He expressed his gratification at "the specific steps proposed, or already taken, to accelerate the Army's participation and action in this most promising area of research and development." He hoped that Collins could select a contractor "at an early date" to initiate the research phase of the Program. The Secretary also gave "hearty endorsement" to the concept of selecting an officer to run the Program on a long-term basis, calling it a "most forward-looking one."25

In conclusion, Pace wrote that he agreed the Army "should strive to accomplish this program on an unclassified basis as you propose. The far-reaching benefits of this program in terms of peaceful application should be made known as fully and as rapidly as possible to the American public." He also asked to be kept "closely informed as to the progress in the vigorous execution of this program." To this end, he suggested a meeting with Collins on the subject in early October. In the meantime, he said his office would be available to provide assistance "in the furtherance" of the project.26

On August 4, responding to the Secretary's approval, the Chief of Engineers Gen. Pick, with Gen. Nichols' concurrence, selected Col. James B. Lampert to head the Army's Nuclear Program. Lampert had first become involved with atomic power in 1946, when, as a promising young engineer officer, he received an assignment to the Manhattan District as a Corps of Engineers' replacement to the wartime staff. A long tour of duty had enabled him to become familiar with atomic energy activities. Subsequent assignments as District Engineer in Charleston from 1949 to 1950, and in a civil works capacity in Tulsa at the time of his new appointment, had given him administrative experience. Arriving in Washington in the middle of August for his initial briefing, Lampert found the Program "was on an extremely tentative state."27

In their first meeting, Gen. Nichols told Lampert he hoped the Army's Nuclear Program would follow the pattern established by Rear Adm. Hyman Rickover in developing the Navy's nuclear submarine program. Rickover held a position as an Assistant Chief of the Navy's Bureau of Ships and as a head of an operating program within the Atomic Energy Commission. In addition, the then-captain operated with a Navy budget and an AEC budget to finance the nuclear submarine program. Although Lampert ultimately created a similar organization, he first had to overcome resistance within the AEC to "the idea of establishing another military program within [its] bosom."28

In the meantime, as Lampert was beginning his initial exploration of his new assignment, the Army formally designated the Corps of Engineers as the supervisory agency. By the time the Colonel had completed his move to Washington in early September, the Corps of Engineers had begun discussions with the Atomic Energy Commission on procedures for getting the program quickly underway. The AEC "recommended very strongly" that the Army follow the same procedures that the Navy and Air Force had used with their nuclear reactor programs. Like his counterparts, Col. Lampert would receive dual assignments, as head of the Army's program and a position in the Reactor Division of the AEC. This arrangement would enable him to be in immediate touch with all aspects of the Commission's reactor development program. The AEC also suggested that the Army officially express to the Agency its interest in starting a reactor program so that the AEC would have a basis for active cooperation in the Army's program.29

To accomplish the last item, Secretary Pace wrote to Gordon Dean, Chairman of the Commission, on September 10, 1952, outlining the Army's interest in developing a nuclear power capacity. According to Pace, at some point in the future the Army would have sufficient need for a power source free from conventional fuel requirements that would justify the additional cost of a nuclear power facility over a conventional power plant. The Secretary asked the Atomic Energy Commission for "advice and assistance" in selecting a contractor for the feasibility study and cooperation with the research group so that the study would benefit from the work of the AEC's Reactor Division. Pace also asked that the Commission accept Col. Lampert on a dual assignment basis in its Reactor Division."30

In his response on October 7, 1952, Dean agreed to cooperate with the Army in its study of possible military uses of nuclear energy. He pointed out that the AEC had already done studies on the economics of operating small nuclear reactors. As a result, he thought the Army should avail itself of the information on hand before extending a contract for an independent feasibility study. In fact, the AEC Chairman thought the Commission should retain responsibility for the study of any new reactor design to avoid duplication and confusion. Dean did agree that Lampert should work closely with the AEC's Division of Reactor Development in evolving any Army reactor program.31

Meanwhile, Gen. Nichols had been working with Col. Lampert to establish a viable foundation for the Army's program. On September 17, Dr. Dunning had come down from Columbia University to go over the project with them, and on September 22, they had met with Thomas Murray, one of the AEC Commissioners, to discuss the proposed program. Murray followed up the meeting on October 9, when he called Gen. Nichols to find out if Dean's letter to Secretary Pace "fit the bill." He also suggested Nichols and Lampert meet with him again to talk about the mechanism of the Army's program after Lampert had spent a week in the Commission's headquarters. In turn, on October 16, Nichols advised Pace that Dean's letter "may furnish an adequate basis for initiation of the program" even though it contained "certain reservations" the AEC had in "relinquishing any jurisdiction in the reactor field."32

Strategically, Nichols did not think the Army "should raise any issues concerning procedure and justification at this time." Instead, he thought Lampert could work directly with Dr. Hafstad to develop plans for the best means of initiating the Program. In fact, Nichols informed Pace that Lampert had already established a liaison with the AEC through Hafstad and had begun his work. He also provided the Secretary with a draft reply to Dean's letter, which advised the AEC Chairman of the arrangement.33

Initially assigned in the Chief of Engineer's Office to the Assistant Chief of Engineers for Troop Operations, Lampert had begun working with Hafstad in the AEC's Reactor Development Division on an informal basis. Hafstad provided him with a desk in the Civilian Reactors Branch in order to give him access to nuclear experts both in the government and in private industry. Lampert also quickly approached Adm. Rickover but obtained an interview only with some "difficulty."

As Lampert recalled, the Admiral greeted him by saying, "I understand you want to build nuclear power plants for the Army. My advice to you is that you don't know what you're getting into and the best thing you can do is get out of it in a hurry." Despite the coldness of his introduction, Rickover did provide Lampert with a great deal of technical materials from the Naval Reactors Group Library and had one of his assistants brief him on the progress of the Navy's reactor program. 34

For the most part, Lampert's first months of work consisted of a series of data gathering meetings. At the AEC, he continued to encounter resistance in part because the Army still had not demonstrated a formal requirement for a nuclear power plant and the Commission was very reluctant to allocate funds without such a justification. At the same time, because the AEC was encouraging private industry to begin work on commercial nuclear power plants, Lampert was told to wait until he could use the results of their investigations. From other people whom he met, however, Lampert found a "rather affirmative attitude." The consensus of opinion was that the Navy's reactor program offered no immediate economic payoff in the field of energy production. Consequently, there was an interest in seeing another government nuclear program started that would offer the potential for the development of military nuclear power plants on land and could contribute to the advance of commercial nuclear power.35

advance of commercial nuclear power.

*Apart from gathering information and receiving encouragement to move ahead, Col. Lampert's efforts received a boost when he obtained an assistant, **Capt. William B. Taylor**, who had been working in the Armed Forces Special Weapons Project. Arriving in October, **Taylor** initially devoted his attention to studying the military procedures for starting a new technical program. He and Lampert also began surveying the Army's power requirements as well as the power requirements of the other armed services for which the Chief of Engineers had responsibility. By November 10, when the Nuclear Power Division was formally activated within the Office of the Chief of Engineers, Lampert and **Taylor** had concluded that the key to getting the Army's Program underway was to get an official statement from a high level in the Pentagon stating that a military requirement existed for the development of nuclear power plants. According to Lampert, this "charter," based on the early Army memoranda and his many discussions, proved "invaluable ... because I was never bothered by anybody in somebody's outer office trying to say, 'You can't talk to my boss because you haven't come through channels.' I think that if I had not had that sort of a general license to operate freely, it would have been much more difficult than it was to get started."36*

*While Lampert and **Taylor** were conducting their preliminary technical and feasibility studies, Gen. Nichols continued his own efforts to advance the Army's Nuclear Program. Following the 1952 presidential election, Nichols visited Adm. Lewis Strauss in New York on December 3, to describe his initiatives toward developing an Army atomic power project and to seek Strauss' support after President Eisenhower's inauguration. Strauss, one of the original members of the AEC and then an adviser to the President-elect on nuclear affairs, gave his "hearty concurrence"' to the Army's plans. Later, this interest and encouragement translated into valuable assistance when the Army's Program ran into serious AEC objections in the spring of 1953.37*

*In the meantime, Lampert and **Taylor** pursued their research with the assistance of the Engineer Strategic Planning Group, the Operations Research Office of John Hopkins University, and several engineer officers, who had relevant scientific backgrounds and were on temporary assignment in the Chief of Engineer's Office. The survey of military requirements focused on power needs in remote areas—in the Mediterranean and the Middle East—the feasibility of floating nuclear power plants, and the use of mobile power plants for direct support of tactical units. To Lampert and **Taylor**, the most convincing argument in favor of military nuclear power plants related to the logistics of producing electricity and steam in remote areas. As Lampert saw it, once a power plant was in place and running, the military "would then have electricity practically indefinitely and [it] would not have to bring any fuel to keep the plant going."38*

To justify the requirement to the AEC, the two officers decided to pick out locales where the Army was then generating electric power, but at high cost and with great difficulty due to the transportation problems. Their preliminary comparisons between the cost of conventional power and nuclear power led them to look specifically at military bases in such places as Northern Greenland and Alaska, where the logistical problems of delivering diesel fuel suggested that nuclear power plants might be a viable alternative. Because the Air Force had bases in such remote areas, it became involved in the study and supplied the Nuclear Power Division with much of its preliminary logistical information. Although the Navy ultimately expressed an interest in the Army's Program because of its base in Antarctica, the service provided few leads during the initial research phase because its overseas bases were accessible to the sea and usually in moderate climates.39

*With Lampert's preliminary studies well under way, on February 2, 1953, the Army Nuclear Power Division issued an Interim Report titled Army Nuclear Power. In it, Lambert and **Taylor** concluded that a military requirement did exist for electric power plants for use at remote bases and in prospective theaters of operation. Their research indicated that nuclear power plants might be technically feasible as well as both militarily and economically justified to fill a specific portion of this requirement. Although they acknowledged that the construction cost of a nuclear power plant would he more than that for a conventional plant, diesel or oil delivery costs could exceed the first-cost differential after only a few years of operation at some remote military bases. They said that further study was needed to ascertain the required characteristics of military nuclear power plants and this could be accomplished through the current research. In addition, they recommended that a technical feasibility study of reactor concepts and designs be undertaken in order to select one concept for development and to set forth the building program. They suggested that this study should be done, preferable on a contract basis in the "immediate future."40*

Lt. Gen. Samuel D. Sturgis, the new Chief of Engineers, approved the Report and sent it up the chain of command to the Military Liaison Committee. The Committee concurred with the findings in the Interim Report and transmitted it to the AEC on March 23, 1953. Moreover, the new Secretary of the Army, Robert Stevens, advised the Chief of Staff on April 13, that he "wholeheartedly" subscribed to the Corps of Engineers' objective to "explore vigorously all possibilities of atomic application in meeting military requirements." Consequently, he offered "full support to all programs" in the field.41

In turn, Gen. Nichols helped prepare the letters that formally established Col. Lampert's position and authority and then wrote the letter to Gordon Dean and the AEC, which accompanied the Interim Report. Nichols recalled that he wrote the letter "in such a fashion that I felt that it would not be turned down." It proposed that the Army offered to pay for the nuclear project, let the AEC pay for it, let the AEC run it, let the Army run it, or run it in the way Adm. Rickover was running the Navy nuclear submarine program. Nichols recalled that the Army "did not prescribe any procedure for doing it, with the idea that we did not want to get into an argument with the AEC about how it be done or how it be funded." Nevertheless, the Commission rejected the Army's proposal, according to Nichols, because some of the Commissioners were worried that the Engineers were getting back into atomic power.42

In analyzing the situation in order to respond to Secretary Stevens, Brig. Gen. Kenner F. Hertford, Assistant Deputy Chief of Staff for Research and Development, concluded that the turndown "apparently arises from the current importance of the general industrial atomic power picture in both the executive branch and the Congress as well as from a feeling that the AEC must keep the initiative in this field." At the same time, Hertford cited President Eisenhower's statement in a National Security Council meeting in late March in which he said that he didn't want Defense Department funds used to develop nuclear power plants that could be used for industrial purposes and so compete with present commercial power plants. Hertford also mentioned the controversy over the future course of nuclear power development and suggested that until the Legislative and Executive branches of the Government had established a national policy, it was "considered inadvisable" to ask the AEC to take any further action in regard to the Army's program.43

Despite the reluctance of the AEC to allow the Army to become involved in nuclear power, the Commission did direct Dr. Hafstad to push studies of small reactor designs that would be applicable to the Army's interest. As a result, Hafstad was proceeding with a technical study at the Oak Ridge National Laboratory, which would provide analyses to meet the Army requirements and to which Lampert would have ready access because of Hafstad's "strong personal support" of the Engineers' investigations. Consequently, although the Army's proposed research contract to study the feasibility of a military requirement for nuclear reactors could not be given out, Hafstad's Oak Ridge Study was expected to provide Lampert with most of the information he would need.44

The Oak Ridge Laboratory expected to complete its study by late summer. The Army would then be able to establish a firm military commitment for its program. In addition, Hertford noted in his analysis to the Chief of Engineers that the AEC would be under new management by then and the Army could expect that "decisions concerning AEC policies in the nuclear field may be somewhat clarified." Furthermore, he explained that the whole question of the future course of nuclear power development is highly controversial. Some factions believed the AEC should demonstrate the feasibility of several types of reactors because of the multimillion dollar investments necessary. Other factions believed the current Atomic Energy Act should be changed to get the government out of the nuclear power development business. In any case, until a national policy was established, Hertford did not think the present AEC would support an Army contract with private industry to develop small nuclear plants for military use.45

On his part, following up on the AEC's rejection of the Army's proposal, Gen. Nichols met with Adm. Strauss on May 13 in an attempt to obtain his assistance in reversing the decision. The President's adviser on energy matters suggested that the Army should prepare the studies recommended by the AEC in order to prove more precisely the military's need for atomic power plants. According to Nichols, Strauss' counsel of continued research and patience resulted from the Admiral's knowledge that he would become an AEC commissioner or the Commission's chairman in the near future. He would then be in a position to give the Army's Program a more a favorable reception.46

Nichols also reported the situation to Secretary Stevens in a letter dated May 27. Agreeing with Hertford's analysis, he told Stevens that the Commission was undergoing changes in composition at the same time as the Atomic Energy Act was in the process of legislative review and revision. He also explained that the Department of Defense had also "indicated a general unwillingness to support military atomic power projects unless there is a clear-cut military requirement for some." He did, however, cite the Army's progress to date, including the Oak Ridge National Laboratory's study of small nuclear reactors of the type the Army needed, the liaison established between Col. Lampert and the AEC, and Lambert's continuing research into the military's justification of nuclear power plants. Finally, Nichols reported to Stevens on his meeting with Adm. Strauss, saying that the Admiral had indicated that nothing in the Administration's nuclear power policy would prevent the Army's Program from proceeding if it could demonstrate "an economic gain to the use of atomic power in lieu of more conventional power for selected military applications."47

Nichols' progress report proved inadequate in satisfying Steven's request for information on the status of the Program. In a Memorandum to the Army Chief of Staff on June 11, 1953, Under Secretary of the Army Earl D. Johnson described Nichols' Memorandum as revealing "very little progress" and claimed he could find no record of being advised of the Army's negotiations with the AEC or the Agency's refusal to authorize the Engineers to proceed with the project. Responding to Johnson on June 18, Nichols suggested that there had apparently been a "considerable misunderstanding that should be clarified."48

In attempting to clarify the status of the Program, Nichols did acknowledge that it "had not progressed as rapidly as I would desire." However, he maintained that work had gone forward and Secretary Pace had not indicated any dissatisfaction at his last briefing on January 12, 1953, before leaving office. After summarizing developments since then, Nichols repeated the current status of the Program as described in his May 27 memo to Secretary Sevens. He explained to Johnson that Col. Lampert was following Adm. Strauss' advice to determine whether nuclear power could be economically justified over conventional power for selected military application before again approaching the AEC with a request for support. Nichols also indicated that the Program was "assuming that the justification must essentially depend on this alone and not on the basis that the work we would be doing would be of general value in promoting industrial power." Denying that Secretary Pace had not been kept informed, Nichols concluded that "progress made to date is reasonably consistent with the difficulties encountered in carrying forward military work under the present Atomic Energy Act."49

In the meantime, to establish the Army's requirement, Lampert had sought help from the AEC, the Army, and the academic world. He received "a very friendly reception" at the Oak Ridge National Laboratory (ORNL) run by the AEC. Evolving from the Manhattan Project's wartime Clinton Laboratories, ORNL in effect became a technical consultant to the Nuclear Power Division. The Laboratory's director, Dr. Alvin Weinberg, had been one of the early enthusiasts for the development of nuclear power plants for general use; he felt the Army's Program offered considerable promise in helping to develop commercial power. As a result, ORNL became, in effect, a technical consultant to Lampert and the Army's Nuclear Power Program. Working in conjunction with Dr. Hafstad at the AEC Reactor Division, Weinberg agreed to set up a small team within the Laboratory staff to examine the existing nuclear reactor technology and develop some very preliminary designs for suitable power plants. In addition, the team would provide estimates of the plants' characteristics and construction costs.50

While the ORNL research progressed during the summer, Lampert received additional inputs from six engineer officers with scientific backgrounds on temporary duty at OCE. They formed a military study group assigned to the Nuclear Power Division to conduct a detailed examination of the military situation around the world in order to determine sites that offered promise as locales for nuclear power plants. The survey focused on power needs in remote areas, such as the Mediterranean and the Middle East, the feasibility of floating nuclear power plants, and the use of mobile power plants for direct support of tactical units. In addition, the Operations Research Office of Johns Hopkins University, working under a contract with the Army, provided assistance to the research effort by setting up a group to do a detailed study of the economic advantages to using nuclear power in remote areas.51

While these studies proceeded, Adm. Strauss became Chairman of the AEC on July 2, and on July 13 he asked Gen. Nichols to become General Manager of the Commission. Before deciding to accept the appointment, Nichols went to Gen. Matthew Ridgeway, the Army Chief of Staff, to discuss the offer. He explained that he was happy with his current assignment but would accept the position if Ridgeway thought he could better serve the nation in that capacity. Within the Army, some people thought Nichols should remain in the service and serve as the General Manager while still on active duty. Neither Secretary of Defense Wilson nor the AEC approved this option. Ultimately, President Eisenhower made the decision that Nichols should resign from the Army and serve in the AEC as a civilian. He did remain in his military position throughout the summer, then retiring on October 31, and beginning his new job the next day.52

Until he left the Army, Nichols had monitored Lambert's work and, on August 13, he provided Secretary Stevens with an up-date on developments since his June report. Because of the slow progress of Congressional hearings on the development of commercial atomic energy, Nichols wrote that the Atomic Energy Law would not be revised until 1954, with a corresponding delay in any private action to build nuclear power plants.53

In assessing the status of the Army's Program, Nichols said research had indicated "that under various conditions there would be a substantial military advantage to the use of nuclear plants in lieu of conventional plants." He noted that capital costs of a nuclear plant could be within a reasonable range of a conventional facility, operating costs would be lower, and savings in logistics would be substantial. He explained that the ORNL investigation had produced a design that could probably be built for $3 million and he estimated that design and construction of a prototype plant would take three to six years. Nichols therefore concluded that the studies done so far justified continuing and expanding the Army's Program with the objective of building a nuclear facility based on the ORNL work.54

Nichols then provided the Secretary with a two-phase plan for accomplishing this goal. He said all design work could be done in twelve months at an estimated cost of $500,000. The actual construction would require about two years and cost $2 to 3 million. As soon as the Nuclear Power Division had completed its next report at the end of September, Nichols said he would discuss it with Lewis Strauss and at that point the AEC could determine how much of the actual work it wanted to control vis-a-vis the Army's responsibility.55

Following the Secretary's concurrence with the plan on September 1, in his last report before retiring, Nichols provided the Army Chief of Staff with additional information. He said the Nuclear Power Division's Report, now scheduled for completion in October, would recommend that the Army support the design of a prototype nuclear plant that would produce about 1,000 kilowatts of electrical power and sufficient additional steam to heat an arctic installation having a 200-man garrison. According to Nichols, the justification for building such a facility "lies in the fact that 75% of the total logistic support required for such a station would be eliminated by the use of a nuclear power plant." He conceded that this saving would not pay the additional cost of the nuclear plant over a conventional facility in a peacetime situation, but argued that "in time of all-out-war, dollar savings and the assurance of continued operations without dependence on regular deliveries of oil would be an important justification."56

Chapter 2 : Organization of the Nuclear Program

pages 21 to 24

With the Second Interim Report, dated October 30, 1953, Colonel Lampert and the Nuclear Power Division formally established a military justification for the design and construction of a nuclear power plant. The Report concluded that the Army's proposed Nuclear Power Program was compatible with national policy and with commercial interest in the subject. It cited military power and heat requirements that nuclear power plants could meet in remote areas. According to the Report, the small nuclear reactor that ORNL had designed was technically feasible and could be built without delay at comparatively low cost, with a minimum risk. Adapted from Rickover's submarine reactor, the chosen design was a pressurized, watercooled and water-moderated reactor, fueled with enriched uranium. Although not cheaper than a conventional facility in most locations, the Report argued that a nuclear plant could be justified in certain high fuel cost areas on an overall dollar basis. Moreover, in wartime, a nuclear plant could gain a significant advantage because of logistical problems in supplying conventional power plants.1

The Report recommended that the Army build a prototype plant at a site in the United States at an estimated cost of less than $5 million. The initial facility should be quickly followed by a field unit constructed in an arctic location with completion scheduled for late 1958. Although cost of the second unit would depend on the site, the Report estimated $2 to $3 million per year as sufficient funding for the Program. Finally, the Report called for continuing studies to apply advancing nuclear technology to evolving military requirements.2

The Second Interim Report quickly made its way up the chain of command. On November 10, Col. Lampert briefed the Military Liaison Committee about the Nuclear Power Division's research and conclusions. On November 13, the Army requested that the Defense Department provide an appropriation of $500,000 to initiate the design of the prototype nuclear plant during fiscal year (FY) 1954. The service also recommended to the Joint Chiefs of Staff that it establish a military requirement for the development of such a nuclear reactor. In advising the Military Liaison Committee of its actions on December 4, the Army's Research and Development Office requested that when the Joint Chiefs of Staff approved the requirement, the Committee should forward the Second Interim Report to the AEC with the recommendation that it undertake the development program. The Research and Design (R&D) Office also recommended that the Defense Department ask the AEC to undertake the development of the reactor at Commission expense, but explained that if necessary, the Army "is prepared to assist the Commission in funding, or to accomplish the development by direct contract with Commission approval."3

As expected, on December 9, the Joint Chiefs of Staff established the requirement for a military nuclear power plant. On December 14, the Military Liaison Committee advised the Atomic Energy Commission of this action. Nevertheless, the problem of how to fund the Program became an issue almost immediately. On December 16, Donald Quarles, the Assistant Secretary of Defense for Research and Development, stated, "We understand that the Atomic Energy Commission is financing the nuclear power plant design project and accordingly we are withholding the requested funds without prejudice to the planned project." But, on February 11, in acknowledging the Liaison Committee's letter, the Atomic Energy Commission indicated it "presently has no funds available" to spend on the project. Instead it suggested the Army should transfer funds to the Commission "to permit initiation of this work without delay."4

In anticipation of working out funding problems and in accordance with the Joint Chiefs of Staff action, on January 11, 1954, the Chief of Engineers activated the Nuclear Power Branch at the Engineer Research and Development Laboratories (ERDL) at Fort Belvoir, Virginia. This Branch was to act as the Corps of Engineers field agency for the Nuclear Program. The Branch's first chief, Maj. Joseph Bacci, remained resident engineer for both the Army and the AEC during the construction of the prototype nuclear plant from 1954 to 1957. The Branch itself came directly under the technical supervision of the Nuclear Power Division in the Office of the Chief of Engineers.

*Under Col. Lampert, the Division operated as part of the Corps of Engineers Directorate of Research and Development, where it remained until an Army re organization in 1962. **Capt. Bill Taylor** served as Lampert's first assistant from October 1952 to September 1953, at which time he contracted a very severe case of polio as a Major, retired from the Army, and was absent until January 1955, when he rejoined the program as a civil engineer. His loss was at least in part offset by the arrival of Lt. Col. William C. Gribble, whom Lampert described as having provided the Program "tremendous support and assistance."5*

*Col. Gribble had worked in the Los Alamos Scientific Laboratory as a metallurgical engineer from 1948 to 1952, while on loan from the Armed Forces Special Weapons Project. Toward the end of his assignment, he became aware of the Army's developing interest in nuclear power. He also learned that the AEC had given the Army a slot in its new training program in reactor technology located at the Oak Ridge National Laboratory. Discovering that the Army's position had not been filled, Gribble applied through the Chief of Engineers to attend the one-year course at the Oak Ridge School of Reactor Technology and became the first Army officer to enroll in the Program. In January 1953, half way through the course, Gribble met Col. Lampert, who was visiting the ORNL as part of his continuing research. Lampert discussed with Gribble his interest in reactors, the extent of his knowledge of nuclear technology, and asked if he would provide assistance in the development of the Army's Program. As a result, during the balance of Gribble's attendance at the school, he maintained contacts with Lampert and **Taylor**, for the most part receiving information about the Army's interest in small nuclear plants and helping to screen lists of prospective students from Army personnel applying to the school. Before he had ended his year's study, Gribble received orders assigning him to the Nuclear Power Division.6*

*Gribble's arrival inWashington brought Lampert's staff to four, including his secretary. During the next several months, he helped prepare the Second Interim Report. Replacing **Taylor** as Lampert's right-hand man, Gribble then assisted in implementing the Joint Chiefs of Staff's decision to support the Army's Nuclear Power Program. It received official approval on February 10, 1954, when Secretary of Defense Charles Wilson confirmed the Joint Chiefs of Staff development requirement "for nuclear power plants in supplying power for heat and electricity at remote and relatively inaccessible military installations." Wilson also formally designated the Army as the "cognizant agency" in carrying out the requirement.*

By this point, the AEC was finally ready to agree to the Army's original request to establish a joint Army-AEC program as it had done earlier with Adm. Rickover and the Navy. With the help of Dr. Hafstad, the AEC and the Corps of Engineers officially recognized the informal working relationship of the previous 18 months, on April 1, 1954, with the establishment of the Army Reactors Branch in the AEC's Division of Reactor Development. Lampert staffed the Branch primarily with Corps of Engineers personnel and liaison officers from the Air Force, Navy, and other Army technical services. The AEC also allowed Lampert to take initial steps toward establishing a small budget within the Commission, which enabled him to begin recruiting a cadre of civilian technical people on the AEC payroll. At the same time, Lampert worked out arrangements so that his military people were accepted within the AEC as technical members of the Branch.8

On the Army side of the organization chart, the Corps of Engineers concurrently established, on April 1, the Army Reactors Group, also with headquarters at the AEC as a focal point for the military side of the Program. For administrative purposes, the Group was attached to the Engineer Center at Fort Belvoir, but reported directly

to the Assistant Chief of Engineers for Troop Operations. In fact, it remained a relatively small office with the majority of people in the Army's nuclear program working full time in the AEC.9

In practice, the Army Reactors Branch was generally responsible for the research and development of nuclear power plants for land use. Reflecting the increasing importance of the Program, the Chief of Engineers redesignated the Nuclear Power Division, Lampert's initial office, as the Office of Special Assistant for Nuclear Power. The OCE/military element in the dual organization structure became responsible for coordination of Army requirements, dealing with Army and Engineer staff matters relating to nuclear power plants, and planning operational aspects of the Program. Because of his dual role as head of both the Army Reactors Branch and the Office of Special Assistant for Nuclear Power, Lampert was able to provide close and continuous coordination of the program.10

Before beginning actual work on the prototype nuclear plant, Lampert still had to resolve the matter of funding. In advising the Secretary of the Army of the AEC's position on providing money for the military Program, Maj. Gen. John P. Uncles, the Army's new Chief of Research and Development, explained that the service felt it "highly desirable that this project be contracted on a lump sum basis inasmuch as there had been a strong indication that potential contractors may be willing to undertake this effort at cost or less than cost in order to get established in this field." However, he advised that the service's Nuclear Power Program had never expected a financial commitment of such magnitude in FY 1954 "even though it has been recognized as an important long range development which the Army should certainly support." Gen. Uncles noted that the Program was, in fact, an all-military requirement, that the Second Interim Report was completed by the time FY 1954 budget-planning had been finalized, and that the AEC should normally be expected to fund a nuclear program such as the Army's. Consequently, he advised Secretary Stevens that "justification existed for requesting that the Secretary of Defense's emergency funds be made available for financing the program."11

Pages 128 to 131 in [HB000C][GDrive]

Facilities Engineering Support Agency (FESA)

As the Engineer Power Group had become an agency in search of a mission by the end of 1973, the Corps of Engineers was seeking an agency to undertake a new assignment. In addition to its civil and other military engineering assignments, since the end of World War II the Corps had supplied Engineer officers as post engineers to operate utilities and maintain facilities on Army bases. For the most part, in the decades of the 1940s, 1950s, and 1960s, the officers assigned to these positions were not of the caliber of those who had or were to later receive the important assignments necessary to advance to positions of high command within or outside the Corps.1

Given this reality, the assignment as a post engineer seemed to be a "kiss of death" to a career even if the records showed the officer's performance as post engineer rated as high or higher than his other assignments. In addition to any lack of talent, the post engineer seldom had an adequate staff in quality or numbers to provide him with the professional assistance he needed. When these shortcomings were combined with the lack of resources in funds and engineering support from the Corps itself, a low level of post maintenance usually resulted. Such deficiencies in men and actions gave rise to a bad image for the Corps within the Army itself.2

In 1968, in recognition of this and related problems, the Army Chief of Staff had initiated a study to provide a comprehensive analysis of the total management of the service's real property maintenance activities. Lt. Gen. L.G. Lincoln headed the study group that examined all reports of previous investigations and did its own research and analysis. Unlike the earlier studies whose recommendations "were rarely if ever carried out," according to Lincoln, his work gave new impetus to the operation and maintenance of the Army's facilities. A subsequent study described the Lincoln recommendations as giving "new direction and impetus" to the Army's operations and maintenance of its Real Property and "a ten year benchmark" for subsequent analysis.3

To deal with the need to provide engineering support for post facilities, the Lincoln Study Group recommended that the Army allocate funds to be controlled by the Chief of Engineers. This money would then be further allocated to districts, which would enable facility engineers to obtain engineering assistance without payment from their own resources. In regard to the facilities engineer, as Gen. Lincoln and his Study Group chose to rename the position of post engineer, the Study Report recommended that the selection of the officer be made on the same basis as any Engineer officer being assigned to a Corps of Engineers district. Not only would the man be "one of the best," according to Lincoln, but he would also subsequently be given the same consideration in personnel evaluation as an officer who had served in a district. The ultimate effect of this change would be to provide a better caliber of officer who would then be perceived in a better light by both peers and superiors, would have a reason to make a record for himself while in his assignment, and would be able to acquire engineering expertise that would he useful in his later career.4

To accomplish an assignment, however, the facilities engineer would also need support from an organization capable of providing broader assistance in emergency situations such as the breakdown of electrical-generating equipment and heating plants. In implementing the Lincoln Study Group proposals, Lt. Gen. W.C. Gribble, the Chief of Engineers, had the logical candidate to assume the assignment: the Engineer Power Group had capabilities he knew well after a long relationship.

*Gribble had joined Col. Lampert and **Maj. Bill Taylor** in September 1953, during the research and start-up phase of the Army's Nuclear Program and had become the number-two man in the organization. He was later the Alaska District Engineer responsible for the construction of the SM-1A and, in the mid-1960s, had become the Director of the Army Reactors Group. Consequently, in response to Chief of Staff Gen. Creighton Abrams' order to implement the Lincoln Study and upgrade facilities on Army bases, Gen. Gribble knew where to turn. Moreover, he appreciated the possible resistance within the organization to the shift in mission to what many considered a less glamorous assignment. Nevertheless, with the Nontactical Generator Program its only significant mission, the Engineer Power Group was clearly in a situation where it had to take on additional activities, particularly if it was to maintain its individual identity in the Corps of Engineers.5*

*In announcing its new mission to the Engineer Power Group staff meeting on January 14, 1974, Maj. Mark Magnussen, then the Deputy Commander and Director of the Agency, explained that the organization would now be under the Facility Engineering Directorate in OCE instead of in the Military Construction Directorate. The change meant that the Power Group would "become more facility engineering oriented." To help set up the new assignment and its operation, Magnussen told the staff that the Chief of Engineers was sending to the headquarters **Bill Taylor**, Col. Lampert's assistant during the birth of the Nuclear Program, to study the current state of affairs as a consultant and make recommendations. 6*

Gribble, the Chief of Engineers, had initiated the changes in organization by deciding to create the Facilities Engineering Directorate within the Corps of Engineers headquarters organization, elevating it from division status with the Military Construction Directorate. Up to that time, Military Construction had the responsibility for both the Army's new construction and for the operation and maintenance of Army facilities. By making the Facilities Engineering Directorate a separate entity, Gribble thought it would be better able to cope with the complex requirements of facilities engineering on the Army's installations worldwide.7

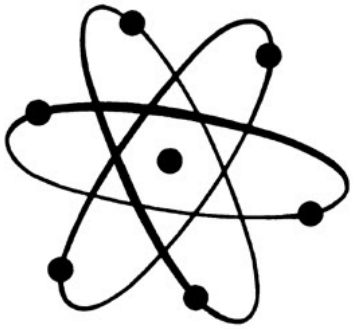
*The first director of the new Directorate, Brig. Gen. William Wray, had been Officer in Charge of the initial SM-1 crew that operated the plant under ALCO's supervision. He had taken part in the original nuclear engineering training program, had worked with Lampert and Gribble in establishing training procedures for power plant crews, and then served as the Nuclear Power Program's first Chief of Operations and Training. As a result, he was sensitive to the changes the Agency had undergone through the years. From Gribble, Wray received guidance about areas on which he should concentrate in his new assignment, particularly in applying the talent that existed in the Engineer Power Group to the problems faced by the facility engineers on Army installations. With **Bill Taylor**'s help in examining the Agency and with his recommendations, Wray reorganized the power Group and gave it a new mission.8*

[...]

1957 (Aug)

See August 1957 issues of "Army Information Digest", page 15 : "Nuclear Power Program by William B. Taylor" : [HG000A][GDrive]

A giant stride toward self-sufficiency in heat and power at isolated stations is provided by the Army's



NUCLEAR POWER PROGRAM

William B. Taylor

THIS SPRING the Army Package Power Reactor (APPR-1) began generating electrical power from nuclear energy at Fort Belvoir, Virginia. The APPR-1 is the first of a family of military nuclear power plants being developed under a joint program of the Army and the Atomic Energy Commission (AEC). As the first military reactor built in this country primarily for the production of electrical power, the APPR-1 is a forerunner of field plants designed to provide compact reliable systems for supporting vital overseas military operations where logistics of conventional fuel is difficult and expensive.

Development of the APPR-1 marks the culmination of five years of combined effort by the U. S. Army and the Atomic Energy Commission to build this first pilot plant on behalf of the Department of Defense.

MAJOR WILLIAM B. TAYLOR, USA-Retired, is on the staff of the Corps of Engineers Research and Development Laboratories, Fort Belvoir, Virginia.

Built for the Army under an AEC contract by Alco Products, Inc., of Schenectady, New York, for about $2,400,000, the plant will be turned over to Army control following completion of extensive tests. The total cost of the plant, including supporting research and development by the Army and AEC, is somewhat greater than the direct cost of design and construction indicated by the contract price. Succeeding plants of course should not cost as much, and already plans are being worked out for the succeeding types that will be made available for military uses.

Basically, the APPR-1 project has three major objectives:

- *First*, to prove by actual operation the feasibility of the design which incorporates some significant departures from previous reactor experience.
- *Second*, to provide operating data and experience on which to base design, construction and operation of similar plants in remote areas.
- *Third*, to provide a facility

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for training military crews for operation of remote plants.

Quite obviously, the first two objectives will require time since, as with any operation of this nature, performance must be observed closely, records must be kept, possible weak spots carefully noted and corrected, and in general the entire equipment must prove itself in every respect.

The third objective, however, was actually well in process of being realized by the time the operation began. To procure the skilled technicians to run the first plant, the Corps of Engineers in April 1956 inaugurated a new branch of its military engineering activities. Thirty-four members of the Armed Forces and one civilian were sent to the University of Virginia for a special basic preparatory course in the fundamentals of nuclear power plant operation.

After five months at the University, the trainees, representing all of the services, were assigned to on-the-job training at Atomic Energy Commission laboratories and contractors' plants. From this group will be drawn instructors for the school that now is being set up by the Corps to train others in operation of military nuclear reactor power plants. The Corps of Engineers is performing this training function for personnel of all the armed services.

THE Army Nuclear Power Program at present includes projects covering three general types of military power plants—fixed, semimobile, and mobile. In addition, special purpose plants for certain specific needs other than electricity and heat also are being studied.

FIXED POWER PLANTS

ALTHOUGH termed "fixed plants," this type is being designed so that major components may be transportable in C-124 aircraft, and the plants can be assembled in a few months, using relatively standard construction methods. All but the heaviest components and those such as the reactor vessel (which may be quite radioactive after use) will be salvageable for use elsewhere.

This type is to be used at relatively permanent installations in remote areas, such as the arctic, where fuel logistics is difficult and expensive. It is the tremendous "power density"—or obtainable energy per pound—of nuclear fuel when compared to conventional fuel, that gives promise of great savings in operation despite probable high initial costs.

Thus a pound of enriched uranium in the APPR-1 can deliver about 2,600,000 kilowatt-hours of energy compared to about 1½ kilowatt-hours that can be delivered by a pound of diesel oil in standard generator sets. The APPR-1 is designed to operate at full power for over a year on a single fuel loading smaller than a barrel and weighing only a few hundred pounds (of which about 50 pounds is active nuclear fuel). When this is compared with a diesel plant that would need some 50,000 barrels to produce the same amount of energy, it is readily seen that tremendous savings in hauling costs are possible from nuclear systems.

At some remote bases, fuel requirements for heat and power alone account for 75 percent of the

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total annual logistical supply requirements. Oil for certain arctic bases, it has been found, may cost more than $42 per barrel due to the necessity of flying it in.

Analysis of nuclear power plant costs as compared to an oil-fired plant at a remote base supplied wholly by airlift indicates that, after about five years of operation, the cumulative cost of the nuclear system may be less, even though its initial cost is greater.

The fixed type plant in remote areas could pay for itself over a period of years. In wartime, when conventional fuel supplies might be endangered or cut off, the nuclear plants very obviously would be of strategic value far exceeding that measurable in monetary terms.

BESIDES the APPR-1, the fixed plant category includes the Argonne Low Power Reactor (ALPR), a prototype plant with about a tenth the electrical output of APPR-1. Construction is planned to start this year at the AEC's National Reactor Testing Station, Arco, Idaho.

The ALPR is designed to meet Air Force specifications for utilities —about 200 kilowatts of electricity and 1,300,000 BTU's per hour in steam for space heating—at DEW-line installations in the Far North. This type plant is also of interest to the Army and Navy for possible use in polar operations.

Still another fixed-type plant, now in the preliminary design stage, is a larger unit capable of supplying about 20,000 kilowatts of electricity. This could be used advantageously at oversea bases in temperate-climate areas, where the problem of supplying ordinary fuel is difficult.

Designs have also been prepared for plants that would provide heat only. By eliminating the requirement for production of high quality steam to drive an electric generator, such plants could be built with much less complexity and weight.

At the control board, this Army Master Sergeant keeps close check on the functioning of the package power reactor plant.

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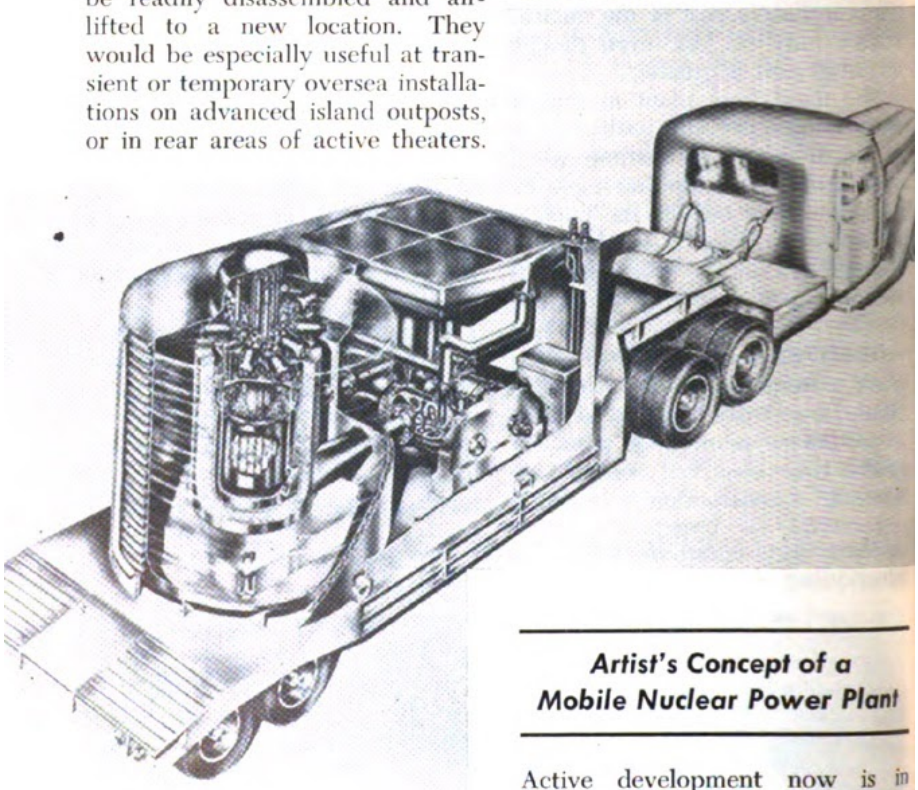
SEMI-MOBILE PLANTS

KNOCKDOWN type plants, made up of air-transportable modules and capable of being assembled in a matter of days, rather than months, could furnish several thousand kilowatts to a major military complex in a relatively static situation. These could be readily disassembled and airlifted to a new location. They would be especially useful at transient or temporary oversea installations on advanced island outposts, or in rear areas of active theaters.

Feasibility studies and preliminary designs now are under way for such plants. They would require only insignificant fuel and water supplies and would utilize field expedient radiation shielding materials to reduce plant weight. However, a prototype plant is not expected for several years because of difficult problems involved in developing reactor materials and components.

MOBILE PLANTS

SMALL, compact systems designed for mobility by air, land or water also are being planned.



Artist's Concept of a Mobile Nuclear Power Plant

Active development now is in progress on a reactor and its associated power generating equipment that can be mounted on a flatbed trailer or railway car, and could be airlifted complete in a C-124 aircraft. Plants of this type, with outputs of several hundred kilowatts and essentially free from fuel and water supply problems, would be useful in remote, arid areas and

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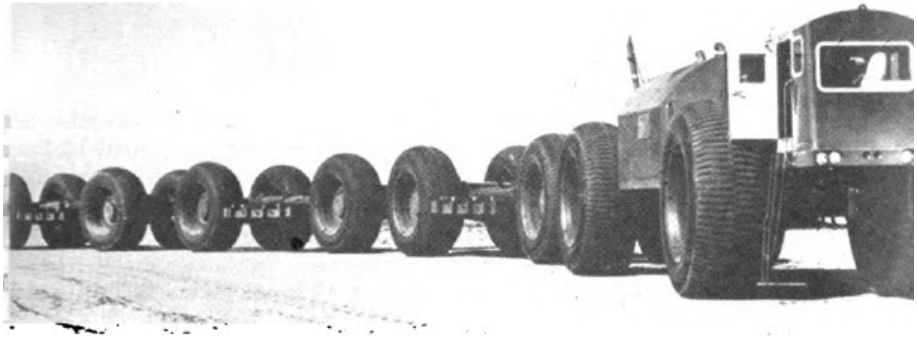

The Army Transportation Corps is studying possible application of nuclear power in diesel-electric overland logistic cargo carriers like this Sno-train.

for field hospital and depot power supply in an active combat theater. Such plants would also be valuable in support of missile operations.

Design work also is progressing on nuclear plants packaged in barges similar in size to the oil-fired barge-mounted power plants which were used by the Army to furnish power during World War II, and in Korea and Okinawa. The Navy's Bureau of Yards and Docks is studying barge-mounted reactor plants. These could greatly reduce tanker space required to support overseas mobilization bases or polar operations. They also would be of value for use in disaster areas.

SPECIAL PURPOSE PLANTS

IN ADDITION to plants designed for production of power and heat, the Army and the AEC are studying and developing reactors for other military uses. The Army Quartermaster Corps has an active program to determine the practicality and advantages of preserving foods and materials through intense ionizing radiation. Experiments have been conducted (See "Preserving Food by Radiation," October 1956 DIGEST) and a project now is underway to build a U.S. Army Ionizing Radiation Center at Sharpe General Depot in Stockton, California. This facility will include an electron accelerator as well as an intense gamma source built by AEC.

The Army Transportation Corps is studying possible uses of nuclear energy in feasibility and design studies on a reactor-powered overland cargo carrier, patterned after the existing diesel-electrical driven, pneumatic-tired "sno-train." (See "Supporting Far North Operations," July 1956 DIGEST). Such a vehicle could haul large cargoes for almost unlimited ranges in remote areas without refueling.

Thus the APPR-1 is a first step in a continuing program to build lighter, more compact nuclear power plants that would reduce the military logistic load in a number of ways.

WORK on the Army Nuclear Power Program began in 1952 when the Corps of Engineers was directed to study the non-destructive military uses of atomic energy. Following a year of study by the Army and the AEC's Oak Ridge National Laboratory, the Joint Chiefs of Staff by 1953 issued a requirement for development of such plants in a range of output

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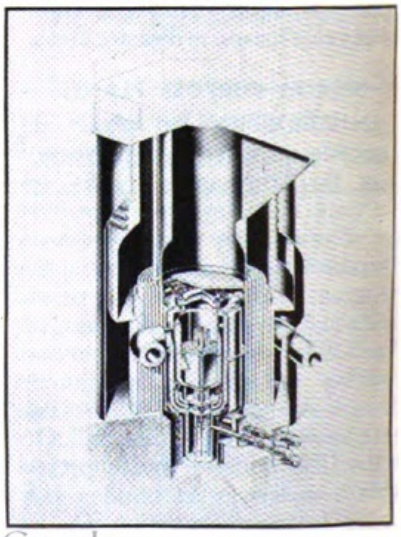
capacities ranging from a few hundred to some 40,000 kilowatts. The Army was directed to carry out this development with the AEC for all the military services.

The Corps of Engineers was designated the Army's agent for conducting and co-ordinating research and development in this entire field. Responsibility for military application studies, development of non-nuclear components and training of nuclear power plant operators was assigned to a Nuclear Power Branch in the Engineer Research and Development Laboratories at Fort Belvoir. This came under direct supervision of the Special Assistant for Nuclear Power on the staff of the Chief of Engineers. Development of the required reactors was made the responsibility of an Army Reactors Branch in the AEC. To assure maximum coordination of both efforts, Colonel James B. Lampert, USA, was assigned concurrent duties as director of activities both in the AEC and in the Corps of Engineers.

These combined activities now include some 100 assigned personnel, about 75 being Corps of Engineers military and civilian engineers and technicians; and the remainder representing the Air Force, Navy, AEC and other Army services.

Model of APPR-1 shows interior of vapor container which includes reactor and primary system components. Enlarged cutaway view of reactor core (right) shows concrete and steel shielding rings, reactor pressure vessel, control rods and drives, and primary coolant piping.

BUILDING of APPR-1 was based on a conceptual design prepared by Oak Ridge National Laboratory. Electric power is produced from any reactor system by removing heat from the critical mass of nuclear fuel and then using the heat to drive a turbine which in turn drives a more or less standard generator. In the APPR-1, heat



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is removed from the reactor by water pumped through the fuel core under pressure so high that it prevents boiling. A heat exchanger transfers the heat from this high pressure water to a secondary steam system which drives the turbine-generator.

The exhaust steam from the APPR-1 turbine is condensed by cooling water from the Potomac River, and then is returned to the heat exchanger, supplemented by purified make-up water obtained from the local water system. The reactor with attendant nuclear radiation is completely isolated from external sources of cooling water, and there is no possibility of introducing radioactivity into adjacent water supplies.

All components of arctic versions of the APPR-1 will be designed to be transportable by air. Present planning calls for the capability of installing such a plant within a six-month construction season. "Air transportability" specifications require that no component exceed a weight limit of 10 tons, or a size limit of 7x18 feet. The turbine-generator and main condenser at Fort Belvoir were excepted—but for arctic plants or others in remote areas, these exemptions probably will not be allowed.

Another feature of the APPR-1 that would not necessarily be incorporated in plants at remote bases is "containment." At Fort Belvoir, a "vapor container"—a large, cylindrical, vapor-tight, steel and concrete shell—encloses the reactor itself and all components through which flow the high pressure reactor cooling water.

The container is designed to confine safely all of the radioactivity that could possibly result in the unlikely event that all of the other interlocking safety factors should fail to shut the reactor down first. In the APPR-1, this doubly cautious design accounts for about 20 percent of plant construction costs and greatly increases the size of the prototype plant over what might be expected in a field version.

In sparsely populated areas, such super-safety features may not have to be incorporated. In any location, however, certain basic physical considerations limit reduction of size and weight of nuclear power plants. The most significant factor is that a minimum mass of material is required as radiation shielding. In the APPR-1, the shielding consists of appreciable amounts of iron, water and reinforced concrete.

Ingenious combinations of special materials and new geometric arrangements can reduce this weight by a few percent, but reduction in shielding weight by large amounts cannot now be foreseen. The use of local expedient materials such as dirt, sand or gravel is expected to permit building a safe reactor in the small size required for use in semi-mobile or mobile plants.

Dedication of the APPR-1 marks another significant milestone in Army history. With the opening of this first package power reactor for production of electricity on a utilitarian basis, the U. S. Army, which pioneered in production of atomic energy for destructive purposes, has helped open new vistas to greater uses of nuclear energy for the benefit of all mankind.

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1965 (Oct 11)

See full page : [HN003F][GDrive]

Abilene Reporter-News (Abilene, Texas) · 11 Oct 1965, Mon · Page 26

Apollo Program Not One-Shotter

ST. LOUIS, Mo. (AP) — Project Apollo is not just a one-shot, $20-billion program to land two Americans on the moon in this decade, an official of the National Aeronautics and Space Administration said today.

Instead, he said, the equipment, technology and personnel being developed will be used to thoroughly explore space out to the moon and to bridge a gap between Apollo and more ambitious manned planetary and other expeditions envisioned by 1980.

William B. Taylor, director of NASA's Apollo Extension System's office, outlined the advanced Apollo plans on the opening day of a three-day conference on manned space flight.

These Missions

Taylor said the basic three-man Apollo rocket and spacecraft will be used for these missions:

—Earth orbit flights out to as far as 22,300 miles for periods ranging from 14 to 45 days. If a supply ship is developed to rendezvous with these stations, the time could be extended to three months or more.

—Moon orbit flights of up to 28 days during which the three-man crew will thoroughly survey all areas of the lunar surface from as close as 30 miles.

—Maintaining two men on the lunar surface for up to two weeks after first landing an unmanned supply ship.

A total of 20 advanced Apollo flights is planned, with the first scheduled in 1968, even before the first Apollo team sets sail for the moon.

Taylor said the program "is to use the capabilities being developed for the lunar landing as a technological bridge to more extensive manned space flights in the 1970's and 1980's."

The goal, he said, will be to select the most promising experiments "which can be flown on Apollo or Apollo-like spacecraft during 1968 to 1972, and which can provide the essential ingredients leading to major space ventures in the next decade."

Four Categories

He said extensive studies have reduced a potential list of several hundred experiments to 150, in these four broad categories:

—Space technology and operations, including 25 experiments on an astronaut leaving an orbiting craft, advanced systems and materials and space flight operation.

—Space sciences and applications, including 71 experiments in such areas as astronomy, astrophysics, biomedical and behavorial sciences, atmospheric and meteorological sciences, communication, navigation and traffic control.

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1974 (Nov)

See full publication: [HG0007][GDrive]

November-December 1974 update

CSC Approves Taylor for PL-313 Appointment

U.S. Civil Service Commission approval of the appointment of William B. Taylor as assistant to the Chief of Engineers for Research and Development and chief of the Corps of Engineers R&D Office was announced Oct. 14. Taylor's selection for the prestigious PL-313 position climaxes a 29-year association with research and development programs, all of it with the U.S. Army except for 1962–67 service with the NASA Office of Manned Space Flight (Apollo and Apollo Applications).

William B. Taylor

Graduated from the U.S. Military Academy with a BS degree in engineering in 1945, Taylor served as an officer until August 1954 with the Combat Engineers in Europe, the Special Weapons Operation at Sandia Base, NM, and Eniwetok Island, Special Weapons Test Planning in the Pentagon, and the Nuclear Reactions Studies, Washington, DC. He retired on physical disability.

Appointed to a U.S. Civil Service position in January 1955, he served five years with Army-AEC Nuclear Power Reactor Development (Construction Operation and Training), Washington, DC. Two years with the Army R&D of Mapping and Geodetic Space Applications at Fort Belvoir, VA, preceded his transfer to NASA.

Upon his return to the Army in May 1967, he was scientific adviser for Missiles and Space, Office of the Chief of R&D, Department of the Army, serving in that capacity until January 1969. For the next four and a half years he was the technical director, U.S. Army Mobility Equipment R&D Center, Fort Belvoir. He has been a private consulting engineer since May 1973, including service with the Army Corps of Engineers.

His educational qualifications include training in radiological engineering at the U.S. Navy PG School in Annapolis, MD, a master's degree in Radiological Engineering in 1951 from Johns Hopkins University, a course in systems engineering at Mathematica, Inc., Princeton, NJ, and completion of the Federal Executive's Institute curriculum at Charlottsville, VA.

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2011 (April 3) - William B Taylor Sr. Passes

Source : [HL000J][GDrive]

William B. Taylor Sr., 86, a director of research and development for the Army Corps of Engineers when he retired in 1981, died April 3 at Inova Mount Vernon Hospital in Alexandria of respiratory failure.

Mr. Taylor started his career with the Corps of Engineers in 1945 after he graduated from the U.S. Military Academy at West Point, N.Y. He was briefly assigned to the Manhattan Project, the Allies' effort in World War II to build an atomic bomb.

He left active duty in 1955 and, during the late 1950s, was a civilian engineer and research manager with the Army Nuclear Power Program. From 1962 to 1967, he was director of NASA's Apollo Applications Program before he rejoined the Corps of Engineers at the Pentagon.

William Brockenbrough Taylor, a native of Norfolk, received a master's degree in engineering from Johns Hopkins University in 1951. During the 1980s, he was an alternative energy consultant for engineering firms in the Washington region.

His honors included the NASA Superior Achievement Award and the Army Meritorious Civilian Service Award.

He was a member of St. James Episcopal Church in Alexandria and had lived in Alexandria since 1951.

Survivors include his wife of 65 years, Nancy Aitcheson Taylor of Alexandria; five children, William B. Taylor Jr. and Anne Cregger Patterson, both of Arlington, Paul K. Taylor and Katharine C. Taylor, both of Manassas, and David A. Taylor of Washington; and 10 grandchildren.

Source : [HL000K][GDrive]

WILLIAM B. TAYLOR,86, a long time Trustee of St. James passed away on Sunday, April 3, 2011.

A founding member of this parish, he and his family attended the first service in July of 1958 in the Woodley Hills School. He was elected to serve on the first Vestry and has over the years served on several Vestries and has been Senior Warden multiple times. Bill was the chair of the Finance Committee responsible for the building of our original church building.

Bill's interests have always supported outreach and mission. He rallied this parish to support programs such as the Advent Episcopal Mission/Church in the Philippines, as well as projects in Mauritania, Sierra Leone, Africa and many others.

For the fiftieth anniversary of this parish, Bill put together a history of the parish with many pictures and interesting stories about the building and the people of St. James' Parish. His attention to detail and sense of humor shine through the pages.

Bill was active at the Diocesan level also, serving on the Diocesan Standing Committee, the governing body of the Diocese and on the Search Committee that called Peter James Lee to be the Bishop of the Diocese of Virginia.

He has lived an amazing life of service to his county as well as his church. Bill graduated from West Point in 1945 and was commissioned in the Army Corps of Engineers. ***He served in the rebuilding of Austria, the Manhattan Project and nuclear weapons testing and reactor studies in the Pentagon following the war.*** *Bill contracted polio in 1953 and after being retired from the Army with his disability and intensive physical therapy, he returned in 1955 as a civilian engineer in the Army –AEC program at Fort Belvoir. Bill was Deputy Director of the Geodesy, Intelligence and Mapping R&D Agency; Director of NASA's Apollo Applications; Scientific Advisor to the Chief of Army R&D; Technical Director of the Army Mobility Equipment R&D Center and Director of R&D for the Army Corps of Engineers. After retiring from Civil Service, he did Engineering Consulting .*

Bill will be remembered as a competent professional soldier, engineer and manager; a trustworthy and loyal friend; a devoted husband, father and grandfather; and a faithful Christian. Bill is survived by his wife of 65 years, Nancy, and five children: William, Jr., Anne, Paul, Katharine and David, their spouses and ten grandchildren.

Bill was larger than life, involved in so many areas of the church, and will be missed by all. He was an example of leading a faithful life. St. James has been blessed by his presence.

Source - [HL000D][GDrive]

DEATH 3 Apr 2011 (aged 86)

BURIAL Arlington National Cemetery , Arlington, Arlington County, Virginia, USA

Virginian-Pilot, The (Norfolk, VA) - Friday, April 8, 2011

William Brockenbrough Taylor, 86, passed away Sunday, April 3, 2011.

He was a U.S. Army veteran and was manager for the Army Corps of Engineers and NASA Apollo program. He was a founder of St. James' Episcopal Church.

He is survived by his wife, Nancy Aitcheson Taylor; his five children, William B. Taylor Jr. (Deborah), Anne Taylor Cregger Patterson (George), Paul Kenneth Taylor (Robin), Katharine Taylor, David Aitcheson Taylor (Lisa); his sister, Betsy Tazewell (John); 10 grandchildren, Dan, Zach, Jake, Sam, Chris, Mary Morgan, Max, Dana, Taylor and Ian.

A visitation will be Saturday, April 9, from 3 to 5 p.m. at Demaine Funeral Home Springfield, and a service will be Sunday, April 10, at 3 p.m. at St. James' Episcopal Church at Mount Vernon Alexandria. Burial will be in Arlington National Cemetery at a later date. His family is deeply grateful for the friendship and skilled care of Joshua Elliott and his

July 8, 2015 - Passing of wife "Nancy Taylor"

See [HL000I][GDrive]

Taylor Nancy Taylor (Age 90) died peacefully at her home on July 5, 2015 after a short illness.

She was an accomplished artist and singer, avid gardener and lover of nature, and a warm and generous friend to all who knew her. She was active in the life of St. James Episcopal Church from its founding in the 1950s, and sang in the church choir, a strong clear voice in the soprano section until just months before her passing.

With her husband Bill, Nancy enjoyed seeing new places. Over the years they traveled to 47 states, Canada, Mexico, Puerto Rico, St. Thomas, St. Croix, Barbados, England, Scotland, Wales, Ireland, France, Belgium, Holland, Germany, Luxemburg, Austria, Italy, Switzerland and Spain. Many of these she commemorated in her art.

Born February 19, 1925 in Alexandria, Virginia, to Virginia Dare and John Kenneth Aitcheson, Nancy had an older brother, John Kenneth Jr. She attended Alexandria public schools, graduating high school in three years due to hard work and an accelerated schedule at the start of World War II. In high school, she played varsity basketball. She graduated from Mary Washington College (now University of Mary Washington) in May 1945 with a bachelor's degree in Art. She and Bill married that June. She worked in the art department of the Hecht Co. and as an art teacher in Alexandria public schools.

She was an active artist all her life, exploring all subjects in media ranging from charcoal and oil painting to pastels and watercolor. She illustrated several books of poetry authored by ***Roberta Newton Taylor, her mother-in-law****. Nancy raised five children, imbuing them with a love of beauty, strength of purpose, and caring. In the fall of 1953 Bill contracted polio, and in many ways she assumed the duties of head of household. For a year that Bill spent in an "iron lung" at Walter Reed Hospital, she visited him daily, driving through Washington, DC and back to their home near Mt. Vernon to care for three small children. When Bill came home from the hospital and pursued a demanding recovery regime of physical therapy, Nancy supported him fully. He said later that his adjustment to life after that "would never have been possible without the daily support and love of my wife, Nance."*

She is survived by five children and their spouses (William B. Taylor, Jr. and Deborah Furlan Taylor, Anne Taylor Cregger Patterson and George Patterson, Paul Kenneth Taylor and Robin Lee Taylor, Katharine Clarke Taylor, and David Aitcheson Taylor and Elizabeth L. Smith). She also leaves ten grandchildren and their spouses: Daniel (and Meg Hopkins) Cregger, Zachary, Jacob and Samuel Cregger; Christopher and Mary Morgan Taylor; Maxwell (and Amanda Sue) Taylor and Dana Taylor; and Mathias and Ian Nace; along with two great-grandchildren. Her family is grateful to the devoted care and friendship of many, especially Joshua Elliott. A memorial service to celebrate Nancy's life will be held on Saturday, July 11 at 2 p.m. at St. James Episcopal Church, 5614 Old Mill Road, Alexandria. Interment with her husband at Arlington National Cemetery at a later date. In lieu of flowers, the family requests donations in her memory to the church. www.demainefunerals.com

Published in The Washington Post on July 8, 2015

RELATED INFO

Brother Rev Lewis Jerome Taylor, Jr

See [HL000F][GDrive]

Rev Lewis Jerome Taylor, Jr

Birth 22 Feb 1923

Death Feb 2011 (aged 87–88)

NORFOLK - The Rev. Lewis Jerome Taylor Jr., husband of the late Pauline Green Taylor and ***father to five****, died in Virginia Beach Feb. 21, 2011, after a brief illness, the day before his 88th birthday. The Rev. Taylor, who was known as "Jay" to family and friends, always sought an engaged and authentic life. He was a beloved member of a large family of Taylors and Tazewells with deep roots in Hampton Roads. The Rev. Taylor was the oldest son and second born to Lewis Jerome Taylor Sr. and Roberta Newton Taylor. He graduated with honors from Granby High School in 1941 and from the U.S. Naval Academy in 1944. He experienced combat in the Pacific aboard the USS Bataan and after the war earned his wings as a naval aviator. After leaving active duty, the Rev. Taylor did post-graduate work at Johns Hopkins University and worked with his father-in-law in agriculture in Clarke County before being called back to active duty for the Korean War. He again left active duty but continued as a Naval Reserve officer, eventually retiring with the rank of commander. The Rev. Taylor felt the call to the ministry while working as partner with his father in the insurance business in Norfolk. He attended Seabury Western Theological Seminary from which he graduated summa cum laude. The Rev. Taylor found the opportunity for an engaged and authentic life in the ministry, which he pursued with great energy for nearly 50 years as an Episcopal priest, theological scholar and prison chaplain. He served for two years as the assistant rector at Williamsburg's Bruton Parish Church and as the Episcopal Chaplain at The College of William and Mary, before accepting the challenge of starting a new church in Virginia Beach, St. Aiden's Episcopal Church. The Rev. Taylor was known at St. Aidan's as a tireless and scholarly priest whose sermons challenged parishioners to listen hard and think deeply about their own search for God's presence in everyday life. In 1968, his personal search took him to Duke University where he pursued his interest in the Christian existentialism of Soren Kierkegaard and the insights of the Louisiana novelist and philosopher Walker Percy, with whom he developed a warm friendship and correspondence. The Rev. Taylor earned the Doctor of Philosophy degree in systematic theology in 1971, with his dissertation titled "The Becoming of the Self in the Writings of Walker Percy: A Kierkegaardian Analysis," which he later published as a book titled "In Search of Self: Life, Death and Walker Percy." After graduation, the Rev. Taylor became a professor at Saint Andrew's Theological Seminary in Manila in the Philippines. In 1977, the Rev. Taylor returned to the United States and the Diocese of Newark, New Jersey, where he served again as a parish priest and founded another mission church, in Chester. The Rev. Taylor retired from fulltime parish ministry in 1985 and returned to Virginia Beach where he served as interim rector at several parishes and as chaplain at the Indian Creek Correctional Center in Chesapeake, while still pursuing his scholarly research and writing. The Rev. Taylor's life of search, authentic engagement and fulfillment found crucial support in his marriage with Polly Taylor. Together they raised three sons, Lewis J.Taylor III, Michael R. Taylor and John B. Taylor; and two daughters, Mary Frances Ridley Vince and Joan Elizabeth Taylor. Mr. Taylor is survived by his five children and their spouses, Lynn Roth Taylor, Christine Lewis Taylor, Cherin Cross Taylor and Ronald Vince; and by his older sister, Elizabeth (Betsy) Tazewell and younger brother, William B. Taylor. His youngest brother, Rev. Robert P. Taylor, died in 1999. The Rev. Taylor is also survived by his grand- children, Lewis J. Taylor IV, Jennifer Taylor, Franklin Taylor, Sara Taylor, Bethany Taylor Etgen, Daniel Taylor, Kyle Vince, David Vince and Tyler Taylor; and his great-grandchildren, Mei-Lian Vader, An-Lian Vader, Robert Taylor, Lindsay Taylor, Emily Etgen, Alex Etgen, Carter Etgen, and Jonas Taylor. The family extends its thanks to the Atlantic Shores Retirement Community for its kind and capable care. The funeral will be held Sunday, Feb. 27, at 1 p.m. in All Saints Episcopal Church, 1969 Woodside Lane, Virginia Beach. Visitation will be held from 3 to 5 p.m. Saturday, Feb. 26, in H.D. Oliver Funeral Apts., 2002 Laskin Road, Virginia Beach. In lieu of flowers, contributions may be made to The Samaritan House, P.O. Box 2400 No. 226 Virginia Beach, VA 23450. Online condolences can be made www.hdoliver.com.*

Brother Rev Robert Page Taylor

[HL000G][GDrive]

Birth 1932

Death 16 Sep 1999 (aged 66–67)

Burial : Unknown, Specifically: location unknown Norfolk Virginia

The Rev. Robert Page Taylor, 67, an Episcopal priest, died Sept. 16, 1999, in his home in Virginia Beach.

Fr. Taylor served the Diocese of Chicago from 1958 until his retirement in 1996. He began his ministry as chaplain to Cook County Prison and was a member of a team which founded St. Leonard's House, a halfway house for persons leaving prison. From 1963 to 1970, Fr. Taylor was the executive director of the agency, guiding it through a time of expansion. He was assistant priest at The Church of St. Paul and the Redeemer in Chicago during the time he was a staff member at Leo J. Shapiro and Associates, a survey research firm. Fr. Taylor joined the Diocese of Chicago staff in 1980 to become director of the Office of Pastoral Care, a service of assistance to Episcopal priests, their families, lay employees and members of Episcopal congregations experiencing difficulties in living.

In 1987, Fr. Taylor was named a Canon of the Episcopal Church when he became director of Program and Mission for the Diocese. This work involved strategic planning for mission parishes and designing overall direction for Diocesan services. In the 1960s, Fr. Taylor was involved in the Civil Rights Movement in Chicago and elsewhere, managing the legal defense funds of those arrested in demonstrations in Chicago. After retirement, he was interim rector of the Church of the Ascension in Chicago, St. Paul's Episcopal Church in Norfolk, and St. Bride's Church in Chesapeake.

Fr. Taylor was also a licensed clinical social worker and a senior certified addiction counselor. He served as consultant to individuals, families and businesses in the field of chemical dependency and mental health.

Fr. Taylor was born in Norfolk and was the son of Jerome and Roberta Taylor. He graduated from Granby High School in Norfolk in 1949. He attended Hampden-Sydney College where he pledged Chi Phi Fraternity. He received a B.A. degree from the University of Virginia in 1953, a Masters of Divinity degree in 1958 from Seabury-Western Theological Seminary, Evanston, Ill., and a master's degree in social work from the University of Chicago in 1982.

His family includes his wife, Carvel Underwood Taylor of the home; four children: Susan Amory of Boston and her husband, David, and their children, Linzee and John; Stephen Taylor of Redondo Beach, Calif.; Joseph Taylor of Chicago and his wife, Wendy, and their children, Joseph Paul III, Terrance and Trevor; and Mary Taylor of Chicago and her son, Christopher Nakutis. He is also survived by his sister, ***Elizabeth Tazewell*** *of Norfolk and her husband, John; his brother, the Rev. Lewis Jerome Taylor of Virginia Beach and his wife, Pauline; and his brother, William Taylor of Alexandria and his wife, Nancy.*

Services will be held at 11 a.m. Tuesday at St. Paul's Episcopal Church, Norfolk, led by the Rev. John J. Capellaro. In addition, a memorial Eucharist will be held at 11 a.m., Oct. 2, 1999, at the Episcopal Church of the Ascension in Chicago by the Rev. Gary Fertig.

Instead of flowers, people are requested to send donations to St. Paul's Theological Library, 201 St. Paul's Blvd., Norfolk VA 23510-2790; St. Leonard's House Educational Support Fund, 2100 W. Warren Blvd., Chicago IL 60612-2310; and Church of the Ascension Music Support Fund, 1133 N. LaSalle St., Chicago IL 60610. H.D. Oliver Funeral Apts., Laskin Road Chapel, is handling arrangements.

2012 (Dec) - John K Aitcheson Jr. (Bill B Taylor Sr's Brother-in-law) passes

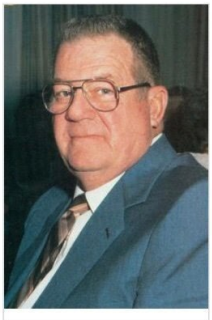
John Kenneth Aitcheson Jr. is the brother of Nancy (Aitcheson) Taylor - Wife of Bill B Taylor Sr.

He was also the father of Tipper Gore .

Mr. John K. Aitcheson, Jr.
Born: January 19, 1923
Died: December 26, 2012
Location: Alexandria, Virginia

Everly Funeral Home
Funerals and Cremations
Everly-Wheatley Funeral Home
1500 West Braddock Road
Alexandria, VA 22302
everlyfuneralhomes@stei.com
Tel. **(703) 998-9200**

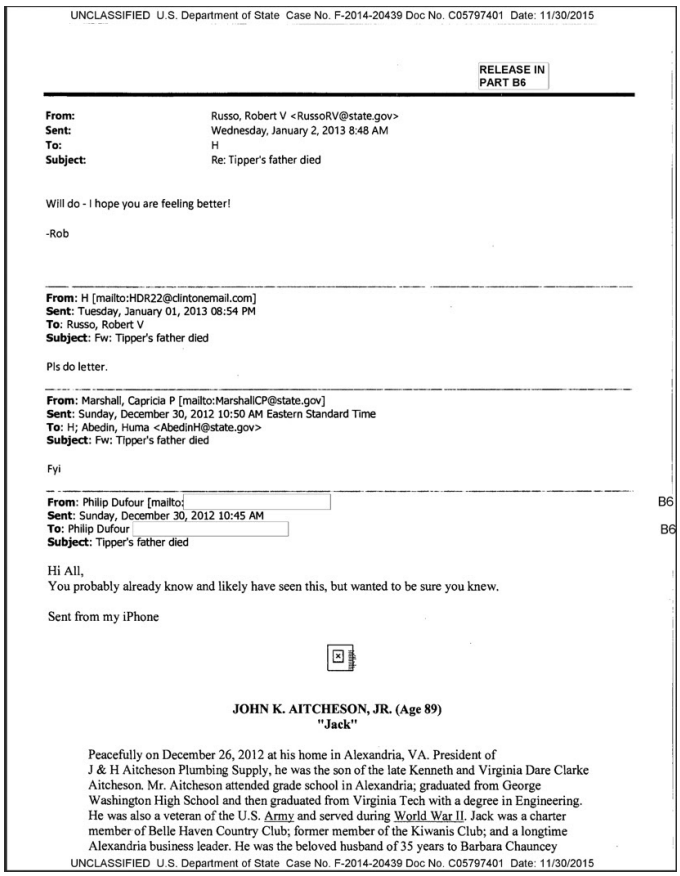
Tribute & Message From The Family



Peacefully on December 26, 2012 at his home in Alexandria, VA. President of J & H Aitcheson Plumbing Supply, he was the son of the late Kenneth and Virginia Dare Clarke Aitcheson. Mr. Aitcheson attended grade school in Alexandria; graduated from George Washington High School and then graduated from Virginia Tech with a degree in Engineering. He was also a veteran of the U.S. Army and served during World War II. Jack was a charter member of Belle Haven Country Club; former member of the Kiwanis Club; and a longtime Alexandria business leader. He was the beloved husband of 35 years to Barbara Chauncey Aitcheson; devoted father of Mary Elizabeth "Tipper" Gore; step-father of Robert, Thomas and James Chauncey; grandfather of Karenna, Kristin, Sarah, and Albert Gore, III, and Jennifer, Crystal, Taylor, and Courtney Chauncey; great grandfather of three; as well as brother of Nancy Taylor; and a friend to many.
Family and friends may gather on Thursday, January 3, 2013 from 1 p.m. until the time of a remembrance service at 2:30 p.m. at Everly-Wheatley Funeral Home, 1500 W. Braddock Rd., Alexandria, VA 22302.

[HT0006][GDrive]

His passing (John Kenneth Aitcheson Jr.) was mentioned in WikiLeaks : [HW000M][GDrive]



UNCLASSIFIED U.S. Department of State Case No. F-2014-20439 Doc No. C05797401 Date: 11/30/2015

RELEASE IN PART B6

From: Russo, Robert V <RussoRV@state.gov>
Sent: Wednesday, January 2, 2013 8:48 AM
To: H
Subject: Re: Tipper's father died

Will do - I hope you are feeling better!

-Rob

From: H [mailto:HDR22@clintonemail.com]
Sent: Tuesday, January 01, 2013 08:54 PM
To: Russo, Robert V
Subject: Fw: Tipper's father died

Pls do letter.

From: Marshall, Capricia P [mailto:MarshallCP@state.gov]
Sent: Sunday, December 30, 2012 10:50 AM Eastern Standard Time
To: H; Abedin, Huma <AbedinH@state.gov>
Subject: Fw: Tipper's father died

Fyi

From: Philip Dufour [mailto: B6
Sent: Sunday, December 30, 2012 10:45 AM
To: Philip Dufour B6
Subject: Tipper's father died

Hi All,
You probably already know and likely have seen this, but wanted to be sure you knew.

Sent from my iPhone

JOHN K. AITCHESON, JR. (Age 89)
"Jack"

Peacefully on December 26, 2012 at his home in Alexandria, VA. President of J & H Aitcheson Plumbing Supply, he was the son of the late Kenneth and Virginia Dare Clarke Aitcheson. Mr. Aitcheson attended grade school in Alexandria; graduated from George Washington High School and then graduated from Virginia Tech with a degree in Engineering. He was also a veteran of the U.S. Army and served during World War II. Jack was a charter member of Belle Haven Country Club; former member of the Kiwanis Club; and a longtime Alexandria business leader. He was the beloved husband of 35 years to Barbara Chauncey

UNCLASSIFIED U.S. Department of State Case No. F-2014-20439 Doc No. C05797401 Date: 11/30/2015

[HW000N][GDrive]

BITCHUTE @Housatonic YOUTUBE @HousatonicLive ODYSEE @Housatonic BRIGHTEON @Housatonic

Housatonic

Claudia Alta "Lady Bird" Taylor (born 1912)

https://en.wikipedia.org/wiki/Lady_Bird_Johnson

Born - 1912

Married President Lyndon Johnson

Parents

Father was Thomas Jefferson Taylor II (born 1874)

Siblings

Brother - Thomas Jefferson Taylor III , Antonio Jefferson Taylor (born 1904)

1986 (Sep 01) - Brother Antonio passes

He is described here ([HN00TB][GDrive]) as "a consultant to the Agency for International Development", and "appointed to the psot by President Lyndon B. Johnson"

Full page of below newspaper clipping here : [HN00T9][GDrive]

Ruptured heart kills city businessman Antonio J. Taylor

By The New Mexican Staff

Memorial services will be conducted Thursday, Sept. 4, at 11 a.m. at St. John's United Methodist Church for prominent Santa Fe businessman Antonio J. Taylor who died at St. Vincent Hospital Sunday.

TAYLOR

Taylor, 82, died of a ruptured aorta.

In 1927, Taylor opened the Old Mexico Shop at Galisteo, which deals in imported arts and crafts, at Galisteo and Water Streets.

Born in 1904 in Karnack, Texas, Taylor came to New Mexico in 1918 as one of the first students of the Los Alamos Ranch for Boys.

Fluent in Spanish, Taylor had a lifelong love affair with Mexico and became one of the first people in the United States to import huge volumes of Mexican arts and crafts.

Fellow importer Lou Slavitz of New York City said Taylor would scour the Mexican countryside looking for top quality crafts and art. He would advance craftsmen part of the cost of materials and have them discount their wholesale price when they delivered their consignments of goods.

His support and encouragement in developing Mexican arts and crafts for export won him widespread respect and recognition on both sides of the border.

Taylor was one of the first people to use mail order to market his collections of imported merchandise.

In 1940, Taylor was president of the Santa Fe Fiesta Council. In 1968, he served as an informal translator for discussions between then U.S. President Lyndon Johnson and Mexican President Luis Dias Ordaz which lead to the Chamizal Agreement between the two countries.

Johnson was married to Taylor's sister Lady Bird Johnson. The former first lady was a frequent visitor to Santa Fe.

In 1976, Taylor received the rank of Commander of the Order of Isabel La Catolica bestowed by King Juan Carlos of Spain in recognition for his service as vice counsel of Spain in the U.S. southwest.

Taylor was a distinctive figure in Santa Fe, known for his wit, charm and kindness. At Christmas, the Old Mexico Shop would invite the children from the now closed St. Vincent Orphanage to pick out new shoes.

Survivors include his wife Matianna Vigil Taylor; two daughters, Mrs. Jack Hopkins of Santa Fe and Mrs. Diana McArthur of Washington, D.C. and a sister, Mrs. Lyndon B. Johnson of Austin, Texas. Other survivors include four grandchildren, and two great grandchildren.

Taylor will be buried at a private ceremony at Rosario Cemetery. The family requests that in lieu of flowers, memorial contributions be made to the Salvation Army, where Taylor served on the board of directors.

1986-09-01-the-morning-herald-pg-a-7-clip-antonio-j-taylor

{HN00TA][GDrive]

EVIDENCE TIMELINE

1954 (Nov 17) - Niece Diana Lee Taylor marries Nikolai Tschursin

Marriage of Diana Lee Taylor (born 1933)

See [HN00T6][GDrive]

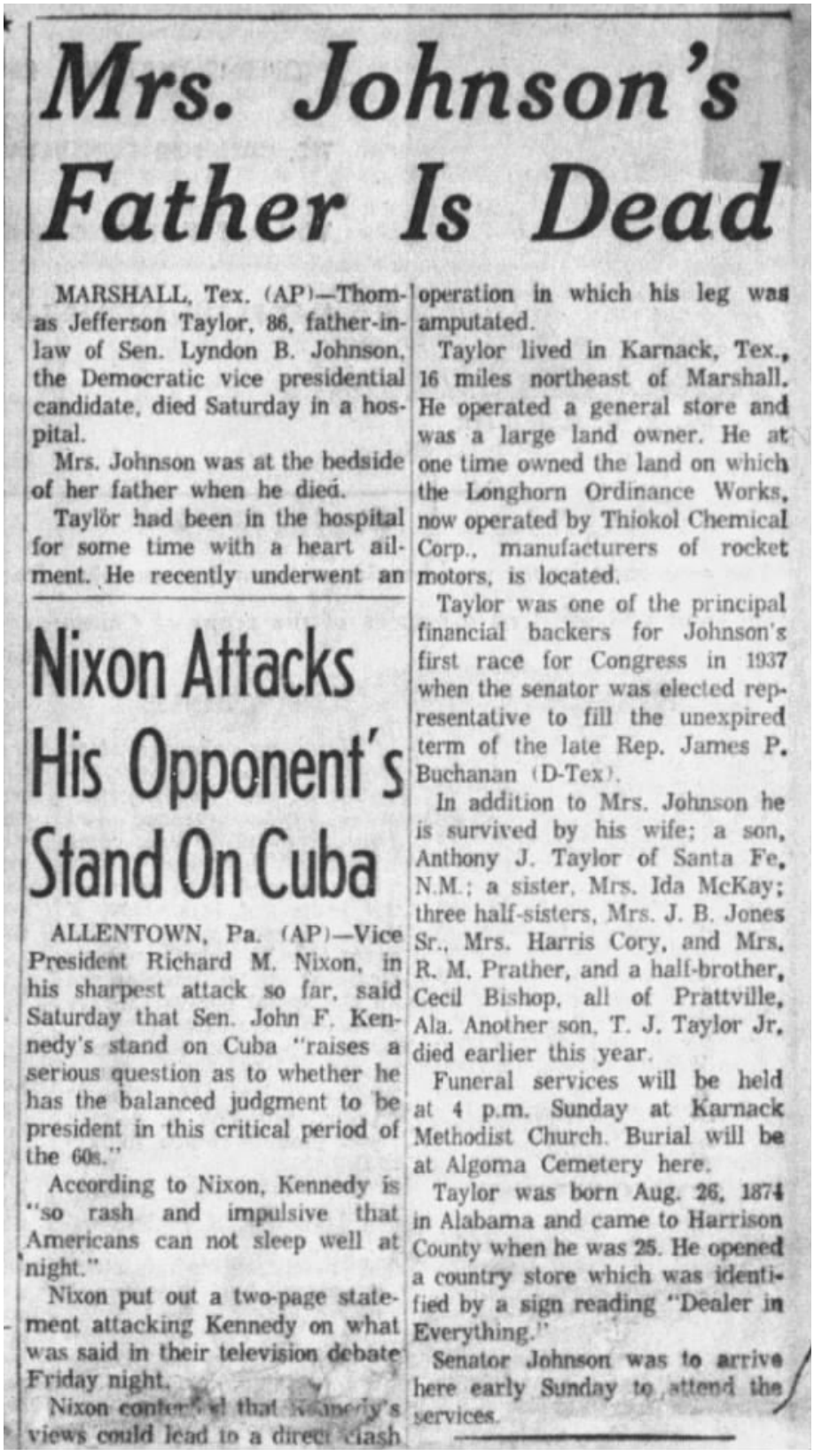
1959 - Brother Thomas Jefferson Taylor Jr. dies

https://www.newspapers.com/image/587989981/?terms=thomas%2Bj%2Btaylor%2Bjr

1960 (Oct 23) - Father Thomas J Taylor II dies

See Thomas Jefferson Taylor II (born 1874)

[HN00TG][GDrive]



Mrs. Johnson's Father Is Dead

MARSHALL, Tex. (AP)—Thomas Jefferson Taylor, 86, father-in-law of Sen. Lyndon B. Johnson, the Democratic vice presidential candidate, died Saturday in a hospital.

Mrs. Johnson was at the bedside of her father when he died.

Taylor had been in the hospital for some time with a heart ailment. He recently underwent an operation in which his leg was amputated.

Taylor lived in Karnack, Tex., 16 miles northeast of Marshall. He operated a general store and was a large land owner. He at one time owned the land on which the Longhorn Ordinance Works, now operated by Thiokol Chemical Corp., manufacturers of rocket motors, is located.

Taylor was one of the principal financial backers for Johnson's first race for Congress in 1937 when the senator was elected representative to fill the unexpired term of the late Rep. James P. Buchanan (D-Tex).

In addition to Mrs. Johnson he is survived by his wife; a son, Anthony J. Taylor of Santa Fe, N.M.; a sister, Mrs. Ida McKay; three half-sisters, Mrs. J. B. Jones Sr., Mrs. Harris Cory, and Mrs. R. M. Prather, and a half-brother, Cecil Bishop, all of Prattville, Ala. Another son, T. J. Taylor Jr., died earlier this year.

Funeral services will be held at 4 p.m. Sunday at Karnack Methodist Church. Burial will be at Algoma Cemetery here.

Taylor was born Aug. 26, 1874 in Alabama and came to Harrison County when he was 25. He opened a country store which was identified by a sign reading "Dealer in Everything."

Senator Johnson was to arrive here early Sunday to attend the services.

Nixon Attacks His Opponent's Stand On Cuba

ALLENTOWN, Pa. (AP)—Vice President Richard M. Nixon, in his sharpest attack so far, said Saturday that Sen. John F. Kennedy's stand on Cuba "raises a serious question as to whether he has the balanced judgment to be president in this critical period of the 60s."

According to Nixon, Kennedy is "so rash and impulsive that Americans can not sleep well at night."

Nixon put out a two-page statement attacking Kennedy on what was said in their television debate Friday night.

Nixon contended that Kennedy's views could lead to a direct clash

1961 (Oct 19) - Passing of sister-in-law - Mrs. Julia Elizabeth Sibley

See [HN00T8][GDrive]

1963 - In the White House to see brother-in-law (and president) LBJ "in action"

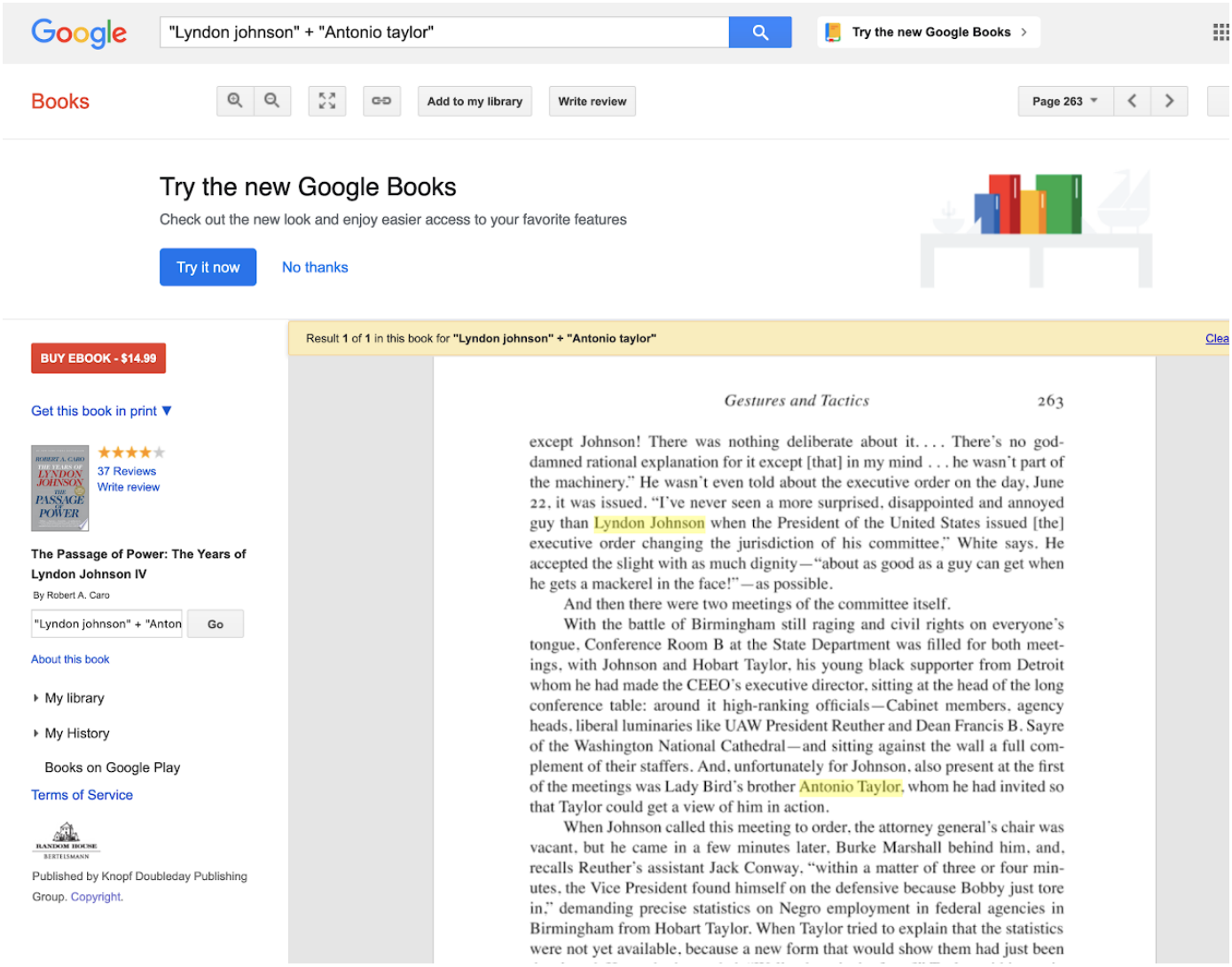
https://books.google.com/books?id=kouZh-f8cLMC&dq=%22Lyndon+johnson%22+%2B+%22Antonio+taylor%22&source=gbs_navlinks_s

Book -

The Passage of Power: The Years of Lyndon Johnson IV

Robert A. Caro

Knopf Doubleday Publishing Group, May 1, 2012 - Biography & Autobiography - 736 pages



1988 (Dec 2) - Passing of son-in-law Dr. Donald MacArthur

Source - PDF - [HN00T2][GDrive] / JPEG is [HN00T1][GDrive]

See Dr. Donald Malcolm MacArthur (born 1931)

Founder of the Dynamac Corporation .

2015-lady-bird-and-johnson-the-hidden-story-of-betty-ford-caroli.txt

https://play.google.com/store/books/details?id=N67_BgAAQBAJ&rdid=book-N67_BgAAQBAJ&rdot=1&source=gbs_atb&pcampaignid=books_booksearch_atb

Lady Bird and Lyndon: The Hidden Story of a Marriage That Made a President

Front Cover

Betty Boyd Caroli

Simon and Schuster, 2015 - Biography & Autobiography - 463 pages

2 Reviews

This “smartly written…stunning” (The Boston Globe) portrait of Lady Bird as the essential strategist, fundraiser, barnstormer, and ballast for her husband Lyndon offers “a penetrating analysis…of a marriage that paired two complicated but devoted figures, a coupling that changed the face of America” (Richmond Times-Dispatch).

Marriage is the most underreported story in political life, yet it is often the key to its success. Historian Betty Boyd Caroli spent seven years exploring the archives of the LBJ Library, interviewing dozens of people, and mining never-before-released letters between Lady Bird and Lyndon. The result “redefines the First Lady as an iron fist in a white glove” (Vanity Fair) and helps explain how the talented, but flawed Lyndon Baines Johnson ended up making history.

Lady Bird grew up the daughter of a domineering father and a cultured but fragile mother. When a tall, pushy Texan named Lyndon showed up in her life, they married within weeks with a tacit agreement: this highly gifted politician would take her away, and she would save him from his weaknesses. The conventional story goes that Lyndon married Lady Bird for her money and demeaned her by flaunting his many affairs, and that her legacy was protecting the nation’s wildflowers. But Caroli shows that she was also the one who swooped in to make the key call to a donor, to keep the team united, to campaign in hostile territory, and to jump-start Lyndon out of his paralyzing dark moods.

In Lady Bird and Lyndon, Caroli restores Lady Bird to her rightful place in history. But she also tells a love story whose compromises and edifying moments many women will recognize.

More »

After only an instant’s hesitation, Lady Bird replied evenly, “Lyndon was a people lover and that certainly did not exclude half the people of the world, women.” The unflappable Lady Bird had faced down one of the most renowned interviewers in the world and answered a potentially embarrassing question with honesty and grace. If Walters had researched Lady Bird’s early years, she could have anticipated the exercise of raw power was taken for granted, and managing it became vital to survival. Rather than strike back against an attack such as Walters’s, Lady Bird relied on the protective carapace she had begun developing as a child—it equipped her to spar, disarm, and vanquish while maintaining what looked like gentle, ladylike composure. Mrs. Johnson rarely talked about her early years. Perhaps she preferred to forget. More likely, she never knew the whole story—part Gothic novel, part comic opera—of how her aristocratic mother wound up giving birth on a December day in 1912 to her only daughter in a hardscrabble part of Texas that she loathed, among people she wished she had never met. Lady Bird’s father, the big, dynamic Thomas Jefferson Taylor (known as T.J.) was one of those men who had to feel he was the most important man in the room. At six foot three, he towered over most people, craved attention, and expected his behavior to be tolerated, no matter how outlandish. The deference he commanded frequently involved money, and he had ingenious methods to keep people owing him. One oft-repeated story had him manipulating an impoverished neighbor back into debt after the man had struggled hard to pay off the last cent owed. The story goes that T. J. Taylor knew the man’s weakness for cats and he offered to give him one, but the man, being scrupulously fair, insisted on paying a little something. The two settled on a minuscule amount, but that was enough to put him back on T.J.’s debtor list. While he wheedled to get what he wanted, T.J. also contributed generously to both churches in town, an effective way to keep the entire community in his debt. The local saying was: “T. J. Taylor owns everything.”

T.J. so firmly ruled that part of Harrison County, lending at exorbitant fees and collecting on his own timetable, that virtually everyone called him “Mr. Boss.” But not his wife, the pampered Minnie, whom he had lured to Texas from more cultured surroundings in Alabama. Miss Minnie called no one “Boss.” When the adult Lady Bird offered one of her rare descriptions of her parents, she called theirs a “stressful” union, and those words, though true, did not begin to capture the truth. Minnie Pattillo and T. J. Taylor grew up in the same Alabama county, but on different planets. Her father, Luther Pattillo (whose Scots ancestors spelled it Patiloch), had begun acquiring land after the Civil War, and by his shrewd (some would say exploitative) management, he had become one of the largest landowners in the state. While most sharecroppers in the region split 50/50 with their landlord whatever the crops brought, Luther Pattillo demanded 60 percent for himself, and because he owned so much land and the general store where many sharecroppers traded, he could get away with it. Luther and his wife, Sarah, liked to enjoy their wealth by moving around, from one of the homes they owned to another, depending on the social season and the school year. Wherever they lived, they maintained a large library and kept a piano in the drawing room so Minnie and her younger sister Effie could perform for guests. Effie got so proficient she set her sights on attending the Juilliard School in New York City, while Minnie remained the bookworm of the family, content to sit alone reading for hours at a time. Behind that genteel facade, of piano music and shelves of old books, the Pattillo household reeked of jealousy and malice. Sarah had been a Confederate widow with three young children when Luther married her, and she never let him Sarah. As a result of his ruthless business practices, he became known as “the meanest man in Autauga County,” but his offspring, proud of their self-made father, liked to lord it over their half-siblings and play up to him. Luther called himself a “general merchant,” and passed along the label (with the business) to his own son Claude, leaving his stepchildren to fend for themselves. If Autauga County, Alabama, had been more urbanized, the Pattillos would have looked at T. J. Taylor as coming from the wrong side of the tracks. In rural Alabama, the common phrase for people like the Taylors, who never managed to own much land of their own but had to eke out a living as tenant farmers, was “dirt poor.” Polished pianos and store-bought books were foreign to them, and they worried not about the winter social calendar but about winter shoes. Yet Autauga County was small enough that Minnie Pattillo and T. J. Taylor, born within months of each other in 1874, were bound to cross paths. Whether it was the romantic setting of his rescuing her after she had been thrown from a horse, as family lore had it, or some other, less dramatic meeting, the mutual attraction was strong. Standing alongside the much taller T.J., Minnie, with her many freckles and ruddy complexion, made his jet black hair and olive skin appear all the darker. Who knows what really drew Minnie to the untutored T. J. Taylor? One answer seems obvious. T.J. acted much like Luther Pattillo in his ambition and business practices, and if most women marry their fathers, Minnie was simply following that instinct. Minnie had a rebellious streak, and she may have found T.J.’s rough edges exciting, so at odds with the social snobbery she witnessed at home. Naturally, her parents were dead set against her having anything to do with T.J., and it was all too clear that she could register her defiance to them by

Naturally, her parents were dead set against her having anything to do with T.J., and it was all too clear that she could register her defiance to them by

sticking with him. For his part, T.J. set out on the fast track to prove himself worthy. Leaving Autauga with an older brother in late 1898, he managed to pay cash for 116 acres as soon as he crossed the Texas border. Where he got that $500 (about a year's wages for a working man) remains a mystery. He later told his daughter he had sold a saddle, but only a very elaborate saddle would have brought $500. And how would he have acquired such a saddle in the first place? His neighbors decided he must have robbed a train along the way. T.J. soon bought more land, swapping poorer acres for better, and when he opened a shop in Karnack, the sign he put out front, "Dealer in Everything," sounded like a bloated version of his future father-in-law's "general merchant." In November 1900, when T.J. returned to Alabama for Minnie, the Pattillos still labeled him "white trash." Acquiring a rustic little store in a speck of a Texas town did not catapult him into their class. Even if they made allowances for his lack of education, they weren't likely to forget that his mother had married four times and produced thirteen children, making her something of a joke to their society-minded friends. When Minnie persisted with plans to wed, her family refused to attend, and so the ceremony was a Taylors-only event at the home of T.J.'s older brother. If Minnie had known where T.J. was taking her, she might have reconsidered. With fewer than one hundred residents, Karnack, Texas, had only recently gotten its own post office. Marshall, the county seat fifteen miles away, had already become one of the wealthiest towns in that part of the state, and it would have suited Minnie better. Its strategic location, on the railroad connecting Dallas and Shreveport, made it a hub for commerce, and prosperous local residents had built imposing large homes along Washington Avenue and opened centers of higher learning, including a Female Institute. But a man on the make, like T.J., needed a set down his stakes and refused to budge. The marriage showed cracks from the start. Minnie made clear she detested her new home, and she wanted nothing to do with neighbors she saw as clearly inferior to herself. Most had never seen an opera or traveled outside the county. Her husband offered little consolation. His long workdays, as he continued to accumulate acres, meant she saw little of him. What she might have heard, she would not have liked. His reputation as a "ladies' man" was well deserved, and what's more, he didn't care a whit what people said about him. Yet Minnie stayed, at least for a while. The son she bore within a year of marriage was named for his father, but by the time the second was born, in August 1904, Minnie wanted a name that had nothing to do with her husband, and she settled on the exotic-sounding "Antonio." Before little Tony could walk, she left Karnack, taking both boys back to Alabama where she farmed them out to relatives, both T.J.'s and hers. To her family, she explained that she had left her husband because he was seeing other women. What had started out as a summer break for Minnie and the boys was going to last a lot longer. According to court documents T.J. filed in February 1909, Minnie had been gone four years and he wanted a divorce. Whenever he had written her to ask for an explanation, she had pled illness and requested more time to convalesce. But T.J. suspected she was not even with her family but had decamped to more appealing surroundings in the upper Midwest, possibly opera-rich Chicago or Battle Creek, Michigan, where she and all her family liked to go to take cures at the Kellogg Sanitarium. It's not clear where T.J. was getting his information, but his suspicion was confirmed when he received word from Michigan that Minnie, having left her sons in Alabama, was indeed a patient at the sanitarium. But, as the Kellogg

doctors informed him, she had recently undergone surgery and was unable to travel the "two thousand miles" (the actual distance was half of that) to answer T.J.'s charges. She was not too sick, however, to know what she wanted, and through her attorneys, she asked for alimony, payment of her attorneys' fees, and a share of the Texas property considered hers under the state's community property laws. Her counterclaim left out all mention of her two little boys, Tommy and Tony, whose custody T.J. was seeking. That response raised T.J.'s ire and, through his lawyers, he went after Minnie's father and officials at the Kellogg Sanitarium, demanding to know who was supporting his wife and what ailed her anyway. Luther Pattillo's response has not survived, but Dr. Bertha Moshier, an internist younger than Minnie, signed a statement on October 6, 1909, declaring that Minnie had been under her care in Battle Creek for "5 weeks" (only a tiny bit of the four years she had been gone) and that since she suffered from "nervous prostration" she needed a private nurse day and night. Travel was out of the question for "four or five months at least." Given Minnie's delicate condition, any trip sooner than that carried the risk of "permanent derangement." Now T.J. sounded baffled: if his wife was indeed suffering from "nervous trouble," would she not be better off in his "quiet country home [than in] a hospital where . . . numerous other people are being treated?" Minnie continued to dither, even accusing T.J. of taking unfair advantage of her by filing for divorce after he had encouraged her to seek treatment. She had never intended to abandon him permanently, she insisted, but in the meantime she refused to set a date for her return. As for the "valuable . . . real and personal property," accumulated during the marriage, her lawyers noted, she "avers that she has an interest." During the years Minnie was separated from T.J., she moved back and forth as "married" and "head of household." Neither parent claimed the company of Tommy and Tony, now aged nine and six, but a census taker found the boys living with T.J.'s older sister and her family in Alabama. When T.J. was granted his divorce nearly a year later (on February 6, 1911) Minnie was still in Alabama, but she immediately went into action. It was grossly unfair, she telegraphed her attorneys, that T.J. had won a "judgment by default," without her presence or participation, and she instructed her legal team to obtain a new hearing. Within weeks, T.J. and Minnie were back together. He dropped his case and she brought the boys to live with him in Karnack. He showed no signs of giving up his womanizing but he did offer Minnie one considerable consolation—a big, showy house, one of the most impressive for miles around. The couple had begun their married life in humble quarters behind the store, but during her absence he had purchased a two-story mansion (with seventeen rooms and six fireplaces) three miles south of Karnack. Built originally by slave labor and always called the Brick House, it had fallen into disrepair, but T.J., who resisted spending money on any personal pleasure, spared no expense in turning the house into one of the most elegant in the county. He put huge white columns out front—giving Minnie something to flaunt if her picky Pattillo kin ever came to visit. Even without the house, Minnie had her reasons for returning to T.J. She still felt drawn to this big, commanding man, for whom she had once bought barbells and a mat for workouts. More importantly, he provided an escape from the

infighting of Luther Pattillo's household in Alabama, where one of his stepdaughters, a widow with four children, had recently returned to live. The always festering resentment between Luther's own offspring and those of his wife Sarah could only grow, now that both parents were failing in health and questions about inheritance became more pressing. In fact, both parents died within months of Minnie's going back to T.J., and Luther, who managed to survive his wife by only a few weeks, made sure to funnel the bulk of his estate to his own blood, leaving only a pittance to each stepchild. That gave Minnie, now heiress to almost a quarter of her father's holdings, ample reason to put some distance between herself and her disinherited half siblings. Her new wealth wasn't hers to spend immediately—it came in land and revenues to be turned over later, when acres were sold and loans paid back. Even if Minnie had inherited a ready fortune, Southern ladies did not go off to live on their own. Certainly not a woman in her forties with two young sons. All through the turmoil of the divorce proceedings, the statements of Minnie's attorneys highlight the importance of money. She knew that T.J. had become a wealthy man in her absence, owner of thousands of acres of cotton-growing land. By renting to farmers who paid him back with a share of the crop, and by supplying those same folks with most of the store-bought items they needed, "Mr. Boss" held them in what even his loyal relatives described as a kind of peonage. His continuing good fortune was virtually assured by the fact that his neighbors could not avoid dealing with him—he owned the gins they needed to process their cotton. If Minnie had accepted the terms of the divorce, she would have lost a lot. On December 22, 1912, little more than a year after Minnie returned to T.J., she gave birth to a

baby girl with large brown eyes. Dr. Baldwin, living just over playmates—Stuff and Doodlebug—who preferred something more vivid than Claudia. Later, it was "deemed more respectable to assign credit to the nurse" and avoid any mention of interracial socializing. Nobody suggested that Minnie liked being back in Karnack. She still found it a dreary, lonely place, populated by people who knew nothing about Italian opera or her favorite authors. She had no close friends, and kept clear of her neighbors, who considered her "wacky." She sometimes accompanied T.J. to the store, then walked the three miles back to the Brick House alone. But more often she rode alone in her chauffeured sedan, a veil covering her face. When she went out for a walk, she loped solo through T.J.'s acres, her long skirts swishing through the grass and her reddish blond hair blowing in the wind. Local residents saw her as a dreamer at heart, a woman who yearned for life on a bigger stage than Karnack could offer. It was that deep, overpowering yearning that she passed on to her only daughter. For her sons, Minnie wanted exposure to a world beyond Texas, and soon after Lady Bird's birth, she dispatched both boys to boarding schools so distant they would find it difficult to come home, even at Christmas holidays. At first enrolled at Riordan, an upstate New York school known for its progressive ways, they were then split up, with Tony transferring to a school in New Mexico. That meant the two brothers, just entering their teens, were deprived of the comfort of each other's companionship, and their little sister saw neither of them. Minnie showed scant interest in making amends for taking the boys away from their father earlier or for leaving them with relatives while she traveled for cures and

culture. She reserved her minimal maternal instincts for little Claudia, who remembered her as a gentle figure, who liked to play records of Italian operas on her Victrola and read Norse tales aloud. Neighbors saw a less benevolent figure, who showed little interest in anyone but herself. On the rare occasion she took a stand on a community matter, T.J. was sure to be found on the opposite side. Her sole foray into politics is a case in point. After Texas granted women the right to vote in primaries in 1918, Minnie began crusading against a popular local candidate, whose relatives were T.J.'s friends. The candidate had been a "slacker" in the war, she argued, and did not deserve public office. T.J. and Minnie disagreed on just about everything. She still liked to travel, to attend musical events in Shreveport, fifteen miles away in Louisiana, and confer with doctors at the Kellogg Sanitarium. He stayed close to home, going to bed early so he could be up and at work before sunrise. The half of Harrison County that was African American interested him only as subjects for exploitation, but she assembled a few of them in her living room to talk about their religious practices. (She claimed she wanted to write a book on the subject but aggravating T.J. seems a more likely motivation.) He continued to strike back in ways that humiliated her. When a dog sniffed him out at his store one day, T.J. turned to a customer and said, "I've been with a black woman and that dog can smell her on me." What clearer evidence does one need to show that Lady Bird grew up in a home where marital fidelity carried little weight? The black youth named Sugar who came past the store for handouts was widely believed to be T.J.'s son, half brother to his three children borne by Minnie. What Lady Bird called a "stressful" marriage was actually one from hell, as the adults she called Mother and Daddy fashioned a reunion on the shards of a bitter, multiyear separation. Her brother Tony captured some of the rancor in that died, in mysterious circumstances that continue to raise questions nearly a century later. Was it suicide, as some Marshall residents believed? A botched abortion, as others suggested? Or did one historian get it right when he relayed rumors that T.J. had "pushed her down" a flight of stairs? Claudia, only five years old at the time, remembered little of her mother's death, and since her father permitted no discussion of the subject, she was unlikely to learn more. The sketchy version she relayed as an adult has become the accepted one—that Minnie, forty-four years old and pregnant, was tripped by a dog, causing her to fall down the stairs of her home, and then die from a subsequent infection. The graphic details haunted one of Minnie's granddaughters, who admitted that during her own pregnancies she stayed on high alert whenever a dog came near. Other information about Minnie's death raises strong doubts about whether a dog had anything to do with it, and the disappearance of documents that would help resolve those doubts maximizes the suspicion. Minnie's death certificate, on file at the Harrison County Courthouse, gives the cause as "septicemia," commonly called "blood poisoning," but not commonly associated with falls. Although the official date is September 4, multiple family communications place it ten, or even fourteen, days later. Tommy and Tony, aged seventeen and thirteen at the time, could offer little in the way of verification. Still hundreds of miles away, they did not learn of their mother's death for a full year because their father did not tell them.

While it would require an autopsy to pinpoint the exact cause of Minnie Taylor's death, a betting person would put money on a botched abortion. Septicemia frequently resulted—and was often fatal—when women tried to abort using metal objects. Since it was common knowledge around Karnack that she was pregnant, she must have been in an advanced stage. Yet neither her tombstone nor death certificate mentions a fetus or stillborn child. Since she had already sent her sons away and was investigating boarding schools in Washington, D.C., for little Claudia, it is reasonable to suspect she would not welcome a fourth child. She was buried, without a funeral service, within twenty-four hours of her death, highly unusual in that county at the time, and it was another physician, not the trusted neighbor, Dr. Baldwin—who had attended Claudia's delivery—who signed Minnie's death certificate. Issues of the county newspaper, which might fill in details of what happened, are missing for those weeks from the archives at the newspaper office and from an otherwise complete collection at the local college. Most suspicious of all is the completeness with which Minnie was erased from her children's lives. Not a single photograph of her survives, indicating that whoever possessed pictures taken of her during the forty-four years that she lived was very angry with her. And T.J. was certainly angry. The only time Lady Bird saw her father fly into a rage was when the local minister tried to console him by saying he should view his wife's passing as "the will of God." Whatever its cause, Minnie Taylor's death left her daughter, five months short of celebrating her sixth birthday, even more isolated. Without those tenuous ties that had once connected her to a remote, often absent mother, the lonely child became even lonelier. Claudia would later hear talk about her mother, how she treasured fine leather bindings on her books and liked to wander alone through the fields. But the picture emerged only in shadowy outline, like that of a distant mother's nighttime stories, he offered to read aloud to her. It was the first time, she later admitted, that she knew he could read. But this was busy cotton season, and he soon decided to cart her off to visit her Alabama cousins five hundred miles away. Rather than engage an adult to accompany her, he hung a sign around her neck and put her on a train. The sign, which read "Please deliver this child to Claude Pattillo, Autauga, Alabama," functioned perfectly, and she arrived without mishap. Behind the sign, a smart little five-year-old was learning the value of self-sufficiency. After his daughter returned to him, T.J. decided she needed a woman's guidance, and he invited Minnie's younger sister Effie to come and live with them. It was a little like asking an injured hunt dog to take care of the pack. Effie Pattillo, who had shown considerable talent as a pianist in her youth, was now in her early forties, a fragile, wispy woman for whom the phrase "having the vapors" could have been invented. Smaller and physically weaker than Minnie, Effie had grown to adulthood pampered like an invalid, and much as she valued appearing the "real lady," she acted more like a spoiled child who took little responsibility for financial decisions or other life choices. Shielded by Papa Pattillo's wealth and standing in the community, she had the luxury of not having to worry about what others thought of how she dressed or acted, and so she became more and more the eccentric bystander. Aunt Effie deserves some credit. She widened her niece's view of the world by taking her along on trips to the Kellogg Sanitarium, and she tried to foster what Minnie had started, introducing Claudia to nature's pleasures, teaching her to appreciate a colorful field of wildflowers or the special light of a setting sun.

T. J. Taylor's huge landholdings provided the space for exploring those joys, but neither he nor Aunt Effie could provide the reliable companionship of the "piney pine" woods and "true blue" wildflowers that had sustained Minnie in a place she hated. Nature was her preferred solace, and it would take center

stage in her daughter's life. As Lady Bird explained later, nature was "my daily companion. My kingdom, my place, my love." Outdoors, walking across her father's acres, she could shut out ugliness and forget the envious glances of the neighborhood children who had far less than she. To transport her to a world of her own, she supplied her own soundtrack, by humming to herself or whistling. The country house that T.J. had bought for Minnie was just the place for their daughter to develop a rock-hard self-sufficiency. With both brothers away at boarding school and only the children of hired help for playmates, Claudia Taylor had plenty of time to herself, to invent games she could play alone, to observe her father's strutting peacocks, to gaze off into the distance at the verdant hills and lush forests. After T.J. built her a detached two-room playhouse, she isolated herself within its walls, even sleeping there at night. Sometimes, as if pulled by a magic cord still connecting mother and daughter, the young Claudia descended the mansion's front steps and set off to ramble for hours across T.J.'s fields, just as her troubled mother had done before her. Did she imagine herself following paths her mother had crossed, sitting on rocky outcroppings where her mother had once stopped to rest and observe the exquisite scenery? As an adult, Lady Bird would always trace her love of the outdoors, its beauty and serenity, back to those solitary years in Karnack's meadows. Driven by her own curiosity and guided by Aunt Effie, she developed an encyclopedic knowledge of wildflowers, so that she became to botany what Theodore Roosevelt was to insect study—she rarely met a species she could not identify. It questioned about her own interest in wildflowers, admitted, "It did not come with the genes." By the time Claudia was no more than ten or eleven, she had figured out that Aunt Effie was someone to love, but a woman that "passive . . . weak and full of illnesses" did not provide a model to follow. Young Claudia set her "sights on being more like my father, who was one of the most physically strong people I have ever known." Lady Bird was very much T.J.'s daughter. Not only her dark hair, olive coloring, and oversized nose came from T.J. Taylor, but far more important, the ambition, business savvy, and almost incredible attention to ferreting out every cent in any exchange. She clung to his example in ways her brothers, separated from him at a young age, never did, and she became the risk taker in much bigger ways than they ever did. T.J. clearly loved and nurtured his only daughter, and he raised her, to a large extent, as if she were a son. At least he made no exceptions for the fact that she was a girl. He taught her the rules of success as if he fully expected she would one day run a business herself. Just as importantly, he made her comfortable with the idea of raw power, even if questionably achieved. Although T.J. was busy as local employer, lending banker, and "dealer in everything," he also served as his daughter's tutor—by example. He never read a book for pleasure, but he was a demon with numbers. Even the tiniest entry on the ledger drew his attention, and his daughter, who would later be described as able to read a balance sheet the way a truck driver reads a map, learned from him. She had her own checking account by the time she reached puberty, and she viewed it as distinctly hers. Informed as an adult that some of her female employees had joint checking accounts with their husbands, she retorted that she

"wouldn't share an account with the Angel Gabriel." T.J.'s talk of his own impoverished youth, of his mother being unable to provide "tea cakes" even at her children's birthdays, convinced Claudia that he wanted far more for her. She understood why for him "value-of-a-dollar" was one word. Unlike most people who knew T.J., his daughter saw only benevolence and kindness in him. She often talked about the time she inquired about a row of large wooden boxes in his store and he had assured her they were packing units. Only later did she learn they were coffins. Most of Karnack's population emphasized his miserly, manipulative ways, but she singled out his rare acts of charitableness, like extending credit to the family of her good friend, Emma Boehringer, whose father had died, leaving his widow with little to support herself and her children. For Lady Bird, T.J. was a gentle, compassionate figure while others were more likely to use the term his father-in-law relished—"the meanest man" around. Young Lady Bird was too smart not to know how T.J. was making his money. Although some of it was legitimately and fairly earned, much of it came from underhanded tactics and squeezing out his weaker neighbors. At the "company store" he operated, he took advantage of local residents who didn't have the means to go elsewhere, and he gouged them on prices. When local lumber mill workers went to his store with the chits in which they had been paid, he gave them less than face value toward their purchases, but he demanded full credit when he cashed in the chits at the mill. He kept hiring men to fish with nets in the neighboring Caddo Lake even after the state legislature prohibited net fishing. Not until a game warden burned his nets did he stop. This was the same Caddo Lake where his daughter liked to hang out in summer. As soon as she was old enough, she went with friends to picnic on its banks, under ferny cypress trees, and swim in its murky, green water. In spite of remained her hero. As Karnack's privileged little rich girl, Lady Bird learned early how to focus on the reality that worked to her benefit and block out the rest. Later in life, she talked about being able to stick her head in the sand, but her associates offered other descriptions of how she managed to ignore unpleasantness. One White House colleague noted she "had resources most people don't have"; she would start whistling and will herself into a place "of birds and sunshine." One acquaintance described her "veil" as a "Southern thing," that came down when she needed to block something out. Her longtime friend Harry Middleton observed, "She put on her mask and let the world go by." Historian Doris Kearns Goodwin called it "psychic leave," and said she witnessed it many times. Lady Bird would be sitting there, in body only, until Lyndon called out, "Bird, are you with me?" Then she would snap back. • • • The tiny one-room Fern School that Claudia Taylor started attending the year after her mother died offered limited companionship. Enrollment rarely reached ten, and when the number dropped to only two or three, the teacher moved classes to T.J.'s Brick House. After six years at Fern, with its potbellied stove, Claudia enrolled in a considerably larger school in the more upscale Jefferson, ten miles away. Sharing a room with Aunt Effie, she learned to imitate the deep Southern accents of the two retired schoolteachers who ran the boardinghouse,

and to roll her eyes, like them, when she wanted to feign ladylike ignorance. With those retired schoolteachers, she had two good examples of how a show of feminine weakness could mask real power. Cut off from so much in life, young Bird learned to disappear into books. Like her mother, she could spend hours at a time with only printed pages for company. She later singled out "The Emperor's New Clothes" by Hans Christian Andersen as an early favorite. One family acquaintance remembered driving up to the Brick House and seeing the eight-year-old girl on the front porch, a copy of the tome Ben-Hur in her little hands. Although T.J. had little schooling, he wanted the best for his daughter, but he was reluctant to send her away. When it came time for high school, he assigned one of his employees to drive her the fifteen miles to Marshall, the county seat. T.J. put little stock in keeping his vehicles clean, and Minnie's daughter was embarrassed when classmates saw her being delivered each day by a dusty truck that smelled of cowhides. Besides, ferrying her back and forth took a driver's valuable time. So T.J. bought her a car of her own when she was only thirteen, and since Texas did not require a driver's license at the time, she drove herself back and forth. Her privileged status did not go unnoticed. "She had her own car," one jealous classmate remembered, "when my family didn't even have a car." T.J. had his reasons for granting his daughter her independence. In 1920, two years after Minnie's death, he married his attractive young bookkeeper, Beulah Wisdom, twenty-four years his junior. Local residents knew her as a "looker" who wore the latest flapper fashions, the kind of woman only a rich man could hope to have. Eight-year-old Claudia did not see her new stepmother as a role model, and, when later asked, as an adult, if she found Beulah attractive, she said, "Yes, in a coarse and crude sort of way." The class chasm between the mercy of whoever was willing to take her in. Some of the Pattillo clan clearly welcomed the child and introduced her to watermelon evenings and Sunday picnics; they took her along on sightseeing trips to neighboring states, even as far as Colorado. Always aware that she was the visiting outsider, on probation, she was careful to mind her manners and look grateful as they bounced her from one household to another. One cousin recalled seeing this perfectly groomed little girl, arriving as the lone passenger in the backseat of a large car, her full skirt carefully spread out around her as if she did not mean to be touched. By the time she was in high school, Claudia Taylor sounded like T.J. on subjects such as finances and international relations. These were written assignments, rather than topics she picked herself, but already, at age fourteen, she appeared opinionated, arguing that the United States should grant independence to the Philippines, not because it was right

but because it would give the U.S. a monopoly on all rubber produced there. In another high school essay, on the subject of whether the United States should cancel debts it stood to collect from European nations, she wrote that she favored cancellation, not "because of sympathy" or because it would make other countries "like us better," but because it would help get those nations back on their feet and in a position to buy American products. Sounding like a cagey, mature bookkeeper, she admitted that $26 billion was "a large sum to erase from the 'right side' . . . of the ledger,"

but she reminded her reader that the U.S. "could make more money" from a strong Europe than from one strapped with debt. It's no wonder her classmates predicted a bright business future for Claudia Taylor when she graduated from Marshall High at age fifteen. The yearbook compared her to Erie Halliburton, the famed entrepreneur locally revered as the man who started out with only a borrowed wagon and a mule but quickly extended his oil and gas empire around the globe. That judgment was very much on the mark. Late in life she admitted that had she not married Lyndon, she would probably have become a businesswoman. At high school graduation, she was not yet set on that course but she was determined to strike out on her own. Staying in Karnack meant constant contact with her flashy, unsympathetic stepmother, and accompanying pathetic Aunt Effie to Alabama was equally unappealing. From the daughter of the local Episcopal rector, she learned about St. Mary's College, an Episcopal boarding school for girls in Dallas, and when she told T.J. she wanted to go there, he agreed. (She later said she hoped she granted her own daughters the same independence he gave her.) In Dallas, she would have a big city (population 158,000) and a chance to smooth out the rough edges of the schooling she had received in Marshall (population 14,000). St. Mary's wasn't exactly what her mother had in mind when she investigated boarding schools in Washington, D.C., but it appeared likely to offer similar rewards. The two years Lady Bird spent at St. Mary's gave her a chance to remake herself. After a religion teacher introduced her to a different version of Christianity than she had heard in the fundamentalist Baptist sermons in Alabama or the Methodist teachings in Karnack she decided to convert to Episcopalianism. An English teacher awakened her to the richness of her native language and encouraged her to write with vivid phrases: "Don't just say 'a man lightning lit up the landscape.' " St. Mary's gave little importance to domestic skills, like cooking and sewing—students at St. Mary's expected to have others do those tasks for them. But it was there that Claudia learned the excitement of live theater. In the world of drama, she could lose herself, and theater became a mainstay pleasure of her adult life. "I loved the theater," she would say: "I fed upon it." The young Lady Bird was game for adventure. On a trip to Shreveport, she insisted on going up in a tiny airplane, even though the wings looked precariously attached with wire. Her friend hung back, but Lady Bird loved it and called it "the most exciting ride of my young life." Fearless at the wheel of a car, she relished driving herself around. Both her mother and Aunt Effie had owned cars but relied on others to operate them, illustrating a kind of dependence that was not for Miss Claudia Taylor. When Aunt Effie needed her car driven the five hundred miles back to Autauga, Alabama, her sixteen-year-old niece volunteered to do it, accompanied by a friend the same age. Detained by road construction and the need to wire T.J. for more money, the two teens finally arrived more than a day late, in the middle of the night, at the home of a very anxious relative in Alabama. Before she turned eighteen, Claudia Taylor had formed the traits that would define her adult life. From her father she had learned the value of every cent and the importance of taking risks. From her mother came the equally strong pull to lose herself in nature and drama, in words and dreams of faraway places. The Southern belle demeanor she had absorbed from Aunt Effie and the two ex-schoolteachers in Jefferson, Texas, fooled many people, and when she rolled her eyes and drawled her vowels, she appeared soft and pliable. But her childhood

had toughened her, and she had mastered the priceless technique of insulating herself against intrusion and hurt, encasing herself in a protective cocoon that no one could breach. She could rationalize—or ignore—the shortcomings of others, even those adversely affecting her, without sacrificing a whit of her dignity. She had prepared herself to do what her mother never did—leave Karnack for a more exciting life.

Unlike her husband, Bird insisted on authenticity in her press releases and correspondence. He liked to put a grandiose slant on his naval service, describing it as a "mission for the President." One staffer picked up the phrase and used it in a letter to a constituent, explaining that Congressman Johnson was not in his office but "serving his country where the President considers he is most needed." Bird, in checking that letter, circled the phrase about the president and penned in as did most of the others. In her husband's absence, Bird continued his efforts to funnel federal money to Texas. Even before Pearl Harbor, Congress had allocated $10 billion for defense contracts, and Lyndon immediately started pushing for locating a military base in his district. Austin's mayor and other city leaders also pressed the case but the competition was fierce in early 1942, and the final decision was looking "a little bit too close." With people back in Austin eager to get a plum military installation there, Bird went to a key figure, assistant secretary of war for air Robert Lovett, and reiterated the advantages of the 10th District. When she left she wasn't sure of the outcome but the press secretary side of her asked for another favor. Before the decision was announced, she wanted Lovett to give her advance notice so she could issue the press release and make sure her husband received credit for his efforts. It is impossible to know what weight she carried in the final decision, but in September 1942 a military base, later renamed Bergstrom Air Force Base, opened on three thousand leased acres in Lyndon's district, and the congressman's name figured prominently in the announcement. Lady Bird Johnson's role in funneling more money to Texas, to a defense plant hundreds of miles away from Lyndon's district, is even more intriguing. The federal government, in its rapid conversion to a war economy, had to open up factories all across the nation to produce whatever its servicemen needed to fight—ammunition and guns, uniforms, fighter planes. While some factories could retool—to make tanks instead of cars—others had to start from scratch, and countless towns wanted the privilege of starting them. Among the winners was tiny Karnack, Texas, where Lady Bird's father still lived. Not all of the land

for Longhorn Ordnance Works came out of T. J. Taylor's considerable holdings, but a lot of it did. By mid-1942, he and his then wife, Ruth, were busy buying land from their neighbors and selling it to the government, sometimes for nearly twice what others received for the same acreage. In the month of August alone, T.J. and Ruth Taylor recorded $70,000 in land sales, equivalent to more than $1 million in 2014 dollars. There was nothing illegal about the land deals—T.J. had been buying and selling bits of Harrison County for more than forty years. But the rapidity of his acquisitions in 1942, followed by quick resale at inflated prices, does raise the question of whether he had inside information about the location of the new ordnance factory. Since Lady Bird and Lyndon had signed away any claim to her father's immediate profits, there is no paper trail connecting them to his windfall. But the question remains: Was Bird using her Washington network to gather information that substantially increased her father's net worth? As the summer of 1942 ended, it must have felt a lot like Christmas in T.J.'s big Brick House. Bird had come back for a visit and her two brothers had their own reasons for celebrating. Tony showed up with a new bride, Matianna, and Tommy, who still lived in Texas, had become the proud father of a baby girl. With Longhorn Ordnance set to open, the local economy looked good. During the half year that Bird managed Lyndon's congressional office, she performed so flawlessly that some of his constituents didn't even know he was gone, and others suggested she could win a House seat on her own if she chose to run. Jake Pickle, who handled the Texas office until he, too, went off to fight, praised the "bang-up job" she was doing. He proposed organizing some extra publicity for her: "I feel we could and should get some good

stories and features about her work. It would go over big." But Lyndon, always a little squeamish when anyone but himself was getting credit, did not push for flattering articles excel, taunting her that anyone with two degrees from the University of Texas should certainly be able to manage the project he had in mind. But when she delivered—making a useful contact or solving a thorny problem—he could turn petulant, not liking to be upstaged.

BITCHUTE @Housatonic YOUTUBE @HousatonicLive ODYSEE @Housatonic BRIGHTEON @Housatonic

Housatonic

Diana Lee Taylor (born 1933)

Also known as Diana Lee Taylor MacArthur (born 1933)

Born - July 7, 1933

- Parents -
  - **Mother** is Julia Elizabeth Sibley (born 1905, passed in 1961) ...
    - Julia Elizabeth Sibley was Born Julia Elizabeth Steele (1905)
    - Julia Elizabeth Sibley married Antonio Jefferson Taylor (born 1904)
    - Divorced
    - Second marriage was to Charles Noel Sibley (born 1899) (of United Fruit Company) -
      - Thus Charles Noel Sibley (born 1899) is the **stepfather of Diana Lee Taylor**
  - **Father** is Antonio Jefferson Taylor (born 1904) (his father is Thomas Jefferson Taylor II (born 1874))
    - Married Julia Elizabeth Sibley (bonr 1905)
    - Divorced
    - Second marriage was to

Married as second husband, **Dr. Donald Malcolm MacArthur** (born 1931) , Pentagon bioweapons chief(1931-1988).

She has lived most of her life in Santa Fe, New Mexico, with a house in the Washington DC area.

Her father, Antonio Jefferson Taylor, was the brother of Lady Bird Johnson, wife of President Lyndon Baines Johnson.

She was President of Dynamac Corporation after 1988, a company founded by her husband Dr. Donald Malcolm MacArthur (born 1931) in 1970 .

2013 (Sep 3) - Bio in "The Santa Fe New Mexican" newspaper

Stepfather Charles Noel Sibley (born 1899) worked at United Fruit Company .

Link tp image : [HN013W][GDrive] / PDF(text) : [HN013X][GDrive]

DIANA MACARTHUR

Diana MacArthur is a Santa Fe native. She was born at St. Vincent Hospital on Palace Avenue in 1933. Her parents, Elizabeth and Antonio "Tony" Taylor, were from East Texas. Her father was Lady Bird Johnson's brother. He was the first student at the Los Alamos Ranch School for Boys and later returned to the Santa Fe area as a tuberculosis patient.

MacArthur and her older sister, Gerry, were great friends of the three Ruthling children, Theo, Ford and Carlton. The sisters often stayed at the Ruthling ranch, where they slept outside in covered wagons, even in winter. The children all took dancing lessons from Jacques Cartier.

MacArthur's parents divorced, and she lived with her father and her father's wife, Matianna "Matti" Vigil. Her mother married Charles Sibley, a career employee of United Fruit Company. The first time MacArthur and Gerry visited them in Guatemala, the girls were 7 and 14. They traveled alone, taking a train through the Mexican jungle, and crossing the river that was the border between the two countries in a dugout canoe.

On a later trip to visit her mother, MacArthur sailed in a United Fruit Company boat. When the boat docked in Havana, she toured the city by herself at age 12.

She attended Loretto Academy and Harrington Junior High, before going to boarding school in Pennsylvania.

In 1955, she received a bachelor's degree in economics, with Phi Beta Kappa honors, from Vassar College.

She married and had her first child, Elizabeth in her senior year. Her husband, Nikolai Tschursin, was an émigré from the Soviet Union. Their son, Alexander, was born in Santa Fe.

The couple divorced after five years, and MacArthur raised her children as a single mother in Washington, D.C. She often spent time with her aunt Lady Bird and uncle Lyndon B. Johnson when he was speaker of the U.S. House of Representatives.

In 1962, MacArthur married Donald MacArthur, a Scottish scientist. He founded a firm, Dynamac, which she continued to run for 20 years after his death in 1988. She eventually sold the firm to another woman-owned company.

When Lyndon B. Johnson was president, he appointed MacArthur to the President's Council on Youth Opportunity. Under President Bill Clinton, she served on a committee of advisers for science and technology that included the Massachusetts Institute of Technology president, three Nobel Prize winners, the president of Lockheed Martin and President Obama's current science adviser.

Today, MacArthur lives on a ridge overlooking Tesuque. "One always knows, if you are born in Santa Fe, where you will retire," she said.

Her son lives in Santa Fe, as does her grandson, Nikolas. Her daughter died in 1994.

The New Mexican

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1954 (Nov 17) - First marriage to Nikolai Tschursin

Full page - [HN00T5][GDrive]

The New Mexican
OF NEW MEXICO

105th Year, Issue No. 294 SANTA FE, NEW MEXICO, SUNDAY, NOVEMBER 7, 1954 B Section

Diana Taylor Is Married In New York

Of wide interest here is the Oct. 24 wedding in New York City of Diana Lee Taylor to Nikolai Tschurin. She is the daughter of Anthony J. Taylor and Mrs. Taylor of this city. The bride's parents were present for the ceremony returning to Santa Fe at mid-week.

Vows were exchanged at the Russian Orthodox Church on West 77th St. An all Russian choir directed by Boris Litkowsky sang for the service.

The bride's wedding dress was of ivory satin fashioned with molded bodice with full skirt flaring over foamy white underskirts. A fingertip tulle veil was attached to a dainty crown of orange blossoms. White roses formed her bridal bouquet.

Attending the bride as matron of honor was Mrs. Irving Glick of Great Neck, Long Island. Two classmates from Vassar, Miss Ann Bartholomew and Miss Vera Schnell, were bridesmaids. A special escort of three classmates from Smith College who had studied abroad with the bride last year was also present.

Attending the groom were Dimitri Tremble of New York City as best man, Michael Lineman of Washington, D. C., as ring bearer. In the Russian tradition, crowns were held over the heads of the couple during the entire ceremony. Bearers of the jeweled crowns were Horace Anderson of Santa Fe and M. Platanof of New York.

Immediately following the ceremony a wedding dinner was held at Hotel Fifth Avenue. Among the New Mexicans attending were Mr. Anderson and Mrs. Anita Anderson of Santa Fe, Mr. and Mrs. Paul Markman formerly of Albuquerque, Mr. and Mrs. Frost Roehsler, Mr. and Mrs. Taylor, parents of the bride; and Mrs. Jack C. Hopkins, sister of the bride.

After a honeymoon in Washington, D. C., the bride returned to Vassar where she is a candidate for her degree in June, 1955.

The bridegroom was born in Rostov-on-Don, Russia. His father was mayor of that city at the time of German defeat at Stalingrad and he and his family following the retreating German Army back to Germany. After several years of dodging the Soviets, they escaped to America under the Displaced Persons program. Mr. Tschurin recently completed service with the U.S. Marine Corps and is now a student at George Washington University in Washington, D. C. The young couple will reside there following the bride's graduation until he receives his degree two years hence.

They met through the bridegroom's mother, Mrs. V. Fram, who resides near Vassar in Poughkeepsie, N. Y.

GS LEADERS MEET WEDNESDAY

A final session of the basic course for Girl Scout leaders will be held at the Scout office Wednesday from 9:30 a.m. to 3 p.m. This work will conlcude the sessions begun last month under direction of

EXCHANGING VOWS in a Russian Orthodox service in New York City are Miss Diana Taylor, daughter of Anthony J. Taylor of Santa Fe and Nikolai Tschurin, son of Mrs. From of Poughkeepsie, New York.

THE SANTA FE HIGH SCHOOL BAND is one of the best known such organizations in New Mexico. During football season they perform as a marching unit switching to a concert band in mid-November. Wednesday is opening day for the annual drive for the Santa Fe Band Parents Association. Tickets go on sale at that time for four concerts scheduled for spring presentation. Pictured are Horacio Manzanares, Louise Hall, Bobby Felix, Jimmy Sikes and Candy Wilson. Just to prove how much the youngsters enjoy band under direction of Bennett Shacklette look at the broad smile on Louise's face. Must have been something very funny. (Max Spring, staff photographer)

[HN00T6][GDrive]

1959 - Uncle Thomas Jefferson Taylor Jr. dies

https://www.newspapers.com/image/587989981/?terms=thomas%2Bj%2Btaylor%2Bjr

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1960 (October) - Grandfather passes

See Thomas Jefferson Taylor II (born 1874) / Full newspaper page : [HN0137][GDrive]

The Shreveport Journal (Shreveport, Louisi... • 24 Oct 1960, Mon • Page 4

Karnack Services Conducted For Thomas J. Taylor

MARSHALL, Tex.—Services were conducted at 4 p.m. Sunday at Karnack Methodist Church in Karnack for Thomas Jefferson Taylor, 86, father of Mrs. Lyndon B. Johnson, wife of the Democratic vice presidential nominee, who died in Memorial Hospital in Marshall about 3:15 p.m. Saturday.

Burial was in Algoma cemetery in Marshall. Officiating ministers were the Rev. R. E. Bischoff, pastor and the Rev. Billy Bonner, a former pastor.

Mr. Taylor was born in Alabama Aug. 29, 1874, and came to Karnack in 1899 when he was 25 years old. He opened a general store and erected a sign "Dealer in Everything" which identified the establishment as serving the entire area. He invested continuously in Harrison County land to become one of the largest landowners in East Texas.

His store is just outside the Longhorn Ordnance Works reservation, most of the Longhorn site having been acquired from him.

He also "dealt in everything," lending financial assistance to numerous individuals which from time to time had him in contracting, automobile, sawmill, fishing and other businesses.

Mr. Taylor was a lifelong member of the Methodist Church and had been a member of the Karnack Church for 60 years. He also was a continuous benefactor and erected the Sunday School building, which is known as Taylor Hall. He also presented the church with its organ.

Taylor had suffered a heart ailment for the past 15 months and had been in the Marshall hospital most of that time.

Besides Mrs. Johnson, Mr. Taylor is survived by his wife and a son, Antonio J. Taylor, of Santa Fe, N.M.; a sister, Mrs. Ida McKay; three half-sisters, Mrs. J. D. Jones Sr., Mrs. Harris Cory and Mrs. R. M. Prather, and a half-brother, Cecil Bishop, all of Prattville, Ala. Another son, T. J. Taylor Jr., died last summer.

[HN0138][GDrive]

1961 (August 13) - Marriage announced

Marriage to Diana Lee Taylor (born 1933)

Two slightly different versions of announcement below

1961-08-13-the-santa-fe-new-mexican-pg-21-clip-macarthur-taylor

DIANA TAYLOR TSCHURSIN
— Hessler Studio

Diana Taylor Tschursin, Dr. MacArthur Will Wed

Antonio J. Taylor of Santa Fe announces the engagement of his daughter, Mrs. Diana Taylor Tschursin of Washington and New Mexico, to Dr. Donald Malcolm MacArthur of Washington and Stornoway, Scotland.

Mrs. Tschursin is the daughter of Mr. Taylor and Mrs. C. Noel Sibley of Marshall, Texas, and is the niece of Mrs. Lyndon B. Johnson. She attended the Shipley School at Bryn Mawr, Pa., and was graduated Phi Beta Kappa in economics at Vassar College in 1955. She is a vice president of the Thomas J. Deegan Company of New York City.

Dr. MacArthur is the son of Mr. and Mrs. Donald J. MacArthur of Scotland. He was graduated with a bachelor of science degree from St. Andrews University and graduated with a Ph.D. degree at the University of Edinburgh in 1957. He is the director of the Chemical and Biological Sciences Laboratories at Melpar, Inc. near Washington.

The couple plan a fall wedding.

Miller Twins Visit Relatives

Full page : [HN00TH][GDrive] / Clip - [HN00TI][GDrive]

WASHINGTON WEDDING PLANNED FOR FALL — Mrs. C. Noel Sibley, 1309 Mobile, Marshall, announces the engagement of her daughter, Mrs. Diana Taylor Tschursin of Washington, to Dr. Donald Malcolm MacArthur of Washington and Stornoway, Scotland. Mrs. Tschursin is the daughter of Antonio J. Taylor of Santa Fe, N. M., and Mrs. Sibley. She is the niece of Mrs. Lyndon B. Johnson. She attended the Shipley School at Bryn Mawr, Pa., and graduated Phi Beta Kappa in economics at Vassar College in 1955. She is a vice president of the Thomas J. Deegan Co. of New York City. Dr. MacArthur is the son of Mr. and Mrs. Donald J. MacArthur of Scotland. He graduated with a bachelor of science degree from St. Andrews University and took a Ph. D degree at the University of Edinburgh in 1957. He is the director of the Chemical and Biological Sciences Laboratories at Melpar Inc. near Washington. The couple plans a fall wedding.

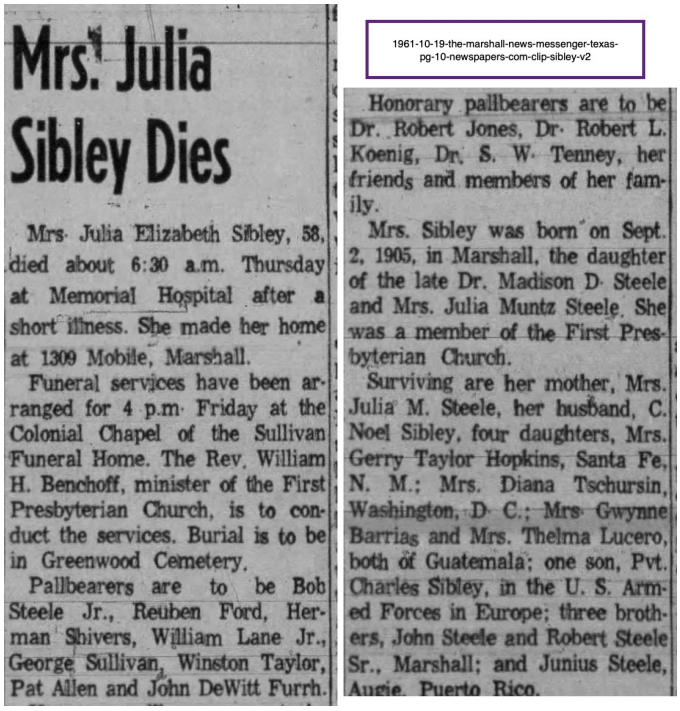
1961-08-13-the-marshall-news-messenger-texas-pg-c-1-clip-macarthur-taylor

Full page : [HN00TJ][GDrive] / Clip - [HN00TK][GDrive]

1961 (Oct 19) - Passing of mother - Mrs. Julia Elizabeth Sibley

source, unmodified image - [HN00T7][GDrive]

some more info here - https://www.newspapers.com/image/320548814/?terms=charles%2Bnoel%2Bsibley



1961-10-19-the-marshall-news-messenger-texas-pg-10-newspapers-com-clip-sibley-v2

Mrs. Julia Sibley Dies

Mrs. Julia Elizabeth Sibley, 58, died about 6:30 a.m. Thursday at Memorial Hospital after a short illness. She made her home at 1309 Mobile, Marshall.

Funeral services have been arranged for 4 p.m. Friday at the Colonial Chapel of the Sullivan Funeral Home. The Rev. William H. Benchoff, minister of the First Presbyterian Church, is to conduct the services. Burial is to be in Greenwood Cemetery.

Pallbearers are to be Bob Steele Jr., Reuben Ford, Herman Shivers, William Lane Jr., George Sullivan, Winston Taylor, Pat Allen and John DeWitt Furrh.

Honorary pallbearers are to be Dr. Robert Jones, Dr. Robert L. Koenig, Dr. S. W. Tenney, her friends and members of her family.

Mrs. Sibley was born on Sept. 2, 1905, in Marshall, the daughter of the late Dr. Madison D. Steele and Mrs. Julia Muntz Steele. She was a member of the First Presbyterian Church.

Surviving are her mother, Mrs. Julia M. Steele, her husband, C. Noel Sibley, four daughters, Mrs. Gerry Taylor Hopkins, Santa Fe, N. M.; Mrs. Diana Tschursin, Washington, D. C.; Mrs. Gwynne Barrias and Mrs. Thelma Lucero, both of Guatemala; one son, Pvt. Charles Sibley, in the U. S. Armed Forces in Europe; three brothers, John Steele and Robert Steele Sr., Marshall; and Junius Steele, Augie, Puerto Rico.

[HN00T8][GDrive]

1962 (Aug 05) - Stepfather "Charles Noel Sibley" dies

See Charles Noel Sibley (born 1899)

Article - [HN00TF][GDrive]

1964 (sep 30)

Full newspaper page : [HN0140][GDrive]

Scientist Group For Johnson Organized Here

The newly organized Scientists and Engineers for Johnson and Humphrey raised approximately $600 the past weekend in campaign funds and named a temporary chairman.

Dr. Donald MacArthur, of Washington, was here to launch the statewide link to the national group.

Dr. MacArthur and his wife, the former Diane Taylor of Santa Fe, niece of President and Mrs. Lyndon B. Johnson, departed early Monday for Dallas to continue organizing a coast-to-coast network of organizations of technical people for the Democratic nominees.

Temporary Chairman Named

Dr. MacArthur met with some 40 persons — all technical and scientists — Sunday at the home of Dr. Sidney Solomon, 2406 Morrow NE. Leo A. Dunn, of Sandia Corp., was named temporary chairman.

Dr. Julius R. Blum, of the University of New Mexico, will serve as temporary treasurer and Victor J. Goetz, with ACF Industries, Inc., acts as publicity chairman.

Another meeting of the newly formed group is planned for 7:30 p.m. tonight at the First National Bank Bldg. East.

Seek Big Victory

Dr. MacArthur said the technical and scientists are organizing " . . . to make sure of an overwhelming victory for Johnson and Humphrey.

Albuquerque will serve as state headquarters. Plans include forming at least one group in each state.

The meeting here was preceded by similar sessions at Santa Fe and Los Alamos.

A top speaker in the scientific - technical community is expected to address the group before the Nov. 3 election.

NATIONAL SCIENTISTS-ENGINEERS FOR LBJ: Dr. and Mrs. Donald M. MacArthur, of Washington, look over political material prepared specially for Scientists and Engineers for Johnson and Humphrey while standing just outside their national headquarters in Washington. Dr. MacArthur and his wife, the former Diane Taylor, of Santa Fe, were in New Mexico Saturday and Sunday. (UPI Teltphoto)

1964-09-30-the-albuquerque-journal-pg-c-3-clip-scientist-group

[HN0141][GDrive]

1965 (Jan 20)

Full newspaper page : [HN0144][GDrive]

Fort Worth Star-Telegram (Fort Worth, Texas) • 20 Jan 1965, Wed • Page 36

PAGE TEN Section Three FORT WORTH S

LBJ Clan Members Share His Triumph

BY JOHN MORT
Star-Telegram Washington Bureau

WASHINGTON, Jan. 20—President Johnson's Texas kin shared in his moment of glory Wednesday.

Numerous relatives of both the President and his First Lady occupied seats of honor among some of the nation's leading dignitaries at the inaugural ceremony.

Seated in the first row on the inaugural platform were Mrs. Johnson and their daughters, Lynda and Luci, with the First Lady placed immediately to her husband's right.

Other front - row occupants were the President's sister, Mrs. Birge Alexander of Fort Worth, her husband and their daughter, Becky, a University of Texas student; Mrs. Johnson's brother, A. J. Taylor of Santa Fe, N. M., and his wife; and two of the President's aunts, Mrs. Jessie Hatcher and Mrs. W. E. Saunders.

In the second row, seated next to U. S. Chief Justice Earl Warren, were Gov. John Connally, long-time Johnson intimate, and Mrs. Connally.

In the same row were Johnson's sister, Mrs. O. P. Bobbitt of Austin, and her husband; his brother, Sam Houston Johnson, also of Austin; and the Taylors' daughter, Mrs. Donald MacArthur of Washington.

Mrs. Johnson's sister-in-law, Mrs. T. J. Taylor Jr., and her daughter, Susan, were assigned third-row seats, along with two of the President's nephews, Phillip Bobbitt and Rodney White.

An uncle of the President, Huffman Baines Sr. of San Antonio, was in the fourth row, along with members of the cabinet.

Also on the presidential platform were Dale Miller of Dallas, chairman of this year's inauguration committee, and his wife.

The family of Vice President Hubert Humphrey also was well represented on the platform.

Mrs. Humphrey sat next to Mrs. Johnson, between the First Lady and the Johnson daughters.

Seated elsewhere on the platform were the Humphrey sons, Hubert H. III, Robert and Douglas; the daughter, Mrs. Bruce Salomson; and Humphrey's brother, Ralph, and his sister, Mrs. Frances Howard.

[HN0145][GDrive]

1965 (Feb 24)

Full newspaper page : [HN014B][GDrive]

PAGE TWO—B SUN-DEMOCRAT WEDNESDAY, FEBRUARY 24, 196

Three Beautiful Kin Of Lyndon Johnson Live Right Nearby In Captial

By VERA GLASER
Women's News Service

WASHINGTON (WNS)—Down Texas way relatives of the Lyndon Johnson are a dime a dozen, but few know they have three beautiful kinfolk living in the nation's capital.

Roxanne George, the President's niece; Patsy Derby, the First Lady's cousin; and Mrs. Donald MacArthur, her niece, discreetly play down their White House ties. People who see them daily often are unaware of the exciting relationship.

But having "Uncle Lyndon and Aunt Bird" in residence at 1600 Pennsylvania Ave., the girls admit, gives life in Washington a certain zest. The trio has been invited to glamorous official functions and occasionally find themselves swept up in spur-of-the-moment activities.

One Sunday morning 23-year-old Roxanne, daughter of Sam Houston Johnson, the President's brother (after her mother's remarriage to O. C. George of Mattoon, Ill., Roxanne was legally adopted), encountered the First Family at St. Mark's Episcopal Church services.

They took her home for a swim in the White House pool. A guest that day was Thomas Mann, later to be named Assistant Secretary of State for Latin American Affairs.

Another time she was a last-minute guest for Sunday lunch in the private living quarters of the Executive Mansion, along with the Clark Cliffords and Abe Fortases, long-time Johnson advisors, and Defense Secretary and Mrs. Robert McNamara.

Chuckling, Roxanne recalled the President's fund of funny stories and his enjoyment of a huge new battery-operated pepper mill at the dining room table. She lived with the Johnsons during her early days in Washington, both at the Sheraton Park Hotel and The Elms, his vice presidential residence.

Patsy, a slim, blue - eyed blonde, is working for her master's degree in American government at Georgetown University. Her mother, Mrs. Frank Derby of York, Ala., and Mrs. Johnson are first cousins. Patsy has been invited to White House receptions, occasionally helping Mrs. Johnson by serving as a hostess.

She shares a four-room apartment in Georgetown with Roxanne, who works for the Arms Control and Disarmament Agency as staff assistant. A graduate of MacMurray College in Jacksonville, Ill., Roxanne speaks fluent French, was assigned to Geneva last year for the disarmament talks, and hopes to return for the next conference.

"Lady Bird never ceases to amaze me with her thoughtfulness," Patsy said, "She took time out from a receiving line at the Smithsonian Institution to ask me about Roxanne when she was in the hospital." Later the Johnsons telephoned and sent flowers from Texas to their pretty niece.

Diana MacArthur, a graduate of Shipley School and Vassar, is the daughter of Lady Bird's brother, Tony Taylor, a Santa Fe, New Mexico importer. With her scientist husband and two children, 10-year-old Elizabeth and Alexander, 8, she lives in a spacious Dutch colonial home filled with paintings and art objects from the American southwest, Europe and Africa, meanwhile working as a consultant to the Peace Corps.

One evening, after a late dinner with the Johnsons, the MacArthurs were invited to spend the night. They slept in the historic Queen's Room, an elegant red-and-white chamber which has been occupied by the sovereigns of England, Greece and the Netherlands, just down the hall from the President's bedroom.

During the recent campaign the MacArthurs left their jobs to organize scientists, engineers and physicians for Johnson - Humphrey, signing up 150,000 members and raising $500,000 for the Johnson ticket.

Patsy worked in the campaign, too, first with the MacArthurs, then as a blue-clad hostess aboard the colorful "Lady Bird Special," Mrs. Johnson's Southern campaign train. After the election, she took a job at the inaugural committee before resuming her studies.

Bursting its seams, the girls' apartment was virtually a second inaugural headquarters during that eventful week. Patsy's mother stayed there. The Georges came from Mattoon, as well as Roxanne's "real" father who stayed in the White House. A special beau from Switzerland crossed the Atlantic to be with Roxanne during the ceremonies and festivities.

All three of their Washington kin have been invited by the Johnsons to sit in the presidential box when the Chief Executive addresses Congress. Patsy heard the State of the Union message. Diana and Roxanne were present when he delivered his first speech following the assassination of the late President Kennedy.

Lady Bird gets credit for bringing Roxanne and Patsy together in what has blossomed into a firm friendship and fulfilled living arrangement. She invited them both to Lynda Bird's high school graduation party, a Hawaiian luau given at The Elms in 1962.

Last November the pair surprised the Johnsons on their thirtieth wedding anniversary, calling at the White House with a bouquet of thirty yellow roses.

"We've always had a close family relationship," Roxanne said. The President gave the commencement address at her college graduation. She confesses, "Like all Johnsons, I love to telephone. My trans-Atlantic bills are pretty high."

Last year in Geneva she told Soviet delegate Semyon Tsarapkin that she knew only five words of Russian—"book, pencil, paper, magazine and newspaper."

"Enough for us to sign an agreement!" he quipped.

Diana's relationship with the First Family is better known than that of the other two girls. The MacArthurs were in the pavilion at the President's swearing in and attended his inaugural luncheon in the Capitol. Along with Patsy, they were invited to the Sunday night supper given on the eve of inaugural week by famed hostess Perle Mesta.

"The morning of the swearing in Mrs. Johnson had someone call me to say an extra ticket had turned up," Diana said. "She wanted to know if one of my children would enjoy using it. That kind of thoughtfulness just overwhelms you."

The kinfolk trio are always seeking ways to repay the First Family's hospitality. The Johnsons have been guests at a MacArthur party but have yet to visit Roxanne and Patsy. The two girls enjoy a "Joint hobby" of cooking, often serving a meal of fondue bourgignonne, for which guests use long skewers to cook their own meat in a chafing dish Roxanne brought from Switzerland.

"We hope the Johnsons can come for dinner. Uncle Lyndon would like this fondue," Roxanne said, helping herself to a taste.

Family Section

LBJ'S BEAUTIFUL WASHINGTON KINFOLK — Roxanne George, the President's niece, and Patsy Derby, the First Lady's cousin (right), serve dinner in their apartment to Mrs. Donald MacArthur, daughter of Lady Bird's brother Tony Taylor.

[HN014C][GDrive]

Jan 1968 - With Ambassador "Jimmy" Symington

See James Wadsworth Symington (born 1927) (son of William Stuart Symington III (born 1901))

Full page : [HN00T2][GDrive]

10C St. Joseph, Mo., News-Press, Sunday, January 7, 1968 | was nervous," he told them,

BETTY BEALE'S WASHINGTON LETTER

Expert Job by Chuck Robb on Honeymoon Secrecy

Washington, D. C.
Jan. 6, 1968

Dear News-Press Readers:

Chuck Robb shouldn't be heading for an overt war; he should join the covert part of the CIA. He's new to the goldfish bowl life, but he pulled off the greatest coup of any publicized bridegroom in recent memory.

He managed to cloak himself and his bride in a cloud of secrecy that must be the envy of everybody from Jacqueline Kennedy and Princess Margaret to Charles Lindbergh.

Despite reports that they honeymooned at Caneel Bay, V. I., to this day not even the First Lady is sure they did, and she is not the kind to ask. It's a cinch the President doesn't know either because he would be the first to tell, said a White House staffer with a chuckle.

Press Corps Alerted

And Chuck pulled this off at a time when the press corps all the way from the White House to the Caribbean, from Dulles Airport to Honolulu, was alerted to be on the lookout.

Yet not a single camera though equipped with telescopic lens and trained around the clock on the suspected honeymoon spot ever caught visible proof of the newlyweds' arrival, presence or departure. Jackie and Princess Margaret should seek his advice the next time they want to go off swimming somewhere in privacy.

How did he do it? He won't say.

"About 75 per cent of what we saw in print was amusing but not necessarily factual," he said. So the true story may never be known.

Said Lynda, regarding their first stop after leaving the White House, "I didn't know where we were going until we actually got there." Incidentally, they did not spend their wedding night at the Georgetown Inn as definitely stated in one paper.

An Early Riser

Lynda Robb, new Arlington resident, found out what it was like to be the dutiful wife of a marine officer even before she left the White House.

Her husband, she discovered

Ambassador Jimmy Symington, chief of protocol, wowed his audience in the Shoreham Hotel's Blue room when he put on a fund-raising performance. A preview photo shows him with Mrs. Donald MacArthur, the First Lady's niece, and Warren Woodward.

wouldn't tell them when they looked at their social calendars.

The Middle East war, an earthquake and absences from town caused the swingingest diplomatic hostesses, the chatelaines of the Kuwait, Venezuelan, Spanish and Moroccan Embassies, to forego the usual ball on New Year's eve.

And there was even a new trend observed among the debutante set. The withdrawal from the exclusive Washington Debutante Ball of two girls whose parents had already paid $700 each for their participation and could not get their money back, is an indication of it.

Prefer to Travel

More and more prospective debutantes would rather have the money to go to Europe than have a coming out party. A lot would rather spend their vacation time at a ski resort where some of the most attractive stags are going. Many times it's the parents who nostagically are holding onto the traditional custom of presenting their daughters to society.

Even they skipped giving the usual holiday bashes for their contemporaries and spent their time instead keeping tabs on

The Peabodys are now residents of Washington, but she recalled the time she was scheduled to be the main speaker at a B'nai B'rith dinner in Boston and canceled out the same day because her daughter had just come home from school and wanted very much to talk over some things with her mother then and there.

Instead of not forgiving her for the last-minute cancellation, the same group gave Toni Peabody their next "Mother of the Year" award!

• • •

Ambassador Jimmy Symington, the socially impeacable, handsome young chief of protocol, made his professional debut as a singer at the Shoreham Hotel the other evening and was a smash hit.

The hotel's Blue room was packed with a society audience that cried "Fabulous!," "Sensational!," "Encore!" and "More!" when he finally put his guitar down and took a bow.

Guitar Project

The attractive director of the striped pants set, who may next run for Congress from Missouri, was making a one night appearance only to raise money for his pet project—guitar lessons and, if warranted, guitars, for

"and I said 'Why should a col of protochief be nervous?"

Before singing "Shadow of Your Smile," he observed that there were many kinds of smiles.

"There is the kind you get when you call a king 'your royal highness;' or the kind you get when you step on the foot of a president as he is getting out of his car."

• • •

AROUND THE TOWN:

Sen. Joseph Clark's divorced wife of 32 years will marry a Washington socialite realtor in a couple of months. The Pennsylvania legislator who instigated the divorce remarried as soon as it was final.

Noel Clark, daughter of Mrs. William Hall of Louisville, Ky., and Easthampton, L. I., will wed Cuthbert Train, widower and son of the late Adm. and Mrs. Charles Russell Train. He has a post-debutante daughter and three sons. She has one married daughter.

Marjorie Post sent Mrs. Johnson a check for $10,000 made out to the Society for a More Beautiful Capital on Christmas eve. She had given an earlier check for $5,000 for the landscaping of a public school in a poor part of town.

What do you send a woman who has everything? To thank her the First Lady dispatched to the General Foods heiress' palatial residence on Christmas day a basket of homey personal things such as loaves of bread baked at the White House, jars of peach and pear preserve put up at the LBJ Ranch, and a handwritten note.

CIA Director Dick Helms' estranged wife Julia made a recent sale that firmly establishes her as a Washington sculptor of note. Although people were aware of her artistic talents, until last summer she was best known as the wife of the CIA boss because glamorous government jobs get more publicity here than any interpreter of the arts.

Now the Washington Gallery of Art has sold for $3,000 her garden bronze fountain sculpture of a young boy—her own son at a tender age—who is crouching down on a log and looking with beguiling interest at a frog. The purchasers were James Ramsay Hunt and his wife who is sister to the wife of Deputy Secretary of Defense Paul Nitze.

Yours, B. B.

(Distributed 1968, by Publishers-Hall Syndicate)
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during the two weeks they spent at the Executive Mansion after returning from their honeymoon, got up at 6:30 in the morning on work days.

"I think 8 a. m. is early!" exclaimed the President's daughter who, despite the fact that she was still surrounded by servants, arose in time to fix Chuck a real morning meal.

* * *

Washington had its quietest holiday season in years. A lot of chic people thought they must be slipping socially or had something their best friends

their gallivanting offspring—the reason being, the new morals among the young and the incredible crime on the streets.

Mrs. Endicott Peabody, the attractive wife of the former Governor of Massachusetts, says there would be a lot fewer hippies if parents were always there when their children needed them most.

Received an Award

Children, she thinks, "are desperately looking for someone who cares. And if they don't get the care at home they turn to love-ins and all the other things that go with it."

the neglected poor children of Washington's dreary Junior Village.

"A guitar," said Jimmy, "is something you can treat with tenderness and love, and it gives you back the same." This was something these children need.

Washingtonians who have to go to so many dinners that when they have a night off they stay home—turned out in a large numbers to hear him. And what they heard was a very professional poised young man who interspersed his songs with an amusing patter.

"Doug Cater asked me if I

[HN00T3][GDrive]

1978 (Oct 31)

Full newspaper page : [HN013T][GDrive]

Mr. and Mrs. A.J. Taylor and Mrs. Jack Hopkins went east to visit his daughter and son-in-law, Dr. and Mrs. Donald MacArthur of Washington. Mrs. MacArthur, a Washington career woman, is remembered as the former Diana Taylor, and is a sister of Mrs. Hopkins. The MacArthurs recently purchased a condominium in Bethany Beach, Md., so they drove the short distance to see this beautiful area, a new development in a magnificent setting.

1978-10-31-the-santa-fe-new-mexican-pg-a-7-clip-macarthur

[HN013U][GDrive]

1988 (Dec 2) - Passing of husband Dr. Donald MacArthur

Source - PDF - [HN00T2][GDrive] / JPEG is [HN00T1][GDrive]

See Dr. Donald Malcolm MacArthur (born 1931)

Founder of the Dynamac Corporation .

1991 - Campaign contribution Issues

Full page shown below - [HN013V][GDrive]

(also see - campaign contrib violations - https://newspaperarchive.com/winchester-star-apr-04-1991-p-24/)

Campaign reform groups advocate limits to out-of-state individual donations

By Tom Bowman
Washington Bureau of The Sun

WASHINGTON — He might be head of the Maryland Democratic Party, but Nathan Landow likes to help fellow Democrats far from the state's borders.

Mr. Landow and three other family members donated $10,500 — mostly in $1,000 checks — to candidates outside Maryland during the past two years, including contributions to Sen. Sam Nunn, D-Ga., and Sen. Albert Gore, D-Tenn., according to Federal Election Commission records.

Meanwhile, Diana MacArthur, chairman of Dynamac Corp., a Rockville-based consulting and engineering company, spent $7,225 in out-of-state donations.

But those contributions pale in comparison with donations made by Bethesda lobbyist Denis M. Neill and his wife, who gave nearly $62,000 to dozens of congressmen and senators from California to New Jersey during the past two years, according to the FEC.

Such large donations would be sharply curtailed under campaign finance reform legislation being considered in Congress amid growing concern about the influence of wealthy out-of-state contributors in congressional campaigns.

Campaign reform advocates note that public attention has been riveted on the thousands of dollars funneled into campaigns by political action committees. But there has been little attention paid to the spending power of wealthy individuals and families, even though their donations make up the bulk of campaign spending and play an active role in the campaigns of Maryland lawmakers. Large contributors — those whose donations exceed $200 and must be listed on campaign finance reports — contributed 48 percent of all money raised by congressional candidates between 1987 and 1988, according to a study by Citizen Action, a campaign reform group. PACs contributed 30 percent, the group found.

Montgomery County was among the top areas in the nation for large donor campaign contributions, with as much as 89 percent of its donors' money targeted for congressional races outside the state, the study said.

Citizen Action found that large donors are often associated with special interests, particularly business. Unlike PACs, they are not required to register with the FEC.

Although individual donations are limited to $1,000 for each election and a total of $25,000 each year, families often skirt the provision by donating in the names of children and other family members, according to the study.

Large out-of-state donations also show up in the campaign war chests of the Maryland congressional delegation, with the state's two senators collecting the majority of individual donations above $500 from outside Maryland.

The 1986 campaign of Sen. Barbara A. Mikulski, D-Md., picked up $293,608 from outside the state and $202,794 from Maryland donors, according to FEC records. The 1988 re-election campaign of Sen. Paul S. Sarbanes, D-Md., pulled in $294,509 from individuals in other states and $185,145 from his constituents.

Of the $84,978 in individual donations collected in November by Representative Helen Delich Bentley, R-2nd, $21,925 came from outside the state. The FEC reported that her contributions included 13 checks for $1,000 each, many from business executives in the oil and marine industry.

Representative Steny H. Hoyer, D-5th, collected $67,665 in individual contributions in October and November, with $17,000 from outside Maryland. Most of this money was in $1,000 checks from lawyers and consultants, FEC records show.

Ms. Mikulski has scheduled a fund-raising trip to Arizona and California this week with events sponsored by law firms, Asian-American groups and other supporters. She is expected to pick up $10,000 to $20,000 in individual contributions at each event, according to the senator's office.

"It's a growing phenomenon," said Michael Podhorzer of Citizen Action. "It's essentially the same as a PAC contribution, but there's no PAC."

"People think that PACs are bad and individuals are good, but it ain't that way," said Larry Makinson of the Center for Responsive Politics, a non-profit research group that studies Congress and is investigating large individual contributions. "There's a tendency for people to think if you get rid of PACs, you get rid of the problem."

"The higher the [individual donation] limit, the easier it is to get large amounts of money to people you want to influence," Mr. Makinson said.

Mr. Landow brushed aside such talk, saying that individuals and families have a "civic obligation" to donate to candidates. Since lawmakers deal with questions that are "national in scope," contributions from out-of-state donors should not be curtailed.

"I don't think it's a good idea to limit [individual donations]," he added. "I agree with limitations on PACs." He doubted that any such contributions from families could be equated with PACs and said his own relationship with the candidates is "personal."

"Those I like and believe in, I support," he said.

Ms. MacArthur said she donates to politicians, primarily Democrats, "because I admire them."

"I think $1,000 is just a fine upper limit," she said.

Asked if she thought large donors wield undue influence, she said, "I don't have any opinion on that."

A Senate Democratic measure calls for voluntary spending limits and public financing that encourages individual contributions of $250 or less, with half coming from inside a candidate's state. A similar measure passed the Senate last year, supported by Mr. Sarbanes and Ms. Mikulski, but reached a stalemate with competing House legislation.

Another measure from Sen. John Kerry, D-Mass., would provide public financing to a candidate who collects individual contributions in amounts of $250 or less, with at least 55 percent from in-state donors.

Senate Minority Leader Robert Dole, R-Kan., advocates reducing the limit on individual donations from $1,000 to $500 to an out-of-state congressional campaign.

In the House, Representative Mike Synar, D-Okla., calls for reducing all individual contributions — inside or outside the state — to $500, "recognizing that money is interested whether it comes from PACs or individuals."

But Mr. Podhorzer said that decreasing the amount of money an individual can give will not dilute the spending power of wealthy contributors.

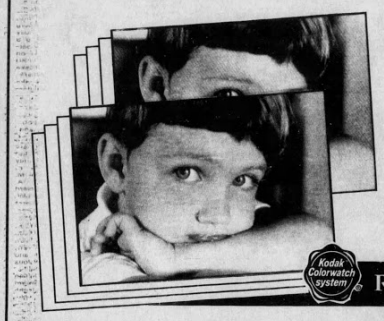
"They're going to find ways to give," he said. "They just have to go to a lot more trouble." Citizen Action believes public financing of campaigns is the only solution. The group supports the Kerry bill because it proposes the greatest amount of public financing.

Mr. Hoyer did not return phone calls.

Mrs. Bentley downplayed the money she received from contributors outside Maryland, saying, "I've never had a request from them for anything."

The congresswoman last year backed a failed Republican reform measure requiring that required that at least half of all donations come from constituents. But she declined to say whether the current $1,000 limit on individual contributions should be reduced for those outside Maryland.

"When I see the whole picture on reform, then I'll give you an answer," she said.



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1994

Diana Taylor's daughter, a microbiologist, committed suicide in 1994 in Maryland. Years later, Diana decided to build a school In Pakistan in her honor.

1994 (August) - Named to science panel by President Clinton

https://newspaperarchive.com/santa-fe-new-mexican-aug-06-1994-p-11/

2008 (Nov 30)

Full newspaper page (shown below) - [HN014D][GDrive]

Los Alamos National Laboratory Foundation Thanks the Sponsors of its 12th Annual Banquet

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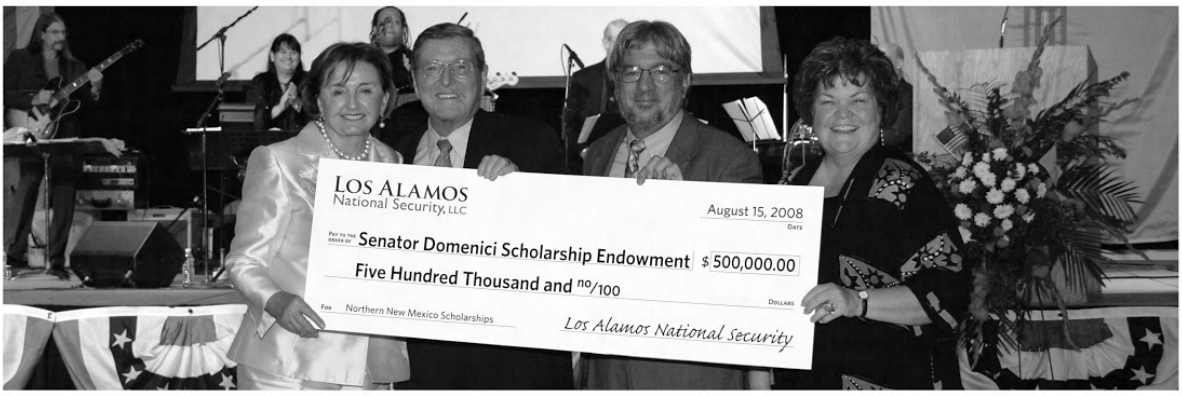

Diamond Sponsor, Los Alamos National Security, LLC presents a check to the Senator Pete Domenici Endowed Scholarship Fund. (Left to right) Diana MacArthur, President, LANL Foundation Board of Directors; Senator Pete Domenici; Mike Anastasio, Director, LANL; and Susan Herrera, Chief Executive Officer, LANL Foundation.

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It is important for friends and communities to gather together and celebrate our achievements and recognize the hope and promise of the future. On August 15, 2008, the LANL Foundation and its supporters joined in honoring Senator Pete Domenici for his 36 outstanding years of public service to New Mexico and the Nation.

In 2008, the LANL Foundation established the Senator Pete Domenici Endowed Scholarship Fund. In "Pete's spirit," this fund is dedicated to providing college scholarships to Northern New Mexico seniors who exhibit academic excellence and outstanding leadership in their schools and communities. Through gifts from the corporate and private sector, as well as proceeds raised from the 12th Annual Banquet, the LANL Foundation hopes to endow a $10,000 scholarship (four-year $2,500 award) annually in each of the seven Northern New Mexico counties served by the Foundation. This fund is also dedicated to fostering the competitiveness of New Mexico's workforce in an increasingly complex global economy. We hope Senator Domenici's legacy will continue to live on through the lives of outstanding students as they pursue their own quest for excellence.

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2013 - Passing of first husband

https://www.washingtonpost.com/local/obituaries/nikolai-tschursin-former-translator-at-the-library-of-congress-dies-at-86/2012/02/07/gIQA9ywB2Q_story.html

Nikolai Tschursin, former translator at the Library of Congress, dies at 86

Nikolai Tschursin, 86, a Russian native who did translation work for the Library of Congress until retiring in 1989, died Jan. 31 at his home in Bradenton, Fla. He had congestive heart failure.

The death was confirmed by his daughter Anna Tschursin.

Mr. Tschursin translated military documents from Russian into English at the Library of Congress, which he joined in the mid-1970s. Earlier, he was an engineer at the Army Department's Harry Diamond Laboratories.

Nikolai Tschursin was born in Rostov, Russia. He settled in the United States after World War II and became a U.S. citizen in 1952. He was a Marine Corps veteran of the Korean War and a 1966 engineering graduate of George Washington University.

He moved to Florida from Vienna in 1998. He was a past member of the Russian Orthodox Cathedral of St. John the Baptist in the District.

His first marriage, to Diana Taylor, ended in divorce. Their daughter, Elizabeth Tschursin, died in 1994.

Survivors include his wife of 51 years, Galina Losinski-Kovanko of Bradenton; a son from his first marriage, Alexander Tschursin of Santa Fe, N.M.; two daughters from his second marriage, Anna Tschursin of Stafford, Va., and Ludmila Tschursin of Folsom, Calif.; and five grandchildren.

2013

BY ROBIN MARTIN THE NEW MEXICAN

At age 80, when most people are at home relaxing, Santa Fe native Diana MacArthur is planning a three-week trip to northern Pakistan, where she is building a school.

Her goal is to complete construction on a 23,000-square-foot building for students in nursery school through eighth grade by the end of 2015. MacArthur and her friends and family have donated half of the funds for the $5 million project.

The school in the village of Murtaza Abad in the Hunza Valley is being built in memory of MacArthur's daughter, Elizabeth "Leeza" Tschursin.

MacArthur said people ask why she is building a school so far away. Her answer is that her daughter chose the site.

Tschursin, who was born in 1955, was MacArthur's oldest child. She lived in Washington, D.C., but spent much time in Santa Fe, staying with family and hiking in the Pecos Wilderness. She received her bachelor's degree from the College of Santa Fe, a master's degree in biology from Georgetown University and a doctorate in microbiology from George Washington University.

As a graduation present, Tschursin's mother gave her a trip to climb in the Alps, on Mount Kilimanjaro and in the Himalayas. Because of political turmoil, Tschursin was not able to enter Nepal, so she went to Pakistan, where she ended up in the country's northernmost territory, Gilgit-Baltistan. As she traveled on the Karakoram Highway, she passed through a village and saw a small school, the Al-Murtaza Academy, which taught children up to sixth grade. She fell in love with the place, stayed with the principal's mother and taught science.

Tschursin made many friends in the Hunza Valley, and when her visa ran out, she was invited to come back to teach. But she became ill and died in Washington, D.C., in 1994 before she was able to return.

MacArthur wants to turn the small school into an academic center for excellence. It also will be a state-of-the-art building.

Pakistani architects have been hired to make the new school the safest building in an area that has severe earthquakes. The project also has backup architects and engineers based in Albuquerque.

Today, the school is a shack with no insulation, lights or ventilation. The new building will have central heating, insulated walls and windows, and energy-saving light fixtures.

Power will come from the local electric grid, and diesel and methane gas from animal waste will fuel boilers to heat the building. Solar and wind power generation is impossible in the valley because tall mountains block both the sun and the wind.

The school will eventually serve

Please see **SCHOOL**, *Page A-4*

MacArthur Pakistan - Newspapers.com

Clipping found in The Santa Fe New Mexican in Santa Fe, New Mexico on Sep 3, 2013. MacArthur Pakistan

1982 - https://www.newspapers.com/image/582413776/?terms=%22donald%2Bmacarthur%22

Jan 1982 - social https://www.newspapers.com/image/582417741/?terms=%22donald%2Bmacarthur%22

Dec 10 1985 - social / family stuff https://www.newspapers.com/image/378427700/?terms=%22donald%2Bmacarthur%22

1985 - family visit stuff https://www.newspapers.com/image/378427700/?terms=%22donald%2Bmacarthur%22

94

https://www.newspapers.com/image/583620748/?terms=macarthur%2Bdynamac

2013

https://www.newspapers.com/image/218905998/?terms=macarthur%2Bdynamac

88 https://www.newspapers.com/image/364164826/?terms=%22diana%2Bmacarthur%22

63 https://www.newspapers.com/image/430984784/?terms=%22diana%2Bmacarthur%22

68 https://www.newspapers.com/image/256112649/?terms=%22diana%2Bmacarthur%22

72 https://www.newspapers.com/image/581376439/?terms=%22diana%2Bmacarthur%22

75 https://www.newspapers.com/image/581487647/?terms=%22diana%2Bmacarthur%22

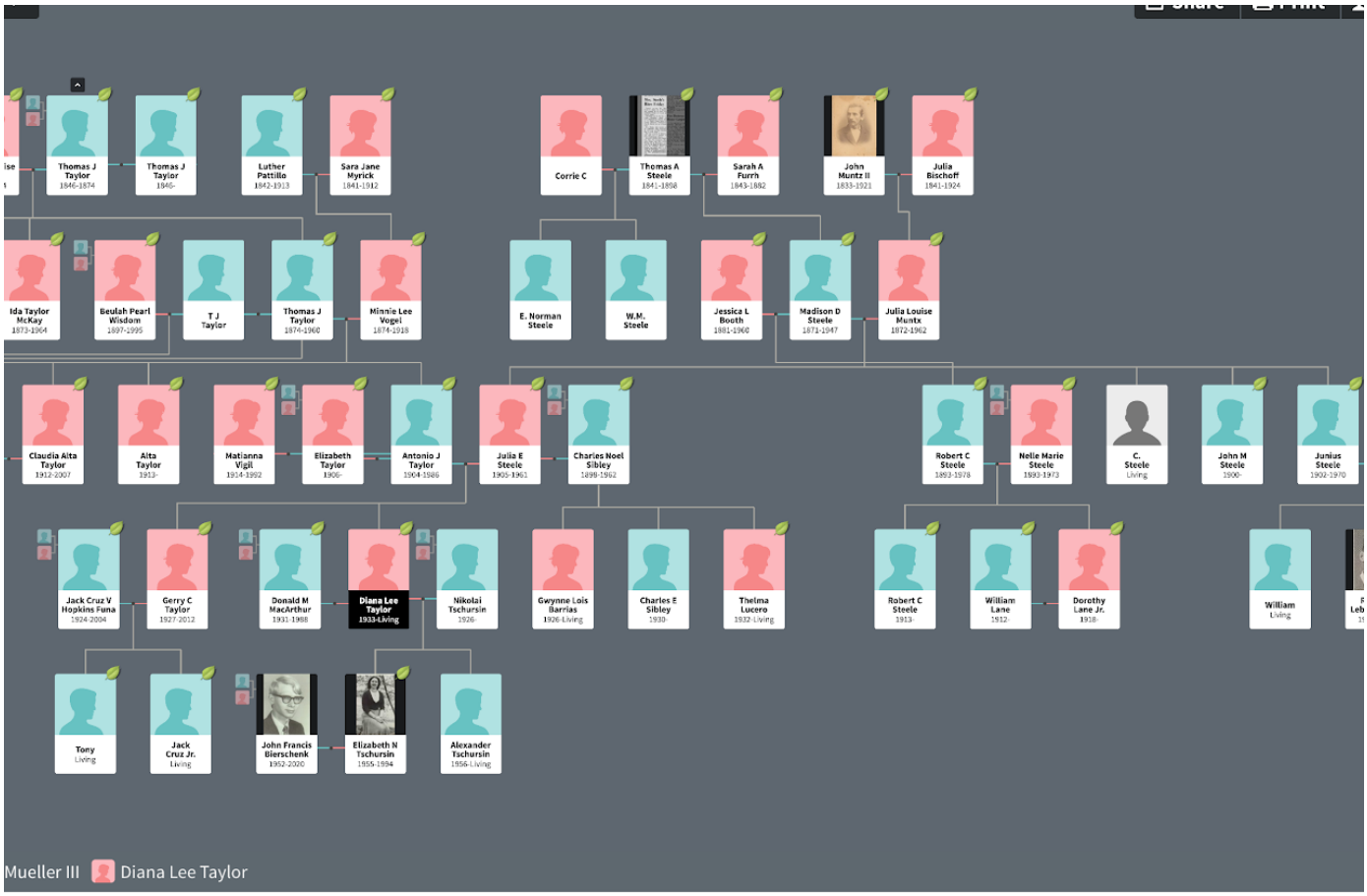
1983 https://newspaperarchive.com/new-castle-news-jun-03-1983-p-11/

84 https://newspaperarchive.com/hillsdale-daily-news-jun-09-1984-p-1/

https://newspaperarchive.com/european-stars-and-stripes-jan-27-1989-p-3/

In reading the newspapers in Marshall Texas, there seems to be a lot of coming and going to Guatemala and Honduras, presumably to the United Fruit locations. In Passenger lists to these locations has turned up a lot of information. Various family trees will be listed below but the name connections are really amazing:

- There were tons of Taylors and Johnsons in this area. Some had been there for over 50 years, and some had arrived from England more recently. None of the English had naturalization papers which are frequent the more north you go at this time period.
- The Sibley's travelled from Jamaica to America and England frequently and many offspring lived in America and claimed citizenship, but there are never any naturalization papers.
- Diana Taylor MacArthur's sister, Gerry, married Jack Cruz Hopkins. The founder of United Fruit, Lorenzo Dow Baker, married a Hopkins. These Hopkins were mormons via Utah, via Washington State, via Missouri, and unknown before that.
- Dr. Steele's first wife was a Jessica Booth. One of their children was named Junius. The only other person I've seen by that name is Junius Brutus Booth, brother of John Wilkes Booth. Jessica Booth's. sister married a Bagely.
- A pallbearer at Julia Elizabeth Steele's funeral was a Dr. Ford.
- There is no marriage record for Julia Elizabeth Steele and Antonio Jefferson Taylor, nor a birth record for the oldest daughter Gerry Hopkins.
- Antonio and Lady Bird Johnson were born in Karnack, Texas, a town distinct from Marshall. Newspaper clippings show that their father was not Thomas Jefferson Taylor as many presume. He was their guardian, so presumably a relative of the parents. There are no birth records for them either.
- The popular opinion is Lady Bird Johnson's "mother's" maiden name was Vigil or Padillo, when various records show it was Vogel. It could be possible these were her maiden names, and she and her brother adopted Thomas Jefferson Taylor's surname. Things seem to be intentionally obtuse.
- The was a Mr. Taylor in Marshall around 1917 who was a bird expert. He gave many lectures and the newspapers called him bird man. Perhaps this is where we get Lady Bird.
- There is a Christopher David Steele born in Dallas in 1962. Given the movement back and forth to England (Fiona Hill, Voyovich), perhaps its not unreasonable to believe the British spy of the Russian dossier is really an American by birth. George Webb states he was married in Washington DC.



https://www.washingtonpost.com/archive/local/1988/11/29/donald-m-macarthur-57-founder-of-md-firm-dies/5ffe116a-79f4-4351-bd24-317bd16cae6f/

https://www.yumpu.com/en/document/read/25971623/corporate-qualifications-same-satxorg

William Brockenbrough Newton Taylor Jr (born 1947)

Wikipedia 🌐 William B. Taylor Jr.

- **Born** September 14, 1947
- **Parents** **William Brockenbrough Taylor Sr** (born 1925) and **Nancy Dare (Aitcheson) Taylor**
- **Siblings**
  -
- **Married** ---
  - **Deborah Furlan Taylor**
- **Family (extended)**
  - Aunt Elizabeth "Betsy" Taylor (married **John Parks Tazewell** (born 1920))

Wikipedia (saved) - [HK000L][GDrive]

[...]

William Brockenbrough "Bill" Taylor Jr. (born 1947) is an American diplomat and a former United States ambassador to Ukraine. In June 2019 Taylor returned to Ukraine to serve as the chargé d'affaires for Ukraine.

Background

Taylor is the son of Nancy Dare (Aitcheson) and [**William Brockenbrough Taylor Sr (born 1925)**], who had been a director of research and development for the United States Army Corps of Engineers (USACE).

Like his father, he attended the United States Military Academy at West Point, New York, graduating in 1969, in the top 1% of his class. The Howitzer yearbook describes his modesty about his many academic and athletic accomplishments, describing him as "a man who is held in the highest esteem and admiration by all of us."[5] In 1977 he completed graduate studies at Harvard University's John F. Kennedy School of Government, receiving a Master of Public Policy degree.

Career

After Taylor graduated from West Point, he served in the infantry for six years, including tours of duty in the 82nd Airborne Division at Fort Bragg, and the 101st Airborne Division in Vietnam during the War. He commanded a company in the 101st Division, and received a Bronze Star and Air Medal V for heroism. Later, he was an aero-rifle commander in the 2nd United States Cavalry Regiment,[6] defending NATO in Germany across the border of Czechoslovakia controlled by the Warsaw Pact and the Eastern Bloc including several countries that had been invaded and occupied by USSR during World War II.[6]

As a civilian he served as Director of Emergency Preparedness Policy in the Department of Energy before serving for five years as Legislative Assistant on the staff of U.S. Senator Bill Bradley (D-N.J.). He then directed a Defense Department think tank at Fort Lesley J. McNair. Following that assignment, he transferred to Brussels for a five year assignment as the Special Deputy Defense Advisor to the U.S. Ambassador to NATO, William Howard Taft IV. From 1992 until 2002 Taylor served with the rank of ambassador coordinating assistance to Eastern Europe and the former Soviet Union, followed by an assignment in Kabul coordinating U.S. and international assistance to Afghanistan. In 2004 he was transferred to Baghdad as Director of the Iraq Reconstruction Management Office.[7]

Until 2006 he then was the U.S. Government's representative to the Quartet's effort to facilitate the Israeli disengagement from Gaza and parts of the West Bank, led by Special Envoy James Wolfensohn in Jerusalem. The Quartet Special Envoy was responsible for the economic aspects of this disengagement.

Taylor was confirmed as United States ambassador to Ukraine by the U.S. Senate on May 26, 2006, and was sworn in on June 5, 2006; he held the post till May 2009.[2]

On September 30, 2009, U.S. President Barack Obama nominated John Tefft as U.S. ambassador to Ukraine.[8] Taylor was appointed Special Coordinator for Middle East Transitions in September 2011.[9]

In 2015, Taylor was appointed executive vice president of the United States Institute of Peace after serving a year in the same role in an acting capacity.[10][11]

Taylor became chargé d'affaires *ad interim* for Ukraine in June 2019, taking over the role from the deputy chief of mission, Kristina Kvien, after Marie Yovanovitch departed Ukraine.[12]

Trump–Ukraine scandal

Main article: Trump–Ukraine scandal [...]

Taylor–Sondland texts

Taylor arrived in Ukraine a month after the abrupt ousting of Ambassador Yovanovitch and the inauguration of the country's new president Volodymyr Zelensky. But following President Donald Trump's phone call with the new Ukranian president, Taylor questioned Trump's motivation in a text to Gordon Sondland, the United States Ambassador to the European Union: "Are we now saying that security assistance and WH meeting are conditioned on investigations?" Sondland told him to phone.[13]

On October 3, 2019, it was revealed that Taylor had expressed, in text messages, concern that President Trump may have withheld aid to Ukraine unless they investigated corruption in Ukraine and interference in the 2016 US election. According to transcripts released by the house impeachment probe, Taylor on September 9, 2019, at 12:47:11 AM texted, "I think it's crazy to withhold security assistance for help with a political campaign." On October 22, 2019 Taylor's opening statement also explained that Sondland required that Zelensky make public statements announcing an investigation, forcing him to conduct one, before the US released the allocated military aid. Taylor said he feared that Trump would withhold the military aid anyway, handing Moscow everything it wanted from the betrayal, texting Sondland that his "nightmare is that they [the Ukrainians] give the interview and don't get the security assistance. The Russians love it. (And I quit.)."[14][15]

Over four hours later, at 5:19:35 AM,[16] in his response to Taylor, Gordon Sondland, the United States Ambassador to the European Union, responded that the charge is "incorrect." "Bill, I believe you are incorrect about President Trump's intentions. The President has been crystal clear: no quid pro quo's of any kind. The President is trying to evaluate whether Ukraine is truly going to adopt the transparency and reforms that President Zelensky promised during his campaign."[16] He then suggested Taylor call the Executive Secretary of the United States Department of State about any concerns[17]: "I suggest we stop the back and forth by text If you still have concerns I recommend you give Lisa Kenna or S a call to discuss them directly. Thanks."[18] In his testimony during the impeachment inquiry Sondland noted that it was only out of his deep respect for Taylor that he tried to address Taylor's concerns.[19] Taylor gave a deposition before a closed-door session of the House Intelligence Committee on October 22, 2019.[20]

Testimony in House impeachment inquiry

Opening statement of Ambassador William B. Taylor

On October 22, 2019, Taylor testified before the US Congressional House regarding the impeachment inquiry against Donald Trump and the Trump-Ukraine scandal in a closed session. Taylor's opening statement was made public and directly implicated President Trump in a proactive and coordinated effort to solicit a political *quid pro quo* whereby “everything” - from a one on one meeting with President Trump to $400 million in military aid to Ukraine - would be held up unless Ukrainian President Zelenskyy agreed to announce publicly that “investigations” would be launched including into former VP Joe Biden, his son Hunter Biden, Burisma, and Ukraine's alleged involvement in the 2016 election. Taylor’s opening statement and testimony was widely viewed as an inflection point in the impeachment inquiry.[21][22][23][24]

Personal

Taylor is married to Deborah Ann Furlan;[25] and they have two children. His nephew (sister's son) is actor and comedian Zach Cregger.

TIMELINE

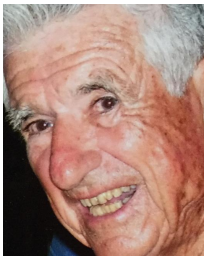
2009 - Wife Deborah Furlan Taylor has research published in "The Catholic Biblical Quarterly"

"The Monetary Crisis in Revelation 13:17 and the Provenance of the Book of Revelation" by **DEBORAH FURLAN TAYLOR** : See [HP0008][GDrive]

BITCHUTE @Housatonic YOUTUBE @HousatonicLive ODYSEE @Housatonic BRIGHTEON @Housatonic

Housatonic

John Parks Tazewell (born 1920)



[HL0009][GDrive]

Brother-in-law to William Brockenbrough Taylor Sr (born 1925) .

Uncle to William Brockenbrough Newton Taylor Jr (born 1947) .

Passed May 31 2016

See [HL0008][GDrive]

John P. Tazewell : September 25, 1920 - May 31, 2016

Resided in Virginia Beach, VA

John Parks Tazewell, 95, passed away on May 31, 2016, at Westminster-Canterbury in Virginia Beach, Virginia. He was born on September 25, 1920, in Wilmington, Delaware, to Calvert Walke Tazewell and Sophie Goode Tazewell.

*John grew up in Norfolk, Virginia, and graduated from Maury High School in 1939. After high school, he attended the U.S. Naval Academy and graduated in 1942. During World War II, he served on the destroyer **USS O'Bannon (DD-450)** , and battleships U.S.S. Alabama and U.S.S. West Virginia, and was awarded a Bronze Star (V). After the war, he attended the Navy Post Graduate School and Massachusetts Institute of Technology, where he received a Masters of Science in Electrical Engineering. He also served as Commodore of a destroyer division, which included NATO-manned U.S.S. Claude V. Ricketts, Commander of the destroyer U.S.S. Laffey, Commander of the Norfolk Test and Evaluation Detachment, project officer for the Tartar missile program, and program manager of the Aegis missile area defense system. He retired in 1970, at the rank of Captain.*

After retirement, John volunteered with a number of organizations in Norfolk, Virginia, including the Senior Services of Southeastern Virginia (formerly SEVAMP), Chrysler Museum Library and Lee's Friends. He enjoyed sailing, rowing, traveling and visiting his children and grand children with his wife and best friend, Elizabeth "Betsy" Taylor.

A memorial service will be held 2:00 p.m., Saturday, August 27, 2016 at Westminster Canterbury, Virginia Beach. A reception will follow the service. A private ceremony to scatter John's ashes will follow in Norfolk.

Notes:

- ***From "Gordon Lilly" :** John was a cousin of my wife, Jean, but I had only met him twice before we moved to Westminster Canterbury six years ago. I then decided to take the liberty of searching for him on the web. I found the most fascinating entry. It was an account to the party that was thrown for him by his crew on the occasion of his retirement. It was clear that he had been a remarkable officer earning the utmost affectionate respect from his ship's company. This prepared me for getting to know John and his family. I got to know him for his intelligence and keen wit. I got to see him as the most loyal husband of Betsy whom he cared for so diligently in her declining years. I had the pleasure of getting to know his delightful family. It was a great privilege for me to become his friend.*
- ***Luong and Lang Vu - 3 years ago :** We missed John and Betsy very much, they helped us many things, when we came Norfolk 1975, we never forget it, we will be in for their memorial service on August 27. We shared the bad news with John, Richard, Judith, Littleton. Will see you all. Luong Vu and all our family.*
- ***Jane and Dwight Schaubach / Jane Schaubach - 3 years ago :** To the family of John, sorry for your loss. John had a life well lived. He and Betsy were our neighbors on Oak Grove Rd. Not too many of our neighbors of that era left. It was a great time to live in Talbot Park.*

Housatonic

Dr. Howard Martin Temin (born 1934)

Wikipedia Howard Martin Temin

Associations

- Dr. Renato Dulbecco (born 1914) (...)
- Dr. David Baltimore (born 1938) (...)
-
-

Saved Wikipedia (April 18, 2021) - "Howard Martin Temin"

https://en.wikipedia.org/wiki/Howard_Martin_Temin

2021-04-18-wikipedia-org-howard-martin-temin.pdf

Howard Temin

Temin in 1975

Born

Howard Martin Temin

December 10, 1934

Philadelphia, Pennsylvania

Died

February 9, 1994 (aged 59)

Madison, Wisconsin

Nationality

American

Alma mater

- Swarthmore College
- California Institute of Technology (PhD)

Known for

Reverse transcriptase

Spouse(s)

Rayla Greenberg (m. 1962)

Children

two

two

Awards

- NAS Award in Molecular Biology (1972)
- Nobel Prize in Physiology or Medicine (1975)
- ForMemRS (1988)[1]

Scientific career

Fields

- Genetics
- Virology

Institutions

University of Wisconsin–Madison

Thesis

The interaction of Rous sarcoma virus and cells in vitro (1960)

Influenced

Wei-Shau Hu

Howard Martin Temin (December 10, 1934 – February 9, 1994) was a US geneticist and virologist. He discovered reverse transcriptase in the 1970s[2] at the University of Wisconsin–Madison, for which he shared the 1975 Nobel Prize in Physiology or Medicine with Renato Dulbecco and David Baltimore.[3][4]

[...]

Early life and education[edit]

Temin was born in Philadelphia, Pennsylvania, to Jewish parents, Annette (Lehman), an activist, and Henry Temin, an attorney.[5] As a high school student at Central High School in Philadelphia, he participated in the Jackson Laboratory's Summer Student Program in Bar Harbor, Maine. The director of the program, C.C. Little, told his parents that Temin was "unquestionably the finest scientist of the fifty-seven students who have attended the program since the beginning…I can't help but feel this boy is destined to become a really great man in the field of science."[5] Temin said that his experience at Jackson's Laboratory is what really got him interested in science.[6]

Temin's parents raised their family to have values associated with social justice and independent thinking, which was evident throughout his life. For Temin's bar mitzvah, the family donated money that would have been spent on the party, to a local camp for displaced persons. Temin was also the valedictorian of his class and he devoted his speech to relevant issues at the time including the recent hydrogen bomb activity and the news of sending a man to the moon.[5]

Temin received his bachelor's degree from Swarthmore College in 1955 majoring and minoring in biology in the honors program. He received his doctorate degree in animal virology from the California Institute of Technology in 1959.[6]

Career and research[edit]

Temin's first exposure to experimental science was during his time at the California Institute of Technology as a graduate student in laboratory of Professor Renato Dulbecco.[6] Temin originally studied embryology at Caltech, but after about a year and a half, he switched to animal virology. He became interested Dulbecco's lab after a chance run-in with Harry Rubin, a postdoctoral fellow in Dulbecco's lab. In the lab, Temin studied the Rous sarcoma virus, a tumor-causing virus that infects chickens.[5] During his research on the virus, he observed that mutations in the virus yielded alterations in the structural characteristics of the infected cell – thus, integration into the cell's genome was occurring. As part of his doctoral thesis, Temin stated that the Rous Sarcoma Virus has "some kind of close relationship with the genome of the infected cell".[5] Following receiving his doctorate, Temin continued to work in Dulbecco's lab as a postdoctoral fellow.

In 1960, the McArdle Laboratory for Cancer Research at the University of Wisconsin–Madison recruited Temin as a virologist; a position that had been hard to fill because, at the time, virology was not considered pertinent to cancer research. Even though Temin knew he would be completely independent in Madison, because of the lack of research involving virology and oncology together, Temin stated that he was "supremely self-confident".[6] When he first arrived in Madison in 1960, he found an unprepared laboratory in the basement of a rundown building with an office that could be considered a closet. Until a more suitable laboratory could be prepared, he continued his research with RSV at a friend's laboratory at the University of Illinois. Later that year, he returned to Madison, continued his RSV research in his own lab, and began his position as an assistant professor.[6]

While studying the Rous sarcoma virus at UW-Madison, Temin began to refer to the genetic material that the virus introduced to the cells, the "provirus". Using the antibiotic, actinomycin D, which inhibits the expression of DNA, he determined that the provirus was DNA or was located on the cell's DNA.[7][8][9] These results implied that the infecting Rous sarcoma virus was somehow generating complementary double-stranded DNA. Temin's description of how tumor viruses act on the genetic material of the cell through reverse transcription was revolutionary. This upset the widely held belief at the time of a popularized version of the "Central Dogma" of molecular biology posited by Nobel laureate Francis Crick, one of the co-discoverers of the structure of DNA (along with James Watson and Rosalind Franklin). Crick had claimed only that sequence information cannot flow out of protein into DNA or RNA, but he was commonly interpreted as saying that information flows exclusively from DNA to RNA to protein. Many highly respected scientists disregarded his work and declared it impossible. Despite the lack of support from the scientific community, Temin continued to search for evidence to support his idea. In 1969, Temin and a postdoctoral fellow, Satoshi Mizutani, began searching for the enzyme that was responsible for the phenomenon of viral RNA being transferred into proviral DNA.[5] Later that year, Temin showed that certain tumor viruses carried the enzymatic ability to reverse the flow of information from RNA back to DNA using reverse transcriptase. Reverse transcriptase was also independently and simultaneously discovered in association with the murine leukemia virus by David Baltimore at the Massachusetts Institute of Technology.[10] In 1975, Baltimore and Temin shared the Nobel Prize of Physiology or Medicine.[11] Both scientists completed their initial work with RNA-dependent DNA polymerase with the Rous sarcoma virus

[11] Both scientists completed their initial work with RNA-dependent DNA polymerase with the Rous sarcoma virus.

The discovery of reverse transcriptase is one of the most important of the modern era of medicine, as reverse transcriptase is the central enzyme in several widespread viral diseases such as AIDS and Hepatitis B. Reverse transcriptase is also an important component of several important techniques in molecular biology, such as the reverse transcription polymerase chain reaction, and diagnostic medicine.

Awards and honors[edit]

In 1992 Temin received the National Medal of Science. Temin was elected a Foreign Member of the Royal Society (ForMemRS) in 1988.[1][12]

Following winning the Nobel Prize, Temin focused his research mainly on studying the viral sequences that control the packaging of viral RNA, developing a new vaccine for HIV, and studying the mechanisms of retroviral variation.[6]

Life and career post-Nobel Prize[edit]

After receiving the Nobel Prize in 1975, Temin went from a rebel in the scientific community to a highly respected researcher. Temin began receiving international recognition for his work, and used his newly acquired fame to improve the world. An example of this was in October 1976; Temin helped scientists in the Soviet Union that were targeted by the KGB, the secret police in the Soviet Union. The Jewish Soviet scientists had been stripped of their jobs and oppressed after requesting visas to emigrate to Israel. Temin made it his mission to personally visit the scientists and their families. He gave them gifts that could be resold to help them financially, and he gave the scientists copies of scientific journals, which had been banned by the KGB.[13] On one occasion, Howard Temin gave a lecture to some of the Jewish Soviet scientists in someone's home. The next morning, almost all of scientists that had attended the lecture were arrested. After they were released, Temin tape-recorded one of the scientist's account of the event and gave the tape to newspapers in the United States so that the situation that Jewish scientists were facing would be publicized.[5]

Another example of Temin trying to improve the world was at the Nobel Prize reception. After receiving the Nobel Prize from King Carl Gustav of Sweden; Temin addressed the smokers in the audience, which included the Queen of Denmark, saying he was "outraged that one major measure available to prevent much cancer, namely the cessation of smoking, had not been more widely adopted". He had also insisted that the ashtray located on the laureates' table be removed.[5]

After winning the Nobel Prize, Temin also became more active in the scientific community outside of research. He was involved in over 14 scientific journals. In 1979, he became an advisory member for the director of the National Institute of Health (NIH) and a member of the human gene therapy subgroup of the recombinant DNA advisory committee. He was also a member of the National Cancer Advisory Board, and the chairman of the AIDS subcommittee. At the National Institute of Allergy and Infectious Diseases (NIAID), he was the chairman of a genetic variation advisory panel on the development of AIDS, and was a member of vaccine advisory board. In the National Academy of Sciences (NAS), he was a member of the Waksman Award committee and report review committee. In 1986, Temin became a member of the Institute of Medicine (IOM)/NAS committee for national strategy for public policy issues associated with AIDS. The last committee Temin served on was the World Health Organization Advisory Council.[6]

In 1981, Temin became a founding member of the World Cultural Council.[14]

Death and legacy[edit]

Temin taught and conducted research at UW-Madison until he died of lung cancer, on February 9, 1994.[1] He was survived by his wife Rayla, a geneticist at UW-Madison, two daughters, and two brothers, Peter Temin, also an academic, and Michael Temin, a lawyer.

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- ^
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- Howard M. Temin on Nobelprize.org

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Thiokol Chemical Corporation

Wikipedia Thiokol

https://en.wikipedia.org/wiki/Thiokol

2021-01-08-wikipedia-org-thiokol.pdf

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https://drive.google.com/file/d/1fXjadZDyw3W9Isj4LdPDAp854kR-PqXJ/view?usp=sharing

Thiokol

This article is about the company. For the trademarked polymer, see Thiokol (polymer).

Industry

Aerospace, Manufacturing, Chemicals

Fate

Purchased by ATK Launch Systems Group

Founded

December 5, 1929

Defunct

2007, succeeded by Orbital ATK; and later merged with Northrop Grumman

Headquarters

Ogden, Utah, US

Products

Rocket engines, Snowcats

Number of employees

15,000

Parent

Cordant Technologies

Thiokol (variously **Thiokol Chemical Corporation**, **Morton-Thiokol Inc.**, **Cordant Technologies Inc.**, **Thiokol Propulsion**, **AIC Group**, **ATK Thiokol**, **ATK Launch Systems Group**; finally **Orbital ATK** before becoming part of Northrop Grumman) was an American corporation concerned initially with rubber and related chemicals, and later with rocket and missile propulsion systems. Its name is a portmanteau of the Greek words for sulfur (θεῖον *"theion"*) and glue (κόλλα *"kolla"*), an allusion to the company's initial product, Thiokol polymer.

The Thiokol Chemical Company was founded in 1929. Its initial business was a range of synthetic rubber and polymer sealants. Thiokol was a major supplier of liquid polymer sealants during World War II. When scientists at the Jet Propulsion Laboratory discovered that Thiokol's polymers made ideal binders for solid rocket fuels, Thiokol moved into the new field, opening laboratories at Elkton, Maryland, and later production facilities at Elkton and at Redstone Arsenal in Huntsville, Alabama. Huntsville produced the XM33 Pollux, TX-18 Falcon, and TX-135 Nike-Zeus systems. It closed in 1996. In the mid-1950s the company bought extensive lands in Utah for its rocket test range. In 1986 it was found at fault for the Space Shuttle *Challenger* disaster.[1] Thiokol continues to have major operations in the state, at Magna, Wasatch County, and Promontory (manufacturer of the Space Shuttle's solid rocket motors), and its current headquarters at Brigham City. As of 2005 the company employed over 15,000 people worldwide and records annual sales of around US$840 million.

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Company history[edit]

Model 601 U.S.A.F. Thiokol Snowcat

Thiokol Spryte used for winter service

- 1926: Two chemists, Joseph C. Patrick and Nathan Mnookin, were trying to invent an inexpensive antifreeze. In the course of an experiment involving ethylene dichloride and sodium polysulfide, they created a gum whose outstanding characteristic was a terrible odor.[2] The substance clogged a sink in the laboratory, and none of the solvents used to remove it were successful. Then the frustrated chemists realized that the resistance of the material to any kind of solvent was a useful property. They had invented a synthetic rubber, which they christened "Thiokol".[3]
- 1929: Bevis Longstreth, an executive at a salt company, founds the Thiokol Corporation in Trenton, New Jersey. He becomes its president and general manager.[4]
- 1944: Longstreth dies, leaving the position of president and general manager open. William Crosby becomes general manager.[4]
- 1945: Charles Bartley, working for the nascent Jet Propulsion Laboratory, discovers the use of thiokol as a stabilizer in solid-fuel rockets.[5]
- 1948: Elkton, Maryland, plant opens, producing solid rocket motors.[6]
- 1949: Thiokol produces the TX-18 Falcon missile, the world's first solid-fueled missile system.[*citation needed*]
- 1957: In anticipation of the forthcoming Minuteman contract, the company builds its plant at Brigham City, Utah.
- 1957: Thiokol Huntsville builds XM33 Pollux missile.
- 1958: Thiokol merges with Reaction Motors Inc. (RMI), makers of liquid propellant rocket motor systems.
- 1958: Thiokol receives contract to build the TU-122 rocket motor for the first stage of the LGM-30 Minuteman ICBM system.
- 1959: Thiokol Huntsville produces CASTOR strap-on booster rocket, used on the Atlas rocket.
- 1964: Woodbine, Georgia plant is constructed to build solid propellant motors for NASA, but the agency changes course and uses liquid fuel.[7]
- 1969: Thiokol awarded U.S. Army contract to manufacture 750,000 Tripflares for use in the Vietnam War.[7]
- 1971: Explosion in magnesium flare assembly facility at Woodbine plant kills 29 and injures 50.[7]
- 1974: Thiokol wins the contract to build the solid rocket booster (SRB) for the Space Shuttle (Nov 29, 1973).
- 1975: Thiokol succeeds Sperry Rand as operator of the large Louisiana Army Ammunition Plant near Minden, Louisiana.
- 1978: The company sells its ski lift division to CTEC and its snow equipment division to Logan Manufacturing Company (LMC), owned by John DeLorean.
- 1980: Thiokol acquires Carlisle Chemical Company of Cincinnati, Ohio.
- 1982: Thiokol merges with Morton-Norwich products (owners of the Morton Salt concern, the Simoniz automotive products brand, and various chemical concerns). The merged company is called Morton Thiokol Incorporated (MTI).
- 1986: An O-ring fault in an MTI SRB destroys Space Shuttle *Challenger* in flight. The company was found at fault for the destruction of *Challenger* and deaths of the astronauts, as a direct causality from pressure from NASA to launch, based on inconclusive evidence of O-ring failure, while under freezing temperatures. (see Space Shuttle Challenger disaster).

A Trident II (D-5) FBM launches and fires its Thiokol solid rocket first stage.

- 1989: Morton Thiokol splits, with most of the chemical concern going with Morton. The propulsion systems division becomes Thiokol Inc.
- 1998: Thiokol changes name to Cordant Technologies.
- 1998: Thiokol branded polymer products purchased by PolySpec L.P., a Houston-based manufacturer of industrial coatings, marine decking, and subsea insulation products.
- 2000: Thiokol merges with two divisions of Alcoa and with Howmet Castings and Huck Fasteners to become AIC Group (Alcoa Industrial Components).
- 2001: Alliant Techsystems (ATK) Inc. (a company formed when Honeywell spun off its defense division) spends $2.9 billion buying Thiokol and related businesses from AIC/Alcoa. ATK built the third stage of the Trident missile and had earlier bought Hercules Aerospace Co., builder of the second stage. With the purchase of Thiokol, makers of the missile's first stage, ATK controls the lion's share of the US solid rocket-fuel market.
- 2005: ATK-Thiokol wins the contract to produce the Ares I launch vehicle first stage for NASA's Project Constellation.[8]

- 2006: Alliant Techsystems (ATK) Inc. renamed ATK-Thiokol to ATK Launch Systems Group.
- 2014: Orbital ATK is formed from the merger of Orbital Sciences Corporation and parts of Alliant Techsystems.
- 2018: Orbital ATK is purchased by Northrop Grumman.

Products[edit]

Thiokol gas generators were used in the airbags on Mars Pathfinder. The top photo shows a complete airbag assembly under test, the bottom shows the three titanium Thiokol gas generators used to inflate the airbags.

Products made by the aerospace divisions of RMI and Thiokol include motors used in Subroc, the Pershing missile, the Peacekeeper missile, Poseidon missile, Minuteman missile, and the Trident I and Trident II missiles. Thiokol produces powerplants for numerous U.S. military missile systems, including AIM-9 Sidewinder, AGM-88 HARM, AGM-65 Maverick, AGM-69 SRAM, and AIR-2 Genie.

Thiokol also produced a variety of liquid and solid rocket motors for the US space program, including deorbit motors for the Mercury and Gemini programs, rocket stages and separation rocket motors for the Apollo program, motors for the Pioneer, Surveyor, Viking, Voyager, and Magellan missions, updated CASTOR boosters for the Delta rocket, and the Space Shuttle Solid Rocket Booster. Reaction Motors powerplants propelled the X-1 and X-15 aircraft, and later Thiokol technologies were also used in the private Tier One manned spaceplane. On March 1, 2006, NASA announced that Thiokol will be the prime contractor for the new Crew Launch Vehicle (CLV), to be known as the Ares I, which will put the Orion spacecraft (formerly known as the "Crew Exploration Vehicle") into low earth orbit, along with the five-segment SRBs for the heavy-lift Cargo Launch Vehicle (CaLV), known as the Ares V.

In addition to ski lifts, Thiokol produced a range of equipment for ski resorts including snowcats and snow grooming vehicles. These businesses were spun off in 1978 when the company restructured itself to concentrate on its rocket products and related technologies. John Z. DeLorean purchased the Thiokol snowcat operation and renamed it DMC. DMC continued to manufacture snowcats until 1988, when the company was renamed LMC. LMC continued making snowcats for 12 more years but ceased operations in 2000. Thiokol produced snow vehicles with a wide range of capabilities and duties. The company also produced several utility based vehicles based on their snowcat tracked vehicle, in addition to larger snow grooming machines suitable for use on steep ski-slopes. Thiokol machines were used in ski resorts, operated by the USAF in Alaska and other northern regions, and are now popular with private owners as dependable snowcats and for all-terrain transport.

Amphibious Thiokol Swamp Spryte All Terrain Vehicle

Thiokol pioneered the short-burn rocket motors used in aircraft ejection seats. The company also produced a number of the earliest practical airbag systems, building the high-speed sodium azide exothermic gas generators used to inflate the bags. Thiokol bags were first used in U.S. military aircraft, before being adapted to space exploration (Mars Pathfinder bounced down on Mars on Thiokol airbags) and automotive airbags. Thiokol's generators form the core of more than 60% of airbags sold worldwide.

See also[edit]

- Antarctic snow cruiser
- Bombardier Recreational Products
- Logan Machine Company
- Snow coach
- Tucker Sno-Cat

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Housatonic

Dr. Edward Donnall "Don" Thomas (born 1920)

Wikipedia E. Donnall Thomas

Associations

- Dr. Robert Charles Nowinski (born 1945)
-

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https://en.wikipedia.org/wiki/E._Donnall_Thomas

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E. Donnall Thomas

Thomas in 2000

Born

Edward Donnall Thomas

March 15, 1920

Mart, Texas, United States

Died

October 20, 2012 (aged 92)

Seattle, Washington, United States

Citizenship

American

Alma mater

University of Texas at Austin

Harvard Medical School

Known for

Transplantation

Awards

Nobel Prize in Physiology or Medicine,

National Medal of Science in 1990

Scientific career

Fields

Medicine

Institutions

Mary Imogene Bassett Hospital

Notable students

Eloise Giblett

Edward Donnall "Don" Thomas (March 15, 1920 – October 20, 2012)[1] was an American physician, professor emeritus at the University of Washington, and director emeritus of the clinical research division at the Fred Hutchinson Cancer Research Center. In 1990 he shared the Nobel Prize in Physiology or Medicine with Joseph E. Murray for the development of cell and organ transplantation. Thomas and his wife and research partner Dottie Thomas developed bone marrow transplantation as a treatment for leukemia.[2]

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Biography[edit]

Born in Mart, Texas, Thomas often shadowed his father who was a general practice doctor. Later, he attended the University of Texas at Austin where he studied chemistry and chemical engineering, graduating with a B.A. in 1941 and an M. A. in 1943. While Thomas was an undergraduate he met his wife, Dorothy (Dottie) Martin while she was training to be journalist. They had three children. Thomas entered Harvard Medical School in 1943, receiving an M.D. in 1946. Dottie became a lab technician during this time to support the family, and the pair worked closely thereafter. He did his residency at Peter Bent Brigham Hospital before joining the US Army. "In 1955, he was appointed physician in chief at the Mary Imogene Bassett Hospital, now Bassett Medical Center, in Cooperstown, N.Y., an affiliate of Columbia University." [3]

At Mary Imogene Bassett, he began to study rodents that received lethal doses of radiation who were then saved by an infusion of marrow cells. At the time, patients who underwent bone marrow transplantation all died from infections or immune reactions that weren't seen in the rodent studies. Thomas began to use dogs as a model system. In 1963, he moved his lab to the United States Public Health Service in Seattle.[4]

Thomas also received National Medal of Science in 1990. In 2003 he was one of 22 Nobel laureates who signed the Humanist Manifesto.[5]

He died of heart failure and is survived by his three children.[4] His wife Dottie died in 2015 aged 92.

Awards and honors[edit]

- 1965-1969 Hematology Study Section, National Institutes of Health
- 1969-1973 Member, Board of Trustees and Medical and Scientific Advisory Committee, Leukemia Society of America, Inc.
- 1970-1974 Clinical Cancer Investigation Review Committee, National Cancer Institute
- 1974 First Annual Eugene C. Eppinger Lecture at Peter Bent Brigham Hospital and the Harvard Medical School
- 1975 A. Ross McIntyre Award, University of Nebraska Medical Center
- 1975 The Henry M. Stratton Lecture, American Society of Hematology, Dallas
- 1977 The Lilly Lecture, Royal College of Physicians, London
- 1979 The Philip Levine Award, American Society of Clinical Pathologists, New Orleans
- 1980 American Cancer Society Award for Distinguished Service in Basic Research
- 1981 Kettering Prize of the General Motors Cancer Research Foundation for contributions to the diagnosis and treatment of cancer
- 1981 Honorary Doctorate of Medicine, University of Cagliari, Sardinia
- 1981 Special Keynote Address Award, American Society of Therapeutic Radiologists
- 1982 Stratton Lecture, International Society of Hematology
- 1982 Paul Aggeler Lecturer, University of California, San Francisco

- 1983 David A. Karnofsky Memorial Lecturer, Annual Meeting of the American Society of Clinical Oncology
- 1983 Robert Roesler de Villiers Award, Leukemia Society of American
- 1984 Sixty-fifth Mellon Lecturer, University of Pittsburgh School of Medicine, May 13
- 1985 Stanley Wright Memorial Lecturer, Annual Meeting of the Western Society for Pediatric Research
- 1987 Karl Landsteiner Memorial Award, Annual Meeting of the American Association of Blood Banks,
- 1987-1988 President, American Society of Hematology
- 1989 Elected Corresponding Member, Academie Royale de Medecine de Belgigue
- 1990 Terry Fox Award, Canada
- 1990 Gairdner Foundation International Award
- 1990 North American Medical Association of Hong Kong Prize
- 1990 Nobel Prize in Medicine
- 1990 Presidential Medal of Science
- 1991 Adolfo Ferrata Lecture, Italian Society of Hematology, Verona, Italy
- 1991 Honorary Doctorate of Medicine, University of Verona
- 1992 Kober Medal, American Association of Physicians
- 1992 Honorary Member, The Royal College of Physicians and Surgeons of Canada
- 1992 Honorary Doctorate of Medicine, University of Parma
- 1993 Golden Plate Award of the American Academy of Achievement[6]
- 1994 Honorary Member, National Academia of Medicine
- 1994 Honorary Degree, University of Barcelona
- 1996 Honorary Degree, University of Warsaw
- 1998 Medal of Merit, State of Washington

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External links[edit]

- Fred Hutchinson Cancer Research Center. Nobel Prize: The Don and Dottie Story
- E. Donnall Thomas on Nobelprize.org including the Nobel Lecture 8 December 1990 Bone Marrow Transplantation - Past, Present and Future

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2012 - Nature Magazine : "Edward Donnall Thomas (1920–2012) : Immunologist who won Nobel prize for bone-marrow transplants."

[HP006I][GDrive]

Published: 14 November 2012 / Nature volume 491, page334(2012)

by Rainer Storb

Edward Donnall (Don) Thomas has been called the father of bone-marrow transplantation. Until the 1970s, every reported human marrow transplant had failed, and prominent immunologists declared that the barriers between individuals could never be crossed. Thomas persisted and eventually succeeded, sharing a Nobel prize for the feat in 1990. Since 1969, around one million patients with otherwise fatal blood disorders have received bone-marrow transplants.

Thomas died on 20 October 2012, aged 92, of heart failure. He was born in Mart, Texas, and his father was a general practice doctor, whom he often accompanied on house calls. Thomas received his bachelor's and master's degrees in organic chemistry from the University of Texas at Austin in 1941 and 1943, respectively. In 1942, he married fellow student Dorothy (Dottie) Martin. She helped to manage his research and papers throughout his career — the late George Santos of Johns Hopkins University School of Medicine in Baltimore, Maryland, once said: "If Dr Thomas is the father of bone-marrow transplantation, then Dottie Thomas is the mother." The couple had three children, two of whom are physicians.

Edward Donnall Thomas Credit: COURTESY OF DOTTIE THOMAS

In 1946, Thomas received his MD degree from Harvard Medical School in Boston, Massachusetts, followed by residency training at the city's Peter Bent Brigham Hospital and then service in the US Army. In 1950, he returned to the area as a research fellow at the Massachusetts Institute of Technology in Cambridge, and then as chief resident and instructor in medicine at Harvard.

In 1955, Thomas was appointed physician-in-chief at the Mary Imogene Bassett Hospital in Cooperstown, New York. Here he became fascinated by the discovery that rodents given a lethal dose of radiation could be rescued by an intravenous infusion of marrow cells from a donor. **In 1957, Thomas treated a patient with leukaemia using high doses of total-body irradiation to wipe out the cancer, and then gave them an infusion of marrow cells from an identical twin. The transplant was at first successful, although the patient later died from a recurrence of the leukaemia.**

Meanwhile, the medical literature was charting numerous cases of patients with blood disorders who had been treated using marrow transplantation from healthy family members. All the patients died from infections or severe immune reactions that were not predicted from studies in inbred rodents. Many investigators left the field, pronouncing it a dead end

Thomas did not give up. In 1957 he began experimenting in dogs. Like humans, dogs have unusual phenotypic diversity, a well-mixed gene pool and can develop haematological diseases, including non-Hodgkin lymphoma. In late 1963, Thomas set up his laboratory at the United States Public Health Service (USPHS) Hospital in Seattle, which was affiliated to the University of Washington's medical school.

When I joined his small band of scientists in 1965 as a research fellow, transplantation was not a widely known concept. Indeed, the university's print shop once produced letterhead stationery for us that read "Division of Hematology and Transportation". A remarkable thing about Thomas's leadership style was that he was happy to give people like me a free hand in innovating, as long as it helped the patients.

Under Thomas's guidance, we spent the 1960s developing high-intensity irradiation treatments to eradicate patients' cancer cells and establishing the importance of tissue matching for transplant outcome. To control and treat graft-versus-host disease, we developed drug combinations to suppress the immune system and produced antibodies against human lymphocytes — which once involved a 1.5-hour chase of an antibody-producing horse. Our total-body irradiation sources were set up in a Second World War underground bunker.

Work with patients began in 1969 at the USPHS hospital. Initial survival rates were low, and unexpected problems required going back and forth between bench and bedside — something that remained a hallmark of Thomas's work. By 1979, after performing a number of transplants, we were able to describe a phenomenon called graft-versus-tumour effects, in which donor lymphocytes help to eliminate residual malignant cells. There are patients who received transplants in 1971 still alive today.

Progress has been slow but steady. Early marrow donors were siblings. In 1979, the first patient with leukaemia was successfully treated with a transplant from an unrelated donor using new immunosuppressant drugs. This success sparked Thomas and others to set up international marrow-donor programmes. Transplant outcomes have improved, with survival rates for some diseases, such as aplastic anaemia, close to 95%.

In 1972, the US government closed the USPHS hospital. This prompted the founding of the private Fred Hutchinson Cancer Research Center (the Hutch), with close ties to the University of Washington's medical school. Thomas headed the medical oncology divisions at both.

Over the years, Thomas's team trained hundreds of young investigators. As one of them put it: "Virtually every major transplant centre in the world got its start by sending someone to train under Don Thomas." Owing to his influence, the Hutch's clinical focus has always been the patient, and its approach, one of teamwork. After retiring in 1989, Thomas continued writing manuscripts, lecturing and serving as an ambassador for the place.

Besides science, Don and Dottie had a passion for fishing and hunting, the fruits of which they shared at intimate dinners with colleagues and friends at their modest home. Reserved, hardworking and uncompromising, Thomas generously attributed much of his success to colleagues, nurses, support staff, patients and their families.

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Rainer Storb

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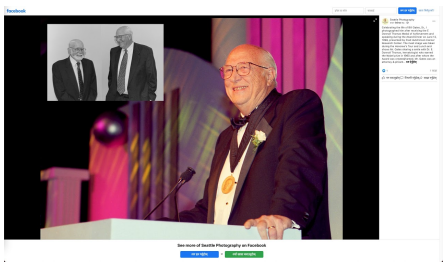
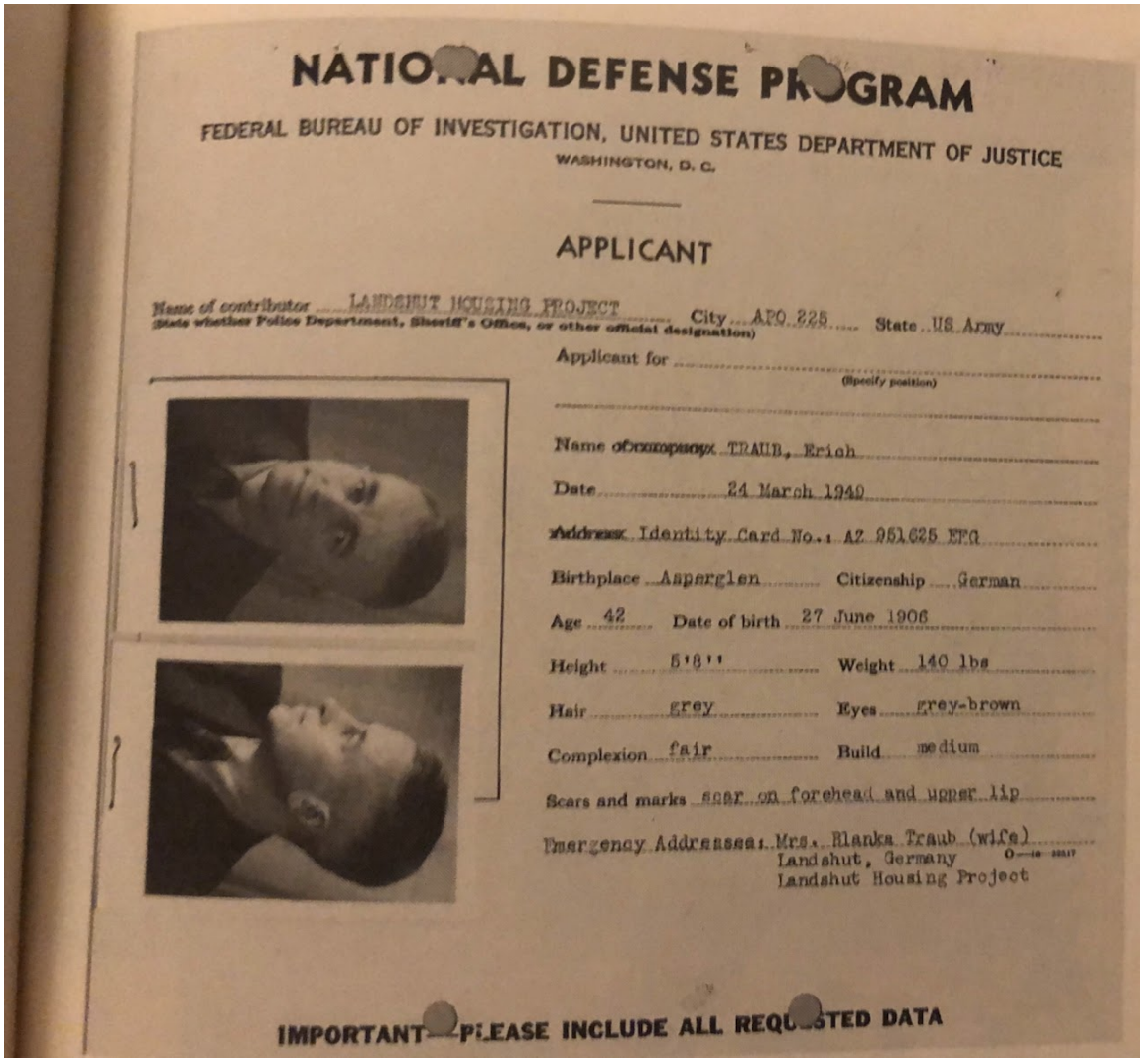


Dr. Erich Traub (born 1906)



NATIONAL DEFENSE PROGRAM

FEDERAL BUREAU OF INVESTIGATION, UNITED STATES DEPARTMENT OF JUSTICE
WASHINGTON, D. C.

APPLICANT

Name of contributor LANDSHUT HOUSING PROJECT City APO 225 State US Army
(State whether Police Department, Sheriff's Office, or other official designation)

Applicant for (Specify position)

Name TRAUB, Erich

Date 24 March 1949

Address Identity Card No.: AZ 951625 EFG

Birthplace Asperglen Citizenship German

Age 42 Date of birth 27 June 1906

Height 5'8" Weight 140 lbs

Hair grey Eyes grey-brown

Complexion fair Build medium

Scars and marks scar on forehead and upper lip

Emergency Addressee: Mrs. Blanka Traub (wife)
Landshut, Germany
Landshut Housing Project

IMPORTANT—PLEASE INCLUDE ALL REQUESTED DATA

[HB005Y][GDrive]

Wikipedia 🌐 Erich Traub

Born 27 June 1906 in Asperglen, German Empire [HK005K][GDrive]

Died 18 May 1985 (aged 78) Rosenheim, West Germany [HK005K][GDrive]

WORKED AT:

- **Plum Island Animal Disease Center**
-

ASSOCIATED WITH :

- **Dr. Richard Edwin Shope (born 1901)**
- **Prof. Rudolf Rott (born 1926)**
- **Dr. Heinrich Werner Schäfer (born 1912)** **(protege of Erich Traub ...** [HW005X][GDrive])

Saved Wikipedia (March 1, 2021) - Erich Traub

Source : [HK005K][GDrive]

- Citizenship German, American
- Alma mater Rockefeller Institute for Medical Research
- Known for Foot-and-mouth disease
- Scientific career Fields Virologist
- Institutions
  - University of Giessen
  - Riems Island, German Reich
- **Influences**
  - [**Dr. Richard Edwin Shope (born 1901)**]
  - [**Dr. Kurt Blome (born 1894)**]

Erich Traub (27 June 1906 – 18 May 1985) was a German veterinarian, scientist and virologist who specialized in foot-and-mouth disease, Rinderpest and Newcastle disease. Traub was a member of the National Socialist Motor Corps (NSKK), a Nazi motorist corps, from 1938 to 1942. He worked directly for Heinrich Himmler, head of the Schutzstaffel (SS), as the lab chief of the Nazis' leading bio-weapons facility on Riems Island.[1]

Traub was rescued from the Soviet zone of Germany after World War II and taken to the United States in 1949 under the auspices of the United States government program Operation Paperclip, meant to exploit the post-war scientific knowledge in Germany, and deny it to the Soviet Union.[2]

Career

Early career and war

During the 1930s, he studied on a fellowship at the Rockefeller Institute for Medical Research in Princeton, New Jersey mentored by [**Dr. Richard Edwin Shope (born 1901)**], performing research on vaccines and viruses, including pseudorabies virus and lymphocytic choriomeningitis virus (LCM).[3][4][5] During his stay in the United States, Traub and his wife were listed as members of the German American Bund, a pro-Nazi German-American club thirty miles west of Plum Island in Yaphank, Long Island, from 1934 to 1935.[6]

Traub worked at the University of Giessen, Germany, from 1938 to 1942.[7] Traub was a member of the Nazi NSKK, a motorist corps, from 1938 to 1942. The NSKK was declared a condemned, not a criminal organization at the Nuremberg trials.[1]

From 1942 to 1948, Traub worked as lab-chief at the Reich Research Institute for Virus Diseases of Animals (German: Reichsforschungsanstalt für Viruskrankheiten der Tiere) on Riems Island (German: Insel Riems), a German animal virus research institute in the Baltic sea, now named the Friedrich Loeffler Institute. The institute was headed by Prof. Dr. Otto Waldmann from 1919 to 1948, while Traub was vice-president.[7]

The Institute at Riems Island was a dual use facility during the Second World War where at least some biological warfare experiments were conducted. It had been founded in 1909-10 to study foot-and-mouth disease in animals and by World War II employed about 20 scientists and a staff of 70-120. Hanns-Christoph Nagel, a veterinarian and biological warfare expert for the German Army, conducted experiments there, as did Traub.[7]

The institute was administered under the Innenministerium (Ministry of the Interior), which Reichsführer-SS Heinrich Himmler took over in 1943. The chain of command was Himmler, Dr. Leonardo Conti (Reich Health Leader), [**Dr. Kurt Blome (born 1894)**], Waldmann, and then Traub. Traub specialized in viral and bacterial diseases. He was assisted by Anna Bürger, who was later also brought to the United States after the war, to work with the Navy's biological warfare program.[8]

On orders from Himmler and Blome, the Deputy Reich Health Leader and head of the German biological warfare program, Traub worked on weaponizing foot-and-mouth disease virus, which has been reported to have been dispersed by aircraft onto cattle and reindeer in Russia.[9] In 1944, Blome sent Traub to pick up a strain of Rinderpest virus in Turkey; upon his return, this strain proved inactive (nonvirulent) and therefore plans for a Rinderpest product were shelved.[1]

Post-war

Immediately after the war Traub was trapped in the Soviet zone of Allied occupied Germany. He was forced to work for the Soviets from his lab on Riems Island.[10] **In July 1948, the British evacuated Erich Traub from Riems Island as a "high priority Intelligence target" since it was now in the Soviet Zone and they feared that Traub was assisting in their biological warfare program.** Traub denied this, however, claiming that his only interest was foot-and-mouth disease in animals.[11]

Traub was brought to the United States in 1949 under the auspices of the United States government program Operation Paperclip, meant to exploit scientific knowledge in Germany, and deny it to the Soviet Union.[2] From 1949 to 1953, he was associated with the Naval Medical Research Institute in Bethesda, Maryland.[7]

Months into his Operation Paperclip contract, Traub was asked to meet with US scientists from Fort Detrick, the Army's biological warfare headquarters, in Frederick, Maryland. As a noted German authority on viruses he was asked to consult on their animal disease program from a Biological Warfare perspective. Traub discussed work done at the Reich Research Institute for Virus Diseases of Animals on Riems Island during World War II for the Nazis, and work done after the war there for the Russians. Traub gave a detailed explanation of the secret operation at the Institute, and his activities there. This information provided the ground work for Fort Detrick's offshore germ warfare animal disease lab on Plum Island.[6] [The facility on Plum Island later became the **Plum Island Animal Disease Center**].

His publicly published research from his time in the United States reports disease research not directly related to weaponization. In 1951, he published a report for the Naval Medical Research Institute on Newcastle Disease virus in chicken and mammalian blood cells.[12] Two years later, he published a paper for the Navy on the mechanisms of immunity in chickens to Newcastle and the possible role of cellular factors.[13] Also in 1953, he published another paper for the Navy with Worth I. Capps on the foot-and-mouth disease virus and methods for rapid adaptation.[14]

Traub served as an expert on foot-and-mouth disease for the FAO of the UN in Bogota, Colombia, from 1951 to 1952, in Tehran, Iran, from 1963 to 1967, and in Ankara, Turkey, from 1969 to 1971.

Return to Germany

Tombstone

After working on biological research for the U.S. Navy from 1949 to 1953, Traub returned to Germany and founded a new branch of the Loeffler Institut in Tübingen, and headed it from 1953 to 1963.[15] In 1960, Traub resigned as Tübingen's director due to the scandal related to accusations of financial embezzlement. He continued with limited lab research for three more years, but then ended his career at Tübingen.[10]

In 1964, Traub published a study for the Army Biological labs in Frederick, Maryland on Eastern Equine Encephalomyeltitis (EEE) immunity in white mice and its relationship to Lymphocytic choriomeningitis (LCM), which had long been a research interest of his.[16]

He retired from the West German civil service in 1971. In 1972, on the occasion of the 500th anniversary of Ludwig Maximilian University of Munich Traub received an honorary doctorate degree in Veterinary Medicine for his achievements in basic and applied Virology (basic research on LCM; definition and diagnosis of type strains of FMD and their variants; development of adsorbate vaccines against fowl plague, Teschen disease of swine, and erysipelas of swine).

On May 18, 1985, Traub died in his sleep in West Germany. He was seventy-eight years old.[10]

Bio-weapon research

This section may stray from the topic of the article. Please help improve this section or discuss this issue on the talk page. (May 2019)

In theory, insects of all types, particularly the biting species, can be used as disease vectors in a biological warfare program. Germany, Japan, Britain, Russia and the U.S. all conducted experiments along these lines during the Second World War, and the Japanese used such insect-borne diseases against both soldiers and civilians in China. This was one reason that President Franklin Roosevelt and Secretary of War Henry Stimson ordered the creation of an American biological warfare program in 1942, which was headquartered at Camp Detrick, Maryland. This eventually grew to a very large facility with 245 buildings and a $60 million budget, including an Entomological Weapons Department that mass-produced flies, lice and mosquitoes as disease vectors. Although the British bio-weapon facility at Porton Down concentrated on the production of anthrax bombs, it also conducted experiments on insects as vectors.

After the war, the Army's 406th Medical General Laboratory in Japan cooperated with former scientists from Unit 731 in experimenting with many different insect vectors, including lice, flies, mosquitoes, ticks, fleas, spiders and beetles to carry a wide variety of diseases, from cholera to meningitis. At Fort Detrick in the late 1940s, Theodore Rosebury also rated insect vectors very highly, and its entomological division had at least three insect-vectored weapons ready for use by 1950. Some of these were later tested at the Dugway Proving Grounds in Utah, and allegedly used during the Korean War as well.[17]

Traub visited the [Plum Island Animal Disease Center] (PIADC) in New York on at least three occasions in the 1950s. The Plum Island facility, operated by the Department of Agriculture, conducted research on foot-and-mouth disease (FMD) of cattle, one of Traub's areas of expertise.[1] Traub was offered a leading position at the [Plum Island Animal Disease Center] in 1958 which he officially declined. It has been alleged that the United States performed bioweapons research on Plum Island.[1][18]

Fort Terry on Plum Island was part of the U.S. biological warfare program in 1944-46, working on veterinary testing in connection with the weaponization of brucellosis. After the war, research on biological weapons continued at Pine Bluff in Arkansas and Fort Detrick, Maryland, while officially at least [Plum Island Animal Disease Center] was transferred to the U.S. Department of Agriculture.[19] From 1949, Plum Island also conducted work on biological weapons against animals and livestock, such as foot-and-mouth disease, Rinderpest, Newcastle disease, African swine fever and plague and malaria in birds. Traub's research work from the Second World War onward involved at least the first three of these (all dangerous only to non-human animal species).[20]

See also[edit]

- Edgewood Arsenal
- Project MKULTRA
- Project MKNAOMI
- Claus Schilling
- Sigmund Rascher
- [**Dr. Kurt Blome (born 1894)**]
- Fort Detrick

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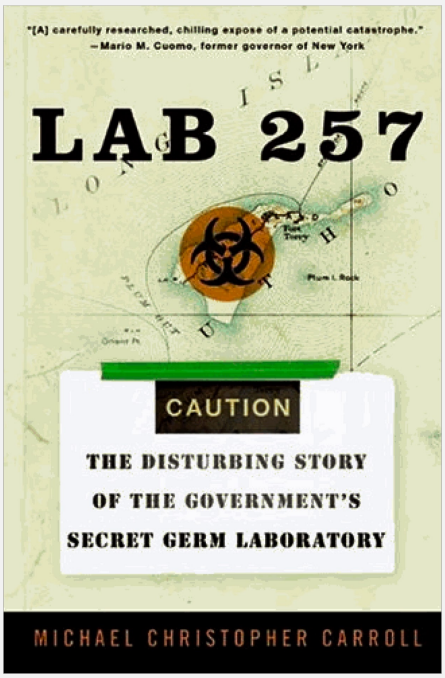

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Nearing the end of World War II, the United States and the Soviet Union raced to recruit German scientists for postwar purposes. Under a top-secret program code-named Project PAPERCLIP, the U.S. military pursued Nazi scientistic talent "like forbidden fruit," bringing them to America under employment contracts and offering them full U.S. citizenship. The recruits were supposed to be nominal participants in Nazi activities. But the zealous military recruited more than two thousand scientists, many of whom had dark Nazi party pasts. *{ Footnotes : The best known PAPERCLIP recruit was Wernher von Braun [...] }*

American scientists viewed these Germans as peers, and quickly forgot they were on opposite sides of a ghastly global war in which millions perished. Fearing brutal retaliation from the Soviets for the Nazis' vicious treatment of them, some scientists cooperated with the Americans to earn amnesty. Others played the two nations off each other to get the best financial deal in exchange for their services. [**Dr. Erich Traub]** was trapped on the Soviet side of the Iron Curtain after the war, and ordered to research germ warfare viruses for the Russians. **He pulled off a daring escape with his family to West Berlin in 1949.** Applying for Project PAPERCLIP employment, Traub affirmed he wanted to "do scientific work in the U.S.A., become an American citizen, and be protected from Russian reprisals."

As lab chief of Insel Riems—a secret Nazi biological warfare laboratory on a crescent-shaped island nestled in the Baltic Sea—[**Dr. Erich Traub**] **worked directly for Adolf Hitler's second-in-charge, SS Reichsführer Heinrich Himmler, on live germ trials**. He packaged weaponized foot-and-mouth disease virus, which was dispersed from a Luftwaffe bomber onto cattle and reindeer in occupied Russia. **At Himmler's request, Traub personally journeyed to the Black Sea coast of Turkey. There, amid the lush Anatolian terrain, he searched for a lethal strain of rinderpest virus for use against the Allies. Earlier in the war he had been a captain in the German Army, working as an expert on infectious animal diseases, particularly in horses. His veterinary corps led the germ warfare attacks on horses in the United States and Romania in World War I with a bacteria called glanders.** He was also a member of NSKK, the Nazi Motorists Corps, a powerful Nazi organization that ranked directly behind the SA (Storm Troopers) and the SS (Elite Corps). In fact, NSKK's first member, joining in April 1930, was Adolf Hitler himself. [**Dr. Erich Traub**] also listed his 1930s membership in Amerika-Deutscher Volksbund, a German-American "club" also known as Camp Sigfried. Just thirty miles west of Plum Island in Yaphank, Long Island, Camp Sigfried was the national headquarters of the American Nazi movement. Over forty thousand people throughout the New York region arrived by train, bus, and car to participate in Nuremberg-like rallies. Each weekend they marched in lockstep divisions, carrying swastika flags, burning Jewish U.S. congressmen in effigy, and singing anti-Semitic songs. Above all, they solemnly pledged their allegiance to Hitler and the Third Reich.

Ironically, [**Dr. Erich Traub**] **spent the prewar period of his scientific career on a fellowship at the Rockefeller Institute in Princeton, New Jersey,** perfecting his skills in viruses and bacteria under the tutelage of American experts before returning to Nazi Germany on the eve of war. **Despite Traub's troubling war record, the U.S. Navy recruited him for its scientific designs, and stationed him at the Naval Medical Research Institute in Bethesda, Maryland.** *{ Footnotes : Another PAPERCLIP recruit who worked alongside Traub at the Naval Medical Research Institute was **Theodur Benzinger**, an "aviation doctor." Benzinger was invited by Heinrich Himmler to view a film on high-altitude simulations at Dachau using prisoners as human guinea pigs (a "37-year-old Jew*

in good condition who lasted 30 minutes—he began to perspire, wriggle his head, developed cramps, became breathless, and [with] foam collecting around his mouth became unconscious and died"). Arrested for war crimes by Nuremberg prosecutors, he denied experimenting with any prisoners. He evaded prosecution at the Nuremberg Doctors' Trial and rushed into the waiting arms of Project PAPERCLIP. }

Just months into his PAPERCLIP contract, the germ warriors of Fort Detrick, the Army's biological warfare headquarters in Frederick, Maryland, and CIA operatives invited [**Dr. Erich Traub**] in for a talk, later reported in a declassified top-secret summary:

- [**Dr. Erich Traub**] is a noted authority on viruses and diseases in Germany and Europe. This interrogation revealed much information of value to the animal disease program from a Biological Warfare point of view. Dr. Traub discussed work done at a German animal disease station during World War II and subsequent to the war when the station was under Russian control. *{ Footnotes - According to the document, a transcript of the meeting was prepared by the CIA. When I requested the transcript under the Freedom of Information Act, the CIA informed me that no such report ever existed, and if it did, it would be withheld for reasons of national security. }*

[**Dr. Erich Traub**]'s detailed explanation of the secret operation on Insel Riems, and his activities there during the war and for the Soviets, laid the groundwork for Fort Detrick's offshore germ warfare animal disease lab on Plum Island. Traub was a founding father.

Little is publicly available about his clandestine activities for the U.S. military. The names of two studies, "Experiments with Chick Embryo Adapted Foot-and-mouth Disease" and "Studies on In-vitro Multiplication of Newcastle Disease Virus in Chicken Blood," were made available under the Freedom of Information Act, but the research reports themselves (and many others) were withheld. With his "laboratory assistant" Anne Burger, who came over in 1951, [**Dr. Erich Traub**] experimented with over forty lethal viruses on large test animals. *{ Footnotes - Linda Hunt, author of Secret Agenda, the seminal book on Project PAPERCLIP, believes Burger may not have been Traub's "assistant," but rather his mistress. Apparently other PAPERCLIP recruits had imported their mistresses from Germany along with their families when they came to America. No additional information is available to the public on Anne Burger. }*

[**Dr. Erich Traub**] also spent time at the USDA laboratories in Beltsville, Maryland, where he isolated a new weapons-grade virus strain in the USDA lab. Studying a virulent strain of a new virus that caused human infections, **Traub showed how it adapted "neurotropically" in humans by voraciously attacking nerve and brain tissues.** This was the same potent virus that infected a human in Plum Island's first-ever germ experiment one year later.

By 1953, West Germany recognized a need for its own Insel Riems and built a high-containment virus facility in Tübingen. They asked **Dr. Erich Traub** to return to the Fatherland and assume command. Permission was granted. But there was a catch. "In view of Dr. Traub's eminence as an international authority and the recognizable military potentialities in the possible application of his specialty, it is recommended that future surveillance in appropriate measure be maintained after the specialist's return to Germany." In other words, the CIA would be tailing him for years. As soon as the lab opened for business, he turned to Plum Island for starter strains of viruses, which were gladly shipped over. USDA officials traveled to West Germany and visited his laboratory often.

ERICH TRAUB AND PLUM ISLAND

Everybody seemed willing to forget about [**Dr. Erich Traub**]'s dirty past—**that he had played a crucial role in the Nazis' "Cancer Research Program," the cover name for their biological warfare program, and that he worked directly under SS Reichsführer Heinrich Himmler**. They seemed willing to overlook that Traub in the 1930s faithfully attended Camp Sigfried. **In fact, the USDA liked him so much, it glossed over his dubious past and offered him the top scientist job at the new Plum Island laboratory—not once, but twice. Just months after the 1952 public hearings on selecting Plum Island, Doc Shahan dialed Dr. Traub at the naval laboratory to discuss plans for establishing the germ laboratory and a position on Plum Island.**

Six years later—and only two years after [**Dr. Erich Traub**] squirmed in his seat at the Plum Island dedication ceremonies—senior scientist Dr. Jacob Traum retired. The USDA needed someone of "outstanding caliber, with a long established reputation, internationally as well as nationally," to fill Dr. Traum's shoes. But somehow it couldn't find a suitable American. "As a last resort it is now proposed that a foreigner be employed." The aggies' choice? [**Dr. Erich Traub**], who was in their view "the most desirable candidate from any source." **The 1958 secret USDA memorandum "Justification for Employment of Dr. Erich Traub" conveniently omitted his World War II activities; but it did emphasize that "his originality, scientific abilities, and general competence as an investigator" were developed at the Rockefeller Institute in New Jersey in the 1930s.**

The letters supporting [**Dr. Erich Traub**] to lead Plum Island came in from fellow Plum Island founders. "I hope that every effort will be made to get him. He has had long and productive experience in both prewar and postwar Germany," said [Dr. William Arthur Hagan (born 1893)] Dr. William Hagan, dean of the Cornell University veterinary school, carefully dispensing with his wartime activities. **The final word came from his dear American friend and old Rockefeller Institute boss [Dr. Richard Edwin Shope (born 1901)], who described Traub as "careful, skillful, productive, and very original" and "one of this world's most outstanding virologists." Shope's sole reference to Traub at war: "During the war he was in Germany serving in the German Army."**

Declining the USDA's offer, [**Dr. Erich Traub**] **continued his directorship of the Tübingen laboratory in West Germany, though he visited Plum Island frequently**. In 1960, he was forced to resign as Tübingen's director under a dark cloud of financial embezzlement. Traub continued sporadic lab research for another three years, and then left Tübingen for good—a scandalous end to a checkered career. **In the late 1970s, the esteemed virologist [Dr. Robert Ellis Shope (born 1929)], on business in Munich, paid his father Richard's old Rockefeller Institute disciple a visit.** The germ warrior had been in early retirement for about a decade by then. "I had dinner with Traub one day— out of old time's sake—and he was a pretty defeated man by then." On May 18, 1985, the Nazis' virus warrior [**Dr. Erich Traub**] died unexpectedly in his sleep in West Germany. He was seventy-eight years old.

A biological warfare mercenary who worked under three flags—Nazi Germany, the Soviet Union, and the United States—[**Dr. Erich Traub**] was never investigated for war crimes. He escaped any inquiry into his wartime past. The full extent of his sordid endeavors went with him to his grave.

While America brought a handful of Nazi war criminals to justice, it safeguarded many others in exchange for verses to the new state religion— modern science and espionage. Records detailing a fraction of [**Dr. Erich Traub**]'s activities are now available to the public, but most are withheld by Army intelligence and the CIA on grounds of national security. But there's enough of a glimpse to draw quite a sketch.

[...]

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Attorney John Loftus was hired in 1979 by the Office of Special Investigations, a unit set up by the Justice Department to expose Nazi war crimes and unearth Nazis hiding in the United States. Given top-secret clearance to review files that had been sealed for thirty-five years, Loftus found a treasure trove of information on America's postwar Nazi recruiting. In 1982, publicly challenging the government's complacency with the wrongdoing, he told 60 Minutes that top Nazi officers had been protected and harbored in America by the CIA and the State Department.

"They got the Emmy Award," Loftus wrote. "My family got the death threats."

Old spies reached out to him after the publication of his book, The Belarus Secret, encouraged that he—unlike other authors—submitted his manuscript to the government, agreeing to censor portions to protect national security. The spooks gave him copies of secret documents and told him stories of clandestine operations. From these leads, Loftus ferreted out the dubious Nazi past of Austrian president and U.N. secretary general Kurt Waldheim. Loftus revealed that during World War II, Waldheim had been an officer in a German Army unit that committed atrocities in Yugoslavia. A disgraced Kurt Waldheim faded from the international scene soon thereafter.

In the preface of The Belarus Secret, Loftus laid out a striking piece of information gleaned from his spy network:

- Even more disturbing are the records of the Nazi germ warfare scientists who came to America. They experimented with poison ticks dropped from planes to spread rare diseases. I have received some information suggesting that the U.S. tested some of these poison ticks on the Plum Island artillery range off the coast of Connecticut during the early 1950s. . . . Most of the germ warfare records have been shredded, but there is a top secret U.S. document confirming that "clandestine attacks on crops and animals" took place at this time.

[**Dr. Erich Traub**] had been working for the American biological warfare program from his 1949 Soviet escape until 1953. We know he consulted with Fort Detrick scientists and CIA operatives; that he worked for the USDA for a brief stint; and that he spoke regularly with Plum Island director **Doc Shahan** in 1952. Traub can be physically placed on Plum Island at least three times—on dedication day in 1956 and two visits, once in 1957 and again in the spring of 1958. Shahan, who enforced an ultrastrict policy against outside visitors, each time received special clearance from the State Department to allow [**Dr. Erich Traub**] on Plum Island soil.

Research unearthed three USDA files from the vault of the National Archives—two were labeled TICK RESEARCH and a third E. TRAUB. All three folders were empty. The caked-on dust confirms the file boxes hadn't been open since the moment before they were taped shut in the 1950s.

Preposterous as it sounds, clandestine outdoor germ warfare trials were almost routine during this period. In 1952, the Joint Chiefs of Staff called for a "vigorous, well-planned, large-scale [biological warfare] test program . . . with all interested agencies participating." A top-secret letter to the secretary of defense later that year stated, "Steps should be taken to make certain adequate facilities are available, including those at Fort Detrick, Dugway Proving Ground, Fort Terry (Plum Island) and an island field testing area." Was Plum Island the island field testing area? Indeed, when the Army first scouted Plum Island for its Cold War designs, they charted wind speeds and direction and found that, much to their liking, the prevailing winds blew out to sea.

One of the participating "interested agencies" was the USDA, which admittedly set up large plots of land throughout the Midwest for airborne anticrop germ spray tests. Fort Detrick's Special Operations Division ran "vulnerability tests" in which operatives walked around Washington, D.C., and San Francisco with suitcases holding Serratia marcescens—a bacteria recommended to Fort Detrick by [**Dr. Erich Traub**]'s **nominal supervisor, Nazi germ czar and Nuremberg defendant [Dr. Kurt Blome (born 1894)]**. Tiny perforations allowed the germs' release so they could trace the flow of the germs through airports and bus terminals. Shortly thereafter, eleven elderly men and women checked into hospitals with never-before-seen Serratia marcescens infections. One patient died. Decades later when the germ tests were disclosed, the Army denied responsibility. A Department of Defense report later admitted the germ was "an opportunistic pathogen . . . causing infections of the endocardium, blood, wounds, and urinary and respiratory tracts." In the summer of 1966, Special Operations men walked into three New York City subway stations and tossed lightbulbs filled with Bacillus subtilis, a benign bacteria, onto the tracks. The subway trains pushed the germs through the entire system and theoretically killed over a million passengers. Tests were also run with live, virulent, anti-animal germ agents. Two hogcholera bombs were exploded at an altitude of 1,500 feet over pigpens set up at Eglin Air Force Base in Florida. And turkey feathers laced with Newcastle disease virus were dropped on animals grazing on a University of Wisconsin farm. *{Footnote : Traub likely developed the standardized Newcastle disease virus placed on the biological cluster bomb by concentrating the germ in chicken blood while he was working at the Naval Medical Research Institute for Project PAPERCLIP. }*

The Army never fully withdrew its germ warfare efforts against food animals. Two years after the Army gave Plum Island to the USDA—and three years after it told President Eisenhower it had ended all biological warfare against food animals—the Joint Chiefs advised that "research on anti-animal agent-munition combinations should" continue, as well as "field testing of anti-food agent munition combinations. . . ." In November 1957, military intelligence examined the elimination of the food supply of the Sino-Soviet Bloc, right down to the calories required for victory:

- In order to have a crippling effect on the economy of the USSR, the food and animal crop resources of the USSR would have to be damaged within a single growing season to the extent necessary to reduce the present average daily caloric intake from 2,800 calories to 1,400 calories; i.e., the starvation level. Reduction of food resources to this level, if maintained for twelve months, would produce 20 percent fatalities, and would decrease manual labor performance by 95 percent and clerical and light labor performance by 80 percent.

At least six outdoor stockyard tests occurred in 1964–65. Simulants were sprayed into stockyards in Fort Worth, Kansas City, St. Paul, Sioux Falls, and Omaha in tests determining how much foot-and-mouth disease virus would be required to destroy the food supply.

Had the Army commandeered Plum Island for an outdoor trial? Maybe the USDA lent a hand with the trial, as it had done out west by furnishing the large test fields. After all, the Plum Island agreement between the Army and the USDA allowed the Army to borrow the island from the USDA when necessary and in the national interest.

[**Dr. Erich Traub**] might have monitored the tests. A source who worked on Plum Island in the 1950s recalls that animal handlers and a scientist released ticks outdoors on the island. "They called him the Nazi scientist, when they came in, in 1951—they were inoculating these ticks," and a picture he once saw "shows the animal handler pointing to the area on Plum where they released the ticks." **Dr. Traub's World War II handiwork consisted of aerial virus sprays developed on Insel Riems and tested over occupied Russia, and of field work for Heinrich Himmler in Turkey.** Indeed, his colleagues conducted bug trials by dropping live beetles from planes. An outdoor tick trial would have been de rigueur for Erich Traub.

[...]

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A few years before the Plum Island Animal Disease Center's dedication day in 1956, the United States launched its first biological warfare program. A glimpse into the past reveals a surprising truth: Plum Island wasn't exactly what it appeared to be to the public.

The gory details were kept secret at the time, but America's germ warfare goals—national defense—were heralded by the nation's leaders and press. A New York Times editorial in 1945 mused, "When the scientific story of the war is written, we have here an epic that rivals that of the atomic bomb." The paper was right. A few months after the United States demonstrated its atomic warfare prowess on Japan, it announced the development of a second weapon: killer

microscopic germs. While forty-five people participated in the British biological warfare effort, the American version involved four thousand men and women. The Army ran the innocuously titled "War Research Service" (WRS) program at Fort Detrick in Frederick, Maryland. **Civilian chemist George W. Merck** [https://en.wikipedia.org/wiki/George_W._Merck] directed the work, advised by scientists from the nation's top universities.

These men were motivated by the threats of the times. In ways, they were no different from the atomic fathers Einstein and Oppenheimer. Theodor Rosebury, a Columbia University microbiologist who worked on the WRS projects, said, "We resolved the ethical question just as other equally good men resolved the same question at Oak Ridge and Los Alamos."

The aims of the biological warfare program didn't trouble Dr. Albert Webb, a Fort Detrick scientist in the early years. "That aspect never worried me personally. People had been killing people for millennia. Whether you hit him over the head with a club, stab him with a spear, or give him a disease he might get anyway—let's not balk at that." One has to look at the whole picture and understand the enemy of the time, says Webb. "We knew other nations, Germany and Japan—and Russia—were working on this, and in self-defense, we had to know what the potential was. Maybe it's not a popular thought today, but I still feel that it was necessary."

Dr. Edwin Fred, Dr. Webb's ultimate boss and the patriarch of WRS, was a veterinarian, as were Merck's top aide, Colonel Arvo Thompson, Fort Detrick founder Dr. Ira Baldwin, and [Dr. William Arthur Hagan (born 1893)] **(who, in addition to spawning Plum Island along with [Dr. Erich Traub], helped Baldwin establish Fort Detrick).** Like MDs, they were trained in infectious disease. But unlike their medical counterparts, the vets weren't ethically bound by an oath that began: "First, do no harm. . . ." **Dr. Webb recalled the mind-sets of the two branches of medicine. "The MDs had this unresolved medical conflict—they weren't supposed to help kill people. Vets, I think, were much more ready than MDs," he says. "There's obviously not the same feelings about the death of their subjects. The mass killing of animals for food is an accepted part of our culture." Unlikely as it seems, the veterinarian was ideally suited for germ warfare research and development.**

Before the attack on Pearl Harbor, a proud isolationism combined with the belief that biological warfare was pure fantasy left the United States woefully unprepared for—and fully exposed to—a real threat. Britain, Canada, Germany, Russia, Japan, and France had initiated germ warfare programs decades earlier. But America made up for the lost time. By war's end it built the largest and most advanced program of them all.

War Research Service launched "Project No. 1" in 1942. [Dr. William Arthur Hagan (born 1893)] was chosen to take the lead. Dean of the Cornell University Veterinary College, Dr. Hagan was an expert on Bacillus anthracis, or anthrax, a disease of sheep and cattle. Also known as woolsorter's disease, because the germ occasionally infected people shearing wool off sheep, it was a rare human affliction—but an exceptionally lethal one. Merck thought it would make a superb bioweapon and commissioned it as WRS's first priority. Anthrax is virulent, but it carries a minimal threat of a boomerang because it is not contagious person to person.

[Dr. William Arthur Hagan (born 1893)] tested many sample strains of anthrax (which WRS codenamed "N") in a four-foot-tall glass apparatus called a vinegar tower. Under the right conditions, anthrax rolls up into a ball and hibernates, or spores, and becomes resistant to threatening environmental conditions like cold temperatures. When returned to a hospitable environment, the hardy spores unfold and come back to life. Hagan found that Strain No. 99 sporulated and retained its high pathogenicity, or ability to spread disease. Dr. Hagan concentrated, purified, and dried Strain No. 99 into enough powder to make a biological bomb. In a small lab in Ithaca, New York, in 1943, Dr. Hagan created the most virulent, concentrated brand of anthrax on Earth. Anthrax became the most important biological agent developed by the American biological warfare program, and Hagan gained the dubious title of the father of weapons-grade anthrax. Late in the war, Great Britain requested samples of Hagan's anthrax, naming it "Hagan's Best."

After the war, [Dr. William Arthur Hagan (born 1893)] became a driving force behind Plum Island's creation (Nazi germ warfare scientist [**Dr. Erich Traub**] would be the other). He used his clout with Congress, the Army, and the USDA to lead the charge for an island virus laboratory. He inspected Plum Island personally and lent his imprimatur to its selection. Upon its inauguration, Hagan bequeathed to the island twelve vials of "N," enough to kill about a million people, considering it takes between 4,500 and 8,000 organisms to cause an infection. To this day, Plum Island denies ever hosting anthrax or working with it, though a now-declassified catalog of deadly germs imported to Plum Island in the early 1950s clearly shows that twelve vials of "N" have been kept in its freezers since the very beginning.

Presumably, [Dr. William Arthur Hagan (born 1893)] believed strongly that his secret wartime research would contribute to a greater good. However, the consequences of "Hagan's Best"—particularly in light of the deadly 2001 anthrax attacks— call into question that belief.

[...]

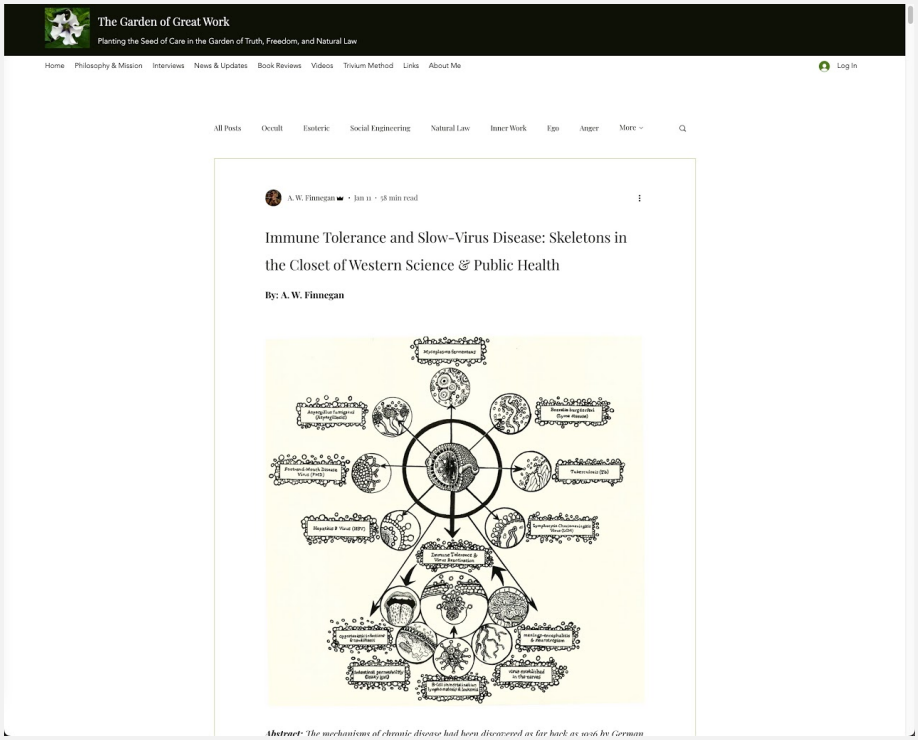
Page 55

Days before, Greenporters had noticed an uncommon buzz along Main Street—strangers darting in and out of shops, eating and drinking heartily at Claudio's and the clam bar out on the pier. Some had distinctive southern and western accents. Others spoke in foreign tongues. But all wore expressions of great anticipation. Locals opened their spare rooms, recently vacated at summer's end, to welcome them. A special ferry was arranged with the New London Freight Lines; the massive LSM transport craft that landed amphibious battalions on the shores of Okinawa during World War II a decade earlier would now land on Plum Island an excited throng of general public and VIPs. Plum Island scientists wearing patriotic red, white, and blue badges pinned to their lapels escorted local residents around the island and inside the heralded chalk-white laboratory. Members of local civic organizations came, too, from the Rotary Club, the Minnepaug Club, and the Southold Tuesday Morning Club, as did national agricultural associations and high school science teachers with their classes in tow.

Master of ceremonies was new Plum Island Director Doc Shahan— smartly dressed in a sharp two-button black suit, crisp white shirt, diagonally striped thin tie, and a handkerchief ironed into a square that peeked out of his breast pocket. Sitting in front of him, in the roped-off seating areas up front, were the VIPs: Plum Island's founding father, [Dr. William Arthur Hagan (born 1893)]; the island's former commanding officer, Army Colonel Donald Mace; top military brass from Fort Detrick, Maryland; and finally a slew of European research scientists. Among them was the director of West Germany's new State Research Laboratory at Tübingen, [**Dr. Erich Traub**].

2021 (Jan) blog post - GardenOfGreatWork - Slow viruses, immune tolerance, Eric Traub

Website : https://www.gardenofgreatwork.org/ / Saved source of this full article : [HW005X][GDrive]



[HW005Y][GDrive]

[...] This scientific discovery which underlies chronic disease was actually discovered by German researcher Erich Traub starting in 1936 with the virus of Lymphocytic Choriomeningitis Virus (LCM), but his contribution was not publicized or credited to Traub, it was instead given to other scientists having to do with something more obscure. [2] This was an act that would bring untold suffering and unnecessary harm for future generations, because it was at this point that science and public health began to turn their backs on a large portion of immunology and one-half of the entire spectrum of disease- chronic disease- and medical progress has been moving nearly in reverse ever since. [3] [...] This act of denying the infectious processes of immune tolerance many years ago, was a pivotal moment in which profiteering and ego became more important than the easing of human suffering, because if the science of immune tolerance had been acknowledged for what it was and the implications that it implied, those in the established science and public health systems would have been forced to rethink the entire paradigm of immunology, vaccination, inflammation, and the very nature of disease itself. This would indicate that the act was done, not just because of the controversial background of its German pioneer, Erich Traub, but because of conflicts of interest involving profiteering and the reputation of establishment science and Big Pharma.

Immune Tolerance, as I will show, is the term that denotes the condition that underlies most if not all of chronic disease, a relapsing/remitting yet progressive condition that ties autoimmune conditions, genetic disorders, endless syndromes, and mental illness to para-infectious mechanisms, through a disrupted immune system and neurotropism, by the proliferation and persistence of a disseminated viral syndrome, where latent viruses already present in the body will reactivate and turn on the body, making the bulk of the condition itself. [5] [6] [7] [8] It is akin to turning one's own microbiome against itself, and no doubt, it is why so many people have so much trouble getting well. [9] This process and proliferation of antigen makes it hard to absorb and take in nutrients, oxygen, and the like, [10] because there is a state of balanced parasitism, and the person will tend to operate at a very low capacity, being malnourished and highly diminished vitality. It is like being somewhat choked out or suffocated at the cellular level. [11]

Immune tolerance will often present without any outward symptoms, but the effect is still damaging due to the parasitic nature of the para-infectious invasion which remains in the body, and active infection can be entirely present without antibodies. [12] Oftentimes this balanced parasitism will turn in favor of the parasitism of virus and antigen. Erich Traub and his mentor Karl Beller noted this in his studies of an AIDS virus of horses, Equine Infectious Anemia Virus (EIA), and the resultant condition was not a true immunity:

It is therefore very questionable whether this is a true immunity. The term "prämunity", which originates from French and becomes more and more natural in German terminology, would probably be more appropriate here. In human and animal protozoal diseases, after the survival of the clinical phenomena existing equilibrium state between parasite and organism, in which the latter is usually resistant to a new infection. Due to damaging influences on the body, this state of equilibrium can change in favor of the parasite. Similar observations were made in [infectious anemia]. [13]

As a result of this truly immoral act of burying the science of immune tolerance, a harmful butterfly effect would take root and branch into every facet of life, every angle of health would be significantly affected, to such an extent that it would change the course of history in untold, unprecedented ways. [14] This fraud would have a cumulative effect that would only grow in intensity over the years, each decade would become more unstable, and to cover these tracks, more unsound explanations would have to be layered over it, and the more out of line with Truth reality became, the more chaotic and unstable its consequences would follow in public health. If there is any hope of fixing this diabolical treason, we must revisit the past, and recall the events in which it took root...

Traub's Discovery of Immune Tolerance

In 1935, a German student studying on a scholarship at the Rockefeller Institute, Erich Traub, was studying the reactivation of latent viruses in equine

encephalomyelitis and swine fever virus (hog cholera), [15] after transmission studies with Richard Shope in Iowa on the pseudorabies virus, a swine herpesvirus unrelated to rabies, [16] after which Traub began a series of experiments in mice, where he was attempting to reactivate a latent virus to cause an epidemic in the mouse colony at the Institute. He injected the mice intracerebrally with foreign proteins or antigen suspended in sterile bouillon, and within short order, an outbreak ensued and infected most of the other mice in the colony, though they all had been otherwise healthy mice before the experiment:

- *During recent work with the viruses of equine encephalomyelitis and hog cholera an infective agent was obtained from white mice which was pathologically and serologically distinct from both viruses. Its origin was not definitely known, but it seemed likely that the natural host of the agent was the mouse, in spite of the fact that in our mouse colony no disease had been previously recognized. In an experiment designed to trace the origin of the infectious agent, 60 five-week-old, healthy-looking mice from our colony were each given an intracerebral injection of a small amount of sterile bouillon. Fifty-one of these mice showed no evidence of illness during the three weeks that they were under observation. Four died in from 3 to 13 days following the inoculation, and three were killed on from the sixth to the eighth day when they showed symptoms similar to those observed in the mice inoculated with the unknown agent. On the sixth day two additional mice that showed photophobia but no other symptoms were killed. From one of these mice no material was obtained for inoculation, but bacteriologically sterile suspensions of the brain of each of the other eight when injected into guinea-pigs caused symptoms which could not be differentiated from those produced by the original material. This experiment, together with others, suggests that the infectious agent is carried by apparently healthy mice in our colony and that symptoms may be brought out by the intracerebral injection of foreign protein. [17]*

The outbreak, however, was not just restricted to the mice, because soon some of the lab technicians and animal keepers contracted the virus and had to be hospitalized, infected with this new virus, which they called Lymphocytic Choriomeningitis Virus (LCM):

- *In 1935 an epidemic of meningitis of a special type (acute lymphocytic choriomeningitis) broke out in the mouse colony in Princeton. Erich Traub recovered a virus to which he gave several years of intensive study before he left the Institute in 1938. [Interestingly], one of the Princeton staff contracted this disease during the mouse epidemic and was studied at The Rockefeller Institute Hospital by T.M. Rivers and T.F.M. Scott, who isolated from him a filtrable agent identical with Traub's. Traub's observations show that the mouse is the natural host of this potentially serious infection, which, fortunately, only occasionally causes illness in human beings. The virus, kept alive in mice by healthy carriers, is acquired by infant mice from their mother while still in utero or shortly after birth. Usually remaining latent, like many other viruses it is occasionally awakened to virulence by some accidental circumstance, causing a disease which spreads with epidemic rapidity. [18]*

This was transmissible and able to spread from animal to human. Traub studied this virus in the colony for several years and noted its persistence in the colony, establishing acute and chronic infections, which set the discovery of immune tolerance in 1936. [19] He noted congenital transmission from mother to newborn, where the virus would persist and become increasingly more silent in the colonies, [20] but later in life the infected stock would present with blood cancers and leukemia, [21] as well as chronic, progressive neurodegenerative diseases in what was later termed early and late onset disease, [22] resembling debilitating chronic conditions that progressively destroyed the central nervous systems of these mice as they got older. [23] The study would be some of the early models of progressive neurodegenerative chronic diseases which would later become so prevalent in Western countries. [24]

Traub's seminal work on LCM virus became the model of an immunosuppressive, relapsing chronic disease, which would become so prevalent in Western societies in later generations. It was termed immune tolerance, in that the body's immune system was not immune to the virus, as in actively neutralizing it, but rather tolerized to the virus, meaning it would not respond to it, little to no antibodies would be produced after the initial infection, and the virus would be able to continue its replication and spread, establishing in the infected subject a slow-virus disease. [25] The slow-virus disease meant that the disease took a much slower, chronic course. The mother would transmit the virus to the young, and the young would be born tolerized to the virus, not showing outward symptoms but having a slow, chronic infection which later in life would turn to chronic disease and result in neurodegeneration, lymphomatosis and cancers. [26] [27]

Traub noticed that antibodies were minimal in the infected colonies, even though they were carriers and shedders of active virus. However, when the rest of the stock was more or less immune tolerant, it would be hard to tell this was the case, but the effect could be spotted if these mice were put into an uninfected colony. [28] Another phenomenon observed in the infected stock, was that the virus only remained in the blood for several weeks and then disappeared from the blood, taking to organ, tissues, brain, and some of the secretions and excretions. [29]

[...]

One of Traub's protégés in Germany, Zvonimir Dinter, writing in a later article submitted to the German medical journal Berliner und Münchener tierärztliche Wochenschrift in 1984, told his experience working with Traub, and suggested that he should have been part of the Nobel Prize for his discovery of immune tolerance in LCM virus:

- ***Traub, "who started the whole thing."** The TRAUB's lived on Riems in a mansion when I entered the villa, it was already twilight, you could hear the monotonous splashing of the Baltic Sea, it was a mood where memories are easily awakened. After coffee with cake, **TRAUB told me how he came to the US when [Dr. Richard Edwin Shope (born 1901)], the famous virologist from the Rockefeller Institute, spent his time in Giessen, among other places, in the early 1930s.** Zwick's work on the Borna Disease attracted researchers who poured in... like TRAUB, who was already considered a student proficient in English, to SHOPE he was assigned as a language facilitator. **SHOPE soon saw TRAUB's interest and talent in viral research and invited him to the Rockefeller Institute. Shope was right in his assumption.** Much later (1959), he told me himself.*
- *TRAUB's talent soon starts after he began research at Princeton, the Rockefeller Institute branch. The topic to which he dedicated his work in the first place was the behavior of the mouse lymphocytic choriomeningitis virus. A number of communications that began in Science and continued in the Journal of Experimental Medicine, and which are generally regarded as classical today, since "... many pioneering series of investigations in many of the key biological properties of the virus were established. "(1) **When BURNET and MEDAWAR received the Nobel Prize in 1960 for their seminal immunological work, I, as a veterinarian and TRAUB's employee, would have liked to see that he, too, had participated in the prize because what TRAUB already described in 1936 and 1939, was the mode of origin of the condition, which was later baptized with "immune tolerance" and which represented a pillar of Burnet's clone-selective theory (2). The American researcher HOTCHIN has appreciated TRAUB's dedication by giving him his monograph with the words: "To ERIC TRAUB who started the whole thing" (3). [148]***

The condition and its process would also be increasingly more complex as vaccinations were stacked on top of those already dealing with one or several chronic viral infections congenitally transmitted from mother to newborn, with no outward signs of disease upon birth, tolerized to virus, yet the effect of infection in the lifetime of that individual would be cumulative, [149] with early and late onset disease, [150] while the increasing number of vaccines given in the schedule adds infinitely more burden to an already confused and exhausted immune system, [151] it is akin to trying to put a fire out with gasoline.

Many people today can think of several families with autistic or mentally ill children, and the effect on a nation, if such angles were used in special weapons of bioterrorism geared for strategic, long-term attacks, a target country would be plagued by chronic health problems and mental illness, with failure to detect infection, and simply labelled 'somatoform' or 'mentally ill' with no infectious disease, [152] yet was very likely dealing with one or several infections. The course of disease by the immune tolerance complex would present only general similarities between subjects, with different courses and outcomes for each. [153] The result could be so various that the condition is grouped into many separate conditions between physical and mental health, leaving health practitioners and public health systems little to no understanding of the causal factors of immune tolerance and neurotropism.

The effect on mental health would present with varying degrees and combinations of neurotropism and damage to the brain, [154] expressing mood swings, lack of organization and cognitive abilities, irritability, rage, senseless acts of violence, irrational behaviors, lowered inhibitions resulting in an increase in criminal activity or deranged behavior, such that is very common in the headlines of Western nations today. [155] Simply put, to target the brain of a population would affect the societal structure as a whole, because the chaos of one effects the many, and when large numbers of unstable citizens with unpredictable and irrational or violent behaviors from neurotropic infections of the brain and CNS are scattered throughout its society presenting in this manner, [156] that is, infections passing congenitally through generations gaining more momentum in the subsequent generations infected, [157] the implications are systemic and far-reaching, tearing at the fabric of the society itself, as we are seeing the effects today, with Western countries leading in chronic disease and mental illnesses. [158] [159]

[...]

In the words of Dr. Erich Traub's protégé, Werner Schafer, a telling revelation spoken at a conference for the Office of Naval Research in Kansas in 1962 may once again hold the key to understanding the situation, albeit through the overtones of unbelievable irony:

- *I hope I have been able to demonstrate that the concentrated action of our group on a very small sector of animal virology was not quite unsuccessful but has created at least some ideas of possibly a more general importance for the fight against virus diseases.* ***At the present time, when concentrated scientific activity is often directed toward the destruction and not toward the preservation of life, one might fear that the phrase "concentration is the prudence of life" will someday be inverted into "concentration is the stupidity of life."*** *To avoid such an occurrence, scientific workers all over the world would do well to return to the ethics of the stoicist Seneca, who noted in his Naturales Quaestiones that "by exploration of the facts natural sciences base the moral life of man on a solid foundation; they liberate him from fear and let him recognize the glory and magnitude of divine creation."*

- Dr. Werner Schäfer, ONR lecture, presented at the Annual Meeting of the American Society for Microbiology, Kansas City, Mo., 6 May 1962. [202]

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Frederick Trump (born 1869)

Wikipedia Frederick Trump

Born - 1869

Died - May 30 1918 (Died in the 1918 Spanish Influenza)

Family -

- Sons:
  - Fred Christ Trump (born 1905)
  - John George Trump (born 1907)

Wikipedia (saved) - 2020-05-21-wikipedia-org-frederick-trump.pdf

https://en.wikipedia.org/wiki/Frederick_Trump "Fred trump"

1885 (Oct) - Sailing from Germany to the United States

Blair, Gwenda. The Trumps: Three Generations of Builders and a Presidential Candidate (pp. 31-32). Simon & Schuster. Kindle Edition.

He left from Bremen, nearly 350 miles north of Kallstadt. The first port to require posted schedules and to take steps to ensure passenger safety and well-being, Bremen now lived off the north German immigrant trade. Like all German cities, it was a bustling but orderly place.18 All visitors spending more than twenty-four hours in the city were required to register with the police, and the streets were so clean that one could almost literally have eaten off them. Friedrich Trump spent his last days on German soil in one of Bremen's scores of boardinghouses, all filled to capacity with would-be Americans,19 as well as an abundant supply of Bauernfanger ("trappers of greenhorns"), ready to take advantage whenever possible.20 For about $20,21 Friedrich Trump bought not a berth but a space in steerage class on the SS Eider, the next boat out from the North German Lloyd Lines. On October 7, 1885, he boarded what was a modern steamship and soon was in the gray, frigid North Sea. Conditions were better than they had been before the steam age, but the voyage was still crowded and unpleasant for Friedrich.22 In calm weather the ship provided one scanty meal a day. Everything else was up to the passenger, who could cook on the deck if the ocean spray did not swamp the fire. Drinking water was in short supply; water for baths was nonexistent.23 The stink of "ship" quickly pervaded the air, and the sight of steerage passengers huddled over the weak fires on deck was depressing. Ten days after his departure, Friedrich Trump stood on the deck, a hawk-faced boy beneath a sheaf of light hair, waiting for his first glimpse of New York Harbor.

1891 - After the great Seattle fire (of 1889), Fred Trump decides to move from New York to Seattle

https://crosscut.com/2016/07/trump-family-roots-seattle-grandfather

The exact spot to look for opportunity [in America] has moved around: In the early 1890s it was in Seattle. The rebirth of the city after 1889's Great Fire called to people of all types in an urban version of "Go west, young man." It doubled Seattle's population in two years, adding 25,000 people.

[...] Frederick Trump [...] was drawn into Seattle like a moth after the fire. His time here has generated some recent controversy, with a number of stories seeking to paint him as a bit of an exploiter or worse.

[Great Seattle Fire : June 6, 1889 .. https://en.wikipedia.org/wiki/Great_Seattle_Fire]

Frederick Trump was cutting hair in New York, living with extended family when the Seattle fire made the news nationwide. He read about it perhaps in the New York Times or maybe in the New Yorker Staats-Zeitung in his native German. Trump [being born in 1869] was just 20 [at the time of the Seattle fire of 1889].

A few days after the [Seattle] fire, the Times reprinted a quote of Seattle city leader H. H. Dearborn, "The fire will prove a blessing in disguise." The follow-up a year later put the reconstruction in numbers: 465 buildings; 69,425,000 bricks; 60 wharves; and $10,000,000 of construction. "Seattle is a far handsomer and better city to live in than the old Seattle was," the Times reported.

Trump came to Seattle a year later, toward the end of 1891. He was listed in city directories and a few Seattle Post-Intelligencer advertisements [[See my own clip below... [HN00YQ][GDrive]]], so we know what he was doing. He switched from cutting hair to serving meals, operating a restaurant called The Dairy. It was just east of the northeast corner of Occidental and Washington, which is in today's Pioneer Square, and Trump lived in a hotel called Pacific House at the northwest corner of that intersection.

He arrived to a divided city, a fact that provides some complications for trying to understand Trump's time in Seattle. On the one hand there was no shortage of saloons, fight venues, gambling houses, or brothels. On the other hand, a coalition of progressives and moralists fought to clean up the city. While Trump was in Seattle, district attorney James T. Ronald was elected mayor.

Ronald fired the police chief on his first day in office and made sure state anti-gambling laws were enforced for the first time. Even Pioneer Square, now remembered simply as a hive of villainy, had a split personality. Used goods stores, pawnshops, outfitters and other upstanding merchants were shoulder to shoulder with the more unsavory venues.

*Trump's restaurant had good neighbors. He shared a building with several other restaurants and a handful of pawnbrokers. In a twist of fate that would make John Oliver smile, two doors over from Drumpf was a **jeweler named Rumpf**. Rumpf partnered with Joseph Mayer, who went on to build the street clocks that Seattle was once noted for.*

In 1891 the atmosphere was quite a bit different across the street where Trump lived. Downstairs from Pacific House were two saloons. The clink of poker chips drifted out on cigar smoke from one of them, and from the basement. These were two of Seattle's five unofficially sanctioned gambling houses. [...]

*We don't know much about Trump's restaurant. His predecessor **Spiro Bisazza** ran an ad for it in 1890 as **the Poodle Dog**, touting a new establishment with long hours, quality ingredients, meals for prince or pauper, and accommodations for women and families away from the predominately male clientele. It's probably safe to assume Trump operated under the same principles.*

1892 (Jan 30) - Fred Trump: Looking for help in his restaurant (newspaper ad)

Full newspaper page : [HN00YP][GDrive]

The Seattle Post-Intelligencer (Seattle, Washington) · 30 Jan 1892, Sat · Page 6

WANTED—PARTNER.

WANTED—PARTNER WITH $1,500 TO take half interest and management of an established business; money wanted to enlarge plant; investigate this. Address I. N. H., Post-Intelligencer.

WANTED—PARTNER IN ONE OF THE best paying restaurants in this city. Call on or address F. Trump, 208 Washington street.

WANTED—PARTNER FOR LOGGING BUSiness; large body of timber secured on salt water; camp, team and outfit; $2,500 capital. Address Logger, Box 682, Seattle, Wash.

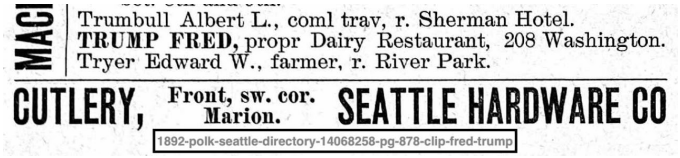
[HN00YQ][GDrive]

1892 (printed in 1893 Seattle Directory) - Fred Trump moves in 1893 to Monte Cristo

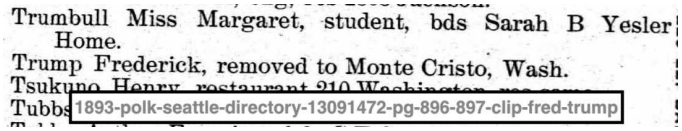
Image of full page from directory - [HD0026][GDrive]

"Fred trump - proprietor - dairy restaurant - 208 Washington"

Image of full page from directory - [HD002A][GDrive]


Trumbull Albert L., coml trav, r. Sherman Hotel.
TRUMP FRED, propr Dairy Restaurant, 208 Washington.
Tryer Edward W., farmer, r. River Park.
CUTLERY, Front, sw. cor. Marion. SEATTLE HARDWARE CO
1892-polk-seattle-directory-14068258-pg-878-clip-fred-trump

1892 (for 1893 Seattle Directory)
[HD0027][GDrive]


Trumbull Miss Margaret, student, bds Sarah B Yesler Home.
Trump Frederick, removed to Monte Cristo, Wash.
Tsukuno Henry, restaurant 210 Washington
Tubbs
1893-polk-seattle-directory-13091472-pg-896-897-clip-fred-trump

1893 (for 1894 Seattle Directory)
[HD002B][GDrive]

1894 (for year 1895) - No Fred Trump in Seattle directory

1897 (for 1898) - No Fred Trump in Seattle directory

1898 (for 1899) - Fred Trump BACK in Seattle directory

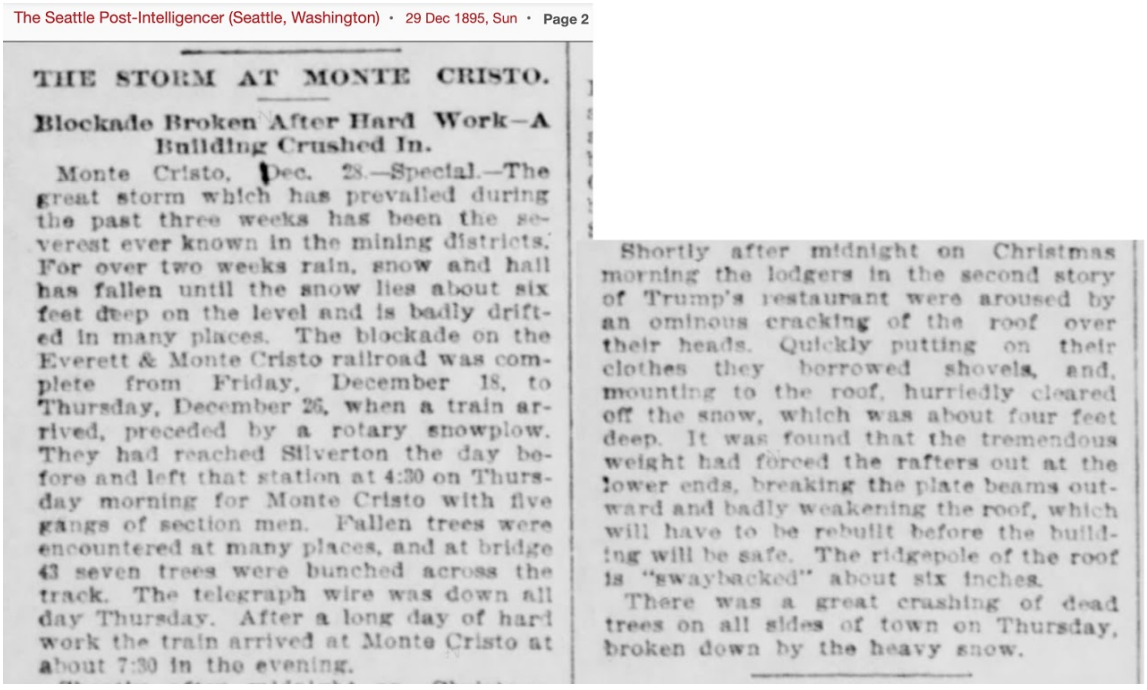
https://www.ancestry.com/imageviewer/collections/2469/images/13607713?treeid=&personid=&hintid=&usePUB=true&usePUBJs=true&_ga=2.100929543.783907915.1596576946-1615111073.1596074686&pId=751560425

Restaurant 207 Cherry ... Room 220 Marion

1899 (for 1900) - No Fred Trump in Seattle directory

1895 - Dec 29 -

Full newspaper page : [HN011E][GDrive]


The Seattle Post-Intelligencer (Seattle, Washington) · 29 Dec 1895, Sun · Page 2

THE STORM AT MONTE CRISTO.

Blockade Broken After Hard Work—A Building Crushed In.

Monte Cristo, Dec. 28.—Special.—The great storm which has prevailed during the past three weeks has been the severest ever known in the mining districts. For over two weeks rain, snow and hail has fallen until the snow lies about six feet deep on the level and is badly drifted in many places. The blockade on the Everett & Monte Cristo railroad was complete from Friday, December 18, to Thursday, December 26, when a train arrived, preceded by a rotary snowplow. They had reached Silverton the day before and left that station at 4:30 on Thursday morning for Monte Cristo with five gangs of section men. Fallen trees were encountered at many places, and at bridge 43 seven trees were bunched across the track. The telegraph wire was down all day Thursday. After a long day of hard work the train arrived at Monte Cristo at about 7:30 in the evening.

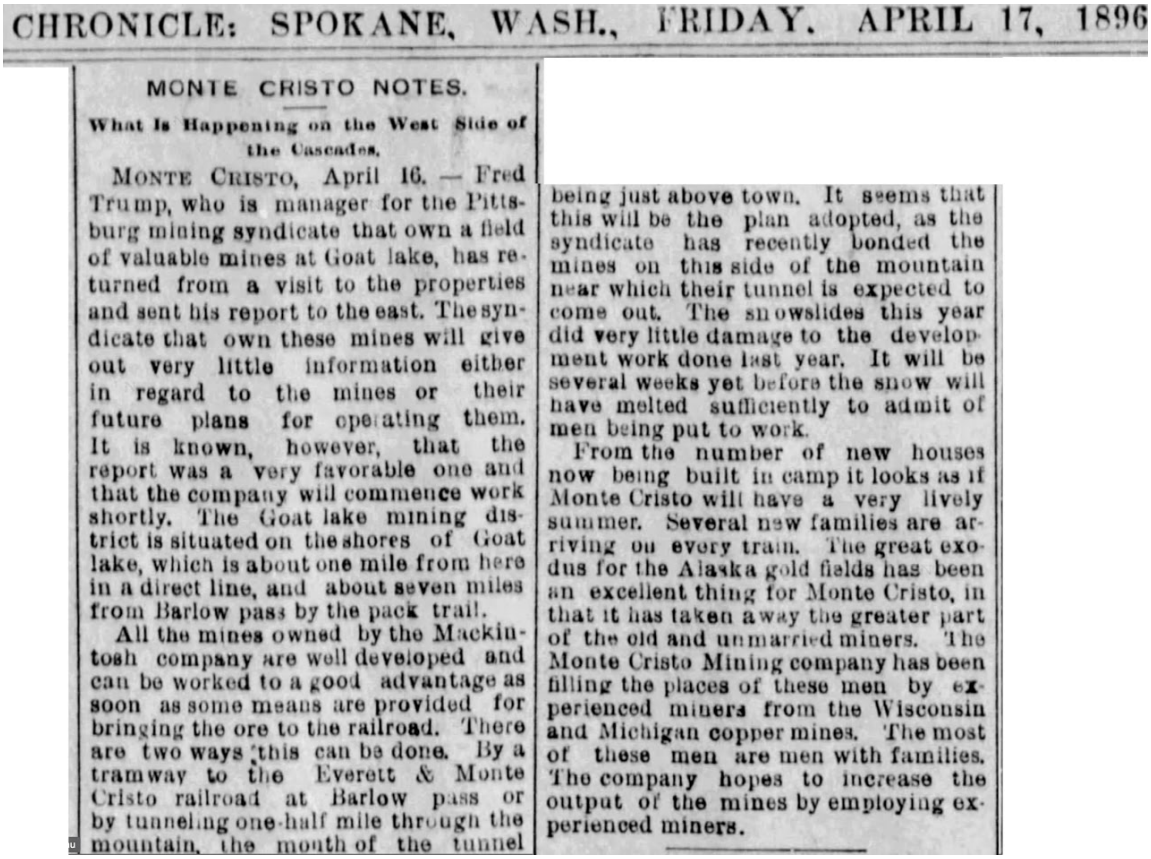
Shortly after midnight on Christmas morning the lodgers in the second story of Trump's restaurant were aroused by an ominous cracking of the roof over their heads. Quickly putting on their clothes they borrowed shovels, and, mounting to the roof, hurriedly cleared off the snow, which was about four feet deep. It was found that the tremendous weight had forced the rafters out at the lower ends, breaking the plate beams outward and badly weakening the roof, which will have to be rebuilt before the building will be safe. The ridgepole of the roof is "swaybacked" about six inches.

There was a great crushing of dead trees on all sides of town on Thursday, broken down by the heavy snow.

[HN011F][GDrive]

1896 (April 17)

Full page : [HN00X0][GDrive]



CHRONICLE: SPOKANE, WASH., FRIDAY, APRIL 17, 1896

MONTE CRISTO NOTES.

What Is Happening on the West Side of the Cascades.

MONTE CRISTO, April 16. — Fred Trump, who is manager for the Pittsburg mining syndicate that own a field of valuable mines at Goat lake, has returned from a visit to the properties and sent his report to the east. The syndicate that own these mines will give out very little information either in regard to the mines or their future plans for operating them. It is known, however, that the report was a very favorable one and that the company will commence work shortly. The Goat lake mining district is situated on the shores of Goat lake, which is about one mile from here in a direct line, and about seven miles from Barlow pass by the pack trail.

All the mines owned by the Mackintosh company are well developed and can be worked to a good advantage as soon as some means are provided for bringing the ore to the railroad. There are two ways this can be done. By a tramway to the Everett & Monte Cristo railroad at Barlow pass or by tunneling one-half mile through the mountain, the mouth of the tunnel being just above town. It seems that this will be the plan adopted, as the syndicate has recently bonded the mines on this side of the mountain near which their tunnel is expected to come out. The snowslides this year did very little damage to the development work done last year. It will be several weeks yet before the snow will have melted sufficiently to admit of men being put to work.

From the number of new houses now being built in camp it looks as if Monte Cristo will have a very lively summer. Several new families are arriving on every train. The great exodus for the Alaska gold fields has been an excellent thing for Monte Cristo, in that it has taken away the greater part of the old and unmarried miners. The Monte Cristo Mining company has been filling the places of these men by experienced miners from the Wisconsin and Michigan copper mines. The most of these men are men with families. The company hopes to increase the output of the mines by employing experienced miners.

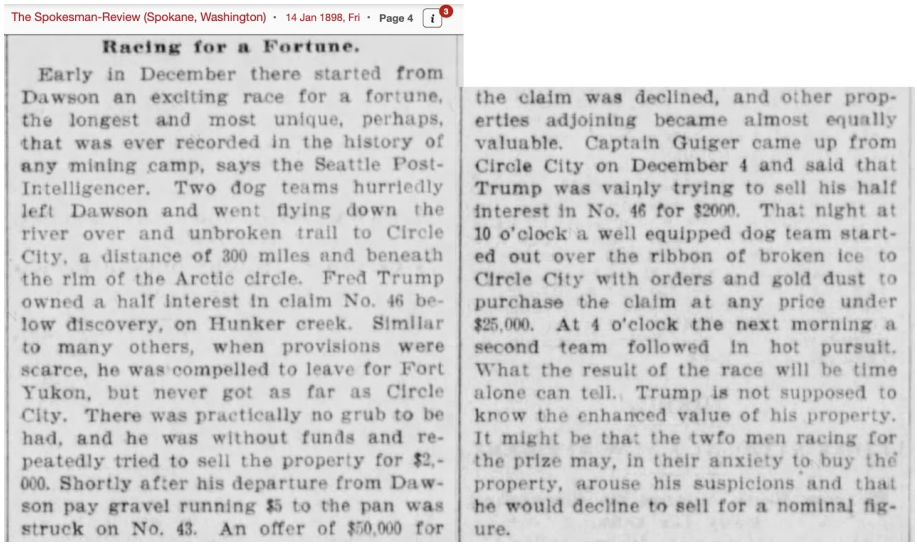
[HN00X1][GDrive]

1896 (Oct 18) - Fred Trump return from Germany

[HN011G][GDrive]

1898 (Dec 14) - Dog sled racing ???

Full newspaper page : [HN011C][GDrive]



The Spokesman-Review (Spokane, Washington) · 14 Jan 1898, Fri · Page 4

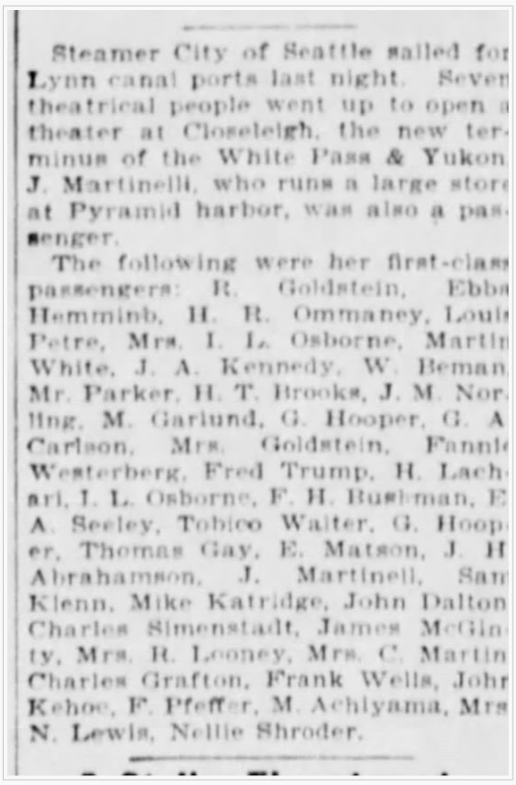
Racing for a Fortune.

Early in December there started from Dawson an exciting race for a fortune, the longest and most unique, perhaps, that was ever recorded in the history of any mining camp, says the Seattle Post-Intelligencer. Two dog teams hurriedly left Dawson and went flying down the river over and unbroken trail to Circle City, a distance of 300 miles and beneath the rim of the Arctic circle. Fred Trump owned a half interest in claim No. 46 below discovery, on Hunker creek. Similar to many others, when provisions were scarce, he was compelled to leave for Fort Yukon, but never got as far as Circle City. There was practically no grub to be had, and he was without funds and repeatedly tried to sell the property for $2,000. Shortly after his departure from Dawson pay gravel running $5 to the pan was struck on No. 43. An offer of $50,000 for the claim was declined, and other properties adjoining became almost equally valuable. Captain Guiger came up from Circle City on December 4 and said that Trump was vainly trying to sell his half interest in No. 46 for $2000. That night at 10 o'clock a well equipped dog team started out over the ribbon of broken ice to Circle City with orders and gold dust to purchase the claim at any price under $25,000. At 4 o'clock the next morning a second team followed in hot pursuit. What the result of the race will be time alone can tell. Trump is not supposed to know the enhanced value of his property. It might be that the twfo men racing for the prize may, in their anxiety to buy the property, arouse his suspicions and that he would decline to sell for a nominal figure.

[HN011D][GDrive]

1899 (Nov 16)

Fred Trump Seattle to Yukon



Steamer City of Seattle sailed for Lynn canal ports last night. Seven theatrical people went up to open a theater at Closeleigh, the new terminus of the White Pass & Yukon. J. Martinelli, who runs a large store at Pyramid harbor, was also a passenger.

The following were her first-class passengers: R. Goldstein, Ebbe Hemminb, H. R. Ommaney, Louis Petre, Mrs. I. L. Osborne, Martin White, J. A. Kennedy, W. Beman Mr. Parker, H. T. Brooks, J. M. Norling, M. Garlund, G. Hooper, G. A Carlson, Mrs. Goldstein, Fannie Westerberg, Fred Trump, H. Lachari, I. L. Osborne, F. H. Rushman, E A. Seeley, Tobico Walter, G. Hooper, Thomas Gay, E. Matson, J. H Abrahamson, J. Martinell, San Klenn, Mike Katridge, John Dalton Charles Simenstadt, James McGinty, Mrs. R. Looney, Mrs. C. Martin Charles Grafton, Frank Wells, John Kehoe, F. Pfeffer, M. Achiyama, Mrs N. Lewis, Nellie Shroder.

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WScout · 17 Jun 2020

CLIPPED FROM
The Seattle Star
Seattle, Washington
16 Nov 1899, Thu · Page 3

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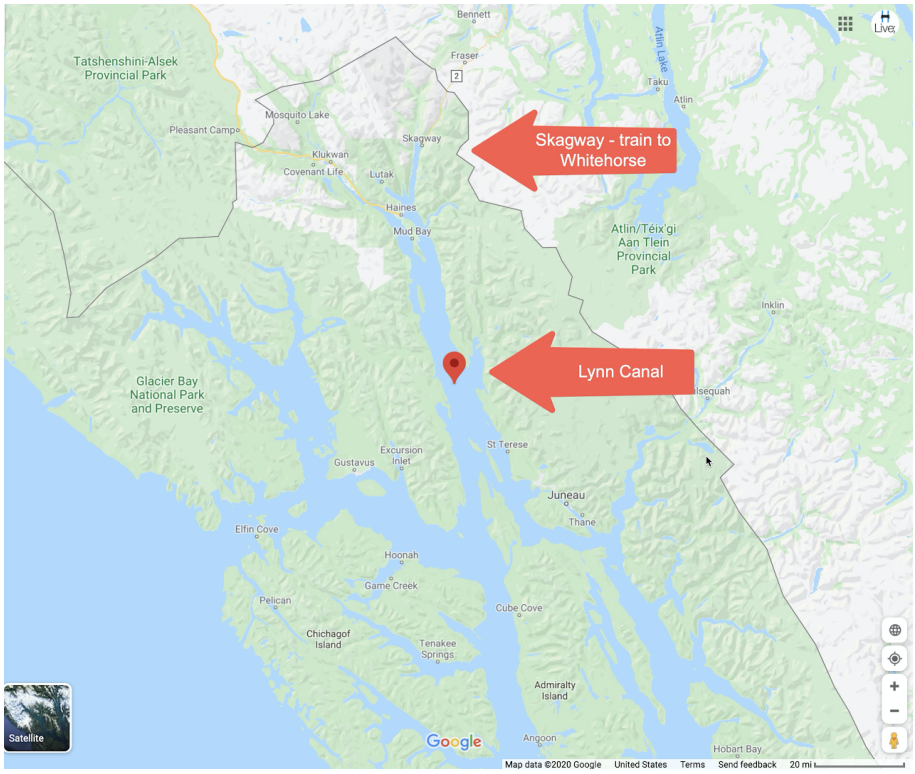
[HN011H][GDrive]



Location of **Lynn Canal** relative to **Skagway**, where the new train to Whitehorse starts

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1901 (March 13) - Fred Trump hotel in whitehorse canada

Full page : [HN00X4][GDrive]

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2 THE WHITE HORSE STAR, MARCH 13, 1901.

Shipyards are Busy.

At Dawson as well as at White Horse much work is being done in the repairing and remodeling of boats. There are many lower river boats on the ways near that city, several being remodeled to operate on the upper river next summer.

The White Horse Navigation Company will operate the Light, Tyrell and Lightning, the latter now being put in condition at the C. D. Co's ways below Dawson.

The Columbia Navigation Company, which owns the Pilgram. now on the lower river, and which lost the Sovereign during the storm at Nome last fall, will operate the Monarch, which now lies at steamboat slough in charge of Captain Leech, between Dawson and White Horse. The Monarch transhipped the American flag for the British, and made one trip to White Horse last fall. For two years previous she has been on the down river run

The Gold Star, owned by Captain

The Hotel Savoy
FRONT ST., WHITE HORSE.
Good Beds.
Reasonable Prices.
Best Meals in Town.
First-Class Bar
IN CONNECTION.
MRS. M. J. TAYLOR, Proprietor.

river their steamers will continue to burn wood. He expects a great cut in freight rates next year.

The first number of the Alaska-Yukon Mining Journal, published at Skagway by the Alaska-Yukon Publishing Company, with H. C. Diers as editor and O. M Kinney, as manager, has just come to hand. The publication will be monthly and devoted exclusively to the mining, financial, transportation and commercial interests of

The Arctic HOTEL AND RESTAURANT,
FRONT ST., WHITE HORSE,
Newest, Neatest, and Best Equipped North of Vancouver.
FRED TRUMP, Prop.
LUMBER

[HN00X5][GDrive]

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http://www.explorenorth.com/library/history/bennett-historic_hotels.html

- **Arctic Restaurant and Hotel** (Bennett): 1899-1900
- - Wikipedia: "In July 1897 after hearing of the Klondike Gold Rush, Frederick (Friedrich) Trump, grandfather of American businessman Donald Trump, ... in April 1898 [incorrect - should be April 1899] moved to Bennett, British Columbia, running the Arctic Restaurant and Hotel, which offered fine dining and lodging in a sea of tents. The Arctic was originally housed in a tent itself, but demand for the hotel and restaurant grew until it occupied a two-story building. When describing the Arctic in a letter to the Yukon Sun newspaper, Trump wrote: 'For single men the Arctic has excellent accommodations as well as the best restaurant in Bennett, but I would not advise respectable women to go there to sleep as they are liable to hear that which would be repugnant to their feelings - and uttered, too, by the depraved of their own sex'. The Arctic House was one of the largest and most decadent restaurants in that region of the Klondike, offering fresh fruit and ptarmigan in addition to the staple of horsemeat."
- - opened May 1899 on the main street, in a tent with a wooden false front.
- - late 1899, a 2-storey wooden building was constructed.
- - December 1899, advertising "Fresh Oysters in Every Style. Elegantly Furnished Private Boxes for Ladies and Parties."
- - in the summer of 1900, the building was floated to a new site near the railway station.
- - January 1901, J. L. Gage prop. (*Whitehorse Star*, Jan. 2)
- - January 1901, Mrs. Gage was complimented for her hospitality by the passengers of a WP&YR train which was held up at Bennett from Sunday afternoon until Tuesday afternoon due to heavy snow (once the train left Bennett, it still took 18 hours to reach Skagway) (*White Horse Tribune*)
- - March 1902, still operating (*White Horse Tribune*, March 8)

https://www.bloomberg.com/features/2016-trump-family-fortune/

Donald Trump's grandfather Friedrich Trump ran a restaurant, bar, and brothel in British Columbia.

By Natalie Obiko Pearson | October 26, 2016

Photographs by Ben Nelms/Bloomberg

Buried in a ghost town in Canada's subarctic are the roots of the family fortune that paved Donald Trump's path to prominence.

Only shards of glass bottles remain on the lake shore in Bennett, British Columbia—remnants perhaps of the lively establishment operated by Trump's grandfather that was known for good food, booze and ready women. A church sits further up the slope, its lonely spire peeking out from a thicket of pines.

Friedrich Trump, circa 1918.

Source: Wikipedia

Bennett was once a thriving transit point for prospectors in the Klondike gold rush at the turn of the 20th century, and Friedrich Trump made a killing running a restaurant and bar. The nest egg he generated in just two years grew into the fortune that has supported his grandson's bid for the U.S. presidency.

"Who else can say that someone running for president of the United States of America owes his fortune to your hometown?," says Scott Etches, 55, a shop owner hawking Trump t-shirts in Whitehorse, Yukon, about 100 kilometers (62 miles) north of Bennett. "It doesn't matter whether you support or oppose Trump. It's actually a great history."

More than a century after Trump's grandfather left the Yukon, Canadian developers and entrepreneurs are torn over whether to exploit the connection to one of the most recognized surnames on the planet. A luxury wilderness resort is planned for Bennett, complete with a lodge that would look just like Trump's watering hole.

"There's so much history, so many stories around here—Trump is just one of them," says Nelson Lepine, who runs the development arm of an indigenous group leading the project.

The Trump family's gold-rush story began when Fred, as he was known, left Germany at the age of 16 with little more than a suitcase. He headed to New York to work as a barber before venturing west in search of riches. Following stints in Seattle and now-defunct Monte Cristo, the gold fever carried him to Bennett, where he and partner Ernest Levin built the Arctic Restaurant, which touted itself as the best-equipped in town.

It was open around the clock with "private boxes for ladies and parties," according to an advertisement in the Dec. 9, 1899 edition of the *Bennett Sun* newspaper. The boxes typically included a bed and scale for weighing gold dust used to pay for "services," according to a three-generational biography by Gwenda Blair, who traced the origins of the Trump family's wealth. Of course, in the rough-and-tumble frontier towns of that era, the Arctic's business model built on food, booze and sex was common.

The Arctic sat a stone's throw from Bennett Lake in the heart of the township, amid a row of similar establishments and a sea of white canvas tents set up by prospectors. It was constructed of milled lumber and stocked fresh oysters, extravagant luxuries in a place where supplies were brought over arduous overland routes.

"I would advise respectable women travelling alone, or with an escort, to be careful in their selection of hotels at Bennett," according to a letter penned by "The Pirate" in the *Yukon Sun* on April 17, 1900. For single men, the Arctic offered excellent accommodations but women should avoid it "as they are liable to hear that which would be repugnant to their feelings and uttered, too, by the depraved of their own sex."

Trump quickly saw where the real profits lay amid the gold-rush frenzy. An estimated 100,000 prospectors set out for the Klondike, of which only a third actually made it, and a mere 4 percent ever struck gold. Given those odds, Trump's willingness to lay down his pick was "a shrewd move," according to Blair. "He was mining the miners."

Bennett was a key hub for prospectors, who trudged from Alaska across frozen mountains and floated rickety rafts down the treacherous rapids of the Yukon River to Dawson City in search of elusive gold. The town lost its allure with the construction of a railway link from Skagway, Alaska to Whitehorse, allowing miners to bypass Bennett.

In response, Trump dismantled the restaurant and its precious lumber and rebuilt it in Whitehorse. A photo in Blair's book shows a mustachioed Fred Trump in a white apron. He's standing at the bar near a wall of drapes behind which women, known as "sporting ladies," entertained miners in privacy.

Trump was a rich man when he left Whitehorse in 1901 to return to his native Kallstadt, Germany, where he later deposited savings of 80,000 marks in the village treasury, Blair recounts. Unable to regain German citizenship, he returned to New York with his riches. That amount—equivalent in purchasing power to about half a million euros in 2014—ended up funding the Trump family's first residential real estate investments in the New York area, later carried on by his son Fred and grandson Donald.

Trump, who claims in his memoir that his grandfather was Swedish, told the *New York Times* in August that Blair's portrayal of Friedrich's business was "totally false." Trump's spokeswoman, Hope Hicks, didn't reply to two voice mails and an e-mail requesting comment.

2017 (March 26) article - Trump's Grandfather Worked Under John D. Rockefeller, Uncle Translated Tesla's Stolen Work

See [HW0032][GDrive]

Before you trust a power player, read up on their history.

The history, family, and associations of a power player are essential prerequisite info, if a person truly wants to understand who they are and what they do

The history, family, and associations of a power player are essential prerequisite info, if a person truly wants to understand who they are and what they do.

Since we're forced to deal with President Donald Trump, let's take a look at what he was born into. He inherited millions of dollars from his US military affiliated real estate baron father, Fred Trump.

His uncle, John G. Trump, was an engineer working with the military industrial complex (https://themindunleashed.com/2017/01/institutes-technology-exposed-academias-role-war-science-system.html) affiliated school MIT, and examined brilliant engineer Nikola Tesla's stolen papers after his death.

Donald Trump's grandfather Frederick Trump (https://en.wikipedia.org/wiki/Frederick_Trump) was an immigrant from Germany to the US. Fred and John G. Trump inherited the foundation of their opportunity from Frederick.

Frederick Trump had problems with immigration in his lifetime, and was denied the ability to again become a German citizen, after fleeing to the US to dodge military service (not that there is anything wrong with avoiding serving in the military of a government you don't believe in).

At the age of 16, in 1885 Friedrich Trump landed in New York after emigrating from Kallstadt, Germany. He made a fortune (https://www.politico.com/magazine/story/2015/08/the-man-who-made-trump-who-he-is-121647) in the Pacific Northwest during the gold-rush era, selling restaurant rooms with prostitutes and alcohol to miners trying to find gold.

He worked under the direction of John D. Rockefeller's investment near Seattle in the last decade of the 1800's. According to an article by researcher Gwenda Blair published in Politico):

- *"Friedrich Trump's Seattle restaurant flourished, but he kept his ears open —another aspect of the Trump family MO. In 1894, he heard that John D. Rockefeller, the wealthiest man in the world, was bankrolling a mining operation in a small town north of Seattle named Monte Cristo. Without delay, Trump scoped out the best location there, secured it by filing a bogus mineral claim, built a hotel on the parcel even though it didn't actually belong to him, and began giving the customers, once again, exactly what they wanted: plenty to eat, lots to drink and of course women.*
- *When Monte Cristo proved slow to deliver on its promise, Rockefeller publicly reiterated his support while secretly arranging an exit. In the summer of 1897, Trump also decided to cash out and return to Seattle—making him, along with Rockefeller, one of the few investors in Monte Cristo to end up winners rather than losers."*

Although this doesn't imply any kind of close relationship between Rockefeller and Trump, it is telling in some way that they both made their fortunes in the same atmosphere. It paints a picture of where power today originates and how it inherently behaves.

Whether or not John D. Rockefeller had a relationship with Friedrich Trump, Donald Trump today has a relationship with Rockefeller's Standard Oil corporation, which is now ExxonMobil.

Donald Trump's Secretary of State is Rex Tillerson, ex-Exxon executive.

Continuing from the article:

- *"In the New Arctic Restaurant and Hotel, which he opened in the raw new town of Bennett in May 1898, he again offered 'private boxes' for ladies, facilities that included not only a bed, but a scale for weighing the gold dust used to pay for services.*
- *It was the best restaurant in town, one newspaper reported at the time, but added that it 'would not advise respectable women to go there to sleep as they are liable to hear that which would be repugnant to their feelings and uttered, too, by the depraved of their own sex.'"*

The story is continued by Wikipedia (https://en.wikipedia.org/wiki/Frederick_Trump):

"He bought all the necessary supplies, sold off his remaining property in Monte Cristo and Seattle, and transferred his 40 acres in the Pine Lake Plateau to his sister Louise. In 1900, Louise sold the property for $250. In the winter following Trump's departure from Monte Cristo, the town suffered some of the worst avalanches and #oods in its short history, and this time, Rockefeller refused to reconstruct the almost vital railroad to Everett."

The same author wrote another article in the Week (https://theweek.com/articles/580042/ancestral-immigrant-historyantiimmigrant-crusader-donald-trump), continuing the story into the 20th

Century. It says:

- *"Friedrich died in May 1918, just before the end of World War I. There was a rising tide of anti-German sentiment in America, manifested in accusations of disloyalty against people with German backgrounds, diatribes against music by German composers, even bon!res of books by German authors. People with German names changed them, and readership plummeted for the nation's hundreds of German-language publications.*
- *This xenophobic atmosphere had a profound impact on Friedrich's older son, Fred (named a"er Friedrich but in an Americanized form). Only 12 years old when his father died, Fred was now the man of the house, and he began to tamper with his family history — that is, to tell it like it wasn't. Despite growing up in a German-speaking home and speaking his parents' language on visits to Kallstadt, he said he didn't know German, and by the beginning of World War II, he said his family was from Sweden."*

So that brings us to Donald Trump's father, Fred Trump. When Fred Trump's father Freidrich died, 13 year old Fred became the man of the house.

By age 15, his mother helped him begin a career in building homes and real-estate, using the wealth accumulated by Freidrich: Donald Trump's father was given a more modest silver spoon than Donald, but a silver spoon nonetheless. With the inheritance from his father and his work in real estate, Fred Trump helped his brother John G. Trump enter academia.

Fred Trump became a millionaire working with the US Military in WWII, building barracks and apartments. According to Wikipedia (https://en.wikipedia.org/wiki/Fred_Trump):

- *"During World War II, Trump built barracks and garden apartments for U.S. Navy personnel near major shipyards along the East Coast, including Chester, Pennsylvania, Newport News, Virginia, and Norfolk, Virginia.*
- *After the war he expanded into middle-income housing for the families of returning veterans, building Shore Haven in Bensonhurst in 1949, and Beach Haven near Coney Island in 1950 (a total of 2,700 apartments). In 1963–1964, he built Trump Village, an apartment complex in Coney Island, for US$70 million."*

This is how Donald Trump was born into a position to create his own fortune, following his father into the real estate business with both his money and business connections.

The exact amount Donald received from his father to start his life is debated. Hillary Clinton (not that she is to be trusted or respected) claimed he received

$14 million.

Donald Trump claimed he received a “small” sum of $1 million to start, and other evidence suggests that he received other loans from his father. He also received a $1 million trust, as did his siblings. According to the Washington Post (https://www.washingtonpost.com/politics/2016/live-updates/generalelection/real-time-fact-checking-and-analysis-of-the-!rst-presidentialdebate/fact-check-how-much-help-did-trumps-father-give-his-son/?utm_term=.c4cca8f0b4bc):

- *“The casino document lists several other loans from Trump’s father to his son, including a $7.5 million loan with at least a 12-percent interest rate that was still outstanding in 1981.*
- *In a 2007 deposition, Trump admitted he had borrowed “a small amount” from his father’s estate: ‘I think it was like in the $9 million range.’”*

During the time that Fred Trump earned his fortune, his brother and Donald’s uncle John G. Trump was working with the mad scientists at Massachusetts Institute of Technology (MIT), de-coding brilliant engineer Nikola Tesla’s stolen papers.

MIT is a central hub of science for the military industrial complex, as we’ve scratched the surface of in past articles (https://themindunleashed.com/2017/01/institutes-technology-exposed-academias-role-war-science-system.html). Researcher and author Peter A. Kirby (https://www.amazon.com/Chemtrails-Exposed-New-Manhattan-Projectebook/dp/B007JDN7EM) thoroughly exposed the root of geoengineering (spraying the skies) in MIT, and his latest article can be found here (https://www.activistpost.com/2017/03/chemtrails-exposed-truly-a-new-manhattan-project.html).

John G.’s association to Tesla was summarized by Big Think (https://bigthink.com/paul-ratner/nikola-tesla-predicted-hillary-clintons-nomination-and-has-a-surprising-connection-to-donald-trump):

- *“A few days a"er Tesla died on January 8th, 1943, his possessions were seized by officials from the amazingly-named government* ***Office of Alien Property*** *. About 3 weeks a"er that, all of Tesla’s things and documents were given a thorough examination by a group of FBI agents that included none other than* ***John G. Trump****.“*

John G. Trump wrote about Tesla’s stolen papers, but perhaps his statement was meant to dissuade people from believing they found something of value in them, to keep the findings a secret. He said (https://bigthink.com/paul-ratner/nikola-tesla-predicted-hillary-clintons-nomination-and-has-a-surprising-connection-to-donald-trump):

Tesla’s “thoughts and efforts during at least the past 15 years were primarily of a speculative, philosophical, and somewhat promotional character,” but “did not include new, sound, workable principles or methods for realizing such results.”

More basic info about John G. Trump can be garnered from Wikipedia (https://en.wikipedia.org/wiki/John_G._Trump):

- *“During 1942, Trump became Secretary of the Microwave Committee, a subcommittee of the NDRC. The director of the Microwave Committee was Alfred Lee Loomis (https://en.wikipedia.org/wiki/Alfred_Lee_Loomis), the millionaire physicist, who decided to create a laboratory. He selected a site for it, chose a suitably discreet and ambiguous name for it and funded the construction, until the Federal administration was established. The new institution was the MIT Radiation Laboratory (https://en.wikipedia.org/wiki/Radiation_Laboratory_%28MIT%29), or the “RadLab”.”*

So what does this say about Donald Trump? One thing is certain: he is not new to the game of political power, to the military industrial complex, or to wealth.

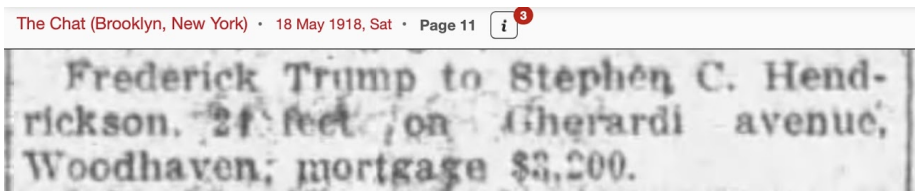
He has never had a history of caring about our class of people, and he has fikked the White House with nothing but bankers (https://www.youtube.com/watch?v=FHNAZMIcFNg), oil barons and people who loot and pillage our class of people.

Just as Hillary Clinton or Barack Obama represented forces larger than them, from Goldman Sachs to the modern day incarnation of Rockefeller’s Standard Oil (ExxonMobil), all of them accept money and direction from the exact same entities.

It is purposefully dif!cult to differentiate who is against who in this powerstructure, but it’s safe to say none of them have our best interest at heart.

1918 (May 18) - Last business transaction ?

Full page - [HN00WU][GDrive]

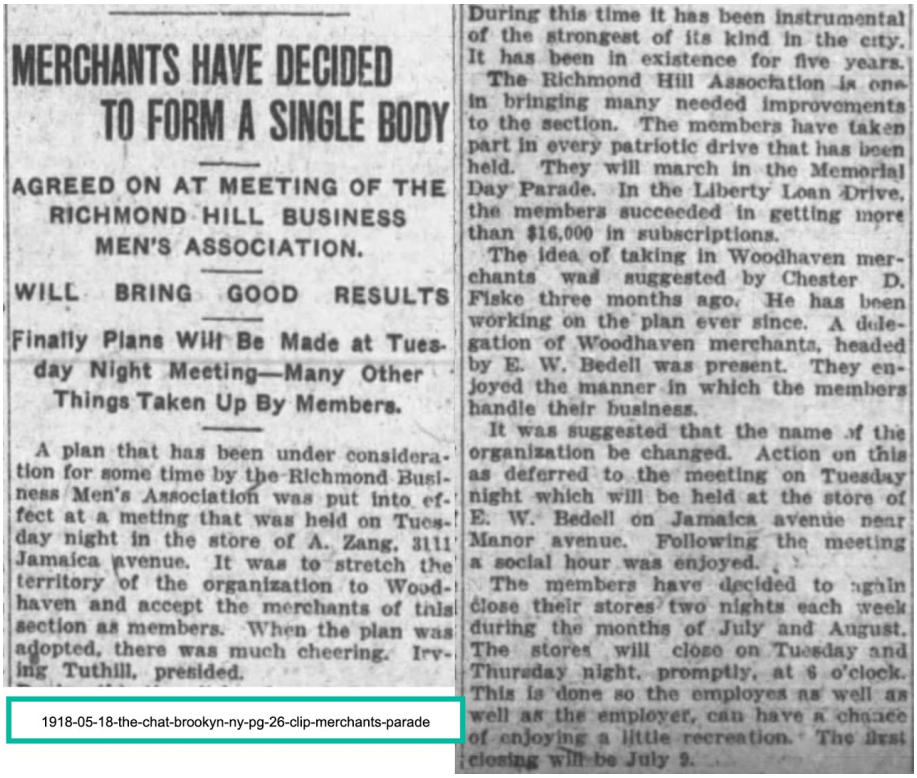

The Chat (Brooklyn, New York) · 18 May 1918, Sat · Page 11

Frederick Trump to Stephen C. Hendrickson, 21 feet on Gherardi avenue, Woodhaven; mortgage $3,200.

[HN00WV][GDrive]

1918 (May 18) - Upcomming NYC memorial day parade

Full page - [HN00WY][GDrive]



MERCHANTS HAVE DECIDED TO FORM A SINGLE BODY

AGREED ON AT MEETING OF THE RICHMOND HILL BUSINESS MEN'S ASSOCIATION.

WILL BRING GOOD RESULTS

Finally Plans Will Be Made at Tuesday Night Meeting—Many Other Things Taken Up By Members.

A plan that has been under consideration for some time by the Richmond Business Men's Association was put into effect at a meting that was held on Tuesday night in the store of A. Zang, 3111 Jamaica avenue. It was to stretch the territory of the organization to Woodhaven and accept the merchants of this section as members. When the plan was adopted, there was much cheering. Irving Tuthill, presided.

During this time it has been instrumental of the strongest of its kind in the city. It has been in existence for five years.

The Richmond Hill Association is one in bringing many needed improvements to the section. The members have taken part in every patriotic drive that has been held. They will march in the Memorial Day Parade. In the Liberty Loan Drive, the members succeeded in getting more than $16,000 in subscriptions.

The idea of taking in Woodhaven merchants was suggested by Chester D. Fiske three months ago. He has been working on the plan ever since. A delegation of Woodhaven merchants, headed by E. W. Bedell was present. They enjoyed the manner in which the members handle their business.

It was suggested that the name of the organization be changed. Action on this as deferred to the meeting on Tuesday night which will be held at the store of E. W. Bedell on Jamaica avenue near Manor avenue. Following the meeting a social hour was enjoyed.

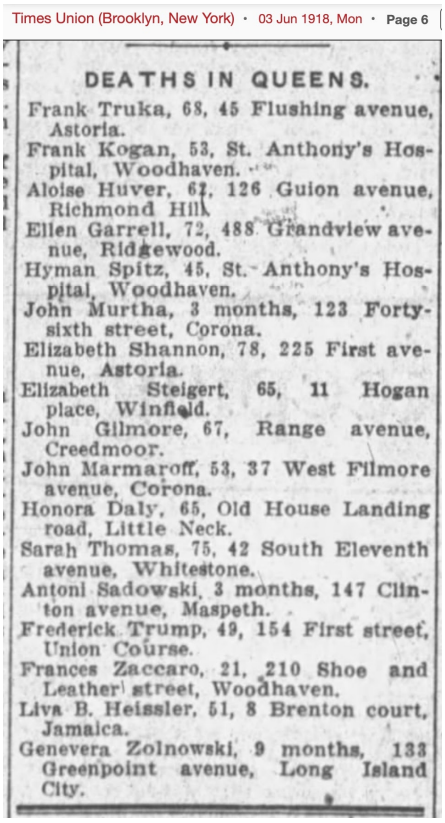
The members have decided to again close their stores two nights each week during the months of July and August. The stores will close on Tuesday and Thursday night, promptly, at 6 o'clock. This is done so the employes as well as well as the employer, can have a chance of enjoying a little recreation. The first closing will be July 9.

1918-05-18-the-chat-brookyn-ny-pg-26-clip-merchants-parade

[HN00WZ][GDrive]

1918 (May/June) - Death

Full page - [HN00WW][GDrive]



Times Union (Brooklyn, New York) · 03 Jun 1918, Mon · Page 6

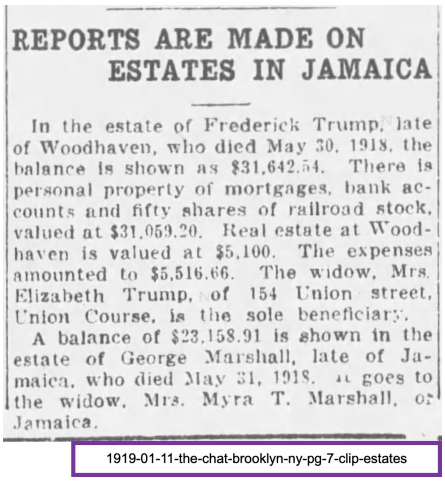
DEATHS IN QUEENS.

Frank Truka, 68, 45 Flushing avenue, Astoria.
Frank Kogan, 53, St. Anthony's Hospital, Woodhaven.
Aloise Huver, 67, 126 Guion avenue, Richmond Hill.
Ellen Garrell, 72, 488 Grandview avenue, Ridgewood.
Hyman Spitz, 45, St. Anthony's Hospital, Woodhaven.
John Murtha, 3 months, 123 Forty-sixth street, Corona.
Elizabeth Shannon, 78, 225 First avenue, Astoria.
Elizabeth Steigert, 65, 11 Hogan place, Winfield.
John Gilmore, 67, Range avenue, Creedmoor.
John Marmaroff, 53, 37 West Filmore avenue, Corona.
Honora Daly, 65, Old House Landing road, Little Neck.
Sarah Thomas, 75, 42 South Eleventh avenue, Whitestone.
Antoni Sadowski, 3 months, 147 Clinton avenue, Maspeth.
Frederick Trump, 49, 154 First street, Union Course.
Frances Zaccaro, 21, 210 Shoe and Leather street, Woodhaven.
Liva B. Heissler, 51, 8 Brenton court, Jamaica.
Genevera Zolnowski, 9 months, 133 Greenpoint avenue, Long Island City.

[HN00WX][GDrive]

1919 (Jan 11) - Estate

Full page : [HN00X2][GDrive]



REPORTS ARE MADE ON ESTATES IN JAMAICA

In the estate of Frederick Trump, late of Woodhaven, who died May 30, 1918, the balance is shown as $31,642.54. There is personal property of mortgages, bank accounts and fifty shares of railroad stock, valued at $31,059.20. Real estate at Woodhaven is valued at $5,100. The expenses amounted to $5,516.66. The widow, Mrs. Elizabeth Trump, of 154 Union street, Union Course, is the sole beneficiary.

A balance of $23,158.91 is shown in the estate of George Marshall, late of Jamaica, who died May 31, 1918. It goes to the widow, Mrs. Myra T. Marshall, of Jamaica.

1919-01-11-the-chat-brooklyn-ny-pg-7-clip-estates

[HN00X3][GDrive]

Monte Cristo Mine -

https://en.wikipedia.org/wiki/Monte_Cristo,_Washington

"Kallstadt Germany gained international media attention as the ancestral home of the related Heinz and Trump families. Heinz is part of the extended family of the Trumps, a second cousin of Frederick Trump and second cousin twice removed of President Donald Trump."

"**Henry J. Heinz, the founder of the Heinz company, was the grandson of Charlotte Louisa Trump.**"

"Frederick Christ Trump (October 11, 1905 – June 25, 1999) Elizabeth Trump was born as Elisabeth Christ in Kallstadt, Kingdom of Bavaria, the daughter of Philipp Christ by his wife Anna Maria Christ (née Anthon)."

individuals with the surname Trump came to the United States in the 19th century, including Charlotte Louisa Trump's son Johann Heinrich Heinz, the father of Henry J. Heinz, the founder of the Heinz company. Henry John Heinz was born in Birmingham, Pennsylvania on October 11, 1844, the son of German immigrants John Henry Heinz (1811–1891), of Kallstadt, Palatinate, Kingdom of Bavaria, and Anna Margaretha Schmidt (1822–1899), of Kruspis, Haunetal, Hesse-Kassel. His father immigrated to the United States at age 29 in 1840, his mother at age 21 in 1843. They were married December 4, 1843, in Birmingham, Pennsylvania, on the south side of Pittsburgh, where they first met. Anna Schmidt was the daughter of a Lutheran minister; John Heinz was also Lutheran.

https://www.rheinpfalz.de/lokal/bad-duerkheim_artikel,-trumps-vorfahren-_arid,663831.html

"

Bad Dürkheim Trump's ancestors:

Tuesday, August 9, 2016 - 4:00 a.m.

The paternal ancestors of Donald Trump (ancestor number 1). Direct ancestors each have the double digit (2, 4, 8, 16 ... the first direct Trump 128), the respective wives always plus 1 (3, 5, 9, 17, etc.). 1: Trump, Donald John, * 14. 6. 1946 Queens, New York City 2: Trump Christ, Frederick, 1905–1999 3: MacLeod, Mary Anne, 1912–2000 4: Trump, Friedrich (Fred), * 1869, marriage 1902, respectively Kallstadt, +1918 N. York 5: Christ, Elisabeth, * 1880 Kallstadt, +1966 Queens, NYC 8: Trump, Christian Johannes, * 1829, +1877, marriage 1859, each.Kallstadt 9: Kober, Katharina, * around 1836 Kall. 10: Christ, Philip III, 1856-1908 Call. 11: Anthon, Anna Maria, * 1857 call. 16: Trump, Johannes, * 1789 Bobenheim / Berg, +1835 Kallstadt 17: Bechtloff, Susanna Maria, * 1804 Kallstadt 20: Christ, Johann. Gg., * 1820 Call. 21: Hartung, Christina, * 1823 Kallstadt 22: Anthon, Johannes / Johann Heinrich, 1819–1889 Kallstadt 23: Farny, Eva, * 1818 Dürkheim, +1875 Kallstadt 32: Trump, Johann Paul, 1727 – around 1792 Bobenheim. 33: Setzer, Maria Elisabetha, * 1745 34: Bechtlof (f), Johann Jakob, 1770-1816, respectively Kallstadt 35: Böhringer, Anna Katharina, +1816, 40: Christ, Johannes, * 1788 Kallstadt 41: Klingenschmidt, Anna Katharina, * 1795 42: Hartung, Johann Martin, 1794-1869, Kallstadt 43: Hansel, Christina Margaretha, * 1799 Kallstadt 44: Anthon / Antoni, Philipp Friedrich, * 1783 Kallstadt 45: Bechtlof (f), Anna Margaretha, * 1797 Kallstadt 46: Farny, Adam, * 1784 Dürkheim 47: Bühler / Böhler, Anna Catharina 64: Trump, Johann Sebastian, * 1699 Battenberg 65: Kohl, Susanna Marg (a) retha, * 1707 Battenberg 66: Setzer, Michael 68: Bechtlof (f), Loren (t) z, * 1732, +1773 jew.Kallstadt 69: Banckhard, Susanna Maria, * 1737 Ungstein 80: Christ, Johann Georg, * 1754 Kall. 81: Ott, Marie Elisabetha, * 1753 Kall. 84: Hartung, Johann Philipp, * 1750 Dürkheim, +1806 Kallstadt 85: Schuster, Charlotta Louisa, * 1763 Kallstadt, +1836 88: Antoni, Johann Heinrich 89: Peter, Sophia Sabina, * 1745 Dürk. 90: Bechtlof (f), Friedr. Karl, * 1765 Kall. 91: Humann, Anna Elisabetha, * 1767 Kallstadt 92: Farny, Johann Adam, * 1753 Dürk. 93: Fischer, Susanna Elisabetha, * 1763 Dürkheim 128: Trump, Johann Philipp, * 1667 Ellerstadt, +1707 Dürkheim (the direct male line ends with him). Other surnames from Michael Wolf's ancestor list (in the order of their appearance): 131: Jaeck, Anna Margaretha, * 1675 Battenberg 139: Worckert, Anna Margaretha 171: Kall, Anna Elisabetha 181: Falter, Christina 185: Hamscher, Maria Magdalena 187 : Steinmetz, Anna Elisabetha 277: Bär, Anna Catharina, * 1673 273: Zimmer, Anna Eva, * around 1675 325: Voltz, Anna Elisabetha, * 1681 Willstädt, + 1751 Kallstadt 327: Dresch, Anna Elisabeth, * 1674 Kallstadt, + after 1739 337: Schroh, Maria Sophia 341: Gesell, Maria Sus (s) anna 357: Herter, Anna Dorothea 365: Kraushaar, Susanne Salome 369: Zolckhofens, Anna Marg (a) retha 649: Münch, Anna Catharina, 1649–1690 Hardenburg 653: Weygant, Anna Catharina, + before 1677 685: Schül (l) er, Anna Elisabetha 713: Durstberger, Veronica 775: Ebel, Susanna Catharina 1549: Kiefer, Anna Dorothea 3100: Ebel, Johann Heinrich, * 1595 Gießen, + 1657 Hardenburg, superintendent of the county of Leiningen-Hardenburg, court preacher to Hardenburg and Caplan to Dürkheim, buried alongside en the door of the castle church. 3101: Tuschelin, Euphrasine Susanna, * 1604 Zweibrücken, +1672 Dürkheim 6202: Tuschelin, Dr. jur. Wolfgang Werner, Leiningischer Rat and chamber director * 1576 Zweibrücken, +1626 Dürk. 12404: Dischlin / Tuschelin, Dr. jur. Gall / Gallus (see text), +1601 Zweibrücken 12405: from Castellum / von Castellaun, Susanna, * around 1543 Kreuznach, +1604 Zweibrücken

Send feedback

History

Saved

Community"

https://familypedia.wikia.org/wiki/Trump_family

Family tree Edit

Henry J. Heinz, the founder of the Heinz company, was the grandson of Charlotte Louisa Trump of Kallstadt

- Johann Philipp Trump (1667–1707), married Juliana Maria Rodenroth
  - Johann Sebastian Trump (1699–1756), married Susanna Margaretha Kohl
    - Johann Paul Trump (1727–1792), married Maria Elisabetha Setzer
      - Charlotte Louisa Trump (1789–1833), married Johann Georg Heinz
        - John Henry Heinz (1811–1891), emigrated to the United States in 1840
          - Henry J. Heinz (1844–1919), founder of the Heinz company
      - Johannes Trump (1789–1835), married Susanna Maria Bechtloff
        - Friedrich Trump (died 1876), married Elisabetha Trump
        - Maria Katharina Trump (born 1827)
        - Christian Johannes Trump (1829–1877), married Katharina Kober (1836–1922)
          - Johannes Trump (born 1860)
          - Katharina Trump (born 1861)
          - Jakob Trump (born 1863)
          - Sybilla Luisa Trump (1865–1931), moved to New York City, the United States, married a German-born man named Schuster
          - Konrad Trump (born 1868–1868)
          - Friedrich Trump (1869–1918), barber and restaurant and hotel manager, married Elisabeth Christ, moved to the United States in 1885/1905
            - Elizabeth (Elisabeth) Trump (1904–1961), married William O. Walter
              - William Trump Walter (born 1931)
              - John W. Walter (born 1934), referred to as the Trump "family historian"[28]
            - Frederick Christ Trump (1905–1999), real estate developer, married Mary MacLeod (1912–2000)
              - Maryanne Trump (born 1937), federal judge, married/divorced David Desmond; married John Barry
                - David William Desmond (born 1960; of first marriage), psychologist
              - Frederick Christ Trump, Jr. (1938–1981), TWA pilot,[29] married/divorced Linda Clapp
                - Frederick Christ Trump III (born 1963) married Lisa Beth Lorant[30][31]
                  - a daughter (born c. 1992)[32]
                  - a son (born c. 1994)[32]
                  - William Trump (born 1999)[31]
                - Mary Trump
              - Elizabeth Joan Trump, married James Walter Grau
              - Donald John Trump (born 1946), real estate developer, 45th President of the United States, married/divorced Ivana Zelníčková; married/divorced Marla Maples; married Melania Knauss
                - Donald Trump Jr. (born 1977; of first marriage), married Vanessa Haydon
                - Ivanka Trump (born 1981; of first marriage), married Jared Kushner
                - Eric Trump (born 1984; of first marriage), married Lara Yunaska
                - Tiffany Trump (born 1993; of second marriage)
                - Barron Trump (born 2006; of third marriage)
              - Robert Trump, married Blaine Beard[33]
            - John George Trump (1907–1985), married Flora Sauerbrun (1913–1983)

Charlotte Louisa Heinz (Trump) Daughter of Johann Paul Trump and Maria Elisabetha Trump Wife of Johann Georg Heinz, III Mother of Johannes Heinz; Georg Friedrich Heinz; John Henry Heinz; Anna Maria Heinz; Charlotte Christiana Heinz; Georg Nikolaus Heinz; Johann Georg Heinz; Anna Charitas Heinz; Johann Karl Heinz; Anna Katharina Heinz; Elisabetha Heinz and Dorothea Heinz Sister of Maria Dorothea Trump; Juliana Trump and John Trump

https://www.geni.com/people/Charlotte-Heinz/6000000042104785474

"Fred Trump landed in NYC in 1883, age 14. Seems likely he went to Pittsburgh to the Heinz's then out west. Application for citizenship 1892 Seattle"

Ran a restaurant

In the Yukon early

Fred Christ Trump (born 1905)

Wikipedia Fred Trump

Wikipedia (saved May 21, 2020) - [HK002P][GDrive]

"Fred trump"

Parents -

- Father is Frederick Trump (born 1869)

Family -

- Brother is John George Trump (born 1907)

Also see -

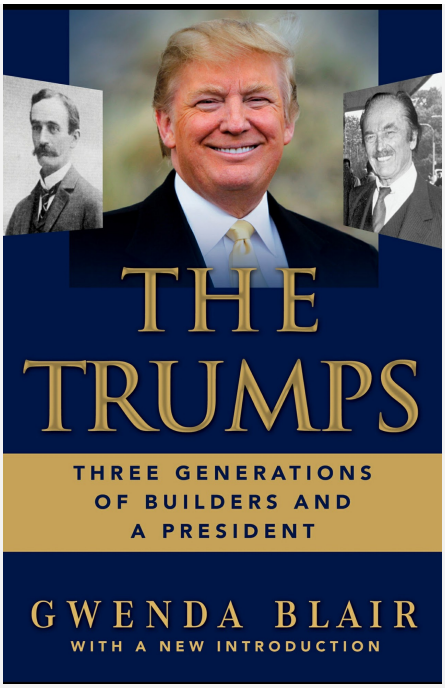
- J. Lehrenkrauss Corporation

1985 - Brother John G Trump passes

See John George Trump (born 1907) .

Book - PURCHASED (Amazon Kindle) - Blair, Gwenda. The Trumps: Three Generations of Builders and a Presidential Candidate. Simon & Schuster. Kindle Edition.

Text - [HB0043][GDrive]



[HB0043][GDrive]

CHAPTER SEVEN - BORN TO WORK

QUIETLY, POLITELY, AND FIRMLY, Frederick Christ Trump pushed his way into the back of a hot, packed courtroom on the afternoon of **Monday, January 15, 1934.** Surrounding him were dozens of anxious, frightened people who had recently discovered that they had lost their life savings. Small investors for the most part, they had found themselves left holding the bag in the biggest bankruptcy anybody could remember. Today, summoned by tiny-print newspaper ads, certified letters, and word of mouth, they had gathered at the Main Post Office Building in Brooklyn, which also served as the federal courthouse.1 Court officials had expected a quiet judicial proceeding. To their dismay, more than three thousand people showed up, overflowing the three-hundred-seat courtroom and clogging the marble-lined corridors and the stairwells. A front-page story in the next day's Brooklyn Eagle called it the largest courthouse crowd in borough history.2

To accommodate the mob of unhappy creditors, officials had propped open the heavy courtroom doors, which were covered in dark leather and studded with brass nails. It was cold outside and chilly on the floors below, but here the severe crowding made the area unpleasantly warm and stale with the smell of overdressed, sweating bodies. Only someone determined could have shoved a way inside. But twenty-eight-year-old Fred Trump, tall and slim, with a mustache and straight blond hair, was very determined.

Courtroom 727, a recent addition to the post office, was an elegant room with a twenty-foot ceiling, patterned marble floors, and large windows that looked west toward the Brooklyn Bridge and the East River. Rich mahogany paneling covered the walls, and terra-cotta wreaths and decorative molding festooned the ceiling. But on this mid-January day no one was paying attention to the decor. Some of the people seemed too dazed to speak and simply stared into space. Others talked incessantly in loud, angry voices. Often the conversations were in German or German-accented English.

Waiting for the proceedings to begin, these spectators were outraged and vulnerable, equally ready to lash out in fury or burst into tears. The Depression had already lasted more than four years. It had long since taught them the cruel lesson that no job was safe, that a factory with production lines working double shifts one week could close the next, and that if you couldn't pay the rent, you were on the street even if you had no place to go. But through the stock market crash, the unemployment lines, and the bank holidays, this group had clung to the apparent stability provided by a handful of corporate enterprises based in downtown Brooklyn and run by a German-American family called Lehrenkrauss.

Known as the House of Lehrenkrauss, this family conglomerate had begun back in 1878, twenty years before the city of Brooklyn merged with Manhattan. In a tiny closet in what was then Brooklyn City Hall, Julius Lehrenkrauss, a recent German immigrant, opened a travel bureau that sold steamship tickets to other Germans who wanted to bring their families to America. Because transferring funds abroad was a complex affair, he became his clients' de facto private banker, holding their money, sending funds overseas, making investments on their behalf.3 As Germans continued to pour into the United States, the Lehrenkrauss operation expanded to fill a five-story building across the street from Borough Hall, as the old City Hall was renamed after Brooklyn was incorporated into New York City in 1898. In addition to the travel agency and private merchant bank, the business now included a safety deposit box department, an insurance company, and mortgage brokering.

After World War I Lehrenkrauss developed a brisk trade in what was known as "guaranteed" or "certificated" mortgages. To pay for the residential properties going up all over New York City, mortgage banks and title companies began to "certificate" mortgages—that is, to divide them into shares that were then sold to the general public like so many bonds. Available in denominations of $1,000 and up, these certificates appealed to people who wanted to cash in on the economic bonanza of the 1920s but had little money to invest. Although mortgage certificates would never create the overnight windfalls of the stock market, they returned a guaranteed 6 percent interest at a time when banks paid only 3 percent and were not insured by the federal government.4

In the early 1930s, as the nation plunged into economic turmoil, certificated mortgages from Lehrenkrauss appeared to retain their value. The firm, now headed by Julius's son, also named Julius, held $30 million in Brooklyn and Queens mortgages, had forty thousand regular customers,5 and maintained five branch offices around the city as well as correspondents in more than a dozen European cities.6 Modest wage earners who had turned over their little nest eggs to Lehrenkrauss remained secure in the knowledge that on the first of every month an interest check would arrive in their mailboxes.

But on December 1, 1933, Lehrenkrauss investors reached into their mailboxes and found them empty.7 The fifty-five-year-old House of Lehrenkrauss had crashed to the ground, apparently without any warning whatsoever. Soon screaming headlines in the Brooklyn Eagle revealed that Julius Lehrenkrauss had been running a deficit operation for years, covering expenses and salaries with a haphazard assortment of schemes that included issuing watered stock

been running a deficit operation for years, covering expenses and salaries with a haphazard assortment of schemes that included issuing watered stock, writing up mortgages based on either inflated or nonexistent evaluations, selling mortgage certificates worth more than the mortgages they represented, and taking out bank loans against mortgages that had already been certificated.8 When the Depression caused the mortgage market to contract, the Lehrenkrauss operation lost its cash flow—the constant inflow of new dollars that kept it afloat—and ended up drowning in a sea of financial obligations.

By law, bankruptcy falls under federal jurisdiction and regulations. Accordingly, Lehrenkrauss's creditors had gathered at the U.S. District Court for the Eastern District of New York—in other words, the federal court in Brooklyn—to exercise their legal responsibility. As most of them were learning for the first time, they were not only entitled, but actually obliged to meet and elect trustees who would parcel out the company's remaining assets. Shortly after two, a man in his mid-thirties who had a mustache and wore his thick brown hair plastered down and parted in the middle called the meeting to order. His name was Theodore Stitt, and he was the court-appointed referee in charge of the Lehrenkrauss bankruptcy case.9

After the crowd settled down, Charles J. McDermott, a prominent retired judge in his late sixties, began speaking. For the past six weeks he had been working on this case as a receiver, an interim official whose job was to inventory assets as bankruptcy proceedings unfolded. Standing in front of the room, he wasted no time getting down to business. The affairs of the House of Lehrenkrauss were so tangled, he said, that it was impossible to give even a general status report.10

To disguise the firm's dire straits, Julius Lehrenkrauss had ordered the accountant to cook the books. Thus, for example, one division's $19,000 deficit had magically turned into a net worth of $1.8 million.11 Julius regularly made out corporate checks to cash, with no accounting for where the money went. Whenever he could get away with it, he paid dividends by issuing more worthless Lehrenkrauss stocks. He left dozens of deeds unfiled, misfiled, and, in some cases, missing altogether. As a result, almost all McDermott could say was that the Lehrenkrauss bankruptcy was "the most interwoven, intricate and hopelessly muddled-up mess that I have ever had anything to do with."12

"Appoint a trustee!" shouted one creditor in the mob.

"Who stole the money?" yelled another. "Put them in jail!"13

At this point, a short fat man with thick gray hair and a cigar stub in his hand stood up in front of the room. Archibald Palmer, a lawyer, had devoted his career to bankruptcy cases, a field that made up for its low prestige with handsome fees. Now in his forties, he had trained as a bantamweight fighter and was well-known for his combativeness in the courtroom. "I have to be punching all the time, even if I get licked," he once said.14 Speaking on behalf of the creditors, he charged that family greed had caused the Lehrenkrauss downfall. The final collapse had turned into disaster and disgrace, he thundered, because of Julius Lehrenkrauss's unwillingness "to face the music" when financial ruin was inevitable. "He was looking for a miracle," Palmer said in a ringing voice. "God doesn't send miracles to bad people."15

The crowd applauded wildly when Palmer reported that police had recovered mining stocks that Julius had pocketed, but the lawyer quickly discouraged their jubilation. "Applause won't do you any good because they owe you so much money," he said, adding that the restored stock "would be of as much consequence as one wrinkle more or less on an old lady's face."16 Indeed, he said, "in this muddle we are doing a public service if we can salvage anything at all and more than anything at all from this mess."17 The press, he declared, had covered only a small fraction of the "dirt and filth" involved, for it would take four newspapers to cover all the crimes committed.18

Unlike everyone else in Courtroom 727, Fred Trump could not have been happier. The eldest son of Frederick Trump, he was well acquainted with the intricacies of New York real estate. As he stood and listened, he became increasingly interested in one particular Lehrenkrauss operation, the mortgage-servicing department. For a small fee, J. Lehrenkrauss & Sons, the core company of the Lehrenkrauss conglomerate, had managed the buildings on which it held mortgages, providing maintenance, collecting interest, paying taxes, and handling routine administrative matters. Because this operation was still making money, court-appointed officials would sell it off to satisfy claims. Presumably it would continue to make money for the buyer. Better yet, it could lead to far greater profits in the future. To the knowledgeable observer, the list of mortgages maintained by the company could be a gold mine, for it identified hundreds of properties that in these Depression times were liable to foreclosure and subsequent auction at tax sales.

After the Lehrenkrauss hearing, the young observer boarded the elevated train out to Woodhaven, Queens, where he lived with his widowed mother. Riding past the old Lehrenkrauss building at the corner of Fulton and Myrtle, now dark and shuttered, he pondered how to proceed. It could be risky; he had learned firsthand that building had its down periods. And with such high stakes, there would be serious political, legal, and financial infighting. But he had already made his decision.

***

If Elizabeth Christ Trump had gotten her way, her son Fred would never have been in that Brooklyn courtroom, because he would never have been in America. But in July 1905, after her husband was unable to regain German citizenship, he, Elizabeth, and their one-year-old daughter returned to New York aboard the SS Pennsylvania. Three months later, on October 11, one day after her twenty-fifth birthday, Elizabeth gave birth to her second child and first son. His name on his birth certificate was Frederick Christ Trump, but he was known as Fred from the start.

The newborn's parents had set up housekeeping at 539 East 177th Street. It was next to the recently electrified Third Avenue elevated train and not far from the Westchester Avenue apartment where they had lived with the Schusters.19 The new neighborhood was quiet, but because the building had been built under old zoning laws, the Trumps had only cold water and shared a bathroom with their neighbors. Two years later they had a third child, John George, and moved about fifteen blocks south to a spanking new five-story brick building on a corner lot in a newly developed section named Woodstock. There were six families on each floor and porcelain washbasins, bathrooms, and iceboxes in each apartment. Because they were on top of a hill, there was also a view out over the South Bronx. A dumbwaiter conveyed coal and wood to each apartment from a storage bin in the basement.20 A large farm at 152nd Street and Prospect Avenue provided fresh vegetables to the whole neighborhood, and a nearby Chinese hand laundry did the wash.21

After his return from Germany, Frederick Trump dusted off his barber tools and supported his growing family by giving shaves and haircuts. At first he lathered and snipped at home in the Bronx, but within a few years he had rented a room at 60 Wall Street, a large office building in lower Manhattan, and hired a tonsorial staff.22 The chairs in his shop were seldom empty, for the modern safety razor was not yet in general use, and being shaved by a barber was part of any successful businessman's daily routine.

But Frederick Trump was no more content to remain a barber now than he had been back in Germany two decades earlier. He worked, he saved, and he searched for a spot where a quick, energetic fellow who'd already knocked around the globe a bit could use what he'd learned, where things were still open and there was a chance to get in on the ground floor. His sister Katherine would move back to Manhattan, where her husband, Fred Schuster, would continue a succession of low-paying clerk jobs. His other sister, Louise, would marry an older, well-to-do Schuster cousin, George, and move north of the city to Mt.

Vernon. But Frederick Trump was still looking for the right opportunity for himself and his nest egg. By the end of 1906 he had found it. He was ready to stake his future on the growth of a section of western Queens called Woodhaven.

Before doing so, Trump made one last stab at returning to Germany. On December 20, 1906, he wrote again to the Royal Ministry of the Interior. Unlike previous unctuous missives, this letter was brief and to the point. He said that his life in America had been good and he had never intended to return to Germany, but his wife was unable to adjust to the New World. He did not emigrate to avoid military service, he said, but because he wanted to have "a profitable life" and to support his mother. He was "a quiet, peaceful man," and his family was of a high moral character. The flowery closing of the previous pleas was reduced to a perfunctory "Obediently."

In short order, the answer came back. The Royal Ministry was sticking to its guns. In a resolution dated January 10, 1907, the crown proclaimed him unwelcome as a resident in Bavaria. On March 13 the mayor of Kallstadt informed the Royal Ministry that he had given the required notice to this effect to Katherina Kober Trump and to Elizabeth's father, Philip Christ. Two days later, on March 15, Frederick Trump opened an account at the Hillside Bank, a new institution on Jamaica Avenue in Queens. He had stopped looking back. His future, and that of his family, would not be across the Atlantic Ocean in Germany, but across the East River in Queens.

It was hardly a wild gamble. As the rest of the city had urbanized, Queens had remained "the cornfield borough,"23 a source of fresh produce and unspoiled countryside. As a result, although it was the largest borough in terms of land area, it had by far the smallest population, just 152,999 inhabitants, or 4 percent of the city's total, in 1900.24 In large part this was because Manhattanites could reach the borough only by ferry or via Brooklyn. But now the city was building the Queensboro Bridge over the East River, and the Pennsylvania Railroad was digging a tunnel under it. When they were finished, Queens would be as accessible as the South Bronx. Surely, Frederick Trump reasoned, the real estate development that had occurred in the rest of the city would then touch Queens, creating opportunity for people like himself.

In September 1908, nine months before the completion of the Queensboro Bridge, he made his move, beginning the family's New York holdings by purchasing a modest two-story frame structure in Woodhaven. It was on the north side of Jamaica Avenue, the Indian track that had served as the main east-west road across Long Island for more than two centuries. The first acquisition in a real estate portfolio that would expand manyfold over the next century, the building was in an area called Union Terrace in honor of a nearby racetrack, now gone, named Union Course.25 In choosing this site, Trump had, as in his northwest ventures, followed the primary rule of real estate: Location, location, location. With an electric trolley that ran down the center of Jamaica Avenue, this site was perfect for business. But his purchase violated real estate's second rule: Never use your own money. He paid cash.

The next year the fledgling real estate magnate got a job as a manager at the Medallion Hotel, on the east side of Sixth Avenue at 23rd Street. The Medallion was one of many prosperous, thoroughly German business establishments in New York, and its majordomo was a champion sharpshooter named Gustav Zimmerman who was from Baden and lived near the Trumps in Morrisania. He saw in Frederick Trump the experienced hand he needed at the newly renovated hotel, which had just obtained a liquor license and was expanding its restaurant and bar operations. As always, the restaurant and hotel business meant long hours, made longer by the task of getting the new operation up and running. Frederick Trump spent most of his time at the hotel, and in the fall of 1909 he cast his vote in the city's mayoral elections from that address.26

By 1910, however, he and his family were in Queens. After a few alterations, the Trumps moved into the building on Jamaica Avenue and rented out one floor to another barber and his family. Unfortunately the building was not well suited for housing. All day long Jamaica Avenue rang with the noisy clamor of commerce, including busy workers rushing to and fro and knickered boys hawking newspapers. The trolley roared deafeningly outside the windows, and Elizabeth worried about letting her young children outside to play. After months of fretting, fretting, Frederick Trump moved his business a few blocks farther east on Jamaica Avenue and bought a nearby house and vacant lot next to it. Located just south of Jamaica Avenue on First Street, the new Trump residence, a two-story frame dwelling, was in the middle of what had been Union Course, and the neighborhood was often referred to by that name.

Unlike the family's previous address, this section was a quiet enclave, dotted with Queen Anne–style homes. The streets were unpaved and ungraded, the potholes so huge that a twelve-year-old girl supposedly fell into one and almost drowned just a few blocks from the Trumps' house.27 Aside from such perils, though, First Street in 1908 was a wonderful playground for Elizabeth, now eight, as well as five-year-old Fred and three-year-old John. Every evening until twilight, they played tag on streets that still had few cars. It was time to go home when the lamplighter came and reached his long pole up to the wick of the gas lamps.28 Up First Street and across Jamaica Avenue was P.S. 97, the red brick elementary school all three children attended.

In winter they ice-skated and rode sleds on the golf course at nearby Forest Park; in summer they played games like ring-a-levio and cat, in which one team hit a stick up in the air and then tried to get to bases before the opposing team retrieved the stick. On Halloween boys turned their jackets inside out, scrawled on them with chalk, and then whacked each other with socks filled with flour.29 A few days later, on election night, families went to Forest Park and huddled around huge bonfires as the local newspapers projected results on special screens. Four weeks later, on Thanksgiving morning, children would dress as ragamuffins and go from door to door collecting fruit and candy before returning home and tucking into turkey.30

Such pleasant conditions ensured the borough's rapid growth.31 Between 1910, when the bridge was finished, and 1915, Queens's population increased 40 percent.32 Land prices soared, nearly all of the borough's remaining farms quickly disappeared, and builders, most of whom worked on a small scale, began constructing one- and two-family homes and small apartment buildings.33

Frederick Trump had high hopes for the future, for he had his own savings to invest as well as possible funds from his sister Louise, who had backed his real estate ventures in the West. Weekday mornings he would walk the few blocks to his office, dressed, as was customary for businessmen at the time, in a spotless boiled white shirt, formal tie, and three-piece tailor-made gray suit. Often he stopped at a little two-room building across the street to visit Carl Louis Voeller, a first-generation German American who was fluent in German and English and specialized in second mortgages. Although Frederick Trump had now spent more than a quarter of a century speaking English, he preferred German and did considerable business, including his own will, with Voeller.34

Doing business in German was hardly unusual in Queens. As of 1900, one in four New Yorkers was German or of German ancestry, which added up to the world's second largest population of Germans after Berlin.35 Queens was especially especially Teutonic, and along Jamaica Avenue German was at least as common as English. A few blocks from the offices of Trump and Voeller was the Triangle Hofbrau, a center of local gemütlichkeit. The restaurant's wooden barrel heads came from Neustadt, a village only a few kilometers from Kallstadt, and carvings across the front boasted of wine from the Pfalz.36 Like many of their neighbors, the Trumps used German at home, and their children did not use much English until they went to school.37

Frederick Trump was working on Jamaica Avenue at a time of almost inconceivably rapid change.38 When he arrived, Long Island farmers still traveled the old road, taking produce to Manhattan at night in horse-drawn wagons. By 1915, though, the weeping willows and chestnuts that had lined Jamaica Avenue were gone, replaced by mounds of dirt from the construction of the elevated train. The farmers' highway had become an urban landmark, a gloomy tunnel-like passageway on which the sun never shone and over which the elevated now roared with an unabated clatter.

With this enclosure of the old plank road, yet another wave of suburbanization ensued, bringing development and subdivision to the farther reaches of Queens.39 In keeping with the borough's new, modern profile, Queens adopted a street-labeling system known as the "Philadelphia grid." Gone were Suydam, Shaw, and other references to the Dutch and English inhabitants whose farms once covered Queens. Gone also were other plain but familiar street names, replaced by sequential numbers. The Trump home, originally 154 First Street (also known, in an era more familiar with Latin, as Unum Street), became 154 87th Road, amended later, as lots subdivided, to 1540 87th Road.

But the greatest changes occurred in August 1914, when World War I erupted. Americans were neutral at first. As time went on, though, they lined up with the British and against the Germans—and, inevitably, against German-Americans. On May 5, 1915, a German submarine sank the Lusitania, a British liner sailing under a U.S. flag. All 1,200 passengers died, including 124 Americans. So did any remaining American neutrality.

Well before the United States officially entered the war in April 1917, the country yanked up the wilkommen mat for what was now perceived as the domestic Hun. The German music that had filled concert halls and opera houses vanished. Cities with German names changed them. Ground meat, formerly called "hamburger," became "Salisbury steak," patties made from it turned into "Wilsonburgers" and "liberty sandwiches," and "sauerkraut" became "liberty cabbage." More than a dozen states summarily dropped German instruction in school, and others severely limited it. German-language newspaper editors and advertisers received threats, postal workers misdelivered their publications, and Boy Scouts burned German papers in huge public bonfires. Teddy Roosevelt, the former president who had originated the notion of the hyphenated American, now denounced anyone who qualified. President Woodrow Wilson banned German males over fourteen from all boats other than ferries as well as airplanes, balloons, and all areas of military import, including Washington, D.C. The government also ordered six hundred thousand German aliens to register with local police and not to change residences.40

Unlike their neighbors, the Trumps did not change their name. Theirs had always been a German-speaking household, and so it remained. Hunkering down to avoid suspicion, Frederick Trump and his sister Katherine stayed in contact with their Kallstadt relatives, and after the war was over, Katherine Trump Schuster and her daughter Elizabeth went back to Kallstadt for a visit.41 But the bitter experience of having been tarred by their German ancestry had left scars on the Trump children. Years later, the older son, Fred, would quietly promote the notion that the family was actually Swedish.

The American Trumps survived the war, but they did not escape tragedy from another source: Blitzkatarrh, or influenza. At first the number of influenza deaths in the spring of 1918 set off no alarms, for people died of influenza and pneumonia every spring. Without a public health network continually coordinating national statistics, it was impossible for the medical community to know that fatalities were higher than usual, much less that one of the most fearsome epidemics in history was about to cut down millions around the world.42 The cases seemed to divide into two types, both fatal. Those who were sick for up to ten days or so before dying developed classic pneumonia, in which the normally whisper-thin membranes of the lungs become thickened, inelastic, unable to do their vital work of cleaning the blood of poisonous gases and providing it with oxygen. But those who died within only a day or two after the first sneeze had lungs full of a terrifying watery red liquid that poured out of the body and turned whole mattresses red.43

One Wednesday at the end of May 1918, Frederick Trump and his older son strolled down Jamaica Avenue. It was the eve of Memorial Day, and Fred, who was eleven, was delighted to honor the U.S. Civil War dead if doing so meant staying home from school. The next day there would be a big parade along this same street, and Fred could hardly wait. He and his father were doing what they often did in the afternoon, stopping in to chat with half a dozen realtors in the small storefront offices that now dotted Jamaica Avenue.

As Fred Trump recounted it many years afterward, his father turned to him and said he felt sick. They walked home, and the older man went to bed. "Then he died," Fred Trump said later. "Just like that. It seemed so sudden to me." At first, he said, he couldn't believe that as the parade was marching down Jamaica Avenue, his father was lying dead upstairs. "It just didn't seem real," he said. "I wasn't that upset. You know how kids are. But I got upset watching my mother crying and being so sad. It was seeing her that made me feel bad, not my own feelings about what had happened."44

The cause of death was listed on the death certificate as "pleno pneumonia, dextra et sinistra": full pneumonia, right and left lungs. Five days later, infected lungs caused the death of Frederick Trump's brother-in-law Fred Schuster. To the Trumps, it seemed a sad coincidence. By the end of the summer, though, it was clear that both men had almost certainly been early victims of what came to be known as "Spanish influenza." Ultimately, the influenza epidemic of 1918 claimed twenty-one million lives—six million more than all of World War I.45

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Five and a half years later, on Tuesday evening, January 30, 1923, Frederick Christ Trump stood in the auditorium of Richmond Hill High School. Looking self-conscious in his formal attire, the thin blond youth marched into the hall to the strains of Mendelssohn, listened to the valedictorian expound on "Investment of Our Heritage," received his diploma, and marched out to Sousa's Washington Post March. He was through with his formal education.

Richmond Hill High, the largest in Queens, was about two miles from Woodhaven. Founded in 1898, it was one of the first tangible rewards Queens received for its incorporation into New York City. In a grand gesture, city officials had laid a cornerstone containing a set of U.S. coins, an engraving of the battleship Maine, and a portrait of Admiral Dewey and his fleet. Unlike a modern high school, this one had no cafeteria; students went home for lunch, brought their own, or ate in a diner attached to the school. But the school did boast a domed observatory, the only one in a city high school, and a brand-new $6,000 telescope. In the early years school life centered around the German club—Der Deutsche Kreis—and social events often featured German games, dances, songs, and readings.46 However, by 1918, the year Fred Trump entered Richmond Hill, the school had become Anglicized and German was rarely spoken.

Because there was little truancy and no vandalism, students did not have individual lockers. They simply left their coats and supplies in a coatroom, and apparently nothing was ever stolen.47 Rules were strict. There were no makeup tests, which meant that no matter how sick they might be, students either showed up for final exams or repeated the course. Teachers still scrupulously followed the classical curriculum, and the school papers bristled with literary allusions and Shakespearean wordplay.48 There were a few black students and a handful of Jews, but for practical purposes the school was white and Christian, with a Protestant majority.

Everything seemed to suggest that Queens would continue to grow and to improve, but not to change. Indeed, in many ways the area was still a nineteenth-century enclave. Some residents made forays into Manhattan, to see jazz at Gray's Drugstore or the Pennsylvania Grill or take in plays on Broadway. But most saw that borough, known throughout Queens as "the City," as a foreign land, distant and intimidating, and preferred to stay put amid traditional suburban familiarity.49

In early June, on Anniversary Day, the community celebrated its own existence.50 Local schools and businesses closed. Parents dressed children in white and decorated baby carriages. Here and there, groups got up a small float for the occasion. People congregated at their churches, joined an informal parade through the streets to Forest Park, and then circled back to the churches for ice cream.51 It was a glorious occasion, a moment to look around and savor a way of life so innocent and pleasant, it seemed that it would never end.

But it did. Economic development, population movement, and growth would inexorably change the face of all of New York City. As new businesses opened, new people would arrive. When Frederick Trump had come to America, he had naturally headed for the tenements of the Lower East Side and then out west, where opportunity was beckoning. But now new arrivals to New York, often from other parts of the United States, wanted to stay in the city and to have their own homes. As Fred Trump came of age, he saw an opportunity for himself in providing them.

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When Frederick Trump died, his estate included the family's two-story, seven-room home in Queens, five vacant lots, $4,000 in savings and life insurance, $3,600 worth of stock, and fourteen mortgages. The net value was estimated at $31,359, the equivalent of about $345,000 in 1999 dollars.52 He had come from nothing, and he had left something for his wife and children. Had he lived, he would probably have left much more. But he had accomplished a great deal in the time that he had. Above all, he had redirected the course of his life and that of his family and the descendants who would follow. Instead of being German, part of the Old World and the old order, they were American, in place to assume leading roles in the century now unfolding. By establishing his family in Queens and becoming involved in real estate, he had set the stage for what was to come.

Unfortunately his financial legacy quickly diminished, consumed by the drastic postwar inflation of 1919–20, during which consumer prices spiked up more than 50 percent. His small but thriving real estate business shrank to its outlines, forcing the family to scramble. As it turned out, his widow had a remarkable talent for doing just that.53 Beginning with the lot next door to her home, she arranged for a local contractor to build houses on the empty property remaining in her husband's business, sell the houses, and provide home mortgages to buyers. For the time being, she would support her family with the income from the mortgages and whatever she could make by taking in sewing. Then, when her children finished school, they would continue the family business. Her older son, Fred, then fifteen, would be the builder; her younger son, John, thirteen, would be the architect; and her daughter, Elizabeth, sixteen, would run the office and keep the books.

Everything seemed to go according to her plan. Young Elizabeth left high school early, not an unusual step at that time, and enrolled in secretarial school. John busied himself with his schoolwork. Fred, who would have been happy to drop out of school, complied with his mother's request that he obtain a diploma, but he did not let being a full-time student interfere with getting the head start he craved.54 While classmates belonged to school clubs and played on sports teams, he earned money caddying at the local golf course, whitewashing curbstones, and delivering groceries and papers to his Woodhaven neighbors.

For as long as he could remember, he had been drawn to building, partly out of respect for his father, but also because it seemed like the most interesting thing in the world. "I always wanted to be a builder," he said years later. "It was my dream as a boy, just as some kids want to be firemen." Now he took night courses at the local YMCA in carpentering and reading blueprints, and he studied plumbing, masonry, and electrical wiring in correspondence courses. He also built a garage for a neighbor. "Probably not the greatest garage ever put up," he later acknowledged, "but the experience reinforced my hope of doing something creative with wood and bricks and cement."55

He did not study any more than he had to. Unlike his younger brother, John, an excellent student and a member of his high school honor society, Fred Trump settled for average marks. He had no time to study, much less to practice the violin that sat gathering dust in his room. The yearbook entry under his name says simply "X"; he had no extracurricular activities. Next to his name appeared the phrase "Even the good Homer sometimes nods his head in sleep," presumably referring to Fred's exhaustion after working and attending night classes.

As soon as he graduated, he obtained full-time employment in construction. His first job was as a "horse's helper" for a local builder. At the time, horse- and mule-drawn delivery wagons hauled construction materials to building sites along streets paved with flat wooden blocks fitted tightly together. The smooth surface meant easy travel in warm months but disaster in winter, when ice sheeted the roadway. On level ground the animals slipped and slid, and on hills they could not move at all.56 To keep Queens from closing down altogether, strapping young men like Fred Trump had to pull the loads themselves. "I replaced a mule," he said later.57 Every day he towed lumber up steep hills too icy for horses to ascend safely and thought about the fact that those high school classmates who had pursued business courses were making $35 a week compared with his $11 paycheck.58

He got work as a carpenter and took courses at Pratt Institute in Brooklyn in engineering, estimating, and other construction-related subjects. "I learned how to frame walls more efficiently than other people, how to read a blueprint more accurately and faster," he said years later. "They weren't huge skills, but they gave me an edge. It meant I could offer something different, something the others couldn't offer."59 He learned his craft well. Within two years of his graduation he had built his first house, a simple one-family home in Woodhaven, and then two more in Queens Village.

The financial end of the operation was more problematic. Because he was still under twenty-one, his mother incorporated the business, known as E. Trump & Son, and signed checks.60 A more difficult hurdle was inadequate sources of credit. Even before the Depression, small-scale builders like Fred Trump had little access to what are known as "construction loans"—essentially the temporary bank loans used to cover architect fees, materials, and other construction costs.I The only place they could borrow money was from moneylenders who crowded the sidewalks across from Brooklyn's Borough Hall year-round, rain or shine. Known as "the Court Street boys," they had deep pockets and offered financing on a handshake. Their customers included the major developers of the day, whose office buildings lined Court Street and were beginning to fill lower Manhattan. But the interest rates charged by the Court Street boys went well into the double digits, far more than Fred Trump could pay.

Instead he contrived his own financing. He began one house, sold it before he had finished it, then used the money to get a second one going while finishing the first, constantly stretching funds to cover the costs that just as constantly threatened to overtake his fledgling operation. He worked from dawn to dusk. He raced the payment clock. By 1926, three years out of high school, he had managed to put up nineteen more homes in Hollis, another Queens neighborhood.

Ceil Raufer was a new bride when she and her husband bought one of these houses from Fred Trump in July 1926 for $7,500. Their house was one in a row of seven detached frame dwellings he built on 199th Street. Obviously designed by the same hand, all had two stories plus an attic and a basement, a driveway to the side, and a garage in the back. Yet each had distinct details: three windows across the second-floor front, three little steps leading up to the front door, a dormer, an asymmetric bit of cornice, a decorative touch on a front porch.

"Fred Trump was too young to be at the closing, so his mother came," Raufer recalled years later. She knew that her house was in the builder's first development, but she had no qualms. Raufer knew the family, as her younger sister had been a classmate of John Trump's in elementary and high school. More important, she was impressed by Fred Trump's attentiveness to his customers. "He used to come around all the time and ask if I needed anything," she said. "Once he connected something in the kitchen so I could turn on the hot water all the time. He always said, 'Don't tell the neighbors, but I'll do it.' "61

All over Queens, groups of Fred Trump's homes began to appear. With each cluster, the houses were a little larger and a little better designed. In part, this

was because the Trumps learned firsthand of any shortcomings. After the mid-1920s the family became real estate gypsies, living in a succession of Fred's own newly finished houses all over Queens. As Elizabeth Trump had planned, her daughter worked as a secretary, for an import-export firm. John worked at General Electric and, with some help from his brother, began studying architecture at Brooklyn Polytechnic Institute. But he soon found that working with his older brother was not easy. To Fred Trump, building was a business proposition that required selling each house as soon as possible, regardless of its state of completion, in order to get enough capital to start the next one. To John, building was an aesthetic act that meant finishing each house down to the final touches before putting it on the market. Over and over the older brother prevailed, and John became increasingly disenchanted. By the end of his freshman year he departed from his mother's script and switched his major to engineering.

In June 1929 the younger Elizabeth Trump, then twenty-five years old, married William Walter, thirty-five, a tall, dark-haired bank trainee. His parents came from Germany, and his father, like Elizabeth's, had been a barber. The newlyweds moved to another of Fred Trump's Hollis homes, an expanded version of Ceil Raufer's house with everything nicer, bigger, and better made. Fred Trump, just twenty-three, had already built scores of residences and had hundreds of satisfied customers. Now he was carving lar**ge building lots out of the undeveloped sections of Jamaica Estates, a rolling, wooded area near the Long Island border.62 Seeing an increase in demand for high-priced homes, he planned to build what he called "authentic architectural reproductions" of English manor and Georgian Colonial dwellings in stone, stucco, and brick. They would have up to five bedrooms and four bathrooms and sell for as much as $30,000**.*63*

Frederick Trump's sisters, Louise Trump Schuster and Katherine Trump Schuster, remained oriented to Manhattan. Both were widows, and their lives revolved around the Glad Tidings Tabernacle, a modest Pentecostal church in the Hell's Kitchen neighborhood of "the City." Geographically the parish was only a borough away from the Queens Trumps. But sociologically and economically, Glad Tidings, with its butchers and bakers, its mail carriers and store clerks, was light-years removed from the bankers and lawyers who came to live in Jamaica Estates.

But the Trumps did stay in touch. Louise and Katherine and their families came to dinner now and then, occasions Katherine's grandchildren remembered fondly years later because of Tante Elizabeth's excellent cooking and, especially, her apple torte. In the summer there were family outings to North Beach, to the fairgrounds and dance pavilions, later replaced by LaGuardia Airport, where German oompah music still rang out. Frederick Trump's children never met his mother, Katherina Kober, who died in Kallstadt in November 1922 at the age of eighty-six, shortly before Fred's graduation from high school. But they accompanied their own mother on a trip to Germany in 1929, just before the Depression made such journeys an impossible luxury.

That October, the stock market crashed, signaling the end of good times. Fred Trump kept putting up mock Tudor mansions, but the real estate market was drying up. The inflationary 1920s had been forgiving times, particularly in real estate; eager to clinch deals, banks had been willing to embrace chancy ventures because any cost overruns could be recouped in a seemingly ever-expanding economy. In the deflationary 1930s, though, banks became allergic to even modest risk taking. Almost no one could obtain capital. Abandoning residential real estate, Trump opened a food market in Queens. He modeled it on King Kullen, a new store a mile away. Unlike the old German-style markets, where customers handed a shopping list to a clerk and waited for it to be assembled, here they could walk around and select cans from the shelves and precut meat from a refrigerator refrigerator case.64 It was one of the first modern supermarkets in the city.

To attract customers, the erstwhile builder placed ads for Trump Market in local papers and published his own broadsheet advertising special bargains. But when his staff told him they could arrange his store better than that of his competitor, he told them not to bother. "I don't want to do it better than King Kullen," he said. "I just want to do it just as well."

What could have been a new career was only a stopgap for Fred Trump. He wanted to build, not manage.65 It was the only time in his life that he did not put his utmost into what he was doing. His heart was in real estate, not refrigerator cases. The whole time he was running the supermarket, he kept looking for a way to return to his first love. With some energetic maneuvering amid the ruins of the House of Lehrenkrauss, perhaps he would be able to leave the grocery store behind.

- *I. Upon completion of a project, such loans, usually from commercial banks that lend on a short-term basis and at a relatively high interest rate, are replaced by "permanent loans" from insurance companies, pension funds, or other institutions able to place money at a lower rate and for longer periods. At that time, banks loaned at most about two-thirds of construction costs, forcing even well-established builders to seek preliminary financing outside formal channels.*

[...] CHAPTER EIGHT [...]

CHAPTER NINE - WASHINGTON TO THE RESCUE

LIKE HIS FATHER, FRED TRUMP was determined to better his station in life by the fastest route possible. By the time Fred Trump came of age, however, the physical frontier where his father met his biggest success was gone. So the son found another wealth-providing frontier: government. As he soon discovered, this frontier had many virtues, chief among them that, in the mid-1930s, it was not disappearing but growing. Greatly expanded by a host of New Deal programs, government offered rich opportunities to those, including Fred Trump, who proved particularly adept at figuring out how to use these programs to their own maximum advantage. This was not illegal or even particularly sneaky. Indeed, Fred Trump did exactly what the government hoped all the Fred Trumps in the land would do. And in so doing, he joined the ranks of entrepreneurs who constitute one of the oldest fraternities in the Republic: multimillionaires who owe their fortunes to subsidies from a grateful government.

Although he did not know it at the time, he set out on this new road shortly after nine o'clock on the morning of Tuesday, March 27, 1934, when the Brooklyn Federal Court approved his purchase of the Lehrenkrauss mortgage-servicing business. Although he would be managing a fraction of the mortgages once held by Lehrenkrauss, the fee—one-half of 1 percent of all monies collected on what remained—would allow him to leave the supermarket business.1 Even better, he would have an inside line on properties about to be foreclosed and available on the cheap at court auctions. With this one favorable nod, the court had provided him with what he needed to relaunch his real estate career. It was an enormous plum, for he would be reentering the field with access to a steady cash flow, permitting him to escape the perpetual mad scramble of the small-scale builder. At last he would not need to race the clock, frantically trying to sell each new house in order to pay off construction debts left from the last one.

That was how Fred Trump got his second start. What allowed him to keep going after the Lehrenkrauss purchase was that in short order he would receive a second and even larger plum. While he had been scheming to obtain control of the one salvageable piece of the Lehrenkrauss wreckage, New Deal economists in the nation's capital were setting about the task of resurrecting the Depression-racked home construction industry. In the process they created a set of circumstances—in effect, a new frontier—in which builders could make money. Almost as an aftereffect, housing would be built.

The one thing developers like Fred Trump couldn't do on their own was to stimulate consumer demand. Even Fred Trump's formidable energy could not produce home buyers in the middle of the Depression. As an individual entrepreneur, he did not have the power. But national policy makers did. The same

home-building industry collapse that had dealt a blow to Fred Trump had been a disaster to the country. To government officials trying to revive a moribund economy, helping the construction industry back on its feet was a high priority. They wanted to put the blueprints and bricks back in Fred Trump's hands as much as he did.

Accordingly, at the same time Fred Trump was maneuvering in federal court in Brooklyn, President Roosevelt's inner circle was trying to figure out how to jump-start the home-building business. After months of feverish discussion and sometimes bitter negotiation, they created the Federal Housing Administration (FHA), and within the next year the entire industry underwent a drastic change. What had been a relatively low-key, local affair became a bustling, large-scale enterprise. In the process, those who could adapt to the changed political and regulatory landscape had an enormous competitive advantage. One of the most successful among them would be Fred Trump. Over the next two decades he would use the FHA to provide homes, to enrich himself, and to help create a new quasi-suburban way of life in the outer boroughs.

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By early 1934 there was no argument about the enormity of the nation's financial crisis. From 1929 to 1933 income had fallen by 36 percent, which meant that, accounting for fluctuations in the value of the dollar, per-capita income was almost as low as it had been in the depression year of 1908. One out of every four workers in the nation was unemployed.2

The whole U.S. economy seemed in near free fall, but real estate was especially badly hit. Almost one-third of the jobless—the largest single category—were in the building trades.3 New housing starts, which had hit an all-time high of 937,000 units in 1925, plunged to 93,000 in 1933.4 One out of ten home mortgages in the United States was in default, and many more were in serious trouble.5

Meanwhile banks, the source of the capital needed for mortgages and new construction, were failing at an unprecedented rate. Those that stayed open were continuing to hemorrhage from withdrawals of cash by insecure American depositors and withdrawals of gold by jittery foreigners.6 By March 1933, on the eve of Roosevelt's inauguration, the banking system was in such chaos that about half the states had declared bank "holidays," the popular euphemism for official permission to keep the doors shut. Three days later the new president declared an unprecedented national bank holiday. In fact, it was more like a bank spring vacation, as it lasted more than a week. This hiatus provided breathing space and time for Congress to crank out emergency banking legislation, but it did not cure the country's financial ills. Of the 17,800 commercial banks in the United States, more than 5,000 delayed reopening, and of these over 2,000 closed permanently.7

Everywhere the nation's bankers were trying desperately to keep their institutions afloat. But out in Utah one of their number went further. Scrambling to keep his own establishment open, Marriner Eccles unexpectedly began formulating questions about the nation's financial underpinnings that would shock his colleagues, intrigue the president, and have a profound effect on Fred Trump's future. From the outside he seemed an unlikely innovator; the thirteenth of twenty-two children born to a practicing polygamist, he was a devout Mormon, a high school dropout, and a conservative Republican. A successful man who managed a number of family businesses, Eccles had never doubted the conventional economic wisdom that enough budget cutbacks would cure even the worst economic ills.

Then, one day in the early 1930s, he faced a run on his own Ogden bank. On the day it was expected, he opened every window and coached tellers to look up every signature card, use small bills, and count slowly. When three o'clock approached and people were still in line, Eccles stood on top of a black-and-gold marble counter and announced that the bank would not close that evening as long as anyone desired service. The next day he reversed orders. The bank opened two hours early, and clerks ignored signature cards and made fast dispersals with big bills. No lines formed, and a business-as-usual atmosphere prevailed. "That was the end of that run," Eccles wrote later. "I thanked God for the nerves I inherited from my father and mother."8

Although his tightly scripted series of moves had saved his own bank, he began to question the traditional notion that continuous belt-tightening would eventually bring the economy around. Rather than helping, he said later, this policy seemed to be "throwing a double loop around the throat of an economy already gasping for breath." Departing ever further from his past assumptions, Eccles declared that government should not be considered in the same light as a business or a family. The latter needed to balance their books or they would go bankrupt, but the government had the unique power to issue money, levy taxes, and in general change the rules of the game.

In fact, Eccles asserted, the government's job wasn't to balance the budget, but rather to put people and money to work. From there it was only a short leap to the distinctly heretical notion that getting the economy moving again meant accepting, and even embracing, an unbalanced budget, at least for the short term. At the same time, Eccles remained firmly on the side of private enterprise and a limited role for government. He wanted to get the country moving again by strengthening the private sector and using its resources, not by having the government sweep in and pick up the tab.

In February 1933, as Fred Trump was arranging supermarket shelves in Queens, Eccles attended an economic conference sponsored by the Senate Finance Committee. One after another, leaders of industry, finance, and labor reiterated that the best medicine for the economy was no medicine other than occasional relief for creditors and investors. When the man Fortune would later describe as a prophet spoke up and suggested a deliberately unbalanced budget, his audience was startled. Then he went on to speak of relief not for creditors, but for debtors—that is, the unemployed, laborers, and farmers. By the time he got to minimum wage laws and higher income and inheritance taxes, his listeners were thoroughly alarmed.9

Unrepentant, Eccles headed to New York to meet an economics professor at Columbia University named Rexford Guy Tugwell. The circumstances did not bode well. Tugwell was late because he had been sitting in a dentist's chair. Obviously feeling guilty, he asked Eccles to share a lunch of sandwiches at a drugstore booth. Tugwell, his jaw throbbing, popped pain pills, listened as the renegade western banker outlined his unorthodox proposals, and then sent him on his way without comment. Unbeknownst to Eccles, the prominent English economist John Maynard Keynes had already advanced similar ideas, and Tugwell was receptive to them. But Eccles knew nothing of this until nine months later, when Tugwell, then serving as assistant secretary of agriculture, abruptly summoned him to Washington.

For three exhausting days Tugwell trotted Eccles around to meet other top Roosevelt administration officials, including Secretary of Agriculture Henry Wallace and Secretary of the Interior Harold Ickes. Because of what Eccles later called "my bizarre status as a reputed millionaire banker and industrialist who preached the gospel [of planned government deficits]," they were willing to listen to him.10 To Eccles's dismay, they were not willing to implement his ideas immediately. But they did want him on board. After he returned to Utah he received an invitation to become a special assistant to Treasury Secretary Henry Morgenthau Jr., and in early 1934 he reported for duty.

In the meantime, a working group known as the National Emergency Council met in the Oval Office with the president to dismantle the Civil Works Administration, a public works effort whose price tag was frightening the old-line budget balancers. When Roosevelt was asked for more money, he threw up his hands in horror and asked with dismay if there was any way to get the government out of the whole lending and relief business. "Sure," one of the men

gathered around the president's desk piped up. "A housing program." And thus began what was to become the Federal Housing Administration, provider of homes for American families and fortunes for American entrepreneurs.11

In March of 1934 a national housing task force got to work. Like everything else in Washington, the guest list was heavily WASP. "It was all Jimmy Stewart in those days," said one New Deal veteran afterward.12 The group included Secretary of Agriculture Wallace, Secretary of Labor Frances Perkins, railroad magnate and Democratic Party bigwig W. Averell Harriman, and Rexford Tugwell. Less well-known was the group's economist, Winfield Riefler, a statistician who had come to the Federal Reserve after working as a commercial banker in Baltimore.13 Colleagues had already singled out Riefler, a tall, skinny blond, as the ablest economist in the entire Fed. He proved it immediately by hiking over to the Treasury and asking Eccles about housing. For the rest of the day and well into the evening, they dissected the nation's financial paralysis. In the process, each found in the other someone willing to question economic shibboleths and to consider unconventional solutions.

When the two men finished talking, Eccles had signed up for the task force. But when he attended a meeting, he was dismayed to find what he called "social service worker" thinking, in which "housing" meant public housing, financed and owned by the government. When he pointed out that the group's members were long on enthusiasm but short on actual know-how for producing real homes for real people, he became head of yet another subcommittee to get the job done.

Together Eccles and Riefler planned what would become the Federal Housing Administration. Among other distinguishing features, the FHA would bear no resemblance to the federal government's only previous such effort, the thirty thousand housing units built for shipyard workers and their families during World War I and sold off at war's end.14 Convinced that government-built housing could not generate enough financial activity to make the economy hum again, Eccles wanted private banks to pony up funds for private construction. Riefler, who had experimented with the idea of mortgage insurance back in Baltimore, suggested the extraordinary notion of having the federal government insure private banks against losses when making loans to home buyers. As Roosevelt had requested, the government itself would thus be out of the lending business. It would not actually lend or give away a dime. Instead it would act as a guarantor of last resort, promising banks they would no longer have to assume all the risk. Bankers could then turn on the fiscal spigots, and construction could resume.

On June 27, 1934, the Seventy-third Congress of the United States passed the Eccles-Riefler plan in the form of the National Housing Act. Title I, the smallest and most quickly operational section, insured bank loans of up to $2,000 for home and office modernization. Within months these loans, which did not require collateral, put nearly $1 billion into the spending stream.15

Title II changed forever the way houses were built and financed in America. Fearing losses, banks had traditionally avoided giving mortgages for more than half of the appraised value of a home. Because most buyers did not have the cash for the other half of the purchase price or for the extortionate interest rates charged by those building and loan associations that provided bigger loans, they had to take out second and third mortgages. Worse, these loans were generally short-term, usually for no more than five years, and payments covered only the interest. When the loan was up, the borrower would hand over a whopping "balloon payment" on the principal and get the loan renewed. Even in the best of times many homeowners remained stuck in an endless cycle of overlapping mortgages, never able to finish paying off their homes.

Title II changed this practice completely. Banks could lend as much as 80 percent of the value of a home and lot, up to a maximum of $12,800, a generous sum at a time when half that amount would provide solid middle-class comfort. Moreover, there was a ban on balloon payments. The interest rate could not be higher than 5 percent, and the loan was both long-term and amortized—that is, payments applied to both interest and principal.16

If banks agreed to follow such radically different rules, the government would insure the loans. For this service, the buyer would pay an extra one-half of 1 percent of the unpaid balance of the loan. The premium or insurance fee would cover FHA administrative costs and also provide a pool to cover any defaults. The same terms would apply to rental housing, but until after World War II the FHA covered mainly single-family homes.

In less than three months Eccles and Riefler had come up with an entirely new approach to home building, figured out the administrative framework, made provisions for financing, and seen the final product through Congress. Now it was the official law of the land. But they were still short people who knew how to build houses.

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In early May of 1934 a thirty-six-year-old architect named Miles Lanier Colean was hurtling toward the nation's capital in the backseat of an old jalopy. By virtue of the fact that he and several unemployed colleagues were willing to cover the cost of the gas, they were the official delegation from the Chicago chapter to the national convention of the American Institute of Architects. Colean, a lanky man with thick black hair and an architecture degree from Columbia University, was so broke that even his share of the expenses was a budget buster. The trip was a wild, desperate gamble that something would turn up.17

Upon arriving in D.C., the travelers crashed a party at a hot nightclub called the Troika. Because the host was Wisconsin's Robert La Follette, who had inherited his name, his liberalism, and his Senate seat from his late father, the guest list was full of young New Dealers. Colean managed to snag an invitation to the next housing task force meeting and soon was on staff. As a student Colean had looked at grand projects, not middle-class housing, and he had later worked on some of the most spectacular examples of overbuilding, including the Palmer House and the Stevens Hotel (later the Conrad Hilton) in Chicago. But unlike most of his colleagues, he had at least thought about large-scale housing development, which he had begun to explore as the building industry of the 1920s shuddered to a dead halt.18

By the fall of 1934 the FHA had perhaps a hundred employees, scattered in empty government offices around downtown Washington. Many were in an upper floor of the spanking new post office building, a neoclassical columned behemoth at Pennsylvania Avenue and 12th Street. Decorated with elaborate sculptural programs, dozens of murals, mahogany wall panels, and cut-glass chandeliers, it was part of a complex known as the Federal Triangle. Originally planned by the Hoover administration as a central location for government employees, it was now crammed with New Deal agencies.19

Surrounded by near imperial splendor, Colean and others on the FHA staff labored all day and half the night, six and sometimes seven days a week, to come up with design and financing guidelines for modest single-family homes all across America. A standard joke around the office was to ask whether there was a doctor in the house—a ridiculous remark because the core staff was composed largely of Ph.D.'s unable to find academic employment.

Once a week they trooped over to the University Club, a few blocks away, and over lunch they filled each other in on what they'd accomplished over the past seven days. To save time they ordered in advance, skipped dessert, and brought along a secretary who entered the men's club by a separate door and took notes on their discussions.20 On Sunday nights the planners gathered again at the home of Fred Babcock, an insurance underwriter and Republican from Chicago. Exhausted from work and homesick, the men who were going to put the building industry back on its feet relaxed over a home-cooked meal and

listened to Babcock, a portly fellow who was blind in one eye, play violin and piano trios with his children.21

Early Monday morning they started right back in again arguing and negotiating over how to go from half a dozen pages of legislation to concrete procedures that would attract loans and prevent cheating. The one thing they all agreed on was the need for rules that were, in the words of one participant, like a good farm fence—"pig tight and bull high."22

One major departure was to focus not only on the builder's ability to command a loan, but also on what was being built. For the first time, there was an emphasis on land planning rather than simply adopting a standard gridiron plan. There was also research on which designs had the best track record. They collected data showing that small, well-planned, well-built houses that adhered to simple standards, like making the bathroom accessible without having to pass through a bedroom, held value better than large, elaborate homes that became white elephants in a slump.23 Market studies on the number and cost of houses in different parts of the country were another innovation. Ernest Fisher, a bespectacled older economist from the University of Michigan, sent researchers to Charleston, West Virginia, to ring every doorbell—including those in the large red-light district—and ask questions.24

Fred Babcock pioneered another important change. Every day he came in, carefully removed his jacket, rolled up the sleeves of his white shirt, and worked on the first nationwide standards for real estate appraisal. In part, this meant figuring out how to assess the creditworthiness of the borrower. Determined to avoid the stranglehold of loans made for unrealistically short time periods, Babcock devised a system of level payments that stretched out over a number of years and covered both interest and principal. To figure out if a mortgage had an acceptable level of risk, a lender could check whether the prospective buyer made enough money to cover the monthly payment—now a routine procedure, but novel at the time. Using this approach, borrowers could feel secure that by paying the same amount each month for a set number of years, they would eventually own their homes, and lenders could feel assured that monthly payments would arrive and they would not have to resort to foreclosure.25

Babcock and Colean also worked on methods to assess the real estate itself. Colean made sure there was an architectural examiner in each local FHA office, hardly a problem in the depths of the Depression. "I became known as the relief agency for the architectural profession," Colean said later.26 Because many areas lacked building codes, the FHA put together its own minimal standards for key elements like indoor plumbing, fire protection, sewage disposal, lot size, and subdivision planning. In doing so, it was essentially providing the first nationwide structural standards.27

Colean and Babcock's chief concern was for the economic soundness of FHA-insured mortgages, not for those who would actually be buying the houses. Indeed, they and their colleagues regarded the FHA not as a do-good government agency, but as an independent, professional insurance program, run on sound businesslike principles. Real estate refugees who had fallen on hard times made up much of the staff, and they understood their clients to be other members of the same real estate fraternity—that is, builders, mortgage bankers, and insurance brokers. Hardly surprising, the culture that developed within this new agency was oriented toward business interests rather than toward consumers or social reform. Thus, for example, the FHA had firm guidelines on what was called "neighborhood homogeneity," based on the premium Babcock's risk appraisal system placed on communities whose families had similar economic, religious, ethnic, and racial backgrounds. In practice this meant that the FHA went along with the restrictive covenants against Jews, Armenians, and other minorities that were common in that era. Its underwriting manuals also strongly discouraged "inharmonious uses of housing," a code phrase for selling homes in white areas to blacks.28

Wary of the FHA's unconventional approach and unconvinced by the businesslike nature of the enterprise, the large insurance companies continued to hold back. It was an enormous problem, for they alone had the resources to lend on a nationwide basis. "The FHA was still a brand-new outfit, with people bumbling around trying to figure out what to do," recalled Philip Brownstein, an FHA staffer and later agency head. "Here you had this crazy Roosevelt determined to bankrupt the entire country—most people thought this program was just too risky."29

Then Stewart McDonald, a car manufacturer who had at one time been police commissioner of St. Louis, took charge. A big, fat man, he considered himself, probably correctly, to be tougher and richer than most of his critics. "This job wouldn't keep me in cigarettes, if I smoked cigarettes," he once told a hostile congressional committee.30 Appointed FHA administrator on September 5, 1935, he quickly dispatched junior underwriters to beat the bushes for prospective FHA customers. At community centers and schools, churches and civic groups, the staffers touted what the FHA had to offer. When they couldn't find a meeting to address, they called one themselves.31 Gradually smaller insurance companies jumped in and started making money. Soon major league outfits in New York City were wading in as well.32 By 1939, five years after Win Riefler went over to the Treasury and talked to Marriner Eccles, the agency that came from their efforts was insuring about one-quarter of all new homes in the country. In 1935, the FHA's first full year of operation, it insured only about twenty-three thousand home mortgages; in 1941, it was covering over two hundred thousand loans.33

In turn, mortgage banking changed from a strictly local form of investment to a nationwide industry. Mortgage bankers could handle FHA-insured loans at the local level, then sell the mortgages on the so-called secondary market to large national institutions like insurance companies and big northeastern banks. Because of FHA standards as to the quality of construction and the terms of financing, FHA-insured mortgages were now marketable commodities all over the country. For the first time, capital in large financial centers could flow out to local banks and home buyers in distant locations.34

One of the busiest locations for FHA-insured mortgages would be New York City, and one of the most active builders there would be Fred Trump. Working in Brooklyn and using FHA-insured mortgages, he produced two thousand single-family homes between 1935 and 1942. Well designed and well built, these dwellings became known as Trump homes. As the public grew to know the name as a symbol of quality, within real estate and financial circles it was becoming known for shrewd business practices and entrepreneurial skill.

CHAPTER TEN HOME BUILDING'S HENRY FORD

TUCKED DEEP INTO THE RECESSES of page thirty-six, The New York Times on August 12, 1936, carried a brief story, just three paragraphs long, that laconically described the most important event of Fred Trump's life.1 At eleven o'clock the day before, Thomas G. Grace, New York State Federal Housing Administration director, had officially inaugurated the Trump Holding Company's new development in a section of central Brooklyn known as East Flatbush. Standing before more than one hundred invited guests, the FHA director waved his arm at an immaculate one-story model house and declared the first forty-eight homes open. Then he presented Fred Trump and his new partner, Charles A. O'Malley, with a plaque commemorating FHA approval of their 450-home project.

In the audience that hot, muggy day was Fred Trump's wife, Mary Anne, a twenty-four-year-old with brown hair and bright blue eyes.2 Born Mary Anne Macleod and the youngest of ten children, she had emigrated six years earlier from Stornoway, an island in Scotland's Outer Hebrides known for herring, sheep, and Harris tweed. Scot Gaelic was her first language, and when she arrived in New York, on the day after her eighteenth birthday, she spoke English with a heavy burr. Unskilled and unemployed, she lived with her married sister in Astoria, Queens. One night she went with her sister to a party and met a blond man with a mustache who was half a dozen years her senior. His name was Fred Trump, and when he went home that night he told his mother he'd just met the woman he was going to marry.

Mary Anne was immediately attracted as well. On a visit to Scotland soon afterward, she told her parents she had met her future husband. They married in 1936 on the second Saturday in January, celebrated at the Carlyle Hotel, and went to Atlantic City for their honeymoon. Characteristically, Fred Trump was too busy to take more than the weekend off. On Monday he was back at work, and Mary Anne had become a housewife. Now it was eight months later, and she was four weeks pregnant with her first child. Smiling graciously despite the August heat, she greeted her husband's friends and colleagues.

Also present at the dedication was Elizabeth Christ Trump. Fifty-six years old, her blond hair turning gray, she was a well-dressed and imposing figure. Just before the bottom fell out of the building industry, she had returned to Germany to see her family and show off her children. Looking around at them today, she felt even more proud than before. By working hard, her older son had found his way back into real estate. **Her daughter's husband, Bill Walter, had become a successful banker, and they had produced two grandchildren, both boys.** Her younger son, John, had a doctorate in electrical engineering, an appointment as an assistant professor at MIT, and a wife named Elora Gordon Sauerbrun. A church organist in Queens, she, too, was from a German background.

Fred Trump was happy to have his entire family in attendance. But the real proof of his success was the men who were there because they did business with him. Charles O'Malley, who had replaced William Demm as Trump's partner, was sixty years old, exactly twice Trump's age, and the official real estate appraiser for New York City. O'Malley brought big-league credibility and status to the partnership, for he had appraised $2 billion worth of property, including the remains of the House of Lehrenkrauss.3 Bill Hyman, the real estate lawyer Trump had met during the Lehrenkrauss hearings and subsequently retained, was also there. Other guests included the district director and main underwriter for the FHA's Brooklyn office.

The biggest coup was the personal appearance of Tommy Grace. A lawyer from Bay Ridge, near Coney Island, Grace, thirty-eight years old, had received an appointment as the first state FHA director the previous year. A decorated war veteran, law professor, and, despite his diminutive stature, former football coach, he had rung doorbells, tallied support, and pulled out the vote on election day. As recognition for his unstinting effort, the local Democratic machine had pushed for his ascension to the FHA.4

As with the awarding of the Lehrenkrauss mortgage-servicing business, politics and, especially, the Madison Club played a major role in the history of the new development in East Flatbush. "Freddy," as Trump was called by Madison pals, never missed a political event, willingly shelled out for every dinner and benefit, and occasionally paid a personal visit to the three-story brownstone that served as club headquarters. Downstairs was a big meeting room full of folding chairs and a lounge with old leather-covered seats; upstairs, in a warren of tiny offices, club officials worked the phones and the mimeograph machines. Out on the surrounding streets, ambitious young club members like Abraham Beame, a high school accounting teacher and later mayor of New York, spent their evenings dropping in on registered voters to see what could be done to keep them in the Democratic fold.5

Through these political contacts, Trump had explored the status of a large vacant tract on the southern edge of Madison Club territory. A stretch of old swampland, it was in East Flatbush and had been the dumping ground for dirt excavated during the construction of the Nostrand Avenue subway. Each year the Ringling Brothers circus camped there for a few weeks after its run at Madison Square Garden. The rest of the time local residents used the area for truck gardens and ball fields—soccer in the fall and baseball every spring.

Working out of one of the unsold houses he had built in Jamaica Estates, a sizable mock Tudor stucco affair on Devonshire Road, Fred Trump had learned all he could about two things: the new FHA mortgage insurance program and the Flatbush site. Over the months he tracked down individual properties that were either in foreclosure or about to be, including some from the Lehrenkrauss connection. In the past, he had built on a relatively small number of lots at any one time, sometimes only a single parcel. But with the FHA behind him, he was able to get loans based on the soundness of his plans rather than the size of his bank account. As a result, for the first time he could put together whole packages of adjacent lots.

Finding out exactly who owned what was a complicated business, and more than once Bill Hyman had to trace titles back to the original Dutch land grants. It was also a delicate business, for if owners found out that they had the last few parcels within a larger area, they could hold out for higher prices. But creating such packages was a business Hyman was good at. Poring diligently over dusty records and then standing unobtrusively at the back of city auctions, he was able to buy up tax liens, many on old farmland on which owners had stopped paying taxes long ago. To avoid detection, he used pseudonyms, stand-ins at auctions, even dummy subsidiary corporations.6 He would do whatever it took. "Whenever you went to a closing with your dad," Fred Trump later told Hyman's son David, "the deal always closed."7

Once Trump had secured the East Flatbush tract, he hired an architect and put him to work with a set of the FHA guidelines produced by Miles Colean. They spelled out official requirements, such as the inside bathroom reachable without going through a bedroom; elsewhere Trump learned about the unofficial requirements, like a brick exterior. Plans in hand, he then went to Tommy Grace. For the initial development of 450 houses, Grace approved $750,000 in mortgage insurance, making Fred Trump one of the first New York builders to get such an FHA commitment. He could then proceed to a commercial bank such as Dime Savings, with which he had established a close relationship, and get the money he needed to go into high gear.8

By mid-1936 Fred Trump had four hundred workers digging out the foundations for houses that would be priced from $3,000 up to $6,250. Unlike many other builders, he did not hire someone else to oversee his jobs. Instead he acted as his own general contractor, reporting to the job site every morning at seven-thirty and watching his crews frame the houses one by one. Within crews, which were all white and a hodgepodge of nationalities, specific craft was usually a matter of ethnic origin. Thus, for example, Swedes were woodworkers and Italians were plasterers. But Fred Trump, who had constructed whole houses by himself, knew how to do every job. Whenever he spotted something being done badly, he stepped in and showed how to do it better and faster.9

To get maximum value out of the land, he built attached row houses with common walls. He avoided corner lots because they were expensive; fortunately East Flatbush blocks were so long that there was room for dozens of row homes to stack up in the midblock sections. Every weekend eager buyers crowded his sales office. Within months he had expanded to similar projects in other Flatbush neighborhoods, again using FHA mortgage commitments to obtain construction loans from banks. To speed up the work, he installed floodlights and hired a second shift of workers to put up houses, lay sidewalks, and pave streets.10

By the time he opened his first section of houses, in August 1936, he was looking into doing more projects nearby. Soon long rows of what became known as "Trump homes" dotted central Brooklyn. Built of dark red brick, they had a distinctive, recognizable look: a beach-towel-size swatch of front lawn, three front steps, and a tiny porch. At the same time, each house was slightly different from those of its neighbors. Faux gables and peaks ornamented the roofline, but not in a uniform fashion. Rusticated stone surrounded a window here and a door there, and minichimneys sat on top of some houses but not others. Every so often one or two homes sat a few feet closer to the street, breaking up the solid line of house fronts. The brick balustrades in front of the porches had a variety of patterns, including stylized key slots or crosses that created long stretches of large capital T's, prefiguring his son's constant use of both initial and name.

Inside the houses there was a similar attention to detail. The front door did not open directly into the living room, but into a minuscule foyer with a coat closet that had a mirror inside the door. Between the small living room and the smaller dining room was a rounded archway rather than the standard squared-off opening. Instead of using linoleum, Trump laid down hardwood parquet floors, and around the kitchen sink was ornamental tilework. The plumbing fixtures used high-quality copper pipes, and in some houses the stairs came carpeted.11

Sitting beneath each house was the emblem of the twentieth century, a garage. Entered by a steep ramp from the street, it had heat in the winter and its door was wonderfully visible year-round. The garage was a source of pride for Fred Trump's customers, even though most could not afford a car and did not know how to drive. Indeed, one of the big draws of Fred Trump's first development was its proximity to the Nostrand Avenue subway and the Utica Avenue bus. Nevertheless, said Marian Kelley, who in 1936 bought the second home Fred Trump built in East Flatbush, the garages meant that these houses "were the big thing—the modern home."12

The garage was hardly the only up-to-date touch. Instead of old-fashioned dormer windows, the houses had casements with small glass panes. In the bathroom the tub was framed with chrome, and there was a hand-painted landscape on the wall instead of the usual wallpaper. Some houses had stall showers, a novelty at the time; others had living rooms with shallow false fireplaces and electric logs that lit up when plugged into an outlet. The basements were not rough storage areas, but finished "recreation rooms" that could be rented out to help pay off the mortgage. Many had a bar with a mirror and a little foot rail in front. "Back then," said homeowner Kelley, "that was real class."

This classiness, which came from Fred Trump's sense of craft, was his new competitive edge. The FHA had launched several builders in Brooklyn, and the most direct competition came from two brothers named Match. "We'd have a front porch, and the Matches would put in a front porch," Fred Trump later told one interviewer. "We'd have a back porch, they'd have a back porch. Toilet upstairs, toilet downstairs. In the beginning, our houses sold for $2,990, $300 down, but they were always quality. . . . Do you know what I mean?"13

The people who lived in Trump homes were the middle of the middle class, or "middle-middle" as one former resident described her neighbors. Mostly young married couples with kids, they included teachers, lawyers, doctors, dentists, middle managers, small-business owners, accountants, a funeral director, and lots of housewives. The center of social life was the porches. All day long kids climbed over, under, and across them. At dusk their parents and, in some cases, grandparents sat there and talked as the kids threw and kicked balls against stoops and up and down the sidewalk and street. "Moving there was a nice step up," said novelist Lynne Sharon Schwartz. "My parents would say proudly, 'We live in a Trump home.' "14

As he had done earlier in Queens, Fred Trump periodically returned to the neighborhoods he had built, checking on how the houses were holding up. Dressed in a coat and tie, he would drive around the streets in a late-model car—at one time a red convertible, later a black Cadillac—and talk with his customers. When he visited Marian Kelley, he would chat with her husband, a store manager for A&P, about the supermarket business. Two years after they purchased the house, he helped them switch to gas heat, which was cleaner than the coal they had been using. "We were young, and we knew nothing about purchasing a house," she said. "He was so pleasant and reliable—it meant a lot to us."15

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Within a year after that August day when Fred Trump opened his first Flatbush home, the country was once again in a recession.16 The rosy picture at the end of 1936—270,000 new homes that year, and predictions of another 400,000 to 450,000 in the year to come—turned dark only a few months into 1937. By April it looked as though the country would be lucky to stay at 1936 levels. A worried Marriner Eccles lobbied the president to do something, and they both began looking to the FHA to get the economy moving again. Coming back from a White House meeting, FHA administrator Stewart McDonald relayed to his staff their marching orders: "Tell the old girl to paint her face, pull up her skirts, and get out on the stage."

Early in 1938 Congress passed liberalized FHA regulations. Borrowers could have up to twenty-five years to pay back mortgage loans, which could cover up to 90 percent of the purchase price for homes costing $6,000 or less. Such changes had a salutary effect, but they worried agency staffers. The FHA had barely gotten started, and this was an enormous new burden. The FHA's original purpose was to stimulate construction by helping bank activity reach normal levels. Now the agency was supposed to rev up the entire economy.17

Fred Trump had no such qualms. Despite his optimistic comments to the press, he had taken a hit during the economic downturn. Now, though, with changed FHA regulations, he was back in business. In March 1938 he joined other builders to form the Brooklyn Home Builders Association, a trade group intended to promote FHA-insured mortgages. Immediately the FHA committed $1 million in mortgage loans for another cluster of Trump homes in Flatbush.18

That July Fred Trump made his five hundredth sale in Brooklyn, and the Eagle hailed him as "the Henry Ford of the home-building industry."19 It was an apt description. Although he was in an industry long dominated by small operators working off the back of an envelope and still worked that way himself, he belonged to the new breed of producers who were putting together their own version of mass production. He built in multiple units, which allowed economies of scale such as ordering bricks by the carload and equipment in large enough shipments to earn discounts. Similarly, he bought lumber in bulk quantities and cut it to size in his own lumberyard, paid in cash to lower costs, and staggered construction to keep crews busy year-round.

By 1938, Fred Trump reported proudly, these methods had lowered his costs from twenty-nine to twenty-five cents a cubic foot.20 By keeping costs down and taking advantage of the new FHA regulations, he was able to produce good homes at such low prices that people were literally jamming the streets to buy his projects—or so he bragged to the New York Evening Post. Indeed, the builder claimed, there was such a commotion one day at his sales office that he had to call in the police to handle the mobs of eager buyers.21

In 1941 he was working on three hundred homes at once and took in $1 million in sales.22 Having run out of empty land in East Flatbush, he had moved his operation to Brighton Beach, on the other side of Brooklyn and one block from the Atlantic Ocean. There he unleashed tractors, derricks, steam shovels, and cement mixers on land that had once been a terminal on the Long Island Railroad.23 Working day and night, hundreds of bricklayers, carpenters, painters, and plumbers raced to meet tight deadlines. To keep up morale and productivity, he installed bathing lockers so workers could go swimming on their breaks,24 and to keep sales up, he promoted his homes constantly. Once he put on a public wedding ceremony for four couples and offered prizes for babies born in Trump homes; other ploys included a push to get "Own a Home" on license plates, a beachfront barge with Trump ads, and, at Coney Island, the release of balloons with coupons for $50 off on one of his $4,990 bungalows.25

Stories on every one of these initiatives appeared in the media, for Fred Trump had learned how convenient newspapers found short news releases for filling news holes. He generously provided item after item. Brief summaries of his sales reports, his market predictions, his "survey" of what had attracted buyers to his homes, and his opinions about everything from family values to national national defense went to local media, which often reprinted the pronouncements verbatim. In this way New York newspaper readers learned, among other things, that Fred Trump considered it a patriotic act to build one-family homes—but not apartments—for Americans26 and that in his opinion renters were mere drifters capable only of brief friendships. To be well-balanced, he declared, children needed to grow up in homes owned by their parents; luckily, his developments were especially child-friendly. Elsewhere he

balanced, he declared, children needed to grow up in homes owned by their parents; luckily, his developments were especially child-friendly. Elsewhere he explained that in inflationary times, instead of postponing buying a home, people should snap one up right away as a hedge against further inflation.27 He did not limit his remarks to industry concerns; when Roosevelt overturned historical precedent and ran for a third presidential term, Fred Trump sent a letter of endorsement to home-builder organizations across the country.28

Within Brooklyn and Queens, Fred Trump had become a public figure. In June 1937, when a stooped and shabby Julius Lehrenkrauss emerged from Sing-Sing prison with $20 to his name, Fred Trump was a highly prosperous businessman. Only in his mid-thirties, he had already built more than two thousand houses and expected to erect thousands more. By 1943, when Lehrenkrauss died alone and impoverished, Trump had become a millionaire.29 Now a father, he would pass on this wealth and property to his children. He would also pass on to them something else equally valuable: what he had learned about the usefulness of the media.

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Soon the gathering conflict in Europe would sweep up nearly everyone in the country, including Fred Trump. In January 1941, six months after the fall of France, the president established the Office of Production Management (OPM). Its mandate was to mobilize American industry for defense. Across the nation it impounded construction materials, and most private housing came to a dead halt. Fortunately for Fred Trump, the presence of the Brooklyn Navy Yard allowed the borough to qualify as a "defense housing area." In order to provide homes for defense workers, Brooklyn builders could still obtain supplies and FHA mortgage insurance.30 In October 1941 the first OPM priority in New York for a major building operation went to Fred Trump for a new project in a section of Brooklyn called Bensonhurst. He had paid cash for a fifty-five-acre tract on which he proposed to build seven hundred houses, the biggest project so far for him and for the New York FHA office.31

Bensonhurst would also be his first project to fall behind schedule. After the bombing of Pearl Harbor in December 1941 and the American declaration of war, the OPM hurriedly withdrew Brooklyn's priority, and local construction sputtered out. But Fred Trump was hardly in trouble. The government had asked him and other developers from the New York area to build defense housing at Norfolk, Virginia, the center of naval operations for the entire East Coast. To sweeten the invitation, Congress added a new provision to the National Housing Act, used to create the FHA back in 1934. Known as Section 608, it provided generous mortgage insurance for multifamily rental housing—apartment houses—for war workers, particularly when located near war plants.32 Fred Trump patriotically decided that the nation needed more apartment buildings.

His turnabout on the desirability of apartments rapidly followed his discovery that building them would let him be an owner, not just a builder. After he finished a development, he would not simply visit every now and then. He would collect rent every month, and he would have equity. Duty had called, and Fred Trump had answered with alacrity. Even before the enactment of Section 608, he was supervising five hundred construction workers at a new apartment complex. Called Oakdale Homes, it was located in what had been an old barroom and red-light district outside the Norfolk Naval Base and Naval Air Station in coastal Virginia.33

Norfolk, an ice-free, deepwater port at the south end of Chesapeake Bay, had long been an important center for shipping and shipbuilding. Over the years the city had expanded at a slow and stately pace, growing to about 140,000 inhabitants at the time of the 1940 U.S. census. But when Fred Trump arrived only two years later, the city had nearly doubled in size and was a boomtown bursting at the seams. During the frantic last-minute American defense buildup, the Pentagon had sent 30,000 men and women in uniform to Norfolk-area bases, and the city continued to swell with the arrival of more soldiers, sailors, shipyard workers, and their families. "There were so many servicepeople here, I hardly knew anybody who had a spare room who didn't take people in," recalled Carol Melton, a Norfolk grande dame who was a young housewife at the time. "You never drove anywhere without picking up sailors or servicepeople. I wore out the upholstery in my new car the first year."34

Fred Trump was stunned. "Norfolk is like a beehive," he told the New York Herald Tribune. There were long lines at stores, and it was standing room only at the movies every night. When it was his turn at a phone booth, getting a call through to New York could take hours. The housing shortage was so drastic that landlords resorted to "hot beds," rooms rented to one tenant during the day and another at night. Local builders had responded with a sprinkling of new homes, but they couldn't possibly meet the overwhelming need on their own. Nor did they want to. They had been stuck with empty housing after a big buildup during World War I, and they were wary of ending up in the same predicament once again.35

For Fred Trump and other outside builders coming to Norfolk, the overcrowding meant he was in the right place at the right time. "Rents are still soaring here," he reported elatedly to the Herald Tribune. Newcomers were so desperate for housing, they weren't waiting to see finished apartments. They lined up for the privilege of renting and signed leases based on blueprints. The previous weekend, Trump noted, forty naval officers showed up at his job site looking for places to live.36 Nearly half a century earlier Frederick Trump had found Seattle and the Yukon to be where the action was; now his son Fred was discovering the same thing in Norfolk.

Fred Trump's partner in Norfolk was James Rosati, a former plastering contractor in Queens. After the Depression Rosati had switched to road construction and had supervised the relocation of dozens of homes that were in the path of the Van Wyck Expressway and Idlewild Airport (later renamed for John F. Kennedy). Watching as war fever mounted across the United States, Rosati headed for Norfolk just before Pearl Harbor and snapped up property near the naval base. When Fred Trump, who had met Rosati in New York, arrived soon afterward, the two builders from Queens teamed up to develop Rosati's land.

Although they were both New York born and bred and only three years apart in age, they were an unlikely pair. The older of the two, Rosati was short and chubby with dark hair, dark eyes, and a big nose. A gregarious man, he was so outgoing that almost as soon as he arrived anywhere he knew everybody's name. Trump, his blond hair turned light brown, was reserved, a ramrod-straight figure with little to say. When he did speak, though, people listened, for his voice was loud and commanding.37 "He was already wealthy, but he wasn't flashy," said Rosati's son, James Jr., years later. "He never tried to impress anybody with his wealth. He didn't seem to care if anybody had ever heard of him."

Each man brought something important to the table. James Rosati had a talent for locating land in a new place, and Fred Trump had a track record of having successfully financed large developments through the FHA. Both were experienced at dealing with large projects and deadlines, something Norfolk builders had never before encountered. Both also knew the value of lining up local politicians, and they quickly made their way to the offices of key figures in Norfolk city government. "Nobody down there had ever seen the level of production and amount of work that went into the way things were done in New York," said James Jr. "It really took outside people coming in to get things moving the way they had to move."

Attorney Bill Hyman came south as well, and he and Fred Trump rented houses near the ocean at the resort community of Virginia Beach. Hyman brought his family, including two young sons who went to school at Virginia Beach, while Trump tried commuting back and forth to New York by train, plane, and, occasionally, his big black Cadillac.38 But driving nearly five hundred miles on preinterstate, two-lane roads took much too long, and getting priority for train and plane travel was too difficult. Eventually Mary Anne and the three children joined him.39 They were a handful: Maryanne, named after her mother,

was five years old and ready for kindergarten, but Fred Jr. was only three, and Elizabeth, named after her paternal grandmother and born shortly after her father had begun building in Norfolk, was an infant.

Almost every day the children of the neighborhood played on the wide, white beach. But the most exciting activity was to watch as the navy practiced amphibious landings and sailors manned the machine-gun emplacements installed at the end of residential streets. “Thousands of sailors would be running up and down the beach,” David Hyman recalled years later. “Norfolk was a sea of white hats, wherever you went. My father would come home from work and his little Chevy coupe would be like a circus car, filled with sailors on their way to Virginia Beach and the amusement park.”40

As the children searched the skies for Messerschmitt planes, Fred Trump was silent about his own German background. Although he had spoken German when he had visited Kallstadt just before the Depression, in America only his parents’ generation spoke the language in public. He began to deny that he knew German and did not teach it to his children. Eventually he started telling people that he was of Swedish ancestry.41 Mindful of the growing prominence of Jews in the real estate industry and local politics, he became so active in Jewish philanthropies that people often assumed he belonged to that faith.42

While Fred Trump was building housing for American military families, his brother was also contributing to the war effort. John Trump, who led the MIT High Voltage Research Laboratory, had already made a name for himself through his work with Robert J. Van de Graaff on the first million-volt X-ray generator. Used for radiation therapy, this invention would prolong the lives of cancer patients around the world. During the war John Trump worked on microwave radiation and served as director of the British branch of the legendary MIT Radiation Lab. There he played a key role in the development of high-resolution radar, the same technology that would replace the citizen plane spotting so eagerly provided by the young Hymans and Trumps.43

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Oakdale Homes, Fred Trump and James Rosati’s first project, was half a mile from the Norfolk navy base and consisted of 216 garden apartments. Seemingly overnight, block after block of trim two-story brick buildings with two complete three-room apartments on each floor began to appear amid vast muddy expanses that would someday be tidy swaths of green. It was Fred Trump’s biggest development yet, and one of the largest in eastern Virginia. It was also his baptism in multifamily rental housing.

Working with his partner, several secretaries, and a handful of superintendents in a small office on the outskirts of Norfolk, Fred Trump was in his element. “He knew more about construction even back then than most people,” James Rosati Jr. recalled later. “My father was an expert. He knew so much himself that most people came to him for advice, but he looked up to Fred Trump. Fred was one of the only people my father would listen to.” Years afterward Rosati Jr., still remembered his awe when he saw Fred Trump add up long columns of figures in his head.44 Trump also knew more about how to get what he needed than most people. When sudden shortages occurred, as they did frequently in everything from toilets to steel girders, he used his clout back home to get items like steel stairwells, fabricated in steelworking facilities in New York, rerouted to Norfolk.

Rosati was hardly the only one who found Fred Trump’s facility with numbers and details awesome. “He was like a computer,” said W. Taylor Johnson Jr., whose father handled Trump’s insurance in Norfolk. “He ran everyone else ragged. How he could keep all these facts and figures in his head was just unreal. Different locations, different trades, dealing with union people—he could just keep changing gears and still keep the conversation going. I almost never saw him refer to notes.”45 Co-owner as well as builder, Fred Trump monitored his buildings for waste day and night, turning out lights and getting up on a stepladder to remove any bulbs he deemed unnecessary.46

Norfolk would provide many New York builders with their first experience working on low-cost, high-volume housing. One Long Island builder, Bill Levitt, who had done only custom homes, found this new focus an intriguing novelty. As Fred Trump was building Oakdale Homes, Levitt was finishing off Oakdale Farms, a nearby development of 750 two- and three-bedroom houses. Little more than a roof and four walls, these bungalows were his first with carports, a money-saving garage substitute that would become a signature on future Levitt homes.47 “Our marching orders were to come up with the cheapest livable housing that could be done,” Levitt said many years later. “It gave us a whole new slant on life.” After the war, this experience would produce Levittown, an enormous Long Island suburban development that would become an important symbol of the postwar era.48

Fred Trump had already built enough low-cost, high-volume housing to be dubbed “Brooklyn’s outstanding builder” by the Brooklyn Eagle. But now he had a large, cheap labor force, little competition, and a drastically expanded market, and he was building even bigger, even faster, and even more inexpensively.49 Talbot Park was his second Norfolk project. Although it had only 496 units, the cost was $4 million, a new high,50 and the buildings, which housed from eight to twenty families, were the largest he had ever constructed.51 In a newspaper interview he heaped praise on the FHA’s liberal new provisions for mortgage insurance, which included advances during construction and no limit on rates of return for builders. “Red tape is cut to a minimum,” he said excitedly, “and costly delays are eliminated.”52

By 1944 Fred Trump had built 1,360 units, nearly 10 percent of all the wartime housing created in Norfolk.53 As long as there was a housing shortage, he declared, he would put up at least 2,000 units a year.54 Or maybe more. His goal, he told the Eagle, was “to achieve the same position in the field of building homes for war workers that Henry Kaiser now occupies in shipbuilding.”55 And Fred Trump was doing everything he could to accomplish it.

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june 21 1929

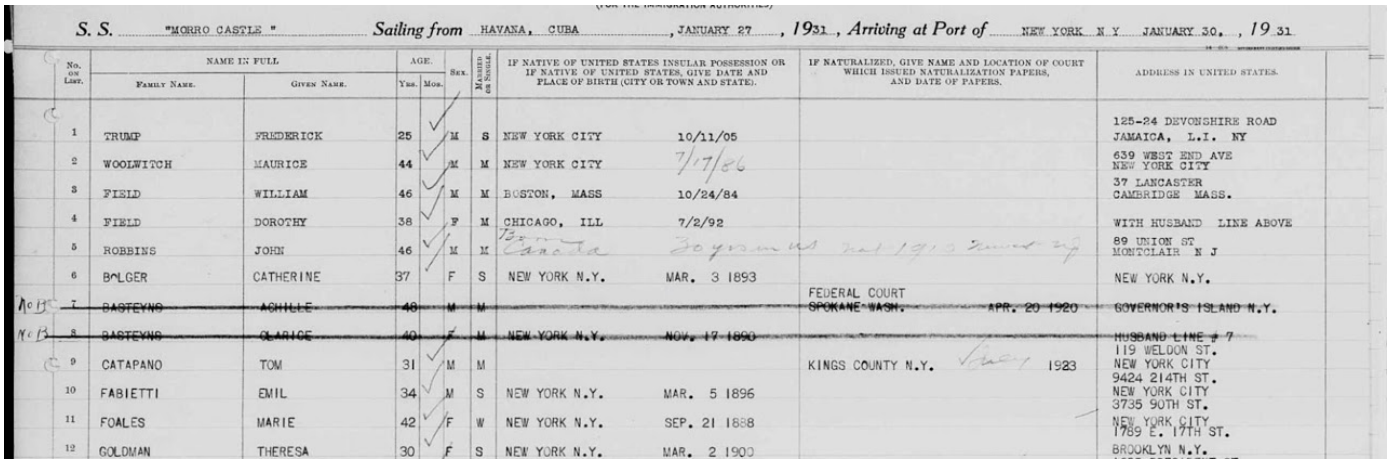
https://www.newspapers.com/image/576075451/?terms=%22frederick%2Btrump%22

1930 Census -

https://search.findmypast.com/record?id=USC%2F1930%2F004952185%2F00220&parentid=USC%2F1930%2F004952185%2F00220%2F012

1931 (Jan 31) - Fred Trump arriving back in NYC from a sailing voyage from Havana, Cuba

(this may be an ad for this travel .. https://www.newspapers.com/image/146460491/?terms=havana%2Bcuba%2Bmorro%2Bcastle)



S. S. "MORRO CASTLE" Sailing from HAVANA, CUBA, JANUARY 27, 1931, Arriving at Port of NEW YORK N.Y. JANUARY 30, 1931

No. on List	Family Name	Given Name	Age Yrs.	Age Mos.	Sex	Married or Single	If native of United States insular possession or if native of United States, give date and place of birth (city or town and state).		If naturalized, give name and location of court which issued naturalization papers, and date of papers.	Address in United States.
1	TRUMP	FREDERICK	25		M	S	NEW YORK CITY	10/11/05		125-24 DEVONSHIRE ROAD JAMAICA, L.I. NY
2	WOOLWITCH	MAURICE	44		M	M	NEW YORK CITY	7/17/86		639 WEST END AVE NEW YORK CITY
3	FIELD	WILLIAM	46		M	M	BOSTON, MASS	10/24/84		37 LANCASTER CAMBRIDGE MASS.
4	FIELD	DOROTHY	38		F	M	CHICAGO, ILL	7/2/92		WITH HUSBAND LINE ABOVE
5	ROBBINS	JOHN	46		M	M				89 UNION ST MONTCLAIR N J
6	BOLGER	CATHERINE	37		F	S	NEW YORK N.Y.	MAR. 3 1893		NEW YORK N.Y.
~~7~~	~~BASTEYNS~~	~~ACHILLE~~	~~48~~		~~M~~	~~M~~			FEDERAL COURT SPOKANE WASH. APR. 20 1920	GOVERNOR'S ISLAND N.Y.
~~8~~	~~BASTEYNS~~	~~CLARICE~~	~~40~~		~~F~~	~~M~~	~~NEW YORK N.Y.~~	~~NOV. 17 1890~~		~~HUSBAND LINE # 7~~
9	CATAPANO	TOM	31		M	M			KINGS COUNTY N.Y. 1923	119 WELDON ST. NEW YORK CITY
10	FABIETTI	EMIL	34		M	S	NEW YORK N.Y.	MAR. 5 1896		9424 214TH ST. NEW YORK CITY
11	FOALES	MARIE	42		F	W	NEW YORK N.Y.	SEP. 21 1888		3735 90TH ST. NEW YORK CITY
12	GOLDMAN	THERESA	30		F	S	NEW YORK N.Y.	MAR. 2 1900		1789 E. 17TH ST. BROOKLYN N.Y.

Clip from Immigrations and Customs sheet : [HG006C][GDrive]

1931 (March 15)

Full newspaper page - [HN010J][GDrive]

BROOKLYN DAILY EAGLE, NEW YORK, SUNDAY, MARCH 15, 1931.

QUEENSBORO'S *Smartest* ADDRESS

JAMAICA ESTATES

Homes from $17,500

Stroll around this parklike section. You will wonder that this community, so like the aristocratic estates of Old England, is within the city limits of New York, and but twenty minutes from Broadway. ■ To live at *Jamaica Estates* is to add immeasurably to your enjoyment of life. Here you will find delightful surroundings of natural beauty, matched only by the exquisite architecture of these dwellings, with their many modern appointments providing an atmosphere of rare good taste. ■ Authentic designs in Early American, English Manor, and Georgian Colonial, with exteriors in stone, brick or stucco. No detail has been spared that these homes might suit the individuality of the high type residents in this community. ■ The living room is equipped with bookcases and a picturesque log-burning fireplace. ■ Each dwelling has three or four bedrooms with two or three bathrooms tiled in color harmonies to suit your own specifications. Automatic refrigeration, of course. Every home has a porch, some open and some attractively enclosed. Following the architectural design of each dwelling is a spacious two-car garage. ■ The beautiful landscaped plots range in size . . . none smaller than 4800 square feet.

Visit the Furnished Model Home

FRED C. TRUMP, Builder

Wareham Road Jamaica Estates

JAMAICA, N. Y. C. . Tel. JAMAICA 10199

Directions: Hillside Ave. to 178th St., turn North 2 blocks, then right one block

[HN010K][GDrive]

1931 (April 19)

https://www.newspapers.com/image/57365750/?clipping_id=33965884

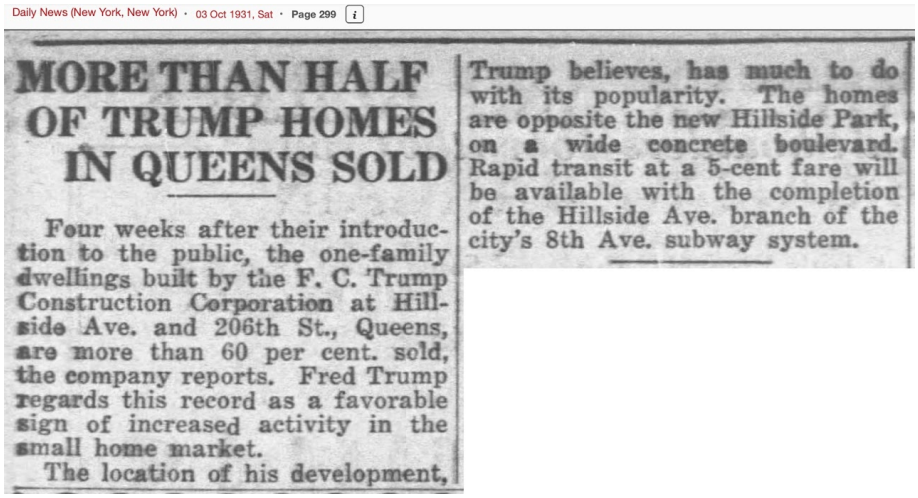
https://www.newspapers.com/image/57365750/?clipping_id=33965884

1931 (May 17)

https://www.newspapers.com/image/57581343/?terms=%22fred%2Btrump%22

1931 (Oct 03)

Full newspaper page : [HN010B][GDrive]



Daily News (New York, New York) · 03 Oct 1931, Sat · Page 299

MORE THAN HALF OF TRUMP HOMES IN QUEENS SOLD

Four weeks after their introduction to the public, the one-family dwellings built by the F. C. Trump Construction Corporation at Hillside Ave. and 206th St., Queens, are more than 60 per cent. sold, the company reports. Fred Trump regards this record as a favorable sign of increased activity in the small home market.

The location of his development, Trump believes, has much to do with its popularity. The homes are opposite the new Hillside Park, on a wide concrete boulevard. Rapid transit at a 5-cent fare will be available with the completion of the Hillside Ave. branch of the city's 8th Ave. subway system.

[HN010C][GDrive]

1932 (Jan 20) - Hotel arrival in Florida

Full newspaper page : [HN010H][GDrive]

The Miami News (Miami, Florida) · 20 Jan 1932, Wed · Page 8

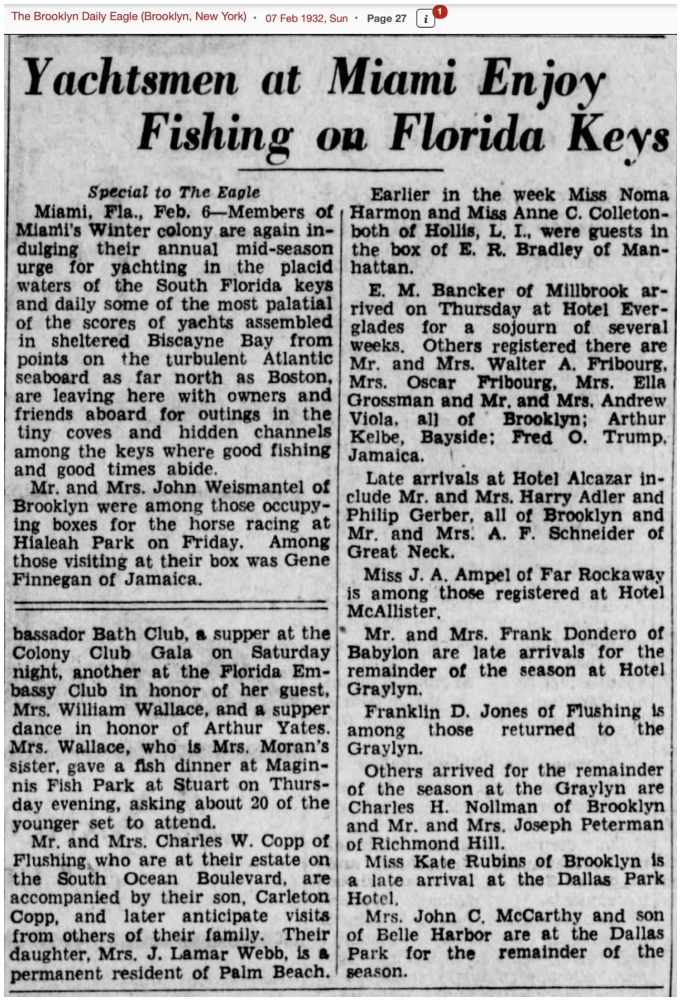
Hotel Arrivals

Recent arrivals at Everglades hotel included: C. A. Tilles; Captain and Mrs. Alfred Lick; Mrs. John Windegger, Fort Smith; Mr. and Mrs. E. W. Kennedy, West Hartford, Conn.; W. A. Jill, Hugh M. Tate, Washington, D. C.; W. E. Grendall, St. Petersburg; Mr. and Mrs. G. V. Green; Mr. and Mrs. E. R. Williams; M. C. Lowe, Jacksonville; L. S. Brown, Atlanta; E. W. Tayman, Atlanta; Mr. and Mrs. R. A. Railton, Mr. and Mrs. J. E. Bulger, Miss Roxana Moore, Miss Laurine Anderson, Mrs. Katherine Moore, all of Chicago; Mr. and Mrs. D. I. Kroehler, Mrs. T. R. Kurch, Hinsdale, Ill.; Mr. and Mrs. W. C. Walker, W. E. Gray, R. G. Stratmann, New Orleans, La.; Mr. and Mrs. S. L. Nicholson, Mr. and Mrs. Eli Burger, Baltimore, Md.; Mr. and Mrs. J. M. Robinson, Detroit; George Welch, Mr. and Mrs. W. K. Richardson and their three children, St. Louis, Mo.; B. W. McCluer, Kansas City, Mo.; Mr. and Mrs. J. M. Ogden, Mrs. W. T. Champion, Bridgeton, N. J.; Mr. and Mrs. Arthur Kolbe, Bayside, L. I.; Mr. and Mrs. H. P. Swanton, Rochester, N. Y.; Fred O. Trump, Jamaica, N. Y.; Judge Simon L. Adler, Rochester, N. Y.; Miss Annah L. Wilson, N. A. Kelfer, Mr. and Mrs. C. W. Stewart, H. L. Rhoades, Mr. and Mrs. M. P. Wolf, Mrs. Jane Gilmour, Mr. and Mrs. J. D. Galoway, A. J. Streeter, Arthur A. Schwartz, Mr. and Mrs. Emil Herz, Robert Fulton, G. A. Doherty, all of New York; Mr. and Mrs. Albert Salzbrenner, Mrs. H. R. Armstrong, Winston-Salem, N. C.; O. B. Souther, Greensboro, N. C.; Mr. and Mrs. J. E. Trescher, Greensboro, N. C.; Joseph Rawson, jr., Miss Gwendolyn Rawson, Cincinnati; Mrs. Ray Young, Philadelphia; J. G. Keck, Philadelphia; Dr. M. L. Bailey, Dillsburg, Pa.; Mr. and Mrs. A. E. Rice, Bigleville, Pa.; Mr. and Mrs. Fred C. Anderson, Pittsburgh; Henry Goodman, jr., Chattanooga, Tenn.; W. D. Howze, Memphis, Tenn.; Mr. and Mrs. T. J. Collier, Racine, Wis.

[HN010I][GDrive]

1932 (Feb 07) - Yachting ... in Florida ?

Full newspaper page : [HN0109][GDrive]



The Brooklyn Daily Eagle (Brooklyn, New York) · 07 Feb 1932, Sun · Page 27

Yachtsmen at Miami Enjoy Fishing on Florida Keys

Special to The Eagle

Miami, Fla., Feb. 6—Members of Miami's Winter colony are again indulging their annual mid-season urge for yachting in the placid waters of the South Florida keys and daily some of the most palatial of the scores of yachts assembled in sheltered Biscayne Bay from points on the turbulent Atlantic seaboard as far north as Boston, are leaving here with owners and friends aboard for outings in the tiny coves and hidden channels among the keys where good fishing and good times abide.

Mr. and Mrs. John Weismantel of Brooklyn were among those occupying boxes for the horse racing at Hialeah Park on Friday. Among those visiting at their box was Gene Finnegan of Jamaica.

bassador Bath Club, a supper at the Colony Club Gala on Saturday night, another at the Florida Embassy Club in honor of her guest, Mrs. William Wallace, and a supper dance in honor of Arthur Yates. Mrs. Wallace, who is Mrs. Moran's sister, gave a fish dinner at Maginnis Fish Park at Stuart on Thursday evening, asking about 20 of the younger set to attend.

Mr. and Mrs. Charles W. Copp of Flushing, who are at their estate on the South Ocean Boulevard, are accompanied by their son, Carleton Copp, and later anticipate visits from others of their family. Their daughter, Mrs. J. Lamar Webb, is a permanent resident of Palm Beach.

Earlier in the week Miss Noma Harmon and Miss Anne C. Colleton—both of Hollis, L. I., were guests in the box of E. R. Bradley of Manhattan.

E. M. Bancker of Millbrook arrived on Thursday at Hotel Everglades for a sojourn of several weeks. Others registered there are Mr. and Mrs. Walter A. Fribourg, Mrs. Oscar Fribourg, Mrs. Ella Grossman and Mr. and Mrs. Andrew Viola, all of Brooklyn; Arthur Kelbe, Bayside; Fred O. Trump, Jamaica.

Late arrivals at Hotel Alcazar include Mr. and Mrs. Harry Adler and Philip Gerber, all of Brooklyn and Mr. and Mrs. A. F. Schneider of Great Neck.

Miss J. A. Ampel of Far Rockaway is among those registered at Hotel McAllister.

Mr. and Mrs. Frank Dondero of Babylon are late arrivals for the remainder of the season at Hotel Graylyn.

Franklin D. Jones of Flushing is among those returned to the Graylyn.

Others arrived for the remainder of the season at the Graylyn are Charles H. Nollman of Brooklyn and Mr. and Mrs. Joseph Peterman of Richmond Hill.

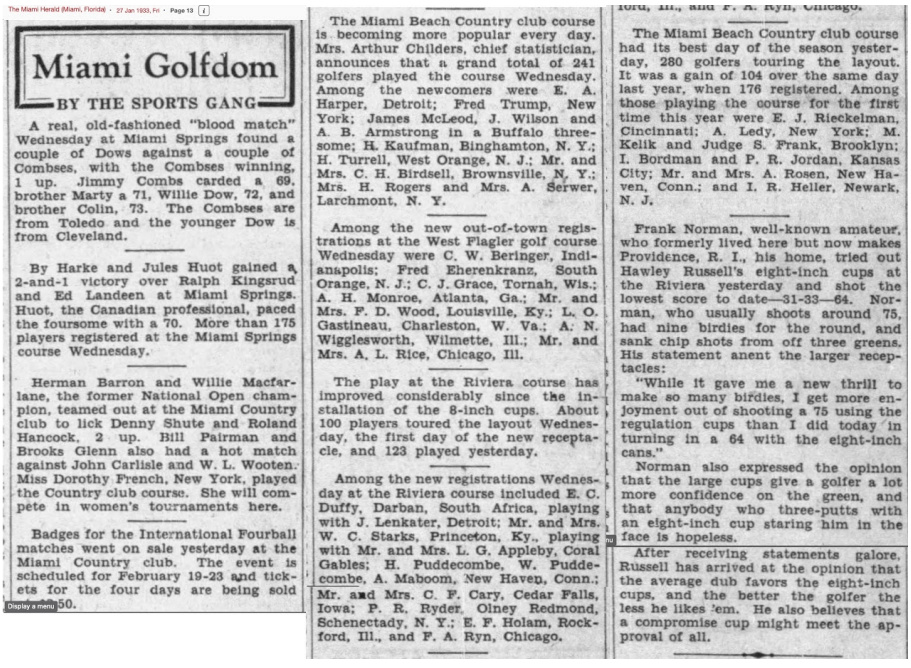
Miss Kate Rubins of Brooklyn is a late arrival at the Dallas Park Hotel.

Mrs. John C. McCarthy and son of Belle Harbor are at the Dallas Park for the remainder of the season.

[HN010A][GDrive]

1933 (Jan 27) - Golfing - In Miami

Full newspaper page : [HN0105][GDrive]



The Miami Herald (Miami, Florida) · 27 Jan 1933, Fri · Page 13

Miami Golfdom

BY THE SPORTS GANG

A real, old-fashioned "blood match" Wednesday at Miami Springs found a couple of Dows against a couple of Combses, with the Combses winning, 1 up. Jimmy Combs carded a 69, brother Marty a 71, Willie Dow, 72, and brother Colin, 73. The Combses are from Toledo and the younger Dow is from Cleveland.

By Harke and Jules Huot gained a 2-and-1 victory over Ralph Kingsrud and Ed Landeen at Miami Springs. Huot, the Canadian professional, paced the foursome with a 70. More than 175 players registered at the Miami Springs course Wednesday.

Herman Barron and Willie Macfarlane, the former National Open champion, teamed out at the Miami Country club to lick Denny Shute and Roland Hancock, 2 up. Bill Pairman and Brooks Glenn also had a hot match against John Carlisle and W. L. Wooten. Miss Dorothy French, New York, played the Country club course. She will compete in women's tournaments here.

Badges for the International Fourball matches went on sale yesterday at the Miami Country club. The event is scheduled for February 19-23 and tickets for the four days are being sold 50.

The Miami Beach Country club course is becoming more popular every day. Mrs. Arthur Childers, chief statistician, announces that a grand total of 241 golfers played the course Wednesday. Among the newcomers were E. A. Harper, Detroit; Fred Trump, New York; James McLeod, J. Wilson and A. B. Armstrong in a Buffalo threesome; H. Kaufman, Binghamton, N. Y.; H. Turrell, West Orange, N. J.; Mr. and Mrs. C. H. Birdsell, Brownsville, N. Y.; Mrs. H. Rogers and Mrs. A. Serwer, Larchmont, N. Y.

Among the new out-of-town registrations at the West Flagler golf course Wednesday were C. W. Beringer, Indianapolis; Fred Eherenkranz, South Orange, N. J.; C. J. Grace, Tornah, Wis.; A. H. Monroe, Atlanta, Ga.; Mr. and Mrs. F. D. Wood, Louisville, Ky.; L. O. Gastineau, Charleston, W. Va.; A. N. Wigglesworth, Wilmette, Ill.; Mr. and Mrs. A. L. Rice, Chicago, Ill.

The play at the Riviera course has improved considerably since the installation of the 8-inch cups. About 100 players toured the layout Wednesday, the first day of the new receptacle, and 123 played yesterday.

Among the new registrations Wednesday at the Riviera course included E. C. Duffy, Darban, South Africa, playing with J. Lenkater, Detroit; Mr. and Mrs. W. C. Starks, Princeton, Ky., playing with Mr. and Mrs. L. G. Appleby, Coral Gables; H. Puddecombe, W. Puddecombe, A. Maboom, New Haven, Conn.; Mr. and Mrs. C. F. Cary, Cedar Falls, Iowa; P. R. Ryder, Olney Redmond, Schenectady, N. Y.; E. F. Holam, Rockford, Ill., and P. A. Ryn, Chicago.

[illegible], Ill., and P. A. Ryn, Chicago.

The Miami Beach Country club course had its best day of the season yesterday, 280 golfers touring the layout. It was a gain of 104 over the same day last year, when 176 registered. Among those playing the course for the first time this year were E. J. Rieckelman, Cincinnati; A. Ledy, New York; M. Kelik and Judge S. Frank, Brooklyn; I. Bordman and P. R. Jordan, Kansas City; Mr. and Mrs. A. Rosen, New Haven, Conn.; and I. R. Heller, Newark, N. J.

Frank Norman, well-known amateur, who formerly lived here but now makes Providence, R. I., his home, tried out Hawley Russell's eight-inch cups at the Riviera yesterday and shot the lowest score to date—31-33—64. Norman, who usually shoots around 75, had nine birdies for the round, and sank chip shots from off three greens. His statement anent the larger receptacles:

"While it gave me a new thrill to make so many birdies, I get more enjoyment out of shooting a 75 using the regulation cups than I did today in turning in a 64 with the eight-inch cans."

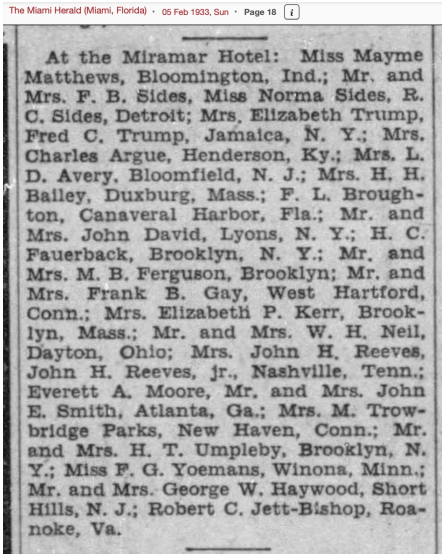
Norman also expressed the opinion that the large cups give a golfer a lot more confidence on the green, and that anybody who three-putts with an eight-inch cup staring him in the face is hopeless.

After receiving statements galore, Russell has arrived at the opinion that the average dub favors the eight-inch cups, and the better the golfer the less he likes 'em. He also believes that a compromise cup might meet the approval of all.

[HN0106][GDrive]

1933 (Feb 05) - Miami

Full newspaper page : [HN0103][GDrive]


The Miami Herald (Miami, Florida) · 05 Feb 1933, Sun · Page 18

At the Miramar Hotel: Miss Mayme Matthews, Bloomington, Ind.; Mr. and Mrs. F. B. Sides, Miss Norma Sides, R. C. Sides, Detroit; Mrs. Elizabeth Trump, Fred C. Trump, Jamaica, N. Y.; Mrs. Charles Argue, Henderson, Ky.; Mrs. L. D. Avery, Bloomfield, N. J.; Mrs. H. H. Bailey, Duxburg, Mass.; F. L. Broughton, Canaveral Harbor, Fla.; Mr. and Mrs. John David, Lyons, N. Y.; H. C. Fauerback, Brooklyn, N. Y.; Mr. and Mrs. M. B. Ferguson, Brooklyn; Mr. and Mrs. Frank B. Gay, West Hartford, Conn.; Mrs. Elizabeth P. Kerr, Brooklyn, Mass.; Mr. and Mrs. W. H. Neil, Dayton, Ohio; Mrs. John H. Reeves, John H. Reeves, jr., Nashville, Tenn.; Everett A. Moore, Mr. and Mrs. John E. Smith, Atlanta, Ga.; Mrs. M. Trowbridge Parks, New Haven, Conn.; Mr. and Mrs. H. T. Umpleby, Brooklyn, N. Y.; Miss F. G. Yoemans, Winona, Minn.; Mr. and Mrs. George W. Haywood, Short Hills, N. J.; Robert C. Jett-Bishop, Roanoke, Va.

[HN0104][GDrive]

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march 13 1934

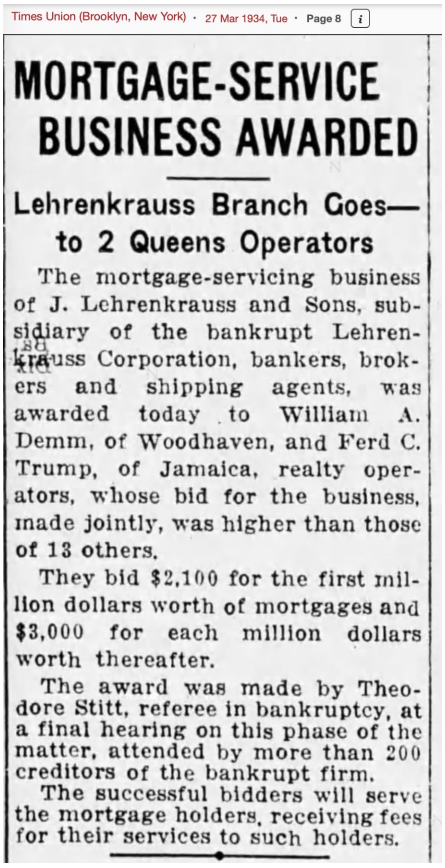
https://www.newspapers.com/image/576211872/?terms=%22fred%2Btrump%22

march 27 1934

https://www.newspapers.com/image/59998316/?terms=%22fred%2Btrump%22

1934 - March 27 - "Ferd C Trump"

Full newspaper page : [HN0107][GDrive]



Times Union (Brooklyn, New York) · 27 Mar 1934, Tue · Page 8

MORTGAGE-SERVICE BUSINESS AWARDED

Lehrenkrauss Branch Goes— to 2 Queens Operators

The mortgage-servicing business of J. Lehrenkrauss and Sons, subsidiary of the bankrupt Lehrenkrauss Corporation, bankers, brokers and shipping agents, was awarded today to William A. Demm, of Woodhaven, and Ferd C. Trump, of Jamaica, realty operators, whose bid for the business, made jointly, was higher than those of 13 others.

They bid $2,100 for the first million dollars worth of mortgages and $3,000 for each million dollars worth thereafter.

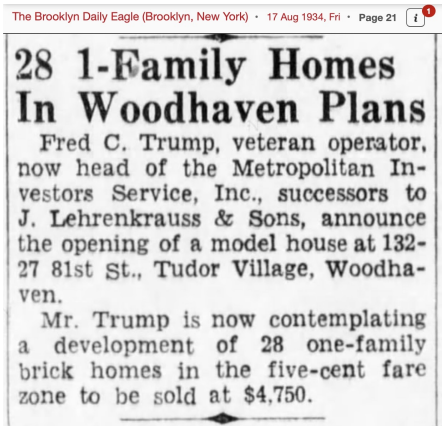
The award was made by Theodore Stitt, referee in bankruptcy, at a final hearing on this phase of the matter, attended by more than 200 creditors of the bankrupt firm.

The successful bidders will serve the mortgage holders, receiving fees for their services to such holders.

[HN0108][GDrive]

1934 (Aug 17)

Full newspaper page : [HN010D][GDrive]



The Brooklyn Daily Eagle (Brooklyn, New York) · 17 Aug 1934, Fri · Page 21

28 1-Family Homes In Woodhaven Plans

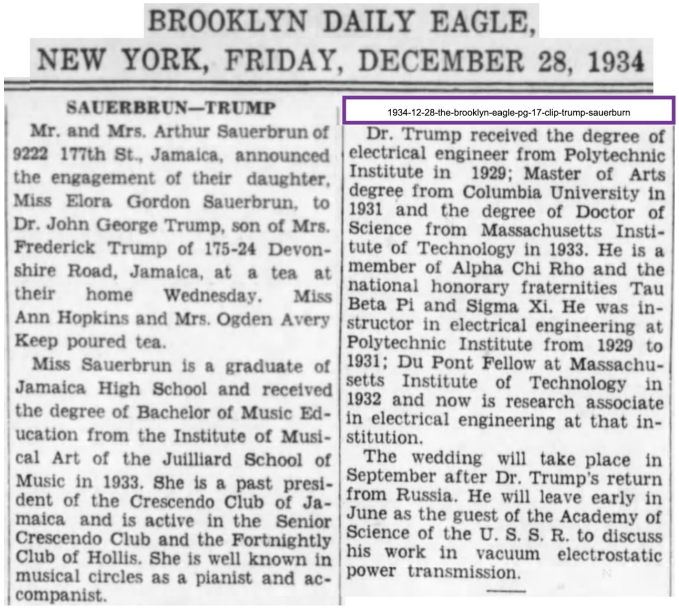
Fred C. Trump, veteran operator, now head of the Metropolitan Investors Service, Inc., successors to J. Lehrenkrauss & Sons, announce the opening of a model house at 132-27 81st St., Tudor Village, Woodhaven.

Mr. Trump is now contemplating a development of 28 one-family brick homes in the five-cent fare zone to be sold at $4,750.

[HN010E][GDrive]

1934 (December)

Full page : [HN00YJ][GDrive]



BROOKLYN DAILY EAGLE,
NEW YORK, FRIDAY, DECEMBER 28, 1934

1934-12-28-the-brooklyn-eagle-pg-17-clip-trump-sauerburn

SAUERBRUN—TRUMP

Mr. and Mrs. Arthur Sauerbrun of 9222 177th St., Jamaica, announced the engagement of their daughter, Miss Elora Gordon Sauerbrun, to Dr. John George Trump, son of Mrs. Frederick Trump of 175-24 Devonshire Road, Jamaica, at a tea at their home Wednesday. Miss Ann Hopkins and Mrs. Ogden Avery Keep poured tea.

Miss Sauerbrun is a graduate of Jamaica High School and received the degree of Bachelor of Music Education from the Institute of Musical Art of the Juilliard School of Music in 1933. She is a past president of the Crescendo Club of Jamaica and is active in the Senior Crescendo Club and the Fortnightly Club of Hollis. She is well known in musical circles as a pianist and accompanist.

Dr. Trump received the degree of electrical engineer from Polytechnic Institute in 1929; Master of Arts degree from Columbia University in 1931 and the degree of Doctor of Science from Massachusetts Institute of Technology in 1933. He is a member of Alpha Chi Rho and the national honorary fraternities Tau Beta Pi and Sigma Xi. He was instructor in electrical engineering at Polytechnic Institute from 1929 to 1931; Du Pont Fellow at Massachusetts Institute of Technology in 1932 and now is research associate in electrical engineering at that institution.

The wedding will take place in September after Dr. Trump's return from Russia. He will leave early in June as the guest of the Academy of Science of the U. S. S. R. to discuss his work in vacuum electrostatic power transmission.

[HN00YK][GDrive]

1935 (March 9) -

Full newspaper page - [HN010F][GDrive]

DAILY NEWS, SATURDAY, MARCH 9, 1935

REAL ESTATE

In Flushing

SUBSTANTIALLY built, this house is one of the Bobrose Homes on 169th St. and 25th Ave., Flushing.

Builders Report No Sales Let-up On Long Island

The following pithy, not to say pertinent, paragraphs concern builders and sellers of homes out Long Island way, where activity, as the saying goes, is marked.

Returning from Florida Fred Trump of the Metropolitan Investors, Inc., found only one home remaining unsold in the development at 82d St. and 132d Ave., in Tudot Village, Woodhaven.

Additional sales of Bell Homes, on 178th Place and 119th Ave., St. Albans, were reported by Edward

Interior view of one of Bell Homes in St. Albans.

Jensen, sales director. Nathan Krader, the builder, plans to complete six more interiors within the week, the exteriors recently having been finished.

Six built-to-order Flushing Colonial homes have been sold recently, according to Louis Bright, builder of the houses on 189th St. and 48th Ave., Flushing.

Invading a lower price field, H. Heller and A. Edkiss, the men behind Paramount Homes, are starting construction of a new group of houses in Flushing. They are confining their activities to Hollis Court Boulevard, 53d Ave. and 195th St., where they have built up a large community in the past four years.

Keen interest has been displayed in the new brick and stone Crestwood Homes at 206th St. and 34th Ave., Bayside.

Merrick Homes, Inc., builders at Merrick Gables, Merrick, L. I., announces the approval by the FHA of insurance on a first mortgage loan on the home recently completed for Mae E. Holland. The home purchased for

New! $6250

(Due to unusual circumstances)

Houses of same construction, type and size on same street sold for $8500 and higher.

PLOT 50x100

ENGLISH type stone, brick and concrete home and garage, 6 large rooms in addition to breakfast room, den or sewing room and attractive basement room, beautiful bath with separate shower stall, extra lavatory and all modern construction and equipment features, excellent train service, convenient to stores, churches and schools. Easy terms can be arranged.

MILTON SIRKIN
Concord Av. & Hillside Av.
WILLISTON PARK, L. I.
(1 mile north of Mineola.) Drive out Hillside Av. to Concord Av. or Tel. JAmaica 6-0404 (week-days)

year-round occupancy is a two-story brick and stone dwelling at 44 Henry St., Merrick.

1935-03-09-the-daily-news-new-york-pg-13-clip-long-island-builders-report

[HN010G][GDrive]

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may 4 1935

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oct 05 1935

https://www.newspapers.com/image/418122709/?terms=%22fred%2Btrump%22

nov 30 1935

https://www.newspapers.com/image/418379496/?terms=%22fred%2Btrump%22

dec 14 1935

https://www.newspapers.com/image/418444120/?terms=%22fred%2Btrump%22

dec 20 1935

https://www.newspapers.com/image/52646214/?terms=%22fred%2Btrump%22

1939-05-28- financial decisions - Eccles vs Alexander Sachs

Full newspaper page : [HN0170][GDrive]

ON THE RECORD

By Dorothy Thompson

Now, about this gambling business. In his speech last Monday night the President accused the critics of his fiscal policies (among them "high-brow columnists and high-geared economists") of being "eager to gamble the safety of the nation." The New Deal, he said, is conservative. "We cannot bring ourselves to take radical chances with other people's property. . . . We do not have the right to gamble with the well-being of 120,000,000 Americans."

Miss Thompson

This statement would seem to indicate that the New Deal has, and has had, a consistent policy arrived at without benefit of high-brow columnists and high-geared economists and that that policy has worked, and, therefore, the New Deal is sticking to it.

Actually, the New Deal has had three separate policies, each of which has been winsomely presented to the public, and each of which has had the support of some high-geared economists and some high-brow columnists—if you count my friend Heywood Broun as a high-brow! Heywood has believed in the infallibility of all three of them.

* * *

Bets Three Ways

There are radical differences in all of these policies put forward by an Administration which takes its name, the New Deal, from a gambling game. The New Deal has staked its money—I mean our money—on all three hands. And they can't possibly, all three, be winners in the same round.

The first was the fiscal policy enunciated in the special economy message of March 10, 1933. At this time Mr. Roosevelt was implementing his criticisms of the Hoover regime's waste and deficit policies.

1939-05-28-the-knoxville-journal-pg-4-clip-on-the-record

"We shall have piled up from the preceding fiscal years an accumulated deficit of $5,000,000,000. . . . It has contributed to the recent collapse of our banking structure. . . . Too often in recent history liberal governments have been wrecked on the rocks of loose fiscal policy. . . . I give you assurance that if this is done (proposed economy legislation) there is reasonable prospect that within a year the income of the government will be sufficient to cover the expenditures of government."

This is Mr. Roosevelt talking the language of high-geared conservative economists. Lewis Douglas and Dr. B. M. Anderson, of the Chase Bank, and high-browed columnist, Mark Sullivan.

But on January 3, 1934, the President had decided to put his money (our money) on another hand. This budget message was inspired by the theory of such high-geared liberal economists as Russell Leffingwell, of Morgan's.

Now, the President adopted the idea of the cyclical budget—the idea of compensatory government spending. The proposed increase in the deficit was to be so arranged and conditioned as to accelerate recovery and secure a balance within the business cycle.

"We should plan to have a definitely balanced budget for the third year of recovery, 1936, and from that time on seek a continuing reduction of the debt."

* * *

How Deficits Go

In the second budget message, of January 3, 1935, the President noted the continuing problem of unemployment and said:

"For this reason it is evident that we have not yet reached a point at which a complete balance can be obtained. . . . I am, however, submitting to the Congress a budget for the fiscal year of 1936. . . . Such deficit as occurs may be expected to decline."

In the message of January 3, 1936, he congratulated himself on the success of his policy.

"Our policy is succeeding. The figures prove it. Secure in the knowledge that steadily decreasing deficits will turn, in time, to steadily increasing surpluses. . . . Let us pursue the course we have mapped."

The year closed six months later with a record-breaking deficit of $4,361,000,000.

On January 8, 1937, there was another optimistic budget message.

"Business conditions have shown each year a marked improvement . . . the gains make it possible to reduce for 1938 many expenditures. . . . We expect in 1939 a completely balanced budget."

Immediately following this message the government embarked upon a drastic deflationary policy not radically reducing spending but increasing three times the Federal Reserve requirements and sterilizing gold.

This move was supported by conservative high-geared economist Winthrop Aldrich and by Marriner Eccles, and was protested by high-geared liberal economists Parker Gilbert, of Morgan's, and Alexander Sachs, of Lehman Corporation. Mr. Morgenthau also looked a little sour.

Low- or high-browed columnist Dorothy Thompson and others predicted a depression, on the argument that the deflation was wildly drastic, that it was a mistake to undertake it unless accompanied by the release of capital, a radical change in the tax structure, and a revival of business confidence, which had been seriously, though indirectly shaken by the attack on the Supreme Court.

Columnists were reprimanded for pessimism.

There was a depression, eventually admitted by the government.

* * *

In January, 1938, a new policy takes form. The budget is going to be balanced when and if the national income has grown to the "requisite amount." High-geared economists, some of whom supported policies 1 and 2, are notably absent in expressions of enthusiasm for No. 3.

High-brow columnists who saw merit in 1 and 2 are almost all "from Missouri" on 3.

[HN0171][GDrive]

1950 Newspaper article references Fred Trump and Lehrenkrauss

Also see J. Lehrenkrauss Corporation

Newspapers reference - [HN0101][GDrive]

student, won the $30 Leisser Memorial Award for keenest observat

BROOKLYN'S MAN OF THE WEEK:

Trump the Builder Plays Mothers as Ace Cards

By RICHARD J. ROTH

Mother's Day is more than a once-a-year proposition so far as Fred Trump is concerned. The builder of Brooklyn's two new housing giants, Shore Haven at Bensonhurst and Beach Haven at Brighton, tries to keep mother in mind the other 364 days as well. And with good reason.

Trump has found that, while it may be papa who pays, it's mama who makes the decision on where the money is going in more than four out of every five apartment rentals.

"In 85 percent of our rentals the final decision has depended on the woman's say-so," the 44-year-old former carpenter's helper pointed out in his field office at the rapidly rising Beach Haven development. "The husband cares only about the convenience of transportation and whether his wife likes the apartment."

Emphasis on Labor Saving

With those statistics firmly in mind Trump built the 1,350-apartment Shore Haven development and is rushing to completion the 1,800-unit Beach Haven development with more than a nod in the direction of what he terms "the woman's point of view." The emphasis is on labor-saving conveniences and other features designed to appeal to the distaff side of the family, particularly to mothers with young children.

Fred C. Trump

At Beach Haven, for example, Trump has provided a building and 6,000 square feet of land at a $1-a-year rental, including heat, for the Board of Education. A unique kindergarten and first-grade school exclusively for residents of the development will be opened.

Baby-Sitter Service

Other innovations include an organized baby-sitter service, using girls from Abraham Lincoln High School, which is directly opposite the Brighton Beach development at Ocean Parkway and Shore Parkway. Also planned are a "courtesy car" bus service to the beach for those who prefer to ride, and ultra-violet clothing driers in the basement laundry rooms in each of the 23 buildings, thus eliminating the roof driers which, the builder declared, are "left over from an old-fashioned era."

A modern $300,000 shopping center, with 14 stores and a 250-car parking area, also is about to rise on Beach Haven property. Other parking spaces will be provided on the landscaped grounds, as well as playground and bench areas, with only 20 percent of the project covered with buildings. Heated garages, with a total capacity of 650 cars, are being constructed in the basement of every building.

'Renting Honeymoon Over'

Why all this consideration for the residents? an amazed veteran of the housing shortage might ask, and in this case, did. The answer, according to Fred Trump, is simple:

"We realize that the renting honeymoon is over. We're attempting to make a real step forward to attract the type of tenant who will appreciate these extra services. Our innovations, we hope, will make for a happier housewife, a happier home life, and a resultant happier community."

Fred Trump was born in the Bronx on Oct. 11, 1905, the son of a former Klondike restaurant operator. After the gold rush of '98 had subsided the elder Trump had dabbled on a small scale in the real estate business.

Started in Queens Village

The Trumps moved to Woodhaven shortly after Fred was born and he attended Richmond Hill High School. At 18, following graduation, he took a job as a carpenter's helper, supplementing this practical experience with courses in building construction three nights a week in the Y. M. C. A. Then he went out on his own.

The first Trump homes began to go up in Queens shortly afterward, about 400 or 500 one-family units in the Queens Village area. Then, after 1932, when home building was at an ebb, Trump was awarded, in Federal Court, the mortgage servicing for the bankrupt Lehrenkrauss financial empire.

This took up much of his time for a year. And he operated one of the first self-service food markets, building it up into a profitable large-volume business before leasing it to a well-known food chain.

Sold 78 Homes in 20 Days

In 1935 Fred Trump moved his operations to Brooklyn, picking a site at Avenue H and Kings Highway. On Nov. 10 he completed the model home; within the next 20 days he sold all 78 of the $3,990 homes, a price which was then about half the average rate.

Those 78 homes have been followed by close to 2,500 in the last 15 years in Flatbush, Manhattan Beach and Bensonhurst. During the war he built 1,400 apartments for war workers at Norfolk and Newport News, Va., and Chester, Pa. Shore Haven was opened in June, 1948, and Beach Haven, begun last November, will be completed in a phenomenal year's time.

Much of Trump's success in his Brooklyn building can be attributed to his pioneering in the field of pile-driving, which permits construction on filled-in land. Beach Haven, for example, is built on land that was once marshy. It is atop 55-foot creosoted logs, each of which can sustain a 25-ton load, five times the required burden.

The good-looking builder was married in 1936 to a Scottish-born girl whom he met at a party. They have five children, ranging in ages from 2 to 13.

[HN0102][GDrive]

Housatonic

John George Trump (born 1907)

Wikipedia John G. Trump

Parents -

- Father is Frederick Trump (born 1869)
- Mother is

Relations -

- Brother is Fred Christ Trump (born 1905)

Saved Wikipedia (Nov 20, 2019)

Wikipedia (saved) - [HK000H][GDrive]

Born John George Trump August 21, 1907 New York City

Died February 21, 1985 (aged 77) Boston, Massachusetts, U.S.

Education

- New York University (BS)
- Columbia University (MS)
- Massachusetts Institute of Technology (PhD)

Known for

- Van de Graaff generator
- Electron beam sterilization of wastewater

[...]

John George Trump (August 21, 1907 – February 21, 1985) was an American electrical engineer, inventor, and physicist. A professor at the Massachusetts Institute of Technology from 1936 to 1973, he was a recipient of U.S. President Ronald Reagan's National Medal of Science and a member of the National Academy of Engineering.[3][4][5] John Trump was noted for developing rotational radiation therapy.[3] Together with Robert J. Van de Graaff, he developed one of the first million-volt X-ray generators. He was the paternal uncle of Donald Trump, who would later go on to become the 45th president of the United States.

Early life

Trump was the youngest of three children and the second son of German immigrants Frederick Trump and Elizabeth Christ Trump. He was born in New York City on August 21, 1907.

John's brother, Fred, joined their mother in real estate development and management while still in his teens (Elizabeth Trump & Son). **Initially, John and his brother tried working together building houses, but ultimately they dissolved their partnership, and John pursued a career in electrical engineering.**

Trump received his bachelor's degree in electrical engineering from the New York University Tandon School of Engineering (then Polytechnic Institute of Brooklyn) in 1929, his master's degree in physics from Columbia University, and his doctorate of electrical engineering from the Massachusetts Institute of Technology (MIT) in 1933. He was a professor at MIT from 1936 until 1973.

War service

During World War II, Trump switched from work on hospital X-ray machines to research into similar technologies with a more direct application to warfare, especially the development of radar. During 1940, he joined the newly formed National Defense Research Committee (NDRC), as technical aide to Karl Compton, President of MIT and the Chairman of the Radar Division.[6]

During 1942, Trump became Secretary of the Microwave Committee, a sub-committee of the NDRC. The director of the Microwave Committee was Alfred Lee Loomis, the millionaire physicist, who decided to create a laboratory. He selected a site for it, chose a suitably discreet and ambiguous name for it and

funded the construction, until the Federal administration was established. The new institution was the MIT Radiation Laboratory, or the "Rad Lab". The British were also researching radar, which they termed Radio Direction Finder (RDF), and had started much earlier. Their Tizard Mission to the US showed how much more sophisticated they were with some of the technologies, particularly the magnetron. The US decided to send a team to Britain to help coordinate the efforts of the two Allies. The unit was known as the "British Branch of the Radiation Laboratory" (BBRL) and operated as a department of Britain's Telecommunications Research Establishment (TRE) at Malvern, in Worcestershire. In 1943, as the technical aide in Division 14 of the NDRC, Trump reviewed and analyzed the papers of Nikola Tesla when the inventor died in a New York City hotel. The research was completed on behalf of the Alien property Custodian office in Washington DC. From February 1944 to the end of the war in Europe, Trump was the Director of the BBRL.[7]

During this time, Trump also served in the Advisory Specialist Group on Radar, advising USAAF General Carl Spaatz on navigational radar, precision-bombing radar, and also defenses against the German radars found in their night-fighters and in their flak units. The systems included: Gee, Oboe, LORAN, H2X, MEW & SCR-584. Trump worked with all the most important British radar experts, including Sir Robert Watson-Watt, A.P. Rowe and Bernard Lovell. At the end of the war, Trump also had interviews with Germany's main radar technicians.[8][9] Trump received recognition for his war-work from both the United States and the United Kingdom.[10][11][3]

Family

John G. Trump is a member of the Trump family. He married Elora Sauerbrun (1913–1983), and they had three children: the late John Gordon Trump (1938–2012) of Watertown, Massachusetts; Christine Philp of New London, New Hampshire; and Karen Ingraham of Los Alamos, New Mexico; and six grandchildren.[3][12] Trump's nephew Donald John Trump became the 45th president of the United States in 2017.

Later life

During 1946 Trump, Robert J. Van de Graaff, and Denis M. Robinson initiated the High Voltage Engineering Corporation (HVEC) to produce Van de Graaff generators.[3]

He returned to MIT to teach and direct research for three decades after the war. Trump died in Boston on February 21, 1985.[13]

The National Academy of Engineering described Trump as "a pioneer in the scientific, engineering and medical applications of high voltage machinery".[4] James Melcher, Trump's lab director, is quoted as saying: "John, over a period of three decades, would be approached by people of all sorts because he could make megavolt beams of ions and electrons – death rays. ... What did he do with it? Cancer research, sterilizing sludge out in Deer Island [a waste disposal facility], all sorts of wondrous things. He didn't touch the weapons stuff."[14]

Awards and honors

Trump received a number of awards including:

- 1947: The King's Medal for Service in the Cause of Freedom (KMS), given by George VI
- 1948: The President's Certificate of Merit, presented by President Harry S. Truman
- 1960: The Lamme Medal, given by the American Institute of Electrical Engineers
- 1983: The National Medal of Science, presented by President Ronald Reagan

1985 (Feb. 26)- Obituary - NY Times - "JOHN TRUMP DIES; ENGINEER WAS 78"

https://www.nytimes.com/1985/02/26/us/john-trump-dies-engineer-was-78.html

1985-02-36-nytimes-john-trump-dies-engineer-was-78.pdf

Dr. John G. Trump, a retired teacher and engineer, died Thursday at his home in Cambridge, Mass., after a long illness. He was 78 years old.

Dr. Trump began studying the voltage-insulation properties of high vacuum and compressed gases while a faculty member at the Massachusetts Institute of Technology. Working with Prof. Robert J. Van de Graaff, he designed one of the first million-volt X-ray generators. Used initially for clinical purposes at the Collis P. Huntington Memorial Hospital in Boston in 1937, it was a development that provided additional years of life to cancer patients throughout the world.

In 1946, Dr. Trump, along with Dr. Van de Graaff and Dr. Denis M. Robinson, founded the High Voltage Engineering Corporation, which developed the Van de Graaff electrostatic generator.

In World War II Dr. Trump was influential in the development of radar and short-wave radar equipment. He was appointed director of the British branch of the M.I.T. Radiation Lab in 1944.

After the war. Dr. Trump, while still on the faculty at M.I.T., became associated with the Department of Radiology at the Lahey Clinic in Boston and later became chairman of its board. Under his direction rotational radiation therapy was developed, "an idea that created quite a stir in those days," he recalled later. He also conceived and developed the use of high-energy electrons in the treatment of superficial skin lesions.

He Received Emeritus Status

He became professor emeritus at M.I.T. in 1973, remaining on as a senior lecturer.

He was the author of nearly 80 scientific publications and the recipient of many awards, including His Majesty's Medal, given by George VI in 1947; the President's Certificate of Merit, presented by President Truman in 1948; and the Lamme Medal, awarded in 1960 by the American Institute of Electrical Engineers. In 1983, he was the recipent of the National Medal of Science.

He was a graduate of the Polytechnic Institute in 1929, received a master's degree in physics from Columbia University in 1931 and a doctorate from M.I.T. in 1933.

Dr. Trump is survived by three children, John Gordon Trump of Watertown, Mass., Christine Philp of Pittsfield, Mass., and Karen Ingraham of Los Alamos, N. M.; and six grandchildren. He was the brother of Frederick C. Trump and the uncle of Donald Trump, New York real estate developers.

A funeral service will be held Sunday at 2:30 P.M. at the Unitarian Church in Winchester, Mass.

Evidence Timeline

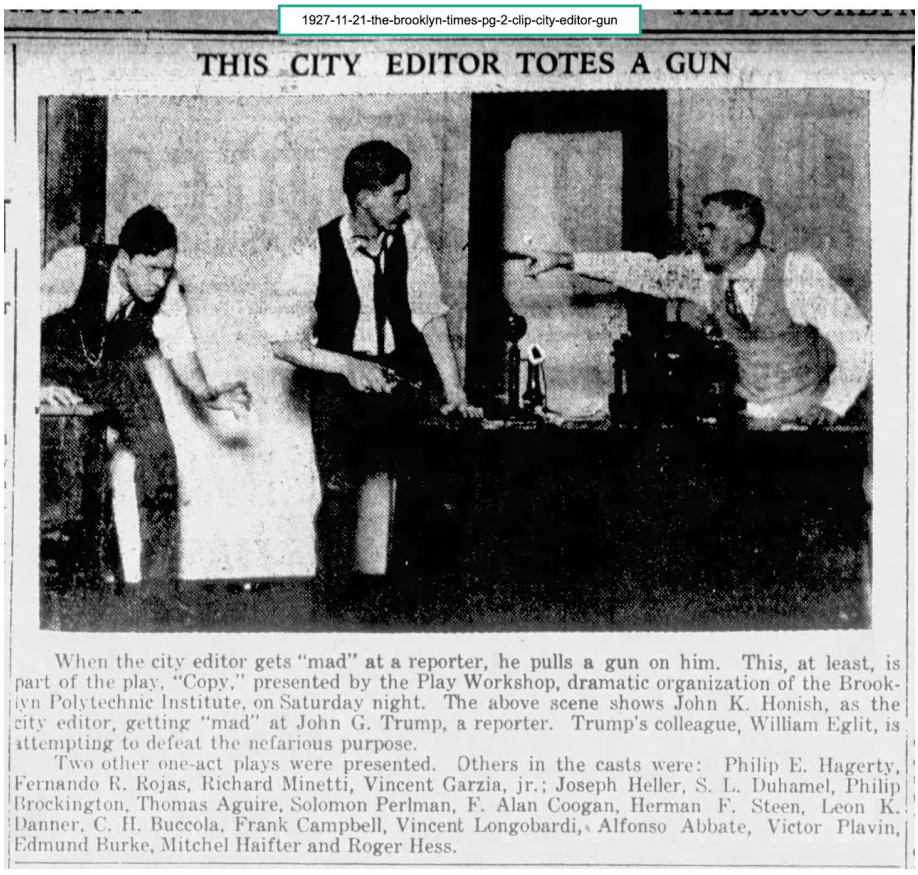
https://www.newspapers.com/image/542845393/?terms=%22john%2Btrump%22

https://www.newspapers.com/image/558050494/?terms=%22john%2Btrump%22

1927 (Nov 21)

Full page : [HN00X8][GDrive]

1927-11-21-the-brooklyn-times-pg-2-clip-city-editor-gun



THIS CITY EDITOR TOTES A GUN

When the city editor gets "mad" at a reporter, he pulls a gun on him. This, at least, is part of the play, "Copy," presented by the Play Workshop, dramatic organization of the Brooklyn Polytechnic Institute, on Saturday night. The above scene shows John K. Honish, as the city editor, getting "mad" at John G. Trump, a reporter. Trump's colleague, William Eglit, is attempting to defeat the nefarious purpose.

Two other one-act plays were presented. Others in the casts were: Philip E. Hagerty, Fernando R. Rojas, Richard Minetti, Vincent Garzia, jr.; Joseph Heller, S. L. Duhamel, Philip Brockington, Thomas Aguire, Solomon Perlman, F. Alan Coogan, Herman F. Steen, Leon K. Danner, C. H. Buccola, Frank Campbell, Vincent Longobardi, Alfonso Abbate, Victor Plavin, Edmund Burke, Mitchel Haifter and Roger Hess.

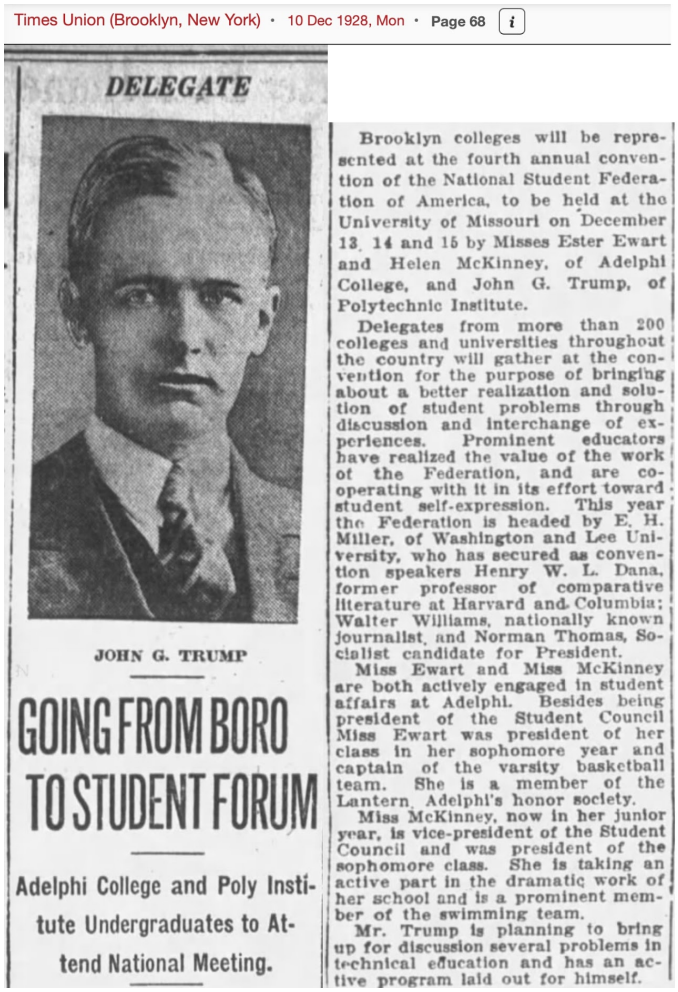
[HN00X9][GDrive]

1928 (September)- Trump family sailing back from Germany to New York City

https://search.findmypast.com/record?id=https%3A%2F%2Ffamilysearch.org%2Fpal%3A%2FMM9.3.1%2FTH-1951-21815-1493-17&parentid=US%2FPASS%2FNY%2F011990124643

1928 (Dec 10)

Full page : [HN00XA][GDrive]



Times Union (Brooklyn, New York) • 10 Dec 1928, Mon • Page 68

DELEGATE

JOHN G. TRUMP

GOING FROM BORO TO STUDENT FORUM

Adelphi College and Poly Institute Undergraduates to Attend National Meeting.

Brooklyn colleges will be represented at the fourth annual convention of the National Student Federation of America, to be held at the University of Missouri on December 13, 14 and 15 by Misses Ester Ewart and Helen McKinney, of Adelphi College, and John G. Trump, of Polytechnic Institute.

Delegates from more than 200 colleges and universities throughout the country will gather at the convention for the purpose of bringing about a better realization and solution of student problems through discussion and interchange of experiences. Prominent educators have realized the value of the work of the Federation, and are cooperating with it in its effort toward student self-expression. This year the Federation is headed by E. H. Miller, of Washington and Lee University, who has secured as convention speakers Henry W. L. Dana, former professor of comparative literature at Harvard and Columbia; Walter Williams, nationally known journalist, and Norman Thomas, Socialist candidate for President.

Miss Ewart and Miss McKinney are both actively engaged in student affairs at Adelphi. Besides being president of the Student Council Miss Ewart was president of her class in her sophomore year and captain of the varsity basketball team. She is a member of the Lantern, Adelphi's honor society.

Miss McKinney, now in her junior year, is vice-president of the Student Council and was president of the sophomore class. She is taking an active part in the dramatic work of her school and is a prominent member of the swimming team.

Mr. Trump is planning to bring up for discussion several problems in technical education and has an active program laid out for himself.

[HN00XB][GDrive]

1929 (Sep 24)

https://www.newspapers.com/image/544383842/?terms=%22john%2Btrump%22

Valedictorian , Brooklyn Polytechnic. Will tech english, electrical engineering

1930

John Trump - President of faculty club at Brooklyn Polytechnic

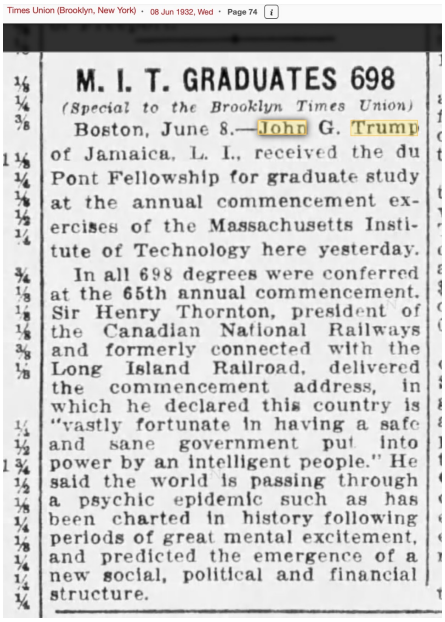
https://www.newspapers.com/image/58062854/?terms=%22John%2Btrump%22

June 08, 1932 - Receives "du pont fellowship for graduate study"

https://www.newspapers.com/image/559887287/?terms=%22John%2Btrump%22

Presented by https://en.wikipedia.org/wiki/Henry_Worth_Thornton - SIR Henry THornton

1932-06-08-brooklyn-times-union-pg-2-clip-mit-graduates.jpg



Times Union (Brooklyn, New York) · 08 Jun 1932, Wed · Page 74

M. I. T. GRADUATES 698

(Special to the Brooklyn Times Union)

Boston, June 8.—John G. Trump of Jamaica, L. I., received the du Pont Fellowship for graduate study at the annual commencement exercises of the Massachusetts Institute of Technology here yesterday.

In all 698 degrees were conferred at the 65th annual commencement. Sir Henry Thornton, president of the Canadian National Railways and formerly connected with the Long Island Railroad, delivered the commencement address, in which he declared this country is "vastly fortunate in having a safe and sane government put into power by an intelligent people." He said the world is passing through a psychic epidemic such as has been charted in history following periods of great mental excitement, and predicted the emergence of a new social, political and financial structure.

June 23, 1932 - Best man at wedding

https://www.newspapers.com/image/559118341/?terms=%22john%2Btrump%22 (also - https://www.newspapers.com/image/559116362/?terms=%22John%2Btrump%22)

- Wedding - one of the guests is **Ernst Weber** (https://en.wikipedia.org/wiki/Ernst_Weber_(engineer)) who .. "Austria-born American electrical engineer, was a pioneer in microwave technologies and played an important role in the history of the New York University Tandon School of Engineering, where in 1945 he founded the Microwave Research Institute (later renamed the Weber Research Institute in his honor). Weber was also the first president of the Institute of Electrical and Electronics Engineers (IEEE) and one of the founders of the U.S. National Academy of Engineering (NAE).[1][2][3][4]"
- Trump was best man for ... "Leo E. A. Saidla" .. learn more here in 1961 NYTimes article below :

The New York Times

THURSDAY, JUNE 22, 1961

LEO E. A. SAIDLA, AN EDUCATOR, 72

Former Department Head at Brooklyn Polytechnic Dies

Special to The New York Times.

STONY BROOK, L. I., June 21—Prof. Leo Erval Alexandre Saidla, educator, author and minister, died this morning of a cerebral hemorrhage at Huntington Hospital, Huntington. He was 72 years old.

Mr. Saidla, who retired in 1955, had moved recently to Stony Brook from the Village of Huntington Bay.

At his retirement, he was chairman of the Department of English and Psychology at Brooklyn Polytechnic Institute, a post he had held since 1947.

He was the author of "Essays for the Study of Structure and Style" and "Present-Day Punctuation." He also was co-author of "Jean Jacques Rousseau and His Philosophy," "Science and the Scientific Mind" and "Engineers and Writers." At his death he was working on "Platonism of Dante."

A native of Lebanon, Ind., he received his Bachelor of Arts degree at Wabash College in 1909 and a Bachelor of Divinity degree at Union Theological Seminary in 1912. He was ordained as a minister of the Presbyterian Church the following year and engaged in settlement work in the Chicago Commons. He later became minister at St. John's of Lattingtown Protestant Episcopal Church.

Mr. Saidla left the ministry to serve as a private overseas with the Army Medical Corps during World War I. After his discharge from service, he studied at the University of Poitiers in France and, upon returning to the United States, at Harvard and the American Academy of Dramatic Arts. He received a Master of Arts degree at Columbia University in 1925.

He was assistant and associate professor of English and director of play productions at Alabama Polytechnic Institute from 1920 to 1923. In 1924, he taught French at New York University and served on the faculty of the Rand School of Social Science.

Later that year, he become an English instructor at Brooklyn Polytechnic Institute. Mr. Saidla was a member of many educational and scientific societies.

He is survived by his widow, the former Mary Fayette Driggs; a son, Glen E.; a daughter, Mrs. Charles W. Morse Jr., and a sister, Mrs. Leslie F. Widener.

[HN011I][GDrive]

1934 (Dec 30)

Full page : [HN00XC][GDrive]

Miss Elora Gordon Sauerbrun, daughter of Mr. and Mrs. Arthur Sauerbrun of Jamaica, is engaged to Dr. John George Trump, son of Mrs. Frederick Trump also of Jamaica.

1934-12-30-the-brooklyn-eagle-pg-22-clip-elora-sauerbrun

[HN00XD][GDrive]

Full page : [HN00YJ][GDrive]

BROOKLYN DAILY EAGLE,
NEW YORK, FRIDAY, DECEMBER 28, 1934

SAUERBRUN—TRUMP

Mr. and Mrs. Arthur Sauerbrun of 9222 177th St., Jamaica, announced the engagement of their daughter, Miss Elora Gordon Sauerbrun, to Dr. John George Trump, son of Mrs. Frederick Trump of 175-24 Devonshire Road, Jamaica, at a tea at their home Wednesday. Miss Ann Hopkins and Mrs. Ogden Avery Keep poured tea.

Miss Sauerbrun is a graduate of Jamaica High School and received the degree of Bachelor of Music Education from the Institute of Musical Art of the Juilliard School of Music in 1933. She is a past president of the Crescendo Club of Jamaica and is active in the Senior Crescendo Club and the Fortnightly Club of Hollis. She is well known in musical circles as a pianist and accompanist.

1934-12-28-the-brooklyn-eagle-pg-17-clip-trump-sauerburn

Dr. Trump received the degree of electrical engineer from Polytechnic Institute in 1929; Master of Arts degree from Columbia University in 1931 and the degree of Doctor of Science from Massachusetts Institute of Technology in 1933. He is a member of Alpha Chi Rho and the national honorary fraternities Tau Beta Pi and Sigma Xi. He was instructor in electrical engineering at Polytechnic Institute from 1929 to 1931; Du Pont Fellow at Massachusetts Institute of Technology in 1932 and now is research associate in electrical engineering at that institution.

The wedding will take place in September after Dr. Trump's return from Russia. He will leave early in June as the guest of the Academy of Science of the U. S. S. R. to discuss his work in vacuum electrostatic power transmission.

[HN00YK][GDrive]

1935 (September) - sailing back from England - with "Jane Trump"

https://search.findmypast.com/record?id=TNA%2FBT27%2F1437%2F00%2F0040%2FP%2F0005F&parentid=TNA%2FBT27%2F1437000040%2F00106

1935 (May 24)

Full page : [HN00XE][GDrive]

PROGRESS ON TUBE PROMISES SUCCESS IN SMASHING ATOMS

Pres Compton of M. I. T. Reports on Gains Made At Round Hill—Experiments to Begin Now

1935-05-24-the-boston-globe-pg-10-clip-smashing-atoms

The smashing of atoms by the Van de Graff 7,000,000-volt generator is expected to take place in the near future at the Massachusetts Institute of Technology experiment station at Round Hill, Mass, it was announced last night by Pres Karl T. Compton as he reported the successful completion of the first unit of the disintegration tube at a meeting of the board of directors of the Research Corporation in New York.

With the completion of the first part of the vacuum tube that must be attached to the high voltage generator before the disintegration of atoms can take place, experiments on low voltage distintegration methods can begin at once it was announced. Many improvements in the generator itself have been made in the past few months, Dr Compton stated. It has been equipped with accurate voltage and current controls as well as vibration eliminators.

New X-Ray Tube

A new high voltage X-ray tube, operating at 700,000 volts and which is expected to prove a valuable instrument in hospitals was also announced by Dr Compton as the product of the research taking place in the high-voltage laboratories of the institute at Cambridge. The extremely penetrative rays of this high-voltage tube have their practical application in the treatment of internal cancer.

The advantage of the new equipment over previous X-ray outfits of similar voltage are cheapness and simplicity of construction, ease and accuracy of control and lastly, the most important fact, that it runs continuously at the high voltage, giving a much improved quality of X-rays. The X-ray tube investigations have been carried out by Dr John G. Trump.

The giant electrostatic generator built at Technology's research station at Round Hill by Dr Robert J. Van de Graaff and his associates, Dr Lester and Chester van Atta, has been perfected to the extent that now all that it needs to go into the atom disintegration business is a vacuum tube. Dr Van de Graaff and his assistants have been engaged on the design and construction of this tube all Winter and have already completed the first unit.

Problem of Major Proportion

The design of the vacuum discharge tube to handle large currents at several million volts is a scientific and engineering problem comparable to the design of the generator itself. The tube will consist of five identical units, joined end to end extending from one sphere or electrode of the generator to the other. The bombarding particles are introduced at one end, after the tube has been evacuated of all traces of air, are accelerated to high speeds by the 7,000,000 volts, guided down the tube by metal shields, and made to impinge on the atoms that are to be disintegrated. The great impact that results from the collision will, it is expected, disrupt the atoms.

One of the difficult problems to be solved in the design of the tube was to maintain what is called a proper voltage distribution by means of electrical leakage. Many months of experimentation were required to develop resistors capable of transmitting the requisite amount of current at the enormously high voltages and still maintain a constancy of operation.

In the Cambridge laboratories of the Institute Dr John Trump has been concentrating the use of a vacuum as an electrical insulator. Results of this investigation are expected to be of

[HN00XF][GDrive]

1936 (October 1)

Full page : [HN00XG][GDrive]

ROCHESTER DEMOCRAT AND CHRONICLE, THURSDAY, OCTOBER 1, 1936

Ray Found to Revolutionize Cancer Work, Doctor Hopes

Cleveland—(AP)—A new machine capable of producing 1,000,000 volt X-rays with an intensity greater than all of the available radium in the world was announced yesterday before American Roentgen Ray Society.

Dr. Richard Dresser of Huntington Memorial Hospital, Boston, told the society the mammoth electrostatic generator, new being installed in the hospital, gave promise of successful treatment of many malignant diseases which fail to respond to the comparatively low voltage ray machines now in use.

Doctor Dresser exhibited a small two-foot model of the apparatus, capable of generating 250,000 volts, and Dr. John G. Trump, professor of engineering at Massachusetts Institute of Technology, demonstrated its operation.

Doctor Dresser explained the machine is superior to any x-ray device now in use in two respects. It makes possible treatment of deep-seated malignant growths in the body, including cancer, because the high voltage x-rays penetrate deeply; and these rays have been found to be more specific in their action of ionizing and destroying diseased tissues than low-voltage rays. In this respect, he added, the high power rays are similar to Gamma rays emitted by radium.

The priniciple of the machine is generation of static electricity, the same as is produced when the hair is combed with a rubbed comb.

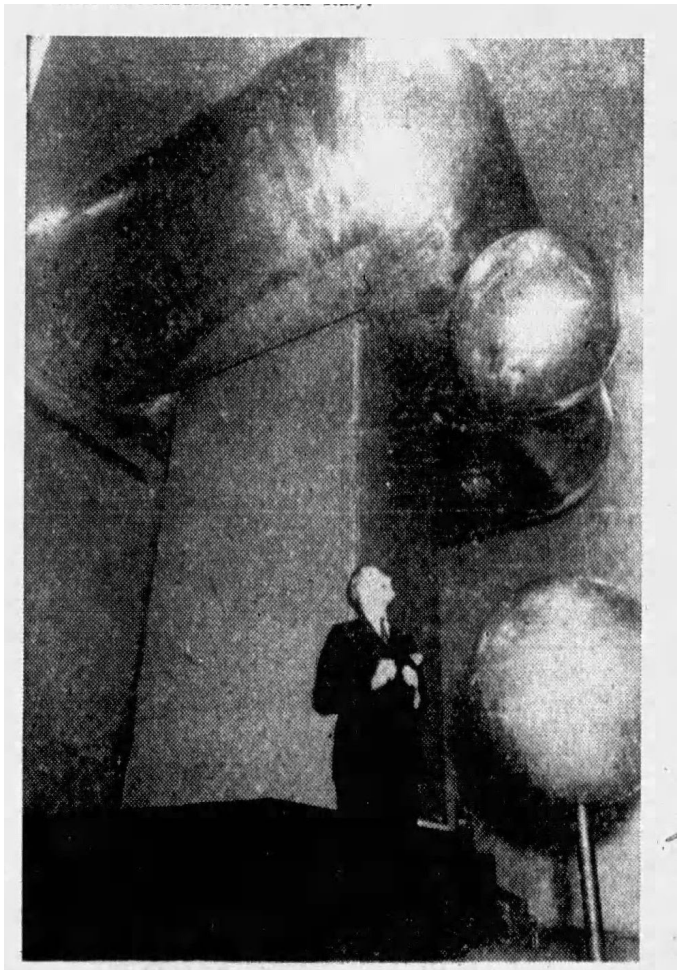
In the large machine, as in the model exhibited here, six fast-moving vertical belts carry negative electricity to the highvoltage terminal in the doughnut-shaped top and on the downward path remove positive electricity from the terminal, depositing it at the grounded base.

[HN00XH][GDrive]

1936 (October 10)

Full page : [HN00Y0][GDrive]

Same picture seen here - https://www.newspapers.com/image/543628207/?terms=%22john%2Btrump%22



A NEW POWERFUL WEAPON IN MANKIND'S FIGHT AGAINST CANCER: The 1,000,000-volt electrostatic generator which was recently installed at the Huntington Memorial Hospital in Boston. Beside it stands its designer, Dr. John G. Trump of the Massachusetts Institute of Technology.

1935-10-10-the-brooklyn-citizen-pg-14-clip-john-trump

[HN00Y1][GDrive]

1936 (Nov 06) - Trump + Vannevar Bush

Full page : [HN00XK][GDrive]

The Boston Globe (Boston, Massachusetts) · 06 Nov 1936, Fri · Page 3

THE BOSTON GLOBE—FRIDAY, NOVEMBER

DR HAUSER TALKS AT SCIENTISTS' DINNER

Three-Day Conference Opens at M. I. T.

Dr Ernst A. Hauser, of M. I. T. spoke on "Colloids," at the annual dinner of the National Research Council, division of engineering and industrial research, committee on electrical insulation, last night at the Copley-Plaza. More than 200 scientists were present. Dean John B. Whitehead of Johns Hopkins University presided.

The banquet was the concluding feature of the opening day of a three-day session of the ninth annual conference of the scientists in the George Eastman Laboratory at Technology.

Dean Vannevar Bush, vice president of M. I. T., delivered the address of welcome at the morning session, and at the banquet last night extended the courtesy of M. I. T. to the scientists, many of them nationally prominent in electrical engineering.

At the two sessions yesterday, 17 technical papers were presented. Dr Whitehead presided.

Chairman Jayson C. Balsbaugh was in charge of the arrangements for the conference and many new features of recent developments in the field of electrical insulation were described in the various technical papers. They dealt with "deterioration, by oxidation and moisture of insulation used for high voltage cables." Among those who presented papers was Dr John Trump, young M. I. T. electrical engineering professor, who, it was recently announced, designed the huge X-ray machine being built at the Collis P. Huntington Memorial Hospital in Boston, and expected to be of great aid in the treatment of cancer. Dr Trump's paper was entitled, "Properties of Vacuum Insulation."

Among those attending the conference are A. V. Astin, National Bureau of Standards; L. J. Berberich, Sun Oil Company; John T. Blake, Simplex Wire and Cable Company; Dr Walter G. Cady, Wesleyan University; W. F. Davidson, Consolidated Edison Company of New York; Prof Chester L. Dawes, Harvard; Dr J. V. Fast, Socony-Vacuum Corporation, New York; Dr Eugene W. Greenfield, Anaconda Wire and Cable Company; Dr Edwin M. Guyer, Corning Glass Works; Dr Charles F. Hill, Westinghouse Research Laboratories; Dr Vladimir Karapetoff, Cornell University; Prof Edward L. Moreland, head of the department of electrical engineering at Technology; Dr Hans Mueller, M. I. T.; Dr Ellery B. Paine, University of Illinois; John D. Piper and Kenneth S. Wyatt, Detroit Edison Company, and Dr Arnold H. Scott, National Bureau of Standards.

Assisting in presentation of the program at the three-day scientific discussions are Dean A. Lyon and Dr Robert G. Larsen, both of the staff at Technology.

[HN00XL][GDrive]

1937 (April 15)

Full page : [HN00XM][GDrive]

World's Mightiest Gamma Ray Generator Dedicated at Hospital

Exceeding in power the combined output of all the available radium in the world, a new 1,000,000 volt X-ray machine for the treatment of cancer was dedicated yesterday at the Collis P. Huntington Memorial Hospital, Huntington av.

The new machine is known technically as an electrostatic generator. It was designed by Dr John G. Trump and Dr Robert J. Van de-Graaf of M. I. T.

The dedicatory exercises were attended by about 100 leaders in the fields of science, education and social welfare. Among them were Pres James Bryant Conant of Harvard and Pres Karl T. Compton of Technology.

"This new medical tool, the most powerful ever built, is unlike any instrument hitherto developed for the X-ray treatment of cancer," said Dr Richard Dresser, roentgenologist at the Huntington Hospital.

Dr Dresser said it would take 2000 grams of radium, which would cost $60,000,000—could it be bought—to produce the gamma rays having the effectiveness of the X-rays developed by this new generator.

Resembling a giant mushroom of polished aluminum, the generator stands 15 feet high. Its rounded top, comprising the huge electrode, is 15 feet long, 12 feet wide and five feet deep.

The visitor has the impression of being in a terrific lightning storm as he peers into the dark room where huge electrical flashes play and snap between the electrode and the spherical terminal.

Through a huge tube the powerful current is led to a heavily lead-insulated treatment room underground, where it is focused on the patient, in perfect safety.

The Huntington Hospital is operated by the Cancer Commission of Harvard University and gains a large percentage of its support from Greater Boston's Community Fund.

This hospital is one of the nation's important cancer research centers. On its staff are Dr Channing C. Simmons, surgeon-in-chief; Dr Joseph C. Aub, physician-in-chief, and Dr Dresser, roentgenologist.

The Huntington Hospital was one of the first in the country to use radium and X-ray in the treatment of cancer.

[HN00XN][GDrive]

1940 (Octover) - WW2 draft card

SERIAL NUMBER 1698 — 1. NAME (Print): John (First) George (Middle) Trump (Last) — ORDER NUMBER 907

2. ADDRESS (Print): 18 Crescent Rd. (Number and street or R. F. D. number) Belmont (Town) Middlesex (County) Mass. (State)

3. TELEPHONE: Bel. 0530-M (Exchange) (Number)

4. AGE IN YEARS: 33 — DATE OF BIRTH: Aug. 21 - 1907 (Mo.) (Day) (Yr.)

5. PLACE OF BIRTH: New York (Town or county) N. Y. - U.S.A. (State or country)

6. COUNTRY OF CITIZENSHIP: U.S.A.

7. NAME OF PERSON WHO WILL ALWAYS KNOW YOUR ADDRESS: Mrs. (Mr., Mrs., Miss) Elora (First) 9. (Middle) Trump (Last)

8. RELATIONSHIP OF THAT PERSON: Wife

9. ADDRESS OF THAT PERSON: 18 Crescent Rd. (Number and street or R. F. D. number) Belmont (Town) Middlesex (County) Mass. (State)

10. EMPLOYER'S NAME: Mass. Inst. of Technology

11. PLACE OF EMPLOYMENT OR BUSINESS: Cambridge - Middlesex - Mass. (Number and street or R. F. D. number) (Town) (County) (State)

I AFFIRM THAT I HAVE VERIFIED ABOVE ANSWERS AND THAT THEY ARE TRUE.

John G. Trump. (Registrant's signature)

REGISTRATION CARD D. S. S. Form 1 (over)

[HG005P][GDrive]

REGISTRAR'S REPORT

DESCRIPTION OF REGISTRANT

RACE		HEIGHT (Approx.)		WEIGHT (Approx.)		COMPLEXION	
White	✓	5' 10½"		150		Sallow	
		EYES		HAIR		Light	✓
Negro		Blue	✓	Blonde	✓	Ruddy	
		Gray		Red		Dark	
Oriental		Hazel		Brown		Freckled	
		Brown		Black		Light brown	
Indian		Black		Gray		Dark brown	
				Bald		Black	
Filipino							

Other obvious physical characteristics that will aid in identification

I certify that my answers are true; that the person registered has read or has had read to him his own answers; that I have witnessed his signature or mark and that all of his answers of which I have knowledge are true, except as follows:

Hope T. Bennett (Signature of registrar)

Registrar for 2 (Precinct) Belmont (Ward) Middlesex (City or county) Mass. (State)

Date of registration October 16 - 1940

(STAMP OF LOCAL BOARD)

(The stamp of the Local Board having jurisdiction of the registrant shall be placed in the above space.)

[HG005Q][GDrive]

1942 (Sep 19)

Full page : [HN00Y2][GDrive]

The Berkshire Eagle (Pittsfield, Massachusetts) · 19 Sep 1942, Sat · Page 11

New X-ray Is Developed

CHICAGO (AP) — Development at Massachusetts Institute of Technology of an X-ray generator which "produces for the first time radiation more penetrating than the gamma rays of radium and with an intensity greater than that of the entire available world supply of radium" was reported today.

The announcement was made to the 43d annual meeting of the American Roentgen Ray Society by Dr. John G. Trump of MIT, its designer, and R. W. Cloud, also of M.I.T., who described construction of the apparatus.

The apparatus, which produces direct-current X-rays, operates at a potential of more than 4,000,000 volts.

[HN00Y3][GDrive]

1944 (Sep 4) - Returning from France

Form I-426

UNITED STATES DEPARTMENT OF JUSTICE
IMMIGRATION AND NATURALIZATION SERVICE

U. S. SPECIAL PASSPORT

U.S. CIT.

52 E

INFORMATION SHEET (concerning passenger arriving on aircraft)

This sheet must be filled out in the English language, typewritten, or printed in ink
(Note further instructions on back of this sheet)

1. Aircraft NC. 18611 (Registration marks) Departing from Foynes Date Sept. 4th, 1944
Arriving in area at New York Date SEP 5 1944

2. Passenger:

NAME IN FULL		Age	Sex	Country of Which Citizen or Subject	EMBARKATION	
Family Name	Given Name				Place	Country
TRUMP	JOHN. G.	37	M	U. S. A..	Foynes	Eire

September 4th 1944

3. Destination in United States Mass. (State) Winchester. (City or town) 9 Cambridge St. (Street and number)

Fill out spaces below in the cases of aliens only

4. Place of birth ..... (Country) (City or town) Race .....
5. Height: Ft. ....; in. ....; complexion ....; color of hair .... of eyes ....
6. Married or single Married Occupation Radio Engineer
7. Able to read ..... (State language or ground for exemption)
8. Immigration visa, passport visa, reentry permit, or other immigration document. (Prefix number with QIV, NQIV, PV, RP, or abbreviated designation of other immigration document, as case may be.)

Number ..... Issued at ..... Date of issue .....

9. Last permanent residence ..... (Country) (State) (City or town) (Street and number)
10. Final destination (intended future permanent residence):

..... (Country) (State) (City or town) (Street and number)

11. Going to join relative or friend in U. S. ..... Name and address of such relative or friend:

..... (Name) (State) (City or town) (Street and number)

12. Whether in U. S. before, and if so, where ..... (State) (City or town) (Street and number)

..... and when .....

13. Purpose in coming to the U. S. ..... Length of intended stay .....
14. Whether has ticket to destination ..... Amount of money shown .....
15. Whether ever in prison or in institution for the care and treatment of the insane .....
16. Whether ever excluded from admission to the United States or arrested and deported from the United States .....
17. Marks of identification:

Ap 35487

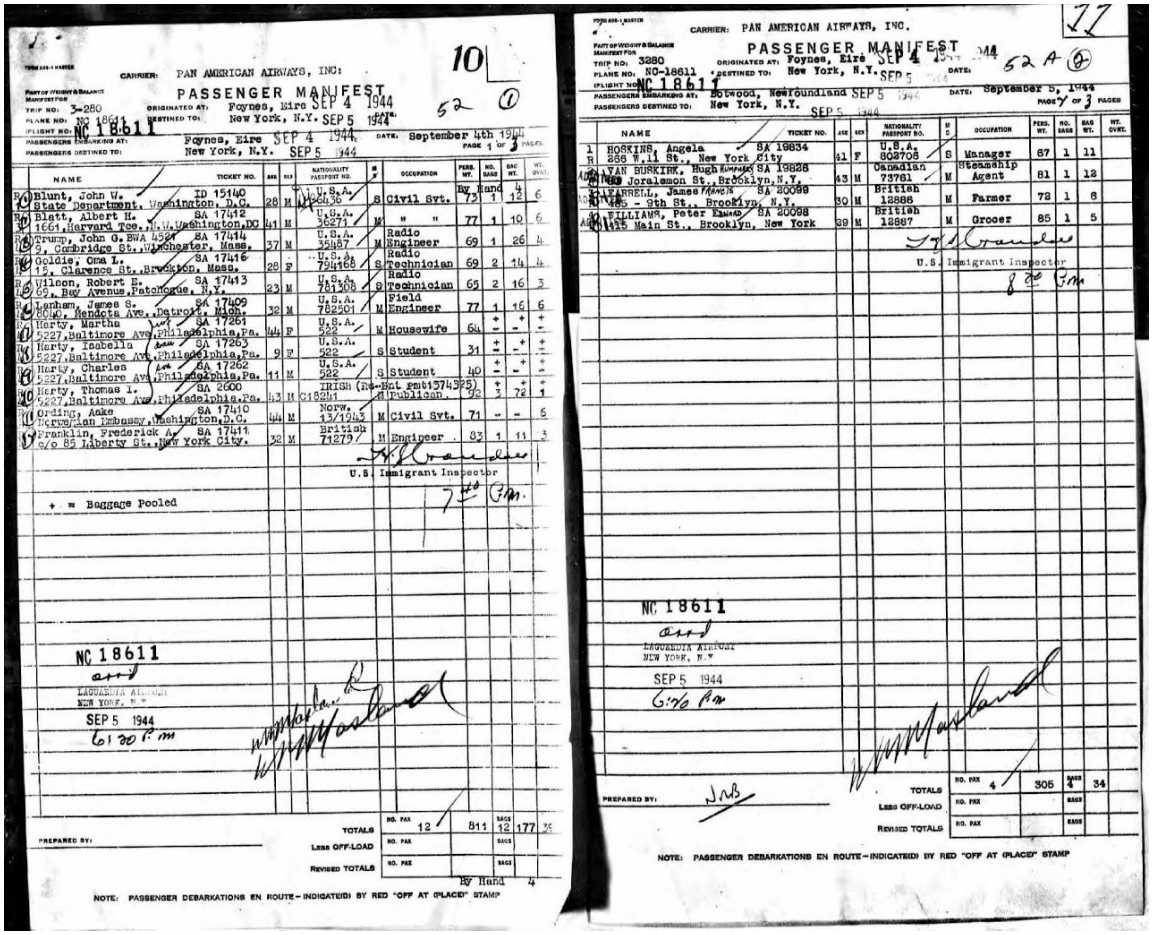
(These spaces reserved for United States immigration officer)
Immigration list No. 1 Line No. 3
Name of person or transportation company operating aircraft PAN AMERICAN AIRWAYS, INC.
Alien's passport will expire .....
Head tax status .....
Held for BSI .....
Admitted under section U. S. CITIZEN

Passenger inspected (and information hereon verified) by ..... (Signature of immigrant inspector)

This form may be obtained upon prepayment from the Superintendent of Documents, Government Printing Office, Washington, D. C. It may be printed by private parties provided it conforms to official form in size, wording, arrangement, and quality and color of paper.

16—54018-1

Whole page : [HJ000N][GDrive]
Clip : [HJ000O][GDrive]



CARRIER: PAN AMERICAN AIRWAYS, INC.

PASSENGER MANIFEST

TRIP NO: 3-280 ORIGINATED AT: Foynes, Eire SEP 4 1944
PLANE NO: NO 18611 DESTINED TO: New York, N.Y. SEP 5 1944
FLIGHT NO: NC 18611
PASSENGERS EMBARKING AT: Foynes, Eire SEP 4 1944 DATE: September 4th 1944
PASSENGERS DESTINED TO: New York, N.Y. SEP 5 1944 PAGE 1 OF 3 PAGES

	NAME	TICKET NO.	AGE	SEX	NATIONALITY PASSPORT NO.	M/S	OCCUPATION	PERS. WT.	NO. BAGS	BAG WT.	WT. OVRG.
R	Blunt, John W.	ID 15140	28	M	U.S.A. March 36	S	Civil Svt.	By Hand	1	12	6
R	Blatt, Albert H. 1661, Harvard Tce. N.W.	SA 17412 Washington, DC	41	M	U.S.A. 36271	M	" "	77	1	10	6
R	Trump, John G. BWA 4564 5, Cambridge St.,	SA 17414 Worchester, Mass.	37	M	U.S.A. 32487	M	Radio Engineer	69	1	26	4
R	Goldie, Ona L. 15, Clarence St.,	SA 17416 Brockton, Mass.	28	F	U.S.A. 794168	S	Radio Technician	69	2	14	4
R	Wilson, Robert E. 69, Bay Avenue,	SA 17413 Patchogue, N.Y.	23	M	U.S.A. 781308	S	Radio Technician	65	2	16	3
R	Lanham, James S. 6040, Hendets Ave.,	SA 17409 Detroit, Mich.	32	M	U.S.A. 782501	M	Field Engineer	77	1	16	6
R	Horty, Martha 5227, Baltimore Ave.,	SA 17261 Philadelphia, Pa.	44	F	U.S.A. 522	W	Housewife	64	+ -	+ -	+ -
R	Horty, Isabella 5227, Baltimore Ave.,	SA 17263 Philadelphia, Pa.	9	F	U.S.A. 522	S	Student	31	+ -	+ -	+ -
R	Horty, Charles 5227, Baltimore Ave.,	SA 17262 Philadelphia, Pa.	11	M	U.S.A. 522	S	Student	40	+ -	+ -	+ -
R	Horty, Thomas I. 5227, Baltimore Ave.,	SA 2600 Philadelphia, Pa.	43	M	IRISH (Re-Ent gmt1574325) C182241	M	Publisher	92	3	72	1
R	Lording, Anke Norwegian Embassy,	SA 17410 Washington, D.C.	44	M	Norw. 13/1943	M	Civil Svt.	71	-	-	6
R	Franklin, Frederick A. c/o 85 Liberty St.,	SA 17411 New York City.	32	M	British 71279	M	Engineer	82	1	11	3

U.S. Immigrant Inspector

+ = Baggage Pooled

NC 18611
and
LAGUARDIA AIRPORT
NEW YORK, N.Y.
SEP 5 1944
6:30 P.M.

	NO. PAX		BAGS	
TOTALS	12	811	12	177
Less OFF-LOAD	NO. PAX		BAGS	
REVISED TOTALS	NO. PAX		BAGS	

By Hand 4

PREPARED BY:

NOTE: PASSENGER DEBARKATIONS EN ROUTE—INDICATED BY RED "OFF AT (PLACE)" STAMP

CARRIER: PAN AMERICAN AIRWAYS, INC.

PASSENGER MANIFEST

TRIP NO: 3280 ORIGINATED AT: Foynes, Eire SEP 4 1944
PLANE NO: NO-18611 DESTINED TO: New York, N.Y. SEP 5
FLIGHT NO: NC 18611
PASSENGERS EMBARKING AT: Botwood, Newfoundland SEP 5 1944 DATE: September 5, 1944
PASSENGERS DESTINED TO: New York, N.Y. SEP 5 1944 PAGE 3 OF 3 PAGES

	NAME	TICKET NO.	AGE	SEX	NATIONALITY PASSPORT NO.	M/S	OCCUPATION	PERS. WT.	NO. BAGS	BAG WT.	WT. OVRG.
1 R	HOSKINS, Angela 266 W.11 St.,	SA 19834 New York City	41	F	U.S.A. 802705	S	Manager	67	1	11	
R	VAN BUSKIRK, Hugh Joralemon St.,	SA 19828 Brooklyn, N.Y.	43	M	Canadian 73761	M	Steamship Agent	81	1	13	
R	FARRELL, James Francis	SA 20098	30	M	British 13886	M	Farmer	73	1	8	
R	485 - 9th St., WILLIAMS, Peter Edward	Brooklyn, N.Y. SA 20098	39	M	British 13887	M	Grocer	85	1	5	
	435 Main St.,	Brooklyn, New York									

U.S. Immigrant Inspector
8:20 P.M.

NC 18611
and
LAGUARDIA AIRPORT
NEW YORK, N.Y.
SEP 5 1944
6:76 P.M.

	NO. PAX		BAGS	
TOTALS	4	305	4	34
Less OFF-LOAD	NO. PAX		BAGS	
REVISED TOTALS	NO. PAX		BAGS	

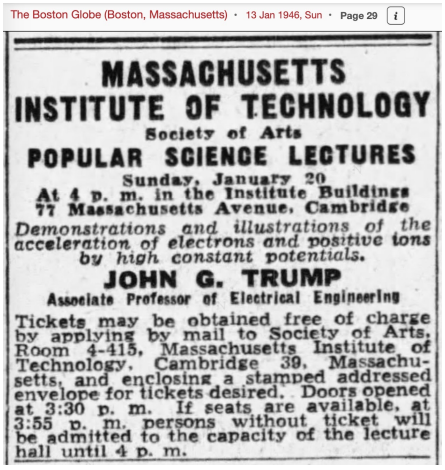
PREPARED BY: NMB

NOTE: PASSENGER DEBARKATIONS EN ROUTE—INDICATED BY RED "OFF AT (PLACE)" STAMP

Whole page : [HJ000P][GDrive]
Clip : [HJ000Q][GDrive]

1946 (Jan 13)

Full page : [HN00XO][GDrive]



The Boston Globe (Boston, Massachusetts) · 13 Jan 1946, Sun · Page 29

MASSACHUSETTS INSTITUTE OF TECHNOLOGY

Society of Arts

POPULAR SCIENCE LECTURES

Sunday, January 20
At 4 p. m. in the Institute Buildings
77 Massachusetts Avenue, Cambridge

Demonstrations and illustrations of the acceleration of electrons and positive ions by high constant potentials.

JOHN G. TRUMP

Associate Professor of Electrical Engineering

Tickets may be obtained free of charge by applying by mail to Society of Arts, Room 4-415, Massachusetts Institute of Technology, Cambridge 39, Massachusetts, and enclosing a stamped addressed envelope for tickets desired. Doors opened at 3:30 p. m. If seats are available, at 3:55 p. m. persons without ticket will be admitted to the capacity of the lecture hall until 4 p. m.

[HN00XP][GDrive]

1947 (Jan 30)

Full page : [HN00Y4][GDrive]

1947-01-30-the-berkshire-eagle-pg-11-clip-atom-shortcut

Atom May Provide Short Cut To Make Artificial Lightning

NEW YORK (UP)—A scientist has suggested that atomic energy may be used directly to operate electrostatic generators, machines so powerful that they can create artificial lightning.

The scientist, Dr. John G. Trump, associate professor of electrical engineering at the Massachusetts Institute of Technology, was one of a group discussing methods of producing electric power at the annual meeting of the Institute of Electrical Engineers.

If such an electrostatic machine could be given power directly from atomic energy it would be a decided short cut toward the goal of science to use atomic power for industrial purposes.

Most present plans would utilize atomic energy to heat water and create steam, which would in turn operate electromagnetic motor generators.

Dr. Trump pointed out that the most direct and powerful forces in nature, including those holding atoms together, are electrostatic in nature, and that electrostatic machines "may be uniquely able to utilize directly the energy of nuclear fission."

He also said that new developments may result in improved, smaller models of the electrostatic generator which probably will be sealed inside air-tight containers and operate in a high vacuum.

Gases at high pressures are now employed for high-voltage insulation, Dr. Trump recalled, and he said that substitution of high vacuums as the insulating medium, if perfected, would make possible considerable reduction in generator size.

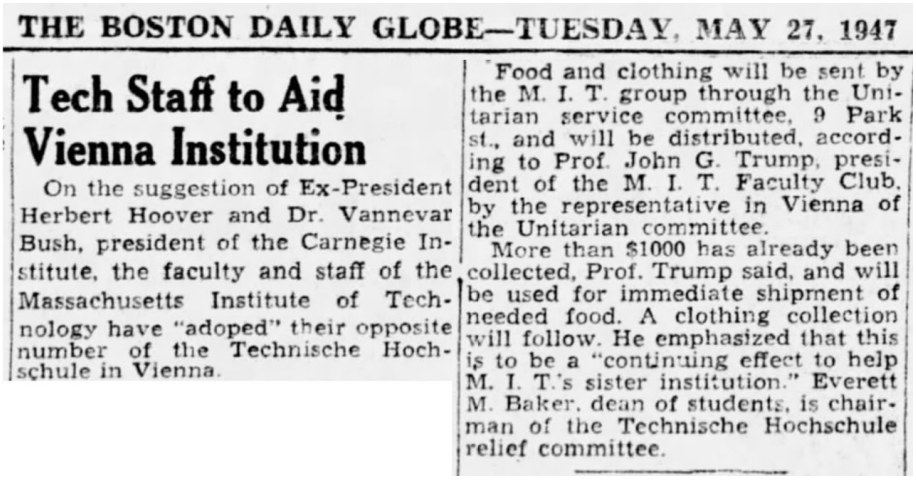
This would carry the application of such machines a step further, and they would have an advantage over electromagnetic power devices in that they could generate and use power directly at high voltage.

This, according to Dr. Trump, might well eliminate two "middle men" in the transfer of atomic power to industrial machines—heating of water, and making of steam.

[HN00Y5][GDrive]

1947 (May 27)

Full page : [HN00XQ][GDrive]



THE BOSTON DAILY GLOBE—TUESDAY, MAY 27, 1947

Tech Staff to Aid Vienna Institution

On the suggestion of Ex-President Herbert Hoover and Dr. Vannevar Bush, president of the Carnegie Institute, the faculty and staff of the Massachusetts Institute of Technology have "adoped" their opposite number of the Technische Hochschule in Vienna.

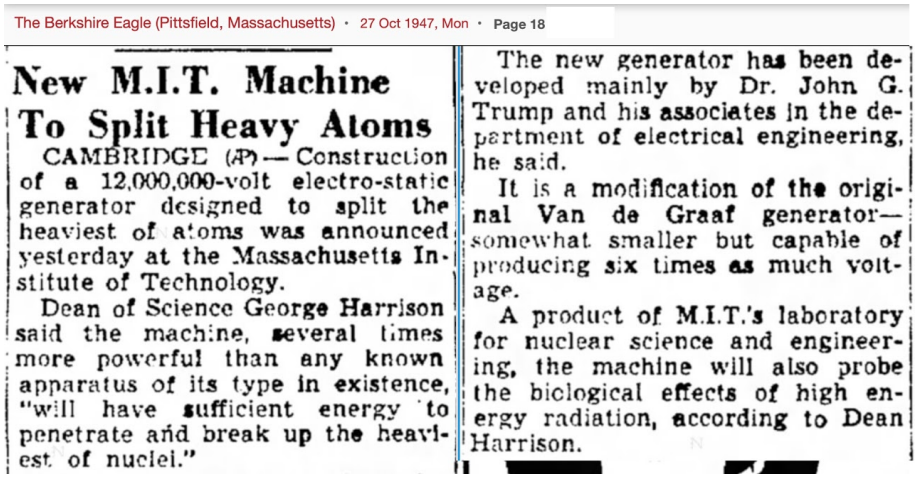
Food and clothing will be sent by the M. I. T. group through the Unitarian service committee, 9 Park st., and will be distributed, according to Prof. John G. Trump, president of the M. I. T. Faculty Club, by the representative in Vienna of the Unitarian committee.

More than $1000 has already been collected, Prof. Trump said, and will be used for immediate shipment of needed food. A clothing collection will follow. He emphasized that this is to be a "continuing effect to help M. I. T.'s sister institution." Everett M. Baker, dean of students, is chairman of the Technische Hochschule relief committee.

[HN00XR][GDrive]

1947 (oct 27)

Full page : [HN00Y6][GDrive]



The Berkshire Eagle (Pittsfield, Massachusetts) · 27 Oct 1947, Mon · Page 18

New M.I.T. Machine To Split Heavy Atoms

CAMBRIDGE (AP) — Construction of a 12,000,000-volt electro-static generator designed to split the heaviest of atoms was announced yesterday at the Massachusetts Institute of Technology.

Dean of Science George Harrison said the machine, several times more powerful than any known apparatus of its type in existence, "will have sufficient energy to penetrate and break up the heaviest of nuclei."

The new generator has been developed mainly by Dr. John G. Trump and his associates in the department of electrical engineering, he said.

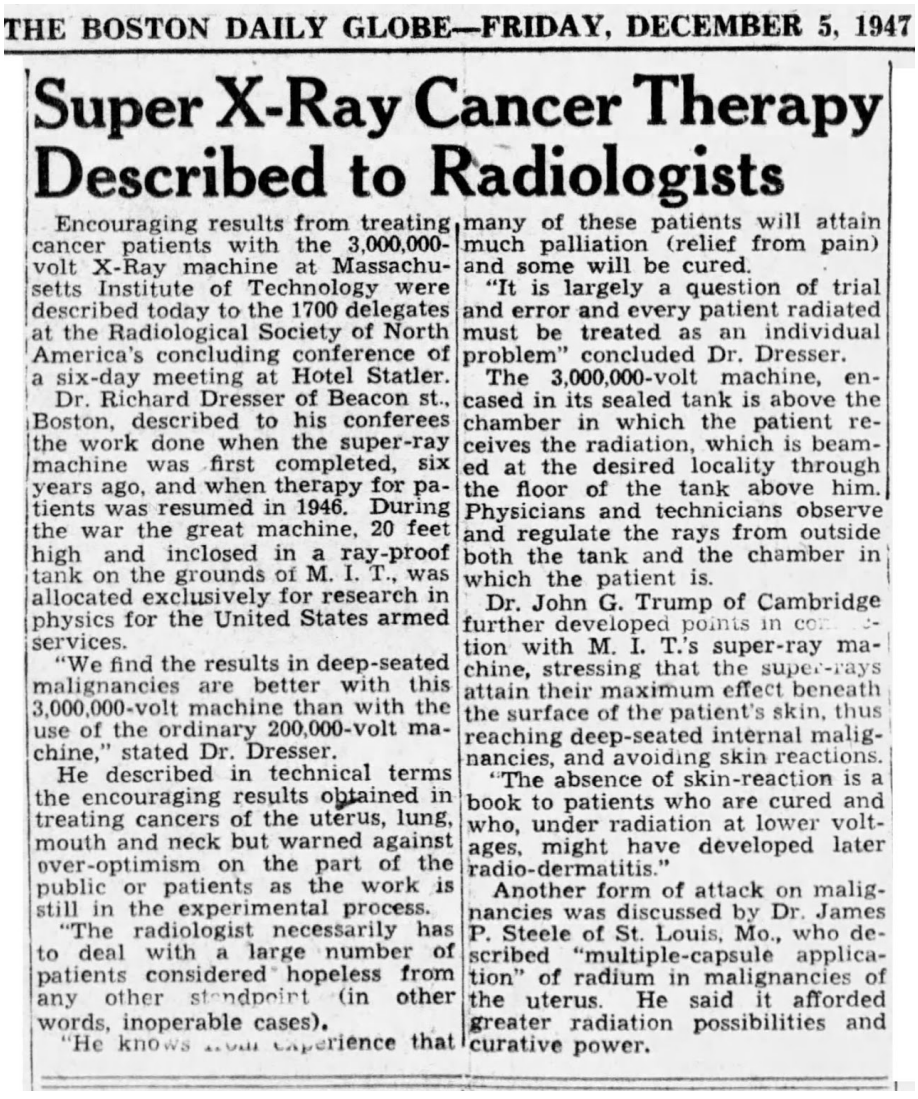
It is a modification of the original Van de Graaf generator—somewhat smaller but capable of producing six times as much voltage.

A product of M.I.T.'s laboratory for nuclear science and engineering, the machine will also probe the biological effects of high energy radiation, according to Dean Harrison.

[HN00Y7][GDrive]

1947 (Dec 05)

Full page : [HN00XS][GDrive]



THE BOSTON DAILY GLOBE—FRIDAY, DECEMBER 5, 1947

Super X-Ray Cancer Therapy Described to Radiologists

Encouraging results from treating cancer patients with the 3,000,000-volt X-Ray machine at Massachusetts Institute of Technology were described today to the 1700 delegates at the Radiological Society of North America's concluding conference of a six-day meeting at Hotel Statler.

Dr. Richard Dresser of Beacon st., Boston, described to his conferees the work done when the super-ray machine was first completed, six years ago, and when therapy for patients was resumed in 1946. During the war the great machine, 20 feet high and inclosed in a ray-proof tank on the grounds of M. I. T., was allocated exclusively for research in physics for the United States armed services.

"We find the results in deep-seated malignancies are better with this 3,000,000-volt machine than with the use of the ordinary 200,000-volt machine," stated Dr. Dresser.

He described in technical terms the encouraging results obtained in treating cancers of the uterus, lung, mouth and neck but warned against over-optimism on the part of the public or patients as the work is still in the experimental process.

"The radiologist necessarily has to deal with a large number of patients considered hopeless from any other standpoint (in other words, inoperable cases).

"He knows from experience that many of these patients will attain much palliation (relief from pain) and some will be cured.

"It is largely a question of trial and error and every patient radiated must be treated as an individual problem" concluded Dr. Dresser.

The 3,000,000-volt machine, encased in its sealed tank is above the chamber in which the patient receives the radiation, which is beamed at the desired locality through the floor of the tank above him. Physicians and technicians observe and regulate the rays from outside both the tank and the chamber in which the patient is.

Dr. John G. Trump of Cambridge further developed points in connection with M. I. T.'s super-ray machine, stressing that the super-rays attain their maximum effect beneath the surface of the patient's skin, thus reaching deep-seated internal malignancies, and avoiding skin reactions.

"The absence of skin-reaction is a book to patients who are cured and who, under radiation at lower voltages, might have developed later radio-dermatitis."

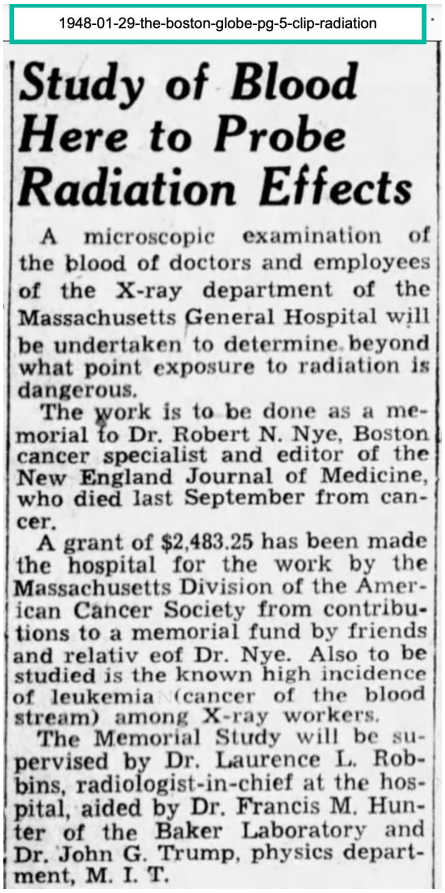
Another form of attack on malignancies was discussed by Dr. James P. Steele of St. Louis, Mo., who described "multiple-capsule application" of radium in malignancies of the uterus. He said it afforded greater radiation possibilities and curative power.

[HN00XT][GDrive]

1948 (Jan 29)

Full page : [HN00XU][GDrive]

1948-01-29-the-boston-globe-pg-5-clip-radiation



Study of Blood Here to Probe Radiation Effects

A microscopic examination of the blood of doctors and employees of the X-ray department of the Massachusetts General Hospital will be undertaken to determine beyond what point exposure to radiation is dangerous.

The work is to be done as a memorial to Dr. Robert N. Nye, Boston cancer specialist and editor of the New England Journal of Medicine, who died last September from cancer.

A grant of $2,483.25 has been made the hospital for the work by the Massachusetts Division of the American Cancer Society from contributions to a memorial fund by friends and relativ eof Dr. Nye. Also to be studied is the known high incidence of leukemia (cancer of the blood stream) among X-ray workers.

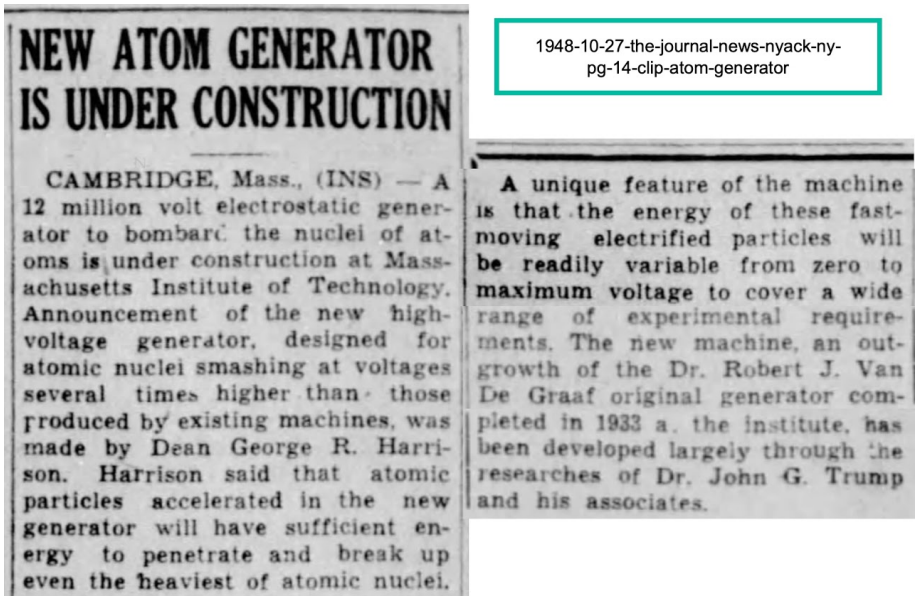
The Memorial Study will be supervised by Dr. Laurence L. Robbins, radiologist-in-chief at the hospital, aided by Dr. Francis M. Hunter of the Baker Laboratory and Dr. John G. Trump, physics department, M. I. T.

[HN00XV][GDrive]

1948 (Oct 27)

Full page : [HN00YE][GDrive]

1948-10-27-the-journal-news-nyack-ny-pg-14-clip-atom-generator



NEW ATOM GENERATOR IS UNDER CONSTRUCTION

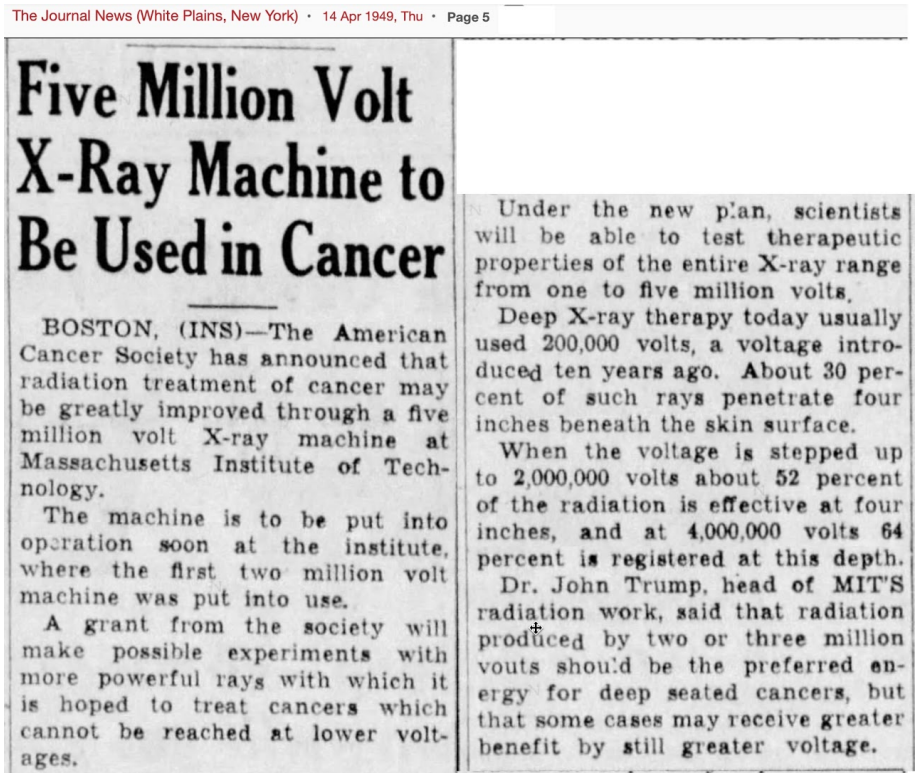
CAMBRIDGE, Mass., (INS) — A 12 million volt electrostatic generator to bombard the nuclei of atoms is under construction at Massachusetts Institute of Technology. Announcement of the new high-voltage generator, designed for atomic nuclei smashing at voltages several times higher than those produced by existing machines, was made by Dean George R. Harrison. Harrison said that atomic particles accelerated in the new generator will have sufficient energy to penetrate and break up even the heaviest of atomic nuclei.

A unique feature of the machine is that the energy of these fast-moving electrified particles will be readily variable from zero to maximum voltage to cover a wide range of experimental requirements. The new machine, an outgrowth of the Dr. Robert J. Van De Graaf original generator completed in 1933 a. the institute, has been developed largely through the researches of Dr. John G. Trump and his associates.

[HN00YF][GDrive]

1949 (April 14)

Full page : [HN00YG][GDrive]



The Journal News (White Plains, New York) • 14 Apr 1949, Thu • Page 5

Five Million Volt X-Ray Machine to Be Used in Cancer

BOSTON, (INS)—The American Cancer Society has announced that radiation treatment of cancer may be greatly improved through a five million volt X-ray machine at Massachusetts Institute of Technology.

The machine is to be put into operation soon at the institute, where the first two million volt machine was put into use.

A grant from the society will make possible experiments with more powerful rays with which it is hoped to treat cancers which cannot be reached at lower voltages.

Under the new plan, scientists will be able to test therapeutic properties of the entire X-ray range from one to five million volts.

Deep X-ray therapy today usually used 200,000 volts, a voltage introduced ten years ago. About 30 percent of such rays penetrate four inches beneath the skin surface.

When the voltage is stepped up to 2,000,000 volts about 52 percent of the radiation is effective at four inches, and at 4,000,000 volts 64 percent is registered at this depth.

Dr. John Trump, head of MIT'S radiation work, said that radiation produced by two or three million vouts should be the preferred energy for deep seated cancers, but that some cases may receive greater benefit by still greater voltage.

[HN00YFH][GDrive]

1950 (April 14)

Full page : [HN00XI][GDrive]

Democrat and Chronicle (Rochester, New York) • 14 Apr 1950, Fri • Page 12

Barbecue Method Adopted for X-Ray Of Cancer Patients

New Technique Allows Greater Use of Radiation

BY HOWARD W. BLAKESLEE

New York — (AP) — The American Cancer Society yesterday reported a new method of giving X-rays which works like barbecuing of roasts.

The patient sits on a turntable, which slowly revolves, while a beam of X-rays plays on him. The difference between this X-ray treatment and barbecuing is that the ray strikes only in a narrow zone around the body.

This new method is used to treat cancer deep within the body. The X-ray is focused so that its principal strength hits at about the site of the cancer.

Rays Focused on Site

Such rays, however, burn all the tissues through which they pass before reaching the deep cancer. Frequently the amount of X-rays which can be given the patient are limited by the amount of burning of the healthy tissues.

The burning of healthy tissues sometimes interferes so much that a patient's life cannot be saved.

By the barbecue method the X-rays remain focused on the cancer all the time, but are never on one spot of healthy tissues for long. This results in a wider area burned but in less severe burning in any one healthy area.

Beam Several Rays

This technique was developed at the Massachusetts Institute of Technology by Dr. John G. Trump, associate professor of electrical engineering. Dr. Hugh F. Hare of the Lahey Clinic, Boston, reported:

"This is the most promising method evolved so far of treating deep tumors susceptible to radiation, including many cases previously considered inaccessible."

The barbecue ray is two million volts, as penetration by X-rays depends on high voltage. As a substitute when the patient cannot be rotated on account of location of the cancer, several simultaneous beams are used. They enter from different angles. The healthy tissues are subjected to the burning effects of only one day, while the cancer gets the combined effect of several.

[HN00XJ][GDrive]

1952 (March 03)

Full page : [HN00YA][GDrive]

The Ithaca Journal (Ithaca, New York) · 03 Mar 1952, Mon · Page 1

New Method Knocks Out Cancers

By ALTON L. BLAKESLEE

Cincinnati— (AP) —An X-ray merry-go-round has knocked out cancers in dozens of apparently hopeless cancer patients, the Second National Cancer Conference was told today.

Some have no signs of cancer 2 years later. But it's too soon to call any of them cured.

The merry-go-round is a revolving chair. The patient sits in it while a powerful 2-million-volt X-ray beam is aimed at his hidden cancer. As the patient spins slowly, the beam concentrates on the cancer. The spinning means less damaging Xrays on his skin and healthy tissues, and thus a bigger dose hitting the cancer.

The merry-go-round method was developed by Dr. John G. Trump and associates of Massachusetts Institute of Techonology, Cambridge, Mass., in research supported by the American Cancer Society. Patients are chosen and treatment guided by Dr. Hugh G. Hare, radio-ologist of the Lahey Clinic in Boston.

Details of results in the first 27 months with the merry-go-round beam were disclosed at the opening of the national cancer conference, bringing together more than 1,000 U.S. and foreign scientists and physicians to report latest advances in the campaign against cancer.

So far, 286 patients have been treated. The great majority had advanced cancer that couldn't be cut out or treated with usual X-ray methods.

Today, 157 have no signs of cancer, and some have been clear for 1 to 2 years. But cancer isn't considered cured until at least 5 years have passed with no recurrence.

Forty-seven have died, some of other diseases; 19 have cancers that spread, 12 have persistent cancers and in five the cancers returned. Another 46 are under treatment still or finished it too recently to be called free of the disease.

[HN00YB][GDrive]

1950 (April 14)

Full page : [HN00XW][GDrive]

NEW CANCER TREATMENT MACHINE—Dr. Hugh F. Hare of the Lahey Clinic and Dr. John G. Trump of M. I. T. demonstrates rotational system of administering high-energy X-rays. Dr. E. W. Webster of M. I. T. acts as patient.

M. I. T. Uses 2 Million Volts in Treating Deep Cancer

Massachusetts Institute of Technology officials announced yesterday a new method of treating deep-seated malignant tumors, which combines the use of 2,000,000 volt X-rays with a rotational system of administration.

"This is the most promising method evolved so far of treating deep tumors susceptible to radiation therapy, including many cases previously considered inaccessible," Dr. Hugh F. Hare of the Lahey Clinic said.

Techniques developed and improved by Dr. John G. Trump, associate professor of electrical engineering at M. I. T., in research made possible by the American Cancer Society, have been used by radiologists of the Lahey Clinic and Massachusetts General Hospital in treating more than 50 patients in a special high-voltage X-ray laboratory at the Institute.

Dr. Hare said that "while the clinical disappearance of the malignancies under treatment have been most gratifying, it must be remembered that a period of years is required to prove any new method of cancer treatment."

Although it is a significant step forward in cancer treatment, Dr. Hare emphasized that many malignancies are too far advanced at the time of recognition and diagnosis to yield to this or other known treatment.

Evaluation Necessary

This high-voltage radiation treatment can only be recommended over other available forms of can- evaluation of each case, it was pointed out.

The 2,000,000-volt X-rays which are one important feature of the new procedure are produced by an cer therapy after careful clinical electrostatic generator developed by Dr. Trump and colleagues at M. I. T. and the High Voltage Engineering Corporation of Cambridge.

The use of gas at high pressure for insulating such high-voltage machines has made it possible to build compact generators which are now being used in hospitals and research centers. The machine in use at M. I. T. was the first commercially built model to be placed in operation.

"Two million-volt X-rays are fully equivalent in penetration and spectral composition to those from radium," Dr. Trump said. "The generator now in use has an X-ray output equal to that obtained from more than 4000 grams of radium, or twice the available world's supply."

Patients are carefully placed upon a rotating turntable in such a way that the sharply-defined X-ray beam continuously illuminates the diseased region. The rotation of the patient has the effect of reducing the dose delivered to regions outside the tumor.

Dr. Hare said that by this method reactions of normal healthy tissue near the diseased area are much less serious than with other methods of radiation. Only two of more than 50 patients to receive the treatment this far have had X-ray sickness, and in several instances gain in weight has occurred during the treatment, he said.

The new technique has been most effective in treating malignancies in the head, neck, throat, lungs, esophagus and uterus, Dr. Hare said.

1950-04-14-the-boston-globe-pg-8-clip-deep-cancer

[HN00XX][GDrive]

1951 (Jan 28)

Full page : [HN00XY][GDrive]

1951-01-28-the-boston-globe-pg-29-clip-mit-alumni

M. I. T. Alumni to Hear Reports at Dinner Feb. 1

Reports on current and future activities at Massachusetts Institute of Technology will feature the annual mid-Winter dinner of the alumni Thursday at 6 p. m. in Walker Memorial.

Recent administrative developments will be discussed by Dr. James R. Killian Jr., president, and Dr. Karl T. Compton, chairman of the corporation. Marshall B. Dalton, general chairman of the Committee on Financial Development, will report on the progress of the institute's development program.

Research frontiers at M. I. T. will be described by Dr. Richard H. Bolt, director of the Acoustics Laboratory; Dr. John G. Trump, associate professor of electrical engineering, and Dr. Alex Bavelas, associate professor of economics. They will be introduced by Dr. George R. Harrison, dean of science.

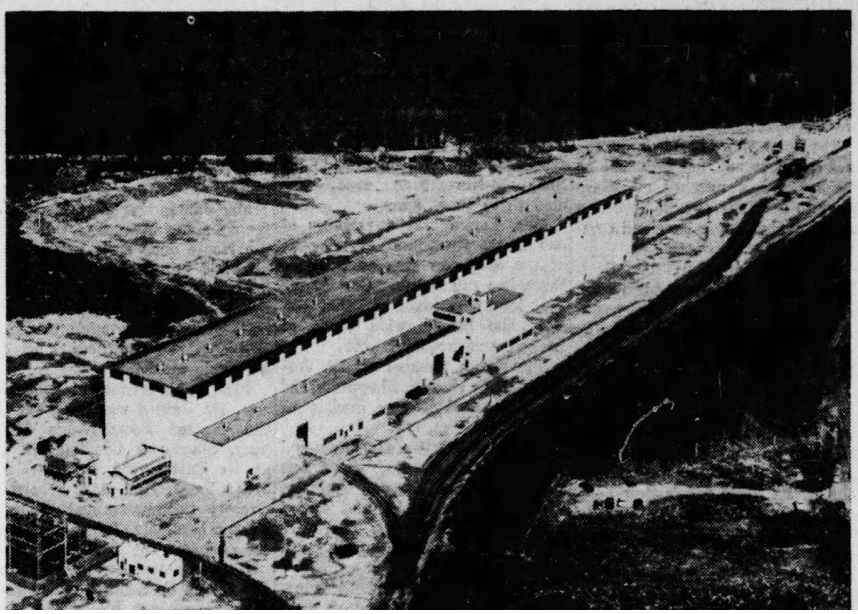
John A. Lund of Cambridge, president of the M. I. T. Alumni Association, will preside. More than 1000 alumni are expected to attend, according to Donald P. Severance, secretary-treasurer of the association.

[HN00XZ][GDrive]

1953 (Nov 18) - Use of Van DeGraaff's X-Ray generator / HVEC

Full page : [HN00YC][GDrive]

Newspaper Editors, Trade Paper Writers Inspect New $5 Million Foster Wheeler Plant At Mt. Top



The new $5 million Foster Wheeler fabricating plant at Mountain Top, showing the nearly-completed plant as it appeared when this aerial photograph was taken last week.

The Foster Wheeler Corporation held a press preview at its newly-constructed plant at Mountain Top yesterday for newspaper editors and trade paper writers.

One-hundred guests of the company were taken to Mountain Top in a special train from New York City over the Jersey Central Line. After a tour through the plant the guests returned to New York in the special train.

The Foster Wheeler Corporation, manufacturers of heavy equipment for steam power plants, oil refineries and process industries, has begun limited operations at the new plant. Due to the need for training new personnel, full operation of the plant is not expected before January 1, 1954.

When full scale operations are in force it is estimated that 500 men will be employed.

$5 Million Plant

Equipped with the most modern fabricating tools, the $5 million plant will turn out pressure vessels of varying proportions, including some of the largest and heaviest in demand. Part of an $8 million expansion and re-tooling program begun three years ago, the new plant will also help to relieve heavy manufacturing schedules at the corporation's other plants in Carteret, N. J., Dansville, N. Y., and St. Catharines, Ontario, Canada.

8,000-Ton Press

Among its major tools will be an 8,000-ton hydraulic beam press weighing over three million pounds and said to have an effectiveness in bending steel plate—hot or cold—seldom before equalled. Largest of its type yet made, the press is capable of bending plate eight inches thick, and (in the case of lighter plate) forty feet long into half-shells which, when welded together, will form pressure vessels of the unusual proportions required for the higher pressures demanded by various industries.

X-Ray Generator

Another outstanding tool will be a 2-million-volt Van de Graaff X-ray generator capable of penetrating steel 12 inches thick. The machine will photograph weld metal with unprecedented clarity of detail, exposing any minute flaws that may occur in the metal. Using fewer and shorter exposures, it will perform its work in considerably less time than conventional X-ray equipment. The Foster Wheeler unit will be the first application of super-voltage X-ray in private industry.

Manufactured by High Voltage Engineering Corporation of Cambridge, Mass., the generator was originally developed for cancer research, and later adapted for industrial use. It was put to its first practical test by the U. S. Navy during World War II, to determine construction details of enemy ordnance.

To guard against the possibility of escaping rays from the powerful machine, it will be housed in a fortress-like structure, with walls of reinforced concrete four feet thick, and removed 550 feet from the main plant.

Special Tools

Other special tools that will make up the new plant, although basically similar to many used in other steel fabricating plants, are unique in their capacity to perform monumental operations, or in their ability to perform familiar tasks automatically, and more efficiently. Among these are:

A new system of automatic shielded arc welding whereby vessels up to eight inches thick and 12 feet in diameter may be welded at of raised track. The drums to be drilled may be placed on either or both sides of the drill platform. The arrangement makes possible the use in combination of as many as six drills on a single cylinder.

To Fabricate Products

Foster Wheeler Corporation is fundamentally a manufacturer of heavy industrial equipment. This includes steam generating units, such as are used in central stations of public utility companies, as well as the condensing and fuel pulverizing equipment, heat exchangers, and evaporators required in such installations. Similar equipment is also furnished for marine service. The Foster Wheeler name plate is familiar to the operators of power plants aboard many of the vessels of the U. S. Navy, as well as leading passenger ships, freighters and Great Lakes cargo vessels. Delivering a complete oil refinery — including the design of the plant, fabrication of the equipment, and erection of the completed units—is another phase of Foster Wheeler activity. Chemical plants, which include manufacture of nitrogen from the atmosphere, synthetic ammonia plants, fertilizer plants and the like, are also designed and built by the company.

Chemical Plants

Many years ago, as the oil refinery industry advanced, knowledge gained by Foster Wheeler in power plant work was applied to the oil industry and more and more the services of Foster Wheeler were in demand by this industry. Today, almost 50% of its business is in oil refinery, and allied industries. In 1953, the largest refinery in Europe was completed under the supervision of Foster Wheeler engineers.

Refinery work soon led to the building of plants for chemical uses. Today, Foster Wheeler is the leading manufacturer of chemical plants for the production of agricultural ammonia in this country. In the chemical field, Foster Wheeler has developed processes for the manufactuer of ammonia, aromatics, Ethylene products, sulfur recovery, and synthetic fuel.

Chain Of Factories

Foster Wheeler is the outgrowth of two separate companies: Wheeler Condenser and Engineering Co., and the Power Specialty Company, each organized at the turn of the century. Each specialized in a different branch of power plant work—the Wheeler Company in the manufacture of condensers, evaporators, heat exchangers, pumps, and auxiliaries, and Power Specialty in the manufacture of steam generating equipment (superheaters, economizers and boilers).

The two companies combined in 1927 to form the Foster Wheeler Corporation. Pioneering in these phases of power plant work, the combination afforded a wealth of experience in the design, engineering and fabrication of heavy equipment. This fabrication is performed in the Carteret, N. J., plant, in the Dansville, N. Y. plant, in the St. Catharines, Ontario and the Egham Surrey (England) factories. The new Mountain Top plant is now added to this chain of factories.

Use P. P. & L. Power

Power for the plant is supplied by two high tension lines from Pennsylvania Power and Light Company. Each line carries 66,000 volts to the plant's sub-station at the west end of the main building. Two 2,500 volt transformers will step this voltage down to 4,160 volts before distributing the power to four power centers within the plants. The electric system has been designed with particular attention to safety and future expansion.

Plant Superintendent

Kenneth L. Walker has been appointed superintendent of the new plant. Before being assigned to Mountain Top, Mr. Walker was superintendent of the boiler shop at the Carteret plant of the corporation. He joined the Foster Wheeler organization at this plant during 1934 and specialized in welding and fabrication.

He is married, has one daughter, and resides at Bear Creek.

Milk Output Shows Decline

The seasonal decline in milk production on Pennsylvania farms continued into October when output totaled 454 million pounds or 3 million less than in September, a federal-state survey showed today.

At the same time, a new egg production record for the month of October was set on Keystone State farms as the total for the month zoomed to 309 million.

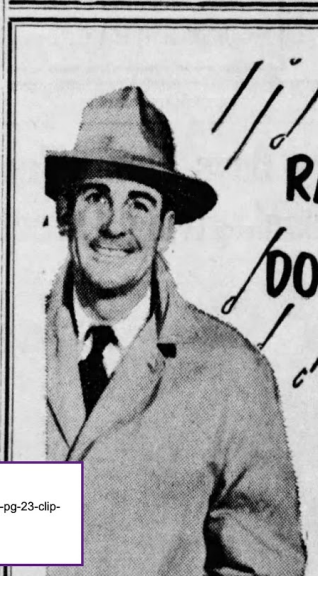
The State Agriculture Department reported that the October milk flow was one million pounds less than for the same month last year although the number of milk cows on farms was 22,000 higher this October.

Pastures were in very poor condition on Nov. 1 as a result of the prolonged drought. Rain in late October had brought relief and early November snow was beneficial in central and some western counties.

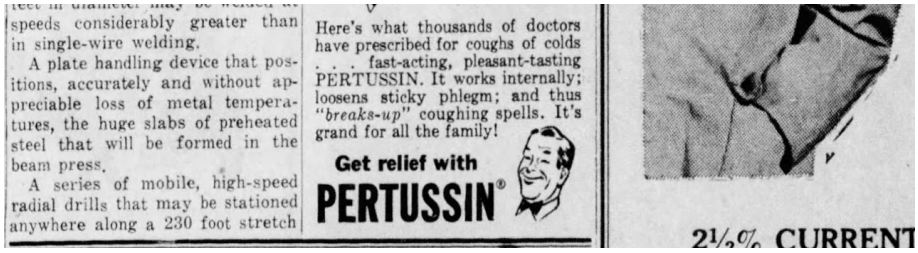
The estimated number of dairy cows in Pennsylvania during October was 928,000 compared with 926,000 during September and 906,000 for October last year.

The October egg production record was set with fewer layers than the Commonwealth had during the same period last year.

Layers in flocks averaged a record 14.2 eggs per bid during October compared with 13.59 in September and 13.52 for October last year, the federal-state survey showed.



1953-11-18-the-plain-speaker-hazleton-pa-pg-23-clip-foster-wheeler-plant



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[HN00YD][GDrive]

1953 (Nov 6)

Full page : [HN00Y8][GDrive]

Many Lung Cancer Cases Cured by Big X-Ray Doses

NEW YORK — Lung cancer in the advanced stages has responded favorably in a number of cases to a large dosage of X-rays from a 2 million-volt machine, it was reported recently to the American Cancer Society.

Clinical disappearance of the primary cancer mass has occurred in more than half of the cases, according to the report. Five out of 23 lung cancer patients given up as hopeless are alive and without any detectable evidence of the disease 12 to 33 months after completion of the therapy. The 18 others survived for an average period of 16½ months, regarded as high in such cases.

The report was presented at the society's annual meeting at the Commodore Hotel by Dr. Hugh F. Hare, radiologist formerly at the Lahey Clinic in Boston, where the work was carried out in collaboration with Dr. John Trump, physicist of the Massachusetts Institute of Technology, Cambridge. Dr. Hare is now at the Los Angeles Tumor Institute.

The therapy consisted of giving a total of 6,000 roentgen units from a Van de Graaff apparatus over a period of 35 treatment days. The dosage, about twice as high as the standard from conventional X-ray machines, was worked out by Dr. Hare and Dr. Trump on plastic models of the human torso with materials of a density similar to that of the human body.

In this manner the scientists determined the exact amount of radiation that would reach each organ. By planting sensitive X-ray films at various levels in the models they also determined the depth to which any amount of radiation would penetrate the body tissues.

They found that high voltages cause less damage to the skin and scatter over a smaller area than less powerful X rays. They also worked out a technique that made possible the delivery of a single exposure of the two million-volt beam over an area as small as the point of a pencil or as large as the area from the neck to the abdomen.

The radiations were administered to the primary tumor as well as to adjacent lymphatic regions to which the original tumor spreads.

"To the best of our knowledge," Dr. Hare reported, "none of the patients so treated have died as a result of their primary lesion; regression of the tumor has been consistent, and clinical disappearance of the primary growth has occurred in more than half of the cases in this series."

The treatment was started in 1949 on 63 victims of hopeless lung cancer. Their original tumors had spread to other parts of the body and hence were beyond the help of surgery. Of the original number, 21 were so far advanced that they died before the treatment could be completed. Of the remaining 42, 19 had received other X-ray therapy and were therefore not included in the report.

Lung Shadow Stressed

Dr. Richard H. Overholt director of the Thoracic Clinic, Brookline, Mass., said in a report that "the time schedule of treatment for lung cancer can be set ahead many months, even years, by paying immediate attention to the first clue of its presence—the abnormal shadow in the X-ray film."

"An abnormal shadow on a chest film represents the first clue to pulmonary cancer," he said. "This discovery may antedate the appearance of symptoms by months or even years. Negative bronchoscopic or secretion examination does not rule out an early cancer.

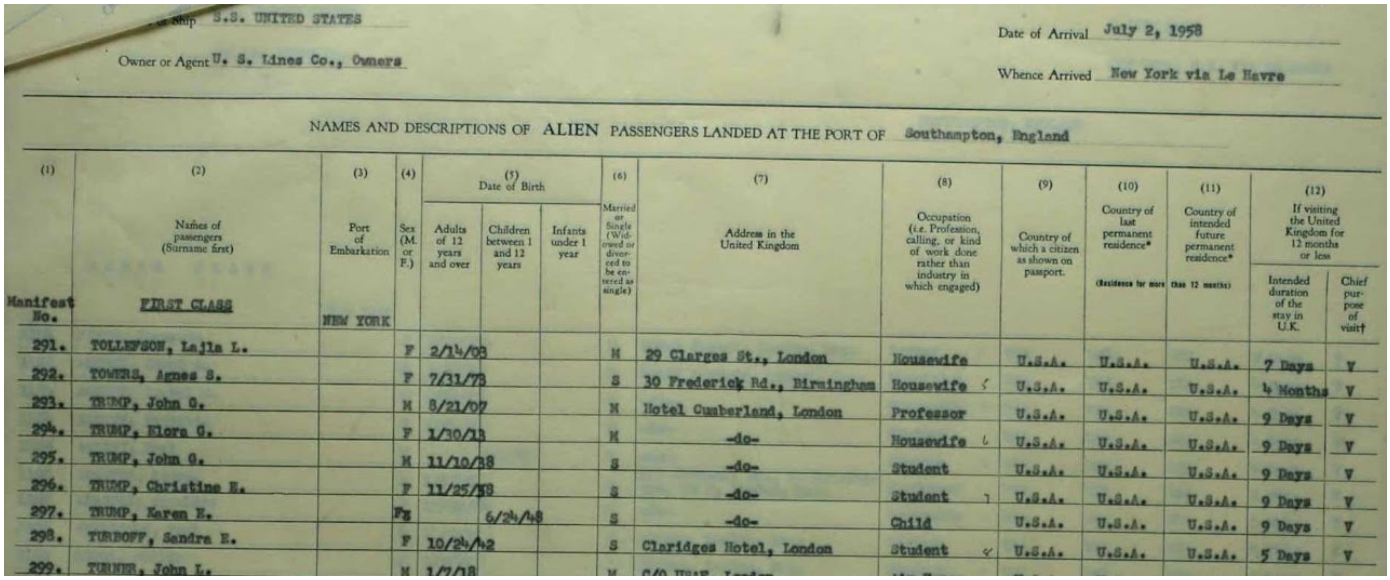
"Immediate surgical exploration and total biopsy is the most direct, reliable and safest method of establishing the diagnosis and providing curative treatment. Cancer of the lung is the most detectable of any internal cancer during the silent and early stage. Salvage rate should be high if there is a direct approach to the substance that produces the shadow . . . There should be no procrastination while the shadow of a pulmonary abnormality remains unexplained."

1953-11-06-the-berkshire-eagle-pg-13-clip-xray-doses

[HN00Y9][GDrive]

1958 - Trip to USA from England

UK and Ireland, Incoming Passenger Lists, 1878-1960 for John G Trump - Southampton, England 1958 July ; Full page : [HJ000L][GDrive]



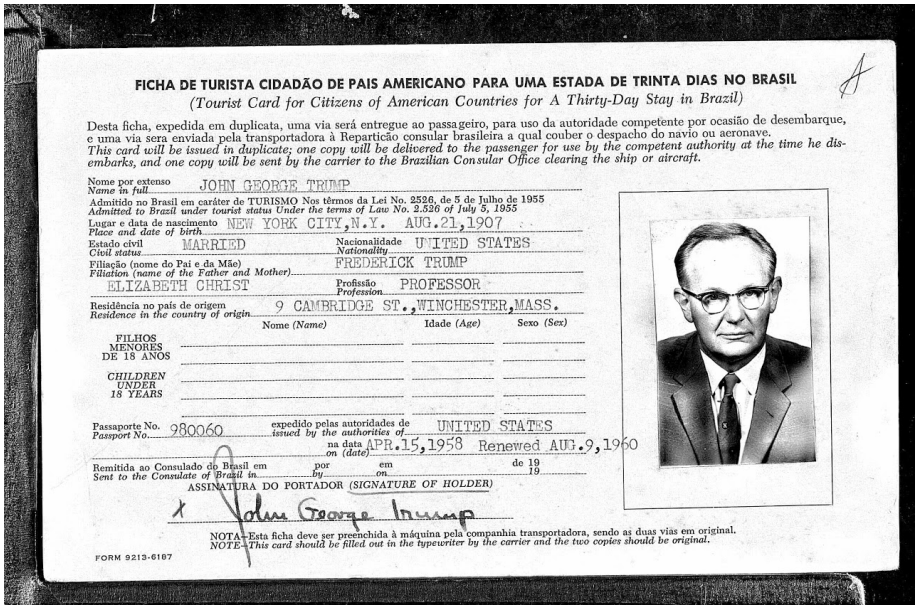
Name of Ship S.S. UNITED STATES
Owner or Agent U. S. Lines Co., Owners
Date of Arrival July 2, 1958
Whence Arrived New York via Le Havre

NAMES AND DESCRIPTIONS OF ALIEN PASSENGERS LANDED AT THE PORT OF Southampton, England

(1) Manifest No.	(2) Names of passengers (Surname first)	(3) Port of Embarkation	(4) Sex (M. or F.)	(5) Date of Birth: Adults of 12 years and over	(5) Children between 1 and 12 years	(5) Infants under 1 year	(6) Married or Single (Widowed or divorced to be entered as single)	(7) Address in the United Kingdom	(8) Occupation (i.e. Profession, calling, or kind of work done rather than industry in which engaged)	(9) Country of which a citizen as shown on passport.	(10) Country of last permanent residence* (Residence for more than 12 month(s))	(11) Country of intended future permanent residence*	(12) If visiting the United Kingdom for 12 months or less: Intended duration of the stay in U.K.	(12) Chief purpose of visit†
	FIRST CLASS	NEW YORK												
291.	TOLLEFSON, Lajla L.		F	2/14/08			M	29 Clarges St., London	Housewife	U.S.A.	U.S.A.	U.S.A.	7 Days	V
292.	TOWERS, Agnes S.		F	7/31/78			S	30 Frederick Rd., Birmingham	Housewife	U.S.A.	U.S.A.	U.S.A.	4 Months	V
293.	TRUMP, John G.		M	8/21/07			M	Hotel Cumberland, London	Professor	U.S.A.	U.S.A.	U.S.A.	9 Days	V
294.	TRUMP, Elora G.		F	1/30/13			M	-do-	Housewife	U.S.A.	U.S.A.	U.S.A.	9 Days	V
295.	TRUMP, John G.		M	11/10/38			S	-do-	Student	U.S.A.	U.S.A.	U.S.A.	9 Days	V
296.	TRUMP, Christine E.		F	11/25/39			S	-do-	Student	U.S.A.	U.S.A.	U.S.A.	9 Days	V
297.	TRUMP, Karen E.		Fe		6/24/48		S	-do-	Child	U.S.A.	U.S.A.	U.S.A.	9 Days	V
298.	TURBOFF, Sandra E.		F	10/24/42			S	Claridges Hotel, London	Student	U.S.A.	U.S.A.	U.S.A.	5 Days	V
299.	TURNER, John L.		M	1/7/18			M	C/O U.S.A. London						

[HJ000M][GDrive]

1960s - Travels to Brazil



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This card will be issued in duplicate; one copy will be delivered to the passenger for use by the competent authority at the time he disembarks, and one copy will be sent by the carrier to the Brazilian Consular Office clearing the ship or aircraft.

Nome por extenso / *Name in full*: JOHN GEORGE TRUMP

Admitido no Brasil em caráter de TURISMO Nos têrmos da Lei No. 2536, de 5 de Julho de 1955 / *Admitted to Brazil under tourist status Under the terms of Law No. 2.536 of July 5, 1955*

Lugar e data de nascimento / *Place and date of birth*: NEW YORK CITY,N.Y. AUG.21,1907

Estado civil / *Civil status*: MARRIED

Nacionalidade / *Nationality*: UNITED STATES

Filiação (nome do Pai e da Mãe) / *Filiation (name of the Father and Mother)*: FREDERICK TRUMP
ELIZABETH CHRIST

Profissão / *Profession*: PROFESSOR

Residência no país de origem / *Residence in the country of origin*: 9 CAMBRIDGE ST.,WINCHESTER,MASS.

	Nome (Name)	Idade (Age)	Sexo (Sex)
FILHOS MENORES DE 18 ANOS			
CHILDREN UNDER 18 YEARS			

Passaporte No. / *Passport No.* 280060 expedido pelas autoridades de / *issued by the authorities of* UNITED STATES na data / *on (date)* APR.15,1958 Renewed AUG.9,1960

Remitida ao Consulado do Brasil em / *Sent to the Consulate of Brazil in* por / *by* em / *on* de 19 / 19

ASSINATURA DO PORTADOR (*SIGNATURE OF HOLDER*)

x John George Trump

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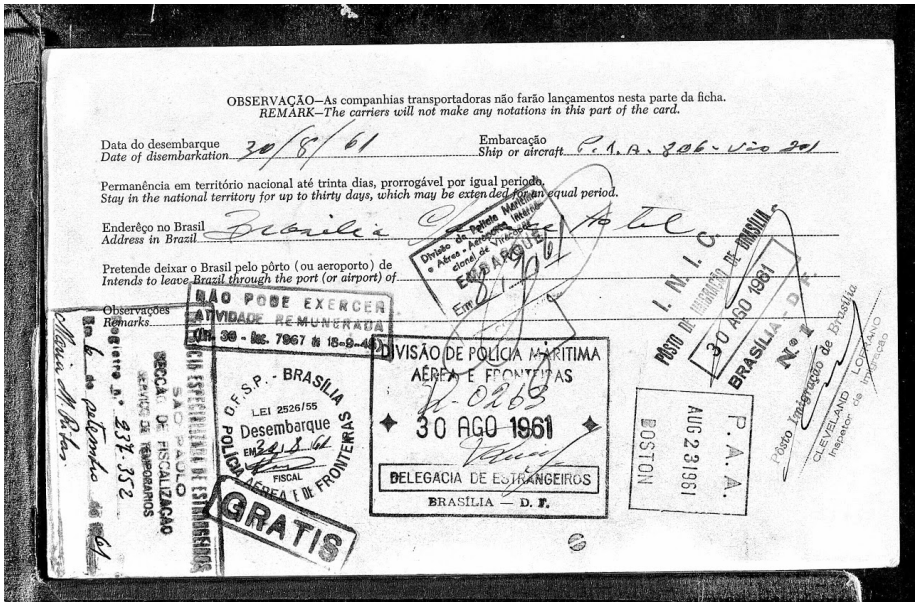

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TODO

1955

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1956 (Sep)

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1959 (April)

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1960 (Sep

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1961

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1963

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1966

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1967 (July 20)

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Atomic Fusion To Make New 'Heavy Elements'

BURLINGTON, Mass. (AP)—Research scientists are using atomic fusion to develop special components for power cells in satellites and artifical hearts.

High Voltage Engineering Corp. has announced a $5.2 million research program, using atomic fusion to develop elements with atomic numbers higher than 92. Uranium—with an atomic number of 92—is the heaviest element which occurs naturally on earth.

Dr. Denis M. Robinson, the corporation president, said Wednesday the firm will invest $4.2 million in the project and the remaining $1 million will come from government or private agencies.

American scientists have already created 11 elements, called transuranium, with atomic numbers higher than 92. A 12th element was created recently by Russian scientists using a cyclotron at the Joint Institute of Nuclear Research at Dubna, near Moscow.

Robinson said the search for transuranium elements "has had the greatest payoff of any research of the frontiers of knowledge, including major contributions to the nuclear reactor and the development of power cells for satellites and artifical hearts."

High Voltage will build a new accelerator, the 16 MV Tandem Van de Graaff particle accelerator, which with other existing equipment will produce "energies never before attainable," Robinson said.

He said the accelerator system will be completed by 1970 and will be "at least two and more probably four years ahead of any comparable facility in the western world."

Groups at Massachusetts Institute of Technology, Yale University, and University at California at Berkeley, Argonne National Laboratory, Oak Ridge National Laboratory and the University of Rochester have made studies on the methods of producing the super-heavy elements.

1967 AP Burlington High Voltage Engineering Corporation Denis M Robinson see John G Trump Robert Van de Graaff U Maryland Toll Ferrer Hornyak helium 3 beam Ernest B Furgurson Baltimore Sun Fitchburg Sentinel MA July 20

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tribethree • 07 Dec 2016

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Fitchburg Sentinel
Fitchburg, Massachusetts
20 Jul 1967, Thu • Page 6

Report

[HN00YI][GDrive]

1968 (June)

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1970

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1977

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Son-in-law - "J C Ingraham" ... .Research papers

https://www.researchgate.net/scientific-contributions/7449818_J_C_Ingraham

Son John Gordon Trump

See https://www.legacy.com/obituaries/bostonglobe/obituary.aspx?n=john-gordon-trump&pid=160130064

TRUMP, John Gordon 73 years young, went home to the Lord, September 25, 2012, surrounded by family at home in Winchester, Massachusetts, after a nineteen year battle with cancer. Born November 10, 1938, in Boston, Massachusetts, to John George Trump and Elora Gordon Sauerbrun, he graduated from Winchester High School, Bowdoin College, and MIT. In 1969 he married Gisela Steinmann. As a self-employed contractor he enjoyed engineering new ideas for the many homes he renovated or built from the ground up. John was an avid hiker, biker, rock climber, swimmer, windsurfer, musician, dancer, gardener, and lover of life. Mr. Trump is survived by his wife of forty-three years, Gisela Trump, and two children, Thomas John Trump and Sylvia Trump Sexton; one grandson; two sisters, Christine Philp and Karen Ingraham; as well as many nieces, nephews, great nieces, great nephews, other relatives, and friends. He was preceded in death by his parents, his grandparents, mother-in-law, Hedwig Steinmann, and his beloved Labrador, Lucy.

2018 - A profile of John Trump, Donald's oft-mentioned scientist uncle

2018-10-18-physics-today-org-a-profile-of-john-trump.pdf

https://physicstoday.scitation.org/do/10.1063/PT.6.4.20181019a/full/

The president's uncle was an MIT physicist and engineer who made his mark in the development of high-voltage generators, World War II radar, and cancer therapies.

Editor's note: This is an updated version of an article that was published during the 2016 presidential campaign.

President Trump doesn't talk much about science. But when he does, there is an excellent chance he will bring up his late uncle John.

Asked about climate change in a 16 October 2018 interview, Trump said the climate is warming but is apt to cool down again in the future. Confronted with the contrary opinion of scientists, Trump replied that scientists disagree about the issue. Pointing out that his uncle John was "a great professor at MIT for many years," he assured his interviewer, "I have a natural instinct for science."

During his run for the presidency, Trump invoked his uncle as evidence of his genetic predisposition for intelligence. He has also said that conversations with his uncle made him appreciate the complex politics of nuclear weapons.

Princeton University physicist William Happer, a senior staff member with the National Security Council, told E&E News that when he was being considered to direct the White House Office of Science and Technology Policy, Trump spoke to him about his uncle's work on Van de Graaff generators. "That really floored me," recalled Happer, who knew Trump's uncle.

Who was this uncle to whom the world of science is so inextricably tied in the president's mind?

John George Trump was born in New York City in 1907. He was the younger brother of Donald's father, Fred, who went into real estate before he finished high school. With financial assistance from his older brother, John enrolled in the Polytechnic Institution of Brooklyn, intending to become an architect and go into business with Fred. However, he switched to electrical engineering and earned his bachelor's degree in 1929. He went on to Columbia University and received a master's degree in physics in 1931.

John Trump then left New York for MIT and earned his doctorate in electrical engineering in 1933, working under physicist Robert J. Van de Graaff (see *Physics Today*, February 1967, page 49). Trump continued on at MIT as a research associate before receiving an appointment there as an assistant professor of electrical engineering in 1936.

During the 1930s Trump built an enduring partnership with Van de Graaff developing high-voltage electrostatic generators. In 1933 Van de Graaff completed a spectacular 12-meter-high generator that was capable of producing a potential difference of 5 million V and had to be housed in an airship hangar about 100 km south of Boston. Trump later contributed to the redesign of the generator when it was relocated to the Theater of Electricity at Boston's Museum of Science, where it is still demonstrated. Trump became a life trustee of the museum.

Van de Graaff originally designed his generator to be a particle accelerator, but he and his collaborators quickly found applications in high-voltage x-ray generation as well. In 1937 a 1 MV x-ray generator was installed at Huntington Memorial Hospital in Boston, where it supplemented radium in cancer therapies. Medical applications of high-voltage radiation ultimately became a major focus of Trump's work. Circa 1960 he was one of the pioneers of rotational radiation therapy, which limits the dose delivered to healthy tissue. (You can watch him describe his work in a video at MIT's Infinite History website.)

In 1939 Trump and Boston Navy Yard engineer Carlton Lutts found that the Huntington Memorial generator could also produce a radiographic image of thick steel in 100 seconds, whereas using radium it took about 65 hours. That capability would soon substantially improve manufacturers' ability to inspect for defects, and it played an important role in US shipbuilding and aircraft construction during World War II.

Trump concentrated his own wartime work on the new technology of radar. In 1940 a technical mission from the UK introduced US researchers to the cavity magnetron, which enabled radar to operate using centimeter wavelengths, greatly expanding its efficacy and range of applications (see *Physics Today*, July 1985, page 60). The new National Defense Research Committee (NDRC) established a microwave committee, which initiated a radar research and development program at MIT. Trump was among the first to join. The effort soon grew into the MIT Radiation Laboratory, or "Rad Lab," which by 1945 was employing some 4000 people.

Trump became the secretary of the microwave committee in 1942 after its first secretary, MIT electrical engineer Edward Bowles, left to advise the secretary of war on radar implementation. Trump also spent the first part of the war as a liaison from NDRC to the Rad Lab and served as an adviser and assistant to MIT president Karl Compton. In 1943, after the enigmatic Nikola Tesla's death, the Federal Bureau of Investigation asked Trump to examine Tesla's papers to determine whether he had been working on anything that might have relevance to the war. Trump found he had not.

Meanwhile, shortly after the attack on Pearl Harbor, the Rad Lab had begun receiving requests for prototype radar units to be sent directly to the field before the equipment could be thoroughly tested and standardized. Developing equipment on such a "crash" basis soon became routine. Researchers and engineers started to accompany units to the field to glean performance data under combat conditions. During that work, they also troubleshot new equipment and helped develop methods for integrating it into operations.

Initially, much of that fieldwork was done by "operations research" groups and teams of expert consultants working for Bowles. However, in 1943 the Rad Lab established a British Branch (BBRL), which created a direct channel between the lab and the European Theater. Trump became the head of BBRL in February 1944. By November he had begun shuttling back and forth between Great Britain and forward military positions on the continent, serving a dual role with BBRL and with Bowles's contingent working for the US Army Air Forces in Europe.

By mid-April 1945, Trump was in Germany, interviewing enemy radar engineers. Those encounters gave Trump the opportunity to compare the US and UK radar effort with that of the Germans. He was impressed by the differences in organization. As he recorded in his war diary, "Just as there was a gap between German scientists and industrialists, there was also an even greater gap between both of these and the military. It was virtually impossible for a scientist or engineer to accompany radar equipment into combat areas to observe its performance or to assist in training."

engineer to accompany radar equipment into combat areas to observe its performance or to assist in training.

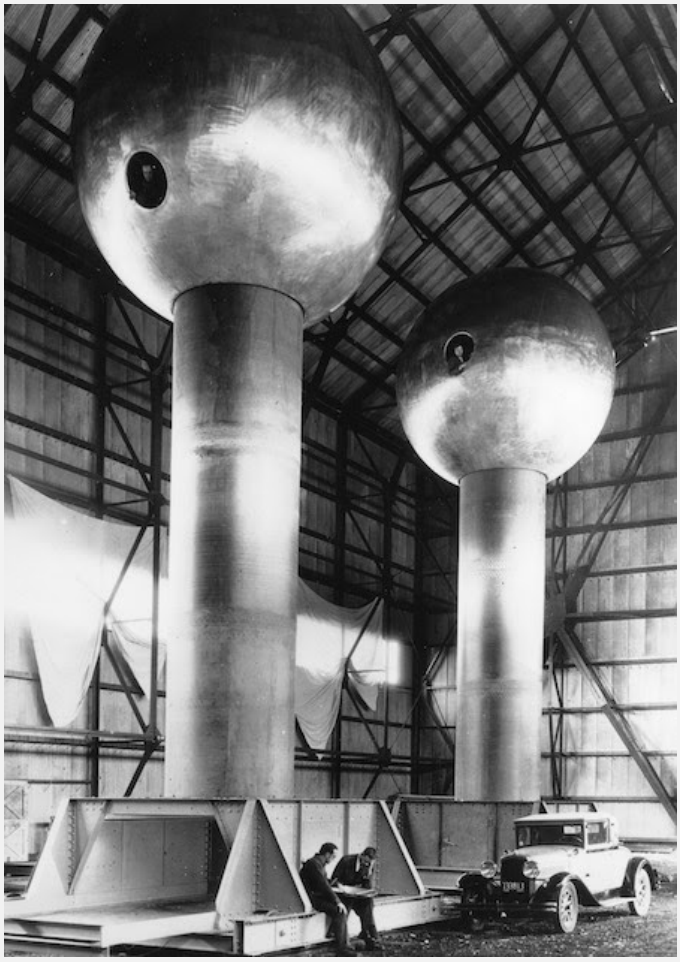
After the war Trump became the director of MIT's High-Voltage Research Laboratory, a position he held from 1946 until his retirement in 1980. In 1946 Trump cofounded the High Voltage Engineering Corporation (HVE) with Van de Graaff and British electrical engineer Denis Robinson, who had been a liaison to the Rad Lab during the war. Trump became the company's chairman and technical director, and he took an active role in developing its accelerator business and several subsidiary companies. Trump was awarded the National Medal of Science in 1983 for his lifetime of path-breaking work.

A unifying theme of Trump's career was his facility in moving back and forth between research and the search for practical applications. In his obituary of Trump (see *Physics Today*, September 1985, page 90), Robinson recalled that his business partner had "an obstinate optimism that could fly in the face of all results and facts available to him and his coworkers."

That was not the same drive animating Trump's by-then-famous nephew's pursuit of real estate glory. Describing John Trump's personality, Robinson wrote, "He was remarkably even-tempered, with kindness and consideration to all, never threatening or arrogant in manner, even when under high stress. He was outwardly and in appearance the mildest of men, with a convincing persuasiveness, carefully marshalling all his facts."

Those characteristics ultimately made John Trump more of a scientist and engineer than a businessman. According to Robinson, "He cared very little for money and the trappings of money." But without mentioning Trump's family relations, Robinson slipped in as an aside that "he did understand land." The property Trump persuaded HVE to purchase in Burlington, on Boston's famed technology corridor, Route 128—"turned out to be worth as much as many years of the company's profitable output."

William Thomas is a science policy analyst for FYI at the American Institute of Physics, which also publishes Physics Today. *The portions of this piece relating to World War II derive from the author's book,* Rational Action: The Sciences of Policy in Britain and America, 1940–1960, *published last year by MIT Press.*



John Trump helped redesign these 12-meter-high Van de Graaff generators, seen here in an airship hangar at Round Hill, Massachusetts. The generators are now at Boston's Museum of Science. Credit: AIP Emilio Segrè Visual Archives

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2018-10-18-physics-today-org-a-profile-of-john-trump-figure2-5.jpg

John Trump (right) rides in a military jeep with Lee DuBridge, director of the MIT Radiation Lab, in Paris during World War II. Credit: AIP Emilio Segrè Visual Archives

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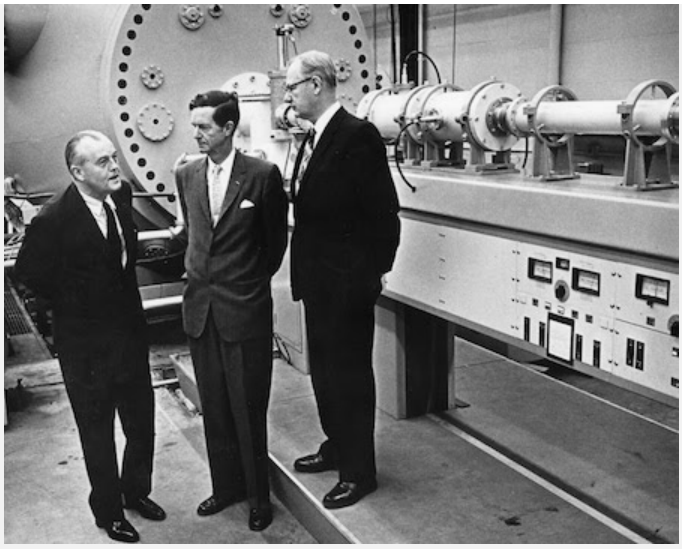

John Trump (right) founded the High Voltage Engineering Corporation with Robert Van de Graaff (left) and Denis Robinson. AIP Emilio Segrè Visual Archives, *Physics Today* Collection, courtesy Nancy Sirkus

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2018-10-18-physics-today-org-a-profile-of-john-trump-figure4-1.jpg

1985 - Physics Today Memorial

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Physics Today **38**, 9, 90 (1985)

https://physicstoday.scitation.org/doi/10.1063/1.2814707

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Pysics Today **38**, 9, page 92 (1985)

https://physicstoday.scitation.org/doi/10.1063/1.2814708

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Ruggero Maria Santilli

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John N. Ross
The Harvard Crimson
Wednesday, March 20, 1985

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elected are Claude J. Allegre, director of the Institut de Physique du Globe, University of Paris, Strasbourg, France; and Pavel A. Cherenkov, laboratory head and professor, Lebedev Physics Institute, USSR Academy of Sciences, Moscow. Altogether 233 foreign members have been elected to the Academy.

obituaries

John George Trump

John G. Trump, professor emeritus of the Massachusetts Institute of Technology, died on 21 February 1985. He was born in New York in 1907 and received his DSc in electrical engineering from MIT in 1933. He then worked at MIT as a research associate until 1936, when he was made an assistant professor of electrical engineering. In 1952 he became a full professor.

Trump served as director of MIT's High-Voltage Research Laboratory from 1946–80. The unifying basis of his professional life was to maintain the highest reliable dc voltage per centimeter, both in vacuum and in gas pressure, for accelerator applications that he clearly foresaw both in medicine and in industry.

His first goal was a 2-million-volt pressurized x-ray generator that could be flexibly mounted in a hospital treatment room. With this he pioneered at MIT, in close cooperation with the Lahey Clinic physicians, the now widely used rotation therapy for cancer tumors with selective protection of adjacent healthy tissue. He designed many of the setups himself and gave daily supervision of patient treatments with the physicians. He developed modified accelerators for treating skin cancers with electrons. Concurrently, Trump taught special courses for hospital physicists in the Northeast.

Trump's war service orginated as technical aide to Karl Compton at MIT. He was on the Steering Committee of the Radiation Laboratory at MIT, and from 1944–45, director of the British Branch Radiation Lab at Great Malvern, following the American forces into Europe to assist in the best utilization of the centimeter radar and radio countermeasures they were using.

In 1946, Trump, Robert Van de Graaff and I founded the High Voltage Engineering Corporation to manufacture the compact Van de Graaff accelerators he was continuing to develop at MIT. He became the company's chairman and technical director and was intimately involved with Van de Graaff and many of their former students in

TRUMP

the positive-ion and tandem Van de Graaff accelerators designed and manufactured by HVE.

In 1962 he caused Electronized Chemicals Corporation to be reactivated as a subsidiary of HVE to make available in industry high-energy electrons, which he called "the beneficent particles of nature." Trump designed ECC's new facilities and remained active as its chairman until it merged with HVE. In 1974 he began at MIT a six-year study, under a National Science Foundation contract, of the economic feasibility of disinfecting liquid municipal sludge with energized electrons. He led a consortium of institutions and agencies in this endeavor and was actively pursuing this during the last year of his life.

An architecturally imposing reminder of Trump's work can be seen at Boston's Museum of Science in the Theater of Electricity, where he was largely responsible for the handsome electrostatic shielding of the 2-million-volt air-insulated generator, which was originally made by Van de Graaff himself in 1935. Trump was a life trustee of the museum. He took a great interest in the very short pulses of electricity generated by the Ion Physics Corporation, another subsidiary of HVE, and this later developed into pulse precipitation of stack gases, which may become of real importance in the problem of acid rain.

In 1984 he was chosen by the President's Committee on the National Medal of Science, and this medal was posthumously presented, in honor of his work, at the White House in March 1985.

Trump's remarkable personality mix contributed to all of this achievement and success. He was remarkably even-tempered, with kindness and consideration to all, never threatening or arrogant in manner, even when under high stress. He was outwardly and in appearance the mildest of men, with a convincing persuasiveness, carefully

marshalling all his facts. Yet over and over, there was an obstinate optimisim that could fly in the face of all results and facts available to him and his coworkers. He cared very little for money and the trappings of money, but he did understand land; the land that he persuaded HVE to purchase in Burlington turned out to be worth as much as many years of the company's profitable output.

Trump's over 100 jointly and singly published papers and reports have brought to three generations of engineers and technicians his clear understanding of the geometry and arithmetic of radiation dosage, whether for x-ray therapy, for radiography, for disinfection and pasteurization or for molecular engineering—the conversion of one form of molecular structure into another. Much of this work stemmed from his own pioneer laboratory work with models.

DENIS M. ROBINSON
High Voltage Engineering Corporation

William L. McMillan

The death of William L. McMillan, professor of physics at the University of Illinois, Urbana–Champaign, on 30 August 1984, brought to an abrupt end a distinguished career in condensed-matter physics. Born 13 January 1936 in Little Rock, Arkansas, he died at age 48 at the peak of his productivity. In his last year McMillan had more than a dozen papers published or in the process of publication.

In 1964 McMillan received a doctorate in physics from the University of Illinois; his thesis on the ground state of liquid helium marked the first application of Monte Carlo methods to a quantum system. Using a variational technique, he calculated the energy, density, pair correlation function and condensate fraction in the zero-momentum state, obtaining results in remarkably good agreement with calculations done later by others with more powerful computers.

In late 1963, McMillan joined the theoretical physics research department at Bell Laboratories, where he worked on a variety of problems in superconductivity, liquid helium and liquid crystals. One of his earliest accomplishments was a computer calculation for deducing the electron–phonon interaction spectrum directly from the tunneling data of an experimental colleague, John Rowell, for which they were jointly awarded the Fritz London Prize. McMillan continued to work on the problem of strong coupling superconductors, which led to the widely used "McMillan T_c formula" and the "McMillan high-T_c limit" for superconductivity as trade-offs

McMILLAN

between strong coupling and phonon softening. While on leave at Cambridge University (1967–68), he wrote his classic paper on the proximity effect and reinvented a formalism for strongly coupled quantum fluids.

Around 1970, McMillan made the first of a number of dramatic plunges into an entirely new field: As a result of visits to Orsay, he became involved with liquid crystals, with their rich variety of phases. On returning to Bell Labs, he was so enthused with the idea of studying liquid crystals with x rays that he shifted from the theory department and set up his own laboratory. Before long, McMillan's experimental work spanned the entire gamut from chemical characterization (synthesis, chromatography) to state-of-the-art measurements on borrowed apparatus. He made pioneering x-ray studies of the critical fluctuations of the order parameter and the corresponding divergence of the transverse and longitudinal coherence lengths associated with the nematic to smectic-A and smectic-C phase transitions.

In 1972, McMillan returned to Urbana to join the staff of the physics department, where he remained until his death, except for a sabbatical year (1977–78) spent at Orsay. At Illinois, he continued to work for several years on both theoretical and experimental aspects of liquid crystals with his graduate students, expanding his experimental repertoire to include light scattering and heat capacity measurements. At the same time, he became deeply interested in the phenomenon of charge-density waves and electronically driven structural phase transitions, and their interaction with superconductivity in transition-metal dichalocogenides and the high-T_c A-15 compounds. This led to a series of papers on phenomenological Landau mean-field theories, both static and dynamic, which he later modified to include fluctuations. In doing so, he unearthed the relevance of domain walls (which he dubbed "discommensurations") in phases with incommensurate charge density waves.

McMillan's own experimental program made him both sensitive to and discerning of the significance of experimental results of other workers. In 1979, on seeing raw experimental data indicating the breakdown of Mott's model of minimum metallic conductivity, he proceeded to develop his own theory of electron localization in disordered metals. A year later, after realizing the importance of Coulomb interactions, he returned to the lab. As was his custom, he assembled his own apparatus and carried out tunneling measurements near the metal–insulator transition. On the basis of his experimental results McMillan constructed a new theory of the metal–insulator transition that included both electron localization and Coulomb interactions on an equal footing. He realized that disordered interacting electronic systems should be controlled by nontrivial fixed points to explain the tunneling data. This opened up the possibility of classifying their universality classes.

In 1981, McMillan turned to a long-planned project that fully engaged his experimental and theoretical skills. Using state-of-the-art arithmetic chips and a processor to control its microcode, he built a high-speed computer in his basement, explicitly for Monte Carlo calculations. It would run for days and even weeks, surviving both power failures and a flood.

During the last few years, McMillan worked on several of the outstanding problems of statistical mechanics, using sophisticated, modern, numerically based methods. He developed and exploited a variant of finite-size scaling, which he called the "macroscopic renormalization group."

McMillan is remembered not only as a great mind but also as a friend. Many of his friends at Murray Hill and Urbana have contributed to this account of his professional career; many more could.

JOHN BARDEEN
JACK MOCHEL
MICHAEL WORTIS
University of Illinois Urbana–Champaign
RAVINDRA BHATT
AT&T Bell Laboratories

Edward Lee Cooperman

Scientific exchange leads to mutual respect, then to trust, and eventually is important toward establishing peace between nations.
Edward Lee Cooperman

Edward Lee Cooperman, professor of physics and former chairman of the department of California State Univer-

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1989-usa-gov-national-academy-of-engineering-memorial-tributes-vol-3-1384.pdf

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John George Trump

1907–1985

By Louis Smullin

John George Trump, a pioneer in the scientific, engineering, and medical applications of high voltage machinery, died on February 21, 1985. Married to the late Elora Trump, John left three children: John, Karen, and Christine.

At the time of his death, John Trump was professor emeritus at the Massachusetts Institute of Technology (MIT) in the Department of Electrical Engineering. He was also senior consultant for the High Voltage Engineering Corporation, the company he founded in 1946 and where, until 1970, he served as chairman of the board and then, until 1980, as technical director.

John Trump was born in New York City on August 21, 1907. He earned a B.S. in electrical engineering from the Polytechnic Institute of Brooklyn in 1929 and an M.S. in physics from Columbia University in 1931. In 1933 he received a D.Sc. in electrical engineering from MIT, where he became a research associate in that same year, an assistant professor in 1936, and a professor in 1952. Trump formally retired in 1973, although he continued his active research program as professor emeritus until 1980.

John Trump came to MIT to work with Professor Robert J. Van de Graaff in what was then the new field of super-high voltage generation and applications. "Van's" main interest was in the application of his new electrostatic generator in the field of nuclear physics. John Trump had two main interests: the insulation of super-high voltages in vacuum and compressed gases and the biological applications of high voltage radiation. These wide-ranging biological applications included the treatment of cancer by megavolt (Mev) X-radiation and electron beams, extensive pioneering studies of food preservation by electron beams, and the treatment of sewage and sludge by 2-Mev electron beams.

With grants from the Godfrey M. Hyams Fund, Trump and his young assistants designed and built an air-insulated megavolt generator that was installed at the Huntington Memorial Hospital in 1937. It was large and awe inspiring. On wet days, the generator crackled and sparked or just died, but the conspicuous advantages of its megavolt X-ray therapy soon became clear. The greater penetration depth of these radiations, compared to lower energy X-rays, permitted more deeply seated tumors to be treated with minimal damage to adjoining tissues.

In 1938, with continued funding from the Hyams Fund, the team began the design of a new, compact 1.25-Mev generator that would be insulated with compressed gas. This particular machine was installed in the George Robert White Hospital of the Massachusetts General Hospital, where it remained in active use for sixteen years. **Trump then undertook the building of a 1.75-Mev machine for the American Oncological Hospital of Philadelphia—until World War II intervened, that is, and the machine was taken by the U.S. Army for use in the Manhattan Project**.

During World War II, Trump interrupted his high-voltage career to work on microwave radar in the MIT Radiation Lab. He served for a time as field services director and was then posted to the British branch of the Radiation Lab. **In 1944 he was named director of the lab and given the responsibility of working directly with the Eisenhower Military Command**. **At the liberation of Paris, Trump rode into the city with General Eisenhower and immediately began to set up the Paris branch of the Radiation Lab.**

His diary of this period is fascinating reading, especially for those of us who remember the significance of H2X, Oboe, Loran, MEW, SCR 584, and other sets of initials from the alphabet soup of the day. For his wartime service, John Trump received a Presidential Citation and the King's Medal for Service in the Cause of Freedom.

After the closing of the Radiation Lab in 1946, Dr. Trump quickly picked up the threads of his previous high-voltage research. He formed the High Voltage Engineering Company to put electrostatic high voltage machines to work. Van de Graaff generators were soon in use all over the world with a wide range of applications, including those in physics research, the sterilization of surgical instruments, the cross-linking of polymers, and the radiography of welds and castings.

Trump's main efforts and interests, however, remained on the MIT campus, where he initiated a long series of experiments, supported by the Natick Laboratory of the Army Quartermaster Corps, in the preservation of food by high voltage radiation. There was also a continuing train of experiments on the bactericidal and viricidal effectiveness of high voltage radiation. Much new work as done on compressed gas insulation, but his most noteworthy contributions were in the treatment of cancer by radiation.

Dr. Trump and his staff began a systematic study of the problems of delivering radiation to deep tumors without destroying the intervening healthy tissue. From their research came an improved technique of rotating the patient 360 degrees about the tumor site, so that the radiation beam entered the body from all directions but focused on the tumor. The team also developed techniques for static and dynamic beam shaping to protect healthy tissues. This work led to a cooperative twenty-five-year research venture with the Lahey Clinic: the setting up of a treatment facility in the MIT High Voltage Lab, where patients were routinely treated under the joint supervision of Trump, his staff, and the Lahey Clinic physicians. Ultimately, more than ten thousand patients were treated.

Until 1950 nearly all high-voltage radiation therapy was done with X-rays generated by the impact of a high-voltage electron beam against a gold target inside a vacuum. In a 1940 paper, Trump, Van de Graaff, and Cloud had suggested using direct high-voltage electrons because of the uniquely different way they penetrated matter.

Although X-rays are absorbed more or less uniformly as they traverse the body from the skin inward, high-energy electrons produce very little ionization until their energy falls below a critical value. They then do all of their ionizing within a very short distance and almost never extend beyond it. The first clinical test of this new technique was made in 1951. The technique offered an ideal way to treat many superficial malignancies, and soon after its initial use, it became a standard method of treatment.

Dr. Trump began his last major effort in 1976. Like all concerned citizens, he was offended by the dumping of millions of gallons of barely treated or raw sewage into our harbors and waterways. His calculations showed that a 2-Mev electron radiation system compared favorably with chlorine treatment on an economic basis, had the additional advantage of destroying many viruses, and appeared to dissociate PCBs and similar compounds into less noxious forms. With National Science Foundation support, Trump and his associates built a pilot plant at the Deer Island Sewage Plant in Boston Harbor. In addition, based on the valuable electron radiation data produced at the Deer Island plant, a commercial sewage treatment plant has been built for the greater Miami area.

John Trump was truly a pioneer in the field of high voltage engineering and high voltage machinery and in the medical applications of high energy radiation. He was the author or coauthor of more than one hundred papers and the recipient of many honors from numerous engineering and medical societies. John Trump was elected to the National Academy of Engineering in 1977. The latest award bestowed upon him was the National Medal of Science, which was presented posthumously in February 1985.

His mixture of personal technical work and quiet leadership produced many important discoveries. John Trump will be missed by his worldwide circle of colleagues and friends.

1998 interview of Mortimer Elkind

http://webcache.googleusercontent.com/search?q=cache:E_HCnJy8R9IJ:history.nih.gov/archives/downloads/elkindoralhistory.pdf+&cd=6&hl=en&ct=clnk&gl=us&client=safari

1998-07-30-us-national-cancer-institute-oral-history-project-dr-mortimer-elkind-via-google-cache.df

National Cancer Institute Oral History Project

Interview with Mortimer Elkind

Conducted on July 30, 1998, by Gretchen A. Casein

Conducted at Dr. Elkind's office at Colorado State University

- GC:
  - This is Gretchen Case, talking to Dr. Mortimer Elkind. We are in his office in FortCollins, Colorado, at Colorado State University. Today is July 30, 1998, and it is about3:00 p.m. I usually just like to start by asking about your background and about how you came to the National Cancer Institute.
- ME:
  - I have a peculiar background. My original training was in engineering. I was a mechanical engineer, a graduate of the Cooper Union School of Engineering. Shortly after that I had a job working as an engineer and then I was drafted into the Navy. I got out of the service and I had the GI Bill of Rights.
  - I started working as an engineer for the Sloan Kettering Institute for Cancer Research, which was a research arm of the Memorial Cancer Hospital in New York City. While I was there, I was recruited by a person from the NCI in Bethesda. I'll think of his name after a while. In any event, he sent me to MIT to study a particle accelerator that hew anted to get for the National Cancer Institute. I was working in the laboratory where the particle accelerator had been developed, the laboratory of John Trump.
  - While I was there, I decided with my GI Bill of Rights to go to school and I did do just that. So I went to school. At that point, the person whose name I didn't remember is Egon Lorenz, L-o-r-e-n-z. He was a biophysicist in charge of various things connected with radiation at the National Cancer Institute. He recruited me while I was at SloanKettering Institute and at that point I already had one master's degree in mechanical engineering from the Brooklyn Polytechnical Institute. Well, part of the idea that he had was to send me off to John Trump's laboratory to learn about the care and feeding of a particle accelerator called the Van de Graaf accelerator, V-a-n d-e G-r-a-a-f, which I did.
  - While I was there I decided to apply my school credits and go to school while a guest at the Massachusetts Institute of Technology. I obtained another master's degree while I was there, in physics, and went on to do a Ph.D. in physics. I didn't do any biology whileI was there. By the time I finished, which was after a four-year period, Dr. Lorenz suggested that I might want some postdoctoral work, which I thought was a good idea. He gave me a choice of doing physics or doing biology. I chose biology and went out toBerkeley, where I became a postdoc fellow in Tobias's laboratory, Cornelius Tobias's laboratory, at the Donner Lab at the University of California at Berkeley
- **GC:**
  - That was Cornelius Tobias?
- **ME:**
  - Tobias. T-o-b-i-a-s. I was out there about nine or ten months, when I was called back to the East Coast because Lorenz had died in the interim. He had a rather weak heart. Dr. Burroughs Mider, who was the scientific director, wanted me to get things going in Bethesda. Very nicely, he allowed me to set up my own laboratory with my own technician, Harriet Sutton. He invited me to do whatever I was interested in. So I started working in biology and worked on yeast biology, actually yeast radiobiology. That was in 1954.
  - A few years later, Ted Puck, here in Denver, introduced quantitative procedures for working with mammalian cells in culture. I thought that was a great idea to start working on the radiobiology of mammalian cells. So I came out to Puck's laboratory for about a week and had a course that a number of people attended and I was one of them. I think I was here a week and a weekend up in the mountains. I went home and converted my laboratory from yeast to mammalian cells, with the encouragement of Bo Mider, who was the Scientific Director at the NCI

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Trusted Information Systems Inc.

Wikipedia Trusted Information Systems

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Trusted Information Systems, Inc.

Type

Public (Former Nasdaq symbol:TISX)

Industry

Computer software

Computer security

Fate Acquired by McAfee, later by SPARTA, Inc., which was acquired by Cobham, plc

Successor McAfee

Founded 1983

Founder Stephen T. Walker

Headquarters Glenwood, Maryland, U.S.

Area served Worldwide

Products

Firewall Software, IPSec VPN, Trusted OS

Trusted Information Systems (**TIS**) was a computer security research and development company during the 1980s and 1990s, performing computer and communications (information) security research for organizations such as NSA, DARPA, ARL, AFRL, SPAWAR, and others.

History

TIS was founded in 1983 by NSA veteran Steve Walker, and at various times employed notable information security experts including David Elliott Bell, Martha Branstad, John Pescatore, Marv Schaefer, Steve Crocker, Marcus Ranum, Wei Xu, John Williams, Steve Lipner and Carl Ellison. TIS was headquartered in Glenwood, Maryland, in a rural location. The company was started in Walker's basement on Shady Lane in Glenwood, MD. As the company grew, rather than move to Baltimore or the Washington D.C. suburbs, a small office building was constructed on land next to Walker's new home on Route 97.

Products

TIS projects included as the following:

1. Trusted Xenix, the first commercially available B2 operating system;
2. Trusted Mach, a research project that influenced DTOS and eventually SELinux;
3. Domain and Type Enforcement (DTE) which likewise influenced SELinux;
4. FWTK Firewall Toolkit (the first open source firewall software) in 1993;
5. First whitehouse.gov e-mail server was hosted at TIS headquarters from June 1 of 1993 to January 20 of 1995;
6. Gauntlet Firewall in 1994, one of the first commercial firewall products, with broad range of Internet Standards, including S/MIME, SNMP, DNS, DNSSEC, and many others. This Firewall became the inception of the third generation firewall;
7. IP Security (IPSec) product in late 1994, known as the first IPSec VPN commercial product in IT history;
8. Encryption Recovery technology integrated with IPSEC, ISAKMP, IKE, and RSA.

TIS's operating system work directly affected BSD/OS, which the Gauntlet Firewall and IPSec was based on, as well as Linux, FreeBSD, HP UX, Sun OS, Darwin, and others.

Post company

The company went public in 1996 and soon afterwards attempted to acquire PGP Inc.; it was instead acquired in 1998 by Network Associates (NAI), which later became McAfee, who had already bought PGP Inc. in 1997. The security research organization became NAI Labs and the Gauntlet engineering and development organization was folded into Network Associates' engineering and development.

NAI Labs went through a couple of branding changes which complemented Network Associates' branding efforts. In 2001 the name was changed to Network Associates Laboratories to better match the corporate identity. Then, in 2002-2003, there was a major branding initiative by Network Associates culminating in selection of the flag brand, McAfee. As a result, the security research organization became McAfee Research.

In 2003, SPARTA, Inc., an employee-owned company, acquired the Network Security branch of McAfee Research.

In 2005, SPARTA acquired the remaining branches of McAfee Research, which were organized into the Security Research Division (SRD) of the Information Systems Security Operation (ISSO).

In 2008, Cobham, plc, a British aerospace company, acquired SPARTA. There have been no organizational changes to SRD or ISSO that affect the security research.

On a separate path, TIS's primary commercial product, the Gauntlet Firewall, was acquired in 1999 from McAfee by Secure Computing Corporation (SCC), that used to be one of TIS's major competitors, because at the time McAfee wasn't interested in being a firewall vendor. The code base was integrated with Secure Computing's firewall product and branded Sidewinder Firewall, which then returned to McAfee when Secure Computing was acquired by them in 2008, and re-branded McAfee Enterprise Firewall. The end of this product line came in 2013, following McAfee's acquisition of another major firewall vendor, Finland-based Stonesoft. McAfee announced in October 2013 the intention to migrate their existing installed base of firewalls to Stonesoft's own Stonegate.

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TRW Incorporated

https://en.wikipedia.org/wiki/TRW_Inc.

Also see

- Irvin Nathaniel Spielberg (born 1918)

Saved Wikipedia (TRW Inc.) from Nov 02, 2020

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Industry

Automotive and aerospace

Fate

Acquired

Successor

TRW Automotive, Northrop Grumman and Goodrich Corporation

Founded

1901

Defunct

2002

Headquarters

Euclid, Ohio / Lyndhurst, Ohio, United States

Key people

Simon Ramo, Dean Wooldridge

Products

Automotive, aerospace and credit reporting

Number of employees

122,258[1]

Subsidiaries

CAV, Girling, LucasVarity Automotive & Lucas Aerospace

Website

hide

TRW Inc., was an American corporation involved in a variety of businesses, mainly aerospace, automotive, and credit reporting.[2] It was a pioneer in multiple fields including electronic components, integrated circuits, computers, software and systems engineering. TRW built many spacecraft, including Pioneer 1, Pioneer 10, and several space-based observatories. It was #57 on the 1986 Fortune 500 list,[3] and had 122,258 employees.[1] The company was called **Thompson Ramo Wooldridge Inc.**, after the 1958 merger of the Ramo-Wooldridge Corporation and Thompson Products. This was later shortened to TRW.

The company was founded in 1901 and lasted for just over a century until being acquired by Northrop Grumman in 2002. It spawned a variety of corporations, including Pacific Semiconductors, The Aerospace Corporation, Bunker-Ramo and Experian. Its automotive businesses were sold off by Northrop Grumman as TRW Automotive, which is now part of ZF Friedrichshafen. TRW veterans were instrumental in the founding of corporations like SpaceX.[4][5]

In 1953, the company was recruited to lead the development of the United States' first ICBM.[6][7] Starting with the initial design by Convair, the multi-corporate team launched Atlas in 1957.[8] It flew its full range in 1958 and was then adapted to fly the Mercury astronauts into orbit.[8] TRW also led development of the Titan missile,[6] which was later adapted to fly the Gemini missions. The company served the US Air Force as systems engineers on all subsequent ICBM development efforts[9] but TRW never produced any missile hardware because of the conflict of interest.[10] In 1960, Congress spurred the formation of the non-profit Aerospace Corporation to provide systems engineering support to the US government[6] but TRW continued to guide the ICBM efforts.

[...]

History

TRW originated in 1901 with the **Cleveland Cap Screw Company**, founded by David Kurtz and four other Cleveland residents.[11] Their initial products were bolts with heads electrically welded to the shafts. In 1904, a welder named Charles E. Thompson adapted their process to making automobile engine valves[11] and by 1915, the company was the largest valve producer in the United States.[12] Charles Thompson was named general manager of the company, which became **Thompson Products** in 1926.[13] Their experimental hollow sodium-cooled valves aided Charles Lindbergh's solo flight across the Atlantic.[12]

In 1937, Thompson Motor Products bought J.A. Drake and Sons (JADSON).[*citation needed*] The company made high-performance valves that were used in many racing engines of the day, including the Miller Offy.[*citation needed*] Dale Drake (son of J.A. Drake) bought the Offy engine design with his partner Louis Meyer in 1946 and won the Indianapolis 500 twenty-seven times, more than any other engine design.

During the period leading up to World War II, through the end of the Korean war, Thompson Products was a key manufacturer of component parts for aircraft engines, including aircraft valves. The TAPCO plant, owned by the US government but operated by Thompson Products, extended for almost a mile along Cleveland's Euclid Avenue. It employed over 16,000 workers at the peak of WW II production. As jet aircraft replaced piston-engined aircraft, Thompson Products became a major manufacturer of turbine blades for jet engines

In 1950, Simon Ramo and Dean Wooldridge while working for Hughes Aircraft, led the development of the Falcon radar-guided missile, among other projects. They grew frustrated with Howard Hughes' management, and formed the **Ramo-Wooldridge Corporation** in September 1953,[13] with the financial support of Thompson Products.[2] The detonation of a thermonuclear bomb by the Soviet Union spurred Trevor Gardner to form the Teapot Committee in October 1953. Chaired by John von Neumann, its purpose was to study the development of ballistic missiles, including ICBMs. Ramo and Wooldridge were committee members, and Ramo-Wooldridge Corp. became the lead contractor of the resulting ICBM development effort, reporting to the United States Air Force.

With continued backing from Thompson Products, Ramo-Wooldridge diversified into computers and electronic components, founding Pacific Semiconductors in 1954.[14][15] They also produced scientific spacecraft such as Pioneer 1. Thompson Products and Ramo-Wooldridge merged in October 1958 to form Thompson Ramo Wooldridge Inc., unofficially known as "TRW".[13] In February 1959, Jimmy Doolittle became chairman of the board of **Space Technology Laboratories (STL),** the division which continued to support the Air Force ICBM efforts.[13]

Other aerospace companies believed TRW's Air Force advisory role granted it unfair access to their technologies[14] and in September 1959, Congress issued a report recommending that STL be converted to a non-profit organization. With nearly half of STL's employees,[13] The Aerospace Corporation was formed in June 1960. It headed the Atlas conversion for Mercury, Titan conversion for Gemini, and provided ongoing systems engineering support for the government. The Air Force continued its ICBM work with TRW.[2]

Dean Wooldridge retired in January 1962[13] to become a professor at California Institute of Technology.[2] Simon Ramo became president of the Bunker-Ramo Corporation in January 1964, jointly owned by TRW and Martin Marietta for the production of computers and monitors. Thompson Ramo Wooldridge officially became TRW Inc. in July 1965.[13] Free of anti-competitive restrictions short of ICBM hardware, STL was renamed TRW Systems Group that same month.[13] In 1968, the company entered the credit reporting industry by purchasing Credit Data Corporation and renaming it TRW Information Systems and Services Inc. The Credit Data group was formed in 1970[13] to compete with Dun & Bradstreet,[2] from the combination of TRWISS and ESL[13] to specialize in technical strategic reconnaissance. TRW Information Systems and Services Division (Credit Data) was spun off in 1996 to form Experian.[16] TRW acquired LucasVarity in 1999, then selling Lucas Diesel Systems to Delphi Automotive and Lucas Aerospace (then called TRW Aeronautical Systems) to Goodrich Corporation.[17]

The company was 57th[3] on the Fortune 500 list of highest revenue American companies in 1986 and had 122,258 employees in 2000.[1] It operated in 25 countries.[2]

On February 3, 1986, the TRW plant in Harrisburg, Pennsylvania, burned to the ground in an eight-alarm fire.[18] The damage was estimated to be greater than $10 million and was the most serious fire to date in the area.

In February 2002 Northrop Grumman launched a $5.9-billion hostile bid for TRW. Northrop Grumman, BAE Systems, and General Dynamics contended for the company with Northrop's increased bid of $7.8 billion ultimately being accepted on July 1, 2002. Soon afterward, the automotive assets of LucasVarity and TRW's own automotive group were sold to The Blackstone Group as TRW Automotive.[19]

Much of TRW's Lyndhurst campus is now home to the Cleveland Clinic Wellness Center.[20]

Bill Gates, the founder of Microsoft, says that he got "his first big break" at age fifteen, debugging energy-grid control software for TRW. "It was kind of scary," Gates said, realizing the things the program was going to help operate. "This thing *needs* to work."[21]

Aerospace

TRW Inc. was active in the development of missile systems and spacecraft, notably, the early development of the U.S. ICBM program under the leadership of the Teapot Committee led by John von Neumann. TRW pioneered systems engineering, creating the ubiquitous N^2 chart and the modern functional flow block diagram. It served as the primary source of systems engineering for the United States Air Force ballistic missile programs.[22]

Space exploration

Space Technology Laboratories (STL), then a division of Ramo-Wooldridge Corp., designed and produced the identical payloads for Pioneer 0, 1 and 2. These were intended to orbit and photograph the Moon, but launch vehicle problems prevented this. NASA launched Pioneer 1 as its first spacecraft on October 11, 1958.[23] It set a distance record from Earth, and provided data on the extent of Earth's radiation belts.

Pioneer 10 and 11 were nearly identical spacecraft, designed and fabricated by TRW Systems Group.[24] They were optimized for ruggedness since they were the first man-made objects to pass through the asteroid belt and Jupiter's radiation belt. Simplicity, redundancy, and use of proven components were essential.[25] As NASA's first all-atomic powered spacecraft,[26] these used plutonium-238 units developed by Teledyne Isotopes.[27] Pioneer 10 carried eleven instruments and Pioneer 11 carried twelve for investigating Jupiter and Saturn, respectively.[28] Data was transmitted back to Earth at 8 Watts, 128 bytes/s at Jupiter,[29] and 1 byte/s from further out. Pioneer 10 was the first man-made object to pass the planetary orbits and its last telemetry was received in 2002, thirty years after launch.[30]

TRW Systems Group designed and built the instrument package which performed the Martian biological experiments,[31] searching for life aboard the two Viking Landers launched in 1975. The 34-lb (15.5 kg) system performed four experiments on Martian soil using a gas chromatograph-mass spectrometer (GC-MS) and a combined biological instrument.

Space-based observatories

TRW designed and built the following space observatories:

- HEAO 1, 2, and 3, with HEAO 2 being the Einstein Observatory, the first fully imaging X-ray telescope put into space
- Compton Gamma Ray Observatory which is the second of four among NASA's Great Observatories program
- Chandra X-ray Observatory is the third of NASA's Great Observatories

The teams developing the following observatories continued their work as part of Northrop Grumman Aerospace Systems:

- SIM Lite space telescope which would have searched for Earth-sized planets in the habitable zones around nearby stars (project canceled)
- James Webb Space Telescope[32] which will be the successor to the Hubble Space Telescope

Satellites

TRW Systems Group designed and manufactured the Vela series of nuclear detection satellites which monitored the 1963 establishment of the nuclear Partial Test Ban Treaty.[33] Subsequently, they produced the Advanced Vela series, first launched in 1967, which could detect nuclear air bursts using instruments actually called bhangmeters. It had the first dual-spin attitude control system with the total system momentum controlled to zero.[34] The Vela and Advanced Vela satellites were the first to alert astronomers to the presence of gamma-ray bursts. They also reported a mysterious apparent nuclear test now called the Vela Incident.

First launched in 1970, the company built all twenty-three reconnaissance satellites in the Defense Support Program (DSP), which are the principal components of the Satellite Early Warning System currently used by the United States. These are operated by the Air Force Space Command, and they detect missile or spacecraft launches and nuclear explosions using sensors that detect the infrared emissions from these intense sources of heat. During Desert Storm, for example, DSP satellites were able to detect the launches of Iraqi Scud missiles and provide timely warnings to civilians and military forces in Israel and Saudi Arabia.[35]

The initial seven Tracking and Data Relay Satellites (TDRS) were built by TRW to improve communication coverage for the Space Shuttle, International Space Station, and US military satellites. When first launched in 1983, the TDRS satellites were the largest, most sophisticated communications satellites built at the time.[36] The seventh vehicle in the series was ordered as a replacement when TDRS-2 was lost in the Challenger accident.

Launched in 2002, TRW produced the Aqua spacecraft based on their modular standardized satellite bus.[37] A joint project of the United States, Japan, and Brazil, Aqua delivers 750 Gigabytes per day detailing the Earth's water cycle in the oceans, lakes, atmosphere, polar ice caps, and vegetation.

Rocket engines

TRW designed and built the descent engine or (LMDE) for the Apollo lunar lander. Due to the need for a soft landing on the Moon, it was the first throttleable engine for manned space flight. This, and the requirements for high thrust, low weight, and crushability (in case of landing on a large rock),[15] earned surprising praise from NASA's history pages, considering the complexity of the lunar missions: "The lunar module descent engine probably was the biggest challenge and the most outstanding technical development of Apollo".[38] This engine was used on Apollo 13 to achieve free return trajectory and make a minor course correction after damage to the Service Module.

After the Apollo program moon landings, the LMDE was further developed into the TRW TR-201 engine. This engine was used in the second stage Delta-P of the Delta launch vehicle for 77 launches between 1972–1988.

Semiconductors and computers

The **Ramo-Wooldridge Corp** formed Pacific Semiconductors in June 1954, under the leadership of Harper North who had been head of electronics R+D at Hughes Aircraft. The funding for this endeavor from Thompson Products was about ten times their initial investment in Ramo-Wooldridge.[14][15] The original goal was to produce the recently invented transistor for commercial sales.

In 1957, Howard Sachar and Sanford "Sandy" Barnes invented the Varicap electronic component (also known as the varactor diode) at Pacific Semiconductors.[39] This device reduced the physical size of radio tuners and eliminated the need for moving mechanical parts. This simplified the implementation of remote control TV tuners. Sachar and Barnes were awarded an Emmy in 2007.[40]

The company manufactured the RW-300 for sales in 1959, one of the first "all-transistor" computers[14] with a power supply that used vacuum tubes. The computer was targeted at industrial control applications, with 1024 analog inputs multiplexed to a 1.9K sample/s 10-bit analog-to-digital converter which was transparent to the programmer. It weighed about 600 pounds (270 kg).[41][42] The real-time operating system was written by John Neblett, and was the intellectual precursor of the RSX-11 operating system for the PDP-11.[43]

The TRW-130 computer was introduced in 1961,[44][45] and designated the AN/UYK-1 by the US Navy as part of its pre-GPS TRANSIT (NAVSAT) satellite-based location system. It used Doppler shifts to compute a location in about 15 minutes, and had rounded corners to allow installation in submarines.

The TTL logic gate, which was the electronics industry standard for two decades, was invented by TRW's James L. Buie in 1961.

In 1965, engineers Don Nelson and Dick Pick at TRW developed the Generalized Information Retrieval Language and System, for use by the U.S. Army to control the inventory of Cheyenne helicopter parts. This developed into the Pick Database Management System which is still in use as of 2016.[46]

TRW LSI Products, Inc. was a wholly owned subsidiary formed to commercialize the integrated circuit technology the company had developed in support of its aerospace business. They produced some of the first commercially available digital signal processing ICs including the TDC1008 multiplier-accumulator.[47] They also made the first 8-bit flash ADC IC, the TDC1007,[48] resulting in an Emmy Award for analog/digital video conversion technology.[49] TRW also pioneered gallium arsenide (GaAs) chip applications for local multipoint distribution service (LMDS) systems, radios, and satellite communications.[50]

Music

Bel Canto Stereophonic Recordings, a TRW subsidiary, was a record label active from the mid-1950s to the early 1960s.[28][29]

In the media

Christopher John Boyce was a TRW employee convicted of selling security secrets to the Soviet Union via the Soviet embassy in Mexico City in the mid-1970s. Boyce and his accomplice, Andrew Daulton Lee, were the subjects of the best-selling 1979 Robert Lindsey book *The Falcon and the Snowman*, and the 1985 film of the same title.

Representatives from Space Technology Laboratories present their ICBM expertise to Don and Pete in *Mad Men* season 2 episode "The Jet Set".[51]

The *Star Trek: The Original Series* season 1 episode "Operation: Annihilate!" (April 13, 1967) was filmed on the campus-like TRW grounds in Redondo Beach, California. The two sets of stairs shown are those leading to the Cafeteria of Building S.[52]

The TRW building is supposedly one of the credit company buildings demolished in the 1999 film *Fight Club*. This is because at the time the book was written, TRW was in the business of credit reporting. However, there is no TRW building in Delaware, where the demolition purportedly happens.[53]

[...]

BITCHUTE @Housatonic **YOUTUBE** @HousatonicLive **ODYSEE** @Housatonic **BRIGHTEON** @Housatonic

Housatonic

Gilbert Leonard Tugwell (born 1919)

[HP0006][GDrive]

NOTE : Not related to 🌐 Rexford Tugwell

Born : November 29, 1919 [HJ0001][GDrive]

1919 (Nov 29) - Born in Sussex, England

Gilbert Tugwell was born Nov 29, 1919 in Sussex England. He was educated in England and served in the British Army during WWII. [HN0035][GDrive]

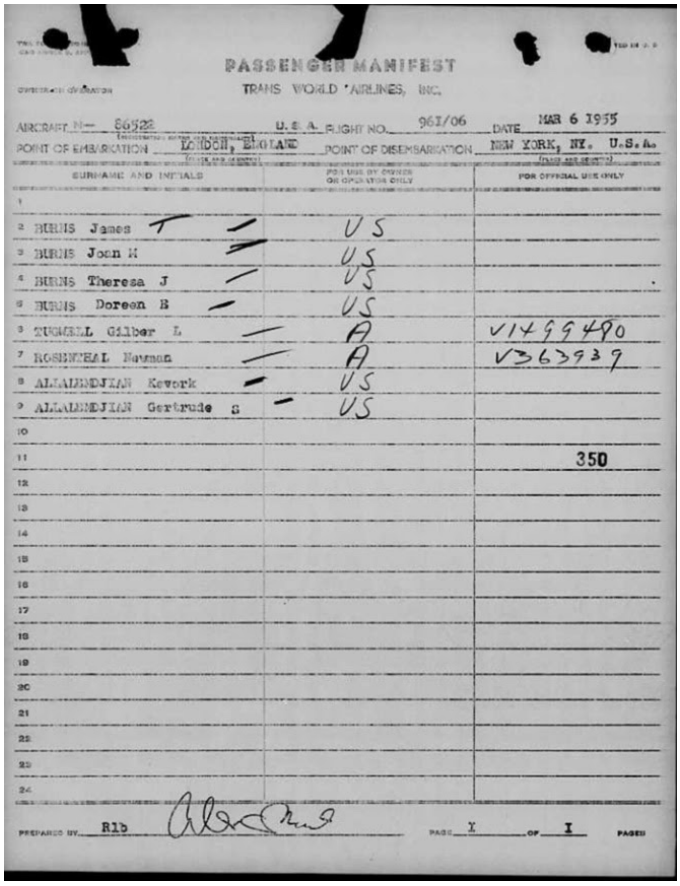
1936 or 1937 (estimated) - Joins Engelhard

Based on the news article in (Martime Reporter and Engineering News (March 1969) [HP0004][GDrive] , Gilbert L Tugwell joined **Engelhard Corporation** in 1936 when was only 17 or 18 years old.

1945 (June) - Marriage to Marjorie Beatson

See (https://www.myheritage.com/names/marjorie_beatson). **Marjorie Beatson** married **Gilbert L Tugwell** in Apr-May-June 1945, at Manchester South, Lancashire, England (Volume: 8D / Page: 70)

1955 (March) - Air travel from London to New York



PASSENGER MANIFEST

TRANS WORLD AIRLINES, INC.

AIRCRAFT N— 86522 U.S.A. FLIGHT NO. 961/06 DATE MAR 6 1955

POINT OF EMBARKATION LONDON, ENGLAND POINT OF DISEMBARKATION NEW YORK, NY. U.S.A.

	SURNAME AND INITIALS		FOR USE BY OWNER OR OPERATOR ONLY	FOR OFFICIAL USE ONLY
1				
2	BURNS James T	—	US	
3	BURNS Joan H	—	US	
4	BURNS Theresa J	—	US	
5	BURNS Doreen B	—	US	
6	TUGWELL Gilber L	—	A	V1499490
7	ROSENTHAL Norman	—	A	V363939
8	ALLAIRDJIAN Kevork	—	US	
9	ALLAIRDJIAN Gertrude S	—	US	
10				
11				350
12				
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22				
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24				

PREPARED BY R1b PAGE 1 OF 1 PAGES

1961 (May) - Travel Document

[HJ0001][GDrive]

1962 - Emigration to the USA

In 1962, Gilbert Leonard Tugwell emigrated to the United States as an employee of **Engelhard Minerals and Chemicals Corporation** [HN0035][GDrive].

1965 - Tugwell has knowledge of using gold for rocket applications

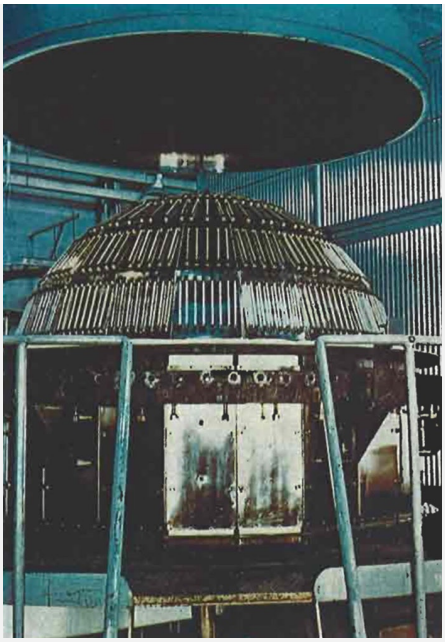
There is a 1971 research paper author in this paper quotes GIlbert L Tugwell from the 1965 source : "G. L. Tugwell, Metal Prog., 1965,88,73;"

From 1971 research paper "The Optical Properties of Gold - A REVIEW OF THEIR TECHNICAL UTILISATION" by Otto Loebich. (to read the PDF see [HC0005][GDrive])

"For heating purposes the costly radiated heat is concentrated to the greatest possible extent. Domestic cookers, for instance, are fitted with high-speed heaters emitting infra-red rays between 750 and 3000nm. They are located at the focus of a gold-coated parabolic metal reflector (thickness of gold deposit approximately 200 nm). An insulating oxide inter-layer prevents the gold from diffusing into the reflector surface (29). Another system employing waves between 5000 and 15000 nm is used to accelerate the drying of paper after printing (29). ***Tugwell*** *discusses a hemispherical Westinghouse annealing dome, where the moulded steel dome of a space capsule is heated to 650°C and fitted over a Thin gold films applied to plate glass windows give adequate transmission of light combined with good reflectivity in the infra-red range, so avoiding uncomfortable overheating of the building during hot weather. The Lurgi headquarters in Frankfurt is one of many office blocks and similar buildings fitted with such gold-coated windows made by Flaehglas A.G. Delog-Detag of Fürth, West Germany former without using an excessive amount of power.The radiation from the heating bars is reflected by the gold-coated interior walls and is focused on to the steel dome."*

"In the final sizing of steel domes for rocket casings a heat-forming operation was devised by Westinghouse in which the casing was accurately expanded over a mandrel at 650° C. Heating was from high temperature quartz lamps, with gold-coated reflectors to concentrate the heat on the mandrel and work-piece and at the same time to prevent heat losses to the wiring and the structure behind the reflectors"

On page 9 of this document :



[HC0006][GDrive]

1968 - As VP of Engelhard, comments on US government involvement in pricing of platinum

See full publication : [HP0007][GDrive]

*"Platinum: Engelhard's intimacy with the federal government was recently suggested by Senator John J. Williams (R-Del.) in connection with platinum (New York Times, 3/24/68). The government was prepared to sell 115,000 ounces of stockpiled platinum to Engelhard Minerals and Chemicals Corp. at a price $12 million below the prevailing market price for the metal. In defense, **G. L. Tugwell**, Executive Vice-President of Engelhard, said, "The thing that annoys us is that we have struggled through this to maintain a fair and reasonable price. Then this silly jerk stands up in the Senate and insinuates we're making a windfall." But the Senator bolstered his charge by seeking to amend the platinum disposal bill by setting the price at $216 to $225 an ounce, which is double the current price paid by Eigelhard and Matthey-Bishop, Inc., the only two U.S. refiners of platinum, but which is the price charged in Western Europe."*

The Daily Oklahoman - March 26 1968

See full page : [HN003C][GDrive]

10 Tues., March 26, 1968 THE DAILY OKLAHOMAN

Metal Sale Called Boon to Democrat

New York Times Service

NEW YORK — While much of the world wonders about gold, Sen. John J. Williams (R. Del.) is concerned with platinum.

The senator is seeking to bring about release of 115,000 ounces of platinum from the government's stockpiles.

He charges the government proposes to sell this platinum at a price $12 million below the prevailing market price for the metal.

He says an amendment he has offered to the disposal bill would rectify this by setting the price at $216 to $225 an ounce.

Unless such a price is set, Williams argues, a windfall Russia, South Africa and Canada are virtually the only sources of platinum.

Withdrawal by the Soviet Union created a speculative market in trading of futures in platinum and drove up the price of Soviet metal, offered selectively in Western Europe, to $216 to $225 an ounce.

But the United States refiners, Engelhard and Matthey-Bishop, adopted a "producer price," currently at $109 to $114 an ounce, depending on the size of an order.

"The thing that annoys us," Tugwell of Engelhard

profit will accrue to the Engelhard Minerals and Chemicals Corp. largely owned by Charles W. Engelhard, a friend of President Johnson and a large contributor to the Democratic Party.

The charge is "idiotic," says G. L. Tugwell, executive vice president of Engelhard. "Since he introduced the amendment in January," Tugwell went on, "we've tried to educate Mr. Williams but he either won't be or can't be told the facts."

The Engelhard Co. and Matthey-Bishop, Inc., are in effect the only refiners of platinum in the nation, and therefore virtually the only buyers of the stockpiled metal.

The government obtained its platinum in the 1950s at an average price of $79.47 an ounce, under a post-war program intended to assure the nation would have sufficient strategic materials, among them platinum, to survive in the event of war.

In recent years, with advent of the nuclear age, the government has been revising its stockpile objectives, mostly downward. Those materials considered surplus have been sold back into commercial channels. The government now proposes to sell its surplus platinum at $109 to $114 an ounce.

Platinum has been in acute short supply since 1965 when the Soviet Union, a large producer, withdrew from the world market. Aside from

said in an interview, "is that we have struggled through this to maintain a fair and reasonable price. Then this silly jerk stands up in the senate and insinuates we're making a windfall."

Tugwell notes that more than 90 percent of free world platinum production is sold at the current producer price of $109 to $114 an ounce.

Williams charged in a senate speech that "the Johnson administration is desperately trying to attain congressional approval of a bill to sell 115,000 troy ounces of platinum at $12 million below prevailing market prices."

The senator called the arrangement "a farce." He said it amounted to a handout to American industry at the taxpayers' expense.

John G. Harlan jr., head of the General Services Administration's property management and disposal service, called the windfall talk "poppycock."

Harlan said the GSA planned again to sell 77,000 ounces of the new surplus to the two companies for a few dollars less than what is now the producers price.

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RESTAURANT
AND LOUNGE
Announces a delightful addition to Downtown Oklahoma City Dining!!!
Elegant gourmet service . . . food suitable for an Epicurean. Theater Parties invited!
Complete dinners start at $1.75 In-

[HN003D][GDrive]

1969 - Executive Vice President of Engelhard

See [HC0001][GDrive] . Read more about **Engelhard Corportation** .

ENGELHARD MINERALS & CHEMICALS CORPORATION

Executive Offices: 113 Astor Street, Newark, New Jersey 07114

DIRECTORS

*Charles W. Engelhard
Chairman
*Alfred G. Blake
Executive Vice President
James J. Casey
Attorney, Casey, Lane & Mittendorf
E. Peter Corcoran
General Partner, Lazard Freres & Co.
*James Deshler II
Chairman, Minerals & Chemicals Division
Kingman Douglass
Consultant, Dillon, Read & Co., Inc.
*Ernst L. Frank
Senior Vice President
*Richard C. Glogau
Senior Vice President
*George A. Helmer
Senior Vice President & General Counsel
*Lawrence Hoguet
Senior Vice President & Treasurer
*Ludwig Jesselson
Executive Vice President
Robert B. Meyner
Attorney, Meyner & Wiley
*Milton F. Rosenthal
President
*Henry Rothschild
Senior Vice President
Maurice W. Rush
Chairman, Hudson Bay Mining and Smelting Co., Ltd.
*Gilbert L. Tugwell
Executive Vice President
Fred W. Wilson
General Partner, Lazard Freres & Co.
William D. Wilson
Managing Director, Charter Consolidated Limited
Robert G. Zeller
General Partner, F. Eberstadt & Co.

Leo Forchheimer
Director Emeritus

*Executive Committee

CORPORATE OFFICERS

Charles W. Engelhard, *Chairman*
Milton F. Rosenthal, *President*
Alfred G. Blake, *Executive Vice President*
Ludwig Jesselson, *Executive Vice President*
Gilbert L. Tugwell, *Executive Vice President*
Ernst L. Frank, *Senior Vice President*
Richard C. Glogau, *Senior Vice President*
George A. Helmer, *Senior Vice President & General Counsel*
Lawrence Hoguet, *Senior Vice President & Treasurer*
Henry Rothschild, *Senior Vice President*
DeWitt L. Alexandre, *Vice President*
Bernard H. Burton, *Vice President*
James J. Casey, *Vice President*
John R. Cockshutt, *Vice President*
Alexander E. Eltz, *Vice President*
Nelson A. Emmons, *Vice President*
Rudolph Forchheimer, *Vice President*
Gerald A. Hale, *Vice President*
Irving D. Isko, *Vice President*
Collister Johnson, *Vice President*
Walter Kann, *Vice President*
R. Blake McCune, *Vice President*
W. Frederick Mittendorf, *Vice President*
Samuel P. Reed, *Vice President*
John F. Thompson, Jr., *Vice President*
A. Calhoun Todd, Jr., *Vice President*
Melvin C. Flint, *Secretary*
Clyde W. Moonie, *Controller*

The 1969 Annual Meeting of Stockholders of Engelhard Minerals & Chemicals Corporation will be held on Wednesday, May 7, at 10 A.M., at the Robert Treat Hotel, Newark, New Jersey

[HC0002][GDrive]

1969 (March) - Promotion to President of the Engelhard Industries Division of Engelhard Minerals & Chemicals Corporation

See full issue - Martime Reporter and Engineering News (March 1969) [HP0004][GDrive] . Note that if Tugwell was with **Engelhard Corporation** for 33 years as of 1969, that means he joined the corporation in 1936 when he was only 17 years old.

Engelhard Industries Promotes G.L. Tugwell And R.C. Glogau

Gilbert L. Tugwell

Richard C. Glogau

Gilbert L. Tugwell has been appointed president of the Engelhard Industries Division of Engelhard Minerals & Chemicals Corporation.

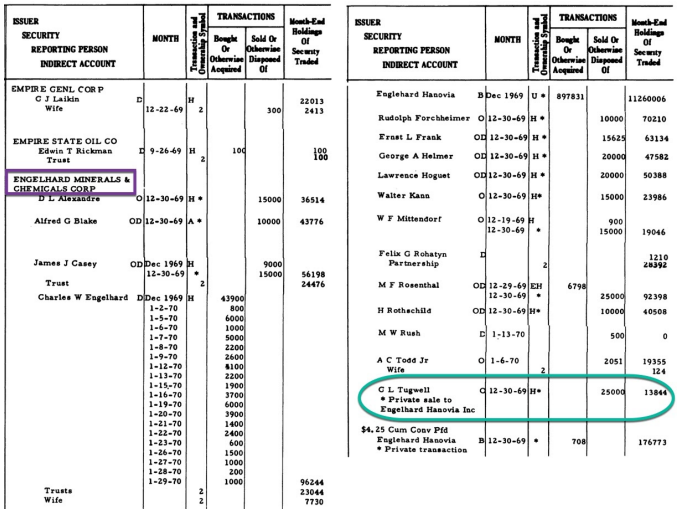
Mr. **Tugwell,** who has been with the company 33 years, also serves as a director, member of the executive committee and executive vice-president of the parent corporation.

Richard C. Glogau, who joined the firm in 1967, after 27 years with E. I. Du Pont de Nemours, succeeds Mr. **Tugwell** as executive vice-president of the Engelhard Division. Mr. **Glogau** also was elected a director, member of the executive committee and senior vice-president of the corporation.

[HP0005][GDrive]

1970 (Jan) - SEC info on Gilbert Tugwell / Engelhard

See full Jan 1970 SEC summary at : [HC0003][GDrive]



ISSUER / SECURITY / REPORTING PERSON / INDIRECT ACCOUNT		MONTH	Transaction and Ownership Symbols	TRANSACTIONS: Bought Or Otherwise Acquired	TRANSACTIONS: Sold Or Otherwise Disposed Of	Month-End Holdings Of Security Traded
EMPIRE GENL COR P						
G J Laikin	D		H			22013
Wife		12-22-69	2		300	2413
EMPIRE STATE OIL CO						
Edwin T Rickman	D	9-26-69	H	100		100
Trust			2			100
ENGELHARD MINERALS & CHEMICALS CORP						
D L Alexandre	O	12-30-69	H *		15000	36514
Alfred G Blake	OD	12-30-69	A *		10000	43776
James J Casey	OD	Dec 1969	H		9000	
		12-30-69	*		15000	56198
Trust			2			24476
Charles W Engelhard	D	Dec 1969	H	43900		
		1-2-70		800		
		1-5-70		6000		
		1-6-70		1000		
		1-7-70		5000		
		1-8-70		2200		
		1-9-70		2600		
		1-12-70		8100		
		1-13-70		2200		
		1-15-70		1900		
		1-16-70		3700		
		1-19-70		6000		
		1-20-70		3900		
		1-21-70		1400		
		1-22-70		2400		
		1-23-70		600		
		1-26-70		1500		
		1-27-70		1000		
		1-28-70		200		
		1-29-70		1000		96244
Trusts			2			23044
Wife			2			7730

ISSUER / SECURITY / REPORTING PERSON / INDIRECT ACCOUNT		MONTH	Transaction and Ownership Symbols	TRANSACTIONS: Bought Or Otherwise Acquired	TRANSACTIONS: Sold Or Otherwise Disposed Of	Month-End Holdings Of Security Traded
Englehard Hanovia	B	Dec 1969	U *	897831		11260006
Rudolph Forchheimer	O	12-30-69	H *		10000	70210
Ernst L Frank	OD	12-30-69	H *		15625	63134
George A Helmer	OD	12-30-69	H *		20000	47582
Lawrence Hoguet	OD	12-30-69	H *		20000	50388
Walter Kann	O	12-30-69	H*		15000	23986
W F Mittendorf	O	12-19-69	H		900	
		12-30-69	*		15000	19046
Felix G Rohatyn	D					1210
Partnership			2			28392
M F Rosenthal	OD	12-29-69	EH	6798		
		12-30-69	*		25000	92398
H Rothschild	OD	12-30-69	H*		10000	40508
M W Rush	D	1-13-70			500	0
A C Todd Jr	O	1-6-70			2051	19355
Wife			2			124
C L Tugwell	C	12-30-69	H*		25000	13844
* Private sale to Engelhard Hanovia Inc						
$4.25 Cum Conv Pfd						
Englehard Hanovia	B	12-30-69	*	708		176773
* Private transaction						

[HC0004][GDrive]

1971 - Tugwell still with Engelhard

Full page : [HN003A][GDrive]

Elections Listed By Engelhard

Newark, N.J. (Special)—Engelhard Minerals and Chemicals Corporation announced the following elections.

Mrs. Charles W. Engelhard as a director to fill the vacancy caused by the recent death of her husband, the company's chairman, Charles W. Engelhard.

Alfred G. Blake, a director, as chairman of the board of directors. He has been associated with the company for 21 years in senior capacities. Most recently he was chairman of the Minerals and chemicals division and executive vice president of the company.

Gavin W. M. Relly, a director, as chairman of the executive committee.

Milton F. Rosenthal, president, as chief executive officer.

Gerald A. Hale, senior vice president, as executive vice president. Ludwig Jesselson and Gilbert L. Tugwell continue as executive vice presidents.

[HN003B][GDrive]

1973 (June 07)- Tugwell now a chairman at Amersil

The Herald-News (Passaic, New Jersey) : [HN0036][GDrive] .

Passaic is a one hour drive to Princeton.

Amersil, Inc. . An international precious metals and technology company. See : https://www.semiconductoronline.com/doc/heraeus-amersil-inc-0001

Two appointments

HILLSIDE — G. L. Tugwell, chairman of Amersil, Inc., announced the appointments of J. J. Breunig as vice president for manufacturing and Michael F. Gastom as vice president and treasurer.

[HN0037][GDrive]

Interesting Amersil cases -

https://www.courtlistener.com/opinion/2246559/heraeus-amersil-inc-v-united-states/

https://www.courtlistener.com/opinion/819665/ei-dupont-de-nemours-co-v-united-states/

[6] Fibre Optics for Naval Applications : An Assessment of Present and Near-Term Capabilities (Sep 24 1976)

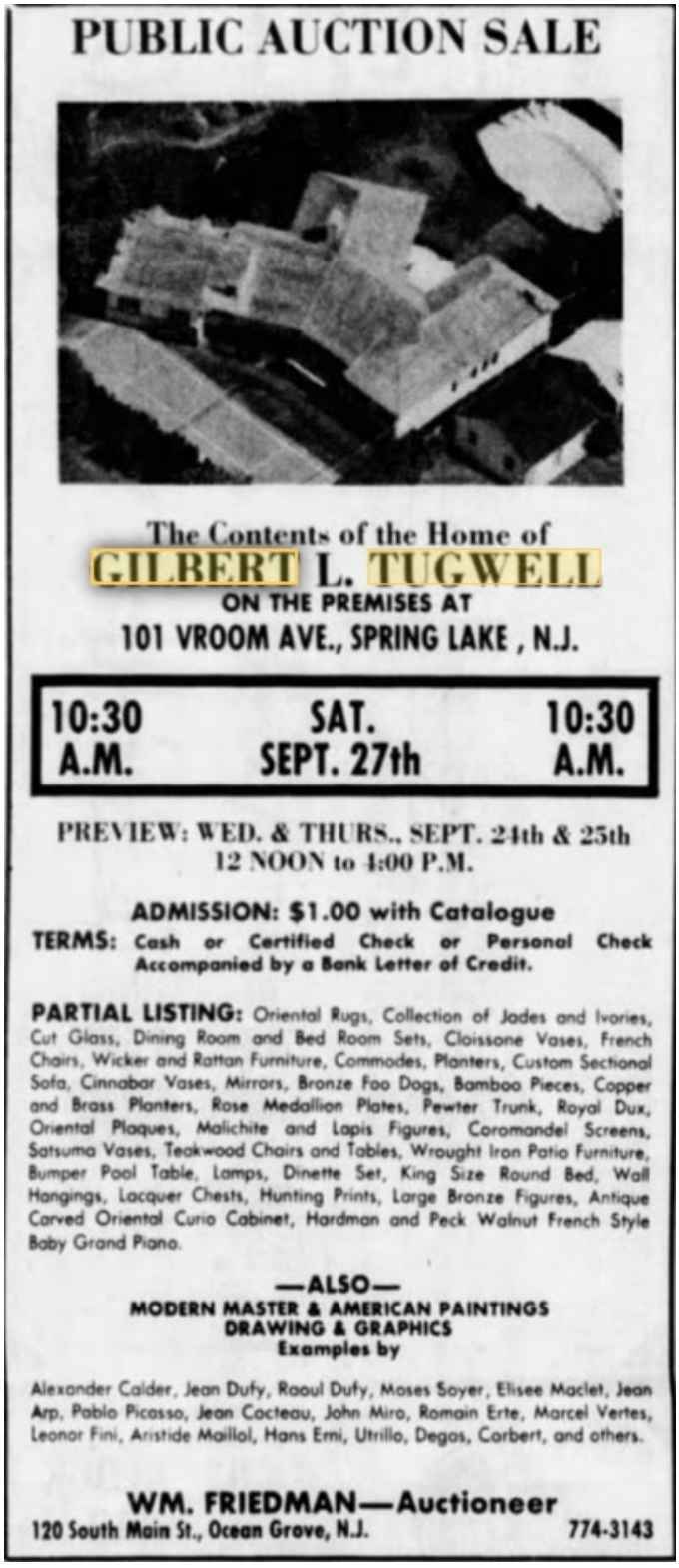
https://apps.dtic.mil/dtic/tr/fulltext/u2/a032465.pdf

1974 - Founding of Tugwell-Mueller Associates with Robert Swan Mueller II

Creates **Tugwell-Mueller Associates, Inc.** (aka "**TMA Inc.**") with Robert Swan Mueller II (b1917) .

1975 (Sep 21) - Auction of Large home in New Jersey (Asbury Park, NJ)

From Asbury Park Press , See full page : [HN0038][GDrive]



PUBLIC AUCTION SALE

The Contents of the Home of
GILBERT L. TUGWELL
ON THE PREMISES AT
101 VROOM AVE., SPRING LAKE , N.J.

10:30 A.M. SAT. SEPT. 27th 10:30 A.M.

PREVIEW: WED. & THURS., SEPT. 24th & 25th
12 NOON to 4:00 P.M.

ADMISSION: $1.00 with Catalogue

TERMS: Cash or Certified Check or Personal Check Accompanied by a Bank Letter of Credit.

PARTIAL LISTING: Oriental Rugs, Collection of Jades and Ivories, Cut Glass, Dining Room and Bed Room Sets, Cloissone Vases, French Chairs, Wicker and Rattan Furniture, Commodes, Planters, Custom Sectional Sofa, Cinnabar Vases, Mirrors, Bronze Foo Dogs, Bamboo Pieces, Copper and Brass Planters, Rose Medallion Plates, Pewter Trunk, Royal Dux, Oriental Plaques, Malichite and Lapis Figures, Coromandel Screens, Satsuma Vases, Teakwood Chairs and Tables, Wrought Iron Patio Furniture, Bumper Pool Table, Lamps, Dinette Set, King Size Round Bed, Wall Hangings, Lacquer Chests, Hunting Prints, Large Bronze Figures, Antique Carved Oriental Curio Cabinet, Hardman and Peck Walnut French Style Baby Grand Piano.

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DRAWING & GRAPHICS
Examples by

Alexander Calder, Jean Dufy, Raoul Dufy, Moses Soyer, Elisee Maclet, Jean Arp, Pablo Picasso, Jean Cocteau, John Miro, Romain Erte, Marcel Vertes, Leonor Fini, Aristide Maillol, Hans Erni, Utrillo, Degas, Corbert, and others.

WM. FRIEDMAN—Auctioneer
120 South Main St., Ocean Grove, N.J. 774-3143

[HN0039][GDrive]

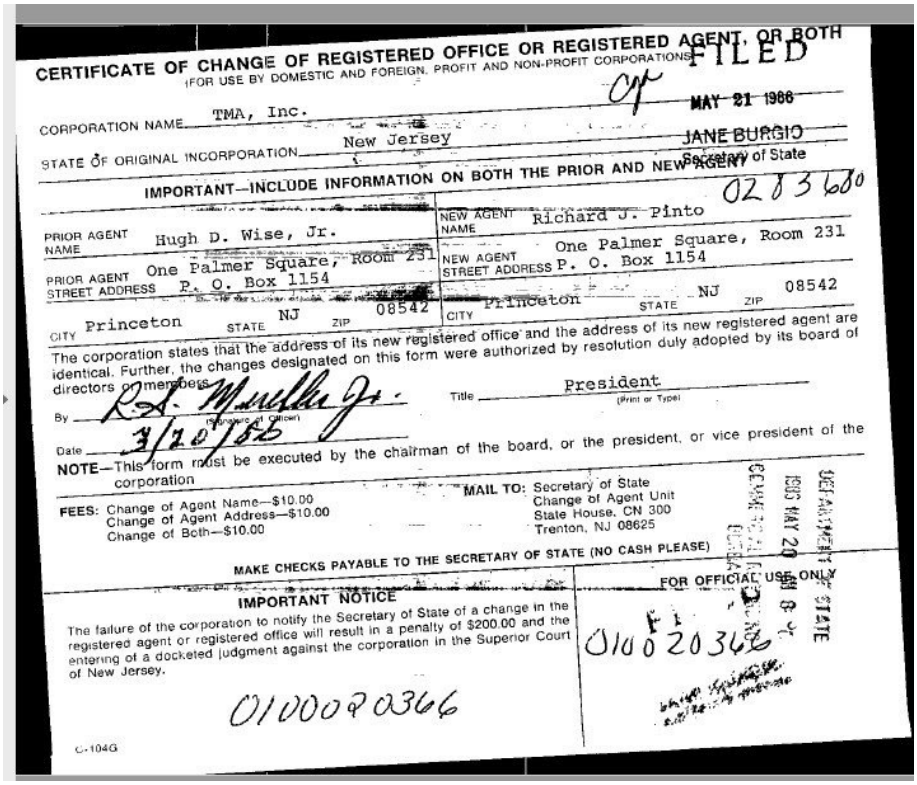
1977 (Nov 27) - Marriage of daughter Georgina ("Gina")

See article in NY Times : [HN003E][GDrive]

"Georgina Tugwell and Thomas Adrian Russo, magna cum laude graduates of Dartmouth College, plan to be married - June. Mr. and Mrs. Gilbert L. Tugwell of New York have announced the engagement of their daughter to the son of Dr. and Mrs. Francis R. Russo of Janesville, Wis. Miss Tugwell, known as Gina, is a management trainee with the Bankers Trust Company - New York. Her fiance is - the municipal bond department of the Mellon Bank - Pittsburgh."

1986 (March) - TMA New Jersey Change of Registered Office or Agent Filing

TMA (Tugwell-Mueller Associates) NJ Corp 1986 filing. Signed by **Robert Swan Mueller Jr.** (aka **Robert Swan Mueller II**). Shared on Twitter : See [HT0003][GDrive] . Previous agent name was Hugh D. Wise, Jr.. New agent name is Richard J. Pinto. The TMA office remains at One Palmer Square, Room 231, Princeton NJ.



CERTIFICATE OF CHANGE OF REGISTERED OFFICE OR REGISTERED AGENT, OR BOTH
(FOR USE BY DOMESTIC AND FOREIGN, PROFIT AND NON-PROFIT CORPORATIONS)

FILED
MAY 21 1986
JANE BURGIO
Secretary of State

CORPORATION NAME TMA, Inc.

STATE OF ORIGINAL INCORPORATION New Jersey

0283680

IMPORTANT—INCLUDE INFORMATION ON BOTH THE PRIOR AND NEW AGENT

PRIOR AGENT	NEW AGENT
NAME: Hugh D. Wise, Jr.	NAME: Richard J. Pinto
STREET ADDRESS: One Palmer Square, Room 231 P. O. Box 1154	STREET ADDRESS: One Palmer Square, Room 231 P. O. Box 1154
CITY: Princeton STATE: NJ ZIP: 08542	CITY: Princeton STATE: NJ ZIP: 08542

The corporation states that the address of its new registered office and the address of its new registered agent are identical. Further, the changes designated on this form were authorized by resolution duly adopted by its board of directors or members.

By R.L. Mundle Jr. (Signature of Officer) Title President (Print or Type)

Date 3/20/86

NOTE—This form must be executed by the chairman of the board, or the president, or vice president of the corporation

FEES: Change of Agent Name—$10.00
Change of Agent Address—$10.00
Change of Both—$10.00

MAIL TO: Secretary of State
Change of Agent Unit
State House, CN 300
Trenton, NJ 08625

MAKE CHECKS PAYABLE TO THE SECRETARY OF STATE (NO CASH PLEASE)

IMPORTANT NOTICE

The failure of the corporation to notify the Secretary of State of a change in the registered agent or registered office will result in a penalty of $200.00 and the entering of a docketed judgment against the corporation in the Superior Court of New Jersey.

0100020366

FOR OFFICIAL USE ONLY

0100 20366

C-104G

[HT0004][GDrive]

Dec 29 1992 - Death

Gilbert Leonard Tugwell died in North Palm Beach, Florida. See full page : [HN0034][GDrive].

GILBERT LEONARD TUGWELL

Age 73, of North Palm Beach, Florida, died December 29, 1992. Mr. Tugwell was born Nov. 29, 1919 in Sussex, England. He was educated in England and served in the British Army during WW II. He emigrated to the U.S. in 1962 as an employee of Engelhard Minerals and Chemicals Corp., where he later became Executive Vice President and Director and Chairman of the Engelhard Industries Division.

Mr. Tugwell is survived by his wife, Marjorie of North Palm Beach; a daughter, Angela Fernandez of Houston, Texas and a daughter, Georgina Russo of Lancaster, Pa.; six grandchildren.

A Memorial Service will be held 10:00 a.m. Tues., Jan. 5, 1993 at St. Mark's Episcopal Church, 3395 Burns Road, Palm Beach Gardens, Florida. Those planning an expression of sympathy are asked to consider the American Cancer Society, 1724 Australian Ave., West Palm Beach, FL 33407. Arrangements entrusted to THOMAS L. PRICE FUNERAL HOME.

[HN0035][GDrive]

UVWXYZ

A B C D E F G H I J K L M N O P Q R S T UVWXYZ

PEOPLE (by last name / then D.o.B.)

- William Robert **Van Cleave** (born 1935)
- Dr. Andrew Jeremy **Wakefield** (born 1957)
- Dr. Lin-Fa **Wang** (born 1960)
- Dr. Sherman Morton **Weissman** (born 1930)
- Dr. Jonathan Seth **Weissman** (born 1966)
- Dr. William Henry **Welch** (born 1850)
- Charles **Wohlstetter** (born 1910)
- Albert James **Wohlstetter** (born 1913)
- John Charles **Wohlstetter** (born 1947)
- Theodore Wai **Wu** Jr. (born 1936)
- Carl Garland **Young** (born 1926)
- Dr. Dov Solomon **Zakheim** (born 1948)
- Philip David **Zelikow** (Born 1954)
- Bernie Edward **Zettl** (born 1922)
- Philip Richard **Zimmermann** Sr (born 1922)
- Philip Richard **Zimmermann** Jr. (born 1954)

PLACES / COMPANIES / OTHER

- Ukraine International Airlines Flight 752
- United Fruit Company
- **UUNET** Technologies, Incorporated
- **VaxGen**, Incorporated
- (Russia) State Research Center of Virology and Biotechnology (**VECTOR**)
- **Verizon** Communications Incorporated
- Vickers Building, Baltimore
- **Virotherapy**
- Special **Virus-Cancer Program**
- **West Nile Virus biological weapon technology and production**
- **West Nile Virus** discovery in the United States (1999)
- **WorldCom** Corporation

Ukraine International Airlines Flight 752

Wikipedia Ukraine International Airlines Flight 752

Saved wikipedia (Sep 3 2020 - Ukraine International Airlines Flight 752

2020-09-03-wikipedia-ukraine-international-airlines-flight-752.pdf / https://en.wikipedia.org/wiki/Ukraine_International_Airlines_Flight_752 / https://drive.google.com/file/d/1-5aTVhjqBkRnmiz0rPieY4KJk2pJ_9wP/view?usp=sharing

UR-PSR, the aircraft involved in the incident, in October 2019

ShootdownDate

8 January 2020

Summary

Shot down by two IRGC Tor M-1 missiles[1]

Site

Khalajabad, Shahriar County, Tehran Province, Iran[2]

35°33′40″N 51°06′14″ECoordinates: 35°33′40″N 51°06′14″E

AircraftAircraft type

Boeing 737-8KV

Operator

Ukraine International Airlines

IATA flight No.

PS752

ICAO flight No.

AUI752

Call sign

UKRAINE INTERNATIONAL 752

Registration

UR-PSR

Flight origin

Imam Khomeini International Airport, Tehran

Destination

Boryspil International Airport, Kiev

Occupants

176

Passengers

167

Crew

9

Fatalities

176[3]

Survivors

0

Ukraine International Airlines Flight 752 (**PS752**) was a scheduled international passenger flight from Tehran to Kiev operated by Ukraine International Airlines (UIA). On 8 January 2020, the Boeing 737-800 operating the route was shot down shortly after takeoff from Tehran Imam Khomeini International Airport by the Iranian Islamic Revolutionary Guards Corp.[4][5][6] All 176 passengers and crew died.[7]

The shoot-down occurred during the 2019–2020 Persian Gulf crisis, five days after U.S. President Donald Trump launched a drone strike that killed Iranian General Qasem Soleimani in retaliation for the 2019–20 attack on the United States embassy in Baghdad by Kata'ib Hezbollah, and hours after Iran launched missiles on U.S. bases in Iraq.[8]

The Iranian government initially denied responsibility for the airplane's destruction, but investigation by Western intelligence agencies and the general public revealed that the aircraft was shot down by a surface-to-air missile launched by Iran.[9] Mass protests calling for the removal of Supreme Leader Ali Khamenei broke out in Iran on 13 January in response to the shootdown and government denial, which ultimately resulted in the Iranian government admitting that it shot down the airliner.[10]

Background

The missile strike occurred four hours after Iran launched retaliatory missile strikes on U.S. positions in Iraq for the killing of Major General Qasem Soleimani.[11] Iran was on the highest state of defensive alert and, according to Commander of the Aerospace Force of the Islamic Revolution Guards Corps (IRGC) Amir Ali Hajizadeh, was "totally prepared for a full-fledged war".[8]

Aircraft

The aircraft was a Boeing 737-8KV, serial number 38124, registration UR-PSR. It was three and a half years old at the time of it being shot down, having first flown on 21 June 2016.[2] It was delivered to the airline on 19 July 2016 and was the first 737 Next Generation aircraft purchased by the airline.[12] The airline defended the airplane's maintenance record, saying it had been inspected just two days before the crash.[13][14]

Flight and crash

Crash site

Approximate location of the crash site

The flight was operated by Ukraine International Airlines, the flag carrier and the largest airline of Ukraine, on a scheduled flight from the Iranian capital Tehran's Imam Khomeini International Airport to Boryspil International Airport in the Ukrainian capital Kiev. Emergency officials confirmed that the aircraft was carrying 176 people, including nine crew members and fifteen children.[15]

Flight 752 was scheduled to take off at 05:15 local time (UTC+3:30), but was delayed. It departed Stand 116 and took off from Runway 29R at 06:12:08 local time and was expected to land in Kiev at 08:00 local time (UTC+2:00).[16][3] The final ADS-B data received was at 06:14:57, less than three minutes after departure.[17]

Between 06:14:17 and 06:14:45 the airplane turned from the take-off heading of 289° to heading 313°, following its regular route.[17][18]

According to the data, the last recorded altitude was at 2,416 metres (7,925 ft) above mean sea level with a ground speed of 275 knots (509 km/h; 316 mph).[19] The airport is 1,007 metres (3,305 ft) above mean sea level, but the ground around Parand and the crash site is several hundred feet higher. The flight was climbing at just under 3000 ft/min when the flight data record abruptly ended over the open ground near the northern end of Enqelab Eslami Boulevard in Parand.[17] Analysis of several videos by *The New York Times* shows that the aircraft was hit almost immediately by the first of two short-range missiles (which knocked out its transponder) launched thirty seconds apart by the Islamic Revolutionary Guard Corps, and with the aircraft having maintained its track, by the second missile some 23 seconds later, after which it veers right and can be seen aflame before disappearing from view.[18] Ukrainian investigators believe the pilots were killed instantly by shrapnel from the missile which exploded near the cockpit.[20]

The precise track of the aircraft is unclear from that point until about a minute before it crashed, when several videos recorded its last seconds.[21][22][23] The aircraft crashed on a park and fields on the edge of the village of Khalajabad 15 kilometres (9.3 mi; 8.1 nmi) north-west of the airport,[24] and about 10 miles (16 km; 8.7 nmi) ENE of the last missile strike about seven minutes after takeoff,[18] but did not cause any casualties on the ground.

Shortly after the crash, emergency responders arrived with 22 ambulances, four bus ambulances, and a helicopter, but intense fires prevented a rescue attempt. The wreckage was strewn over a wide area, with no survivors found at the crash site.[25] The aircraft was completely destroyed on impact.[26]

Passengers and crew

People on board, based on Ukrainian official list[27][a]NationNumber

Iran[b]

Canada[c]

Canada	63
Ukraine[d]	11
Sweden[e]	10
Afghanistan[f]	7
United Kingdom[g]	3
Total	**176**

Recovery operations, victims of Flight 752

There were 167 passengers and nine crew members on the flight.[33] According to Iranian officials, 146 passengers used Iranian passports to leave Iran, ten used Afghan passports, five used Canadian ones, four Swedish ones, and two used Ukrainian passports.[34] There is some disagreement from other sources with this accounting of nationalities, possibly due to some passengers being nationals of more than a single country.

According to Ukrainian foreign minister Vadym Prystaiko and a flight manifest released by UIA,[35] out of the 167 passengers' citizenship, 82 were confirmed to be Iranian, 63 were Canadian, three were British, four were Afghan, 10 were Swedish, and three were German. Eleven Ukrainians were also onboard, nine of them being the crew.[7][29] The German Foreign Ministry denied any Germans were aboard;[36] the three people in question were Afghan nationals who lived in Germany as asylum seekers.[31] According to Iranian nationality law, the Iranian government considers dual citizens as Iranian citizens only.[37]

Of the 167 passengers, 138 were travelling to Canada via Ukraine.[38][39][40] Many of the Iranian Canadians were affiliated with Canadian universities, as students or academics who had travelled to Iran during Christmas break. The crash was the largest loss of Canadian lives in aviation since the 1985 bombing of Air India Flight 182.[41] On January 15, 2020, Canadian Transport Minister Marc Garneau said 57 Canadians died in the crash.[42]

In addition to six flight attendants, the crew consisted of Captain Volodymyr Gaponenko (11,600 hours on Boeing 737 aircraft, including 5,500 hours as captain), instructor pilot Oleksiy Naumkin (12,000 hours on Boeing 737, including 6,600 as captain), and first officer Serhiy Khomenko (7,600 hours on Boeing 737).[43]

Investigation

Impact zone

The Civil Aviation Organization of Iran (CAOI) reported shortly after the incident that a team of investigators had been sent to the crash site.[33] On the same day, the Ukrainian government said it would send experts to Tehran to assist with the investigation. President Volodymyr Zelensky instructed the Ukrainian General Prosecutor to open a criminal investigation into the crash.[44] The Ukrainian government sent 53 representatives to Iran to assist with the investigation, among them government officials, investigators, and representatives of the UIA.[45]

A Ukrainian Air Force Ilyushin Il-76 prepares to depart for Iran from the Boryspil International Airport with specialists from the National Bureau of Investigation of Civil Aviation and Incidents with the Civil Aviation Service, State Aviation Service, Ukraine International Airlines and from the General Inspectorate of the Ministry of Defense of Ukraine.

Under standard International Civil Aviation Organization (ICAO) rules, according to Annex 13 of the Chicago Convention, the United States National Transportation Safety Board (NTSB) would participate in the investigation, as they represented the state of the manufacturer of the aircraft. France's Bureau d'Enquêtes et d'Analyses pour la Sécurité de l'Aviation Civile (BEA) would participate as representatives of the state of manufacture of the aircraft's engines (a U.S.–France joint venture) and Ukraine's Ministry of Infrastructure would participate as representatives of the state in which the aircraft was registered. Given the 2019–20 Persian Gulf crisis, it is not known how these organizations would be involved, although it was reported that Iran had said American, French and Ukrainian authorities would be involved.[46]

The head of the commission for accidents in the CAOI said they received no emergency message from the aircraft before the crash.[47] It was reported that the aircraft's black boxes (the cockpit voice recorder (CVR) and flight data recorder (FDR)) had been recovered, but the CAOI said it was not clear to which country the recorders would be sent so the data could be analyzed.[48] The association said it would not hand over the black boxes to Boeing or to U.S. authorities.[49] On 9 January, the black boxes were reported, by Iranian investigators, to have been damaged and that some parts of their memory may have been lost.[50] Mary Schiavo, a former U.S. Department of Transportation inspector general, said no automated distress messages had been sent from the aircraft or by its crew.[51]

On 9 January, the Swedish Accident Investigation Authority and Transportation Safety Board of Canada (TSB) were officially invited by the investigation team to participate in the probe on the crash.[52] The NTSB,[53][54][55] Ukraine, and Boeing were also invited to participate in the investigation.[52] Due to American economic sanctions placed on Iran, U.S. investigators would need a special licence from the Treasury and the State Departments to travel there.[56][57][58]

On 9 January, media reports showed bulldozers being used to clear the crash site. Some aircraft investigation experts expressed concerns about disturbing and damaging the crash site before a thorough investigation can be conducted.[59] Iran denied bulldozing the evidence.[60] On 10 January, the Iranian government granted Ukrainian investigators permission to investigate the flight recorders and Ukrainian investigators visited the crash site,[61][62] with plans to download the recorders in Tehran.[63] On 14 January, the head of the TSB, Kathy Fox, said there were signs that Iran would allow the TSB to participate in the downloading and analysis of data from the airplane's flight data recorder and cockpit voice recorder.[64] On 23 January, the TSB announced that they had been invited by Iran to help with the flight recorders.[65]

On 2 February, Ukrainian TV channel aired a leaked recording of the information exchange between the Iranian pilot of an Aseman Airlines flight and an Iranian air-traffic controller. The pilot allegedly stated in Persian that he saw a flash similar to missile fire in the sky, and then an explosion. Following the leak, the Ukrainian President Volodymyr Zelensky said the new evidence proved Iran was well-aware from the very first moments that the Ukraine passenger airplane was brought down by a missile.[66] The following day Iran ceased co-operation with Ukraine in its investigation into the disaster due to this leaked recording.[67] Iran resumed co-operation on 15 February.[68]

Flight data recorder and cockpit voice recorder

On 20 January, Iran asked for assistance from France and the United States to recover the data from the flight data recorder and cockpit voice recorder.[69] On 5 February, Canada urged Iran to send the recorders to France.[70] Iran denied the request.[71]

On 12 March, Iran agreed to hand over the recorders to Ukraine.[72] However, the COVID-19 pandemic delayed this action.[73][74][75] During this time, impatience began to mount from Ukraine, Canada, and ICAO.[76]

On 11 June, Iran announced that the flight recorders would be sent directly to the Bureau d'Enquêtes et d'Analyses pour la Sécurité de l'Aviation Civile (BEA) in France.[77] Canadian officials urged Iran to complete this action "as soon as possible", citing the previous delays in handing over the recorders.[78] This statement was further reinforced 11 days later, when Iranian foreign minister Mohammad Javad Zarif commented on this intention during a phone call with Canadian foreign minister François-Philippe Champagne.[79]

On 20 July, the examination of the recorders started in Paris; Champagne rejected the finding by the CAOI that "human error" caused the launch of the missiles which destroyed the aircraft: "It cannot just be the result of a human error. There is no circumstance under (which) a civilian aircraft can be downed just by the result of human error in this day and age... All the facts and circumstances point to more than just a human error, so certainly we will continue to pursue vigorously the investigation."[80]

Cause of the crash

Wreckage of Flight 752, with part of an engine in the foreground, showing nozzle guide vanes

Wreckage of Flight 752

On 8 January, Iran's Road and Transportation Ministry released a statement that the aircraft burst into flames after a fire started in one of its engines, causing the pilot to lose control and crash into the ground.[81][44] The airline opined that pilot error was impossible to be cited as the cause of the crash as the pilots had exclusively been trained for the Tehran flights for years, noting that Tehran Airport was "not a simple airport".[82]

Iranian and Ukrainian government sources initially blamed mechanical issues aboard the aircraft for its crash.[27][83][84] The Ukrainian government later retracted its statement and said anything was possible, refusing to rule out that the aircraft was hit by a missile.[85] President Zelensky said there should not be any speculation about the cause of the crash.[44]

On 9 January, U.S. intelligence and defence officials said they believed the aircraft had been shot down by an Iranian Tor missile (NATO reporting name SA-15 "Gauntlet"),[86] based on evidence from reconnaissance satellite imagery and radar data.[87][52] Ukrainian authorities said a shootdown was one of the "main working theories", while Iranian authorities denied this, stating that allegations of a missile hit were "psychological warfare".[88][89][90][91] British defence officials agreed with the American assessment of a shootdown.[90] Prime Minister of Canada Justin Trudeau said evidence from multiple sources, including Canadian intelligence, suggest the aircraft was shot down by an Iranian missile.[92]

After three days of describing it as "an American lie", "a wrongful scenario by CIA and the Pentagon", and "an attempt to prevent Boeing stock from a free fall",[93][94] on 11 January, the Armed Forces of the Islamic Republic of Iran admitted they had shot down the airplane, having erroneously identified it as a hostile target.[95]

The flight had been delayed by more than an hour because the captain had decided to offload some luggage because the aircraft was over its certified takeoff weight.[96]

According to an early IRGC statement, when the airplane seemed to head toward a "sensitive military centre" of the Islamic Revolutionary Guard Corps, controllers mistook it for a "hostile target" and shot it down.[97] Iran's Civil Aviation Organization disputed this timeline, arguing that the airplane was on the correct course all the time and there was no proven flight deviation.[98] The CAOI's viewpoint was also supported by a Radio Canada International article that used public ADS-B flight tracking data.[99][100]

Iranian Brigadier general Amir Ali Hajizadeh of the IRGC Aerospace Defense said a missile operator in Bidganeh had acted independently, mistook the airplane for a U.S. cruise missile and shot it down. Hajizadeh also said the airplane was on-track and "made no mistake".[8][9]

Western experts had previously noted that Flight 752 was flying near several sensitive Iranian ballistic missile facilities, including the Shahid Modarres missile base at Bidganeh near Malard, which the Iranians could have believed would be targets of retaliation for their attack a few hours earlier.[101][102]

On 11 July 2020, the CAOI reported that Iran now blamed the missile strike that downed PS752 on "bad communication" and "poor alignment". According to the Iranians, the missile battery "had been relocated and was not properly reoriented" and the guilty parties did not include the higher-ranking chain of command officers.[103][104]

Analyses based on social media

On 9 January, the Instagram account Rich Kids of Tehran published a video captioned: *"The actual footage from the moment the #Ukrainian flight was shot down by a Russian-made Tor-M1 missile just moments after takeoff from #Tehran's Airport "*.[105][106] The video was published at the same time the Iranian authorities were claiming technical problems for the crash.[107][108] Qassem Biniaz, a spokesman for Iran's Road and Transportation Ministry, said the pilot "lost control of the plane" after a fire broke out in one of its engines, denying the Ukrainian plane was hit by a missile.[109][110][111]

On 9 January, a video was posted on a public Telegram channel showing what was, according to Bellingcat, apparently a mid-air explosion. The New York Times contacted the person who filmed the video and confirmed its authenticity. An investigation team from Bellingcat carried out an analysis of this video and geolocated it to a residential area in Parand, a suburb west of the airport.[112][113] Bellingcat also examined photos from an unknown source and said these images of a missile nose cone had yet to be verified, despite claims from several sources.[114] The Tor missile's warhead is located in its midsection, meaning its nose may not be destroyed in an explosion.[114] Similar photographs have been taken in eastern Ukraine, but none have been found

meaning its nose may not be destroyed in an explosion.[111] Similar photographs of fragments have been taken in eastern Ukraine, but none have been found to be the same as those attributed to the recent incident.[114]

USA Today reported that the firm IHS Markit reviewed photographs showing the guidance section of a missile and "assesses them to be credible".[115][116] Aviation monitoring group Opsgroup said: "We would recommend the starting assumption to be that this was a shootdown event, similar to MH17—until there is clear evidence to the contrary" asserting that photographs "show obvious projectile holes in the fuselage and a wing section".[117]

Subsequent developments

On 9 January, President Trump said the airplane "was flying in a pretty rough neighbourhood, and somebody could have made a mistake."[118] He said the U.S. had no involvement in the incident and that he did not believe a mechanical issue had anything to do with the crash.[118] U.S. intelligence sources informed U.S. media outlets they were "confident that Iran painted the Ukrainian airliner with radar and fired two surface to air missiles that brought down the aircraft."[119][120]

Also on 9 January, at a news conference in Ottawa, Canadian Prime Minister Justin Trudeau said the airliner was likely brought down by an Iranian missile, citing intelligence from Canadian and other sources, and said the incident "may well have been unintentional".[121]

On 10 January, during an interview with Sky News, Iran's ambassador to the United Kingdom, Hamid Baeidinejad, rejected video footage obtained by American media that showed bulldozers clearing the crash site as "absurd".[122] Baeidinejad further denied that an Iranian missile had brought down the airplane, and said that "[p]lane accidents are a very technical issue, I cannot judge, you cannot judge, reporters on the ground cannot judge. Nobody can judge. A foreign minister or a prime minister cannot judge on this issue."[123]

On 11 January, Iran admitted it had shot down the Ukrainian jet by "accident", the result of human error. General Amir Ali Hajizadeh, the head of the Iranian Revolutionary Guard's aerospace division, said his unit accepts "full responsibility" for the shootdown. In an address broadcast by state television, he said that when he learned about the downing of the airplane, "I wished I was dead." Hajizadeh said that, with his forces on high alert, an officer mistook it for a hostile missile and made a "bad decision".[124]

On 14 January, the Rich Kids of Tehran Instagram account published a new video, showing two missiles hitting the aircraft.[125] The security camera footage, verified by *The New York Times*, shows two missiles, fired 30 seconds apart.[126] On 20 January, the Civil Aviation Organization of Iran also admitted that the country's paramilitary Revolutionary Guard had fired two Russian-made Tor-M1 missiles at the aircraft.[127][128]

On 10 August, IRGC officer Gholamreza Soleimani told Iranian state TV that Iran will not compensate Ukraine International Airlines for the shootdown because the "plane is insured by European companies in Ukraine and not by Iranian companies".[129]

Aftermath

Commemoration of the victims of the air crash in Iran at Kyiv Boryspil airport

Commemoration of the victims of the air crash in Iran

On 17 January, the Canadian government announced that it would provide C$25,000 to the relatives of each of the 57 Canadian citizens and permanent residents who were killed in the crash. The funds were to help cover immediate needs, like funeral and travel expenses. However, Canadian Prime Minister Justin Trudeau also said that it holds Iran financially responsible.[130]

On 19 January, the bodies of 11 Ukrainian citizens, who died in the crash, were returned to Ukraine in a solemn ceremony at the Boryspil International Airport. The coffins, which were each draped in a Ukrainian flag, were carried one by one from a Ukrainian Il-76 military plane of the 25th Transport Aviation Brigade.[131]

President Zelensky, Secretary of the National Security and Defense Council of Ukraine Oleksiy Danilov, Prime Minister Oleksiy Honcharuk, Chairman of the Verkhovna Rada Dmytro Razumkov, and other officials and military servicemen participated in the commemoration.[132]

Reactions

Air traffic

The disaster occurred amid a heightened political crisis in the Persian Gulf, hours after the Iranian military launched 15 missiles towards U.S. military airbases in Iraq in response to the Baghdad International Airport airstrike which killed Iranian general Qasem Soleimani. In response, the U.S. Federal Aviation Administration (FAA), in a notice to airmen (NOTAM), banned all American civil aircraft from flying over Iran, Iraq, the Gulf of Oman and the Persian Gulf.[133][134] Although the FAA's NOTAM is not binding on non-U.S. airlines, many airlines take it into consideration when making safety decisions, especially after the downing of Malaysia Airlines Flight 17 in 2014.[135][136][137] Several airlines, including Austrian Airlines,[52] Singapore Airlines,[138] KLM,[139] Air France,[140] Air India,[140] SriLankan Airlines,[141] Qantas[135] and Vietnam Airlines[142] began to reroute their flights. Other airlines, such as Lufthansa, Emirates, Flydubai, and Turkish Airlines cancelled some flights to airports in Iran and Iraq and would make further operational changes as necessary.[137][143][144][145]

Ukraine International Airlines (UIA) suspended flights to Tehran indefinitely shortly after the incident, with flights after the day of the crash no longer available.[7] The suspension also complied with a prohibition issued by State Aviation Administration of Ukraine for flights in Iran's airspace for all Ukrainian registration aircraft.[146] Since the crash, additional airlines, Air Astana and SCAT Airlines also re-routed flights that overflew Iran.[147][148] This followed a recommendation by the Kazakhstan Ministry of Industry and Infrastructure Development, issued to Kazakhstani air companies after the crash, to avoid flying over Iran airspace and/or to cancel flights to Iran.[149] Air Canada rerouted its Toronto-Dubai flight to fly over Egypt and Saudi Arabia instead of Iraq.[150]

Iran

Government and IRGC

Iran declared 9 January a national day of mourning both for the victims of Flight 752 and for those killed in a stampede at Qasem Soleimani's funeral.[151]

On 11 January, the Iranian Islamic Revolutionary Guard Corps said they had shot down the aircraft after erroneously identifying it as a hostile target.[152]

President Rouhani called the incident an "unforgivable mistake".[153] Foreign minister Mohammad Javad Zarif apologized for the disaster and added that the preliminary conclusion of the armed forces' internal investigation was "human error".[154]

On 17 January, Iranian Supreme Leader Ali Khamenei, in his first Friday sermon in eight years, defended the Revolutionary Guards' accidental killing of passengers[*dubious* – *discuss*] and praised Operation Martyr Soleimani for giving a "slap on the face" to the United States. His sermon came as public anger mounted against the government for their handling of the incident.[155]

In April, an Iranian MP, the spokesman for the Iranian parliament's legal and judicial committee, said the Iranian military "carried out their duties well", adding that "the movement of the plane was very suspicious" and that no arrests had been made in relation to the incident.[156][157]

Anti-government protests

Main article: Ukraine International Airlines Flight 752 protests

A gathering at Amirkabir University of Technology. Above flowers and lit candles a notice reads "What is the cost of lying?"

On 11 January, in response to the government's admission, thousands of protesters poured into the streets of Tehran and other Iranian cities such as Isfahan, Shiraz, Hamadan and Urmia.[158] Video clips on Twitter showed protesters in Tehran chanting "Death to the dictator", a reference to Supreme Leader Ali Khamenei.[159] In Tehran, hundreds of protesters took to the streets to vent anger at officials, calling them liars for having denied the shootdown. Protests took place outside at least two universities: students and protesters gathered at Sharif University, Amirkabir University and Hafez Overpass in Tehran, initially to pay respect to the victims. Protests turned angry in the evening. President Trump tweeted support for the protests.[160][161][162] The mourning Iranians called Qasem Soleimani a murderer and tore up pictures of him, shattering the appearance of national solidarity that had followed his death.[163][164][165][166][167][168]

On 12 January, protests erupted across Iran for a second day; in Tehran and in several other cities, protesters chanted slogans against the leadership and clashed with security forces and Iran's Basiji Force firing tear gas at the protesters.[169] The protesters chanted that they needed more than just resignations, but prosecutions of those responsible as well.[170] Tehran residents told Reuters that police were out in force in the capital on 12 January, with dozens of protesters in Tehran chanting "They are lying that our enemy is America, our enemy is right here," and scores of demonstrators gathered in other cities also shown on social media.[171]

On 13 January, the *Los Angeles Times* reported that Iranian security forces fired both live ammunition and tear gas to disperse demonstrators.[172]

Iran's exiled Crown Prince Reza Pahlavi said the Islamic Republic Supreme Leader Ali Khamenei was responsible for the downing.[173] Iranian reformist newspaper *Etemad* ran the banner headline "Apologize and resign", and commented on the "people's demand" for the removal of those responsible for the shootdown.[174]

A Khamenei representative in the elite Revolutionary Guards, told a gathering of Khamenei's representatives in Iranian universities that the *Assembly of Experts*, the clerical body that chose Khamenei, "... do not appoint the Supreme Leader, rather they discover him [...] In the Islamic system, the office and the legitimacy of the Supreme Leader comes from God, the Prophet and the Shi'ite Imams".[175]

Amnesty International reported on 15 January that on 11 and 12 January Iranian security forces used tear gas, pointed pellets and pepper spray against peaceful demonstrators protesting the government lying about shooting down the passenger plane.[176]

Funerals

Iran's security forces were on alert not to let people turn funerals of the plane crash victims into demonstrations. Nevertheless, in some Iranian cities such as Isfahan and Sanandaj, participants in these funerals have shown their anger and shouted anti-government slogans.[177] The supreme leader Ali Khamenei praised the country's armed forces and described the protesters as those deceived by foreign media.[178]

Arrests

On 14 January 2020, Iran's judiciary announced that several arrests had been made over the accidental shooting down of the aircraft. The spokesman, Gholamhossein Esmaili, did not name any suspect or say how many had been held.[179][180] In a televised speech, President Rouhani said the judiciary would assemble a special court with a high-ranking judge and tens of experts to oversee the investigation.[181]

On 14 January, it was announced that Iranian authorities had arrested the person who had published a video of the aircraft being shot down. An Iranian journalist based in London who initially posted the footage insisted his source was safe, and that the Iranian authorities had arrested the wrong person.[182] According to Tasnim News Agency and the semi-official Fars News Agency, Iranian authorities are looking for the person(s) who distributed the video.[183]

Families of the victims

Iran's Radio Farda reported that according to Zeytoun (a foreign-based Persian website) Iranian intelligence agents forced families of the victims to give interviews on state TV, declaring their support for the Iranian government or else the government would not deliver the bodies of the victims.[184]

In February, in Toronto, a proposed class action claim was filed in the Ontario Superior Court of Justice against Iran, Iranian Supreme Leader Ali Khamenei, and various branches of the Iranian military, among others.[185][186] Lawyers of the families of Canadian victims are seeking compensation of at least $1.1 billion.[187][188]

On 3 April 2020, the families of the victims formed an association in Toronto, Ontario, Canada, to follow the case through legal avenue. The association's spokesman, Hamed Esmaeilion, said the association's aim is, "to bring the perpetrators of the crime to justice, including those who ordered it".[189] In July 2020, Esmaeilion was outraged that the ICAO had yet to condemn the incident, and pointed out that the ICAO needed only three months to adopt a unanimous resolution condemning in the strongest terms the destruction and alleged murders of Malaysia Airlines Flight MH17.[190]

Ukraine

President Zelensky expressed condolences to the relatives of the victims[191] and cut short his diplomatic visit in Oman. He later added that several aircraft had been prepared in Kiev to travel to Tehran to transport the dead. He declared 9 January a national day of mourning, with Ukrainian flags flying at half-mast on government buildings. He also announced unscheduled inspections on every airliner in the country and asked Ukrainians to refrain from visiting Iran and Iraq for the time being.[192] On 11 January Zelensky said, "Ukraine insists on a full admission of guilt. We expect Iran to bring those responsible to justice, return the bodies, pay compensation and issue an official apology. The investigation must be full, open and continue without delays or obstacles."[193]

justice, return the bodies, pay compensation and issue an official apology. The investigation must be full, open and continue without delays or obstacles.[193]

On 13 January, Ukraine's Foreign Minister, Vadym Prystaiko, said five of the countries that had citizens on board the airliner—Canada, Ukraine, Afghanistan, Sweden and an unnamed country—would meet in London on 16 January to discuss possible legal action.[64]

Canada

Prime Minister of Canada Justin Trudeau speaks to media

With the large loss of Canadian life, Canadian Foreign Affairs Minister François-Philippe Champagne and Transport Minister Marc Garneau both expressed sympathy for the victims. Champagne announced that he was in touch with the Ukrainian government, and Garneau announced that Canada was offering assistance in the investigation.[194] Prime Minister Justin Trudeau insisted on transparency and justice for the families and loved ones of the victims.[193] On 14 January, Trudeau said tensions and escalation between Iran and the United States were responsible for the shootdown.[195][196]

On March 31, Prime Minister Justin Trudeau announced the appointment of Ralph Goodale as Special Advisor to the Government of Canada.[197] Goodale will "examine lessons learned" from Flight 752, Ethiopian Airlines Flight 302, Air India Flight 182 and other air disasters and "develop a framework to guide Canada's responses to international air disasters."[198]

United Kingdom

Prime Minister Boris Johnson called for the repatriation of the bodies of the dead and pledged to work with Canada and Ukraine.[193]

Ambassador of the United Kingdom to Iran, Robert Macaire was arrested on 11 January 2020 during protests in Tehran but released shortly afterwards.[199][200] The ambassador was detained on suspicion that he had joined demonstrations against the government; he denied this and clarified that he had attended an event advertised as a vigil, to pay respects to the victims, and had left five minutes after people started chanting. The British government called his arrest a "flagrant violation of international law".[200] Macaire had been arrested 30 minutes after leaving the vigil he said he had attended, according to *The Guardian*.[201] The following day Macaire was summoned to the Ministry of Foreign Affairs, in order to explain his presence during the protest.[202] The U.S. has urged the Iranian regime to issue the British ambassador a formal apology for disregarding his rights and to reiterate that all the rights of diplomats should be respected.[203]

Source : YorkRegion (2020, Jan 09) - PDF = [HM000L][GDrive] , PNG = [HM000M][GDrive]

'There are no words': York Region Iranian-Canadian community mourns plane crash victims

'Right now, everyone is completely united in grief': Kaveh Sahrooz

News Jan 09, 2020 by Kim Zarzour , Sheila Wang YorkRegion.com

Iranian Plane Crash - Flag half mast

A flag at Richmond Green Secondary School in Richmond Hill flies at half mast Jan. 8 after the Ukranian International Airlines crash near Tehran, Iran. - Steve Somerville/Torstar

While all of Canada mourns the loss of 57 citizens and dozens more residents in the Ukrainian International Airlines tragedy in Iran, the Iranian-Canadian community is particularly impacted by the incident.

York Region is home to many Iranian-Canadians, with the largest number in Richmond Hill.

Majid Jowhari, MP for Richmond Hill MP, released a statement on Jan. 8 to extend his condolences to the families and friends of the passengers on the flight that crashed in Iran.

"There are no words at this time to ease the grief we all feel," said the Iranian-born Liberal MP, who was re-elected to represent Canada's most Iranian riding in 2019.

Kaveh Sahrooz, Iranian-Canadian lawyer and human rights activist, said the expat community is grief-stricken.

"All morning I've been reading messages on social media from people who knew someone on the flight," he said. "We are a growing community but at the end of the day, we are a relatively small community and everyone knows everyone."

He said Iranian-Canadians had been divided lately surrounding the issues of Trump and Soleimani, but that division has been pushed aside.

"Right now, everyone is completely united in grief."

Majid Zohari, a Richmond Hill Iranian-Canadian, said most people in the community have been impacted in some way.

"Iranians have large families," he said. "Everybody has relatives home in Iran."

The overwhelming feeling, he said, is one of confusion.

"Everybody's confused about what has happened," he said. "We are all hearing different stories from different sources."

Many are wondering about the coincidental timing of ballistic missiles launched by the Iranian regime occurring at the same time as the plane crash, he said.

"This is huge. We don't know if there is a tie between."

Reza Moridi, an Iranian-Canadian and former MPP for Richmond Hill, said the community is devastated.

"Our community has been going through so much," he said. "(Iran) was once such a wonderful country."

He referred to deaths and imprisonment under the regime and recent events with the U.S., saying the expat community worldwide worried about what would come next.

"And then we wake up this morning to another tragedy — the plane crash. It has been really tough on our community."

Former Richmond Green Secondary School teacher, Mojgan Faghani, said the news about tragedy was "devastating", adding "I hope it's an accident".

Faghani found out that Richmond Green student Arad Zarei, 17, was a passenger on that plane through a message from a previous colleague.

A passenger jet heading to Ukraine from Iran crashed minutes after taking off in the Iranian capital of Tehran, killing 176 people on board, including 138 people who were booked on a connecting flight to Toronto, which included 63 Canadians, according to Prime Minister Justin Trudeau, Ukrainian officials and friends of the victims.

Ukrainian International Airlines has released a list of the passengers on board the plane, which was headed to the Ukrainian capital, Kyiv.

Several of the victims either lived in, or had close ties with, York Region.

Jowhari said his office is in touch with Global Affairs Canada and is able to provide updates and assistance to all those affected as necessary.

Those who are directly impacted are encouraged to contact the MP's office at majid.jowhari@parl.gc.ca or 905-707-9701, or Global Affairs Canada's 24/7 Emergency Watch and Response Centre at 1-613-996-8885 or 1-800-387-3124, or sos@international.gc.ca.

Canadian citizens in Iran requiring consular assistance should contact the Canadian Embassy in Ankara at +90 (312) 409 2700 or call Global Affairs Canada's Emergency Watch and Response Centre at +1-613-996-8885.

by Kim Zarzour

A Ukraine-bound plane crashed minutes killing 176 people on board, including 63 Canadians and several people with connections to Canada. (Wed., Jan. 8, 2020)

Source : [HM000N][GDrive]

Newlyweds, university students and families from across Canada among Iran plane crash victims

By Star Staff

Wed., Jan. 8, 2020timer62 min. read

Early Wednesday morning, a passenger jet heading to Ukraine from Iran crashed minutes after taking off in the Iranian capital of Tehran, killing 176 people on board, including 63 Canadians and several people with connections to Canada, according to Ukrainian officials and friends of the victims.

Ukrainian International Airlines has released a list of the passengers on board the plane, which was headed to the Ukrainian capital, Kyiv.

The airline said most passengers were transiting through Kyiv to other destinations. The airline offers an inexpensive connecting flight from Kyiv to Toronto's Pearson International Airport.

In a flood of tributes posted to social media, friends of some listed passengers identified them as university students, professors and professionals returning to Canada after the winter break.

Neda Sadighi, GTA

Dr. Neda Sadighi.

A clerk at a Richmond Hill eye clinic confirmed that optometrist Dr. Neda Sadighi was on the plane after visiting Tehran for 10 days on vacation. According to the clinic's website, Sadighi is an eye surgeon who started practising in Tehran before coming to Canada. She's a member of the College of Optometrists of Ontario, and the Iranian Association of Ophthalmologists.

Joe Belden, who worked alongside Sadighi at Optical Eyeworks in Richmond Hill, Ont., said office staff were aware of Sadaghi's travels to Iran and had learned of her death directly from her family members.

Belden said clinic staff were struggling to come to terms with the death of their only doctor, who he described as an amazing person.

"She was really helpful to disadvantaged people," Belden said. "She treated everybody with respect no matter their background. She was kind all the way around."

Suzan Golbabapour, GTA

Suzan Golbabapour.

At a Remax office in Richmond Hill, a realtor said real estate agent Suzan Golbabapour was also a passenger on the plane, after travelling to Iran last month for holidays.

University of Waterloo students Marzieh (Mari) Foroutan and Mansour Esnaashary Esfahani

University of Waterloo students Mari Foroutan and Mansour Esnaashary Esfahani.

A spokesperson with the University of Waterloo said they are aware the names of two PhD students, Marzieh (Mari) Foroutan and Mansour Esnaashary Esfahani, listed among the dead on the flight.

Foroutan was a student in the university's geography department, while Esfahani studied civil engineering, the school said.

A friend of Foroutan's, Jaya Sree Mugunthan, told the Star she was an Iranian international student at the school, calling her an "ambitious person."

In her 30s, Foroutan was described by her friend Jacqueline Eenkooren as a "powerful woman who put everyone else before herself," in a Facebook message to the Star.

Foroutan was "so sincere, gracious, and generous" and "ridiculously humble" despite her many academic achievements, Eenkooren said. She did an animated Ted Talk entitled "Could We Actually Live on Mars?" that discussed the unique features of the red planet. Her research focused on "the application of new algorithms and technologies in remote sensing to study climate change."

She also researched "planetary extremes from hyper-arid hot deserts to freezing worlds," according to her University of Waterloo profile on the university's website.

"She was always looking for little opportunities to treat other people around her. She'd buy you a cookie, just because, and pretend to get angry if you tried to decline in any way," Eenkooren said.

"Amazing how someone who is so quiet and understated could be so strong and be such a force to be reckoned with at the same time. There will never be another Marzieh."

University of Guelph students Milad Ghasemi Ariani and Ghanimat Azhdari

Milad Ghasemi Ariani.

Ghanimat Azhdari, University of Guelph student

The University of Guelph also confirmed two of its PhD students were passengers: Ghanimat Azhdari, who was doing work in indigenous conservation in the Department of Geography, Environment and Geomatics; and Milad Ghasemi Ariani, who was pursuing a PhD in the Department of Marketing and Consumer Studies.

The university originally said Azhdari's partner was also on the plane, but later said it could not confirm that was the case.

University of Guelph associate professor Faisal Moola confirmed in a tweet that Azhdari was one of his PhD students. "Ghanimat was on her way back to @uofg after visiting her family and traditional Indigenous territories in Iran over the December break. The students and I are in so much pain," he wrote.

"Ghanimat was an Indigenous person who was born into the nomadic Qashqai tribe in southwestern Iran," Moola added in a statement to the Star, adding: "The one thing that brings me a little comfort in coping with Ghanimat's death is the knowledge that my dear student was a powerful and passionate young leader in defence of Indigenous peoples and their territories, and that her life's work will continue."

Ariani is being remembered as a student who would be there for his classmates when they had a problem, or needed someone to talk to.

"He was really caring because he was helping other students," Towhid Islam, a professor and researcher with the University of Guelph's Gordon S. Lang School of Business and Economics, told the Guelph Mercury Tribune.

"Typically doctoral students are mature — they have families, children, multiple problems, they don't have enough money. I found him helping other people, counselling them and motivating them."

University of Alberta professors Mojgan Daneshmand and Pedram Mousavi, with daughters Daria and Dorina

Pedram Mousavi, 47, Mojgan Daneshmand, 43, and their daughters, Daria Mousavi, 14, and Dorina Mousavi, 9, seen in this family photo posted to Pedram Mousavi's Facebook account in 2014.

Masoud Ardakani, the University of Alberta's associate chair of electrical and computer engineering, confirmed in an email that professors Mojgan Daneshmand and Pedram Mousavi were on the flight, along with their daughters Daria and Dorina.

Nooran Ostadeian, who has known them since 2010 when she helped them find a home as a real estate agent, said the couple was among her closest friends in Edmonton.

"They were like an example of the happiest couple that I've ever known in my life," Ostadeian said. "I want them to be remembered as a symbol of love, community members who did a lot of dedication and contribution to the community. Great teachers for their students."

Friend Arezu Omaraee called the loss unbearable.

"They were more than friends, they were our family basically here," she said at a memorial.

"They were hard working, scientists, beautiful hearts, angels really."

Omaraee said they received a text from Pedram Mousavi from the airport and he was anxious to get out of Iran.

"He said, 'I just want to get out of this mess,'" she recalled. "But still he was joking about it. He always had this funny, cheerful attitude about everything."

Hossein Saghlatoon, who did his PhD and post-doctorate studies under Mousavi, said he has known the family for about six years.

"I was crying my eyes out," he said. "It's not just that I was working with them or that he was my boss. He was a friend. He was like a father to me."

Saghlatoon said it took him several hours to confirm the information before he told his colleagues one by one.

"Both of them were amazing, sweet people. They were so kind, irreplaceable," he said.

Sina Ghaemi, an engineering professor at the University of Alberta, knew Mousavi for about six years. Their offices were next door to each other.

"He was a really fun person and always laughing," Ghaemi said. "He was a very happy person."

Yeganeh Molazem said Pedram, Mojgan, Daria and Dorina were her family away from home.

"They treated everyone around them with love and kindness," she said through tears at a memorial in Edmonton. "Daria and Dorina were like my little sisters — the most incredible girls I ever knew. They were so smart, hardworking, compassionate and always with a smile on their face."

Yolazem said Daria just turned 14 and Dorina would have turned 10 in March.

"The world has lost two of the most beautiful souls," she said.

Siavash Maghsoudlou Estarabadi, wife Azaden Kaveh and daughter Paria

McMaster University confirmed Wednesday that Siavash Maghsoudlou Estarabadi, a former post-doctoral fellow in the faculty of health sciences who left the university in 2018, was listed as a passenger.

An Iranian friend of Maghsoudlou Estarabadi's in Hamilton, who did not want her name published for fear of retribution if she returns to Iran, said he was travelling with his wife, Azaden Kaveh, and 15- or 16-year-old daughter, Paria. They were also listed as passengers.

The family was living in Sweden, the friend said.

Dr. Sarah McDonald, a professor in McMaster's department of obstetrics and gynecology who worked with Maghsoudlou Estarabadi in Hamilton, remembered him as "a kind and thoughtful person." She said his research focused on the important issue of the causes of preterm birth.

Daniel and Dorsa Ghandchi

According to a 2017 McMaster newsletter, Maghsoudlou Estarabadi had joined the department of obstetrics and gynecology as a post-doctoral fellow in perinatal clinical epidemiology. He completed his PhD from the Karolinska Institute in Sweden and received his doctorate of medicine from Iran University of Medical Sciences.

Iman Ghaderpanah and Parinaz Ghaderpanah, Toronto

Iman Ghaderpanah and Parinaz Ghaderpanah.

Sam Green, the owner of a GTA real estate agency, said Toronto-based mortgage broker and realtor Iman Ghaderpanah was on the plane travelling with his wife, Parinaz Ghaderpanah, on holiday.

wife, Parinaz Ghaderpanan, on holiday.

“They are just a young couple, and they were building a life together,” Green said. “It’s a tragic situation.”

Nima Ahmadi, the vice-president of the Tirgan Festival, said Parinaz was a member of the non-profit’s funding committee and was a “brilliant lady,” who used her background in banking to help the organization. She worked at RBC, he said.

“She was a very, very beautiful person inside and out,” he said. “I’m going to miss her.’”

Her husband was also a sponsor of the festival. He said they were both in their early to mid-30s and coming back from visiting their parents in Iran.

Parinaz was a branch manager at a Toronto RBC, the bank confirmed to employees, and her husband had also worked at the bank for a time.

In a note to bank staff, she was remembered as a strong and dedicated leader.

“She embodied the best of RBC and we were incredibly lucky to have known and worked with her for the past nine years,” the note read.

“Her presence on the ship will be sadly missed, and she will be missed dearly by her branch, the Toronto northeast market and all of the lives she touched in RBC.”

Parisa Eghbalian and her daughter Reera Esmaeilion, GTA

Hamed Esmaeilion (left) of Log Home Dental in Caledon East is mourning the loss of his wife, Parisa Eghbalian, and daughter Reera Esmaeilion.

Dr. Hamed Esmaeilion of Log Home Dental in Caledon East gave permission to confirm he is mourning the loss of his wife, Dr. Parisa Eghbalian, and daughter Reera Esmaeilion, said office manager Leanne Robertson.

Robertson said Eghbalian and the couple’s daughter were on the trip to attend his wife’s sister’s engagement party.

Esmaeilion and Eghbalian also ran Aurora E&E Dentistry in Aurora together. According to that clinic’s webpage, Eghbalian was born and raised in Iran, and graduated from Tabriz University of Medical Science in 2001. Prior to immigrating to Canada in 2010, she worked as an associate for nine years. In her spare time, she enjoyed reading and watching movies with her husband and young daughter.

At the Aurora office, assistant Manija Ghotbi told the Star that owner Eghbalian had left for vacation last month with her daughter.

We’re all devastated,” Ghotbi said.

Faezeh Falsafi and her two children, Daniel and Dorsa Ghandchi, GTA

Faezeh Falsafi, with her son Daniel Ghandchi and daughter Dorsa Ghandchi

Daniel, 9, and Dorsa, who would have been 17 this week, were travelling with their mother Faezeh, 46. Their father Alireza Ghandchi spoke to the Star from Frankfurt airport, where he’s on route to Tehran for their funerals.

Daniel was a “cute” little boy he said, and Dorsa was a “super talented” artist, who loved making YouTube videos and playing piano. A photo from her birthday last year shows her beaming next to a cake, and black and gold balloons, her little brother smiling mischievously beside her. His wife had studied mechanical engineering in Iran and was close to graduating from an immigration consultant program here in Canada. In the meantime she was working as a realtor.

“After this life is meaningless for me,” he told the Star. “I don’t know how I can continue.”

What he wants now is just to know what happened to the doomed plane.

“I’m not a political person,” he said, but “it’s our right to know.”

Falsafi had worked at Homelife Bayview Realty Inc. since 2016, said colleague Olga Moss, calling her an “amazing” and “very hard-working” person.

“She’s gone with her two kids,” Moss said. “It’s just gut wrenching.”

Ardalan Ebnoddin-Hamidi and Niloofar Razzaghi, their son Kamyar Ebnoddin-Hamidi, Metro Vancouver

Niloofar Razzaghi, her husband Ardalan Ebnoddin-Hamidi and their son Kamyar Ebnoddin-Hamidi lived in Port Coquitlam, B.C.

Ardalan Ebnoddin-Hamidi, his wife Niloofar Razzaghi, and their teenage son Kamyar Ebnoddin-Hamidi are confirmed to have been on the flight. Razzaghi’s name does not appear on the official flight manifest, but multiple sources have confirmed to the Star she was on board.

The family was from Metro Vancouver, according to the chair of the Tricity Iranian Cultural Society. Behzad Abdi said he and Ardalan had known each other since going to university in Iran and that Ardalan had come to Canada as a civil engineer specializing in tunnels to help build the SkyTrain Evergreen extension to Coquitlam.

“When he worked he was very serious,” Abdi, said of his friend. “But he was a funny guy as well.”

Abdi said Ardalan was an active volunteer and helped organize many events through the society. His wife had just finished training to become a teacher two months ago.

Jessi Eiriksson, 15, said through tears that Kamyar was one of her best friends. Both were in Grade 10 at Riverside Secondary School in Port Coquitlam, B.C.

“He was the most caring person I have ever met. He was always there for me and he would be there for anybody whenever they needed someone to talk to,” she sobbed.

“It’s the hardest thing losing him.”

He loved making music and wanted to become a producer when he was older, she said.

She said he also enjoyed playing soccer for fun and they would often kick a ball around together.

“He was shy except he’s just such a loving person that everyone loves Kamyar. He makes everyone happy just with his smile and a joke.”

The University of British Columbia said Razzaghi graduated with a bachelor of science in math in 2010 and a bachelor of education in 2018.

York University student Sadaf Hajiaghavand

York University student Sadaf Hajiaghavand.

Friends of Sadaf Hajiaghavand, 27, confirmed that she was a second-year human resources student at York University. Naz Moayed said that Hajiaghavand quickly became one of her closest friends after the women who met at York University bonded over the discovery that they both arrived in Canada mere days apart from each other in 2016.

“It’s really hard,” Moayed said. “I can’t believe that she’s not here. I just spoke with her two days ago.”

Moayed said Hajiaghavand was a Canadian permanent resident and was in Iran visiting family for 10 days.

“She was kind and into fashion,” she said. She said Hajiaghavand worked two jobs including as a beauty consultant at a Toronto cosmetic store. She also pursued modelling on the side.

Arash Pourzarabi and Pouneh Gorji, Edmonton

Newlyweds Arash Pourzarabi, left, and Pouneh Gorji.

Also on the plane were young newlyweds Arash Pourzarabi and Pouneh Gorji, of Edmonton. Payman Paseyan, a member of the Iranian-Canadian community in Edmonton, said they’d married just days before boarding the plane.

Pourzarabi was working on a graduate degree in artificial intelligence at the University of Alberta, and his supervisor, Prof. Michael Bowling, said the couple loved to spend their free time exploring new parts of Edmonton.

Bowling described Pourzarabi as “so bright.”

“Not just smart, which you have to be doing a graduate degree in artificial intelligence,” he said in an email, “but he brought a brightness to each meeting … particularly with his smile.”

Alina Tarbhai and her mother, Afifa Tarbhai, Toronto

"There are some who bring a light so great to the world that even after they have gone the light remains," wrote COPE 343 when announcing the death of Alina Tarbhai

Afifa Tarbhai.

The Ontario Secondary School Teachers’ Federation confirmed one its members, Alina Tarbhai, was on the flight.

“All of us who work at OSSTF/FEESO’s Provincial Office in Toronto are shocked and deeply saddened by the loss of our colleague,” the federation said in a release.

“Alina was a valued employee, and part of a tightly-knit team at Provincial Office. She was respected and well-liked by all. Her passing represents a profound loss for all of us who worked with her.”

Her mother, Afifa Tarbhai, was also among the victims in the plane crash.

“On behalf of everyone at the City of Markham, we send our deepest condolences to a team member, Muhammad Tarbhai, a Markham aquatic staff member who lost his mother and his sister Alina,” Mayor Frank Scarpitti wrote on Twitter. “This unimaginable tragedy has affected us all.”

Cope Local 343 also shared their condolences in a post over Instagram.

“Our hearts, love and strength is with the family, colleagues, and friends of fellow COPE 343 Sister Alina Tarbhai and her mother Afifa Tarbhai who were victims of the plane crash in Tehran, Iran.”

Toronto Grade 10 student Maya Zibaie and her mother, Shahrzad Hashemi

Northern yearbook photo of Maya Zibaie.

Shahrzad Hashemi

Shahrzad Hashemi and her daughter, Maya Zibaie, were also on the flight. They were returning to Toronto, after a few weeks of vacation in Iran, according to Ramin Moradzadeh, a longtime family friend.

Hashemi’s husband, Mahmoud, had also travelled with them to Iran, but had to come back earlier because of a job prospect he had applied for.

“They were new to Canada,” said Moradzadeh, noting the family of three were living in the city’s west end near Eglinton and Bathurst. Mahmoud rushed back to Iran after the tragedy.

“They are so wonderful, so kind. I just lost a part of my life.”

Northern Secondary School principal Adam Marshall confirmed to the Star that Maya Zibaie was a Grade 10 student and had been at the school for two years.

“It’s pretty devastating,” he said.

In a statement sent to parents and the school community, Marshall described her as “kind, happy and well-liked by her peers.”

“She was new to Canada, enjoyed attending high school and often shared with staff how excited she was about her future and reaching her academic goals. Maya will be sorely missed.”

Alvand Sadeghi, his wife, McGill student Negar Borghei, his sister Sahand Sadeghi and niece Sophie Emami, Toronto

Negar Borghei, her husband Alvand Sadeghi

Sophie Emami

Sophie Emami

Negar Borghei was “the type of sister you could rely on,” Hamidreza Borghei, who said his sister was loved by colleagues, family and friends alike.

“Because of her, I believed that having an older sister is a blessing,” he said. “She did everything with a smile on her face. She was perfect.”

Negar, a master’s student at McGill University, was killed along with her husband, Alvand Sadeghi, a web developer working in Toronto.

Sadeghi’s sister, Sahand Sadeghi, and her daughter, Sophie Emami, a senior kindergarten student at Lillian Public School in Toronto, were also killed.

Amirhossein Maleki, a cousin of Negar’s, told the Star that she had already received a master’s in Iran, but was pursuing another in Canada. Her husband, Alvand — a skilled pianist, according to Maleki — moved here after her.

Hamidreza said Negar would take the train to Toronto every weekend to see her husband, who he said was like a “brother” to him. He believed that Alvand was “the perfect match” for his sister: they were both calm, collected, warm and hard-working.

“They were lovebirds: you never saw them fight or argue. And there was no tension, even when they were apart for work and school. If anything, they were more in love because of the distance,” Hamidreza said.

Sahand was “the most hospitable person,” Hamidreza said. And Sophie, her daughter, was “an angel.”

Hamidreza said that two days before the family was set to depart Sophie wanted to practise her English. Hamidreza helped her out.

“We made a menu with food on it. And she put ‘poutine,’ the most Canadian food ever, as her first item. Then ice cream and jelly beans and cake.”

Sophie seemed “homesick for Canada” the whole trip, Hamidreza says.

In a statement, the Toronto District School Board said Sophie was an amazing child who was dearly loved by her teachers and classmates.

“She always had a smile and hug for everyone,” a statement said.

Hamidreza said he wanted to thank “everybody in Canada” for giving his sister “freedom, peace and hospitality.”

“I’m so glad she chose Canada; it was the land that gave her freedom — and we will never forget that.”

Toronto architect Mahdieh Ghassemi, and her children, Arsan Niazi and Arnica Niazi

Toronto architect Mahdieh Ghassemi.

Mahdieh Ghassemi, a Toronto architect, her son Arsan Niazi, 11, and daughter Arnica Niazi, 8, were also on board the plane that crashed, according to Nitin Malhotra, the founder of N Architecture Inc.

Ghassemi had worked at the firm for five years according to Malhotra, who described her as a “rock star” in her field and said that she’d left “a lasting impression” due to the nature of her job.

Malhotra said that right before she flew to Iran, Ghassemi had won an urban design award for a Tim Hortons that she’d designed in Brampton.

“You really can’t get any more Canadian than that,” he said.

The Toronto District School Board confirmed Arsan was a Grade 6 student at Pleasant Public School who was enrolled in the extended French program for three years, a letter that went out to parents states. “He is a wonderful example of kindness and will be sorely missed by our students and staff,” the letter states.

Arnica Naizi was in Grade 3 at Finch Public School, where she was being remembered for her “bright smile, positive spirit and kindness to all.”

McMaster University students Iman Aghabali and Mehdi Eshaghian

Iman Aghbali and Mehdi Eshaghian

McMaster University confirmed that two PhD students in the Faculty of Engineering were believed to be on board, Iman Aghabali and Mehdi Eshaghian.

“McMaster is a tightly knit community and there will be many faculty, staff, colleagues, friends and fellow students who need our support and caring at this tragic time,” said president David Farrar in a statement.

According to McMaster’s website, Aghabali received his bachelors in electrical engineering, and joined McMaster as a PhD student to pursue his research interests under supervision of professor Ali Emadi in McMaster automotive resource centre, in 2017. His research focused on design and control of power electronics converters in hybrid electric vehicles applications.

The website says Eshaghian joined MARC in 2018 to pursue his master’s degree, and then PhD in mechanical engineering. He had previously graduated from Sharif University of Technology in Tehran.

The McMaster Iranian Student Association also paid tribute to the two.

“Mehdi and Iman were two kind souls who always celebrated Iranian traditions with our community,” the association said.

“It is devastating for the entire McMaster community to hear the painful passing of young students who left behind their families and motherland in hopes of a better future career.”

Ali Mazaheri said his best friend Eshaghian would have turned 25 in a week.

He said Eshaghian had been seeing friends and family and was on the flight because it was the cheapest route back to Canada.

Mazaheri said the two last saw each other 11 days ago and went shopping, visited a tea house and took photos.

“When we said goodbye he told me maybe I can’t see you again, so if I can’t, goodbye,” Mazaheri said.

Alireza Pey, Ottawa

Alireza Pey

Alireza Pey.

Alireza Pey, known to his friends as Ali, was a loving father who cared deeply for the Iranian community in Ottawa. He leaves behind his two daughters, aged 8 and 10.

“It’s devastating and I’m in disbelief,” said Maryam Kamkar, a friend of Pey’s and Iranian Canadian family community member.

Pey organized a Facebook group to bring Iranian Canadian families together in Ottawa, “to meet and provide an opportunity for kids to play and keep the language and culture going,” Kamkar added.

Pey is also the founder and CEO of MessageHopper, a tech company in Ottawa. Back in 2017, he also published a book called “Discrimination in the Canadian Courts: The True Story of a Muslim Father Fighting for His Children” based on his experience moving to Canada from Iran as an experienced engineer in 2000 and fighting discrimination against immigrant fathers in family court.

“He was a great man who tried to bring the community together,” Kamkar says. “He provided his personal residence as a meeting place for Iranian families to come together, celebrated both Iranian and Canadian holidays with a large group of friends.”

Delaram Dadashnejad, Vancouver

Delaram Dadashnejad.

A student from Tehran studying at Langara College in Vancouver was also killed, Delaram Dadashnejad, 27, was taking university transfer courses at the college.

In a statement Langara College said Dadashnejad was visiting family in Iran and on her way back to Vancouver to continue her studies.

University of Windsor research assistant Hamid Setareh Kokab and wife Samira Bashiri

Samira Bashiri, left, and Hamid Setareh Kokab.

Assistant professor at the University of Windsor Afshin Rahimi confirmed to the Star that his research assistant Hamid Setareh Kokab and his wife, Samira Bashiri, were on the plane.

University of Toronto students and siblings Zeynab Asadi Lari and Mohammed Asadi Lari

UTM student Zeynab Asadi Lari.

Mohammad Asadi Lari.

University of Toronto Mississauga (UTM) student Zeynab Asadi Lari was pursuing a science degree at UTM and was the UTM branch president of the STEM Fellowship, a Canadian non-profit that mentors young scholars in data science and scholarly writing.

STEM Fellowship co-founder Dr. Sacha Noukhovitch confirmed that Asadi Lari, and her brother, Mohammed Asadi Lari, were on the plane that crashed.

Mohammed Asadi Lari, who attends the downtown campus of University of Toronto, co-founded the STEM Fellowship.

The University of British Columbia also confirmed the deaths of the two former students and released a statement expressing their “deepest condolences” to their family and friends. The school said Zeynab had enrolled at UBC in 2016 in the Bachelor of Science program, with a biology major. Her brother graduated in 2018 with a Bachelor of Science in cellular, anatomical and physiological sciences with honours standing.

University of Toronto student Mohammad Amin Jebelli

Mohammad Amin Jebelli.

Mohammad Amin Jebelli, who was completing a Masters of Health Science in the Translational Research Program at the University of Toronto, had travelled to Tehran to be with his family over the holidays.

Joseph Ferenbok, director of the Translational Research Program, said Jebelli had graduated medical school in Iran and worked as a doctor there. After mandatory military service, he chose the program at U of T because he was looking for something “creative and entrepreneurial.”

Jebelli, 29, was an accomplished and bright student. According to his Linkedin profile he had done volunteer work in underserved areas of Iran as a family and emergency care physician, and was interested in medical imaging and cardiovascular diseases.

His “selfless” nature really stood out, Ferenbok said. He said he would always stay late after department events, washing dishes or cleaning up, even when he was commuting from Waterloo during his first semester.

“No matter how much work he had or what he was doing, he always had time to help other people,” Ferenbok said. “He’s touched a lot of lives.”

Kevin Vuong taught Jebelli in a Leadership and Project Management class.

Vuong described him as “a phenomenal scientist” with an interest in cardiovascular diseases, and who had a passion for photography.

“We lost 176 people yesterday, one of them was Amin, and the world is worst for it. May you rest in peace, my friend,” wrote Vuong, who also serves in the Royal Canadian Navy, in a tribute tweet.

Siavash Ghafouri-Azar and Sara Mamani, Montreal

Siavash Ghafouri-Azar and Sara Mamani from Montreal are shown in a handout photo from family friend Gounash Pirniya taken at their wedding in Iran about a week ago.

Two graduates from Concordia University in Montreal were also among the dead. Siavash Ghafouri-Azar and Sara Mamani both graduated from the school of engineering at the university, the school confirmed on Twitter.

Babak Ghafoori Azar confirmed his cousin, Siavash Ghafouri-Azar, 35, worked for aerospace company Pratt & Whitney, in Quebec, after completing his master’s at Concordia. Mamani’s LinkedIn page suggests she’d been employed by Bombardier since 2018.

“It’s a nightmare,” Babak Ghafoori Azar said. “Everyone back home is crying. He was extremely bright.”

After relocating here in 2014, Ghafouri-Azar would go on to meet his future wife, Mamani, at Concordia, Babak Ghafoori Azar said.

“The couple decided to go back to Iran to get married in December, and were on their way home from their festive nuptials when disaster struck,” he said. “They went to Tehran to have the traditional ceremony and celebrate with family.”

Siavash Ghafouri-Azar, a mechanical engineer by trade, sent him pictures from the ceremony and the two exchanged pleasantries about the occasion. That was the last time they communicated.

They were close growing up in Tehran, said Babak Ghafoori Azar, now a journalist in Prague for Radio Free Europe, and although he hadn’t seen his cousin in about 10 years the two stayed in touch with frequent phone calls and social media contact.

Gounash Pirniya, a close friend, said the pair had recently bought a house together.

“They were successful, kind, honest and hardworking people,” Pirniya said. “They were enjoying their life as Canadian citizens.”

Shadi Jamshidi, Toronto

Shadi Jamshidi.

Shadi Jamshidi lived in Toronto and worked at the Mississauga office of Brenntag Canada as a technical sales representative.

The entire community at Brenntag Canada is “devastated” for the loss of Jamshidi, who was the company’s technical sales representative, said HR and communications director Stefania Badea.

Jamshidi, 31, had been working with the company for over a year, and had travelled to Iran to be with her family over the holidays.

“She totally was an amazing person,” said Badea, noting Jamshidi had just been selected to participate in the company’s upcoming global program on leadership in March. “She was a great employee, outstanding, always fun to be around. She had a very positive attitude, highly intelligent. We looked at her as one of our future talents.”

Carleton University student Fareed Arasteh and alumnus Mansour Pourjam

Fareed Arasteh.

Carleton University confirmed two of members of its community were on board the flight: Fareed Arasteh, a PhD student in biology, and biology alumnus Mansour Pourjam.

“Our thoughts are with Fareed’s and Mansour’s families, friends and colleagues at this difficult time, and with everyone who has suffered loss in this terrible tragedy,” the school said in a statement on their website.

Relatives said Arasteh was in Iran to marry his fiancée over the school holiday. Their wedding was just three days ago.

Golnaz Shaverdi, cousin of Arasteh’s wife, said the family is devastated by news of his death, especially his new bride, Maral, who remains in Iran.

“She’s devastated,” Shaverdi said. “He was such a nice guy. Everyone in the family really loved him. He was young and very kind. Everyone is, of course, devastated and they are also very worried for his wife, because she’s going through a very hard time now.”

Shaverdi spent a weekend with Arasteh before he left Canada and helped him pick out his wedding outfit.

“He was a very kind and very honest person. He was thinking about his fiancée, was glad that he was going to go and see her and that they were going to be married,” she said, breaking down into tears. “He talked about all their plans and their dreams about life.”

Bahareh Karami, York Region

Bahareh Karami.

York Region confirmed the death of a member of its staff, Bahareh Karami, who joined the municipality in 2018 working as a technologist in the capital planning and delivery branch within Environmental Services.

“We are so shocked and extremely saddened by this tragedy,” said York Region chairman and CEO Wayne Emmerson in a release. “Our prayers are with Bahareh’s family, friends and colleagues, and for everyone that may be impacted in any way by this horrific event.”

The release said the municipality is in the process of reaching out directly to Bahareh’s immediate family, who live in Tehran. It said she was a graduate of University of Tehran with a Bachelor of Science in chemical engineering, before receiving a master’s degree in science from North Carolina State University.

“Bahareh’s colleagues speak very highly of her,” said York Region chief administrator officer Bruce Macgregor. “She is being remembered for her love of family, a dedicated and strong work ethic, and great sense of enthusiasm.”

Karami lived in Toronto’s Riverside neighbourhood. In her spare time, she enjoyed Latin dancing, especially bachata, a popular social dance style and music genre from the Dominican Republic.

Her dance instructor Fernando Ulloa told the Star’s sister paper she was as a “hard worker with the goal to do better with every practice.”

He’ll “never forget the enormous smile on her face after all of our performances.”

Mahsa Amirliravi and husband Moh Salahi, Toronto

Mahsa Amirliravi and husband, Moh Salahi

Mazyar Amirliravi, the brother of Mahsa Amirliravi, 29, confirmed that his sister was on the flight with her husband Moh Salahi, 30.

“I’m so sad,” a sobbing Mazyar Amirliravi told the Star. Amirliravi said he found out about his sister’s death via news reports. He has since spoken to relatives in Tehran who confirmed she was killed in the crash.

Overwhelmed by grief, Mazyar Amirliravi was unable to speak, so his wife, Nafise Ghadimi, did so on his behalf. She said the couple were both engineers, who

Overwhelmed by grief, Mazyar Amirnavi was unable to speak, so his wife, Nahid Ghadimi, did so on his behalf. She said the couple were both engineers, who met at Ryerson University and later married in 2014. The couple were Canadian citizens, who lived in Richmond Hill and both taught engineering-related courses at Lambton College in Toronto.

“We were supposed to go pick them up today,” she said. “They were very young and successful.”

GTA secondary school student Arad Zarei

Arad Zarei

Arad Zarei, 18, was in Iran visiting his mother over the holidays in the city of Shiraz, according to a statement from his father Mehrzad Zarei, which he released through the office of Willowdale MP Ali Ehsassi.

“He was the apple of my eye and his energetic demeanour and caring personality left a lasting impression on his classmates and many friends,” the father wrote. “His life will undoubtedly leave a gaping hole in the lives of the many he touched.”

Mehrzad Zarei said his son was supposed to come back in Canada to resume his last semester at Richmond Green Secondary School.

École de Technologie Supérieure student Aida Farzaneh and her husband, alumnus Arvin Morattab, Montreal

The École de Technologie Supérieure, a public engineering school in Montreal part of the l’Université du Québec, also confirmed two deaths.

In a release, the school said Aida Farzaneh, a PhD student, who was lecturing in construction engineering, and her husband, Arvin Morattab, who got his PhD there in 2018, were killed in the crash.

“All the ETS community offers its most sincere condolences to the families and loved ones of Ms. Farzanah and Mr. Morattab, as well as to their teachers and colleagues,” the school wrote in a statement.

Razgar Rahimi, Farideh Gholami and their son Jiwan, GTA

Razgar Rahimi, who taught at University of Ontario Institute of Technology in Oshawa and Cetennial College in Toronto, with wife Farideh Gholami and their 3-year-old son Jiwan Rahimi.

Centennial College confirmed Prof. Razgar Rahimi was on the plane that crashed, together with his pregnant wife, Farideh Gholami, and their three-year-old son Jiwan.

Rahimi had started teaching in the department of engineering technology and applied science in September 2018, and was a sessional lecturer at the University of Ontario Institute of Technology in Oshawa.

“Professor Rahimi will be remembered as an engaging teacher and mentor, a friendly face who was always willing to assist students with their assignments, and as a warm human being who spoke often of his young family and his many colleagues and acquaintances both in Canada and back home in Iran,” wrote school president Craig Stephenson.

Friend Mahdiyeh Amiri told the Star that Gholami was an extremely talented and creative artist.

“She got the highest level of the Persian Calligraphy certificate when she was in high school. She got admitted to the university in 2002 for the bachelor degree in Industrial design and from the beginning she exceeded all the teacher’s expectations and graduated with distinction,” said Amiri, adding Gholami went on to work as an interior designer and jewelry designer, and designed yoga pants for ANU that were made from recycled water bottles.

She was dreaming to have her own jewelry design company one day, Amiri said.

“They were a happy family and they were bringing joy wherever they went. It’s a little bit soothing that the last days of their lives were spent in the love of their families,” Amiri said.

Another family friend, Mariana Eret, said the couple were “full of life, energy, plans, and dreams for the future.”

Eret said Razgar wanted to be a professor and that they were very caring and loving parents. Their son Jiwan just turned three last August and Gholami spent a whole month planning his birthday party.

“Jiwan was an extraordinary boy, he was smart, cheerful and he loved reading books. Last Halloween he wanted to be an avocado and Farideh made an avocado costume just for him.”

Eret said Farideh was seven months pregnant with their second son and the whole family were excited about the new addition.

“Farideh has already bought new things and decorated the bedroom for the new baby. They were caring and supportive friends and just fun people to be around. They had many close friends, both in the Iranian and non-Iranian communities,” Eret said. “If you had any question or problem, they were always there for you, ready to help selflessly in any way they could.”

Mohammad Sadeghi, Bahareh Hajesfandiari and Anisa Sadeghi, Winnipeg

Mohammad Sadeghi, Bahareh Hajesfandiari and Anisa Sadeghi.

A Winnipeg family of three will be dearly missed, said their neighbour Behnam Soltani.

Mohammad Sadeghi, who went by Mahdi; his wife Bahareh Hajesfandiari and their daughter Anisa Sadeghi were a kind family, Soltani said.

“They were some of the nicest people I’ve met.”

Soltani said the family was in Iran to visit relatives over the holidays and he knew they were coming back on the flight that crashed.

The family were involved in the local Iranian community, Soltani said. Mahdi Sadeghi was a board member for the Iranian association and Hajesfandiari volunteered at a Persian school.

Soltani was at their home about two weeks before they left. He never expected they wouldn’t return.

“Everybody is in shock. It is so bad.”

Forough Khadem, Winnipeg

Forough Khadem.

Jude Uzonna, the Health Research Chair and an associate professor of immunology at the University of Manitoba, said he was devastated by the death of his friend and colleague Forough Khadem.

He met her at a conference in Iran where she was a translator. At the end of the conference Uzonna told her if she ever wanted to do a doctoral program she could come to his lab in Winnipeg. She took him up on the offer and graduated about three years ago from the University of Manitoba.

Khadem was a talented immunologist and an absolutely fantastic person to be around, Uzonna said.

"If you walk into a room and Forough is there, you will try to find out who is this lady. She is very affable. She connects with people," he said. "It's devastating."

She went home to Iran in December to visit family. He texted her Monday to say he hoped that she was doing well. She responded that she was coming back to Winnipeg and hoped to see him soon.

"Now she's gone," he said.

Amirhossien Ghasemi, Winnipeg

Amirhossien Ghasemi.

Amir Shirzadi, a board member with the Manitoba Iranian Student Association, said his good friend Amirhossien Ghasemi was on the plane.

Shirzadi said his friend was visiting family in Iran and was on his way back to Winnipeg. Ghasemi was a graduate student in biomedical engineering at the University of Manitoba.

"I saw him before he left the country," said Shirzadi, who added that the two played games together.

"I can't use past tense. I think he's coming back. We play again. We talk again. It's too difficult to use past tense, too difficult. No one can believe it."

Another good friend, Shahin Ahmadi, said Ghasemi always wanted to help people and expressed compassion to everyone he encountered. They spoke an hour before the flight and Ghasemi told Ahmadi he was happy to return home and get back to his studies.

"We told each other that we cannot wait to see each other again."

Shekoufeh Choupannejad, Saba Saadat and Sara Saadat, Edmonton

Shekoufeh Choupannejad, left, with her daughters Sara Saadat, middle, and Saba Saadat, right.

Shayesteh Majdnia, a past president of the Iranian Heritage Society of Edmonton, said she was close friends with Shekoufeh Choupannejad, a gynecologist who died along with her two daughters Saba Saadat and Sara Saadat.

Saba was in the midst of her bachelors in the department of biological sciences at the University of Alberta, while Sara had just graduated from the university with a bachelor's degree in psychology, the school confirmed Thursday.

Majdnia said she had spoken to Choupannejad's husband, who is still in Iran, for confirmation. She said Choupannejad also leaves behind a son who was not on the trip with the family.

"She was the kindest person I had ever met," Majdnia said of Choupannejad.

She said Choupannejad was always there for community fundraisers, and often did her best to help take appointments with new immigrants who were overwhelmed and unable to find immediate medical help.

University of Alberta members Mohammad Mahdi Elyasi, Amir Hossein Saeedinia and Elnaz Nabiyi

Mohammad Mahdi Elyasi

Amir Saeedinia

Elnaz Nabiyi.

The University of Alberta confirmed the names of three more members of its community.

Mahdi Elyasi graduated from the university in 2017 with a masters from the Department of Mechanical Engineering and Faculty of Engineering.

According to the university, he was a bright and motivated student who always wanted to be helpful to others and taught English to refugees.

Amir Hossein Saeedinia was supposed to start his PhD student in the same department this month, according to the university. The school said he was known for his big smile, bright mind and enthusiasm for research and discovery.

Elnaz Nabiyi was a phD student in the Department of Accounting, Operations and Information Systems at Alberta School of Business.

The university said she graduated with a master's degree from Sharif University of Technology in Tehran, before moving to Canada to be with her husband a few years ago to begin their PhDs.

University of Toronto student Mojtaba Abbasnezhad

Mojtaba Abbasnezhad

The University of Toronto confirmed Mojtaba Abbasnezhad was among at least six students whose names are on the flight manifest. A LinkedIn profile with that name said he was a PhD student and teaching assistant at the school, and has done research on wastewater treatment.

Abbasnezhad was on the plane because he was returning from visiting his father and brother in Iran, according to his friend, Pooya Poolad.

"It's sad and shocking. I still can't believe he's not here among us. He was only 26 and just started his PhD with many dreams."

According to Poolad, Abbasnezhad had lost his mother a few years ago "and was always missing her. I think now they're together."

Poolad said he'd been thinking of joining his friend on the trip, but then changed his mind. "I wish he (had) never gone there as well. May he rest in peace," he said in a Facebook message.

Saharnaz Haghjoo and her daughter Elsa Jadidi, Scarborough

Saharnaz Haghjoo and her daughter Elsa Jadidi

A photo of Pedram Jadidi, seen at a memorial at the University of Windsor.

Al Haadi School, a private elementary establishment in Scarborough, posted on its Facebook page on Wednesday afternoon that its Grade 3 student Elsa Jadidi was on the plane that crashed, along with her mother. Describing her as a bright and brilliant student, the school said her passing will leave "a gaping hole" in people's hearts.

"She was a kind, compassionate soul who lit up our classrooms, and held so much promise as a stellar student and impeccable leader at such a young age," the school statement reads in part.

"Our school will be much dimmer without Elsa to warm the hallways with her smile and laughter."

Her mother, Saharnaz Haghjoo, was the manager of the Jump Scarborough program at the YWCA. The Jump program is designed to help resettle newcomers to the city.

Elsa had gone to school at Wali ul Asr in Brampton up until last year. A Facebook post from Wali ul Asr called Elsa a "wonderful girl who was always smiling."

Haghjoo's sister is one of Wali ul Asr's central campus teachers. The school called Haghjoo "a great supporter of the school," always making a point to "express her gratitude and appreciation to Elsa's teachers."

High school student Arshia Arbabbahrami and engineer Kasra Saati, Calgary

Kasra Saati

The Calgary Board of Education has confirmed that Arshia Arbabbahrami was an international student in Grade 12 at Western Canada School who was returning to Canada after spending the holidays with his family in Iran.

Principal Carma Cornea sent an email to students and families Wednesday that said Arbabbahrami was active in track, and the swim and dive teams: "He dreamt of being a doctor and was a leader in our community who many students looked up to."

Wednesday evening Calgary Mayor Naheed Nenshi tweeted his condolences to Arbabbahrami's family, as well as a second Calgarian killed in the crash. Kasra Saati was on the passenger list of the doomed flight.

"Our hearts are heavy as we grieve the loss across the country and in our city with Arshia and Kasra's families," he said.

Engineer Kasra Saati, listed as a passenger by the airline, was also believed to have been on the flight, according to a statement from his former employer, Viking Air.

In an emailed statement, a company spokesperson said he'd been a valued member of the team at the Calgary aircraft assembly facility up until last month. "His loss is deeply felt by everyone who had the opportunity to work with him," the statement read.

Saati travelled to Iran over the holidays for a reunion with his wife and two children, said friend Nina Saeidpour.

"He was such a smart, social person and of course he was a family guy."

Saeidpour said Saati boarded the plane to return to Calgary, while his wife, Mehsam, infant daughter and son, who is 10 or 11, stayed behind. Mehsam was in Iran during her maternity leave so that her family could help out with the new baby, Saeidpour said.

She said friends frantically went through the flight manifest when they got word of the crash. Saati's name was on it, but not the rest of his family. Eventually Saeidpour was able to connect with Mehsam, who was in shock and surrounded by friends and family.

"It's just so sad that people come here to have a better life for themselves and their families, and then something like this happens," said Saeidpour. "Suddenly, they leave behind a beautiful young family."

Angela Murray, a spokeswoman for Viking Air Ltd. said Saati worked at the company's aircraft assembly facility from early 2018 until December 2019. His LinkedIn profile says he was a quality engineer.

"His loss is deeply felt by everyone who had the opportunity to work with him," said Murray.

Ajax family Hiva Molani, Evin Arsalani and daughter Kurdia Molani

Hiva Molani, left, and Evin Arsalani

Kurdia Molani with her mother Evin Arsalani.

A young family of three from Ajax were also killed in the crash. Evin Arsalani, 30, her husband Hiva Molani, 38, and their one-year-old daughter Kurdia were all passengers on the flight that crashed. They were returning to Canada after spending three weeks in Iran to attend a wedding, according to friend Nasrin Alizadeh.

"We are all shocked and in disbelief. It was Evin's birthday on Jan. 2, and she had just turned 30," said Alizadeh in an emailed statement. "Evin's mother is currently in the hospital with the rest of her family as her mother became ill after hearing the tragic news.

"They are a well respected and well known family here among the Kurdish Iranian community. May they rest in peace."

"I've directed staff to lower our flags to half-mast and to offer our condolences," said Ajax mayor Shaun Collier in response to the deaths of the family. "It's a tragic loss. Our thoughts and prayers are with the family, I can't imagine what they're going through."

Fatemeh Kazerani and Mohammadhosse Saket, North Vancouver

Fatemeh Kazerani and Mohammadhosse Saket

A young couple from North Vancouver, Fatemeh (Faye) Kazerani and Mohammadhosse (Daniel) Saket, were confirmed to have been on the flight. Sima Ghaffarzadeh, editor of Farsi-language Hamyaari media, told the Star a relative had identified the pair.

Daniel worked at North Vancouver-based real-estate developer Denna Homes, the company confirmed.

"This has been a very trying day for the Denna Homes family. As a small office of 10 people, Daniel's passing is a significant loss to all of us. Daniel was a colleague, a friend and family. Both he and Faye will be sadly missed," Dan Thomson, vice-president of marketing, said in a statement.

"Daniel and Faye both had a zest for life that lit up every room they entered."

Farzad Taheri said he saw his cousins, who went by the English names Daniel and Faye, just before Christmas.

"We were the only family they had in Canada," Taheri said.

Taheri described Saket as "extremely kind, generous, humble genius."

His death is a "big loss to humanity," he said.

"Faye was the most positive, also extremely kind and generous woman."

Ayeshe Pourghaderi and daughter Fatemeh Pasavand, North Vancouver

Residents of North Vancouver identified Ayeshe Pourghaderi, 37, and Fatemeh Pasavand, 18, as mother and daughter. Pourghaderi and her husband opened Amir Bakery two years ago, according to Reza Varasteh, the manager of a shop and deli across the street.

The mother and daughter had been in Tehran visiting family and friends, according to Arash Azrahimi, owner of a photography business near the baker. The couple worked seven days a week and Pourghaderi did many of the bread deliveries to retailers herself, said Varasteh.

"I saw her two weeks ago," he said. "She always had a smile on her face."

According to Varasteh, Pourghaderi's husband got on a flight back to Tehran as soon as he found out about the crash.

Firouzeh Madani and husband Naser Pourshabanoshibi, Metro Vancouver

Firouzeh Madani and her husband, Naser Pourshabanoshibi, were both doctors who had moved to Canada about six years ago to upgrade their educations said, family friend Majid Mahichi.

He said he'd known Pourshabanoshibi since they were in high school growing up in northern Iran. "He was one of the top students," Mahichi said. "We were all waiting to see him be really successful."

Mahichi said when he looked at the flight manifest he saw the names of his two friends, then later confirmed the news with Madani's sister.

A North Vancouver couple in their mid-50s, Madani and Pourshaban were both award-winning physicians in Iran, said their niece Sara Hezarkhani. They were working towards getting their licences to practise in Canada.

"No words can describe their personalities, their true spirit, the passion that they had for the work," Hezarkhani said.

The couple was in Iran for about two weeks over the holidays to visit family, she said.

Pourshaban and Madani had been living in Canada for about seven years, Hezarkhani said. Their daughter is a university student in the Lower Mainland. She was not on board the flight.

"This is a big loss for our family and it will be very hard to (get) over," said Hezarkhani.

Asghar Dhirani, Caledon

Asghar Dhirani was remembered for his "vivacious personality on the golf course." He was a religious leader and supporter of the non-profit Wali ul Asr school in Caledon, close friend Shaiq Ibrahim said. He would lead pilgrimages back to various religious sites in Iraq and Iran with the community.

"He was extremely helpful, kind, and polite," the Wali ul Asr school wrote in a Facebook post. "He often told the school's management 'Please to not hesitate to ask, I will help the school in any way I can, whatever little I can do.'"

Western University students Milad Nahavandi, Hadis Hayatdavoudi, Ghazal Nourian and Sajedeh Saraeian

Milad Nahavandi.

Hadis Hayatdavoudi was a PhD student at Western University.

Ghazal Nourian

Sajedeh Saraeian, left.

In London, Ont., the University of Western Ontario held a Wednesday night vigil for four graduate students who lost their lives in the plane crash:

Milad Nahavandi, a PhD candidate in Chemical and Biochemical Engineering, Hadis Hayatdavoudi, a PhD candidate in Chemistry and Sajedeh Saraeian, an incoming Masters student in Chemical and Biochemical Engineering, and Ghazal Nourian, a PhD candidate in Mechanical and Materials Engineering.

University president Alan Shepard called the deaths "devastating."

"It's just heartbreaking and difficult to comprehend," Shepard told the Western News. According to the university's paper, all four were international students.

Hayatdavoudi was studying the effects of hydrogen on copper at the Electrochemistry and Corrosion Science Centre. Its goal is to examine how corrosion

affects nuclear waste containers. Her supervisor, Jamie Noel, said Hayatdavoudi had spent a month in Iran with her family — her first time back home since she moved to Canada on her own in September 2018. He said she was on the flight so she could be back in Canada in time to act as a teaching assistant for one of his courses.

“She found Canadians were very welcoming to her, coming from so far away, all by herself, a single woman in a strange country, with a different language,” said Noel, who noted that she quickly found community with other Persian students in his lab.

University of Ottawa students Alma Oladi, Mehraban Badiei, and Saeed Kashani

Alma Oladi.

Saeed K. Kashani .

At the University of Ottawa, a professor of international affairs shared his condolences in a Twitter post for three students, Alma Oladi, Mehraban Badiei and Saeed Kashani, who died in the crash.

“Deepest condolences to the families of three uOttawa students… and to all the other grieving families,” Roland Paris posted.

The university school paper featured Badiei, a first-year health sciences student who said her goals for 2020 were to meet new people and make new friends.

“Since the publication of this article on Tuesday, January 7, 2020, we were saddened to learn that Mehraban was a victim in the tragic Flight PS752 accident in Iran. We offer our sympathy and condolences to her family and friends,” the updated article read.

Saeed K. Kashani was entering the fourth year of his chemistry PhD degree, said Stephen G. Newman, an associate professor in the department of chemistry and biomolecular sciences. His focus was on organic synthetic: the branch of chemistry that deals with how to construct complex, valuable molecules from commercially available chemical building blocks.

Alma Oladi was a PhD student studying mathematics at the University of Ottawa. Students and staff who knew her turned her desk into a makeshift memorial on Wednesday, with white flowers and cards placed next to a picture of her signature smile.

“She always had this smile on her face,” said Mohsen Zandimoghadam, who was a friend of Oladi.

“She was a nice and kind girl. She always wanted to explore places and discover new things in life and new places … she had so many plans for her life in Canada.”

Saint Mary’s University students Maryam Malek and Fatemeh Mahmoodi

The Saint Mary’s University Students’ Association in Halifax expressed their condolences late Wednesday night for the loss of two students, Maryam Malek and Fatemeh Mahmoodi, who were studying for a master’s degree in finance.

“We would like to express our thoughts to the families, friends, and colleagues,” the association wrote in a statement.

“I knew them very well,” said Colin Dodds, the program’s academic director and the university’s former president, who noted he had taught them in November and December and had stayed in touch with the pair during the holiday break.

The intense, 12-month program is aimed at helping students establish a career in the financial services sector.

“To celebrate the fact that it was the end of the first semester ... they were going home to see parents and family,” Dodds said. “It’s a huge loss.”

Malek was in her early 40s and Mahmoodi was in her early 30s. Both spoke three languages.

University of Victoria student Roja Omidbakhsh

Roja Omidbaksh

The University of Victoria confirmed that Roja Omidbakhsh, a first-year student, died in the plane crash.

“It is always a profound loss for the entire community when we lose someone, and our hearts and thoughts go out to Roja’s loved ones,” University president Jamie Cassels wrote in a statement Wednesday.

Omidbakhsh was a “very positive” student, professor Mark Colgate said.

“She was on the pathway to complete a bachelor of commerce ... we’re heartbroken that this happened and our condolences go to her family and classmates.”

University of Toronto students Mohammad Amin Beiruti and Mohammad Salehe

Mohammad Amin Beiruti.

Mohammad Salehe.

The University of Toronto confirmed that two more of its students were killed in the crash in a Wednesday press release: Mohammad Amin Beiruti and Mohammad Salehe.

“On behalf of the entire University of Toronto community, I want to say how deeply saddened we are, and how concerned we are for the families and friends of those who lost their lives,” U of T president Meric Gertler said in a statement. “We are continuing to gather information, and taking care to respect the privacy and wishes of all involved.”

Salehe was a PhD student in computer science. He was relatively new to Canada, having moved to Toronto about a year and half ago. Friends told UofT News that Salehe had exceptional talent and was a very skilled programmer.

Fellow PhD student Seyed Hossein Mortazavi described Salehe as a “remarkable” human being who was always eager to help others. “I don’t know anyone that has ever said any bad thing about him and I’ve known him for 22 years,” he said of Salehe.

Mohammad Amin Beiruti was pursuing a PhD in computer science. At a campus memorial, his professor Yashar Ganjali told mourners that Beiruti was

working on a project to design controllers for next-generation internet. He was someone who "wanted to make the world a better place," Ganjali said, according to UofT News.

Amir Ovaysi, Asal Ovaysi and Sara Hamzeei, GTA

Amir Ovaysi and his daughter Asal.

Amir Ovaysi and his wife Sara Hamzeei.

Amir Ovaysi, 42, is remembered as a proud family man who would often show his colleagues videos and photos of his six-year-old daughter, Asal, and his wife, Sara Hamzeei, 34.

His manager, Troy Futher, says the three were in Iran to visit Ovaysi's aging parents. Ovaysi left in mid-December, joining his wife and daughter, who had arrived in November. It was their first visit home since they came to Canada about two years ago.

Futher said he hired Ovaysi at his heating, ventilation and air-conditioning company, Smith Energy Inc., in June. Ovaysi had a master's degree in mechanical engineering. He worked out of the company's Mississauga, Ont., office, but had a house in Newmarket, Ont.

"He was genuine. He was a super person — a brilliant mind, an astute student," said Futher, who added it was heartbreaking to have to inform staff that Ovaysi and his family were on board the flight.

"A lot of the employees took it extremely hard," he said. "It's been a sombre day, a very difficult day."

Nasim Rahmanifar, Edmonton

Nasim Rahmanifar was a master's student in the University of Alberta's mechanical engineering department.

Nasim Rahmanifar, a master's student in the University of Alberta's mechanical engineering department, was nervous about her first winter in Edmonton.

"She was so excited to go back ... she planned to surprise her mom," her friend Sina Esfandiarpour told Edmonton media at a news conference.

He said he received a text from Rahmanifar from the airport that she was on her way back and she wasn't looking forward to the cold weather.

"She was afraid," said Esfandiarpour. "She just came in May and she said, 'They told me it was just freezing cold.'

"She is never going to see that."

Ramin Fathian, Rahmanifar's officemate, said she was really worried about the weather in Edmonton.

"She was asking me all the time, 'What is the best jacket?'" he recalled. "We were saying it's not that bad. You will get used to it."

One of her supervisors, Prof. Hossein Rouhani, said Rahmanifar was a highly motivated, hard-working student who had recently earned a scholarship.

"She was an outstanding student," said Rouhani, who added Rahmanifar planned to complete a PhD when she returned to Canada.

Roja Azadian, Ottawa

Roja Azadian was supposed to travel to Canada for the first time with her husband, who has been studying at Algonquin College in Ottawa, but a mix-up over his ticket meant he could not get on the plane with her.

"He was thinking, I'm going to send her and then I'm going to be back on the next flight," said Leila Hojabri, a friend of Azadian's husband.

He called a friend in Ottawa, asking if he could pick Azadian up at the airport and ensure she was safe. Instead, her husband remains safe in Iran and she died aboard Ukraine International Airlines flight PS 752.

"She wasn't sure if she should come to Canada and he was just building here and getting ready for her to join him and it's just a really, really tragic story," Hojabri said.

Dalhousie student Masoumeh Ghavi and sister Mandieh Ghavi

Masoumeh Ghavi, a master's student at Dalhousie in IT and communications, and her younger sister Mahdieh, a first-year student, were flying back to Halifax to resume their studies.

Sadra Kord-Jamshidi, president of the Dalhousie Iranian Students Society (DISS), said that Masoumeh had just recently come to Halifax.

"I met her last October at an annual general meeting that we held for the DISS. She came here in September. She was the nicest and also a very hard-working individual. Being a self-funded master's students working two jobs to make ends meet, she also offered the society her help in all of our events," Kord-Jamshidi told the Star.

A Tehran native, Masoumeh had been working at MTN Irancell and Huawei previously, according to her Facebook profile.

Dalhousie's Iranian Students Society put out a statement on Wednesday, writing that "we are deeply saddened by the tragic crash of flight #PS752 that was headed from Tehran to Kyiv and took away our beautiful Masoumeh and many other brilliant minds." The group has organized a vigil, which is taking place on Jan. 11.

Terry Balser, Dalhousie's provost and vice-president academic, said on Wednesday in a news release that "on behalf of the entire Dalhousie University community, I wish to offer my deepest condolences to all impacted by this tragedy, including those on our campuses and in the broader Iranian community in our region. We are here for you and thinking of you in this difficult time."

Sheyda Shadkhoo, Markham

Sheyda Shadkhoo.

Shadkhoo, 41, was a chemist who worked as a control substance co-ordinator at SGS Corp. in Markham, Ont., a Swiss company that helps inspect, test and verify that products on the market meet various government standards.

Her husband, Hassan Shadkhoo, said his wife phoned him Wednesday, just before the plane took off, because she was afraid to fly. The conflict between Iran

Her husband, Hassan Shaukhoo, said his wife phoned him Wednesday, just before the plane took off, because she was afraid to fly. The conflict between Iran and the United States and the missile attacks had alarmed her.

He said he is gutted that he reassured his wife it would be OK. Twenty minutes after they got off the phone, the plane crashed.

"I wasn't there," he said, sobbing. "I should have been there with her."

The couple was married for 10 years. Sheyda was in Iran to visit her mother.

University of British Columbia fellow Mehran Abtahi, Vancouver

Mehran Abtahi

On Wednesday, the University of British Columbia confirmed that Dr. Mehran Abtahi, a postdoctoral research fellow studying civil engineering died in the flight.

He was among three UBC alumni, Niloofar Razzaghi, Zeynab Asadi Lari, and Mohammad Asadi Lari.

"I wish to once again, on behalf of the university, express my deepest condolences to the families, friends and loved ones of our community members," Santa J. Ono, university president, wrote in a statement.

Shakiba Feghahati and Rosstin Moghaddam, GTA

Shahin (Shawn) Moghaddam, Shakiba Feghahati and Rosstin Moghaddam, 10.

Shakiba Feghahati and her son, Rosstin Moghaddam, 10, didn't make it back home to Nobleton after visiting family in Iran, Feghahati's husband, Shahin (Shawn) Moghaddam, said.

"Please give them back to me," Moghaddam pleaded through tears, his voice trembling.

He said Feghahati helped him at their metal fabricating business in Woodbridge and took care of Rosstin.

Rosstin, their only child, was a Grade 4 French immersion student at Beynon Fields Public School in Richmond Hill.

The family moved to Canada seven years ago, according to one of Feghahati's posts on Instagram.

"We didn't hear good news from Iran in the last few days. It's completely broken my heart…" Feghahati wrote in a post in Persian Nov. 19. "Today we witnessed the selfishness of human beings … Our change and revolution can begin here."

Behnaz Ebrahimi-Khoei and her son Rahmtin Ahmadi, Toronto

Behnaz Ebrahimi-Khoei, a property valuation analyst in Toronto, died in the crash, the Ontario Public Service Employees Union confirmed.

"Behraz was a member and steward with Local 552. She will be dearly missed," the union wrote in a statement.

According to the union group, she was one exam away from completing her Canadian Residential Appraiser (CRA) designation.

Ebrahimi-Khoei is remembered as a kind-hearted person and a dedicated mother, according to co-workers. Her son, Rahmtin Ahmadi, a Grade 4 student in the Toronto District School Board, was also killed in the crash.

The TDSB sent out letters to notifying the Muirhead Public School community that Ahmadi, was killed. The note called Ahmadi an "energetic and enthusiastic young man," who loved to play tag and was known to "greet staff and students each morning with a friendly hello."

Amihossein Ghorbani Bahabadi, Winnipeg

Amirhossein Bahabadi Ghorbani.

The University of Manitoba has identified Amirhossein Ghorbani Bahabadi, a current student with the International College of Manitoba, as one of the victims from the crash in a statement from Wednesday morning.

He is one of five alumni and students from the University of Manitoba to be named.

During a vigil at the university his close friend Ayda Mohammadian said Ghorbani wanted to be a doctor. Ghorbani studied very hard but was also a lot of fun, his friend said. Ghorbani's goal was always to become successful so he could take care of his parents back in Iran, she added.

"We never knew that on the way back here he was going to die, and we are the ones who lost him," she said holding back tears.

Before Ghorbani went back to Iran in December, Mohammadian told her friend she was worried for him. Ghorbani told her that he would return in 20 days and they could get back to planning their futures.

"But he didn't come back," she said.

University of Windsor members Pedram Jadidi and Mohammad Abaspour Ghadi

Two more people with ties to the University of Windsor, Pedram Jadidi and Mohammad Abaspour Ghadi, have been identified as victims from the plane crash.

Jadidi was a doctoral student of civil engineering and Ghadi, the spouse of Zahra Naghibi, who was also a doctoral student of civil engineering at the school. A total of five people have been identified by the school.

"This is a real tragedy for our institution," said University of Windsor president Robert Gordon. "These were five extraordinary individuals who embodied what our University is all about."

Jadidi was in Iran to mark the first anniversary of his father's death, his friend Mehran Eshaghi told a memorial service.

He had moved to Canada to study civil engineering at the University of Windsor shortly after his dad died and he went home to be with his family.

"Who would have thought this was going to be his last farewell to his mother?" Eshaghi asked. "Who would believe this beautiful family would lose a father

and son in a year?"

Eshaghi said his friend was a strong student and more.

"He demonstrated to be an exceptional, enthusiastic researcher," he said. "Outside of work space, Pedram was known by all of us as an approachable friend. He was a keen lover of movies, music and sport and was a skilled graphic designer."

Jadidi's PhD supervisor Shaohong Cheng said Jadidi was a promising young scientist.

"He brought all his passion, his expertise, to my group, to my lab," Cheng said, recounting how Jadidi and a colleague had created a wind tunnel experiment.

"I still remember that moment when Pedram and his partner came to my office and proudly showed me the video of that test," she said. "We were so excited. We cheered together for this milestone in my research group."

Zahra Naghibi, Windsor

Zahra Naghibi

Zahra Naghibi was a PhD student and colleague of Jacqueline Stagner at the University of Windsor. Stagner said she was informed by the head of the lab where Naghibi worked that she was on the plane.

"She was very helpful and warm," Stagner said.

Naghibi was a part of Windsor's Turbulence and Energy Lab, where she worked on issues related to solar energy.

Stagner said when one of her students — just starting graduate work and new to Canada — needed help, Naghibi stepped in.

"Zahra was giving her advice, helping her out, letting her learn from her own work and what she'd discovered — helping her along, the next generation of researchers. She was very welcoming."

Shahab Raana and Sahand Hatefi-Mostaghim, Montreal

Shahab Raana and Sahand Hatefi-Mostaghim

Two students at the Avrion Technical Institute in Montreal have been identified as victims in the crash. Shahab Raana and Sahand Hatefi-Mostaghim were "not just one, but two of my best and most valuable students," their teacher Mike Stephens wrote in a Facebook post.

"Shahab and Sahand were incredibly talented, smart, hard working and goal oriented," Stephens added. "They were both eager to learn as much as they could as well as wanted to."

A fellow classmate in their welding and fitting class, Dong Wong Lee, from South Korea, became really close friends with Raana and Hatefi-Mostaghim, despite language barriers.

"All of our classmates are really close each other. We shared lots of different things such as culture, language, experience and we enjoy to talk about it a lot," he told the Star. "Even though it wasn't a long time, we were all like brothers. We are in a deep sad mood."

Queen's University student Amir Moradi

Queen's University is mourning the loss of a student, Amir Moradi, who died in the plane crash. Moradi was enrolled in the Faculty of Arts and Science, according to a statement shared by the university.

"Having just received new information, it is with great sadness that I must now convey that one of our undergraduate students has perished in the plane crash tragedy in Iran. That tragedy, which has touched so many of our higher education institutions in Canada, has now affected Queen's directly," school principal Patrick Deane said.

Farzaneh Naderi and 11-year-old son Noojan Sadr, Winnipeg

Farzaneh Naderi and her 11-year-old son, Noojan Sadr, from Winnipeg have been identified as victims. A GoFundMe page has been organized Sadr's cousin Negysa Kalar.

"Farzaneh was an amazing mother, wife, aunt, and incredible person. My cousin Noojan was charismatic, caring, and beyond his years. Too young to have lost such a beautiful soul," the post from the family read.

"She loved her family so much and would do anything for us," Kalar said of Naderi. "She was so full of life and selfless."

The family moved to Winnipeg about 15 years ago. Naderi volunteered for three years before being permanently employed as a tutor for children with autism at St. Amant, a not-for-profit foundation in Manitoba.

A statement from St. Amant said Naderi had a big heart and genuinely cared about her colleagues, the children and their families.

Noojan loved to play video games and soccer. He adored his family, his cousin said.

"My little cousin was the sweetest boy and so humble."

The mother and son were on their way home to Winnipeg after visiting family in Iran. Kalar has started the Sadr Family Memorial Fund to support her uncle, Abolfazl Sadr, who lost his son and wife.

Soheila Massoumeh Moshref Ravazi Moghaddam, West Vancouver

Family friend Majid Majid Mahichi has confirmed West Vancouver resident Soheila Massoumeh Moshref Ravazi Moghaddam was aboard the plane.

Mahichi said the mother of three worked as an office manager at a local hotel.

Fereshteh Maleki Dizaje, Ottawa

Dizaje, a 47-year-old Ottawa architect, was travelling back from Iran after attending the wedding of her only daughter.

Her longtime friend Reza Eslami, who first met her at the architectural school in Tehran, described her as a “brilliant architect” and “amazing friend.”

“She had no problem picking up construction tools and building things with her own hands,” he said.

A single mom who had moved to Canada a few years ago, she was looking forward to focusing a bit more on her own life, now that her daughter was married.

“She always had this smile, no matter what state of mind she was in,” Eslami added.

Mohammad Moeini, Sherbrooke, Que.

Mohammad Moeini

Mohammad Moeini, a resident of Sherbrooke, Que., has been identified as a victim of the plane crash.

According to his LinkedIn page, Moeini worked as a Mechanical Designer at Bombardier Recreational Products.

Sherbrooke Mayor Steve Lussier shared his condolences in a Facebook post.

Sharieh Faghihi, Halifax

Sharieh Faghihi

Dalhousie University released a statement Thursday confirming Dr. Sharieh Faghihi was killed in the crash.

Born in Tehran, Faghihi immigrated to Canada in 2011 with her husband and two children. After graduating from Dalhousie in 2016, she returned to the faculty to teach in the Division of Periodontology in 2017 and also worked in private practice in Halifax. According to an alumni magazine, she also helped establish a dental centre for disabled children in need in Tehran.

Faghihi was an “absolute joy,” said LJ Turnbull, regional manager for Dentalcorp.

“One of the kindest human beings,” said Turnbull. “She had a fantastic sense of humour and she was great with the patients ... She was friends with everybody on the team.”

Another colleague, dentist Ebrahim Kiani, said he first met Faghihi 25 years ago when she was head of the periodontics department at the Shiraz University of Medical Science in Iran.

“She was very kind, very generous with her knowledge and very skilled,” Kiani said. “She was published in many journals ... She was a good mentor for me.”

Dawn Collins told the Star she was a patient of hers.

She paid tribute to her “maternal presence” in a Facebook post, saying she made her feel more comfortable in the dentist chair.

“I always felt she was very loving in her work and nurturing,” said Dawn Collins. “Appreciate her.”

Farhad Niknam, Toronto

Farhad Niknam.

Dr. Farhad Niknam, a dentist in Toronto, has been identified by the Iranian Ontario Dental Association as a victim of the crash.

In a Facebook post from Wednesday, the organization named Niknam along with two other dentists in Ontario.

“May they rest in peace.....I would like to extend my most heartfelt condolences to their families and loved ones,” Reza Termei, the IODA president, said.

Niknam, 44, moved to Winnipeg five years ago with his wife and daughter after running a dental practice in Iran for 15 years, said Sanaz Valadi, his friend of 20 years.

About three years ago, after having a son, the family moved to Toronto. Niknam took his dental equivalency exam and began to train other foreign dentists.

He had recently settled the family in a new condominium and registered to be a dentist in Toronto.

Valadi said they spoke on the phone only three days ago and Niknam was excited to come back to Canada to start a new phase of his career. Instead, Valadi spent the hours after the crash with Niknam’s grieving wife.

Niknam and his wife, Mojgan, had been married for 15 years. Valadi said she will never forget how much they glowed as they danced at their wedding.

Now Mojgan is alone with her daughter Yana, 7, and son Yuna, 3.

Niknam’s family flew back to Iran on Wednesday to have DNA tests done so they can retrieve his body.

Niloufar Sadr, Montreal

Niloufar Sadr

Niloufar Sadr, a mother, artist, and community member in Montreal’s art scene, was killed in the plane crash, the MEKIC art gallery shared on social media.

Sadr was a “beloved friend” and “helped lots of artists and artisans” when she worked at gallery. “So many memories and its still so hard to believe this tragedy. God bless her soul,” the post read.

The MEKIC gallery represents the Iranian and Middle Eastern artist community.

Sadr, 61, was returning to Toronto after a visit with family in Iran.

Sadr had lived in Montreal for many years but moved to Toronto a few years ago to be closer to her adult children and grandchildren, said Elahe Machouf, a longtime friend.

She described Sadr as someone who was full of life and had managed an art gallery in Montreal.

“She was very involved in the cultural field,” Machouf said. “Recently, she moved to Toronto because her children had moved there and she followed them, as

"She was very involved in the cultural field," Machouf said. "Recently, she moved to Toronto because her children had moved there and she followed them, as many mothers do."

Machouf said Sadr's father was Ahmad Sayyed Javadi, a prominent Iranian lawyer, politician and political activist, who died in 2013.

Sadr's ex-husband Reza Banisadre, a Montreal architect, said Sadr visited Iran every year.

"She was very joyous. She had lots of friends," Banisadre said. "She loved life."

Sadr leaves two daughters and a son, as well as three grandchildren.

Faraz Falsafi, Toronto

Faraz Falsafi

Faraz Falsafi, a Toronto software engineer, had been visiting family in his hometown of Tehran over the holidays. A friend of his and fellow engineer, Arian Hosseinzadeh, said Falsafi was a scholar who completed a bachelor's degree in software engineering and master's degree in the science in intelligent systems at Kabir University of Technology, and a master's in machine learning at McGill University.

It was there, at McGill in Montreal, that Hosseinzadeh said he and Falsafi met.

"He was fun, he was humble, and he was very smart and talented," Hosseinzadeh wrote in an email to the Star. "Not only his family and friends, but I'm sure the world is going to miss such a good person."

Hamidreza (Sam) Djavadi and son Kian Djavadi, Missisauga

Hamidreza (Sam) Djavadi

Kian Djavadi

Hamidreza (Sam) Djavadi and his teenage son Kian were returning to Canada from a holiday trip to Iran. His wife had caught an earlier flight back so she could return to work.

They lived in Mississauga but had a cottage in Grand Bend, Ont. That small community is now mourning them, remembering them both as "just really friendly, truly kind souls," said Michael Vanhevel in a message to the Star.

Vanhevel, who worked at the marina in Grand Bend, said the father and son could often be seen out on their boat and would stop to chat as they filled it up with gas.

"We remember them vividly, and everyone who worked there, including me, loved to see them coming down the channel," he said.

Juan Castro, hired Kian to work for him last summer, at his Grand Bend water sports rental company.

The teen "pretty much made the whole summer" quickly becoming a key member of the team who would often invite other employees back to his parents' cottage for dinners. "He was such a good kid," Castro said. Sam, as he was known, was always one of the first ones out on his boat each season and "pretty much made friends with everybody."

George Brown students Kiana Ghasemi and Darya Toghian, Toronto

Kiana Ghasemi

Kiana Ghasemi was on her way to begin studies at George Brown College, family friend Mohammad Rastifar confirmed in a message to the Star.

"God bless her," he said. Family friend Samira Akbari added Ghasemi was "really excited" about this new chapter in Canada.

"Her dad had tried so hard to send her over there," she said over the phone from San Francisco. "It's so sad."

Darya Toghian was studying at George Brown College and was also killed in the crash.

The college did not release the names of the two students killed in the crash, but said one was studying in the Architectural Technology program and the other in the Computer Programmer Analyst program.

"The shock and sorrow felt across Canada right now feels particularly heightened for us with the tragic deaths of two of our students. To those of you who studied and worked with the students we lost this week, I extend my deepest sympathies," George Brown College President Anne Sado said.

"We share this grief and profound sense of loss with our colleagues across the post-secondary education community, who are also mourning the deaths of their co-workers and students — individuals who were preparing to take on the challenges of a new semester and were working towards bright futures. Honouring the memories of those who died may ease some of the anguish we're all feeling."

Mahmoud Attar, GTA

Mahmoud Attar

Zohreh Attar was beside herself with worry, knowing her brother Mahmoud, 69, was about to board a plane to fly from Iran to Canada just as the area was brewing with war.

"I didn't want to upset him, but I was so afraid. I texted him, told him to be careful."

But he shrugged off her worries and instead texted back, asking what he could do for her, what did she need that he could buy in the airport and bring to Richmond Hill?

It was typically selfless Mahmoud, Zohreh said, always thinking about others, never himself.

He had been excited to help his 35-year-old daughter, Sahar Attar, decorate her new North York home. He was bringing her treasured items, dinnerware and photos from Iran, to make it her own.

"Before he left," Sahar said, "he said 'don't worry, I have wrapped them very carefully so they won't be broken on the way.'"

These were the last messages Zohreh and Sahar received from Mahmoud.

Zohreh, a resident of Richmond Hill since 2007, said Mahmoud loved Canada; Sahar smiled, remembering how delighted he always was to hear Canadian border officials say, “welcome to Canada.”

Zahra Hasani, Toronto

Zahra Hasani was the wife of student Mohammad Salehe, who was also on board the plane.

They made a great couple, said longtime friend Seyed Hossein Mortazavi.

Salehe was a talented scientist who grew up with a love of computer programming, while Hasani wanted to do her master’s at the University of Toronto.

After completing two degrees from Sharif University of Technology in Tehran, Iran, and working as a senior software engineer at a tech company, Salehe started his PhD in computer science at the University of Toronto, Mortazavi said.

“Although he was usually quiet, he was very active in multiple social and religious communities, always trying to be there for his friends and neighbours,” said Mortazavi.

“Zahra was caring, devoted to her friends and family,” he said.

The two were on their way back from visiting family in Iran after the last school term.

Masoud Shaterpour Khiaban, GTA

Masoud Shaterpour Khiaban

The young man was about to begin his studies at York University’s school of continuing studies, York confirmed.

He was supposed to be doing a post-graduate certificate in the business administration program.

“We are heartbroken by this news,” said president and vice-chancellor Rhonda L. Lenton in a statement.

“On behalf of the York community, we extend our heartfelt condolences to everyone affected by this tragedy.”

Niloofar Rastgar spoke to his father’s cousin, Shaterpour over text in the months prior to the fall of Ukraine Airlines 752. They spoke about Shaterpour moving to Canada and beginning his new life at York University to earn his MBA. Rastgar, who said he may have only met Shaterpour once or twice as a little kid, said Shaterpour had made quite the impression through the short, brief text messages.

“I could tell that he was a hard working, well-educated and kind person,” Rastgar said, noting that Shaterpour, 31, had a medical degree from a university in Iran. “He was a self made person.”

Rastgar, who lives in Vancouver, said Shaterpour’s mother passed away when he was a teenager and his father had died about four months ago.

“He had two brothers and two sisters who are in shock and mourning for him.”

Shahrokh Eghbali Bazoft, Maryam Agha Miri and Shahzad Eghbali Bazoft

Shahrokh Eghbali Bazoft (left), Maryam Agha Miri and eight-year-old Shahzad Eghbali Bazoft

Shahrokh Eghbali Bazoft, his wife Maryam Agha Miri and their eight-year-old daughter Shahzad Eghbali Bazoft lived in Toronto and all died together, said Sharokh’s niece, Nadia Eghbali.

Eghbali said her uncle was a kind soul and a charismatic person.

“It was really hard not to like him because he was so kind. He had the best stories with funny voices and expressions that he would make,” said Eghbali, on the phone from Chicago. “He had everyone laughing including himself.”

Eghbali, a Grade 3 student at Dallington Public School, was “a very creative and curious student,” a letter sent out by the school reads. “She enjoyed coming to school and approached her learning with enthusiasm.” School officials wrote that Eghbali’s “thinking was out of the box and she brought new, innovative ideas to her classmates.”

“Maryam was a kind person, a devoted mother, wife and friend,” Eghbali said. “She always made us feel welcome, she made you feel loved.”

Eghbali said Shahzad had a creative mind.

“She had a great giggle and she just meant so much to her parents,” she said.

“They were a wonderful family and they’ll be truly missed.”

Pegah Safar Poor Koloor, GTA

York University identified Pegah Safar Poor Koloor as one of three students lost in the tragedy. Koloor was a first-year Faculty of Science student, studying biology.

York joined universities across the country in paying tribute to the victims of the crash with a moment of silence on Wednesday.

With files from Yorkregion.com, DurhamRegion.com, Toronto.com, the Hamilton Spectator, Mississauga.com, Guelph Mercury Tribune, and The Canadian Press

‘A sense of disbelief’ as losses are counted in Edmonton’s Iranian community - By Kieran Leavitt - Wed., Jan. 8, 2020

Source : [HM000P][GDrive]

EDMONTON—A newlywed couple. A family of four. Students returning from their winter break.

Edmonton’s small Iranian community was counting its losses in a state of shock Wednesday after a plane crash in Iran that left 176 people dead — including more than five dozen Canadians, many of whom had been travelling home to Alberta.

“More than anything, people are mourning,” said Pegah Salari, an active member of the city’s Iranian community. “We are still at that initial state of grief when everyone’s so shocked.”

The Ukraine International Airlines Boeing 737-800 was en route to Kyiv, Ukraine’s capital, when it crashed shortly after take off, killing all aboard. There were 63 Canadians on the flight and Prime Minister Justin Trudeau said 138 passengers were on their way to Toronto.

While a list compiled by the community pegged the city’s losses at 25 people, the Star has so far been able to independently confirm that 13 members of the local Iranian community died in the crash.

“The impact is so big, because of the large number of individuals involved, that it’s going to take some time for us to actually comprehend what actually happened,” Salari said.

“More than anything, it’s a sense of disbelief right now.”

Edmonton has around 4,300 people of Iranian origin, according to a 2016 Statistics Canada census, compared to about 95,000 in the Greater Toronto Area and 45,000 in Vancouver. At a Wednesday media availability, Reza Akbari, president of the Iranian Heritage Society of Edmonton, estimated Edmonton’s Iranian community is closer to 5,000 people, and up to 6,000 when students are included.

He said the University of Alberta has been a popular destination for Iranian students because it’s perceived as one of the top research universities in the country, specifically citing their engineering, energy and environment programs.

Masoud Ardakani, the University of Alberta’s associate chair of electrical and computer engineering, confirmed in an email that professors Mojgan Daneshmand and Pedram Mousavi were on the flight, along with their daughters Daria, 14, and Dorina, 9.

Daneshmand is listed as an associate professor in the engineering department at U of A, as well as Canada Research Chair Tier II in Radio Frequency (RF) Microsystems for Communication and Sensing. Mousavi worked in the same department as a professor in mechanical engineering.

Pedram Mousavi, 47, Mojgan Daneshmand, 43, and their daughters, Daria Mousavi, 14, and Dorina Mousavi, 9, seen in this family photo posted to Pedram Mousavi’s Facebook account in 2014, were killed in the plane crash near Tehran early Wednesday. The family lived in Edmonton and Mousavi and Daneshmand were professors at the University of Alberta.

Friend Nooran Ostadeian remembered Daneshmand and Mousavi as the “happiest couple” she had known. Ostadeian had known them since 2010 when she helped them find a home as a real estate agent when they moved to Edmonton.

“I want them to be remembered as a symbol of love, community members who did a lot ... Great teachers for their students.”

Maryam Hajazi, who coached Dorina in a soccer program, remembers the girl as being intelligent and curious. She would frequently ask questions about techniques and how she could be the best player she could be.

“She most probably got the gene from her parents,” Hajazi said. “She was so smart, everyone liked her.”

The Calgary Board of Education, meanwhile, confirmed that Arshia Arbabbahrami was an international student in Grade 12 at Western Canada School, who was returning to Canada after spending the holidays with his family in Iran.

Principal Carma Cornea sent an email to students and families that said Arbabbahrami was active in track, as well as the swim and dive teams: “He dreamt of being a doctor and was a leader in our community who many students looked up to.”

Ramin Fathian worked in the same office as Nasim Rahmanifar, who was working on her master’s degree in mechanical engineering at the U of A and was considering a second master’s or doctorate.

She had started the program in May 2019, and Fathian remembers how anxious and scared she was of Edmonton’s winter, having lived most of her life in Iran. He said their group of friends spent time together every weekend, frequently playing volleyball. Rahmanifar was always eager to go back to Iran.

“She was super excited to get back home to visit her family … She missed them a lot,” he said.

Also on board were young newlyweds Arash Pourzarabi and Pouneh Gorji, of Edmonton. Payman Parseyan, an active member of the Iranian community, said they’d married days before boarding the plane.

Newlyweds Arash Pourzarabi, 26, and Pouneh Gorji, 25, are seen in this March 2019 photo taken by friends in Edmonton. The couple was killed in the plane crash near Tehran Wednesday.

Uploaded by: Fowler, Tanis

Amir Samani, a graduate student in the same computer science department Gorji and Pourzarabi belonged to, said he remembers Pourzarabi going out of his way to help with his studies.

“I’m in big denial right now. I can’t understand what’s going through my mind,” he said. “I even check my phone to see, is he going back online again? Are we going to talk again?”

He said it was good having friends of Iranian ancestry at the university because there isn’t a huge Iranian community in Edmonton. He wasn’t able to go to the couple’s wedding, but had hoped to attend a small ceremony with friends upon their return.

Pourzarabi was working on a graduate degree in artificial intelligence at the University of Alberta, and his supervisor, Professor Michael Bowling, said the couple loved to spend their free time exploring new parts of Edmonton.

What we know and don’t know about Ukraine International Airline Flight 752

Bowling described Pourzarabi as “so bright.”

“Not just smart, which you have to be doing a graduate degree in artificial intelligence,” he said in an email, “but he brought a brightness to each meeting … particularly with his smile.”

Throughout the day, community organizations and members were co-ordinating vigils with hundreds expected to attend. On Wednesday night, mourners gathered for a candlelight vigil outside the Alberta legislature in Edmonton.

Salari said the high number of Edmonton community members on board likely had to do with sanctions and travel restrictions that Iranians have to grapple with when flying. There aren’t as many airlines flying to Iran and options are limited.

“For as long as I can remember, there was a few preferred airlines that would allow for people to travel with all the limitations that are on them,” she said.

Few members of Edmonton’s Iranian community in the city will be left untouched by the loss of life, Salari said.

Akbari, with the Iranian Heritage Society, said there will be a vigil held on Friday but the exact time and location was still being confirmed.

With files from Alex Boyd and Rosa Saba

Edmonton’s Iranian community hit by economic fallout as U.S. leaves nuclear deal - Thu., May 10, 2018 - By Ameya Charnalia

Source : [HM000O][GDrive]

EDMONTON—Members of the Iranian community in Edmonton are dismayed by U.S. President Donald Trump's decision to withdraw from the Iran nuclear deal.

"It's unfortunate to see the Trump administration vetoing this agreement without another agreement in place," said Payman Parseyan, president of the Iranian Heritage Society of Edmonton. "This can have long-term negative consequences for everyone at the table."

Iran agreed in 2015 to allow international supervisors to monitor its nuclear activities, reassuring other nations that it is not developing weapons of mass destruction. In return, those nations would lift a number of crippling economic sanctions.

Trump announced Tuesday that the United States will withdraw from the landmark agreement. Tearing up the deal was one of his campaign promises.

"The fact is this was a horrible one-sided deal that should have never, ever been made," Trump said Tuesday. "It didn't bring calm, it didn't bring peace and it never will."

Parseyan said the decision had an immediate financial impact.

"It's sending the Iranian economy into a downward spiral," he said. "The average Iranian is struggling more and more to provide basic needs to their families."

The Iranian rial has indeed plunged since the announcement, which is affecting Edmontonians who rely on remittances or pension payments from Iran, said Behrouz Khani, an Iranian-Canadian in Edmonton.

"It makes it harder for people who are living here," Khani said.

He added that there are several Canadian citizens of Iranian descent who rely on family in Iran for their retirement income, too.

"They transfer their retirement money from Iran to here every month, or once in while, and now they have lots of issues because the rate goes up," said Khani.

There are 5,000 to 6,000 people with either Iranian or Iranian-Canadian citizenship in Edmonton, according to Parseyan.

On Wednesday, Prime Minister Justin Trudeau said the Iran nuclear deal wasn't perfect but it helped prevent the country from developing a nuclear weapon.

Trudeau also stressed that Canada is firmly aligned with most countries in supporting the deal, formally known as the Joint Comprehensive Plan of Action (JPCOA).

"We know that standing firmly in support of the JPCOA with our NATO allies and others is extremely important," Trudeau said. "We regret the decision by the United States to pull out, but we are still hopeful we are going to be able to keep Iran from developing nuclear weapons."

Six countries negotiated the deal, including the five permanent members of the United Nations Security Council — the U.S., Britain, France, China and Russia — as well as Germany.

German Chancellor Angela Merkel said the decision underscores the need for Europe to take increasing responsibility for peace and security, similar to the message she delivered after Trump's debut at last year's G7 summit.

Parseyan said it is the Iranian people who lose the most.

"They don't understand why the average Joe has to suffer because of conflicts between two nations," Parseyan said.

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United Fruit Company

Wikipedia United Fruit Company

https://en.wikipedia.org/wiki/United_Fruit_Company

People who we know worked here -

- Charles Noel Sibley (born 1899)

housatonic

UUNET Technologies, Incorporated

Wikipedia UUNET

- In 1996, **UUNET** was acquired by [**MFS Communications Company, Incorporated**] on April 30, 1996.
- **John William Sidgmore (born 1951)** - As of 1996, UUNET's **UUNET President and Chief Executive** ([HN01CS][GDrive])

Saved Wikipedia (Dec 17, 2020) - UUNET

Source : [HK0048][GDrive]

Trade name Verizon Enterprise Solutions / Verizon Business

Former type Subsidiary

Industry Telecommunications

Fate Acquired by Verizon Communications in 2006

Founded 1987; 33 years ago

Defunct 2006; 14 years ago

Headquarters Ashburn, Virginia, U.S.

Products Conferencing, Contact Centers, Data and IP Services, Internet access, IT Solutions and Hosting, Managed Networks, Premises Equipment (CPE), Security, Voice, VoIP, Wireless

Parent Verizon Communications(2006–present [2020 as of this capture of the Wikipedia page])

Website www.uu.net (archive.org)

UUNET, founded in 1987, was one of the largest Internet service providers and one of the early Tier 1 networks. It was based in Northern Virginia and was one of the first commercial Internet service providers. Today, UUNET is an internal brand of Verizon Business (formerly MCI).

History[edit]

Background[edit]

Prior to its founding, access to Usenet and e-mail exchange from non-ARPANET sites was accomplished using a cooperative network of systems running the UUCP protocol over POTS lines. During the mid-1980s, growth of this network began to put considerable strain on the resources voluntarily provided by the larger UUCP hubs. This prompted Rick Adams, a system administrator at the Center for Seismic Studies, to explore the possibilities of providing these services commercially as a way to reduce the burden on the existing hubs.

Early existence[edit]

With funding in the form of a loan from Usenix, UUNET Communications Services began operations in 1987 as a non-profit corporation providing Usenet feeds, e-mail exchange and access to a large repository of software source code and related information. The venture proved successful and shed its non-profit status within two years. At the same time, the company changed its name to **UUNET Technologies**. In 1990, UUNET launched its AlterNet service, which provided access to an IP backbone independent of the constraints of those operated by the government. That network lives on in a much larger form and serves as the core of a set of products which include access at dial-up and broadband speeds as well as web hosting. UUNET raised $6 Million from Accel Partners, Menlo Ventures and New Enterprise Associates in 1993 and $8.2 million in 1996 for expanding its network and hiring new executives with experience in marketing.[1]

In the mid-1990s, UUNET was the fastest-growing ISP, outpacing MCI and Sprint. At its peak, Internet traffic was briefly doubling every few months, which translates to 10x growth each year. However, the continuing UUNET claims of such growth (long after it had fallen to lower, albeit still substantial levels) artificially fueled the expectations of the dot-com and telecom companies of the late 1990s, leading to the dot-com bubble and crash in 2000/2001.[2]

Mergers and acquisitions[edit]

In 1996, UUNET was acquired by MFS on April 30, 1996. This was an independent acquisition unrelated to the acquisition of MFS by Worldcom. However, as MFS was a public company and the acquisition made the company a Wall Street darling,[3] it likely influenced Worldcom's decision to pursue MFS.[4]

In 1996, UUNET was acquired by WorldCom on August 26, 1996, as part of WorldCom's purchase of MFS Communications Company.[5]

In 2001, UUNET was fully integrated with WorldCom and the name was dropped from all official documents.

In 2002, the owner of UUNET at that time (WorldCom) filed for what was then the largest Chapter 11 bankruptcy protection in history.

In 2005, its Internet service and infrastructure, assigned AS701, maintained the highest outdegree of any ISP.[*clarification needed*][6][7]

Verizon[edit]

In 2006, WorldCom was purchased by Verizon Communications and now operates under the Verizon Business name.

Spam[edit]

SpewSpewNet[edit]

After it had been sold and resold during the onset of the dot-com bubble, UUNET acquired the nickname *SpewSpewNET*. This nickname was given because UUNET had become a home for many distributors of spam, including distributors of both Newsgroup spam and E-mail spam. UUNET also became known for providing bulletproof hosting to many web pages whose chief form of advertisement was spam. Because UUNET started with a loan from Usenix and controlled the e-mail addresses for moderated Usenet groups, it was hard to block email traffic to or from Usenet. In 1997, UUNET had lost so much credit that on 1 August, after finding alternate routes for moderated newsgroups, a Usenet death penalty (UDP) was issued against UUNET.[8] A week later, the UDP was lifted.[9] In 1998 UUNET threatened legal action[10] for hosting a GIF image with "SPAMUNET" on it.[11]

Timeline[edit]

- 1987 – UUNET Communications Services is founded and passes its first traffic via the CompuServe Network on 12 May using UUCP (Unix to Unix Copy Protocol).
- 1989 – UUNET becomes a for-profit corporation
- 1990 – UUNET launches AlterNet
- 1991 – UUNET participates in the founding of the Commercial Internet Exchange Association
- 1992 - UUNET with MFS co-creates MAE-East, for a time the world's busiest Internet exchange and "center of the internet"
- 1994 – Microsoft paid $16.4 million for a 15 percent share of the company
- 1995 – In May, UUNET is listed on the NASDAQ stock market in an initial public offering that would become part of the beginning of the dot-com boom.
- 1995 – UUNET Technologies Inc places a takeover bid against Unipalm Pipex.[12]
- 1996 – UUNET Technologies agreed to a merger with the Microsoft backed MFS Communications Company.[13]
- 1996 – Metropolitan Fiber Systems (MFS) acquires UUNET for $2 Billion on 12 August 1996. This marked the day UUNET stopped existing as an independent company.
- 1996 – WorldCom acquires MFS on New Year's Eve – 31 Dec. at 11:58 p.m EST for $12.4 billion
- 1997 – Usenet death penalty (UDP) issued against UUNET, and lifted a week later
- 1997 – On 10 November, WorldCom and MCI announced their US$37 billion merger including combining internetMCI & UUNET Internet operations.
- 1998 – The combined MCI WorldCom opens for business on 15 September after being given the go-ahead from the DOJ, subsequent to divesting internet MCI.[14]
- 1998 – WorldCom acquires CompuServe Network Services from H&R Block and ANS Communications from AOL. Both become part of UUNET in 1999.
- 1999 – On 5 October, MCI Worldcom announces its intentions to buy Sprint for $129 billion.
- 2000 – The European Commission and DOJ denied the MCI WorldCom / Sprint merger on Antitrust Grounds.
- 2001 – The UUNET brand is folded into WorldCom's product line and disappears
- 2002 – WorldCom files for Chapter 11 bankruptcy protection as a result of a massive $11 billion accounting scandal.
- 2003 – The UUNET brand re-emerges as WorldCom's wholesale-only brand.
- 2004 – WorldCom emerges from Chapter 11 bankruptcy and renames itself to MCI, still using the UUNET brand for wholesale business.
- 2005 – MCI again drops the UUNET brand for wholesale business. The name is no longer in use.
- 2006 – Verizon acquires MCI, including its UUNET subsidiary, now known as Verizon Business. AS701 remains the backbone of Verizon Business although its origin dates back to 1990 when it was under the UUNET flag.

https://www.youtube.com/watch?v=m061W3FXfUU

UUNET Corporate video

615 views • Oct 18, 2013

martin zhow

1996 (May 06) - Baltimore Sun - $189 million bonanza on lucky venture MFS' takeover of UUNET to benefit local firm's clients; Humbled and looking ahead; At NEA it's 'thank God and we're on to the next dream'

Timothy J. Mullaney ; Source : [HN01CS][GDrive]

Of all the beneficiaries of last week's $2 billion deal for [MFS Communications Company, Incorporated] to take over Internet access provider [**UUNET Technologies, Incorporated**], one of the biggest will be a Baltimore venture capital firm that stands to make $189 million on a $4 million investment.

New Enterprise Associates controlled 10.1 percent of Fairfax, Va.-based Uunet, having paid $3.9 million for the stake in 1994. NEA endured a wild roller-coaster ride in Uunet's stock price after the company went public last May, and stands to make a killing for its clients when the merger goes through. [...]

The 18-year-old firm has invested in about 320 companies, which [NEA general partner Charles W. Newhall III] said have $18 billion in annual revenues. NEA has capitalized on the historic bull market for new stock issues that has made millionaires out of people who founded NEA-backed companies such as Genetic Therapy Inc. of Gaithersburg and Integrated Health Systems Inc. of Owings Mills.

In most cases, venture capitalists get paid when a company is sold or goes public. NEA's 15 initial public offerings last year topped the venture capital industry for the third time in four years, according to a report by San Francisco-based Venture-One Corp.

"Over the last five years, NEA has averaged one IPO a month -- a remarkable track record for an entrepreneurial money machine," Venture-One said.

Not nearly all the cash from the [**UUNET Technologies, Incorporated**] takeover will go to NEA's principals, however. The investment was made with part of a $200 million fund the firm raised from pension funds and other investors in the early 1990s, Newhall said. NEA principals put up 1 percent, and otherwise get paid a share of the profits above the $200 million invested. Given the hit on Uunet, almost any return at all on the other $196 million in the pool is pure profit. [...]

[**UUNET Technologies, Incorporated**] founder **Richard Adams** was basically an engineer with a vision when he went looking for money in 1994. He met up with NEA, and with two other venture firms, and quickly raised the money he needed to move forward.

But it came with a price. The venture capitalists decided that [**UUNET Technologies, Incorporated**] needed upgraded management. "They said, basically, we're going to hire a management team and we're going to put some money in," said **UUNET President and Chief Executive [John William Sidgmore (born 1951)]**. "They brought people in in early '94."

[John William Sidgmore (born 1951)], **a colleague of NEA partner Peter Barris when they both worked for General Electric Co.**, was at the top of the list. **He had sold Intelecom Solutions, a Montgomery County software firm, to Computer Sciences Corp. in 1991 and was still running Intelecom for the new owner when Barris approached him.**

"He basically convinced me this would be an exciting area to work in," Sidgmore said. "It was a little tiny company, much smaller than the one I was running. But Peter convinced me it was a terrific opportunity." [...] Sidgmore said. "No, of course [I didn't know how terrific the opportunity was, ...] but you have to remember no one knew anything about the Internet two years ago. Now everyone thinks they're an expert."

What happened in between was 1995. [**UUNET Technologies, Incorporated**] did some big things right, and also rode a wave of interest in the Internet that was mostly beyond its control.

On its own, UUNET decided to focus on the business market, avoiding low-margin competition with the likes of America Online for consumers' business. And it made a key alliance with software titan Microsoft Corp., which took a 13 percent stake in Uunet.

"Microsoft, in essence, financed development of the network," [John William Sidgmore (born 1951)] said.

By then, the media had joined the Internet hype, and so had the stock market. And, Sidgmore says, there was good reason.

"People realized the Internet would become a revolutionary technology," he said. "It enables virtually everyone to communicate with each other, and it was dramatically cheaper than conventional networks. These two things were a sea change."

The wave allowed [**UUNET Technologies, Incorporated**] to go public at $47 a share last May. From then it was a roller-coaster, with the stock rocketing above $70, then plummeting as low as $24.50 after AT&T; Corp. said it was getting into the Internet access business, then rebounding as optimists comforted themselves with the idea that upstart AT&T; challengers past have grown into companies like MCI Communications Corp.

The takeover price was $61 a share. But the deal attracted negative attention as well, because suspicious trading in Uunet options made it appear news of the deal had leaked prematurely. Sidgmore said the company doesn't know who bought the options before the deal.

"A lot of communications technologies have come and gone, and AT&T; hasn't dominated them," Newhall said. "We felt that if you went into the business end of the Internet backbone, you could add products and services to be competitive."

But Sidgmore said the company made the deal because moves like AT&T;'s entry make the Internet business much more competitive.

The Virginia company simply needed a bigger partner with deeper pockets to make the technology investments Uunet will need to keep up.

"The Internet is getting very serious, and there are going to be a lot of very serious players," he said. "If we want to remain a leader, we were not going to be able to do it on our own."

Newhall said NEA's 16 investment professionals, based on St. Paul Street and in Silicon Valley, live by their ability to spot trends, mostly in health care and information technology industries. "In our business, our success is determined by our ability to participate in things that change the way the world is," he said. "I think we've done that."

"We've basically succeeded in what we dreamed of doing: starting businesses that are important."

1996 (Aug 27) - NYTimes : "Worldcom to Buy MFS for $12 Billion, Creating a Phone Giant"

By Mark Landler ; Source : [HN01CQ][GDrive]

In a sign of the rush toward "one-stop shopping" in telephone service, [WorldCom Corporation] agreed to buy [MFS Communications Company

In a sign of the rush toward "one-stop shopping" in telephone service, [WorldCom Corporation] agreed to buy [MFS Communications Company, Incorporated] yesterday in a stock deal worth approximately **$12 billion**.

The combination of Worldcom and MFS creates the nation's first fully integrated local and long-distance phone company since the breakup of the Bell System in 1984. And though the companies are hardly household names, together they promise to be a new giant in the lucrative market of providing communications services to business customers.

By combining networks, MFS Worldcom will be able to offer corporate customers a full complement of services: local and long-distance phone, data transmission and access to the Internet. Worldcom, the fourth-largest long-distance carrier, has until now primarily sold its network capacity to other long-distance companies. MFS is the leading provider of alternative local phone services to business customers seeking better prices or services than are available from the local telephone monopolies.

For all its size, however, yesterday's merger is only the third-largest deal of the year in the roiling telecommunications industry, outranked by the $22.1 billion combination of Bell Atlantic and Nynex and the $16 billion merger of SBC Communications and Pacific Telesis.

And unlike those pending mergers, yesterday's deal will have scant impact on residential customers. Worldcom and MFS plan to focus almost exclusively on the business market, where for years big corporate customers have purchased phone service from carriers that lacked such familiar brand names as AT&T or Nynex.

Still, analysts and executives said the merger was another milestone in the redrawing of the communications landscape that began when the Government deregulated the industry in February.

"It's highly significant because it elevates one more player into the ranks of end-to-end service providers," said Paul T. Unger, a telecommunications consultant at A. T. Kearney.

Together, MFS and Worldcom will have $5.4 billion in revenues, operations in 45 domestic markets and 500,000 corporate customers. Worldcom will issue 500 million to 550 million shares to acquire MFS.

In Nasdaq trading yesterday, Worldcom's stock dropped $3.625, to $22.75, while **MFS jumped $9.94, to $44.81**.

MFS Worldcom faces plenty of competition in the business market. AT&T, MCI and Sprint are moving rapidly to offer packages of services to corporate customers. And the Baby Bells intend to be full-service providers as well, though they will cater primarily to businesses in their own regions.

Several analysts said the merger presaged even more deals, and they pointed to another alternative local-access provider, the Teleport Communications Group, as the next potential takeover. Teleport announced a deal with AT&T yesterday to carry long-distance calls by connecting its local networks in large cities to AT&T's nationwide network. Teleport's shares rose $1.375, to $23.625.

Neither MFS nor Worldcom is a stranger to mergers. MFS, which is based in Omaha, acquired a leading Internet access company, [UUNET Technologies, Incorporated], for $2 billion in April. And Worldcom, which is based in Jackson, Miss., was cobbled together from several small long-distance companies, reaching its current configuration through the $2.5 billion joining of LDDS and Wiltel Network Services in January 1995.

Analysts generally praised the latest deal, which was reported yesterday in The Wall Street Journal, though some noted Worldcom was paying a lofty premium. Under the terms of the deal, each share of MFS common stock will be exchanged for 2.5 shares of Worldcom stock. Based on yesterday's closing price, that values MFS shares at $47.80 each -- a 37 percent premium to the market value on Friday.

MFS, which has invested heavily to build fiber optic networks, had revenues of $583.2 million in 1995, but lost $267.9 million. "You're paying $12 billion for a company with negative net income and negative cash flow," said one analyst, who insisted on anonymity.

That prospect apparently does not daunt Bernard J. Ebbers, the president and chief executive of Worldcom, who proposed the merger to the chairman of MFS, [James Quell Crowe (born 1949)], over dinner two weeks ago at Mr. Crowe's home in Omaha. The two men took barely two weeks to hammer out a deal the size of Time Inc.'s 1990 acquisition of Warner Communications.

Mr. Ebbers, whose flowing hair and relaxed manner make him look more like a country-and-western singer than a corporate executive, will be the chief executive of the new company. [James Quell Crowe (born 1949)] will be the chairman.

Worldcom's current chairman is John W. Kluge, the billionaire investor and a major shareholder in the company. Mr. Ebbers said Mr. Kluge would step down when the merger is completed in four to eight months. He said it was not clear whether Mr. Kluge would remain on the board.

Mr. Ebbers said the companies did not plan any layoffs. But the merger will probably claim at least one casualty in the executive suite. Royce W. Holland, the president and chief operating officer of MFS and one of its founders, said he would probably depart in a few months.

"I've been at this for nine years," Mr. Holland said yesterday, "It's probably time for me to take a little time off."

In a joint interview, Mr. Ebbers and Mr. Crowe said the merger would give them a critical jump over AT&T, MCI and other rivals in offering a bundle of services to business customers.

Worldcom owns a fiber optic backbone that snakes around the country, while MFS has scores of smaller fiber optic rings in local markets. By connecting the companies' combined 25,000 miles of fiber, the two executives said they would be able to carry traffic entirely on their own networks.

"Being first to market is a tremendous advantage, because building these networks is not an overnight proposition," Mr. Ebbers said.

AT&T, MCI and Sprint do not own local systems. So as they move into the local phone business they must either lease capacity from the Baby Bells, or construct their own local switches and networks. The Baby Bells, meanwhile, are prevented from entering the long-distance business until they can demonstrate that their local markets are truly competitive.

Combining Worldcom and MFS will also squeeze savings out of both companies. Daniel Reingold, an analyst at Merrill Lynch & Company, estimated that MFS would save about $40 million a year by diverting its long-distance traffic from AT&T and other carriers to Worldcom's network. And Worldcom could save $200 million to $400 million in access charges by using MFS's local networks to connect calls from its long-distance customers.

Worldcom has racked up an impressive annual return to shareholders of 57.3 percent in the last decade -- in part by aggressively acquiring and managing other telephone companies.

"They've shown an ability to integrate acquisitions," said Simon Flannery, a telecommunications analyst at J. P. Morgan & Company, "It's important to look at their track record in analyzing this deal."

Whatever Mr. Ebbers's talents as a manager, some observers question whether he needed to buy MFS -- particularly given the $12 billion price tag. With fiber optics and digital technology expanding the capacity of telephone wires, some analysts forecast an eventual glut of network circuits that will probably enable long-distance carriers to lease capacity on local networks at increasingly favorable rates.

P. William Bane, a telecommunications consultant at Mercer Management Consulting in Washington, said Worldcom might have been able to get into the local phone business simply by leasing capacity on the local networks of the seven Baby Bells.

Indeed, MCI Communications announced something resembling such a deal yesterday with Nextwave Communications, a company that plans to offer a new type of local cellular service, called personal communications services. MCI will lease capacity on Nextwave's wireless system and sell it under the MCI brand name.

"If they can fill in all the pieces, they'll do very well," Mr. Bane said of MCI. "And they won't have to buy anything."

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Housatonic

William Robert Van Cleave (born 1935)

Wikipedia William Van Cleave

Associations

- Ben Telfer Plymale (born 1926) (Peers while in the Reagan adminstraiton transition)
- Thomas Paul Rona (born 1923)

Saved Wikipedia (Nov 5 2020)

[HK003C][GDrive]

William Robert Van Cleave (August 27, 1935 – March 15, 2013) was a former advisor to President Ronald Reagan, the United States Department of Defense, and Department of State as well as Emeritus Professor, former head, and the founder of Missouri State University's Department of Defense and Strategic Studies (DSS). The DSS program is now located in Fairfax, VA, 10 miles from Washington D.C. [1] He was also advisory council member of the Center for Security Policy,[2] board advisor of the American Center for Democracy and National Institute for Public Policy.[3] As a strategic thinker, he is remembered as a leading Cold Warrior and long-standing hawkish policy advocate.[4][5]

Academic background and military service[edit]

Van Cleave received a B.A. in political science from the California State University, Long Beach as well as his M.A. and Ph.D. (1967) from the Claremont Graduate School (now Claremont Graduate University). His dissertation was titled "Nuclear Proliferation: The Interaction of Politics and Technology," and supervised by Harold W. Rood. He was Senior Research Fellow in National Security Affairs at the Hoover Institution on War, Revolution and Peace at Stanford University.[6]

Van Cleave was Professor and Director of the Defense and Strategic Studies Program at the University of Southern California from 1967-87. Under his leadership, the DSS program started in 1971 in the School of International Relations at USC. The primary objective of the program was to provide graduate level education and training for students planning careers in national and international security affairs, policy-making, and teaching at the university-level. The program moved to Southwest Missouri State University (now MSU) in 1987 where DSS became a Department offering specialized Master of Science degree. In 2005, the University moved the Department physically to Fairfax, VA to take advantage of the many opportunities that are unique to the D.C. metropolitan area.[1][7]

Military service[edit]

Van Cleave enlisted in the United States Marine Corps at the age of 17, and became a Marine Security Guard at the American embassy in Vienna during the time of the Allied-occupied Austria following World War II. In 1957, he transferred to the Marine Reserves, and became an officer.

Governmental and Professional Services

Van Cleave's past professional experience included being a member of the **U.S. Delegation to the Strategic Arms Limitation Talks [S.A.L.T.] with the USSR**, Chairman-Designate of General Advisory Committee on Arms Control and Disarmament Agency, Special Assistant for Strategic Policy and Planning in the Office of the Secretary of Defense, member of the Team B effort to review national intelligence on the USSR and to produce a competitive National Intelligence Estimate. From 1979 to 1981 he was Senior Advisor and Defense Policy Coordinator to Ronald Reagan and Director of the Department of Defense Transition Team between the administrations of President Carter and President Reagan. He was also a former officer at the U.S. Marine Corps.[6][7]

He was the Director of the Division for Research in Strategy at the Institute for Advanced Strategic and Political Studies (IASPS)[7] Trustee member of the International Institute of Strategic Studies, and Board Member of the Committee on the Present Danger.[4]

Professor Van Cleave has approximately 200 professional publications, and has received numerous awards for his outstanding work as a teacher and faculty member. He was the 1979 Claremont Graduate University Distinguished Alumni Award Recipient.[8]

Professor Van Cleave died on March 15, 2013[9] and is buried in Hemet, California.

See also

- Center for Security Policy
- Committee on the Present Danger
- Institute for Advanced Strategic and Political Studies
- Arms Control and Disarmament Agency
- Strategic Arms Limitation Talks
- Claremont Graduate University
- Hoover Institution

[...]

Also see :

https://militarist-monitor.org/profile/william-van-cleave/

https://news.usc.edu/48349/in-memoriam-william-van-cleave-77/

1981 (Jan 15)

Also mentioned - Ben Telfer Plymale (born 1926)

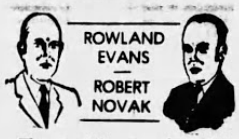
Full newspaper page : [HN01BX][GDrive]

1981-01-15-the-marion-star-pg-4-clip-weinberger

Inside Report

Weinberger Makes It Clear Who Is Boss

WASHINGTON — Unease within the defense community over Caspar (Cap) Weinberger has blossomed into panic now that the secretary of defense-designate has booted out "Reaganaut" military advisers, trashed their recommendations and at least opened the door for soft-liners.



The certain appointment of Frank Carlucci, the Carter administration's deputy CIA director, as deputy secretary of defense is the visible tip of concealed events. In a Dec. 20 shouting match, Cap the Knife fired defense expert William Van Cleave as transition chief, blackballed him and his team from Pentagon posts and consigned their reports to ash cans. Since then, a collection of personalities never connected with strong defense have been edging into the Reagan transition.

The most charitable explanation is that this is no conspiracy but the product of Weinberger's nearly total ignorance on defense questions, which was fully revealed in his Senate confirmation hearing. But assuming Weinberger finally learns the names and issues involved, he has lost valuable time in revising defense spending and lost invaluable experts he badly needs.

In this as in other transition wars these past two months, Ronald Reagan's presence is barely felt. There has been no gesture from either the president-elect or his chief aide, Ed Meese, that they regard a radical reconstruction of the nation's depleted defenses as top priority.

Consider the Reagan-Meese view toward Weinberger's insistence on Carlucci, a civil servant with no Defense Department background, as deputy secretary. Reagan's "kitchen cabinet" unanimously recommended against it, as did his defense transition team. The president-elect might then have suggested saving the deputy secretary's spot for an expert. Instead, Reagan acquiesced.

That was the situation when Van Cleave, Reagan's defense adviser throughout the campaign, went to California Dec. 20 to brief Weinberger. The secretary-designate was in an ugly mood. He unjustly believed Van Cleave was responsible for a press campaign against Carlucci.

An icy Weinberger informed Van Cleave that he and his team's services were terminated forthwith. The hot-tempered Van Cleave shouted that his responsiblity was to advise Reagan himself and Weinberger could not fire him. Weinberger shouted back that Van Cleave was deceiving himself; he was gone.

Weinberger was correct. Early in the transition period when Van Cleave crossed swords with transition overseer William Timmons, a Timmons aide asked Meese whether Van Cleave was under the president-elect's protection. No, replied Meese, fire him if you want. The trouble blew over temporarily, but Reagan has not come to his defense adviser's aid.

Van Cleave was not the only victim. His team's members, including some of the nation's leading military experts, are blackballed. That includes the highly-esteemed Ben Plymale of Boeing, who made the disastrous Dec. 20 trip west with Van Cleave. Plymale had been expected to be an adornment of the Reagan Pentagon as under secretary for research.

The defense plans fastidiously prepared by Van Cleave, Plymale and associates will never be read by Weinberger. That may well prevent any Reagan hurry-up plans for accelerated spending in the current fiscal year.

Pentagon offices formerly occupied by the Van Cleave team are now mostly empty. In charge of the skeleton crew there is an old Weinberger-Carlucci comrade from HEW days in the Nixon administration: William Howard Taft III, a Washington lawyer who knows even less about defense than Weinberger and Carlucci. Yet, incredibly, Taft has wound up on the list for the department's No. 3 post; under secretary for policy.

Taft has been conferring on defense matters with Richard Stubbing, a Carter administration anti-defense expert at the Office of Management and Budget (OMB) whose views generally coincide with Sen. George McGovern's. With Reaganauts exiled to oblivion, among those briefing Weinberger for his confirmation hearing were two Carter officials; Jack Stempler, assistant defense secretary for legislative affairs, and Brig. Gen. Carl Smith, military assistant to Defense Secretary Harold Brown.

Carlucci has been consulting with his close friend (another HEW old hand), John Rhinelander — who was a passionate arms-controller as a State Department lawyer. Carlucci told us Rhinelander will not go into the Reagan administration and denied he even knows Barry Blechman, a former Carter administration arms-controller now at the Carnegie Endowment. But a memo circulating on Capitol Hill lists Blechman as a possible assistant secretary of defense.

There are antidotes. Secretary-designate Alexander Haig has moved quickly to install a Reaganaut staff at the State Department. The National Securtiy Council (NSC) staff will be filled with Reaganauts, possibly including Van Cleave. Despite his less-than-reassuring confirmation testimony, Weinberger may soon learn enough to reflect Reagan's philosophy in personnel and policy. But for now, one Senate conservative is calling Weinberger "another Harold Brown with one difference — Brown knows something about defense."

Bible Digest

"A man's pride shall bring him low: but honor shall uphold the humble spirit." Proverbs 29:23 Pride is a killer that has slain many spiritual giants. When a person gets wrapped up in himself he makes a pretty small package.

"I am the bread of life." John 6:48 In an age of miracles and mechanism, it is a sad report that half of the world goes to bed with empty stomachs, because the other half retires with empty hearts.

[HN01BY][GDrive]

http://openvault.wgbh.org/catalog/V_FFE4733DB5AA48438805C7709093E7F0

WGBH - War and Peace in the Nuclear Age; Missile Experimental; Interview with William Van Cleave, 1987

Part of War and Peace in the Nuclear Age.

12/09/1987

William Van Cleave was an academic specializing in strategic issues. He was involved with the Strategic Arms Limitation Talks (SALT) and a member of Team B in the 1970s. In 1980-1981, he was a senior adviser to presidential candidate Ronald Reagan and directed his defense transition team. He begins with a description of the Soviet threat and the Carter administration's approach to dealing with it, of which he is critical. He explains his belief in the window of vulnerability, describing its implications but also assessing the differing views of others on the topic, notably members of the Scowcroft Commission. He goes into depth on the MX missile and the complex issue of basing, listing his objections to President Carter's preferences and outlining the three-pronged approach he proposed to President-elect Reagan. He also lists the problems the SALT process posed to these ideas. In subsequent months, the Reagan administration made certain policy decisions to which he objected. He singles out Defense Secretary Caspar Weinberger for lacking technical background and personal interest in the subject, but he also notes certain Air Force conceptions and practices in a critical light. As early as October 1981 he found himself believing that the Carter Administration approach was far preferable to what their successors had chosen. He explains why he came to see a crash program on a small, single-warhead missile as the best option for a land-based defense. He further argues that a Soviet surprise attack is both a credible scenario and the only planning factor that makes strategic sense. He opposes idea of giving up the land-based leg of the triad mainly because it depends on arms control agreements to which the Soviets would never agree.

1987-12-09-wgbh-openvalut-war-and-peave-in-the-nuclear-age-william-van-cleave-interview.pdf

1987-12-09-wgbh-openvalut-war-and-peave-in-the-nuclear-age-william-van-cleave-interview-dialogue-txt.txt

Interviewer: ASKS HIM TO REVIEW WHAT SOVIET THREAT WAS TO OUR FORCES.

Van Cleave: Obviously concern began to grow about land-based force, particularly ICBM vulnerability in the late 1960s. Particularly reflected in the March '69 decision by the new Nixon Administration to reshape the planned ABM program into a first priority for defending the Minuteman force. So the Safeguard ABM program as described and debated in 1969 and 1970 really focused on the survivability, vulnerability problems of that time. Of course in 1972 when we gave away defense of the ICBM force and everything else, against ballistic missiles, then the entire scientific defense community turned to examining a variety of ways that one could make a land-based ballistic missile force more survivable than if it were in fixed, known, undefended locations. And between about '72 when the ABM treaty was signed and the end of the 1970s, 30 some different basing modes had been fairly well studied during that time. As a matter of fact I'd say that there's no single defense problem that I know of that was so thoroughly studied as the problem of ICBM vulnerability in the 1970s. Through all of that there was a perception that the threat would inevitably take place. The only dispute was over how long we had and to what extent the threat would be. That is to say, how great was the threat in terms of how few of Soviet resources had to be used in order to pose a vulnerability problem. In 1976 we had the B Team on competitive intelligence. I was a member of the B Team, Mr. Paul Nitze was, Richard Pipes of Harvard, and a few others. We were charged by President Ford with reviewing intelligence estimates on Soviet strategic force programs and capabilities. Looking backwards to see if they were wrong, what accounted for them being wrong, and then doing our own competitive estimate at this point in time. The B Team in '76 warned that there would be far more rapid advancements by the Soviet Union in the number of MIRVed re-entry vehicles and in the accuracy of those vehicles than the intelligence community then projected. We felt that there would be a window of vulnerability by the early 1980s. The Carter Administration came in 1977 and not only ignored the B Team report because what it conflicted with what it preferred to view of reality, intentionally threw the B Team report out. So the first Carter MX program proposed in 1977, as I recall, that it be placed then in Minuteman silos. It was Congress that intervened at that time and said, "No chance. We're not going to have you improve the capability of a missile without commensurate improvements in the survivability. Go back and study survivability schemes. Well the Carter Administration of course did that and what it discovered at that point of time was that of all the studies of the 70s the bottom line was generally that some form of preservation of location uncertainty through multiple shelters, in one form or another, preferably austere vertical shelters, was by far the preferred system. He had a problem. It was never resolved and hasn't been resolved by the Reagan Administration. And that is the MX missile is a SALT arms control missile, it's not a strategist's missile. And it made basing particularly difficult. It really reduced any options of mobility. It did make keeping its uncertainty of location very difficult because of the sheer mass and weight and electronics and mechanics associated with it. But the Carter Administration was committed to the MX missile. By '79 I think the Carter Administration, certainly people like Harold Brown and William Perry, were beginning to perceive that the B Team's projections were accurate and we're acknowledging in unclassified Congressional hearings that we would have a real problem. That by the early 1980s the Soviets could destroy 90 percent of the ICBM force with a small fraction of their force and that was really the... The argument then came about the window of vulnerability, when would it take place and what should be done about it.

Interviewer: WHAT WAS THE WINDOW?

Van Cleave: Well the window of vulnerability as I began using the term and I think Mr. Nitze began using it about the same time. I don't know who really coined it to begin with. It might have been someone else. But we began using it, particularly after the B Team and when we began debating SALT II as part of the Committee on the Present Danger. You can view the term from a more narrow sense to a broader sense. In its most narrow sense it referred specifically to the impending ICBM vulnerability. A vulnerability of the entire ICBM force to relatively small fraction of the Soviet force. In a broader view, something that's often forgotten, and certainly the Scowcroft Commission forgot it, is that it referred overall to the vulnerability of American strategic deterrent forces and their command and control communications. We were as worried about bomber vulnerability, and C-Cubed vulnerability, and the possibility of sometime in the future, submarine vulnerability, at the time. So the window of vulnerability really referred on a broader sense to all land-based force vulnerability. In the next sense it sort of referred to an overall strategic vulnerability of the United States that would take place when Soviet strategic forces had this asymmetrical counterforce capability, plus the strong, secure force. Just the gross imbalance in forces. It seemed to us to be a window of vulnerability. So it...we used it in all three senses. But clearly when it began, when I began writing in to Mr. Reagan's statements in 1979, it referred most specifically to ICBM vulnerability.

Interviewer: ASKS NITZE SCENARIO FOR HOW SOVIETS COULD TAKE ADVANTAGE OF THE VULNERABILITY.

Van Cleave: Well the scenario is a commonplace scenario. It's one that's been recognized by the Department of Defense, going way back to the '60s. You can see it laid out in the Safeguard debate of '69, '70, '71, Harold Brown described it in his Defense Department reports to Congress every year. And that was the scenario where there would be a well timed, coordinated attack on the land-based forces by some combination of Soviet ICBMs and SLBMs that at the same time would take out probably the early warning systems, the command and control systems. We, this scenario was even willing to say, okay, all the submarines at sea survive. But then after that first strike which takes out all of American capability against time-urgent hardened targets or non-time-urgent hardened targets, the United States is left with X number of warheads at sea, which are useful only against soft point targets, which is a force we don't want to use, that we want to keep in reserve. And facing that is an overwhelming Soviet residual force of ICBMs, SLBMs and bombers, supported by active and passive defenses. A situation where if the strike were successfully carried out in the first place, most of us who have thought it over felt that a President probably would not retaliate or if he did it would be more symbolic retaliation. And we felt that this would not be a credible deterrent, that whatever the increase in the risks of the surprise attack taking place, it certainly increased the risks in foreign policy and decision making.

Interviewer: DIDN'T SCOWCROFT QUESTION THIS SCENARIO?

Van Cleave: The Scowcroft Commission said something a little bit different than that I think. The Scowcroft Commission apparently didn't believe in a sure destruction at that time, of all-out retaliation. What they said was that a coordinated attack would be so difficult that our ICBM forces, as well as many of our bombers could launch on warning. The Scowcroft Commission solution was a launch on warning or at best a launch under attack solution. Up to the time of the Scowcroft Commission, everybody, including Harold Brown and William Perry and those of us on the opposite side of the political aisle, shunned at all costs a launch on warning or launch under attack, court of last resort much less a strategy, because of the obvious difficulties with it. Technically, operationally, strategically, intelligence, and so forth. So the Scowcroft Commission did a couple of things in this regard. It said that we could ... first of all acknowledged ICBM vulnerabilities. Since the Soviets now possess the combination of numbers, accuracy and reliability to destroy our ICBM force with a small fraction of its force. It then said, however, that that in itself was not sufficient problem to drive ICBM modernization. That's totally contrary to what the entire community believed up to that point in time. Totally contrary to what people like Harold Brown who served with the committee said in his, in his previous statements. And they said besides that, we'll get early warning of the attack and can launch on warning. That a coordinated attack is too difficult. Well, the coordinated attack problem is debated all the way back to the Safeguard debate and everybody, including Harold Brown in his 1979 report to Congress, said that while the coordinated attack is difficult, it is not impossible and we can't ignore that particular risk. So the Scowcroft Commission sort of turned that around. Earlier in 79 Harold Brown and Perry were telling Congress that our bombers became more vulnerable because of ICBM vulnerability and the Scowcroft Commission ignored that as well. And then it did one other thing that I think is potentially is a very serious blow to sound strategic logic in the United States. It turned the concept of Crisis Stability on its head. Originally Crisis Stability was an additional standard for force effectiveness. Strategic

stability said in the old days of the sixties that there won't be a surprise attack because we can always retaliate with at least a submarine force. Crisis stability says now wait a minute. Still, you have to worry that even with a submarine force, at a time of crisis, if your other forces are strategically important and vulnerable, then the enemy's incentive to attack will be increased. And since the, according to the logic of that time, the only real chance of an exchange was in a crisis anyway. It was particularly in a crisis that we must assure that all major segments of the forces were survivable. That none of them, and particularly the ICBM force which is far and away the most important key to American strategy, at least since NSDM-242 in 1974. Certainly key to PD-59. Without a survivable ICBM force American strategic doctrine falls apart with the speed of light. Crisis stability understood that. Now the Scowcroft Commission uses Crisis Stability to reduce the standards for force effectiveness. It says, according to Crisis Stability that, first of all, there won't be a surprise attack. We will come out of a crisis. Because of that our bombers and ICBMs will be more alert and we can launch on warning. Therefore we don't have to worry about ICBM vulnerability, at least not for the next ten years, it said. Because remember the report said, "Yeah, it's a problem and we'd better fix it in the '90s with a small ICBM. But we can live with it in the '80s." But as everybody knows the Scowcroft Commission's assignment was to justify the MX program to Congress and not to come up with sensible solutions for vulnerability.

Interviewer: IN THE 1980 CAMPAIGN HE SERVED AS SENIOR DEFENSE ADVISOR FOR REAGAN. ASKS WHAT THEY HAD IN COMMON IN SENSE OF WHAT NEEDED TO BE DONE?

Van Cleave: In 1980 I took a leave of absence from the University to serve as the senior defense advisor for Mr. Reagan and defense policy coordinator. Dick Allen was the national...

Interviewer: (INTERRUPTIONS REPEATS QUESTION)

Van Cleave: In 1980 I took a leave of absence from the university to be senior defense advisor for Ronald Reagan during the campaign. And coordinator of defense policy. Early on in the spring of 1980 when the newspapers were trying to say that the former Governor of California didn't know anything about foreign defense policy, Richard Allen and I set up an advisory group of experts, scanning foreign and defense policy. A hundred and some, about half of which were in defense. In the spring of '80, at that time, I suggested to Mr. Reagan that in addition to working on the campaign and the speeches, I'd put these people to work. That I'd take the defense experts, organize them into task forces, appoint chairmen, and then I'd chair the overall group. And we'd study these problems. On these task forces I used people that had been instrumental in something called the Strategic Alternatives Team. The Strategic Alternatives Team was set up about 1978 under my chairmanship, consisting of a group of policy experts like Paul Nitze, top scientists like Bill Graham, top engineers like Ben Plymale then vice president of Boeing, and others. Because we were so concerned with the vulnerability problem and with our conviction that the Administration was not addressing it seriously enough and that its solutions to it would not be timely enough. We set ourselves up to study quicker solutions, principally to the vulnerability problem. But to strategic force modernization overall. I brought most of that team into the campaign in 1980 and from the spring of 1980 up to the time of the election, we did an enormous amount of analytical work and studies and the like. And really had tentative solutions already decided upon. We held our own hearings, we had our own working groups and the like. The idea that I proposed at the time was that we could get 75 percent of the work done on a Reagan 8-year defense program by the time of the election and really be able to hit the ground running. That I would then agree to be Director of the Department of Defense transition team, between the Carter and the Reagan Administrations, which I was. And bring the professional people in who had helped me both in the Strategic Alternatives Team and doing these studies of 1980, into the Pentagon to complete the work. By turning it from unclassified into classified, by doing the necessary negotiating with the services, and saying here's what we have come up with, what's your reaction to it? Do you support it? Do you disagree? If you disagree, why do you disagree? Let's go back and address the problem again.

Interviewer: ASKS ABOUT BASING MODES FOR MX: HE TOLD CANDIDATE REAGAN IT WAS NOT GOOD TO SUPPORT....

Van Cleave: We had two problems with the Carter basing mode for MX. The basing mode, that is to say. One was the timing plan for development and deployment of the system didn't come soon enough. Mr. Reagan announced in a major speech in Chicago on March 1980, this system isn't timely enough. We'll be faced with the window of vulnerability, we need a system to provide survivability more rapidly. The other thing is that because the Carter Administration had changed the system to adapt it to then SALT II negotiations, it had changed in specific ways that we were critical of, without being critical of the concept of multiple protective shelters.

Interviewer: ASKS ADVICE TO REAGAN ON BASING.

Van Cleave: Well the advice I gave Mr. Reagan and the position that Mr. Reagan took throughout 1980 was that we were critical, not of multiple protective shelter basing but of the Carter MX plan, for two reasons. One it would not provide the necessary survivability rapidly enough. It was too slow a system. Mr. Reagan first said in March of 1980 in Chicago that this system does not solve the window of vulnerability problem rapidly enough. We need something that does it more quickly than now planned. Secondly the Carter Administration had by '79, '80, changed the system to adapt it to SALT II requirements in ways that made the system too cumbersome, too costly and too uncertain. And we were critical of those specific changes in the system.

Interviewer: WHAT FEATURES DID THEY ADD?

Van Cleave: Well in the first place, keep in mind that all of the community agreed that for various reasons vertical shelters were far the best. They carried the, the least technical risk, the least uncertainty in the pricing...

Interviewer: INTERRUPTS FOR FORMAT DISCUSSION WHAT WAS WRONG WITH CARTER MPS?

Van Cleave: The Carter version was that it had changed the original concepts of the system. For example, from vertical shelters which all studies to that time, Defense Science Board, Air Force Science Board and outside contractors, had all agreed by that time that austere vertical shelters were far preferable for any multiple protective shelter or as it was originally called, multiple aim point system. The reason being that they could be built cheaper, they were harder, they carried less technical risk, they carried less cost uncertainty, and the point here was that particularly with an MX, 192,000 pounds, when with a canister and transporter would be a million pounds, really could not be a mobile missile. And you therefore had to have location uncertainty. Vertical shelters with random occasional movement rather than mobility was what everyone agreed was the best or the most optimum solution at that time, if one ruled out defense.

Interviewer: WHY DID THE CARTER ADMINISTRATION CHANGE THE SYSTEM?

Van Cleave: As the Carter Administration was planning this multiple protective shelter and negotiating SALT II, the Committee on the Present Danger, particularly Mr. Paul Nitze but also myself and a couple of others, pointed out that there seemed to be an inconsistency here. The Carter Administration was negotiating an agreement that would rule out the very system it said was necessary for MX. The Carter Administration denied that. We kept pressing the point. At this point in time, and I believe 1979, the Carter Administration sent over to Geneva, I believe Mr. Vance at the time, to tell Mr. Semenov, the head of the Soviet delegation, sort of the following: "It is our interpretation of the SALT II agreement that this system is not ruled out and is not inconsistent with

of the Soviet delegation, sort of the following: "It is our interpretation of the SALT II agreement that this system is not ruled out and is not inconsistent with the agreement." What the Carter Administration hoped was that the emissary would go there, make the statement, turn around and come home. And following the curious American negotiating doctrine that Soviet silence means Soviet assent, everything would be alright. But the Soviet says "No, wait a minute, sorry, that's inconsistent with what you are negotiating." The Carter Administration said but, the agreement, once the protocol expires, doesn't rule out mobile ICBMs. The Soviet says, "Yeah, you're right. Mobile ICBMs a great idea. We like mobiles, we're going to have mobile ICBMs but you're not building a mobile ICBM. You're talking about building thousands of launchers." By that point in time, the silo launcher in the ground vertical was identified as a launcher for SALT counting purposes. And at least in American eyes as a missile. And if the Soviets wanted to cause trouble about this, which they did, all our argument... that this is not a launcher it's a protective shelter, could be used and was used. It's ironic because the Soviets don't necessarily use silo launchers as anything other than protective shelters. All of their ICBMs themselves come in canisters. And we should have from the earliest days of SALT I point out that these things aren't launchers, that we really don't know what a launcher is and it's stupid to limit launchers anyway. But we didn't do that. We were in that trap. Here are the Soviets saying that building all of these shelters was the same thing as building new launchers and that was prohibited. And this isn't a truly mobile system. And besides that, how can we verify it? The Carter Administration went back, took the volti...excuse me, the vertical shelters that looked like silo launchers, put them above ground, made them horizontal shelters or garages, and then tried to add much more mobility to the system, coming in with Racetrack and stuff like that. So you had horizontal shelters which were more costly and not nearly as hard, and you had a mobile system for a missile and its transporter which were too large for a mobile system. And then you introduced new problems with preserving location uncertainty. And to top all that off the Carter Administration put SALT viewing parts, ports on top of the horizontal shelters which would be open when the Soviet satellite went over so they could see which shelters held the missile. Which wasn't our idea of location uncertainty. It was those kinds of things that I think degraded the original concepts that we criticized. But we did not, we did not criticize multiple protective shelter at any time during '79 or '80.

Interviewer: CITES AIR FORCE RESERVATIONS. ASKS IF HE TALKED WITH GENERALS BURKE OR HECKER ABOUT THE PROBLEM.

Van Cleave: Well in '79 or '80 and even into '81, we had constant interaction with Air Force officials such as General Burke and General Hecker. And I was a great admirer of both men who were superb professionals and looked at this problem objectively. It's entirely correct to say that neither they nor for that matter Lew Allen favored the changes in the system that the Carter Administration made. But nonetheless they found themselves then in a bind. It was to take this system and make the best of it or risk not have any ICBM modernization at all. Or what would be even worse I believe in those gentlemen's eyes, having the MX put in Minuteman silos rather than in some type of survivable basing scheme. I think they felt it was preferable to the alternatives and they turned out to be correct, and that it would be possible to improve it as you went along.

Interviewer: WHAT DID HE SAY TO THE GENERALS?

Van Cleave: We felt that we were going to win the election in 1980 and we could make changes in it that would improve it and do it much more rapidly than the Carter Administration planned. We also felt that his system was by then so flawed that it was most unlikely either to solve the survivability problem or to get through Congress. My arguments with Gen. Burke and Gen. Hecker and the Air Force had to do again with the timing of solutions to the problem. I was recommending strongly and so did my transition team that we have an interim solution of redeploying Minuteman III in multiple protective shelters in existing Minuteman deployment areas. And then phasing MX in probably a lesser deployment in terms of numbers into those areas. And proceeding with rapid deployment of a small ICBM. The Air Force clearly preferred to stay with MX only.

Interviewer: DURING THE BILL MOYERS DEBATE HE WAS SEEN AS OPPOSING MOVING SYSTEM TO UTAH. WHY DID HE GO AHEAD AND ENCOURAGE PEOPLE TO FIGHT THIS FORM OF THE SYSTEM?

Van Cleave: Well we felt that time again, make it clear that...the MX was really the wrong missile for the United States. We felt that it was a missile that would be too difficult to adapt to a sufficiently survivable basing mode. And that it would be better to take the existing force that we had, which was a good force, the Minuteman III, upgrade it and redeploy it in a far more survivable mode. We at that point in time felt that there was sufficient time and probability to do that that we should push on that even at the risk that it might cause for MX at the time.

Interviewer: SO HE DID REALLY BACK THE STRUGGLE OF PEOPLE IN UTAH/NEVADA AGAINST THIS BASING SYSTEM?

Van Cleave: No, that's not quite correct to say. Because in the final analysis I thought particularly when there's further delay in rebasing Minuteman III, that we, if we were going to have the MX, and I was a supporter all the time of Minuteman, of ICBM modernization and increased counter-force capabilities and the like, that if we were going to have it, we had to have some time of a multiple shelter basing. My strategic alternative team and my group of experts up through the transition, still felt that it was probably a mistake to try to propose to put this system into new areas when we had six wings of Minuteman deployment scattered all around the country, encompassing about 200,000 square miles where people were used to having ICBMs. And where particularly, if you had the original MPS concept with vertical shelters, you could include in those existing deployment areas, and, or, on other military reservation. We had then 30,000 square miles of fenced military reservations available as well. And it was really, again, the MX missile that was driving the basing. Rather than the other way around.

Interviewer: WHY DID HE FEEL THE BIG MISSILE REMAINED UNCHANGED THROUGH DESIGN PHASES AND THE BASING MODE CHANGED?

Van Cleave: The Air Force has had an interest in larger missiles for cost effectiveness reasons going back in the 1960s. Given the threat as defined in the late '60s, and throughout the early to middle 1970s, then there wasn't anything intrinsically wrong with a large missile in fixed shelters. The larger missile was also a product of SALT. When you began counting and limiting the numbers of things, i.e., launchers or missiles, you increased the pressure to make bigger and bigger things. As well as cost effectiveness and re-entry vehicle deployment reasons do as well. Strategic logic would have counseled producing the same capability but scattering it into a larger number of smaller packages, which packages were individually less lucrative and less attractive targets or aim points, and could be made more survivable through both proliferation and mobility. Mobility and concealment become almost exponentially more difficult as the size of the missile and its associated equipment increase. And therefore we, we were against that because of survivability. I think the Air Force wanted it for SALT reasons because they wanted a larger missile, because by that time the MX was the only ICBM under development and they were afraid of losing it. And because they felt that if you let them work the problem they could solve the vulnerability problem adequately.

Interviewer: DID HE RECOMMEND TO REAGAN THAT HE CONSIDER REDEVELOPING MISSILE ALONG SMALLER LINES AND MAKING IT MORE MOBILE?

Van Cleave: We had different phases of what we were recommending because we were trying to be realistic about it and we certainly wanted Air Force cooperation as much as we could get. By the time of the transition we had a three-pronged approach to the problem. One was as I said, redeployment of Minuteman III, in multiple shelters in existing deployment areas. The second was continued development of the MX missile for adaptation into that same MX, MPS deployment, but probably in lesser numbers than the 200 planned by the Carter Administration. And the third was concurrent, rapid deployment of

the single warhead, small ICBM. Which would be adaptable to a larger number of survivability measures from mobility to concealment. Those were the three approaches that we were recommending. Now you can see readily with the first and the third, the second wasn't needed... It just wasn't needed. But it was partly a concession to the Air Force and partly it was a hedge against some unforeseen failure, technical or political, in the development of the small ICBM.

Interviewer: IS HE SAYING, IF WE COULD HAVE DEVELOPED A SMALL MOBILE MISSILE, THEN MX WAS UNNECESSARY?

Van Cleave: That MX was not only unnecessary. If we could do those two things, redeploy Minuteman III and develop the small ICBM expeditiously, MX would be a bad idea.

Interviewer: SALT GOT IN THE WAY FOR US STRATEGICALLY. DID HE FEEL WE SHOULD ABANDON SALT AND GO AHEAD TO DO WHAT WAS UNILATERALLY BEST FOR US?

Van Cleave: SALT certainly got in the way of solving the survivability problem for ICBMs. Keep in mind that SALT either prohibited or was biased against essentially every way that I know of to have a survivable land-based ballistic missile force. First of all, it limited your numbers. That is, it prevented proliferation of aim points and increased the value inevitably, of each aim port. Secondly the SALT ABM treaty says you can't defend them against ballistic missile defense. Thirdly, for verification reasons, you couldn't conceal them without going to an enormous amount of difficulties such as was in the MPS system, and fourthly, also for verification reasons, it was the American position in SALT, from the earliest days of SALT I to this very day in the Reagan Administration, that mobile ICBMs should be banned. Now if you can't proliferate aim points, if you can't defend, if you can't conceal, and you can't make them mobile, I don't know how to make ICBMs survivable. And that's been a product of SALT.

Interviewer: ASKS ABOUT GOVERNORS SCOTT MATHESON AND ROBERT LIST.

Van Cleave: At the time of the Bill Moyers debate in Salt Lake City on MX and MX basing, the governors of the two states involved, Bob List of Nevada and Scott Matheson of Utah were still rather favorable towards MX deployment in their states, as I recall. Gov. Matheson was of course perceptive to social objections and to what the Mormon Church's position would be, but Robert List was still looking at it as a very potential economic boom to the state of Nevada and was not at that time opposing it. It shows that the political situation can change when there's a very determined and articulate minority making dramatic if not outrageous claims about the consequences of deployment.

Interviewer: SENATOR GARN SAYS LAXALT AND HE TURNED REAGAN AGAINST THE SYSTEM.

Van Cleave: Jake Garn and Paul Laxalt probably had a lot to do with persuading Mr. Reagan and Mr. Weinberger that by 1980 it was not a good idea to put the system in their states as envisaged at the time. I had many discussions with both Jake Garn and Paul Laxalt and I found them quite willing to consider alternative deployment modes that were not as disruptive as that planned by the Carter Administration. Paul Laxalt on the other hand was quite in sympathy with my urging about Minuteman redeployment and my suggestion that a lesser deployment of Minuteman could be phased into a multiple protective shelter system around the Cheyenne, Wyoming, Air Force Base.

Interviewer: ASKS IF IT'S IRONIC THAT CARTER WOULD GIVE MX MISSILE TO PEOPLE, PARTICULARLY FROM THE COMMITTEE ON THE PRESENT DANGER TO GET SALT II RATIFIED—AND THEN REALLY GOT NOTHING.

Van Cleave: Well I don't think, I don't think it was a matter of the Carter Administration giving opponents of SALT II the MX missile. Because the MX missile would not have relieved one bit our opposition to SALT II. And in fact, most of us had reservations about the MX missile. I think that the responsible people in the Carter Administration like Secretary Brown and Dr. William Perry, by that time, themselves felt something had to be done about ICBM vulnerability and also favored improving the capability of the force.

Interviewer: SHOULD WE HAVE BUILT THE LARGEST MISSILE WE COULD UNDER THE SALT RULES? HAVE AS MUCH TARGET COVERAGE AS POSSIBLE?

Van Cleave: If we were to be bound forever and ever to SALT rules, then there is a lot to be said about building the largest lightweight ICBM and SS-19 size ICBM, which is the MX, that the rules will allow. We badly needed increased counterforce and increased ICBM capability, or we couldn't either carry out our own doctrine or have essential equivalence with the Soviet Union. In that case, however, we either needed ballistic missile defense of those larger missile systems, or we needed to get back to a sensible multiple protective shelter system. My own preferred solution would have been to do away with limits on launchers or aim points, and even limits on missiles, and look at such thing as overall throw weight limits on capability. So you agreed on what ceilings or capability you would have, but then the sides were left to adapt those forces to the best survivable mode that they could find. And in my view that would have been the same capacity, the same increased counter-force capability, but divided up among a large number of very small missiles that could be either concealed or made mobile or if necessary also defended.

Interviewer: HOW WAS WEINBERGER'S PHILOSOPHY DIFFERENT FROM YOURS — YOU WERE SLATED TO HIS JOB...

Van Cleave: The... I'm not sure there's a difference in philosophy between myself and the new Secretary of Defense, Caspar Weinberger. On the one hand there is a bureaucratic difference that for a year, plus the transition, I had been organizing the Reagan defense plan and a lot of people in the building, Pentagon, and outside of it, were sort of looking at me as if I were Secretary of Defense. I never expected to become Secretary of Defense. I knew I didn't have the political experience or anything else. That was one problem. The other problem, the real problem was that as fine a man as Mr. Weinberger is and as great his service in government, he simply simply was not experience in defense problems and in such matters as ICBM survivability.

Interviewer: WHAT MISTAKE DID HE MAKE?

Van Cleave: The mistake made by Mr. Weinberger was sort of several fold.... The mistake made by Mr. Weinberger was several fold. First of all, he didn't have the background and knowledge to tackle the problem expeditiously and he sought to buy time bureaucratically by forming one study panel such as the Townes Panel after another, all the way to the Scowcroft Commission, to restudy a problem that had already been studied more than any single defense problem in my knowledge, and didn't need any more study. Secondly, a priori, he rejected the multiple protective shelter. For whatever set of reasons, I'm not entirely certain. Perhaps politically he was convinced that it wouldn't work in Utah and Nevada. Perhaps he was convinced that we opposed the system in 1980. Ronald Reagan really didn't oppose the basing scheme and we didn't oppose the missile either, although none of us were very enthusiastic about it. But nonetheless, Mr. Weinberger would not consider any discussion of the multiple protective shelters from day one. He wouldn't even listen to the Joint Chiefs of Staff or the Air Force on the problem. What he did was say, in essence, now fellows, that I have ruled out, the only two known ways to make the MX survivable, ballistic missile defense and multiple shelters, come up with another solution. And the MX, and the Air Force and OSD cast around for one thing after another, and came up, predictably, with one very bad idea after the other, from the C-5A or Big Bird air mobility, to dense pack and closely spaced basing to what have you. And then finally shrugged their shoulders and went right back to 1977 and the Carter Administration and stuck them in Minuteman

silos.

Interviewer: DID HE TRY TO CONVINCE WEINBERGER TO LOOK AT THE FACTS?

Van Cleave: I tried on several occasions to brief Cap Weinberger about all the work that we had done on the entire strategic force modernization program, and particularly on the problem of ICBM vulnerability and the options among Minuteman II, MX, and the small ICBM. Mr. Weinberger was not interested at the time of his appointment, and before inauguration day, in hearing those briefings. Either at the Pentagon or when my deputy, Dr. Plymale and I flew to San Francisco. He was interested in the threat briefings that we brought along and was very attentive to those. He was not interested in the options that we had by that time formulated, or our preferred on those options. It was my idea to present him the options, tell him which ones the services favored, if they were different, from which ones his transition team favored. And ... lay them out that way. He would not listen to those. I then tried to guide him and his representatives, such as Mr. Taft, to the written materials that we had formulated, the boxes of materials. We had large briefing books that laid out all of these options in exquisite detail. I am not aware that any of that team looked at any of those materials in any way whatsoever. Later on Mr. Plymale and I finished a summary report of what we did and I personally delivered that to Mr. Carlucci. I am not aware that anyone paid any attention to that either. When it became clear as 1981 was going on, and the Air Force was beginning to get very worried about the new Administration, when it became clear that they weren't moving to resolve the problem in any way whatsoever, I prepared a couple of written memorandums and took them to Richard Allen and to Ed Meese. And we had discussions of the problem and I got absolutely nowhere.

Interviewer: ASKS HIM TO REPEAT ANSWER, CONCENTRATING ON BASING QUESTION.

Van Cleave: Well the problem here is that I didn't have a chance to outline any of the options for ICBM survivability for Mr. Weinberger because he wouldn't take the time to listen to them.

Interviewer: HE WOULDN'T LISTEN TO MULTIPLE PROTECTIVE SHELTER SYSTEM?

Van Cleave: I had the strong feeling in the meetings I had after Cap Weinberger was appointed Secretary of Defense, up to the time when the transition team was dissolved and Mr. Weinberger didn't care to hear of any of the options or recommendations or solutions that we had come up with.

Interviewer: DID HE REGRET HAVING COMING OUT AGAINST THE MPS EARLIER? IF THEY HAD USED THE CARTER SCHEDULE YOU MIGHT HAVE HAD 200 MISSILES BASED SURVIVABLY?

Van Cleave: By October of 1981, when the Reagan Administration announced strategic force modernization program, and announced having the number... halfing the number of MX missiles and putting them in Minuteman silos, I certainly did feel that the Carter Administration approach was far preferable to that without any shadow of a doubt whatsoever. And by that period of time, as a matter of fact, right about that time, I gave an address to the professional community in Washington, D.C., at a semi-annual defense form meeting, where I went over these particular options. And at that time explained why I didn't favor the things that were being discussed, but did make the point that I felt something was far better than nothing. That we badly needed an ICBM development, a modernization program, and at that point of time any movement in the direction of survivability was infinitely preferable than just putting things in silos. Also at that point of time I remember meeting Harold Brown at a lunch at the Committee on the Present Danger where Dr. Brown was sort of kidding me about wasn't the Carter Administration approach to this far better than what the Reagan Administration had come up with. And I had to acknowledge that yes, indeed, it was.

Interviewer: WASN'T THAT HARD BECAUSE THE AIR FORCE HAD SAID IN 1979 NOT TO OBJECT TO THIS BECAUSE WE WON'T GET A SYSTEM?

Van Cleave: The Air Force's position was indeed that if we pushed the other types of options, such as Minuteman redeployment and the small ICBM, that we would likely lose the MX program. As it turned out that wasn't quite correct because we didn't get the MX program either. And we don't have the MX program now that the Air Force envisioned then.

Interviewer: WHAT WAS HIS TAKE ON THE SCOWCROFT COMMISSION REPORT?

Van Cleave: By 1982 I had become persuaded that the MX missile was the problem. And I was writing Op-Ed pieces and the like, saying that the Reagan Administration adopted the Carter missile which was a bad idea, and threw out the Carter basing scheme which was a good idea. But that now the Reagan Administration had the opportunity to come up with the Reagan missile and a Reagan basing scheme, and it was called the small ICBM adapted to multiple protective shelter or other options of mobility. And by that time I was saying again that the MX was the problem. I wrote a major piece in the Washington Post in December of 82 on that which led to my being summoned as one of the ... initial witnesses before the Scowcroft Commission. I spent a good deal of time testifying and answering their questions, and I believe I was partly responsible for persuading them of the wisdom of a small, single RV, ICBM program. As a matter of fact, I got an early copy of their report inscribed to me by one of the members, Jim Woolsey, you know, with the inscription, "With thanks for the main idea." And at that point of time I was feeling strongly that we really needed a crash program on small ICBM.

Interviewer: WHERE DID THE IDEA ORIGINATE?

Van Cleave: The small ICBM is an idea that has floated around for a long period of time. It was something that various elements of the scientific and policy community have been interested in. Paul Nitze had been interested in it for a number of years. People at R-D Associates on the West Coast, had been interested. It's just an idea that had been around for a long period of time.

Interviewer: WHAT ABOUT THE ARGUMENTS THAT IT'S JUST TOO EXPENSIVE?

Van Cleave: Well I don't believe the small ICBM is too expensive. But what we're listening to here when we're listening to these costs, we're listening to the Air Force. Which wants to protect the MX. Now any system, particularly since the Air Force and its contractors have a monopoly on ICBM research and development and procurement, any system can be made to look as arbitrarily costly and to take as much time as they wanted to look at. And then when you add the fact that the government bureaucracy in DOD anyway can make any simple problem exceedingly difficult, and any difficult problem virtually impossible to solve, you can string out the time and the costs. I think this hit its peak when during the transition the Air Force attempted unsuccessfully to tell the transition team that it would take longer and cost more to take a missile we already had, redeploy it in existing deployment areas where the infrastructure existed, where the political community accepted it, than it would to develop a brand new missile, the MX, put it in an entirely new area, and solve all the environmental and engineering problems. That was absolutely absurd.

Interviewer: WHY HAS THE AIR FORCE STALLED ON THIS, AND WHY?

Van Cleave: The Air Force in my view as an institution has undoubtedly been stalling on the small ICBM or the Midgetman. But it has also lost favor, partly because of Air Force actions toward it in the office of the Secretary of Defense. There are really three contributing factors to the problems with the small

ICBM today. First of all the Scowcroft Commission, not wanting it to interfere with the MX, made it an 1990s initial operating capabilities system. A 1990s system. When I testified to the Scowcroft Commission, with all the expert support I had behind me, I testified that there was no reason that we couldn't have that system beginning deployment within four years. That was the end of '82, start of '83. That is to say in 1987 to at most beginning 1988 system. There is no reason to call it a 1992 system unless the Scowcroft Commission was under instructions to preserve the MX and not use this to be a... an alternative to the MX or a competitor to it. The Air Force by that time was institutionally dedicated to the MX missile and saw the small ICBM also as a competitor. That doesn't mean the entire Air Force. No doubt the small ICBM program officers have been devoted to the small ICBM. And the... and SAC has also been in favor of the small ICBM because there is a lot to be said for targeting purposes. For a single warhead missile rather than a large MIRVed missiles. So there have been pockets of support in the Air Force. But at the highest levels the Air Force has not been favorable to the small ICBM. To give it unfavorable comparison with the MX, they have come up with cost effectiveness techniques based upon the number of warheads carried per unit cost. Rather than the true comparison, which is how many survivable warheads do we have and what's the cost of a survivable warhead, not the cost of a warhead in peace, for heaven's sake. Nobody's ever used that for anything. But those kinds of comparisons coupled with assumptions about SALT limitations on the number of small ICBMs have driven the unit cost of the small ICBM to a point where it has to be unattractive. If you're really talking about 300 small ICBMs, and you are using a calculation based on cost per warhead, then it's going to be unattractive to me.

Van Cleave: The small ICBM as it's been developed by the Air Force has become an unattractive system for many in the Office of Secretary of Defense. Because they feel it will be too costly, the numbers will be too low, and that given the Air Force's approach on cost effectiveness calculations, it makes more sense to have a MIRVed small ICBM. But a MIRVed small ICBM means two things. First of all it means a growth in the missile weight. And a growth in the missile weight means an even greater growth in the weight of the overall transporter or erector launcher package. Every pound of growth in the weight of the missile means about 8 pounds growth in the weight of the transporter and canister and things for that missile. When you begin to make a MIRV out of it, you've taken what was originally a 25,000 missile and then a 33 and then a 38, and you're up to close to Minuteman-sized missile, 60 to 70,000 pounds. That becomes more difficult to make mobile and more difficult to conceal and it also becomes more costly. Secondly, however, there were many strategic reasons for a single warhead vehicle. Ranging from reducing the attractiveness of the target, changing the strategic exchange ratio so the enemy expends more warheads than he gets of ours. And because there are many targeting reasons to have small or single re-entry vehicles rather than MIRVed. But now OSD, knowing all of those things, has now become dis-enamored, if that's the right word, of the small ICBM. And is in fact against it.

Interviewer: HOW DOES HE FEEL ABOUT HML?

Van Cleave: I don't believe that the HML... I don't believe that the hardened mobile launcher is the right way to go for a small ICBM, I think it adds far too much weight and far too much cost to what should have been kept a very simple and austere system. The small ICBM, if it were kept small enough, like 25,000 or 30,000 pounds, or with the 10 years it's taking to develop it, technology could probably give you a 18,000 to 20,000 pound ICBM with a thousand pound warhead, without any trouble at all. If you'd kept it small you could have adapted it to a greater variety of mobile configurations. The hard mobile launcher adds too much weight to do that, and I think probably the best thing would be to take the small ICBM and adapt it to a multiple protective shelter system. In that regard I'd do two things. I would make austere vertical shelters on the fenced military reservations for the prime deployment. And then I'd add a large number of even cheaper, possible even horizontal shelters outside the military reservation. To which the system could scatter if it did receive enough warning to do so.

Interviewer: WHY DID THE AIR FORCE PUSH THE HML?

Van Cleave: I don't know why the Air Force is pushing the hard mobile launcher. I've seen Air Force design studies that support it in an engineering fashion. And I'm sure that many of the Air Force officers working on it have become convinced that the hard mobile launcher is the best solution to barrage types of threats and the like. Also, they are operating on a couple of assumptions. One, off the road mobility is a non-starter politically, and secondly, multiple protective shelters wouldn't get past the Secretary of Defense who to recently was Cap Weinberger. So if you ruled out off the road mobility, and you ruled out multiple protective shelters, and you're talking about making a system mobile or quasi mobile in the land areas that are being discussed, then the hard mobile launcher can be said to make sense. I wouldn't rule out the other two things. I would in fact try and return to them.

Interviewer: WAS THE AIR FORCE DOING THAT TO SABOTAGE...

Van Cleave: I would also add that I do have my suspicions that many in the Air Force do favor the hard mobile launcher because it helps make the small ICBM look less attractive and more costly.

Interviewer: SHOULD THE SCOWCROFT COMMISSION HAVE KILLED THE MX AND MOVED AHEAD WITH THE SMALL MISSILE?

Van Cleave: I firmly believe that the Scowcroft Commission would have done far greater service to the national security of the nation if it had recommended that the Reagan Administration scrap the MX and had recommended a crash program to develop and deploy the small ICBM.

Interviewer: ASKS HOW HE FEELS ABOUT MXS IN SILOS.

Van Cleave: It makes me very uncomfortable to have MXs stuck in silos. I am entirely for more capable ICBM forces. But survivability comes first and all along survivability has been the number one priority. And it's as simple as that. We can't have major increases in capability without commensurate improvements in survivability.

Interviewer: WEINBERGER SAYS HE SAW WINDOW OF VULNERABILITY AS NOT JUST NEEDING TO PROTECT OUR MISSILES BUT WE NEEDED TO MATCH PERCEPTUALLY THE OFFENSIVE CAPABILITY OF THE SOVIETS. THE MX IN SILOS THEN DOES THAT.

Van Cleave: I have no problem with Mr. Weinberger's description of the term window of vulnerability as including essential equivalence and perceptual equivalence with Soviet capabilities. In the broadest sense I would agree that that should be encompassed by the term. But that in itself is no reason to put MX missiles in vulnerable configurations. You're not, you're not building weapons, you're building targets if you do that. You're not improving essential equivalence at all. You're destabilizing a situation, it seems to me.

Interviewer: ASKS HIM TO REPEAT ANSWER.

Van Cleave: With his definition. If I were to take my original definition of window of vulnerability one step farther and broadening it, I would say yes, essential equivalence. I would say, as a matter of fact, being able to accomplish the objectives that we have set for our strategic forces which includes essential equivalence.

Interviewer: ASKS HIM TO REPEAT PART OF ANSWER.

Van Cleave: [illegible] with Cap Weinberger's [illegible] ability [illegible] essential [illegible] with the Soviet Union. And

Van Cleave: I had no quarrel with Cap Weinberger's window of vulnerability broadly enough to encompass essential equivalence with the Soviet Union. And I certainly believe the United States should attempt to match Soviet counterforce capability and that increased ICBM capabilities are necessary to do that. But that in itself is no reason to put these capabilities in a vulnerable configuration. That's not adding weapons, it's adding targets. And it doesn't help essential equivalence to do it in that fashion.

Interviewer: SCOWCROFT COMMISSION SAID WINDOW OF VULNERABILITY HAD BEEN WAY OVER EMPHASIZED. THAT WE DON'T HAVE TO WORRY ABOUT FOR A DECADE OR SO.

Van Cleave: The Scowcroft Commission said that the window of vulnerability exists today but that it had been over emphasized for a decade. That it was not itself sufficiently important to be thee driving factor for ICBM modernization. I think the Scowcroft Commission was dead wrong and I think that really reflects the truth that the Scowcroft Commission's charter was to come up with an MX package that would be persuasive to Congress.

Interviewer: WHY WAS IT SO IMPORTANT TO BUILD MX?

Van Cleave: Why was it so important to build that particular MX? Because there was strong commitment to it. Reagan was committed to the MX by that point in time, the Air Force was committed to the MX. And there were sound reasons for proceeding with an ICBM development program. We hadn't deployed a new ICBM for a number of years. Soviet ICBM forces were far surpassing those of the United States in every measure of capability. My only problem here is that the window of vulnerability and ICBM survivability have indeed been the foremost strategic problems facing our strategic forces for a number of years, and increasingly so. And I think the Scowcroft Commission did a very poor job of rationalizing, or attempting to rationalize that problem away.

Interviewer: FIRST YOU FOMENTED CRITICISM OF CARTER MPS SYSTEM; LATER YOU CAME TO SEE IT WAS THE BEST SOLUTION AND ARGUED ITS CASE TO WEINBERGER?

Van Cleave: I criticized the Carter multiple protective shelter because I think that it had itself become a degraded system compared to the sounder concepts for multiple protective shelters. I also criticized it because at that time I was persuaded as were many others that there were in fact alternatives to that program that were viable politically, that were a far more timely solutions to the vulnerability problem, and that were technically and operationally superior to that particular plan. Had I known at the time, or had the problem been defined to me at that time, as this or nothing, I would certainly have preferred that to nothing.

Interviewer: DANIEL GRAHAM SAID MPS WAS DESIGNED TO SOAK UP THE VERY SOVIET WEAPONS THAT SHOULD BE THE PRIME TARGETS FOR MX IN A COUNTERFORCE ROLE.

Van Cleave: Danny Graham's statement about this being a system to soak up Soviet RVs, I think was really one made to enforce his own preferred view that we spend more of our money on ballistic missile defense isn't on defensive forces than these offensive forces. And on that principle I certainly agree with Gen. Graham that we should spend more money on ballistic missile defenses and strategic defenses. But the purpose of a, of a survivability scheme or basing scheme for an ICBM force is, is distorted if it's phrased as a way to soak up things. What it's, what it's there for is to increase attack requirements, thereby multiply uncertainties and reduce the incentives for, for attack. It's there to deter attack on the system.

Interviewer: DOES HE FIND SURVIVABILITY OF MX MORE IMPORTANT THAN LARGE NUMBER OF TARGET COVERAGE CAPABILITY?

Van Cleave: There are two reasons to modernize the ICBM force. Both of them are important. One is survivability and the other is increased capability. As important as increased capability is, it is not more important than survivability.

Interviewer: ASKS IF AIR FORCE FAVORED CAPABILITY, CONGRESS FAVORED SURVIVABILITY.

Van Cleave: I think it's entirely true that the Air Force has always put increased capability before survivability because they've already spent more time and money working on the missile than on the basing scheme. That was the case with MX, and it's the case now with the small ICBM.

Interviewer: ASKS HOW HE FEELS ABOUT RAIL GARRISON PROPOSAL.

Van Cleave: The rail garrison proposal is one that, if I had any alternatives to it, that I was attracted to. That if the Administration told me that it's willing to deploy a ballistic missile defense of MX or any other portion of the ICBM force, that I would reject. But I certainly think it's preferable to putting MX in Minuteman silos.

Interviewer: BUT HIS PREFERENCE IS...

Van Cleave: My preference would be to go with the small ICBM and/or with ballistic missile defense, than with the MX and a rail garrison mode, without any shadow of a doubt. The rail garrison mode at least does something for survivability beyond just putting the things in the Minuteman silo. But it is still a system that depends upon strategic warning for its survivability.

Interviewer: ASKS IF BOLT OUT OF THE BLUE IS REALISTIC SCENARIO.

Van Cleave: I think the only prudent planning factor is the surprise attack. It's the only one that makes sense. Even if one were to argue and to believe that a surprise attack has near zero probability because the only scenario in which one could imagine a Soviet attack would be one growing out of a crisis. Simply because our forces are inherently more survivable if they're on generated alert, and in a crisis mode, any Soviet decision to attack would probably include attempts to stand down from a crisis situation so that the attack in effect would be a surprise attack. When you add to that the very great political, psychological likelihood that information of an attack would be information more resisted by American decision makers than any other information of value... imaginable. Then surprise attack becomes technically at least as likely if not more likely than an attack with warning.

Interviewer: ASKS HOW HE ACCOUNTS FOR THE CHANGE: THE ADMINISTRATION HAS TAKEN A TOTALLY DIFFERENT DIRECTION FROM WHAT HE HAS RECOMMENDED.

Van Cleave: Well I can't really account except for reasons that have been explained, why the Reagan Administration took a position on ICBM programs far different than I had recommended or that the transition team had recommended, or that its own strategic forces of 1980 had recommended, except to say that to Mr. Weinberger was adamantly determined not to pay any attention to the recommendations of those particular groups and of myself.

Interviewer: ASKS WHY HE SAID IN 1976 HE WOULD PREFER TO TAKE THE SOVIET FORCES TO OURS.

Van Cleave: I don't remember the date, but you're probably correct that as long as ten years ago in Congressional testimony I did say that if there were a

possibility of trading Soviet strategic nuclear force...trading American strategic nuclear forces for Soviets, we'd be better off and I'd make the swap at that point of time. I saw Soviets strategic nuclear forces already possessing the potential far to surpass those of the United States in the capabilities essential to meeting our own strategic doctrine. Besides the fact that it was the American strategic forces that were being made vulnerable by the Soviet strategic forces, and not the Soviet strategic forces that were being made vulnerable by American strategic forces. So on the Soviet side you had at once a more capable force, or at least in potential, and a far more survivable, or less vulnerable force.

Interviewer: DOES HE THINK THE SOVIETS WOULD TRY TO LAUNCH AN ATTACK THAT TOOK OUT MOST OF OUR KEY MILITARY ATTRIBUTES AND NOT EXPECT US TO COUNTER?

Van Cleave: I think it's entirely credible that we should plan on the basis of the Soviet attack, counterforce attack, reserving strong residual forces to try and dissuade any American response. Whatever one believes about the credibility of such a scenario, any prudent strategic planner must base his planning on that kind of scenario and that kind of assumption. For years, since we've had ICBM forces, the planning scenario agreed upon by every Administration was that of a well-executed surprise attack. The term well executed surprise attack has been used by every Secretary of Defense since Mr. McNamara and including Mr. Brown. That was the planning factor deemed prudent for judging the survivability and efficiency of our strategic forces, and there seemed to me to be very sound reasons for doing so. It may well be that the Soviet Union would always be deterred from waging such an attack because of the possibility of some type of measurable American retaliation. One doesn't know. But in any type of strategic analysis today, we've gotten to a position as Mr. Brzezinski and other have publicly acknowledged, where the uncertainties surrounding a hypothetical Soviet surprise attack are far less than the uncertainties associated with an American retaliation.

Interviewer: CITES SCOWCROFT COMMISSIONS VIEW.

Van Cleave: The Scowcroft Commission did rationalize its position by saying that not the uncertainty so much but the difficulties of a coordinated attack on all land-based forces, coupled with the surviving forces at sea, would be not a very satisfactory or comfortable but an adequate deterrent for this decade. Only.

Interviewer: IS A SURPRISE ATTACK CREDIBLE?

Van Cleave: A surprise attack to me is not only a credible scenario, I'm not judging the probability of it, but it is a credible scenario because it's the one that makes the most sense strategically, it's the one that best fits into Soviet doctrine and mentality, and it's the one from which an attacker could expect to derive the most. More than the question of credibility which is judgmental, it's the only sensible planning factor. It's the only prudent scenario upon which one should base strategic force planning and one's evaluation of the sufficiency of your strategic deterrent forces. Every Secretary of Defense since Robert McNamara, indeed since we've had land-based ballistic missiles, has used the term "well executed surprise attack" as a kind of threat against which we have to design the survivability of our forces. And I believe that that's sound.

Interviewer: WHY NOT GIVE UP LAND-BASED ICBMS BECAUSE THEY ARE HARD TO MAKE SURVIVABLE?

Van Cleave: Giving up land-based ICBMs because of the difficulties of making them adequately survivable, has been an option that many people have recommended and an option that has been discussed for a long period of time. The logic behind it says, Why not give up the type of system that is at once the most threatening and at the same time the most vulnerable. That kind of logic of course presupposes a strategic arms limitation agreement where both sides would agree to do that. Since we know the Soviet side is not going to do that, the only question becomes "Should the United States unilaterally give up an ICBM force because we have found it too difficult to make it adequate survivable?" My own preference would be to say No to that because I believe we can make one adequately survivable because the ICBM is absolutely critical to current American strategic doctrine and policy. To relinquish it would at least require major changes in that doctrine. And because there are many attributes an ICBM have that are in its favor, such as low operations and maintenance, sounder communications, and everything like that. But if you really posed the question as "Can we only have a vulnerable and essentially inadequate ICBM force?" then of course I have to reconsider what the alternatives are to that. I would prefer to keep an ICBM force and to work on making it survivable.

Interviewer: WHY DID MX BECOME SUCH A CAMPAIGN ISSUE FOR REAGAN IN 1980?

Van Cleave: The MX was a big campaign issue for Ronald Reagan in 1980 because strategic force modernization and inadequacy of defense programs were a big issue and the ICBM was just part of that. At the time, in 1980, we were emphasizing the overall inadequacy of defense programs and defense budgets. We were emphasizing that strategic force modernization was still taking 8 percent or less of the defense budget at a time when the strategic balance was shifting radically in favor of the Soviet Union and more must be done there. And then finally the window of vulnerability began to focus attention on the MX and ICBM problem. But if you look back at the Republican platform in Detroit of 1980, or at any of the statements that Mr. Reagan made on defense, the ICBM wasn't singled out for extra attention or focus. It was just part of a lot of things that we were saying needed to be done. We were making strong recommendations at the time on everything from the B-1 to better pay for military personnel and increased readiness.

Interviewer: DID YOU CAMPAIGN ON THE ISSUE OF THE WINDOW OF VULNERABILITY — AND THEN DO NOTHING ABOUT IT?

Van Cleave: The candidate who campaigned on the window of vulnerability not only did not proceed to close that window of vulnerability, but opened it wider.

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VaxGen, Incorporated

Wikipedia https://en.wikipedia.org/wiki/VaxGen

https://en.wikipedia.org/wiki/VaxGen
HK0069
https://drive.google.com/file/d/1OZUBa4XCS5zEP4AbwcfSLClfZGkoi74Z/view?usp=sharing

Saved Wikipedia (March17, 2021) - "VaxGen"

VaxGen
VaxGen was a biopharmaceutical company based in the San Francisco Bay Area.
Founded in 1995 and based in South San Francisco, California, the company was engaged in the development of vaccines that immunize against infectious disease, notably AIDS. On July 28, 2010, VaxGen Inc. was acquired by diaDexus, Inc. in a reverse merger transaction.;[1] diaDexus filed for bankruptcy in 2016.[2] VaxGen, Inc. does not have significant operations.
AIDSVAX
Anthrax vaccine
References
External links
In the 1990s, VaxGen developed and began trials of an AIDS vaccine called AIDSVAX. The National Institute of Allergy and Infectious Diseases (NIAID) worked with Vaxgen when Vaxgen was developing its AIDS vaccine. Specifically, NIAID and Vaxgen worked together on research projects related to the body's immune response to the vaccine. As of 1998, according to NIAID, "The threeyear study [of AIDSVAX] is the first large-scale trial of an HIV preventive vaccine, and will involve 5,000 volunteers at about 40 clinical sites in North America."[3]
However, in 2003, it was announced that the preliminary trials of the vaccine, conducted in Thailand and North America, had been unsuccessful.[4][5] The company's analysis of its results, which resulted in some potentially positive outcomes among patient subgroups, was criticized by statisticians as inappropriate.[6]
Vaxgen had focused its recent efforts on a new form of Anthrax Vaccine, for which it was awarded a $877 million contract to provide the vaccine under the Project Bioshield Act.[7] In December 2006, HHS unilaterally withdrew the $877 million contract, sending the stock tumbling as low as $1.20 per share.
Contents
AIDSVAX
Anthrax vaccine
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Historically was http://www.VaxGen.com. This URL is no longer for the Vaxgen, Inc. in this article.

(Russia) State Research Center of Virology and Biotechnology (VECTOR)

Wikipedia State Research Center of Virology and Biotechnology (VECTOR)

Saved Wikipedia

See [HK001Z][GDrive] Live - https://en.wikipedia.org/wiki/State_Research_Center_of_Virology_and_Biotechnology_VECTOR

The **State Research Center of Virology and Biotechnology VECTOR**, also known as the Vector Institute (Russian: Федеральное бюджетное учреждение науки «Государственный научный центр вирусологии и биотехнологии „Вектор“» федеральной службы по надзору в сфере защиты прав потребителей и благополучия человека (ГНЦ ВБ «Ве́ктор»)), is a biological research center in Koltsovo, Novosibirsk Oblast, Russia. It has research facilities and capabilities for all levels of Biological Hazard, CDC Levels 1–4. It is one of two official repositories for the now-eradicated smallpox virus,[1][a] and was part of the system of laboratories known as the Biopreparat.

Recently the facility has been upgraded and secured using modern cameras, motion sensors, fences, and biohazard containment systems. Its relative seclusion makes security an easier task. Since its inception there has been an army regiment guarding the facility.[2][1]

The facility has, at least in Soviet times, been a nexus for biological warfare research (see Soviet biological weapons program), though the nature of any ongoing research in this area is uncertain.

History

This section needs expansion. You can help by adding to it. (March 2020)

Organized in 1974, the center has a long history of virology, making impressive Soviet contribution to smallpox research.[3] Genetic engineering projects included creation of viruses that manufacture toxins as well as research on bioregulators and various peptides that function in the nervous system.[4] In the post-soviet times the center made research and development cotributions in many projects like a vaccine for Hepatitis A, influenza vaccines, vaccines for the Ebola virus,[5] antiviral drugs with nucleotide analogs,[6] test-systems for diagnostics of HIV and Hepatitis B and other development.[7]

In March 2020 it was reported that Russian scientists have begun to test vaccine prototypes for the new coronavirus disease, with the plan of presenting the most effective one in June, a laboratory chief at Vector Institute said. The prototypes have been created and the testing on animals began.[8]

Tasks

The main tasks of the Center according to Vector:

Basic research of causative agents of especially dangerous and socially important viral infections, and their genetic variability and diversity, pathogenesis of viral infections.

Ensuring constant readiness for implementing diagnostics of especially dangerous infectious agents.

The development and introduction into healthty practice of diagnostic curative and preventive medicines.

Post-graduate training, and scientific training of higher qualification in the field of Virology, molecular biology and biotechnology through graduate school and higher education.

Accidents

In 2004 a researcher at VECTOR died after accidentally pricking herself with a needle contaminated with the Ebola virus.[9]

Fifteen years later, on September 17, 2019, a gas explosion occurred at Vector. One worker suffered third-degree burns, and the blast blew out window panes. The lab has highly contagious forms of bird flu and strains of hepatitis.

2019 (Sep) - LAB BLAST Gas explosion tears through Russian bio-weapons lab containing smallpox, Ebola and HIV virus sparking ‘major emergency’

https://www.thesun.co.uk/news/9943121/gas-explosion-rips-russian-laboratory-smallpox-ebola-plauge-anthrax/

A GAS explosion and ensuing fire has ripped through a Russian "bio-weapons" laboratory where the world's most infectious viruses are stored.

The State Research Centre of Virology and Biotechnology has said a cylinder exploded in a lab, which is one of two places in the world to stockpile smallpox.

Russian media have reported that the “the situation was quickly upgraded from an ordinary emergency to a major incident”.

Following the blast, one worker was left with third degree burns. Further details are unclear.

The risk to the public from biological contamination has been downplayed.

Russian state media reported the facility’s head “emphasising the incident does not pose any biological or any other threat to the population”.

The fire was caused by the explosion of a gas canister but "no work with biological materials was going on there", a statement from the lab said.

MAJOR INCIDENT

The incident follows numerous blasts in nuclear and conventional weapons bases in the past few months.

On August 8 a deadly explosion at ballistic nuclear missile testing range near Nyonoksa, north-western Russia caused a spike in radiation levels and sparked the evacuation of a nearby village.

Officials claimed that no radiation had been released, although the city administration in Severodvinsk reported a rise in radiation levels – a contradiction that recalled Soviet-era cover-ups of disasters like Chernobyl.

On August 5, huge explosions and mushrooms clouds were witnessed nearby a weapons base in Kamenka, Siberian region of Krasnoyarsk

On July 1 a "blast" aboard a Russian nuclear "spy" submarine killed 14 crew members.

The plant is one of two places in the world, where the smallpox disease is stored.

The other place is at a high-security laboratory which is called the US centre for Disease Control in Atlanta.

2005 (May 25) - Russian Scientist Dies in Ebola Accident at Former Weapons Lab (NY TImes article)

See [HN00RP][GDrive]

A **Russian scientist** at a former Soviet biological weapons laboratory in Siberia has died after accidentally sticking **herself** with a needle laced with ebola, the deadly virus for which there is no vaccine or treatment, the lab's parent Russian center announced over the weekend.

Scientists and officials said the accident had raised concerns about safety and secrecy at the State Research Center of Virology and Biotechnology, known as Vector, which in Soviet times specialized in turning deadly viruses into biological weapons. Vector has been a leading recipient of aid in an American program to help former Soviet scientists and labs convert to peaceful research.

Although the accident occurred May 5, Vector did not report it to the World Health Organization until last week. Scientists said that although Vector had isolated the scientist to contain any potential spread of the disease and there was no requirement that accidents involving ebola be reported, the delay meant that scientists at the health agency could not provide prompt advice on treatment that might have saved her life.

The first public mention of the accident was over the weekend on Pro-Med, the informal Internet reporting and discussion network of doctors and other health care professionals, which posted the Vector account of the laboratory accident on its Web site (www.promedmail.org)

American experts said the accident had not occurred in a lab now receiving United States government or private money for research.

While officials at Vector said the scientist, Antonina Presnyakova, was working on an ebola vaccine, they have declined to identify who was financing the research or discuss its specific nature.

Terry Fredeking, the president and founder of Antibody Systems, a Texas-based company, said that while his company had spent more than $150,000 in the last five years on joint research on ebola at Vector, the accident did not involve research he was financing. "It's sad and somewhat frightening," said Mr. Fredeking, "that Vector didn't inform the W.H.O. or even its own lab directors that the accident had occurred in time for us to offer help."

Ronald Atlas, a biodefense expert at a center at the University of Louisville, in Kentucky, said that while it was important to work on vaccines to protect against deadly viruses, the accident showed the danger. "It shows we must be careful about what we are doing, as well as where and with whom we are doing it," said Dr. Atlas, in an interview here at the American Society for Microbiology's annual meeting.

An American scientist was involved in a similar accident with ebola at the Army's leading biodefense lab at Fort Detrick, Md., several months ago. But she did not contract the disease. The lab disclosed the accident within 48 hours, officials said.

Vector is also one of two repositories of the deadly smallpox virus -- the other is the Centers for Disease Control and Prevention in Atlanta. Since the Soviet Union collapsed, the United States has spent millions of dollars to help convert such places to peaceful research, including an estimated $10 million at Vector.

Critics of the program have opposed expanding such aid because it is hard to verify whether former Soviet scientists are using the American-supported research for peaceful purposes. But the program's defenders say it keeps scientists employed on peaceful projects and prevents them from working for anti-American states or terrorists seeking biological weapons.

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Verizon Communications Incorporated

Wikipedia Verizon Communications

Notes :

After GTE Corporation becomes **Verizon Communications Incorporated** (in 2000), it goes on to purchase with [MCI WorldCom Corporation] in 2006 (negotiations which started in 2005).

Saved Wikipedia (Dec 25 2020) - Verizon Communications

Source - [HK004F][GDrive]

Formerly Bell Atlantic Corporation (1983–2000)

Type Public

Traded as

- NYSE: VZ
- NASDAQ: VZ
- DJIA component
- S&P 100 component
- S&P 500 component

ISIN US92343V1044

Industry

- Telecommunications
- Mass media

Predecessor

- AT&T Corporation
- NYNEX
- GTE

Founded October 7, 1983; 37 years ago

Headquarters 1095 Avenue of the Americas, New York City, New York, U.S.

Area served Worldwide, mainly serving United States

Key people Hans Vestberg (Chairman, CEO)

Products

- Cable television
- Landline
- Mobile phone
- Broadband
- Digital television
- IPTV

- Digital Media
- Internet
- Telematics

Revenue US$131.86 billion[1]:40 (2019)

Operating income US$30.38 billion[1]:40 (2019)

Net income US$19.79 billion[1]:41 (2019)

Total assets US$291.73 billion[1]:40 (2019)

Total equity US$62.84 billion[1]:80 (2019)

Number of employees 135,300 (July 24, 2020)

Divisions

- Verizon Consumer
- Verizon Business
- Verizon Media

Subsidiaries

- Verizon Delaware
- Verizon Maryland
- Verizon North
- Verizon New England
- Verizon New Jersey
- Verizon New York
- Verizon Pennsylvania
- Verizon South
- Verizon Washington, DC
- Verizon Virginia
- BlueJeans
- Skyward
- Visible
- XO Communications
- Verizon Hearst Media Partners (50%)

Website

verizon.com

Verizon Communications Inc. is an American multinational telecommunications conglomerate and a corporate component of the Dow Jones Industrial Average.[10] The company is based at 1095 Avenue of the Americas in Midtown Manhattan, New York City,[4] but is incorporated in Delaware.

In 1984, the United States Department of Justice mandated AT&T Corporation to break up the Bell System into seven companies, each a Regional Bell Operating Company (RBOC), commonly referred to as "Baby Bells". **Bell Atlantic**,[11] one of the Baby Bells, came into existence the same year, consisting of the separate operating companies New Jersey Bell, Bell of Pennsylvania, Diamond State Telephone, and C&P Telephone, with a trading area from New Jersey to Virginia.

As part of a rebranding of the Baby Bells in the mid-1990s, all of Bell Atlantic's operating companies assumed the holding company's name. In 1997, Bell Atlantic expanded into New York and the New England states by merging with fellow Baby Bell NYNEX. Bell Atlantic was the surviving company name, and the merged company moved its headquarters from Philadelphia to NYNEX's old headquarters in New York City. In 2000, Bell Atlantic acquired GTE, which operated telecommunications companies across most of the rest of the country that was not already in Bell Atlantic's footprint. Bell Atlantic, the surviving entity, changed its name to Verizon, a portmanteau of *veritas* (Latin for "truth") and *horizon*.[12]

In 2015, Verizon expanded into content ownership by acquiring AOL,[13][14] and two years later, it acquired Yahoo!.[15] AOL and Yahoo were amalgamated into a new division named Oath Inc.,[16] currently known as Verizon Media. As of 2016, Verizon is one of three remaining companies with roots in the former Baby Bells. The other two, like Verizon, exist as a result of mergers among fellow former Baby Bell members. SBC Communications bought the Bells' former parent AT&T Corporation and took on the AT&T name, and Lumen Technologies (formerly Century Link) acquired Qwest (formerly US West) in 2011.

As of April 2019, Verizon's subsidiary Verizon Wireless is the second largest wireless communications service provider in the United States, with 153.1 million mobile customers.[17] And as of 2017, Verizon is the only publicly traded telecommunications company to have two stock listings in its home country, both the NYSE (principal) and NASDAQ (secondary).[18] As of 2017, it is also the second largest telecommunications company by revenue after AT&T.[19]

- External links

History[edit]

Bell Atlantic (1983–2000)[edit]

Bell Atlantic Corporation was created as one of the original Regional Bell Operating Companies (RBOCs) in 1984, during the breakup of the Bell System.[20]

[21] Bell Atlantic's original roster of operating companies included:

- The Bell Telephone Company of Pennsylvania[22]
- New Jersey Bell[23]
- Diamond State Telephone[24]
- C&P Telephone[24] (itself comprising four subsidiaries)[25]

Bell Atlantic originally operated in the states of New Jersey, Pennsylvania, Delaware, Maryland, West Virginia, and Virginia, as well as Washington, D.C.[24]

In 1996, CEO and Chairman Raymond W. Smith orchestrated Bell Atlantic's merger with NYNEX.[26] When it merged, it moved its corporate headquarters from Philadelphia to New York City.[26] NYNEX was consolidated into this name by 1997.[27]

Merger of equals (2000–2002)[edit]

Verizon's former logo used from May 19, 1998 to September 1, 2015

Bell Atlantic changed its name to Verizon Communications in June 2000, when the Federal Communications Commission approved the US$64.7 billion Merger with telephone company GTE, nearly two years after the deal was proposed in July 1998.[28] The approval came with 25 stipulations to preserve competition between local phone carriers, including investing in new markets and broadband technologies.[28] The new entity was headed by co-CEOs Charles Lee, former CEO of GTE, and Bell Atlantic CEO Ivan Seidenberg.[28]

Verizon became the largest local telephone company in the United States, operating 63 million telephone lines in 40 states.[29] The company also inherited 25 million mobile phone customers.[29] Additionally, Verizon offered internet services and long-distance calling in New York, before expanding long-distance operations to other states.[28][30]

The name Verizon derives from the combination of the words *veritas*, Latin for truth, and horizon.[31] The name was chosen from 8,500 candidates and the company spent $300 million on marketing the new brand.[31][32]

Two months before the FCC gave final approval on the formation of Verizon Communications, Bell Atlantic formed Verizon Wireless in a joint venture with the British telecommunications company Vodafone in April 2000.[32][33][34] The companies established Verizon Wireless as its own business operated by Bell Atlantic, which owned 55% of the venture.[33] Vodafone retained 45% of the company.[33] The deal was valued at approximately $70 billion and created a mobile carrier with 23 million customers.[32][33] Verizon Wireless merged Bell Atlantic's wireless network, Vodafone's AirTouch and PrimeCo holdings, and the wireless division of GTE.[33][35][36] Due to its size, Verizon Wireless was able to offer national coverage at competitive rates, giving it an advantage over regional providers typical of the time.[32]

During its first operational year, Verizon Wireless released Mobile Web, an Internet service that allowed customers to access partner sites such as E*Trade, ABC News, ESPN, Amazon.com, Ticketmaster, and MSN,[34] as well as the "New Every Two" program, which gave customers a free phone with every two-year service contract.[37] In another partnership with MSN in 2002, Verizon Wireless launched the mobile content service VZW with MSN and a phone that utilized the Microsoft Windows operating system.[38]

In August 2000, approximately 85,000 Verizon workers went on an 18-day labor strike after their union contracts expired.[39][40] The strike affected quarterly revenues,[41] resulting in Verizon Wireless' postponement of the company's IPO[41] (the IPO was ultimately cancelled in 2003 because the company no longer needed to raise revenue for Verizon Wireless due to increased profits),[42] and created a backlog of repairs.[40] This strike did not involve all company employees, as mostly line technicians and user technicians of the company are union.

Verizon launched 3G service in 2002, which doubled the Internet speeds of the time to 144kb a second.[43] In August 2002, Verizon began offering local, long-distance and mobile calling, as well as Internet service, in a bundle. It was initially only available to customers in New York and Massachusetts.[30]

2003–2005[edit]

In June 2003, Verizon Wireless backed an FCC-issued portability requirement that permitted consumers to take their phone numbers with them across carriers.[44] The company gained 1.5 million new subscribers the following quarter, partially due to the rule change.[45] In April 2004, the Dow Jones Industrial Average added Verizon Communications to its stock market index.[46] Verizon replaced telecom competitor AT&T, which had been a part of the index since the Great Depression.[46]

On December 22, 2004, mail servers at Verizon.net were configured not to accept connections from Europe by default in an attempt to reduce spam email that was originating from the region. Individual domains would only be unblocked upon request.[47]

In 2004, Verizon launched its Fios Internet service, which transmits data over fiber optic cables, in Keller, Texas.[48][49] The company launched Fios TV in September 2005, also in Keller. Twenty percent of qualified homes signed up by the end of 2004.[50] By January 2006, Fios offered over 350 channels in eight states, including 20 high-definition television channels as well as video on demand.[50]

MCI acquisition

In 2005, Verizon began negotiations to purchase long-distance carrier MCI, who accepted the company's initial $6.75 billion offer in February but then received a higher offer from Qwest Communications. Verizon increased its bid to $7.6 billion (or $23.50 a share), which MCI accepted on March 29, 2005.[51] The acquisition gave the company access to MCI's million corporate clients and international holdings, expanding Verizon's presence into global markets.[51][52] As a result, Verizon Business was established as a new division to serve the company's business and government customers.[53] The FCC approved the deal on November 5, 2005, valuing it at $8.5 billion.[54] Verizon's 2006 revenues rose by as much as 20% following the purchase.[55]

2006–2010[edit]

In May 2006, *USA Today* reported that Verizon, as well as AT&T and BellSouth, had given the National Security Agency landline phone records following the September 11 attacks.[56][57] That same month, a $50 billion lawsuit was filed by two lawyers on behalf of all Verizon subscribers for privacy violations and to prevent the company from releasing additional records without consent or warrant.[56][57] Protesters staged the National Day of Out(R)age due in part to the controversy.[58] In 2007, Verizon stated that it fulfilled only "lawful demands" for information,[59] but also acknowledged surrendering customer information to government agencies without court orders or warrants 720 times between 2005 and 2007.[60]

In March 2007, Verizon was a lawsuit against Vonage for patent infringement. The three patents named were filed by Bell Atlantic in 1997, and relate to the

In March 2007, Verizon won a lawsuit against Vonage for patent infringement. The three patents named were filed by Bell Atlantic in 1997, and relate to the conversion of IP addresses into phone numbers, a key technology of Vonage's business.[61] The company was awarded US$58 million in damages and future royalties.[61] Vonage later lost an appeal and was ordered to pay Verizon $120 million.[62]

In May 2007, Verizon acquired Cybertrust, a privately held provider of global information security services.[63]

In September 2007, Verizon Wireless reversed a controversial decision to deny NARAL Pro-Choice America a short code through which the organization could text consumers who had signed up for messaging from the group. The company had initially refused the group access to a code by reserving the right to block "controversial or unsavory" messages.[64]

In November 2007, Verizon opened its networks to third party apps and devices for the first time,[65] a decision that allowed it to participate in the FCC's 2008 700 MHz auction of "open access" spectrum.[65][66] During that auction, the company bid $9.4 billion and won the bulk of national and local licenses for airwaves reaching approximately 469 million people.[66][67] Verizon utilized the increased spectrum for its 4G service.[66]

In June 2008, Verizon Wireless purchased wireless carrier Alltel for $28.1 billion. The acquisition included 13 million customers, which allowed Verizon Wireless to surpass AT&T in number of customers and reach new markets in rural areas.[68]

In October 2010, Verizon Wireless paid $77.8 million in refunds and FCC penalties for overcharging 15 million customers for data services. The company stated the overcharges were accidental and only amounted to a few dollars per customer.[69][70]

On February 4, 2010, 4chan began receiving reports from Verizon Wireless customers that they were having difficulties accessing the site's image boards. Administrators of the site found that only traffic on port 80 to the boards.4chan.org domain was affected, leading them to believe the block was intentional. On February 7, 2010, Verizon Wireless confirmed that 4chan.org was "explicitly blocked"[71] after Verizon's security and external experts detected sweep attacks coming from an IP address associated with the 4chan network. Traffic was restored several days later.[72]

In August 2010, the chairmen of Verizon and Google agreed that network neutrality should be defined and limited.[73][74]

In December 2010, Verizon introduced its 4G LTE network in 38 markets, as well as airports in seven additional cities. The company planned on a three-year continuous expansion of the 4G service.[75]

Selling wirelines (2005–2010 & 2015)[edit]

Between 2005 and 2010, Verizon divested wireline operations in several states to Frontier in order to focus on its wireless, Fios internet and Fios TV businesses.[55] It sold 700,000 lines in Hawaii in 2005,[55][76] and spun off lines in Maine, New Hampshire and Vermont in January 2007, which were then purchased by FairPoint Communications for $2.72 billion.[55] Verizon also shed its telephone directory business in 2006.[77]

In May 2009, the company spun off wirelines in Arizona, Idaho, Illinois, Indiana, Michigan, Nevada, North Carolina, Ohio, Oregon, South Carolina, Washington, West Virginia, and Wisconsin into a company that then merged with Frontier Communications in a deal valued at $8.6 billion.[78][79] In 2016, Verizon sold its wireline operations in Texas, Florida, and California to Frontier.[80]

2011–present[edit]

On January 27, 2011, Verizon acquired Terremark, an information technology services company, for $1.4 billion.[81] Ivan Seidenberg retired as Verizon's CEO on August 1, 2011, and was succeeded by Lowell McAdam.[82]

In December 2011, the non-partisan organization Public Campaign criticized Verizon for its tax avoidance procedures after it spent $52.34 million on lobbying while collecting $951 million in tax rebates between 2008 and 2010 and making a profit of $32.5 billion. The same report also criticized Verizon for increasing executive pay by 167% in 2010 for its top five executives while laying off 21,308 workers between 2008 and 2010.[83] However, in its Form 10-K filed with the SEC on February 24, 2012, Verizon reported having paid more than $11.1 billion in taxes (including income, employment and property taxes) from 2009 to 2011. In addition, the company reported in the 10-K that most of the drop in employment since 2008 was due to a voluntary retirement offer.[84]

In June 2012, Verizon purchased Hughes Telematics, a producer of wireless features for automobiles, for $612 million as part of its strategy to expand into new growth areas in its wireless business.[85] The same month, Verizon's E-911 service failed in the aftermath of the June 2012 derecho storm in several northern Virginia suburbs of Washington, D.C., with some problems lasting several days.[86] The FCC conducted an investigation[86] and released a report detailing the problems that led to the failure in January 2013. Verizon reported that it had already addressed or was addressing a number of the issues related to the FCC report, including the causes of generator failures, conducting audits of backup systems, and making its monitoring systems less centralized,[87] although the FCC indicated that Verizon still needed to make additional improvements.[88]

In July 2012, the FCC ruled that Verizon must stop charging users an added fee for using 4G smartphones and tablets as Wi-Fi hotspots (known as "tethering"). Verizon had been charging its customers, even those with "unlimited" plans, $20 per month for tethering. As part of the settlement, Verizon made a voluntary payment of $1.25 million to the U.S. Treasury.[89]

In August 2012, the Department of Justice approved Verizon's purchase of Advanced Wireless Services (AWS) spectrum from a consortium of cable companies, including Comcast, Time Warner Cable and Bright House Networks, for $3.9 billion.[90] Verizon began expanding its LTE network utilizing these extra airwaves in October 2013.[91]

On June 5, 2013, *The Guardian* reported it had obtained an order by the Federal Bureau of Investigation (FBI) and approved by the United States Foreign Intelligence Surveillance Court that required Verizon to provide the NSA with telephone metadata for all calls originating in the U.S.[92][93] Verizon Wireless was not part of the NSA data collection for wireless accounts due to foreign ownership issues.[94]

In September 2013, Verizon purchased the 45% stake in Verizon Wireless, previously owned by Vodafone, for $130 billion.[95] The deal closed on February 21, 2014, and became the third largest corporate deal ever signed, giving Verizon Communications sole ownership of Verizon Wireless.[96]

On January 14, 2014, the DC Circuit Court of Appeals struck down the FCC's net neutrality rules after Verizon filed suit against them in January 2010.[97][98] In June 2016, in a 184-page ruling, the United States Court of Appeals for the District of Columbia Circuit upheld, by a 2–1 vote, the FCC's net neutrality rules and the FCC's determination that broadband access is a public utility rather than a luxury. AT&T and the telecom industry said they would seek to appeal the decision to the Supreme Court.[99]

On January 28, 2014, the Wall Street Journal reported that Verizon was charging more than 1,200 companies for information about its subscribers' online activities.

On January 22, 2014, the *Wall Street Journal* reported that Verizon received more than 1,000 requests for information about its subscribers on national security grounds via National Security Letters. In total, Verizon received 321,545 requests from federal, state and local law enforcement for U.S. customer information.[100] In May 2015, Verizon agreed to pay $90 million "to settle federal and state investigations into allegations mobile customers were improperly billed for premium text messages."[101]

In late October 2014, Verizon Wireless launched the technology news website SugarString. The publication attracted controversy after it was reported that its writers were forbidden from publishing articles related to net neutrality or domestic surveillance. Although Verizon denied that this was the case, the site (described as being a pilot project) was shuttered in December.[102][103]

In August 2015, Verizon launched Hum, a service and device offering vehicle diagnostic and monitoring tools for vehicles.[104] On August 1, 2016, Verizon announced its acquisition of Fleetmatics, a fleet telematics system company in Dublin, Ireland, for $2.4 billion, to build products that it offers to enterprises for logistics and mobile workforces.[105] On September 12, 2016, Verizon announced its acquisition of Sensity, a startup for LED sensors, in an effort to bolster its IoT portfolio.[106]

In October 2016, Verizon was accused by Communications Workers of America of deliberately refusing to maintain its copper telephone service. The organization released internal memos and other documents stating that Verizon workers in Pennsylvania were being instructed to, in areas with network problems, migrate voice-only customers to VoiceLink, a system that delivers telephone service over the Verizon Wireless network, and not to repair the copper lines. VoiceLink has limitations, including incompatibility with services or devices that require the transmission of data over the telephone line, and a dependency on a battery backup in case of power failure. The memo warned that technicians who do not follow this procedure would be subject to "disciplinary action up to and including dismissal". A Verizon spokesperson responded to the allegations, stating that the company's top priority was to restore service to customers as quickly as possible, and that VoiceLink was a means of doing so in the event that larger repairs had to be done to the infrastructure. The spokesperson stated that it was "hard to argue with disciplining someone who intentionally leaves a customer without service".[107][108]

In November 2016, Verizon acquired mapping startup SocialRadar, whose technology would be integrated with MapQuest.[109]

On January 26, 2017, the *Washington Post* reported that Verizon was in talks to merge with Charter Communications.[110]

In 2017, Verizon partnered with Alley to develop a number of coworking spaces under the name "Alley powered by Verizon".[111][112][113]

On March 13, 2017, Verizon was sued by New York City for violating its cable franchise agreement, which required the provider to pass a fiberoptic network to all households in the city by June 30, 2014. Verizon disputed the claims, citing landlords not granting permission to install the equipment on their properties, and an understanding with the government that the fiber network would follow the same routes as its copper lines, and did not necessarily mean it would have to pass the lines in front of every property.[114]

On April 27, 2017, Verizon invested $10 million in Renovo Auto, an autonomous vehicle company based in Campbell, California.[115]

Verizon Connect was created in 2018, combining the individual Telematics, Fleetmatics, and Telogis units.[116][117][118]

On January 17, 2019, Verizon announced that it would offer anti-spam and robocalling features free of charge to all its customers beginning in March.[119][120]

In April 2019, Verizon began rolling out its 5G mobile network, which was active in 30 cities by the end fo the year.[121][122] Unlike other U.S. carriers, Verizon only uses millimeter-wave (mmWave) spectrum for its 5G network.[123] While capable of very high speeds, mmWave has limited range and poor building penetration.[124][125]

On May 15, 2020, Verizon acquired videoconferencing service BlueJeans in order to expand its business portfolio offerings, particularly its unified communications offerings. While the price of the acquisition was not announced, it is believed to be in the sub $500 million range.[126] The transaction is expected to close in the second quarter of 2020.[127] In September of the same year, the business announced it plans to acquire TracFone Wireless (a business unit of Mexican telecom business, America Movil) for $6.25 billion.[128]

In October 2020, Verizon collaborated with Apple to bring 5G connectivity to Apple's iPhone 12 lineup.[*citation needed*]

Acquisition of AOL and Yahoo[edit]

On May 12, 2015, Verizon announced it would acquire AOL at $50 per share, for a deal valued around $4.4 billion.[129][130] The following year, Verizon announced it would acquire the core internet business of Yahoo! for $4.83 billion.[15][131][132] Following the completion of the acquisitions, Verizon created a new division called Oath, which includes the AOL and Yahoo brands.[16] The sale did not include Yahoo's stakes in Alibaba Group and Yahoo! Japan.[133][134]

On March 16, 2017, Verizon announced it would discontinue the e-mail services provided for its internet subscribers and migrate them to AOL Mail.[135]

On May 23, 2017, Verizon CEO Lowell McAdam confirmed the company's plan to launch a streaming TV service.[136] The integrated AOL-Yahoo operation, housed under the newly created Oath division, would be organized around key content-based pillars.[137]

On June 13, 2017, Verizon completed its acquisition of Yahoo for $4.48 billion.[138]

Verizon service van

On December 10, 2018, Verizon announced that 10,400 managers had agreed to leave the company as part of a "voluntary separation program" offered to 44,000 employees, resulting in a cut of around 7% of its workforce. At the same time, the company announced a $4.6 billion write-off on its media division, citing "increased competitive and market pressures throughout 2018 that have resulted in lower-than-expected revenues and earning."[139]

Finances[edit]

For the fiscal year 2019, Verizon reported earnings of US$19.265 billion, with an annual revenue of US$131.868 billion, an increase of 0.77% over the previous fiscal cycle. Verizon's shares traded at over $45 per share, and its market capitalization was valued at over US$229.1 billion in October 2018.[140] As of 2018, Verizon is ranked No. 16 on the Fortune 500 rankings of the largest corporations in the United States by total revenue.[141]

Marketing campaigns[edit]

Since its inception, Verizon Communications has run several marketing campaigns, including:

Can you hear me now?[edit]

The "Can you hear me now?" campaign, which was created for the newly formed Verizon Wireless, started running in 2001, and featured actor Paul Marcarelli in the role of "Test Man", a character based on a Verizon network tester, who travels the country asking "Can you hear me now?".[142][143][144] The campaign, originally conceived by New York agency Bozell, ran from early 2001 to September 2010.[145][146] Data from the technology tracking firm The Yankee Group showed that, in the early years of the campaign, net customers grew 10% to 32.5 million in 2002 and 15% more to 37.5 million in 2003. In addition, customer turnover dropped to 1.8% in 2001, down from 2.5% in 2000.[144] In 2011, Marcarelli parted ways with Verizon, and is now a spokesperson for Sprint.[147]

There's a map for that[edit]

The "There's a map for that" campaign was launched in late 2009, designed as a parody of AT&T's "There's an app for that" campaign. The ads depicted a side-by-side comparison of Verizon and AT&T network coverage maps.[148] In early November 2009, AT&T filed a lawsuit in Atlanta federal court, claiming that the coverage maps being used in the ads were misleading.[149] The suit was dropped later that month in conjunction with Verizon dropping a similar suit against AT&T.[148]

That's not cool[edit]

In 2009, Verizon joined with the Ad Council, in partnership with the Family Violence Prevention Fund and the Office on Violence Against Women, to create the "That's not cool" public service advertising campaign. Designed to help teens recognize and prevent digital dating abuse, the ads were run on its Wireless' Mobile Web service, Verizon FiOS internet and TV.[150][151]

Powerful Answers[edit]

In January 2013, Verizon launched the "Powerful Answers" campaign, designed by agency McGarryBowen.[152] The campaign centered around a contest in which $10 million in prizes was offered to individuals for finding solutions to "the world's biggest challenges" by making use of Verizon's cloud, broadband and wireless networks.[153][154] Winners of the inaugural competition were announced at the 2014 Consumer Electronics Show.[153] Israel-based TinyTap won the education category; Smart Vision Labs of Newport, Rhode Island, won in the healthcare category; and Mosaic Inc. of Oakland, California, won in the sustainability category.[153]

Inspire Her Mind[edit]

In June 2014, Verizon launched the "Inspire Her Mind" campaign, created by agency AKQA. It was designed to encourage girls' interest in science, technology, engineering and math,[155] and aimed to address findings from the National Science Foundation, whose research showed that 66 percent of fourth-grade girls said they were interested science and math, yet only 18 percent of college students in engineering and math are women.[156][157]

Flipside Stories (#NeverSettle)[edit]

In February 2015, Verizon launched its Flipside Stories ad campaign, featuring the #NeverSettle hashtag. The ads showed dramatized "testimonials" of people with and without Verizon Wireless or Verizon Fios services.[158][159][160]

Better Matters[edit]

In 2016, Verizon started using the slogan "Better Matters" in reference to its networks.[161]

Humanability campaign[edit]

Verizon launched its Humanability campaign in 2017.[162][163] The company aimed for the ads to showcase to consumers and investors its diversification of revenue sources and technology beyond smartphones. These include online advertising, data collection, Internet of Things, smart cities, telematics, and media.[162][163]

Corporate governance

Board of directors

The current board of directors is comprised as follows as of July 2019:[164]

- Hans Vestberg, chairman and CEO
- Shellye Archambeau
- Mark Bertolini
- Vittorio Colao
- Melanie Healey, former president of Procter & Gamble[165]
- Clarence Otis, Jr.
- Daniel H. Schulman
- Rodney E. Slater
- Kathryn Tesija, former executive vice president of Target Corporation
- Gregory Weaver, former CEO of Deloitte's audit and enterprise risk division

Executives

As of 2019:[166][167]

- Hans Vestberg, chairman and CEO
- Ronan Dunne, executive vice president and group CEO, Verizon Consumer
- Tami Erwin, executive vice president and group CEO, Verizon Business
- Guru Gowrappan, executive vice president and group CEO, Verizon Media

- Guru Gowrappan, executive vice president and group CEO, Verizon Media

Corporate responsibility

The Verizon Foundation is the philanthropic arm of Verizon Communications, which donates about $70 million per year to nonprofit organizations, with a focus on education, domestic violence prevention, and energy management.[168] Verizon's educational initiatives have focused on STEM fields,[169] including: a national competition for students to develop mobile application concepts;[169] the Verizon Innovative Learning Schools program, providing professional development for teachers in underserved areas;[170] and providing students with wireless hardware and services as part of President Obama's ConnectED program.[171] The company also runs HopeLine, which has provided mobile phones to approximately 180,000 victims of domestic violence,[172][173] and a program that offers grants for victims of domestic violence to start or grow home-based businesses.[174] As part of an initiative to reduce the company's carbon intensity metrics by 50 percent by 2020, Verizon announced planned investment in solar panels and natural gas fuel cells at its facilities.[175] The increased capacity would make Verizon the leading solar power producer among U.S. communications companies.[176]

On February 5, 2019, Verizon first entered the green bond market with an issue of $1 billion. The sale was oversubscribed, meaning that investors bids were about $8 billion. Verizon plans to invest money on renewable energy, for instance, by developing solar and wind energy energy-efficient projects involving technology and equipment replacement, and the deployment of 5G wireless technologies, allowing for real-time response for energy demand (smart building management and city systems), green buildings, sustainable water management, and also biodiversity and conservation.[177]

According to Cbonds, the newly issued green bonds have 3.875% coupon rate and will mature on August 5, 2029. Goldman Sachs and Bank of America Merrill Lynch were the bookrunners of the deal.[178]

Criticism

Security concerns

According to Google Project Zero researcher Tavis Ormandy, Verizon applies a simplistic certification methodology to give its "Excellence in Information Security Testing" award, e.g. to Comodo Group. It focuses on GUI functions instead of testing security relevant features. Not detected were Chromodo browser disabling of the same-origin policy, a VNC-delivered with a default of weak authentication, not enabling address space layout randomization (ASLR) when scanning, and using access control lists (ACLs) throughout its product.[179]

Net neutrality

Verizon and Comcast have been actively lobbying for current changes in the FCC's regulations that require internet service providers to offer all content at one internet speed regardless of the type of content since the early 2000s. In 2014, Verizon unsuccessfully sued the FCC for these powers.[180] Verizon has admitted to throttling content of its competitors including Netflix and YouTube.[181][182]

Deceptive advertising of 5G

In May 2020, the Better Business Bureau criticized Verizon for claiming it was "building the most powerful 5G experience for America" and recommended that the company make clear and conspicuous disclosures to consumers about the limited actual availability of its 5G network.[183] Verizon had been cited by the Better Business Bureau in March 2019 for ads that "convey the message that Verizon has achieved the important milestone of deploying the first mobile wireless 5G network" prior to 5G availability, falsely conveying that the technology was currently available.[184]

Privacy

Verizon has a one-star privacy rating from the Electronic Frontier Foundation.[185]

Sponsorships and venues

Verizon is the title sponsor of several large performance and sports venues as well as a sponsor of many major sporting organizations.

National Hockey League

In January 2007, Verizon secured exclusive marketing and promotional rights with the National Hockey League.[186] The deal was extended for another three years in 2012 and included new provisions for the league to provide exclusive content through Verizon's GameCenter app.[187]

Motorsports

In 2009 and 2010 Verizon sponsored Justin Allgaier in the NASCAR Nationwide Series, before they chose to opt out of a two-year-old NASCAR team sponsorship with Penske Racing in order to pursue an expanded presence with the IndyCar Series.[188] In March 2014 Verizon became title sponsor of the series through 2018.[189]

National Football League

In late 2010, Verizon Communications joined with Vodafone Group in a joint partnership to replace Sprint as the official wireless telecommunications partner of the National Football League.[190] The four-year deal was estimated at $720 million. In June 2013, Verizon announced a four-year extension with the NFL in a deal reportedly valued at $1 billion. The new agreement gave Verizon the right to stream every NFL regular-season and playoff game.[191]

[...]

Venues

Verizon is the title sponsor for a number of sporting and entertainment arena the Verizon Arena in North Little Rock, Arkansas;[196] and the Verizon Center in Mankato, Minnesota.[197] SNHU Arena in Manchester, New Hampshire, was originally known as the Verizon Wireless Arena until September 2016, when Southern New Hampshire University acquired the naming rights for a period of at least 10 years.[198]

Verizon has been the title sponsor of entertainment amphitheaters in locations throughout the United States, including four individually referred to as the "Verizon Wireless Amphitheatre": in Irvine, California;[199] Maryland Heights, Missouri;[200] Selma, Texas;[201] and Alpharetta, Georgia.[202]

Verizon is a former sponsor of the Capital One Arena in Washington, DC.[203]

The main home concert hall of the Philadelphia Orchestra at the Kimmel Center for the Performing Arts is named Verizon Hall.[204]

2000 (April 06) - The Boston Globe

Full newspaper page : [HN01F0][GDrive]

See : **Genuity Incorporated (2000)** , **GTE Corporation** , **Verizon Communications Incorporated**

E6 THE BOSTON GLOBE • THURSDAY, APRIL 6, 2000

GTE Net division to hire 500 in state, change its name

By Ross Kerber
GLOBE STAFF

GTE Internetworking plans to hire 500 e-commerce consultants and engineers in Massachusetts this year to help develop its high-speed data network and offer services as part of a proposed spinout from GTE Corp.

The division, with headquarters in Burlington, also plans to announce today that it will change its name to Genuity Inc. as it becomes a publicly traded company.

The plan is part of a controversial bid by GTE and Bell Atlantic to gain government approvals for their $84 billion merger plan, which would create the country's biggest local phone company.

Currently, the GTE unit employs about 2,000 people in Massachusetts and 3,500 in all. It includes most of the assets of the former Bolt Beranek & Newman in Cambridge, which GTE bought in 1997 for $616 million. GTE says the unit had revenue of about $1 billion last year but wasn't profitable.

In 1969, Bolt Beranek was one of the Pentagon's first contractors for the computer system that became the Internet. More recently, the company has operated high-speed data connections for big corporations and Internet service providers. In February, it won a contract from America Online Inc., estimated to be worth more than $2.5 billion, to install new connections for the service provider.

If the Genuity spinout is approved, said GTE Internetworking's president, Paul R. Gudonis, the company would become one of the top four providers of Internet connectivity services, along with Sprint, WorldCom, and UUNet. To compete, Gudonis said, Genuity will offer more consulting services to help companies create corporate Internets and business-to-business services for e-commerce. Gudonis would be head of the new company.

The future of the division remains a touchy issue before regulators, however. In filings with the Federal Communications Commission, GTE and Bell Atlantic had proposed to spin off the unit as a public company and keep a 10 percent ownership interest, with an option to increase that to 80 percent within five years.

But competitor AT&T says that would leave those companies effectively in control of the unit. AT&T wants the FCC to insist that Bell Atlantic make more commitments to open local phone service to competition. The FCC is considering the arguments and hopes to rule on the merger by July.

Matthew Kovar, a manager at the Yankee Group consulting firm who follows the networking industry, said Genuity would be free as a stand-alone company to pursue a more aggressive strategy than it would be as a local phone company unit. "It's not a change to the entire business model," he said of Genuity's plans. "But maybe these are things they felt they weren't free to do, or weren't able to do, because of the lethargic Bell operating company mentality."

Gudonis said he couldn't discuss financial specifics, including the total amount of networking investment Genuity would make, until the company files registration statements with the Securities and Exchange Commission to sell public shares. No filings are expected until the FCC clears the merger of the parent companies, he said.

Gudonis's tenure with the GTE unit dates back to 1994, when he joined Bolt Beranak as president of what then was known as its "BBN Planet" division, providing high-speed data services to individual companies. The business totalled about $5 million that year, he said; now it will generate the majority of Genuity's revenue. In addition to Internet companies, customers include Honeywell and FleetBoston Financial Corp.

Genuity also will invest heavily to upgrade its Internet backbone services so it can eventually handle the heavy demands needed to send video signals to homes via cable modems and high-speed phone lines. Clients for these services include Yahoo Inc. and General Electric's NBC Interactive, he said.

The unit is also constructing a new office park in Woburn. Gudonis said it will house 1,400 people by next year, some of whom transferred from other offices in the state.

[HN01F1][GDrive]

2000 (May 25)

Full newspaper page - [HN01F5][GDrive]

See : **Genuity Incorporated (2000)** , **GTE Corporation** , **Verizon Communications Incorporated**

C4 THE BOSTON GLOBE • THURSDAY, MAY 25, 2000

TECHNOLOGY & INNOVATION

Genuity's plan to raise $2.6b in IPO would be largest by ISP

BLOOMBERG NEWS

WASHINGTON – Genuity Inc., the pioneering Internet unit of GTE Corp., said its planned initial public offering could raise as much as $2.6 billion, making it the largest ever for a US Internet service provider.

GTE, a local phone service provider based in Irving, Texas, is selling 90.5 percent of Genuity, whose Internet roots date back to the sending of the first e-mail.

GTE is making the sale so regulators will allow it to be bought by Bell Atlantic Corp. and form the biggest US local phone company under the name Verizon Communications. Bell Atlantic said yesterday it expects to complete the purchase next month.

Burlington, Mass.-based Genuity first filed for the IPO last month without specifying the number of shares being sold or the price being sought.

"It's obviously a very large deal, and it's unclear in this type of environment how willing the market will be to swallow something of this size," said Darren Chervitz, a money manager at Jacob Asset Management in New York.

Genuity said it plans to sell 173.9 million Class A common shares for between $12 and $15 each, raising between $2.1 billion and $2.6 billion before expenses. At the $13.50 midpoint of the expected price range, the stock sale would be worth $2.3 billion, according to Genuity's amended IPO filing to the Securities and Exchange Commission.

At the top of the expected price range, Genuity would rank as the ninth-biggest IPO in US history and the largest ever for a US Internet service provider. Among worldwide Internet IPOs, Genuity would likely rank behind Germany's T-Online International AG, which raised $2.8 billion last month, Chervitz said.

The value of Internet stocks and IPOs have fallen in recent months. Since March 10, the Bloomberg US Internet index has dropped by more than half, from 301.78 to 137.64, while the Bloomberg IPO Index has sunk from 2415.11 to 1007.47.

Genuity said it plans to use $1.8 billion of the funds being raised to expand its network, which makes up part of the mesh of wires that connect computers around the world and are referred to as the backbone of the Internet. The rest of the IPO proceeds would be available for other general purposes, which could include acquisitions, although none are in the works now, the filing said.

The IPO funds would represent only a part of the company's capital spending plan to expand its network infrastructure at the cost of $11 billion to $13 billion between 1999 and 2004. Genuity plans to spend $1.8 billion to $2 billion on the project this year, according to the filing.

The entire company, with 192.2 million shares to be outstanding immediately after the IPO, would have a market value of between $2.3 billion and $2.9 billion at the IPO price range. At the midpoint, Genuity would be valued at $2.6 billion.

The combined GTE and Bell Atlantic hold about 18.3 million Class B common shares, giving them 9.5 percent in Genuity following the IPO. Those shares would be worth between $219.1 million and $273.8 million, at the $12-15 per share price range. At the $13.50 midpoint, the stake would be worth about $246.5 million.

Under their proposal to regulators, the companies could convert their Class B shares – which are largely identical to the publicly traded Class A – into 800 million Class C common shares, which get five votes each versus one apiece for the other classes. The conversion would give Bell Atlantic and GTE an 82 percent equity stake and 96 percent voting control over Genuity, the filing said.

The companies could make the swap if they permit competition from other companies within Bell Atlantic's local phone markets in 12 states, by an unspecified date in 2005. Bell Atlantic's 13th state, New York, already is open. US law forbids a local carrier from providing long-distance service – including Internet access – in states where it hasn't completed steps to allow local competition, according to the filing.

Bell Atlantic plans an IPO this year for another of its businesses, Verizon Wireless, which is a joint venture with Vodafone AirTouch PLC.

GTE shares rose 37.5 cents to close at $60.625, after reaching as high as $61.50 in late afternoon trading.

[HN01F6][GDrive]

2000 (June 19) - RCRWireless article - Verizon gets green light ; The FTC approves transfer of GTE Corp.'s communications licenses to Bell Atlantic Corp

See [HW005C][GDrive] - By Reily Gregson on JUNE 19, 2000Archived Articles

WASHINGTON-The Federal Communications Commission late Friday approved the transfer of GTE Corp.'s communications licenses to Bell Atlantic Corp. contingent on 25 conditions, including putting some wireless properties into a trust until they can be sold so as to not violate cellular cross-ownership rules.

"There will be those that will claim this merger brings us closer to a re-emergence of Ma Bell, however, my support is predicated on the applicants' enforceable commitments to open its traditional local markets to competitors, invest in new markets and accelerate deployment of broadband technologies. The end result should produce more competition, not less," said FCC Chairman William Kennard.

"This is a great day for Bell Atlantic and GTE, for our customers, our investors and our employees … This final approval contains reasonable conditions that clear the way to unite these two great companies into Verizon Communications," said Charles R. Lee, chairman and chief executive officer of GTE and designated chairman and co-CEO of the new company. The merger is expected to close by June 30.

Bringing GTE's wireless holdings into Verizon Wireless-the mobile-phone company consisting of Bell Atlantic Mobile, PrimeCo and Vodafone AirTouch plc-would create the nation's largest wireless company, with more than 24 million customers and a footprint covering 90 percent of the United States.

"Our ability to deliver a full plate of voice, data, Internet and wireless services to all our customers will make Verizon the next great brand in communications," said Ivan Seidenberg, chairman and CEO of Bell Atlantic and designated president and co-CEO of Verizon.

Bell Atlantic and GTE obtained Department of Justice approval after selling off overlapping wireless properties. Some of the sales were made in a multiproperty deal with Alltel Corp., which was approved by the FCC's Wireless Telecommunications Bureau last week.

One of the major conditions on the transfer involves GTE's Internet backbone, operation of which would violate the Telecommunications Act of 199

To get around the telecom act's prohibition against regional Bell operating companies offering long-distance services, Bell Atlantic and GTE proposed, and the FCC accepted, spinning off the Internet backbone into a new entity called Genuity [(Genuity Incorporated (2000))].

Verizon would have a 9.5 percent interest in **Genuity [(Genuity Incorporated (2000))]** until Verizon is granted long-distance authority in the former Bell Atlantic states. Bell Atlantic has received such authority in New York but still has 12 states and the District of Columbia to go. Once approval has been obtained, Verizon would then be permitted to control up to 80 percent of Genuity. If approval is not granted for at least 50 percent of the old Bell Atlantic territory within five years, the conversion to 80-percent stock would evaporate.

Seidenberg said he expects long-distance approval within two years from the close of the merger.

This arrangement satisfied FCC Commissioner Susan Ness, who said approving the merger was "a close call."

Both Republican members of the commission partially dissented in the approval because of the conditions placed on it.

"None of the shortcomings I address here or in my previous statement on these issues will ever be addressed unless the commission begins to reform the majority's `balancing approach' to merger review that we apply again here, or seriously question the aforementioned specious theories of potential harm," said FCC Commissioner Michael Powell.

FCC Commissioner Harold Furchtgott-Roth also dissented because he does not believe the commission should be involved in regulating undersea cable licenses. This is one of the approvals the FCC granted.

Amid concerns that someone might challenge the license transfers, the companies said they believe the approval with conditions can withstand any court challenge.

"We think this arrangement is bullet proof. We believe we have the best lawyers and best consultants that one could have … We don't think there is a minuscule chance that this would be overturned," said Lee.

Fate of WorldCom/Sprint

Internet issues also may derail WorldCom Inc.'s hopes of marrying Sprint Corp. and gaining control of Sprint PCS.

Sprint Chairman William Esrey told shareholders last week at the company's annual meeting in Westwood, Kan., that some Justice Department staff do not support the merger.

"We have had a number of high-level meetings with [DOJ] officials in recent weeks, but it remains unclear if we will or will not get the necessary government clearances to implement the merger," Esrey said.

WorldCom needs the merger to fill in the large wireless gap in its offerings. Sprint needs to expand its international reach. Both companies would benefit from combining their fixed-wireless assets.

While DOJ seems concerned with the antitrust implications of a merger between the nation's No. 2 and No. 3 long-distance companies, the European Commission is concerned about WorldCom's dominance of the Internet. Experts believe WorldCom is willing to sell off Sprint's Internet backbone but not its stake in UUNet.

Similar concerns when WorldCom bought MCI Communications Corp. led to the sale of some of WorldCom's assets to Cable and Wireless plc. This sale was not successful and experts believe the EC does not want to create a repeat situation.

The EC is scheduled to make a decision by July 12

Should WorldCom/Sprint convince DOJ and EC officials that the merger would create an all-distance company in an all-distance telecommunications market, the company still must receive FCC approval to transfer its licenses.

2002 (July 26) - NYTimes - "Genuity Faces Bankruptcy As Verizon Ignores an Option"

By Seth Schiesel With Simon Romero ; See [HN01C4][GDrive] ;

This article is also located at [**Genuity Incorporated (2000)**]

Genuity [(Genuity Incorporated (2000))], the last of the original Big Three Internet carriers, may be about to go the way of its competitors -- into bankruptcy.

Verizon, the No. 1 local phone company, said yesterday that it would not rescue Genuity from the telecommunications and technology vortex by taking control of the company.

Verizon, which spun off **Genuity [(Genuity Incorporated (2000))]** two years ago, had been expected to reassume control of the company by June 2005, under terms of the spinoff

Yesterday's announcement sent Genuity's stock plummeting by 89 percent to close at 29 cents, pushed Genuity into default on $3 billion in loans and raised the possibility that the company might have to file for bankruptcy protection within months. If that happens, Genuity would take its place alongside WorldCom's UUNet division and PSINet as former highflying Internet "backbone" companies operating under bankruptcy protection.

A sharp sell-off of Genuity's shares on Wednesday -- otherwise the best day for stocks in 15 years -- suggested that some traders might have had advance warning of yesterday's announcement. Certainly, the Wall Street grapevine may have known something was afoot: **Genuity [(Genuity Incorporated (2000))]** revealed yesterday that on Monday, it had drawn down $723 million from a prior credit line with eight banks.

But Genuity said yesterday that it had no idea that Verizon was planning to drop its option when Genuity called on the banks Monday. "This is absolutely coincidental from our standpoint," Susan Kraus, a Genuity spokeswoman, said yesterday. "We had absolutely no knowledge of what Verizon was going to do."

As the Internet came to popular attention in the early 1990's, three companies emerged as the leading carriers of Internet data: Uunet, PSINet and Genuity's predecessor, BBN. As telephone companies expanded into data networking in the 1990's, they were eager to acquire those early pioneers. Although PSINet remained independent, [**UUNET Technologies, Incorporated**] was acquired by [**MFS Communications Company, Incorporated**] shortly before MFS was acquired by **WorldCom** [, which later became **MCI WorldCom Corporation**,] in 1996. GTE acquired BBN in 1997 and later renamed it Genuity.

When Bell Atlantic acquired GTE in 2000, creating Verizon, the combined company spun off 90 percent of Genuity as a condition for winning regulatory approval for that deal. Bell Atlantic was not allowed to control Genuity because Bell Atlantic was not then allowed to sell long-distance communications services, including data networking.

But Verizon accurately anticipated that it would win the necessary long-distance approval within a few years. So, when it spun off most of Genuity to public shareholders in 2000, it retained the ability to reassume control of Genuity by mid-2005.

Until recently, many investors expected that Verizon would assert its option, given that Genuity had grown from $183 million in revenue in 1997 to $1.2 billion last year.

Genuity's losses, however, have also grown. Were Verizon to reacquire control of Genuity, it would also have to consolidate Genuity's $3 billion in debt and its annual losses -- $4 billion last year -- into its own financial statements.

Already jittery about the state of the regional Bell companies, investors were loath for Verizon to make that move. As a result, Verizon said yesterday that it would not. Now, Verizon appears to believe that it can get into the long-distance data communications business without assuming Genuity's baggage

Given the stock movement on Wednesday, the most important outstanding questions are about just when Verizon made that decision and when Verizon told Genuity.

On Wednesday, as the Dow Jones industrial average soared by nearly 489 points, Genuity's shares plunged by 26 percent, to $2.59, from Tuesday's close of $3.50. Peter Thonis, a Verizon spokesman, said yesterday that Verizon did not tell Genuity about its decision until after the stock market closed on Wednesday.

As for **Genuity [(Genuity Incorporated (2000))]**, the question is why it rushed to borrow $723 million on Monday.

Genuity said yesterday that the group of eight banks really should have been nine and that the $723 million really should have been $850 million. Genuity said Deutsche Bank refused to honor a commitment to lend it an additional $127 million, and that it had sued Deutsche Bank in Federal Court in Massachusetts.

Deutsche Bank said that it had not received any legal papers and that it was in talks with Genuity.

People close to Genuity's lenders said yesterday that Genuity called its banks on Monday morning and demanded the money remaining under its prior credit line by noon that day. Some banking executives said yesterday that companies generally were prepared to wait 48 hours before actually receiving cash under a credit line. They speculated that Deutsche Bank could have been unnerved by the unusually urgent nature of Genuity's request.

Ms. Kraus, the Genuity spokeswoman, said Genuity's agreement with its lenders allowed the company to draw on its loans quickly.

Some bankers speculated yesterday that the eight other banks that did comply might have inferred that Genuity was worried about Verizon's intentions. Moreover, according to people close to both Genuity and Verizon, Michael T. Masin, a Verizon vice chairman and Genuity board member, was asked not to attend a Genuity board meeting on Sunday. His exclusion could have fueled a perception that Genuity suspected that Verizon would cut it loose soon.

2002 (Jul 26) - Forbes - "Genuity Is Left On The Launching Pad"

See [HP004D][GDrive]

This article is also located at [**Genuity Incorporated (2000)**]

Genuity [(Genuity Incorporated (2000))] introduced itself to a puzzled public two years ago with an ad campaign that featured a mysterious-looking black rocket and a very 1990s tagline: "Do you want to change the world?" But the '90s, alas, had just ended, and the world had already changed--and not for the better, if you were a tech investor.

Now Genuity and its rocket appear headed for the auction block. Irony abounds in the situation, for Genuity descends from BBN, the firm that pretty much built the original Internet. The firm's current travails offer yet another sad illustration of the Moses syndrome, in which the visionary genius who points the way to the promised land fails to make it there himself.

Genuity [(Genuity Incorporated (2000))] operates a major Internet backbone network. The firm started touting its Black Rocket network services platform with that ad campaign in late 2000, just as the Internet stock market boom was collapsing. Genuity remained unprofitable, and investors abandoned this stock en masse on July 25, after Verizon Communications cut the lifeline that theoretically had tethered Genuity to its former corporate parent.

[**Verizon Communications Incorporated**] on July 24 [2002] effectively relinquished its right to reacquire a controlling interest in **Genuity [(Genuity Incorporated (2000))]**. That decision pushed Genuity into default on some of its credit agreements. The next day its shares fell almost 90%, to 29 cents from $2.59, and although it was back up over 50 cents today in afternoon trading, the stock has been cut to a rare "sell" rating by at least one Wall Street analyst. Genuity Chairman Paul Gudonis was reduced to talking up his "valuable set of assets," which is the verbal equivalent of hanging a "for sale cheap" sign on the front door.

"Now that Verizon has elected not to reintegrate Genuity, we will evaluate all our options, which could include seeking another strategic partner or restructuring our operating plan while we address this situation," Gudonis said in a statement expressing disappointment with Verizon's decision.

BBN--originally Bolt, Beranek and Newman--was founded in Cambridge, Mass., in 1948 by professors from the Massachusetts Institute of Technology. Then in 1960, BBN employee J.C.R.LicklideJ.C.R. Licklider famously forecast the Internet with his seminal "Man-Computer Symbiosis" paper. It was BBN that built the ARPANET, the Internet's forerunner; it was BBN's RayTomlinsonRay Tomlinson who invented e-mail, which soon composed the bulk of the Internet's traffic. So it made sense that BBN would end up a major Internet backbone firm. In 1997 it was acquired by GTE in a deal valued at $616 millio

A few months later, GTE bought a Bechtel Enterprises unit called Genuity [(Genuity Incorporated (2000))] and combined it with BBN. Then in 2000, GTE merged with Bell Atlantic to form Verizon. The Internet network had to be spun off, because a Baby Bell was not allowed to be in the long-distance data business. But Verizon retained an option, if certain conditions were met, to reabsorb Genuity. The general expectation was that Verizon one day would exercise that option, which is why this week's announcement to the contrary left the spinoff gasping for life.

With WorldCom already in Chapter 11 proceedings, its UUNet Internet backbone unit presumably is being shopped around. Now Genuity too is up for grabs--and with it, the storied BBN legacy. It's one thing to invent the Internet, it seems, and quite another to figure out how to make it pay.

2002 (Nov 27) - NetworkWorld - Level 3 to buy bankrupt Genuity's assets

Stephen LawsonBy Stephen Lawson ; See [HP004I][GDrive]

This article is also located at [**Genuity Incorporated (2000)**]

Internet backbone provider [**Level 3 Communications, Incorporated**] has agreed to acquire the bulk of the assets of network provider **Genuity [(Genuity Incorporated (2000))]**, which has filed for bankruptcy, the companies announced Wednesday.

Level 3 will pay as much as $242 million in cash and assume a significant portion of Genuity's long-term operating agreements, according to a statement from the companies. The deal must be approved by regulatory agencies and a bankruptcy court and is expected to close in the first quarter of 2003.

Also Wednesday, **Genuity [(Genuity Incorporated (2000))]** filed voluntary petitions for reorganization under Chapter 11 of the U.S. bankruptcy code, the statement said. The cash on Genuity's balance sheet, together with Level 3's cash payment, will be distributed to creditors of Genuity.

Based in Woburn, Mass., **Genuity [(Genuity Incorporated (2000))]** was spun out of U.S. telecommunications carrier [**Verizon Communications Incorporated**] according to the terms of the merger of Bell Atlantic and [**GTE Corporation**] that created Verizon in 2000. More recently, the company has been suffering financially amid a glut of capacity on backbone networks. In May, Genuity announced that it would cut as much as 30 percent of its workforce, or 1,200 jobs.

[**Level 3 Communications, Incorporated**], in Broomfield, Colorado, will acquire Genuity's network transport business as well as its dedicated and dial-up Internet access operations. It also will take over Genuity's managed services business, which it will combine with its iStructure subsidiary but continue to operate under the Genuity brand.

Genuity's biggest customers are Verizon and AOL, according to the statement. Verizon has executed a new multi-year contract to buy wholesale dial-up, transport and other services from Level 3, which should take effect when the acquisition closes.

2002 (Nov 27) - "Level 3 to acquire Genuity assets and operations for $242 million"

Source - LightWaveOnline - [HW005H][GDrive]

This article is also located at [**Genuity Incorporated (2000)**]

[**Level 3 Communications, Incorporated**] and **Genuity Inc. [(Genuity Incorporated (2000))]** announced today that they have signed a definitive agreement under which Level 3 will acquire substantially all of the assets of the Massachusetts-based communications company.

[**Level 3 Communications, Incorporated**] will pay up to $242 million in cash and assume a significant portion of existing long-term operating agreements to acquire Genuity's assets and operations. To facilitate the transaction, **Genuity [(Genuity Incorporated (2000))]** today is filing voluntary petitions for reorganization under Chapter 11 of the Bankruptcy Code. Level 3's cash consideration at closing could be reduced subject to certain material adjustments.

Closing is expected to occur during the first quarter of 2003. The transaction is subject to approval by the bankruptcy court and certain government regulatory agencies.

"This transaction represents the best outcome for the key constituencies of both Genuity and Level 3," contends Paul R. Gudonis, chairman and chief executive officer of Genuity. "Both companies, as well as Genuity's largest customers and creditors, have signed agreements supporting the transaction."

"There is a unique and compelling fit between Genuity and Level 3," adds James Q. Crowe, Level 3's chief executive officer. "The transaction combines the assets and operations of Genuity, the company that helped invent the Internet, with Level 3, the company that built the first network fully optimized for Internet Protocol-based communications. Both companies are experienced providers of optical and IP-based services, and both are Tier 1 Internet backbone providers with industry-leading quality of service. Genuity's transport and dedicated and dial-up Internet access business--more than 80 percent of revenue--is complementary to Level 3's transport, managed modem and IP services business."

Based in Woburn, MA, **Genuity [(Genuity Incorporated (2000))]** operates an international IP network. The company provides dial-up and dedicated Internet access, transport, managed security and VPN, hosting and other services to communications companies, enterprises and government agencies. Its largest customers are Verizon Communications and America Online, which accounted for greater than 60 percent of its $223 million in revenue for the third quarter of 2002.

All but one of Genuity's banks have signed an agreement in support of the transaction. Verizon has executed a new multi-year contract to purchase wholesale dial-up, IP, transport and other services from Level 3, to take effect when the transaction closes. America Online has signed an agreement consenting to the transaction that contemplates [**Level 3 Communications, Incorporated**] acquiring America Online's network services agreement with Genuity. In addition, Allegiance Telecom Inc., Genuity's largest network supplier, supports the transaction.

As part of this transaction, Level 3 is also acquiring Genuity's managed services business and its associated enterprise customers and product set. "We recognize the importance of these customers and are committed to ensuring they receive the highest quality service without disruption," asserts Kevin O'Hara, president and chief operating officer of Level 3. "As a result, we plan to combine these operations with those of our (i)Structure subsidiary in order to focus on the needs of those customers. That new managed services operating company will do business under the name 'Genuity,' a recognized leader in that market." [...]

2003 (Aug 19) - CenturyLink corporate news - Level 3 to Sell Midwest Fiber Optic Network Acquired in Genuity Transaction

See [HC004L][GDrive]

This article is also located at [**Genuity Incorporated (2000)**]

BROOMFIELD, Colo., Aug. 19 /PRNewswire-FirstCall/ -- [**Level 3 Communications, Incorporated**] announced today that it has signed a definitive agreement to sell the **Midwest Fiber Optic Network (MFON)**, a regional communications system it acquired through its recent transaction with **Genuity** [**(Genuity Incorporated (2000))**].

CenturyTel (NYSE: CTL) will purchase the stand-alone system, which serves as a regional backbone for a number of carriers, including CenturyTel itself, in Arkansas, Missouri and Illinois. The purchase price is approximately $17 million in cash, subject to adjustments including date of closure and system revenue at time of close. Closing is subject to regulatory approvals and customary conditions.

"This is a non-core asset for Level 3," said Sunit Patel, Level 3's chief financial officer. "While MFON currently generates approximately $1.5 million a month in revenue, the geography and architecture of the system do not offer us a practical or cost-effective way to integrate its operations into the Level 3 network. As such, we believe it makes sense to sell this business and continue to focus on the integration of the core assets, customers and traffic from the Genuity transaction."

Closing is expected to occur by the end of the fourth quarter of 2003.

Daniels & Associates, the Denver-based media and telecommunications mergers and acquisitions specialist, served as financial advisor to Level 3 on this transaction.

- **About Level 3 Communications :** Level 3 (Nasdaq: LVLT) is an international communications and information services company. The company operates one of the largest Internet backbones in the world, is one of the largest providers of wholesale dial-up service to ISPs in North America and is the primary provider of Internet connectivity for millions of broadband subscribers, through its cable and DSL partners. The company offers a wide range of communications services over its 22,500-mile broadband fiber optic network including Internet Protocol (IP) services, broadband transport, colocation services, and patented Softswitch-based managed modem and voice services. Its Web address is www.Level3.com. The company offers information services through its subsidiaries, (i)Structure and Software Spectrum. For additional information, visit their respective web sites at www.softwarespectrum.com, and www.i-structure.com.
- **About CenturyTel :** CenturyTel, Inc. provides communications services including local, long distance, Internet access and data services to more than 3 million customers in 22 states. The company, headquartered in Monroe, Louisiana, is publicly traded on the New York Stock Exchange under the symbol CTL, and is included in the S&P 500 Index. CenturyTel is the 8th largest local exchange telephone company, based on access lines, in the United States. Visit CenturyTel at www.centurytel.com.

2004 (Feb 05) - Network World : "Verizon selling off net innovator BBN"

See [HP004H][GDrive]

Verizon Friday announced it has sold off BBN Technologies to the subsidiary's management team in conjunction with venture capital firm Accel Partners and private equity outfit General Catalyst. Terms of the deal weren't disclosed.

BBN, which was founded in 1948, came to Verizon by way of the merger of former BBN parent company GTE with Bell Atlantic in 2000. The GTE-Bell Atlantic combination became Verizon

R&D specialist BBN has cemented its place in network industry lore through its operation of ARPANET, a precursor of the Internet, and the first implementation of packet switching in 1969. More recently, the company has made advances on the security front in the area of quantum cryptography.

Never a huge self-promoter, the organization has been particularly quiet since becoming a Verizon unit. BBN lists just three 2003 press releases on its Web site, for instance.

The company will continue to be led by Tad Elmer, who has been president since 1999 and a member of the organization for more than 25 years.

Accel Managing Partner Jim Breyer said in a statement that the venture firm bought into BBN mainly to get access to its team. "These are simply people we wanted to be in business with," he said, noting how the company's penchant for technology innovations is in line with the kinds of start-ups Accel looks to fund.

Verizon said it is dealing BBN as part of its ongoing review of assets.

2005 (May 12) - BusinessWire - BBN Technologies Appoints George Conrades, Executive Chairman of Akamai Technologies, to Board of Directors

Source - [HW005I][GDrive]

CAMBRIDGE, Mass.--(BUSINESS WIRE)--May 12, 2005--BBN Technologies, a leading provider of advanced technology and research and development, announced today that [George Henry Conrades (born 1939)], executive chairman of [Akamai Technologies, Incorporated], has been appointed to BBN's Board of Directors. Mr. Conrades served as the CEO of [BBN Technologies, Incorporated] from 1994 to 1997.

"I'm delighted to join the Board of Directors of BBN Technologies, a highly respected organization renowned for developing innovative solutions to some of the world's most challenging problems," said Mr. Conrades. "It's a privilege to be reunited with BBN's world-class scientists and their excellent work."

“George brings to the BBN board an outstanding record of technology and business leadership together with a deep understanding of and appreciation for BBN's business, culture, and core values”

The BBN Board of Directors also includes: Tad Elmer, BBN's president and CEO; David Fialkow and Ken Novack, managing director and advisory board member of General Catalyst Partners, respectively; Jim Breyer and Kevin Efrusy of Accel Partners; and Anita K. Jones, the Lawrence R. Quarles Professor of Engineering & Applied Science, and Professor of Computer Science in the School of Engineering and Applied Science at the University of Virginia.

"George brings to the BBN board an outstanding record of technology and business leadership together with a deep understanding of and appreciation for BBN's business, culture, and core values," said Mr. Elmer. "His counsel will help us grow and prosper."

[George Henry Conrades (born 1939)] was named Chairman and Chief Executive Officer of Akamai in April 1999, bringing a broad range of business experience in the computing, Internet, telecommunications, and media industries. Mr. Conrades became Executive Chairman of Akamai in April 2005.

Before joining Akamai, Mr. Conrades was Executive Vice President and President of GTE Internetworking following the firm's acquisition of BBN Corporation in 1997. At [GTE Corporation], he was responsible for creating GTE Internetworking and leading GTE's rapid growth in the data and Internet business, including integrated telecommunications services.

From 1994 until GTE's acquisition of BBN, [George Henry Conrades (born 1939)] served as CEO of BBN, where he built BBN Planet into one of the industry's top-tier ISPs. BBN designed, built, and deployed the first four nodes of the ARPANET, the forerunner to today's Internet.

Mr. Conrades currently serves as a venture partner at Polaris Venture Partners, an early stage investment company.

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Vickers Building, Baltimore

[HW000K][GDrive]

Source - [HW000J][GDrive]

The Vickers Building represents a shift in downtown Baltimore architectural design that occurred directly after the Great Baltimore Fire of 1904 and is one of the largest buildings to utilize brick as a primary material in the Central Business District. Most of the other buildings rebuilt in the area were made of stone. Masonry was popular after the Great Fire because of fireproofing concerns.

Before the Great Fire, many buildings (including the old Vickers Building the new one replaced) were built in the ornate Second Empire style and featured sloping Mansard roofs and complex architectural details. This changed after the Great Fire. Architects took a more pragmatic approach to rebuilding the Central Business district and were pressured to create buildings that were cost- efficient, fire safe, and could be erected quickly. Because of all the national attention after the Fire, the city wanted to show the rest of the country its stability and they wanted to do it quickly.

The permit for the Vickers Building was issued on May 19, 1904, only three months after the fire. Many of the building's properties indicate fire-conscious planning: it's made of brick; it has a flat roof because people believed spacious Mansard roof attics contributed to the spread of the Fire; and the bay windows recede into the building rather than protrude outwards.

Not all ornamentation was eschewed from the construction of the Vickers Building. Stone lion heads adorn the topmost bay windows and a band of terra cotta runs along the street facing side of the roof. The interior is home to Werner's Restaurant: a mainstay in the area since 1951.

Blog from CharmCityHistory Blogspot - "Mr. Vickers' Building and His Inventive Tenants"

Source - [HW000L][GDrive]

Much has been said about the Vickers Building (219-231 East Redwood Street, once German Street) mainly associated with 2001 preservationist efforts by the Historic American Buildings Survey (HABS) and the Maryland Historical Trust, in coordination with the City of Baltimore's Commission for Historical and Architectural Preservation (CHAP) and Preservation Maryland. Baltimore Heritage highlighted that the permit for this 'new' Vickers Building (to replace the old Vickers Building with ornate Second Empire style with Mansard roofs and complex architecture details) was issued on May 19, 1904, merely 3 months after the Great Baltimore Fire of 1904.

Architects like Meyers and Eitelman after the fire took practical approaches to design that focused on cost-efficiency and quick rebuilding practices that focused on fire-conscious planning. Brick facing, flat roofs, and receding bay windows were employed vs. Mansard roofs, and protruding bay windows which were designs believed to have contributed to the Fire's spread.

Mr. George R. Vickers, Jr. (1843-1916), whose surname is predominantly etched in multiple places upon the building, was the son of a prominent businessmen of Baltimore by the same name who helped found one of the oldest banks in the city, National Marine Bank of Baltimore (currently at 33 South Gay Street), incorporated in 1810. Like his father, George Jr. was Vice-President of the bank and he was also determined to erect the four-story brick office building replacing his father's previous office building. It was built costing $50,000 and Mr. Vickers Jr. first advertised office space as being desirable to stock brokers and bankers in the Baltimore Sun in November 1904.

*While it is well know that a current occupant of the building (since 1950) is **Werner's Restaurant**, with its remarkably intact example of art deco interior complete with late Moderne lunch counter, there have been a few interesting and odd inventors with historical connections who have occupied its walls. Five years after opening, a New Jersey-based business by the name of The Collins Wireless Telephone Company established an office in the Vickers Building in September 1909 - it was to demonstrate to Baltimore a novel system that was essentially one of the earliest predecessors of today's modern cellular telephone.*

*Archie Frederick Collins, resident of New York City, filed Patent Number 814,942, dated March 13, 1906, entitled **Wireless Telephony** by stating "my invention relates to the art of transmitting and receiving articulate speech electronically between two or more stations without connecting wires." Indeed, a Baltimore Sun article reported the demonstration resulted in conversation that "could be distinctly heard at both telephones, one being located on a scow off the United Fruit Company's pier, on Pratt Street, and the other on the pier of the Standard Oil Company, a distance of about 500 feet.... Voices at both ends could be distinctly understood and distinguished, being transmitted in a clear, liquid tone, coming as plainly as over the ordinary telephone."*

*An article, published by Collins' assistant in Modern Electronics, August 1908, gave a somewhat odd foreshadowing of today's modern cell phone: **The Collins Wireless Telephone** will make "it possible to telephone from automobiles to the garage where help is needed... every auto will be provided with a portable wireless telephone. Then in the event of the inevitable accident the phone can be taken out, set up ready for use and communication can be established."*

You can read about Mr. Collin ... Genius or Fraud? but, suffice it to say, in 1911 four officers of the company were indicted for using the mails to defraud in selling worthless stock and he was charged and convicted of giving fraudulent demonstrations of his wireless telephone on October 14, 1909 at the Electrical Show in Madison Square Garden, NY for the purpose of selling stock in the Company.

*The Vickers Building hosted another inventor, Thomas Marshall Smith (great-grandson to Chief Justice John J. Marshall), merely a month later in October 1909, demonstrated his Baltimore invention in room 209 - it was known as **The St. Margaret's Invalid Lifter**. The British Journal of Nursing featured it in 1910 as being "the nurse's friend." It was only advertised in local papers for one month having the recommendations of doctors from Johns Hopkins University and the U.S. Government eventually attaining Patent Number 976,307, dated November 22, 1910, entitled **Hydraulic Invalid Lifter**.*

By May 28, 1911, while there were numerous lifts for invalids being used, his was hailed by the Baltimore Sun as being "A Boon To The Sick" since the heavy lifting was done hydraulically through a pump with the simple press of a foot on a pedal at the base near the floor. According to a feature article, Mr. Smith came to his idea through a desire to help his mother, who late in life lost the use of her limbs and was large and heavy.

George Vickers Jr continued as a well respected businessman, predominantly as Vice President of the bank for 30 years, but was at one time involved in a Court of Appeals of Maryland suit from a judgement he received over a contract land tract 1903 purchase dispute in which he lost in Baltimore Circuit Court against the Mayor and City Council of Baltimore. Oddly enough, during the State Court appeal, Edgar Allen Poe and Albert C. Ritchie argued against Mr. Vickers on behalf of the City. He lived at 1317 North Eutaw Street until his death but his memory lives on as do the novel ideas of the tenants in his building.

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Virotherapy

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Specialty

virology

[edit on Wikidata]

Virotherapy is a treatment using biotechnology to convert viruses into therapeutic agents by reprogramming viruses to treat diseases. There are three main branches of virotherapy: anti-cancer oncolytic viruses, viral vectors for gene therapy and viral immunotherapy. These branches utilize three different types of treatment methods: gene overexpression, gene knockout, and suicide gene delivery. Gene overexpression adds genetic sequences that compensate for low to zero levels of needed gene expression. Gene knockout utilizes RNA methods to silence or reduce expression of disease-causing genes. Suicide gene delivery introduces genetic sequences that induce an apoptotic response in cells, usually to kill cancerous growths.[1] In a slightly different context, virotherapy can also refer more broadly to the use of viruses to treat certain medical conditions by killing pathogens.

History[edit]

Chester M. Southam, a researcher at Memorial Sloan Kettering Cancer Center, pioneered the study of viruses as potential agents to treat cancer. [Source : [HN01JE][GDrive]]

Oncolytic virotherapy[edit]

1) Oncolytic virus unable to enter cells without specific receptor. 2) Oncolytic virus is able to enter tumor cells with specific receptors where they replicate and lyse the cell as well as recruit other immune cells.

Main article: Oncolytic virus

Oncolytic virotherapy is not a new idea – as early as the mid 1950s doctors were noticing that cancer patients who suffered a non-related viral infection, or who had been vaccinated recently, showed signs of improvement;[3] this has been largely attributed to the production of interferon and tumour necrosis factors in response to viral infection, but oncolytic viruses are being designed that selectively target and lyse only cancerous cells.

In the 1940s and 1950s, studies were conducted in animal models to evaluate the use of viruses in the treatment of tumours.[4] In the 1940s–1950s some of the earliest human clinical trials with oncolytic viruses were started.[5][6]

Mechanism[edit]

It is believe that oncolytic virus achieve their goals by two mechanism: selective killing of tumor cells as well as recruitment of host immune system.[7][8] One of the major challenges in cancer treatment is finding treatments that target tumor cells while ignoring non-cancerous host cells. Viruses are chosen because they can target specific receptors expressed by cancer cells that allow for virus entry. One example of this is the targeting of CD46 on multiple myeloma cells by measles virus. [9] The expression of these receptors are often increased in tumor cells.[8] Viruses can also be engineered to target specific receptors on tumor cells as well.[8] Once viruses have entered the tumor cell, the rapid growth and division of tumor cells as well as decreased ability of tumor cells to fight off viruses make them advantageous for viral replication compared to non-tumorous cells.[7][8] The replication of viruses in tumor cells causes tumor cells to lyse killing them and also release signal to activate the host's own immune system, overcoming immunosuppression. This is done through the disruption of the microenvironment of the tumor cells that prevents recognition by host immune cells.[8] Tumor antigens and danger-associated molecular patterns are also released during the lysis process which helps recruit host immune cells.[8] Currently, there are many viruses being used and tested, all differing in their ability to lyse cells, activate the immune system, and transfer genes.

Clinical Development[edit]

As of 2019, there are over 100 clinical trials looking at different viruses, cancers, doses, routes and administrations. Most of the work has been done on herpesvirus, adenovirus, and vaccinia virus, but other viruses include measles virus, coxsackievirus, polio virus, newcastle disease virus, and more.[8][10] Methods of delivery tested include intratumoral, intravenous, intraperitoneal, and more.[11] Types of tumor that are currently being study with oncolytic viruses include CNS tumors, renal cancer, head and neck cancer, ovarian cancer, and more.[10] Oncolytic virotherapy as a monotherapy has also been tested in combination with other therapies including chemotherapy, radiotherapy, surgery, and immunotherapy.[8][10]

Approved for Clinical Use[edit]

In 2015 the FDA approved the marketing of talimogene laherparepvec, a genetically engineered herpes virus, to treat melanoma lesions that cannot be operated on; as of 2019, it is the only oncolytic virus approved for clinical use. It is injected directly into the lesion.[12] As of 2016 there was no evidence that it extends the life of people with melanoma, or that it prevents metastasis.[13] Two genes were removed from the virus – one that shuts down an individual cell's defenses, and another that helps the virus evade the immune system – and a gene for human GM-CSF was added. The drug works by replicating in cancer cells, causing them to burst; it was also designed to stimulate an immune response but as of 2016, there was no evidence of this.[14][12] The drug was created and initially developed by BioVex, Inc. and was continued by Amgen, which acquired BioVex in 2011.[15] It was the first oncolytic virus approved in the West.[14]

Others[edit]

RIGVIR is a virotherapy drug that was approved by the State Agency of Medicines of the Republic of Latvia in 2004.[16] It is wild type ECHO-7, a member of echovirus family.[17] The potential use of echovirus as an oncolytic virus to treat cancer was discovered by Latvian scientist Aina Muceniece in the 1960s and 1970s.[17] The data used to register the drug in Latvia is not sufficient to obtain approval to use it in the US, Europe, or Japan.[17][18] As of 2017 there was no good evidence that RIGVIR is an effective cancer treatment.[19][20] On March 19, 2019, the manufacturer of ECHO-7, SIA LATIMA, announced the drug's removal from sale in Latvia, quoting financial and strategic reasons and insufficient profitability.[21] However, several days later an investigative TV show revealed that State Agency of Medicines had run laboratory tests on the vials, and found that the amount of ECHO-7 virus is of a much smaller amount than claimed by the manufacturer. In March 2019, the distribution of ECHO-7 in Latvia has been stopped.[22]

Challenges and Future Prospective[edit]

Although oncolytic viruses are engineered to specifically target tumor cells, there is always the potential for off-target effects leading to symptoms that are usually associated with that virus.[7] The most common symptom that has been reported has been flu-like symptoms. The HSV virus used as an oncolytic virus has retained their native thymidine kinase gene which allows it to be targeted with antiretroviral in the even of unwarranted side effects.[8]

Other challenges include developing an optimal method of delivery either directly to the tumor site or intravenously and allowing for target of multiple sites.[8] Clinical trials include the tracking of viral replication and spread using various laboratory techniques in order to find the optimal treatment.

Another major challenge with using oncolytic viruses as therapy is avoiding the host's natural immune system which will prevent the virus from infecting the tumor cells.[7][8] Once the oncolytic virus is introduced to the host system, a healthy host's immune system will naturally try to fight off the virus. Because of this, if less virus is able to reach the target site, it can reduce the efficacy of the oncolytic virus. This leads to the idea that inhibiting the host's immune response may be necessary early in the treatment, but this is brought with safety concerns. Due to these safety concerns of immunosuppression, clinical trials have excluded patients who are immunocompromised and have active viral infections.

Viral gene therapy[edit]

Viral gene therapy uses genetically engineered viral vectors to deliver a gene of interest to target cells. An AAV-based vector is shown in this example.

Viral gene therapy uses genetically engineered viral vectors to deliver therapeutic genes to cells with genetic malfunctions.[23]

Mechanism[edit]

The use of viral material to deliver a gene starts with the engineering of the viral vector. Though the molecular mechanism of the viral vector differ from vector to vector, there are some general principles that are considered.

In diseases that are secondary to a genetic mutation that causes the lack of a gene, the gene is added back in.[24][25][26] In diseases that are due to the overexpression of a gene, viral genetic engineering may be introduced to turn off the gene.[24] [27] [28] Viral gene therapy may be done in vivo or ex vivo.[23] [29] In the former, the viral vector is delivered directly to the organ or the tissue of the patient. In the later, the desired tissue is first retrieved, genetically modified, and then transferred back to the patient. The molecular mechanisms of gene delivery and/or integration into cells vary based on the viral vector that is used.[23] Rather than

delivery of drugs that require multiple and continuous treatments. Delivery of a gene has the potential to create a long lasting cell that can continuously produce gene product.[24]

Clinical Development[edit]

There has been a few successful clinical use of viral gene therapy since the 2000s, specifically with adeno-associated virus vectors and chimeric antigen receptor T-cell therapy.

Approved for Clinical Use[edit]

Adeno-associated virus[edit]

Vectors made from Adeno-associated virus are one of most established products used in clinical trials today. It was initially attractive for the use of gene therapy due to it not being known to cause any disease along with several other features.[29] It has also been engineered so that that it does not replicate after the delivery of the gene. [29]

- In 2017, the FDA approved Spark Therapeutics' Luxturna, an AAV vector-based gene therapy product for the treatment of *RPE65* mutation-associated retinal dystrophy in adults.[30][31] Luxturna is the first gene therapy approved in the US for the treatment of a monogenetic disorder.[30][32] It has been authorized for use in the EU since 2018.[33]
- In 2019, the FDA approved Zolgensma, an AAV vector-based gene therapy product for the treatment of spinal muscular atrophy in children under the age of two.[34] As of August 2019, it is the world's most expensive treatment, at a cost of over two million USD.[35] Novartis is still seeking marketing approval for the drug in the EU as of 2019.[35]

In additional, other clinical trials involving AAV-gene therapy looks to treat diseases such as Haemophilia along with various neurological, cardiovascular, and muscular diseases. [29]

Chimeric antigen receptor T cells[edit]

Chimeric antigen receptor T cell (CAR T cell) are a type of immunotherapy that makes use of viral gene editing. CAR T cell use an ex vivo method in which T lymphocytes are extracted and engineered with a virus typically gammaretrovirus or lentivirus to recognize specific proteins on cell surfaces.[24] [36] This causes the T-lymphocytes to attack the cells that express the undesired protein. Currently two therapies, Tisagenlecleucel and Axicabtagene ciloleucel are FDA-approved to treat acute lymphoblastic leukemia and diffuse large B-cell lymphoma respectively.[24] Clinical trials are underway to explore it's potential benefits in solid malignancies. [24]

Others[edit]

In 2012 the European Commission approved Glybera, an AAV vector-based gene therapy product for the treatment of lipoprotein lipase deficiency in adults.[37] It was the first gene therapy approved in the EU.[38] The drug never received FDA approval in the US, and was discontinued by its manufacturer uniQure in 2017 due to profitability concerns.[39] As of 2019 it is no longer authorized for use in the EU.[37]

Challenges and Future Prospective[edit]

Currently, there are still many challenges of viral gene therapy. Immune responses to viral gene therapies pose a challenge to successful treatment.[40] However, responses to viral vectors at immune privileged sites such as the eye may be reduced compared to other sites of the body.[40][41] As with other forms of virotherapy, prevention of off-target genome editing is a concern. In additional to viral gene editing, other genome editing technologies such as CRISPR gene editing have been shown to be more precise with more control over the delivery of genes.[24] As genome editing become a reality, it is also necessary to consider the ethical implications of the technology.

Viral immunotherapy[edit]

Viral immunotherapy is the use of virus to stimulate the body's immune system. Unlike traditional vaccines, in which attenuated or killed virus/bacteria is used to generate an immune response, viral immunotherapy uses genetically engineered viruses to present a specific antigen to the immune system. That antigen could be from any species of virus/bacteria or even human disease antigens, for example cancer antigens.

Vaccines are another method of virotherapy that use attenuated or inactivated viruses to develop immunity to disease. An attenuated virus is a weakened virus that incites a natural immune response in the host that is often undetectable. The host also develops potentially life-long immunity due to the attenuated virus's similarity to the actual virus. Inactivated viruses are killed viruses that present a form of the antigen to the host. However, long-term immune response is limited.[42]

Cancer treatment[edit]

Viral immunotherapy in the context of cancer stimulates the body's immune system to better fight against cancer cells. Rather than preventing causes of cancer, as one would traditionally think in the context of vaccines, vaccines against cancer are used to treat cancer. [43] The mechanism is dependent upon the virus and treatment. Oncolytic viruses, as discussed in previous section, is stimulate host immune system through the release of tumor-associated antigens upon lysis as well as through the disruption of the cancer's microenvironment which helps them avoid the host immune system. [8] CAR T Cells, also mentioned in previous section, is another form of viral immunotherapy that uses viruses to genetically engineer immune cells to kill cancer cells. [24]

Other projects and products[edit]

Protozoal virotherapy[edit]

Viruses have been explored as a means to treat infections caused by protozoa.[44][45] One such protozoa that potential virotherapy treatments have explored is

Naegleria fowleri which causes primary amebic meningoencephalitis (PAM). With a mortality rate of 95%, this disease-causing eukaryote has one of the highest pathogenic fatalities known. Chemotherapeutic agents that target this amoeba for treating PAM have difficulty crossing blood-brain barriers. However, the driven evolution of virulent viruses of protozoal pathogens (VVPPs) may be able to develop viral therapies that can more easily access this eukaryotic disease by crossing the blood-brain barrier in a process analogous to bacteriophages. These VVPPs would also be self-replicating and therefore require infrequent administration with lower doses, thus potentially reducing toxicity.[46] While these treatment methods for protozoal disease may show great promise in a manner similar to bacteriophage viral therapy, a notable hazard is the evolutionary consequence of using viruses capable of eukaryotic pathogenicity. VVPPs will have evolved mechanisms of DNA insertion and replication that manipulate eukaryotic surface proteins and DNA editing proteins. VVPP engineering must therefore control for viruses that may be able to mutate and thereby bind to surface proteins and manipulate the DNA of the infected host.

See also[edit]

- Cancer
- Gene therapy
- Oncolytic virus
- Vector
- Virosome, using modified viruses for drug delivery

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2009 (Aug 24) - NYTimes : A Virus's Debut in a Doctor's Syringe"

DISEASE An image of West Nile virus, which a researcher in New York injected into people with advanced cancer as part of an experiment in the 1950s.

Source : [HN01JE][GDrive]

By KENT SEPKOWITZ, M.D.

- Aug. 24, 2009

Ten years ago this week, New York found itself at the center of a major public health drama: in Queens, a mysterious illness was attacking older men who liked to garden.

The minute-by-minute excitement resembled that of the recent pandemonium caused by swine flu, but with an important difference: in those first late-summer days of 1999, the cause of the outbreak was unknown. It was not until Sept. 24, after three people had died, that the culprit was identified. It was the mosquito-borne West Nile virus, and investigators grimly declared that it had never been seen in the United States.

Well, not quite. America's first cases of West Nile were actually seen in the 1950s, on the Upper East Side of Manhattan. But these cases occurred among people with terminal cancer. And the vector was not mosquitoes but the syringe of a researcher at what is now Memorial Sloan-Kettering Cancer Center.

Sixty years ago, radiation and chemotherapy for cancer were in their infancy; if the surgeon could not cut a tumor out, things were just about hopeless. So the researcher, Dr. Chester M. Southam, was studying viruses for their cancer-killing potential. Studies had shown that a pathogen called the Russian spring-summer encephalitis virus could eradicate tumors in mice. Because that virus was considered too dangerous for people, Southam searched for something milder, settling on the newly discovered West Nile virus.
The work was done in two bedded rooms separated from the rest of the hospital by an old-fashioned screen door. Dr. Donald Armstrong, attending physician emeritus at Memorial Sloan-Kettering who was a trainee at the time, said the screens were placed to minimize the possibility that a rogue mosquito would transmit virus to other patients or staff members. Southam injected West Nile virus into more than 100 people with advanced cancer and few treatment options, then reported his findings in journals. The work generated substantial excitement. "Deep Cancers Temporarily Shrunk by Rare Nerve Virus From Africa," The New York Times reported on April 15, 1952.

"Nerve virus" indeed: Southam had selected West Nile because he thought it would be harmless. In naturally occurring cases from Africa, it had caused only slight fever. But in New York, things turned out quite differently. Eleven percent became ill, and a few quite ill, with symptoms of what we now consider classic West Nile encephalitis: fever, weakness, confusion and even seizures. Virus was isolated from the cerebrospinal fluid of one patient, while in others it was cultured from blood more than three weeks after inoculation.

In one type of cancer, lymphoma, tumors did shrink in 3 of 8 injected patients, compared with just a few responses in the 100 with other types of cancer. But five of the same eight lymphoma patients developed severe West Nile disease, including encephalitis 🗣 a rate far higher than in everyone else.

So Southam moved on. Intrigued by the body's ability to destroy infection, he wondered whether it might be trained to control tumors. For the rest of his career, he worked in the novel field of immune therapy, now one of the most exciting areas in cancer therapeutics. His West Nile work, meanwhile, spawned its own field.

Current approaches are more sophisticated than the old days behind the screen door. For example, some investigators booby-trap a virus, then send it off to deliver its toxic package to the cancer cell. In others approaches, a virus is injected to provoke a general immune response. And in still others, the virus does what Southam had predicted: kills a tumor directly.
But rather than being revered as the father of viral therapy or as a patriarch in the field of immunotherapy, Southam became notorious for something entirely different. His enthusiasm for understanding how the immune system might be kick-started to control cancer nearly cost him his career. To study the immune response to cancer, he injected live tumor cells into people without malignancy; he selected 53 prisoners in the Ohio State Penitentiary and, years later, 22 elderly, dying patients in Brooklyn.

A 2004 essay by Dr. Barron H. Lerner in The New England Journal of Medicine recounted the "enormous controversy" that followed the Brooklyn episode. In a case brought by the state attorney general before the Board of Regents of the State University of New York in 1964, Southam was found to have committed "fraud or deceit" and unprofessional conduct. (Despite or because of this, he was soon elected president of the American Association for Cancer Research.)

The case became a flashpoint in the national debate about proper protection of human volunteers. Not that the idea was new to him: in one West Nile article, he noted that "all patients were volunteers and were informed of the experimental nature and the infectious nature of the virus inoculation."

Southam died in 2002, at 82. As it turned out, his greatest contribution to medicine was not his groundbreaking work in viral or immune therapies of cancer. Rather, he occupies the unenviable position of having focused public attention on the ethical problems related to clinical research 🗣 and, as such, was pivotal in the creation of our current system, in which highest priority goes not to the acquisition of medical knowledge but to the safety of human volunteers.

Special Virus-Cancer Program

SVCP Reports

1950 - 1972 - Administrative History of NCI's Virus and Cancer Programs

See (2004) "An Administrative History of the National Cancer Institute's Viruses and Cancer Programs, 1950-1972 ", by By Carl G. Baker, M.D. /
Source of PDF at [HB006C][GDrive]

1970 - Oct 1970 "Special Virus-Cancer program Fifth Joint Working Conference"

Plain PDF (no OCR), original resolution - [HG0056][GDrive]

PDF (with OCR), but compressed resolution - [HG0057][GDrive]

1971 - Aug 1971 "Special Virus-Cancer program Progress Report 08"

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1976 - Aug 1976 "Special Virus-Cancer program Progress Report 13"

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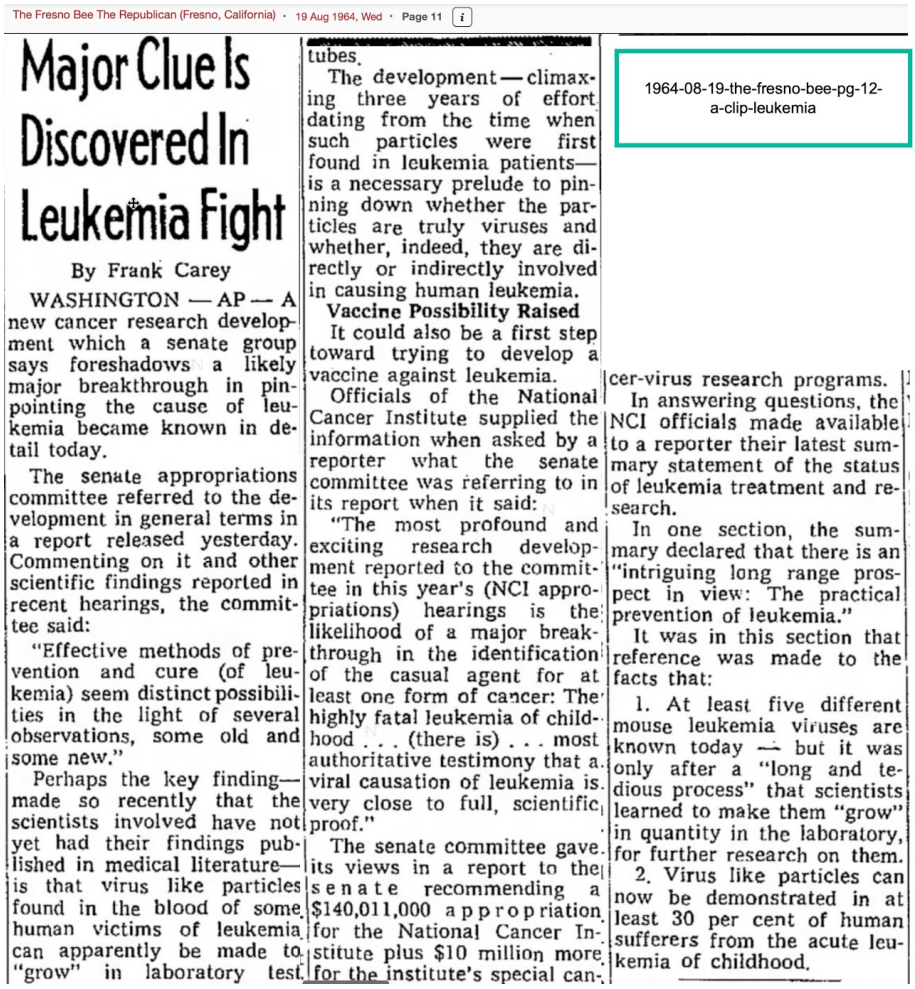
1977 - Aug 1977 "Special Virus-Cancer Program Progress Report 14"

Plain PDF (no OCR), original resolution - [HG0058][GDrive]

PDF (with OCR), but compressed resolution - [HG0059][GDrive]

1964 Aug 19 - First mention of SVCP

Full newspaper page - [HN00TZ][GDrive]



The Fresno Bee The Republican (Fresno, California) · 19 Aug 1964, Wed · Page 11

1964-08-19-the-fresno-bee-pg-12-a-clip-leukemia

Major Clue Is Discovered In Leukemia Fight

By Frank Carey

WASHINGTON — AP — A new cancer research development which a senate group says foreshadows a likely major breakthrough in pinpointing the cause of leukemia became known in detail today.

The senate appropriations committee referred to the development in general terms in a report released yesterday. Commenting on it and other scientific findings reported in recent hearings, the committee said:

"Effective methods of prevention and cure (of leukemia) seem distinct possibilities in the light of several observations, some old and some new."

Perhaps the key finding—made so recently that the scientists involved have not yet had their findings published in medical literature—is that virus like particles found in the blood of some human victims of leukemia can apparently be made to "grow" in laboratory test tubes.

The development — climaxing three years of effort dating from the time when such particles were first found in leukemia patients—is a necessary prelude to pinning down whether the particles are truly viruses and whether, indeed, they are directly or indirectly involved in causing human leukemia.

Vaccine Possibility Raised

It could also be a first step toward trying to develop a vaccine against leukemia.

Officials of the National Cancer Institute supplied the information when asked by a reporter what the senate committee was referring to in its report when it said:

"The most profound and exciting research development reported to the committee in this year's (NCI appropriations) hearings is the likelihood of a major breakthrough in the identification of the casual agent for at least one form of cancer: The highly fatal leukemia of childhood . . . (there is) . . . most authoritative testimony that a viral causation of leukemia is very close to full, scientific proof."

The senate committee gave its views in a report to the senate recommending a $140,011,000 appropriation for the National Cancer Institute plus $10 million more for the institute's special cancer-virus research programs.

In answering questions, the NCI officials made available to a reporter their latest summary statement of the status of leukemia treatment and research.

In one section, the summary declared that there is an "intriguing long range prospect in view: The practical prevention of leukemia."

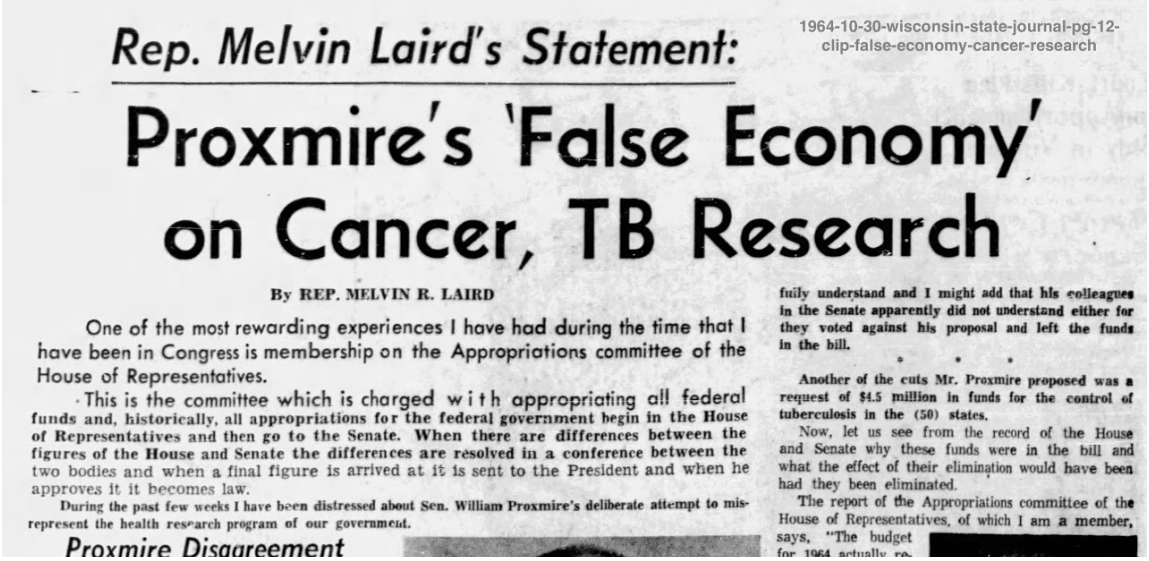
It was in this section that reference was made to the facts that:

1. At least five different mouse leukemia viruses are known today — but it was only after a "long and tedious process" that scientists learned to make them "grow" in quantity in the laboratory, for further research on them.
2. Virus like particles can now be demonstrated in at least 30 per cent of human sufferers from the acute leukemia of childhood.

[HN00U0][GDrive]

1964 - (October 30)

Full newspaper page - [HN00U1][GDrive]



1964-10-30-wisconsin-state-journal-pg-12-clip-false-economy-cancer-research

Rep. Melvin Laird's Statement:

Proxmire's 'False Economy' on Cancer, TB Research

By REP. MELVIN R. LAIRD

One of the most rewarding experiences I have had during the time that I have been in Congress is membership on the Appropriations committee of the House of Representatives.

This is the committee which is charged with appropriating all federal funds and, historically, all appropriations for the federal government begin in the House of Representatives and then go to the Senate. When there are differences between the figures of the House and Senate the differences are resolved in a conference between the two bodies and when a final figure is arrived at it is sent to the President and when he approves it it becomes law.

During the past few weeks I have been distressed about Sen. William Proxmire's deliberate attempt to misrepresent the health research program of our government.

Proxmire Disagreement

fully understand and I might add that his colleagues in the Senate apparently did not understand either for they voted against his proposal and left the funds in the bill.

* * *

Another of the cuts Mr. Proxmire proposed was a request of $4.5 million in funds for the control of tuberculosis in the (50) states.

Now, let us see from the record of the House and Senate why these funds were in the bill and what the effect of their elimination would have been had they been eliminated.

The report of the Appropriations committee of the House of Representatives, of which I am a member, says, "The budget for 1964 actually re-

Proxmire's Disagreement

I have the privilege of serving on two subcommittees of the House Appropriations committee. One of them is the subcommittee on the Department of Defense and the other is the subcommittee on Labor, Health, Education, and Welfare. As ranking member of my party on this latter committee I would like to speak today about the health programs for two reasons.

● The first reason is that they affect the present and future health of all Americans and they do so by providing the funds for medical research and for the control of diseases in the several states.

● The second reason is that Sen. Proxmire and I find ourselves in disagreement on these appropriations from year to year and this year I would like to discuss some of our differences in detail so that you might have the opportunity of assessing the facts yourselves and coming to your own conclusions about the merits of the two positions.

This year, after the House of Representatives had acted on the appropriations for Public Health, the Senate took up the bill.

When the bill reached the Senate floor for debate Mr. Proxmire proposed substantial reductions in the health provisions of the bill. He introduced an amendment which, among other things, provided for a reduction of $10 million in cancer research and $4.5 million in the control of tuberculosis in the states.

Now, while I agree that Sen. Proxmire is not a member of the subcommittee in the Senate that hears the witnesses and receives the evidence on which appropriations are made for health purposes, he does, however, have access to the hearings of the committee and to the report of the committee which explains for everybody who is to vote on the bill, why and how the conclusions of the committee were reached.

Proxmire's Amendment

The $10 million which Mr. Proxmire sought to remove from the bill was proposed to the committee by the Acute Leukemia Medical Task Force of the National Cancer Institute, after the House hearings had been concluded and after the House had acted on the bill. The Senate report explains that the purpose of the appropriation of the $10 million is to carry out a special cancer virus research program.

The report states, "The most profound and exciting research development reported to the committee in this year's hearings is **the likelihood of a major breakthrough in the identification of the casual agent for at least one form of cancer: the highly fatal leukemia of childhood.**

"The committee recognizes that over many years, the research attack on cancer has been marked by a number of up-cycles of hope but that in the end, the disease generally has continued to resist understanding, prevention, or treatment. There is reason, therefore, for caution at this time. But the committee, **nevertheless, must report most authoritative testimony that a viral causation of leukemia is very close to full, scientific proof."**

The report goes on to state, **"Leukemia is a serious disease problem in this country today. Among children aged 4 to 14, it ranks second only to accidents as a cause of death . . .**

"Without treatment, only 5 per cent of children survive as long as one year. The disease today is unpreventable, incurable, usually fatal."

The report then goes on to quote one of the most eminent scientists in the virus field, a man who some years ago received the Nobel Prize for his work in virology. He says, **"I believe that virus-cancer research during the past year or so has become the brightest and potentially most productive area in all of cancer research.**

SEN. WILLIAM PROXMIRE

"The discovery that several viruses could be isolated from human cancer material and that to date none of these are the same as any known virus places a severe obligation on us as scientists to determine whether or not these are the causative agents of human cancer. Needless to say, this is an exceedingly difficult problem and will require additional developments if firm proof is to be obtained."

And again he says, **"The priming of research in this area has paid very rich dividends and within the past few months there has been a virtual avalanche of very important new findings which should be developed vigorously. In order to do this it will be necessary to develop production facilities for expanded cultivation of human and other cells in tissue culture and to develop expanded facilities for the growth of these newly isolated viruses in sufficiently large quantity to permit their complete identification."**

The committee report, itself, then goes on to say, "Testimony presented by the director of the Cancer Institute and others strongly supports the need for immediate intensification of research on the viral origin of cancer and with particular reference to the opportunities immediately available in the leukemias.

"The $10 million recommended to support this special cancer virus research program has been decided after much consideration of the testimony of Institute and special witnesses. It will permit a sound start in an effort that may prove not only costly and difficult, but also dangerous to the researchers, for it involves the concentration of viruses to a high degree and perhaps the removal of factors that prevent their transmission in nature."

Sen. Byrd's Report

REP. MELVIN R. LAIRD

Rep. Melvin Laird (R-Marshfield) is the 1964 Albert Lasker Foundation Health Research Award winner. It is the highest Health Research Award in the nation and in the last 15 years has been given to only three public officials. The award was made to Laird in New York last May.

Laird has been cited for his health work by the American Cancer Society, the National Mental Health Assn., the American Assn. of Medical and Dental Colleges, the National Assn. to Prevent Blindness and other organizations.

Cancer Research Centers called "Lairdettes" have been constructed at 14 locations in the United States. Laird was credited for obtaining the federal funds for the construction of the new 11-story McArdle Laboratory for Cancer Research of the University of Wisconsin's Medical School, one of the 14 "Lairdettes." He was appointed by both President Eisenhower and President Kennedy to the U.S. delegation to the World Health Organization.

He said, **"Mr. President, we stand on the threshold of exciting new discoveries in the field of prevention and treatment and cure of leukemia. Recent developments have been so rapid that we have had to use the approach here used.** The information that was brought to the attention of the committee was not known in time for a request to be made to the Bureau of the Budget and thus to travel through the normal channels. So it came to the committee in the form of a special report."

"Two hundred and ninety thousand persons die annually from cancer. Of these 290,000, approximately 15,000 die from leukemia, mainly children. Heretofore, and today, leukemia was and is considered to be an incurable disease, although considerable progress has been made in recent years with respect to the development of palliative drugs, drugs which will delay the development of the disease. **But up until this point, there is no known, sure cure for leukemia.**

"Leukemia is the second greatest killer of children, ranking second only to accidents. In the recent past, children afflicted with leukemia could be expected to live only for a very few weeks. Then the average period of life was extended through drug therapy to 6 months. I think about 80 children have been treated with various new drugs and have lived for a period of 5 years subsequent to the initial discovery of the disease.

"So we have been making some slow progress, but, as I say, recent scientific discoveries have been brought to the attention of the committee. They have indicated that we do, indeed, stand at the door of what may be an exciting breakthrough in our effort to make war upon and conquer this dreadful disease.

"Mr. President, it appears possible that a vaccine may be developed, such as the polio vaccine, which can prevent the incurring of this disease. Time is of the essence, and it is necessary, if we are to take advantage of new discoveries, that we make this initial appropriation, which is the beginning of a 2 or 3-year 'crash' program.

"If efforts are successful in this regard, it is hoped that we shall have opened the doors to the prevention and cure of other types of cancer. It is felt this may be a model program for dealing with other types of cancer.

"IT WOULD BE A GREAT MISTAKE FOR THE SENATE TO ADOPT THE AMENDMENT OFFERED BY THE SENATOR FROM WISCONSIN, MR. PROXMIRE, IN THIS REGARD IN PARTICULAR, AND IN OTHER REGARDS AS WELL, BUT ESPECIALLY IN RESPECT OF THIS ITEM.

"The subcommittee and the full committee, I think unanimously, favored this item. I do not recall that any attempt was made in the full committee to delete the item, and I was present when the subcommittee marked up the bill. Unfortunately, the senator from Alabama (Mr. Hill) was not able to be present when the full committee acted.

"All who spoke on it spoke enthusiastically about it. I do not recall any item that has ever been before this committee or any other subcommittee or committee of which I have been a member in the 12 years I have been in the House and Senate that has been so enthusiastically and unanimously received—certainly as far as the full committee and subcommittee were concerned—as was this item.

"IT WOULD BE A GRAVE, UNTHINKABLE AND UNFORGIVABLE ERROR FOR THE SENATE TODAY TO APPROVE THE AMENDMENT WHICH HAS BEEN OFFERED BY THE SENATOR FROM WISCONSIN TO STRIKE THIS ITEM FROM

duced this activity (control of tuberculosis) approximately one half million dollars below the 1964 level. If there ever was a proposal that was penny wise and pound foolish this is it. This is borne out by testimony both of officials of the U. S. Public Health Service and public witnesses, and in the paragraphs which follow the economics of the situation are pointed out by the committee.

SEN. HARRY BYRD

"Last year the committee again expressed its concern over the apparent lack of effectiveness of efforts to control tuberculosis in the United States.

$239 Million Saving

"Costs for tuberculosis hospitalization are now approximately $335 million per year. **The program the Task Force recommends would reduce this cost to an approximate $96 million in that 10th year, a saving of $239 million. Not to invest the funds necessary to carry out this program, which would be even less money over a 10-year period than can be saved in that 10th year alone would, in the opinion of the committee, be sheer financial folly and the essence of false economy."**

If the incidence of tuberculosis were dropping at the rate that it should be, it may be that these funds would be unnecessary but as the senator managing the bill on the Senate floor said, **"Mr. President, I call attention to the fact that more than half of the 53,315 tuberculosis cases reported in 1962 involved persons over 45 years of age. I also call attention to the fact that 6,000 of these cases involved children younger than 15 years of age.** These 6,000 children had active cases of tuberculosis. They were not just tuberculin reactors. They were active cases. Some of them had the adult type of pulmonary tuberculosis.

"Those are but a few of the recommendations that have been made by the task force on tuberculosis.

"THE SENATOR FROM WISCONSIN SPEAKS ABOUT PEOPLE DOWNTOWN AND WHAT THEY RECOMMEND. HE HAS INDICATED THAT THE PEOPLE DOWNTOWN FEEL THAT THE AMOUNT OF MONEY RECOMMENDED IS MORE THAN IS NEEDED."

"MR. PRESIDENT, THE PEOPLE DOWNTOWN TO WHOM THE SENATOR REFERS ARE CLERKS IN THE BUREAU OF THE BUDGET. THEY ARE NOT MEDICAL EXPERTS. THEY ARE NOT PEOPLE WHO CAN COMPETENTLY SPEAK TO THE SUBJECT. THEY ARE CLERKS, AND THEY HAVE VARIOUS RESPONSIBILITIES. OF COURSE, THEY CANNOT SPEAK AS CAN EMINENT PHYSICIANS, SCIENTISTS, AND MEDICAL PEOPLE WHO APPEARED BEFORE THE COMMITTEE, WHO HAVE RECOMMENDED THE APPROPRIATION, AND WHO FEEL THAT IT IS NECESSARY IF WE ARE TO REGAIN THE GROUND THAT WE HAVE LOST, FOR WE HAVE BEEN LOSING GROUND. I TRUST THAT THE RECOMMENDATION OF THE COMMITTEE WILL BE UPHELD BY THE SENATE."

Defeated 79 to 6

The amendment of Mr. Proxmire to reduce the health funds in the bill, including the two items I have discussed in detail, was defeated by his colleagues by a vote of 79 to 6.

In other words, 79 of his 85 colleagues who were present found the facts to be different than he stated, found the testimony of the medical experts sound and found that these programs were vital to the well being of the American people.

I agreed with them and, in fact, with the Senate, I supported the position they took.

As I try to understand the position of Mr. Proxmire on these health programs this year and in the years prior to this, sometimes I am of the opinion that he just doesn't understand the problem. The testimony is available for him to read, the reports of the committees are available to him, and he has the benefit of the debate on the floor of the Senate but it appears to me that he may not be able to fully understand what is meant by the statements and positions of the eminent experts who bring these problems before us as medical persons for us to vote on as legislators.

At other times I wonder if Mr. Proxmire is being completely honest with the people of Wisconsin in the position he takes in the Senate. For, as we go back several years we can note that year after year he offers amendments to reduce the health programs of the nation and invariably fails to do so.

It makes me wonder sometimes if he does not introduce these amendments in the full knowledge that they will not be enacted but that they will mislead the people of Wisconsin into thinking that he is making an honest effort to reduce the cost of government. I can't fully make up my mind what the motive is for his actions but whether these actions flow from ignorance or insincerity I leave for you to decide.

Since I have come to Congress I have worked and hoped for a balanced budget and I will continue to do so as long as I am a member of the Congress. I feel that the whole budget should not only be balanced but that it should be reduced and balanced, and the record will show that I have been steadfast in this position and I shall remain so.

Within the framework of a balanced budget, however, I will support programs vital to the health of the people of this country. The record will show that

The senator managing the bill on the floor of the Senate, Harry Byrd of West Virginia, went into more detail on this item in the debate on Aug. 19, and now I quote from the Senate proceedings of the Congressional Record of that day,

THE BILL."

How, in the light of these facts, these medical and scientific judgments, Mr. Proxmire felt constrained to attempt to do away with one of the most vital parts of our national health program I do not

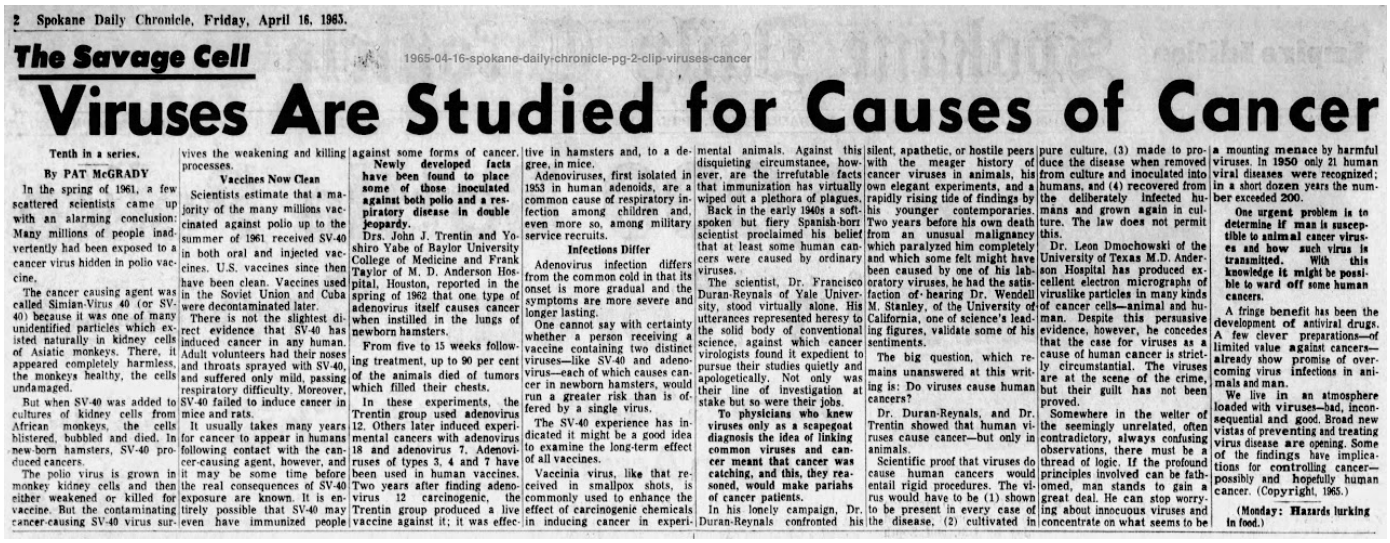
I have done that in the past and you may be sure that I will continue to do so in the future.

I am glad to set the record straight on these programs and I hope that in this statement my position has been made clear.

[HN00U2][GDrive]

1965 (April 16)

Full newspaper page - [HN00U3][GDrive]



2 Spokane Daily Chronicle, Friday, April 16, 1965.

The Savage Cell

1965-04-16-spokane-daily-chronicle-pg-2-clip-viruses-cancer

Viruses Are Studied for Causes of Cancer

Tenth in a series.

By PAT McGRADY

In the spring of 1961, a few scattered scientists came up with an alarming conclusion: Many millions of people inadvertently had been exposed to a cancer virus hidden in polio vaccine.

The cancer causing agent was called Simian-Virus 40 (or SV-40) because it was one of many unidentified particles which existed naturally in kidney cells of Asiatic monkeys. There, it appeared completely harmless, the monkeys healthy, the cells undamaged.

But when SV-40 was added to cultures of kidney cells from African monkeys, the cells blistered, bubbled and died. In new-born hamsters, SV-40 produced cancers.

The polio virus is grown in monkey kidney cells and then either weakened or killed for vaccine. But the contaminating cancer-causing SV-40 virus survives the weakening and killing processes.

Vaccines Now Clean

Scientists estimate that a majority of the many millions vaccinated against polio up to the summer of 1961 received SV-40 in both oral and injected vaccines. U.S. vaccines since then have been clean. Vaccines used in the Soviet Union and Cuba were decontaminated later.

There is not the slightest direct evidence that SV-40 has induced cancer in any human. Adult volunteers had their noses and throats sprayed with SV-40, and suffered only mild, passing respiratory difficulty. Moreover, SV-40 failed to induce cancer in mice and rats.

It usually takes many years for cancer to appear in humans following contact with the cancer-causing agent, however, and it may be some time before the real consequences of SV-40 exposure are known. It is entirely possible that SV-40 may even have immunized people against some forms of cancer.

Newly developed facts have been found to place some of those inoculated against both polio and a respiratory disease in double jeopardy.

Drs. John J. Trentin and Yoshiro Yabe of Baylor University College of Medicine and Frank Taylor of M. D. Anderson Hospital, Houston, reported in the spring of 1962 that one type of adenovirus itself causes cancer when instilled in the lungs of newborn hamsters.

From five to 15 weeks following treatment, up to 90 per cent of the animals died of tumors which filled their chests.

In these experiments, the Trentin group used adenovirus 12. Others later induced experimental cancers with adenovirus 18 and adenovirus 7. Adenoviruses of types 3, 4 and 7 have been used in human vaccines. Two years after finding adenovirus 12 carcinogenic, the Trentin group produced a live vaccine against it; it was effective in hamsters and, to a degree, in mice.

Adenoviruses, first isolated in 1953 in human adenoids, are a common cause of respiratory infection among children and, even more so, among military service recruits.

Infections Differ

Adenovirus infection differs from the common cold in that its onset is more gradual and the symptoms are more severe and longer lasting.

One cannot say with certainty whether a person receiving a vaccine containing two distinct viruses—like SV-40 and adenovirus—each of which causes cancer in newborn hamsters, would run a greater risk than is offered by a single virus.

The SV-40 experience has indicated it might be a good idea to examine the long-term effect of all vaccines.

Vaccinia virus, like that received in smallpox shots, is commonly used to enhance the effect of carcinogenic chemicals in inducing cancer in experimental animals. Against this disquieting circumstance, however, are the irrefutable facts that immunization has virtually wiped out a plethora of plagues.

Back in the early 1940s a soft-spoken but fiery Spanish-born scientist proclaimed his belief that at least some human cancers were caused by ordinary viruses.

The scientist, Dr. Francisco Duran-Reynals of Yale University, stood virtually alone. His utterances represented heresy to the solid body of conventional science, against which cancer virologists found it expedient to pursue their studies quietly and apologetically. Not only was their line of investigation at stake but so were their jobs.

To physicians who knew viruses only as a scapegoat diagnosis the idea of linking common viruses and cancer meant that cancer was catching, and this, they reasoned, would make pariahs of cancer patients.

In his lonely campaign, Dr. Duran-Reynals confronted his silent, apathetic, or hostile peers with the meager history of cancer viruses in animals, his own elegant experiments, and a rapidly rising tide of findings by his younger contemporaries. Two years before his own death from an unusual malignancy which paralyzed him completely and which some felt might have been caused by one of his laboratory viruses, he had the satisfaction of hearing Dr. Wendell M. Stanley, of the University of California, one of science's leading figures, validate some of his sentiments.

The big question, which remains unanswered at this writing is: Do viruses cause human cancers?

Dr. Duran-Reynals, and Dr. Trentin showed that human viruses cause cancer—but only in animals.

Scientific proof that viruses do cause human cancers would entail rigid procedures. The virus would have to be (1) shown to be present in every case of the disease, (2) cultivated in pure culture, (3) made to produce the disease when removed from culture and inoculated into humans, and (4) recovered from the deliberately infected humans and grown again in culture. The law does not permit this.

Dr. Leon Dmochowski of the University of Texas M.D. Anderson Hospital has produced excellent electron micrographs of virus-like particles in many kinds of cancer cells—animal and human. Despite this persuasive evidence, however, he concedes that the case for viruses as a cause of human cancer is strictly circumstantial. The viruses are at the scene of the crime, but their guilt has not been proved.

Somewhere in the welter of the seemingly unrelated, often contradictory, always confusing observations, there must be a thread of logic. If the profound principles involved can be fathomed, man stands to gain a great deal. He can stop worrying about innocuous viruses and concentrate on what seems to be a mounting menace by harmful viruses. In 1950 only 21 human viral diseases were recognized; in a short dozen years the number exceeded 200.

One urgent problem is to determine if man is susceptible to animal cancer viruses and how such virus is transmitted. With this knowledge it might be possible to ward off some human cancers.

A fringe benefit has been the development of antiviral drugs. A few clever preparations—of limited value against cancers—already show promise of overcoming virus infections in animals and man.

We live in an atmosphere loaded with viruses—bad, inconsequential and good. Broad new vistas of preventing and treating virus disease are opening. Some of the findings have implications for controlling cancer—possibly and hopefully human cancer. (Copyright, 1965.)

(Monday: Hazards lurking in food.)

[HN00U4][GDrive]

1965 (July 1)

Full newspaper page - [HN00U5][GDrive]

Volume 76—No. 26 RIDGEWOOD, N. J., THURSDAY, JULY 1, 1965

Virologist Has Hope for Leukemia Cure

By PEG PETERSON

RAMSEY—Mice, hope and caution are the tools of Dr. Sami Mayyasi's trade.

A parent himself, he deals every day with a subject most parents try not to think about at all—leukemia. But he deals with leukemia in terms of hope, not despair.

The Ramsey man is part of a team of scientists at the Charles Pfizer and Company's cancer research center in Maywood, who are dedicated to the proposition that leukemia someday will be no more fearsome than polio is today. The Maywood laboratory—Pfizer's John L. Smith Memorial Center for Cancer Research—is under contract with the federal government's National Cancer Institute "to thoroughly study animal leukemia caused by virus with the goal that the same personnel will be skilled in the handling of leukemia virus if and when it can be isolated in humans," according to John L. Davenport, director of the Maywood center.

If the goal itself offers an implicit promise that leukemia can be conquered, Dr. Mayyasi is quick to check any runaway optimism. "There are those who say leukemia research today is about as far along as polio research was in the 1930s," he cautioned. But he himself puts it less starkly: "We probably are years away from a vaccine effective against leukemia in humans."

In any case, the assumed goal—a human vaccine—was brought some measure closer last year when Dr. Mayyasi and the group he heads succeeded in growing mouse leukemia virus in mouse tissue culture, establishing a self-perpetuating cell line for the cultivation of vaccine.

The Arabic-born virologist's achievement, announced at a Pfizer press conference late in the summer, sent a wave of excitement through newspaper and magazine science columns to a world hungry for any kind of progress in the battle against the fatal cancer which attacks bone marrow and the lymph nodes that manufacture blood.

Strains of leukemia virus in mice had already been isolated, including two strains with which Dr. Mayyasi worked—the strains isolated by Drs. John B. Moloney and Frank Rauscher Jr. both of the National Cancer Institute. And there had been previous successful attempts to vaccinate mice, but only with the virus taken directly from an infected mouse.

Breakthrough

Dr. Mayyasi's breakthrough was in utilizing, in his vaccination, the leukemia virus cultivated from tissue culture cell lines.

The significance is in the likelihood that the same mass production methods can be applied in development of a human vaccine . . . if and when a human leukemia virus can be isolated.

That's a tremendous "if and when." Cancer researchers at Pfizer and in labs all over the world are conducting probably the greatest virus hunt in history, racing against time and its death toll to find the virus which they strongly suspect—but have yet to prove—causes human leukemia.

Using powerful electron microscopes, the only instruments through which virus can be seen, workers at Pfizer and other labs are constantly examining blood plasma cells from human leukemia victims, searching for evidence of a virus.

Much of the study centers around the few, but very striking, evidences of a clustering of leukemia cases, primarily the outbreak in Niles, Ill., from 1957 to 1961 affecting eight children, seven of whom attended the same school while the eighth was a friend of one of the seven students.

Scientists also are much concerned with a condition called Burkitt's Lymphoma, a cancer of lymph tissues resembling leukemia, found among children living in a hot, moist section of East Africa. The climate suggests some transmission of the disease by insect carriers. Cell lines from tumors of those children are being studied.

Virus Suspect

It has been the few evidences of clustering, standing out sharply in what for the most part has been a random pattern, that has helped to put scientists on the trail of a virus. And what have they found beyond the mouse and chicken viruses?

There have been a number of discoveries of "virus-like" particles, in the plasma from human leukemia victims and in the tumors from the African lymphoma victims. Pfizer lab officials have explained: "Occasional virus-like particles have been observed in human plasma, and attempts are now being made to grow them in tissue culture and pin down the identification, as observation under the electron microscope is not positive by itself."

There's no doubt that many mouse leukemias are caused by virus, roundish with a squared-off tail, about 1/250,000th of an inch in size. And there's no doubt that the Mayyasi test-tube vaccine is effective.

Hundreds of mice have received injections of the dead vaccine developed from tissue culture and, subsequently, were injected with a leukemia virus. Ninety per cent of them were protected against the disease. All of the unvaccinated mice in the control groups developed leukemia after injections of the virus.

Safety Check

Dr. Mayyasi and others in the Pfizer virology department are concerned now with development of new safety-check methods—ways of testing the vaccine for purity to make certain the vaccine has no effects other than protection against leukemia, and freeing it of extraneous cellular material by chemical and physical means. Whatever lessons are learned from mice in that respect are almost certain to have importance when the time comes to check the purity and safety of a human vaccine.

About one-quarter of the some 200 employees of the Pfizer labs in Maywood are in the virology department, concerned with the role of virus in cancer. Meanwhile, others at the memorial center—which is named for a former Pfizer president who died of cancer—are concerned with other programs, including chemotherapy, the search for drugs having an effect on cancer.

Worked on Salk Vaccine

If a human vaccine is developed, it won't be the first time Dr. Mayyasi has had a role in an important vaccine program. Joining Pfizer in 1957, he worked first on Salk polio vaccine and influenza vaccine at Terre Haute, Ind. Four years later he went to Pfizer laboratories in Sandwich, England, to work with a group which perfected the Sabin polio vaccine.

On returning to the United States, he was appointed manager of vaccine development, heading Pfizer's live-virus measles vaccine program at Terre Haute. He and his family moved here, to 292 Elizabeth Ave., when he was assigned to the Maywood center in the summer of 1963.

Born in Haifa, Palestine, Dr. Mayyasi completed his high school education in Jerusalem and studied for three years at the American University of Beirut before coming to the United States in December of 1947. He studied at Ohio Northern University at Ada and received BS and MS degrees in bachteriology at the University of Tennessee in Knoxville.

He acquired a doctor of philosophy degree and a wife from Ohio State University at Columbus. A laboratory graduate assistant there, he was able to persuade an attractive co-ed named Elsie that the world could get along without her services as a nurse. "But I persuaded easily," laughed Mrs. Mayyasi, who studies piano and is active in the First Presbyterian Church.

The Mayyasis have two children, a son, Kim Arthur, and a daughter, Mona Lynn, students at Hubbard School.

Outside the lab, Dr. Mayyasi has a wide spectrum of interests including—well, just about everything except mice. Mice at home would be a bit much, so the family gets by with a parakeet, cat and fish in the pet department. Dr. Mayyasi plays tennis, swims in the Ramsey pool and is almost as handy around the kitchen as he is in a laboratory.

As an amateur chef, he specializes in preparing Near-Eastern dishes which he and his wife serve at Sunday open houses for the foreign students and physicians studying at Columbia Presbyterian Hospital in New York. The hospitality and the familiar food, the Mayyasis hope, make a foreign land a little less lonely for the students.

RELAXING AT HOME with his family, Dr. Mayyasi listens with his children, Kim Arthur and Mona Lynn while Mrs. Mayyasi reads. Their home is in Ramsey from which the virologist travels daily to Maywood for research work in the control of leukemia.

DR. SAMI MAYYASI examines the contents of a container while at work in the cancer research laboratories of Chas. Pfizer and Co. in Maywood. Dr. Mayyasi recently developed a vaccine which effectively protects mice against leukemia.

1965-07-01-ridgewood-herald-news-pg-21-clip-virologist

[HN00U6][GDrive]

1965 (July 19)

Full newspaper / Page 1 - [HN00U7][GDrive]

Full newspaper / Page 7 - [HN00U8][GDrive]

Dow to do cancer research project

THE BRAZOSPORT FACTS
FREEPORT, TEXAS Mon., July 19, 1965 7

The Dow Chemical Company has been awarded a contract by the Public Health Service, Department of Health, Education and Welfare, to develop methods of protecting personnel and preventing cross-contamination of experiments in virus-cancer research.

The work will be carried out by the Pitman-Moore Division of Dow at Zionsville, Ind.

Control of bio-hazards in virus research is one of four principal areas of investigation under a special virus-cancer-leukemia program for which the National Cancer Institute received a special congressional appropriation of $10 million for 1965.

1965-07-19-the-brazosport-facts-freeort-texas-pg-7-clip-cancer-research

The other areas to be investigated are . . . the cause and prevention of human leukemia, treatment of human leukemia, and animal leukemias and their possible relationships to man.

The contract with Dow is funded in the amount of $989,000.

A team of Dow scientists will design, construct and test full-scale models of new containment facilities needed for studies at the institute's proposed virus laboratory and animal facility in Bethesda, Maryland.

The company will also develop a system to monitor the safety of institute personnel, and maintain surveillance of experiments, equipment, and facilities involved in research projects.

The team, headed by Dr. Lawrence C. Weaver, will consist of virologists, microbiologists, veterinarians, pathologists, engineers and technicians familiar with the operation, design and construction of facilities used in advanced virus research. They will be based at the Pitman-Moore laboratories at Zionsville, Ind.

The Zionsville laboratories have been doing virus work for a number of years. Lirugen, a recently introduced, live-virus measles vaccine, was developed at the Zionsville facility, and the laboratories have been deeply involved in a wide range of human and veterinary medical research.

[HN00U9][GDrive]

1969 (June 26)

Full newspaper page - [HN00UA][GDrive]

1969-06-26-pike-county-dispatch-milford-pg-1-clip-cancer-research

Appointed to Leukemia Committee

Armund E. (Art) Foley, of Hemlock Farms, Lord's Valley, Hawley, Pa., Director of Public Education and Information, Leukemia Society of America, Inc., has been appointed a member of the Organization Committee for the IVth International Symposium on Comparative Leukemia Research, to be held in Cherry Hill, New Jersey, September 21-25, 1969. The announcement was made by Ray M. Dutcher, Ph. D., General Chairman for the Symposium.

Mr. Foley has been associated with the Leukemia Society of America since March 1968. Prior to that time he was program promotion consultant for the CBA-TV series, "The 21st Century."

The Symposium will be principally co-sponsored by the Leukemia Society of America, Inc. and the Special Virus Cancer Program of the National Cancer Institute of the National Institutes of Health. More than 80 papers will be presented by scientists and physicians from throughout the world to the more than 500 attendees.

The Symposium is under the auspecies of the World Committee for Comparative Leukemia Research which is sponsored by the World Health Organization. This will be the first time the International Symposium will be held in the United States.

[HN00UB][GDrive]

1969 (Sep 9)

Full newspaper page - [HN00UC][GDrive]

'No Generation Gap'

Leukemia drive launched here

A statewide campaign to raise funds for the Delaware Chapter of the Leukemia Society of America has opened.

Cochairmen of the month-long drive are Robert P. Barnett of 10 Pelham Road, Welshire, and Robert J. Marvel of 1930 Thomas Road, Fairfaz.

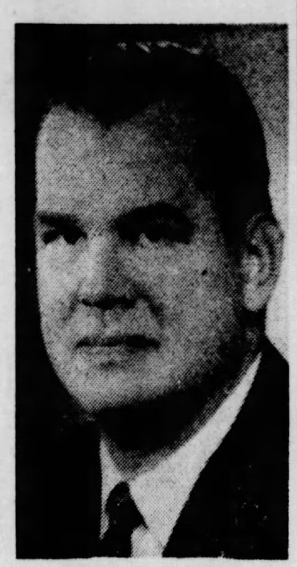
THEME of this year's campaign is "There Is No Generation Gap in Leukemia."

Barnett, a vice president of Atlas Chemical Industries, Inc., and general manager of its international division, noted that "no person is immune to leukemia. It strikes all age groups, races, nationalities and both sexes.

"It is one of the major causes of death among children in America," Barnett added, "yet the incidence of leukemia has been increasing especially in the age group over 40."

The Leukemia Society of America is a voluntary nonprofit organization with many chapters across the nation. It is dedicated to conquering leukemia through research as well as providing patient aid and public education. The Delawae chapter provides counseling and financial assistance to leukemia patients and their families.

Robert J. Marvel



Robert P. Barnett

The chapter's board of directors includes lay and professional volunteers from business, the medical and nursing professions, clergy, social workers, housewives and other interested citizens.

Marvel, who was the Wilmington Jaycee's Outstanding Young Man of the Year in 1968, is vice president of Brewer & Clement, Inc., local insurance firm.

HE pointed out the importance of the International Symposium on Comparative Leukemia Research, which will be held at Cherry Hill, N.J., Sept. 21-25. "This symposium." Marvel said, "is being sponsored by the special virus cancer program of the National Cancer Institute and the Leukemia Society of America, and should give an accurate and up-to-date report on the progress made by researchers toward solving this major disease."

Without the contributions of interested citizens, Marvel said, such research could be seriously impaired.

Contributions should be sent to the Leukemia Society, Bank of Delaware, P.O. Box 2366, Wilmington, Del., 19899.

1969-09-09-the-morning-news-wilmington-de-pg-pg-4-clip-cancer-research

[HN00UD][GDrive]

1969 (Sep 26)

Full newspaper page - [HN00UE][GDrive]

Russian Research Links Viruses With Leukemia

CHERRY HILL (AP) — A Russian scientist reported yesterday on research in the Soviet Union supporting a theory that viruses can cause leukemia in humans.

An American scientist whose institute is supported by federal contracts promptly invited the Soviet specialist to repeat the experiment in the American laboratory.

Dr. Boris Lapin, an eminent Soviet virologist from the Institute of Experimental Pathology and Therapy at Sukhumi, described work done in his laboratory by an associate, Dr. L. A. Yakovleva.

Dr. Yakovleva, he said, produced "leukemia-like diseases" in monkeys by inoculating them with tissue and cell-free filtrates from humans with leukemia.

"Successful duplication of Dr. Yakovleva's work," the American scientist said, "could mark a significant step in establishing the possible viral causation of leukemia in man and animals."

The invitation came from Dr. S. S. Kalter of the Southwest Foundation for Research in Education of San Antonio, Texas, at the Fourth International Symposium on Comparative Leukemia Research.

No Difficulty Seen

According to the proposal, Dr. Lapin would use the foundation's laboratories to repeat the experiment. A spokesman said details would have to be worked out, but foresaw no difficulty.

American and Soviet scientists have worked in each other's laboratories in the past.

Dr. Kalter said it has been established that viruses can cause leukemia in numerous animals, but it hasn't been established that the same thing happens in humans.

If it does, some way of combatting the virus could presumably be developed sometime in the future.

U.S. Has Tried

Scientists at the conference said that researchers in the United States have long tried to produce leukemia in animals with specimens from human leukemia patients. The Americans have used newborn monkeys.

Dr. Lapin said the Soviet results came with pregnant adult monkeys. The adult monkey, he said, developed the disease 1½ years after the human leukemic material was introduced.

The Southwest Foundation is supported by federal contracts from the Special Virus Cancer Program of the U.S. National Cancer Institute, at the National Institutes of Health at Bethesda, Md.

The conference was sponsored by the Institute and the Leukemia Society of America, Inc., a volunteer organization.

1969-09-26-asbury-park-press-nj-pg-19-clip-cancer-research

[HN00UF][GDrive]

1969 (Oct 22)

Full newspaper page - [HN00UG][GDrive]

Russians' cancer research may help leukemia patients

WASHINGTON — A Soviet cancer specialist has reported that baboons inoculated with material from human leukemia patients have developed a leukemia-like disease.

The research has caused excitement among American cancer specialists who have been trying to accomplish the same thing for years.

The New York Times
News Service 1969

The contents of the Russian research report were made known in Washington by spokesmen for the National Cancer Institute.

The Soviet scientist has been offered laboratory space in this country for experiments designed to confirm the Russian work. The objective of the research is to prove what many scientists suspect—that viruses are among the causes of human cancer. Proof of this would have profound effects on cancer research and, probably, on cancer prevention and treatment.

Leukemia, a form of cancer affecting the blood and blood-forming organs, is one of the prime suspects in the search for virus-caused human cancers. Natural leukemias in several animal species are known to be caused by viruses.

A major tactic in the search for proof has been attempts to produce leukemia in animals which were inoculated with cell-free material from human leukemia patients. Monkeys and baboons have been given special emphasis because of their close genetic relationship to man.

If human cancer viruses do exist they might cause the disease in monkeys or baboons.

In this country, several thousands of the animals have been inoculated with cell-free material from human cancers during the past several years, but no cases of leukemia have ever been found. In most of the American experiments newborn monkeys were used, while the Russian scientists used adult pregnant female baboons.

The scientists do not claim that the disease that has appeared in a few of the animals is leukemia. For the present, they call it a "leukemia-like" disease. Like human leukemia it is characterized by enlarged spleen and lymph nodes and small hemorrhages into the skin. The scientists also saw changes in the animals' blood and bone marrow resembling the effects of leukemia in man.

The Russion scientists also have reported finding particles in the animals' blood resembling a type of virus called C type virus which is among the prime suspects in human leukemia.

The Soviet report was made at the fourth international symposium on comparative leukemia research in Cherry Hill, N.J. It is sponsored by the special virus cancer program of the National Cancer Institute, Bethesda, Md., and by the Leukemia Society of America, Inc. The report was given by Dr. Boris Lapin of the Institute of Experimental Pathology and Therapy of the U.S.S.R. Academy of Medical Science. The author of the report was Dr. L. A. Yakovleva of the same institute.

Dr. S. S. Kalter of the Southwest Foundation for Research in Education, San Antonio, formally offered use of laboratories there to Lapin for experiments to confirm the results of the Russian research. The foundation is a contractor in the U.S. virus-cancer program. The National Cancer Institute described Lapin as an eminent virus specialist.

The report from the Soviet Union indicated that it took about 1½ years for classic leukemia-like symptoms to appear in three pregnant female baboons. The scientists had not been primarily interested in the mothers, but in their babies.

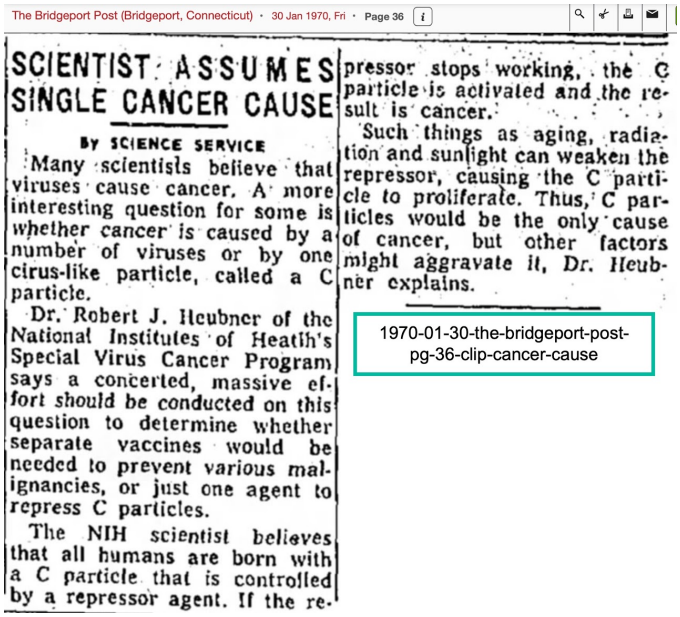
After the females were placed in a laboratory enclosure they developed the symptoms. Then other pregnant females not originally exposed to the human material developed the same symptoms. No theory was offered to explain why the effect should be produced in pregnant females while it failed to appear in other adults and newborns.

1969-10-22-the-leader-post-regina-saskatchewan-pg-19-clip-cancer-research

[HN00UH][GDrive]

1970 (Jan 30)

Full newspaper page - [HN00UI][GDrive]



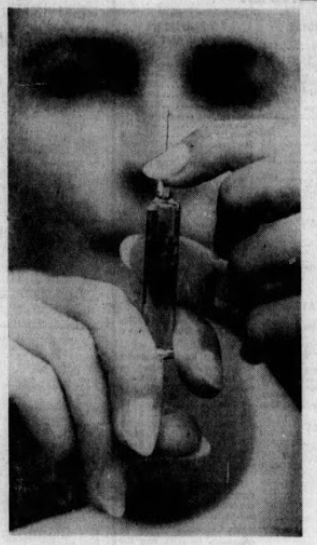
[HN00UJ][GDrive]

1970 (Feb 07)

Full newspaper page - [HN00UK][GDrive]

A Cancer Vaccine By 1973?

EXAMINER Showcase



HUMAN cancer cells are grown in rows of flasks at the Maywood N. J. laboratory of Charles Pfizer & Co. From these cells, researchers have isolated viruses they suspect can cause cancer.

By Edward Edelson

SCIENTISTS may be on the verge of attaining control of cancer.

It could take the form of vaccines to prevent specific malignant diseases, such as leukemia and cervical cancer. The first steps toward an experimental vaccine are being taken, and human testing on a small scale could start as early as 1973.

Or cancer control could come from a single injection designed to prevent all forms of the disease.

The key to both possibilities is the link between viruses and human cancer. Little more than five years ago, the evidence became so convincing that the federal government launched a two-stage research program; its aim was to prove whether viruses do cause human cancer, and if this was proved, then to do something about it.

This Special Virus Cancer Program is being handled in much the same way as the project that, in less than a decade, enabled the United States to land men on the moon.

Instead of testing one component at a time, Project Apollo engineers saved years by testing them all together in a single rocket launch.

IN THE SAME WAY, the virus cancer program is proceeding on a dozen different fronts at once—and if one approach begins to show promise, resources are shifted into it from less hopeful areas.

By this technique, program officials say they've achieved in two years what might have taken 10 or 15. Most scientists are convinced viruses do cause at least some human cancers. And effective ways to stop these viruses are within sight.

Right now, all that can be done about cancer is to find it as soon as possible and treat it with drugs, radiation, and surgery. Early detection has paid large dividends. In the 1940s, only one cancer patient in five lived five years or more after diagnosis. Today, one in three survives for at least five years.

But there is a narrow limit to what can be done after cancer strikes, and it appears that we are now close to the wall. The cancer survival rate, after moving up steadily for two decades, has not changed since 1956. The new frontier in research is prevention, not treatment.

After a long, slow start, the push toward prevention is now in high gear. One thing that held it back so long was the difficulty in determining the cause of cancer — or rather, in wading through a confusing abundance of suspected causes.

Radiation, sunlight, dyes, any number of chemicals — dozens in cigarette smoke alone — have been shown to cause cancer in humans or animals.

And then there are the viruses. These exceedingly small particles, which straddle the border between living and nonliving things, are actually parasites. They can reproduce only in living tissue, and are found in almost every living being, plant and animal.

For a long time, there seemed to be no reason for suspecting them as a cause of cancer.

FOR MANY REASONS scientists rejected the idea of a cancer-virus link even when suspicious evidence did appear.

In 1911, Dr. Francis Peyton Rous of the Rockefeller Institute reported he had transmitted cancer from one chicken to another by injection. The key had to be a virus, because the fluid he injected had been strained so everything larger than a virus had been removed.

Yet Dr. Rous' report was greeted with hostile silence. Physicians then were convinced a cancer was not contagious, and were simply not persauded Dr. Rous' findings were significant enough to divert research from its traditional channels.

Eventually, Dr. Rous was to get the Nobel Prize for his work — but not until 1966.

In the years between, scientists began finding literally dozens of cases of virus-caused cancer in animals. Viruses were isolated from diseased animals, grown in the laboratory, and injected into other animals to produce cancer.

Viruses were shown to be responsible not only for "solid" tumors but also for leukemias — the uncontrollable fatal disorders of the white blood cells — in rats, rabbits, frogs, hamsters and other species.

But for years, scientists could not detect any cancer-type viruses in human cancer patients.

Some researchers began to speculate that if viruses caused cancer, they must do it in hit-and-run fashion, so that by the time a person had cancer and someone tried to find the virus, it had done its work and fled.

Others believed failure to find viruses was imperfect detection methods. Finally, in 1957, Dr. Leon Dmochowski of the University of Texas M. D. Anderson Hospital and Tumor Institute at Houston turned his powerful electron microscope on the tissue of human leukemia patients—and found virus-like particles.

This became an important turning point; evidence implicating viruses in human leukemia piled up. By 1964 the National Cancer Institute became so convinced it asked Congress for a special research appropriation. It got $10 million for the first year and the Special Virus Cancer Program was under way.

It's now a major international effort.

Time (even in terms of hours) is of the essence, Dr. Frank J. Rauscher Jr. who heads the program, says.

ONE EVENING recently, scientists at the Maywood, N.J., laboratory of Chas. Pfizer & Co., received a call from a Salt Lake City physician who is cooperating in the work.

The physician had diagnosed leukemia in one of his patients and was about to start drug treatment. For cancer virus research, it is important to get cells from the patient before he gets any drugs. So by 5 a.m. the next day, a Pfizer representative was on his way to Salt Lake City for the samples.

Vaccine researchers are concentrating on three viruses as the source of potential vaccines. No one knows how many viruses there are. For instance, more than 100 are known to be involved in the common cold alone. Quite a few viruses are known to be associated with animal cancers; three are suspect in human cancers. But the three viruses on which the vaccine research is now focused have one important thing in common; they have actually been found in human cancer tissue or in the blood of large numbers of people with cancer.

THE FIRST of the three is called the Epstein-Barr virus after the two scientist who discovered it. It apparently causes a peculiar tumorous disease that accounts for half the cancer deaths among African children.

Scientists are also fairly sure the Epstein-Barr Virus (EBV) also is the cause of infectious mononucleosis.

"Mono" is a distressing — but definitely noncancerous — disease in which the white blood cell count increases slightly and briefly. Otherwise, mononucleosis and cancer are unrelated.

The EBV is now the prime candidate for a cancer vaccine. Researchers are working on ways to produce a killed-virus vaccine, similar to the Salk polio vaccine. The virus for such vaccines is killed so it doesn't infect anybody. But the dead virus still retains the ability to awaken the body's defenses and trigger the production of antibodies, which fight off live viruses if the vaccinated person is exposed to them.

The second virus involved in cancer vaccine research is called herpes type 2. This virus (and the EBV) happen to resemble the herpes-viruses, which cause cold sores, shingles, skin eruptions, and a variety of noncancerous illnesses.

Herpes type 2 has been found in a high percentage of women with cervical cancer.

The third virus is quite different from the first two. It's "the C particle," and it's a virus-like organism.

The C particle doesn't act like an ordinary virus, which usually invades a cell, takes over the cell's production facilities in order to make more viruses, then bursts and spills out its offspring viruses when the cell's manufacturing capacity is exhausted.

Instead, the C particle often enters a cell and disappears. And it spreads in an unusual way. Most viruses move horizontally from person to person, by coughs, sneezes, or in water and food.

The C particle appears to travel vertically, from mother to unborn child. The particle has been found to cause a number of different kinds of cancers in animals, and recently investigators have found human cancer cells with C virus in them.

SOME EXPERTS believe the C particle holds the ultimate answer to preventing all forms of cancer. One of the leading supporters of tihs view is Dr. Robert J. Huebner, who heads the solid tumor section of the government's Special Virus Cancer Program.

Dr. Huebner believes all animals and humans are born with the C particle. Ordinarily it doesn't do anything and something keeps the lid on. But this "repressor," as it is called, sometimes stops working, and the C virus becomes active. The result is cancer.

Dr. Huebner points out that cancer is primarily a disease of old age. Apparently, the repressor wears down or somehow stops doing its job as the years go by.

Scientists debate whether an ordinary type of vaccine would work if the C particle is at the root of all cancers. Dr. Huebner says if people are born with a C particle, they must be born with some tolerance to it and would reject the vaccine. Instead, he would like to start a program to find out what represses the C particle. Then an injection of the repressor could be used to control cancer.

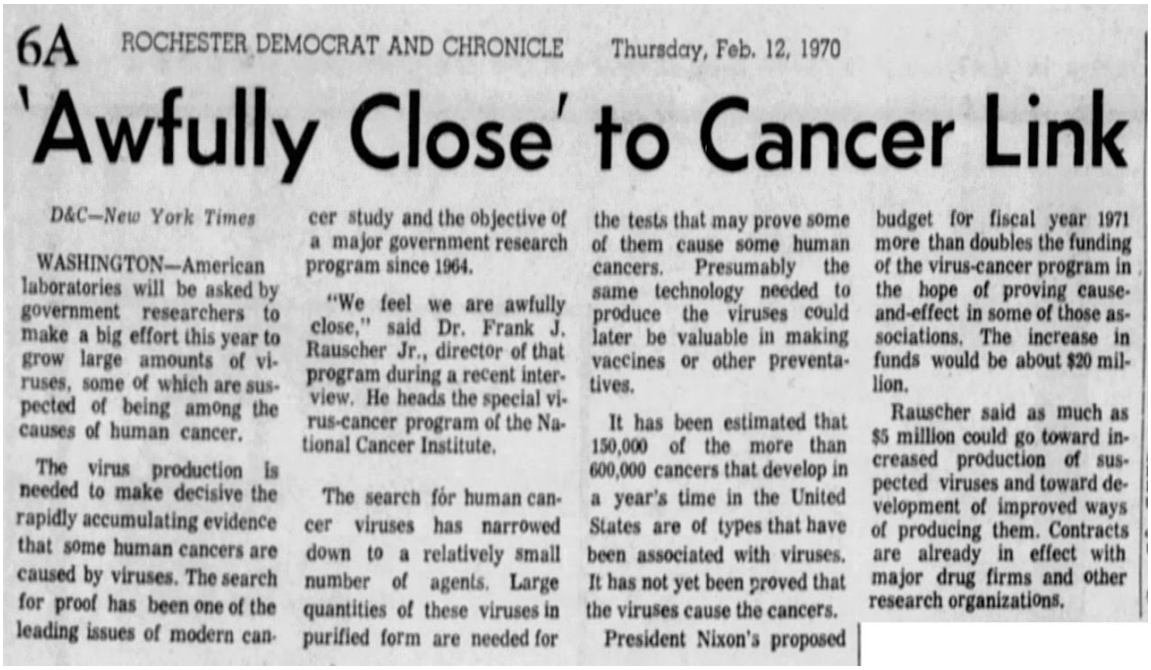
"I feel we should do a moon-shot kind of effort on this to see if we're right," Huebner says.

—Reprinted from Family Health Magazine

[HN00UL][GDrive]

1970 (Feb 12)

Full newspaper page - [HN00UM][GDrive]



6A ROCHESTER DEMOCRAT AND CHRONICLE Thursday, Feb. 12, 1970

'Awfully Close' to Cancer Link

D&C—New York Times

WASHINGTON—American laboratories will be asked by government researchers to make a big effort this year to grow large amounts of viruses, some of which are suspected of being among the causes of human cancer.

The virus production is needed to make decisive the rapidly accumulating evidence that some human cancers are caused by viruses. The search for proof has been one of the leading issues of modern cancer study and the objective of a major government research program since 1964.

"We feel we are awfully close," said Dr. Frank J. Rauscher Jr., director of that program during a recent interview. He heads the special virus-cancer program of the National Cancer Institute.

The search for human cancer viruses has narrowed down to a relatively small number of agents. Large quantities of these viruses in purified form are needed for the tests that may prove some of them cause some human cancers. Presumably the same technology needed to produce the viruses could later be valuable in making vaccines or other preventatives.

It has been estimated that 150,000 of the more than 600,000 cancers that develop in a year's time in the United States are of types that have been associated with viruses. It has not yet been proved that the viruses cause the cancers.

President Nixon's proposed budget for fiscal year 1971 more than doubles the funding of the virus-cancer program in the hope of proving cause-and-effect in some of those associations. The increase in funds would be about $20 million.

Rauscher said as much as $5 million could go toward increased production of suspected viruses and toward development of improved ways of producing them. Contracts are already in effect with major drug firms and other research organizations.

[HN00UN][GDrive]

1970 (March 11)

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1970 (March 23)

https://www.newspapers.com/image/224285133/?terms=%22special%2Bvirus%2Bcancer%2Bprogram%22

1970 (March 26)

Full newspaper page - [HN00W0][GDrive] [HN00W1][GDrive]

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1970 (April 27)

Full newspaper page - [HN00W4][GDrive]

Science Report

Current Decade Called Crucial In Cancer War

1970-04-27-intelligencer-journal-lancaster-pa-pg-10-clip-cancer-war

By WILLIAM HINES

WASHINGTON — A recent speech by Dr. Jonathan E. Rhoads, president of the American Cancer Society, points up the progress made by medicine in this century — and also the progress still waiting to be made.

Speaking at a meeting of science journalists, Rhoads predicted that "the decade of the '70s will be as crucial in the war against cancer as were the 1880s and '90s with regard to infectious disease."

Hines

This sent some history-conscious reporters scurrying to the record books, where, among other nuggets of information, these were uncovered:

At the turn of the century, according to official U.S. Government vital statistics, the three top killer diseases were tuberculosis, pneumonia and diarrhea. Today these are far down the list of death causes and have been replaced at the top by heart disease, cancer and stroke, in that order.

TB, which in 1900 took 1,944 lives in every 1,000,000 population, now claims fewer than 40 victims per million. Pneumonia's death rate per million has fallen from 1,526 to 310, while diarrhea and enteritis have declined from 1,399 to 16.

As Rhoads indicated, the causes of most of the germ-caused infectious diseases were discovered in the last 20 years of the 19th Century (viruses came later), and vaccines and antitoxins came along soon afterward.

The history books show that typhoid's germ was isolated in 1880, TB's in 1882, diphtheria's in '83 and so on until by 1900, when the agent of dysentery was found, most of the really lethal microbes in the environment had been identified.

While vaccines and the like certainly helped to eliminate such scourges as diphtheria and scarlet fever, advances in public health were at least equally responsible. Public sanitation is incomparably better now than it was in great-grandmother's day.

Cancer-fighters think they may be close to a breakthrough now especially in some forms of this ailment which apparently are caused by viruses. A special virus cancer program at the National Institutes of Health in Bethesda, Md., is one of the few research efforts that has received increased funds in the federal budget for fiscal 1971.

In the old days, it often took a long time between discovery of cause and elimination of a disease. In the case of "childbed fever," 45 years elapsed from the time the Hungarian, Ignaz Semmelweis, identified this killer of new mothers as a form of blood poisoning and the isolation of the responsible germ.

Rhoads said breakthroughs can be exploited much more rapidly now than in the 19th Century, because then "we did not have computers, ultracentrifuges, supervoltage X-ray, molecular or genetic manipulation or other highly sophisticated devices." All these can now be brought to bear when it counts when promising research results are reported.

* * *

ADDITIONAL CANCER FACTS — In 1900 cancer took only 640 lives per million population. Today it takes 1600. Scientists believe a large part of this increase is due to the fact that people escape early death from infectious disease and live long enough now to catch the so-called "degenerative" diseases that top the killer list.

But there is also evidence that pollution of our environment may cause cancer, or speed up the cancer-producing processes of life. Despite whatever the tobacco industry may say, most scientists are now convinced that cigarette smoking causes lung cancer, and the cancer-causing properties of atomic radiaton are beyond dispute.

Although cancers strike virtually all vertebrate animals, tumors of the digestive tract are much more common in human beings than in lower species. Some scientists believe the fact that man is the only animal who cooks his food may have something to do with this.

[HN00W5][GDrive]

1970 (June 26)

Full newspaper page - [HN00W2][GDrive]

Scientists Believe

Breast Cancer Virus Is Photographed

By JUDITH RANDAL

WASHINGTON — Increasingly convinced that a virus plays a role in human breast cancer, scientists think they have identified the villain and — using an electron microscope with a camera attachment — have taken its photograph.

What the scientists find particularly exciting is that the particle is virtually a dead ringer for a virus discovered by a scientist named John Bittner in 1934 and known to cause breast cancer in mice.

Since a great deal is known about the Bittner agent, the behavior of what is apparently its human counterpart may perhaps be quickly understood. Breast cancer is a leading killer of American women — 30,000 die of it each year in the United States — and it is not unknown in men.

AT A BRIEFING here in conjunction with a meeting of the Tissue Culture Association, Dr. George Todaro said that his colleague at the National Cancer Institute, Dr. Victor Zeve, has found the virus particle in test-tube-grown cells that were derived from the tumor of a woman who died of breast cancer at the Roswell Park Memorial Institute in Buffalo, N.Y. Dr. Stuart Aaronson, also at the National Cancer Institute, also participated in the work.

Quite independently, Todaro said, Dr. Dan H. Moore, at the Institute for Cancer Research in Camden, N.J., has found a few of the particles in another line of breast cancer cells obtained from a patient at the University of Pennsylvania School of Medicine hospital in Philadelphia and kept going in the laboratory.

Todaro, Zeve, Aaronson, Moore and other scientists frequently exchange information and ideas as participants in the National Cancer Institute's Special Virus Cancer Program, which organizes the research of its contractors and grant-recipients so that appropriate techniques are ready whenever a new link between virusts and human cancers turns up.

THIS IS particularly relevant in the case of what they believe is the newly discovered cancer virus, because similar particles have been found by Dr. William Feller of Georgetown University here in milk samples of women who have had one breast removed and then had a child and, in one instance, in the milk of a woman whose mother died of the disease.

More recently, Moore has found the particles in the milk samples of 6 of 90 healthy American women with no family history of brease cancer, 4 of 9 healthy women with such a history, and 9 of 24 samples obtained from healthy Parsi women in India and flown to this country for analysis.

Parsi women were chosen for the study because the sect has been inbred since the 8th century and breast cancer comprises 49 per cent of all female cancers in this ethnic group, Moore said in a telephone interview.

Furthermore, although the particles seen by Feller only resemble viruses known to cause cancer in animals, all those from women studied in New Jersey apparently are identical with those ferreted out in human breast cancer cell lines by the electron microscope, he said.

DR. DAN H. MOORE

MOORE keeps tab on those who are donors to his "milk bank" so that he can be sure to learn which, if any, of the women eventually develop breast cancer. In the meantime, however, experience with the Bittner mouse tumor virus strongly suggests that those whose milk samples now contain the virus are the most likely candidates for the disease.

The reason for this can be traced to what is known of the mouse virus. Nursing mice transmit this agent in their milk which ultimately leads to tumors in their offspring.

"There is as yet no real reason for women not to nurse their babies, but a similar mechanism in humans is a distinct possibility," Moore said.

Said another way, this means, according to current theory, that some of the genetic material of which the virus is composed is taken into the genetic material of the human egg and thus gets passed along from one generation to the next at the moment of conception. A mother whose genes are thus "contaminated" could transmit the virus in her milk so that her child at some time in its life — typically after 40 — would be particularly susceptible to the disease.

AN ORDINARY vaccine, designed as it is to prevent virus infection between one person and another, would of course be powerless against this process of "vertical transmission."

The Special Virus Cancer Program has foreseen this possibility and has commissioned a number of scientists to work out alternatives to immunization.

Perhaps the best known of these researchers is Dr. Sol Spiegelman of the Columbia-Presbyterian Medical Center in New York. Working with RNA viruses — those with a core of ribonucleic acid containing their genetic information and an outer protein jacket — Spiegelman has been able to reduce particles containing 330,000 units of hereditary information to a shadow of their former selves.

THESE abbreviated viruses are capable of successfully competing against their larger and more lethal counterparts, but incapable of causing disease. To date, he has experimented only with viruses that infect bacteria, but hopes are bright that the principle also will be applicable to man.

Since the Bittner virus and the virus found by Moore and Zeve are also RNA viruses — although of a slightly different type — the day may come when every baby, by being exposed to a "mini-virus" before birth, will have no need to fear breast cancer when he or she grows up.

1970-06-26-courier-post-camden-nj-pg-13-clip-breast-cancer

[HN00W3][GDrive]

1970 (August 19)

Full newspaper page - [HN00W0][GDrive]

Scientists on Trail of Cancer's Cause Seeking Proof in Virus Crop

By HAROLD M. SCHMECK Jr.
© 1970 New York Times News Service

WASHINGTON — American laboratories will be asked to make a big effort this year to grow large amounts of viruses in the hope of clinching the rapidly accumulating evidence that some human cancers are caused by viruses.

The search for proof has been one of the chief issues of modern cancer study and the objective of a major government research program since 1964.

"We feel we are awfully close," Dr. Frank J. Rauscher Jr., who heads the special virus cancer program of the Cancer Institute, said in a recent interview.

The search for human cancer viruses has narrowed down to a relatively small number of agents. Large quantities of the viruses in purified form are needed for the tests that may prove some of them cause some cancers.

Presumably, the same technology needed to produce the viruses could later be valuable in making vaccines or other preventives.

It has been estimated that 150,000 of the more than 600,000 human cancers that develop each year in this country are of types that have been associated with viruses. To date it has not been proved that the viruses cause the cancers.

President Nixon's proposed budget for the fiscal year 1971, beginning next July 1, more than doubles the funding of the cancer virus program in the hope of proving cause and effect in some of those associations. The increase in funds would be about $20 million.

Rauscher said that as much as $5 million of that could go toward increased production of suspect viruses and toward development of improved ways of producing them. Contracts are already in effect with major drug companies and other research organizations.

Significant Research

Several recent developments in research were cited by Rauscher as "profoundly important."

Among these was an achievement by Dr. Lloyd J. Old of the Sloan-Kettering Institute for Cancer Research in New York. He and his colleagues succeeded in growing human breast cancer tissues in the laboratory and have found in these growths particles that look like virus particles found in some animal breast cancers.

Systematic studies by Georgetown University and Charles Pfizer & Co., Inc., have been finding small viruslike particles in the milk of women who have breast cancer. Similar particles have been found with less frequency in the milk of women who do not have the disease.

These findings do not prove the cancers are caused by viruses, although the tendency toward breast cancer in some ani- Among their close relatives and close family contacts, 90 per cent had antibodies against those antigens, something much less common in the general population.

The evidence suggests that something transmissible, such as a virus, is involved in the disease. A key characteristic of animal cancer viruses is their ability to make the cells they invade start producing abnormal cellular antigens that are common from case to case, provided the virus is the same.

In New York, Dr. Old has been able to grow human sarcoma cells in tissue culture and has found the same characteristic antigens in them and in a wide variety of human sarcoma specimens.

Some of the new money is expected to go into studies of more sarcoma patients and more research on sarcoma tissue. It is expected that as many as 30 to 40 different sarcoma tissue cultures will be established within the next six months.

So far, the strongest and most suggestive association between human viruses and cancer appears to be that found in a type of cancer called Burkitt's lymphoma, which is common in some parts of Africa.

Insect Suspected

The geographical distribution of this disease has long suggested to doctors the possibility that it is caused by some transmissible agent carried by an insect. A virus usually called EBV has been found in close and almost invariable association with this disease.

This virus is similar to, although not identical with, previously known viruses of a group called herpes that commonly infect man. Herpes simplex virus, for example, is the agent present in common cold sores.

The EBV virus also appears to be closely associated with a cancer called nasopharyngeal carcinoma, common in some parts of Asia but relatively uncommon in the United States.

The same virus also now appears to be a major cause of infectious mononucleosis. Some doctors have said this noncancerous illness seems to act as though it were like leukemia that proved abortive and did not develop completely.

1970-08-29-the-berkshire-eagle-pg-15-clip-cancer-virus

[HN00W1][GDrive]

1970 (Oct 25)

Full newspaper page - [HN00UO][GDrive]

TODAY IN SCIENCE

Virus, Enzymes Among Subjects In Cancer Study

By LEILA HOLMES

We saw the landing of a man on the moon before 1970. Shall we see the cure for cancer before 1980?

By the late 1960s, the resolution for the moon landing was firm. The technology had been perfected, the achievement had been set as a national goal, and the only remaining question for scientists was "when?"

Dramatic promises for the answer to preventing cancer at a scheduled time are not being made.

Leila Holmes

Neither is a one-track national cancer goal being set, for there are so many avenues of cancer research, any one of which suddenly could lead to the solution.

It is true that early detection of cancer and its treatment by drugs, radiation, and surgery have improved and paid off in the last 20 years. In the 1940s only one out of five cancer patients lived for more than five years after diagnosis. Today, one in three passes the five-year mark.

RESEARCHERS across the country, including investigators in many departments at the Indiana University School of Medicine, are studying cancer from every angle.

Science so far has been able to cure most skin cancers to slow down the progress of the disease by improved treatment, and to urge prevention of more lung cancer by stopping cigarette smoking. This is only a drop in the bucket compared to the entire cancer question.

The chief research focus, whether studying individual cells or entire organ systems, is on prevention, not treatment. Development of vaccines to prevent specific types of cancer, such as leukemia or cancer of the cervix, would be sensational, and appear faintly on the horizon as real possibilities.

An even more remote, but not entirely unreasonable hope could be for a single injection which might prevent all forms of cancer.

The key to a vaccine becoming a reality could lie in the link between viruses and human cancer. Evidence of this linkage became so convicning five years ago that the Federal government launched a special virus cancer program, which now is proceeding on a broad front.

The National Committee of Consultants to Conquer Cancer, a recently established body of 26 members consisting of both scientists and laymen, is observing the cancer research picture closely.

AS ONE AREA of research shows great promise, this committee quickly shifts resources to that project and awaay from less hopeful ones. The virus area is one of the more promising ones just now.

While no infectious virus has been consistently isolated from human malignant tumors, several types of viruses have been found in human cancer tissue or in the blood of cancer patients.

Other specific viruses might be found if techniques are refined for isolation of viruses, which may be defective in nature and require "helper" substances to rescue them from tumors.

One virus apparently causes a tumorous disease, accounting for half the cancer deaths in African children, and so becomes the prime candidate for a cancer vaccine. This virus also has been found in Hodgkin's disease and a form of childhood leukemia.

IF THIS VIRUS does cause these diseases and a vaccine similar to the Salk polio vaccine can be successfully developed, the public could be immunized against the leukemias or blood cancers.

Another virus has been isolated from many women with cancer of the cervix. A vaccine for this type of cancer would represent the first preventive measure for maligant tumors.

A virus-like organism, recently seen in human cancer cells, and found to be the cause for certain animal malignancies, does not behave like an ordinary virus, and is even more intriguing to many scientists.

Instead of being transmitted from person to person, as with the common cold, or in water or air, it seems to be passed down from generation to generation.

SOME SCIENTISTS think that this virus, called "C particle," is present in all forms of animal and human life, but usually remains inactive or dormant because of a built-in repressor, an inhibiting agent.

Then, certain conditions, such as old age, radiation or chemicals, perhaps wears down the repressor, setting off the action of the virus. With nothing to stop its action, the virus then causes cell growth to go wild, producing cancer in all of its forms. If the repressor of the "C particle" could be determined, these scientists believe that cancer could be knocked out by an injection of repressor.

Biochemists believe that enzymes, small protein chemicals which reside within the body to regulate all of its chemical reactions, could be faulty or even missing in persons who develop cancer.

So researchers are probing enzyme systems to see if and how they could be related, then controlled to balance the chemistry of the body and stop the rampant growth of cancer cells. Enzyme deficiencies couuld be inherited, so family patterns are being followed by other groups.

An international symposium on enzyme regulation in normal tissues and in cancer, originated by Dr. George Weber, professor of pharmacology at the Indiana-Purdue University School of Medicine, met early this month on the medical center campus for its ninth consecutive annual meeting.

THE ROLE of hormones which are secreted by the endocrine glands, in speeding or slowing the growth of cancer are under scrutiny, too. At Sloan-Kettering Institute for cancer research and other research centers, hormones are being broken down into their small chemical components to provide information which could be useful in better understanding cancer.

Too, instead of removing the entire pituitary gland, which is responsible among other functions for growth, scientists at Sloan-Kettering, soon hope to be able to halt cancer by removing only the growth-promoting factor of the gland.

Thus, by leaving most of the gland intact, a better balance of glandular function will be maintained, and still the growth of the cancer stopped.

CELL BIOLOGISTS are looking at cell surfaces to see why cancer cells differ from normal ones and why they lose the ability to recognize overcrowding, and continue piling up on top of each other.

Enormous strides have been made in studying immune reactions, and how antibodies are formed to resist a foreign substance, perhaps even a wild cancer cell.

These are only a few of the many areas of cancer research, for which funds are needed. Even if research appropriations were unlimited, no one could promise that a cure would be achieved within five years. Yet, who knows? The cure could come tomorrow.

[HN00UP][GDrive]

1970 (Dec 29)

https://www.newspapers.com/image/225582453/?terms=%22special%2Bvirus%2Bcancer%2Bprogram%22

1971 (Jan 10)

Full newspaper page - [HN00UQ][GDrive]

—'Rifampicin' May Have Cancer-Curbing Potential—

New Anti-Cancer Derivatives Being Tested in U.S.

By JUDITH RANDAL
Of the Washington Star

WASHINGTON — The National Cancer Institute is undertaking a crash program of drug testing that may enable it to close the gap between new research findings and dramatically better treatment for some forms of cancer in as little as a year.

At the same time, the work promises to advance the understanding of the fundamental nature of certain human malignancies, particularly the leukemias and cancers of the breast and bone. All of these have been linked to the same family of viruses, although no cause and effect relationship has been proved. Together, these disorders make up a significant portion of the annual cancer toll which is second only to heart disease as the nation's leading killer.

The drugs in the testing program are derivatives of an antibiotic called rifampicin which is made by the Italian drug firm Lepetit S.P.A. in Milan. The firm is making some 400 of these derivatives available to the NCI which is assigning the testing task in part to its own laboratories in Bethesda and its grantees at medical schools around the county and in part to scientists under contract to the institute's coordinating arm, the Special Virus Cancer Program (SVCP).

After preliminary screening of the compounds for their anti-cancer activity with test-tube samples taken from human tumors, the most promising of the lot will be subjected to animal tests. Then, if further scrutiny still shows them to be suitable, they will be given to patients on a trial basis.

The sudden focus on antibiotics for their cancer curbing potential is itself a dramatic example of how swiftly science can capitalize on new knowledge if the tools and resources are at hand.

Versions of rifampicin have been tested for some time against tuberculosis and several other bacterial infections, but as recently as three months ago few scientists had thought of them in connection with malignant disease.

The way was cleared for the new approach last spring when two biologists — Howard Temin of the University of Wisconsin and David Baltimore of the Massachusetts Institute of Technology — discovered independently since the tumor viruses known to cause cancers in animals behave in an unorthodox way.

Viruses are cores of genes clad in protein jackets. In a sense they are parasites for it is only when — having shed their protein jackets — they invade the nucleus of an intact cell to co-opt its genetic machinery that they can reproduce.

Once stripped for action, the ordinary virus gets a grip on the cell's DNA - deoxyribonucleic acid — the chemicals of wich its genes are made. The DNA then obediently turns out RNA — ribonucleic acid — and then proteins which are made to the specifications of the virus, enabling it to copy itself.

The tumor viruses studied by Temin and Baltimore, however, reverse this sequence of events. In the cells they invade, RNA makes DNA instead of vice-versa, and the DNA thus becomes the viral RNA's slave.

This is not altogether surprising since the tumor viruses themselves contain mostly RNA. Indeed, Temin predicted they would be found to have this talent in 1964. But the finding, which has since been confirmed by other laboratories, has caused a ferment in scientific circles.

There is a two-fold reason for this:

1. Temin and Baltimore found that animal cells infected by RNA tumor virus have a chemical catalyst or enzyme called "RNA-dependent DNA polymerase" which is not found in other cells.

2. Dr. Sol Spiegelman of the Frances Delaifield Hospital in New York, a star of the Special Cancer Virus program, and Dr. Robert C. Gallo and his colleagues at the National Cancer Institute recently discovered a similar enzyme in the tissues of leukemic patients, but have not been able to detect it in normal individuals despite intensive search.

Indeed, Spiegelman, after studying 120 patients, has learned that the enzyme disappears when the disease is in remission and becomes more and more plentiful when it becomes worse making its presence of absence a useful diagnostic tool in monitoring the effectiveness of therapy.

Furthermore — and this is where the rifampicin derivatives come in — Dr. Maurice Green of the St. Louis University School of Medicine, another SVCP participant, found in October that certain versions of the antibiotic block the activity of the enzyme in cancerous animal cells. From this came the current crash program to discover whether some of the compounds may exert a similar influence on human cancer cells and perhaps restore their behavior to normal.

The several forms of leukemia are, of course, the obvious candidates for such a strategy but Dr. Frank Rauscher, SVCP director, says he and his colleagues have no intention of letting it go there. "Collaborative efforts have accomplished in six months what would ordinarily take years," he says. "Why should we stop now?"

In animals, the leukemias are in general, associated with a class of viruses known as "C-type particles." The logical place to look, therefore, for other kinds of human cancer that might be suceptible to rifampicin derivatives is in tissue from the kinds of cancer in which these particles have been found.

The theory is that, like tissues from leukemia patients, these tissues should contain the telltale enzyme. So far the thinking has proved sound. In rapid succession, scientists have found the enzyme in conjunction with:

1. Sarcomas or malignant tumors of the bone and connective tissue.

2. Burkitt's lymphoma, a cancer of the jaw prevalent in Africa, but not unknown elsewhere.

3. Breast cancer, which, as the cause of 30,000 deaths a year, is the leading cancer killer of American women and also kills some men.

In some cases, admittedly, the evidence is not as airtight as in others. Scientists are convinced when they find the enzyme in tissue samples taken directly from cancer patients. But they feel on less firm ground when the samples used — while derived from human tumors — have been grown in test-tubes over long periods of time.

"There's always the danger that the enzyme is a contaminant when you're working with these cell lines," says Spiegelman. "This is the reason that the findings on breast cancer and Burkitt's lymphoma must be regarded as preliminary until further tests have been done."

Still Speigelman and other scientists connected with the project are confident that it will pay off.

The rifampicin derivatives, Spiegelman concedes, may prove too toxic to give to people in large doses, particularly those who are as sick as cancer patients often are. But this, he says, is no cause for gloom.

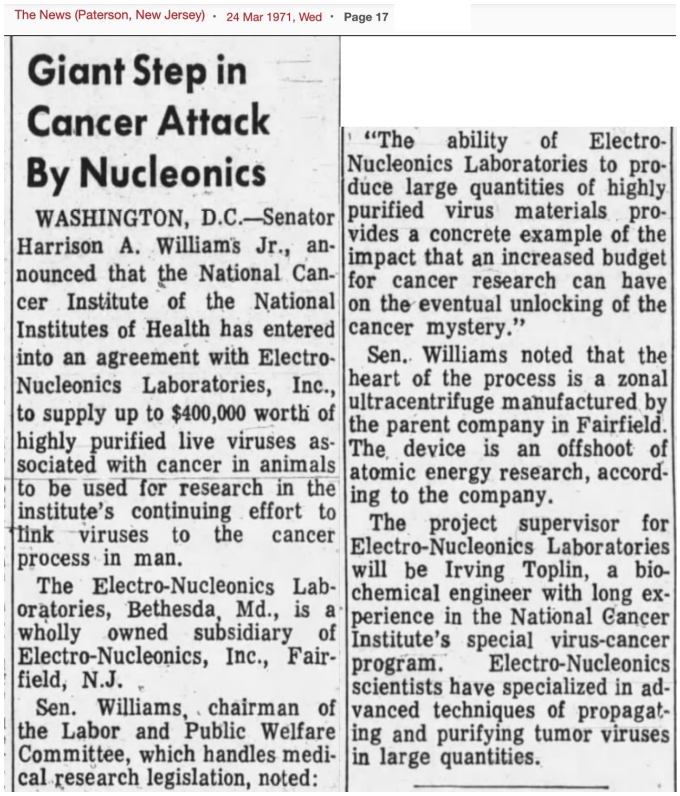
"Once we purify the enzyme," he says, "and learn enough about its structure, it should be relatively easy to design better drugs than those now available. We're not home yet, but we now have a handle on the problem we can use as a target, and this is something we have never had before."

1971-01-10-iowa-city-press-citizen-pg-11a-clip-anti-cancer-drug

[HN00UR][GDrive]

1971 (March 24)

Full newspaper page - [HN00US][GDrive]



The News (Paterson, New Jersey) · 24 Mar 1971, Wed · Page 17

Giant Step in Cancer Attack By Nucleonics

WASHINGTON, D.C.—Senator Harrison A. Williams Jr., announced that the National Cancer Institute of the National Institutes of Health has entered into an agreement with Electro-Nucleonics Laboratories, Inc., to supply up to $400,000 worth of highly purified live viruses associated with cancer in animals to be used for research in the institute's continuing effort to link viruses to the cancer process in man.

The Electro-Nucleonics Laboratories, Bethesda, Md., is a wholly owned subsidiary of Electro-Nucleonics, Inc., Fairfield, N.J.

Sen. Williams, chairman of the Labor and Public Welfare Committee, which handles medical research legislation, noted:

"The ability of Electro-Nucleonics Laboratories to produce large quantities of highly purified virus materials provides a concrete example of the impact that an increased budget for cancer research can have on the eventual unlocking of the cancer mystery."

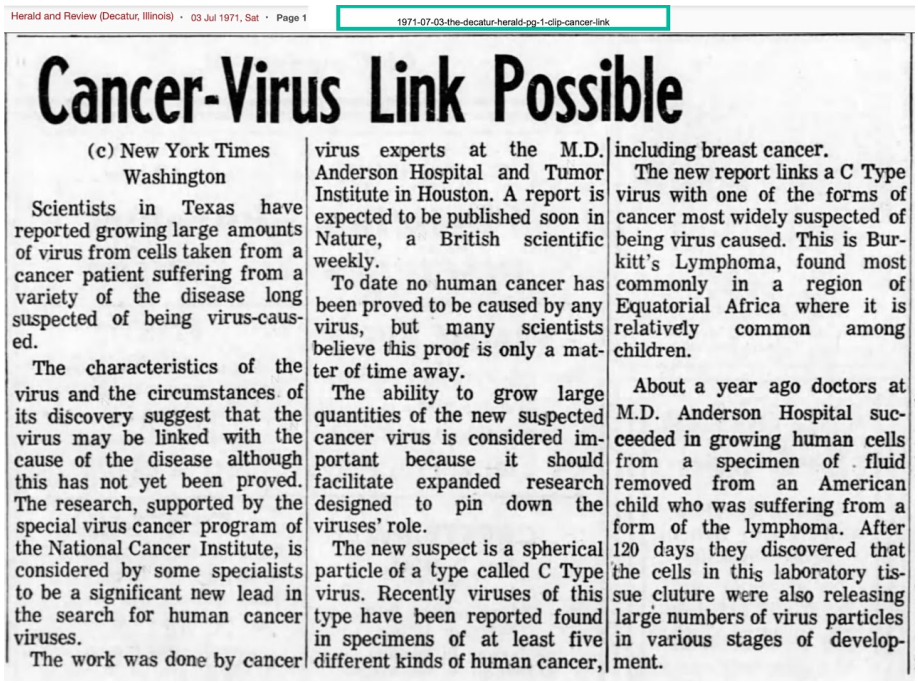
Sen. Williams noted that the heart of the process is a zonal ultracentrifuge manufactured by the parent company in Fairfield. The device is an offshoot of atomic energy research, according to the company.

The project supervisor for Electro-Nucleonics Laboratories will be Irving Toplin, a biochemical engineer with long experience in the National Cancer Institute's special virus-cancer program. Electro-Nucleonics scientists have specialized in advanced techniques of propagating and purifying tumor viruses in large quantities.

[HN00UT][GDrive]

1971 (July 03)

Full newspaper page - [HN00UU][GDrive]



Herald and Review (Decatur, Illinois) · 03 Jul 1971, Sat · Page 1

1971-07-03-the-decatur-herald-pg-1-clip-cancer-link

Cancer-Virus Link Possible

(c) New York Times
Washington

Scientists in Texas have reported growing large amounts of virus from cells taken from a cancer patient suffering from a variety of the disease long suspected of being virus-caused.

The characteristics of the virus and the circumstances of its discovery suggest that the virus may be linked with the cause of the disease although this has not yet been proved. The research, supported by the special virus cancer program of the National Cancer Institute, is considered by some specialists to be a significant new lead in the search for human cancer viruses.

The work was done by cancer virus experts at the M.D. Anderson Hospital and Tumor Institute in Houston. A report is expected to be published soon in Nature, a British scientific weekly.

To date no human cancer has been proved to be caused by any virus, but many scientists believe this proof is only a matter of time away.

The ability to grow large quantities of the new suspected cancer virus is considered important because it should facilitate expanded research designed to pin down the viruses' role.

The new suspect is a spherical particle of a type called C Type virus. Recently viruses of this type have been reported found in specimens of at least five different kinds of human cancer, including breast cancer.

The new report links a C Type virus with one of the forms of cancer most widely suspected of being virus caused. This is Burkitt's Lymphoma, found most commonly in a region of Equatorial Africa where it is relatively common among children.

About a year ago doctors at M.D. Anderson Hospital succeeded in growing human cells from a specimen of fluid removed from an American child who was suffering from a form of the lymphoma. After 120 days they discovered that the cells in this laboratory tissue cluture were also releasing large numbers of virus particles in various stages of development.

[HN00UV][GDrive]

1971 (July 11)

Full newspaper page - [HN00UW][GDrive]

Letters & Science

MEDICINE

Cancer Breakthrough?

Suspicion, as any detective knew, was one thing, but proof quite another — and much harder to assemble.

For years, biochemical researchers had suspected viruses as being cancer-causing agents. But viruses were ubiquitous in the tissues of men and animals, and the fact that any virus was directly linked to the cause of cancer in man had been extremely difficult to prove. Such links had been established with numerous cancers in animals. Yet the long-awaited proof that human cancers might also be virus-caused had remained elusive.

Human Virus

One obvious reason was the impossibility of injecting suspected cancer viruses into a human subject to see if they produced a tumor. Injecting such a suspected human cancer virus into any other species did not prove the point, since some viruses capable of causing cancer in one animal species under the right circumstances failed to do so in another species.

The complexities of the research were further compounded by the fact that some animal cancer viruses would appear in their recognizable mature form only when another type of virus was present. These were designated "helper" viruses because of their ability to assist the cancer viruses achieve mature form.

Burkitt's Lymphoma

Last week, however, a breakthrough on the path to proof was announced by researchers in Texas. A team of virus experts at the M.D. Anderson Hospital and Tumor Institute in Houston reported growing large amounts of virus from cells taken from a patient with Burkitt's lymphoma — a variety of the disease long suspected of being virus-caused.

About a year ago, doctors at the Anderson Hospital succeeded in growing human cells from a specimen of fluid removed from an American child who was suffering from a form of the lymphoma. After 120 days they discovered that the cells in this laboratory tissue culture also were releasing large numbers of virus particles in various stages of development.

The quantities were so copious that at least one virus particle was found in every cell studies, and examination of these viruses appeared to rule out the possibility that they were chance contaminants.

The suspect was a spherical particle of the group called a C-type virus. Recently, viruses of this type had been reported found in specimens of at least five different kinds of human cancer — including breast cancer.

The research, attributed to Drs. Elizabeth Priori, Leon Dmochowski, Brooks Myers and J. R. Wilbur, and supported by the special virus-cancer program of the National Cancer Institute, was considered by specialists to be a significant new lead in the search for human cancer viruses.

The characteristics of the virus and the circumstances of its discovery suggested that it might be linked with the origins of the disease. Furthermore, the ability to grow large quantities of the suspected cancer virus was considered highly significant, since it should greatly facilitate expanded research designed to pin down the viruses' precise role.

AP Wirephoto

THE SCEPTRE of power for the nation's 1.1 million members of the National Education Association passed to the hands of Mrs. Catharine Barrett of Syracuse, N.Y., at the association's annual convention in Detroit last week.

ENVIRONMENT

Target: AAA

Ralph Nader, champion of consumer rights who had taken on such giants as Volkswagen and New York's First National Bank recently, moved his Raiders back into the environment picture last weekend and his targets were big again.

Nader opened an investigation of the 13-million member American Automobile Association and in a separate, personal action he appealed to the Nation's scientists to step out of the laboratories and accept social responsibility for cleaning up the country.

Nader said that the auto clubs had "a unique potential to act as consumer representatives for their members" but thus far they had aligned with the auto industry in "disdain" for automobile safety and pollution.

Conflict of Interest?

The investigation, he said, was started after "complaints from AAA members" and AAA policies which show a "potential conflict of interest . . . as a result of services they provide their membership, such as sale of insurance and auto accessories."

The investigators would try to determine who controlled AAA policies and "the potential of the auto clubs to make major contributions toward the health and safety of auto users."

Later, Nader, speaking at the Lawrence Berkeley Laboratory to physicists and graduate students, told the scientists they, too, could

AP Wirephoto

DOCTORS DMOCHOWSKI AND PRIORI
They studied a suspected cancer virus

S. F. Sunday Examiner & Chronicle

[HN00UX][GDrive]

1971 (Sep 10)

Full newspaper page - [HN00UY][GDrive]

DAILY NEWS, FRIDAY, SEPTEMBER 10, 1971

Find Fresh Clue of Viral Link to Hodgkin's Disease

By WILLIAM RICE
Science Writer of THE NEWS

Researchers at Sloan-Kettering Institute for Cancer Research have isolated two specific types of virus-like agents in the malignant cells of victims of Hodgkin's disease, a form of lymph cancer that strikes an estimated 5,000 Americans annually.

If the work announced yesterday proves out, it may represent a major step toward solving the mysteries of Hodgkin's disease and provide researchers with a tool they may use to test new drugs for combating it.

Dr. John Moloney, chairman of the National Cancer Institute's special virus-cancer program, described the work as "very exciting."

May Support Multivirus Theory

He said the findings not only would reinforce the belief that viruses and cancer are related but also could fit into the theory held by some that more than one virus may be needed in the development of some malignancies.

It does not, however, mean that a new cure is around the corner for this disease, which claims the lives of more than half its victims.

It has long been suspected that a virus may be connected with Hodgkin's disease, but proof of the relationship has eluded scientists.

Dr. F. Kingsley Sanders, virologist and a vice president at Sloan-Kettering Institute, 410 E. 68th St., said the discovery was made in tissues taken from 10 patients at Memorial Hospital for Cancer and Allied Diseases.

Using a unique metal grid to filter off toxic cells that have resisted previous attempts, Sanders and his fellow researchers were able to nurse the cells from malignant lymph tissues through up to 50 generations.

The scientists reported that the new cells produced ribonucleic acid (RNA) particles that apparently were viral in nature. They admitted, however, that they were unable to actually see a specific virus although the biochemical evidence of its existence was quite strong.

Then, Sanders and his colleagues reported, the cultures from two of the patients—an 8-year-old girl and a 52-year-old man—slowly stopped reproducing and developed signs of another virus form, later seen through an electron microscope and identified as a herpes-type virus similar to the virus that causes chicken pox and shingles.

This second virus was composed of deoxyribonucleic acid (DNA).

Both RNA and DNA are believed to contain the keys to a cell's ability to reproduce normally or to suddenly change into a rapidly producing chain of malignant cells.

Sanders, in an interview coinciding with the publication of his team's report in today's issue of Nature, the British scientific journal, carefully pointed out, however, that he was not claiming as yet that the two families of virus particles were the causes of Hodgkin's disease.

Sanders said that he now was interested in testing Hodgkin's disease victims and their relatives and contacts to see if any had developed antibodies signifying that they have been challenged by one or both of the virus types.

In June, New York State Health Department investigators claimed to have found a link among 13 cases of Hodgkin's disease victims in the Albany area and suggested for the first time that this form of cancer may be communicable.

The National Cancer Institute, however, quickly pointed out that the cluster of cases may have been the result of nothing more than chance.

Link Other Viruses to Cancer

Other viruses recently have been implicated with various forms of cancer, particularly leukemia, bone cancer, Burkitt's lymphoma and other forms of lymphoid malignancies.

While such discoveries have been hailed as the first slow steps toward the possible development of a cancer vaccine, scientists carefully warn that outside contamination of the test material always must be suspected and, even if a virus is finally proved to cause a particular cancer, it would be many years before a vaccine could be produced.

Working with Sanders were Drs. Magdalena Eisinger, Charles Young, Etienne de Harven, Lloyd Old, June Biedler and technician Sylvia Fox.

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1971 (Sep 19)

Full newspaper page - [HN00V0][GDrive]

New Fighters Against Cancer Hold Promise

1971-09-18-the-tennessean-pg-b-8-clip-cancer

By JUDITH RANDAL
(C) 1971 Washington Star

PADUA, Italy — A crash program begun last January by the National Institutes of Health because of startling new findings in cancer research, has already turned up some two dozen drugs that in the same concentration are two to 10 times more harmful to leukemia cells than they are to healthy tissue.

Further work is needed to establish the safety and effectiveness of the compounds, but some may be given to patients whose illness is resistant to other treatment within a year.

A LONG DELAY is necessary because the preliminary work had to be done with cells isolated in test tubes and the crucial tests in animals are not yet complete. Nonetheless, scientists at the fifth International Symposium on Comparative Leukemia Research which met here this past week are impressed at the pace at which progress is taking place.

At a news conference, Dr. Robert C. Gallo of the National Cancer Institute, a branch of the National Institutes of Health, said that the 24 or so potential cancer fighters had been identified by screening more than 200 chemicals, all derived from an Italian drug called rifampicin.

RIFAMPICIN, he explained, has little antitumor activity itself, but has long been used in Europe for the treatment of tuberculosis and was recently licensed for this purpose in the United States. It is manufactured by the Gruppo Lepetit Co. in Milan which is also supplying the derivatives for research and a related drug called rifamycin. This is a chemical of known safety but questionable value in cancer therapy.

In its effort to leave no stone unturned, however, the National Institutes of Health plans tests of rifamycin on leukemia patients for whom other drugs have failed in the next two months.

Rifampicin and rifamycin came to the attention of the National Cancer Institute after the independent discovery in the spring of 1970 by two scientists — Howard Temin of the University of Wisconsin and David Baltimore of the Massachusetts Institute of Technology — that viruses known to cause leukemia and certain other malignancies in animals seem to owe their ability to enslave normal cells to an enzyme called RNA dependent DNA polymerase.

IN NOVEMBER, Gallo found a similar enzyme in cells from patients with acute leukemia and determined that the formation of the enzyme could be partially blocked in the test tube by rifampicin and completely destroyed by some of its derivatives. The cancer institute's Special Virus Cancer Program then committed itself to more intensive research on this family of drugs.

In the intervening months, scientists under contract to this program have not only discovered the enzyme in the cells of patients with leukmia, but have also come to suspect that it is a fellow-traveler of tumors of the bone and connective tissue and cancers of the lymph glands.

In addition, there is growing evidence that it may play an important role in breast cancer. Thus, although leukemia patients will probably be the first to benefit from rifampicin derivatives, if they are as promising as expected, other cancer victims may also be helped by the drugs.

BESIDES opening up new avenues of cancer therapy research, the recently discovered enzyme is deepening scientific understanding of the biological processes by which the various forms of cancer take hold.

At last week's meeting for example, more than a dozen papers were presented reporting progress in deciphering the structure of protein and in purifying and isolating its component parts. These advances, it was said, may lead to such advances as diagnostic tests specific for the many forms of cancer at an early stage and to many new strategies to control the abnormal cell activity characteristic of tumor growth.

Even more exciting is the distinct possibility of preventive vaccines.

AN IMPORTANT facet of current cancer thinking is the belief that if viruses are implicated in human tumors, which they almost surely are, in some instances at least their lethal potential is passed on from one generation to the next at conception.

Many scientists have felt this would render vaccines useless because the body would be incapable of recognizing inherited materials as possibly dangerous and would not, therefore, make antibodies to destroy them. However, it was reported by Dr. Jeffrey Schlom of the Columbia College of Physicians and Surgeons in New York, that several animal cancer viruses that behave similarly can be neutralized by vaccines. This being so, he said there is every reason to suppose that the same goal can be achieved for man.

The symposium on leukemia research is sponsored by the World Committee for Comparative Leukemia Research and the World Health Organization. Some 400 scientists from 17 countries came to Padua and Venice for the meeting.

[HN00V1][GDrive]

1971 (Dec 06)

Full newspaper page - [HN00V2][GDrive]

Medical Scientists Find 'Likely' Candidate for Human Cancer Virus

LOS ANGELES (AP) — Medical scientists here have have discovered what they say "appears to be the most likely candidate yet" for a human cancer virus.

If their conclusions are proven correct by a battery of experiments now underway, the scientists' discovery would become a powerful new tool in the search for the dread disease's cause and a possible cure. It would be important new evidence supporting the still unproven idea that each person is born with the seeds of cancer and that a cancer virus particle helps "turn on" the disease.

The discovery by doctors at Los Angeles Childrens Hospital, the University of Southern California and the National Cancer Institute in Bethesda, Md., is certain to further fuel a quiet but intense controversy that has grown out of the search for a human cancer virus.

The Los Angeles group's findings are to be published in the Dec. 22 issue of Nature, the British scientific journal. The article will come five months after researchers at the M.D. Anderson Hospital in Houston, Tex., announced in July they had found the first human cancer virus.

But National Cancer Institute scientists who studied the M.D. Anderson findings published a paper in Nature in September claiming the virus is from a mouse and not a human virus.

Dr. Elizabeth S. Priori of M.D. Anderson Hospital said in a telephone interview she remains convinced her group's virus is not a mouse virus but that it may share some common properties with mouse virus. She said an article would be published "any day now" in Nature reporting studies with an electron microscope that show the M.D. Anderson virus is different from mouse virus.

The M.D. Anderson candidate is known as the ESP virus, after Dr. Priori's initials.

In another laboratory, strong evidence that a virus can cause breast cancer has come from Columbia University researchers Drs. Sol Spiegelman and Jeffrey Schlom.

Drs. Spiegelman and Schlom reported recently on biochemical research they say strengthens previous indications that virus-like particles are linked with human breast cancers.

The Columbia researchers have found virus-like particles in the milk of 60 per cent of 180 American women who came from families with a history of breast cancer.

Dr. John B. Molaney, head of the National Cancer institute's special virus program, confirmed the latest report of a possible virus, saying it indeed is a "candidate" for a human cancer virus.

In yet another study, a Georgetown University medical research team reported Sunday what it said was the first long-term maintenance in culture of a human malignant tumor in which large amounts of virus have appeared.

"It is the first time a C-type (cancer) virus has been observed in the primary tumor before culture and in the cell line after extended culture, Dr. Sarah Stewart, Georgetown pathology professor, told a news conference.

"We have a good share of the evidence to prove that we have a human virus and not one accidentally interjected from animals."

Although virus particles have been discovered in human malignancies before, Dr. Stewart said they have been unstable and have not been in sufficient quantity to work with.

"Our virus is growing in tissue culture," she said. "We now have the means to produce the virus in sufficient quantity to isolate, purify and work with it."

Dr. Moloney of the NCI said: "This is a very interesting finding by Dr. Stewart but she has an awful lot of control work to do. It must be determined whether the virus is human, certainly whether it is a causative factor in certain human tumors.

"She must develop certain controls to determine whether the virus particle is indeed human . . ." he said. "Those studies will be undertaken by other investigators in the special virus cancer program.

"But certainly until these results come in, we cannot say this is a human virus, no less a human tumor virus," Moloney said.

One of the NCI scientists who wrote the critical article on the M.D. Anderson virus claim is Dr. Robert J. Huebner of the NCI viral carcinogenesis branch. He and Dr. R. M. McAllister of Childrens Hospital, Dr. Murray B. Gardner of the University of Southern California and Dr. R.V. Gilden of Flow Laboratories, Inc., of Rockville, Md. are principal authors of the latest article.

They discussed their findings with science writers recently and explained why they think they have discovered human cancer virus.

"We think this is the best candidate so far detected to be the so-called human C-type virus," McAllister said.

The scientists have interpreted the data to be strong circumstantial evidence the cancer virus particles are of human origin.

1971-12-06-messenger-inquirer-owensboro-kentucky-pg-7-a-clip-human-cancer-virus

[HN00V3][GDrive]

1972 (Jan 18)

Full newspaper page - [HN00VY][GDrive]

Findings Support Cancer Theory

WASHINGTON (AP) — A team of Columbia University cancer researchers has reported some new test-tube findings which they suggest may strengthen the still-unproved concept what at least some human cancers are caused by viruses.

The three-man group, in a report to the technical journal Science, said they had found an apparent chemical compatability between genetic materials found in tissue cells from three types of human cancer and those found in viruses known to cause comparable malignancies in mice.

The three types of cancer are breast cancer, leukemia, and sarcoma — the latter being a form of malignancy that primarily affects connective tissue and includes such tumors as bone cancer.

The scientists made plain that, even if it is eventually proved that such human cancers are caused by viruses, it wouldn't necessarily follow that they are caused by the same viruses that can produce those same malignances in mice.

But they did suggest that their findings may mean this:

Since the genetic chemistry within the human cancer cells studied appears to be closely similar to that occuring inside viruses known to be able to cause comparable types of mouse-cancers, some still-unidentified viruses may be the basic cause of the human cancers.

The new experiments involved special studies of the genetic materials — DNA and RNA — that occur in the nuclei of all living cells, both normal and malignant. Together, these so-called nucleic acids — complementing one another — team up to control the way cells work and the way, indeed, inheritance is passed on from old to new cells, and from a generation of individuals to their offspring.

The Columbia researchers found that DNA produced from each of the three mouse-cancer viruses could very often be bonded chemically to RNA derived from cells of the human cancers. That is mouse-virus material and human cancer tissue material was combined.

Science In The News

Referring to the studies of human sarcoma tissues the scientists said:

"Although our experiments do not constitute definite proof of a viral etiology cause of human sarcomas, they provide rather compelling evidence for the presence in these human tumors of RNA similar to that found in an agent known to be related to a virus that causes sarcomas in an experimental animal."

They added:

"Whatever these results may ultimately mean for a viral etiology of human cancer, they do suggest a remarkable similarity in the specific virus-related information found in corresponding tumors of mice and men."

The researchers — of Columbia's Institute of Cancer Research — are Drs. Sol Spiegelman, Donald Kufe, and Rudiger Hehlmann. They said their study was conducted with the Special Virus Cancer Program (SVCP) of the government's National Institutes of Health.

THE RECORD, TUESDAY, JANUARY 18, 1972

1972-01-18-the-record-hackensack-new-jersey-pg-b-4-clip-cancer-theory

[HN00VZ][GDrive]

1972 (March 03)

Full newspaper page - [HN00VW][GDrive]

Alton Evening Telegraph (Alton, Illinois) • 03 Mar 1972, Fri • Page 18

Lemp named to tumor virus program post

John F. Lemp Jr., has joined Electro - Nucleonics Laboratories, Inc., of Bethesda, Maryland, as Director of the Tumor Virus Program.

JOHN LEMP JR.

He will be responsible for purification techniques and production of RNA tumor viruses and other sub-cellular materials that Electro-Nucleonics Laboratories provides to laboratories engaged in cancer research.

Much of the Electro-Nucleonics Laboratories' work in this area is performed in collaboration with the Special Virus Cancer Program of the National Cancer Institute.

Lemp comes to Electro-Nucleonics Laboratories with twenty years experience as a registered microbiologist in both private and government laboratories. He is a 1951 graduate in Microbiology from the University of Illinois and has been listed in "American Men of Science" for the past several years.

A resident of Lovettsville, Va., Lemp is the son of John Lemp Sr., 1627 Joesting, Alton.

[HN00VX][GDrive]

1972 (April 27)

Full newspaper page - [HN00VU][GDrive]

An insight from chickens

ST. PETERSBURG, Fla. (AP) — Two scientists who hate chickens are learning, from those same chickens, new insights into viruses that cause cancers.

A main finding is that one virus can enhance or boost the effects of a second virus.

While no viruses have yet been proven to cause human cancers, the research is adding to such suspicions as these:

—That what ultimately happens to you from various virus infections may depend upon which virus came visiting you first.

—Prior infection with one kind of virus might confer some protection against later infection with a cancer-causing virus. Or the initial infection might boost the cancer-causing power of a second virus.

For example, some scientists think that an attack of infectious mononucleosis, the so-called "kissing disease," might make people less susceptible to leukemia later in life, if it turns out that leukemia is really caused by a virus.

The scientists who dislike chickens are Drs. Vincent Groupe and Jack W. Frankel, the director and deputy director of Life Sciences, Inc., a research and development laboratory here.

Some 600 chickens are continually being reared and maintained in the laboratory, and over years of close familiarity Groupe and Frankel have come to regard chickens with a good deal less affection than for a family pet, even to the point of preferring not to have chicken dinners at home.

But the chickens are a key to some basic research because they have been bred to be virus and germ free, or at least free of specific viruses known to be involved in cancers in chickens.

This had taken generations of breeding under aseptic conditions, in research supported by the Special Virus Cancer Program of the National Cancer Institute.

The result is chickens, and their eggs, free from viruses like the one that causes Marek's disease, a form of solid leukemia in chickens, bringing on paralysis and tumors within four to six weeks. It spreads easily within infected chicken houses, and hundreds of thousands of infected chickens are destroyed each year as unfit for human consumption.

If virus-free chickens are inoculated with Marek's virus, they don't get paralysis or tumors — they simply keel over and die within two weeks.

This raises the question whether some "activator" virus has to be present for Marek type cancer to develop, Groupe says, adding the role of mixed viral infections leading to cancer has never been considered before."

Using tissue cultures of virus-free eggs, Groupe and Frankel injected them with Marek's virus and with Avian Leucosis Virus — AVL — which causes a cancer in chickens.

They found that prior infection with AVL interfered with the ability of Marek's virus to cause changes in living cells. But the mixture produced more AVL particles than would result from growing Avian Leucosis Virus alone in the testtubes. Its action was enhanced. Thus, one virus may be a cause and another the activator in a cancer process.

Kindred experiments now are being conducted in virus-free chickens.

But far more than chickens is involved in the studies.

The Marek virus is a herpes virus, belonging to the family of viruses that cause ordinary cold sores and the nerve disease called shingles. A herpes virus has been implicated in some cancers of the cervix in women.

And in many ways, Marek's resembles a virus, the Epstein-Barr or E.B. virus, implicated in a human leukemia known as Burkitt's lymphoma.

1972-04-27-the-courier-news-bridgewater-nj-pg-a-4-clip-chickens-cancer

[HN00VV][GDrive]

1972 (May 07)

Full newspaper page - [HN00VS][GDrive]

Cancer Breakthrough Predicted

United Press International

WASHINGTON — Dr. Frank J. Rauscher, the new director of the National Cancer Institute, is confident that cancer research will lead to the prevention and successful treatment of the disease.

President Nixon announced Rauscher's appointment Friday.

In a subsequent meeting with reporters, Rauscher said he did not see "any single breakthrough," but "an accumulation of information which sooner or later will ripen — and in many cases this will be soon — for developing means for cancer prevention as well as treatment."

Explaining his confidence, Rauscher mentioned that of the 100 cancers that afflict man, about 15 per cent can be treated extremely well, to the point of at least five-year survivals in half the cases.

"We see a major challenge now of providing this kind of treatment to people all over the country, rather than just at four or five major clinical centers, predominantly in the Eastern United States," he said.

"This can be described, I suppose, as a breakthrough, but it is in the utilization of existing knowledge that I think we can do much better, now that we have expanded resources."

Rauscher, 40, has had long service in cancer research. With a doctorate in virology and microbiology, he has, in his words, a record of "about 10 to 13 years at the bench in the laboratory."

Since 1965, he has been involved in the management of the nation's Special Virus Cancer program.

"We are trying to apply these management techniques on a broader base to cancer," he said.

Asked to explain progress in cancer research and treatment in everyday language, Rauscher said he would "shy away from speaking about a solution" to the problem of cancer.

"There will be many solutions," he said. "In fact, there are many examples I could give you. We know what causes many cancers right now.

"Leukemia is fast becoming one of the most treatable diseases of any of our cancers."

Discussing lymphocytic leukemia in children, Rauscher said this disease occurs today in some 15,000 American children below the age of 7 every year.

He added: "Between four and five years ago, the average life expectancy of a child presented with leukemia was in the order of four to six months. Today, with aggressive chemotherapy, the use of combinations of drugs, 85 per cent of these children can be put into long-term remission.

"In fact, this is becoming so good that by life tables — the analysis we would do on any one of us if we went for a new insurance policy, as an example — by that kind of analysis, 50 per cent are living disease-free after five years. We are at the point where we are beginning to feel confidence in saying that these are cures."

Rauscher cautioned, however, that even with such progress in the treatment of the leukemias, the cancer mortality-fatality rate is increasing.

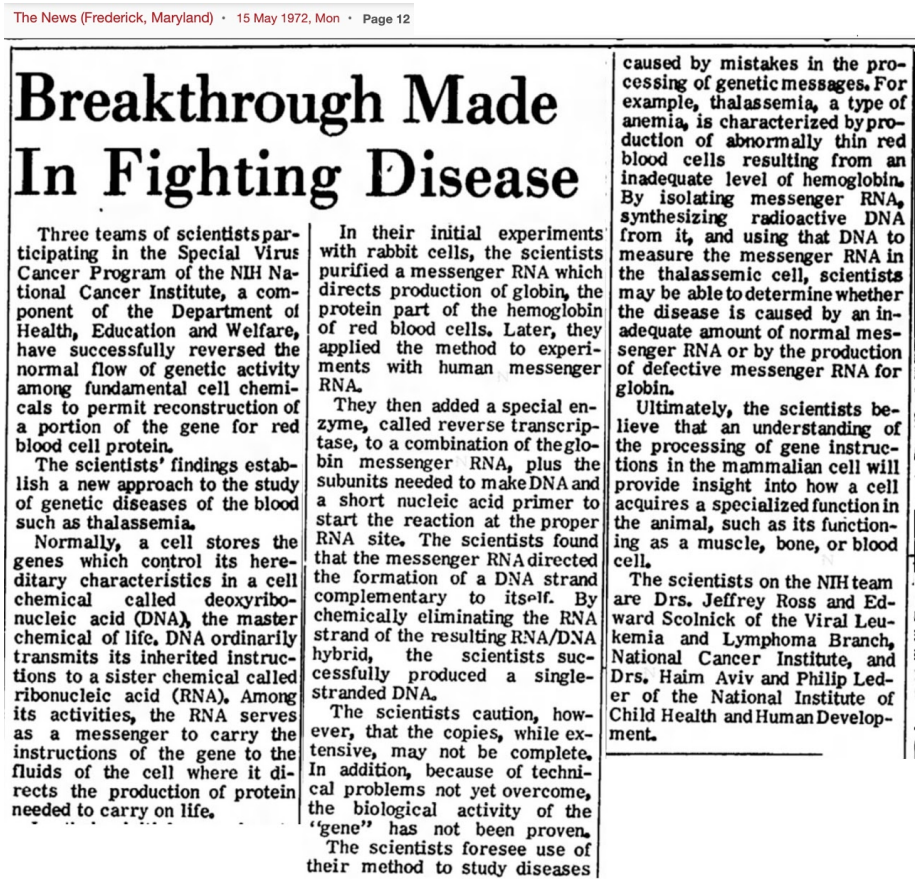
"There are many things that cause this," he said. "There is a tremendous increase in lung cancer, as an example."

1972-05-07-the-charlotte-observer-pg-36-d-clip-cancer-breakthrough

[HN00VT][GDrive]

1972 (May 15)

Full newspaper page - [HN00VQ][GDrive]



The News (Frederick, Maryland) · 15 May 1972, Mon · Page 12

Breakthrough Made In Fighting Disease

Three teams of scientists participating in the Special Virus Cancer Program of the NIH National Cancer Institute, a component of the Department of Health, Education and Welfare, have successfully reversed the normal flow of genetic activity among fundamental cell chemicals to permit reconstruction of a portion of the gene for red blood cell protein.

The scientists' findings establish a new approach to the study of genetic diseases of the blood such as thalassemia.

Normally, a cell stores the genes which control its hereditary characteristics in a cell chemical called deoxyribonucleic acid (DNA), the master chemical of life. DNA ordinarily transmits its inherited instructions to a sister chemical called ribonucleic acid (RNA). Among its activities, the RNA serves as a messenger to carry the instructions of the gene to the fluids of the cell where it directs the production of protein needed to carry on life.

In their initial experiments with rabbit cells, the scientists purified a messenger RNA which directs production of globin, the protein part of the hemoglobin of red blood cells. Later, they applied the method to experiments with human messenger RNA.

They then added a special enzyme, called reverse transcriptase, to a combination of the globin messenger RNA, plus the subunits needed to make DNA and a short nucleic acid primer to start the reaction at the proper RNA site. The scientists found that the messenger RNA directed the formation of a DNA strand complementary to itself. By chemically eliminating the RNA strand of the resulting RNA/DNA hybrid, the scientists successfully produced a single-stranded DNA.

The scientists caution, however, that the copies, while extensive, may not be complete. In addition, because of technical problems not yet overcome, the biological activity of the "gene" has not been proven.

The scientists foresee use of their method to study diseases caused by mistakes in the processing of genetic messages. For example, thalassemia, a type of anemia, is characterized by production of abnormally thin red blood cells resulting from an inadequate level of hemoglobin. By isolating messenger RNA, synthesizing radioactive DNA from it, and using that DNA to measure the messenger RNA in the thalassemic cell, scientists may be able to determine whether the disease is caused by an inadequate amount of normal messenger RNA or by the production of defective messenger RNA for globin.

Ultimately, the scientists believe that an understanding of the processing of gene instructions in the mammalian cell will provide insight into how a cell acquires a specialized function in the animal, such as its functioning as a muscle, bone, or blood cell.

The scientists on the NIH team are Drs. Jeffrey Ross and Edward Scolnick of the Viral Leukemia and Lymphoma Branch, National Cancer Institute, and Drs. Haim Aviv and Philip Leder of the National Institute of Child Health and Human Development.

[HN00VR][GDrive]

1972 (Nov 17)

Full newspaper page - [HN00VO][GDrive]

The Daily News (Lebanon, Pennsylvania) • 17 Nov 1972, Fri • Page 26

Medical Center MD In Russia Two Weeks

HERSHEY — A faculty member at The Milton S. Hershey Medical Center of The Pennsylvania State University is one of seven American cancer scientists currently in the USSR on a two-week exchange of information with leading Soviet scientists.

He is Dr. Fred Rapp, a virologist who has been chairman of the department of microbiology at the Medical Center since 1969.

The exchange is part of a U.S.-U.S.S.R. health agreement to share research results from cancer, heart disease and environmental studies which was signed in Moscow in May 1972 during the President's summit meeting.

As part of the exchange agreement, the U.S. delegation will present to Soviet scientists 31 strains of cancer viruses affecting chickens, cats, rodents, and non-human primates, as well as a possible human tumor virus from a muscle cancer.

Dr. Fred Rapp

Dr. Rapp heads a research team at the Medical Center which has studied human viruses as a cause of cancer under the Special Virus Cancer Program, a research contract program under the etiology area of the National Cancer Institute, since 1970.

The U.S. team will visit cancer research institutes in Moscow, Leningrad and Sukhumi. They are expected to develop a joint plan for continued exchange of research results on cancer viruses.

In addition to Dr. Rapp, the team includes Drs. John Moloney, Timothy E. O'Connor, and Louis B. Sibal, of the National Cancer Institute, Bethesda, Md. Dr. J. Thomas August, Albert Einstein College of Medicine, New York City; Dr. Freidrich Deinhardt, Rush-Presbyterian-St. Luke's Medical Center, Chicago, and Dr. Robert M. McAllister, Children's Hospital of Los Angeles.

[HN00VP][GDrive]

1973 (Feb 14)

Full newspaper page - [HN00VM][GDrive]

Researchers Aid Fight

Experiments Link Viruses With Forms Of Cancer

By Judith Randal
New York Times News Service

WASHINGTON — Two sets of experiments have added weight to the already impressive evidence that links some forms of human cancer with infection by a virus.

One set of experiments — the joint venture of a George Washington University scientist and a researcher at the University of Naples in Italy — implicates members of the same virus family in cancer of the female cervix and cancer of the lip.

The other — a collaborative effort between scientists at Columbia University College of Physicians and Surgeons in New York and the Bionetics Research Laboratories in Bethesda, Md. — indicates a different kind of virus may play an important role in causing breast cancer, which kills more than 32,000 women and from 250 to 300 men in the United States each year.

Both sets of experiments are described in the current issue of the weekly magazine Science and were supported by funds from the special virus cancer program begun by the National Cancer Institute about three years ago.

It has long been known that viruses are capable of producing a variety of malignant tumors in many species of animals and plants and virus remnants of one kind and another have been found with growing frequency in recent years in the tissues of cancer patients. The trouble is that it has been difficult to determine whether their presence was merely accidental or had played a role in the development of the disease.

Although neither set of experiments answers this question definitively, they promise to hasten its resolution. Meanwhile, they may lead both to better cancer therapies and improved detection tests so tumors can be found early when chances of successful treatment are best.

In their experiments on lip and cervical cancer, Drs. Ariel C. Hollinshead and Giulio Tarro tried to find out whether herpes simplex viruses — of the family of virus which causes cold sores — are capable of inserting some of their genes into the heriditary machinery of human cells.

After a complex series of studies the scientists were able to demonstrate that an insoluble protein characteristic of herpes simplex viruses appears in tissue samples taken from patients with cancer of the lip or cervix but not in the tissue sample of patients with several other forms of cancer or those without cancer.

Furthermore, this protein — when removed from the surface of lip and cervical tumor cells — was identical to that found on normal cells grown in the test tubes after they had been infected with herpes simplex viruses.

The protein in question is known as antigen and is thought to appear in cancer patients as a result of interactions between a chemical or chemicals on the surface of herpes viruses and cells of the lip or cervix depending on which of the two types of cancers are involved.

Scientists believe there is probably a lag of years between the time of exposure to the virus and the onset of tumor growth and that this explains why an intact virus is seldom recovered from cancer patients.

Some breast cancer in laboratory mice is common and was discovered in the 1930s to be often due to a virus which newborn animals drink as nurslings from their mothers' milk. And it has since been shown, with photographs taken with an electron microscope, that these mouse cancer viruses are identical in appearance to particles often found in samples of human milk — particularly if there is a family history of breast cancer.

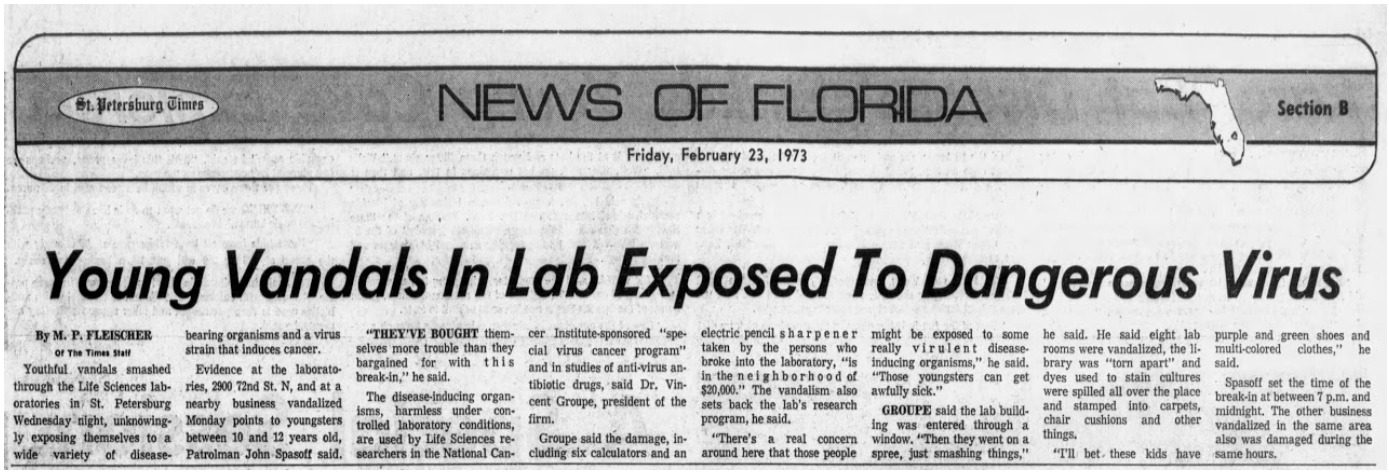
The new experiment demonstrates there is a chemical relationship as well.

1973-02-14-the-sacramento-bee-pg-a-2-clip-virus-link

[HN00VN][GDrive]

1973 (Feb 23)

Full newspaper page - [HN00V4][GDrive]



St. Petersburg Times

NEWS OF FLORIDA

Section B

Friday, February 23, 1973

Young Vandals In Lab Exposed To Dangerous Virus

By M. P. FLEISCHER
Of The Times Staff

Youthful vandals smashed through the Life Sciences laboratories in St. Petersburg Wednesday night, unknowingly exposing themselves to a wide variety of disease-bearing organisms and a virus strain that induces cancer.

Evidence at the laboratories, 2900 72nd St. N, and at a nearby business vandalized Monday points to youngsters between 10 and 12 years old, Patrolman John Spasoff said.

"THEY'VE BOUGHT themselves more trouble than they bargained for with this break-in," he said.

The disease-inducing organisms, harmless under controlled laboratory conditions, are used by Life Sciences researchers in the National Cancer Institute-sponsored "special virus cancer program" and in studies of anti-virus antibiotic drugs, said Dr. Vincent Groupe, president of the firm.

Groupe said the damage, including six calculators and an electric pencil sharpener taken by the persons who broke into the laboratory, "is in the neighborhood of $20,000." The vandalism also sets back the lab's research program, he said.

"There's a real concern around here that those people might be exposed to some really virulent disease-inducing organisms," he said. "Those youngsters can get awfully sick."

GROUPE said the lab building was entered through a window. "Then they went on a spree, just smashing things," he said. He said eight lab rooms were vandalized, the library was "torn apart" and dyes used to stain cultures were spilled all over the place and stamped into carpets, chair cushions and other things.

"I'll bet these kids have purple and green shoes and multi-colored clothes," he said.

Spasoff set the time of the break-in at between 7 p.m. and midnight. The other business vandalized in the same area also was damaged during the same hours.

[HN00V5][GDrive]

March 4

https://www.newspapers.com/image/81164857/?terms=%22special%2Bvirus%2Bcancer%2Bprogram%22

March 15

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APril 25

https://www.newspapers.com/image/217180350/?terms=%22special%2Bvirus%2Bcancer%2Bprogram%22

May 04

https://www.newspapers.com/image/332300514/?terms=%22special%2Bvirus%2Bcancer%2Bprogram%22

june 24

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1973 (Dec 02)

Full newspaper page - [HN00V6][GDrive]

Congress Makes Conquest of Cancer a National Goal

(Second in a Series)

By ANNE KOVALENKO

The National Cancer Institute (NCI) — one of the 10 research institutes that are part of the National Institutes of Health — is the nation's principal federal agency on the causes, diagnosis, treatment and prevention of cancer.

In 1973 Congress appropriated more than $432 million —the largest amount ever — for a Presidential and a Congressional commitment establishing the conquest of cancer as a national goal. Last year a total of $378,794,000 was appropriated for this purpose.

The National Cancer Act of 1971 authorized $1.6 billion over the ensuing three years to advance the national effort against cancer.

Headed by Area Man

Dr. Frank J. Rauscher Jr., son of Mr. and Mrs. Frank J. Rauscher of 851 New Jersey Ave., Hellertown, was named director of the National Cancer Institute and charged with the responsibility of carrying out the expanded, intensified and coordinated cancer research program.

This graduate of Moravian College (1953) received a Ph.D. from Rutgers in 1957 and came to NCI in 1959 as a microbiologist in the Laboratory of Viral Oncology until 1964 when he was appointed head of the Viral Oncology Section.

A year later he was appointed acting chief of the Viral Leukemia and Lymphoma Branch while simultaneously serving as chairman of the Special Virus Cancer Program. Subsequently, he became chief of the Viral Leukemia and Lymphoma Branch and in 1967 was appointed associate scientific director for viral oncology. In 1969 he was named acting scientific director for etiology and in 1970 scientific director of etiology. He became head of NCI on May 5, 1972.

His Responsibilities

The National Cancer Act of 1971 authorized the director of NCI to:

1. Plan and develop an expanded, intensified and coordinated cancer research program encompassing the programs of the Institute, related programs of other research institutes and other federal and non-federal programs with the advice of the National Cancer Advisory Board.

2. To utilize existing research facilities and personnel of NIH for accelerated exploration in areas of special promise.

3. To encourage and coordinate cancer research by industrial concerns which evidence a capability for such research and,

4. To collect, analyze and disseminate all data useful in the prevention, diagnosis and treatment of cancer, including establishment of an international cancer research data bank.

Seven Main Thrusts

The announced strategy of NCI, according to Dr. Rauscher, involves seven primary thrusts: The first four —classified under Cause and Prevention — are (1) to reduce the effectiveness of external agents (such as pollution, cigarette smoking, etc) (2) to modify individuals (3) to prevent conversion of cells and (4) to prevent tumor establishment.

The fifth objective (classified under Detection and Diagnosis) is to achieve accurate assessment of cancer risks. The sixth is to cure as many patients as possible and the seventh, to restore patients as fully as possible.

Supportive surgery is performed to sustain the patient or to alleviate pain or discomfort resulting from cancer while preventive surgery may be performed to prevent development of the disease. For instance, certain polyps, and moles of the colon, rectum, skin or larynx may be precancerous conditions which might become so if left untreated.

Radiotherapy has become increasingly important in the United States in the past two decades. Radiation may reduce the size and delay the spread of cancers, heal ulcerating tumors, diminish or stop persistent bleeding or hemorrhage and relieve tumor-related obstructions of the blood vessels.

To cure cancer a radiation dose must be large enough to destroy cancer cells but not so great as to seriously damage normal tissue surrounding or overlying the cancer.

Localized cancer often can be removed by surgery or destroyed by radiation but these methods can rarely cure cancers that have spread nor can they cure cancers of the blood or blood-forming tissues such as leukemia.

345,000 Deaths a Year

Most of the 345,000 cancer deaths in the United States yearly are due to the inability of surgery or radiation to cure widespread disease.

Scientists have felt for years that the best way to treat such cancers would be drugs or chemicals that would destroy cancer cells and yet not harm normal tissue.

More than 40 drugs have already been developed that are useful in treating some form of cancer. In about 15 per cent of clinical cancer, the drugs can produce cures. In many of the rest, they often temporarily inhibit the cancerous growth, relieve pain and allow the patient to live a longer, more comfortable life.

Cancer can strike at any age. It affects children as well as adults but it strikes with increasing frequency with advancing age.

About 53 million Americans now living will eventually have cancer — about one in four according to present rates. Cancer will strike in about two of three families.

In the 70's there will be an estimated 3.5 million cancer deaths, 6.5 million new cancer cases and more than 10 million under medical care for cancer.

Early detection is emphasized in all cancers. Physicians advise that if you recognize a symptom, go to your doctor to find out if it means cancer. Don't wait for symptoms to become painful. Pain is not an early sign.

The possible signs of cancer?

NCI lists seven: Unusual bleeding or discharge; a lump or thickening in the breast or elsewhere; a sore that won't heal; change in bowel or bladder habits; hoarseness or cough; indigestion or difficulty in swallowing or change in a wart or mole.

Where are they today?

Research is organized into three broad areas — etiology, chemotherapy and general laboratories and clinics.

Etiology is concerned with cancer causation and prevention. Top priority in this area is carcinogenesis — the induction of cancer by environmental agents such as viruses, chemicals or radiation acting either alone or in combination.

Human Cancer Virus?

Virus-cancer research holds great promise, according to Dr. Rauscher. Recent discoveries by research teams have turned up what may be a human cancer virus in the skeletal muscles of a seven-year-old child, a monkey and an ape.

Efforts are under way to determine whether these viruses are of human origin, whether they occur primarily in human cells and whether they can cause cancer in animals.

Rauscher emphasizes that few cancers develop because of heredity — that most are caused by what people do or are exposed to over a number of years.

Cancer is a disease that may be preventable if it is largely induced by chemicals or conditions in the environment. Scientists are therefore trying to identify and eliminate carcinogens (cancer-causing agents) wherever possible.

Environmental pollution caused concern as long ago as 1775 when cancer of the scrotum in chimney sweeps of London was believed related to their long exposure to soot. Historically, research tried to establish there was an increased risk of cancer in certain industrial settings. At present, occupationally related cancers have been linked to substances like coal tar and other combustion and distillation products of coal, oil shale, lignite and petroleum as well as metal and radioactive ores and compounds of metals such as asbestos.

Smoking Related to Cancer

The most significant findings in chemical carcinogenesis is the relationship of cigarette smoking with lung cancer and the association of smoking with other types of cancer. This discovery resulted in the passage of a bill by Congress calling for strict regulation of cigarette advertising with a ban on television promotion and the printing of a warning on all cigarette packages.

The sixth objective in cancer research — to cure as many patients as possible — receives about 35 per cent of all allocated funds.

Surgery, radiation and chemotherapy are the primary methods of arresting and controlling most forms of cancer today.

Surgery may be specific, supportive or preventive. It is the primary form of treatment for cancer of the lung —the form that claims the most lives in the United States.

When surgery is performed for early forms of these cancers, 70 to 80 per cent of the patients live five years and many are cured.

Cancer of the breast also is treated primarily by surgery. Stomach cancer at present can be treated successfully only by surgery.

20 Years Research Reveal

Body Defect Can Trigger Cancer

A trail of research spanning nearly two decades has led to the discovery of a new link between cancer and the body's immune system.

Patients with a rare intestinal disease have been found to have a unique type of defect in their immune defense systems. The same patients have also been found to have an increased likelihood of developing cancer.

The immune defect is associated with a disease called intestinal lymphangiectasia, first described by physicians at the National Institutes of Health Clinical Center.

This disease is one of the protein-losing "gastro-enteropathies," a new class of diseases identified on the basis of studies started at the Clinical Center soon after it opened in 1953.

In patients with intestinal lymphangiectasia, the channels of the lymph system do not develop properly, particularly in the walls of the small intestine. The channels are larger than normal and allow the body fluid called lymph to leak into the small intestine and thus pass out of the body. This leakage of lymph causes a steady loss of white blood cells and dissolved proteins.

Dr. Thomas A. Waldmann and co-workers at the National Cancer Institute (NCI) have found that patients with intestinal lymphangiectasia have a markedly depressed capability to carry out immune defense reactions. This is caused chiefly by shortages of lymphocytes.

NCI scientists discovered that lymphocytes in these patients are lost through their defective lymph vessels. In addition, remaining lymphocytes have an impaired immune capability.

Cancer develops more frequently than normal in persons with various immune disorders and in transplant recipients who are given immunosuppressants to prevent rejection of donated organs.

Cancer has also been found in an above-normal number of intestinal lymphangiectasia patients at the Clinical Center. This adds to the growing body of evidence on the importance of the immune system as a defense against cancer.

The loss of lymphocytes into the intestine represents another means by which the immune system can become defective. A number of other immune disorders have been identified by investigators at the Clinical Center and elsewhere.

These disorders include decreased production of white blood cells and antibodies (proteins in the blood which neutralize bacteria and other harmful substances), destruction of antibodies by abnormal metabolic reactions, and defects in recognizing and attacking body invaders.

The growing understanding of intestinal lymphangiectasia emerged from nearly 20 years of work at the NIH Clinical Center. Scientists at several NIH Institutes studied patients with extremely low levels of protein in their blood.

Over a period of years, Dr. Jesse L. Steinfeld (later surgeon-general of the Public Health Service, who spoke at Moravian College about a year ago) Dr. Robert Gordon of the National Institute of Arthritis, Metabolism and Digestive Diseases; Dr. Frederick Bartter of the National Heart and Lung Institute; Dr. Warren Strober of the National Cancer Institute and other NIH scientists identified a new class of diseases — the protein-losing gastro-enteropathies in which proteins from the blood were lost into the gastro-intestinal tract. As understanding of the disorder progressed, several new diseases were discovered including intestinal lymphangiectasia. More than 90 diseases are associated with protein-losing gastro-enteropathy.

[HN00V7][GDrive]

1974 (Jan 07)

Full newspaper page - [HN00V8][GDrive]

Lebanon Daily News (Lebanon, Pennsylvania) · 07 Jan 1974, Mon · Page 12

Med Center Provost To Visit Mainland China

HERSHEY — Dr. Fred Rapp, associate provost for health affairs and professor and chairman of microbiology at The Milton S. Hershey Medical Center of The Pennsylvania State University, is one of eleven Penn State scientists and educators who will visit the People's Republic of China in February.

The delegation, led by Dr. John W. Oswald, University president, will enter China at Hong Kong on February 8 and will depart from the same point February 28.

The trip is supported by a grant from the Ford Foundation. The itinerary includes stops at Canton, Shanghai, Soochow, Wuhsi, Nanking and Peking with side trips to other sites. Members of the group plan to consult with Chinese officials in many specialized areas and to visit major universities, research centers, collective farms, and industrial plants.

At Canton, the group hopes to visit Lingnan University where the "Penn State in China" program was headquartered for nearly fifty years.

Other university professors in the delegation represent the areas of political science, agricultural economics, speech, economics, geography, and Chinese history.

Dr. Rapp also has visited the U.S.S.R. as one of seven American cancer scientists participating in a continuous exchange of information under the U.S.-U.S.S.R. health agreement to share research results signed in Moscow in 1972 during President Nixon's summit meeting there. Dr. Rapp heads the research team at the Medical Center which is studying human viruses as a cause of cancer under the special virus cancer program of the National Cancer Institute.

[HN00V9][GDrive]

1974 (June 20)

Full newspaper page - [HN00VA][GDrive]

Scientists Criticize Managers

Cancer Institute Shifting Virus Study

New York Times News Service

BETHESDA, Md. — The National Cancer Institute is undertaking a major reorganization of its special virus cancer program in response to criticism from scientists.

The 10-year-old program is dedicated to exploring the possible role of viruses in causing human cancers, one of the most intensively pursued areas of modern cancer research.

The program is one of the institute's major research efforts and costs more than one-tenth of the total annual budget of the institute, which is the federal agency conducting the government's research fight against cancer.

Administration of the special virus program was criticized sharply earlier this year by a committee of scientists appointed by the National Cancer Advisory Board. The virus-cancer program supports research and the production of materials needed in research through contracts with organizations and individuals outside the cancer institute. It was the management of that program, including instances of apparent conflict of interest, that was the primary target of criticism.

Dissatisfaction came to a focus in March when a review committee appointed by the advisory board delivered a sharply critical report.

The committee report said the prtgram was limited too much to a narrow section of the scientific community and that conflicts of interest had arisen because scientists of the institute who were passing judgment on contract proposals often had close ties to organizations seeking the contracts.

"Those who run it are also often the recipients of large amounts of money they dispense," said the report.

In the early days of the program, this was almost inescapable because there were few scientists working in cancer-virus research.

The report, prepared under the chairmanship of Dr. Norton Zinder of Rockefeller University, said the vision that established the program had been sound, but that the management philosophy had been "sadly in error."

"Instead of allowing the direction of the scientific program to come from working scientists by opening it to all, the program appears to have been a closed operation from its start," the report said.

At its spring meeting here this week, the advisory board was told of the institute's reorganization plans, some of which began before the report was presented earlier this year. The advisory board oversees the programs of the institute.

Dr. Harold Amos, of Harvard Medical School, said the program had in fact been highly productive and scientifically excellent. Nevertheless, Amos expressed general agreement with the recommendations for change.

Dr. John B. Moloney, head of the virus-cancer program, said that, among other changes, roughly five program-review working groups of scientists were to be replaced by two new review groups. In these, scientists from outside the institute will be heavily represented and the working rules will be such as to prevent conflict of interest.

The virus-cancer program spends about $46 million a year, in contrast to about $23 million that goes directly to grants for scientists working on virus research, but outside the special program.

1974-06-20-fort-lauderdale-news-pg-5-b-clip-cancer

[HN00VB][GDrive]

1974 (Oct 30)

Full newspaper page - [HN00VC][GDrive]

1974-10-30-the-daily-news-lebabon-pa-pg-16-clip-cancer-center

Hershey Med Center Opens New Cancer Research Wing

HERSHEY — The first facility in central Pennsylvania with the primary mission of cancer research will open officially today at 4:30 p.m., with ribbon cutting ceremonies at The Milton S. Hershey Medical Center of The Pennsylvania State University.

Program participants will be Michael Baker Jr., president of the Penn State Board of Trustees; Dr. John W. Oswald, president of the University; Dr. Guy R. Newell Jr., deputy director of the National Cancer Institute of the National Institutes of Health; and Dr. Fred Rapp, associate provost and dean for health affairs and professor and chairman of microbiology at Hershey. Dr. Harry Prystowsky, provost of the Medical Center and dean of the college of medicine at Hershey, will serve as master of ceremonies.

Dr. Rapp said the new building will "permit a tremendous expansion of the already important role of Penn State'sCollegeof Medicine as a national and international training and research center with the ultimate goal of improved patient care and better human health." He said that some 100 persons currently working in the field of cancer at Hershey will move into the building throughout the winter. It is projected that an eventual staff of some 200 research scientists and technicians plus graduate students and medical students will participate in the programs.

The $3.6 million basic sciences-cancer research wing was made possible through a $2 million construction contract from the National Cancer Institute cancer etiology program under the federal Conquest of Cancer Act of 1972. They were awarded to Penn State as an extension of a research contract existing between the NCI special virus cancer program and Dr. Rapp's laboratory since 1970 for the study of defective human viruses.

The University committed $1.2 million in non-state funds previously ear-marked for expansion of the Medical Center. Additional funds have been provided by the federal government and other sources toward laboratory benches and fixed equipment.

The wing is the first addition to the main building on the Hershey campus which houses the medical sciences building and hospital. Located at the western end of the basic sciences wing, it is the fourth extension south from the crescent shaped front of the structure as it is seen from Route 322. There are approximately 36,000 square feet of new laboratory space in the wing's eight floors.

Cancer research at the Medical Center currently is being funded by 20 research and training grants and contracts from the National Cancer Institute and two each from the American Cancer Society and the Leukemia Society of America.

Primary areas of research to be conducted initially in the wing will focus on the role of viruses in causing cancer, with particular emphasis on long-range possibilities for methods of early diagnosis and prevention of metastases, the biology of cancer cells, with stress on how they differ biochemically and genetically from normal cells; and methods for controlling the multiplication of cancer cells. Body areas included are the cervix, uterus, breast, prostrate, bladder, lung, blood system and skin.

Cooperative programs are being conducted with the University of Chicago Medical School, Rush-Presbyterian Medical School in Chicago, Roswell Park Memorial Cancer Institute in Buffalo, Children's Hospital of Philadelphia, and the University of Texas. These programs provide for the exchange of information, biological reagents and materials, expertise in specific areas of knowledge and techniques. They have resulted in a number of new findings published jointly in international professional journals.

The Penn State College of Medicine faculty over the past five years has trained numerous visiting scientists from other continents who

[HN00VD][GDrive]

1974 (Nov 07) -

Full newspaper page - [HN00VE][GDrive]

The Hershey Star

RIBBON IS CUT . . . and operations formally begin at $3 million basic sciences-cancer research wing at Milton S. Hershey Medical Center. Participants in dedication ceremony Wednesday, October 30, were, l-r: Dr. Harry Prystowsky, provost of Medical Center and dean of college of medicine at Hershey; Dr. Guy R. Newell, Jr., deputy director of National Cancer Institute of National Institutes of Health; Dr. John W. Oswald, president of University; Dr. Fred Rapp, associate provost and dean for health affairs and professor and chairman of microbiology at Hershey; and Michael Baker, Jr., president of the Penn State board of trustees.

Cancer Research Wing Opens At Hershey Medical Center

The first facility in central Pennsylvania with the primary mission of cancer research opened officially Wednesday, October 30, at 4:30 p.m., with ribbon-cutting ceremonies at The Milton S. Hershey Medical Center of The Pennsylvania State University.

Program participants were Michael Baker, Jr., president of the Penn State Board of Trustees; Dr. John W. Oswald, president of the University; Dr. Guy R. Newell, Jr., deputy director of the National Cancer Institute of the National Institutes of Health, and Dr. Fred Rapp, associate provost and dean for health affairs and professor and chairman of microbiology at Hershey. Dr. Harry Prystowsky, provost of the Medical Center and dean of the college of medicine at Hershey served as master of ceremonies.

A significant address was made by Dr. Newell of the National Cancer Institute. He stated that he felt honored to participate in the dedicaion ceremonies and was impressed by his expansion of a "young, vibrant and critically needed medical center." He pointed out that "the Milton S. Hershey Medical Center, in barely more than a decade, has already demonstrated to the people of Pennsylvania and to our nation its ability to function magnificently in the art of medicine and in contributing to the National Cancer Program." In mentioning the funding of the addition, Dr. Newell stated, "I would like to pay tribute to those who provided the remaining one-third of the funds." The National Cancer Institute supported two-thirds of the funding. Because the funds were available approximately 25,000 square feet of additional laboratory space for studies in fundamental cancer research by basic science and clinical faculty members is now ready to be put into operation. Dr. Newell stated enthusiastically, "The Milton S. Hershey Medical Center will have expanded facilities to train young scientists, to give medical students exposure to developments in cancer research, and to support over $1.5 million of cancer research contracts and grants." Dr. Newell explained that the major emphasis of research in the new laboratories will be the study of viruses that may cause cancer in humans. "Among the viruses under study here are defective human viruses — viruses that cannot produce the usual effects of infection."

He pointed out that these areas have been investigated for many years, and the studies will be able to be expanded upon in this new research facility. Dr. Newell stated, "I have every confidence — and I say this with the full endorsement of the director and the senior scientific staff of the National Cancer Institute — that the invesment we are making today in this splendid edifice will, under the guidance of this team of gifted scientists, pay off handsomely." Dr. Newell is optimistic about the potential of an institution such as he Medical Center He stated that "in the 1930's fewer than one in five cancer patients was being saved; in the 1950's, that ratio was reduced to one in four. Today, it is one in three, and this could be immediately reduced to one in two if every single person heeded the oft-repeated warnings about cancer prevention and frequent medical check-ups. With heartening regularity there have been emerging from research laboratories and clinics such as this one scientific findings that bring us a step — perhaps just a small step — closer to the solution of the cancer problem. The solution will not come from a dramatic, one-time breakthrough, but rather from deliberate efforts of young, innovative scientists such as those in this institution."

Dr. Newell related that new discoveries are being made about the substances in our environment that could relate to cancer. He pointed out that once identified, these substances are being removed from contact with humans. As a specific example he mentioned the intensive efforts to produce a less hazardous cigarette. He spoke enthusiastically about proven methods of diagnosis and detection — the Pap smear, mammography, and Xerography. Dr. Newell pointed out that although scientists have known for years that some viruses cause some forms of cancer in certain animals, they have not yet shown this to be true in humans. In a reassuring manner Dr. Newell added, "We are sanguine in our belief that the role of viruses in human cancer causation will be determined in the next very few years. This will herald yet another whole new era of cancer prevention, diagnosis and treatment." In conclusion Dr. Newell said, "It is my hope, and, I am sure, the hope of everyone here, that what we germinate in this building will come to fruition in an answer to at least one of the major riddles of cancer — and in answering that riddle will herald a new generation of opportunity for cancer research and contra. All who are connected with this center should be proud on this day. I know I am proud to be even a marginal part of it."

Not only Dr. Newell, but all of the program parucipants, spoke enthusiastically about the potential for the new research institution. Dr. Rapp stated that the new building will "permit a tremendous expansion of the already important role of Penn State's College of Medicine as a national and international training and research center with the ultimate goal of improved patient care and better human health." He said that some 100 people currently working in the field of cancer at Hershey will move into the building throughout the winter. It is projected that an eventual staff of some 200 research scientists and technicians plus graduate students and medical students will participate in the programs.

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The Penn State College of Medicine faculty over the past five years has trained numerous visiting scientists from other continents who have spent extended periods of time as visiting scholars. The new building will permit expanded opportunities for international scientists to work at Hershey, and visiting fellows from other American research centers are already scheduled for stays of from six months to two years.

The building will house personnel for the departments of anatomy, biological chemistry, microbiology, pathology, pharmacology, physiology, comparative medicine and support services.

It is the expectation of all connected with this addition to the Medical Center that new doors will be opened in the areas of cancer research and related fields. Directors of the cancer research program feel that they have every reason to be confident in the new cancer wing as the Medical Center is staffed with some of the "most brilliant scientists in the nation."

1974-11-07-the-elizabethtown-chronicle-pennsylvania-sec-2-pg-2-clip-cancer-center

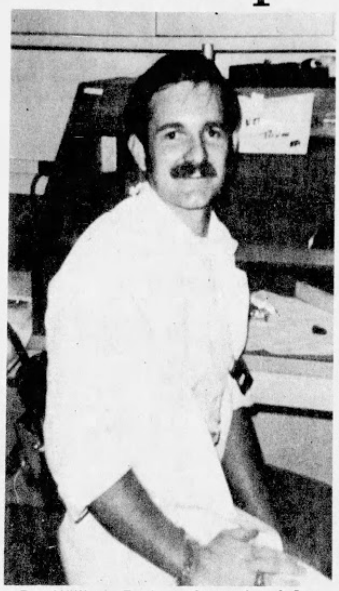
[HN00VF][GDrive]

1975 (April 16)

Full newspaper page - [HN00VG][GDrive]

Viruses could be cause of disease in breasts

Former port grad close to cancer breakthrough



Dr. William Drohan, formerly of San Pedro, is working on a possible breakthrough in breast cancer research. He is investigating the possibility that viruses cause human breast cancer and is trying to isolate the virus.

By Bobbie Ellis
Staff writer

A microbiologist, who was graduated in 1964 from Fermin Lasuen High School in San Pedro, is working on a possible breakthrough in breast cancer research.

Dr. William Nash Drohan, 28, the son of Mr. and Mrs. Robert P. (Christine) Drohan, 1424 N. Cabrillo Ave., San Pedro, is investigating the possibility that viruses cause human breast cancer.

Although a human breast cancer virus has yet to be isolated, Drohan is using a virus isolated from a natural-occuring mammary tumor of a female Rhesus monkey as a means to study the human disease.

Using the monkey virus as a probe, the former Holy Trinity Elementary School student has identified what appear to be fragments of a human breast cancer virus in tissues from women with malignant breast cancer.

No similar various pieces have been found in normal human tissue, according to the Department of Health, Education and Welfare (hew).

Working in a Springfield, Va. Laboratory supported by the Special Virus Cancer program of the National Cancer Institute, Drohan has not put cells from the malignant breast tissue into laboratory culture tubes, where he is artifically growing them in an attempt to induce a cancer virus.

If this line of research proves successful, the former San Pedran hopes to raise a vaccine that, when innocluated into female infants, would prevent viral related breast cancer in adulthood.

According to the Public Health Service's National Institues of Health in Bethesda, Md., if the becomes impossible for Drohan to isolate the cancer virus from the human cells, he will try to purify the viral fragments he already has identified.

These fragments, then, will be employed as tools to generate diagnostic tests for the early detection of breast cancer.

The prognosis for patients with breast cancer which is detected and treated early is quite good. The outlook becomes even better as surgical and chemotherapeutic treatment improves.

Drohan's research is supported by a contact within the Special Virus Cancer program. He also has received support from the American Cancer Society.

Born in Boston, Mass., Drohan grew up in San Pedro.

He received his bachelor of arts degree in medical microbiology in 1968 from the University of California at Los Angeles, after which he was accepted at the UCLA pre-doctoral laboratories.

In 1970, he was awarded a U.S. Public Health Service grant of $22,500 for research into the virus AMV (Avian Myoblastosis) known to cause acute lymphatic leukemia in chickens.

The grant enabled him to investigate AMV's effect on chicken neucleic acid, the herditary material, and apply the results to humans.

Drohan's superior at the time was Dr. Marcel Baluda, a Nobel prize winner for work in cancer research.

Drohan received his doctorate from UCLA in 1973.

He and his wife, Marian, make their home in Annandale, Va.

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1976 (March 09)

Full newspaper page - [HN00VI][GDrive]

Money Pours In But Cancer War Drags

The Pittsburgh Press
IN THIS SECTION
Editorials, Finance, Sports, Want Ads, Comics, TV
Page 13 Tuesday, March 9, 1976

(This is the third in a series excerpted from 'The Patchwork Mouse,' the just-published book on cancer research by veteran science reporter Joseph Hixson.)

By JOSEPH HIXSON

The American public suffers from time to time with a preoccupation over a single disease and today that disease is cancer.

For reasons that are obscure, cancer had almost the taboo status of a venereal disease all through the 19th century and well into the 20th. Outlays by the U.S. Hygienic Laboratory, predecessor of the Public Health Service, when it started supporting a special cancer laboratory at Harvard in 1922, totaled $11,000.

By March, 1975, the total appropriated by Congress for cancer research had reached $691 million.

Among those opposing such huge outlays for cancer research were formidable men like Dr. James Ewing, then director of New York's Memorial Sloan-Kettering Hospital.

A solution for cancer, he argued when Congress was debating establishment of a National Cancer Institute in 1937, 'will come when science is ready for it and cannot be hastened by pouring sums of money into the effort.'

Those are not the sort of words today's American Cancer Society likes to hear. The society orchestrates its campaign for funds carefully but with little regard for consistency.

While it keeps an up-to-date list of celebrities who have died of the disease, it also encourages articles by or about people who have survived cancer's onslaught and publicizes the celebrities among them, such as Shirley Temple Black, Betty Ford and Happy Rockefeller.

The American Cancer Society's slogan "Early Detection Means Longer Life," pinpoints one of the many ambiguities inherent in making the public aware of cancer. It can easily be self-fulfilling and hence misleading.

Since a tumor in its earliest phase, when it is a single aberrant cell or perhaps two or four cells, is undetectable by any medical tests known today, doctors cannot know the moment when a person develops cancer.

What had in 1964 looked like a simple hunt for cancer-causing viruses against which medicine might produce vaccines, turned out to be a far more complex matter.

Therefore, two people could become cancer victims on the same day, but the tumor of one of them might be diagnosed as cancer a year before that of the other.

If subsequently both died on the same day, the patient with the earlier detection would obviously think he or she had lived a year longer with cancer. So would the physicians.

And there is the matter of defining a cancer cure.

Medicine generally, and the cancer society in particular, have defined a cured cancer patient as one who survives five years after cancer has been diagnosed. This definition, of course, makes it possible for a cancer victim dying in his sixth year of the disease to be labeled as cured.

Finally, there is the problem of the location of the tumor. Cancer does not directly kill its victims. A patient with a brain tumor frequently dies of the pressure generated by the growing mass of cells in the skull.

Cancer patients with small and slowly growing tumors frequently succumb to neglect while being carefully cared for in bed.

Insufficient exercise can give rise to blood clots in the legs that, traveling through the veins and arteries, eventually are trapped in a lung vessel that is too small to let them pass. The patient then dies of a pulmonary embolism.

Since the fatality is classifiable as a cardiovascular death resulting from cancer, it is at least arguable whether those stumping for more cancer money — from the point of view of the American Heart Association at the expense of the National Heart and Lung Institute — should be allowed to claim such patients as cancer deaths to prove their case.

Likewise, patients with leukemia usually succumb to an overwhelming infection or hemorrhage. Their demise could thus be linked to diseases in the domain of either the National Institute for Allergy and Infectious Disease or the heart-lung area.

Such niceties, however, are not normally of great concern to politicians looking for a stone of disease on which to inscribe their names as a testimonial for the next election.

The House of Representatives, for example, in 1970 passed a resolution urging an all-out war on cancer.

Such Senate names as Edward M. Kennedy have long championed the war.

President Richard Nixon added another $100 million for cancer research in 1971.

And on top of the extra money, Mr. Nixon spelled out the goal in his State of the Union address in a sentence that not even the American Cancer Society writers could have improved upon:

"The time has come when the same kind of concentrated effort that split the atom and took man to the moon should be turned toward conquering this dread disease."

Heaven knows, there was more cancer hardware already in U.S. hospitals than could be used on a daily, economic basis. But in 1944 and 1961, science knew much, much more about the atomic nucleus and rocketry than doctors even now know about cancer.

In November, 1971, the Cancer Act was voted and the President signed it on Dec. 23. The bill authorized expenditures of $1.59 billion for cancer research over the next three years.

It also set up a National Cancer Advisory Board and established a three-man panel that would keep the President informed of progress and administrative problems in the program that might need his attention.

The idea of a war against cancer, with attendant connotations of defense industries and the comparisons with the space program, where contracting had been so successfully used, lured the cancer institute into a scandalous situation.

The notion of quick success paved the way for expansion of the special cancer virus program.

A handful of National Cancer Institute administrators were contracting for more than $40 million worth of viruses, epidemiology studies and animal tumor systems. It was an uneasy situation and rife with opportunities for conflict of interest.

But while the virus-program contractors were enjoying their windfalls, the scientific aspect of viral cancer causation was growing in complexity. No longer did it seem likely that a single virus infecting a human being could directly produce a cancer.

What had in 1964 looked like a simple hunt for viruses against which medicine might produce vaccines, turned out to be a far more complex matter with at least three different theories competing for validation and the whole picture growing murkier by the day.

The National Cancer Advisory Board was aware of the dissatisfactions voiced by virologists at the seeming exclusivity of the National Cancer Institute's program in their field.

Early in 1973 the board suggested a committee of 10 scientists look into the project. It promptly became known by the name of its distinguished chairman, Norton Zinder, microbial genetics professor at Rockefeller University.

When the Zinder Committee's report was made public in March, 1974, it became apparent how far highly reputed scientists could deviate from accepted standards of integrity when tempted to bolster their theorems and prejudices with huge sums of the public's money.

Although the 39-page report cited several justifications for the value to cancer research of a special effort on tumor viruses, the committee had also sought to learn from the National Institutes of Health how much money it was spending on all virus research and how much on virus research related to cancer.

It found that in fiscal 1972, the nation's health research center had made about 2,000 grants with peer review that came to about $120 million of which "about $58 million went to studies in some way related to cancer."

Of these, the center had awarded 100 grants in the area of virus research amounting to $7 million while the special virus cancer program (SVCP) had spent six times as much on 131 contracts.

The report made it plain at the outset that the committee took a dim view of such concentration of cancer virus money in so few hands.

Toward the end of its report, the Zinder Committee commented, "The vision that established the program was sound, but the underlying philosophy that the role of management of fundamental science is the same as the role of management for engineering or development when the fundamental knowledge is available, was sadly in error."

When Director Frank Rauscher of the National Cancer Institute was asked about the possible development of a cancer virus vaccine for humans, he replied, "My position has always been that vaccines are something we must strive for. Vaccines are probable.

"But to anybody in science it's understood that it's one thing to develop the capability of making a vaccine but then you have to prove that it's safe . . . I've never felt we were going to get a proven, effective vaccine in less than 10 years."

As for microbiologist Zinder, he doesn't think there's ever going to be a cancer vaccine

From the book, "The Patchwork Mouse." Copyright 1976 by Joseph Hixson. Published by Anchor Press-Doubleday & Co. Inc.

TOMORROW: Murmurs of betrayal.

'The Patchwork Mouse'

Meet Mary Tyler Moore

By JERRY PARKER

Mary Tyler Moore initially invaded the national consciousness in the early 1960s as the TV wife of Dick Van Dyke on the "Dick Van Dyke Show."

In five years, she collected five Emmy nominations and two Emmy awards.

On her own six-year-old CBS series, she has gone on to greater glory, several million dollars and a firmer grip on the title of America's sweetheart.

Mary Richards, the Minneapolis TV newswoman she plays, is the first situation comedy heroine to be beautiful, bright, funny, single and frankly over-30.

Miss Moore herself is 38 and has a 19-year-old son from her first marriage. For the past 12 years she has been married to Grant Tinker, head of MTM Productions.

The company produces "The Mary Tyler Moore Show," its two hit spin-offs, "Rhoda" and "Phyllis," and two other prime-time series.

The Tinker marriage spanned the dark days of Miss Moore's career, the time in the late 1960s when she starred in several movie failures and was involved in one Broadway disaster.

(Her recent TV special, "Mary's Incredible Dream," was panned by the critics and will probably have to be added to the list of career disappointments.)

Two years ago, the Tinkers hit a marital snag but they are now reconciled.

Mary Tyler Moore granted this interview in her trailer-dressing room in Studio City, Calif.

Q.—One writer said Mary Richards may be the best-liked TV character in America. Why is she so appealing?

MISS MOORE—That's a tough question. It's almost like saying "Why do you think your friends like you, Mary?" because the character of Mary Richards and the character of Mary Tinker are very similar.

It's hard for me to be objective about it. Her vulnerability is a very appealing quality, and the fact that she has enough confidence to at times assert herself.

Q.—How do the two Marys differ?

MISS MOORE: We are pretty much the same person. I think our values are similar. Our self-imposed goals and standards of perfection are similar. Mary Richards expects a lot of herself and I know I do.

Of course, our living circumstances are quite different. I am very happy to be married and to share my life and Mary Richards has no conception of what that can be and is not searching for it.

Mary Tyler Moore: 'I never thought of myself as pretty.'

Q.—You're America's best-known "bachelor girl," yet you yourself have never been in that situation, have you?

MISS MOORE—No. I have always been with somebody. I married my first husband three months after graduating from high school and there was a very short separation and divorce period between that marriage and my marriage to Grant.

Q.—Could you function well as a single?

MISS MOORE—If I had to. If, God forbid, something happened to Grant, I would have to live alone and learn to adjust. And that would be difficult.

Q.—Is this season the end of Mary Richards?

MISS MOORE—No, there are two more seasons—this one, one more and then we'll quit.

Q.—Why is that?

MISS MOORE—The show has been

Q.—Couldn't you have a broader range in movies?

MISS MOORE—Not in the field of comedy. I see very few really funny movies and I see an awful lot of really funny television. I'm quite happy with the medium of television.

Q.—Are you sensitive on the subject of age?

MISS MOORE—I have very little choice in the matter, since I have a 19-year-old son. I was born in 1937.

Q.—Were you always pretty?

MISS MOORE—Am I?

Q.—Don't you know?

MISS MOORE—I am not being coy but I have never thought of myself as being pretty, from the day I first looked into a mirror to this very moment.

Q.—Didn't other people tell you?

MISS MOORE—People tell me a lot of things and I tend not to believe them. I'm one of those people who believes only the bad reviews, never the good reviews.

Q.—I think your public pictures you as having been a cheerleader-homecoming queen type in high school. Were you?

MISS MOORE—I was none of those things. I was an ambitious kid who really wanted to be a dancer. I had friends, but they always came second. So I was something of a loner.

Q.—After years of telling reporters "I don't discuss my personal life," you gave the Ladies Home journal an interview in which you and your husband talked quite openly about your separation and reconciliation. Why was that?

MISS MOORE—We felt almost missionary-like about that particular article, and it is not something I would want to do again, nor would Grant.

Newsday Service

CIA Traps Falcons For Sheiks

By JACK ANDERSON

were intended merely as a gift for the

[HN00VJ][GDrive]

1977 (Feb 06)

Full newspaper page - [HN00VK][GDrive]

University Labs offers variety of services

HIGHLAND PARK — University Laboratories, Inc., 810 North Second Avenue, is a biological research, testing and consulting laboratory. Founded in 1959 by Dr. Eugene H. Bernstein, it had its modest beginning in the basement of a frame building on Carroll Place, New Brunswick.

In 1962, University Laboratories was awarded its first contract by the National Cancer Institute, National Institutes of Health, to investigate and produce avian and mammalian tumor and leukemia viruses. Moving into a modern new building designed specifically for certain types of research, Bernstein was joined by Frederick A. Frant, who now is vice president, and two other virologists.

The business was incorporated in 1964, and was awarded a National Cancer Institute contract which tripled the original. University Laboratories expanded its staff by 12 more scientists and technicians.

The year 1965 saw an expansion of facilities at its present site. An additional 7,500 square feet, which enlarged the building four-fold, was constructed.

When the Soviet-American scientific exchange program was announced in 1972, the Special Virus Cancer Program selected University Laboratories to prepare 32 cancer viruses as part of the United States gift to the Soviet Union. A U.S. scientific team which accompanied President Nixon to the U.S.S.R. presented this package to their Russian counterparts.

University Laboratories will shortly enter its 15th consecutive year under contract to the National Cancer Institute. This is a fact very few contractors can boast of, and attests to the high quality of work accomplished under the Special Virus Cancer Program. During these years, University Labs has produced many different strains of cancer and leukemia viruses and antisera to these viruses, and is one of the few laboratories in the country capable of doing this type of production successfully.

The personnel employed to work in the virus areas are carefully screened to establish that they are completely familiar with concepts of sterility and safety procedures.

Although virology is its major field of endeavor, University Labs provides many services for the pharmaceutical, chemical, cosmetic and food industries. These services include evaluation of agents for bactericidal, fungicidal and virucidal activity; tests for nutrition, physiology and vitamin evaluation; and a wide variety of toxicity testing of drugs, cosmetics and chemicals. In addition, the laboratories are involved in carcinogenesis testing in animals, mutagenesis testing using bacteria and yeast and teratogenic studies. The mutagenesis program, in particular, is expanding very rapidly. It is a relatively inexpensive screen for the capacity of a chemical to cause mutations in microorganisms. Since most mutagenic compounds have been demonstrated to be carcinogenic, the potential hazard of a chemical may be predicted quickly and inexpensively.

The firm is involved in food microbiology and is the national testing laboratory for the largest doughnut manufacturer in the United States.

While University Laboratories performs studies involving the common laboratory animals such as mice, rabbits, guinea pigs, etc., it is also concerned with the raising of the common house fly (Musca domestica). These flies are raised through the various life cycle phases under exacting temperature, humidity and nutritional environment so that each generation is exactly as the previous. The flies are used for insecticide testing and are housed in special screened cages in a room appropriately dubbed the "Fly Room." When one considers that should all the progeny of the original two flies survive, at the end of only 6 months, there would be enough flies to cover the entire surface of the globe 47 feet deep, we can all be relieved that University Labs is in the insecticide battle! It is difficult to imagine how many flies there would be should all have survived since University Labs started raising them in 1965.

1977)-02-06-the-central-new-jersey-home-news-pg-b-10-clip-univ-labs

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Housatonic

Dr. Andrew Jeremy Wakefield (born 1957)

Wikipedia Andrew Wakefield

Associations

- Dr. Peter Daszak (born 1965) (Measles vaccine study, that sort of started it all for Dr. Wakefield)

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Andrew Wakefield

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Andrew Wakefield

Wakefield at an anti-vaccine rally in Poland, 2019

Born

Andrew Jeremy Wakefield

1957 (age 63–64)[1][2]

Eton, Berkshire, England

Nationality

British

Education

King Edward's School, Bath

Alma mater

St Mary's Hospital Medical School, London

Occupation

Former physician, anti-vaccination activist

Known for

Lancet MMR autism fraud

This article is part of a series on

Alternative medicine

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Andrew Jeremy Wakefield (born 1957) is a British former physician and academic who was struck off the medical register due to his involvement in the *Lancet* MMR autism fraud, a 1998 study that falsely claimed a link between the measles, mumps, and rubella (MMR) vaccine and autism. He has subsequently become known for anti-vaccination activism. Publicity around the 1998 study caused a sharp decline in vaccination uptake, leading to a number of outbreaks of measles around the world. He was a surgeon on the liver transplant programme at the Royal Free Hospital in London and became senior lecturer and honorary consultant in experimental gastroenterology at the Royal Free and University College School of Medicine. He resigned from his positions there in 2001, "by mutual agreement", then moved to the United States. In 2004, Wakefield began working at the Thoughtful House research center in Austin, Texas, serving as Executive Director there until February 2010, when he resigned in the wake of findings against him by the British General Medical Council.

Wakefield published his 1998 paper on autism in the prestigious medical journal *The Lancet*, claiming a novel form of enterocolitis linked to autism. However, other researchers were unable to reproduce his findings,[3][4] and a 2004 investigation by *Sunday Times* reporter Brian Deer identified undisclosed financial conflicts of interest on Wakefield's part.[5] Most of Wakefield's co-authors then withdrew their support for the study's interpretations,[6] and the British General Medical Council (GMC) conducted an inquiry into allegations of misconduct against Wakefield and two former colleagues,[7] focusing on Deer's findings.[8]

In 2010, the GMC found that Wakefield had been dishonest in his research, had acted against his patients' best interests and mistreated developmentally delayed children,[9] and had "failed in his duties as a responsible consultant".[10][11][12] *The Lancet* fully retracted Wakefield's 1998 publication on the basis of the GMC's findings, noting that elements of the manuscript had been falsified and that the journal had been "deceived" by Wakefield.[13][14] Three months later, Wakefield was struck off the UK medical register, due in part to his deliberate falsification of research published in *The Lancet*,[15] and was barred from practising medicine in the UK.[16] In a related legal decision, a British court held that "[t]here is now no respectable body of opinion which supports [Dr. Wakefield's] hypothesis, that MMR vaccine and autism/enterocolitis are causally linked".[17] Wakefield has continued to defend his research and conclusions, saying there was no fraud, hoax or profit motive.[18][19][20] In 2016, Wakefield directed the anti-vaccination film *Vaxxed: From Cover-Up to Catastrophe*.

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Early life and education

Wakefield was born in 1957;[1][2] his father was a neurologist and his mother was a general practitioner.[21] After leaving the independent King Edward's School, Bath,[22] Wakefield studied medicine at St Mary's Hospital Medical School[21] (now Imperial College School of Medicine), fully qualifying in 1981.

Wakefield became a fellow of the Royal College of Surgeons in 1985.[2]

Career

At the University of Toronto from 1986 to 1989, he was a member of a team that studied tissue rejection problems with small intestine transplantation, using animal models.[23][24] He continued his studies of small intestine transplantation under a Wellcome Trust travelling fellowship at University of Toronto in Canada.[2]

Claims of measles virus–Crohn's disease link

Back in the UK, he worked on the liver transplant programme at the Royal Free Hospital in London.[2] In 1993, Wakefield attracted professional attention when he published reports in which he concluded that measles virus might cause Crohn's disease;[25] and two years later he published a paper in *The Lancet* proposing a link between the measles vaccine and Crohn's disease.[26] Subsequent research failed to confirm this hypothesis, with a group of experts in Britain reviewing a number of peer-reviewed studies in 1998 and concluding that the measles virus did not cause Crohn's disease, and neither did the MMR vaccine.[27]

Later, in 1995, while conducting research into Crohn's disease, he was approached by Rosemary Kessick, the parent of a child with autism, who was seeking help with her son's bowel problems and autism; Kessick ran a group called Allergy Induced Autism.[28] In 1996, Wakefield turned his attention to researching possible connections between the MMR vaccine and autism.[2]

At the time of his MMR research study, Wakefield was senior lecturer and honorary consultant in experimental gastroenterology at the Royal Free Hospital School of Medicine (from 2008, UCL Medical School). He resigned in 2001,[29] by "mutual agreement and was made a fellow of the Royal College of Pathologists",[30] and moved to the US in 2001[31] (or 2004, by another account).[30] He was reportedly asked to leave the Royal Free Hospital after refusing a request to validate his 1998 *Lancet* paper with a controlled study.[32]

Wakefield subsequently helped establish and served as the executive director of Thoughtful House Center for Children, which studies autism in Austin, Texas, where, according to *The Times*, he "continued to promote the theory of a link between the MMR vaccine and autism, despite admitting it was 'not proved'."[30] He resigned from Thoughtful House in February 2010, after the British General Medical Council found that he had been "dishonest and

irresponsible" in conducting his earlier autism research in England.[23][33] *The Times* reported in May 2010 that he was a medical advisor for Visceral, a UK charity that "researches bowel disease and developmental disorders".[30]

Wakefield is barred from practising as a physician in the UK,[16] and is not licensed in the US.[34] He lives in the US where he has a following, including the anti-vaccinationist Jenny McCarthy,[35] who wrote the foreword for Wakefield's autobiography, *Callous Disregard*. She has a son with autism-like symptoms that she believes were caused by the MMR vaccine.[36][37] According to Brian Deer, as of 2011, Wakefield lives near Austin with his family.[23][38]

Wakefield has set up the non-profit Strategic Autism Initiative to commission studies into the condition, and is currently listed as a director of a company called Medical Interventions for Autism and another called the Autism Media Channel.[38]

The Lancet fraud

Main article: Lancet MMR autism fraud

On 28 February 1998, Wakefield was the lead author of a study of twelve children with autism that was published in *The Lancet*. The study proposed a new syndrome called autistic enterocolitis, and raised the possibility of a link between a novel form of bowel disease, autism, and the MMR vaccine. The authors said that the parents of eight of the twelve children linked what were described as "behavioural symptoms" with MMR, and reported that the onset of these symptoms began within two weeks of MMR vaccination.

These possible triggers were reported as MMR in eight cases, and measles infection in one. The paper was instantly controversial, leading to widespread publicity in the UK and the convening of a special panel of the UK's Medical Research Council the following month.[39] One 2005 study in Japan found that there was no causal relationship between the MMR vaccine and autism in groups of children given the triple MMR vaccine and children who received individual measles, mumps and rubella vaccinations. In Japan, the MMR vaccine had been replaced with individual vaccinations in 1993.[40]

Although the paper said that no causal connection had been proven, before it was published, Wakefield made statements at a press conference and in a video news release issued by the hospital, calling for suspension of the triple MMR vaccine until more research could be done.[41] This was later criticized as 'science by press conference'.[42] According to BBC News, it was this press conference, rather than the paper in *The Lancet*, that fuelled the MMR vaccination scare.[43] The BBC report said he told journalists: "it was a 'moral issue' and he could no longer support the continued use of the three-in-one jab for measles, mumps and rubella. 'Urgent further research is needed to determine whether MMR may give rise to this complication in a small number of people,' Wakefield said at the time."[43] He said, "If you give three viruses together, three live viruses, then you potentially increase the risk of an adverse event occurring, particularly when one of those viruses influences the immune system in the way that measles does."[41] He suggested parents should opt for single vaccinations against measles, mumps and rubella, separated by gaps of one year. *60 Minutes* interviewed him in November 2000, and he repeated these claims to the U.S. audience, providing a new focus for the nascent anti-vaccination movement in the U.S., which had been primarily concerned about thiomersal in vaccines.[44][45] In December 2001, Wakefield resigned from the Royal Free Hospital, saying, "I have been asked to go because my research results are unpopular."[29] The medical school said that he had left "by mutual agreement". In February 2002, Wakefield stated: "What precipitated this crisis was the removal of the single vaccine, the removal of choice, and that is what has caused the furore—because the doctors, the gurus, are treating the public as though they are some kind of moronic mass who cannot make an informed decision for themselves."[46]

Aftermath of initial controversy

Wakefield continued to conduct clinical research in the United States after leaving the Royal Free Hospital in December 2001. He joined a controversial American researcher, Jeff Bradstreet, at the International Child Development Resource Center, to conduct further studies on the possible relationship between the MMR vaccine and autism.[47]

In 2004, Wakefield began working at the Thoughtful House research center in Austin, Texas.[48] Wakefield served as Executive Director of Thoughtful House until February 2010, when he resigned in the wake of findings against him by the British General Medical Council.[33][49]

In February 2004, the controversy resurfaced when Wakefield was accused of a conflict of interest. In *The Sunday Times*, Brian Deer reported that some of the parents of the 12 children in the study in *The Lancet* were recruited via a UK lawyer preparing a lawsuit against MMR manufacturers, and that the Royal Free Hospital had received £55,000 from the UK's Legal Aid Board (now the Legal Services Commission) to pay for the research.[50] Previously, in October 2003, the board had cut off public funding for the litigation against MMR manufacturers.[51] Following an investigation of the allegations in *The Sunday Times* by the UK General Medical Council, Wakefield was charged with serious professional misconduct, including dishonesty.[52] In December 2006, Deer, writing in *The Sunday Times*, further reported that in addition to the money they donated to the Royal Free Hospital, the lawyers responsible for the MMR lawsuit had paid Wakefield personally more than £400,000, which he had not previously disclosed.[53]

Twenty-four hours before the 2004 *Sunday Times* report by Deer, *The Lancet*'s editor Richard Horton responded to the investigation in a public statement, describing Wakefield's research as "fatally flawed" and said he believed the paper would have been rejected as biased if the peer reviewers had been aware of Wakefield's conflict of interest.[54] Ten of Wakefield's twelve co-authors of the paper in *The Lancet* later published a retraction of an interpretation.[55] The section of the paper retracted read as follows:

> Interpretation. We identified associated gastrointestinal disease and developmental regression in a group of previously normal children, which was generally associated in time with possible environmental triggers.

The retraction stated:[55]

> We wish to make it clear that in this paper no causal link was established between (the) vaccine and autism, as the data were insufficient. However the possibility of such a link was raised, and consequent events have had major implications for public health. In view of this, we

> consider now is the appropriate time that we should together formally retract the interpretation placed upon these findings in the paper, according to precedent.[56]

Wakefield v Channel 4 and others

In November 2004, Channel 4 broadcast a one-hour *Dispatches* investigation by reporter Brian Deer; the *Toronto Star* said Deer had "produced documentary evidence that Wakefield applied for a patent on a single-jab measles vaccine before his campaign against the MMR vaccine, raising questions about his motives".[23][57][58]

In addition to Wakefield's unpublished initial patent submission,[57] Deer released a copy of the published patent application.[59] At page 1, the first paragraph of this stated:

> The present invention relates to a new vaccine/immunisation for the prevention and/or prophylaxis against measles virus infection and to a pharmaceutical or therapeutic composition for the treatment of IBD (Inflammatory Bowel Disease); particularly Crohn's Disease and Ulcerative Colitis and regressive behavioural disease (RBD) (also referred to as "Pervasive Developmental Disorder).

Before describing the research in Wakefield's 1998 paper in *The Lancet*, at the same page this patent explicitly states that the use of the MMR vaccine causes autism:

> It has now also been shown that use of the MMR vaccine (which is taken to include live attenuated measles vaccine virus, measles virus, mumps vaccine virus and rubella vaccine virus, and wild strains of the aforementioned viruses) results in ileal lymphoid nodular hyperplasia, chronic colitis and pervasive developmental disorder including autism (RBD), in some infants.

According to Deer, a letter from Wakefield's lawyers to him dated 31 January 2005 said: "Dr Wakefield did not plan a rival vaccine."[57]

In the *Dispatches* programme, Deer also revealed that Nicholas Chadwick, a researcher working under Wakefield's supervision in the Royal Free medical school, had failed to find measles virus in the children reported on in *The Lancet*.[60]

In January 2005, Wakefield initiated libel proceedings against Channel 4, the independent production company Twenty Twenty and Brian Deer, *The Sunday Times*, and against Deer personally along with his website briandeer.com.[61] Within weeks of issuing his claims, however, Wakefield sought to have the action frozen until after the conclusion of General Medical Council proceedings against him. Channel 4 and Deer sought a High Court order compelling Wakefield to continue with his action, or discontinue it. After a hearing on 27 and 28 October 2005, Mr Justice David Eady ruled against a stay of proceedings:

> It thus appears that the Claimant wishes to use the existence of the libel proceedings for public relations purposes, and to deter other critics, while at the same time isolating himself from the "downside" of such litigation, in having to answer a substantial defence of justification ... I am quite satisfied, therefore, that the Claimant wished to extract whatever advantage he could from the existence of the proceedings while not wishing to progress them or to give the Defendants an opportunity of meeting the claims.[62]

The judgment identified Channel 4's "very lengthy extracts" summarizing Deer's allegations against Wakefield:[62]

> (i) [Wakefield] spread fear that the MMR vaccine might lead to autism, even though he knew that his own laboratory had carried out tests whose results dramatically contradicted his claims in that the measles virus had not been found in a single one of the children concerned in his study and he knew or ought to have known that there was absolutely no basis at all for his belief that the MMR should be broken up into single vaccines.
>
> (ii) In spreading such fear, acted dishonestly and for mercenary motives in that, although he improperly failed to disclose the fact, he planned a rival vaccine and products (such as a diagnostic kit based on his theory) that could have made his fortune
>
> (iii) Gravely abused the children under his care by unethically carrying out extensive invasive procedures (on occasions requiring three people to hold a child down), thereby driving nurses to leave and causing his medical colleagues serious concern and unhappiness
>
> (iv) Improperly and/or dishonestly failed to disclose to his colleagues and to the public that his research on autistic children had begun with a contract with solicitors who were trying to sue the manufacturers of the MMR vaccine
>
> (v) Improperly or dishonestly lent his reputation to the International Child Development Resource Centre, which promoted to very vulnerable parents expensive products for whose efficacy (as he knew or should have known) there was no scientific evidence

Mr. Justice Eady's ruling states that, "The views or conclusions of the GMC disciplinary body would not, so far as I can tell, be relevant or admissible", that Channel 4's allegations "go to undermine fundamentally the Claimant's professional integrity and honesty", and that, "It cannot seriously be suggested that priority should be given to GMC proceedings for the resolution of issues."

In December 2006, Deer released records obtained from the Legal Services Commission, showing that it had paid £435,643 in undisclosed fees to Wakefield for the purpose of building a case against the MMR vaccine.[63] Those payments, *The Sunday Times* reported, had begun two years before publication of Wakefield's paper in *The Lancet*.[53] Within days of Deer's report, Wakefield dropped all his libel actions[64] and was ordered to pay all defendants' legal costs.[65][66]

Other concerns

Wakefield's data was also questioned;[67] a former graduate student, who appeared in Deer's programme, later testified that Wakefield ignored laboratory data that conflicted with his hypothesis. An independent investigation of a collaborating laboratory questioned the accuracy of the data underpinning Wakefield's claims.[68]

In June 2005, the BBC programme *Horizon* reported on an unnamed and unpublished study of blood samples from a group of 100 autistic children and 200 children without autism. They reported finding 99% of the samples contained no trace of the measles virus, and the samples that did contain the virus were just as likely to be from non-autistic children, i.e., only three samples contained the measles virus, one from an autistic child and two from a typically developing child. The study's authors found no evidence of any link between MMR and autism.[69]

The Institute of Medicine (IOM) of the United States National Academy of Sciences,[70] along with the CDC[71] and the UK National Health Service,[72] have found no link between vaccines and autism. Reviews in the medical literature have also found no link between the MMR vaccine and autism or with bowel disease, which Wakefield called "autistic enterocolitis".[73][74][75]

General Medical Council hearings

Between July 2007 and May 2010, a 217-day "fitness to practise" hearing of the UK General Medical Council examined charges of professional misconduct against Wakefield and two colleagues involved in the paper in *The Lancet*.[76][77] The charges included that he:

- "Was being paid to conduct the study by solicitors representing parents who believed their children had been harmed by MMR".[76]
- Ordered investigations "without the requisite paediatric qualifications" including colonoscopies, colon biopsies and lumbar punctures ("spinal taps") on his research subjects without the approval of his department's ethics board and contrary to the children's clinical interests,[76] when these diagnostic tests were not indicated by the children's symptoms or medical history.
- "Act[ed] 'dishonestly and irresponsibly' in failing to disclose ... how patients were recruited for the study"[76] as well as in his descriptions in the Lancet papers and in questions after the paper published, about what ailments the children had, and when those ailments were observed relative to their getting vaccinated.[78][79]:Paragraphs 33–36, pp 45–48
- "Conduct[ed] the study on a basis not approved by the hospital's ethics committee."[76]
- Purchased blood samples—for £5 each—from children present at his son's birthday party, which Wakefield joked about in a later presentation.[76]
- "[S]howed callous disregard for any distress or pain the children might suffer"[15]

Wakefield denied the charges;[80] on 28 January 2010, the GMC ruled against Wakefield on all issues, stating that he had "failed in his duties as a responsible consultant",[10] acted against the interests of his patients,[10] and "dishonestly and irresponsibly" in his controversial research.[11] On 24 May 2010, he was struck off the United Kingdom medical register. It was the harshest sanction that the GMC could impose, and effectively ended his career as a physician. In announcing the ruling, the GMC said that Wakefield had "brought the medical profession into disrepute", and no sanction short of erasing his name from the register was appropriate for the "serious and wide-ranging findings" of misconduct.[16][81] On the same day, Wakefield's autobiography, *Callous Disregard* was published, using the same words as one of the charges against him ("he showed callous disregard for any distress or pain the children might suffer").[15] Wakefield argued that he had been unfairly treated by the medical and scientific establishment.[82]

Fraud and conflict of interest allegations

In February 2009, *The Sunday Times* reported that a further investigation by the newspaper had revealed that Wakefield "changed and misreported results in his research, creating the appearance of a possible link with autism",[83] citing evidence obtained by the newspaper from medical records and interviews with witnesses, and supported by evidence presented to the GMC.

In April 2010, Deer expanded on laboratory aspects of his findings in a report in the *BMJ*, recounting how normal clinical histopathology results (obtained from the Royal Free hospital) had been subjected to wholesale changes, from normal to abnormal, in the medical school and published in *The Lancet*.[84] On 2 January 2011, Deer provided two tables comparing the data on the twelve children, showing the original hospital data and the data with the wholesale changes as used in the 1998 *The Lancet* article.[85]

On 5 January 2011, *BMJ* published an article by Brian Deer entitled "How the case against the MMR vaccine was fixed".[86] Deer said that, based on examination of the medical records of the 12 children in the original study, his research had found:[86]

> The paper in *The Lancet* was a case series of 12 child patients; it reported a proposed "new syndrome" of enterocolitis and regressive autism and associated this with MMR as an "apparent precipitating event." But in fact:
>
> > Three of nine children reported with regressive autism did not have autism diagnosed at all. Only one child clearly had regressive autism;
> >
> > Despite the paper claiming that all 12 children were "previously normal", five had documented pre-existing developmental concerns;
> >
> > Some children were reported to have experienced first behavioural symptoms within days of MMR, but the records documented these as starting some months after vaccination;
> >
> > In nine cases, unremarkable colonic histopathology results—noting no or minimal fluctuations in inflammatory cell populations—were changed after a medical school "research review" to "non-specific colitis";
> >
> > The parents of eight children were reported as blaming MMR, but 11 families made this allegation at the hospital. The exclusion of three allegations—all giving times to onset of problems in months—helped to create the appearance of a 14-day temporal link;
> >
> > Patients were recruited through anti-MMR campaigners, and the study was commissioned and funded for planned litigation.[86]

In an accompanying editorial, *BMJ* editors said:

> Clear evidence of falsification of data should now close the door on this damaging vaccine scare ... Who perpetrated this fraud? There is no doubt that it was Wakefield. Is it possible that he was wrong, but not dishonest: that he was so incompetent that he was unable to fairly describe the project, or to report even one of the 12 children's cases accurately? No. A great deal of thought and effort must have gone into drafting the paper to achieve the results he wanted: the discrepancies all led in one direction; misreporting was gross. Moreover, although the scale of the GMC's 217-day hearing precluded additional charges focused directly on the fraud, the panel found him guilty of dishonesty concerning the study's admissions criteria, its funding by the Legal Aid Board, and his statements about it afterwards.[87]

The *British Medical Journal* editorial concluded that Wakefield's paper was an "elaborate fraud".[88][87]

In a *BMJ* follow-up article on 11 January 2011,[32] Deer stated that Wakefield had planned to capitalize on the MMR vaccination scare provoked by his paper.[89] He said that based upon documents he had obtained under Freedom of information legislation,[90] Wakefield—in partnership with the father of one of the boys in the study—had planned to launch a venture on the back of an MMR vaccination scare that would profit from new medical tests and "litigation driven testing".[89][57] *The Washington Post* reported that Deer said that Wakefield predicted he "could make more than $43 million a year from diagnostic kits" for the new condition, autistic enterocolitis.[90] According to Deer's report in *BMJ*, the ventures, Immunospecifics Biotechnologies Ltd and Carmel Healthcare Ltd —named after Wakefield's wife—failed after Wakefield's superiors at University College London's medical school gave him a two-page letter that said:

> We remain concerned about a possible serious conflict of interest between your academic employment by UCL, and your involvement with Carmel ... This concern arose originally because the company's business plan appears to depend on premature, scientifically unjustified publication of results, which do not conform to the rigorous academic and scientific standards that are generally expected.[32]

WebMD reported on Deer's *BMJ* report, saying that the $43 million predicted yearly profits would come from marketing kits for "diagnosing patients with autism" and that "the initial market for the diagnostic will be litigation-driven testing of patients with AE [autistic enterocolitis, an unproven condition concocted by Wakefield] from both the UK and the US".[91] According to WebMD, the *BMJ* article also claimed that Carmel Healthcare Ltd. would succeed in marketing products and developing a replacement vaccine if "public confidence in the MMR vaccine was damaged".[91]

In October 2012, research published in PNAS, the Proceedings of the National Academy of Sciences, identified Wakefield's 1998 paper as the most cited retracted scientific paper, with 758 citations, and gave the "reason for retraction" as "fraud".[92]

Journal retractions

On 2 February 2010, *The Lancet* formally retracted Wakefield's 1998 paper.[93][94][95] The retraction states: "The claims in the original paper that children were 'consecutively referred' and that investigations were 'approved' by the local ethics committee have been proven to be false."[13]

The following day, the editor of a specialist journal, *Neurotoxicology*, withdrew another Wakefield paper that was in press. The article, which concerned research on monkeys, had already been published online and sought to implicate vaccines in autism.[96]

In May 2010, *The American Journal of Gastroenterology* retracted a paper of Wakefield's that used data from the 12 patients of the article in *The Lancet*.[97]

On 5 January 2011, *British Medical Journal* editors recommended that Wakefield's other publications should be scrutinized and retracted if need be.[35]

Wakefield response

As of January 2011, Wakefield continued to maintain his innocence. In a press release, he stated,

> I want to make one thing crystal clear for the record—my research and the serious medical problems found in those children were not a hoax and there was no fraud whatsoever. Nor did I seek to profit from our findings ... despite media reports to the contrary, the results of my research have been duplicated in five other countries ... I continue to fully support more independent research to determine if environmental triggers, including vaccines, are causing autism and other developmental problems ... Since the Lancet [sic] paper, I have lost my job, my career and my country. To claim that my motivation was profit is patently untrue. I will not be deterred—this issue is far too important.[18]

In an Internet radio interview, Wakefield said the *BMJ* series "was utter nonsense" and denied "that he used the cases of the 12 children in his study to promote his business venture". Deer has filed financial disclosure forms and rejects Wakefield's claim that he is funded by the pharmaceutical industry.[89] According to CNN, Wakefield said the patent he held was for "an 'over-the-counter nutritional supplement' that boosts the immune system".[89] WebMD reported that Wakefield said he was the victim of "a ruthless, pragmatic attempt to crush any attempt to investigate valid vaccine safety concerns".[91]

Wakefield says that Deer is a "hit man who was brought in to take [him] down" and that other scientists have simply taken Deer at his word. While on *Anderson Cooper 360°*, he said that he had not read the *BMJ* articles yet, but he denied their validity and denied that Deer had interviewed the families of the children in the study. He also urged viewers to read his book, *Callous Disregard*, which he said would explain why he was being targeted, to which Anderson Cooper replied: "But sir, if you're lying, then your book is also a lie. If your study is a lie, your book is a lie."[98][99]

Wakefield later implied that there is a conspiracy by public health officials and pharmaceutical companies to discredit him, including suggesting they pay bloggers to post rumours about him on websites or that they artificially inflated reports of deaths from measles.[98]

Deer counter-response

Deer responded to Wakefield's charge by challenging Wakefield to sue him:

> If it is true that Andrew Wakefield is not guilty as charged, he has the remedy of bringing a libel action against myself, *The Sunday Times* of London, against the medical journal here, and he would be the richest man in America.[100]

Deer mentioned that all of Wakefield's previous libel actions had been dismissed or withdrawn.[62][100]

In January 2012, Wakefield filed a defamation lawsuit in Texas state court against Deer, Fiona Godlee, and the *BMJ* for false accusations of fraud, seeking a jury trial in Travis County. The filing identified Wakefield as a resident of Austin,[101][102] and cited the "Texas Long-Arm Statute" as justification for initiating the proceeding in Texas. The *BMJ* responded that it stood by its reports and would "defend the claim vigorously".[103][104] In August 2012 District Court Judge Amy Meachum dismissed Wakefield's suit for lack of jurisdiction.[105][106] Her ruling was upheld on appeal in September 2014 and Wakefield was ordered to pay all parties' costs.[107][108]

On 5 April 2011, Deer was named the UK's specialist journalist of the year in the British Press Awards, organised by the Society of Editors. The judges said that Deer's investigation of Wakefield was a "tremendous righting of a wrong".[109]

Epidemics, effects, and reception

See also: 2013 Swansea measles epidemic and Measles outbreaks in the 21st century

Physicians, medical journals, and editors have made statements tying Wakefield's fraudulent actions to various epidemics and deaths.[116] Michael J. Smith, a professor of pediatrics at the University of Louisville, an "infectious diseases expert who has studied the autism controversy's effect on immunization rates", said, "Clearly, the results of this [Wakefield] study have had repercussions."[117][118]

Wakefield's study and his claim that the MMR vaccine might cause autism led to a decline in vaccination rates in the United States, the United Kingdom, and Ireland, and a corresponding rise in measles and mumps infections, resulting in serious illness and deaths. His continued claims that the vaccine is harmful have contributed to a climate of distrust of all vaccines and the reemergence of other previously-controlled diseases.[119][67][36]

The Associated Press said:

> Immunization rates in Britain dropped from 92 percent to 73 percent, and were as low as 50 percent in some parts of London. The effect was not nearly as dramatic in the United States, but researchers have estimated that as many as 125,000 US children born in the late 1990s did not get the MMR vaccine because of the Wakefield splash.[117]

ABC News Channel WWAY3 said:

> Since Dr. Andrew Wakefield's study was released in 1998, many parents have been convinced the measles, mumps and rubella vaccine could lead to autism. But that study may have done more harm than good. According to the Centers for Disease Control and Prevention, in the United States, more cases of measles were reported in 2008 than any year since 1997. More than 90 percent of those infected had not been vaccinated, or their vaccination status was not known.[115]

Paul Hébert, editor-in-chief of the *Canadian Medical Association Journal* (CMAJ) said:

> There has been a huge impact from the Wakefield fiasco ... This spawned a whole anti-vaccine movement. Great Britain has seen measles outbreaks. It probably resulted in a lot of deaths.[23]

A profile in a *New York Times Magazine* article commented:

> Andrew Wakefield has become one of the most reviled doctors of his generation, blamed directly and indirectly, depending on the accuser, for irresponsibly starting a panic with tragic repercussions: vaccination rates so low that childhood diseases once all but eradicated here—whooping cough and measles, among them—have re-emerged, endangering young lives.[98]

Journalist Brian Deer called for criminal charges against Wakefield.[100]

On 1 April 2011, the James Randi Educational Foundation awarded Wakefield the Pigasus Award for "refusal to face reality".[120]

A 2011 journal article described the vaccine-autism connection as "the most damaging medical hoax of the last 100 years".[121]

In 2011, Wakefield was at the top of the list of the worst doctors of 2011 in *Medscape*'s list of "Physicians of the Year: Best and Worst".[122] In January 2012, *Time* magazine named Wakefield in a list of "Great Science Frauds".[123] In 2012 he was awarded the Lifetime Achievement in Quackery award by the Good Thinking Society.[124]

A writer from *The New York Times*, who was covering a 2011 event in Tomball, Texas where Wakefield spoke, was threatened by its organizer, Michelle Guppy: "Be nice to him, or we will hurt you." Guppy is the coordinator of the Houston Autism Disability Network.[98]

In June 2012, a local court in Rimini, Italy, ruled that the MMR vaccination had caused autism in a 15-month-old boy. The court relied heavily on Wakefield's discredited *Lancet* paper and largely ignored the scientific evidence presented to it. The decision was appealed.[125] On 13 February 2015, the decision was overturned by a Court of Appeals in Bologna.[126]

In February 2015, Wakefield denied that he bore any responsibility for the measles epidemic that started at Disneyland. He also reaffirmed his discredited belief that "MMR contributes to the current autism epidemic".[127] By that time at least 166 measles cases had been reported. Paul Offit did not agree, saying that the outbreak was "directly related to Dr. Wakefield's theory".[128]

Filmmaker Miranda Bailey followed Wakefield and his wife Carmel and their children for five years filming a documentary about Wakefield as a person, *The Pathological Optimist*. According to Robert Ladendorf writing for *Skeptical Inquirer* magazine, Bailey attempted to remain neutral and add a "human touch", which Ladendorf says was successful. Wakefield is shown "as a soft-spoken but beleaguered family man trying to resurrect his reputation and raising money

for his legal fund."[129]

In 2018, *The Skeptic* awarded Wakefield the Rusty Razor award "for pseudoscience and bad critical thinking."[130][131] The award is decided annually by readers' votes. Editor Deborah Hyde said, "Our contributors clearly felt that anti-vaccination damage is still a current issue, despite Mr. Wakefield first having come to public attention so long ago. These childhood diseases can do real damage, so we're proud to be an organisation that gets the good news out there – the evidence is overwhelming that vaccination is safe. Protect your children and your community by using it."[132]

Political activism

Wakefield was scheduled to testify before the Oregon Senate Health Care Committee on 9 March 2015, in opposition to Senate Bill 442,[133] "a bill that would eliminate nonmedical exemptions from Oregon's school immunization law".

The Oregon Chiropractic Association had invited him. The chairman of the committee then canceled the meeting "after it became clear that" Wakefield planned to testify. She denied that her decision had anything to do with Wakefield's plans.[134]

On 24 April 2015, Wakefield received two standing ovations from the students at Life Chiropractic College West when he told them to oppose Senate Bill SB277, a bill that proposes elimination of non-medical vaccine exemptions.[135] Wakefield had previously been a featured speaker at a 2014 "California Jam" gathering of chiropractors,[136] as well as a 2015 "California Jam" seminar, with continuing education credits, sponsored by Life Chiropractic College West.[137] On 3 July 2015, Wakefield participated in a protest held in Santa Monica, California, against SB 277,[138] a recently enacted bill which removed the personal belief exemption to school vaccine requirements in California state law.[139]

Vaxxed film

Main article: Vaxxed

In 2016, Wakefield directed the anti-vaccination propaganda film *Vaxxed: From Cover-Up to Catastrophe*.[145] The film purports to show "an appalling cover-up committed by the government agency charged with protecting the health of American citizens [the US Centers for Disease Control and Prevention (CDC)] ... an alarming deception that has contributed to the skyrocketing increase of autism and potentially the most catastrophic epidemic of our lifetime."[146] The film was withdrawn from New York's 2016 Tribeca Film Festival after the festival's founder Robert De Niro (who has a child with autism) reversed his decision to include it.[147] Wakefield called this action censorship.[148] Ian Lipkin, professor of epidemiology and director of the Center for Infection and Immunity at the Columbia University Mailman School of Public Health, writing in *The Wall Street Journal*, said: "If *Vaxxed* had been submitted as science fiction, it would merit attention for its story line, character development and dialogue. But as a documentary it misrepresents what science knows about autism, undermines public confidence in the safety and efficacy of vaccines, and attacks the integrity of legitimate scientists and public-health officials".[149]

Selected publications

Books

- Wakefield, Andrew J (24 May 2010). *Callous Disregard: Autism and Vaccines: The Truth Behind a Tragedy*. Skyhorse Publishing. ISBN 978-1-61608-169-0.

Journal articles

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See also

- List of scientific misconduct incidents

- List of scientific misconduct incidents

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Dr. Lin-Fa Wang (born 1960)

Associations :

- **Dr. Duane J. Gubler (born 1939)** - **Infectious diseases research program at Duke-NUS** (https://gvn.org/gvn-centers-of-excellence/asia-australia/singapore/)

birth date hint -

https://bioengineeringcommunity.nature.com/posts/out-of-the-bsl3-jail-simplifying-sars-cov-2-virus-neutralization-tests

Dr Wanni Chia (co-first author) stacking a cPass kit, a commercialized sVNT by Genscript, in a video created by the lab to celebrate Prof Linfa Wang's 60th birthday in May 2020 ("A scientist" is one of the many titles used to describe his different professional roles)

Dr. Sherman Morton Weissman (born 1930)

Wikipedia Sherman Weissman

Born Nov 22 1930 https://www.ancestry.com/discoveryui-content/view/306049476:1788?tid=&pid=&queryId=ead0935bbdcdb1f19c27bdddf3970630&_phsrc=llt19&_phstart=successSource

Children include : **Dr. Jonathan Seth Weissman (born 1966)**

Associations

- **Dr. Francis Sellers Collins (born 1950)** (" At Yale, [**Dr. Francis Sellers Collins (born 1950)**] worked under the direction of [**Dr. Sherman Morton Weissman (born 1930)**], and in 1984 the two published a paper, "Directional cloning of DNA fragments at a large distance from an initial probe: a circularization method".[7] The method described was named chromosome jumping, to emphasize the contrast with an older and much more time-consuming method of copying DNA fragments called chromosome walking.[8] ")

Saved Wikipedia (April 19, 2021) - "Sherman Weissman"

https://en.wikipedia.org/wiki/Sherman_Weissman

2021-04-19-wikipedia-sherman-weissman.pdf

- Alma mater Harvard Medical School
- Known for Sequencing the SV40 genome
- Scientific career Fields : Genetics
- Institutions : Yale School of Medicine
- Influenced [**Dr. Francis Sellers Collins (born 1950)**]

Sherman Morton Weissman is an American scientist and the Sterling Professor of Genetics at the Yale School of Medicine. A mentor to [**Dr. Francis Sellers Collins (born 1950)**], Weissman elucidated the nucleic acid sequence of the SV40 genome.

Biography

Weissman was the son of a general practitioner. After attending Harvard Medical School, Weissman interned at Boston City Hospital and was a research fellow with the National Institutes of Health and the National Cancer Institute before taking a faculty position at Yale.[1]

Weissman mentored [**Dr. Francis Sellers Collins (born 1950)**], the director of the NIH, during Collins's postdoctoral fellowship at Yale.[2] Collins called Weissman "the smartest guy" he has met[3] and credited Weissman with allowing him to establish autonomy as a researcher. In Weissman's lab, Collins developed the technique known as chromosome jumping.[4]

In 1978, Weissman published the complete nucleic acid sequence of the SV40 genome. A week later, Belgian researcher Walter Fiers published the genome sequence in another journal. Until 1 ½ years earlier, the Weissman and Fiers teams had each been working on separate halves of the sequence. As technology allowed for faster sequencing, each team began to work toward sequencing the entire genome on its own. In the months before he came up with the published sequence, Weissman had to retract several "final" sequences once errors were discovered.[5] Weissman was elected to the National Academy of Sciences in 1983.[6]

Weissman's seven children include Jonathan Weissman, a scientist at the Massachusetts Institute of Technology. Jonathan's mother is Myrna Weissman, a professor of epidemiology in psychiatry at Columbia University.[7]

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Dr. Jonathan Seth Weissman (born 1966)

Wikipedia Jonathan Weissman

Middle name "Seth" : https://app.dimensions.ai/discover/publication?and_facet_researcher=ur.01143024036.14

Born 16 Apr 1966 (https://www.ancestry.com/discoveryui-content/view/185938525:1732?tid=&pid=&queryId=41539adaa322d1181787da31da4caad3&_phsrc=llt24&_phstart=successSource)

Parents : Father is **Dr. Sherman Morton Weissman (born 1930)** , ...

Saved Wikipedia (April 19, 2021) - "Jonathan Weissman"

2021-04-19-wikipedia-org-jonathan-weissman.pdf

https://en.wikipedia.org/wiki/Jonathan_Weissman

Nationality

American

Alma mater

Harvard University, MIT, Yale University

Known for

Ribosome profiling Protein folding

Awards

- Protein Society Irving Sigal Young Investigator Award (2004)
- Raymond and Beverly Sackler International Prize (2008)
- National Academy of Sciences Award for Scientific Discovery (2015)

Scientific career

Fields

Biochemistry Biophysics

Institutions

MIT

UCSF

HHMI

Doctoral advisor

Peter Kim

Other academic advisors

Arthur Horwich

Jonathan S. Weissman is the Landon T. Clay Professor of Biology at the Massachusetts Institute of Technology, a member of the Whitehead Institute, and a Howard Hughes Medical Institute Investigator. From 1996 to 2020, he was a faculty member in the department of Cellular Molecular Pharmacology at the University of California, San Francisco.

Education[edit]

He earned his B.A. in Physics from Harvard College (1988) and his Ph.D. in Physics (1993) from MIT working with Peter Kim. There, he started his studies on protein folding examining Bovine pancreatic trypsin inhibitor (BPTI).[1]

He was a postdoctoral fellow at Yale University (1993-1996), where he worked with Arthur Horwich studying the mechanism of GroEL.[2][3]

Career[edit]

Weissman's research team studies how cells ensure that proteins fold into their correct shape, as well as the role of protein misfolding in disease and normal physiology. The team also develops experimental and analytical approaches for exploring the organizational principles of biological systems and globally monitoring protein translation through ribosome profiling. A broad goal of his work is to bridge large-scale approaches and in depth mechanistic investigations to reveal the information encoded within genomes.[4][5][6]

Weissman has been a member of the National Academy of Sciences since 2009.

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External links[edit]

- UCSF Academic Bio
- His Howard Hughes Medical Institute bio
- Weissman Lab website

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- PMID: 10600742 / DOI: 10.1126/science.286.5448.2333
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https://drive.google.com/file/d/1jmF68l_ymJuiz7VWHpnnrSGyjIw5Ctfh/view?usp=sharing

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https://drive.google.com/file/d/1nl6BGMq6igwP-n-CPmAxaQ26NfU2mnxy/view?usp=sharing

Authors :

- [**Dr. Robert Salvatore Lanciotti (born 1960)**] - Zika virus mistakes / "whistleblower" ?
- [**Dr. John Timothy Roehrig (born 1952)**] (Work w/ Robert Shope ? ...)
- V. Deubel,2
- J. Smith,3
- M. Parker,3
- K. Steele
- B. Crise
- K. E. Volpe
- M. B. Crabtree,
- J. H. Scherret,4
- R. A. Hall,4
- [**Dr. John S. MacKenzie (born 1943(est.))**]
- C. B. Cropp,1
- B. Panigrahy
- E. Ostlund
- B. Schmitt
- M. Malkinson
- C. Banet,
- [**Dr. Jonathan Seth Weissman (born 1966)**] : [father is **Dr. Sherman Morton Weissman (born 1930)** (mentored **Dr. Francis Sellers Collins (born 1950)**)]
- N. Komar,
- H. M. Savage,
- W. Stone,7
- [**Dr. Tracey S. McNamara (born 1954)**]
- [**Dr. Duane J. Gubler (born 1939)**] : [Dr. D.J. Gubler is a peer of **Dr. Lin-Fa Wang (born 1960)**]

In late summer 1999, an outbreak of human encephalitis occurred in the north- eastern United States that was concurrent with extensive mortality in crows (Corvus species) as well as the deaths of several exotic birds at a zoological park in the same area. Complete genome sequencing of a flavivirus isolated from the brain of a dead Chilean flamingo (Phoenicopterus chilensis), together with partial sequence analysis of envelope glycoprotein (E-glycoprotein) genes amplified from several other species including mosquitoes and two fatal human cases, revealed that West Nile (WN) virus circulated in natural transmission cycles and was responsible for the human disease. Antigenic mapping with E-glycoprotein–specific monoclonal antibodies and E-glycoprotein phylogenetic analysis confirmed these viruses as WN. This North American WN virus was most closely related to a WN virus isolated from a dead goose in Israel in 1998.

5% CO_2. Cells were examined for cytopathologic effect for up to 7 days after inoculation.

4. C. G. Sibley and B. L. Monroe Jr., *Distribution and Taxonomy of Birds of the World* (Yale Univ. Press, New Haven, CT, 1990). Common and scientific names of birds are used in accordance with those listed in this book.
5. Total numbers of mosquitoes by species that were collected in 14 towns in Fairfield County, CT, and tested for virus from 6 September through 14 October 1999: *Ae. vexans*, 1688; *Ae. cinereus*, 172; *Ae. trivittatus*, 131; *Ae. taeniorhynchus*, 123; *Ae. sollicitans*, 109; *Ae. cantator*, 63; *Ae. triseriatus*, 28; *Ae. japonicus*, 19; *Ae. canadensis*, 1; *Anopheles punctipennis*, 82; *An. quadrimaculatus*, 4; *An. walkeri*, 2; *Coquillettidia perturbans*, 15; *Culex pipiens*, 744; *Cx. restuans*, 27; *Cx. erraticus*, 4; *Cx. territans*, 1; *Culiseta melanura*, 76; *Cs. morsitans*, 1; *Psorophora ferox*, 4; and *Uranotaenia sapphirina*, 104.
6. M. Z. Ansari, R. E. Shope, S. Malik, *J. Clin. Lab. Anal.* **7**, 230 (1993). Isolates were tested initially in an ELISA against reference antibodies to six viruses, in three families, isolated from mosquitoes in North America. The antibodies were prepared in mice and provided by the World Health Organization Center for Arbovirus Research and Reference, Yale Arbovirus Research Unit, Department of Epidemiology and Public Health, Yale University School of Medicine. The antibodies were to Eastern Equine Encephalomyelitis, Highlands J, Cache Valley, LaCrosse, Jamestown Canyon, and St. Louis Encephalitis viruses.
7. Most dead birds were collected by state or town personnel in Connecticut and sent to the Pathobiology Department at the University of Connecticut, Storrs, where they were examined for postmortem and nutritional condition, gross lesions, and microscopic evidence indicative of encephalitis. Brain tissue from birds with presumed encephalitis were frozen at −70°C and then sent to the Connecticut Agricultural Experiment Station, New Haven, for virus testing. Corresponding brain sections were processed for histologic examination. A 10% suspension of each sampled brain tissue was prepared in 1.5 ml of phosphate-buffered saline by triturating with a mortar and pestle (*9*). Two to seven tissue samples from each bird were tested for virus. Aluminum was added to facilitate homogenization of tissue. Suspensions were centrifuged at 520*g* for 10 min. The supernatant of each sample was then passed through a 0.22-μm filter before inoculation of a 100-μl sample onto a monolayer of Vero cells. Cells were grown and examined for cytopathologic effect (*3*). Isolates were initially tested against reference antibodies (*6*).
8. Connecticut towns from which dead crows were collected and virus isolated from brain tissues (number of isolates in parentheses): Bridgeport (n = 1), Darien (n = 1), Fairfield (n = 4), Greenwich (n = 3), Hamden (n = 1), Madison (n = 1), Milford (n = 1), New Canaan (n = 1), New Haven (n = 3), North Haven (n = 1), Norwalk (n = 1), Redding (n = 1), Stamford (n = 5), Stratford (n = 1), Weston (n = 1), Westport (n = 1), and Woodbridge (n = 1).
9. The Cooper's hawk was observed alive on the ground on 25 September 1999 and was described as having difficulty standing, spinning in circles, and having seizures. It died 11 hours after being found. Gross pathology of the brain showed extensive hemorrhage.
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11. Supplemental web material is available at www.sciencemag.org/feature/data/1046471.shl.
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22. Cells were fixed at 4°C in a 2.5% (w/v) glutaraldehyde–2% paraformaldehyde solution containing 0.1% (w/v) $CaCl_2$ and 1% (w/v) sucrose in 100 mM Na cacodylate buffer (pH 7.4), postfixed in 1% (w/v) OsO_4, dehydrated through an ethanol and acetone series, and embedded in an LX-112–Araldite mixture. Thin sections were poststained with 5% (w/v) uranyl acetate in 50% (v/v) methanol followed by Reynold's lead citrate and examined in a Zeiss EM 10C electron microscope at an accelerating voltage of 80 kV. Virus particles measured 35 to 40 nm.
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24. We thank J. Correia, J. Shepard, M. Vasil, B. Hamid, C. Scott, and T. Blevins for technical assistance. P. Mazik, P. Mazik, R. Wagner, P. Lucas, T. Capanella, R. Nieves, and S. Nieves helped with the collection of mosquitoes in Greenwich and Stamford. K. Hannon and R. Schaper provided the brain from the Cooper's hawk. Supported in part by Hatch Grant 763 and NIH grant P01-AI-30548.

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Origin of the West Nile Virus Responsible for an Outbreak of Encephalitis in the Northeastern United States

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In late summer 1999, an outbreak of human encephalitis occurred in the northeastern United States that was concurrent with extensive mortality in crows (*Corvus* species) as well as the deaths of several exotic birds at a zoological park in the same area. Complete genome sequencing of a flavivirus isolated from the brain of a dead Chilean flamingo (*Phoenicopterus chilensis*), together with partial sequence analysis of envelope glycoprotein (E-glycoprotein) genes amplified from several other species including mosquitoes and two fatal human cases, revealed that West Nile (WN) virus circulated in natural transmission cycles and was responsible for the human disease. Antigenic mapping with E-glycoprotein–specific monoclonal antibodies and E-glycoprotein phylogenetic analysis confirmed these viruses as WN. This North American WN virus was most closely related to a WN virus isolated from a dead goose in Israel in 1998.

In late August and early September 1999, New York City and surrounding areas experienced an outbreak of human encephalitis consistent with an arboviral etiology. Serological evidence from this outbreak implicated a flavivirus as the etiologic agent. Concurrent with this human encephalitis outbreak, a viral encephalitis of unknown etiology was discovered in American crows (*Corvus brachyrhynchos*) and fish crows (*Corvus ossifragus*) dying in the same geographic area. Deaths were also observed among several exotic avian species, including a Chilean flamingo (*Phoenicopterus chilensis*) at the Bronx Zoo. Necropsy samples from these birds were submitted to the National Veterinary Services Laboratories, U.S. Department of Agriculture, and were inoculated into embryonated chicken eggs for virus isolation. Flavivirus particles (diameter 40 nm) were observed by electron microscopy in the allantoic fluid 4 days after inoculation. The isolates were forwarded to the Centers for Disease Control and Prevention (CDC) for identification.

The complete nucleotide sequence of one of these viral isolates (WN-NY99, from the dead Chilean flamingo) has now been determined. The viral genomic RNA was amplified and copied into overlapping DNA fragments of ~2 to 3 kb by means of the reverse transcription polymerase chain reaction (RT-PCR) (*1*). Both strands of the purified DNAs were sequenced with the use of primers spaced about 400 bases apart along the entire genome. The complete 11,029-nucleotide genomic sequence of WN-NY99 has been submitted to GenBank (accession number AF196835). The deduced amino acid sequence of the coding region of WN-NY99 (genomic positions 97 to 10,395) is shown in Fig. 1. The WN-NY99 virus genome exhibited standard flavivirus genomic organization, the same overall genomic organization as was described for the WN-Nigeria and Kunjin (KUN) viruses (*2*). A short 5′ noncoding region of 96 nucleotides is followed by an ATG initiation codon at position 97 and a single open reading frame of 10,302 nucleotides coding for three structural proteins—capsid, premembrane (prM), and envelope (E)—and five nonstructural proteins (NS1, NS2a/NS2b, NS3, NS4a/NS4b, and NS5). The coding region of WN-NY99 is followed by a 3′ noncoding region of 631 nucleotides.

To identify the New York virus antigenically, we performed indirect immunofluorescence antibody tests using a panel of well-defined monoclonal antibodies (mAbs) to map various isolates from birds and mosquitoes. The mAb end-point titers with the North American isolates were compared to titers derived with other representatives of the Japanese encephalitis (JE) virus serocomplex of flaviviruses (Table 1). These mAbs, which are specific for the E-glycoprotein, can distinguish WN virus from KUN virus and can also distinguish either of these viruses from other members of the JE virus serocomplex. Viruses were grown in Vero cells, spotted onto 12-well slides, air-dried, and fixed with acetone before staining. All viruses reacted similarly with the broad flavivirus-reactive, positive-control mAb 4G2 (*3*, *4*). None of these viruses reacted with the negative-control antibody, which is specific for the E1 glycoprotein of eastern equine encephalitis (EEE), an unrelated alphavirus (*5*). All WN isolates, including those from North America, reacted especially with the WN virus–specific mAb H5.46, but not with the KUN

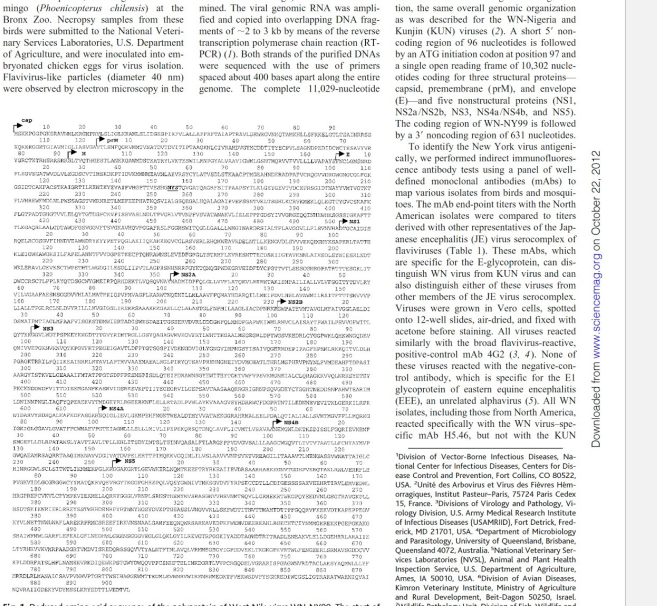

Fig. 1. Deduced amino acid sequence of the polyprotein of West Nile virus WN-NY99. The start of each protein is marked by an arrow. Abbreviations for protein names: cap, nucleocapsid; prM, premembrane protein; M, viral membrane protein; E, viral envelope glycoprotein; NS1 to NS5, viral nonstructural proteins. The E-glycoprotein glycosylation motif (NYS) is underlined. Single-letter abbreviations for amino acid residues are as follows: A, Ala; C, Cys; D, Asp; E, Glu; F, Phe; G, Gly; H, His; I, Ile; K, Lys; L, Leu; M, Met; N, Asn; P, Pro; Q, Gln; R, Arg; S, Ser; T, Thr; V, Val; W, Trp; and Y, Tyr.

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virus–specific mAb 10A1 (four- to eightfold titer differences) (*6*–*8*). Similarly, only KUN virus reacted with mAb 10A1, but not with mAb H5.46. No KUN or WN viruses reacted with either the St. Louis encephalitis (SLE) virus–specific mAb 6B5A-2 or the Murray Valley encephalitis (MVE) virus–specific mAb 4B6C-2 (*9*, *10*). These results type the North American isolates as WN virus and not as KUN, SLE, or MVE viruses.

WN virus belongs to the family Flaviviridae, genus *Flavivirus*, and is a member of the JE virus serocomplex, which also includes JE, SLE, MVE, and KUN viruses, among others (*11*). Flaviviruses are plus-sense, single-stranded RNA viruses with a genome of ~11,000 nucleotides (*2*). Recently published sequence and phylogenetic data suggest that, within this serocomplex, KUN viruses appear to be a subtype of WN virus rather than a separate viral species (*12*). Although flaviviruses are closely related to each other antigenically and cross-react in serological tests with polyclonal antisera, most have a rather distinctive geographic distribution. Those of the JE serocomplex are maintained in a natural transmission cycle involving mosquito vectors and bird reservoir hosts. Humans and horses are usually incidental hosts.

To determine more precisely the relationships between the WN-NY99 virus and other related virus strains, we performed a phylogenetic analysis on an informative region of the E-glycoprotein gene (genome positions 1402 to 1656) (*12*, *13*). Aligned nucleic acid sequence data from 33 WN viruses, seven KUN viruses, and one JE virus were analyzed with the use of algorithms for parsimony (PAUP), distance (MEGA; Fig. 2), and maximum likelihood (fastDNAml) (*14*–*17*). The phylogenetic trees generated by these analyses had the same overall topology as that previously observed, insofar as all WN and KUN viruses are separated into two major lineages (*12*, *13*). Viruses in lineage 1 are primarily of West African, Middle Eastern, Eastern European, and Australian origin. Lineage 2 consists exclusively of viruses from the African continent that have apparently not been involved in human or equine outbreaks, but rather are maintained in enzootic cycles.

Within lineage 1, the KUN viruses and the Indian WN viruses both appear as monophyletic sister clades to the European and African WN viruses. The WN-NY99 virus is found within lineage 1 and is most closely related to WN viruses that have recently been isolated from North Africa, Romania, Kenya, Italy, and the Middle East. Of particular note is the close relationship between the WN-NY99 virus and a WN virus isolated from the brain of a dead goose in Israel in 1998. Phylogenetic analysis of a portion of the gene encoding the NS5 protein and of the 3′ noncoding region (830 bases) of 12 WN and KUN viruses also generates trees with nearly identical topology, with WN-NY99 demonstrating the closest relationship with lineage 1 WN viruses (*18*). Flavivirus sequences amplified from brain specimens from fatal human cases occurring in the New York City outbreak have been analyzed by comparing genomic sequences from the nonstructural protein genes to single isolates of KUN and WN viruses (*19*). Briese *et al.* concluded that the agent responsible for the New York City area outbreak was most closely related to KUN virus, and accordingly called the outbreak virus Kunjin/West Nile–like. The phylogenetic tree in Fig. 2 compares 40 WN and KUN viruses and is more representative of the phylogeny WN viruses.

To investigate these relationships further, we derived additional sequence data from the structural gene region of the genome (positions 549 to 1826 in the genes encoding the prM and E proteins, selected nucleotide sequences obtained during the 1999 epidemic and compared them to other WN strains within lineage 1 for which sequence data from this region were available. Table 2 displays the percent identity among these viruses. The high degree of sequence similarity (>99.4%) among the various strains circulating throughout New York City and surrounding counties and states indicates that a single WN strain was introduced and circulated during the U.S. WN virus outbreak. The identical genomic sequences identified from human brain specimens also confirm the association of this WN-NY99 virus with human disease. The small number of nucleotide substitutions observed among the strains analyzed is indicative of viral microevolution occurring during the outbreak.

A high degree of similarity between all of the U.S. WN viruses and the WN virus isolated in Israel in 1998 (>99.8%) was observed. Within these 1278 nucleotides (genome positions 549 to 1826), only two nucleotide differences occurred between WN-NY99 and WN-Israel 1998. Although this high degree of homology was unexpected, it could not have resulted from cross-contamination of U.S. viruses with the Israeli virus; the sequencing of the WN-Israel 1998 virus was performed independently at the Pasteur Institute, whereas the isolation and sequencing of the New York isolates was carried out independently at CDC. For comparison, analysis of this same region of WN-NY99 with another virus within the same lineage (Romania 1996, mosquito isolate) revealed 37 nucleotide differences (96.9% identity). The conservation of RNA supports the hypothesis that the epidemic and epizootic observed in the late summer of 1999 in the northeastern United States (primarily New York, New Jersey, and Connecticut) are attributable to a WN virus that is unprecedented and unknown in the Western Hemisphere. This virus has a widespread distribution in Africa, West Asia, and the Middle East, occasionally causing epidemics in Europe that are thought to be initiated by viruses introduced by migrant birds (*21*). The current epidemic of WN virus in New York City is unprecedented and underscores the ease with which pathogens can move among the population centers of the world. It is not yet known how the virus was introduced, nor how long it has been in the United States. The extent of its geographic distribution remains a mystery, as does the long-term impact it may have on human and animal health. The WN virus could have entered the Western Hemisphere through a number of mechanisms, including travel by infected humans, importation of illegal birds or other domestic pets, or unintentional introduction of virus-infected ticks or mosquitoes. Additional surveillance as well as field and laboratory studies are in progress to help address these questions. Because it cannot be predicted whether the WN virus will reappear in the year 2000 transmission season, all components of the public health system must be prepared with rapid surveillance and clinical detection systems in place.

Table 1. Antigenic characterization of North American WN viruses. Ig, immunoglobulin; nd, not done.

mAb*	Virus specificity	Ig	Virus†							Vero‡
			KUN	Rom WN	Egypt WN	NYC WN	India WN	SLE	MVE	EEE	
H5.46	WN	IgM	20	160	160	80	80	≤10	≤10	nd	≤10
10A1	KUN	IgG2b	80	≤10	≤10	≤10	≤10	≤10	≤10	nd	≤10
2B2	WN/KUN	IgG2a	80	80	160	160	160	≤10	≤10	nd	≤10
4B6C-2	MVE	IgG2a	≤10	≤10	≤10	≤10	≤10	≤10	≥320	nd	≤10
6B5A-2	SLE	IgG2a	≤10	≤10	≤10	≤10	≤10	≥320	≤10	nd	≤10
4G2	Flavivirus	IgG2a	≥320	≥320	≥320	≥320	≥320	≥320	≥320	nd	≤10
1B1C-4	EEE-E1	IgG2b	≤10	≤10	≤10	≤10	≤10	≤10	≤10	320	≤10

*The mAbs H5.46, 4B6C-2, 6B5A-2, 4G2, and 1B1C-4 were mouse ascitic fluids; mAbs 10A1 and 2B2 were cell culture supernatants; mAb 1B1C-4, used as a negative control antibody, is specific for the E1 glycoprotein of the alphavirus EEE. †Virus strains used: KUN, Kunjin MRM-16; Rom WN, Romania mosquito isolate 97-50; Egypt WN, Eg101; NYC WN, New York City mosquito isolate NY-99-6922; India WN, 2266; SLE, MSI-7; MVE, original; EEE, strain NJ/60. ‡Uninfected cell control.

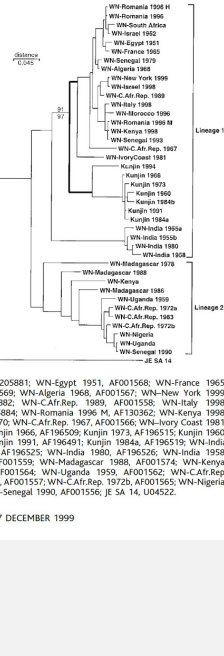

Fig. 2. Phylogenetic tree based on E-glycoprotein nucleic acid sequence data (255 base pairs). The tree was constructed with the program MEGA by neighbor-joining with Kimura two-parameter distance (scale bar). Bootstrap confidence level (500 replicates) and a confidence probability value based on the standard error test (*22*, *23*) were calculated using MEGA and are included on the tree (top and bottom values, respectively), illustrating support for the division between the lineage 1 WN virus group (not including the India isolates) and the KUN virus group. The best estimated length of the segment (bold line) separating these groups, in units of expected nucleotide substitutions per site, is 0.06928 and is statistically significantly positive (P < 0.01) by the likelihood ratio test (fastDNAml maximum likelihood program). An approximate 95% confidence interval for the true length of this segment is 0.03347, 0.10737. The isolate history of strains used in this tree and the alignment used for analysis are available upon request from the authors. GenBank accession numbers for the sequences included in the tree are as follows: WN-Romania 1996 H, AF130363; WN-Romania 1996, AF205879; WN-South Africa, AF205880; WN-Israel 1952, AF205881; WN-Egypt 1951, AF001568; WN-France 1965, AF001560; WN-Senegal 1979, AF001569; WN-Algeria 1968, AF001567; WN–New York 1999, AF196835; WN-Israel 1998, AF205882; WN-C.Afr.Rep. 1969, AF001558; WN-Italy 1998, AF205883; WN-Morocco 1996, AF205884; WN-Romania 1996 M, AF130362; WN-Kenya 1998, AF146082; WN-Senegal 1993, AF001570; WN-C.Afr.Rep. 1967, AF001566; WN–Ivory Coast 1981, AF001561; Kunjin 1994, AF196495; Kunjin 1966, AF196509; Kunjin 1973, AF196515; Kunjin 1960, D00246; Kunjin 1984b, AF196498; Kunjin 1991, AF196491; Kunjin 1984a, AF196519; WN-India 1955a, AF205885; WN-India 1955b, AF196525; WN-India 1980, AF196526; WN-India 1958, AF196524; WN-Madagascar 1978, AF001559; WN-Madagascar 1988, AF001574; WN-Kenya, AF001571; WN-Madagascar 1986, AF001564; WN-Uganda 1959, AF001562; WN-C.Afr.Rep. 1972a, AF001563; WN-C.Afr.Rep. 1983, AF001557; WN-C.Afr.Rep. 1972b, AF001565; WN-Nigeria, M12294; WN-Uganda, AF001573; WN-Senegal 1990, AF001556; JE SA 14, U04522.

Table 2. Percent identity among West Nile virus strains over a 1278-nucleotide base region of prM and E proteins.

	WN virus strain*	1	2	3	4	5	6	7	8	9	10	11	12	13	14
1	WN-NY99		99.8	99.9	99.8	99.9	99.9	99.8	99.9	99.8	99.8	96.9	95.1	87.1	75.8
2	WN-Crn-CT99			99.9	99.8	99.9	99.9	99.8	99.9	99.8	99.8	96.9	95.2	87.2	75.8
3	WN-Crow-NJ99				99.8	100.0	100.0	99.9	100.0	99.8	99.9	97.0	95.3	87.2	75.9
4	WN-Crow-NY99					99.8	99.8	99.8	99.8	99.7	99.8	96.8	95.1	87.0	76.0
5	WN-Cpipiens-NY99						100.0	99.9	100.0	99.8	99.9	97.0	95.3	87.2	75.9
6	WN-Eq.-NY99							99.9	100.0	99.8	99.9	97.0	95.3	87.2	75.9
7	WN-HB709-NY99								99.9	99.8	99.8	96.9	95.2	87.2	76.0
8	WN-HB743-NY99									99.8	99.9	97.0	95.3	87.2	75.9
9	WN-USAMRID99										99.9	97.2	95.3	87.3	76.0
10	WN-Israel 1998											97.1	95.4	87.4	76.1
11	WN-Romania.96												94.7	87.2	75.4
12	WN-Rom.-hum.96													87.5	76.9
13	Kunjin-MRM-16														76.3
14	WN-Nigeria														

*Sources of WN virus strains are as follows: WN-NY99, virus isolate from Bronx Zoo flamingo 382-99 (entire genome sequenced); WN-Crn-CT99, NVSL isolate from a sandhill crane, Fairfield County, Connecticut; WN-Crow-NJ99, American crow, Hunterdon County, New Jersey; WN-Crow-NY99, American crow, Nassau County, New York; WN-*Cpipiens*-NY99, *Culex pipiens* pool, Nassau County, New York; WN-Eq.-NY99, NVSL isolate from a horse, Suffolk County, New York; WN-HB709-NY99, human brain tissue 61709, Queens County, New York; WN-HB743-NY99, human brain tissue 61743, Queens County, New York; WN-USAMRID99, USAMRID virus isolate from a crow found in the Bronx Zoo; WN-Israel 1998, Pasteur Institute virus isolate from goose, Israel, 1998; WN-Rom.-mosq.96, virus isolate from *Culex pipiens* pool, Romania, 1996 (GenBank accession number AF130362); WN-Rom.hum.96, virus isolate from human cerebrospinal fluid, Romania, 1996 (GenBank accession number AF130363); Kunjin-MRM-16, Kunjin virus (GenBank accession number D00246); WN-Nigeria, West Nile virus (GenBank accession number M12294). Unless otherwise noted, sequencing was performed on original noncultured tissue specimens.

References and Notes

1. The following RT-PCR and sequencing protocol was used. RNA was extracted from chicken embryonic allantoic fluid with the QIAamp Viral RNA kit (Qiagen); 140 μl of starting material was extracted, according to the manufacturer's protocol, and the RNA was resuspended in a final volume of 100 μl of ribonuclease-free water. DNA templates for sequencing were then generated as follows: The entire RNA genome of WN-NY99 (lanes 382-99) was converted/copied into six overlapping double-stranded DNA fragments in multiple RT-PCR reactions using the WN-specific primer pairs 109/1442c, 1248/2737c, 2414/5237c, 5150/7990c, 7336/9794c, and 9661/10,488c (where c = complementary). The 3′ end of WN-NY99 virus was amplified by addition of a polyadenylate [poly(A)] tail onto the genome with poly(A) polymerase, followed by a RT-PCR reaction with the WN-specific primer 10,141 in combination with an oligo(dT) anchor primer. The 5′ end of WN-NY99 was amplified with the 5′ RACE System kit (Life Technologies, Gaithersburg, MD) and WN-specific primers 619c and 348c. Sequencing of additional WN isolates in the prM-E region (see text) was accomplished with the use of the primer pairs in the corresponding region of the genome, as described above. All WN-specific RT-PCR and sequencing primers were designed with the use of OLIGO (Molecular Biology Insights Inc., Cascade, CO) and the published sequences of WN (GenBank accession numbers M12294 and M10103) and Kunjin (GenBank accession number D00246). RT-PCR reactions were performed with the TITAN One Tube RT-PCR kit (Boehringer Mannheim) following the manufacturer's protocol. The resulting DNA fragments were purified by electrophoresis on 1% agarose gels; the DNA bands

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To investigate these relationships further, we derived additional sequence data from the structural gene region of the genome (positions 549 to 1826 in the genes encoding the prM and E proteins) from selected isolates obtained during the 1999 epidemic and compared them to other WN strains within lineage 1 for which sequence data from this region were available. Table 2 displays the percent identity among these viruses. The high degree of sequence similarity (.99.8%) among the various strains circulating throughout New York City and surrounding counties and states indicates that a single WN strain was introduced and circulated during the U.S. WN virus outbreak. The identical genomic sequences identified from human

brain specimens also confirm the association of this WN-NY99 virus with human disease. The small number of nucleotide substitutions observed among the strains analyzed is indicative of viral microevolution occurring during the outbreak.

A high degree of similarity between all of the U.S. WN viruses and the WN virus isolated in Israel in 1998 (.99.8%) was observed. Within these 1278 nucleotides (genome positions 549 to 1826), only two nucleotide differences occurred between WN-NY99 and WNIsrael 1998. Although this high degree of homology was unexpected, it could not have resulted from cross-contamination of U.S. viruses with the Israeli virus; the sequencing of the WN-Israel 1998 virus was performed independently at the Pasteur Institute, whereas the isolation and sequencing of New York isolates was carried out independently at CDC. For comparison, analysis of this same region of WN-NY99 with another virus within the same lineage (Romania 1996, mosquito isolate) revealed 37 nucleotide differences (96.9% identity).

The cumulative data support the hypothesis that the epidemic and epizootic observed in the late summer of 1999 in the northeastern United States (primarily New York, New Jersey, and Connecticut) are attributable to a WN virus that has been circulating in the Mediterranean region since 1998. It is noteworthy that the WN-Israel 1998 virus was associated with increased pathogenicity for birds, a property also observed in the U.S. outbreak and previously observed only experimentally (20). The absence of reported human cases during this Israeli epizootic may be due to background human immunity to the WN virus in Israel.

The northeastern U.S. outbreak is the first documented incidence of the WN virus in the Western Hemisphere. This virus has a widespread distribution in Africa, West Asia, and the Middle East, occasionally causing epidemics in Europe that are thought to be initiated by viruses introduced by migrant birds (21). The current epidemic of WN virus in New York City is unprecedented and underscores the ease with which pathogens can move among the population centers of the world. It is not yet known how the virus was introduced, nor how long it has been in the United States. The extent of its geographic distribution remains a mystery, as does the long-term impact it may have on human and animal health. The WN virus could have entered the Western Hemisphere through a number of mechanisms, including travel by infected humans, importation of illegal birds or other domestic pets, or unintentional introduction of virus-infected ticks or mosquitoes. Additional surveillance as well as field and laboratory studies are in progress to help address these questions. Because it cannot be predicted whether the WN virus will reappear in the year 2000 transmission season, all components of the public health system must be prepared with rapid surveillance and clinical detection systems in place.

2020-11-one-world-one-health-congress-6th-programme-at-a-glance.png

https://worldonehealthcongress.org/mega-programme

Lipkin -> Karesh / Daszak

https://www.publichealth.columbia.edu/sites/default/files/legacy/_twobytwo_v4i1.pdf

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2015

Meeting in Brief COMMITTEE ON SCIENCE, TECHNOLOGY, AND LAW POLICY AND GLOBAL AFFAIRS December 1-3, 2015

https://www.nap.edu/download/21913#

2015-national-academies-of-sciences-meeting-brief-international-summit-on-human-gene-editing-a-global-discussion

Contributors

National Academies of Sciences, Engineering, and Medicine; Policy and Global Affairs; Committee on Science, Technology, and Law; Steven Olson, Editor

Description

New biochemical tools have made it possible to change the DNA sequences of living organisms with unprecedented ease and precision. These new tools have generated great excitement in the scientific and medical communities because of their potential to advance biological understanding, alter the genomes of microbes, plants, and animals, and treat human diseases. They also have raised profound questions about how people may choose to alter not only their own DNA but the genomes of future generations.

[read full description]

Topics

- Health and Medicine — Genetics
- Health and Medicine — Medical Technologies and Treatments

Suggested Citation

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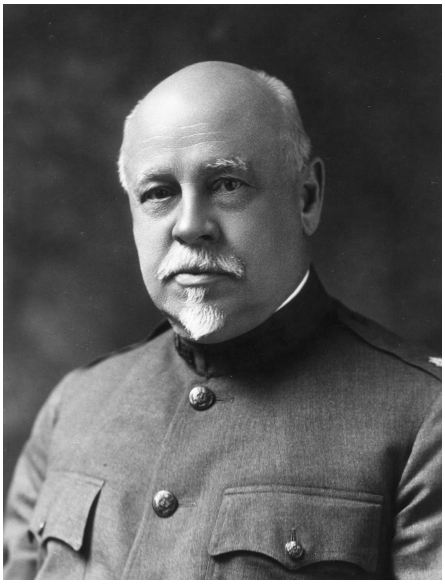
Dr. William Henry Welch (born 1850)



"Welch as brigadier general circa 1917-1921"
[HK006J][GDrive]

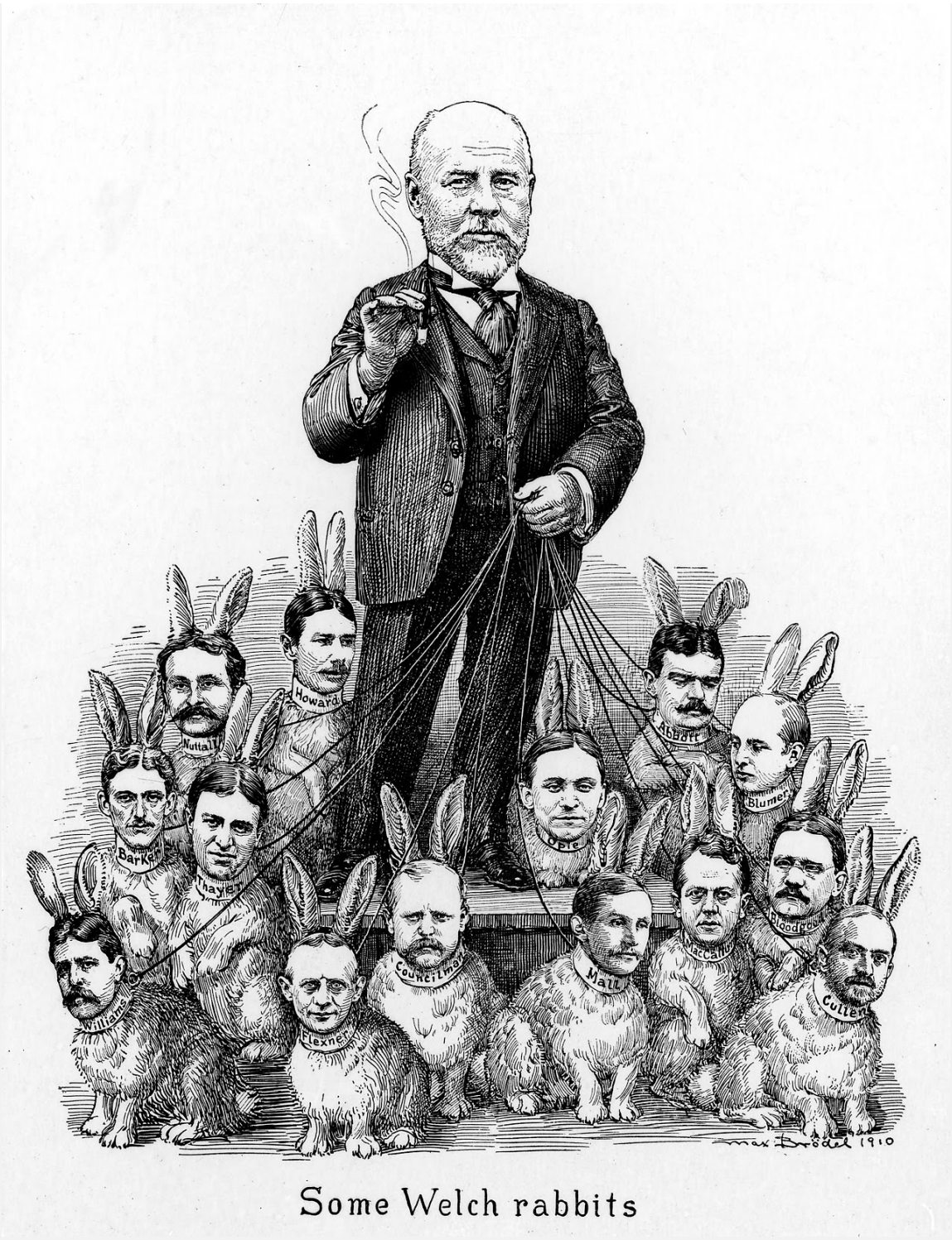
Wikipedia William H. Welch

ASSOCIATIONS

- Dr. Simon Flexner (born 1863) - (Dr. Simon Flexner was a resident of Dr. Welch at Johns Hopkins - Welch ultimately referred/introduced Simon Flexer to the Rockefellers who were creating the Rockefeller institute of Research)

Saved Wikipedia (April 7, 2021) - William H. Welch

Source : [HK006H][GDrive]



Caricature of William Welch with his students, by Max Brödel, 1910
[HK006I][GDrive]

1st Dean of Johns Hopkins School of Medicine and School of Public Health

Personal details

Born

April 8, 1850

Norfolk, Connecticut

Died

April 30, 1934 (aged 84)

Johns Hopkins Hospital

Baltimore, Maryland

Nationality

United States

Residence

Baltimore, Maryland

Education

Yale University

Columbia University College of Physicians and Surgeons, M.D.

Occupation

Physician, pathologist

William Henry Welch (April 8, 1850 – April 30, 1934) was an American physician, pathologist, bacteriologist, and medical school administrator. He was one of the "Big Four" founding professors at the Johns Hopkins Hospital.[1] He was the first dean of the Johns Hopkins School of Medicine and was also the founder of the Johns Hopkins School of Hygiene and Public Health, the first school of public health in the country. Welch was more known for his cogent summations of current scientific work, than his own scientific research. The Johns Hopkins medical school library is also named after Welch. In his lifetime, he was called the "Dean of American Medicine" and received various awards and honors throughout his lifetime, and posthumously.[2]

Biography[edit]

Early life[edit]

He was born on April 8, 1850, to William Wickham Welch and Emeline Collin Welch in Norfolk, Connecticut. He had a long family history of physicians and surgeons, starting with his grandfather Benjamin Welch. Benjamin was also on the medical forefront of his time, establishing his county's medical association.[3] William H. Welch was educated at Norfolk Academy and the Winchester Institute, a boarding school. His father and a grandfather and four of his uncles were all physicians. William Henry entered Yale University in 1866, where he studied Greek and classics. Initially, Welch was not interested in becoming a physician; his primary ambition was to teach the Greek language.[4] He received an A.B. degree in 1870. As an undergraduate, he joined the Skull and Bones fraternity.[5]

Early career[edit]

After a short period of teaching high-school students in Norwich, New York, Welch went to study medicine at the Columbia University College of Physicians and Surgeons, in Manhattan. In 1875, he received his MD. From 1876 to 1877, he studied at several German laboratories to work with, among others, Julius Cohnheim and Rudolf Virchow. This experience abroad prompted Welch to model his plans for a new medical institute on the Institute of the History of Medicine at the University of Leipzig.[4] He returned to America in 1877 and opened a lab at Bellevue Medical College (now a part of New York University Medical School).

Later career at Johns Hopkins[edit]

Welch is widely known at the time for his pathology residency program, which later attracted many bright minds from across the country.

In 1884, he was the first physician recruited to be a professor at the newly forming Johns Hopkins Hospital and Medical School at Johns Hopkins University in Baltimore.[1] By 1886, he had 16 graduate physicians working in his laboratory – the first postgraduate training program for physicians in the country.[1] He helped the trustees recruit the other founding physicians for the hospital – William Stewart Halsted, William Osler, and Howard Kelly. Welch became head of the Department of Pathology when the hospital opened in 1889. In 1893, he also became the first dean of the Johns Hopkins University School of Medicine, and in 1916, he established and led the Johns Hopkins School of Hygiene and Public Health, the first school of public health in the country. During this time, Welch was also involved in creating a new medical library for Johns Hopkins. He embarked on a sabbatical in Europe, where he visited the University of Leipzig's Institute and various other universities, as well as libraries and bookstores. These German institutions influenced Welch's design for the Institute of the History of Medicine at Johns Hopkins, which was established in October 1929.[6] The new institute also built on the already existing Johns Hopkins Hospital Historical Club (est. 1890), of which Welch had been a co-founder.[7] Welch is also the founding editor-in-chief of the American Journal of Epidemiology.

Caricature of William Welch with his students, by Max Brödel, 1910

Graduates of Welch's training programs were highly coveted as academic physicians. Medical schools and institutes across the country vied for Welch's former students and graduate scientists to fill top posts.[1] Many of his residents went on to become highly prominent physicians, including Walter Reed, co-discoverer of the cause of yellow fever, [**Dr. Simon Flexner (born 1863)**], founding director of the Rockefeller Institute for Medical Research, and future Nobel laureates George Whipple and Peyton Rous.

Welch's research was principally in bacteriology, and he is the discoverer of the organism that causes gas gangrene. It was named Clostridium welchii in recognition of that fact, but now the organism usually is designated as Clostridium perfringens.

From 1901 to 1933, he was founding president of the Board of Scientific Directors at the Rockefeller Institute for Medical Research. He was an instrumental reformer of medical education in the United States as well as a president of the National Academy of Sciences from 1913–1917. He also was president of the American Medical Association, the Association of American Physicians, the History of Science Society, the Congress of American Physicians and Surgeons, the Society of American Bacteriologists, and the Maryland State Board of Health. Welch was a founding editor of the Journal of Experimental Medicine.

Welch served in the U.S. Army Medical Corps during World War I, and played a major role in the response to the 1918 Influenza Pandemic. He remained in the Reserve Corps for three years thereafter, attaining the rank of brigadier general (07). For his service during the war, Welch received the Distinguished Service Medal.[8]

Death[edit]

Welch died on April 30, 1934, at the age of 84, of prostatic adenocarcinoma at Johns Hopkins Hospital.[2]

Honors and awards[edit]

- Welch was awarded the Royal Order of the Crown of Prussia in 1911.[4]
- In 1927, Welch received the Kober Medal from the American Association of Physicians.[4]
- The William H. Welch Medical Library at Johns Hopkins, which opened in 1929, was decided on March 5, 1928, to be named after him.[9]
- In 1931, Welch received the Harben Medal from the Royal Institute of Public Health for his professorship in the history of medicine.[4]
- In 1950, the first William H. Welch Medal was awarded by American Association for the History of Medicine to honor authors in field of medical history [10]
- Welch Road, in the vicinity of Stanford University Medical Center in Stanford, California, is named in his honor.[11]

See also[edit]

- William H. Welch House

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West Nile Virus biological weapon technology and production

Also see :

- **West Nile Virus discovery in the United States (1999)** (...)
-

west nile - Iraq Weapons

1990 (ot) - https://www.newspapers.com/image/553643473/?terms=%22west%20nile%22&match=1

1991 (Jan) - https://www.newspapers.com/image/284018604/?terms=%22west%20nile%22&match=1

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CDC sees no evidence of bioterrorism in spread of West Nile virus

Filed Under: **Anthrax**; **Bioterrorism**; **West Nile**

By: Robert Roos | Sep 19, 2002

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Sep 19, 2002 (CIDRAP News) – In response to a US senator's speculation, the Centers for Disease Control and Prevention (CDC) says there is no evidence that bioterrorism has played a role in the spread of West Nile virus to and within the United States.

"As stated repeatedly, we have no scientific evidence to suggest that West Nile virus and West Nile activity in the United States is an act of terrorism or bioterrorism-related," Bernadette Burden, a CDC spokeswoman in Atlanta, told CIDRAP News yesterday.

Last week Sen. Patrick J. Leahy, D-Vt., whose office was the target of an anthrax-laden letter last fall, speculated on a radio talk show about the possibility that the West Nile epidemic is related to bioterrorism. The disease reached the United States in 1999 and spread rapidly across the country this summer. As of Sep 18, the CDC reported 1,641 confirmed cases in 32 states, with 80 deaths.

"I think we have to ask ourselves: Is it coincidence that we're seeing such an increase in West Nile virus, or is that something that's being tested as a biological weapon against us?," Leahy said on a Sep 12 talk show, as quoted by the Associated Press. The show reportedly was aired by WKDR in Burlington, Vt., and WDEV in Waterbury, Vt.

In a written statement released later the same day, Leahy said, "In the times in which we live, questions about our vulnerabilities are unavoidable, and finding all the answers we can is more important than ever. I have no way of knowing what the answers are, but some legitimate questions have been asked, especially before September 11 last year, and no doubt they are being asked anew by the agencies that are working on this."

Blythe McCormack, a Leahy spokeswoman in Washington, said Leahy was not calling for a new investigation of the issue. "It was basically along the lines of, 'We should be looking into every possibility, especially in the environment after September 11,'" she told CIDRAP News. She also said the talk show was cut short so that the station could broadcast President Bush's speech to the United Nations, so Leahy's comments were "kind of incomplete to begin with."

In subsequent news reports, CDC officials said the spread of West Nile in the United States has been consistent with what is known about its natural transmission pathway from mosquitoes to birds and people.

Burden said the CDC considered the bioterrorism possibility when West Nile first reached the East Coast in 1999, killing seven people in the New York City area. "The CDC considers any and all possibilities for a virus coming into the United States for the first time, so certainly the issue of it being planted deliberately was a question that was examined at the time," she said.

In October 1999, the *New Yorker* magazine published an article describing claims by an alleged Iraqi defector that Saddam Hussein was planning to use West Nile virus as a weapon. The article, by Richard Preston, said bioweapons experts at the CIA had heard of the claim made in a book by the alleged defector, who called himself Mikhael Ramadan, and they recalled the claim when West Nile virus was identified in New York City in September 1999. Ramadan's book, as quoted in Preston's article, said Hussein had boasted that his scientists would develop a strain of West Nile virus "capable of destroying 97 percent of all life in an urban environment." (The fatality rate for West Nile is far below 97%.)

Preston's article also quoted an unnamed Army expert as saying that Soviet Russian biologists had evaluated West Nile as a possible biological weapon but concluded that it wouldn't work very well.

After the *New Yorker* article appeared, the CIA said it had looked into the possibility that Saddam Hussein had engineered the West Nile outbreak and had concluded there was no evidence. Leahy's office supplied a copy of a *Washington Post* article published Oct 12, 1999, in which an unnamed CIA official said the agency had found no evidence of bioterrorism. CIA officials said the agency had reviewed press reports on the matter but had not conducted a formal investigation, according to the article.

One Congressional committee also looked into the issue in July 2000 and likewise saw no evidence of terrorism behind the West Nile outbreak. The report, by the minority staff of the Senate Governmental Affairs Committee, stated, "U.S. law enforcement, public health, and intelligence officials have investigated the possibility that West Nile virus resulted from a bioterrorist attack but believe that this is very unlikely. All indications point to the natural occurrence of West Nile virus, which probably arrived in New York through international trade and travel."

Iraq got seeds for bioweapons from U.S.

ASSOCIATED PRESS |
https://www.baltimoresun.com/news/nation-world/bal-te.bioweapons01oct01-story.html
2002-10-01-the-baltimore-sun-web-iraq-got-seeds-for-bioweapons-from-usa
OCT 01, 2002 AT 3:00 AM

Rep. Jim McDermott, a Washington Democrat, and other members of a visiting American delegation in Baghdad, Iraq, on Sept. 30. The visiting lawmakers warned both Baghdad and Washington not to interfere in the U.N. weapons inspection process. (AP/Jassim Mohammed)
WASHINGTON - Iraq's bioweapons program that President Bush wants to eradicate got its start with help from the United States two decades ago, according to government records getting new scrutiny in light of the discussion of war against Iraq.

The Centers for Disease Control and Prevention sent samples directly to several Iraqi sites that United Nations weapons inspectors determined were part of Saddam Hussein's biological weapons program, CDC and congressional records from the early 1990s show.

Iraq had ordered the samples, claiming it needed them for legitimate medical research.

The CDC and a biological sample company, American Type Culture Collection, sent strains of all the germs Iraq used to make weapons, including anthrax, the bacteria that make botulinum toxin and the germs that cause gas gangrene, the records show. Iraq also got samples of other deadly pathogens, including West Nile virus.

The transfers came in the 1980s, when the United States supported Iraq in its war with Iran. They were detailed in a 1994 Senate Banking Committee report and a 1995 follow-up letter from the CDC to the Senate.

The exports were legal at the time and approved under a program administered by the Commerce Department.

"I don't think it would be accurate to say the United States government deliberately provided seed stocks to the Iraqis' biological weapons programs," said Jonathan Tucker, a former U.N. biological weapons inspector. "But they did deliver samples that Iraq said had a legitimate public health purpose, which I think was naive to believe, even at the time."

The disclosures put the United States in the uncomfortable position of possibly having provided the key ingredients of the weapons America is considering waging war to destroy, said Sen. Robert C. Byrd.

The West Virginia Democrat entered the documents into the Congressional Record this month.

Byrd asked Defense Secretary Donald H. Rumsfeld about the germ transfers at a recent Senate Armed Services Committee hearing. Byrd noted that Rumsfeld met Hussein in 1983, when Rumsfeld was President Reagan's Middle East envoy.

"Are we, in fact, now facing the possibility of reaping what we have sown?" Byrd asked Rumsfeld after reading parts of a Newsweek article on the transfers.

"I have never heard anything like what you've read, I have no knowledge of it whatsoever, and I doubt it," Rumsfeld said.

He later said he would ask the Defense Department and other government agencies to search their records for evidence of the transfers.

Invoices included in the documents read like shopping lists for biological weapons programs.

One 1986 shipment from the Virginia-based American Type Culture Collection included three strains of anthrax, six strains of the bacteria that make botulinum toxin and three strains of the bacteria that cause gas gangrene.

Iraq later admitted to the United Nations that it had made weapons out of all three.

The company sent the bacteria to the University of Baghdad, which U.N. inspectors concluded had been used as a front to acquire samples for Iraq's biological weapons program.

The CDC, meanwhile, sent shipments of germs to the Iraqi Atomic Energy Commission and other agencies involved in Iraq's weapons of mass destruction programs.

It sent samples in 1986 of botulinum toxin and botulinum toxoid - used to make vaccines against botulinum toxin - directly to the Iraqi chemical and biological weapons complex at al-Muthanna, the records show.

Botulinum toxin is the paralyzing poison that causes botulism. Having a vaccine to the toxin would be useful for anyone working with it, such as biological weapons researchers or soldiers who might be exposed to the deadly poison, Tucker said.

The CDC also sent samples of a strain of West Nile virus to an Iraqi microbiologist at a university in the southern city of Basra in 1985, the records show.

West Nile Virus discovery in the United States (1999)

Wikipedia West Nile virus in the United States

- Dr. Tracey S. McNamara (born 1954)
- Deborah Susan Asnis (born 1956)
- Dr. Marcelle C. Layton (born 1958)
- Dr. Duane J. Gubler (born 1939)
- Dr. Walter Ian Lipkin (born 1952)
-

Saved Wikipedia (Feb 16, 2021) - "West Nile virus in the United States"

NO MENTION OF Dr. Walter Ian Lipkin (born 1952) , or Dr. Tracey S. McNamara (born 1954) !!!

[HK0054][GDrive]

USGS map of the United States showing reported cases of West Nile virus infection by county in 2012. Cumulative total of the entire country: 1,590 cases. (Current as of Aug. 28, 2012).[1]

U.S. West Nile virus (WNV) neuroinvasive disease incidence. Current 9-4-2012

The West Nile virus quickly spread across the United States after the first reported cases in Queens, New York in 1999. The virus is believed to have entered in an infected bird or mosquito, although there is no clear evidence. The disease spread quickly through infected birds. Mosquitoes spread the disease to mammals. It was mainly noted in horses but also appeared in a number of other species. **The first human cases usually followed within three months of the first appearance of infected birds in the area except where cold weather interrupted the mosquito vectors.** Since the virus has become widely established in the U.S., an average of 130 deaths a year occurred.

Differences in surveillance and reporting between health departments and generally increased surveillance as the disease spread cause some problems in direct comparison of the number of cases and the mortality rate. The reported number of infected in 2009 was 720, but the estimated total number of infected the same year was 54,000.[2] The true mortality rate is thought to be much lower because most cases are so mild they go undiagnosed. Some estimates put severe cases at only 1% of all cases. It is believed that the elderly or people with weak immune systems are most vulnerable to serious illness or death if bitten by a mosquito infected by West Nile.[3][unreliable medical source?] Most but not all mild cases go undiagnosed. In addition, some more severe but non-neuroinvasive cases are not reported to the CDC. Some mild cases are discovered during blood donation screening. 1,039 West Nile-tainted blood donations were discovered between 2003 and mid-2005. 30 cases of West Nile from blood transfusion were known, the majority from 2002 before blood screening was instituted.

In the first ten years since the virus arrived in the U.S., over 1,100 deaths occurred with human cases reported from every U.S. state except Maine, Alaska and Hawaii. (Animal cases have been occasionally found in Maine and in Puerto Rico.)[4] In 2012, there was a widespread outbreak with the highest death toll and second-highest total case numbers. Maine and Puerto Rico reported one case each, the first time the disease was reported in those places.[5]

Discovery in the United States

In August 1999, Dr. Deborah Asnis, an infectious disease specialist at Flushing Hospital Medical Center in Queens, noticed two male patients who were suffering from similar, unusual symptoms. The two patients, aged 60 and 75 respectively, were exhibiting sudden paralysis in their arms and legs, as well as disorientation and high fevers.[6][7] Lab testing also showed elevated numbers of white blood cellswithin the spinal fluid of both males.[6] Neither of the patients were responding to antiviral drugs.[7] Possible early hypothesizes included botulism, viral encephalitis, Guillain–Barré syndrome, or meningitis, but none of these illnesses exactly matched the symptoms.[6] Asnis decided to pursue a more concrete diagnosis by contacting authorities and other colleagues.[6]

[**Deborah Susan Asnis (born 1956)**] contacted [**Dr. Marcelle C. Layton (born 1958)**], the New York City Department of Health's chief epidemiologist, on Monday, August 23, 1999, to report her patients' symptoms.[6] Layton advised Asnis to send samples of the patients' blood and spinal fluid to the New York

State Department of Health in Albany for further analysis.[5] By Friday, August 27, 1999, just four days after Asnis had contacted Layton, two additional patients had been identified in Queens.[6] The number rose to eight by Sunday, August 29, at Flushing Hospital Medical Center and other hospitals in Queens.[6] All of the early patients resided within a few miles of one another. They were also frequent gardeners in the evenings.[6]

The Centers for Disease Control and Prevention (C.D.C.) initially identified the mystery illness as St. Louis encephalitis on September 3, 1999.[6] The city of New York began widespread spraying for mosquitos later that same day.[6] However, laboratory testing continued to determine a definitive cause of the symptoms.

The U.S. federal government revised its diagnosis from St. Louis encephalitis to West Nile virus on September 27, 1999, citing research by [**Dr. Duane J. Gubler (born 1939)**], a C.D.C. expert on arboviruses, as well as several bird deaths in the Bronx, located to the north of Queens.[6]

Dr. Deborah Asnis was credited by health experts with the early identification of West Nile virus in the United States.[6] **Her actions likely prevented a more widespread outbreak.**[6][7] In their 2003 book, The New Killer Diseases: How the Alarming Evolution of Germs Threatens Us All, authors Elinor Levy and Mark Fischetti praised Dr. Asnis' response to the symptoms, writing that, "Asnis did something other doctors might not have bothered to do."[6] They elaborated that, "One of the worst problems with our disease-detection system is that many doctors never report cases of strange symptoms, either because they are unsure of the disease they are facing, they're ignorant of the reporting requirement, or they simply never get around to it. Deborah Asnis was highly conscientious."[6]

Recent cases

During the years between 1999 and 2010, an estimate of 3 million people have been infected in the United States. Highest incidence rates are observed in states of the central great plains, with South Dakota, Wyoming and North Dakota leading in incidence.[8]

During the 2012 West Nile virus outbreak in Texas, 1,868 cases were reported. Male patients, persons >65 years of age, and minorities were at highest risk for neuroinvasive disease. At total of 1,868 cases including 844 (45%) WNND (West Nile neuroinvasive disease) cases and 89 deaths (case-fatality rate 5%). Dates of onset ranged from May 1, 2012, through December 6, 2012. The outbreak peaked during week 33 (mid-August) with 225 reported cases, which is historically the same peak for all reported WNV cases in Texas during 2002–2011. The median time from date of symptom onset to date of official report to TxDSHS was 27 days (range 6–274 days). Of the 254 counties in Texas, 135 (53%) reported a WNV case. The overall incidence rate for the state was 7.8 cases per 100,000 population. Almost half of the cases were reported from the northeastern quadrant of the state, including the Dallas/Fort Worth metroplex (902 [48%] cases): Dallas (396 [21%]), Tarrant (259 [14%]), Collin (64 [3%]), and Denton (183 [10%]) counties. These 4 counties had a combined incidence rate of 16 cases per 100,000 population.[9]

Cases

[...]

Sources: Final Cumulative Maps & Data for 1999–2018, Preliminary Maps & Data for 2019, and West Nile Virus Disease Cases by State 2020, Centers for Disease Control and Prevention

*2019 also had 104 presumptive cases observed in blood donors

** as of December 15, 2020, also 127 presumptive cases observed in blood donors

Maps of progression

The following maps show the progress of human cases of West Nile across the United States. States are colored according to the percentage of all U.S. West Nile cases they represented in that year. Zero percent (no cases) is colored white; less than 1% is blue; between 1% and 5% is green; between 5% and 10% is yellow, and greater than 10% of cases in a year is red.

LIPKIN + MCNAMARA

https://news.wttw.com/2012/08/09/west-nile-prevention-chicago

west nile and birds

https://www.naba.org/wnvirus.html

Finally, emphasis has focused on dead birds, particularly dead crows. Crows are among the most susceptible species to West Nile Virus in the Old World and are obviously going to be a major reservoir for the virus in the New World. The fact that West Nile Virus does not usually kill the birds that carry it is one piece of evidence supporting the hypothesis that it recently arrived in North America, where our crows and other birds have yet to develop any immunity. However, in order for the disease to be sufficiently widespread in the birds to cause a number of bird deaths, and in order for there to be enough infected birds to infect enough mosquitoes to produce an epidemic, the virus had to be present in the bird population for many months, perhaps even for years. In southern Europe the virus was present for several years before the Romanian outbreak.

This means that the virus is probably already fairly widespread in birds, not just in crows. Birds, including crows, range widely and are not cognizant of county barriers. Thus a bird that dies in county A today may have been infected in county B last week. Thus, to base county-wide control programs on a single dead crow is inappropriate.

CDC

https://wwwnc.cdc.gov/eid/article/9/3/02-0628_article

Of the 87 mosquito-exposed birds, we observed obvious signs of illness in 28 birds, including members of certain passerine species (in particular, the corvids) and the Ring-billed Gull. Signs of illness included generalized lethargy, ruffled feathers, unusual posture (Blue Jay), inability to hold head upright (Ring-billed Gull), and ataxia (Ring-billed Gull). In most cases, clinical signs were followed by death within 24 h. Moribund birds were euthanized, although ill birds were rarely found moribund because death occurred rapidly. External hemorrhage, either from the mouth or from the cloaca, was noted in a small number of American Crows that died. Although our sample sizes and controls were insufficient to generate accurate estimates of mortality rates, our observations can be used to generate preliminary estimates (Table 4).

https://www.reuters.com/article/us-westnile-birds/west-nile-killing-off-beloved-u-s-birds-study-idUSN1735085420070518

CHICAGO (Reuters) - The West Nile Virus is taking a worse-than-expected toll on some favorite birds in North America such as robins and chickadees, U.S. researchers said on Thursday.

Slideshow (3 images)

They studied 20 North American birds and found declines in seven species from four families as a result of the virus, which lives in birds and other animals and can be transmitted by mosquitoes to humans.

The impact was especially strong among the American crow population, which has been cut by 45 percent since West Nile first appeared in the United States in 1999.

“Seven out of 20 is a substantial number,” said A. Marm Kilpatrick, senior research scientist for the Consortium for Conservation Medicine at the Wildlife Trust, whose work appears in journal Nature this week.

“When West Nile first showed up in ‘99, people knew that crows were dying and jays were dying, but no one knew if there were any population level impacts,” Kilpatrick said in a telephone interview.

AUSTON MARMADUKE KILPATRICK resume (2019)

2019-07-11-website-kilpatrick-cv.pdf

[HL006J][GDrive]

Whoa - 27 papers with peter Daszak !

Top 10 Lies About West Nile Virus and Anvil

by Robert Lederman

http://www.envinfo.org/wnv%20lederman%2010%20top%20lies.htm

https://rense.com/general39/media.htm

Rense.com

West Nile Virus - Real Threat Or Media Hype

By Marjorie Tietjen

Daystar1952@yahoo.com

7-23-3

https://www.thecity.nyc/2021/1/28/22255488/fauci-vaccinations-de-blasios-nyc-covid-contact-tracing

Was request for money for contact tracing really jsut a way to get money for vaccines ?

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http://www.mosquitocontrol.org/st-louis-encephalitis

2011 Book : "West Nile Story - in the Run-Up to 9/11" by Mitchel Cohen

Published by the No Spray Coalition Against Toxic Pesticides / Source : [HB005W][GDrive]

See **Dr. Thomas Patrick Monath (born 1940)**

It was in this context that in August 1999, animal pathologist
Tracey McNamara and her team working at the Bronx Zoo disclosed
that exotic birds had begun dying from an unknown disease.
They feared it would spread to other birds and might attack
human beings and present a serious health emergency. McNamara
– who had also been associated with the top security U.S. government
animal disease and biowarfare research lab on Plum Island
(off the eastern tip of Long Island, New York) – contacted the
NYC Department of Health. After a number of false starts in identifying
the pathogen, which by now had affected several people as
well as birds, the Centers for Disease Control announced that a
rare mosquito-borne virus, West Nile, was causing the disease
previously unknown in the U.S.3

[...]
wo years before what we now know simply as “9/11,” a
terrorist attack hit New York – or so we were told. U.S.
government officials announced that Saddam Hussein had
sent some arcane virus that was killing birds – mostly crows – and
that could be transmitted to people by mosquitoes. Panic ensued.
The mysterious disease threatened to infect and kill people
throughout the metropolitan area.
T
Ecologists and bird-watchers had tried to call attention to
clusters of dead crows for months earlier in 1999, mostly around
the Fort Totten area. Fort Totten is situated on the northern shore
of Queens, some 200 miles as the crow flies from the Plum Island
Animal Disease Center – a high security government lab research-
7
Drawing by Van Howell
for the No Spray Coalition
ing dangerous pathogens similar to West Nile virus.
The infected areas also overlapped the path of emissions
spewing from New Jersey’s oil refineries, raising questions for

some (but ignored by most in the NYC Department of Health) over the possibility of air pollution as the cause of – or at least a contributing factor in – the bird deaths.5 Health and government officials released incorrect and ever-changing information about the nature of the disease, which fueled panic. At first the birds were said to have died from St. Louis Encephalitis, then West Nile-'like' virus, and finally West Nile virus.

Four people in New York City died from what was said to be West Nile encephalitis that first year, a disease previously unknown in the U.S. (Encephalitis is an inflammation of the brain that could be caused by exposure to pesticides and other toxins as well as by certain viruses and bacteria.) Far fewer died in this "emergency" than from diseases caused or exacerbated by the massive aerial and truck-based pesticide spraying. Strangely – and this information had to be pried a year later from Dept. of Health officials with a crowbar – not a trace of West Nile virus was found in the brain tissue of those who'd died, even though studies at Yale showed that "people who develop full-blown cases of West Nile encephalitis . . . are those in whom the virus has penetrated the blood-brain barrier." The virus should have been found in the brain of anyone suffering or having died from West Nile.6

Sound, and into the Atlantic Ocean.

Mayor Giuliani held daily press conferences at his bunker in World Trade Center #7 surrounded by maps and graphs and armed guards, whipping up hysteria and enabling officials to circumvent civil liberties and manipulate the media and public. This was a building which, unknown to most of us at the time, also

9

housed, a few floors above, the largest CIA offices in the country outside of Langley VA, and all the Securities and Exchange Commission files on Enron and other corporate scandals, which were scheduled to be heard shortly after 9/11. (Most of those files were destroyed in the attacks on the World Trade Center.) In the beginning Giuliani and others pinned the upsurge of mosquito-borne ailments and the handful of cases of West Nile encephalitis on Saddam Hussein, just as officials were later to claim – similarly, with nary a shred of evidence – that Saddam was behind the Anthrax attacks following 9/11. During the military build-up to the Gulf War in 1990-91, then-President George Bush publicly condemned the threatened use of chemical and biological weapons by Saddam Hussein, who was depicted as "worse than Hitler," while privately shipping those very pathogens to Iraq. The U.S. military, under the guise of fearing an Iraqi attack with biological and chemical weapons, inoculated hundreds of thousands of U.S. soldiers with experimental anthrax and nerve gas vaccines that had

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Donald Rumsfeld's famous handshake cementing trade agreements with Saddam Hussein in Iraq, circa 1983.

never before been tested on people in field conditions. Hundreds resisted, and many were quietly court-martialed.

The U.S. government knew the extent of Iraq's biological and chemical arsenal. After all, hadn't Donald Rumsfeld visited Iraq in 1983 on behalf of the Bechtel corporation, which was seeking to build an oil pipeline from Iraq to the Gulf of Aqaba via Jordan, and shaken Saddam's hand to seal the various trade agreements between the U.S. and Iraq? But

[...]

The U.S. government knew the extent of Iraq's biological and chemical arsenal. After all, hadn't Donald Rumsfeld visited Iraq in 1983 on behalf of the Bechtel corporation, which was seeking to build an oil pipeline from Iraq to the Gulf of Aqaba via Jordan, and shaken Saddam's hand to seal the various trade agreements between the U.S. and Iraq? But now, in reckless disregard of the truth (and of their own culpability in providing pathogens to Saddam), U.S. and city officials speculated – this was in September 1999, two years before 9/11, remember – that Iraq manufactured the virus said to be causing the disease, infected mosquitoes with it, and then shipped those mosquitoes overseas to be released in New York City. This scenario surely strained credulity, especially since the signature of U.S. President George Herbert Walker Bush, in his capacity as head of the CIA and later as Vice President and President, appeared on documents approving U.S. shipments to Iraq of toxic varieties of E.coli and Salmonella bacteria, and organisms that cause Anthrax, West Nile, gas gangrene and brucellosis.

11 But somehow the obvious "follow up" questions were never asked, and Bush and Donald Rumsfeld escaped criticism over their sale of toxic organisms to Iraq.

[...]

ambiguous.)

THE INSTRUCTIVE CASE OF DR. OMAR SHAFEY
r. Marcelle Layton contributed to the pesticide drumbeat
with an article on the spray campaign in the CDC's journal,
Morbidty and Mortality Weekly Report. But even here,
in the supposedly objective halls of science, political intrigue
abounds: Layton's report was chosen at the last-minute to replace
a very critical article about spraying Malathion by Florida epidemiologist
Dr. Omar Shafey, who headed the Florida Department
of Health's Division of Environmental Hazards and Health
D
25
Effects. Shafey submitted a study, "Surveillance for Acute Pesticide-
Related Illness During the Medfly Eradication Program –
Florida, 1998," which detailed 138 reported cases of pesticide-related
illnesses among Florida residents following intensive Malathion
spraying there.
Dr. Shafey's findings were slated to appear in the October 22,
1999 issue of MMWR. But on October 19 – two days before publication
– Dr. Steven Ostroff, then Acting Deputy Director for Science
and Public Health at the CDC, called John Ward, M.D., the
editor of the MMWR, and convinced him to bump the article critical
of spraying and replace it with Layton's. It

[..]
Dr. Shafey continued his research on workers exposed to
pesticides on the job. But two years later, he was fired by the Florida
Department of Health for an alleged over-charge of $12.50 on a
travel-reimbursement voucher. (The inspector

[...]
company announced it was
32
"almost ready" in developing a vaccine for West Nile encephalitis
– at just the moment (Oh Lucky Day!) the disease was first detected
in birds at the Bronx Zoo and as Hauer and Giuliani were
about to begin their mass spray campaign. (Oravax was awarded
a $3 million grant from the National Institutes of Health the following
summer to create a live viral vaccine for West Nile, using
the yellow fever vaccine as its base.) Oravax, according to Monath,
was also working on Dengue fever at the time that Cuba complained
that the U.S. was engaging in bioterrorism against it by
spreading mosquito-borne illnesses there. A mysterious outbreak
of Dengue fever also hit Hawaii at that time.
Some have suspected that the discovery of West Nile disease
and the readiness of the vaccine were not a coincidence, that political
and economic motives intersected and reinforced each other,
and that West Nile virus was released to create a market for the
vaccine as well as to engage in bioterrorism preparedness drills
and experiments. "The theory I and a number of other activists
have been suggesting," writes researcher Patricia Doyle, "is that
the entire WNV panic has been created specifically in order to justify
the mass distribution of this very vaccine throughout the entire
U.S. Oravax was granted a license by the U.S. Army bio-warfare
lab in Ft. Detrick in 1996 (Monath was previously a researcher at
the same lab) to manufacture a Japanese encephalitis vaccine derived
from a genetically-altered virus the Army itself created.
WNV is a variation of Japanese encephalitis. Numerous medical
and scientific institutions, many run by the Federal government,
have been quietly experimenting with WNV in NYC and the surrounding
area for decades. Most of this research involved biowarfare
applications."49
It was Hauer who, more than anyone else, persisted in raising
the "foreign terrorism" conjecture for West Nile virus (claiming
that Saddam Hussein was behind it) long after that disinformation
and attempt at public manipulation had been discredited, and
left it to Monath to push for financial subsidies to his company to
manufacture the vaccine. Hauer was next hired as Assistant Secre-
33
tary of Health and Human Services on – please note the date –
Sept. 10th, 2001. Together with Tommy Thompson (the secretary of
the agency), it was Hauer who told the White House staff and
President Bush to begin taking the drug Cipro, made by Bayer, ostensibly
for Anthrax exposure.50 The date of that recommendation?
The morning of September 11th, 2001.
Hauer then went on to head the federal Office of Public
Health Emergency Preparedness,51 created in June 2002. He used
his position as a bully pulpit to stump for emergency mandatory
vaccination programs and hammer them into place. He was the
main force behind legislation known as the Model Emergency
Health Powers Act, which establishes a bioterror preparedness
"czar" – Hauer clearly envisioned himself in that role – with authority
to order mandatory vaccinations of health care workers
and first responders (police, fire-fighters, soldiers, medical personnel)

and "quarantine" facilities for those who fall victim to smallpox or other "emergency" diseases, as well as to keep track of and round up those who refuse to take the smallpox vaccine and incarcerate them in the same facilities as people who contracted the highly contagious smallpox. The legislation has been submitted federally as well as to state legislatures across the country, where much of it has already been passed piece by piece. By 2009, the camps had already been constructed by Halliburton – the infamous corporation that Dick Cheney had headed.52

On the federal Centers for Disease Control's website, one lone footnote cites four different vaccines to be administered for smallpox, not just the one that many older folks got in the 1950s – and even that was more dangerous than we were led to believe. Three of the four kinds of vaccines would be genetically engineered and administered to unsuspecting people, despite having never been tested. Basically, the CDC – now headed by Thomas Frieden, who until 2009 directed NYC's Department of Health – is proposing a massive experiment on a population driven to hysteria by the government and media. "At the end of the day, the numbers [of first responders receiving mandatory smallpox vaccinations]

could be significantly greater than 500,000," Hauer said.53

At first, a panel of outside experts – the Advisory Committee on Immunization Practices – rejected the proposal to mandate smallpox vaccinations to the general public. But Hauer and several other officials overruled that moderating recommendation and produced a firestorm within the Bush administration over the question of mandatory emergency vaccinations. Hauer recommended "that a phased approach be used, starting with 500,000 and then moving in steps to 10 million."54 But in a decision of unheralded courage and historical importance, the California Nurses Association – now a national labor union – heroically refused to allow themselves or their patients to be vaccinated with these unnecessary experimental vaccines, igniting a resistance movement across the political spectrum that threw a wrench into the gears. In blocking the government's "emergency" forced vaccination program for smallpox, the nurses saved tens of thousands of lives and pointed the way for new forms of resistance in the post-9/11 era.

https://www.usaha.org/upload/Publication/Newsletters/2000/USAHA_Newsletter_Mar2000.pdf

2) Monitor the health and productivity of the U.S. animal populations and monitor the health-related attributes of animal products and veterinary biologics. Emergencies are more than the outbreak of only foreign animal diseases. An unusual presentation of a disease in this country can suddenly and negatively impact the public's purchasing decisions as well as importation decisions made by other countries. VS monitors foreign animal health and maintains an extensive domestic surveillance system to prevent incursions and quickly detect and diagnose outbreaks of exotic diseases. VS has been successful in its eradication campaigns against exotic Newcastle disease (1974), hog cholera (1978) and avian influenza (1984). In September 1999, it successfully isolated a virus from tissues of a crow from the New York city area. This virus was later identified as West Nile Virus (WNV) and confirmed as the cause of a human encephalitis outbreak. At the request of New York State, VS sent an early response team to assist in investigating the cases.

. Murray K, Walker C, Herrington E, et al. Persistent infection with West Nile virus years after initial infection. *J Infect Dis.* 2010;201:2–4. [PMC free article] [PubMed] [Google Scholar]

See **Dr. Thomas Patrick Monath (born 1940)**

http://www.otdowntown.com/news/west-nile-plot-exposed-HYNP12200010313103199 71

West Nile Plot Exposed!

16 FEB 2015 | 05:01

Last August, a little company based in Cambridge, MA?OraVax?received a $3 million grant from the National Institutes of Health to begin work on a West Nile vaccine.

As was reported in the Daily News on Aug. 21, "Federal health officials say they will recommend that anyone in the high-risk group?children and the elderly?take the vaccine." The story went on to report that OraVax hoped to begin human testing of the vaccine in 18 months?though federal officials were expecting it sooner?perhaps even by next summer.

Dr. Thomas Monath, vice president of vaccine research and medical affairs at OraVax, who's perhaps the world's leading authority on arboviruses (insect-borne diseases)?and the man behind the development of the new vaccine?says things are coming along "outstandingly well."

"We really only began this initiative last fall, briefly," he told me via telephone. "Then, when we got funded by NIH, we started around August 1. And at this point, we have generated a vaccine candidate, so we're initiating pre-clinical studies."

This all sounds like very promising news. However, it scares the hell out of a small handful of researchers and conspiracists, who are convinced that something ominous is behind it all. Why? Most of their concerns lie with the figure of Monath himself and, to a lesser degree, with OraVax.

A bit of background. From 1974 to 1988, Dr. Monath was the medical director of the Division of Vector (i.e., mosquito)-Borne Infectious Diseases at the Centers for Disease Control. Then, from '89 to '92, he was the colonel-in-chief of the virology division at the U.S. Army Medical Research Institute of Infectious Diseases at Fort Detrick, in Maryland.

In other words, he worked in the U.S. Army's biowarfare division?and that's what worries people. What's more, together with Jerome Hauer, former director of the Mayor's Office of Emergency Management, he's been an adviser to both President Clinton (on biowar preparedness) and Mayor Giuliani (at the initial outbreak of WNV). And now he just happens to be with the company that landed the grant to develop the vaccine?a vaccine that could well mean billions for the small biotech firm in the coming years.

The conspiracy stories range from speculations that WNV was accidentally released from the biological research facility on Plum Island to the firm conviction on the part of some that OraVax intentionally unleashed the virus upon the city?first, to ensure that they would sell their vaccine, and, second, as part of a grand eugenics experiment being spearheaded by the Rockefeller Foundation.

I asked Dr. Monath if he was aware of some of the things people were saying about him.

"I've seen the e-mails," he admitted. "Of course I don't know whether I've seen them all?I don't go looking for them, because they're all tommyrot. My friends send them to me. We don't fight these things or dismiss them, because they're trying to mix truth with lies?the standard way of making things believable. But it's all preposterous, and I'm happy to tell you why."

Dr. Monath explained that most of these conspiracy tales have arisen as a direct result of his background in biodefense. "I've served on many committees on biodefense issues and so on. I'm connected in that way, and people can find that out. Also, there's the connection with my interest in arthropod-borne viruses. What I'm doing now is corporate, and it's easy to weave all sorts of conspiracy theories together. I mean, none of this has any basis in fact. For example, there was one saying that I had done work on Japanese encephalitis vaccines when I was in the Army, and that's not true at all."

When you look at OraVax and Monath over the past 10 years, however, it's easy to see why some questions could arise.

OraVax, Inc. was formed in 1990.

In December of 1990, with the Gulf War still a few weeks away, the Dept. of Defense released a memo to the Tri-Service Vaccine Task Force, recommending, among other things, that the task force "Establish as high priority the institution of a Manhattan-like project to evaluate the above vaccines in a real operational setting and to develop specific vaccines for shigella sonnei, STLT and ST enterotoxigenic E. coli, West Nile Fever, and post-wound infectious agents."

In short, military researchers were working on a WNV vaccine 10 years ago, in preparation for the possible use of biological agents by the Iraqis.

In 1992, Monath left the military, and joined OraVax.

In May of 1997, as reported in the Boston Business Journal, OraVax was given a $322 million contract with the Dept. of Defense to develop vaccines for several potential biowar agents. According to the Journal, "[OraVax] will manufacture vaccines for at least two of the diseases being targeted by the defense department's Joint Vaccination Acquisition Program."

Unfortunately, according to an OraVax memo dated Aug. 18 of the following year, the deal fell through: "OraVax, Inc...announced today that it has been unable to reach agreement with DynPort concerning the manufacture and development...of the first two vaccines proposed under the program."

As a result of that lost contract, OraVax stock value plummeted from $75 a share to 25 cents, leaving the company on the brink of being booted off of NASDAQ.

Soon thereafter, OraVax was bought out by Peptide, a British vaccine manufacturer.

On April 10, 1998, Monath and Jerry Hauer met with President Clinton, suggesting that Clinton stockpile vaccines across the country in preparation for the possibility of a bioterror attack. The President rejected the idea.

across the country in preparation for the possibility of a bioterror attack. The President rejected the idea.

In the summer of 1999, as we all know, the first cases of WNV appeared in New York, and Monath and Hauer were called in to advise the Mayor on the crisis. A year later, OraVax received the NIH grant.

There's absolutely nothing ostensibly sinister in any of that. But it reveals that there was an initiative to develop a WNV vaccine 10 years ago?and that Monath was in such a position that he was quite possibly involved.

Some researchers on the subject have pointed out that it usually takes a full 10 years to develop a vaccine from the research stages to a point where human testing can begin. Yet OraVax is saying their vaccine will begin testing in 18 months, if not sooner.

It also seemed peculiar that there was an outbreak of WNV in New York just about 10 years after military research began?and that Monath was involved in the WNV hysteria from the very beginning?and that a struggling company that, just a year earlier, was in serious financial trouble, landed the contract. Was it all just very fortuitous?

I brought up the DoD memo to Monath, and asked about his involvement.

"I went to a number of those Tri-Service meetings," he said. "I don't recall anything specifically about West Nile. But at that time, I know that the folks at Walter Reed?where I was not, I was at Fort Detrick?were doing some initial work on West Nile. My recollection is it never really went anywhere. As far as I know, there was no STO, or Science and Technology Objective, or fund line for West Nile vaccine development. If there had been one, it would've been at Walter Reed, where the infectious disease threats were addressed. Fort Detrick only dealt with bioweaponry issues."

(It should be noted, however, that Dr. Monath's work at Fort Detrick took place at the Medical Research Institute of Infectious Diseases.)

And when I further asked him about the unusual speed with which the vaccine development seemed to be progressing, he explained, "It reflects this platform technology that we're using, which is very robust. We splice the genes for the co-protein of the virus into yellow fever [vaccine]. We've got a lot of experience with that, and it has proven itself to work again with West Nile."

There's much evidence of that, too. Monath has, in the past, developed several vaccines using his yellow fever vaccine as a base. You might say it gives him a good head start.

He also went on to explain that the NIH grant?which seemed paltry when compared with other grants and contracts OraVax has been involved with?was little more than seed money, used to kickstart the program?and that other investors would be needed as the work progressed. Three million dollars, it turns out, is also the maximum amount the NIH could grant them.

These are all responses that the conspiracists, of course, have their own scary answers for?with plenty of documentation to back them up. In and amongst all of the interweavings and speculations, though, they do raise a few very good questions.

"Why would you be working on a vaccine," asks Robert Lederman, president of A.R.T.I.S.T. (Artists' Response To Illegal State Tactics)?who's done perhaps more writing on "The West Nile Plot" than anyone else?**"for a disease that's so difficult to get? And so unlikely to even make anybody sick, let alone cause fatalities? When there are so many diseases in the world, why would you be pursuing this?"**

And he's got a point. West Nile just doesn't seem to be that bad?so why the hubbub about the vaccine?

The answer, I would guess, has less to do with government plots than it does with the nature of contemporary science. Like conspiracy theories, scientific work takes place in tight focus. Both study the tiniest of issues, the incidentals, in the hopes of adding something to the big picture.

For instance, it should be noted that the West Nile vaccine is not the only vaccine that OraVax is currently working on. A month after they received the $3 million NIH grant, they received a $343 million contract with the CDC to develop a new smallpox vaccine. They also have another dozen vaccines in the works. West Nile seems innocuous, yes?but it's also a strain of Japanese encephalitis, which does kill people?so the possibility certainly exists that it could turn into something worth worrying about. And if that's the case, why not have a vaccine for it?

Fact is, I would have been much more suspicious had they received $300 million for a WNV vaccine, as opposed to $3 million.

And what about Dr. Monath? How peculiar is it that he advised the President and the Mayor and then ended up at the company that received the contract? If you look at things backwards?his background in the military's biodefense program, etc.?it might seem more than a little suspicious. Questions of conflict of interest aside, however, Monath remains the world's leading authority on these diseases, as well as the most prominent researcher into the development of vaccines for these diseases. It seems likely that wherever he ended up?whether at a small company with a shaky past or the world's largest biotech firm?he would be the one who would be given the job.

Perhaps a more important question, though, concerns the spraying itself. There's no denying that the pesticides being dumped on the city are potentially much more harmful to humans than WNV. Lord knows they kill every form of aquatic life they touch. And we have no idea what sort of long-term effects they'll have on the health of New York's population. So why the quasi-military response to such a useless "epidemic"?

Lederman feels that it's a ploy, a patently offensive tactic used to make next year's vaccine a more pleasant alternative and ensure sales. But, again, I think there's a simpler answer?namely, that this is how we've always dealt with problems like this. Not only in New York, or in California with the medflies, but all over the world.

According to a 1998 article by the CDC's Duane Gubler, "Vector-borne infectious diseases are emerging or resurging as a result of changes in public health policy, insecticide and drug resistance, shift in emphasis from prevention to emergency response, demographic and societal changes, and genetic changes in pathogens."

Historical records going back to the early part of this century indicate that outbreaks of insect-borne diseases like malaria, yellow fever, sleeping sickness and the black plague have traditionally been met with kneejerk insecticide saturation, in order to contain the problem after the fact, by killing adult carriers. Thing is, this method always seemed to work for a while.

A few decades after the problem was taken care of, however, there have been resurgences of all these diseases?usually in more virulent strains?in Asia, Africa, Europe and North America. Everything came back.

"Although the reasons for the failure of [vector-borne disease control programs] are complex and not well understood," Gubler writes, "two factors played important roles: 1) the diversion of financial support and subsequent loss of public health infrastructure and 2) reliance on quick-fix solutions such as insecticides and drugs."

He goes on to argue for the development of vaccines and a greater emphasis on prevention as opposed to reaction.

Point being, I guess, that in response to WNV, the city is only doing what every country on Earth has done in the past?and because of it, we may need that damn vaccine down the road.

When I first started looking into this story late last summer, I was convinced something shady was going on with Monath and OraVax, even before I read any of Mr. Lederman's articles. I was so suspicious of the spraying that I desperately wanted to discover that something diabolical was behind it. Believe me, Lederman and the others writing on this subject tell good stories and make strong cases?until you take a step back. Or maybe two steps back, to a point where Occam taps you on the shoulder and whispers in your ear.

There are still plenty of questions that I have about the city's West Nile hysteria. But I've come to the conclusion that the answers are more likely to be found in human stupidity than in superhuman evil.

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https://www.bizjournals.com/boston/stories/1997/09/29/newscolumn1.html

1997-09-29-bizjournals-com-boston-oravax-inc-japanese-encephalitis-vaccine

https://drive.google.com/file/d/1sGS-bKKDQxq4RQai8Gvtd0Lum5u0hzXs/view?usp=sharing

OraVax Inc. at work on Japanese encephalitis vaccine

By Tom Salemi –

Sep 29, 1997 Updated Sep 29, 1997, 12:00am EDT

OraVax Inc. of Cambridge just signed a licensing agreement to bolster the company's development of a vaccine for Japanese encephalitis, a mosquito-borne virus endangering billions of people in Asia.

The deal with St. Louis University's Chimeric Flavivirus Vaccines gives OraVax access to the Yellow Fever virus, an effective vaccine with an extraordinary ability to replicate, according to the company.

With the school's chimeric vaccine technology, OraVax will try to meld the fast-growing quality of the Yellow Fever virus vaccine with the company's vaccine against Japanese encephalitis, dengue, hepatitis and other viruses.

The encephalitis vaccine is just one of the four the company vowed to focus on after its reorganization in the spring.

One vaccine will protect nursing-home residents who may be susceptible to certain strains of colitis or diarrhea, and work continues on the vaccine to prevent peptic ulcers.

Meanwhile, OraVax will be taking another big step with HNK20, an experimental drug created to ward off a respiratory virus in infants.

The drug didn't fare too well in tests conducted last winter in Argentina, Australia, New Zealand and South Africa, where it failed to reduce hospitalization much better than a placebo.

With cold and flu season on the way, OraVax wants to conduct a second Phase III trial on younger patients this winter, this time focusing on infants four months of age and under, where the drug proved to be most effective.

But OraVax still hasn't found a corporate partner to pay for the study.

Spokeswoman Kelly Conlon said the company needs to settle on a partner within the next three weeks.

[...]

ddd

The West Nile Virus Outbreak of 1999 in New York:
The Flushing Hospital Experience
Deborah S. Asnis,1 Rick Conetta,1 Alex A. Teixeira,1
Glenn Waldman,1 and Barbara A. Sampson2

https://watermark.silverchair.com/30-3-413.pdf?token=AQECAHi208BE49Ooan9kkhW_Ercy7Dm3ZL_9Cf3qfKAc485ysgAAApkwggKVBgkqhkiG9w0BBwagggKGMIICggIBADCCAnsGCSqGSIb3DQEHATAeBglghkgBZQMEAS4wEQQMhes0omkZKjA91RkPAgEQgIICTBm_oMcLhs3nrx0inlVo_Ww8AtrKWZYAx2jjdegufUl67blLHdt-hfPuL5ElWVQUigBqHmAxUe6g0eWtRa7kHNtZ4EVjq0j7nrqPdOWY5PAOXW01sp2uS9__Mr4h0Cuz61mctuE9cQ7HYyhr8AxccJs2LqpBd1Sjvvlk-9Xv-a-KhifGNTIyIyG5g0-OrqXI3uhfPvg65mKd7R39RQQCpLaglAq6pKSyGCoxQ-b8FmlGb8uo-7J8kIiP8iBR5uQVpwUocM9sRBqHLFqprRdSePmLR9c1N8418p829hOHs7eooTtC17iv_79OwNC2nJppg-kfKKHo26T9bGqP_TS-T7odyLBNPO-YVAmGNOcE3kAlGPI2zVmstRFy-SBtd_bjNeHloIjiwiUA5PgbS1phEcF20yBdfNPqsvEM-o_ahHOVvTgrBCqIUyLoPC2NWTbPr42J5nOqYvH9WBfj3FQ3G3LN8-wVQMhhcfoZPDpehBex0GWcGk5QIvymoqp_l09b2t_DdDTQCckiQ_Pg74hlSLpzM-zn_X_PFg2GtIvCThis7X4MfII6KjNZVLyX6r4hxLdAX0_Ap8S5ElxMFcIZ-JaJ6siUqqy4W1la7CUemm902t902lRmnDcLVW9_zTO9EDHALMYm0tBBr_bf2pAodOSOvNNwJLyOKrUnMeKFkBIqtoUOrO_mVHQzffoG47lGv6IF2gEMklYiq2UOK_G13nGLAC-G_rDxBd9Swr30GBsZCtSwArxuY1nVU8icGNdiD_8WS3bwsZBe3irWuQ

The major vector in NYC was the Culex pipiens mosquito, but WNV has also been previously isolated in the Aedes vexans and Anopheles mosquitoes. The source of this outbreak could have been an infected bird (either migrated or imported), infected mosquitoes, or, less probably, a viremic person. West Nile fever normally does not cause birds to become ill, but during the NYC outbreak thousands of crows died and smaller numbers of birds of other species in the greater New York metropolitan area [9]. **In the past, WNV has been isolated in horses with encephalitis in Egypt, France, Portugal, Morocco, and Italy, but this is not common [10, 11]. In the New York outbreak ofWNV, »25 horses in the North Fork of Long Island (a suburb of NYC) became clinically ill, of which 9 died and 16 recovered (S. Trock, Cornell University and New York State Department of Agriculture and Markets, personal communication**). One cat also died of WNV infection in New Jersey (J. Brook, New Jersey Department of Health, personal communication). Camels, sheep, goats, and dogs can become infected, but they do not maintain virus in nature as well as birds because they have a lower population density and a slower reproductive rate [11]. It has been shown that domestic mammals either develop low-level or undetectable viremia after experimental infection. WNV has also been found in wild ixodid and argasid ticks, but their role in infecting humans is not well established [11].
The

"North Fork of Long Island" ... is not a "suburb of New York City"

'West Nile Virus' Outbreak And Dead Lobsters

When I learned about the outbreak of the brand new altered/mutated strain of West Nile Virus, I began to spend more and more time investigating Plum Island.

I have learned that Plum Island had a fiber-optic cable installed and finalized in March, 1999. During the finalization of the installation of that cable, by STV, Inc. power to the island and the facility had to be cut. All power was to go through the cable, even back-up power.

Plum Island uses a negative pressurization to maintain biocontainment. In other words, as you go to the center of the facility, where the exotic disease labs are located, the pressure is depressurized. This would prevent microbes from release should an accident happen. Negative pressurization depends on power. I have been told that the power to the facility was cut to finalize the installation of the cable.

I have learned that in the 1970's there was an accidental release of microbes. All of the people were safely evacuated, in paper clothes, from the Island. The animals were incinerated and then the Island and Facility was sprayed with toxic chemicals to decontaminate it.

The investigation of Plum Island is still ongoing. I am also investigating the death of the lobster population in Long Island Sound. Lobsters are dying by the millions. I feel this mass die-off is related to the material uncovered in my Plum Island investigation. I am, also, still in the process of investigating the 'West Nile Virus.'

http://www.rag.org.au/sra/plum.htm

...

Threats To Stop The Investigation

Thus far, I have found an equid outbreak of the same/or almost the same strain of West Nile Virus, not far from the United Nations Biocontainment level 5 facility in Italy. The outbreak happened Fall of 1998.

According to the charter of the diagnostic facility at Plum Island, foreign disease samples should have gone to Plum Island during that outbreak.

My latest findings also places Japanese Encephalitis at the Plum Island facility. In addition, Plum Island doctors have tested Japanese Encephalitis vaccine on HUMAN VOLUNTEERS.

Evidently, I have unknowingly stumbled upon something that "someone" in "some" agency does not want made public.

One of the last radio programs that myself and my partner William Thomas did, is mysteriously now unavailable on the internet archives.

A friend and confident who had worked in the US Military Biowar program and who has friends at some of the alphabet soup agencies, told me that I have attracted the attention of someone in an agency. He said, "they want to keep what I have discovered, in the shadows." He also said that they want to silence me.

My investigation continues. When I first began, I tried to get the documents to the mainstream media. NO TAKERS.

I sent the info to William Thomas, the author of "Bringing the War Home," and "Scorched Earth." William Thomas very bravely took over the investigation for me.

I am not a professional, I am just a private citizen who began to ask questions. Many of which remain unanswered at this time.

I am sincerely grateful, To William Thomas, who took time from his busy schedule and his own investigations, specifically of the Chemtrails, to help me. I could not carry one without his help. I sincerely want to thank you, Will Thomas.

I, also, want to thank Jeff Rense, Art Bell, and David Oates for enabling me to have a forum to discuss my research.

As for my health, my friend (whom I fondly call' Capt. X') is quite concerned. There are those in our Government who want this to remain in the shadows. I just cannot go along with that. I am continuing my investigation with my partner, William Thomas. Together, we are in the process of explaining where a pathogen, never before seen in the Continental U.S., has originated.

I will keep updating the Plum Island, Biocontainment Level 5, story.

Patty Doyle

** As a footnote: The Italian West Nile virus has been traced back to Senegal 1993. I am in the process of checking labs near that outbreak and will keep you updated.

https://watermark.silverchair.com/33-10-1713.pdf?token=AQECAHi208BE49Ooan9kkhW_Ercy7Dm3ZL_9Cf3qfKAc485ysgAAAp4wggKaBgkqhkiG9w0BBwagggKLMIICHwIBADCCAoAGCSqGSIb3DQEHATAeBglghkgBZQMEAS4wEQQMzrTBDbqgOyi2LL15AgEQgIICUehJ8818xAInHS8S1PiwtOfRz3KjTFvEf0WtIr0wpIJsfvM8cXc1SoG2w_1WvjuaAQfIdlBbMXjPWn0-5cLDYNWtJakduYVa5r_sgf537xiG9arDZV2_-ZPRWuQozCVuSzrLn-QQPUVfuZbzvAsQrMlnFZbFIDAedRhoYyBD2INI7C0LEbEIeqA1h_jgINvPXlDDfgITrYr-g7vWlgiMykSi9MZRdRNGurvvOrqCsSu9R94kiuuRx0kzFU7A_PiHMSOeXXRgxfxo3GkhrYdrZ-D-I-6MTWpevhHP3F7a37RWowDpKDAUjWqZF3dI_UyrHwyIALdhKJaeRyjMkwAdfHAcWzs7Wpxwax9trP1r6XRmdA1Fj5U3K-cw3XuaE_w8LAx4lkd16z82WeNu9YkPJAU7OZ4CWze_jiUkOZNlgAltITtBiP6T7fCC7Ya4W6H004cvsViMcrvX_D9isopSm4YL5DJO1gzKNlbZN9wVoojIDWPmBEChGBuoiyogjfjrVKZWBSJF5a1zKLhCGFOnPPRx3B3PEOvRpMIMhPfhRDPp5a7Z6yE4Y1buQdftgluzdFY6gnRYMh5qipCKCl2zo6FfiYSF5Bv6-zHZzLbsImJv8Pgq6kOMCehA-DSohe2Sue-seawI3k9MA1sQSj6Lu0Oh8hR7UGfnqNRl83Knk4rJ-g0SvQusVf50VQrIYsqtBUPZeVo5N_3ApPzyBOn13frwZKQqcFSDApVpB3o7kDxHcSN0LBMcv8dI5EKUNGQIJ1L4W6Sp7daLXUvvUZfxo67U

In 1999, an epidemic of West Nile virus (WNV) encephalitis occurred in New York City (NYC) and 2 surrounding New York counties.
In August 1999, an epidemic of West Nile virus (WNV) encephalitis and aseptic meningitis began in New York City (NYC) [1–3]. Over 8 weeks, 59 people were hospitalized with severe neurologic illnesses; 7 died. Concurrent epizootics with high mortality occurred in birds, particularly American crows (Corvus brachyrhynchos), and in horses on Long Island.

In 2000, 63 horses with neurologic and other illnesses due to WNV infection were reported from 26 counties in 7 states (New Jersey, New York, Connecticut, Delaware, Massachusetts, Pennsylvania, and Rhode Island) [4]. In follow-up studies of ill horses, the US Department of Agriculture documented a case fatality rate of 38% (unpublished data). These cases in horses suggested that the risk for human infection, including the presence of infected mammal-biting mosquitoes, were more widespread than the 10 counties reporting human cases.

It doesnt say WHICH towns in 1999 for horses...

2000 (April 26) - NYTimes : "A Bug That Can Fell a Horse; Fighting Mosquitoes' Threat to Thoroughbreds"

By Sarah Kershaw , **April 26, 2000** / Source : [HN01IF][GDrive]

The obsession with mosquito control at the two tracks is no surprise, given the routine frenzy surrounding the health of horses. In addition to the nine horse deaths, on a cluster of farms near Riverhead on Long Island, the virus infected 16 other horses, including 2 thoroughbreds that were racing at Belmont and another horse that raced at Yonkers.

...

Amid all this, it is still unclear whether West Nile will reappear in the New York City area or spread to Long Island again. Recent tests on hibernating mosquitoes in **Fort Totten, Queens, near the epicenter of the 1999** outbreak that infected 69 people, confirmed that the virus was still alive there. And In Westchester, a dead bird tested positive last month for the virus, raising fears that West Nile will reemerge this summer.

"You wouldn't even want to think about it," said John Dowd, a trainer, who was working with 10 horses at Aqueduct before the races there last Thursday. Among Mr. Dowd's charges that day were some racehorses, like Wires Crossed and Critical Thinker, worth up to $10 million.

Farm managers, particularly those on the East End of Long Island, where the virus struck last year, and other horse breeders said they were taking precautions similar to those at the racetracks, including using the mosquito dunks in standing water. Several said they were planning to stable their horses at night, spray them with pesticides and keep them in barns at dusk and dawn, peak mosquito hours. A few breeders said they were considering stabling their horses in upstate New York or in other states.

Jeff Raine, who manages the B**ig E farm in Jamesport, N.Y., where two horses, including a thoroughbred brood mare, succumbed to West Nile last year,** said he was doing everything he could to prepare for mosquito season. The 120-acre breeding farm is owned by Robert Entenmann of the baked goods company, and is home to 15 horses that serve as Mr. Entenmann's private breeding and racing stock.

In the feverish world of horse racing and breeding, mosquito season is about as welcome as a hurricane at the Preakness.

Especially this spring, given the prospect of a repeat of the West Nile virus -- which killed seven people and nine horses in New York last year, including a retired racehorse who was to breed thoroughbreds. The possibility that the mosquito-borne illness could destroy a multimillion-dollar celebrity like Fusaichi Pegasus, the Kentucky Derby favorite who spent four days training at Aqueduct before winning the Wood Memorial there on April 15, has track officials

more hyper than in-bred thoroughbreds.

So, these days, there are some rather strange goings-on at Aqueduct and Belmont Park, both near the epicenter of the outbreak in northern Queens and both part of an industry that contributes more than $1 billion annually to New York State's economy.

Take the chickens at Belmont, the nation's largest track, on the Queens-Nassau border. Once welcome to spend all their days scuttling around the stables and barns there, they now have a $5 bounty on their heads and are being rounded up by the hundreds.

Horsemen brought chickens to Belmont soon after the gates opened in 1905 to calm the high-strung thoroughbreds by lending a barnyard feel to the stables. But erstwhile friends, the fowl, now known to help spread West Nile, are being trapped in padlocked coops and tested for the virus. So far, almost 500 have been shipped to a farmer upstate, racing officials said.

While kicking out the chickens, Belmont officials are bringing in fish. After investigating the behavior of various species to find some that eat mosquito larvae, racing officials last week dumped 4,000 goldfish and catfish into the two lakes in the main track's infield, and into a duck pond near the grandstand.

Then there was the pesticide deal with the Native American chief. Racing officials spent $10,000 on a latex chemical called Ultracide produced by the man's company, Native American Enviro-Tech. They were told it would kill the bugs but not harm the horses. But the state has blocked the use of Ultracide because it is not registered in New York.

The obsession with mosquito control at the two tracks is no surprise, given the routine frenzy surrounding the health of horses. In addition to the nine horse deaths, on a cluster of farms near Riverhead on Long Island, the virus infected 16 other horses, including 2 thoroughbreds that were racing at Belmont and another horse that raced at Yonkers.

At the track, a cough or a sneeze is cause for alarm; wobbling, twitching and circling, symptoms of West Nile infections in horses, sends veterinarians and trainers into red alert.

"The stars of this sport are the horses," said Francis J. La Belle Jr., a spokesman for the New York Racing Association, which owns and operates New York's three largest tracks, at Belmont, Aqueduct and Saratoga. "We go nowhere without them."

Horses, like humans, can recover from West Nile, which can be deadly if it leads to encephalitis, swelling of the brain. Infections can range from what looks like a minor flu to serious neurological illnesses; but three racehorses that were infected with the virus last year recovered, and, so far, two have gone on to race, according to the veterinarians who treated them. (Some horse owners take out health insurance that could cover illness or death from West Nile, but others do not, experts said.)

Officials at both Queens racetracks are also dropping doughnut-shaped "mosquito dunks" made of larvicide, which kills the eggs, into other bodies of standing water that are mosquito breeding grounds. They are also setting up mechanical mosquito traps across the 430-acre Belmont property, and the Nassau County Health Department plans to set up a mosquito-trapping station there to catch the bugs and test them for West Nile, officials said.

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"I've had nightmares about it recurring," said Mr. Raine, who had to pu**t to sleep the brood mare, Terroir, a retired racehorse who ran at Aqueduct and Belmont** a year before she was sent to the Jamesport farm to breed. "We're very concerned about what's going to happen this year."

Terroir's illness was the first confirmed case of equine West Nile in last year's outbreak, said Dr. John Andresen, the veterinarian who treated her and diagnosed her as having the virus. Government scientists are using genetic material from Terroir for research on a possible vaccine, he said.

At Belmont and elsewhere, state officials are testing the blood of chickens, which carry the virus but do not get sick from it, for signs of West Nile. Chickens can spread the virus to horses if mosquitoes bite infected chickens and then bite horses. But horses, "dead-end hosts," cannot spread the disease to other horses or species, experts said.

A group of chicks from Belmont who were tested recently showed no sign of exposure to the virus, said Dr. Neil Cleary, a veterinarian with the racing association who treated one of the two Belmont racehorses who was infected with West Nile but recovered.

State agriculture officials said that since the outbreak, they have conducted blood tests on horses in the Riverhead area and across Long Island to determine how many were exposed to the disease, possibly making them immune. Results released so far showed that of 69 horses tested in the Riverhead area, 20 were exposed to the disease but did not get sick. The incubation period is up to seven days, so those horses would not be at risk for infection, veterinarians said.

It is still not known why the virus struck that cluster of Long Island farms, 60 miles from the Queens epicenter of the outbreak. But several experts said they suspected West Nile was carried to Riverhead, on the tip of the island, by birds.

Dr. Andresen and other veterinarians who have studied the virus since last year's outbreak, the first time West Nile was detected in the Western Hemisphere, said the newness of the disease here made it difficult to understand the risks and to calm nervous breeders and horse owners.

"It leaves the vets in a quandary," said Dr. Howard Flynn, president of the Long Island Veterinary Medical Association, who runs a clinic in Medford, N.Y. . "This is brand-spanking new around here, and that's part of the problem."

Only one other documented outbreak of the virus caused as many deaths among horses as the Long Island one, a 1996 outbreak in Morocco. It killed 42 of 94 horses confirmed to be infected, said Dr. Peter Timoney, director of the Gluck Equine Research Center at the University of Kentucky in Lexington. A smaller outbreak occurred in Tuscany, Italy, in 1998, Dr. Timoney said.

Dr. Timoney and other veterinarians said that only a few outbreaks of West Nile had occurred among horses since the virus was first detected, in Uganda in 1937. But they said they were concerned about the high mortality rate among infected horses. Almost half the horses with confirmed cases -- 9 of 25 -- either died or were so sick they had to be put to sleep, a mortality rate far higher than the 4 or 5 percent rate for humans.

"Statistically we haven't seen a major occurrence of this disease in horses," Dr. Timoney said. "Still, think about the stakes: these Kentucky Derby hopefuls. If that one animal becomes seriously infected and dies, that's one hell of an economic loss."

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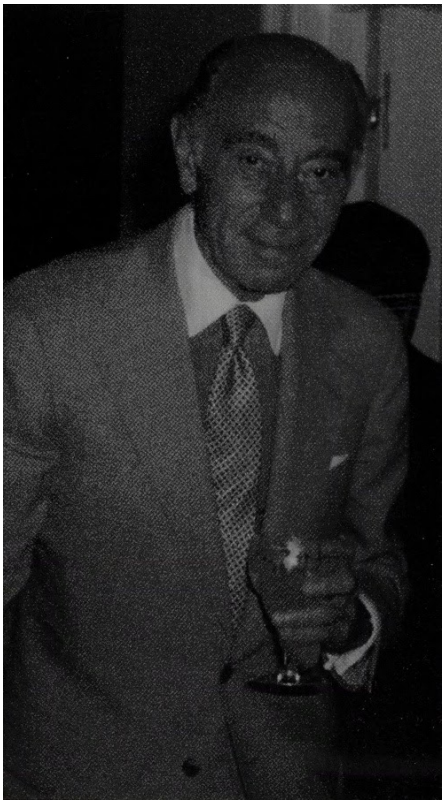
Charles Wohlstetter (born 1910)



[HB005F][GDrive]

Siblings include :

- **Albert James Wohlstetter (born 1913)**

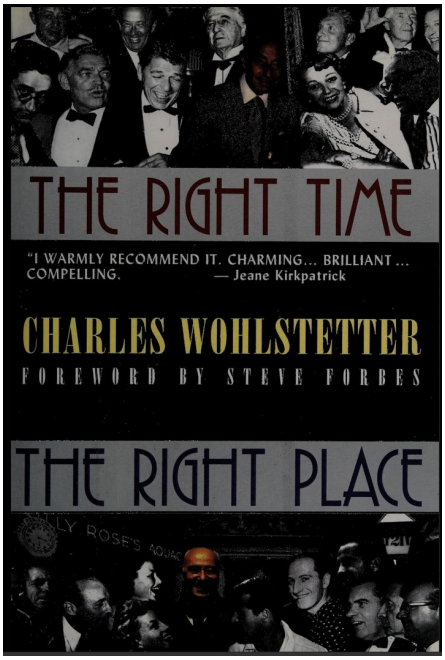
Children include :

- **John Charles Wohlstetter (born 1947)**
-

Founded **Contel Corporation** , which was purchased in 1990/1991 by **GTE Corporation** .

1997 Autobiography :

PDF with OCR is here (created from Archive.org) : [HB005C][GDrive]



[HB005D][GDrive]

1995 (May 25) - NYTimes - "Charles Wohlstetter, 85, Founder of Contel, Dies"

PDF : [HN01D5][GDrive]

By John Holusha / May 25, 1995

Charles Wohlstetter, 85, Founder of Contel, Dies

By JOHN HOLUSHA

Charles Wohlstetter, who developed small rural telephone companies and combined them into a $3 billion business before selling it to the GTE Corporation, died yesterday at his home in New York City. He was 85.

Mr. Wohlstetter, who was born and educated in New York City, entered the telephone business when he was 50, after a long and varied career.

In 1929, at age 18, he graduated from what was then City College of New York and got a job as a runner at a small stock brokerage firm, where he quickly advanced to become a small-scale money manager. He survived the stock market crash that year and set up a brokerage house with a partner.

He was successful but restless. In 1938, he moved to Los Angeles to write screenplays. During the year he spent in Hollywood, he sold three, one of which was made into a low-budget film called "What Millionaire Playboy."

Although many writers go for years without having a film produced, Mr. Wohlstetter was dissatisfied and returned in 1939 to New York, where he organized a company to make aircraft parts for the Army. World War II brought the company plenty of business, and with the profits Mr. Wohlstetter opened an investment banking company.

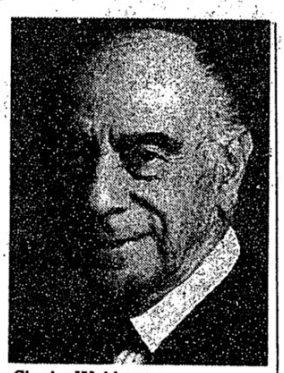
A $1.5 million investment in a small telephone company in Alaska got him interested in the thousands of independent companies scattered across the country. He formed the Continental Telephone Company with two partners in 1961 and acquired hundreds of independents.

The company, later known as Contel, pushed into new technologies, not always successfully, and in 1990, it paid $1.3 billion to acquire rights to 8.1 million potential cellular telephone customers in Kentucky, Alabama and Tennessee.

Mr. Wohlstetter had hoped to pay for the acquisition with a public offering of stock, but by the time he was ready, telephone stocks had lost favor and he could not get the price he wanted. The company then agreed to be acquired by GTE, a combination that created the country's largest local telephone company. Mr. Wohlstetter, then 80, joined GTE as vice chairman of the board, a position he held to his death.

At the time of the merger, Contel had grown to having $6 billion in assets, $3 billion in annual revenues and operations in 32 states, South America, Asia, Europe and the Middle East.

Mr. Wohlstetter enjoyed his wealth, collecting art, which is displayed at his home and office, and investing in a vineyard and winery in Bordeaux, France. He was also chairman of the Billy Rose Foundation, vice chairman of the board of trustees for the National Symphony in Washington and a trustee of the Foundation for Research in Medicine and Biology.



Charles Wohlstetter

He is survived by his wife, Rose, of New York City; three sons, Philip, of Seattle, John, of Washington, and Rand, of New York City; a brother, Albert, of Los Angeles, and two grandchildren.

[HN01D6][GDrive]

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Housatonic

Albert James Wohlstetter (born 1913)

Wikipedia Albert Wohlstetter

Siblings include :

- Charles Wohlstetter (born 1910)

Other relationships:

- Nephew John Charles Wohlstetter (born 1947)

Saved Wikipedia (Dec 18, 2020) - Albert Wohlstetter

[HK0046][GDrive]

Born December 19, 1913 in New York, New York, U.S.

Died January 10, 1997 (aged 83) in Los Angeles, U.S.

Alma mater City College of New York / Columbia University

Occupation

- Military strategist
- Systems theorist

Known for *The Delicate Balance of Terror*[2]

Spouse(s) Roberta Wohlstetter (née Morgan)

Children Joan Wohlstetter-Hall

Albert James Wohlstetter (December 19, 1913 – January 10, 1997) was an American political scientist noted for his influence on U.S. nuclear strategy during the Cold War. He and his wife Roberta Wohlstetter, an accomplished historian and intelligence expert, received the Presidential Medal of Freedom from Ronald Reagan on November 7, 1985.

Early life and education

Albert Wohlstetter was born on 19 December 1913, the fourth and youngest child of Philip Wohlstetter and Nellie (née Friedman). His paternal grandparents were cosmopolitan Jews who immigrated to the United States from the Austro-Hungarian Empire in the latter half of the nineteenth century. Albert's father, Philip, was born in the United States about twenty years later.[1] Albert's older siblings were William (1902–1967), Helene (1906–1974) and [Charles Wohlstetter (born 1910) (died 1995)]. Albert's brother Charles was an accomplished businessman who would help Albert get his start as a young man. Charles also employed Helene at one of his companies, ConTel, where she was killed in a shooting by a disgruntled employee in 1974.[2]

The Wohlstetters lived in the Washington Heights neighborhood of Manhattan. After attending the City College of New York, Philip Wohlstetter became an attorney and served as chief counsel to the Metropolitan Opera. In 1912, he founded one of the early phonograph companies, the Rex Talking Machine Corporation. Luminaries of the performance world were regular guests in the Wohlstetter home. The Rex company was taken over and its Wilmington, Delaware factory converted to war production during the World War I. Philip died of a heart attack in 1918 when Albert was four years old.[3]

City College of New York

Wohlstetter started at City College of New York in 1931 through a scholarship in modern dance, earning a B.A. in 1934. At the time he was involved in radical politics, and was a member of the League for a Revolutionary Workers Party, a Trotskyist splinter group, in the mid-1930s.[4]

Columbia University

Wohlstetter started at Columbia Law School on a fellowship in 1934. It was in a class there that he met Roberta Morgan. Wohlstetter was bored by law school and left the program after only one year. He stayed at Columbia to pursue a Ph.D. in mathematical logic and the philosophy of science where he studied under Abraham Wald and was a peer of Jacob Wolfowitz.[5] After a thesis titled *Language and Empiricism* earned him an M.A. in June 1937, several

fellowships allowed him to work on his dissertation. He had a fellowship with the Social Science Research Council on a project to incorporate modern mathematical methods into economics and business cycle research. From 1941–1942 he was a research associate at the National Bureau of Economic Research.[6]

In August 1942 the Wohlstetters vacationed with Dwight Macdonald, one of the editors of *Partisan Review*, and his wife, Nancy in Nantucket.[7]

He left Columbia's graduate program to work for the U.S. government on war planning during World War II and never completed his doctorate.

Early career

During the Second World War, Wohlstetter worked on problems of war production. He was first hired by the Planning Committee of the War Production Board. It is unclear how he ended up there. In an interview, Wohlstetter says that while on the Carnegie associateship with NBER, Simon Kuznets was hired by Robert R. Nathan and it was Kuznets who hired Wohlstetter.[8] Albert's brother [**Charles Wohlstetter (born 1910)**] recounts that it was Arthur F. Burns who gave Albert the job.[9]

Later he worked at Atlas Aircraft Products Company.

After the war, Wohlstetter worked briefly in business in New York.[10] He moved back to Washington, D.C. to serve as the Director of Programs for the National Housing Agency (USHA) in 1946 and 1947, the only time in his career he was a federal employee.[11] At the USHA Wohlstetter worked with Paul Weidlinger, an engineer who had worked during the war for an aircraft company owned by Albert's brother, [**Charles Wohlstetter (born 1910)**], designing modular buildings such as airplane hangars that could be assembled quickly. At the USHA Wohlstetter and Weidlinger worked on applying such principles to domestic residential buildings.[10]

During the 1937–1938 school year, Roberta had worked as a teaching assistant at the University of Southern California, during which time she became enamored with the California lifestyle.[12] At her urging, and with his brother Charles helping to secure a job for Albert, the Wohlstetters moved to Santa Monica in 1947. Albert went to work for the General Panel Corporation to "tool up" their industrial plant. General Panel Corporation was a company founded by Walter Gropius and Konrad Wachsmann, two important figures in the Bauhaus movement.[13]

RAND Corporation

While on a walk, Albert and Roberta ran into Abe Girschick, Olaf Helmer and Chen McKinsey on the street in Santa Monica. Albert knew the three from his days as a student and in government service.[14] The three mathematicians "... were overjoyed to see us. Mathematical logic was a very, very small world. There were only a little over a dozen mathematical logicians before the war in the United States ..."[15] Girschick, Helmer and McKinsey were working at the recently formed RAND Corporation. With their help, Hans Speier, the head of the RAND social science division, hired Roberta, initially to write book abstracts for circulation to the RAND staff.[16] When General Panel Corporation finally went out of business in 1951, Albert wanted to return to academia in the east, but Roberta was intent on remaining in California.[17] She set up a meeting between Albert and Charles J. Hitch, the head of the RAND economics department. The two hit it off and Wohlstetter was brought on as a consultant to the Mathematics Department.[18]

Wohlstetter remained a consultant with RAND for the first few years. It was not until June or July 1953, a few months after he began briefing *Selection and Use of Strategic Air Bases* to the Air Force that Hitch finally insisted that his consultant status was "absurd" and that he join the permanent staff.[19]

At RAND, he researched how to posture and operate U.S. strategic nuclear forces to deter plausible forms of Soviet nuclear-armed aggression in way that was credible, cost-effective and controllable.[20]

Wohlstetter's *The Delicate Balance of Terror* (1958) was highly influential in shaping the thinking of the Washington foreign policy establishment, particularly in its emphasis on the looming threat of Soviet attack.[21]

During this period, Wohlstetter's relationship with fellow RAND strategist Bernard Brodie grew increasingly acrimonious. In 1963, Brodie accused Wohlstetter of a security violation and financial malfeasance. Wohlstetter had shared a draft RAND paper by Constantin Melnik with Henry Rowen, then one of the Whiz Kids working as the Deputy Assistant Secretary of Defense for International Security Affairs under Robert McNamara. Brodie also claimed that Wohlstetter was extravagant in wining and dining clients and colleagues using RAND funds. Wohlstetter defended himself by pointing out that the Melnik paper was only a "D" designated document, RAND's lowest level classification, and as a former RAND employee who had collaborated extensively with Wohlstetter on some of his most important studies, Rowen was authorized to receive the paper. Nevertheless, RAND Director Frank Collbohm demanded that Wohlstetter submit his resignation. When Wohlstetter refused, Collbohm fired him, but agreed to let Wohlstetter stay on at RAND long enough to find another job.[22]

University of Chicago

At the suggestion of Hans Morgenthau and with his help, Wohlstetter secured a position as a professor of political science at the University of Chicago.[23]

In the 1960s and 1970s, he expanded the scope of his research to include alliance policy and nuclear nonproliferation,[24] ballistic missile defense, [25]innovation in military technology,[26] peacetime military competitions,[27] and military potential and economics of civil nuclear energy.[28]

In the 1980s, Wohlstetter frequently criticized proponents of mutual assured destruction who supported targeting of nuclear weapons on civilians and cities instead over enemy combatants and military forces.[29]

Wohlstetter and his wife, Roberta Wohlstetter, also counseled both Democratic and Republican administrations, including advisers to President John F. Kennedy during the Cuban Missile Crisis in 1962.[30] They received the Presidential Medal of Freedom from Ronald Reagan on November 7, 1985.

During his long career, Wohlstetter also taught at UCLA and the University of California, Berkeley, in the early 1960s. From 1964 to 1980, he taught in the political science department of the University of Chicago, and chaired the dissertation committees of Paul Wolfowitz, Efraim Inbar and Zalmay Khalilzad. He is often credited with influencing a number of prominent members of the neoconservative movement,[31] including Richard Perle (who, as a teenager, dated Wohlstetter's daughter Joan).[32] He is the uncle of John Wohlstetter, author of *Sleepwalking with the Bomb* and *The Long War Ahead and The Short War Upon Us*.[33]

January 12, 1988

The Commission on Integrated Long-Term Strategy meets with President Reagan to discuss their report, Discriminate Deterrence. Members of the commission on the left side of the table (clockwise from the bottom of the photograph to the top): Gen. Bernard Schriever, former Commander, Air Force Systems Command; Judge William P. Clark, former National Security Adviser; Ambassador Anne Armstrong, Chairperson, President's Foreign Intelligence Advisory Board; Gen. John Vessey, former Chairman of Joint Chiefs of Staff; Albert Wohlstetter; Fred Iklé, former Under Secretary of Defense for Policy; Zbigniew Brzezinski, former National Security Adviser; Gen. Andrew J. Goodpaster, former NATO Supreme Allied Commander; W. Graham Claytor, Jr., former Secretary of the Navy and Deputy Secretary of Defense; Samuel P. Huntington, Director, Center for International Affairs, Harvard University; Admiral James L. Holloway III, former Chief of Naval Operations **(Commission members not present: Henry A. Kissinger, former National Security Adviser and Secretary of State; [Dr. Joshua Lederberg (born 1925)], Professor of molecular genetics and informatics and President of Rockefeller University)**. The President and staff, right side of table, (top to bottom): National Security Adviser Colin Powell; President Ronald Reagan; Secretary of Defense Frank Carlucci (obstructed); Chief of Staff Howard Baker. White House Cabinet Room, Washington, D.C., 12 January 1988. Photograph by William Fitz-Patrick, courtesy of the Ronald Reagan Presidential Library. The Commission held a press briefing later that day at the Pentagon which is available via C-SPAN.

[https://en.wikipedia.org/wiki/Albert_Wohlstetter#/media/File:1988-Jan-12-Ikle-Wohlstetter-Commission-C44746-9.tif] [2021-03-10-wikipedia-org-lossy-page1-1561px-1988-Jan-12-ikle-wohlstetter-commission-c44746-9-tif.jpg]

Death

On 16 December 1996, his 83rd birthday, Wohlstetter was not feeling well. He and Roberta thought he was just ill or having an asthma attack. Over the telephone from New York their daughter Joan reviewed the symptoms for a heart attack and told Roberta to call an ambulance. Albert made a fuss, not wanting to go to the emergency room. At the hospital he was diagnosed as having had a serious heart attack and was discharged home with around-the-clock nursing care. In the living room he set up a makeshift chair that allowed him to partially recline so he could continue to work. A month later, on 10 January 1997, Wohlstetter died at his Laurel Canyon home.[34]

A memorial was held at the office of the RAND Corporation[35] and a month later Senator Jon Kyland special guest Richard Perle conducted a brief remembrance in the Senate chamber.[36] Albert Wohlstetter is buried at Westwood Village Memorial Park Cemetery in Los Angeles. Roberta Wolstetter died on 6 January 2007.

Awards

> President Ronald Reagan presents Albert and Roberta Wohlstetter and Paul Nitze with the Presidential Medal of Freedom. The East Room of the White House, Washington, D.C., 7 November 1985. Photograph by Peter J. Souza, courtesy of the Ronald Reagan Presidential Library.

He was twice awarded the Department of Defense Medal for Distinguished Public Service, first by Robert McNamara in February 1965 and again by Donald Rumsfeld in November 1976. He is the first recipient not employed by the Department of Defense and the first person awarded it twice.[37]

On 7 November 1985 President Reagan awarded Albert Wohlstetter, along with his wife Roberta Wohlstetter and Paul Nitze, the Presidential Medal of Freedom.

Legacy

The *Albert J. and Roberta Wohlstetter Papers* are available at the Hoover Institution Archives at Stanford University.

In popular culture

Wohlstetter served as one of the inspirations for Stanley Kubrick's film, *Dr. Strangelove or: How I Learned to Stop Worrying and Love the Bomb*. In 1962, Kubrick was looking for his next project after *Lolita* and started reading intensively on nuclear issues. One of Kubrick's early ideas was to make a realistic thriller, titled after Wohlstetter's "Delicate Balance of Terror". But Kubrick could not conceive of a realistic scenario for an accidental nuclear war, so turned instead to the idea of making a comedy. The character of Dr. Strangelove is a composite of numerous people associated with RAND that besides Wohlstetter included Herman Kahn, John von Neumann, Wernher von Braun, and Edward Teller. [...]

Albert Wohlstetter Network - RAND Corp and The Rise of the Neocons Infographic

This infographic displays the people, think tanks and institutions connections that created part of the neoconservative movement born out of the Chicago School and big money foundations.

https://theworldneedsthisman.blogspot.com/2019/03/albert-wohlstetter-network-rand-corp.html?view=flipcard

2019-03-theworldneedsthisman-blogspot-com-albert-wolhstetter-netowrk-rand-corp.jpg
https://drive.google.com/file/d/1YXpdww8W4eH8BqffzudS1_Jd4fmq-Ldl/view?usp=sharing

2019-03-theworldneedsthisman-blogspot-com-albert-wolhstetter-netowrk-rand-corp-hires.jpg
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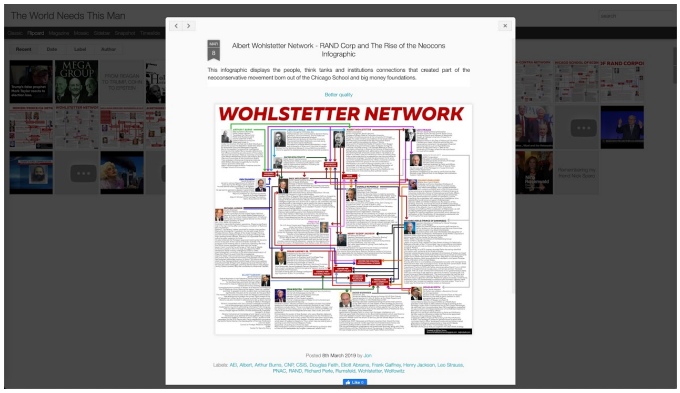
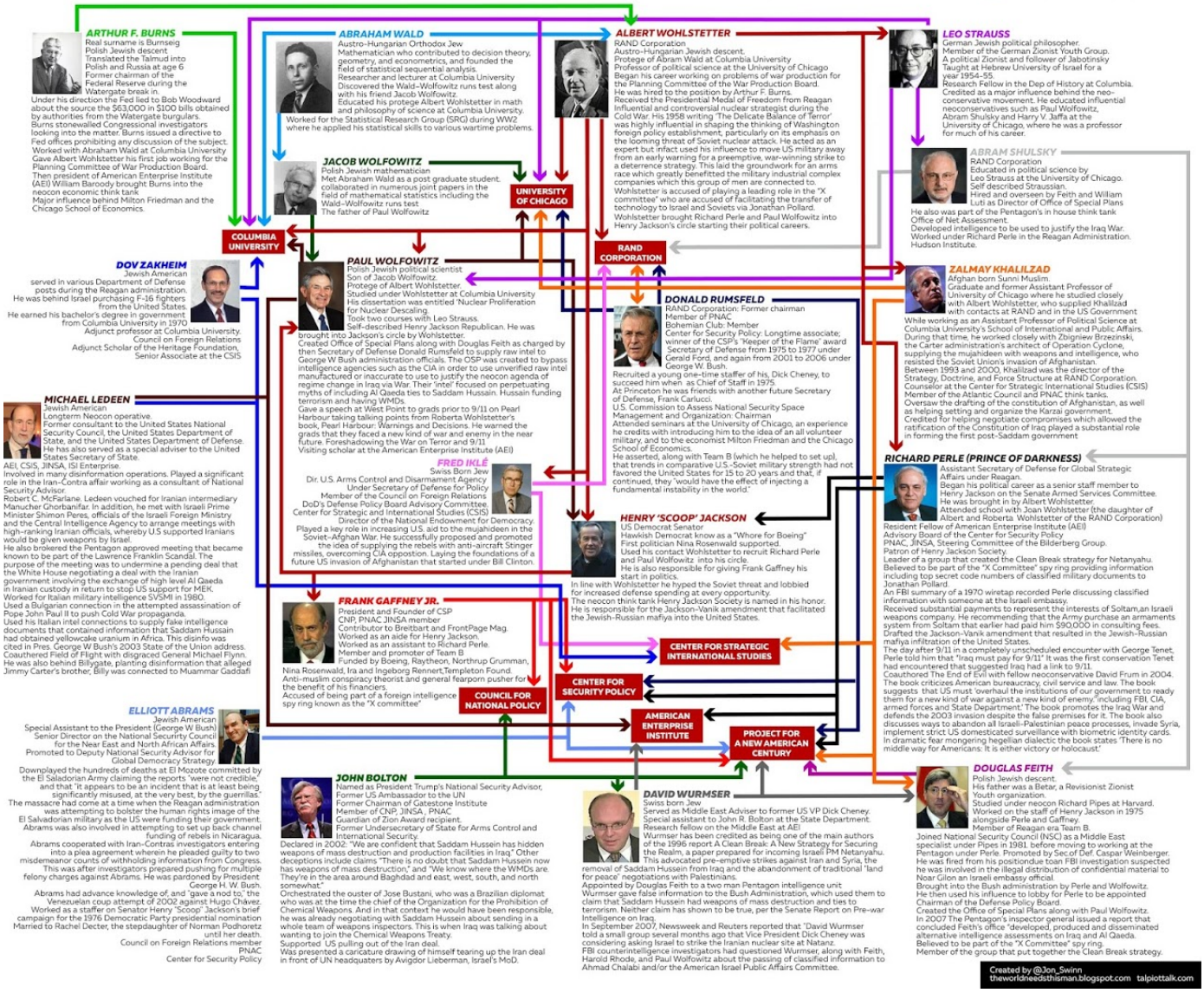


WOHLSTETTER NETWORK



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Housatonic

John Charles Wohlstetter (born 1947)

Parents : Father is **Charles Wohlstetter (born 1910)**

Other relationships:

- Uncle (paternal) is **Albert James Wohlstetter (born 1913)**

john wohlstetter

The Dennis Miller Show - John Wohlstetter - 02-12-2015

22 views • Nov 28, 2017

https://www.youtube.com/watch?v=tMKqG1sZ75w

BookTV: John Wohlstetter, "Sleepwalking with the Bomb"

263 views • Sep 4, 2012

BookTV

John Wohlstetter talks about the threat of nuclear weapons today and discusses what can be done to safeguard against the ultimate catastrophe. Hosted by the Discovery Institute in Seattle.

https://www.youtube.com/watch?v=TRKfrSG9XYk

March 12, 2013 7:17 pm ET - Wall Street Journal - "Chinese 'Hackers' Is a Misnomer. They're Spies."

https://www.wsj.com/articles/SB10001424127887323978104578332020833172726

2013-03-12-wall-street-journal-john-wohlstetter-chinese-hackers.pdf

The U.S. is under cyber attack from a hostile regime. Forceful American digital counterattacks are in order.

By John C. Wohlstetter

In a speech on Monday at the Asia Society in New York, National Security Adviser Tom Donilon addressed Chinese cyber intrusions into U.S. government and business network infrastructures. In moving cybersecurity "to the forefront of our agenda," Mr. Donilon noted that he wasn't referring to "ordinary cybercrime or hacking." He called on Beijing to recognize the importance of cyber issues, take "serious steps" to investigate Chinese cyber intrusions, and engage in a "constructive dialogue" to define "acceptable norms of behavior in cyberspace."

To his credit, Mr. Donilon differentiates between hacking and China's threat in cyberspace—the software that controls the operation of networks linking computers in the governmental and private sphere. But in asking Beijing to investigate cyber intrusions, he is asking the government to investigate its own military's massive continuing cyberspying. While his speech reflects a desire to be diplomatic in public, it muddles the true nature of the threat and thus may confound U.S. efforts to respond.

After last month's report by Internet security firm Mandiant linking China's People's Liberation Army to hundreds of thousands of cyberattacks across the globe, including against U.S. corporations and government agencies, cybersecurity is finally getting the media attention it deserves. Yet there remain misperceptions about cyberthreats and how to respond. For instance, Chinese cyber intruders on the PLA payroll shouldn't be considered "hackers." They are spies for the Chinese government. Mr. Donilon's speech would have made the distinction clearer in the news media and in the public mind, had he not called on Beijing to fix the problem, as if it originated elsewhere.

Hacking has historical associations that differ considerably from what the PLA is doing. From the late 1960s through the early 1980s, hackers were mostly a benign phenomenon: pranksters playing hide-and-seek with network administrators. Sometimes they even played the role of outsiders testing firewalls to inform administrators of security problems.

By the 1980s, hacking had acquired a second, negative connotation. Malicious software—"malware"—made its appearance. Malware encompasses "viruses" that begin self-replicating when activated by the unsuspecting user. Also included are "worms" that replicate without user action, "logic bombs" that activate at a later time, and "Trojan horses" that appear to be legitimate programs even when detected.

Hackers from time to time purloined or altered data, malicious acts that led to the passage of federal and state laws making such intrusions unlawful. But the authorities still were dealing with a small-scale phenomenon.

Yet in the late 1980s there was a glimpse of cyberthreats to come: On May 13, 1988, Israel detected and stopped the "PLO virus," a logic bomb designed to infect and destroy files on computers at Hebrew University timed for May 14, 1988, the 40th anniversary of Israel's independence.

In the 1990s, significant economic damage became a reality. The emergence of the public Internet meant that networks connected to the World Wide Web served not thousands but many millions of computers through myriad interconnected networks.

The first decade of the 21st century saw the rise of network use by two new, malevolent actors rarely present before: terrorist groups and hostile governments. Shortly after the 9/11 attacks, Richard Clarke, the top government bureaucrat focusing on cyberthreats during the late Clinton and early George W. Bush years, was right to warn of a looming "digital Pearl Harbor."

Yet unlike terrorist organizations that generally inspire individual or small groups of hackers, the Chinese are conducting operations—cyberspying and widespread theft of sensitive data—akin to what the Soviets did during the Cold War to better position themselves in the event of a hot war. Mere hackers don't steal volumes of documentation on the ultra-advanced F-35 Lightning, the only fifth-generation fighter still being produced by the U.S. China's spies have invaded every major national-security database that they can within the Pentagon and U.S. defense companies.

In the event of war, China could use stolen data to bypass security firewalls and launch cyber strikes to blind the global positioning satellites that direct U.S. weapons to their targets and to disable satellites that enable global military and diplomatic voice and data communications. They also could cripple U.S. public telecommunications networks that link financial, energy, transportation and electric-grid infrastructures. China's newest Stealth fighter, the J-31, closely resembles the F-35.

So what should the U.S. do?

Begin by acknowledging the magnitude of the threat. The PLA's "Third Department," which handles telecommunications, can call on 12 operation bureaus to carry out cyberattacks, and three research institutes for technical support with some 13,000 staff upon request. The volume of stolen data is staggering: In March 2011, a single cyber intruder stole 24,000 files from a defense industry computer network.

A full panoply of diplomatic and economic levers must be employed to raise the costs of China's campaign. Economic sanctions can target key companies and officials; trade can be conditioned on significantly curbing cyberspying; and demonstrating the ability to penetrate Chinese military networks can impose costs on the Chinese.

Now that America's economic and financial affairs are deeply entangled with China's, mounting such a robust response may seem a daunting task. But the U.S. must begin by recognizing that the country is dealing with a hostile regime. China isn't an enemy out to destroy America, as is al Qaeda or the Islamic Republic of Iran; it is out to supplant the U.S. as the premier power on the world stage.

Had China sent military aircraft repeatedly into U.S. airspace, there would have been a swift and strong response from Washington. Had Chinese spies broken into U.S. office buildings and walked out with purloined documents, they would have been tried and punished. Instead, they did so in "cyberspace"—stealing on a scale mere burglars couldn't imagine.

China's cyber challenge won't end soon. The U.S. had better respond promptly, forcefully and creatively—and settle in for the long haul.

Mr. Wohlstetter is the author of "Sleepwalking With the Bomb" (Discovery Institute Press, 2012).

Housatonic

Theodore Wai Wu Jr. (born 1936)

Born - 19 Nov 1936 ([HD0001][GDrive])

Mom - Mabel Lee Wu (https://search.ancestry.com/cgi-bin/sse.dll?indiv=1&dbid=60901&h=45783114&tid=&pid=&usePUB=true&_phsrc=jWH74&_phstart=successSource)

1960 military record

https://search.ancestry.com/cgi-bin/sse.dll?indiv=1&dbid=2345&h=76485&tid=&pid=&usePUB=true&_phsrc=jWH69&_phstart=successSource

View U.S., Select Military Registers, 1862-1985

Add alternate information

Report issue

Name: Theodore Wai Wu Jr

Birth Date: 19 Nov 1936

Military Date: 3 Jun 1959

Publication Date: 1960

Title: U.S. Navy, Marine Corps and Reserve Officers

1964 (Dec 19) - Theodore Wu is a singer !

Full page : [HN00CR][GDrive]

The Boston Globe (Boston, Massachusetts) • 19 Dec 1964, Sat • Page 21

Cantata Sunday at Ruggles St.

"The Glorious Saviour," a Christmas Cantata by D. Stephen Cushman, minister of music and conductor, will be presented by the 70-voice adult choir of Ruggles Street Baptist Church on Sunday at 7:15 p.m.

D. STEPHEN CUSHMAN

The soloists will be Aletha Munro, soprano, and Lt Theodore W. Wu, formerly of Hong Kong, baritone. William Herzog III, compiler and author of the text, will give the narration. The performance is open to the public without charge.

Mr. Cushman, a member of the American Guild of Organists, is an organ recitalist, pianist and harpsichordist. He has been choral director and instructor of Musical History at Phillips Exeter Academy Summer School since 1956. A 1960 graduate of Harvard where he studied choral composition with Randall Thompson, he received his master's degree at the New England Conservatory of Music in 1962.

An English major at Harvard, Mr. Herzog wrote the drama, "Love Is Patient and Kind," which had its first performance on Nov. 29, at Ruggles Street Baptist Church.

[HN00CS][GDrive]

1966 (Oct 19) - Wedding attendance

"Lt. Theodore Wu"

Full page : [HN00CT][GDrive]

The Chilliwack Progress (Chilliwack, British Columbia, Canada) • 19 Oct 1966, Wed • Page 3

WOMEN'S NEWS

Mrs. Frances Pollard
Editor

Mother, Sister Attend Rites In U.S.A.

The groom's mother and sister, Mrs. John Plett and Mrs. John French, respectively, travelled from Chilliwack to eastern United States to attend the wedding of Carolyn Janet Murch and Edelbert Gregory Plett.

Rev. Stanley Anderson and Rev. Kenneth Curtis officiated at the ceremony Oct. 1 in Calvary Baptist Church, Dorchester, Mass., for the daughter of Mr. and Mrs. Clarence E. Murch, Westwood, Mass., and the son of Mrs. Plett, Chilliwack, and the late John Plett.

Given in marriage by her father, the bride wore a gown of white bridal satin entrain trimmed with Alencon lace. An orange blossom crown held her below-the-shoulder-length veil. She carried a white orchid and stephanotis bouquet atop a Bible.

She was attended by her sister, Mrs. Joann Peterson; Mrs. Phyllis Meyers, Miss Arlene Fraser and Miss Eleanor Emerson as senior attendants and Laurel Peterson, her niece, as flower girl. They wore full - length empire gowns featuring ivory crepe skirts and cranberry velvet bodices. They carried red roses, pink carnations and white snapdragons.

A. Victor Plett, Moose Jaw, was his brother's best man. Ushers were William Smyth, Robert Solomon, Lt. Theodore Wu, and John Hansen.

Following a honeymoon by plane to Bermuda, Mr. and Mrs. Plett are residing at 1801 Riverside Dr., Ottawa, Ont.

[HN00CU][GDrive]

1968 - Graduating college

https://www.ancestry.com/interactive/1265/32724_241418-00579?pid=528158998&treeid=&personid=&rc=&usePUB=true&_phsrc=jWH61&_phstart=successSource

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Sep 1974 - Theodore Wu - married Marilyn Johnson

Full page : [HN00CV][GDrive]

MRS. THEODORE WAI WU

Miss Johnson, Mr. Wu are married in Boston

Pink carnations and ivory chrysanthemums decorated the altar at Park Street Congregational Church in Boston on Saturday afternoon, Sept. 7, when Marilyn Johnson became the bride of Theodore Wai Wu. The 4 o'clock ceremony was performed by Rev. Clifford Anderson, Rev. Paul E. Toms and Rev. Arnold Olsen and a reception followed in the Church Parlors.

The bride, daughter of Mr. and Mrs. Carl E. Johnson, Walpole, was escoted by her father. Her sister, Carol J. Lewin, Norfolk, was matron of honor. Bridesmaids were Ann Dwyer, Framingham; Barbara B. Frink, Wellesley; Ruth Brescia, Arlington; Gretchen LaRossa, Newton, and Gail St. Clair, Foxboro. Amy B. Lewin, Norfolk, was her aunt's flower girl.

Michael F. Brescia, Arlington, was best man for the bridegroom, who is the son of Mr. and Mrs. Joseph T. Wong, Los Angeles. Ushers included Lawrence Scott, Everett; Dr. William Peters, Arlington; Dr. James Small, Brighton; Dr. William Smyth, Watertown; Baldwin B. H. Soo-Hoo, Monterey Park, Calif.; Thomas Coperman, Falls Church, Va.; O. Bradley Latham, Reading, and Donald K. Yee, South San Gabriel, Calif.

The bride, a graduate of Lasell Junior Colllege, received her BS magna cum laude from Boston College School of Nursing. Her husband was graduated from the US Naval Academy at Annapolis and Boston University School of Law and attended Tufts University Graduate School of Arts and Sciences. He is an Assistant US Attorney for the Central District of California.

Mr. and Mrs. Wu will live in LaCanada, Calif.

1974-09-08-the-boston-globe-pg-b-11-clip-wu-wedding

[HN00CW][GDrive]

1975 (Feb 25)

Full page : [HN00CX][GDrive]

The Los Angeles Times (Los Angeles, California) · 25 Feb 1975, Tue · Page 14

Two Put on Probation in Safety Violations Case

Two officials of a Long Beach business that cleans petroleum product storage tanks were placed on four years' probation Monday on charges of violations of federal safety laws that resulted in the death of an employe.

U. S. Dist. Judge Warren J. Ferguson sentenced J. R. Dent, president of Crosby & Overton, Inc., and John Saenz, the vice president of the firm, both of whom had earlier pleaded no contest to the charges.

As a condition of probation, Ferguson ordered the company to implement a 14-point safety program drawn up by the government, including the addition of a full-time trained safety engineer.

The judge said he was rejecting a Probation Department recommendation that heavy fines also be levied on the two men and the company—which also pleaded no contest—because he would rather see their money go toward improving safety conditions.

The two men and the company were charged with failing to provide an appropriate air compressor to Jess Marinez while he was working in a naphtha storage tank at Douglas Oil Refining Co. in Paramount.

The compressor failed to work Aug. 8, 1973, cutting off Marinez' air supply and resulting in his death, according to Asst. U. S. Atty. Theodore Wai Wu.

[HN00CY][GDrive]

1975 (June 26)

https://www.newspapers.com/image/71716358/?terms=%22theodore%2Bwu%22

1976 (July 14)

https://www.newspapers.com/image/383076905/?terms=%22theodore%2Bwu%22

1976-07-14-the-los-angeles-times-pg-40

1976-07-14-the-los-angeles-times-pg-40-clip-missiles

The Los Angeles Times (Los Angeles, California) · 14 Jul 1976, Wed · Page 40

Man Accused of Illegal Exporting of Missile Data

BY ROBERT RAWITCH
Times Staff Writer

The president of a Newport Beach aerospace manufacturing and engineering firm has been indicted by a federal grand jury on charges of illegally exporting to France technical assistance and data relating to the fabrication of materials having rocket and missile applications.

Vernon Edler, president of Edler Industries, Inc., was accused in the seven-count indictment of violating the Mutual Security Act of 1954 and making false statements to the State Department.

Asst. U.S. Atty. Theodore Wai Wu said the indictment culminates a year-long investigation by the U.S. Customs Service. The indictment alleges that Edler and the company made false statements in applications to the State Department for approval of two proposed agreements pertaining to the exportation of the data to France.

Edler Industries allegedly has participated in the manufacturing of nozzle assemblies and exit cones for various U.S. missiles, including the Minuteman and the Titan.

Edler, 56, if convicted, could be fined a maximum of $145,000 and receive a 20-year prison term. The company also could be fined up to $145,000.

1976 (Oct 19)

Full Page : [HN00CZ][GDrive]

Man Sentenced Over Illegal Exporting

Convicted of Giving French Data on Missile, Rocket Parts

BY ROBERT RAWITCH
Times Staff Writer

The president of a Newport Beach engineering firm was placed on five years' probation and ordered to spend 10 weekends in jail after his conviction of illegally exporting to France technical assistance and data relating to material that has rocket and missile applications.

U.S. Dist. Judge Manuel L. Real imposed the sentence on Vernon Edler, president of Edler Industries, after suspending a two-year prison sentence. As a condition of probation, Edler will have to devote 1,200 hours to charitable causes.

Edler, who once had U.S. State Department authorization to sell such data to France, lost that approval, yet continued to do business with the foreign nation, according to the government.

Edler Industries once participated in the manufacturing of nozzle assemblies and exit cones for various U.S. missiles, including the Minuteman and Titan.

Evidence at the trial revealed that between January, 1974, and April, 1975, the company's engineers and technical personnel went to France to provide technological assistance to a French company specializing in the research, development and manufacturing of missiles and rockets.

Company employes testified that during the same period, French engineers visited the Newport Beach plant on numerous occasions to discuss fabrication processes of components having applications to missiles and launch vehicles.

Without State Department approval, such discussions were allegedly in violation of the Mutual Security Act of 1954.

Prior to sentencing, Edler's attorney provided a letter to Real from the defense's chief expert witness contending that data passed along was common knowledge based on

open literature.

William Payne, a former Air Force officer and munitions expert, said in the letter that Edler Industries had "no capability for general structural design and analyses" of weapons' systems.

Although stating that other former defense contractors similarly might be exchanging data without State Department approval, Payne did not condone Edler's alleged actions.

Asst. U.S. Atty. Theodore Wai Wu did not respond in court to the letter, which was read silently by Real. But Wai Wu later said the government's expert witnesses disputed that the material passed along by Edler was common knowledge and of a harmless nature.

Real also fined Edler Industries $25,000 and placed the company on three year's probation.

[HN00D0][GDrive]

1976 (Oct 20)

Full page : [HN00DE][GDrive]

Aerospace Executive To Work Out Penalty

LOS ANGELES (AP) – The president of an aerospace firm has been sentenced to 10 weekends in jail and ordered to perform 1,200 hours of charity work for illegally giving a French company technical assistance on rockets and missiles.

Vernon Edler Sr., 56, president of Edler Industries of Newport Beach, was given a two-year sentence Monday and placed on five years' probation. But U.S. District Court Judge Manuel Real suspended the term except for the weekends and charity work.

The judge also fined the company $25,000 and placed it on three years' probation.

Edler and his firm were convicted last month of five counts of illegal export in violation of the 1954 U.S. Mutual Security Act.

Asst. U.S. Atty. Theodore Wai Wu, who prosecuted the case, said company representatives provided technical assistance on lightweight and carbon material fabrication processes used in missile nozzle components to the Societe Europaene de Propulsion plant in Bordeaux, France. The prosecution said French engineers and technicians also visited Edler Industries to observe fabrication processes.

The government said that although Edler once had state-department approval to sell data to the French firm he continued to provide information through discussions in 1974 and 1975 after losing the permission without state-department approval those discussions violated the law, prosecutors said.

HOUSTON (AP) – A 5-week-old boy is recovering from injuries he suffered when a pet raccoon attacked him as he slept, his parents say.

Elmo Scott said officials at a local hospital described his son, Charles, as in fair condition Monday, a week after he was attacked in the bedroom of his grandmother's house.

"He had to get 86 stitches in his face alone," Scott said.

He said the raccoon, a pet belonging to a neighbor, apparently got in the back door and went to the bedroom where the infant slept. Scott said his brother-in-law, Charles Mullenix, went to investigate a "funny sound" and found the raccoon "all over" the baby.

Mullenix said he was bitten and scratched several times before he choked the animal to death.

Scott said the animal tore off the end of his son's nose, bit him all over the face, tore his lips and scratched him.

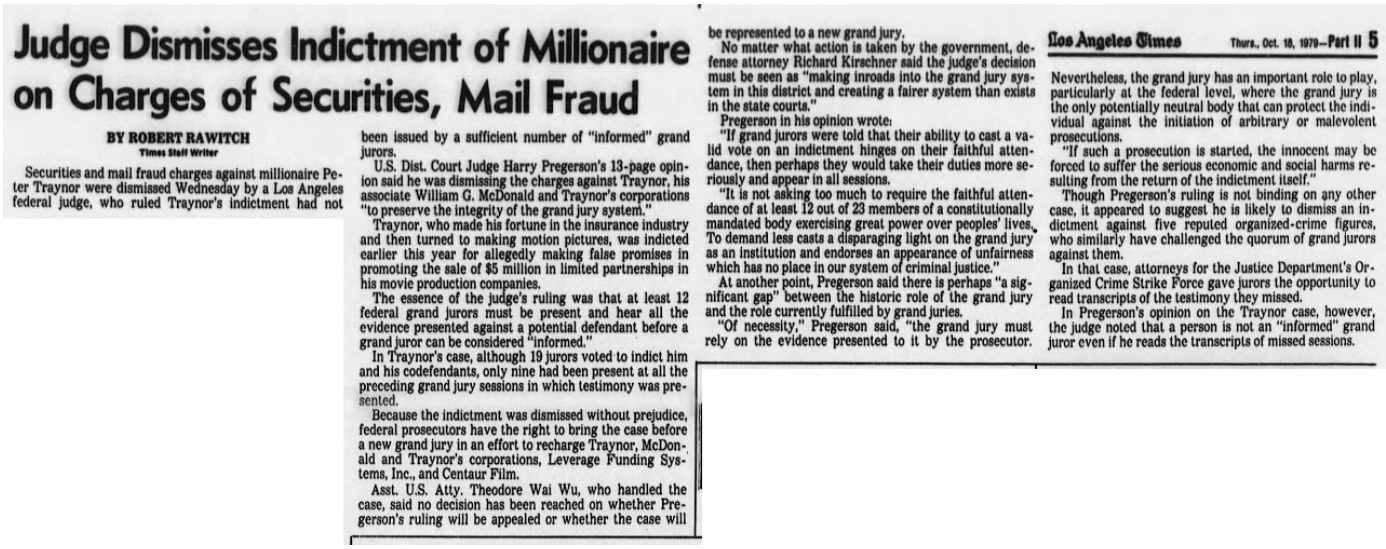
"We think his eyes will be okay," Scott said. "We're lucky there ... The doctors say he's improving faster than expected."

One source of worry was averted when tests showed that the raccoon did not carry rabies, Scott said.

[HN00DF][GDrive]

1979 (Oct 18)

Full Page : [HN00D1][GDrive]



Judge Dismisses Indictment of Millionaire on Charges of Securities, Mail Fraud

BY ROBERT RAWITCH
Times Staff Writer

Securities and mail fraud charges against millionaire Peter Traynor were dismissed Wednesday by a Los Angeles federal judge, who ruled Traynor's indictment had not been issued by a sufficient number of "informed" grand jurors.

U.S. Dist. Court Judge Harry Pregerson's 13-page opinion said he was dismissing the charges against Traynor, his associate William G. McDonald and Traynor's corporations "to preserve the integrity of the grand jury system."

Traynor, who made his fortune in the insurance industry and then turned to making motion pictures, was indicted earlier this year for allegedly making false promises in promoting the sale of $5 million in limited partnerships in his movie production companies.

The essence of the judge's ruling was that at least 12 federal grand jurors must be present and hear all the evidence presented against a potential defendant before a grand juror can be considered "informed."

In Traynor's case, although 19 jurors voted to indict him and his codefendants, only nine had been present at all the preceding grand jury sessions in which testimony was presented.

Because the indictment was dismissed without prejudice, federal prosecutors have the right to bring the case before a new grand jury in an effort to recharge Traynor, McDonald and Traynor's corporations, Leverage Funding Systems, Inc., and Centaur Film.

Asst. U.S. Atty. Theodore Wai Wu, who handled the case, said no decision has been reached on whether Pregerson's ruling will be appealed or whether the case will be represented to a new grand jury.

No matter what action is taken by the government, defense attorney Richard Kirschner said the judge's decision must be seen as "making inroads into the grand jury system in this district and creating a fairer system than exists in the state courts."

Pregerson in his opinion wrote:

"If grand jurors were told that their ability to cast a valid vote on an indictment hinges on their faithful attendance, then perhaps they would take their duties more seriously and appear in all sessions.

"It is not asking too much to require the faithful attendance of at least 12 out of 23 members of a constitutionally mandated body exercising great power over peoples' lives. To demand less casts a disparaging light on the grand jury as an institution and endorses an appearance of unfairness which has no place in our system of criminal justice."

At another point, Pregerson said there is perhaps "a significant gap" between the historic role of the grand jury and the role currently fulfilled by grand juries.

"Of necessity," Pregerson said, "the grand jury must rely on the evidence presented to it by the prosecutor.

Los Angeles Times Thurs., Oct. 18, 1979—Part II 5

Nevertheless, the grand jury has an important role to play, particularly at the federal level, where the grand jury is the only potentially neutral body that can protect the individual against the initiation of arbitrary or malevolent prosecutions.

"If such a prosecution is started, the innocent may be forced to suffer the serious economic and social harms resulting from the return of the indictment itself."

Though Pregerson's ruling is not binding on any other case, it appeared to suggest he is likely to dismiss an indictment against five reputed organized-crime figures, who similarly have challenged the quorum of grand jurors against them.

In that case, attorneys for the Justice Department's Organized Crime Strike Force gave jurors the opportunity to read transcripts of the testimony they missed.

In Pregerson's opinion on the Traynor case, however, the judge noted that a person is not an "informed" grand juror even if he reads the transcripts of missed sessions.

[HN00D2][GDrive]

1981 (Aug 21)

[HN00AX][GDrive]

4A THE CHARLOTTE OBSERVER Friday, Aug. 21, 1981

2 Arrested, 2 Still Sought In Sale Of Electronic Goods To Soviet Bloc

Associated Press

LOS ANGELES — Two persons have been arrested on charges of selling bugging devices and other strategic technology for shipment to the Soviet Union.

The arrests were made Wednesday, shortly before those two and two other persons were charged in a 60-count indictment handed up by a federal grand jury in Los Angeles.

Arrested were Anatoli Maluta, 61, a Soviet-born U.S. citizen who lives in Redondo Beach, and Sabina Dorn Tittel, 31, of Rancho Palos Verdes. Assistant U.S. Attorney Theodore Wu said they would be arraigned Monday. Both were held in lieu of $800,000 bail.

Still being sought are Werner Bruchhausen, 42, of West Germany, and Dietmar Ulrichshofer, 41, of Austria. "They're overseas for sure," said Alan Walls, deputy regional director of U.S. Customs. Authorities indicated they were probably in Europe.

Neither Walls nor Wu would say how the case was broken, although Walls said the investigation began 18 months ago. Walls said West German authorities cooperated.

"We're talking of a suspected $8 million worth of strategic technology," he said. "We can document and prove approximately $2 million and have a good indication of the remaining $6 million."

Walls said exporting such technology illegally is common: "It's also common that . . . it is exported to friendly countries and then diverted to hostile countries. It's difficult (to prove intent) but it's possible and we think we have," he said.

The indictment charged that during 3½ years ending in June 1980, the four conspired to ship strategic technology to West Germany and elsewhere without obtaining U.S. export licenses.

Maluta, Bruchhausen and Ulrichshofer were accused of exporting electronic monitoring and communications systems, computer components, semiconductors, manufacturing and testing equipment.

Maluta and Ms. Tittel allegedly told their employees to tell manufacturers the items were being purchased for Maluta's security business and facilities in Arizona and Alaska, officials said.

Bruchhausen owns and controls six California technology corporations and two West German corporations. Maluta, an officer and director, controlled the daily operations of the six California firms.

Named as an unindicted coconspirator was Hans Koenig, a West German and owner of a company called Elmasch, which allegedly sold high technology products from the United States to Soviet-bloc countries.

[HN00AY][GDrive]

1981 (July 2)

https://www.newspapers.com/image/387447009/?terms=%22Theodore%2BWai%2BWu%22

☆TOMORROW

The Minneapolis Star
Tuesday, July 7, 1981 3C

Silicon Valley new target for spies

Los Angeles Times

LOS ANGELES—Foreign intelligence efforts in the United States have shifted from Air Force bases and military targets to the fortresses of U.S. technology, say specialists in counterintelligence, electronics and law enforcement.

They say foreign agents operate here in surprisingly large numbers, and several FBI sources estimate there may be 30 Soviet KGB agents working in Northern California alone.

The agents' targets are the assembly plants that make up the heartland of the U.S. microelectronics industry—the "Silicon Valley" of Santa Clara County, Calif.

The arrests last week in Los Angeles of a suspected Polish intelligence officer and a Hughes Aircraft Co. radar engineer show the extent of the foreign powers' determination to compromise the security of aerospace and electronics firms.

The American engineer, now cooperating with the FBI, said he was paid more than $110,000 by Polish agents for technical documents that described projects Hughes planned to sell the U.S. government.

The military implications are clear for the "covert, all-weather guns systems"—the subject of one of the Hughes documents apparently acquired by the Poles. But counterintelligence and electronics specialists say national security may be even more damaged by espionage in electronics and other technological fields.

The United States has a clear international edge in microelectronics, surpassing even the Japanese in such revolutionary technologies as integrated circuits, bubble memory and other exotic computer-related fields.

Star Illustration by Kent MacIntosh

Technical superiority

But that edge is fragile. The kind of knowledge and technical data—even the memory chips and other electronics parts themselves—are extremely portable and are as useful to an enemy as they are to the United States.

Theodore Wai Wu, a Naval Academy graduate, is an assistant U.S. attorney in Los Angeles. He has prosecuted a number of cases involving the illegal transfer of technology to the Soviet bloc.

Wu said the public record is filled with evidence that U.S. military policy is based in large part on the presumption that this country has wide technical superiority over the Soviets.

"But what should happen if it turns out that our edge is not as wide as we believed?" Wu asked.

The United States has attempted in the past decade to control the spread of technology. In response, the Soviets and their allies have concentrated their intelligence gathering in the Silicon Valley, Los Angeles and other areas where the electronics industry has grown.

Soviet agents are in the market for technical information and for the manufacturing equipment needed to develop their electronics capability.

But they also are involved in the purchase through phony corporations of everything from simple parts to highly sophisticated electronics components. These materials are shipped and reshipped, sometimes with the knowledge of their U.S. manufacturers, to disguise their ultimate destination—the Soviet bloc.

The cooperation of so-called "legitimate" electronics businessmen is necessary for this traffic to continue, investigators contend.

Technology transfer

"Some of them are a hell of a lot more interested in a sale than they are in their country's security," said one U.S. customs investigator in San Pedro, Calif. "They don't care who they are selling to. A sale is a sale."

Customs officials say 40 international shipments have been seized at Los Angeles International Airport and at the harbor in the past year. Besides machine-gun parts and other munitions, the seized material included computer parts and components for a missile guidance system.

Agencies ranging from the Santa Clara County sheriff's office to the FBI and CIA are involved in investigating crimes involving "technology transfer."

The wizards of the Silicon Valley have learned to reduce entire computers to intricate layered pieces of glass that can store and sort hundreds of thousands of bits of binary information in billionths of a second. The military and industrial applications of such advances are manifold.

One of the most recent inquiries into such allegedly illicit traffic involves the "Continental Technology Corp.," under investigation by a Los Angeles federal grand jury.

No indictments have been issued in the investigation, which involves about a dozen alleged shell ized U.S. citizen born in Russia, and Werner J. Bruchausen of Neiderseeon, West Germany.

The documents—including an affidavit prepared by Santa Clara County Deputy Sheriff Wayne Brown—state the two men figure in stolen electronics parts trafficking.

A variety of sources say the federal investigation is more concerned, however, with the international movement of complete electronics systems, some of which are believed to have been smuggled out of the country.

Hidden destinations

Maluta once worked for U.S. Air Force intelligence. He referred questions about the investigation to his attorney, Carl Capozzola of Torrance, Calif., who said his client is willing to cooperate with federal investigators.

As is sometimes the practice of shipping firms attempting to evade the U.S. embargo on high-technology exports to Russia, Continental Technology shipped proscribed equipment through non-Soviet bloc countries to conceal its real destination, investigators said.

In addition to such transshipping, however, the Continental investigation has shown evidence of more sophisticated schemes. One source familiar with the investigation said electronics components, which could not be legally exported, were wired into mundane electronics equipment and shipped under disguise.

U.S. investigators went to West Germany last month to expand their probe, according to sources. The U.S. Commerce Department has suspended the export privileges of Maluta, Bruchausen, another corporate officer and three of Bruchausen's West German electronics firms.

However, investigators doubt the German will be prosecuted here because the U.S.-West German extradition treaty does not extend to export law violations.

A classic example of that problem involves Volker Nast of Hamburg, West Germany, who played a key role in a 1975 scheme to smuggle electronics gear to Moscow. Customs investigators said Nast and his colleagues have direct ties to an East German-Russian spy ring that specializes in obtaining electronics parts.

Illegal exports

Nast and five other men, including three Americans, were indicted in San Francisco for conspiring to export several tons of electronics equipment to Russia.

The equipment included not only components but machines such as "wafer scrubbers" used in the manufacture of integrated circuits.

"This stuff could never have been exported to Russia legally," said John Lockie, a Washington attorney and former federal prosecutor in San Francisco.

Lockie said federal authorities were alerted to the ring's operation six tons of sand bags were put into the packing crates in its place. The shipment was resealed and put aboard a freighter for Hamburg.

Nast met the shipment in Hamburg, investigators said, arranged to have the goods forwarded to East Germany and then to Moscow.

The 1975 incident resulted in the conviction of three American electronics executives for violations of the export laws. But the three Germans indicted, including Nast, were not brought to trial.

Nast, however, was not heard from again until this year, when customs investigators on the East Coast launched another probe into an apparent Eastern bloc attempt to obtain sensitive electronics equipment.

The target this time was a microwave receiver called an MSR-903, manufactured by the Micro-Tel Corp. of Baltimore. The device can be used to monitor satellite transmissions and has been sought by Soviet and Czech agents since 1972, the FBI said.

Tracking smugglers

The machine in question was ordered in 1980 by a U.S. businessman who requested certain modifications in the $49,000 unit.

Because the businessman told Micro-Tel officials he was ordering it for a colleague in Europe, the company notified customs investigators.

When they found that no export license had been secured for the machine, they suspected smuggling.

Agents bugged the machine with a radio-tracking beacon, according to William Mason, customs agent in charge of the investigation, which began in Trenton, N.J.

Three days after delivery, customs agents arrested a German engineering student, Rolf Peter Herms, 36, at Kennedy Airport in New York, trying to check the receiver, hidden in a large suitcase, aboard a flight to Frankfurt.

Herms, who later pleaded guilty to export violations, said he had been hired by Nast to smuggle the MSR-903 out of the United States.

Nast was indicted May 26 for conspiracy to violate U.S. munitions control laws, because the receiver is so specialized it is considered an article of war.

The coincidence of Nast's involvement in two different electronics prosecutions is not unusual. There is, according to investigators, a relatively tight international network of electronics-parts traffickers operating on the fringes of the legitimate business.

In fact, according to Northern California investigators, individuals suspected of transshipping electronics components to the Soviet Union also are alleged to be involved in a large-scale, lucrative international black market in stolen electronics parts.

Documents filed in several California courts by Santa Clara County officials show that both Maluta and Bruchausen, under investigation in the Continental Technology case, also figure in a series of criminal cases arising from the theft of memory chips from Intel Corp. and other Silicon Valley manufacturers.

An affidavit by Santa Clara Deputy Brown, filed in support of search warrants for Maluta's home and other buildings in Los Angeles, traces a kind of electronics parts pipeline that stretches from the Silicon Valley across the Atlantic to Europe and perhaps behind the Iron Curtain.

Brown said informants have told him some electronics middlemen regularly pay hundreds of thousands of dollars for parts, knowing they are stolen.

One such deal took place in Anaheim, Calif., when, an informant reportedly told Brown, a dealer paid more than $385,000 for a trunk load of stolen memory chips.

International market

The informant, identified by Brown as John Henry Jackson of Sunnyvale, Calif., and several other of Brown's sources named a number of the electronics dealers involved in this black market. Among those named were Maluta and Bruchausen.

While the affidavit in state court does not concern itself with the federal crimes involved with illegal export of electronics parts, Brown said in a recent interview he believes parts stolen in the Silicon Valley can be sent as easily to Soviet bloc countries as they are being sent to Western Europe.

The connection between the international market for stolen electronics parts and technology transfer to the Soviet Union is, however, by no means clear.

Some electronics experts doubt that any connection exists. They argue the Soviets already have developed enough manufacturing capability that they no longer need parts from the United States.

But other experts say there is evidence the Soviet electronics industry is based in large part on components copied directly from U.S. designs. These components would be compatible with U.S. parts, the experts say.

Evidence of that was found recently when intelligence analysts recovered a Soviet SAM 6 missile, which incorporates what is described as a "carbon copy" of an Intel 8080 microprocessor.

Intel Corp. officials, amazed at the faithfulness of the copy, said it would be perfectly compatible with other Intel parts and there was "absolutely no reason" why the Soviets would not be using the device with stolen U.S. parts.

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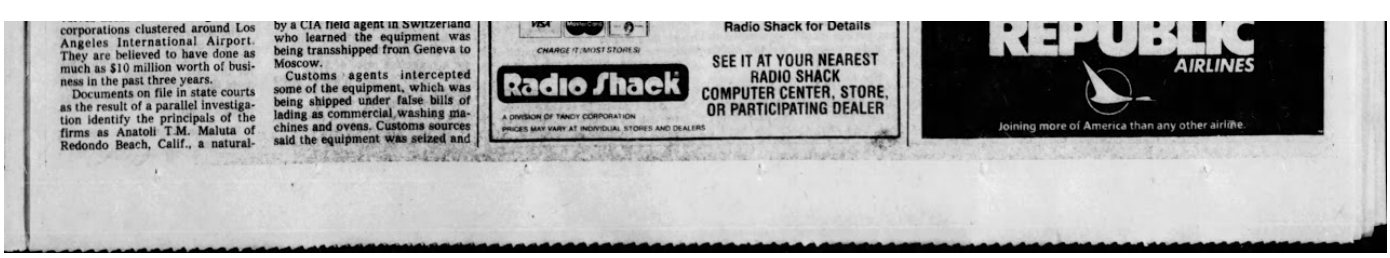

[HN00DE][GDrive]

1982 (June 13)

Theodore Wu was later named as deputy assistant secretary of commerce for export enforcement by Secretary of Commerce Malcolm Baldridge Jr. on 13 June 1982.

1983 (Dec 11)

Full page : [HN00DC][GDrive]

1983-12-11-the-sedalia-democrat-pg-8-clip-boats

U.S. seizes three high-speed boats

WASHINGTON (AP) — U.S. officials said Friday they seized three high-speed patrol boats headed for Nicaragua and that the Sandinista government had intended to use them to spy against its Central American neighbors.

The crafts, produced by a U.S. company, were equipped with high-performance engines and sophisticated electronic gear, said Theodore W. Wu, deputy assistant secretary for export enforcement at the Commerce Department.

[HN00DD][GDrive]

1985 (Feb 04)

Inside

Loan curbs

President Reagan's plan to change the rules for federal loans and grants to college students is a reasonable response to a sensitive problem. Globe editorial.

— Page 4A

Plea

Pope John Paul II pleads "with pain in my heart," in the heart of Peruvian rebel territory, for leftist Peruvian guerrillas to lay down their arms and end the struggle that has killed 4,000 people.

— Page 10A

Other Features

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Deaths .....2B&5B
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Today's TV Fare 3B

Diversion of helicopters investigated by government

80 U.S. aircraft received by North Korea, officials claim

WASHINGTON (AP) — The Commerce Department says it has evidence that a West German exporter engineered the diversion of more than 80 U.S. helicopters to communist North Korea — aircraft similar to those provided to South Korea for its defense.

Theodore Wu, deputy assistant secretary of commerce for export enforcement, said Sunday that the diversion of the Hughes model 300 and 500 helicopters was "probably the largest illegal diversion of U.S.-manufactured aircraft" known. He said the aircraft would be enough "to give close air-to-ground support for a whole regiment of troops."

Customs and Commerce Department agents armed with search warrants seized documents Friday from two Los Angeles-area freight companies that Wu said were allegedly involved in packing and forwarding some of the helicopters.

Also on Friday, the department revoked the export licenses of two West German companies, an official of one of the firms and eight related parties, most of them in the Los Angeles area, making it illegal for anyone to deal with them in transactions involving goods of U.S. origin.

Wu said the evidence indicates that Kurt Behrens, managing director of Dela-Avia Fluggerate Gmbh., had ordered at least 85 helicopters from Hughes for delivery in 1983 and 1984, and at least 80 of the craft were delivered, ostensibly to Behrens in West Germany.

But Wu said the department's information shows the ultimate destination of the helicopters was North Korea.

He said, for example, that the latest shipment, involving 15 helicopters and repair parts, was shipped from Los Angeles on a Panamanian-flag vessel, the Westwood Merchant. They were unloaded in Antwerp, Belgium, trucked 75 miles north to Rotterdam, the Netherlands, and put on a Soviet vessel, the Prorokov. The ship was ostensibly bound for Hong Kong, but the helicopters apparently went instead to North Korea, said Wu.

Another shipment, in 1983, went from Los Angeles to Japan before being diverted to North Korea, he said.

Wu said there is no information so far to indicate that Hughes Helicopter, based in the Los Angeles suburb of Culver City, knew anything about the scheme. "The company is cooperating with the Commerce Department" in its further investigation with the Justice Department, said Wu.

But he said documents indicate that the traders who filed export papers with the U.S. government concerning the transactions "had reason to know, or in fact knew, that the 'copters were not going to West Germany but were intended for North Korea."

According to the authoritative reference book Jane's All the World's Aircraft, military versions of the model 500 helicopter are capable of carrying anti-tank rockets and machine guns.

The book says South Korea has for several years been building military versions of the model 500 for its air force from U.S.-supplied components. By 1980, the country had more than 100 such helicopters, according to Jane's.

The "related parties" denied U.S. export privileges, he said, were Associated Air Services of Van Nuys, Calif.; National Helicopter Service and Engineering, Van Nuys; Associated Industries, North Hollywood; Spedition Killewald Exportrans Gmbh, Berlin; Arnold A. Semler, Studio City, Calif., and a company bearing his name; Ronald H. Semler, identified as general manager of Associated Industries; and Monte Barry Semler, identified as Associated's director of international marketing.

Previous 1 2 3 4 5 Next

Publication: Joplin Globe
Location: Joplin, Missouri, United States Of America
Issue Date: February 4, 1985

[HN00DB][GDrive]

Full page : [HN00D9][GDrive]

1985-02-04-the-lowell-sun-pg-1-clip-helicopters

North Korea got US-built 'copters

WASHINGTON (AP) – North Korea has received more than 80 U.S.-built helicopters – similar to military models provided to South Korea – through a West German exporter who allegedly diverted them there illegally, the Commerce Department says.

Commerce's deputy assistant secretary for export enforcement, Theodore Wu, said the aircraft, if modified for military use, would be enough "to give close air-to-ground support for a whole regiment of troops."

The transactions involving Hughes model 300 and 500 helicopters "is probably the largest illegal diversion of U.S.-manufactured aircraft, of helicopters, that we know of," Wu said in a telephone interview.

U.S. policy provides for an embargo against any goods being shipped to North Korea, with the sole exception of non-commercial quantities of humanitarian items.

On Friday, Customs and Commerce Department agents armed with search warrants seized documents from two Los Angeles-area freight companies that Wu said were allegedly involved in packing and forwarding some of the helicopters. He identified the companies as Unitrans International Corp. in Inglewood and Associated Industries in North Hollywood.

Also on Friday, the department revoked the export licenses of two West German companies, an official of one of the firms and eight related parties, most of them in the Los Angeles area. That step made it illegal for anyone to deal with them in transactions involving goods of U.S. origin, Wu said.

Wu said the evidence indicates that Kurt Behrens, managing director of Dela-Avia Fluggerate Gmbh., had ordered at least 85 helicopters from Hughes for delivery in 1983 and 1984, and at least 80 of the craft were delivered.

But instead of going to Behrens in West Germany, the helicopters were shipped to North Korea, he said.

[HN00DA][GDrive]

1986 (April)

https://www.newspapers.com/image/397732396/?terms=%22Theodore%2BWu%22

1986 (July 14)

Full Page [HN00D7][GDrive]

The San Bernardino County Sun (San Bernardino, California) • 14 Jul 1986, Mon • Page 12

PEOPLE

California businessmen fined for alleged export conspiracy

SAN JOSE — The U.S. Commerce Department has fined the head of a Silicon Valley company and a Redondo Beach businessman a total of $450,000 for allegedly conspiring to illegally export silicon chip-making equipment to Czechoslovakia.

The Commerce Department charged that William Dart, head of Santa Clara-based Display Systems, and Josef Kubicek, president of Exclusitrade Inc. of Redondo Beach, conspired in June 1983 to export to Czechoslovakia without a license two wafer-polishing devices used in the manufacture of semiconductors.

The equipment was seized by customs officers before it could be shipped to Czechoslovakia.

The machines have no direct military applications, but certain types cannot be exported to Eastern bloc countries because they could be used to manufacture semiconductors used in computer and electronic systems with military uses, said export enforcement officer Theodore Wu.

Fines of $300,000 against Kubicek and $150,000 against Dart were announced last week by the Commerce Department's Export Enforcement Office in San Jose.

Dart on Friday said he and Kubicek plan to appeal the matter to federal court.

[HN00D8][GDrive]

1987 (Jan 6)

[HN00D5][GDrive]

The Sacramento Bee (Sacramento, California) • 06 Jan 1987, Tue • Page 50

FIND | CLIP | PRINT/SAVE | SHARE

Export bar for Santa Clara firm

US suspects restricted high-tech equipment was sent to Bulgaria

Los Angeles Times

WASHINGTON — The Commerce Department Monday denied a California businessman export privileges for 60 days, saying it has reason to believe that his Santa Clara company has illegally exported high-technology goods to Bulgaria.

Theodore W. Wu, deputy assistant secretary for export enforcement at the Commerce Department, said the action against Anthony Speno and his business, Valley Machine & Tool, followed a Dec. 12 search of the company by department agents.

As a result of the search, Wu said, the department "has reason to believe" that the company "currently has in its possession various high-technology goods which may also be intended for export to Bulgaria," including computer disk manufacturing equipment.

"The department moved to impose this order as a preventive measure while the investigation is in progress," he added.

Federal export regulations require special licenses to export certain high-technology equipment from the United States to other countries and bar the export of certain products to Eastern bloc nations.

According to an affidavit signed by the special agent, a search warrant was obtained for company offices to determine whether it had illegally exported to Bulgaria equipment used to manufacture 2-inch to 14-inch disks.

The equipment, known as surface enhancement systems, had been produced by AYE-ZED, a San Jose company that is now bankrupt, the agent said. Bruce E. Colegrove, former owner of AYE-ZED, told an investigator that he had been hired by Speno to refurbish some of the equipment.

While working at the company's Santa Clara facilities, Colegrove told the investigator, he overheard a conversation between Speno and another unidentified person that indicated the machines were going to F.T.O. Technika in Sofia, Bulgaria. Colegrove said that he ended his contract with Valley Machine & Tool last March after the company failed to pay him. In October, when Colegrove returned for payment, only one of the refurbished machines still remained in Santa Clara, he said.

A further check, the investigator said, revealed that the company made about 10 export shipments to Bulgaria within the last year via Union Air Transport, a freight forwarder in Burlingame, which arranged for delivery of the commodities directly to an ocean shipping line.

The forwarder said that Valley Machine & Tool listed the shipments as containing general industrial equipment, or electronic and precision instruments, commodities that may be shipped to Eastern bloc countries.

[HN00D6][GDrive]

1990s

1996 - 1997 - Residency in La Jolla, California

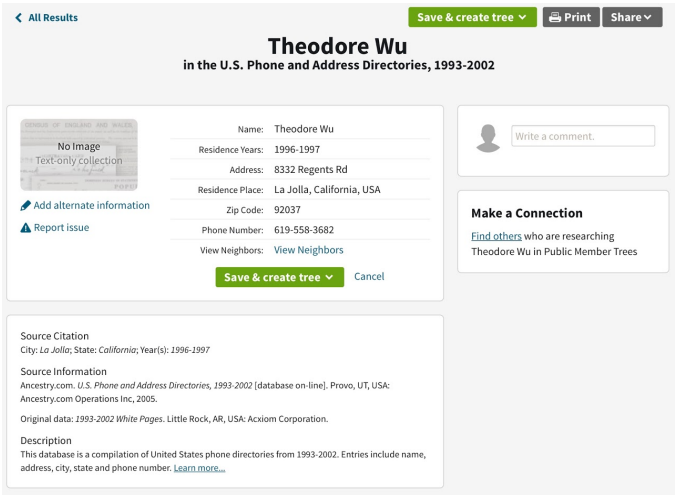
Transcript - [HD0002][GDrive]

NOTE: Close proximity to where **Werner Bruchhausen** (born 1939) lived only a couple of years earlier.

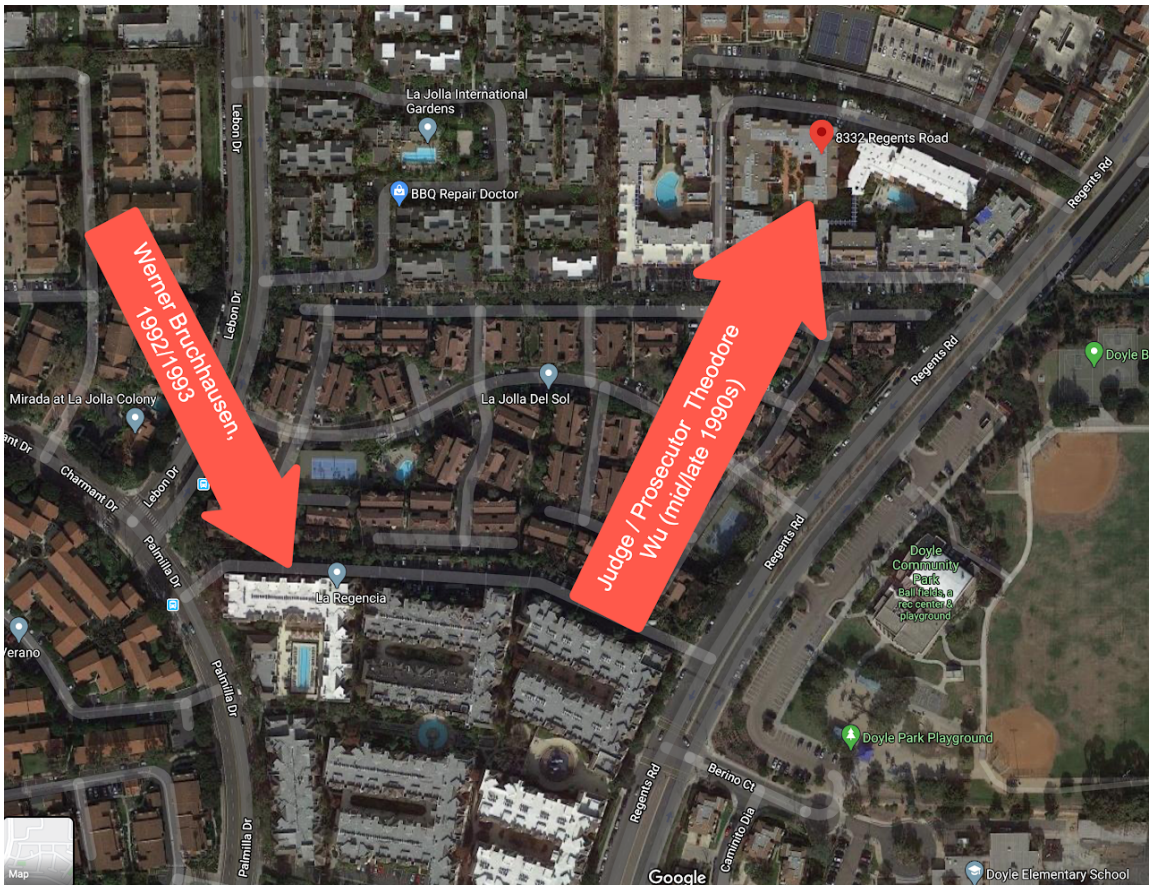
Theodore Wu

Residence Years: 1996-1997

Address: 8332 Regents Rd ， Residence Place: La Jolla, California, USA ， Zip Code: 92037



[HD0003][GDrive]



1999 (Dec) - Mother passes

Mabel Lee Wu - DAUGTER IN-LAW IS MARYLIN JOHNSON

Full page : [HN00D3][GDrive]

The Los Angeles Times (L... • 16 Dec 1999, Thu •

WU, Mabel Lee, 91, Glendale, California, on Saturday, December 11, 1999, at Verdugo Hills Hospital. Loving mother of Carolyn C. Lu and Theodore W. Wu, Jr.; also survived by son-in-law, Eddie Lu and daughter-in-law, Marilyn J. Wu; 4 grandsons, Derek, Daryl and Douglas Lu, and Theodora Joshua Wu. Outgoing and caring, she loved her family and friends, enjoyed music and traveling.

Services will be held at the Wee Kirk Chapel, Forest Lawn-Glendale, Sat., 11:30am, Dec. 18, interment to follow at Forest Lawn.

In lieu of flowers, memorial contributions may be made to the Foothill Service Club for the Blind, 117 E. Los Feliz Blvd., Glendale, CA. 91205.

She is now rejoicing with the Heavenly Father and her Savior, Christ the Lord.

[HN00D4][GDrive]

---

http://members.calbar.ca.gov/fal/Licensee/Detail/63793

Theodore Wai Wu #63793

License Status: Inactive

Address: 10742 Wynkoop Dr, Great Falls, VA 22066

County: Non-California County

Phone Number: (202) 737-7810

Fax Number: (703) 759-1999

Email: Not Available

Law School: Boston Univ SOL; Boston MA

License Status, Disciplinary and Administrative History

Below you will find all changes of license status due to both non-disciplinary administrative matters and disciplinary actions.

Date License Status Discipline Administrative Action

Present Inactive

1/30/2007 Inactive

5/16/1975 Admitted to The State Bar of California

Additional Information:

https://www.avvo.com/attorneys/22066-va-theodore-wu-74727.html

LICENSE

State Status Acquired Updated

CA Inactive 1975 01/18/2020

We have not found any instances of professional misconduct for this lawyer.

Address History

See : [HD0001][GDrive]

Address: 1904 Miracle Ln, Falls Church, VA, 22043-1520 (1984)

[1920 Miracle Ln, Falls Church, VA, 22043-1520]

[10742 Wynkoop Dr, Great Falls, VA, 22066-1607 (1993)]

[10742 Wynkoop Dr, Great Falls, VA, 22066-1607 (1996)]

OTHER Family notes

Parents divorce - 1980

divorce - 1980

https://search.ancestry.com/cgi-bin/sse.dll?indiv=1&dbid=1141&h=1171770&tid=&pid=&usePUB=true&_phsrc=jWH77&_phstart=successSource

Joseph T Wong

Spouse Name: Mabel L

Location: Los Angeles

Date: 27 Jun 1980

wedding - May 3 1958

https://search.ancestry.com/cgi-bin/sse.dll?indiv=1&dbid=1100&h=9346399&tid=&pid=&usePUB=true&_phsrc=jWH83&_phstart=successSource

Mabel L Wu

Spouse:

Joseph T Wong

Marriage Date:

3 May 1958

Recorded County:

Clark

Page:

OTHER NOTES :

https://twitter.com/NitzPnitz/status/1233152265973882880?s=20

"arron, Ted Wu is described as a grateful & "ardent patriot" responsible for the complex convictions of Walter and Frances Spor on sale of their laser tech to Soviets."

https://law.justia.com/cases/federal/appellate-courts/F2/864/1467/239562/

Wu gets good review in Senate sub-committee hearing on International trade 1983.

https://twitter.com/NitzPnitz/status/1233117887927332872?s=20

https://twitter.com/NitzPnitz/status/1233118233353498624?s=20

dec 13 1980

https://www.newspapers.com/image/20071108/?terms=%22theodore%2Bwu%22

https://twitter.com/NitzPnitz/status/1233103489947095041?s=20

screen capture

https://www.beenverified.com/people/marilyn-wu/

https://www.linkedin.com/in/joshua-wu/

TECHNOBANDITS

Chatper 6 - "Technbandits" (1984)

See [HB000M][GDrive]

Mention of Olmer

[...]

A letter, dated October 30, was sent to the committee chairman by Deputy Assistant Customs Commissioner William Green, and he did not mince his words. The letter, which was to become known as the Green_Memo, was damming. It accused the Commerce Department of impeding cooperation in investigations, compromising customs and foreign government sources, and damaging Customs relationships with the allies. The Commerce Department, said the Green Memo, had contributed to problems affecting the national security.

The Department of Commerce hit back. It claimed that Customs had not always responded with help when needed, that it had initiated its own investigations without telling Commerce, and that if Customs seized shipments without proper technical knowledge to support those seizures it would be harassing legitimate exporters. Commerce stressed that all export control enforcement should be under one agency- the Commerce Department's Compliance Division, where controls were a priority. Customs was responsible for enforcing a number of laws, and its priorities were constantly being reassessed. (30)

Accusation and counter-accusation continued as, during the next few years, Congress became increasingly involved. The criticism from each side was bitter, but the most damning of all for Commerce came in May 1982, after an eighteen-month investigation by Senate staff members into the behavior of the Compliance Division. One special agent employed in the Compliance Division, who had served more than twenty years as a criminal investigator, told Senate staff that "the Kremlin's spy organization, the KGB, could not have organized tho Compliance Division in a way more beneficial to Soviet interests." (31)

The Senate investigators demolished the Commerce Department's claims that tho Con1pliunce Division was competent. "Our investigation found that ... it is an understaffed, poorly equipped, and in certain instances under-trained and unqualified investigative and intelligence unit." How could it carry out its function when it was overwhelmed with work? The division did not even have a "secure" telephone. Everyone knew about the problems, the Senate staff member told his committee; it was one of the worst kept secrets in the Executive Branch. But he had found no one who would come forward and tell the truth. "The highest leaders of our nation are led to believe that we have an export control capability when, in fact we don't." (32)

Most shocking of all to the assembled senators was a revelation by a former Compliance Division investigator that he was the only person responsible for ensuring that companies adhered to former President Carter's embargo on grain sales to the Soviet Union after the invasion of Afghanistan. Senator Sam Nunn of Georgia, a member of the Committee on Governmental Affairs, remarked; "So you have a major decision by the President of the United States on a major foreign policy issue involving the United States and the Soviet Union, involving all our allies, involving the credibility of our foreign policy and economic policy throughout the world, and you have the Commerce Department assigning one individual for enforcement purposes." Senator Nunn, who later introduced legislation to amend the Export Administration Act and transfer criminal enforcement from Commerce to Customs, said, "When [President Reagan] starts talking about the export of technical equipment that aids the Soviet Union, nobody tells him that they have eight inspectors covering all the airports and ports of the country in enforcing the Export Administration Act, do they?"(33)

The investigation met with resistance by government departments. Working agents and senior officials were candid - but insisted on anonymity. Both the FBI and the Justice Department refused to help evaluate Commerce, although there was a widespread sense throughout the affected areas of government that the Compliance Division was inadequate. Senator Nunn remarked: "So the attitude generally is what the President of the United States doesn't know about the inability of the Commerce Department to carry out his own policy doesnt hurt him, right? What the Congress doesn't know doesn't hurt them?" (34) Reports on the Commerce Departments relations with the Intelligence community were just as damming. The Senate investigation found intelligence on technology transfer to be insufficient, a commitment of, needed resources lacking, and the Intelligence community not organized to use information to block prohibited transfers. Intelligence sources told the Senate investigators that they had "virtually no communication with ... Compliance regarding ongoing investigations... There is a little feedback from Commerce regarding intelligence information it provides ... Compliance ... rarely seeks the expertise of the intelligence community. " (35)

The friction between Commerce s Compliance Division and the Customs Service eventually led to scarcely credible behavior by government officials. "Customs is doing its thing ... Commerce is doing its thing... and nobody is happy and it is costing the taxpayer over thirty million dollars," remarked Representative Don Bonker of Washington State, sponsor of the House version of the bill to amend the Export Administration Act. (36)

At the receiving end of the attack, Lawrence Brady did not flinch. The official who had said export administration was a "total shambles" was unswerving in his belief that Commerce should be the major body for enforcement of the Export Administration Act at home and abroad. In February 1983, he told skeptical senators that significant strides had been taken in correcting the deficiencies that had built up during the seventies. He now believed Commerce to be the equal of Customs in most respects. The Intelligence agencies had been asked to prepare current analyses of Soviet acquisition targets and methods: these were being read ·regularly by Brady and his staff. Budget and manpower had been increased; for the first time technical people were being hired as licensing officers. Commerce officials were being educated in how to use the control list, prepare license applications, and examine various licenses. Thirty-five highly trained criminal investigators had been hired, and a third of a million dollars had been spent on state-of-the-art surveillance equipment. (37)

But the main change was that a **new Commerce Department office** had been created. The much-criticized Compliance Division has been upgraded to office status. **To head the new and expanded Office of Export Enforcement, Lawrence Brady had brought on board one of.the West Coast's most renowned attorneys in the technology-transfer field, the man who had prosecuted three well-known cases** (38). **Theodore Wai Wu** was an assistant U.S. attorney in Los Angeles**, where he was assistant chief of the Criminal Division and senior trial attorney for Customs and export control violations**. Wu was not unpopular with the Customs agents with whom he had been in close contact during high-tech investigations, although had said, "He tended to get overenthusiastic." The story the agent told took place during one of the trials on technology transfer.

"He kept jumping up and down and shouting 'Objection! Objection!' The judge kept saying, 'Sustained.' At one point, Wu jumped up and shouted, 'Sustained!' 'That's my line, Mr. Wu,' the judge told him." (39)

Customs agents found him knowledgeable about technology; they admired that. And he was good at explaining technological complexities to juries. Wu was a graduate of the U.S. Naval Academy and had served on active duty in weapon and engineering assignments. He had done graduate work at Tufts University and got a J.D. at Boston University Law School.

Like Bob Cozzolina, Ted Wu believed that the first line of defense in controlling technology transfer was the private sector. "Tip-offs are critical. We rely on industry to give us leads." (40) Each of the cases he had prosecuted had been a result of information from industry. **One of Ted Wu's main assets was the Commerce Department's newly acquired IBM 370 computer, storing the 300,000 existing export licenses and all the new applications**. It had on-line tracking for all cases to proscribed destinations and details of computer exports to Western countries. It was to be upgraded throughout 1983 to store intelligence information and details on the foreign availability of technology. Accessible from the West Coast and New York, with eventual expansion to forty-seven cities, it would enable local investigators to check both destinations and users. **Lionel Olmer, Under Secretary of Commerce for International Trade**, told Congress in February 1983 that information in the computer would provide valuable help for the FBI, the CIA, and the Customs Service.

But the stronger the enforcement capabilities at Commerce, the more intense became the rivalry with Customs. At the heart of the dispute was the information stored on Ted Wu's computer. Customs agents complained that they were being denied access to the wealth of information in those memory banks, and this was hampering their investigations. Commerce officials were willing to give them details only on a case-by-case basis. Congress became aware of the problem in the spring of 1983. Under Secretary Olmer claimed at Senate hearings that a memorandum of understanding on sharing the information was about to be signed. However, it was a couple of months late getting off the ground.

"I understand you are negotiating the size of the table", said a senator.

"No, I don't think so," replied Olmer. "I'm not looking for a Nobel Peace Prize."

He was told it might be worth it.

"I do not believe there are any serious issues between us that would prevent us from getting a memorandum ... signed within the next week or so," replied Olmer. But he went on: "We've been criticzed ... for not giving ... Customs... information from the private sector which !s given to us in the course of ... applications for export .... There is an awful lot of proprietary information ... and we are simply not prepared to let it go without some understanding." (42)

At the center of the controversy was a clause in the Export Administration Act that protected proprietary commercial information obtained by Commerce. Customs Commissioner von Raab told Congress that the computer was closed to his agents because "apparently it contains some business confidential information." He said the use to which he might put the information would not cause problems. The State Department, after all, opened its files, and the Justice Department had, in fact, ruled that information that might be closed to the public was not closed to government agencies. Now, the Commerce Secretary had ruled that the information be made available; it was junior officials who were refusing to supply the data on anything other than a case-by-case basis. (43) Congress was told that the refusal by Commerce to open its files was unique to the Reagan administration. Theodore L. Thau, who from 1961 to 1972, was executive secretary of the Ex port control Administration Review Board in charge of the legal aspects of export control enforcement, had shared information with other government agencies. Thau was "surprised and shocked" that for the first time since 1949, when the act's confidentiality prrovision was adopted, the question of sharing information had arisen. (44)

The Exodus team became desperate for the licensing details. Aft shipments were seized at ports of exit, the Washington Command Center was obliged to wait until Commerce officials told them the licensing status of the equipment: the fact that copies of licenses were not included with shippers' export declarations infuriated them. Commissioner von Raab did not hesitate to express their concern. He told Congress that to speed the work of his team he did not need validated licenses with shipments; just photocopies. Twice a day one of his agents was obliged to walk across Washington's 14th Street from Treasury to Commerce, carrying details of the shipments seized by his team. "Commerce then decides what to do with the detentions," he said. (45)

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Housatonic

Carl Garland Young (born 1926)

[HN01BD][GDrive]

Born in Portland, Oregon on March 26, 1926 [HL005H][GDrive]

Father - Carl Ludwig Young (see https://www.ancestry.com/family-tree/person/tree/28858747/person/12105701119/facts)

HN01BD

Associated with :

- **Dr. David Bliss Dekker (born 1919)** (Colleague at University of Washington Computer Center / Co-founder of **Computer Center Corporation (Seattle)**)
- Monique R Rona (born 1928) (Co-founder of **Computer Center Corporation (Seattle)**)
- Stephen Russell (born 1937) (colleague at **Computer Center Corporation (Seattle)**)

Marriage

https://search.ancestry.com/cgi-bin/sse.dll?indiv=1&dbid=2378&h=845402&tid=&pid=&queryId=170c51ea451303d3999cf7023396d06a&usePUB=true&_phsrc=MOW142&_phstart=successSource

1946 - returning from Germany ?

https://www.ancestry.com/imageviewer/collections/7488/images/NYT715_7233-0618?treeid=&personid=&hintid=&queryId=1ceca5e17f1f11029e1666d5887e716c&usePUB=true&_phsrc=MOW146&_phstart=successSource&usePUBJs=true&_ga=2.55964523.1156066000.1605136269-1282622217.1602734250&pId=3021868461

Lic Jr Eng

1948 - returning from Korea

https://www.ancestry.com/imageviewer/collections/7949/images/IMUSACA1907_130191-00095?usePUB=true&_phsrc=MOW147&_phstart=successSource&usePUBJs=true&pId=4482046

1963 and earlier - Have not yet found evidence that Carl Young is at University of Washington

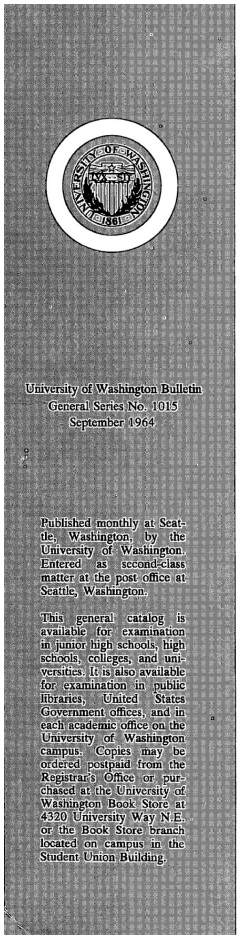
---

1964 - University of Washington Registrar?

1963 - also a registrar ? https://books.google.com/books?id=puHcz5U5aN0C&pg=PA195&lpg=PA195&dq=%22Carl+G+Young%22+%2B+%22Washington%22&source=bl&ots=rMnBTVsUfx&sig=ACfU3U1wfoluO46p3pAeyP6sbabb5Odpaw&hl=en&sa=X&ved=2ahUKEwiPrvK2s4HtAhWy1VkKHceMB8Y4FBDoATAGegQIARAC#v=onepage&q=%22Carl%20G%20Young%22%20%2B%20%22Washington%22&f=false

1964-univ-washington-general-catalog-1964-to-1965-v1-pg-regents-cgyoung.jpg

- (1964) University of Washington General Catalog (1964 - 1965)
  - Source : [HE0033][GDrive]



University of Washington Bulletin
General Series No. 1015
September 1964

Published monthly at Seattle, Washington, by the University of Washington. Entered as second-class matter at the post office at Seattle, Washington.

This general catalog is available for examination in junior high schools, high schools, colleges, and universities. It is also available for examination in public libraries, United States Government offices, and in each academic office on the University of Washington campus. Copies may be ordered postpaid from the Registrar's Office or purchased at the University of Washington Book Store at 4320 University Way N.E. or the Book Store branch located on campus in the Student Union Building.

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[HE003D][GDrive]

(1967) University of Washington General Catalog (1967 - 1969)

[HE0039][GDrive]

Page 53

Computer Center Director of Operations is Carl G. Young, B.S. ; Computer Center Faculty Director is David B. Dekker, Ph.D.

Computer Center :

The Computer Center, established in September, 1956,

provides electronic calculating facilities and auxiliary

punched-card equipment for use by faculty and research personnel of the University. The facilities of the

Computer Center are also available to neighboring

institutions.

The facilities include IBM 7094 and 7040 high-speed

digital comput4tg machines as a directly coupled system, and a Burroughs B5500 with facilities for remote

access.

The Computer Center is administered by an executive

committee from the faculty of the University of Washington. There also exists a Pacific Northwest Research

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1968 - The United Nations Treaty Series Project / PETER H. ROHN UNIVERSITY OF WASHINGTON / Source: International Studies Quarterly , Jun., 1968, Vol. 12, No. 2 (Jun., 1968), pp. 174- 195

Source : [HP003Y][GDrive] (Note - Purchased for 39 dollars , Nov 2020)

The United Nations Treaty Series Project - By PETER H. ROHN UNIVERSITY OF WASHINGTON

[...]

1963. The United Nations Treaty Series Project (UNTS Project) started as a vague hunch in a class discussion. The question was how to prove the growth of international institutions in conventional international law. The answer was simple in theory but difficult in practice. We should survey the texts of treaties. If references to international institutions increased, the point was proved; otherwise, disproved. The more treaties we surveyed the more reliable the results would be. There was no money to pay for anything, no special equipment, no extra work space, nothing but the idea and the library and a group of students volunteering to do the job as part of their classwork in international law.

Two months later, some fifty students had combed through all volumes of the United Nations Treaty Series (UNTS). There were 426 volumes in the autumn of 1963. A few key characteristics were extracted from every one of the 6,734 treaties published up to that time in the UNTS. The students coded these key characteristics on dittoed code sheets. By Christmas I had on my desk a pile of several hundred code sheets filled out by 50 students in as many handwritings. I had no way of guessing the level of accuracy and completeness, let alone usefulness, of the whole exercise.

[...][page 178][...]

Also in 1965, the UNTS Project became part of the regular graduate instruction in international law at the University of Washington. A system was developed (and is still in force) whereby seminar students must combine traditional and quantitative methods in international law. Standard procedures include the handling of UNTS Project printouts, code manuals, and raw data cards. Students also use auxiliary equipment in the computer center as well as desk calculators and other simple devices for minor individual tasks. Measurements and computer-oriented activities must be related to traditional research wherever possible.

1966. This year saw a gradual shift of emphasis from investment to production. Data enlargement continued by adding identifications of international organizations referred to in treaty texts and identity of registering party, as well as some refinements in the 1965 topic code. The second annual updating was completed in June by adding to the data bank UNTS Volumes 454-503 published between June 1965 and June 1966. Data enlargement and updating having become a routine function of an on-going operation, the main thrust of the work in 1966 concerned new programs for the machine-handling of UNTS data, and analytic work in selected aspects of the law of treaties. Completed were the study of the Canadian UNTS Gap," a special study on the role of military matters in the world's treaty pattern,[12] a general statement of theoretical under- pinnings for the UNTS Project, [13] a paper on information retrieval aspects of the UNTS Project, [14] and an outline of a more general scheme of computerizing international law. [15]

Two professional meetings on the use of computers in international relations research included the UNTS Project: (1) the special working group on electronic data processing set up by the American Society of International Law; [16] and (2) the Institute on "Computers and the Policy-Making Community" sponsored by the Endowment for International Peace and the U. S. Atomic Energy Commission. [17]

Also in 1966, two graduate student papers on UNTS Project material attracted professional interest: (1) one paper was selected for presentation to a West Coast regional conference [I8] and was then revised and published elsewhere; [19] and (2) the other paper was chosen for presentation to the University of Washington Student International Law Society and then also published elsewhere. [20] By the end of 1966, a total of 15 students found their work referred to by name in UNTS Project publications,[21] and 8 of them more than once. [22]

Finally, the UNTS Project was given a broader institutional base at the University of Washington through the appointment of a joint advisory committee by the Dean of the Law School and the Chairman of the Political Science Department.

1967. Three new sets of data were added in 1967: (1) date of effect, (2) date of registration and (3) official languages. New work began on multilateral treaties and on treaty history subsequent to registration, e.g. prolongations, terminations, accessions, withdrawals, amendments, and reservations. The annual updating proceeded concurrently with the addition of new data. UNTS Volumes 504-550 were coded. This brought our data bank up to date, covering all UNTS volumes published through December 1967.

The computer center started developing for the UNTS Project a teletype capacity for instant retrieval between the UNTS Project office and the computer center. This is being done by means of the B-5500 XTAB retrieval program adapted by the computer center of the University of Washington especially to the needs of the UNTS Project. It will be used in addition to the existing capacity of the IBM-7094 for both retrieval and computation. The B-5500 program plus teletype response will cut the waste and the waiting time involved in using the IBM-7094 (or later the IBM-360) for simple retrieval jobs. **[23][Grateful recognition for imaginative help far beyond routine cooperation is made to the two co-directors of the computer center at the University of Washington, David Dekker and Carl Young, and to the following staff members in particular: Charlene Haug, Elton Hay, Larry Menninga and Monique Rona.]** Hunches can then be tested in minutes rather than days. Retrieval also has become a somewhat larger part of UNTS Project operations as more faculty and graduate students use our data bank and as more requests for special data printouts are received from outside. [24] [...]

1968 (August 14) -Co-founder of a new company - Computer Center Corporation

- Full newspaper page : [HN01AV][GDrive]

1968-08-14-the-seattle-times-pg-35-clip-computer-center

Computer Firm Formed

A new computer firm, the Computer Center Corp., has been formed by four University of Washington specialists, it was announced today.

Carl G. Young, director of operations at the university's computer center since 1965, has resigned to become president of the new company, which will specialize in service to scientific firms and industries on a time-sharing basis.

Quarters have been leased in the former Dresslar-Waesche Building at 4057 Roosevelt Way N. E.

Dr. David B. Dekker, who has been faculty director of the University Computer Center since its establishment, is vice president of the new firm.

DEKKER will serve in a consultant capacity during the school year and continue on the university faculty as an associate professor of mathematics and graduate-program adviser in computer sciences. He has resigned his position with the University Computer Center.

C. G. YOUNG

DR. D. B. DEKKER

Richard G. Hamlet, chief systems programmer at the University Computer Center, and Monique R. Rona, chief scientific programmer at the center, have resigned their university positions to join the new firm.

A fifth incorporator is Richard L. Wilkinson, formerly Northwest sales manager of the Digital Equipment Corp.

TIME-SHARING of the capabilities of large, fast and complex central processors will be the principal mode of operation of the corporation, Young said.

The company plans to sell computer time via common-carrier lines from teletype machines or other electronic typewriter devices situated in customer offices.

The user will be able to communicate data directly to the computer and receive almost instantaneous reply in his own office.

The Computer Center Corp. plans to be in operation about November 1.

Westside S & L Leads July Gain

Westside Federal Savings & Loan Association in July led a local reversal of the usual July trend toward a decline in net savings.

Net savings rose only $200,000 last month in the 23 associations affiliated with the Seattle League of Insured Savings Associations. Westside, a member of the association, registered a gain of $433,000.

In 1966, when there was a tight money situation comparable to this year, league institutions suffered a July loss of $6.7 million.

[HN01AW][GDrive]

Not clear if Carl G Young returns to U Washington after Computer Center Corp folds ...

2008 (October 3) - Carl Garland Young passes in Seattle

[HL005H][GDrive]

Carl Garland YOUNG, age 82, of Seattle, passed away on October 3, 2008. He was born in Portland, Oregon on March 26, 1926. Carl is survived by his wife, Verona, sons, Roger Young, Eric Young, daughter, Garland Young, granddaughter, Monika Young and brother, Gordon Young. Mr. Young is also survived by several nieces, nephews, relatives and a host of friends. At Carl's request, no services will be held. If desired, memorials may be made in Carl's memory to the donor's favorite charity. Arrangements by Evergreen-Washelli.

Jordis Lamar (Dahl) Young (1929 - 2017)

Jordis Lamar Young formerly **Dahl**

Born **27 Jul 1929** in **New Rockford, Eddy, North Dakota, United States**

ANCESTORS

Daughter of Alf Oswald Dahl and Nina (Olson) Dahl

Sister of Carroll Frederick Dahl and Jeanette Olive (Dahl) O'Meara

[spouse(s) unknown]

[children unknown]

Died **13 Dec 2017** in **Lake Stevens, Snohomish, Washington, United States**

Profile manager: David Pierce [send private message]

Profile last modified 11 Jul 2019 | Created 30 Apr 2019

This page has been accessed 31 times.

Biography

Jordis was born 27 July 1929 in New Rockford, North Dakota. She was the daughter of Alf Dahl and Nina Olson. She was baptized 30 October 1930 at the Kverness Lutheran Church in Brantford, North Dakota.[1]

She moved from North Dakota with her family and attended school in Seattle. Jordis traveled to Europe several times in the early 1950s, once on a trip to Norway and another trip to Paris.

Jordis married Carl Garland Young twice. They married for the first time on 13 December 1952 in Seattle.[2]They married for the second time 20 July 1956 in Seattle.[3] Jordis and Carl were the parents of three children. Jordis and Carl divorced.

Jordis worked as an administrator at the University of Washington for many years and also served as a thesis reviewer for graduate students.

Jordis was a loving mother and grandmother and also enjoyed traveling.

She died 13 December 2017 at a retirement home in Lake Stevens, Washington, at the age of 88.[4]

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Housatonic

Dr. Dov Solomon Zakheim (born 1948)

Wikipedia Dov S. Zakheim

Saved Wikipedia (Nov 21 2020) for Dov S Zakheim

See [HK003L][GDrive]

Under Secretary of Defense (Comptroller)

In office

May 3, 2001 – April 15, 2004

President

George W. Bush

Preceded by

William J. Lynn

Succeeded by

Tina Jonas

Personal details

Born

December 18, 1948 (age 71)

Brooklyn, New York, U.S.

Alma mater

Columbia University

St Antony's College, Oxford

Occupation

Writer, businessman, and politician.

Dov S. Zakheim (born December 18, 1948) is an American businessman, writer, politician, and former official of the United States government. In the Reagan administration, he held various Department of Defense positions.

Early life[edit]

Dov S. Zakheim was born on December 18, 1948 in Brooklyn, New York. He earned his bachelor's degree in government from Columbia University in 1970, and his doctorate in economics and politics at St. Antony's College, Oxford University. He is Jewish.[1][2][3]

Career[edit]

Zakheim was an adjunct professor at the National War College, Yeshiva University, Columbia University and Trinity College, where he was presidential scholar.

Zakheim served in various Department of Defense posts during the Reagan administration, including Deputy Undersecretary of Defense for Planning and Resources from 1985 to 1987. There was some controversy in both the US and Israel over Zakheim's involvement in ending the Israeli fighter program, the IAI Lavi. He argued that Israeli and U.S. interests would be best served by having Israel purchase F-16 fighters, rather than investing in an entirely new aircraft.

Zakheim was signed a letter to Clinton about Iraq.[4][5][6] During the 2000 U.S. Presidential election campaign, Zakheim served as a foreign policy advisor to George W. Bush as part of a group led by Condoleezza Rice that called itself The Vulcans.

From 1987–2001, Zakheim was CEO of SPC International, a subsidiary of System Planning Corporation, a high-technology analytical firm. During that period he served as a consultant to the Office of the Secretary of Defense, and sat on a number of major DoD panels, including its Task Force on Defense Reform (1997) and the DoD's first Board of Visitors of Overseas Regional Centers (1998–2001). In September 2000 Zakheim is also a member of the Council on Foreign Relations, the International Institute for Strategic Studies, and the United States Naval Institute, and a member of the editorial board of the journal *The National Interest*. He is a three-time recipient of the Department of Defense's highest civilian award, the Distinguished Public Service Medal, as well as other awards for government and community service.

Zakheim was an Adjunct Scholar of the Heritage Foundation, a Senior Associate at the Center for Strategic and International Studies, and published over 200 articles and monographs on defense issues.

Zakheim was then appointed as Under Secretary of Defense (Comptroller) from 2001 in George W. Bush administration, and served in this capacity until April 2004. During his term as Comptroller, he was tasked to help track down the Pentagon's 2.3 trillion dollars' worth of unaccounted transactions. DoD financial experts, Zakheim said, are making good progress reconciling the department's "lost" expenditures, trimming them from a prior estimated total of $2.3 trillion to $700 billion.[7] In 2008, he was appointed by President Bush as a member of the Commission on Wartime Contracting in Iraq and Afghanistan.

Zakheim retired as a Senior Vice President of Booz Allen Hamilton in 2010. He currently is a Senior Fellow at the CNA Corporation, a senior advisor at the Center for Strategic and International Studies. He is also Co-Vice Chair of Global Panel America (Global Panel Foundation) with Sir Malcolm Rifkind, the former UK Foreign Secretary and Minister of Defense.

His most recent book, *A Vulcan's Tale: How the Bush Administration Mismanaged the Reconstruction of Afghanistan*, discusses the Bush administration's missed opportunities and struggles to manage two wars, particularly the seemingly endless conflict in Afghanistan.[8]

Zakheim also currently sits on the Atlantic Council's[9] Board of Directors.

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This list is incomplete; you can help by expanding it.

Books[edit]

- *Flight of the Lavi : inside a U.S.-Israeli crisis*. Brasseys. 1996.
- *Congress and National Security in the Post-Cold War Era* (The Nixon Center, 1998)
- *Toward a Fortress Europe?* (Center for Strategic and International Studies, 2000)
- *A Vulcan's Tale* (Brookings Institution Press, 2011)

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Year	**Review article**	**Work(s) reviewed**
2018	"Lehman's maritime triumph". *Naval War College Review*. **71** (4): 141–146. Autumn 2018.	Lehman, John (2018). *Oceans ventured : winning the Cold War at sea*. New York: W. W. Norton.

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Source - Militarist Monitor Website - Dov Zakheim

Source : [HW0055][GDrive]

last updated: December 5, 2012

Affiliations

- **Center for Strategic and International Studies:** Senior Adviser
- ***National Interest*:** Advisory Council Member
- **CNA Corporation**: Senior Fellow
- **Center for Security Policy:** Former Member, Advisory
- **Defense Business Board:** Former Member
- **Chief of Naval Operations Executive Panel:** Former Member
- **Aspen Ideas Festival:** 2006 Speaker
- **Royal Institute of International Affairs:** Member
- **International Institute for Strategic Studies:** Member
- **Heritage Foundation:** Former Adjunct Scholar
- **Project for the New American Century:** Participant, Rebuilding America's Defenses Report (2000); Letter Signatory
- **Search for Common Ground:** Board of Directors
- **American Jewish Committee:**Chair, Office of Government and International Affairs

Government

- **U.S. Department of Defense:** Under Secretary of Defense (Comptroller) and Chief Financial Officer (2001-2004); Deputy Under Secretary of Defense for Planning and Resources in the Office of the Under Secretary of Defense (Policy) (1985-1987); Various Posts (1981-1985)
- **Transition 2001 Panel:** Member
- **Defense Science Board:** Member of Task Force on "The Impact of DoD Acquisition Policies on the Health of the Defense Industry" (2000)
- **Task Force on Defense Reform:**Member (1997)
- **U.S. Commission for the Preservation of America's Heritage Abroad:** Member of the Board
- **Congressional Budget Office:**Former Staff Member of National Security and International Affairs Division

Business

- **Booz Allen Hamilton:** Former Vice President (2004-2010)
- **System Planning Corp:** Former Corporate Vice President
- **SPC International:** Former Chief Executive Officer
- **Northrop Grumman:** Former Member, Advisory Board
- **McDonnell Douglas:** Former Consultant

Education

- **Columbia University:** BA
- **London School of Economics:**Degree Not Specified
- **University of Oxford, St. Antony's College:** D.Phil., Economics, and Politics

Related:

- Charles Krauthammer

- Michael Chertoff
- John Hay Initiative
- Center for Security Policy
- Committee for the Liberation of Iraq Members on Iran Deal
- Bipartisan Policy Center
- Thomas Donnelly
- Douglas Feith
- Rachel Abrams (1951-2013)
- National Interest

Dov S. Zakheim is a former Pentagon official who worked in both the George W. Bush and Ronald Reagan administrations. His track record includes collaborating with a number of militarist advocacy groups—including the neoconservative Project for the New American Century and the Center for Security Policy—and working as an executive at a host of defense contractors such as Booz Allen Hamilton and Northrop Grumman. Zakheim has also been a fellow at CNA Corporation (home to the Center for Naval Analyses), an adviser to the Center for Strategic and International Studies, a member of the advisory council of the *National Interest*, and a lecturer at numerous universities, including the National War College, Yeshiva University, and Columbia.

In 2011, Republican presidential candidate Mitt Romneynamed Zakheim as a member of his advisory team on foreign and defense policy. Joining Zakheim was a host of other former Bush administration officials like Michael Chertoff and Eric Edelman, as well as several high-profile neoconservatives, including Robert Kagan, Paula Dobriansky, Eliot Cohen, and Dan Senor.[1]

In recent years, Zakheim has written about and participated in numerous public forums on U.S. foreign policy issues. In June 2012, he was a featured speaker at an event organized by the right-wing Heritage Foundation titled "The Liberation of the Falklands, Thirty Years After: Why the United States Must Back Britain Now."[2] Also in June 2012, Zakheim was a panelist at a conference organized by the liberal-hawk Center for a New American Security titled "Rethinking U.S. Security: Navigating a World in Transition."[3]

Zakheim is the author most recently of *A Vulcan's Tale: How the Bush Administration Mismanaged the Reconstruction of Afghanistan* (Brookings Institution Press 2011), which claims to provide an insider's view of the failures of the Bush administration in waging wars in Iraq and Afghanistan.[4]

Bush Administration

Zakheim was part of an informal team of foreign policy advisors assembled by candidate George W. Bush during the 2000 presidential campaign who were nicknamed the "Vulcans." Among the other Vulcans were Stephen Hadley, Dick Cheney, Donald Rumsfeld, Condoleezza Rice, and Paul Wolfowitz. "The Vulcans," wrote James Mann in his award-winning 2004 history of the Bush "war cabinet," "represented the generation that bridged what are commonly depicted as two separate and distinct periods of modern history: Cold War and post-Cold War. For the Vulcans, the disintegration of the Soviet Union represented only a middle chapter in the narrative, not the end or the beginning."[5]

After Bush's election, Rumsfeld tapped Zakheim to serve as his undersecretary for defense –comptroller, a post from which Zakheim oversaw Pentagon spending in the wake of the 9/11 terrorist attacks and the onset of the "war on terror." Zakheim remained as comptroller until 2004, overseeing three defense budgets, each totaling more than $300 billion, and implementing six wartime supplementary budget requests.[6]

Zakheim served as the Defense Department's chief financial officer during the 2003 efforts to streamline the department's spending procedures to reflect Defense Secretary Donald Rumsfeld's vision of a 21st-century military. Critics say some of the reforms removed congressional oversight and accountability from the defense budget. During Zakheim's tenure, the Defense Department's Inspector General found that the Pentagon could not properly account for more than $1 trillion of spent funds.[7]

As the Pentagon comptroller, Zakheim also served as coordinator of the Defense Department's civilian programs in Afghanistan and as an international fundraiser for Iraq reconstruction monies, organizing the October 2003 Madrid donors conference and the June 2003 UN potential donors conference.

In 2004 Zakheim stepped down from his post at the Pentagon with little explanation. However, his resignation followed a highly critical audit by the General Accountability Office.

Like other former Bush administration officials, Zakheim became heavily critical of the administration's track record after leaving office. In 2006, he coauthored a piece in the *National Interest* with Daniel Pipes, Tommy Franks, and four others, stating: "Iraq's seemingly never-ending violence, whether it is termed a civil war, or, more euphemistically, 'sectarian strife,' has created a sense of instability, insecurity, and raw fear, for all but those Kurds living in Kurdistan. Democracy in this environment is nothing more than a sorry catch-phrase."[8]

In January 2007, Zakheim argued in an op-ed for the *Financial Times* that Iraq had fallen into a civil war and advocated that the United States pull back to Iraq's borders. "No doubt some will see this as the United States giving up on democracy and being content to stand by as Iraqis kill each other. Yet clearly democracy in Iraq must await the end of the civil war. … The strategic shift would bring relief to our overstretched and over-deployed military. It would reduce combat losses. Above all, it would give the military a mission that they can achieve. This way we can finally bring to an end a bitter domestic debate over Iraq policy that has so undermined public faith in the judgment and wisdom of their leaders on both sides of the political aisle."[9]

Defense Industry and Advocacy

Shortly after leaving the Pentagon in 2004, Zakheim became a vice president at Booz Allen Hamilton, a defense contractor that has employed a number hawkish policy figures, including former CIA head James Woolsey and retired air force general Thomas Moorman. Among the group's more notorious activities were its efforts during the lead-up to the 2003 invasion of Iraq to assist corporations in securing contracts for work in that country.[10]

Zakheim's involvement with the defense industry began when he first joined the Pentagon in 1981, serving in various posts including special assistant to the assistant secretary for international security and assistant undersecretary for policy and resources, before moving up into the post of deputy undersecretary of defense for planning and resources, working in systems acquisition and strategic planning.

When Zakheim left the Defense Department in 1987, it was for an executive vice president post with the Virginia-based government contractor Systems Planning Corporation (SPC), which has supplied the Defense Department with military technology for several decades and has been a support contractor for

the Defense Advanced Research Projects Agency (DARPA). Zakheim also served as CEO at subsidiary SPC International and as a consultant for the defense contractors McDonnell Douglas (now a part of Boeing) and Northrop Grumman.[11]

At the same time as he was working in the private sector for companies that benefit from defense spending, Zakheim was busy advocating for policies that implied increased defense spending. While still at Systems Planning Corporation in April 1998, Zakheim participated in an SPC "roundtable" discussion for the Rumsfeld Missile Commission.[12] According to a 2002 *Washington Post* story, it was this interaction with Rumsfeld that solidified Zakheim's reputation as someone who shared the future defense secretary's vision of streamlining and modernizing the U.S. military.[13]

After Bush took office in 2001, Zakheim was tapped by Rumsfeld to serve as comptroller based on his experience with defense and budgeting. As Rumsfeld told the *Washington Post*in May 2001: "I put together a few small groups, to look at some things that I thought were priority issues. Some the president asked me to. And with the thought that we could get some bright people looking at them and then we'd plug them into the Quadrennial Defense Review which we're going to do, and that starts now. … Zakheim got on board Friday and he has taken the thought that came from the financial management business that Senator [Robert] Byrd raised with me, and has thoughts, and they will again be doing some internal changes and then making some proposals for legislation at some point."[14]

Zakheim was also involved with advocacy groups like the Committee for Peace and Security in the Gulf, a neoconservative-led initiative originally formed in 1990 to support the first Gulf War. In 1998, the group sent an open letter to President Bill Clinton calling for a "comprehensive political and military strategy for bringing down Saddam and his regime." Fellow signatories included Rumsfeld, Richard Perle, Wolfowitz, Douglas Feith, Elliott Abrams, Paula Dobriansky, Frank Gaffney, Bill Kristol, Michael Ledeen, Joshua Muravchik, Jeffrey Gedmin, Fred Ikle, Robert Kagan, David Wurmser, and Peter Rodman.[15]

Zakheim later joined several of these same people in supporting the Project for the New American Century (PNAC), a neoconservative organization that played an important role in driving public and official support for the invasion of Iraq before and after the 9/11 attacks. In 1998, Zakheim signed a PNAC open letter to Clinton about the crisis in Kosovo. The letter called for U.S. support for regime change in Belgrade. Two years later, Zakheim contributed to a PNAC paper titled, "Rebuilding America's Defenses." The paper claimed that "If the United States is to maintain its preeminence—and the military revolution now underway is already an American-led revolution—the Pentagon must begin in earnest to transform U.S. military forces."

The PNAC paper also opined that in the absence of some "catastrophic" event akin to Pearl Harbor, such reforms would happen at a glacial pace. A year later, 9/11 seemed to provide such a spark to the kind of rapid transformation envisioned. "The system is a slow system to react until something happens, and something has happened. And the system is reacting," the *Washington Post* quoted Zakheim as saying in 2002. "This is going to push our [agenda] ahead, obviously geared to the war effort, precisely because it was this kind of war that many of us feared and anticipated."[16]

In 2005, after leaving the Pentagon, Zakheim remained an advocate for funding and policy to promote the "military transformation" of U.S. armed services. In an opinion piece, Zakheim wrote that Rumsfeld spent billions on such transformation programs, and he cited the wars in Iraq and Afghanistan as examples of the need for a restructured military that is more responsive, flexible, and interconnected.[17]

An Equivocal Neocon?

Zakheim is often characterized as a neoconservative because of his frequent association with neocon groups and his support for some hawkish Middle East policy prescriptions. However, a close look at his track record reveals a more complicated picture.

In 1996, Zakheim published *Flight of the Lavi: Inside a U.S.-Israeli Crisis*, which detailed his role while in the Reagan Pentagon in ending the IAI Lavi program, an initiative in the 1980s in which Israel researched and developed its own fighter jets (called the IAI Lavi). Zakheim reinforced the U.S. position that Israel should not produce an aircraft that would compete with the U.S. F-16, arguing that it was more efficient for Israel to buy jets from the United States. An ordained rabbi and an orthodox Jew, Zakheim was publicly criticized and harassed for his role in opposing the system and purportedly going against the interests of Israel. Today the Israeli Air force has the largest fleet of F-16s outside of the United States.[18]

More recently, in February 2012, Zakheim produced a monograph for the CNA Corporation that called for the United States to dissuade Israel from unilaterally attacking Iran, a view that contrasts sharply with that of many neoconservatives. Titled “The United States Navy and Israeli Navy: Background, Current Issues, Scenarios, and Prospects,” the report highlighted Israel’s rapidly changing security environment and the potential implications for both Israeli and U.S. naval policies. “Israel’s increasing isolation in its region, its parting of the ways with Turkey, and the changes being brought about by the Arab Spring, are altering the Israeli government’s strategic calculus. The passage of Iranian warships through the Suez Canal, Egypt’s readiness to terminate its blockade of Gaza, and Turkey’s readiness to escort flotillas to Gaza all point to a much more challenging eastern Mediterranean environment for the IN [Israeli Navy]. In addition, Egypt’s change of policy indicates that the IN can no longer be certain of its freedom of movement into and out of the Red Sea.”[19]

In responding to this evolving situation, Zakheim urged restraint: “It is in the USN’s [U.S. Navy]—and America’s—interests that the IN not act independently against Iran, either by launching any attacks against Iran from the Arabian Sea or even by boarding Iranian origin ships on the high seas. … [T]he USN, to the extent that it has a voice in policymaking circles, should seek to encourage the IN to follow a path of caution and moderation, if only because so many of Israel’s regional neighbors see it as an extension of the United States. This is a tall order for the USN, and it cannot moderate Israel on its own—it is questionable whether anyone can—but it is critical that it at least attempt to do so, for the sake of both navies and the nations they defend.”[20]

Such views have led some observers to claim that at heart Zakheim is not a neoconservative, but a realist. As a writer for *The Jerusalem Report* wrote shortly after Zakheim stepped down from his Pentagon post in 2004, “Wolfowitz and Feith were among the chief proponents of war with Iraq, while Zakheim is more associated with the pragmatic faction of the Republican Party. He served in the Reagan administration as an undersecretary of defense from 1985 until 1987 and is generally considered responsible for killing the Lavi project, an initiative to build an Israeli fighter jet with American technology.”[21]

Similarly, in a *New York Times* article published just after the 2000 election, James Traub wrote: "Dov Zakheim, for example, has written that the scale of atrocities in places like the Balkans is often exaggerated, and that in any case violating another nation's sovereignty threatens 'to unravel the entire fabric of international relations.' Zakheim concludes that we should intervene 'only when our own interests are clearly at stake, or when genocide is so manifest that refusal to act would destroy our moral leadership of the free world.'"[22]

In contrast to the above, however, are the numerous affiliations with neoconservative groups Zakheim has maintained over the years—most notably with the Center for Security Policy and the Project for the New American Century—as well as his at times stark characterizations of Israeli and U.S. opponents. Following the January 2006 election of Hamas in an open contest in the Palestinian territories, for example, Zakheim repeated a number of misleading historical parallels often employed by neoconservatives like Richard Pipesand Norman Podhoretz, to argue: "We have a situation not unlike Germany in

1932 when we had an upstart [Nazi] party ruled by thugs that preached hatred and racism and also claimed they would clean up a corrupt Weimar Republic. The parallels are frightening."[23]

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[2] Washington Daybook, "The Heritage Foundation holds a discussion on 'The Liberation of the Falklands, Thirty Years After: Why the United States Must Back Britain Now,'" June 14, 2012.

[3] AP Planner, "Center for a New American Security Annual Conference," June 8, 2012.

[4] Brookings Institution Press, "A Vulcan's Tale: How the Bush Administration Mismanaged the Reconstruction of Afghanistan," http://www.brookings.edu/research/books/2011/avulcanstale.

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[6] Defense Department News Release, "Dov S. Zakheim to Resign," March 24, 2004, http://www.defenselink.mil/releases/release.aspx?releaseid=7166.

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[8] Tommy Franks, Stephen Biddle, Peter Charles Choharis, John M. Owen IV, Daniel Pipes, Gary Rosen, and Dov Zakheim, "Is This Victory?" *National Interest*, November/December 2006.

[9] Dov Zakheim, "Why American Should Operate from Iraq's Borders," *Financial Times*, January 4, 2007.

[10] Tim Shorrock, "Carlyle Group May Buy Major CIA Contractor: Booz Allen Hamilton," Corpwatch, March 8, 2008.

[11] Michelle Ciarrocca and William D. Hartung, "Axis Of Influence: Behind the Bush Administration's Missile Defense Revival," World Policy Institute Special Report, July 2002.

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Philip David Zelikow (Born 1954)

[HL006V][GDrive]

Wikipedia Philip D. Zelikow

ASSOCIATIONS

- **Eliot Asher Cohen (born 1956)** ((Philip Zelikow immediately proceeded Eliot Cohen as Counselor of the United States Department of State)

Prabook.com : Saved April 22, 2021 info : "Philip David Zelikow is an American attorney, diplomat, academic and author."

Source : [HL006U][GDrive]

Background

Mr. Zelikow was born on September 21, 1954 in New York, United States. He is a son of Nate and Lee (Landsman) Zelikow.

Education

Philip Zelikow attended the University of Houston between 1972 and 1975. He received his degree of Bachelor of Arts from the University of Redlands in 1977. In 1981 Mr. Zelikow obtained Juris Doctor degree from the University of Houston. He also completed his studies at Tufts University, earning Master of Arts in 1984. In 1995 he received Doctor of Philosophy from the same university.

Career

- In 1979 Mr. Zelikow held the post of a briefing attorney at Texas Court of Criminal Appeals, Austin. From 1980 to 1983 he acted as a trial attorney at David Berg and Associates (now Berg & Androphy), Houston, Texas. After practicing law in the early 1980s, Mr. Zelikow turned toward the field of national security. He was adjunct professor of national security affairs at the Naval Postgraduate School in Monterey, California in 1984-1985.
- During the period of 1985-1989 Philip D. Zelikow occupied several posrts at the U.S. Department of State, Washington, District of Columbia: political officer and political adviser in Vienna, Austria, watch officer at Operations Center, Washington, District of Columbia, and line officer for Secretariat Staff, Washington, District of Columbia. Between 1989 and 1991 he served as a director for European security affairs at National Security Council, Washington, District of Columbia.
- In 1991 Mr. Zelikow became an associate professor of public policy at Harvard University, Cambridge, Massachusetts, and later member of Center for Science and International Affairs and Standing Committee on European Studies.
- He has been a contributor to books, including Securing Peace in the New Era: Politics in the Former Soviet Union and the Challenge to American Security, Nuclear Weapons in a Transformed World and The CIA and Estimates of the Soviet Union, 1950-1985. Moreover, he is known to be a contributor to periodicals, including International Security, Foreign Affairs, Journal of Strategic Studies, World and I, Political Science Quarterly, and Survival.

Achievements

- Philip D. Zelikow is notable for his writings connected with the areas of history and public policy. Mr. Zelikow has also written about terrorism and national security, including a set of Harvard case studies on "Policing Northern Ireland." He also has co-written many books. He is a recipient of several grants from Municipality of Afulah (1992) and from Vatat.

Works (books)

- Germany Unified and Europe Transformed: A Study in Statecraft 1995
- The Kennedy Tapes: Inside the White House during the Cuban Missile Crisis 2002
- Dealing with Dictators: Dilemmas of US Diplomacy and Intelligence Analysis, 1945-19902006
- Why People Don't Trust Government 1997

Membership

- International Institute for Strategic Studies , United States
- Council on Foreign Relations , United States
- Society for Historians of American Foreign Relations , United States

[...]

Connections

- Philip Zelikow married Paige Ellen Partain on May 30, 1982. The couple has two children, whose names are Alexander and Carolyn.
- Father: Nate Zelikow
- Mother: Lee (Landsman) Zelikow
- Wife: Paige Ellen Partain
- Son: Alexander Zelikow
- Daughter: Carolyn Zelikow

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https://en.wikipedia.org/wiki/Philip_D._Zelikow

- Counselor of the United States Department of State
  - In office February 1, 2005 – January 2, 2007
  - President : George W. Bush
  - Preceded by : Wendy Sherman
  - **Succeeded by** : [**Eliot Asher Cohen (born 1956)**]
- Personal details

Born

Philip David Zelikow

September 21, 1954 (age 66)

New York City, New York

Education

University of Redlands

University of Houston Law Center

The Fletcher School of Law and Diplomacy

Occupation

Academic

Philip David Zelikow (/ˈ zɛlɪkoʊ/; born September 21, 1954) is an American attorney, diplomat, academic and author. He has worked as the executive director of the 9/11 Commission, director of the Miller Center of Public Affairs at the University of Virginia, and Counselor of the United States Department of State. He is the White Burkett Miller Professor of History at the University of Virginia and was American Academy in Berlin Axel Springer Fellow, in the fall of 2009.

Education

Zelikow received a BA in history and political science from the University of Redlands, a J.D. from the University of Houston Law Center (where he was an editor of the law review), and a MALD and Ph.D. in international relations from The Fletcher School of Law and Diplomacy at Tufts University.

Career

Academic and federal government positions

After practicing law in the early 1980s, Zelikow turned toward the field of national security. He was adjunct professor of national security affairs at the Naval Postgraduate School in Monterey, California in 1984–1985.

He joined the United States Department of State through the standard examination process for the foreign service as a career civil servant. As a Foreign Service Officer, he served overseas at the U.S. Mission to the conventional arms control talks in Vienna, at the State Department's 24-hour crisis center, and on the secretariat staff for Secretary of State George P. Shultz, during the second Reagan administration (1985–1989).

In 1989, in the George H. W. Bush administration, Zelikow was detailed to join the National Security Council, where he was involved as a senior White House staffer in the diplomacy surrounding the German reunification and the diplomatic settlements accompanying the end of the Cold War in Europe. During the first Gulf War, he aided President Bush, National Security Advisor Brent Scowcroft, and Secretary of State James Baker in diplomatic affairs related to the coalition. He co-authored, with Condoleezza Rice, the book Germany Unified and Europe Transformed: A Study in Statecraft (1995), an academic study of the politics of reunification.[1][2]

In 1991, Zelikow left the NSC to go to Harvard University. From 1991 to 1998, he was Associate Professor of Public Policy and co-director of Harvard's Intelligence and Policy Program, at Harvard's Kennedy School of Government.

In 1998, Zelikow moved to the University of Virginia, where until February 2005 he directed the nation's largest center on the American presidency. He served as director of the Miller Center of Public Affairs and, as White Burkett Miller Professor of History, held an endowed chair. The Center launched a project to transcribe and annotate the previously secret tapes made during the Kennedy, Nixon and Johnson presidencies.[3] In a presidential oral history project headed by James Sterling Young, it systematically gathers additional information on the presidencies of Reagan, George H.W. Bush, and Clinton.

Following an appointment at the Department of State from 2005 to 2007 during the Bush administration, Zelikow returned to academics at the University of Virginia. In 2011, he was appointed Associate Dean of the Graduate School of Arts & Sciences. He has been instrumental in restructuring the College of Arts & Sciences. Also in 2011, Zelikow was appointed by President Barack Obama to the President's Intelligence Advisory Board.[4]

Commissions and committees

- **Bush transition team**
  - In late 2000 and early 2001, Zelikow served on President Bush's transition team. After George W. Bush took office, Zelikow was named to a position on the President's Foreign Intelligence Advisory Board [PFIAB], and worked on other task forces and commissions as well. He directed the bipartisan National Commission on Federal Election Reform, created after the 2000 election and chaired by former presidents Jimmy Carter and Gerald Ford, along with Lloyd Cutler and Bob Michel. This Commission's recommendations led directly to congressional consideration and enactment into law of the Help America Vote Act of 2002.[5]
- **Markle Task Force on Security**
  - In 2002, Phil Zelikow became the executive director of the Markle Task Force on National Security in the Information Age. The Task Force comprises a diverse and bipartisan group of experienced policymakers, senior executives from the information technology industry, public interest advocates, and experts in privacy, intelligence, and national security. The Markle Task Force seeks to inform the policy judgments and investments of the federal, state and local governments in the collection and use of information as it relates to national security. The Task Force's reports and recommendations have been codified through two laws (IRPTA 2004 and the Implementing 9/11 Commission Report Act 2007) and several presidential directives.[6]
- **Executive director of the 9/11 Commission**
  - Zelikow was appointed executive director of the 9/11 Commission (National Commission on Terrorist Attacks Upon the United States), whose work included examination of the conduct of presidents Clinton and George W. Bush and their administrations prior to and on September 11,

2001. Zelikow's prior involvement with the administration of George W. Bush led to opposition from the 9/11 Family Steering Committee, citing the obvious conflict of interest of having previously worked on the Bush transition team. The Commission's Republican chair and Democratic vice-chair strongly defended Zelikow, both at the time and later.[7] In response to the concerns, Zelikow had agreed to recuse himself from any investigation matters pertaining to the National Security Council's transition from the Clinton to Bush administrations, which Zelikow had helped manage.[8]

- After being informed of the Department of Defense's Able Danger project by U.S. Army Lieutenant Colonel Anthony Shaffer, he failed to have the 9/11 Commission investigate, despite the promise that the Commission would investigate all 9/11 related topics. Able Danger was not included in the Commission's final report. In 2005 and 2006 a member of the House Armed Services Committee, Rep. Curt Weldon, publicized Shaffer's allegations in public statements and hearings.[9] A September 2006 report of the Department of Defense Inspector General found that these allegations were baseless. A further report by the Senate Select Committee on Intelligence came to the same conclusion in December 2006.[10][11]
- Some staff members of the 9/11 Commission distrusted Zelikow, considering him to be a "White House mole" in view of his being a close confidant of National Security Adviser Condoleezza Rice and his having worked in several high level capacities in the George W. Bush administration.[12]

- **Rice national security strategy project**
  - In Rise of the Vulcans (2004), James Mann reports that when Richard Haass, a senior aide to Secretary of State Colin Powell and the director of policy planning at the State Department, drafted an overview of America's national security strategy following the September 11, 2001 attacks, Dr. Rice, the national security advisor, "ordered that the document be completely rewritten. She thought the Bush administration needed something bolder, something that would represent a more dramatic break with the ideas of the past. Rice turned the writing over to her old colleague, University of Virginia Professor Philip Zelikow." One criticism of this document, issued on September 17, 2002, is that it is supposed to have been a significant document in an alleged Bush administration doctrine of preemptive war.[13][14] However, in the drafting of this document Zelikow had opposed the proposed language using preemption in the context of how to deal with weapons of mass destruction.[15]
- **Rework America**
  - In 2014–15, while on leave from the University of Virginia and working for the Markle Foundation, Zelikow helped lead a Foundation-sponsored group of prominent Americans called "Rework America." The group developed arguments and ideas on how to use the digital revolution to enlarge economic opportunity for all Americans. The group published its ideas in "America's Moment: Creating Opportunity in the Connected Age."[16]

George W. Bush administration

Zelikow's role in the second Iraq war is discussed at some length in Bob Woodward's State of Denial, which presents him as an internal critic of the way the war was being conducted in 2005 and 2006, and as an originator of the alternative approach termed "clear, hold, and build." He is also named by sources such as Jack Goldsmith's The Terror Presidency as an internal critic of the treatment of terrorist captives, and there was wide attention given to an address he made on this subject after leaving office in April 2007.

Based on speeches and internal memos, some political analysts believe that Zelikow disagreed with aspects of the Bush administration's Middle Eastern policy.[17]

As Counselor to Secretary of State Rice, Zelikow opposed the Bush administration Torture Memos. In 2006, Zelikow wrote a memorandum warning that the abuse of prisoners through so-called "enhanced interrogation" could constitute war crimes.[18][19] Bush administration officials ignored his recommendations, and tried to collect all copies of the memo and destroy them.[20][21] Jane Mayer, author of the Dark Side,[22] quotes Zelikow as predicting that "America's descent into torture will in time be viewed like the Japanese internments," in that "(f)ear and anxiety were exploited by zealots and fools."[23]

Expertise

Zelikow's area of academic expertise is the history and practice of public policy. In addition to the work on German unification, he has been significantly involved in contemporary scholarship on the Cuban Missile Crisis, including the relation between this crisis and the East-West confrontation over Berlin.

While at Harvard, he worked with Ernest R. May and Richard Neustadt on the use, and misuse, of history in policymaking. They observed, as Zelikow noted in his own words, that "contemporary" history is "defined functionally by those critical people and events that go into forming the public's presumptions about its immediate past. The idea of 'public presumption'," he explained, "is akin to William McNeill's notion of 'public myth' but without the negative implication sometimes invoked by the word 'myth.' Such presumptions are beliefs (1) thought to be true (although not necessarily known to be true with certainty), and (2) shared in common within the relevant political community."[24] "

Zelikow and May also authored and sponsored scholarship on the relationship between intelligence analysis and policy decisions. Zelikow later helped found a research project to prepare and publish annotated transcripts of presidential recordings made secretly during the Kennedy, Johnson, and Nixon administrations (see WhiteHouseTapes.org) and another project to strengthen oral history work on more recent administrations, with both these projects based at the University of Virginia's Miller Center of Public Affairs.

In writing about the importance of beliefs about history, Zelikow has called attention to what he has called "'searing' or 'molding' events [that] take on 'transcendent' importance and, therefore, retain their power even as the experiencing generation passes from the scene. In the United States, beliefs about the formation of the nation and the Constitution remain powerful today, as do beliefs about slavery and the Civil War. World War II, Vietnam, and the civil rights struggle are more recent examples." He has noted that "a history's narrative power is typically linked to how readers relate to the actions of individuals in the history; if readers cannot make a connection to their own lives, then a history may fail to engage them at all."[24]

Terrorism

Zelikow has also written about terrorism and national security, including a set of Harvard case studies on "Policing Northern Ireland." In the November–December 1998 issue of Foreign Affairs, he co-authored an article Catastrophic Terrorism, with Ashton B. Carter, and John M. Deutch, in which they speculated that if the 1993 bombing of the World Trade Center had succeeded, "the resulting horror and chaos would have exceeded our ability to describe it. Such an act of catastrophic terrorism would be a watershed event in American history. It could involve loss of life and property unprecedented in peacetime and undermine America's fundamental sense of security, as did the Soviet atomic bomb test in 1949. Like Pearl Harbor, the event would divide our past and future into a before and after. The United States might respond with draconian measures scaling back civil liberties, allowing wider surveillance

of citizens, detention of suspects and use of deadly force. More violence could follow, either future terrorist attacks or U.S. counterattacks. Belatedly, Americans would judge their leaders negligent for not addressing terrorism more urgently." [25]

Works written or co-written

Zelikow has co-written many books. He wrote a book with Ernest May on The Kennedy Tapes, and another with Joseph Nye and David C. King on Why People Don't Trust Government. Others include:

- Philip D. Zelikow with Condoleezza Rice, To Build a Better World: Choices to End the Cold War and Create a Global Commonwealth" Twelve, 2019. 528 pages, ISBN 1-538-76468-7
- Philip D. Zelikow with Condoleezza Rice, Germany Unified and Europe Transformed: A Study in Statecraft Harvard University Press, 1995, hardcover, 520 pages, ISBN 0-674-35324-2; trade paperback, 1997, 520 pages, ISBN 0-674-35325-0
- Philip D. Zelikow with Graham T. Allison, Essence of Decision: Explaining the Cuban Missile Crisis 2nd edition Longman, 1999. 440 pages, ISBN 0-321-01349-2
- Philip D. Zelikow with Ernest R. May, The Kennedy Tapes: Inside the White House During the Cuban Missile Crisis Harvard University Press, 1997, 728 pages, ISBN 0-674-17926-9
- Philip D. Zelikow, American Military Strategy: Memos to a President (Aspen Policy Series) W.W. Norton & Company, 2001, 206 pages, ISBN 0-393-97711-0

Affiliations

Zelikow is a member of the Global Development Program Advisory Panel, Gates Foundation.[citation needed]

Government offices

Preceded by

Wendy Sherman

Counselor of the United States Department of State

February 1, 2005 – January 2, 2007

Succeeded by

Eliot A. Cohen

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- ^ Shenon, Philip (2008). The Commission: The Uncensored History of the 9/11 Investigation. New York City: Hachette Book Group USA. p. 128. ISBN 978-0-446-58075-5. Retrieved July 24, 2010. It was a remarkable document, a reversal of generations of American military doctrine, which had previously held that the United States would launch a military strike against an enemy only after it had been struck or if American lives were in immediate jeopardy.
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External links

Wikiquote has quotations related to: Philip D. Zelikow

- Snowshoe Films Zelikow (Documentary by Snowshoe Films)
- Appearances on C-SPAN
- Philip D. Zelikow on Charlie Rose
- Philip D. Zelikow at IMDb
- Works by or about Philip D. Zelikow in libraries (WorldCat catalog)
- "Philip D. Zelikow collected news and commentary". The New York Times.
- Membership at the Council on Foreign Relations

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father -

1963 - https://www.newspapers.com/image/440077734/?terms=%22Nate%20Zelikow%22&match=1

1971 - https://www.newspapers.com/image/140216286/?terms=%22Nate%20Zelikow%22&match=1

1975 - debate competitions

https://www.newspapers.com/image/15122612/?terms=zelikow&match=1

1982 - https://www.newspapers.com/image/144732614/?terms=zelikow&match=1

1990 - Zelikow now with the national security council ???

https://www.newspapers.com/image/463994598/?terms=zelikow&match=1

1992 - ABomb

https://www.newspapers.com/image/325721919/?terms=zelikow%20kissinger&match=1

1997 -

https://www.newspapers.com/image/497546478/?terms=zelikow%20kissinger&match=1

https://sci-hub.se/https://doi.org/10.2307/20049476

Lederberg <-< Cohen <-> Zelikow

Biohazard: The Chilling True Story of the Largest Covert Biological Weapons Program in the World: Told from the inside by the Man Who Ran It by Ken Alibek; Stephen Handelman; Biological Weapons: Limiting the Threat by Joshua Lederberg

Review by: Eliot A. Cohen

Foreign Affairs, Vol. 78, No. 5 (Sep. - Oct., 1999), p. 169

Published by: Council on Foreign Relations Stable URL: http://www.jstor.org/stable/20049476 .

Accessed: 15/06/2014 05:54

2013 (Sep 26) - Passing of mother, "Lee Landsman Zelikow"

Published•Thu, Sep 26, 2013 : https://jhvonline.com/lee-landsman-zelikow-p15850-124.htm

Lee Landsman Zelikow peacefully passed away in Houston, on Friday, Sept. 20, 2013, at the age of 86. Lee grew up on Long Island, in New York, where she was a gifted student who then devoted herself to caring for her parents after her father was disabled by a serious illness. Hired as a civilian employee of the U.S. Army, even before she was of age, and given a high-level security clearance, she later deployed overseas to work for U.S. occupation forces in Japan and in Okinawa from 1947 to 1950. Her charms won her titles as a beauty queen and admiring depictions on more than one aircraft fuselage.

Returning to America, Lee began a new life in Houston as a wife, mother and homemaker. Raising three children, she resumed her education, including graduate and other college coursework at Rice and the University of Houston, and became a sought-after consultant on health and nutrition.

Throughout her life, Lee was a passionate lover of the arts, especially music, and of foreign travel. After the death of her husband, Nate Zelikow, Lee found new happiness in marriage for the last 15 years of her life with Ron Morris as well as constant enjoyment in the love of her growing family.

Lee is survived by her children: Philip (and wife, Paige) Zelikow of Charlottesville, Va.; Sabrina (and husband, Edward) Engel of Houston; and Robin (and husband, Brian) Fontana of Houston; and by her grandchildren: Alexander Zelikow, Carolyn Zelikow, Hilary Engel Kamin (and husband, Brent), Natalie Engel, Bucky Engel, Meredith Fontana and Alec Fontana; and by her husband, Ron. She also is remembered lovingly by her in-laws, stepchildren, step-grandchildren and many dear friends.

Funeral services were held at the Emanu El Memorial Park, 8341 Bissonnet St., Houston, at noon on Monday, Sept. 23, 2013.

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research notes :

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LOWELL P. WIGGLESWORTH, RICE UNIVERSITY, CIVIL WAR MOTIVES AND THE ZELIKOW 911 COMMISSION REPORT

by Shirley Locke Holmes, CPW News Service

from Catastrophic Terrorism: Imagining

the Transformative Event, 1998 for the

Foreign Affair, the magazine of the

Council on Foreign Relations, Nov-Dec. 1998.

David Ray Griffin and Peter Dale Scott are not the only analyst of the American experience of 911 who have raised issue with the *Official 911 Commission Report*. Historian Lowell P. Wigglesworth believes that the contrived 911 attack on the World Trade Center and the American Civil War were as engineered as the Transcontinental Railroad.

"That right. You can't really understand how we created civil war in the Middle East without knowing how it was done in the U.S.A.. The *911 Truth Movement* which now include architects and engineers, metallurgists, pilots and an array of physical scientists, physicists and chemists, have pointed out that the Lee Hamilton/Thomas Kean Commission that investigated the 911 attack were being handled by Condelezza Rice's aide Philip Zelikow who was an expert on terrorism writing in November-December 1998 about 'catastrophic terrorism'. Why is this important? Without making the connections of Philip Zelikow through Houston where he attended law school at the University of Houston, to his Tufts University thesis on the role of history and myth and to Rice University another center of myth spinning you're quite handicapped. Benjamin Rhodes, another heavy-handed manager of the Hamilton/Kean Commission report with Zelikow, along with David Rhodes, now CBS Television President, went to school in the shadows of the James A. Baker Center for Public Policy, named for Sec. of State, James A. Baker of the Baker & Botts law firm of historic Union and Southern Pacific attorneys. Rice is the school that produced both Kenneth Pitzer and Frank Vandiver. Pitzer protected the oil cabal against the potential energy encroachment of nuclear power and Vandiver sat over the Jefferson Davis Project that held the letters of Jeff Davis that proved the close relationship between Davis and the New England China trading opium smuggling power elites that drooled over the South's flatland rail route to the Pacific, the central core of my work on the U.S. Civil War," said Wigglesworth.

Philip Zelikow's home in Houston, Texas' Meyerland development.

From Harris County Clerk's records.

CLICK HERE TO ENLARGE

Indeed, Philip Zelikow was in Houston, Texas, having lived with his family in the Meyerland area where the leading High School of Bellaire is often called "Hebrew High". Zelikow's mother was from Long Island, New York and had worked in Japan after WWII with a top security clearance from 1947-1950. His father, Nate Zelikow, is mentioned in the book, *Making Movies Black* in chapter 5, noting that Nate Zelikow owned Nate Zelikow Productions (p 333). Philip Zelikow's interest in history and myth was therefore fed and watered at his home not far from his mother's alma mater, Rice University. In 2005 Frank Vandiver, a former Rice Unversity President like Kenneth Pitzer, had moved on to head up the Mosher Institute of Defense Studies at Texas A&M University where he wrote the book *How America Goes To War.* Ed Mosher of Houston's Mosher Steel had provided 13,000 tons of steel for the critical first nine floors of the WTC back in 1972. "This is a key element in the potential plan to bring down the towers along with just who was in the upper floors where planes hit. The WTC was designed by Minoru Yamasaki who has also been the architect for the infamous Pruitt-Igoe building in St. Louis used as the site of an undisclosed nuclear radiation test on unwitting America citizens and the subject of Dr. Lisa Martino-Taylors lengthy PhD dissertation. Both of Yamasaki's buildings were demolished by Controlled Demolition Inc, or CDI. Puitt-Igoe was demolished using thermite in 1972 as were the remains of WTC shortly after 911 to the horror of victims' families, especially the NYFD firefighters' families," said Wigglesworth.

Philip Zelikow's mother's obituary from the *Houston Chronicle*.

Click HERE to enlarge.

"Where David Ray Griffin does not go deep enough, nor Peter Dale Scott for that matter, is with the connections of Zelikow to David and Benjamin Rhodes

and Rice University's place in the academic atmosphere of the world's oil monopoly. "Houston, Texas is by virtue of the high concentration of petro-chemical geologists and engineers, the capital of the world's oil producers. Griffin rightly points out that the supposed attack on the WTC would have been much more devastating if the planes had they hit nearby nuclear power plants, but they didn't. Likewise, Salem Bin Laden, Osama's oldest brother, owned the Houston Gulf Manor Airport near the CIA linked Ellington Field from which attackers, Osama's older brother a highly experienced attack jet and BAC-111 jet pilot, could have staged attacks on the Houston petrochemical corridor within minutes of Gulf Manor airport which was bought for Salem by James R. Bath, GWB's Texas Air National Guard roommate, and Khalid Bin Mahfouz, the Saudi royal family's chief banker," said Wigglesworth adding "Minoru Yamasaki was the Bin Laden's leading architect for Saudi royal projects making a nice, neat, clean connection between the Bin Laden's and their architect and taking eyes off of potential hometown, Reichstag-rerun, culprits."

Wigglesworth is also concerned that not enough has been made of the fact that David Ray Griffin sees George Herbert Walker Bush's failure to take out Saddam Hussein in the first Gulf War was somehow indicative of his non-participation in the 911 event that Griffin also admits required substantial prior planning. "Saddam was, after all, originally our boy in Iraq and recipient of April Glasby's invitation to invade Kuwait," said Wigglesworth. "With thermite having been invented in the 1890's and with Minoru Yamasaki's role in Pruitt-Igoe, the spectacle's plan could well have been much older than first thought by the leading 911 Truth Movement analysts."

Griffin will reiterate Gerald Posner's assertion in *Why America Slept,* that three members of the Saudi royal family had prior knowledge of the 911 attack and that they were killed after the CIA informed Saudi intelligence of their stories. What seems farcical is that the heavy handed Saudi intelligence would surely have known that 15 of the 19 Saudi hijackers were planning something for the WTC and that given their close relationship to the Bush family that Prince Bandar would have triggered an interception. According to Wigglesworth you cannot expect Senator Bob Graham's book on 911 to really expose the censored last 28 pages of the *Official 911 Commission Report*. That would have to include Bin Laden's connections to Houston. Instead those last 28 pages send readers on a wild goose chase for Saudi involvement in LA, fifteen hundred miles west of Houston. When Graham's concerns are aired on CBS's *60 Minutes*, sitting at the controls of CBS is David Rhodes, brother of Benjamin Rhodes, and co-spinners of the 911 myth with Zelikow and all having been wet-nursed on Houston's oil spigot. Both David and Benjamin Rhodes' father and Zelikow's mother were Rice University alumni," said Wigglesworth.

"*Sixty-Minutes* had also botched the 1972 GWB Texas Air National Guard story that Mary Mapes first heard in 1999, but which CBS failed to unpack before the 2000 Presidential election....supposedly because Mapes' mother had died that year. "The story wasn't important enough to chase down without Mapes?" asked Wigglesworth. GWB's Air Guard memo story needed to mention that James R. Bath was Bush's Air Guard roommate and later the businessman who not only bought for Salem Bin Laden the Gulf Manor Airport in Houston, but he controlled the fuel supplies for Ellington Field though his company Southwest Airport Services with his partner in that company, William E. King, working for the new Bracewell & Giuliani law firm that was created with Mayor Rudy Giuliani after 911 and based in Houston. Bath and Mahfouz were board members of BCCI the Bank of Commerce and Credit International which Georgia Senator Sam Nunn called the 'Bank of crooks and criminals'...the chief Iran-Contra money laundering bank. Salem Bin Laden had died in a mysterious ultra-light airplane crash in Cibolo, Texas in 1988, the same year that CIA agent Matthew Gannon died while returning to the USA to ask the top ranking CIA at Langley just why the rank and file CIA agents across the Middle East had nothing on Al Qaeda in their files. "Gannon died on Pan Am 103 over Lockerbie, Scotland. Salem Bin Laden's death was reported falsely by CBS's Lowell Bergman to have been in his BAC-111 jet and not an ultra-light that inexplicably flew like a drone into a high power line," said Wigglesworth.

"Al Qaeda was created by the CIA from within the Egyptian-based Muslim Brotherhood to fight alongside the Mujahedeen in Afghanistan in the 1980's. This was not widely known among CIA agents even in 1988 when Gannon and Salem died, but Salem had been widely reported to have been using his BAC-111 jet in the 1980 'October Surprise' eight years before his strange death, not unlike the strange deaths of the three members of the Saudi royal family that Gerald Posner said knew about the 911 attack before it happened.....a forty-one year old dying of a heart attack, the other in a single car crash on his way to the funeral of the first and the third, a twenty-one-year-old, of thirst from having wondered by himself into the desert. Directly next to Frank Vandiver's Jefferson Davis Project on the Rice University campus is the Robert Herring Building. Built by the founder of Houston Natural Gas, the forerunner of Enron, Herring's widow, Joanne King Herring, had joined with Texas Rep. Charlie Wilson to weaponize Al Qaeda for the fight in Afghanistan. Our wars in the Middle East's Golden Crescent, the poppy growing region of the Ottoman Empire, is now doubly enticing because of oil," said Wigglesworth noting that Mrs. Herring's sons had created *One America News* which Wigglesworth said "joins CBS and the other news channels in the propagandizing Joseph Goebbels-like myth-spinning."

Bernie Edward Zettl (born 1922)

Bernie Zettl, 1968
[HN01DK][GDrive]

Employers :

- Dynalectron Corporation
- TRW Incorporated
- GTE Corporation

Associations

- **Walter Roy Edgington (born 1925)** (GTE / Pentagon legal case, 1980s)
- **Daniel Richard Bannister (born 1930)** (DynaElectron / DynCorp)

1967

Bernie Zettl - PRESIDENT of old crows

https://www.govinfo.gov/content/pkg/GPO-CRECB-1967-pt22/pdf/GPO-CRECB-1967-pt22-10-2.pdf

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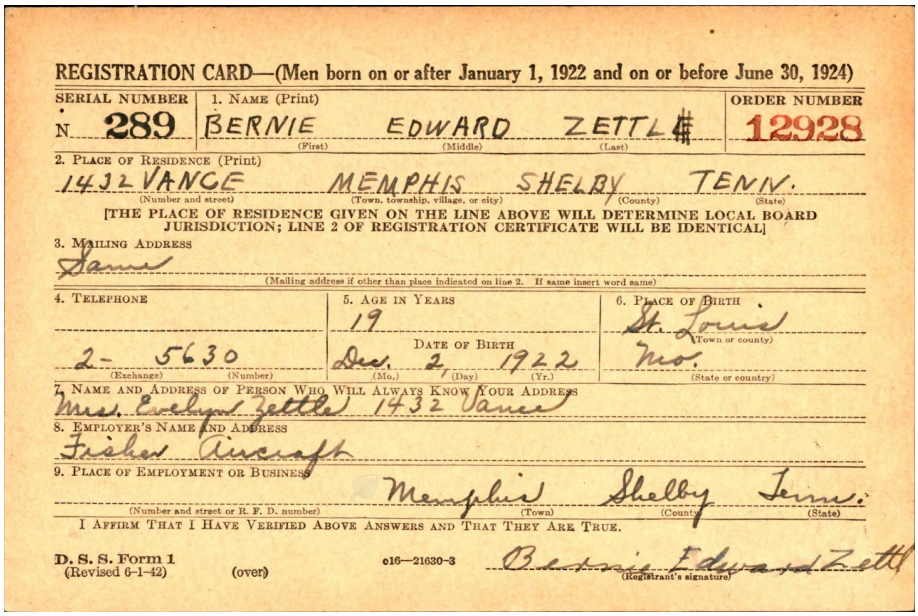
1930 us census -

https://search.findmypast.com/record?id=USC%2F1930%2F004951831%2F01143&parentid=USC%2F1930%2F004951831%2F01143%2F032

1940 - US Census - Tennessee

https://search.findmypast.com/record?id=USC%2F1940%2F005461334%2F00733&parentid=USC%2F1940%2F1632894687

1942 - WW2 Draft



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2. PLACE OF RESIDENCE (Print) 1432 VANCE (Number and street) MEMPHIS (Town, township, village, or city) SHELBY (County) TENN. (State)

[THE PLACE OF RESIDENCE GIVEN ON THE LINE ABOVE WILL DETERMINE LOCAL BOARD JURISDICTION; LINE 2 OF REGISTRATION CERTIFICATE WILL BE IDENTICAL]

3. MAILING ADDRESS Same (Mailing address if other than place indicated on line 2. If same insert word same)

4. TELEPHONE 2-5630 (Exchange) (Number)

5. AGE IN YEARS 19 DATE OF BIRTH Dec. (Mo.) 2 (Day) 1922 (Yr.)

6. PLACE OF BIRTH St. Louis (Town or county) Mo. (State or country)

7. NAME AND ADDRESS OF PERSON WHO WILL ALWAYS KNOW YOUR ADDRESS Mrs. Evelyn Zettle 1432 Vance

8. EMPLOYER'S NAME AND ADDRESS Fisher Aircraft

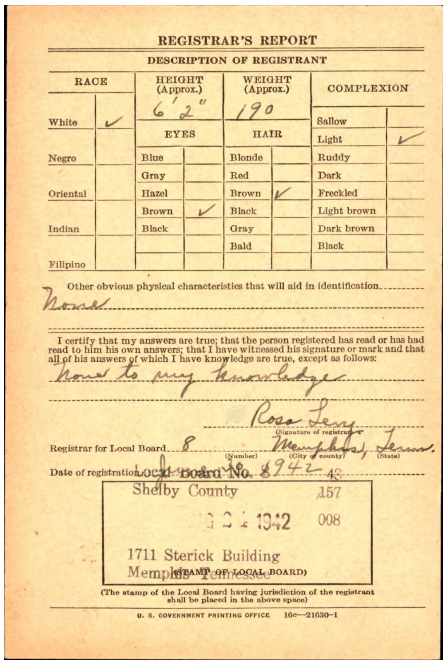
9. PLACE OF EMPLOYMENT OR BUSINESS Memphis (Town) Shelby (County) Tenn. (State)

I AFFIRM THAT I HAVE VERIFIED ABOVE ANSWERS AND THAT THEY ARE TRUE.

D. S. S. Form 1 (Revised 6-1-42) (over) 16—21630-3

Bernie Edward Zettl (Registrant's signature)

[HG00AI][GDrive]



REGISTRAR'S REPORT

DESCRIPTION OF REGISTRANT

RACE		HEIGHT (Approx.)		WEIGHT (Approx.)		COMPLEXION	
White	✓	6' 2"		190		Sallow	
		EYES		HAIR		Light	✓
Negro		Blue		Blonde		Ruddy	
		Gray		Red		Dark	
Oriental		Hazel		Brown	✓	Freckled	
		Brown	✓	Black		Light brown	
Indian		Black		Gray		Dark brown	
				Bald		Black	
Filipino							

Other obvious physical characteristics that will aid in identification: None

I certify that my answers are true; that the person registered has read or has had read to him his own answers; that I have witnessed his signature or mark and that all of his answers of which I have knowledge are true, except as follows: None to my knowledge

Rosa Terry (Signature of registrar)

Registrar for Local Board 8 (Number) Memphis, Tenn. (City or county) (State)

Date of registration Feb 24 1942 Local Board No. 8942-43

Shelby County 157

FEB 24 1942 008

1711 Sterick Building Memphis, Tennessee (STAMP OF LOCAL BOARD)

(The stamp of the Local Board having jurisdiction of the registrant shall be placed in the above space)

U. S. GOVERNMENT PRINTING OFFICE 16—21630-1

[HG00AJ][GDrive]

1943 (July 04) - Best man at wedding - (Maxwell field, Alabama)

Full newspaper page : [HN01DC][GDrive]

The La Crosse Tribune (La Crosse, Wisconsin) · 04 Jul 1943, Sun · Page 4

FIELD CHAPEL SERVICE JOINS AREA COUPLE

Helena Maria Nelson and Aviation Cadet LeRoy William Marx passed through a saber arch formed by non-commissioned officers in the bridegroom's division as they left chapel No. 1, Maxwell Field, Ala., Saturday evening following their marriage by Chaplain Sack.

For the 7:30 ceremony the bride wore white embroidered organza with long train, her fingertip fush veil capped with a Juliet headdress of seed pearls and her white bible having a spray of gardenias.

Joyce Marx, bridesmaid, had pink rosebuds in bouquet and headdress to accent the light blue in her silk marquisette dress. Aviation Cadet Bernie Zettl was best man. A reception followed the ceremony.

Cadet and Mrs. Marx are to reside at 5 Southmont drive, Perry street extension, Montgomery, Ala. Parents of these two are Mr. and Mrs. Harold Nelson, 719 Vine street, and Mr. and Mrs. William Marx, Dresbach, Minn.

[HN01DD][GDrive]

1950 (Feb 07) - In Biloxi

Full newspaper page : [HN01DE][GDrive]

THE DAILY HERALD

Entered as second-class mail matter at the post office at Biloxi, Miss., under the act of March 3, 1897. Entered as second-class mail matter, October 14, 1909, at the post office of Gulfport, Miss., under the Act of March 3, 1897.

BILOXI BILOXI-GULFPORT DAILY HERALD, PUBLISHER GULFPORT
Herald Building FOUNDED BY GEO. W. WILKES Herald Building
Water Street PUBLISHED DAILY EXCEPT SUNDAY Herald Square

Established weekly in Biloxi 1884; daily 1898; established in Gulfport 1909.

MEMBER OF THE ASSOCIATED PRESS—The Associated Press is entitled exclusively to the use of republication of all the local news printed in this newspaper as well as all AP news dispatches

Tuesday Afternoon, February 7, 1950

SUBSCRIPTION RATES: Daily, by carrier, 20c per week; by mail 85c per month; by mail, outside Biloxi and Gulfport, in Harrison, Stone, Jackson and Hancock counties only 65c per month; one day a week only (Saturday) by mail $2 per year; mail subscriptions payable in advance.

IMPORTANT COLONEL GROVES

Colonel Groves, who was in charge of atomic energy operations during its investigation, progress and development until the perfection of the A-bomb dropped on Japan, must be very smart and also scientific. He must have kept a personal diary, and doubtless did have a very meticulous official record, of operations and persons engaged in such work. He certainly has been called upon by courts, to testify in criminal cases of un-American subversive activity, and before congressional investigations into such matters. He seemed to have all detailed information for instant answers. The latest was the German-born person arrested in London, who had worked on atomic energy projects here and is charged with relaying atomic "secret" information to Moscow, and of spying for the Communists here and in Britain, is the latest suspect, as to whom Colonel Groves has been called on to testify. His testimony is buttressed by that of Chief FBI, Edgar Hoover, another astute, vigilant, able and efficient official, who "broke" the case to the London authorities.

These two fine, highly important, courageous and most capable American officers continue their useful service to this Government and its people and will (should) not be forgotten by them. The great debate and general discussion going on about the hydrogen bomb calls for their continued usefulness, which cannot be dispensed with. They will be heard of often, no doubt, before this cruel war is over and at least some kind of peace and international "living together" are restored—and nobody knows when that will be.

HE GAVE HIS BLOOD

There is no satisfactory substitute for human blood; the only source is people. The philosophy of the National Blood Program—of giving blood—combines idealism with humanitarianism—giving of ism in the hearts of those who gave for others.

Dedicated to saving lives and preventing human suffering, the National Blood Program of the American Red Cross offers an un-

Sie Simon Case Set For Feb. 15

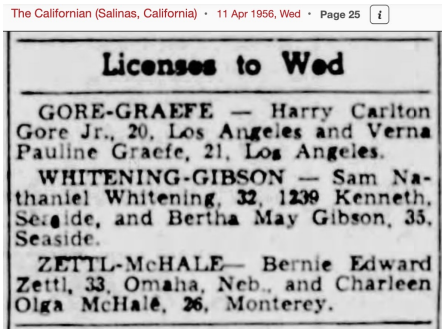
The slot machine case against Sie Simon, operator of Sie's Place, was set for Feb. 15 by Judge J. D. Stennis in city court at Biloxi Monday night. Simon is charged on five counts involving slot machines.

In other action Monday night, Judge Stennis fined the following: John Engler, Clyde Junius Singletary, Herbert Lee Keyes, Johnny Moore, Carl Wooten Siegal, Clarence Edwards, drunk, $5; Frank Allison Richards, Preston Cooley, Howard Joseph Abshire, Robert Gilliland, Williams Thomas Oakley, Roy Livingston Gardner, George Steven Cragnate, Benjamin Jefferson Kliman, Sterling Oleo Allen, Boyd Rodney Stewart, George Washington Fluker, Harry Francis Olmsted, Mrs. Joseph Wilburn, John Francis Sterne, Manuel Velazquez, Clifford W. Messer, James Garland Hakkins, Philip Harold Hein, Raffaele Quattrocchi, William Patrick Ryan, Hector Benavides, Vaco W. Guillet, Mrs. John Smith, Robert Aaron Gable, Bernie Edward Zettl, Thomas William Cox, Edward Leroy Harrison, Margie Parker, Miss Catherine Joseph, Ingeboigt B. Hanson, Paul Francis Cahalan, parking ordinance violation; Calvin C. Bray, Margie Parker, drunk and disorderly, $15; Samuel Harvell, driving while under the influence of liquor, $100; James Leo Wilson, making left turn at stop light, $2.50; Joseph Wojciechowski, driving wrong way on one-way street, $2.50; Solomon Cotton, disorderly conduct, $10; Nelson Mumford, assault and battery, $10; Gaston Vead, making left turn at stop light, $2.50; Sterling Cleo Allen, reckless driving, $10; James Aubrey Bounds, blocking driveway, $2.50.

[HN01DF][GDrive]

1956 (April) - Marriage to Charleen Olga McHale

Full newspaper page : [HN01DG][GDrive]


The Californian (Salinas, California) · 11 Apr 1956, Wed · Page 25

Licenses to Wed

GORE-GRAEFE — Harry Carlton Gore Jr., 20, Los Angeles and Verna Pauline Graefe, 21, Los Angeles.

WHITENING-GIBSON — Sam Nathaniel Whitening, 32, 1239 Kenneth, Seaside, and Bertha May Gibson, 35, Seaside.

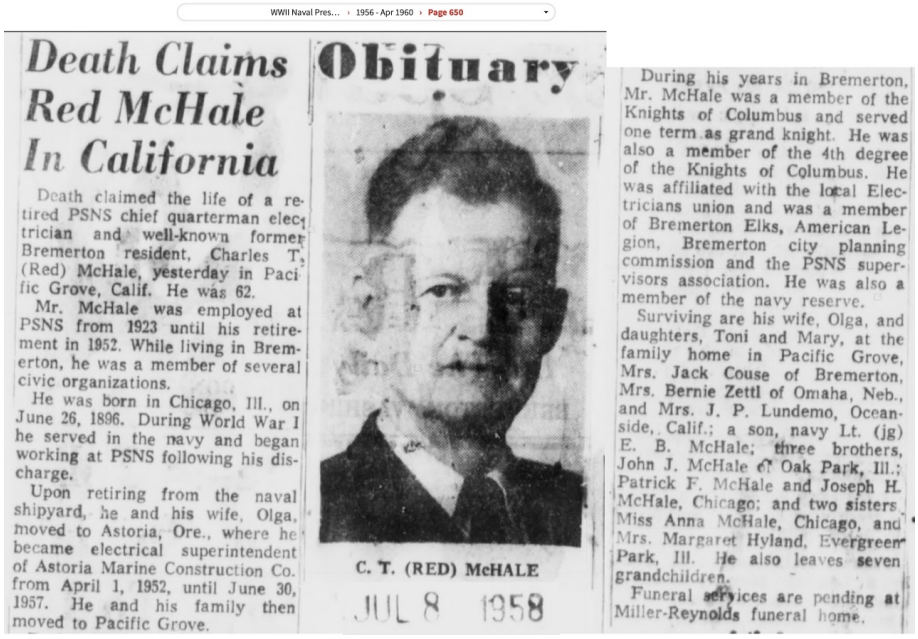
ZETTL-McHALE— Bernie Edward Zettl, 33, Omaha, Neb., and Charleen Olga McHale, 26, Monterey.

[HN01DH][GDrive]

1958 (July 8) - Father in-law dies

{1940 US Census for Charles McHale) - Sixth street, bremerton - https://www.archives.com/GA.aspx?_act=ImageViewCensus1940&FirstName=Charleen&LastName=Mchale&Location=WA&UniqueId=39972604&type=census&folderImageSeq=

Full set of clippings, from Fold3 (at low resolution) - [HN01DT][GDrive]


WWII Naval Pres... › 1956 - Apr 1960 › Page 650

Death Claims Red McHale In California

Death claimed the life of a retired PSNS chief quarterman electrician and well-known former Bremerton resident, Charles T. (Red) McHale, yesterday in Pacific Grove, Calif. He was 62.

Mr. McHale was employed at PSNS from 1923 until his retirement in 1952. While living in Bremerton, he was a member of several civic organizations.

He was born in Chicago, Ill., on June 26, 1896. During World War I he served in the navy and began working at PSNS following his discharge.

Upon retiring from the naval shipyard, he and his wife, Olga, moved to Astoria, Ore., where he became electrical superintendent of Astoria Marine Construction Co. from April 1, 1952, until June 30, 1957. He and his family then moved to Pacific Grove.

Obituary

C. T. (RED) McHALE

JUL 8 1958

During his years in Bremerton, Mr. McHale was a member of the Knights of Columbus and served one term as grand knight. He was also a member of the 4th degree of the Knights of Columbus. He was affiliated with the local Electricians union and was a member of Bremerton Elks, American Legion, Bremerton city planning commission and the PSNS supervisors association. He was also a member of the navy reserve.

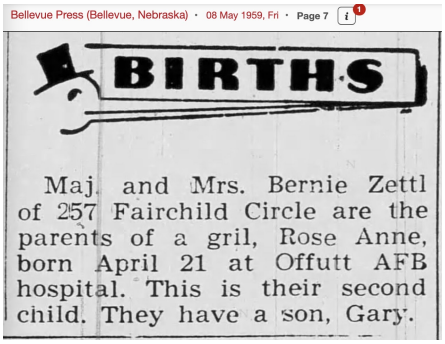
Surviving are his wife, Olga, and daughters, Toni and Mary, at the family home in Pacific Grove, Mrs. Jack Couse of Bremerton, Mrs. Bernie Zettl of Omaha, Neb., and Mrs. J. P. Lundemo, Oceanside, Calif.; a son, navy Lt. (jg) E. B. McHale; three brothers, John J. McHale of Oak Park, Ill.; Patrick F. McHale and Joseph H. McHale, Chicago; and two sisters, Miss Anna McHale, Chicago, and Mrs. Margaret Hyland, Evergreen Park, Ill. He also leaves seven grandchildren.

Funeral services are pending at Miller-Reynolds funeral home.

[HN01DU][GDrive]

1959 (May 08)

Full newspaper page : [HN01DA][GDrive]


Bellevue Press (Bellevue, Nebraska) · 08 May 1959, Fri · Page 7

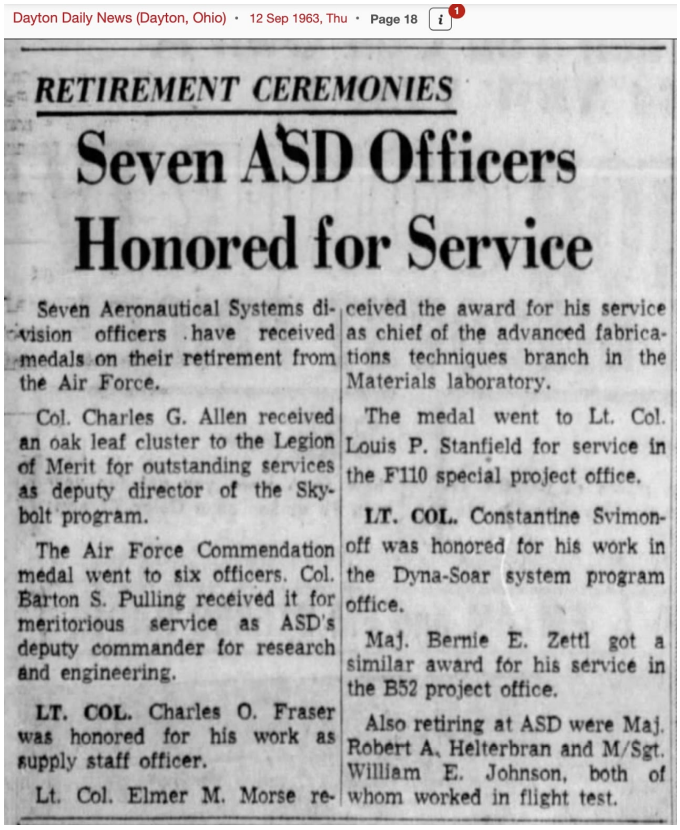
BIRTHS

Maj. and Mrs. Bernie Zettl of 257 Fairchild Circle are the parents of a gril, Rose Anne, born April 21 at Offutt AFB hospital. This is their second child. They have a son, Gary.

[HN01DB][GDrive]

1963 (Sep 12) - ASD (Aeronautical Systems Division) Officers Retirement - Major Bernie E. Zettl honored for service in the B52 projec

Full page : [HN01D8][GDrive]



Dayton Daily News (Dayton, Ohio) · 12 Sep 1963, Thu · Page 18

RETIREMENT CEREMONIES

Seven ASD Officers Honored for Service

Seven Aeronautical Systems division officers have received medals on their retirement from the Air Force.

Col. Charles G. Allen received an oak leaf cluster to the Legion of Merit for outstanding services as deputy director of the Skybolt program.

The Air Force Commendation medal went to six officers. Col. Barton S. Pulling received it for meritorious service as ASD's deputy commander for research and engineering.

LT. COL. Charles O. Fraser was honored for his work as supply staff officer.

Lt. Col. Elmer M. Morse received the award for his service as chief of the advanced fabrications techniques branch in the Materials laboratory.

The medal went to Lt. Col. Louis P. Stanfield for service in the F110 special project office.

LT. COL. Constantine Svimonoff was honored for his work in the Dyna-Soar system program office.

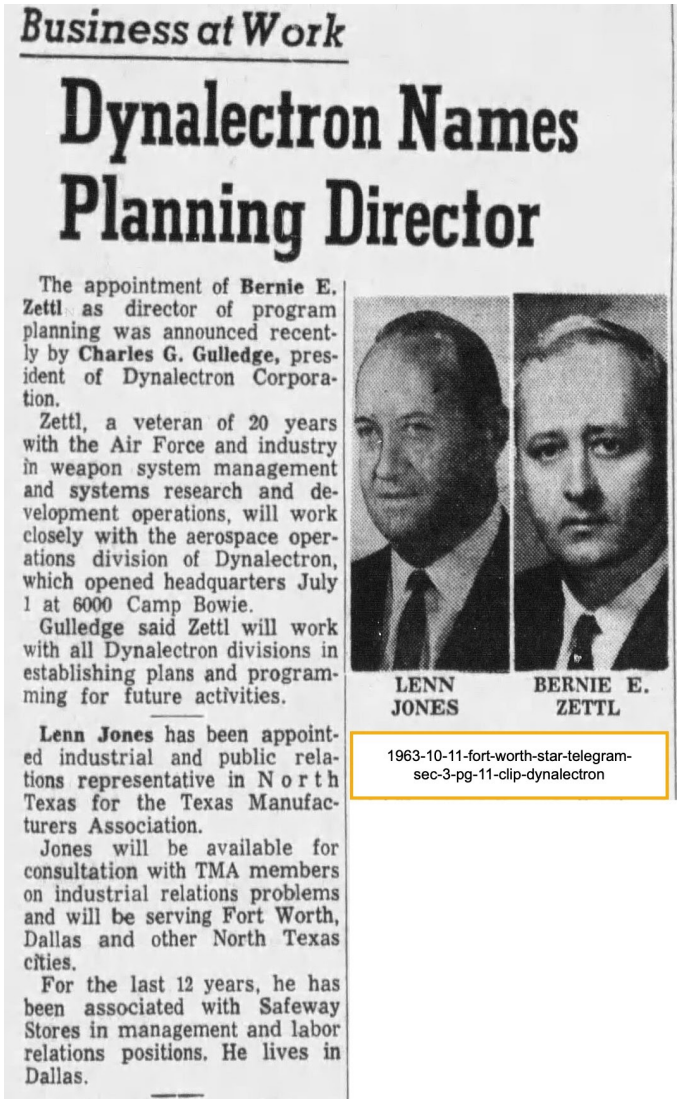
Maj. Bernie E. Zettl got a similar award for his service in the B52 project office.

Also retiring at ASD were Maj. Robert A. Helterbran and M/Sgt. William E. Johnson, both of whom worked in flight test.

[HN01D9][GDrive]

1963 (Oct 11) - "Dynalectron"

See **Dynalectron Corporation** . / Full newspaper page : [HN01D2][GDrive]



Business at Work

Dynalectron Names Planning Director

The appointment of **Bernie E. Zettl** as director of program planning was announced recently by **Charles G. Gulledge**, president of Dynalectron Corporation.

Zettl, a veteran of 20 years with the Air Force and industry in weapon system management and systems research and development operations, will work closely with the aerospace operations division of Dynalectron, which opened headquarters July 1 at 6000 Camp Bowie.

Gulledge said Zettl will work with all Dynalectron divisions in establishing plans and programming for future activities.

Lenn Jones has been appointed industrial and public relations representative in North Texas for the Texas Manufacturers Association.

Jones will be available for consultation with TMA members on industrial relations problems and will be serving Fort Worth, Dallas and other North Texas cities.

For the last 12 years, he has been associated with Safeway Stores in management and labor relations positions. He lives in Dallas.

LENN JONES

BERNIE E. ZETTL

1963-10-11-fort-worth-star-telegram-sec-3-pg-11-clip-dynalectron

[HN01D3][GDrive]

1963 (Nov 10) - Award given to Dan R Bannister by Bernie Zettl

See Daniel Richard Bannister (born 1930) / Full newspaper page : [HN01D0][GDrive]

FORT WORTH STAR-TELEGRAM Sunday, November 10, 1963 Section Five PAGE THREE

BUSINESS AT WORK

Fort Worth Firm Wins Coffee Supply Contract

Kimbell Coffee and Tea Corporation of Fort Worth has been awarded a $147,071 contract for roasted ground coffee by the New York regional headquarters of the Defense Subsistence Supply Center which buys food supplies for the armed services.

Twelve firms competed for the contract.

A 10-year award pin was presented to **DAN R. BANNISTER**, vice president and manager of Dynalectron Aerospace Operations Division here.

Bannister, 33, of 4100 Galt, is one of the youngest aviation executives in the nation. A gold pen and pencil set were given to Bannister by **BERNIE ZETTL**, director of program planning. Also participating in the ceremony were **JACK VESTAL**, operations manager, and **JACK MIKEL**, personnel manager.

An extensive microwave system following the course of the Nile River from Cairo to Aswan will be built by Collins Radio which has a division in Dallas.

The 500-mile communication link will make television available for the first time to most Egyptian people.

JOSEPH P. POWELL has been named Houston manager of Mars Instrument Company.

The appointment of **EDWARD L. SKINNER** as sales representative for Texas and Louisiana was announced by **GORDON L. BROTT**, manager of the Fort Smith, Ark., plant of Ohio Rubber Company.

Skinner, a Dallas resident, is the former president of Renniks Rubber Company in Fort Worth.

HAL CARPENTER of Dallas has been named to supervise North Texas sales of the first rolled carpet goods to be produced in the mid-continent area.

Sequoyah Mills announced that Carpenter will be territory manager for the Fort Worth-Dallas metropolitan area.

Clary Corporation Vice President **EDSON I. SMALL** has announced the formation of a new marketing position and a man to fill the spot.

WILLIAM F. DORITY will fill the position of field sales manager, with his headquarters in Montclair, N. J.

A registered secondary offering of 350,000 shares of the Mosler Safe Company common stock ($1 par value) has been announced by Blyth & Company, Inc. and associates.

MICKEY GOLDMAN | ROY TUGGLE | SAM REZINKOFF | JOHN L. HANIGAN

JOSEPH P. POWELL | EDWARD T. SKINNER | C. H. ANSEL | DAN BANNISTER

The shares are being sold for the account of three members of the Mosler family who will hold some 57 per cent of the common stock after the sale. None of the proceeds of the sale will accrue to the company. Subject to obtaining board distribution of its common stock to meet requirements of the New York Stock Exchange, the Mosler firm intends to apply for listing on the exchange.

SAM REZINKOFF of 5400 Odessa has been elected to the Agents Advisory Council for the Southwestern region of the New York Life Insurance Company.

A marketing, research and business planning specialist, **ROBERT W. CLARK**, of Fort Worth has been appointed assistant to the president of the Western Company.

Clark has been associated with GE since 1947 and is former manager of the aviation and defense systems for the firm's outdoor lighting department in Hendersonville, N. C.

A new addition to the staff of Superior accounting, Tax & Insurance Service at 2850-A W. Berry, is **ROY TUGGLE**.

MICKEY GOLDMAN, Fort Worth business man, was one of the principals at a state meeting for Calvert Distillers Company in Dallas recently when executives of the firm came to Texas to launch Calvert Extra.

The appointment of **GORDON H. FISHER** of Gainsville as assistant to the president was announced by **FRANK R. MILLIKEN**, president of Kennecotte Copper Corporation. Fisher was president of General Minerals in Houston before joining Kennecotte.

ELBERT J. HALING, assistant to the regional director of Public Housing Administration in Fort Worth discussed "Better Public Relations for Better City Government" at the Arkansas Municipal League Convention at Hot Springs Friday.

FLOYD E. BLOUNT, Socony Mobil Oil Company of Dallas, will address the North Texas (Fort Worth-Dallas) section of the National Association of Corrosion Engineers Monday at the Torch Restaurant in Dallas at 8:30 p. m.

Three University of Texas professors have collaborated on a Textbook, "Intermediate Accounting," a new publication. The authors are **DR. JOHN WHITE, DR. GLENN A. WALSH** and **DR. CHARLES T. ZLATKOVICH.**

Preparations are underway at Aluminum Company of America's Rockdale, Texas, plant to restart a 25,000-ton potline, thus boosting the smelter's production to 100 per cent capacity and its work force to more than 1,000 men.

JOHN L. HANIGAN has been named president of Brunswick Corporation.

He will assume his new duties as soon as he can be relieved of his old ones.

The appointment of **C. H. ANSEL JR.** as technical representative for Haveg Reinhold Inc., Santa Fe Spcings, Cal., has been announced.

TOM F. ANDERSON of Alcoa has been elected president of Texas Chemcial Council, an association of more than 50 chemical firms with operations in Texas.

Hayes Employment Service has announced the complete remodeling and expansion of their offices in the Continental Life Building.

Promotion of **B. B. McCULLOUGH** from agent to assistant manager of Fort Worth District No. 1 of the American National Insurance Company of Galveston has been announced by **W. W. CHERRY**, senior vice president and director of combination agencies.

[HN01D1][GDrive]

1966 (Nov 20)

https://newspaperarchive.com/colorado-springs-gazette-nov-20-1966-p-11/

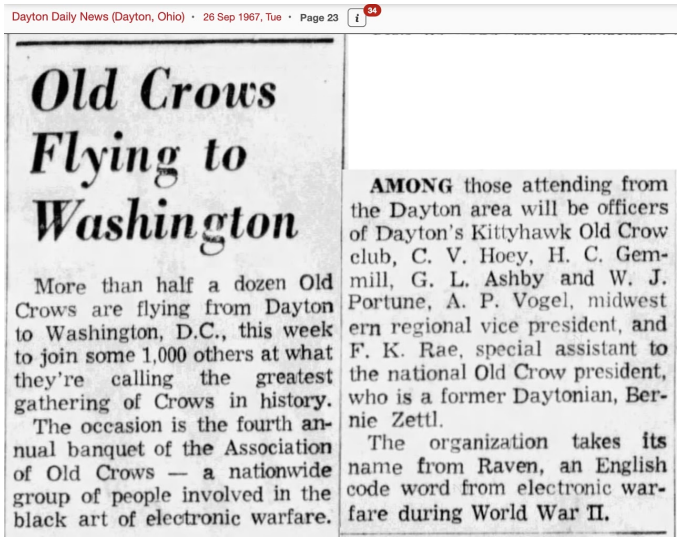
1967

https://www.govinfo.gov/content/pkg/GPO-CRECB-1967-pt22/pdf/GPO-CRECB-1967-pt22-10-2.pdf

1967 (Sep 26)

https://www.newspapers.com/image/404632294/?terms=%22bernie%20zettl%22&match=1

1967-09-26-the-dayton-daily-news-pg-23-clip-old-crows



Dayton Daily News (Dayton, Ohio) · 26 Sep 1967, Tue · Page 23

Old Crows Flying to Washington

More than half a dozen Old Crows are flying from Dayton to Washington, D.C., this week to join some 1,000 others at what they're calling the greatest gathering of Crows in history.

The occasion is the fourth annual banquet of the Association of Old Crows — a nationwide group of people involved in the black art of electronic warfare.

AMONG those attending from the Dayton area will be officers of Dayton's Kittyhawk Old Crow club, C. V. Hoey, H. C. Gemmill, G. L. Ashby and W. J. Portune, A. P. Vogel, midwestern regional vice president, and F. K. Rae, special assistant to the national Old Crow president, who is a former Daytonian, Bernie Zettl.

The organization takes its name from Raven, an English code word from electronic warfare during World War II.

1968 (March 29)

Full newspaper page : [HN01DI][GDrive]

National Association President To Address Local Old Crows

Bernie Zettl, national president of the Association of Old Crows, is scheduled as the featured speaker at the Tuesday meeting of the Raven Cajun Chapter of the AOC.

The meeting, slated to be held in the Gold Room at the Officers' Open Mess, will begin with cocktails at 7 p.m. and followed by a buffet style dinner at 8.

The primary business of the meeting will be the installation of officers elected by the general membership at the February meeting.

Members are invited to bring their dates to the meeting. Reservations for the dinner should be confirmed with Don Ryan at extension 3439.

BERNIE ZETTL

1968-03-29-barksdale-observer-pg-pg-1-clip-zettl

[HN01DJ][GDrive]

1968 (Nov 01)

Full newspaper page : [HN01DL][GDrive]

Friday, November 1, 1968 BARKSDALE OBSERVER

'Old Crows' Convene In San Antonio

HQ. SAC (SAC PS) — An estimated 1,000 "crows" will migrate to San Antonio, Tex., Nov. 14 for the fifth annual meeting of an organization which has the unusual purpose of promoting an interest in electronic warfare.

The "Crows" are very human members of the Association of Old Crows who have the common interest of advancing the art of detecting and countering an enemy's electronics systems with other electronic systems and devices.

The Association is gathering to swap ideas and information and to commemorate some of the contributions of its membership to electronic warfare technology, according to President Bernie E. Zettl.

The Headquarters Strategic Air Command Chapter, known as the SAC Roost, has more than 100 members. They will be represented at the convention by Chapter President Capt. Don Rich, SAC Operations/Plans and six other members.

Maj. Al Michaels, Hq. 2nd AF, and Maj. John McNutt, 1st CEG, are the two Barksdale personnel who will attend the annual meeting in San Antonio.

The annual meeting and banquet is scheduled concurrently with the Tenth Annual NORAD Electronics Warfare Conference, also in San Antonio on Nov. 13-15. The Old Crows business meeting is scheduled for Nov. 14 at the Brooks AFB theater.

Banquet speaker will be Senator Joseph Montoya (D) of New Mexico, a longtime champion of the employment of electronic countermeasures (ECM). Master of ceremonies will be Dan Graves, from Aeronautical Systems Division at Wright-Patterson AFB, Ohio.

First organized in 1964, the Association of Old Crows' membership includes ECM personnel from all branches of the service in addition to industry and academic representatives. Associate membership is available to citizens of Canada, Great Britain, France, Sweden and Australia.

The Old Crows name dates back to the days of World War II when British ECM personnel rode black night fighter aircraft, wearing black flight suits. Because of this and the wily talents required for the job, the project was named "Raven." When American counterparts arrived for duty, they also became Ravens. The Americans later adopted the name of Crow as the American version of the same bird.

Total membership in the Association is 5,000 in 40 local clubs throughout the United States and overseas. Membership is open to anyone who has an interest in ECM. Headquarters of the Association is in Washington, D. C., P. O. Box 19127.

[HN01DM][GDrive]

1968 (Nov 14)

Full newspaper pages : Page 1a : [HN01DN][GDrive] / Page 2a : [HN01DP][GDrive]

San Antonio Express (San Antonio, Texas) · 14 Nov 1968, Thu · Page 1

Electronic Warfare Men Gather in S.A.

By JERRY LOCHBAUM

Communist forces in North Vietnam were using radar to direct fire of anti - aircraft guns and missiles against attacking American planes. That was electronic warfare. The experts call it EW.

Americans devised a new kind of equipment called RHW, for Radar Homing and Warning, and went out to locate and destroy enemy radar sites in an effort code - named Project Wild Weasel. That was a venture in electronic countermeasures (ECM).

The Communists had a reply, however. They turned off their radar, and disappeared. That came under the heading of electronic counter - countermeasures (ECCM).

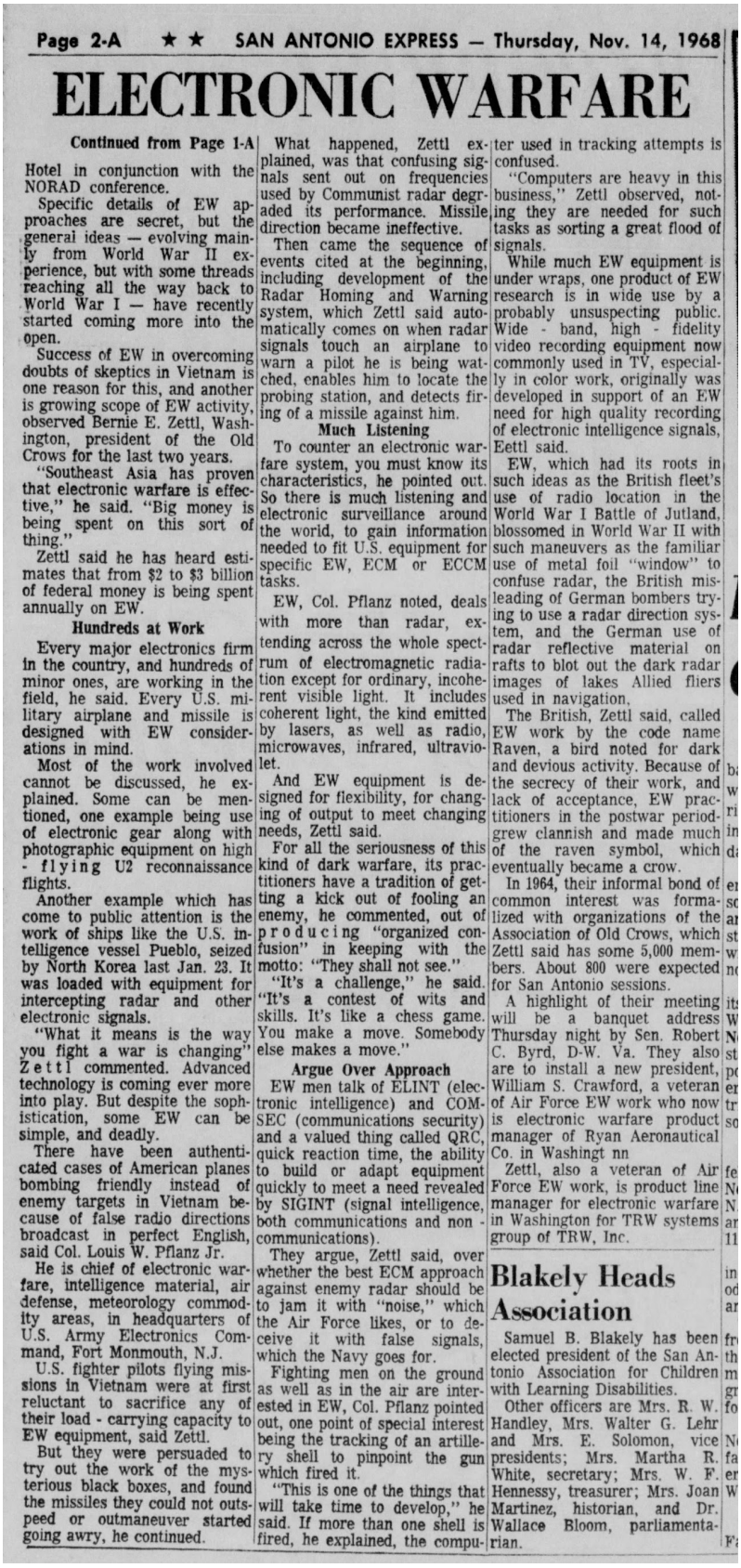
U.S. experts in the tricky, sophisticated and still largely secret field of work with electronic warfare and its many variants gathered in San Antonio Wednesday for two meetings which will continue through Friday.

● One is the 10th annual North American Air Defense Command electronic warfare convention at the School of Aerospace Medicine, Brooks AFB. Needless to say, it is being conducted in secrecy.

● The other is the fifth annual convention of the Association of Old Crows, a group of military and industrial people with interests in the field, meeting at Hilton Palacio del Rio

See ELECTRONIC, Page 2A

[HN01D0][GDrive]



ELECTRONIC WARFARE

Continued from Page 1-A

Hotel in conjunction with the NORAD conference.

Specific details of EW approaches are secret, but the general ideas — evolving mainly from World War II experience, but with some threads reaching all the way back to World War I — have recently started coming more into the open.

Success of EW in overcoming doubts of skeptics in Vietnam is one reason for this, and another is growing scope of EW activity, observed Bernie E. Zettl, Washington, president of the Old Crows for the last two years.

"Southeast Asia has proven that electronic warfare is effective," he said. "Big money is being spent on this sort of thing."

Zettl said he has heard estimates that from $2 to $3 billion of federal money is being spent annually on EW.

Hundreds at Work

Every major electronics firm in the country, and hundreds of minor ones, are working in the field, he said. Every U.S. military airplane and missile is designed with EW considerations in mind.

Most of the work involved cannot be discussed, he explained. Some can be mentioned, one example being use of electronic gear along with photographic equipment on high - flying U2 reconnaissance flights.

Another example which has come to public attention is the work of ships like the U.S. intelligence vessel Pueblo, seized by North Korea last Jan. 23. It was loaded with equipment for intercepting radar and other electronic signals.

"What it means is the way you fight a war is changing" Zettl commented. Advanced technology is coming ever more into play. But despite the sophistication, some EW can be simple, and deadly.

There have been authenticated cases of American planes bombing friendly instead of enemy targets in Vietnam because of false radio directions broadcast in perfect English, said Col. Louis W. Pflanz Jr.

He is chief of electronic warfare, intelligence material, air defense, meteorology commodity areas, in headquarters of U.S. Army Electronics Command, Fort Monmouth, N.J.

U.S. fighter pilots flying missions in Vietnam were at first reluctant to sacrifice any of their load - carrying capacity to EW equipment, said Zettl.

But they were persuaded to try out the work of the mysterious black boxes, and found the missiles they could not outspeed or outmaneuver started going awry, he continued.

What happened, Zettl explained, was that confusing signals sent out on frequencies used by Communist radar degraded its performance. Missile direction became ineffective.

Then came the sequence of events cited at the beginning, including development of the Radar Homing and Warning system, which Zettl said automatically comes on when radar signals touch an airplane to warn a pilot he is being watched, enables him to locate the probing station, and detects firing of a missile against him.

Much Listening

To counter an electronic warfare system, you must know its characteristics, he pointed out. So there is much listening and electronic surveillance around the world, to gain information needed to fit U.S. equipment for specific EW, ECM or ECCM tasks.

EW, Col. Pflanz noted, deals with more than radar, extending across the whole spectrum of electromagnetic radiation except for ordinary, incoherent visible light. It includes coherent light, the kind emitted by lasers, as well as radio, microwaves, infrared, ultraviolet.

And EW equipment is designed for flexibility, for changing of output to meet changing needs, Zettl said.

For all the seriousness of this kind of dark warfare, its practitioners have a tradition of getting a kick out of fooling an enemy, he commented, out of producing "organized confusion" in keeping with the motto: "They shall not see."

"It's a challenge," he said. "It's a contest of wits and skills. It's like a chess game. You make a move. Somebody else makes a move."

Argue Over Approach

EW men talk of ELINT (electronic intelligence) and COMSEC (communications security) and a valued thing called QRC, quick reaction time, the ability to build or adapt equipment quickly to meet a need revealed by SIGINT (signal intelligence, both communications and non - communications).

They argue, Zettl said, over whether the best ECM approach against enemy radar should be to jam it with "noise," which the Air Force likes, or to deceive it with false signals, which the Navy goes for.

Fighting men on the ground as well as in the air are interested in EW, Col. Pflanz pointed out, one point of special interest being the tracking of an artillery shell to pinpoint the gun which fired it.

"This is one of the things that will take time to develop," he said. If more than one shell is fired, he explained, the computer used in tracking attempts is confused.

"Computers are heavy in this business," Zettl observed, noting they are needed for such tasks as sorting a great flood of signals.

While much EW equipment is under wraps, one product of EW research is in wide use by a probably unsuspecting public. Wide - band, high - fidelity video recording equipment now commonly used in TV, especially in color work, originally was developed in support of an EW need for high quality recording of electronic intelligence signals, Eettl said.

EW, which had its roots in such ideas as the British fleet's use of radio location in the World War I Battle of Jutland, blossomed in World War II with such maneuvers as the familiar use of metal foil "window" to confuse radar, the British misleading of German bombers trying to use a radar direction system, and the German use of radar reflective material on rafts to blot out the dark radar images of lakes Allied fliers used in navigation.

The British, Zettl said, called EW work by the code name Raven, a bird noted for dark and devious activity. Because of the secrecy of their work, and lack of acceptance, EW practitioners in the postwar period grew clannish and made much of the raven symbol, which eventually became a crow.

In 1964, their informal bond of common interest was formalized with organizations of the Association of Old Crows, which Zettl said has some 5,000 members. About 800 were expected for San Antonio sessions.

A highlight of their meeting will be a banquet address Thursday night by Sen. Robert C. Byrd, D-W. Va. They also are to install a new president, William S. Crawford, a veteran of Air Force EW work who now is electronic warfare product manager of Ryan Aeronautical Co. in Washingt nn

Zettl, also a veteran of Air Force EW work, is product line manager for electronic warfare in Washington for TRW systems group of TRW, Inc.

Blakely Heads Association

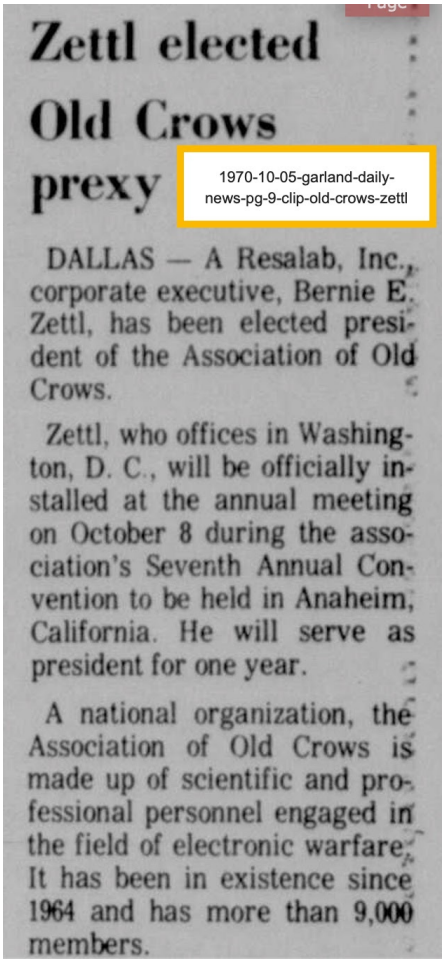
Samuel B. Blakely has been elected president of the San Antonio Association for Children with Learning Disabilities.

Other officers are Mrs. R. W. Handley, Mrs. Walter G. Lehr and Mrs. E. Solomon, vice presidents; Mrs. Martha R. White, secretary; Mrs. W. F. Hennessy, treasurer; Mrs. Joan Martinez, historian, and Dr. Wallace Bloom, parliamentarian.

[HN01DQ][GDrive]

1970 (Oct 05)

Full newspaper page : [HN01DR][GDrive]



Zettl elected Old Crows prexy

1970-10-05-garland-daily-news-pg-9-clip-old-crows-zettl

DALLAS — A Resalab, Inc., corporate executive, Bernie E. Zettl, has been elected president of the Association of Old Crows.

Zettl, who offices in Washington, D. C., will be officially installed at the annual meeting on October 8 during the association's Seventh Annual Convention to be held in Anaheim, California. He will serve as president for one year.

A national organization, the Association of Old Crows is made up of scientific and professional personnel engaged in the field of electronic warfare. It has been in existence since 1964 and has more than 9,000 members.

[HN01DS][GDrive]

1970 (Nov 18)

https://www.newspapers.com/image/54222994/?terms=crows%20Zettl&match=1

1972 (until 1982) - Bernie Zettl works as "a marketing consultant"for Sanders (a New Hampshire company)

Full pages, Boston Globe 1985 article - Page 43 at [HN01CD][GDrive] , Page 49 at [HN01CF][GDrive] ; clip at [HN01CG][GDrive]

Sanders Associates : See https://en.wikipedia.org/wiki/Sanders_Associates

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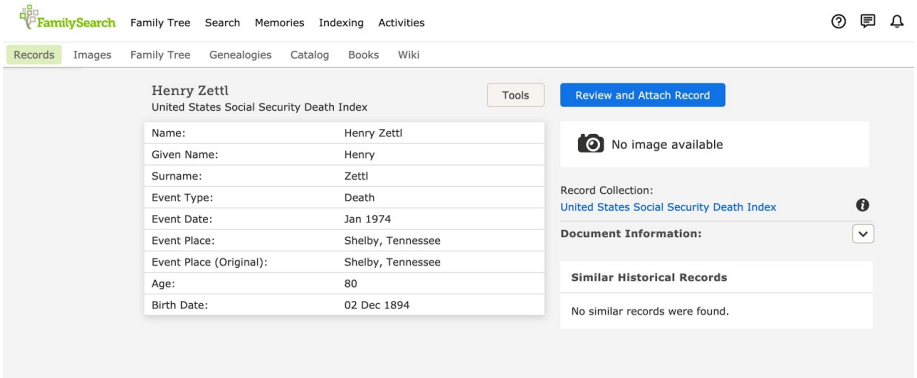
1974 (Jan) - Father passes (Tennessee)

https://www.familysearch.org/ark:/61903/1:1:V9D7-RQ3

2020-12-13-familysearch-org-henry-zettl-death-index-jan-74.jpg



1974 (Feb) - Loss of daughter

he lost a daughter when she was only 23 - "**Bernie** Edward **Zettl**."

https://www.ancientfaces.com/person/debra-zettl-birth-1951-death-1974/36166358

Debra Zettl was born on February 19, 1951. She died in August 1974 at 23 years of age.

1976 (Feb 2/3)

https://books.google.com/books?id=utPQAAAAMAAJ&pg=PA348&lpg=PA348&dq=%22old+crows%22+%2B+%22zettl%22&source=bl&ots=wSUqHjxsS8&sig=ACfU3U31ZPY6rQb2sGHxf35uA_I8yXsGkg&hl=en&sa=X&ved=2ahUKEwisyL-frMLtAhUKFVkFHadXBHcQ6AEwBnoECAcQAg#v=onepage&q=%22old%20crows%22%20%2B%20%22zettl%22&f=false

DoD-industry relations, conflict of interest and standards of conduct: hearings before the Joint Committee on Defense Production, Congress of the United States, Ninety-fourth Congress, second session, February 2 and 3, 1976

DoD_industry_relations_conflict_of_inter.pdf

1976-02-us-congress-joint-committee-on-defense-production-dod-conflict-standards

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1978 (until 1983) - Bernie Zettl works with GTE

Full pages, Boston Globe 1985 article - Page 43 at [HN01CD][GDrive] , Page 49 at [HN01CF][GDrive] ; clip at [HN01CG][GDrive]

See **GTE Corporation**

1985 (March 20) Wall Street Journal article (available via CIA)

PDF at [HN01CH][GDrive] / OCR version at [HN01CK][GDrive]

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ARTICLE APPEARED ON PAGE

WALL STREET JOURNAL
20 March 1985

Arms and Influence

Grand-Jury Probe Jars The Close-Knit World Of Electronic Warfare

Did a Top Consultant Flout Law on National Security By Giving Data to Firms?

Old Crows and New Weapons

By Andy Pasztor
Staff Reporter of The Wall Street Journal

The Old Crow didn't get old by being the fastest of the birds, or the strongest, or the bravest. He got old by being wily.
—The unofficial motto of the Association of Old Crows

WASHINGTON—In the shadowy, high-tech world of electronic warfare, Bernie Zettl has been a prominent player and purveyor of inside information since he retired as an Air Force major in the early 1960s.

The gregarious 62-year-old consultant with the ready smile seems to know just about every important military and corporate decision-maker in the $3 billion-a-year business. He helped create and then served as president of the 20,000-member Association of Old Crows, a little-known but influential fraternity of electronic-warfare experts, U.S. military officers and corporate executives scattered around the globe.

Devices and Techniques

With his quick wit and connections, Mr. Zettl became an essential link to help industry understand the Pentagon's latest thinking about everything from new radar-jamming devices and submarine-surveillance techniques to improved anti-detection missile systems. From his nondescript suburban Virginia office, Mr. Zettl has worked at one time or another as a consultant for nearly a dozen of the country's largest military contractors, including TRW Inc., GTE Corp., Northrop Corp. and Sanders Associates Inc.

But in the process, federal investigators contend, Mr. Zettl violated national-security laws and regulations by quietly supplying certain clients with a steady stream of classified budget and planning documents that the Pentagon didn't want released. A continuing two-year federal grand-jury investigation of Mr. Zettl's activities hasn't produced an indictment as yet, but it has ended his cozy arrangements and sent shock waves through the close-knit group of senior military officers and civilian weapons engineers who routinely dealt with him. It has also prompted doubts about military-procurement procedures.

Many of the allegedly leaked documents, according to current and former officials familiar with the investigation, were clearly stamped "secret" and included internal spending projections for a variety of future Air Force and Navy weapons and electronic intelligence-gathering systems.

Unfair Advantage?

Dissemination of the information didn't endanger U.S. security, these officials agree, because none of the documents fell into the hands of people without the necessary federal clearance to handle sensitive military data. But investigators from the Justice Department and the Defense Department's inspector general's office want to determine how the allegedly unauthorized release occurred.

They also are raising questions about the role of the Old Crows and examining whether any contractors gained an unfair competitive advantage by obtaining the classified material outside official channels.

Interviews with Mr. Zettl, a group of his friends and business associates and several industry executives interrogated by prosecutors reveal the extent of the unusual federal investigation. The interviews also provide a rare glimpse inside the Old Crows, an organization that Mr. Zettl and others helped turn into a powerhouse in the weapons industry. The Old Crows, for example, quietly advise military leaders on complex technical issues, while the Pentagon routinely sponsors and provides space for the group's annual convention and also approves the presentation of classified papers there.

Violations Denied

Mr. Zettl denies violating any laws and asserts that the kind of consulting work he performed was "something that was done by many other people" in the industry. "I wasn't the only person in the loop," he asserts. "The documents were readily available to any company that wanted to go to the trouble . . . and pick them up. They really didn't have any reason to zero in on me."

Gus Slayton, the executive director of the Old Crows, argues that sharing the information, in fact, may have benefited U.S. security. "Industry is trying to figure out what kind of weapons systems government wants" for the future, he maintains, and routine exchange of information is a central element of that effort.

The Justice Department confirms that Mr. Zettl is the target of an "ongoing criminal investigation," but it declines to provide details. Washington attorney Robert Klimek, a retired Air Force colonel who represents the Association of Old Crows and at least one military official interviewed by investigators, says he has been assured by prosecutors that the group itself isn't a target of the grand-jury investigation.

The Pentagon declines comment. But privately some military officials worry that details of the investigation could provide critics with fresh ammunition about loopholes in the Pentagon's procurement practices at a time when federal spending on electronic weaponry is booming.

Quite apart from any potential criminal violations, investigators have documented a widespread pattern of information-swapping among members of the Association of Old Crows and their friends in uniform. Critics contend that these practices may have discouraged aggressive price competition among major weapons contractors, squeezed many smaller companies out of the business and hurt taxpayers.

Northrop, TRW and Sanders Associates deny receiving any unauthorized documents or information from Mr. Zettl. A Northrop spokesman says Mr. Zettl still serves as a "technical consultant" to one of the company's units. GTE officials decline to comment on the matter.

The association was founded in 1964 by a small band of World War II intelligence and electronics officers eager to share some drinks and recount their days of battlefield glory. The name comes from the code word "Crow," which was used to identify Allied aircraft that jammed German radar signals during bombing raids.

Outsiders first considered the group nothing more than "a marching and chowder society," recalls Rear Adm. Albert Gallotta Jr., one of the Navy's top electronic-warfare experts and the vice president of the Old Crows. But after developing a more professional image, conducting regular electronic-warfare training lectures for the Pentagon and stepping up efforts to recruit more members, the organization grew rapidly in both size and importance.

Chapters Abroad

It now boasts a pair of retired major generals on its executive committee and board of directors, along with committed members in corporate board rooms across the country. There are 81 separate chapters, or "roosts," including groups in Australia, Japan, Taiwan and the Netherlands.

Continued

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2.

"We don't try to impede or criticize the military," explains William S. Crawford, another association founder who now works as a consultant in the field. However, that didn't prevent Mr. Zettl, one of the most senior and respected Old Crows, from running into difficulty: Pentagon auditors turned up an unauthorized classified document during a routine audit of one of Mr. Zettl's client companies, and the auditors started asking questions about how it got into the files. The company initially balked at providing an explanation, so the Pentagon's inspector general began a full-scale investigation to track down the leak. Mr. Zettl and his supporters won't identify the company, and neither will the government.

The investigation comes at a time when the Pentagon is enforcing tough new security protections and when senior policy makers such as Defense Undersecretary Fred Ikle are railing against leaks of all kinds. The Zettl case also coincides with publicity about a separate Pentagon investigation of allegations that a Ford Motor Co. subsidiary and other companies working on the Army's controversial $4.5 billion Divad antiaircraft gun hired at least eight retired military officers who previously had important roles in the weapon's development.

Expenditure Analyses

Among the documents Mr. Zettl allegedly passed to industry officials were five-year and one-year intelligence-expenditure analyses for the Air Force and summaries of electronic-warfare budget priorities for the Navy. Mr. Zettl maintains that all of the material was legally available to any contractor who had the required security clearance and could demonstrate "a need to know" about such projections. The most he was guilty of, Mr. Zettl's supporters contend, was technical violations of security rules for failing to officially sign out and adequately safeguard the documents.

"There are all kinds of people out there, call them consultants if you will, who make a living trying to understand such documents" and then translate them for companies, says Mr. Klimek, the association's lawyer. Mr. Klimek adds that when he worked on electronic-warfare projects in the Pentagon, "Bernie Zettl used to come around and talk to me from time to time" without ever abusing his security clearance by requesting documents.

Recently, Mr. Klimek asserts, the government has "tried to intimidate and threaten" him and some active military personnel who knew Mr. Zettl by calling them to testify before a grand jury in Alexandria, Va., or requiring them to submit to long interviews with Pentagon criminal investigators.

It isn't clear how many documents are part of the investigation, although some Old Crows familiar with the details of the case suggest it could be as many as a dozen spread over a period of several years.

Mr. Zettl won't discuss details of the documents, except to say that they didn't include the most highly classified and valuable "project-specific" information. And despite the government scrutiny of leaks, he asserts, "it's still good business and visibility for companies" selling to the Pentagon to have their executives elected to run the Association of Old Crows.

The association's officials and military backers strongly defend the organization. George Nicholas, the Pentagon's assistant director of electronic combat, says he was "concerned" when he first learned about the investigation but is now satisfied that the group's current leadership wasn't involved in any questionable activities. "The Pentagon has always supported the Old Crows," he says, and relied on them to help solve the "tough political and technical problems" of electronic warfare.

Lynwood Cosby, former superintendent of tactical electronic-warfare weapons at the Naval Research Laboratory who now works for Teledyne Inc. and is a past president of the Old Crows, says a major goal of the association is to "create the environment where exchange of information between the military and contractors can flourish." National-security restrictions, Mr. Cosby argues, sometimes "create an unnecessary impediment to the information flow" and prevent contractors "from knowing how to invest" intelligently for the future. "I'm not sure he (Mr. Zettl) did anything wrong," Mr. Cosby says.

Prosecutors' View

Prosecutors, on the other hand, are known to believe that committing even technical violations of security rules, particularly among people accustomed to dealing with sensitive information, would show that Mr. Zettl and his associates recognized that the documents were obtained and circulated outside the law. "The government attorneys keep insisting that the documents were stolen or otherwise corruptly obtained," says one Old Crow recently interviewed by investigators.

Adm. Gallotta suggests that the investigation is focusing on "questions of favoritism" involving some of the companies that hired Mr. Zettl. Anton Brees, a Northrop Corp. executive and retired Air Force official on the association's board, says that some Pentagon officer probably gave the documents to Mr. Zettl as a sign of friendship and trust. If so, Mr. Brees adds, such a relatively minor mistake "surely doesn't wipe out 20 years of productive and patriotic work" by the Old Crows.

Mr. Slayton, the association's director, says Mr. Zettl remains a member of the Old Crows but hasn't been active in running the organization for several years. Investigators have asked the association for information about several current or former members who were friends or business associates of Mr. Zettl. But it isn't clear how many other individuals in the association or in the Pentagon also may be targets of the grand-jury proceedings.

Some members of the group associated with Mr. Zettl appear bitter about the unwanted attention. Retired Air Force Maj. Gen. Gerald Carey, for instance, who works as a researcher at Georgia Institute of Technology and also serves as a director of the Old Crows, praises the association for creating a "vehicle that allows government, industry and universities to share information" about the latest advances in electronic warfare.

Without such cooperation, Mr. Carey suggests, the U.S. may be unable to take full advantage of developments in laser technology, electronically controlled optical systems, and artificial intelligence to track enemy weapons and avoid detection of its own. "I don't think what he (Mr. Zettl) was doing had anything to do with the Old Crows" or its importance as an institution, Mr. Carey argues.

Old Crows President Doyle Larson, former commander of the Air Force's Electronic Security Command, insists that the association helps give industry "guidance and direction" that would be "impossible" for the Pentagon to provide by itself.

The government's scrutiny of Mr. Zettl's consulting work also has raised questions about some of his other activities. A federal indictment released in Cleveland last month doesn't name Mr. Zettl as a defendant but says that he played a key role in helping a friend and former National Aeronautics and Space Administration official submit more than $6,800 of false travel vouchers to the government. The indictment says that Mr. Zettl participated in the allegedly fraudulent scheme at the same time that a number of his clients, including TRW and Sanders Associates, were interested in obtaining federal contracts at a NASA facility run by the same official.

Meanwhile, friends worry that Mr. Zettl seems increasingly depressed as the current investigation drags on. He has lost nearly all his defense-contractor clients, and many of the companies voluntarily tightened internal procedures for obtaining and handling classified materials. "They're afraid to have somebody working for them who is under investigation," Mr. Zettl complains.

The only reason the government singled him out for prosecution, the consultant told a reporter over the phone recently, is because "I was a big name in the aerospace industry. I knew virtually everyone in the business." But Mr. Zettl contends, "I didn't do anything different or improper" compared with "other people in the field."

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[HN01CJ][GDrive]

1985 (Sep 11)

Full page : [HN01C9][GDrive]

Arizona Daily Sun (Flagstaff, Arizona) · 11 Sep 1985, Wed · Page 6

6—The SUN, Flagstaff, Arizona, Wednesday, September 11, 1985

Jury Indicts GTE Trio In Defense Fraud Case

WASHINGTON (UPI) — A federal grand jury has indicted three GTE Corp. officials for conspiring to obtain and use secret Pentagon documents to get government contracts, the Justice Department announced.

Attorney General Edwin Meese said the Justice Department also charged the defense arm of the company, GTE Government Systems Corp., in a separate action with an additional count of conspiracy.

The Pentagon said Tuesday the Waltham, Mass., company, which manufactures electronic warfare equipment, will plead guilty to the charge that it used the classified internal documents "to defraud the United States."

The indictment, returned in U.S. District Court in Alexandria, Va., charged a consultant and two company officials with illegally obtaining sensitive Pentagon budget documents that "reflect the potential procurements of the department ... (and) contain proprietary and classified information."

Those officials used the inside information to help the company obtain government contracts, the indictment said.

The indictment also charged the three with unauthorized possession of a classified document, using a section of the law normally reserved for espionage cases.

The separate count of conspiracy charged against the company said GTE officials took extraordinary steps to conceal their activity, the Justice Department said.

Named as defendants in the five-count indictment were:

- Robert Carter, 55, of Mountain View, Calif., a former GTE employee who was marketing manager of the Electronic Warfare Organization of GTE's Western Division.
- Walter Edgington, 60, of Annandale, Va., a GTE vice president for marketing with offices in Rossyln, Va.
- Bernie Zettl, 62, of McLean, Va., a consultant doing business as Zettl Associates, with offices in Virginia.

If convicted, GTE Government Systems Corp. faces a maximum fine of $10,000. The individuals indicted face fines and sentences up to $30,000 and 25 years in prison.

[HN01CA][GDrive]

1985 (Sep 17) - The Boston Globe

Full pages : Page 43 at [HN01CD][GDrive] , Page 49 at [HN01CF][GDrive]

Budget data flowed freely in GTE bidding

By Bruce Mohl
Globe Staff

ALEXANDRIA, Va. – With thinning white hair and sporting a dark green sweater beneath a sportcoat, 62-year-old Bernie E. Zettl looks more like your typical grandfather than a spy.

But the US Justice Department says Zettl was indeed a spy, an industrial spy who worked as a consultant for some of the nation's largest defense contractors. The Justice Department has accused Zettl of violating federal espionage statutes by acting as the middleman in a conspiracy to obtain classified Defense Department budget documents.

Government investigators say Zettl acquired the secret documents from a source in the Pentagon and passed them along to GTE Government Systems Corp. of Waltham, Mass., which was eager to use the information to get a leg up on its competitors in bidding on government contracts.

Zettl declined to comment yesterday as he was arraigned in US District Court here. He asked for a jury trial and the trial date was set for Nov. 13.

But the GTE case, which broke last week, is causing consterna-

'Zettl was getting documents . . . [congressmen] can't obtain.'

– US Sen. Charles Grassley

tion in defense contractor circles, where, some contractors say, use of such classified budget documents is common industry practice.

The government crackdown is also giving jitters to a number of companies that have dealt with Zettl. Sanders Associates of Nash-

Bernie Zettl: More like a grandfather than a spy.

ua, N.H., which acknowledges it employed Zettl for 10 years, has been under investigation by the Justice Department, according to the company. Several Sanders employees were interviewed by government investigators earlier this year, but no action has been taken.

What is startling about the case is the acknowledgment that classified budget information not available even to Congress flows freely between the Pentagon and its suppliers. A GTE spokesman, for example, said the use of classified budget documents by contractors is frequently practiced. In its guilty plea last week, the company even said it would occasionally tell Zettl which documents it wanted.

"Zettl was getting documents from the inside and selling them, documents that members of Congress can't obtain," said Sen. Charles Grassley (R-Iowa). "It's an example of the old buddy-buddy relationship that just builds up between defense contractors and the Defense Department."

But industry officials said the Pentagon was well aware of what was happening and supported it. "It was kind of an open secret,"

ZETTL, Page 48

1985-09-17-the-boston-globe-pg-43-clip-gte-zettl

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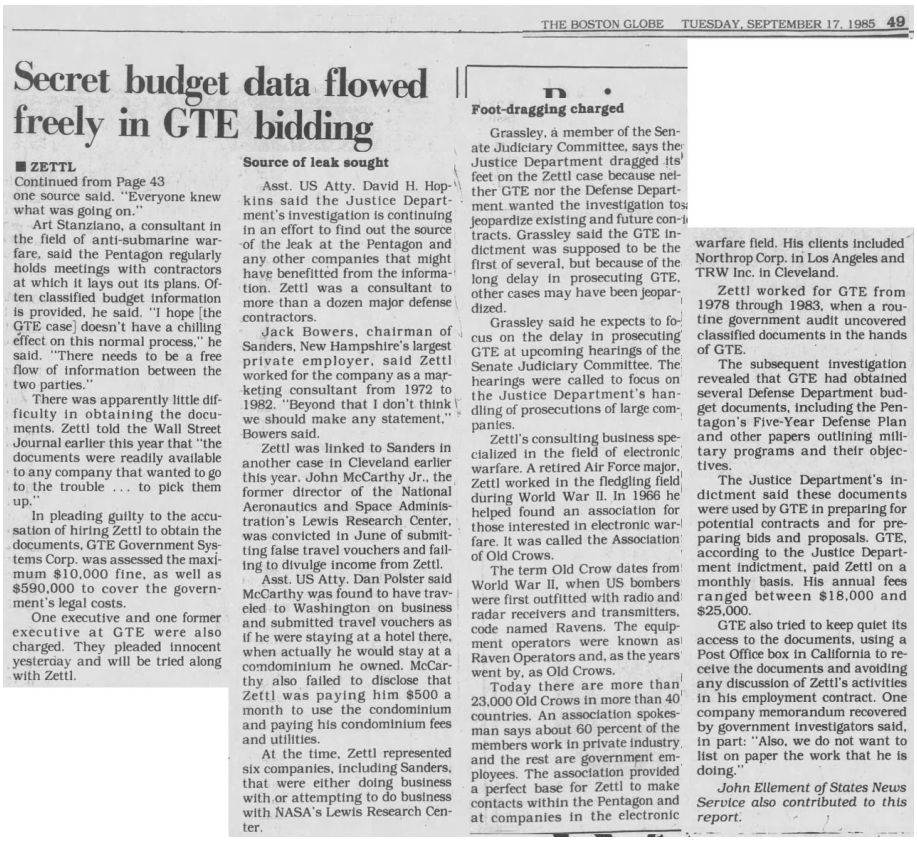

Secret budget data flowed freely in GTE bidding

■ **ZETTL**

Continued from Page 43

one source said. "Everyone knew what was going on."

Art Stanziano, a consultant in the field of anti-submarine warfare, said the Pentagon regularly holds meetings with contractors at which it lays out its plans. Often classified budget information is provided, he said. "I hope [the GTE case] doesn't have a chilling effect on this normal process," he said. "There needs to be a free flow of information between the two parties."

There was apparently little difficulty in obtaining the documents. Zettl told the Wall Street Journal earlier this year that "the documents were readily available to any company that wanted to go to the trouble . . . to pick them up."

In pleading guilty to the accusation of hiring Zettl to obtain the documents, GTE Government Systems Corp. was assessed the maximum $10,000 fine, as well as $590,000 to cover the government's legal costs.

One executive and one former executive at GTE were also charged. They pleaded innocent yesterday and will be tried along with Zettl.

Source of leak sought

Asst. US Atty. David H. Hopkins said the Justice Department's investigation is continuing in an effort to find out the source of the leak at the Pentagon and any other companies that might have benefitted from the information. Zettl was a consultant to more than a dozen major defense contractors.

Jack Bowers, chairman of Sanders, New Hampshire's largest private employer, said Zettl worked for the company as a marketing consultant from 1972 to 1982. "Beyond that I don't think we should make any statement," Bowers said.

Zettl was linked to Sanders in another case in Cleveland earlier this year. John McCarthy Jr., the former director of the National Aeronautics and Space Administration's Lewis Research Center, was convicted in June of submitting false travel vouchers and failing to divulge income from Zettl.

Asst. US Atty. Dan Polster said McCarthy was found to have traveled to Washington on business and submitted travel vouchers as if he were staying at a hotel there, when actually he would stay at a condominium he owned. McCarthy also failed to disclose that Zettl was paying him $500 a month to use the condominium and paying his condominium fees and utilities.

At the time, Zettl represented six companies, including Sanders, that were either doing business with or attempting to do business with NASA's Lewis Research Center.

Foot-dragging charged

Grassley, a member of the Senate Judiciary Committee, says the Justice Department dragged its feet on the Zettl case because neither GTE nor the Defense Department wanted the investigation to jeopardize existing and future contracts. Grassley said the GTE indictment was supposed to be the first of several, but because of the long delay in prosecuting GTE, other cases may have been jeopardized.

Grassley said he expects to focus on the delay in prosecuting GTE at upcoming hearings of the Senate Judiciary Committee. The hearings were called to focus on the Justice Department's handling of prosecutions of large companies.

Zettl's consulting business specialized in the field of electronic warfare. A retired Air Force major, Zettl worked in the fledgling field during World War II. In 1966 he helped found an association for those interested in electronic warfare. It was called the Association of Old Crows.

The term Old Crow dates from World War II, when US bombers were first outfitted with radio and radar receivers and transmitters, code named Ravens. The equipment operators were known as Raven Operators and, as the years went by, as Old Crows.

Today there are more than 23,000 Old Crows in more than 40 countries. An association spokesman says about 60 percent of the members work in private industry, and the rest are government employees. The association provided a perfect base for Zettl to make contacts within the Pentagon and at companies in the electronic warfare field. His clients included Northrop Corp. in Los Angeles and TRW Inc. in Cleveland.

Zettl worked for GTE from 1978 through 1983, when a routine government audit uncovered classified documents in the hands of GTE.

The subsequent investigation revealed that GTE had obtained several Defense Department budget documents, including the Pentagon's Five-Year Defense Plan and other papers outlining military programs and their objectives.

The Justice Department's indictment said these documents were used by GTE in preparing for potential contracts and for preparing bids and proposals. GTE, according to the Justice Department indictment, paid Zettl on a monthly basis. His annual fees ranged between $18,000 and $25,000.

GTE also tried to keep quiet its access to the documents, using a Post Office box in California to receive the documents and avoiding any discussion of Zettl's activities in his employment contract. One company memorandum recovered by government investigators said, in part: "Also, we do not want to list on paper the work that he is doing."

John Ellement of States News Service also contributed to this report.

[HN01CG][GDrive]

1993 - Marriage

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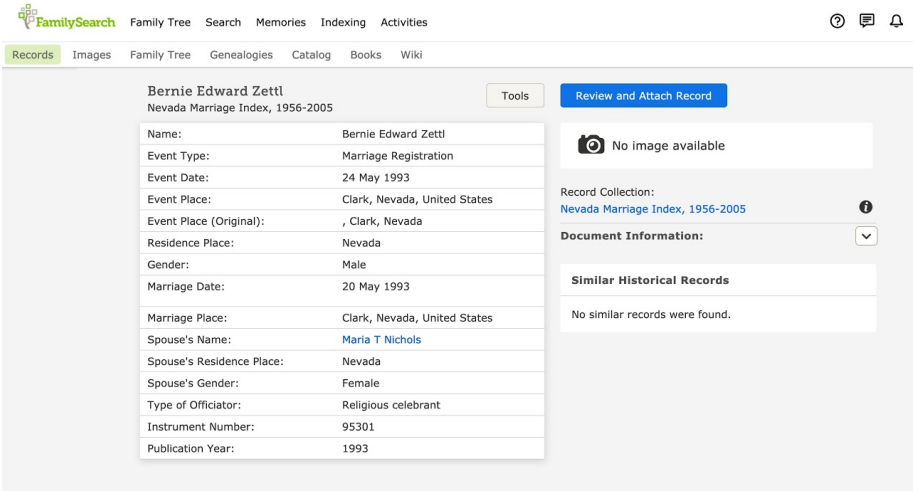
2020-12-13-familysearch-org-bernie-e-zettl-record-marriage.jpg



US, SS applications and claims - Bernie Edward Zettl

https://www.ancestry.com/discoveryui-content/view/41703155:60901?indiv=try&viewrecord=1&r=an

Name: Bernie Edward Zettl

Birth Date: 2 Dec 1922 in St Louis, Mississippi

Death Date: 29 Dec 1997

Father: Henry L Zettl

Mother: Evelyn Stiles

[...]

daughter's marriage - https://www.ancestry.com/imageviewer/collections/9279/images/43068_162028006055_0756-00025?pId=163638623

1988 living only a few blocks from gates sr childhood home https://www.ancestry.com/discoveryui-content/view/198026125:1788?indiv=1&tid=&pid=&queryId=3a62393dc366469b35c741ea09cdf218&usePUB=true&_phsrc=fEm62&_phstart=successSource

Relatives

Wife (1st) - Charleen Olga Zettl (passed Sep 19, 2019)

September 6, 1929 - September 19, 2019 / Source : [HL005U][GDrive]

Charleen McHale-Zettl passed on 19 Sep surrounded by her children. She lived 90 event filled years and is survived by her children Mary, RoseAnne and Gary, and 2 granddaughters. She was from a long time Bremerton family connected to the Navy Shipyard. **She attended Star of the Sea & Bremerton High class of '48. Her first real job took her to Boeing Seattle as an admin worker. There she met a dashing Air Force pilot, Bernie Zettl, who snuck her on to the prototype Boeing 707, wearing a parachute for her first ever airplane ride!** They married a year later, joining the military family, and making many life-long friends. Charleen continued federal civil service work. In Dayton she worked in the office that developed the F-111. 20 years later her son piloted F-111's into harms way. She returned to Bremerton in the 80s and worked for the Red Cross. After her retirement she was a volunteer for 25+ years at the Puget Sound Navy Museum running the gift shop. Charleen led a life of service before self, qualities she inherited from this fine city of artisans, shipwrights and servicemen. In memory of her, please consider supporting the Navy Museum via an Amazon “smiles" login where a small percentage of each purchase goes to the museum at no additional charge.

Sister-in-law Mary Catherine McHale (passing June 2019)

July 31, 1922 - June 19, 2019 / Source - [HL005V][GDrive]

Mary Catherine was born in Pocatello, Idaho, as the first child of Charles T. (Red) McHale and Olga Schmidt McHale. The family settled in Bremerton, where it grew to seven; Mary, Rose, Francis (Toni), Terry Couse (all deceased), Charleen Zettl, PJ Lund (Bremerton), and Edward (Camarillo, CA). An alumna of Star of the Sea elementary school and Bremerton high school (class of 1940), she headed to Chicago to attend Mundelein College, including study abroad in South Hampton, England. In 1943, Mary joined the U.S. Army out of Ft. Lewis, Washington. She supported the war effort until its end in 1945 and returned to college at Seattle University. In 1950, after a few years in the private sector, Mary returned to active duty with the Army and was stationed in Ft. Ord, California.

The Monterey Bay area became her life-long home and she made a 44-year long career out of administrative support for the Defense Language Institute at the Presidio there (this included a 10-year stint in Washington, D.C.). She was a life-long member of Altrusa International and the Catholic Daughters of the Americas. Her Catholic faith was unwavering and demonstrated by her excitement to bundle up in her winter-woolies and stand at 4:00 am, in the freezing winds of Laguna Seca to see and hear Pope John Paul II.

Travel was a passion for her. If a friend suggested a trip to Europe, South America, or the Vatican, she was packed and ready to go… always toting a 35mm camera and a bag full of film. She had friends and a large, extended family all over the United States and would visit them regularly. She was an oral historian and could give you details of your own hometown that even you didn't know. The constant adventurer, Mary would never take the same route home from anywhere. Between the St. Angela Merici parish and the family home in Pacific Grove, it could take hours, with a cruise along the bay, or 17-Mile Drive, through the Presidio, up and down Prescott Avenue, or even a stop at Dennis the Menace park. Her nieces and nephews were always entertained and scared to death by her lack of attention to the road.

Mary moved back to Bremerton in 2006 and spent the last four years at Later Years Adult Family Home. The owner, Tammy and staff took wonderful care of her and enjoyed her feisty nature. She was an independent person, doing as she pleased until the end. Her family would like to thank everyone for their compassion.

Besides her two sisters and brother, Mary (Auntie Cathie to many of us) is survived by twelve nieces and nephews and thirteen great nieces and nephews

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Frances McHale - Passing 2006 (June 14, 2006)

Source : [HL005W][GDrive]

March 10, 1925 To June 10, 2006

Frances A. "Toni" McHale, 81, of Bremerton died Saturday. She was born in Seattle to Charles and Olga (Schmidt) McHale. She attended Bremerton High School, and worked as an accountant for KBRO. She also worked with the Naval Post Graduate School, Fleet Numerical Weather Facility in Monterrey, Calif., the U.S. State Department in Guatemala and Keyport Naval Torpedo Station. Ms. McHale was an accomplished seamstress and knitter. She was an active member of St. Angela's Catholic Church. She was preceded in death by her sisters, Anna Barry and Theresa Crouse. She is survived by her brother, Edward McHale; sisters, P.J. Lund (Ron), Charleen Zettl and Mary Catherine McHale; her cousin, Noray Larson; and lifelong friends, Frances and Walter McConnell, Jeannie Rowlett and Jo Lauth. Visitation: 10 a.m. to 11 a.m. Friday at Holy Trinity Catholic Church, with a service to follow.

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https://apps.dtic.mil/dtic/tr/fulltext/u2/a281541.pdf

https://apps.dtic.mil/sti/pdfs/ADA360507.pdf

"BE Zettl"

Philip Richard Zimmermann Sr (born 1922)

Born : Oct 15 1922 [HG0005][GDrive]

Children :

- **Philip Richard Zimmermann Jr** (born 1954)

1930 US Census

Transcript - [HS0001][GDrive] / Full Census Form - [HS0002][GDrive]

Philip R Zimmerman
United States Census, 1930

Tools

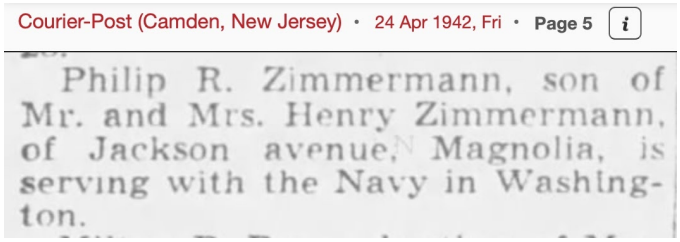
Name:	Philip R Zimmerman
Event Type:	Census
Event Date:	1930
Event Place:	Palmyra, Burlington, New Jersey, United States
Gender:	Male
Age:	7
Marital Status:	Single
Race:	White
Race (Original):	White
Relationship to Head of Household:	Son
Relationship to Head of Household (Original):	Son
Birth Year (Estimated):	1923
Birthplace:	New Jersey
Father's Birthplace:	Pennsylvania
Mother's Birthplace:	Tennessee
Sheet Letter:	A
Sheet Number:	3

Household	Role	Sex	Age	Birthplace
Henry G Zimmerman	Head	Male	33	Pennsylvania
Lovada H Zimmerman	Wife	Female	32	Tennessee
Mildred L Zimmerman	Daughter	Female	11	New Jersey
Caroline M Zimmerman	Daughter	Female	10	New Jersey
Evelyn M Zimmerman	Daughter	Female	5	New Jersey
June E Zimmerman	Daughter	Female	1	New Jersey
Philip R Zimmerman	Son	Male	7	New Jersey
Robert B Zimmerman	Son	Male	3	New Jersey

[HS0003][GDrive]

1942 (April) Gets into US Navy, serving in Washington DC

Full page : [HN0032][GDrive]



Courier-Post (Camden, New Jersey) • 24 Apr 1942, Fri • Page 5

Philip R. Zimmermann, son of Mr. and Mrs. Henry Zimmermann, of Jackson avenue, Magnolia, is serving with the Navy in Washington.

[HN0033][GDrive]

17 Oct 1942 - Wedding

PDF Transcript : [HL0004][GDrive] / Image at [HL0005][GDrive]

First name(s) Philip Richard

Last name Zimmermann

Age 22 / Birth year 1920

Event date 17 Oct 1942

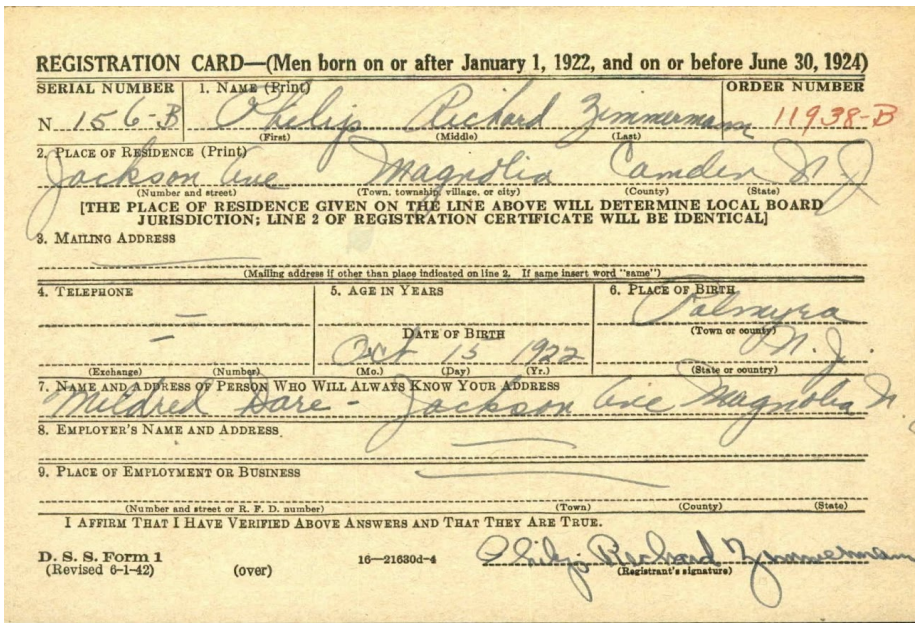
Location - Place District Of Columbia, United States

Spouse's first name(s) Myra Vermell

Spouse's last name Wyatt

Spouse's age 22 / Spouse's birth year 1920

WW2 Draft - Why is this dated 1946 ?



REGISTRATION CARD—(Men born on or after January 1, 1922, and on or before June 30, 1924)

SERIAL NUMBER N 156-B | 1. NAME (Print) Philip Richard Zimmermann | ORDER NUMBER 11938-B

2. PLACE OF RESIDENCE (Print) Jackson Ave Magnolia Camden N.J.

(Number and street) (Town, township, village, or city) (County) (State)

[THE PLACE OF RESIDENCE GIVEN ON THE LINE ABOVE WILL DETERMINE LOCAL BOARD JURISDICTION; LINE 2 OF REGISTRATION CERTIFICATE WILL BE IDENTICAL]

3. MAILING ADDRESS

(Mailing address if other than place indicated on line 2. If same insert word "same")

4. TELEPHONE — (Exchange) (Number)

5. AGE IN YEARS — DATE OF BIRTH Oct 5 1922 (Mo.) (Day) (Yr.)

6. PLACE OF BIRTH Palmyra (Town or county) N.J. (State or country)

7. NAME AND ADDRESS OF PERSON WHO WILL ALWAYS KNOW YOUR ADDRESS Mildred Dare - Jackson Ave Magnolia N.J.

8. EMPLOYER'S NAME AND ADDRESS

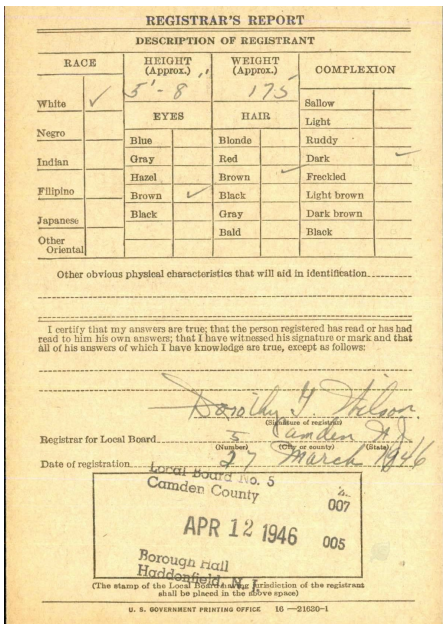
9. PLACE OF EMPLOYMENT OR BUSINESS

(Number and street or R. F. D. number) (Town) (County) (State)

I AFFIRM THAT I HAVE VERIFIED ABOVE ANSWERS AND THAT THEY ARE TRUE.

D. S. S. Form 1 (Revised 6-1-42) (over) 16—21630d-4 Philip Richard Zimmermann (Registrant's signature)

[HG0005][GDrive]



REGISTRAR'S REPORT

DESCRIPTION OF REGISTRANT

RACE		HEIGHT (Approx.)		WEIGHT (Approx.)		COMPLEXION	
White	✓	5'-8"		175		Sallow	
Negro		EYES		HAIR		Light	
Indian		Blue		Blonde		Ruddy	
Filipino		Gray		Red		Dark	
Japanese		Hazel		Brown	✓	Freckled	
Other Oriental		Brown	✓	Black		Light brown	
		Black		Gray		Dark brown	
				Bald		Black	

Other obvious physical characteristics that will aid in identification

I certify that my answers are true; that the person registered has read or has had read to him his own answers; that I have witnessed his signature or mark and that all of his answers of which I have knowledge are true, except as follows:

Dorothy J. Wilson (Signature of registrant)

Registrar for Local Board 5 (Number) Camden (City or county) N.J. (State)

Date of registration March 27 1946

Local Board No. 5 Camden County N.J. 007 APR 12 1946 005 Borough Hall Haddonfield N.J.

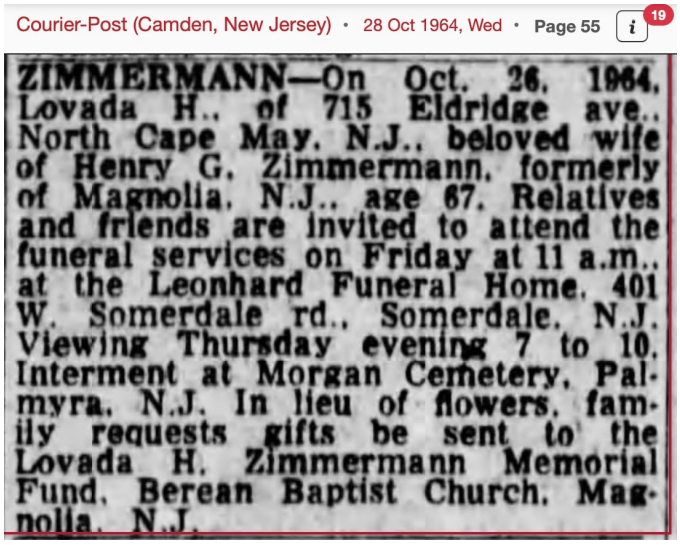
(The stamp of the Local Board having jurisdiction of the registrant shall be placed in the above space)

U. S. GOVERNMENT PRINTING OFFICE 16—21630-1

[HG0006][GDrive]

1964 (Oct) - Mother passes - Lovada H Zimmermann

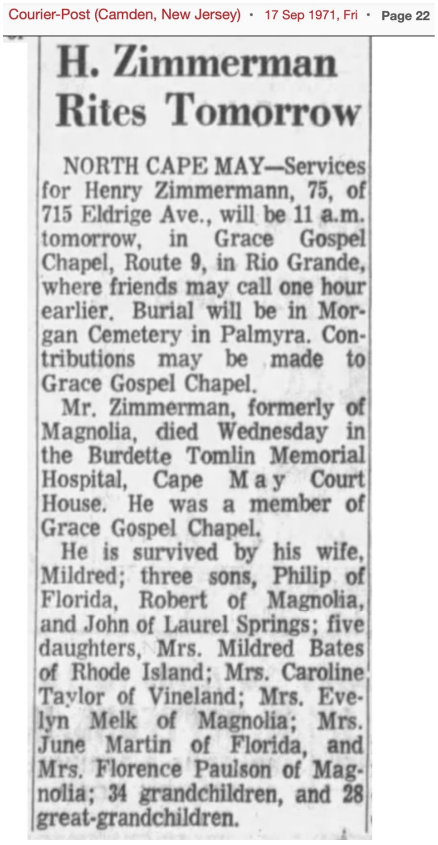
Full page : [HN0030][GDrive]



[HN0031][GDrive]

1971 (Sep 17) - Father passes (Henry Zimmermann)

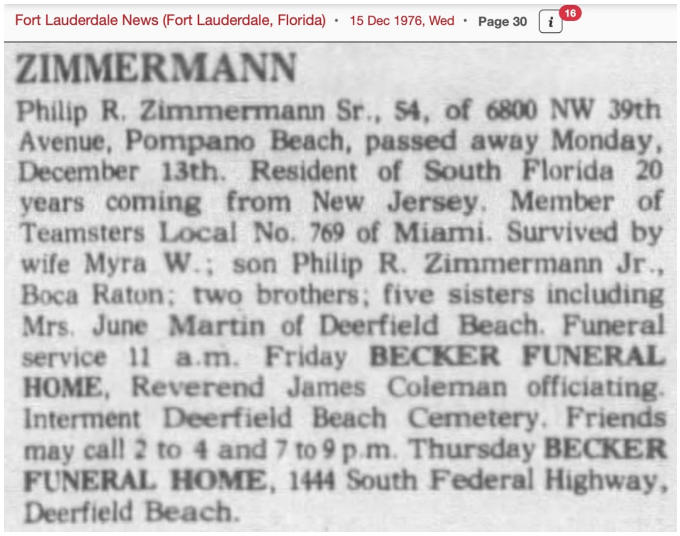
Full page : [HN002Y][GDrive]



[HN002Z][GDrive]

1976 (Dec) - Passes

Full page : [HN002F][GDrive]


Fort Lauderdale News (Fort Lauderdale, Florida) · 15 Dec 1976, Wed · Page 30

ZIMMERMANN

Philip R. Zimmermann Sr., 54, of 6800 NW 39th Avenue, Pompano Beach, passed away Monday, December 13th. Resident of South Florida 20 years coming from New Jersey. Member of Teamsters Local No. 769 of Miami. Survived by wife Myra W.; son Philip R. Zimmermann Jr., Boca Raton; two brothers; five sisters including Mrs. June Martin of Deerfield Beach. Funeral service 11 a.m. Friday **BECKER FUNERAL HOME**, Reverend James Coleman officiating. Interment Deerfield Beach Cemetery. Friends may call 2 to 4 and 7 to 9 p.m. Thursday **BECKER FUNERAL HOME**, 1444 South Federal Highway, Deerfield Beach.

[HN002G][GDrive]

GRAVE : https://www.findagrave.com/memorial/36967076/philip-r-zimmermann

OTHER FAMILY NOTES

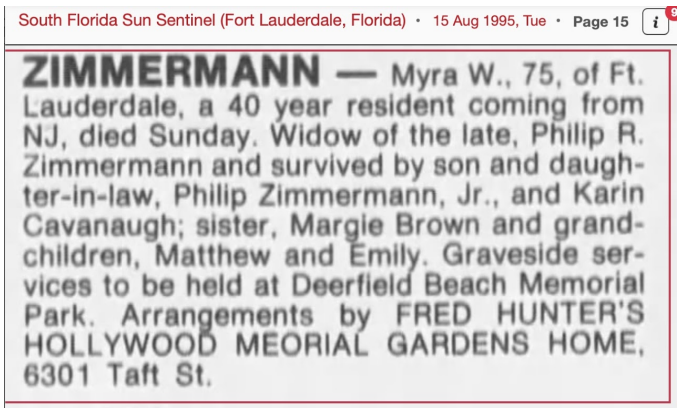
(wife) Myra V Wyatt - born 1920/21

https://www.findmypast.com/transcript?id=USC%2F1930%2F004950784%2F00643%2F015

https://search.findmypast.com/record?id=USC%2F1930%2F004950784%2F00643&parentid=USC%2F1930%2F004950784%2F00643%2F015

1995 (Aug 13) - Mother Myra Zimmermann passes

Full page : [HN002P][GDrive]


South Florida Sun Sentinel (Fort Lauderdale, Florida) · 15 Aug 1995, Tue · Page 15

ZIMMERMANN — Myra W., 75, of Ft. Lauderdale, a 40 year resident coming from NJ, died Sunday. Widow of the late, Philip R. Zimmermann and survived by son and daughter-in-law, Philip Zimmermann, Jr., and Karin Cavanaugh; sister, Margie Brown and grandchildren, Matthew and Emily. Graveside services to be held at Deerfield Beach Memorial Park. Arrangements by FRED HUNTER'S HOLLYWOOD MEORIAL GARDENS HOME, 6301 Taft St.

[HN002Q][GDrive]

Myra Zimmermann Passing -

Transcript : [HL0006][GDrive]

Myra W Zimmermann
United States, GenealogyBank Obituaries, 1980-2014

Tools

Deceased	
Name:	Myra W Zimmermann
Event Type:	Obituary
Event Date:	15 Aug 1995
Event Place:	Fort Lauderdale, Florida, United States
Residence Place:	Fort Lauderdale
Gender:	Female
Age:	75
Birth Year (Estimated):	1920
Death Date:	13 Aug 1995
Newspaper:	South Florida Sun-Sentinel

Parents and Siblings		
Margie Brown	Sister	Female
Emily	Sister	Female
Extended Family		
Matthew	Grandson	Male
Karin Cavanaugh	DaughterInLaw	Female
Others on Record		
Philip Zimmermann Jr	Unknown	Male
Fred Hunter	Unknown	Male

[HL0007][GDrive]

2018 (Jan 5) - Passing of Brother Robert B Zimmermann :

https://www.findagrave.com/memorial/186570067/robert-b-zimmermann

Birth 27 Dec 1926

Death 5 Jan 2018 (aged 91)

Burial : Brig Gen Wm C Doyle Veterans Memorial Cemetery

Arneytown, Burlington County, New Jersey, USA

Plot O2 6709

On January 5, 2018 of Magnolia, NJ. Age 91 years.

Beloved husband of the late Mary A. (nee Atkins). Devoted father of Barbara M. Irving, Nancy J. Perozzi, James R. Zimmermann, Steven E. Zimmermann, Carol S. Boyd, Robert W. Zimmermann, and Marianne L. McNeill. Dear brother of Evelyn Melk, June Martin, John Zimmermann, and Florence Paulson. Special friend of Sandy Russell.

He was very proud of his many grandchildren and great grandchildren and great-great grandchild with more on the way.

A U.S. Navy WWII veteran, Mr. Zimmermann was an original member of the Solid Rock Baptist Church where he was very active in the congregation and Sunday School classes right up until his death.

Relatives and friends are invited to attend his viewing Monday evening 4:00-6:00PM January 15th at the SOLID ROCK BAPTIST CHURCH 420 S. WHITE HORSE PIKE BERLIN, NJ 08009. Funeral service 6:30PM. Private interment in Brig. Gen. Wm. C. Doyle Veterans Cemetery Arneytown, NJ. Please, no flowers.

Contributions to Vision Baptist College Fund 420 S. WHITE HORSE PIKE BERLIN, NJ 08009 are preferred by the family. Arrangements under the direction of the COSTANTINO FUNERAL HOME 231 W. WHITE HORSE PIKE BERLIN, NJ 08009. For additional information or to send condolences: Costantinofuneralhome.com

Published in Courier-Post on Jan. 11, 2018

June Zimmermann wedding announcement - https://www.newspapers.com/image/525144805/?terms=%22june%2Bzimmermann%22

2007 - Mildred Dare passes - https://www.newspapers.com/image/227286251/?terms=lovada%2Bzimmermann

https://www.newspapers.com/image/182074421/?terms=lovada%2Bzimmermann

BITCHUTE @Housatonic **YOUTUBE** @HousatonicLive **ODYSEE** @Housatonic **BRIGHTEON** @Housatonic

Housatonic

Philip Richard Zimmermann Jr (born 1954)

Wikipedia Phil Zimmermann

Born Feb 12 1954 (https://www.s9.com/Biography/zimmermann-philip/)

Father : **Philip Richard Zimmermann Sr** (born 1922)

Wikipedia (saved) - [HK000E][GDrive]

Philip R. "Phil" Zimmermann *(born 1954) is an American computer scientist and cryptographer. He is the creator of Pretty Good Privacy (PGP), the most widely used email encryption software in the world. He is also known for his work in VoIP encryption protocols, notably ZRTP and Zfone. Zimmermann is co-founder and Chief Scientist of the global encrypted communications firm Silent Circle.*

Background

He was born in Camden, New Jersey. Zimmermann received a B.S. degree in computer science from Florida Atlantic University in Boca Raton, Florida in 1978. In the 1980s, Zimmermann worked in Boulder, Colorado as a software engineer and was a part of the Nuclear Weapons Freeze Campaign as a military policy analyst.

PGP

In 1991, he wrote the popular Pretty Good Privacy (PGP) program, and made it available (together with its source code) through public FTP for download, the first widely available program implementing public-key cryptography. Shortly thereafter, it became available overseas via the Internet, though Zimmermann has said he had no part in its distribution outside the United States.

The very first version of PGP included an encryption algorithm, BassOmatic, developed by Zimmermann.

Arms Export Control Act investigation

After a report from RSA Security, who were in a licensing dispute with regard to the use of the RSA algorithm in PGP, the United States Customs Service started a criminal investigation of Zimmermann, for allegedly violating the Arms Export Control Act. The United States Government had long regarded cryptographic software as a munition, and thus subject to arms trafficking export controls. At that time, PGP was considered to be impermissible ("high-strength") for export from the United States. The maximum strength allowed for legal export has since been raised and now allows PGP to be exported. The investigation lasted three years, but was finally dropped without filing charges.

After the government dropped its case without indictment in early 1996, Zimmermann founded PGP Inc. and released an updated version of PGP and some additional related products. That company was acquired by Network Associates (NAI) in December 1997, and Zimmermann stayed on for three years as a Senior Fellow. NAI decided to drop the product line and in 2002, PGP was acquired from NAI by a new company called PGP Corporation. Zimmermann served as a special advisor and consultant to that firm until Symantec acquired PGP Corporation in 2010. Zimmermann is also a fellow at the Stanford Law School's Center for Internet and Society. He was a principal designer of the cryptographic key agreement protocol (the "association model") for the Wireless USB standard.

Silent Circle

Along with Mike Janke and Jon Callas, in 2012 he co-founded Silent Circle, a secure hardware and subscription based software security company.

Dark Mail Alliance

In October 2013, Zimmermann, along with other key employees from Silent Circle, teamed up with Lavabit founder Ladar Levison to create the Dark Mail Alliance. The goal of the organization is to work on a new protocol to replace PGP that will encrypt email metadata, among other things that PGP is not capable of.

Zimmermann's Law

In 2013, an article on Zimmermann's Law quoted Phil Zimmermann as saying The natural flow of technology tends to move in the direction of making surveillance easier, and the ability of computers to track us doubles every eighteen months, in reference to Moore's law.

Awards and other recognition

Zimmermann has received numerous technical and humanitarian awards for his pioneering work in cryptography:

- *In 2018, Zimmermann was inducted into Information Systems Security Association (ISSA) hall of fame by the ISSA International Organization on October 16, 2018.*
- *In 2012, Zimmermann was inducted into the Internet Hall of Fame by the Internet Society.*
- *In 2008, PC World named Zimmermann one of the "Top 50 Tech Visionaries" of the last 50 years.*
- *In 2006, **eWeek** ranked PGP 9th in the 25 Most Influential and Innovative Products introduced since the invention of the PC in 1981.*
- *In 2003, **Reason** named him a "Hero of Freedom"*
- *In 2001, Zimmermann was inducted into the CRN Industry Hall of Fame.*
- *In 2000, **InfoWorld** named him one of the "Top 10 Innovators in E-business".*
- *In 1999, he received the Louis Brandeis Award from Privacy International.*
- *In 1998, he received a Lifetime Achievement Award from Secure Computing Magazine.*
- *In 1996, he received the Norbert Wiener Award for Social and Professional Responsibility for promoting the responsible use of technology.*
- *In 1995, he received the Chrysler Design Award for Innovation, and the Pioneer Award from the Electronic Frontier Foundation.*
- *In 1995, **Newsweek** also named Zimmermann one of the "Net 50", the 50 most influential people on the Internet.*

Simon Singh's The Code Book devotes an entire chapter to Zimmermann and PGP.

Publications

- *The Official PGP User's Guide, MIT Press, 1995* (See book at [HB0009][GDrive])
- *PGP Source Code and Internals, MIT Press, 1995*

1972 (April)

Full page : [HN002D][GDrive]

PHILIP ZIMMERMAN, WOULD-BE ASTRONAUT IN SUIT
. . . Science Club president and dozen friends at Cape Kennedy

Northeast High Students

Watch Apollo 16 Lift Off

When Apollo 16 lifts off today, students in the Northeast High School Science Club will be at Cape Kennedy with the million or so other visitors to watch the history-making event.

The trip was organized by the club and about 12 members are there, enjoying reserved parking spaces about three miles from the launch pad.

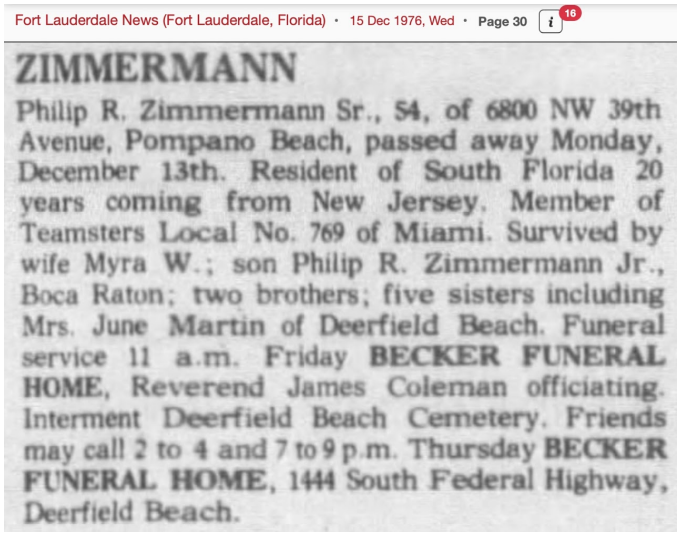
As part of the club's backgrounding for the trip, they examined and climbed into a demonstration space suit, which was sent to them by Robert E. Wilson, space science education specialist at Cape Kennedy.

Philip Zimmermann, club president, was anxious to try on the suit, since his ambition is to be an astronaut. Zimmerman will attend Florida Atlantic University next year as a faculty scholar.

[HN002E][GDrive]

1976 (Dec) - Father Passes

Full page : [HN002F][GDrive]



Fort Lauderdale News (Fort Lauderdale, Florida) · 15 Dec 1976, Wed · Page 30

ZIMMERMANN

Philip R. Zimmermann Sr., 54, of 6800 NW 39th Avenue, Pompano Beach, passed away Monday, December 13th. Resident of South Florida 20 years coming from New Jersey. Member of Teamsters Local No. 769 of Miami. Survived by wife Myra W.; son Philip R. Zimmermann Jr., Boca Raton; two brothers; five sisters including Mrs. June Martin of Deerfield Beach. Funeral service 11 a.m. Friday **BECKER FUNERAL HOME**, Reverend James Coleman officiating. Interment Deerfield Beach Cemetery. Friends may call 2 to 4 and 7 to 9 p.m. Thursday **BECKER FUNERAL HOME**, 1444 South Federal Highway, Deerfield Beach.

[HN002G][GDrive]

1987 (Dec) - As a protestor in Colorado

Full page : [HN002H][GDrive]

Northwest Herald (Woodstock, Illinois) · 24 Dec 1987, Thu · PAGE 6

New fight against war toys doesn't lower sales figures

By Rebecca Cantwell
Scripps Howard News Service

BOULDER, Colo. — Activists waging a fight against "war toys" have succeeded in raising eyebrows, but not in lowering sales.

"I don't want children — especially my own son — to become desensitized to violence and see being a soldier as a positive role model," said Philip Zimmermann.

He and his son, Matthew, 7, are among a dozen people who have protested the sale of war toys outside four Boulder toy stores in the days before Christmas.

Their targets have included guns, toy tanks and sci-fi toys that they say glorify destruction. Protesters are asking customers to write letters to store managers urging them to discontinue sales of the toys.

Kacie Cavanaugh, Matthew's mother, said protesters are trying to raise parents' awareness.

The protest so far has not altered consumers' buying patterns, said managers of Target and K mart, two outlets that sell war toys.

"They're just as popular as they used to be," said Phyllis Berka, manager of Boulder's Target store. "I have not seen a wave of anti-war-toy buying."

K mart manager Peter Stenbakken said military-toy sales have not dropped because of the protest.

But several toy stores are capitalizing on parents who wish to avoid military toys.

"Our pitch is we are a nonviolent toy store," said Sue Lounsbury, owner of Play Fair. "We don't carry squirt guns, we carry squirt animals," she said.

(Rebecca Cantwell is a reporter for the Rocky Mountain News in Denver.)

[HN002I][GDrive]

1993 (Sep 21)

Full page : [HN002S][GDrive]

Grand jury is investigating encryption software exports

ASSOCIATED PRESS

SAN JOSE — A federal grand jury is investigating exports of a controversial computer program in a case that could affect how software is distributed worldwide.

U.S. Customs officials asked for an investigation into ViaCrypt of Phoenix and Austin Code Works of Austin, Texas, and the companies' plans for foreign distribution of software, including PGP, a program that turns data into an indecipherable code using encryption technology.

William Keane, an assistant U.S. attorney, confirmed that an investigation is continuing, but declined to comment on the case.

The PGP program has been distributed worldwide over computer networks by some computer enthusiasts who oppose the U.S. government's trade regulations on encryption.

The National Security Agency, which monitors international communications, has supported strict encryption technology export regulations, arguing that it would be difficult to keep tabs on hostile governments and foreign terrorists.

But opponents say the restrictions hurt sales and violate the First Amendment that protects the right to publish information about encryption.

"I wrote PGP to make democracy healthier. I didn't do it to make money," said Philip Zimmermann, a computer consultant who developed PGP.

"We believe everything we are doing is above board and well within the law," said ViaCrypt President Leonard Mikus. He said the company had no intentions of violating export regulations.

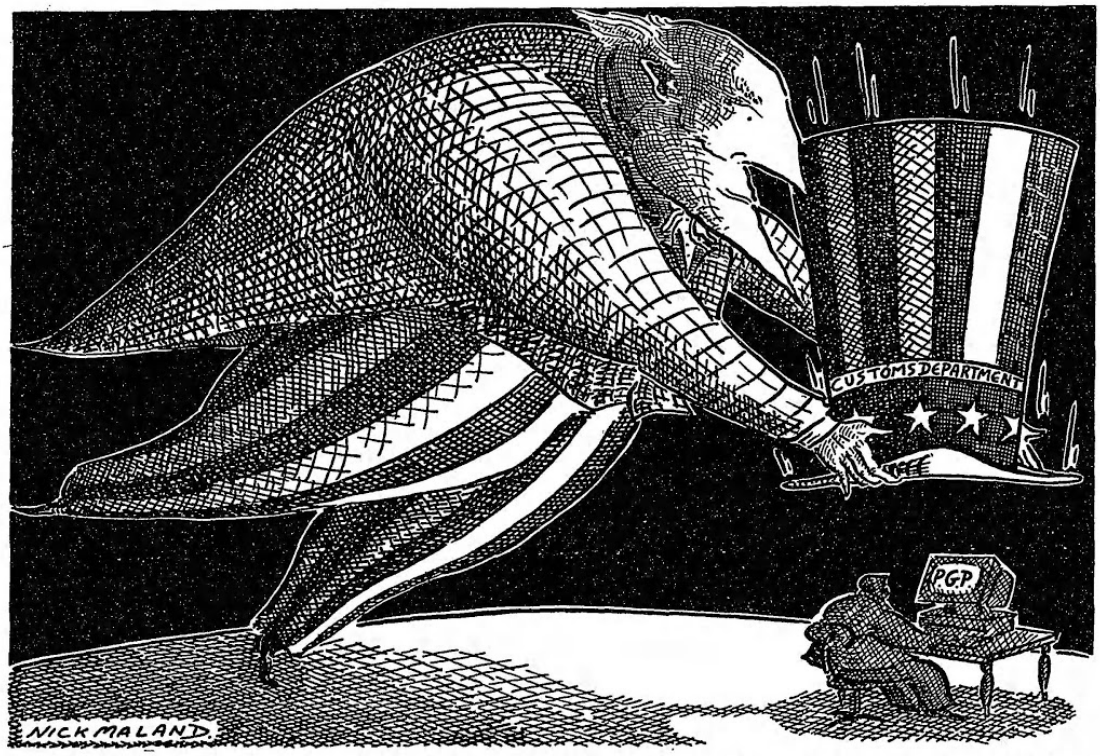
[HN002T][GDrive]

1993 (Nov)

Full page : [HN002J][GDrive]

How computers could give us back the privacy that computerisation has taken away

Enter the crypto factor



Wendy Grossman

THE NEWS came, appropriately enough, over the electronic networks: Phil Zimmermann needs help. The details followed: the US Customs Department is investigating him to determine whether he was responsible for exporting full-strength encryption from the US. Under US law, strong encryption is classified as a munitions.

Zimmermann is the author of the first version of PGP, which stands for "Pretty Good Privacy". The program runs on a variety of microcomputers and is widely available as freeware on online services all over the world, including Cix and CompuServe. In fact, the program is probably "exported" many times every day. Anyone can use it to make sure that their electronic communications are secure.

Zimmermann seems to have become interested in cryptography as early as junior school. Computers came into it later: after taking a computer science degree in Florida he became a computer consultant specialising in cryptography. It wasn't until 1991 that PGP 1.0, a DOS program, was released: one of the technical difficulties was learning how to get computers to do calculations involving 300-digit numbers. Since then others have built on Zimmermann's work; there are versions of the program for DEC VAX VMS, Unix and even Microsoft Windows. There have also been improved DOS versions: we are now up to 2.3.

PGP is based on the RSA encryption algorithm, named for its developers, Rivest, Shamir and Adelman. RSA relies on a system called public-key cryptography. The program starts by generating two keys, a public and a private one. Your private key is just that: private. You keep it safe and share it with no one. Your public key, however, you get digitally signed by people who know you and can attest that it's yours. After that you can distribute it as widely as you like by any method you like. There are already "key servers" — one of them at Demon Internet Limited in London — where public keys are available for downloading by anyone who wants them. But you will, of course, keep a "key ring" of your correspondents' public keys, which you will use to decrypt their messages.

Public-key cryptography has several elegant features. First, the encryption really is "industrial strength". Second, the keys authenticate messages as well as protect them from prying eyes: if a message can be decrypted using your public key, that's a guarantee that the message came from you — and you can't later disavow it.

Enter the cypherpunks, to whom Zimmermann is a hero. Instead of relying on data protection legislation and the goodwill of systems administrators, they argue, use the computer to give us back the privacy that computerised systems have taken away. Think of encryption as an envelope: you wouldn't want to send all your private mail on postcards, would you? The private nature of the act of writing electronic mail and messages makes it easy to forget how public they really are.

Protecting the privacy of correspondence is only the beginning. Other proposed uses for encryption include digital cash, which would allow you to pay for goods and services electronically and anonymously, and selective smart cards, which would only tell authorities the information they need and no more. For example, you could have a card that told the DSS you were entitled to benefit, but gave staff none of your personal details.

The fact that it's illegal to export strong encryption from the US does not make it illegal to use PGP in the UK. However, it has been technically illegal to use PGP inside the US, because the RSA algorithm is patented by RSA Data Security, a company set up to exploit RSA, which was developed at MIT with public funding.

Ironically this patent is not valid in the UK and other countries, because of prior publication in Scientific American. This situation may be changing: a commercial version of PGP is being released in the US, and the GATT talks may uphold such US patents. (Of course many cypherpunks argue that it should not be possible to patent an algorithm, any more than you should be allowed to patent the human genome or a compound's molecular structure.)

The present US Customs investigation doesn't deal with the patent issues, only the export question. But it's come at the same time as Clinton's Clipper Chip proposals and the Digital Telephony bill, both of which seek to limit the strength of encryption available within the US. This has a certain irony: encryption is too dangerous to be given to the American public, but anyone can have a gun.

The result has been to give Zimmermann some of the gloss of a folk hero: he is regarded as being the man who gave strong encryption to the masses.

Zimmermann contends that he did not export PGP. But win or lose, he will face the usual astronomical American legal bills, so a defense fund has been set up by his attorney (email: dubois@csn.org). And win or lose, the technology is out there now. No amount of scouring of the world's hard discs will ever bring it back under control.

[HN002K][GDrive]

1994 (June)

Full page : [HN002L][GDrive]

Encryption wizard rides out PGP trouble

Scripps Howard News Service

BOULDER, Colo. — Phil Zimmermann is enjoying a brief reprieve from his role as sentry on the electronic frontier.

As point man for privacy, he's been up in the watchtower for a long stretch. So it feels good to put his feet up in the booth at a natural-foods restaurant.

For the moment, there are no phone calls, no electronic mail, no deadlines. It's transitory, but it helps.

Because sometimes it's tough living with the irony.

"As a privacy activist, I value my own privacy and yet I've had to give up a lot of that privacy to be in the role I am now," he says.

Zimmermann is a 40-year-old software encryption wizard. He wrote a state-of-the-art program called PGP — Pretty Good Privacy — that has earned him admiration and excoriation.

Admiration because personal privacy is a notion near and dear to democracy. Excoriation because he outmaneuvered the U.S. government and intelligence agencies pushing their own competing encryption standard, the Clipper chip.

Despite all the attention, Zimmermann maintains he's not the best U.S. cryptographer "by far," though he acknowledges he may be the best-known.

He also acknowledges, with a laugh, that his 15 minutes of fame have been good for his consulting business. But he recognizes there are larger forces at work.

"I like being a political activist," he says. "But it's also hard. There are a lot of obstacles to getting this technology out. I have to do it in a way that doesn't break any laws. I think I have done it in a way that doesn't break any laws. It doesn't look to me like it breaks any laws. But the government feels differently and we'll have to see how that develops."

The legal situation is still fluid. Zimmermann is feeling a lot of heat right now from federal officials and from a San Diego grand jury. The reason is PGP.

Cryptography software is an electronic version of the cipher puzzles many newspapers carry. Those puzzles typically involve substituting one letter for another — T for E, for instance — to spell a word or phrase. The trick is to figure out the substitutions and solve the puzzle.

With conventional cryptography, the sender encodes a message using a key.

The person receiving the message must have the same key to decode it.

PGP employs something called public key cryptography, a method invented by mathematicians from the Massachusetts Institute of Technology in the late 1970s. It incorporates two mathematically related, but different, keys. Either key can be used to encode the electronic communication, but only the complementary key can be used to decode it.

The beauty is that you can tell everyone your public key, allowing them to send you private messages. After all, you're the only one who has the decoding key. Even the person who sends you the electronic message can't decode it.

"It's like those safes at 7-Eleven where they put the money in the drop box," says Zimmermann. "They can put it in but they can't get it out. You have to know the combination."

Although there are many versions of public key cryptography programs, PGP is considered the most powerful. It employs several complicated algorithms — mathematical formulas — and a 307-digit key. Cryptographers will tell you any cipher is breakable, given enough time. With PGP, you better have a few quadrillion years to spare or access to a bunch of supercomputers.

Zimmermann designed the original PGP in response to a bill in the U.S. Senate that would have required communications providers to build in a "back door" for plain text traffic. That back door would have official agencies armed with court orders to monitor illegal or potentially subversive communications.

Not long after he finished designing the first version of PGP in June 1991, Zimmermann gave it to a friend whom he won't name. The friend promptly published it on the Internet, the vast weblike network that links computers around the world.

"I didn't know much about the Internet," recalls Zimmermann. "I said, 'OK, just make sure not to export it.' After thousands and thousands of Americans got their hands on it, it spread to Europe."

That's when the trouble started. Because the Internet has connections in nearly every country in the world, putting information on it is the equivalent of handing out a global flier. But under State Department export regulations, encryption software fits in the same category as munitions. From the government's perspective, putting PGP on the Internet was akin to giving away state secrets.

Suddenly, with PGP's distribution over the Internet, anybody with a computer and modest technical know-how could code a message even the most powerful supercomputers — the kind governments typically have — would take decades, if not centuries, to break.

"This means that now, for the first time, it's possible to communicate securely with people you've never met without the prior exchange of keys over secure channels," says Zimmermann.

What public key cryptography, and PGP specifically, have done is make electronic privacy egalitarian, taking it from the realm of governments and the wealthy to the masses.

That may sound like the democratic ideal in action. But there's a big problem from the government's point of view. Criminals use computers, too, and if they can blanket their activities from the prying eyes of law enforcement or intelligence agencies, that makes it tough to protect the rest of us.

Zimmermann doesn't argue that point.

"People have asked me how I feel about criminals using this. My feeling is that criminals use cellular telephones and pocket pagers. In fact, those technologies in particular ... are notorious for use by drug dealers. ... But nobody seriously suggests we get rid of cellular phones and pocket pagers just because drug dealers use them. ... This is the same thing."

Government ire at Zimmermann goes deeper than criminals using PGP. The National Security Agency has developed its own encryption device, the Clipper chip. In pushing Clipper as the standard, the government proposes that anyone doing business with the federal system incorporate the chip in electronic communications devices, from computers to phones.

Part of the idea is to keep those communications secure. But another part of it is to allow government, law enforcement or intelligence agencies armed with the requisite court order to listen in.

Unlike PGP, the Clipper chip incorporates a back door, an entry for eavesdropping. When each Clipper chip is manufactured, the government gets a copy of the chip serial number and the associated master key. That information is escrowed at the U.S. Treasury Department and the National Institute of Standards and Technology. When an authorized agency wants to listen in, it obtains the master key from escrow and suddenly the private communication isn't so private anymore.

PGP changed the equation. Not only is it probably more powerful than Clipper — no one knows because the Skipjack algorithm behind Clipper is secret — but it also can be used on top of Clipper.

"The government is trying to intercede here with the Clipper chip and make illegal other kinds of encryption like PGP," contends Zimmermann. "It's sort of like the government saying I can't whisper something in your ear without them tapping into it. I ought to be able to whisper something in your ear, even if your ear is 1,000 miles away."

Zimmermann and cryptography go back 30 years. He recalls reading a children's book on secret writing when he was in the fourth grade. That was enough to hook him.

"I thought it was really cool," he remembers. "What kid wouldn't, right?"

His computer expertise is more recent. Born in New Jersey but raised in South Florida, he attended Florida Atlantic University in Boca Raton, where he planned to major in physics. But the computer scene was too hot to ignore.

"I took a couple of computer science courses in physics. I discovered I was spending so much time playing with computers, I decided I ought to get academic credits. I just thought they were cool and fun to play with, so I kept doing it."

In 1978, armed with a computer science degree from FAU, he headed for Colorado, where the Front Range already was a hotbed of high-tech hardware and software development. He translated his software expertise into a job at NBI, the Boulder-based maker of word-processing computers and programs. That lasted just long enough for him to decide to strike out on his on. Metamorphic Systems, a maker of the main circuit boards for Apple computers, was the result.

Like countless other entrepreneurial ventures, the firm foundered. Zimmermann found work quickly, this time with Storage Technology Corp. There, he was able to pursue his interest in cryptography and he began work on a research paper that introduced him to key players in the academic world.

About this time Zimmermann the political activist emerged. The nuclear freeze movement was at its height and Zimmermann put himself on the front lines. That led to a couple of protest-related arrests, his first real confrontation with law-and-order forces. Meanwhile, he was working behind the scenes as well.

"I saw cryptography as something important for political movements like the nuclear freeze to serve communications security needs," he recalls.

In 1985, Storage Technology Corp. slid into bankruptcy. Zimmermann was one of 3,000 people laid off in a single day as the company sought to cut costs and survive.

But if the layoff signaled the end of his career at Storage Technology, it also marked the beginning of a deeper involvement in cryptography — a pursuit that would lead to PGP.

Zimmermann's stand with PGP has earned him his share of enemies. Clipper chip proponents, who seem to be few and far between, aren't the only ones.

James Bidzos, head of RSA Data Security Inc. in California, is one. RSA Data makes its own encryption software, including MailSafe, which protects e-mail communications.

Though Bidzos is an outspoken critic of Clipper, he contends that popular perception of Zimmermann as some kind of high-tech Patrick Henry is hype.

"One guy said Zimmermann is trying to save the world from evil government," Bidzos says. "He did this to make money. ... He did two things others were not willing to do: He gave away the intellectual property of another party, and he turned a blind eye to (PGP's) illegal export."

Bidzos' anger stems from PGP's incorporation of certain RSA Data technology. There is considerable dispute about whether Zimmermann obtained that technology properly.

MIT recently took action that may produce a temporary truce. It issued the newest version of Zimmermann's program, PGP 2.5, over the Internet after obtaining a license from RSA Data to include its technology in the software.

Bidzos hasn't sued Zimmermann — yet. It may be that he figures it's a no-win situation. Even if he sues and wins, he's made a martyr out of someone who's widely perceived as an electronic patriot.

The PGP and Clipper chip debate has produced one of the strangest collections of bedfellows in recent memory. Big business and leftists, cyberpunks and corporate suits all are preaching from the same pulpit.

The pro-Clipper contingent, small as it is, holds an important hole card: Nowhere in the Constitution is protection of personal privacy spelled out. It may be implied, but it's not defined.

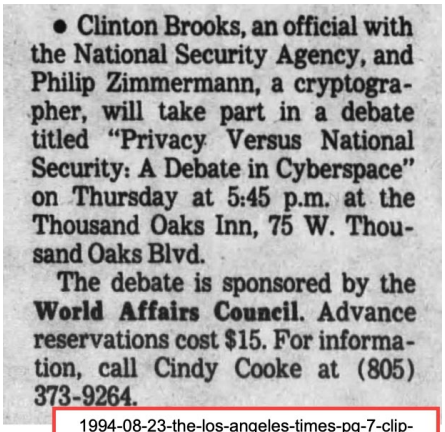
Indeed, U.S. legal code permits officially sanctioned invasion of our privacy if there's a compelling reason and the invaders follow legal form.

[HN002M][GDrive]

1994 (AUG)

Full page : [HN002N][GDrive]

NOTE (verify this) - "***Clinton Brooks**, who had served up to now as special assistant to the NSA director for equities, has been named to the newly-created post of NSA's Knowledge Management Office. The office appears to have been created to develop artificial intelligence applications in NSA's decision-making process.*"



• Clinton Brooks, an official with the National Security Agency, and Philip Zimmermann, a cryptographer, will take part in a debate titled "Privacy Versus National Security: A Debate in Cyberspace" on Thursday at 5:45 p.m. at the Thousand Oaks Inn, 75 W. Thousand Oaks Blvd.

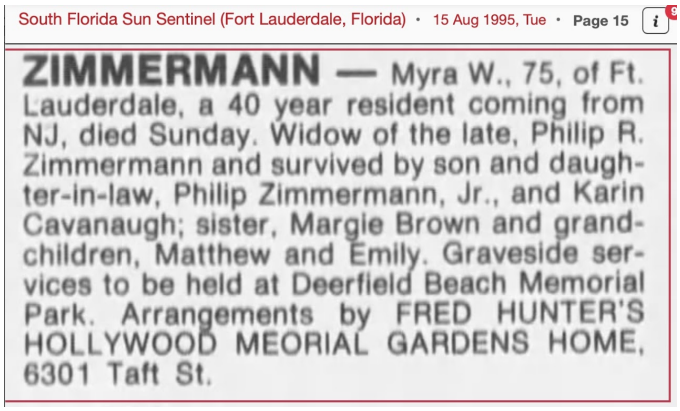
The debate is sponsored by the **World Affairs Council**. Advance reservations cost $15. For information, call Cindy Cooke at (805) 373-9264.

1994-08-23-the-los-angeles-times-pg-7-clip-zimmermann.jpg

[HN002O][GDrive]

1995 (Aug 13) - Mother Myra Zimmermann passes

Full page : [HN002P][GDrive]



South Florida Sun Sentinel (Fort Lauderdale, Florida) • 15 Aug 1995, Tue • Page 15

ZIMMERMANN — Myra W., 75, of Ft. Lauderdale, a 40 year resident coming from NJ, died Sunday. Widow of the late, Philip R. Zimmermann and survived by son and daughter-in-law, Philip Zimmermann, Jr., and Karin Cavanaugh; sister, Margie Brown and grandchildren, Matthew and Emily. Graveside services to be held at Deerfield Beach Memorial Park. Arrangements by FRED HUNTER'S HOLLYWOOD MEORIAL GARDENS HOME, 6301 Taft St.

[HN002Q][GDrive]

Son Matthew at Beast Code ?

Naval warfare ?

https://www.linkedin.com/in/matthew-zimmermann-83196921/ 2020-01-linkedin-com-matthew-zimmermann.pdf /

2020-01-linkedin-com-matthew-zimmermann-img-following-corp-1.jpg

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2020-01-linkedin-com-matthew-zimmermann-img-following-corp-3.jpg

https://www.apollo.io/people/Matthew/Zimmermann/54a724897468696b7f722c19

https://www.apollo.io/companies/ARA/54a134a769702d407f323e00?chart=count

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Source : 1995 (March edition) of "PGP : Pretty Good Privacy" - Chapter 4 ("A Pretty Good History of PGP")

See book at [HB0009][GDrive]

[...] PGP arouses passions like few other pieces of software. That's because PGP hits two raw nerves in the computer industry: the fight over encryption and privacy and the fight over software patents. And both of those fights are neatly encapsulated in the person of one computer scientist, turned peace activist turned cryptography outlaw, turned Cypherpunk spokesman: Phil Zimmermann.

Phil Zimmermann: On the Road to PGP

Phil Zimmermann doesn't fit the mold of the typical Cypherpunk. Married with two kids, Zimmermann lives in a small house in Boulder, Colorado, where he tries as best as he can to make a living as a full-time cryptography consultant. He feels more comfortable in a suit and tie than in a T-shirt and jeans. Zimmermann doesn't lead a glamorous, flamboyant life, but then cryptography isn't high-stakes poker. At least, it didn't used to be.

Zimmermann was born in Camden, New Jersey, in 1954, but his parents soon moved to southern Florida. He spent most of his formative years in Miami and Fort Lauderdale. When it was time for college, he picked Florida Atlantic University in nearby Boca Raton.

In college Zimmermann first studied physics, but soon he was bitten by the bug and switched his major to computer science. He met one of the school's switchboard operators, fell in love, and got married on the spring equinox in 1977. He took a year off from school to get some real-world experience working at Harris Computer Systems Division in Fort Lauderdale, where he worked on a Fortran compiler, an interval arithmetic package, and some other compiler tools. When he graduated from college in late 1978, Phil and his wife packed up everything they owned and moved to Boulder, Colorado.

Phil didn't have a job waiting for him in the Rockies, but Boulder sounded like an interesting place to live. The mountains represented a big change from the life that the couple had known on the Florida coast. And Zimmermann's degree in computer science, combined with his year of work experience, meant that he didn't have to look long for work once he arrived. In short order, he became a freelance computer consultant working with a company that was designing devices for the upcoming consumer electronics bus (CEBus). Typical applications of the technology were controlling lights in a house by remote control or using a home's electrical wiring for an alarm system.

Things were looking up for the Zimmermann family, but clouds were on the horizon: mushroom clouds. In 1980, Ronald Reagan was elected to office, and Zimmermann began to get nervous. "Reagan was in the White House. Brezhnev was in the Kremlin. Our side was building weapons that were designed to launch a first strike," he later recalled. Day by day, Zimmermann and his wife worried more about the possibility of nuclear war; the birth of their first child in 1980 made matters all the more urgent. To the couple, there seemed to be only one logical solution: emigrate to New Zealand.

"We thought it would be a hard life in New Zealand after a nuclear war, but we thought it might be still livable," he says. It was better than the supposed alternative in postwar America.

Zimmermann started obtaining the necessary passports and immigration papers for himself and his family. Everything was in order and ready to go by early 1982, when the couple heard about a conference being held in Denver by a group calling itself the Nuclear Weapons Freeze Campaign. They decided to go.

Zimmermann remembers the conference as "sobering but empowering." He heard a lecture by Daniel Ellsberg, the man who gave the Pentagon Papers to the New York Times. Ellsberg left Zimmermann feeling hopeful. The United States, after all, is a democracy. "It seemed plausible that this was a political movement that had some chance of success, of turning things around," he recalls. "And so we decided to stay and fight."

Soon after the conference, Zimmermann started hunting for books about military policy and weapons. He discovered a particularly good bookstore at a nearby mall and spent several hundred dollars. Zimmermann was going to become a self-taught military policy analyst. As soon as he finished the books, he started teaching his own course called "Get Smart on the Arms Race" at the Community Free School, a nonaccredited adult education center in Boulder. He made the rounds as a public speaker and started to train lobbyists and political candidates on issues of military policy and weapons technology. He was even arrested, along with Carl Sagan, Daniel Ellsberg, and more than 400 other protesters, at the Nevada nuclear testing grounds. "Direct action," he called it.

Politically, Zimmermann's years with the antinuclear movement were a success. Zimmermann's group helped get Tim Wirth elected to the U.S. Senate and another Democrat, David Skaggs, elected to Congress. But financially, Zimmermann couldn't have picked a worse time: he had just given up his lucrative business as a computer consultant in favor of starting a computer company with some of his friends. And startup companies, especially in the computer field, have a way of not putting food on the table.

Metamorphic Systems

In 1980, the most exciting personal computer in the world was the Apple II, manufactured by a new company in Cupertino, California, called Apple Computer. The Apple II had a full-size keyboard, fantastic graphics, and a fairly speedy microprocessor, the 6502. But as time passed, the Apple's 6502 seemed to run slower and slower. When IBM launched its new personal computer in 1981, it didn't use the 6502, but a new chip from Intel, the 8088.

Zimmermann's startup had a simple premise: build a single-board computer with an Intel 8088 that could plug into the back of an Apple II. That way, Apple II users could get the speed of the 8088, without having to give up their existing software. Zimmermann and his friends gave their company an appropriate name, Metamorphic Systems. Its headquarters was located in the kitchen of one of the founders.

By day, Zimmermann would work in his friend's kitchen, writing the basic input/output system (BIOS) of the new Metamorphic computer. At night, he would study military policy at home. And at the bank, Zimmermann's savings were draining away.

One day, Metamorphic Systems got a telephone call from a computer programmer in Arkansas named Charlie Merritt. Zimmermann picked up the phone. Merritt had seen the advertisements for Metamorphic Systems' computer and was excited by the machine's speed. Merritt needed speed, he explained to Zimmermann, because he was writing programs to do public key cryptography with an algorithm called RSA, and RSA was a pig with CPU cycles. At the mention of cryptography, something clicked in Zimmermann's mind.

1970 (May) - kacie cavanaugh - Future wife promoting peace!

Full page : [HN002U][GDrive]

Times Photo by Janice Whipple

Florida Presbyterian College students converse with Rev. Terrance Peterson (right). From left: Walter Gooch, Kacie Cavanaugh, Alan Hulick, Kitty Pelster and Mary Lou Hall of Yankeetown.

1970-05-24-st-petersburg-times-pg-suncoast-3-clip-peace

Promoting Peace Discussed

By JANICE WHIPPLE
Times Correspondent

YANKEETOWN — Promoting peace was discussed by several Florida Presbyterian College students and the Parsons Memorial Church congregation in Yankeetown last week.

Alan Hulick of Marshall, Mo., son of a Presbyterian minister, stressed the need for communication. He agreed with a questioner concerning the destruction of property, saying that it was wrong, but, he added that lives were more important than buildings.

Walter Gooch of Clemson, S.C., urged economic boycott of industries such as cosmetic and cigarette, as a non-violent measure in an effort to stop the overseas combat.

Questions concerning communism brought the answer that lives were more important than the form of government. Hulick said, however, "I personally don't want to overthrow our government. The system we have now is good."

Kacie Cavanaugh answered a question concerning the suppression of Christianity under communism, by saying that Christianity was in the hearts and minds of the people and that suppression strengthens Christianity.

Rev. Terrance Peterson, pastor of the church, expressed satisfaction with the service which he said he believed encouraged communication between youths and adults even though they may not have been in agreement.

[HN002V][GDrive]

1982 (July) - camping

Full page : [HN002W][GDrive]

AP Laserphoto

Lawn Lake shown one week before flood
...earth dam, shown above, gave way Thursday and flooded Estes Park

Flood creates extended stay for Rocky Mountain campers

By Steve Krizman
Colorado News Special

ROCKY MOUNTAIN NATIONAL PARK (AP) — An "over-nighter" next to a babbling brook became an extended stay in a campground much more secluded than a Longmont family would have liked.

Tony and Peggy Donovan awoke from their overnight stay in Rocky Mountain National Park to find the peaceful stream next to which they had camped had become a roiling torrent.

"We could hear it building, and it sounded like a freight train," said Tony Donavan, who along with his wife and two young daughters was among those camped at the Aspenglen campground.

It was sometime between 7 and 7:30 a.m. Within minutes, the campers were stranded on an island of wilderness.

"We watched the river rise and thought we were on pretty high ground," Peggy Donovan said. "Then the lady camping next to us informed us that there was water running through the campground behind us and that the water actually was on both sides of us."

"We headed for high ground, and waded through water up to our knees," Donovan said. From a safe vantage point they and their bewildered campground neighbors watched as the raging waters, propelled along Fall River after a dam broke four miles above them, tossed car-sized boulders, gnawed through a paved road and snapped tall pines "like a match stick."

Like the others still marooned in Aspenglen, the Donovans didn't know Thursday evening when or how they were going to escape their all-too-secluded mountain spot. They walked along the rubble-strewn road, skirted gaping holes, bypassed the defunct bridge over troubled waters and negotiated make-shift foot bridges to watch as U.S. Park Service crews tried to fashion a passable road back across Fall Creek to U.S. 34 and the road home.

Roasting hot dogs for dinner, the remnants of provisions intended to last them only one night, Donovan said he ould spend an extra night at Aspenglen. He said Park officials were not too optimistic when they could extricate vehicles.

For Kacie Cavanaugh, her husband and 2-year-old son, there was no pressing need to get back home, but she needed diapers. "You can't just go back and get diapers and other things you need," she said. "We don't like to backpack, and this is too much like it."

Others in the campground donated diapers to the cause, an example of how strangers stranded together pitched in to keep their situation more comfortable and even a little cheery.

If they complain, it's mostly to wonder why parks officials could not have notified them of the impending flood. Cavanaugh said a park ranger warned campers on an island in the campground, but did not move farther into the campground to warn others.

Most said their first hint that something was amiss was the sudden change in volume of the rushing river. A couple was awakened by water streaming through their tent.

"People were just running around," said Kevin Kolega of St. Joseph, Mo. His tent was just 15 feet from the river's edge.

"In looking back," said Cavanaugh, "I was sorry that more of us didn't think to yell and warn others." After the shock of the event was over, campers did got from tent to tent to make sure all were safe and had evacuated to higher ground, she said.

"You didn't really have time to get scared," she said. "but you just had the idea that you didn't know if you wree all of a sudden going to under 10 feet of water. But as it turned out, we had room to maneuver."

First on the scene, she said, were television news teams who landed in a nearby meadow in their helicopters.

Many of the campers heard of the cause of the flood through reports on Estes Park's radio station. Still, by afternoon, they were hungry for news from the outside.

Reporters, who had to hike into the area from Trail Ridge Road, often were interviewed themselves. "Did this really make the national news?" one asked. "Is that trail out of here very difficult?" inquired another.

All were shocked to hear that it was almost business as usual in the rest of the park.

The Park Service provided ice and food for those who needed provisions, while workers tried to bulldoze a crude road back to civilization. Campers who had to leave were airlifted out. By the afternoon, a makeshift path was available for those lucky enough to have a car on the other side of the river.

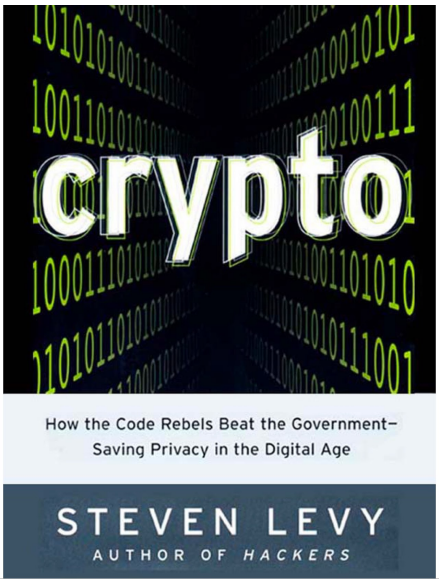
They spoke little of the three campers who had made it out, then disappeared in the floodwaters when they tried to retrjeve some belongings.

[HN002X][GDrive]

"Crypto, How the Code Rebels Beat the Government--Saving Privacy in the Digital Age" - Chapter 2

Chapter - crypto anarchy

See book at [HB000A][GDrive]



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When Phil Zimmermann began his cryptography adventure, he had no idea that he would end up both hailed as a folk hero and investigated for violations of federal law. He acted out of scientific curiosity, a hobbyist's passion, and a bit of political paranoia. Born in 1954, and raised in various Florida towns, he was a self-described nerd, "not naturally a party guy." An odd, awkward duck. His father was a truck driver; both parents were alcoholics. He wanted to be an astronomer. In the fourth grade, though, he became captivated by codes. A Saturday afternoon Miami television show called M.T. Graves and the Dungeon had a kids' club. Members were sold a physical "key" to unscramble a secret code. During the show, a series of numbers were flashed on the screen and club members could use the key to translate them into magical, clear messages. Zimmermann never sent in the money to buy the key, but he jotted down the numbers anyway—and managed to decode them into plaintext. To an only child in a troubled family, transforming such gibberish into something familiar gave a sense of mastery, of belonging. A sense of an organized home.

No wonder Zimmermann sought to learn more about ciphers. He found a book by children's author Herbert S. Zim called Codes and Secret Writing. Published by Scholastic and directed at ten- to twelve-year-olds, this thin volume straightforwardly conveyed the excitement of cryptography, almost as if its author were a senior intelligence executive instructing a bright, though green, recruit. "The idea of this book is not to give you codes to copy but to help you invent your own codes—not one or two but, if you like, hundreds of codes," wrote Zim. "How you use your knowledge of codes is, of course, up to you."

The book became Zimmermann's Bible. He faithfully attempted all its exercises, such as making invisible ink out of lemon juice, creating original ciphers, and, of course, cracking the encoded messages presented in the book. A couple of years later, in junior high, a friend boasted of a code he'd made up and Zimmermann accepted the challenge of breaking it. "Make sure it's a long message," Zimmermann told the kid, who complied, foolishly thinking that a longer message would be harder to crack. The message was written in runic-style symbols, vaguely evocative of the languages of Tolkien's Middle Earth. Zimmermann did a frequency analysis, an elementary technique of cryptanalysis that simply involves counting how often alphabetic letters appear. This enabled him to solve it like a garden-variety cryptogram. All to the amazement of his buddy.

His interest in codes waned during his teenage years, and it wasn't until he was in college, at Florida Atlantic University, that Zimmermann realized computers could be cryptographic tools. Though he was majoring in physics, he wound up spending a lot of time in the computer room, at first doing course-related work, but eventually just drinking in the elixir of programming itself. The appeal was creating one's own world in the machine. "You could interact with something that wasn't a living thing but seemed to be like one," he says. Best of all, he was good at it, in contrast to his physics abilities. His nemesis: calculus.

Though he began programming his first week at college in 1972, he didn't actually see a real computer for a year, because his school only had terminals connected to distant machines. After all, Florida Atlantic wasn't MIT or Stanford. Not even a big state school. Zimmermann became a student assistant, teaching others to use the terminals. And after his second year, he dropped physics for computer science.

He rediscovered his passion for ciphers in that computer room. One of his experiments involved writing his own secret code, using the now-antiquated FORTRAN computer language. His scheme used random number functions to substitute each character in a plaintext message with a different character. The random number function was keyed with a password. Because his code couldn't be broken by frequency analysis (the randomizing function would change a "t" early in the message to one thing and subsequent "t's" to different characters), Zimmermann figured that not even the CIA could break it. He'd never imagined techniques like chosen plaintext attacks, or deconstructing random number generators. (And he'd never heard of the NSA.) As it was, years later he would encounter that same "unbreakable" cipher, presented in a student homework assignment as a cipher that could be easily broken with basic cryptanalytic techniques. "So much for my brilliant scheme," he says.

In the summer of 1977, with only one course to go before graduation and already employed at a minicomputer company in Fort Lauderdale, Zimmermann came across the Mathematical Recreations column of Scientific American, and found something that blew his mind. It was, of course, Martin Gardner's description of public key and the RSA algorithm. He was hungry to know more. Out of the blue, he called Ron Rivest at MIT and asked him about the

possibilities of implementing the system on a computer. Rivest told him that in the course of experimenting, the MIT group had already done that in LISP, a tony computer language used for artificial intelligence work. "That's out of my reach," said a disappointed Zimmermann, who had never had access to the flashy LISP machines; they were luxury items costing $100,000 and geared for research, not practical tasks like accounting. Though high-level arithmetic wasn't his strong point, Zimmermann understood that the odds of getting a LISP box at Florida Atlantic University approached infinity to one. He wondered, however, whether he could do RSA on one of those cheap new microcomputers. That would be different. Zimmermann had a partial share in one of the clunky low-cost machines of the time—it ran on a Zylog Z-80 processor, sort of the Model A of the mid-1970s. But as he thought about implementing RSA, he realized that he had little idea of how to do some of the extended arithmetic routines explained in the MIT paper. So he didn't try.

There were other things happening in Phil Zimmermann's life then. The same year he discovered RSA, he married his girlfriend Kacie Cavenaugh, who worked on the college switchboard. Not long afterward, the young couple visited friends in Boulder, Colorado, and fell in love with the area. Zimmermann returned to his Florida job but began planning for a move, and a year later he and Kacie packed up their Volkswagen Rabbit and drove to the Rockies. He got a job at a software company making workstation word processors, and began raising a family: their son was born in 1980. And then he heard Daniel Ellsberg speak at a nuclear freeze rally in Denver.

In high school, Phil Zimmermann had pretty much ignored Vietnam, but at Florida Atlantic he had come to adopt a passive but heartfelt antigovernment stance. The Nixon scandals had opened his eyes to how brazenly the government could lie. By the time of Ronald Reagan's presidency, he had totally soured on politics. He read Robert Scheer's With Enough Shovels, and worried about nuclear annihilation. Zimmermann and his wife decided to move to New Zealand, the better to avoid the coming holocaust. They went so far as to acquire passports and immigration papers. (He had yet to learn that there wasn't much of a computer industry in New Zealand.) And then he attended the 1982 rally where he heard Ellsberg, who, after his famous moment as the emancipator of the Pentagon Papers, had become a leading antinuclear activist. Zimmermann was galvanized. From that point on, he forgot about emigrating and decided to become active himself—to stay and fight.

He and some friends were starting a company they called Metamorphic Systems, and they planned to produce a circuit board for Apple computers that would run Intel-compatible programs. But Zimmermann still found time to dig into every book he could find on NATO policy, weapon systems, and the like. He would spend hundreds of dollars at a bookstore and tear through the volumes. Then he began teaching military policy at the Free University in Boulder. He spoke at nuclear freeze rallies and advised a couple of candidates for Congress. Twice he was arrested at rallies, once at the Nevada nuclear testing range, alongside his heroes Ellsberg and Carl Sagan. (Neither arrest resulted in any charges filed.)

But as the eighties moved on, the nuclear freeze movement seemed to lose steam. Metamorphic Systems wasn't doing well either: once the IBM PC became dominant, the idea of putting Intel processors into Apple II computers seemed kind of ridiculous. Zimmermann himself was a bit lost. But then, everything changed with a single phone call from a programmer in Arkansas who had a scheme few people could appreciate more than Phil Zimmermann.

The guy's name was Charlie Merritt, and it turned out that he was actually doing the thing that Zimmermann had dreamed of since reading Martin Gardner's column in 1977: he was implementing an RSA public key cryptosystem on a microcomputer. Merritt had experienced a similar reaction to Zimmermann's when he'd read about the work of the MIT researchers. Moving from his native Houston to Fayetteville, Arkansas, he started a company with several friends and they actually managed to create a public key program running on Z-80 computers. It ran very slowly, but it worked. But no one seemed to want to buy it. After a while, his friends dropped out, and Merritt, with his wife Hobbit, began selling the program themselves. Eventually news of their tiny enterprise reached the multibillion-dollar intelligence operation in Fort Meade. Periodically the NSA would send its representatives to Arkansas to warn Merritt of the dire consequences that might ensue if he sent any encryption packages out of the country. Since Merritt Software's customers were largely overseas companies that wanted encryption to circumvent the peeping thugs of corrupt regimes, this restriction virtually shut the company down. To try to get some domestic leads, Merritt was reduced to calling obscure companies he'd read about in computer magazines, hoping they would package his program with their stuff. That was how he found Metamorphic and Phil Zimmermann.

When Zimmermann heard what Merritt was up to, his excitement was so over the top that Merritt suspected a practical joke was being played on him: no one he'd ever met had been so nuts about encryption. Zimmermann told Merritt all about his own passion for crypto, about M.T. Graves and the Dungeon and Herbert Zim and Ron Rivest. He professed his hatred for Big Brother. But mostly, he wanted to know everything Merritt had learned about making RSA work on a personal computer.

Now that he knew it was possible to do so, Zimmermann became driven to write his own public key encryption program—for the people. Whereas his previous efforts in crypto had been solely performed as neat hacks, and as an expression of his passion for codes in general, he now was a sophisticated political activist who had twice been dragged off to a holding pen for asserting his opinion. He now understood that in the computer age, government had an extremely powerful tool for monitoring dissent: electronic surveillance. Not only could Big Brother types stick their collective ear into phone conversations, but they could pluck the increasingly popular e-mail messages out of the digital ether and read business plans and shameful secrets to their black, black hearts' content. While electronic mail was a terrific thing, it actually represented a step backward in privacy: even with relatively insecure physical mail, people had sealed envelopes to protect the privacy of their messages. What Zimmermann hoped to produce was the electronic equivalent to sealed envelopes. But if you gave people a crypto program to protect e-mail, you'd have something much better than sealed envelopes. If people all agreed to use it, he thought, it would be a form of solidarity, a mass movement to resist unwanted snooping. Right on, baby!

Understanding the speed limitations of public key, Zimmermann figured that his program should be a hybrid cryptosystem, using the slow public key RSA protocols to exchange keys and some other, speedier algorithm to perform the bulk encryption of the actual message. He was unaware of Lotus Notes, which was already implementing such a hybrid system, and was certainly in the dark about RSA Data Security, Inc., which was going to base an entire business on licensing public key for the kind of systems Zimmermann thought he was himself pioneering. (Neither did Zimmermann have a clue about the RSA patents.) In any case, neither of those firms had a shipping product in 1984.

Zimmermann did understand several things correctly: A useful program should run not just on a single brand of computer, but on all sorts of machines. To do this, it had to be written in a computer language that was amenable to all sorts of different processors, and as any programmer knew, the language that best satisfied that requirement was called C. Fortunately, Zimmermann knew C inside out. The program also had to be easy to use. And its circulation had to be so widespread that a near-ubiquity could quickly be realized. Thus it would benefit by the Network Effect.

Charlie Merritt was a holdout who still hadn't tackled C, but he was strong in an area where Zimmermann was sadly deficient: the complicated mathematics that enabled one to work with the huge numbers required by RSA. This was particularly important in implementing RSA on a personal computer, which used 8-bit "words" in its calculations: it was a challenging process to apply those relatively small numbers in a way that could process the mighty numbers that RSA demanded—512 bits, 1028 bits, and even more. If you didn't do it efficiently, the program would run so slowly that no one would ever use it.

Though no immediate business deal came of Merritt's call to Metamorphic, he and Zimmermann became constant telephone correspondents, with

Though no immediate business deal came of Merritt's call to Metamorphic, he and Zimmermann became constant telephone correspondents, with Zimmermann soliciting all of Merritt's knowledge of multiprecision arithmetic functions. It was such a complicated process that eventually they decided that Merritt should come to visit Zimmermann in Boulder for a sort of arithmetic boot camp, in November 1986.

It was an action-packed week, and not only because of the math that Zimmermann learned. Merritt was working on a project for the navy, producing a conventional cipher; he taught it to the younger man. The project had been subcontracted to Merritt by a company for whom he'd been consulting: RSA Data Security. Before he flew to Boulder, he'd called the company's new president to ask if they might meet in Colorado, a place that was a sight easier to get to than Fayetteville, Arkansas. Jim Bidzos agreed.

Bidzos had been looking forward to a testosterone-charged get-to-know-you dinner with Merritt—two guys in a steak house lighting cigars and swapping lies. Instead he found a third wheel was included, Zimmermann. And instead of a steak house, they wound up at The Good Earth, a brightly lit emporium of salads and grains.

The actual conversation at the restaurant would become a matter of dispute. Jim Bidzos later said he had been startled when Phil Zimmermann spoke of his plan to create a program that used RSA's proprietary protocols. In fact, RSA had a similar program, and Bidzos had brought along two copies. This was Mailsafe, written by Rivest and Adleman, two guys who by now had more math and cryptography knowledge in their little fingers than Zimmermann had managed to glean from Merritt in two years. Zimmermann, however, would claim that Bidzos was impressed with his plans, so much so that he offered the programmer a free license to the RSA algorithm. Bidzos would later vociferously deny making any such offer.

In any case, Zimmermann saw no reason to change his own plans, and he spent the next few years furthering his didactic education on cryptography so he could complete his own encryption program. He wrote up some of his ideas in a paper that was published, to his pride, in IEEE Computer, a wellregarded computer-science journal. Not bad for a kid from Florida Atlantic University.

Then he began working on the actual program. One crucial step was producing the bulk encryption algorithm that would perform the actual encoding of message content. Eschewing DES and the RSAowned RC-2 standard devised by Ron Rivest, he attempted the risky course of producing his own cipher. It was based on the one that Charlie Merritt had taught him, the cipher Merritt had produced for the navy. But Zimmermann toughened the system by introducing multiple rounds of substitution. As he refined his concept, he recalled a Dan Aykroyd routine from the original Saturday Night Live television show. Portraying a fast-talking late-night huckster, Aykroyd hawked a blender so powerful that you could throw a fish into it: the liquefied output would be a healthy juice (yum). This was the Bass-O-Matic, a perfect name, Zimmermann figured, for an encryption algorithm. Any cryptanalyst who confronted his scrambled messages would be as ineffectual at reconstructing them, he hoped, as someone attempting to reconstitute a silvery, flopping fish from the noxious goo emerging from the Bass-O-Matic blender.

Zimmermann went on to other problems, and pieces fell into place—message digests, interface, and a range of protocols. But after months and months of work, all he really had were separate components that still weren't tied together into a working program. "It took a lot more work to put them together," he says. By 1990—six years after first talking to Charlie Merritt and four years since Merritt's visit to Boulder— Zimmermann realized that in order to finish he would have to make a total gung-ho commitment, even if it meant having to tighten his budget, cut out the consulting, and spend less time with his family. He embarked on a full-time regimen of programming.

Zimmermann had dreamed up a name for his work in progress, though not one as irreverent as Bass-O-Matic. Zimmermann had been an early devotee of the Macintosh computer, and had experimented with a simple data communications program when none had existed. Thinking of "Ralph's Pretty Good Grocery," an imaginary sponsor from Garrison Keillor's A Prairie Home Companion radio show, he had called it "Pretty Good Terminal." This gave him the idea for the name of his crypto program: Pretty Good Privacy. He never really considered that it might become a major brand name. But then, his marketing plans were vague. He did hope to make some money selling PGP, but figured on a modest amount using shareware rules, where people would download the program and pay him on the honor system.

For the next six months, Zimmermann worked twelve-hour days in a bedroom of his house, which he almost lost because he didn't have the money to make the mortgage payments. Maybe, he figured, if he finally finished PGP and released it, enough users would send him money to get him back on his feet. As the software got closer to completion, he called Jim Bidzos to see if they could finally clear up the intellectual property issue that the RSA chief had brought up during that ill-fated dinner. Zimmermann explained his product and asked for a go-ahead to use the RSA algorithm. Bidzos was appalled at the request: this guy thinks we'll just give him our crown jewels? Maybe instead of asking for handouts, he suggested, Zimmermann should develop his product for some company rich enough to get a standard RSA license.

The whole conversation was so out of line with Zimmermann's vision for his product—and the dim view he took of the high-powered business world—that he basically ignored the whole problem and went back to work.

By early 1991, Zimmermann was making progress toward a working product. Then something happened to change his course—and to make PGP famous. The unlikely agent in this shift was U.S. Senator Joseph Biden, the head of the Senate Judiciary Committee and a cosponsor of pending antiterrorist legislation, Senate Bill 266. In a draft of the bill introduced on January 24, Biden inserted some new language:

> It is the sense of Congress that providers of electronic communications services and manufacturers of electronic communications service equipment shall ensure that communications systems permit the government to obtain the plaintext contents of voice, data, and other communications when appropriately authorized by law. [Emphasis added.]

A poison needle in a haystack of clauses and qualifications, this passage originally escaped scrutiny. But its appearance was no accident. The language of the bill had been forged with the help of law enforcement agencies. That sentence was included at the explicit request of the FBI. And what a sentence it was! It plunged a virtual dagger into the heart of the crypto revolution. How could tech companies and services promise to deliver the plaintext contents of encrypted texts—the original messages meant to be read only by their intended recipients—if people scrambled them with programs like Mailsafe, Lotus Notes, and PGP? Logically, the only way that the "sense of Congress" could be satisfied would be a ban on any encryption except that equipped with "trapdoors" that the manufacturers and services could flip open at the demand of the feds.

It wasn't until April 1991, however, that the crypto community itself learned of this legislative time bomb. A consultant who had done work for the NSA revealed the offending clause on various Internet bulletin boards, along with apocalyptic commentary: "Are there readers of this list that believe that providers of electronic communications services can reserve to themselves the ability to read all the traffic and still keep the traffic 'confidential' in any meaningful sense? . . . Any assertion that all use of any such trapdoors would be only 'when appropriately authorized by law' is absurd on its face. . . . Any such mechanism would be subject to abuse." The message ended with a warning that would galvanize Phil Zimmermann: "I suggest you begin to stock up on crypto gear while you can still get it."

To Zimmermann, S. 266 was the ultimate deadline. If he didn't get PGP out into the world now, the government might prevent its very existence. At least for the time being, domestic crypto was legal. So Zimmermann decided to finish up the first version of PGP quickly and get it out to as many people as possible. He also gave up his financial hopes for PGP. Instead of releasing it as shareware, he designated it "freeware." This meant not only that the software didn't cost anything, but also that users could themselves distribute it far and wide to others with the blessing of its creator.

Fortunately, a medium existed that made it easier than in any time in history to circulate an encryption system like PGP: the Internet. In 1991, the formerly government-owned computer network was just beginning its meteoric rise to ubiquity. Thousands of discussion groups abounded, and millions of files were downloaded every day. The majority of users at the time did not yet reflect the public at large— most were very computer savvy, and a lot of them were outright nerds. But these were exactly the types of people who would respond to PGP, which, despite Zimmermann's best efforts, was still not as easy to use as MacWrite or Tetris.

Oddly, at that time, Zimmermann himself was not much of an Internet devotee. He hardly knew how to use e-mail. In this sense he was still the outsider looking in. But in recent months he had begun a correspondence with a fellow crypto enthusiast in California, Kelly Goen, whom he had met through Charlie Merritt. In the month after the on-line call to action about S. 266, Zimmermann apparently gave Goen a copy of his PGP software so that it could be spread on the Internet "like dandelion seeds," Zimmermann later wrote. On May 24 Goen e-mailed Jim Warren, a computer activist and columnist for MicroTimes, a Bay Area computer-oriented newspaper, and explained the purpose of flooding the networks with PGP. "The intent here," wrote Goen, "is to invalidate the so-called trapdoor provision of the new Senate bill coming down the pike before it makes it into law." In other words, if thousands of copies of PGP were in use, Senate Bill 266 would be rendered irrelevant; when confronted with PGP-encrypted files, the AT&Ts of the world would not be able to guarantee plaintext to G-men or spooks.

On the first weekend in June, Jim Warren got a series of calls from Goen, who told him that PGP day had arrived. Goen was obviously intoxicated with the drama of it all, taking precautions that were more from the book of Maxwell Smart than James Bond. "He was driving around the Bay Area with a laptop, acoustic coupler, and cellular phone," Warren later wrote in MicroTimes. "He would stop at a pay phone, upload a number of copies for a few minutes, then disconnect and rush off to another phone miles away. He said he wanted to get as many copies scattered as widely as possible around the nation before the government could get an injunction and stop him."

Apparently, Goen was also careful to upload only to Internet sites inside the United States. Of course, once a software program appears on a file server, anyone in the world can download it: Pakistani hackers, Iraqi terrorists, Bulgarian freedom fighters, Swiss adulterers, Japanese high schoolers, French businessmen, Dutch child pornographers, Norwegian privacy nuts, or Colombian drug dealers. Though not yet a cliché, an Internet slogan was already becoming a familiar refrain: On the Information Highway, borders are just speed bumps.

How quickly did PGP leave the United States and find its way overseas, without as much as a howdydo to the export laws? Instantly. Zimmermann would later marvel at hearing that the very next day people in other countries were encrypting messages with PGP. How could Zimmermann have avoided this potentially illegal passage of his program to distant shores? "I could have not released it at all," he later said. "But there's no law against Americans having strong cryptography." And, after all, Phil Zimmermann engineered his sudden release of PGP not to circumvent export laws, but to arm his countrymen, the people who might be affected by Senate Bill 266. His motto, as expressed in his documentation to the program, was "When crypto is outlawed, only outlaws will have crypto."

Ironically, Joseph Biden's offending language, the impetus for Zimmermann's extraordinary step, met a much less enthusiastic response than PGP did. Senator Biden had been taken by surprise at the huge expression of public outrage (fueled by civil liberties groups) at the stealth antiprivacy language he had introduced. By June, he had quietly withdrawn the clause. But the incident left an unexpected legacy: hundreds of thousands of PGP-encrypted messages circulating throughout the world. Pretty Good Privacy had escaped from Phil Zimmermann's hard drive and had now been cloned countless times. He could no more recall it than one could take back one's words after they were uttered.

Zimmermann was proud of PGP 1.0 though defensive at its shortcomings. Maybe it didn't introduce any mathematical innovations. And maybe the coding was so disorganized that he felt compelled to apologize for it in the documentation. But it was one of the first really usable personal computer solutions for a complete cryptosystem, from digital signatures to encryption. "If you look at what was available at that time, there were only laboratory petri-dish versions of RSA," he says. "One had been published in Byte; it took all afternoon to do an RSA calculation. Mine did that in a few seconds. I had brought together a practical implementation that had all the things you needed to do public key cryptography. It was a major event . . . it was a watershed event."

One person disagreed strongly: Jim Bidzos of RSA and Public Key Partners. When he saw PGP, he was outraged. This was no original product, he felt—look at Mailsafe—but a blatant rip-off of his company's technology and patents. Why didn't Zimmermann get honest and call it Pretty Good Piracy? Bidzos called the Colorado programmer and, literally screaming at him, demanded he remove the software from circulation. Despite all Bidzos's previous animosity, Zimmermann was actually taken aback at this response: "I thought he would be delighted," he says. He attempted to defend himself. He had done PGP for political reasons, not to challenge any commercial enterprises. After all, the Fortune 500 companies that were RSA's potential customers don't use freeware; they buy their software from companies that will back it up and support it. So what was the problem?

Bidzos accused him of actually playing into the NSA's hands—because anything that hurt his company was music to Fort Meade.

Not long afterward, Bidzos had his lawyer put Zimmermann on legal notice that he was infringing on PKP's patents. This worried Zimmermann, and he called Bidzos once again to try to make a deal. The basis of the agreement was simple: Zimmermann would not distribute his software with the RSA protocols, and Bidzos would not sue him. An agreement was indeed drawn up to that effect, and Zimmermann signed it. But each party had his own interpretation of that phone conversation. Bidzos felt that the deal compelled Zimmermann actually to kill PGP. Zimmermann insisted that he had only affirmed his understanding of a hypothetical agreement: if he stopped distribution of PGP, then he would not be sued. Zimmermann would also claim Bidzos gave him verbal assurances that RSA would sell licenses to PGP's end-users so they could use the software without infringing on RSA's patents. Bidzos denied those claims.

It later became clear that Zimmermann's interpretation of "distributing PGP" was somewhat narrow. By leaving the distribution to others, he felt that he was free to continue his involvement with the software. In fact, Zimmermann was supervising a second release of PGP, this one with the help of some more experienced cryptographers.

He'd realized that he needed help after a sobering experience at Crypto '91 in Santa Barbara. His main mission had been to get a reading from the wizards there on the security of PGP. (Admittedly this task was overdue, considering that thousands of people were already using the program.) Right away, he ran into Brian Snow, one of the top crypto mathematicians at the NSA. Zimmermann, of course, was curious as to whether the government was upset about PGP. "If I were you, I would be more concerned about getting heat from Jim Bidzos than from the government," said Snow.

This puzzled Zimmermann—why wasn't the government worried? Then he sought private comments on his program. After first getting a brush-off from Adi Shamir—the Israeli cryptographer told him to send the program to Israel and he'd spend ten minutes with it—Zimmermann got the attention of Shamir's colleague at Weizmann, Eli Biham. They retreated to the UCSB cafeteria, scene of many a bull session and impromptu cryptanalysis at the annual conference. For Zimmermann, it was a long lunch in more ways than one; Biham quickly embarrassed the amateur cryptographer by uncovering several fatal flaws in Bass-O-Matic. The cipher was, for instance, vulnerable to a differential cryptanalysis attack. While not exactly a dead fish, the Bass-O-Matic was far from a prize catch.

Zimmermann now realized that he could only truly improve PGP if he were to recognize his own limitations. His ultimate success at codemaking would come from realizing that he wasn't really a great cryptographer. He was a knowledgeable packager and programmer who would need ace mathematicians and cryptographers to help him with the hard-core details.

Fortunately, a lot of very smart people had been excited by the release of PGP 1.0. Instead of feeling burned by its weaknesses, they were eager to pitch in and fix them. Soon Zimmermann had recruited volunteers in New Zealand, Holland, and California to be his mainstay engineers. A casual collection of kibitzers also contributed advice and small pieces. Together they began work on version 2.0. Zimmermann was the chief designer, approving every decision, every line of the code, but he hid his role so that Bidzos wouldn't think that he was abandoning his promise not to violate RSA's patents.

The result was PGP 2.0, an infinitely stronger product. Bass-O-Matic had been tossed aside ("Calling it that wasn't too good an idea, anyway," says Zimmermann. "Cryptography is something you can't joke about"). In its place, Zimmermann chose a preexisting Swiss cipher called the International Data Encryption Algorithm, or IDEA. Written in 1990 by two celebrated cryptographic mathematicians, IDEA had quickly stood up to public scrutiny. Zimmermann felt the IDEA cipher was even stronger than DES, particularly with the 128-bit keys he recommended. "This is not," he wrote in the 2.0 documentation, "a home-grown algorithm."

Another crucial improvement came in an area that Zimmermann basically had ignored with PGP 1.0: key certification, the process by which public keys are authenticated. Certification is often seen as the Achilles' heel of public key systems. The classic conundrum in such systems arises when Alice wants to send something to Bob. She scrambles it with Bob's public key, and only Bob can unscramble it. But what if Alice has never met Bob—how does she get his public key? If she asks him for it directly, she can't encode her request (obviously not, because she doesn't have his public key yet, which she would use to encrypt the message). So a potential eavesdropper, Eve, could act as "a man in the middle," and snatch that message en route. Then Eve, pretending to be Bob, could send her own public key to Alice, falsely representing it as Bob's key. (This deceptive masquerade is known as "spoofing.") If Alice is duped, she'll encode her secret message to Bob with the key. Alas, Bob won't be able to read anything scrambled with that key—only tricky Eve can. So much for the security of direct requests.

What about the idea of publishing something like a digital phone book full of public keys? The forging problem persists, unless you have a certifiably secure means of protecting that book and assuring that the keys really do belong to their purported owners. Yes, it would require an extravagant effort to pull off such a fraud. But it's possible, and as long as the vulnerability exists, any public key system has to figure out a way to get around this security hole.

Many people have come to think that the answer lies in a large-scale "certification authority" to distribute and verify public keys. Such a center would be able to process millions of public keys. Using the certification authority's own public key—presumably a key so well-circulated that no one could spoof it—you could securely query it to get someone's key, or verify a public key someone sent you. Of course, such an ambitious solution was impossible for Zimmermann. He didn't have the wherewithal, or money, to set up a closely monitored certification authority to distribute and verify public keys. So he had to come up with another method.

His solution was quite ingenious, especially since it reflected the outsider sensibility that generally characterized his efforts. Instead of a central key authority, he envisioned the PGP community itself as an authority. "PGP allows third parties, mutually trusted friends, to sign keys," explained Zimmermann in a 1993 interview. "That proves that they came from who they said they came from." By "signing" keys, Zimmermann was talking about a technique whereby someone in effect attached his or her own public key to someone else's, as a sort of stamp of approval. After you generated a public key, you'd get the key signed by people who knew you personally. These signings were to be performed face-to-face, to minimize the threat of spoofing. So if Alice knows Bob personally, she arranges to meet him, and physically hands him a disk with her PGP public key. Using his copy of PGP, Bob signs it with his own private key. (This is done simply by selecting a function in the software program and clicking the mouse.) He gives her back the signed key and keeps a copy for his own "public key ring," a collection of signed keys that PGP users are encouraged to keep on their hard drives. Later, a third party, Carol, might want to communicate with Alice but doesn't know her. So Carol seeks out Alice's public key, either from her directly or from a bulletin board full of public keys. In the latter case, how does she know it's really Alice's? She checks to see who has signed the key—does it have the imprimatur of anyone she knows? Since Carol knows Bob—and has earlier received a verified copy of Bob's public key—she can establish the veracity of his signature. If it checks out, that means that Bob has really met the person who holds this new key and is implicitly telling Carol, "Hey, it's really Alice." So Carol can be sure that Alice is who she says she is. At least to the degree she trusts Bob.

This system—known as a "web of trust"—requires some judgment on the user's part. After all, Carol can't be sure of Alice's identity unless she personally knows someone who has physically met her and signed her key. What if she doesn't know anyone who's physically signed it? Is it worth trusting a second-level verification? Maybe her friend Bob hasn't signed Alice's key, but he has signed a key of someone named Ted. And Ted has signed Alice's key. Whether you'll trust that signature depends on Ted's reputation: who are the people who have signed his key? As more and more people used PGP, some were bound to develop a reputation for being scrupulous in verifying the keys they sign. Seeing one of those trusted introducers on a key ring would be a strong assurance of authenticity. In any case, PGP allowed users to set what cryptographer Bruce Schneier refers to as "paranoia levels": how many levels of separation you're willing to accept, depending on the degree to which you trust various signers.

With this web of trust, a stronger encryption algorithm, a better interface, and a number of other improvements, PGP 2.0 was—unlike Zimmermann's favorite weekend comedy show—ready for prime time. The informal team of programmers had even prepared translations of the interface in several languages, so people worldwide could use it from the day of release. In September 1992, two of Zimmermann's helpers posted PGP 2.0 on the Net from their respective homes in Amsterdam and Auckland. This way, the program could be imported into the United States, violating no export regulations. In almost no time, the new version supplanted and exceeded the first one. "I got more mail in the month after the release than I had received the whole previous year," says Zimmermann. "It was like lighting a match to dry prairie grass."

Jim Bidzos became, if possible, even angrier. He was particularly outraged at a contention of Zimmermann's included in the documentation that came with every download of PGP. Zimmermann claimed that Public Key Partners was ripping off the American public by making people pay for technology developed on the government dime. After Zimmermann's attempts to cover himself with disclaimers ("The author of this software implementation of the RSA algorithm is providing this ... for educational use only ... Licensing this algorithm from PKP is the responsibility of you, the user, not Philip Zimmermann ...") he

is providing this ???for educational use only.??? Licensing this algorithm from PKP is the responsibility of you, the user, not Philip Zimmermann.???), he launched into a long justification of his actions, claiming that he didn't think he was infringing on any patents. He implied that by controlling the patents to public key cryptography, Public Key Partners—"essentially a litigation company," he called it—was doing the NSA's dirty work by denying crypto to the people! Finally, while not giving any assurances, he told potential users that they didn't have much to worry about by violating PKP's patent rights: "There are just too many PGP users to go after," he wrote. "And why would they single you out?"

"He's misleading people, defaming us as a way of getting support for his own agenda," said Bidzos in 1994. "There's the evil government trying to deny you your right to privacy and the evil patent holders bent on ripping you and the government off—it's not really clear who's worse, but you can put them both off by using this software. He knew it was false."

Bidzos did have a point: RSA itself had already produced Mailsafe, an implementation of the public key patents. Both parties agree that during the contentious 1986 dinner meeting, Bidzos gave Zimmermann a copy of Mailsafe, but Zimmermann claimed he never tested the software or read the documentation because he'd already figured out how his product would work. "This guy says he was blown away by the invention of RSA," says Bidzos. "We're supposed to believe that he took software written by the people who invented it, his heroes, and never was curious enough to look at it?"

Yet much of Bidzos's fury was directed not just at Zimmermann's actions but at the runaway popularity of PGP. Because it was free, available worldwide regardless of export laws, and had quickly attained a patina of coolness among the high-tech crowd, its usership quickly exceeded that of Mailsafe, and was now threatening to become an Internet standard. Despite not being an accomplished cryptographer with a Stanford or MIT pedigree, despite having virtually no sense of business or marketing, Zimmermann had done what neither the original world-class public key mathematicians nor the market-savvy Bidzos had succeeded in doing: create a bottom-up crypto phenomenon that not only won over grassroots users but was being described as the major challenge to the multibillion-dollar agency behind the Triple Fence. No wonder that by the end of 1992, Phil Zimmermann had gone from total obscurity to the hero of the crypto underground. "If I go to Europe, I'll never have to buy lunch," he said. "I have a huge number of adoring fans."

Zimmermann's do-it-yourself effort to create a crypto program and distribute it to the people—an effort consciously undertaken to circumvent government control—marked a new dimension in the ongoing battle between the NSA and the cryptographers who worked outside its reach. The agency had once felt that its voluntary prepublication compromise with academics had mitigated much of the potential damage of that community's emergence. (And with the troublesome First Amendment in play, there was little choice in the matter.) Fort Meade's minions were also fending off the commercial threat to its dominance by budging only slightly on the export situation.

But it was getting harder to convince people that it made sense to control cryptography. It was becoming increasingly clear that this was not a weapons technology but one that might fit in as a common artifact of everyday life. All those millions who used Lotus Notes were already aware of its benefits. Those with garden variety e-mail were shocked to find that basic protections just weren't there—sending mail on the Internet seemed secure but was actually one step removed from broadcasting. And as more people began using cellular phones, for instance, they wondered why it was that their calls could be so easily monitored by any wirehead who plunked down a hundred dollars for a scanner. Even the Prince of Wales had his cell calls to his mistress intercepted, with the whole world now chuckling at endearments he uttered to her, endearments that were intensely personal (OK, they involved menstruation supplies). In a world of highly evolved communications, why shouldn't everything be protected? Even the National Football League figured this out: it used crypto to encode the radio signals sent from coaches in the observation booth to quarterbacks on the field. This was something anyone could understand. Here was something as straightforward as a means to prevent the Green Bay Packers from stealing the next play from John Elway . . . and we called this national security?

These were tough questions for a branch of government not used to answering any questions at all. Butthe questioning was about to become more intense as a new force, in part inspired by Zimmermann, now came into play: cryptoactivism. Strong cryptography distributed on the Internet—and a revolutionary movement built around producing and distributing strong codes—seemed on its face a fringe activity. But with the crypto controversy heating up, it turned out that the time was ripe for a small movement to apply leverage.

So it seemed to two crypto enthusiasts who hatched an idea for a group that would be outside even the outsiders in the battle for cryptography. The concept developed spontaneously when Eric Hughes, a young mathematician living in the north Bay Area and thinking of moving down the California coast, visited his friend Tim May in Santa Cruz to do some house hunting.

Hughes and May were an interesting combination, bound by scientific passion, political libertarianism, and a slightly unnerving paranoia. (Hughes liked to joke about this, citing an unknown philosopher who supposedly said, "Cryptography is the mathematical consequence of paranoid assumptions.") Both cut striking figures, eschewing a math-nerd look for the frontier garb of the Old West: crypto cowboys. Hughes was often seen in a felt Stetson.

At forty, May was a physicist who had retired from Intel seven years earlier with a bundle of stocks. His major contribution at the semiconductor giant had been his proof that quantum events—the meanderings of subatomic particles—could affect the calculations performed by semiconductor chips. May's discovery allowed Intel's designers to devise strategies to deal with this problem, enabling the steady progress of Moore's Law. Outside of technology, May was an advocate of libertarianism, as opposed to government restrictions. "I got converted by reading Ayn Rand as a kid," he says. "I would write polemics about natural rights in class." As an adult he posted such polemics—intentionally provocative and highly entertaining rants—to Usenet groups, and his hard-core advocacy of unbridled cryptography had earned him an edgy reputation. A slim, bearded man who often wore an outback hat, he owned a small house cluttered with books, gadgets, and well-fed cats.

A semilapsed Mormon from Virginia, Eric Hughes had a long, wispy light-brown beard, aviator wirerimmed glasses, and a cold, sarcastic wit. Not yet thirty, he was brimming with attitude. But his cocky sureness was tempered with a steady intelligence that enabled him to understand both sides of an issue.

He loved cryptography. He'd studied math at Berkeley, and worked for a company overseas for a while. Now, at the dawn of the Internet, he was figuring out how he could use codes to fortify the information age. His ultimate goal was combining pure-market capitalism and freedom fighting. In his world view, governments—even allegedly benign ones like the United States—were a constant threat to the well-being of citizens. Individual privacy was a citadel constantly under attack by the state. The great miracle was that the state could be thwarted by algorithms. "It used to be that you could get privacy by going to the physical frontier, where no one would bother you," he said. "With the right application of cryptography, you can again move out to the frontier—permanently."

As radical as Hughes's vision was, it paled in comparison to that of his Santa Cruz friend. When Tim May thought about crypto it was almost like dropping acid. In the computer age, we create "virtual regions," he would say. And the conduits and pipes of the future, the very mortar and walls of those virtual spaces, could be held up by nothing but crypto. Oh, God, May would burst out when speaking of this vision, it's so profound. There's nothing else! One-way functions like the ones exploited by Diffie, Merkle, and Rivest were the building blocks of cyberspace, he insisted, and if we don't use them we would be reduced to pathetic shivering creatures standing in the ashes of a virtual burned-out house. But with it, everything is imaginable. Secure conduits—

untappable by the NSA!—from hackers in Los Gatos, California, to activists in St. Petersburg, Russia. Transactions beyond taxation. And an end to the nationstates. That was the coming revolution, according to Tim May.

Such were the topics discussed in May 1992 during Eric Hughes's house-hunting visit to Tim May. There was so much to talk about that the conversation lasted for three days. "We'd get up in the morning and just keep chatting and chatting and I wouldn't get anything done about looking for a house," says Hughes. "And we'd go out to lunch and come back and keep going. It just went on and on." By the end of the visit—not surprisingly, Hughes had made no progress in finding a house and went back to his shared crashpad in Berkeley—they agreed to organize a loose confederation of those with similar views. Not to sit around and bullshit, but to actually produce, à la Zimmermann, the tools that would arm the general public against cyberthieves, credit bureaus, and especially the government.

In the next few weeks, they enlisted the aid of some influential figures in the antigovernment crypto community. One forceful ally was thirty-seven-year-old John Gilmore, a gentle computer hacker with long thinning hair and a wispy beard (when he stood beside Eric Hughes, the two of them looked like a geeky version of the cough-drop-icon Smith Brothers). Gilmore had made a small fortune from being one of the original programmers at Sun Microsystems—he had been employee number five—but left in 1986. In 1990, along with Mitch Kapor and Grateful Dead lyricist John Perry Barlow, he'd founded the Electronic Frontier Foundation (EFF) to enforce civil liberties in the digital age, and had just started a new company called Cygnus Support, devoted to aiding users of free software. His hobby-horse was personal privacy. At a 1991 conference called "Computers, Freedom, and Privacy," he delivered a speech that anticipated the thoughts of Mays and Hughes—a people's crypto movement to stave off the government.

> What if we could build a society where the information was never collected? Where you could pay to rent a video without leaving a credit card or bank account number? Where you could prove you're certified to drive without giving your name? Where you could send and receive messages without revealing your physical location, like an electronic post office box? That's the kind of society I want to build. I want to guarantee—with physics and mathematics, not with laws—things like real privacy of personal communications . . . real privacy of personal records . . . real freedom of trade . . . real financial privacy . . . [and] real control of identification.

Gilmore was particularly interested in making sure that information about crypto found its way into the public domain. (He had been the one who had used the Internet to circulate Ralph Merkle's fastencryption paper after the NSA had asked Xerox not to publish it.) More recently, he had been trying to liberate four early cryptanalysis textbooks by the NSA's legendary wizard William Friedman, filing Freedom of Information (FOI) requests to have the fifty-year-old works declassified. He even hired a Berkeley lawyer to help him negotiate the complicated process and file suit when government agencies did not respond within the specified legal time period.

Not long after demanding the Friedman texts, Gilmore began an extensive bibliographic search for them on the Internet, using "know-bots," which were automated intelligent search programs. The bots indicated that copies of two Friedman codebreaking works were publicly accessible, one in the Virginia Military Institute library, the other on microfilm at Boston University. Apparently at one time the government had lifted the restrictions on them, but in the Reagan era they had once again been classified. Gilmore immediately got friends to send him copies and notified the judge hearing his FOI appeal that the texts were on public library shelves. The government responded by notifying Gilmore that any further distribution of the Friedman texts would violate the Espionage Act, which mandated a possible ten-year sentence for violations. In other words, Gilmore could be sent to Leavenworth for a decade, just for taking a book out of the library and sharing it with friends. Gilmore not only notified the judge that his First Amendment rights were being violated, but told his story to a local reporter.

Two days later, the government backed down, formally declassifying the two texts. But Gilmore persisted in asking for the other works, and requested that the judge declare the Espionage Act itself an unconstitutional suppression of free speech. When a reporter asked him if his stance might not weaken national security, he was unrepentant. "We are not asking to threaten national security," he said. "We're asking to discard a Cold War bureaucratic idea of national security which is obsolete. They're abridging the freedom and privacy of all citizens, to defend us against a bogeyman that they will not explain."

Working with Gilmore (only later did Whitfield Diffie agree to participate as a sort of éminence grise), Hughes and May began planning a physical meeting of the proposed movement. Hughes was then calling the group CASI, or Cryptology Amateurs for Social Irresponsibility. Hughes and May prepared all summer, setting the invitation-only event for September 19, 1992, at Hughes's house in Berkeley. Because the nature of the enterprise involved an implicit attack on the government's most powerful spy agency, it was decided that discretion should be the watchword.

The meeting exceeded everyone's expectations. Unlike the Birkenstocked academics and rubbernecking spooks who met at the Crypto conferences, the twenty or so in attendance were people who saw cryptography totally outside the context of their own careers (if indeed they had one, as some did not). Their main concern was how people would and should use crypto tools. Their politics were heavily libertarian; more than a few were also self-proclaimed Extropians, whose philosophy merged an extremist view of individual liberties with a loopy belief that the far fringes of scientific research would soon accrue to our benefit. (Topics that made Extropians giddy included nanotechnology, cyborgs, and cryogenics; some Extropians had signed up to have their heads posthumously frozen, to be thawed and revived in some distant century.)

But it would be a mistake to misjudge this group by their peccadilloes or by the modest turnout at this first meeting. In fact, they would wind up becoming so influential that their grandiose fantasies would be vindicated. Profane, cranky, and totally in tune with the digital hip-hop of Internet rhythm, they were cryptographers with an attitude. If the government hadn't enough to worry about with industry, privacy advocates, and reform-minded policy wonks urging liberalization of encryption, the emergence of crypto rebels as popular culture heroes was a tipping point, an unexpected sign that the code wars had gone someplace new. The code rebels had arrived, brandishing a powerful intellectual weapon: crypto anarchy.

For this first meeting, Tim May had produced a fifty-seven-page handout, along with an elaborate agenda including discussion of "societal implications of cryptography," "voting networks," and "anonymous information markets." There were reports on digital money in virtual realities and John Gilmore's assessment of the NSA. And there was time set aside, of course, for the "reading of manifestos." Tim May had one prepared especially for the meeting, which he called the Crypto Anarchist Manifesto. It ended on a stirring note:

> Just as the technology of printing altered and reduced the power of medieval guilds and the social power structure, so too will cryptologic methods fundamentally alter the nature of corporations and of government interference in economic transactions. Combined with emerging information markets, crypto anarchy will create a liquid market for any and all material which can be put into words and pictures. And just as a seemingly minor invention like barbed wire made possible the fencing-off of vast ranches and farms, thus altering the concepts of land and property rights in the frontier West, so too will the seemingly minor discovery out of an arcane branch of mathematics come to be the wire clippers which dismantle the barbed wire around intellectual property. Arise, world; you have nothing to lose but your barbed-wire fences!

For a couple of hours, people were invited to play "the Crypto Anarchy game," a role-playing exercise in which people imagined using exotic crypto protocols

to keep surveillants in the dark about their activities, such as passing secrets or doing drug deals. Since PGP 2.0 had been released only days before —and most in attendance were huge fans of the first version—much of the meeting was spent discussing Phil Zimmermann's latest effort, and copies were distributed to all in the room. (Zimmermann himself was still in Boulder.) The event turned into a key-swapping party, as everyone exchanged PGP public keys and signed one another's key ring. PGP, after all, was the embodiment of the group's belief that cryptography was too important to be left to governments or even well-meaning companies. Only dedicated individuals, willing to suffer the consequences of government sanction, could assure that the tools got circulated into the Internet's bloodstream. After that, John Gilmore said, "It would take a pretty strong police state to suppress this technology."

One unexpected highlight was an observation made by Hughes's companion, a leather-clad writer who penned articles for the digital hippie magazine Mondo 2000 under the name St. Jude. Listening to the visions of overturning society with modular arithmetic, she made the connection with the recent rise of socalled cyberpunks—hackers turned hipsters by linking the in-your-face iconoclasm of punk-rock rebels with the digital revolution. "Hey," she called out, "you guys are cypherpunks!" They all loved the name.

The newly dubbed group was eager to meet again in a month. In the meantime, Eric Hughes set up what would be a much more robust and fertile cypherpunk gathering place: the Internet. Using John Gilmore's server (its Internet domain name was toad.com) as a cyberspace hub, Hughes set up what was known as a list-serv, an ongoing mega-discussion where anyone who signed up for the list would receive, unfiltered, the e-mail contributions of any other member who cared to report news, critique a cryptosystem, or unleash a rant. Within a few weeks, over 100 people would sign on to the list, an impressive number considering the mind-numbing volume of messages passed—often well over 150 a day.

After that first meeting, Eric Hughes drafted what he called "a small statement of purpose" to explain what the group was about. This "cypherpunk manifesto" envisioned a home-brewed privacy structure that the government couldn't crack:

> Cypherpunks write code. They know that someone has to write to defend privacy, and since it's their privacy, they're going to write it. Cypherpunks publish their code so that their fellow cypherpunks may practice and play with it. Cypherpunks realize that security is not built in a day and are patient with incremental progress.
>
> Cypherpunks don't care if you don't like the software they write. Cypherpunks know that software can't be destroyed. Cypherpunks know that a widely dispersed system can't be shut down.
>
> Cypherpunks will make the networks safe for privacy.

A couple of days afterward, Hughes revealed the details of the second meeting, to be held on October 10 at Cygnus's new office in Mountain View. "Attendance is transitive trust, arbitrarily deep," he wrote. "Invite who[m]ever you want. . . . Do not, however, post the announcement. Time for that will come."

As indeed it would. By the following year, the list had expanded to more than 700 participants. The group's original reluctance to ban journalists from its meetings—an ironic stance for people so enthusiastic about the spread of information in the Internet age—faded. Soon, cypherpunk lore would be a staple in publications ranging from Wired magazine to the New York Times. (Their faces, hidden by masks with scrawled PGP public key "fingerprints" on them, adorned Wired's second issue.) The face of crypto had taken on a veneer of hipness.

Crypto anarchy was a fascinating concept, infecting not only the media but the well-ordered domains of corporations and government as well. Even Donn Parker, a well-known security expert who had previously specialized in assessments of computer crackers, was now weighing in on the danger of the "coming state of information anarchy if crypto is allowed to proliferate unchecked in its present form." (Parker recommended strong crypto, but with master keys in the hands of government—as it turned out, something that the government was already considering.)

But even as the crypto rebels were becoming media darlings, government threats, and civil liberties heroes, few were aware that the mathematical and philosophical basis of their efforts had come from a single man, arguably the ultimate cypherpunk. He never attended a meeting, didn't post to the list, and in fact had bitter running feuds with some of the people on it. Nonetheless, his ideas—and the patents he held on their implementations—were discussed with awe and fear both in the corporate and intelligence world. The creator himself was one of the most frustrating enigmas in the field, harder to crack than triple DES.

This was David Chaum.

Chaum, a bearded, ponytailed, Birkenstocked cryptographer and businessman, was the former Berkeley graduate student who had, on his own initiative, sustained the Santa Barbara Crypto conferences and organized the International Association for Cryptologic Research. But his legacy in the crypto world went far beyond that: for a number of years he was the privacy revolution's Don Quixote, idealistically pursuing crypto liberation from Big Brother. While at Berkeley in the late 1970s, he began building on the foundation of public key to create protocols for a world where people could perform any number of electronic functions while preserving their anonymity. If the use of public key is akin to magic, and if elaborations like secret sharing and zero-knowledge proofs are viewed as powerful examples of that magic, then David Chaum was the Houdini of crypto, inventor of mathematical tools that could deliver the impossible: all the benefits of the electronic world without the drawbacks of an electronic path that could lead crooks, corporations, and cops to one's doorstep. Magic, some believed, that potentially could make the entire concept of statehood disappear.

From a very early age, David Chaum had an interest in the hardware of privacy. "I think what's important to realize is that there is a strong driving force for me," he says. "My interest in computer security initially, and encryption later on, came because of my fascination with security technologies in general—things like locks and burglar alarms and safes." (At one point, as a graduate student, he even devised a new design for a lock and came close to selling it to a major manufacturer.) And, of course, he was completely fascinated by computers. Chaum was raised in suburban Los Angeles in a middle-class Jewish family (his birthdate is uncertain because of a characteristic refusal to divulge such specific identifying details). In high school and college—he began attending UCLA before graduating from high school, then enrolled at Sonoma State to be near a girlfriend, and finally finished up at UC San Diego—he did some garden variety computer pranking: password cracking, trash-can scrounging, and such. In math classes he hung out with a bunch of fellow malcontents: they would sit in the back of the class and every so often, when the teacher made an error, they would chime in with a counterproof. (Not exactly The Blackboard Jungle, but these were computer nerds.) He was also picking up a serious background in mathematics. And late in his college career, he came to cryptography, a discovery that in retrospect seems inevitable.

He had already been thinking about the means of protecting computer information, but his first serious thoughts on the subject were revealed in an English class paper. The politically radical young woman teaching the course had urged the students to write about what interested them passionately. Chaum wrote about encryption.

He chose Berkeley for graduate work, largely because of its association with the new paradigm of public key cryptography. He knew that Lance Hoffman

He chose Berkeley for graduate work, largely because of its association with the new paradigm of public key cryptography. He knew that Lance Hoffman, who taught there, had been Ralph Merkle's teacher. He was unaware that Hoffman had rejected Merkle's ideas out of hand. Still, he made good contacts at the school—he even met Whit Diffie, who was living in Berkeley then—and got the support he needed to begin his own work. Chaum's first papers, published in 1979, are indicative of the focus his work would take: devising cryptographic means of assuring privacy. His ideas built upon the concept of public key, particularly the authentication properties of digital signatures. "I got interested in those particular techniques because I wanted to make [anonymous] voting protocols," he says. "Then I realized that you could use them more generally as sort of untraceable communication protocols." The trail led to anonymous, untraceable digital cash.

For Chaum, politics and technology reinforced each other. He believed that as far as privacy was concerned, society stood at a crossroads. Proceeding in our current direction, we would arrive at a place where Orwell's worst prophecies were fulfilled. He delineated the problem in a paper called "Numbers Can Be a Better Form of Cash Than Paper":

> We are fast approaching a moment of crucial and perhaps irreversible decision, not merely between two kinds of technological systems, but between two kinds of society. Current developments in applying technology are rendering hollow both the remaining safeguards on privacy and the right to access and correct personal data. If these developments continue, their enormous surveillance potential will leave individual's lives vulnerable to an unprecedented concentration of scrutiny and authority.

In the early 1980s, David Chaum conducted a quest for the seemingly impossible answer to a problem that many people didn't consider a problem in the first place: how can the domain of electronic life be extended without further compromising our privacy? Or—even more daring—can we do this by actually increasing privacy? In the process he figured out how cryptography could produce an electronic version of the dollar bill.

In order to appreciate this, one must consider the obstacles to such a task. The most immediate concern of anyone attempting to produce a digital form of currency is counterfeiting. As anyone who has copied a program from a floppy disk to a hard drive knows, it is totally trivial to produce an exact copy of anything in the digital medium. What's to stop Eve from taking her one Digi-Buck and making a million, or a billion copies? If she can do this, her laptop, and every other computer, becomes a mint, and an infinite hyperinflation makes this form of currency worthless.

Chaum's way of overcoming that problem was the use of digital signatures to verify the authenticity of bills. Only one serial number would be assigned to a given "bill"—the number itself would be the bill— and when the unique number was presented to a merchant or a bank, it could be scanned to see if the virtual bill was authentic and had not been previously spent. This would be fairly easy to do if every electronic unit of currency was traced through the system at every point, but that process could also track the way people spent their money, down to the last penny. Exactly the kind of surveillance nightmare that gave Chaum the chills. How could you do this and unconditionally protect one's anonymity?

Chaum began his solution by coming up with something called a "blind signature." This is a process by which a bank, or any other authorizing agency, can authenticate a number so that it can act as a unit of currency. Yet, using Chaum's mathematics, the bank itself does not know who has the bill, and therefore cannot trace it. This way, when the bank issues you a stream of numbers designed to be accepted as cash, you have a way of changing the numbers (to make sure the money can't be traced) while maintaining the bank's imprimatur.

One of Chaum's most dramatic breakthroughs occurred when he managed to come up with a mathematical proof that this sort of anonymity could be provided unconditionally. The Eureka Moment came as he was driving his Volkswagen van from Berkeley to his home in Santa Barbara, where he taught computer science in the early eighties. "I was just turning this idea over and over in my head, and I went through all kinds of solutions. I kept riding through it, and finally by the time I got there I knew exactly how to do it in an elegant way."

He presented his theory with a vivid example: a scenario of three cryptographers finishing their meal at a restaurant and awaiting the check. The waiter appears. Your dinner, he tells the dining cryptographers, has been prepaid. The question is, by whom? Has one of the diners decided anonymously to treat his colleagues—or has the NSA or someone else paid for the meal? The dilemma was whether this information could be gleaned without compromising the anonymity of the cryptographer who might have paid for the dinner.

The answer to the "Dining Cryptographers" problem was surprisingly simple, involving coin tosses hidden from certain parties. For instance, Alice and Bob would flip a quarter behind a menu so Ted couldn't see it—and then each would privately write down the result and pass it to him. The key stipulation would be that if one of them was the benefactor who paid for the meal, that person would write down the opposite result of the coin toss. Thus if Ted received contradictory reports of the coin toss —one heads, one tails—he would know that one of his fellow diners paid for the meal. But without further collusion, he would have no way of knowing if it was Alice or Bob who paid. By a series of coin tosses and passed messages, any number of diners—in what would be called a DC-Net—could play this game. The idea could be scaled to a currency system.

"It was really important, because it meant that untraceability could be unconditional," he says— meaning mathematically bulletproof. "It doesn't matter how much computer power the NSA has to break codes—they can't figure it out, and you can prove that."

Chaum's subsequent work—as well as the patents he successfully applied for—built upon those ideas, addressing problems like preventing double-spending while preserving anonymity. In a particularly clever mathematical twist, he came up with a scheme whereby one's anonymity would always be preserved, with a single exception: if someone attempted to double-spend a unit that he or she had already spent somewhere else, at that point the second bit of information would allow a trace to be revealed. In other words, only cheaters would be identified—indeed, they would be providing evidence to law enforcement of their attempt to commit fraud.

This was exciting work, but Chaum received very little encouragement for pursuing it. "For many years it was very difficult for me to have to work on this sort of subject within the field, because people were not at all receptive to it," Chaum says. For a period of several years in the early 1980s, Chaum attempted to make personal connections with the leading lights in privacy policy and share his ideas with them.

"The uniform reaction was negative," he says. "And I couldn't understand this. It made it all the harder for me to keep pushing on this, because my academic advisors were saying, 'Oh, that's political, that's social—you're out of line.' " Even his advisor at Berkeley tried to dissuade him. "Don't work on this, because you can never tell the effects of a new idea on society," he told his stubborn student. Instead of heeding the warning, Chaum dedicated his dissertation to him, saying it was the rejection of the advisor's thinking that motivated him to finish the work.

Eventually, Chaum decided that the best way to spread his ideas would be to start his own company. By then he was living in Amsterdam; on an earlier visit with his Dutch girlfriend, he had fortuitously met up with some academics who offered him a post, which in turn led to an appointment at CWI, the Centre for Mathematics and Computer Science in Amsterdam. So, in 1990, he founded Digicash, with his own meager capital and a contract in hand from the Dutch government for a feasibility study of technology that would allow electronic toll payments on highways. Chaum developed a prototype by which smart cards holding a certain amount of verified cash value could be affixed to a windshield and high-speed scanning devices would subtract the tolls as the cars whizzed

holding a certain amount of verified cash value could be affixed to a windshield and high-speed scanning devices would subtract the tolls as the cars whizzed by. One could also use the cards to pay for public transportation and eventually for other items. Of course, the payments would be anonymous. To Chaum this was the most important part of the system: his fear was that a scheme that allowed officials to retrace the routes of citizens would be an Orwellian atrocity. (Systems eventually implemented in the United States, like the popular E-ZPass system, actually do track travelers.)

After completing that contract (the system was never implemented), Chaum kept his company active in smart-card applications; some of the projects focused on cash systems that would be used in a building or complex of buildings. He had a working example of it at Digicash headquarters on the outskirts of Amsterdam; visitors could sample the future by using anonymous cash cards to buy sodas and make phone calls.

But in the early 1990s, even as the world came around to the significance of the ideas Chaum had hatched in isolation—firms ranging from Microsoft to Citibank were pursuing digital cash projects—the company's operations remained relatively small scale. Digicash remained independent, without a close alliance with a large partner in banking or financial services. Chaum felt that in time these partners, at the least licensees who used Digicash technology, would emerge. They had to. It was now the conventional wisdom that paper money would be replaced by crypto-protected digits. When that happened, his paradigm would become a crucial factor in maintaining privacy in the age of e-money. This was an idea Chaum believed was worth holding out for.

Some people interpreted this as stubbornness, or, at least, poor business practice. "People wanted to buy David's patents but he asked for too much—he wanted control," says a former Digicash employee. Another tale making the rounds was that Chaum made a last-minute veto of a deal with Visa that would have made Digicash the standard for electronic money. A Digicash executive would later tell a reporter of similar blowups with other firms, including Microsoft. But Chaum furiously resisted the theory that his personality quirks and actions scotched realistic deals. When a reporter interviewed him about the subject, Chaum lashed out at the "malicious slander that it's hard to do deals with me." Still, frustrated by not being able to get Chaum's patents, some companies began devising their own schemes for anonymity, which may or may not have infringed on his patents.

Some cypherpunks felt that Chaum had taken the improper ideological approach by applying for patents on his work. (These idealists didn't like RSA's patents, either.) They complained that by withholding the technology from anyone who wanted to implement it—and threatening to sue anyone who tested the breadth of these patents—he was actually preventing his dream from being realized. This criticism enraged Chaum. "I really believe it's sort of my mission to do this, because I have this vision that stuff like this might be possible, and I really felt it was my responsibility to do it," he would say. "No one was working on this for a good half-dozen years while I was busily working on it and they all thought I was nuts. The patents are really helpful to our little company; we couldn't license, really, without the patents, and the whole purpose of them from my point of view is to get this stuff out there."

It was an article of faith among cypherpunks that protocols for anonymity would indeed flourish. This was not a foregone conclusion. Many tried to make their own schemes, with names like Magic Money. Meanwhile, Citibank and Visa were exploring digital cash on their own. And a well-funded new company called Cybercash was being formed outside of D.C.; one of its investors was RSA Data Security. The cypherpunks wanted to know whether this new form of money would provide an electronic trail to the user. They hoped not. The c-punk list was full of scenarios in which the Internet provided "data havens" outside the United States, places beyond the purview of the industrialized nations where people could bank funds or even gamble with digital cash. When some cypherpunks helped organize the first conference on financial cryptography, its location was a foregone conclusion: Anguilla, a small Caribbean island whose transactions laws were, to say the least, liberal.

One of Chaum's ideas, adopted wholeheartedly by cypherpunks, was the emergence of services called "remailers." These were sort of cyberspace information launderers . . . outposts on the information highway, independently maintained by cypherpunk activists, who stripped any identifying marks from a message, then passed it on either to its final destination or to another remailer, for another round of data scrubbing. Your message goes into the remailer (also known as an anonymous server) with a return address—and gets forwarded without one.

Just sending your anonymous message to a single remailer, though, was regarded as insufficient protection. Indeed, it imbued the person running the server with too much power. If he or she turned out to be untrustworthy, or got hacked, or was served with a subpoena, it would be all too easy for outsiders to get hold of one's return address. It was the same problem that Whit Diffie originally complained about with network administrators and passwords. The cypherpunks thought they had the solution to this problem: they helped seed a loose confederation of remailers around the globe. In order to get real protection, you had to direct your messages through a series, or "string," or "chain," of remailers. Each remailing service would strip the return address; only the first one would have the original address. A cop or a spy trying to trace a message would then have to get the records (if they still existed, which they generally didn't) of ten or twelve or twenty remailers in order to retrace the steps. So if the authorities couldn't get the records from some remailer nerd in Tonga, they'd never find the original. (Some paranoid users—or, more likely, cypherpunks airing out their software—went through as many as a hundred remailers on their string; since there weren't that many anonymity servers in the world, this required multiple visits.)

To be really sure your anonymity was protected, you'd use PGP to encrypt the whole shebang with the public key of the final remailer on the chain. That way no remailer until the final one would be able to read the message, which by then would have its origins well buried. Want more security? Encrypt that final message in another envelope of PGP encryption, this one scrambled with the public key of the penultimate remailer on the chain. That would provide a double layer of encryption. And so on and so on, envelopes within envelopes, until privacy was fully assured. If at any point along the way, someone attempted to read the message, they'd get gibberish, "like getting a tape of microphone hiss," gloated Eric Hughes.

With cypherpunk encouragement—the first remailer was set up by Hughes himself, on the Berkeley server—about twenty remailers were up and humming by 1993. Of all the barn-building efforts of those on the list, creating an easier way to utilize remailer chains was the most intense. It didn't seem to bother the cypherpunks that those using the nascent system weren't doing much to improve society. Most of the messages sent through remailers were postings to Usenet discussion groups on the Internet; sadly, these were generally harassing attacks on people or simply idiotic flames. Instead of enriching cyberspace conversations, these unsigned stink bombs degraded it. You'd have sophisticated on-line colloquies about technical issues or personal matters, and some moron would chime in with foul-mouthed insults—and the serious participants in the discussion would be frustrated because there'd be no way of applying sanctions to the conversational vandal who disrupted things. On the other hand, in some groups—notably those encouraging contributions from whistle-blowers or victims of sex crimes—otherwise reluctant message posters discovered a measure of security in having their messages attributed to alternate, untraceable identities known as "nyms." It wasn't unusual in such groups to see a lot of mail from clearly cloaked correspondents at sites like "bogus@no.return.address."

The hardest part of running a remailer, it turned out, was not technical. Cypherpunk scripts made the process fairly easy for the technically competent noncryptographer to set up an anon server. The tough part was standing up to the social and legal pressures that would come when outraged targets of hate mail and pranks would demand that the anonymous traffic cease. A typical case was a cypherpunk at the University of Washington who wanted to use the school's computer system as a remailer. For a few months things went fine, "which wasn't bad when you consider that it was based on a student account with a Nazi-like administration," wrote the operator. "The death blow was a target [of e-mail attacks] complaining to me about someone sending unsolicited mail

to them through my remailer." The plea to stop such mail went to the system "postmaster," the person in charge of the university's e-mail system. Of course, the postmaster didn't know anything about such a service being operated on the school's computer, and "when he looked into it, he was quite surprised." End of remailer.

More successful was the case of Julf Helsingius, a Finnish computer consultant who began a remailer in his home outside Helsinki in 1993. He wanted to provide cover to people posting in a Usenet group concerning alcoholic recovery. He set up "Penet" (a variation on his company's name, Pennitech) on a small UNIX machine running on a modest Intel 386 chip, and opened for business, relying solely on word of mouth for users. Soon thousands of people were sending messages through the machine, which would forward the messages to their destinations without the identifying header. The traffic got so intense that Julf had to install a high-speed Internet pipe in his home, which cost him a thousand dollars a month. Sometimes, users would write to Julf and ask him why he did it. The answer was complicated; Julf was part of the Swedish-speaking minority in Finland and had always felt strongly about the ability of minorities to speak up. In another sense though, he considered it a hobby. "Some people spend similar money on golf or whatever," he would say. When people complained that he was allowing creeps and perverts to express themselves, he had a reply for that too:

> I can only answer that I believe very firmly that it's not for me to dictate how other people ought to behave. But remember, anonymous postings are a privilege, and use them accordingly. I believe adult human beings can behave responsibly. Please don't let me down.

No matter what the result, the cypherpunk remailer effort generated a vital dialogue on the issue of anonymity in a digital society. One important cypherpunk text was Ender's Game, a science fiction novel by Orson Scott Card. Part of the plot hinged on an influential public debate between two unknown philosophers who took advantage of remailer-type technology to post treatises under the fictional nyms of Demosthenes and Locke. Since the ideas were subversive, it was absolutely necessary to keep their real identities secret; nonetheless, the force of their arguments changed the course of society in the novel. Another good reason to hide the real people behind these ideas was that the writers were children, a brother and sister who were, respectively, twelve and ten years old. "It's not my fault I'm twelve right now," the young man explained to his sister. "The world is always a democracy in times of flux, and the man with the best voice will win."

But it was not only science fiction that valued anonymity. The practice was crucial in the formation of the United States itself, and was arguably as American as apple pie. As cypherpunk historians loved to point out, the model for the Ender's Game debate may have been the Federalist Papers, with parts written by James Madison, John Jay, and Alexander Hamilton but published under the pseudonym Publius. And when Thomas Paine wrote Common Sense, he originally signed it "An Englishman." As the Supreme Court would note, "Anonymous pamphlets, leaflets, brochures, and even books have played an important role in the progress of mankind," a role the court has sustained in consistent rulings. In 1995, it would reaffirm the constitutionality of the concept once more, using the words of John Stuart Mill to hail anonymity as "a shield from the tyranny of the majority." Who could blame cypherpunks for producing the cryptographic tools to preserve a writer's ability to continue this vital tradition?

Plenty of people, as it turned out. Critics—among them FBI director Louis Freeh—would contend that when anonymity hit the Internet, it did not merely find a familiar niche in a new medium; it was amplified beyond recognition into something more menacing. David Chaum's invention of blind digital signatures and non-traceable anonymous cash had the potential to make cyberspace into an identity-free zone where one could go underground far more easily and effectively than in the physical world. When you spend hard currency in a store, for instance, no one asks you for ID papers—but your face marks the transaction in the cashier's mind, particularly if you're a return customer. (If you wore a bag over your head, you'd probably have trouble making the payment in the first place.) Using Chaumian protocols, you could potentially make all your purchases, send all your mail, even receive monies, with total assurance that no one would know who you are. But so could kidnappers, child pornographers, and terrorists, whose lives would be made much simpler and more secure with such tools.

Such concerns didn't faze the cypherpunks. On the contrary, they went out of their way to emphasize why the technologies of anonymity could be so controversial. A good example was Tim May's announcement of an enterprise he called "BlackNet." The group did not exist, of course. It was a thought experiment he originally figured to bring up for discussion at a cypherpunk meeting, but then decided to send it out anonymously on the Net. "I sent it through remailers so it would add a piquancy, a spiciness to it," says May, who certainly didn't mind going public with his own beliefs (he usually signed his e-mail with a hair-raising list of passions—"crypto anarchy, digital money, anonymous networks, digital pseudonyms, black markets, and collapse of governments").

BlackNet was a guerrilla theater presentation of those interests. "Your name has come to our attention," the message began. "We have reason to believe you may be interested in the products and services our new organization, BlackNet, has to offer. BlackNet is in the business of buying, selling, trading, and otherwise dealing with information in all its many forms." The offer went on to explain that with public key cryptography, a perfect data black market exists where one can get or sell everything from trade secrets to cruise missile plans without any risk of being identified. The parties in these transactions will not be known to each other, not even to BlackNet. Needless to say, no one would ever know who is behind BlackNet:

> Our location in physical space is unimportant. Our location in cyberspace is all that matters. Our primary address is the PGP key location "BlackNet" and we can be contacted (preferably through a chain of anonymous remailers) by encrypting a message to our public key (contained below) and depositing this message in one of the several locations in cyberspace we monitor.

BlackNet also purported to deal in money, offering to make anonymous deposits in the bank of your choice. You could deal with BlackNet using actual cash or "cryptocredits," BlackNet's own internal currency (which could be used in any sort of untraceable clandestine information transaction you chose). And BlackNet itself had no ideology of its own, save one: "We consider nation-states, export laws, patent laws, national security considerations, and the like to be relics of the pre-cyberspace era."

To May's delight, many accepted the BlackNet announcement at face value, especially as news of it leaked beyond the crypto community and into the more panic-prone world at large. Though BlackNet was fictional, May did believe that in the future we would see similar enterprises. It didn't bother him at all—people were free agents, and responsible for themselves. "If people die as a result of this . . . eh!" he said. "I didn't hurt them."

All in all, the exercise put a screaming exclamation point to cypherpunk philosophy. Crypto anarchy until then may have been the province of science fiction writers, but the tools to make it real were arriving. As those digital armaments were put to use, it was possible that a thousand BlackNets could bloom. Certainly this was something noted inside the Triple Fence—and at FBI headquarters as well. Did it portend a movement that had to be stopped? The establishment was beginning to think so.

With the powers of crypto, "we have the capability of 100 percent privacy," admitted security expert Donn Parker. "But if we use this, I don't think society can survive."

Housatonic